Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

NEIC ***01*** *18:45:41.7±1.7,21°.70S×179°.55W,h600^{km},mb4.6/6,*
Error ellipse: s-maj=75.5km s-min=25.7km az=151.0
IDC ***01*** *18:45:46.3±2.6,21°.76S×179°.70W,h627^{km}±37^{km},mb3.5/4,*
mb1 3.7/4,mb1mx3.2/14,Error ellipse: s-maj=83.2km
s-min=20.6km az=159.0
ISC 01 18:45:41.7±1.4**,22°.1S**±0°.2×**179°.3W**±0°.2**,h600^{km},n22,**
σ**1^{s}.55**/24**,mb4.4**/9**,1C,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HBZ	**Hicks Bay**	**15.60**	**187**	*e*P	**P**	**18 48 53.1**	**-2.1**
URZ	**Urewera**	**16.41**	**190**	P	**P**	**18 49 01.5**	**-1.1**
MRZ	**Mangatainoka R**	**19.02**	**192**	*e*P	**P**	**18 49 26.7**	**+0.3**
DIW	**D'Urville Isla**	**19.52**	**195**	*e*P	**P**	**18 49 27.3**	**-3.6**
CAW	**Cannon Point**	**19.55**	**193**	*e*P	**P**	**18 49 31.7**	**+0.5**
OTW	**Orongorongo Tu**	**19.73**	**193**	*e*P	**P**	**18 49 33.0**	**+0.2**
MOW	**Moikau**	**19.82**	**192**	*e*P	**P**	**18 49 35.5**	**+1.9**
THZ	**Tophouse**	**20.68**	**197**	*e*P	**P**	**18 49 42.0**	**+0.5**
KHZ	**Kahutara**	**21.14**	**195**	P	**P**	**18 49 46.2**	**+0.8**
ARMA	**Armidale**	**27.28**	**246**	*e*P	**P**	**18 50 42.4**	**+2.3**
	4.9nm,0.5s						
CTA	**Charters Tower**	**32.13**	**267**	⇑*i*P	**P**	**18 51 22.3**	**+0.5**
	13nm,0.5s						
STKA	**Stephens Creek**	**36.00**	**246**	*e*P	**P**	**18 51 55.3**	**+1.5**
	3.1nm,0.4s						
ASAR	**Alice Springs**	**42.97**	**259**	P	**P**	**18 52 50.1**	**+0.4**
	9.8nm,0.5s,baz=92,slow=8.2,SNR=47						
ASAR				S	**S**	**18 58 31.3**	**-1.6**
	1.0nm,0.8s,baz=95,slow=15,SNR=5.7						
ASPA	**Alice Springs**	**42.97**	**259**	*e*P	**P**	**18 52 50.1**	**+0.4**
WRA	**Warramunga Arr**	**43.18**	**264**	P	**P**	**18 52 51.0**	**-0.4**
	1.8nm,0.3s,baz=96,slow=7.8,SNR=93						
WRA				S	**S**	**18 58 33.0**	**-2.9**
	0.3nm,0.9s,baz=99,slow=14,SNR=3.0						
KAKA	**Kakadu**	**46.79**	**273**	*e*P	**P**	**18 53 18.2**	**-0.7**
	14nm,0.4s						
FITZ	**Fitzroy Crossi**	**51.61**	**264**	*e*P	**P**	**18 53 54.3**	**+0.1**
	12nm,0.3s						
MBWA	**Marble Bar**	**56.31**	**259**	*e*P	**P**	**18 54 27.1**	**-0.1**
	11nm,0.6s						
CMAR	**Chiang Mai Arr**	**89.48**	**290**	P	**P**	**18 57 38.1**	**+1.7**
	1.3nm,0.8s,baz=135,slow=3.1,SNR=8.1						
ARCES	**ARCESS Array B**	**130.23**	**349**	PKP	**PKiKP**	**19 03 43.7**	**-1.2**
	0.7nm,0.6s,baz=282,slow=4.2,SNR=3.5						
FINES	**FINESS Array B**	**136.91**	**342**	PKP	**PKiKP**	**19 03 57.3**	**-1.3**
	3.7nm,1.1s,baz=158,slow=3.2,SNR=3.4						
MLR	**Muntele Rosu**	**148.83**	**325**	PKPbc	**PKiKP**	**19 04 22.7**	**-1.0**
	0.2nm,0.7s,baz=1.2,slow=23,SNR=2.3						

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

*SJA **01** 00:03:15.5±0.7, 34°.75S×70°.85W, h109^{km}±2^{km}, ML3.4, MW3.6*
*NEIC **01** 00:03:17.1±1.1, 34°.72S±0°.04×70°.79W±0°.07, h102^{km}±4^{km}, mb4.0/4, Error ellipse: s-maj=8.6km s-min=5.3km az=104.0*
*GUC **01** 00:03:17.0±0.6, 34°.73S×70°.81W, h102^{km}±2^{km}, ML3.6*
ISC 01 00:03:16.7±0.8**, 34°.75S**±0°.03×**70°.74W**±0°.04**, h103**^{km}±5^{km}**, n88,** σ**0^{s}97**/138**, 18C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BO02	Sierra Bellavi	0.05	220		Pn	00 03 30.9	-0.1
BO02					Sn	00 03 42.1	+0.4
BO02	Sierra Bellavi	0.05	220	⇓iP	Pn	00 03 30.8	-0.3
BO02				eS	Sn	00 03 41.4	-0.4
BO02	Sierra Bellavi	0.05	220	eP	Pn	00 03 30.8	-0.3
BO02				eS	Sn	00 03 43.1	+1.3
BO02				IAML		00 03 44.4	
	comp=Z,3µm,0.1s						
BO01	Tunca	0.46	321		Pn	00 03 32.1	-0.5
BO01					Sn	00 03 43.9	-0.5
BO01	Tunca	0.46	321	⇑iP	Pn	00 03 32.0	-0.5
BO01				eS	Sn	00 03 43.5	-0.8
BO01	Tunca	0.46	321	eP	Pn	00 03 32.0	-0.5
BO01				eS	Sn	00 03 44.4	0.0
BO01				IAML		00 03 46.1	
	comp=Z,553nm,0.2s						
BO04	La Punta	0.77	8		Pn	00 03 35.0	-0.2
BO04					Sn	00 03 48.8	-0.1
BO04	La Punta	0.77	8	⇑iP	Pn	00 03 34.9	-0.2
BO04				eS	Sn	00 03 48.6	-0.2
BO04				IAML		00 03 50.0	
	comp=E,3µm,0.3s						
MT01	Popeta	0.98	334		Pn	00 03 36.8	-0.4
MT01					Sn	00 03 52.2	-0.3
MT01	Popeta	0.98	334	⇑iP	Pn	00 03 36.7	-0.4
MT01				IAML		00 03 53.0	
	comp=E,1µm,0.3s						
MT01				eS	Sn	00 03 53.0	+0.5
MT01	Popeta	0.98	334	eP	Pn	00 03 36.7	-0.4
MT01				eS	Sn	00 03 52.9	+0.4
MT01				IAML		00 03 53.4	
	comp=Z,691nm,0.1s						
MT09	Talagante	0.99	348		Pn	00 03 37.3	-0.2
MT09					Sn	00 03 53.0	0.0
MT09	Talagante	0.99	348	⇑iP	Pn	00 03 37.2	-0.2
MT09				eS	Sn	00 03 52.6	-0.4
MT09				IAML		00 03 54.8	
	comp=N,3µm,0.3s						
LMEL	Las Melosas	1.00	26		Pn	00 03 37.9	+0.4
LMEL					Sn	00 03 54.1	+0.8
LMEL	Las Melosas	1.00	26	⇑iP	Pn	00 03 37.7	+0.2
LMEL				eS	Sn	00 03 53.6	+0.4
LMEL				IAML		00 03 58.2	
	comp=N,2µm,0.3s						
LMEL	Las Melosas	1.00	26	eP	Pn	00 03 38.0	+0.4
LMEL				eS	Sn	00 03 54.3	+1.0
LMEL				IAML		00 03 57.6	
	comp=Z,994nm,0.8s						
GO05	Hualane	1.01	255	⇑iP	Pn	00 03 37.0	-0.5
GO05				eS	Sn	00 03 52.2	-1.0
GO05	Hualane	1.01	255	eP	Pn	00 03 37.0	-0.5
GO05				eS	Sn	00 03 51.3	-1.8
GO05				IAML		00 03 53.9	
	comp=Z,282nm,0.5s						
MT12	Pirque	1.03	9	⇑iP	Pn	00 03 37.6	-0.1
MT12				eS	Sn	00 03 53.5	0.0
MT12				IAML		00 03 56.2	
	comp=N,2µm,0.4s						
BO03	Pichilemu	1.04	284	i P	Pn	00 03 37.7	0.0
MT13	San Alfonso	1.07	21		Pn	00 03 38.7	+0.4
MT13					Sn	00 03 55.3	+0.8
MT13	San Alfonso	1.07	21	⇑iP	Pn	00 03 38.6	+0.4
MT13				eS	Sn	00 03 55.1	+0.6
MT13				IAML		00 03 56.0	
	comp=N,3µm,0.2s						
MT13	San Alfonso	1.07	21	eP	Pn	00 03 38.8	+0.5
MT13				eS	Sn	00 03 55.7	+1.2
MT13				IAML		00 03 55.9	
	comp=Z,2µm,0.2s						
ML02	Panimavida	1.15	209		Pn	00 03 39.3	+0.3
ML02					Sn	00 03 56.6	+0.8
ML02	Panimavida	1.15	209	eP	Pn	00 03 39.2	+0.3
ML02				IAML		00 03 58.0	
	comp=N,712nm,0.4s						
ML02	Panimavida	1.15	209	eP	Pn	00 03 39.4	+0.3
ML02				eS	Sn	00 03 56.9	+1.1
ML02				IAML		00 04 00.1	
	comp=Z,226nm,0.6s						
MT15	Las Vizcachas	1.17	10	eP	Pn	00 03 39.0	-0.2
MT15				eS	Sn	00 03 56.4	+0.2
MT15				IAML		00 03 58.0	
	comp=N,2µm,0.3s						
MT03	Universidad Ad	1.27	9		Pn	00 03 40.5	+0.1
MT03					Sn	00 03 59.0	+0.6
MT03	Universidad Ad	1.27	9	⇑iP	Pn	00 03 40.4	-0.1
MT03				eS	Sn	00 03 58.3	-0.1
MT03				IAML		00 04 01.6	
	comp=N,2µm,0.2s						
MT03	Universidad Ad	1.27	9	eP	Pn	00 03 40.6	+0.2
MT03				eS	Sn	00 03 59.3	+0.9
MT03				IAML		00 04 02.0	
	comp=Z,969nm,0.2s						
VA05	Santo Domingo	1.31	326		Pn	00 03 40.9	+0.1
VA05					Sn	00 03 59.2	+0.2
VA05	Santo Domingo	1.31	326	eP	Pn	00 03 40.4	-0.4
VA05				IAML		00 04 06.2	
	comp=E,2µm,0.4s						
MT16	CCHEN	1.33	8		Pn	00 03 41.0	-0.2
MT16					Sn	00 03 59.9	+0.2
MT16	CCHEN	1.33	8	⇑iP	Pn	00 03 41.0	-0.2
MT16				⇑eS	Sn	00 03 59.3	-0.3
MT16				IAML		00 04 00.9	
	comp=E,330nm,0.3s						
MT05	Renca	1.36	0		Pn	00 03 41.4	-0.1
MT05					Sn	00 04 00.8	+0.6
MT05	Renca	1.36	0	eP	Pn	00 03 41.4	-0.1
MT05				IAML		00 04 01.5	
	comp=N,2µm,0.3s						
MT05	Renca	1.36	0	eP	Pn	00 03 41.4	-0.1
MT05				eS	Sn	00 04 01.2	+1.1
MT05				IAML		00 04 01.8	
	comp=Z,828nm,0.2s						
MT14	Cerro Cal¡n	1.36	7	⇑iP	Pn	00 03 41.5	-0.1
MT14				eS	Sn	00 03 59.8	-0.5
MT14				IAML		00 04 02.6	
	comp=N,1µm,0.2s						
MT04	Ro Olivares	1.43	21	⇑iP	Pn	00 03 42.9	+0.3
MT04				eS	Sn	00 04 02.6	+0.5
MT04				IAML		00 04 07.2	
	comp=N,501nm,0.2s						
MT04	Ro Olivares	1.43	21	eP	Pn	00 03 42.9	+0.3
MT04				eS	Sn	00 04 03.5	+1.4
MT04				IAML		00 04 07.3	
	comp=Z,295nm,0.1s						
MT08	Bocatoma Ro	1.43	25		Pn	00 03 42.8	+0.2
MT08	Bocatoma Ro	1.43	25	i P	Pn	00 03 42.8	+0.2
MT08				eS	Sn	00 04 03.0	+0.8
MT08	Bocatoma Ro	1.43	25	eP	Pn	00 03 38.0	-4.6
MT08				eP		00 03 43.2	
MT08				eS	Sn	00 04 03.9	+1.8
MT08				IAML		00 04 08.9	
	comp=Z,133nm,0.6s						
MT10	Hacienda Santa	1.48	7	⇑iP	Pn	00 03 43.0	-0.1
MT10				eS	Sn	00 04 02.7	-0.3
MT10				IAML		00 04 07.8	
	comp=E,1µm,0.3s						
EDS3	Malargue	1.50	133	eP	Pn	00 03 39.2	-4.0
MT02	Curacav	1.52	347		Pn	00 03 43.1	-0.3
MT02	Curacav	1.52	347	⇑iP	Pn	00 03 43.1	-0.3
MT02				IAML		00 04 05.5	
	comp=E,391nm,0.2s						
MT02	Curacav	1.52	347	eP	Pn	00 03 43.2	-0.3
MT02				eS	Sn	00 04 05.7	+2.0
MT02				IAML		00 04 09.3	
	comp=Z,202nm,0.8s						
PEL	Peldehue	1.60	2		Pn	00 03 44.5	0.0
PEL					Sn	00 04 05.6	+0.1
PEL	Peldehue	1.60	2	⇑iP	Pn	00 03 44.4	0.0
PEL				IAML		00 04 06.5	
	comp=N,1µm,0.3s						
PEL	Peldehue	1.60	2	eP	Pn	00 03 44.5	0.0
PEL				eS	Sn	00 04 06.0	+0.4
PEL				IAML		00 04 06.8	
	comp=Z,478nm,0.4s						
ROC1	El Roble	1.79	353	eP	Pn	00 03 46.6	-0.3
ROC1				eS	Sn	00 04 09.3	-0.5
ROCH	El Roble	1.79	353	⇑iP	Pn	00 03 46.5	-0.5
ROCH				eP		00 03 46.6	
ROCH				eS	Sn	00 04 08.8	-1.1
ROCH				IAML		00 04 13.7	
	comp=N,383nm,0.3s						
ROCH				IAML		00 04 13.7	
	comp=N,808nm,0.2s						
RFA	San Rafael	1.87	91	eP	Pn	00 03 47.6	-0.2
RFA				eS	Sn	00 04 10.9	-0.6
RFA				IAML		00 04 11.1	
	comp=Z,92nm,0.5s						
VA01	Torpederas	1.88	336	Pn	Pn	00 03 48.0	+0.1
VA01	Torpederas	1.88	336	eP	Pn	00 03 48.0	+0.1
VA01	Torpederas	1.88	336	eP	Pn	00 03 48.0	+0.1
VA01				IAML		00 04 16.0	
	comp=Z,141nm,0.4s						
BI02	San Fabin de	1.96	193		Pn	00 03 49.3	+0.4
BI02	San Fabin de	1.96	193	eP	Pn	00 03 48.8	-0.1
BI02				IAML		00 04 50.1	
	comp=Z,155nm,1.3s						
VA03	San Esteban	1.99	5		Pn	00 03 49.4	0.0
VA03	San Esteban	1.99	5	⇓iP	Pn	00 03 49.4	0.0
VA03				i P	Pn	00 03 49.4	0.0
VA03				IAML		00 04 18.3	
	comp=E,657nm,0.3s						
VA03	San Esteban	1.99	5	eP	Pn	00 03 49.5	+0.2
VA03				eS	Sn	00 04 14.7	+0.5
VA03				IAML		00 04 16.4	
	comp=Z,310nm,0.4s						
VA06	Catapilco	2.23	348		Pn	00 03 52.0	-0.3
VA06	Catapilco	2.23	348	⇑iP	Pn	00 03 52.1	-0.3
VA06				IAML		00 04 20.4	
	comp=N,780nm,0.4s						
AVIZ	Vizcacheras	2.24	56	eP	Pn	00 03 48.7	-3.9
AAGR	Agrelo	2.30	44	eP	Pn	00 03 54.7	+1.3
AAGR				eS	Sn	00 04 16.5	-5.0
ARCO	CERRO ARCO	2.43	39	eP	Pn	00 03 56.2	+1.1
ARCO				eS	Sn	00 04 20.7	-3.8
RTLS	Leoncito	3.18	23	eP	Pn	00 04 06.8	+1.6
RTLS				IAML		00 04 49.5	
	comp=Z,90nm,1.1s						
CO02	Combarbal	3.54	356		Pn	00 04 09.3	-0.6
CO02	Combarbal	3.54	356	eP	Pn	00 04 09.2	-0.8
CO02				eS	Sn	00 04 50.2	-0.8
CO02				IAML		00 04 54.4	
	comp=Z,119nm,0.3s						
CFA	Coronel Fontan	3.77	34	eP	Pn	00 04 13.5	+0.6
CFA				eS	Sn	00 04 57.4	+0.9
ACAN	Cantantal	3.86	51	eP	Pn	00 04 14.5	+0.4
ACAN				IAML		00 05 17.4	
	comp=Z,36nm,0.5s						
CO03	El Pedregal	3.90	1		Pn	00 04 14.2	-0.5
CO06	Fray Jorge	4.14	349		Pn	00 04 16.6	-1.2
ACCO	Cerro Coronel	4.38	19	eP	Pn	00 04 22.3	+0.8
GO04	Tololo Observa	4.57	359		Pn	00 04 22.4	-1.4
AROD	Rodeo	4.70	14	eP	Pn	00 04 26.1	+0.5
AROD				eS	Sn	00 05 22.3	+3.1
CO01	Juntas del Tor	4.79	7	Pn	Pn	00 04 25.3	-1.5
LCO	Las Campanas	5.72	0		Pn	00 04 37.3	-2.2
AC05	El Transito	5.91	4		Pn	00 04 40.5	-1.4
PLCA	Paso Flores	5.97	179	Pn	Pn	00 04 42.2	-0.4
VA04	Juan Fernndez	6.79	277	Pn	Pn	00 04 53.0	-0.8
TRQA	Tornquist	7.79	118	Pn	Pn	00 05 06.4	-1.0
EFI	East Falkland	19.23	155	P	P	00 07 31.6	-0.9
BOAV	Boa Vista	38.18	17	P	P	00 10 25.6	-0.7
BOAV				IAmb	IAmb	00 10 47.0	
	comp=Z,2.1nm,1.0s						
BELA	Belgrano 2	45.95	170	P	P	00 11 29.9	+1.1
BELA				IAmb	IAmb	00 11 41.4	
	comp=Z,2.5nm,1.1s						
SNAA	Sanae	50.48	158	P	P	00 12 04.0	+0.3
BOSA	Boshof	78.77	117	P	P	00 15 08.7	+0.3

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*UPP **01** 00:23:56.7±0.0, 67°.85N×20°.21E, h0^{km}, ML2.4, Suspected explosion*
*IDC **01** 00:23:57.9±1.4, 67°.87N×20°.69E, h0^{km}, mbtmp2.9/3, ML1.9/3, Error ellipse: s-maj=19.8km s-min=7.7km az=117.0*
*HEL **01** 00:23:57.1±0.1, 67°.83N×20°.17E, h0^{km}, ML2.0, Suspected explosion*
*BER **01** 00:23:58.1±2.7, 67°.73N×20°.45E, h0^{km}, ML2.0, Suspected explosion*
ISC 01 00:23:56.9±0.7**, 67°.84N**±0°.02×**20°.23E**±0°.02**, h0**^{km}**, n44,** σ**0^{s}91**/74**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.12	20	P	Pg	00 23 59.2	+0.1
KUA				S	Sg	00 24 01.1	+0.5
RATU	Laukkuluspa	0.24	266	P	Pg	00 24 01.4	-0.1
RATU				S	Sg	00 24 04.6	+0.1
KOVU	Salmi	0.38	356	P	Pg	00 24 04.0	-0.2
KOVU				S	Sg	00 24 09.2	+0.1
NIKU	Nikkaluokta	0.45	274	P	Pg	00 24 05.3	-0.2
NIKU				S	Sg	00 24 11.6	+0.3
LANU	Lannavaara	0.70	72	P	Pg	00 24 10.1	-0.2
LANU				S	Sg	00 24 19.5	+0.3
LANU	Lannavaara	0.70	72	PG	Pg	00 24 09.9	-0.3
LANU				SG	Sg	00 24 19.6	+0.3
DUNU	Dundret	0.74	170	P	Pg	00 24 10.6	-0.3
MASU	Masugnsbyn	0.78	119	P	Pg	00 24 11.7	-0.1
SALU	Saltoluokta	0.81	236	P	Pg	00 24 11.8	-0.4
SALU				S	Sg	00 24 23.0	+0.3
SALU	Saltoluokta	0.81	236	eP	Pg	00 24 12.1	-0.1
SALU				eS	Sg	00 24 21.3	-1.4
KIF	Kilpisjarvi	1.19	10	PG	Pg	00 24 19.6	+0.1
KIF				MSG		00 24 34.7	
	comp=Z,21nm,0.2s						
KIF				SG	Sg	00 24 35.0	+0.1
PAJU	Pajala	1.39	125	P	Pg	00 24 22.4	-0.9
PAJU				S	Sg	00 24 41.0	-0.2
PAJU	Pajala	1.39	125	PG	Pg	00 24 22.1	-1.2
	baz=302						
PAJU				SG	Sg	00 24 41.7	+0.5
HEF	Hetta	1.41	65	eP	Pn	00 24 22.8	-0.9
HEF				eS	Sg	00 24 41.4	-0.6
HEF	Hetta	1.41	65	PG	Pn	00 24 22.8	-0.9
HEF				MSG		00 24 40.1	
	comp=Z,11nm,0.2s						
HEF				SG	Sg	00 24 41.3	-0.6
ERTU	Ertsjaerv	1.50	149	P	Pn	00 24 24.5	-0.6
ERTU	Ertsjaerv	1.50	149	PG	Pn	00 24 24.2	-0.8
ERTU				SN	Sn	00 24 45.5	+0.2
KLF	Kolari	1.56	111	PG	Pn	00 24 25.3	-0.5
KLF				MSG		00 24 44.3	
	comp=Z,9.4nm,0.2s						
KLF				SN	Sg	00 24 47.3	+0.4
KTK1	Kautokeino	1.62	42	eP	Pn	00 24 26.4	-0.2
KTK1	Kautokeino	1.62	42	PG	Pn	00 24 26.4	-0.2
KTK1				SN	Sb	00 24 48.4	-0.1
HARU	Harads	1.71	170	P	Pn	00 24 28.1	+0.3
JETT	Jettan, Norway	1.72	2	eP	Pn	00 24 28.3	+0.2
JETT				eS	Sn	00 24 50.5	-0.3
JETT				IAML		00 24 52.6	
	comp=Z,59nm,0.5s						
TRO	Tromso	1.86	346	eP	Pb	00 24 30.7	-1.0
TRO	Tromso	1.86	346	PG	Pn	00 24 30.4	+0.5
TRO				SG	Sb	00 24 54.8	-0.6
STEI	Steigen	1.89	275	eP	Pb	00 24 31.6	-0.6
STEI				eS	Sb	00 24 56.4	+0.1
STEI				IAML		00 25 03.7	
	comp=Z,9.4nm,0.4s						
FAUS	Fauske	1.95	259	eP	Pb	00 24 32.3	-0.9
FAUS				eS	Sb	00 24 58.2	+0.3
FAUS				IAML		00 25 02.4	
	comp=Z,19nm,0.4s						
KALU	Kalix	2.34	147	PB	Pn	00 24 37.6	+1.1
KALU				SG	Sb	00 25 08.1	-1.2
TOF	Tornio	2.40	136	PB	Pn	00 24 38.6	+1.4
	baz=315						
TOF				MSG		00 25 08.1	
	comp=Z,5.3nm,0.2s						
TOF				SG	Sb	00 25 11.1	+0.4
RNF	Rovaniemi	2.57	116	PB	Pn	00 24 41.3	+1.6
RNF				SG	Sb	00 25 15.5	-0.4
ARCES	ARCESS Array B	2.57	46	Pn	Pn	00 24 40.3	+0.6
	comp=Z,0.5nm,0.3s,baz=227,slow=15,SNR=23						
ARCES				Lg	Lg	00 25 13.1	
	comp=Z,1.1nm,0.3s,baz=231,slow=24,SNR=13						
	comp=Z,0.9nm,0.3s						
RAJF	Raja-Jooseppi	3.09	74	PN	Pn	00 24 47.1	+0.3
RAJF				SB	Sb	00 25 30.2	-0.5
KEV	Kevo	3.12	49	PB	Pn	00 24 48.4	+1.1
KEV				SN	Sn	00 25 26.4	+1.2
RANF	Ranua	3.17	122	PB	Pn	00 24 49.1	+1.2
BURU	Burvik	3.31	171	PB	Pn	00 24 51.4	+1.7
BURU				SB	Sn	00 25 32.3	+2.6
VRF	Varrio	3.56	87	PB	Pb	00 24 58.5	-2.2
VRF				SG	Sb	00 25 47.1	+2.7
OUL	Oulu	3.58	138	PG	Pb	00 25 01.5	+0.5
OUL				SG	Sb	00 25 46.0	+1.0
KU2	Taivalkoski	3.83	120	PN	Pn	00 24 58.1	+1.2
OLKF	Oulanka, Finla	3.90	109	PN	Pn	00 24 59.0	+1.1
MSF	Maaselka	3.98	115	PN	Pn	00 25 00.3	+1.2
UMAU	Umeaa	3.98	177	PG	Pb	00 25 06.0	-1.7
KU6	Riekki	4.22	111	PN	Pn	00 25 02.4	+0.1
KU1	Kurvinen	4.35	117	PN	Pn	00 25 05.6	+1.5
KU1				SN	Sn	00 25 56.4	+0.9
FINES	FINESS Array B	6.89	156	Pn	Pn	00 25 39.3	+0.3
	comp=Z,0.1nm,0.3s,baz=347,slow=11,SNR=1.5						
FINES				Sn	Sn	00 26 57.3	-0.8
	comp=Z,0.2nm,0.3s,baz=353,slow=21,SNR=2.2						
FINES				Lg	Lg	00 27 33.0	
	comp=Z,0.4nm,0.3s,baz=344,slow=29,SNR=5.7						
	comp=Z,2.3nm,0.9s						
NOA	NORSAR Array B	7.85	214	Pn	Pn	00 25 52.3	+0.1
	baz=13,slow=12,SNR=1.9						
NOA				Lg	Lg	00 28 08.4	
	baz=14,slow=11,SNR=4.8						
	comp=Z,0.7nm,0.9s						

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*IDC **01** 00:57:30.4±2.2, 11°.25N×87°.54W, h104^{km}±27^{km}, mb2.8/1, mbtmp3.7/3, Error ellipse: s-maj=67.9km s-min=15.3km az=34.0*
*CATAC **01** 00:57:32.4±0.3, 12°N±2°×8°7W±°, h75^{km}±2^{km}, M4.1/31, MLv4.1/31, Error ellipse: s-maj=5.1km s-min=3.0km az=39.4, confirmed*
*UCR **01** 00:57:48.2±1.0, 11°.40N×85°.97W, h34^{km}±5^{km}, MW3.9*
ISC 01 00:57:31.4±1.0**, 12°.18N**±0°.05×**86°.89W**±0°.05**, h98**^{km}±6^{km}**, n70,** σ**0^{s}72**/84**, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALEN	Leon	0.28	5	P	Pn	00 57 45.4	-0.4
ALEN	Leon	0.28	5	S	Sn	00 57 56.2	-0.2
COPN	Copaltepe	0.29	89	P	Pn	00 57 45.3	-0.4
CNGA	Al SSO del Vol	0.37	31	P	Pn	00 57 45.9	-0.3
CNGA				S	Sn	00 57 57.6	+0.3
CNGN	Cerro Negro	0.37	31	S	Sn	00 57 59.2	+1.8
CNGN	Cerro Negro	0.37	31	P	Pn	00 57 46.0	-0.3
ILCN	San Idelfonso	0.44	25	P	Pn	00 57 46.2	-0.5
ILCN				S	Sn	00 57 57.3	-0.6
AMTN	Mateare	0.46	82	P	Pn	00 57 46.8	+0.1
AMTN	Mateare	0.46	82	S	Sn	00 57 58.8	+0.6
MOM2	El Cardon	0.48	57	P	Pn	00 57 46.7	-0.1
MOM2				S	Sn	00 57 58.7	+0.3
POLN	Al Sur del Vol	0.48	10	S	Sn	00 57 58.4	0.0
SAPS	Ciudad Sandino	0.48	91	P	Pn	00 57 47.2	+0.3
SAPS	Ciudad Sandino	0.48	91	S	Sn	00 57 58.6	+0.2
MOM3	MOM3	0.50	48	P	Pn	00 57 46.6	-0.4
MOM3				S	Sn	00 57 59.2	+0.6
PKGN	Cerro Pekin	0.50	351	P	Pn	00 57 47.5	+0.5
PKGN				S	Sn	00 57 59.3	+0.6
APQ3	Volcan Apoyequ	0.52	79	P	Pn	00 57 47.6	+0.5
APQ3				S	Sn	00 57 59.8	+0.9
APQ2	Apoyeque	0.56	88	P	Pn	00 57 47.1	-0.3
APQ2				S	Sn	00 58 00.0	+0.6
ABCN	Banco Central	0.57	95	P	Pn	00 57 47.8	+0.2
ABCN	Banco Central	0.57	95	S	Sn	00 58 00.2	+0.6
ALLN	Telcor Managua	0.61	92	S	Sn	00 58 00.4	+0.3
ALLN	Telcor Managua	0.61	92	P	Pn	00 57 47.9	+0.1
UNAN	Cigeo UNAN	0.61	96	P	Pn	00 57 47.9	0.0
UNAN				S	Sn	00 58 00.3	+0.1
MGAN	Managua	0.63	93	P	Pn	00 57 47.5	-0.6
MGAN	Managua	0.63	93	S	Sn	00 58 00.8	+0.2
MAS3	Al N del Volca	0.72	102	P	Pn	00 57 49.3	+0.5
MAS3				S	Sn	00 58 01.9	0.0
SABN	Sabanita	0.75	107	P	Pn	00 57 48.5	-0.7
MASN	Masaya	0.75	104	P	Pn	00 57 49.9	+0.7
MASN	Masaya	0.75	104	eP	Sn	00 58 01.7	-0.8
NANN	Nandasmo	0.79	107	S	Sn	00 58 04.7	+1.6
NANN	Nandasmo	0.79	107	P	Pn	00 57 50.9	+1.4
POTN	Potosi Cosigui	1.01	324	P	Pn	00 57 52.2	+0.4
POTN				S	Sn	00 58 08.1	+0.8
LIMN	Finca el Limon	1.02	30	P	Pn	00 57 52.2	+0.1
LIMN				S	Sn	00 58 07.8	+0.3
CSGN	Cosiguina Volc	1.03	321	P	Pn	00 57 52.3	+0.2
CSGN				S	Sn	00 58 08.2	+0.5
MATN	Matagalpa	1.21	52	P	Pn	00 57 53.6	-0.6
MATN	Matagalpa	1.21	52	S	Sn	00 58 10.9	-0.4
BOAB	BOACO BROADBAN	.23	77	S	Sn	00 58 12.2	+0.6
BOAB	BOACO BROADBAN	.23	77	P	Pn	00 57 54.8	+0.5
JAPN	Al SSO del Vol	1.35	118	P	Pn	00 57 56.3	+0.5
JAPN	Al SSO del Vol	1.35	118	eP	Pn	00 57 56.0	+0.2
CONN	Concepcion	1.38	116	P	Pn	00 57 56.1	0.0
CONN				S	Sn	00 58 15.2	+0.3
CNCH	Conchagua	1.43	320	P	Pn	00 57 57.1	+0.3
CNCH	Conchagua	1.43	320	S	Sn	00 58 16.6	+0.6
RCON	San Juan de Ri	1.49	29	S	Sn	00 58 18.7	+1.4
RCON	San Juan de Ri	1.49	29	P	Pn	00 57 58.3	+0.7
LCND	La Caada	1.49	319	P	Pn	00 57 57.7	+0.2
RCVN	Varillal2	1.56	26	P	Pn	00 57 59.1	+0.7
RCVN	Varillal2	1.56	26	S	Sn	00 58 19.8	+0.9
LCRUZ	La Cruz	1.65	131	eP	Pn	00 57 59.7	+0.2
CARN	Rivas	1.67	126	P	Pn	00 58 01.0	+1.4
CARN	Rivas	1.67	126	eP	Pn	00 57 59.8	+0.1
BUAI	Buenos Aires	2.00	130	eP	Pn	00 58 03.8	-0.2
LAPC	Finca la Perla	2.00	134	eP	Pn	00 58 03.9	-0.1
ALIBA	Liberia Airpor	2.06	140	eP	Pn	00 58 05.5	+0.9
GPS2	Hotel Rincn d	2.07	133	eP	Pn	00 58 05.2	+0.2
MESS	Mesas	2.19	130	eP	Pn	00 58 06.3	-0.2
VMAR	Armenia, Volca	2.21	128	eP	Pn	00 58 06.6	-0.1
COLC	Colonia	2.24	132	eP	Pn	00 58 07.5	+0.4
CUI	Cuipilapa	2.27	131	eP	Pn	00 58 07.8	+0.3
JUD3	Juan Diaz 3	2.40	146	eP	Pn	00 58 09.8	+0.6
NICO	Nicoya	2.48	145	eP	Pn	00 58 10.9	+0.7
QUEB	Quebradon, Cot	2.49	128	eP	Pn	00 58 10.6	+0.2
JTS	Las Juntas de	2.67	134	P	Pn	00 58 13.3	+0.5
	75nm,0.4s,baz=290,slow=22,SNR=54						
JTS				S	Sn	00 58 45.1	+0.5
	29nm,0.3s,baz=281,slow=20,SNR=5.4						
NYURE	Nandayure	2.70	143	eP	Pn	00 58 13.7	+0.6
CEDE	Laguna Cedeo	2.73	128	eP	Pn	00 58 14.3	+0.7
ARE1	Arenal 1	2.73	128	eP	Pn	00 58 13.7	+0.1
APG	El Apazote	4.47	309	P	Pn	00 58 38.5	+1.4
	1.5nm,0.7s,baz=134,slow=11,SNR=17						
CMIG	Matias Romero	9.15	303	P	Pn	00 59 41.5	+1.0
	3.6nm,0.3s,baz=136,slow=11,SNR=39						
TXAR	Lajitas Array	23.13	320	P	P	01 02 29.7	+0.4
	0.4nm,0.6s,baz=135,slow=9.1,SNR=4.9						
	0.4nm,0.6s						
ASAR	Alice Springs	139.67	248	PKP	PKPdf	01 16 45.8	-2.8
	0.7nm,0.8s,baz=101,slow=2.4,SNR=6.9						
WRA	Warramunga Arr	139.72	254	PKP	PKPdf	01 16 46.9	-1.9
	0.9nm,0.6s,baz=84,slow=2.1,SNR=10.0						

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*NEIC **01** 01:34:15.6±2.1, 15°.88S±0°.07×72°.20W±0°.06, h115^{km}±10^{km}, mb4.2/8, Error ellipse: s-maj=13.4km s-min=2.8km az=220.0*
*IDC **01** 01:34:18.9±2.1, 15°.07S×71°.74W, h126^{km}±15^{km}, mb3.9/2, mbtmp4.3/4, MS2.4/1, Error ellipse: s-maj=115.8km s-min=10.9km az=24.0*
*VAO **01** 01:34:19.9±0.7, 15°.63S×71°.73W, h135^{km}±6^{km}, mb4.2, Presumed earthquake*
ISC 01 01:34:14.0±0.7**, 15°.85S**±0°.06×**72°.16W**±0°.07**, h100**^{km}**, n52,** σ**1^{s}88**/56**, mb4.1**/5**, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	3.05	146		Pn	01 35 03.5	+3.0
AP01				Sn	Sn	01 35 38.7	+2.5
PB18	Visviri	3.09	124		Pn	01 35 06.1	+4.6
PB18				Sn	Sn	01 35 40.6	+2.5
PB12	IPOC Station P	3.26	148		Pn	01 35 05.6	+2.2

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PB16  IPOC Station P     3.54 135         Pn      01 35 11.0 +3.5
LPAZ  La Paz             3.89  97  P      Pn      01 35 16.2 +3.9
      14nm,0.5s,baz=276,slow=8.7,SNR=57
LPAZ                               S      Sn      01 35 58.5 +1.0
      31nm,0.6s,baz=192,slow=25,SNR=12
LPAZ                               LR     LR      01 36 21.4
      comp=Z,60nm,20.8s,baz=45,slow=33
LPAZ  La Paz             3.89  97 eP      Pn      01 35 13.8 +1.5
PSGCX Pisagua            4.20 153         Pn      01 35 17.2 +1.1
PB11  IPOC Station P     4.56 149         Pn      01 35 22.2 +1.2
GO01  Chusmiza           4.73 144         Pn      01 35 26.0 +2.4
TA01  Diego Aracena      5.05 158         Pn      01 35 28.8 +1.3
PB08  IPOC Station P     5.14 147         Pn      01 35 30.9 +1.9
PATCX Punta Patache      5.30 159         Pn      01 35 32.1 +1.2
PB01  IPOC Station P     5.75 154         Pn      01 35 37.5 +0.4
PB02  IPOC Station P     5.85 159         Pn      01 35 39.6 +1.2
NNA   Nana               5.95 310  P      Pn      01 35 42.8 +3.1
      45nm,0.3s,baz=136,slow=12,SNR=44
NNA                                S      Sn      01 36 49.3 +2.6
      47nm,0.6s,baz=49,slow=22,SNR=7.1
NNA   Nana               5.95 310         Pn      01 35 42.5 +2.7
PB09  IPOC Station P     6.53 155         Pn      01 35 49.2 +1.5
PB03  IPOC Station P     6.57 160         Pn      01 35 49.5 +1.2
PB05  IPOC Station P     7.21 165         Pn      01 35 57.1 +0.2
PB14  IPOC Station P     8.89 170  Pn     Pn      01 36 20.2 +0.3
AC01  Pan de Azucar     10.35 172  Pn     Pn      01 36 37.9 -1.7
VILB  Vilhena           11.93  78 eP      Pn      01 37 01.0  0.0
PTLB  Pontes e Lacer    12.55  90 eP      Pn      01 37 08.9 -0.1
TEFE  Tefe              14.32  32 eP      Pn      01 37 31.5 -0.7
MURT  Porto Murtinho    14.94 115 eP      Pn      01 37 37.8 -2.2
PDRB  Porto dos Gac     15.56  76 eP      Pn      01 37 46.7 -1.3
SALV  Santo Antonio     15.84  92 eP      Pn      01 37 50.4 -1.0
CLDB  Colider           16.66  75 eP      Pn      01 38 01.0 -0.6
MACA  Manacapuru-AM     16.92  43         Pn      01 38 02.2 -2.6
MACA  Manacapuru-AM     16.92  43 eP      Pn      01 38 01.3 -3.5
NPGB  Novo Progresso    18.63  64 eP      P       01 38 22.6 -1.4
ARAG  Araguaiana, MT    19.58  92 eP      P       01 38 32.7 -1.6
ITTB  Itaituba          19.76  56 eP      P       01 38 35.1 -1.2
SNDB  Serra Nova Dou    20.61  82 eP      P       01 38 43.8 -1.7
ITRB  Iturama           21.10 104 eP      P       01 38 50.9 +0.1
BOAV  Boa Vista         21.47  33         P       01 38 53.6 -1.0
BOAV                               IAmb   IAmb    01 38 59.3
      comp=Z,7.8nm,0.8s
BOAV  Boa Vista         21.47  33 eP      P       01 38 54.0 -0.7
RUSC  La Rusia          21.62 357  P      P       01 38 56.6 -0.1
ITAB  Concordia         21.77 125  P      P       01 38 56.9 -0.8
ITAB                               IAmb   IAmb    01 39 39.5
      comp=Z,17nm,1.4s
ITAB  Concordia         21.77 125 eP      P       01 38 58.9 +1.2
MAL2  Monte Alegre,     22.42  54  P      P       01 39 03.5 -1.2
CPSB  Cacapava Do Su    22.45 133 eP      P       01 39 07.2 +2.3
BB19B Bebedouro         23.00 107 eP      P       01 39 10.7 +0.2
IPMB  Ipameri, GO       23.00  99 eP      P       01 39 09.0 -1.6
PLTB  Pedras Altas      23.16 136  P      P       01 39 10.9 -1.1
PLTB                               IAmb   IAmb    01 39 36.3
      comp=Z,15nm,1.3s
BDFB  Brasilia          23.23  93  P      P       01 39 11.7 -1.2
      comp=Z,3.4nm,0.7s,baz=252,slow=11,SNR=7.7
      comp=Z,3.4nm,0.7s
BDFB  Brasilia          23.23  93  P      P       01 39 11.5 -1.4
JANB  Januaria          26.84  92 eP      P       01 39 44.4 -1.1
BSFB  Barra de Sao F    30.01 100 eP      P       01 40 13.4 -0.2
SNAA  Sanae             68.59 161  P      P       01 45 05.5 -0.4
SNAA                               IAmb   IAmb    01 45 41.7
      comp=Z,3.4nm,1.2s
TORD  Torodi Ar. Bea    78.50  73  P      P       01 46 03.2 -1.6
      comp=Z,3.3nm,0.8s,baz=289,slow=3.2,SNR=16
      comp=Z,3.3nm,0.8s
MJAR  Matsushiro Arr   146.06 313  PKPbc  PKPdf   01 53 43.8 +2.0
      comp=Z,0.3nm,0.4s,baz=116,slow=1.0,SNR=4.9
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*IDC **01** 01:40:32.2±5.0, 17.°77S×178.°66W, h588^{km}±57^{km}, mb3.1/8, mbtmp4.0/8, Error ellipse: s-maj=32.3km s-min=20.3km az=146.0*

*NEIC **01** 01:40:34.4±0.9, 17.°76S±0.°10×178.°8W±0.°2, h609^{km}±8^{km}, mb4.0/13, Error ellipse: s-maj=23.9km s-min=13.6km az=79.0*

ISC 01 01:40:30.6±0.6**, 17.°9S**±0.°2×**178.°7W**±0.°1**, h579**^{km}**, n51, σ0.^{s}90**/51**, mb3.8**/15**, Fiji Islands region**

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Code  Station Name        Δ°   AZ°   Phase ID            Time     Res
                                   Op     ISC         h  m  s     ISC
MSVF  Nonsavu            3.15 272  P      P       01 41 54.2 +5.2
CTAO  Charters Tower    33.23 260  P      P       01 46 21.4 +0.3
CTAO                               IAmb   IAmb    01 46 51.9
      comp=Z,9.9nm,1.3s
WB0   Warramunga Arr    44.39 260  P      P       01 47 51.3 +0.4
WB0                                IAmb   IAmb    01 48 28.4
      comp=Z,10.0nm,1.5s
WRA   Warramunga Arr    44.42 260  P      P       01 47 52.1 +0.8
      comp=Z,0.5nm,0.5s,baz=94,slow=7.8,SNR=9.2
WRA                                PcP    PcP     01 49 21.8 -0.4
      comp=Z,0.2nm,0.3s,baz=89,slow=3.6,SNR=5.1
      comp=Z,0.5nm,0.5s
WRA   Warramunga Arr    44.42 260  P      P       01 47 51.4 +0.2
ASAR  Alice Springs     44.59 254  P      P       01 47 53.4 +0.8
      comp=Z,2.8nm,0.7s,baz=88,slow=8.9,SNR=48
ASAR                               PcP    PcP     01 49 22.4 -0.3
      comp=Z,0.4nm,0.5s,baz=96,slow=3.5,SNR=7.4
      comp=Z,2.8nm,0.7s
ASAR  Alice Springs     44.59 254  P      P       01 47 52.1 -0.4
MJAR  Matsushiro Arr    67.72 323  P      P       01 50 32.1 +0.9
      comp=Z,0.7nm,0.7s,baz=159,slow=6.8,SNR=1.9
      comp=Z,0.7nm,0.7s
QSPA  South Pole Qui    72.21 180  P      P       01 50 59.3 +1.8
      comp=Z,1.0nm,0.8s,baz=14,slow=6.3,SNR=3.4
      comp=Z,1.0nm,0.8s
QSPA  South Pole Qui    72.21 180  P      P       01 50 59.6 +2.1
BEKR  Beckworth         79.00  42  P      P       01 51 35.6  0.0
BEKR                               IAmb   IAmb    01 52 17.2
      comp=Z,9.6nm,1.5s
NVAR  Mina Array Bea    79.54  44  P      P       01 51 39.2 +0.7
      comp=Z,0.6nm,0.5s,baz=222,slow=9.6,SNR=6.0
      comp=Z,0.6nm,0.5s
ILSW  Iliamna Southw    80.28  13  P      P       01 51 41.2 -0.5
J05D  Fort Rock, OR     80.42  39  P      P       01 51 43.9 +1.0
J05D                               IAmb   IAmb    01 51 44.9
      comp=Z,8.0nm,1.1s
M17K  Holitna River     80.78  10  P      P       01 51 45.0 +0.9
K15K  Wolf Creek Mou    81.02   8  P      P       01 51 46.8 +1.5
BELA  Belgrano 2        82.25 173  P      P       01 51 49.4 -2.1
BELA                               IAmb   IAmb    01 52 16.9
      comp=Z,6.1nm,1.4s
U15A  North Rim         82.65  48  P      P       01 51 55.6 +1.0
U15A                               IAmb   IAmb    01 51 56.0
      comp=Z,2.4nm,0.8s
ILAR  Eielson Array     85.88  13  P      P       01 52 08.8 -0.5
      comp=Z,0.5nm,0.4s,baz=222,slow=4.9,SNR=26
      comp=Z,0.5nm,0.4s
TX31  Lajitas Ar. Si    86.15  58  P      P       01 52 12.3 +0.7
TX31                               IAmb   IAmb    01 52 13.3
      comp=Z,3.5nm,1.0s
TXAR  Lajitas Array     86.16  58  P      P       01 52 12.4 +0.8
      comp=Z,1.5nm,0.8s,baz=220,slow=5.9,SNR=12
      comp=Z,1.5nm,0.8s
PDAR  Pinedale Array    87.46  44  P      P       01 52 17.6 -0.1
      comp=Z,0.7nm,0.6s,baz=218,slow=3.9,SNR=9.0
      comp=Z,0.7nm,0.6s
PDAR  Pinedale Array    87.46  44  P      P       01 52 17.4 -0.2
BVAR  Borovoye Array   116.66 321  PKhKP  PKPpre  01 58 08.0
      comp=Z,0.2nm,0.4s,baz=204,slow=1.4,SNR=8.9
FINES FINESS Array B   133.07 344  PKP    PKPdf   01 58 40.5  0.0
      comp=Z,3.9nm,0.9s,baz=128,slow=2.3,SNR=2.2
BUR08 Bucovina Ar. S   144.44 332  PKPab  PKPab   01 59 03.1 +0.7
BURAR Bucovina Array   144.45 332  PKPab  PKPab   01 59 03.2 +0.8
BRTR  Keskin Array B   144.58 315  PKP    PKPdf   01 59 01.8 -0.5
      comp=Z,0.4nm,0.5s,baz=108,slow=2.5,SNR=6.1
OSTC  Ostas           145.27 343 ePKP     PKPab   01 59 05.1 -0.3
CLL   Collm           145.35 347  PKPbc   PKPab   01 59 04.7 -0.9
UPC   Upice           145.37 343 ePKP     PKPab   01 59 04.8 -0.9
STEB  Steborice       145.37 341 ePKP     PKPab   01 59 04.8 -1.0
DPC   Dobruska-Polom  145.43 343 ePKP     PKPab   01 59 05.4 -0.6
KRLC  Kraliky         145.54 342 ePKP     PKPab   01 59 05.3 -1.2
MAUC  Maruska         145.86 341 ePKP     PKPab   01 59 06.7 -1.0
MMAI  Mount Meron Ar  145.92 303  PKPbc   PKPab   01 59 07.3 -1.3
      comp=Z,0.9nm,0.4s,baz=79,slow=4.7,SNR=10
PRU   Pruhonice       146.23 345 ePKP     PKPbc   01 59 06.5 -0.3
ZVC   Zvikov          146.82 345 ePKP     PKiKP   01 59 09.0 -1.4
KHC   Kasperske Hory  147.26 345 ePKP     PKPbc   01 59 09.9 +0.2
CKRC  Cesky Krumlov   147.36 344 ePKP     PKPbc   01 59 10.1 +0.2
GEC2  GERESS Array S  147.50 345  PKPbc   PKPbc   01 59 10.5 +0.2
GERES GERESS Array B  147.50 345  PKPbc   PKPbc   01 59 10.3  0.0
      comp=Z,1.3nm,0.7s,baz=24,slow=3.6,SNR=9.7
RONA  Rosalia, Austr  147.81 341 i PKP    PKiKP   01 59 11.5 -1.0
      comp=Z,0.2nm,0.2s
SOKA  Soboth          149.11 342 ePKP     PKPbc   01 59 14.2 -0.2
      comp=Z,0.3nm,0.3s
KBA   Koelnbreinsper  149.22 344 ePKP     PKPbc   01 59 14.2 -0.6
      comp=Z,1.1nm,0.5s
OBKA  Obir            149.40 342 ePKP     PKPbc   01 59 14.2 -0.9
      comp=Z,1.6nm,0.6s
WATA  Walderalm       149.41 346 i PKP    PKPbc   01 59 14.7 -0.5
      comp=Z,1.9nm,0.6s
WTTA  Wattenberg      149.47 346 i PKP    PKiKP   01 59 15.2 -0.9
      comp=Z,3.1nm,0.5s
MOTA  Moosalm         149.51 347 i PKP    PKPbc   01 59 14.7 -0.8
      comp=Z,2.0nm,0.8s
SQTA  Sankt Quirin    149.60 347 i PKP    PKPbc   01 59 14.5 -1.1
      comp=Z,1.7nm,0.7s
ABTA  Abfaltersbach   149.74 345 i PKP    PKPbc   01 59 14.7 -1.2
      comp=Z,1.3nm,0.5s
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*SOME **01** 02:05:38.8, 40.°15N×83.°53E, h5^{km}*

*IDC **01** 02:05:38.3±0.7, 39.°67N×82.°87E, h0^{km}, mb4.0/16, mbtmp4.0/22, ML3.5/6, MS2.9/6, Error ellipse: s-maj=17.5km s-min=11.1km az=51.0*

*MOS **01** 02:05:38.4±0.9, 39.°64N×82.°89E, h12^{km}, mb4.5/7, Error ellipse: s-maj=13.1km s-min=5.2km az=124.0*

*NEIC **01** 02:05:40.9±2.7, 39.°71N±0.°04×82.°80E±0.°09, h10^{km}±1^{km}, mb4.3/22, Error ellipse: s-maj=13.8km s-min=3.4km az=59.0*

*NNC **01** 02:05:43.4±2.6, 39.°82N×82.°82E, h12^{km}±10^{km}, mb4.7, mpv4.3, Error ellipse: s-maj=17.3km s-min=16.3km az=96.0*

ISC 01 02:05:40.1±0.5**, 39.°65N**±0.°05×**82.°75E**±0.°04**, h10**^{km}**, n136, σ1.^{s}87**/142**, mb4.2**/21**, MS3.1**/3**, 14C-5D, Southern Xinjiang**

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Code  Station Name        Δ°   AZ°   Phase ID            Time     Res
                                   Op     ISC         h  m  s     ISC
WUS   Wushi              3.11 301         Pn      02 06 30.1 +0.7
KTMS  Ketmen             4.20 335  Pg     Pb      02 06 54.3 +0.1
      35nm,0.3s
KTMS                               Lg     Lg      02 07 49.1
      101nm,0.4s
KTMS  Ketmen             4.20 335 eP      Pb      02 06 54.3 +0.1
      35nm,0.3s
KTMS                              eS      Sb      02 07 49.0 +4.0
      101nm,0.4s
SHLS  Shalkode           4.29 326  Pg     Pb      02 06 54.8 -0.9
      89nm,0.3s
SHLS                               Lg     Lg      02 07 49.8
      258nm,0.3s
SHLS  Shalkode           4.29 326 eP      Pb      02 06 54.8 -0.9
      89nm,0.3s
SHLS                              eS      Sb      02 07 49.8 +2.1
      258nm,0.3s
SHLS  Shalkode           4.29 326 eP      Pn      02 06 44.9 -0.7
TARG  Taragay, Kyrgy     4.30 301         Pn      02 06 47.6 +1.7
TARG  Taragay, Kyrgy     4.30 301  P      Pn      02 06 47.6 +1.7
PRZ   Przheval'sk        4.34 312         Pn      02 06 49.1 +2.8
PRZ   Przheval'sk        4.34 312  P      Pn      02 06 49.1 +2.8
PDGK  Podgornoye         4.42 327 ⇓Pn     Pn      02 06 48.9 +1.5
      22nm,0.3s
PDGK                              ⇓Sn     Sn      02 07 41.0 +2.0
      140nm,0.8s
PDGK                              ⇓Lg     Lg      02 08 00.6
      143nm,0.6s
PDGK  Podgornoye         4.42 327  P      Pn      02 06 48.8 +1.5
PDGK                                              02 07 40.9
UZB   Uzynbulak          4.48 323  Pg     Pb      02 07 02.5 +3.6
      59nm,0.4s
UZB                                Lg     Lg      02 08 03.2
      133nm,0.4s
UZB   Uzynbulak          4.48 323 eP      Pb      02 07 02.5 +3.6
      59nm,0.4s
UZB                               eS      Sg      02 08 03.2 -0.9
      133nm,0.4s
UZB   Uzynbulak          4.48 323 eP      Pn      02 06 50.0 +1.8
KPKS  Kokpek             4.89 323  Pg     Pb      02 07 10.0 +4.2
      0.3nm,0.2s
KPKS                               Lg     Lg      02 08 15.2
      210nm,0.4s
KDJ   Kajisay            4.90 302         Pn      02 06 55.3 +1.4
KDJ   Kajisay            4.90 302  P      Pn      02 06 55.3 +1.4
KSH   Kashi              5.24 271  Pn     Pn      02 07 05.4 +6.8
KSH                                Sn     Sb      02 08 10.7 -4.1
KSH                                smax   smax
      comp=N,200nm,0.8s
KSH                                smax   smax
      comp=E,180nm,1.0s
KNOS  Konyrlen           5.41 332  Pg     Pb      02 07 18.1 +3.4
      comp=E,32nm,0.3s
KNOS                               Lg     Lg      02 08 29.1
      comp=E,55nm,0.4s
BLB   Baldybastay        5.47 326  Pg     Pb      02 07 19.4 +3.6
      comp=E,21nm,0.2s
BLB                                Lg     Lg      02 08 31.4
      comp=E,84nm,0.4s
WMQ   Urumqi             5.58  40 ePn     Pn      02 07 05.6 +2.4
WMQ                                Sn     Sn      02 08 05.8 -1.5
WMQ                                smax   smax
      comp=N,150nm,1.1s
WMQ                                smax   smax
      comp=E,120nm,1.1s
KNDC  Almaty             5.62 311 ⇑Pn     Pn      02 07 06.0 +2.2
      comp=E,60nm,0.6s
KNDC                              ⇑Pg     Pg      02 07 28.0 +0.3
      comp=E,70nm,0.6s
KNDC                              ⇑Lg     Lg      02 08 38.1
      comp=E,132nm,0.9s
KNDC  Almaty             5.62 311  P      Pn      02 07 06.0 +2.2
ARXS  Arharly            5.86 323  Pg     Pb      02 07 27.1 +4.8
      comp=E,16nm,0.4s
ARXS                               Lg     Lg      02 08 44.8
      comp=E,37nm,0.5s
ARXS  Arharly            5.86 323 eP      Pb      02 07 27.1 +4.8
ARXS                              eS      Sg      02 08 44.8 -3.3
ARXS  Arharly            5.86 323 eP      Pn      02 07 07.6 +0.6
KAPS  Kapalarasan        6.17 337  Pg     Pb      02 07 30.8 +3.1
      comp=E,12nm,0.3s
KAPS                               Lg     Lg      02 08 51.8
      comp=E,45nm,0.4s
AAK   Ala-Archa          6.91 298  Pn     Pn      02 07 23.6 +2.1
      comp=E,1.3nm,0.3s,baz=123,slow=10,SNR=14
AAK                                Lg     Lg      02 09 21.7
      comp=E,1.7nm,0.3s,baz=289,slow=12,SNR=4.6
AAK                                LR     LR      02 10 11.2
      comp=E,54nm,19.0s,baz=116,slow=39
      comp=E,3.0nm,0.4s
AAK   Ala-Archa          6.91 298         Pn      02 07 22.5 +0.9
AAK   Ala-Archa          6.91 298 ⇑Pn     Pn      02 07 23.7 +2.1
      comp=E,1.0nm,0.5s
AAK                               ⇓Pg     Pg      02 07 50.1 -2.3
      comp=E,33nm,1.1s
AAK                               ⇑Lg     Lg      02 09 26.7
      comp=E,65nm,1.4s
AAK   Ala-Archa          6.91 298  P      Pn      02 07 22.5 +0.9
MK31  Makanchi Array     7.15 357 ⇑Pn     Pn      02 07 25.1 +0.3
      comp=E,3.4nm,0.3s,baz=183,slow=12,SNR=230
MK31                              ⇑Sn     Sn      02 08 45.7 -0.4
      comp=E,8.4nm,0.5s,baz=178,slow=18,SNR=4.2
MK31                              ⇑Lg     Lg      02 09 29.8
      comp=E,7.0nm,0.5s,baz=181,slow=27
MK31  Makanchi Array     7.15 357  P      Pn      02 07 25.0 +0.3
MK31                                              02 08 43.7
MKAR  Makanchi Array     7.15 357  Pn     Pn      02 07 24.9 +0.1
      comp=E,3.7nm,0.3s,baz=184,slow=12,SNR=63
MKAR                               Sn     Sn      02 08 45.4 -0.7
      comp=E,4.7nm,0.3s,baz=192,slow=17,SNR=5.3
MKAR                               Lg     Lg      02 09 27.5
      comp=E,2.6nm,0.3s,baz=172,slow=23,SNR=2.4
MKAR                               LR     LR      02 10 37.2
      comp=E,54nm,20.1s,baz=141,slow=42
      comp=E,7.6nm,0.4s
MAKZ  Makanchi           7.18 356         Pn      02 07 25.4 +0.2
MAKZ  Makanchi           7.18 356 ⇑Pn     Pn      02 07 25.6 +0.4
      comp=E,9.8nm,0.3s
MAKZ                              ⇑Sn     Sn      02 08 45.3 -1.5
      comp=E,11nm,0.3s
MAKZ                              ⇓Lg     Lg      02 09 23.6
      comp=E,6.4nm,0.5s
MAKZ  Makanchi           7.18 356  P      Pn      02 07 25.4 +0.2
ARSB  Arslanbob          7.63 286  Pn     Pn      02 07 32.5 +1.0
ARSB  Arslanbob          7.63 286  P      Pn      02 07 32.5 +1.0
MANEM Manem              8.92 260         Pn      02 07 52.1 +2.8
GAR   Garm               9.66 270         Pn      02 07 58.8 -0.4
NIL   Nilore             9.69 235         Pn      02 08 00.1 +0.4
NIL   Nilore             9.69 235  P      Pn      02 08 00.1 +0.4
KK31  Karatay Array      9.83 295 ⇑Pg     Pn      02 08 40.4  +39
      comp=E,2.7nm,0.6s
KK31                              ⇑Lg     Lg      02 10 57.7
      comp=E,12nm,0.8s
KKAR  Karatay Array      9.83 295  Pn     Pn      02 08 00.5 -0.9
KKAR  Karatay Array      9.83 295  P      Pn      02 08 00.5 -0.9
IUG   Iuzhnay            9.95 289 eP      Pn      02 08 09.1 +5.9
GOMU  GeErMu            10.13 106  Pn     Pn      02 08 04.4 -1.6
GOMU                               Pg             02 08 45.9
GOMU                               Sn     Sn      02 10 03.6 +3.7
GOMU                               Sg             02 11 00.6
GOMU                               smax   smax
      comp=N,9.0nm,0.7s
GOMU                               smax   smax
      comp=E,4.0nm,0.3s
CHGR  Chuyangaron       10.60 269         Pn      02 08 11.4 -0.8
CHGR  Chuyangaron       10.60 269  P      Pn      02 08 11.4 -0.8
KURBB Kurchatov Arra    11.37 346  Pn     Pn      02 08 22.2 -0.3
      comp=E,0.2nm,0.3s,baz=169,slow=11,SNR=7.1
KURBB                              Sn     Sn      02 10 25.2 -4.4
      comp=E,0.2nm,0.3s,baz=155,slow=22,SNR=1.4
KURBB                              Lg     Lg      02 11 43.5
      comp=E,0.1nm,0.3s,baz=152,slow=33,SNR=4.5
      comp=E,0.7nm,0.3s
KURBB Kurchatov Arra    11.37 346 ⇑Lg     Lg      02 11 43.4
      comp=E,31nm,0.8s
KURK  Kurchatov         11.44 347         Pn      02 08 22.2 -1.3
KURK                                      Sn      02 10 25.1 -6.2
KURK  Kurchatov         11.44 347 ⇑Lg     Lg      02 11 45.6
      comp=E,8.1nm,0.8s
KURK  Kurchatov         11.44 347  P      Pn      02 08 22.2 -1.3
KURK                                              02 10 25.2
SHAA  Shahritus         11.63 264         Pn      02 08 24.6 -1.7
KBL   Kabul             12.07 249         Pn      02 08 30.8 -1.5
KBL   Kabul             12.07 249  P      Pn      02 08 30.8 -1.5
GTA   Gaotai            13.18  86 eP      Pn      02 08 43.6 -3.8
GTA                                pP     P       02 08 48.1 -9.5
GTA                                pmax   pmax
      comp=Z,6.0nm,1.4s
GTA                                smax   smax
      comp=N,17nm,1.4s
GTA                                smax   smax
      comp=E,11nm,1.0s
GTA                                LR     LR
      comp=N,240nm,10.9s
GTA                                LR     LR
      comp=E,210nm,11.3s
GTA                                LR     LR
      comp=Z,120nm,12.0s
ZAA0  Zalesovo Array    14.38   5         Pn      02 09 00.5 -3.1
ZALV  Zalesovo Beam     14.38   5  Pn     Pn      02 09 00.6 -3.0
      comp=Z,0.6nm,0.3s,baz=186,slow=13,SNR=12
ZALV                               Sn     Sn      02 11 41.6 -1.3
      comp=Z,0.5nm,0.3s,baz=183,slow=20,SNR=4.1
ZALV                               LR     LR      02 14 43.6
      comp=Z,18nm,19.0s,baz=183,slow=38
ZALV  Zalesovo Beam     14.38   5  Pn     Pn      02 09 00.9 -2.7
BVAR  Borovoye Array    15.84 332  Pn     Pn      02 09 21.9 -1.2
      comp=Z,0.2nm,0.3s,baz=142,slow=12,SNR=17
      comp=Z,0.5nm,0.4s
BORK  Borovoye          15.88 332         Pn      02 09 22.5 -1.1
BORK                               IAmb   IAmb    02 09 29.3
      comp=Z,8.9nm,0.8s
BORK  Borovoye          15.88 332  P      Pn      02 09 22.5 -1.1
BORK                               pmax   pmax
      comp=Z,9.0nm,0.8s
SHL   Shillong          15.99 149         Pn      02 09 23.8 -1.6
SHL                                IAmb   IAmb    02 09 32.5
      comp=Z,9.5nm,0.6s
SHL   Shillong          15.99 149  P      Pn      02 09 23.8 -1.6
SHL                                pmax   pmax
      comp=Z,10.0nm,0.6s
HRA   Herat             17.19 259  Pn     Pn      02 09 40.1 -0.4
AB31  Akbulak array     18.84 308         P       02 09 59.1 -0.9
AB31                               IAmb   IAmb    02 10 02.8
      comp=Z,7.2nm,0.8s
ABKAR Akbulak array     18.84 308         P       02 09 59.2 -0.8
SONM  Songino Array     18.89  57  P      P       02 09 59.5 -1.2
      comp=Z,0.1nm,0.3s,baz=251,slow=12,SNR=6.5
      comp=Z,1.4nm,0.9s
SONM  Songino Array     18.89  57 eP      Pn      02 10 04.7 +3.4
AKTO  Aktyubinsk        20.44 310  P      P       02 10 17.6 +0.1
      comp=Z,9.9nm,0.6s,baz=109,slow=12,SNR=14
      comp=Z,9.9nm,0.6s
ARTI  Arti              23.18 324  P      P       02 10 46.2 -0.4
ARTI                               IAmb   IAmb    02 10 48.1
      comp=Z,6.2nm,0.5s
ARTI  Arti              23.18 324  P      P       02 10 46.2 -0.4
ARTI                               pmax   pmax
      comp=Z,6.0nm,0.5s
CMAR  Chiang Mai Arr    25.34 142  P      P       02 11 06.7 -0.5
      comp=Z,0.8nm,0.3s,baz=332,slow=10,SNR=10
CMAR                               LR     LR      02 23 26.9
      comp=Z,12nm,19.9s,baz=195,slow=42
      comp=Z,0.8nm,0.3s
CMAR  Chiang Mai Arr    25.34 142  P      P       02 11 06.6 -0.7
CMAR  Chiang Mai Arr    25.34 142 eP      P       02 11 11.4 +4.2
CMAR                               pmax   pmax
      comp=Z,1.0nm,0.4s
MARD  Mardin            32.73 280  P      P       02 12 13.4 +0.4
MARD                               IAmb   IAmb    02 12 15.5
      comp=Z,5.1nm,0.9s
ARPR  Arapgir-MALATY    34.08 284  P      P       02 12 24.8  0.0
KSRS  Korea Array       35.12  79  P      P       02 12 33.8 +0.1
      comp=Z,0.5nm,0.7s,baz=298,slow=9.9,SNR=1.8
      comp=Z,0.5nm,0.7s
BR131 Keskin Array S    37.41 286  P      P       02 12 53.9 +0.5
BR131                              IAmb   IAmb    02 12 55.1
      comp=Z,7.1nm,0.8s
BR131 Keskin Array S    37.41 286  P      P       02 12 53.9 +0.5
BR131                              pmax   pmax
      comp=Z,7.0nm,0.8s
BRTR  Keskin Array B    37.41 286  P      P       02 12 54.5 +1.1
      comp=Z,4.0nm,0.6s,baz=96,slow=8.6,SNR=25
      comp=Z,4.0nm,0.6s
BRTR  Keskin Array B    37.41 286  P      P       02 12 53.8 +0.4
ASF   Jabal al Asfar    37.55 273  LR     LR      02 31 09.5
      comp=Z,29nm,18.3s,baz=350,slow=41
MMAI  Mount Meron Ar    38.36 275  P      P       02 13 02.8 +1.4
      comp=Z,0.6nm,0.4s,baz=70,slow=7.2,SNR=6.8
      comp=Z,0.6nm,0.4s
AKASG Malin Array Be    38.53 305  P      P       02 13 02.9 +0.3
      comp=Z,0.5nm,0.4s,baz=67,slow=9.1,SNR=4.7
      comp=Z,0.5nm,0.4s
AKASG Malin Array Be    38.53 305  IAmb   IAmb    02 13 46.3
      comp=Z,3.5nm,1.4s
AKASG Malin Array Be    38.53 305 eP      P       02 13 02.8 +0.3
AKASG                              pmax   pmax
      comp=Z,2.0nm,0.4s
TIXI  Tiksi             39.44  21  LR     LR      02 31 01.1
      comp=Z,89nm,18.1s,baz=216,slow=39
BORA  Eskisehir         39.72 288  P      P       02 13 12.6 -0.1
BORA                               IAmb   IAmb    02 13 31.8
      comp=Z,17nm,1.3s
FINES FINESS Array B    40.43 322  P      P       02 13 18.5 +0.2
      comp=Z,2.1nm,0.8s,baz=95,slow=9.6,SNR=9.5
      comp=Z,2.1nm,0.8s
ELL   Elmali            41.13 283  P      P       02 13 25.5 +1.0
ELL                                IAmb   IAmb    02 13 29.5
      comp=Z,6.2nm,1.1s
ELL   Elmali            41.13 283  P      P       02 13 25.5 +1.0
ELL                                pmax   pmax
      comp=Z,6.0nm,1.1s
PABE  Paberze           41.38 313  P      P       02 13 26.9 +0.8
MLR   Muntele Rosu      41.49 297  P      P       02 13 28.7 +1.3
MLR                                IAmb   IAmb    02 13 29.9
      comp=Z,3.9nm,0.7s
MLR   Muntele Rosu      41.49 297  P      P       02 13 28.7 +1.3
MLR                                pmax   pmax
      comp=Z,4.0nm,0.7s
BURAR Bucovina Array    41.55 301  P      P       02 13 28.0 +0.2
BUR08 Bucovina Ar. S    41.55 301  P      P       02 13 28.6 +0.8
ARCES ARCESS Array B    42.11 334  P      P       02 13 32.3 +0.3
      comp=Z,5.4nm,0.9s,baz=88,slow=10,SNR=8.5
      comp=Z,5.4nm,0.9s
OJC   Ojcow             44.55 305  P      P       02 13 52.9 +0.9
OJC   Ojcow             44.55 305  P      P       02 13 52.9 +0.9
KRLC  Kraliky           46.48 306 eP      P       02 14 08.1 +0.8
KRLC  Kraliky           46.48 306 eP      P       02 14 08.1 +0.8
HFS   Hagfors           46.50 320  P      P       02 14 07.5 +0.3
      comp=Z,1.7nm,0.3s,baz=116,slow=8.0,SNR=23
      comp=Z,1.7nm,0.3s
DPC   Dobruska-Polom    46.70 306 eP      P       02 14 10.4 +1.4
DPC   Dobruska-Polom    46.70 306 eP      P       02 14 10.4 +1.4
CHVC  Chvalec           46.81 307 eP      P       02 14 10.9 +1.1
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CHVC	Chvalec	46.81	307	eP	P	02 14 10.9	+1.1
UPC	Upice	46.86	306	eP	P	02 14 11.4	+1.2
UPC	Upice	46.86	306	eP	P	02 14 11.4	+1.2
NC405	NORSAR Array S	47.36	321	P	P	02 14 14.5	+0.6
NB2	NORSAR Subarra	47.61	321	P	P	02 14 16.0	+0.1
	comp=Z,1.9nm,0.6s,baz=82,slow=7.9						
NOA	NORSAR Array B	47.61	321	P	P	02 14 15.8	-0.1
	comp=Z,2.4nm,0.6s,baz=83,slow=7.7,SNR=14						
	comp=Z,2.4nm,0.6s						
PRU	Pruhonice	47.90	306	eP	P	02 14 19.0	+0.7
PRU				e		02 14 19.3	
PRU	Pruhonice	47.90	306	eP	P	02 14 19.0	+0.7
CKRC	Cesky Krumlov	48.36	305	eP	P	02 14 23.2	+1.3
CKRC	Cesky Krumlov	48.36	305	eP	P	02 14 23.2	+1.3
CLL	Collm	48.51	308	eP	P	02 14 24.0	+1.1
CLL	Collm	48.51	308	eP	P	02 14 24.0	+1.1
GERES	GERESS Array B	48.74	305	P	P	02 14 25.3	+0.4
	comp=Z,0.5nm,0.4s,baz=72,slow=8.6,SNR=4.4						
	comp=Z,0.5nm,0.4s						
GERES	GERESS Array B	48.74	305	eP	P	02 14 25.8	+0.9
GERES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TUE	Stuetta	52.29	303	P	P	02 14 51.5	-0.3
TUE				IAmb	IAmb	02 15 15.2	
	comp=Z,6.7nm,1.2s						
BNI	Bardonecchia	54.55	302	P	P	02 15 08.6	+0.2
BNI	Bardonecchia	54.55	302	P	P	02 15 08.6	+0.2
BNI				pmax	pmax		
	comp=Z,13nm,1.4s						
EKA	Eskdalemuir Ar	56.43	317	P	P	02 15 21.6	0.0
	comp=Z,0.6nm,0.3s,baz=70,slow=6.6,SNR=16						
	comp=Z,0.6nm,0.3s						
B21K	Ikpikpuk River	63.30	19	P	P	02 16 09.7	+1.1
ESDC	Sonseca Array	64.01	301	P	P	02 16 12.8	-1.0
	comp=Z,1.3nm,0.8s,baz=57,slow=7.0,SNR=10						
	comp=Z,1.3nm,0.8s						
ESDC	Sonseca Array	64.01	301	IAmb	IAmb	02 16 41.6	
	comp=Z,2.7nm,1.4s						
TORD	Torodi Ar. Bea	74.89	275	P	P	02 17 20.5	-0.9
	comp=Z,0.9nm,0.7s,baz=36,slow=8.5,SNR=6.8						
	comp=Z,0.9nm,0.7s						
WRA	Warramunga Arr	76.36	131	P	P	02 17 28.9	-0.7
	comp=Z,1.6nm,0.7s,baz=316,slow=6.1,SNR=6.8						
	comp=Z,1.6nm,0.7s						
WRA	Warramunga Arr	76.36	131	IAmb	IAmb	02 17 29.5	
	comp=Z,0.2nm,0.9s						
ASAR	Alice Springs	79.03	133	P	P	02 17 44.0	-0.4
	comp=Z,0.9nm,0.6s,baz=316,slow=5.5,SNR=10						
	comp=Z,0.9nm,0.6s						
NVL	N'lazarevskaya	121.06	201	i PKIKP	PKiKP	02 24 36.4	+4.6
NVL				e		02 26 07.0	
NVL				ePPP	PPP	02 28 41.3	
NVL				eSSS	SSS	02 47 11.8	
NVL				pmax	pmax		
	comp=Z,11nm,1.3s						

IDC ***01*** *02:13:05.3±2.5, 4°.83S×144°.77E, h53km±22km, mb3.7/7, mbtmp4.1/10, ML4.0/2, MS2.8/4, Error ellipse: s-maj=30.8km s-min=11.8km az=51.0*

NEIC ***01*** *02:13:07.5±2.1, 5°.00S±0°.06×144°.65E±0°.09, h82km±9km, mb4.2/5, Error ellipse: s-maj=13.5km s-min=8.6km az=86.0*

ISC 01 02:13:08.3±0.8**, 4°.98S**±0°.09×**144°.6E**±0°.1**, h82km, n23, σ1s.50**/24**, mb4.0**/8**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	4.61	302	P	Pn	02 14 14.7	-1.0
	2.8nm,0.3s,baz=158,slow=9.8,SNR=6.5						
JAY				S	Sn	02 15 06.5	-1.5
	16nm,0.7s,baz=88,slow=23,SNR=1.9						
JAY				LR	LR	02 16 45.9	
	comp=Z,49nm,19.3s,baz=163,slow=47						
	7.5nm,0.4s						
PMG	Port Moresby	5.07	150	P	Pn	02 14 20.3	-1.6
	10nm,0.4s,baz=106,slow=5.2,SNR=5.4						
PMG				S	Sn	02 15 18.1	-1.0
	14nm,0.3s,baz=103,slow=22,SNR=5.6						
PMG				LR	LR	02 16 38.1	
	comp=Z,49nm,20.5s,baz=270,slow=42						
PMG	Port Moresby	5.07	150		Pn	02 14 20.6	-1.2
COEN	Coen	9.04	189		Pn	02 15 15.5	-0.5
WB0	Warramunga Arr	17.76	213	P	P	02 17 08.6	-1.4
WR8	Warramunga Arr	17.85	213		P	02 17 10.6	-0.5
WR8				IAmb	IAmb	02 17 12.5	
	comp=Z,18nm,1.1s						
WRA	Warramunga Arr	17.93	213	P	P	02 17 12.1	+0.2
	comp=Z,0.9nm,0.3s,baz=31,slow=11,SNR=38						
	comp=Z,9.5nm,0.8s						
KNRA	Kununurra	18.86	235	P	P	02 17 20.7	-1.4
ASAR	Alice Springs	21.26	208	P	P	02 17 48.1	+0.1
	comp=Z,2.9nm,0.8s,baz=27,slow=10,SNR=23						
ASAR				LR	LR	02 26 00.3	
	comp=Z,51nm,18.5s,baz=296,slow=36						
	comp=Z,2.9nm,0.8s						
ASAR	Alice Springs	21.26	208	P	P	02 17 48.1	+3.6
JHJ	Hachijo jima 2	38.17	353	LR	LR	02 33 43.6	
	comp=Z,34nm,19.2s,baz=268,slow=33						
CMAR	Chiang Mai Arr	50.69	299	P	P	02 22 01.6	+1.7
	comp=Z,2.1nm,0.4s,baz=114,slow=6.4,SNR=7.8						
	comp=Z,2.1nm,0.4s						
MKAR	Makanchi Array	75.21	321	P	P	02 24 42.5	+0.3
	comp=Z,0.6nm,0.5s,baz=100,slow=8.7,SNR=5.1						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	75.21	321	P	P	02 24 42.6	+0.4
ZALV	Zalesovo Beam	76.90	328	P	P	02 24 50.3	-1.2
	comp=Z,0.6nm,0.6s,baz=134,slow=6.3,SNR=2.9						
	comp=Z,0.6nm,0.6s						
G18K	Tagagawik	81.61	20	P	P	02 25 17.3	+0.3
G18K				IAmb	IAmb	02 25 39.9	
	comp=Z,5.1nm,1.2s						
IMAR	Indian Mountai	83.39	21	P	P	02 25 24.9	-1.3
BVAR	Borovoye Array	84.56	324	P	P	02 25 32.6	+0.2
	comp=Z,1.0nm,0.6s,baz=109,slow=6.6,SNR=8.5						
	comp=Z,1.0nm,0.6s						
QSPA	South Pole Qui	84.98	180	P	P	02 25 37.5	+3.0
	comp=Z,0.8nm,0.5s,baz=16,slow=3.4,SNR=5.0						
	comp=Z,0.8nm,0.5s						
QSPA	South Pole Qui	84.98	180	P	P	02 25 38.1	+3.6
QSPA				IAmb	IAmb	02 26 03.8	
	comp=Z,2.7nm,1.0s						
ILAR	Eielson Array	85.49	24	P	P	02 25 35.8	-1.0
	comp=Z,0.8nm,0.6s,baz=254,slow=5.3,SNR=15						
	comp=Z,0.8nm,0.6s						
ILAR	Eielson Array	85.49	24	P	P	02 25 35.1	-1.7
EKA	Eskdalemuir Ar	123.53	339	PKP	PKiKP	02 31 56.1	-0.3
	comp=Z,1.5nm,1.0s,baz=35,slow=2.9,SNR=3.7						

SDD ***01*** *02:14:07.7±1.9, 19°.12N×66°.79W, h118km±24km, MD3.4, ML3.1, MW3.1, Presumed earthquake*

NEIC ***01*** *02:14:08.3±1.5, 19°.19N±0°.04×67°.05W±0°.03, h10km±1km, ML2.1/10, Md3.0/9(RSPR), Error ellipse: s-maj=6.2km s-min=4.0km az=167.0*

RSPR ***01*** *02:14:09.6, 19°.27N×67°.13W, h58km±7km, MD3.0/9*

OSPL ***01*** *02:14:10.9±1.9, 19°.22N×67°.17W, h58km±42km, ML2.2, Presumed earthquake*

ISC 01 02:14:11.4±1.6**, 19°.1N**±0°.1×**67°.05W**±0°.04**, h59km**±21km**, n44, σ1s.21**/56**, 16C-8D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.66	185		Pn	02 14 23.3	-1.9
AGPR	Aguadilla, PR	0.66	185	⇑eP	Pn	02 14 24.0	-1.2
AGPR	Aguadilla, PR	0.66	185	eS	Sn	02 14 35.8	+0.6
AGPR	Aguadilla, PR	0.66	185	⇑ePg	Pn	02 14 26.4	+1.2
AGPR				⇓eSg	Sn	02 14 38.3	+3.1
AGPR				IAML		02 14 42.8	
	comp=N,1µm,0.3s						
AGPR	Aguadilla, PR	0.66	185	i P	Pn	02 14 24.1	-1.2
AGPR				eS	Sn	02 14 35.6	+0.4
AGPR				IAML		02 14 39.3	
	comp=Z,147nm,1.6s						
AOPR	Arecibo Observ	0.83	160		Pn	02 14 25.9	-1.4
AOPR	Arecibo Observ	0.83	160		Sn	02 14 37.3	-1.6
AOPR	Arecibo Observ	0.83	160	⇓eP	Pn	02 14 25.9	-1.4
AOPR	Arecibo Observ	0.83	160	⇑ePg	Pn	02 14 26.3	-1.0
AOPR				⇑eSg	Sn	02 14 41.6	+2.7
AOPR				IAML		02 14 47.8	
	comp=N,1µm,0.3s						
PRSN	Puerto Rico Se	0.91	186		Pn	02 14 27.9	-0.5
PRSN					Sn	02 14 40.4	-0.3
PRSN	Puerto Rico Se	0.91	186	⇓eP	Pn	02 14 27.9	-0.5
PRSN	Puerto Rico Se	0.91	186	eS	Sn	02 14 40.4	-0.3
PRSN	Puerto Rico Se	0.91	186	⇑ePg	Pn	02 14 28.4	+0.1
PRSN				⇑eSg	Sn	02 14 41.7	+1.0
PRSN				IAML		02 14 44.4	
	comp=N,2µm,0.3s						
LSP	Las Mesas	0.95	182		Pn	02 14 27.7	-1.2
LSP					Sn	02 14 42.1	+0.4
LSP	Las Mesas	0.95	182	⇑eP	Pn	02 14 27.7	-1.2
LSP	Las Mesas	0.95	182	eS	Sn	02 14 42.1	+0.4
ECPR	Experimental S	1.03	141	⇑eP	Pn	02 14 28.7	-1.3
ECPR	Experimental S	1.03	141	eS	Sn	02 14 44.6	+1.0
CRPR	Cabo Rojo, PR	1.12	183		Pn	02 14 30.0	-1.0
CRPR					Sn	02 14 46.0	+0.5
CRPR	Cabo Rojo, PR	1.12	183	IAML		02 14 46.8	
	comp=N,41nm,1.4s						
CRPR				IAML		02 14 48.6	
	comp=E,33nm,0.3s						
CRPR	Cabo Rojo, PR	1.12	183	⇑eP	Pn	02 14 30.0	-1.0
CRPR	Cabo Rojo, PR	1.12	183	eS	Sn	02 14 46.0	+0.5
CRPR	Cabo Rojo, PR	1.12	183	⇑ePg	Pn	02 14 30.4	-0.6
CRPR				⇑eSg	Sn	02 14 45.7	+0.1
CRPR				IAML		02 14 53.1	
	comp=N,149nm,0.2s						
CRPR	Cabo Rojo, PR	1.12	183	i P	Pn	02 14 30.2	-0.8
CRPR				eS	Sn	02 14 45.6	+0.1
CRPR				IAML		02 14 48.5	
	comp=Z,37nm,2.8s						
MLPR	Magueyes Islan	1.15	180	⇑eP	Pn	02 14 30.7	-0.8
MLPR	Magueyes Islan	1.15	180	eS	Sn	02 14 47.5	+1.1
MLPR	Magueyes Islan	1.15	180	⇑ePg	Pn	02 14 30.4	-1.1
MLPR				⇑eSg	Sn	02 14 46.8	+0.4
MLPR				IAML		02 14 58.7	
	comp=N,118nm,0.3s						
OBIP	Obispado Ponce	1.16	159		Pn	02 14 31.1	-0.4
OBIP					Sn	02 14 47.1	+0.6
OBIP	Obispado Ponce	1.16	159	IAML		02 14 50.2	
	comp=N,41nm,0.6s						
OBIP				IAML		02 14 50.2	
	comp=E,34nm,0.3s						
OBIP	Obispado Ponce	1.16	159	⇑eP	Pn	02 14 31.1	-0.4
OBIP	Obispado Ponce	1.16	159	eS	Sn	02 14 47.1	+0.6
GCPR	Guaynabo City	1.23	131		Sn	02 14 49.4	+1.3
GCPR	Guaynabo City	1.23	131		Pn	02 14 30.9	-1.6
GCPR				IAML		02 15 04.7	
	comp=E,26nm,3.2s						
GCPR	Guaynabo City	1.23	131	⇓eP	Pn	02 14 31.7	-0.8
GCPR	Guaynabo City	1.23	131	eS	Sn	02 14 49.4	+1.3
SJG	San Juan	1.32	140	i P	Pn	02 14 35.4	+1.7
SJG				eS	Sn	02 14 50.7	+0.2
SJG				IAML		02 15 03.1	
	comp=Z,13nm,1.5s						
HUMP	Col San Antoni	1.50	131		Pn	02 14 35.7	-0.4
HUMP					Sn	02 14 55.5	+0.7
HUMP	Col San Antoni	1.50	131	IAML		02 15 00.5	
	comp=E,23nm,1.2s						
HUMP	Col San Antoni	1.50	131	⇓eP	Pn	02 14 35.7	-0.4
HUMP	Col San Antoni	1.50	131	eS	Sn	02 14 55.5	+0.7
HIDR	Higuey Centro	1.67	252	⇓ePg	Pn	02 14 37.8	-0.6
HIDR				⇑eSg	Sn	02 15 01.3	+2.6
HIDR				IAML		02 15 10.0	
	comp=N,85nm,0.3s						
MIDR	Miches	1.90	266	⇓eP	Pn	02 14 39.4	-2.1
DR12	Loma Pena Alta	2.23	262	Pn	Pn	02 14 45.5	-0.7
HATOM	Hato Mayor del	2.23	262	ePg	Pn	02 14 44.7	-1.4
HATOM				⇓eSg	Sn	02 15 14.6	+2.0
HATOM				IAML		02 15 31.5	
	comp=N,56nm,0.3s						

MDD ***01*** *02:21:09.1±2.8, 32°.58N×18°.92W, h0km, mb_Lg3.4/7, Error ellipse: s-maj=24.6km s-min=17.5km az=69.0*

ISC 01 02:20:59.2±4.4**, 32°.10N**±0°.09×**19°.1W**±0°.2**, h10km, n20, σ1s.62**/22**, Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMOZ	Porto Moniz, M	1.73	65	eS	Sb	02 21 53.7	+0.6
PMAR	Madeira	1.92	71	eS	Sb	02 21 59.3	+0.8
PMAR				IAML		02 21 59.6	
PMAR				IAML		02 22 00.1	
PMAR				IAML		02 22 01.8	
PMPS	Porto Santo	2.49	67	eS	Sn	02 22 10.0	-0.3
PMPST	Porto Santo, M	2.50	66	eS	Sn	02 22 09.8	-0.7
CROM	Garafia, La Pa	3.48	163	S	Sg	02 22 53.8	+2.7
CROM				i IVmb_Lg		02 22 55.1	
CMIR	El Paso, La Pa	3.54	163	P	Pg	02 22 06.9	-0.3
CMIR				S	Sg	02 22 50.3	-2.8
CMIR				i IVmb_Lg		02 22 54.4	
TBT	Taburiente	3.55	163	S	Sg	02 22 50.6	-2.7
TBT				i IVmb_Lg		02 22 54.9	
CENR	El Paso, La Pa	3.62	163	S	Sg	02 22 55.4	-0.1
CJED	Jedey, El Paso	3.66	163	S	Sg	02 22 56.0	-0.6
CJED				i IVmb_Lg		02 22 59.9	
CVIE	Villa de Mazo,	3.66	163	S	Sg	02 22 56.1	-0.6
CDOS	Garachico, Isl	4.29	151	S	Sb	02 23 08.9	+2.1
CNOR	Icod de los Vi	4.31	151	S	Sb	02 23 09.8	+2.5
CFOR	Fortaleza, Los	4.33	150	S	Sb	02 23 08.2	+0.1
CFOR				i IVmb_Lg		02 23 17.4	
CPVI	La Orotava (Te	4.35	151	S	Sb	02 23 11.0	+2.2
CDIE	La Orotava (Te	4.38	150	S	Sb	02 23 09.6	+0.3
CCHO	La Orotava (Te	4.38	151	S	Sb	02 23 11.4	+2.0
CCHO				i IVmb_Lg		02 23 16.0	
CCAN	Las Canadas	4.41	151	S	Sb	02 23 10.4	+0.2
CLAJ	Vilaflor (Tene	4.44	152	S	Sb	02 23 12.1	+1.0
CTFS	San Miguel de	4.52	152	S	Sb	02 23 12.1	-1.2
CLUM	San Bartolome	5.19	144	P	Pb	02 22 30.6	+0.4
CLUM				S	Sb	02 23 31.0	-1.6
CLUM				i IVmb_Lg		02 24 23.3	

GCG 01 02:24:25.6±0.5**, 15°.24N**×**90°.77W, h16km**±147km**, MD3.9, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APG	El Apazote	0.38	128	i P	Pb	02 24 34.1	0.0
SOKI	Kika Raxquin	0.73	236	eP	Pb	02 24 40.4	+0.1
STG8	El Palmar, Qui	0.96	216	eP	Pb	02 24 43.0	-1.0
STG5	El Palmar, Qui	1.00	214	eP	Pb	02 24 44.5	-0.1
CCIG	Comitan	1.68	309	eP	Pn	02 24 54.6	+0.1
PETF	Flores	1.89	27	eP	Pn	02 24 57.3	+0.1

IDC ***01*** *02:34:32.5±1.6, 10°.26S×165°.95E, h0km, mb3.9/4, mbtmp4.0/5, ML4.1/1, Error ellipse: s-maj=53.4km s-min=27.4km az=126.0*

NEIC ***01*** *02:34:53.0±2.0, 11°.3S±0°.1×166°.5E±0°.2, h184km±11km, mb4.4/10, Error ellipse: s-maj=25.8km s-min=16.1km az=85.0*

ISC 01 02:34:49.3±1.2**, 11°.2S**±0°.1×**166°.5E**±0°.2**, h150km, n19, σ1s.83**/13**, mb4.1**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	4.30	171		Pn	02 35 56.8	+3.3
SANVU				Sn	Sn	02 36 42.1	-1.5
MARNC	Mare, Loyalty	10.35	172	Pn	Pn	02 37 11.8	-2.1
DZM	Mont Dzumac	10.83	180	Pn	Pn	02 37 22.8	+2.4
	1.2nm,0.3s,baz=82,slow=6.0,SNR=23						
	3.0nm,0.3s						
DZM	Mont Dzumac	10.83	180		Pn	02 37 22.5	+2.1
EIDS	Eidsvold	20.29	224	P	P	02 39 13.4	-0.1
EIDS				IAmb	IAmb	02 39 36.2	
	comp=Z,21nm,1.5s						
CTAO	Charters Tower	21.38	243	P	P	02 39 26.1	+0.9
CTAO				IAmb	IAmb	02 39 57.8	
	comp=Z,11nm,1.4s						
COEN	Coen	22.91	261	P	P	02 39 41.0	+0.5
COEN				IAmb	IAmb	02 40 22.2	
	comp=Z,11nm,1.4s						
ARMA	Armidale	23.60	214	P	P	02 39 44.8	-1.9
ARMA				IAmb	IAmb	02 39 55.8	
	comp=Z,27nm,1.4s						
BHW	Baring Head	31.00	168	P	P	02 40 52.3	-0.3
WR8	Warramunga Arr	31.97	250	P	P	02 40 59.8	-1.7
WR8				IAmb	IAmb	02 41 24.1	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	32.12	250	P	P	02 41 00.8	-1.9
	comp=Z,0.6nm,0.6s,baz=82,slow=9.1,SNR=7.7						
	comp=Z,0.6nm,0.6s						
WRA	Warramunga Arr	32.12	250	P	P	02 41 00.1	-2.6
ASAR	Alice Springs	33.38	244	P	P	02 41 11.5	-2.2
	comp=Z,1.0nm,0.7s,baz=73,slow=10.0,SNR=14						
	comp=Z,1.0nm,0.7s						
FITZ	Fitzroy Crossi	40.05	255	P	P	02 42 09.2	-0.9
K15K	Wolf Creek Mou	77.37	15	P	P	02 46 26.9	-0.4
STLK	Strandline Lak	79.48	19	P	P	02 46 39.6	+0.6
STLK				IAmb	IAmb	02 47 17.0	
	comp=Z,11nm,1.4s						
ILAR	Eielson Array	83.41	18	P	P	02 46 57.4	-2.1
	comp=Z,0.8nm,0.6s,baz=234,slow=5.4,SNR=18						
	comp=Z,0.8nm,0.6s						
MKAR	Makanchi Array	94.11	317	P	P	02 47 49.6	-1.3
	comp=Z,0.5nm,0.5s,baz=84,slow=6.5,SNR=5.1						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	94.11	317	P	P	02 47 49.7	-1.2

IDC ***01*** *02:50:17.3±4.1, 5°.77S×148°.87E, h92km±34km, mb3.5/6, mbtmp3.9/8, MS3.0/2, Error ellipse: s-maj=55.5km s-min=23.1km az=98.0*

ISC 01 02:50:18.2±1.2**, 5°.8S**±0°.1×**148°.9E**±0°.3**, h100km, n11, σ1s.35**/10**, mb3.7**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.98	205	P	Pn	02 51 16.8	-0.3
	72nm,0.3s,baz=25,slow=6.4,SNR=43						
PMG				S	Sn	02 52 02.6	-0.3
	146nm,0.4s,baz=8.2,slow=18,SNR=15						
WRA	Warramunga Arr	19.94	224	P	P	02 54 42.2	-0.2
	6.3nm,0.8s,baz=48,slow=11,SNR=38						
ASAR	Alice Springs	22.89	217	P	P	02 55 13.0	-0.6
	2.8nm,0.5s,baz=52,slow=9.3,SNR=53						
	2.8nm,0.5s						
KSRS	Korea Array	47.24	337	P	P	02 58 42.1	+1.0
	1.0nm,0.6s,baz=150,slow=8.7,SNR=4.6						
	1.0nm,0.6s						
CMAR	Chiang Mai Arr	54.79	297	LR	LR	03 22 00.8	
	comp=Z,7.7nm,21.9s,baz=40,slow=35						
SONM	Songino Array	65.13	330	P	P	03 00 49.5	+1.0
	0.4nm,0.6s,baz=131,slow=8.0,SNR=2.0						
	0.4nm,0.6s						
MKAR	Makanchi Array	78.51	320	LR	LR	03 38 25.2	
	comp=Z,19nm,18.1s,baz=312,slow=37						
ZALV	Zalesovo Beam	79.82	327	P	P	03 02 14.8	-0.6
	0.6nm,0.5s,baz=123,slow=5.3,SNR=2.2						
	0.6nm,0.5s						
QSPA	South Pole Qui	84.19	180	P	P	03 02 40.5	+2.2
	1.0nm,0.8s,baz=306,slow=1.7,SNR=3.5						
	1.0nm,0.8s						
ILAR	Eielson Array	84.55	23	P	P	03 02 38.1	-1.8
	0.4nm,0.8s,baz=259,slow=5.6,SNR=3.0						
	0.4nm,0.8s						
TORD	Torodi Ar. Bea	146.83	285	PKPbc	PKPbc	03 09 48.5	-1.4
	0.2nm,0.4s,baz=144,slow=2.3,SNR=5.9						

NAO ***01*** *03:02:33.7, 34°.98N×21°.13E, h33km, MB3.6*

IDC ***01*** *03:03:48.0±1.3, 43°.24N×18°.05E, h0km, mb3.6/1, mbtmp3.6/13, ML3.0/9, MS3.1/2, Error ellipse: s-maj=19.5km s-min=11.8km az=28.0*

PDG ***01*** *03:03:49.1±0.6, 43°.20N×17°.93E, h10km±3km, MD3.9/12, ML3.9/13, Error ellipse: s-maj=1.1km s-min=2.5km az=0.0*

BEO ***01*** *03:03:49.3±0.4, 43°.33N×17°.97E, h12km±2km, ML4.0/11*

NEIC ***01*** *03:03:50.1±1.7, 43°.25N±0°.05×18°.05E±0°.05, h10km±1km, mb4.3/5, Error ellipse: s-maj=8.2km s-min=5.8km az=15.0*

RHSSO ***01*** *03:03:50.5±0.3, 43°.28N×18°.06E, h8km, ML4.0/6*

PRU ***01*** *03:03:51.9, 43°.31N×18°.20E, h10km, M4.1*

ISC 01 03:03:49.8±1.0**, 43°.28N**±0°.02×**18°.05E**±0°.01**, h7km**±7km**, n255, σ1s.41**/351**, mb4.6**/3**, 40C-24D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	Ston	0.48	213	ePg	Pg	03 03 58.9	-0.1
STON				Sg	Sg	03 04 05.9	+0.6
STON	Ston	0.48	213	ePg	Pg	03 03 58.7	-0.3
STON				eSg	Sg	03 04 06.7	+1.5
BRY	Bratogost	0.52	136	⇓iPg	Pg	03 03 59.6	-0.2
BRY				i Sg	Sg	03 04 07.9	+1.4
TREB	Trebinje	0.60	158	⇑iPg	Pg	03 04 00.9	-0.4
TREB				eSg	Sb	03 04 10.7	-0.5
DBRK	Dubrovnik	0.61	173	i Pg	Pg	03 04 01.6	+0.1
DBRK				Sg	Sg	03 04 10.4	+0.9
UPM	Unac-Piva	0.63	96	⇑iPg	Pg	03 04 02.3	+0.4
UPM				i Sg	Sb	03 04 13.0	+0.7
RICI	Ricice	0.70	288	ePg	Pg	03 04 03.0	-0.3
RICI				Sg	Sg	03 04 11.4	-1.1
MAKA	Makarska	0.75	271	i Pg	Pg	03 04 03.6	-0.7
MAKA				Sg	Sg	03 04 13.6	-0.4
NKME	Niksic	0.83	127	⇓iPg	Pg	03 04 05.6	-0.2
NKME				eSg	Sb	03 04 18.9	+0.9
HCY	Herceg Novi	0.89	158	⇓iPg	Pg	03 04 06.7	-0.1
HCY				i Sg	Sb	03 04 20.2	+0.6
CEME	Cevo	0.97	139	⇑iPg	Pg	03 04 07.2	-1.1
CEME				eSg	Sb	03 04 22.5	+0.6
PLE	Pljevlja	0.98	86	⇑iPg	Pg	03 04 08.9	+0.3
PLE				i Sg	Sn	03 04 23.8	-0.4
LSTV	Lastovo	0.99	240	ePg	Pg	03 04 07.9	-0.9
LSTV				Sg	Sg	03 04 22.1	+0.5
RUDO	Rudo	1.02	70	⇑iPg	Pg	03 04 08.6	-0.8
RUDO				eSg	Sg	03 04 22.1	-0.5
BBLS	Lazi&#263i	1.15	59	ePg	Pb	03 04 12.0	0.0
BBLS				eSg	Sn	03 04 28.4	0.0
BUM	Brajici-Budva	1.15	147	⇑iPg	Pb	03 04 11.5	-0.6
BUM				i Sg	Sn	03 04 28.3	-0.2
KOME	Kolasin	1.15	111	⇓iPg	Pb	03 04 12.0	-0.1
KOME				eSg	Sn	03 04 29.6	+1.1
HVAR	Hvar	1.18	266	ePg	Pb	03 04 11.2	-1.2
HVAR				Sg	Sg	03 04 27.9	+0.3
PDG	Podgorica	1.22	133		Pn	03 04 12.2	-1.1
PDG					Sn	03 04 29.9	-0.2
PDG	Podgorica	1.22	133	⇓P	Pn	03 04 12.0	-1.2
PDG				⇑S	Sn	03 04 29.8	-0.2
PDG	Podgorica	1.22	133	ePg	Pn	03 04 12.2	-1.1
PDG				eSg	Sn	03 04 31.5	+1.4
PDG	Podgorica	1.22	133	⇑iPg	Pn	03 04 11.5	-1.8
PDG				i Sg	Sn	03 04 30.8	+0.7
DRME	Dracevica, Mon	1.37	142	⇓iPg	Pn	03 04 15.6	+0.3
DRME				eSg	Sg	03 04 34.1	+0.3
KIJV	Kijevo	1.40	302	ePn	Pn	03 04 15.6	-0.1
KIJV				Sn	Sg	03 04 38.6	+3.8
SJES	Sjenica	1.40	90	ePg	Pg	03 04 17.0	+0.3
SJES				eSg	Sg	03 04 35.6	+0.7
IVA	Berane	1.41	106	⇓iPg	Pn	03 04 15.7	-0.2
IVA				eSg	Sg	03 04 35.9	+0.9
PVY	Plav	1.56	115	⇓iPn	Pn	03 04 18.3	+0.3
PVY				i Sn	Sb	03 04 39.0	0.0
IVAS	Ivanjica	1.56	78	ePg	Pn	03 04 18.2	+0.2
IVAS				eSg	Sb	03 04 38.7	-0.3
ULC	Ulcinj	1.58	146	⇑iPg	Pn	03 04 18.3	+0.1
ULC				i Sg	Sn	03 04 38.8	-0.1
BLY	Banja Luka	1.60	337	⇑iPn	Pb	03 04 19.3	-0.4
BLY				eSn	Sn	03 04 39.4	0.0
BLY	Banja Luka	1.60	337	⇑P	Pb	03 04 19.0	-0.6
BLY				⇓S	Sb	03 04 39.9	-0.2
TEKS	Tekeris	1.66	39	ePg	Pn	03 04 18.4	-1.0
TEKS				eSg	Sg	03 04 44.3	+1.1
ZIRJ	Zirje	1.79	283	ePn	Pn	03 04 22.0	+0.8
ZIRJ				Sn	Sb	03 04 45.1	-0.5
MORI	Morici	1.80	290	ePn	Pb	03 04 22.4	-0.7
MORI				Sn	Sg	03 04 47.2	-0.5
TRUS	Trudelj	1.95	60	ePg	Pn	03 04 23.1	-0.2
TRUS				eSg	Sg	03 04 52.9	+0.4
GRUS	Gruza	2.03	72	ePg	Pn	03 04 24.6	+0.2
GRUS				eSg	Sg	03 04 54.5	-0.5
UDBI	Udbina	2.07	308	i Pn	Pb	03 04 27.4	-0.4
UDBI				Sn	Sb	03 04 53.9	+0.1
GOCS	Kraljevo Serbi	2.08	81	ePg	Pn	03 04 25.5	+0.4
GOCS				eSg	Sg	03 04 57.1	+0.6
SELS	Selova	2.24	90	ePn	Pn	03 04 27.9	+0.6
A251A	Rujevac	2.25	326	ePn	Pn	03 04 28.9	+1.4
FRGS	Fruska Gora	2.27	33	ePn	Pn	03 04 26.5	-1.2
AVAS	Avala Beograd	2.27	51	ePn	Pn	03 04 27.0	-0.8
SGRT	San Giovanni R	2.28	229		Pn	03 04 25.9	-2.1
DUGI	Dugi Otok	2.29	289	ePn	Pn	03 04 29.0	+1.0
DUGI				Sn	Sb	03 04 59.1	-0.8
PLIT	Plitvice	2.37	313	ePn	Pn	03 04 30.8	+1.7
PHP	Peshkopia	2.38	131	P	Pb	03 04 31.6	-1.4
VIRC	Vir	2.40	296	ePn	Pn	03 04 30.5	+1.1
VIRC				Sn	Sb	03 05 00.8	-2.2
MOSL	Moslavina	2.52	339	ePn	Pn	03 04 31.1	0.0
NVLJ	Novalja	2.63	300	ePn	Pn	03 04 33.5	+0.8
NVLJ				Sn	Sb	03 05 07.8	-2.0

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BOVS  Bovan             2.69  81 ⇓P      Pn     03 04 33.8 +0.4
BOVS                             ⇑S      Sn     03 05 06.8 +0.7
BOVS  Bovan             2.69  81 ePn     Pn     03 04 33.6 +0.2
BOVS                             eSn     Sn     03 05 06.1 -0.1
RABC  Rab               2.78 303 ePn     Pn     03 04 35.6 +0.9
BARS  Barje             2.80  98 ePn     Pn     03 04 35.6 +0.6
BARS                             eSn     Sn     03 05 07.7 -1.2
MATE  Matera            2.81 201 ⇓P      Pn     03 04 33.9 -1.1
MATE                             ⇓S      Sn     03 05 07.2 -2.0
SKO   Skopje            2.82 116 i Pn    Pn     03 04 37.5 +2.3
KUBS  Kucevo            2.86  65 ePn     Pn     03 04 33.9 -1.9
ACER  Acerenza          2.94 213         Pn     03 04 35.5 -1.5
MORH  Mrgy, Hungar      2.97   8 ePn     Pn     03 04 38.2 +0.9
MORH                             eSn     Sn     03 05 13.6 +0.4
MORH  Mrgy, Hungar      2.97   8 ⇓P      Pn     03 04 36.4 -0.9
OHR   Ohrid             2.97 136 i Pn    Pb     03 04 40.7 -2.4
BORS2 Bor- Borsko je    2.99  73 ePn     Pn     03 04 36.2 -1.4
VRSS  Vrsac             2.99  51 ePn     Pn     03 04 36.6 -1.0
BOJS  Bojanci           3.00 319 i Pn    Pn     03 04 38.8 +1.1
BOJS                             eSn     Sn     03 05 14.1 +0.2
MDVR  Moldovita         3.04  59 ⇓P      Pn     03 04 37.9 -0.4
BANR  Banloc            3.06  45 ⇑P      Pn     03 04 39.2 +0.7
SUBS  Subotica          3.06  21 ePn     Pn     03 04 37.4 -1.1
ZAGS  Zajecar           3.09  79 ePn     Pn     03 04 39.3 +0.4
RIY   Rijeka            3.28 310 ePn     Pn     03 04 43.1 +1.6
BEHE  Becsehely         3.32 345         Pn     03 04 41.0 -1.2
BEHE  Becsehely         3.32 345 ePn     Pn     03 04 42.4 +0.2
BEHE                             eSn     Sn     03 05 21.7 -0.2
KBN   Korca             3.34 141  P      Pn     03 04 44.4 +1.9
BOSS  Bosilegrad        3.35 102 ePn     Pn     03 04 43.8 +1.3
ZAPS  Zavoj             3.35  88 ePn     Pn     03 04 43.3 +0.8
TRAN  Tran              3.40  96  P      Pn     03 04 44.3 +1.0
PAOL  Paolisi           3.42 230         Pn     03 04 43.6 -0.1
GUMA  Gualdo di Mace    3.46 268         Pn     03 04 44.3 +0.3
BZS   Buzias            3.46  46 ⇓P      Pn     03 04 44.1  0.0
CAMP  Campotosto        3.49 259         Pn     03 04 45.0 +0.4
BRJN  Brijuni           3.50 299 ePn     Pn     03 04 45.2 +0.6
DJES  Djerdap           3.51  65 ⇑P      Pn     03 04 45.7 +0.9
HERR  Herculane         3.53  61 ⇑P      Pn     03 04 45.0  0.0
AQU   L'Aquila          3.54 257⇑iPn     Pn     03 04 45.8 +0.6
AQU                              eSn     Sn     03 05 27.6 +0.2
RMGR  Halanga-Turnu     3.63  66 ⇑P      Pn     03 04 46.1 -0.3
NEST  Nestorio          3.63 141  P      Pn     03 04 48.4 +1.9
NEST                              S      Sn     03 05 15.8  -14
FDMO  Fiordimonte       3.64 268         Pn     03 04 46.5  0.0
NRCA  Norcia            3.65 265         Pn     03 04 47.0 +0.3
PUNG  Punghina          3.67  72 ⇑P      Pn     03 04 47.8 +0.8
CUC   Castrocucco       3.68 208         Pn     03 04 46.5 -0.6
SURR  Surduc            3.83  48 ⇑P      Pn     03 04 48.0 -1.0
PENT  Pentalofos        3.85 142  P      Pn     03 04 51.4 +1.9
BLSH  Balsha            3.85  94  P      Pn     03 04 52.2 +2.7
VTS   Vitosha           3.86  98  P      Pn     03 04 50.7 +0.9
VTS                               S      Sn     03 05 25.9  -10
VTS   Vitosha           3.86  98  P      Pn     03 04 51.3 +1.6
VTS                               S      Sn     03 05 34.8 -0.6
VAY   Valandovo         3.88 119 i Pn    Pn     03 04 51.5 +1.7
TRI   Trieste           3.92 310         Pn     03 04 51.0 +0.7
VALD  Valchedram        3.94  82  P      Pn     03 04 52.8 +2.2
SIRR  Siria             3.94  39 ⇑P      Pn     03 04 49.6 -1.1
SRE   Strehaia          3.97  68 ⇑P      Pn     03 04 51.7 +0.6
GRG   Griva             3.98 124  P      Pn     03 04 52.3 +1.1
GZR   Gura Zlata        4.00  56 ⇑P      Pn     03 04 51.8 +0.3
KKB   Krupnik           4.01 109  P      Pn     03 04 53.3 +1.6
KKB   Krupnik           4.01 109  P      Pn     03 04 53.5 +1.8
KKB                               S      Sn     03 05 40.4 +1.4
SOKA  Soboth            4.02 329         Pn     03 04 52.4 +0.6
SOKA                                     Sn     03 05 38.2 -1.0
SOKA  Soboth            4.02 329 i Pn    Pn     03 04 52.4 +0.6
      12nm,0.3s,SNR=12
SOKA                             eSn     Sn     03 05 38.2 -1.0
      18nm,0.4s
PLNA  Plana             4.03 100  P      Pn     03 04 54.2 +2.2
MURB  Monte Urbino      4.04 272         Pn     03 04 52.9 +0.9
KZN   Kozani            4.07 136  P      Pn     03 04 53.8 +1.4
CESX  Cesi              4.07 262         Pn     03 04 53.3 +0.9
OBKA  Obir              4.08 324         Pn     03 04 54.1 +1.5
OBKA  Obir              4.08 324 i Pn    Pn     03 04 54.1 +1.5
      3.0nm,0.2s
OBKA  Obir              4.08 324 ePn     Pn     03 04 54.0 +1.4
OBKA                             eSn     Sn     03 05 42.0 +1.3
KPRO  Kipourio          4.14 142  P      Pn     03 04 55.5 +1.9
MPEP  Malo Peshtene     4.15  87  P      Pn     03 04 55.4 +1.8
KNT   Kendrikon         4.17 119  P      Pn     03 04 55.2 +1.3
SABO  M.te Sabotino     4.17 312         Pn     03 04 54.7 +0.8
JAN   Janina            4.18 149  P      Pn     03 04 54.5 +0.5
JAN                               S      Sn     03 05 30.1  -13
TIP   Timpagrande       4.21 194         Pn     03 04 53.9 -0.5
BUD   Budapest          4.26   9 ePn     Pn     03 04 52.3 -2.8
BSZH  Besenyszg         4.32  20 ⇑P      Pn     03 04 55.6 -0.2
DEV   Deva              4.34  51 ⇓P      Pn     03 04 57.1 +1.0
ARSA  Arzberg           4.36 337         Pn     03 04 56.7 +0.3
ARSA  Arzberg           4.36 337 i Pn    Pn     03 04 56.7 +0.3
      6.1nm,0.4s,SNR=11
ARSA  Arzberg           4.36 337 ePn     Pn     03 04 56.7 +0.3
PRMD  Pramanda          4.39 148  P      Pn     03 04 57.7 +0.9
THE   Thessaloniki      4.52 124  P      Pn     03 04 59.7 +1.1
SOP   Sopron            4.53 347 ePn     Pn     03 04 58.5 -0.2
SRO   Srobarova         4.54   2 ePN     Pn     03 04 59.9 +1.0
SRO                              eSN     Sn     03 05 47.7 -4.2
MMB   Musomishta        4.56 110  P      Pn     03 05 01.7 +2.5
PGB   Panagyurishte     4.56  98  P      Pn     03 05 02.1 +2.9
MYKA  Terra Mystica     4.59 319         Pn     03 05 01.0 +1.4
MYKA  Terra Mystica     4.59 319 i Pn    Pn     03 05 01.0 +1.4
      3.9nm,0.3s
LIT   Litokhoron        4.59 132  P      Pn     03 05 00.5 +0.9
LIT   Litokhoron        4.59 132         Pn     03 04 59.7 +0.1
RONA  Rosalia, Austr    4.59 345         Pn     03 04 59.3 -0.4
RONA                                     Sn     03 05 50.7 -2.6
RONA  Rosalia, Austr    4.59 345 ePn     Pn     03 04 59.3 -0.4
      1.6nm,0.4s
RONA                             eSn     Sn     03 05 50.7 -2.6
      29nm,0.7s
HORT  Hortiatis         4.62 124  P      Pn     03 05 01.5 +1.5
BORR  Bors              4.64  33 ⇑P      Pn     03 04 60.0 -0.3
LOT   Lotru             4.64  60 ⇓P      Pn     03 05 00.1 -0.3
PLVB  Pleven            4.79  86 ⇓P      Pn     03 05 02.5 +0.1
PSZ   Piszkesteto       4.82  15         Pn     03 05 01.9 -1.0
PSZ   Piszkesteto       4.82  15 ⇑P      Pn     03 05 02.0 -0.8
PSZ   Piszkesteto       4.82  15 ePn     Pn     03 05 01.8 -1.0
PSZ                              eSn     Sn     03 05 55.4 -3.5
DRGR                    4.82  42 ⇑P      Pn     03 05 02.0 -0.8
STAL  STALIGIAL         4.83 310         Pn     03 05 03.1 +0.2
CONA  Conrad Observa    4.90 342 ePn     Pn     03 05 04.0  0.0
      0.4nm,0.2s
CONA                             eSn     Sn     03 05 58.3 -2.6
      36nm,0.9s
LTVH  Ltavrtes, Hu      4.92  32 ⇓P      Pn     03 05 04.0 -0.2
MARR  Marisel-Cluj      4.95  45 ⇑P      Pn     03 05 04.5 -0.1
OSSC  Osservatorio P    4.96 275         Pn     03 05 03.6 -1.2
KBA   Koelnbreinsper    5.05 320         Pn     03 05 07.7 +1.6
KBA                                      Sn     03 06 04.8  0.0
KBA   Koelnbreinsper    5.05 320 i Pn    Pn     03 05 07.7 +1.6
      4.4nm,0.3s,SNR=8.2
KBA                              eSn     Sn     03 06 04.8  0.0
      39nm,0.8s
KBA   Koelnbreinsper    5.05 320 ePn     Pn     03 05 07.7 +1.6
KBA                              eSn     Sn     03 06 04.5 -0.3
MODS  Modra-Piesok      5.13 354 ePN     Pn     03 05 06.8 -0.2
MODS                             eSN     Sn     03 06 03.0 -3.4
ARR   Arges             5.17  64 ⇓P      Pn     03 05 07.6  0.0
CJR   Cluj-Napoca       5.22  47 ⇑P      Pn     03 05 08.7 +0.3
ABTA  Abfaltersbach     5.24 313         Pn     03 05 09.3 +0.7
ABTA                                     Sn     03 06 10.8 +1.5
ABTA  Abfaltersbach     5.24 313 i Pn    Pn     03 05 09.3 +0.7
      1.5nm,0.2s,SNR=10
ABTA                             eSn     Sn     03 06 10.8 +1.5
      46nm,0.7s
COPA  Copaceanca        5.27  78 ⇑P      Pn     03 05 09.1 +0.3
CEL   Celeste           5.27 199  Pn     Pn     03 05 07.7 -1.3
MOA   Molln             5.29 331         Pn     03 05 10.6 +1.4
MOA                                      Sn     03 06 10.5 +0.1
MOA   Molln             5.29 331 ePn     Pn     03 05 10.6 +1.4
      8.8nm,0.4s
MOA                              eSn     Sn     03 06 10.5 +0.1
      42nm,0.8s
MOA   Molln             5.29 331 ePn     Pn     03 05 10.7 +1.4
MOA                              eSn     Sn     03 06 10.0 -0.4
CTI   Castel Tesino     5.34 303         Pn     03 05 10.1 +0.1
MDB   Medias            5.34  55 ⇑P      Pn     03 05 10.3 +0.4
BIOA  Bad Ischl, Aus    5.40 326         Pn     03 05 12.2 +1.5
BIOA                                     Sn     03 06 13.3 +0.3
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BIOA  Bad Ischl, Aus    5.40 326 i Pn    Pn     03 05 12.2 +1.5
      14nm,0.3s,SNR=11
BIOA                             eSn     Sn     03 06 13.3 +0.3
      29nm,0.9s
VOIR                    5.46  64 ⇓P      Pn     03 05 12.1 +0.5
KECS  Kecovo            5.48  17 ePN     Pn     03 05 11.7 -0.1
KECS                             eSN     Sn     03 06 12.4 -2.6
JAVC  Velka Javorina    5.59 357 ePN     Pn     03 05 12.8 -0.6
JAVC                             eSN     Sn     03 06 21.6 +3.7
LESA  Schwarzleotal     5.62 319         Pn     03 05 15.4 +1.6
LESA  Schwarzleotal     5.62 319 i Pn    Pn     03 05 15.4 +1.6
      11nm,0.2s,SNR=17
ELND  Elena             5.74  91 ⇑P      Pn     03 05 15.1 -0.3
RJOB  Jochberg          5.79 322 ePn     Pn     03 05 18.1 +2.0
RJOB                             eSn     Sn     03 06 23.6 +0.8
ARCR  ARCALIA           5.86  47 ⇓P      Pn     03 05 17.5 +0.5
DOPR  Dopca             5.89  60 ⇓P      Pn     03 05 17.5 +0.1
KRUC  Moravsky          5.90 349 ePN     Pn     03 05 18.1 +0.5
KRUC                             eSN     Sn     03 06 24.3 -1.1
RDO   Rodhopi           5.95 108         Pn     03 05 19.6 +1.3
LANS  Liptovska Anna    5.96   9 ePN     Pn     03 05 19.3 +0.9
LANS                             eSN     Sn     03 06 23.5 -3.4
WTTA  Wattenberg        6.03 314         Pn     03 05 20.7 +1.1
WTTA                                     Sn     03 06 30.3 +1.4
WTTA  Wattenberg        6.03 314 i Pn    Pn     03 05 20.7 +1.1
      11nm,0.2s,SNR=13
WTTA                             eSn     Sn     03 06 30.3 +1.4
      17nm,0.6s
MLR   Muntele Rosu      6.08  66  Pn     Pn     03 05 19.6 -0.5
      0.2nm,0.3s,baz=171,slow=22,SNR=2.2
MLR                               Sn     Sn     03 06 30.7 +0.8
      1.1nm,0.3s,baz=130,slow=20,SNR=4.1
MLR                               LR     LR     03 07 53.0
      comp=Z,174nm,21.0s,baz=272,slow=40
      1.3nm,0.6s
MLR   Muntele Rosu      6.08  66  Pn     Pn     03 05 21.0 +0.9
MLR   Muntele Rosu      6.08  66 ⇑P      Pn     03 05 21.2 +1.1
MAUC  Maruska           6.09 359 ePN     Pn     03 05 20.2 -0.1
WATA  Walderalm         6.11 314         Pn     03 05 22.6 +2.0
WATA                                     Sn     03 06 34.1 +3.3
WATA  Walderalm         6.11 314 i Pn    Pn     03 05 22.5 +2.0
      5.7nm,0.2s,SNR=17
WATA                             eSn     Sn     03 06 34.1 +3.3
      46nm,0.8s
VRAC  Vranov            6.12 351  Pn     Pn     03 05 20.4 -0.2
      0.2nm,0.3s,baz=177,slow=14,SNR=3.9
VRAC                              Sn     Sn     03 06 24.7 -6.1
      0.6nm,0.3s,baz=115,slow=17,SNR=2.1
      1.5nm,0.6s
VRAC  Vranov            6.12 351 ⇑P      Pn     03 05 20.9 +0.3
VRAC  Vranov            6.12 351 ePN     Pn     03 05 20.9 +0.3
VRAC                             eSN     Sn     03 06 29.8 -1.0
CKRC  Cesky Krumlov     6.13 336 ePN     Pn     03 05 22.7 +2.0
RAZG  Razgrad           6.17  84 ⇑P      Pn     03 05 21.8 +0.6
SQTA  Sankt Quirin      6.24 312         Pn     03 05 24.2 +1.9
SQTA                                     Sn     03 06 37.0 +3.1
SQTA  Sankt Quirin      6.24 312 i Pn    Pn     03 05 24.2 +1.9
      2.6nm,0.2s,SNR=7.5
SQTA                             eSn     Sn     03 06 37.0 +3.1
      25nm,0.9s
TURR  Turia             6.32  61 ⇑P      Pn     03 05 23.5 +0.1
GEC2  GERESS Array S    6.34 333         Pn     03 05 23.6  0.0
GEC2  GERESS Array S    6.34 333 ePn     Pn     03 05 25.3 +1.6
GEC2                             eSn     Sn     03 06 34.0 -2.4
GERES GERESS Array B    6.34 333  Pn     Pn     03 05 24.1 +0.4
      0.1nm,0.3s,baz=151,slow=13,SNR=23
GERES                             Sn     Sn     03 06 31.5 -4.8
      0.2nm,0.3s,baz=145,slow=24,SNR=7.8
      1.4nm,0.3s
MOTA  Moosalm           6.37 312         Pn     03 05 25.7 +1.6
MOTA                                     Sn     03 06 39.4 +2.2
MOTA  Moosalm           6.37 312 ePn     Pn     03 05 25.7 +1.6
      15nm,0.3s
MOTA                             eSn     Sn     03 06 39.4 +2.2
      40nm,1.1s
FETA  Feichten          6.39 308         Pn     03 05 25.5 +1.1
FETA  Feichten          6.39 308 i Pn    Pn     03 05 25.5 +1.1
      1.4nm,0.4s
VAE   Valguarnera       6.42 207  Pn     Pn     03 05 23.1 -1.8
      6.6nm,0.9s,baz=0.0,slow=17,SNR=1.6
MORC  Moravsky Berou    6.51 357         Pn     03 05 25.5 -0.5
MORC  Moravsky Berou    6.51 357 ⇑P      Pn     03 05 25.7 -0.3
MORC  Moravsky Berou    6.51 357 ePN     Pn     03 05 26.1 +0.1
MORC                             eSN     Sn     03 06 37.3 -3.3
STHS  Stebnicka Huta    6.53  19 ePN     Pn     03 05 26.2  0.0
STHS                             eSN     Sn     03 06 37.5 -3.4
KHC   Kasperske Hory    6.63 334 ePN     Pn     03 05 29.3 +1.7
KHC                              eSN     Sn     03 06 40.8 -2.6
BURAR Bucovina Array    6.65  47  Pn     Pn     03 05 28.8 +0.9
BURAR Bucovina Array    6.65  47 ⇑P      Pn     03 05 28.7 +0.7
BUR08 Bucovina Ar. S    6.66  47         Pn     03 05 28.6 +0.6
PLOR  Plostina          6.66  64 ⇑P      Pn     03 05 28.2 +0.2
RAFF  Raffo Rosso       6.67 206  Pn     Pn     03 05 27.5 -0.7
VRI   Vrincioaia        6.72  64 ⇑P      Pn     03 05 28.8  0.0
ZVC   Zvikov            6.72 338 ePN     Pn     03 05 31.5 +2.7
DAVOX Davos/Dischmat    6.77 304  Pn     Pn     03 05 30.1 +0.4
      1.7nm,0.3s,baz=119,slow=13,SNR=26
DAVOX                             Sn     Sn     03 06 44.8 -2.2
      1.1nm,0.3s,baz=186,slow=15,SNR=1.5
      5.5nm,0.4s
ITM   Ithomi            6.77 153         Pn     03 05 28.6 -1.0
FUR   Furstenfeldbru    6.81 318 ePn     Pn     03 05 30.9 +0.8
KRLC  Kraliky           6.86 353 ePN     Pn     03 05 31.3 +0.5
WET   Wettzell          6.88 330 ePn     Pn     03 05 33.0 +2.0
WET                              eSg     Sg     03 07 34.8 +4.3
TUE   Stuetta           6.96 300         Pn     03 05 32.8 +0.5
DAVA  Damuels           7.02 308         Pn     03 05 34.1 +1.0
DAVA  Damuels           7.02 308 i Pn    Pn     03 05 34.1 +1.0
      1.5nm,0.3s
OJC   Ojcow             7.05   9  Pn     Pn     03 05 33.3  0.0
UBR   Ueberruh          7.11 311 ePn     Pn     03 05 35.3 +1.1
ICOR  Ion Corvin        7.12  80 ⇓P      Pn     03 05 34.1 -0.1
ICOR                             ⇑S      Sn     03 06 57.5 +2.2
DPC   Dobruska-Polom    7.18 351 ePN     Pn     03 05 37.2 +2.1
MANZ  Manzenberg        7.86 331 ePn     Pn     03 05 46.3 +1.8
MANZ                             eSn     Sn     03 07 11.9 -1.7
GRF   Grafenberg Arr    7.96 326 ePn     Pn     03 05 46.9 +1.0
TANN  Tannenbergstha    8.10 334 ePn     Pn     03 05 50.0 +2.1
SENIN Lac Senin/Sane    8.24 296         Pn     03 05 49.5 -0.4
BFO   Black Forest      8.46 310         Pn     03 05 52.8  0.0
BFO   Black Forest      8.46 310 ePn     Pn     03 05 53.2 +0.5
MOX   Moxa              8.58 331 ePn     Pn     03 05 55.9 +1.5
CLL   Collm             8.74 339  Pn     Pn     03 05 57.1 +0.7
CLL   Collm             8.74 339 ePn     Pn     03 05 59.0 +2.6
CLL                              ePg     Pg     03 06 36.0 -0.9
CLL                              eSn     Sn     03 07 15.0  -20
CLL                              ex      x      03 07 30.0
CLL                              ex      x      03 07 44.0
CLL                              eSb     Sg     03 07 59.0  -31
CLL                              eSg     Sg     03 08 25.0 -5.0
ECH   Echery            9.08 307  Pn     Pn     03 06 00.3 -0.8
IDI   Anoyia            9.57 144  Pn     Pn     03 06 05.4 -2.6
      4.6nm,0.7s,baz=305,slow=12,SNR=7.3
TNS   Taunus Mts        9.57 320 ePn     Pn     03 06 08.8 +0.8
BRTR  Keskin Array B   12.21 102  Pn     Pn     03 06 44.9 +0.7
      baz=306,slow=12,SNR=3.6
BRTR                              LR     LR     03 11 04.8
      comp=Z,70nm,18.3s,baz=298,slow=36
      0.8nm,0.8s
CSS   Mathiatis        14.46 120  Pn     Pn     03 07 13.6 -1.3
OBN   Obninsk          16.87  39  Pn     Pn     03 07 46.4 +0.2
OBN                               IAmb   IAmb   03 07 48.8
      comp=Z,24nm,0.9s
MMAI  Mount Meron Ar   17.03 121  P      Pn     03 07 49.0 +0.5
      comp=Z,0.3nm,0.4s,baz=321,slow=11,SNR=1.7
HFS   Hagfors          17.09 353  P      Pn     03 07 48.9 -0.1
      comp=Z,0.1nm,0.3s,baz=156,slow=11,SNR=2.0
      comp=Z,1.1nm,0.6s
NAO01 NORSAR Array S   18.12 349         P      03 08 02.8 +0.7
NAO01                             IAmb   IAmb   03 08 04.9
      comp=Z,18nm,1.2s
NB2   NORSAR Subarra   18.26 349  P      P      03 08 10.6 +6.9
      comp=Z,0.6nm,0.6s,baz=162,slow=9.3
NOA   NORSAR Array B   18.26 349  P      P      03 08 04.3 +0.6
      baz=162,slow=12,SNR=4.4
      comp=Z,1.4nm,1.0s
EKA   Eskdalemuir Ar   18.26 319  P      P      03 08 03.7  0.0
      baz=117,slow=12
      comp=Z,1.7nm,0.8s
FINES FINESS Array B   18.82  12  P      P      03 08 09.8  0.0
      comp=Z,0.1nm,0.3s,baz=187,slow=9.8,SNR=3.4
      comp=Z,3.3nm,0.9s
ZALV  Zalesovo Beam    43.84  52  P      P      03 11 55.0 -1.2
      comp=Z,0.3nm,0.3s,baz=289,slow=9.0,SNR=2.3
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      comp=Z,0.3nm,0.3s
WMQ   Urumqi           49.07  64 eP      P      03 12 39.3 +1.8
HHC   Hu-ho-hao-te     65.73  56 eP      P      03 14 34.0 -1.2
HHC                               pmax   pmax
      comp=Z,18nm,0.7s
HHC                               pmax   pmax
      comp=Z,130nm,3.7s
E29M  Blow River       67.21 351  P      P      03 14 43.6 -0.5
E29M                              IAmb   IAmb   03 14 53.5
      comp=Z,6.8nm,1.4s
D23K  Nanushuk River   67.77 356  P      P      03 14 47.5 -0.1
PZH   PanZhiHua        67.97  74  P      P      03 14 50.3 +0.6
IMAR  Indian Mountai   70.89 356  P      P      03 15 06.5 -0.4
BCAR  Beaver Creek A   72.79 351  P      P      03 15 18.0 -0.5
```

IDC 01 03:07:58.1±2.7**, 4°.88N**×**123°.72E, h0^{km}, mb3.5**/3**,**
mbtmp3.5/3**, Error ellipse: s-maj=369.9km**
s-min=26.5km az=63.0, Celebes Sea

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Code  Station Name         Δ°  AZ°    Phase ID            Time     Res
                                    Op     ISC       h  m  s     ISC
WRA   Warramunga Arr   26.79 157  P      P      03 13 40.1  0.0
      0.2nm,0.3s,baz=337,slow=9.5,SNR=5.7
      0.2nm,0.3s
ASAR  Alice Springs    30.06 161  P      P      03 14 09.3  0.0
      0.1nm,0.4s,baz=334,slow=8.4,SNR=1.1
      0.1nm,0.4s
MKAR  Makanchi Array   54.92 326  P      P      03 17 30.8 -0.1
      0.4nm,0.3s,baz=122,slow=7.1,SNR=7.8
      0.4nm,0.3s
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*PDG **01** 03:10:02.6±0.1, 43°.29N×18°.02E, h10^{km}, MD3.1/3,*
ML3.0/13, Error ellipse: s-maj=0.1km s-min=0.1km
az=90.0
*RHSSO **01** 03:10:03.3±0.3, 43°.26N×18°.01E, h8^{km}, ML2.9/6*
*PRU **01** 03:10:06.7, 43°.34N×18°.05E, h10^{km}*
*VIE **01** 03:10:08.6±1.2, 43°.61N×17°.92E, h8^{km}, mb2.8/9, ml2.5/9,*
ms3.9/2, Error ellipse: s-maj=12.5km s-min=9.4km
az=130.0 47 km WSW of Sarajevo
ISC 01 03:10:03.0±1.1**, 43°.30N**±0°.02×**18°.10E**±0°.02**, h8^{km}**±9^{km}**,**
n60, σ1^{s}35/104**, 12C-17D, Northwestern Balkan**
Peninsula

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Code  Station Name         Δ°  AZ°    Phase ID            Time     Res
                                    Op     ISC       h  m  s     ISC
BRY   Bratogost         0.51 141⇑iPg     Pg     03 10 12.9  0.0
BRY                              i Sg    Sb     03 10 21.5 -0.4
STON  Ston              0.52 215 i Pg    Pg     03 10 12.0 -1.0
STON                               Sg    Sg     03 10 18.8 -1.0
UPM   Unac-Piva         0.60  99 ePg     Pb     03 10 14.9 -0.9
UPM                              i Sg    Sn     03 10 25.2 -2.6
TREB  Trebinje          0.61 162⇑iPg     Pg     03 10 14.0 -0.8
TREB                             eSg     Sg     03 10 23.7 +0.9
DBRK  Dubrovnik         0.63 177 ePg     Pg     03 10 14.8 -0.4
DBRK                               Sg    Sg     03 10 22.9 -0.5
RICI  Ricice            0.73 286 ePg     Pg     03 10 16.1 -0.9
RICI                               Sg    Sg     03 10 27.1 +0.4
MAKA  Makarska          0.79 270 ePg     Pg     03 10 16.6 -1.5
MAKA                               Sg    Sg     03 10 28.4  0.0
NKME  Niksic            0.82 130⇓iPg     Pg     03 10 18.6 -0.2
NKME                             eSg     Sn     03 10 32.3 -0.9
HCY   Herceg Novi       0.90 161 ePg     Pg     03 10 19.6 -0.7
HCY                              i Sg    Sb     03 10 33.9 +1.0
PLE   Pljevlja          0.94  88 ePg     Pn     03 10 21.2 -1.4
PLE                              i Sg    Sn     03 10 36.9 +0.6
CEME  Cevo              0.96 141 ePg     Pg     03 10 21.1 -0.4
CEME                             eSg     Sn     03 10 36.7  0.0
RUDO  Rudo              0.98  71⇓iPg     Pn     03 10 21.8 -1.2
RUDO                             eSg     Sn     03 10 36.4 -0.6
LSTV  Lastovo           1.03 239 ePg     Pb     03 10 21.9 -1.2
LSTV                               Sg    Sb     03 10 35.4 -1.4
KOME  Kolasin           1.13 113 ePg     Pn     03 10 24.5 -0.7
KOME                             eSg     Sn     03 10 43.0 +2.1
BUM   Brajici-Budva     1.16 149 ePg     Pb     03 10 24.6 -0.6
BUM                              i Sg    Sn     03 10 43.0 +1.5
HVAR  Hvar              1.21 265 ePg     Pn     03 10 24.8 -1.4
HVAR                               Sg    Sb     03 10 40.8 -1.1
PDG   Podgorica         1.22 135 ⇑P      Pb     03 10 25.4 -0.8
PDG                              ⇓S      Sb     03 10 40.9 -1.1
PDG   Podgorica         1.22 135 ePg     Pb     03 10 25.7 -0.5
PDG                              i Sg    Sn     03 10 45.4 +2.6
DRME  Dracevica, Mon    1.37 144 ePg     Pn     03 10 28.4  0.0
DRME                             eSg     Sg     03 10 50.3 +3.3
IVA   Berane            1.38 107 ePg     Pg     03 10 29.2 -0.3
IVA                              i Sg    Sg     03 10 51.3 +3.9
KIJV  Kijevo            1.42 300 ePn     Pn     03 10 30.1 +1.0
KIJV                               Sg    Sn     03 10 49.4 +1.5
PVY   Plav              1.54 117 ePn     Pg     03 10 31.8 -0.7
PVY                              i Sn    Sg     03 10 54.8 +2.4
ULC   Ulcinj            1.58 147 ePn     Pb     03 10 32.2 -0.2
ULC                              i Sn    Sg     03 10 55.2 +1.4
BLY   Banja Luka        1.59 336⇑iPn     Pn     03 10 32.3 +0.9
BLY                              eSn     Sb     03 10 53.6 +0.7
BLY   Banja Luka        1.59 336 ⇓P      Pb     03 10 33.1 +0.4
BLY                              ⇓S      Sg     03 10 55.4 +1.2
ZIRJ  Zirje             1.82 282 ePn     Pn     03 10 34.7 +0.2
ZIRJ                               Sn    Sn     03 10 58.3 +0.5
MORI  Morici            1.83 289 i Pn    Pn     03 10 35.3 +0.6
MORI                               Sn    Sn     03 10 59.1 +1.1
UDBI  Udbina            2.09 307 i Pn    Pn     03 10 40.8 +2.5
UDBI                               Sn    Sn     03 11 05.5 +1.1
DUGI  Dugi Otok         2.31 288 ePn     Pn     03 10 42.0 +0.7
DUGI                               Sn    Sn     03 11 10.7 +0.8
VIRC  Vir               2.42 295 ePn     Pn     03 10 43.6 +0.8
VIRC                               Sn    Sn     03 11 14.1 +1.6
BOVS  Bovan             2.65  81 ⇓P      Pn     03 10 46.3 +0.4
BOVS                             ⇓S      Sn     03 11 16.4 -1.8
NVLJ  Novalja           2.65 300 ePn     Pn     03 10 46.7 +0.8
RABC  Rab               2.80 302 ePn     Pn     03 10 48.9 +1.0
MATE  Matera            2.84 202 ⇓P      Pn     03 10 52.1 +3.4
MORH  Mrgy, Hungar      2.94   7 ePn     Pn     03 10 51.1 +1.2
MORH                             eSn     Sn     03 11 27.0 +1.6
MORH  Mrgy, Hungar      2.94   7 ⇑P      Pn     03 10 49.8 -0.2
MDVR  Moldovita         3.00  59 ⇓P      Pn     03 10 50.1 -0.6
MDVR                             ⇑S      Sn     03 11 24.7 -2.2
BEHE  Becsehely         3.31 344 ePn     Pn     03 10 55.0  0.0
BEHE                             eSn     Sn     03 11 34.6 +0.2
BZS   Buzias            3.42  46 ⇓P      Pn     03 10 56.3 -0.3
BZS                              ⇑S      Sn     03 11 36.6 -0.6
HERR  Herculane         3.49  62 ⇓P      Pn     03 10 57.1 -0.4
AQU   L'Aquila          3.58 256 ePn     Pn     03 10 57.7 -1.1
AQU                              eSn     Sn     03 11 39.1 -2.2
SURR  Surduc            3.78  48 ⇓P      Pn     03 11 01.8 +0.3
SURR                             ⇓S      Sn     03 11 44.1 -2.0
SIRR  Siria             3.90  39 ⇑P      Pn     03 11 02.4 -0.8
SIRR                             ⇓S      Sn     03 11 47.4 -1.8
GZR   Gura Zlata        3.95  56 ⇑P      Pn     03 11 04.1 +0.2
GZR                              ⇑S      Sn     03 11 49.7 -0.8
SOKA  Soboth            4.02 328 i Pn    Pn     03 11 05.7 +0.8
      2.0nm,0.2s,SNR=10
SOKA                             eSn     Sn     03 11 50.0 -2.1
      2.1nm,0.4s
OBKA  Obir              4.08 323 ePn     Pn     03 11 06.2 +0.5
      0.5nm,0.2s
ARSA  Arzberg           4.35 336 ePn     Pn     03 11 09.9 +0.5
      1.6nm,0.3s
DRGR                    4.78  42 ⇓P      Pn     03 11 14.6 -0.7
DRGR                             ⇑S      Sn     03 12 10.0 -0.9
PSZ   Piszkesteto       4.79  15 ⇑P      Pn     03 11 15.3 -0.1
CONA  Conrad Observa    4.89 342 ePn     Pn     03 11 18.0 +1.2
      0.1nm,0.2s
MARR  Marisel-Cluj      4.91  45 ⇓P      Pn     03 11 16.9 -0.2
MARR                             ⇓S      Sn     03 12 14.0  0.0
MODS  Modra-Piesok      5.11 354 ePN     Pn     03 11 23.0 +3.3
MODS                             eSN     Sn     03 12 18.2 -0.6
ABTA  Abfaltersbach     5.25 313 ePn     Pn     03 11 22.7 +1.0
      0.9nm,0.2s
MOA   Molln             5.29 331 i Pn    Pn     03 11 23.6 +1.4
      0.8nm,0.2s
BIOA  Bad Ischl, Aus    5.40 326 ePn     Pn     03 11 25.1 +1.4
      1.4nm,0.2s,SNR=6.3
LESA  Schwarzleotal     5.62 319 ePn     Pn     03 11 28.2 +1.3
      2.3nm,0.2s,SNR=9.6
WTTA  Wattenberg        6.04 313 i Pn    Pn     03 11 34.2 +1.5
      1.2nm,0.2s,SNR=7.9
WATA  Walderalm         6.12 314 i Pn    Pn     03 11 35.5 +1.8
      0.9nm,0.2s,SNR=5.6
MOTA  Moosalm           6.38 312 i Pn    Pn     03 11 38.5 +1.2
      3.4nm,0.5s
KHC   Kasperske Hory    6.62 333 ePN     Pn     03 11 42.9 +2.4
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Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHC				*e*SN	**Sn**	**03 12 54.2**	**-2.0**

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*IDC **01** 03:26:14.0±1.8, 0°.77N×126°.56E, h0^{km}, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=177.9km s-min=21.9km az=66.0*
*DJA **01** 03:26:18.1±0.4, 1°N±6°×12°6E±°, h10^{km}, M3.6/7, MLv3.6/7*
ISC 01 03:26:20.6±1.0**, 0°.58N**±0°.07×**126°.15E**±0°.06**, h35^{km}, n10, σ1^{s}.77**/11**, mb3.9**/4**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.23**	**81**	P	**Pn**	**03 26 40.3**	**-1.0**
MNI	**Manado**	**1.57**	**303**	P	**Pn**	**03 26 46.4**	**+0.4**
MNI				S	**Sn**	**03 27 06.1**	**+1.0**
GAMI	**Galela, Maluku**	**2.06**	**53**	P	**Pn**	**03 26 54.9**	**+2.2**
SANI	**Sanana**	**2.62**	**184**	P	**Pn**	**03 27 00.3**	**-0.2**
GTOI	**Gorontalo**	**3.14**	**271**	P	**Pn**	**03 27 08.8**	**+1.2**
KRAI	**Karang Ratu**	**4.48**	**150**	P	**Pn**	**03 27 29.3**	**+3.3**
WRA	**Warramunga Arr**	**21.92**	**159**	P	**P**	**03 31 09.4**	**-1.7**
	3.5nm,0.8s,baz=339,slow=11,SNR=14						
	3.5nm,0.8s						
ASAR	**Alice Springs**	**25.25**	**163**	P	**P**	**03 31 42.7**	**-1.0**
	1.0nm,0.7s,baz=337,slow=8.2,SNR=14						
	1.0nm,0.7s						
MKAR	**Makanchi Array**	**59.82**	**327**	P	**P**	**03 36 21.1**	**-1.5**
	0.5nm,0.4s,baz=121,slow=7.7,SNR=6.1						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**64.08**	**328**	P	**P**	**03 36 51.0**	**-0.1**
	1.0nm,0.2s,baz=133,slow=4.3,SNR=1.7						
	1.0nm,0.2s						

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*KRNET **01** 03:32:36.0±0.1, 41°.64N×72°.31E, h18^{km}, mb3.5*
*SOME **01** 03:32:36.0, 41°.67N×72°.30E, h2^{km}*
*NNC **01** 03:32:39.5±1.4, 41°.76N×72°.34E, h0^{km}, mb4.0, mpv3.9, Error ellipse: s-maj=14.9km s-min=4.7km az=177.0*
ISC 01 03:32:35.7±1.1**, 41°.62N**±0°.02×**72°.36E**±0°.02**, h2^{km}**±10^{km}**, n44, σ1^{s}.75**/78**, 21C-17D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.35**	**301**	⇓*e*P	**Pg**	**03 32 42.3**	**-0.1**
ARK				⇓*e*S	**Sg**	**03 32 46.8**	**-0.2**
ARSB	**Arslanbob**	**0.55**	**122**	⇓*e*P	**Pg**	**03 32 47.4**	**+1.2**
ARSB				⇓*e*S	**Sg**	**03 32 55.6**	**+2.3**
MNAS	**Manas**	**0.88**	**7**	⇓*e*P	**Pb**	**03 32 52.5**	**-1.2**
MNAS				⇓*i*S	**Sg**	**03 33 04.3**	**+0.4**
TRKS	**Terek-Say**	**0.92**	**265**	⇓*i*P	**Pb**	**03 32 52.5**	**-2.0**
TRKS				⇓*i*S	**Sb**	**03 33 04.3**	**-3.0**
OHH	**Osh**	**1.14**	**164**	⇑*e*P	**Pb**	**03 32 57.7**	**-0.4**
OHH				⇑*e*S	**Sg**	**03 33 13.5**	**+1.3**
MRKS	**Merke**	**1.30**	**29**	P	**Pb**	**03 33 00.2**	**-0.6**
	32nm,0.2s						
MRKS				S	**Sg**	**03 33 17.7**	**+0.3**
	88nm,0.2s						
MRKS	**Merke**	**1.30**	**29**	*e*P	**Pb**	**03 33 00.2**	**-0.6**
	32nm,0.2s						
MRKS				*e*S	**Sg**	**03 33 17.7**	**+0.3**
	88nm,0.2s						
SALK	**Salom-Alik**	**1.32**	**123**	⇑*i*P	**Pb**	**03 33 01.3**	**0.0**
SALK				⇑*i*S	**Sg**	**03 33 19.6**	**+1.5**
ARLS	**Aral**	**1.49**	**80**	⇑*e*P	**Pb**	**03 33 04.0**	**-0.1**
ARLS				⇑*e*S	**Sg**	**03 33 24.4**	**+1.0**
DZA	**Taraz**	**1.49**	**329**	P	**Pg**	**03 33 06.3**	**+2.1**
	102nm,0.1s						
DZA				S	**Sg**	**03 33 28.3**	**+4.8**
	316nm,0.3s						
DZA	**Taraz**	**1.49**	**329**	*e*P	**Pg**	**03 33 06.3**	**+2.1**
	102nm,0.1s						
DZA				*e*S	**Sg**	**03 33 28.3**	**+4.8**
	316nm,0.3s						
IUG	**Iuzhnay**	**1.82**	**288**	Pg	**Pg**	**03 33 10.8**	**+0.2**
	156nm,0.2s						
IUG				Lg	Lg	03 33 36.7	
	1μm,0.3s						
SFK	**Sufi-Kurgan**	**1.82**	**151**	⇓*i*P	**Pb**	**03 33 09.7**	**-0.2**
SFK				⇓*i*S	**Sg**	**03 33 34.3**	**+0.1**
AAK	**Ala-Archa**	**1.88**	**57**	⇑Pn	**Pb**	**03 33 11.0**	**+0.1**
	14nm,0.5s						
AAK				⇑Sn	**Sg**	**03 33 39.8**	**+3.6**
	7.1nm,0.4s						
KK31	**Karatay Array**	**2.02**	**318**	⇑Pn	**Pb**	**03 33 12.8**	**-0.4**
	12nm,0.5s,baz=133,slow=15,SNR=78						
KK31				⇓Sn	**Sg**	**03 33 40.0**	**-0.7**
	18nm,0.3s,baz=129,slow=29,SNR=11						
FRU1	**Bishkek**	**2.06**	**54**	⇑*i*P	**Pb**	**03 33 13.0**	**-0.9**
FRU1				⇑*i*S	**Sb**	**03 33 39.8**	**-0.2**
CHM	**Chimkent**	**2.17**	**290**	*e*P	**Pg**	**03 33 17.2**	**-0.1**
	127nm,0.2s						
CHM				*e*S	**Sg**	**03 33 46.7**	**+1.2**
	568nm,0.4s						
DRK	**Karamyk**	**2.18**	**192**	⇑*i*P	**Pb**	**03 33 14.5**	**-1.5**
DRK				⇑*i*S	**Sb**	**03 33 42.5**	**-1.0**
CHMS	**Chumysh**	**2.25**	**51**	⇓*i*P	**Pb**	**03 33 15.3**	**-1.7**
CHMS				⇓*i*S	**Sb**	**03 33 44.1**	**-1.1**
BRLS	**Borolday**	**2.35**	**308**	Pg	**Pg**	**03 33 19.1**	**-1.6**
	14nm,0.3s						
BRLS				Lg	Lg	03 33 49.7	
	100nm,0.2s						
BRLS	**Borolday**	**2.35**	**308**	*e*P	**Pg**	**03 33 19.1**	**-1.6**
	14nm,0.3s						
BRLS				*e*S	**Sg**	**03 33 49.7**	**-1.4**
	100nm,0.2s						
SGDS	**Sogindy**	**2.48**	**42**	Pg	**Pb**	**03 33 21.7**	**+0.6**
	5.0nm,0.1s						
SGDS				Lg	Lg	03 33 54.2	
	32nm,0.3s						
JNKS	**Jany-Kuch**	**2.54**	**102**	⇑*e*P	**Pb**	**03 33 19.9**	**-2.2**
JNKS				⇑*e*S	**Sb**	**03 33 52.1**	**-1.8**
BOOM	**Boomskoye usch**	**2.80**	**71**	⇑*i*P	**Pb**	**03 33 23.4**	**-3.2**
BOOM				⇑*i*S	**Sb**	**03 33 58.0**	**-3.4**
DGS	**Degeres**	**3.00**	**56**	Pg	**Pg**	**03 33 32.3**	**-0.8**
	25nm,0.3s						
DGS				Lg	Lg	03 34 12.5	
	63nm,0.7s						
DGS	**Degeres**	**3.00**	**56**	*e*P	**Pg**	**03 33 32.3**	**-0.8**
	25nm,0.3s						
DGS				*e*S	**Sg**	**03 34 12.5**	**+0.4**
	63nm,0.7s						
KST	**Kastek**	**3.02**	**61**	Pg	**Pb**	**03 33 31.9**	**+1.6**
	24nm,0.3s						
KST				Lg	Lg	03 34 12.1	
	74nm,0.7s						
KST	**Kastek**	**3.02**	**61**	*e*P	**Pb**	**03 33 31.9**	**+1.6**
	24nm,0.3s						
KST				*e*S	**Sg**	**03 34 12.1**	**-0.8**
	74nm,0.7s						
GAR	**Garm**	**3.05**	**212**	⇓*i*P	**Pn**	**03 33 26.3**	**+1.3**
GAR				⇓*i*S	**Sn**	**03 34 02.9**	**+0.8**
MTBS	**Maitube**	**3.37**	**62**	Pg	**Pg**	**03 33 39.1**	**-1.2**
	8.6nm,0.4s						
MTBS				Lg	Lg	03 34 24.0	
	56nm,0.4s						
MTBS	**Maitube**	**3.37**	**62**	*e*P	**Pg**	**03 33 39.1**	**-1.2**
	8.6nm,0.4s						
MTBS				*e*S	**Sg**	**03 34 24.0**	**+0.1**
	56nm,0.4s						
IZV	**Izvestkoviy**	**3.46**	**64**	Pg	**Pg**	**03 33 40.7**	**-1.2**
	17nm,0.4s						
IZV				Lg	Lg	03 34 27.0	
	26nm,0.5s						
IZV	**Izvestkoviy**	**3.46**	**64**	*e*P	**Pg**	**03 33 40.7**	**-1.2**
	17nm,0.4s						
IZV				*e*S	**Sg**	**03 34 27.0**	**+0.3**
	26nm,0.5s						
KDJ	**Kajisay**	**3.63**	**80**	⇓*i*P	**Pn**	**03 33 35.2**	**+2.1**
KDJ				⇓*e*S	**Sn**	**03 34 18.3**	**+1.7**
BTLS	**Baital**	**3.64**	**19**	*e*P	**Pg**	**03 33 43.4**	**-2.0**
	8.0nm,0.5s						
BTLS				*e*S	**Sg**	**03 34 31.4**	**-1.1**
	10nm,0.6s						
TNSS	**Tian-Shan**	**3.68**	**66**	Pg	**Pg**	**03 33 45.4**	**-0.8**
	4.1nm,0.4s						
TNSS				Lg	Lg	03 34 34.8	
	4.6nm,0.5s						
TNSS	**Tian-Shan**	**3.68**	**66**	*e*P	**Pg**	**03 33 45.4**	**-0.8**
	4.1nm,0.4s						
TNSS				*e*S	**Sg**	**03 34 34.8**	**+0.9**
	4.6nm,0.5s						
MDOK	**Medeo**	**3.80**	**64**	Pg	**Pg**	**03 33 46.5**	**-2.0**
	7.4nm,0.3s						
MDOK				Lg	Lg	03 34 36.7	
	14nm,0.3s						
CHGR	**Chuyangaron**	**3.84**	**221**	⇑*i*P	**Pn**	**03 33 37.1**	**+1.2**
CHGR				⇑*i*S	**Sn**	**03 34 21.6**	**-0.1**
KOTS	**Kotyrbulak**	**3.87**	**64**	Pg	**Pg**	**03 33 49.1**	**-0.8**
	5.6nm,0.3s						
KOTS				Lg	Lg	03 34 41.2	
	33nm,0.5s						
KOTS	**Kotyrbulak**	**3.87**	**64**	*e*P	**Pg**	**03 33 49.1**	**-0.8**
	5.6nm,0.3s						
KOTS				*e*S	**Sg**	**03 34 41.2**	**+1.2**
	33nm,0.5s						
TARG	**Taragay, Kyrgy**	**4.08**	**87**	⇑*i*P	**Pn**	**03 33 41.4**	**+2.0**
TARG				⇑*i*S	**Sn**	**03 34 29.0**	**+1.1**
ARXS	**Arharly**	**4.78**	**55**	*e*P	**Pb**	**03 34 02.8**	**+2.6**
	4.9nm,0.5s						
ARXS				*e*S	**Sg**	**03 35 04.5**	**-4.6**
	11nm,0.4s						
KPKS	**Kokpek**	**5.02**	**66**	*e*P	**Pg**	**03 34 08.6**	**-3.3**
	5.7nm,0.4s						
KPKS				*e*S	**Sg**	**03 35 15.3**	**-1.6**
	12nm,0.7s						

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*SJA **01** 03:34:55.1±0.7, 23°.18S×71°.90W, h24^{km}±4^{km}, ML3.5, MW3.5*
*NEIC **01** 03:34:56.5±1.7, 23°.16S±0°.05×71°.9W±0°.1, h10^{km}±1^{km}, mb4.3/6, Mwr4.2(GUC), Error ellipse: s-maj=16.7km s-min=8.5km az=276.0*
*IDC **01** 03:34:59.8±1.2, 23°.28S×70°.61W, h0^{km}, mb3.8/3, mbtmp3.9/5, ML4.0/2, MS3.2/3, Error ellipse: s-maj=69.9km s-min=23.9km az=86.0*
*GUC **01** 03:35:02.1±0.7, 23°.04S×71°.55W, h31^{km}±3^{km}, ML3.7*
ISC 01 03:34:53.1±0.9**, 22°.88S**±0°.03×**71°.91W**±0°.05**, h10^{km}, n72, σ1^{s}.71**/78**, mb4.2**/4**, 4C-1D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB10	**IPOC Station P**	**1.40**	**117**		**Pg**	**03 35 20.1**	**+0.2**
PB10	**IPOC Station P**	**1.40**	**117**	⇑*e*P	**Pg**	**03 35 20.1**	**+0.2**
PB10				*e*S	**Sb**	**03 35 34.2**	**-3.1**
PB10				IAML		03 35 36.6	
	comp=N,3μm,0.3s						
PB10	**IPOC Station P**	**1.40**	**117**	*i* P	**Pg**	**03 35 19.7**	**-0.3**
PB10				IAML	**S**	**03 35 37.3**	**+0.3**
	comp=Z,2μm,0.3s						
PB10				*i* S	**S**	**03 35 37.3**	**+0.3**
PB10				IAML		03 35 40.2	
	comp=Z,552nm,0.4s						
PB05	**IPOC Station P**	**1.57**	**90**		**Pg**	**03 35 24.5**	**+1.1**
PB05	**IPOC Station P**	**1.57**	**90**	⇑*e*P	**Pg**	**03 35 24.8**	**+1.5**
PB05				*e*S	**Sn**	**03 35 40.9**	**-0.8**
PB05	**IPOC Station P**	**1.57**	**90**	*i* P	**Pg**	**03 35 24.1**	**+0.8**
PB05				IAML		03 35 46.9	
	comp=Z,196nm,1.3s						
PB03	**IPOC Station P**	**2.15**	**68**		**Pg**	**03 35 34.3**	**-0.2**
PB03	**IPOC Station P**	**2.15**	**68**	*e*P	**Pg**	**03 35 34.5**	**0.0**
PB03				*e*S	**Sb**	**03 35 59.4**	**+0.2**
PB03				IAML		03 36 00.2	
	comp=N,485nm,0.6s						
PB03	**IPOC Station P**	**2.15**	**68**	*i* P	**Pg**	**03 35 33.6**	**-0.8**
PB03				*i* S	**Sg**	**03 36 02.5**	**+0.1**
PB03				IAML		03 36 04.4	
	comp=Z,264nm,0.6s						
PB06	**IPOC Station P**	**2.16**	**86**		**Pg**	**03 35 33.6**	**-1.0**
PB06	**IPOC Station P**	**2.16**	**86**	⇑*e*P	**Pg**	**03 35 33.6**	**-1.0**
PB06				*e*S	**Sb**	**03 35 57.6**	**-1.8**
PB06	**IPOC Station P**	**2.16**	**86**	*i* P	**Pg**	**03 35 32.9**	**-1.7**
PB06				IAML		03 35 60.0	
	comp=Z,230nm,0.6s						
PB06				IAML		03 35 60.0	
	comp=Z,271nm,0.6s						
PB06				*i* S	**Sg**	**03 36 00.1**	**-2.5**
PB07	**IPOC Station P**	**2.19**	**59**		**Pg**	**03 35 35.4**	**+0.2**
PB14	**IPOC Station P**	**2.22**	**142**		**Pn**	**03 35 29.7**	**-0.7**
PB14	**IPOC Station P**	**2.22**	**142**	*i* P	**Pn**	**03 35 29.6**	**-0.7**
PB14				*e*S	**Sn**	**03 35 53.4**	**-4.6**
PB14	**IPOC Station P**	**2.22**	**142**	*i* P	**Pn**	**03 35 30.0**	**-0.3**
PB14				*i* S	**Sn**	**03 35 54.3**	**-3.7**
PB14				IAML		03 35 54.7	
	comp=Z,629nm,0.6s						
PB14				IAML		03 35 57.9	
	comp=Z,292nm,0.8s						
PB02	**IPOC Station P**	**2.42**	**51**		**Pg**	**03 35 38.6**	**-1.0**
PB02	**IPOC Station P**	**2.42**	**51**	⇑*e*P	**Pg**	**03 35 38.6**	**-1.0**
PB02				*e*S	**Sb**	**03 36 07.0**	**+0.2**
PB02				IAML		03 36 08.8	
	comp=E,281nm,0.4s						
PB02	**IPOC Station P**	**2.42**	**51**	*i* P	**Pg**	**03 35 38.4**	**-1.2**
PB02				*i* S	**Sg**	**03 36 11.2**	**+0.2**
PB02				IAML		03 36 17.6	
	comp=Z,321nm,0.3s						
PATCX	**Punta Patache**	**2.61**	**39**		**Pg**	**03 35 41.6**	**-1.6**
PATCX	**Punta Patache**	**2.61**	**39**	*e*P	**Pb**	**03 35 41.5**	**+1.4**
PATCX				*e*S	**Sb**	**03 36 11.9**	**-0.4**
PATCX				IAML		03 36 19.5	
	comp=E,262nm,0.4s						
PATCX	**Punta Patache**	**2.61**	**39**	*i* P	**Pb**	**03 35 41.5**	**+1.4**
PATCX				IAML		03 36 17.6	
	comp=Z,100nm,0.4s						
PATCX				IAML		03 36 35.8	
	comp=Z,67nm,0.8s						
PB09	**IPOC Station P**	**2.69**	**67**		**Pb**	**03 35 42.0**	**+0.5**
PB09	**IPOC Station P**	**2.69**	**67**	*e*P	**Pg**	**03 35 43.0**	**-1.7**
PB09				*e*S	**Sb**	**03 36 12.4**	**-2.3**
PB09				IAML		03 36 17.7	
	comp=E,415nm,0.6s						
PB09	**IPOC Station P**	**2.69**	**67**	*i* P	**Pb**	**03 35 41.2**	**-0.2**
PB09				*i* S	**Sb**	**03 36 15.8**	**+1.2**
PB09				IAML		03 36 18.8	
	comp=Z,277nm,0.9s						
TA01	**Diego Aracena**	**2.80**	**35**		**Pb**	**03 35 44.1**	**+0.9**
TA01	**Diego Aracena**	**2.80**	**35**	*e*P	**Pb**	**03 35 44.0**	**+0.7**
PB01	**IPOC Station P**	**2.89**	**51**		**Pb**	**03 35 46.2**	**+1.3**
PB01	**IPOC Station P**	**2.89**	**51**	*e*P	**Pb**	**03 35 45.9**	**+1.0**
PB01				*e*S	**Sb**	**03 36 19.3**	**-1.1**
PB01				IAML		03 36 24.8	
	comp=E,220nm,0.3s						
PB01	**IPOC Station P**	**2.89**	**51**	*i* P	**Pb**	**03 35 45.7**	**+0.8**
PB01				IAML		03 36 35.9	
	comp=Z,57nm,0.3s						
GO02	**Mina Guanaco**	**3.11**	**138**		**Pn**	**03 35 43.7**	**+1.1**
GO02	**Mina Guanaco**	**3.11**	**138**	*e*P	**Pn**	**03 35 43.5**	**+0.9**
GO02				*e*S	**Sn**	**03 36 17.7**	**-2.2**
GO02				IAML		03 36 20.6	
	comp=N,724nm,0.2s						
PX03	**IPOC Station P**	**3.25**	**41**	*e*P	**Pb**	**03 35 51.6**	**+0.7**
AF01	**San Pedro de A**	**3.44**	**92**	*e*P	**Pb**	**03 35 53.9**	**-0.5**
AF01				*e*S	**Sn**	**03 36 28.2**	**+0.2**
AC01	**Pan de Azucar**	**3.47**	**160**		**Pn**	**03 35 45.6**	**-1.6**
AC01	**Pan de Azucar**	**3.47**	**160**	⇓*i*P	**Pn**	**03 35 45.5**	**-1.7**
AC01				IAML		03 36 23.8	
	comp=E,453nm,0.2s						
PSGCX	**Pisagua**	**3.66**	**27**		**Pb**	**03 35 56.4**	**-1.6**
PB08	**IPOC Station P**	**3.74**	**44**		**Pb**	**03 35 59.1**	**-0.4**
PB08	**IPOC Station P**	**3.74**	**44**	*e*P	**Pb**	**03 35 59.0**	**-0.5**
PB08				*e*S	**Sb**	**03 36 41.9**	**-3.1**
PB08	**IPOC Station P**	**3.74**	**44**	IAML		03 36 48.8	
	comp=Z,83nm,0.3s						
PB11	**IPOC Station P**	**3.74**	**35**		**Pb**	**03 35 58.1**	**-1.3**
PB11	**IPOC Station P**	**3.74**	**35**	*e*P	**Pb**	**03 35 57.6**	**-1.8**
PB11	**IPOC Station P**	**3.74**	**35**	IAML		03 36 51.2	
	comp=Z,94nm,0.7s						
GO01	**Chusmiza**	**4.07**	**39**		**Pb**	**03 36 03.7**	**-1.5**
GO01	**Chusmiza**	**4.07**	**39**	*e*P	**Pb**	**03 36 03.4**	**-1.8**
PB12	**IPOC Station P**	**4.49**	**20**		**Pb**	**03 36 08.2**	**-4.0**
PB12	**IPOC Station P**	**4.49**	**20**	IAML		03 37 02.8	
	comp=Z,73nm,0.3s						
AC06	**Mina Casimiro**	**4.68**	**163**		**Pn**	**03 36 02.5**	**-1.3**
AC02	**Maricunga**	**4.68**	**148**		**Pn**	**03 36 05.9**	**+1.5**
AC02	**Maricunga**	**4.68**	**148**	*e*P	**Pn**	**03 36 05.6**	**+1.3**
GO03	**Copiapo**	**4.94**	**162**		**Pn**	**03 36 06.5**	**-0.9**
AC05	**El Transito**	**6.12**	**166**		**Pn**	**03 36 22.8**	**-0.9**
SLA	**San Lorenzo**	**6.14**	**109**	*e*P	Pb	03 36 34.0	-6.4
LPAZ	**La Paz**	**7.46**	**29**	Pn	Pn	03 36 50.8	+8.2
	comp=Z,0.5nm,0.3s,baz=274,slow=3.1,SNR=18						
LPAZ				LR	LR	03 40 01.3	
	comp=Z,90nm,18.1s,baz=196,slow=41						
	comp=Z,1.5nm,0.3s						
MT01	**Popeta**	**10.96**	**177**	Pn	**Pn**	**03 37 28.6**	**-1.5**
H03N1	**Juan Fernandez**	**12.20**	**209**	T	T	03 50 15.2	
	baz=30,slow=74						
H03N2	**Juan Fernandez**	**12.21**	**209**	T	T	03 49 56.0	
	baz=30,slow=74						
H03N3	**Juan Fernandez**	**12.22**	**209**	T	T	03 49 55.1	
	baz=30						
PTLB	**Pontes e Lacer**	**14.14**	**61**		**P**	**03 38 17.4**	**-3.8**
VILB	**Vilhena**	**14.87**	**50**		**P**	**03 38 29.4**	**0.0**
VILB				IAmb	IAmb	03 38 34.5	
	comp=Z,12nm,0.9s						
TRQA	**Tornquist**	**17.36**	**153**	Pn	**P**	**03 38 55.6**	**-1.3**
PLCA	**Paso Flores**	**17.84**	**177**	P	**P**	**03 39 04.8**	**+2.5**
	comp=Z,0.2nm,0.3s,baz=357,slow=14,SNR=15						
	comp=Z,4.0nm,0.8s						
MACA	**Manacapuru-AM**	**22.41**	**31**	P	**P**	**03 39 55.7**	**+3.6**
VAO	**Valinhos**	**22.96**	**95**	P	**P**	**03 40 00.6**	**+2.6**
VAO				IAmb	IAmb	03 40 07.7	
	comp=Z,6.3nm,0.8s						
ROSC	**El Rosal**	**27.65**	**355**	LR	LR	03 52 18.1	
	comp=Z,82nm,18.3s,baz=249,slow=37						
TXAR	**Lajitas Array**	**60.24**	**328**	P	P	03 45 16.9	+15
	comp=Z,0.3nm,1.0s,baz=150,slow=6.9,SNR=2.1						
	comp=Z,0.3nm,1.0s						
SNAA	**Sanae**	**61.91**	**160**	P	**P**	**03 45 15.6**	**+3.0**
	comp=Z,2.0nm,0.8s,baz=273,slow=6.4,SNR=11						
	comp=Z,2.0nm,0.8s						
SNAA	**Sanae**	**61.91**	**160**	P	**P**	**03 45 16.1**	**+3.6**
SNAA				IAmb	IAmb	03 45 17.1	
	comp=Z,2.4nm,0.8s						
QSPA	**South Pole Qui**	**67.32**	**180**	P	P	03 45 54.3	+6.2
	comp=Z,1.4nm,0.8s,baz=137,slow=4.9,SNR=4.4						
	comp=Z,1.4nm,0.8s						
QSPA	**South Pole Qui**	**67.32**	**180**	IAmb	IAmb	03 46 06.5	
	comp=Z,2.7nm,1.2s						
BOSA	**Boshof**	**85.24**	**119**	LR	LR	04 21 58.8	
	comp=Z,15nm,20.2s,baz=6.5,slow=34						
MKAR	**Makanchi Array**	**148.36**	**35**	PKPbc	**PKPab**	**03 54 44.6**	**+1.7**
	comp=Z,0.7nm,0.7s,baz=324,slow=3.2,SNR=3.9						

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*DJA **01** 04:02:23.1±0.3, 1°S±3°×12°2E±°, h10^{km}, M4.4/14, mB5.0/3, mb4.6/6, MLv4.2/14, Mw(mB)4.3/3*
*IDC **01** 04:02:30.4±7.2, 0°.97S×121°.33E, h83^{km}±73^{km}, mb3.3/7, mbtmp3.7/8, ML4.1/1, MS3.0/3, Error ellipse: s-maj=64.6km s-min=20.7km az=55.0*
ISC 01 04:02:23.6±1.3**, 0°.72S**±0°.06×**121°.60E**±0°.05**, h17^{km}**±9^{km}**, n32, σ1^{s}.36**/29**, mb3.9**/7**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APSI	**Ampana**	**0.20**	**167**	P	**Pg**	**04 02 27.6**	**-0.8**
LUWI	**Luwuk**	**1.21**	**105**	P	**Pn**	**04 02 46.5**	**+0.7**
MRSI	**Marisa**	**1.23**	**16**	P	**Pn**	**04 02 44.1**	**-2.1**
PCI	**Palu**	**1.78**	**264**	P	**Pn**	**04 02 54.5**	**+0.9**
GTOI	**Gorontalo**	**1.95**	**46**	P	**Pn**	**04 02 56.0**	**0.0**
MPSI	**Mapaga**	**2.00**	**302**	P	**Pn**	**04 02 55.1**	**-1.6**
KMSI	**Cibinong**	**2.70**	**62**	P	**Pb**	**04 03 13.7**	**+2.1**
TTSI	**Tana Toraja**	**2.92**	**218**	P	**Pn**	**04 03 10.5**	**+1.2**
MMSI	**Mamuju**	**3.33**	**234**	P	**Pn**	**04 03 16.0**	**+1.0**
KKSI	**Kolaka, Sulawe**	**3.43**	**179**	P	Pg	04 03 34.8	+5.4
SPSI	**Sidrap Palu**	**3.71**	**210**	P	**Pn**	**04 03 21.7**	**+1.5**
PMSI	**Majene**	**3.85**	**224**	P	**Pn**	**04 03 24.2**	**+2.0**
MNI	**Manado**	**3.88**	**56**	P	**Pb**	**04 03 32.0**	**+0.2**
BNSI	**Bone**	**3.95**	**202**	P	**Pn**	**04 03 24.8**	**+1.3**
SANI	**Sanana**	**4.58**	**107**	P	**Pn**	**04 03 31.6**	**-0.6**
KAPI	**Kappang**	**4.65**	**203**	P	**Pn**	**04 03 34.1**	**+0.9**
	9.3nm,0.3s,baz=29,slow=7.6,SNR=42						
KAPI				S	**Sn**	**04 04 23.4**	**-3.4**
	15nm,0.4s,baz=190,slow=22,SNR=1.5						
	32nm,0.4s						
KAPI	**Kappang**	**4.65**	**203**	P	**Pn**	**04 03 33.9**	**+0.7**
BKSI	**Bulukumba**	**4.81**	**198**	P	**Pn**	**04 03 35.8**	**+0.5**
MKS	**Makassar**	**4.95**	**205**	P	**Pn**	**04 03 38.8**	**+1.5**
BSSI	**Bau Bau, Buton**	**5.50**	**192**	P	**Pn**	**04 03 45.3**	**+0.4**
	0.2nm35nm,0.7s						
NLAI	**Namlea**	**6.04**	**115**	P	**Pn**	**04 03 53.3**	**+1.1**
	2μm65nm,0.7s						
EDFI	**Ende, Flores**	**7.98**	**179**	P	**Pn**	**04 04 19.4**	**+0.4**
BATI	**Baumata**	**9.65**	**168**	LR	LR	04 08 30.3	
	comp=Z,104nm,19.5s,baz=18,slow=38						
WRA	**Warramunga Arr**	**22.81**	**148**	P	**P**	**04 07 25.4**	**-0.5**
	0.5nm,0.6s,baz=323,slow=11,SNR=5.1						
	0.5nm,0.6s						
PSI	**Prapat**	**22.94**	**279**	LR	LR	04 16 53.6	
	comp=Z,55nm,21.4s,baz=102,slow=38						
ASAR	**Alice Springs**	**25.75**	**153**	P	**P**	**04 07 53.3**	**-0.3**
	0.4nm,0.8s,baz=345,slow=14,SNR=4.8						
	0.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**29.32**	**312**	LR	LR	04 20 06.7	
	comp=Z,19nm,19.2s,baz=260,slow=36						
SONM	**Songino Array**	**50.14**	**347**	P	**P**	**04 11 19.7**	**+1.4**
	1.5nm,1.0s,baz=152,slow=6.7,SNR=4.5						
	1.5nm,1.0s						
MKAR	**Makanchi Array**	**58.50**	**329**	P	**P**	**04 12 19.4**	**+0.3**
	0.7nm,0.8s,baz=138,slow=7.4,SNR=2.8						
	0.7nm,0.8s						
ZALV	**Zalesovo Beam**	**62.40**	**336**	P	**P**	**04 12 44.4**	**-1.1**
	0.9nm,0.6s,baz=145,slow=5.4,SNR=4.5						
	0.9nm,0.6s						
KURBB	**Kurchatov Arra**	**62.89**	**331**	P	**P**	**04 12 47.9**	**-1.0**
	1.2nm,0.8s,baz=142,slow=6.0,SNR=8.5						
	1.2nm,0.8s						
BVAR	**Borovoye Array**	**68.38**	**330**	P	**P**	**04 13 23.2**	**-1.1**
	0.6nm,0.5s,baz=123,slow=11,SNR=5.0						
	0.6nm,0.5s						

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*IDC **01** 04:21:38.0±2.6, 25°.05N×126°.88E, h0^{km}, mb3.7/5, mbtmp3.7/5, MS2.8/2, Error ellipse: s-maj=129.9km s-min=21.2km az=62.0*
*JMA **01** 04:21:39.9±0.4, 25°N±2°×12°8E±°, h65^{km}±4^{km}, MV3.2/17, NEAR OKINAWAJIMA ISLAND*
ISC 01 04:21:39.3±1.0**, 25°.30N**±0°.07×**127°.70E**±0°.06**, h27^{km}, n21, σ1^{s}.13**/26**, mb3.6**/5**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	**0.84**	**5**	P	**Pn**	**04 21 55.5**	**0.0**
JJT3				*e*S	**Sn**	**04 22 07.4**	**+0.5**
JNTH	**Nagotoyohara**	**1.25**	**13**	P	**Pn**	**04 22 00.3**	**-0.7**
JNTH				*e*S	**Sn**	**04 22 15.9**	**-1.0**
JKE	**Kume jima 2**	**1.31**	**321**	P	**Pn**	**04 22 00.8**	**-1.0**
JAGN	**Aguni-jima**	**1.34**	**342**	P	**Pn**	**04 22 02.1**	**-0.2**
JAGN				*e*S	**Sn**	**04 22 18.0**	**-1.3**
JOW	**Kunigami**	**1.61**	**19**	P	**Pn**	**04 22 06.0**	**0.0**
JIH	**Iheya**	**1.74**	**8**	*e*P	**Pn**	**04 22 08.2**	**+0.4**
JYRO	**Yoronjima**	**1.84**	**21**	*e*P	**Pn**	**04 22 09.2**	**0.0**
JTK	**Tokunoshima**	**2.71**	**24**	*e*P	**Pn**	**04 22 21.7**	**+0.5**
JTK				*e*S	**Sn**	**04 22 52.1**	**-1.1**
JAMN	**Amaminishikomi**	**3.21**	**24**	P	**Pn**	**04 22 28.9**	**+0.9**
JMZ	**Minamidaito 2**	**3.23**	**80**	*e*P	**Pn**	**04 22 27.8**	**-0.4**
JMZ				*e*S	**Sn**	**04 23 03.6**	**-2.1**
JKDJ	**Kitadaitoujima**	**3.31**	**78**	P	**Pn**	**04 22 29.1**	**-0.3**
JKDJ				*e*S	**Sn**	**04 23 06.3**	**-1.5**
JAM	**Amami Oshima**	**3.53**	**28**	P	**Pn**	**04 22 33.0**	**+0.6**
JAM				*e*S	**Sn**	**04 23 12.5**	**-0.9**
JTAJ	**Takarajima**	**4.06**	**19**	*e*P	**Pn**	**04 22 40.4**	**+0.7**
JNN	**Nakanoshima**	**4.92**	**23**	*e*P	**Pn**	**04 22 52.8**	**+1.3**
MJAR	**Matsushiro Arr**	**14.37**	**36**	LR	LR	04 30 01.0	
	comp=Z,43nm,19.1s,baz=148,slow=34						
LZDM	**Lanzhou Array**	**23.17**	**303**	P	**P**	**04 26 42.3**	**-1.8**
	1.2nm,0.3s,baz=125,slow=9.3,SNR=4.1						
	1.2nm,0.3s						
SONM	**Songino Array**	**28.08**	**329**	P	**P**	**04 27 30.4**	**+1.6**
	0.3nm,0.3s,baz=148,slow=8.4,SNR=2.9						
	0.3nm,0.3s						
PETK	**Petropavlovsk-**	**35.73**	**31**	LR	LR	04 45 14.4	
	comp=Z,11nm,18.8s,baz=85,slow=39						
MKAR	**Makanchi Array**	**41.80**	**313**	P	**P**	**04 29 25.6**	**-1.0**
	0.6nm,0.5s,baz=96,slow=10.0,SNR=11						
	0.6nm,0.5s						
WRA	**Warramunga Arr**	**45.44**	**171**	P	**P**	**04 29 57.1**	**+1.0**
	0.5nm,0.8s,baz=350,slow=8.0,SNR=3.1						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**49.05**	**172**	P	**P**	**04 30 26.1**	**+1.9**
	0.4nm,0.6s,baz=350,slow=9.0,SNR=9.9						
	0.4nm,0.6s						

DJA 01 04:38:35.2±0.3**, 9°S**±8°×**11°8E**±°**, h155^{km}**±3^{km}**, M3.4**/8**, mb3.7**/5**, MLv3.2**/8**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.13**	**239**	P	Pn	04 38 57.2	+1.2
PLAI				S	Sn	04 39 12.9	+1.1
DBNI	**Kabupaten Domp**	**0.49**	**58**	P	Pn	04 38 58.6	+1.5
DBNI				S	Sn	04 39 15.0	+1.2
TWSI	**Taliwang, Sumb**	**1.00**	**271**	P	Pn	04 39 01.3	+0.9
WBSI	**Waikabubak, Su**	**1.72**	**121**	P	Pn	04 39 07.6	0.0
WBSI				S	Sn	04 39 31.9	-0.5

KLNI	Mataram	1.81	281	P	Pn	04 39 08.7	+0.3
LBFI	Labuhan Bajo,	2.00	82	P	Pn	04 39 11.1	+0.5
IGBI	Denpasar	2.71	269	P	Pn	04 39 19.4	+0.2
BASI	Baing, Sumba	3.02	119	P	Pn	04 39 23.9	+0.9
JAGI	Jajag, Banyuwa	3.71	274	P	Pn	04 39 30.4	-1.4
EDFI	Ende, Flores	3.76	90	P	Pn	04 39 32.4	-0.2
PCJI	Pacitan	6.66	274	P	Pn	04 40 10.4	-0.4
	0.2nm19nm,1.4s						
UGM	Wanagama	7.34	276	P	Pn	04 40 19.7	-0.2

RSNC 01 04:42:00.2±0.0,**7°N**±1°×**7°3W**±°,**h144**^{km}±2^{km},**M3.0,mb3.7, ML2.7,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.24	185	P	Pn	04 42 19.8	-0.4
BARC				S	Sn	04 42 35.1	-0.2
BRJC	Barrancabermej	0.60	284	P	Pn	04 42 21.5	+0.1
BRJC				S	Sn	04 42 38.5	+1.0
PAMC	Pamplona, Colo	0.68	42	P	Pn	04 42 22.5	0.0
PAMC				S	Sn	04 42 39.1	-0.4
RUSC	La Rusia	0.94	175	P	Pn	04 42 23.9	-0.5
RUSC				S	Sn	04 42 42.0	-0.8
PTBC	PUERTO BERRIO,	1.32	257	P	Pn	04 42 26.5	-0.9
PTBC				S	Sn	04 42 47.5	-0.7
OCAC	Ocana	1.41	354	P	Pn	04 42 27.6	-0.9
OCAC				S	Sn	04 42 49.3	-0.9
SPBC	San Pablo de B	1.48	218	P	Pn	04 42 28.7	-0.5
SPBC				S	Sn	04 42 51.2	-0.2
CHIC	Chingaza	2.26	195	P	Pn	04 42 38.2	-0.3
CHIC				S	Sn	04 43 07.4	-0.5
ROSC	El Rosal	2.29	210	P	Pn	04 42 39.8	+0.9
ROSC				S	Sn	04 43 10.8	+2.3
UREC	San Jos de Ur	2.53	291	P	Pn	04 42 39.7	-1.7
UREC				S	Sn	04 43 10.0	-3.1
GUY2C	Guyana, Caldas	2.71	234	P	Pn	04 42 44.2	0.0
GUY2C				S	Sn	04 43 19.1	+1.1
VILC	Villavicencio,	2.75	191	P	Pn	04 42 43.5	-0.9
VILC				S	Sn	04 43 17.6	-0.8
RECRC	Villamaria, Ca	2.87	230	P	Pn	04 42 47.4	+1.2
RECRC				S	Sn	04 43 24.7	+3.2
NIZA	Niza - Manizal	2.90	233	P	Pn	04 42 49.2	+2.9
NIZA				S	Sn	04 43 25.8	+4.0
CBOC	Ciudad Bolivar	2.99	251	P	Pn	04 42 47.6	+0.2
CBOC				S	Sn	04 43 21.3	-2.6
DBBC	Dabeiba	3.03	274	P	Pn	04 42 47.3	-0.6
DBBC				S	Sn	04 43 22.5	-2.1
ARGC	Ariguani, Magd	3.19	340	P	Pn	04 42 49.9	0.0
ARGC				S	Sn	04 43 26.9	-1.4
ANIL	Santa Ana	3.22	224	P	Pn	04 42 51.2	+0.7
ANIL				S	Sn	04 43 31.9	+2.6
PRAC	Prado	3.54	209	P	Pn	04 42 53.8	-0.6
PRAC				S	Sn	04 43 35.9	-0.5
ORTC	Ortega, Tolima	3.57	216	P	Pn	04 42 54.0	-0.7
ORTC				S	Sn	04 43 36.5	-0.5
PLMC	San Jos del P	3.65	239	P	Pn	04 42 55.8	0.0
PLMC				S	Sn	04 43 36.4	-2.5
URMC	La Uribe, Meta	3.76	199	P	Pn	04 42 57.0	-0.3
URMC				S	Sn	04 43 41.7	+0.1
CRJC	Cerrejon, Guaj	4.17	4	P	Pn	04 43 00.0	-2.7
CRJC				S	Sn	04 43 44.8	-6.5
YOTC	Yotoco, Valle	4.25	228	P	Pn	04 43 02.5	-1.2
YOTC				S	Sn	04 43 54.2	+1.1
CAPC	Capurgana	4.52	294	P	Pn	04 43 07.8	+0.6
CAPC				S	Sn	04 43 53.7	-5.7
MACC	Macarena, Meta	4.70	188	P	Pn	04 43 07.0	-2.7
MACC				S	Sn	04 43 59.7	-4.1
URIC	Uribia, Colomb	4.98	13	P	Pn	04 43 10.0	-3.2
URIC				S	Sn	04 44 05.5	-4.7
JAMC	Jamundi, Valle	5.01	224	P	Pn	04 43 12.5	-1.5
	4.6nm,0.6s						
JAMC				S	Sn	04 44 10.6	-0.8
	4.6nm,0.6s						

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*NEIC **01** 05:07:03.4±1.2,53°.03N±0°.04×164°.14W±0°.06,h10^{km}±1^{km}, mb3.8/22,ML3.3/16,ML3.3(AEIC),Error ellipse: s-maj=7.5km s-min=5.9km az=188.0*

*IDC **01** 05:07:03.0±1.1,53°.22N×164°.02W,h0^{km},mb3.9/16, mbtmp3.8/19,ML3.2/3,Error ellipse: s-maj=28.5km s-min=16.3km az=8.0*

*AEIC **01** 05:07:05.4±1.6,52°.95N±0°.03×164°.06W±0°.04,h33^{km}±5^{km}, Error ellipse: s-maj=5.1km s-min=2.9km az=150.0*

ISC 01 05:07:03.2±0.7,**53°.01N**±0°.05×**164°.22W**±0°.04,**h10**^{km}, **n106,**σ**1^{s}.37**/126,**mb3.8**/16,**Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKSA	Akutan Strait	1.43	323		Pb	05 07 29.3	-0.7
AKSA					Sn	05 07 47.7	-0.4
AKUT	Akutan	1.46	321		Pb	05 07 29.9	-0.5
AKUT				IAML		05 07 50.9	
	comp=E,430nm,0.9s						
AKUT	Akutan	1.46	321	P	Pb	05 07 29.8	-0.6
AHB	Akutan Harbor	1.46	320		Pb	05 07 30.1	-0.4
AHB					Sg	05 07 49.7	-0.5
AHB					Sb	05 07 51.2	+2.1
AKBBA	Akutan Broad B	1.50	318		Pb	05 07 30.7	-0.4
AKBBA					Sb	05 07 50.3	+0.2
AKBBA					Sg	05 07 51.5	+0.2
ZRO	Akutan Zero	1.51	317		Pb	05 07 30.8	-0.5
ZRO					Sb	05 07 50.8	+0.3
AKV	Akutan Volcano	1.53	318		Pb	05 07 31.2	-0.5
AKV					Sg	05 07 52.1	-0.2
AKLV	Akutan Long Va	1.55	319		Pb	05 07 31.4	-0.6
AKLV					Sb	05 07 51.5	-0.3
AKLV					Sg	05 07 52.5	-0.6
AKRB	Akutan Reef Bi	1.57	316		Pb	05 07 31.6	-0.8
AKRB					Pg	05 07 32.0	-1.4
AKRB					Sb	05 07 52.8	+0.4
AKRB					Sg	05 07 53.5	-0.3
LVA	Lava Point	1.58	318	Pn	Pb	05 07 31.5	-1.0
AKGG	Akutan Green G	1.59	319		Pb	05 07 31.9	-0.8
AKGG					Sb	05 07 52.5	-0.4
AKGG					Sg	05 07 53.2	-1.2
UNV	Unalaska Valle	1.60	303		Pb	05 07 31.7	-1.1
UNV					Sb	05 07 52.8	-0.4
UNV				IAML		05 07 53.8	
	comp=N,298nm,0.7s						
UNV				IAML		05 07 54.4	
	comp=E,465nm,0.6s						
UNV	Unalaska Valle	1.60	303	P	Pb	05 07 31.5	-1.4
WEBT	Westdahl Beart	1.62	349		Pb	05 07 32.0	-1.2
WEBT					Pg	05 07 32.4	-1.9
WEBT					Sn	05 07 52.4	-0.3
MREP	Makushin Rep't	1.71	299		Pb	05 07 33.8	-1.0
MNAT	Makushin Natee	1.71	302		Pb	05 07 33.8	-1.0
SSLS	Shishaldin Sou	1.71	4		Pb	05 07 33.1	-1.8
SSLS					Pn	05 07 33.4	+0.3
MGOD	Makushin Gods	1.77	298		Pb	05 07 34.4	-1.4
SSBA	Shishaldin	1.77	2		Pb	05 07 34.0	-1.8
SSBA					Sn	05 07 55.6	-1.0
SSBA					Sb	05 07 57.5	-0.5
MSW	Makushin Switc	1.78	302		Pb	05 07 34.7	-1.2
MSW					Sb	05 07 57.2	-1.1
MSW					Sn	05 07 57.4	+0.7
FALS	False Pass	1.92	14	Pn	Pn	05 07 35.0	-0.8
FALS	False Pass	1.92	14	P	Pn	05 07 35.6	-0.2
FALS	False Pass	1.92	14	S	Sn	05 07 59.2	-0.8
OKFG	Magazine Ridge	2.25	282		Pn	05 07 41.1	+0.6
OKTU	Okmok Mt. Tuli	2.33	281		Pn	05 07 42.4	+0.8
OKNC	Okmok New Cone	2.39	282		Pn	05 07 43.2	+0.9
DT1	Dutton Round H	2.40	28		Pn	05 07 41.3	-1.2
OKCE	Okmok Cone E	2.41	282		Pb	05 07 43.9	-2.7
OKWR	Okmok West Rim	2.43	282		Pn	05 07 43.8	+0.8
OKWR					Pb	05 07 44.1	-3.0
DTNA	Dutton South F	2.44	28		Pn	05 07 42.2	-0.9
OKSP	Okmok Steeple	2.46	277		Pn	05 07 43.9	+0.5
DOL	Dolgoi Island	2.56	32		Pn	05 07 43.5	-1.3
PS4A	Pavlof South-4	2.73	30		Pn	05 07 46.5	-0.5
PVV	Pavlof Volcano	2.77	30		Pn	05 07 47.3	-0.3
NIKH	Nikolski High	2.80	271	Pn	Pn	05 07 48.5	+0.6
NIKH				IAML		05 08 22.2	
	comp=N,141nm,0.8s						
NIKH				IAML		05 08 28.2	
	comp=E,129nm,1.2s						
PS1A	Pavlof South-1	2.83	30		Pn	05 07 48.1	-0.3
S12K	Black Hills	2.98	24	Pn	Pn	05 07 50.6	0.0
S12K				IAML		05 08 26.3	
	comp=E,90nm,0.2s						
SDPT	Sand Point	3.22	42	Pn	Pn	05 07 53.0	-0.7
SDPT				IAML		05 08 33.7	
	comp=E,81nm,0.9s						
SDPT				IAML		05 08 37.7	
	comp=N,77nm,1.1s						
SDPT	Sand Point	3.22	42	P	Pn	05 07 53.0	-0.7
CNBA	Chernabura Isl	3.29	55	Pn	Pn	05 07 53.5	-1.2
CHIR	Chirikof Islan	5.76	57	Pn	Pn	05 08 27.9	-0.7
ATKA	Atka Island	6.13	266	Pn	Pn	05 08 34.1	+0.4
PLK4	Peulik 4	6.45	41	Pn	Pn	05 08 37.1	-1.1
O15K	Ungalikthiuk R	6.66	20	Pn	Pn	05 08 39.6	-1.3
SII	Sitkinak Islan	6.81	54	Pn	Pn	05 08 41.0	-2.0
N14K	Kuskokwak Cree	7.08	10	Pn	Pn	05 08 45.9	-0.8
O16K	Kokwok River B	7.43	25	Pn	Pn	05 08 50.9	-0.7
OHAK	Old Harbor	7.56	52	P	Pn	05 08 51.8	-1.5
ADK	Adak	7.70	267	Pn	Pn	05 08 55.5	+0.2
ADK	Adak	7.70	267	P	Pn	05 08 53.0	-2.2
KDAK	Kodiak Island	8.17	50	Pn	Pn	05 08 59.4	-2.3
	comp=N,0.3nm,0.3s,baz=231,slow=2.5,SNR=11						
KDAK				Sn	Sn	05 10 23.2	-11
	comp=N,0.1nm,0.3s,baz=221,slow=0.9,SNR=1.2						
	comp=N,5.4nm,0.9s						
Q19K	Cape Douglas,	8.39	41	Pn	Pn	05 09 04.0	-0.7
L14K	Kuka Creek	8.40	5	Pn	Pn	05 09 04.1	-0.7
O18K	Koktuh Hills	8.48	32	Pn	Pn	05 09 05.5	-0.5
SYI	Shuyak Island	8.71	45	Pn	Pn	05 09 08.3	-0.7
L16K	Owhat River	9.10	14	Pn	Pn	05 09 14.7	+0.3
M17K	Holitna River	9.18	21	Pn	Pn	05 09 16.4	+0.9
M20K	Styx River	10.70	29	Pn	Pn	05 09 34.0	-2.4
SLKM	Skilak Lake	10.73	40	Pn	Pn	05 09 36.4	-0.4
SUA	Susitna One	11.16	35	Pn	Pn	05 09 41.8	-1.0
L22K	Petersville	11.91	32	Pn	Pn	05 09 51.5	-1.4
KLU	Klutina	13.01	42		Pn	05 10 05.4	-2.6
BPAW	Bear Paw Mtn.	13.06	26	Pn	Pn	05 10 08.7	+0.1
ISLE	Juniper Island	14.14	49		Pn	05 10 19.9	-3.6
G21K	Allakaket	14.55	17	P	P	05 10 36.3	+0.8
ILAR	Eielson Array	14.74	30	Pn	Pn	05 10 28.4	-3.1
	baz=223,slow=13,SNR=4.8						
	comp=N,0.3nm,0.6s						
M27K	Edge Creek, AK	15.10	43	Pn	Pn	05 10 31.6	-4.9
M27K				IAmb	IAmb	05 10 45.0	
	comp=Z,7.4nm,0.8s						
G23K	Bananza Creek	15.42	22		Pn	05 10 40.6	0.0
G23K				IAmb	IAmb	05 10 45.2	
	comp=Z,3.2nm,0.6s						
L27K	Beaver Creek,	15.47	41		Pn	05 10 38.9	-2.3
L27K				IAmb	IAmb	05 10 48.6	
	comp=Z,3.1nm,0.7s						
J26L	Joseph Creek	15.64	35		Pn	05 10 42.9	-0.6
DAWY	Dawson	16.91	39		Pn	05 10 58.3	-1.5
I27K	Kandik River	16.96	33	Pn	Pn	05 10 58.4	-2.0
I28M	Miner Creek	17.44	35		Pn	05 11 04.9	-1.5
K29M	Barlow Dome	17.54	41		Pn	05 11 06.3	-1.4
K29M				IAmb	IAmb	05 11 16.0	
	comp=Z,4.9nm,0.8s						
J29N	Klondike Camp	17.55	39	P	Pn	05 11 06.7	-1.0
J29N				IAmb	IAmb	05 11 12.6	
	comp=Z,5.3nm,0.6s						
E25K	Arctic Village	17.59	23	P	Pn	05 11 05.7	-2.4
M31M	Drury Creek, Y	18.28	48	P	P	05 11 19.7	+2.9
M31M				IAmb	IAmb	05 11 20.5	
	comp=Z,6.8nm,1.0s						
J30M	Hart River	18.33	40	P	P	05 11 21.1	+3.7
J30M				IAmb	IAmb	05 11 21.8	
	comp=Z,5.8nm,0.8s						
H29M	Whitestone	18.41	34	P	Pn	05 11 17.4	-0.8
H29M				IAmb	IAmb	05 11 35.9	
	comp=Z,5.9nm,0.9s						
P33M	Teslin, Yukon	18.59	55		Pn	05 11 22.5	+2.1
P33M				IAmb	IAmb	05 11 23.7	
	comp=Z,13nm,0.9s						
I30M	Mount Dempster	18.61	38	P	Pn	05 11 22.3	+1.5
I30M				IAmb	IAmb	05 11 23.1	
	comp=Z,4.6nm,0.7s						
H31M	Peel River	19.63	38		Pn	05 11 33.1	+0.2
DLBC	Dease Lake	19.86	60	P	P	05 11 32.2	-2.0
	comp=Z,0.1nm,0.3s,baz=227,slow=14,SNR=4.6						
	comp=Z,1.7nm,0.8s						
INK	Inuvik	21.12	32	P	P	05 11 45.0	-2.6
	comp=Z,1.2nm,0.5s,baz=253,slow=10,SNR=13						
	comp=Z,1.2nm,0.5s						
INK	Inuvik	21.12	32		P	05 11 46.2	-1.5
INK				IAmb	IAmb	05 11 52.7	
	comp=Z,6.7nm,1.1s						
C36M	Paulatuk	24.66	33	P	P	05 12 22.7	-0.9
A36M	Sachs Harbour	25.40	27		P	05 12 30.9	+0.7
YKA	Yellowknife Ar	27.45	50	P	P	05 12 48.5	-0.4
	comp=Z,0.9nm,0.8s,baz=277,slow=10,SNR=3.8						
	comp=Z,0.9nm,0.8s						
NVAR	Mina Array Bea	34.58	96	P	P	05 13 52.8	+0.6
	comp=Z,1.2nm,0.8s,baz=292,slow=7.6,SNR=6.0						
	comp=Z,1.2nm,0.8s						
PDAR	Pinedale Array	37.21	83	P	P	05 14 15.2	+0.5
	comp=Z,0.7nm,0.7s,baz=305,slow=5.2,SNR=8.1						
	comp=Z,0.7nm,0.7s						
TXAR	Lajitas Array	49.63	94	P	P	05 15 55.1	+0.3
	comp=Z,0.9nm,0.8s,baz=303,slow=5.5,SNR=8.7						
	comp=Z,0.9nm,0.8s						
SONM	Songino Array	53.62	303	P	P	05 16 26.3	+1.8
	comp=Z,0.3nm,0.5s,baz=46,slow=6.2,SNR=2.3						
	comp=Z,0.3nm,0.5s						
SONM	Songino Array	53.62	303	IAmb	IAmb	05 16 26.9	
	comp=Z,1.4nm,1.0s						
ARCES	ARCESS Array B	57.56	356	P	P	05 16 53.4	+1.1
	comp=Z,2.3nm,0.9s,baz=351,slow=11,SNR=1.0						
	comp=Z,2.3nm,0.9s						
KURK	Kurchatov	63.92	321	P	P	05 17 37.9	+2.1
KURK	Kurchatov	63.92	321	IAmb	IAmb	05 17 42.3	
	comp=Z,3.0nm,1.1s						
KURBB	Kurchatov Arra	64.03	321	P	P	05 17 37.9	+1.4
	comp=Z,0.6nm,0.9s,baz=33,slow=7.2,SNR=1.4						
	comp=Z,0.6nm,0.9s						
BVAR	Borovoye Array	64.94	327	P	P	05 17 43.6	+1.1
	comp=Z,1.0nm,0.6s,baz=60,slow=6.0,SNR=6.7						
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	65.58	316	P	P	05 17 46.9	+0.1
	comp=Z,0.3nm,0.6s,baz=35,slow=5.3,SNR=2.0						
	comp=Z,0.3nm,0.6s						
FINES	FINESS Array B	65.60	355	P	P	05 17 46.8	+0.1
	comp=Z,4.1nm,1.0s,baz=7.6,slow=5.8,SNR=4.6						
	comp=Z,4.1nm,1.0s						
HFS	Hagfors	67.20	1	P	P	05 17 56.7	-0.2
	comp=Z,3.9nm,0.8s,baz=35,slow=5.3,SNR=2.7						
	comp=Z,3.9nm,0.8s						
EKA	Eskdalemuir Ar	70.90	11	P	P	05 18 20.2	+0.3
	comp=Z,1.7nm,0.7s,baz=350,slow=4.6,SNR=6.9						
	comp=Z,1.7nm,0.7s						
AKASG	Malin Array Be	76.05	351	P	P	05 18 50.3	0.0
	comp=Z,2.4nm,0.6s,baz=13,slow=5.7,SNR=7.9						
	comp=Z,2.4nm,0.6s						
AKASG	Malin Array Be	76.05	351	IAmb	IAmb	05 18 57.5	
	comp=Z,2.4nm,1.1s						
GERES	GERESS Array B	78.51	1	P	P	05 19 05.1	+0.8
	comp=Z,0.4nm,0.6s,baz=353,slow=7.3,SNR=3.0						
	comp=Z,0.4nm,0.6s						
CMAR	Chiang Mai Arr	79.49	287	P	P	05 19 10.9	+0.9
	comp=Z,0.5nm,0.3s,baz=45,slow=6.2,SNR=1.5						
	comp=Z,0.5nm,0.3s						

DJA 01 05:11:23.0±0.4,**11°S**±4°×**11°8E**±°,**h10**^{km},**M4.2**/11, **mB5.3**/1,**mb4.5**/7,**MLv4.1**/11,**Mw(mB)4.7**/1,**South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	2.15	32	P	Pn	05 11 58.9	-0.1
WBSI				S	Sn	05 12 21.9	-3.9
PLAI	Plampang	2.66	351	P	Pn	05 12 05.3	-0.7
DBNI	Kabupaten Domp	2.95	2	P	Pn	05 12 10.2	+0.2
DBNI				S	Sn	05 12 41.0	-4.5
TWSI	Taliwang, Sumb	3.02	334	P	Pn	05 12 10.0	-0.9
TWSI				S	Sn	05 12 40.0	-7.1
LBFI	Labuhan Bajo,	3.40	29	P	Pn	05 12 16.6	+0.5
KLNI	Mataram	3.68	325	P	Pn	05 12 20.6	+0.6
EDFI	Ende, Flores	4.36	52	P	Pn	05 12 28.9	-0.5
RTBI	Rangdo, Negare	4.40	313	P	Pn	05 12 30.0	0.0
JAGI	Jajag, Banyuwa	4.99	306	P	Pn	05 12 37.6	-0.5
	0.5nm3µm27nm,0.5s						
GMJI	Gumukmas	5.68	304	P	Pn	05 12 47.4	-0.1
	0.1nm20nm,0.4s						
BSSI	Bau Bau, Buton	5.75	23	P	Pn	05 12 48.6	+0.1
	0.2nm32nm,0.7s						
BKSI	Bulukumba	6.39	17	P	Pn	05 12 58.2	+0.9
	0.1nm16nm,0.5s						
SNJI	Sawahan-Nganju	7.35	299	P	Pn	05 13 11.5	+0.9
PCJI	Pacitan	7.67	294	P	Pn	05 13 14.5	-0.3

IDC 01 05:15:49.3±3.2,**32°.57S**×**178°.61W,h0**^{km},**mb3.7**/2, **mbtmp3.7**/3,**ML3.7**/1,**Error ellipse: s-maj=73.6km s-min=37.2km az=112.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.67	210	Pn	Pn	05 17 28.4	-0.1
	1.6nm,0.3s,baz=40,slow=4.2,SNR=6.3						
URZ				Sn	Sn	05 18 45.2	0.0
	0.6nm,0.3s,baz=86,slow=14,SNR=2.2						
	5.4nm,0.5s						
ASAR	Alice Springs	42.52	270	P	P	05 23 46.6	-0.2
	0.6nm,0.6s,baz=103,slow=7.4,SNR=6.1						
	0.6nm,0.6s						
WRA	Warramunga Arr	43.71	275	P	P	05 23 56.4	0.0
	1.0nm,0.7s,baz=114,slow=7.7,SNR=5.2						
	1.0nm,0.7s						
FINES	FINESS Array B	146.98	338	PKPbc	PKPbc	05 35 32.2	-0.8
	2.9nm,1.0s,baz=36,slow=5.5,SNR=4.1						

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*MOS **01** 05:23:46.9,42°.43N×43°.14E,h9^{km},MPVA3.7*

*NORS **01** 05:23:48.0,42°.46N×43°.24E,h2^{km},MPVA3.7*

*AFAD **01** 05:24:07.5,41°.38N×42°.32E,h7^{km}±5^{km},ML2.0*

ISC 01 05:23:47.4±1.2,**42°.44N**±0°.02×**43°.15E**±0°.03,**h3**^{km}±10^{km}, **n27,**σ**0^{s}.70**/49,**Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIGR	Digorskoe uzhe	0.56	34	*e*Pg	Pg	05 23 56.6	-1.6
DIGR				*e*Sg	Sg	05 24 04.8	-0.5
NEUR	Neytrino	0.89	338	*e*Pg	Pg	05 24 03.7	-0.7
NEUR				*i* Sg	Sg	05 24 17.1	+1.1
LACR	Lac	0.93	65	*e*Pg	Pg	05 24 05.1	-0.1
LACR				*e*Sg	Sg	05 24 16.4	-0.9
KORR	Kora	0.93	46	*e*Pg	Pg	05 24 05.3	0.0
KORR				*e*Sg	Sg	05 24 17.7	+0.3
LSNR	Lesken	0.97	30	*e*Pg	Pg	05 24 05.8	-0.3
LSNR				*e*Sg	Sg	05 24 18.9	+0.2
EPOS	Posof	0.99	199	P	Pn	05 24 14.1	+5.7
EPOS				S	Sg	05 24 19.4	+0.2
EPOS				*i* IAML		05 24 21.0	
	comp=N,187nm,0.4s						
NCK	Nalchik	1.10	17	*e*Pg	Pg	05 24 09.3	+0.8
NCK				*e*Sg	Sb	05 24 24.3	+0.3
ARNR	Ardon	1.11	48	*e*Pg	Pg	05 24 08.8	+0.1
ARNR				*e*Sg	Sb	05 24 25.1	+0.8
STDR	Stavd-Durt	1.14	35	*e*Pg	Pg	05 24 09.7	+0.3
STDR				*e*Sg	Sb	05 24 25.5	+0.4
VLKR	Vladikavkaz	1.28	61	*e*Pg	Pn	05 24 12.0	-0.2
VLKR				*e*Sg	Sn	05 24 29.8	-0.1
KBZ	Khabaz	1.30	352	*e*Pg	Pn	05 24 12.1	-0.4
KBZ				*i* Sg	Sg	05 24 30.2	+1.0
AHAN	Ardahan-Merkez	1.34	197	P	Pg	05 24 13.8	+0.8
AHAN				S	Sn	05 24 30.9	-0.7
AHAN				*i* IAML		05 24 34.0	
	comp=E,122nm,0.4s						
SHA1	Shidzhatmaz	1.35	345	*e*Pg	Pn	05 24 12.2	-1.2
SHA1				*i* Sg	Sb	05 24 31.0	-0.2
KBTC	Kuba-Taba	1.39	8	*e*Pg	Pg	05 24 14.9	+0.8
KBTC				*e*Sg	Sg	05 24 33.5	+1.5
KIV0	Kislovodsk Arr	1.55	348	*i* Pg	Pn	05 24 15.6	-0.5
KIV0				*i* Sg	Sn	05 24 36.9	+0.1
KIV	Kislovodsk	1.55	347	*e*Pg	Pn	05 24 15.9	-0.2
KIV				*e*Sg	Sn	05 24 37.0	+0.2
DBOC	Borcka	1.56	226	P	Pn	05 24 16.4	+0.3
BEYR	Belyy Ugol+	1.59	351	*e*Pg	Pn	05 24 15.9	-0.6
BEYR				*e*Sg	Sn	05 24 37.6	-0.1
PYA1	Pyatigorsk	1.62	359	*e*Pg	Pn	05 24 16.1	-0.9
PYA1				*e*Sg	Sn	05 24 38.5	+0.1
GOLE	Ardahan-G¶le	1.66	195	P	Pb	05 24 18.6	-0.1
EAK	Akyaka	1.79	169	P	Pn	05 24 19.3	-0.1
EAK				S	Sb	05 24 43.3	-0.4
EAK				*i* IAML		05 24 50.0	
	comp=E,61nm,0.8s						
DBAD	Bademkaya	1.79	218	P	Pn	05 24 20.0	+0.6
DBAD				S	Sb	05 24 43.7	-0.2
DBAD				*i* IAML		05 24 47.0	
	comp=E,115nm,0.5s						
DBAD				*i* IAML		05 24 50.0	
	comp=N,119nm,0.4s						
BOZK	Kars-Merkez-Bo	1.85	184	P	Pb	05 24 21.3	-0.8
DDEM	Demirkent	1.87	215	P	Pb	05 24 21.5	-0.8
DDEM				S	Sn	05 24 44.9	+0.2
DDEM				*i* IAML		05 24 47.0	
	comp=N,310nm,0.3s						
DDEM				*i* IAML		05 24 49.0	
	comp=E,259nm,0.3s						
DVE	Vedeno	2.25	76	*e*Pn	Pn	05 24 26.9	+1.3
DVE				*e*Sn	Sb	05 24 57.0	-0.1
KOTA	Agri, Merkez-K	2.64	179	P	Pn	05 24 31.9	+0.8
KRIK	Erzurum-spir	2.69	219	P	Pb	05 24 36.9	+0.6
KRIK				*i* IAML		05 24 58.0	
	comp=N,23nm,0.9s						
KRIK				*i* IAML		05 25 03.0	
	comp=E,15nm,0.1s						
KRIK				S	Sg	05 25 12.2	-1.5

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*CNRM **01** 05:40:25.9,32°.90N×15°.04W,h30^{km}*

*MDD **01** 05:40:27.8±0.9,32°.68N×15°.35W,h0^{km},Mb4.5/21, M_mb4.0/16,Error ellipse: s-maj=8.8km s-min=6.7km az=122.0*

*IGIL **01** 05:40:29.2,32°.81N×15°.17W,h27^{km},ML2.7*

*INMG **01** 05:40:30.6±2.1,32°.78N×15°.18W,h26^{km},ML2.7,Error ellipse: s-maj=4.4km s-min=2.6km az=116.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Porto Santo (Madeira)*

ISC 01 05:40:25.5±2.3,**32°.75N**±0°.05×**15°.14W**±0°.04,**h28**^{km}±22^{km}, **n79,**σ**1^{s}.98**/57,**23C,Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMPS	Porto Santo	1.05	287⇑	*e*P	Pn	05 40 45.2	+0.9
PMPS				*i* IAML		05 40 57.1	
PMPST	Porto Santo, M	1.06	288⇑	*e*P	Pn	05 40 45.1	+0.8
PMPST				*e*S	Sb	05 40 56.3	-2.3
PMPST				*i* IAML		05 40 56.6	
PMPST				*i* IAML		05 40 57.4	
PMPST				*i* IAML		05 40 57.8	
FUL	Funchal	1.48	266	*e*P	Pn	05 40 51.6	+1.4
FUL				*e*S	Sn	05 41 07.3	-1.4
FUL				*i* IAML		05 41 08.9	
FUL				*i* IAML		05 41 09.1	
FUL				*i* IAML		05 41 12.6	
PMAR	Madeira	1.50	269	*e*P	Pn	05 40 51.9	+1.3
PMAR				*e*S	Sn	05 41 08.0	-1.3
PMAR				*i* IAML		05 41 09.8	
PMAR				*i* IAML		05 41 11.1	
PMAR				*i* IAML		05 41 14.3	
PMAR	Madeira	1.50	269	P	Pn	05 40 51.7	+1.1
PMAR	Madeira	1.50	269	S	Sn	05 41 10.8	+1.5
PMOZ	Porto Moniz, M	1.74	273	Pn	Pn	05 40 55.0	+1.2
PMOZ				Sn	Sn	05 41 13.4	-1.6
PMOZ	Porto Moniz, M	1.74	273	*e*P	Pn	05 40 55.1	+1.3
PMOZ				*e*S	Sn	05 41 13.4	-1.6
PMOZ				*i* IAML		05 41 20.8	
PMOZ				*i* IAML		05 41 21.8	
PMOZ				*i* IAML		05 41 23.1	
PMOZ	Porto Moniz, M	1.74	273	P	Pn	05 40 54.1	+0.3
PMOZ	Porto Moniz, M	1.74	273	S	Sn	05 41 15.5	+0.4
CDLV	Cueva Verdes	3.86	157	P	Pn	05 41 25.6	+2.7
CDLV				⇑*i*IVmb_VC		05 41 28.5	
	506nm,SNR=0.9						
CDLV				S	Sn	05 42 07.2	-0.2
CGUI	Guimar, Teneri	4.56	195	P	Pn	05 41 32.9	+0.3
CGUI				⇑*i*IVmb_VC		05 41 40.5	
	537nm,SNR=1.0						
CGUI				S	Sn	05 42 22.3	-2.4
CPUN	Puntallana, La	4.60	210	P	Pn	05 41 34.6	+1.5
CPUN				⇑*i*IVmb_VC		05 41 35.8	
	771nm,SNR=0.9						
CPUN				S	Sn	05 42 22.1	-3.4
CFOR	Fortaleza, Los	4.60	196	P	Pn	05 41 33.5	+0.2
CFOR				⇑*i*IVmb_VC		05 41 39.2	
	451nm,SNR=1.3						
CFOR				S	Sn	05 42 24.1	-1.9
CNOR	Icod de los Vi	4.62	197	P	Pn	05 41 34.2	+0.7

CNOR				S	Sn	05 42 24.8	-1.5
CDIE	La Orotava (Te	4.62	196	P	Pn	05 41 34.8	+1.1
CDIE				S	Sn	05 42 24.0	-2.5
CGIN	Giniginamar, F	4.62	168	P	Pn	05 41 35.2	+1.7
CGIN				⇑*i*IVmb_VC		05 41 36.7	
	552nm,SNR=1.7						
CGIN				S	Sn	05 42 23.6	-2.5
CROM	Garafia, La Pa	4.63	211	P	Pn	05 41 34.3	+0.5
CROM				⇑*i*IVmb_VC		05 41 36.2	
	640nm,SNR=1.3						
CROM				S	Sn	05 42 22.1	-4.6
MACI	Morro de la Ar	4.64	195	P	Pn	05 41 35.3	+1.4
MACI				⇑*i*IVmb_VC		05 41 36.2	
	145nm,SNR=0.3						
MACI				S	Sn	05 42 25.6	-1.4
CRAJ	Montana Rajada	4.65	196	P	Pn	05 41 33.6	-0.4
CRAJ				⇑*i*IVmb_VC		05 41 34.7	
	630nm,SNR=1.0						
CRAJ				S	Sn	05 42 25.6	-1.6
CBOL	Buenavista del	4.66	199	⇑*i*IVmb_VC		05 41 36.9	
	139nm,SNR=0.6						
CBOL				S	Sn	05 42 24.1	-3.1
CGOR	Puntagorda, La	4.66	213	P	Pn	05 41 33.2	-0.9
CGOR				⇑*i*IVmb_VC		05 41 36.5	
	1μm,SNR=1.5						
CGOR				S	Sn	05 42 23.5	-3.7
CPVI	La Orotava (Te	4.67	197	P	Pn	05 41 35.1	+0.7
CPVI				S	Sn	05 42 24.9	-2.9
CMIR	El Paso, La Pa	4.67	211	P	Pn	05 41 34.1	-0.2
CMIR				⇑*i*IVmb_VC		05 41 35.7	
	763nm,SNR=2.2						
CMIR				S	Sn	05 42 23.2	-4.4
EOSO	Osorio	4.68	184	Sn	Sn	05 42 24.8	-2.9
EOSO	Osorio	4.68	184	⇑*i*IVmb_VC		05 41 34.7	
	335nm,SNR=0.8						
EOSO				P	Pn	05 41 35.4	+1.1
EOSO				S	Sn	05 42 24.9	-2.8
CCAN	Las Canadas	4.69	196	P	Pn	05 41 35.0	+0.4
CCAN				⇑*i*IVmb_VC		05 41 35.6	
	123nm,SNR=0.3						
CCAN				S	Sn	05 42 24.7	-3.5
CCHO	La Orotava (Te	4.71	197	P	Pn	05 41 35.5	+0.8
CCHO				⇑*i*IVmb_VC		05 41 37.0	
	156nm,SNR=0.7						
CCHO				S	Sn	05 42 25.1	-3.5
TBT	Taburiente	4.71	211	P	Pn	05 41 34.3	-0.4
TBT				⇑*i*IVmb_VC		05 41 37.1	
	362nm,SNR=1.1						
TBT				S	Sn	05 42 22.5	-5.9
CENR	El Paso, La Pa	4.73	210	P	Pn	05 41 35.0	-0.1
CENR				⇑*i*IVmb_VC		05 41 36.1	
	1μm,SNR=1.9						
CENR				S	Sn	05 42 25.3	-3.7
CVIE	Villa de Mazo,	4.75	210	P	Pn	05 41 36.2	+0.9
CVIE				S	Sn	05 42 25.2	-4.3
CLAJ	Vilaflor (Tene	4.77	197	P	Pn	05 41 35.0	-0.7
CLAJ				⇑*i*IVmb_VC		05 41 35.3	
	561nm,SNR=0.7						
CLAJ				S	Sn	05 42 24.7	-5.3
CJED	Jedey, El Paso	4.78	210	P	Pn	05 41 34.6	-1.1
CJED				⇑*i*IVmb_VC		05 41 34.6	
	1μm,SNR=1.1						
CJED				S	Sn	05 42 26.0	-4.2
CADE	Adeje, Tenerif	4.78	197	⇑*i*IVmb_VC		05 41 36.1	
	743nm,SNR=1.4						
CADE				P	Pn	05 41 36.6	+0.9
CADE				S	Sn	05 42 26.9	-3.3
CTFS	San Miguel de	4.83	196	P	Pn	05 41 36.1	-0.2
CTFS				⇑*i*IVmb_VC		05 41 37.2	
	528nm,SNR=1.0						
CTFS				S	Sn	05 42 29.6	-1.8
CLUM	San Bartolome	4.94	185	P	Pn	05 41 38.5	+0.6
CLUM				⇑*i*IVmb_VC		05 41 41.0	
	663nm,SNR=1.1						
CLUM				S	Sn	05 42 31.0	-3.1
TANT	Tantan	5.49	141	P	Pn	05 41 47.5	+2.2
TANT	Tantan	5.49	141	S	Sn	05 42 51.8	+4.3
SRHM	Skhour des Reh	6.12	91	P	Pn	05 41 53.1	-0.9
SRHM	Skhour des Reh	6.12	91	S	Sn	05 42 59.6	-3.5
OUK	Oukaimeden	6.37	102	P	Pn	05 41 57.8	+0.1
OUK	Oukaimeden	6.37	102	S	Sn	05 43 08.5	-1.2
AVE	Averroes	6.51	83	Sn	Sn	05 43 09.4	-3.3
AVE				Pn	Pn	05 42 03.2	+3.8
AVE	Averroes	6.51	83	P	Pn	05 41 59.0	-0.3
AVE	Averroes	6.51	83	S	Sn	05 43 10.8	-1.8
PFVI	Vila Bisbo	6.78	48	*e*P	Pn	05 42 03.7	+0.7
TIO	Tiouine	6.94	103	Sn	Sn	05 43 22.0	-1.6
TIO				Pn	Pn	05 42 10.2	+4.7
TIO	Tiouine	6.94	103	P	Pn	05 42 05.6	+0.2
TIO	Tiouine	6.94	103	S	Sn	05 43 23.2	-0.4
MORF	Marmelete	6.99	48	*e*P	Pn	05 42 07.2	+1.2
MORF				*e*S	Sn	05 43 18.4	-6.1
MORF				IAML		05 43 19.6	
	comp=E,6.1nm,0.1s						
MORF	Marmelete	6.99	48	*e*P	Pn	05 42 06.8	+0.8
MORF				*e*S	Sn	05 43 18.3	-6.2
MORF				*i* IAML		05 43 18.5	
MORF				*i* IAML		05 43 18.6	
MORF				*i* IAML		05 43 19.6	
PTEO	Sao Teotonio	7.10	46	*e*P	Pn	05 42 09.1	+1.6
PTEO				*e*S	Sn	05 43 22.7	-4.5
OUZM	OUZ	7.36	102	P	Pn	05 42 09.8	-1.3
OUZM	OUZ	7.36	102	S	Sn	05 43 29.6	-4.3
PBDV	Barranco-do-Ve	7.42	51	Sn	Sn	05 43 24.8	-10
PBDV				Pn	Pn	05 42 13.0	+1.2
PBDV	Barranco-do-Ve	7.42	51	*e*P	Pn	05 42 12.6	+0.8
PBDV				*e*S	Sn	05 43 25.3	-10
TISM	Timmit	7.44	96	P	Pn	05 42 12.3	+0.2
TISM	Timmit	7.44	96	S	Sn	05 43 33.2	-2.4
PCVE	Castro Verde	7.58	48	Pn	Pn	05 42 14.8	+0.8
PCVE				Sn	Sn	05 43 30.7	-8.2
PCVE	Castro Verde	7.58	48	*e*P	Pn	05 42 15.1	+1.1
PCVE				*e*S	Sn	05 43 31.4	-7.5
PVAQ	Vaqueiros	7.65	51	*e*P	Pn	05 42 15.4	+0.4
PVAQ				*e*S	Sn	05 43 30.4	-10
PVAQ				*i* IAML		05 43 40.1	
PVAQ				*i* IAML		05 43 44.3	
PVAQ				*i* IAML		05 43 55.2	
PVAQ	Vaqueiros	7.65	51	P	Pn	05 42 13.8	-1.1
PVAQ	Vaqueiros	7.65	51	S	Sn	05 43 37.8	-2.9
PMAFR	Mafra	7.80	36	*e*S	Sn	05 43 35.2	-9.2
EGRO	El Granado	7.88	51	Pn	Pn	05 42 18.5	+0.4
MOE	Montemor	7.98	42	*e*P	Pn	05 42 20.9	+1.4
PARRA	Arraiolos	8.35	42	*e*P	Pn	05 42 24.9	+0.3
PARRA				*e*S	Sn	05 43 48.7	-9.3
IFR	Ifrane	8.43	82	Pn	Pn	05 42 28.5	+2.6
IFR				Sn	Sn	05 43 51.8	-8.3
PMTG	Montargil	8.43	40	*e*S	Sn	05 43 52.1	-7.8
PBAR	Barrancos	8.54	48	*e*P	Pn	05 42 28.1	+1.0
PBAR				*e*S	Sn	05 43 53.1	-9.4
SMIR	Smir Dam	8.59	67	P	Pn	05 42 26.8	-1.1
SMIR	Smir Dam	8.59	67	S	Sn	05 44 00.9	-2.9
ESPR	Espera	8.66	59	Pn	Pn	05 42 29.4	+0.5
MD31	MD31	8.74	86	P	Pn	05 42 29.8	-0.2
MD31	MD31	8.74	86	S	Sn	05 44 03.2	-4.4
MDT	Midelt	8.87	87	P	Pn	05 42 31.4	-0.4
MDT	Midelt	8.87	87	S	Sn	05 44 08.2	-2.6
AKLM	AKL	9.56	76	P	Pn	05 42 39.5	-1.8
AKLM	AKL	9.56	76	S	Sn	05 44 23.4	-4.5

DJA 01 05:41:35.7±0.3, 7˚S±4˚×10˚6E±˚, h67^{km}±8^{km}, M4.0/15, mb4.3/4, MLv3.9/15, Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKJI	Sukabumi	0.68	68	P	Pn	05 41 51.4	+1.2
SKJI				S	Sn	05 42 03.1	+2.3
DBJI	Dramaga	1.08	50	P	Pn	05 41 55.1	0.0
DBJI				S	Sn	05 42 10.8	+1.2
SBJI	Serang	1.15	10	P	Pn	05 41 56.1	+0.1
SBJI				S	Sn	05 42 11.3	+0.2
CNJI	Cibinong	1.20	92	P	Pn	05 41 56.9	+0.3
TNG	Tangerang	1.30	34	P		05 41 57.7	
TNG				P	Pn	05 41 57.6	-0.3
BBJI	Bungbulang	1.73	97	P	Pn	05 42 03.5	-0.2
LEM	Lembang	1.74	76	P	Pn	05 42 04.6	+0.7
KASI	Kota Agung	2.23	321	P	Pn	05 42 10.8	+0.4
KLSI		2.81	335	P	Pn	05 42 18.4	0.0
KPJI	Karang Pucung	2.99	92	P	Pn	05 42 21.5	+0.8
MDSI	Maura Dua	3.25	328	P	Pn	05 42 24.3	-0.1
EGSI	Enggano, Bengk	4.09	297	P	Pn	05 42 36.5	+0.7
UGM	Wanagama	4.61	98	P	Pn	05 42 42.7	-0.2
PCJI	Pacitan	5.29	100	P	Pn	05 42 52.0	-0.2
	0.2nm22nm,1.7s						
PPSI	Pulau Pagai	7.39	307	P	Pn	05 43 21.0	0.0
	92nm,1.0s						
JAGI	Jajag, Banyuwa	8.24	99	P	Pn	05 43 32.1	-0.6
	13nm,0.8s						
RTBI	Rangdo, Negare	9.02	98	P	Pn	05 43 42.7	-0.6

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*BJI **01** 05:48:32.9, 5°.39S×68°.45E, h23^{km}, mB5.4/41, mb4.9/63, Ms5.1/61, Ms7 4.9/62*

*MOS **01** 05:48:32.2±1.0, 5°.07S×68°.54E, h10^{km}, mb5.2/55, MS4.6/7, Error ellipse: s-maj=8.2km s-min=4.8km az=88.6*

*IDC **01** 05:48:32.3±0.5, 5°.03S×68°.43E, h0^{km}, mb4.5/30, mbtmp4.5/31, ML4.3/1, MS4.6/64, Error ellipse: s-maj=14.4km s-min=12.9km az=90.0*

*GCMT **01** 05:48:34.7±0.1, 5°.12S±0°.01×68°.56E±0°.01, h12^{km}, MW5.3/141, Moment Tensor Solution. s69,c101; s141,c256; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.04±.01; $M_{\theta\theta}$0.39±.01; $M_{\phi\phi}$0.65±.01; $M_{r\theta}$0.43±.04; $M_{\theta\phi}$-0.53±.01; $M_{\phi r}$0.12±.04; Best double couple: $M_0$1.14000×10^{17} NP1:ϕ_s160.00000°,δ44.00000°, λ-62.00000°. NP2:ϕ_s303.00000°,δ53.00000°, λ-114.00000°. Principal axes: T 1.0820, Plg5.0000°, Azm50.0000°; N 0.1170, Plg19.0000°, Azm319.0000°; P -1.1980, Plg70.0000°, Azm154.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **01** 05:48:34.6±1.4, 5°.15S±0°.08×68°.62E±0°.08, h10^{km}±1^{km}, mb5.2/90, Mww5.3/23 Error ellipse: s-maj=14.4km s-min=13.0km az=225.0*

*NEIC **01** 05:48:35.6, 5°.06S×68°.63E, h12^{km}*

*NEIC **01** 05:48:35.6, 5°.16S×68°.63E, h12^{km}, Moment Tensor Solution. Duration: 2^{s}2 Moment tensor: Scale 10^{16}Nm; M_{rr}-8.83; $M_{\theta\theta}$3.52; $M_{\phi\phi}$5.32; $M_{r\theta}$-2.22; $M_{\theta\phi}$-4.75; $M_{\phi r}$-2.24; Fault plane solution: $M_0$9.58000×10^{16} NP1: ϕ_s122.98000°,δ46.84000°,λ-115.52000°. NP2: ϕ_s337.89000°,δ48.84000°,λ-65.33000°. Principal axes: T 9.2532, Plg1.0000°, Azm51.0000°; N 0.6247, Plg18.0000°, Azm141.0000°; P -9.8779, Plg72.0000°, Azm318.0000°;*

*BGR **01** 05:48:43.1, 4°.26S×67°.79E, h33^{km}, mb5.0, Ms4.3*

ISC 01 05:48:34.7±0.3, 5°.09S±0°.04×68°.53E±0°.04, h13^{km}, n430, σ1^{s}71/424, mb5.0/176, MS4.7/97, 17C-11D, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGAR	Diego Garcia	4.53	121	P	Pn	05 49 42.2	-0.7
DGAR				S	Sn	05 50 38.2	+2.7
DGAR	Diego Garcia	4.53	121		Pn	05 49 41.0	-2.0
DGAR				Sn	Sn	05 50 31.1	-4.4
DGAR	Diego Garcia	4.53	121	*d i*P	Pn	05 49 40.8	-2.2
KAAM	Kaadhehdhoo	7.12	39	Pn	Pn	05 50 18.2	-0.4
KAAM	Kaadhehdhoo	7.12	39	P	Pn	05 50 18.6	0.0
	1.6nm111nm,2.2s						
PALK	Pallekele	17.27	45	P	P	05 52 37.1	-0.2
	1.0nm,0.3s,baz=208,slow=10,SNR=4.7						
PALK				LR	LR	05 57 52.2	
	comp=Z,7μm,18.3s,baz=228,slow=32						
	7.3nm,0.7s						
PALK	Pallekele	17.27	45	P	P	05 52 37.7	+0.4
PALK				S	Sn	05 55 46.0	-2.1
PALK	Pallekele	17.27	45	P	Pn	05 52 36.3	+0.5
PALK	Pallekele	17.27	45	P	P	05 52 38.0	+0.7
PALK	Pallekele	17.27	45	P	Pn	05 52 36.3	+0.5
PALK				pmax	pmax		
	comp=Z,64nm,1.4s						
HYB	Hyderabad	24.46	24	*e*P	P	05 53 49.6	-4.0
HYB				IVmB_BB		05 53 56.2	
	comp=Z,742nm,6.1s						
HYB				*e*S	S	05 58 14.0	+0.5
OPO	Ambohidratompo	24.77	235	LR	LR	06 01 28.5	
	comp=Z,2μm,19.4s,baz=190,slow=31						
PBA	Port Blair	29.27	55	P	P	05 54 36.9	0.0
WSAR	Wadi Sarin	29.77	341	LR	LR	06 04 31.4	
	comp=Z,5.4nm,19.1s,baz=168,slow=32						
ATD	Arta Tunnel	30.43	303	LR	LR	06 04 30.0	
	comp=Z,35nm,21.9s,baz=122,slow=32						
KCSI	Kotacane, Aceh	30.44	74	P	P	05 54 49.5	+2.2
	comp=Z,633nmcomp=Z,14nm,1.7s						
HOQ	Hoqain	30.53	339	P	P	05 54 50.0	+2.0
	SNR=8.2						
HOQ				P	P	05 54 50.0	+2.0
	SNR=8.2						
ARQ	Araqi	30.59	338	P	P	05 54 51.1	+2.5
ARQ				P	P	05 54 51.1	+2.5
SOHO	SOHO	31.32	339	P	P	05 54 56.3	+1.4
SOHO				P	P	05 54 56.3	+1.4
RPSI	Rantau Prapat	31.33	76	P	P	05 54 54.4	-0.8
PSI	Prapat	31.36	76	LR	LR	06 06 14.3	
	comp=Z,3μm,18.8s,baz=274,slow=34						
PSI	Prapat	31.36	76	P	P	05 54 54.4	-1.2
PSI				pmax	pmax		
	comp=Z,13nm,1.2s						
KMBO	Kilima Mbogo	31.48	276	LR	LR	06 05 17.4	
	comp=Z,2μm,21.3s,baz=100,slow=32						
KMBO	Kilima Mbogo	31.48	276	*i* P	P	05 54 59.0	+2.2
KMBO				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ALNE	Al Ain	31.54	337	P	P	05 54 58.6	+1.7
ALNE				P	P	05 54 58.6	+1.7
ASHO	Ashiyiah	31.99	338	P	P	05 55 03.0	+2.1
	SNR=9.0						
ASHO				P	P	05 55 03.0	+2.1
	SNR=9.0						
HATD	Hatta, Dubai	32.09	338	P	P	05 55 03.7	+1.9
	SNR=7.3						
HATD				P	P	05 55 03.7	+1.9
	SNR=7.3						
UOSS	Minazif	32.18	339	P	P	05 55 03.6	+1.1
UOSS				P	P	05 55 03.6	+1.1
UOSS	Minazif	32.18	339		P	05 55 03.1	+0.7
FAQ	Al Faqa, Dubai	32.22	338	P	P	05 55 04.4	+1.6
FAQ				P	P	05 55 04.4	+1.6
NAZ	Nazwa, Dubai	32.42	338	P	P	05 55 07.0	+2.4
NAZ				P	P	05 55 07.0	+2.4
MASF	Masafi	32.58	339	P	P	05 55 08.3	+2.3
	SNR=6.0						
MASF				P	P	05 55 08.3	+2.3
	SNR=6.0						
BANOM	Banah	33.04	340	P	P	05 55 11.3	+1.3
BANOM				P	P	05 55 11.3	+1.3
IPM	Ipoh	33.82	74	P	P	05 55 20.8	+3.8
LODK	Lodwar	34.20	284	P	P	05 55 23.1	+2.7
	SNR=6.0						
LODK	Lodwar	34.20	284		P	05 55 21.3	+0.9
LODK				IAmb	IAmb	05 55 29.8	
	comp=Z,33nm,1.5s						
MDSI	Maura Dua	35.52	91	P	P	05 55 31.8	+0.1
	comp=Z,757nmcomp=Z,30nm,1.4s						
BRDH	Bariadhala	35.67	38	LR	LR	06 10 54.2	
	comp=Z,1μm,18.5s,baz=226,slow=38						
MYKOM	Kota Tinggi	35.94	80	P	P	05 55 34.3	-1.0
MYKOM				IAmb	IAmb	05 55 43.5	
	comp=Z,33nm,1.2s						
KLSI		36.06	91	P	P	05 55 38.4	+2.0
	comp=Z,895nmcomp=Z,33nm,1.7s						
RAYN	Ar Rayn	36.25	323		P	05 55 38.0	+0.1
RAYN	Ar Rayn	36.25	323	P	P	05 55 38.0	+0.1
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
EVN	Everest	37.29	27	P	P	05 55 47.1	-0.3
SHL	Shillong	37.99	36	P	P	05 55 54.3	+1.6
	SNR=9.9						
SHL	Shillong	37.99	36		P	05 55 52.1	-0.6
SHL				IAmb	IAmb	05 55 56.4	
	comp=Z,38nm,1.1s						
SHL	Shillong	37.99	36	P	P	05 55 52.2	-0.6
SHL				pmax	pmax		
	comp=Z,38nm,1.1s						
MBAR	Mbarara	38.00	276	LR	LR	06 09 25.6	
	comp=Z,943nm,19.9s,baz=104,slow=33						
MBAR	Mbarara	38.00	276	P	P	05 55 55.9	+2.8
MBAR				P	P	05 55 55.9	+2.8
MBAR	Mbarara	38.00	276	P	P	05 55 53.0	-0.1
MBAR				IAmb	IAmb	05 56 03.1	
	comp=Z,55nm,1.8s						
MBAR	Mbarara	38.00	276	*ce*P	P	05 55 56.1	+3.0
MBAR				pmax	pmax		
	comp=Z,25nm,1.7s						
CM31	Chiang Mai Arr	38.03	51	P	P	05 55 55.1	+2.1
CM31	Chiang Mai Arr	38.03	51	P	P	05 55 53.0	-0.1
CMAR	Chiang Mai Arr	38.03	51	P	P	05 55 54.2	+1.1
	comp=Z,5.9nm,1.0s,baz=244,slow=9.7,SNR=32						
CMAR				PcP	PcP	05 58 08.8	+0.2
	comp=Z,4.7nm,0.9s,baz=238,slow=4.4,SNR=8.7						
CMAR				LR	LR	06 09 24.6	
	comp=Z,846nm,21.4s,baz=240,slow=33						
	comp=Z,5.9nm,1.0s						
CMAR	Chiang Mai Arr	38.03	51	P	P	05 55 52.1	-1.0
CMAR	Chiang Mai Arr	38.03	51	*i* P	P	05 55 54.7	+1.6
CMAR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CHTO	Chiang Mai	38.24	51	P	P	05 55 56.7	+1.9
CHTO				P	P	05 55 56.7	+1.9
CHTO	Chiang Mai	38.24	51		P	05 55 54.4	-0.4
CHTO	Chiang Mai	38.24	51	P	P	05 55 56.5	+1.7
	comp=Z,18nm,1.3s						
CHTO	Chiang Mai	38.24	51	P	P	05 55 54.4	-0.4
CHTO				pmax	pmax		
	comp=Z,25nm,1.2s						
NIL	Nilore	38.79	6	P	P	05 56 02.3	+3.1
NIL				P	P	05 56 02.3	+3.1
NIL	Nilore	38.79	6	P	P	05 55 59.9	+0.7
NIL				IAmb	IAmb	05 56 07.0	
	comp=Z,52nm,1.1s						
NIL	Nilore	38.79	6	P	P	05 55 59.9	+0.7
NIL				pmax	pmax		
	comp=Z,53nm,1.1s						
KBL	Kabul	39.42	1	P	P	05 56 08.1	+3.3
	SNR=19						
KBL				P	P	05 56 08.1	+3.3
	SNR=19						
KBL	Kabul	39.42	1	P	P	05 56 05.8	+1.1
KBL				IAmb	IAmb	05 56 14.6	
	comp=Z,100nm,1.9s						
KBL	Kabul	39.42	1	P	P	05 56 05.8	+1.1
KBL				pmax	pmax		
	comp=Z,100nm,1.9s						
HRA	Herat	39.71	352	P	P	05 56 06.9	-0.3
LSA	Lhasa	40.84	31	P	P	05 56 18.9	+2.0
LSA				P	P	05 56 18.9	+2.0
TNCH	TengChong	41.79	43	P	P	05 56 27.4	+2.9
TNCH				PP	PP	05 58 02.3	+1.1
TNCH				S	S	06 02 45.5	+3.5
TNCH				LR	LR		
	comp=Z,1μm,17.7s						
TNCH				LR	LR		
	comp=Z,830nm,18.3s						
TNCH				LR	LR		
	comp=Z,2μm,21.5s						
SHAA	Shahritus	42.44	360	P	P	05 56 30.3	+0.9
SHAA				IAmb	IAmb	05 57 06.7	
	comp=Z,31nm,1.1s						
MANEM	Manem	42.52	4	P	P	05 56 30.6	+0.4
MANEM				IAmb	IAmb	05 56 38.4	
	comp=Z,397nm,2.0s						
H04N2	CROZET ISLANDS	43.41	197	T	T	06 43 20.0	
	baz=19,slow=75,SNR=9.5						
H04N1	CROZET ISLANDS	43.42	197	T	T	06 43 41.2	
	baz=19,slow=75,SNR=9.1						
H04N3	CROZET ISLANDS	43.43	197	T	T	06 43 42.9	
	baz=19,slow=75,SNR=10.0						
CHGR	Chuyangaron	43.53	1	P	P	05 56 37.4	-0.9
CHGR	Chuyangaron	43.53	1	P	P	05 56 37.4	-0.9
CHGR				pmax	pmax		
	comp=Z,20nm,1.1s						
GAR	Garm	43.90	2	P	P	05 56 41.4	+0.1
GAR				IAmb	IAmb	05 56 48.2	
	comp=Z,63nm,1.1s						
SBUM	Sibu	44.28	81	P	P	05 56 46.1	+1.5
	comp=Z,19nm,1.4s						
DRK	Karamyk	44.45	4	P	P	05 56 45.5	-0.4
DRK				IAmb	IAmb	05 56 57.6	
	comp=Z,42nm,1.2s						
DRK	Karamyk	44.45	4	P	P	05 56 45.5	-0.4
DRK				pmax	pmax		
	comp=Z,42nm,1.2s						
KMI	Kunming	44.80	46	P	P	05 56 47.0	-1.9
KMI				S	S	06 03 25.1	-1.2
KMI				pmax	pmax		
	comp=Z,13nm,1.3s						
KMI				pmax	pmax		
	comp=Z,150nm,6.0s						
KMI				LR	LR		
	comp=Z,570nm,22.3s						
KMI				LR	LR		
	comp=Z,690nm,18.8s						
KMI				LR	LR		
	comp=Z,950nm,19.6s						
KHWEE	KHWEE	44.91	244	P	P	05 56 49.4	-0.3
KHWEE				IAmb	IAmb	05 56 56.9	
	comp=Z,80nm,1.4s						
KSH	Kashi	44.92	8	P	P	05 56 46.3	-3.1
KSH				pP	pP	05 56 50.6	-1.8
KSH				sP	pwP	05 56 56.7	-0.2
KSH				S	S	06 03 22.6	-4.7
KSH				pmax	pmax		
	comp=Z,19nm,1.0s						
KSH				pmax	pmax		
	comp=Z,280nm,4.3s						
KSH				LR	LR		
	comp=Z,1μm,18.5s						
KSH				LR	LR		
	comp=Z,1μm,15.1s						
KSH				LR	LR		
	comp=Z,1μm,20.6s						
PZH	PanZhiHua	44.95	44	P	P	05 56 51.5	+1.6
PZH				S	S	06 03 29.2	+1.0
PZH				pmax	pmax		
	comp=Z,20nm,1.3s						
PZH				pmax	pmax		
	comp=Z,210nm,4.3s						
PZH				LR	LR		
	comp=Z,1μm,20.2s						
PZH				LR	LR		
	comp=Z,930nm,18.6s						
PZH				LR	LR		
	comp=Z,1μm,17.3s						
LBTB	Lobatse	45.67	240	LR	LR	06 13 51.6	
	comp=Z,2μm,19.6s,baz=68,slow=33						
ARSB	Arslanbob	46.37	5	P	P	05 57 01.2	+0.3
ARSB				IAmb	IAmb	05 57 23.4	
	comp=Z,37nm,1.7s						
ARSB	Arslanbob	46.37	5	P	P	05 57 01.2	+0.3
ARSB				pmax	pmax		
	comp=Z,37nm,1.7s						
IUG	Iuzhnay	47.03	2	*e*P	P	05 57 05.1	-0.9
IUG	Iuzhnay	47.03	2	*e*P	P	05 57 06.0	0.0
WUS	Wushi	47.10	11	P	P	05 57 06.6	+0.1
BOSA	Boshof	47.19	235	P	P	05 57 07.4	-0.2
	comp=Z,7.4nm,0.9s,baz=65,slow=8.1,SNR=12						
BOSA				LR	LR	06 14 00.9	
	comp=Z,2μm,21.9s,baz=54,slow=32						
	comp=Z,7.4nm,0.9s						
BOSA	Boshof	47.19	235	P	P	05 57 06.3	-1.2
BOSA				IAmb	IAmb	05 57 26.0	
	comp=Z,49nm,1.6s						
CHM	Chimkent	47.20	1	*e*P	P	05 57 07.3	0.0
	comp=Z,34nm,1.8s						
CHM	Chimkent	47.20	1	*e*P	P	05 57 07.2	0.0
CHM				pmax	pmax		
	comp=Z,34nm,1.8s						
QIZ	Qiongzhong	47.21	58	P	P	05 57 06.6	-1.1
QIZ	Qiongzhong	47.21	58	P	P	05 57 05.9	-1.8
QIZ				S	S	06 04 02.2	+1.5
QIZ				LR	LR		
	comp=Z,490nm,17.5s						
QIZ				LR	LR		
	comp=Z,720nm,18.7s						
QIZ				LR	LR		
	comp=Z,1μm,18.6s						
EIL	Elat	47.25	319	LR	LR	06 15 04.4	
	comp=Z,347nm,18.3s,baz=150,slow=34						
KDJ	Kajisay	47.65	9	P	P	05 57 11.0	0.0
KDJ	Kajisay	47.65	9	P	P	05 57 11.0	0.0
KDJ				pmax	pmax		
	comp=Z,136nm,2.0s						
ASF	Jabal al Asfar	47.74	323	LR	LR	06 14 43.5	
	comp=Z,243nm,19.3s,baz=115,slow=33						
AAK	Ala-Archa	47.81	6	LR	LR	06 15 48.2	
	comp=Z,647nm,21.8s,baz=192,slow=34						
AAK	Ala-Archa	47.81	6	P	P	05 57 15.3	+3.1
AAK				P	P	05 57 15.3	+3.1

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AAK   Ala-Archa         47.81   6   P      P      05 57 12.1 -0.1
AAK                                 IAmb   IAmb   05 57 20.6
      comp=Z,60nm,1.4s
AAK   Ala-Archa         47.81   6d iP      P      05 57 14.8 +2.6
AAK                                 pmax   pmax
      comp=Z,24nm,1.4s
DZA   Taraz             47.83   3  eP      P      05 57 12.1  0.0
DZA   Taraz             47.83   3  eP      P      05 57 12.1  0.0
BOOM  Boomskoye usch    47.84   7   P      P      05 57 12.6 +0.3
BOOM  Boomskoye usch    47.84   7   P      P      05 57 12.6 +0.3
BOOM                                pmax   pmax
      comp=Z,74nm,1.6s
GOMU  GeErMu            47.89  29   P      P      05 57 11.5 -1.6
GOMU                                PP     PP     05 59 03.8 -1.4
GOMU                                LR     LR
      comp=Z,2µm,17.1s
GOMU                                LR     LR
      comp=Z,990nm,17.4s
GOMU                                LR     LR
      comp=Z,2µm,17.6s
BRLS  Borolday          47.91   1  eP      P      05 57 10.9 -1.9
      comp=Z,9.5nm,1.4s
BRLS  Borolday          47.91   1  eP      P      05 57 10.8 -1.9
BRLS                                pmax   pmax
      comp=Z,9.0nm,1.4s
GHAJ  Ghor Haditha      47.95 321   P      P      05 57 13.2  0.0
GHAJ                                IAmb   IAmb   05 57 56.5
      comp=Z,19nm,1.1s
FRU1  Bishkek           48.00   6   P      P      05 57 14.4 +1.0
FRU1  Bishkek           48.00   6   P      P      05 57 14.5 +1.0
FRU1                                pmax   pmax
      comp=Z,64nm,1.2s
KK31  Karatay Array     48.00   2          P      05 57 13.0 -0.5
KK31                                IAmb   IAmb   05 57 20.7
      comp=Z,42nm,1.7s
KK31  Karatay Array     48.00   2   P      P      05 57 13.0 -0.5
KK31                                pmax   pmax
      comp=Z,42nm,1.7s
KKAR  Karatay Array     48.00   2   P      P      05 57 13.8 +0.3
KKAR  Karatay Array     48.00   2   P      P      05 57 13.8 +0.3
TWSI  Taliwang, Sumb    48.11  97   P      P      05 57 15.1 +0.3
      comp=Z,31nm,1.6s
QNGWA Qangwa            48.26 248   P      P      05 57 16.2 +0.2
QNGWA                               IAmb   IAmb   05 57 24.4
      comp=Z,36nm,1.4s
GYA   Guiyang           48.45  48   P      P      05 57 17.7 +0.4
GYA                                 S      S      06 04 15.1 -3.1
GYA                                 LR     LR
      comp=Z,980nm,19.6s
GYA                                 LR     LR
      comp=Z,630nm,18.9s
GYA                                 LR     LR
      comp=Z,1µm,16.0s
TNSS  Tian-Shan         48.51   8  eP      P      05 57 17.3 -0.6
TNSS  Tian-Shan         48.51   8  eP      P      05 57 17.2 -0.6
SGDS  Sogindy           48.63   6  eP      P      05 57 18.3 -0.1
      comp=Z,6.2nm,0.9s
MDOK  Medeo             48.65   8  eP      P      05 57 18.6 -0.1
MDOK  Medeo             48.65   8  eP      P      05 57 18.5 -0.1
AAA   Alma-Ata          48.67   8  eP      P      05 57 18.4 -0.3
AAA   Alma-Ata          48.67   8  eP      P      05 57 18.4 -0.3
SATY  Saty              48.76  10  eP      P      05 57 19.1 -0.3
      comp=Z,19nm,1.2s
SATY  Saty              48.76  10  eP      P      05 57 19.1 -0.3
SATY                                pmax   pmax
      comp=Z,19nm,1.2s
UZB   Uzynbulak         48.95  10  eP      P      05 57 20.6 -0.4
      comp=Z,17nm,1.4s
UZB   Uzynbulak         48.95  10  eP      P      05 57 20.5 -0.4
UZB                                 pmax   pmax
      comp=Z,17nm,1.4s
SHLS  Shalkode          49.03  11  eP      P      05 57 21.9 +0.3
      comp=Z,13nm,1.1s
SHLS  Shalkode          49.03  11  eP      P      05 57 21.8 +0.3
SHLS                                pmax   pmax
      comp=Z,13nm,1.1s
CD2   Chengdu           49.13  41   P      P      05 57 23.8 +1.4
CD2                                 S      S      06 04 32.4 +4.8
CD2                                 pmax   pmax
      comp=Z,30nm,0.5s
CD2                                 LR     LR
      comp=Z,2µm,21.1s
CD2                                 LR     LR
      comp=Z,1µm,21.1s
MMAI  Mount Meron Ar    49.23 323   LR     LR     06 17 09.1
      comp=Z,306nm,18.5s,baz=132,slow=35
MARD  Mardin            49.49 331   IAmb   IAmb   05 57 33.7
      comp=Z,74nm,1.7s
KOOLE Kule              49.88 244   P      P      05 57 28.2 -0.2
KOOLE                               IAmb   IAmb   05 57 35.6
      comp=Z,25nm,0.9s
GNI   Garni             50.06 336   P      P      05 57 32.5 +3.1
GNI   Garni             50.06 336          P      05 57 30.1 +0.7
GNI   Garni             50.06 336⇑iP       P      05 57 30.9 +1.4
GNI                                 pmax   pmax
      comp=Z,40nm,1.8s
AKT   Akhty             50.10 340  eP      P      05 57 28.1 -1.6
AKT                                e              05 58 44.5
AKT                                ePPP    PPP    06 00 17.2
AKT                                eS      S      06 04 41.4 +0.5
AKT                                 pmax   pmax
      comp=Z,38nm,1.1s
BTLS  Baital            50.15   5  eP      P      05 57 29.7 -0.2
BTLS  Baital            50.15   5  eP      P      05 57 29.7 -0.2
TDK   Taldyqorghan      50.65   9  eP      P      05 57 33.4 -0.2
      comp=Z,26nm,1.3s
TDK   Taldyqorghan      50.65   9  eP      P      05 57 33.4 -0.2
TDK                                 pmax   pmax
      comp=Z,26nm,1.3s
KAPI  Kappang           51.01  92   LR     LR     06 17 17.2
      comp=Z,1µm,20.8s,baz=262,slow=34
KAPI  Kappang           51.01  92   P      P      05 57 36.1 -0.8
KAPI  Kappang           51.01  92   P      P      05 57 36.1 -0.8
KAPI                                pmax   pmax
      comp=Z,14nm,1.2s
TTSI  Tana Toraja       51.19  90   P      P      05 57 39.9 +1.7
      comp=Z,19nm,1.6s
BKSI  Bulukumba         51.36  93   P      P      05 57 39.8 +0.2
      comp=Z,560nmcomp=Z,30nm,1.1s
BNSI  Bone              51.39  92   P      P      05 57 41.6 +1.8
      comp=Z,20nm,2.0s
H01W3 Cape Leeuwin H    51.45 131   T      T      06 53 00.9
      baz=295,slow=75,SNR=20
H01W2 Cape Leeuwin H    51.46 131   T      T      06 52 57.5
      baz=295,slow=75,SNR=16
H01W1 Cape Leeuwin H    51.47 131   T      T      06 52 58.4
      baz=295,slow=75,SNR=16
MAK   Makhachkala       51.49 340  eP      P      05 57 34.0 -5.9
MAK                                eS      S      06 04 51.7 -8.2
MAK                                 pmax   pmax
      comp=Z,128nm,1.6s
MAK                                 MLR    MLR
      comp=Z,297nm,20.0s
TSUM  Tsumeb            51.55 250   LR     LR     06 19 04.2
      comp=Z,1µm,18.1s,baz=110,slow=36
MPSI  Mapaga            51.58  86   P      P      05 57 42.5 +1.3
      comp=Z,21nm,1.1s
WMQ   Urumqi            51.67  18  eP      P      05 57 44.3 +2.9
WMQ                                 pP     pwP    05 57 48.8 -0.1
WMQ                                 S      S      06 05 04.8 +2.3
WMQ                                 pmax   pmax
      comp=Z,48nm,1.9s
WMQ                                 pmax   pmax
      comp=Z,330nm,4.3s
WMQ                                 LR     LR
      comp=Z,2µm,16.1s
WMQ                                 LR     LR
      comp=Z,1µm,17.3s
WMQ                                 LR     LR
      comp=Z,1µm,24.5s
PSA00 Pilbara Seismi    52.28 113          P      05 57 45.9 -0.4
LZDM  Lanzhou Array     52.47  36   P      P      05 57 47.7 -0.1
      comp=Z,1.7nm,0.3s,baz=223,slow=14,SNR=6.2
LZDM                                LR     LR     06 21 04.0
      comp=Z,538nm,19.5s,baz=45,slow=37
      comp=Z,1.7nm,0.3s
TOLI2 Tolitoli          52.55  85   IAmb   IAmb   05 57 60.0
      comp=Z,19nm,1.0s
LZH   Lanzhou           52.65  36  eP      P      05 57 53.7 +4.7
LZH                                 sP     pwP    05 58 01.7 +5.2
LZH                                 S      S      06 05 16.4  0.0
LZH                                 pmax   pmax
      comp=Z,28nm,1.6s
LZH                                 pmax   pmax
      comp=Z,320nm,4.5s
LZH                                 LR     LR
      comp=Z,1µm,17.8s
LZH                                 LR     LR
      comp=Z,680nm,18.4s
LZH                                 LR     LR
      comp=Z,2µm,17.8s
ENH   Enshi             52.66  45   P      P      05 57 48.4 -0.6
ENH                                 IAmb   IAmb   05 57 55.4
      comp=Z,29nm,0.9s
EDFI  Ende, Flores      52.86  97   P      P      05 57 50.2 -0.6
      comp=Z,16nm,1.6s
GTA   Gaotai            52.86  30   P      P      05 57 52.4 +2.0
GTA                                 pP     pwP    05 57 56.8 -1.1
GTA                                 S      S      06 05 19.8 +0.6
GTA                                 pmax   pmax
      comp=Z,12nm,1.3s
GTA                                 LR     LR
      comp=Z,1µm,20.0s
GTA                                 LR     LR
      comp=Z,1µm,18.2s
GTA                                 LR     LR
      comp=Z,2µm,18.2s
MAKZ  Makanchi          53.03  12   P      P      05 57 50.6 -0.8
MAKZ                                IAmb   IAmb   05 57 58.1
      comp=Z,23nm,1.1s
MAKZ  Makanchi          53.03  12   P      P      05 57 50.6 -0.8
MAKZ                                pmax   pmax
      comp=Z,23nm,1.2s
MK31  Makanchi Array    53.08  12   P      P      05 57 50.0 -1.8
MK31                                IAmb   IAmb   05 57 58.6
      comp=Z,57nm,1.9s
MK31  Makanchi Array    53.08  12⇓iP       P      05 57 52.7 +0.9
MKAR  Makanchi Array    53.08  12   P      P      05 57 50.3 -1.5
      comp=Z,2.8nm,0.8s,baz=194,slow=6.8,SNR=13
MKAR                                LR     LR     06 21 19.9
      comp=Z,468nm,18.4s,baz=182,slow=37
      comp=Z,2.8nm,0.8s
NWAO  Narrogin (SRO)    53.09 128   LR     LR     06 15 14.6
      comp=Z,384nm,21.5s,baz=274,slow=30
BNN   Bunyan            53.17 328   P      P      05 57 52.7  0.0
BNN                                 IAmb   IAmb   05 58 00.9
      comp=Z,38nm,1.5s
MMRI  Maumere           53.40  97   P      P      05 57 53.7 -1.0
KBZ   Khabaz            53.82 337   P      P      05 57 56.2 -1.0
      comp=Z,4.6nm,0.9s,baz=144,slow=10,SNR=8.0
KBZ                                 LR     LR     06 21 51.5
      comp=Z,213nm,19.9s,baz=130,slow=37
      comp=Z,4.6nm,0.9s
KBZ   Khabaz            53.82 337⇑iP       P      05 57 58.0 +0.8
KBZ                                 pmax   pmax
      comp=Z,29nm,2.0s
SHA1  Shidzhatmaz       53.92 337⇓iP       P      05 57 59.5 +1.2
KVAR  Kislovodsk Arr    54.09 337   LR     LR     06 22 22.3
      comp=Z,209nm,18.1s,baz=62,slow=38
KIV   Kislovodsk        54.10 337  eP      P      05 58 01.6 +2.2
KIV                                 pmax   pmax
      comp=Z,10.0nm,1.1s
KIV                                 MLR    MLR
      comp=Z,150nm,17.0s
ZSN   Zaisan            54.27  14  eP      P      05 58 00.4 -0.1
      comp=Z,19nm,1.3s
ZSN   Zaisan            54.27  14  eP      P      05 58 00.3 -0.1
ZSN                                 pmax   pmax
      comp=Z,19nm,1.3s
XAN   Xi'an             54.49  41   P      P      05 58 02.6 +0.2
XAN                                 pP     sP     05 58 07.8 +1.2
XAN                                 S      S      06 05 41.8 +0.6
XAN                                 pmax   pmax
      comp=Z,42nm,1.1s
XAN                                 pmax   pmax
      comp=Z,370nm,5.2s
XAN                                 LR     LR
      comp=Z,1µm,17.7s
XAN                                 LR     LR
      comp=Z,930nm,18.2s
XAN                                 LR     LR
      comp=Z,2µm,17.3s
AB31  Akbulak array     54.64 353   IAmb   IAmb   05 58 10.4
      comp=Z,57nm,1.6s
ABKAR Akbulak array     54.64 353          P      05 58 02.6 -0.5
GTOI  Gorontalo         54.71  86   P      P      05 58 05.6 +1.3
      comp=Z,16nm,1.0s
BATI  Baumata           54.82  99   LR     LR     06 21 54.2
      comp=Z,731nm,19.6s,baz=290,slow=36
BRZS  Berezniki         54.97   3  eP      P      05 58 05.8 +0.3
BRZS  Berezniki         54.97   3  eP      P      05 58 05.8 +0.3
BR131 Keskin Array S    54.97 327   P      P      05 58 07.1 +1.2
BR131 Keskin Array S    54.97 327   P      P      05 58 05.8 -0.1
BR131 Keskin Array S    54.97 327⇑iP       P      05 58 06.4 +0.5
BRTR  Keskin Array B    54.97 327   P      P      05 58 05.2 -0.6
      comp=Z,1.3nm,0.9s,baz=157,slow=8.0,SNR=8.1
BRTR                                LR     LR     06 20 43.8
      comp=Z,194nm,20.1s,baz=106,slow=35
      comp=Z,1.3nm,0.9s
BRTR  Keskin Array B    54.97 327          P      05 58 05.8 -0.1
BRTR  Keskin Array B    54.97 327 i P      P      05 58 06.3 +0.4
BRTR                                pmax   pmax
      comp=Z,1.0nm,0.8s
SOC   Sochi             55.00 335  eP      P      05 57 59.3 -6.5
SOC                                e              06 00 05.8
SOC                                ePPP    PPP    06 01 16.6
SOC                                eS      S      06 05 43.7 -3.9
SOC                                eSS     SS     06 09 22.5 -9.1
SOC                                eSSS    SSS    06 11 35.8
SOC                                 MLR    MLR
      comp=Z,277nm,15.0s
TGY   Tagaytay City     55.37  69   LR     LR     06 18 06.7
      comp=Z,195nm,21.8s,baz=336,slow=32
SOEI  Soe               55.41  98   P      P      05 57 54.9  -15
AKTO  Aktyubinsk        56.05 352   LR     LR     06 22 36.5
      comp=Z,255nm,19.7s,baz=176,slow=36
KURBB Kurchatov Arra    56.16   8   P      P      05 58 13.1 -0.9
      comp=Z,5.5nm,1.0s,baz=202,slow=7.4,SNR=22
KURBB                               LR     LR     06 22 32.4
      comp=Z,716nm,18.8s,baz=172,slow=36
      comp=Z,5.5nm,1.0s
SEM   Semipalatinsk     56.20   9  eP      P      05 58 14.3 -0.3
      comp=Z,11nm,1.4s
SEM   Semipalatinsk     56.20   9  eP      P      05 58 14.3 -0.3
SEM                                 pmax   pmax
      comp=Z,11nm,1.4s
KURK  Kurchatov         56.26   8   P      P      05 58 16.8 +2.1
KURK  Kurchatov         56.26   8   P      P      05 58 14.2 -0.5
KURK                                IAmb   IAmb   05 58 21.7
      comp=Z,15nm,0.9s
KURK  Kurchatov         56.26   8⇑iP       P      05 58 14.3 -0.5
KURK                                pmax   pmax
      comp=Z,11nm,1.1s
WHN   Wuhan             56.33  48   P      P      05 58 16.5 +0.9
LYN   LuoYang           57.16  43   P      P      05 58 22.4 +0.9
LYN                                 pP     pwP    05 58 27.4 -1.6
LYN                                 S      S      06 06 16.9 +0.2
LYN                                 pmax   pmax
      comp=Z,17nm,1.3s
LYN                                 pmax   pmax
      comp=Z,410nm,4.0s
LYN                                 LR     LR
      comp=Z,880nm,18.5s
LYN                                 LR     LR
      comp=Z,870nm,18.2s
LYN                                 LR     LR
      comp=Z,1µm,21.0s
FITZ  Fitzroy Crossi    57.20 108   LR     LR     06 21 18.5
      comp=Z,459nm,19.4s,baz=285,slow=34
FITZ  Fitzroy Crossi    57.20 108          P      05 58 20.6 -1.4
BVAR  Borovoye Array    57.92   1   P      P      05 58 26.1 -0.4
      comp=Z,4.2nm,0.9s,baz=165,slow=6.2,SNR=13
BVAR                                LR     LR     06 23 02.0
      comp=Z,489nm,21.1s,baz=186,slow=36
      comp=Z,4.2nm,0.9s
BORK  Borovoye          57.94   1          P      05 58 26.4 -0.1
BORK                                IAmb   IAmb   05 58 33.9
      comp=Z,46nm,1.5s
BORK  Borovoye          57.94   1⇑iP       P      05 58 27.0 +0.4
BORK                                pmax   pmax
      comp=Z,19nm,1.5s
DAV   Davao City (W)    58.20  79   LR     LR     06 22 03.2
      comp=Z,528nm,21.9s,baz=257,slow=34
BTO   Baotou            59.27  36  eP      P      05 58 38.0 +1.7
BTO                                 pP     pwP    05 58 42.5 -1.3
BTO                                 sP     sP     05 58 45.2 +4.7
BTO                                 PP     PP     06 00 51.1 +3.7
BTO                                 S      S      06 06 44.2 -0.2
BTO                                 SS     SS     06 10 42.2 +2.9
BTO                                 pmax   pmax
      comp=Z,450nm,4.9s
BTO                                 LR     LR
      comp=Z,1µm,22.4s
BTO                                 LR     LR
      comp=Z,1µm,23.5s
BTO                                 LR     LR
      comp=Z,1µm,22.7s
BELG  Belogornoye       59.97 345⇑iP       P      05 58 40.0 -0.6
BELG                                pmax   pmax
      comp=Z,3.0nm,1.1s
KNRA  Kununurra         59.99 105          P      05 58 40.7 -0.9
KNRA                                IAmb   IAmb   05 58 44.8
      comp=Z,26nm,1.1s
HNS   HongShan          60.27  41 ⇑P       P      05 58 44.7 +1.7
HNS                                 S      S      06 06 56.9 -0.1
HNS                                 pmax   pmax
      comp=Z,27nm,1.3s
HNS                                 LR     LR
      comp=Z,190nm,13.8s
HNS                                 LR     LR
      comp=Z,780nm,19.0s
HNS                                 LR     LR
      comp=Z,840nm,18.8s
HHC   Hu-ho-hao-te      60.34  37⇓iP       P      05 58 45.8 +2.2
HHC                                 pP     pwP    05 58 50.8 -0.4
HHC                                 S      S      06 06 54.4 -3.7
HHC                                 pmax   pmax
      comp=Z,20nm,1.3s
HHC                                 pmax   pmax
      comp=Z,280nm,6.3s
HHC                                 LR     LR
      comp=Z,770nm,18.1s
HHC                                 LR     LR
      comp=Z,760nm,19.6s
HHC                                 LR     LR
      comp=Z,1µm,20.2s
ZAA0  Zalesovo Array    60.39  11          P      05 58 42.2 -1.3
ZALV  Zalesovo Beam     60.39  11   P      P      05 58 42.4 -1.2
      comp=Z,4.8nm,0.8s,baz=212,slow=7.2,SNR=18
ZALV                                LR     LR     06 25 03.7
      comp=Z,618nm,21.1s,baz=202,slow=36
      comp=Z,4.8nm,0.8s
ZALV  Zalesovo Beam     60.39  11   P      P      05 58 42.5 -1.0
NJ2   Nanjing           60.43  49  eP      P      05 58 45.5 +1.3
NJ2                                 sP     pwP    05 58 54.6 +2.8
NJ2                                 pmax   pmax
      comp=Z,19nm,0.5s
NJ2                                 LR     LR
      comp=Z,1µm,13.3s
NJ2                                 LR     LR
      comp=Z,1µm,15.3s
NJ2                                 LR     LR
      comp=Z,1µm,17.7s
YOJ   Yonaguni jima     60.59  58   P      P      05 58 45.4 -0.1
YOJ   Yonaguni jima     60.59  58   P      P      05 58 45.4 -0.1
YOJ                                 pmax   pmax
      comp=Z,1µm,0.7s
VORD  Divnogorie        61.23 339  eP      P      05 58 46.8 -2.5
VORD                                pmax   pmax
      comp=Z,10.0nm,1.0s
TIA   Tai'an            61.25  44   P      P      05 58 50.8 +1.0
TIA                                 pmax   pmax
      comp=Z,17nm,0.8s
VSR   Storozhevoye      61.48 339  eP      P      05 58 48.9 -2.1
VSR                                 pmax   pmax
      comp=Z,10.0nm,1.2s
ARTI  Arti              61.83 354   LR     LR     06 26 06.6
      comp=Z,202nm,18.2s,baz=158,slow=36
ARTI  Arti              61.83 354          P      05 58 52.9 -0.4
ARTI                                IAmb   IAmb   05 59 04.9
      comp=Z,20nm,1.0s
ARTI  Arti              61.83 354d iP      P      05 58 52.4 -0.9
ARTI                                              05 59 30.7
ARTI                                S      S      06 07 16.9 +0.6
ARTI                                SS     SS     06 11 16.9 -1.7
ARTI                                pmax   pmax
      comp=Z,51nm,2.4s
SVE   Sverdlovsk        62.05 355  eP      P      05 59 01.2 +6.5
SVE                                 pmax   pmax
      comp=Z,37nm,1.6s
SONM  Songino Array     62.31  28   P      P      05 58 57.3 +0.4
      comp=Z,18nm,1.1s,baz=218,slow=5.7,SNR=50
SONM                                LR     LR     06 25 50.8
      comp=Z,2µm,19.8s,baz=217,slow=36
      comp=Z,18nm,1.1s
SONM  Songino Array     62.31  28   P      P      05 58 56.9  0.0
SULR                    62.35 327 ⇑P       PKiKP  06 05 48.5 -0.7
MAW   Mawson            62.53 182   P      P      05 58 58.7 +0.9
      comp=Z,5.3nm,0.8s,baz=0.9,slow=10,SNR=5.1
MAW                                 LR     LR     06 19 34.2
      comp=Z,885nm,21.9s,baz=352,slow=30
      comp=Z,5.3nm,0.8s
ULN   Ulaanbaatar       62.64  28   P      P      05 59 01.8 +2.7
ULN                                 P      P      05 59 01.8 +2.7
ULN   Ulaanbaatar       62.64  28   P      P      05 58 59.5 +0.5
ULN                                 IAmb   IAmb   05 59 07.0
      comp=Z,43nm,1.6s
ULN   Ulaanbaatar       62.64  28   P      P      05 59 01.2 +2.1
ULN   Ulaanbaatar       62.64  28⇓iP       P      05 59 01.0 +1.9
ULN                                 pmax   pmax
      comp=Z,24nm,1.5s
BJT   Baijiatuau        62.68  40   P      P      05 58 59.8 +0.5
BJT                                 IAmb   IAmb   05 59 11.9
      comp=Z,25nm,1.2s
BJT   Baijiatuau        62.68  40   P      P      05 58 59.8 +0.5
BJT                                 pmax   pmax
      comp=Z,25nm,1.2s
BJI   Beijing           62.69  40   P      P      05 59 00.6 +1.2
BJI                                 pP     pwP    05 59 05.6 -1.4
BJI                                 sP     sP     05 59 08.2 +4.6
BJI                                 S      S      06 07 27.6 -0.2
BJI                                 pmax   pmax
      comp=Z,8.0nm,1.0s
BJI                                 pmax   pmax
      comp=Z,140nm,5.1s
BJI                                 LR     LR
      comp=Z,300nm,17.9s
BJI                                 LR     LR
      comp=Z,270nm,16.3s
BJI                                 LR     LR
      comp=Z,320nm,24.3s
ZAK   Zakamensk         62.85  24  eP      P      05 59 02.1 +1.7
ZAK                                 pmax   pmax
      comp=Z,13nm,1.6s
MLR   Muntele Rosu      63.05 328   P      P      05 59 02.1 +0.2
MLR   Muntele Rosu      63.05 328   P      P      05 59 02.1 +0.2
MLR                                 pmax   pmax
      comp=Z,72nm,2.0s
FAKI  Fak Fak           63.58  91          P      05 59 05.1 -0.7
FAKI  Fak Fak           63.58  91   P      P      05 59 07.1 +1.3
TLY   Talaya            64.00  23   P      P      05 59 08.0 +0.2
TLY                                 IAmb   IAmb   05 59 16.5
      comp=Z,27nm,1.4s
KMPD  K-Podol'skiy      64.83 331   P      P      05 59 17.5 +4.2
XLT   XiLinHaoTe        64.84  36  eP      P      05 59 15.6 +2.0
XLT                                 S      S      06 07 58.4 +3.8
XLT                                 pmax   pmax
      comp=Z,10.0nm,2.3s
XLT                                 pmax   pmax
      comp=Z,210nm,6.8s
XLT                                 LR     LR
      comp=Z,47nm,17.2s
XLT                                 LR     LR
      comp=Z,410nm,17.4s
XLT                                 LR     LR
      comp=Z,670nm,19.0s
AK10  Malin Array Si    64.95 334   P      P      05 59 19.1 +5.1
AK02  Malin Array Si    65.01 334   P      P      05 59 19.3 +4.9
AKASG Malin Array Be    65.04 334   P      P      05 59 12.3 -2.3
      comp=Z,2.8nm,0.8s,baz=140,slow=5.5,SNR=10
AKASG                               LR     LR     06 30 29.2
      comp=Z,227nm,18.8s,baz=124,slow=39
      comp=Z,2.8nm,0.8s
AKASG Malin Array Be    65.04 334   P      P      05 59 14.2 -0.4
AKASG Malin Array Be    65.04 334   P      P      05 59 14.2 -0.4
AKASG                               pmax   pmax
      comp=Z,13nm,1.5s
AKBB  Malin Array Si    65.04 334          P      05 59 13.5 -1.1
AKBB  Malin Array Si    65.04 334 i P      P      05 59 13.7 -0.9
KIEV  Kiev              65.04 334          P      05 59 13.4 -1.2
KIEV  Kiev              65.04 334   P      P      05 59 13.4 -1.2
KIEV                                pmax   pmax
      comp=Z,92nm,2.0s
AK18  Malin Array Si    65.12 334   P      P      05 59 20.1 +5.0
KIRV  Kirov             65.30 349   LR     LR     06 29 32.0
      comp=Z,247nm,18.1s,baz=144,slow=38
KIRV  Kirov             65.30 349⇓iP       P      05 59 15.8 -0.3
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ASAR  Alice Springs     65.43 114   P      P       05 59 17.6 -0.2
      comp=Z,7.5nm,0.9s,baz=282,slow=6.0,SNR=43
ASAR                                LR     LR      06 24 21.5
      comp=Z,605nm,21.5s,baz=284,slow=33
      comp=Z,7.5nm,0.9s
ASAR  Alice Springs     65.43 114          P       05 59 17.8  0.0
ASAR  Alice Springs     65.43 114   P      P       05 59 17.8  0.0
WRA   Warramunga Arr    65.55 109   P      P       05 59 18.5 -0.1
      comp=Z,18nm,0.9s,baz=285,slow=6.1,SNR=56
WRA                                 LR     LR      06 24 03.5
      comp=Z,507nm,21.8s,baz=288,slow=32
      comp=Z,18nm,0.9s
WRA   Warramunga Arr    65.55 109          P       05 59 18.2 -0.4
WRAB  Tennant Creek     65.56 109   P      P       05 59 17.6 -1.1
WRAB                                IAmb   IAmb    05 59 21.5
      comp=Z,21nm,0.9s
WRAB  Tennant Creek     65.56 109⇑iP      P       05 59 19.1 +0.4
WRAB                                pmax   pmax
      comp=Z,25nm,0.9s
OBN   Obninsk           65.58 340⇓eP      P       05 59 20.0 +2.0
OBN                                e               06 01 45.0
OBN                                eS     S       06 08 25.7  +23
OBN                                eSS    SS      06 12 24.0 +6.8
OBN                                 pmax   pmax
      comp=Z,8.0nm,0.7s
OBN                                 MLR    MLR
      comp=Z,304nm,19.0s
WB0   Warramunga Arr    65.59 109          P       05 59 18.2 -0.6
WB0                                 IAmb   IAmb    05 59 26.0
      comp=Z,21nm,0.8s
DL2   Dalian            65.70  43   P      P       05 59 21.0 +1.9
DL2                                 S      S       06 08 12.2 +7.2
DL2                                 pmax   pmax
      comp=Z,53nm,1.6s
DL2                                 pmax   pmax
      comp=Z,180nm,6.1s
DL2                                 LR     LR
      comp=Z,600nm,17.4s
DL2                                 LR     LR
      comp=Z,710nm,18.8s
DL2                                 LR     LR
      comp=Z,870nm,18.1s
WR8   Warramunga Arr    65.70 109          P       05 59 19.2 -0.4
MOS   Moscow            65.76 341  eP      P       05 59 19.3 +0.2
MOS                                e               05 59 49.1
MOS                                e               06 01 45.2
MOS                                 pmax   pmax
      comp=Z,52nm,1.3s
JOW   Kunigami          65.86  58   LR     LR      06 29 31.1
      comp=Z,385nm,18.1s,baz=272,slow=37
SYO   Syowa Base        66.65 191⇑iP      P       05 59 26.2 +1.5
SYO   Syowa Base        66.65 191⇓esP     sP      05 59 30.8 +2.0
TAM   Tamanrasset       67.47 297   P      P       05 59 30.9 -0.1
TAM   Tamanrasset       67.47 297   P      P       05 59 30.9 -0.1
TAM                                 pmax   pmax
      comp=Z,46nm,0.2s
MNK   Minsk             68.34 336  i P     P       05 59 33.6 -2.0
MNK                                i               05 59 58.8
MNK                                i               06 02 04.2
MNK                                i PPP   PPP     06 03 42.7
MNK                                i S     S       06 08 35.4 -0.9
MNK                                i               06 09 33.0
MNK                                i SS    SS      06 12 59.7 -0.2
MNK                                 pmax   pmax
      comp=N,23nm,0.8s
MNK                                 pmax   pmax
      comp=E,11nm,0.7s
MNK                                 pmax   pmax
      comp=Z,10.0nm,0.8s
MNK                                 MLR    MLR
      comp=Z,145nm,18.0s
MNK                                 MLR    MLR
      comp=N,224nm,19.0s
MNK                                 MLR    MLR
      comp=E,239nm,18.0s
CIT   Chita             68.55  28  eP      P       05 59 37.4 +0.4
CIT                                e               05 59 43.6
CIT                                e               06 00 02.8
CIT                                e               06 02 08.6
CIT                                 pmax   pmax
      comp=Z,106nm,2.9s
KEST  Kesra             68.66 311   LR     LR      06 30 06.2
      comp=Z,186nm,18.1s,baz=12,slow=36
LANS  Liptovska Anna    68.78 328  eP      P       05 59 44.8 +6.3
TORD  Torodi Ar. Bea    68.79 286   P      P       05 59 38.1 -1.2
      comp=Z,1.9nm,0.3s,baz=73,slow=4.0,SNR=1.9
      comp=Z,1.9nm,0.3s
TORD  Torodi Ar. Bea    68.79 286   P      P       05 59 38.6 -0.7
NRCA  Norcia            69.14 320   P      P       05 59 41.2 +0.3
NRCA                                IAmb   IAmb    05 59 48.2
      comp=Z,36nm,1.4s
KSAR  Wonju Array Be    69.47  47   P      P       05 59 42.3 -0.7
KSAR  Wonju Array Be    69.47  47   P      P       05 59 42.3 -0.7
KSRS  Korea Array       69.50  47   P      P       05 59 42.7 -0.5
      comp=Z,3.8nm,1.1s,baz=257,slow=9.1,SNR=9.6
      comp=Z,3.8nm,1.1s
MODS  Modra-Piesok      69.52 326  eP      P       05 59 42.4 -0.7
MODS                               e               05 59 48.9
MODS  Modra-Piesok      69.52 326  eP      P       05 59 42.4 -0.7
MODS                               e               05 59 48.9
KLMR  Klimovskoe        69.54 345  eP      P       05 59 41.3 -1.6
KLMR                                pmax   pmax
      comp=Z,69nm,1.5s
RONA  Rosalia, Austr    69.69 325  eP      P       05 59 43.9 -0.4
      comp=Z,3.2nm,1.3s
MAUC  Maruska           69.78 327  eP      P       05 59 44.2 -0.5
SOKA  Soboth            69.88 324  eP      P       05 59 46.4 +0.9
      comp=Z,3.1nm,1.0s
ARSA  Arzberg           69.90 325   IAmb   IAmb    06 00 23.1
      comp=Z,27nm,1.8s
ARSA  Arzberg           69.90 325  eP      P       05 59 45.1 -0.4
      comp=Z,2.9nm,1.0s
CONA  Conrad Observa    70.06 325  eP      P       05 59 45.7 -0.9
      comp=Z,4.0nm,1.1s
JNU   Nakatsue          70.12  52   LR     LR      06 29 33.3
      comp=Z,411nm,20.8s,baz=256,slow=35
HILR  Hailar Array B    70.16  33   P      P       05 59 47.0 -0.1
      comp=Z,14nm,0.8s,baz=224,slow=6.2,SNR=17
HILR                                LR     LR      06 31 00.8
      comp=Z,419nm,21.9s,baz=355,slow=36
      comp=Z,14nm,0.8s
VRAC  Vranov            70.41 327   LR     LR      06 30 51.6
      comp=Z,140nm,19.6s,baz=106,slow=36
CN2   Changchun         70.56  40 ⇑P      P       05 59 50.1 +0.5
CN2                                esP     pwP     05 59 57.0 -0.2
CN2                                eS      S       06 09 02.1 -0.8
CN2                                 pmax   pmax
      comp=Z,10.0nm,0.6s
CN2                                 pmax   pmax
      comp=Z,300nm,5.0s
CN2                                 LR     LR
      comp=Z,200nm,14.0s
CN2                                 LR     LR
      comp=Z,300nm,14.0s
CN2                                 LR     LR
      comp=Z,500nm,15.0s
MOA   Molln             70.94 325  eP      P       05 59 52.8 +0.9
      comp=Z,7.1nm,1.4s
BIOA  Bad Ischl, Aus    71.22 324  eP      P       05 59 54.5 +1.0
      comp=Z,13nm,2.0s
OSTC  Ostas             71.31 328  eP      P       05 59 52.6 -1.4
OSTC  Ostas             71.31 328  eP      P       05 59 52.6 -1.4
ABTA  Abfaltersbach     71.41 323  eP      P       05 59 54.3 -0.5
      comp=Z,4.3nm,0.8s
LESA  Schwarzleotal     71.65 324  eP      P       05 59 55.5 -0.8
      comp=Z,4.3nm,1.0s
INKA  Innaminka         71.91 117          P       05 59 57.1 -1.0
INKA                                IAmb   IAmb    06 00 06.6
      comp=Z,13nm,0.9s
KHC   Kasperske Hory    71.99 326  eP      P       05 59 56.7 -1.5
KHC   Kasperske Hory    71.99 326  eP      P       05 59 56.7 -1.5
JAY   Jayapura          72.03  91   LR     LR      06 33 44.0
      comp=Z,65nm,18.9s,baz=156,slow=38
WTTA  Wattenberg        72.19 323  eP      P       05 59 59.2 -0.4
      comp=Z,8.1nm,1.3s
WATA  Walderalm         72.25 323  eP      P       05 59 59.4 -0.5
      comp=Z,5.2nm,1.1s
SQTA  Sankt Quirin      72.42 323  eP      P       06 00 00.3 -0.6
      comp=Z,4.8nm,0.8s
MOTA  Moosalm           72.54 323  eP      P       06 00 00.6 -1.1
      comp=Z,7.6nm,0.9s
FETA  Feichten          72.61 323  eP      P       06 00 01.7 -0.4
      comp=Z,4.7nm,0.9s
BNX   BinXian           72.68  39 ⇓P      P       06 00 03.4 +1.1
BNX                                 pmax   pmax
      comp=Z,15nm,1.2s
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BRG   Berggiesshubel    72.70 327  eP      P       06 00 02.8 +0.5
      comp=Z,13nm,1.4s,baz=119,slow=6.0
RETA  Reutte            72.81 323  eP      P       06 00 03.0 -0.2
      comp=Z,14nm,1.9s
FUR   Furstenfeldbru    72.83 324  eP      P       06 00 03.3  0.0
      comp=Z,31nm,1.0s,baz=119,slow=6.0
STKA  Stephens Creek    72.95 122   P      P       06 00 04.0 -0.2
      comp=Z,1.5nm,0.4s,baz=309,slow=6.5,SNR=1.8
STKA                                LR     LR      06 29 07.8
      comp=Z,465nm,19.8s,baz=267,slow=33
      comp=Z,1.5nm,0.4s
STKA  Stephens Creek    72.95 122   P      P       06 00 03.2 -1.0
DAVOX Davos/Dischmat    73.02 322   LR     LR      06 31 54.2
      comp=Z,171nm,18.8s,baz=92,slow=36
ROTZ  Rotzenmuhle       73.08 326  eP      P       06 00 04.5 -0.1
      comp=Z,2.4nm,1.3s,baz=119,slow=6.0
MANZ  Manzenberg        73.25 326  eP      P       06 00 06.1 +0.4
      comp=Z,2.6nm,1.2s,baz=119,slow=6.0
DAVA  Damuels           73.25 323  eP      P       06 00 05.5 -0.4
      comp=Z,8.1nm,0.8s
TANN  Tannenbergstha    73.27 326  eP      P       06 00 06.3 +0.5
      comp=Z,68nm,2.2s,baz=119,slow=6.0
UBR   Ueberruh          73.30 323  eP      P       06 00 06.3 +0.2
      comp=Z,66nm,1.2s,baz=119,slow=6.0
CLL   Collm             73.43 327          P       06 00 06.5 -0.1
CLL                                 IAmb   IAmb    06 00 14.1
      comp=Z,38nm,1.6s
CLL   Collm             73.43 327   P      P       06 00 06.5 -0.1
CLL                                 pmax   pmax
      comp=Z,38nm,1.6s
CLL   Collm             73.43 327  eP      P       06 00 07.1 +0.5
      comp=Z,40nm,1.6s,baz=119,slow=6.0
MDJ   Mudanjiang        73.59  41   P      P       06 00 07.4 -0.4
MDJ                                 IAmb   IAmb    06 00 10.7
      comp=Z,30nm,1.0s
MDJ   Mudanjiang        73.59  41   P      P       06 00 09.7 +2.0
MDJ                                 pP     pwP     06 00 14.4 -1.0
MDJ                                 S      SKiKP   06 09 39.6 +1.5
MDJ                                 SS     SS      06 14 21.6 +0.6
MDJ                                 pmax   pmax
      comp=Z,39nm,1.0s
MDJ                                 pmax   pmax
      comp=Z,430nm,6.2s
MDJ                                 LR     LR
      comp=Z,470nm,17.2s
MDJ                                 LR     LR
      comp=Z,520nm,15.8s
MDJ                                 LR     LR
      comp=Z,610nm,22.1s
GRA1  Grafenberg Arr    73.60 325   IAmb   IAmb    06 00 14.7
      comp=Z,42nm,1.2s
GRF   Grafenberg Arr    73.60 325  eP      P       06 00 07.7  0.0
      comp=Z,41nm,1.2s,baz=119,slow=6.0
GRF                                eL      L       06 31 31.6
      comp=Z,146nm,20.2s
RUE   Ruedersdorf       73.63 329  eP      P       06 00 08.2 +0.4
      comp=Z,12nm,0.8s,baz=119,slow=6.0
MOX   Moxa              73.85 326  eP      P       06 00 09.8 +0.6
      comp=Z,6.1nm,1.0s,baz=119,slow=6.0
MOX                                eL      L       06 32 47.0
      comp=Z,182nm,18.8s
FINES FINESS Array B    73.99 340   P      P       06 00 08.3 -1.4
      comp=Z,6.3nm,1.0s,baz=116,slow=4.4,SNR=6.7
FINES                               LR     LR      06 34 11.1
      comp=Z,198nm,20.9s,baz=112,slow=37
      comp=Z,6.3nm,1.0s
FINES FINESS Array B    73.99 340   P      P       06 00 09.0 -0.7
FINES FINESS Array B    73.99 340   P      P       06 00 09.0 -0.7
NEUB  Neuenburg         74.04 327  eP      P       06 00 10.9 +0.6
      comp=Z,29nm,1.4s,baz=119,slow=6.0
DBIC  Dimbokro          74.18 278   P      P       06 00 10.3 -1.5
      comp=Z,4.7nm,0.9s,baz=135,slow=4.4,SNR=6.0
      comp=Z,4.7nm,0.9s
DBIC  Dimbokro          74.18 278   P      P       06 00 11.2 -0.6
DBIC                                IAmb   IAmb    06 00 18.9
      comp=Z,16nm,1.1s
DBIC  Dimbokro          74.18 278   P      P       06 00 11.2 -0.6
DBIC                                pmax   pmax
      comp=Z,16nm,1.1s
STU   Stuttgart         74.34 324  eP      P       06 00 12.0 -0.1
      comp=Z,47nm,1.1s,baz=119,slow=6.0
SENIN Lac Senin/Sane    74.44 321   IAmb   IAmb    06 00 21.2
      comp=Z,14nm,0.8s
BFO   Black Forest      74.66 323  eP      P       06 00 14.1 +0.2
      comp=Z,11nm,1.5s,baz=119,slow=6.0
NVL   N'lazarevskaya    74.67 197  eP      P       06 00 15.2 +1.7
NVL                                 pmax   pmax
      comp=Z,23nm,0.9s
HEH   HeiHe             74.76  35  eP      P       06 00 15.3 +0.9
HEH                                 LR     LR
      comp=Z,590nm,19.0s
HEH                                 LR     LR
      comp=Z,350nm,18.6s
HEH                                 LR     LR
      comp=Z,840nm,18.3s
UBBA  Unterbreizbach    74.83 326  eP      P       06 00 15.6 +0.9
      comp=Z,21nm,1.5s,baz=119,slow=6.0
FLTG  Flechtingen       74.89 328  eP      P       06 00 15.3 +0.2
      comp=Z,17nm,1.4s,baz=119,slow=6.0
USRK  Ussuriysk Ar.     75.00  42   P      P       06 00 15.4 -0.5
      comp=Z,4.3nm,0.8s,baz=268,slow=5.5,SNR=5.9
      comp=Z,4.3nm,0.8s
ASSE  Asse, Remlinge    75.09 327  eP      P       06 00 17.0 +0.8
      comp=Z,28nm,1.5s,baz=119,slow=6.0
CLZ   Clausthal         75.12 327  eP      P       06 00 17.1 +0.5
      comp=Z,27nm,1.4s,baz=119,slow=6.0
GTTG  Gottingen         75.20 327  eP      P       06 00 17.9 +0.9
      comp=Z,32nm,1.4s,baz=119,slow=6.0
NRIK  Noril'sk          75.42   7   P      P       06 00 17.7 -0.1
      comp=Z,1.1nm,0.5s,baz=204,slow=8.4,SNR=6.2
NRIK                                LR     LR      06 36 30.5
      comp=Z,408nm,18.2s,baz=189,slow=38
      comp=Z,1.1nm,0.5s
NRIK  Noril'sk          75.42   7   IAmb   IAmb    06 00 25.6
      comp=Z,67nm,1.8s
TNS   Taunus Mts        75.43 325  eP      P       06 00 19.3 +0.8
      comp=Z,14nm,1.1s,baz=119,slow=6.0
KASTN Kahler Asten      75.90 326  eP      P       06 00 22.1 +1.1
      comp=Z,27nm,1.5s,baz=119,slow=6.0
RETH  Rethem/Aller,     76.09 327  eP      P       06 00 22.6 +0.6
      comp=Z,28nm,1.6s,baz=119,slow=6.0
BSEG  Bad Segeberg      76.17 329  eP      P       06 00 22.8 +0.4
      comp=Z,15nm,1.4s,baz=119,slow=6.0
ZEA   Zeya              76.33  31  eP      P       06 00 25.4 +2.0
ZEA                                eS      S       06 10 08.4 +0.5
ZEA                                 pmax   pmax
      comp=Z,10.0nm,1.5s
ZEA                                 smax   smax
      comp=E,100nm,14.8s
ZEA                                 MLR    MLR
      comp=E,400nm,17.0s
ZEA                                 MLR    MLR
      comp=N,300nm,18.0s
ZEA                                 MLR    MLR
      comp=Z,700nm,17.0s
BUG   Bochum--Univer    76.65 326  eP      P       06 00 26.1 +1.0
      comp=Z,8.1nm,0.9s,baz=119,slow=6.0
CTA   Charters Tower    76.75 109   LR     LR      06 34 01.2
      comp=Z,9.5nm,18.7s,baz=236,slow=36
CTAO  Charters Tower    76.75 109          P       06 00 25.6 -0.9
CTAO                                IAmb   IAmb    06 00 39.5
      comp=Z,29nm,1.3s
CTAO  Charters Tower    76.75 109   P      P       06 00 25.6 -0.9
CTAO                                pmax   pmax
      comp=Z,29nm,1.3s
IBBN  Ibbenburen        76.76 327  eP      P       06 00 26.9 +1.1
      comp=Z,24nm,1.6s,baz=119,slow=6.0
MJAR  Matsushiro Arr    76.92  51   P      P       06 00 27.0 -0.2
      comp=Z,3.6nm,1.0s,baz=258,slow=7.2,SNR=12
MJAR                                LR     LR      06 36 10.1
      comp=Z,738nm,18.5s,baz=248,slow=37
      comp=Z,3.6nm,1.0s
MJAR  Matsushiro Arr    76.92  51          P       06 00 27.1  0.0
MJAR                                IAmb   IAmb    06 00 34.9
      comp=Z,52nm,1.8s
MJAR  Matsushiro Arr    76.92  51   P      P       06 00 27.1  0.0
HFS   Hagfors           77.83 335   P      P       06 00 31.0 -0.7
      comp=Z,8.9nm,0.8s,baz=133,slow=6.5,SNR=12
      comp=Z,8.9nm,0.8s
JCJ   Chichijima        77.88  61   LR     LR      06 30 29.6
      comp=Z,174nm,21.7s,baz=106,slow=32
TROLL Troll, Antarti    77.89 197 ⇑P      P       06 00 34.2 +2.1
      comp=Z,216nm,0.8s
GUMO  Guam              77.98  75   LR     LR      06 32 43.1
      comp=Z,215nm,20.7s,baz=253,slow=34
PMG   Port Moresby      77.98  98   LR     LR      06 38 11.1
      comp=Z,149nm,18.0s,baz=252,slow=38
PMG   Port Moresby      77.98  98   P      P       06 00 35.0 +1.5
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      comp=Z,22nm,1.2s
MD01  Midelt array s    78.85 305          P       06 00 38.1  0.0
NB2   NORSAR Subarra    79.35 335   P      P       06 00 38.8 -1.3
      comp=Z,75nm,2.0s,baz=122,slow=5.6
NB2   NORSAR Subarra    79.35 335   P      P       06 00 38.8 -1.3
      baz=122,slow=5.6
NOA   NORSAR Array B    79.35 335   P      P       06 00 39.0 -1.2
      comp=Z,2.5nm,1.0s,baz=114,slow=6.1,SNR=5.4
NOA                                 LR     LR      06 37 44.3
      comp=Z,124nm,18.9s,baz=95,slow=37
      comp=Z,2.5nm,1.0s
NOA   NORSAR Array B    79.35 335   P      P       06 00 39.0 -1.2
SNAA  Sanae             79.38 198 ⇑P      P       06 00 40.5 +0.3
      comp=Z,99nm,0.9s
SNAA  Sanae             79.38 198   P      P       06 00 39.3 -0.9
      comp=Z,3.1nm,0.8s,baz=94,slow=9.6,SNR=10.0
      comp=Z,3.1nm,0.8s
SNAA  Sanae             79.38 198          P       06 00 40.6 +0.4
SNAA  Sanae             79.38 198   P      P       06 00 40.6 +0.4
SNAA                                pmax   pmax
      comp=Z,17nm,1.5s
ESDC  Sonseca Array     79.91 312   P      P       06 00 43.5 -0.2
      comp=Z,2.7nm,0.9s,baz=90,slow=4.2,SNR=12
ESDC                                LR     LR      06 35 18.2
      comp=Z,55nm,19.0s,baz=104,slow=35
      comp=Z,2.7nm,0.9s
ESDC  Sonseca Array     79.91 312          P       06 00 44.0 +0.3
ARCES ARCESS Array B    80.01 346   P      P       06 00 43.1 -0.4
      comp=Z,9.7nm,1.2s,baz=145,slow=5.5,SNR=4.3
ARCES                               LR     LR      06 36 46.7
      comp=Z,344nm,20.9s,baz=130,slow=36
      comp=Z,9.7nm,1.2s
VNA2  Neumayer--Watz    80.62 199 ⇑P      P       06 00 46.6 -0.3
      comp=Z,14nm,0.8s,baz=22,slow=25
VNA1  Neumayer--Stat    80.85 199 ⇑P      P       06 00 50.1 +2.1
      comp=Z,13nm,1.0s
VNA3  Neumayer Olymp    81.41 199 ⇑P      P       06 00 51.4 +0.3
      comp=Z,21nm,0.9s
YAK   Yakutsk           81.44  25   LR     LR      06 37 49.0
      comp=Z,869nm,18.4s,baz=237,slow=36
ASAJ  Asahikawa         82.19  44   LR     LR      06 37 11.5
      comp=Z,509nm,20.8s,baz=271,slow=36
YSS   Yuzhno-Sakhali    83.03  42  eP      P       06 00 59.5 -0.4
YSS                                e               06 04 07.0
YSS                                eS      S       06 11 14.8 -4.3
YSS                                ePS     PnS     06 12 13.4 +3.1
YSS                                eSS     SS      06 16 39.6 -3.4
YSS                                 pmax   pmax
      comp=Z,20nm,1.1s
YSS                                 MLR    MLR
      comp=Z,700nm,16.0s
YSS                                 MLR    MLR
      comp=N,500nm,15.0s
YSS                                 MLR    MLR
      comp=E,600nm,16.0s
EKA   Eskdalemuir Ar    83.89 327   P      P       06 01 04.0 -0.2
      comp=E,0.8nm,0.7s,baz=108,slow=5.4,SNR=5.6
      comp=E,0.8nm,0.7s
EKA   Eskdalemuir Ar    83.89 327   P      P       06 01 04.0 -0.2
GLVR  Golovnino         84.16  45  i P     P       06 01 04.4 -1.4
QSPA  South Pole Qui    84.92 180   P      P       06 01 13.0 +3.6
      comp=E,4.4nm,0.9s,baz=269,slow=2.6,SNR=17
QSPA                                LR     LR      06 34 55.9
      comp=E,394nm,18.4s,baz=276,slow=33
QSPA  South Pole Qui    84.92 180   P      P       06 01 10.1 +0.7
VNDA  Vanda             85.78 167   P      P       06 01 14.7 +1.3
      comp=E,2.2nm,0.7s,baz=285,slow=6.0,SNR=10
VNDA                                LR     LR      06 35 01.5
      comp=E,414nm,20.8s,baz=251,slow=32
      comp=E,2.2nm,0.7s
VNDA  Vanda             85.78 167          P       06 01 13.4 +0.1
VNDA  Vanda             85.78 167   P      P       06 01 13.4 +0.1
VNDA                                pmax   pmax
      comp=Z,7.0nm,1.0s
TIXI  Tiksi             85.84  16   LR     LR      06 40 21.1
      comp=Z,908nm,21.2s,baz=204,slow=36
TIXI  Tiksi             85.84  16          P       06 01 13.5 -0.1
TIXI                                IAmb   IAmb    06 01 15.7
      comp=Z,32nm,1.2s
TIXI  Tiksi             85.84  16   P      P       06 01 13.5 -0.1
TIXI                                pmax   pmax
      comp=Z,33nm,1.3s
SBA   Scott Base        86.79 168   P      P       06 01 17.4 -0.9
SBA   Scott Base        86.79 168   P      P       06 01 17.4 -0.9
SBA                                 pmax   pmax
      comp=Z,87nm,2.0s
SPITS Spitsbergen Ar    87.72 351   LR     LR      06 44 51.7
      comp=Z,148nm,18.9s,baz=104,slow=39
BELA  Belgrano 2        87.81 192          P       06 01 23.6 +0.4
MA2   Magadan           90.42  30   LR     LR      06 45 12.2
      comp=Z,282nm,19.3s,baz=263,slow=38
JMIC  Jan Mayen         90.58 341   LR     LR      06 43 56.4
      comp=Z,177nm,18.9s,baz=34,slow=37
SEY   Seymchan          91.70  27   LR     LR      06 43 58.6
      comp=Z,1μm,18.4s,baz=265,slow=36
SKR   Severo-Kuril's    92.37  40  eP      P       06 01 26.8  -18
SKR                                eS      S       06 12 40.8 -7.4
SKR                                 pmax   pmax
      comp=Z,300nm,5.3s
SKR                                 MLR    MLR
      comp=Z,600nm,15.0s
PETK  Petropavlovsk-    93.53  37   LR     LR      06 46 29.0
      comp=Z,396nm,19.8s,baz=256,slow=37
BORG  Borgarnes         94.51 335   LR     LR      06 47 06.5
      comp=Z,194nm,18.0s,baz=70,slow=37
DZM   Mont Dzumac       95.41 113  eSS     SS      06 19 49.3 +5.3
      comp=Z,179nm,28.8s
DZM   Mont Dzumac       95.41 113  eLR     LR      06 32 43.1
      comp=Z,1μm,22.4s
R32K  Eaglecrest       124.00  14          PKPdf   06 07 30.8 -1.9
BI02  San Fabin de     124.01 219          PKiKP   06 07 33.8 +0.1
LPAZ  La Paz           132.16 243   PKP    PKPdf   06 07 50.5 +0.3
      comp=Z,1.1nm,0.8s,baz=71,slow=3.6,SNR=5.1
TBI   Tubuai           133.37 129  eSS     SS      06 28 05.2 +2.2
      comp=Z,902nm,30.2s
TBI   Tubuai           133.37 129  eLR     LR      06 50 19.2
      comp=Z,686nm,32.5s
PPT2  Papeete2         136.14 122  ePP     PP      06 10 33.0 -3.4
      comp=Z,26nm,24.0s
PPT2  Papeete2         136.14 122  eSS     SS      06 28 42.5 +5.4
      comp=Z,67nm,27.0s
PPT2  Papeete2         136.14 122  eLR     LR      06 51 28.8
      comp=Z,324nm,25.0s
PPT2                               eLR     LR      06 51 40.5
      comp=Z,377nm,23.8s
PDAR  Pinedale Array   142.45 358   PKP    PKPdf   06 08 06.9 -1.1
      comp=Z,0.7nm,0.7s,baz=101,slow=3.0,SNR=7.7
NVAR  Mina Array Bea   146.24  10   PKPbc  PKPab   06 08 16.4  0.0
      comp=Z,3.8nm,0.8s,baz=8.2,slow=1.5,SNR=20
TAOE  Nuku Hiva Isla   148.22 116  ePP     PP      06 11 47.1 -2.9
      comp=Z,23nm,24.8s
TAOE  Nuku Hiva Isla   148.22 116  eSS     SS      06 30 54.2 -3.6
      comp=Z,43nm,29.4s
TAOE  Nuku Hiva Isla   148.22 116  eLR     LR      06 57 16.7
      comp=Z,154nm,22.6s
TXAR  Lajitas Array    154.78 344   PKPbc  PKPbc   06 08 34.4 -2.2
      comp=Z,1.0nm,0.7s,baz=9.5,slow=3.3,SNR=10.0
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MOS 01 06:00:12.8, 43°.83N×40°.95E, h11km, MPVA3.8, 4D, Western Caucasus

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Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                    Op      ISC      h  m  s     ISC
GRYR  Gornoye           0.30  19  i Pg     Pb       06 00 20.2 -0.1
GRYR                              i Sg     Sg       06 00 24.0 +0.9
GRYR  Gornoye           0.30  19  i PG     Pb       06 00 20.2 -0.1
ARXR  Arkhyz            0.35 139  i Pg     Pb       06 00 21.3 +0.1
ARXR                              i Sg     Sb       06 00 26.6 -0.3
ARXR  Arkhyz            0.35 139⇓iPG      Pb       06 00 21.3  0.0
ARXR                              i S      Sb       06 00 26.6 -0.3
RPOR  Krasnaya Polya    0.52 256  i Pg     Pb       06 00 23.7 -0.2
RPOR                              eSg      Sg       06 00 30.2 +0.6
RPOR  Krasnaya Polya    0.52 256  i PG     Pb       06 00 23.7 -0.2
RPOR                              eS       Sg       06 00 29.7 +0.1
GUZR  Guzeripl'         0.63 286  i Pg     Pg       06 00 25.0 +0.1
GUZR                              i Sg     Sg       06 00 33.0 -0.2
GUZR  Guzeripl'         0.63 286  i PG     Pg       06 00 25.0  0.0
GUZR                              i S      Sg       06 00 33.7 +0.5
DOMR  Dombai            0.73 138  i Pg     Pb       06 00 27.7 +0.1
DOMR                              i Sg     Sb       06 00 37.3 -0.3
DOMR  Dombai            0.73 138⇓iPG      Pb       06 00 27.7 +0.1
DOMR                              i S      Sb       06 00 37.1 -0.5
VSLR  Vesyoloye         0.76 241  ePG      Pn       06 00 29.0 -0.6
VSLR                              eS       Sb       06 00 39.1 +0.6
LABN  Labinsk           0.83 349  i Pg     Pn       06 00 30.8 +0.4
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LABN				eSg	Sn	06 00 42.5	-0.2
LABN	Labinsk	0.83	349	i PG	Pn	06 00 30.8	+0.3
LABN				i S	Sn	06 00 43.2	+0.5
SOC	Sochi	0.93	255	ePg	Pg	06 00 30.4	-0.3
SOC				eSg	Sb	06 00 43.1	-0.2
SOC	Sochi	0.93	255	ePG	Pn	06 00 32.2	+0.4
SOC				e		06 00 42.2	
SOC				pmax	pmax		
	comp=Z,49nm,1.4s						
SOC				smax	smax		
	comp=E,75nm,1.8s						
SOC				smax	smax		
	comp=N,94nm,1.6s						
NVNR	Nevinnomyssk	1.07	42	i Pg	Pn	06 00 34.5	+0.7
NVNR				eSg	Sn	06 00 49.3	+0.6
NVNR	Nevinnomyssk	1.07	42	ePG	Pn	06 00 34.5	+0.7
NVNR				i S	Sn	06 00 49.0	+0.3
MRNR	Maryino	1.07	276	i Pg	Pn	06 00 33.9	+0.1
MRNR				eSg	Sb	06 00 47.8	+0.4
MRNR	Maryino	1.07	276	i PG	Pn	06 00 33.9	+0.1
MRNR				eS	Sb	06 00 47.8	+0.4
GOYR	Goytkh	1.21	291	ePg	Pg	06 00 36.0	-0.1
GOYR				eSg	Sn	06 00 52.7	+0.5
GOYR	Goytkh	1.21	291	ePG	Pg	06 00 36.0	-0.1
GOYR				eS	Sn	06 00 52.7	+0.6
SHA1	Shidzhatmaz	1.24	94	i Pg	Pg	06 00 37.1	+0.5
SHA1				i Sg	Sn	06 00 53.1	0.0
SHA1	Shidzhatmaz	1.24	94	⇓iPG	Pg	06 00 37.1	+0.5
SHA1				i S	Sn	06 00 53.1	0.0
KIV	Kislovodsk	1.26	84	ePg	Pg	06 00 37.1	+0.1
KIV				eSg	Sb	06 00 53.1	+0.2
KIV	Kislovodsk	1.26	84	i PG	Pg	06 00 37.5	+0.5
KIV				i S	Sn	06 00 54.0	+0.5
KIV0	Kislovodsk Arr	1.27	84	ePg	Pg	06 00 37.4	+0.3
KIV0				eSg	Sn	06 00 53.8	+0.1
BEYR	Belyy Ugol+	1.36	82	ePg	Pg	06 00 39.0	+0.2
BEYR				eSg	Sg	06 00 56.5	0.0
BEYR	Belyy Ugol+	1.36	82	ePG	Pg	06 00 39.0	+0.1
BEYR				eS	Sg	06 00 56.5	0.0
NEUR	Neytrino	1.39	113	ePG	Pg	06 00 40.0	+0.5
NEUR				eS	Sg	06 00 57.7	+0.1
KBZ	Khabaz	1.41	93	i Pg	Pg	06 00 39.9	+0.1
KBZ				i Sg	Sg	06 00 58.2	0.0
KBZ	Khabaz	1.41	93	⇓iPG	Pg	06 00 39.9	0.0
KBZ				i S	Sg	06 00 58.2	0.0
PYA1	Pyatigorsk	1.56	81	ePg	Pg	06 00 42.6	-0.2
PYA1				eSg	Sb	06 01 02.4	+0.7
PYA1	Pyatigorsk	1.56	81	ePG	Pg	06 00 42.6	-0.2
ALER	Alexandrovskoy	1.69	56	ePg	Pg	06 00 44.6	-0.6
ALER				eSg	Sg	06 01 08.9	+1.8
ALER	Alexandrovskoy	1.69	56	ePN	Pg	06 00 44.6	-0.6
ALER				eS	Sg	06 01 08.9	+1.8
KBTC	Kuba-Taba	1.78	90	ePg	Pg	06 00 47.0	+0.2
KBTC				eSg	Sg	06 01 09.1	-0.8
KBTC	Kuba-Taba	1.78	90	ePN	Pg	06 00 47.0	+0.1
ERBR	Yeremizino-Bor	1.91	350	ePg	Pb	06 00 46.9	-0.9
ERBR				eSg	Sb	06 01 11.8	+0.1
ERBR	Yeremizino-Bor	1.91	350	ePN	Pb	06 00 48.4	+0.7
ERBR				e		06 01 15.0	
GOF	Gofitskoye	1.94	50	ePg	Pg	06 00 50.4	+0.5
GOF				i Sg	Sb	06 01 12.9	+0.6
GOF	Gofitskoye	1.94	50	ePN	Pg	06 00 50.4	+0.5
SRGR	Sergiyevskiy	2.04	322	ePg	Pb	06 00 49.6	-0.2
SRGR				eSg	Sb	06 01 15.6	+0.4
SRGR	Sergiyevskiy	2.04	322	ePN	Pb	06 00 49.6	-0.2
SPGR	Shapsug	2.26	295	ePn	Pb	06 00 52.5	-1.1
SPGR				eSn	Sb	06 01 20.8	-0.8
SPGR	Shapsug	2.26	295	ePN	Pb	06 00 52.5	-1.1
SPGR				eS	Sb	06 01 20.8	-0.8
STDR	Stavd-Durt	2.31	100	ePn	Pb	06 00 54.8	+0.4
STDR				eSn	Sb	06 01 24.3	+1.3
STDR	Stavd-Durt	2.31	100	ePN	Pb	06 00 54.8	+0.4
STDR				eS	Sb	06 01 24.3	+1.4
KORR	Kora	2.39	107	ePN	Pg	06 00 58.7	+0.2
KORR				eS	Sb	06 01 25.8	+0.5
ARNR	Ardon	2.51	104	ePN	Pg	06 01 00.5	-0.4
ARNR				eS	Sb	06 01 27.8	-1.0
ANN	Anapa	2.71	292	i Pn	Pb	06 01 02.1	+0.8
ANN				eSn	Sb	06 01 35.8	+1.4
ANN	Anapa	2.71	292	i PN	Pb	06 01 02.1	+0.9
ANN				eS	Sb	06 01 35.8	+1.4
SUKR	Sukko	2.71	292	ePn	Pn	06 00 58.3	+2.0
SUKR				eSn	Sb	06 01 32.2	-2.3
SUKR	Sukko	2.71	292	ePN	Pn	06 00 58.3	+2.0
SUKR				eS	Sb	06 01 32.2	-2.3

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*JMA **01** 06:00:29.0±0.2, 24.°2N±0.°7×123.°6E±0.°5, h46^{km}±1^{km}, MV3.5/13, NEAR ISHIGAKIJIMA ISLAND*
JMA Felt I J1 at NEAR ISHIGAKIJIMA ISLAND.
ISC 01 06:00:29.7±1.2**, 24.°13N**±0.°07×**123.°55E**±0.°03**, h33**^{km}±4^{km}**, n20,** σ**0^{s}90**/29**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.25	108	i P	Pn	06 00 37.0	+0.2
HATJ				S	Sb	06 00 43.1	+1.6
IRIF	Iriomote-Funau	0.26	40	i P	Pn	06 00 36.7	-0.4
IRIF				eS	Sn	06 00 42.7	+1.1
JKRS	Kuro-shima	0.43	76	i P	Pb	06 00 39.0	-0.3
JKRS				S	Sb	06 00 46.7	+0.9
JIJ	Ishigaki jima	0.59	67	i P	Pn	06 00 40.4	-1.3
YOJ	Yonaguni jima	0.59	304	P	Pn	06 00 41.3	-0.4
YOJ	Yonaguni jima	0.59	304	i P	Pn	06 00 41.2	-0.4
YOJ				S	Sn	06 00 50.2	0.0
JYNG	Yonagunijimaku	0.63	300	i P	Pn	06 00 41.9	-0.5
JYNG				S	Sn	06 00 51.4	+0.1
JISG	Ishigakijimahi	0.83	57	i P	Pn	06 00 43.6	-1.4
JISG				S	Sn	06 00 55.3	-0.8
JTJ	Tarama	1.17	64	P	Pn	06 00 48.8	-0.9
JTJ				S	Sn	06 01 04.0	-0.4
JIRB	Irabujima	1.63	65	P	Pn	06 00 55.4	-0.7
JIRB				S	Sn	06 01 15.0	-1.0
JMJ2	Miyako jima3	1.73	69	P	Pn	06 00 57.4	0.0
JIKM	Ikemajima	1.74	63	eP	Pn	06 00 56.8	-0.7
NACB	Ninganchiao	1.78	272	P	Pn	06 00 57.5	-0.7
JOGS	Gusukube	1.81	69	eP	Pn	06 00 58.8	+0.3
JOGS				eS	Sn	06 01 21.4	+1.2
YHNB	Yeheng	2.05	286	P	Pn	06 01 02.4	+0.5
TATO	Taipei	2.05	294	P	Pn	06 01 02.2	+0.3
YULB	Yu-li	2.19	251	P	Pn	06 01 02.6	-1.2
SSLB	Suanglung	2.40	262	P	Pn	06 01 05.8	-0.9
TWGBT	Beinan	2.62	240	P	Pn	06 01 08.2	-1.5
TPUB	Ta-pu	2.80	253	P	Pn	06 01 13.2	+1.0

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*NAO **01** 06:03:45.0, 39.°07N×24.°47E, h10^{km}, MB3.8*
*MOS **01** 06:04:16.1±1.0, 41.°38N×19.°35E, h11^{km}, mb4.5/7, Error ellipse: s-maj=6.5km s-min=3.8km az=77.4*
*PRU **01** 06:04:17.9, 41.°26N×19.°63E, h10^{km}, M4.2*
*SKO **01** 06:04:18.1, 41.°56N×19.°32E, h14^{km}, ML3.9*
*RHSSO **01** 06:04:18.3±1.0, 41.°44N×19.°57E, h6^{km}±4^{km}, ML4.1/6*
*PDG **01** 06:04:19.4±0.0, 41.°54N×19.°59E, h16^{km}, MD4.1/13, ML4.0/13, Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*
*THE **01** 06:04:19.9, 42°N±4°×1°9E±°, h12^{km}, M3.9/26, MLh3.9/26*
*TIR **01** 06:04:19.6, 41.°59N×19.°59E, h35^{km}, Ml4.2/6*
*NEIC **01** 06:04:19.2±2.0, 41.°52N±0.°04×19.°43E±0.°07, h10^{km}±1^{km}, mb4.2/15, Error ellipse: s-maj=9.2km s-min=6.1km az=260.0*
*BGR **01** 06:04:22.0±2.9, 41.°64N×19.°66E, h10^{km}, ML4.2, Error ellipse: s-maj=48.9km s-min=31.1km az=140.0*
*BEO **01** 06:04:21.1±0.6, 41.°54N×19.°50E, h21^{km}±4^{km}, ML4.1/8*
*IDC **01** 06:04:24.9±1.5, 41.°72N×19.°44E, h57^{km}±15^{km}, mb3.7/13, mbtmp3.9/23, MS3.1/3, Error ellipse: s-maj=13.5km s-min=11.1km az=144.0*
ISC 01 06:04:19.4±0.9**, 41.°53N**±0.°02×**19.°50E**±0.°02**, h13**^{km}±6^{km}**, n336,** σ**1^{s}49**/407**, mb4.2**/18**, 25C-35D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.33	123	Pg	Pg	06 04 25.9	-0.2
TIR				AML	AML	06 04 30.4	
	94nm,0.3s						
TIR				Sg	Sg	06 04 31.4	+0.9
ULC	Ulcinj	0.48	336	⇑iPg	Pg	06 04 28.9	0.0
ULC				i Sg	Sb	06 04 37.1	+0.4
SDA	Shkodra	0.53	360	Pg	Pg	06 04 29.7	-0.1
SDA				Sg	Sb	06 04 37.8	-0.3
DRME	Dracevica, Mon	0.70	340	ePg	Pg	06 04 32.8	-0.3
DRME				eSg	Sb	06 04 44.3	+1.2
PHP	Peshkopia	0.72	77	Pg	Pg	06 04 32.2	-1.3
PHP				Sg	Sg	06 04 42.2	-0.8
PHP				AML	AML	06 04 52.1	
	45nm,0.6s						
BUM	Brajici-Budva	0.90	330	ePg	Pb	06 04 36.7	-0.2
BUM				i Sg	Sn	06 04 51.3	+0.6
PDG	Podgorica	0.92	349	Pn	Pg	06 04 36.3	-1.0
PDG				Sg	Sb	06 04 49.6	+0.2
PDG	Podgorica	0.92	349		Pg	06 04 36.1	-1.1
PDG				Sg	Sn	06 04 53.9	+2.7
PDG	Podgorica	0.92	349	ePg	Pg	06 04 36.8	-0.4
PDG				eSg	Sn	06 04 51.7	+0.5
PDG	Podgorica	0.92	349	ePg	Pg	06 04 36.6	-0.6
PDG				i Sg	Sn	06 04 51.4	+0.2
VLO	Vlora	1.06	180	Pn	Pn	06 04 40.2	+0.2
VLO				Sn	Sn	06 04 55.3	+0.7
VLO				AML	AML	06 05 03.0	
	38nm,0.5s						
VLO	Vlora	1.06	180	P	Pn	06 04 40.3	+0.4
VLO				S	Sn	06 04 56.1	+1.6
OHR	Ohrid	1.06	113	i Pg	Pb	06 04 38.9	-0.9
OHR				i Sg	Sn	06 04 56.8	+2.0
OHR				eLg	Lg	06 04 58.1	
	comp=N,4µm,0.6s						
OHR				eLg	Lg	06 04 58.2	
	comp=E,2µm,0.6s						
CEME	Cevo	1.11	337	⇑iPg	Pg	06 04 40.3	-0.5
CEME				eSg	Sn	06 04 58.1	+2.1
PVY	Plav	1.12	18	⇓iPg	Pb	06 04 39.6	-1.2
PVY				i Sg	Sn	06 04 56.9	+0.6
HCY	Herceg Novi	1.19	321	⇓iPg	Pn	06 04 42.1	+0.3
HCY				i Sg	Sn	06 05 01.3	+3.5
NKME	Niksic	1.30	342	ePg	Pb	06 04 43.8	-0.1
NKME				eSg	Sg	06 05 03.9	+2.4
KOME	Kolasin	1.32	0	⇓iPg	Pn	06 04 43.7	0.0
KOME				eSg	Sg	06 05 03.8	+1.7
KBN	Korca	1.33	132	Pn	Pn	06 04 43.6	-0.2
KBN				Sn	Sb	06 05 01.3	+0.1
KBN				AML	AML	06 05 06.2	
	comp=E,19nm,0.6s						
KBN	Korca	1.33	132	P	Pb	06 04 44.6	+0.4
KBN				S	Sg	06 05 03.3	+1.1
IVA	Berane	1.38	12	⇓iPg	Pn	06 04 44.3	-0.2
IVA				i Sg	Sg	06 05 04.7	+0.9
TREB	Trebinje	1.47	325	⇑iPg	Pb	06 04 46.0	-0.6
TREB				eSg	Sg	06 05 07.9	+1.3
SKO	Skopje	1.52	72	i Pg	Pn	06 04 47.8	+1.4
SKO				i Sg	Sg	06 05 10.3	+2.0
DBRK	Dubrovnik	1.52	319	ePn	Pb	06 04 47.2	-0.4
DBRK				Sn	Sg	06 05 10.1	+1.6
BRY	Bratogost	1.55	333	ePg	Pb	06 04 47.7	-0.4
BRY				i Sg	Sg	06 05 10.0	+0.7
NEST	Nestorio	1.61	133	P	Pn	06 04 48.9	+1.2
NEST				S	Sb	06 05 10.2	+0.7
UPM	Unac-Piva	1.73	345	ePn	Pn	06 04 50.1	+0.6
UPM				i Sn	Sg	06 05 14.2	-1.0
SJES	Sjenica	1.77	11	ePg	Pb	06 04 52.2	+0.4
SJES				eSg	Sg	06 05 16.4	+0.1
PLE	Pljevlja	1.80	357	ePn	Pn	06 04 50.9	+0.5
PLE				i Sn	Sb	06 05 15.5	+0.5
PENT	Pentalofos	1.82	136	P	Pn	06 04 51.9	+1.4
PENT				S	Sn	06 05 14.8	+1.3
KEK	Kerkira	1.83	173		Pg	06 04 54.9	+0.5
STON	Ston	1.90	316	ePn	Pb	06 04 52.5	-1.4
STON				Sn	Sg	06 05 19.9	-0.5
STON	Ston	1.90	316	ePg	Pb	06 04 53.7	-0.2
STON				eSg	Sg	06 05 19.7	-0.7
NOCI	Noci	1.98	249	Pn	Pn	06 04 52.5	-0.2
NOCI				Sn	Sg	06 05 21.9	-1.2
NOCI				AML	AML	06 05 35.0	
	comp=E,3.7nm,0.4s						
SELS	Selova	2.07	35	ePn	Pn	06 04 55.5	+1.5
SELS				eSn	Sn	06 05 21.3	+1.6
IGT	Igoumenitsa	2.09	162	P	Pn	06 04 54.3	+0.1
IGT				S	Sn	06 05 20.1	0.0
RUDO	Rudo	2.09	357	ePn	Pn	06 04 55.1	+0.9
RUDO				eSn	Sn	06 05 22.0	+1.8
IVAS	Ivanjica	2.10	13	ePn	Pn	06 04 55.3	+0.9
IVAS				eSn	Sb	06 05 23.7	+0.1
KZN	Kozani	2.11	125	P	Pn	06 04 55.5	+1.0
KPRO	Kipourio	2.11	137	P	Pn	06 04 55.2	+0.7
BARS	Barje	2.15	52	i Pn	Pn	06 04 56.4	+1.3
BARS	Barje	2.15	52	ePn	Pn	06 04 56.2	+1.2
BARS				eSn	Sn	06 05 21.9	+0.3
GRG	Griva	2.26	104	P	Pn	06 04 57.5	+1.0
GRG	Griva	2.26	104	i Pn	Pn	06 04 57.5	+1.0
GOCS	Kraljevo Serbi	2.27	26	ePn	Pn	06 04 58.1	+1.3
GOCS				eSn	Sn	06 05 25.9	+1.2
MATE	Matera	2.29	248	⇓P	Pn	06 04 56.6	-0.2
VAY	Valandovo	2.32	94	i Pn	Pn	06 04 58.3	+1.0
VAY				i Sn	Sn	06 05 27.5	+1.9
VAY				eLg	Lg	06 05 28.2	
	comp=E,322nm,0.5s						
VAY				eLg	Lg	06 05 31.6	
	comp=N,232nm,0.5s						
PRMD	Pramanda	2.34	148	P	Pn	06 04 58.5	+0.8
BBLS	Lazi&#263i	2.34	358	ePn	Pn	06 04 59.3	+1.6
BOSS	Bosilegrad	2.42	65	ePn	Pn	06 04 59.8	+1.0
BOSS				eSn	Sn	06 05 28.1	-0.2
GRUS	Gruza	2.52	20	ePn	Pn	06 05 01.4	+1.2
TETR	Tetrakomo, Epi	2.57	148	P	Pn	06 05 02.1	+1.3
KNT	Kendrikon	2.58	97	P	Pn	06 05 01.8	+0.9
KNT	Kendrikon	2.58	97	i Pn	Pn	06 05 01.9	+0.9
BOVS	Bovan	2.66	37	⇓P	Pn	06 05 03.8	+1.8
BOVS	Bovan	2.66	37	ePn	Pn	06 05 03.5	+1.5
BOVS				eSn	Sn	06 05 33.5	-0.7
LIT	Litokhoron	2.68	121	P	Pn	06 05 02.6	+0.4
LIT	Litokhoron	2.68	121		Pn	06 05 02.7	+0.4
LIT	Litokhoron	2.68	121	P	Pn	06 05 02.7	+0.4
TRAN	Tran	2.68	60	P	Pn	06 05 02.7	+0.3
KKB	Krupnik	2.73	82	P	Pn	06 05 03.7	+0.6
KKB	Krupnik	2.73	82	P	Pn	06 05 04.1	+1.0
KKB	Krupnik	2.73	82	i Pn	Pn	06 05 04.3	+1.2
THL	Klokotos Trika	2.74	135	P	Pn	06 05 03.5	+0.3
THE	Thessaloniki	2.77	108	P	Pn	06 05 03.7	+0.2
TRUS	Trudelj	2.78	14	ePn	Pn	06 05 04.7	+1.1
ACER	Acerenza	2.79	256		Pn	06 05 04.4	+0.6
SGRT	San Giovanni R	2.83	276		Pn	06 05 03.0	-1.4
TSLK	Tsoukalades, L	2.84	161	P	Pn	06 05 04.2	-0.3
HORT	Hortiatis	2.88	108	P	Pn	06 05 05.2	+0.2
LKD2	Lefkada island	2.88	162	P	Pn	06 05 04.5	-0.5
ZAPS	Zavoj	2.90	52	ePn	Pn	06 05 07.1	+1.7
ZAPS				eSn	Sn	06 05 38.1	-2.1
NYDR	Nydri-Lefkada	2.96	162	P	Pn	06 05 05.7	-0.4
DRAG	Dragano-Lefkad	2.96	163	P	Pn	06 05 05.4	-0.7
VTS	Vitosha	2.99	67	P	Pn	06 05 07.2	+0.6
VTS	Vitosha	2.99	67	P	Pn	06 05 07.9	+1.3
VTS				S	Sn	06 05 42.9	+0.5
SVIS	Svilajnac	3.01	24	ePn	Pn	06 05 10.1	+3.2
TEKS	Tekeris	3.02	0	ePn	Pn	06 05 07.7	+0.7
EVGI	Lefkada island	3.04	163	P	Pn	06 05 06.7	-0.5
ZAGS	Zajecar	3.04	40	ePn	Pn	06 05 08.8	+1.5
ZAGS				eSn	Sn	06 05 42.6	-1.0
PLNA	Plana	3.08	71	P	Pn	06 05 09.7	+1.9
PLNA				S	Sn	06 05 46.6	+2.1
BLSH	Balsha	3.11	63	P	Pn	06 05 10.7	+2.5
SRS	Serrai	3.11	96	P	Pn	06 05 08.9	+0.8
SRS	Serrai	3.11	96	i Pn	Pn	06 05 09.0	+0.8
TIP	Timpagrande	3.15	223		Pn	06 05 08.1	-0.6
BORS2	Bor- Borsko je	3.16	35	ePn	Pn	06 05 08.9	0.0
BORS2				eSn	Sn	06 05 44.6	-1.9
FSK	Fiskardo	3.17	165	P	Pn	06 05 08.2	-0.8
MMB	Musomishta	3.19	88	P	Pn	06 05 10.5	+1.1
MMB	Musomishta	3.19	88	P	Pn	06 05 10.3	+1.0
MMB				S	Sn	06 05 47.3	+0.1
CUC	Castrocucco	3.19	243		Pn	06 05 09.8	+0.4
PLG	Polygyros	3.20	110	P	Pn	06 05 10.2	+0.7
MAKR	Makrakomi, Fth	3.22	140	P	Pn	06 05 10.2	+0.4
AVAS	Avala Beograd	3.25	13	ePn	Pn	06 05 10.6	+0.4
KUBS	Kucevo	3.29	28	ePn	Pn	06 05 10.5	-0.3
KUBS				eSn	Sn	06 05 47.1	-2.7
PVO	Paravola	3.30	151	P	Pn	06 05 11.8	+1.0
AGG	Agios Georgios	3.31	138	P	Pn	06 05 11.8	+0.8
DMLN	Damoulianata-K	3.35	168	P	Pn	06 05 10.3	-1.3
VLS	Valsamata	3.45	166	P	Pn	06 05 12.0	-0.9
ANX	Ano Chora	3.47	147	P	Pn	06 05 14.2	+0.9
OUR	Ouranopolis	3.60	108	P	Pn	06 05 15.4	+0.5
PGB	Panagyurishte	3.62	73	P	Pn	06 05 17.2	+2.0
VALD	Valchedram	3.62	52	P	Pn	06 05 17.0	+1.8
AXS	Araxos	3.63	156	P	Pn	06 05 15.3	0.0
MPEP	Malo Peshtene	3.63	58	P	Pn	06 05 17.5	+2.1
MDVR	Moldovita	3.63	26	⇑P	Pn	06 05 16.5	+1.1
FRGS	Fruska Gora	3.64	3	ePn	Pn	06 05 15.9	+0.4
BLY	Banja Luka	3.64	333	ePn	Pn	06 05 15.9	+0.4
BLY				eSn	Sn	06 06 00.2	+1.9
BLY	Banja Luka	3.64	333	⇓P	Pn	06 05 17.2	+1.7
SERG	Sergoula	3.68	147	P	Pn	06 05 17.2	+1.2
PUNG	Punghina	3.73	41	⇓P	Pn	06 05 18.1	+1.4
PAOL	Paolisi	3.75	264		Pn	06 05 18.0	+0.9
ORTH	Orthonies,Zaky	3.79	166	P	Pn	06 05 17.3	-0.2
KAVA	Kavala	3.81	96	P	Pn	06 05 18.6	+0.7
VRSS	Vrsac	3.83	20	ePn	Pn	06 05 18.7	+0.6
DJES	Djerdap	3.84	34	⇑P	Pn	06 05 20.1	+1.8
RZN	Rozhen	3.93	86	P	Pn	06 05 20.9	+1.2
RZN	Rozhen	3.93	86	P	Pn	06 05 21.2	+1.5
PLD	Plovdiv	3.97	79	P	Pn	06 05 21.4	+1.4
HERR	Herculane	3.97	31	⇓P	Pn	06 05 21.2	+1.2
KLV	Kalavryta, Ach	4.03	149	P	Pn	06 05 21.5	+0.5
SRE	Strehaia	4.14	40	⇓P	Pn	06 05 23.9	+1.4
SRE	Strehaia	4.14	40	P	Pn	06 05 23.8	+1.4
CEL	Celeste	4.28	222		Pn	06 05 23.4	-1.0
BZS	Buzias	4.37	20	⇑P	Pn	06 05 26.3	+0.8
BZS	Buzias	4.37	20	P	Pn	06 05 26.2	+0.8
KDZ	Kurdzhali	4.38	87	P	Pn	06 05 26.7	+1.0
GZR	Gura Zlata	4.54	31	⇑P	Pn	06 05 29.9	+1.9
GZR	Gura Zlata	4.54	31	P	Pn	06 05 29.8	+1.9
RDO	Rodhopi	4.56	93		Pn	06 05 28.9	+0.8
DIM	Dimitrovgrad	4.57	81	P	Pn	06 05 29.9	+1.6
AQU	L'Aquila	4.62	282	⇑iPn	Pn	06 05 29.2	+0.1
AQU				eSn	Sn	06 06 22.7	+0.1
SURR	Surduc	4.63	23	⇓P	Pn	06 05 29.8	+0.6
CAMP	Campotosto	4.65	285		Pn	06 05 30.3	+0.8
SMTH	Samothraki Isl	4.68	101	P	Pn	06 05 30.2	+0.4
MORH	Mrgy, Hungar	4.73	353	⇑iPn	Pn	06 05 30.8	+0.4
MORH				eSn	Sn	06 06 25.8	+0.7
MORH	Mrgy, Hungar	4.73	353	⇑P	Pn	06 05 31.0	+0.6
ITM	Ithomi	4.73	156	Pn	Pn	06 05 30.6	+0.1
GUMA	Gualdo di Mace	4.82	291		Pn	06 05 32.1	+0.3
DION	Dionisos Attik	4.85	134	P	Pn	06 05 32.9	+0.7
NRCA	Norcia	4.92	288		Pn	06 05 33.8	+0.6
ELND	Elena	4.94	71	⇓P	Pn	06 05 35.0	+1.7
SIRR	Siria	4.99	17	⇑P	Pn	06 05 34.8	+0.7
FDMO	Fiordimonte	4.99	290		Pn	06 05 34.3	+0.2
DEV	Deva	5.00	28	⇓P	Pn	06 05 36.7	+2.5
DEV	Deva	5.00	28	P	Pn	06 05 36.7	+2.5
HUMR	Humele	5.01	51	⇑P	Pn	06 05 36.6	+2.2
BOJS	Bojanci	5.03	324	i Pn	Pn	06 05 35.2	+0.6
BOJS				i Sn	Sn	06 06 32.5	-0.2
SZH	Strazhitsa	5.10	68	P	Pn	06 05 37.9	+2.4
CESX	Cesi	5.26	284		Pn	06 05 38.4	+0.6
BEHE	Becsehely	5.32	339		Pn	06 05 39.9	+1.3
BEHE	Becsehely	5.32	339	ePn	Pn	06 05 39.3	+0.8
BEHE				eSn	Sn	06 06 39.5	-0.2
JMB	Yambol	5.32	77	P	Pn	06 05 40.2	+1.6
ARR	Arges	5.36	42	⇑P	Pn	06 05 41.4	+2.3
TNR	Turnu Rosu	5.38	38	⇑P	Pn	06 05 42.0	+2.4
TNR	Turnu Rosu	5.38	38	P	Pn	06 05 41.9	+2.4
MURB	Monte Urbino	5.45	291		Pn	06 05 41.1	+0.7
MTUR	Matau	5.49	46	⇓P	Pn	06 05 43.2	+2.3
MTUR	Matau	5.49	46	P	Pn	06 05 43.2	+2.3
VOIR		5.62	44	⇓P	Pn	06 05 45.0	+2.3
VOIR		5.62	44	P	Pn	06 05 45.0	+2.3
VAE	Valguarnera	5.64	226	P	Pn	06 05 48.7	+5.7
	comp=N,8.9nm,0.9s,baz=244,slow=23,SNR=2.5						
VAE				S	Sn	06 06 54.4	+6.6
	comp=N,8.3nm,0.7s,baz=38,slow=22,SNR=1.4						
DRGR		5.75	23	⇓P	Pn	06 05 45.4	+0.9
DRGR		5.75	23	P	Pn	06 05 45.4	+0.9
MARR	Marisel-Cluj	5.77	26	⇓P	Pn	06 05 47.1	+2.3
BORR	Bors	5.80	16	⇓P	Pn	06 05 47.8	+2.7
RAFF	Raffo Rosso	5.86	224	Pn	Pn	06 05 44.0	-2.0
TRI	Trieste	5.90	317	Pn	Pn	06 05 46.0	-0.4
TRI	Trieste	5.90	317	P	Pn	06 05 46.1	-0.4
CJR	Cluj-Napoca	5.96	28	⇓P	Pn	06 05 49.2	+1.8
CJR	Cluj-Napoca	5.96	28	P	Pn	06 05 49.2	+1.8
SOKA	Soboth	6.07	330	i Pn	Pn	06 05 48.8	-0.1
	comp=N,1.5nm,0.2s,SNR=9.6						
OBKA	Obir	6.13	326	i Pn	Pn	06 05 49.8	+0.1
	comp=N,2.5nm,0.2s,SNR=9.6						
OBKA	Obir	6.13	326	ePn	Pn	06 05 51.2	+1.4
MLR	Muntele Rosu	6.13	48	P	Pn	06 05 53.4	+3.6
	comp=N,13nm,0.4s,baz=303,slow=3.8,SNR=30						
MLR				S	Sn	06 07 00.5	+0.5
	comp=N,24nm,0.6s,baz=140,slow=22,SNR=9.4						
MLR	Muntele Rosu	6.13	48		Pn	06 05 52.0	+2.2
MLR	Muntele Rosu	6.13	48	⇓P	Pn	06 05 52.8	+2.9
DOPR	Dopca	6.15	42	⇑P	Pn	06 05 52.5	+2.5
SABO	M.te Sabotino	6.17	318		Pn	06 05 50.0	-0.2
ARSA	Arzberg	6.39	335		Pn	06 05 53.9	+0.6
ARSA	Arzberg	6.39	335	ePn	Pn	06 05 53.7	+0.4
	comp=N,2.5nm,0.5s,SNR=6.5						
ARSA	Arzberg	6.39	335	ePn	Pn	06 05 53.8	+0.4
PSZ	Piszkesteto	6.40	2		Pn	06 05 53.6	+0.2
PSZ	Piszkesteto	6.40	2	⇑P	Pn	06 05 54.5	+1.1
PSZ	Piszkesteto	6.40	2	P	Pn	06 05 54.5	+1.1
OSSC	Osservatorio P	6.42	291		Pn	06 05 53.6	-0.1
APE	Apeiranthos	6.46	132	⇑eP	Pn	06 05 53.8	-0.4
COVR	Voineasa-Covas	6.50	46	⇑P	Pn	06 05 57.5	+2.7
CASP	Castiglione de	6.54	284	Pn	Pn	06 05 55.3	-0.1
RONA	Rosalia, Austr	6.58	341	ePn	Pn	06 05 56.0	+0.1
	comp=N,1.0nm,0.5s						
MYKA	Terra Mystica	6.62	322	i Pn	Pn	06 05 56.5	0.0
	comp=N,2.3nm,0.4s						
BALB	Balikesir	6.65	104		Pn	06 05 58.6	+1.7
PLOR	Plostina	6.75	48	⇓P	Pn	06 06 01.0	+2.8
PLOR	Plostina	6.75	48	P	Pn	06 06 00.9	+2.8
VRI	Vrincioaia	6.80	48	⇑P	Pn	06 06 01.9	+3.0
VRI	Vrincioaia	6.80	48	P	Pn	06 06 01.8	+3.0
STAL	STALIGIAL	6.81	316		Pn	06 05 58.6	-0.5
ZCCA	Zocca	6.86	297	Pn	Pn	06 05 59.4	-0.4
TEOL	Teolo	6.87	307		Pn	06 05 59.8	0.0
CONA	Conrad Observa	6.91	339	ePn	Pn	06 06 00.8	+0.4
	comp=N,1.8nm,0.6s						
ONER	Baraj Valea Uz	6.92	44	⇓P	Pn	06 06 03.5	+3.0
CIMO	Cimolais	6.99	316		Pn	06 06 00.5	-1.0
KECS	Kecovo	6.99	5	eP	Pn	06 06 03.6	+2.1
KECS				e		06 07 19.5	
KECS	Kecovo	6.99	5	ePN	Pn	06 06 03.6	+2.1
KECS				eSN	Sn	06 07 19.5	-1.3
MODS	Modra-Piesok	7.03	348	eP	Pn	06 06 05.2	+3.2
MODS				e		06 07 19.3	
MODS	Modra-Piesok	7.03	348	ePN	Pn	06 06 05.2	+3.2
MODS				eSN	Sn	06 07 19.2	-2.5
KBA	Koelnbreinsper	7.09	324	ePn	Pn	06 06 02.5	-0.6
	comp=N,2.2nm,0.3s,SNR=7.3						
KBA	Koelnbreinsper	7.09	324	ePn	Pn	06 06 03.3	+0.3
TIRR	Tirgusor	7.16	63	Pn	Pn	06 06 03.8	0.0
TIRR	Tirgusor	7.16	63	P	Pn	06 06 03.8	0.0
ABTA	Abfaltersbach	7.24	318	i Pn	Pn	06 06 04.7	-0.4
	comp=N,1.9nm,0.3s,SNR=4.8						
CTI	Castel Tesino	7.26	311		Pn	06 06 05.1	-0.2
CTI	Castel Tesino	7.26	311	P	Pn	06 06 05.1	-0.2
CFR	Carcaliu	7.27	57	⇓P	Pn	06 06 07.2	+1.8
CFR	Carcaliu	7.27	57	P	Pn	06 06 07.2	+1.8
BURAR	Bucovina Array	7.33	32	Pn	Pn	06 06 07.8	+1.6
BURAR	Bucovina Array	7.33	32	⇓P	Pn	06 06 08.5	+2.2
BURAR	Bucovina Array	7.33	32	P	Pn	06 06 08.4	+2.2
MOA	Molln	7.34	331	ePn	Pn	06 06 06.5	+0.2
	comp=N,3.5nm,0.6s,SNR=7.2						
MOA	Molln	7.34	331	ePn	Pn	06 06 08.3	+2.0
BUR08	Bucovina Ar. S	7.34	32		Pn	06 06 07.6	+1.1
JAVC	Velka Javorina	7.45	351	ePN	Pn	06 06 09.8	+2.0
JAVC				eSN	Sn	06 07 34.9	+2.8
BIOA	Bad Ischl, Aus	7.45	328	ePn	Pn	06 06 07.9	+0.1
	comp=N,3.9nm,0.4s,SNR=7.2						
PRMA	PARMA	7.46	299	Pn	Pn	06 06 06.5	-1.4
IDI	Anoyia	7.53	144	P	Pn	06 06 06.1	-2.9
	comp=N,4.5nm,0.3s,baz=247,slow=4.4,SNR=12						
IDI				S	Sn	06 07 26.6	-7.6
	comp=N,7.9nm,0.3s,baz=144,slow=22,SNR=6.5						
IDI	Anoyia	7.53	144	Pn	Pn	06 06 07.2	-1.8
MANT	Manisa	7.58	111		Pn	06 06 10.9	+1.1
LANS	Liptovska Anna	7.62	360	eP	Pn	06 06 15.6	+5.4
LANS				e		06 07 38.6	
LANS	Liptovska Anna	7.62	360	ePN	Pn	06 06 15.6	+5.4
LANS				eSN	Sn	06 07 38.6	+2.1
LESA	Schwarzleotal	7.65	323	ePn	Pn	06 06 09.9	-0.7
	comp=N,2.6nm,0.4s,SNR=10						
SALO	Salr	7.69	305		Pn	06 06 10.6	-0.6

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TLCR                       7.71  59 ⇑P      Pn     06 06 13.7 +2.4
TLCR                       7.71  59  P      Pn     06 06 13.7 +2.4
RJOB  Jochberg             7.83 325 ePn     Pn     06 06 14.5 +1.3
MSSA  Maissana             7.84 294  Pn     Pn     06 06 12.9 -0.4
KRUC  Moravsky             7.85 345 ePN     Pn     06 06 14.3 +1.1
KRUC                                eSN     Sn     06 07 42.9 +1.0
MAUC  Maruska              7.93 352 ePN     Pn     06 06 15.9 +1.5
VSL   Villasalto           7.97 259  Pn     Pn     06 06 13.9 -1.1
STHS  Stebnicka Huta       7.99   8 eP      Pn     06 06 17.5 +2.4
STHS                                e              06 07 44.6
STHS  Stebnicka Huta       7.99   8 ePN     Pn     06 06 17.5 +2.4
STHS                                eSN     Sn     06 07 44.6 -0.7
WTTA  Wattenberg           8.04 318 i Pn    Pn     06 06 16.4 +0.4
      comp=N,3.0nm,0.3s,SNR=9.2
WTTA  Wattenberg           8.04 318 ePn     Pn     06 06 18.0 +2.0
WTTA                                eSn     Sn     06 07 47.8 +1.1
VRAC  Vranov               8.04 346  P      Pn     06 06 17.1 +1.2
      comp=N,0.9nm,0.3s,baz=188,slow=4.6,SNR=4.2
VRAC                                 S      Sn     06 07 44.3 -2.5
      comp=N,2.9nm,0.6s,baz=133,slow=16,SNR=1.6
VRAC                                 LR     LR     06 09 46.2
      comp=N,126nm,18.3s,baz=166,slow=41
WATA  Walderalm            8.11 318 ePn     Pn     06 06 16.9 -0.1
      comp=N,6.4nm,0.5s,SNR=12
CKRC  Cesky Krumlov        8.16 335 eP      Pn     06 06 18.6 +1.0
CKRC  Cesky Krumlov        8.16 335 ePN     Pn     06 06 18.6 +1.0
SQTA  Sankt Quirin         8.22 317 i Pn    Pn     06 06 18.8 +0.3
      comp=N,2.2nm,0.2s,SNR=7.8
FETA  Feichten             8.35 314 ePn     Pn     06 06 20.9 +0.6
      comp=N,1.0nm,0.4s
MOTA  Moosalm              8.36 317 ePn     Pn     06 06 20.1 -0.3
      comp=N,2.0nm,0.5s
MORC  Moravsky Berou       8.36 351  Pn     Pn     06 06 20.4  0.0
MORC  Moravsky Berou       8.36 351 ePN     Pn     06 06 21.8 +1.4
MORC                                eSN     Sn     06 07 56.2 +1.5
MORC  Moravsky Berou       8.36 351  P      Pn     06 06 20.4  0.0
GEC2  GERESS Array S       8.38 333         Pn     06 06 20.4 -0.2
GERES GERESS Array B       8.38 333  P      Pn     06 06 20.9 +0.2
      comp=N,1.4nm,0.6s,baz=156,slow=13,SNR=7.5
GERES                                S      Sn     06 07 49.8 -5.4
      comp=N,2.4nm,0.8s,baz=168,slow=20,SNR=1.6
GERES                                LR     LR     06 10 21.8
      comp=N,136nm,21.0s,baz=102,slow=44
PART  Garmisch-Parte       8.46 318 eSn     Sn     06 07 57.3 +0.3
KARP  Karpathos            8.46 132  Pn     Pn     06 06 21.4 -0.4
ZUGS  Zugspitze, Sch       8.47 317 ePn     Pn     06 06 23.9 +1.8
ZUGS                                eSn     Sn     06 07 58.7 +1.1
KHC   Kasperske Hory       8.67 333         Pn     06 06 24.5  0.0
KHC   Kasperske Hory       8.67 333⇑eP      Pn     06 06 25.7 +1.1
KHC   Kasperske Hory       8.67 333 ePN     Pn     06 06 24.6  0.0
KHC                                 eSN     Sn     06 08 02.2  0.0
DAVOX Davos/Dischmat       8.68 310  P      Pn     06 06 27.2 +2.3
      comp=N,2.1nm,0.3s,baz=119,slow=21,SNR=13
DAVOX                                S      Sn     06 07 59.7 -3.0
      comp=N,5.2nm,0.5s,baz=130,slow=9.8,SNR=3.5
DAVOX                                LR     LR     06 09 57.7
      comp=N,145nm,18.8s,baz=178,slow=39
TUE   Stuetta              8.83 307         Pn     06 06 26.9 -0.1
DAVA  Damuels              8.97 313 ePn     Pn     06 06 29.0 +0.1
      comp=N,2.2nm,0.4s
DAVA  Damuels              8.97 313 ePn     Pn     06 06 30.5 +1.7
DAVA                                eSn     Sn     06 08 10.1 +0.3
UBR   Ueberruh             9.09 316 ePn     Pn     06 06 31.6 +1.2
DPC   Dobruska-Polom       9.10 347 eP      Pn     06 06 31.5 +1.1
DPC   Dobruska-Polom       9.10 347 ePN     Pn     06 06 31.5 +1.1
PRU   Pruhonice            9.14 339 eP      Pn     06 06 32.6 +1.6
PRU   Pruhonice            9.14 339 ePN     Pn     06 06 32.6 +1.6
ISP   Isparta              9.27 110⇓eP      Pn     06 06 34.7 +1.9
SENIN Lac Senin/Sane      10.04 303         Pn     06 06 41.9 -1.6
BFO   Black Forest        10.43 314  Pn     Pn     06 06 46.6 -2.1
BFO   Black Forest        10.43 314 i P     Pn     06 06 49.9 +1.2
CLL   Collm               10.76 338 eP      Pn     06 07 06.0  +13
BR131 Keskin Array S      10.90  95⇓eP      Pn     06 06 55.8 +0.6
BRTR  Keskin Array B      10.90  95  P      Pn     06 06 58.8 +3.6
      comp=N,0.3nm,0.4s,baz=277,slow=12,SNR=4.1
AKASG Malin Array Be      11.38  33  P      Pn     06 07 01.4 -0.2
      comp=N,2.0nm,0.8s,baz=226,slow=13,SNR=7.5
AKASG Malin Array Be      11.38  33 i P     Pn     06 07 04.1 +2.5
AKASG                                pmax   pmax
      comp=Z,2.0nm,0.7s
AKBB  Malin Array Si      11.38  33⇓eP      Pn     06 07 04.7 +3.1
MNK   Minsk               14.13  20 i P     Pn     06 07 37.2 -1.9
      comp=E,15nm,1.0s
MNK                                 i P     Pn     06 07 37.2 -1.9
      comp=N,13nm,0.7s
MNK                                 i P     Pn     06 07 37.2 -1.9
      comp=Z,15nm,0.9s,baz=207
MNK                                 i PP    P      06 07 45.2 -1.6
MNK                                 i PPP   PPP    06 07 52.8
MNK                                 i S     Sn     06 10 15.6  0.0
MNK                                 i SS    SnSn   06 10 29.3 +1.3
MNK                                 i SSS   SSS    06 10 41.8
MNK                                 i LQ    LQ     06 11 46.7
MNK                                 i LR    LR     06 12 51.4
MNK                                 i LRM   MLR    06 13 34.7
      comp=N,218nm,17.4s
MNK                                 i LRM   MLR    06 13 36.6
      comp=Z,45nm,7.7s
MNK                                 i LRM   MLR    06 13 46.6
      comp=E,188nm,14.2s
MNK   Minsk               14.13  20 i P     Pn     06 07 37.2 -1.9
MNK                                 i S     Sn     06 10 15.6  0.0
MNK                                  pmax   pmax
      comp=E,15nm,1.0s
MNK                                  pmax   pmax
      comp=N,13nm,0.7s
MNK                                  pmax   pmax
      comp=Z,15nm,0.9s
MNK                                  MLR    MLR
      comp=N,218nm,17.0s
MNK                                  MLR    MLR
      comp=Z,45nm,8.0s
MNK                                  MLR    MLR
      comp=E,188nm,14.0s
NACGM Naroch              14.23  17 eP      Pn     06 07 40.8 +0.4
      comp=Z,16nm,0.9s,baz=203
MMAI  Mount Meron Ar      15.23 119  P      Pn     06 07 57.4 +3.2
      comp=Z,2.6nm,0.4s,baz=321,slow=11,SNR=6.2
SHA1  Shidzhatmaz         17.17  75deP      Pn     06 08 18.3 -1.0
KIV   Kislovodsk          17.19  74         P      06 08 27.0 +6.1
KIV   Kislovodsk          17.19  74 eP      P      06 08 32.0  +11
KIV                                  pmax   pmax
      comp=Z,265nm,1.1s
KBZ   Khabaz              17.35  75⇑eP      Pn     06 08 21.6 +0.4
VSU   Vasula              17.56  13⇓eP      P      06 08 25.2 +0.5
VSU                                  pmax   pmax
      comp=Z,92nm,2.8s
OBN   Obninsk             17.64  34⇓eP      P      06 08 26.7 +1.1
OBN                                  pmax   pmax
      comp=Z,11nm,0.9s
OBN                                  MLR    MLR
      comp=Z,107nm,16.0s
NCK   Nalchik             17.86  76⇓eP      Pn     06 08 25.7 -1.9
NCK                                  pmax   pmax
      comp=Z,184nm,1.0s
HFS   Hagfors             18.97 351  P      P      06 08 39.7 -0.6
      comp=Z,3.3nm,0.6s,baz=179,slow=13,SNR=11
GNI   Garni               19.13  86⇑eP      P      06 08 43.1 +0.7
NC405 NORSAR Array S      20.18 349  P      P      06 08 53.0 -0.5
NC405                                IAmb   IAmb   06 09 18.8
      comp=Z,5.6nm,0.8s
NB201 NORSAR Array S      20.18 348  P      P      06 08 53.2 -0.3
NB2   NORSAR Subarra      20.18 348  P      P      06 08 53.6  0.0
      comp=Z,2.8nm,0.9s,baz=153,slow=10
NOA   NORSAR Array B      20.18 348  P      P      06 08 51.7 -1.9
      comp=Z,1.3nm,0.8s,baz=154,slow=9.8,SNR=3.1
EKA   Eskdalemuir Ar      20.29 321  P      P      06 08 54.0 -0.7
      comp=Z,0.4nm,0.4s,baz=115,slow=8.9,SNR=11
      comp=Z,0.4nm,0.4s
NC303 NORSAR Array S      20.34 349  P      P      06 08 54.9 -0.3
FINES FINESS Array B      20.34   9  P      P      06 08 53.6 -1.6
      comp=Z,3.4nm,0.4s,baz=184,slow=10.0,SNR=25
      comp=Z,3.4nm,0.4s
FINES FINESS Array B      20.34   9  P      P      06 08 54.2 -1.0
FINES FINESS Array B      20.34   9  P      P      06 08 54.2 -1.0
FIA1  FINESS Array S      20.34   9  P      P      06 08 54.0 -1.1
NC204 NORSAR Array S      20.48 348  P      P      06 08 56.5 -0.2
NC204                                IAmb   IAmb   06 09 13.2
      comp=Z,16nm,1.1s
BELG  Belogornoye         21.92  51  P      P      06 09 12.3 +0.1
      comp=Z,15nm,1.0s,baz=233,slow=5.1,SNR=4.0
      comp=Z,15nm,1.0s
BELG  Belogornoye         21.92  51⇓eP      P      06 09 12.5 +0.3
BELG                                 pmax   pmax
      comp=Z,4.0nm,1.2s
KLMR  Klimovskoe          22.89  26 eP      P      06 09 20.3 -2.2
KLMR                                 pmax   pmax
      comp=Z,37nm,1.7s
ARCES ARCESS Array B      28.25   4  P      P      06 10 10.7 -1.1
      comp=Z,3.0nm,0.9s,baz=195,slow=9.3,SNR=1.6
      comp=Z,3.0nm,0.9s
ARTI  Arti                29.08  46c iP     P      06 10 18.7 -0.7
ARTI                                 S      S      06 15 12.6 +2.1
ARTI                                 pmax   pmax
      comp=Z,39nm,4.7s
AB31  Akbulak array       29.15  61  P      P      06 10 20.2 +0.2
AB31                                 IAmb   IAmb   06 10 20.4
      comp=Z,1.0nm,0.6s
ABKAR Akbulak array       29.15  61  P      P      06 10 20.2 +0.2
TORD  Torodi Ar. Bea      32.26 214  P      P      06 10 47.5 -0.3
      comp=Z,4.0nm,0.5s,baz=22,slow=12,SNR=1.5
      comp=Z,4.0nm,0.5s
UOSS  Minazif             34.56 107  P      P      06 11 06.4 -1.5
UOSS                                 IAmb   IAmb   06 11 13.4
      comp=Z,4.7nm,1.1s
BORK  Borovoye            35.62  53  P      P      06 11 17.0 +0.4
BORK                                 IAmb   IAmb   06 11 17.2
      comp=Z,2.4nm,0.6s
BORK  Borovoye            35.62  53⇓eP      P      06 11 17.3 +0.7
BORK                                 pmax   pmax
      comp=Z,7.0nm,2.0s
BVAR  Borovoye Array      35.66  54  P      P      06 11 15.2 -1.9
      comp=Z,1.2nm,0.7s,baz=267,slow=5.9,SNR=5.9
      comp=Z,1.2nm,0.7s
KURBB Kurchatov Arra      40.95  56  P      P      06 12 01.4 -0.1
      comp=Z,0.8nm,0.8s,baz=282,slow=9.1,SNR=4.5
      comp=Z,0.8nm,0.8s
KURK  Kurchatov           40.99  56  P      P      06 12 01.4 -0.5
KURK  Kurchatov           40.99  56  P      P      06 12 01.4 -0.5
ZAA0  Zalesovo Array      44.10  51  P      P      06 12 26.2 -0.9
ZAA0                                 IAmb   IAmb   06 12 28.8
      comp=Z,4.8nm,1.1s
ZALV  Zalesovo Beam       44.10  51  P      P      06 12 25.6 -1.6
      comp=Z,2.0nm,0.4s,baz=277,slow=7.9,SNR=11
      comp=Z,2.0nm,0.4s
ZALV  Zalesovo Beam       44.10  51  P      P      06 12 25.8 -1.3
ZALV  Zalesovo Beam       44.10  51 i P     P      06 12 26.0 -1.1
ZALV                                 pmax   pmax
      comp=Z,2.0nm,0.4s
MK31  Makanchi Array      44.29  61⇓iP      P      06 12 27.7 -1.1
MKAR  Makanchi Array      44.29  61  P      P      06 12 27.9 -0.8
      comp=Z,1.9nm,0.5s,baz=280,slow=7.7,SNR=17
      comp=Z,1.9nm,0.5s
MKAR  Makanchi Array      44.29  61  P      P      06 12 28.1 -0.7
MKAR  Makanchi Array      44.29  61 i P     P      06 12 28.0 -0.8
MKAR                                 pmax   pmax
      comp=Z,2.0nm,0.5s
DGZ   Jazzator, Alta      46.73  56⇓eP      P      06 12 47.3 -0.9
DGZ                                  pmax   pmax
      comp=Z,13nm,3.3s
WMQ   Urumqi              48.88  63 eP      P      06 13 04.9  0.0
WMQ                                  sP     sP     06 13 14.1 +3.6
WMQ                                  pmax   pmax
      comp=Z,24nm,0.7s
WMQ                                  pmax   pmax
      comp=Z,260nm,5.7s
SONM  Songino Array       58.97  52  P      P      06 14 18.2 -0.4
      comp=Z,0.8nm,0.8s,baz=301,slow=6.8,SNR=3.9
      comp=Z,0.8nm,0.8s
SONM  Songino Array       58.97  52  IAmb   IAmb   06 14 23.7
      comp=Z,3.7nm,0.9s
ULN   Ulaanbaatar         59.34  51⇑eP      P      06 14 21.4 +0.2
ULN                                  pmax   pmax
      comp=Z,10.0nm,3.0s
HHC   Hu-ho-hao-te        65.81  56 eP      P      06 15 03.9 -0.5
HHC                                  pmax   pmax
      comp=Z,9.0nm,0.5s
HHC                                  pmax   pmax
      comp=Z,160nm,4.5s
PZH   PanZhiHua           67.42  74  P      P      06 15 16.4 +1.4
ILAR  Eielson Array       73.50 354  P      P      06 15 51.2 -0.1
      comp=Z,0.3nm,1.0s,baz=4.2,slow=6.7,SNR=2.4
      comp=Z,0.3nm,1.0s
MJAR  Matsushiro Arr      84.20  45  P      P      06 16 50.7 +0.1
      comp=Z,0.3nm,0.2s,baz=334,slow=3.6,SNR=2.1
      comp=Z,0.3nm,0.2s
MJAR  Matsushiro Arr      84.20  45  IAmb   IAmb   06 16 51.7
      comp=Z,2.1nm,1.1s
PDAR  Pinedale Array      84.35 325  P      P      06 16 50.8 -0.7
      comp=Z,0.2nm,0.6s,baz=24,slow=8.2,SNR=2.5
      comp=Z,0.2nm,0.6s
```

IDC 01 06:05:31.4±10.0**,6°.77S**×**66°.66E,h0^{km},mb4.0**/4**,**
mbtmp4.0/4**,MS3.8**/2**,Error ellipse: s-maj=319.9km**
s-min=33.7km az=66.0,South Indian Ocean

```
Code  Station Name         Δ°   AZ°   Phase ID          Time       Res
                                     Op     ISC       h  m  s     ISC
PSI   Prapat              33.58  75  LR     LR     06 22 42.1
      comp=Z,158nm,20.0s,baz=326,slow=31
BOSA  Boshof              44.70 236  LR     LR     06 30 56.6
      comp=Z,124nm,18.9s,baz=26,slow=34
H01W3 Cape Leeuwin H      51.79 130  T      T      07 09 60.0
      baz=292
H01W2 Cape Leeuwin H      51.80 130  T      T      07 09 54.9
      baz=292
H01W1 Cape Leeuwin H      51.81 130  T      T      07 09 57.0
      baz=292
KURBB Kurchatov Arra      58.08   9  P      P      06 15 26.4  0.0
      3.1nm,1.3s,baz=201,slow=7.5,SNR=4.1
      3.1nm,1.3s
SONM  Songino Array       64.66  28  P      P      06 16 11.1 -0.1
      2.9nm,1.1s,baz=217,slow=7.0,SNR=8.7
      2.9nm,1.1s
ASAR  Alice Springs       66.49 113  P      P      06 16 22.9 -0.5
      0.6nm,0.8s,baz=275,slow=6.6,SNR=5.1
      0.6nm,0.8s
WRA   Warramunga Arr      66.76 109  P      P      06 16 25.7 +0.5
      1.3nm,0.8s,baz=276,slow=6.4,SNR=7.0
      1.3nm,0.8s
```

ISK ***01*** *06:07:20.8,40°.33N×42°.17E,h5^{km},ML4.0/15*
NSSP ***01*** *06:07:20.9,40°.27N×42°.30E,h10^{km},Ms3.8*
TIF ***01*** *06:07:20.4,40°.33N×42°.19E,h2^{km}±1^{km}*
AFAD ***01*** *06:07:21.5,40°.31N×42°.19E,h7^{km}±2^{km},MW4.0*
IDC ***01*** *06:07:24.4±1.1,40°.60N×42°.53E,h0^{km},mb3.5/5,*
mbtmp3.4/10,ML2.7/4,MS3.6/2,Error ellipse:
s-maj=16.4km s-min=14.1km az=132.0
ISC 01 06:07:21.7±1.1**,40°.31N**±0°.02×**42°.19E**±0°.02**,h0^{km}**±9^{km}**,**
n87,σ**1^{s}.37**/113**,mb4.0**/13**,Turkey**

```
Code  Station Name         Δ°   AZ°   Phase ID          Time       Res
                                     Op     ISC       h  m  s     ISC
SENK  Senkaya-Erzuru       0.28  26  Pg     Pg     06 07 27.1  0.0
SENK                                 Sg     Sg     06 07 32.3 +1.6
HOMI  Horasan              0.34 220  P      Pg     06 07 28.4 +0.2
HOMI                                 S      Sg     06 07 33.3 +0.6
KOPR  Koprukoy-ERZUR       0.41 219  Pg     Pg     06 07 29.9 +0.4
KOPR                                 Sg     Sb     06 07 37.1 -1.6
EATA  Eleskirt             0.50 152  P      Pb     06 07 32.2 -1.4
EATA                                 S      Sb     06 07 39.3 -2.2
GOLE  Ardahan-G¶lle        0.61  30  P      Pg     06 07 33.5 +0.1
GOLE                                 S      Sg     06 07 42.3 +0.9
BOZK  Kars-Merkez-Bo       0.66  65  P      Pg     06 07 34.3 -0.1
BOZK                                 S      Sg     06 07 44.0 +1.0
DDEM  Demirkent            0.67 330  P      Pg     06 07 34.5 -0.1
DDEM                                 S      Sg     06 07 44.1 +0.8
ERZM  Erzurum              0.75 238  P      Pb     06 07 36.7 -1.1
ERZM                                 S      Sb     06 07 47.6 -1.0
KARS  Kars                 0.75  65  Pg     Pb     06 07 36.8 -0.9
DBAD  Bademkaya            0.80 332  P      Pg     06 07 36.9 -0.1
DBAD                                 S      Sg     06 07 47.4 -0.1
DIGO  Kars                 0.91  83  P      Pg     06 07 38.6 -0.6
AHAN  Ardahan-Merkez       0.92  21  P      Pb     06 07 39.6 -1.0
AHAN                                 S      Sg     06 07 51.3 +0.2
KOTA  Agri, Merkez-K       0.93 123  P      Pb     06 07 40.1 -0.7
AGRB  Hanur-Agry           0.96 140  Pg     Pb     06 07 40.9 -0.3
AGRB                                 Sg     Sn     06 07 55.2 -1.7
KRIK  Erzurum-spir         0.96 272  P      Pb     06 07 40.5 -0.9
KRIK                                 S      Sg     06 07 52.2 -0.5
DORK  Agr/Tutak/Do         1.03 154  P      Pg     06 07 41.5 +0.1
DORK                                 S      Sb     06 07 56.1 -0.3
DBOC  Borcka               1.11 339  P      Pg     06 07 41.9 -1.0
DBOC                                 S      Sg     06 07 54.1 -3.2
EAK   Akyaka               1.15  70  P      Pg     06 07 43.1 -0.5
ECAT  Cat-ERZURUM          1.17 233  P      Pg     06 07 43.5 -0.6
MLAZ  Malazgirt-MUS        1.20 166  Pn     Pn     06 07 44.8 -1.0
MLAZ                                 Sn     Sn     06 08 03.1 +0.3
EPOS  Posof                1.26  19  P      Pg     06 07 45.4 -0.5
VNNZ  Vanand               1.27  99 eP      Pn     06 07 45.6 -1.1
VNNZ                                eS      Sn     06 08 04.3 -0.2
VRTB  Varto-Mus            1.28 206  P      Pn     06 07 45.7 -1.2
VRTB  Varto-Mus            1.28 206  Pn     Pg     06 07 46.5 +0.3
IZDR  Rize                 1.33 292  P      Pn     06 07 46.0 -1.5
KOPT  Kop Dagi             1.33 258  P      Pg     06 07 47.7 +0.6
KARO  Karliova-Bingo       1.33 222  Pn     Pg     06 07 47.6 +0.4
CHOM  Cayeli-Rize          1.34 306  Pn     Pb     06 07 46.9 -0.8
BATM  Batumi               1.35 344  Pn     Pb     06 07 47.0 -0.8
DYDN  Diyadin              1.38 123  P      Pg     06 07 48.4 +0.2
BGD   Bogdanovka           1.43  48  P      Pg     06 07 48.9 -0.3
BGD                                  S      Sg     06 08 09.5 +1.7
ARUZ  Aruch                1.46  90 eP      Pn     06 07 48.4 -0.9
ARUZ                                eS      Sg     06 08 08.4  0.0
AKH   Akhalkalaki          1.48  42  P      Pg     06 07 50.0 -0.1
AKH                                  S      Sg     06 08 11.3 +2.1
BAYB  BAYBURT              1.48 269  P      Pb     06 07 49.5 -0.7
IGDI  IGDIR                1.51 106  P      Pg     06 07 50.8 +0.1
YEDI  Yedisu-Bingol        1.54 236  Pn     Pb     06 07 50.3 -0.8
ADCV  BITLIS_Adilcev       1.56 164  P      Pb     06 07 50.6 -0.8
ERCV  ERCIS-VAN            1.56 145  Pn     Pg     06 07 51.3 -0.3
BAYT  Aydıntepe-Bayb       1.57 274  Pn     Pb     06 07 50.7 -0.9
AMBZ  Amberd               1.58  86 eP      Pn     06 07 50.5 -0.7
AMBZ                                eS      Sb     06 08 11.8 -0.8
TASB  TASBURUN-IGDIR       1.60 101  Pn     Pg     06 07 51.9 -0.5
SLHN  Bingol, Solhan       1.62 214  P      Pb     06 07 51.8 -0.7
MUSM  Mu-Merkez            1.67 199  P      Pb     06 07 52.6 -0.6
VMUR  Van-Muradiye         1.69 141  P      Pg     06 07 54.5 +0.4
BNGB  Bingl                1.76 222  Pn     Pb     06 07 53.8 -1.0
GURO  Guroymak-BITLI       1.76 184  Pn     Pb     06 07 54.1 -0.8
SRTK  Saratovka            1.79  64 eP      Pb     06 07 54.3 -1.1
SRTK                                eS      Sg     06 08 19.2  0.0
BLIS  Bitlis-Merkez        1.89 182  P      Pb     06 07 56.3 -0.9
TRLG  Trialeti             1.90  49  P      Pb     06 07 56.2 -1.1
KAPZ  Kaputan              1.92  89 eP      Pb     06 07 56.3 -1.3
KAPZ                                eS      Sb     06 08 21.8 -0.3
GNI   Garni                1.96  94  Pn     Pb     06 07 56.8 -1.5
GNI   Garni                1.96  94 eP      Pb     06 07 57.1 -1.2
GNI                                 eS      Sg     06 08 25.0 +0.4
KZR   Kazreti              2.00  57  P      Pn     06 07 55.9 -0.8
KZR                                  S      Sb     06 08 24.1 -0.3
TVAN  Van                  2.01 152  P      Pg     06 07 59.6 -0.6
ERZN  Erzincan             2.03 250  Pn     Pn     06 07 57.2  0.0
AKDM  Akdamar-Van          2.07 163  Pn     Pb     06 07 58.5 -1.7
GUMT  Gumushane            2.08 275  Pn     Pn     06 07 57.6 -0.2
TKB   Tkibuli              2.13  16  P      Pb     06 07 59.5 -1.6
TKB                                  S      Sg     06 08 30.6 +0.5
LSVT  Lusahovit            2.36  74 eP      Pn     06 08 02.4 +0.6
LSVT                                eS      Sb     06 08 32.9 -2.0
TBLG  Delisi               2.40  53  P      Pb     06 08 03.2 -2.5
TBLG                                 S      Sg     06 08 40.1 +1.5
TBLG  Delisi               2.40  53  Pn     Pn     06 08 03.0 +0.8
GARIG Gari                 2.49  22  P      Pn     06 08 04.4 +0.9
GARIG                                S      Sg     06 08 41.0 -0.6
DGRG  David-gareji         2.67  64  P      Pb     06 08 07.6 -2.7
AYRK  Ayrk                 2.76  93 eP      Pn     06 08 08.7 +1.3
AYRK                                eS      Sb     06 08 44.3 -2.2
CHRG  Chargali             2.88  45  P      Pn     06 08 10.3 +1.3
VSHL  Vashlovani           3.33  73  P      Pb     06 08 22.0 +0.4
LGD   Lagodekhi            3.42  62  P      Pn     06 08 17.9 +1.7
KBZ   Khabaz               3.46   9  Pn     Pn     06 08 17.7 +1.0
      0.7nm,0.3s,baz=192,slow=14,SNR=14
KBZ                                  Sn     Sn     06 08 54.0 -4.3
      2.7nm,0.3s,baz=165,slow=4.9,SNR=4.7
KBZ                                  LR     LR     06 09 39.9
      comp=Z,177nm,21.4s,baz=224,slow=43
      1.8nm,0.6s
KVAR  Kislovodsk Arr       3.66   6  Pn     Pn     06 08 20.6 +1.0
      baz=123,slow=17
      1.9nm,0.4s
BRTR  Keskin Array B       6.59 268  Pn     Pb     06 09 08.8 -8.5
      0.1nm,0.3s,baz=64,slow=16,SNR=2.7
      0.9nm,0.7s
ASF   Jabal al Asfar       9.17 209  Pn     Pn     06 09 45.0  +10
      0.2nm,0.3s,baz=12,slow=14,SNR=1.7
      1.3nm,0.6s
AKASG Malin Array Be      13.79 323  Pn     Pn     06 10 38.5 +0.3
      0.4nm,0.3s,baz=138,slow=14,SNR=5.7
CONA  Conrad Observa      20.31 301 eP      Pn     06 12 04.5 +3.4
      comp=Z,2.2nm,0.7s
KBA   Koelnbreinsper      21.85 298 eP      P      06 12 21.4 +5.6
      comp=Z,2.9nm,0.8s
GERES GERESS Array B      21.91 302  P      P      06 12 18.8 +2.3
      1.1nm,0.7s,baz=94,slow=10.0,SNR=5.1
      1.1nm,0.7s
LESA  Schwarzleotal       22.34 298 eP      P      06 12 23.6 +2.6
      comp=Z,3.8nm,0.8s
BVAR  Borovoye Array      22.98  47  P      P      06 12 27.3 -0.4
      0.3nm,0.5s,baz=243,slow=9.5,SNR=4.4
      0.3nm,0.5s
WTTA  Wattenberg          23.02 298 eP      P      06 12 32.0 +3.7
      comp=Z,9.5nm,1.3s
WATA  Walderalm           23.07 298 eP      P      06 12 32.2 +3.4
      comp=Z,7.6nm,1.1s
SQTA  Sankt Quirin        23.31 298 eP      P      06 12 31.9 +0.7
      comp=Z,3.7nm,0.8s
MOTA  Moosalm             23.39 298 eP      P      06 12 32.5 +0.4
      comp=Z,16nm,1.0s
FETA  Feichten            23.62 297 eP      P      06 12 33.7 -0.7
      comp=Z,4.2nm,0.9s
KURBB Kurchatov Arra      27.24  56  P      P      06 13 07.2  0.0
      1.5nm,0.9s,baz=266,slow=9.3,SNR=6.1
      1.5nm,0.9s
EKA   Eskdalemuir Ar      33.29 312  P      P      06 14 02.7 +2.1
      1.5nm,0.8s,baz=99,slow=12,SNR=4.9
      1.5nm,0.8s
SONM  Songino Array       45.54  58  P      P      06 15 43.1  0.0
      0.2nm,0.3s,baz=294,slow=7.1,SNR=4.3
      0.2nm,0.3s
CMAR  Chiang Mai Arr      53.08  97  P      P      06 16 40.1 -0.8
      1.8nm,0.3s,baz=308,slow=6.5,SNR=5.5
SJG   San Juan            91.70 295  LR     LR     07 01 23.5
      comp=Z,162nm,19.5s,baz=88,slow=35
```

ISK ***01*** *06:07:47.9,40°.33N×42°.21E,h10^{km},ML3.5/4*
AFAD ***01*** *06:07:47.9,40°.33N×42°.20E,h7^{km}±3^{km},MW4.0*
ISC 01 06:07:48.1±1.0**,40°.34N**±0°.02×**42°.17E**±0°.02**,h12^{km}**±9^{km}**,**
n28,σ**0^{s}.77**/43**,Turkey**

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Code  Station Name         Δ°   AZ°   Phase ID          Time       Res
                                     Op     ISC       h  m  s     ISC
SENK  Senkaya-Erzuru       0.26  31  Pg     Pg     06 07 53.5 -0.1
SENK                                 Sg     Sg     06 07 57.9 +0.5
HOMI  Horasan              0.36 215  P      Pb     06 07 56.2 -0.3
HOMI                                 S      Sb     06 08 01.5 -0.7
KOPR  Koprukoy-ERZUR       0.42 215  Pg     Pg     06 07 56.5  0.0
KOPR                                 Sg     Sb     06 08 03.5 -0.6
EATA  Eleskirt             0.53 153  P      Pb     06 07 58.6 -1.0
EATA                                 S      Sg     06 08 05.6 -0.2
GOLE  Ardahan-G¶lle        0.59  33  P      Pb     06 08 00.0 -0.6
GOLE                                 S      Sb     06 08 08.3 -0.7
DDEM  Demirkent            0.64 330  P      Pg     06 08 00.5 -0.1
DDEM                                 S      Sg     06 08 09.9 +0.9
BOZK  Kars-Merkez-Bo       0.66  67  P      Pg     06 08 00.9 -0.1
BOZK                                 S      Sb     06 08 09.9 -1.1
KARS  Kars                 0.75  67  Pg     Pb     06 08 02.6 -0.6
KARS                                 Sg     Sb     06 08 13.2 -0.2
ERZM  Erzurum              0.76 235  P      Pg     06 08 02.3 -0.5
DBAD  Bademkaya            0.77 332  P      Pg     06 08 02.9 -0.2
DBAD                                 S      Sg     06 08 12.9 -0.2
AHAN  Ardahan-Merkez       0.89  22  P      Pn     06 08 06.6 -0.1
AHAN                                 S      Sn     06 08 19.3 -0.4
DIGO  Kars                 0.92  85  P      Pg     06 08 04.8 -1.1
DIGO                                 S      Sg     06 08 17.3 -0.6
KRIK  Erzurum-spir         0.95 270  P      Pb     06 08 07.2 +0.5
KOTA  Agri, Merkez-K       0.96 124  P      Pn     06 08 09.8 +2.3
AGRB  Hanur-Agry           0.99 140  Pg     Pb     06 08 06.9 -0.4
AGRB                                 Sg     Sb     06 08 20.7 +0.4
DBOC  Borcka               1.08 339  P      Pb     06 08 09.3 +0.6
DBOC                                 S      Sg     06 08 21.3 -1.6
MLAZ  Malazgirt-MUS        1.23 166  Pn     Pn     06 08 11.5 +0.2
EPOS  Posof                1.24  20  P      Pg     06 08 13.4 +1.5
IZDR  Rize                 1.31 291  P      Pn     06 08 12.8 +0.5
IZDR                                 S      Sb     06 08 28.3 -1.1
CHOM  Cayeli-Rize          1.31 306  Pn     Pb     06 08 13.2 +0.5
BATM  Batumi               1.32 344  Pn     Pg     06 08 13.4  0.0
KARO  Karliova-Bingo       1.34 220  Pn     Pb     06 08 13.4 +0.1
DYDN  Diyadin              1.41 124  P      Pg     06 08 15.9 +0.7
DYDN                                 S      Sg     06 08 34.8 +1.2
YEDI  Yedisu-Bingol        1.54 235  Pn     Pb     06 08 16.5 -0.2
BAYT  Aydıntepe-Bayb       1.55 273  Pn     Pn     06 08 16.5 +0.8
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Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TASB	**TASBURUN-IGDIR**	1.62	102	Pn	Pb	06 08 17.8	-0.2
BNGB	**Bingl**	1.77	221	Pn	Pb	06 08 20.1	-0.5
GURO	**Guroymak-BITLI**	1.79	184	Pn	Pn	06 08 19.5	+0.6

RSNC 01 06:18:05.1±0.0,7°N±1°×7°3W±°,h138km±1km,M2.8,mb3.6, mB4.8,ML2.5,Mw(mB)4.1,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	0.22	181	P	Pn	06 18 23.9	-0.4
BARC				S	Sn	06 18 37.7	-1.1
BRJC	**Barrancabermej**	0.58	286	P	Pn	06 18 25.6	+0.1
BRJC				S	Sn	06 18 41.3	+0.3
PAMC	**Pamplona, Colo**	0.71	42	P	Pn	06 18 26.8	-0.2
PAMC				S	Sn	06 18 43.5	0.0
RUSC	**La Rusia**	0.92	174	P	Pn	06 18 27.8	-0.8
RUSC				S	Sn	06 18 45.6	-0.8
PTBC	**PUERTO BERRIO,**	1.30	258	P	Pn	06 18 30.5	-1.1
PTBC				S	Sn	06 18 51.8	0.0
OCAC	**Ocana**	1.43	354	P	Pn	06 18 32.2	-1.0
OCAC				S	Sn	06 18 53.9	-0.7
SPBC	**San Pablo de B**	1.45	218	P	Pn	06 18 32.8	-0.6
SPBC				S	Sn	06 18 54.2	-0.7
CHIC	**Chingaza**	2.23	194	P	Pn	06 18 42.1	-0.7
CHIC				S	Sn	06 19 11.0	-0.7
ROSC	**El Rosal**	2.26	210	P	Pn	06 18 43.3	+0.2
ROSC				S	Sn	06 19 13.4	+1.2
UREC	**San Jos de Ur**	2.51	292	P	Pn	06 18 44.9	-1.0
UREC				S	Sn	06 19 15.7	-1.5
GUY2C	**Guyana, Caldas**	2.68	234	P	Pn	06 18 48.5	+0.1
GUY2C				S	Sn	06 19 24.6	+2.8
VILC	**Villavicencio,**	2.73	191	P	Pn	06 18 47.3	-1.4
VILC				S	Sn	06 19 23.3	+1.0
RECRC	**Villamaria, Ca**	2.84	230	P	Pn	06 18 52.9	+2.4
RECRC				S	Sn	06 19 29.1	+3.8
NIZA	**Niza - Manizal**	2.87	233	P	Pn	06 18 51.3	+0.7
NIZA				S	Sn	06 19 27.7	+2.1
CBOC	**Ciudad Bolivar**	2.97	252	P	Pn	06 18 52.0	+0.2
CBOC				S	Sn	06 19 27.9	+0.1
DBBC	**Dabeiba**	3.02	274	P	Pn	06 18 51.9	-0.4
DBBC				S	Sn	06 19 27.9	-0.8
ANIL	**Santa Ana**	3.19	224	P	Pn	06 18 55.8	+1.0
ANIL				S	Sn	06 19 35.4	+2.2
ARGC	**Ariguani, Magd**	3.21	341	P	Pn	06 18 54.3	-0.4
ARGC				S	Sn	06 19 32.5	-0.6
PRAC	**Prado**	3.51	209	P	Pn	06 18 57.6	-1.2
PRAC				S	Sn	06 19 39.6	-0.7
ORTC	**Ortega, Tolima**	3.54	216	P	Pn	06 18 58.3	-0.8
ORTC				S	Sn	06 19 41.4	+0.5
PLMC	**San Jos del P**	3.62	239	P	Pn	06 18 59.9	-0.3
PLMC				S	Sn	06 19 42.5	-0.3
URMC	**La Uribe, Meta**	3.74	199	P	Pn	06 19 00.9	-0.8
URMC				S	Sn	06 19 45.8	+0.2
CRJC	**Cerrejon, Guaj**	4.19	4	P	Pn	06 19 04.6	-3.1
CRJC				S	Sn	06 19 51.2	-5.2
YOTC	**Yotoco, Valle**	4.22	228	P	Pn	06 19 06.5	-1.6
YOTC				S	Sn	06 19 55.9	-1.1
CAPC	**Capurgana**	4.51	294	P	Pn	06 19 12.9	+1.0
CAPC				S	Sn	06 19 59.1	-4.7
MACC	**Macarena, Meta**	4.68	188	P	Pn	06 19 11.2	-3.0
MACC				S	Sn	06 20 03.8	-4.1
URIC	**Uribia, Colomb**	5.00	13	P	Pn	06 19 14.5	-3.8
URIC				S	Sn	06 20 09.9	-5.5
FLOC	**Florencia**	5.75	206	P	Pn	06 19 26.9	-1.5

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*IDC **01** 06:48:43.1±0.8,13°.82N×120°.41E,h99km±9km,mb3.6/7, mbtmp3.9/7,Error ellipse: s-maj=27.7km s-min=12.8km az=74.0*

ISC 01 06:48:43.1±0.9,13°.8N±0°.1×120°.3E±0°.2,h100km,n8, σ0ˢ.95/12,mb4.0/7,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	0.67	63	P	Pn	06 49 00.3	0.0
	2μm,0.4s,baz=282,slow=2.0,SNR=22						
TGY				S	Sn	06 49 13.4	+0.2
	3μm,0.4s,baz=299,slow=22,SNR=30						
SONM	**Songino Array**	35.86	344	P	P	06 55 33.8	+0.3
	2.0nm,0.6s,baz=166,slow=9.7,SNR=15						
	2.0nm,0.6s						
WRA	**Warramunga Arr**	36.25	157	P	P	06 55 35.9	-1.0
	0.5nm,0.9s,baz=331,slow=10.0,SNR=6.9						
WRA				pP	pP	06 56 00.6	+1.0
	0.2nm,0.3s,baz=333,slow=9.8,SNR=3.2						
	0.5nm,0.9s						
ASAR	**Alice Springs**	39.53	160	P	P	06 56 04.2	-0.2
	0.4nm,0.3s,baz=335,slow=7.7,SNR=16						
ASAR				pP	pP	06 56 28.0	+0.6
	0.4nm,0.7s,baz=339,slow=6.8,SNR=2.8						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	45.74	324	P	P	06 56 55.8	+1.3
	0.3nm,0.3s,baz=110,slow=8.0,SNR=5.1						
	0.3nm,0.3s						
ZALV	**Zalesovo Beam**	48.80	333	P	P	06 57 16.8	-1.2
	0.7nm,0.3s,baz=118,slow=7.7,SNR=4.9						
ZALV				pP	pP	06 57 39.9	-1.3
	0.4nm,0.5s,baz=145,slow=7.9,SNR=1.5						
	0.7nm,0.3s						
KURBB	**Kurchatov Arra**	49.91	326	P	P	06 57 27.1	+0.6
	1.4nm,0.2s,baz=121,slow=8.0,SNR=8.6						
	1.4nm,0.2s						
BVAR	**Borovoye Array**	55.49	326	P	P	06 58 08.0	+0.4
	1.3nm,0.5s,baz=117,slow=9.0,SNR=10						
	1.3nm,0.5s						

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*TIR **01** 06:52:57.8,41°.52N×19°.32E,h2km±11km,ML3.4/3*
*SKO **01** 06:52:59.0,41°.59N×19°.30E,h0km,ML3.1*
*PRU **01** 06:52:59.7,41°.47N×19°.58E,h10km*
*PDG **01** 06:52:59.8±0.1,41°.58N×19°.58E,h14km,MD3.3/4, ML3.2/13,Error ellipse: s-maj=0.3km s-min=0.3km az=0.0*
*THE **01** 06:53:00.6,42°N±6°×1°9E±°,h12km,M3.1/12,MLh3.1/12*
*BEO **01** 06:53:02.7±0.5,41°.63N×19°.47E,h25km±2km,ML3.1/8*
*VIE **01** 06:53:03.9±0.7,42°.08N×19°.60E,h8km,mb3.1/10,ms3.9/7, Error ellipse: s-maj=16.3km s-min=3.4km az=33.0 48 km E of Shkoder*

ISC 01 06:53:00.5±1.0,41°.59N±0°.02×19°.46E±0°.02,h15km±8km, n114,σ1ˢ.07/165,21C-11D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	0.39	128	Pg	Pg	06 53 08.0	-0.3
TIR				Sg	Sg	06 53 13.3	-0.3
TIR				AML	AML	06 53 14.5	
	6.9nm,0.4s						
TIR	**Tirane**	0.39	128	*i* Pg	Pg	06 53 08.0	-0.3
TIR				*i* Sg	Sb	06 53 14.4	-0.4
ULC	**Ulcinj**	0.41	337	*e*Pg	Pg	06 53 08.4	-0.3
ULC				*i* Sg	Sb	06 53 15.8	+0.2
SDA	**Shkodra**	0.47	4	Pg	Pg	06 53 09.2	-0.6
SDA				Sg	Sb	06 53 16.8	-0.4
DRME	**Dracevica, Mon**	0.63	341	*e*Pg	Pg	06 53 12.4	-0.5
DRME				*e*Sg	Sb	06 53 23.1	+1.1
PHP	**Peshkopia**	0.74	82	P	Pg	06 53 13.4	-1.5
PHP				Sg	Sg	06 53 24.6	-0.2
PHP				AML	AML	06 53 28.1	
	5.3nm,0.5s						
BUM	**Brajici-Budva**	0.83	330	*e*Pg	Pg	06 53 16.2	-0.4
BUM				*i* Sg	Sn	06 53 30.0	+0.2
PDG	**Podgorica**	0.86	350	Pg	Pg	06 53 16.8	-0.3
PDG				Sg	Sn	06 53 30.3	0.0
PDG	**Podgorica**	0.86	350	⇑P	Pg	06 53 16.6	-0.5
PDG	**Podgorica**	0.86	350	*e*Pg	Pg	06 53 16.4	-0.7
PDG				*e*Sg	Sn	06 53 31.3	+1.0
PDG	**Podgorica**	0.86	350	*e*Pg	Pg	06 53 16.1	-1.0
PDG				*i* Sg	Sn	06 53 30.2	-0.1
CEME	**Cevo**	1.04	337	*e*Pg	Pb	06 53 19.8	-0.5
CEME				*e*Sg	Sn	06 53 36.8	+1.8
PVY	**Plav**	1.07	20	*e*Pg	Pb	06 53 19.2	-1.7
PVY				*i* Sg	Sn	06 53 35.7	-0.2
OHR	**Ohrid**	1.11	115	*i* Pg	Pb	06 53 20.9	-0.6
OHR				*i* Sg	Sn	06 53 38.2	+1.5
OHR				*e*Lg	Lg	06 53 39.2	
	comp=N,274nm,0.6s						
OHR				*e*Lg	Lg	06 53 41.1	
	comp=E,361nm,0.5s						
VLO	**Vlora**	1.12	179	Sg	Sn	06 53 37.0	+0.3
VLO				AML	AML	06 53 44.4	
	comp=E,4.9nm,0.2s						
VLO	**Vlora**	1.12	179	P	Pg	06 53 22.9	+0.9
HCY	**Herceg Novi**	1.12	320	⇑*i*Pg	Pg	06 53 21.8	-0.3
HCY				*i* Sg	Sn	06 53 39.7	+2.8
NKME	**Niksic**	1.24	343	⇑*i*Pg	Pn	06 53 23.3	0.0
NKME				*e*Sg	Sg	06 53 43.3	+2.8
KOME	**Kolasin**	1.26	2	*e*Pg	Pn	06 53 23.3	-0.4
KOME				*e*Sg	Sg	06 53 43.1	+1.8
IVA	**Berane**	1.32	14	⇓*i*Pg	Pn	06 53 24.0	-0.6
IVA				*i* Sg	Sg	06 53 44.4	+1.1
KBN	**Korca**	1.39	133	Pg	Pg	06 53 26.5	-0.7
KBN				Sg	Sg	06 53 47.1	+1.7
KBN	**Korca**	1.39	133	P	Pb	06 53 26.3	+0.1
KBN				S	Sg	06 53 46.0	+0.7
DBRK	**Dubrovnik**	1.46	318	*i* Pn	Pn	06 53 26.5	+0.2
DBRK				Sg	Sg	06 53 46.9	-0.6
BRY	**Bratogost**	1.48	333	⇑*i*Pg	Pb	06 53 27.5	-0.3
BRY				*i* Sg	Sg	06 53 49.6	+1.3
SKO	**Skopje**	1.53	75	*i* Pg	Pb	06 53 28.4	-0.1
SKO				*i* Sg	Sb	06 53 48.2	+0.4
UPM	**Unac-Piva**	1.67	346	*e*Pn	Pn	06 53 30.0	+0.6
UPM				*i* Sn	Sg	06 53 53.7	-0.5
NEST	**Nestorio**	1.68	134	P	Pb	06 53 30.6	-0.5
NEST				S	Sb	06 53 52.5	+0.3
SJES	**Sjenica**	1.72	13	*e*Pn	Pb	06 53 31.3	-0.5
SJES				*e*Sg	Sg	06 53 55.9	+0.1
PLE	**Pljevlja**	1.74	358	*e*Pn	Pn	06 53 30.7	+0.4
PLE				*i* Sn	Sb	06 53 55.1	+1.1
STON	**Ston**	1.83	315	*e*Pn	Pn	06 53 31.5	+0.1
STON				Sn	Sn	06 53 53.3	-1.0
STON	**Ston**	1.83	315	*e*Pn	Pb	06 53 33.8	+0.1
STON				*e*Sn	Sn	06 53 55.1	+0.8
SELS	**Selova**	2.04	36	*e*Pn	Pn	06 53 35.0	+0.6
SELS				*e*Sn	Sn	06 54 00.9	+1.2
IVAS	**Ivanjica**	2.05	14	*e*Pn	Pn	06 53 35.2	+0.6
BARS	**Barje**	2.14	54	*i* Pn	Pn	06 53 36.0	+0.3
BARS				*i* Sn	Sb	06 54 04.0	-1.4
BARS	**Barje**	2.14	54	*e*Pn	Pn	06 53 36.0	+0.3
IGT	**Igoumenitsa**	2.16	162	P	Pn	06 53 36.0	+0.1
IGT				S	Sn	06 54 02.3	-0.1
KZN	**Kozani**	2.17	125	P	Pn	06 53 36.8	+0.6
KPRO	**Kipourio**	2.18	138	P	Pn	06 53 36.7	+0.5
KPRO				S	Sn	06 54 03.4	+0.4
LFKM	**Lefkimmi**	2.19	168	S	Sn	06 54 03.0	0.0
GOCS	**Kraljevo Serbi**	2.23	27	*e*Pn	Pn	06 53 37.9	+0.8
GOCS				*e*Sn	Sn	06 54 05.7	+1.2
BBLS	**Lazi&#263i**	2.28	359	*e*Pn	Pb	06 53 40.1	-1.3
MATE	**Matera**	2.28	247	⇑P	Pn	06 53 37.1	-0.5
MATE				⇓S	Sn	06 54 05.9	+0.5
GRG	**Griva**	2.31	105	*i* Pn	Pn	06 53 38.7	+0.7
VAY	**Valandovo**	2.35	95	*i* Pn	Pn	06 53 39.2	+0.6
VAY				*i* Sn	Sn	06 54 07.2	0.0
VAY				*e*Lg	Lg	06 54 09.9	
	comp=N,44nm,0.6s						
VAY				*e*Lg	Lg	06 54 15.0	
	comp=E,41nm,0.5s						
PRMD	**Pramanda**	2.40	148	P	Pn	06 53 39.6	+0.2
BOSS	**Bosilegrad**	2.43	67	*e*Pn	Pn	06 53 40.1	+0.5
BOSS				*e*Sn	Sn	06 54 08.5	-0.6
GRUS	**Gruza**	2.48	21	*e*Pn	Pn	06 53 41.3	+0.9
KNT	**Kendrikon**	2.62	98	P	Pn	06 53 42.8	+0.5
KNT	**Kendrikon**	2.62	98	*i* Pn	Pn	06 53 42.9	+0.5
TETR	**Tetrakomo, Epi**	2.63	148	P	Pn	06 53 42.4	-0.1
BOVS	**Bovan**	2.64	38	⇑P	Pn	06 53 43.2	+0.7
BOVS	**Bovan**	2.64	38	*e*Pn	Pn	06 53 43.2	+0.7
BOVS				*e*Sn	Sn	06 54 13.3	-0.9
TRUS	**Trudelj**	2.73	14	*e*Pn	Pn	06 53 45.6	+1.9
KKB	**Krupnik**	2.76	83	*i* Pn	Pn	06 53 44.8	+0.6
KKB				*i* Sn	Sn	06 54 16.8	-0.5
THE	**Thessaloniki**	2.82	109	*i* Pn	Pn	06 53 44.8	-0.2
ZAPS	**Zavoj**	2.89	53	*e*Pn	Pn	06 53 46.9	+0.8
ZAPS				*e*Sn	Sn	06 54 20.7	+0.1
TSLK	**Tsoukalades, L**	2.91	161	P	Pn	06 53 46.0	-0.2
LKD2	**Lefkada island**	2.94	161	P	Pn	06 53 46.4	-0.4
TEKS	**Tekeris**	2.96	1	*e*Pn	Pn	06 53 47.5	+0.5
VTS	**Vitosha**	2.99	69	P	Pn	06 53 48.0	+0.4
VTS	**Vitosha**	2.99	69	*e*Pn	Pn	06 53 48.3	+0.8
VTS				*e*Sn	Sn	06 54 22.9	-0.4
NYDR	**Nydri-Lefkada**	3.02	161	P	Pn	06 53 47.2	-0.6
ZAGS	**Zajecar**	3.02	42	*e*Pn	Pn	06 53 49.2	+1.4
BLKB	**Belogradchik**	3.13	48	⇑S	Sn	06 54 28.4	+2.0
BLKB	**Belogradchik**	3.13	48	*e*Pn	Pn	06 53 50.5	+1.2
BLKB				*e*Sn	Sn	06 54 26.1	-0.3
BORS2	**Bor- Borsko je**	3.13	36	*e*Pn	Pn	06 53 49.3	0.0
BORS2				*e*Sn	Sn	06 54 24.6	-1.9
SRS	**Serrai**	3.15	97	*i* Pn	Pn	06 53 50.1	+0.5
TIP	**Timpagrande**	3.17	221	⇑P	Pn	06 53 48.6	-1.3
AVAS	**Avala Beograd**	3.20	14	*e*Pn	Pn	06 53 51.1	+0.8
AVAS				*e*Sn	Sn	06 54 27.0	-1.2
MMB	**Musomishta**	3.22	89	*i* Pn	Pn	06 53 52.2	+1.7
KUBS	**Kucevo**	3.26	29	*e*Pn	Pn	06 53 50.2	-0.9
KUBS				*e*Sn	Sn	06 54 27.4	-2.2
AGG	**Agios Georgios**	3.37	138	P	Pn	06 53 52.3	-0.4
BLY	**Banja Luka**	3.57	333	⇑P	Pn	06 53 55.7	+0.3
BLY	**Banja Luka**	3.57	333	*e*Pn	Pn	06 53 56.8	+1.4
FRGS	**Fruska Gora**	3.58	4	*e*Pn	Pn	06 53 56.3	+0.8
MDVR	**Moldovita**	3.59	27	⇓P	Pn	06 53 57.0	+1.3
MDVR	**Moldovita**	3.59	27	*e*Pn	Pn	06 53 56.4	+0.7
MDVR				*e*Sn	Sn	06 54 36.5	-1.4
VRSS	**Vrsac**	3.79	20	*e*Pn	Pn	06 53 59.8	+1.5
HERR	**Herculane**	3.94	32	⇓P	Pn	06 54 00.2	-0.1
PLD	**Plovdiv**	3.99	80	*e*Pn	Pn	06 54 02.1	+1.0
PLVB	**Pleven**	4.22	63	⇑P	Pn	06 54 05.0	+0.8
BZS	**Buzias**	4.32	21	⇑P	Pn	06 54 07.2	+1.5
GZR	**Gura Zlata**	4.51	31	⇓P	Pn	06 54 08.7	+0.4
SURR	**Surduc**	4.59	24	⇑P	Pn	06 54 10.2	+0.8
MORH	**Mrgy, Hungar**	4.67	353	⇑P	Pn	06 54 10.4	0.0
SIRR	**Siria**	4.94	18	⇑P	Pn	06 54 15.6	+1.4
SIRR				⇑S	Sn	06 55 14.3	+3.2
BOJS	**Bojanci**	4.97	323	*e*Pn	Pn	06 54 14.9	+0.4
ARR	**Arges**	5.33	43	⇓P	Pn	06 54 20.5	+0.9
CEY	**Cerknica**	5.53	320	*e*Pn	Pn	06 54 22.7	+0.5
CEY				*e*Sn	Sn	06 55 23.6	-1.9
SKDS	**Skadanscina**	5.59	317	*e*Pn	Pn	06 54 22.5	-0.7
SKDS				*e*Sn	Sn	06 55 22.9	-4.3
VOIR		5.60	45	⇑P	Pn	06 54 24.2	+1.0
DRGR		5.71	23	⇑P	Pn	06 54 25.9	+1.2
SOKA	**Soboth**	6.00	329	*e*Pn	Pn	06 54 28.0	-0.8
	comp=E,0.3nm,0.2s						
OBKA	**Obir**	6.06	326	*e*Pn	Pn	06 54 30.0	+0.4
	comp=E,0.8nm,0.2s						
MLR	**Muntele Rosu**	6.12	48	⇑P	Pn	06 54 31.4	+0.9
DOPR	**Dopca**	6.13	42	⇓P	Pn	06 54 32.0	+1.5
ISR	**Istrita**	6.26	53	⇓P	Pn	06 54 33.7	+1.4
NEHR	**Nehoiu**	6.28	50	⇓P	Pn	06 54 33.7	+1.1
ARSA	**Arzberg**	6.33	335	*e*Pn	Pn	06 54 32.6	-0.6
	comp=E,0.4nm,0.3s						
PSZ	**Piszkesteto**	6.34	3	⇓P	Pn	06 54 34.9	+1.4
COVR	**Voineasa-Covas**	6.48	47	⇑P	Pn	06 54 36.9	+1.5
ICOR	**Ion Corvin**	6.63	65	⇑P	Pn	06 54 39.1	+1.8
PLOR	**Plostina**	6.73	48	⇓P	Pn	06 54 41.2	+2.4
VRI	**Vrincioaia**	6.78	48	⇑P	Pn	06 54 41.1	+1.6
KECS	**Kecovo**	6.94	6	*e*PN	Pn	06 54 44.9	+3.4
KECS				*e*SN	Sn	06 56 00.5	+0.4
KBA	**Koelnbreinsper**	7.02	323	*i* Pn	Pn	06 54 42.6	-0.3
	comp=E,0.5nm,0.4s						
ABTA	**Abfaltersbach**	7.18	318	*e*Pn	Pn	06 54 44.5	-0.5
	comp=E,0.5nm,0.3s						
ABTA				*e*Sn	Sn	06 56 05.2	-1.1
	comp=E,1.0nm,0.3s						
BIOA	**Bad Ischl, Aus**	7.38	328	*i* Pn	Pn	06 54 47.7	+0.1
	comp=E,0.3nm,0.2s						
LESA	**Schwarzleotal**	7.58	323	*e*Pn	Pn	06 54 49.5	-1.0
	comp=E,0.5nm,0.2s						
WTTA	**Wattenberg**	7.97	318	*i* Pn	Pn	06 54 55.7	-0.2
	comp=E,1.1nm,0.2s						
SQTA	**Sankt Quirin**	8.16	316	*e*Pn	Pn	06 54 57.6	-0.8
	comp=E,0.7nm,0.3s						
MOTA	**Moosalm**	8.29	317	*e*Pn	Pn	06 54 59.5	-0.8
	comp=E,0.5nm,0.3s						
RETA	**Reutte**	8.56	316	*e*Pn	Pn	06 55 02.9	-1.1
	comp=E,0.2nm,0.2s						
KHC	**Kasperske Hory**	8.60	333	*e*PN	Pn	06 55 04.8	+0.4
KHC				*e*SN	Sn	06 56 40.8	-0.4

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*SKO **01** 06:54:43.1,41°.56N×19°.46E,h0km,ML2.8*
*BEO **01** 06:54:44.2±0.6,41°.52N×19°.62E,h2km±3km,ML2.8/8*
*PDG **01** 06:54:44.7±0.0,41°.63N×19°.56E,h8km,MD3.1/3, ML3.0/13,Error ellipse: s-maj=0.1km s-min=0.1km az=0.0*

ISC 01 06:54:42.8±1.1,41°.51N±0°.04×19°.47E±0°.03,h11km±9km, n43,σ1ˢ.00/81,2C-1D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	0.34	118	*i* Pg	Pg	06 54 49.3	-0.2
TIR				*i* Sg	Sg	06 54 54.7	+0.7
ULC	**Ulcinj**	0.49	340	*e*Pg	Pg	06 54 52.3	0.0
ULC				*i* Sg	Sg	06 54 58.8	+0.1
DRME	**Dracevica, Mon**	0.71	343	*e*Pg	Pg	06 54 56.2	-0.3
DRME				*e*Sg	Sg	06 55 06.0	+0.1
BUM	**Brajici-Budva**	0.90	332	*e*Pg	Pb	06 55 00.2	-0.3
BUM				*i* Sg	Sn	06 55 13.2	-1.4
PDG	**Podgorica**	0.94	350	*e*Pg	Pg	06 55 00.5	-0.3
PDG				*e*Sg	Sn	06 55 15.1	-0.2
PDG	**Podgorica**	0.94	350	*e*Pg	Pg	06 55 00.0	-0.8
PDG				*i* Sg	Sg	06 55 13.0	0.0
OHR	**Ohrid**	1.08	111	*i* Pg	Pb	06 55 02.4	-1.1
OHR				*i* Sg	Sn	06 55 19.2	+0.3
OHR				*e*Lg	Lg	06 55 20.8	
	comp=E,195nm,0.5s						
OHR				*e*Lg	Lg	06 55 21.2	
	comp=N,164nm,0.4s						
CEME	**Cevo**	1.12	339	*e*Pg	Pn	06 55 03.8	-0.7
CEME				*e*Sg	Sn	06 55 20.0	+0.1
PVY	**Plav**	1.15	18	*e*Pg	Pn	06 55 03.2	-1.8
PVY				*i* Sg	Sb	06 55 19.1	-0.6
HCY	**Herceg Novi**	1.19	323	*e*Pg	Pg	06 55 05.7	+0.1
HCY				*i* Sg	Sn	06 55 23.6	+2.0
NKME	**Niksic**	1.32	343	*e*Pg	Pb	06 55 07.2	-0.4
NKME				*e*Sg	Sg	06 55 26.4	+1.2
KOME	**Kolasin**	1.34	2	*e*Pg	Pn	06 55 07.2	-0.4
KOME				*e*Sg	Sg	06 55 26.4	+0.4
IVA	**Berane**	1.40	13	⇑*i*Pg	Pn	06 55 08.0	-0.4
IVA				*i* Sg	Sb	06 55 27.8	+0.8
TREB	**Trebinje**	1.47	326	*e*Pg	Pg	06 55 10.5	-0.4
TREB				*e*Sg	Sg	06 55 31.3	+1.3
DBRK	**Dubrovnik**	1.52	320	*e*Pn	Pg	06 55 12.5	+0.5
DBRK				Sg	Sg	06 55 31.9	+0.2
SKO	**Skopje**	1.55	72	*i* Pg	Pb	06 55 11.9	+0.4
SKO				*i* Sg	Sn	06 55 31.1	+0.7
BRY	**Bratogost**	1.56	334	⇑*i*Pg	Pg	06 55 12.0	-0.6
BRY				*i* Sg	Sg	06 55 34.9	+2.1
UPM	**Unac-Piva**	1.75	346	*e*Pn	Pb	06 55 14.9	-0.1
UPM				*i* Sn	Sg	06 55 38.9	0.0
SJES	**Sjenica**	1.79	12	*e*Pn	Pg	06 55 17.0	-0.2
SJES				*e*Sg	Sg	06 55 41.1	+0.7
PLE	**Pljevlja**	1.82	358	⇓*i*Pn	Pb	06 55 15.7	-0.6
PLE				*i* Sn	Sb	06 55 40.1	+0.9
STON	**Ston**	1.89	317	*e*Pn	Pg	06 55 18.2	-0.9
STON				Sn	Sb	06 55 39.7	-1.3
STON	**Ston**	1.89	317	*e*Pn	Pg	06 55 18.2	-0.9
SELS	**Selova**	2.10	35	*e*Pn	Pn	06 55 19.2	+1.2
SELS				*e*Sn	Sn	06 55 45.7	+1.5
RUDO	**Rudo**	2.11	358	*e*Pn	Pb	06 55 20.6	-0.5
RUDO				*e*Sn	Sb	06 55 47.8	+0.5
IVAS	**Ivanjica**	2.13	14	*e*Pn	Pb	06 55 20.5	-0.9
BARS	**Barje**	2.18	52	*i* Pn	Pn	06 55 20.9	+1.8
BARS				*i* Sn	Sn	06 55 46.4	+0.3
BARS	**Barje**	2.18	52	*e*Pn	Pb	06 55 21.4	-0.9
BARS				*e*Sn	Sn	06 55 46.4	+0.3
GRG	**Griva**	2.28	103	*i* Pn	Pn	06 55 20.9	+0.5
GRG				*i* Sn	Sn	06 55 49.6	+1.0
GOCS	**Kraljevo Serbi**	2.30	26	*e*Pn	Pn	06 55 22.0	+1.2
GOCS				*e*Sn	Sn	06 55 51.1	+1.9
VAY	**Valandovo**	2.34	94	*i* Pn	Pn	06 55 22.4	+1.1
VAY				*i* Sn	Sn	06 55 51.0	+1.0
VAY				*e*Lg	Lg	06 55 55.4	
	comp=N,201nm,1.8s						
VAY				*e*Lg	Lg	06 55 58.9	
	comp=E,26nm,0.6s						
BBLS	**Lazi&#263i**	2.36	359	*e*Pn	Pb	06 55 25.9	+0.5
BOSS	**Bosilegrad**	2.45	65	*e*Pn	Pn	06 55 23.8	+1.0
BOSS				*e*Sn	Sn	06 55 52.2	-0.6
BOSS				*e*Sn	Sb	06 55 52.8	-4.4
GRUS	**Gruza**	2.55	21	*e*Pn	Pn	06 55 25.0	+0.9
KNT	**Kendrikon**	2.61	96	*i* Pn	Pn	06 55 25.2	+0.3
KNT				*i* Sn	Sn	06 55 57.6	+1.0
LIT	**Litokhoron**	2.69	120	*i* Pn	Pn	06 55 26.9	+0.8
BOVS	**Bovan**	2.69	37	*e*Pn	Pn	06 55 27.0	+0.9
BOVS				*e*Sn	Sn	06 55 58.9	+0.2
KKB	**Krupnik**	2.76	82	*i* Pn	Pn	06 55 27.9	+0.8
KKB				*i* Sn	Sn	06 56 00.4	0.0
THE	**Thessaloniki**	2.79	107	*i* Pn	Pn	06 55 27.5	+0.2
ZAPS	**Zavoj**	2.94	52	*e*Pn	Pn	06 55 30.8	+1.3
ZAPS				*e*Sn	Sn	06 56 04.7	-0.1
VTS	**Vitosha**	3.02	67	*e*Pn	Pn	06 55 31.3	+0.6
VTS				*e*Sn	Sn	06 56 06.1	-0.8
ZAGS	**Zajecar**	3.08	41	*e*Pn	Pn	06 55 31.8	+0.4
ZAGS				*e*Sn	Sn	06 56 07.6	-0.6
BLKB	**Belogradchik**	3.18	47	*e*Pn	Pn	06 55 34.4	+1.6
BLKB				*e*Sn	Sn	06 56 10.5	-0.2
MDVR	**Moldovita**	3.66	26	*e*Pn	Pn	06 55 39.9	+0.4
MDVR				*e*Sn	Sn	06 56 22.5	-0.2

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*PRU **01** 07:18:27.6,41°.10N×19°.45E,h10km,M4.4*
*SKO **01** 07:18:28.4,41°.46N×19°.30E,h0km,ML3.6*
*VIE **01** 07:18:28.9,41°.58N×19°.63E,h0km,mb4.0/4,ML2.6/1 32 km NNW of Tirana*
*NEIC **01** 07:18:29.6±1.4,41°.47N±0°.05×19°.37E±0°.07,h10km±1km, mb4.4/11,Error ellipse: s-maj=9.0km s-min=8.1km az=266.0*
*BEO **01** 07:18:30.3±0.5,41°.43N×19°.46E,h7km±2km,ML3.4/10*
*TIR **01** 07:18:30.6,41°.56N×19°.51E,h37km±4km,Ml3.7/3*
*PDG **01** 07:18:31.4±0.1,41°.55N×19°.58E,h12km,MD3.6/10, ML3.5/13,Error ellipse: s-maj=0.2km s-min=0.2km az=0.0*
*THE **01** 07:18:31.0,41°N±8°×2°0E±1°1,h0km±21km,M3.2/13, MLh3.2/13*
*IDC **01** 07:18:39.6±2.1,41°.89N×19°.44E,h87km±21km,mb3.8/4, mbtmp3.8/12,MS3.3/3,Error ellipse: s-maj=21.3km s-min=15.2km az=7.0*

ISC 01 07:18:30.0±0.9,41°.47N±0°.02×19°.46E±0°.02,h14km±6km, n218,σ1ˢ.44/286,mb4.3/8,32C-22D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	0.33	111	Pg	Pg	07 18 36.0	-0.7
TIR				AML	AML	07 18 40.7	
	19nm,0.5s						
TIR				Sg	Sg	07 18 41.7	+0.4
TIR	**Tirane**	0.33	111	*i* Pg	Pg	07 18 36.0	-0.7
TIR				*i* Sg	Sg	07 18 42.0	+0.6
ULC	**Ulcinj**	0.52	342	⇓*i*Pg	Pg	07 18 40.4	+0.1
ULC				*i* Sg	Sb	07 18 48.1	-0.3
SDA	**Shkodra**	0.59	3	Pg	Pg	07 18 41.0	-0.5
SDA				S	Sb	07 18 49.9	-0.2
DRME	**Dracevica, Mon**	0.75	344	*e*Pg	Pg	07 18 44.5	-0.1
DRME				*e*Sg	Sb	07 18 55.4	+0.5
PHP	**Peshkopia**	0.77	73	Pg	Pg	07 18 43.5	-1.4
PHP				Sg	Sg	07 18 54.6	-0.5
PHP				AML	AML	07 19 00.2	
	11nm,0.7s						
PHP	**Peshkopia**	0.77	73	P	Pg	07 18 43.5	-1.4
PHP				S	Sg	07 18 53.1	-1.9
BUM	**Brajici-Budva**	0.94	333	*e*Pg	Pb	07 18 48.3	+0.3
BUM				*i* Sg	Sn	07 19 02.5	+0.5
PDG	**Podgorica**	0.97	351	Pg	Pg	07 18 47.8	-1.0
PDG				S	Sg	07 19 01.1	-0.5
PDG	**Podgorica**	0.97	351		Pg	07 18 47.8	-1.0
PDG	**Podgorica**	0.97	351	⇑P	Pg	07 18 48.2	-0.6
PDG				⇓S	Sb	07 19 02.2	+0.8
PDG	**Podgorica**	0.97	351	*e*Pg	Pg	07 18 48.0	-0.8
PDG				*e*Sg	Sn	07 19 03.4	+0.6
PDG	**Podgorica**	0.97	351	*e*Pg	Pg	07 18 48.3	-0.6
PDG				*i* Sg	Sn	07 19 03.0	+0.2
VLO	**Vlora**	1.00	178	Pg	Pn	07 18 50.9	+1.5
VLO				Sg	Sn	07 19 05.7	+2.4
VLO				AML	AML	07 19 17.9	
	7.6nm,0.4s						
VLO	**Vlora**	1.00	178	P	Pb	07 18 50.3	+1.3
VLO				S	Sn	07 19 05.4	+2.1
OHR	**Ohrid**	1.07	109	*i* Pg	Pg	07 18 49.0	-1.6
OHR				*i* Sg	Sn	07 19 06.5	+1.2
OHR				*e*Lg	Lg	07 19 07.3	
	comp=N,1μm,0.8s						
OHR				*e*Lg	Lg	07 19 08.7	
	comp=E,1μm,0.6s						
CEME	**Cevo**	1.15	340	*e*Pg	Pb	07 18 51.9	+0.2
CEME				*e*Sg	Sn	07 19 09.4	+2.1
PVY	**Plav**	1.19	18	⇓*i*Pg	Pb	07 18 51.4	-1.0
PVY				*i* Sg	Sn	07 19 08.4	+0.1

HCY	Herceg Novi	1.22	324	⇑iPg	Pg	07 18 53.6	+0.2
HCY				iSg	Sn	07 19 12.6	+3.8
KBN	Korca	1.31	130	Pg	Pb	07 18 55.3	+0.9
KBN				S	Sg	07 19 13.2	+0.9
KBN	Korca	1.31	130	P	Pn	07 18 54.9	+1.0
KBN				S	Sg	07 19 13.0	+0.7
NKME	Niksic	1.35	344	ePg	Pb	07 18 55.4	+0.3
NKME				eSg	Sg	07 19 15.8	+2.1
KOME	Kolasin	1.38	2	⇓iPg	Pn	07 18 55.4	+0.4
KOME				eSg	Sg	07 19 15.8	+1.1
IVA	Berane	1.44	13	⇑iPg	Pn	07 18 56.2	+0.5
IVA				iSg	Sg	07 19 17.2	+0.7
TREB	Trebinje	1.50	327	ePn	Pb	07 18 57.4	-0.2
TREB	Trebinje	1.50	327	ePg	Pb	07 18 57.4	-0.2
TREB				eSg	Sg	07 19 19.2	+0.9
DBRK	Dubrovnik	1.55	321	ePn	Pn	07 18 58.0	+0.9
DBRK				Sn	Sg	07 19 21.6	+1.7
SKO	Skopje	1.57	71	iPg	Pb	07 18 59.2	+0.5
SKO				iSg	Sg	07 19 21.4	+1.0
BRY	Bratogost	1.59	335	⇓iPg	Pb	07 18 59.8	+0.6
BRY				iSg	Sg	07 19 22.3	+1.1
NEST	Nestorio	1.60	131	P	Pn	07 18 59.0	+1.1
NEST				S	Sb	07 19 21.0	+1.6
UPM	Unac-Piva	1.78	347	⇓iPn	Pb	07 19 02.2	-0.4
UPM				iSn	Sg	07 19 26.4	-1.0
PENT	Pentalofos	1.80	134	P	Pn	07 19 02.3	+1.7
SJES	Sjenica	1.83	12	ePn	Pb	07 19 03.9	+0.5
SJES				eSg	Sg	07 19 29.8	+0.8
PLE	Pljevlja	1.86	358	ePn	Pn	07 19 03.0	+1.4
PLE				iSn	Sb	07 19 27.8	+0.7
STON	Ston	1.92	318	ePn	Pn	07 19 03.1	+1.0
STON				Sn	Sb	07 19 28.7	+0.2
STON	Ston	1.92	318	ePn	Pn	07 19 03.2	+1.0
STON				eSn	Sb	07 19 29.0	+0.5
NOCI	Noci	1.93	250	Pn	Pn	07 19 03.1	+0.7
NOCI				Sn	Sb	07 19 30.3	+1.4
IGT	Igoumenitsa	2.04	161	P	Pn	07 19 06.5	+2.5
IGT				Sn	Sb	07 19 33.4	+1.3
IGT	Igoumenitsa	2.04	161	P	Pn	07 19 04.8	+0.9
KPRO	Kipourio	2.09	136	P	Pn	07 19 06.3	+1.7
KPRO				S	Sn	07 19 33.1	+2.6
KZN	Kozani	2.10	123	P	Pn	07 19 06.0	+1.2
SELS	Selova	2.14	35	ePn	Pn	07 19 07.0	+1.7
SELS				eSn	Sb	07 19 34.4	-0.6
RUDO	Rudo	2.15	358	ePn	Pn	07 19 06.7	+1.3
RUDO	Rudo	2.15	358	ePn	Pb	07 19 07.7	-1.0
RUDO				eSn	Sb	07 19 36.5	+1.3
IVAS	Ivanjica	2.17	13	ePn	Pn	07 19 07.5	+1.8
BARS	Barje	2.21	52	iPn	Pn	07 19 07.4	+1.1
BARS	Barje	2.21	52	ePn	Pn	07 19 07.6	+1.4
MATE	Matera	2.24	250	⇑P	Pn	07 19 06.6	+0.1
MATE				⇑S	Sn	07 19 34.8	+0.9
GRG	Griva	2.28	102	iPn	Pn	07 19 08.5	+1.3
GRG				iSn	Sb	07 19 38.1	-0.8
PRMD	Pramanda	2.30	147	P	Pn	07 19 09.3	+1.8
GOCS	Kraljevo Serbi	2.34	26	ePn	Pn	07 19 09.8	+1.7
GOCS				eSn	Sb	07 19 39.2	-1.6
VAY	Valandovo	2.34	93	iPn	Pn	07 19 09.4	+1.3
VAY				iSn	Sn	07 19 38.7	+2.1
VAY				eLg	Lg	07 19 39.5	
	comp=N,244nm,0.8s						
VAY				eLg	Lg	07 19 50.5	
	comp=E,294nm,0.9s						
BBLS	Lazi&#263i	2.40	359	ePn	Pn	07 19 10.8	+1.9
BOSS	Bosilegrad	2.48	64	ePn	Pn	07 19 11.5	+1.6
BOSS				eSn	Sn	07 19 42.0	+2.1
TETR	Tetrakomo, Epi	2.53	146	P	Pn	07 19 12.5	+1.8
GRUS	Gruza	2.59	21	ePn	Pn	07 19 13.0	+1.5
KNT	Kendrikon	2.61	96	P	Pn	07 19 11.8	+0.1
KNT	Kendrikon	2.61	96	iPn	Pn	07 19 13.0	+1.3
KNT				iSn	Sn	07 19 44.9	+1.7
LIT	Litokhoron	2.67	120	P	Pn	07 19 14.1	+1.4
LIT	Litokhoron	2.67	120		Pn	07 19 12.8	+0.2
LIT	Litokhoron	2.67	120	iPn	Pn	07 19 14.4	+1.8
LIT				iSn	Sb	07 19 49.2	-1.1
BOVS	Bovan	2.73	37	⇑P	Pn	07 19 14.5	+1.1
BOVS				⇓S	Sb	07 19 49.9	-2.0
BOVS	Bovan	2.73	37	ePn	Pn	07 19 14.6	+1.2
BOVS				eSn	Sn	07 19 47.9	+1.8
ACER	Acerenza	2.74	257		Pn	07 19 13.1	-0.5
KKB	Krupnik	2.78	81	iPn	Pn	07 19 15.7	+1.7
KKB				iSn	Sn	07 19 49.0	+1.7
THE	Thessaloniki	2.78	106	iPn	Pn	07 19 14.9	+0.9
THE				iSn	Sn	07 19 48.7	+1.4
SGRT	San Giovanni R	2.80	277		Pn	07 19 14.2	-0.2
TRUS	Trudelj	2.84	14	ePn	Pn	07 19 16.2	+1.3
ZAPS	Zavoj	2.97	51	ePn	Pn	07 19 18.5	+1.9
ZAPS				eSn	Sn	07 19 54.0	+2.0
SOH	Sokhos	3.01	101	iPn	Pn	07 19 18.5	+1.2
VTS	Vitosha	3.04	66	ePn	Pn	07 19 19.5	+1.8
VTS				eSn	Sn	07 19 56.8	+2.8
TIP	Timpagrande	3.08	223		Pn	07 19 18.4	+0.2
TIP	Timpagrande	3.08	223	⇑P	Pn	07 19 18.2	0.0
TEKS	Tekeris	3.08	1	ePn	Pn	07 19 19.1	+0.9
ZAGS	Zajecar	3.11	40	ePn	Pn	07 19 20.3	+1.7
ZAGS				eSn	Sn	07 19 57.5	+1.9
EVR	Evrytania	3.12	144	P	Pn	07 19 20.8	+2.0
SRS	Serrai	3.13	95	P	Pn	07 19 19.7	+0.8
SRS	Serrai	3.13	95	iPn	Pn	07 19 20.1	+1.1
CUC	Castrocucco	3.13	243		Pn	07 19 18.8	-0.2
BLKB	Belogradchik	3.21	47	ePn	Pn	07 19 22.1	+2.1
BLKB				eSn	Sn	07 20 00.4	+2.4
MMB	Musomishta	3.22	87	iPn	Pn	07 19 22.1	+2.0
BORS2	Bor- Borsko je	3.23	35	ePn	Pn	07 19 20.4	+0.2
BORS2				eSn	Sn	07 19 58.6	+0.1
KUBS	Kucevo	3.36	28	ePn	Pn	07 19 22.2	+0.1
KUBS				eSn	Sn	07 20 02.2	+0.4
BLY	Banja Luka	3.68	334	ePn	Pn	07 19 27.8	+1.4
BLY	Banja Luka	3.68	334	⇓P	Pn	07 19 27.6	+1.2
FRGS	Fruska Gora	3.70	4	ePn	Pn	07 19 27.5	+0.8
MDVR	Moldovita	3.70	26	⇑P	Pn	07 19 27.8	+1.0
MDVR	Moldovita	3.70	26	ePn	Pn	07 19 28.0	+1.2
MDVR				eSn	Sn	07 20 10.5	+0.3
PAOL	Paolisi	3.71	265		Pn	07 19 27.4	+0.4
VRSS	Vrsac	3.90	20	ePn	Pn	07 19 30.6	+1.2
HERR	Herculane	4.04	31	⇑P	Pn	07 19 32.8	+1.5
HERR				⇓S	Sn	07 20 21.7	+3.2
BANR	Banloc	4.10	17	⇑P	Pn	07 19 33.6	+1.4
SRE	Strehaia	4.21	39	⇑P	Pn	07 19 36.1	+2.3
CEL	Celeste	4.22	222	Pn	Pn	07 19 33.3	-0.5
PLVB	Pleven	4.28	62	⇑P	Pn	07 19 36.4	+1.8
BZS	Buzias	4.44	20	⇓P	Pn	07 19 37.9	+1.1
RDO	Rodhopi	4.59	92	Pn	Pn	07 19 40.2	+1.3
AQU	L'Aquila	4.61	283	ePn	Pn	07 19 40.3	+1.1
GZR	Gura Zlata	4.61	30	⇑P	Pn	07 19 40.7	+1.4
GZR				⇓S	Sn	07 20 36.3	+3.7
CAMP	Campotosto	4.63	285		Pn	07 19 39.1	-0.5
ITM	Ithomi	4.69	155	Pn	Pn	07 19 40.2	-0.1
SURR	Surduc	4.70	23	⇓P	Pn	07 19 41.3	+0.8
MORH	Mrgy, Hungar	4.78	353	ePn	Pn	07 19 43.8	+2.2
GUMA	Gualdo di Mace	4.82	291		Pn	07 19 41.6	-0.5
NRCA	Norcia	4.91	288		Pn	07 19 43.4	0.0
FDMO	Fiordimonte	4.98	290		Pn	07 19 44.6	+0.2
ELND	Elena	4.99	71	⇑P	Pn	07 19 46.2	+1.8
COPA	Copaceanca	5.01	56	⇓P	Pn	07 19 46.4	+1.8
SIRR	Siria	5.06	18	⇓P	Pn	07 19 46.3	+0.9
SIRR				⇑S	Sn	07 20 46.2	+2.7
SIRR	Siria	5.06	18	ePn	Pn	07 19 46.1	+0.8
SIRR				eSn	Sn	07 20 44.3	+0.8
BOJS	Bojanci	5.07	324	ePn	Pn	07 19 46.6	+1.1
BOJS				eSn	Sn	07 20 42.5	-1.2
BOJS	Bojanci	5.07	324	iPn	Pn	07 19 46.5	+1.1
BOJS				iSn	Sn	07 20 43.7	0.0
HUMR	Humele	5.08	51	⇓P	Pn	07 19 48.0	+2.5
CESX	Cesi	5.25	285		Pn	07 19 45.8	-2.1
RIY	Rijeka	5.29	318	ePn	Pn	07 19 49.6	+1.1
BEHE	Becsehely	5.36	340	ePn	Pn	07 19 49.6	+0.1
ARR	Arges	5.42	42	⇓P	Pn	07 19 51.6	+1.2
MURB	Monte Urbino	5.44	292		Pn	07 19 49.8	-0.9
VAE	Valguarnera	5.58	226	P	Pb	07 20 05.7	-1.4
	comp=E,7.8nm,0.8s,baz=167,slow=14,SNR=1.6						
VAE				S	Sb	07 21 14.3	+0.5
	comp=E,8.2nm,0.6s,baz=344,slow=22,SNR=1.6						
RAZG	Razgrad	5.62	66	⇑P	Pn	07 19 55.4	+2.3
CEY	Cerknica	5.62	321	ePn	Pn	07 19 54.2	+1.1
CEY				eSn	Sn	07 20 58.3	+0.9
SKDS	Skadanscina	5.68	318	ePn	Pn	07 19 53.9	-0.1
SKDS				eSn	Sn	07 20 57.8	-1.2
VOIR		5.68	44	⇓P	Pn	07 19 56.3	+2.3
RAFF	Raffo Rosso	5.79	225	Pn	Pn	07 19 54.0	-1.5
LJU	Ljubljana	5.80	324	ePn	Pn	07 19 57.0	+1.4
DRGR		5.81	23	⇑P	Pn	07 19 57.2	+1.4
MARR	Marisel-Cluj	5.84	26	⇑P	Pn	07 19 57.6	+1.4
MDB	Medias	5.88	36	⇑P	Pn	07 19 58.4	+1.9
TRI	Trieste	5.92	318	Pn	Pn	07 19 56.8	-0.4
CJR	Cluj-Napoca	6.03	28	⇑P	Pn	07 20 00.3	+1.6
SOKA	Soboth	6.11	330	ePn	Pn	07 20 00.3	+0.5
	comp=E,3.7nm,0.4s,SNR=12						
OBKA	Obir	6.16	327	ePn	Pn	07 20 01.6	+1.0
	comp=E,5.2nm,0.3s,SNR=7.5						
SABO	M.te Sabotino	6.19	319		Pn	07 20 00.4	-0.6
CICN	Ciocanesti	6.20	61	⇓P	Pn	07 20 02.9	+2.0
MLR	Muntele Rosu	6.20	47	P	Pn	07 20 03.9	+2.8
	comp=E,8.5nm,0.6s,baz=151,slow=19,SNR=24						
MLR				S	Sn	07 21 13.2	+1.4
	comp=E,4.4nm,0.7s,baz=262,slow=14,SNR=1.3						
MLR				LR	LR	07 22 38.7	
	comp=E,121nm,18.6s,baz=95,slow=40						
MLR	Muntele Rosu	6.20	47		Pn	07 20 03.8	+2.7
MLR	Muntele Rosu	6.20	47	⇑P	Pn	07 20 04.0	+2.8
DOPR	Dopca	6.22	42	⇑P	Pn	07 20 04.2	+2.9
ISR	Istrita	6.33	52	⇑P	Pn	07 20 06.0	+3.1
NEHR	Nehoiu	6.36	49	⇓P	Pn	07 20 05.7	+2.5
OSSC	Osservatorio P	6.41	291		Pn	07 20 03.5	-0.4
ARSA	Arzberg	6.43	335		Pn	07 20 04.2	0.0
ARSA	Arzberg	6.43	335	ePn	Pn	07 20 04.4	+0.1
	comp=E,3.2nm,0.4s,SNR=6.2						
ARSA	Arzberg	6.43	335	ePn	Pn	07 20 05.4	+1.1
PSZ	Piszkesteto	6.46	3		Pn	07 20 04.5	-0.2
PSZ	Piszkesteto	6.46	3	⇓P	Pn	07 20 04.7	+0.1
COVR	Voineasa-Covas	6.56	46	⇑P	Pn	07 20 07.5	+1.4
MYKA	Terra Mystica	6.65	323	ePn	Pn	07 20 07.1	-0.1
	comp=E,3.0nm,0.4s						
BISRR	Bisoca	6.67	50	⇑P	Pn	07 20 10.1	+2.7
ICOR	Ion Corvin	6.68	64	⇑P	Pn	07 20 09.8	+2.1
PLOR	Plostina	6.81	48	⇓P	Pn	07 20 11.9	+2.4
STAL	STALIGIAL	6.84	317		Pn	07 20 09.2	-0.6
ZCCA	Zocca	6.86	298	Pn	Pn	07 20 09.5	-0.7
VRI	Vrincioaia	6.86	48	⇑P	Pn	07 20 12.6	+2.5
TEOL	Teolo	6.88	307		Pn	07 20 09.5	-0.9
CONA	Conrad Observa	6.95	340	ePn	Pn	07 20 11.6	+0.3
	comp=E,0.4nm,0.4s						
ONER	Baraj Valea Uz	6.98	43	⇑P	Pn	07 20 14.3	+2.5
TLBR	Topalu	7.01	61	⇑P	Pn	07 20 14.2	+2.2
CIMO	Cimolais	7.01	316		Pn	07 20 10.8	-1.4
KECS	Kecovo	7.05	6	ePN	Pn	07 20 13.8	+1.1
KECS				eSN	Sn	07 21 32.2	-0.5
MODS	Modra-Piesok	7.08	348	eSN	Sn	07 21 31.8	-1.5
PANC	Panciu	7.10	49	⇑P	Pn	07 20 16.1	+2.7
KBA	Koelnbreinsper	7.12	324	ePn	Pn	07 20 14.2	+0.4
	comp=E,1.7nm,0.4s						
ABTA	Abfaltersbach	7.27	319	ePn	Pn	07 20 15.6	-0.2
	comp=E,2.0nm,0.3s						
CTI	Castel Tesino	7.27	312		Pn	07 20 14.9	-0.9
CFR	Carcaliu	7.33	57	⇑P	Pn	07 20 18.6	+2.1
MOA	Molln	7.38	332	ePn	Pn	07 20 18.0	+0.8
	comp=E,0.9nm,0.2s						
MOA	Molln	7.38	332	ePn	Pn	07 20 19.0	+1.8
BURAR	Bucovina Array	7.39	32	Pn	Pn	07 20 17.0	-0.5
BURAR	Bucovina Array	7.39	32	⇑P	Pn	07 20 20.3	+2.8
BUR08	Bucovina Ar. S	7.41	32	Pn	Pn	07 20 17.3	-0.4
BIOA	Bad Ischl, Aus	7.48	328	ePn	Pn	07 20 19.1	+0.5
	comp=E,3.2nm,0.3s						
MANT	Manisa	7.59	110	Pn	Pn	07 20 22.0	+1.7
LESA	Schwarzleotal	7.68	323	iPn	Pn	07 20 22.0	+0.5
	comp=E,2.8nm,0.4s,SNR=13						
SALO	Salr	7.70	306	Pn	Pn	07 20 20.4	-1.3
TLCR		7.77	58	⇓P	Pn	07 20 24.7	+2.2
MSSA	Maissana	7.83	295	Pn	Pn	07 20 23.0	-0.6
STHS	Stebnicka Huta	8.05	8	eSN	Sn	07 22 02.4	+5.2
WTTA	Wattenberg	8.06	319	ePn	Pn	07 20 26.8	+0.1
	comp=E,2.3nm,0.3s,SNR=11						
WATA	Walderalm	8.14	319	ePn	Pn	07 20 27.8	+0.1
	comp=E,2.8nm,0.3s,SNR=9.7						
SQTA	Sankt Quirin	8.25	317	ePn	Pn	07 20 30.5	+1.3
	comp=E,3.8nm,0.3s,SNR=6.1						
FETA	Feichten	8.37	314	ePn	Pn	07 20 30.7	-0.2
	comp=E,0.8nm,0.3s						
MOTA	Moosalm	8.38	317	ePn	Pn	07 20 32.0	+0.9
	comp=E,4.1nm,0.7s						
GERES	GERESS Array B	8.42	333	P	Pn	07 20 32.2	+0.5
	comp=E,0.4nm,0.3s,baz=150,slow=14,SNR=6.1						
GERES				S	Sn	07 22 06.5	0.0
	comp=E,1.6nm,0.4s,baz=149,slow=24,SNR=6.3						
RETA	Reutte	8.65	317	ePn	Pn	07 20 35.2	+0.5
	comp=E,0.8nm,0.3s						
DAVOX	Davos/Dischmat	8.70	311	P	Pn	07 20 37.2	+1.7
	comp=E,2.1nm,0.3s,baz=120,slow=14,SNR=11						
DAVOX				S	Sn	07 22 11.9	-1.4
	comp=E,5.8nm,0.6s,baz=24,slow=19,SNR=6.0						
KHC	Kasperske Hory	8.71	334		Pn	07 20 34.1	-1.4
KHC	Kasperske Hory	8.71	334	ePN	Pn	07 20 35.9	+0.4
KHC				eSN	Sn	07 22 15.0	+1.6
TUE	Stuetta	8.84	308		Pn	07 20 36.8	-0.6
DAVA	Damuels	8.99	314	ePn	Pn	07 20 40.4	+0.9
	comp=E,1.2nm,0.3s						
BNI	Bardonecchia	9.99	295	Pn	Pn	07 20 51.4	-1.7
SENIN	Lac Senin/Sane	10.04	303		Pn	07 20 52.5	-1.4
BFO	Black Forest	10.45	315	Pn	Pn	07 20 58.9	-0.5
NACGM	Naroch	14.29	17	eP	Pn	07 21 52.9	+1.1
	comp=Z,5.0nm,0.7s,baz=203						
MMAI	Mount Meron Ar	15.23	119	P	P	07 22 14.3	+4.8
	comp=Z,0.5nm,0.2s,baz=300,slow=13,SNR=1.8						
HFS	Hagfors	19.03	351	P	P	07 22 50.6	-0.6
	comp=Z,1.2nm,0.5s,baz=158,slow=9.2,SNR=5.0						
NC602	NORSAR Array S	19.90	349	P	P	07 22 58.3	-2.5
NC602				IAmb	IAmb	07 23 03.8	
	comp=Z,23nm,1.4s						
EKA	Eskdalemuir Ar	20.32	321	P	P	07 23 05.2	-0.2
	comp=Z,0.3nm,0.4s,baz=112,slow=9.9,SNR=7.4						
FINES	FINESS Array B	20.41	9	P	P	07 23 05.4	-0.9
	comp=Z,5.0nm,0.9s,baz=188,slow=9.5,SNR=12						
FINES	FINESS Array B	20.41	9	P	P	07 23 05.2	-1.0
FIA1	FINESS Array S	20.41	9	P	P	07 23 05.4	-0.8
ARTI	Arti	29.14	46	P	P	07 24 27.8	-2.4
	comp=Z,3.9nm,0.9s,baz=255,slow=12,SNR=4.3						
	comp=Z,3.9nm,0.9s						
BVAR	Borovoye Array	35.72	53	P	P	07 25 28.0	+0.1
	comp=Z,1.3nm,0.8s,baz=264,slow=5.8,SNR=5.9						
	comp=Z,1.3nm,0.8s						
MBAR	Mbarara	43.10	163	LR	LR	07 45 33.9	
	comp=Z,18nm,21.7s,baz=2.0,slow=37						
ZALV	Zalesovo Beam	44.17	50	P	P	07 26 37.5	-0.5
	comp=Z,1.5nm,0.6s,baz=279,slow=7.8,SNR=8.3						
	comp=Z,1.5nm,0.6s						
ZALV	Zalesovo Beam	44.17	50	P	P	07 26 37.3	-0.7
MK31	Makanchi Array	44.35	61	P	P	07 26 39.4	-0.2
MKAR	Makanchi Array	44.35	61	P	P	07 26 39.2	-0.4
	comp=Z,2.1nm,0.6s,baz=282,slow=7.0,SNR=12						
	comp=Z,2.1nm,0.6s						
ILULI	Ilulissat	45.13	332	P	P	07 26 44.9	-0.5
A36M	Sachs Harbour	64.14	348	P	P	07 29 03.6	+0.4
A36M				IAmb	IAmb	07 29 24.7	
	comp=Z,6.0nm,1.4s						
KSPA	Keystone Colle	67.38	306	P	P	07 29 22.0	-2.7
E29M	Blow River	69.16	351	P	P	07 29 35.2	-0.1
F31M	Tsiigehtchic	69.53	349	P	P	07 29 37.0	-0.6
F31M				IAmb	IAmb	07 29 48.1	
	comp=Z,4.1nm,1.4s						
H29M	Whitestone	71.29	351	P	P	07 29 47.2	-1.2
H29M				IAmb	IAmb	07 30 18.6	
	comp=Z,2.9nm,1.1s						
IMAR	Indian Mountai	72.75	357	P	P	07 29 57.4	+0.2
DAWY	Dawson	73.48	350	P	P	07 30 02.0	+0.4
DAWY				IAmb	IAmb	07 30 23.1	
	comp=Z,5.7nm,1.4s						
MDJ	Mudanjiang	73.92	44	P	P	07 30 04.8	+0.4
DAV	Davao City (W)	97.26	74	LR	LR	08 24 31.3	
	comp=Z,50nm,18.4s,baz=35,slow=41						

NEIC ***01*** *07:19:06.9±0.8,2°.1S±0°.1×67°.68E±0°.04,h10^{km}±2^{km}, mb4.3/9,Error ellipse: s-maj=19.3km s-min=7.4km az=183.0*

IDC ***01*** *07:19:08.9±4.0,1°.69S×67°.47E,h0^{km},mb4.0/5, mbtmp4.0/5,MS3.0/4,Error ellipse: s-maj=102.6km s-min=38.7km az=64.0*

ISC 01 07:19:06.5±0.9,**2°.2S**±0°.1×**67°.6E**±0°.1,**h10**^{km}**,n22, σ1^{s}.28**/15,**mb4.3**/9,**MS3.2**/3,**Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAAM	Kaadhehdhoo	5.97	64	Pn	Pn	07 20 34.0	-0.9
DGAR	Diego Garcia	7.08	138	Pn	Pn	07 20 50.4	+0.1
PALK	Pallekele	16.05	54	LR	LR	07 27 21.9	
	comp=Z,52nm,21.7s,baz=246,slow=31						
KIBK	Kibwezi	29.57	269	P	P	07 25 11.7	-0.3
KIBK				IAmb	IAmb	07 25 41.3	
	comp=Z,5.6nm,1.1s						
NIL	Nilore	36.01	8	P	P	07 26 07.2	-0.7
NIL				IAmb	IAmb	07 26 13.4	
	comp=Z,3.4nm,0.7s						
MYKOM	Kota Tinggi	36.41	84	P	P	07 26 11.3	-0.4
MBAR	Mbarara	36.92	272	P	P	07 26 16.4	+0.2
MBAR				IAmb	IAmb	07 26 17.2	
	comp=Z,5.9nm,1.1s						
CMAR	Chiang Mai Arr	37.00	55	P	P	07 26 19.2	+2.7
	comp=Z,0.7nm,0.3s,baz=236,slow=7.4,SNR=4.5						
CMAR				LR	LR	07 40 08.3	
	comp=Z,11nm,19.3s,baz=130,slow=34						
	comp=Z,0.7nm,0.3s						
LSA	Lhasa	38.85	34	P	P	07 26 32.9	+0.3
LSA				IAmb	IAmb	07 26 57.6	
	comp=Z,6.1nm,0.4s						
H04N2	CROZET ISLANDS	45.97	195	T	T	08 17 31.0	
	baz=22,slow=75,SNR=9.6						
H04N1	CROZET ISLANDS	45.97	195	T	T	08 17 31.3	
	baz=22,slow=75,SNR=7.7						
H04N3	CROZET ISLANDS	45.98	195	T	T	08 17 25.0	
	baz=22,slow=75,SNR=7.8						
LBTB	Lobatse	46.44	237	LR	LR	07 44 57.5	
	comp=Z,28nm,19.1s,baz=356,slow=33						
BOSA	Boshof	48.18	233	LR	LR	07 44 56.0	
	comp=Z,32nm,20.0s,baz=26,slow=32						
KURBB	Kurchatov Arra	53.40	9	P	P	07 28 27.2	+0.9
	comp=Z,0.9nm,0.2s,baz=209,slow=7.3,SNR=3.6						
	comp=Z,0.9nm,0.2s						
KURK	Kurchatov	53.51	9	P	P	07 28 26.4	-0.6
ZALV	Zalesovo Beam	57.72	12	P	P	07 28 57.6	+0.3
	comp=Z,0.5nm,0.5s,baz=199,slow=8.5,SNR=2.4						
	comp=Z,0.5nm,0.5s						
SONM	Songino Array	60.17	29	P	P	07 29 16.9	+2.2
	comp=Z,1.6nm,0.9s,baz=232,slow=7.5,SNR=6.5						
	comp=Z,1.6nm,0.9s						
SONM	Songino Array	60.17	29	P	P	07 29 13.9	-0.7
SONM				IAmb	IAmb	07 29 18.1	
	comp=Z,2.2nm,1.1s						
TLY	Talaya	61.70	25	P	P	07 29 23.5	-1.3
WRA	Warramunga Arr	67.38	111	P	P	07 30 08.8	+6.2
	comp=Z,0.9nm,0.8s,baz=278,slow=6.4,SNR=5.3						
	comp=Z,0.9nm,0.8s						
WRA	Warramunga Arr	67.38	111	P	P	07 30 01.2	-1.5

IDC 01 07:28:27.8±2.3,**1°.61N**×**126°.70E,h0**^{km}**,mb3.4**/3, **mbtmp3.4**/3,**Error ellipse: s-maj=187.1km s-min=28.4km az=66.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.69	161	P	P	07 33 30.4	-0.7
	1.1nm,0.7s,baz=340,slow=10,SNR=9.1						
	1.1nm,0.7s						
ASAR	Alice Springs	26.08	165	P	P	07 34 03.9	+0.5
	0.2nm,0.4s,baz=343,slow=11,SNR=4.5						
	0.2nm,0.4s						
MKAR	Makanchi Array	59.28	326	P	P	07 38 31.3	+0.1
	0.3nm,0.5s,baz=114,slow=8.2,SNR=2.3						
	0.3nm,0.5s						

GCG ***01*** *07:37:58.1±0.7,14°.01N×91°.10W,h75^{km}±6^{km},MD4.0, ML3.8*

CATAC ***01*** *07:37:58.3±0.7,14°N±4°×9°1W±°,h31^{km}±6^{km},M3.2/10, MLv3.2/10,Error ellipse: s-maj=10.0km s-min=3.1km az=28.0,confirmed*

ISC 01 07:38:00.1±1.4,**14°.1N**±0°.1×**90°.97W**±0°.06,**h73**^{km}**,n23,** σ1^{s}.**83**/27,**Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESSG	Sabana Grande	0.34	24	iP	Pn	07 38 11.2	-0.9
ESSG				eS	Sn	07 38 21.3	+0.6
FG16	Alotenango, Sa	0.49	66	eP	Pn	07 38 12.0	-1.3
FG16				IAML		07 38 25.9	
	comp=N,8µm,0.2s						
STG5	El Palmar, Qui	0.49	312	eP	Pn	07 38 15.2	+1.9
STG8	El Palmar, Qui	0.53	316	eP	Pn	07 38 15.9	+2.2
STG8				eS	Sn	07 38 29.6	+5.8
STG2	El Palmar, Qui	0.53	313	eP	Pn	07 38 16.0	+2.3
PCG5	San Vicente Pa	0.59	76	iP	Pn	07 38 12.6	-1.7
PCG5				eS	Sn	07 38 24.2	-0.6
RTAL	Retalhuleu	0.83	303	P	Pn	07 38 14.9	-1.9
RTAL	Retalhuleu	0.83	303	S	Sn	07 38 27.3	-1.8
SOKI	Kika Raxquin	0.85	331	iP	Pn	07 38 16.6	-0.9
FAME	Alcaldia de Sa	0.96	104	P	Pn	07 38 17.5	-0.8
FAME	Alcaldia de Sa	0.96	104	S	Sn	07 38 32.3	+0.5
APG	El Apazote	1.05	28	iP	Pn	07 38 19.8	+0.2
NUBE	Las Nubes	1.17	98	iP	Pn	07 38 20.6	-0.5
NUBE	Las Nubes	1.17	98	P	Pn	07 38 20.6	-0.5
NUBE	Las Nubes	1.17	98	S	Sn	07 38 37.3	+0.6
SMCA	Catarina	1.32	306	iP	Pn	07 38 20.9	-2.0
SMCA				eS	Sn	07 38 37.4	-2.6
CEVE	Cerro Verde	1.33	100	P	Pn	07 38 23.2	0.0
CEVE	Cerro Verde	1.33	100	S	Sn	07 38 42.6	+2.0
JAYA	Jayaque - finc	1.54	106	iP	Pn	07 38 25.3	-0.6
JAYA	Jayaque - finc	1.54	106	P	Pn	07 38 25.3	-0.6
JAYA	Jayaque - finc	1.54	106	S	Sn	07 38 45.1	-0.1
PMON	Piamonte	1.65	102	P	Pn	07 38 27.2	-0.1
PMON	Piamonte	1.65	102	S	Sn	07 38 49.1	+1.3

DRS ***01*** *07:51:31.1,42°.93N×45°.79E,h6^{km}*

NORS ***01*** *07:51:31.5,42°.97N×45°.77E,h20^{km},MPVA3.9*

MOS ***01*** *07:51:31.1,42°.98N×45°.75E,h20^{km},MPVA3.8*

ISC 01 07:51:32.5±0.8,**42°.99N**±0°.02×**45°.77E**±0°.01,**h19**^{km}±2^{km}, **n75,**σ1^{s}.**22**/146,**4C-4D,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GROC	Groznyy	0.21	6	ePg	Pb	07 51 37.6	+0.2
GROC				eSg	Sg	07 51 42.4	+1.1
GROC	Groznyy	0.21	6	⇓iPG	Pb	07 51 38.0	+0.6
GROC				eS	Sg	07 51 42.8	+1.5
DVE	Vedeno	0.27	97	ePg	Pg	07 51 37.7	-0.9
DVE				eSg	Sg	07 51 43.1	+0.3
DVE	Vedeno	0.27	97	⇓iPG	Pg	07 51 37.7	-0.9
DVE				eS	Sb	07 51 43.4	+0.7
BTLR	Botlikh	0.47	134	ePg	Pg	07 51 41.2	-0.9
BTLR				eSg	Sg	07 51 48.8	+0.3
BTLR	Botlikh	0.47	134	ePG	Pb	07 51 42.6	+0.3
BTLR				eS	Sb	07 51 49.8	+0.9
DLMR	Dylym	0.64	83	ePg	Pb	07 51 45.5	+0.4
DLMR				eSg	Sn	07 51 55.8	-0.5
DLMR	Dylym	0.64	83	ePG	Pb	07 51 45.5	+0.4
DLMR				eS	Sn	07 51 55.8	-0.5
KMGR	Komgaron	0.66	276	ePg	Pg	07 51 45.9	+0.2
KMGR				eSg	Sg	07 51 55.8	+1.2
KMGR	Komgaron	0.66	276	ePG	Pg	07 51 45.9	+0.2
KMGR				eS	Sg	07 51 55.8	+1.2
VLKR	Vladikavkaz	0.80	274	ePg	Pb	07 51 46.9	-1.0
VLKR				eSg	Sg	07 51 59.6	+0.7
VLKR	Vladikavkaz	0.80	274	ePG	Pb	07 51 46.9	-1.0
VLKR				eS	Sg	07 51 59.6	+0.7
UNCR	Uncukul	0.81	110	ePg	Pb	07 51 48.5	+0.5
UNCR				eSg	Sn	07 52 01.2	+0.7
UNCR	Uncukul	0.81	110	ePG	Pb	07 51 48.5	+0.5
UNCR				eS	Sn	07 52 01.2	+0.7
HNZR	Khunzah	0.82	121	ePG	Pb	07 51 48.7	+0.3
HNZR				eS	Sn	07 52 01.4	+0.3
HNZR				pmax	pmax		
	comp=Z,40nm,0.3s						
XNZR	Khunzakh	0.82	123	ePg	Pb	07 51 48.7	+0.3
XNZR				eSg	Sn	07 52 01.4	+0.3
KRNR	Karanay	0.85	101	ePg	Pb	07 51 49.4	+0.6
KRNR				eSg	Sn	07 52 02.7	+0.9
KRNR	Karanay	0.85	101	ePG	Pb	07 51 49.4	+0.6
KRNR				eS	Sn	07 52 02.7	+0.9
BTKR	Batakoyurt	0.97	293	ePg	Pb	07 51 50.4	-0.5
BTKR				eSg	Sn	07 52 05.4	+0.8
BTKR	Batakoyurt	0.97	293	ePG	Pb	07 51 50.4	-0.5
BTKR				eS	Sn	07 52 05.4	+0.8
ARKR	Arakani	0.98	113	ePg	Pb	07 51 51.2	+0.2
ARKR				eSg	Sn	07 52 06.5	+1.6
ARKR	Arakani	0.98	113	ePG	Pb	07 51 51.2	+0.2
ARKR				eS	Sn	07 52 06.5	+1.6
TLTR	Tlyarata	0.98	154	ePg	Pb	07 51 50.6	-0.6

TLTR				eSg	Sg	07 52 04.9	+0.1
TLTR	Tlyarata	0.98	154	ePG	Pb	07 51 50.5	-0.6
TLTR				eS	Sg	07 52 04.8	+0.1
TLTR				pmax	pmax		
	comp=Z,63nm,0.2s						
BUJR	Buynaksk	1.00	99	ePg	Pb	07 51 51.5	+0.2
BUJR				eSg	Sn	07 52 06.9	+1.7
BUJR	Buynaksk	1.00	99	ePG	Pb	07 51 51.5	+0.2
BUJR				eS	Sn	07 52 06.9	+1.7
TRKR	Terskaya	1.05	314	ePg	Pg	07 51 53.1	+0.2
TRKR				eSg	Sg	07 52 08.1	+1.3
TRKR	Terskaya	1.05	314	ePG	Pg	07 51 53.1	+0.2
TRKR				eS	Sg	07 52 08.1	+1.3
LACR	Lac	1.09	262	iPg	Pb	07 51 52.1	-0.8
LACR				eSg	Sb	07 52 06.5	-0.4
LACR	Lac	1.09	262	ePG	Pb	07 51 52.1	-0.8
LACR				eS	Sb	07 52 07.1	+0.2
ARNR	Ardon	1.10	280	ePg	Pg	07 51 54.0	+0.1
ARNR				eSg	Sg	07 52 09.9	+1.5
ARNR	Ardon	1.10	280	ePG	Pg	07 51 54.0	+0.1
ARNR				eS	Sg	07 52 09.9	+1.5
KORR	Kora	1.25	275	ePg	Pg	07 51 56.9	+0.2
KORR				eSg	Sg	07 52 13.6	+0.5
KORR	Kora	1.25	275	ePG	Pb	07 51 56.2	+0.6
KORR				eS	Sg	07 52 13.6	+0.5
MAK	Makhachkala	1.28	91	ePg	Pn	07 51 56.1	+0.8
MAK				eSg	Sg	07 52 13.5	-0.4
MAK	Makhachkala	1.28	91	ePG	Pn	07 51 56.1	+0.8
MAK				eS	Sg	07 52 13.5	-0.4
STDR	Stavd-Durt	1.30	287	ePg	Pb	07 51 56.9	+0.5
STDR				eSg	Sg	07 52 14.8	+0.1
STDR	Stavd-Durt	1.30	287	ePG	Pb	07 51 56.9	+0.5
STDR				eS	Sg	07 52 14.8	+0.1
KMKR	Kumukh	1.31	131	ePg	Pb	07 51 57.0	+0.4
KMKR				eSg	Sg	07 52 15.9	+1.0
KMKR	Kumukh	1.31	131	ePG	Pb	07 51 57.0	+0.4
KMKR				eS	Sg	07 52 15.9	+1.0
KMKR				pmax	pmax		
	comp=Z,79nm,0.2s						
PRTR	Priterechnaya	1.32	306	iPg	Pb	07 51 57.2	+0.4
PRTR				eSg	Sg	07 52 15.8	+0.5
PRTR	Priterechnaya	1.32	306	⇑iPG	Pb	07 51 57.2	+0.4
PRTR				eS	Sg	07 52 16.7	+1.3
LSNR	Lesken	1.45	282	ePg	Pb	07 51 59.1	+0.1
LSNR				eSg	Sg	07 52 19.0	-0.4
LSNR	Lesken	1.45	282	ePG	Pb	07 51 59.1	+0.1
LSNR				eS	Sg	07 52 19.0	-0.4
SGKR	Sergokala	1.49	110	ePg	Pb	07 51 59.8	+0.1
SGKR				eSg	Sg	07 52 21.4	+0.7
SGKR	Sergokala	1.49	110	ePG	Pb	07 51 59.8	+0.1
SGKR				eS	Sg	07 52 21.4	+0.7
SGKR				pmax	pmax		
	comp=Z,3.0nm,0.1s						
URKR	Urkarakh	1.61	120	ePN	Pn	07 52 01.2	+1.1
URKR				eS	Sg	07 52 23.8	-0.6
URKR				pmax	pmax		
	comp=Z,29nm,0.2s						
DIGR	Digorskoe uzhe	1.61	267	ePg	Pn	07 52 00.1	0.0
DIGR				eSg	Sb	07 52 21.6	-0.2
DIGR	Digorskoe uzhe	1.61	267	ePG	Pn	07 52 00.2	0.0
DIGR				eS	Sb	07 52 21.6	-0.2
NCK	Nalchik	1.67	288	ePg	Pn	07 52 01.4	+0.6
NCK				eSg	Sb	07 52 24.9	+1.7
NCK	Nalchik	1.67	288	ePN	Pn	07 52 01.4	+0.6
NCK				eS	Sb	07 52 24.9	+1.7
KBTC	Kuba-Taba	1.91	296	ePg	Pn	07 52 05.4	+1.3
KBTC				iSg	Sb	07 52 30.9	+0.7
KBTC	Kuba-Taba	1.91	296	ePN	Pn	07 52 05.4	+1.3
KBTC				iS	Sb	07 52 31.0	+0.7
AKT	Akhty	2.10	135	ePg	Pb	07 52 10.5	+0.4
AKT				eSg	Sb	07 52 36.1	+0.3
AKT	Akhty	2.10	135	ePN	Pb	07 52 10.7	+0.6
AKT				e		07 52 14.6	
AKT				e		07 52 15.2	
AKT				eS	Sg	07 52 40.6	+0.5
AKT				e		07 52 46.0	
AKT				pmax	pmax		
	comp=Z,16nm,0.2s						
AKT				smax	smax		
	comp=N,71nm,0.3s						
AKT				smax	smax		
	comp=N,55nm,0.3s						
AKT				smax	smax		
	comp=E,62nm,0.3s						
PYA1	Pyatigorsk	2.22	300	ePN	Pn	07 52 08.1	-0.3
PYA1				eS	Sb	07 52 38.5	-0.7
KBZ	Khabaz	2.22	290	iPg	Pn	07 52 09.5	+1.2
KBZ				eSg	Sb	07 52 37.6	-1.5
KBZ	Khabaz	2.22	290	iPN	Pn	07 52 09.5	+1.2
KBZ				eS	Sb	07 52 37.6	-1.5
KSMR	Kasumkent	2.23	128	ePn	Pb	07 52 13.0	+0.6
KSMR				eSn	Sb	07 52 40.9	+1.2
KSMR	Kasumkent	2.23	128	ePN	Pb	07 52 13.0	+0.6
KSMR				eS	Sb	07 52 40.9	+1.2
BEYR	Belyy Ugol+	2.38	296	ePN	Pn	07 52 12.5	+1.9
BEYR				eS	Sb	07 52 42.8	-1.0
SHA1	Shidzhatmaz	2.39	289	ePn	Pn	07 52 10.4	-0.5
SHA1				eSn	Sn	07 52 41.4	+1.6
SHA1	Shidzhatmaz	2.39	289	iPN	Pn	07 52 10.8	-0.1
KIV0	Kislovodsk Arr	2.44	294	ePn	Pn	07 52 10.6	-0.9
KIV0				eSn	Sb	07 52 45.0	-0.5
KIV	Kislovodsk	2.44	294	ePn	Pn	07 52 09.4	-2.1
KIV				eSn	Sb	07 52 43.7	-2.0
KIV	Kislovodsk	2.44	294	ePN	Pn	07 52 10.6	-0.9
KIV				eS	Sb	07 52 45.0	-0.7
ALER	Alexandrovskoy	2.72	312	ePN	Pn	07 52 15.3	0.0
ALER				eS	Sn	07 52 49.4	+1.7
GOF	Gofitskoye	2.85	317	cePN	Pb	07 52 22.3	-0.5
GOF				eS	Sg	07 53 05.8	+1.6
GNI	Garni	2.94	196	ePN	Pb	07 52 24.0	-0.5
GNI				eS	Sn	07 52 56.7	+3.3
AKTO	Aktyubinsk	11.22	44	⇑Pn	Pn	07 54 14.1	+2.3
	comp=E,1.0nm,0.8s						
AKTO				⇓Sn	Sn	07 56 10.1	-6.5
	comp=E,0.8nm,0.8s						
AKTO	Aktyubinsk	11.22	44	P	Pn	07 54 14.1	+2.3
AB31	Akbulak array	11.65	53	Pn	Pn	07 54 18.8	+1.0
	comp=E,0.2nm,0.5s,baz=239,slow=12,SNR=8.3						
AB31				⇑Sn	Sn	07 56 23.1	-4.2
	comp=E,0.5nm,0.5s,baz=244,slow=23,SNR=5.0						
AB31	Akbulak array	11.65	53	P	Pn	07 54 18.8	+1.0
AB31				S	Sn	07 56 23.1	-4.2
TNR	Turnu Rosu	15.61	287	⇓P	Pn	07 55 08.5	-2.9
KURK	Kurchatov	23.61	59	iP	P	07 56 43.3	+1.2

*PDG **01** 07:52:39.8±0.2, 41°.51N×19°.44E, h1^{km}±1^{km}, MD3.0/2, ML3.0/13, Error ellipse: s-maj=0.4km s-min=1.2km az=0.0*
*SKO **01** 07:52:42.2, 41°.54N×19°.44E, h0^{km}, ML2.8*
*TIR **01** 07:52:42.5, 41°.56N×19°.57E, h26^{km}±2^{km}, Ml2.9/3*
*BEO **01** 07:52:42.9±0.6, 41°.54N×19°.51E, h12^{km}±2^{km}, ML2.7/8*
ISC 01 07:52:41.7±1.1, **41°.55N**±0°.02×**19°.49E**±0°.02, **h5**^{km}±9^{km}, **n61**, σ**1^{s}26**/103, **2C-5D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.35	126	Pg	Pg	07 52 48.1	-0.4
TIR				Sg	Sg	07 52 53.0	-0.1
TIR				AML	AML	07 52 53.3	
	6.2nm,0.2s						
TIR	Tirane	0.35	126	iPg	Pg	07 52 48.3	-0.2
TIR				iSg	Sg	07 52 53.7	+0.6
ULC	Ulcinj	0.45	336	ePg	Pg	07 52 48.6	-1.8
ULC				iSg	Sg	07 52 56.1	-0.1
SDA	Shkodra	0.50	1	Pg	Pg	07 52 51.9	+0.6
SDA				Sg	Sb	07 53 00.2	-0.3
SDA				AML	AML	07 53 04.0	
	11µm,0.2s						
DRME	Dracevica, Mon	0.67	341	⇓iPg	Pg	07 52 52.7	-1.9
DRME				eSg	Sg	07 53 03.8	+0.4
PHP	Peshkopia	0.73	79	Pg	Pg	07 52 54.3	-1.4
PHP				Sg	Sg	07 53 05.0	-0.1
PHP				AML	AML	07 53 09.9	
	2.0nm,0.3s						
BUM	Brajici-Budva	0.87	330	ePg	Pg	07 52 56.2	-2.2
BUM				iSg	Sg	07 53 10.2	+0.6
PDG	Podgorica	0.89	349	Pg	Pg	07 53 00.1	+1.3
PDG				Sg	Sb	07 53 12.9	+1.0
PDG	Podgorica	0.89	349	⇓P	Pg	07 52 58.6	-0.3
PDG	Podgorica	0.89	349	ePg	Pg	07 52 58.3	-0.5
PDG				eSg	Sb	07 53 13.2	+1.3
PDG	Podgorica	0.89	349	ePg	Pg	07 52 57.0	-1.8
PDG				iSg	Sg	07 53 11.5	+1.1
CEME	Cevo	1.08	337	ePg	Pb	07 53 00.2	-2.7
CEME				eSg	Sb	07 53 17.6	+0.3
OHR	Ohrid	1.08	114	iPg	Pb	07 53 02.7	-0.2
OHR				iSg	Sn	07 53 18.0	-0.9
OHR				eLg	Lg	07 53 18.6	
	comp=N,344nm,1.0s						
OHR				eLg	Lg	07 53 21.2	
	comp=E,276nm,0.6s						
VLO	Vlora	1.08	180	Pg	Pg	07 53 03.1	+0.7
VLO				Sg	Sg	07 53 17.2	+0.8
PVY	Plav	1.10	19	ePg	Pb	07 53 01.0	-2.2
PVY				iSg	Sn	07 53 19.1	-0.4
HCY	Herceg Novi	1.16	321	ePg	Pn	07 53 01.4	-3.2
HCY				iSg	Sb	07 53 20.0	+0.5
NKME	Niksic	1.28	342	ePg	Pn	07 53 03.9	-2.3
NKME				eSg	Sg	07 53 24.5	+1.8
KOME	Kolasin	1.30	1	ePg	Pn	07 53 04.5	-2.0
KOME				eSg	Sg	07 53 25.7	+2.3
IVA	Berane	1.35	13	ePg	Pn	07 53 05.5	-1.8
IVA				iSg	Sg	07 53 27.7	+2.5
KBN	Korca	1.35	133	Pg	Pn	07 53 07.0	-0.3
KBN				Sg	Sg	07 53 25.1	-0.1
TREB	Trebinje	1.44	324	ePg	Pn	07 53 09.2	+0.8
TREB				eSg	Sg	07 53 28.9	+1.0
DBRK	Dubrovnik	1.50	319	ePn	Pb	07 53 10.5	+0.5
DBRK				Sg	Sb	07 53 30.0	+0.8
BRY	Bratogost	1.52	333	ePg	Pn	07 53 08.2	-1.4
BRY				iSg	Sg	07 53 32.5	+1.9
SKO	Skopje	1.52	73	iPg	Pb	07 53 10.2	-0.2
SKO				iSg	Sg	07 53 31.4	+0.8
UPM	Unac-Piva	1.71	346	ePn	Pn	07 53 11.8	-0.4
UPM				iSn	Sg	07 53 37.9	+1.4
SJES	Sjenica	1.75	12	ePn	Pn	07 53 12.3	-0.4
SJES				eSg	Sg	07 53 38.0	+0.2
PLE	Pljevlja	1.78	358	ePn	Pn	07 53 13.3	+0.1
PLE				iSn	Sg	07 53 40.0	+1.2
STON	Ston	1.87	315	ePn	Pn	07 53 14.7	+0.4
STON				Sn	Sn	07 53 38.7	+0.5
STON	Ston	1.87	315	ePn	Pn	07 53 13.6	-0.7
STON				eSn	Sn	07 53 38.7	+0.5
SELS	Selova	2.06	35	ePn	Pn	07 53 17.6	+0.7
SELS				eSn	Sn	07 53 43.6	+0.6
IVAS	Ivanjica	2.08	13	ePn	Pn	07 53 17.8	+0.5
IGT	Igoumenitsa	2.12	162	P	Pn	07 53 17.0	-0.7
IGT				Sg	Sb	07 53 46.9	-0.2
BARS	Barje	2.14	53	iPn	Pn	07 53 18.2	+0.1
BARS				iSn	Sn	07 53 45.8	+0.8
BARS	Barje	2.14	53	ePn	Pn	07 53 18.2	+0.1
BARS				eSn	Sn	07 53 45.1	+0.1
GOCS	Kraljevo Serbi	2.25	27	ePn	Pb	07 53 21.9	-1.0
GOCS				eSn	Sn	07 53 49.2	+1.3
GRG	Griva	2.28	104	iPn	Pn	07 53 19.7	-0.2
GRG				iSn	Sn	07 53 48.7	+0.4
BBLS	Lazi&#263i	2.31	359	ePn	Pn	07 53 21.8	+1.3
VAY	Valandovo	2.33	95	iPn	Pn	07 53 20.5	-0.2
VAY				iSn	Sn	07 53 50.2	+0.6
VAY				eLg	Lg	07 53 51.0	
	comp=E,12nm,0.5s						
VAY				eLg	Lg	07 53 54.4	
	comp=N,114nm,1.5s						
BOSS	Bosilegrad	2.42	66	ePn	Pn	07 53 21.9	0.0
GRUS	Gruza	2.50	21	ePn	Pn	07 53 24.1	+1.1
KNT	Kendrikon	2.60	98	iPn	Pn	07 53 24.2	-0.1
BOVS	Bovan	2.65	37	⇓P	Pb	07 53 30.5	+0.9
BOVS	Bovan	2.65	37	ePn	Pn	07 53 25.4	+0.4
BOVS				eSn	Sn	07 53 57.1	-0.4
KKB	Krupnik	2.74	83	iPn	Pn	07 53 27.4	+1.1
TRUS	Trudelj	2.75	14	ePn	Pn	07 53 28.5	+2.0
THE	Thessaloniki	2.79	108	iPn	Pn	07 53 26.3	-0.6
ZAPS	Zavoj	2.90	53	ePn	Pn	07 53 29.2	+0.7
ZAPS				eSn	Sn	07 54 03.3	-0.4
TEKS	Tekeris	3.00	1	ePn	Pn	07 53 30.9	+1.1
ZAGS	Zajecar	3.03	41	ePn	Pn	07 53 30.9	+0.6
SRS	Serrai	3.12	97	iPn	Pn	07 53 31.1	-0.4
BLKB	Belogradchik	3.13	48	ePn	Pn	07 53 32.6	+0.9
BLKB				eSn	Sn	07 54 09.2	-0.3
BORS2	Bor- Borsko je	3.15	35	ePn	Pn	07 53 31.1	-0.8
BORS2				eSn	Sn	07 54 08.0	-1.8
KUBS	Kucevo	3.28	29	ePn	Pn	07 53 32.3	-1.4
BLY	Banja Luka	3.61	333	⇓P	Pb	07 53 49.2	+3.3
MDVR	Moldovita	3.62	26	ePn	Pn	07 53 38.4	+0.1
MDVR				eSn	Sn	07 54 20.1	-1.3
MORH	Mrgy, Hungar	4.70	353	⇑P	Pb	07 54 04.2	-0.3
SIRR	Siria	4.97	18	ePn	Pn	07 53 58.0	+1.1
SIRR				eSn	Sn	07 54 51.7	-3.0
BOJS	Bojanci	5.01	323	ePn	Pn	07 53 58.1	+0.7
CEY	Cerknica	5.56	320	ePn	Pn	07 54 05.5	+0.4
CEY				eSn	Sn	07 55 08.0	-1.4
MDB	Medias	5.79	36	⇑P	Pb	07 54 20.4	-2.7
MLR	Muntele Rosu	6.13	48	⇓P	Pn	07 54 16.0	+3.1

IDC 01 08:04:45.1±1.7, **19°.81S**×**177°.37W**, **h0**^{km}, **mb3.7**/4, **mbtmp3.7**/4, **Error ellipse: s-maj=44.6km s-min=39.4km az=6.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	45.25	256	P	P	08 13 04.6	0.0
	1.5nm,0.8s,baz=97,slow=7.6,SNR=21						
	1.5nm,0.8s						
WRA	Warramunga Arr	45.28	261	P	P	08 13 04.6	-0.3
	0.4nm,0.5s,baz=99,slow=8.1,SNR=12						
	0.4nm,0.5s						
QSPA	South Pole Qui	70.26	180	P	P	08 16 00.2	+0.2
	0.8nm,0.6s,baz=135,slow=1.4,SNR=8.7						
	0.8nm,0.6s						
ILAR	Eielson Array	87.51	13	P	P	08 17 34.1	-0.1
	0.5nm,1.1s,baz=209,slow=4.8,SNR=1.5						
	0.5nm,1.1s						

*TIR **01** 08:09:02.5, 41°.54N×19°.49E, h24^{km}±4^{km}, Ml2.9/2*
*PDG **01** 08:09:04.5±0.1, 41°.61N×19°.45E, h9^{km}, ML2.5/13, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
ISC 01 08:09:02.9±1.2, **41°.57N**±0°.02×**19°.54E**±0°.03, **h0**^{km}±11^{km}, **n27**, σ**1^{s}27**/46, **6C-6D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.33	132	Pg	Pg	08 09 08.5	-0.7
TIR				AML	AML	08 09 13.5	
	6.2nm,0.2s						
TIR				S	Sg	08 09 13.6	+0.1
ULC	Ulcinj	0.45	331	⇓iPg	Pg	08 09 11.7	+0.1
ULC				iSg	Sg	08 09 17.9	+0.5
SDA	Shkodra	0.48	357	Pg	Pg	08 09 12.6	+0.5
SDA				Sg	Sg	08 09 20.1	+1.6
DRME	Dracevica, Mon	0.67	337	ePg	Pg	08 09 15.8	0.0
DRME				eSg	Sg	08 09 25.4	+0.9
PHP	Peshkopia	0.69	80	P	Pg	08 09 16.0	-0.1
PHP				Sg	Sb	08 09 27.1	-0.7
PHP				AML	AML	08 09 29.1	
	1.8nm,0.4s						
BUM	Brajici-Budva	0.88	327	ePg	Pg	08 09 19.4	-0.3
BUM				iSg	Sg	08 09 32.1	+1.1
PDG	Podgorica	0.89	346	⇑P	Pg	08 09 19.7	-0.2
PDG	Podgorica	0.89	346	ePg	Pg	08 09 19.9	0.0
PDG				iSg	Sb	08 09 33.7	+0.2
PVY	Plav	1.07	17	ePg	Pb	08 09 23.9	-0.5
PVY				iSg	Sn	08 09 40.5	-0.4
CEME	Cevo	1.08	335	ePg	Pg	08 09 23.3	-0.3
CEME				eSg	Sb	08 09 39.3	+0.1
HCY	Herceg Novi	1.17	319	⇓iPg	Pg	08 09 22.4	-3.0
HCY				iSg	Sb	08 09 41.8	0.0
NKME	Niksic	1.27	340	ePg	Pg	08 09 27.0	-0.3
NKME				eSg	Sn	08 09 46.0	+0.2
KOME	Kolasin	1.28	359	ePg	Pg	08 09 27.4	-0.1
KOME				eSg	Sn	08 09 46.9	+0.9
IVA	Berane	1.33	11	ePg	Pn	08 09 28.6	-0.2
IVA				iSg	Sn	08 09 49.1	+1.9
KBN	Korca	1.34	135	Pg	Pb	08 09 28.6	-0.2
KBN				S	Sb	08 09 46.1	-0.4
BRY	Bratogost	1.52	331	⇓iPg	Pn	08 09 31.1	-0.4
BRY				iSg	Sg	08 09 54.2	+2.3
UPM	Unac-Piva	1.70	344	⇓iPn	Pb	08 09 34.8	-0.3
UPM				iSn	Sg	08 09 58.5	+1.0
PLE	Pljevlja	1.76	356	ePn	Pb	08 09 35.5	-0.7
PLE				iSn	Sg	08 09 59.9	+0.3
NOCI	Noci	2.02	248	P	Pb	08 09 39.3	-1.2
NOCI				Sn	Sn	08 10 04.2	+0.1
IGT	Igoumenitsa	2.12	163	P	Pn	08 09 38.8	-0.8
IGT				S	Sn	08 10 07.2	+0.5
BOVS	Bovan	2.61	37	⇓P	Pb	08 09 49.3	-1.3
TIP	Timpagrande	3.19	223	⇑P	Pg	08 10 06.3	+2.2
HERR	Herculane	3.92	31	⇑P	Pn	08 10 03.8	-0.5
BZS	Buzias	4.32	20	⇑P	Pn	08 10 10.4	+0.7
GZR	Gura Zlata	4.49	31	⇓P	Pn	08 10 15.6	+3.4
SURR	Surduc	4.59	23	⇑P	Pg	08 10 30.4	-0.3
MORH	Mrgy, Hungar	4.69	352	⇑P	Pb	08 10 21.6	-4.4

RHSSO 01 08:09:08.0±0.5, **43°.19N**×**18°.06E**, **h8**^{km}, **ML2.0**/3, **1C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STON	Ston	0.41	220	iPg	Pg	08 09 15.7	-0.3
STON				Sg	Sb	08 09 22.6	-1.2
TREB	Trebinje	0.52	155	⇑iPg	Pg	08 09 17.5	-0.5
TREB				eSg	Sg	08 09 25.8	+1.1
DBRK	Dubrovnik	0.52	173	Sg	Sb	08 09 26.1	-1.0
DBRK	Dubrovnik	0.52	173	iPg	Pg	08 09 18.3	+0.2
MAKA	Makarska	0.77	278	ePg	Pg	08 09 21.5	-1.2
MAKA				Sg	Sg	08 09 33.2	+0.5
LSTV	Lastovo	0.95	244	Sg	Sb	08 09 39.4	-0.1
LSTV	Lastovo	0.95	244	ePg	Pg	08 09 25.5	-0.8
RUDO	Rudo	1.05	65	ePg	Pg	08 09 26.6	-1.5
RUDO				eSg	Sg	08 09 41.3	-0.5
HVAR	Hvar	1.18	270	ePg	Pb	08 09 29.5	-1.1
HVAR				Sg	Sb	08 09 46.1	+0.1
KIJV	Kijevo	1.45	305	ePn	Pn	08 09 34.4	-0.2
KIJV				Sg	Sg	08 09 54.6	-0.1
BLY	Banja Luka	1.68	338	ePn	Pn	08 09 37.6	-0.1
BLY				eSn	Sn	08 09 59.9	+0.4
ZIRJ	Zirje	1.82	286	ePn	Pn	08 09 40.2	+0.6
ZIRJ				Sn	Sb	08 10 04.3	-0.2
MORI	Morici	1.84	292	iPn	Pn	08 09 40.6	+0.7
MORI				Sn	Sb	08 10 04.6	-0.5

*CATAC **01** 08:22:02.0±0.6, 14°N±4°×9°2W±°, h25^{km}±5^{km}, M3.5/15, MLv3.5/15, Error ellipse: s-maj=9.5km s-min=7.3km az=72.2, confirmed*
*MEX **01** 08:22:02.0±1.0, 14°.25N×92°.12W, h52^{km}±15^{km}, MD4.0*
*GCG **01** 08:22:02.3±1.0, 14°.31N×91°.95W, h31^{km}±3^{km}, MD4.2, ML4.0*
*SNET **01** 08:22:03.0±1.1, 14°.33N×91°.94W, h54^{km}±7^{km}, ML3.6*
ISC 01 08:21:59.0±1.5, **14°.18N**±0°.06×**92°.13W**±0°.04, **h28**^{km}±13^{km}, **n65**, σ**2^{s}06**/88, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	Retalhuleu	0.55	51	eP	Pn	08 22 12.2	+1.3
RTAL				eS	Sn	08 22 20.4	+1.2
RTAL	Retalhuleu	0.55	51	eP	Pn	08 22 12.1	+1.1
RTAL				eS	Sn	08 22 19.3	+0.1
RTAL	Retalhuleu	0.55	51	P	Pn	08 22 12.0	+1.1
SMCA	Catarina	0.68	5	iP	Pb	08 22 13.2	+1.0
THIG		0.74	350	iP	Pb	08 22 14.5	+1.3
THIG				eS	Sn	08 22 24.9	+1.0
THIG		0.74	350	iP	Pb	08 22 14.5	+1.3
THIG				iS	Sn	08 22 24.8	+1.0
STG2	El Palmar, Qui	0.78	71	iP	Pb	08 22 13.9	-0.1
STG5	El Palmar, Qui	0.79	73	iP	Pb	08 22 13.7	-0.6
STG8	El Palmar, Qui	0.80	70	iP	Pb	08 22 14.3	-0.2
STG8				iS	Sn	08 22 24.1	-1.7
CHUJ	Union Juarez	0.91	1	eP	Pb	08 22 15.6	-0.8
CHUJ				eS	Sn	08 22 27.3	-1.2
QUEO	Labor Ovalle	0.91	41	eP	Pn	08 22 16.5	+0.3
QUEO				iS	Sn	08 22 27.9	-0.7
QUEO				IAML		08 22 29.2	
	comp=E,3µm,0.1s						
PATR	El Naranjo	0.94	354	eP	Pb	08 22 16.0	-0.8
PATR				eS	Sb	08 22 27.8	-1.1
SOKI	Kika Raxquin	0.95	48	eP	Pn	08 22 17.3	+0.4
SOKI				eS	Sn	08 22 29.3	-0.5
PAVE	Pavencul	1.01	358	eP	Pb	08 22 17.1	-0.9
PAVE				eS	Sb	08 22 29.6	-1.4
ESSG	Sabana Grande	1.28	81	iP	Pn	08 22 21.8	+0.8
ESSG				eS	Sn	08 22 35.4	-1.9
ESSG				IAML		08 22 37.7	
	comp=N,1µm,0.3s						
HUEH	Huehuetenango	1.29	28	eP	Pb	08 22 22.2	-0.5
HUEH				eS	Sb	08 22 38.2	-0.7
HUEH	Huehuetenango	1.29	28	eP	Pb	08 22 22.0	-0.6
HUEH				eS	Sb	08 22 38.3	-0.7
HUEH	Huehuetenango	1.29	28	iP	Pb	08 22 22.3	-0.4
HUEH				eS	Sb	08 22 38.2	-0.7
HUEH	Huehuetenango	1.29	28	P	Pb	08 22 22.3	-0.4
QUIS	Sacapulas	1.50	42	eP	Pb	08 22 25.2	-1.0
FG16	Alotenango, Sa	1.57	86	iP	Pn	08 22 21.6	-3.7
FG16				iS	Sn	08 22 37.0	-7.8
FG16				IAML		08 22 41.1	
	comp=E,9µm,0.2s						
PCG5	San Vicente Pa	1.70	89	iP	Pn	08 22 24.7	-2.3
APG	El Apazote	1.81	63	iP	Pn	08 22 29.3	+0.8
PCIG		1.85	325	eP	Pn	08 22 29.3	+0.5
PCIG				eS	Sn	08 22 45.3	-6.0
FAME	Alcaldia de Sa	2.08	99	P	Pn	08 22 33.1	+1.0
CCIG	Comitan	2.09	360	eP	Pn	08 22 34.1	+1.8
CCIG				eS	Sn	08 22 56.0	-1.7
CCIG	Comitan	2.09	360	eP	Pn	08 22 34.2	+1.8
SLOZ	Alcaldia de Sa	2.28	94	S	Sn	08 23 00.7	-1.4
NUBE	Las Nubes	2.30	97	eP	Pn	08 22 36.6	+1.4
NUBE				eS	Sn	08 23 02.1	-0.6
NUBE	Las Nubes	2.30	97	eP	Pn	08 22 36.6	+1.4
NUBE	Las Nubes	2.30	97	P	Pn	08 22 36.9	+1.7
NUBE	Las Nubes	2.30	97	S	Sn	08 23 01.7	-1.0
RTR	El Retiro	2.43	96	eP	Pn	08 22 39.3	+2.3
CEVE	Cerro Verde	2.46	98	eP	Pn	08 22 39.8	+2.3
CEVE				IAML		08 23 20.1	
	comp=Z,428nm,0.3s						
CEVE	Cerro Verde	2.46	98	P	Pn	08 22 40.1	+2.6
CEVE	Cerro Verde	2.46	98	S	Sn	08 23 09.9	+3.2
SBLS	San Blas	2.46	98	eP	Pn	08 22 39.4	+1.9
SNJE	San Jose	2.47	97	eP	Pn	08 22 39.9	+2.3
UNIC	Universidad Ca	2.51	94	P	Pn	08 22 40.1	+2.0
JAYA	Jayaque - finc	2.66	101	eP	Pn	08 22 41.4	+1.2
JAYA				IAML		08 23 14.7	
	comp=Z,255nm,0.2s						
JAYA	Jayaque - finc	2.66	101	eP	Pn	08 22 41.6	+1.4
JAYA	Jayaque - finc	2.66	101	P	Pn	08 22 41.9	+1.8
JAYA	Jayaque - finc	2.66	101	S	Sn	08 23 12.6	+1.0
MTO3	Montecristo	2.69	85	P	Pn	08 22 41.8	+1.1
TGIG		2.76	340	eP	Pn	08 22 45.3	+3.9
TGIG				eS	Sn	08 23 12.1	-1.7
PMON	Piamonte	2.77	99	eP	Pn	08 22 43.8	+2.0
PMON				eS	Sn	08 23 15.5	+1.1
PMON	Piamonte	2.77	99	P	Pn	08 22 44.0	+2.3
PMON	Piamonte	2.77	99	S	Sn	08 23 17.2	+2.8
LOMA	Loma Larga	2.92	100	eP	Pn	08 22 45.4	+1.6
LOMA	Loma Larga	2.92	100	P	Pn	08 22 45.7	+1.9
LOMA	Loma Larga	2.92	100	S	Sn	08 23 20.5	+2.4
PAVA	Las Pavas	3.13	98	eP	Pn	08 22 48.5	+1.8
PAVA	Las Pavas	3.13	98	P	Pn	08 22 50.3	+3.6
TECO	Alcaldia de Te	3.32	101	eP	Pn	08 22 51.7	+2.6
TECO				eS	Sn	08 23 28.3	+0.7
TECO	Alcaldia de Te	3.32	101	P	Pn	08 22 50.9	+1.8
SCLA	Alcaldia de Sa	3.34	98	P	Pn	08 22 51.2	+1.8
TECA	Tecapa	3.59	100	eP	Pn	08 22 55.3	+2.3
UXUV	UXUV	3.67	328	eP	Pn	08 22 55.3	+1.3
UXUV				eS	Sn	08 23 36.8	+0.3
RANC	El Ranchito	3.81	101	eP	Pn	08 22 58.5	+2.6
CMIG	Matias Romero	3.93	318	eP	Pn	08 22 58.7	+1.2
CMIG				eS	Sn	08 23 41.9	-0.8
HUIG	Huatulco	4.16	293	eP	Pn	08 23 01.1	+0.4
HUIG				eS	Sn	08 23 39.8	-8.5
NEUV	Arroyo Zacate	4.98	315	eP	Pn	08 23 12.7	+0.8
NEUV				eS	Sn	08 24 03.2	-5.4
TOIG	Toxpalan	6.13	310	eP	Pn	08 23 30.1	+2.1
TOIG				eS	Sn	08 24 33.5	-3.8
HLIG	Huajuapan de L	6.55	304	eP	Pn	08 23 37.8	+4.0
HLIG				eS	Sn	08 24 36.3	-11
FTIG	Fresnillo de T	6.86	304	eP	Pn	08 23 40.8	+2.9
FTIG				eS	Sn	08 24 51.7	-3.5

*NEIC **01** 08:27:10.7±0.3, 19°.62N±0°.09×64°.6W±0°.1, h10^{km}±2^{km},* *ML2.5/12,Md3.5/9(RSPR),Error ellipse: s-maj=19.4km s-min=14.7km az=116.0*

RSPR 01 08:27:13.2,19°.70N×64°.52W,h30km±29km,MD3.5/9, 5C-4D,Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUMP	Col San Antoni	1.99	219		Pn	08 27 43.1	-1.8
HUMP					Sn	08 28 06.7	-2.1
HUMP	Col San Antoni	1.99	219	⇑eP	Pn	08 27 43.7	-1.2
HUMP	Col San Antoni	1.99	219	eS	Sn	08 28 07.0	-1.9
GCPR	Guaynabo City	2.02	227		Pn	08 27 43.2	-2.1
GCPR					Sn	08 28 07.6	-2.0
GCPR				IAML		08 28 15.5	
	comp=N,29nm,2.6s						
GCPR	Guaynabo City	2.02	227	⇓eP	Pn	08 27 46.3	+1.0
GCPR	Guaynabo City	2.02	227	eS	Sn	08 28 07.3	-2.2
SJG	San Juan	2.21	225		Pn	08 27 45.7	-2.1
SJG				IAML		08 28 22.1	
	comp=N,32nm,3.8s						
SJG				IAML		08 28 50.5	
	comp=N,24nm,4.9s						
SJG	San Juan	2.21	225	⇓eP	Pn	08 27 47.8	0.0
SJG	San Juan	2.21	225	eS	Sn	08 28 12.6	-1.5
ECPR	Experimental S	2.22	232	⇑eP	Pn	08 27 46.0	-2.0
ECPR	Experimental S	2.22	232	eS	Sn	08 28 11.3	-3.2
AOPR	Arecibo Observ	2.50	238		Pn	08 27 50.1	-1.8
AOPR					Sn	08 28 18.9	-2.6
AOPR	Arecibo Observ	2.50	238	⇑eP	Pn	08 27 52.4	+0.5
AOPR	Arecibo Observ	2.50	238	eS	Sn	08 28 19.2	-2.3
OBIP	Obispado Ponce	2.57	231		Pn	08 27 50.9	-1.9
OBIP					Sn	08 28 21.0	-2.1
OBIP				IAML		08 28 34.7	
	comp=E,28nm,3.8s						
OBIP				IAML		08 29 10.1	
	comp=N,33nm,3.7s						
OBIP	Obispado Ponce	2.57	231	⇓eP	Pn	08 27 49.5	-3.3
OBIP	Obispado Ponce	2.57	231	eS	Sn	08 28 21.0	-2.1
LSP	Las Mesas	2.86	239		Pn	08 27 54.6	-2.3
LSP					Sn	08 28 29.2	-1.2
LSP	Las Mesas	2.86	239	⇓eP	Pn	08 27 54.6	-2.3
LSP	Las Mesas	2.86	239	eS	Sn	08 28 29.2	-1.2
MLPR	Magueyes Islan	2.94	235	⇑eP	Pn	08 27 56.9	-1.1
MLPR	Magueyes Islan	2.94	235	eS	Sn	08 28 31.1	-1.2
CRPR	Cabo Rojo, PR	2.97	236		Pn	08 27 56.3	-2.1
CRPR					Sn	08 28 30.9	-2.2
CRPR				IAML		08 29 01.7	
	comp=N,35nm,4.3s						
CRPR	Cabo Rojo, PR	2.97	236	⇑eP	Pn	08 27 57.5	-0.9
CRPR	Cabo Rojo, PR	2.97	236	eS	Sn	08 28 32.0	-1.1
DR12	Loma Pena Alta	4.68	260	Pn	Pn	08 28 20.1	-1.9

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*UCR **01** 08:28:23.6±0.8,10°.30N×84°.83W,h63km±2km,MW3.9*

*CATAC **01** 08:28:24.6±0.2,10°N±2°×8°5W±°,h47km±3km,M3.6/18, MLv3.6/18,Error ellipse: s-maj=5.3km s-min=2.9km az=42.8,confirmed*

ISC 01 08:28:24.6±1.3,**10°.27N**±0°.03×**84°.83W**±0°.03,**h60**km±5km, **n150,**σ**0s.72**/156,**Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTEVE	Monteverde	0.05	360	eP	Pn	08 28 33.4	-0.5
MTEVE				eS	Sn	08 28 40.9	+0.4
JTS	Las Juntas de	0.13	280	P	Pn	08 28 33.2	-0.7
JTS				S	Sn	08 28 40.3	-0.1
JTS	Las Juntas de	0.13	280	eP	Pn	08 28 33.2	-0.7
JTS				eS	Sn	08 28 40.5	+0.1
JUNT	Juntas	0.13	276	eP	Pn	08 28 33.2	-0.6
CHIK	Chiripa	0.19	335	eP	Pn	08 28 34.0	-0.3
CHIK				eS	Sn	08 28 42.1	+0.9
ARE1	Arenal 1	0.22	29	eP	Pn	08 28 34.3	0.0
VARE2	V. Arenal	0.22	29	eP	Pn	08 28 34.3	-0.1
SOCE	Pocosol	0.23	61	P	Pn	08 28 34.1	-0.3
SOCE	Pocosol	0.23	61	eP	Pn	08 28 34.1	-0.3
SOCE				eS	Sn	08 28 42.1	+0.7
TABAC	Tabacon	0.24	14	eP	Pn	08 28 34.3	-0.1
TILA	Tilaran	0.24	325	eP	Pn	08 28 33.9	-0.5
CEDE	Laguna Cedeo	0.25	29	eP	Pn	08 28 34.5	-0.1
FORC	Fortuna	0.25	38	eP	Pn	08 28 34.3	-0.2
VACR	Volcan Arenal	0.25	36	eP	Pn	08 28 34.3	-0.2
VACR				eS	Sn	08 28 42.5	+0.9
REZ	Monterrey de S	0.29	26	eP	Pn	08 28 34.7	-0.1
ENAS	Puntarenas	0.29	182	eP	Pn	08 28 34.2	-0.5
ROBF	Roble, Puntare	0.30	163	eP	Pn	08 28 34.0	-0.8
CNAS	Canas	0.31	302	eP	Pn	08 28 35.6	+0.8
INVE	Universidad In	0.31	312	eP	Pn	08 28 34.7	-0.2
ARZA	Esparza	0.32	150	eP	Pn	08 28 34.2	-0.7
QUEB	Quebradon, Cot	0.36	349	eP	Pn	08 28 34.9	-0.5
TIMP	Tierras Morena	0.36	329	eP	Pn	08 28 34.9	-0.6
SRA1	San Ramn	0.39	118	eP	Pn	08 28 35.0	-0.6
QUEU	Ciudad Quesada	0.39	82	eP	Pn	08 28 35.3	-0.3
RAMO	San Ramon	0.40	117	eP	Pn	08 28 35.1	-0.6
VPL2	V. Platanar	0.44	85	eP	Pn	08 28 35.8	-0.4
PALD	Palmares	0.44	119	eP	Pn	08 28 35.5	-0.6
TENO	El Achiote	0.46	341	eP	Pn	08 28 35.6	-0.7
PAQE	Paquera	0.46	193	eP	Pn	08 28 35.8	-0.4
OROT	Orotina	0.46	140	eP	Pn	08 28 35.6	-0.7
NARAN	Naranjo de Ala	0.47	111	eP	Pn	08 28 36.2	-0.3
MOTZ	Rio Naranjo	0.48	330	eP	Pn	08 28 36.2	-0.3
NYURE	Nandayure	0.50	237	eP	Pn	08 28 36.2	-0.4
CUI	Cuipilapa	0.51	319	eP	Pn	08 28 36.3	-0.5
PLVR	Palo Verde	0.52	279	eP	Pn	08 28 36.9	-0.2
ATEO	Atenas	0.52	123	eP	Pn	08 28 36.2	-0.8
COLC	Colonia	0.54	317	eP	Pn	08 28 36.6	-0.5
TCS1	Tacares	0.56	113	P	Pn	08 28 37.1	-0.4
TCS1	Tacares	0.56	113	eP	Pn	08 28 37.0	-0.4
ITAL	Pital	0.57	72	eP	Pn	08 28 36.8	-0.7
VPS8	V Poas	0.58	99	eP	Pn	08 28 37.7	-0.1
MESS	Mesas	0.59	322	eP	Pn	08 28 37.2	-0.6
ARTO	Ro Cuarto	0.61	83	eP	Pn	08 28 37.2	-0.6
POAS	San Pedro de P	0.61	108	eP	Pn	08 28 37.6	-0.3
VMAR	Armenia, Volca	0.61	332	eP	Pn	08 28 37.4	-0.6
NICO	Nicoya	0.62	258	eP	Pn	08 28 38.0	0.0
CMARA	Lajas Hojancha	0.64	247	P	Pn	08 28 37.8	-0.5
CMARA	Lajas Hojancha	0.64	247	S	Sn	08 28 48.4	+0.2
CMARA	Lajas Hojancha	0.64	247	eP	Pn	08 28 37.7	-0.6
CAO2	Cobano, Puntar	0.64	206	eP	Pn	08 28 37.0	-1.3
UPAL	Upala	0.65	344	P	Pn	08 28 37.7	-0.7
UPAL	Upala	0.65	344	S	Sn	08 28 48.3	0.0
UPAL	Upala	0.65	344	eP	Pn	08 28 37.6	-0.7
PURI	Puriscal	0.66	129	eP	Pn	08 28 37.8	-0.8
BELE	Belen	0.69	115	eP	Pn	08 28 38.2	-0.7
ERIA	Liberia	0.70	301	eP	Pn	08 28 38.7	-0.3
GPS2	Hotel Rincn d	0.71	313	eP	Pn	08 28 38.5	-0.5
JUD3	Juan Diaz 3	0.71	262	eP	Pn	08 28 38.9	-0.2
SANTA	Santa Ana	0.71	118	eP	Pn	08 28 38.2	-0.9
GPS3	Bodega del ICE	0.72	312	eP	Pn	08 28 39.4	+0.2
GPS1	Guardaparques	0.72	314	eP	Pn	08 28 38.4	-0.8
CBL1	Cabuya	0.72	201	eP	Pn	08 28 37.7	-1.5
HEME	Heredia, Merce	0.73	112	eP	Pn	08 28 39.9	+0.4
DELF	Filadelfia	0.74	284	eP	Pn	08 28 39.2	-0.2
VRLE	La Escondida,	0.74	314	eP	Pn	08 28 38.8	-0.7
SACU	Santa Cruz	0.74	270	eP	Pn	08 28 39.7	+0.2
VORI	VORI	0.75	317	eP	Pn	08 28 39.1	-0.6
HDC	Heredia	0.75	111	eP	Pn	08 28 39.1	-0.5
LAPC	Finca la Perla	0.78	310	eP	Pn	08 28 39.1	-0.8
ALIBA	Liberia Airpor	0.78	295	eP	Pn	08 28 39.8	0.0
BUAI	Buenos Aires	0.78	321	eP	Pn	08 28 39.4	-0.5
PEJA	Penjamo Buenos	0.79	323	eP	Pn	08 28 39.5	-0.5
MEXI	Barrio Mexico	0.80	114	eP	Pn	08 28 39.7	-0.5
TIBA	Tibas	0.80	112	eP	Pn	08 28 39.8	-0.6
ACOS	Acosta	0.80	126	eP	Pn	08 28 39.5	-0.9
ELI1	Hacienda Flor	0.81	298	P	Pn	08 28 39.9	-0.3
ELI1	Hacienda Flor	0.81	298	eP	Pn	08 28 40.0	-0.3
CENT	San Jose	0.81	114	eP	Pn	08 28 40.8	+0.4
SARA	Sarapiqu	0.81	77	eP	Pn	08 28 39.9	-0.4
LUJA	Lujan	0.82	115	eP	Pn	08 28 39.9	-0.6
LUPE	Guadalupe	0.82	113	eP	Pn	08 28 37.6	-3.0
SJS	Escuela Geolog	0.83	113	eP	Pn	08 28 40.1	-0.5
ECI	Escuela Centro	0.83	113	eP	Pn	08 28 40.0	-0.6
SJS3	Mercedes San J	0.83	113	eP	Pn	08 28 40.2	-0.5
AMPA	Desamparados	0.84	116	eP	Pn	08 28 40.8	0.0
CORON	Coronado	0.86	110	eP	Pn	08 28 40.9	-0.2
PICV	PH. Pirrs	0.89	136	eP	Pn	08 28 40.5	-0.9
SAJU	San Juanillo,	0.89	257	eP	Pn	08 28 40.0	-1.3
TRIO	Tres Rios	0.90	114	eP	Pn	08 28 40.9	-0.7
CVIMO	Finca Echandi	0.90	105	eP	Pn	08 28 41.3	-0.4
TAGO	Cartago	0.97	114	eP	Pn	08 28 42.0	-0.5
PITB	Pirrs, San	0.99	127	eP	Pn	08 28 42.0	-0.7
RAZU	San Marcos de	1.00	127	eP	Pn	08 28 42.1	-0.7
VICA	Volcano Irazu	1.01	106	eP	Pn	08 28 42.5	-0.6
PILE	Guapiles	1.02	93	eP	Pn	08 28 42.6	-0.4
REPA	Paraso	1.04	115	eP	Pn	08 28 43.0	-0.4
RAFA	San Farael, Vo	1.05	107	eP	Pn	08 28 43.2	-0.4
PCAYA	Pacayas	1.06	109	eP	Pn	08 28 43.4	-0.3
PIEC	Cerro El Cedra	1.07	127	eP	Pn	08 28 43.3	-0.6
CVTQ	Turrialba Volc	1.08	104	eP	Pn	08 28 43.8	-0.2
VTR0	Volcan Turrial	1.08	103	eP	Pn	08 28 43.4	-0.7
CVTR	Volcan Turrial	1.08	103	eP	Pn	08 28 43.5	-0.6
CVTV	Tajo	1.09	104	eP	Pn	08 28 43.8	-0.4
TRT2	Tortugero	1.11	75	P	Pn	08 28 43.2	-0.9
TRT2	Tortugero	1.11	75	S	Sn	08 28 57.8	-0.9
TRT2	Tortugero	1.11	75	eP	Pn	08 28 43.2	-0.9
VTCV	VTCV, Calle Va	1.12	105	eP	Pn	08 28 44.1	-0.3
ABRB	Las Abras (San	1.12	103	eP	Pn	08 28 44.2	-0.3
VINA	Juan Vinas	1.13	109	eP	Pn	08 28 44.1	-0.3
LCRUZ	La Cruz	1.13	316	eP	Pn	08 28 43.9	-0.5
CARN	Rivas	1.14	323	P	Pn	08 28 44.0	-0.5
CARN	Rivas	1.14	323	eP	Pn	08 28 43.9	-0.6
RESJ	San Isidro (Tu	1.19	101	eP	Pn	08 28 44.9	-0.4
EGUB	Earth Gu¡pi	1.22	93	eP	Pn	08 28 45.3	-0.3
RVLA	Villa Bonita	1.23	97	eP	Pn	08 28 46.4	+0.7
BUS1	Rivas	1.28	124	eP	Pn	08 28 46.0	-0.7
IRES	Siquirres	1.31	97	eP	Pn	08 28 46.5	-0.3
JAPN	Al SSO del Vol	1.50	326	P	Pn	08 28 49.0	-0.4
JAPN	Al SSO del Vol	1.50	326	eP	Pn	08 28 49.0	-0.4
CONN	Concepcion	1.51	329	P	Pn	08 28 48.3	-1.2
SAJE	San Jernim	1.59	125	eP	Pn	08 28 50.0	-0.7
OCHAL	Ojochal	1.65	135	P	Pn	08 28 51.3	0.0
OCHAL	Ojochal	1.65	135	S	Sn	08 29 11.8	+0.3
VERH	Veragua Rainfo	1.65	102	eP	Pn	08 28 51.0	-0.3
EDPE	Pejibaye, P	1.66	132	eP	Pn	08 28 51.2	-0.3
BURE	Buenos Aires	1.83	126	eP	Pn	08 28 53.4	-0.4
DRK0	Durika	1.85	123	P	Pn	08 28 51.4	-2.8
DRK0	Durika	1.85	123	S	Sn	08 29 16.8	0.0
DRK0	Durika	1.85	123	eP	Pn	08 28 53.5	-0.8
NADN	Granada	1.89	321	eP	Pn	08 28 53.9	-0.7
CEUA	Cerro Uatsi, L	1.97	109	eP	Pn	08 28 57.1	+1.4
EDP2	Potrero Grande	2.05	127	eP	Pn	08 28 56.6	-0.2
NANN	Nandasmo	2.09	323	P	Pn	08 28 58.4	+1.1
NANN	Nandasmo	2.09	323	S	Sn	08 29 23.0	+0.6
BOAB	BOACO BROADBAN	2.32	339	P	Pn	08 28 59.7	-0.8
BOAB	BOACO BROADBAN	2.32	339	S	Sn	08 29 27.6	-0.2
ALCO	Alturas Coton,	2.36	124	eP	Pn	08 29 00.5	-0.7
PIRO	Carate, Puerto	2.37	141	P	Pn	08 29 01.9	+0.8
PIRO	Carate, Puerto	2.37	141	S	Sn	08 29 29.8	+0.8
PIRO	Carate, Puerto	2.37	141	eP	Pn	08 29 01.9	+0.8
CDITO	Canoas	2.56	131	P	Pn	08 29 05.8	+2.1
BRU2	Volcan	2.57	125	eP	Pn	08 29 06.0	+2.0
COPN	Copaltepe	2.57	318	P	Pn	08 29 03.6	-0.3
BQTLY	Boquete Panama	2.77	123	eP	Pn	08 29 06.5	-0.3
MOM3	MOM3	2.78	324	P	Pn	08 29 07.6	+0.9
MATN	Matagalpa	2.86	338	P	Pn	08 29 06.4	-1.5
CNGA	Al SSO del Vol	2.88	320	P	Pn	08 29 08.6	+0.4
PBNVO	Pueblo Nuevo,	2.94	118	eP	Pn	08 29 08.6	-0.2
RBALA	Bur	2.98	117	eP	Pn	08 29 08.8	-0.6
LIMN	Finca el Limon	3.16	332	P	Pn	08 29 11.6	-0.4

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*KRNET **01** 08:48:19.6±0.1,40°.89N×79°.15E,h19km,mb2.7*

*SOME **01** 08:48:20.2,40°.87N×79°.13E,h15km*

*NNC **01** 08:48:21.3±1.0,40°.92N×79°.09E,h0km,mb3.3,mpv3.0, Error ellipse: s-maj=6.8km s-min=5.1km az=165.0*

ISC 01 08:48:22.9±1.8,**41°.01N**±0°.08×**79°.07E**±0°.05,**h10**km,**n30,** σ**1s.12**/45,**12C-2D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	Taragay, Kyrgy	1.20	308	⇑iP	Pn	08 48 44.3	-1.8
TARG				⇑iS	Sg	08 49 02.5	+0.9
PRZ	Przheval'sk	1.56	341	⇑iP	Pn	08 48 51.2	+0.3
PRZ				⇑iS	Sg	08 49 14.2	+1.1
KDJ	Kajisay	1.81	309	⇑iP	Pn	08 48 54.8	+0.5
KDJ				⇑iS	Sg	08 49 20.9	-0.3
SATY	Saty	2.11	347	Pg	Pb	08 49 01.9	+0.6
	6.0nm,0.3s						
SATY				Lg	Lg	08 49 32.9	
	30nm,0.4s						
UZB	Uzynbulak	2.14	359	Pg	Pb	08 49 02.2	+0.4
	4.4nm,0.3s						
UZB				Lg	Lg	08 49 32.4	
	18nm,0.4s						
UZB	Uzynbulak	2.14	359	eP	Pb	08 49 02.2	+0.4
	4.4nm,0.3s						
UZB				eS	Sg	08 49 32.4	+0.7
	18nm,0.4s						
SHLS	Shalkode	2.17	8	Pg	Pg	08 49 04.0	-0.5
	9.2nm,0.3s						
SHLS				Lg	Lg	08 49 35.5	
	23nm,0.5s						
SHLS	Shalkode	2.17	8	eP	Pg	08 49 04.0	-0.5
	9.2nm,0.3s						
SHLS				eS	Sg	08 49 35.5	+2.9
	23nm,0.5s						
KPKS	Kokpek	2.48	353	Pg	Pb	08 49 08.0	+0.5
	0.4nm,0.2s						
KPKS				Lg	Lg	08 49 42.5	
	27nm,0.4s						
KURS	Kuram	2.57	345	Pg	Pb	08 49 10.4	+1.2
	4.1nm,0.4s						
KURS				Lg	Lg	08 49 46.1	
	21nm,0.6s						
TNSS	Tian-Shan	2.58	323	Pg	Pb	08 49 09.9	+0.5
	0.7nm,0.3s						
TNSS				Lg	Lg	08 49 45.7	
	3.3nm,0.6s						
TNSS	Tian-Shan	2.58	323	eP	Pb	08 49 09.9	+0.5
	0.7nm,0.3s						
TNSS				eS	Sg	08 49 45.7	0.0
	3.3nm,0.6s						
JNKS	Jany-Kuch	2.59	272	⇓eP	Pn	08 49 05.6	+0.5
JNKS				⇓eS	Sb	08 49 38.7	-2.8
KTMS	Ketmen	2.62	21	Pg	Pb	08 49 09.9	-0.1
	0.8nm,0.3s						
KTMS				Lg	Lg	08 49 45.7	
	5.3nm,0.5s						
KTMS	Ketmen	2.62	21	eP	Pb	08 49 09.9	-0.1
	0.8nm,0.3s						
KTMS				eS	Sg	08 49 45.7	-1.3
	5.3nm,0.5s						
MDOK	Medeo	2.63	326	Pg	Pb	08 49 10.9	+0.7
	1.4nm,0.2s						
MDOK				Lg	Lg	08 49 47.4	
	10nm,0.6s						
KOTS	Kotyrbulak	2.66	327	Pg	Pb	08 49 11.8	+1.1
	2.6nm,0.2s						
KOTS				Lg	Lg	08 49 49.2	
	17nm,0.6s						
KOTS	Kotyrbulak	2.66	327	eP	Pb	08 49 11.8	+1.1
	2.6nm,0.2s						
KOTS				eS	Sg	08 49 49.2	+0.7
	17nm,0.6s						
IZV	Izvestkoviy	2.73	319	Pg	Pb	08 49 12.5	+0.5
	1.6nm,0.3s						
IZV				Lg	Lg	08 49 50.3	
	7.1nm,0.5s						
IZV	Izvestkoviy	2.73	319	eP	Pb	08 49 12.5	+0.5
	1.6nm,0.3s						
IZV				eS	Sg	08 49 50.4	-0.4
	7.1nm,0.5s						
BOOM	Boomskoye usch	2.77	303	⇑iP	Pn	08 49 08.3	+0.7
BOOM				⇑iS	Sb	08 49 44.3	-2.5
KST	Kastek	3.08	312	Pg	Pb	08 49 19.3	+1.4
	1.3nm,0.3s						
KST				Lg	Lg	08 50 02.1	
	6.2nm,0.4s						
KST	Kastek	3.08	312	eP	Pb	08 49 19.3	+1.4
	1.3nm,0.3s						
KST				eS	Sg	08 50 02.1	+0.1
	6.2nm,0.4s						
BLB	Baldybastay	3.12	352	Pg	Pb	08 49 19.4	+0.9
	17nm,0.2s						
BLB				Lg	Lg	08 50 02.4	
	9.8nm,0.3s						
DGS	Degeres	3.32	313	Pg	Pb	08 49 22.2	+0.3
	1.3nm,0.3s						
DGS				Lg	Lg	08 50 07.1	
	3.4nm,0.6s						
ARXS	Arharly	3.33	344	Pg	Pb	08 49 22.7	+0.6
	1.0nm,0.3s						
ARXS				Lg	Lg	08 50 08.3	
	6.6nm,0.3s						
ARXS	Arharly	3.33	344	eP	Pb	08 49 23.0	+0.8
ARXS				eS	Sg	08 50 08.3	-1.7
KNOS	Konyrlen	3.35	1	Pg	Pb	08 49 24.2	+1.6
	1.0nm,0.3s						
KNOS				Lg	Lg	08 50 10.2	
	5.6nm,0.3s						
ARLS	Aral	3.67	285	⇑iP	Pn	08 49 20.6	+0.7
ARLS				⇑iS	Sn	08 50 04.9	+1.6
SALK	Salom-Alik	3.98	270	⇑iP	Pn	08 49 24.5	+0.4
SALK				⇑iS	Sn	08 50 11.6	+0.6

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*IDC **01** 09:04:16.9±0.7,19°.79S×175°.65W,h0km,mb4.0/9, mbtmp4.1/11,ML3.8/2,MS2.9/1,Error ellipse: s-maj=29.5km s-min=19.0km az=142.0*

*NEIC **01** 09:04:30.5±2.1,19°.9S±0°.1×174°.88W±0°.09,h142km±8km, mb4.6/18,Error ellipse: s-maj=18.0km s-min=12.4km az=190.0*

*NOU **01** 09:04:31.2,20°.04S×174°.68W,h165km,mb4.5/26,Tonga Islands*

ISC 01 09:04:28.6±0.5,**20°.07S**±0°.09×**174°.90W**±0°.05,**h115**km, **n68,**σ**2s.03**/59,**mb4.2**/16,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.79	79		Pn	09 05 40.5	+1.7
NIUE	Niue	4.79	79	P	Pn	09 05 40.8	+2.1
NIUE	Niue	4.79	79	S	Sn	09 06 32.1	-1.2
AFI	Afiamalu	6.82	27	Pn	Pn	09 06 05.3	-0.9
AFI	Afiamalu	6.82	27	P	Pn	09 06 07.7	+1.5
MSVF	Nonsavu	7.06	288	Pn	Pn	09 06 11.6	+2.1
MSVF	Nonsavu	7.06	288	P	Pn	09 06 12.8	+3.3
RAR	Rarotonga	14.21	97	Pn	P	09 07 49.6	+1.0
	1.4nm,0.3s,baz=243,slow=11,SNR=2.0						
RAR				Sn	Sn	09 10 16.4	-5.1
	1.8nm,0.3s,baz=101,slow=4.9,SNR=1.7						
	10nm,0.6s						
RAR	Rarotonga	14.21	97		Pn	09 07 45.2	+0.5
MARNC	Mare, Loyalty	16.02	262		P	09 08 08.1	-0.6
MARNC	Mare, Loyalty	16.02	262	P	P	09 08 09.8	+1.1
DVP	Devils Point	16.17	275	P	P	09 08 12.5	+2.2
PINNC	Pines Island,	16.64	258	P	P	09 08 16.8	+1.3
PINNC	Pines Island,	16.64	258	S	S	09 11 24.1	+1.0
YATNC	Mamie plateau,	17.11	260	P	Pn	09 08 21.9	+1.1
OUENC	Ouen Island, N	17.18	259	P	Pn	09 08 22.8	+1.2
DZM	Mont Dzumac	17.52	260	Pn	Pn	09 08 27.0	+1.1
	3.9nm,0.3s,baz=88,slow=20,SNR=34						
DZM	Mont Dzumac	17.52	260	P	Pn	09 08 25.9	0.0
DZM				IAmb	IAmb	09 08 29.5	
	comp=Z,30nm,0.7s						
DZM	Mont Dzumac	17.52	260	P	Pn	09 08 27.8	+1.9
ONTNC	Ouen Toro	17.53	259	P	Pn	09 08 24.4	-1.5
ONTNC				IAmb	IAmb	09 08 27.6	
	comp=Z,26nm,0.9s						
SANVU	Saraoutou	17.65	282	P	P	09 08 25.2	-1.5
SANVU				IAmb	IAmb	09 08 38.9	
	comp=Z,32nm,0.9s						
SANVU	Saraoutou	17.65	282	P	Pn	09 08 29.4	+2.1
URZ	Urewera	19.41	199	P	P	09 08 43.8	-1.9
	comp=Z,1.0nm,0.3s,baz=240,slow=5.4,SNR=6.1						
URZ				S	S	09 12 00.4	-18
	comp=Z,10nm,1.0s,baz=352,slow=20,SNR=1.5						
	comp=Z,2.4nm,0.3s						
URZ	Urewera	19.41	199	P	P	09 08 44.9	-0.7
BKZ	Black Stump Fm	20.43	199	P	P	09 08 57.0	+0.2
QRZ	Quartz Range	23.30	205	P	P	09 09 24.9	-1.4
QRZ	Quartz Range	23.30	205	P	P	09 09 26.1	-0.2
THZ	Tophouse	23.97	203	P	P	09 09 32.4	0.0
THZ				IAmb	IAmb	09 10 08.9	
	comp=Z,51nm,1.5s						
PPT	Papeete	24.10	88	LR	LR	09 17 01.3	
	comp=Z,25nm,19.9s,baz=306,slow=31						
KHZ	Kahutara	24.32	201	P	P	09 09 35.6	+0.1
TV1H	Townsville Har	36.02	265	P	P	09 11 18.0	-1.0
CTA	Charters Tower	36.43	263	P	P	09 11 21.6	-0.8
CTAO	Charters Tower	36.43	263	P	P	09 11 20.5	-1.9
CTAO				IAmb	IAmb	09 11 22.6	
	comp=Z,14nm,0.5s						
CTAO	Charters Tower	36.43	263	P	P	09 11 21.6	-0.8
CMSA	Cobar Meteorol	37.09	244	P	P	09 11 25.4	-2.5
TOO	Toolangi	38.50	234	P	P	09 11 37.9	-1.9
TOO				IAmb	IAmb	09 11 39.4	
	comp=Z,9.8nm,1.4s						
COEN	Coen	40.47	272	P	P	09 11 55.8	-0.5
STKA	Stephens Creek	40.59	244	P	P	09 11 54.1	-3.0
	comp=Z,3.0nm,0.8s,baz=78,slow=8.9,SNR=3.9						
	comp=Z,3.0nm,0.8s						
BBOO	Buckleboo	45.34	243	P	P	09 12 34.1	-1.3
WR8	Warramunga Arr	47.39	261	P	P	09 12 49.5	-2.1
WR8				IAmb	IAmb	09 13 31.7	
	comp=Z,3.9nm,1.0s						
AS31	Alice Springs	47.44	256	P	P	09 12 50.8	-1.2
ASAR	Alice Springs	47.44	256	P	P	09 12 48.6	-3.4
	comp=Z,3.0nm,0.7s,baz=99,slow=8.2,SNR=54						
ASAR				PcP	PcP	09 14 21.1	+0.3
	comp=Z,0.3nm,0.6s,baz=88,slow=4.9,SNR=1.7						
	comp=Z,3.0nm,0.7s						
ASAR	Alice Springs	47.44	256	P	P	09 12 49.4	-2.7
WRAB	Tennant Creek	47.53	261	P	P	09 12 49.9	-2.8
WRA	Warramunga Arr	47.54	261	P	P	09 12 49.4	-3.4
	comp=Z,2.9nm,0.5s,baz=98,slow=7.8,SNR=99						
	comp=Z,2.9nm,0.5s						
WRA	Warramunga Arr	47.54	261	P	P	09 12 50.5	-2.3
KNRA	Kununurra	53.59	265	P	P	09 13 37.3	-1.0
KNRA				IAmb	IAmb	09 13 38.4	
	comp=Z,9.0nm,0.8s						
FITZ	Fitzroy Crossi	55.97	261	P	P	09 13 54.8	-0.6
SBA	Scott Base	58.51	184	P	P	09 14 15.1	+2.8
VNDA	Vanda	58.61	186	P	P	09 14 15.7	+2.7
VNDA				IAmb	IAmb	09 14 28.2	
	comp=Z,5.2nm,1.4s						
QSPA	South Pole Qui	70.00	180	P	P	09 15 32.9	+5.3
	comp=Z,1.9nm,1.1s,baz=15,slow=0.7,SNR=6.3						
	comp=Z,1.9nm,1.1s						
QSPA	South Pole Qui	70.00	180	P	P	09 15 29.6	+2.0
MJAR	Matsushiro Arr	71.63	322	P	P	09 15 36.2	-1.5
	comp=Z,0.7nm,0.5s,baz=161,slow=5.9,SNR=4.5						
	comp=Z,0.7nm,0.5s						
JOW	Kunigami	72.15	308	P	P	09 15 38.8	-2.2
VTX	Valle De La Tr	76.36	49	P	P	09 16 02.2	-3.3
VTX				IAmb	IAmb	09 16 13.3	
	comp=Z,16nm,1.4s						
NVAR	Mina Array Bea	78.74	42	P	P	09 16 23.2	+4.5
	comp=Z,0.9nm,0.7s,baz=253,slow=5.9,SNR=5.1						
	comp=Z,0.9nm,0.7s						
H03S2	Juan Fernandez	83.82	124	T	T	10 49 23.1	
	baz=248,slow=75,SNR=193						
H03S1	Juan Fernandez	83.84	124	T	T	10 49 22.1	
	baz=248,slow=75,SNR=247						
H03S3	Juan Fernandez	83.84	124	T	T	10 49 20.8	
	baz=248,slow=75,SNR=245						
H03N2	Juan Fernandez	83.95	123	T	T	10 49 22.8	
	baz=257,slow=71,SNR=67						
H03N3	Juan Fernandez	83.95	123	T	T	10 49 28.9	
	baz=257,slow=71,SNR=33						
H03N1	Juan Fernandez	83.97	123	T	T	10 49 33.5	
	baz=257,slow=71,SNR=33						
TXAR	Lajitas Array	84.39	56	P	P	09 16 53.8	+5.2
	comp=Z,1.0nm,1.0s,baz=244,slow=4.7,SNR=5.4						
	comp=Z,1.0nm,1.0s						
PDAR	Pinedale Array	86.68	42	P	P	09 17 03.2	+3.4
	comp=Z,0.2nm,0.6s,baz=244,slow=4.7,SNR=2.5						
	comp=Z,0.2nm,0.6s						
ILAR	Eielson Array	87.28	12	P	P	09 17 04.3	+2.5
	comp=Z,0.2nm,0.5s,baz=214,slow=4.9,SNR=10						
	comp=Z,0.2nm,0.5s						
EKA	Eskdalemuir Ar	144.24	8	PKhKP	PKPpre	09 23 50.5	
	comp=Z,0.4nm,0.5s,baz=333,slow=3.2,SNR=2.1						
BRTR	Keskin Array B	148.65	315	PKPbc	PKPab	09 24 05.9	-0.7
	comp=Z,0.3nm,0.4s,baz=131,slow=3.5,SNR=1.5						
GERES	GERESS Array B	150.47	348	PKPbc	PKiKP	09 24 09.3	+1.8
	comp=Z,0.3nm,0.4s,baz=47,slow=5.9,SNR=2.1						

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*IDC **01** 09:49:58.5±1.3,2°.80N×66°.42E,h0km,mb3.9/10, mbtmp3.9/11,ML4.2/1,MS3.4/8,Error ellipse: s-maj=39.3km s-min=21.2km az=46.0*

*NEIC **01** 09:50:01.3±1.2,2°.8N±0°.1×66°.6E±0°.1,h10km±1km, mb4.5/16,Error ellipse: s-maj=20.5km s-min=18.9km az=243.0*

ISC 01 09:50:00.1±0.9,**2°.8N**±0°.1×**66°.5E**±0°.1,**h10**km,**n48,** σ**0s.87**/36,**mb4.4**/16,**MS3.4**/7,**Carlsberg Ridge**

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

KAAM	Kaadhehdhoo	6.90	109		Pn	09 51 40.0	-1.4
HMDM	Hanimaadhoo	7.74	59	Pn	Pn	09 51 51.9	-1.0
PALK	Pallekele	14.83	72	Pn	Pn	09 53 30.6	+0.5
	1.0nm,0.3s,baz=279,slow=10,SNR=8.5						
PALK				LR	LR	09 58 12.9	
	comp=Z,212nm,18.6s,baz=278,slow=33						
	4.4nm,0.7s						
PALK	Pallekele	14.83	72		Pn	09 53 29.4	-0.7
BRDH	Bariadhala	31.38	49	LR	LR	10 10 50.0	
	comp=Z,44nm,18.5s,baz=185,slow=40						
EVN	Everest	31.65	36	P	P	09 56 24.9	+0.5
EVN				IAmb	IAmb	09 56 43.5	
	comp=Z,6.2nm,1.2s						
KBL	Kabul	31.65	4	P	P	09 56 25.9	+2.1
PSI	Prapat	32.39	89	LR	LR	10 07 57.7	
	comp=Z,80nm,18.8s,baz=250,slow=33						
SHL	Shillong	33.29	45	P	P	09 56 39.6	+1.3
SHL				IAmb	IAmb	09 56 45.5	
	comp=Z,9.9nm,1.2s						
SHAA	Shahritus	34.61	2	P	P	09 56 49.9	+0.4
SHAA				IAmb	IAmb	09 57 01.2	
	comp=Z,12nm,1.0s						
CMAR	Chiang Mai Arr	35.38	62	P	P	09 56 56.4	+0.1
	comp=Z,0.5nm,0.2s,baz=231,slow=8.2,SNR=1.2						
CMAR				LR	LR	10 11 10.3	
	comp=Z,44nm,18.9s,baz=260,slow=36						
	comp=Z,0.5nm,0.2s						
CMAR	Chiang Mai Arr	35.38	62	P	P	09 56 56.0	-0.3
GAR	Garm	36.18	5	P	P	09 57 03.7	+0.6
GAR				IAmb	IAmb	09 57 06.0	
	comp=Z,10nm,0.9s						
KK31	Karatay Array	40.27	5	P	P	09 57 38.0	+0.6
KKAR	Karatay Array	40.27	5	P	P	09 57 37.6	+0.2
MARD	Mardin	41.67	329	P	P	09 57 50.0	+0.9
KBZ	Khabaz	45.80	336	P	P	09 58 22.2	+0.2
	comp=Z,3.6nm,1.0s,baz=145,slow=3.8,SNR=3.8						
	comp=Z,3.6nm,1.0s						
MKAR	Makanchi Array	45.91	15	P	P	09 58 23.8	+0.8
	comp=Z,0.5nm,0.8s,baz=205,slow=6.4,SNR=1.8						
	comp=Z,0.5nm,0.8s						
MKAR	Makanchi Array	45.91	15	P	P	09 58 22.5	-0.5
AB31	Akbulak array	46.60	354	P	P	09 58 28.4	+0.1
AB31				IAmb	IAmb	09 58 30.6	
	comp=Z,9.1nm,1.4s						
ABKAR	Akbulak array	46.60	354	P	P	09 58 28.9	+0.6
BRTR	Keskin Array B	47.30	325	P	P	09 58 33.9	-0.3
	comp=Z,0.8nm,0.9s,baz=144,slow=11,SNR=2.8						
	comp=Z,0.8nm,0.9s						
LBTB	Lobatse	48.36	233	LR	LR	10 16 39.8	
	comp=Z,62nm,19.7s,baz=38,slow=33						
KURBB	Kurchatov Arra	48.71	10	P	P	09 58 43.9	-0.8
	comp=Z,0.8nm,1.0s,baz=210,slow=7.4,SNR=4.4						
	comp=Z,0.8nm,1.0s						
BOSA	Boshof	50.42	229	LR	LR	10 18 37.6	
	comp=Z,43nm,18.2s,baz=29,slow=34						
H04N2	CROZET ISLANDS	50.48	193	T	T	10 53 04.0	
	baz=19,slow=76,SNR=566						
H04N1	CROZET ISLANDS	50.48	193	T	T	10 53 02.3	
	baz=19,slow=76,SNR=578						
H04N3	CROZET ISLANDS	50.49	193	T	T	10 53 03.6	
	baz=19,slow=76,SNR=403						
ZALV	Zalesovo Beam	53.14	13	P	P	09 59 17.5	-0.5
	comp=Z,1.0nm,0.5s,baz=202,slow=7.5,SNR=7.7						
	comp=Z,1.0nm,0.5s						
ZALV	Zalesovo Beam	53.14	13	P	P	09 59 17.0	-1.0
ARTI	Arti	53.81	354	P	P	09 59 21.9	-0.9
SONM	Songino Array	56.47	31	P	P	09 59 43.7	+1.2
	comp=Z,1.6nm,1.1s,baz=224,slow=6.2,SNR=8.3						
	comp=Z,1.6nm,1.1s						
SONM	Songino Array	56.47	31	P	P	09 59 42.7	+0.2
SONM				IAmb	IAmb	09 59 45.6	
	comp=Z,6.0nm,1.4s						
AKASG	Malin Array Be	57.10	333	P	P	09 59 44.7	-2.0
AKASG				IAmb	IAmb	09 59 53.5	
	comp=Z,5.5nm,1.4s						
H01W3	Cape Leeuwin H	58.30	134	T	T	11 02 53.3	
	baz=300,slow=75,SNR=75						
H01W2	Cape Leeuwin H	58.31	134	T	T	11 02 54.7	
	baz=300,slow=75,SNR=86						
H01W1	Cape Leeuwin H	58.32	134	T	T	11 02 55.6	
	baz=300,slow=75,SNR=96						
HFS	Hagfors	69.85	335	P	P	10 01 09.5	-1.4
	comp=Z,2.8nm,0.8s,baz=133,slow=8.5,SNR=4.5						
	comp=Z,2.8nm,0.8s						
WRA	Warramunga Arr	70.26	112	P	P	10 01 14.5	+0.3
	comp=Z,3.2nm,0.9s,baz=291,slow=5.7,SNR=7.7						
	comp=Z,3.2nm,0.9s						
WRA	Warramunga Arr	70.26	112	P	P	10 01 14.0	-0.2
WB0	Warramunga Arr	70.28	112	P	P	10 01 14.5	+0.2
ASAR	Alice Springs	70.59	116	P	P	10 01 16.3	+0.1
	comp=Z,0.8nm,0.7s,baz=289,slow=5.8,SNR=9.9						
	comp=Z,0.8nm,0.7s						
ASAR	Alice Springs	70.59	116	P	P	10 01 16.5	+0.3
AS31	Alice Springs	70.60	116	P	P	10 01 16.4	+0.1
MJAR	Matsushiro Arr	73.66	53	LR	LR	10 35 56.4	
	comp=Z,11nm,18.8s,baz=222,slow=37						
SNAA	Sanae	86.26	197	P	P	10 02 43.0	+1.2
SNAA				IAmb	IAmb	10 03 14.6	
	comp=Z,5.6nm,1.5s						
PETK	Petropavlovsk-	88.50	37	LR	LR	10 45 03.6	
	comp=Z,29nm,18.3s,baz=311,slow=37						
TXAR	Lajitas Array	146.67	344	PKPbc	PKPbc	10 09 43.6	+0.6
	comp=Z,1.8nm,0.7s,baz=58,slow=2.9,SNR=22						

IDC ***01*** *10:02:29.5±0.9, 19.°16N×95.°11W, h0km, mb3.7/5, mbtmp3.6/9, ML3.5/4, Error ellipse: s-maj=31.5km s-min=15.3km az=68.0*

NEIC ***01*** *10:02:30.3±2.0, 19.°29N±0.°04×95.°30W±0.°05, h10km±2km, mb4.3/11, Md4.5/136(MEX), Error ellipse: s-maj=9.2km s-min=5.2km az=67.0*

CATAC ***01*** *10:02:31.8±1.0, 19°N±3°×9°5W±°, h17km±7km, M4.8/7, mb5.0/5, mB5.4/3, MLv4.6/7, Mw(mB)4.9/3, Error ellipse: s-maj=7.4km s-min=4.9km az=11.8, confirmed*

MEX ***01*** *10:02:33.9±1.1, 19.°25N×95.°32W, h16km±21km, MD4.5*

ISC 01 10:02:30.7±1.7**, 19.°25N**±0.°03×**95.°28W**±0.°03**, h16**km±12km**, n184, σ2.s57**/236**, mb4.0**/7**, Veracruz**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMUV	Sontecomapan	0.72	168		Pb	10 02 45.3	+0.4
PMUV	Sontecomapan	0.72	168	eP	Pb	10 02 45.3	+0.4
PMUV				eS	Sg	10 02 54.1	-0.1
LVIG	Laguna Verde	1.17	294		Pn	10 02 51.2	-1.3
LVIG	Laguna Verde	1.17	294	eP	Pn	10 02 51.2	-1.3
LVIG				eS	Sb	10 03 03.6	-4.0
JAUV	Jalcomulco	1.44	275		Pn	10 02 55.9	-0.4
JAUV	Jalcomulco	1.44	275	eP	Pn	10 02 55.9	-0.4
JAUV				eS	Sn	10 03 12.7	-2.2
NEUV	Arroyo Zacate	1.61	198		Pn	10 02 58.2	-0.2
NEUV	Arroyo Zacate	1.61	198	eP	Pn	10 02 58.2	-0.2
NEUV				eS	Sn	10 03 16.5	-2.5
TOIG	Toxpalan	2.04	236		Pn	10 03 05.1	+0.5
TOIG	Toxpalan	2.04	236	eP	Pn	10 03 05.1	+0.5
TOIG				eS	Sn	10 03 25.6	-4.3
TPIG	Tehuac#an	2.14	248		Pn	10 03 06.6	+0.6
TPIG	Tehuac#an	2.14	248	eP	Pn	10 03 06.6	+0.6
TPIG				eS	Sn	10 03 29.4	-2.9
CMIG	Matias Romero	2.18	170	Pn	Pn	10 03 06.6	+0.3
	18nm,0.3s,baz=331,slow=7.0,SNR=314						
CMIG				Sn	Sn	10 03 31.3	-1.7
	35nm,0.3s,baz=203,slow=23,SNR=18						
	32nm,0.3s						
CMIG	Matias Romero	2.18	170	eP	Pn	10 03 06.6	+0.3
CMIG				eS	Sn	10 03 28.8	-4.3
UXUV	UXUV	2.20	151		Pn	10 03 06.8	+0.2
UXUV	UXUV	2.20	151	eP	Pn	10 03 06.8	+0.2
UXUV				eS	Sn	10 03 30.6	-3.1
CXUV	Coxquihui	2.36	293		Pn	10 03 08.8	-0.1
CXUV	Coxquihui	2.36	293	eP	Pn	10 03 08.8	-0.1
CXUV				eS	Sn	10 03 35.4	-2.2
VHSA	Villahermosa	2.55	119	eS	Sn	10 03 40.9	-1.4
OXLC	Oaxaca	2.56	212		Pn	10 03 12.8	+1.0
OXLC	Oaxaca	2.56	212	eP	Pn	10 03 12.8	+1.0
OXLC				eS	Sn	10 03 41.0	-1.8
OXBJ	Oaxaca	2.57	213		Pb	10 03 16.1	-0.5
OXBJ	Oaxaca	2.57	213	eP	Pb	10 03 16.1	-0.5
OXBJ				eS	Sn	10 03 43.8	+0.8
OXIG	Oaxaca	2.57	213		Pn	10 03 12.8	+0.8
VHO	Vista Hermosa	2.57	213	eP	Pn	10 03 12.8	+0.8
VHO				eS	Sn	10 03 38.3	-4.7
HLIG	Huajuapan de L	2.78	240		Pn	10 03 15.9	+1.1
HLIG	Huajuapan de L	2.78	240	eP	Pn	10 03 15.9	+1.1
HLIG				eS	Sn	10 03 45.7	-2.5
FTIG	Fresnillo de T	3.02	244	eP	Pn	10 03 19.5	+1.5
FTIG				eS	Sn	10 03 52.1	-1.8
PPSX	Xalitzintla	3.06	267	eP	Pb	10 03 22.9	-2.1
PPSX				eS	Sn	10 03 53.2	-2.0
TXIG	Tlaxiaco	3.09	230		Pn	10 03 20.3	+1.2
TXIG	Tlaxiaco	3.09	230	eP	Pn	10 03 20.3	+1.2
TXIG				eS	Sn	10 03 54.2	-1.7
PPPT	Popocatepetl	3.17	266	eP	Pn	10 03 23.5	+3.0
PPPT				eS	Sn	10 03 56.1	-2.3
PPCL	Tochimilco	3.18	264	eP	Pn	10 03 23.5	+3.1
PPCL				eS	Sn	10 04 00.2	+2.2
TGIG		3.20	140		Pn	10 03 21.3	+0.8
TGIG		3.20	140	eP	Pn	10 03 21.3	+0.8
TGIG				eS	Sn	10 03 55.0	-3.4
YOIG	Yosondua	3.21	223	eP	Pn	10 03 22.4	+1.6
YOIG				eS	Sn	10 03 56.7	-2.3
VTVM	Tizayuca	3.34	279	eP	Pn	10 03 26.3	+3.8
VTVM				eS	Sn	10 04 07.0	+4.9
HMTT	Tlapaneco	3.43	246		Pn	10 03 22.1	-1.6
HMTT	Tlapaneco	3.43	246	eP	Pn	10 03 22.1	-1.6
HMTT				eS	Sn	10 03 58.0	-6.1
MPVM	San Francisco	3.53	270		Pb	10 03 30.8	-2.1
MPVM	San Francisco	3.53	270	eP	Pb	10 03 30.8	-2.1
MPVM				eS	Sn	10 04 12.3	+5.6
TLIG	Tlapa	3.54	242		Pn	10 03 25.8	+0.5
TLIG	Tlapa	3.54	242	eP	Pn	10 03 25.9	+0.7
TLIG				eS	Sn	10 04 04.9	-2.0
TLIG	Tlapa	3.54	242	P	Pn	10 03 26.0	+0.7
TLIG	Tlapa	3.54	242	S	Sn	10 04 05.7	-1.2
HUIG	Huatulco	3.55	193		Pn	10 03 25.9	+0.7
HUIG	Huatulco	3.55	193	eP	Pn	10 03 25.9	+0.7
HUIG				eS	Sn	10 04 04.0	-3.0
PBVM	Pinon	3.60	274	e	Pb	10 03 34.0	0.0
PBVM				e		10 04 16.7	
YAIG	Yautepec	3.60	264	eP	Pn	10 03 28.8	+2.7
YAIG				eS	Sn	10 04 07.3	-1.1
XCVM	Xochimilco	3.62	271	eP	Pn	10 03 29.4	+2.9
XCVM				e		10 04 16.8	
ZUVM	ZUMPANGO	3.63	280		Pb	10 03 32.0	-2.6
ZUVM	ZUMPANGO	3.63	280	eP	Pb	10 03 32.0	-2.6
ZUVM				e		10 04 16.1	
CTUV	Llano Grande	3.63	308		Pn	10 03 27.5	+1.1
CTUV	Llano Grande	3.63	308	eP	Pn	10 03 27.5	+1.1
CTUV				eS	Sn	10 04 02.6	-6.4
PTVM	Pico Tres Padr	3.63	276	eP	Pb	10 03 31.6	-3.2
PTVM				e		10 04 15.0	
TLVM	San Miguel Top	3.66	270		Pb	10 03 32.3	-3.0
TLVM	San Miguel Top	3.66	270	eP	Pb	10 03 32.3	-3.0
TLVM				eS	Sn	10 04 10.2	+0.1
UNM	Universidad Na	3.68	272	Pn	Pn	10 03 27.2	-0.1
DEIG	Demacu	3.69	287	eP	Pn	10 03 30.1	+2.7
DEIG				eS	Sn	10 04 07.9	-2.8
PEIG	Puerto Escondi	3.69	209		Pn	10 03 27.7	+0.5
PEIG	Puerto Escondi	3.69	209	eP	Pn	10 03 27.7	+0.5
PEIG				eS	Sn	10 04 06.2	-4.3
MZVM		3.73	270	eP	Pb	10 03 32.8	-3.5
MZVM				eS	Sn	10 04 14.0	+2.6
MCRU	Las Cruces	3.76	272	eP	Pb	10 03 35.8	-1.1
MCRU				eS	Sn	10 04 13.3	+0.8
MGIG	Malinaltepec	3.77	238		Pn	10 03 28.4	+0.1
MGIG	Malinaltepec	3.77	238	eP	Pn	10 03 28.4	+0.1
MGIG				eS	Sn	10 04 09.4	-3.1
AOVM	Tlapan	3.82	271	eP	Pn	10 03 34.0	+4.6
AOVM				eS	Sn	10 04 14.4	+0.2
INVM	La Marquesa	3.88	271	eP	Pn	10 03 34.7	+4.6
INVM				eS	Sn	10 04 16.5	+1.0
SCIG	Sabancuy	3.88	93		Pn	10 03 30.3	+0.6
SCIG	Sabancuy	3.88	93	eP	Pn	10 03 30.3	+0.6
SCIG				eS	Sn	10 04 08.5	-6.5
SCIG	Sabancuy	3.88	93	P	Pn	10 03 31.5	+1.7
SCIG	Sabancuy	3.88	93	S	Sn	10 04 11.5	-3.6
PNIG	Pinotepa	3.93	224		Pn	10 03 29.8	-0.7
PNIG	Pinotepa	3.93	224	eP	Pn	10 03 29.8	-0.7
PNIG				eS	Sn	10 04 12.9	-3.3
MAVM	Malinalco, Edo	4.00	266	eP	Pn	10 03 34.9	+3.3
MAVM				eS	Sn	10 04 17.2	-1.0
PCIG		4.04	151		Pn	10 03 32.5	+0.6
PCIG		4.04	151	eP	Pn	10 03 32.5	+0.6
PCIG				eS	Sn	10 04 12.0	-6.9
TOVM	TOLUCA	4.16	271	eP	Pn	10 03 37.9	+4.0
TOVM				eS	Sn	10 04 19.8	-2.5
CCIG	Comitan	4.21	134		Pn	10 03 36.1	+1.8
CCIG	Comitan	4.21	134	eP	Pn	10 03 37.3	+2.9
CCIG				eS	Sn	10 04 22.4	-1.0
CCIG	Comitan	4.21	134	P	Pn	10 03 37.5	+3.1
CCIG	Comitan	4.21	134	S	Sn	10 04 23.2	-0.1
MEIG	Mezcala	4.32	253		Pn	10 03 36.3	+0.4
MEIG	Mezcala	4.32	253	eP	Pn	10 03 36.3	+0.4
MEIG				eS	Sn	10 04 23.6	-2.5
ACIG	Acambay	4.40	280		Pn	10 03 37.8	+0.7
ACIG	Acambay	4.40	280	eP	Pn	10 03 37.8	+0.7
ACIG				eS	Sn	10 04 31.6	+3.5
CRIG	Cruz Grande	4.44	236		Pn	10 03 36.0	-1.4
CRIG	Cruz Grande	4.44	236	eP	Pn	10 03 36.0	-1.4
CRIG				eS	Sn	10 04 21.5	-7.3
DAIG	Los Arroyos	4.71	243		Pn	10 03 40.4	-0.8
DAIG	Los Arroyos	4.71	243	eP	Pn	10 03 40.4	-0.8
DAIG				eS	Sn	10 04 32.4	-3.2
ARIG	Puente Sto Nin	4.90	259	eP	Pn	10 03 45.0	+1.3
ARIG				eS	Sn	10 04 34.6	-5.6
PAVE	Pavencul	5.01	143	eP	Pn	10 03 48.4	+2.9
PAVE				eS	Sn	10 04 38.5	-4.6
PATR	El Naranjo	5.04	144	eP	Pn	10 03 48.4	+2.5
PATR				eS	Sn	10 04 42.1	-1.8
JRQG	Juriquilla Cam	5.07	287	Pn	Pn	10 03 47.8	+1.4
CHUJ	Union Juarez	5.13	143	eP	Pn	10 03 49.9	+2.8
CHUJ				eS	Sn	10 04 41.6	-4.5
THIG		5.19	146	eP	Pn	10 03 52.5	+4.8
THIG				eS	Sn	10 04 47.7	+0.3
CAIG	El Cayaco	5.22	246		Pn	10 03 46.7	-1.5
CAIG	El Cayaco	5.22	246	eP	Pn	10 03 46.7	-1.5
CAIG				eS	Sn	10 04 41.4	-6.8
GTIG	Gomez Farias	5.25	317		Pn	10 03 47.1	-1.5
GTIG	Gomez Farias	5.25	317	eP	Pn	10 03 47.1	-1.5
GTIG				eS	Sn	10 04 41.3	-7.6
HUEH	Huehuetenango	5.32	137	Pn	Pn	10 03 52.2	+2.5
HUEH	Huehuetenango	5.32	137	eP	Pn	10 03 55.4	+5.6
HUEH				eS	Sn	10 04 46.2	-4.7
HUEH	Huehuetenango	5.32	137	S	Sn	10 04 51.8	+0.9
MYIG	Merida	5.48	71		Pn	10 03 52.7	+1.0
MYIG	Merida	5.48	71	eP	Pn	10 03 52.7	+1.0
MYIG				eS	Sn	10 04 50.5	-3.9
MYIG	Merida	5.48	71	P	Pn	10 03 52.4	+0.7
MYIG	Merida	5.48	71	S	Sn	10 04 51.0	-3.4
MOIG	Morelia	5.59	275	eP	Pn	10 03 59.4	+5.9
MOIG	Morelia	5.59	275	P	Pn	10 03 59.5	+6.0
MOIG	Morelia	5.59	275	S	Sn	10 05 04.4	+6.7
PETF	Flores	5.65	113		Pn	10 03 54.7	+0.6
PETF	Flores	5.65	113	eP	Pn	10 03 55.3	+1.2
PETF				eS	Sn	10 04 49.8	-8.8
PETF	Flores	5.65	113	P	Pn	10 03 55.4	+1.4
PETF	Flores	5.65	113	S	Sn	10 04 53.1	-5.6
RTAL	Retalhuleu	5.82	143	Pn	Pn	10 03 58.8	+2.4
RTAL	Retalhuleu	5.82	143	eP	Pn	10 03 59.1	+2.7
RTAL				eS	Sn	10 04 54.4	-8.5
RTAL	Retalhuleu	5.82	143	S	Sn	10 05 02.8	-0.1
ZIIG	Zihuatanejo	6.09	255	eP	Pn	10 04 01.7	+1.5
ZIIG				eS	Sn	10 05 03.1	-6.5
APG	El Apazote	6.25	132	Pn	Pn	10 04 03.5	+0.9
	0.1nm,0.3s,baz=206,slow=15,SNR=7.3						
APG				Sn	Sn	10 05 08.6	-5.2
	0.6nm,0.3s,baz=117,slow=13,SNR=8.1						
TEIG	Tepich	6.67	80	Pn	Pn	10 04 08.0	0.0
	baz=309,slow=24						
TEIG				Sn	Sn	10 05 17.7	-6.1
	baz=132,slow=24,SNR=8.3						
TEIG	Tepich	6.67	80		Pn	10 04 07.7	-0.3
TEIG	Tepich	6.67	80	P	Pn	10 04 07.8	-0.3
TEIG				S	Sn	10 05 16.5	-7.3
LNIG	Linares	6.83	326		Pn	10 04 09.4	-0.9
LNIG	Linares	6.83	326	eP	Pn	10 04 09.4	-0.9
LNIG				e		10 05 17.8	
IZABA	Izabal, Puerto	7.29	118	S	Sn	10 05 37.8	-1.2
FAME	Alcaldia de Sa	7.38	136	P	Pn	10 04 15.9	-1.9
MTO3	Montecristo	7.44	130		Pn	10 04 18.4	-0.5
MTO3	Montecristo	7.44	130	S	Sn	10 05 41.4	-1.8
MTO3	Montecristo	7.44	130	P	Pn	10 04 21.1	+2.2
NUBE	Las Nubes	7.49	134	P	Pn	10 04 15.4	-4.1
INCO	Volcan de Coli	7.86	273	eP	Pn	10 04 29.5	+4.7
INCO				eS	Sn	10 05 50.0	-3.8
MNGA	Volcan de Coli	7.88	273	eP	Pn	10 04 29.2	+4.2
MNGA				eS	Sn	10 05 50.9	-3.0
SOMAC	Volcano de Col	7.89	273	eP	Pn	10 04 29.0	+3.8
SOMAC				eS	Sn	10 05 54.0	-0.4
CEGR	Campo Tres	8.10	272	eP	Pn	10 04 31.7	+3.8
CEGR				eS	Sn	10 05 54.9	-4.5
CDAR	Ciudad de Arme	8.26	269	eP	Pn	10 04 31.6	+1.6
CDAR				eS	Sn	10 05 55.1	-7.9
833A	Chaparral WMA,	9.78	338		Pn	10 04 52.1	+1.2
CNGN	Cerro Negro	10.64	128	Pn	Pn	10 05 03.1	+0.5
HNDO	Hondo	10.86	341		Pn	10 05 06.3	+0.7
DRIO	Del Rio	11.23	335	Pn	Pn	10 05 11.0	+0.3
BOAB	BOACO BROADBAN	11.45	125	Pn	Pn	10 05 14.8	+1.0
HNVL	Huntsville, TX	11.46	359	Pn	Pn	10 05 13.1	-0.6
441A	DeRidder	11.61	9	Pn	Pn	10 05 14.6	-1.1
435B	Jarrell	11.67	350		Pn	10 05 17.3	+0.6
JCT	Junction City	11.91	341		Pn	10 05 19.7	-0.3
BRDY	Brady	12.45	345		Pn	10 05 27.6	+0.4
TXAR	Lajitas Array	12.61	324	Pn	Pn	10 05 35.5	+5.8
	baz=125,slow=10,SNR=2.6						
	0.3nm,0.9s						
237A	Washetta, Mont	12.71	358	Pn	Pn	10 05 30.0	-0.8
OZNA	Ozona	12.77	337		Pn	10 05 29.9	-1.9
WHTX	Lake Whitney,	12.84	352		Pn	10 05 30.6	-2.0
346A	Big Creek Wild	13.18	22		Pn	10 05 35.4	-1.8
CAMR	Camarioca	13.52	71	eP	Pn	10 05 38.4	-3.5
PLPT	Palo Pinto	13.78	349		Pn	10 05 44.3	-1.2
FW06	Azle	13.82	352		Pn	10 05 45.4	-0.6
ABTX	Abilene, Hawle	13.88	344		Pn	10 05 47.2	+0.3
Z41A	Richland Creek	14.12	9		Pn	10 05 49.0	-1.2
146A	Union	14.45	21		Pn	10 05 52.2	-2.5
MGV	Manicaragua	14.60	76	eP	Pn	10 05 54.7	-2.0
MIAR	Mount Ida	15.31	5		Pn	10 06 05.3	-0.9
X40A	Basin Creek Fa	15.33	8		Pn	10 06 05.4	-1.1
X40A				IAmb	IAmb	10 06 14.8	
	comp=Z,19nm,1.2s						
DWPF	Disney Wildern	15.44	53	eP	Pn	10 05 59.2	-8.7
CCCC	Cccc	16.55	80	eP	P	10 06 24.7	-0.1
MTDJ	Mount Denham	16.84	91	Pn	Pn	10 06 25.5	-0.5
HHAR	Hobbs	17.01	4	Pn	Pn	10 06 27.1	-0.9
HHAR				IAmb	IAmb	10 06 41.1	
	comp=Z,24nm,1.3s						
LMGC	Las Mercedes	17.23	84	eP	Pn	10 06 31.4	+0.5
GOGA	Godfrey	17.61	34	Pn	Pn	10 06 34.0	-1.5
GOGA				IAmb	IAmb	10 06 36.6	
	comp=Z,12nm,0.5s						
CHIV	Chivirico	17.79	85	eP	P	10 06 40.6	+2.1
W50A	Signal Mountai	18.17	27	P	Pn	10 06 39.9	-2.6
MARVS	Santiago de Cu	18.27	84	eP	P	10 06 46.5	+2.6
PINC	Pinares de May	18.37	83	eP	P	10 06 48.1	+3.2
RCC	Rio Carpintero	18.46	84	eP	Pn	10 06 48.6	+2.5
ANMO	Albuquerque	18.51	330	P	Pn	10 06 49.1	+2.3
	comp=Z,0.1nm,0.3s,baz=146,slow=15,SNR=2.7						
	comp=Z,0.4nm,0.6s						
GTBY	Guantanamo Bay	19.02	85	eP	Pn	10 06 56.9	+4.1
MOAC	Moa	19.15	82	eP	P	10 06 44.4	-9.1
TKL	Tuckaleechee C	19.24	30	P	Pn	10 06 55.6	+0.2
	comp=Z,0.9nm,0.3s,baz=231,slow=13,SNR=12						
	comp=Z,2.2nm,0.3s						
QMBU	Quimbuelo	19.29	84	eP	Pn	10 07 01.3	+5.2
T50A	Nancy	19.93	25	P	P	10 07 02.1	+0.2
P48A	Milroy	21.87	21	P	P	10 07 23.2	+0.4
P48A				IAmb	IAmb	10 07 44.1	
	comp=Z,12nm,1.1s						
S54A	Dingess, Beckl	22.14	30	P	P	10 07 26.0	+0.2
S54A				IAmb	IAmb	10 08 08.1	
	comp=Z,8.1nm,1.0s						
PDAR	Pinedale Array	26.37	336	P	P	10 08 09.3	+2.8
	comp=Z,0.2nm,0.5s,baz=157,slow=10,SNR=2.7						
	comp=Z,0.2nm,0.5s						
NVAR	Mina Array Bea	27.65	319	P	P	10 08 21.4	+3.3
	comp=Z,2.2nm,0.8s,baz=124,slow=7.8,SNR=13						
	comp=Z,2.2nm,0.8s						
LPAZ	La Paz	44.27	141	P	P	10 10 38.9	-1.7
	comp=Z,0.3nm,0.4s,baz=195,slow=13,SNR=1.5						
	comp=Z,0.3nm,0.4s						
ILAR	Eielson Array	56.80	336	P	P	10 12 15.2	+1.3
	comp=Z,0.5nm,0.9s,baz=116,slow=8.2,SNR=5.0						
	comp=Z,0.5nm,0.9s						
PLCA	Paso Flores	63.95	159	P	P	10 13 04.4	+1.2
	comp=Z,1.8nm,0.8s,baz=309,slow=6.5,SNR=4.6						
	comp=Z,1.8nm,0.8s						
WRA	Warramunga Arr	133.39	260	PKP	PKiKP	10 21 48.6	+0.4
	comp=Z,0.6nm,0.6s,baz=42,slow=2.2,SNR=7.2						
ASAR	Alice Springs	134.19	255	PKP	PKPdf	10 21 49.3	+0.9
	comp=Z,0.4nm,0.8s,baz=93,slow=1.8,SNR=2.9						

TEH 01 10:04:36.8, 35.°74N×51.°99E, h5km, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDMV	Damavand	0.17	167	Pg	Pg	10 04 40.6	+0.3
IDMV				Sg	Sg	10 04 43.4	+0.9
IFIR	Firoozkooh	0.63	99	Pg	Pb	10 04 49.9	-0.6
IVRN	Varamin	0.78	196	Pg	Pb	10 04 52.8	0.0
ISFB	Sefidab	1.40	171	Pg	Pg	10 05 03.7	0.0

NOU ***01*** *10:06:32.5, 36.°90S×177.°02E, h265km, MLv3.9/19, Off E. Coast of N. Island, N.Z.*

WEL ***01*** *10:06:35.8±1.0, 37°S±7°×17°7E±°, h234km±10km, M3.3/22, ML3.2/7, MLv3.3/22, Error ellipse: s-maj=9.3km s-min=7.3km az=32.5, confirmed*

ISC 01 10:06:29.4±2.2**, 36.°79S**±0.°07×**177.°13E**±0.°07**, h286**km±12km**, n149, σ1.s75**/166**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	Te Kaha	1.09	152	P	Pn	10 07 09.9	+1.1
HAZ				S	S	10 07 36.5	-3.5
KUZ	Kuaotunu	1.13	272	P	Pn	10 07 09.5	+0.5
KUZ	Kuaotunu	1.13	272	P	Pn	10 07 09.5	+0.5
OPRZ	Ohinepanea	1.15	203	P	Pn	10 07 10.5	+1.5
TGRZ	Tauranga	1.16	216	P	Pn	10 07 10.9	+1.8
MXZ	Matakaoa Point	1.22	130	P	Pn	10 07 11.0	+1.6
MXZ	Matakaoa Point	1.22	130	S	S	10 07 39.5	-1.6
MXZ	Matakaoa Point	1.22	130	P	Pn	10 07 10.8	+1.4
MXZ				S	S	10 07 39.1	-2.0
MARZ	Manawahe	1.24	197	P	Pn	10 07 11.3	+1.7
RUGZ	Raukumara Rang	1.25	160	P	Pn	10 07 10.4	+0.7
RUGZ				S	S	10 07 38.2	-3.6
PKGZ	Pakihiroa	1.31	145	P	Pn	10 07 10.3	+0.3
PKGZ				S	S	10 07 40.7	-1.6
KARZ	Kaharoa	1.41	210	P	Pn	10 07 12.5	+1.9
KMRZ	Kaimai	1.41	222	P	Pn	10 07 12.4	+1.8
OMRZ	Omania	1.44	204	P	Pn	10 07 12.9	+2.0
GRZ	Great Barrier	1.45	291	P	Pn	10 07 11.3	+0.4
WMGZ	Waiomatatini S	1.45	135	P	Pn	10 07 12.9	+2.1
WMGZ				S	S	10 07 42.5	-1.2
URZ	Urewera	1.47	181	P	Pn	10 07 11.8	+0.9
URZ	Urewera	1.47	181	S	S	10 07 42.5	-1.4
URZ	Urewera	1.47	181	P	Pn	10 07 11.9	+0.9
URZ				S	S	10 07 41.8	-2.1
TARZ	Mount Tarawera	1.52	199	P	Pn	10 07 13.6	+2.1
TWGZ	Tauwhareparae	1.54	154	P	Pn	10 07 13.8	+2.3
TWGZ				S	S	10 07 44.9	-0.1
PUZ	Puketiti	1.56	145	P	Pn	10 07 13.5	+1.8
PUZ				S	S	10 07 43.3	-1.9
UTU	Utuhina	1.57	208	P	Pn	10 07 14.7	+3.1
MWZ	Matawai	1.57	168	P	Pn	10 07 13.2	+1.5
MWZ				S	S	10 07 43.8	-1.6
HLRZ	Highlands Stat	1.58	203	P	Pn	10 07 14.8	+3.0
TOZ	Tahuroa Road	1.60	234	P	Pn	10 07 13.7	+1.8
WIAZ	Waiheke Island	1.60	269	P	Pn	10 07 13.1	+1.2
MKAZ	Moumakai	1.61	258	P	Pn	10 07 13.3	+1.3
RRRZ	Republican Roa	1.62	197	P	Pn	10 07 13.6	+1.6
HSRZ	Hossack Road	1.67	205	P	Pn	10 07 15.5	+3.1
MUGZ	Murupara	1.71	189	P	Pn	10 07 13.8	+1.2
MUGZ				S	S	10 07 44.3	-2.7
RAGZ	Rawiri	1.72	172	P	Pn	10 07 14.7	+1.9
RAGZ				S	S	10 07 45.3	-2.0
HRRZ	Handcock Road	1.73	203	P	Pn	10 07 14.9	+2.0
TKGZ	Te Karaka	1.74	161	P	Pn	10 07 14.8	+1.9
TKGZ				S	S	10 07 45.7	-1.7
GRRZ	Galatos Road	1.75	207	P	Pn	10 07 15.3	+2.3
ETAZ	East Tamaki Re	1.77	264	P	Pn	10 07 14.6	+1.4
MBAZ	Motutapu North	1.79	270	P	Pn	10 07 14.6	+1.3
PRRZ	Plateau Road	1.80	199	P	Pn	10 07 14.9	+1.5
RTZ	Ruatahuna	1.82	184	P	Pn	10 07 14.9	+1.3

ABAZ	Army Bay	1.85	275	P	Pn	10 07 15.1	+1.3
ALRZ	Allen Road	1.87	199	P	Pn	10 07 15.7	+1.8
WPRZ	Whakapapatarin	1.89	204	P	Pn	10 07 16.6	+2.6
CNGZ	Carnagh Statio	1.89	153	P	Pn	10 07 16.6	+2.6
EPAZ	Eden Park BICE	1.91	267	P	Pn	10 07 15.5	+1.2
HBAZ	Herne Bay Bore	1.92	268	P	Pn	10 07 15.7	+1.4
RIGZ	Rimuhau	1.98	165	P	Pn	10 07 17.0	+2.3
RIGZ				S	S	10 07 50.3	-0.5
KUTZ	Kaahu Road	1.98	211	P	Pn	10 07 17.1	+2.2
TLZ	Tolley Road	1.99	219	P	Pn	10 07 17.3	+2.5
SNGZ	Shannon Statio	1.99	175	P	Pn	10 07 16.8	+1.9
SNGZ				S	S	10 07 49.4	-1.7
AWAZ	Awhitu Peninsu	2.01	261	P	Pn	10 07 16.4	+1.3
RVAZ	Riverhead Bore	2.05	270	P	Pn	10 07 16.4	+1.0
WTAZ	Waiatarua	2.05	265	P	Pn	10 07 16.8	+1.4
MTHZ	Maungataniwha	2.07	186	P	Pn	10 07 17.1	+1.5
MRHZ	Matea Rd	2.12	195	P	Pn	10 07 17.4	+1.4
MRHZ				S	S	10 07 51.7	-1.2
RAHZ	Arahi	2.12	181	P	Pn	10 07 18.0	+2.0
WATZ	Wairara	2.21	210	P	Pn	10 07 19.0	+2.2
PRGZ	Paritu Road	2.21	165	P	Pn	10 07 19.3	+2.6
KNZ	Kokohu	2.27	169	P	Pn	10 07 18.9	+1.7
KNZ				S	S	10 07 52.4	-2.7
WHHZ	Waihua	2.28	178	P	Pn	10 07 19.4	+2.1
NMHZ	Naumai	2.31	186	P	Pn	10 07 20.0	+2.3
RATZ	Rangitukua	2.33	207	P	Pn	10 07 19.7	+1.9
RITZ	Rihia Road	2.40	204	P	Pn	10 07 18.2	-0.2
WCZ	Waipu Caves	2.40	290	P	Pn	10 07 19.5	+1.0
BKZ	Black Stump Fm	2.42	192	P	Pn	10 07 19.6	+1.0
BKZ	Black Stump Fm	2.42	192	S	S	10 07 56.7	-1.1
BKZ	Black Stump Fm	2.42	192	P	Pn	10 07 19.7	+1.1
BKZ				S	S	10 07 55.4	-2.5
MHGZ	Mahia Peninsul	2.44	166	P	Pn	10 07 20.9	+2.2
KATZ	Kakaramea	2.46	207	P	Pn	10 07 22.1	+3.0
ARHZ	Aropaoanui	2.47	182	P	Pn	10 07 21.1	+2.1
HIZ	Hauiti	2.49	226	P	Pn	10 07 22.0	+2.8
HIZ	Hauiti	2.49	226	P	Pn	10 07 22.0	+2.8
NTVZ	North Tongarir	2.57	206	P	Pn	10 07 22.2	+2.1
TMVZ	Te Maari	2.58	205	P	Pn	10 07 22.1	+1.9
KRVZ	Karewarewa	2.58	207	P	Pn	10 07 22.1	+1.9
ETVZ	East Tongariro	2.59	205	P	Pn	10 07 22.2	+1.8
WTVZ	West Tongariro	2.62	207	P	Pn	10 07 22.3	+1.7
NNVZ	North Ngauruho	2.62	207	P	Pn	10 07 22.5	+1.8
OTVZ	Oturere	2.63	206	P	Pn	10 07 22.7	+2.0
TWVZ	Taurewa	2.64	210	P	Pn	10 07 22.5	+1.8
SNVZ	South Ngauruho	2.66	206	P	Pn	10 07 23.0	+1.9
NGZ	Ngauruhoe	2.67	206	P	Pn	10 07 22.9	+1.9
MCHZ	McNeill Hill	2.67	187	P	Pn	10 07 23.1	+2.2
KWHZ	Kaweka Forest	2.69	192	P	Pn	10 07 22.8	+1.7
COVZ	Chateau Observ	2.71	207	P	Pn	10 07 23.1	+1.7
TUVZ	Tukino	2.73	205	P	Pn	10 07 23.4	+1.7
FWVZ	Far West T-bar	2.75	206	P	Pn	10 07 23.5	+1.5
MAVZ	Matarangi	2.76	206	P	Pn	10 07 23.8	+1.7
WHVZ	Whangaehu Hut	2.77	206	P	Pn	10 07 23.8	+1.7
TRVZ	Turoa	2.80	206	P	Pn	10 07 24.1	+1.7
WNVZ	Wahianoa	2.80	205	P	Pn	10 07 23.9	+1.5
MOVZ	Moawhango	2.83	202	P	Pn	10 07 23.6	+1.1
CKHZ	Cape Kidnapper	2.86	181	P	Pn	10 07 24.6	+1.9
PKVZ	Pokaka	2.86	209	P	Pn	10 07 25.0	+2.1
KRHZ	Kereru	2.91	192	P	Pn	10 07 24.6	+1.3
VRZ	Vera Road	2.99	218	P	Pn	10 07 26.7	+2.7
KAHZ	Kahuranaki	3.00	184	P	Pn	10 07 26.1	+1.8
PXZ	Pawanui	3.24	184	P	Pn	10 07 27.9	+1.3
OUZ	Omahuta	3.27	298	P	Pn	10 07 28.1	+1.1
OUZ	Omahuta	3.27	298	P	Pn	10 07 28.3	+1.3
WPHZ	Waipukurau	3.31	189	P	Pn	10 07 28.5	+1.1
TSZ	Takapari Road	3.39	195	P	Pn	10 07 29.2	+1.0
WAZ	Wanganui	3.40	209	P	Pn	10 07 30.0	+1.6
LREZ	Lake Rotokare	3.42	218	P	Pn	10 07 31.4	+2.9
PKE	Pukeiti	3.45	225	P	Pn	10 07 32.4	+3.5
PRHZ	Porangahau	3.49	186	P	Pn	10 07 30.5	+1.3
KHEZ	Kahui Hut	3.50	224	P	Pn	10 07 32.9	+3.4
NBEZ	Newall Road No	3.57	225	P	Pn	10 07 33.6	+3.5
DVHZ	Dannevirke	3.58	192	P	Pn	10 07 31.0	+0.7
NMEZ	Namu Road	3.66	223	P	Pn	10 07 34.1	+3.0
OHWZ	Ohakea	3.69	202	P	Pn	10 07 32.9	+1.5
ANWZ	Angora Road	3.70	188	P	Pn	10 07 32.8	+1.3
POWZ	Post Office Ro	3.75	196	P	Pn	10 07 33.0	+0.9
PRWZ	Pori Road	3.87	193	P	Pn	10 07 34.8	+1.5
BFZ	Birch Farm	3.94	190	P	Pn	10 07 34.9	+0.7
BFZ	Birch Farm	3.94	190	S	S	10 08 24.6	-1.5
BFZ	Birch Farm	3.94	190	P	Pn	10 07 35.0	+0.7
MRZ	Mangatainoka R	4.05	197	P	Pn	10 07 35.9	+0.5
TIWZ	Tintock	4.09	193	P	Pn	10 07 37.1	+1.1
CPWZ	Castlepoint	4.17	190	P	Pn	10 07 38.5	+1.7
HOWZ	Holdsworth Sta	4.29	197	P	Pn	10 07 38.6	+0.5
OGWZ	Otaki Gorge	4.30	200	P	Pn	10 07 38.7	+0.5
TMWZ	Te Maipa	4.42	192	P	Pn	10 07 40.5	+0.9
KIW	Kapiti Island	4.42	202	P	Pn	10 07 39.9	+0.3
MTW	Mount Morrison	4.54	196	P	Pn	10 07 41.4	+0.4
CAW	Cannon Point	4.60	200	P	Pn	10 07 41.9	+0.2
DUWZ	D'Urville Isla	4.72	211	P	Pn	10 07 43.3	+0.2
TRWZ	Traveller	4.73	193	P	Pn	10 07 43.9	+0.6
PAWZ	Paruwai Farm	4.77	196	P	Pn	10 07 44.2	+0.5
MSWZ	Moikau Station	4.84	197	P	Pn	10 07 44.6	+0.1
WEL	Wellington	4.85	202	P	Pn	10 07 45.1	+0.5
SNZO	South Karori	4.89	202	P	Pn	10 07 45.5	+0.5
SNZO	South Karori	4.89	202	S	S	10 08 44.4	-1.2
BHW	Baring Head	4.93	200	P	Pn	10 07 45.6	+0.1
TCW	Tory Channel	4.94	206	P	Pn	10 07 45.7	+0.1
PLWZ	Palliser	4.99	196	P	Pn	10 07 46.4	+0.2
TUWZ	Tuamarina	5.25	207	P	Pn	10 07 50.0	+0.7
NNZ	Nelson	5.29	212	P	Pn	10 07 49.7	-0.1
TKNZ	Takaka Hill	5.34	216	P	Pn	10 07 49.8	-0.5
QRZ	Quartz Range	5.39	220	P	Pn	10 07 50.8	-0.2
QRZ	Quartz Range	5.39	220	S	S	10 08 54.2	-2.4
QRZ	Quartz Range	5.39	220	P	Pn	10 07 50.6	-0.4
CMWZ	Cape Campbell	5.44	204	P	Pn	10 07 52.7	+1.2
BSWZ	Blackbirch Sta	5.53	206	P	Pn	10 07 53.2	+0.7
MRNZ	Matariki Terra	5.72	215	P	Pn	10 07 54.4	-0.5
THZ	Tophouse	5.95	212	P	Pn	10 07 57.4	-0.3
KHZ	Kahutara	6.26	205	P	Pn	10 08 01.7	+0.3
RPZ	Rata Peaks	8.33	212	P	Pn	10 08 27.2	+0.4
SYZ	Scrubby Hill	11.42	209	P	Pn	10 09 06.6	+1.7
SYZ	Scrubby Hill	11.42	209	S	S	10 11 14.5	+2.3

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*IDC **01** 10:06:28.2±2.7, 41.°37N×46.°63E, h0^{km}, mb3.6/4, mbtmp3.8/9, ML3.6/5, MS2.9/2, Error ellipse: s-maj=44.3km s-min=11.1km az=16.0*
*NSSP **01** 10:06:29.5, 41.°48N×46.°58E, h10^{km}, Ms3.7*
*AZER **01** 10:06:29.6, 41.°61N×46.°55E, h15^{km}, ml3.8*
*DRS **01** 10:06:30.6, 41.°54N×46.°58E, h15^{km}*
*MOS **01** 10:06:30.0, 41.°56N×46.°65E, h10^{km}, MPVA4.7*
*TIF **01** 10:06:30.1, 41.°53N×46.°63E, h9^{km}±1^{km}*
ISC 01 10:06:30.9±0.8, **41.°53N**±0.°01×**46.°62E**±0.°01, **h10**^{km}±5^{km}, **n162**, σ**1**^{s}**42**/296, **mb3.8**/4, **7C-9D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKTA	Zakatala	0.10	360	P	Pg	10 06 33.6	0.0
ZKTA				S	Sg	10 06 36.0	+0.3
VSHL	Vashlovani	0.35	209	P	Pb	10 06 40.3	+1.2
SEKA	Sheki	0.54	127	Pg	Pg	10 06 41.2	-0.3
SEKA				Sg	Sb	10 06 50.1	-0.2
SEKA	Sheki	0.54	127	PG	Pg	10 06 41.0	-0.4
TLTR	Tlyarata	0.61	341	*i* Pg	Pg	10 06 42.2	-0.5
TLTR				*e*Sg	Sg	10 06 51.4	+0.6
TLTR	Tlyarata	0.61	341	⇓*i*PG	Pg	10 06 42.2	-0.5
TLTR				*e*S	Sg	10 06 51.3	+0.6
TLTR				pmax	pmax		
	comp=Z,565nm,0.2s						
KMKR	Kumukh	0.70	31	*e*Pg	Pg	10 06 44.4	-0.1
KMKR				*e*Sg	Sb	10 06 54.6	-0.5
KMKR	Kumukh	0.70	31	*e*PG	Pg	10 06 44.3	-0.1
KMKR				*e*S	Sb	10 06 54.5	-0.5
KMKR				pmax	pmax		
	comp=Z,2µm,0.5s						
AKT	Akhty	0.83	93	*e*Pg	Pg	10 06 46.4	-0.6
AKT				*e*Sg	Sb	10 06 58.2	-0.6
AKT	Akhty	0.83	93	⇓*i*PG	Pg	10 06 46.2	-0.8
AKT				*e*S	Sg	10 06 57.6	-0.3
AKT				pmax	pmax		
	comp=Z,373nm,0.2s						
AKT				smax	smax		
	comp=E,3µm,0.3s						
AKT				smax	smax		
	comp=E,3µm,0.2s						
AKT				smax	smax		
	comp=N,3µm,0.4s						
MNGR	Mingechevir, A	0.83	155	P	Pb	10 06 47.8	+0.3
MNGR				S	Sn	10 07 02.7	+1.7
MNGR	Mingechevir, A	0.83	155	PG	Pb	10 06 48.0	+0.5
GANJ	Ganja	0.91	195	P	Pg	10 06 48.2	-0.3
GANJ				S	Sb	10 07 02.1	+1.0
GANJ	Ganja	0.91	195	PG	Pg	10 06 48.2	-0.3
DGRG	David-gareji	0.94	265	S	Sn	10 07 05.9	+2.1
DGRG	David-gareji	0.94	265	PG	Pb	10 06 50.0	+0.6
DGRG				S	Sn	10 07 05.8	+2.1
DGRG	David-gareji	0.94	265	P	Pb	10 06 50.0	+0.6
URKR	Urkarakh	0.98	50	*e*Pg	Pb	10 06 50.1	0.0
URKR				*e*Sg	Sn	10 07 04.2	-0.8
URKR	Urkarakh	0.98	50	*e*PG	Pb	10 06 50.1	0.0
URKR				*e*S	Sn	10 07 04.1	-0.8
URKR				pmax	pmax		
	comp=Z,597nm,0.5s						
GDB	GEDABAY	1.04	219	P	Pg	10 06 50.1	-0.9
GDB				S	Sg	10 07 04.7	+0.1
QZX	Qazax, Azerbai	1.05	244	P	Pg	10 06 50.6	-0.6
QZX				S	Sb	10 07 06.2	+1.0
QBL	Gabala	1.09	122	P	Pg	10 06 51.5	-0.3
QBL				S	Sn	10 07 08.8	+1.5
ARKR	Arakani	1.10	14	*e*Pg	Pg	10 06 52.0	-0.2
ARKR				*e*Sg	Sn	10 07 07.5	-0.3
ARKR	Arakani	1.10	14	*e*PG	Pg	10 06 52.0	-0.2
ARKR				*e*S	Sn	10 07 07.5	-0.3
KSMR	Kasumkent	1.13	86	*e*Pg	Pn	10 06 52.8	-0.1
KSMR				*e*Sg	Sn	10 07 08.8	+0.3
KSMR	Kasumkent	1.13	86	*e*PG	Pn	10 06 52.8	-0.1
KSMR				*e*S	Sn	10 07 08.8	+0.3
BTLR	Botlikh	1.17	345	*e*Pg	Pb	10 06 53.1	-0.2
BTLR				*e*Sg	Sg	10 07 09.1	+0.5
BTLR	Botlikh	1.17	345	*e*PG	Pb	10 06 53.1	-0.2
BTLR				*e*S	Sg	10 07 09.1	+0.5
UNCR	Uncukul	1.19	6	*e*Pg	Pb	10 06 53.5	-0.1
UNCR				*e*Sg	Sn	10 07 10.8	+1.0
UNCR	Uncukul	1.19	6	*e*PG	Pb	10 06 53.5	-0.1
UNCR				*e*S	Sn	10 07 10.8	+1.0
XNQ	Khinaliq	1.20	107	P	Pb	10 06 53.4	-0.4
XNQ				S	Sn	10 07 10.3	0.0
SGKR	Sergokala	1.21	39	*e*Pg	Pg	10 06 54.5	+0.4
SGKR				*e*Sg	Sn	10 07 12.0	+1.7
SGKR	Sergokala	1.21	39	*e*PG	Pg	10 06 54.5	+0.4
SGKR				*e*S	Sn	10 07 12.0	+1.7
QSAR	Qusar	1.23	90	P	Pg	10 06 54.3	-0.3
QSAR				S	Sn	10 07 11.8	+0.9
LSVT	Lusahovit	1.24	241	⇓*i*P	Pn	10 06 53.2	-1.2
LSVT				⇑*i*S	Sb	10 07 10.4	-0.2
KRNR	Karanay	1.31	9	*e*Pg	Pn	10 06 55.4	0.0
KRNR				*e*Sg	Sg	10 07 13.7	+0.6
KRNR	Karanay	1.31	9	*e*PG	Pn	10 06 55.4	0.0
KRNR				*e*S	Sg	10 07 13.7	+0.6
KRNR				pmax	pmax		
	comp=Z,244nm,0.4s						
BRDA	Brd	1.34	161	Pn	Pg	10 06 56.5	-0.1
BRDA				Sn	Sg	10 07 17.1	+3.1
BUJR	Buynaksk	1.34	15	*e*Pg	Pb	10 06 56.2	+0.1
BUJR				*e*Sg	Sg	10 07 15.0	+0.9
BUJR	Buynaksk	1.34	15	*e*PG	Pb	10 06 56.2	+0.1
BUJR				*e*S	Sg	10 07 15.0	+0.9
BUJR				pmax	pmax		
	comp=Z,282nm,0.4s						
DRN	Derbent	1.37	68	*e*Pg	Pg	10 06 57.2	0.0
DRN				*e*Sg	Sg	10 07 16.4	+1.4
DRN	Derbent	1.37	68	*e*PG	Pg	10 06 57.2	0.0
DRN				*e*S	Sg	10 07 16.4	+1.4
BTNK	Botanikuri	1.38	277	PG	Pn	10 06 56.3	+0.1
BTNK				S	Sg	10 07 16.0	+0.8
SEAG	Tbilisi Sea	1.38	280	P	Pb	10 06 57.2	+0.3
SEAG				S	Sg	10 07 17.3	+1.9
SEAG	Tbilisi Sea	1.38	280	PG	Pb	10 06 57.1	+0.3
SEAG				S	Sg	10 07 17.3	+1.9
IML	Ismayilli	1.39	122	Pn	Pn	10 06 56.1	-0.3
IML				Sn	Sg	10 07 15.8	+0.2
QUBA	Quba, Azerbaij	1.42	97	Pn	Pg	10 06 58.3	+0.1
QUBA				Sn	Sg	10 07 19.1	+2.6
TBLG	Delisi	1.43	279	P	Pn	10 06 57.0	+0.1
TBLG				S	Sg	10 07 17.7	+0.9
TBLG	Delisi	1.43	279	PG	Pn	10 06 57.0	+0.1
TBLG				S	Sg	10 07 17.7	+0.9
AGDM	Agdam	1.47	165	Pn	Pn	10 06 58.0	+0.5
AGDM				Sn	Sg	10 07 18.7	+0.5
DVE	Vedeno	1.47	346	*e*Pg	Pn	10 06 57.7	+0.2
DVE				*e*Sg	Sg	10 07 18.4	+0.1
DVE	Vedeno	1.47	346	*e*PG	Pn	10 06 57.7	+0.2
DVE				*e*S	Sg	10 07 18.3	+0.1
DVE				pmax	pmax		
	comp=Z,182nm,0.5s						
ZRD	Zardab	1.49	147	Pn	Pb	10 06 59.0	+0.3
ZRD				Sn	Sg	10 07 21.6	+2.8
CHRG	Chargali	1.50	303	P	Pn	10 06 57.8	-0.1
CHRG				S	Sg	10 07 19.8	+0.7
DLMR	Dylym	1.54	0	*e*Pg	Pb	10 06 59.7	+0.2
DLMR				*e*Sg	Sg	10 07 21.1	+0.8
DLMR	Dylym	1.54	0	*e*PG	Pb	10 06 59.7	+0.2
DLMR				*e*S	Sg	10 07 21.1	+0.8
AYRK	Ayrk	1.55	204	⇓*i*P	Pn	10 06 59.0	+0.2
AYRK				⇓*i*S	Sg	10 07 20.8	-0.1
SHTL	Shatili	1.57	316	P	Pn	10 06 58.9	-0.1
SHTL				S	Sb	10 07 21.0	+1.0
SHTL	Shatili	1.57	316	PG	Pn	10 06 58.8	-0.1
SHTL				S	Sb	10 07 21.0	+1.0
MAK	Makhachkala	1.57	24	*e*Pg	Pb	10 07 00.3	+0.3
MAK				*e*Sg	Sg	10 07 22.2	+0.8
MAK	Makhachkala	1.57	24	⇓*i*PG	Pn	10 06 59.3	+0.5
MAK				*e*S	Sg	10 07 22.2	+0.8
MAK				pmax	pmax		
	comp=Z,184nm,0.3s						
MAK				smax	smax		
	comp=N,1µm,0.6s						
MAK				smax	smax		
	comp=N,1µm,0.6s						
KDMR	Kurdemir	1.65	134	Pn	Pb	10 07 01.1	-0.3
KDMR				Sn	Sg	10 07 25.1	+1.0
PQL	Pirkuli	1.66	116	Pn	Pn	10 07 00.8	+0.6
PQL				Sn	Sg	10 07 25.1	+0.7
KZR	Kazreti	1.67	266	P	Pn	10 06 58.0	-2.2
KZR				S	Sn	10 07 20.2	-1.4
KZRT	Kazreti	1.68	266	PN	Pn	10 06 58.0	-2.4
SIZA	Siyzn	1.77	104	Pg	Pg	10 07 05.5	+0.5
SIZA				Sn	Sg	10 07 30.4	+2.4
GROC	Groznyy	1.78	340	*e*Pg	Pn	10 07 02.7	+1.0
GROC				*e*Sg	Sb	10 07 26.9	+0.9
GROC	Groznyy	1.78	340	*e*PN	Pn	10 07 02.7	+1.0
GROC				*e*S	Sb	10 07 26.8	+0.9
GROC				pmax	pmax		
	comp=Z,226nm,0.4s						
KANR	Karaman	1.78	21	*e*Pg	Pg	10 07 05.7	+0.6
KANR				*e*Sg	Sg	10 07 31.3	+3.1
KANR	Karaman	1.78	21	*e*PN	Pg	10 07 05.7	+0.6
KANR				*e*S	Sg	10 07 31.3	+3.1
SRTK	Saratovka	1.79	256	*e*P	Pn	10 07 02.1	0.0
SRTK				*e*S	Sn	10 07 25.9	+0.9
GUDG	Gudauri	1.85	301	P	Pb	10 07 04.3	-0.6
GUDG				S	Sg	10 07 30.1	-0.3
GUDG	Gudauri	1.85	301	PN	Pb	10 07 04.3	-0.6
GUDG				S	Sg	10 07 30.1	-0.3
ATGJ	Altiaghaj	1.87	110	Pg	Pg	10 07 07.1	+0.3
ATGJ				Sn	Sg	10 07 33.7	+2.6
TRLG	Trialeti	1.89	271	S	Sb	10 07 29.2	-0.2
TRLG	Trialeti	1.89	271	PN	Pn	10 07 03.8	+0.4
TRLG	Trialeti	1.89	271	P	Pn	10 07 03.8	+0.4
KAPZ	Kaputan	1.89	231	*e*P	Pn	10 07 04.7	+1.3
KAPZ				*e*S	Sb	10 07 30.4	+1.0
BLQ	Beylaqan	1.94	158	Pn	Pn	10 07 04.5	+0.5
BLQ				Sn	Sg	10 07 32.3	-1.1
GNI	Garni	1.99	227	*e*P	Pb	10 07 06.8	-0.4
GNI				*e*S	Sb	10 07 33.9	+1.8
GNI	Garni	1.99	227	⇑*i*PN	Pb	10 07 07.0	-0.2
GNI				*e*S	Sg	10 07 34.2	-0.6
KMGR	Komgaron	2.00	320	*e*Pg	Pb	10 07 08.7	+1.2
KMGR				*e*Sg	Sg	10 07 34.5	-0.9
KMGR	Komgaron	2.00	320	*e*PN	Pb	10 07 08.7	+1.2
GBS	Qobustan	2.02	119	Pn	Pb	10 07 08.1	+0.4
GBS				Sg	Sg	10 07 38.9	+3.2
VAYK	Vayk	2.05	207	*i* P	Pb	10 07 07.3	-0.9
VAYK				*i* S	Sb	10 07 35.1	+1.3
VLKR	Vladikavkaz	2.09	317	*e*Pg	Pg	10 07 11.2	+0.2
VLKR				*e*Sg	Sg	10 07 37.6	-0.5
VLKR	Vladikavkaz	2.09	317	*e*PN	Pg	10 07 11.2	+0.2
VLKR				*e*S	Sg	10 07 37.6	-0.5
AMBZ	Amberd	2.12	238	*e*P	Pb	10 07 08.8	-0.8
AMBZ				*e*S	Sb	10 07 37.3	+1.2
QRD	Qoradiz	2.14	165	Pn	Pn	10 07 07.2	+0.6
QRD				Sn	Sb	10 07 36.2	0.0
LACR	Lac	2.16	308	*e*Pg	Pb	10 07 09.6	-0.5
LACR				*e*Sg	Sb	10 07 39.0	+2.0
LACR	Lac	2.16	308	*e*PN	Pb	10 07 09.6	-0.5
LACR				*e*S	Sb	10 07 39.0	+2.0
HYR	Heyderabad	2.26	217	Pg	Pb	10 07 11.5	-0.3
HYR				Sn	Sb	10 07 38.8	-1.0
SBZ	Shahbuz	2.28	201	Pg	Pb	10 07 11.9	-0.3
SBZ				Sn	Sb	10 07 40.6	0.0
ARUZ	Aruch	2.29	238	*e*P	Pb	10 07 12.1	-0.3
ARUZ				*e*S	Sg	10 07 43.4	-1.1
BGD	Bogdanovka	2.29	264	P	Pn	10 07 10.3	+1.4
BGD				S	Sb	10 07 40.7	-0.2
BGD	Bogdanovka	2.29	264	PN	Pn	10 07 10.3	+1.4
BGD				S	Sb	10 07 40.7	-0.2
EGVZ	Egvard	2.30	182	⇓*i*P	Pn	10 07 10.3	+1.3
EGVZ				⇓*i*S	Sb	10 07 40.6	-0.6
AKH	Akhalkalaki	2.35	268	P	Pn	10 07 11.3	+1.5
AKH				S	Sb	10 07 42.9	+0.2
AKH	Akhalkalaki	2.35	268	PN	Pn	10 07 11.3	+1.5
AKH				S	Sb	10 07 42.9	+0.2
METS	Metsamor	2.37	235	*e*P	Pb	10 07 12.8	-1.0
METS				*e*S	Sb	10 07 43.7	+0.6
ARNR	Ardon	2.39	314	*e*Pn	Pb	10 07 14.3	+0.3
ARNR				*e*Sn	Sb	10 07 43.8	+0.2
ARNR	Ardon	2.39	314	*e*PN	Pb	10 07 14.3	+0.3
ARNR				*e*S	Sb	10 07 43.8	+0.2
ALIB	&Aumlli-Bayram	2.40	130	Pn	Pn	10 07 11.9	+1.7
ALIB				Sn	Sb	10 07 41.9	-1.8
BTKR	Batakoyurt	2.40	321	*e*Pn	Pb	10 07 15.8	+1.6
BTKR				*e*Sn	Sg	10 07 47.3	-0.7
BTKR	Batakoyurt	2.40	321	*e*PN	Pb	10 07 15.8	+1.6
BTKR				*e*S	Sg	10 07 47.3	-0.7
KORR	Kora	2.45	310	*e*Pn	Pb	10 07 15.9	+0.9
KORR				*e*Sn	Sb	10 07 46.1	+0.8
KORR	Kora	2.45	310	*e*PN	Pb	10 07 15.9	+0.9
KORR				*e*S	Sb	10 07 46.1	+0.8
NAX	Nakhchivan	2.51	200	Pg	Pb	10 07 16.5	+0.4
NAX				Sg	Sg	10 07 51.7	+0.2
NAX	Nakhchivan	2.51	200	PN	Pb	10 07 15.6	-0.5
IGDI	IGDIR	2.55	230	Pn	Pn	10 07 13.2	+0.8
IGDI				Sn	Sn	10 07 44.6	+1.1
VNNZ	Vanand	2.56	237	*e*P	Pb	10 07 16.6	-0.4
VNNZ				*e*S	Sb	10 07 49.7	+1.2
STDR	Stavd-Durt	2.64	315	*e*Pn	Pb	10 07 17.8	-0.4
STDR				*e*Sn	Sn	10 07 48.1	+2.5
STDR	Stavd-Durt	2.64	315	*e*PN	Pb	10 07 17.8	-0.4
STDR				*e*S	Sn	10 07 48.1	+2.5
DIGR	Digorskoe uzhe	2.64	302	*e*Pn	Pn	10 07 16.1	+2.4
DIGR				*e*Sn	Sb	10 07 49.5	-1.4
DIGR	Digorskoe uzhe	2.64	302	*e*PN	Pn	10 07 16.1	+2.4
DIGR				*e*S	Sb	10 07 49.5	-1.4
ORD	Ordubad	2.65	191	Pn	Pn	10 07 15.6	+1.9
ORD				Sn	Sb	10 07 49.3	-1.7
GLBA	Clilabad	2.66	149	Pn	Pn	10 07 15.0	+1.2
GLBA				Sn	Sb	10 07 50.5	-0.7
LSNR	Lesken	2.71	311	*e*Pn	Pn	10 07 15.4	+0.9
LSNR				*e*Sn	Sb	10 07 52.0	-0.7
LSNR	Lesken	2.71	311	*e*PN	Pn	10 07 15.4	+0.9
LSNR				*e*S	Sb	10 07 52.0	-0.7
TKB	Tkibuli	2.83	288	P	Pb	10 07 19.6	-1.9
TKB				S	Sb	10 07 57.4	+1.2
TKB	Tkibuli	2.83	288	PN	Pb	10 07 19.6	-1.9
TKB				S	Sb	10 07 57.4	+1.2
YRD	Yardimli	2.89	154	Pn	Pn	10 07 18.0	+0.8
YRD				Sn	Sn	10 07 53.3	+1.2
LRK	Lerik	3.17	155	Pn	Pn	10 07 22.0	+1.0
LRK				Sn	Sn	10 08 01.3	+2.4
LKRN	Lenkeran, Azer	3.27	149	Pg	Pg	10 07 31.8	-1.7
LKRN				Sn	Sn	10 08 03.3	+2.3
LKRN	Lenkeran, Azer	3.27	149	PN	Pn	10 07 25.1	+3.0
KBTC	Kuba-Taba	3.29	315	*e*Pn	Pn	10 07 25.8	+3.3
KBTC				*e*Sn	Sn	10 08 05.3	+3.6
KBTC	Kuba-Taba	3.29	315	*e*PN	Pn	10 07 25.8	+3.3
KBTC				*e*S	Sn	10 08 05.3	+3.6
ASTR	Astara	3.40	150	Pn	Pn	10 07 25.0	+1.0
ASTR				Sn	Sn	10 08 06.3	+2.0
KBZ	Khabaz	3.52	310	Pn	Pn	10 07 28.1	+2.6
	comp=Z,0.8nm,0.3s,baz=94,slow=6.1,SNR=11						
KBZ				Pg	Pg	10 07 37.1	-1.2
	comp=Z,0.8nm,0.3s,baz=126,slow=14,SNR=4.3						
KBZ				Sn	Sn	10 08 11.8	+4.7
	comp=Z,1.1nm,0.3s,baz=149,slow=3.0,SNR=4.1						
KBZ				Lg	Lg	10 08 23.8	
	comp=Z,1.8nm,0.3s,baz=251,slow=14,SNR=5.5						
KBZ				LR	LR	10 08 57.6	
	comp=Z,62nm,19.3s,baz=164,slow=41						
	comp=Z,1.8nm,0.9s						
KBZ	Khabaz	3.52	310	*i* Pn	Pb	10 07 30.1	-3.1
KBZ				*e*Sn	Sb	10 08 12.5	-3.4
KBZ	Khabaz	3.52	310	*i* PN	Pb	10 07 30.1	-3.1
KBZ				*e*S	Sb	10 08 12.5	-3.4
PYA1	Pyatigorsk	3.62	315	*e*PN	Pn	10 07 30.2	+3.1
PYA1				*e*S	Sn	10 08 13.3	+3.4
SHA1	Shidzhatmaz	3.66	308	*e*Pn	Pn	10 07 31.5	+3.7
SHA1				*e*Sn	Sn	10 08 14.4	+3.2
SHA1	Shidzhatmaz	3.66	308	*e*PN	Pn	10 07 31.5	+3.7
SHA1				*e*S	Sn	10 08 14.4	+3.2
BEYR	Belyy Ugol+	3.74	313	*e*Pn	Pn	10 07 28.9	+0.2
BEYR				*e*Sn	Sn	10 08 14.4	+1.6
BEYR	Belyy Ugol+	3.74	313	*e*PN	Pn	10 07 28.9	+0.2
BEYR				*e*S	Sn	10 08 14.4	+1.6
KIV	Kislovodsk	3.78	311	*e*Pn	Pn	10 07 31.5	+2.3
KIV				*e*Sn	Sn	10 08 16.0	+2.2
KIV	Kislovodsk	3.78	311	*e*PN	Pn	10 07 31.5	+2.3
KIV				*e*S	Sn	10 08 16.0	+2.2
ALER	Alexandrovskoy	4.22	321	*e*Pn	Pn	10 07 37.2	+2.0
ALER				*e*Sn	Sn	10 08 26.2	+1.7
ALER	Alexandrovskoy	4.22	321	*e*PN	Pn	10 07 37.2	+2.0
ALER				*e*S	Sn	10 08 26.2	+1.7
GOF	Gofitskoye	4.39	325	*ce*PG	Pg	10 08 13.0	+18
GOF				*e*S	Sg	10 09 03.8	+12
BELG	Belogornoye	10.89	3	Pn	Pn	10 09 07.7	+1.1
	comp=Z,1.5nm,0.3s,baz=37,slow=18,SNR=4.2						
	comp=Z,11nm,0.6s						
AKTO	Aktyubinsk	11.91	38	Pn	Pn	10 09 19.1	-1.6
	comp=Z,0.3nm,0.3s,baz=231,slow=9.7,SNR=5.5						
	comp=Z,1.0nm,0.3s						
AKTO	Aktyubinsk	11.91	38	⇑Pn	Pn	10 09 18.6	-2.0
	comp=Z,2.7nm,0.8s						
AKTO				⇓Sn	Sn	10 11 30.1	-3.3
	comp=Z,4.4nm,1.0s						
AB31	Akbulak array	12.12	46	⇑Pn	Pn	10 09 22.5	-1.1
	comp=Z,0.8nm,0.5s,baz=230,slow=14,SNR=14						
AB31				⇑Sn	Sn	10 11 35.8	-2.9
	comp=Z,3.4nm,0.9s,baz=235,slow=22,SNR=2.6						
AB31	Akbulak array	12.12	46	P	Pn	10 09 22.5	-1.1
AB31				S	Sn	10 11 35.8	-2.9
AKASG	Malin Array Be	15.12	313	Pn	P	10 10 08.3	-1.3
	comp=Z,0.4nm,0.3s,baz=118,slow=12,SNR=2.0						
OBN	Obninsk	15.12	337	⇑*e*P	Pn	10 10 05.3	+0.9
OBN				pmax	pmax		
	comp=Z,17nm,0.4s						
OBN				MLR	MLR		
	comp=Z,93nm,18.0s						
MOS	Moscow	15.39	341	*e*P	Pn	10 10 05.5	-2.4
ARTI	Arti	16.71	23	Pn	Pn	10 10 25.3	+0.3
	comp=Z,0.7nm,0.3s,baz=204,slow=10.0,SNR=5.3						
	comp=Z,2.4nm,0.5s						
KIRV	Kirov	17.16	5	LR	LR	10 19 13.8	
	comp=Z,108nm,18.3s,baz=240,slow=44						
MNK	Minsk	17.97	323	*i* P	Pn	10 10 39.9	-0.6
	comp=E,21nm,1.1s						
MNK				*i* P	Pn	10 10 39.9	-0.6
	comp=N,28nm,1.2s						
MNK				*i* P	Pn	10 10 39.9	-0.6
	comp=Z,8.0nm,0.8s,baz=128						
MNK				*i* PP	PnPn	10 10 50.8	-0.6
MNK				*i* PPP	PPP	10 10 58.5	
MNK				*i* S	Sn	10 14 01.3	+0.6
MNK				*i* SS	SnSn	10 14 16.4	+2.1
MNK				*i* SSS	SSS	10 14 29.1	
MNK				*i* LR	LR	10 17 07.7	
MNK	Minsk	17.97	323	*i* P	Pn	10 10 39.9	-0.6
MNK				*i* S	Sn	10 14 01.3	+0.6
MNK				pmax	pmax		
	comp=Z,8.0nm,0.8s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MNK				pmax	pmax		
	comp=E,21nm,1.1s						
MNK				pmax	pmax		
	comp=N,28nm,1.2s						
BVAR	Borovoye Array	19.70	46	P	P	10 10 59.3	-0.9
	comp=N,0.1nm,0.3s,baz=248,slow=11,SNR=6.2						
	comp=N,1.6nm,0.4s						
AAK	Ala-Archa	20.68	78	P	P	10 11 09.8	-1.4
	comp=N,0.6nm,0.4s,baz=257,slow=8.9,SNR=4.4						
	comp=N,0.6nm,0.4s						
AAK	Ala-Archa	20.68	78	*i* P	Pn	10 11 12.9	-0.5
FINES	FINESS Array B	23.49	335	P	P	10 11 41.0	+0.5
	comp=N,7.0nm,1.1s,baz=138,slow=9.1,SNR=5.5						
	comp=N,7.0nm,1.1s						
FINES	FINESS Array B	23.49	335	*i* P	P	10 11 44.7	+4.2
FINES				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KURBB	Kurchatov Arra	23.77	57	P	P	10 11 43.4	+0.1
	comp=Z,0.3nm,0.4s,baz=270,slow=10,SNR=11						
	comp=Z,0.3nm,0.4s						
KURK	Kurchatov	23.84	56	*i* P	P	10 11 44.6	+0.6
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK31	Makanchi Array	25.97	66	*i* P	P	10 12 02.0	-1.5
MKAR	Makanchi Array	25.97	66	P	P	10 12 03.2	-0.4
	comp=Z,1.9nm,0.8s,baz=265,slow=9.2,SNR=5.7						
	comp=Z,1.9nm,0.8s						

IDC 01 10:07:59.3±2.5, 1°.61N×132°.88E, h0^{km}, mb3.5/5, mbtmp3.6/5, Error ellipse: s-maj=152.2km s-min=21.8km az=74.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.46	176	P	P	10 12 50.5	+0.9
	0.7nm,0.8s,baz=355,slow=11,SNR=7.9						
	0.7nm,0.8s						
ASAR	Alice Springs	25.14	178	P	P	10 13 25.6	-0.7
	0.5nm,0.9s,baz=348,slow=10,SNR=7.2						
	0.5nm,0.9s						
H11N1	WAKE ISLAND Hy	37.81	59	T	T	10 55 37.6	
	baz=246,slow=75,SNR=6.7						
H11N2	WAKE ISLAND Hy	37.83	59	T	T	10 55 32.1	
	baz=246,slow=75,SNR=3.8						
H11N3	WAKE ISLAND Hy	37.83	59	T	T	10 55 38.9	
	baz=246,slow=75,SNR=6.2						
MKAR	Makanchi Array	62.86	323	P	P	10 18 27.4	+0.2
	0.3nm,0.4s,baz=102,slow=9.0,SNR=4.5						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	66.89	326	P	P	10 18 53.2	-0.1
	0.9nm,0.8s,baz=121,slow=5.9,SNR=7.9						
	0.9nm,0.8s						
BVAR	Borovoye Array	72.48	326	P	P	10 19 27.8	0.0
	1.1nm,0.7s,baz=100,slow=6.1,SNR=4.9						
	1.1nm,0.7s						

IDC 01 10:16:14.9±1.4, 2°.03N×126°.81E, h0^{km}, mb3.6/4, mbtmp3.6/4, MS3.7/1, Error ellipse: s-maj=160.5km s-min=20.6km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	13.33	334	LR	LR	10 24 48.3	
	comp=Z,313nm,19.3s,baz=141,slow=38						
WRA	Warramunga Arr	23.05	162	P	P	10 21 21.5	-0.6
	1.1nm,0.5s,baz=340,slow=11,SNR=23						
WRA				PcP	PcP	10 25 11.5	-0.4
	0.4nm,1.1s,baz=321,slow=3.1,SNR=1.3						
	1.1nm,0.5s						
ASAR	Alice Springs	26.45	165	P	P	10 21 54.6	+0.7
	0.2nm,0.4s,baz=341,slow=9.8,SNR=7.1						
ASAR				PcP	PcP	10 25 19.0	-0.5
	0.3nm,0.9s,baz=343,slow=3.2,SNR=1.9						
	0.2nm,0.4s						
MKAR	Makanchi Array	59.00	326	P	P	10 26 16.6	0.0
	0.4nm,0.4s,baz=116,slow=8.4,SNR=8.9						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	63.21	328	P	P	10 26 44.9	-0.1
	0.5nm,0.5s,baz=129,slow=6.1,SNR=7.0						
	0.5nm,0.5s						

IDC 01 10:21:44.1±7.1, 33°.80N×139°.55E, h677^{km}±15^{km}, mb2.8/6, mbtmp3.7/7, Error ellipse: s-maj=151.0km s-min=37.7km az=174.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	2.94	339	P	P	10 23 08.7	-0.5
	0.8nm,0.5s,baz=185,slow=6.1,SNR=5.7						
MJAR				S	S	10 24 18.9	+0.1
	0.8nm,0.7s,baz=104,slow=36,SNR=2.1						
KURBB	Kurchatov Arra	46.85	310	P	P	10 29 16.2	-0.1
	0.2nm,0.3s,baz=93,slow=7.6,SNR=4.0						
	0.2nm,0.3s						
BVAR	Borovoye Array	51.66	314	P	P	10 29 52.3	+0.9
	0.7nm,0.4s,baz=93,slow=7.2,SNR=2.8						
	0.7nm,0.4s						
ILAR	Eielson Array	53.04	31	P	P	10 30 01.8	+0.9
	0.2nm,0.6s,baz=272,slow=7.1,SNR=2.7						
	0.2nm,0.6s						
FINES	FINESS Array B	70.96	332	P	P	10 31 56.8	+1.0
	1.2nm,0.3s,baz=68,slow=5.4,SNR=17						
	1.2nm,0.3s						
HFS	Hagfors	76.39	335	P	P	10 32 24.6	-1.8
	3.1nm,1.0s,baz=92,slow=4.3,SNR=4.6						
	3.1nm,1.0s						
NOA	NORSAR Array B	76.56	337	P	P	10 32 26.6	-0.8
	0.4nm,0.6s,baz=32,slow=5.6,SNR=5.2						
	0.4nm,0.6s						

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*PDG **01** 10:25:10.0±0.1, 43°.18N×18°.05E, h15^{km}, MD2.7/1, ML2.6/13, Error ellipse: s-maj=0.3km s-min=0.2km az=90.0*

*RHSSO **01** 10:25:10.9±0.4, 43°.17N×18°.13E, h9^{km}, ML2.5/4*

ISC 01 10:25:10.1±1.0, 43°.18N±0°.03×18°.07E±0°.02, h8^{km}±9^{km}, n28, σ0^{s}.96/56, 6C-1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	Ston	0.41	221	*i* Pg	Pg	10 25 17.8	-0.3
STON				Sg	Sg	10 25 24.9	+1.4
BRY	Bratogost	0.44	129	⇑*i*Pg	Pg	10 25 18.8	0.0
BRY				*i* Sg	Sb	10 25 26.2	-0.9
TREB	Trebinje	0.51	156	⇑*i*Pg	Pg	10 25 19.5	-0.5
TREB				*e*Sg	Sb	10 25 27.7	-1.1
DBRK	Dubrovnik	0.52	173	*e*Pg	Pg	10 25 20.0	-0.1
DBRK				Sg	Sg	10 25 27.3	+0.5
UPM	Unac-Piva	0.61	88	*e*Pg	Pg	10 25 21.5	-0.5
UPM				*i* Sg	Sb	10 25 31.7	-0.3
RICI	Ricice	0.75	295	*e*Pg	Pg	10 25 23.5	-1.1
RICI				Sg	Sg	10 25 33.9	-0.5
NKME	Niksic	0.77	122	⇓*i*Pg	Pg	10 25 23.9	-1.0
NKME				*e*Sg	Sn	10 25 37.0	-2.1
MAKA	Makarska	0.77	278	*e*Pg	Pg	10 25 23.9	-1.1
MAKA				Sg	Sg	10 25 35.1	0.0
HCY	Herceg Novi	0.80	157	*e*Pg	Pg	10 25 24.9	-0.6
HCY				*i* Sg	Sb	10 25 37.6	+0.5
CEME	Cevo	0.89	135	*e*Pg	Pg	10 25 26.7	-0.5
CEME				*e*Sg	Sn	10 25 40.9	-1.1
LSTV	Lastovo	0.96	245	*e*Pg	Pg	10 25 27.7	-0.8
LSTV				Sg	Sg	10 25 41.4	+0.5
PLE	Pljevlja	0.98	81	*e*Pg	Pg	10 25 28.6	-0.3
PLE				*i* Sg	Sn	10 25 44.0	-0.3
RUDO	Rudo	1.04	65	*e*Pg	Pb	10 25 28.8	-1.6
RUDO				*e*Sg	Sb	10 25 43.0	-1.3
BUM	Brajici-Budva	1.07	145	*e*Pg	Pb	10 25 30.0	-0.9
BUM				*i* Sg	Sn	10 25 46.9	+0.4
KOME	Kolasin	1.11	107	⇑*i*Pg	Pb	10 25 31.0	-0.6
KOME				*e*Sg	Sn	10 25 48.9	+1.3
PDG	Podgorica	1.15	130	*e*Pg	Pb	10 25 31.5	-0.7
PDG				*i* Sg	Sn	10 25 49.8	+1.4
HVAR	Hvar	1.18	270	*e*Pg	Pn	10 25 32.5	-0.4
HVAR				Sg	Sb	10 25 48.2	-0.1
DRME	Dracevica, Mon	1.29	140	⇑*i*Pg	Pn	10 25 34.0	-0.4
DRME				*e*Sg	Sg	10 25 54.1	+2.5
IVA	Berane	1.37	102	*e*Pg	Pb	10 25 35.7	-0.4
IVA				*i* Sg	Sg	10 25 56.2	+1.9
KIJV	Kijevo	1.46	305	*e*Pg	Pb	10 25 37.5	-0.1
KIJV				Sg	Sn	10 25 55.6	-0.5
ULC	Ulcinj	1.50	144	⇑*i*Pg	Pn	10 25 37.4	+0.2
ULC				*i* Sg	Sg	10 25 58.9	+0.7
PVY	Plav	1.51	112	⇑*i*Pg	Pb	10 25 37.7	-0.7
PVY				*i* Sg	Sg	10 26 00.2	+1.6
BLY	Banja Luka	1.69	338	*e*Pn	Pb	10 25 41.0	-0.5
BLY				*e*Sn	Sb	10 26 03.4	+0.5
ZIRJ	Zirje	1.83	286	*e*Pn	Pn	10 25 42.2	+0.4
ZIRJ				Sn	Sb	10 26 06.6	-0.2
MORI	Morici	1.85	293	*e*Pn	Pn	10 25 43.2	+1.1
MORI				Sn	Sb	10 26 07.4	+0.1
DUGI	Dugi Otok	2.33	291	*e*Pn	Pn	10 25 50.5	+1.8
DUGI				Sn	Sn	10 26 18.2	+0.7
VIRC	Vir	2.45	298	*e*Pn	Pn	10 25 50.8	+0.5
VIRC				Sn	Sn	10 26 21.4	+1.0
MORH	Mrgy, Hungar	3.06	8	*e*Pn	Pn	10 25 59.7	+1.0
MORH				*e*Sn	Sn	10 26 36.1	+0.6

WEL 01 10:27:16.0±1.3, 31°S±10°×17°9E±1°6, h12^{km}, M4.1/3, mB4.5/3, ML4.3/8, MLv4.2/2, Mw(mB)3.6/3, Error ellipse: s-maj=23.5km s-min=4.7km az=119.9, confirmed, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.06	59	P	Pn	10 28 01.9	-2.2
GLKZ				S	Sn	10 28 42.4	+1.8
MXZ	Matakaoa Point	6.69	185	P	Pn	10 28 55.1	+0.9
MXZ				S	Sn	10 30 12.3	+1.9
HAZ	Te Kaha	6.94	189	P	Pn	10 28 59.1	+1.5
HAZ				S	Sn	10 30 19.5	+3.2
WMGZ	Waiomatatini S	6.94	184	P	Pn	10 28 59.3	+1.8
WMGZ				S	Sn	10 30 18.3	+1.8
RUGZ	Raukumara Rang	7.16	189	P	Pn	10 29 01.3	+0.6
RUGZ				S	Sn	10 30 22.4	+0.4
PUZ	Puketiti	7.20	185	P	Pn	10 29 01.3	+0.1
PUZ				S	Sn	10 30 21.6	-1.3
URZ	Urewera	7.54	192	P	Pn	10 29 04.4	-1.3
URZ				S	Sn	10 30 32.6	+1.5
MWZ	Matawai	7.54	189	P	Pn	10 29 05.9	+0.1
MWZ				S	Sn	10 30 31.0	-0.3
CNGZ	Carnagh Statio	7.62	185	P	Pn	10 29 07.6	+0.7
RAHZ	Arahi	8.18	191	P	Pn	10 29 13.3	-1.3
RAHZ				S	Sn	10 30 45.6	-1.4
BKZ	Black Stump Fm	8.53	194	P	Pn	10 29 17.1	-2.3
BKZ				S	Sn	10 30 52.1	-3.6
ARHZ	Aropaoanui	8.53	191	P	Pn	10 29 17.2	-2.2
ARHZ				S	Sn	10 30 52.9	-2.7
KWHZ	Kaweka Forest	8.79	194	P	Pn	10 29 20.4	-2.6
KWHZ				S	Sn	10 30 58.4	-3.8
KRHZ	Kereru	9.02	194	P	Pn	10 29 21.7	-4.4
KRHZ				S	Sn	10 31 02.4	-5.1
KAHZ	Kahuranaki	9.07	191	P	Pn	10 29 23.6	-3.2
TSZ	Takapari Road	9.50	195	P	Pn	10 29 27.4	-5.3
TSZ				S	Sn	10 31 12.9	-6.6
PRHZ	Porangahau	9.57	191	P	Pn	10 29 28.5	-5.2
PRHZ				S	Sn	10 31 18.5	-2.7
OGWZ	Otaki Gorge	10.41	197	P	Pn	10 29 36.9	-8.2

IDC 01 10:36:31.4±4.0, 7°.35S×127°.13E, h394^{km}±69^{km}, mb3.3/1, mbtmp3.8/3, Error ellipse: s-maj=85.0km s-min=50.7km az=92.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	4.45	230	P	Pn	10 37 47.1	-0.5
	160nm,0.4s,baz=46,slow=1.8,SNR=22						
BATI				S	S	10 38 49.8	+0.4
	52nm,0.4s,baz=108,slow=20,SNR=7.6						
WRA	Warramunga Arr	14.34	152	P	P	10 39 37.7	+0.7
	0.3nm,0.3s,baz=333,slow=11,SNR=19						
WRA				S	S	10 42 10.9	+0.3
	0.6nm,0.9s,baz=321,slow=19,SNR=3.5						
ASAR	Alice Springs	17.48	159	P	P	10 40 11.6	+0.9
	0.7nm,0.5s,baz=332,slow=9.4,SNR=26						
ASAR				S	S	10 43 12.4	0.0
	0.2nm,0.5s,baz=342,slow=21,SNR=1.8						
STKA	Stephens Creek	27.88	153	P	P	10 41 46.4	-0.6
	2.8nm,1.0s,baz=305,slow=12,SNR=1.4						
	2.8nm,1.0s						

NOU 01 10:39:41.0, 11°.19S×165°.17E, h16^{km}, mb5.3/14, Santa Cruz Islands, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HURO	Huro Makira	3.29	282	P	Pn	10 40 31.1	-0.8
SANVU	Saraoutou	4.67	155	P	Pn	10 40 50.2	-0.7
NGOA	Tingoa Renbel	5.02	265	P	Pn	10 40 54.8	-0.9
SAVO	Savo Central	5.65	291	P	Pn	10 41 05.1	+0.7
SAVO	Savo Central	5.65	291	S	Sn	10 42 10.3	+1.3
TATA	Tatamba Isabel	5.98	297	P	Pn	10 41 08.4	-0.5
DZM	Mont Dzumac	10.89	174	P	Pn	10 42 16.9	+0.5
DZM	Mont Dzumac	10.89	174	S	Sn	10 44 19.4	+1.4
YATNC	Mamie plateau,	10.93	172	P	Pn	10 42 17.2	+0.3
YATNC	Mamie plateau,	10.93	172	S	Sn	10 44 20.5	+1.5
PINNC	Pines Island,	11.57	169	P	Pn	10 42 25.8	+0.3
PINNC	Pines Island,	11.57	169	S	Sn	10 44 34.3	-0.1

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*NOU **01** 10:39:50.4, 25°.45S×179°.15W, h598^{km}, mb4.2/16, South of Fiji Islands*

*NEIC **01** 10:40:06.7±1.9, 26°.6S±0°.1×178°.4E±0°.2, h608^{km}±10^{km}, mb4.1/14, Error ellipse: s-maj=23.0km s-min=17.2km az=71.0*

*IDC **01** 10:40:09.6±2.2, 26°.35S×178°.16E, h639^{km}±25^{km}, mb3.1/11, mbtmp4.1/12, Error ellipse: s-maj=15.6km s-min=13.3km az=178.0*

ISC 01 10:40:06.4±0.5, 26°.66S±0°.06×178°.43E±0°.08, h612^{km}, n92, σ2^{s}.02/102, mb3.8/17, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.14	130	P	P	10 41 35.5	+2.0
GLKZ				S	S	10 42 43.6	-1.2
MSVF	Nonsavu	8.89	358	P	P	10 42 13.7	-1.2
OUZ	Omahuta	9.49	205	P	P	10 42 23.7	+3.5
OUZ	Omahuta	9.49	205	P	P	10 42 23.6	+3.5
WCZ	Waipu Caves	9.89	200	P	P	10 42 30.4	+6.4
KUZ	Kuaotunu	10.31	192	P	P	10 42 30.9	+2.6
KUZ	Kuaotunu	10.31	192	P	P	10 42 30.6	+2.3
PINNC	Pines Island,	10.77	290	P	P	10 42 33.9	+0.8
PINNC	Pines Island,	10.77	290	P	P	10 42 34.1	+1.0
MARNC	Mare, Loyalty	10.81	296	P	P	10 42 33.7	+0.3
MARNC	Mare, Loyalty	10.81	296	P	P	10 42 34.7	+1.3
MXZ	Matakaoa Point	10.87	181	P	P	10 42 31.9	-1.9
MXZ	Matakaoa Point	10.87	181	P	P	10 42 32.1	-1.6
HAZ	Te Kaha	11.08	183	P	P	10 42 35.2	-0.6
HAZ				S	S	10 44 32.7	-5.8
WMGZ	Waiomatatini S	11.13	180	P	P	10 42 37.1	+0.9
WMGZ				S	S	10 44 36.9	-2.5
RUGZ	Raukumara Rang	11.29	183	P	P	10 42 38.1	+0.1
OUENC	Ouen Island, N	11.36	289	P	P	10 42 40.3	+1.4
PUZ	Puketiti	11.38	181	P	P	10 42 39.9	+1.1
PUZ				S	S	10 44 40.1	-3.9
YATNC	Mamie plateau,	11.47	291	P	P	10 42 41.1	+1.1
TWGZ	Tauwhareparae	11.49	182	P	P	10 42 40.5	+0.5
TWGZ				S	S	10 44 43.3	-2.8
URZ	Urewera	11.62	185	P	P	10 42 39.4	-1.8
	5.7nm,0.3s,baz=268,slow=3.4,SNR=24						
URZ				S	S	10 44 43.7	-4.5
	11nm,0.5s,baz=72,slow=23,SNR=19						
URZ	Urewera	11.62	185	P	P	10 42 39.5	-1.6
URZ	Urewera	11.62	185	P	P	10 42 39.7	-1.4
URZ				S	S	10 44 43.7	-4.5
MWZ	Matawai	11.66	184	P	P	10 42 40.2	-1.4
MWZ				S	S	10 44 44.4	-4.7
RRRZ	Republican Roa	11.76	187	P	P	10 42 45.8	+3.3
TKGZ	Te Karaka	11.76	182	P	P	10 42 42.9	+0.4
CNGZ	Carnagh Statio	11.79	181	P	P	10 42 43.2	+0.4
DZM	Mont Dzumac	11.84	290	P	P	10 42 44.6	+0.8
	34nm,0.6s,baz=153,slow=18,SNR=27						
DZM	Mont Dzumac	11.84	290	P	P	10 42 45.0	+1.3
TLZ	Tolley Road	11.89	191	P	P	10 42 46.4	+2.5
RIGZ	Rimuhau	12.03	183	P	P	10 42 44.8	-0.4
RIGZ				S	S	10 44 49.6	-6.0
SNGZ	Shannon Statio	12.12	184	P	P	10 42 46.8	+0.7
HIZ	Hauiti	12.20	193	P	P	10 42 50.5	+3.7
RAHZ	Arahi	12.27	185	P	P	10 42 48.0	+0.4
RAHZ				S	S	10 44 55.7	-4.4
KNZ	Kokohu	12.34	183	P	P	10 42 47.9	-0.3
RATZ	Rangitukua	12.38	190	P	P	10 42 49.8	+1.2
NMHZ	Naumai	12.48	186	P	P	10 42 49.8	+0.1
BKZ	Black Stump Fm	12.58	187	P	P	10 42 49.1	-1.5
BKZ	Black Stump Fm	12.58	187	P	P	10 42 49.2	-1.4
ARHZ	Aropaoanui	12.62	185	P	P	10 42 51.5	+0.4
TMVZ	Te Maari	12.63	190	P	P	10 42 52.4	+1.2
WTVZ	West Tongariro	12.65	190	P	P	10 42 52.0	+0.6
OTVZ	Oturere	12.68	190	P	P	10 42 53.3	+1.5
MCHZ	McNeill Hill	12.83	186	P	P	10 42 52.1	-1.0
KWHZ	Kaweka Forest	12.84	187	P	P	10 42 52.1	-1.1
WNVZ	Wahianoa	12.85	190	P	P	10 42 54.8	+1.3
KHEZ	Kahui Hut	13.13	195	P	P	10 43 00.1	+3.9
BFZ	Birch Farm	14.10	187	P	P	10 43 02.7	-2.9
QRZ	Quartz Range	14.95	198	P	P	10 43 15.6	+2.2
KHZ	Kahutara	16.22	193	P	P	10 43 25.7	+0.8
CTAO	Charters Tower	30.20	276	P	P	10 45 29.7	+0.4
CTAO				IAmb	IAmb	10 45 42.8	
	comp=Z,6.7nm,1.1s						
COEN	Coen	35.27	284	P	P	10 46 12.6	+0.5
COEN				IAmb	IAmb	10 46 32.7	
	comp=Z,17nm,1.5s						
AS31	Alice Springs	40.26	264	P	P	10 46 52.0	-0.3
ASAR	Alice Springs	40.26	264	P	P	10 46 52.2	-0.1
	comp=Z,0.4nm,0.4s,baz=85,slow=7.1,SNR=13						
ASAR				S	S	10 52 15.1	-2.2
	comp=Z,0.5nm,0.8s,baz=99,slow=14,SNR=6.9						
	comp=Z,0.4nm,0.4s						
ASAR	Alice Springs	40.26	264	P	P	10 46 51.4	-0.9
WR8	Warramunga Arr	40.74	270	P	P	10 46 55.9	-0.2
WR8				IAmb	IAmb	10 46 57.8	
	comp=Z,7.7nm,1.4s						
WRA	Warramunga Arr	40.89	270	P	P	10 46 56.7	-0.7
	comp=Z,1.1nm,0.5s,baz=103,slow=8.6,SNR=17						
WRA				PcP	pP	10 48 42.0	+1.6
	comp=Z,0.9nm,0.8s,baz=111,slow=3.5,SNR=3.6						
WRA				S	S	10 52 23.9	-2.5
	comp=Z,1.0nm,1.0s,baz=108,slow=13,SNR=5.3						
	comp=Z,1.1nm,0.5s						
WRA	Warramunga Arr	40.89	270	P	P	10 46 56.9	-0.4
KNRA	Kununurra	47.33	273	P	P	10 47 45.9	-0.9
KNRA				IAmb	IAmb	10 48 14.0	
	comp=Z,19nm,1.4s						
VNDA	Vanda	51.52	185	P	P	10 48 18.1	+1.7
	comp=Z,0.7nm,0.5s,baz=5.3,slow=6.7,SNR=6.2						
	comp=Z,0.7nm,0.5s						
VNDA	Vanda	51.52	185	P	P	10 48 17.9	+1.4
VNDA				IAmb	IAmb	10 48 33.0	
	comp=Z,7.1nm,1.4s						
QSPA	South Pole Qui	63.43	180	P	P	10 49 42.1	+4.8
	comp=Z,2.7nm,0.5s,baz=221,slow=0.4,SNR=57						
	comp=Z,2.7nm,0.5s						
QSPA	South Pole Qui	63.43	180	P	P	10 49 41.8	+4.5
QSPA				IAmb	IAmb	10 49 42.9	
	comp=Z,3.2nm,0.6s						
MJAR	Matsushiro Arr	73.40	327	P	P	10 50 35.0	-2.5
	comp=Z,1.5nm,0.9s,baz=52,slow=1.3,SNR=5.0						
	comp=Z,1.5nm,0.9s						
MJAR	Matsushiro Arr	73.40	327	P	P	10 50 35.4	-2.1
BELA	Belgrano 2	73.88	173	P	P	10 50 39.9	+0.2
BELA				IAmb	IAmb	10 50 48.6	
	comp=Z,4.6nm,1.1s						
SMAI	San Martin Ant	74.04	159	P	P	10 50 41.9	+1.3
SMAI				IAmb	IAmb	10 50 43.2	
	comp=Z,2.9nm,0.8s						
KSRS	Korea Array	79.48	321	P	P	10 51 11.0	+0.4
	comp=Z,0.5nm,0.5s,baz=133,slow=6.2,SNR=2.0						
	comp=Z,0.5nm,0.5s						
PETK	Petropavlovsk-	81.46	348	P	P	10 51 20.6	+0.1
	comp=Z,2.3nm,0.7s,baz=115,slow=8.5,SNR=6.9						
	comp=Z,2.3nm,0.7s						
PETK	Petropavlovsk-	81.46	348	P	P	10 51 20.5	0.0
USRK	Ussuriysk Ar.	82.33	328	P	P	10 51 25.4	+0.3
	comp=Z,1.9nm,0.7s,baz=106,slow=5.1,SNR=2.8						
	comp=Z,1.9nm,0.7s						
NVAR	Mina Array Bea	87.71	45	P	P	10 51 52.2	+0.6
	comp=Z,0.6nm,0.6s,baz=254,slow=4.7,SNR=4.2						
	comp=Z,0.6nm,0.6s						
K13K	Kusilvak Mount	89.33	8	P	P	10 51 59.1	+1.0
M17K	Holitna River	89.90	11	P	P	10 52 01.7	+0.8
WVOR	Wild Horse Val	89.92	41	P	P	10 52 02.6	+1.1
TXAR	Lajitas Array	93.08	59	P	P	10 52 17.2	+0.8
	comp=Z,0.2nm,0.7s,baz=248,slow=4.2,SNR=3.4						
	comp=Z,0.2nm,0.7s						
ILAR	Eielson Array	95.04	14	P	P	10 52 23.1	-1.3
	comp=Z,0.3nm,0.7s,baz=201,slow=4.5,SNR=5.8						
	comp=Z,0.3nm,0.7s						
KURBB	Kurchatov Arra	116.23	316	PKP	PKPdf	10 57 39.7	-1.3
	comp=Z,0.4nm,0.3s,baz=120,slow=1.9,SNR=2.7						
BVAR	Borovoye Array	121.54	318	PKP	PKPdf	10 57 50.1	-1.0
	comp=Z,1.4nm,0.5s,baz=138,slow=1.6,SNR=7.8						
SPITS	Spitsbergen Ar	127.75	355	PKP	PKPdf	10 58 01.5	-0.9
	comp=Z,15nm,1.1s,baz=32,slow=5.8,SNR=1.5						
ARCES	ARCESS Array B	134.27	347	PKP	PKPdf	10 58 13.8	-1.0
	comp=Z,2.8nm,0.9s,baz=56,slow=2.0,SNR=5.0						
FINES	FINESS Array B	140.56	339	PKhKP	PKPpre	10 58 19.6	
	comp=Z,1.1nm,0.5s,baz=42,slow=5.4,SNR=11						
FINES				PKP	PKPdf	10 58 26.9	+0.3
	comp=Z,1.4nm,0.5s,baz=89,slow=3.8,SNR=6.9						
NB2	NORSAR Subarra	144.55	349	PKP	PKPdf	10 58 33.2	-0.5
	comp=Z,1.1nm,0.4s,baz=16,slow=2.9						
NOA	NORSAR Array B	144.55	349	PKP	PKPdf	10 58 33.5	-0.2
	comp=Z,0.2nm,0.3s,baz=26,slow=3.0,SNR=11						
HFS	Hagfors	144.93	347	PKP	PKPdf	10 58 34.4	+0.1
	comp=Z,5.9nm,0.4s,baz=66,slow=3.7,SNR=58						
AKASG	Malin Array Be	146.44	324	PKPbc	PKPdf	10 58 39.1	+1.9
	comp=Z,3.3nm,0.5s,baz=45,slow=3.7,SNR=14						
MMAI	Mount Meron Ar	147.43	290	PKPbc	PKPbc	10 58 43.8	+0.8
	comp=Z,1.0nm,0.2s,baz=60,slow=10,SNR=2.2						
BRTR	Keskin Array B	148.00	303	PKPbc	PKPbc	10 58 43.9	-0.4
	comp=Z,1.0nm,0.4s,baz=255,slow=1.0,SNR=7.6						
EKA	Eskdalemuir Ar	151.33	2	PKPbc	PKPbc	10 58 50.8	-0.7
	comp=Z,0.7nm,0.4s,baz=343,slow=2.7,SNR=15						
EKA				PKPab	PKPab	10 59 02.0	-0.6
	comp=Z,2.8nm,1.1s,baz=358,slow=3.5,SNR=5.0						
CLL	Collm	153.01	340	*i* PKPab	sPKPdf	10 59 09.7	+2.7
CLL	Collm	153.01	340	*e*PKPdf	PKPdf	10 58 47.0	-7.4
CLL	Collm	153.01	340	*i* PKPbc	PKiKP	10 58 55.5	-0.2

TRN 01 10:52:20.7, 17°.61N×61°.15W, h16^{km}, MD3.7, East of Barbuda., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.61	275	*e*P	Pn	10 52 36.0	+1.3
ANWB				*e*S	Sn	10 52 44.9	+0.7
DHSZ	Broadband at M	1.45	204	*e*P	Pb	10 52 47.8	+0.4
DHSZ				*e*S	Sg	10 53 08.0	+0.3
SKI	Saint Kitts	1.54	260	*e*P	Pn	10 52 48.1	+0.6
SKI				*e*S	Sg	10 53 10.9	+0.6
ATGZ	Broadband at L	1.60	200	*e*P	Pb	10 52 50.2	+0.3
ATGZ				*e*S	Sg	10 53 11.3	-1.2
MMLZ	Guadeloupe Bro	1.64	198	*e*P	Pb	10 52 50.4	-0.1
MMLZ				*e*S	Sb	10 53 12.1	+1.2
TBG	Guadaloupe-3	1.81	195	*e*P	Pb	10 52 53.2	-0.3
TBG				*e*S	Sg	10 53 17.7	-1.4
DSLB	Salisbury	2.18	187	*e*P	Pb	10 52 58.6	-1.2
DSLB				*e*S	Sb	10 53 25.9	-0.6

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*NEIC **01** 10:56:32.2±2.3, 1°.6S±0°.1×67°.7E±0°.1, h10^{km}±1^{km}, mb4.5/14, Error ellipse: s-maj=19.0km s-min=17.4km az=262.0*

*IDC **01** 10:56:32.0±0.9, 1°.39S×67°.82E, h0^{km}, mb4.1/11, mbtmp4.1/11, MS3.6/25, Error ellipse: s-maj=23.5km s-min=21.3km az=1.0*

ISC 01 10:56:33.7±0.6, 1°.47S±0°.09×67°.84E±0°.10, h18^{km}, n56, σ1^{s}.30/34, mb4.4/19, MS3.6/24, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAAM	Kaadhehdhoo	5.51	69		Pn	10 57 54.3	-0.6
DGAR	Diego Garcia	7.49	142	Pn	Pn	10 58 21.2	-1.0
PALK	Pallekele	15.50	56	LR	LR	11 04 53.8	
	comp=Z,227nm,18.8s,baz=244,slow=32						
OPO	Ambohidratompo	26.44	229	LR	LR	11 10 40.1	
	comp=Z,124nm,18.3s,baz=176,slow=32						
UOSS	Minazif	28.57	337	P	P	11 02 28.0	-0.8
KMBO	Kilima Mbogo	30.58	270	P	P	11 02 49.5	+2.4
	22nm,0.3s,baz=210,slow=16,SNR=18						
RPSI	Rantau Prapat	31.35	82	P	P	11 02 53.2	-0.5
RPSI				IAmb	IAmb	11 03 15.8	
	comp=Z,8.6nm,1.2s						
PSI	Prapat	31.37	82	LR	LR	11 13 39.8	
	comp=Z,94nm,19.4s,baz=240,slow=33						
BRDH	Bariadhala	33.38	43	LR	LR	11 19 19.9	

	comp=Z,90nm,18.1s,baz=180,slow=41						
EVN	Everest	34.47	31	P	P	11 03 21.4	0.0
EVN				IAmb	IAmb	11 03 25.1	
	comp=Z,7.3nm,1.3s						
NIL	Nilore	35.30	8	P	P	11 03 28.4	+0.5
SHL	Shillong	35.55	39	P	P	11 03 31.0	+0.8
SHL				IAmb	IAmb	11 03 33.5	
	comp=Z,6.3nm,0.9s						
CMAR	Chiang Mai Arr	36.44	56	P	P	11 03 40.3	+2.5
	comp=Z,1.1nm,0.5s,baz=246,slow=10,SNR=14						
CMAR				LR	LR	11 16 58.0	
	comp=Z,45nm,21.3s,baz=250,slow=34						
	comp=Z,1.1nm,0.5s						
CMAR	Chiang Mai Arr	36.44	56	P	P	11 03 38.5	+0.7
CHTO	Chiang Mai	36.62	55	P	P	11 03 40.3	+1.0
MBAR	Mbarara	37.10	271	LR	LR	11 15 52.0	
	comp=Z,32nm,18.9s,baz=80,slow=31						
MANEM	Manem	38.98	5	P	P	11 03 59.8	+0.5
MANEM				IAmb	IAmb	11 04 02.2	
	comp=Z,19nm,1.4s						
AAK	Ala-Archa	44.31	7	LR	LR	11 21 56.2	
	comp=Z,53nm,19.1s,baz=227,slow=34						
GHAJ	Ghor Haditha	44.73	320	P	P	11 04 45.4	-0.7
H04N2	CROZET ISLANDS	46.69	195	T	T	11 54 44.6	
	baz=22,slow=75						
H04N1	CROZET ISLANDS	46.69	195	T	T	11 54 53.8	
	baz=22,slow=75						
H04N3	CROZET ISLANDS	46.70	195	T	T	11 55 06.2	
	baz=22,slow=75						
LBTB	Lobatse	46.99	237	LR	LR	11 22 27.5	
	comp=Z,64nm,19.9s,baz=60,slow=33						
BOSA	Boshof	48.76	232	LR	LR	11 22 39.0	
	comp=Z,70nm,20.7s,baz=27,slow=32						
MKAR	Makanchi Array	49.71	13	P	P	11 05 25.2	+0.4
	comp=Z,0.7nm,0.7s,baz=184,slow=4.2,SNR=2.0						
MKAR				LR	LR	11 24 27.9	
	comp=Z,49nm,20.8s,baz=184,slow=34						
	comp=Z,0.7nm,0.7s						
KBZ	Khabaz	50.23	337	P	P	11 05 28.8	+0.1
	comp=Z,2.9nm,0.9s,baz=136,slow=6.0,SNR=3.6						
	comp=Z,2.9nm,0.9s						
AB31	Akbulak array	50.98	353	P	P	11 05 31.7	-2.6
ABKAR	Akbulak array	50.98	353	P	P	11 05 31.7	-2.5
BRTR	Keskin Array B	51.57	326	P	P	11 05 39.4	+0.3
	comp=Z,2.3nm,1.0s,baz=138,slow=13,SNR=6.4						
	comp=Z,2.3nm,1.0s						
BRTR	Keskin Array B	51.57	326	P	P	11 05 38.0	-1.1
KAPI	Kappang	51.94	95	LR	LR	11 27 22.3	
	comp=Z,23nm,18.3s,baz=317,slow=36						
TSUM	Tsumeb	52.24	247	LR	LR	11 25 49.3	
	comp=Z,58nm,18.9s,baz=121,slow=34						
KURBB	Kurchatov Arra	52.69	9	P	P	11 05 47.0	0.0
	comp=Z,0.7nm,0.2s,baz=201,slow=8.3,SNR=4.7						
KURBB				LR	LR	11 27 02.6	
	comp=Z,67nm,20.6s,baz=176,slow=35						
	comp=Z,0.7nm,0.2s						
BVAR	Borovoye Array	54.34	2	LR	LR	11 29 06.7	
	comp=Z,36nm,18.0s,baz=171,slow=36						
ZAA0	Zalesovo Array	57.00	12	P	P	11 06 17.4	-0.7
ZAA0				IAmb	IAmb	11 06 18.4	
	comp=Z,7.6nm,1.5s						
ZALV	Zalesovo Beam	57.00	12	P	P	11 06 18.1	-0.1
	comp=Z,1.3nm,0.7s,baz=220,slow=6.3,SNR=7.9						
ZALV				LR	LR	11 30 25.0	
	comp=Z,37nm,18.1s,baz=218,slow=36						
	comp=Z,1.3nm,0.7s						
ZALV	Zalesovo Beam	57.00	12	P	P	11 06 17.9	-0.3
DAV	Davao City (W)	58.23	81	LR	LR	11 33 30.2	
	comp=Z,36nm,18.2s,baz=344,slow=38						
SONM	Songino Array	59.48	29	P	P	11 06 37.4	+1.6
	comp=Z,4.8nm,0.9s,baz=227,slow=6.9,SNR=22						
SONM				LR	LR	11 32 36.7	
	comp=Z,115nm,19.2s,baz=224,slow=36						
	comp=Z,4.8nm,0.9s						
SONM	Songino Array	59.48	29	P	P	11 06 36.8	+1.0
SONM				IAmb	IAmb	11 06 38.6	
	comp=Z,8.2nm,1.1s						
ULN	Ulaanbaatar	59.82	30	P	P	11 06 38.7	+0.5
ULN				IAmb	IAmb	11 06 40.4	
	comp=Z,3.4nm,1.1s						
MAW	Mawson	66.10	182	LR	LR	11 28 28.9	
	comp=Z,36nm,20.7s,baz=51,slow=29						
WRA	Warramunga Arr	67.44	111	P	P	11 07 29.1	+0.1
	comp=Z,3.7nm,0.9s,baz=280,slow=6.0,SNR=17						
	comp=Z,3.7nm,0.9s						
HILR	Hailar Array B	67.52	34	P	P	11 07 30.5	+1.6
	comp=Z,5.0nm,0.8s,baz=201,slow=7.9,SNR=7.7						
	comp=Z,5.0nm,0.8s						
JNU	Nakatsue	68.50	54	LR	LR	11 37 36.4	
	comp=Z,42nm,20.0s,baz=293,slow=36						
DBIC	Dimbokro	72.99	277	LR	LR	11 40 19.3	
	comp=Z,30nm,18.1s,baz=7.5,slow=36						
YAK	Yakutsk	78.46	25	LR	LR	11 43 59.5	
	comp=Z,83nm,18.6s,baz=266,slow=36						
EKA	Eskdalemuir Ar	80.49	327	P	P	11 08 44.0	-0.5
	comp=Z,0.5nm,0.7s,baz=140,slow=6.0,SNR=1.5						
	comp=Z,0.5nm,0.7s						
TIXI	Tiksi	82.57	16	LR	LR	11 47 21.1	
	comp=Z,50nm,18.0s,baz=6.5,slow=37						
MA2	Magadan	87.67	30	LR	LR	11 49 09.8	
	comp=Z,33nm,19.1s,baz=52,slow=36						
QSPA	South Pole Qui	88.53	180	P	P	11 09 28.0	+2.8
	comp=Z,1.5nm,1.0s,baz=245,slow=3.5,SNR=7.1						
QSPA				LR	LR	11 45 20.8	
	comp=Z,31nm,18.7s,baz=210,slow=33						
	comp=Z,1.5nm,1.0s						
QSPA	South Pole Qui	88.53	180	P	P	11 09 23.0	-2.1
SEY	Seymchan	88.80	27	LR	LR	11 50 28.9	
	comp=Z,59nm,20.2s,baz=321,slow=36						
VNDA	Vanda	89.45	167	P	P	11 09 28.6	-0.6
VNDA				IAmb	IAmb	11 09 33.4	
	comp=Z,4.7nm,1.2s						
PDAR	Pinedale Array	138.81	357	PKP	PKiKP	11 16 00.9	-0.9
	comp=Z,0.3nm,0.7s,baz=42,slow=4.6,SNR=2.8						
TXAR	Lajitas Array	151.13	345	PKPbc	PKPbc	11 16 26.6	-0.2
	comp=Z,1.2nm,1.0s,baz=10.0,slow=2.1,SNR=8.3						

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*FUNV **01** 11:09:26.6, 11°.64N×62°.66W, h57^{km}, MW3.5*

TRN 01 11:09:34.9, 11°.67N×61°.09W, h20^{km}, MD3.0, South-east of Grenada., Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRGR	Grenville	0.72	310	*e*P	Pb	11 09 49.1	+0.4
GRGR				*e*S	Sn	11 10 00.1	-0.2
GRFF	Grenada Fort F	0.74	301	*e*P	Pb	11 09 49.1	+0.1
GRFF				*e*S	Sn	11 09 59.8	-1.0
GRW	Mount Saint Ca	0.74	311	*e*P	Pn	11 09 50.2	0.0
GRW				*e*S	Sn	11 10 01.0	0.0
GRHS	Sauteurs	0.77	316	*e*P	Pb	11 09 49.6	0.0
GRHS				*e*S	Sb	11 10 00.5	+0.9
GRSS	Sisters	0.81	321	*e*P	Pb	11 09 49.9	-0.3
GRSS				*e*S	Sn	11 10 01.8	-0.7
GCMP	Grenada, Carri	0.87	338	*e*P	Pb	11 09 51.6	+0.2
GCMP				*e*S	Sb	11 10 03.3	+0.7
TRN	Trinidad (W)	1.06	197	*e*P	Pn	11 09 55.3	+0.7
TRN				*e*S	Sn	11 10 09.2	+0.5
DMDM	Guralp CMG5TDE	1.07	205	*e*S	Sn	11 10 09.2	+0.3
SVB	Belmont	1.60	354	*e*P	Pb	11 10 03.0	-0.8
SVB				*e*S	Sb	11 10 22.9	-0.7
MCLT	Moule a Chique	2.03	4	*e*P	Pn	11 10 08.4	+0.4
MCLT				*e*S	Sn	11 10 33.0	+0.2
SLBI	Saint Lucia, B	2.34	3	*e*P	Pn	11 10 13.5	+1.3
SLBI				*e*S	Sn	11 10 39.7	-0.6
BIM	Bigot	2.83	0	*e*P	Pn	11 10 19.2	+0.2
BIM				*e*S	Sn	11 10 52.7	+0.2

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*JMA **01** 11:26:09.2±0.1, 24°.0N±0°.7×123°.6E±0°.4, h31^{km}±1^{km}, MV3.2/9, NEAR ISHIGAKIJIMA ISLAND*

ISC 01 11:26:08.9±1.1, **23°.94N**±0°.06×**123°.57E**±0°.04, **h28**^{km}±9^{km}, **n21**, σ1^{s}.**21**/28, **Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.25	61	*i* P	Pb	11 26 15.6	+0.1
HATJ				S	Sb	11 26 20.4	+0.5
IRIF	Iriomote-Funau	0.42	21	*i* P	Pb	11 26 17.7	-0.3
IRIF				S	Sb	11 26 23.9	-0.3
JKRS	Kuro-shima	0.50	53	*i* P	Pb	11 26 19.2	0.0
JKRS				S	Sb	11 26 26.4	+0.1
JIJ	Ishigaki jima	0.68	51	*i* P	Pb	11 26 21.4	-0.8
JIJ				S	Sb	11 26 30.1	-1.1
YOJ	Yonaguni jima	0.73	316	P	Pn	11 26 22.7	-0.6
YOJ	Yonaguni jima	0.73	316	S	Sn	11 26 33.0	-0.5
YOJ	Yonaguni jima	0.73	316	*i* P	Pn	11 26 22.9	-0.5
JYNG	Yonagunijimaku	0.77	312	*i* P	Pn	11 26 23.4	-0.5
JYNG				S	Sb	11 26 33.7	0.0
JISG	Ishigakijimahi	0.94	46	P	Pn	11 26 25.5	-0.7
JISG				*e*S	Sn	11 26 37.6	-1.1
JTJ	Tarama	1.25	56	*e*P	Pb	11 26 30.9	-0.9
JTJ				*e*S	Sb	11 26 47.4	-0.1
JMJ	Miyako jima 2	1.80	61	P	Pb	11 26 42.3	+1.1
JMJ	Miyako jima 2	1.80	61	S	Sb	11 27 07.7	+4.4
NACB	Ninganchiao	1.82	278	P	Pn	11 26 38.1	-0.2
YHNB	Yeheng	2.13	290	P	Pn	11 26 43.8	+1.1
YULB	Yu-li	2.15	256	P	Pn	11 26 42.4	-0.5
YULB	Yu-li	2.15	256	S	Sn	11 27 07.9	-0.8
TATO	Taipei	2.16	299	P	Pn	11 26 44.1	+1.1
TATO	Taipei	2.16	299	S	Sn	11 27 10.4	+1.6
TWGBT	Beinan	2.54	245	P	Pn	11 26 47.7	-0.6
TWGBT	Beinan	2.54	245	S	Sn	11 27 17.0	-1.4
TPUB	Ta-pu	2.77	257	P	Pn	11 26 52.4	+1.0

KRSC 01 11:36:04.3±0.8, **53°.97N×168°.96E, h40**^{km}±20^{km}, **Ml3.9, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	Bering	2.13	307	*e*P	Pn	11 36 39.5	+2.2
BKI				*e*S	Sn	11 37 04.9	+2.4
KBTR	Krutoberegovo	4.18	305	*e*P	Pn	11 37 10.5	+5.1
KZV	Kizimen	5.17	286	*e*P	Pn	11 37 23.3	+4.1
SPN	Mys Shipunski	5.40	264	*e*S	Sn	11 38 26.8	+3.8
SDLR	Sedlovina	6.04	267	*e*P	Pn	11 37 36.1	+5.0
AVH	Avacha	6.12	268	*e*P	Pn	11 37 37.5	+5.3
KRX	Arik	6.16	268	*e*P	Pn	11 37 37.6	+4.8
KOK	Koryaka	6.18	268	*e*P	Pn	11 37 38.9	+5.9

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*VIE **01** 11:42:38.1, 41°.09N×19°.14E, h0^{km}, mb3.8/5, ML2.9/1 36 km SW of Durres*

*IDC **01** 11:42:38.9±1.1, 41°.33N×19°.31E, h0^{km}, mb3.5/9, mbtmp3.6/17, ML3.7/6, MS3.1/9, Error ellipse: s-maj=16.5km s-min=10.3km az=33.0*

*PRU **01** 11:42:40.4, 41°.10N×19°.46E, h10^{km}, M4.5*

*SKO **01** 11:42:41.9, 41°.46N×19°.33E, h0^{km}, ML4.0*

*THE **01** 11:42:41.9, 41°N±4°×1°9E±°, h12^{km}, M3.7/16, MLh3.7/16*

*NEIC **01** 11:42:42.3±1.7, 41°.36N±0°.06×19°.32E±0°.07, h10^{km}±1^{km}, mb4.5/8, Error ellipse: s-maj=10.8km s-min=9.2km az=181.0*

*TIR **01** 11:42:42.6, 41°.34N×19°.46E, h28^{km}±1^{km}, Ml3.9/6*

*BEO **01** 11:42:43.1±0.5, 41°.29N×19°.36E, h17^{km}±2^{km}, ML3.7/10*

*MCSM **01** 11:42:44.8±0.3, 41°N±4°×1°9E±°, h72^{km}±11^{km}, mb4.0, MLv4.1*

*PDG **01** 11:42:44.3±0.1, 41°.40N×19°.34E, h19^{km}, MD3.9/13, ML3.8/13, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*

ISC 01 11:42:42.0±0.9, **41°.32N**±0°.02×**19°.37E**±0°.02, **h17**^{km}±6^{km}, **n264**, σ1^{s}.**46**/327, **mb3.9**/9, **MS3.4**/3, **27C-16D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.38	85	Pg	Pg	11 42 49.1	-0.7
TIR				S	Sg	11 42 55.2	+0.1
TIR				AML	AML	11 42 58.9	
	18nm,0.2s						
TIR	Tirane	0.38	85	Pg	Pg	11 42 49.1	-0.7
TIR				S	Sg	11 42 53.6	-1.5
TIR				AML	AML	11 42 58.9	
	18nm,0.2s						
TIR	Tirane	0.38	85	*i* Pg	Pg	11 42 49.2	-0.7
TIR				*i* Sg	Sg	11 42 54.3	-0.8
ULC	Ulcinj	0.65	352	*e*Pg	Pb	11 42 55.3	+0.3
ULC				*i* Sg	Sb	11 43 04.6	+0.8
SDA	Shkodra	0.74	8	Pg	Pb	11 42 56.6	+0.1
SDA				Sg	Sb	11 43 07.0	+0.8
SDA	Shkodra	0.74	8	Pg	Pb	11 42 56.6	+0.1
SDA				Sg	Sn	11 43 07.7	-0.8
VLO	Vlora	0.85	173	Pg	Pn	11 43 01.3	+2.1
VLO				Sg	Sn	11 43 11.6	+0.2
VLO				AML	AML	11 43 18.5	
	39nm,0.5s						
VLO				AML	AML	11 43 20.6	
	32nm,0.5s						
VLO	Vlora	0.85	173	Pg	Pn	11 43 00.2	+0.9
VLO				Sg	Sn	11 43 11.8	+0.5
VLO				AML	AML	11 43 18.5	
	39nm,0.5s						
VLO				AML	AML	11 43 20.6	
	32nm,0.5s						
VLO	Vlora	0.85	173	P	Pn	11 43 00.9	+1.7
VLO				S	Sn	11 43 15.5	+4.1
DRME	Dracevica, Mon	0.88	351	*e*Pg	Pn	11 42 59.4	-0.2
DRME				*e*Sg	Sn	11 43 12.1	+0.1
PHP	Peshkopia	0.89	65	Pg	Pb	11 42 57.6	-1.4
PHP				Sg	Sb	11 43 10.0	-0.6
PHP				AML	AML	11 43 16.8	
	17nm,0.5s						
PHP	Peshkopia	0.89	65	P	Pb	11 42 58.2	-0.8
BUM	Brajici-Budva	1.04	340	*e*Pg	Pg	11 43 02.3	0.0
BUM				*i* Sg	Sn	11 43 17.6	+1.4
OHR	Ohrid	1.10	100	*i* Pg	Pb	11 43 02.1	-0.5
OHR				*i* Sg	Sg	11 43 19.9	+2.2
OHR				*e*Lg	Lg	11 43 20.8	
	comp=N,2µm,0.4s						
OHR				*e*Lg	Lg	11 43 22.1	
	comp=E,6µm,0.6s						
PDG	Podgorica	1.11	356	Pg	Pg	11 43 03.4	-0.2
PDG				Sg	Sg	11 43 19.2	+1.0
PDG	Podgorica	1.11	356	Pg	Pg	11 43 03.4	-0.2
PDG				Sg	Sg	11 43 19.1	+0.9
PDG	Podgorica	1.11	356		Pb	11 43 02.7	-0.1
PDG	Podgorica	1.11	356	⇑P	Pg	11 43 03.6	0.0
PDG				⇑S	Sg	11 43 19.4	+1.3
PDG	Podgorica	1.11	356	*e*Pg	Pg	11 43 03.8	+0.2
PDG				*e*Sg	Sg	11 43 21.0	+2.8
PDG	Podgorica	1.11	356	*e*Pg	Pg	11 43 03.6	0.0
PDG				*i* Sg	Sg	11 43 20.3	+2.1
CEME	Cevo	1.27	345	*e*Pg	Pg	11 43 06.3	-0.3
CEME				*e*Sg	Sg	11 43 25.0	+1.8
KBN	Korca	1.28	122	P	Pg	11 43 06.9	+0.2
KBN				S	Sg	11 43 24.0	+0.5
KBN				AML	AML	11 43 29.3	
	comp=E,15nm,0.7s						
KBN	Korca	1.28	122	P	Pb	11 43 06.4	+0.6
KBN				S	Sg	11 43 24.0	+0.5
KBN				AML	AML	11 43 29.3	
	comp=E,15nm,0.7s						
KBN	Korca	1.28	122	P	Pg	11 43 06.7	0.0
KBN				S	Sg	11 43 25.5	+2.0
HCY	Herceg Novi	1.30	330	*e*Pg	Pg	11 43 06.9	-0.3
HCY				*i* Sg	Sg	11 43 25.9	+1.7
PVY	Plav	1.35	19	*e*Pg	Pg	11 43 08.1	0.0
PVY				*i* Sg	Sg	11 43 27.3	+1.6
NKME	Niksic	1.48	348	*e*Pg	Pg	11 43 09.9	-0.6
NKME				*e*Sg	Sg	11 43 30.1	+0.3
KOME	Kolasin	1.53	4	*e*Pg	Pg	11 43 10.9	-0.7
KOME				*e*Sg	Sg	11 43 32.2	+0.6
NEST	Nestorio	1.56	125	P	Pb	11 43 10.7	+0.2
NEST				S	Sg	11 43 32.3	-0.2
TREB	Trebinje	1.59	332	*e*Pn	Pn	11 43 10.1	+0.7
TREB	Trebinje	1.59	332	*e*Pg	Pb	11 43 10.4	-0.5
TREB				*e*Sg	Sg	11 43 34.8	+1.5
IVA	Berane	1.60	14	*e*Pg	Pb	11 43 11.5	+0.3
IVA				*i* Sg	Sg	11 43 33.3	-0.4
DBRK	Dubrovnik	1.63	326	*i* Pn	Pn	11 43 10.6	+0.7
DBRK				Sn	Sg	11 43 35.9	+1.4
KEK	Kerkira	1.64	168	S	Sg	11 43 34.4	-0.4
SKO	Skopje	1.69	67	*i* Pg	Pb	11 43 12.3	-0.3
SKO				*i* Sg	Sb	11 43 34.3	+0.8
BRY	Bratogost	1.70	339	*e*Pn	Pb	11 43 12.1	-0.8
BRY				*i* Sn	Sg	11 43 35.3	-1.5
PENT	Pentalofos	1.75	129	P	Pb	11 43 13.9	+0.1
NOCI	Noci	1.82	254	Pn	Pn	11 43 13.3	+0.8
NOCI	Noci	1.82	254	Pn	Pn	11 43 13.6	+1.1
UPM	Unac-Piva	1.91	350	*e*Pn	Pb	11 43 15.8	-0.8
UPM				*i* Sn	Sb	11 43 40.4	+0.1
IGT	Igoumenitsa	1.93	157	Pn	Pb	11 43 16.1	-0.7
IGT				Sn	Sb	11 43 42.5	+1.9
IGT				AML	AML	11 43 56.5	
	comp=E,3.0nm,0.6s						
IGT	Igoumenitsa	1.93	157	Pn	Pn	11 43 15.7	+1.6
IGT				Sn	Sb	11 43 42.5	+1.9
IGT				AML	AML	11 43 56.5	
	comp=E,3.0nm,0.6s						
IGT	Igoumenitsa	1.93	157	P	Pn	11 43 15.3	+1.1
IGT	Igoumenitsa	1.93	157	*i* Pn	Pn	11 43 15.2	+1.1
IGT				*i* Sn	Sg	11 43 44.6	+0.4
STON	Ston	1.99	322	*e*Pn	Pn	11 43 15.7	+0.8
STON	Ston	1.99	322	*e*Pn	Pn	11 43 15.6	+0.8
SJES	Sjenica	1.99	13	*e*Pn	Pb	11 43 18.0	+0.1
JAN	Janina	2.01	145	P	Pn	11 43 16.6	+1.4
PLE	Pljevlja	2.01	0	*e*Pn	Pb	11 43 17.4	-0.8
PLE				*i* Sn	Sb	11 43 42.9	-0.1
KZN	Kozani	2.09	118	P	Pn	11 43 17.6	+1.3
MATE	Matera	2.12	253	⇓P	Pn	11 43 17.8	+1.1
RUDO	Rudo	2.30	0	*e*Pn	Pn	11 43 20.7	+1.6
RUDO	Rudo	2.30	0	*e*Pn	Pn	11 43 20.8	+1.6
SELS	Selova	2.30	34	*e*Pn	Pn	11 43 20.6	+1.4
SELS				*e*Sn	Sb	11 43 49.8	-1.5
GRG	Griva	2.32	98	P	Pn	11 43 19.2	-0.3
GRG	Griva	2.32	98	*i* Pn	Pn	11 43 20.8	+1.3
GRG				*i* Sn	Sn	11 43 49.6	+2.0
IVAS	Ivanjica	2.33	14	*e*Pn	Pn	11 43 20.9	+1.3
IVAS				*e*Sn	Sb	11 43 51.3	-0.8
BARS	Barje	2.36	50	*e*Pn	Pn	11 43 21.1	+1.1
VAY	Valandovo	2.41	89	*i* Pn	Pn	11 43 21.5	+0.8
VAY				*i* Sn	Sb	11 43 54.5	0.0
VAY				*e*Lg	Lg	11 44 00.3	
	comp=N,829nm,1.4s						
VAY				*e*Lg	Lg	11 44 02.9	
	comp=E,285nm,0.7s						
TETR	Tetrakomo, Epi	2.45	143	P	Pn	11 43 23.0	+1.7
GOCS	Kraljevo Serbi	2.50	26	*e*Pn	Pn	11 43 23.4	+1.3
GOCS				*e*Sn	Sn	11 43 53.6	+1.4
BBLS	Lazi&#263i	2.55	1	*e*Pn	Pn	11 43 24.3	+1.7
BOSS	Bosilegrad	2.60	62	*e*Pn	Pn	11 43 24.6	+1.2
BOSS				*e*Sn	Sn	11 43 56.5	+1.9
ACER	Acerenza	2.64	260		Pn	11 43 24.9	+0.9
KNT	Kendrikon	2.67	92	*i* Pn	Pn	11 43 25.4	+1.2
KNT				*i* Sn	Sn	11 43 56.3	+0.2
LIT	Litokhoron	2.67	116		Pn	11 43 25.9	+1.6
LIT	Litokhoron	2.67	116	*i* Pn	Pn	11 43 26.2	+1.9
THL	Klokotos Trika	2.67	130	P	Pn	11 43 25.8	+1.5
TSLK	Tsoukalades, L	2.68	158	P	Pn	11 43 25.4	+1.1
LKD2	Lefkada island	2.71	158	P	Pn	11 43 25.7	+0.8
GRUS	Gruza	2.75	21	*e*Pn	Pn	11 43 27.2	+1.8
SGRT	San Giovanni R	2.75	280		Pn	11 43 25.7	+0.2
AMPL	Ampelaki	2.78	149	P	Pn	11 43 27.4	+1.6
DRAG	Dragano-Lefkad	2.79	160	P	Pn	11 43 26.2	+0.3
NYDR	Nydri-Lefkada	2.80	158	P	Pn	11 43 26.5	+0.5
THE	Thessaloniki	2.81	103	*i* Pn	Pn	11 43 27.0	+0.9
THE				*i* Sn	Sn	11 44 00.3	+0.7
KKB	Krupnik	2.87	78	P	Pn	11 43 28.5	+1.4
KKB	Krupnik	2.87	78	P	Pn	11 43 28.7	+1.7
KKB	Krupnik	2.87	78	*i* Pn	Pn	11 43 28.6	+1.6
EVGI	Lefkada island	2.87	159	P	Pn	11 43 27.4	+0.4
TRAN	Tran	2.88	57	P	Pn	11 43 28.9	+1.8
BOVS	Bovan	2.89	36	⇓P	Pn	11 43 29.1	+1.8
BOVS	Bovan	2.89	36	*e*Pn	Pn	11 43 28.9	+1.6
BOVS				*e*Sn	Sn	11 44 03.5	+1.9
TIP	Timpagrande	2.92	224		Pn	11 43 28.4	+0.6
TIP	Timpagrande	2.92	224	⇓P	Pn	11 43 28.1	+0.3
TIP	Timpagrande	2.92	224	Pn	Pn	11 43 27.8	0.0
FSK	Fiskardo	3.00	162	P	Pn	11 43 28.7	-0.1
TRUS	Trudelj	3.00	14	*e*Pn	Pn	11 43 30.5	+1.7
CUC	Castrocucco	3.01	245		Pn	11 43 30.6	+1.7
EVR	Evrytania	3.04	141	P	Pn	11 43 31.1	+1.6
SOH	Sokhos	3.06	98	*i* Pn	Pn	11 43 30.5	+0.9
SOH				*i* Sn	Sn	11 44 07.5	+1.7
ZAPS	Zavoj	3.11	50	*e*Pn	Pn	11 43 32.4	+2.0
ZAPS				*e*Sn	Sn	11 44 07.6	+0.4
VTS	Vitosha	3.16	64	⇓*i*P	Pn	11 43 32.5	+1.4
VTS				S	Sn	11 44 10.1	+1.5
VTS	Vitosha	3.16	64	*e*Pn	Pn	11 43 32.6	+1.4
VTS				*e*Sn	Sn	11 44 09.5	+0.9
PVO	Paravola	3.17	148	P	Pn	11 43 32.5	+1.4
SRS	Serrai	3.19	92	*i* Pn	Pn	11 43 32.4	+0.9
AGG	Agios Georgios	3.23	134	P	Pn	11 43 33.2	+1.3
TEKS	Tekeris	3.23	2	*e*Pn	Pn	11 43 32.5	+0.5
PLNA	Plana	3.24	68	P	Pn	11 43 34.6	+2.4
ZAGS	Zajecar	3.27	39	*e*Pn	Pn	11 43 33.9	+1.4
VLS	Valsamata	3.28	163	P	Pn	11 43 32.1	-0.5
BLSH	Balsha	3.29	61	P	Pn	11 43 36.3	+3.4
MMB	Musomishta	3.30	85	P	Pn	11 43 31.7	-1.3
MMB	Musomishta	3.30	85	P	Pn	11 43 34.8	+1.8
MMB				S	Sn	11 44 12.6	+0.7
MMB	Musomishta	3.30	85	*i* Pn	Pn	11 43 34.5	+1.5
BLKB	Belogradchik	3.36	46	*e*Pn	Pn	11 43 36.3	+2.5
BLKB				*e*Sn	Sn	11 44 14.9	+1.6
BORS2	Bor- Borsko je	3.39	34	*e*Pn	Pn	11 43 34.1	-0.1
AXS	Araxos	3.48	153	P	Pn	11 43 36.2	+0.8
KUBS	Kucevo	3.53	28	*e*Pn	Pn	11 43 36.0	0.0
PAOL	Paolisi	3.63	267		Pn	11 43 39.3	+1.8
PGB	Panagyurishte	3.78	70	P	Pn	11 43 41.8	+2.3
BLY	Banja Luka	3.78	336	*e*Pn	Pn	11 43 40.9	+1.4
BLY	Banja Luka	3.78	336	⇑P	Pn	11 43 41.5	+2.0
BLY	Banja Luka	3.78	336	*e*Pn	Pn	11 43 40.9	+1.4
MPEP	Malo Peshtene	3.83	56	P	Pn	11 43 42.7	+2.5
VALD	Valchedram	3.83	50	P	Pn	11 43 43.1	+2.9
FRGS	Fruska Gora	3.85	5	*e*Pn	Pn	11 43 41.1	+0.6
MDVR	Moldovita	3.86	26	⇑P	Pn	11 43 42.0	+1.3
MDVR	Moldovita	3.86	26	*e*Pn	Pn	11 43 41.8	+1.1
MDVR				*e*Sn	Sn	11 44 24.6	-1.1
PUNG	Punghina	3.95	40	⇑P	Pn	11 43 44.6	+2.7
RZN	Rozhen	4.05	83	P	Pn	11 43 45.4	+2.0
CEL	Celeste	4.06	222		Pn	11 43 43.5	+0.1
CEL	Celeste	4.06	222	Pn	Pn	11 43 43.9	+0.5
VRSS	Vrsac	4.06	20	*e*Pn	Pn	11 43 44.5	+1.1
VRSS				*e*Sn	Sn	11 44 29.4	-1.1
DJES	Djerdap	4.07	34	⇑P	Pn	11 43 44.9	+1.4
PLD	Plovdiv	4.11	77	*e*Pn	Pn	11 43 46.0	+2.0
HERR	Herculane	4.20	31	⇑P	Pn	11 43 47.4	+2.1
SRE	Strehaia	4.37	39	⇓P	Pn	11 43 50.9	+3.3
PLVB	Pleven	4.41	60	⇓P	Pn	11 43 50.4	+2.3
AQU	L'Aquila	4.57	285	*e*Pn	Pn	11 43 52.0	+1.5
AQU	L'Aquila	4.57	285	Pn	Pn	11 43 52.0	+1.5
ITM	Ithomi	4.59	153	Pn	Pn	11 43 51.1	+0.5
BZS	Buzias	4.60	20	⇓P	Pn	11 43 52.1	+1.4
CAMP	Campotosto	4.61	287		Pn	11 43 52.3	+1.3
RDO	Rodhopi	4.66	90		Pn	11 43 52.5	+0.9
GZR	Gura Zlata	4.77	30	⇓P	Pn	11 43 55.2	+2.0
GUMA	Gualdo di Mace	4.81	293		Pn	11 43 54.7	+1.0
SURR	Surduc	4.87	23	⇑P	Pn	11 43 55.6	+1.2
NRCA	Norcia	4.89	290		Pn	11 43 56.0	+1.1
MORH	Mrgy, Hungar	4.92	354	*e*Pn	Pn	11 43 55.9	+0.8
MORH	Mrgy, Hungar	4.92	354	⇑P	Pn	11 43 56.0	+0.8
MORH	Mrgy, Hungar	4.92	354	Pn	Pn	11 43 56.0	+0.8
FDMO	Fiordimonte	4.97	292		Pn	11 43 56.8	+0.9
ELND	Elena	5.10	69	⇑P	Pn	11 43 59.6	+2.0
BOJS	Bojanci	5.14	326	*e*Pn	Pn	11 43 59.5	+1.3
BOJS	Bojanci	5.14	326	*i* Pn	Pn	11 43 59.4	+1.1
BOJS				*i* Sn	Sn	11 44 56.8	-0.4
SIRR	Siria	5.22	18	*e*Pn	Pn	11 44 01.2	+1.9
SIRR				*e*Sn	Sn	11 44 57.7	-1.3
CESX	Cesi	5.22	287		Pn	11 44 00.5	+1.2
HUMR	Humele	5.22	50	⇓P	Pn	11 44 01.5	+2.2
LOT	Lotru	5.23	36	⇑P	Pn	11 44 01.8	+2.3
DEV	Deva	5.24	28	⇓P	Pn	11 44 01.6	+2.1
RIY	Rijeka	5.36	320	*e*Pn	Pn	11 44 02.4	+1.2
RIY				*e*Sn	Sn	11 45 01.6	-0.8
MURB	Monte Urbino	5.43	293		Pn	11 44 03.7	+1.4
ARR	Arges	5.58	42	⇑P	Pn	11 44 06.8	+2.5
TNR	Turnu Rosu	5.61	38	⇑P	Pn	11 44 07.6	+2.9
RAFF	Raffo Rosso	5.64	225	Pn	Pn	11 44 04.8	-0.3
CEY	Cerknica	5.69	323	*e*Pn	Pn	11 44 07.1	+1.3
CEY				*e*Sn	Sn	11 45 09.9	-0.8
LOZB	Loznitsa	5.73	67	⇓P	Pn	11 44 09.0	+2.7
SKDS	Skadanscina	5.75	319	*e*Pn	Pn	11 44 06.8	+0.3
SKDS				*e*Sn	Sn	11 45 10.3	-1.8
VOIR		5.84	43	⇓P	Pn	11 44 09.9	+2.0
VOIR		5.84	43	Pn	Pn	11 44 09.8	+2.0
	comp=E,0.1nmcomp=E,12nm,2.4s						
DRGR		5.98	23	⇑P	Pn	11 44 11.1	+1.4
MDB	Medias	6.04	35	⇑P	Pn	11 44 12.5	+2.0
CJR	Cluj-Napoca	6.20	28	⇓P	Pn	11 44 16.0	+3.3
SOKA	Soboth	6.20	331	*i* Pn	Pn	11 44 13.2	+0.4
	comp=E,1.1nm,0.2s,SNR=18						
OBKA	Obir	6.25	328	*i* Pn	Pn	11 44 14.5	+1.1
	comp=E,1.3nm,0.2s,SNR=8.2						
SABO	M.te Sabotino	6.26	320		Pn	11 44 13.8	+0.3
MLR	Muntele Rosu	6.35	47	Pn	Pn	11 44 15.9	+0.9
	comp=E,2.6nm,0.3s,baz=145,slow=15,SNR=16						
MLR				Sn	Sn	11 45 29.4	+2.3

	comp=E,0.5nm,0.3s,baz=297,slow=5.4,SNR=3.6						
MLR				LR	LR	11 46 57.1	
	comp=E,129nm,18.6s,baz=234,slow=40						
	comp=E,9.2nm,0.5s						
MLR	Muntele Rosu	6.35	47		Pn	11 44 16.2	+1.3
MLR	Muntele Rosu	6.35	47	⇑P	Pn	11 44 18.0	+3.1
MLR	Muntele Rosu	6.35	47	Pn	Pn	11 44 16.7	+1.8
	comp=E,0.1nmcomp=E,15nm,0.6s						
DOPR	Dopca	6.38	41	⇑P	Pn	11 44 17.4	+2.2
OSSC	Osservatorio P	6.40	293		Pn	11 44 15.0	-0.5
ISR	Istrita	6.47	52	⇑P	Pn	11 44 19.6	+3.1
ISR	Istrita	6.47	52	Pn	Pn	11 44 18.2	+1.7
	comp=E,0.3nmcomp=E,28nm,1.4s						
NEHR	Nehoiu	6.51	49	⇑P	Pn	11 44 19.0	+2.0
ARSA	Arzberg	6.54	336		Pn	11 44 18.0	+0.6
ARSA	Arzberg	6.54	336	*e*Pn	Pn	11 44 18.2	+0.8
	comp=E,3.2nm,0.4s,SNR=4.6						
ARSA	Arzberg	6.54	336	*e*Pn	Pn	11 44 18.1	+0.6
PSZ	Piszkesteto	6.61	3		Pn	11 44 18.9	+0.5
PSZ	Piszkesteto	6.61	3	⇑P	Pn	11 44 19.4	+1.0
OZUR		6.67	42	⇓P	Pn	11 44 21.8	+2.7
COVR	Voineasa-Covas	6.72	45	⇑P	Pn	11 44 22.9	+3.1
ARCR	ARCALIA	6.79	30	⇑P	Pn	11 44 23.8	+3.0
ICOR	Ion Corvin	6.81	63	⇑P	Pn	11 44 23.1	+2.0
BISRR	Bisoca	6.81	49	⇑P	Pn	11 44 24.3	+3.0
ZCCA	Zocca	6.87	299	Pn	Pn	11 44 23.0	+1.0
STAL	STALIGIAL	6.90	318		Pn	11 44 22.9	+0.5
TEOL	Teolo	6.91	308		Pn	11 44 22.4	-0.1
PLOR	Plostina	6.96	47	⇓P	Pn	11 44 25.6	+2.4
VRI	Vrincioaia	7.01	47	⇑P	Pn	11 44 26.7	+2.7
VRI	Vrincioaia	7.01	47	Pn	Pn	11 44 26.6	+2.7
	comp=E,0.1nmcomp=E,16nm,2.8s						
CONA	Conrad Observa	7.07	340	*e*Pn	Pn	11 44 24.4	-0.3
	comp=E,0.1nm,0.2s						
CIMO	Cimolais	7.07	317		Pn	11 44 24.8	+0.1
ONER	Baraj Valea Uz	7.14	43	⇓P	Pn	11 44 28.7	+3.0
KBA	Koelnbreinsper	7.20	325	*e*Pn	Pn	11 44 27.2	+0.6
	comp=E,1.9nm,0.5s						
KECS	Kecovo	7.21	6	*e*PN	Pn	11 44 31.7	+5.1
KECS				*e*SN	Sn	11 45 45.7	-2.3
MODS	Modra-Piesok	7.21	349	*e*PN	Pn	11 44 30.0	+3.4
MODS				*e*SN	Sn	11 45 46.5	-1.5
CTI	Castel Tesino	7.32	313		Pn	11 44 28.2	0.0
ABTA	Abfaltersbach	7.33	320	*e*Pn	Pn	11 44 28.6	+0.2
	comp=E,1.5nm,0.2s,SNR=8.8						
KORU	Korolevo	7.34	20	Pn	Pn	11 44 30.2	+1.8
IDI	Anoyia	7.42	142	Pn	Pn	11 44 28.1	-1.5
	comp=E,7.2nm,0.6s,baz=214,slow=18,SNR=1.0						
IDI				Sn	Sn	11 45 48.1	-5.4
	comp=E,1.4nm,0.3s,baz=6.2,slow=15,SNR=1.9						
PRMA	PARMA	7.47	300	Pn	Pn	11 44 30.9	+0.7
CFR	Carcaliu	7.47	56	⇑P	Pn	11 44 33.4	+3.2
MOA	Molln	7.47	333	*i* Pn	Pn	11 44 32.0	+1.8
	comp=E,0.9nm,0.1s,SNR=10						
MOA	Molln	7.47	333	*e*Pn	Pn	11 44 32.0	+1.8
MUKU	Mukachevo	7.51	17	Pn	Pn	11 44 32.3	+1.6
HOLU	Holmets	7.52	16	Pn	Pn	11 44 32.0	+1.2
BURAR	Bucovina Array	7.56	32	⇑P	Pn	11 44 34.7	+3.3
BIOA	Bad Ischl, Aus	7.57	329	*e*Pn	Pn	11 44 31.9	+0.3
	comp=E,3.1nm,0.4s,SNR=7.6						
BUR08	Bucovina Ar. S	7.57	31		Pn	11 44 33.6	+1.9
SALO	Salr	7.73	307		Pn	11 44 33.7	-0.1
LESA	Schwarzleotal	7.76	324	*e*Pn	Pn	11 44 33.8	-0.4
	comp=E,1.6nm,0.3s,SNR=8.9						
MSSA	Maissana	7.83	296	Pn	Pn	11 44 34.9	-0.4
WTTA	Wattenberg	8.12	320	*e*Pn	Pn	11 44 39.8	+0.5
	comp=E,4.6nm,0.3s,SNR=27						
WATA	Walderalm	8.20	320	*e*Pn	Pn	11 44 40.8	+0.4
	comp=E,9.0nm,0.4s,SNR=18						
STHS	Stebnicka Huta	8.21	9	*e*PN	Pn	11 44 43.7	+3.4
STHS				*e*SN	Sn	11 46 12.3	-0.2
VRAC	Vranov	8.22	347	Pn	Pn	11 44 39.0	-1.5
	comp=E,1.0nm,0.3s,baz=165,slow=8.8,SNR=5.2						
VRAC				Sn	Sn	11 46 12.9	-0.1
	comp=E,0.4nm,0.3s,baz=36,slow=23,SNR=1.8						
	comp=E,2.3nm,0.4s						
SQTA	Sankt Quirin	8.31	318	*i* Pn	Pn	11 44 41.9	+0.1
	comp=E,2.5nm,0.2s,SNR=14						
KARP	Karpathos	8.40	131	Pn	Pn	11 44 46.3	+3.3
FETA	Feichten	8.43	315	*e*Pn	Pn	11 44 43.6	+0.2
	comp=E,1.6nm,0.5s						
MOTA	Moosalm	8.44	318	*i* Pn	Pn	11 44 44.7	+1.0
	comp=E,1.3nm,0.2s						
GEC2	GERESS Array S	8.52	334	Pn	Pn	11 44 45.2	+0.5
GERES	GERESS Array B	8.52	334	Pn	Pn	11 44 45.1	+0.4
	comp=E,0.1nm,0.3s,baz=151,slow=13,SNR=9.1						
GERES				Sn	Sn	11 46 19.2	-1.3
	comp=E,0.1nm,0.3s,baz=157,slow=25,SNR=4.2						
	comp=E,0.6nm,0.3s						
DAVOX	Davos/Dischmat	8.74	312	Pn	Pn	11 44 47.9	+0.1
	comp=E,1.7nm,0.3s,baz=147,slow=15,SNR=12						
DAVOX				Sn	Sn	11 46 27.8	+1.8
	comp=E,1.2nm,0.3s,baz=291,slow=19,SNR=2.8						
DAVOX				LR	LR	11 48 20.0	
	comp=E,79nm,18.3s,baz=76,slow=39						
	comp=E,3.1nm,0.5s						
KHC	Kasperske Hory	8.81	334	Pn	Pn	11 44 49.0	+0.5
KHC	Kasperske Hory	8.81	334	*e*PN	Pn	11 44 49.2	+0.6
KHC				*e*SN	Sn	11 46 27.6	+0.1
KHC	Kasperske Hory	8.81	334	Pn	Pn	11 44 49.1	+0.5
	comp=E,6.5nm,2.4s						
KMPD	K-Podol'skiy	8.81	32	Pn	Pn	11 44 50.4	+1.8
TUE	Stuetta	8.88	309		Pn	11 44 50.1	+0.4
TUE	Stuetta	8.88	309	Pn	Pn	11 44 49.8	+0.1
	comp=E,46nm,0.7s						
KRLC	Kraliky	8.94	349	*e*SN	Sn	11 46 30.1	-0.5
DAVA	Damuels	9.04	314	*i* Pn	Pn	11 44 52.9	+1.0
	comp=E,4.1nm,0.3s						
SENIN	Lac Senin/Sane	10.07	304		Pn	11 45 06.3	+0.4
BFO	Black Forest	10.51	316		Pn	11 45 11.4	-0.4
BR106	Keskin Array S	10.97	94	Pn	Pn	11 45 18.1	-0.1
	comp=E,3.1nm,1.2s						
BR105	Keskin Array S	10.97	94	Pn	Pn	11 45 18.0	-0.3
	comp=E,3.8nm,1.0s						
BRTR	Keskin Array B	10.98	94	Pn	Pn	11 45 20.2	+1.7
	comp=E,0.1nm,0.3s,baz=297,slow=16,SNR=1.6						
BRTR				LR	LR	11 50 12.2	
	comp=E,114nm,19.3s,baz=283,slow=41						
	comp=E,0.7nm,0.8s						
AK20	Malin Array Si	11.55	32	Pn	Pn	11 45 27.8	+1.7
AK18	Malin Array Si	11.56	32	Pn	Pn	11 45 27.3	+1.1
AKASG	Malin Array Be	11.61	33	LR	LR	11 49 41.8	
	comp=E,53nm,20.8s,baz=202,slow=36						
MMAI	Mount Meron Ar	15.22	118	LR	LR	11 53 45.2	
	comp=E,41nm,18.3s,baz=342,slow=44						
ESDC	Sonseca Array	17.81	272	P	Pn	11 46 47.9	-1.2
	baz=70,slow=13,SNR=2.1						
ESDC				LR	LR	11 53 06.1	
	comp=E,21nm,20.5s,baz=52,slow=35						
	comp=E,0.6nm,0.9s						
HFS	Hagfors	19.16	351	P	P	11 47 02.3	-2.1
	comp=E,3.8nm,1.0s,baz=171,slow=12,SNR=1.6						
NOA	NORSAR Array B	20.37	349	P	P	11 47 17.3	-0.2
	comp=E,0.5nm,0.7s,baz=160,slow=11,SNR=1.4						
	comp=E,0.5nm,0.7s						
EKA	Eskdalemuir Ar	20.39	321	P	P	11 47 17.1	-0.7
	comp=E,0.9nm,0.6s,baz=111,slow=8.8,SNR=9.5						
	comp=E,0.9nm,0.6s						
FINES	FINESS Array B	20.56	9	P	P	11 47 18.2	-1.4
	comp=E,3.0nm,0.8s,baz=189,slow=11,SNR=8.7						
FINES				LR	LR	11 56 35.5	
	comp=E,145nm,19.6s,baz=232,slow=41						
	comp=E,3.0nm,0.8s						
ARTI	Arti	29.30	46	LR	LR	12 01 22.9	
	comp=E,76nm,21.9s,baz=303,slow=38						
BVAR	Borovoye Array	35.87	53	P	P	11 49 40.5	-0.2
	comp=E,0.7nm,0.7s,baz=280,slow=8.3,SNR=4.2						
	comp=E,0.7nm,0.7s						
KURBB	Kurchatov Arra	41.15	56	P	P	11 50 24.8	-0.3
	comp=E,0.2nm,0.5s,baz=290,slow=10.0,SNR=2.7						
	comp=E,0.2nm,0.5s						
ZAA0	Zalesovo Array	44.31	50	P	P	11 50 50.5	-0.3
ZALV	Zalesovo Beam	44.31	50	P	P	11 50 50.3	-0.5
	comp=E,1.6nm,0.5s,baz=285,slow=8.5,SNR=10						
	comp=E,1.6nm,0.5s						
MKAR	Makanchi Array	44.48	61	P	P	11 50 51.9	-0.3
	comp=E,1.4nm,0.7s,baz=285,slow=7.5,SNR=13						
	comp=E,1.4nm,0.7s						
MKAR	Makanchi Array	44.48	61	P	P	11 50 51.7	-0.5
SONM	Songino Array	59.18	52	LR	LR	12 20 52.5	
	comp=E,56nm,21.2s,baz=28,slow=39						
A36M	Sachs Harbour	64.28	348	P	P	11 53 15.5	-0.2
A36M				IAmb	IAmb	11 53 15.7	
	comp=Z,3.8nm,1.1s						
J57A	Williamstown	66.48	308	P	P	11 53 30.6	+0.2
C27K	Jago River	68.67	354	P	P	11 53 44.2	+0.3
C27K				IAmb	IAmb	11 54 15.9	
	comp=Z,6.2nm,1.4s						
E29M	Blow River	69.29	351	P	P	11 53 47.9	+0.1
E29M				IAmb	IAmb	11 53 52.0	
	comp=Z,7.3nm,1.4s						
F31M	Tsiigehtchic	69.66	349	P	P	11 53 50.0	0.0
D23K	Nanushuk River	69.79	356	P	P	11 53 51.5	+0.7
YKA	Yellowknife Ar	70.14	339	P	P	11 53 52.9	-0.1
	comp=Z,0.8nm,0.7s,baz=33,slow=5.2,SNR=7.6						
	comp=Z,0.8nm,0.7s						
ILAR	Eielson Array	73.70	354	P	P	11 54 14.7	+0.3
	comp=Z,0.2nm,0.8s,baz=196,slow=9.4,SNR=2.6						
	comp=Z,0.2nm,0.8s						
ASAR	Alice Springs	123.32	93	PKP	PKPdf	12 01 36.8	-1.4
	comp=Z,0.3nm,0.6s,baz=316,slow=1.5,SNR=4.4						

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*PDG **01** 12:00:20.3±0.0, 43°.25N × 18°.02E, h12^{km}, MD2.7/3, ML2.7/13, Error ellipse: s-maj=0.1km s-min=0.1km az=90.0*

*RHSSO **01** 12:00:21.2±0.4, 43°.25N × 18°.08E, h9^{km}, ML2.8/4*

ISC 01 12:00:19.7±1.0**, 43°.32N**±0°.03 × **18°.03E**±0°.02**, h14^{km}**±9^{km}**,**
n23, σ1^{s}.14/46**, 3C-1D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	Ston	0.50	209	*e*Pg	Pg	12 00 29.3	-0.3
STON				Sg	Sb	12 00 37.0	-0.4
BRY	Bratogost	0.56	138	*e*Pg	Pg	12 00 30.1	-0.6
BRY				*i* Sg	Sg	12 00 38.4	+0.3
TREB	Trebinje	0.64	158	⇑*i*Pg	Pg	12 00 31.4	-0.8
TREB				*e*Sg	Sg	12 00 40.9	+0.2
UPM	Unac-Piva	0.65	100	*e*Pg	Pb	12 00 32.6	-0.3
UPM				*i* Sg	Sb	12 00 42.9	+1.0
DBRK	Dubrovnik	0.65	172	*i* Pg	Pg	12 00 32.1	-0.3
DBRK				Sg	Sg	12 00 40.2	-0.8
RICI	Ricice	0.68	286	*e*Pg	Pb	12 00 33.4	+0.1
RICI				Sg	Sb	12 00 43.5	+1.0
MAKA	Makarska	0.74	268	*e*Pg	Pb	12 00 34.0	-0.2
MAKA				Sg	Sn	12 00 45.7	-0.9
NKME	Niksic	0.87	129	⇓*i*Pg	Pg	12 00 36.0	-0.5
NKME				*e*Sg	Sn	12 00 49.3	-0.7
HCY	Herceg Novi	0.93	158	*e*Pg	Pg	12 00 36.7	-1.0
HCY				*i* Sg	Sn	12 00 50.7	-0.7
PLE	Pljevlja	0.99	89	*e*Pg	Pn	12 00 39.0	-0.3
PLE				*i* Sg	Sn	12 00 54.8	+1.7
LSTV	Lastovo	1.00	237	*e*Pg	Pb	12 00 37.7	-1.0
LSTV				Sg	Sn	12 00 52.7	-0.3
CEME	Cevo	1.01	139	*e*Pg	Pb	12 00 38.3	-0.6
CEME				*e*Sg	Sn	12 00 53.4	0.0
RUDO	Rudo	1.02	72	*e*Pg	Pg	12 00 39.3	-0.1
RUDO				*e*Sg	Sn	12 00 53.2	-0.5
HVAR	Hvar	1.16	264	*e*Pg	Pg	12 00 42.9	+0.8
HVAR				Sg	Sn	12 00 58.8	+1.7
KOME	Kolasin	1.18	113	*e*Pg	Pg	12 00 42.1	-0.4
KOME				*e*Sg	Sn	12 01 00.4	+2.6
BUM	Brajici-Budva	1.20	148	*e*Pg	Pn	12 00 41.8	-0.2
BUM				*i* Sg	Sn	12 00 59.8	+1.7
PDG	Podgorica	1.26	134	*e*Pg	Pb	12 00 43.0	-0.2
PDG				*i* Sg	Sg	12 01 02.2	+1.8
DRME	Dracevica, Mon	1.41	143	⇑*i*Pg	Pb	12 00 45.7	-0.1
DRME				*e*Sg	Sg	12 01 06.8	+1.6
IVA	Berane	1.44	107	*e*Pg	Pg	12 00 46.8	-0.5
IVA				*i* Sg	Sg	12 01 08.4	+2.5
BLY	Banja Luka	1.56	337	⇑*i*Pn	Pg	12 00 50.3	+0.7
BLY				*e*Sn	Sg	12 01 11.2	+1.4
PVY	Plav	1.59	116	*e*Pg	Pb	12 00 49.0	+0.1
PVY				*i* Sg	Sg	12 01 11.9	+1.0
ULC	Ulcinj	1.62	146	*e*Pn	Pb	12 00 49.2	-0.1
ULC				*i* Sn	Sg	12 01 12.0	+0.2
MORH	Mrgy, Hungar	2.93	8	*e*Pn	Pb	12 01 09.0	-2.7
MORH				*e*Sn	Sb	12 01 44.8	-2.6

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*RHSSO **01** 12:02:06.8±0.4, 43°.26N × 18°.06E, h8^{km}, ML2.8/5*

*PDG **01** 12:02:06.4±0.0, 43°.25N × 18°.03E, h15^{km}, MD3.1/2, ML3.0/12, Error ellipse: s-maj=0.1km s-min=0.1km az=90.0*

*VIE **01** 12:02:09.0±0.7, 43°.45N × 18°.08E, h8^{km}, mb3.0/9, ml2.4/5, ms3.9/2, Error ellipse: s-maj=12.5km s-min=6.0km az=58.0 51 km SSW of Sarajevo*

ISC 01 12:02:06.2±1.1**, 43°.27N**±0°.03 × **18°.05E**±0°.02**, h5^{km}**±10^{km}**,**
n41, σ0^{s}.85/69**, 4C-1D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	Ston	0.47	213	*e*Pg	Pg	12 02 15.0	-0.1
STON				Sg	Sg	12 02 22.5	+1.3
BRY	Bratogost	0.51	135	*e*Pg	Pg	12 02 16.0	-0.1
BRY				*i* Sg	Sb	12 02 24.4	-1.2
TREB	Trebinje	0.59	158	⇑*i*Pg	Pg	12 02 17.2	-0.4
TREB				*e*Sg	Sb	12 02 26.7	-1.0
DBRK	Dubrovnik	0.60	173	*i* Pg	Pg	12 02 18.0	+0.3
DBRK				Sg	Sg	12 02 26.7	+1.2
UPM	Unac-Piva	0.63	95	*e*Pg	Pg	12 02 18.5	+0.2
UPM				*i* Sg	Sb	12 02 28.7	-0.4
RICI	Ricice	0.70	289	*e*Pg	Pg	12 02 19.1	-0.6
RICI				Sg	Sg	12 02 28.6	-0.2
MAKA	Makarska	0.75	272	*e*Pg	Pg	12 02 19.7	-0.9
MAKA				Sg	Sg	12 02 30.8	+0.5
NKME	Niksic	0.83	127	⇑*i*Pg	Pg	12 02 21.9	-0.2
NKME				*e*Sg	Sb	12 02 35.1	+0.4
HCY	Herceg Novi	0.88	158	*e*Pg	Pg	12 02 22.6	-0.5
HCY				*i* Sg	Sb	12 02 36.4	+0.3
CEME	Cevo	0.96	138	*e*Pg	Pg	12 02 24.2	-0.5
CEME				*e*Sg	Sn	12 02 39.4	-1.2
LSTV	Lastovo	0.98	240	*e*Pg	Pg	12 02 24.8	-0.1
LSTV				Sg	Sg	12 02 38.1	+0.4
PLE	Pljevlja	0.98	86	*e*Pg	Pg	12 02 24.9	-0.1
PLE				*i* Sg	Sn	12 02 40.7	-0.5
RUDO	Rudo	1.03	70	⇑*i*Pg	Pg	12 02 24.9	-1.0
RUDO				*e*Sg	Sg	12 02 39.2	0.0
BUM	Brajici-Budva	1.15	147	*e*Pg	Pg	12 02 27.6	-0.6
BUM				*i* Sg	Sn	12 02 45.7	+0.5
HVAR	Hvar	1.17	266	*e*Pg	Pb	12 02 27.6	-1.3
HVAR				Sg	Sg	12 02 43.9	+0.1
PDG	Podgorica	1.22	133	⇓*i*Pg	Pb	12 02 28.7	-1.0
PDG				*i* Sg	Sn	12 02 48.2	+1.4
DRME	Dracevica, Mon	1.37	142	*e*Pg	Pn	12 02 31.5	-0.4
DRME				*e*Sg	Sg	12 02 52.2	+2.1
KIJV	Kijevo	1.40	302	*e*Pn	Pn	12 02 32.7	+0.3
KIJV				Sg	Sn	12 02 51.6	+0.3
IVA	Berane	1.41	106	*e*Pg	Pn	12 02 32.5	-0.1
IVA				*i* Sg	Sg	12 02 53.5	+2.0
PVY	Plav	1.56	115	*e*Pg	Pn	12 02 34.7	0.0
PVY				*i* Sg	Sg	12 02 57.0	+0.8
ULC	Ulcinj	1.57	145	*e*Pg	Pn	12 02 34.7	-0.1
ULC				*i* Sg	Sg	12 02 57.1	+0.4
BLY	Banja Luka	1.61	338	⇑*i*Pn	Pn	12 02 35.9	+0.7
BLY				*e*Sn	Sn	12 02 56.3	-0.1
ZIRJ	Zirje	1.79	283	*e*Pn	Pn	12 02 37.7	0.0
ZIRJ				Sn	Sn	12 03 01.8	+0.9
MORI	Morici	1.80	290	*i* Pn	Pn	12 02 37.8	-0.1
MORI				Sn	Sb	12 03 03.0	+0.5
UDBI	Udbina	2.08	308	*i* Pn	Pn	12 02 42.4	+0.6
UDBI				Sn	Sn	12 03 08.8	+0.8
DUGI	Dugi Otok	2.29	290	*e*Pn	Pn	12 02 45.1	+0.5
DUGI				Sn	Sb	12 03 15.3	-1.2
VIRC	Vir	2.40	296	*e*Pn	Pn	12 02 46.6	+0.6
VIRC				Sn	Sn	12 03 17.1	+1.3
NVLJ	Novalja	2.63	301	*i* Pn	Pn	12 02 50.5	+1.1
RABC	Rab	2.78	303	*i* Pn	Pn	12 02 52.8	+1.5
MORH	Mrgy, Hungar	2.98	8	*e*Pn	Pn	12 02 55.0	+0.9
MORH				*e*Sn	Sn	12 03 30.6	+0.4
BEHE	Becsehely	3.33	345	*e*Sn	Sn	12 03 38.2	-0.6
SOKA	Soboth	4.03	329	*i* Pn	Pn	12 03 08.8	+0.2
	1.0nm,0.3s						
OBKA	Obir	4.08	324	*e*Pn	Pn	12 03 10.5	+1.2
	0.4nm,0.2s						
ARSA	Arzberg	4.36	337	*e*Pn	Pn	12 03 14.1	+0.9
	1.5nm,0.4s						
KBA	Koelnbreinsper	5.06	321	*e*Pn	Pn	12 03 23.8	+1.0
	1.1nm,0.4s						
ABTA	Abfaltersbach	5.24	313	*e*Pn	Pn	12 03 25.7	+0.4
	1.1nm,0.3s						
MOA	Molln	5.29	331	*i* Pn	Pn	12 03 27.3	+1.4
	1.0nm,0.2s						
LESA	Schwarzleotal	5.62	320	*e*Pn	Pn	12 03 31.6	+1.1
	1.4nm,0.2s						
WTTA	Wattenberg	6.04	314	*e*Pn	Pn	12 03 36.7	+0.5
	1.7nm,0.2s						
WATA	Walderalm	6.11	314	*i* Pn	Pn	12 03 38.6	+1.3
	0.9nm,0.2s						
MOTA	Moosalm	6.37	312	*e*Pn	Pn	12 03 41.9	+1.0
	0.6nm,0.2s						

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*JMA **01** 12:05:05.9±0.1, 23°.7N±0°.6 × 122°.6E±0°.4, h36^{km}, MV2.2/10, NEAR ISHIGAKIJIMA ISLAND*

*TAP **01** 12:05:06.7, 23°.78N × 122°.59E, h37^{km}, ML2.8, D*

ISC 01 12:05:04.9±1.1**, 23°.70N**±0°.03 × **122°.60E**±0°.02**, h29^{km}**±12^{km}**,**
n88, σ0^{s}.74/141**, 1C-4D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	EOS4	0.49	328	*i* P	Pn	12 05 16.1	+0.4
EOS4				*i* S	Sn	12 05 23.2	0.0
EOS3	EOS3	0.64	336	*e*P	Pn	12 05 18.5	+0.6
EOS3				*i* S	Sn	12 05 27.3	+0.2
EOS2	EOS2	0.79	335	P	Pn	12 05 21.3	+1.3
EOS2				S	Sn	12 05 31.9	+1.1
JYNG	Yonagunijimaku	0.81	23	P	Pn	12 05 20.6	+0.2
JYNG				*e*S	Sn	12 05 30.9	-0.6
YOJ	Yonaguni jima	0.85	26	*i* P	Pn	12 05 21.5	+0.6
YOJ				*e*S	Sn	12 05 32.5	+0.1
TEYL	Yanliau Villag	0.94	281	*e*S	Sn	12 05 36.0	+1.5
SHUL	Shoufeng	0.96	275	*e*P	Pb	12 05 22.9	+0.1
SHUL				*e*S	Sn	12 05 35.7	+0.7
TWD	Chiawan	1.00	293	⇓*i*P	Pn	12 05 22.9	-0.1
TWD				S	Sb	12 05 36.5	+0.2
ETL	Fush Village	1.01	297	P	Pb	12 05 23.5	-0.3
ETL				*e*S	Sn	12 05 35.3	-1.1
EAHA	Aohua	1.01	309	*e*P	Pb	12 05 23.7	0.0
EAHA				*e*S	Sb	12 05 38.0	+1.4
NACB	Ninganchiao	1.04	297	⇑*i*P	Pn	12 05 23.5	0.0
NACB				S	Sn	12 05 36.3	-0.8
ETM	Tongmen	1.05	285	P	Pn	12 05 23.1	-0.5
ETM				*e*S	Sn	12 05 36.3	-1.1
EWUT	Wuta	1.06	315	*i* S	Sb	12 05 38.1	0.0
ENA	Nanau	1.07	313	*i* P	Pb	12 05 24.7	-0.1
ENA				*i* S	Sb	12 05 38.3	-0.1
EGFH	Guangfu	1.08	269	*e*P	Pn	12 05 24.5	+0.5
ESL	Shilin	1.08	276	⇓*i*P	Pn	12 05 23.9	-0.1
ESL				S	Sn	12 05 36.3	-1.7
HGSD	Ruisui	1.10	259	P	Pn	12 05 24.8	+0.5
HGSD				S	Sn	12 05 38.1	-0.5
ESAO	Su ao	1.11	322	*e*P	Pn	12 05 24.7	+0.2
WARBT	Fenglin Townsh	1.11	271	P	Pn	12 05 24.6	0.0
WARBT				S	Sn	12 05 38.0	-1.0
ECBN	Changbin	1.12	250	*e*S	Sn	12 05 39.3	+0.1
TWC	Suao	1.14	323	P	Pn	12 05 24.7	-0.2
TWC				S	Sn	12 05 39.4	-0.2
ETLH	Xiulin Townshi	1.14	296	*i* P	Pn	12 05 25.2	+0.2
ETLH				S	Sn	12 05 39.5	-0.3
EHYH	Wanrong	1.17	260	*e*P	Pb	12 05 26.3	-0.2
EHYH				*e*S	Sn	12 05 40.7	+0.3
EHY	Hungye	1.19	261	*i* P	Pb	12 05 26.4	-0.4
EHY				*i* S	Sn	12 05 41.1	+0.2
IRIF	Iriomote-Funau	1.21	58	P	Pb	12 05 27.4	+0.3
IRIF				*e*S	Sb	12 05 42.3	-0.1
CHKH	Chenggong	1.22	246	*e*S	Sn	12 05 40.7	-0.8
NDS	Dongshan	1.23	319	*e*P	Pb	12 05 28.0	+0.4
NDS				*e*S	Sb	12 05 42.8	-0.3
YULB	Yu-li	1.24	256	⇓P	Pb	12 05 27.4	-0.2
YULB				S	Sb	12 05 43.5	+0.4
TWF1	Yuli	1.25	254	*i* P	Pb	12 05 27.6	-0.2
TWF1				*i* S	Sb	12 05 43.3	-0.2
LATG	Datong	1.29	310	*e*P	Pb	12 05 28.5	-0.1
LATG				*e*S	Sn	12 05 43.2	-0.2
FULB	Fuli	1.30	248	*e*P	Pn	12 05 28.0	+0.9
FULB				*i* S	Sn	12 05 43.2	-0.4
WHF	Hehuan Shan	1.30	290	*e*P	Pn	12 05 28.0	+0.5
WHF				S	Sn	12 05 45.0	+0.8
TWE	Neicheng	1.33	320	*e*P	Pb	12 05 28.8	-0.3
TWE				*e*S	Sb	12 05 45.3	-0.5
NNSB	Datong	1.33	303	P	Pb	12 05 28.5	-0.8
NNSB				*e*S	Sn	12 05 44.4	-0.1
OWD	Renai	1.33	281	*e*P	Pn	12 05 28.3	+0.6
OWD				*i* S	Sn	12 05 44.4	-0.1
ENTT	Nioudou	1.33	315	*i* P	Pb	12 05 28.7	-0.6
ENTT				*i* S	Sn	12 05 44.1	-0.3
VWDT	VWDT	1.34	273	⇓P	Pb	12 05 28.8	-0.6
VWDT				S	Sn	12 05 44.7	+0.1
NNS	Nan Shan	1.34	304	*e*P	Pb	12 05 28.8	-0.7
FUSS	Fushou	1.36	294	*e*P	Pb	12 05 29.0	-0.8
FUSS				S	Sn	12 05 45.8	+0.5
WUSB	Renai	1.39	282	*e*P	Pn	12 05 29.4	+0.9
WUSB				*i* S	Sn	12 05 46.7	+0.8
JKRS	Kuro-shima	1.39	67	*e*P	Pb	12 05 30.0	-0.3
JKRS				*e*S	Sb	12 05 47.4	-0.3
EHD	Haiduan	1.40	247	*e*P	Pn	12 05 29.3	+0.8
EHD				*e*S	Sn	12 05 45.1	-0.8
EDH	Donghe	1.40	239	*e*S	Sn	12 05 45.3	-0.6
FUSB	Fushanzhiwuyua	1.41	319	P	Pb	12 05 30.2	-0.3
FUSB				*e*S	Sn	12 05 46.5	+0.2
ECS	Chishang	1.41	245	*e*P	Pb	12 05 31.9	+1.4
ECS				*e*S	Sb	12 05 48.0	0.0
TWT	Tachien	1.42	293	P	Pb	12 05 32.2	+1.4
TWB1	Santiao Chiao	1.42	337	*e*P	Pn	12 05 28.5	-0.2
TDCB	Techi	1.43	293	*e*P	Pb	12 05 30.4	-0.6
TIPB	Shuangxi	1.45	331	*e*P	Pb	12 05 30.2	-1.1
TIPB				S	Sn	12 05 47.5	+0.1
LDUT	Ludao	1.46	226	*e*S	Sn	12 05 46.9	-0.6
NWLT	Wulai	1.47	317	*e*P	Pb	12 05 31.1	-0.5
NWLT				*i* S	Sn	12 05 48.2	+0.5
YHNB	Yeheng	1.48	311	*e*P	Pb	12 05 31.0	-0.8
YHNB				S	Sn	12 05 47.8	-0.3
NSK	Sanguang	1.50	311	P	Pn	12 05 30.9	+1.0
NSK				S	Sn	12 05 47.6	-0.9
SSLB	Suanglung	1.51	274	*e*P	Pb	12 05 31.3	-1.0
SSLB				*e*S	Sn	12 05 48.6	-0.2
SXI1	Grass Mountain	1.54	335	*e*P	Pb	12 05 31.6	-1.2
SXI1				*e*S	Sn	12 05 48.5	-1.1
ELDTW	Lidau	1.54	251	P	Pn	12 05 31.6	+1.0
ELDTW				S	Sn	12 05 49.5	-0.1
JIJ	Ishigaki jima	1.56	65	*e*P	Pb	12 05 32.4	-0.6
SMLT	Sun Moon Lake	1.57	277	P	Pb	12 05 32.2	-1.1
SMLT				*e*S	Sn	12 05 51.5	+1.1
WHYT	Xinyi Township	1.60	270	P	Pb	12 05 33.2	-0.7
WHYT				*e*S	Sb	12 05 52.9	-0.8
TYC	Yuchr	1.61	278	*e*P	Pn	12 05 32.7	+1.3
WHP	Taichung City	1.62	291	*e*P	Pb	12 05 34.0	-0.2
NFF	Wufeng Townshi	1.64	305	*e*P	Pb	12 05 34.2	-0.4
NFF				S	Sb	12 05 55.1	+0.2
TWGBT	Beinan	1.65	238	*e*P	Pn	12 05 32.9	+1.0
ALS	Alishan	1.66	264	*e*P	Pb	12 05 34.5	-0.4
YM01	YM01	1.72	327	*e*P	Pb	12 05 34.5	-1.3
WJS	Zhushan	1.72	274	*e*P	Pb	12 05 36.0	+0.2
WJS				*e*S	Sb	12 05 57.4	+0.3
LIOB	Emei	1.73	303	P	Pb	12 05 36.0	0.0
NSTT	Nanjuang	1.73	303	*e*P	Pb	12 05 35.2	-0.8
ZUZH	Zhuzihu	1.75	327	*e*P	Pb	12 05 35.3	-1.0
STYH	Taoyuan	1.76	253	P	Pb	12 05 35.4	-1.0
STYH				*i* S	Sn	12 05 55.9	+1.1
WNT	Mingjian	1.77	276	*e*P	Pb	12 05 36.7	+0.1
JISG	Ishigakijimahi	1.79	60	*e*P	Pn	12 05 34.6	+0.7
JISG				*e*S	Sn	12 05 56.1	+0.4
TWQ1	Liyutan	1.79	291	*e*P	Pb	12 05 36.9	-0.2
WCKO	Fanlu	1.85	262	*e*P	Pb	12 05 37.8	-0.3
TPUB	Ta-pu	1.85	258	*i* P	Pb	12 05 37.6	-0.5
TPUB				S	Sb	12 06 00.3	-0.6
WTP	Ta-pu	1.88	257	*e*P	Pb	12 05 38.4	-0.2
WDLH	Douliu	1.89	270	*e*P	Pb	12 05 37.5	-1.2
LYUB	Lan-yu	1.93	209	*e*P	Pn	12 05 35.2	-0.6
SGST	Jiashian	1.96	252	*e*P	Pb	12 05 39.1	-0.7
CHN1	Nanshi	1.97	255	*e*P	Pb	12 05 39.8	-0.3
TWK	Hsinying	1.99	258	*e*P	Pb	12 05 40.0	-0.4
SNST	Tainan City	1.99	257	*e*P	Pb	12 05 40.8	+0.3
SSD	Sandimen	2.05	243	*e*P	Pn	12 05 39.1	+1.8
EAST	Anshuo	2.08	231	*e*P	Pb	12 05 40.4	-1.6
MASBT	Mashibuluo	2.11	240	*e*P	Pn	12 05 39.6	+1.3
SCZT	Fangliau	2.25	235	*e*P	Pb	12 05 44.1	-0.8
WDGT	Dungji	2.74	261	*e*P	Pb	12 05 50.9	-2.2
WDGT				S	Sn	12 06 20.6	+1.6
PTMZ	Houxiangcun	3.44	294	P	Pn	12 05 57.9	+1.3
PTMZ				*e*S	Sn	12 06 36.2	-0.3

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*GCG **01** 12:08:13.1±3.0, 16°.97N × 94°.90W, h50^{km}, MD4.2*

*MEX **01** 12:08:17.0±0.9, 16°.59N × 94°.74W, h56^{km}±19^{km}, MD3.9*

ISC 01 12:08:16.9±1.2, 16°.65N±0°.04×94°.70W±0°.03, h50^{km}, n21, σ2^{s}.37/33, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.48	338	eP	Pn	12 08 23.8	-4.1
CMIG				eS	Sn	12 08 31.5	-4.2
UXUV	UXUV	0.85	38	eP	Pn	12 08 30.3	-2.3
UXUV				eS	Sn	12 08 44.7	+0.5
NEUV	Arroyo Zacate	1.50	315	eP	Pn	12 08 40.6	-0.7
NEUV				eS	Sn	12 09 02.5	+2.7
TGIG		1.52	85	eP	Pn	12 08 40.6	-1.1
TGIG				eS	Sn	12 09 00.0	-0.3
TGIG		1.52	85	i P	Pn	12 08 40.7	-1.0
TGIG				eS	Sn	12 08 60.0	-0.3
HUIG	Huatulco	1.61	237	eP	Pn	12 08 40.2	-2.7
HUIG				eS	Sn	12 09 00.2	-2.3
HUIG	Huatulco	1.61	237	eP	Pn	12 08 39.9	-3.0
HUIG				eS	Sn	12 09 00.7	-1.9
PCIG		1.70	123	eP	Pn	12 08 42.1	-2.0
PCIG				eS	Sn	12 09 03.1	-1.6
VHO	Vista Hermosa	1.99	283	eP	Pn	12 08 51.5	+3.2
VHO				eS	Sn	12 09 13.8	+1.6
PEIG	Puerto Escondi	2.44	255	eP	Pn	12 08 52.6	-1.6
PEIG				eS	Sn	12 09 26.6	+3.7
CCIG	Comitan	2.48	98	eP	Pn	12 08 56.9	+1.8
CCIG				eS	Sn	12 09 29.1	+4.8
CCIG	Comitan	2.48	98	eP	Pn	12 08 57.3	+2.3
TOIG	Toxpalan	2.68	303	eP	Pn	12 08 58.2	+0.6
TOIG				eS	Sn	12 09 32.5	+3.5
YOIG	Yosondua	2.74	275	eP	Pn	12 09 02.9	+4.3
YOIG				eS	Sn	12 09 38.0	+7.4
PATR	El Naranjo	2.82	122	eP	Pn	12 08 59.7	+0.1
PATR				eS	Sn	12 09 33.3	+0.8
PAVE	Pavencul	2.82	120	eP	Pn	12 09 00.2	+0.5
PAVE				eS	Sn	12 09 35.8	+3.1
CHUJ	Union Juarez	2.93	121	eP	Pn	12 09 01.0	-0.2
CHUJ				eS	Sn	12 09 36.9	+1.6
TXIG	Tlaxiaco	3.00	282	eP	Pn	12 09 02.6	+0.5
TXIG				eS	Sn	12 09 40.0	+3.0
HLIG	Huajuapan de L	3.19	292	eP	Pn	12 09 12.5	+7.7
HLIG				eS	Sn	12 09 50.3	+8.5
PNIG	Pinotepa	3.30	266	eP	Pn	12 09 06.0	0.0
PNIG				eS	Sn	12 09 44.0	-0.1
FTIG	Fresnillo de T	3.51	291	eP	Pn	12 09 17.0	+7.9
FTIG				eS	Sn	12 09 52.5	+3.0

IDC 01 12:13:16.6±4.3, 4°.07S×103°.25E, h0^{km}, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=223.8km s-min=25.6km az=52.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	30.79	262	T	T	12 50 59.0	
	baz=83,slow=76,SNR=35						
H08S3	Diego Garcia H	30.80	262	T	T	12 50 59.0	
	baz=83,slow=76,SNR=22						
H08S1	Diego Carcia H	30.81	262	T	T	12 51 00.4	
	baz=83,slow=76,SNR=34						
WRA	Warramunga Arr	34.16	120	P	P	12 20 03.7	-0.1
	0.3nm,0.8s,baz=296,slow=8.8,SNR=1.8 0.3nm,0.8s						
ASAR	Alice Springs	35.42	126	P	P	12 20 14.8	+0.1
	0.2nm,0.7s,baz=300,slow=8.5,SNR=9.5 0.2nm,0.7s						
MKAR	Makanchi Array	53.92	342	P	P	12 22 42.1	+0.2
	0.5nm,0.6s,baz=157,slow=7.4,SNR=2.0 0.5nm,0.6s						
ZALV	Zalesovo Beam	59.83	348	P	P	12 23 23.6	0.0
	0.6nm,0.4s,baz=158,slow=7.1,SNR=2.7 0.6nm,0.4s						
H04N2	CROZET ISLANDS	61.14	218	T	T	13 28 04.6	
	baz=63						
H04N1	CROZET ISLANDS	61.15	218	T	T	13 28 18.9	
	baz=63						
H04N3	CROZET ISLANDS	61.15	218	T	T	13 28 59.1	
	baz=63						
TXAR	Lajitas Array	144.19	42	PKP	PKPbc	12 32 53.6	+0.2
	0.2nm,0.8s,baz=312,slow=3.1,SNR=3.6						

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*PDG **01** 12:14:07.3±0.2, 43°.26N×18°.03E, h13^{km}±1^{km}, ML2.5/13, Error ellipse: s-maj=0.8km s-min=0.7km az=90.0*

*RHSSO **01** 12:14:08.1±0.4, 43°.25N×18°.08E, h8^{km}, ML2.5/4*

ISC 01 12:14:07.3±1.1, 43°.26N±0°.03×18°.04E±0°.02, h7^{km}±9^{km}, n28, σ0^{s}.97/56, 5C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	Ston	0.46	213	i Pg	Pg	12 14 15.9	-0.2
STON				Sg	Sg	12 14 23.7	+1.6
BRY	Bratogost	0.51	134	⇑iPg	Pg	12 14 17.0	-0.1
BRY				i Sg	Sb	12 14 25.6	-0.7
TREB	Trebinje	0.58	157	⇑iPg	Pg	12 14 17.8	-0.7
TREB				eSg	Sb	12 14 27.7	-0.6
DBRK	Dubrovnik	0.59	172	i Pg	Pg	12 14 18.8	+0.1
DBRK				Sg	Sb	12 14 27.7	-0.9
UPM	Unac-Piva	0.64	95	ePg	Pg	12 14 19.1	-0.4
UPM				i Sg	Sb	12 14 29.5	-0.5
RICI	Ricice	0.70	290	i Pg	Pg	12 14 20.1	-0.7
RICI				Sg	Sg	12 14 30.2	+0.2
MAKA	Makarska	0.75	273	ePg	Pg	12 14 20.6	-1.0
MAKA				Sg	Sg	12 14 30.8	-0.5
NKME	Niksic	0.83	126	ePg	Pg	12 14 22.8	-0.4
NKME				eSg	Sn	12 14 36.3	-1.6
HCY	Herceg Novi	0.88	157	ePg	Pg	12 14 23.7	-0.4
HCY				i Sg	Sn	12 14 37.9	-1.1
CEME	Cevo	0.96	137	ePg	Pg	12 14 25.1	-0.6
CEME				eSg	Sn	12 14 40.5	-0.7
LSTV	Lastovo	0.97	240	ePg	Pg	12 14 25.8	-0.1
LSTV				Sg	Sg	12 14 38.8	+0.3
PLE	Pljevlja	0.99	85	ePg	Pg	12 14 26.3	+0.1
PLE				i Sg	Sn	12 14 41.2	-0.8
RUDO	Rudo	1.03	69	⇑iPg	Pg	12 14 25.7	-1.4
RUDO				eSg	Sg	12 14 40.3	-0.2
BUM	Brajici-Budva	1.14	146	ePg	Pb	12 14 28.7	-0.7
BUM				i Sg	Sn	12 14 46.9	+1.2
KOME	Kolasin	1.16	110	ePg	Pb	12 14 28.7	-0.9
KOME				eSg	Sn	12 14 47.2	+1.1
HVAR	Hvar	1.17	267	ePg	Pb	12 14 28.7	-1.0
HVAR				Sg	Sb	12 14 44.5	-0.6
PDG	Podgorica	1.22	132	ePg	Pn	12 14 29.9	-0.8
PDG				i Sg	Sn	12 14 49.4	+2.0
DRME	Dracevica, Mon	1.36	141	ePg	Pn	12 14 32.6	-0.1
DRME				eSg	Sg	12 14 53.9	+2.9
KIJV	Kijevo	1.40	303	ePn	Pn	12 14 32.5	-0.8
KIJV				Sg	Sn	12 14 52.2	+0.2
IVA	Berane	1.41	105	ePg	Pn	12 14 33.4	-0.1
IVA				i Sg	Sg	12 14 55.0	+2.4
PVY	Plav	1.56	114	⇑iPg	Pn	12 14 35.7	+0.2
PVY				i Sg	Sg	12 14 58.4	+1.1
ULC	Ulcinj	1.57	145	ePg	Pn	12 14 35.9	+0.3
ULC				i Sg	Sg	12 14 58.8	+1.1
BLY	Banja Luka	1.61	338	ePn	Pb	12 14 37.1	-0.3
BLY				eSn	Sb	12 14 58.4	+0.4
ZIRJ	Zirje	1.79	284	ePn	Pn	12 14 39.1	+0.5
ZIRJ				Sn	Sn	12 15 02.2	+0.7
MORI	Morici	1.80	291	i Pn	Pn	12 14 39.7	+0.9
MORI				Sn	Sb	12 15 03.6	+0.3
DUGI	Dugi Otok	2.29	290	ePn	Pn	12 14 46.0	+0.6
DUGI				Sn	Sn	12 15 15.5	+1.7
VIRC	Vir	2.40	297	ePn	Pn	12 14 47.3	+0.3
VIRC				Sn	Sn	12 15 16.8	+0.3
MORH	Mrgy, Hungar	2.99	8	⇑iPn	Pn	12 14 56.4	+1.3
MORH				eSn	Sn	12 15 31.8	+0.7

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*JMA **01** 12:14:44.5±0.1, 36°.1N±0°.3×140°.0E±0°.4, h67^{km}, MV1.6/30, SW IBARAKI PREF*

*IDC **01** 12:14:46.0±3.7, 36°.41N×139°.76E, h0^{km}, mb3.4/2, mbtmp3.4/2, Error ellipse: s-maj=76.1km s-min=24.4km az=30.0*

ISC 01 12:14:44.2±3.7, 36°.13N±0°.09×140°.1E±0°.1, h70^{km}±24^{km}, n8, σ0^{s}.65/11, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	Yasato	0.15	48	i P	Pn	12 14 54.7	+0.2
JYT				S	Sn	12 15 02.2	+0.1
JAG	Ashikaga	0.57	301	i P	Pn	12 14 57.6	-0.1
JAG				i S	Sn	12 15 07.2	-0.5
JKT	Katashina	0.91	314	P	Pn	12 15 01.4	-0.3
JKT				eS	Sn	12 15 14.5	-0.2
JRY	Ryogami san	0.95	264	eP	Pn	12 15 02.2	+0.2
JRY				eS	Sn	12 15 15.3	0.0
JOD2	Odawara 2	1.17	223	eS	Sn	12 15 20.0	-0.4
MJAR	Matsushiro Arr	1.55	286	Pn	Pn	12 15 09.5	-0.4
	0.1nm,0.3s,baz=98,slow=9.8,SNR=4.9						
MJAR				Sn	Sn	12 15 30.7	+1.5
	baz=235,slow=39,SNR=2.0						
WRA	Warramunga Arr	56.03	186	P	P	12 24 28.1	+12
	0.6nm,0.7s,baz=4.1,slow=8.5,SNR=11 0.6nm,0.7s						
ASAR	Alice Springs	59.76	187	P	P	12 24 55.2	+13
	0.2nm,0.7s,baz=12,slow=6.2,SNR=1.6 0.2nm,0.7s						

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*KRNET **01** 12:15:45.9±0.1, 40°.74N×73°.19E, h17^{km}, mb3.0*

*SOME **01** 12:15:46.2, 40°.77N×73°.25E, h5^{km}*

*NNC **01** 12:15:48.4±1.7, 40°.82N×73°.19E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=13.1km s-min=6.9km az=173.0*

ISC 01 12:15:46.4±0.8, 40°.78N±0°.02×73°.19E±0°.02, h10^{km}, n34, σ1^{s}.84/57, 30C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.40	231	⇑iP	Pg	12 15 53.2	-1.1
OHH				⇑iS	Sg	12 15 58.5	-1.2
SALK	Salom-Alik	0.49	78	⇓iP	Pg	12 15 55.6	-0.3
SALK				⇓iS	Sg	12 16 02.6	+0.2
ARSB	Arslanbob	0.57	344	⇑iP	Pg	12 15 57.6	+0.2
ARSB				⇑iS	Sb	12 16 06.1	-0.6
SFK	Sufi-Kurgan	0.80	163	⇑iP	Pg	12 16 00.6	-1.3
SFK				⇑iS	Sg	12 16 11.2	-1.2
ARLS	Aral	1.38	38	⇑iP	Pb	12 16 11.8	-0.5
ARLS				⇑iS	Sg	12 16 30.7	0.0
ARK	Arkit	1.38	318	⇑iP	Pb	12 16 12.0	-0.3
ARK				⇑iS	Sg	12 16 31.0	+0.3
DRK	Karamyk	1.68	220	⇑iP	Pn	12 16 16.3	+0.2
DRK				⇑iS	Sb	12 16 38.3	-0.6
TRKS	Terek-Say	1.72	296	⇑iP	Pn	12 16 16.9	+0.3
TRKS				⇑iS	Sb	12 16 39.6	-0.4
MNAS	Manas	1.78	343	⇑iP	Pb	12 16 19.3	+0.1
MNAS				⇑iS	Sg	12 16 43.5	-0.2
JNKS	Jany-Kuch	1.89	81	⇓eP	Pb	12 16 20.7	-0.3
JNKS				⇓eS	Sg	12 16 45.5	-1.5
MRKS	Merke	1.96	1	Pg	Pg	12 16 23.4	-0.6
	31nm,0.3s						
MRKS				Lg	Lg	12 16 49.7	
	53nm,0.3s						
MRKS	Merke	1.96	1	eP	Pg	12 16 23.3	-0.7
	31nm,0.3s						
MRKS				eS	Sg	12 16 49.4	-0.1
	53nm,0.3s						
AAK	Ala-Archa	2.10	27	⇑Pn	Pb	12 16 25.2	+0.6
	3.8nm,0.6s						
AAK				⇑Sn	Sg	12 16 53.1	-0.6
	12nm,0.5s						
FRU1	Bishkek	2.29	27	⇑iP	Pb	12 16 26.8	-1.1
FRU1				⇑iS	Sb	12 16 56.2	-0.2
BOOM	Boomskoye usch	2.67	49	⇑iP	Pn	12 16 31.6	+1.9
BOOM				⇑iS	Sb	12 17 05.1	-2.3
GAR	Garm	2.84	232	⇑iP	Pn	12 16 33.2	+1.3
GAR				⇑iS	Sn	12 17 07.7	+1.5
SGDS	Sogindy	2.88	21	Pg	Pg	12 16 39.8	-1.7
	3.2nm,0.3s						
SGDS				Lg	Lg	12 17 16.9	
	10nm,0.7s						
KST	Kastek	3.06	42	Pg	Pg	12 16 43.3	-1.8
	2.1nm,0.2s						
KST				Lg	Lg	12 17 23.0	
	17nm,0.7s						
KST	Kastek	3.06	42	eP	Pg	12 16 43.3	-1.8
	2.1nm,0.2s						
KST				eS	Sg	12 17 23.0	-1.8
	17nm,0.7s						
KK31	Karatay Array	3.06	320	⇑Pg	Pg	12 16 43.0	-2.1
	1.4nm,0.4s,baz=130,slow=16,SNR=16						
KK31				⇑Lg	Lg	12 17 23.1	
	2.6nm,0.3s,baz=129,slow=28,SNR=8.2						
KDJ	Kajisay	3.29	64	⇑iP	Pn	12 16 40.2	+2.1
KDJ				⇑iS	Sn	12 17 19.6	+2.3
BRLS	Borolday	3.37	313	Pg	Pb	12 16 48.1	+1.9
	3.4nm,0.3s						
BRLS				Lg	Lg	12 17 30.9	
	6.9nm,0.4s						
BRLS	Borolday	3.37	313	eP	Pb	12 16 48.1	+1.9
	3.4nm,0.3s						
BRLS				eS	Sg	12 17 30.9	-3.6
	6.9nm,0.4s						
MTBS	Maitube	3.37	45	Pg	Pb	12 16 48.2	+2.0
	6.2nm,0.5s						
MTBS				Lg	Lg	12 17 32.5	
	12nm,0.4s						
MTBS	Maitube	3.37	45	eP	Pb	12 16 48.2	+2.0
	6.2nm,0.5s						
MTBS				eS	Sg	12 17 31.8	-2.7
	12nm,0.4s						
KRBS	Karabastau	3.45	31	Pg	Pb	12 16 49.5	+2.0
	1.1nm,0.4s						
KRBS				Lg	Lg	12 17 33.9	
	19nm,0.6s						
TNSS	Tian-Shan	3.60	50	Pg	Pg	12 16 54.1	-1.2
	0.8nm,0.2s						
TNSS				Lg	Lg	12 17 40.8	
	2.0nm,0.6s						
TNSS	Tian-Shan	3.60	50	eP	Pg	12 16 53.9	-1.4
	0.8nm,0.2s						
TNSS				eS	Sg	12 17 40.8	-1.1
	2.0nm,0.6s						
TARG	Taragay, Kyrgy	3.60	73	⇑iP	Pn	12 16 44.6	+1.9
TARG				⇑iS	Sn	12 17 27.2	+1.7
KOTS	Kotyrbulak	3.81	49	Pg	Pg	12 16 56.6	-2.8
	3.9nm,0.6s						
KOTS				Lg	Lg	12 17 46.3	
	11nm,0.8s						
KOTS	Kotyrbulak	3.81	49	eP	Pg	12 16 56.6	-2.8
	3.9nm,0.6s						
KOTS				eS	Sg	12 17 46.3	-2.5
	11nm,0.8s						
KTBS	Karatobe	3.91	40	Pg	Pg	12 16 58.5	-2.7
	2.1nm,0.6s						
KTBS				Lg	Lg	12 17 49.1	
	6.7nm,0.8s						
ARXS	Arharly	4.85	43	Pg	Pb	12 17 14.8	+3.3
	1.4nm,0.7s						
ARXS				Lg	Lg	12 18 16.7	
	5.3nm,0.5s						
ARXS	Arharly	4.85	43	eP	Pb	12 17 14.8	+3.3
ARXS				eS	Sg	12 18 16.7	-5.3

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*BJI **01** 12:27:49.7, 59°.76N×153°.54W, h85^{km}, mB4.9/9, mb5.0/47, Ms4.4/1, Ms7 4.3/1*

*MOS **01** 12:27:50.0±0.9, 59°.68N×152°.92W, h94^{km}, mb4.6/14, Error ellipse: s-maj=11.2km s-min=5.6km az=89.1*

*IDC **01** 12:27:51.0±1.1, 59°.73N×152°.95W, h89^{km}±9^{km}, mb4.3/35, mbtmp4.7/41, MS3.4/18, Error ellipse: s-maj=10.6km s-min=8.4km az=2.0*

*NEIC **01** 12:27:51.7±1.1, 59°.62N±0°.03×152°.81W±0°.06, h95^{km}±3^{km}, Error ellipse: s-maj=4.6km s-min=4.1km az=125.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.88; $M_{\theta\theta}$-2.38; $M_{\phi\phi}$-0.50; $M_{r\theta}$3.92; $M_{\theta\phi}$6.20; $M_{\phi r}$3.07; Fault plane solution: $M_0$8.38000×10^{15} NP1:ϕ_s92.39000°, δ68.17000°, λ34.59000°. NP2:ϕ_s348.01000°, δ58.20000°, λ154.05000°. Principal axes: T 8.8566, Plg39.0000°, Azm313.0000°; N -1.0406, Plg50.0000°, Azm121.0000°; P -7.8160, Plg6.0000°, Azm218.0000°;*

*NEIC **01** 12:27:52.1, 59°.63N×152°.81W, h90^{km}*

*AEIC **01** 12:27:52.7±1.4, 59°.61N±0°.03×152°.78W±0°.06, h88^{km}±3^{km}, ML4.5, mb4.8/32(NEIC), ML4.7/188(NEIC), Mwr4.5/79(NEIC), Error ellipse: s-maj=4.2km s-min=4.0km az=132.0*

ISC 01 12:27:51.2±0.4, 59°.60N±0°.02×152°.79W±0°.02, h95^{km}±2^{km}, h94^{km}:pP-P, n756, σ0^{s}.84/863, mb4.8/72, 5C-2D, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
P19K	Oil Pt	0.23	282		Pn	12 28 05.2	+0.3
P19K				IAML		12 28 16.1	
	comp=N,31µm,0.8s						
P19K				IAML		12 28 17.1	
	comp=E,29µm,0.6s						
P19K	Oil Pt	0.23	282		Sn	12 28 15.4	+0.3
P19K	Oil Pt	0.23	282	P	Pn	12 28 05.2	+0.3
	baz=95,SNR=261						
P19K				S	Sn	12 28 15.1	0.0
	baz=95						
P19K				S	Sn	12 28 15.1	0.0
	baz=95						
AU22	Augustine Moun	0.37	231		Pn	12 28 06.0	+0.5
AU22					Sn	12 28 16.8	+0.6
ILS	Iliamna Low So	0.38	338		Pn	12 28 05.8	0.0
ILS					Sn	12 28 16.4	-0.2
AUL	Augustine Lava	0.40	236		Pn	12 28 06.1	+0.4
AUL					Sn	12 28 17.2	+0.7
AUF	Augustine Flow	0.41	238		Pn	12 28 06.0	+0.2
AUF					Sn	12 28 17.1	+0.5
AUJK	Augustine Jueg	0.41	232		Pn	12 28 06.2	+0.4
AUJK					Sn	12 28 17.0	+0.3
AGU	Augustine-Summ	0.41	234		Pn	12 28 06.2	+0.3
AGU					Sn	12 28 17.4	+0.5
AUCH	Augustine Cone	0.41	235		Pn	12 28 06.2	+0.3
AUCH					Sn	12 28 17.2	+0.3
AUW	Augustine West	0.42	236		Pn	12 28 06.3	+0.4
AUW	Augustine West	0.42	236		Pn	12 28 06.2	+0.4
ILSW	Iliamna Southw	0.42	335		Pn	12 28 06.2	+0.1
ILSW	Iliamna Southw	0.42	335		Sn	12 28 16.6	-0.5
AUI	Augustine Isla	0.42	231		Pn	12 28 06.1	+0.2
IVE	Iliamna Volcan	0.43	344		Pn	12 28 06.1	+0.1
IVE					Sn	12 28 17.1	-0.1
O20K	Slope Mountain	0.49	10		Pn	12 28 06.8	+0.4
O20K					Sn	12 28 18.5	+0.7
O20K	Slope Mountain	0.49	10	P	Pn	12 28 07.0	+0.6
	baz=192,SNR=211						
O20K				S	Sn	12 28 17.7	0.0
	baz=192						
O20K				S	Sn	12 28 17.7	0.0
	baz=192						
ILW	Iliamna West	0.49	339		Pn	12 28 06.7	+0.1
HOM	Homer	0.58	84		Pn	12 28 08.1	+1.1
HOM	Homer	0.58	84		Sn	12 28 20.4	+1.5
HOM	Homer	0.58	84	P	Pn	12 28 08.1	+1.1
	baz=268,SNR=122						
HOM				S	Sn	12 28 20.2	+1.3
	baz=268						
CNPM	China Poot	0.79	95		Pn	12 28 09.7	+0.6
CNPM				IAML		12 28 23.4	
	comp=E,18µm,0.4s						
Q19K	Cape Douglas,	0.81	213		Pn	12 28 09.3	+0.1
Q19K				IAML		12 28 26.6	
	comp=E,23µm,0.7s						
Q19K				IAML		12 28 32.4	
	comp=N,25µm,0.9s						
Q19K	Cape Douglas,	0.81	213		Sn	12 28 22.8	+0.1
Q19K	Cape Douglas,	0.81	213	P	Pn	12 28 09.4	+0.2
	baz=31,SNR=603						
Q19K				S	Sn	12 28 22.6	-0.1
	baz=31						
Q19K				S	Sn	12 28 22.6	-0.1
	baz=31						
RED	Redoubt Volcan	0.82	0		Pn	12 28 09.4	+0.1
RED				IAML		12 28 23.6	
	comp=N,8µm,1.2s						
RDSO	Redoubt South	0.85	1		Pn	12 28 09.9	+0.1
RDWB	Redoubt West	0.89	358		Pn	12 28 10.2	+0.1
O19K	Port Alsworth	0.97	308		Pn	12 28 11.2	+0.3
O19K				IAML		12 28 26.2	
	comp=N,11µm,0.5s						
O19K				IAML		12 28 26.2	
	comp=E,13µm,0.6s						
O19K	Port Alsworth	0.97	308		Sn	12 28 25.6	-0.1
O19K	Port Alsworth	0.97	308	P	Pn	12 28 11.1	+0.3
	baz=126,SNR=354						
O19K				S	Sn	12 28 25.6	-0.1
	baz=126						
O19K				S	Sn	12 28 25.6	-0.1
	baz=126						
BRLK	Bradley Lake	0.98	80		Pn	12 28 11.6	+0.6
BRLK				IAML		12 28 26.1	
	comp=N,30µm,0.7s						
BRLK				IAML		12 28 29.1	
	comp=E,14µm,0.7s						
RDJH	Redoubt Jeurge	0.99	360		Pn	12 28 11.5	+0.3
RDT	Redoubt	0.99	11		Pn	12 28 11.3	+0.2
RDT					Sn	12 28 26.4	+0.1
DFR	Drift River	0.99	3		Pn	12 28 11.6	+0.4
Q20K	Shuyak Island	1.02	168	P	Pn	12 28 12.2	+0.9
	baz=348,SNR=1000						
Q20K				S	Sn	12 28 26.8	+0.3
	baz=348						
Q20K				S	Sn	12 28 26.8	+0.3
	baz=348						
SYI	Shuyak Island	1.02	168		Pn	12 28 12.2	+0.8
SYI				IAML		12 28 28.0	
	comp=E,27µm,0.8s						
SYI	Shuyak Island	1.02	168		Sn	12 28 26.7	+0.2
BRSE	Bradley Lake S	1.05	82		Pn	12 28 12.1	+0.4
BRSE					Sn	12 28 27.3	+0.1
BRSE	Bradley Lake S	1.05	82	P	Pn	12 28 12.2	+0.4
	baz=265,SNR=157						
BRSE				S	Sn	12 28 27.0	-0.2
	baz=265						
O18K	Koktuh Hills	1.25	283		Pn	12 28 14.1	0.0
O18K				IAML		12 28 31.9	
	comp=E,6µm,0.9s						
O18K				IAML		12 28 32.1	
	comp=N,5µm,0.8s						
O18K	Koktuh Hills	1.25	283	P	Pn	12 28 14.1	0.0
	baz=99,SNR=295						
O18K				S	Sn	12 28 30.5	-0.9
	baz=99						
O18K				S	Sn	12 28 30.5	-0.9
	baz=99						
P18K	Big Mountain,	1.26	261		Pn	12 28 13.9	-0.4
P18K	Big Mountain,	1.26	261	P	Pn	12 28 13.9	-0.4
	baz=78,SNR=94						
P18K				S	Sn	12 28 30.5	-1.2
	baz=78						
P18K				S	Sn	12 28 30.5	-1.2
	baz=78						
KAPH	Katmai Pasha	1.29	219		Pn	12 28 15.5	+0.9
CAPN	Captain Cook N	1.43	34	P	Pn	12 28 18.5	+2.4
	baz=217,SNR=52						
KAHG	Katmai Hook Gl	1.44	220		Pn	12 28 17.2	+0.8
N19K	Bonanza Creek	1.48	326		Pn	12 28 17.3	+0.3
N19K					Sn	12 28 36.0	-0.5
N19K	Bonanza Creek	1.48	326	P	Pn	12 28 17.3	+0.3
	baz=144						
N19K				S	Sn	12 28 35.9	-0.6
	baz=144						
N19K				S	Sn	12 28 35.9	-0.6
	baz=144						
KARR	Katmai Rainbow	1.49	223		Pn	12 28 17.8	+0.8
KAHC	Katmai Hardscr	1.49	231		Pn	12 28 17.5	+0.4
KAHC					Sn	12 28 36.4	-0.4
Q18K	Katmai Hardscr	1.49	231	P	Pn	12 28 17.6	+0.4
	baz=48,SNR=1000						
Q18K				S	Sn	12 28 36.4	-0.4
	baz=48						
Q18K				S	Sn	12 28 36.4	-0.4
	baz=48						
SLKM	Skilak Lake	1.57	54		Pn	12 28 18.7	+0.6
SLKM				IAML		12 28 39.7	
	comp=N,12µm,0.7s						
SLKM				IAML		12 28 42.6	
	comp=E,5µm,0.6s						
KAWH	Katmai	1.61	221		Pn	12 28 19.0	+0.5
KAWH					Sn	12 28 39.4	+0.1
CKL	Chakachamna La	1.61	8		Pn	12 28 19.2	+0.5
N20K	Mount Spurr	1.63	10	P	Pn	12 28 19.4	+0.6
	baz=191,SNR=677						
N20K				S	Sn	12 28 39.8	+0.1
	baz=191						
N20K				S	Sn	12 28 39.8	+0.1
	baz=191						
SPCR	Spurr Chakacha	1.63	10		Pn	12 28 19.3	+0.5
SPCR	Spurr Chakacha	1.63	10		Pn	12 28 19.4	+0.5
SPCR	Spurr Chakacha	1.63	10	P	Pn	12 28 19.4	+0.5
	baz=191,SNR=558						
SPCR				S	Sn	12 28 39.7	0.0
	baz=191						
SPCN	Chakachatna No	1.65	10		Pn	12 28 19.8	+0.7
SPBG	Spurr Blockage	1.68	7		Pn	12 28 20.1	+0.7
SPWE	Spurr West	1.68	4		Pn	12 28 20.3	+0.8
SPCG	Spurr Capps Gl	1.74	12		Pn	12 28 21.0	+0.8

SEW	**Seward**	1.76	72		Pn	12 28 20.3	0.0
SEW				IAML		12 28 43.2	
	comp=E,6µm,0.8s						
SEW				IAML		12 28 45.8	
	comp=N,7µm,0.7s						
SEW	**Seward**	1.76	72	P	Pn	12 28 20.5	+0.2
	baz=256,SNR=83						
SEW				S	Sn	12 28 41.1	-1.4
	baz=256						
KAKN	**Katmai Knife C**	1.76	223		Pn	12 28 21.1	+0.5
KAKN					Sn	12 28 42.7	-0.2
SPNN	**North Nagishla**	1.77	1		Pn	12 28 21.4	+0.7
O22K	**Cooper Landing**	1.77	59		Pn	12 28 21.2	+0.7
O22K	**Cooper Landing**	1.77	59	P	Pn	12 28 21.2	+0.7
	baz=243,SNR=335						
O22K				S	Sn	12 28 43.0	+0.2
	baz=243						
KCG	**Knife Ck. Glac**	1.77	224		Pn	12 28 21.6	+0.9
KVTA	**Katmai Vly 10**	1.79	228		Pn	12 28 21.4	+0.7
KBM	**Katmai Bkd Mtn**	1.83	224		Pn	12 28 22.3	+0.9
KDAK	**Kodiak Island**	1.83	177	P	Pn	12 28 21.0	-0.3
	comp=N,2µm,0.5s,baz=14,slow=8.1,SNR=4540						
KDAK				S	Sn	12 28 42.4	-1.8
	comp=N,2µm,0.5s,baz=329,slow=8.4,SNR=39						
KDAK				LR	LR	12 29 01.7	
	comp=N,600nm,21.0s,baz=242,slow=36						
KDAK	**Kodiak Island**	1.83	177		Pn	12 28 21.0	-0.3
KDAK				IAML		12 28 44.6	
	comp=N,10µm,0.5s						
KDAK				IAML		12 28 45.2	
	comp=N,9µm,0.5s						
KDAK	**Kodiak Island**	1.83	177	P	Pn	12 28 21.3	0.0
	baz=356						
KDAK				S	Sn	12 28 43.2	-1.0
	baz=356						
KCE	**Katmai Mt Cerb**	1.85	223		Pn	12 28 22.8	+1.2
KABU	**Katmai Buttres**	1.86	225		Pn	12 28 22.6	+0.8
N18K	**Kilae Creek**	1.89	306	P	Pn	12 28 22.4	+0.3
	baz=123,SNR=889						
N18K				S	Sn	12 28 44.2	-1.5
	baz=123						
N18K				S	Sn	12 28 44.2	-1.5
	baz=123						
ACHA	**Angle Creek He**	1.92	224	Pn	Pn	12 28 23.5	+0.9
MGLS	**Mageik Landsli**	1.92	221		Pn	12 28 23.3	+0.8
STLK	**Strandline Lak**	1.96	14		Pn	12 28 23.7	+0.6
ANCK	**Angle Creek**	1.99	226		Pn	12 28 24.2	+0.8
FIS	**Fire Island**	2.00	38		Pn	12 28 25.0	+1.5
FIS				IAML		12 29 12.2	
	comp=E,6µm,0.7s						
FIS				IAML		12 29 14.8	
	comp=N,5µm,0.7s						
CAHL	**Cahill**	2.03	221		Pn	12 28 25.0	+1.0
CNTC	**Contact Creek**	2.09	231		Pn	12 28 25.6	+0.7
Q17K	**Contact Creek**	2.10	231	P	Pn	12 28 25.5	+0.6
	baz=48						
Q17K				S	Sn	12 28 50.4	-0.1
	baz=48						
Q17K				S	Sn	12 28 50.4	-0.1
	baz=48						
SUA	**Susitna One**	2.12	27		Pn	12 28 25.7	+0.5
SUA				IAML		12 28 54.4	
	comp=E,6µm,0.9s						
SUA				IAML		12 28 54.6	
	comp=N,2µm,0.9s						
SUA	**Susitna One**	2.12	27	P	Pn	12 28 26.2	+1.0
	baz=210,SNR=1000						
SUA				S	Sn	12 28 51.4	+0.2
	baz=210						
RC01	**Rabbit Creek A**	2.13	44		Pn	12 28 26.3	+1.2
RC01				IAML		12 28 52.9	
	comp=N,3µm,0.5s						
RC01				IAML		12 28 53.6	
	comp=E,3µm,0.4s						
RC01	**Rabbit Creek A**	2.13	44	P	Pn	12 28 25.7	+0.6
	baz=228,SNR=464						
RC01				S	Sn	12 28 51.1	0.0
	baz=228						
O17K	**Koliganek Bris**	2.19	276		Pn	12 28 26.1	+0.1
O17K	**Koliganek Bris**	2.19	276	P	Pn	12 28 26.2	+0.3
	baz=92,SNR=123						
O17K				S	Sn	12 28 52.0	-0.6
	baz=92						
Q16K	**King Salmon**	2.20	247		Pn	12 28 26.8	+0.8
Q16K	**King Salmon**	2.20	247	P	Pn	12 28 26.8	+0.8
	baz=62,SNR=274						
Q16K				S	Sn	12 28 53.1	+0.3
	baz=62						
R18K	**Karluk**	2.22	204		Pn	12 28 26.6	+0.2
R18K	**Karluk**	2.22	204	P	Pn	12 28 26.5	+0.2
	baz=22						
R18K				S	Sn	12 28 52.4	-1.0
	baz=22						
R18K				S	Sn	12 28 52.4	-1.0
	baz=22						
M20K	**Styx River**	2.29	356		Pn	12 28 28.3	+0.9
M20K	**Styx River**	2.29	356	P	Pn	12 28 28.3	+0.9
	baz=176						
M20K				S	Sn	12 28 54.9	-0.2
	baz=176						
M20K				S	Sn	12 28 54.9	-0.2
	baz=176						
N17K	**Nushagak Hills**	2.39	295		Pn	12 28 28.8	+0.1
N17K	**Nushagak Hills**	2.39	295	P	Pn	12 28 28.7	+0.1
	baz=110,SNR=163						
OHAK	**Old Harbor**	2.40	187		Pn	12 28 28.3	-0.5
OHAK				IAML		12 28 58.2	
	comp=N,3µm,0.3s						
OHAK				IAML		12 29 02.5	
	comp=E,3µm,0.6s						
OHAK	**Old Harbor**	2.40	187	P	Pn	12 28 28.0	-0.8
OHAK	**Old Harbor**	2.40	187	S	Sn	12 28 55.8	-1.8
OHAK	**Old Harbor**	2.40	187	P	Pn	12 28 28.3	-0.5
	baz=5.7,SNR=212						
OHAK				S	Sn	12 28 55.4	-2.2
	baz=5.7						
M18K	**Stony River**	2.42	323		Pn	12 28 29.1	+0.2
M18K	**Stony River**	2.42	323	P	Pn	12 28 29.2	+0.2
	baz=140,SNR=577						
M18K				S	Sn	12 28 57.2	-0.7
	baz=140						
SKT	**Skwentna**	2.46	14		Pn	12 28 29.8	+0.2
SKT				IAML		12 29 31.2	
	comp=E,2µm,1.0s						
SKT	**Skwentna**	2.46	14	P	Pn	12 28 30.1	+0.5
	baz=196,SNR=475						
SKT				S	Sn	12 29 00.1	+1.1
	baz=196						
M22K	**Willow**	2.52	30		Pn	12 28 31.4	+1.1
M22K				IAML		12 29 09.1	
	comp=E,6µm,0.6s						
M22K	**Willow**	2.52	30	P	Pn	12 28 31.4	+1.1
	baz=213,SNR=886						
M22K				S	Sn	12 29 01.1	+0.7
	baz=213						
PWL	**Port Wells**	2.55	59		Pn	12 28 31.0	+0.2
PWL	**Port Wells**	2.55	59	P	Pn	12 28 30.9	+0.2
	baz=243,SNR=323						
PWL				S	Sn	12 28 59.8	-1.4
	baz=243						
PLK2	**Peulik 2**	2.61	227		Pn	12 28 32.6	+1.1
PLK3	**Peulik 3**	2.65	225		Pn	12 28 33.1	+1.1
PLK5	**Peulik 5**	2.67	235		Pn	12 28 33.6	+1.3
PMR	**Palmer**	2.69	41	Pn	Pn	12 28 32.6	0.0
PMR				IAML		12 29 16.9	
	comp=E,1µm,0.8s						
PMR	**Palmer**	2.69	41	P	Pn	12 28 32.6	0.0
PMR	**Palmer**	2.69	41	P	Pn	12 28 32.5	0.0
	baz=224,SNR=411						
PMR				S	Sn	12 29 03.2	-1.2
	baz=224						
PLK1	**Peulik 1**	2.69	229		Pn	12 28 33.6	+1.0
O16K	**Kokwok River B**	2.70	272		Pn	12 28 33.1	+0.5
O16K	**Kokwok River B**	2.70	272	P	Pn	12 28 33.2	+0.5
	baz=87,SNR=60						
PLK4	**Peulik 4**	2.72	225		Pn	12 28 34.1	+1.0
PLK4	**Peulik 4**	2.72	225	IAML		12 29 09.4	
	comp=N,4µm,0.5s						
R17L	**Mt. Peulik Vol**	2.72	225	P	Pn	12 28 34.2	+1.1
	baz=41						
R17L				S	Sn	12 29 06.1	+0.9
	baz=41						
R17L				S	Sn	12 29 06.1	+0.9
	baz=41						
P23K	**Montague Islan**	2.75	79		Pn	12 28 34.2	+0.9
P23K				IAML		12 29 06.2	
	comp=E,5µm,0.9s						
P23K				IAML		12 29 07.2	
	comp=N,5µm,0.6s						
P23K	**Montague Islan**	2.75	79	P	Pn	12 28 34.2	+0.9
	baz=265,SNR=37						
P23K				S	Sn	12 29 05.3	-0.5
	baz=265						
P23K				S	Sn	12 29 05.3	-0.5
	baz=265						
L19K	**White Mountain**	2.78	340		Pn	12 28 34.6	+0.8
L19K	**White Mountain**	2.78	340	P	Pn	12 28 34.3	+0.5
	baz=158						
L19K				S	Sn	12 29 06.2	-0.4
	baz=158						
L19K				S	Sn	12 29 06.2	-0.4
	baz=158						
KNK	**Knik Glacier**	2.81	48		Pn	12 28 34.3	+0.1
KNK				IAML		12 29 08.9	
	comp=N,5µm,0.6s						
KNK	**Knik Glacier**	2.81	48	P	Pn	12 28 34.2	+0.1
	baz=232,SNR=411						
KNK				S	Sn	12 29 06.1	-1.1
	baz=232						
PLBL	**Peulik Blue Cr**	2.84	230		Pn	12 28 35.8	+1.1
GHO	**Glory Hole Cre**	2.89	39		Pn	12 28 35.8	+0.5
GHO				IAML		12 29 14.6	
	comp=N,2µm,0.5s						
GHO				IAML		12 29 18.0	
	comp=E,2µm,0.8s						
M17K	**Holitna River**	2.92	310		Pn	12 28 36.0	+0.4
M17K	**Holitna River**	2.92	310	IAML		12 29 26.6	
	comp=E,1µm,0.9s						
M17K				IAML		12 29 28.4	
	comp=N,1µm,1.0s						
M17K	**Holitna River**	2.92	310	P	Pn	12 28 36.0	+0.4
	baz=126,SNR=144						
M17K				S	Sn	12 29 08.9	-1.1
	baz=126						
L20K	**Farewell, AK**	2.93	350	P	Pn	12 28 36.6	+0.8
	baz=169,SNR=130						
CUT	**Chulitna**	3.07	22		Pn	12 28 38.5	+0.9
CUT				IAML		12 29 21.0	
	comp=E,2µm,0.8s						
CUT				IAML		12 29 24.3	
	comp=N,2µm,0.9s						
CUT	**Chulitna**	3.07	22	P	Pn	12 28 38.1	+0.5
	baz=205,SNR=307						
CUT				S	Sn	12 29 13.8	+0.4
	baz=205						
L22K	**Petersville**	3.09	18		Pn	12 28 39.1	+1.1
SML	**Sawmill**	3.11	43		Pn	12 28 38.6	+0.3
SML				IAML		12 29 37.8	
	comp=E,2µm,0.8s						
SML				IAML		12 29 48.7	
	comp=N,2µm,1.0s						
SML	**Sawmill**	3.11	43	P	Pn	12 28 38.3	0.0
	baz=227,SNR=322						
SML				S	Sn	12 29 13.5	-1.1
	baz=227						
GLI	**Glacier Island**	3.11	63		Pn	12 28 37.8	-0.4
GLI	**Glacier Island**	3.11	63	P	Pn	12 28 37.4	-0.9
	baz=249,SNR=34						
GLI				S	Sn	12 29 11.8	-2.8
	baz=249						
N16K	**Nishlik Lake**	3.13	289		Pn	12 28 38.9	+0.5
N16K	**Nishlik Lake**	3.13	289	S	Sn	12 29 14.3	-0.6
	baz=103						
SII	**Sitkinak Islan**	3.14	194		Pn	12 28 38.3	-0.4
SII				IAML		12 29 16.4	
	comp=N,4µm,0.4s						
SII	**Sitkinak Islan**	3.14	194	P	Pn	12 28 38.0	-0.7
SII	**Sitkinak Islan**	3.14	194	S	Sn	12 29 12.7	-2.6
SII	**Sitkinak Islan**	3.14	194	P	Pn	12 28 38.2	-0.4
	baz=13,SNR=47						
SII				S	Sn	12 29 12.5	-2.9
	baz=13						
R16K	**Pilot Point**	3.23	233		Pn	12 28 41.1	+1.3
L18K	**Granite Mounta**	3.24	326		Pn	12 28 39.9	-0.1
L18K	**Granite Mounta**	3.24	326	P	Pn	12 28 40.1	+0.1
	baz=142,SNR=163						
L18K				S	Sn	12 29 16.1	-1.5
	baz=142						
L18K				S	Sn	12 29 16.1	-1.5
	baz=142						
HIN	**Hinchinbrook I**	3.25	73		Pn	12 28 40.2	0.0
Q23K	**Middleton Isla**	3.29	90	P	Pn	12 28 41.4	+0.9
	baz=276						
Q23K				S	Sn	12 29 17.1	-1.6
	baz=276						
Q23K				S	Sn	12 29 17.1	-1.6
	baz=276						
MID	**Middleton Isla**	3.29	90		Pn	12 28 41.2	+0.6
MID	**Middleton Isla**	3.29	90	IAML		12 29 20.2	
	comp=E,3µm,0.5s						
PPLA	**Purkeypile**	3.32	5		Pn	12 28 42.6	+1.5
PPLA				IAML		12 29 24.1	
	comp=E,864nm,1.0s						
PPLA				IAML		12 30 06.0	
	comp=N,816nm,1.1s						
PPLA	**Purkeypile**	3.32	5	P	Pn	12 28 42.4	+1.3
	baz=186,SNR=167						
PPLA				S	Sn	12 29 20.6	+0.9
	baz=186						
M23K	**Glacier View**	3.32	46		Pn	12 28 40.9	-0.1
M23K	**Glacier View**	3.32	46	P	Pn	12 28 41.0	-0.1
	baz=231,SNR=255						
M23K				S	Sn	12 29 17.8	-1.8
	baz=231						
M23K				S	Sn	12 29 17.8	-1.8
	baz=231						
FID	**Port Fidalgo**	3.35	67		Pn	12 28 40.5	-0.9
M16K	**Timber Creek**	3.38	298		Pn	12 28 42.4	+0.5
M16K	**Timber Creek**	3.38	298	P	Pn	12 28 42.4	+0.5
	baz=112,SNR=44						
M16K				S	Sn	12 29 20.7	-0.4
	baz=112						
M16K				S	Sn	12 29 20.7	-0.4
	baz=112						
SCM	**Sheep Creek Mo**	3.49	48		Pn	12 28 43.9	+0.5
SCM				IAML		12 29 26.4	
	comp=E,3µm,0.9s						
SCM				IAML		12 29 27.7	
	comp=N,2µm,0.9s						
SCM	**Sheep Creek Mo**	3.49	48	P	Pn	12 28 43.9	+0.5
SCM	**Sheep Creek Mo**	3.49	48	P	Pn	12 28 43.5	+0.1
	baz=233,SNR=105						
SCM				S	Sn	12 29 23.3	-0.4
	baz=233						
O15K	**Ungalikthiuk R**	3.62	266		Pn	12 28 46.2	+1.1
O15K	**Ungalikthiuk R**	3.62	266	P	Pn	12 28 46.3	+1.1
	baz=80,SNR=35						
EYAK	**Cordova Ski Ar**	3.65	72		Pn	12 28 45.4	-0.1
EYAK				IAML		12 29 28.0	
	comp=E,1µm,0.5s						
EYAK				IAML		12 29 29.8	
	comp=N,1µm,0.6s						
EYAK	**Cordova Ski Ar**	3.65	72	P	Pn	12 28 44.9	-0.5
EYAK	**Cordova Ski Ar**	3.65	72	P	Pn	12 28 45.1	-0.3
	baz=258,SNR=54						
EYAK				S	Sn	12 29 25.6	-1.8
	baz=258						
L17K	**Donlin**	3.70	316		Pn	12 28 46.2	0.0
L17K	**Donlin**	3.70	316	P	Pn	12 28 46.2	0.0
	baz=131,SNR=123						
N15K	**Kwethluk River**	3.73	282		Pn	12 28 47.6	+1.1
N15K	**Kwethluk River**	3.73	282	P	Pn	12 28 47.6	+1.1
	baz=95,SNR=34						
N15K				S	Sn	12 29 29.2	-0.1
	baz=95						
N15K				S	Sn	12 29 29.2	-0.1
	baz=95						
WAT7	**Susitna Watana**	3.76	29		Pn	12 28 47.1	+0.1
DIV	**Divide**	3.81	63		Pn	12 28 47.6	0.0
DIV				IAML		12 29 31.1	
	comp=E,2µm,1.2s						
K20K	**Telida**	3.82	351		Pn	12 28 48.4	+0.7
K20K	**Telida**	3.82	351	P	Pn	12 28 48.4	+0.7
	baz=170						
K20K				S	Sn	12 29 29.9	-1.6
	baz=170						
K20K				S	Sn	12 29 29.9	-1.6
	baz=170						
WAT1	**Susitna Watana**	3.83	31		Pn	12 28 48.0	+0.1
WAT1	**Susitna Watana**	3.83	31	P	Pn	12 28 48.1	+0.1
	baz=215						
WAT1				S	Sn	12 29 30.0	-1.9
	baz=215						
WAT6	**Susitna Watana**	3.86	37		Pn	12 28 48.5	0.0
WAT6	**Susitna Watana**	3.86	37	P	Pn	12 28 48.6	+0.1
	baz=222,SNR=374						
WAT6				S	Sn	12 29 31.0	-1.8
	baz=222						
KLU	**Klutina**	3.88	58		Pn	12 28 48.8	+0.1
KLU				IAML		12 29 34.0	
	comp=E,2µm,0.6s						
KLU	**Klutina**	3.88	58	P	Pn	12 28 48.6	0.0
	baz=244,SNR=388						
KLU				S	Sn	12 29 31.5	-1.7
	baz=244						
L16K	**Owhat River**	3.91	306		Pn	12 28 48.8	-0.1
L16K	**Owhat River**	3.91	306	P	Pn	12 28 49.1	+0.1
	baz=120,SNR=50						
AZAC	**Aniakchak**	3.96	229		Pn	12 28 50.4	+0.7
TRF	**Thorofare Moun**	4.04	16		Pn	12 28 51.7	+0.8
TRF				IAML		12 29 40.7	
	comp=N,875nm,0.9s						
TRF				IAML		12 29 41.2	
	comp=E,722nm,0.9s						
TRF	**Thorofare Moun**	4.04	16	P	Pn	12 28 50.9	0.0
	baz=199,SNR=196						
TRF				S	Sn	12 29 36.4	-0.8
	baz=199						
ANPB	**Aniakchak Plen**	4.04	228		Pn	12 28 51.5	+0.7
CHIR	**Chirikof Islan**	4.09	203		Pn	12 28 50.9	-0.5
CHIR				IAML		12 29 36.6	
	comp=N,2µm,0.5s						
CHIR	**Chirikof Islan**	4.09	203	P	Pn	12 28 50.6	-0.8
CHIR	**Chirikof Islan**	4.09	203	P	Pn	12 28 50.4	-0.9
	baz=20,SNR=9.5						
M24K	**Tolsona, Glenn**	4.09	49		Pn	12 28 52.3	+0.8
M24K	**Tolsona, Glenn**	4.09	49	P	Pn	12 28 52.0	+0.5
	baz=236,SNR=188						
M15K	**Kasigluk River**	4.10	289		Pn	12 28 51.9	+0.5
M15K	**Kasigluk River**	4.10	289	P	Pn	12 28 52.0	+0.5
	baz=102,SNR=13						
M15K				S	Sn	12 29 37.6	-0.7
	baz=102						
K17K	**Iditarod**	4.11	322		Pn	12 28 51.9	+0.3
K17K	**Iditarod**	4.11	322	IAML		12 29 54.7	
	comp=E,552nm,1.2s						
K17K	**Iditarod**	4.11	322	P	Pn	12 28 52.0	+0.3
	baz=137,SNR=208						
RAGM	**Ragged Mountai**	4.15	76		Pn	12 28 52.3	+0.1
GOAT	**Goat Mountain**	4.15	73		Pn	12 28 52.1	-0.2
KAIM	**Kayak Island**	4.24	82		Pn	12 28 54.5	+1.1
KAIM	**Kayak Island**	4.24	82	P	Pn	12 28 54.5	+1.1
	baz=270,SNR=9.8						
RND	**Reindeer**	4.25	25		Pn	12 28 54.5	+0.8
RND				IAML		12 29 43.6	
	comp=N,814nm,0.8s						
RND				IAML		12 30 27.3	
	comp=E,378nm,1.0s						
RND	**Reindeer**	4.25	25	P	Pn	12 28 54.5	+0.8
BMRM	**Bremner River**	4.30	68		Pn	12 28 54.4	+0.1
BMRM				IAML		12 29 44.3	
	comp=E,1µm,0.5s						
BMRM				IAML		12 29 47.1	
	comp=N,2µm,1.0s						
BMRM	**Bremner River**	4.30	68	P	Pn	12 28 53.8	-0.5
	baz=255,SNR=200						
CHUM	**Lake Minchumin**	4.30	3		Pn	12 28 54.5	+0.3
CHUM	**Lake Minchumin**	4.30	3	P	Pn	12 28 54.6	+0.4
	baz=183,SNR=129						
J18K	**Innoko River**	4.31	336		Pn	12 28 54.5	+0.2
J18K	**Innoko River**	4.31	336	P	Pn	12 28 54.7	+0.3
	baz=152,SNR=107						
O14K	**Tigyukauivet M**	4.34	269		Pn	12 28 56.1	+1.2
O14K	**Tigyukauivet M**	4.34	269	P	Pn	12 28 56.0	+1.2
	baz=81,SNR=13						
HMT	**Hamilton**	4.35	77		Pn	12 28 55.2	+0.3
DHY	**Denali Highway**	4.35	34		Pn	12 28 55.4	+0.4
DHY				IAML		12 29 48.5	
	comp=E,811nm,0.6s						
DHY				IAML		12 29 49.0	
	comp=N,483nm,0.5s						
DHY	**Denali Highway**	4.35	34	P	Pn	12 28 55.3	+0.2
	baz=220,SNR=245						
NICHA	**Nichawak Mount**	4.48	78		Pn	12 28 56.7	-0.1
N25K	**Chitina, Valde**	4.51	60		Pn	12 28 57.4	+0.3
N25K				IAML		12 29 53.3	
	comp=N,913nm,0.7s						
N25K				IAML		12 29 53.7	
	comp=E,666nm,0.8s						
N25K	**Chitina, Valde**	4.51	60	P	Pn	12 28 57.2	+0.1
	baz=248,SNR=293						
N14K	**Kuskokwak Cree**	4.51	278		Pn	12 28 58.4	+1.3
N14K	**Kuskokwak Cree**	4.51	278	IAML		12 30 29.1	
	comp=N,441nm,1.4s						
N14K				IAML		12 30 53.8	
	comp=E,540nm,1.4s						
N14K	**Kuskokwak Cree**	4.51	278	P	Pn	12 28 58.4	+1.3
	baz=90,SNR=33						
MCK	**McKinley**	4.53	22		Pn	12 28 58.1	+0.7
MCK				IAML		12 29 51.3	
	comp=E,703nm,0.6s						
MCK				IAML		12 29 51.8	
	comp=N,445nm,1.1s						
MCK	**McKinley**	4.53	22	P	Pn	12 28 58.1	+0.7
MCK	**McKinley**	4.53	22	P	Pn	12 28 58.0	+0.6
	baz=206,SNR=332						
SUCK	**Suckling Hills**	4.57	80		Pn	12 28 59.0	+1.0
SUCK				IAML		12 29 56.9	
	comp=E,626nm,0.5s						
SUCK				IAML		12 29 57.5	
	comp=N,798nm,0.7s						
BPAW	**Bear Paw Mtn.**	4.59	10		Pn	12 28 58.5	+0.3
BPAW				IAML		12 29 52.8	
	comp=E,355nm,0.7s						
BPAW				IAML		12 29 53.3	
	comp=N,324nm,0.8s						
BPAW	**Bear Paw Mtn.**	4.59	10	P	Pn	12 28 57.8	-0.4
	baz=192,SNR=158						
J19K	**Poorman**	4.61	344	P	Pn	12 28 58.5	+0.1
	baz=162						
BERG	**Berg Lake**	4.63	76		Pn	12 28 59.1	+0.4
J20K	**Nowinta River**	4.63	353	P	Pn	12 28 59.3	+0.6
	baz=172,SNR=266						
HARP	**HAARP**	4.65	50		Pn	12 28 59.3	+0.2
HARP	**HAARP**	4.65	50	P	Pn	12 28 59.2	+0.2
	baz=237,SNR=239						
M14K	**Bethel**	4.72	288		Pn	12 29 00.6	+0.7
M14K				IAML		12 31 00.2	
	comp=E,280nm,1.4s						
M14K	**Bethel**	4.72	288	P	Pn	12 29 00.8	+0.8
	baz=100,SNR=42						
L15K	**Ungalak Mounta**	4.76	300		Pn	12 29 00.9	+0.4
L15K	**Ungalak Mounta**	4.76	300	P	Pn	12 29 00.8	+0.3
	baz=112,SNR=24						
WACK	**Wrangell Chich**	4.78	56		Pn	12 29 01.2	+0.2
GLB	**Gilahina Butte**	4.80	64		Pn	12 29 00.7	-0.4
GLB				IAML		12 29 54.1	
	comp=E,546nm,0.8s						
GLB				IAML		12 29 56.4	
	comp=N,713nm,0.5s						
GRIN	**Grindle Hills**	4.81	78		Pn	12 29 01.9	+0.7
VNNF	**Veniaminof 3**	4.81	229		Pn	12 29 02.6	+1.3
BGLC	**Bering Glacier**	4.82	80		Pn	12 29 02.8	+1.5
BGLC	**Bering Glacier**	4.82	80	P	Pn	12 29 02.7	+1.5
	baz=268						
WASW	**Wrangell South**	4.82	57		Pn	12 29 01.9	+0.4
VNSG	**Veniaminof 6**	4.84	227		Pn	12 29 02.1	+0.5
BWN	**Browne**	4.85	17		Pn	12 29 02.1	+0.4
BWN				IAML		12 30 50.8	
	comp=E,872nm,1.1s						
BWN				IAML		12 30 55.1	
	comp=N,1µm,1.3s						
J17K	**VABM Dome**	4.85	324		Pn	12 29 01.4	-0.2
J17K	**VABM Dome**	4.85	324	P	Pn	12 29 01.5	-0.2
	baz=139,SNR=109						
KHIT	**Khitrov Hills**	4.86	76		Pn	12 29 01.6	-0.3
PAX	**Paxson**	4.88	43		Pn	12 29 02.4	+0.2
PAX				IAML		12 29 58.6	
	comp=E,354nm,0.5s						
PAX				IAML		12 30 12.8	
	comp=N,290nm,0.8s						
PAX	**Paxson**	4.88	43	P	Pn	12 29 02.4	+0.2
PAX	**Paxson**	4.88	43	P	Pn	12 29 02.5	+0.2
	baz=230,SNR=358						
S14K	**Fog Glacier**	4.91	230	P	Pn	12 29 04.0	+1.5
	baz=44,SNR=11						
VNFG	**Fog Glacier, M**	4.91	230		Pn	12 29 03.9	+1.4
VNFG	**Fog Glacier, M**	4.91	230	IAML		12 30 20.7	
	comp=E,974nm,0.8s						

VRDI	**Verde Repeater**	**4.91**	**67**		**Pn**	**12 29 02.6**	**0.0**
VRDI				IAML		12 29 58.1	
	comp=E,790nm,0.6s						
VRDI				IAML		12 29 59.0	
	comp=N,948nm,0.6s						
CRQM	**Cirque**	**4.95**	**72**		**Pn**	**12 29 03.3**	**+0.1**
CRQE	**Cirque**	**4.97**	**72**	P	**Pn**	**12 29 03.1**	**-0.4**
	baz=261,SNR=42						
VNKR	**Veniaminof 5**	**5.02**	**227**		**Pn**	**12 29 04.3**	**+0.2**
K15K	**Wolf Creek Mou**	**5.04**	**306**		**Pn**	**12 29 04.9**	**+0.6**
K15K	**Wolf Creek Mou**	**5.04**	**306**	P	**Pn**	**12 29 04.5**	**+0.1**
	baz=118,SNR=54						
SNH	**Sunshine Point**	**5.04**	**79**		**Pn**	**12 29 05.0**	**+0.6**
WAX	**Waxell Ridge**	**5.05**	**76**		**Pn**	**12 29 04.8**	**+0.3**
TGL	**Tana Glacier**	**5.10**	**73**		**Pn**	**12 29 05.6**	**+0.4**
TGL				IAML		12 30 02.9	
	comp=E,923nm,0.7s						
TGL				IAML		12 30 04.9	
	comp=N,811nm,0.7s						
MCARA	**McCarthy VSAT**	**5.15**	**66**		**Pn**	**12 29 05.9**	**+0.2**
MCARA	**McCarthy VSAT**	**5.15**	**66**	P	**Pn**	**12 29 05.6**	**-0.1**
	baz=254,SNR=87						
L14K	**Kuka Creek**	**5.20**	**294**		**Pn**	**12 29 07.4**	**+1.0**
L14K	**Kuka Creek**	**5.20**	**294**	IAML		12 30 28.6	
	comp=E,221nm,1.1s						
L14K				IAML		12 30 33.9	
	comp=N,205nm,1.4s						
L14K	**Kuka Creek**	**5.20**	**294**	P	**Pn**	**12 29 06.4**	**0.0**
	baz=105,SNR=22						
CYK	**Cape Yakataga**	**5.22**	**80**		**Pn**	**12 29 06.9**	**+0.3**
BARK	**Barkley Ridge**	**5.23**	**77**		**Pn**	**12 29 07.8**	**+0.9**
J16K	**Anvik River**	**5.26**	**318**		**Pn**	**12 29 07.2**	**0.0**
J16K	**Anvik River**	**5.26**	**318**	P	**Pn**	**12 29 07.3**	**0.0**
	baz=131,SNR=82						
I20K	**Naaghedeneel**	**5.27**	**352**		**Pn**	**12 29 08.2**	**+0.8**
I20K	**Naaghedeneel**	**5.27**	**352**	IAML		12 30 39.7	
	comp=E,588nm,1.2s						
I20K				IAML		12 30 47.5	
	comp=N,668nm,1.3s						
I20K	**Naaghedeneel**	**5.27**	**352**	P	**Pn**	**12 29 08.4**	**+1.1**
	baz=171,SNR=123						
NEA2	**Nenana**	**5.30**	**18**	Pn	**Pn**	**12 29 07.2**	**-0.6**
NEA2				IAML		12 30 06.5	
	comp=E,205nm,0.9s						
NEA2				IAML		12 30 07.6	
	comp=N,306nm,1.0s						
NEA2	**Nenana**	**5.30**	**18**	P	**Pn**	**12 29 07.4**	**-0.4**
	baz=201,SNR=504						
ISLE	**Juniper Island**	**5.32**	**75**		**Pn**	**12 29 08.5**	**+0.2**
KIAG	**Kiagna River**	**5.36**	**71**		**Pn**	**12 29 08.6**	**-0.2**
PTPK	**Patty Peak**	**5.36**	**68**		**Pn**	**12 29 08.9**	**+0.2**
WRH	**Wood River Hil**	**5.36**	**22**		**Pn**	**12 29 08.3**	**-0.3**
WRH				IAML		12 30 07.5	
	comp=E,235nm,0.7s						
WRH				IAML		12 30 08.9	
	comp=N,180nm,0.9s						
M13K	**Dall Lake**	**5.36**	**283**		**Pn**	**12 29 10.1**	**+1.5**
M13K	**Dall Lake**	**5.36**	**283**	IAML		12 31 21.0	
	comp=N,219nm,1.5s						
M13K				IAML		12 31 27.9	
	comp=E,211nm,1.5s						
M13K	**Dall Lake**	**5.36**	**283**	P	**Pn**	**12 29 10.0**	**+1.4**
	baz=94,SNR=7.8						
K24K	**Donnelly Dome**	**5.37**	**35**		**Pn**	**12 29 09.8**	**+1.0**
K24K	**Donnelly Dome**	**5.37**	**35**	P	**Pn**	**12 29 10.2**	**+1.4**
	baz=222,SNR=429						
BALM	**Baldy**	**5.38**	**70**		**Pn**	**12 29 09.5**	**+0.5**
BAGL	**Bagley Icefiel**	**5.43**	**76**		**Pn**	**12 29 10.5**	**+0.9**
MESA	**MESA**	**5.49**	**79**		**Pn**	**12 29 11.3**	**+0.8**
MESA	**MESA**	**5.49**	**79**	P	**Pn**	**12 29 11.3**	**+0.8**
	baz=269,SNR=35						
MENT	**Mentasta**	**5.50**	**49**		**Pn**	**12 29 10.6**	**0.0**
MENT	**Mentasta**	**5.50**	**49**	P	**Pn**	**12 29 11.0**	**+0.4**
GCSA	**Galena City Sc**	**5.50**	**341**		**Pn**	**12 29 10.8**	**+0.3**
GCSA	**Galena City Sc**	**5.50**	**341**	P	**Pn**	**12 29 10.8**	**+0.3**
	baz=158,SNR=35						
M26K	**Nabesna, AK**	**5.53**	**55**		**Pn**	**12 29 11.1**	**+0.2**
M26K	**Nabesna, AK**	**5.53**	**55**	P	**Pn**	**12 29 11.4**	**+0.5**
	baz=244						
HDA	**Harding Lake**	**5.55**	**27**		**Pn**	**12 29 11.0**	**-0.2**
HDA	**Harding Lake**	**5.55**	**27**	P	**Pn**	**12 29 10.8**	**-0.4**
	baz=213,SNR=439						
CCB	**Clear Creek Bu**	**5.57**	**23**		**Pn**	**12 29 11.0**	**-0.4**
YAH	**Yahtse**	**5.60**	**77**		**Pn**	**12 29 12.6**	**+0.6**
RIDG	**Independent Ri**	**5.61**	**39**		**Pn**	**12 29 12.4**	**+0.3**
RIDG	**Independent Ri**	**5.61**	**39**	P	**Pn**	**12 29 12.4**	**+0.3**
	baz=226,SNR=332						
GRNC	**Granite Creek**	**5.62**	**74**		**Pn**	**12 29 12.7**	**+0.3**
L26K	**Log Cabin Wild**	**5.70**	**49**		**Pn**	**12 29 14.1**	**+1.0**
L26K	**Log Cabin Wild**	**5.70**	**49**	P	**Pn**	**12 29 13.5**	**+0.3**
	baz=238,SNR=299						
I17K	**Unalakleet**	**5.71**	**322**		**Pn**	**12 29 13.4**	**+0.2**
I17K	**Unalakleet**	**5.71**	**322**	P	**Pn**	**12 29 13.4**	**+0.2**
	baz=135,SNR=34						
BARN	**Barnard Glacie**	**5.72**	**70**		**Pn**	**12 29 14.8**	**+1.1**
COLA	**College**	**5.77**	**21**		**Pn**	**12 29 14.2**	**+0.1**
COLA	**College**	**5.77**	**21**	P	**Pn**	**12 29 14.6**	**+0.5**
COLA	**College**	**5.77**	**21**	*i* P	**Pn**	**12 29 12.8**	**-1.3**
COLA	**College**	**5.77**	**21**	P	**Pn**	**12 29 13.9**	**-0.2**
	baz=206						
I23K	**Minto, Yukon-K**	**5.79**	**15**		**Pn**	**12 29 14.2**	**-0.1**
I23K	**Minto, Yukon-K**	**5.79**	**15**	P	**Pn**	**12 29 14.2**	**-0.1**
	baz=198,SNR=421						
RKAV	**Rock Avalanche**	**5.79**	**78**		**Pn**	**12 29 15.8**	**+1.2**
DOT	**Dot Lake**	**5.81**	**42**		**Pn**	**12 29 15.2**	**+0.5**
CTG	**Chitna Glacier**	**5.86**	**72**	P	**Pn**	**12 29 15.6**	**+0.1**
	baz=262,SNR=114						
CTGM	**Chitina Glacie**	**5.86**	**72**		**Pn**	**12 29 16.1**	**+0.6**
IL01		**5.87**	**25**		**Pn**	**12 29 15.0**	**-0.5**
IL31		**5.87**	**25**		**Pn**	**12 29 15.1**	**-0.4**
ILAR	**Eielson Array**	**5.87**	**25**	P	**Pn**	**12 29 14.9**	**-0.7**
	comp=E,147nm,0.5s,baz=212,slow=13,SNR=1408						
ILAR				S	**Sn**	**12 30 19.8**	**-1.6**
	comp=E,170nm,0.8s,baz=217,slow=22,SNR=13						
ILAR				ScP	**ScP**	**12 39 33.1**	**+0.4**
	comp=E,0.5nm,0.5s,baz=202,slow=1.0,SNR=6.4						
TABL	**Table Mountain**	**5.90**	**77**		**Pn**	**12 29 16.3**	**+0.2**
CHX	**Chaix Hills**	**5.90**	**81**		**Pn**	**12 29 15.6**	**-0.5**
SDPT	**Sand Point**	**5.95**	**228**		**Pn**	**12 29 16.1**	**-0.4**
SDPT	**Sand Point**	**5.95**	**228**	P	**Pn**	**12 29 15.9**	**-0.7**
SDPT	**Sand Point**	**5.95**	**228**	P	**Pn**	**12 29 16.4**	**-0.2**
	baz=41,SNR=6.7						
M27K	**Edge Creek, AK**	**5.98**	**58**	P	**Pn**	**12 29 17.9**	**+0.7**
	baz=248						
H20K	**Anotleneega Mo**	**5.99**	**352**		**Pn**	**12 29 17.6**	**+0.5**
H20K	**Anotleneega Mo**	**5.99**	**352**	P	**Pn**	**12 29 17.8**	**+0.6**
	baz=170,SNR=104						
LOGN	**Logan Glacier**	**6.00**	**73**		**Pn**	**12 29 18.0**	**+0.5**
CHNA	**Chernabura Isl**	**6.04**	**221**	P	**Pn**	**12 29 17.3**	**-0.6**
CHNA	**Chernabura Isl**	**6.04**	**221**	P	**Pn**	**12 29 17.0**	**-0.9**
	baz=34,SNR=6.1						
CNBA	**Chernabura Isl**	**6.05**	**221**		**Pn**	**12 29 17.3**	**-0.8**
SCRK	**Sand Creek**	**6.05**	**40**		**Pn**	**12 29 17.7**	**-0.4**
SCRK	**Sand Creek**	**6.05**	**40**	P	**Pn**	**12 29 17.5**	**-0.6**
	baz=228,SNR=156						
POKR	**Poker Plat Res**	**6.07**	**22**		**Pn**	**12 29 18.0**	**-0.2**
POKR	**Poker Plat Res**	**6.07**	**22**	P	**Pn**	**12 29 17.8**	**-0.3**
	baz=207,SNR=94						
SAMH	**Samovar Hills**	**6.07**	**80**		**Pn**	**12 29 19.3**	**+1.0**
H21K	**Melozitna Rive**	**6.08**	**360**		**Pn**	**12 29 18.0**	**-0.3**
H21K	**Melozitna Rive**	**6.08**	**360**	P	**Pn**	**12 29 18.0**	**-0.3**
	baz=180						
J14K	**Nanvaranak Lak**	**6.09**	**306**		**Pn**	**12 29 19.0**	**+0.6**
J14K	**Nanvaranak Lak**	**6.09**	**306**	P	**Pn**	**12 29 17.8**	**-0.7**
	baz=116,SNR=20						
J25K	**Salcha River,**	**6.11**	**32**	P	**Pn**	**12 29 18.8**	**0.0**
	baz=218,SNR=390						
H18K	**Honhosa River**	**6.14**	**337**		**Pn**	**12 29 19.4**	**+0.2**
H18K	**Honhosa River**	**6.14**	**337**	P	**Pn**	**12 29 19.4**	**+0.2**
	baz=152						
H19K	**Roundabout Mou**	**6.18**	**346**		**Pn**	**12 29 19.9**	**+0.2**
H19K	**Roundabout Mou**	**6.18**	**346**	P	**Pn**	**12 29 19.6**	**-0.1**
	baz=162,SNR=30						
YUK2	**White River**	**6.26**	**64**		**Pn**	**12 29 21.2**	**+0.3**
K13K	**Kusilvak Mount**	**6.27**	**297**		**Pn**	**12 29 21.7**	**+0.8**
K13K	**Kusilvak Mount**	**6.27**	**297**	P	**Pn**	**12 29 21.3**	**+0.4**
	baz=106,SNR=23						
H17K	**Granite Mounta**	**6.30**	**331**		**Pn**	**12 29 21.4**	**+0.1**
H17K	**Granite Mounta**	**6.30**	**331**	P	**Pn**	**12 29 21.4**	**+0.1**
	baz=145,SNR=99						
BC01	**Beaver Creek A**	**6.31**	**52**		**Pn**	**12 29 21.5**	**0.0**
L27K	**Beaver Creek,**	**6.31**	**52**		**Pn**	**12 29 21.5**	**0.0**
L27K	**Beaver Creek,**	**6.31**	**52**	P	**Pn**	**12 29 21.6**	**0.0**
	baz=242,SNR=272						
BCAR	**Beaver Creek A**	**6.33**	**52**		**Pn**	**12 29 22.1**	**+0.3**
S12K	**Black Hills**	**6.33**	**236**		**Pn**	**12 29 23.0**	**+1.2**
S12K	**Black Hills**	**6.33**	**236**	P	**Pn**	**12 29 22.3**	**+0.5**
	baz=48						
PCA	**Pinnacle**	**6.33**	**80**		**Pn**	**12 29 23.1**	**+1.2**
PINM	**Pinnacle**	**6.34**	**80**	P	**Pn**	**12 29 22.8**	**+0.9**
	baz=271,SNR=22						
H22K	**Ishtalitna Cre**	**6.35**	**5**		**Pn**	**12 29 22.1**	**+0.1**
H22K	**Ishtalitna Cre**	**6.35**	**5**	P	**Pn**	**12 29 22.1**	**+0.1**
	baz=187,SNR=205						
PS1A	**Pavlof South-1**	**6.39**	**233**		**Pn**	**12 29 22.9**	**+0.3**
O28M	**Mount Upton**	**6.39**	**74**		**Pn**	**12 29 24.2**	**+1.4**
O28M	**Mount Upton**	**6.39**	**74**	P	**Pn**	**12 29 24.3**	**+1.4**
	baz=265,SNR=246						
H23K	**Yukon River**	**6.42**	**12**	P	**Pn**	**12 29 23.2**	**+0.2**
	baz=195						
IMAR	**Indian Mountai**	**6.42**	**356**		**Pn**	**12 29 23.3**	**+0.3**
YUK3	**Moose Creek**	**6.43**	**65**		**Pn**	**12 29 23.8**	**+0.4**
YUK3	**Moose Creek**	**6.43**	**65**	P	**Pn**	**12 29 24.4**	**+1.0**
	baz=256,SNR=513						
BVCY	**Beaver Creek**	**6.45**	**59**		**Pn**	**12 29 23.7**	**+0.3**
BVCY	**Beaver Creek**	**6.45**	**59**	P	**Pn**	**12 29 24.1**	**+0.7**
	baz=250,SNR=101						
PN7A	**Pavlof North-7**	**6.49**	**234**		**Pn**	**12 29 24.5**	**+0.5**
PS4A	**Pavlof South-4**	**6.49**	**233**		**Pn**	**12 29 24.0**	**0.0**
HAG	**Hague Volcano**	**6.53**	**233**		**Pn**	**12 29 24.9**	**+0.3**
HAG	**Hague Volcano**	**6.53**	**233**	P	**Pn**	**12 29 24.9**	**+0.3**
J26L	**Joseph Creek**	**6.55**	**37**	P	**Pn**	**12 29 24.4**	**-0.4**
	baz=226						
DOL	**Dolgoi Island**	**6.63**	**232**		**Pn**	**12 29 25.8**	**-0.2**
H24K	**Noodor Dome**	**6.65**	**18**	P	**Pn**	**12 29 25.9**	**-0.2**
	baz=202						
BCPM	**Bancas Point**	**6.65**	**81**		**Pn**	**12 29 26.7**	**+0.5**
YUK8	**Steele Glacier**	**6.66**	**70**		**Pn**	**12 29 26.9**	**+0.3**
YUK8	**Steele Glacier**	**6.66**	**70**	P	**Pn**	**12 29 27.3**	**+0.8**
	baz=261,SNR=210						
H16K	**Elim**	**6.71**	**323**		**Pn**	**12 29 26.8**	**-0.1**
H16K	**Elim**	**6.71**	**323**	P	**Pn**	**12 29 26.7**	**-0.3**
	baz=134,SNR=14						
K27K	**Chicken**	**6.74**	**44**	P	**Pn**	**12 29 27.4**	**+0.1**
	baz=234,SNR=44						
M11K	**Mekoryuk**	**6.78**	**282**		**Pn**	**12 29 29.6**	**+1.8**
M11K	**Mekoryuk**	**6.78**	**282**	P	**Pn**	**12 29 28.7**	**+0.9**
	baz=91,SNR=7.2						
DTNA	**Dutton South F**	**6.79**	**233**		**Pn**	**12 29 28.6**	**+0.6**
PRP	**Porcupine Dome**	**6.81**	**26**		**Pn**	**12 29 28.4**	**-0.1**
PRP	**Porcupine Dome**	**6.81**	**26**	P	**Pn**	**12 29 28.1**	**-0.3**
	baz=213,SNR=180						
DT1	**Dutton Round H**	**6.83**	**233**		**Pn**	**12 29 29.0**	**+0.4**
G19K	**Purcell Mounta**	**6.85**	**345**		**Pn**	**12 29 28.9**	**0.0**
G19K	**Purcell Mounta**	**6.85**	**345**	P	**Pn**	**12 29 28.8**	**0.0**
	baz=161,SNR=22						
G18K	**Tagagawik**	**6.86**	**339**		**Pn**	**12 29 29.1**	**+0.1**
G18K	**Tagagawik**	**6.86**	**339**	P	**Pn**	**12 29 29.0**	**+0.1**
	baz=154,SNR=24						
G17K	**Kiwalik Mounta**	**6.94**	**332**		**Pn**	**12 29 29.7**	**-0.3**
G17K	**Kiwalik Mounta**	**6.94**	**332**	P	**Pn**	**12 29 29.7**	**-0.3**
	baz=145,SNR=16						
G21K	**Allakaket**	**6.95**	**358**		**Pn**	**12 29 30.8**	**+0.6**
G21K	**Allakaket**	**6.95**	**358**	P	**Pn**	**12 29 30.2**	**+0.1**
	baz=177						
O29M	**Mount Kennedy**	**7.17**	**78**		**Pn**	**12 29 34.1**	**+0.7**
O29M	**Mount Kennedy**	**7.17**	**78**	P	**Pn**	**12 29 34.1**	**+0.7**
	baz=271,SNR=50						
YUK4	**Talbot Arm**	**7.20**	**70**	P	**Pn**	**12 29 35.2**	**+1.4**
	baz=262,SNR=115						
G23K	**Bananza Creek**	**7.24**	**9**		**Pn**	**12 29 34.2**	**0.0**
G23K	**Bananza Creek**	**7.24**	**9**	P	**Pn**	**12 29 34.2**	**0.0**
	baz=191,SNR=234						
I26K	**Coal Creek Min**	**7.25**	**34**		**Pn**	**12 29 33.6**	**-0.7**
I26K	**Coal Creek Min**	**7.25**	**34**	P	**Pn**	**12 29 33.6**	**-0.7**
	baz=223						
YUK6	**Outpost Mounta**	**7.30**	**73**		**Pn**	**12 29 36.0**	**+0.8**
YUK6	**Outpost Mounta**	**7.30**	**73**	P	**Pn**	**12 29 35.7**	**+0.6**
	baz=266,SNR=67						
G16K	**Koyuk River**	**7.30**	**327**		**Pn**	**12 29 34.7**	**-0.2**
G16K	**Koyuk River**	**7.30**	**327**	P	**Pn**	**12 29 34.5**	**-0.4**
	baz=138,SNR=5.9						
G22K	**Bettles**	**7.37**	**4**		**Pn**	**12 29 36.7**	**+0.9**
G22K	**Bettles**	**7.37**	**4**	P	**Pn**	**12 29 36.1**	**+0.2**
	baz=185						
YUK7	**Dusty Glacier**	**7.39**	**76**		**Pn**	**12 29 37.0**	**+0.6**
FALS	**False Pass**	**7.47**	**235**		**Pn**	**12 29 37.8**	**+0.4**
FALS	**False Pass**	**7.47**	**235**	P	**Pn**	**12 29 37.6**	**+0.3**
FALS	**False Pass**	**7.47**	**235**	S	**Sn**	**12 31 00.4**	**0.0**
FALS	**False Pass**	**7.47**	**235**	P	**Pn**	**12 29 37.7**	**+0.4**
	baz=46,SNR=13						
G24K	**Hadweenzic Riv**	**7.51**	**16**		**Pn**	**12 29 37.1**	**-0.8**
G24K	**Hadweenzic Riv**	**7.51**	**16**	P	**Pn**	**12 29 37.1**	**-0.8**
	baz=201,SNR=92						
M29M	**Somme Creek**	**7.51**	**62**		**Pn**	**12 29 38.9**	**+1.0**
M29M	**Somme Creek**	**7.51**	**62**	P	**Pn**	**12 29 39.2**	**+1.2**
	baz=254						
G15K	**Niukluk**	**7.52**	**321**		**Pn**	**12 29 38.2**	**+0.2**
G15K	**Niukluk**	**7.52**	**321**	P	**Pn**	**12 29 38.2**	**+0.2**
	baz=131						
YUK5	**Granite Creek**	**7.56**	**72**		**Pn**	**12 29 38.7**	**+0.1**
F20K	**Avaraart Lake**	**7.59**	**351**		**Pn**	**12 29 39.5**	**+0.6**
F20K	**Avaraart Lake**	**7.59**	**351**	P	**Pn**	**12 29 39.3**	**+0.5**
	baz=169						
F19K	**Shaleruckik Mo**	**7.60**	**345**		**Pn**	**12 29 39.9**	**+1.0**
F19K	**Shaleruckik Mo**	**7.60**	**345**	P	**Pn**	**12 29 39.3**	**+0.4**
	baz=160						
P29M	**Windy Craggy**	**7.63**	**83**		**Pn**	**12 29 40.1**	**+0.5**
P29M	**Windy Craggy**	**7.63**	**83**	P	**Pn**	**12 29 40.2**	**+0.6**
	baz=276,SNR=93						
ISNN	**Isanotski Nort**	**7.64**	**236**		**Pn**	**12 29 38.8**	**-0.9**
F21K	**Alatna River**	**7.66**	**358**		**Pn**	**12 29 40.6**	**+0.8**
F21K	**Alatna River**	**7.66**	**358**	P	**Pn**	**12 29 40.3**	**+0.5**
	baz=177,SNR=42						
F18K	**Selawik**	**7.68**	**339**		**Pn**	**12 29 39.9**	**-0.2**
F18K	**Selawik**	**7.68**	**339**	P	**Pn**	**12 29 40.2**	**+0.2**
	baz=153,SNR=11						
HYT	**Haines Junctio**	**7.71**	**74**		**Pn**	**12 29 41.9**	**+1.2**
HYT	**Haines Junctio**	**7.71**	**74**	P	**Pn**	**12 29 41.3**	**+0.6**
	baz=268,SNR=54						
ANM	**Nome**	**7.71**	**315**		**Pn**	**12 29 41.4**	**+0.8**
ANM	**Nome**	**7.71**	**315**	P	**Pn**	**12 29 41.4**	**+0.8**
ANM	**Nome**	**7.71**	**315**	P	**Pn**	**12 29 40.9**	**+0.3**
	baz=124,SNR=31						
COLD	**Coldfoot**	**7.74**	**7**		**Pn**	**12 29 40.6**	**-0.3**
COLD	**Coldfoot**	**7.74**	**7**	P	**Pn**	**12 29 41.2**	**+0.3**
	baz=190,SNR=80						
DAWY	**Dawson**	**7.75**	**49**	P	**Pn**	**12 29 41.3**	**+0.2**
	baz=241,SNR=196						
FYU	**Fort Yukon**	**7.78**	**23**		**Pn**	**12 29 40.7**	**-0.7**
G25K	**Bearman Lake**	**7.79**	**20**		**Pn**	**12 29 41.0**	**-0.6**
G25K	**Bearman Lake**	**7.79**	**20**	P	**Pn**	**12 29 41.1**	**-0.6**
	baz=206						
F17K	**Baldwin Pennin**	**7.86**	**334**		**Pn**	**12 29 42.5**	**-0.1**
F17K	**Baldwin Pennin**	**7.86**	**334**	P	**Pn**	**12 29 42.4**	**-0.1**
	baz=147,SNR=30						
L29M	**L29M**	**7.87**	**57**		**Pn**	**12 29 43.4**	**+0.7**
L29M	**L29M**	**7.87**	**57**	P	**Pn**	**12 29 43.2**	**+0.5**
	baz=250,SNR=198						
I27K	**Kandik River**	**7.91**	**36**	P	**Pn**	**12 29 42.6**	**-0.8**
	baz=226,SNR=71						
F22K	**John River**	**7.94**	**2**		**Pn**	**12 29 43.9**	**+0.2**
F22K	**John River**	**7.94**	**2**	P	**Pn**	**12 29 43.8**	**+0.2**
	baz=182						
N30M	**Aishikik Lake**	**7.96**	**70**		**Pn**	**12 29 44.1**	**0.0**
N30M	**Aishikik Lake**	**7.96**	**70**	P	**Pn**	**12 29 44.0**	**0.0**
	baz=264,SNR=193						
P30M	**Million Dollar**	**7.98**	**79**		**Pn**	**12 29 45.0**	**+0.7**
P30M	**Million Dollar**	**7.98**	**79**	P	**Pn**	**12 29 44.6**	**+0.2**
	baz=273						
E19K	**Redstone River**	**8.13**	**348**		**Pn**	**12 29 46.7**	**+0.6**
F15K	**North Star Dit**	**8.19**	**323**		**Pn**	**12 29 47.2**	**+0.1**
F15K	**North Star Dit**	**8.19**	**323**	P	**Pn**	**12 29 47.1**	**+0.1**
	baz=133,SNR=9.4						
F24K	**Squaw Lake**	**8.24**	**13**		**Pn**	**12 29 47.8**	**0.0**
F24K	**Squaw Lake**	**8.24**	**13**	P	**Pn**	**12 29 47.5**	**-0.3**
	baz=198,SNR=53						
M30M	**Minto, Yukon**	**8.30**	**62**		**Pn**	**12 29 49.2**	**+0.7**
M30M	**Minto, Yukon**	**8.30**	**62**	P	**Pn**	**12 29 49.3**	**+0.7**
	baz=256,SNR=76						
I28M	**Miner Creek**	**8.33**	**40**		**Pn**	**12 29 49.3**	**+0.2**
I28M	**Miner Creek**	**8.33**	**40**	P	**Pn**	**12 29 49.2**	**+0.2**
	baz=232,SNR=168						
PLBC	**Pleasant Camp**	**8.35**	**84**		**Pn**	**12 29 49.7**	**+0.4**
PLBC	**Pleasant Camp**	**8.35**	**84**	P	**Pn**	**12 29 49.3**	**+0.1**
	baz=278,SNR=44						
J29N	**Klondike Camp**	**8.39**	**48**	P	**Pn**	**12 29 50.0**	**+0.2**
	baz=242,SNR=149						
H27K	**Steamboat Moun**	**8.39**	**33**		**Pn**	**12 29 50.0**	**+0.2**
H27K	**Steamboat Moun**	**8.39**	**33**	P	**Pn**	**12 29 48.9**	**-0.9**
	baz=223,SNR=43						
K29M	**Barlow Dome**	**8.39**	**53**		**Pn**	**12 29 50.5**	**+0.5**
K29M	**Barlow Dome**	**8.39**	**53**	P	**Pn**	**12 29 50.2**	**+0.3**
	baz=247,SNR=110						
O30N	**Mendenhall**	**8.40**	**75**		**Pn**	**12 29 50.5**	**+0.5**
O30N	**Mendenhall**	**8.40**	**75**	P	**Pn**	**12 29 50.1**	**+0.2**
	baz=270,SNR=51						
G26K	**Porcupine Rive**	**8.40**	**25**		**Pn**	**12 29 49.1**	**-0.9**
G26K	**Porcupine Rive**	**8.40**	**25**	P	**Pn**	**12 29 49.2**	**-0.7**
	baz=213,SNR=45						
E17K	**Hotham Inlet**	**8.53**	**335**		**Pn**	**12 29 51.3**	**-0.3**
E17K	**Hotham Inlet**	**8.53**	**335**	P	**Pn**	**12 29 51.2**	**-0.4**
	baz=147,SNR=17						
E22K	**Anaktuvuk Pass**	**8.58**	**2**		**Pn**	**12 29 52.7**	**+0.4**
E22K	**Anaktuvuk Pass**	**8.58**	**2**	P	**Pn**	**12 29 52.7**	**+0.4**
	baz=183						
F14K	**Arctic Creek**	**8.58**	**319**		**Pn**	**12 29 52.5**	**+0.2**
F14K	**Arctic Creek**	**8.58**	**319**	P	**Pn**	**12 29 51.7**	**-0.6**
	baz=127,SNR=5.5						
E18K	**Tukpahlearik C**	**8.58**	**339**		**Pn**	**12 29 52.7**	**+0.4**
E18K	**Tukpahlearik C**	**8.58**	**339**	P	**Pn**	**12 29 52.6**	**+0.3**
	baz=152						
N31M	**Braeburn, Yuko**	**8.59**	**70**		**Pn**	**12 29 53.1**	**+0.5**
N31M	**Braeburn, Yuko**	**8.59**	**70**	P	**Pn**	**12 29 53.2**	**+0.7**
	baz=265,SNR=116						
E23K	**Chandalar**	**8.60**	**8**		**Pn**	**12 29 52.7**	**0.0**
E23K	**Chandalar**	**8.60**	**8**	P	**Pn**	**12 29 52.8**	**0.0**
	baz=191,SNR=69						
F25K	**Christian Rive**	**8.62**	**19**		**Pn**	**12 29 51.6**	**-1.3**
F25K	**Christian Rive**	**8.62**	**19**	P	**Pn**	**12 29 51.8**	**-1.1**
	baz=205,SNR=33						
BMAR	**Burnt Mountain**	**8.66**	**21**		**Pn**	**12 29 53.0**	**-0.5**
E24K	**Your Creek**	**8.71**	**11**	P	**Pn**	**12 29 53.7**	**-0.5**
	baz=195,SNR=48						
S31K	**Pelican**	**8.75**	**94**		**Pn**	**12 29 54.2**	**-0.5**
S31K	**Pelican**	**8.75**	**94**	P	**Pn**	**12 29 54.2**	**-0.5**
	baz=288						
G27K	**Doyon Strip**	**8.79**	**30**	P	**Pn**	**12 29 54.0**	**-1.2**
	baz=220,SNR=50						
E20K	**Nigu River**	**8.81**	**352**	P	**Pn**	**12 29 55.8**	**+0.2**
	baz=169						
I29M	**Ogilvie Camp,**	**8.83**	**43**	P	**Pn**	**12 29 56.6**	**+0.8**
	baz=236,SNR=153						
SKAG	**Skagway**	**8.87**	**83**	P	**Pn**	**12 29 56.8**	**+0.5**
	baz=279						
R31K	**City Hall, Gus**	**8.88**	**90**	P	**Pn**	**12 29 56.7**	**+0.3**
	baz=285						
E21K	**Killik River**	**8.89**	**357**	P	**Pn**	**12 29 56.1**	**-0.4**
	baz=176						
AKUT	**Akutan**	**8.97**	**238**		**Pn**	**12 29 58.2**	**+0.5**
AKUT	**Akutan**	**8.97**	**238**	P	**Pn**	**12 29 58.7**	**+1.0**
AKUT	**Akutan**	**8.97**	**238**	S	**Sn**	**12 31 36.3**	**-0.5**
F26K	**Sheenjek River**	**8.97**	**22**		**Pn**	**12 29 56.9**	**-0.8**
F26K	**Sheenjek River**	**8.97**	**22**	P	**Pn**	**12 29 57.1**	**-0.6**
	baz=210,SNR=63						
MAYO	**Mayo, Yukon**	**8.98**	**56**		**Pn**	**12 29 59.1**	**+1.3**
MAYO	**Mayo, Yukon**	**8.98**	**56**	P	**Pn**	**12 29 59.1**	**+1.3**
	baz=251,SNR=63						
WHY	**Whitehorse**	**9.00**	**76**		**Pn**	**12 29 58.3**	**+0.1**
WHY	**Whitehorse**	**9.00**	**76**	P	**Pn**	**12 29 58.5**	**+0.3**
	baz=271,SNR=96						
AHB	**Akutan Harbor**	**9.00**	**238**		**Pn**	**12 29 58.6**	**+0.4**
AKMO	**Akutan Morgan**	**9.10**	**238**		**Pn**	**12 30 00.3**	**+0.8**
E25K	**Arctic Village**	**9.12**	**17**		**Pn**	**12 29 58.6**	**-1.1**
E25K	**Arctic Village**	**9.12**	**17**	P	**Pn**	**12 29 58.2**	**-1.4**
	baz=204,SNR=21						
J30M	**Hart River**	**9.17**	**50**		**Pn**	**12 30 01.4**	**+0.9**
J30M	**Hart River**	**9.17**	**50**	P	**Pn**	**12 30 01.3**	**+0.9**
	baz=245,SNR=276						
TNA	**Tin City**	**9.17**	**317**		**Pn**	**12 30 01.1**	**+0.8**
TNA	**Tin City**	**9.17**	**317**	P	**Pn**	**12 29 59.0**	**-1.3**
	baz=124,SNR=5.7						
TOLK	**Toolik Lake Re**	**9.18**	**7**		**Pn**	**12 30 01.2**	**+0.6**
TOLK	**Toolik Lake Re**	**9.18**	**7**	P	**Pn**	**12 30 01.0**	**+0.5**
	baz=190,SNR=57						
D19K	**Kuna River**	**9.22**	**348**		**Pn**	**12 30 02.4**	**+1.3**
D19K	**Kuna River**	**9.22**	**348**	P	**Pn**	**12 30 01.2**	**+0.2**
	baz=163						
D20K	**Etivluk River**	**9.29**	**351**	P	**Pn**	**12 30 02.4**	**+0.3**
	baz=168						
D17K	**Noatak River**	**9.31**	**335**	P	**Pn**	**12 30 02.7**	**+0.5**
	baz=146						
D22K	**Ayikyak River**	**9.31**	**0**	P	**Pn**	**12 30 02.5**	**+0.2**
	baz=180						
H29M	**Whitestone**	**9.32**	**39**		**Pn**	**12 30 02.9**	**+0.5**
H29M	**Whitestone**	**9.32**	**39**	P	**Pn**	**12 30 03.0**	**+0.6**
	baz=232,SNR=22						
M31M	**Drury Creek, Y**	**9.33**	**66**		**Pn**	**12 30 03.2**	**+0.6**
M31M	**Drury Creek, Y**	**9.33**	**66**	P	**Pn**	**12 30 03.2**	**+0.6**
	baz=262,SNR=90						
P08K	**Saint George I**	**9.37**	**259**	P	**Pn**	**12 30 03.9**	**+0.8**
	baz=64						
D23K	**Nanushuk River**	**9.44**	**5**		**Pn**	**12 30 05.4**	**+1.3**
D23K	**Nanushuk River**	**9.44**	**5**	P	**Pn**	**12 30 05.4**	**+1.3**
	baz=187,SNR=52						
I30M	**Mount Dempster**	**9.45**	**46**	P	**Pn**	**12 30 04.4**	**+0.1**
	baz=241,SNR=39						
UNV	**Unalaska Valle**	**9.48**	**239**		**Pn**	**12 30 04.2**	**-0.5**
UNV	**Unalaska Valle**	**9.48**	**239**	P	**Pn**	**12 30 04.5**	**-0.2**
	baz=47						
SIT	**Sitka**	**9.53**	**98**		**Pn**	**12 30 04.7**	**-0.6**
SIT	**Sitka**	**9.53**	**98**	P	**Pn**	**12 30 05.3**	**0.0**
SIT	**Sitka**	**9.53**	**98**	P	**Pn**	**12 30 04.7**	**-0.6**
SIT	**Sitka**	**9.53**	**98**	P	**Pn**	**12 30 05.4**	**+0.2**
	baz=293						
MNAT	**Makushin Natee**	**9.54**	**239**		**Pn**	**12 30 05.3**	**-0.1**
MSW	**Makushin Switc**	**9.56**	**240**		**Pn**	**12 30 05.6**	**-0.2**
RDOG	**Red Dog Mine**	**9.57**	**337**	P	**Pn**	**12 30 05.5**	**-0.3**
	baz=148						
JIS	**Juneau Island**	**9.60**	**90**	P	**Pn**	**12 30 07.4**	**+1.2**
C21K	**Knifeblade Rid**	**9.63**	**356**		**Pn**	**12 30 07.4**	**+0.8**
C21K	**Knifeblade Rid**	**9.63**	**356**	P	**Pn**	**12 30 06.8**	**+0.1**
	baz=174,SNR=9.2						
P32M	**Atlin**	**9.67**	**82**		**Pn**	**12 30 07.1**	**-0.1**
P32M	**Atlin**	**9.67**	**82**	P	**Pn**	**12 30 07.0**	**-0.1**
	baz=278,SNR=14						
D24K	**Happy Valley**	**9.74**	**8**		**Pn**	**12 30 08.2**	**+0.1**
D24K	**Happy Valley**	**9.74**	**8**	P	**Pn**	**12 30 08.0**	**0.0**
	baz=192						
S32K	**Killisnoo**	**9.76**	**95**	P	**Pn**	**12 30 09.1**	**+0.8**
	baz=290,SNR=6.0						
C18K	**Utukok River**	**9.78**	**342**	P	**Pn**	**12 30 09.6**	**+0.9**
	baz=154,SNR=8.9						
F28M	**Old Crow**	**9.86**	**30**		**Pn**	**12 30 08.7**	**-1.0**
F28M	**Old Crow**	**9.86**	**30**	P	**Pn**	**12 30 08.5**	**-1.2**
	baz=222,SNR=62						
G29M	**Pine Creek**	**9.87**	**36**	P	**Pn**	**12 30 10.2**	**+0.2**
	baz=229,SNR=17						
N32M	**Quiet Lake**	**9.87**	**73**		**Pn**	**12 30 10.4**	**+0.4**
N32M	**Quiet Lake**	**9.87**	**73**	P	**Pn**	**12 30 10.0**	**0.0**
	baz=270						
E27K	**Coleen River**	**9.90**	**25**		**Pn**	**12 30 09.1**	**-1.2**
E27K	**Coleen River**	**9.90**	**25**	P	**Pn**	**12 30 09.4**	**-1.0**
	baz=215,SNR=21						
EPYK	**Eagle Plains**	**9.95**	**40**	P	**Pn**	**12 30 10.6**	**-0.3**
	baz=235,SNR=30						
C19K	**Lookout Ridge**	**9.97**	**346**	P	**Pn**	**12 30 11.1**	**-0.2**
	baz=160						
C17K	**DeLong Mountai**	**9.98**	**337**	P	**Pn**	**12 30 10.7**	**-0.7**
	baz=148						
P33M	**Teslin, Yukon**	**10.04**	**78**		**Pn**	**12 30 12.9**	**+0.6**
P33M	**Teslin, Yukon**	**10.04**	**78**	P	**Pn**	**12 30 12.0**	**-0.4**
	baz=275,SNR=33						
B21K	**Ikpikpuk River**	**10.09**	**356**	P	**Pn**	**12 30 12.3**	**-0.5**
	baz=175						
D25K	**Kavik River**	**10.13**	**13**		**Pn**	**12 30 12.6**	**-0.9**
D25K	**Kavik River**	**10.13**	**13**	P	**Pn**	**12 30 13.2**	**-0.3**
	baz=199,SNR=106						
C16K	**Lisburne Hills**	**10.28**	**333**	P	**Pn**	**12 30 15.9**	**+0.5**
	baz=142						
C24K	**Franklin Bluff**	**10.30**	**8**		**Pn**	**12 30 15.8**	**+0.1**
C24K	**Franklin Bluff**	**10.30**	**8**	P	**Pn**	**12 30 15.1**	**-0.6**
	baz=192						
C23K	**Itkillik River**	**10.32**	**4**		**Pn**	**12 30 16.0**	**+0.1**
C23K	**Itkillik River**	**10.32**	**4**	P	**Pn**	**12 30 16.1**	**+0.2**
	baz=186						
G30M	**tAoh Zraii Nji**	**10.47**	**38**		**Pn**	**12 30 18.0**	**0.0**
G30M	**tAoh Zraii Nji**	**10.47**	**38**	P	**Pn**	**12 30 18.1**	**0.0**
	baz=233,SNR=25						
H31M	**Peel River**	**10.47**	**46**		**Pn**	**12 30 18.9**	**+0.8**
H31M	**Peel River**	**10.47**	**46**	P	**Pn**	**12 30 18.8**	**+0.6**
	baz=242,SNR=81						
Q32M	**Nakina River**	**10.51**	**85**		**Pn**	**12 30 19.6**	**+0.7**
Q32M	**Nakina River**	**10.51**	**85**	P	**Pn**	**12 30 20.0**	**+1.1**
	baz=282						
B18K	**Kokolik River**	**10.53**	**342**	P	**Pn**	**12 30 19.5**	**+0.8**

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      baz=154
B20K  Meade River       10.61 352   P      Pn     12 30 18.1 -1.8
      baz=168
E28M  Babbage River     10.70  27          Pn     12 30 20.2 -0.9
E28M  Babbage River     10.70  27   P      Pn     12 30 19.2 -1.9
      baz=219
C27K  Jago River        10.77  17          Pn     12 30 21.2 -0.9
C27K  Jago River        10.77  17   P      Pn     12 30 21.2 -0.9
      baz=206,SNR=20
B22K  Teshekpuk Lake    10.79 359   P      Pn     12 30 21.2 -1.1
      baz=178
C26K  Camden Bay        10.87  15   P      Pn     12 30 22.2 -1.2
      baz=202
D27M  Malcolm River     10.91  23   P      Pn     12 30 22.9 -1.2
      baz=214,SNR=20
E29M  Blow River        10.93  30   P      Pn     12 30 23.0 -1.3
      baz=224,SNR=30
F30M  Barrier River     10.99  36   P      Pn     12 30 24.4 -0.7
      baz=231,SNR=11
U33K  Whale Pass        11.03 100   P      Pn     12 30 25.4 -0.2
      baz=297,SNR=14
G31M  Satah River       11.06  41   P      Pn     12 30 26.0 -0.1
      baz=237,SNR=56
R33M  Jennings River    11.08  82   P      Pn     12 30 26.9 +0.4
      baz=281,SNR=21
NIKH  Nikolski High     11.11 240   P      Pn     12 30 27.3 +0.5
      baz=47
A19K  Wainwright        11.19 345   P      Pn     12 30 28.5 +0.7
      baz=158
WRAK  Wrangell Islan    11.29  98          Pn     12 30 29.6 +0.5
WRAK  Wrangell Islan    11.29  98   P      Pn     12 30 29.7 +0.5
      baz=295
CRAG  Craig             11.33 103   P      Pn     12 30 29.5 -0.3
CRAG  Craig             11.33 103   P      Pn     12 30 29.9 +0.1
      baz=300
S34M  Telegraph Cree    11.36  89   P      Pn     12 30 31.3 +1.1
      baz=288,SNR=16
D28M  Stokes Point      11.45  26   P      Pn     12 30 31.5 +0.3
      baz=219,SNR=44
A22K  Sinclair Lake     11.48 356   P      Pn     12 30 29.7 -2.0
      baz=174
F31M  Tsiigehtchic      11.52  39   P      Pn     12 30 31.4 -0.8
      baz=236,SNR=82
DLBC  Dease Lake        11.77  86   P      Pn     12 30 36.6 +0.9
      comp=E,16nm,0.4s,baz=230,slow=8.8,SNR=73
DLBC                                S      Sn     12 32 36.3 -8.7
      comp=E,16nm,0.4s,baz=168,slow=27,SNR=7.4
DLBC  Dease Lake        11.77  86   P      Pn     12 30 36.3 +0.6
      baz=286,SNR=16
WTLY  Watson Lake, Y    12.05  77   P      Pn     12 30 41.0 +1.6
      baz=278,SNR=20
INK   Inuvik            12.09  36   P      Pn     12 30 38.6 -1.2
      comp=E,42nm,0.8s,baz=233,slow=16,SNR=97
INK                                 LR     LR     12 34 59.2
      comp=E,142nm,18.8s,baz=259,slow=36
INK   Inuvik            12.09  36   P      Pn     12 30 38.5 -1.4
      baz=233,SNR=36
T35M  Bob Quinn         12.13  93   P      Pn     12 30 41.5 +1.1
      baz=292,SNR=8.8
V35K  Ketchikan         12.15 101   P      Pn     12 30 41.4 +0.7
      baz=299,SNR=7.4
ATKA  Atka Island       14.06 248   P      Pn     12 31 07.0 +1.2
TOAD  Toad River Com    14.09  81   P      Pn     12 31 07.9 +1.8
      baz=285,SNR=16
KOTAN Kotaneelee Air    14.39  75   P      P      12 31 12.1 -2.1
      baz=281,SNR=22
WRGLY Wrigley           14.43  63   P      P      12 31 11.9 -2.7
      baz=269,SNR=32
ADK   Adak              15.45 251   Pn     Pn     12 31 23.6 +0.2
ADK                                 IAmb   IAmb   12 31 27.4
      comp=Z,96nm,1.2s
ADK   Adak              15.45 251   P      Pn     12 31 24.0 +0.5
ADK   Adak              15.45 251   P      Pn     12 31 23.7 +0.2
ADK                                 pmax   pmax
      comp=Z,96nm,1.2s
C36M  Paulatuk          15.58  39   P      Pn     12 31 22.6 -2.4
      baz=246,SNR=38
BBB   Bella Bella       15.63 108   P      P      12 31 26.8 -1.2
      comp=Z,3.2nm,0.5s,baz=317,slow=11,SNR=9.8
BBB                                 S      Sn     12 34 16.9 -1.4
      comp=Z,3.8nm,0.5s,baz=48,slow=19,SNR=13
BBB                                 LR     LR     12 36 07.5
      comp=Z,136nm,18.8s,baz=250,slow=32
KIWB  Kanaga Island     15.69 251   Pn     Pn     12 31 26.2 -0.4
KIWB                                IAmb   IAmb   12 31 51.6
      comp=Z,158nm,1.4s
A36M  Sachs Harbour     16.54  30          Pn     12 31 35.5 -1.4
A36M  Sachs Harbour     16.54  30   P      Pn     12 31 35.3 -1.6
      baz=236,SNR=141
YKAW3 Yellowknife Wh    18.51  64   P      Pn     12 32 00.7 -0.2
YKAW3                               IAmb   IAmb   12 32 04.5
      comp=Z,39nm,0.8s
YKA   Yellowknife Ar    18.52  65   P      Pn     12 32 01.1 +0.1
      comp=Z,30nm,0.8s,baz=285,slow=13,SNR=154
YKA                                 PcP    PcP    12 36 25.2 +0.2
      comp=Z,0.8nm,0.4s,baz=289,slow=2.7,SNR=11
YKA                                 LR     LR     12 39 04.3
      comp=Z,119nm,18.3s,baz=228,slow=36
YKA                                 ScP    ScP    12 39 52.6 +1.1
      comp=Z,0.8nm,0.6s,baz=291,slow=2.5,SNR=8.3
YKAW1 Yellowknife Wh    18.58  65   P      Pn     12 32 01.7 +0.1
YKAW1                               IAmb   IAmb   12 32 03.3
      comp=Z,41nm,1.1s
SHEM  Shemya Is, Ala    19.52 264   P      P      12 32 10.5 -0.1
      comp=Z,58nm,0.7s,baz=71,slow=17,SNR=2.6
LLLB  Lillooet          19.67 104   P      Pn     12 32 14.5 -0.2
B08A  Colville Reser    22.40 105   P      P      12 32 43.5 +1.9
EDM   Edmonton          22.46  89   P      P      12 32 43.3 +1.2
EDM                                 IAmb   IAmb   12 33 17.2
      comp=Z,42nm,1.1s
EDM   Edmonton          22.46  89   P      P      12 32 43.3 +1.2
EDM                                 pmax   pmax
      comp=Z,42nm,1.1s
LTY   Liberty           22.52 109   P      P      12 32 45.3 +2.5
MXC   Moxie City        23.18 110   P      P      12 32 51.6 +2.3
WAH2  Wahluke Slope     23.40 108   P      P      12 32 52.9 +1.5
NEW   Newport           23.55 103   LR     LR     12 41 00.6
      comp=Z,85nm,19.7s,baz=312,slow=33
NEW   Newport           23.55 103   P      P      12 32 54.6 +1.9
NEW   Newport           23.55 103   P      P      12 32 54.7 +1.9
NEW                                 pmax   pmax
      comp=Z,10.0nm,1.1s
F10A  Beach Ranch, E    25.09 107   P      P      12 33 08.4 +1.6
YBH   Yreka Blue Hor    25.79 120   LR     LR     12 41 01.0
      comp=Z,6.4nm,19.8s,baz=329,slow=30
SEY   Seymchan          25.89 301   P      P      12 33 11.9 -1.7
      comp=Z,6.8nm,0.7s,baz=79,slow=9.1,SNR=8.9
SEY                                 PcP    PcP    12 36 40.5 +0.7
      comp=Z,2.7nm,1.0s,baz=104,slow=6.0,SNR=4.3
SEY                                 LR     LR     12 43 26.8
      comp=Z,45nm,19.8s,baz=50,slow=36
      comp=Z,6.8nm,0.7s
SEY   Seymchan          25.89 301 i P      P      12 33 14.1 +0.5
SEY                                 pmax   pmax
      comp=Z,7.0nm,0.9s
BLKN  Baker Lake        26.31  55   P      P      12 33 18.7 +1.3
BLKN                                IAmb   IAmb   12 33 22.9
      comp=Z,15nm,0.7s
FFC   Flin Flon         27.40  78   P      P      12 33 28.4 +1.0
FFC   Flin Flon         27.40  78   P      P      12 33 28.4 +1.0
FFC                                 pmax   pmax
      comp=Z,4.0nm,0.9s
PEA0B Petropavlovsk-    27.62 279   P      P      12 33 29.7 +0.4
PEA0B Petropavlovsk-    27.62 279   P      P      12 33 29.7 +0.4
PEA0B                               pmax   pmax
      comp=Z,63nm,1.2s
PETK  Petropavlovsk-    27.62 279   P      P      12 33 28.4 -0.9
      comp=Z,24nm,0.9s,baz=68,slow=14,SNR=46
PETK                                PcP    PcP    12 36 44.8 +0.7
      comp=Z,6.1nm,1.0s,baz=100,slow=3.7,SNR=5.3
PETK                                LR     LR     12 44 21.6
      comp=Z,33nm,20.9s,baz=86,slow=36
      comp=Z,24nm,0.9s
MA2   Magadan           27.84 295   P      P      12 33 31.0 -0.2
      comp=Z,25nm,0.9s,baz=98,slow=13,SNR=6.9
MA2                                 LR     LR     12 44 33.2
      comp=Z,60nm,18.7s,baz=70,slow=36
      comp=Z,25nm,0.9s
YHH   Holmes Hill       29.08 102   P      P      12 33 45.3 +2.6
ELK   Elko              29.98 112   LR     LR     12 44 15.7
      comp=Z,78nm,20.2s,baz=315,slow=33
NVAR  Mina Array Bea    30.44 119   P      P      12 33 57.0 +2.3
      comp=Z,2.4nm,0.8s,baz=311,slow=9.0,SNR=14
NVAR                                PcP    PcP    12 36 52.8 +1.1
      comp=Z,0.5nm,0.5s,baz=310,slow=3.6,SNR=2.4
NVAR                                LR     LR     12 43 46.0
      comp=Z,102nm,21.1s,baz=16,slow=31
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      comp=Z,2.4nm,0.8s
PDAR  Pinedale Array    31.20 103   P      P      12 34 02.7 +1.3
      comp=Z,0.6nm,0.6s,baz=326,slow=4.9,SNR=9.7
PDAR                                PcP    PcP    12 36 54.0 +0.3
      comp=Z,0.4nm,0.5s,baz=123,slow=2.2,SNR=4.3
PDAR                                ScP    ScP    12 40 27.0 -0.7
      comp=Z,0.2nm,0.6s,baz=299,slow=7.6,SNR=1.5
      comp=Z,0.6nm,0.6s
TIXI  Tiksi             31.87 324   P      P      12 34 05.7 -0.9
      comp=Z,4.4nm,0.5s,baz=88,slow=10,SNR=13
TIXI                                PcP    PcP    12 36 54.3 -0.4
      comp=Z,2.0nm,0.3s,baz=56,slow=4.6,SNR=6.2
TIXI                                ScP    ScP    12 40 28.2 -0.9
      comp=Z,2.6nm,0.5s,baz=86,slow=3.9,SNR=7.5
TIXI                                LR     LR     12 49 37.3
      comp=Z,27nm,18.2s,baz=304,slow=41
      comp=Z,4.4nm,0.5s
TIXI  Tiksi             31.87 324   P      P      12 34 05.7 -0.9
TIXI                                IAmb   IAmb   12 34 07.0
      comp=Z,5.3nm,0.6s
TIXI  Tiksi             31.87 324ceP       P      12 34 06.2 -0.4
TIXI                                pmax   pmax
      comp=Z,9.0nm,1.3s
GRAC  Grapevine Rang    32.04 119   P      P      12 34 11.1 +2.6
GRAC                                IAmb   IAmb   12 34 36.7
      comp=Z,17nm,1.4s
PFO   Pinyon Flats O    35.28 121   LR     LR     12 45 44.7
      comp=Z,55nm,21.1s,baz=357,slow=30
YAK   Yakutsk           35.80 308   P      P      12 34 40.0 -0.6
      comp=Z,40nm,0.7s,baz=228,slow=2.5,SNR=11
      comp=Z,40nm,0.7s
YAK   Yakutsk           35.80 308   P      P      12 34 40.5 -0.2
YAK   Yakutsk           35.80 308  eP      P      12 34 39.8 -0.9
YAK                                e*PP    pP     12 35 00.6 -2.0
YAK                                e                12 36 02.3
YAK                                e                12 37 05.7
YAK                                eS      S      12 40 11.1 +0.5
YAK                                e*SS    sS     12 40 46.8 -1.3
YAK                                e                12 44 48.1
YAK                                 pmax   pmax
      comp=Z,62nm,1.4s
YAK                                 pmax   pmax
      comp=N,3.0nm,1.1s
YAK                                 pmax   pmax
      comp=E,4.0nm,0.9s
YAK                                 pmax   pmax
      comp=Z,119nm,3.5s
YAK                                 pmax   pmax
      comp=N,175nm,2.5s
YAK                                 pmax   pmax
      comp=E,273nm,5.6s
YAK                                 smax   smax
      comp=E,241nm,4.3s
YAK                                 smax   smax
      comp=N,215nm,4.3s
TYV   Tymovskoe         36.44 286  eP      P      12 34 46.6 +0.3
TYV                                 pmax   pmax
      comp=Z,21nm,0.8s
TYV                                 pmax   pmax
      comp=Z,100nm,2.9s
FRB   Frobisher Bay     37.45  47   LR     LR     12 49 40.2
      comp=Z,132nm,18.6s,baz=79,slow=35
YSS   Yuzhno-Sakhali    38.97 281  eP      P      12 35 08.0 +0.4
YSS                                 pmax   pmax
      comp=Z,30nm,1.0s
GRNR  Gornyy            39.52 290  eP      P      12 35 12.0 -0.2
ASAJ  Asahikawa         41.03 278   P      P      12 35 25.0 +0.2
      comp=Z,17nm,0.7s,baz=253,slow=6.2,SNR=21
      comp=Z,17nm,0.7s
ASAJ  Asahikawa         41.03 278   P      P      12 35 25.0 +0.2
ZEA   Zeya              41.81 299  eP      P      12 35 30.5 -0.5
ZEA                                 pmax   pmax
      comp=E,10.0nm,0.5s
ZEA                                 pmax   pmax
      comp=N,10.0nm,0.6s
ZEA                                 pmax   pmax
      comp=Z,30nm,0.9s
SPITS Spitsbergen Ar    42.30   3   P      P      12 35 33.8 -0.9
      comp=Z,8.5nm,0.6s,baz=8.9,slow=5.9,SNR=10
SPITS                               PcP    PcP    12 37 26.5  0.0
      comp=Z,8.7nm,0.7s,baz=318,slow=1.9,SNR=2.3
      comp=Z,8.5nm,0.6s
SCHQ  Schefferville     43.69  57   P      P      12 35 46.8 +0.6
      comp=Z,8.0nm,1.0s,baz=296,slow=8.2,SNR=5.3
      comp=Z,8.0nm,1.0s
HEH   HeiHe             44.11 295  eP      P      12 35 47.9 -1.6
HEH                                 pmax   pmax
      comp=Z,64nm,0.8s
NRIK  Noril'sk          44.30 334   P      P      12 35 50.3 -0.5
      comp=Z,12nm,0.7s,baz=57,slow=6.1,SNR=23
NRIK                                LR     LR     12 55 36.6
      comp=Z,38nm,19.0s,baz=44,slow=38
      comp=Z,12nm,0.7s
TXAR  Lajitas Array     44.74 110   P      P      12 35 56.8 +1.9
      comp=Z,0.8nm,0.7s,baz=330,slow=6.6,SNR=13
TXAR                                ScP    ScP    12 41 19.9 +1.1
      comp=Z,0.6nm,1.0s,baz=322,slow=0.9,SNR=3.6
TXAR                                LR     LR     12 53 50.2
      comp=Z,52nm,18.3s,baz=357,slow=35
      comp=Z,0.8nm,0.7s
USRK  Ussuriysk Ar.     46.25 286   P      P      12 36 05.4 -1.2
      comp=Z,11nm,0.7s,baz=61,slow=9.9,SNR=12
      comp=Z,11nm,0.7s
MDJ   Mudanjiang        47.11 288   P      P      12 36 12.5 -0.8
MDJ                                 pmax   pmax
      comp=Z,18nm,1.1s
BNX   BinXian           47.34 290  ⇓P      P      12 36 14.9 -0.1
BNX                                 pmax   pmax
      comp=Z,42nm,0.9s
HILR  Hailar Array B    48.08 299   P      P      12 36 20.4 -0.4
      comp=Z,7.7nm,0.4s,baz=50,slow=9.5,SNR=25
      comp=Z,7.7nm,0.4s
MJB9  Matsu-Tunnel      48.91 274   P      P      12 36 28.3 +1.0
MJB9                                IAmb   IAmb   12 36 29.3
      comp=Z,16nm,0.7s
MAJO  Matsushiro        48.91 274   P      P      12 36 27.3 +0.1
MAJO  Matsushiro        48.91 274   P      P      12 36 27.3 +0.1
MAJO                                pmax   pmax
      comp=Z,16nm,0.8s
MJAR  Matsushiro Arr    48.91 274   P      P      12 36 26.9 -0.4
      comp=Z,3.6nm,0.7s,baz=17,slow=7.4,SNR=16
      comp=Z,3.6nm,0.7s
JGF   Kuroka            50.08 274   P      P      12 36 36.3 +0.2
JGF                                 IAmb   IAmb   12 36 37.8
      comp=Z,13nm,0.7s
ARCES ARCESS Array B    51.15   1   P      P      12 36 43.7  0.0
      comp=Z,2.4nm,0.7s,baz=325,slow=1.9,SNR=4.6
      comp=Z,2.4nm,0.7s
APA   Apatity           53.05 357  eP      P      12 36 56.1 -1.7
KS19  Wonju Array Si    53.36 283   P      P      12 37 00.7 +0.2
KSRS  Korea Array       53.37 283   P      P      12 37 00.9 +0.4
      comp=Z,12nm,0.7s,baz=42,slow=6.8,SNR=50
      comp=Z,12nm,0.7s
KSAR  Wonju Array Be    53.40 283   P      P      12 37 00.1 -0.6
KSAR  Wonju Array Be    53.40 283   P      P      12 37 00.1 -0.6
ULN   Ulaanbaatar       54.82 306   P      P      12 37 11.7 +0.5
ULN                                 IAmb   IAmb   12 37 12.2
      comp=Z,8.8nm,0.9s
ULN   Ulaanbaatar       54.82 306 i P      P      12 37 11.4 +0.3
ULN                                 pmax   pmax
      comp=Z,10.0nm,1.0s
SONM  Songino Array     55.11 306   P      P      12 37 13.5 +0.3
      comp=Z,14nm,0.8s,baz=41,slow=7.1,SNR=80
SONM                                PcP    PcP    12 38 13.3 -0.1
      comp=Z,4.5nm,0.8s,baz=43,slow=1.5,SNR=6.4
SONM                                LR     LR     13 00 27.5
      comp=Z,34nm,19.8s,baz=183,slow=36
      comp=Z,14nm,0.8s
SONM  Songino Array     55.11 306   P      P      12 37 13.6 +0.4
JNU   Nakatsue          55.31 277   P      P      12 37 11.7 -3.0
      comp=Z,15nm,1.1s,baz=131,slow=9.8,SNR=2.2
KNGR  Kungurtug, Tuv    56.33 314 i P      P      12 37 22.2 +0.3
KNGR                                pmax   pmax
      comp=Z,11nm,1.0s
BJI   Beijing           57.00 294   P      P      12 37 26.9 +0.4
BJI                                 pmax   pmax
      comp=Z,8.0nm,0.9s
ZAA0  Zalesovo Array    57.76 324   P      P      12 37 31.4 -0.2
ZALV  Zalesovo Beam     57.76 324   P      P      12 37 31.4 -0.3
      comp=Z,21nm,0.5s,baz=32,slow=6.9,SNR=125
      comp=Z,21nm,0.5s
HHC   Hu-ho-hao-te      58.46 298  eP      P      12 37 37.2 +0.2
HHC                                 pmax   pmax
      comp=Z,18nm,0.8s
HHC                                 pmax   pmax
      comp=Z,48nm,5.0s
NOA   NORSAR Array B    59.05   9   P      P      12 37 39.8 -0.9
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      comp=Z,1.1nm,0.7s,baz=351,slow=6.7,SNR=4.1
NOA                                 PcP    PcP    12 38 28.3 -0.1
      comp=Z,1.6nm,0.7s,baz=355,slow=4.5,SNR=3.7
      comp=Z,1.1nm,0.7s
FINES FINESS Array B    59.28   1   P      P      12 37 41.8 -0.3
      comp=Z,3.2nm,0.8s,baz=15,slow=7.9,SNR=9.0
FINES                               PcP    PcP    12 38 28.4 -0.8
      comp=Z,2.9nm,0.8s,baz=345,slow=4.8,SNR=1.5
      comp=Z,3.2nm,0.8s
FINES FINESS Array B    59.28   1 i P      P      12 37 42.7 +0.6
FINES                               pmax   pmax
      comp=Z,3.0nm,0.9s
BTO   Baotou            59.35 299  eP      P      12 37 43.1  0.0
BTO                                 pP     pP     12 38 07.3 +0.6
BTO                                 sP     sP     12 38 18.2 +1.0
BTO                                 pmax   pmax
      comp=Z,13nm,0.9s
BTO                                 pmax   pmax
      comp=Z,270nm,3.9s
KLMR  Klimovskoe        59.49 353  eP      P      12 37 42.1 -1.5
KLMR                               e                12 39 53.3
KLMR                                pmax   pmax
      comp=Z,28nm,1.4s
HFS   Hagfors           60.13   8   P      P      12 37 47.5 -0.5
      comp=Z,3.7nm,0.8s,baz=40,slow=7.7,SNR=10
      comp=Z,3.7nm,0.8s
DGZ   Jazzator, Alta    60.60 320 i P      P      12 37 51.4 -0.2
DGZ                                 pmax   pmax
      comp=Z,6.0nm,1.1s
SVE   Sverdlovsk        60.92 340  eP      P      12 37 53.6 +0.2
SVE                                 pmax   pmax
      comp=Z,13nm,1.0s
ARTI  Arti              61.73 341d iP      P      12 37 58.9  0.0
ARTI                                S      S      12 46 16.3 +2.5
ARTI                                SS     SS     12 50 15.2 -0.6
ARTI                                pmax   pmax
      comp=Z,13nm,0.7s
NJ2   Nanjing           62.15 286  eP      P      12 38 04.1 +2.1
NJ2                                 pmax   pmax
      comp=Z,6.0nm,0.5s
KURK  Kurchatov         62.42 326   P      P      12 38 03.5  0.0
KURK  Kurchatov         62.42 326 i P      P      12 38 04.2 +0.7
KURK                                pmax   pmax
      comp=Z,12nm,0.9s
BORK  Borovoye          62.47 332   P      P      12 38 03.7 -0.1
BORK                                IAmb   IAmb   12 38 04.7
      comp=Z,12nm,0.8s
BORK  Borovoye          62.47 332 i P      P      12 38 04.5 +0.7
BORK                                pmax   pmax
      comp=Z,12nm,0.9s
BVAR  Borovoye Array    62.47 332   P      P      12 38 03.3 -0.6
      comp=Z,24nm,0.6s,baz=29,slow=6.7,SNR=134
BVAR                                LR     LR     13 08 02.1
      comp=Z,27nm,18.1s,baz=336,slow=39
      comp=Z,24nm,0.6s
KURBB Kurchatov Arra    62.53 326   P      P      12 38 03.8 -0.5
      comp=Z,12nm,0.5s,baz=28,slow=6.7,SNR=67
KURBB                               PP     PP     12 40 21.3 -0.9
      comp=Z,1.3nm,0.6s,baz=30,slow=10,SNR=4.2
      comp=Z,12nm,0.5s
EKA   Eskdalemuir Ar    62.87  19   P      P      12 38 06.0 -0.5
      comp=Z,5.0nm,0.5s,baz=328,slow=5.4,SNR=40
      comp=Z,5.0nm,0.5s
LYN   LuoYang           63.17 293   P      P      12 38 08.8  0.0
LYN                                 pmax   pmax
      comp=Z,36nm,1.0s
GTA   Gaotai            64.74 305   P      P      12 38 18.3 -0.9
GTA                                 pmax   pmax
      comp=Z,39nm,1.0s
MK31  Makanchi Array    64.81 321ceP       P      12 38 19.2 -0.2
MKAR  Makanchi Array    64.81 321   P      P      12 38 19.0 -0.4
      comp=Z,7.1nm,0.6s,baz=38,slow=6.7,SNR=81
      comp=Z,7.1nm,0.6s
XAN   Xi'an             65.24 295   P      P      12 38 21.2 -1.2
XAN                                 pmax   pmax
      comp=Z,22nm,0.9s
OBN   Obninsk           65.39 354 i P      P      12 38 21.8 -1.1
OBN                                e                12 38 53.4
OBN                                 pmax   pmax
      comp=Z,6.0nm,0.9s
OBN                                 MLR    MLR
      comp=Z,111nm,15.0s
LZH   Lanzhou           65.81 300  eP      P      12 38 26.2  0.0
LZH                                 pmax   pmax
      comp=Z,50nm,1.4s
LZDM  Lanzhou Array     65.99 300   P      P      12 38 26.7 -0.8
      comp=Z,11nm,0.7s,baz=31,slow=0.9,SNR=12
      comp=Z,11nm,0.7s
MNK   Minsk             66.24 360 i P      P      12 38 28.5 +0.1
MNK                               i *PP    pP     12 38 51.4 -1.0
MNK                               i                 12 40 55.3
MNK                               i PPP    PPP    12 42 31.2
MNK                               i S      S      12 47 11.4 +1.8
MNK                               i *SS    sS     12 47 51.1 -0.2
MNK                               i SS     SS     12 51 30.3 +4.3
MNK                                 pmax   pmax
      comp=Z,7.0nm,0.8s
MNK                                 pmax   pmax
      comp=N,23nm,1.1s
MNK                                 pmax   pmax
      comp=E,14nm,0.7s
MNK                                 MLR    MLR
      comp=E,68nm,15.0s
MNK                                 MLR    MLR
      comp=Z,89nm,16.0s
MNK                                 MLR    MLR
      comp=N,116nm,17.0s
BELG  Belogornoye       67.15 347 i P      P      12 38 34.9 +0.7
BELG                                pmax   pmax
      comp=Z,2.0nm,0.8s
CLL   Collm             68.85  10  epP     pP     12 39 09.0 +0.1
CLL                                 AMS    AMS    22 40 00.0
      comp=Z,200nm,18.1s
AKASG Malin Array Be    70.04 359   P      P      12 38 50.8 -1.4
      comp=Z,0.8nm,0.4s,baz=4.3,slow=6.0,SNR=5.5
      comp=Z,0.8nm,0.4s
AKASG Malin Array Be    70.04 359 i P      P      12 38 54.0 +1.8
AKASG                               pmax   pmax
      comp=Z,1.0nm,0.5s
DPC   Dobruska-Polom    70.05   7  eP      P      12 38 51.1 -1.2
DPC   Dobruska-Polom    70.05   7  eP      P      12 38 51.1 -1.2
KRLC  Kraliky           70.35   7  eP      P      12 38 55.6 +1.4
KRLC  Kraliky           70.35   7  eP      P      12 38 55.6 +1.4
AAK   Ala-Archa         70.94 325   LR     LR     13 13 36.0
      comp=Z,54nm,18.6s,baz=9.0,slow=39
AAK   Ala-Archa         70.94 325ceP       P      12 38 57.1 -0.9
AAK                                 pmax   pmax
      comp=Z,6.0nm,0.7s
KHC   Kasperske Hory    71.06   9ceP       P      12 38 58.9 +0.4
KHC                                 pmax   pmax
      comp=Z,19nm,2.5s
KHC   Kasperske Hory    71.06   9  eP      P      12 38 58.8 +0.3
GERES GERESS Array B    71.35   9   P      P      12 38 59.4 -0.9
      comp=Z,0.3nm,0.4s,baz=340,slow=3.5,SNR=4.9
      comp=Z,0.3nm,0.4s
MODS  Modra-Piesok      72.08   7  eP      P      12 39 03.5 -1.1
MODS  Modra-Piesok      72.08   7  eP      P      12 39 03.5 -1.1
PZH   PanZhiHua         74.89 297   P      P      12 39 23.3 +1.7
KIV   Kislovodsk        76.02 349  eP      P      12 39 28.2 +0.5
KIV                                 pmax   pmax
      comp=Z,7.0nm,1.1s
KBZ   Khabaz            76.22 348   P      P      12 39 28.5 -0.1
      comp=Z,1.0nm,0.5s,baz=26,slow=10.0,SNR=1.9
      comp=Z,1.0nm,0.5s
KBZ   Khabaz            76.22 348 i P      P      12 39 29.4 +0.7
KBZ                                 pmax   pmax
      comp=Z,4.0nm,1.1s
ESDC  Sonseca Array     77.78  24   P      P      12 39 37.7 +0.1
      comp=Z,5.6nm,0.8s,baz=340,slow=5.5,SNR=21
      comp=Z,5.6nm,0.8s
BRTR  Keskin Array B    80.89 355   P      P      12 39 53.9 -0.7
      comp=Z,1.4nm,0.9s,baz=359,slow=3.5,SNR=3.7
      comp=Z,1.4nm,0.9s
CMAR  Chiang Mai Arr    83.13 295   P      P      12 40 05.5 -1.0
      comp=Z,5.7nm,0.8s,baz=16,slow=5.6,SNR=28
      comp=Z,5.7nm,0.8s
PMG   Port Moresby      83.65 239ceP       P      12 40 08.8 -0.2
PMG                                 pmax   pmax
      comp=Z,10.0nm,1.0s
KEST  Kesra             83.87  15   P      P      12 40 10.1  0.0
      comp=Z,8.8nm,0.9s,baz=358,slow=3.7,SNR=5.3
      comp=Z,8.8nm,0.9s
MD01  Midelt array s    84.14  27          P      12 40 11.9 +0.3
MDP   Montagnes des     90.75  79   LR     LR     13 23 15.9
      comp=Z,19nm,19.2s,baz=106,slow=37
WRA   Warramunga Arr    98.69 245   P      P      12 41 17.9 -1.6
      comp=Z,0.9nm,1.0s,baz=36,slow=5.4,SNR=7.0
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Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,0.9nm,1.0s						
WRA	**Warramunga Arr**	**98.69**	**245**	*i* P	**P**	**12 41 17.8**	**-1.7**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**102.11**	**244**	P	**Pdif**	**12 41 34.9**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=24,slow=4.8,SNR=4.2						
BOSA	**Boshof**	**148.99**	**3**	PKP	**PKPdf**	**12 47 23.6**	**+0.1**
	comp=Z,19nm,0.6s,baz=316,slow=14,SNR=22						
BOSA				PKPbc	**PKiKP**	**12 47 27.5**	**-1.4**
	comp=Z,19nm,0.6s,baz=356,slow=2.4,SNR=67						
QSPA	**South Pole Qui**	**149.40**	**180**	PKP	**PKPdf**	**12 47 23.5**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=331,slow=2.9,SNR=3.6						
QSPA				PKPbc	**PKPab**	**12 47 31.4**	**-1.3**
	comp=Z,3.9nm,0.5s,baz=214,slow=0.7,SNR=62						
MAW	**Mawson**	**162.49**	**228**	PKPab	**PKPab**	**12 48 29.0**	**+0.5**
	comp=Z,2.3nm,0.5s,baz=104,slow=7.2,SNR=7.8						
NVL	**N'lazarevskaya**	**167.13**	**157**	*e*PKIKP	**PKPdf**	**12 47 49.7**	**+5.9**
NVL				pmax	pmax		
	comp=Z,11nm,1.0s						

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*IDC **01** 13:09:03.0±1.4, 55°.27N×166°.74E, h0^{km}, mb3.5/3, mbtmp3.7/5, ML3.4/2, MS2.9/1, Error ellipse: s-maj=41.4km s-min=20.8km az=178.0*

*KRSC **01** 13:09:04.4±1.4, 55°.33N×166°.41E, h36^{km}±8^{km}, Ml4.0*

ISC 01 13:09:05.3±0.9**, 55°.37N**±0°.07×**166°.63E**±0°.05**, h20**^{km}**, n37, σ1^{s}31**/41**, mb3.5**/3**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	**Bering**	**0.41**	**246**	*e*P	**Pb**	**13 09 12.5**	**-1.3**
BKI				*e*S	**Sb**	**13 09 18.7**	**-0.9**
KBTR	**Krutoberegovo**	**2.31**	**293**	*e*P	**Pn**	**13 09 39.6**	**-2.5**
KBTR				*e*S	**Sn**	**13 10 08.0**	**-1.8**
KBG	**Krutoberegovo**	**2.38**	**293**	*e*S	**Sn**	**13 10 09.9**	**-1.8**
MKZ	**Mys Kozlova**	**2.94**	**256**	*e*P	**Pn**	**13 09 50.0**	**-0.8**
SMKR	**Semkarok**	**3.14**	**295**	*e*P	**Pn**	**13 09 53.0**	**-0.7**
SRKR	**Sorokina**	**3.32**	**295**	*e*P	**Pn**	**13 09 55.7**	**-0.4**
BZGR	**Bezymyannyi-Gr**	**3.41**	**282**	*e*P	**Pn**	**13 09 58.8**	**+1.4**
KLY	**Klyuchi**	**3.50**	**288**	*e*P	**Pn**	**13 09 56.5**	**-1.9**
KMNR	**Kamenistaya**	**3.65**	**279**	*e*P	**Pn**	**13 10 01.6**	**+0.9**
KPT	**Kopyto**	**3.67**	**282**	*e*P	**Pn**	**13 10 01.8**	**+0.8**
KOZ	**Kozyrevsk**	**3.88**	**283**	*e*P	**Pn**	**13 10 05.9**	**+2.1**
KII	**Karymskiy**	**4.37**	**255**	*e*P	**Pn**	**13 10 10.9**	**+0.3**
SPN	**Mys Shipunski**	**4.50**	**242**	*e*P	**Pn**	**13 10 11.1**	**-1.0**
SPN				*e*S	**Sn**	**13 11 02.6**	**-1.2**
ESO	**Esso**	**4.52**	**280**	*e*P	**Pn**	**13 10 13.6**	**+1.0**
NLC	**Nalytchevo**	**4.80**	**246**	*e*S	**Sn**	**13 11 11.3**	**-0.1**
SDLR	**Sedlovina**	**4.99**	**248**	*e*P	**Pn**	**13 10 19.7**	**+0.6**
SDLR				*e*S	**Sn**	**13 11 15.8**	**-0.5**
KRER	**Koryakskii**	**5.05**	**249**	*e*P	**Pn**	**13 10 20.9**	**+0.8**
AVH	**Avacha**	**5.08**	**249**	*e*P	**Pn**	**13 10 21.2**	**+0.9**
KRX	**Arik**	**5.08**	**250**	*e*P	**Pn**	**13 10 20.9**	**+0.5**
KOK	**Koryaka**	**5.12**	**249**	*e*P	**Pn**	**13 10 21.7**	**+0.8**
SHEM	**Shemya Is, Ala**	**5.14**	**118**	Pn	**Pn**	**13 10 20.4**	**-0.5**
	4.5nm,0.3s,baz=183,slow=7.0,SNR=4.1						
SHEM				Sn	**Sn**	**13 11 17.4**	**-2.2**
	1.1nm,0.3s,baz=274,slow=20,SNR=1.8						
	45nm,0.8s						
DALK	**Dalny**	**5.18**	**246**	*e*P	**Pn**	**13 10 22.1**	**+0.5**
DALK				*e*S	**Sn**	**13 11 18.8**	**-1.9**
PET	**Petropavlovsk**	**5.24**	**247**	*e*P	**Pn**	**13 10 23.3**	**+0.9**
PET				*e*S	**Sn**	**13 11 21.8**	**-0.3**
KRMR	**Karymshinskiy**	**5.61**	**246**	*e*P	**Pn**	**13 10 28.0**	**+0.5**
RUS	**Russkaya**	**5.63**	**242**	*e*P	**Pn**	**13 10 29.0**	**+1.3**
PETK	**Petropavlovsk-**	**5.71**	**250**	Pn	**Pn**	**13 10 29.1**	**+0.3**
	1.8nm,0.3s,baz=71,slow=18,SNR=36						
PETK				Sn	**Sn**	**13 11 35.3**	**+1.7**
	1.1nm,0.3s,baz=59,slow=17,SNR=4.1						
	7.1nm,0.6s						
MTVR	**Mutnovka**	**5.77**	**243**	*e*P	**Pn**	**13 10 31.9**	**+2.1**
GRL	**Gorelyy**	**5.79**	**244**	*e*P	**Pn**	**13 10 31.8**	**+1.8**
ASAK	**Asacha**	**5.97**	**243**	*e*P	**Pn**	**13 10 33.7**	**+1.3**
KDTR	**Khodutka, Kamc**	**6.22**	**238**	*e*P	**Pn**	**13 10 35.9**	**+0.1**
SEY	**Seymchan**	**10.51**	**322**	LR	LR	13 15 52.0	
	comp=Z,54nm,18.4s,baz=104,slow=38						
ILAR	**Eielson Array**	**24.45**	**49**	P	**P**	**13 14 22.5**	**+0.1**
	1.4nm,1.0s,baz=270,slow=8.6,SNR=10						
	1.4nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**35.59**	**180**	T	T	13 53 14.4	
	baz=0.5,slow=76						
H11N3	**WAKE ISLAND Hy**	**35.60**	**180**	T	T	13 53 15.5	
	baz=0.5,slow=76						
H11N1	**WAKE ISLAND Hy**	**35.60**	**180**	T	T	13 53 04.5	
	baz=0.5,slow=76						
MKAR	**Makanchi Array**	**50.56**	**298**	P	**P**	**13 18 04.0**	**+1.9**
	0.5nm,0.8s,baz=39,slow=5.7,SNR=4.3						
	0.5nm,0.8s						
TXAR	**Lajitas Array**	**66.25**	**73**	P	**P**	**13 19 53.3**	**+1.4**
	0.3nm,0.5s,baz=296,slow=4.0,SNR=3.5						
	0.3nm,0.5s						

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*SKO **01** 13:10:05.6, 41°.63N×19°.53E, h0^{km}, ML2.5*

*PDG **01** 13:10:08.9±0.4, 41°.66N×19°.37E, h3^{km}±2^{km}, ML2.5/13, Error ellipse: s-maj=1.5km s-min=1.8km az=0.0*

ISC 01 13:10:05.1±1.2**, 41°.55N**±0°.04×**19°.51E**±0°.04**, h7**^{km}±10^{km}**, n21, σ1^{s}41**/41**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.33**	**127**	*i* Pg	**Pg**	**13 10 11.3**	**-0.3**
ULC	**Ulcinj**	**0.46**	**334**	*e*Pg	**Pg**	**13 10 14.6**	**+0.5**
ULC				*i* Sg	**Sg**	**13 10 19.4**	**-0.7**
DRME	**Dracevica, Mon**	**0.68**	**339**	*e*Pg	**Pb**	**13 10 18.8**	**-0.6**
DRME				*e*Sg	**Sb**	**13 10 27.3**	**-1.8**
BUM	**Brajici-Budva**	**0.88**	**329**	*e*Pg	**Pb**	**13 10 22.5**	**-0.4**
BUM				*i* Sg	**Sb**	**13 10 34.1**	**-0.8**
PDG	**Podgorica**	**0.90**	**348**	*e*Pg	**Pb**	**13 10 23.1**	**0.0**
PDG				*i* Sg	**Sn**	**13 10 35.4**	**-2.2**
OHR	**Ohrid**	**1.06**	**114**	*i* Pg	**Pg**	**13 10 24.7**	**-0.8**
OHR				*i* Sg	**Sg**	**13 10 41.4**	**+2.1**
OHR				*e*Lg	Lg	13 10 44.2	
	comp=N,70nm,0.7s						
OHR				*e*Lg	Lg	13 10 44.6	
	comp=E,95nm,0.5s						
CEME	**Cevo**	**1.09**	**336**	*e*Pg	**Pb**	**13 10 26.3**	**-0.1**
CEME				*e*Sg	**Sn**	**13 10 41.3**	**-1.1**
PVY	**Plav**	**1.10**	**17**	*e*Pg	**Pn**	**13 10 26.4**	**-0.7**
PVY				*i* Sg	**Sn**	**13 10 44.6**	**+1.9**
HCY	**Herceg Novi**	**1.18**	**320**	*e*Pg	**Pg**	**13 10 27.8**	**+0.1**
HCY				*i* Sg	**Sn**	**13 10 43.9**	**-0.5**
NKME	**Niksic**	**1.29**	**341**	*e*Pg	**Pn**	**13 10 30.4**	**+0.7**
NKME				*e*Sg	**Sn**	**13 10 49.0**	**+1.8**
KOME	**Kolasin**	**1.30**	**0**	*e*Pg	**Pn**	**13 10 30.8**	**+0.9**
KOME				*e*Sg	**Sn**	**13 10 49.6**	**+2.0**
IVA	**Berane**	**1.35**	**12**	*e*Pg	**Pn**	**13 10 31.6**	**+1.0**
IVA				*i* Sg	**Sn**	**13 10 52.8**	**+3.9**
SKO	**Skopje**	**1.50**	**73**	*i* Pg	**Pg**	**13 10 33.9**	**0.0**
SKO				*i* Sg	**Sb**	**13 10 50.9**	**-1.8**
DBRK	**Dubrovnik**	**1.51**	**318**	*e*Pn	**Pg**	**13 10 34.4**	**+0.2**
DBRK				Sg	**Sg**	**13 10 53.8**	**+0.1**
BRY	**Bratogost**	**1.53**	**332**	*e*Pg	**Pb**	**13 10 33.9**	**-0.1**
BRY				*i* Sg	**Sg**	**13 10 55.6**	**+1.1**
UPM	**Unac-Piva**	**1.71**	**345**	*e*Pn	**Pg**	**13 10 37.8**	**-0.2**
UPM				*i* Sn	**Sg**	**13 11 00.3**	**0.0**
PLE	**Pljevlja**	**1.78**	**357**	*e*Pn	**Pg**	**13 10 39.6**	**+0.3**
PLE				*i* Sn	**Sg**	**13 11 03.5**	**+1.0**
STON	**Ston**	**1.89**	**315**	*e*Pn	**Pn**	**13 10 37.9**	**+0.1**
STON				Sn	**Sn**	**13 11 01.5**	**-0.4**
IGT	**Igoumenitsa**	**2.11**	**162**	*i* Pn	**Pn**	**13 10 40.2**	**-0.7**
IGT				*i* Sn	**Sn**	**13 11 10.9**	**+3.5**
VAY	**Valandovo**	**2.31**	**95**	*i* Pn	**Pn**	**13 10 44.6**	**+1.0**
VAY				*i* Sn	**Sn**	**13 11 13.5**	**+1.2**
VAY				*e*Lg	Lg	13 11 14.2	
	comp=E,30nm,1.2s						
VAY				*e*Lg	Lg	13 11 16.3	
	comp=N,23nm,0.9s						
KKB	**Krupnik**	**2.73**	**83**	*i* Pn	**Pn**	**13 10 47.8**	**-1.5**
KKB				*i* Sn	**Sn**	**13 11 20.5**	**-2.1**

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*IDC **01** 13:17:02.0±0.9, 1°.76N×99°.23E, h0^{km}, mb3.9/12, mbtmp3.9/13, ML3.7/1, MS3.7/42, Error ellipse: s-maj=41.7km s-min=10.4km az=64.0*

*NEIC **01** 13:17:04.3±1.1, 1°.80N±0°.04×99°.11E±0°.04, h8^{km}±4^{km}, mb4.5/18, Error ellipse: s-maj=7.7km s-min=3.7km az=225.0*

*DJA **01** 13:17:05.9±0.2, 2°N±2°×9°9E±°, h10^{km}, M4.7/22, mb4.8/5, mB5.6/3, MLv4.6/22, Mw(mB)5.1/3*

*GCMT **01** 13:17:08.3±0.4, 1°.97N±0°.02×99°.30E±0°.03, h34^{km}±2^{km}, MW4.8/76, Moment Tensor Solution. s13,c14; s76,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.13±.20; $M_{\theta\theta}$-1.91±.12; $M_{\phi\phi}$1.78±.13; $M_{r\theta}$-0.74±.13; $M_{\theta\phi}$0.69±.09; $M_{\phi r}$-0.52±.15; Best double couple: $M_0$2.16900×10^{16} NP1:ϕ_s145.00000°,δ65.00000°,λ178.00000°. NP2: ϕ_s236.00000°,δ88.00000°,λ25.00000°. Principal axes: T 2.1210, Plg19.0000°, Azm103.0000°; N 0.0940, Plg65.0000°, Azm240.0000°; P -2.2160, Plg16.0000°, Azm8.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 13:17:04.2±0.5**, 1°.81N**±0°.04×**99°.11E**±0°.04**, h10**^{km}**, n108, σ1^{s}39**/73**, mb4.3**/23**, MS3.8**/43**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBSI	**Sibolga**	**0.33**	**220**	P	**Pn**	**13 17 14.1**	**-1.1**
RPSI	**Rantau Prapat**	**0.90**	**348**		**Pg**	**13 17 21.5**	**-0.2**
PSI	**Prapat**	**1.00**	**350**	Pg	**Pg**	**13 17 21.3**	**-2.3**
	65nm,0.3s,baz=155,slow=18,SNR=138						
PSI				Lg	Lg	13 17 34.3	
	79nm,0.3s,baz=224,slow=22,SNR=5.1						
PSI				LR	LR	13 17 58.7	
	comp=Z,3µm,19.1s,baz=312,slow=58						
PSI	**Prapat**	**1.00**	**350**	P	**Pg**	**13 17 21.7**	**-1.9**
PSI				P	**Pg**	**13 17 21.7**	**-1.9**
MNSI	**Mandailing Nat**	**1.11**	**155**	P	**Pb**	**13 17 24.9**	**-0.7**
GSI	**Gunungsitoli**	**1.61**	**252**		**Pn**	**13 17 33.0**	**+0.3**
GSI	**Gunungsitoli**	**1.61**	**252**	P	**Pn**	**13 17 32.7**	**-0.1**
TSI	**Tuntungan**	**1.77**	**342**	P	**Pb**	**13 17 36.7**	**-0.1**
PBSI	**Pulau Batu**	**2.02**	**204**	P	**Pn**	**13 17 38.5**	**0.0**
KCSI	**Kotacane, Aceh**	**2.16**	**322**	P	**Pn**	**13 17 42.1**	**+1.7**
TPTI		**2.41**	**307**	P	**Pn**	**13 17 44.6**	**+0.9**
BKNI	**Bangkinang**	**2.43**	**127**	Pn	**Pn**	**13 17 44.3**	**+0.3**
BKNI	**Bangkinang**	**2.43**	**127**	P	**Pb**	**13 17 48.0**	**-0.1**
PPI	**Padang Panjang**	**2.59**	**150**	P	**Pb**	**13 17 50.9**	**0.0**
SNSI	**Sinabang, Aceh**	**2.84**	**282**	P	**Pn**	**13 17 52.1**	**+2.4**
PDSI	**Padang**	**3.02**	**153**	P	**Pn**	**13 17 54.2**	**+2.0**
SISI	**Saibi**	**3.11**	**180**	P	**Pn**	**13 17 55.1**	**+1.7**
IPM	**Ipoh**	**3.27**	**36**		**Pn**	**13 17 56.6**	**+0.9**
IPM	**Ipoh**	**3.27**	**36**	P	**Pn**	**13 17 57.1**	**+1.4**
MLSI	**Meulaboh, Aceh**	**3.64**	**312**	P	**Pn**	**13 18 03.6**	**+2.9**
KULM	**Kulim**	**3.79**	**24**		**Pn**	**13 18 03.6**	**+0.9**
KULM	**Kulim**	**3.79**	**24**	P	**Pn**	**13 18 03.6**	**+0.9**
LHMI	**Lhok Sumawe**	**4.02**	**328**	Pn	**Pn**	**13 18 05.9**	**-0.1**
LHMI	**Lhok Sumawe**	**4.02**	**328**	P	**Pn**	**13 18 07.6**	**+1.6**
KRJI	**Kerinci**	**4.53**	**149**	P	**Pn**	**13 18 13.4**	**+0.3**
PPSI	**Pulau Pagai**	**4.63**	**169**	P	**Pn**	**13 18 13.9**	**-0.4**
BTDF	**Bukit Timah Da**	**4.69**	**95**	P	**Pn**	**13 18 15.5**	**+0.4**
MYKOM	**Kota Tinggi**	**4.74**	**90**		**Pn**	**13 18 15.8**	**-0.1**
MYKOM	**Kota Tinggi**	**4.74**	**90**	P	**Pn**	**13 18 15.9**	**0.0**
MASI	**Maura Aman, Be**	**5.83**	**147**	P	**Pn**	**13 18 33.9**	**+3.0**
DSRI	**Dabo**	**5.92**	**112**	P	Pn	13 18 37.4	+5.3
	0.6nm4µm111nm,0.6s						
KSI	**Kapahiang**	**6.45**	**147**	P	**Pn**	**13 18 42.1**	**+2.7**
	9µm61nm,0.9s						
MDSI	**Maura Dua**	**8.05**	**141**	P	**Pn**	**13 19 03.9**	**+2.6**
KLSI		**8.56**	**139**	P	**Pn**	**13 19 10.5**	**+2.2**
CMAR	**Chiang Mai Arr**	**16.55**	**359**	Pn	**Pn**	**13 20 56.7**	**+0.1**
	0.1nm,0.3s,baz=190,slow=12,SNR=11						
CMAR				Sn	**Sn**	**13 24 04.3**	**+3.8**
	0.2nm,0.3s,baz=182,slow=27,SNR=1.6						
CMAR				LR	LR	13 27 21.5	
	comp=Z,395nm,18.6s,baz=190,slow=37						
	0.9nm,0.6s						
CMAR	**Chiang Mai Arr**	**16.55**	**359**	Pn	**Pn**	**13 20 56.2**	**-0.4**
CHTO	**Chiang Mai**	**16.90**	**359**		**P**	**13 21 04.4**	**+1.3**
CRAI	**Chiangrai**	**18.35**	**4**		**P**	**13 21 19.2**	**+0.1**
PALK	**Pallekele**	**19.13**	**287**	LR	LR	13 28 45.4	
	comp=Z,287nm,19.1s,baz=104,slow=36						
QIZ	**Qiongzhong**	**20.09**	**31**	P	Pn	13 21 42.0	+2.0
QIZ				S	Sn	13 25 26.4	+0.2
QIZ				LR	LR		
	comp=N,480nm,11.0s						
QIZ				LR	LR		
	comp=E,590nm,8.8s						
QIZ				LR	LR		
	comp=Z,390nm,14.8s						
KAPI	**Kappang**	**21.71**	**108**	LR	LR	13 30 58.5	
	comp=Z,320nm,18.8s,baz=252,slow=39						
BRDH	**Bariadhala**	**21.98**	**341**	LR	LR	13 32 22.5	
	comp=Z,346nm,19.4s,baz=183,slow=42						
TNCH	**TengChong**	**23.09**	**359**	*e*P	**P**	**13 22 12.1**	**+1.5**
TNCH				S	S	13 26 04.3	-18
TNCH				LR	LR		
	comp=N,960nm,10.4s						
TNCH				LR	LR		
	comp=E,370nm,8.4s						
TNCH				LR	LR		
	comp=Z,940nm,12.4s						
PZH	**PanZhiHua**	**24.68**	**6**	P	**P**	**13 22 28.4**	**+2.7**
DAV	**Davao City (W)**	**26.90**	**78**	LR	LR	13 33 44.9	
	comp=Z,140nm,20.1s,baz=230,slow=37						
SOEI	**Soe**	**27.57**	**115**	P	**P**	**13 22 52.0**	**+0.1**
YHNB	**Yeheng**	**31.29**	**42**	P	**P**	**13 23 24.3**	**-0.6**
WHN	**Wuhan**	**32.03**	**25**	P	P	13 23 37.9	+6.8
LZDM	**Lanzhou Array**	**34.24**	**7**	LR	LR	13 37 21.7	
	comp=Z,103nm,20.0s,baz=155,slow=36						
NJ2	**Nanjing**	**35.38**	**30**	*e*P	**P**	**13 24 02.2**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NWAO	**Narrogin (SRO)**	**38.56**	**155**	LR	LR	13 38 30.5	
	comp=Z,384nm,21.5s,baz=328,slow=34						
HHC	**Hu-ho-hao-te**	**40.47**	**15**	*e*P	**P**	**13 24 44.1**	**+0.8**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,6.0s						
HHC				LR	LR		
	comp=N,360nm,13.3s						
HHC				LR	LR		
	comp=E,350nm,13.3s						
HHC				LR	LR		
	comp=Z,390nm,15.3s						
WB0	**Warramunga Arr**	**40.73**	**124**	P	**P**	**13 24 45.2**	**-0.4**
WB0				IAmb	IAmb	13 24 49.8	
	comp=Z,15nm,1.5s						
WRA	**Warramunga Arr**	**40.76**	**124**	P	**P**	**13 24 43.9**	**-2.0**
	comp=Z,2.5nm,0.9s,baz=302,slow=8.9,SNR=13						
WRA				PcP	**PcP**	**13 26 46.7**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=311,slow=3.2,SNR=2.9						
WRA				LR	LR	13 43 22.8	
	comp=Z,117nm,19.9s,baz=348,slow=39						
	comp=Z,2.5nm,0.9s						
WRAB	**Tennant Creek**	**40.77**	**124**	P	**P**	**13 24 44.3**	**-1.7**
WRAB				IAmb	IAmb	13 24 50.2	
	comp=Z,13nm,1.4s						
WR8	**Warramunga Arr**	**40.90**	**124**	P	**P**	**13 24 45.5**	**-1.5**
WR8				IAmb	IAmb	13 24 52.1	
	comp=Z,11nm,1.2s						
JAY	**Jayapura**	**41.81**	**96**	LR	LR	13 43 51.4	
	comp=Z,59nm,20.9s,baz=236,slow=39						
ASAR	**Alice Springs**	**42.27**	**129**	P	**P**	**13 24 56.2**	**-2.0**
	comp=Z,0.8nm,0.9s,baz=301,slow=7.5,SNR=11						
ASAR				PcP	**PcP**	**13 26 51.5**	**-0.7**
	comp=Z,1.2nm,1.1s,baz=304,slow=4.1,SNR=4.2						
ASAR				LR	LR	13 42 31.6	
	comp=Z,113nm,21.7s,baz=294,slow=36						
	comp=Z,0.8nm,0.9s						
WMQ	**Urumqi**	**43.05**	**348**	*e*P	**P**	**13 25 06.7**	**+2.4**
MANEM	**Manem**	**43.60**	**328**	P	**P**	**13 25 09.6**	**+0.5**
MANEM				IAmb	IAmb	13 25 16.4	
	comp=Z,13nm,1.1s						
KSRS	**Korea Array**	**44.28**	**33**	P	**P**	**13 25 13.1**	**-1.2**
	comp=Z,0.3nm,0.4s,baz=226,slow=7.2,SNR=1.4						
	comp=Z,0.3nm,0.4s						
DRK	**Karamyk**	**44.99**	**330**	P	**P**	**13 25 20.4**	**+0.1**
CHGR	**Chuyangaron**	**45.77**	**327**	P	**P**	**13 25 26.5**	**+0.3**
CHGR				IAmb	IAmb	13 25 35.7	
	comp=Z,8.3nm,1.1s						
AAK	**Ala-Archa**	**46.24**	**335**	LR	LR	13 47 01.4	
	comp=Z,145nm,20.6s,baz=152,slow=39						
SONM	**Songino Array**	**46.28**	**7**	P	**P**	**13 25 30.3**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=201,slow=7.7,SNR=3.6						
SONM				LR	LR	13 47 01.6	
	comp=Z,156nm,19.7s,baz=214,slow=39						
	comp=Z,0.4nm,0.4s						
GUMO	**Guam**	**46.74**	**73**	LR	LR	13 49 59.8	
	comp=Z,22nm,18.1s,baz=193,slow=42						
MKAR	**Makanchi Array**	**47.15**	**344**	P	**P**	**13 25 36.5**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=160,slow=7.6,SNR=5.0						
MKAR				LR	LR	13 48 20.2	
	comp=Z,72nm,21.3s,baz=144,slow=40						
	comp=Z,1.2nm,0.8s						
MAKZ	**Makanchi**	**47.24**	**344**	P	**P**	**13 25 37.4**	**-0.2**
PMG	**Port Moresby**	**49.14**	**104**	LR	LR	13 49 48.9	
	comp=Z,49nm,18.3s,baz=324,slow=40						
INKA	**Innaminka**	**49.64**	**129**	P	**P**	**13 25 56.4**	**+0.1**
INKA				IAmb	IAmb	13 26 06.4	
	comp=Z,4.4nm,1.4s						
MJAR	**Matsushiro Arr**	**49.97**	**42**	LR	LR	13 46 06.8	
	comp=Z,45nm,21.3s,baz=228,slow=35						
HILR	**Hailar Array B**	**50.74**	**17**	LR	LR	13 51 12.6	
	comp=Z,145nm,18.2s,baz=315,slow=40						
KURBB	**Kurchatov Arra**	**51.67**	**343**	P	**P**	**13 26 10.4**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=164,slow=6.8,SNR=6.7						
KURBB				LR	LR	13 51 27.8	
	comp=Z,61nm,18.9s,baz=173,slow=40						
	comp=Z,0.5nm,0.3s						
KURK	**Kurchatov**	**51.73**	**344**	P	**P**	**13 26 11.5**	**-0.2**
KURK				IAmb	IAmb	13 26 14.8	
	comp=Z,1.6nm,0.7s						
STKA	**Stephens Creek**	**52.37**	**133**	LR	LR	13 50 23.6	
	comp=Z,86nm,20.2s,baz=315,slow=38						
ZALV	**Zalesovo Beam**	**53.29**	**350**	P	**P**	**13 26 22.6**	**-0.6**
	comp=Z,1.9nm,0.6s,baz=176,slow=5.5,SNR=9.8						
ZALV				LR	LR	13 53 31.6	
	comp=Z,59nm,20.0s,baz=224,slow=41						
	comp=Z,1.9nm,0.6s						
BVAR	**Borovoye Array**	**56.33**	**340**	P	**P**	**13 26 45.2**	**0.0**
	comp=Z,1.0nm,0.5s,baz=141,slow=9.7,SNR=4.2						
	comp=Z,1.0nm,0.5s						
AB31	**Akbulak array**	**57.90**	**331**	P	**P**	**13 26 56.2**	**-0.2**
AB31				IAmb	IAmb	13 27 01.7	
	comp=Z,2.3nm,0.9s						
ABKAR	**Akbulak array**	**57.90**	**331**	P	**P**	**13 26 55.7**	**-0.8**
ARTI	**Arti**	**63.43**	**336**	LR	LR	13 56 52.8	
	comp=Z,110nm,21.5s,baz=146,slow=38						
YAK	**Yakutsk**	**64.32**	**15**	LR	LR	13 59 34.0	
	comp=Z,102nm,18.2s,baz=236,slow=40						
ASF	**Jabal al Asfar**	**65.68**	**305**	LR	LR	13 58 53.8	
	comp=Z,42nm,19.1s,baz=85,slow=38						
EIL	**Elat**	**66.76**	**302**	LR	LR	13 57 41.6	
	comp=Z,75nm,18.9s,baz=140,slow=36						
MMAI	**Mount Meron Ar**	**67.11**	**305**	LR	LR	14 02 19.2	
	comp=Z,35nm,18.2s,baz=108,slow=40						
NRIK	**Noril'sk**	**67.86**	**356**	P	**P**	**13 28 02.3**	**-0.1**
	comp=Z,1.6nm,0.4s,baz=174,slow=2.4,SNR=2.1						
NRIK				LR	LR	13 59 47.9	
	comp=Z,48nm,18.4s,baz=170,slow=38						
	comp=Z,1.6nm,0.4s						
NRIK	**Noril'sk**	**67.86**	**356**	IAmb	IAmb	13 28 23.0	
	comp=Z,8.9nm,1.4s						
MBAR	**Mbarara**	**68.40**	**269**	LR	LR	13 53 44.6	
	comp=Z,49nm,21.6s,baz=68,slow=32						
DZM	**Mont Dzumac**	**69.79**	**114**	*e*LR	LR	13 49 22.0	
	comp=Z,155nm,24.8s						
MA2	**Magadan**	**69.97**	**25**	LR	LR	14 01 45.2	
	comp=Z,33nm,18.1s,baz=232,slow=38						
BRTR	**Keskin Array B**	**70.12**	**312**	P	**P**	**13 28 18.1**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=127,slow=5.8,SNR=2.6						
BRTR				LR	LR	14 01 16.4	
	comp=Z,42nm,19.3s,baz=94,slow=38						
	comp=Z,0.5nm,0.7s						
PETK	**Petropavlovsk-**	**70.18**	**33**	LR	LR	13 59 04.6	
	comp=Z,35nm,19.7s,baz=218,slow=36						
TIXI	**Tiksi**	**72.27**	**10**	LR	LR	14 03 43.0	
	comp=Z,65nm,18.4s,baz=206,slow=39						
TIXI	**Tiksi**	**72.27**	**10**	P	**P**	**13 28 28.8**	**-0.7**
TIXI				IAmb	IAmb	13 28 39.5	
	comp=Z,5.5nm,1.1s						
MAW	**Mawson**	**73.74**	**194**	LR	LR	13 53 35.4	
	comp=Z,53nm,18.8s,baz=34,slow=30						
LBTB	**Lobatse**	**75.86**	**244**	LR	LR	13 58 52.3	
	comp=Z,26nm,18.0s,baz=76,slow=33						
AKASG	**Malin Array Be**	**75.95**	**322**	LR	LR	14 04 32.6	
	comp=Z,28nm,21.4s,baz=106,slow=38						
BOSA	**Boshof**	**76.73**	**240**	LR	LR	13 56 52.7	
	comp=Z,27nm,20.8s,baz=18,slow=31						
RPZ	**Rata Peaks**	**78.29**	**135**	LR	LR	14 03 24.2	
	comp=Z,153nm,22.0s,baz=306,slow=36						
FINES	**FINESS Array B**	**80.35**	**332**	P	**P**	**13 29 15.3**	**-0.3**
	comp=Z,3.3nm,0.9s,baz=102,slow=5.8,SNR=5.8						
	comp=Z,3.3nm,0.9s						
URZ	**Urewera**	**81.71**	**129**	LR	LR	14 08 52.3	
	comp=Z,82nm,18.1s,baz=282,slow=38						
ARCES	**ARCESS Array B**	**82.61**	**340**	LR	LR	14 09 11.5	
	comp=Z,94nm,21.4s,baz=110,slow=38						
VNDA	**Vanda**	**86.04**	**169**	LR	LR	14 01 53.5	
	comp=Z,35nm,21.5s,baz=296,slow=31						
HFS	**Hagfors**	**86.15**	**330**	P	**P**	**13 29 45.6**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=117,slow=5.0,SNR=1.5						
HFS				LR	LR	14 10 54.7	
	comp=Z,69nm,18.3s,baz=64,slow=38						
	comp=Z,1.3nm,0.6s						
SPITS	**Spitsbergen Ar**	**86.75**	**348**	LR	LR	14 14 38.4	
	comp=Z,69nm,18.7s,baz=116,slow=40						
NOA	**NORSAR Array B**	**87.41**	**331**	LR	LR	14 14 31.2	
	comp=Z,45nm,18.0s,baz=355,slow=39						
PPT2	**Papeete2**	**110.85**	**108**	*e*LR	LR	14 08 19.8	
	comp=Z,89nm,32.0s						
PPT2				*e*LR	LR	14 08 31.7	
	comp=Z,132nm,26.5s						
TAOE	**Nuku Hiva Isla**	**120.65**	**99**	*e*LR	LR	14 12 51.9	
	comp=Z,45nm,26.2s						
TXAR	**Lajitas Array**	**142.13**	**33**	PKP	**PKPdf**	**13 36 35.7**	**-2.0**
	comp=Z,0.1nm,0.8s,baz=357,slow=3.0,SNR=1.5						

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*RHSSO **01** 13:34:15.5±0.4, 43°.22N×18°.14E, h8^{km}, ML2.5/4*

*PDG **01** 13:34:15.3±0.3, 43°.19N×18°.08E, h6^{km}±1^{km}, MD2.4/1, ML2.3/12, Error ellipse: s-maj=0.7km s-min=0.6km az=90.0*

ISC 01 13:34:14.7±1.2**, 43°.22N**±0°.03×**18°.09E**±0°.02**, h4**^{km}±10^{km}**, n27, σ1^{s}02**/54**, 4C-4D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	**Ston**	**0.45**	**220**	*i* Pg	**Pg**	**13 34 23.1**	**-0.3**
STON				Sg	**Sg**	**13 34 30.4**	**+1.1**
BRY	**Bratogost**	**0.46**	**134**	*e*Pg	**Pg**	**13 34 23.2**	**-0.4**
BRY				*i* Sg	**Sg**	**13 34 30.1**	**+0.6**
TREB	**Trebinje**	**0.54**	**159**	⇑*i*Pg	**Pg**	**13 34 24.9**	**-0.2**
TREB				*e*Sg	**Sb**	**13 34 33.8**	**-1.1**
DBRK	**Dubrovnik**	**0.55**	**176**	*e*Pg	**Pg**	**13 34 25.6**	**+0.2**
DBRK				Sg	**Sg**	**13 34 33.4**	**+0.9**
UPM	**Unac-Piva**	**0.59**	**92**	*e*Pg	**Pg**	**13 34 26.1**	**-0.1**
UPM				*i* Sg	**Sb**	**13 34 35.8**	**-0.9**
RICI	**Ricice**	**0.75**	**292**	*i* Pg	**Pg**	**13 34 28.0**	**-1.1**
RICI				Sg	**Sg**	**13 34 38.5**	**-0.4**
NKME	**Niksic**	**0.78**	**125**	*e*Pg	**Pg**	**13 34 29.1**	**-0.6**
NKME				*e*Sg	**Sb**	**13 34 41.2**	**-0.6**
MAKA	**Makarska**	**0.79**	**275**	*e*Pg	**Pg**	**13 34 28.4**	**-1.4**
MAKA				Sg	**Sg**	**13 34 40.6**	**+0.6**
HCY	**Herceg Novi**	**0.83**	**159**	*e*Pg	**Pg**	**13 34 30.6**	**0.0**
HCY				*i* Sg	**Sb**	**13 34 42.3**	**-0.9**
CEME	**Cevo**	**0.91**	**138**	⇓*i*Pg	**Pg**	**13 34 31.8**	**-0.3**
CEME				*e*Sg	**Sn**	**13 34 46.3**	**-1.6**
PLE	**Pljevlja**	**0.95**	**83**	⇓*i*Pg	**Pg**	**13 34 33.4**	**+0.4**
PLE				*i* Sg	**Sn**	**13 34 48.6**	**-0.6**
LSTV	**Lastovo**	**0.99**	**243**	*e*Pg	**Pg**	**13 34 33.3**	**-0.4**
LSTV				Sg	**Sg**	**13 34 46.8**	**+0.2**
RUDO	**Rudo**	**1.01**	**67**	⇑*i*Pg	**Pg**	**13 34 33.1**	**-1.0**
RUDO				*e*Sg	**Sg**	**13 34 46.9**	**-0.4**
BUM	**Brajici-Budva**	**1.09**	**147**	⇑*i*Pg	**Pg**	**13 34 35.3**	**-0.4**
BUM				*i* Sg	**Sn**	**13 34 52.0**	**-0.5**
KOME	**Kolasin**	**1.11**	**109**	⇓*i*Pg	**Pg**	**13 34 35.3**	**-0.7**
KOME				*e*Sg	**Sn**	**13 34 53.2**	**+0.3**
PDG	**Podgorica**	**1.17**	**132**	*e*Pg	**Pg**	**13 34 35.7**	**-1.4**
PDG				*i* Sg	**Sn**	**13 34 53.9**	**-0.3**
HVAR	**Hvar**	**1.20**	**268**	*e*Pg	**Pg**	**13 34 36.6**	**-1.2**
HVAR				Sg	**Sg**	**13 34 53.9**	**+0.5**
DRME	**Dracevica, Mon**	**1.31**	**142**	⇑*i*Pg	**Pn**	**13 34 38.7**	**-1.2**
DRME				*e*Sg	**Sn**	**13 34 59.7**	**+1.9**
IVA	**Berane**	**1.37**	**104**	*e*Pg	**Pn**	**13 34 39.9**	**-0.8**
IVA				*i* Sg	**Sn**	**13 35 01.2**	**+1.9**
KIJV	**Kijevo**	**1.45**	**303**	*e*Pn	**Pn**	**13 34 41.4**	**-0.5**
KIJV				Sn	**Sg**	**13 35 02.9**	**+1.4**
PVY	**Plav**	**1.51**	**114**	⇓*i*Pg	**Pn**	**13 34 42.7**	**0.0**
PVY				*i* Sg	**Sg**	**13 35 06.8**	**+3.6**
BLY	**Banja Luka**	**1.66**	**337**	*e*Pn	**Pn**	**13 34 45.2**	**+0.5**
BLY				*e*Sn	**Sn**	**13 35 07.0**	**+0.5**
ZIRJ	**Zirje**	**1.83**	**284**	*e*Pn	**Pn**	**13 34 47.0**	**-0.1**
ZIRJ				Sn	**Sn**	**13 35 11.5**	**+0.8**
MORI	**Morici**	**1.85**	**291**	*i* Pn	**Pn**	**13 34 47.4**	**+0.2**
MORI				Sn	**Sn**	**13 35 12.5**	**+1.4**
DUGI	**Dugi Otok**	**2.33**	**290**	*e*Pn	**Pn**	**13 34 55.0**	**+1.0**
DUGI				Sn	**Sn**	**13 35 24.7**	**+1.6**
VIRC	**Vir**	**2.45**	**297**	*e*Pn	**Pn**	**13 34 55.5**	**0.0**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIRC				Sn	Sn	13 35 26.7	+0.9
MORH	Mrgy, Hungar	3.02	7	*e*Pn	Pn	13 35 03.8	+0.5
MORH				*e*Sn	Sn	13 35 40.0	+0.1

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*IDC **01** 13:38:44.0±22.0, 24°.40N×141°.42E, h234^{km}±219^{km}, mb3.1/6, mbtmp3.6/6, Error ellipse: s-maj=41.2km s-min=28.3km az=66.0*

ISC 01 13:38:35.2±1.1, **24°.5N**±0°.2×**141°.5E**±0°.3, **h148**^{km}**, n7,** σ**0^{s}.58**/7, **mb3.3**/7, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.67	190	P	P	13 46 33.3	0.0
	0.6nm,0.8s,baz=11,slow=8.5,SNR=6.8						
	0.6nm,0.8s						
MKAR	Makanchi Array	51.69	311	P	P	13 47 27.7	+0.7
	0.3nm,0.6s,baz=97,slow=8.9,SNR=2.0						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	54.45	316	P	P	13 47 46.8	-0.2
	0.3nm,0.3s,baz=91,slow=8.3,SNR=2.1						
	0.3nm,0.3s						
ILAR	Eielson Array	60.34	28	P	P	13 48 28.2	+0.1
	0.3nm,0.8s,baz=261,slow=6.1,SNR=2.5						
	0.3nm,0.8s						
YKA	Yellowknife Ar	74.77	28	P	P	13 49 58.9	+0.3
	0.3nm,0.9s,baz=302,slow=9.0,SNR=4.5						
	0.3nm,0.9s						
ARCES	ARCESS Array B	75.81	341	P	P	13 50 03.8	-0.8
	12nm,1.1s,baz=42,slow=5.7,SNR=3.5						
FINES	FINESS Array B	80.02	334	P	P	13 50 27.6	-0.3
	6.1nm,1.1s,baz=91,slow=5.6,SNR=3.7						
	6.1nm,1.1s						

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*SKO **01** 13:52:22.5, 41°.45N×19°.47E, h0^{km}, ML2.6*
*TIR **01** 13:52:23.8, 41°.47N×19°.64E, h12^{km}, Ml2.9/2*
*PDG **01** 13:52:23.0±0.6, 41°.37N×19°.45E, h16^{km}±1^{km}, ML2.8/13, Error ellipse: s-maj=0.8km s-min=1.9km az=0.0*
*THE **01** 13:52:28.0, 41°N±46°×2°0E±2°7, h2^{km}±32^{km}, M2.5/6, MLh2.5/6*

ISC 01 13:52:23.8±0.9, **41°.45N**±0°.03×**19°.63E**±0°.03, **h14**^{km}±7^{km}, **n49,** σ**1^{s}.32**/80, **6C-5D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.21	119	Pg	Pg	13 52 28.1	-0.3
TIR				Sg	Sg	13 52 31.7	+0.2
TIR				AML	AML	13 52 32.0	
	7.9nm,0.2s						
TIR	Tirane	0.21	119	*i* Pg	Pg	13 52 28.4	0.0
TIR				*i* Sg	Sg	13 52 32.4	+0.9
ULC	Ulcinj	0.59	331	*e*Pg	Pg	13 52 34.7	-0.7
ULC				*i* Sg	Sb	13 52 44.5	+0.3
SDA	Shkodra	0.61	351	P	Pg	13 52 35.3	-0.5
SDA				Sg	Sb	13 52 44.5	-0.3
PHP	Peshkopia	0.66	69	P	Pg	13 52 35.3	-1.3
PHP				S	Sg	13 52 45.2	-0.1
PHP				AML	AML	13 52 47.7	
	2.7nm,0.2s						
PHP	Peshkopia	0.66	69	P	Pg	13 52 35.1	-1.5
DRME	Dracevica, Mon	0.81	336	*e*Pg	Pg	13 52 38.7	-0.8
DRME				*e*Sg	Sn	13 52 52.1	-0.6
OHR	Ohrid	0.95	110	*i* Pg	Pg	13 52 41.3	-0.7
OHR				*i* Sg	Sn	13 52 56.3	+0.2
OHR				*e*Lg	Lg	13 52 57.6	
	comp=N,276nm,0.8s						
OHR				*e*Lg	Lg	13 52 58.2	
	comp=E,86nm,0.5s						
BUM	Brajici-Budva	1.01	328	*e*Pg	Pg	13 52 42.1	-1.3
BUM				*i* Sg	Sn	13 52 58.2	+0.4
PDG	Podgorica	1.02	344	Pg	Pb	13 52 43.2	-0.1
PDG				S	Sn	13 52 58.0	+0.1
PDG	Podgorica	1.02	344	⇓P	Pb	13 52 43.2	-0.1
PDG				⇑S	Sg	13 52 52.2	-4.6
PDG	Podgorica	1.02	344	⇓*i*Pg	Pb	13 52 42.9	-0.4
PDG				*i* Sg	Sn	13 52 59.7	+1.8
PVY	Plav	1.17	12	*e*Pg	Pg	13 52 46.7	+0.3
PVY				*i* Sg	Sn	13 53 05.9	+4.0
KBN	Korca	1.20	133	P	Pg	13 52 47.0	0.0
KBN				Sg	Sn	13 53 03.6	+1.1
KBN	Korca	1.20	133	P	Pn	13 52 46.3	0.0
CEME	Cevo	1.22	335	*e*Pg	Pn	13 52 46.1	-0.4
CEME				*e*Sg	Sn	13 53 05.3	+2.4
HCY	Herceg Novi	1.31	320	*e*Pg	Pn	13 52 47.2	-0.5
HCY				*i* Sg	Sg	13 53 07.2	+1.2
KOME	Kolasin	1.41	357	*e*Pg	Pb	13 52 50.0	+0.1
KOME				*e*Sg	Sg	13 53 11.5	+2.4
NKME	Niksic	1.41	339	*e*Pg	Pn	13 52 49.7	+0.5
NKME				*e*Sg	Sg	13 53 10.8	+1.5
IVA	Berane	1.44	8	*e*Pg	Pb	13 52 50.4	0.0
IVA				*i* Sg	Sg	13 53 11.8	+1.7
SKO	Skopje	1.46	68	*i* Pg	Pn	13 52 50.6	+0.8
NEST	Nestorio	1.49	133	P	Pb	13 52 51.4	0.0
NEST				S	Sn	13 53 10.1	+0.4
DBRK	Dubrovnik	1.64	318	*e*Pn	Pn	13 52 52.4	+0.1
DBRK				Sn	Sb	13 53 14.9	+0.3
BRY	Bratogost	1.66	331	*e*Pn	Pn	13 52 52.9	+0.2
BRY				*i* Sn	Sg	13 53 16.3	-1.0
PENT	Pentalofos	1.70	137	P	Pb	13 52 54.4	-0.4
PENT				S	Sn	13 53 14.6	-0.1
UPM	Unac-Piva	1.83	343	*e*Pn	Pn	13 52 55.7	+0.6
UPM				*i* Sn	Sb	13 53 21.0	+0.8
PLE	Pljevlja	1.89	355	*e*Pn	Pn	13 52 56.8	+1.0
PLE				*i* Sn	Sb	13 53 22.9	+1.2
IGT	Igoumenitsa	1.99	164	P	Pn	13 52 56.6	-0.5
IGT	Igoumenitsa	1.99	164	*i* Pn	Pn	13 52 57.1	0.0
IGT				*i* Sn	Sn	13 53 22.8	+1.1
STON	Ston	2.02	315	*e*Pn	Pn	13 52 57.5	0.0
STON				Sn	Sn	13 53 22.3	-0.2
BARS	Barje	2.13	49	*i* Pn	Pn	13 52 58.8	-0.2
GRG	Griva	2.15	102	*i* Pn	Pn	13 52 59.1	-0.2
GRG				*i* Sn	Sn	13 53 27.1	+1.2
VAY	Valandovo	2.22	92	*i* Pn	Pn	13 53 00.5	+0.3
VAY				*i* Sn	Sn	13 53 28.4	+1.0
VAY				*e*Lg	Lg	13 53 30.2	
	comp=E,18nm,0.8s						
VAY				*e*Lg	Lg	13 53 31.0	
	comp=N,23nm,0.8s						
TETR	Tetrakomo, Epi	2.45	149	P	Pn	13 53 04.3	+0.8
KNT	Kendrikon	2.48	96	*i* Pn	Pn	13 53 04.2	+0.3
KNT				*i* Sn	Sn	13 53 31.0	-3.0
LIT	Litokhoron	2.56	121	*i* Pn	Pn	13 53 04.8	-0.1
THE	Thessaloniki	2.65	107	*i* Pn	Pn	13 53 07.7	+1.5
KKB	Krupnik	2.66	80	*i* Pn	Pn	13 53 06.3	+0.1
KKB				*i* Sn	Sn	13 53 38.1	-0.2
BOVS	Bovan	2.67	34	⇑P	Pn	13 53 07.4	+0.9
BOVS				⇑S	Sn	13 53 32.6	-6.1
TSLK	Tsoukalades, L	2.74	163	P	Pn	13 53 06.8	-0.5
LKD2	Lefkada island	2.77	163	P	Pn	13 53 07.3	-0.5
NYDR	Nydri-Lefkada	2.85	163	P	Pn	13 53 08.2	-0.7
DRAG	Dragano-Lefkad	2.85	165	P	Pn	13 53 07.9	-1.0
MDVR	Moldovita	3.67	24	⇓P	Pn	13 53 19.7	-0.4
HERR	Herculane	3.99	30	⇓P	Pn	13 53 25.1	+0.5
BZS	Buzias	4.41	18	⇑P	Pn	13 53 29.5	-0.8
GZR	Gura Zlata	4.56	29	⇓P	Pn	13 53 32.5	0.0
SIRR	Siria	5.04	16	⇑P	Pn	13 53 38.8	-0.2
VOIR		5.61	43	⇑P	Pn	13 53 47.4	+0.5

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*IDC **01** 14:04:27.7±0.8, 47°.75N×123°.60E, h0^{km}, mb3.7/8, mbtmp3.7/11, ML3.8/3, MS3.8/1, Error ellipse: s-maj=29.1km s-min=12.4km az=37.0*
*NEIC **01** 14:04:29.9±0.9, 47°.74N±0°.05×123°.6E±0°.1, h10^{km}±1^{km}, mb4.3/19, Error ellipse: s-maj=14.0km s-min=6.9km az=67.0*

ISC 01 14:04:29.3±0.5, **47°.77N**±0°.05×**123°.56E**±0°.04, **h10**^{km}**, n43,** σ**1^{s}.32**/51, **mb4.2**/19, **1D, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HIA	Hailar	2.95	302		Pn	14 05 16.0	-0.1
HILR	Hailar Array B	3.10	307	Pn	Pn	14 05 18.0	-0.2
	baz=104,slow=25						
HILR				Pg	Pb	14 05 24.1	-0.3
	baz=121,slow=17						
HILR				Lg	Lg	14 06 06.3	
	baz=122,slow=29						
	13nm,0.3s						
BNX	BinXian	3.33	126	⇓Pn	Pn	14 05 21.6	+0.2
BNX				Sg	Sg	14 06 16.0	-0.2
BNX				smax	smax		
	comp=N,330nm,0.9s						
BNX				smax	smax		
	comp=E,350nm,1.0s						
HEH	HeiHe	3.55	44	Pn	Pn	14 05 23.4	-1.0
HEH				Pg	Pb	14 05 33.4	+1.3
HEH				Sn	Sn	14 06 05.5	-0.8
HEH				Sg	Sg	14 06 20.6	-2.6
HEH				smax	smax		
	comp=N,450nm,0.6s						
HEH				smax	smax		
	comp=E,820nm,0.8s						
MDJ	Mudanjiang	5.24	125		Pn	14 05 47.8	+0.2
MDJ	Mudanjiang	5.24	125	Pn	Pn	14 05 48.8	+1.2
MDJ				Pg	Pg	14 06 09.3	-0.3
MDJ				Sg	Sg	14 07 16.4	-1.0
MDJ				smax	smax		
	comp=N,130nm,0.7s						
MDJ				smax	smax		
	comp=E,160nm,0.8s						
USRK	Ussuriysk Ar.	6.87	118	Pn	Pn	14 06 07.7	-2.2
	comp=E,1.0nm,0.3s,baz=188,slow=14,SNR=11						
USRK				Sn	Sn	14 07 27.3	-0.9
	comp=E,0.9nm,0.3s,baz=296,slow=23,SNR=2.6						
USRK				Lg	Lg	14 08 03.7	
	comp=E,2.2nm,0.3s,baz=313,slow=20,SNR=5.3						
	comp=E,3.0nm,0.7s						
KS19	Wonju Array Si	10.74	161	Pn	Pn	14 07 01.0	-2.0
KSRS	Korea Array	10.80	161	Lg	Lg	14 10 08.7	
	comp=E,0.3nm,0.3s,baz=340,slow=30,SNR=5.1						
SONM	Songino Array	11.55	277	Pn	Pn	14 07 13.1	-1.1
	comp=E,0.8nm,0.3s,baz=86,slow=12,SNR=15						
SONM				Sn	Sn	14 09 17.3	-6.0
	comp=E,0.4nm,0.3s,baz=86,slow=24,SNR=5.1						
SONM				Lg	Lg	14 10 32.4	
	comp=E,0.9nm,0.3s,baz=90,slow=31,SNR=7.1						
	comp=E,0.2nm,0.3s						
SONM	Songino Array	11.55	277		Pn	14 07 14.8	+0.6
TLY	Talaya	13.46	294	Pn	Pn	14 07 41.5	+1.4
JYT	Yasato	16.86	127	P	P	14 08 26.7	-0.7
JHJ2	Mitsune	19.11	134	P	P	14 08 51.8	-0.4
TWG	Pinlang	24.98	185	P	P	14 09 53.1	+0.2
TWG				IAmb	IAmb	14 10 16.3	
	comp=Z,16nm,1.3s						
ZALV	Zalesovo Beam	24.98	299	P	P	14 09 54.0	+1.3
	comp=Z,0.4nm,0.5s,baz=92,slow=12,SNR=2.2						
	comp=Z,0.4nm,0.5s						
WMQ	Urumqi	25.17	274	*e*P	P	14 09 56.9	+2.2
KURK	Kurchatov	29.15	293	P	P	14 10 31.6	+1.3
KURBB	Kurchatov Arra	29.22	293	P	P	14 10 31.6	+0.7
	comp=Z,0.5nm,0.6s,baz=85,slow=9.7,SNR=5.1						
	comp=Z,0.5nm,0.6s						
WUS	Wushi	31.96	275	P	P	14 10 56.4	+1.1
WUS				IAmb	IAmb	14 11 15.3	
	comp=Z,4.3nm,1.4s						
ABKAR	Akbulak array	41.06	297	P	P	14 12 13.5	+0.9
C18K	Utukok River	41.42	32	P	P	14 12 16.0	+0.5
J14K	Nanvaranak Lak	41.69	41	P	P	14 12 17.9	+0.2
D19K	Kuna River	42.56	32	P	P	14 12 25.4	+0.7
F19K	Shaleruckik Mo	43.08	35	P	P	14 12 29.2	+0.4
F19K				IAmb	IAmb	14 12 51.3	
	comp=Z,9.7nm,1.5s						
F21K	Alatna River	44.59	33	P	P	14 12 41.4	+0.3
F21K				IAmb	IAmb	14 13 01.2	
	comp=Z,6.8nm,1.4s						
G21K	Allakaket	44.80	34	P	P	14 12 43.2	+0.5
F24K	Squaw Lake	46.53	32	P	P	14 12 57.0	+0.5
F24K				IAmb	IAmb	14 13 22.7	
	comp=Z,2.4nm,1.2s						
H23K	Yukon River	46.55	35	P	P	14 12 57.4	+0.9
H23K				IAmb	IAmb	14 12 60.0	
	comp=Z,4.3nm,1.5s						
G24K	Hadweenzic Riv	46.99	33	P	P	14 13 00.8	+0.8
G24K				IAmb	IAmb	14 13 25.1	
	comp=Z,5.5nm,1.4s						
BMAR	Burnt Mountain	47.74	31	P	P	14 13 06.6	+0.8
ILAR	Eielson Array	47.99	35	P	P	14 13 08.4	+0.6
	comp=Z,0.5nm,0.7s,baz=281,slow=6.5,SNR=8.5						
	comp=Z,0.5nm,0.7s						
PRP	Porcupine Dome	48.20	34	P	P	14 13 10.1	+0.5
PRP				IAmb	IAmb	14 13 16.1	
	comp=Z,2.8nm,0.8s						
G27K	Doyon Strip	49.04	32	P	P	14 13 16.9	+1.0
G27K				IAmb	IAmb	14 13 22.7	
	comp=Z,1.8nm,0.8s						
H27K	Steamboat Moun	49.35	32	P	P	14 13 19.4	+1.1
H27K				IAmb	IAmb	14 13 24.7	
	comp=Z,4.0nm,1.4s						
I30M	Mount Dempster	51.70	32	P	P	14 13 36.3	+0.2
I30M				IAmb	IAmb	14 13 50.7	
	comp=Z,5.1nm,1.4s						
FINES	FINESS Array B	52.76	323	P	P	14 13 42.8	-1.1
	comp=Z,4.4nm,0.9s,baz=56,slow=6.1,SNR=3.7						
FINES				LR	LR	14 40 37.4	
	comp=Z,99nm,19.5s,baz=306,slow=41						
	comp=Z,4.4nm,0.9s						
HFS	Hagfors	58.38	326	P	P	14 14 23.5	-0.7
	comp=Z,1.1nm,0.7s,baz=47,slow=8.5,SNR=1.0						
	comp=Z,1.1nm,0.7s						
NOA	NORSAR Array B	58.67	328	P	P	14 14 27.6	+1.2
	comp=Z,1.0nm,0.8s,baz=55,slow=7.5,SNR=1.7						
	comp=Z,1.0nm,0.8s						
WRA	Warramunga Arr	68.09	169	P	P	14 15 29.3	+0.2
	comp=Z,0.6nm,0.8s,baz=345,slow=5.8,SNR=3.4						
	comp=Z,0.6nm,0.8s						
ASAR	Alice Springs	71.71	170	P	P	14 15 51.2	-0.1
	comp=Z,0.3nm,0.8s,baz=355,slow=6.5,SNR=4.7						
	comp=Z,0.3nm,0.8s						
JTMT	Jette	72.39	37	P	P	14 15 56.1	+0.7
SNAA	Sanae	145.78	207	PKPbc	PKPdf	14 24 06.8	+0.2
	comp=Z,1.1nm,0.9s,baz=224,slow=4.3,SNR=2.4						

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*IDC **01** 14:05:03.6±3.0, 28°.78N×140°.66E, h49^{km}±35^{km}, mb3.6/9, mbtmp3.9/10, ML4.5/1, Error ellipse: s-maj=38.6km s-min=23.8km az=61.0*
*NEIC **01** 14:05:12.0±0.8, 28°.8N±0°.1×140°.7E±0°.1, h123^{km}±8^{km}, mb4.4/19, Error ellipse: s-maj=20.5km s-min=13.3km az=55.0*
*JMA **01** 14:05:12.6±0.1, 29°N±1°×14°1E±°, h144^{km}, MV3.8/12, NEAR CHICHIJIMA ISLAND*

ISC 01 14:05:13.6±0.6, **28°.72N**±0°.06×**140°.8E**±0°.1, **h150**^{km}**, n37,** σ**1^{s}.60**/37, **mb4.1**/15, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.05	142	P	Pn	14 05 47.4	-2.0
CBIJ				*e*S	Sn	14 06 13.9	-2.9
JCJ	Chichijima	2.06	142	P	Pn	14 05 36.8	-13
	138nm,0.3s,baz=285,slow=23,SNR=88						
JCJ				S	Sn	14 06 03.1	-14
	163nm,0.3s,baz=272,slow=22,SNR=12						
	278nm,0.4s						
JCJ	Chichijima	2.06	142	Pn	Pn	14 05 47.3	-2.1
JCJ				Sn	Sn	14 06 14.4	-2.4
JHH2	Haha-jima-NKT2	2.43	149	*e*P	Pn	14 05 52.4	-1.4
JHH2				*e*S	Sn	14 06 22.6	-2.3
JHJ2	Mitsune	4.45	350	*e*S	Sn	14 07 09.2	-2.0
JMKN	Mikurajimanish	5.25	349	*e*S	Sn	14 07 27.8	-2.3
BSO1	Boso 1	5.92	2	*e*S	Sn	14 07 41.7	-3.5
YULB	Yu-li	18.27	258	P	P	14 09 13.3	-2.5
YULB				IAmb	IAmb	14 09 50.8	
	comp=Z,27nm,1.2s						
PATS	Pohnpei	27.37	139	P	P	14 10 45.1	+0.2
MKAR	Makanchi Array	48.47	309	P	P	14 13 38.8	-2.1
	comp=Z,0.4nm,0.7s,baz=89,slow=9.5,SNR=1.5						
	comp=Z,0.4nm,0.7s						
WB0	Warramunga Arr	48.60	188	P	P	14 13 43.4	+1.4
WB0				IAmb	IAmb	14 14 19.4	
	comp=Z,7.4nm,1.4s						
WR8	Warramunga Arr	48.77	188	P	P	14 13 44.7	+1.4
WR8				IAmb	IAmb	14 14 18.2	
	comp=Z,8.1nm,1.4s						
WRA	Warramunga Arr	48.78	188	P	P	14 13 44.2	+0.8
	comp=Z,0.2nm,0.4s,baz=6.6,slow=8.0,SNR=9.6						
	comp=Z,0.2nm,0.4s						
WRA	Warramunga Arr	48.78	188	IAmb	IAmb	14 13 44.7	
	comp=Z,0.4nm,1.2s						
KURK	Kurchatov	50.95	314	P	P	14 13 59.8	+0.3
KURK	Kurchatov	50.95	314	IAmb	IAmb	14 14 01.1	
	comp=Z,1.6nm,1.0s						
KURBB	Kurchatov Arra	51.01	314	P	P	14 13 59.8	-0.2
	comp=Z,0.2nm,0.4s,baz=91,slow=8.9,SNR=5.7						
	comp=Z,0.2nm,0.4s						
P19K	Oil Pt	53.62	35	P	P	14 14 19.4	+0.3
BVAR	Borovoye Array	56.00	317	P	P	14 14 36.6	+0.3
	comp=Z,1.3nm,0.4s,baz=94,slow=6.9,SNR=15						
	comp=Z,1.3nm,0.4s						
BORK	Borovoye	56.04	317	P	P	14 14 36.8	+0.2
BORK				IAmb	IAmb	14 14 37.5	
	comp=Z,1.4nm,0.6s						
PCA	Pinnacle	60.14	35	P	P	14 15 05.8	+0.7
F30M	Barrier River	61.32	26	P	P	14 15 13.8	+1.0
F30M				IAmb	IAmb	14 15 49.9	
	comp=Z,5.5nm,1.4s						
ARTI	Arti	62.47	322	P	P	14 15 21.0	+0.3
ARTI				IAmb	IAmb	14 15 46.3	
	comp=Z,10nm,1.3s						
AB31	Akbulak array	63.06	313	P	P	14 15 24.8	0.0
ABKAR	Akbulak array	63.06	313	P	P	14 15 24.3	-0.4
NWAO	Narrogin (SRO)	65.25	202	P	P	14 15 40.2	+1.2
NIUE	Niue	67.28	129	P	P	14 15 53.9	+1.6
ARCES	ARCESS Array B	71.59	340	P	P	14 16 19.9	+1.8
	comp=Z,8.7nm,1.1s,baz=60,slow=4.8,SNR=8.9						
	comp=Z,8.7nm,1.1s						
FIA1	FINESS Array S	75.93	333	P	P	14 16 44.1	+0.7
FINES	FINESS Array B	75.93	333	P	P	14 16 44.5	+1.1
	comp=Z,1.3nm,0.3s,baz=76,slow=4.9,SNR=18						
	comp=Z,1.3nm,0.3s						
NVAR	Mina Array Bea	80.50	51	P	P	14 17 10.4	+1.1
	comp=Z,0.1nm,0.4s,baz=312,slow=7.4,SNR=1.7						
	comp=Z,0.1nm,0.4s						
NC405	NORSAR Array S	81.41	338	P	P	14 17 14.7	+1.2
NC405				IAmb	IAmb	14 17 16.4	
	comp=Z,13nm,1.2s						
HFS	Hagfors	81.43	336	P	P	14 17 14.4	+0.9
	comp=Z,1.4nm,0.5s,baz=84,slow=6.1,SNR=7.7						
	comp=Z,1.4nm,0.5s						
NB201	NORSAR Array S	81.60	338	P	P	14 17 15.7	+1.2
NC204	NORSAR Array S	81.61	338	P	P	14 17 15.8	+1.2
NB2	NORSAR Subarra	81.63	338	P	P	14 17 15.7	+1.0
	comp=Z,0.5nm,0.5s,baz=43,slow=5.3						
NOA	NORSAR Array B	81.63	338	P	P	14 17 15.6	+1.0
	comp=Z,1.1nm,0.8s,baz=43,slow=4.6,SNR=2.0						
	comp=Z,1.1nm,0.8s						

IDC 01 14:05:22.2±5.5, **30°.18N**×**141°.91E, h0**^{km}**, mb3.5**/2, **mbtmp3.4**/3, **ML2.2**/1, **Error ellipse: s-maj=254.6km s-min=28.0km az=75.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	3.44	329	Sn	Sn	14 06 56.3	-2.3
	1.9nm,0.3s,baz=25,slow=22,SNR=1.8						
MJAR	Matsushiro Arr	7.06	335	Pn	Pn	14 07 06.7	0.0
	baz=159,slow=11,SNR=4.4						
MJAR				Sn	Sn	14 08 27.2	-0.5
	0.1nm,0.3s,baz=136,slow=18,SNR=4.4						
	0.7nm,0.5s						
WRA	Warramunga Arr	50.37	189	P	P	14 14 20.8	-0.4
	0.7nm,0.6s,baz=8.7,slow=7.8,SNR=6.8						
	0.7nm,0.6s						
ASAR	Alice Springs	54.09	189	P	P	14 14 49.0	+0.2
	0.3nm,0.7s,baz=4.3,slow=6.6,SNR=2.2						
	0.3nm,0.7s						

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*TIR **01** 14:41:06.5, 41°.55N×19°.48E, h7^{km}±10^{km}, Ml2.6/2*
*PDG **01** 14:41:09.8±0.1, 41°.67N×19°.55E, h12^{km}, MD3.0/4, ML2.9/13, Error ellipse: s-maj=0.2km s-min=0.2km az=0.0*
*IDC **01** 14:41:11.6±7.8, 42°.20N×20°.30E, h0^{km}, mb3.5/1, mbtmp3.4/3, ML2.7/2, Error ellipse: s-maj=148.3km s-min=30.5km az=28.0*

ISC 01 14:41:08.4±1.2, **41°.60N**±0°.04×**19°.56E**±0°.03, **h10**^{km}±8^{km}, **n42,** σ**1^{s}.45**/58, **11C-14D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.34	138	P	Pg	14 41 14.6	-0.5
TIR				Sg	Sg	14 41 19.1	-0.5
TIR				AML	AML	14 41 23.8	
	2.6nm,0.4s						
ULC	Ulcinj	0.44	327	*e*Pg	Pg	14 41 16.8	-0.2
ULC				*i* Sg	Sg	14 41 23.1	+0.4
SDA	Shkodra	0.46	354	P	Pg	14 41 17.5	+0.2
SDA				Sg	Sb	14 41 23.9	-1.5
DRME	Dracevica, Mon	0.65	335	*e*Pg	Pg	14 41 20.9	-0.1
DRME				*e*Sg	Sb	14 41 30.2	-0.9
PHP	Peshkopia	0.66	82	P	Pg	14 41 20.3	-0.9
PHP				Sg	Sg	14 41 31.2	+1.2
PHP				AML	AML	14 41 34.3	
	1.7nm,0.4s						
BUM	Brajici-Budva	0.86	325	*e*Pg	Pg	14 41 24.7	-0.3
BUM				*i* Sg	Sb	14 41 37.5	+0.3
PDG	Podgorica	0.86	345	⇓P	Pg	14 41 25.0	0.0
PDG	Podgorica	0.86	345	*e*Pg	Pg	14 41 24.6	-0.4
PDG				*i* Sg	Sb	14 41 37.6	+0.5
PVY	Plav	1.04	16	⇓*i*Pg	Pg	14 41 27.9	-0.5
PVY				*i* Sg	Sn	14 41 43.5	-0.4
CEME	Cevo	1.06	333	⇑*i*Pg	Pg	14 41 28.4	-0.4
CEME				*e*Sg	Sn	14 41 44.1	-0.2
HCY	Herceg Novi	1.16	317	*e*Pg	Pg	14 41 30.5	-0.3
HCY				*i* Sg	Sn	14 41 47.8	+1.1
KOME	Kolasin	1.25	358	⇑*i*Pg	Pg	14 41 31.8	-0.7
KOME				*e*Sg	Sn	14 41 50.4	+1.3
NKME	Niksic	1.25	339	*e*Pg	Pg	14 41 31.8	-0.7
NKME				*e*Sg	Sn	14 41 50.5	+1.5
IVA	Berane	1.30	11	*e*Pg	Pg	14 41 32.6	-0.7
IVA				*i* Sg	Sn	14 41 52.1	+1.9
DBRK	Dubrovnik	1.50	316	*e*Pn	Pn	14 41 36.2	+0.8
DBRK				Sg	Sn	14 41 55.3	+0.3
BRY	Bratogost	1.51	330	*e*Pg	Pn	14 41 36.5	+0.9
BRY				*i* Sg	Sg	14 41 58.1	+1.2
UPM	Unac-Piva	1.68	343	⇓*i*Pn	Pn	14 41 39.2	+1.2
UPM				*i* Sn	Sg	14 42 02.2	-0.1
PLE	Pljevlja	1.74	356	*e*Pn	Pn	14 41 39.8	+1.0
PLE				*i* Sn	Sg	14 42 03.5	-0.7
STON	Ston	1.88	313	*e*Pn	Pn	14 41 41.2	+0.6
STON				Sg	Sn	14 42 04.1	-0.3
MATE	Matera	2.36	247	⇓P	Pn	14 41 50.5	+3.4
BOVS	Bovan	2.58	37	⇑P	Pn	14 41 51.0	+0.8
TIP	Timpagrande	3.23	222	⇓P	Pn	14 41 55.9	-3.3
MDVR	Moldovita	3.55	26	⇑P	Pn	14 42 04.1	+0.5
DJES	Djerdap	3.75	34	⇓P	Pn	14 42 06.8	+0.5
HERR	Herculane	3.89	31	⇑P	Pn	14 42 08.3	+0.1
BZS	Buzias	4.29	20	⇓P	Pn	14 42 14.5	+0.8
GZR	Gura Zlata	4.46	31	⇑P	Pn	14 42 17.6	+1.5
SURR	Surduc	4.55	23	⇓P	Pn	14 42 17.9	+0.6
MORH	Mrgy, Hungar	4.66	352	⇓P	Pn	14 42 18.7	-0.1
SIRR	Siria	4.91	17	⇓P	Pn	14 42 21.2	-1.0
LOT	Lotru	4.92	37	⇓P	Pn	14 42 22.2	-0.3
VOIR		5.54	44	⇑P	Pn	14 42 33.7	+2.7
MARR	Marisel-Cluj	5.69	26	⇑P	Pn	14 42 23.6	-9.3
MLR	Muntele Rosu	6.05	48	⇓P	Pn	14 42 41.9	+3.8
DOPR	Dopca	6.07	42	⇑P	Pn	14 42 42.3	+4.1
COVR	Voineasa-Covas	6.42	46	⇓P	Pn	14 42 45.7	+2.7
PLOR	Plostina	6.67	48	⇑P	Pn	14 42 49.0	+2.6
VRI	Vrincioaia	6.72	48	⇑P	Pn	14 42 48.2	+1.1
BURAR	Bucovina Array	7.24	32	⇓P	Pn	14 42 57.1	+2.7
GERES	GERESS Array B	8.34	332	Pn	Pn	14 43 11.6	+2.1
	baz=138,slow=12,SNR=2.1						
	0.1nm,0.3s						
FINES	FINESS Array B	20.26	9	P	P	14 45 41.7	-2.0
	0.1nm,0.3s,baz=200,slow=10,SNR=5.0						
	3.5nm,0.9s						
MKAR	Makanchi Array	44.22	61	P	P	14 49 16.0	-1.7
	0.6nm,0.7s,baz=289,slow=8.2,SNR=5.2						
	0.6nm,0.7s						

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*IDC **01** 14:50:04.0±1.6, 3°.54N×126°.58E, h0^{km}, mb3.5/6, mbtmp3.6/6, MS2.8/1, Error ellipse: s-maj=124.6km s-min=19.0km az=69.0*

ISC 01 14:50:10.2±1.9, **3°.6N**±0°.3×**126°.9E**±0°.8, **h50**^{km}**, n7,** σ**0^{s}.44**/6, **mb3.6**/6, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.61	183	P	P	14 54 55.9	-0.3
	2.0nm,0.9s,baz=354,slow=8.6,SNR=2.1						
	2.0nm,0.9s						
WRA	Warramunga Arr	24.53	163	P	P	14 55 25.0	-0.4
	0.7nm,0.9s,baz=340,slow=10,SNR=8.0						
	0.7nm,0.9s						
ASAR	Alice Springs	27.97	166	P	P	14 55 56.8	+0.5
	0.2nm,0.9s,baz=341,slow=9.7,SNR=6.4						
	0.2nm,0.9s						
CMAR	Chiang Mai Arr	31.05	300	LR	LR	15 10 10.8	
	comp=Z,18nm,18.4s,baz=280,slow=39						

MKAR	**Makanchi Array**	**57.73**	**325**	P	**P**	**14 59 56.3**	**+0.3**
	0.6nm,0.7s,baz=120,slow=7.7,SNR=5.4						
	0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**61.91**	**327**	P	**P**	**15 00 24.4**	**-0.2**
	1.1nm,0.8s,baz=127,slow=5.9,SNR=9.8						
	1.1nm,0.8s						
BVAR	**Borovoye Array**	**67.49**	**327**	P	**P**	**15 01 00.9**	**-0.1**
	0.6nm,0.7s,baz=93,slow=3.0,SNR=2.1						
	0.6nm,0.7s						

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*FUNV **01** 15:19:35.8, 10°.80N×62°.29W, h26^{km}, MW3.6*
*TRN **01** 15:19:35.0, 10°.78N×62°.24W, h89^{km}, MD3.1, North of the Paria peninsula.*
ISC 01 15:19:34.0±3.7, 10°.8N±0°.1×62°.3W±0°.1, h97^{km}±47^{km}, n8, σ1^s.56/13, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**0.88**	**99**	*e*P	**Pn**	**15 19 53.5**	**+0.7**
TRN				*e*S	**Sn**	**15 20 05.7**	**-1.4**
GRGR	**Grenville**	**1.48**	**25**	*e*P	**Pn**	**15 20 00.3**	**+0.5**
GRGR				*e*S	**Sn**	**15 20 19.4**	**0.0**
GRHS	**Sauteurs**	**1.57**	**24**	*e*P	**Pn**	**15 20 01.5**	**+0.6**
GRHS				*e*S	**Sn**	**15 20 20.9**	**-0.5**
GCMP	**Grenada, Carri**	**1.89**	**26**	*e*P	**Pn**	**15 20 05.7**	**+0.6**
GCMP				*e*S	**Sn**	**15 20 28.2**	**-0.5**
PCRV	**Puerto La Cruz**	**2.38**	**256**	*e*P	**Pn**	**15 20 12.9**	**+1.4**
PCRV				*e*S	**Sn**	**15 20 38.6**	**-1.7**
PCRV	**Puerto La Cruz**	**2.38**	**256**	*e*P	**Pn**	**15 20 12.9**	**+1.4**
PCRV				*e*S	**Sn**	**15 20 41.3**	**+1.0**
CACV	**CAICARA DEL OR**	**5.27**	**233**	*e*P	Pn	15 20 45.9	-4.5
CACV				*e*S	Sn	15 21 38.6	-11
TURV	**Turiamo**	**5.47**	**267**	*e*S	**Sn**	**15 21 51.4**	**-3.2**

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*DNK **01** 15:27:05.4±0.4, 81°.70N×3°.02W, h36^{km}±5^{km}, ML0.9, Presumed earthquake*
*KOLA **01** 15:27:07.9, 81°.38N×2°.57W, h0^{km}, ML1.9, Greenland sea, Knipovich ridge, north*
BER 01 15:27:02.9±2.1, 81°.79N×3°.18W, h0^{km}±38^{km}, Mw3.1, ML2.3(DNK), Confirmed Earthquake, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOR	**Nord**	**1.97**	**271**	*i* P	Pn	15 27 35.9	-1.5
NOR				*i* S	Sn	15 27 59.7	-3.1
NOR	**Nord**	**1.97**	**271**	*i* P	Pn	15 27 35.9	-1.5
NOR				*i* S	Sn	15 27 58.0	-4.8
NOR				IAML		15 28 05.2	
	comp=Z,1.6nm,0.2s						
KBS	**Kingsbay**	**3.83**	**131**	P	Pn	15 28 00.1	-2.8
KBS				S	Sn	15 28 39.7	-8.8
KBS	**Kingsbay**	**3.83**	**131**	*e*P	Pn	15 28 00.2	-2.7
KBS				IAML		15 28 01.0	
	comp=Z,4.2nm,0.2s						
KBS	**Kingsbay**	**3.83**	**131**	*i* P	Pn	15 27 59.4	-3.5
KBS				*i* S	Sn	15 28 39.6	-8.8
BRBB	**Barentsburg B**	**4.78**	**132**	P	Pn	15 28 14.6	-1.3
BRBB	**Barentsburg B**	**4.78**	**132**	*e*P	Pn	15 28 14.4	-1.5
BRBA	**Barentsburg A**	**4.81**	**132**	*e*P	Pn	15 28 15.4	-1.0
SPA0	**Spitsbergen Ar**	**4.94**	**127**	*e*P	Pn	15 28 16.0	-2.2
SPITS	**Spitsbergen Ar**	**4.94**	**127**	P	Pn	15 28 15.9	-2.3
SPITS				S	Sn	15 29 06.3	-10
HSPB	**Hornsund (broa**	**5.88**	**135**	P	Pn	15 28 27.3	-3.7
ZFI2	**Zemlya Franca-**	**7.55**	**72**	*e*P	Pn	15 28 54.3	+0.4
OMEGA	**Omega**	**7.57**	**72**	P	Pn	15 28 54.4	+0.1
OMEGA				S	Sn	15 30 15.2	-5.4
	comp=Z,19nm,2.2s						

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*NEIC **01** 15:29:33.1±1.2, 11°.81N±0°.06×143°.43E±0°.07, h10^{km}±1^{km}, mb4.7/86, Error ellipse: s-maj=13.8km s-min=5.8km az=128.0*
*IDC **01** 15:29:37.6±2.3, 11°.73N×143°.45E, h52^{km}±22^{km}, mb3.9/18, mbtmp4.1/19, ML4.2/1, MS3.3/11, Error ellipse: s-maj=19.9km s-min=12.8km az=98.0*
ISC 01 15:29:34.7±0.4, 11°.76N±0°.06×143°.42E±0°.09, h25^{km}, n103, σ0^s.72/76, mb4.7/60, MS3.3/10, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.30**	**38**	P	**Pn**	**15 30 13.1**	**+2.0**
	64nm,0.3s,baz=190,slow=9.9,SNR=11						
GUMO				S	**Sb**	**15 30 41.6**	**-2.0**
	260nm,0.6s,baz=246,slow=12,SNR=3.9						
	353nm,0.6s						
JAY	**Jayapura**	**14.44**	**191**	LR	LR	15 38 02.4	
	comp=Z,162nm,18.4s,baz=1.0,slow=35						
PATS	**Pohnpei**	**15.49**	**107**	P	**P**	**15 33 15.3**	**-0.6**
JOW	**Kunigami**	**20.68**	**319**	P	Pn	15 34 14.4	-0.9
	18nm,0.9s,baz=141,slow=6.5,SNR=2.2						
JOW				LR	LR	15 40 56.7	
	comp=Z,46nm,21.5s,baz=180,slow=33						
	18nm,0.9s						
JOW	**Kunigami**	**20.68**	**319**	Pn	Pn	15 34 14.7	-0.6
JOW				IAmb	IAmb	15 34 43.5	
	comp=Z,40nm,1.1s						
PMG	**Port Moresby**	**21.36**	**170**	P	**P**	**15 34 19.9**	**-0.4**
	comp=Z,3.5nm,0.9s,baz=357,slow=13,SNR=3.2						
	comp=Z,3.5nm,0.9s						
PMG	**Port Moresby**	**21.36**	**170**	P	**P**	**15 34 20.9**	**+0.7**
LUWI	**Luwuk**	**24.14**	**240**	P	**P**	**15 34 48.7**	**-0.3**
LUWI				IAmb	IAmb	15 34 49.8	
	comp=Z,21nm,0.7s						
JNU	**Nakatsue**	**24.17**	**334**	LR	LR	15 44 18.6	
	comp=Z,51nm,18.1s,baz=156,slow=36						
JNU	**Nakatsue**	**24.17**	**334**	P	**P**	**15 34 48.8**	**-0.3**
JNU				IAmb	IAmb	15 34 55.2	
	comp=Z,41nm,1.3s						
JGF	**Kuroka**	**24.36**	**348**	P	**P**	**15 34 50.2**	**-0.6**
JGF				IAmb	IAmb	15 35 08.6	
	comp=Z,21nm,1.4s						
SSLB	**Suanglung**	**24.46**	**302**	P	**P**	**15 34 50.8**	**-1.1**
TPUB	**Ta-pu**	**24.53**	**301**	P	**P**	**15 34 53.2**	**+0.7**
MJAR	**Matsushiro Arr**	**25.11**	**350**	P	**P**	**15 34 56.1**	**-1.5**
	comp=Z,2.3nm,0.7s,baz=164,slow=9.9,SNR=10						
MJAR				LR	LR	15 44 11.3	
	comp=Z,74nm,18.4s,baz=178,slow=35						
	comp=Z,2.3nm,0.7s						
MJAR	**Matsushiro Arr**	**25.11**	**350**	P	**P**	**15 34 56.3**	**-1.3**
MAJO	**Matsushiro**	**25.12**	**350**	P	**P**	**15 34 56.8**	**-0.9**
MJB9	**Matsu-Tunnel**	**25.12**	**350**	P	**P**	**15 34 57.6**	**-0.1**
COEN	**Coen**	**25.55**	**181**	P	**P**	**15 35 02.0**	**+0.3**
COEN				IAmb	IAmb	15 35 20.6	
	comp=Z,18nm,1.4s						
KSRS	**Korea Array**	**29.11**	**334**	P	**P**	**15 35 34.3**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=140,slow=6.7,SNR=2.0						
	comp=Z,0.5nm,0.6s						
CTAO	**Charters Tower**	**31.77**	**175**	P	**P**	**15 35 57.8**	**+0.6**
ASAJ	**Asahikawa**	**32.25**	**359**	LR	LR	15 47 35.6	
	comp=Z,16nm,21.4s,baz=180,slow=33						
WB0	**Warramunga Arr**	**32.57**	**196**	P	**P**	**15 36 02.5**	**-1.7**
WR8	**Warramunga Arr**	**32.72**	**196**	P	**P**	**15 36 04.1**	**-1.4**
WRAB	**Tennant Creek**	**32.74**	**196**	P	**P**	**15 36 04.5**	**-1.1**
WRAB				IAmb	IAmb	15 36 07.3	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**32.75**	**196**	P	**P**	**15 36 04.8**	**-0.9**
	comp=Z,1.7nm,0.8s,baz=19,slow=11,SNR=11						
	comp=Z,1.7nm,0.8s						
USRK	**Ussuriysk Ar.**	**33.79**	**345**	P	**P**	**15 36 13.7**	**-0.9**
	comp=Z,2.4nm,0.7s,baz=110,slow=12,SNR=4.6						
	comp=Z,2.4nm,0.7s						
AS31	**Alice Springs**	**36.42**	**195**	P	**P**	**15 36 37.5**	**0.0**
ASAR	**Alice Springs**	**36.42**	**195**	P	**P**	**15 36 37.5**	**0.0**
	comp=Z,0.4nm,0.6s,baz=24,slow=11,SNR=12						
ASAR				LR	LR	15 51 57.9	
	comp=Z,67nm,18.2s,baz=72,slow=37						
	comp=Z,0.4nm,0.6s						
PSA00	**Pilbara Seismi**	**40.41**	**215**	P	**P**	**15 37 10.7**	**-0.4**
PSA00				IAmb	IAmb	15 37 44.2	
	comp=Z,22nm,1.4s						
DZM	**Mont Dzumac**	**40.51**	**146**	P	**P**	**15 37 12.3**	**+0.3**
PETK	**Petropavlovsk-**	**42.80**	**13**	LR	LR	15 53 14.9	
	comp=Z,45nm,19.5s,baz=200,slow=33						
CMAR	**Chiang Mai Arr**	**43.36**	**284**	P	**P**	**15 37 35.9**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=89,slow=9.0,SNR=2.6						
	comp=Z,1.3nm,0.8s						
FORT	**Forrest**	**44.80**	**199**	P	**P**	**15 37 46.2**	**-0.4**
FORT				IAmb	IAmb	15 37 51.1	
	comp=Z,11nm,0.8s						
BBOO	**Buckleboo**	**44.88**	**189**	P	**P**	**15 37 47.6**	**+0.5**
SONM	**Songino Array**	**47.43**	**327**	P	**P**	**15 38 07.6**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=148,slow=5.6,SNR=4.7						
	comp=Z,0.5nm,0.5s						
SHEM	**Shemya Is, Ala**	**47.70**	**25**	P	**P**	**15 38 09.2**	**+0.1**
SMY	**Shemya**	**47.70**	**25**	P	**P**	**15 38 09.3**	**+0.1**
MA2	**Magadan**	**48.04**	**5**	LR	LR	15 59 27.4	
	comp=Z,19nm,18.5s,baz=336,slow=37						
MORW	**Morawa**	**48.44**	**213**	P	**P**	**15 38 15.7**	**+0.4**
YAK	**Yakutsk**	**51.16**	**352**		**P**	**15 38 35.2**	**-0.2**
YAK				IAmb	IAmb	15 38 36.3	
	comp=Z,12nm,0.8s						
SEY	**Seymchan**	**51.49**	**5**	LR	LR	16 02 23.6	
	comp=Z,27nm,18.0s,baz=28,slow=38						
P08K	**Saint George I**	**57.46**	**29**	P	**P**	**15 39 21.9**	**+0.6**
MKAR	**Makanchi Array**	**61.83**	**317**	P	**P**	**15 39 52.4**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=99,slow=8.0,SNR=5.3						
	comp=Z,1.1nm,0.8s						
MKAR	**Makanchi Array**	**61.83**	**317**	P	**P**	**15 39 51.9**	**+0.1**
MAKZ	**Makanchi**	**62.04**	**317**	P	**P**	**15 39 53.6**	**+0.4**
ZALV	**Zalesovo Beam**	**62.29**	**325**	P	**P**	**15 39 54.1**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=103,slow=6.3,SNR=5.9						
	comp=Z,1.4nm,0.6s						
K13K	**Kusilvak Mount**	**62.35**	**25**	P	**P**	**15 39 55.1**	**+0.2**
K13K				IAmb	IAmb	15 40 33.3	
	comp=Z,14nm,1.4s						
ANM	**Nome**	**63.41**	**22**	P	**P**	**15 40 01.9**	**0.0**
J16K	**Anvik River**	**64.64**	**24**	P	**P**	**15 40 10.2**	**+0.2**
J16K				IAmb	IAmb	15 40 35.0	
	comp=Z,13nm,1.5s						
I17K	**Unalakleet**	**64.87**	**24**	P	**P**	**15 40 12.2**	**+0.7**
I17K				IAmb	IAmb	15 40 44.3	
	comp=Z,4.8nm,1.2s						
KURK	**Kurchatov**	**65.07**	**321**		**P**	**15 40 12.8**	**-0.3**
KURK				IAmb	IAmb	15 40 13.8	
	comp=Z,4.8nm,0.7s						
KURBB	**Kurchatov Arra**	**65.11**	**321**	P	**P**	**15 40 13.6**	**+0.3**
	comp=Z,3.4nm,0.6s,baz=107,slow=6.7,SNR=34						
	comp=Z,3.4nm,0.6s						
J17K	**VABM Dome**	**65.31**	**25**	P	**P**	**15 40 15.3**	**+0.9**
J17K				IAmb	IAmb	15 40 50.5	
	comp=Z,11nm,1.3s						
C16K	**Lisburne Hills**	**65.40**	**19**	P	**P**	**15 40 15.1**	**+0.3**
F17K	**Baldwin Pennin**	**65.84**	**21**	P	**P**	**15 40 18.8**	**+1.1**
G18K	**Tagagawik**	**66.53**	**22**	P	**P**	**15 40 22.8**	**+0.5**
G18K				IAmb	IAmb	15 40 23.6	
	comp=Z,4.8nm,0.8s						
G19K	**Purcell Mounta**	**67.22**	**22**	P	**P**	**15 40 27.4**	**+0.8**
NRIK	**Noril'sk**	**67.39**	**341**	P	**P**	**15 40 27.7**	**+0.1**
	comp=Z,2.1nm,0.6s,baz=112,slow=7.8,SNR=4.0						
	comp=Z,2.1nm,0.6s						
NRIK	**Noril'sk**	**67.39**	**341**	P	**P**	**15 40 27.5**	**-0.1**
NRIK				IAmb	IAmb	15 40 28.5	
	comp=Z,3.4nm,0.8s						
E19K	**Redstone River**	**67.71**	**21**	P	**P**	**15 40 30.8**	**+1.2**
E19K				IAmb	IAmb	15 40 31.9	
	comp=Z,6.5nm,0.7s						
L22K	**Petersville**	**68.56**	**27**	P	**P**	**15 40 34.9**	**-0.2**
L22K				IAmb	IAmb	15 40 59.3	
	comp=Z,10nm,1.4s						
BPAW	**Bear Paw Mtn.**	**68.92**	**25**	IAmb	IAmb	15 40 39.3	
	comp=Z,4.2nm,0.9s						
GHO	**Glory Hole Cre**	**69.20**	**28**	P	**P**	**15 40 39.2**	**+0.1**
GHO				IAmb	IAmb	15 40 45.1	
	comp=Z,12nm,1.2s						
KNK	**Knik Glacier**	**69.33**	**28**	P	**P**	**15 40 40.1**	**+0.3**
E22K	**Anaktuvuk Pass**	**69.87**	**21**	P	**P**	**15 40 44.2**	**+1.1**
G23K	**Bananza Creek**	**70.08**	**23**	IAmb	IAmb	15 40 46.6	
	comp=Z,5.0nm,0.8s						
COLD	**Coldfoot**	**70.17**	**22**	IAmb	IAmb	15 40 47.5	
	comp=Z,7.7nm,0.8s						
CCB	**Clear Creek Bu**	**70.40**	**25**	P	**P**	**15 40 46.0**	**-0.4**
BVAR	**Borovoye Array**	**70.48**	**322**	P	**P**	**15 40 47.6**	**+0.5**
	comp=Z,3.1nm,0.4s,baz=105,slow=7.4,SNR=26						
	comp=Z,3.1nm,0.4s						
BORK	**Borovoye**	**70.53**	**322**		**P**	**15 40 47.1**	**-0.3**
BORK				IAmb	IAmb	15 40 48.4	
	comp=Z,5.0nm,0.6s						
D23K	**Nanushuk River**	**70.53**	**20**	IAmb	IAmb	15 40 49.8	
	comp=Z,7.3nm,0.8s						
H24K	**Noodor Dome**	**70.67**	**24**	P	**P**	**15 40 48.2**	**+0.1**
H24K				IAmb	IAmb	15 40 50.0	
	comp=Z,6.6nm,1.0s						
IL31		**70.81**	**25**	IAmb	IAmb	15 40 49.0	
	comp=Z,5.5nm,1.0s						
ILAR	**Eielson Array**	**70.81**	**25**	P	**P**	**15 40 48.2**	**-0.7**
	comp=Z,2.2nm,0.5s,baz=251,slow=5.9,SNR=48						
	comp=Z,2.2nm,0.5s						
TOLK	**Toolik Lake Re**	**70.82**	**21**	IAmb	IAmb	15 40 50.8	
	comp=Z,7.1nm,0.9s						
C23K	**Itkillik River**	**70.84**	**20**	IAmb	IAmb	15 40 51.0	
	comp=Z,7.5nm,0.8s						
E24K	**Your Creek**	**71.04**	**22**	IAmb	IAmb	15 40 52.5	
	comp=Z,5.2nm,0.8s						
G24K	**Hadweenzic Riv**	**71.05**	**23**	IAmb	IAmb	15 40 52.4	
	comp=Z,3.9nm,0.8s						
F24K	**Squaw Lake**	**71.11**	**22**	IAmb	IAmb	15 40 53.1	
	comp=Z,4.9nm,0.8s						
DOT	**Dot Lake**	**71.79**	**27**	IAmb	IAmb	15 40 57.0	
	comp=Z,5.0nm,0.7s						
F25K	**Christian Rive**	**71.96**	**22**	IAmb	IAmb	15 40 58.4	
	comp=Z,4.6nm,0.8s						
D25K	**Kavik River**	**72.11**	**21**	IAmb	IAmb	15 40 58.8	
	comp=Z,6.8nm,1.0s						
J26L	**Joseph Creek**	**72.16**	**26**	P	**P**	**15 40 57.3**	**+0.1**
J26L				IAmb	IAmb	15 41 00.3	
	comp=Z,3.7nm,0.7s						
G26K	**Porcupine Rive**	**72.53**	**23**	IAmb	IAmb	15 41 03.0	
	comp=Z,4.9nm,1.0s						
F26K	**Sheenjek River**	**72.54**	**22**	IAmb	IAmb	15 41 02.5	
	comp=Z,5.3nm,0.8s						
BCAR	**Beaver Creek A**	**72.71**	**27**	P	**P**	**15 41 00.8**	**+0.3**
C27K	**Jago River**	**73.10**	**20**	IAmb	IAmb	15 41 04.8	
	comp=Z,8.3nm,1.1s						
H27K	**Steamboat Moun**	**73.29**	**24**	IAmb	IAmb	15 41 06.1	
	comp=Z,6.7nm,0.9s						
K29M	**Barlow Dome**	**74.70**	**27**	IAmb	IAmb	15 41 15.2	
	comp=Z,10nm,1.2s						
F30M	**Barrier River**	**75.69**	**23**	P	**P**	**15 41 18.2**	**+0.5**
F30M				IAmb	IAmb	15 42 01.1	
	comp=Z,17nm,1.5s						
M31M	**Drury Creek, Y**	**76.04**	**29**	P	**P**	**15 41 19.8**	**0.0**
AB31	**Akbulak array**	**76.94**	**318**		**P**	**15 41 25.1**	**0.0**
AB31				IAmb	IAmb	15 41 25.8	
	comp=Z,3.9nm,0.7s						
ABKAR	**Akbulak array**	**76.94**	**318**		**P**	**15 41 25.0**	**-0.1**
ARTI	**Arti**	**77.56**	**325**	P	**P**	**15 41 28.5**	**+0.1**
ARTI				IAmb	IAmb	15 41 28.8	
	comp=Z,5.8nm,0.5s						
YKA	**Yellowknife Ar**	**85.12**	**27**	P	**P**	**15 42 08.2**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=290,slow=5.8,SNR=7.9						
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**85.12**	**27**	P	**P**	**15 42 08.4**	**+0.1**
SPITS	**Spitsbergen Ar**	**85.61**	**350**	P	**P**	**15 42 10.5**	**-0.1**
	comp=Z,26nm,1.2s,baz=33,slow=8.6,SNR=1.4						
RES	**Resolute Bay**	**86.64**	**13**	P	**P**	**15 42 16.9**	**+1.2**
RES				IAmb	IAmb	15 42 17.3	
	comp=Z,9.5nm,1.4s						
NVAR	**Mina Array Bea**	**89.16**	**51**	P	**P**	**15 42 28.7**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=277,slow=7.0,SNR=5.1						
	comp=Z,0.8nm,0.6s						
FINES	**FINESS Array B**	**92.20**	**335**	P	**P**	**15 42 40.9**	**-1.2**
	comp=Z,3.4nm,1.0s,baz=84,slow=5.9,SNR=5.7						
	comp=Z,3.4nm,1.0s						
AKASG	**Malin Array Be**	**95.67**	**324**	LR	LR	16 28 17.2	
	comp=Z,60nm,19.8s,baz=356,slow=37						
NOA	**NORSAR Array B**	**98.23**	**339**	LR	LR	16 29 53.3	
	comp=Z,23nm,18.0s,baz=290,slow=37						
LPAZ	**La Paz**	**149.09**	**102**	PKPbc	**PKPbc**	**15 49 21.9**	**-0.7**
	comp=Z,1.2nm,0.7s,baz=270,slow=3.5,SNR=3.8						

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*IDC **01** 15:34:43.4±2.6, 3°.32S×130°.37E, h0^{km}, mb3.8/2, mbtmp3.8/4, ML3.6/2, MS3.6/1, Error ellipse: s-maj=136.6km s-min=27.9km az=74.0*
ISC 01 15:34:47.8±1.0, 3°.32S±0°.09×130°.53E±0°.09, h31^{km}, n13, σ1^s.60/13, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.34**	**208**	P	**Pb**	**15 35 14.2**	**+1.7**
FAKI	**Fak Fak**	**1.76**	**77**	P	**Pn**	**15 35 14.8**	**-1.4**
SANI	**Sanana**	**4.71**	**285**	P	**Pn**	**15 35 56.9**	**+0.1**
TOLI2	**Tolitoli**	**10.69**	**294**	P	**Pn**	**15 37 18.9**	**-0.1**
DAV	**Davao City (W)**	**11.45**	**334**	LR	LR	15 42 36.8	
	comp=Z,255nm,18.8s,baz=110,slow=42						
FITZ	**Fitzroy Crossi**	**15.45**	**198**	Pn	**Pn**	**15 38 21.4**	**-2.3**
	0.1nm,0.3s,baz=28,slow=8.1,SNR=2.0						
FITZ				Sn	**Sn**	**15 41 11.3**	**-2.5**
	0.1nm,0.3s,baz=296,slow=9.5,SNR=2.6						
	1.8nm,0.9s						
COEN	**Coen**	**16.36**	**131**	P	**Pn**	**15 38 36.4**	**+1.1**
WRAB	**Tennant Creek**	**16.93**	**168**	P	**P**	**15 38 44.4**	**+0.1**
WRA	**Warramunga Arr**	**16.93**	**168**	Pn	**Pn**	**15 38 40.8**	**-1.8**
	0.5nm,0.3s,baz=349,slow=11,SNR=12						
WRA				Sn	Sn	15 41 39.5	-10
	0.1nm,0.3s,baz=347,slow=21,SNR=1.7						
	0.6nm,0.4s						
QIS	**Mount Isa**	**19.28**	**153**	P	**P**	**15 39 11.4**	**+1.2**
MTSU	**Mount Surprise**	**19.98**	**138**	P	**P**	**15 39 19.3**	**+1.4**
ASAR	**Alice Springs**	**20.49**	**171**	P	**P**	**15 39 24.4**	**+1.0**
	4.9nm,0.4s,baz=351,slow=10,SNR=108						
	4.9nm,0.4s						
MKAR	**Makanchi Array**	**65.48**	**326**	P	**P**	**15 45 27.8**	**-0.3**
	0.2nm,0.4s,baz=113,slow=8.0,SNR=4.3						
	0.2nm,0.4s						

UPP 01 15:39:57.5±0.1, 58°.82N×15°.09E, h0^{km}, ML1.5, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASKU	**Askersund**	**0.16**	**298**	P	Pg	15 40 00.7	+0.3
ASKU				S	Sg	15 40 03.1	+0.6
ASKU	**Askersund**	**0.16**	**298**	P	Pg	15 40 00.7	+0.3
ASKU				S	Sg	15 40 03.1	+0.6
LNKU	**Linkoeping**	**0.64**	**160**	P	Pg	15 40 09.6	-0.1
LNKU	**Linkoeping**	**0.64**	**160**	P	Pg	15 40 09.6	-0.1
NRAU	**Nora**	**0.75**	**358**	P	Pg	15 40 11.8	-0.1
NRAU	**Nora**	**0.75**	**358**	P	Pg	15 40 11.8	-0.1
ESKU	**Eskilstuna**	**0.79**	**58**	P	Pg	15 40 12.3	-0.3
ESKU				S	Sg	15 40 23.1	+0.3
ESKU	**Eskilstuna**	**0.79**	**58**	P	Pg	15 40 12.3	-0.3
ESKU				S	Sg	15 40 23.1	+0.3
VIKU	**Vikbolandet**	**0.90**	**110**	P	Pg	15 40 14.5	-0.2
VIKU	**Vikbolandet**	**0.90**	**110**	P	Pg	15 40 14.5	-0.2
FKPU	**Falk**	**0.98**	**228**	P	Pg	15 40 15.9	-0.3
FKPU	**Falk**	**0.98**	**228**	P	Pg	15 40 15.9	-0.3
NASU	**Vaermlandsnaes**	**1.00**	**277**	P	Pg	15 40 16.2	-0.4
NASU	**Vaermlandsnaes**	**1.00**	**277**	P	Pg	15 40 16.2	-0.4
EKSU	**Eksjoe**	**1.26**	**175**	P	Pg	15 40 20.7	-0.8
EKSU	**Eksjoe**	**1.26**	**175**	P	Pg	15 40 20.7	-0.8
VSTU	**Vaestervik**	**1.39**	**146**	P	Pn	15 40 23.3	-0.8
VSTU	**Vaestervik**	**1.39**	**146**	P	Pn	15 40 23.3	-0.8
FINU	**Finntorp**	**1.47**	**294**	P	Pn	15 40 25.2	0.0
FINU	**Finntorp**	**1.47**	**294**	P	Pn	15 40 25.2	0.0

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*DNK **01** 15:39:58.8±1.7, 58°.81N×15°.10E, h0^{km}, ML1.5(UPP), Explosion*
UPP 01 15:39:59.0±0.1, 58°.81N×15°.06E, h0^{km}, ML1.8, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASKU	**Askersund**	**0.15**	**306**	P	Pg	15 40 01.9	+0.1
	baz=116						
ASKU				S	Sg	15 40 04.2	+0.4
ASKU	**Askersund**	**0.15**	**306**	P	Pg	15 40 01.9	+0.1
	baz=116						
ASKU				S	Sg	15 40 04.2	+0.4
LNKU	**Linkoeping**	**0.63**	**158**	P	Pg	15 40 10.9	-0.2
LNKU				S	Sg	15 40 19.4	+0.2
LNKU	**Linkoeping**	**0.63**	**158**	P	Pg	15 40 10.9	-0.2
LNKU				S	Sg	15 40 19.4	+0.2
NRAU	**Nora**	**0.77**	**359**	P	Pg	15 40 13.7	+0.1
NRAU				S	Sg	15 40 24.2	+0.6
NRAU	**Nora**	**0.77**	**359**	P	Pg	15 40 13.7	+0.1
NRAU				S	Sg	15 40 24.2	+0.6
ESKU	**Eskilstuna**	**0.81**	**58**	P	Pg	15 40 14.1	-0.4
ESKU	**Eskilstuna**	**0.81**	**58**	P	Pg	15 40 14.1	-0.4
VIKU	**Vikbolandet**	**0.91**	**109**	P	Pg	15 40 16.0	-0.4
VIKU	**Vikbolandet**	**0.91**	**109**	P	Pg	15 40 16.0	-0.4
NASU	**Vaermlandsnaes**	**0.98**	**278**	P	Pg	15 40 17.7	-0.1
NASU	**Vaermlandsnaes**	**0.98**	**278**	P	Pg	15 40 17.7	-0.1
EKSU	**Eksjoe**	**1.25**	**174**	P	Pg	15 40 22.1	-0.7
EKSU	**Eksjoe**	**1.25**	**174**	P	Pg	15 40 22.1	-0.7
VSTU	**Vaestervik**	**1.39**	**145**	P	Pn	15 40 24.3	-1.3
VSTU	**Vaestervik**	**1.39**	**145**	P	Pn	15 40 24.3	-1.3
FINU	**Finntorp**	**1.46**	**295**	P	Pn	15 40 25.9	-0.6
FINU	**Finntorp**	**1.46**	**295**	P	Pn	15 40 25.9	-0.6
BACU	**Backbrunna**	**1.48**	**44**	P	Pn	15 40 25.7	-1.2
BACU	**Backbrunna**	**1.48**	**44**	P	Pn	15 40 25.7	-1.2
UDD	**Uddeholm**	**1.48**	**331**	P	Pn	15 40 26.4	-0.5
UDD	**Uddeholm**	**1.48**	**331**	P	Pn	15 40 26.4	-0.5

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*IDC **01** 16:09:12.8±2.5, 31°.54N×140°.47E, h77^{km}±20^{km}, mb3.4/11, mbtmp3.7/13, Error ellipse: s-maj=44.3km s-min=17.9km az=78.0*
*JMA **01** 16:09:15.3±0.5, 32°N±2°×14°1E±°, h11^{km}, MV4.0/27, E OFF HACHIJOJIMA ISLAND*
ISC 01 16:09:07.8±1.0, 31°.47N±0°.08×140°.8E±0°.1, h35^{km}, n33, σ2^s.56/27, mb3.6/11, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.34**	**318**	S	**Sn**	**16 09 46.0**	**-0.7**
JHCJ	**Hachijojimakas**	**1.82**	**332**	S	**Sn**	**16 09 57.0**	**-1.6**
JHJ2	**Mitsune**	**1.85**	**333**	P	**Pn**	**16 09 39.6**	**+2.5**
JHJ	**Hachijo jima 2**	**1.87**	**332**	P	**Pn**	**16 09 39.6**	**+2.3**
	238nm,0.9s,baz=64,slow=21,SNR=17						
JHJ				S	**Sn**	**16 09 56.5**	**-3.2**
	306nm,0.3s,baz=131,slow=19,SNR=8.5						
JMKN	**Mikurajimanish**	**2.63**	**337**	S	**Sn**	**16 10 17.1**	**-1.5**
JMYK	**Miyake Tsubota**	**2.80**	**338**	*e*S	**Sn**	**16 10 22.6**	**-0.1**
BSO1	**Boso 1**	**3.18**	**2**	P	**Pn**	**16 09 57.9**	**+3.1**
TK02	**Tokai 2**	**3.58**	**315**	P	**Pn**	**16 10 04.6**	**+4.0**
TTO1	**TONANKAI O.B.S**	**4.04**	**303**	P	**Pn**	**16 10 10.2**	**+3.4**
JOD2	**Odawara 2**	**4.06**	**339**	P	**Pn**	**16 10 11.3**	**+3.9**
JOD2				*e*S	**Sn**	**16 10 51.3**	**-2.4**
JTNC	**Tanabenakahech**	**4.99**	**299**	P	**Pn**	**16 10 23.6**	**+3.4**
JWY	**Kouya**	**5.19**	**303**	P	**Pn**	**16 10 26.6**	**+3.6**
JYTA	**Yamagatataniai**	**5.35**	**321**	*e*P	**Pn**	**16 10 29.5**	**+4.4**
MJAR	**Matsushiro Arr**	**5.51**	**337**	P	**Pn**	**16 10 29.5**	**+2.2**
	1.2nm,0.7s,baz=151,slow=14,SNR=8.8						
MJAR				S	**Sn**	**16 11 31.4**	**+1.9**
	2.0nm,0.5s,baz=108,slow=15,SNR=4.0						
MAT	**Matsushiro**	**5.51**	**337**	*e*P	Pn	16 10 32.5	+5.1
ASAJ	**Asahikawa**	**12.71**	**6**	P	**Pn**	**16 12 08.5**	**+2.6**
	4.7nm,0.9s,baz=204,slow=20,SNR=1.5						
H11N2	**WAKE ISLAND Hy**	**26.18**	**110**	T	T	16 43 57.6	
	baz=307						
H11N1	**WAKE ISLAND Hy**	**26.19**	**110**	T	T	16 43 51.1	
	baz=307						
H11N3	**WAKE ISLAND Hy**	**26.20**	**110**	T	T	16 43 53.3	
	baz=307						
H11S3	**WAKE ISLAND Hy**	**26.68**	**113**	T	T	16 43 57.6	
	baz=305,slow=75,SNR=17						
H11S1	**WAKE ISLAND Hy**	**26.69**	**113**	T	T	16 43 58.5	
	baz=305,slow=75,SNR=16						
H11S2	**WAKE ISLAND Hy**	**26.70**	**113**	T	T	16 43 59.6	
	baz=305,slow=75,SNR=12						
SONM	**Songino Array**	**30.83**	**312**	P	**P**	**16 15 18.2**	**-2.3**
	0.2nm,0.3s,baz=91,slow=5.8,SNR=1.4						
	0.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**39.89**	**261**	P	**P**	**16 16 37.5**	**-1.0**
	0.3nm,0.4s,baz=61,slow=8.6,SNR=1.2						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**45.46**	**317**	P	P	16 17 20.8	-2.4
	0.3nm,0.4s,baz=120,slow=8.5,SNR=1.8						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**46.85**	**307**	P	P	16 17 31.9	-2.5
	0.7nm,0.8s,baz=90,slow=8.8,SNR=4.8						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	**51.49**	**188**	P	**P**	**16 18 11.0**	**+1.0**
	0.1nm,0.4s,baz=6.7,slow=7.4,SNR=1.7						
	0.1nm,0.4s						
BVAR	**Borovoye Array**	**54.07**	**315**	P	**P**	**16 18 27.3**	**-1.5**
	0.3nm,0.5s,baz=53,slow=10,SNR=2.3						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**55.22**	**188**	P	**P**	**16 18 38.2**	**+0.8**
	0.3nm,0.8s,baz=3.7,slow=6.9,SNR=6.9						
	0.3nm,0.8s						
FINES	**FINESS Array B**	**73.52**	**333**	P	**P**	**16 20 35.6**	**-1.0**
	7.1nm,1.1s,baz=59,slow=4.9,SNR=4.6						
	7.1nm,1.1s						
AKASG	**Malin Array Be**	**78.42**	**323**	P	**P**	**16 21 03.8**	**-1.0**
	0.6nm,0.4s,baz=55,slow=5.2,SNR=2.5						
	0.6nm,0.4s						
HFS	**Hagfors**	**78.96**	**336**	P	**P**	**16 21 07.7**	**+0.1**
	3.1nm,0.9s,baz=78,slow=8.0,SNR=1.5						
	3.1nm,0.9s						

NOA	**NORSAR Array B**	**79.13**	**338**	P	**P**	**16 21 07.9**	**-0.6**
	1.9nm,1.1s,baz=54,slow=5.3,SNR=2.1						
	1.9nm,1.1s						

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*TIR **01** 16:15:38.6, 41°.46N×19°.39E, h17^{km}±1^{km}, Md2.9/6, Ml2.4/5*
*SKO **01** 16:15:40.8, 41°.53N×19°.34E, h0^{km}, ML2.5*
*PDG **01** 16:15:42.6±0.4, 41°.58N×19°.54E, h7^{km}±1^{km}, ML2.6/13, Error ellipse: s-maj=1.4km s-min=1.3km az=90.0*
ISC 01 16:15:40.9±1.1, **41°.52N**±0°.02×**19°.45E**±0°.02, **h6**^{km}±9^{km}, **n42**, σ**1^s.20**/71, **8C-5D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.35**	**119**	Pg	**Pg**	**16 15 48.6**	**+0.9**
TIR				Sg	**Sg**	**16 15 51.9**	**-0.5**
TIR				AML	AML	16 15 55.1	
	1.2nm,0.3s						
TIR				AML	AML	16 15 55.4	
	1.1nm,0.2s						
TIR	**Tirane**	**0.35**	**119**	*i* Pg	**Pg**	**16 15 48.7**	**+0.9**
TIR				*i* Sg	**Sg**	**16 15 53.5**	**+1.1**
ULC	**Ulcinj**	**0.47**	**341**	*e*Pg	**Pb**	**16 15 50.7**	**-0.9**
ULC				*i* Sg	**Sb**	**16 15 57.6**	**-1.3**
SDA	**Shkodra**	**0.53**	**4**	Pg	**Pg**	**16 15 50.9**	**-0.4**
SDA				Sg	**Sb**	**16 15 59.1**	**-1.5**
SDA				AMd		16 16 45.6	
DRME	**Dracevica, Mon**	**0.70**	**343**	⇓*i*Pg	**Pb**	**16 15 54.7**	**-0.8**
DRME				*e*Sg	**Sb**	**16 16 05.1**	**-0.3**
PHP	**Peshkopia**	**0.76**	**77**	Pg	**Pg**	**16 15 54.3**	**-1.2**
PHP				Sg	**Sg**	**16 16 03.2**	**-2.2**
PHP				AML	AML	16 16 09.1	
	1.6nm,0.2s						
PHP				AMd		16 16 41.0	
BUM	**Brajici-Budva**	**0.89**	**332**	*e*Pg	**Pb**	**16 15 58.5**	**-0.2**
BUM				*i* Sg	**Sn**	**16 16 12.2**	**-1.0**
PDG	**Podgorica**	**0.92**	**351**	Pg	**Pb**	**16 15 58.8**	**-0.5**
PDG				Sg	**Sb**	**16 16 11.7**	**-0.1**
PDG				AMd		16 17 01.0	
PDG	**Podgorica**	**0.92**	**351**	⇓P	**Pg**	**16 15 58.2**	**-0.4**
PDG	**Podgorica**	**0.92**	**351**	*e*Pg	**Pg**	**16 15 58.5**	**-0.1**
PDG				*i* Sg	**Sb**	**16 16 12.1**	**+0.3**
OHR	**Ohrid**	**1.09**	**111**	*i* Pg	**Pg**	**16 16 02.0**	**+0.1**
OHR				*i* Sg	**Sn**	**16 16 19.0**	**+0.7**
OHR				*e*Lg	Lg	16 16 20.5	
	comp=N,65nm,0.5s						
OHR				*e*Lg	Lg	16 16 22.4	
	comp=E,47nm,0.5s						
CEME	**Cevo**	**1.10**	**339**	*e*Pg	**Pn**	**16 16 02.3**	**-0.7**
CEME				*e*Sg	**Sn**	**16 16 18.9**	**+0.4**
PVY	**Plav**	**1.14**	**19**	⇑*i*Pg	**Pg**	**16 16 02.0**	**-0.8**
PVY				*i* Sg	**Sb**	**16 16 18.3**	**+0.1**
HCY	**Herceg Novi**	**1.17**	**323**	*e*Pg	**Pn**	**16 16 04.4**	**+0.6**
HCY				*i* Sg	**Sn**	**16 16 22.4**	**+2.3**
NKME	**Niksic**	**1.30**	**344**	⇑*i*Pg	**Pg**	**16 16 05.7**	**-0.2**
NKME				*e*Sg	**Sn**	**16 16 25.2**	**+1.8**
KOME	**Kolasin**	**1.33**	**2**	*e*Pg	**Pg**	**16 16 06.3**	**-0.2**
KOME				*e*Sg	**Sn**	**16 16 25.8**	**+1.6**
KBN	**Korca**	**1.35**	**131**	Sn	**Sb**	**16 16 21.6**	**-2.5**
KBN				AML	AML	16 16 29.5	
	comp=E,0.3nm,0.4s						
IVA	**Berane**	**1.39**	**13**	*e*Pg	**Pb**	**16 16 07.1**	**-0.3**
IVA				*i* Sg	**Sg**	**16 16 27.1**	**+1.5**
DBRK	**Dubrovnik**	**1.50**	**320**	*e*Pn	**Pg**	**16 16 09.7**	**0.0**
DBRK				Sg	**Sg**	**16 16 30.0**	**+0.7**
BRY	**Bratogost**	**1.54**	**334**	*e*Pg	**Pg**	**16 16 10.4**	**0.0**
BRY				*i* Sg	**Sg**	**16 16 33.9**	**+3.5**
SKO	**Skopje**	**1.56**	**72**	*i* Pg	**Pn**	**16 16 09.8**	**+0.7**
SKO				*i* Sg	**Sn**	**16 16 30.5**	**+0.9**
UPM	**Unac-Piva**	**1.73**	**347**	*e*Pn	**Pg**	**16 16 13.3**	**-0.8**
UPM				*i* Sn	**Sg**	**16 16 38.1**	**+1.5**
PLE	**Pljevlja**	**1.81**	**359**	*e*Pn	**Pg**	**16 16 15.1**	**-0.5**
PLE				*i* Sn	**Sg**	**16 16 39.7**	**+0.6**
KEK	**Kerkira**	**1.82**	**172**	Sn	**Sn**	**16 16 36.3**	**+0.1**
STON	**Ston**	**1.88**	**317**	*e*Pn	**Pb**	**16 16 14.4**	**-1.2**
STON				Sn	**Sg**	**16 16 39.9**	**-1.4**
NOCI	**Noci**	**1.94**	**249**	Pn	**Pn**	**16 16 12.6**	**-1.9**
NOCI				Sn	**Sn**	**16 16 38.5**	**-0.7**
NOCI				AML	AML	16 16 54.5	
	comp=E,0.2nm,0.4s						
NOCI				AMd		16 17 34.9	
IGT	**Igoumenitsa**	**2.09**	**161**	Pn	**Pn**	**16 16 17.5**	**+1.0**
IGT				Sn	**Sn**	**16 16 43.1**	**+0.2**
IGT				AMd		16 17 39.2	
BARS	**Barje**	**2.18**	**53**	*i* Pn	**Pn**	**16 16 18.6**	**+0.9**
BARS				*i* Sn	**Sn**	**16 16 46.0**	**+0.9**
MATE	**Matera**	**2.25**	**248**	⇑P	**Pg**	**16 16 26.2**	**+2.2**
GRG	**Griva**	**2.29**	**103**	*i* Pn	**Pn**	**16 16 19.0**	**-0.3**
GRG				*i* Sn	**Sn**	**16 16 49.3**	**+1.4**
VAY	**Valandovo**	**2.35**	**94**	*i* Pn	**Pn**	**16 16 20.8**	**+0.7**
VAY				*i* Sn	**Sn**	**16 16 50.5**	**+1.2**
VAY				*e*Lg	Lg	16 16 57.5	
	comp=N,23nm,1.0s						
VAY				*e*Lg	Lg	16 16 58.6	
	comp=E,11nm,0.6s						
KNT	**Kendrikon**	**2.62**	**97**	*i* Pn	**Pn**	**16 16 24.4**	**+0.6**
KNT				*i* Sn	**Sn**	**16 16 55.5**	**-0.4**
BOVS	**Bovan**	**2.69**	**37**	⇑P	**Pn**	**16 16 25.5**	**+0.8**
LIT	**Litokhoron**	**2.71**	**121**	*i* Pn	**Pn**	**16 16 26.0**	**+1.1**
KKB	**Krupnik**	**2.77**	**82**	*i* Pn	**Pn**	**16 16 26.7**	**+0.8**
KKB				*i* Sn	**Sn**	**16 16 59.2**	**-0.5**
HERR	**Herculane**	**4.00**	**32**	⇓P	**Pn**	**16 16 42.1**	**-0.6**
BZS	**Buzias**	**4.39**	**20**	⇑P	**Pn**	**16 16 47.9**	**-0.2**
GZR	**Gura Zlata**	**4.57**	**31**	⇓P	**Pn**	**16 16 50.5**	**-0.1**
MORH	**Mrgy, Hungar**	**4.73**	**353**	⇑P	**Pb**	**16 17 01.8**	**-2.4**
LOT	**Lotru**	**5.03**	**37**	⇓P	**Pn**	**16 16 59.4**	**+2.4**
VOIR		**5.65**	**44**	⇑P	**Pn**	**16 17 06.6**	**+1.2**
PLOR	**Plostina**	**6.78**	**48**	⇑P	**Pn**	**16 17 23.2**	**+2.3**

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*SKO **01** 16:17:21.9, 41°.51N×19°.31E, h0^{km}, ML2.5*
*TIR **01** 16:17:21.9, 41°.54N×19°.58E, h9^{km}, Md2.9/6, Ml2.5/6*
*PDG **01** 16:17:23.9±0.1, 41°.60N×19°.58E, h10^{km}, ML2.6/13, Error ellipse: s-maj=0.1km s-min=0.3km az=0.0*
ISC 01 16:17:22.4±1.1, **41°.55N**±0°.02×**19°.57E**±0°.02, **h7**^{km}±9^{km}, **n29**, σ**1^s.04**/55, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.30**	**132**	Pg	**Pb**	**16 17 29.7**	**-0.4**
TIR				Sg	**Sg**	**16 17 32.1**	**-0.2**
TIR				AML	AML	16 17 34.4	
	3.6nm,0.3s						
TIR				AML	AML	16 17 36.2	
	1.3nm,0.3s						
TIR	**Tirane**	**0.30**	**132**	*i* Pg	**Pb**	**16 17 29.7**	**-0.4**
TIR				*i* Sg	**Sb**	**16 17 35.5**	**+0.1**
ULC	**Ulcinj**	**0.48**	**330**	*e*Pg	**Pg**	**16 17 31.8**	**+0.1**
ULC				*i* Sg	**Sb**	**16 17 39.2**	**-1.4**
SDA	**Shkodra**	**0.50**	**354**	Pg	**Pb**	**16 17 33.2**	**-0.5**
SDA				Sg	**Sg**	**16 17 39.7**	**+1.0**
SDA				AMd		16 18 28.2	
PHP	**Peshkopia**	**0.67**	**78**	Pg	**Pg**	**16 17 34.6**	**-0.7**
PHP				Sg	**Sg**	**16 17 43.2**	**-0.7**
PHP				AML	AML	16 17 48.9	
	1.7nm,0.2s						
PHP				AMd		16 18 20.5	
DRME	**Dracevica, Mon**	**0.70**	**336**	*e*Pg	**Pb**	**16 17 36.3**	**-0.7**
DRME				*e*Sg	**Sb**	**16 17 46.8**	**0.0**
BUM	**Brajici-Budva**	**0.90**	**326**	*e*Pg	**Pb**	**16 17 40.0**	**-0.5**
BUM				*i* Sg	**Sn**	**16 17 53.7**	**-1.3**
PDG	**Podgorica**	**0.91**	**345**	Pg	**Pg**	**16 17 39.4**	**-0.5**
PDG				Sg	**Sb**	**16 17 53.4**	**+0.5**
PDG				AMd		16 18 37.5	
PDG	**Podgorica**	**0.91**	**345**	*e*Pg	**Pg**	**16 17 39.9**	**0.0**
PDG				*i* Sg	**Sn**	**16 17 53.8**	**-1.3**
OHR	**Ohrid**	**1.02**	**115**	*i* Pg	**Pn**	**16 17 43.5**	**+0.2**
OHR				*i* Sg	**Sn**	**16 18 00.3**	**+2.3**
OHR				*e*Lg	Lg	16 18 03.2	
	comp=N,91nm,0.6s						
OHR				*e*Lg	Lg	16 18 04.5	
	comp=E,89nm,0.6s						
PVY	**Plav**	**1.08**	**15**	*e*Pg	**Pg**	**16 17 42.8**	**-0.4**
PVY				*i* Sg	**Sn**	**16 17 59.1**	**-0.4**
CEME	**Cevo**	**1.11**	**334**	*e*Pg	**Pn**	**16 17 44.1**	**-0.4**
CEME				*e*Sg	**Sn**	**16 18 00.7**	**+0.6**
HCY	**Herceg Novi**	**1.20**	**319**	*e*Pg	**Pg**	**16 17 46.2**	**+0.7**
HCY				*i* Sg	**Sn**	**16 18 03.9**	**+1.6**
KOME	**Kolasin**	**1.30**	**358**	*e*Pg	**Pg**	**16 17 47.2**	**-0.2**
KOME				*e*Sg	**Sn**	**16 18 05.9**	**+1.1**
NKME	**Niksic**	**1.30**	**340**	*e*Pg	**Pg**	**16 17 47.1**	**-0.3**
NKME				*e*Sg	**Sn**	**16 18 06.7**	**+1.9**
KBN	**Korca**	**1.30**	**135**	Sg	**Sn**	**16 18 04.4**	**-0.5**
KBN				AML	AML	16 18 10.9	
	comp=E,0.3nm,0.6s						
IVA	**Berane**	**1.34**	**10**	*e*Pg	**Pg**	**16 17 47.8**	**-0.4**
IVA				*i* Sg	**Sg**	**16 18 08.4**	**+2.8**
SKO	**Skopje**	**1.46**	**73**	*i* Pg	**Pg**	**16 17 51.6**	**+1.1**
SKO				*i* Sg	**Sg**	**16 18 10.9**	**+1.6**
DBRK	**Dubrovnik**	**1.54**	**317**	*e*Pn	**Pb**	**16 17 50.8**	**-0.5**
DBRK				Sg	**Sg**	**16 18 11.9**	**-0.1**
BRY	**Bratogost**	**1.55**	**331**	*e*Pg	**Pb**	**16 17 51.5**	**-0.1**
BRY				*i* Sg	**Sg**	**16 18 14.4**	**+2.0**
UPM	**Unac-Piva**	**1.72**	**344**	*e*Pn	**Pb**	**16 17 54.3**	**-0.3**
UPM				*i* Sn	**Sg**	**16 18 18.6**	**+0.7**
PLE	**Pljevlja**	**1.78**	**356**	*e*Pn	**Pb**	**16 17 55.2**	**-0.4**
PLE				*i* Sn	**Sg**	**16 18 19.7**	**-0.1**
KEK	**Kerkira**	**1.84**	**175**	Sn	**Sg**	**16 18 22.4**	**+0.7**
STON	**Ston**	**1.92**	**314**	*i* Pn	**Pn**	**16 17 55.3**	**-0.2**
STON				Sn	**Sn**	**16 18 19.0**	**-0.9**
NOCI	**Noci**	**2.04**	**249**	Pn	**Pb**	**16 17 59.7**	**-0.1**
NOCI				Sn	**Sg**	**16 18 28.0**	**0.0**
NOCI				AML	AML	16 18 30.7	
	comp=E,0.2nm,0.3s						
NOCI				AMd		16 19 13.6	
BARS	**Barje**	**2.09**	**52**	*i* Pn	**Pb**	**16 17 59.7**	**-1.0**
BARS				*i* Sn	**Sg**	**16 18 28.1**	**-1.6**
IGT	**Igoumenitsa**	**2.10**	**164**	Pn	**Pb**	**16 18 00.9**	**+0.1**
IGT				Sn	**Sg**	**16 18 28.6**	**-1.2**
IGT				AML	AML	16 18 38.5	
	comp=E,0.1nm,0.5s						
IGT				AMd		16 19 32.9	
VAY	**Valandovo**	**2.27**	**95**	*i* Pn	**Pb**	**16 18 01.8**	**-1.9**
VAY				*i* Sn	**Sg**	**16 18 37.5**	**+2.2**
VAY				*e*Lg	Lg	16 18 39.0	
	comp=N,14nm,0.7s						
VAY				*e*Lg	Lg	16 18 40.2	
	comp=E,8.8nm,0.6s						
KNT	**Kendrikon**	**2.53**	**98**	*i* Pn	**Pb**	**16 18 08.3**	**0.0**

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*NNC **01** 16:19:44.6±0.3, 42°.89N×77°.67E, h0^{km}±2^{km}, mb2.2, mpv2.7, Error ellipse: s-maj=3.6km s-min=1.3km az=5.0*
*KRNET **01** 16:19:45.0±0.1, 42°.89N×77°.66E, h20^{km}, mb2.4*
*SOME **01** 16:19:45.8, 42°.93N×77°.67E, h15^{km}*
ISC 01 16:19:45.6±1.0, **42°.88N**±0°.02×**77°.61E**±0°.02, **h12**^{km}±8^{km}, **n31**, σ**1^s.89**/61, **4C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDOK	**Medeo**	**0.50**	**304**	*e*P	**Pg**	**16 19 55.4**	**0.0**
MDOK				*e*S	**Sg**	**16 20 02.7**	**+0.6**
MDOK	**Medeo**	**0.50**	**304**	Pg	**Pg**	**16 19 55.4**	**0.0**
	1.3nm,0.1s						
MDOK				Lg	Lg	16 20 02.7	
	7.3nm,0.2s						
KOTS	**Kotyrbulak**	**0.51**	**314**	P	**Pg**	**16 19 55.6**	**0.0**
	2.6nm,0.1s						
KOTS				S	**Sg**	**16 20 02.7**	**+0.4**
	25nm,0.2s						
KOTS	**Kotyrbulak**	**0.51**	**314**	*e*P	**Pg**	**16 19 55.6**	**0.0**
	2.6nm,0.1s						
KOTS				*e*S	**Sg**	**16 20 02.7**	**+0.4**
	25nm,0.2s						
TNSS	**Tian-Shan**	**0.51**	**288**	P	**Pg**	**16 19 55.7**	**0.0**
	0.4nm,0.1s						
TNSS				S	**Sg**	**16 20 03.1**	**+0.5**
	2.2nm,0.1s						
TNSS	**Tian-Shan**	**0.51**	**288**	*e*P	**Pg**	**16 19 55.7**	**0.0**
	0.4nm,0.1s						
TNSS				*e*S	**Sg**	**16 20 03.1**	**+0.5**
	2.2nm,0.1s						
SATY	**Saty**	**0.61**	**73**	P	**Pg**	**16 19 55.6**	**-1.9**
	6.4nm,0.1s						
SATY				S	**Sg**	**16 20 03.5**	**-2.1**
	19nm,0.1s						
PRZ	**Przheval'sk**	**0.71**	**124**	⇑*i*P	**Pg**	**16 19 58.2**	**-1.1**
PRZ				⇑*i*S	**Sg**	**16 20 06.8**	**-1.8**
KDJ	**Kajisay**	**0.82**	**203**	⇓*i*P	**Pg**	**16 20 00.9**	**-0.5**
KDJ				⇓*i*S	**Sg**	**16 20 12.2**	**0.0**
MTBS	**Maitube**	**0.90**	**286**	*e*P	**Pb**	**16 20 02.7**	**-0.5**
MTBS				*e*S	**Sb**	**16 20 15.2**	**0.0**
MTBS	**Maitube**	**0.90**	**286**	P	**Pb**	**16 20 02.7**	**-0.5**
	2.2nm,0.1s						
MTBS				S	**Sb**	**16 20 15.2**	**0.0**
	9.0nm,0.4s						
MTBS	**Maitube**	**0.90**	**286**	*e*P	**Pb**	**16 20 02.7**	**-0.5**
	2.2nm,0.1s						
MTBS				*e*S	**Sb**	**16 20 15.2**	**0.0**
	9.0nm,0.4s						
UZB	**Uzynbulak**	**1.07**	**75**	*e*P	**Pb**	**16 20 04.6**	**-1.5**
UZB				*e*S	**Sb**	**16 20 18.0**	**-2.0**
UZB	**Uzynbulak**	**1.07**	**75**	P	**Pb**	**16 20 04.6**	**-1.5**
	1.6nm,0.1s						
UZB				S	**Sb**	**16 20 18.0**	**-2.0**
	4.6nm,0.1s						
UZB	**Uzynbulak**	**1.07**	**75**	*e*P	**Pb**	**16 20 04.6**	**-1.5**
	1.6nm,0.1s						
UZB				*e*S	**Sb**	**16 20 18.0**	**-2.0**
	4.6nm,0.1s						
KTBS	**Karatobe**	**1.07**	**321**	P	**Pn**	**16 20 05.8**	**-0.6**
	1.1nm,0.2s						
KTBS				S	**Sg**	**16 20 20.3**	**+0.1**
	1.1nm,0.4s						
TARG	**Taragay, Kyrgy**	**1.16**	**173**	⇓*i*P	**Pb**	**16 20 06.5**	**-1.3**
TARG				⇓*i*S	**Sb**	**16 20 22.2**	**-0.8**
KST	**Kastek**	**1.22**	**278**	*e*P	**Pb**	**16 20 08.5**	**-0.2**
KST				*e*S	**Sn**	**16 20 25.0**	**0.0**
KST	**Kastek**	**1.22**	**278**	P	**Pb**	**16 20 08.5**	**-0.2**
	1.6nm,0.3s						
KST				S	**Sn**	**16 20 25.0**	**0.0**
	3.5nm,0.5s						
KST	**Kastek**	**1.22**	**278**	*e*P	**Pb**	**16 20 08.5**	**-0.2**
	1.6nm,0.3s						
KST				*e*S	**Sn**	**16 20 25.0**	**0.0**
	3.5nm,0.5s						
BOOM	**Boomskoye usch**	**1.29**	**253**	⇑*i*P	**Pb**	**16 20 09.6**	**-0.3**
BOOM				⇑*i*S	**Sn**	**16 20 27.1**	**+0.2**
ARXS	**Arharly**	**1.34**	**7**	P	**Pb**	**16 20 09.9**	**-0.8**
	0.9nm,0.2s						
ARXS				S	**Sn**	**16 20 27.2**	**-0.7**
	2.8nm,0.3s						
ARXS	**Arharly**	**1.34**	**7**	*e*P	**Pb**	**16 20 09.9**	**-0.8**
	0.9nm,0.2s						
ARXS				*e*S	**Sn**	**16 20 27.2**	**-0.7**
	2.8nm,0.3s						
BLB	**Baldybastay**	**1.37**	**27**	P	**Pg**	**16 20 10.6**	**-1.3**
	11nm,0.1s						
BLB				S	**Sg**	**16 20 28.1**	**-1.5**
	7.5nm,0.2s						
SHLS	**Shalkode**	**1.39**	**78**	*e*P	**Pg**	**16 20 15.1**	**+2.9**
SHLS				*e*S	**Sg**	**16 20 36.6**	**+6.4**
SHLS	**Shalkode**	**1.39**	**78**	P	**Pg**	**16 20 15.1**	**+2.9**
	1.5nm,0.2s						
SHLS				S	**Sg**	**16 20 37.2**	**+6.9**
	6.7nm,0.4s						
SHLS	**Shalkode**	**1.39**	**78**	*e*P	**Pg**	**16 20 15.1**	**+2.9**
	1.5nm,0.2s						
SHLS				*e*S	**Sg**	**16 20 36.6**	**+6.4**
	6.7nm,0.4s						
DGS	**Degeres**	**1.39**	**286**	*e*P	**Pb**	**16 20 11.7**	**+0.1**
DGS				*e*S	**Sb**	**16 20 30.3**	**+0.9**
DGS	**Degeres**	**1.39**	**286**	P	**Pb**	**16 20 11.7**	**+0.1**
	1.4nm,0.2s						
DGS				S	**Sb**	**16 20 30.3**	**+0.9**
	2.7nm,0.1s						
DGS	**Degeres**	**1.39**	**286**	*e*P	**Pb**	**16 20 11.7**	**+0.1**
	1.4nm,0.2s						
DGS				*e*S	**Sb**	**16 20 30.3**	**+0.9**
	2.7nm,0.1s						
JNKS	**Jany-Kuch**	**2.34**	**219**	⇓*e*P	**Pn**	**16 20 24.1**	**+0.1**
JNKS				⇓*e*S	**Sn**	**16 20 54.1**	**+1.4**

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*TIR **01** 16:27:01.2, 41°.47N×19°.70E, h19^{km}, Md2.8/7, Ml2.7/4*
*PDG **01** 16:27:01.6±0.3, 41°.50N×19°.79E, h11^{km}, ML2.6/13, Error ellipse: s-maj=0.5km s-min=1.2km az=0.0*
ISC 01 16:27:01.3±1.0, **41°.45N**±0°.02×**19°.72E**±0°.03, **h13**^{km}±9^{km}, **n26**, σ**0^s.80**/47, **2D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.15**	**132**	Pg	**Pb**	**16 27 06.0**	**0.0**
TIR				Sg	**Sb**	**16 27 09.0**	**-0.1**
TIR				AML	AML	16 27 10.3	
	9.3nm,0.3s						
PHP	**Peshkopia**	**0.59**	**66**	Pg	**Pg**	**16 27 12.8**	**-0.2**
PHP				Sg	**Sb**	**16 27 21.3**	**-0.6**
PHP				AML	AML	16 27 25.4	
	1.9nm,0.1s						
PHP				AMd		16 27 58.0	
SDA	**Shkodra**	**0.62**	**345**	Pg	**Pg**	**16 27 12.2**	**-1.3**
SDA				Sg	**Sg**	**16 27 22.0**	**+0.1**
SDA				AMd		16 28 05.1	
ULC	**Ulcinj**	**0.62**	**326**	*e*Pg	**Pg**	**16 27 12.2**	**-1.4**
ULC				*i* Sg	**Sg**	**16 27 22.5**	**+0.7**
DRME	**Dracevica, Mon**	**0.84**	**332**	*e*Pg	**Pb**	**16 27 16.8**	**-1.0**
DRME				*e*Sg	**Sn**	**16 27 30.2**	**-0.8**
PDG	**Podgorica**	**1.04**	**341**	Pg	**Pb**	**16 27 19.4**	**-1.8**
PDG				Sg	**Sb**	**16 27 34.9**	**+0.1**
PDG				AMd		16 28 20.5	
PDG	**Podgorica**	**1.04**	**341**	*e*Pg	**Pb**	**16 27 20.6**	**-0.6**
PDG				*i* Sg	**Sn**	**16 27 36.4**	**+0.4**
BUM	**Brajici-Budva**	**1.05**	**325**	*e*Pg	**Pb**	**16 27 20.9**	**-0.5**
BUM				*i* Sg	**Sn**	**16 27 36.7**	**+0.3**
KBN	**Korca**	**1.16**	**135**	Pg	**Pn**	**16 27 23.1**	**-0.2**
KBN				Sg	**Sg**	**16 27 39.3**	**+0.6**
KBN				AMd		16 28 31.5	
PVY	**Plav**	**1.16**	**9**	*e*Pg	**Pb**	**16 27 22.6**	**-0.7**
PVY				*i* Sg	**Sg**	**16 27 39.5**	**+0.7**
CEME	**Cevo**	**1.25**	**332**	*e*Pg	**Pb**	**16 27 24.8**	**0.0**
CEME				*e*Sg	**Sg**	**16 27 43.1**	**+1.4**
HCY	**Herceg Novi**	**1.35**	**318**	*e*Pg	**Pb**	**16 27 26.3**	**-0.2**
HCY				*i* Sg	**Sg**	**16 27 46.9**	**+2.0**
KOME	**Kolasin**	**1.41**	**354**	*e*Pg	**Pn**	**16 27 27.0**	**+0.2**
KOME				*e*Sg	**Sg**	**16 27 48.5**	**+1.7**
IVA	**Berane**	**1.43**	**5**	*e*Pg	**Pn**	**16 27 26.8**	**-0.2**
IVA				*i* Sg	**Sg**	**16 27 48.6**	**+1.2**
NKME	**Niksic**	**1.44**	**337**	*e*Pg	**Pb**	**16 27 27.9**	**-0.1**
NKME				*e*Sg	**Sg**	**16 27 49.1**	**+1.5**
DBRK	**Dubrovnik**	**1.69**	**317**	*e*Pn	**Pn**	**16 27 31.0**	**+0.5**
DBRK				Sn	**Sb**	**16 27 53.4**	**0.0**
BRY	**Bratogost**	**1.70**	**329**	⇓*i*Pn	**Pb**	**16 27 32.2**	**-0.3**
BRY				*i* Sn	**Sg**	**16 27 56.2**	**+0.3**
KEK	**Kerkira**	**1.73**	**178**	Pn	**Pg**	**16 27 34.7**	**+0.1**
KEK				Sn	**Sg**	**16 27 57.1**	**0.0**
KEK				AMd		16 28 51.2	
UPM	**Unac-Piva**	**1.85**	**341**	⇓*i*Pn	**Pb**	**16 27 35.1**	**-0.1**
UPM				*i* Sn	**Sb**	**16 27 59.6**	**+1.2**
PLE	**Pljevlja**	**1.90**	**353**	*e*Pn	**Pn**	**16 27 34.0**	**+0.5**
PLE				*i* Sn	**Sb**	**16 27 59.9**	**+0.4**
IGT	**Igoumenitsa**	**1.97**	**166**	Pg	**Pb**	**16 27 36.8**	**-0.3**
IGT				AMd		16 28 54.8	
STON	**Ston**	**2.07**	**314**	*e*Pn	**Pn**	**16 27 36.1**	**+0.4**
STON				Sn	**Sn**	**16 28 00.8**	**-0.5**
NOCI	**Noci**	**2.11**	**253**	Pn	**Pb**	**16 27 38.8**	**-0.6**
NOCI				AML	AML	16 28 08.8	
	0.2nm,0.3s						
NOCI				AMd		16 28 53.8	
LSTV	**Lastovo**	**2.48**	**303**	*e*Pn	**Pn**	**16 27 41.2**	**-0.2**
RICI	**Ricice**	**2.80**	**318**	*e*Pn	**Pn**	**16 27 46.3**	**+0.5**
HVAR	**Hvar**	**2.98**	**307**	*e*Pn	**Pn**	**16 27 48.5**	**+0.3**

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*RHSSO **01** 16:28:41.9±0.5, 43°.16N×18°.05E, h8^{km}, ML2.5/3*
*PDG **01** 16:28:41.8±0.1, 43°.18N×18°.04E, h10^{km}±2^{km}, ML2.5/13, Error ellipse: s-maj=0.3km s-min=0.3km az=90.0*
ISC 01 16:28:41.7±1.0, **43°.19N**±0°.03×**18°.05E**±0°.02, **h7**^{km}±9^{km}, **n27**, σ**0^s.95**/54, **2C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STON	**Ston**	**0.40**	**219**	*e*Pg	**Pg**	**16 28 49.5**	**-0.1**
STON				Sg	**Sg**	**16 28 55.7**	**+0.9**
BRY	**Bratogost**	**0.46**	**128**	*e*Pg	**Pg**	**16 28 50.2**	**-0.5**
BRY				*i* Sg	**Sg**	**16 28 57.7**	**+1.0**
TREB	**Trebinje**	**0.52**	**154**	*e*Pg	**Pg**	**16 28 51.0**	**-0.7**
TREB				*e*Sg	**Sg**	**16 28 59.0**	**+0.5**
DBRK	**Dubrovnik**	**0.52**	**172**	*i* Pg	**Pg**	**16 28 51.8**	**0.0**
DBRK				Sg	**Sb**	**16 28 59.4**	**-1.5**
UPM	**Unac-Piva**	**0.63**	**88**	*e*Pg	**Pg**	**16 28 53.6**	**-0.3**
UPM				*i* Sg	**Sb**	**16 29 04.2**	**0.0**
RICI	**Ricice**	**0.74**	**295**	*i* Pg	**Pg**	**16 28 55.9**	**0.0**
RICI				Sg	**Sg**	**16 29 06.0**	**+0.5**
MAKA	**Makarska**	**0.76**	**278**	*i* Pg	**Pg**	**16 28 55.8**	**-0.5**
MAKA				Sg	**Sb**	**16 29 07.3**	**-0.4**
NKME	**Niksic**	**0.79**	**122**	*e*Pg	**Pg**	**16 28 56.3**	**-0.5**
NKME				*e*Sg	**Sb**	**16 29 08.9**	**+0.3**
HCY	**Herceg Novi**	**0.81**	**156**	*e*Pg	**Pg**	**16 28 56.9**	**-0.3**
HCY				*i* Sg	**Sb**	**16 29 09.3**	**+0.2**
CEME	**Cevo**	**0.90**	**135**	*e*Pg	**Pg**	**16 28 58.4**	**-0.7**
CEME				*e*Sg	**Sn**	**16 29 12.7**	**-1.5**
LSTV	**Lastovo**	**0.94**	**244**	*e*Pg	**Pg**	**16 28 59.9**	**0.0**
LSTV				Sg	**Sb**	**16 29 12.5**	**-0.6**
PLE	**Pljevlja**	**0.99**	**81**	*e*Pg	**Pg**	**16 29 00.8**	**0.0**
PLE				*i* Sg	**Sn**	**16 29 16.0**	**-0.4**
RUDO	**Rudo**	**1.06**	**65**	*e*Pg	**Pg**	**16 29 01.1**	**-0.9**
RUDO				*e*Sg	**Sg**	**16 29 15.6**	**-0.1**
BUM	**Brajici-Budva**	**1.08**	**145**	*e*Pg	**Pg**	**16 29 01.9**	**-0.6**
BUM				*i* Sg	**Sn**	**16 29 18.7**	**+0.1**
KOME	**Kolasin**	**1.13**	**107**	*e*Pg	**Pg**	**16 29 02.9**	**-0.5**
KOME				*e*Sg	**Sn**	**16 29 20.4**	**+0.7**
PDG	**Podgorica**	**1.17**	**130**	⇑*i*Pg	**Pb**	**16 29 03.5**	**-0.7**
PDG				*i* Sg	**Sn**	**16 29 21.7**	**+1.2**
HVAR	**Hvar**	**1.17**	**270**	*e*Pg	**Pb**	**16 29 04.0**	**-0.3**
HVAR				Sg	**Sn**	**16 29 20.6**	**-0.1**
DRME	**Dracevica, Mon**	**1.30**	**140**	*e*Pg	**Pn**	**16 29 05.9**	**-0.4**
DRME				*e*Sg	**Sn**	**16 29 26.3**	**+2.4**
IVA	**Berane**	**1.39**	**102**	*e*Pg	**Pn**	**16 29 07.2**	**-0.4**
IVA				*i* Sg	**Sg**	**16 29 29.6**	**+3.2**
KIJV	**Kijevo**	**1.45**	**305**	*e*Pn	**Pg**	**16 29 10.2**	**+0.6**
KIJV				Sg	**Sg**	**16 29 28.4**	**+0.1**
ULC	**Ulcinj**	**1.51**	**144**	⇑*i*Pg	**Pb**	**16 29 09.4**	**-0.6**
ULC				*i* Sg	**Sg**	**16 29 30.9**	**+0.7**
PVY	**Plav**	**1.52**	**112**	*e*Pg	**Pb**	**16 29 09.8**	**-0.6**
PVY				*i* Sg	**Sg**	**16 29 32.3**	**+1.6**
BLY	**Banja Luka**	**1.68**	**339**	*e*Pn	**Pn**	**16 29 11.6**	**0.0**
BLY				*e*Sn	**Sb**	**16 29 34.3**	**-0.1**
ZIRJ	**Zirje**	**1.81**	**286**	*e*Pn	**Pb**	**16 29 14.3**	**-0.9**
ZIRJ				Sn	**Sg**	**16 29 39.3**	**-0.7**
MORI	**Morici**	**1.83**	**293**	*e*Pn	**Pb**	**16 29 15.3**	**-0.3**
MORI				Sn	**Sb**	**16 29 39.3**	**+0.6**
DUGI	**Dugi Otok**	**2.32**	**291**	*e*Pn	**Pn**	**16 29 21.5**	**+1.2**
DUGI				Sn	**Sn**	**16 29 50.7**	**+1.8**
VIRC	**Vir**	**2.44**	**298**	*e*Pn	**Pb**	**16 29 24.6**	**-1.2**
VIRC				Sn	**Sb**	**16 29 54.2**	**-1.8**

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*IDC **01** 16:31:11.0±1.6, 13°.10N×51°.12E, h0^{km}, mb3.6/7, mbtmp3.6/7, MS3.3/9, Error ellipse: s-maj=42.8km s-min=27.9km az=11.0*
ISC 01 16:31:13.4±1.3, **13°.1N**±0°.3×**51°.1E**±0°.2, **h16**^{km}, **n16**, σ**1^s.25**/7, **mb3.7**/6, **MS3.3**/8, **Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATD	**Arta Tunnel**	**8.23**	**260**	LR	LR	16 35 34.0	
	comp=Z,7.0nm,18.8s,baz=22,slow=32						
KMBO	**Kilima Mbogo**	**19.72**	**225**	LR	LR	16 42 26.6	
	comp=Z,42nm,21.2s,baz=82,slow=34						
EIL	**Elat**	**22.28**	**320**	LR	LR	16 45 01.7	
	comp=Z,41nm,20.1s,baz=158,slow=37						
BRTR	**Keskin Array B**	**30.67**	**333**	P	**P**	**16 37 27.0**	**-0.5**
	0.4nm,0.8s,baz=152,slow=4.0,SNR=4.3						
	0.4nm,0.8s						
KBZ	**Khabaz**	**31.33**	**349**	LR	LR	16 52 01.6	
	comp=Z,76nm,18.3s,baz=136,slow=40						
AAK	**Ala-Archa**	**35.72**	**30**	LR	LR	16 52 42.7	
	comp=Z,44nm,19.2s,baz=231,slow=36						
AKTO	**Aktyubinsk**	**37.65**	**7**	LR	LR	16 56 11.4	
	comp=Z,41nm,18.8s,baz=78,slow=40						
MKAR	**Makanchi Array**	**42.58**	**32**	P	**P**	**16 39 08.8**	**+0.2**
	0.4nm,0.5s,baz=219,slow=8.3,SNR=6.2						
	0.4nm,0.5s						
ARTI	**Arti**	**43.56**	**6**	LR	LR	16 59 11.7	
	comp=Z,45nm,19.9s,baz=214,slow=39						
LBTB	**Lobatse**	**45.33**	**213**	LR	LR	16 57 26.8	
	comp=Z,36nm,19.7s,baz=38,slow=35						
CMAR	**Chiang Mai Arr**	**46.23**	**77**	P	**P**	**16 39 38.6**	**+0.4**
	0.5nm,0.4s,baz=272,slow=9.0,SNR=5.2						
	0.5nm,0.4s						
TORD	**Torodi Ar. Bea**	**48.06**	**276**	P	**P**	**16 39 52.3**	**-0.3**
	0.3nm,0.6s,baz=74,slow=11,SNR=1.6						
	0.3nm,0.6s						
BOSA	**Boshof**	**48.43**	**211**	LR	LR	16 59 42.4	
	comp=Z,23nm,18.1s,baz=20,slow=35						
ZALV	**Zalesovo Beam**	**48.64**	**26**	P	**P**	**16 39 54.7**	**-1.8**
	0.3nm,0.5s,baz=232,slow=11,SNR=2.3						

	0.3nm,0.5s						
NOA	NORSAR Array B	55.91	338	P	P	16 40 52.1	+1.6
	0.9nm,0.8s,baz=129,slow=8.5,SNR=2.1						
NOA				LR	LR	17 07 59.5	
	comp=Z,24nm,18.5s,baz=335,slow=40						
	0.9nm,0.8s						
WRA	Warramunga Arr	88.18	111	P	P	16 44 04.3	-0.1
	0.5nm,0.9s,baz=298,slow=4.0,SNR=2.9						
	0.5nm,0.9s						

HEL 01 16:33:11.9±0.3, 67°.86N×20°.11E, h0^{km}, ML1.3, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANU	Lannavaara	0.74	74	PB	Pg	16 33 26.4	+0.4
LANU				SG	Sg	16 33 34.0	-1.6
KIF	Kilpisjarvi	1.18	12	*e*P	Pn	16 33 35.8	+0.1
KIF	Kilpisjarvi	1.18	12	PN	Pn	16 33 36.0	+0.3
KIF				MSG		16 33 49.0	
	comp=Z,2.9nm,0.2s						
KIF				SN	Sb	16 33 51.4	+0.4
HEF	Hetta	1.44	66	*e*P	Pn	16 33 38.5	-0.7
HEF	Hetta	1.44	66	PG	Pn	16 33 37.8	-1.4
	baz=249						
HEF				MSG		16 33 55.2	
	comp=Z,1.4nm,0.2s						
HEF				SG	Sg	16 33 57.9	-0.3
ERTU	Ertsjaerv	1.54	147	PN	Pn	16 33 40.0	-0.5
	baz=328						
ERTU				SN	Sn	16 34 00.5	-0.7
KLF	Kolari	1.61	111	PG	Pn	16 33 41.0	-0.5
KLF				MSG		16 34 00.1	
	comp=Z,1.5nm,0.2s						
KLF				SN	Sg	16 34 03.4	0.0
KTK1	Kautokeino	1.64	43	SN	Sg	16 34 05.4	+0.9
KALU	Kalix	2.38	146	PG	Pb	16 33 54.2	-1.3
KALU				SG	Sb	16 34 24.8	-0.6
TOF	Tornio	2.44	135	PG	Pb	16 33 55.5	-1.0
TOF				MSG		16 34 23.9	
	comp=Z,1.4nm,0.2s						
TOF				SG	Sb	16 34 27.3	+0.3
ARA0	ARCESS Array S	2.59	47	PG	Pb	16 33 58.5	-0.7
	baz=235						
ARA0				SG	Sb	16 34 31.2	-0.4
RNF	Rovaniemi	2.62	116	PG	Pb	16 33 57.8	-1.7
	baz=301						
RNF				SB	Sb	16 34 30.9	-1.3
RAJF	Raja-Jooseppi	3.13	75	SG	Sb	16 34 48.8	+1.9
KEV	Kevo	3.15	50	SG	Sb	16 34 47.4	-0.1
RANF	Ranua	3.21	122	SG	Sg	16 34 53.6	-1.5
KU6	Riekki	4.26	111	PG	Pb	16 34 29.3	+1.7
	baz=299						

NEIC ***01*** *17:05:26.9±2.2, 12°.0N±0°.1×143°.9E±0°.2, h10^{km}±1^{km}, mb4.6/15, Error ellipse: s-maj=25.4km s-min=16.8km az=104.0*

IDC ***01*** *17:05:27.1±0.8, 12°.20N×143°.64E, h0^{km}, mb4.0/14, mbtmp4.0/14, MS3.2/1, Error ellipse: s-maj=23.8km s-min=17.3km az=121.0*

ISC 01 17:05:29.6±0.6**, 12°.01N**±0°.09×**143°.8E**±0°.1**, h26^{km}, n37, σ1^{s}.50**/39**, mb4.4**/23**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.89	34	Pn	Pn	17 06 00.5	+0.4
	57nm,0.3s,baz=188,slow=22,SNR=12						
GUMO				Sn	Sn	17 06 24.2	+1.1
	106nm,0.3s,baz=14,slow=23,SNR=9.8						
DPSS	Saipan	3.75	31	Pn	Pn	17 06 23.2	-2.6
PATS	Pohnpei	15.21	108	Pn	Pn	17 09 00.8	-2.0
SAUI	Saumlaki	23.43	213	P	P	17 10 36.3	-0.6
MJAR	Matsushiro Arr	24.94	349	LR	LR	17 19 59.2	
	comp=Z,49nm,19.5s,baz=180,slow=35						
MYLDM	Lahad Datu	25.90	257	P	P	17 10 58.4	-1.3
MYLDM				IAmb	IAmb	17 11 12.1	
	comp=Z,33nm,1.5s						
JKA	Kamikawa-asahi	32.01	358	P	P	17 11 50.9	-2.9
WB0	Warramunga Arr	32.91	196	P	P	17 11 58.8	-3.0
WR8	Warramunga Arr	33.06	196	P	P	17 12 00.8	-2.4
WR8				IAmb	IAmb	17 12 05.2	
	comp=Z,6.8nm,1.3s						
WRA	Warramunga Arr	33.09	196	P	P	17 12 05.0	+1.5
	comp=Z,0.5nm,0.6s,baz=20,slow=9.7,SNR=5.5						
	comp=Z,0.5nm,0.6s						
ASAR	Alice Springs	36.75	195	P	P	17 12 38.1	+3.1
	comp=Z,0.3nm,0.7s,baz=9.8,slow=7.4,SNR=3.8						
	comp=Z,0.3nm,0.7s						
CMAR	Chiang Mai Arr	43.66	284	P	P	17 13 33.2	+0.7
	comp=Z,0.3nm,0.3s,baz=99,slow=7.6,SNR=1.8						
	comp=Z,0.3nm,0.3s						
SONM	Songino Array	47.43	326	P	P	17 14 02.5	+0.4
	comp=Z,0.8nm,0.7s,baz=144,slow=6.8,SNR=4.1						
SONM				PcP	PcP	17 15 33.3	+1.0
	comp=Z,0.4nm,0.6s,baz=139,slow=2.2,SNR=2.5						
	comp=Z,0.8nm,0.7s						
SONM	Songino Array	47.43	326	P	P	17 14 02.8	+0.7
MKAR	Makanchi Array	61.91	317	P	P	17 15 47.0	0.0
	comp=Z,0.4nm,0.7s,baz=89,slow=11,SNR=4.5						
	comp=Z,0.4nm,0.7s						
MKAR	Makanchi Array	61.91	317	P	P	17 15 48.0	+1.0
ZALV	Zalesovo Beam	62.30	325	P	P	17 15 49.0	-0.4
	comp=Z,1.1nm,0.6s,baz=102,slow=8.3,SNR=6.0						
ZALV				PcP	PcP	17 16 29.6	+0.6
	comp=Z,0.7nm,0.5s,baz=122,slow=5.0,SNR=2.7						
	comp=Z,1.1nm,0.6s						
ZALV	Zalesovo Beam	62.30	325	P	P	17 15 47.8	-1.6
KURK	Kurchatov	65.12	321	P	P	17 16 07.5	-0.6
KURK				IAmb	IAmb	17 16 09.5	
	comp=Z,3.4nm,0.8s						
KURBB	Kurchatov Arra	65.16	320	P	P	17 16 08.6	+0.3
	comp=Z,2.3nm,0.8s,baz=103,slow=6.9,SNR=16						
	comp=Z,2.3nm,0.8s						
ILAR	Eielson Array	70.43	25	P	P	17 16 40.8	-0.5
	comp=Z,0.9nm,0.7s,baz=253,slow=5.8,SNR=15						
	comp=Z,0.9nm,0.7s						
ILAR	Eielson Array	70.43	25	P	P	17 16 40.4	-0.9
BVAR	Borovoye Array	70.52	322	P	P	17 16 42.6	+0.5
	comp=Z,1.9nm,0.4s,baz=107,slow=7.3,SNR=9.4						
	comp=Z,1.9nm,0.4s						
C24K	Franklin Bluff	71.08	20	P	P	17 16 45.1	0.0
C24K				IAmb	IAmb	17 16 47.7	
	comp=Z,7.2nm,0.8s						
D25K	Kavik River	71.75	21	P	P	17 16 49.8	+0.5
D25K				IAmb	IAmb	17 16 51.4	
	comp=Z,4.0nm,0.8s						
J26L	Joseph Creek	71.78	26	P	P	17 16 48.2	-1.4
J26L				IAmb	IAmb	17 17 12.5	
	comp=Z,7.5nm,1.5s						
C27K	Jago River	72.74	20	P	P	17 16 55.6	+0.4
C27K				IAmb	IAmb	17 16 58.6	
	comp=Z,3.4nm,0.9s						
INK	Inuvik	76.22	22	P	P	17 17 15.2	-0.1
INK				IAmb	IAmb	17 17 17.3	
	comp=Z,4.3nm,0.9s						
AB31	Akbulak array	77.01	318	P	P	17 17 20.0	-0.2
A36M	Sachs Harbour	78.97	18	P	P	17 17 30.7	+0.1
A36M				IAmb	IAmb	17 17 32.8	
	comp=Z,4.2nm,0.8s						
YKA	Yellowknife Ar	84.73	27	P	P	17 18 02.7	+1.5
	comp=Z,0.7nm,0.7s,baz=287,slow=5.9,SNR=9.3						
	comp=Z,0.7nm,0.7s						
YKA	Yellowknife Ar	84.73	27	P	P	17 18 01.3	+0.1
ARCES	ARCESS Array B	88.25	342	P	P	17 18 18.4	+0.1
	comp=Z,6.5nm,1.0s,baz=39,slow=2.5,SNR=7.9						
	comp=Z,6.5nm,1.0s						
ARCES	ARCESS Array B	88.25	342	P	P	17 18 18.0	-0.3
NVAR	Mina Array Bea	88.72	51	P	P	17 18 24.4	+2.9
	comp=Z,0.9nm,0.5s,baz=294,slow=5.7,SNR=4.1						
	comp=Z,0.9nm,0.5s						
FINES	FINESS Array B	92.14	335	P	P	17 18 35.4	-1.2
	comp=Z,3.1nm,0.9s,baz=64,slow=3.8,SNR=15						
	comp=Z,3.1nm,0.9s						
PDAR	Pinedale Array	93.81	45	P	P	17 18 48.0	+3.0
	comp=Z,0.2nm,0.6s,baz=277,slow=5.1,SNR=2.9						
	comp=Z,0.2nm,0.6s						

TIR ***01*** *17:13:24.4, 42°.23N×19°.12E, h33^{km}±1^{km}, Md2.7/4, Ml2.6/4*

PDG ***01*** *17:13:26.8±0.1, 42°.38N×19°.38E, h22^{km}, MD2.3/2, ML2.2/13, Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*

ISC 01 17:13:26.4±0.9**, 42°.33N**±0°.02×**19°.37E**±0°.03**, h24^{km}**±5^{km}**, n24, σ1^{s}.50**/44**, 2C-1D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDG	Podgorica	0.13	320	Pg	Pb	17 13 31.0	-0.2
PDG				Sg	Sb	17 13 34.5	+0.1
PDG				AMd		17 14 04.3	
PDG	Podgorica	0.13	320	⇑*i*Pg	Pb	17 13 31.0	-0.2
PDG				*i* Sg	Sb	17 13 34.5	+0.1
DRME	Dracevica, Mon	0.20	223	*e*Pg	Pn	17 13 32.5	-1.3
DRME				*e*Sg	Sb	17 13 37.4	+1.6
SDA	Shkodra	0.30	161	Pg	Pb	17 13 33.3	0.0
SDA				Sg	Sb	17 13 38.6	+0.7
SDA				AML	AML	17 13 41.4	
	12µm,0.2s						
SDA				AMd		17 14 08.4	
BUM	Brajici-Budva	0.35	265	*e*Pg	Pn	17 13 34.5	-1.5
BUM				*i* Sg	Sn	17 13 41.1	-1.2
ULC	Ulcinj	0.38	194	*e*Pg	Pn	17 13 34.9	-1.5
ULC				*i* Sg	Sn	17 13 42.8	-0.1
CEME	Cevo	0.40	303	*e*Pg	Pn	17 13 34.8	-1.8
CEME				*e*Sg	Sn	17 13 41.4	-2.0
PVY	Plav	0.51	59	*e*Pg	Pb	17 13 36.3	-0.5
PVY				*i* Sg	Sb	17 13 44.2	+0.3
KOME	Kolasin	0.53	12	⇑*i*Pg	Pb	17 13 36.0	-1.1
KOME				*e*Sg	Sb	17 13 44.9	+0.5
NKME	Niksic	0.53	325	⇓*i*Pg	Pb	17 13 36.7	-0.4
NKME				*e*Sg	Sn	17 13 45.2	-1.5
HCY	Herceg Novi	0.66	280	*e*Pg	Pn	17 13 39.6	-0.5
HCY				*i* Sg	Sn	17 13 50.3	+0.6
IVA	Berane	0.66	36	*e*Pg	Pb	17 13 39.0	-0.4
IVA				*i* Sg	Sb	17 13 48.8	+0.5
BRY	Bratogost	0.83	313	*e*Pg	Pn	17 13 42.1	-0.6
BRY				*i* Sg	Sn	17 13 55.2	+0.9
UPM	Unac-Piva	0.93	339	*e*Pg	Pb	17 13 43.7	-0.3
UPM				*i* Sg	Sn	17 13 58.1	+1.3
DBRK	Dubrovnik	0.96	291	*e*Pg	Pb	17 13 45.2	+0.9
DBRK				Sg	Sn	17 14 01.1	+3.8
PLE	Pljevlja	1.00	1	*e*Pg	Pn	17 13 44.6	-0.3
PLE				*i* Sg	Sb	17 14 00.1	+2.3
PHP	Peshkopia	1.03	129	Pg	Pb	17 13 45.5	-0.1
PHP				Sg	Sb	17 14 00.6	+2.0
PHP				AML	AML	17 14 05.2	
	0.7nm,0.4s						
PHP				AMd		17 14 53.4	
TIR	Tirane	1.05	159	Pn	Pn	17 13 44.1	-1.4
TIR				Sn	Sb	17 13 58.8	-0.5
TIR				AML	AML	17 14 04.9	
	0.2nm,0.3s						
STON	Ston	1.34	294	*e*Pn	Pb	17 13 51.5	+0.7
STON				Sg	Sb	17 14 11.9	+4.3
LSTV	Lastovo	1.88	284	*e*Pn	Pb	17 13 59.1	-0.9
HVAR	Hvar	2.31	292	*e*Pn	Pb	17 14 05.2	-2.1
NOCI	Noci	2.32	229	Sn	Sn	17 14 27.8	-2.9
NOCI				AML	AML	17 14 32.3	
	0.1nm,0.3s						
KEK	Kerkira	2.64	173	Sn	Sn	17 14 40.2	+1.6
IGT	Igoumenitsa	2.89	165	Pn	Pn	17 14 11.8	+1.0
IGT				Sn	Sn	17 14 45.9	+1.0
IGT				AMd		17 15 47.1	

IDC ***01*** *17:24:01.3±1.6, 2°.62N×129°.16E, h0^{km}, mb4.2/7, mbtmp4.2/7, MS3.1/3, Error ellipse: s-maj=185.9km s-min=16.7km az=69.0*

DJA ***01*** *17:24:07.8±0.6, 2°N±4°×12°9E±°, h17^{km}±5^{km}, M4.4/16, mB5.1/2, mb4.5/15, MLv4.4/16, Mw(mB)4.5/2*

NEIC ***01*** *17:24:09.7±1.8, 2°.31N±0°.05×128°.60E±0°.09, h62^{km}±10^{km}, mb4.6/15, Error ellipse: s-maj=13.9km s-min=5.6km az=68.0*

ISC 01 17:24:07.1±0.5**, 2°.37N**±0°.06×**128°.74E**±0°.08**, h35^{km}, n58, σ1^{s}.56**/58**, mb4.5**/19**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.10	221		Pn	17 24 39.8	-0.1
TNTI				Sn	Sn	17 25 08.9	+4.1
TNTI	Ternate	2.10	221	P	Pn	17 24 39.8	-0.1
TNTI				S	Sn	17 25 04.8	0.0
MNI	Manado	4.01	257	P	Pn	17 25 07.6	+1.5
SWI	Sorong	4.08	142	P	Pn	17 25 08.2	+1.1
SANI	Sanana	5.19	212	P	Pn	17 25 22.9	+0.6
KRAI	Karang Ratu	5.67	184	P	Pn	17 25 25.9	-3.0
MSAI	Masohi	5.69	178	P	Pn	17 25 30.3	+1.1
	0.1nm30nm,0.6s						
NLAI	Namlea	5.81	196	P	Pn	17 25 31.8	+0.9
	0.2nm751nm38nm,0.7s						
GTOI	Gorontalo	5.99	253	P	Pn	17 25 35.6	+2.3
	0.2nm42nm,0.6s						
MWPI	Manokwari, Pap	6.23	122	P	Pn	17 25 40.6	+3.9
FAKI	Fak Fak	6.32	146	Pn	Pn	17 25 39.9	+2.0
FAKI	Fak Fak	6.32	146	P	Pn	17 25 39.0	+1.1
	0.1nm20nm,1.0s						
RKPI	Ransiki, Papua	6.66	125	P	Pn	17 25 46.1	+3.5
	50nm,0.6s						
LUWI	Luwuk	6.87	240		Pn	17 25 44.5	-0.9
LUWI	Luwuk	6.87	240	P	Pn	17 25 45.9	+0.5
	0.2nm20nm,0.6s						
MRSI	Marisa	7.06	255	P	Pn	17 25 50.2	+2.2
	0.2nm56nm,0.6s						
APSI	Ampana	7.81	245	P	Pn	17 25 57.6	-0.7
	0.2nm36nm,0.9s						
TOLI2	Tolitoli	8.06	261		Pn	17 26 01.4	-0.3
MPSI	Mapaga	9.07	257	P	Pn	17 26 16.0	+0.3
TTSI	Tana Toraja	10.42	239	P	Pn	17 26 33.9	-0.3
	21nm,1.1s						
MYLDM	Lahad Datu	10.59	286	P	Pn	17 26 37.8	+1.3
	19nm,1.9s						
BNSI	Bone	10.94	232	P	Pn	17 26 41.3	0.0
	14nm,0.8s						
SPSI	Sidrap Palu	10.96	235	P	Pn	17 26 41.7	+0.2
	2µm17nm,0.6s						
PMSI	Majene	11.43	239	P	Pn	17 26 48.1	+0.1
BSSI	Bau Bau, Buton	11.81	224	P	Pn	17 26 52.9	-0.3
	11nm,0.9s						
BATI	Baumata	13.48	202	LR	LR	17 33 30.6	
	comp=Z,52nm,18.9s,baz=338,slow=41						
LBFI	Labuhan Bajo,	13.94	219	P	Pn	17 27 22.5	+0.2
KNRA	Kununurra	17.93	180		Pn	17 28 14.7	+0.8
FITZ	Fitzroy Crossi	20.57	188	LR	LR	17 36 34.4	
	comp=Z,58nm,19.9s,baz=14,slow=36						
COEN	Coen	21.63	139	P	P	17 28 54.6	+0.1
COEN				IAmb	IAmb	17 29 08.9	
	comp=Z,14nm,1.4s						
PMG	Port Moresby	21.76	123	LR	LR	17 38 15.1	
	comp=Z,42nm,18.1s,baz=341,slow=40						
TPUB	Ta-pu	22.24	340	P	P	17 29 01.3	+0.3
TPUB				IAmb	IAmb	17 29 32.1	
	comp=Z,59nm,1.4s						
WB0	Warramunga Arr	22.69	166		P	17 29 06.9	+1.0
WB0				IAmb	IAmb	17 29 07.9	
	comp=Z,12nm,0.8s						
WRA	Warramunga Arr	22.85	166	P	P	17 29 08.1	+0.5
	comp=Z,8.7nm,0.7s,baz=344,slow=10,SNR=57						
	comp=Z,8.7nm,0.7s						
WRA	Warramunga Arr	22.85	166	P	P	17 29 07.1	-0.4
WR8	Warramunga Arr	22.90	166		P	17 29 03.9	-4.2
WR8				IAmb	IAmb	17 29 10.5	
	comp=Z,16nm,1.4s						
AS31	Alice Springs	26.37	169		P	17 29 39.5	-0.8
ASAR	Alice Springs	26.37	169	P	P	17 29 40.9	+0.6
	comp=Z,2.6nm,0.5s,baz=355,slow=8.3,SNR=139						
ASAR				PcP	PcP	17 33 05.1	-0.6
	comp=Z,0.6nm,0.5s,baz=354,slow=2.2,SNR=10						
	comp=Z,2.6nm,0.5s						
ASAR	Alice Springs	26.37	169	P	P	17 29 39.8	-0.5
ASAR					PcP	17 33 05.0	-0.7
NJ2	Nanjing	30.95	344	*e*P	P	17 30 22.3	+1.3
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
JMN	Monobe	31.56	8	P	P	17 30 25.8	-0.6
FORT	Forrest	32.98	181	P	P	17 30 37.3	-1.5
FORT				IAmb	IAmb	17 30 39.1	
	comp=Z,15nm,1.0s						
PZH	PanZhiHua	35.31	315	P	P	17 31 00.6	+1.3
BBOO	Buckleboo	35.67	169	P	P	17 31 00.4	-1.7
STKA	Stephens Creek	36.18	161	P	P	17 31 06.9	+0.4
	comp=Z,8.6nm,0.6s,baz=333,slow=9.6,SNR=15						
	comp=Z,8.6nm,0.6s						
STKA	Stephens Creek	36.18	161	P	P	17 31 06.9	+0.4
XAN	Xi'an	36.54	332	P	P	17 31 14.4	+4.8
XAN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ARMA	Armidale	39.25	148	P	P	17 31 33.2	+0.6
ARMA				IAmb	IAmb	17 31 59.7	
	comp=Z,23nm,1.4s						
HHC	Hu-ho-hao-te	41.33	340	*e*P	P	17 31 51.6	+1.9
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,5.9s						
CAN	Canberra	42.03	155	P	P	17 31 52.6	-2.8
CAN				IAmb	IAmb	17 32 25.1	
	comp=Z,9.8nm,1.0s						
EVN	Everest	47.41	307	P	P	17 32 36.5	-2.6
EVN				IAmb	IAmb	17 32 51.7	
	comp=Z,3.5nm,0.6s						
YAK	Yakutsk	59.52	1		P	17 34 06.5	-0.1
YAK				IAmb	IAmb	17 34 08.6	
	comp=Z,14nm,0.8s						
MKAR	Makanchi Array	59.81	325	P	P	17 34 08.5	-0.5
	comp=Z,0.4nm,0.5s,baz=116,slow=8.1,SNR=6.1						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	59.81	325	P	P	17 34 07.4	-1.6
KURBB	Kurchatov Arra	63.96	327	P	P	17 34 36.4	-0.4
	comp=Z,0.6nm,0.5s,baz=126,slow=6.2,SNR=8.6						
	comp=Z,0.6nm,0.5s						
BVAR	Borovoye Array	69.55	327	P	P	17 35 13.2	+0.8
	comp=Z,0.4nm,0.5s,baz=123,slow=5.3,SNR=5.1						
	comp=Z,0.4nm,0.5s						
ARCES	ARCESS Array B	92.40	340	P	P	17 37 13.0	-0.9
	comp=Z,3.5nm,0.8s,baz=63,slow=5.6,SNR=5.9						
	comp=Z,3.5nm,0.8s						
TORD	Torodi Ar. Bea	125.25	288	PKP	PKPdf	17 43 04.5	-0.8
	comp=Z,0.4nm,0.6s,baz=54,slow=2.0,SNR=2.1						

NIED ***01*** *17:34:40.3, 24°.29N×122°.02E, h45^{km}, MW4.0, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}0.08; $M_{\theta\theta}$-0.19; $M_{\phi\phi}$0.11; $M_{r\theta}$0.26; $M_{\theta\phi}$1.07; $M_{\phi r}$0.37; Fault plane solution: $M_0$1.17000×10^{15} NP1:ϕ_s88.00000°, δ73.00000°, λ14.00000°. NP2:ϕ_s354.00000°, δ77.00000°, λ163.00000°.*

TAP ***01*** *17:34:40.7, 24°.39N×121°.96E, h27^{km}, ML4.2, B*

JMA ***01*** *17:34:40.3±0.2, 24°N±1°×122°.0E±0°.7, h45^{km}±3^{km}, MV3.8/13, TAIWAN REGION*

IDC ***01*** *17:35:14.7±5.7, 24°.93N×122°.94E, h413^{km}±76^{km}, mb2.9/7, mbtmp3.7/8, Error ellipse: s-maj=35.1km s-min=15.8km az=66.0*

ISC 01 17:34:40.4±0.8**, 24°.35N**±0°.02×**122°.05E**±0°.02**, h27^{km}**±5^{km}**, n169, σ1^{s}.04**/284**, mb3.6**/7**, 21C-35D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS2	EOS2	0.18	68	⇑P	Pb	17 34 46.6	+0.7
EOS2				S	Sb	17 34 51.7	+2.0
EOS3	EOS3	0.26	104	⇑*i*P	Pb	17 34 47.5	+0.6
EOS3				S	Sn	17 34 53.1	-0.3
EWUT	Wuta	0.26	292	⇓P	Pb	17 34 46.4	-0.7
EAHA	Aohua	0.28	266	P	Pb	17 34 46.8	-0.4
EAHA				S	Sb	17 34 51.8	-0.1
EHP	Heping Village	0.28	262	P	Pb	17 34 47.0	-0.3
EHP				*e*S	Sn	17 34 53.4	-0.7
ENA	Nanau	0.29	286	⇓*i*P	Pb	17 34 46.8	-0.6
ENA				S	Sb	17 34 51.1	-1.1
ESAO	Su ao	0.29	321	P	Pb	17 34 46.8	-0.6
ESAO				S	Sb	17 34 50.9	-1.3
TWC	Suao	0.31	325	⇓*i*P	Pb	17 34 47.1	-0.6
TWC				S	Sb	17 34 51.6	-1.2
EOS4	EOS4	0.34	132	⇑P	Pb	17 34 48.1	+0.3
NDS	Dongshan	0.41	313	P	Pb	17 34 48.9	-0.4
NDS				S	Sb	17 34 54.9	-0.4
ETL	Fush Village	0.43	244	⇓P	Pb	17 34 49.5	0.0
ETL				S	Sb	17 34 56.4	+0.6
NACB	Ninganchiao	0.45	247	P	Pb	17 34 49.5	-0.4
NACB	Ninganchiao	0.45	247	⇓*i*P	Pb	17 34 49.4	-0.4
NACB				S	Sb	17 34 56.5	+0.3
TWD	Chiawan	0.49	237	⇓*i*P	Pb	17 34 50.4	-0.2
TWD				S	Sn	17 34 58.6	-0.7
EGS		0.50	348	⇓P	Pb	17 34 50.5	-0.3
EGS				*e*S	Sb	17 34 57.7	-0.1
TWE	Neicheng	0.51	317	⇑*i*P	Pb	17 34 50.4	-0.4
TWE				S	Sb	17 34 56.5	-1.3
LATG	Datong	0.51	292	⇑*i*P	Pb	17 34 50.5	-0.4
LATG				*e*S	Sb	17 34 57.4	-0.6
ENTT	Nioudou	0.52	304	⇑*i*P	Pb	17 34 50.7	-0.4
ETLH	Xiulin Townshi	0.53	255	⇓P	Pb	17 34 51.1	-0.2
ETLH				*e*S	Sn	17 35 00.2	-0.4
NTC	Toucheng	0.54	339	*e*P	Pb	17 34 51.3	-0.1
NTC				S	Sb	17 34 59.2	+0.4
HWA	Hwalien	0.55	227	P	Pb	17 34 52.0	+0.5
FUSB	Fushanzhiwuyua	0.58	315	⇑*i*P	Pb	17 34 51.9	-0.3
FUSB				S	Sb	17 34 59.3	-0.8
NNSB	Datong	0.61	278	⇑P	Pb	17 34 52.3	-0.3
NNSB				S	Sb	17 35 00.5	-0.3
NNS	Nan Shan	0.62	279	*i* P	Pb	17 34 52.5	-0.3
NNS				*e*S	Sb	17 35 00.3	-0.9
TEYL	Yanliau Villag	0.63	221	⇓P	Pb	17 34 53.0	+0.2
TEYL				*e*S	Sn	17 35 03.3	+0.5
ETM	Tongmen	0.63	233	⇓*i*P	Pb	17 34 52.7	-0.2
ETM				S	Sb	17 35 02.2	+0.8
TIPB	Shuangxi	0.65	342	⇓*i*P	Pb	17 34 53.2	-0.1
TIPB				S	Sb	17 35 01.1	-0.9
NWLT	Wulai	0.65	311	⇑*i*P	Pb	17 34 52.9	-0.4
TWB1	Santiao Chiao	0.66	356	⇓*i*P	Pb	17 34 53.3	-0.1
TWB1				S	Sb	17 35 01.9	-0.3
LXIB	Xiulin Townshi	0.66	241	⇓*i*P	Pb	17 34 53.1	-0.4
LXIB				S	Sn	17 35 04.0	+0.1
YHNB	Yeheng	0.69	298	P	Pb	17 34 53.9	0.0
YHNB	Yeheng	0.69	298	⇑*i*P	Pb	17 34 53.6	-0.3
YHNB				S	Sb	17 35 02.6	-0.5
NSK	Sanguang	0.70	298	⇑*i*P	Pb	17 34 53.8	-0.4
NSK				S	Sb	17 35 03.3	-0.3
SHUL	Shoufeng	0.71	218	*e*P	Pn	17 34 54.8	0.0
SHUL				*e*S	Sn	17 35 06.5	+1.7
WHF	Hehuan Shan	0.74	254	⇓*i*P	Pb	17 34 54.7	-0.3
WHF				*e*S	Sb	17 35 05.5	+0.6
TWA	Mucha	0.76	326	P	Pb	17 34 54.9	0.0
TWA				S	Sb	17 35 04.2	-0.8
NWF	Wu-fen Shan	0.76	342	⇓P	Pb	17 34 55.3	+0.2
NWF				S	Sb	17 35 05.1	+0.1
SXI1	Grass Mountain	0.76	348	⇓*i*P	Pb	17 34 55.2	+0.1
SXI1				S	Sn	17 35 05.7	-0.5
WFSB	Wu-fen Shan	0.76	342	⇓P	Pn	17 34 55.4	0.0
WFSB				*e*S	Sb	17 35 04.4	-0.6
ESL	Shilin	0.77	227	⇓*i*P	Pb	17 34 54.7	-0.6
ESL				*e*S	Sb	17 35 05.2	-0.2
NHDH	Xindian Distri	0.77	322	*e*P	Pn	17 34 55.8	+0.2
TWT	Tachien	0.80	263	⇑P	Pn	17 34 56.2	+0.1
TWT				*e*S	Sb	17 35 06.9	+0.6
TATO	Taipei	0.80	321	P	Pn	17 34 56.3	+0.3
NHY	Taipei	0.81	328	*e*P	Pn	17 34 56.8	+0.6
TDCB	Techi	0.81	263	⇑P	Pn	17 34 56.3	0.0
TDCB				S	Sb	17 35 06.3	-0.5
JYNG	Yonagunijimaku	0.83	83	P	Pb	17 34 56.2	0.0
JYNG				S	Sn	17 35 07.4	-0.2
TNOU	National Taiwa	0.83	343	P	Pb	17 34 56.2	-0.1
TNOU				S	Sb	17 35 06.2	-1.0
TAP	Taipei	0.84	325	P	Pn	17 34 56.9	+0.4
TAP				S	Sb	17 35 07.3	-0.1
WARBT	Fenglin Townsh	0.87	224	⇓*i*P	Pb	17 34 55.8	-1.1
WARBT				S	Sb	17 35 08.5	+0.3
EGFH	Guangfu	0.88	220	*e*P	Pb	17 34 56.0	-1.1
OWD	Renai	0.89	244	⇓P	Pb	17 34 56.6	-0.6
OWD				*e*S	Sb	17 35 09.1	+0.3
YOJ	Yonaguni jima	0.89	83	P	Pb	17 34 57.2	0.0
YOJ	Yonaguni jima	0.89	83	⇑*i*P	Pb	17 34 56.8	-0.4
YOJ				S	Sb	17 35 08.7	0.0
YOJ	Yonaguni jima	0.89	83	P	Pb	17 34 57.0	-0.2
YOJ				S	Sn	17 35 09.1	-0.1
NFF	Wufeng Townshi	0.89	289	*e*P	Pn	17 34 57.4	+0.2
NFF				*e*S	Sn	17 35 10.0	+0.7
KSHI	Guanxi Townshi	0.90	298	⇓P	Pn	17 34 58.2	+0.9
KSHI				*e*S	Sn	17 35 10.8	+1.4
YM01	YM01	0.90	332	*e*P	Pn	17 34 57.8	+0.3
WUSB	Renai	0.92	247	⇓*i*P	Pb	17 34 57.4	-0.4
WUSB				*e*S	Sn	17 35 10.2	+0.1
ZUZH	Zhuzihu	0.93	331	*e*P	Pn	17 34 58.0	+0.3
ZUZH				*e*S	Sn	17 35 11.1	+0.8
YM08	YM08	0.93	334	*e*P	Pb	17 34 57.8	-0.2
TWS1	Kuangyinshan	0.94	323	⇑*i*P	Pn	17 34 58.8	+0.9
TWS1				*e*S	Sn	17 35 11.6	+1.1
ANP	Anpu	0.96	330	*e*P	Pn	17 34 58.6	+0.4
NTST	Danshui	0.98	326	⇑P	Pn	17 34 59.2	+0.8
NTST				*e*S	Sn	17 35 13.4	+2.0

LIOB	Emei	0.98	288	⇑*i*P	Pn	17 34 59.4	+0.9
LIOB				S	Sn	17 35 12.8	+1.2
NSTT	Nanjuang	0.99	287	⇑*i*P	Pn	17 34 59.4	+0.7
NSTT				*e*S	Sb	17 35 11.1	-0.6
NCU	National Centr	1.00	309	P	Pb	17 34 57.7	-1.3
NCU				S	Sn	17 35 12.2	+0.4
NCUH	Zhongli	1.00	308	⇑*i*P	Pn	17 34 59.2	+0.6
NCUH				S	Sn	17 35 13.1	+1.3
WHP	Taichung City	1.00	266	P	Pn	17 34 59.6	+0.7
WHP				*e*S	Sn	17 35 12.5	+0.3
TWY	Chenhua	1.01	336	*e*P	Pn	17 35 00.2	+1.3
TWY				*e*S	Sn	17 35 12.5	+0.4
VWDT	VWDT	1.02	235	⇓*i*P	Pb	17 34 58.9	-0.5
VWDT				*e*S	Sb	17 35 12.4	+0.1
HGSD	Ruisui	1.02	214	*e*P	Pb	17 34 58.1	-1.4
HGSD				*e*S	Sn	17 35 16.0	+3.4
SBCB	Hsinchu	1.06	295	⇑*i*P	Pb	17 35 00.6	+0.4
SBCB				*e*S	Sn	17 35 16.1	+2.7
EHYH	Wanrong	1.06	217	*e*P	Pn	17 34 58.8	-0.8
EHYH				*e*S	Sb	17 35 13.6	-0.1
EHY	Hungye	1.07	218	⇓P	Pn	17 34 58.4	-1.3
HSN	Hsinchu	1.08	295	P	Pb	17 35 00.2	-0.2
HSN				*e*S	Sn	17 35 15.9	+2.0
SSLB	Suanglung	1.14	241	P	Pn	17 35 01.2	+0.5
SSLB	Suanglung	1.14	241	⇓P	Pn	17 35 00.7	0.0
SSLB				S	Sb	17 35 15.2	-0.8
SMLT	Sun Moon Lake	1.14	246	*e*P	Pn	17 35 01.3	+0.5
SMLT				*e*S	Sn	17 35 16.9	+1.2
NMLH	Miaoli	1.16	280	*e*P	Pb	17 35 02.7	+0.9
NMLH				S	Sn	17 35 18.5	+2.6
TWQ1	Liyutan	1.16	270	⇓P	Pb	17 35 02.5	+0.7
TWQ1				*e*S	Sn	17 35 18.6	+2.6
ECBN	Changbin	1.16	208	*e*P	Pn	17 35 01.3	+0.4
TYC	Yuchr	1.17	248	P	Pb	17 35 01.8	-0.2
TYC				S	Sn	17 35 17.4	+1.2
YULB	Yu-li	1.17	216	P	Pn	17 35 00.1	-1.0
YULB	Yu-li	1.17	216	⇓*i*P	Pn	17 34 59.9	-1.2
YULB				*e*S	Sb	17 35 15.5	-1.3
EYUL	Yuli	1.20	214	*e*P	Pn	17 35 01.8	+0.4
TWF1	Yuli	1.21	215	⇓P	Pn	17 35 00.3	-1.2
TCU	Taichung	1.27	261	*e*P	Pb	17 35 03.6	0.0
TCU				*e*S	Sb	17 35 21.0	+1.5
WHYT	Xinyi Township	1.27	239	*e*P	Pb	17 35 03.5	-0.1
WHYT				*e*S	Sb	17 35 20.3	+0.6
PCYT	Pengchaiyu	1.27	1	*e*P	Pn	17 35 02.5	-0.1
CHKH	Chenggong	1.30	207	*e*P	Pn	17 35 00.8	-2.0
WJS	Zhushan	1.31	247	⇓P	Pb	17 35 04.7	+0.3
WJS				*e*S	Sb	17 35 22.9	+2.0
YUS	Yu-Shan	1.32	230	⇓P	Pn	17 35 03.6	+0.1
YUS				*e*S	Sn	17 35 20.7	+0.2
WNT	Mingjian	1.33	250	*e*P	Pb	17 35 05.7	+1.0
WNT				*e*S	Sb	17 35 23.6	+2.3
FULB	Fuli	1.34	211	*e*P	Pn	17 35 02.7	-0.7
WCHH	Zhanghua	1.38	259	*e*P	Pb	17 35 05.4	-0.2
WCHH				*e*S	Sb	17 35 24.3	+1.5
WCH1	Changhua City	1.40	259	*e*P	Pb	17 35 05.5	-0.3
WCH1				*e*S	Sb	17 35 24.9	+1.7
ALS	Alishan	1.41	234	⇓P	Pn	17 35 05.4	+0.7
ALS				*e*S	Sb	17 35 23.6	-0.2
EHD	Haiduan	1.42	213	*e*P	Pn	17 35 02.5	-2.1
CHN5	Tsauling	1.46	239	⇓*i*P	Pb	17 35 06.4	-0.5
CHN5				*e*S	Sb	17 35 26.5	+1.5
ECS	Chishang	1.46	211	*e*P	Pn	17 35 05.4	+0.3
ELDTW	Lidau	1.49	219	*e*P	Pn	17 35 04.6	-1.0
WGK	Gukeng	1.51	244	*e*P	Pb	17 35 07.9	+0.1
WGK				*e*S	Sb	17 35 28.9	+2.5
WDL	Douliou City	1.51	246	*e*P	Pb	17 35 07.8	0.0
WDL				*e*S	Sb	17 35 29.1	+2.4
WDLH	Douliu	1.53	245	*e*P	Pb	17 35 08.2	+0.2
WDLH				*e*S	Sb	17 35 28.9	+1.9
EDH	Donghe	1.53	207	*e*P	Pn	17 35 04.5	-1.5
EDH				*e*S	Sn	17 35 24.0	-1.0
IRIF	Iriomote-Funau	1.54	90	*e*P	Pn	17 35 06.1	0.0
IRIF				S	Sn	17 35 25.4	+0.2
WCKO	Fanlu	1.60	236	P	Pb	17 35 09.0	-0.3
WCKO				*e*S	Sb	17 35 30.1	+1.0
CHN2	Minshiung	1.65	241	*e*P	Pb	17 35 10.1	-0.1
CHN2				*e*S	Sb	17 35 33.2	+2.7
STYH	Taoyuan	1.65	225	P	Pn	17 35 08.2	+0.6
STYH				S	Sb	17 35 30.6	0.0
LONT	Longtian	1.66	210	*e*P	Pn	17 35 07.8	-0.1
TPUB	Ta-pu	1.66	231	P	Pn	17 35 08.9	+1.0
TPUB	Ta-pu	1.66	231	⇓P	Pn	17 35 09.2	+1.3
TPUB				*e*S	Sb	17 35 31.2	+0.3
WTCT	Ta-ch'eng	1.68	254	S	Sb	17 35 31.7	+0.3
CHY	Chiayi	1.71	241	*e*P	Pb	17 35 10.8	-0.3
CHY				*e*S	Sb	17 35 33.8	+1.6
WTP	Ta-pu	1.71	230	P	Pn	17 35 09.9	+1.4
WTP				S	Sb	17 35 33.1	+0.8
LDUT	Ludao	1.75	198	*e*P	Pn	17 35 07.2	-1.8
LDUT				*e*S	Sn	17 35 28.1	-2.4
TWGBT	Beinan	1.76	210	P	Pn	17 35 08.2	-1.0
TWGBT	Beinan	1.76	210	*e*P	Pn	17 35 07.7	-1.5
TWG	Pinlang	1.76	211	*e*P	Pn	17 35 08.3	-1.0
TWK	Hsinying	1.79	233	⇑P	Pb	17 35 11.3	-1.2
TWK				*e*S	Sb	17 35 35.3	+0.7
JKRS	Kuro-shima	1.80	93	*e*P	Pn	17 35 10.5	+0.8
JKRS				S	Sn	17 35 32.5	+0.9
CHN1	Nanshi	1.81	230	P	Pn	17 35 11.4	+1.5
CHN1				S	Sb	17 35 35.1	0.0
SNST	Tainan City	1.81	232	P	Pn	17 35 11.3	+1.5
SNST				S	Sb	17 35 35.3	+0.2
WSF	Szhu	1.81	247	*e*P	Pb	17 35 11.6	-1.3
WSF				S	Sb	17 35 36.1	+1.0
SGST	Jiashian	1.84	227	⇓P	Pn	17 35 10.8	+0.6
SGST				S	Sb	17 35 35.0	-1.0
WSL	Shuilin Townsh	1.85	244	⇓P	Pb	17 35 12.5	-1.2
WSL				S	Sb	17 35 36.9	+0.5
JIJ	Ishigaki jima	1.91	89	*e*P	Pn	17 35 11.4	+0.1
JIJ				*e*S	Sn	17 35 34.6	+0.1
CHN8	Yiju	1.95	240	P	Pn	17 35 13.5	+1.7
CHN8				S	Sb	17 35 39.3	0.0
CHN3	Shinhua	1.99	231	*e*P	Pb	17 35 14.7	-1.3
CHN3				S	Sb	17 35 42.1	+1.6
ECL	Taimali	2.01	210	P	Pn	17 35 12.4	-0.2
SSHA	Shanhua	2.01	233	*e*S	Sb	17 35 41.0	+0.1
SCST	Cishan	2.04	225	*e*P	Pb	17 35 15.0	-1.8
SCST				*e*S	Sb	17 35 42.4	+0.8
SSD	Sandimen	2.06	219	*e*P	Pn	17 35 15.1	+1.8
SSD				*e*S	Sb	17 35 40.9	-1.3
SCLT	Jiali	2.06	236	*e*S	Sb	17 35 41.8	-0.5
JISG	Ishigakijimahi	2.08	83	P	Pn	17 35 13.5	0.0
JISG				*e*S	Sn	17 35 38.8	+0.2
TSMG	Majia	2.08	218	*e*S	Sb	17 35 42.9	0.0
TWM1	Shoushan	2.13	225	*e*P	Pb	17 35 17.2	-1.1
TWM1				*e*S	Sb	17 35 47.7	+3.5
SGLT	Jiouru	2.16	222	*e*S	Sb	17 35 45.8	+0.7
TSCK	Chigu Township	2.16	237	*e*P	Pn	17 35 15.8	+1.2
TSCK				*e*S	Sb	17 35 43.4	-1.7
MASBT	Mashibuluo	2.16	217	*e*P	Pn	17 35 15.4	+0.7
MASBT				*e*S	Sn	17 35 42.0	+1.4
EAST	Anshuo	2.25	210	*e*P	Pn	17 35 15.4	-0.5
SCZT	Fangliau	2.36	214	*e*P	Pn	17 35 19.4	+1.9
SCZT				*e*S	Sn	17 35 47.7	+2.1
LYUB	Lan-yu	2.38	190	*e*P	Pn	17 35 15.6	-2.1
PNG	Penghu	2.41	252	*e*P	Pn	17 35 18.5	+0.5
PNG				*e*S	Sn	17 35 47.3	+0.6
PHUB	P'eng-hu	2.41	250	*e*P	Pn	17 35 18.8	+0.7
PHUB				*e*S	Sn	17 35 47.5	+0.7
JTJ	Tarama	2.44	83	P	Pn	17 35 19.2	+0.7
WDGT	Dungji	2.44	244	*e*P	Pn	17 35 19.7	+1.2
WDGT				*e*S	Sn	17 35 49.7	+2.2
MATB	Ma-tsu	2.61	314	*e*P	Pn	17 35 20.8	-0.2
MATB				*e*S	Sn	17 35 53.0	+1.2
HEN	Hengchun	2.62	208	*e*P	Pn	17 35 23.2	+2.1
HEN				*e*S	Sn	17 35 54.6	+2.5
VCHM	Qimei	2.65	245	*e*P	Pn	17 35 22.4	+1.0
VCHM				*e*S	Sn	17 35 53.0	+0.3
PTMZ	Houxiangcun	2.75	285	*e*P	Pn	17 35 22.6	-0.1
PTMZ				*e*S	Sn	17 35 54.2	-0.9
JMJ	Miyako jima 2	2.99	80	P	Pn	17 35 27.5	+1.4
XPSS	Dashiqiu	3.07	327	*e*P	Pn	17 35 26.9	-0.2
XPSS				*e*S	Sn	17 36 02.9	-0.1
MHZQ	Yeshan	3.24	303	*e*P	Pn	17 35 29.0	-0.5
KNM	Kinmen	3.29	272	*e*P	Pn	17 35 31.6	+1.3
KNM				*e*S	Sn	17 36 09.8	+1.2
KNMB	Chin-men Tao	3.33	273	*e*P	Pn	17 35 30.6	-0.2
KNMB				*e*S	Sn	17 36 08.1	-1.5
AXDP	Jialang	3.75	279	*e*P	Pn	17 35 36.5	0.0
AXDP				*e*S	Sn	17 36 17.6	-2.2
ZPLA	Ao Xicun	3.94	265	*e*P	Pn	17 35 39.1	-0.1
ZPLA				*e*S	Sn	17 36 22.6	-2.0
DSXP	Dongshan	4.27	262	*e*P	Pn	17 35 44.0	+0.3
DSXP				*e*S	Sn	17 36 31.2	-1.5
SXFK	Yanhouchang	4.47	298	*e*P	Pn	17 35 46.2	-0.3
JOW	Kunigami	6.14	65	P	Pn	17 36 10.8	+1.3
KSRS	Korea Array	14.00	20	P	P	17 38 06.9	+2.3
	2.8nm,0.6s,baz=200,slow=11,SNR=16						
CMAR	Chiang Mai Arr	22.28	259	P	P	17 39 47.7	+12
	0.3nm,0.3s,baz=76,slow=11,SNR=4.3						
	0.3nm,0.3s						
SONM	Songino Array	26.53	336	P	P	17 40 15.4	-0.6
	1.4nm,0.8s,baz=154,slow=9.7,SNR=6.9						
	1.4nm,0.8s						
MKAR	Makanchi Array	38.77	315	P	P	17 42 02.1	-0.6
	0.8nm,0.6s,baz=100,slow=10.0,SNR=8.4						
	0.8nm,0.6s						
ZALV	Zalesovo Beam	40.54	327	P	P	17 42 15.6	-1.6
	1.8nm,0.5s,baz=120,slow=8.1,SNR=10.0						
	1.8nm,0.5s						
WRA	Warramunga Arr	45.62	164	P	P	17 42 58.4	-0.3
	0.5nm,0.8s,baz=345,slow=8.0,SNR=2.5						
	0.5nm,0.8s						
BVAR	Borovoye Array	48.05	320	P	P	17 43 15.4	-1.9
	0.9nm,0.5s,baz=90,slow=7.4,SNR=5.9						
	0.9nm,0.5s						
ASAR	Alice Springs	49.10	166	P	P	17 43 25.5	-0.2
	0.4nm,1.0s,baz=348,slow=8.9,SNR=4.9						
	0.4nm,1.0s						

*IDC **01** 17:41:24.9±2.4, 37°.69N×142°.39E, h0^{km}, mb3.5/3, mbtmp3.3/4, ML2.0/1, Error ellipse: s-maj=45.7km s-min=33.0km az=70.0*

*JMA **01** 17:41:29.1±0.2, 37°.6N±0°.4×142°.1E±0°.9, h30^{km}±3^{km}, MV3.7/38, E OFF FUKUSHIMA PREF*

ISC 01 17:41:26.7±2.1**, 37°.57N**±0°.05×**142°.12E**±0°.08**, h6**^{km}±11^{km}**,**
n20, σ1^{s}.08/27**, mb3.4**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.90	326	*i* P	Pn	17 41 45.5	-0.4
JIKH				*e*S	Sb	17 41 57.0	-0.1
JMST	Minamisoumatoc	0.99	280	P	Pn	17 41 46.8	-0.3
JMST				S	Sg	17 41 59.3	+0.8
JFK	Kawauchi	1.01	259	P	Pb	17 41 46.9	+0.3
JFK				S	Sg	17 41 59.7	+0.6
JIO	Ouri	1.07	326	*i* P	Pn	17 41 48.2	-0.1
JIO				S	Sg	17 42 01.5	+0.3
JMM	Marumori	1.09	286	*i* P	Pn	17 41 48.4	-0.1
ONAJ	Iwakimizuishiy	1.15	247	P	Pg	17 41 48.7	0.0
ONAJ				S	Sg	17 42 02.7	-0.9
JOU	Okura	1.40	305	*i* P	Pg	17 41 53.8	+0.3
JOU				S	Sb	17 42 11.4	+0.1
JOTO	OTAMA OYAMA	1.42	270	*i* P	Pg	17 41 54.0	+0.1
JOTO				S	Sb	17 42 11.8	0.0
JMK	Ichinoseki	1.55	333	*e*P	Pb	17 41 55.5	-0.4
JYS	Shirataka	1.75	293	*e*S	Sb	17 42 21.2	-0.2
JFY	Yanaizu	1.93	266	*e*P	Pb	17 42 01.4	-0.9
JFY				S	Sn	17 42 25.4	+0.8
JYK	Kaneyama	1.93	315	P	Pb	17 42 01.3	-1.1
JYK				S	Sn	17 42 25.5	+0.8
JOM	Ohasama	2.01	342	*e*P	Pn	17 42 02.0	+0.9
MJAR	Matsushiro Arr	3.29	253	Pn	Pn	17 42 21.6	+2.9
	0.1nm,0.3s,baz=68,slow=11,SNR=9.3						
MJAR				Sn	Sb	17 43 02.5	-3.3
	0.2nm,0.3s,baz=67,slow=26,SNR=2.4						
	1.0nm,0.5s						
H11S1	WAKE ISLAND Hy	28.69	125	T	T	18 17 21.7	
	baz=317,slow=76,SNR=9.3						
H11S3	WAKE ISLAND Hy	28.69	125	T	T	18 17 22.1	
	baz=317,slow=76,SNR=8.1						
H11S2	WAKE ISLAND Hy	28.71	125	T	T	18 17 23.1	
	baz=317,slow=76,SNR=9.0						
MKAR	Makanchi Array	44.31	302	P	P	17 49 36.4	-0.9
	0.4nm,0.7s,baz=89,slow=11,SNR=2.4						
	0.4nm,0.7s						
KURBB	Kurchatov Arra	46.12	308	P	P	17 49 52.1	+0.6
	0.6nm,0.5s,baz=80,slow=7.8,SNR=6.0						
	0.6nm,0.5s						
WRA	Warramunga Arr	57.67	189	P	P	17 51 17.8	-0.2
	0.2nm,0.5s,baz=6.6,slow=7.0,SNR=2.3						
	0.2nm,0.5s						

*IDC **01** 17:48:19.3±2.0, 41°.37N×19°.40E, h0^{km}, mb3.8/6, mbtmp3.7/10, ML3.2/4, Error ellipse: s-maj=31.5km s-min=16.3km az=6.0*

*PRU **01** 17:48:21.2, 41°.08N×19°.31E, h10^{km}*

*SKO **01** 17:48:21.6, 41°.56N×19°.35E, h0^{km}, ML3.7*

*TIR **01** 17:48:22.3, 41°.55N×19°.63E, h42^{km}±3^{km}, Md2.9/7, Ml3.7/6*

*THE **01** 17:48:22.5, 42°N±8°×1°9E±°, h11^{km}, M3.7/17, MLh3.7/17*

*BEO **01** 17:48:24.2±0.5, 41°.55N×19°.54E, h9^{km}±2^{km}, ML3.4/9*

ISC 01 17:48:22.5±1.0**, 41°.50N**±0°.02×**19°.49E**±0°.02**, h13**^{km}±7^{km}**,**
n169, σ1^{s}.56/213**, mb4.0**/4**, 27C-15D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.32	118	Pg	Pg	17 48 29.4	+0.4
TIR				Sg	Sg	17 48 31.6	-1.8
TIR				AML	AML	17 48 33.9	
	45nm,0.3s						
TIR	Tirane	0.32	118	*i* Pg	Pg	17 48 29.4	+0.4
TIR				*i* Sg	Sb	17 48 35.0	-0.2
SDA	Shkodra	0.55	0	Pg	Pg	17 48 33.1	-0.3
SDA				Sg	Sb	17 48 41.9	+0.1
SDA				AMd		17 49 30.4	
PHP	Peshkopia	0.73	75	Pg	Pg	17 48 35.8	-1.1
PHP				Sg	Sg	17 48 44.9	-1.6
PHP				AML	AML	17 48 49.5	
	9.9nm,0.4s						
PHP				AMd		17 49 30.2	
PHP	Peshkopia	0.73	75	P	Pg	17 48 36.1	-0.7
PHP				S	Sb	17 48 47.3	+0.1
PDG	Podgorica	0.95	349	Pg	Pb	17 48 39.9	-0.9
PDG				Sg	Sg	17 48 53.7	+0.5
PDG				AMd		17 49 48.6	
PDG	Podgorica	0.95	349	⇓P	Pb	17 48 40.3	-0.5
PDG				⇓S	Sb	17 48 53.2	0.0
PDG	Podgorica	0.95	349	*e*Pg	Pb	17 48 39.9	-0.9
VLO	Vlora	1.03	180	Pg	Pb	17 48 42.1	-0.1
VLO				Sg	Sn	17 48 56.3	-0.6
VLO				AML	AML	17 49 06.4	
	19nm,0.5s						
VLO				AMd		17 49 57.6	
VLO	Vlora	1.03	180	P	Pn	17 48 44.1	+1.4
VLO				S	Sn	17 49 00.2	+3.2
OHR	Ohrid	1.06	111	*i* Pg	Pb	17 48 42.4	-0.3
OHR				*i* Sg	Sn	17 49 00.0	+2.3
OHR				*e*Lg	Lg	17 49 01.4	
	comp=N,1µm,0.5s						
OHR				*e*Lg	Lg	17 49 02.8	
	comp=E,1µm,0.5s						
KBN	Korca	1.31	131	Pn	Pn	17 48 45.0	-1.7
KBN				Sn	Sb	17 49 01.4	-2.5
KBN				AML	AML	17 49 09.1	
	comp=E,5.7nm,0.5s						
KBN				AMd		17 50 02.6	
KBN	Korca	1.31	131	P	Pg	17 48 48.1	+0.3
KBN				S	Sg	17 49 07.8	+2.9
TREB	Trebinje	1.48	325	*e*Pn	Pb	17 48 49.9	-0.1
TREB	Trebinje	1.48	325	*e*Pg	Pb	17 48 50.4	+0.4
TREB				*e*Sg	Sg	17 49 11.4	+1.1
SKO	Skopje	1.53	71	*i* Pg	Pb	17 48 51.0	+0.2
SKO				*i* Sg	Sg	17 49 12.5	+0.7
DBRK	Dubrovnik	1.54	320	*e*Pn	Pb	17 48 51.6	+0.7
DBRK				Sg	Sg	17 49 12.2	+0.1
NEST	Nestorio	1.60	132	P	Pb	17 48 52.6	+0.6
NEST				S	Sg	17 49 15.1	+1.0
SJES	Sjenica	1.79	11	*e*Pn	Pb	17 48 55.6	+0.2
SJES				*e*Sg	Sg	17 49 20.8	+0.5
PENT	Pentalofos	1.80	136	P	Pb	17 48 55.2	-0.3
STON	Ston	1.91	316	*e*Pn	Pb	17 48 58.1	+0.9
STON				Sn	Sb	17 49 22.0	+1.0
STON	Ston	1.91	316	*e*Pn	Pb	17 48 57.5	+0.3
STON				*e*Sn	Sg	17 49 23.2	-0.8
IGT	Igoumenitsa	2.07	162	Pn	Pn	17 48 58.2	+1.2
IGT				Sn	Sn	17 49 23.6	+1.0
IGT				AMd		17 50 22.5	
IGT	Igoumenitsa	2.07	162	P	Pn	17 48 57.8	+0.9
IGT	Igoumenitsa	2.07	162	*i* Pn	Pn	17 48 57.9	+0.9
IGT				*i* Sn	Sb	17 49 24.5	-1.1
LFKM	Lefkimmi	2.10	168	P	Pn	17 48 58.4	+1.0
KPRO	Kipourio	2.10	137	P	Pn	17 48 58.5	+1.0
KZN	Kozani	2.10	124	P	Pb	17 48 59.5	-1.0
SELS	Selova	2.10	35	*e*Pn	Pn	17 48 58.8	+1.4
SELS				*e*Sn	Sb	17 49 26.0	-0.5
JAN	Janina	2.11	150	P	Pn	17 48 58.9	+1.3
RUDO	Rudo	2.12	358	*e*Pn	Pb	17 49 01.0	+0.2
IVAS	Ivanjica	2.13	13	*e*Pn	Pn	17 48 59.2	+1.3
BARS	Barje	2.17	52	*i* Pn	Pn	17 48 59.3	+0.9
BARS				*i* Sn	Sn	17 49 27.1	+2.0
BARS	Barje	2.17	52	*e*Pn	Pn	17 48 59.6	+1.2
BARS				*e*Sn	Sn	17 49 26.9	+1.7
GRG	Griva	2.26	103	P	Pn	17 49 00.8	+1.2
GRG	Griva	2.26	103	*i* Pn	Pn	17 49 01.0	+1.4
GRG				*i* Sn	Sn	17 49 29.3	+1.9
MATE	Matera	2.27	249	⇓P	Pg	17 49 04.6	-1.5
GOCS	Kraljevo Serbi	2.30	26	*e*Pn	Pn	17 49 02.2	+2.0
GOCS				*e*Sn	Sn	17 49 30.4	+1.9
LSTV	Lastovo	2.31	304	*e*Pn	Pn	17 49 01.6	+1.3
PRMD	Pramanda	2.32	148	P	Pn	17 49 01.8	+1.3
VAY	Valandovo	2.32	93	*i* Pn	Pn	17 49 01.2	+0.7
VAY				*i* Sn	Sn	17 49 30.6	+1.8
VAY				*e*Lg	Lg	17 49 31.7	
	comp=E,131nm,0.6s						
VAY				*e*Lg	Lg	17 49 32.6	
	comp=N,234nm,0.8s						
BBLS	Lazi&#263i	2.37	358	*e*Pn	Pb	17 49 03.4	-1.6
BOSS	Bosilegrad	2.44	65	*e*Pn	Pn	17 49 03.2	+1.1
BOSS				*e*Sn	Sn	17 49 33.1	+1.3
TETR	Tetrakomo, Epi	2.55	147	P	Pn	17 49 05.3	+1.7
GRUS	Gruza	2.55	20	*e*Pn	Pn	17 49 05.1	+1.5
KNT	Kendrikon	2.59	96	P	Pn	17 49 05.4	+1.3
KNT	Kendrikon	2.59	96	*i* Pn	Pn	17 49 05.3	+1.2
KNT				*i* Sn	Sn	17 49 36.4	+1.0
LIT	Litokhoron	2.67	121	P	Pn	17 49 06.1	+0.8
LIT	Litokhoron	2.67	121	*i* Pn	Pn	17 49 06.1	+0.8
BOVS	Bovan	2.69	37	⇓P	Pn	17 49 06.8	+1.3
BOVS	Bovan	2.69	37	*e*Pn	Pn	17 49 06.6	+1.1
BOVS				*e*Sn	Sn	17 49 37.9	0.0
KKB	Krupnik	2.75	82	P	Pn	17 49 07.7	+1.5
KKB	Krupnik	2.75	82	*i* P	Pn	17 49 07.8	+1.5
KKB	Krupnik	2.75	82	*i* Pn	Pn	17 49 07.7	+1.5
THE	Thessaloniki	2.77	107	*i* Pn	Pn	17 49 07.2	+0.7
TRUS	Trudelj	2.80	14	*e*Pn	Pn	17 49 09.2	+2.1
HVAR	Hvar	2.81	308	*e*Pn	Pn	17 49 08.7	+1.5
TSLK	Tsoukalades, L	2.82	161	P	Pn	17 49 08.0	+0.7
LKD2	Lefkada island	2.85	161	P	Pn	17 49 08.5	+0.7
AMPL	Ampelaki	2.89	152	P	Pn	17 49 09.6	+1.3
ZAPS	Zavoj	2.92	52	*e*Pn	Pn	17 49 10.3	+1.5
ZAPS				*e*Sn	Sn	17 49 45.4	+1.6
DRAG	Dragano-Lefkad	2.93	163	P	Pn	17 49 08.9	0.0
NYDR	Nydri-Lefkada	2.93	161	P	Pn	17 49 09.2	+0.3
SOH	Sokhos	2.99	102	P	Pn	17 49 10.8	+1.0
SOH	Sokhos	2.99	102	*i* Pn	Pn	17 49 10.9	+1.2
VTS	Vitosha	3.00	67	P	Pn	17 49 11.1	+1.1
VTS	Vitosha	3.00	67	*i* P	Pn	17 49 11.3	+1.3
VTS	Vitosha	3.00	67	*e*Pn	Pn	17 49 11.2	+1.3
VTS				*e*Sn	Sn	17 49 46.2	+0.3
EVGI	Lefkada island	3.01	162	P	Pn	17 49 09.9	0.0
TEKS	Tekeris	3.05	0	*e*Pn	Pn	17 49 11.1	+0.6
ZAGS	Zajecar	3.07	40	*e*Pn	Pn	17 49 12.2	+1.5
ZAGS				*e*Sn	Sn	17 49 48.1	+0.8
PLNA	Plana	3.09	70	*e*P	Pn	17 49 13.3	+2.2
SRS	Serrai	3.11	96	P	Pn	17 49 12.2	+0.8
SRS	Serrai	3.11	96	*i* Pn	Pn	17 49 12.0	+0.7
BLSH	Balsha	3.12	63	*i* P	Pn	17 49 14.0	+2.5
FSK	Fiskardo	3.15	165	P	Pn	17 49 11.8	0.0
BLKB	Belogradchik	3.17	47	*e*Pn	Pn	17 49 14.0	+1.9
BLKB				*e*Sn	Sn	17 49 50.6	+0.9
MMB	Musomishta	3.20	88	P	Pn	17 49 13.6	+1.1
MMB	Musomishta	3.20	88	*i* P	Pn	17 49 14.0	+1.5
MMB	Musomishta	3.20	88	*i* Pn	Pn	17 49 13.5	+1.1
PLG	Polygyros	3.20	109	P	Pn	17 49 13.4	+0.8
MAKR	Makrakomi, Fth	3.20	140	P	Pn	17 49 14.4	+1.8
AVAS	Avala Beograd	3.28	13	*e*Pn	Pn	17 49 15.0	+1.4
AGG	Agios Georgios	3.29	138	P	Pn	17 49 15.3	+1.5
KUBS	Kucevo	3.32	28	*e*Pn	Pn	17 49 13.9	-0.3
KUBS				*e*Sn	Sn	17 49 52.6	-0.9
MPEP	Malo Peshtene	3.65	58	*i* P	Pn	17 49 20.9	+2.2
BLY	Banja Luka	3.66	333	*e*Pn	Pn	17 49 20.2	+1.3
BLY	Banja Luka	3.66	333	⇑P	Pn	17 49 20.1	+1.3
MDVR	Moldovita	3.66	26	⇑P	Pn	17 49 19.8	+0.9
MDVR	Moldovita	3.66	26	*e*Pn	Pn	17 49 19.9	+1.0
MDVR				*e*Sn	Sn	17 50 01.3	-0.6
FRGS	Fruska Gora	3.66	4	*e*Pn	Pn	17 49 19.4	+0.5
PUNG	Punghina	3.75	41	⇑P	Pn	17 49 22.2	+2.1
VRSS	Vrsac	3.86	20	*e*Pn	Pn	17 49 23.1	+1.5
DJES	Djerdap	3.86	34	⇑P	Pn	17 49 23.3	+1.6
RZN	Rozhen	3.94	85	*i* P	Pn	17 49 24.7	+1.8
PLD	Plovdiv	3.98	79	*e*P	Pn	17 49 25.1	+1.9
PLD	Plovdiv	3.98	79	*i* Pn	Pn	17 49 25.2	+2.0
PLD	Plovdiv	3.98	79	*e*Pn	Pn	17 49 24.8	+1.6
PLD				*e*Sn	Sn	17 50 09.1	-0.6
HERR	Herculane	4.00	31	⇑P	Pn	17 49 24.5	+1.0
SRE	Strehaia	4.17	39	⇑P	Pn	17 49 27.2	+1.4
PLVB	Pleven	4.24	62	⇑P	Pn	17 49 28.5	+1.7
BZS	Buzias	4.39	20	⇑P	Pn	17 49 29.7	+0.8
PVL	Pavlikeni	4.51	67	*i* P	Pn	17 49 32.5	+1.9
GZR	Gura Zlata	4.57	30	⇓P	Pn	17 49 33.0	+1.6
AQU	L'Aquila	4.62	283	*e*Pn	Pn	17 49 35.8	+3.7
SURR	Surduc	4.66	23	⇑P	Pn	17 49 34.2	+1.6
MORH	Mrgy, Hungar	4.75	353	*e*Pn	Pn	17 49 33.9	+0.1
MORH	Mrgy, Hungar	4.75	353	⇑P	Pn	17 49 36.0	+2.2
ELND	Elena	4.95	71	⇑P	Pn	17 49 38.0	+1.5
SIRR	Siria	5.02	17	⇓P	Pn	17 49 38.3	+0.8
SIRR	Siria	5.02	17	*e*Pn	Pn	17 49 39.0	+1.5
SIRR				*e*Sn	Sn	17 50 33.4	-1.9
SIRR				*e*Sn	Sn	17 50 33.6	-1.7
LOT	Lotru	5.03	37	⇑P	Pn	17 49 39.2	+1.5
HUMR	Humele	5.03	51	⇓P	Pn	17 49 39.0	+1.3
BOJS	Bojanci	5.05	324	*e*Pn	Pn	17 49 39.4	+1.4
SZH	Strazhitsa	5.12	68	*i* P	Pn	17 49 41.5	+2.6
JMB	Yambol	5.34	77	*e*P	Pn	17 49 43.5	+1.6
BEHE	Becsehely	5.34	339	*e*Pn	Pn	17 49 46.4	+4.5
ARR	Arges	5.38	42	⇓P	Pn	17 49 44.3	+1.8
TNR	Turnu Rosu	5.41	38	⇓P	Pn	17 49 45.0	+2.1
LOZB	Loznitsa	5.58	68	⇑P	Pn	17 49 47.0	+1.8
CEY	Cerknica	5.61	321	*e*Pn	Pn	17 49 46.7	+1.0
CEY				*e*Sn	Sn	17 50 50.1	+0.1
VOIR		5.64	44	⇓P	Pn	17 49 49.0	+2.8
SKDS	Skadanscina	5.67	317	*e*Pn	Pn	17 49 47.7	+1.1
SKDS				*e*Sn	Sn	17 50 49.5	-2.1
MARR	Marisel-Cluj	5.79	26	⇑P	Pn	17 49 49.3	+1.0
SOKA	Soboth	6.09	330	*i* Pn	Pn	17 49 53.7	+1.4
	comp=N,0.3nm,0.2s						
LTVH	Ltavrtes, Hu	6.13	16	⇑P	Pn	17 49 54.2	+1.5
OBKA	Obir	6.15	326	*e*Pn	Pn	17 49 54.1	+1.1
	comp=N,0.7nm,0.2s						
MLR	Muntele Rosu	6.16	47	Pn	Pn	17 49 57.0	+3.7
	comp=N,1.2nm,0.3s,baz=229,slow=1.6,SNR=13						
MLR				Sn	Sn	17 51 05.3	+1.7
	comp=N,0.6nm,0.3s,baz=0.0,slow=20,SNR=1.7						
	comp=N,4.9nm,0.4s						
MLR	Muntele Rosu	6.16	47	⇑P	Pn	17 49 55.8	+2.5
DOPR	Dopca	6.18	42	⇑P	Pn	17 49 55.6	+2.2
ISR	Istrita	6.29	53	⇑P	Pn	17 49 58.0	+3.0
NEHR	Nehoiu	6.32	49	⇑P	Pn	17 49 58.2	+2.8
ARSA	Arzberg	6.41	335	*e*Pn	Pn	17 49 57.9	+1.2
	comp=N,0.7nm,0.3s						
PSZ	Piszkesteto	6.42	2	⇑P	Pn	17 49 58.2	+1.4
OZUR		6.47	43	⇓P	Pn	17 49 59.0	+1.6
COVR	Voineasa-Covas	6.52	46	⇓P	Pn	17 50 00.9	+2.8
TURR	Turia	6.56	44	⇑P	Pn	17 50 01.2	+2.5
ICOR	Ion Corvin	6.64	64	⇓P	Pn	17 50 01.7	+1.9
PLOR	Plostina	6.77	48	⇑P	Pn	17 50 04.4	+2.8
VRI	Vrincioaia	6.82	48	⇑P	Pn	17 50 04.5	+2.3
CONA	Conrad Observa	6.93	339	*e*Pn	Pn	17 50 06.0	+2.2
	comp=N,0.4nm,0.3s						
ONER	Baraj Valea Uz	6.94	44	⇑P	Pn	17 50 06.7	+2.8
TLBR	Topalu	6.97	61	⇑P	Pn	17 50 06.5	+2.3
KECS	Kecovo	7.02	5	*e*PN	Pn	17 50 08.8	+3.8
KECS				*e*SN	Sn	17 51 23.0	-1.6
MODS	Modra-Piesok	7.05	348	*e*PN	Pn	17 50 12.0	+6.6
MODS				*e*SN	Sn	17 51 24.9	-0.5
ABTA	Abfaltersbach	7.26	319	*e*Pn	Pn	17 50 09.6	+1.3
	comp=N,0.4nm,0.2s						
CFR	Carcaliu	7.29	57	⇓P	Pn	17 50 10.1	+1.4
BURAR	Bucovina Array	7.35	32	⇑P	Pn	17 50 12.3	+2.7
MOA	Molln	7.36	331	*e*Pn	Pn	17 50 10.9	+1.2

	comp=N,0.2nm,0.2s						
LESA	Schwarzleotal	7.67	323	ePn	Pn	17 50 13.6	-0.4
	comp=N,0.4nm,0.2s						
TLCR		7.73	58	⇑P	Pn	17 50 17.1	+2.4
STHS	Stebnicka Huta	8.01	8	ePN	Pn	17 50 20.8	+2.2
STHS				eSN	Sn	17 51 29.6	-19
STHS	Stebnicka Huta	8.01	8	eSN	Sn	17 51 44.8	-4.2
WTTA	Wattenberg	8.05	318	ePn	Pn	17 50 20.6	+1.3
	comp=N,0.5nm,0.3s						
SQTA	Sankt Quirin	8.24	317	ePn	Pn	17 50 22.8	+1.0
	comp=N,0.9nm,0.3s						
MOTA	Moosalm	8.37	317	ePn	Pn	17 50 25.5	+1.8
	comp=N,0.9nm,0.3s						
GERES	GERESS Array B	8.40	333	Pn	Pn	17 50 24.7	+0.6
	baz=160,slow=13,SNR=5.4						
	comp=N,0.3nm,0.4s						
KHC	Kasperske Hory	8.69	333	ePN	Pn	17 50 28.6	+0.7
KHC				eSN	Sn	17 52 07.1	+1.3
DAVOX	Davos/Dischmat	8.69	311	Pn	Pn	17 50 28.1	-0.1
	comp=N,0.4nm,0.3s,baz=117,slow=15,SNR=6.2						
	comp=N,0.8nm,0.4s						
SORM	Soroca	9.14	40	⇓P	Pn	17 50 36.7	+2.7
MMAI	Mount Meron Ar	15.22	119	Pn	P	17 52 01.4	-0.8
	comp=N,0.9nm,0.3s,baz=328,slow=11,SNR=5.8						
KBZ	Khabaz	17.36	75	P	P	17 52 27.1	+1.4
	comp=N,1.2nm,0.6s,baz=252,slow=8.1,SNR=4.9						
HFS	Hagfors	19.00	351	P	Pn	17 52 44.3	0.0
	comp=N,0.1nm,0.3s,baz=161,slow=10,SNR=1.6						
	comp=N,2.4nm,0.8s						
EKA	Eskdalemuir Ar	20.31	321	P	P	17 52 57.6	-0.3
	comp=N,1.6nm,0.8s,baz=112,slow=9.5,SNR=2.2						
	comp=N,1.6nm,0.8s						
FINES	FINESS Array B	20.37	9	P	P	17 52 57.6	-1.0
	comp=N,2.3nm,0.6s,baz=189,slow=8.9,SNR=7.6						
	comp=N,2.3nm,0.6s						
BVAR	Borovoye Array	35.68	53	P	P	17 55 20.3	0.0
	comp=N,1.1nm,0.7s,baz=282,slow=7.4,SNR=8.4						
	comp=N,1.1nm,0.7s						
ZALV	Zalesovo Beam	44.13	50	P	P	17 56 29.6	-0.8
	comp=N,2.1nm,0.5s,baz=281,slow=9.2,SNR=10						
	comp=N,2.1nm,0.5s						
MKAR	Makanchi Array	44.31	61	P	P	17 56 31.4	-0.6
	comp=N,2.5nm,0.7s,baz=284,slow=7.5,SNR=25						
	comp=N,2.5nm,0.7s						
SONM	Songino Array	58.99	52	P	P	17 58 20.3	-1.5
	comp=N,0.3nm,0.5s,baz=306,slow=3.4,SNR=2.5						
	comp=N,0.3nm,0.5s						

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*TIR **01** 17:50:06.3, 41°.53N×19°.60E, h18^{km}, Md2.7/3, Ml2.5/3*

ISC 01 17:50:06.4±1.2**, 41°.55N**±0°.06×**19°.62E**±0°.06**, h14**^{km}±12^{km}**,**
n7, σ0^{s}61/13**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.27	137	Pg	Pg	17 50 11.9	-0.1
TIR				Sg	Sb	17 50 16.8	-0.7
TIR				AML	AML	17 50 17.8	
	2.3nm,0.1s						
TIR				AML	AML	17 50 17.8	
	4.8nm,0.2s						
SDA	Shkodra	0.51	350	Pg	Pg	17 50 15.6	-0.9
SDA				Sg	Sb	17 50 24.8	+0.3
SDA				AMd		17 50 46.2	
PHP	Peshkopia	0.63	77	Pg	Pg	17 50 18.9	+0.3
PHP				Sg	Sb	17 50 28.4	+0.5
PHP				AML	AML	17 50 33.6	
	0.5nm,0.2s						
PHP				AMd		17 51 04.4	
PDG	Podgorica	0.92	343	Pg	Pb	17 50 23.6	-0.6
PDG				Sg	Sn	17 50 37.7	-0.2
PDG				AMd		17 51 07.9	
KBN	Korca	1.27	136	Sn	Sg	17 50 47.5	0.0
KBN				AML	AML	17 50 52.8	
	0.4nm,0.5s						
DBRK	Dubrovnik	1.57	316	ePn	Pg	17 50 36.6	+0.1
DBRK				Sg	Sg	17 50 57.6	+0.7
STON	Ston	1.95	313	ePn	Pb	17 50 42.3	+0.8
STON				Sn	Sb	17 51 05.3	-0.4

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*IDC **01** 18:08:18.2±2.5, 38°.61N×142°.75E, h0^{km}, mb3.5/3, mbtmp3.4/4, ML2.3/1, MS2.8/2, Error ellipse: s-maj=65.7km s-min=33.5km az=64.0*

*JMA **01** 18:08:22.4±0.1, 38°.5N±0°.3×142°.3E±0°.6, h25^{km}±1^{km}, MV3.5/39, E OFF MIYAGI PREF*

*NIED **01** 18:08:22.4, 38°.49N×142°.27E, h25^{km}, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.96; $M_{\theta\theta}$-1.05; $M_{\phi\phi}$0.09; $M_{r\theta}$0.80; $M_{\theta\phi}$0.01; $M_{\phi r}$-0.23; Fault plane solution: $M_0$1.30000×10^{14} NP1: ϕ_s260.00000°, δ27.00000°, λ71.00000°. NP2: ϕ_s100.00000°, δ65.00000°, λ99.00000°.*

ISC 01 18:08:20.3±2.3**, 38°.53N**±0°.05×**142°.36E**±0°.09**, h9**^{km}±11^{km}**,**
n22, σ1^{s}28/24**, mb3.7**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.74	253	i P	Pb	18 08 34.9	-0.4
JIKH				S	Sg	18 08 43.5	-0.6
JKMT	Kesennumamotoy	0.75	292	i P	Pb	18 08 35.8	+0.3
JKMT				eS	Sg	18 08 45.1	+0.6
OFUJ	Ofunato	0.77	316	eP	Pn	18 08 36.5	-0.8
JIO	Ouri	0.80	265	eP	Pb	18 08 36.2	-0.2
JIO				eS	Sg	18 08 45.7	-0.4
JMK	Ichinoseki	0.98	295	eP	Pn	18 08 39.9	-0.4
JOM	Ohasama	1.25	319	eP	Pg	18 08 44.2	-0.1
JOM				eS	Sg	18 09 00.3	-0.3
JOU	Okura	1.34	263	eP	Pn	18 08 45.2	-0.1
JOU				eS	Sn	18 09 01.2	-2.0
JMM	Marumori	1.40	242	eP	Pn	18 08 44.9	-1.2
JMM				eS	Sn	18 09 02.1	-2.6
JRG	Rokugo	1.60	303	eP	Pb	18 08 49.4	-0.6
JRG				eS	Sn	18 09 09.0	-0.5
JYK	Kaneyama	1.61	284	eP	Pn	18 08 49.2	+0.3
JYK				eS	Sn	18 09 09.2	-0.7
JFK	Kawauchi	1.65	226	eP	Pn	18 08 48.0	-1.5
MJAR	Matsushiro Arr	3.85	240	Pn	Pn	18 09 22.6	+2.8
	0.2nm,0.3s,baz=58,slow=12,SNR=13						
MJAR				Sn	Sb	18 10 17.8	+2.6
	0.1nm,0.3s,baz=137,slow=12,SNR=4.1						
MJAR				LR	LR	18 11 11.7	
	comp=Z,55nm,18.1s,baz=95,slow=42						
	2.3nm,0.4s						
JOW	Kunigami	16.61	230	LR	LR	18 17 35.6	
	comp=Z,78nm,19.8s,baz=126,slow=33						
H11N2	WAKE ISLAND Hy	28.32	124	T	T	18 43 57.9	
	baz=317,slow=75,SNR=79						
H11N1	WAKE ISLAND Hy	28.33	124	T	T	18 43 58.4	
	baz=317,slow=75,SNR=66						
H11N3	WAKE ISLAND Hy	28.34	124	T	T	18 43 58.1	
	baz=317,slow=75,SNR=53						
H11S1	WAKE ISLAND Hy	29.09	126	T	T	18 44 52.6	
	baz=318,slow=76,SNR=19						
H11S3	WAKE ISLAND Hy	29.10	126	T	T	18 44 50.4	
	baz=318,slow=76,SNR=19						
H11S2	WAKE ISLAND Hy	29.11	126	T	T	18 44 55.4	
	baz=318,slow=76,SNR=14						
KURBB	Kurchatov Arra	45.69	307	P	P	18 16 42.0	+0.7
	0.8nm,0.6s,baz=79,slow=8.1,SNR=5.5						
	0.8nm,0.6s						
WRA	Warramunga Arr	58.65	189	P	P	18 18 18.3	+0.3
	0.5nm,0.8s,baz=8.5,slow=7.1,SNR=2.6						
	0.5nm,0.8s						
ASAR	Alice Springs	62.38	189	P	P	18 18 43.4	0.0
	0.2nm,0.7s,baz=9.1,slow=6.9,SNR=3.6						
	0.2nm,0.7s						

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*IDC **01** 18:12:49.8±4.4, 37°.05S×177°.88E, h176^{km}±51^{km}, mb3.4/2, mbtmp3.8/2, Error ellipse: s-maj=122.2km s-min=40.0km az=1.0*

*NOU **01** 18:12:51.7, 36°.92S×177°.61E, h156^{km}, MLv3.3/9, Off E. Coast of N. Island, N.Z.*

*WEL **01** 18:12:53.1±1.3, 37°S±10°×17°8E±°, h148^{km}±10^{km}, M3.4/42, ML3.2/7, MLv3.4/42, Error ellipse: s-maj=15.0km s-min=7.3km az=40.2, confirmed*

ISC 01 18:12:49.9±1.0**, 36°.97S**±0°.06×**177°.67E**±0°.07**, h180**^{km}±7^{km}**,**
n88, σ1^{s}17/93**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.78	139	P	Pn	18 13 16.2	+0.1
MXZ	Matakaoa Point	0.78	139	P	Sn	18 13 35.6	-0.9
MXZ	Matakaoa Point	0.78	139	P	Pn	18 13 16.3	+0.1
MXZ				S	Sn	18 13 35.8	-0.7
HAZ	Te Kaha	0.79	173	P	Pn	18 13 16.2	0.0
HAZ				S	Sn	18 13 34.5	-2.2
PKGZ	Pakihiroa	0.95	160	P	Pn	18 13 18.4	+1.1
RUGZ	Raukumara Rang	0.99	180	P	Pn	18 13 17.4	-0.3
RUGZ				S	Sn	18 13 36.6	-2.8
WMGZ	Waiomatatini S	1.03	145	P	Pn	18 13 18.6	+0.8
WMGZ				S	Sn	18 13 39.6	0.0
MYRZ	Mayor Island	1.18	254	P	Pn	18 13 19.9	+0.8
PUZ	Puketiti	1.19	157	P	Pn	18 13 20.1	+1.0
TWGZ	Tauwhareparae	1.23	168	P	Pn	18 13 20.9	+1.5
OPRZ	Ohinepanea	1.24	225	P	Pn	18 13 19.8	+0.3
URZ	Urewera	1.36	199	P	Pn	18 13 20.9	+0.4
	105nm,0.3s,baz=260,slow=6.2,SNR=269						
URZ				S	Sn	18 13 43.4	-1.0
	104nm,0.3s,baz=9.5,slow=18,SNR=31						
URZ	Urewera	1.36	199	P	Pn	18 13 20.9	+0.4
URZ	Urewera	1.36	199	S	Sn	18 13 43.4	-1.0
URZ	Urewera	1.36	199	P	Pn	18 13 21.0	+0.4
MWZ	Matawai	1.36	185	P	Pn	18 13 21.4	+0.7
TKGZ	Te Karaka	1.47	174	P	Pn	18 13 22.7	+1.1
RAGZ	Rawiri	1.53	187	P	Pn	18 13 23.8	+1.5
CNGZ	Carnagh Statio	1.57	164	P	Pn	18 13 24.2	+1.7
KUZ	Kuaotunu	1.58	278	P	Pn	18 13 21.9	-0.6
KUZ	Kuaotunu	1.58	278	P	Pn	18 13 22.0	-0.6
KMRZ	Kaimai	1.63	237	P	Pn	18 13 23.6	+0.4
MUGZ	Murupara	1.66	205	P	Pn	18 13 24.2	+0.7
RIGZ	Rimuhau	1.73	178	P	Pn	18 13 25.3	+1.1
SNGZ	Shannon Statio	1.82	188	P	Pn	18 13 26.0	+0.9
TOZ	Tahuroa Road	1.88	246	P	Pn	18 13 26.6	+0.9
GRZ	Great Barrier	1.92	291	P	Pn	18 13 25.4	-0.6
MTHZ	Maungataniwha	1.99	199	P	Pn	18 13 27.2	+0.3
RAHZ	Arahi	1.99	193	P	Pn	18 13 27.9	+1.0
MKAZ	Moumakai	2.01	265	P	Pn	18 13 27.5	+0.5
WIAZ	Waiheke Island	2.04	274	P	Pn	18 13 27.6	+0.2
KNZ	Kokohu	2.05	180	P	Pn	18 13 28.3	+0.9
WHHZ	Waihua	2.13	189	P	Pn	18 13 29.4	+1.1
MHGZ	Mahia Peninsul	2.19	175	P	Pn	18 13 30.5	+1.5
ETAZ	East Tamaki Re	2.19	270	P	Pn	18 13 29.7	+0.7
NMHZ	Naumai	2.23	197	P	Pn	18 13 30.7	+1.2
MBAZ	Motutapu North	2.23	274	P	Pn	18 13 29.9	+0.4
ABAZ	Army Bay	2.31	278	P	Pn	18 13 30.7	+0.3
ARHZ	Aropaoanui	2.35	193	P	Pn	18 13 31.8	+1.0
HBAZ	Herne Bay Bore	2.36	272	P	Pn	18 13 31.9	+1.0
BKZ	Black Stump Fm	2.38	203	P	Pn	18 13 31.4	+0.2
BKZ	Black Stump Fm	2.38	203	S	Sn	18 14 03.0	-0.5
BKZ	Black Stump Fm	2.38	203	P	Pn	18 13 31.4	+0.2
AWAZ	Awhitu Peninsu	2.42	267	P	Pn	18 13 32.5	+0.9
WTAZ	Waiatarua	2.48	270	P	Pn	18 13 33.3	+1.0
MCHZ	McNeill Hill	2.58	197	P	Pn	18 13 34.6	+1.1
KWHZ	Kaweka Forest	2.64	201	P	Pn	18 13 34.5	+0.3
NTVZ	North Tongarir	2.64	216	P	Pn	18 13 35.4	+1.1
TMVZ	Te Maari	2.64	215	P	Pn	18 13 35.4	+1.0
ETVZ	East Tongariro	2.66	215	P	Pn	18 13 35.4	+0.9
WTVZ	West Tongariro	2.70	217	P	Pn	18 13 35.7	+0.8
OTVZ	Oturere	2.70	215	P	Pn	18 13 36.0	+1.0
HIZ	Hauiti	2.71	235	P	Pn	18 13 37.0	+2.0
HIZ	Hauiti	2.71	235	P	Pn	18 13 37.0	+2.0
CKHZ	Cape Kidnapper	2.72	190	P	Pn	18 13 35.7	+0.5
SNVZ	South Ngauruho	2.73	215	P	Pn	18 13 38.8	+3.4
TWVZ	Taurewa	2.74	219	P	Pn	18 13 37.4	+2.0
MAVZ	Matarangi	2.83	215	P	Pn	18 13 38.9	+2.1
KRHZ	Kereru	2.85	201	P	Pn	18 13 36.6	-0.2
WNVZ	Wahianoa	2.86	214	P	Pn	18 13 37.7	+0.7
WCZ	Waipu Caves	2.87	290	P	Pn	18 13 36.2	-0.7
KAHZ	Kahuranaki	2.88	192	P	Pn	18 13 37.6	+0.5
PXZ	Pawanui	3.12	191	P	Pn	18 13 39.8	-0.1
WPHZ	Waipukurau	3.23	197	P	Pn	18 13 41.4	0.0
TSZ	Takapari Road	3.36	203	P	Pn	18 13 42.3	-0.7
PRHZ	Porangahau	3.39	193	P	Pn	18 13 43.2	-0.1
DVHZ	Dannevirke	3.52	199	P	Pn	18 13 44.5	-0.5
OUZ	Omahuta	3.73	297	P	Pn	18 13 47.3	-0.3
OUZ	Omahuta	3.73	297	P	Pn	18 13 47.2	-0.3
PRWZ	Pori Road	3.81	200	P	Pn	18 13 48.6	0.0
MRZ	Mangatainoka R	4.03	203	P	Pn	18 13 50.1	-1.2
HOWZ	Holdsworth Sta	4.26	203	P	Pn	18 13 52.8	-1.5
OGWZ	Otaki Gorge	4.30	206	P	Pn	18 13 53.7	-1.2
TMWZ	Te Maipa	4.35	198	P	Pn	18 13 54.3	-1.2
KIW	Kapiti Island	4.44	208	P	Pn	18 13 55.0	-1.5
MTW	Mount Morrison	4.51	201	P	Pn	18 13 55.1	-2.3
TRWZ	Traveller	4.68	199	P	Pn	18 13 58.2	-1.5
MSWZ	Moikau Station	4.82	202	P	Pn	18 13 59.6	-1.9
PLWZ	Palliser	4.96	201	P	Pn	18 14 01.2	-2.1
TCW	Tory Channel	4.99	211	P	Pn	18 14 01.8	-1.7
TUWZ	Tuamarina	5.31	212	P	Pn	18 14 09.0	+1.2
MRNZ	Matariki Terra	5.84	219	P	Pn	18 14 15.2	+0.5
THZ	Tophouse	6.04	216	P	Pn	18 14 16.9	-0.5
KHZ	Kahutara	6.30	209	P	Pn	18 14 18.7	-2.0
ASAR	Alice Springs	39.70	277	P	P	18 20 06.7	+1.9
	1.0nm,0.5s,baz=122,slow=8.1,SNR=29						
	1.0nm,0.5s						
WRA	Warramunga Arr	41.31	282	P	P	18 20 19.6	+1.6
	0.8nm,0.6s,baz=121,slow=7.9,SNR=9.8						
	0.8nm,0.6s						
KURBB	Kurchatov Arra	122.86	312	PKP	PKiKP	18 31 23.6	-0.4
	0.2nm,0.6s,baz=118,slow=2.6,SNR=2.4						
FINES	FINESS Array B	149.73	333	PKPbc	PKiKP	18 32 17.6	-0.6
	3.4nm,1.0s,baz=71,slow=6.4,SNR=3.9						

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*HLW **01** 18:13:22.4, 34°.25N×27°.09E, h12^{km}±3^{km}, Md4.0, Ml3.8*

*ISK **01** 18:13:27.5, 34°.64N×26°.68E, h89^{km}, ML3.1/22*

*ATH **01** 18:13:28.2, 34°.59N×26°.78E, h66^{km}±4^{km}, ML3.1/7, Manual Solution by G.Panopoulou First location: 2019/12/01 18:14:45, This location: 2019/12/01 19:49:19 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

*AFAD **01** 18:13:31.0, 34°.62N×26°.94E, h35^{km}, ML2.9*

*THE **01** 18:13:31.7, 35°N±19°×2°7E±2°5, h63^{km}±12^{km}, M2.9/9, MLh2.9/9*

ISC 01 18:13:25.6±1.7**, 34°.53N**±0°.07×**26°.76E**±0°.03**, h17**^{km}±10^{km}**,**
n86, σ1^{s}33/105**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.74	323	P	Pn	18 13 42.8	+1.5
ZKR				S	Sn	18 13 51.9	-0.3
ZKR	Zakros	0.74	323	Pg	Pn	18 13 42.6	+1.3
ZKR				Sg	Sn	18 13 55.7	+3.6
ZKR	Zakros	0.74	323	P	Pn	18 13 42.6	+1.3
ZKR				S	Sn	18 13 52.9	+0.7
SIT2	Siteia	0.87	322	P	Pn	18 13 44.5	+1.5
SIT2				S	Sn	18 13 56.7	+1.5
STIA	Sitia Lasithi	0.87	321	P	Pn	18 13 44.2	+1.1
STIA				S	Sn	18 13 56.7	+1.4
KSS1	Kassos Island	0.90	8	P	Pn	18 13 45.2	+1.7
KARP	Karpathos	1.07	18	P	Pn	18 13 48.1	+2.3
KARP				S	Sn	18 14 01.0	+0.7
KARP	Karpathos	1.07	18	Pg	Pn	18 13 47.9	+2.0
KARP	Karpathos	1.07	18	P	Pn	18 13 48.2	+2.3
KARP				S	Sg	18 14 00.6	+0.2
NPS	Neapolis	1.20	308	P	Pg	18 13 49.1	+0.4
NPS	Neapolis	1.20	308	P	Pg	18 13 49.2	+0.4
NPS				S	Sn	18 14 03.8	+0.3
IACM	Heraklion	1.59	300	P	Pg	18 13 55.0	-1.2
IDI	Anoyia	1.72	297	P	Pb	18 13 56.2	-0.6
IDI				S	Sn	18 14 15.0	-1.3
IDI	Anoyia	1.72	297	Pn	Pb	18 13 56.1	-0.6
IDI				Sn	Sn	18 14 16.2	-0.1
IDI	Anoyia	1.72	297	P	Pb	18 13 56.3	-0.4
IDI				S	Sn	18 14 16.4	+0.1
ARG	Arkhangelos	2.02	33	P	Pb	18 14 01.4	-0.5
ARG	Arkhangelos	2.02	33	Pn	Pn	18 14 00.9	+2.0
ARG				Sn	Sn	18 14 24.5	+0.7
ARG	Arkhangelos	2.02	33	P	Pb	18 14 01.4	-0.5
ARG				S	Sn	18 14 22.5	-1.2
ASTA	Astypalaia	2.04	351	P	Pn	18 13 59.7	+0.5
THERA	Ancient Thera,	2.12	331	P	Pn	18 14 00.3	+0.1
SNT5	Nea Kammeni, S	2.18	330	P	Pn	18 14 01.4	+0.3
GVD	Gavdhos	2.23	279	Pn	Pn	18 14 03.2	+1.5
GVD	Gavdhos	2.23	279	P	Pn	18 14 02.9	+1.2
GVD				S	Sn	18 14 28.8	0.0
SAP3	Santorini-Thir	2.23	329	P	Pn	18 14 02.0	+0.3
VAM	Vamos	2.28	293	P	Pn	18 14 03.9	+1.5
VAM	Vamos	2.28	293	P	Pn	18 14 04.2	+1.7
DAT	Datca	2.30	17	Pn	Pn	18 14 03.8	+1.0
CHAN	Chania	2.44	295	P	Pn	18 14 05.5	+0.9
IMMV	Iera Moni Meta	2.47	293	P	Pn	18 14 06.8	+1.8
IMMV	Iera Moni Meta	2.47	293	Pn	Pn	18 14 05.9	+0.9
TURN	Turunc	2.55	28	P	Pn	18 14 08.5	+2.4
TURN				S	Sn	18 14 38.5	+1.7
TURN				i IAML		18 14 39.0	
	comp=N,52nm,0.3s						
TURN				i IAML		18 14 39.0	
	comp=E,62nm,0.7s						
TURN	Turunc	2.55	28	Pn	Pn	18 14 07.6	+1.5
KNDR	Palaiochora Ch	2.67	286	P	Pn	18 14 08.8	+1.0
KNDR	Palaiochora Ch	2.67	286	Pn	Pn	18 14 08.7	+0.9
KNDR	Palaiochora Ch	2.67	286	P	Pn	18 14 09.1	+1.3
KNDR				S	Sn	18 14 39.4	-0.5
APE	Apeiranthos	2.73	339	Pn	Pn	18 14 08.8	+0.1
APE	Apeiranthos	2.73	339	P	Pn	18 14 09.1	+0.5
APE				S	Sn	18 14 39.9	-1.4
DALY	Dalyan (Mula)	2.76	33	Pn	Pn	18 14 10.4	+1.4
IZZE	Mula-Seydike	2.77	46	P	Pn	18 14 09.8	+0.6
IZZE				S	Sn	18 14 41.8	-0.5
IZZE				i IAML		18 14 46.0	
	comp=N,66nm,0.3s						
AKAS	Kas	2.88	53	P	Pn	18 14 12.2	+1.3
AKAS				S	Sn	18 14 44.6	-0.5
AKAS				i IAML		18 14 45.0	
	comp=E,86nm,1.1s						
AKAS				i IAML		18 14 58.0	
	comp=N,100nm,0.6s						
AKAS	Kas	2.88	53	Pn	Pn	18 14 12.1	+1.3
YER	Yerkesik	2.88	25	Pn	Pn	18 14 11.9	+1.1
MLSB	Milas	2.88	16	Pn	Pn	18 14 11.4	+0.6
SABU	Mula-Dalaman	2.91	37	P	Pn	18 14 12.7	+1.5
SABU				S	Sn	18 14 42.3	-3.5
ANKY	Antikythira Is	3.13	296	P	Pn	18 14 15.5	+1.3
CAME	Cameli-Denizli	3.18	40	Pn	Pn	18 14 16.2	+1.3
SLUM	Salum	3.29	204	P	Pn	18 14 11.4	-5.0
DNZT	Denizli-Tavas-	3.30	33	P	Pn	18 14 18.4	+1.7
DNZT				S	Sn	18 14 54.6	-0.9
CAEL	Denizli, Camel	3.32	38	P	Pn	18 14 18.6	+1.6
CAEL				i IAML		18 14 57.0	
	comp=E,38nm,1.2s						
CAEL				i IAML		18 14 59.0	
	comp=N,28nm,0.4s						
ELL	Elmali	3.39	48	Pn	Pn	18 14 19.3	+1.5
TAVA	DENIZLI_Tavas	3.41	30	P	Pn	18 14 19.6	+1.5
TAVA				S	Sn	18 14 53.4	-4.9
AKUM	Antalya-Kumluc	3.43	57	P	Pn	18 14 19.0	+0.7
AKUM				i IAML		18 14 57.0	
	comp=E,36nm,1.6s						
AKUM				i IAML		18 14 58.0	
	comp=N,50nm,1.6s						
AYDB	Zeytinkoy-Aydi	3.53	15	Pn	Pn	18 14 20.3	+0.5
GOLH	Golhisar	3.53	39	P	Pn	18 14 21.9	+2.2
APMY	Acipayam-Deniz	3.59	34	Pn	Pn	18 14 21.6	+1.1
VLI	Veliai	3.81	306	P	Pn	18 14 22.9	-0.5
VLI	Veliai	3.81	306	P	Pn	18 14 22.9	-0.5
KORT	Korkueli	3.82	49	P	Pn	18 14 26.6	+2.8
KORT	Korkueli	3.82	49	Pn	Pn	18 14 25.2	+1.4
ODEM	Odemis-Izmir	3.89	15	Pn	Pn	18 14 25.2	+0.6
CHOS	Chios island	3.90	352	P	Pn	18 14 25.1	+0.4
KARY	Karystos	3.97	332	P	Pn	18 14 26.6	+0.9
MET5	Makryloggos,Me	4.14	319	P	Pn	18 14 28.5	+0.5
MET2	Kameni Chora,	4.15	319	P	Pn	18 14 28.7	+0.5
DION	Dionisos Attik	4.22	328	P	Pn	18 14 29.9	+0.8
PTL	Penteli	4.22	327	P	Pn	18 14 30.0	+0.8
GORD	Gordes-Manisa	4.52	14	Pn	Pn	18 14 33.6	+0.3
VIL2	Platees	4.63	324	P	Pn	18 14 34.9	+0.1
LTK	Loutraki	4.64	320	P	Pn	18 14 35.5	+0.6
PYL	PYLOS	4.72	302	P	Pn	18 14 34.4	-1.6
ITM	Ithomi	4.74	305	Pn	Pn	18 14 34.7	-1.5
ITM	Ithomi	4.74	305	P	Pn	18 14 35.3	-0.9
NATA	Nata	4.79	85	P	Pn	18 14 37.1	0.0
GUR	Goura	4.93	315	P	Pn	18 14 38.6	-0.5
GUR	Goura	4.93	315	P	Pn	18 14 38.8	-0.3
KLV	Kalavryta, Ach	5.12	315	P	Pn	18 14 41.3	-0.2
KLV	Kalavryta, Ach	5.12	315	P	Pn	18 14 41.6	0.0
DRO	Drossia	5.32	311	P	Pn	18 14 45.5	+1.1
ASGA	Asgata	5.35	85	P	Pn	18 14 44.9	+0.2
KALE	Kalithea	5.36	317	P	Pn	18 14 45.5	+0.6
SWA2		5.38	192	P	Pn	18 14 39.7	-5.4
SWA2				S	Sn	18 15 35.8	-11
CSS	Mathiatis	5.43	84	P	Pn	18 14 45.5	-0.2
MVOU	Mavrovouni	5.68	83	P	Pn	18 14 49.1	-0.1
AGG	Agios Georgios	5.72	323	P	Pn	18 14 50.9	+1.0
LKD2	Lefkada island	6.49	313	P	Pn	18 14 59.8	-0.6
HFRF	Wahat Farafira	7.47	169	P	Pn	18 15 07.1	-6.8

DJA 01 18:43:41.2±0.4**, 9°S**±3°×**11°1E**±°**, h10**^{km}**, M3.6**/16**, mb3.9**/3**,**
MLv3.5/16**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCJI	Pacitan	0.88	355	P	Pg	18 43 58.0	-0.2
PCJI				S	Sb	18 44 10.2	-0.3
UGM	Wanagama	1.37	328	P	Pn	18 44 05.5	-0.9
UGM				S	Sb	18 44 23.8	-0.8
SNJI	Sawahan-Nganju	1.38	21	P	Pn	18 44 06.7	0.0
SNJI				S	Sn	18 44 25.3	+0.1
SJI	Sawahan	1.43	21	P	Pn	18 44 06.4	-0.9
SJI				S	Sn	18 44 25.5	-0.7
YOGI	Yogyakarta	1.58	323	P	Pn	18 44 09.3	0.0
YOGI				S	Sn	18 44 29.1	-0.7
NGJI	Ngawi	1.71	7	P	Pb	18 44 13.0	+0.2
SMRI	Semarang	2.17	338	P	Pn	18 44 17.7	+0.2
GMJI	Gumukmas	2.30	70	P	Pn	18 44 17.3	-1.9
KPJI	Karang Pucung	2.89	307	P	Pn	18 44 28.5	+1.2
CTJI	Waduk Cacaban	2.91	315	P	Pn	18 44 28.6	+1.0
CTJI				S	Sn	18 45 04.4	+1.7
JAGI	Jajag, Banyuwa	2.92	78	P	Pn	18 44 26.4	-1.4
ABJI	Asem Bagus	3.21	67	P	Pn	18 44 32.3	+0.6
BBJI	Bungbulang	3.92	294	P	Pn	18 44 41.5	0.0
CNJI	Cibinong	4.45	293	P	Pn	18 44 47.9	-0.9
KLNI	Mataram	4.82	83	P	Pn	18 44 54.5	+0.6
TWSI	Taliwang, Sumb	5.56	87	P	Pn	18 45 04.8	+0.7
	0.1nm18nm,1.1s						
PLAI	Plampang	6.44	88	P	Pn	18 45 15.9	-0.3
	23nm,1.0s						
DBNI	Kabupaten Domp	6.99	86	P	Pn	18 45 23.9	+0.1

IDC 01 18:45:14.3±3.3**, 32°.28S**×**177°.68W, h0**^{km}**, mb3.6**/2**,**
mbtmp3.7/3**, ML3.1**/1**, MS2.5**/1**, Error ellipse: s-maj=78.8km s-min=48.4km az=124.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.33	214	Pn	Pn	18 47 01.6	-1.0
	0.3nm,0.3s,baz=272,slow=3.0,SNR=1.8						
URZ				Sn	Sn	18 48 21.0	-5.5
	0.7nm,0.3s,baz=264,slow=7.1,SNR=6.8						
	9.3nm,0.9s						
RAR	Rarotonga	19.39	60	LR	LR	18 57 03.4	
	comp=Z,13nm,18.6s,baz=77,slow=37						
ASAR	Alice Springs	43.31	269	P	P	18 53 18.2	0.0
	0.2nm,0.4s,baz=108,slow=8.0,SNR=6.2						
	0.2nm,0.4s						
WRA	Warramunga Arr	44.47	274	P	P	18 53 27.4	-0.1
	0.7nm,0.5s,baz=114,slow=8.0,SNR=12						
	0.7nm,0.5s						
FINES	FINESS Array B	146.99	339	PKPbc	PKPbc	19 04 57.4	-0.8
	3.1nm,0.9s,baz=90,slow=2.8,SNR=4.1						

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*IDC **01** 18:47:16.4±1.2, 72°.00N×16°.06E, h0^{km}, mbtmp3.6/5, ML2.6/4, Error ellipse: s-maj=19.4km s-min=11.4km az=72.0*

*HEL **01** 18:47:17.8±0.3, 72°.01N×15°.71E, h15^{km}, ML2.6, ML2.5(UPP), ML2.3(BER), Confirmed Earthquake*

*NAO **01** 18:47:17.9±0.4, 72°.04N×15°.62E, h15^{km}, ML3.0*

*BER **01** 18:47:18.5±2.8, 72°.07N×15°.60E, h15^{km}, ML2.3, ML3.0(NAO), Confirmed Earthquake*

*KOLA **01** 18:47:22.8, 71°.65N×16°.68E, h0^{km}, ML2.5, Error ellipse: s-maj=21.9km s-min=8.0km az=150.0, Norwegian sea*

*UPP **01** 18:47:22.2±3.0, 71°.73N×16°.20E, h0^{km}, ML2.5, Presumed earthquake*

ISC 01 18:47:14.8±1.3**, 72°.06N**±0°.07×**15°.51E**±0°.05**, h10**^{km}**, n97,**
σ2^{s}24/149**, Norwegian Sea**

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

TRO	**Tromso**	2.69	154	Pn	Pn	18 47 59.5	+1.5
TRO				Sn	Sn	18 48 29.1	-1.3
TRO	**Tromso**	2.69	154	*e*P	Pn	18 47 59.4	+1.5
TRO				*e*S	Sn	18 48 28.7	-1.7
TRO				IAML		18 48 32.1	
	comp=Z,28nm,0.2s						
TRO	**Tromso**	2.69	154	*e*P	Pn	18 48 00.3	+2.4
TRO				*e*S	Sn	18 48 29.1	-1.3
HAMF	**Hammerfest**	2.99	114	Pn	Pn	18 48 03.0	+0.9
HAMF				Sn	Sn	18 48 35.8	-2.1
HAMF	**Hammerfest**	2.99	114	*e*P	Pn	18 48 03.4	+1.3
HAMF				*e*S	Sn	18 48 35.4	-2.5
HAMF				IAML		18 48 40.0	
	comp=Z,30nm,0.2s						
HAMF	**Hammerfest**	2.99	114	*e*P	Pn	18 48 03.6	+1.5
HAMF				*e*S	Sn	18 48 35.2	-2.7
JETT	**Jettan, Norway**	2.99	145	Pn	Pn	18 48 04.4	+2.2
JETT				Sn	Sn	18 48 37.4	-0.6
JETT	**Jettan, Norway**	2.99	145	Pn	Pn	18 48 04.4	+2.2
JETT				Sn	Sn	18 48 37.4	-0.6
JETT				IAML		18 48 39.8	
	comp=Z,23nm,0.2s						
JETT	**Jettan, Norway**	2.99	145	*e*P	Pn	18 48 04.4	+2.2
JETT				*e*S	Sn	18 48 37.4	-0.6
JETT				IAML		18 48 39.8	
	comp=Z,23nm,0.2s						
KIF	**Kilpisjarvi**	3.54	147	Pn	Pn	18 48 11.6	+1.9
KIF				Sn	Sn	18 48 50.8	-0.7
KIF	**Kilpisjarvi**	3.54	147	*e*P	Pn	18 48 11.7	+2.0
KIF				*e*S	Sn	18 48 50.0	-1.5
KIF	**Kilpisjarvi**	3.54	147	*e*P	Pn	18 48 11.7	+2.0
KIF				*e*S	Sn	18 48 50.4	-1.2
KIF				MSG		18 48 52.3	
	comp=Z,28nm,0.2s						
LOF	**Lofoten**	4.00	191	Pn	Pn	18 48 17.2	+1.2
LOF				Sn	Sn	18 49 00.6	-2.2
LOF	**Lofoten**	4.00	191	*e*P	Pn	18 48 17.6	+1.6
LOF				*e*S	Sn	18 49 00.7	-2.2
LOF				IAML		18 49 02.0	
	comp=Z,28nm,0.5s						
LOF	**Lofoten**	4.00	191	*e*P	Pn	18 48 17.6	+1.6
LOF				*e*S	Sn	18 49 00.7	-2.2
LOF				IAML		18 49 02.0	
	comp=Z,28nm,0.5s						
KTK1	**Kautokeino**	4.00	136	Pn	Pn	18 48 18.5	+2.4
KTK1				Sn	Sn	18 49 02.7	-0.2
KTK1	**Kautokeino**	4.00	136	*e*P	Pn	18 48 18.4	+2.4
KTK1				*e*S	Sn	18 49 02.6	-0.4
KTK1				IAML		18 49 06.2	
	comp=Z,13nm,0.2s						
KTK1	**Kautokeino**	4.00	136	*e*P	Pn	18 48 18.4	+2.4
KTK1				*e*S	Sn	18 49 02.6	-0.4
KTK1				IAML		18 49 06.2	
	comp=Z,13nm,0.2s						
STEI	**Steigen**	4.15	181	Pn	Pn	18 48 20.3	+2.3
STEI				Sn	Sn	18 49 04.2	-2.3
STEI	**Steigen**	4.15	181	*e*P	Pn	18 48 20.0	+2.0
STEI				*e*S	Sn	18 49 04.1	-2.3
STEI				IAML		18 49 10.6	
	comp=Z,12nm,0.5s						
STEI	**Steigen**	4.15	181	*e*P	Pn	18 48 20.0	+2.0
STEI				*e*S	Sn	18 49 04.1	-2.3
STEI				IAML		18 49 10.6	
	comp=Z,12nm,0.5s						
ARA0	**ARCESS Array S**	4.16	123	Pn	Pn	18 48 19.7	+1.5
	baz=306,slow=12						
ARA0				Sn	Sn	18 49 05.3	-1.5
	baz=309,slow=22						
ARA0	**ARCESS Array S**	4.16	123	Pn	Pn	18 48 19.7	+1.5
	baz=306,slow=12						
ARA0				Sn	Sn	18 49 05.3	-1.5
	baz=309,slow=22						
ARA0				IAML		18 49 07.1	
	comp=Z,19nm,0.2s						
ARA0	**ARCESS Array S**	4.16	123	*e*P	Pn	18 48 19.8	+1.5
ARA0				*e*S	Sn	18 49 04.5	-2.3
ARCES	**ARCESS Array B**	4.16	123	Pn	Pn	18 48 19.5	+1.3
	comp=Z,0.6nm,0.3s,baz=313,slow=12,SNR=50						
ARCES				Sn	Sn	18 49 05.0	-1.8
	comp=Z,7.1nm,0.3s,baz=312,slow=21,SNR=34						
	comp=Z,1.1nm,0.3s						
ARCES	**ARCESS Array B**	4.16	123	P	Pn	18 48 19.6	+1.3
ARCES				S	Sn	18 49 01.8	-5.0
KOVU	**Salmi**	4.17	155	P	Pn	18 48 21.3	+3.0
KOVU				S	Sn	18 49 06.1	-0.9
KOVU	**Salmi**	4.17	155	*e*P	Pn	18 48 21.3	+3.0
KOVU				*e*S	Sn	18 49 06.1	-0.9
NIKU	**Nikkaluokta**	4.38	162	P	Pn	18 48 24.6	+3.4
NIKU	**Nikkaluokta**	4.38	162	*e*P	Pn	18 48 24.6	+3.4
KEV	**Kevo**	4.42	116	Pn	Pn	18 48 23.3	+1.5
KEV				Sn	Sn	18 49 10.4	-2.9
KEV	**Kevo**	4.42	116	*e*P	Pn	18 48 22.5	+0.7
KEV				*e*S	Sn	18 49 09.6	-3.7
KEV	**Kevo**	4.42	116	*e*S	Sn	18 49 10.5	-2.8
KUA	**Kurravaara**	4.44	156	P	Pn	18 48 24.9	+2.8
KUA	**Kurravaara**	4.44	156	*e*P	Pn	18 48 24.9	+2.8
RATU	**Laukkuluspa**	4.48	160	P	Pn	18 48 25.2	+2.6
RATU				S	Sn	18 49 13.6	-1.1
RATU	**Laukkuluspa**	4.48	160	*e*P	Pn	18 48 25.2	+2.6
RATU				*e*S	Sn	18 49 13.6	-1.1
HEF	**Hetta**	4.59	139	Pn	Pn	18 48 26.1	+2.0
HEF				Sn	Sn	18 49 14.9	-2.5
HEF	**Hetta**	4.59	139	*e*P	Pn	18 48 26.4	+2.2
HEF				*e*S	Sn	18 49 15.1	-2.3
HEF	**Hetta**	4.59	139	*e*P	Pn	18 48 26.4	+2.2
HEF				*e*S	Sn	18 49 15.1	-2.3
FAUS	**Fauske**	4.70	181	Pn	Pn	18 48 28.4	+2.8
FAUS				Sn	Sn	18 49 18.8	-1.2
FAUS	**Fauske**	4.70	181	P	Pn	18 48 27.9	+2.3
FAUS				S	Sn	18 49 18.6	-1.5
FAUS	**Fauske**	4.70	181	*e*P	Pn	18 48 28.0	+2.5
FAUS				*e*S	Sn	18 49 16.8	-3.2
FAUS				IAML		18 49 25.2	
	comp=Z,11nm,0.3s						
FAUS	**Fauske**	4.70	181	*e*P	Pn	18 48 28.0	+2.5
FAUS				*e*S	Sn	18 49 16.8	-3.2
FAUS				IAML		18 49 25.2	
	comp=Z,11nm,0.3s						
SALU	**Saltoluokta**	4.81	166	P	Pn	18 48 30.3	+3.1
SALU	**Saltoluokta**	4.81	166	*e*P	Pn	18 48 30.3	+3.1
SALU				*e*S	Sn	18 49 22.5	-0.4
SALU	**Saltoluokta**	4.81	166	*e*P	Pn	18 48 30.3	+3.1
VADS	**Vadso**	4.91	107	Pn	Pn	18 48 30.5	+2.1
VADS				Sn	Sn	18 49 22.7	-2.4
VADS	**Vadso**	4.91	107	P	Pn	18 48 30.9	+2.5
VADS				S	Sn	18 49 20.9	-4.2
VADS	**Vadso**	4.91	107	*e*P	Pn	18 48 30.4	+2.0
VADS				*e*S	Sn	18 49 22.7	-2.4
VADS				IAML		18 49 25.8	
	comp=Z,12nm,0.5s						
VADS	**Vadso**	4.91	107	*e*P	Pn	18 48 30.9	+2.5
VADS				*e*S	Sn	18 49 23.1	-2.0
HSPB	**Hornsund (broa**	4.97	0	*e*P	Pn	18 48 31.4	+2.0
HSPB	**Hornsund (broa**	4.97	0	*e*P	Pn	18 48 31.4	+2.0
VAGH	**Vaagaholmen**	5.41	189	*e*P	Pn	18 48 36.8	+1.5
VAGH				*e*S	Sn	18 49 32.1	-5.4
VAGH				IAML		18 49 35.8	
	comp=Z,7.6nm,0.3s						
VAGH	**Vaagaholmen**	5.41	189	*e*P	Pn	18 48 36.8	+1.5
VAGH				*e*		18 49 32.1	
VAGH				IAML		18 49 35.8	
	comp=Z,7.6nm,0.3s						
RAUS	**Rausandaksla**	5.67	186	*e*P	Pn	18 48 40.4	+1.4
RAUS				*e*S	Sn	18 49 41.5	-2.5
RAUS				IAML		18 49 45.7	
	comp=Z,11nm,0.3s						
STOK	**Stokkvaagen**	5.82	190	Pn	Pn	18 48 42.0	+1.1
STOK				Sn	Sn	18 49 43.2	-4.4
MOR8	**Moi Rana**	5.93	184	Pn	Pn	18 48 43.8	+1.3
MOR8				Sn	Sn	18 49 45.5	-4.8
MOR8	**Moi Rana**	5.93	184	*e*P	Pn	18 48 43.3	+0.9
MOR8				*e*S	Sn	18 49 46.3	-4.0
MOR8				IAML		18 49 52.2	
	comp=Z,6.1nm,0.2s						
MOR8	**Moi Rana**	5.93	184	*e*P	Pn	18 48 43.3	+0.9
MOR8				*e*S	Sn	18 49 46.3	-4.0
MOR8				IAML		18 49 52.2	
	comp=Z,6.1nm,0.2s						
SGF	**Sodankyl**	6.00	135	*e*P	Pn	18 48 45.8	+2.4
SGF				*e*S	Sn	18 49 48.0	-4.1
SGF				smax	smax	18 49 51.1	
	comp=Z,3.4nm,0.2s						
SGF	**Sodankyl**	6.00	135	*e*P	Pn	18 48 45.8	+2.4
SGF				*e*S	Sn	18 49 48.0	-4.1
SGF				MSG		18 49 51.1	
	comp=Z,3.4nm,0.2s						
ERTU	**Ertsjaerv**	6.01	154	P	Pn	18 48 46.1	+2.5
ERTU	**Ertsjaerv**	6.01	154	*e*P	Pn	18 48 46.1	+2.5
LEIR	**Leirfjorden**	6.04	189	Pn	Pn	18 48 45.4	+1.5
LEIR				Sn	Sn	18 49 47.8	-5.1
LEIR	**Leirfjorden**	6.04	189	*e*P	Pn	18 48 45.3	+1.5
LEIR				*e*S	Sn	18 49 47.8	-5.1
LEIR				IAML		18 49 51.5	
	comp=Z,8.5nm,0.4s						
LEIR	**Leirfjorden**	6.04	189	*e*P	Pn	18 48 45.3	+1.5
LEIR				*e*S	Sn	18 49 47.8	-5.1
LEIR				IAML		18 49 51.5	
	comp=Z,8.5nm,0.4s						
SPA0	**Spitsbergen Ar**	6.16	2	Pn	Pn	18 48 48.1	+2.5
	baz=171,slow=16						
SPA0				Sn	Sn	18 49 50.0	-6.0
	baz=164,slow=28						
SPA0	**Spitsbergen Ar**	6.16	2	Pn	Pn	18 48 48.1	+2.5
	baz=171,slow=16						
SPA0				Sn	Sn	18 49 50.0	-6.0
	baz=164,slow=28						
SPA0	**Spitsbergen Ar**	6.16	2	*e*P	Pn	18 48 48.1	+2.5
SPA0				*e*		18 49 50.0	
SPITS	**Spitsbergen Ar**	6.16	2	Pn	Pn	18 48 48.0	+2.5
	baz=174,slow=16						
SPITS				Sn	Sn	18 49 49.9	-6.1
	baz=136,slow=34						
	comp=Z,20nm,1.2s						
TERR	**Teriberka**	7.10	104	P	Pn	18 48 59.0	+0.5
TERR				S	Sn	18 50 13.6	-5.5
APA0	**Apatity Array**	7.49	118	Pn	Pn	18 49 04.1	+0.2
	baz=314,slow=12						
APA0				Sn	Sn	18 50 22.5	-6.2
	baz=310,slow=28						
APA0	**Apatity Array**	7.49	118	P	Pn	18 49 04.5	+0.6
APA0				S	Sn	18 50 18.7	-10
APA0	**Apatity Array**	7.49	118	Pn	Pn	18 49 04.1	+0.2
	baz=314,slow=12						
APA0				Sn	Sn	18 50 22.5	-6.2
	baz=310,slow=28						
APA0	**Apatity Array**	7.49	118	*e*P	Pn	18 49 04.1	+0.2
APA0				*e*S	Sn	18 50 22.5	-6.2
NSS	**Namsos**	7.67	192	*e*	Pn	18 49 10.4	+4.1
NSS	**Namsos**	7.67	192	*e*P	Pn	18 49 10.4	+4.1
KVDA	**Kovda**	8.13	123	P	Pn	18 49 13.2	+0.6
KVDA				S	Sn	18 50 34.3	-10
MOL	**Molde**	10.00	202	*e*P	Pn	18 49 38.5	+0.3
MOL	**Molde**	10.00	202	*e*P	Pn	18 49 38.5	+0.3
AKN	**Aaknes**	10.44	203	P	Pn	18 49 45.1	+0.8
AKN				Sn	Sn	18 51 32.9	-8.3
NB2	**NORSAR Subarra**	11.19	191	P	Pn	18 49 55.7	+1.1
NB2	**NORSAR Subarra**	11.19	191	P	Pn	18 49 55.7	+1.1
NB2	**NORSAR Subarra**	11.19	191	*e*P	Pn	18 49 55.7	+1.1
NOA	**NORSAR Array B**	11.19	191	Pn	Pn	18 49 55.6	+1.1
	baz=6.0,slow=13,SNR=2.5						
	comp=Z,0.5nm,0.7s						
FIA0	**FINESS Array S**	11.42	154	Pn	Pn	18 49 59.4	+1.8
	baz=346,slow=12						
FIA0				Sn	Sn	18 51 57.7	-7.3
	baz=349,slow=28						
FIA0	**FINESS Array S**	11.42	154	Pn	Pn	18 49 59.4	+1.8
	baz=346,slow=12						
FIA0				Sn	Sn	18 51 57.7	-7.3
	baz=349,slow=28						
FIA0	**FINESS Array S**	11.42	154	*e*P	Pn	18 49 59.4	+1.8
FIA0				*e*S	Sn	18 51 57.7	-7.3
FINES	**FINESS Array B**	11.42	154	Pn	Pn	18 49 58.6	+1.0
	comp=Z,0.1nm,0.3s,baz=342,slow=12,SNR=5.2						
FINES				Sn	Sn	18 51 57.8	-7.2
	comp=Z,0.2nm,0.3s,baz=350,slow=24,SNR=5.4						
	comp=Z,5.2nm,1.1s						
NRA0	**NORESS Array S**	11.48	190	Pn	Pn	18 49 59.6	+1.2
	baz=3.0,slow=14						
NRA0	**NORESS Array S**	11.48	190	Pn	Pn	18 49 59.6	+1.2
	baz=3.0,slow=14						
NRA0	**NORESS Array S**	11.48	190	*e*P	Pn	18 49 59.6	+1.2
HFS	**Hagfors**	12.00	184	Pn	Pn	18 50 05.6	0.0
	comp=Z,2.4nm,0.9s,baz=5.0,slow=13,SNR=1.9						
HFS	**Hagfors**	12.00	184	Pn	Pn	18 50 06.6	+1.0
	baz=1.9,slow=14						
HFS	**Hagfors**	12.00	184	Pn	Pn	18 50 06.6	+1.0
	baz=1.9,slow=14						
HFS	**Hagfors**	12.00	184	*e*P	Pn	18 50 06.6	+1.0

IDC 01 18:50:02.1±1.6**, 5°.49N**×**126°.51E, h0**^{km}**, mb3.5**/5**,
mbtmp3.5**/5**, Error ellipse: s-maj=117.9km
s-min=20.0km az=69.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	23.46	182	P	P	18 55 13.5	+0.1
	1.3nm,0.5s,baz=0.0,slow=15,SNR=2.1						
	1.3nm,0.5s						
WRA	**Warramunga Arr**	26.42	163	P	P	18 55 42.2	+1.5
	0.6nm,0.7s,baz=342,slow=10.0,SNR=8.8						
	0.6nm,0.7s						
ASAR	**Alice Springs**	29.87	166	P	P	18 56 10.3	-1.2
	0.3nm,0.9s,baz=348,slow=7.4,SNR=9.5						
ASAR				PcP	PcP	18 59 14.1	-0.8
	0.4nm,0.9s,baz=347,slow=2.3,SNR=4.5						
	0.3nm,0.9s						
MKAR	**Makanchi Array**	55.99	325	P	P	18 59 43.2	+0.7
	0.5nm,0.6s,baz=116,slow=7.1,SNR=7.8						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	60.15	327	P	P	19 00 10.7	-0.8
	0.3nm,0.6s,baz=129,slow=6.8,SNR=5.3						
	0.3nm,0.6s						

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*GII **01** 18:52:14.4±0.0, 35°.044N±0°.002×26°.382E±0°.001, h20^{km}, Mws3.2, confirmed*
*AFAD **01** 18:52:16.1, 35°.50N×26°.09E, h5^{km}±4^{km}, ML2.8*
*ISK **01** 18:52:19.7, 35°.41N×26°.27E, h19^{km}, ML2.6/17*
*ATH **01** 18:52:20.7, 35°.35N×26°.26E, h28^{km}±1^{km}, ML2.7/8, Manual Solution by G.Panopoulou First location: 2019/12/01 18:53:29, This location: 2020/11/09 18:17:12 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*
*THE **01** 18:52:21.0, 35°N±7°×2°6E±°, h24^{km}±6^{km}, M2.6/7, MLh2.6/7*
ISC 01 18:52:21.0±0.9**, 35°.34N**±0°.05×**26°.26E**±0°.02**, h26**^{km}±8^{km}**,
n59,** $\sigma 0^{s}$**.83**/82**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIT2	**Siteia**	0.18	224	P	Pb	18 52 26.6	0.0
SIT2				S	Sb	18 52 30.9	+0.4
STIA	**Sitia Lasithi**	0.20	226	P	Pb	18 52 26.7	-0.1
STIA				S	Sb	18 52 31.8	+1.1
ZKR	**Zakros**	0.23	190	P	Pb	18 52 26.4	-0.8
ZKR				S	Sb	18 52 31.3	0.0
ZKR	**Zakros**	0.23	190	Pg	Pb	18 52 26.4	-0.8
ZKR				Sg	Sb	18 52 31.8	+0.4
ZKR	**Zakros**	0.23	190	P	Pb	18 52 26.4	-0.8
ZKR				S	Sb	18 52 31.6	+0.2
NPS	**Neapolis**	0.54	262	P	Pb	18 52 31.4	-0.6
NPS				S	Sb	18 52 39.9	+0.5
NPS	**Neapolis**	0.54	262	P	Pb	18 52 31.4	-0.6
NPS				S	Sb	18 52 39.8	+0.4
KSS1	**Kassos Island**	0.54	81	P	Pb	18 52 32.2	+0.2
KARP	**Karpathos**	0.76	74	P	Pb	18 52 35.5	-0.2
KARP	**Karpathos**	0.76	74	Pg	Pb	18 52 35.8	+0.1
KARP	**Karpathos**	0.76	74	P	Pb	18 52 35.5	-0.2
KARP				S	Sb	18 52 45.8	0.0
IACM	**Heraklion**	0.98	268	S	Sn	18 52 52.1	+0.2
IACM	**Heraklion**	0.98	268	P	Pn	18 52 38.5	-0.6
IDI	**Anoyia**	1.12	268	P	Pn	18 52 40.6	-0.6
IDI				S	Sn	18 52 55.5	-0.3
IDI	**Anoyia**	1.12	268	Pn	Pn	18 52 41.2	+0.1
IDI				Sn	Sb	18 52 56.8	+0.7
IDI	**Anoyia**	1.12	268	P	Pn	18 52 40.6	-0.6
IDI				S	Sn	18 52 55.3	-0.5
THERA	**Ancient Thera,**	1.21	328	P	Pn	18 52 41.6	-0.7
THERA				S	Sn	18 52 57.4	-0.4
SNT5	**Nea Kammeni, S**	1.27	327	P	Pn	18 52 42.7	-0.5
SNT5	**Nea Kammeni, S**	1.27	327	P	Pn	18 52 42.6	-0.5
SAP3	**Santorini-Thir**	1.32	326	P	Pn	18 52 43.7	-0.1
RGE1	**Gennadi, Rhode**	1.52	63	P	Pn	18 52 46.0	-0.5
YAZI	**Mula-Dat§a-**	1.65	35	P	Pn	18 52 47.3	-1.0
YAZI				S	Sn	18 53 08.2	-0.5
VAM	**Vamos**	1.69	273	P	Pn	18 52 48.8	-0.1
ARG	**Arkhangelos**	1.75	59	P	Pn	18 52 49.4	-0.3
ARG	**Arkhangelos**	1.75	59	Pn	Pn	18 52 49.3	-0.3
ARG				Sn	Sn	18 53 10.9	-0.2
ARG	**Arkhangelos**	1.75	59	P	Pn	18 52 49.7	0.0
ARG				S	Sn	18 53 11.2	+0.1
DAT	**Datca**	1.75	37	Pn	Pn	18 52 48.7	-1.1
DAT				Sn	Sn	18 53 10.9	-0.4
APE	**Apeiranthos**	1.82	341	P	Pn	18 52 50.0	-0.8
APE	**Apeiranthos**	1.82	341	Pn	Pn	18 52 50.3	-0.5
APE	**Apeiranthos**	1.82	341	P	Pn	18 52 49.0	-1.8
APE				S	Sn	18 53 15.0	+1.9
APE	**Apeiranthos**	1.82	341	P	Pn	18 52 50.2	-0.5
APE				S	Sn	18 53 12.8	-0.3
GVD	**Gavdhos**	1.85	255	Pn	Pn	18 52 52.1	+1.0
GVD	**Gavdhos**	1.85	255	P	Pn	18 52 51.0	-0.2
IMMV	**Iera Moni Meta**	1.87	274	Pn	Pn	18 52 51.9	+0.6
IMMV	**Iera Moni Meta**	1.87	274	P	Pn	18 52 51.3	0.0
BODT	**Bodrum**	1.92	26	Pn	Pn	18 52 51.5	-0.5
BDRM	**Kayabasi**	1.97	29	P	Pn	18 52 53.1	+0.4
BDRM				S	Sn	18 53 18.2	+1.6
MHLO	**Agia Marina, M**	2.02	312	P	Pn	18 52 53.0	-0.5
TURN	**Turunc**	2.15	48	P	Pn	18 52 54.9	-0.3
TURN				S	Sn	18 53 20.7	-0.3
TURN	**Turunc**	2.15	48	Pn	Pn	18 52 54.5	-0.7
KNDR	**Palaiochora Ch**	2.16	268	Pn	Pn	18 52 56.0	+0.7
MLSB	**Milas**	2.30	32	Pn	Pn	18 52 56.6	-0.7
YER	**Yerkesik**	2.42	42	Pn	Pn	18 52 58.9	-0.1
DALY	**Dalyan (Mula)**	2.43	52	Pn	Pn	18 52 59.0	-0.1
SABU	**Mula-Dalaman**	2.64	55	P	Pn	18 53 01.6	-0.4
SABU				*i* IAML		18 53 54.0	
	comp=N,36nm,1.9s						
AKAS	**Kas**	2.86	71	Pn	Pn	18 53 03.5	-1.6
AYDB	**Zeytinkoy-Aydi**	2.91	26	Pn	Pn	18 53 05.7	-0.1
CAME	**Cameli-Denizli**	2.93	56	Pn	Pn	18 53 05.6	-0.5
DNZT	**Denizli-Tavas-**	2.95	48	P	Pn	18 53 06.4	+0.1
DNZT				S	Sn	18 53 45.1	+4.1
ESEN	**Aydn-Nazilli**	2.97	34	P	Pn	18 53 07.0	+0.5
TAVA	**DENIZLI_Tavas**	3.01	44	P	Pn	18 53 06.6	-0.6
VLI	**Veliai**	3.03	298	P	Pn	18 53 06.8	-0.4
CAEL	**Denizli, Camel**	3.04	53	P	Pn	18 53 07.8	+0.2
CAEL				S	Sb	18 53 53.0	+1.6
CAEL				*i* IAML		18 54 06.0	
	comp=E,62nm,0.9s						
CAEL				*i* IAML		18 54 20.0	
	comp=N,53nm,1.0s						
CHOS	**Chios island**	3.05	357	P	Pn	18 53 07.1	-0.5
NAZL	**Nazilli-Aydin**	3.09	31	Pn	Pn	18 53 08.2	+0.1
APMY	**Acipayam-Deniz**	3.25	48	Pn	Pn	18 53 10.2	-0.1
GOLH	**Golhisar**	3.27	54	P	Pn	18 53 10.3	-0.3
GOLH				S	Sb	18 53 55.4	-2.4
GOLH				*i* IAML		18 54 04.0	
	comp=N,33nm,0.9s						
GOLH				*i* IAML		18 54 05.0	
	comp=E,27nm,0.8s						
ODEM	**Odemis-Izmir**	3.27	26	Pn	Pn	18 53 10.7	0.0
KULA	**Kula-Manisa**	3.71	31	Pn	Pn	18 53 16.9	+0.2

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*GII **01** 19:00:30.0±0.0, 35°.188N±0°.002×28°.848E±0°.001, h20^{km}, Mws3.0, confirmed*
*ISK **01** 19:00:30.3, 35°.38N×28°.79E, h62^{km}±2^{km}, ML2.5/15*
*NIC **01** 19:00:31.4, 35°.29N×28°.80E, h32^{km}±28^{km}, Ml2.6/9*
*AFAD **01** 19:00:31.2, 35°.56N×28°.71E, h46^{km}±1^{km}, ML2.3*
*ATH **01** 19:00:31.9, 35°.53N×28°.79E, h50^{km}±11^{km}, ML2.9/6, Manual Solution by G.Panopoulou First location: 2019/12/01 19:02:06, This location: 2019/12/01 20:29:21 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 1 km*
*THE **01** 19:00:34.7, 36°N±8°×2°8E±1°3, h26^{km}±15^{km}, M2.6/6, MLh2.6/6*
ISC 01 19:00:30.8±1.2**, 35°.38N**±0°.05×**28°.78E**±0°.03**, h48**^{km}±47^{km}**,
n106,** $\sigma 1^{s}$**.22**/130**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RGE1	**Gennadi, Rhode**	0.95	313	P	Pn	19 00 47.6	-0.2
ARG	**Arkhangelos**	0.99	328	P	Pn	19 00 47.6	-0.8
ARG				S	Sn	19 00 58.4	-2.9
ARG	**Arkhangelos**	0.99	328	Pg	Pn	19 00 49.0	+0.6
ARG	**Arkhangelos**	0.99	328	P	Pn	19 00 49.6	+1.2
ARG				AML	AML	19 01 10.1	
	0.3nm,0.3s						
ARG				AML	AML	19 01 13.3	
	0.2nm,0.6s						
ARG	**Arkhangelos**	0.99	328	P	Pn	19 00 47.9	-0.6
AKAS	**Kas**	1.08	38	P	Pn	19 00 50.2	+0.4
AKAS				S	Sn	19 01 04.2	+0.4
AKAS				*i* IAML		19 01 05.0	
	comp=E,98nm,0.3s						
AKAS	**Kas**	1.08	38	Pg	Pn	19 00 50.5	+0.7
AKAS				Sg	Sn	19 01 04.6	+0.8
IZZE	**Mula-Seydike**	1.12	19	P	Pn	19 00 50.2	0.0
IZZE				*i* IAML		19 01 12.0	
	comp=N,85nm,0.3s						
IZZE				*i* IAML		19 01 18.0	
	comp=E,58nm,0.4s						
DEMR	**Demre-Antalya**	1.25	46	Pn	Pn	19 00 52.5	+0.6
DEMR				Sn	Sn	19 01 08.7	+1.0
KARP	**Karpathos**	1.33	278	P	Pn	19 00 54.0	+0.9
KARP				S	Sn	19 01 08.2	-1.5
KARP	**Karpathos**	1.33	278	Pn	Pn	19 00 53.9	+0.9
KARP				Sn	Sn	19 01 10.8	+1.1
KARP	**Karpathos**	1.33	278	P	Pn	19 00 54.1	+0.9
KARP				S	Sn	19 01 11.5	+1.8
KARP	**Karpathos**	1.33	278	P	Pn	19 00 54.2	+1.2
DALY	**Dalyan (Mula)**	1.44	356	Pn	Pn	19 00 55.1	+0.6
SABU	**Mula-Dalaman**	1.45	6	P	Pn	19 00 54.9	+0.2
SABU				*i* IAML		19 01 29.0	
	comp=N,30nm,0.7s						
TURN	**Turunc**	1.46	343	P	Pn	19 00 54.9	+0.1
TURN				*i* IAML		19 01 22.0	
	comp=N,32nm,0.9s						
TURN	**Turunc**	1.46	343	Pn	Pn	19 00 55.4	+0.6
AKUM	**Antalya-Kumluc**	1.58	53	P	Pn	19 00 57.2	+0.8
AKUM				S	Sn	19 01 15.7	+0.1
AKUM				*i* IAML		19 01 17.0	
	comp=N,29nm,0.3s						
AKUM				*i* IAML		19 01 47.0	
	comp=E,57nm,2.1s						
KNIK	**Mula-Seydike**	1.60	23	P	Pn	19 00 56.8	+0.1
CAME	**Cameli-Denizli**	1.62	15	Pn	Pn	19 00 57.6	+0.5
ELL	**Elmali**	1.65	33	Pn	Pn	19 00 57.9	+0.5
ELL	**Elmali**	1.65	33	P	Pn	19 00 59.2	+1.8
ELL				AML	AML	19 01 19.0	
	0.2nm,0.9s						
ELL				S	Sn	19 01 20.4	+2.9
ELL				AML	AML	19 01 21.2	
	0.3nm,0.7s						
DAT	**Datca**	1.67	324	P	Pn	19 00 57.5	-0.2
DAT	**Datca**	1.67	324	Pn	Pn	19 00 57.9	+0.2
YAZI	**Mula-Dat§a-**	1.69	321	P	Pn	19 00 57.2	-0.7
YAZI				S	Sn	19 01 16.4	-2.0
YAZI				*i* IAML		19 01 17.0	
	comp=N,50nm,0.4s						
YAZI				*i* IAML		19 01 17.0	
	comp=E,60nm,0.5s						
YER	**Yerkesik**	1.80	347	P	Pn	19 01 00.4	+0.9
YER	**Yerkesik**	1.80	347	Pn	Pn	19 01 00.1	+0.6
DNZT	**Denizli-Tavas-**	1.91	6	P	Pn	19 01 01.3	+0.3
DNZT				S	Sn	19 01 22.2	-1.7
GOLH	**Golhisar**	1.96	18	P	Pn	19 01 03.5	+1.8
GOLH				*i* IAML		19 02 06.0	
	comp=N,31nm,1.3s						
BDRM	**Kayabasi**	2.00	328	P	Pn	19 01 01.6	-0.6
BDRM				*i* IAML		19 01 28.0	
	comp=E,38nm,1.9s						
KORT	**Korkueli**	2.06	38	P	Pn	19 01 04.9	+1.9
KORT				S	Sn	19 01 27.5	-0.1
KORT				*i* IAML		19 01 32.0	
	comp=E,29nm,0.5s						
KORT				*i* IAML		19 01 33.0	
	comp=N,20nm,0.5s						
KORT	**Korkueli**	2.06	38	Pn	Pn	19 01 03.8	+0.7
BODT	**Bodrum**	2.06	325	P	Pn	19 01 04.6	+1.6
BODT	**Bodrum**	2.06	325	Pn	Pn	19 01 03.9	+0.9
MLSB	**Milas**	2.08	337	Pn	Pn	19 01 04.1	+0.8
TAVA	**DENIZLI_Tavas**	2.09	3	P	Pn	19 01 04.2	+0.7

TAVA				S	**Sn**	**19 01 27.8**	**-0.5**
ZKR	**Zakros**	**2.12**	**264**	P	**Pn**	**19 01 05.1**	**+1.4**
ZKR	**Zakros**	**2.12**	**264**	P	**Pn**	**19 01 05.3**	**+1.6**
ZKR				S	**Sn**	**19 01 29.8**	**+1.0**
APMY	**Acipayam-Deniz**	**2.13**	**11**	Pn	**Pn**	**19 01 04.8**	**+0.7**
DNIZ	**Denizli-Tavas-**	**2.25**	**5**	P	**Pn**	**19 01 06.0**	**+0.3**
DNIZ				S	**Sn**	**19 01 31.5**	**-0.8**
ESEN	**Aydn-Nazilli**	**2.44**	**352**	P	**Pn**	**19 01 08.1**	**-0.1**
ESEN				S	**Sn**	**19 01 35.8**	**-1.1**
ESEN				*i* IAML		19 01 39.0	
	comp=N,12nm,0.2s						
ESEN				*i* IAML		19 02 02.0	
	comp=E,20nm,2.2s						
NPS	**Neapolis**	**2.59**	**268**	P	**Pn**	**19 01 12.2**	**+1.9**
NPS	**Neapolis**	**2.59**	**268**	P	**Pn**	**19 01 12.4**	**+2.1**
NPS				S	**Sn**	**19 01 41.6**	**+1.0**
AYDB	**Zeytinkoy-Aydi**	**2.66**	**345**	Pn	**Pn**	**19 01 11.3**	**-0.1**
SMG	**Samos**	**2.81**	**327**	P	**Pn**	**19 01 12.9**	**-0.3**
SMG	**Samos**	**2.81**	**327**	P	**Pn**	**19 01 12.7**	**-0.5**
AKMS	**Akamas**	**2.93**	**96**	P	**Pn**	**19 01 16.2**	**+1.3**
AKMS				AML	AML	19 01 45.5	
	0.2nm,1.0s						
AKMS				AML	AML	19 01 47.0	
	0.1nm,0.7s						
AKMS				S	**Sn**	**19 01 49.9**	**+1.0**
AKMS	**Akamas**	**2.93**	**96**	P	**Pn**	**19 01 16.1**	**+1.2**
SNT5	**Nea Kammeni, S**	**2.94**	**291**	P	**Pn**	**19 01 15.4**	**+0.5**
GAZI	**Gazipasa**	**3.00**	**72**	Pn	**Pn**	**19 01 16.6**	**+0.8**
APE	**Apeiranthos**	**3.12**	**304**	P	**Pn**	**19 01 17.4**	**-0.2**
APE	**Apeiranthos**	**3.12**	**304**	P	**Pn**	**19 01 17.2**	**-0.4**
ALFC	**Alefka**	**3.13**	**93**	P	**Pn**	**19 01 19.1**	**+1.4**
ALFC				S	**Sn**	**19 01 55.1**	**+1.2**
ALFC				AML	AML	19 01 56.4	
	0.1nm,0.3s						
ALFC				AML	AML	19 01 57.6	
	0.1nm,0.1s						
ALFC	**Alefka**	**3.13**	**93**	P	**Pn**	**19 01 18.9**	**+1.2**
NATA	**Nata**	**3.16**	**100**	P	**Pn**	**19 01 19.7**	**+1.6**
NATA				AML	AML	19 01 48.5	
	0.3nm,1.0s						
NATA				S	**Sn**	**19 01 55.5**	**+0.9**
NATA				AML	AML	19 01 57.4	
	0.2nm,0.4s						
NATA	**Nata**	**3.16**	**100**	P	**Pn**	**19 01 19.6**	**+1.6**
IDI	**Anoyia**	**3.18**	**270**	P	**Pn**	**19 01 19.5**	**+1.1**
SEYD	**Seydisehir-KON**	**3.19**	**50**	Pn	**Pn**	**19 01 19.8**	**+1.2**
XYLS	**Xyliatos**	**3.51**	**95**	P	**Pn**	**19 01 24.0**	**+1.0**
XYLS				S	**Sn**	**19 02 04.7**	**+1.4**
XYLS				AML	AML	19 02 05.8	
	0.1nm,0.2s						
XYLS				AML	AML	19 02 07.8	
	0.1nm,0.2s						
ASGA	**Asgata**	**3.71**	**98**	P	**Pn**	**19 01 26.8**	**+1.1**
ASGA				S	**Sn**	**19 02 08.7**	**+0.7**
ASGA				AML	AML	19 02 09.8	
	0.1nm,0.5s						
ASGA				AML	AML	19 02 12.6	
	0.1nm,0.3s						
ASGA	**Asgata**	**3.71**	**98**	P	**Pn**	**19 01 26.7**	**+1.1**
VAM	**Vamos**	**3.74**	**272**	P	**Pn**	**19 01 27.0**	**+0.9**
CSS	**Mathiatis**	**3.75**	**95**	P	**Pn**	**19 01 26.1**	**0.0**
CSS	**Mathiatis**	**3.75**	**95**	S	**Sn**	**19 02 08.9**	**-0.2**
CSS	**Mathiatis**	**3.75**	**95**	P	**Pn**	**19 01 27.2**	**+1.0**
CSS				AML	AML	19 02 07.8	
CSS				AML	AML	19 02 09.0	
CSS				S	**Sn**	**19 02 10.0**	**+1.0**
CSS	**Mathiatis**	**3.75**	**95**	P	**Pn**	**19 01 27.2**	**+1.0**
MVOU	**Mavrovouni**	**3.99**	**94**	P	**Pn**	**19 01 30.5**	**+1.1**
MVOU				AML	AML	19 02 09.7	
	0.1nm,1.0s						
MVOU				AML	AML	19 02 11.6	
MVOU				S	**Sn**	**19 02 16.6**	**+1.8**
MVOU	**Mavrovouni**	**3.99**	**94**	P	**Pn**	**19 01 30.3**	**+0.9**
KNDR	**Palaiochora Ch**	**4.22**	**270**	P	**Pn**	**19 01 33.8**	**+1.2**
MMC7	**Mount Meron ar**	**5.96**	**111**	P	**Pn**	**19 01 55.9**	**-0.6**
MMA0B	**Mount Meron ar**	**5.97**	**111**	P	**Pn**	**19 01 55.9**	**-0.8**
MMA0B	**Mount Meron ar**	**5.97**	**111**	S	**Sn**	**19 03 02.9**	**-0.9**
GEM	**Giv'at Ha'Em**	**6.09**	**109**	P	**Pn**	**19 01 57.4**	**-0.8**
GEM	**Giv'at Ha'Em**	**6.09**	**109**	S	**Sn**	**19 03 06.0**	**-0.7**
NATI	**Neve Ativ**	**6.13**	**108**	P	**Pn**	**19 01 58.6**	**-0.1**
NATI	**Neve Ativ**	**6.13**	**108**	S	**Sn**	**19 03 07.0**	**-0.5**
MMLI	**Mount Malkishu**	**6.25**	**116**	P	**Pn**	**19 01 59.7**	**-0.8**
MMLI	**Mount Malkishu**	**6.25**	**116**	S	**Sn**	**19 03 08.9**	**-1.7**
SALP	**Salfit**	**6.28**	**120**	P	**Pn**	**19 01 59.7**	**-1.2**
SALP	**Salfit**	**6.28**	**120**	S	**Sn**	**19 03 09.8**	**-1.5**
KSHT	**Keshet**	**6.30**	**110**	P	**Pn**	**19 02 00.5**	**-0.6**
KSHT	**Keshet**	**6.30**	**110**	S	**Sn**	**19 03 10.8**	**-1.0**
HMDT	**Nahal Hemdat**	**6.42**	**117**	P	**Pn**	**19 02 02.0**	**-0.8**
HMDT	**Nahal Hemdat**	**6.42**	**117**	S	**Sn**	**19 03 13.7**	**-1.0**
KZIT	**Kziot**	**6.48**	**132**	P	**Pn**	**19 02 02.4**	**-1.3**
KZIT	**Kziot**	**6.48**	**132**	S	**Sn**	**19 03 14.1**	**-2.2**
YTIR	**Yattir**	**6.64**	**125**	P	**Pn**	**19 02 04.7**	**-1.1**
YTIR	**Yattir**	**6.64**	**125**	S	**Sn**	**19 03 19.1**	**-1.2**
DSI	**Dead Sea**	**6.69**	**123**	P	**Pn**	**19 02 05.7**	**-0.8**
DSI	**Dead Sea**	**6.69**	**123**	S	**Sn**	**19 03 19.8**	**-1.7**
MSBI	**Mazada**	**6.83**	**125**	P	**Pn**	**19 02 07.4**	**-1.0**
MSBI	**Mazada**	**6.83**	**125**	S	**Sn**	**19 03 23.3**	**-1.5**
RMNI	**Mount Ramon**	**6.92**	**132**	P	**Pn**	**19 02 08.9**	**-0.9**
RMNI	**Mount Ramon**	**6.92**	**132**	S	**Sn**	**19 03 25.6**	**-1.7**
GHAJ	**Ghor Haditha**	**6.98**	**124**	P	**Pn**	**19 02 09.5**	**-1.0**
GHAJ	**Ghor Haditha**	**6.98**	**124**	S	**Sn**	**19 03 26.9**	**-1.6**
PRNI	**Paran**	**7.25**	**132**	P	**Pn**	**19 02 13.0**	**-1.1**
PRNI	**Paran**	**7.25**	**132**	S	**Sn**	**19 03 31.2**	**-3.8**
KRMI	**Paran Flat**	**7.25**	**135**	P	**Pn**	**19 02 13.0**	**-1.2**
KRMI	**Paran Flat**	**7.25**	**135**	S	**Sn**	**19 03 32.9**	**-2.3**
HRFI	**Mount Harif**	**7.49**	**134**	P	**Pn**	**19 02 16.2**	**-1.4**
HRFI	**Mount Harif**	**7.49**	**134**	S	**Sn**	**19 03 38.9**	**-2.2**
MBRI	**Mt Berech**	**7.60**	**135**	P	**Pn**	**19 02 17.7**	**-1.3**
MBRI	**Mt Berech**	**7.60**	**135**	S	**Sn**	**19 03 42.3**	**-1.6**
EIL	**Elat**	**7.71**	**136**	P	**Pn**	**19 02 19.3**	**-1.2**
EIL	**Elat**	**7.71**	**136**	S	**Sn**	**19 03 44.4**	**-2.2**

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*IDC **01** 19:12:48.5±0.9, 44°.56N×148°.16E, h0^{km}, mb3.8/12, mbtmp3.8/13, ML2.7/1, MS2.8/5, Error ellipse: s-maj=27.6km s-min=20.2km az=106.0*
*MOS **01** 19:12:53.9±1.5, 44°.37N×148°.20E, h57^{km}, mb4.0/8, Error ellipse: s-maj=11.6km s-min=8.9km az=67.9*
*SKHL **01** 19:12:55.9±0.6, 44°.40N×148°.20E, h62^{km}±3^{km}, mb5.1/3*
*JMA **01** 19:12:55.4±0.2, 44°N±1°×14°8E±°, h0^{km}, MV4.6/34, SE OFF ETOROFU*
*NIED **01** 19:12:55.4, 44°.02N×147°.90E, h0^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.19; $M_{\theta\theta}$3.53; $M_{\phi\phi}$-3.71; $M_{r\theta}$3.17; $M_{\theta\phi}$-2.06; $M_{\phi r}$4.05; Fault plane solution: $M_0$6.41000×10^{14} NP1: ϕ_s144.00000°, δ40.00000°, λ0.00000°. NP2: ϕ_s234.00000°, δ90.00000°, λ-130.00000°.*

ISC 01 19:12:55.0±1.2**, 44°.34N**±0°.06×**148°.25E**±0°.08**, h47**^{km}±10^{km}**, n79, σ1.^{s}37**/88**, mb3.8**/18**, 1C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.93**	**343**	d *i*PN	**Pn**	**19 13 10.3**	**-1.3**
KUR				*i* S	**Sn**	**19 13 22.1**	**-1.8**
KUR				pmax	pmax		
	comp=N,682nm,0.2s						
KUR				pmax	pmax		
	comp=E,548nm,0.2s						
KUR				pmax	pmax		
	comp=Z,2µm,0.2s						
KUR				smax	smax		
	comp=E,4µm,0.4s						
KUR				smax	smax		
	comp=N,3µm,0.3s						
KUR	**Kuril'sk**	**0.93**	**343**	*i* P	**Pn**	**19 13 10.4**	**-1.2**
KUR				AMB	AMB	19 13 12.1	
	comp=N,2µm,0.4s						
KUR				*e*S	**Sn**	**19 13 22.0**	**-1.8**
KUR				A	A	19 13 24.1	
	comp=N,3µm,0.4s						
KUR				A	A	19 13 24.1	
	comp=N,5µm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.75**	**261**	d *i*PN	**Pn**	**19 13 22.8**	**+0.1**
YUK				*e*S	**Sn**	**19 13 42.3**	**-1.5**
YUK				pmax	pmax		
	comp=N,176nm,0.1s						
YUK				pmax	pmax		
	comp=E,319nm,0.1s						
YUK				pmax	pmax		
	comp=Z,1µm,0.1s						
YUK				smax	smax		
	comp=N,2µm,0.2s						
YUK				smax	smax		
	comp=E,2µm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.75**	**261**	*i* P	**Pn**	**19 13 22.8**	**+0.1**
YUK				AMB	AMB	19 13 24.4	
	comp=E,890nm,0.2s						
YUK				*e*S	**Sn**	**19 13 42.3**	**-1.5**
YUK				A	A	19 13 47.9	
	comp=E,3µm,0.4s						
YUK				A	A	19 13 47.9	
	comp=E,2µm,0.4s						
GLVR	**Golovnino**	**2.06**	**254**	*e*PN	**Pn**	**19 13 27.3**	**+0.3**
GLVR				*e*S	**Sn**	**19 13 51.1**	**-0.4**
GLVR				pmax	pmax		
	comp=Z,324nm,0.1s						
GLVR				pmax	pmax		
	comp=E,74nm,0.2s						
GLVR				pmax	pmax		
	comp=N,92nm,0.1s						
GLVR				smax	smax		
	comp=N,2µm,0.2s						
GLVR				smax	smax		
	comp=E,3µm,0.2s						
GLVR	**Golovnino**	**2.06**	**254**	*e*P	**Pn**	**19 13 27.3**	**+0.3**
GLVR				AMB	AMB	19 13 29.6	
	comp=E,320nm,0.2s						
GLVR				*e*S	**Sn**	**19 13 51.1**	**-0.4**
GLVR				A	A	19 13 58.4	
	comp=E,2µm,0.2s						
GLVR				A	A	19 13 58.4	
	comp=E,3µm,0.2s						
NEM2	**Nemuro 2**	**2.06**	**243**	*i* P	**Pn**	**19 13 26.6**	**-0.5**
NEM2				*e*S	**Sn**	**19 13 48.7**	**-2.8**
NMR	**Nemuro--Hokkai**	**2.07**	**243**	⇓ *i*PN	**Pn**	**19 13 26.5**	**-0.6**
NMR				*e*S	**Sn**	**19 13 49.7**	**-2.0**
NMR	**Nemuro--Hokkai**	**2.07**	**243**	*i* P	**Pn**	**19 13 26.6**	**-0.6**
NMR				*e*S	**Sn**	**19 13 49.7**	**-2.0**
RUSJ	**Misakicho**	**2.17**	**265**	*e*PN	**Pn**	**19 13 29.8**	**+1.2**
RUSJ				*e*S	**Sn**	**19 13 55.9**	**+1.6**
JRA	**Rausu**	**2.29**	**261**	*e*P	**Pn**	**19 13 31.3**	**+1.1**
JRA				*e*S	**Sn**	**19 13 57.3**	**+0.1**
JNSB	**Nemuroshibetsu**	**2.41**	**257**	*e*P	**Pn**	**19 13 32.8**	**+1.0**
JNSB				*e*S	**Sn**	**19 14 00.4**	**+0.3**
JKHN	**Kushirohamanak**	**2.57**	**242**	*e*P	**Pn**	**19 13 34.0**	**-0.1**
JKHN				*e*S	**Sn**	**19 14 01.8**	**-2.3**
JNK	**Nakash**	**2.66**	**255**	P	**Pn**	**19 13 36.0**	**+0.7**
JNK				*e*S	**Sn**	**19 14 05.8**	**-0.5**
AKK	**Akkeshi**	**2.81**	**243**	*e*P	**Pn**	**19 13 37.2**	**-0.1**
JAK	**Akkeshi**	**2.91**	**244**	*e*P	**Pn**	**19 13 38.7**	**0.0**
JAK				*e*S	**Sn**	**19 14 10.4**	**-2.0**
JTKR	**Abashiri--Toko**	**3.15**	**265**	*e*P	**Pn**	**19 13 42.9**	**+0.9**
JAR	**Ashorobuto**	**3.41**	**254**	P	**Pn**	**19 13 46.9**	**+1.4**
JAR				*e*S	**Sn**	**19 14 24.2**	**-0.5**
JOB	**Onbets**	**3.51**	**247**	*e*P	**Pn**	**19 13 47.8**	**+0.8**
JOB				*e*S	**Sn**	**19 14 26.5**	**-0.8**
JMP	**Maruseppu**	**3.53**	**266**	*e*P	**Pn**	**19 13 48.5**	**+1.2**
JCH	**Churui**	**3.96**	**246**	*e*P	**Pn**	**19 13 53.1**	**0.0**
JCH				*e*S	**Sn**	**19 14 37.1**	**-1.1**
JKK2	**Kamakawa 2**	**3.99**	**265**	*e*P	**Pn**	**19 13 56.2**	**+2.6**
ASAJ	**Asahikawa**	**4.07**	**269**	Pn	**Pn**	**19 13 57.2**	**+2.6**
	comp=E,2.7nm,0.3s,baz=56,slow=5.8,SNR=26						
ASAJ				Sn	Sn	19 14 50.9	+10
	comp=E,1.5nm,0.3s,baz=90,slow=20,SNR=1.3						
JSE	**Soyaes**	**4.09**	**281**	*e*P	**Pn**	**19 13 55.9**	**+1.0**
JNBK	**Urakawa-nobuka**	**4.51**	**245**	*e*P	**Pn**	**19 14 01.1**	**+0.4**
JWK2	**Keihoku**	**4.62**	**284**	*e*P	**Pn**	**19 14 04.7**	**+2.5**
YSS	**Yuzhno-Sakhali**	**4.65**	**306**	*e*PN	**Pn**	**19 14 02.9**	**+0.3**
YSS				*e*S	**Sn**	**19 14 51.9**	**-3.4**
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
YSS	**Yuzhno-Sakhali**	**4.65**	**306**	*e*P	**Pn**	**19 14 03.2**	**+0.6**
JRBN	**Rebuntou**	**5.22**	**284**	*e*P	**Pn**	**19 14 11.9**	**+1.5**
TYV	**Tymovskoe**	**7.54**	**332**	*e*P	**Pn**	**19 14 42.2**	**+0.1**
SKR	**Severo-Kuril's**	**8.28**	**37**	*e*PN	**Pn**	**19 14 56.8**	**+4.5**
SKR				*e*S	Sn	19 16 36.9	+13
SKR				pmax	pmax		
	comp=Z,76nm,1.2s						
SKR				pmax	pmax		
	comp=Z,800nm,6.7s						
SKR				MLR	MLR		
	comp=Z,800nm,13.0s						
SKR	**Severo-Kuril's**	**8.28**	**37**	*e*P	**Pn**	**19 14 53.8**	**+1.5**
TEY	**Ternei**	**8.33**	**279**	*e*PN	Pn	19 15 03.7	+11
PAU	**Pauzhetka**	**9.15**	**36**	*e*P	**Pn**	**19 15 07.0**	**+2.8**
OKH	**Okha**	**9.85**	**341**	*e*P	**Pn**	**19 15 16.0**	**+2.2**
PEA0B	**Petropavlovsk-**	**10.76**	**32**	*i* PN	**Pn**	**19 15 26.0**	**-0.2**
PETK	**Petropavlovsk-**	**10.76**	**32**	LR	LR	19 20 15.5	
	comp=Z,32nm,18.1s,baz=304,slow=42						
MJA0	**Matsu Arr-Jizo**	**10.89**	**228**	*e*PN	**Pn**	**19 15 28.7**	**+0.5**
MJAR	**Matsushiro Arr**	**10.91**	**228**	Pn	**Pn**	**19 15 28.1**	**-0.4**
	baz=30,slow=15,SNR=4.9						
MJAR				LR	LR	19 19 28.1	
	comp=Z,55nm,19.4s,baz=48,slow=36						
	comp=Z,1.1nm,0.8s						
JHJ	**Hachijo jima 2**	**13.00**	**213**	LR	LR	19 20 42.9	
	comp=Z,63nm,21.3s,baz=84,slow=36						
JNU	**Nakatsue**	**17.55**	**236**	LR	LR	19 23 23.4	
	comp=Z,17nm,20.3s,baz=17,slow=36						
YAK	**Yakutsk**	**20.78**	**335**	*i* P	**P**	**19 17 31.1**	**-0.6**
YAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
YAK	**Yakutsk**	**20.78**	**335**	*e*P	**P**	**19 17 31.1**	**-0.6**
SONM	**Songino Array**	**28.98**	**292**	LR	LR	19 31 05.6	
	comp=Z,38nm,19.6s,baz=344,slow=38						
H11N2	**WAKE ISLAND Hy**	**29.05**	**142**	T	T	19 49 37.7	
	baz=332,slow=76,SNR=184						
H11N1	**WAKE ISLAND Hy**	**29.07**	**142**	T	T	19 49 38.9	
	baz=332,slow=76,SNR=187						
H11N3	**WAKE ISLAND Hy**	**29.07**	**142**	T	T	19 49 39.1	
	baz=332,slow=76,SNR=214						
H11S1	**WAKE ISLAND Hy**	**30.05**	**143**	T	T	19 50 52.7	
	baz=333,slow=76,SNR=320						
H11S3	**WAKE ISLAND Hy**	**30.05**	**143**	T	T	19 50 50.0	
	baz=333,slow=76,SNR=243						
H11S2	**WAKE ISLAND Hy**	**30.06**	**143**	T	T	19 50 54.7	
	baz=333,slow=76,SNR=245						
ZALV	**Zalesovo Beam**	**41.28**	**307**	PcP	**PcP**	**19 22 32.5**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=89,slow=4.6,SNR=6.3						
MKAR	**Makanchi Array**	**45.01**	**297**	P	**P**	**19 21 04.7**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=79,slow=7.9,SNR=7.1						
MKAR				PcP	**PcP**	**19 22 45.4**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=65,slow=5.0,SNR=4.2						
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**45.01**	**297**	*e*P	**P**	**19 21 05.3**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**45.01**	**297**	*e*P	**P**	**19 21 05.3**	**-0.3**
KURK	**Kurchatov**	**45.86**	**304**	*i* P	**P**	**19 21 12.8**	**+0.6**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK	**Kurchatov**	**45.86**	**304**	*e*P	**P**	**19 21 12.8**	**+0.6**
KURBB	**Kurchatov Arra**	**45.94**	**304**	P	**P**	**19 21 10.8**	**-2.1**
	comp=Z,0.3nm,0.4s,baz=75,slow=7.9,SNR=5.0						
KURBB				PcP	**PcP**	**19 22 48.2**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=74,slow=3.3,SNR=5.8						
	comp=Z,0.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**48.45**	**254**	P	**P**	**19 21 33.6**	**+0.8**
	comp=Z,0.4nm,0.4s,baz=52,slow=7.4,SNR=5.5						
	comp=Z,0.4nm,0.4s						
CMAR	**Chiang Mai Arr**	**48.45**	**254**	*e*P	**P**	**19 21 34.3**	**+1.5**
BVAR	**Borovoye Array**	**49.74**	**309**	PcP	**PcP**	**19 23 01.8**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=34,slow=3.8,SNR=3.1						
BORK	**Borovoye**	**49.77**	**309**	*i* P	**P**	**19 21 42.8**	**+0.4**
BORK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
AAK	**Ala-Archa**	**51.81**	**296**	*i* P	**P**	**19 21 58.2**	**0.0**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
AAK	**Ala-Archa**	**51.81**	**296**	*e*P	**P**	**19 21 58.2**	**0.0**
ARTI	**Arti**	**54.56**	**317**	*i* P	**P**	**19 22 17.7**	**-0.2**
ARTI				pmax	pmax		
	comp=Z,3.0nm,1.2s						
YKA	**Yellowknife Ar**	**54.87**	**34**	P	**P**	**19 22 20.2**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=298,slow=8.1,SNR=4.4						
	comp=Z,0.7nm,0.7s						
YKA	**Yellowknife Ar**	**54.87**	**34**	*i* P	**P**	**19 22 20.7**	**+0.7**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	**ARCESS Array B**	**58.97**	**340**	P	**P**	**19 22 47.4**	**-1.6**
	comp=Z,3.9nm,0.9s,baz=36,slow=6.8,SNR=1.9						
	comp=Z,3.9nm,0.9s						
FINES	**FINESS Array B**	**64.70**	**333**	P	**P**	**19 23 26.1**	**-1.5**
	comp=Z,7.6nm,1.2s,baz=60,slow=5.9,SNR=4.2						
	comp=Z,7.6nm,1.2s						
WRA	**Warramunga Arr**	**65.23**	**194**	P	**P**	**19 23 32.6**	**+1.1**
	comp=Z,0.9nm,1.0s,baz=9.5,slow=7.4,SNR=3.2						
	comp=Z,0.9nm,1.0s						
OBN	**Obninsk**	**65.30**	**324**	⇑ *e*P	**P**	**19 23 32.4**	**+0.8**
OBN				*e*		19 25 54.6	
OBN				*e*S	S	19 32 24.3	+13
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,57nm,16.0s						
OBN	**Obninsk**	**65.30**	**324**	*e*P	**P**	**19 23 32.4**	**+0.8**
ASAR	**Alice Springs**	**68.94**	**194**	P	**P**	**19 23 56.1**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=11,slow=6.4,SNR=6.9						
	comp=Z,0.4nm,0.8s						
NOA	**NORSAR Array B**	**69.33**	**339**	P	**P**	**19 23 55.0**	**-2.0**
	comp=Z,0.8nm,0.8s,baz=33,slow=8.0,SNR=2.5						
	comp=Z,0.8nm,0.8s						
KIV	**Kislovodsk**	**69.95**	**312**	*e*P	**P**	**19 24 02.8**	**+1.5**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV	**Kislovodsk**	**69.95**	**312**	*e*P	**P**	**19 24 02.8**	**+1.5**
EKA	**Eskdalemuir Ar**	**77.78**	**344**	P	**P**	**19 24 45.3**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=27,slow=6.4,SNR=3.7						
	comp=Z,0.2nm,0.3s						
TXAR	**Lajitas Array**	**81.66**	**57**	P	**P**	**19 25 08.7**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=312,slow=2.7,SNR=4.5						
	comp=Z,0.3nm,0.6s						
MMAI	**Mount Meron Ar**	**81.74**	**309**	P	**P**	**19 25 08.7**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=0.0,slow=1.4,SNR=2.4						
	comp=Z,0.9nm,0.5s						
NVL	**N'lazarevskaya**	**146.04**	**204**	*e*PKHKP	PKPpre	19 32 22.2	
NVL				pmax	pmax		
	comp=Z,21nm,1.5s						

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*KRNET **01** 19:14:39.6±0.1, 39°.08N×70°.54E, h19^{km}, mb3.5*
*SOME **01** 19:14:39.7, 39°.22N×71°.25E, h20^{km}*
*NNC **01** 19:14:42.9±5.0, 39°.14N×71°.79E, h0^{km}, mb3.9, mpv3.7, Error ellipse: s-maj=42.7km s-min=29.3km az=153.0*

ISC 01 19:14:36.1±1.2**, 39°.06N**±0°.05×**70°.71E**±0°.03**, h10**^{km}±13^{km}**, n21, σ1.^{s}92**/35**, 17C-9D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	**Garm**	**0.31**	**260**	⇑ *i*P	**Pb**	**19 14 44.0**	**+0.1**
GAR				⇑ *i*S	**Sg**	**19 14 47.1**	**+0.5**
DRK	**Karamyk**	**0.95**	**63**	⇑ *i*P	Pn	19 14 59.5	+3.7
DRK				⇑ *i*S	**Sn**	**19 15 13.7**	**+4.2**
CHGR	**Chuyangaron**	**1.28**	**252**	⇑ *i*P	**Pg**	**19 15 01.2**	**+0.6**
CHGR				⇑ *i*S	**Sg**	**19 15 16.7**	**-0.5**
OHH	**Osh**	**2.17**	**47**	⇑ *e*P	**Pg**	**19 15 18.8**	**+1.1**
OHH				⇑ *e*S	**Sg**	**19 15 47.4**	**+1.6**
SFK	**Sufi-Kurgan**	**2.36**	**65**	⇑ *i*P	**Pg**	**19 15 21.9**	**+0.5**
SFK				⇑ *i*S	**Sg**	**19 15 52.6**	**+0.6**
TRKS	**Terek-Say**	**2.49**	**7**	⇑ *i*P	**Pb**	**19 15 21.3**	**+0.2**
TRKS				⇑ *i*S	**Sb**	**19 15 51.6**	**-0.3**
ARSB	**Arslanbob**	**2.86**	**37**	⇑ *i*P	**Pb**	**19 15 28.0**	**+0.7**
ARSB				⇑ *i*S	**Sb**	**19 16 03.1**	**+0.7**
SALK	**Salom-Alik**	**3.01**	**52**	⇓ *e*P	**Pb**	**19 15 30.4**	**+0.5**
SALK				⇓ *e*S	**Sb**	**19 16 07.4**	**+0.7**
IUG	**Iuzhnay**	**3.13**	**351**	Pg	**Pg**	**19 15 36.1**	**0.0**
	18nm,0.3s						
IUG				Lg	Lg	19 16 18.3	
	78nm,0.5s						
CHM	**Chimkent**	**3.37**	**346**	*e*P	**Pg**	**19 15 40.7**	**+0.1**
	24nm,0.1s						
CHM				*e*S	**Sg**	**19 16 24.1**	**-0.1**
	70nm,0.4s						
MNAS	**Manas**	**3.69**	**21**	⇓ *e*P	**Pb**	**19 15 39.1**	**-2.4**
MNAS				⇓ *i*S	**Sb**	**19 16 22.5**	**-3.8**
ARLS	**Aral**	**3.93**	**43**	⇑ *i*P	**Pb**	**19 15 43.0**	**-2.6**
ARLS				⇑ *i*S	**Sb**	**19 16 29.3**	**-4.0**
BRLS	**Borolday**	**4.03**	**351**	Pg	**Pb**	**19 15 46.7**	**-0.5**
	2.1nm,0.2s						
BRLS				Lg	Lg	19 16 32.8	
	9.0nm,0.7s						
BRLS	**Borolday**	**4.03**	**351**	*e*P	**Pb**	**19 15 46.3**	**-0.9**
	2.1nm,0.2s						
BRLS				*e*S	**Sb**	**19 16 33.6**	**-2.3**
	9.0nm,0.7s						
KK31	**Karatay Array**	**4.05**	**358**	⇓Pn	**Pb**	**19 15 47.4**	**-0.1**
	2.3nm,0.3s,baz=186,slow=13,SNR=28						
KK31				⇓Lg	Lg	19 16 51.7	
	8.7nm,0.6s,baz=184,slow=32,SNR=5.1						
MRKS	**Merke**	**4.15**	**27**	Pg	**Pb**	**19 15 49.8**	**+0.5**
	6.8nm,0.3s						
MRKS				Lg	Lg	19 16 41.6	
	13nm,0.4s						
MRKS	**Merke**	**4.15**	**27**	*e*P	**Pb**	**19 15 49.8**	**+0.5**
	6.8nm,0.3s						
MRKS				*e*S	**Sb**	**19 16 39.5**	**0.0**
	13nm,0.4s						
JNKS	**Jany-Kuch**	**4.29**	**61**	⇓ *e*P	**Pb**	**19 15 47.8**	**-3.9**
JNKS				⇓ *e*S	**Sb**	**19 16 38.7**	**-4.9**
AAK	**Ala-Archa**	**4.59**	**38**	⇑Pg	**Pb**	**19 15 56.2**	**-0.5**
	2.2nm,0.5s						
AAK				⇓Lg	Lg	19 16 55.3	
	5.5nm,0.8s						
KST	**Kastek**	**5.62**	**43**	Pg	**Pb**	**19 16 14.2**	**-0.2**
	1.1nm,0.2s						
KST				Lg	Lg	19 17 21.7	
	4.6nm,0.5s						
KST	**Kastek**	**5.62**	**43**	*e*P	**Pb**	**19 16 14.2**	**-0.2**
	1.1nm,0.2s						
KST				*e*S	**Sb**	**19 17 21.7**	**-0.3**
	4.6nm,0.5s						

DJA 01 19:19:03.2±0.2**, 8°S**±4°×**11°6E**±°**, h10**^{km}**, M3.9**/19**, mb4.2**/6**, MLv3.7**/19**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLNI	**Mataram**	**0.26**	**236**	P	Pg	19 19 08.6	+0.2
KLNI				S	Sg	19 19 12.7	+0.8
KHKI	**Kahang-Kahang**	**0.70**	**263**	P	Pb	19 19 17.2	-0.3
KHKI				S	Sb	19 19 26.9	-0.3
TWSI	**Taliwang, Sumb**	**0.73**	**129**	P	Pb	19 19 17.8	-0.2
DNP	**Denpasar**	**1.16**	**250**	P	Pb	19 19 24.5	-0.8
IGBI	**Denpasar**	**1.27**	**245**	P	Pn	19 19 26.3	-0.7
IGBI				S	Sg	19 19 44.1	0.0
RTBI	**Rangdo, Negare**	**1.36**	**262**	P	Pn	19 19 28.0	-0.4
RTBI				S	Sb	19 19 46.1	-0.3
PLAI	**Plampang**	**1.55**	**111**	P	Pn	19 19 31.2	+0.3
DBNI	**Kabupaten Domp**	**1.99**	**96**	P	Pn	19 19 36.5	-0.5
ABJI	**Asem Bagus**	**2.11**	**283**	P	Pn	19 19 38.7	+0.1
JAGI	**Jajag, Banyuwa**	**2.14**	**265**	P	Pn	19 19 37.4	-1.7
KMMI	**Kalianget**	**2.62**	**298**	P	Pn	19 19 47.0	+1.3
BLJI	**Banyuglugur**	**2.74**	**281**	P	Pn	19 19 47.5	+0.2
GMJI	**Gumukmas**	**2.84**	**270**	P	Pn	19 19 47.9	-0.7
WBSI	**Waikabubak, Su**	**3.33**	**114**	P	Pn	19 19 55.0	-0.4
LBFI	**Labuhan Bajo,**	**3.55**	**93**	P	Pn	19 19 58.5	+0.1
WSI	**Waingapu**	**4.17**	**110**	P	Pn	19 20 07.1	+0.1
SNJI	**Sawahan-Nganju**	**4.53**	**276**	P	Pn	19 20 12.9	+0.8
BSSI	**Bau Bau, Buton**	**4.66**	**63**	P	Pn	19 20 12.0	-1.7
PCJI	**Pacitan**	**5.08**	**271**	P	Pn	19 20 18.5	-1.0
	0.2nm48nm,1.2s						
EDFI	**Ende, Flores**	**5.34**	**95**	P	Pn	19 20 23.1	-0.1
	0.1nm9.7nm,0.5s						
PMSI	**Majene**	**5.41**	**29**	P	Pn	19 20 23.4	-0.6
	0.1nm18nm,0.9s						
UGM	**Wanagama**	**5.74**	**273**	P	Pn	19 20 29.5	+0.9

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*SOF **01** 19:55:37.7, 45°.39N±0°.01×26°.36E±0°.01, h120^{km}±2^{km}, MD2.9/5*
*BUC **01** 19:55:37.6±0.3, 45°.46N×26°.35E, h120^{km}±2^{km}, ml3.6/47, Error ellipse: s-maj=1.4km s-min=1.3km az=164.0*

ISC 01 19:55:36.7±1.5**, 45°.47N**±0°.03×**26°.34E**±0°.03**, h130**^{km}±8^{km}**, n60, σ0.^{s}56**/97**, 56C-29D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEHR	**Nehoiu**	**0.05**	**216**	⇓P	**Pn**	**19 55 54.9**	**+0.6**
NEHR				⇑S	**Sn**	**19 56 07.4**	**-0.2**
MLR	**Muntele Rosu**	**0.28**	**275**	⇑P	**Pn**	**19 55 55.4**	**+0.5**
MLR				⇑S	**Sn**	**19 56 08.7**	**+0.2**
ISR	**Istrita**	**0.38**	**157**	⇓P	**Pn**	**19 55 55.6**	**+0.5**
ISR				⇑S	**Sn**	**19 56 08.7**	**-0.4**
COVR	**Voineasa-Covas**	**0.39**	**346**	⇑P	**Pn**	**19 55 55.3**	**+0.1**
COVR				⇓S	**Sn**	**19 56 08.4**	**-0.8**
PLOR	**Plostina**	**0.44**	**30**	⇓P	**Pn**	**19 55 55.6**	**+0.2**
PLOR				⇑S	**Sn**	**19 56 09.6**	**-0.1**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRI	Vrincioaia	0.48	34	⇑P	Pn	19 55 56.0	+0.4
VRI				⇑S	Sn	19 56 09.8	-0.2
PLAR	PLOIESTI	0.59	202	⇓S	Sn	19 56 11.0	0.0
TURR	Turia	0.63	339	⇑P	Pn	19 55 56.8	+0.2
TURR				⇓S	Sn	19 56 10.7	-0.9
PANC	Panciu	0.70	54	⇓P	Pn	19 55 57.6	+0.7
PANC				⇑S	Sn	19 56 12.4	+0.1
OZUR		0.74	329	⇓P	Pn	19 55 57.2	-0.1
BOSR	Bodos	0.77	322	⇑P	Pn	19 55 56.9	-0.6
BOSR				⇓S	Sn	19 56 12.8	-0.6
COSR	Cosmesti PH	0.79	60	⇑P	Pn	19 55 58.0	+0.4
COSR				⇑S	Sn	19 56 13.3	-0.2
SULR		0.79	184	⇑P	Pn	19 55 58.5	+0.8
DOPR	Dopca	0.83	307	⇑P	Pn	19 55 58.2	+0.1
DOPR				⇓S	Sn	19 56 13.4	-0.8
ONER	Baraj Valea Uz	0.87	3	⇑P	Pn	19 55 58.8	+0.4
VOIR		0.91	269	⇓P	Pn	19 55 59.0	+0.2
VOIR				⇓S	Sn	19 56 14.7	-0.7
MTUR	Matau	0.93	255	⇓P	Pn	19 55 59.4	+0.4
TUDR		0.95	82	⇑P	Pn	19 55 58.9	-0.1
TUDR				⇓S	Sn	19 56 15.4	-0.5
GHRR		0.96	51	⇑P	Pn	19 55 59.8	+0.7
GHRR				⇑S	Sn	19 56 16.1	0.0
IZVR	Izvoarele	1.01	85	⇑P	Pn	19 55 59.3	-0.3
IZVR				⇑S	Sn	19 56 15.9	-1.0
LEHL	Lehliu	1.05	161	⇓S	Sn	19 56 18.3	+0.7
SCHL	Schela	1.05	88	⇑S	Sn	19 56 16.3	-1.3
SCHLR	Schela	1.05	89	⇑P	Pn	19 55 59.8	-0.2
SCHLR				⇑S	Sn	19 56 16.7	-0.9
SCHLR	Schela	1.05	89	⇑P	Pn	19 55 59.8	-0.2
TESR	Tescani	1.07	12	⇓P	Pn	19 56 00.3	+0.1
TESR				⇑S	Sn	19 56 17.0	-1.1
NEGRR	Negrea	1.09	86	⇑P	Pn	19 56 00.6	+0.3
AMRR	Amara	1.11	140	⇑P	Pn	19 56 01.3	+0.8
AMRR				⇓S	Sn	19 56 19.0	+0.3
BUC1	Bucharest	1.14	191	⇑P	Pn	19 56 01.6	+0.7
BUC1				⇑S	Sn	19 56 19.6	+0.4
VARL	Varlezi	1.15	67	⇑P	Pn	19 56 01.2	+0.3
VARL				⇓S	Sn	19 56 19.2	-0.2
SCTR	Scanteiesti	1.18	79	⇑P	Pn	19 56 01.8	+0.5
SCTR				⇑S	Sn	19 56 19.6	-0.4
ARR	Arges	1.20	266	⇑P	Pn	19 56 02.1	+0.6
ARR				⇑S	Sn	19 56 20.1	-0.4
BIR	Birlad	1.21	48	⇑P	Pn	19 56 02.1	+0.6
BIR				⇓S	Sn	19 56 20.2	-0.3
TATR	Tatarca	1.21	83	⇑P	Pn	19 56 02.1	+0.5
TATR				⇑S	Sn	19 56 20.4	0.0
SGRR	Singureni	1.27	192	⇓P	Pn	19 56 02.1	-0.1
SGRR				⇑S	Sn	19 56 21.1	-0.5
VLDR	Vladesti	1.28	72	⇑P	Pn	19 56 02.8	+0.5
VLDR				⇑S	Sn	19 56 21.7	-0.1
CFR	Carcaliu	1.30	102	⇑P	Pn	19 56 02.7	+0.2
CFR				⇑S	Sn	19 56 21.0	-1.2
GIUM	Giurgiulesti	1.32	89	⇑S	Sn	19 56 22.6	+0.2
HUMR	Humele	1.34	226	⇑P	Pn	19 56 03.4	+0.4
HUMR				⇑S	Sn	19 56 23.0	0.0
BIZ	Bicaz	1.48	354	⇓S	Sn	19 56 26.2	+0.5
TLBR	Topalu	1.52	127	⇑P	Pn	19 56 05.3	+0.3
COPA	Copaceanca	1.55	211	⇑P	Pn	19 56 05.7	+0.4
COPA				⇓S	Sn	19 56 26.8	-0.3
VASR	Vaslui	1.55	40	⇓P	Pn	19 56 05.6	+0.3
TPGR	Topolog	1.60	112	⇓P	Pn	19 56 05.8	0.0
TPGR				⇑S	Sn	19 56 26.9	-1.1
ICOR	Ion Corvin	1.71	142	⇑P	Pn	19 56 07.8	+0.7
ICOR				⇑S	Sn	19 56 30.0	-0.2
TLCR		1.77	98	⇑P	Pn	19 56 08.2	+0.4
TLCR				⇑S	Sn	19 56 31.5	-0.1
TIRR	Tirgusor	1.79	124	⇑P	Pn	19 56 08.2	+0.2
LOT	Lotru	1.81	270	⇓P	Pn	19 56 09.0	+0.6
LOT				⇓S	Sn	19 56 32.4	-0.2
PRAR	RASCA	1.90	358	⇑P	Pn	19 56 10.2	+0.9
PRAR				⇑S	Sn	19 56 34.2	-0.2
RAZG	Razgrad	1.90	176	⇓S	Sn	19 56 33.8	-0.7
MFTR	Murfatlar	1.97	130	⇓P	Pn	19 56 10.5	+0.4
LOZB	Loznitsa	2.10	175	⇓P	Pn	19 56 12.2	+0.3
SZH	Strazhitsa	2.22	187	*i* P	Pn	19 56 13.3	0.0
SZH				S	Sn	19 56 40.1	-1.2
PSN	Preselentsi	2.24	144	*e*P	Pn	19 56 14.3	+0.8
PSN				S	Sn	19 56 41.1	-0.6
NEF	NEVSHA	2.30	163	*e*P	Pn	19 56 14.8	+0.4
PRD	Provadia	2.43	161	*i* P	Pn	19 56 16.4	+0.5
PVL	Pavlikeni	2.49	200	*i* P	Pn	19 56 16.9	+0.2
PVL				S	Sn	19 56 45.8	-1.6
ROIA	ROIAK	2.49	162	*e*P	Pn	19 56 17.3	+0.6
AVR	AVREN	2.53	157	*e*P	Pn	19 56 17.9	+0.6
VALD	Valchedram	2.73	230	P	Pn	19 56 20.1	+0.4
MPEP	Malo Peshtene	2.81	222	*e*P	Pn	19 56 21.1	+0.3

TRN 01 20:05:48.8, 17°.46N×61°.24W, h7^{km}, MD3.9, South-west of Barbuda., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.56	292	*e*P	Pn	20 06 02.3	-0.9
ANWB				*e*S	Sn	20 06 11.8	-0.9
MBFL	Flemmings, Mon	1.17	233	*e*S	Sn	20 06 31.6	+3.8
MLYT	Lee's Yard	1.17	231	*e*S	Sn	20 06 32.7	+4.9
DHSZ	Broadband at M	1.28	203	*e*P	Pg	20 06 15.5	+2.0
DHSZ				*e*S	Sn	20 06 33.5	+2.9
ATGZ	Broadband at L	1.43	199	*e*P	Pg	20 06 17.2	+0.8
ATGZ				*e*S	Sg	20 06 38.0	+3.1
SKI	Saint Kitts	1.44	265	*e*P	Pg	20 06 17.0	+0.6
SKI				*e*S	Sg	20 06 38.9	+3.9
MMLZ	Guadeloupe Bro	1.47	196	*e*P	Pg	20 06 18.5	+1.5
MMLZ				*e*S	Sg	20 06 38.4	+2.4
TBG	Guadaloupe-3	1.64	194	*e*P	Pg	20 06 20.4	0.0
TBG				*e*S	Sg	20 06 42.9	+1.1
DSLB	Salisbury	2.02	185	*e*P	Pb	20 06 25.5	-0.4
DSLB				*e*S	Sb	20 06 52.1	+0.9
BIM	Bigot	2.93	177	*e*P	Pn	20 06 38.1	+2.2
BIM				*e*S	Sn	20 07 13.8	+2.5

IDC ***01*** *20:06:23.0±13.0, 15°.50S×165°.74E, h0^{km}, mb4.0/3, mbtmp4.0/4, Error ellipse: s-maj=234.2km s-min=36.3km az=56.0*

NOU ***01*** *20:06:24.6, 15°.62S×167°.03E, h0^{km}, MLv4.5/14, Vanuatu Islands*

ISC 01 20:06:16.3±2.3**, 15°.1S**±0°.1×**166°.7E**±0°.2**, h10^{km}, n10, σ2^{s}.49**/11**, mb4.1**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	2.97	152	P	Pn	20 07 04.3	+0.8
YATNC	Mamie plateau,	6.93	179	P	Pn	20 08 00.1	+2.1
YATNC	Mamie plateau,	6.93	179	S	Sn	20 09 13.3	-3.7
DZM	Mont Dzumac	6.95	182	Pn	Pn	20 08 01.3	+2.9
	4.8nm,0.4s,baz=9.5,slow=18						
DZM				Sn	Sn	20 09 16.3	-1.2
	2.0nm,0.3s,baz=136,slow=22,SNR=9.9						
DZM	Mont Dzumac	6.95	182	P	Pn	20 08 01.8	+3.5
DZM	Mont Dzumac	6.95	182	S	Sn	20 09 16.9	-0.6
PINNC	Pines Island,	7.51	175	P	Pn	20 08 08.5	+2.5
STKA	Stephens Creek	28.36	230	P	P	20 12 10.3	-0.4
	3.3nm,0.9s,baz=53,slow=10,SNR=1.8						
	3.3nm,0.9s						
WRA	Warramunga Arr	31.23	256	P	P	20 12 35.2	-1.2
	0.4nm,0.7s,baz=85,slow=9.2,SNR=5.4						
	0.4nm,0.7s						
ASAR	Alice Springs	32.06	249	P	P	20 12 43.0	-0.6
	1.1nm,0.4s,baz=76,slow=9.1,SNR=25						
	1.1nm,0.4s						

IDC ***01*** *20:13:42.7±2.8, 42°.30N×19°.51E, h0^{km}, mb3.7/3, mbtmp3.5/10, ML3.1/7, Error ellipse: s-maj=41.2km s-min=14.9km az=3.0*

TIR ***01*** *20:13:43.6, 42°.34N×19°.20E, h30^{km}±1^{km}, Md3.0/8, Ml3.3/6*

PDG ***01*** *20:13:45.8±0.2, 42°.37N×19°.39E, h23^{km}, MD3.3/11, ML3.2/12, Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*

RHSSO ***01*** *20:13:45.4±1.1, 42°.34N×19°.51E, h11^{km}±3^{km}, ML3.3/5*

SKO ***01*** *20:13:45.5, 42°.48N×19°.38E, h0^{km}, ML3.2*

BEO ***01*** *20:13:46.2±0.3, 42°.39N×19°.41E, h12^{km}±1^{km}, ML3.0/16*

PRU ***01*** *20:13:48.9, 42°.41N×19°.38E, h10^{km}*

ISC 01 20:13:45.6±0.8**, 42°.36N**±0°.02×**19°.40E**±0°.02**, h17^{km}**±5^{km}**, n125, σ1^{s}.50**/200**, mb3.5**/3**, 20C-14D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDG	Podgorica	0.13	302	Pg	Pg	20 13 49.0	-0.4
PDG				Sg	Sg	20 13 52.0	+0.1
PDG				AMd		20 14 22.6	
PDG	Podgorica	0.13	302	⇓P	Pb	20 13 50.5	+0.9
PDG	Podgorica	0.13	302	*e*Pg	Pb	20 13 50.2	+0.6
PDG				*e*Sg	Sg	20 13 53.7	+1.8
PDG	Podgorica	0.13	302	⇑*i*Pg	Pb	20 13 50.1	+0.5
PDG				*i* Sg	Sg	20 13 53.7	+1.8
DRME	Dracevica, Mon	0.24	223	⇓*i*Pg	Pb	20 13 51.5	0.0
DRME				*e*Sg	Sg	20 13 56.6	+2.0
SDA	Shkodra	0.32	167	Pg	Pg	20 13 52.2	-0.1
SDA				Sg	Sb	20 13 58.0	+0.3
SDA				AMd		20 14 35.5	
BUM	Brajici-Budva	0.38	261	⇑*i*Pg	Pb	20 13 53.7	-0.3
BUM				*i* Sg	Sb	20 14 00.5	+0.8
CEME	Cevo	0.41	297	⇑*i*Pg	Pb	20 13 53.9	-0.5
CEME				*e*Sg	Sb	20 14 00.8	+0.5
ULC	Ulcinj	0.41	197	⇑*i*Pg	Pg	20 13 53.9	-0.1
ULC				*i* Sg	Sb	20 14 01.5	+1.0
PVY	Plav	0.47	60	⇓*i*Pg	Pg	20 13 55.4	+0.3
PVY				*i* Sg	Sb	20 14 03.3	+1.0
KOME	Kolasin	0.50	10	⇓*i*Pg	Pb	20 13 56.0	+0.1
KOME				*e*Sg	Sb	20 14 03.6	+0.6
NKME	Niksic	0.53	321	⇓*i*Pg	Pg	20 13 55.8	-0.3
NKME				*e*Sg	Sb	20 14 04.2	+0.4
IVA	Berane	0.62	35	⇓*i*Pg	Pg	20 13 58.1	+0.2
IVA				*i* Sg	Sb	20 14 08.3	+1.6
HCY	Herceg Novi	0.68	278	⇑*i*Pg	Pb	20 13 58.9	-0.1
HCY				*i* Sg	Sb	20 14 09.7	+1.6
BRY	Bratogost	0.84	311	⇑*i*Pg	Pg	20 14 01.3	-0.6
BRY				*i* Sg	Sn	20 14 15.0	+0.2
TREB	Trebinje	0.86	295	*e*Pg	Pb	20 14 02.2	+0.2
TREB				*e*Sg	Sn	20 14 15.4	+0.3
UPM	Unac-Piva	0.92	337	⇑*i*Pg	Pg	20 14 02.8	-0.6
UPM				*i* Sg	Sn	20 14 17.5	+0.6
PLE	Pljevlja	0.97	359	⇓*i*Pg	Pb	20 14 04.2	+0.2
PLE				*i* Sg	Sn	20 14 19.2	+1.2
DBRK	Dubrovnik	0.98	289	*e*Pg	Pb	20 14 04.3	+0.2
DBRK				Sg	Sn	20 14 19.5	+1.4
SJES	Sjenica	0.99	25	*e*Pg	Pg	20 14 04.5	-0.3
SJES				*e*Sg	Sb	20 14 18.2	+0.9
PHP	Peshkopia	1.03	131	Pg	Pb	20 14 04.6	-0.3
PHP				Sg	Sn	20 14 20.2	+0.9
PHP				AML	AML	20 14 24.4	
	4.0nm,0.5s						
PHP				AMd		20 15 02.2	
TIR	Tirane	1.07	161	Pg	Pb	20 14 05.2	-0.4
TIR				Sg	Sb	20 14 20.3	+0.9
TIR				AML	AML	20 14 27.3	
	2.1nm,0.5s						
TIR	Tirane	1.07	161	*i* Pg	Pb	20 14 05.6	0.0
TIR				*i* Sg	Sn	20 14 23.8	+3.5
RUDO	Rudo	1.26	359	⇑*i*Pg	Pn	20 14 08.3	-0.1
RUDO				*e*Sg	Sg	20 14 26.1	-0.1
IVAS	Ivanjica	1.33	24	*e*Pg	Pb	20 14 10.3	+0.1
IVAS				*e*Sg	Sb	20 14 27.6	+0.6
STON	Ston	1.36	293	*e*Pn	Pb	20 14 10.7	+0.2
STON				Sg	Sg	20 14 30.6	+1.1
BBLS	Lazi&#263i	1.50	0	*e*Pg	Pb	20 14 13.4	+0.3
BBLS				*e*Sg	Sb	20 14 33.0	+1.0
SELS	Selova	1.53	55	*e*Pg	Pn	20 14 13.2	+1.1
SELS				*e*Sg	Sb	20 14 33.3	+0.8
SKO	Skopje	1.56	104	*i* Pg	Pb	20 14 14.9	+0.9
SKO				*i* Sg	Sg	20 14 36.2	+0.3
GOCS	Kraljevo Serbi	1.61	41	*e*Pg	Pn	20 14 14.5	+1.1
GOCS				*e*Sg	Sn	20 14 35.2	+1.3
OHR	Ohrid	1.63	140	*i* Pg	Pg	20 14 17.3	+0.5
OHR				*i* Sg	Sg	20 14 40.4	+2.3
OHR				*e*Lg	Lg	20 14 41.3	
	comp=N,280nm,0.6s						
OHR				*e*Lg	Lg	20 14 42.8	
	comp=E,211nm,0.5s						
GRUS	Gruza	1.80	32	*e*Pn	Pn	20 14 16.5	+0.6
GRUS				*e*Sn	Sn	20 14 39.5	+1.1
BARS	Barje	1.84	75	*i* Pn	Pn	20 14 17.6	+1.3
BARS				*i* Sn	Sg	20 14 45.5	+0.7
BARS	Barje	1.84	75	*e*Pn	Pn	20 14 17.7	+1.3
BARS				*e*Sn	Sn	20 14 41.0	+1.7
VLO	Vlora	1.89	178	Pg	Pn	20 14 17.9	+0.8
VLO				Sg	Sn	20 14 40.0	-0.6
VLO				AML	AML	20 14 50.9	
	comp=E,1.7nm,0.5s						
VLO				AMd		20 15 42.8	
LSTV	Lastovo	1.90	283	*i* Pn	Pn	20 14 17.9	+0.7
LSTV				Sn	Sb	20 14 43.1	-0.1
MAKA	Makarska	1.98	299	*e*Pn	Pb	20 14 20.2	-1.0
TRUS	Trudelj	2.00	21	*e*Pg	Pn	20 14 19.3	+0.7
TRUS				*e*Sg	Sb	20 14 47.5	+1.3
RICI	Ricice	2.02	305	*e*Pn	Pb	20 14 21.0	-0.8
KBN	Korca	2.02	149	Pn	Pb	20 14 21.2	-0.8
KBN				Sn	Sb	20 14 47.1	+0.2
KBN				AMd		20 15 44.1	
BOVS	Bovan	2.12	52	⇓P	Pn	20 14 21.5	+1.3
BOVS	Bovan	2.12	52	*e*Pn	Pn	20 14 20.9	+0.7
BOVS				*e*Sn	Sn	20 14 47.1	+1.0
TEKS	Tekeris	2.19	2	*e*Pn	Pn	20 14 22.0	+0.8
TEKS				*e*Sn	Sn	20 14 47.7	-0.3
BOSS	Bosilegrad	2.28	86	*e*Pn	Pn	20 14 23.6	+1.1
BOSS				*e*Sn	Sn	20 14 52.5	+2.3
SVIS	Svilajnac	2.32	34	*e*Pn	Pn	20 14 24.0	+1.0
HVAR	Hvar	2.32	292	*i* Pn	Pn	20 14 24.4	+1.3
NOCI	Noci	2.36	229	Pg	Pn	20 14 22.3	-1.3
NOCI				Sn	Sn	20 14 50.4	-1.7
NOCI				AML	AML	20 14 54.2	
	comp=E,0.6nm,0.2s						
NOCI				AMd		20 16 04.2	
TRAN	Tran	2.44	78	*e*P	Pn	20 14 26.4	+1.6
AVAS	Avala Beograd	2.47	19	*e*Pn	Pn	20 14 25.2	+0.1
AVAS				*e*Sn	Sn	20 14 54.4	-0.5
ZAGS	Zajecar	2.53	54	*e*Pn	Pn	20 14 27.0	+1.1
ZAGS				*e*Sn	Sn	20 14 58.6	+2.3
ZAPS	Zavoj	2.54	68	*e*Pn	Pn	20 14 27.4	+1.2
ZAPS				*e*Sn	Sn	20 14 58.2	+1.4
BORS2	Bor- Borsko je	2.58	47	*e*Pn	Pn	20 14 26.1	-0.5
BORS2				*e*Sn	Sn	20 14 56.7	-0.8
VAY	Valandovo	2.58	113	*i* Pn	Pn	20 14 28.6	+2.0
VAY				*i* Sn	Sb	20 15 02.0	-0.9
VAY				*e*Lg	Lg	20 15 09.3	
	comp=N,56nm,0.9s						
VAY				*e*Lg	Lg	20 15 09.9	
	comp=E,41nm,0.6s						
GRG	Griva	2.65	121	*i* Pn	Pn	20 14 29.7	+2.1
GRG				*i* Sn	Sn	20 15 03.2	+3.9
MATE	Matera	2.65	231	⇑P	Pb	20 14 34.2	+1.5
KIJV	Kijevo	2.74	308	*e*Pn	Pn	20 14 31.5	+2.7
FRGS	Fruska Gora	2.81	6	*e*Pn	Pn	20 14 30.2	+0.4
FRGS				*e*Sn	Sn	20 15 04.1	+0.8
KKB	Krupnik	2.82	99	*i* P	Pn	20 14 32.5	+2.6
KKB	Krupnik	2.82	99	*i* Pn	Pn	20 14 32.0	+2.1
KKB				*i* Sn	Sn	20 15 06.7	+3.2
VTS	Vitosha	2.84	84	*i* P	Pn	20 14 31.7	+1.3
KNT	Kendrikon	2.88	113	*i* Pn	Pn	20 14 32.8	+2.1
KNT				*i* Sn	Sn	20 15 07.6	+2.7
BLY	Banja Luka	2.88	327	⇑*i*Pn	Pn	20 14 32.6	+1.9
BLY				*e*Sn	Sn	20 15 07.4	+2.4
BLY	Banja Luka	2.88	327	⇓P	Pn	20 14 33.4	+2.7
BLY	Banja Luka	2.88	327	*e*Pn	Pn	20 14 33.2	+2.5
BLY				*e*Sn	Sn	20 15 06.6	+1.6
BLSH	Balsha	2.90	79	*e*P	Pn	20 14 31.9	+0.8
IGT	Igoumenitsa	2.91	166	Pn	Pn	20 14 32.0	+0.8
IGT				Sn	Sn	20 15 08.5	+2.7
IGT				AML	AML	20 15 25.2	
	comp=E,0.2nm,0.5s						
IGT				AMd		20 16 22.0	
IGT	Igoumenitsa	2.91	166	*i* Pn	Pn	20 14 32.0	+0.8
IGT				*i* Sn	Sn	20 15 07.1	+1.3
MDVR	Moldovita	2.94	34	⇑P	Pn	20 14 33.1	+1.4
HERR	Herculane	3.34	40	⇑P	Pn	20 14 38.2	+1.2
SOH	Sokhos	3.34	116	*i* Pn	Pn	20 14 39.2	+2.1
MPEP	Malo Peshtene	3.34	71	*e*P	Pn	20 14 39.9	+2.9
MMB	Musomishta	3.34	103	*i* P	Pn	20 14 39.7	+2.6
MMB	Musomishta	3.34	103	*i* Pn	Pn	20 14 39.7	+2.6
MMB				*i* Sn	Sn	20 15 19.2	+2.8
SRS	Serrai	3.37	110	*i* Pn	Pn	20 14 39.8	+2.3
SRS				*i* Sn	Sn	20 15 19.4	+2.3
PGB	Panagyurishte	3.53	86	*e*P	Pn	20 14 41.7	+2.0
BZS	Buzias	3.62	25	⇓P	Pn	20 14 41.1	+0.2
TIP	Timpagrande	3.76	213	⇓P	Pn	20 14 42.6	-0.2
GZR	Gura Zlata	3.89	38	⇓P	Pn	20 14 46.4	+1.7
MORH	Mrgy, Hungar	3.89	352	⇑*i*Pn	Pn	20 14 45.5	+0.9
MORH				*e*Sn	Sn	20 15 29.8	-0.1
MORH	Mrgy, Hungar	3.89	352	⇑P	Pn	20 14 45.7	+1.1
PLD	Plovdiv	3.97	91	*i* Pn	Pn	20 14 48.3	+2.5
SIRR	Siria	4.23	22	⇑P	Pn	20 14 50.1	+0.8
PVL	Pavlikeni	4.32	78	*e*P	Pn	20 14 53.2	+2.7
LOT	Lotru	4.41	44	⇑P	Pn	20 14 54.5	+2.6
AQU	L'Aquila	4.45	272	*e*Pn	Pn	20 14 53.2	+0.9
AQU				*e*Sn	Sn	20 15 44.8	+1.1
BEHE	Becsehely	4.52	336	⇑*i*Pn	Pn	20 14 54.1	+0.9
BEHE				*e*Sn	Sn	20 15 45.8	+0.4
ARR	Arges	4.83	50	⇑P	Pn	20 15 00.0	+2.5
VOIR		5.11	51	⇑P	Pn	20 15 03.6	+2.2
SOKA	Soboth	5.33	326	*i* Pn	Pn	20 15 06.8	+2.3
	comp=E,0.9nm,0.2s,SNR=7.3						
OBKA	Obir	5.41	322	*e*Pn	Pn	20 15 07.5	+2.0
	comp=E,0.5nm,0.2s						
PSZ	Piszkesteto	5.57	3	⇑P	Pn	20 15 08.5	+0.8
ARSA	Arzberg	5.61	332	*e*Pn	Pn	20 15 09.9	+1.6
	comp=E,5.5nm,0.4s,SNR=12						
ARSA				*e*Sn	Sn	20 16 12.7	+0.3
	comp=E,2.9nm,0.5s						
MLR	Muntele Rosu	5.67	54	Pn	Pn	20 15 11.3	+2.2
	comp=E,0.2nm,0.3s,baz=246,slow=10.0,SNR=2.4						
MLR				Sn	Sn	20 16 13.8	0.0
	comp=E,0.4nm,0.3s,baz=246,slow=12,SNR=6.3						
	comp=E,1.7nm,0.5s						
MLR	Muntele Rosu	5.67	54	⇓P	Pn	20 15 13.1	+4.0
RONA	Rosalia, Austr	5.77	339	*e*Pn	Pn	20 15 12.1	+1.5
	comp=E,0.3nm,0.2s						
RONA				*e*Sn	Sn	20 16 16.4	0.0
	comp=E,3.5nm,0.5s						
MYKA	Terra Mystica	5.93	318	*i* Pn	Pn	20 15 14.1	+1.3
	comp=E,0.3nm,0.2s						
CONA	Conrad Observa	6.10	337	*e*Pn	Pn	20 15 16.7	+1.6
	comp=E,0.9nm,0.3s						
CONA				*e*Sn	Sn	20 16 24.6	0.0
	comp=E,4.0nm,0.5s						
KECS	Kecovo	6.17	7	*e*PN	Pn	20 15 17.9	+2.0
KECS				*e*SN	Sn	20 16 24.7	-1.3
MODS	Modra-Piesok	6.20	347	*e*PN	Pn	20 15 19.1	+2.8
MODS				*e*SN	Sn	20 16 26.1	-0.6
VRI	Vrincioaia	6.33	54	⇓P	Pn	20 15 24.1	+6.0
KBA	Koelnbreinsper	6.39	320	*e*Pn	Pn	20 15 21.7	+2.5
	comp=E,0.7nm,0.3s						
MOA	Molln	6.58	328	*i* Pn	Pn	20 15 24.5	+2.9
	comp=E,1.8nm,0.4s						
ABTA	Abfaltersbach	6.59	314	*i* Pn	Pn	20 15 23.4	+1.6
	comp=E,0.7nm,0.1s,SNR=6.3						
ABTA				*e*Sn	Sn	20 16 36.4	-0.2
	comp=E,2.0nm,0.3s						
LESA	Schwarzleotal	6.96	319	*i* Pn	Pn	20 15 29.1	+2.2
	comp=E,1.9nm,0.4s						
LESA				*e*Sn	Sn	20 16 46.7	+1.1
	comp=E,1.5nm,0.3s						
MAUC	Maruska	7.09	352	*e*PN	Pn	20 15 31.0	+2.4
MAUC				*e*SN	Sn	20 16 47.4	-1.4
STHS	Stebnicka Huta	7.17	10	*e*PN	Pn	20 15 32.7	+3.0
STHS				*e*SN	Sn	20 16 50.8	+0.1
VRAC	Vranov	7.22	345	Sn	Sn	20 16 51.6	-0.2
	comp=E,0.4nm,0.3s,baz=197,slow=7.7,SNR=4.1						
WTTA	Wattenberg	7.38	314	*e*Pn	Pn	20 15 33.6	+0.9
	comp=E,0.9nm,0.2s						
WTTA				*e*Sn	Sn	20 16 56.3	+0.1
	comp=E,6.9nm,0.5s						
WATA	Walderalm	7.46	314	*e*Pn	Pn	20 15 35.6	+1.8
	comp=E,0.4nm,0.1s						
WATA				*e*Sn	Sn	20 16 58.3	+0.3
	comp=E,11nm,0.6s						
SQTA	Sankt Quirin	7.59	313	*e*Pn	Pn	20 15 37.9	+2.5
	comp=E,0.6nm,0.2s						
SQTA				*e*Sn	Sn	20 17 01.5	+0.4
	comp=E,5.0nm,0.5s						
GERES	GERESS Array B	7.62	330	Pn	Pn	20 15 38.3	+2.4
	comp=E,0.1nm,0.3s,baz=151,slow=14,SNR=10						
GERES				Sn	Sn	20 16 59.7	-2.1
	baz=135,slow=17,SNR=3.0						
	comp=E,0.7nm,0.4s						
MOTA	Moosalm	7.72	313	*e*Pn	Pn	20 15 38.7	+1.4
	comp=E,1.8nm,0.5s						
MOTA				*e*Sn	Sn	20 17 04.5	+0.1
	comp=E,6.1nm,0.5s						
FETA	Feichten	7.74	310	*e*Pn	Pn	20 15 38.4	+0.9
	comp=E,0.8nm,0.4s						
KHC	Kasperske Hory	7.90	331	*e*PN	Pn	20 15 42.9	+3.2
KHC				*e*SN	Sn	20 17 06.5	-2.1
RETA	Reutte	7.99	313	*e*Sn	Sn	20 17 11.2	+0.3
	comp=E,5.9nm,0.6s						
DAVOX	Davos/Dischmat	8.11	306	Pn	Pn	20 15 43.8	+1.1
	comp=E,0.5nm,0.3s,baz=106,slow=19,SNR=9.6						
DAVOX				Sn	Sn	20 17 13.1	-0.9
	comp=E,0.7nm,0.3s,baz=288,slow=22,SNR=7.4						
	comp=E,2.1nm,0.5s						
DPC	Dobruska-Polom	8.27	346	*e*SN	Sn	20 17 17.0	-0.8
DAVA	Damuels	8.37	309	*e*Sn	Sn	20 17 19.0	-1.4
	comp=E,2.2nm,0.4s						
HFS	Hagfors	18.14	351	P	Pn	20 17 55.7	-0.8
	comp=E,0.2nm,0.3s,baz=170,slow=8.8,SNR=6.3						
	comp=E,0.8nm,0.5s						
NOA	NORSAR Array B	19.35	348	P	P	20 18 09.5	-0.6
	baz=157,slow=9.9,SNR=2.0						
	comp=E,0.4nm,0.6s						
FINES	FINESS Array B	19.53	10	P	P	20 18 11.1	-0.9
	comp=E,0.2nm,0.3s,baz=188,slow=10,SNR=7.5						
	comp=E,3.5nm,1.0s						
EKA	Eskdalemuir Ar	19.61	319	P	P	20 18 12.8	-0.1
	baz=112,slow=9.4						
	comp=E,0.4nm,0.5s						
ARCES	ARCESS Array B	27.42	5	P	P	20 19 28.5	-1.6
	comp=E,3.0nm,0.9s,baz=195,slow=8.8,SNR=5.9						
	comp=E,3.0nm,0.9s						
BVAR	Borovoye Array	35.23	54	P	P	20 20 38.3	-0.5
	comp=E,0.5nm,0.7s,baz=296,slow=4.6,SNR=2.9						
	comp=E,0.5nm,0.7s						
MKAR	Makanchi Array	43.96	62	P	P	20 21 51.0	-0.7
	comp=E,0.3nm,0.7s,baz=280,slow=7.1,SNR=1.4						
	comp=E,0.3nm,0.7s						

DJA 01 20:19:33.5±0.2**, 7°S**±3°×**12°8E**±°**, h287^{km}**±6^{km}**, M4.1**/16**, mb3.7**/16**, mB5.0**/3**, MLv4.3**/15**, Mw(mB)4.3**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.44	110	P	Pn	20 20 32.7	-0.3
KRAI	Karang Ratu	3.48	6	P	Pn	20 20 33.6	+0.2
SOEI	Soe	4.75	232	P	Pn	20 20 47.7	-0.1
SANI	Sanana	5.14	336	P	Pn	20 20 53.4	+1.1
BATI	Baumata	5.50	232	P	Pn	20 20 56.3	-0.2
FAKI	Fak Fak	5.70	48	P	Pn	20 20 58.1	-0.8
	0.1nm14nm,0.9s						
MMRI	Maumere	6.03	252	P	Pn	20 21 03.6	+0.7
	0.1nm24nm,1.0s						
EDFI	Ende, Flores	6.58	252	P	Pn	20 21 10.0	+0.3
SWI	Sorong	6.71	29	P	Pn	20 21 10.0	-1.2
	0.1nm8.1nm,0.5s						
BSSI	Bau Bau, Buton	7.53	275	P	Pn	20 21 21.9	+0.6
	0.1nm7.9nm,1.0s						
WBSI	Waikabubak, Su	9.01	251	P	Pn	20 21 38.1	-1.5
	18nm,1.3s						
PLAI	Plampang	10.37	258	P	Pn	20 21 55.7	-0.6
	19nm,1.3s						

IDC ***01*** *20:31:09.7±1.1, 46°.61N×121°.42W, h0^{km}, mb3.5/3, mbtmp3.4/6, ML3.4/2, Error ellipse: s-maj=17.6km s-min=9.8km az=127.0*

SEA ***01*** *20:31:10.9±2.0, 46°.53N±0°.01×121°.42W±0°.02, h2^{km}±7^{km}, ML3.4/16, ML3.5/88(NEIC), Mwr3.6/11(SLM), Error ellipse: s-maj=2.3km s-min=2.0km az=60.0*

NEIC ***01*** *20:31:10.1±1.0, 46°.52N±0°.01×121°.38W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=2.5km az=345.0*

NEIC ***01*** *20:31:10, 46°.53N×121°.41W, h11^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.86; $M_{\theta\theta}$-2.54; $M_{\phi\phi}$1.68; $M_{r\theta}$0.12; $M_{\theta\phi}$0.72; $M_{\phi r}$1.24; Fault plane solution: $M_0$2.66000×10^{14} NP1:ϕ_s319.00000°, δ67.00000°, λ153.00000°. NP2:ϕ_s60.00000°, δ65.00000°, λ25.00000°. Principal axes: T 2.6583, Plg35.0000°, Azm279.0000°; N 0.0040, Plg55.0000°, Azm102.0000°; P -2.6623, Plg2.0000°, Azm10.0000°;*

ISC 01 20:31:10.5±1.0**, 46°.54N**±0°.02×**121°.39W**±0°.02**, h8^{km}**±8^{km}**, n111, σ0^{s}.84**/127**, mb3.4**/3**, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LON	Longmire	0.36	307		Pg	20 31 17.3	-0.3
PANH	Panhandle Gap,	0.37	332		Pg	20 31 17.6	-0.3
PANH					Sg	20 31 23.0	+0.4
RCM	Mount Rainier-	0.38	322		Pg	20 31 17.9	-0.2
RCM					Sg	20 31 23.5	+0.3
RCS	Mount Rainier-	0.41	325		Pg	20 31 18.4	-0.3
ASR	Mount Adams--S	0.41	200		Pg	20 31 18.3	-0.2
REMR	Mount Rainier-	0.42	313		Pg	20 31 18.5	-0.2
NAC	Naches	0.44	63		Pg	20 31 19.0	-0.1
FMW	Mount Fremont	0.44	334		Pg	20 31 18.9	-0.2
FMW					Sg	20 31 25.4	+0.5
OBSR	Observation Ro	0.47	321		Pg	20 31 19.5	-0.2
OBSR					Sg	20 31 26.7	+0.9
RVC	Mount Rainier-	0.57	316		Pg	20 31 21.3	-0.2
RVC					Sg	20 31 29.5	+0.4
RVC	Mount Rainier-	0.57	316		Pg	20 31 21.3	-0.2
B202	Windy Ridge, M	0.59	241		Pg	20 31 21.5	-0.4
B202					Sg	20 31 29.6	-0.1
SOSW	Source of Smit	0.59	241		Pg	20 31 21.7	-0.3
YA2	Yakima	0.59	91		Pg	20 31 22.3	+0.3
TDL	Tradedollar La	0.60	252		Pg	20 31 21.9	-0.2
CDFW	Cedar Flats	0.62	228		Pg	20 31 22.0	-0.4
ESD	East Dome	0.63	237		Pg	20 31 22.5	-0.1
JRO	Jston Ridge Ob	0.63	246		Pg	20 31 22.4	-0.3
JRO					Sg	20 31 31.2	+0.3
JRO	Jston Ridge Ob	0.63	246	IAML		20 31 31.4	
	comp=N,4µm,0.4s						
JRO				IAML		20 31 31.5	
	comp=E,5µm,0.3s						
REMW	Rembrandt	0.64	239		Pg	20 31 22.8	-0.2
REMW					Sb	20 31 32.1	-1.2
B201	Coldwater, Mou	0.65	249		Pg	20 31 22.6	-0.4
B201					Sg	20 31 31.6	+0.1
SEPW	September Lobe	0.65	239		Pg	20 31 22.8	-0.2
STD	Studebaker Rid	0.65	243		Pg	20 31 22.6	-0.4
STD					Sg	20 31 31.7	+0.2
F05D	White Salmon	0.65	184		Pg	20 31 23.0	-0.1
JLK	June Lake	0.66	234		Pg	20 31 22.8	-0.4
JLK	June Lake	0.66	234		Pg	20 31 22.8	-0.4
JLK					Sb	20 31 32.2	-1.3
SWF2	Southwest Flan	0.68	238		Pg	20 31 23.2	-0.3
SWF2					Sb	20 31 33.1	-1.1
EBG	Ellensburg	0.68	56		Pg	20 31 23.8	+0.2
SHW	Mount Saint He	0.68	240		Pg	20 31 23.3	-0.3
ERK	Elk Rock	0.70	251		Pg	20 31 23.5	-0.4
GSM	Grass Mountain	0.72	338		Pg	20 31 24.1	-0.4
B941	Kapowsin	0.73	309		Pg	20 31 23.7	-0.8
B941					Sg	20 31 34.1	+0.1
FL2	Flat Top 2	0.75	243		Pg	20 31 24.4	-0.5
B203	Quarry, Mount	0.75	241		Pg	20 31 24.2	-0.7
B203					Sg	20 31 34.8	+0.1
MXC	Moxie City	0.76	87		Pg	20 31 25.1	0.0
MXC				IAML		20 31 36.5	
	comp=N,3µm,0.5s						
MXC				IAML		20 31 37.6	
	comp=E,1µm,0.3s						
MXC	Moxie City	0.76	87		Sg	20 31 35.9	+1.0
MTMW	Mount Mitchell	0.77	228		Pg	20 31 24.4	-0.8
D05A	Enumclaw	0.77	328		Pg	20 31 25.1	-0.3
D05A	Enumclaw	0.77	328		Sb	20 31 36.1	-0.7
GHW	Garrison Hill	0.79	310		Pg	20 31 25.1	-0.6
E04D	Cinebar	0.81	272		Pg	20 31 25.7	-0.5
APM	Augspurger Mou	0.82	194		Pg	20 31 26.0	-0.4
APM					Sb	20 31 38.5	+0.1
TBM	Table Mountain	0.83	40		Pg	20 31 26.7	+0.1
PCFR	Pierce County	0.85	303		Pg	20 31 26.2	-0.7
LTY	Liberty	0.88	34		Pg	20 31 26.8	-0.6
LTY				IAML		20 31 39.1	
	comp=N,896nm,0.5s						
LTY				IAML		20 31 39.4	
	comp=E,938nm,0.4s						
LTY	Liberty	0.88	34		Sg	20 31 39.0	+0.3
RAW	Raver	0.88	335		Sb	20 31 39.7	-0.3
F04A	Amboy	0.94	230		Pg	20 31 27.7	-0.8
BRVW	Black Rock Val	0.97	93		Pg	20 31 28.9	-0.2
RVW	Rose Valley	1.01	248		Pg	20 31 28.9	-1.1
BLTW	Bickleton	1.05	126		Pg	20 31 30.2	-0.4
E07A	Sunnyside	1.06	88		Pg	20 31 30.2	-0.6
E07A				IAML		20 31 47.2	
	comp=E,2µm,0.5s						
E07A				IAML		20 31 48.1	
	comp=N,1µm,0.3s						
BVW	Beverly	1.07	75		Pg	20 31 30.9	-0.3
SHRK	Shell Rock	1.08	185		Pg	20 31 30.3	-0.8
VLL	Laurance Lake	1.09	191		Pg	20 31 30.9	-0.6
MDW	Midway	1.13	85		Pg	20 31 31.4	-0.7
D04E	Lakebay	1.15	305		Pg	20 31 32.0	-0.5
BENWA	Benson Ranch	1.16	90		Pg	20 31 31.9	-0.8
RRHS	Rochester High	1.17	284		Pg	20 31 31.8	-1.1
RRHS					Sb	20 31 48.7	+0.5
C05A	Tolt Reservoir	1.18	350		Sg	20 31 47.6	-0.7
SP2	Seward Park 2	1.18	330		Pg	20 31 32.8	-0.3
SP2					Sn	20 31 50.2	+0.7
SNIWA	Snively Ranch	1.20	93		Pg	20 31 32.7	-0.8
SNIWA	Snively Ranch	1.20	93		Pg	20 31 32.7	-0.8
SNIWA					Sb	20 31 50.1	+1.0
F07A	Phinny Hill Vi	1.20	122		Pg	20 31 32.8	-0.7
F07A				IAML		20 31 52.7	
	comp=E,1µm,0.4s						
F07A	Phinny Hill Vi	1.20	122		Sb	20 31 49.7	+0.5
F04D	Rainier, OR	1.21	249		Pg	20 31 32.6	-1.2
HOOD	Mount Hood Mea	1.23	189		Pg	20 31 32.9	-1.2
WAH2	Wahluke Slope	1.28	79		Pg	20 31 34.1	-0.9
HAWA	Hanford	1.29	96		Pg	20 31 34.0	-1.3
HAWA				IAML		20 31 53.1	
	comp=E,993nm,0.6s						
G05A	Wamic	1.29	178		Pg	20 31 34.6	-0.7
G05A				IAML		20 31 56.0	
	comp=E,1µm,0.9s						
G06A	Carlson Farm,	1.40	158		Pn	20 31 35.9	-0.5
GNW	Green Mountain	1.42	317		Pn	20 31 35.6	-1.0
EPH	Ephrata	1.48	56	IAML		20 31 59.6	
	comp=E,1µm,0.4s						
EPH				IAML		20 32 00.5	
	comp=N,905nm,0.5s						
F03A	Seaside	1.62	249		Pn	20 31 39.2	-0.2
RADR	Rader Ridge	1.67	267		Pn	20 31 40.6	+0.5
RADR				IAML		20 32 08.2	
	comp=E,897nm,0.8s						
RADR				IAML		20 32 09.4	
	comp=N,590nm,0.6s						
WISH	Wishkah	1.73	290		Pb	20 31 41.8	-0.8
WISH				IAML		20 32 10.0	
	comp=N,312nm,0.6s						
YPT	Yellepit	1.75	105		Pn	20 31 40.7	-0.5
YPT				IAML		20 32 05.7	
	comp=N,541nm,0.5s						
D08A	Wollman Farm,	1.77	72		Pn	20 31 41.2	-0.3
G03D	McMinnville, O	1.86	225		Pn	20 31 43.2	+0.5
G03D				IAML		20 32 15.0	
	comp=E,427nm,0.5s						
G03D				IAML		20 32 15.6	
	comp=N,546nm,0.7s						
NLWA	Neilton Lookou	1.90	298		Pn	20 31 43.4	+0.1
NLWA				IAML		20 32 12.8	
	comp=N,265nm,0.5s						
NLWA				IAML		20 32 15.2	
	comp=N,291nm,1.2s						
H04A	Detroit Lake	1.94	197		Pn	20 31 44.1	+0.4
H04A				IAML		20 32 12.9	
	comp=N,285nm,0.4s						
H04A				IAML		20 32 18.3	
	comp=E,271nm,0.4s						
G08A	Pilot Rock	2.10	125		Pn	20 31 45.0	-1.1
G08A				IAML		20 32 17.8	
	comp=N,407nm,0.6s						
G08A				IAML		20 32 17.8	
	comp=E,410nm,0.5s						
H04D	Lebanon	2.22	206		Pb	20 31 49.5	-1.5
H04D				IAML		20 32 20.9	
	comp=E,305nm,0.6s						
H04D				IAML		20 32 25.6	
	comp=N,230nm,0.6s						
E09A	Wood Farm, Sta	2.24	89		Pn	20 31 47.4	-0.5
E09A				IAML		20 32 26.8	
	comp=E,454nm,0.6s						
LNOR	Lincton Mounta	2.26	106		Pn	20 31 47.8	-0.3
LNOR				IAML		20 32 28.7	
	comp=E,428nm,0.5s						
B08A	Colville Reser	2.30	37		Pn	20 31 48.6	-0.1
B08A				IAML		20 32 23.4	
	comp=E,193nm,0.6s						
B08A				IAML		20 32 25.6	
	comp=N,190nm,0.7s						
COR	Corvallis	2.37	215	Pn	Pn	20 31 50.8	+1.2
COR				IAML		20 32 25.0	
	comp=N,218nm,0.8s						
COR				IAML		20 32 30.2	
	comp=N,281nm,0.7s						
C09A	Chrisman Ranch	2.47	58		Pn	20 31 51.0	-0.1
WIFE	Three Sisters-	2.50	187		Pn	20 31 52.7	+1.1
PGC	Sidney	2.53	327		Pn	20 31 53.8	+1.9
PINE	Pine Mountain	2.76	173		Pn	20 31 56.4	+1.1
PINE				IAML		20 32 43.6	
	comp=E,229nm,0.9s						
PINE				IAML		20 32 44.3	
	comp=N,176nm,1.1s						
I07A	Izee	2.79	151		Pn	20 31 55.9	+0.3
I04A	Tendick Farm,	2.84	195		Pn	20 31 58.2	+2.1
I04A				IAML		20 32 37.6	
	comp=E,108nm,0.4s						
CLRS	Cowichan Lake	2.94	322		Pn	20 31 58.6	+1.1
F10A	Beach Ranch, E	2.94	100		Pn	20 31 57.9	+0.2
BMO	Blue Mountains	3.32	119		Pn	20 32 02.4	-0.4
BMO				IAML		20 33 00.3	
	comp=E,70nm,0.4s						
BMO				IAML		20 33 00.4	
	comp=E,82nm,0.6s						
NEW	Newport	3.38	58	Pn	Pn	20 32 03.3	-0.2
	comp=E,3.2nm,0.3s,baz=244,slow=13,SNR=24						
NEW				Sn	Sn	20 32 41.9	-1.9
	comp=E,9.0nm,0.3s,baz=100,slow=19,SNR=8.2						
NEW				Lg	Lg	20 32 54.8	
	comp=E,46nm,0.3s,baz=134,slow=22,SNR=13						
	comp=E,7.7nm,0.2s						
NEW	Newport	3.38	58		Pn	20 32 03.1	-0.4
NEW				IAML		20 32 59.4	
	comp=E,139nm,0.5s						
NEW				IAML		20 33 05.9	
	comp=E,157nm,1.1s						
J08A	Circle Bar Ran	3.79	146		Pn	20 32 10.2	+0.8
PLID	Pearl Lake	4.04	109		Pn	20 32 12.8	0.0
PLID				IAML		20 33 19.9	
	comp=E,34nm,0.7s						
YBH	Yreka Blue Hor	4.90	192	Pn	Pn	20 32 27.9	+3.4
	baz=8.8,slow=12,SNR=9.6						
JTMT	Jette	5.00	73		Pn	20 32 26.5	+0.6
MFID	Camas Ranch	5.03	126		Pn	20 32 26.6	+0.2
MFID				IAML		20 33 54.0	
	comp=E,49nm,1.4s						
MSO	Missoula	5.14	84		Pn	20 32 27.5	-0.3
MSO				IAML		20 34 06.3	
	comp=E,47nm,1.9s						
BPMT	Black Pine Rid	5.49	88		Pn	20 32 33.1	+0.4
NVAR	Mina Array Bea	8.41	163	Pn	Pn	20 33 17.0	+4.0
	comp=E,0.1nm,0.3s,baz=360,slow=13,SNR=1.7						
	comp=E,0.3nm,0.3s						
PDAR	Pinedale Array	9.24	110	Pn	Pn	20 33 29.6	+5.5
	comp=E,1.6nm,0.8s,baz=306,slow=15,SNR=8.8						
YKA	Yellowknife Ar	16.45	11	Pn	Pn	20 35 00.8	-0.7
	comp=E,0.1nm,0.3s,baz=194,slow=15,SNR=6.6						
TXAR	Lajitas Array	22.06	135	P	P	20 36 06.6	+0.8
	comp=E,0.4nm,0.9s,baz=329,slow=11,SNR=3.5						
	comp=E,0.4nm,0.9s						
ILAR	Eielson Array	22.97	332	P	P	20 36 16.4	+1.4
	comp=E,1.2nm,1.0s,baz=137,slow=9.7,SNR=7.2						
	comp=E,1.2nm,1.0s						
FINES	FINESS Array B	69.22	16	P	P	20 42 17.6	+0.4
	comp=E,3.6nm,1.0s,baz=335,slow=9.6,SNR=4.0						
	comp=E,3.6nm,1.0s						

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*NEIC **01** 20:34:05.6±2.5, 48°.33N±0°.07×128°.8W±0°.2, h10^{km}±2^{km}, mb4.0/26, Error ellipse: s-maj=20.2km s-min=7.7km az=240.0*

*GCMT **01** 20:34:07.8±0.5, 48°.25N±0°.05×129°.09W±0°.05, h23^{km}±1^{km}, MW4.8/71, Moment Tensor Solution. s23,c27; s71,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.71±.16; M$_{\theta\theta}$0.14±.09; M$_{\phi\phi}$1.57±.10; M$_{r\theta}$-0.40±.18; M$_{\theta\phi}$0.09±.06; M$_{\phi r}$0.03±.11; Best double couple: M$_0$1.68400×10^{16} NP1:ϕ_s15.00000°,δ46.00000°,λ-74.00000°. NP2: ϕ_s172.00000°,δ46.00000°,λ-106.00000°. Principal axes: T 1.5750, Plg0.0000°, Azm274.0000°; N 0.2220, Plg12.0000°, Azm183.0000°; P -1.7920, Plg78.0000°, Azm4.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 20:34:05.2±1.0**, 48°.48N**±0°.07×**128°.8W**±0°.1**, h10^{km}, n43, σ1^{s}15**/40**, mb4.1**/3**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	2.21	12		Pb	20 34 43.9	-1.3
HOLB				Sn	Sb	20 35 13.3	+0.7
OZB	Mount Ozzard	2.26	77	Pn	Pn	20 34 42.6	-0.1
CBB	Campbell River	2.75	54		Pn	20 34 51.0	+1.6
CLRS	Cowichan Lake	3.14	82		Pn	20 34 54.9	+0.2
BBB	Bella Bella	3.74	7		Pn	20 35 04.7	+1.8
LLLB	Lillooet	5.00	62	Pn	Pn	20 35 21.4	+1.1
NVAR	Mina Array Bea	12.62	139		Pn	20 37 04.6	-0.2
NV11	Mina Array Sit	12.68	138		Pn	20 37 04.8	-0.8
PD31	Pinedale Array	14.63	106		Pn	20 37 32.2	-0.2
WCT	Wildcat Mounta	14.71	138		Pn	20 37 33.7	+0.3
TPNV	Topopah Spring	14.75	137		Pn	20 37 32.2	-1.8
ISA	Isabella, Lake	14.92	145		Pn	20 37 36.6	+0.4
PRN	Pahroc Range	14.95	133		Pn	20 37 39.0	+2.3
MPMC	Manual Prospec	14.97	142		Pn	20 37 37.1	+0.2
CLC	China Lake	15.13	143		Pn	20 37 39.3	+0.4
SHPR	Sheep Range	15.62	135		Pn	20 37 44.4	-1.1
Q16A	Castle Valley	15.92	120		Pn	20 37 50.1	+0.7
Q16A				IAmb	IAmb	20 37 59.8	
	comp=Z,10nm,1.1s						
MTPU	Mount Pierson	15.96	125		P	20 37 52.5	-1.2
MTPU				IAmb	IAmb	20 38 00.5	
	comp=Z,12nm,1.1s						
YKAW1	Yellowknife Wh	16.16	24		Pn	20 37 49.5	-2.6
YKAW1				IAmb	IAmb	20 38 13.6	
	comp=Z,14nm,1.3s						
LCMT	Little Creek M	16.17	129	P	Pn	20 37 53.2	+0.7
LCMT				IAmb	IAmb	20 38 02.7	
	comp=Z,14nm,1.1s						
K22A	Casper	16.65	102	P	P	20 38 00.8	-0.3
K22A				IAmb	IAmb	20 38 08.3	
	comp=Z,32nm,1.4s						
ELS	Elsinore Mount	17.10	146	P	P	20 38 06.0	-0.1
U15A	North Rim	17.11	129	P	P	20 38 08.2	+1.9
U15A				IAmb	IAmb	20 38 27.7	
	comp=Z,11nm,1.2s						
W13A	Hualapai Mount	17.36	135		Pn	20 38 07.3	-0.4
PV23	Carpenter Ridg	17.49	118		Pn	20 38 08.3	-1.0
PFO	Pinyon Flats O	17.51	144		P	20 38 10.8	+0.2
PV14	Lion Creek, Pa	17.54	118	P	Pn	20 38 09.5	-0.3
PV14				IAmb	IAmb	20 38 18.0	
	comp=Z,27nm,1.3s						
FFC	Flin Flon	17.75	59		Pn	20 38 12.3	+0.2
ESJX	Sierra Juarez	19.13	145	P	Pn	20 38 28.9	-0.4
CCB	Clear Creek Bu	19.14	335	P	Pn	20 38 28.7	-0.4
CCB				IAmb	IAmb	20 38 43.7	
	comp=Z,10nm,1.2s						
F31M	Tsiigehtchic	19.18	354		P	20 38 28.1	-0.5
F31M				IAmb	IAmb	20 38 40.7	
	comp=Z,21nm,1.5s						
BMAR	Burnt Mountain	20.63	343	P	P	20 38 44.7	+0.2
E28M	Babbage River	20.88	349	P	P	20 38 48.0	+0.9
E28M				IAmb	IAmb	20 38 57.7	
	comp=Z,10nm,1.1s						
KSCO	Kaye Shedlock'	21.08	107		P	20 38 51.8	+2.1
TUC	Tucson	21.13	133	P	P	20 38 48.9	-1.2
TUC				IAmb	IAmb	20 38 56.3	
	comp=Z,5.5nm,1.1s						
K30B	Basset	21.18	95		P	20 38 52.3	+1.6
ANMO	Albuquerque	21.39	121	P	P	20 38 54.5	+1.4
ABQ	Albuquerque	21.39	121		P	20 38 54.6	+1.4
ABQ				IAmb	IAmb	20 39 01.8	
	comp=Z,13nm,1.5s						
TAOE	Nuku Hiva Isla	57.95	193	eLR	LR	21 00 51.4	
	comp=Z,67nm,27.2s						
PPT2	Papeete2	68.33	201	eLR	LR	21 05 30.6	
	comp=Z,79nm,28.2s						
TBI	Tubuai	73.85	200	eLR	LR	21 08 12.6	
	comp=Z,348nm,33.2s						
HHC	Hu-ho-hao-te	76.29	317	eP	P	20 45 53.8	-0.3
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,71nm,3.6s						
DZM	Mont Dzumac	90.88	237	eLR	LR	21 16 06.9	
	comp=Z,81nm,23.9s						

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*TIR **01** 20:48:03.5, 41°.47N×19°.47E, h18^{km}, Md2.9/7, Ml2.7/6*

*PDG **01** 20:48:04.4±0.4, 41°.48N×19°.50E, h10^{km}±1^{km}, ML2.6/13, Error ellipse: s-maj=0.5km s-min=1.8km az=0.0*

*SKO **01** 20:48:05.0, 41°.55N×19°.39E, h0^{km}, ML2.7*

*THE **01** 20:48:15.4, 41°N±23°×2°0E±2°0, h6^{km}±22^{km}, M2.5/10, MLh2.5/10*

ISC 01 20:48:04.9±1.0**, 41°.48N**±0°.02×**19°.48E**±0°.03**, h10^{km}**±8^{km}**, n46, σ1^{s}16**/74**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.32	115	Pg	Pg	20 48 11.5	+0.3
TIR				Sg	Sg	20 48 15.4	-0.1
TIR				AML	AML	20 48 16.6	
	5.3nm,0.1s						
TIR	Tirane	0.32	115	i Pg	Pg	20 48 11.7	+0.5
ULC	Ulcinj	0.51	340	ePg	Pg	20 48 14.3	-0.6
ULC				i Sg	Sg	20 48 22.4	+0.8
SDA	Shkodra	0.57	1	Pg	Pg	20 48 15.3	-0.6
SDA				Sg	Sg	20 48 22.9	-0.5
SDA				AMd		20 49 11.2	
DRME	Dracevica, Mon	0.74	342	ePg	Pg	20 48 18.3	-0.8
DRME				eSg	Sb	20 48 30.0	0.0
PHP	Peshkopia	0.75	74	Pg	Pg	20 48 17.9	-1.4
PHP				Sg	Sg	20 48 28.9	-0.2
PHP				AML	AML	20 48 32.1	
	1.7nm,0.3s						
PHP				AMd		20 49 03.5	
BUM	Brajici-Budva	0.93	332	ePg	Pg	20 48 21.9	-0.8
BUM				i Sg	Sb	20 48 36.7	+1.2
PDG	Podgorica	0.96	350	Pg	Pg	20 48 21.9	-1.4
PDG				Sg	Sg	20 48 35.9	+0.1
PDG				AMd		20 49 17.4	
PDG	Podgorica	0.96	350	ePg	Pg	20 48 22.0	-1.4
PDG				i Sg	Sn	20 48 37.8	-0.3
OHR	Ohrid	1.06	110	i Pg	Pb	20 48 25.2	-0.1
OHR				i Sg	Sn	20 48 42.3	+1.6
OHR				i Lg	Lg	20 48 43.8	
	comp=N,147nm,0.5s						
OHR				i Lg	Lg	20 48 44.8	
	comp=E,129nm,0.5s						
CEME	Cevo	1.14	339	ePg	Pb	20 48 25.6	-1.2
CEME				eSg	Sn	20 48 43.5	+0.8
PVY	Plav	1.17	18	ePg	Pb	20 48 26.0	-1.2
PVY				i Sg	Sn	20 48 44.3	+0.9
HCY	Herceg Novi	1.21	323	ePg	Pn	20 48 27.3	-0.6
HCY				i Sg	Sn	20 48 46.2	+1.8
KBN	Korca	1.31	131	Pn	Pn	20 48 24.1	-5.1
KBN				Sn	Sb	20 48 45.9	-0.6
KBN				AML	AML	20 48 51.9	
	comp=E,0.9nm,0.5s						
KBN				AMd		20 49 28.3	
NKME	Niksic	1.34	343	ePg	Pn	20 48 29.4	-0.3
NKME				eSg	Sg	20 48 49.8	+1.7
KOME	Kolasin	1.37	1	ePg	Pn	20 48 29.8	-0.3
KOME				eSg	Sg	20 48 51.2	+2.4
IVA	Berane	1.42	12	ePg	Pn	20 48 30.2	-0.6
IVA				i Sg	Sg	20 48 52.9	+2.3
SKO	Skopje	1.54	71	i Pg	Pg	20 48 34.7	+0.3
SKO				i Sg	Sg	20 48 54.8	+0.3
BRY	Bratogost	1.58	334	ePn	Pn	20 48 33.8	+0.7
BRY				i Sn	Sg	20 48 56.9	+1.2
NEST	Nestorio	1.60	132	P	Pg	20 48 35.4	-0.1
NEST				S	Sn	20 48 51.6	-2.4
UPM	Unac-Piva	1.77	346	ePn	Pb	20 48 37.2	-0.3
UPM				i Sn	Sg	20 49 01.4	-0.4
PENT	Pentalofos	1.80	135	P	Pb	20 48 38.3	+0.4
PLE	Pljevlja	1.85	358	ePn	Pb	20 48 38.4	-0.4
PLE				i Sn	Sb	20 49 03.1	+1.1
NOCI	Noci	1.96	250	Pn	Pn	20 48 39.1	+1.0
NOCI				Sn	Sb	20 49 05.1	+0.1
NOCI				AML	AML	20 49 09.7	
	comp=E,0.2nm,0.4s						
NOCI				AMd		20 49 55.3	
IGT	Igoumenitsa	2.05	161	Pn	Pn	20 48 40.2	+0.7
IGT				Sn	Sb	20 49 08.3	+0.4
IGT				AML	AML	20 49 16.3	
	comp=E,0.1nm,0.3s						
IGT				AMd		20 49 50.8	
IGT	Igoumenitsa	2.05	161	P	Pn	20 48 39.3	-0.2
IGT	Igoumenitsa	2.05	161	i Pn	Pn	20 48 40.2	+0.7
IGT				i Sn	Sn	20 49 06.2	+1.1
KPRO	Kipourio	2.09	136	P	Pb	20 48 42.0	-0.9
KPRO				S	Sn	20 49 02.3	-3.9
BARS	Barje	2.19	52	i Pn	Pn	20 48 42.2	+0.9
BARS				i Sn	Sb	20 49 11.6	0.0
GRG	Griva	2.26	103	i Pn	Pn	20 48 43.7	+1.4
GRG				i Sn	Sb	20 49 11.9	-1.9
PRMD	Pramanda	2.31	147	P	Pn	20 48 44.7	+1.7
VAY	Valandovo	2.33	93	i Pn	Pn	20 48 44.1	+0.9
VAY				i Sn	Sb	20 49 13.7	-2.0
VAY				i Lg	Lg	20 49 13.8	
	comp=N,25nm,0.6s						
VAY				i Lg	Lg	20 49 16.2	
	comp=E,10nm,0.6s						
TETR	Tetrakomo, Epi	2.54	147	P	Pn	20 48 47.9	+1.7
KNT	Kendrikon	2.59	96	i Pn	Pn	20 48 47.9	+1.1
KNT				i Sn	Sn	20 49 18.6	+0.2
LIT	Litokhoron	2.67	120	i Pn	Pn	20 48 49.6	+1.7
THL	Klokotos Trika	2.72	134	P	Pn	20 48 50.5	+1.9
KKB	Krupnik	2.75	81	i Pn	Pn	20 48 50.3	+1.2
THE	Thessaloniki	2.77	107	i Pn	Pn	20 48 50.9	+1.7
TSLK	Tsoukalades, L	2.80	161	P	Pn	20 48 49.8	0.0
LKD2	Lefkada island	2.84	161	P	Pn	20 48 50.5	+0.2
DRAG	Dragano-Lefkad	2.92	163	P	Pn	20 48 51.3	-0.1
NYDR	Nydri-Lefkada	2.92	161	P	Pn	20 48 51.2	-0.1
EVGI	Lefkada island	3.00	162	P	Pn	20 48 52.3	-0.1
SRS	Serrai	3.12	95	i Pn	Pn	20 48 54.9	+0.9
FSK	Fiskardo	3.13	164	P	Pn	20 48 53.7	-0.6
DMLN	Damoulianata-K	3.31	168	P	Pn	20 48 56.2	-0.6

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*ATH **01** 21:01:53.1, 35°.22N×26°.35E, h42^{km}±2^{km}, ML2.5/3, Manual Solution by A.Fokaefs First location: 2019/12/01 21:03:05, This location: 2019/12/02 07:06:06 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 4 km; Longitude uncertainty: 2 km*

*THE **01** 21:01:55.1, 35°N±4°×2°6E±°, h23^{km}±4^{km}, M2.4/7, MLh2.4/7*

*AFAD **01** 21:01:58.0, 35°.37N×26°.60E, h35^{km}, ML2.4*

ISC 01 21:01:54.9±0.9**, 35°.26N**±0°.08×**26°.28E**±0°.03**, h33^{km}**±6^{km}**, n26, σ1^{s}34**/41**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIT2	Siteia	0.15	247	P	Pb	21 02 00.7	-0.3
SIT2				S	Sb	21 02 05.8	+0.7
ZKR	Zakros	0.16	198	P	Pb	21 02 00.5	-0.5
ZKR				S	Sb	21 02 05.2	0.0
ZKR	Zakros	0.16	198	P	Pb	21 02 00.4	-0.7
ZKR				S	Sb	21 02 05.7	+0.5
STIA	Sitia Lasithi	0.16	248	P	Pb	21 02 00.8	-0.3
STIA				S	Sb	21 02 06.1	+0.8
NPS	Neapolis	0.54	270	P	Pb	21 02 05.6	-0.6
NPS				S	Sb	21 02 13.9	0.0
NPS	Neapolis	0.54	270	P	Pb	21 02 05.4	-0.8
NPS				S	Sb	21 02 14.3	+0.4
KARP	Karpathos	0.78	68	P	Pn	21 02 09.7	+0.1
KARP				S	Sb	21 02 20.9	+0.6
KARP	Karpathos	0.78	68	P	Pn	21 02 08.8	-0.8
IACM	Heraklion	0.99	273	S	Sn	21 02 26.3	+1.1
IACM	Heraklion	0.99	273	P	Pn	21 02 12.6	+0.2
IDI	Anoyia	1.13	272	P	Pn	21 02 14.7	+0.1
IDI				S	Sn	21 02 30.0	+0.9
IDI	Anoyia	1.13	272	P	Pn	21 02 14.5	0.0
IDI				S	Sn	21 02 29.6	+0.6
SNT5	Nea Kammeni, S	1.34	328	P	Pn	21 02 16.9	-0.5
SNT5	Nea Kammeni, S	1.34	328	P	Pn	21 02 16.6	-0.8
VAM	Vamos	1.70	275	P	Pn	21 02 21.1	-1.2
YAZI	Mula-Dat§a-	1.71	34	P	Pn	21 02 22.0	-0.4
YAZI				S	Sn	21 02 40.3	-2.7
ARG	Arkhangelos	1.78	57	P	Pn	21 02 23.7	+0.3

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APE   Apeiranthos          1.90 342  P        Pn       21 02 24.5 -0.6
TURN  Turunc               2.20  46  P        Pn       21 02 28.6 -0.4
TURN                                 S        Sn       21 02 53.1 -2.0
TURN                                i IAML             21 03 15.0
      comp=E,26nm,2.3s
IZZE  Mula-Seydike         2.67  63  P        Pn       21 02 34.4 -1.2
IZZE                                 S        Sn       21 03 03.4 -3.4
IZZE                                i IAML             21 03 44.0
      comp=E,28nm,1.4s
SABU  Mula-Dalaman         2.68  54  P        Pn       21 02 35.6 -0.2
SABU                                 S        Sn       21 03 10.2 +3.0
SABU                                i IAML             21 03 14.0
      comp=E,23nm,2.1s
SABU                                i IAML             21 03 27.0
      comp=N,18nm,1.0s
DNZT  Denizli-Tavas-       3.00  47  P        Pn       21 02 40.2  0.0
DNZT                                i IAML             21 03 15.0
      comp=N,12nm,3.2s
DNZT                                 S        Sn       21 03 18.3 +3.3
ESEN  Aydn-Nazilli         3.03  33  P        Pn       21 02 41.2 +0.7
ESEN                                i IAML             21 03 16.0
      comp=E,16nm,2.8s
ESEN                                i IAML             21 03 35.0
      comp=N,16nm,2.9s
TAVA  DENIZLI_Tavas        3.06  43  P        Pn       21 02 43.0 +1.9
GOLH  Golhisar             3.31  52  P        Pn       21 02 44.4 -0.1
GOLH                                 S        Sn       21 03 25.5 +2.8
KIRA  zmir-Kiraz           3.39  30  P        Pn       21 02 46.0 +0.4
KIRA                                i IAML             21 04 24.0
      comp=E,12nm,4.1s
KIRA                                i IAML             21 04 34.0
      comp=N,18nm,3.0s
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*IDC **01** 21:16:51.2±4.3, 16°.24N×93°.06W, h0^{km}, mb3.9/7, mbtmp3.9/8, MS3.2/1, Error ellipse: s-maj=91.1km s-min=35.9km az=9.0*

*GCG **01** 21:16:59.4±1.8, 15°.79N×94°.06W, h36^{km}±999^{km}, MD4.8, ML4.8*

*MEX **01** 21:17:01.3±0.5, 15°.87N×93°.95W, h89^{km}±7^{km}, MD4.4*

*NEIC **01** 21:17:01.5±2.2, 15°.91N±0°.06×93°.93W±0°.04, h86^{km}±5^{km}, mb4.0/35, Md4.4/88(MEX), Error ellipse: s-maj=9.1km s-min=5.5km az=201.0*

*CATAC **01** 21:17:01.9±0.5, 16°N±4°×9°4W±°, h58^{km}±8^{km}, M4.3/9, MLv4.3/9, Error ellipse: s-maj=10.1km s-min=4.6km az=39.8, confirmed*

ISC 01 21:16:59.7±0.8**, 15°.81N**±0°.03×**94°.01W**±0°.03**, h84**^{km}±8^{km}**, n153, σ2^{s}40**/225**, mb3.9**/12**, Near coast of Oaxaca**

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Code  Station Name          Δ°   AZ°    Phase ID            Time      Res
                                      Op       ISC       h  m  s    ISC
PCIG                       0.77  97            Pn       21 17 16.4 -0.1
PCIG                                           Sn       21 17 28.8  0.0
PCIG                       0.77  97  eP        Pn       21 17 16.4 -0.1
PCIG                                 eS        Sn       21 17 28.8  0.0
TGBT  Tuxtla Gutierr       1.31  42            Pn       21 17 22.7 -0.1
TGBT                                           Sn       21 17 38.8 -1.3
TGBT  Tuxtla Gutierr       1.31  42  eP        Pn       21 17 22.7 -0.1
TGBT                                 eS        Sn       21 17 38.8 -1.3
UXUV  UXUV                 1.51 355            Pn       21 17 26.2 +0.8
UXUV                                           Sn       21 17 43.8 -0.9
UXUV  UXUV                 1.51 355  eP        Pn       21 17 26.2 +0.8
UXUV                                 eS        Sn       21 17 43.8 -0.9
CMIG  Matias Romero        1.53 327   Pn       Pn       21 17 26.0 +0.4
      76nm,0.3s,baz=158,slow=11,SNR=350
CMIG                                  Sn       Sn       21 17 44.5 -0.7
      289nm,0.3s,baz=24,slow=20,SNR=33
CMIG  Matias Romero        1.53 327            Pn       21 17 26.0 +0.4
CMIG                                           Sn       21 17 45.1  0.0
CMIG  Matias Romero        1.53 327  eP        Pn       21 17 26.0 +0.4
CMIG                                 eS        Sn       21 17 45.1  0.0
PATR  El Naranjo           1.85 112            Pn       21 17 29.9  0.0
PATR                                           Sn       21 17 47.4 -5.5
PATR  El Naranjo           1.85 112  eP        Pn       21 17 29.9  0.0
PATR                                 eS        Sn       21 17 47.4 -5.5
CCIG  Comitan              1.86  75            Pn       21 17 29.3 -0.8
CCIG  Comitan              1.86  75            Sn       21 17 49.5 -3.7
CCIG  Comitan              1.86  75  eP        Pn       21 17 30.2 +0.2
CCIG                                 eS        Sn       21 17 49.5 -3.7
CCIG  Comitan              1.86  75  eP        Pn       21 17 30.1 -0.1
CCIG                                 eS        Sn       21 17 49.0 -4.2
CCIG  Comitan              1.86  75   P        Pn       21 17 30.3 +0.2
CCIG  Comitan              1.86  75   S        Sn       21 17 51.0 -2.2
PAVE  Pavencul             1.87 109            Pn       21 17 30.7 +0.4
PAVE                                           Sn       21 17 50.2 -3.3
PAVE  Pavencul             1.87 109  eP        Pn       21 17 30.7 +0.4
PAVE                                 eS        Sn       21 17 50.2 -3.3
THIG                       1.91 118            Pn       21 17 31.1 +0.6
THIG                                           Sn       21 17 49.7 -4.2
THIG                       1.91 118  eP        Pn       21 17 31.1 +0.6
THIG                                 eS        Sn       21 17 49.7 -4.2
THIG                       1.91 118  eP        Pn       21 17 30.5  0.0
CHUJ  Union Juarez         1.97 111  eP        Pn       21 17 31.5 -0.1
CHUJ                                 eS        Sn       21 17 52.0 -3.7
HUIG  Huatulco             2.02 269  e         Pn       21 17 31.2 -0.8
HUIG                                 e                  21 17 50.6
HUIG  Huatulco             2.02 269  eP        Pn       21 17 31.0 -1.0
HUIG                                 i S       Sn       21 17 53.5 -3.1
SMCA  Catarina             2.09 117  eP        Pn       21 17 33.5 +0.5
SMCA                                 eS        Sn       21 17 56.6 -1.8
TUIG  Tuzandepetl          2.25 350            Pn       21 17 34.6 -0.5
TUIG                                           Sn       21 18 00.1 -2.0
TUIG  Tuzandepetl          2.25 350  eP        Pn       21 17 34.6 -0.5
TUIG                                 eS        Sn       21 18 00.1 -2.0
NEUV  Arroyo Zacate        2.56 318            Pn       21 17 39.7 +0.5
NEUV                                           Sn       21 18 01.7 -7.7
NEUV  Arroyo Zacate        2.56 318  eP        Pn       21 17 39.7 +0.5
NEUV                                 eS        Sn       21 18 01.7 -7.7
RTAL  Retalhuleu           2.57 119   Pn       Pn       21 17 40.7 +1.2
RTAL                                  Sn       Sn       21 18 10.4 +0.5
RTAL  Retalhuleu           2.57 119  eP        Pn       21 17 40.8 +1.4
RTAL                                 eS        Sn       21 18 03.1 -6.8
RTAL  Retalhuleu           2.57 119   P        Pn       21 17 41.0 +1.5
RTAL  Retalhuleu           2.57 119   S        Sn       21 18 10.9 +1.0
QUIS  Sacapulas            2.86 100  eP        Pn       21 17 44.1 +0.7
OXLC  Oaxaca               2.87 296            Pn       21 17 44.6 +1.0
OXLC  Oaxaca               2.87 296  eP        Pn       21 17 44.6 +1.0
OXLC                                 e                  21 18 09.8
STG2  El Palmar, Qui       2.89 118  eP        Pn       21 17 40.2 -3.6
OXIG  Oaxaca               2.90 296            Pn       21 17 45.9 +1.9
OXIG                                           Sn       21 18 16.2 -1.8
VHO   Vista Hermosa        2.90 296  eP        Pn       21 17 45.9 +1.9
VHO                                  eS        Sn       21 18 16.2 -1.8
STG8  El Palmar, Qui       2.90 117  eP        Pn       21 17 40.2 -3.8
PMUV  Sontecomapan         2.92 339            Pn       21 17 42.6 -1.7
PMUV                                           Sn       21 18 13.5 -4.9
PMUV  Sontecomapan         2.92 339  eP        Pn       21 17 42.6 -1.7
PMUV                                 eS        Sn       21 18 13.5 -4.9
STG5  El Palmar, Qui       2.93 118  eP        Pn       21 17 40.3 -4.0
PEIG  Puerto Escondi       3.02 274            Pn       21 17 44.7 -0.8
PEIG                                           Sn       21 18 15.8 -5.0
PEIG  Puerto Escondi       3.02 274  eP        Pn       21 17 44.7 -0.8
PEIG                                 eS        Sn       21 18 15.8 -5.0
APG   El Apazote           3.51 103  eP        Pn       21 17 52.5 +0.2
YOIG  Yosondua             3.55 288            Pn       21 17 54.5 +1.6
YOIG                                           Sn       21 18 33.3 -0.7
YOIG  Yosondua             3.55 288  eP        Pn       21 17 54.5 +1.6
YOIG                                 eS        Sn       21 18 33.3 -0.7
TOIG  Toxpalan             3.71 308            Pn       21 17 57.1 +2.3
TOIG                                           Sn       21 18 37.6 +0.2
TOIG  Toxpalan             3.71 308  eP        Pn       21 17 57.1 +2.3
TOIG                                 eS        Sn       21 18 37.6 +0.2
TXIG  Tlaxiaco             3.88 292            Pn       21 17 59.4 +2.1
TXIG                                           Sn       21 18 39.1 -2.8
TXIG  Tlaxiaco             3.88 292  eP        Pn       21 17 59.4 +2.1
TXIG                                 eS        Sn       21 18 39.1 -2.8
PNIG  Pinotepa             4.00 279            Pn       21 17 58.9 +0.1
PNIG  Pinotepa             4.00 279  eP        Pn       21 17 58.9 +0.1
PNIG                                 e                  21 18 35.7
TPIG  Tehuac#an            4.12 310            Pn       21 18 02.8 +2.2
TPIG                                           Sn       21 18 48.2 +0.4
TPIG  Tehuac#an            4.12 310  eP        Pn       21 18 02.8 +2.2
TPIG                                 eS        Sn       21 18 48.2 +0.4
PETF  Flores               4.13  74   Pn       Pn       21 18 00.6 +0.1
PETF  Flores               4.13  74            Sn       21 18 44.5 -3.1
PETF  Flores               4.13  74  eP        Pn       21 17 59.6 -0.9
PETF                                 eS        Sn       21 18 44.5 -3.1
PETF  Flores               4.13  74  eP        Pn       21 18 00.6 +0.1
PETF                                  IAML              21 18 49.9
      comp=N,880nm,0.4s
PETF  Flores               4.13  74   P        Pn       21 18 00.8 +0.3
PETF  Flores               4.13  74   S        Sn       21 18 45.7 -1.9
SCIG  Sabancuy             4.14  40            Pn       21 18 00.1 -0.6
SCIG  Sabancuy             4.14  40  eP        Pn       21 18 00.1 -0.6
SCIG                                 e                  21 18 38.9
SCIG  Sabancuy             4.14  40  eP        Pn       21 18 00.1 -0.6
SCIG                                 eS        Sn       21 18 41.9 -6.1
SCIG                                  IAML              21 18 47.2
      comp=N,1µm,0.2s
SCIG  Sabancuy             4.14  40   P        Pn       21 18 00.4 -0.3
HLIG  Huajuapan de L       4.15 300            Pn       21 18 03.1 +2.1
HLIG                                           Sn       21 18 44.9 -3.6
HLIG  Huajuapan de L       4.15 300  eP        Pn       21 18 03.1 +2.1
HLIG                                 eS        Sn       21 18 44.9 -3.6
FAME  Alcaldia de Sa       4.33 116   S        Sn       21 18 53.8 +1.3
FAME  Alcaldia de Sa       4.33 116   P        Pn       21 18 04.4 +1.2
JAUV  Jalcomulco           4.43 323            Pn       21 18 04.1 -0.6
JAUV                                           Sn       21 18 51.7 -3.3
JAUV  Jalcomulco           4.43 323  eP        Pn       21 18 04.1 -0.6
JAUV                                 eS        Sn       21 18 51.7 -3.3
FTIG  Fresnillo de T       4.47 298            Pn       21 18 08.0 +2.8
FTIG                                           Sn       21 18 54.0 -2.0
FTIG  Fresnillo de T       4.47 298  eP        Pn       21 18 08.0 +2.8
FTIG                                 eS        Sn       21 18 54.0 -2.0
NUBE  Las Nubes            4.51 114   P        Pn       21 18 07.3 +1.5
NUBE  Las Nubes            4.51 114   S        Sn       21 18 59.8 +2.7
LVIG  Laguna Verde         4.52 330            Pn       21 18 05.0 -0.9
LVIG                                           Sn       21 18 51.9 -5.2
LVIG  Laguna Verde         4.52 330  eP        Pn       21 18 05.0 -0.9
LVIG                                 eS        Sn       21 18 51.9 -5.2
MGIG  Malinaltepec         4.66 288            Pn       21 18 09.2 +1.4
MGIG                                           Sn       21 18 58.8 -2.0
MGIG  Malinaltepec         4.66 288  eP        Pn       21 18 09.2 +1.4
MGIG                                 eS        Sn       21 18 58.8 -2.0
TLIG  Tlapa                4.70 292            Pn       21 18 10.2 +1.8
TLIG  Tlapa                4.70 292            Sn       21 19 00.8 -1.0
TLIG  Tlapa                4.70 292  eP        Pn       21 18 10.7 +2.3
TLIG                                 eS        Sn       21 19 00.8 -1.0
MTO3  Montecristo          4.71 107            Pn       21 18 08.1 -0.4
JAYA  Jayaque - finc       4.91 115   S        Sn       21 19 08.5 +1.7
CRIG  Cruz Grande          5.00 281            Pn       21 18 12.1 -0.3
CRIG                                           Sn       21 19 04.2 -4.8
CRIG  Cruz Grande          5.00 281  eP        Pn       21 18 12.1 -0.3
CRIG                                 eS        Sn       21 19 04.2 -4.8
PPCL  Tochimilco           5.38 306  eP        Pn       21 18 20.8 +3.1
PPCL                                 eS        Sn       21 19 16.6 -1.9
PPPT  Popocatepetl         5.41 306  eP        Pn       21 18 22.2 +3.7
PPPT                                 eS        Sn       21 19 20.6 +0.9
PBPN  Popocatepetl         5.46 307  eP        Pn       21 18 22.6 +3.6
PBPN                                 eS        Sn       21 19 17.7 -3.1
PBXN  Popocatepetl         5.46 306  eP        Pn       21 18 23.0 +3.9
PBXN                                 eS        Sn       21 19 16.9 -4.0
PPM   Popocatepetl         5.47 307  eP        Pn       21 18 23.1 +3.9
PPM                                  eS        Sn       21 19 19.2 -1.8
PPIG  Popocatepetl         5.47 307            Pn       21 18 23.1 +3.8
PPIG                                           Sn       21 19 19.2 -1.9
CXUV  Coxquihui            5.52 322            Pn       21 18 19.9 +0.4
CXUV                                           Sn       21 19 18.6 -3.0
CXUV  Coxquihui            5.52 322  eP        Pn       21 18 19.9 +0.4
CXUV                                 eS        Sn       21 19 18.6 -3.0
DAIG  Los Arroyos          5.54 283            Pn       21 18 20.5 +0.7
DAIG  Los Arroyos          5.54 283  eP        Pn       21 18 20.5 +0.7
DAIG                                 e                  21 19 11.5
YAIG  Yautepec             5.71 303            Pn       21 18 24.8 +2.7
YAIG                                           Sn       21 19 22.9 -3.4
YAIG  Yautepec             5.71 303  eP        Pn       21 18 24.8 +2.7
YAIG                                 eS        Sn       21 19 22.9 -3.4
MEIG  Mezcala              5.77 292            Pn       21 18 24.1 +1.2
MEIG                                           Sn       21 19 26.3 -1.4
MEIG  Mezcala              5.77 292  eP        Pn       21 18 24.1 +1.2
MEIG                                 eS        Sn       21 19 26.3 -1.4
CAIG  El Cayaco            6.13 282            Pn       21 18 28.6 +0.9
CAIG                                           Sn       21 19 31.5 -5.0
CAIG  El Cayaco            6.13 282  eP        Pn       21 18 28.6 +0.9
CAIG                                 eS        Sn       21 19 31.5 -5.0
ARIG  Puente Sto Nin       6.54 293            Pn       21 18 36.5 +3.1
ARIG                                           Sn       21 19 41.4 -5.1
ARIG  Puente Sto Nin       6.54 293  eP        Pn       21 18 36.5 +3.1
ARIG                                 eS        Sn       21 19 41.4 -5.1
TEIG  Tepich               7.01  50            Pn       21 18 38.5 -1.3
ZIIG  Zihuatanejo          7.36 285            Pn       21 18 46.5 +1.9
ZIIG                                           Sn       21 20 04.4 -2.2
ZIIG  Zihuatanejo          7.36 285  eP        Pn       21 18 46.5 +1.9
ZIIG                                 eS        Sn       21 20 04.4 -2.2
JUD3  Juan Diaz 3          9.98 123   Pn       Pn       21 19 21.7 +1.4
HNDO  Hondo               14.49 341   Pn       Pn       21 20 21.1 +0.3
JCT   Junction City       15.54 341   Pn       Pn       21 20 34.7 +0.5
JCT                                   IAmb     IAmb     21 20 39.4
      comp=Z,9.4nm,0.7s
SAND  Sanderson           15.93 334   Pn       Pn       21 20 39.7 +0.6
SAND                                  IAmb     IAmb     21 20 42.6
      comp=Z,5.4nm,0.9s
TXAR  Lajitas Array       16.14 328   Pn       Pn       21 20 42.2 +0.5
      comp=Z,1.3nm,0.9s,baz=145,slow=15,SNR=6.7
OZNA  Ozona               16.39 338   Pn       Pn       21 20 45.0 +0.2
OZNA                                  IAmb     IAmb     21 20 49.8
      comp=Z,9.9nm,0.8s
SGCY  Sterling City       17.30 339            P        21 20 57.5 +1.3
MNHN  Monahans            17.41 334            Pn       21 20 57.7 +0.4
MNHN                                  IAmb     IAmb     21 21 02.6
      comp=Z,5.7nm,0.6s
VHRN  Van Horn            17.98 328            P        21 21 04.8 +1.0
ODSA  Odessa              18.00 336   P        P        21 21 04.6 +0.6
ODSA                                  IAmb     IAmb     21 21 08.7
      comp=Z,11nm,0.7s
APMT  Aspermont           18.30 344            P        21 21 08.4 +1.3
APMT                                  IAmb     IAmb     21 21 15.7
      comp=Z,5.2nm,0.7s
SN07  Snyder 07           18.30 341   P        P        21 21 08.5 +1.3
SN07                                  IAmb     IAmb     21 21 10.3
      comp=Z,10nm,0.9s
GDL2  Guadalupe Moun      18.84 332   P        P        21 21 13.6 +0.4
DKNS  Dickens             18.85 342   P        P        21 21 13.7 +0.5
DKNS                                  IAmb     IAmb     21 21 16.0
      comp=Z,11nm,0.9s
WMOK  Wichita Mounta      19.33 348            P        21 21 19.6 +1.1
MSTX  Muleshoe            19.74 338            P        21 21 24.4 +1.4
MSTX                                  IAmb     IAmb     21 21 27.6
      comp=Z,17nm,1.1s
SMWD  Samnorwood          20.02 345            P        21 21 26.4 +0.5
AMTX  Amarillo            20.21 341   P        P        21 21 29.1 +1.1
121A  Cookes Peak, D      20.82 326            P        21 21 35.4 +0.6
Y22A  Socorro             21.50 329            P        21 21 43.5 +1.5
Y22A                                  IAmb     IAmb     21 21 46.4
      comp=Z,7.1nm,1.1s
BNM   Barren Site         21.51 330   P        P        21 21 43.8 +1.6
RTBA  Rita Blanca         21.97 341            P        21 21 48.0 +1.1
ABQ   Albuquerque         22.09 332            P        21 21 48.9 +0.6
ANMO  Albuquerque         22.09 332   P        P        21 21 50.0 +1.7
      comp=Z,2.5nm,0.8s,baz=150,slow=10,SNR=12
      comp=Z,2.5nm,0.8s
ANMO  Albuquerque         22.09 332            P        21 21 49.7 +1.4
TASM  ASL Pad, Albuq      22.09 332            P        21 21 50.1 +1.8
TASM  ASL Pad, Albuq      22.09 332   P        P        21 21 49.8 +1.5
TASM                                  IAmb     IAmb     21 21 53.1
      comp=Z,1.7nm,0.8s
TASM  ASL Pad, Albuq      22.09 332   P        P        21 21 49.7 +1.5
TASM                                  IAmb     IAmb     21 21 53.1
      comp=Z,1.8nm,0.8s
TASM  ASL Pad, Albuq      22.09 332   P        P        21 21 48.0 -0.3
TASM                                  IAmb     IAmb     21 21 53.3
      comp=Z,2.2nm,0.9s
T25A  Trinidad            23.16 338            P        21 21 59.8 +0.4
T25A                                  IAmb     IAmb     21 22 05.3
      comp=Z,14nm,1.3s
X18A  Snowflake           23.51 325   P        P        21 22 01.8 -0.8
PDAR  Pinedale Array      29.99 337   P        P        21 23 02.0 +1.4
      comp=Z,0.5nm,0.9s,baz=161,slow=9.4,SNR=5.0
      comp=Z,0.5nm,0.9s
PDAR  Pinedale Array      29.99 337   P        P        21 23 01.2 +0.6
SNOW  Snow King Moun      31.05 336   P        P        21 23 10.8 +0.9
NVAR  Mina Array Bea      31.05 321   P        P        21 23 13.4 +3.4
      comp=Z,1.4nm,0.7s,baz=128,slow=9.0,SNR=7.8
      comp=Z,1.4nm,0.7s
LOHW  Long Hollow         31.11 336   P        P        21 23 11.0 +0.5
LOHW                                  IAmb     IAmb     21 23 13.2
      comp=Z,4.9nm,1.1s
MOOW  Moose Ponds         31.28 336            P        21 23 12.4 +0.4
MOOW                                  IAmb     IAmb     21 23 41.6
      comp=Z,1.7nm,1.4s
ULM   Lac du Bonnet       34.39 358   P        P        21 23 36.1 -2.6
      comp=Z,1.9nm,0.4s,baz=190,slow=9.2,SNR=2.2
      comp=Z,1.9nm,0.4s
SCHQ  Schefferville       44.25  22   LR       LR       21 42 24.2
      comp=Z,27nm,19.2s,baz=112,slow=35
YKA   Yellowknife Ar      48.84 347   P        P        21 25 36.7 +0.3
      comp=Z,1.6nm,0.6s,baz=159,slow=6.9,SNR=26
      comp=Z,1.6nm,0.6s
YKA   Yellowknife Ar      48.84 347   P        P        21 25 36.6 +0.1
ILAR  Eielson Array       60.42 337   P        P        21 27 00.6 +0.3
      comp=Z,0.2nm,0.7s,baz=155,slow=5.2,SNR=8.7
      comp=Z,0.2nm,0.7s
ILAR  Eielson Array       60.42 337   P        P        21 27 01.6 +1.4
ARCES ARCESS Array B      85.03  18   P        P        21 29 25.6 -0.1
      comp=Z,1.7nm,0.5s,baz=292,slow=5.6,SNR=11
      comp=Z,1.7nm,0.5s
```

*MOS **01** 21:22:39.6±0.8, 10°.28S×161°.23E, h47^{km}, mb5.3/21, Error ellipse: s-maj=10.2km s-min=9.2km az=127.3*

*BJI **01** 21:22:42.8, 10°.04S×161°.71E, h81^{km}, mB5.2/11, mb4.7/48, Ms4.7/1, Ms7 4.4/3*

*IDC **01** 21:22:44.0±0.6, 10°.35S×161°.25E, h71^{km}±3^{km}, mb4.4/24, mbtmp4.7/25, MS3.9/51, Error ellipse: s-maj=17.0km s-min=12.4km az=97.0*

*NEIC **01** 21:22:43.7±1.2, 10°.30S±0°.08×161°.25E±0°.10, h65^{km}±1^{km}, mb5.1/217, Error ellipse: s-maj=14.2km s-min=10.9km az=63.0*

*NOU **01** 21:22:44.9, 10°.38S×161°.38E, h70^{km}, mb5.2/80, Solomon Islands*

*GCMT **01** 21:22:45.7±0.2, 10°.45S±0°.01×161°.31E±0°.01, h69^{km}±1^{km}, MW5.2/111, Moment Tensor Solution. s77,c108; s111,c168; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.64±.13; $M_{\theta\theta}$-3.55±.14; $M_{\phi\phi}$1.90±.13; $M_{r\theta}$-2.97±.10; $M_{\theta\phi}$5.23±.12; $M_{\phi r}$-1.22±.10; Best double couple: $M_0$6.84200×10^{16} NP1:ϕ_s164.00000°, δ60.00000°, λ168.00000°. NP2:ϕ_s260.00000°, δ79.00000°, λ31.00000°. Principal axes: T 6.5210, Plg29.0000°, Azm126.0000°; N 0.6310, Plg58.0000°, Azm277.0000°; P -7.1630, Plg13.0000°, Azm28.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 21:22:43.8±0.3**, 10°.37S**±0°.04×**161°.31E**±0°.04**, h70**^{km}±2^{km}**, h70**^{km}**:pP-P, n722, σ1^{s}27**/642**, mb5.1**/207**, 7C-4D, Bougainville-Solomon Islands region**

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Code  Station Name          Δ°   AZ°    Phase ID            Time      Res
                                      Op       ISC       h  m  s    ISC
HURO  Huro Makira          0.59  99   P        Pn       21 22 58.1 +0.6
HURO  Huro Makira          0.59  99   P        Sn       21 23 07.4 -0.2
NGOA  Tingoa Renbel        1.70 226   P        Pn       21 23 10.8 -0.7
ALEG  Aligegeo Malai       1.71 339   P        Pn       21 23 14.5 +2.8
ALEG  Aligegeo Malai       1.71 339   S        Sn       21 23 37.7 +4.9
SAVO  Savo Central         1.91 309   P        Pn       21 23 15.5 +1.2
SAVO  Savo Central         1.91 309   S        Sn       21 23 40.1 +2.6
TATA  Tatamba Isabel       2.47 323   P        Pn       21 23 24.6 +2.8
TATA  Tatamba Isabel       2.47 323   S        Sn       21 23 53.2 +2.3
SANVU Saraoutou            7.65 132            Pn       21 24 32.7 +0.2
SANVU Saraoutou            7.65 132   P        Pn       21 24 33.1 +0.5
SANVU Saraoutou            7.65 132   S        Sn       21 25 56.0 -1.7
DVP   Devils Point         9.90 138   P        Pn       21 25 03.7 +0.4
RTV   Rentapao            10.10 138   P        Pn       21 25 07.0 +0.9
KOUNC Koumac, New Ca      10.52 165   P        Pn       21 25 14.0 +2.2
KOUNC Koumac, New Ca      10.52 165   S        Sn       21 27 07.7 -0.4
RABL  Rabaul              10.95 303            Pn       21 25 15.0 -2.7
INH   Isangel             11.93 141   P        Pn       21 25 31.6 +0.5
DZM   Mont Dzumac         12.63 158   P        Pn       21 25 42.4 +1.6
      27nm,0.4s,baz=310,slow=23,SNR=61
DZM                                   S        Sn       21 27 56.0 -3.8
      57nm,0.6s,baz=348,slow=21,SNR=8.4
DZM                                   LR       LR       21 29 54.9
      comp=Z,124nm,18.0s,baz=351,slow=34
DZM   Mont Dzumac         12.63 158  eP        Pn       21 25 41.7 +0.9
      288nm,1.6s
DZM                                  eS        Sn       21 27 54.6 -5.2
      193nm,0.8s
DZM                                  eLR       LR       21 28 31.2
      2µm,27.2s
DZM   Mont Dzumac         12.63 158            Pn       21 25 41.4 +0.7
DZM   Mont Dzumac         12.63 158   P        Pn       21 25 42.4 +1.6
MARNC Mare, Loyalty       12.80 151            Pn       21 25 43.1 +0.3
MARNC Mare, Loyalty       12.80 151   P        Pn       21 25 43.7 +0.9
YATNC Mamie plateau,      12.80 156   P        Pn       21 25 43.6 +0.7
ONTNC Ouen Toro           12.85 158            Pn       21 25 43.1 -0.5
ONTNC Ouen Toro           12.85 158   P        Pn       21 25 45.3 +1.7
OUENC Ouen Island, N      13.10 157   P        Pn       21 25 49.3 +2.3
PMG   Port Moresby        13.98 273   P        P        21 26 03.0 -1.4
      25nm,1.0s,baz=101,slow=11,SNR=9.6
PMG                                   LR       LR       21 30 51.2
      comp=Z,875nm,21.7s,baz=115,slow=35
PMG   Port Moresby        13.98 273   Pn       Pn       21 25 54.9 -3.7
PMG   Port Moresby        13.98 273   P        Pn       21 26 01.1 +2.5
PMG   Port Moresby        13.98 273   P        Pn       21 26 00.9 +2.3
PMG   Port Moresby        13.98 273   P        Pn       21 26 00.4 +1.8
      84nm,1.1s
PMG   Port Moresby        13.98 273   P        Pn       21 25 54.9 -3.7
MANU  Manus Island        16.13 300   Pn       Pn       21 26 24.9 -1.5
TARA  Tarawa              16.41  45   P        P        21 26 31.8 +0.4
AUNRC North Rockhamp      16.51 217   P        P        21 26 32.3 -0.2
GD1S  Gladstone Soft      16.52 215   P        P        21 26 33.9 +1.2
TV1H  Townsville Har      16.57 236   P        P        21 26 33.8 +0.5
PATS  Pohnpei             17.35 350   P        P        21 26 45.3 +3.4
      comp=Z,573nm,1.1s
PATS  Pohnpei             17.35 350   Pn       Pn       21 26 39.0 -2.5
PATS  Pohnpei             17.35 350   P        P        21 26 43.0 +1.1
CTA   Charters Tower      17.43 235   P        P        21 26 44.9 +2.1
      comp=Z,4.5nm,1.2s
CTA   Charters Tower      17.43 235   LR       LR       21 32 34.3
      comp=Z,12nm,20.8s,baz=53,slow=34
CTA   Charters Tower      17.43 235   P        P        21 26 44.5 +1.7
CTAO  Charters Tower      17.43 235            Pn       21 26 41.8 -0.7
CTAO                                  IAmb     IAmb     21 26 48.3
      comp=Z,141nm,1.0s
CTAO  Charters Tower      17.43 235   P        P        21 26 44.5 +1.7
CTAO  Charters Tower      17.43 235   P        Pn       21 26 41.8 -0.7
CTAO                                  pmax     pmax
      comp=Z,141nm,1.0s
FUNA  Funafuti            17.74  86   P        Pn       21 26 48.7 +2.5
EIDS  Eidsvold            17.80 212   P        Pn       21 26 48.5 +1.6
      comp=Z,72nm,0.8s
EIDS  Eidsvold            17.80 212            Pn       21 26 47.0 +0.1
EIDS  Eidsvold            17.80 212   P        Pn       21 26 48.9 +2.0
MSVF  Nonsavu             17.80 116            P        21 26 47.0 +0.1
MSVF  Nonsavu             17.80 116   P        Pn       21 26 49.2 +2.1
MSVF  Nonsavu             17.80 116 i P        P        21 26 47.1 +0.1
MSVF                                  pmax     pmax
      comp=Z,46nm,1.0s
COEN  Coen                18.08 257   P        Pn       21 26 54.2 +3.8
      comp=Z,50nm,1.0s
COEN  Coen                18.08 257   P        Pn       21 26 53.8 +3.4
MTSU  Mount Surprise      18.18 243   P        Pn       21 26 54.2 +2.6
      comp=Z,88nm,0.9s
MTSU  Mount Surprise      18.18 243   P        Pn       21 26 53.9 +2.3
AUWSH Wavell State H      18.65 204   P        Pn       21 26 58.8 +1.7
GC1S  Gold Coast 1 S      19.16 201   P        Pn       21 27 04.2 +1.0
TW1H  Toowoomba 1 Ha      19.22 206   P        Pn       21 27 06.3 +2.3
RMQ   Roma                19.94 215   P        P        21 27 10.0 -0.2
ARMA  Armidale            21.89 203   P        P        21 27 31.8 +0.6
      comp=Z,61nm,0.8s
ARMA  Armidale            21.89 203   P        P        21 27 31.4 +0.1
ARMA                                  IAmb     IAmb     21 27 52.5
      comp=Z,206nm,1.8s
ARMA  Armidale            21.89 203   P        P        21 27 31.4 +0.1
JAY   Jayapura            21.90 289   P        P        21 27 30.6 -0.8
      comp=Z,18nm,0.8s,baz=52,slow=7.5,SNR=4.2
JAY                                   LR       LR       21 36 08.9
      comp=Z,274nm,22.0s,baz=330,slow=37
      comp=Z,18nm,0.8s
JAY   Jayapura            21.90 289   P        P        21 27 29.5 -1.9
      comp=Z,1µmcomp=Z,56nm,0.6s
GENI  Genyem              22.37 289   P        P        21 27 38.5 +2.1
GENI  Genyem              22.37 289   P        P        21 27 35.1 -1.3
      comp=Z,53nm,0.9s
AULRC Lightning Ridg      22.69 211   P        P        21 27 41.0 +1.3
AUPHS Peel High Scho      22.79 204   P        P        21 27 41.0 +0.3
QLP   Quilpie             22.81 223   P        P        21 27 41.9 +0.9
      comp=Z,140nm,1.0s
QLP   Quilpie             22.81 223   P        P        21 27 42.5 +1.5
QIS   Mount Isa           23.21 242   P        P        21 27 46.0 +0.9
      comp=Z,48nm,0.8s
QIS   Mount Isa           23.21 242   P        P        21 27 45.8 +0.7
SMPI  Sarmi               23.94 289   P        P        21 27 51.2 -0.5
      comp=Z,220nm,1.3s
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AUDCS Dubbo College      24.71 206   P      P      21 27 59.2 +0.7
CMSA  Cobar Meteorol     25.56 212   P      P      21 28 08.1 +1.9
      comp=Z,28nm,0.7s
CMSA  Cobar Meteorol     25.56 212   P      P      21 28 08.4 +2.2
INKA  Innaminka          25.94 225   P      P      21 28 10.4 +0.8
RAO   Raoul Island       27.02 137   LR     LR     21 37 04.6
      comp=Z,246nm,20.6s,baz=128,slow=32
OUZ   Omahuta            27.15 158   P      P      21 28 22.1 +1.6
WR8   Warramunga Arr     27.54 247   P      P      21 28 23.3 -0.9
WR8                                  IAmb   IAmb   21 28 50.6
      comp=Z,44nm,0.8s
WB0   Warramunga Arr     27.58 247          P      21 28 24.1 -0.5
WB0                                  IAmb   IAmb   21 28 46.5
      comp=Z,52nm,0.7s
WRAB  Tennant Creek      27.67 247   P      P      21 28 24.7 -0.6
WRAB                                 IAmb   IAmb   21 28 59.2
      comp=Z,32nm,0.8s
WRAB  Tennant Creek      27.67 247   P      P      21 28 25.5 +0.1
WRAB  Tennant Creek      27.67 247ceP      P      21 28 25.1 -0.3
WRAB                                 pmax   pmax
      comp=Z,7.0nm,0.6s
WRA   Warramunga Arr     27.68 247   P      P      21 28 25.3 -0.2
      comp=Z,6.6nm,0.6s,baz=77,slow=8.9,SNR=38
WRA                                  LR     LR     21 38 58.8
      comp=Z,398nm,19.2s,baz=148,slow=35
      comp=Z,6.6nm,0.6s
WRA   Warramunga Arr     27.68 247   P      P      21 28 24.2 -1.3
STKA  Stephens Creek     28.12 218   P      P      21 28 30.0 +0.7
      comp=Z,5.0nm,0.8s,baz=37,slow=9.9,SNR=5.2
STKA                                 LR     LR     21 39 21.3
      comp=Z,544nm,18.5s,baz=41,slow=36
      comp=Z,5.0nm,0.8s
STKA  Stephens Creek     28.12 218   P      P      21 28 29.4 +0.1
STKA  Stephens Creek     28.12 218   P      P      21 28 32.1 +2.8
STKA  Stephens Creek     28.12 218 i P      P      21 28 29.6 +0.3
KDU   Kakadu             28.34 263   P      P      21 28 31.4  0.0
      comp=Z,16nm,1.4s
GUMO  Guam               28.86 325   LR     LR     21 39 24.1
      comp=Z,362nm,21.8s,baz=130,slow=35
AS31  Alice Springs      29.28 240          P      21 28 39.1 -0.6
ASAR  Alice Springs      29.28 240   P      P      21 28 38.9 -0.8
      comp=Z,2.4nm,0.8s,baz=70,slow=9.2,SNR=17
ASAR                                 LR     LR     21 39 42.5
      comp=Z,424nm,19.0s,baz=64,slow=35
      comp=Z,2.4nm,0.8s
ASAR  Alice Springs      29.28 240   P      P      21 28 38.7 -1.0
ASAR  Alice Springs      29.28 240   P      P      21 28 38.7 -1.0
AUALC St Philip's Co     29.31 240   P      P      21 28 42.6 +2.6
TOZ   Tahuroa Road       30.09 157   P      P      21 28 47.1 +0.5
TOO   Toolangi           30.60 205   P      P      21 28 50.8 -0.4
      comp=Z,12nm,0.9s
HTT   Hallett            30.82 218   P      P      21 28 52.9 -0.3
      comp=Z,11nm,0.9s
HAZ   Te Kaha            31.04 154   P      P      21 28 57.7 +2.8
URZ   Urewera            31.18 156   LR     LR     21 39 44.2
      comp=Z,239nm,20.4s,baz=325,slow=33
URZ   Urewera            31.18 156   P      P      21 28 57.5 +1.3
RTZ   Ruatahuna          31.43 156          P      21 28 58.9 +0.3
PUZ   Puketiti           31.50 154   P      P      21 29 00.2 +1.0
BNDI  Bandanaira         31.66 278   P      P      21 29 03.0 +2.2
BNDI  Bandanaira         31.66 278   P      P      21 28 59.5 -1.3
BKZ   Black Stump Fm     31.72 157   P      P      21 29 00.8 -0.2
BKZ                                  IAmb   IAmb   21 29 02.3
      comp=Z,32nm,0.9s
BKZ   Black Stump Fm     31.72 157   P      P      21 29 01.3 +0.2
BKZ   Black Stump Fm     31.72 157   P      P      21 29 01.3 +0.2
QRZ   Quartz Range       31.92 164   P      P      21 29 03.8 +1.2
KNRA  Kununurra          32.12 257   P      P      21 29 04.8  0.0
      comp=Z,54nm,0.7s
KNRA  Kununurra          32.12 257   P      P      21 29 04.8  0.0
BBOO  Buckleboo          32.24 222   P      P      21 29 05.7  0.0
      comp=Z,47nm,0.9s
TSZ   Takapari Road      32.30 159   P      P      21 29 06.1 -0.1
PXZ   Pawanui            32.61 158   P      P      21 29 09.1 +0.4
MRZ   Mangatainoka R     32.71 160   P      P      21 29 08.6 -1.0
MRZ                                  IAmb   IAmb   21 29 44.0
      comp=Z,44nm,1.2s
MRZ   Mangatainoka R     32.71 160   P      P      21 29 09.4 -0.3
TCW   Tory Channel       32.78 162   P      P      21 29 10.5 +0.2
TUWZ  Tuamarina          32.88 162   P      P      21 29 11.7 +0.6
THZ   Tophouse           32.89 164   P      P      21 29 11.2 -0.1
THZ                                  IAmb   IAmb   21 29 13.9
      comp=Z,32nm,0.9s
THZ   Tophouse           32.89 164   P      P      21 29 11.2 -0.1
BFZ   Birch Farm         32.96 159   P      P      21 29 11.2 -0.6
KRAI  Karang Ratu        33.40 280   P      P      21 29 14.2 -1.8
      comp=Z,23nm,0.6s
INZ   Inchbonnie         33.43 166   P      P      21 29 16.7 +0.8
AAI   Ambon              33.51 279   P      P      21 29 15.3 -1.7
      comp=Z,46nm,0.6s
KHZ   Kahutara           33.67 164   P      P      21 29 17.3 -0.7
LTZ   Lake Taylor        33.68 165   P      P      21 29 18.3 +0.2
LTZ                                  IAmb   IAmb   21 29 19.4
      comp=Z,31nm,0.8s
LTZ   Lake Taylor        33.68 165   P      P      21 29 18.0 -0.1
FOZ   Fox Glacier        33.86 169          P      21 29 19.9 +0.4
FOZ   Fox Glacier        33.86 169   P      P      21 29 19.9 +0.4
GVZ   Greta Valley S     34.05 165   P      P      21 29 21.4 +0.1
JCZ   Jackson Bay        34.20 170   P      P      21 29 23.9 +1.2
JCZ   Jackson Bay        34.20 170   P      P      21 29 22.6 -0.1
RPZ   Rata Peaks         34.28 167          P      21 29 23.2 -0.1
RPZ   Rata Peaks         34.28 167   P      P      21 29 24.1 +0.8
WRKA  Warakurna          34.55 241   P      P      21 29 24.7 -1.2
      comp=Z,20nm,0.7s
WRKA                                 pP     pwP    21 29 45.7 -1.6
LBZ   Lake Benmore       34.75 169   P      P      21 29 26.6 -0.7
WKZ   Wanaka             34.97 170   P      P      21 29 28.9 -0.3
DCZ   Deep Cove          35.33 173          P      21 29 32.4 +0.2
DCZ   Deep Cove          35.33 173   P      P      21 29 32.2  0.0
MLZ   Mavora Lakes       35.36 172   P      P      21 29 32.2 -0.4
MLZ   Mavora Lakes       35.36 172   P      P      21 29 32.6  0.0
FITZ  Fitzroy Crossi     35.37 253   P      P      21 29 32.3 -0.7
      comp=Z,8.2nm,0.8s,comp=Z,0.0nm
FITZ  Fitzroy Crossi     35.37 253   LR     LR     21 42 44.7
      comp=Z,147nm,21.0s,baz=78,slow=34
FITZ  Fitzroy Crossi     35.37 253          P      21 29 32.3 -0.7
FITZ  Fitzroy Crossi     35.37 253   P      P      21 29 33.3 +0.3
EAZ   Earnscleugh        35.41 170   P      P      21 29 32.5 -0.5
WHZ   Wether Hill Ro     35.85 172   P      P      21 29 36.5 -0.2
WHZ   Wether Hill Ro     35.85 172   P      P      21 29 36.0 -0.8
PYZ   Puysegur Point     35.97 174   P      P      21 29 38.2 +0.5
SANI  Sanana             36.04 281   P      P      21 29 38.6 -0.2
SANI  Sanana             36.04 281   P      P      21 29 37.1 -1.7
      comp=Z,19nm,0.9s
TUZ   Tuapeka            36.17 170   P      P      21 29 39.4  0.0
SOEI  Soe                36.47 268   P      P      21 29 41.8 -0.8
SYZ   Scrubby Hill       36.66 171   P      P      21 29 43.6  0.0
BATI  Baumata            37.03 267   LR     LR     21 44 18.3
      comp=Z,162nm,20.7s,baz=113,slow=35
BATI  Baumata            37.03 267   P      P      21 29 47.2  0.0
      comp=Z,59nm,0.8s
MMRI  Maumere            38.56 269          P      21 29 59.5 -0.6
MMRI  Maumere            38.56 269   P      P      21 30 00.6 +0.5
MMRI  Maumere            38.56 269   P      P      21 29 59.6 -0.6
      comp=Z,56nm,0.7s
RAR   Rarotonga          38.87 111   LR     LR     21 43 04.6
      comp=Z,204nm,21.4s,baz=292,slow=31
EDFI  Ende, Flores       39.09 269   P      P      21 30 01.9 -2.8
      comp=Z,18nm,0.7s
LUWI  Luwuk              39.41 281   P      P      21 30 07.2  0.0
LUWI  Luwuk              39.41 281   P      P      21 30 08.0 +0.8
LUWI  Luwuk              39.41 281   P      P      21 30 05.9 -1.3
DAV   Davao City (W)     39.57 295   LR     LR     21 46 37.7
      comp=Z,55nm,18.0s,baz=108,slow=36
GTOI  Gorontalo          39.64 284   P      P      21 30 07.9 -1.2
      comp=Z,83nm,0.9s
WSI   Waingapu           40.37 267   P      P      21 30 13.1 -2.1
      comp=Z,4µmcomp=Z,99nm,1.2s
APSI  Ampana             40.52 281   P      P      21 30 16.1 -0.4
      comp=Z,59nm,1.2s
BSSI  Bau Bau, Buton     40.59 273   P      P      21 30 16.7 -0.3
      comp=Z,52nm,0.7s
MRSI  Marisa             40.62 283   P      P      21 30 16.2 -1.0
      comp=Z,19nm,0.7s
LBFI  Labuhan Bajo,      40.88 269   P      P      21 30 17.1 -2.4
      comp=Z,653nmcomp=Z,47nm,0.8s
BKSI  Bulukumba          41.08 274   P      P      21 30 19.0 -2.1
      comp=Z,20nm,1.2s
BNSI  Bone               41.26 275   P      P      21 30 22.0 -0.5
      comp=Z,49nm,0.9s
WBSI  Waikabubak, Su     41.27 267   P      P      21 30 21.5 -1.1
      comp=Z,59nm,1.0s
PSA00 Pilbara Seismi     41.27 249   P      P      21 30 21.8 -0.7
PSA00                                IAmb   IAmb   21 30 45.9
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      comp=Z,30nm,0.8s
KAPI  Kappang            41.50 274   LR     LR     21 46 33.2
      comp=Z,67nm,21.8s,baz=96,slow=34
KAPI  Kappang            41.50 274   P      P      21 30 26.8 +2.3
KAPI  Kappang            41.50 274   P      P      21 30 23.8 -0.7
JCJ   Chichijima         41.61 334   LR     LR     21 45 57.6
      comp=Z,279nm,18.9s,baz=122,slow=34
SPSI  Sidrap Palu        41.67 276   P      P      21 30 24.0 -1.9
      comp=Z,24nm,1.1s
TTSI  Tana Toraja        41.81 277   P      P      21 30 24.2 -2.8
      comp=Z,16nm,1.0s
TOLI2 Tolitoli           41.91 283   P      P      21 30 26.4 -1.5
PCI   Palu               42.28 280   P      P      21 30 30.2 -0.7
      comp=Z,98nm,1.0s
DBNI  Kabupaten Domp     42.44 269   P      P      21 30 29.1 -3.0
      comp=Z,24nm,0.7s
MPSI  Mapaga             42.54 282   P      P      21 30 31.1 -1.9
      comp=Z,27nm,0.8s
PMSI  Majene             42.60 276   P      P      21 30 30.7 -2.8
      comp=Z,34nm,1.8s
MMSI  Mamuju             42.77 277   P      P      21 30 33.2 -1.7
      comp=Z,11nm,0.8s
PLAI  Plampang           42.93 268   P      P      21 30 33.3 -2.8
      comp=Z,58nm,0.7s
MEEK  Meekatharra        43.37 242   P      P      21 30 39.7 +0.2
      comp=Z,52nm,0.8s
MEEK                                 pP     pwP    21 31 01.4 +0.1
MEEK  Meekatharra        43.37 242   P      P      21 30 40.1 +0.5
TWSI  Taliwang, Sumb     43.82 268   P      P      21 30 42.7 -0.6
      comp=Z,31nm,1.1s
KLNI  Mataram            44.62 268   P      P      21 30 48.4 -1.3
      comp=Z,48nm,0.9s
IGBI  Denpasar           45.52 268   P      P      21 30 55.2 -1.6
NWAO  Narrogin (SRO)     46.27 234   LR     LR     21 49 50.5
      comp=Z,422nm,19.4s,baz=336,slow=35
NWAO  Narrogin (SRO)     46.27 234   P      P      21 31 02.0 -0.6
NWAO                                 pP     pP     21 31 18.0 -0.6
JAGI  Jajag, Banyuwa     46.53 268   P      P      21 31 03.2 -1.6
JAGI  Jajag, Banyuwa     46.53 268   P      P      21 31 03.7 -1.1
JAGI  Jajag, Banyuwa     46.53 268   P      P      21 31 01.6 -3.2
      comp=Z,56nm,0.7s
BBKI  Banjar Baru        46.59 275   P      P      21 31 02.5 -2.8
      comp=Z,38nm,0.7s
KKM   Kota Kinabalu      47.78 288   P      P      21 31 17.5 +2.9
KKM   Kota Kinabalu      47.78 288   P      P      21 31 12.0 -2.6
      comp=Z,29nm,0.9s
JHJ   Hachijo jima 2     47.87 335   LR     LR     21 49 15.5
      comp=Z,79nm,21.8s,baz=76,slow=33
PPT   Papeete            48.09 104   LR     LR     21 47 38.6
      comp=Z,52nm,20.1s,baz=209,slow=31
PPT2  Papeete2           48.09 104  eS      S      21 38 07.8 -3.0
      comp=Z,160nm,25.2s
PPT2                                eLQ     LQ     21 42 54.9
      comp=Z,561nm,28.8s
PPT2                                eLR     LR     21 44 53.6
      comp=Z,403nm,30.5s
PPT2                                eLR     LR     21 45 00.6
      comp=Z,515nm,29.2s
TBI   Tubuai             48.62 112  eP      P      21 31 24.3 +3.4
      comp=Z,848nm,37.8s
TBI   Tubuai             48.62 112  eLQ     LQ     21 43 16.8
      comp=Z,3µm,34.5s
TBI                                 eLR     LR     21 45 15.6
      comp=Z,2µm,30.5s
SJI   Sawahan            48.96 269   P      P      21 31 22.4 -1.3
      comp=Z,2µmcomp=Z,44nm,0.6s
SNJI  Sawahan-Nganju     48.96 269   P      P      21 31 22.9 -0.9
      comp=Z,57nm,1.1s
PCJI  Pacitan            49.49 268   P      P      21 31 27.0 -0.6
INU   Inuyama            50.94 334   P      P      21 31 37.7 -0.5
INU   Inuyama            50.94 334   P      P      21 31 38.2  0.0
INU   Inuyama            50.94 334   P      P      21 31 37.8 -0.5
INU                                  pP     pP     21 31 54.2 -1.3
JGF   Kuroka             51.02 335          P      21 31 37.4 -1.4
JGF                                  IAmb   IAmb   21 31 39.5
      comp=Z,18nm,0.8s
MJAR  Matsushiro Arr     51.48 336   P      P      21 31 41.4 -0.8
      comp=Z,8.3nm,0.6s,baz=169,slow=8.3,SNR=30
MJAR                                 pP     pP     21 31 58.3 -1.2
      comp=Z,5.1nm,0.6s,baz=168,slow=8.2,SNR=5.3
MJAR                                 LR     LR     21 53 07.7
      comp=Z,37nm,19.8s,baz=140,slow=36
      comp=Z,8.3nm,0.6s
MJAR  Matsushiro Arr     51.48 336   P      P      21 31 41.1 -1.1
MJAR  Matsushiro Arr     51.48 336   P      P      21 31 41.1 -1.1
MJAR                                 pmax   pmax
      comp=Z,10.0nm,1.1s
MAJO  Matsushiro         51.48 336   P      P      21 31 41.3 -1.0
MAJO                                 IAmb   IAmb   21 31 42.3
      comp=Z,16nm,0.6s
MAJO  Matsushiro         51.48 336   P      P      21 31 41.3 -1.0
MAJO  Matsushiro         51.48 336 i P      P      21 31 40.8 -1.5
MAJO                                 pmax   pmax
      comp=Z,14nm,0.6s
MAJO  Matsushiro         51.48 336   P      P      21 31 41.6 -0.7
MAJO                                 pP     pP     21 31 58.1 -1.4
MJB9  Matsu-Tunnel       51.48 336   P      P      21 31 42.3  0.0
MJB9                                 IAmb   IAmb   21 31 43.3
      comp=Z,16nm,0.6s
CTJI  Waduk Cacaban      51.59 269   P      P      21 31 42.7 -0.8
      comp=Z,56nm,0.9s
JWT   Wachi              51.59 333   P      P      21 31 44.9 +1.8
KPJI  Karang Pucung      51.80 269   P      P      21 31 42.2 -2.8
      comp=Z,44nm,0.8s
JNU   Nakatsue           52.07 327   LR     LR     21 54 40.8
      comp=Z,41nm,18.1s,baz=127,slow=37
JNU   Nakatsue           52.07 327          P      21 31 45.9 -0.9
JSD   Sado               52.76 337   P      P      21 31 51.0 -0.7
JSD                                  IAmb   IAmb   21 31 52.5
      comp=Z,21nm,0.8s
BBJI  Bungbulang         53.04 268   P      P      21 31 51.8 -2.6
      comp=Z,25nm,0.9s
TPI   Tanjungpandan      53.78 274   P      P      21 31 57.6 -2.0
      comp=Z,26nm,1.1s
KASI  Kota Agung         56.41 270   P      P      21 32 16.5 -2.2
      comp=Z,34nm,1.1s
JKA   Kamikawa-asahi     56.83 344          P      21 32 21.7 +0.7
ASAJ  Asahikawa          56.83 344   LR     LR     21 54 15.7
      comp=Z,297nm,22.0s,baz=166,slow=33
ASAJ  Asahikawa          56.83 344   P      P      21 32 21.7 +0.7
ASAJ                                 pmax   pmax
      comp=Z,43nm,1.0s
MDSI  Maura Dua          56.89 271   P      P      21 32 19.3 -2.8
      comp=Z,17nm,1.0s
LWLI  Liwa               56.92 271   P      P      21 32 19.6 -2.8
      comp=Z,3µmcomp=Z,56nm,0.9s
KSRS  Korea Array        56.94 328   P      P      21 32 22.3 +0.4
      comp=Z,9.9nm,0.9s,baz=145,slow=7.2,SNR=16
KSRS                                 pP     pP     21 32 39.8 +0.4
      comp=Z,11nm,0.9s,baz=146,slow=6.4,SNR=7.3
      comp=Z,9.9nm,0.9s
TAOE  Nuku Hiva Isla     57.67  94  eLR     LR     21 49 23.8
      comp=Z,200nm,27.7s
NJ2   Nanjing            58.53 318  eP      P      21 32 33.9 +0.7
NJ2                                  pmax   pmax
      comp=Z,6.0nm,0.5s
YSS   Yuzhno-Sakhali     59.42 345   P      P      21 32 40.0 +1.0
YSS   Yuzhno-Sakhali     59.42 345  eP      P      21 32 39.7 +0.7
YSS                                  pmax   pmax
      comp=Z,30nm,1.1s
USRK  Ussuriysk Ar.      60.48 336   P      P      21 32 47.1 +0.8
      comp=Z,22nm,0.6s,baz=158,slow=5.3,SNR=28
USRK                                 pP     pP     21 33 05.0 +0.9
      comp=Z,34nm,1.0s,baz=139,slow=7.1,SNR=5.3
      comp=Z,22nm,0.6s
WHN   Wuhan              60.73 314   P      P      21 32 46.1 -2.2
PPI   Padang Panjang     61.33 275   P      P      21 32 51.8 -1.0
      comp=Z,23nm,0.8s
MDJ   Mudanjiang         61.80 335   P      P      21 32 54.6 -0.6
MDJ                                  IAmb   IAmb   21 33 18.5
      comp=Z,22nm,1.0s
MDJ   Mudanjiang         61.80 335   P      P      21 32 56.0 +0.7
MDJ                                  pP     pP     21 33 13.3  0.0
MDJ                                  S      S      21 41 14.6 +1.4
MDJ                                  pmax   pmax
      comp=Z,25nm,1.0s
MDJ   Mudanjiang         61.80 335   P      P      21 32 55.4 +0.1
MDJ   Mudanjiang         61.80 335   P      P      21 32 55.1 -0.1
MNSI  Mandailing Nat     62.39 276   P      P      21 32 58.9 -1.0
      comp=Z,46nm,0.8s
MNSI                                 pP     pP     21 33 16.4 -0.9
      comp=Z,46nm,0.8s
TYV   Tymovskoe          63.10 347  eP      P      21 33 04.7 +0.9
TYV                                  pmax   pmax
      comp=Z,200nm,2.4s
TYV                                  pmax   pmax
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      comp=Z,19nm,0.8s
PETK  Petropavlovsk-     63.30 358   P      P      21 33 05.2  0.0
      comp=Z,8.2nm,0.9s,baz=168,slow=7.6,SNR=6.5
PETK                                 pP     pP     21 33 22.1 -0.9
      comp=Z,8.2nm,0.9s,baz=207,slow=9.5,SNR=3.9
PETK                                 LR     LR     21 56 29.3
      comp=Z,186nm,21.9s,baz=164,slow=32
      comp=Z,8.2nm,0.9s
PETK  Petropavlovsk-     63.30 358   P      P      21 33 04.8 -0.3
PETK                                        pP     21 33 20.8 -2.1
BNX   BinXian            63.63 334 ⇓P      P      21 33 07.1 -0.3
BNX                                  pmax   pmax
      comp=Z,35nm,0.4s
SHEM  Shemya Is, Ala     63.80   9   LR     LR     21 55 34.9
      comp=Z,80nm,20.1s,baz=282,slow=31
LYN   LuoYang            64.31 316  eP      P      21 33 16.8 +4.7
LYN                                  sP     sP     21 33 39.1 +1.5
LYN                                  pmax   pmax
      comp=Z,12nm,0.8s
HNS   HongShan           64.52 320 ⇑P      P      21 33 13.5 +0.1
HNS                                  pmax   pmax
      comp=Z,13nm,1.1s
KCSI  Kotacane, Aceh     64.74 279   P      P      21 33 12.8 -2.6
      comp=Z,16nm,0.9s
XAN   Xi'an              66.48 314   P      P      21 33 22.9 -3.4
XAN                                  pmax   pmax
      comp=Z,11nm,0.8s
KMI   Kunming            67.07 303   P      P      21 33 36.4 +6.0
KMI                                  pP     pP     21 33 48.6 +0.3
KMI                                  pmax   pmax
      comp=Z,11nm,1.7s
KMI                                  LR     LR
      comp=Z,190nm,25.6s
VNDA  Vanda              67.14 180   P      P      21 33 30.0 +0.3
      comp=Z,22nm,0.8s,baz=342,slow=6.9,SNR=83
VNDA                                 LR     LR     21 57 26.6
      comp=Z,119nm,21.6s,baz=5.5,slow=31
      comp=Z,22nm,0.8s
VNDA  Vanda              67.14 180   P      P      21 33 29.8 +0.1
VNDA                                 IAmb   IAmb   21 33 31.0
      comp=Z,28nm,0.8s
VNDA  Vanda              67.14 180   P      P      21 33 29.8 +0.1
VNDA                                 pmax   pmax
      comp=Z,28nm,0.9s
VNDA  Vanda              67.14 180   P      P      21 33 30.0 +0.3
VNDA                                 pP     pP     21 33 47.4 +0.3
HEH   HeiHe              67.22 337  eP      P      21 33 30.2 -0.3
HEH                                  pmax   pmax
      comp=Z,30nm,0.8s
SBA   Scott Base         67.53 179   P      P      21 33 32.9 +0.8
SBA   Scott Base         67.53 179   P      P      21 33 32.9 +0.8
SBA                                  pmax   pmax
      comp=Z,41nm,1.1s
XLT   XiLinHaoTe         67.83 326  eP      P      21 33 35.2 +0.5
XLT                                  pP     pP     21 33 53.2 +0.6
XLT                                  sP     PcP    21 34 01.6 +0.8
XLT                                  pmax   pmax
      comp=Z,46nm,0.7s
XLT                                  pmax   pmax
      comp=Z,190nm,5.4s
CMAR  Chiang Mai Arr     67.86 295   P      P      21 33 35.3 +0.1
      comp=Z,1.7nm,0.5s,baz=113,slow=4.2,SNR=16
CMAR                                 pP     pP     21 33 52.5 -0.6
      comp=Z,4.9nm,0.9s,baz=127,slow=4.7,SNR=5.5
CMAR                                 LR     LR     22 03 46.6
      comp=Z,16nm,19.6s,baz=110,slow=36
      comp=Z,1.7nm,0.5s
CMAR  Chiang Mai Arr     67.86 295   P      P      21 33 34.3 -0.9
CMAR  Chiang Mai Arr     67.86 295ceP      P      21 33 35.5 +0.3
CMAR                                 pmax   pmax
      comp=Z,2.0nm,0.5s
CHTO  Chiang Mai         67.98 295   P      P      21 33 35.9 -0.1
CHTO  Chiang Mai         67.98 295   P      P      21 33 36.4 +0.4
CHTO  Chiang Mai         67.98 295   P      P      21 33 33.4 -2.6
      comp=Z,16nm,1.0s
CHTO  Chiang Mai         67.98 295   P      P      21 33 35.9 -0.1
CHTO                                 pmax   pmax
      comp=Z,12nm,0.9s
NIKH  Nikolski High      68.05  19   P      P      21 33 35.5 -0.2
      baz=212
CCD   Concordia, Ant     68.08 190   P      P      21 33 36.1  0.0
PZH   PanZhiHua          68.46 304   P      P      21 33 40.3 +1.3
HHC   Hu-ho-hao-te       68.55 322  eP      P      21 33 40.1 +0.9
HHC                                  pP     pwP    21 33 59.4 -0.5
HHC                                  pmax   pmax
      comp=Z,7.0nm,1.4s
HHC                                  pmax   pmax
      comp=Z,210nm,5.2s
BTO   Baotou             69.36 321  eP      P      21 33 42.7 -1.6
BTO                                  pP     pP     21 34 02.6 +0.3
BTO                                  sP     sP     21 34 11.3 +1.5
BTO                                  pmax   pmax
      comp=Z,6.0nm,0.6s
BTO                                  pmax   pmax
      comp=Z,250nm,6.6s
HIA   Hailar             69.69 332   P      P      21 33 45.3 -0.8
HIA                                  IAmb   IAmb   21 33 47.0
      comp=Z,20nm,0.7s
HIA   Hailar             69.69 332   P      P      21 33 46.2 +0.2
HIA   Hailar             69.69 332 i P      P      21 33 45.7 -0.3
HIA                                  pmax   pmax
      comp=Z,17nm,0.9s
HIA   Hailar             69.69 332   P      P      21 33 45.9 -0.1
HILR  Hailar Array B     69.89 333   P      P      21 33 47.6 +0.3
      comp=Z,7.1nm,0.5s,baz=131,slow=5.9,SNR=17
HILR                                 pP     pP     21 34 05.3 -0.3
      comp=Z,5.2nm,0.4s,baz=121,slow=5.7,SNR=2.9
      comp=Z,7.1nm,0.5s
ZEA   Zeya               70.10 339  eP      P      21 33 48.6 +0.2
ZEA                                 e              21 34 06.9
ZEA                                  pmax   pmax
      comp=E,10.0nm,0.4s
ZEA                                  pmax   pmax
      comp=N,20nm,0.6s
ZEA                                  pmax   pmax
      comp=Z,30nm,0.8s
MA2   Magadan            70.22 354   LR     LR     22 00 52.9
      comp=Z,110nm,21.7s,baz=170,slow=33
P08K  Saint George I     70.96  17   P      P      21 33 53.9 +0.4
      baz=210
LZDM  Lanzhou Array      71.15 314   LR     LR     22 03 04.1
      comp=Z,57nm,21.2s,baz=95,slow=34
SPIA  Saint Paul Isl     71.26  16   P      P      21 33 55.7 +0.4
      baz=210
FALS  False Pass         71.42  21   P      P      21 33 56.8 +0.4
      baz=217
S12K  Black Hills        72.57  21   P      P      21 34 03.4 +0.1
      baz=218
SEY   Seymchan           73.40 356   LR     LR     22 03 58.2
      comp=Z,92nm,20.8s,baz=167,slow=34
SEY   Seymchan           73.40 356  eP      P      21 34 07.3 -0.7
SEY                                  pmax   pmax
      comp=Z,18nm,1.5s
S14K  Fog Glacier        73.91  21   P      P      21 34 11.3 +0.1
      baz=220
CHIR  Chirikof Islan     75.05  24   P      P      21 34 18.2 +0.5
      baz=224
M11K  Mekoryuk           75.11  16   P      P      21 34 18.8 +0.9
      baz=213
ULN   Ulaanbaatar        75.24 326   P      P      21 34 19.4 +0.1
ULN   Ulaanbaatar        75.24 326   P      P      21 34 18.6 -0.6
      comp=Z,79nm,1.2s
ULN   Ulaanbaatar        75.24 326 i P      P      21 34 18.8 -0.4
ULN                                  pmax   pmax
      comp=Z,14nm,0.9s
ULN   Ulaanbaatar        75.24 326   P      P      21 34 19.9 +0.6
GTA   Gaotai             75.48 315  eP      P      21 34 21.3 +0.5
GTA                                  pP     pP     21 34 40.2 +1.1
SONM  Songino Array      75.59 325   P      P      21 34 21.5 +0.3
      comp=Z,13nm,0.7s,baz=143,slow=5.8,SNR=44
SONM                                 pP     pP     21 34 40.7 +1.3
      comp=Z,14nm,0.8s,baz=138,slow=5.4,SNR=10
SONM                                 LR     LR     22 06 18.7
      comp=Z,51nm,21.9s,baz=144,slow=35
      comp=Z,13nm,0.7s
SONM  Songino Array      75.59 325   P      P      21 34 20.3 -0.9
SONM                                        pP     21 34 38.9 -0.5
O14K  Tigyukauivet M     75.64  19   P      P      21 34 21.5 +0.5
      baz=218
BRDH  Bariadhala         75.69 297   LR     LR     22 05 24.7
      comp=Z,25nm,22.0s,baz=184,slow=34
M13K  Dall Lake          75.93  17   P      P      21 34 24.1 +1.5
      baz=216
N14K  Kuskokwak Cree     76.04  18   P      P      21 34 24.4 +1.1
      baz=218
R17L  Mt. Peulik Vol     76.08  22   P      P      21 34 24.2 +0.6
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      baz=223
PLK4  Peulik 4          76.08  22  P     P       21 34 23.8 +0.1
YAK   Yakutsk           76.28 345  LR    LR      22 05 29.3
      comp=Z,141nm,22.0s,baz=116,slow=34
YAK   Yakutsk           76.28 345  P     P       21 34 24.2 -0.4
YAK   Yakutsk           76.28 345  eP    P       21 34 24.0 -0.6
YAK                                e             21 34 33.7
YAK                                e*PP  pP      21 34 40.6 -2.3
YAK                                e             21 37 12.1
YAK                                ePPP  PPP     21 39 01.1
YAK                                eS    S       21 44 04.4 +1.0
YAK                                e*SS  SKKSac  21 44 29.9 +0.2
YAK                                eSS   SS      21 48 56.2 -2.8
YAK                                eSSS  SSS     21 52 23.1
YAK                                 pmax  pmax
      comp=Z,72nm,1.0s
YAK                                 pmax  pmax
      comp=N,7.0nm,0.9s
YAK                                 pmax  pmax
      comp=E,4.0nm,1.2s
YAK                                 pmax  pmax
      comp=Z,206nm,4.8s
YAK                                 pmax  pmax
      comp=N,56nm,2.5s
YAK                                 pmax  pmax
      comp=E,74nm,4.3s
YAK                                 smax  smax
      comp=E,157nm,4.6s
YAK                                 smax  smax
      comp=N,108nm,4.6s
YAK   Yakutsk           76.28 345  P     P       21 34 24.3 -0.2
SHL   Shillong          76.38 300  IAmb  IAmb    21 34 53.7
      comp=Z,15nm,0.8s
M14K  Bethel            76.61  18        P       21 34 26.7 +0.2
M14K                               IAmb  IAmb    21 34 28.3
      comp=Z,25nm,0.9s
M14K  Bethel            76.61  18  P     P       21 34 27.3 +0.8
      baz=217
Q17K  Contact Creek     76.72  22  P     P       21 34 27.9 +0.6
      baz=223
N15K  Kwethluk River    76.73  19  P     P       21 34 27.8 +0.6
      baz=219
GAMB  Gambell           76.74  12  P     P       21 34 27.7 +0.5
      baz=207
R18K  Karluk            76.75  23  P     P       21 34 27.6 +0.3
      baz=225
K13K  Kusilvak Mount    76.82  16  P     P       21 34 28.7 +1.1
      baz=214
L14K  Kuka Creek        76.88  17  P     P       21 34 28.9 +0.9
      baz=216
ACHA  Angle Creek He    76.88  22        P       21 34 28.4 +0.2
O16K  Kokwok River B    76.94  20  P     P       21 34 28.6 +0.2
      baz=221
M15K  Kasigluk River    76.95  18  P     P       21 34 29.2 +0.7
      baz=218
OHAK  Old Harbor        76.95  23  P     P       21 34 28.5  0.0
      baz=226
Q18K  Katmai Hardscr    77.31  22  P     P       21 34 30.4 -0.3
      baz=224
N16K  Nishlik Lake      77.38  19  P     P       21 34 31.8 +0.9
      baz=220
O17K  Koliganek Bris    77.41  20  P     P       21 34 31.0  0.0
      baz=222
L15K  Ungalak Mounta    77.49  17  P     P       21 34 32.3 +0.8
      baz=218
KDAK  Kodiak Island     77.62  23  P     P       21 34 32.3 +0.1
KDAK  Kodiak Island     77.62  23  P     P       21 34 32.3 +0.1
KDAK                               pmax  pmax
      comp=Z,40nm,1.0s
KDAK  Kodiak Island     77.62  23  P     P       21 34 33.1 +0.8
      baz=226
M16K  Timber Creek      77.74  19  P     P       21 34 33.6 +0.7
      baz=220
P18K  Big Mountain,     77.77  21  P     P       21 34 32.8 -0.3
P18K  Big Mountain,     77.77  21  P     P       21 34 33.2 +0.1
      baz=224
J14K  Nanvaranak Lak    77.78  16  P     P       21 34 34.0 +1.0
      baz=215
N17K  Nushagak Hills    77.94  20  P     P       21 34 34.2 +0.2
N17K                               IAmb  IAmb    21 34 54.9
      comp=Z,44nm,1.4s
N17K  Nushagak Hills    77.94  20  P     P       21 34 34.4 +0.4
      baz=222
K15K  Wolf Creek Mou    77.97  17  IAmb  IAmb    21 34 54.9
      comp=Z,44nm,1.2s
K15K  Wolf Creek Mou    77.97  17  P     P       21 34 34.9 +0.8
      baz=217
Q19K  Cape Douglas,     78.01  22  P     P       21 34 34.8 +0.3
      baz=225
L16K  Owhat River       78.12  18  P     P       21 34 35.5 +0.6
      baz=220
Q20K  Shuyak Island     78.26  23  P     P       21 34 35.9 +0.2
      baz=227
N18K  Kilae Creek       78.48  20  P     P       21 34 37.3 +0.3
      baz=223
M17K  Holitna River     78.51  19  P     P       21 34 37.7 +0.5
      baz=222
O19K  Port Alsworth     78.67  21  P     P       21 34 38.6 +0.7
      baz=225
P19K  Oil Pt            78.67  22  P     P       21 34 37.7 -0.4
      baz=226
ZAK   Zakamensk         78.69 326  eP    P       21 34 36.5 -2.0
ZAK                                pmax  pmax
      comp=Z,13nm,1.8s
L17K  Donlin            78.80  18  P     P       21 34 39.4 +0.7
      baz=220
ANM   Nome              78.83  14  P     P       21 34 39.4 +0.6
      baz=213
ILSW  Iliamna Southw    78.94  21  IAmb  IAmb    21 35 18.1
      comp=Z,50nm,1.4s
J16K  Anvik River       79.02  16  IAmb  IAmb    21 35 00.9
      comp=Z,38nm,1.3s
J16K  Anvik River       79.02  16  P     P       21 34 40.9 +1.0
      baz=218
N19K  Bonanza Creek     79.06  20  P     P       21 34 39.9 -0.3
      baz=224
TNA   Tin City          79.10  13  P     P       21 34 41.2 +1.0
      baz=211
M18K  Stony River       79.10  19  P     P       21 34 41.1 +0.8
      baz=223
O20K  Slope Mountain    79.19  22  P     P       21 34 41.7 +0.7
      baz=226
K17K  Iditarod          79.24  18  IAmb  IAmb    21 35 02.0
      comp=Z,25nm,1.1s
K17K  Iditarod          79.24  18  P     P       21 34 42.0 +0.9
      baz=220
L18K  Granite Mounta    79.36  19  IAmb  IAmb    21 35 03.4
      comp=Z,36nm,1.0s
L18K  Granite Mounta    79.36  19  P     P       21 34 43.0 +1.2
      baz=222
F14K  Arctic Creek      79.37  13  P     P       21 34 42.7 +1.0
      baz=212
I17K  Unalakleet        79.47  16  P     P       21 34 43.2 +0.9
      baz=218
G15K  Niukluk           79.50  14  P     P       21 34 43.3 +0.8
      baz=215
J17K  VABM Dome         79.54  17  IAmb  IAmb    21 34 44.6
      comp=Z,17nm,0.8s
J17K  VABM Dome         79.54  17  P     P       21 34 43.6 +0.9
      baz=220
QSPA  South Pole Qui    79.63 180  P     P       21 34 46.9 +3.4
      comp=Z,36nm,0.8s,baz=359,slow=1.5,SNR=93
QSPA                               LR    LR      22 05 54.3
      comp=Z,44nm,21.0s,baz=21,slow=32
QSPA  South Pole Qui    79.63 180  P     P       21 34 44.1 +0.7
BRSE  Bradley Lake S    79.66  22  P     P       21 34 44.5 +1.1
      baz=228
H16K  Elim              79.66  15  P     P       21 34 44.0 +0.7
      baz=216
L19K  White Mountain    79.92  19        P       21 34 45.2 +0.3
L19K                               IAmb  IAmb    21 34 47.2
      comp=Z,22nm,0.9s
L19K  White Mountain    79.92  19  P     P       21 34 45.5 +0.7
      baz=224
F15K  North Star Dit    79.95  14  P     P       21 34 46.0 +1.2
      baz=214
N20K  Mount Spurr       80.12  21  P     P       21 34 46.6 +0.6
      baz=226
SPCR  Spurr Chakacha    80.12  21  P     P       21 34 46.9 +0.9
      baz=226
CAPN  Captain Cook N    80.20  22  P     P       21 34 47.3 +1.1
      baz=227
G16K  Koyuk River       80.24  15  P     P       21 34 47.6 +1.2
      baz=216
M20K  Styx River        80.28  20  P     P       21 34 47.4 +0.6
      baz=226
J18K  Innoko River      80.28  18  P     P       21 34 46.6 -0.1
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J18K                               IAmb  IAmb    21 35 07.1
      comp=Z,32nm,1.4s
J18K  Innoko River      80.28  18  P     P       21 34 47.6 +0.8
      baz=222
SEW   Seward            80.38  23  P     P       21 34 48.2 +0.9
      baz=229
L20K  Farewell, AK      80.45  19  P     P       21 34 49.0 +1.3
      baz=225
H17K  Granite Mounta    80.51  16  P     P       21 34 47.9  0.0
H17K  Granite Mounta    80.51  16  P     P       21 34 48.8 +0.9
      baz=219
O22K  Cooper Landing    80.53  22  P     P       21 34 49.0 +0.9
      baz=229
G17K  Kiwalik Mounta    80.76  15  P     P       21 34 49.9 +0.7
      baz=218
SUA   Susitna One       80.81  21  P     P       21 34 50.2 +0.4
      baz=228
SKT   Skwentna          80.89  21  P     P       21 34 50.5 +0.4
      baz=227
RC01  Rabbit Creek A    80.93  22  P     P       21 34 51.3 +1.1
      baz=229
J19K  Poorman           81.00  18  P     P       21 34 51.2 +0.7
J19K  Poorman           81.00  18  P     P       21 34 51.5 +1.0
      baz=223
K20K  Telida            81.02  19  P     P       21 34 50.8 +0.2
K20K  Telida            81.02  19  P     P       21 34 51.3 +0.6
      baz=224
H18K  Honhosa River     81.09  16  P     P       21 34 51.3 +0.3
      baz=220
Q23K  Middleton Isla    81.17  24  P     P       21 34 52.2 +0.7
      baz=232
GCSA  Galena City Sc    81.19  17  P     P       21 34 52.5 +1.0
      baz=222
M22K  Willow            81.23  21  P     P       21 34 52.5 +0.7
      baz=228
PWL   Port Wells        81.30  22  P     P       21 34 52.6 +0.4
PWL                                IAmb  IAmb    21 35 24.3
      comp=Z,40nm,1.2s
PWL   Port Wells        81.30  22  P     P       21 34 53.0 +0.8
      baz=230
PPLA  Purkeypile        81.30  20  P     P       21 34 52.7 +0.4
      baz=226
F17K  Baldwin Pennin    81.36  14  P     P       21 34 52.4 +0.1
F17K                               IAmb  IAmb    21 35 12.8
      comp=Z,28nm,1.2s
F17K  Baldwin Pennin    81.36  14  P     P       21 34 53.4 +1.1
      baz=217
PMR   Palmer            81.48  22  P     P       21 34 53.2 +0.1
      baz=229
L22K  Petersville       81.52  20  P     P       21 34 53.0 -0.5
J20K  Nowinta River     81.58  18        P       21 34 54.1 +0.5
J20K  Nowinta River     81.58  18  P     P       21 34 53.8 +0.2
      baz=224
G18K  Tagagawik         81.58  15  P     P       21 34 53.7 +0.1
G18K                               IAmb  IAmb    21 37 06.4
      comp=Z,39nm,1.9s
G18K  Tagagawik         81.58  15  P     P       21 34 54.0 +0.4
      baz=220
KNK   Knik Glacier      81.61  22  P     P       21 34 53.9  0.0
      baz=230
CUT   Chulitna          81.61  21  P     P       21 34 54.1 +0.3
      baz=228
E17K  Hotham Inlet      81.73  14  P     P       21 34 54.8 +0.5
      baz=217,SNR=12
GLI   Glacier Island    81.78  23  P     P       21 34 55.1 +0.4
      baz=231
F18K  Selawik           81.88  15  P     P       21 34 55.9 +0.8
      baz=219
H19K  Roundabout Mou    81.90  16  P     P       21 34 55.4 +0.1
H19K                               IAmb  IAmb    21 35 15.8
      comp=Z,33nm,1.4s
H19K  Roundabout Mou    81.90  16  P     P       21 34 56.5 +1.2
      baz=222
SML   Sawmill           81.91  22  P     P       21 34 56.6 +1.1
      baz=230
I20K  Naaghedeneel      81.93  18  P     P       21 34 56.2 +0.8
      baz=224
CHUM  Lake Minchumin    81.95  19  P     P       21 34 56.2 +0.7
      baz=226,SNR=7.2
D17K  Noatak River      81.95  13  P     P       21 34 55.9 +0.5
      baz=215
EYAK  Cordova Ski Ar    82.09  23  P     P       21 34 57.3 +1.0
      baz=232
M23K  Glacier View      82.12  22  P     P       21 34 57.3 +0.7
      baz=230
PALK  Pallekele         82.14 279  LR    LR      22 15 04.7
      comp=Z,26nm,19.6s,baz=102,slow=38
G19K  Purcell Mounta    82.19  16  IAmb  IAmb    21 35 17.3
      comp=Z,31nm,1.4s
G19K  Purcell Mounta    82.19  16  P     P       21 34 57.6 +0.8
      baz=221
KAIM  Kayak Island      82.25  24  P     P       21 34 57.6 +0.4
      baz=234
RDOG  Red Dog Mine      82.28  13  P     P       21 34 57.4 +0.2
RDOG                               IAmb  IAmb    21 35 23.6
      comp=Z,60nm,1.8s
RDOG  Red Dog Mine      82.28  13  P     P       21 34 57.4 +0.2
      baz=216
SCM   Sheep Creek Mo    82.29  22  P     P       21 34 57.6 +0.1
      baz=231
E18K  Tukpahlearik C    82.29  14  P     P       21 34 58.2 +0.9
      baz=218,SNR=5.1
TRF   Thorofare Moun    82.31  20  IAmb  IAmb    21 35 24.3
      comp=Z,18nm,0.9s
TRF   Thorofare Moun    82.31  20  P     P       21 34 57.4 -0.3
      baz=228,SNR=5.9
H20K  Anotleneega Mo    82.32  17  P     P       21 34 58.1 +0.6
      baz=223
WAT1  Susitna Watana    82.49  21  P     P       21 34 58.5  0.0
      baz=230
BPAW  Bear Paw Mtn.     82.52  19  P     P       21 34 59.0 +0.4
      baz=227
F19K  Shaleruckik Mo    82.53  15  P     P       21 34 59.0 +0.4
      baz=221
C17K  DeLong Mountai    82.57  12  P     P       21 34 59.1 +0.4
      baz=215
KLU   Klutina           82.61  23  P     P       21 34 59.6 +0.5
      baz=232
WAT6  Susitna Watana    82.62  21  P     P       21 34 59.7 +0.4
      baz=230
RND   Reindeer          82.77  20  IAmb  IAmb    21 35 24.6
      comp=Z,19nm,0.9s
BMRM  Bremner River     82.79  23  P     P       21 35 00.5 +0.4
      baz=233
M24K  Tolsona, Glenn    82.89  22  IAmb  IAmb    21 35 26.8
      comp=Z,27nm,0.8s
M24K  Tolsona, Glenn    82.89  22  P     P       21 35 01.3 +0.7
      baz=232
MCK   McKinley          82.95  20  P     P       21 35 00.9 +0.1
      baz=229,SNR=22
IMAR  Indian Mountai    83.00  17  P     P       21 35 00.2 -0.8
H21K  Melozitna Rive    83.04  17  P     P       21 35 02.0 +0.8
      baz=225
DHY   Denali Highway    83.06  21  P     P       21 35 01.9 +0.3
      baz=231
C18K  Utukok River      83.14  13  P     P       21 35 02.2 +0.4
      baz=217
E19K  Redstone River    83.15  15  IAmb  IAmb    21 35 28.9
      comp=Z,17nm,0.8s
E19K  Redstone River    83.15  15  P     P       21 35 02.3 +0.6
      baz=221
N25K  Chitina, Valde    83.18  23  P     P       21 35 02.8 +0.7
      baz=233
F20K  Avaraart Lake     83.23  16  P     P       21 35 02.9 +0.7
      baz=222
CRQM  Cirque            83.25  24  IAmb  IAmb    21 35 04.6
      comp=Z,27nm,0.9s
CRQE  Cirque            83.27  24  P     P       21 35 02.7  0.0
      baz=235,SNR=5.4
GLB   Gilahina Butte    83.39  23  IAmb  IAmb    21 35 25.0
      comp=Z,16nm,1.0s
MESA  MESA              83.41  25  P     P       21 35 03.7 +0.3
      baz=236
HARP  HAARP             83.45  22  P     P       21 35 04.1 +0.7
      baz=233
G21K  Allakaket         83.45  17  P     P       21 35 04.2 +0.9
      baz=225
NEA2  Nenana            83.47  19  IAmb  IAmb    21 35 23.3
      comp=Z,24nm,1.1s
NEA2  Nenana            83.47  19  P     P       21 35 03.3 -0.2
      baz=229,SNR=11
B18K  Kokolik River     83.58  12  P     P       21 35 04.6 +0.6
      baz=216
H22K  Ishtalitna Cre    83.63  18  IAmb  IAmb    21 35 25.6
      comp=Z,24nm,1.1s
H22K  Ishtalitna Cre    83.63  18  P     P       21 35 05.3 +1.1
      baz=227,SNR=8.6
MCARA McCarthy VSAT     83.66  24  IAmb  IAmb    21 35 33.6
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      comp=Z,24nm,1.0s
MCARA McCarthy VSAT     83.66  24  P     P       21 35 05.8 +1.3
      baz=235
PAX   Paxson            83.68  22  P     P       21 35 05.1 +0.5
      baz=232
MAW   Mawson            83.69 202  P     P       21 35 05.0 +0.4
      comp=Z,8.2nm,1.0s,comp=Z,0.0nm
MAW   Mawson            83.69 202  P     P       21 35 04.8 +0.1
      comp=Z,22nm,0.7s,baz=103,slow=6.7,SNR=48
MAW                                LR    LR      22 06 44.7
      comp=Z,88nm,21.5s,baz=97,slow=32
      comp=Z,22nm,0.7s
WRH   Wood River Hil    83.72  20  IAmb  IAmb    21 35 24.1
      comp=Z,24nm,1.1s
D19K  Kuna River        83.72  14  IAmb  IAmb    21 35 05.9
      comp=Z,28nm,1.2s
D19K  Kuna River        83.72  14  P     P       21 35 04.6 -0.1
      baz=220
I23K  Minto, Yukon-K    83.75  19  P     P       21 35 04.6 -0.2
      baz=229
C19K  Lookout Ridge     83.86  13  P     P       21 35 06.1 +0.7
      baz=219
CCB   Clear Creek Bu    83.92  20        P       21 35 05.1 -0.6
F21K  Alatna River      83.96  16  P     P       21 35 06.5 +0.5
      baz=225
E20K  Nigu River        84.01  15  P     P       21 35 06.7 +0.5
      baz=222
COLA  College           84.05  19  P     P       21 35 05.9 -0.5
COLA  College           84.05  19  P     P       21 35 06.3 -0.1
COLA  College           84.05  19  P     P       21 35 05.9 -0.5
COLA                               pmax  pmax
      comp=Z,23nm,0.7s
COLA  College           84.05  19  P     P       21 35 06.7 +0.3
      baz=230
COLA  College           84.05  19  P     P       21 35 06.3 -0.1
COLA                               pP    pP      21 35 24.6 -0.5
HDA   Harding Lake      84.06  20  P     P       21 35 07.2 +0.7
      baz=231,SNR=8.7
PINM  Pinnacle          84.07  25  P     P       21 35 07.5 +0.8
      baz=237
K24K  Donnelly Dome     84.08  21  IAmb  IAmb    21 35 33.8
      comp=Z,19nm,1.0s
K24K  Donnelly Dome     84.08  21  P     P       21 35 07.6 +1.0
      baz=232
CTG   Chitna Glacier    84.10  24  P     P       21 35 07.8 +0.9
      baz=236
CTGM  Chitina Glacie    84.10  24  IAmb  IAmb    21 35 33.1
      comp=Z,17nm,0.7s
H23K  Yukon River       84.14  18  IAmb  IAmb    21 35 27.2
      comp=Z,22nm,1.1s
H23K  Yukon River       84.14  18  P     P       21 35 07.7 +0.8
      baz=228,SNR=8.0
D20K  Etivluk River     84.25  14  IAmb  IAmb    21 35 27.8
      comp=Z,34nm,1.2s
D20K  Etivluk River     84.25  14  P     P       21 35 07.8 +0.4
      baz=222
M26K  Nabesna, AK       84.26  23  IAmb  IAmb    21 35 39.4
      comp=Z,14nm,0.9s
M26K  Nabesna, AK       84.26  23  P     P       21 35 08.6 +1.0
      baz=235
G22K  Bettles           84.30  17  P     P       21 35 08.4 +0.8
      baz=226,SNR=5.4
MENT  Mentasta          84.30  22  IAmb  IAmb    21 35 33.9
      comp=Z,11nm,0.7s
MENT  Mentasta          84.30  22  P     P       21 35 08.8 +1.0
ILAR  Eielson Array     84.31  20  P     P       21 35 07.1 -0.6
      comp=Z,4.7nm,0.9s,baz=246,slow=4.8,SNR=57
ILAR                               LR    LR      22 06 19.2
      comp=Z,84nm,21.2s,baz=233,slow=31
      comp=Z,4.7nm,0.9s
ILAR  Eielson Array     84.31  20  P     P       21 35 06.9 -0.8
ILAR  Eielson Array     84.31  20  P     P       21 35 06.9 -0.8
POKR  Poker Plat Res    84.35  19  P     P       21 35 08.4 +0.5
      baz=230
RIDG  Independent Ri    84.37  21  P     P       21 35 08.7 +0.6
      baz=233
A19K  Wainwright        84.41  12  P     P       21 35 09.3 +1.2
      baz=217
O28M  Mount Upton       84.46  25  IAmb  IAmb    21 35 11.3
      comp=Z,25nm,0.9s
O28M  Mount Upton       84.46  25  P     P       21 35 09.6 +0.7
      baz=237
L26K  Log Cabin Wild    84.49  22  P     P       21 35 10.3 +1.6
      baz=234,SNR=7.0
F22K  John River        84.52  16  P     P       21 35 09.6 +0.9
      baz=226
G23K  Bananza Creek     84.59  17  IAmb  IAmb    21 35 34.3
      comp=Z,50nm,1.8s
G23K  Bananza Creek     84.59  17  P     P       21 35 09.8 +0.7
      baz=228
DOT   Dot Lake          84.60  21  IAmb  IAmb    21 35 35.3
      comp=Z,17nm,0.8s
TIXI  Tiksi             84.64 350  LR    LR      22 16 30.2
      comp=Z,39nm,18.0s,baz=198,slow=38
TIXI  Tiksi             84.64 350  P     P       21 35 08.1 -1.1
TIXI  Tiksi             84.64 350ceP     P       21 35 08.5 -0.7
TIXI                               pmax  pmax
      comp=Z,17nm,1.7s
TIXI  Tiksi             84.64 350  P     P       21 35 08.3 -0.9
TIXI                               pP    pP      21 35 26.4 -1.7
M27K  Edge Creek, AK    84.66  23  IAmb  IAmb    21 35 35.9
      comp=Z,25nm,0.9s
M27K  Edge Creek, AK    84.66  23  P     P       21 35 11.0 +1.3
      baz=236
H24K  Noodor Dome       84.67  19  P     P       21 35 10.3 +0.8
      baz=230
E21K  Killik River      84.71  15  IAmb  IAmb    21 35 42.3
      comp=Z,16nm,1.1s
E21K  Killik River      84.71  15  P     P       21 35 10.6 +0.8
      baz=224
J25K  Salcha River,     84.72  20  IAmb  IAmb    21 35 34.6
      comp=Z,12nm,0.8s
J25K  Salcha River,     84.72  20  P     P       21 35 10.6 +0.7
      baz=232
RPN   Rapa Nui          84.78 117  LR    LR      22 05 25.5
      comp=Z,48nm,21.5s,baz=54,slow=30
SCRK  Sand Creek        84.82  21  P     P       21 35 11.3 +0.9
      baz=234,SNR=8.6
COLD  Coldfoot          84.89  17  P     P       21 35 11.7 +1.1
      baz=228
O29M  Mount Kennedy     84.89  26  P     P       21 35 11.8 +0.9
      baz=239
YUK3  Moose Creek       84.90  24  P     P       21 35 12.3 +1.3
      baz=237,SNR=8.7
P29M  Windy Craggy      84.91  26  P     P       21 35 12.1 +1.2
      baz=240
YUK8  Steele Glacier    84.91  25  P     P       21 35 12.0 +0.8
      baz=238,SNR=10
C21K  Knifeblade Rid    85.02  14  P     P       21 35 13.0 +1.8
      baz=223
E22K  Anaktuvuk Pass    85.06  16  P     P       21 35 12.9 +1.4
      baz=226
L27K  Beaver Creek,     85.08  23  IAmb  IAmb    21 35 32.8
      comp=Z,42nm,1.6s
L27K  Beaver Creek,     85.08  23  P     P       21 35 12.4 +0.7
      baz=236,SNR=11
BVCY  Beaver Creek      85.09  23  P     P       21 35 12.7 +0.9
      baz=237,SNR=7.2
BCAR  Beaver Creek A    85.10  23  P     P       21 35 12.4 +0.6
B20K  Meade River       85.10  13  P     P       21 35 12.8 +1.3
      baz=221
R31K  City Hall, Gus    85.21  28  P     P       21 35 13.9 +1.6
      baz=242
PRP   Porcupine Dome    85.22  20  P     P       21 35 13.7 +1.2
      baz=232
J26L  Joseph Creek      85.28  21  P     P       21 35 14.1 +1.3
      baz=234
YUK6  Outpost Mounta    85.31  25  P     P       21 35 13.8 +0.6
      baz=239
S32K  Killisnoo         85.32  29  P     P       21 35 13.7 +0.8
      baz=243
G24K  Hadweenzic Riv    85.35  18  IAmb  IAmb    21 35 33.5
      comp=Z,25nm,1.2s
G24K  Hadweenzic Riv    85.35  18  P     P       21 35 14.2 +1.3
      baz=230
D22K  Ayikyak River     85.35  15  IAmb  IAmb    21 35 41.8
      comp=Z,14nm,0.7s
D22K  Ayikyak River     85.35  15  P     P       21 35 14.2 +1.3
      baz=225
YUK4  Talbot Arm        85.40  25  P     P       21 35 14.8 +1.2
      baz=239,SNR=7.9
B21K  Ikpikpuk River    85.41  14  P     P       21 35 14.6 +1.5
      baz=223
PLBC  Pleasant Camp     85.43  27  P     P       21 35 14.8 +1.4
      baz=241
P30M  Million Dollar    85.50  26  P     P       21 35 14.4 +0.6
      baz=240
K27K  Chicken           85.54  22  P     P       21 35 15.1 +1.2
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     baz=236
WMQ  Urumqi            85.56 316 eP      P      21 35 15.8 +1.3
E23K Chandalar         85.61  17 IAmb    IAmb   21 35 36.0
     comp=Z,26nm,1.6s
E23K Chandalar         85.61  17 P       P      21 35 15.3 +1.0
     baz=228
HYT  Haines Junctio    85.61  26 P       P      21 35 15.3 +0.7
     baz=240
R32K Eaglecrest        85.72  28 P       P      21 35 15.4 +0.5
     baz=243
F24K Squaw Lake        85.75  17 IAmb    IAmb   21 35 41.3
     comp=Z,44nm,1.9s
F24K Squaw Lake        85.75  17 P       P      21 35 15.8 +0.9
     baz=230
G25K Bearman Lake      85.81  18 P       P      21 35 16.1 +1.0
     baz=232
I26K Coal Creek Min    85.89  20 IAmb    IAmb   21 35 36.4
     comp=Z,22nm,1.2s
I26K Coal Creek Min    85.89  20 P       P      21 35 16.4 +0.8
     baz=234
D23K Nanushuk River    85.94  16 P       P      21 35 17.1 +1.3
     baz=227
E24K Your Creek        85.94  17 P       P      21 35 16.8 +0.9
     baz=229
WRAK Wrangell Islan    85.94  31 P       P      21 35 16.9 +0.8
     baz=245
TOLK Toolik Lake Re    86.01  16 P       P      21 35 16.7 +0.4
     baz=228
M29M Somme Creek       86.05  24 P       P      21 35 17.5 +0.9
     baz=239
O02D Mt. Diablo Mer    86.06  48 IAmb    IAmb   21 35 54.5
     comp=Z,16nm,1.1s
N30M Aishikik Lake     86.11  25 P       P      21 35 17.6 +0.7
     baz=240
O30N Mendenhall        86.19  26 P       P      21 35 17.7 +0.5
     baz=241
B22K Teshekpuk Lake    86.21  14 P       P      21 35 17.9 +0.8
     baz=224
HYB  Hyderabad         86.26 288 eP      P      21 35 17.8 -0.7
M02C Callahan          86.37  47 IAmb    IAmb   21 35 21.6
     comp=Z,9.6nm,0.8s
F25K Christian Rive    86.47  18 P       P      21 35 19.5 +1.0
     baz=232
L29M L29M              86.52  23 P       P      21 35 19.7 +0.9
     baz=239
DAWY Dawson            86.54  22 IAmb    IAmb   21 35 40.0
     comp=Z,28nm,1.2s
DAWY Dawson            86.54  22 P       P      21 35 20.4 +1.5
     baz=238,SNR=10.0
C23K Itkillik River    86.55  15 P       P      21 35 20.6 +1.9
     baz=227
D24K Happy Valley      86.56  16 IAmb    IAmb   21 35 52.1
     comp=Z,18nm,1.2s
D24K Happy Valley      86.56  16 P       P      21 35 20.3 +1.5
     baz=229
I27K Kandik River      86.59  20 P       P      21 35 20.2 +1.1
     baz=236,SNR=8.1
G26K Porcupine Rive    86.65  19 P       P      21 35 20.5 +1.2
     baz=234
N31M Braeburn, Yuko    86.67  25 P       P      21 35 20.6 +1.1
     baz=241
M30M Minto, Yukon      86.78  24 IAmb    IAmb   21 35 40.9
     comp=Z,29nm,1.4s
M30M Minto, Yukon      86.78  24 P       P      21 35 20.9 +0.7
     baz=240
O03E Paynes Creek      86.82  48 IAmb    IAmb   21 35 22.9
     comp=Z,15nm,1.0s
E25K Arctic Village    86.82  17 P       P      21 35 21.1 +1.0
     baz=232
C24K Franklin Bluff    86.96  16 IAmb    IAmb   21 35 41.9
     comp=Z,22nm,1.1s
C24K Franklin Bluff    86.96  16 P       P      21 35 21.9 +1.1
     baz=229
H27K Steamboat Moun    86.97  20 IAmb    IAmb   21 35 42.2
     comp=Z,27nm,1.4s
H27K Steamboat Moun    86.97  20 P       P      21 35 22.7 +1.7
     baz=236
F26K Sheenjek River    86.98  18 P       P      21 35 22.4 +1.4
     baz=233
Q32M Nakina River      87.08  28 P       P      21 35 22.4 +0.6
     baz=245
I28M Miner Creek       87.09  21 IAmb    IAmb   21 35 25.2
     comp=Z,27nm,1.9s
I28M Miner Creek       87.09  21 P       P      21 35 22.6 +0.9
     baz=237
K29M Barlow Dome       87.13  23 IAmb    IAmb   21 35 43.0
     comp=Z,21nm,1.2s
K29M Barlow Dome       87.13  23 P       P      21 35 22.8 +0.9
     baz=240
S34M Telegraph Cree    87.18  30 P       P      21 35 22.9 +0.8
     baz=246
J29N Klondike Camp     87.18  22 P       P      21 35 23.0 +1.0
     baz=239,SNR=6.2
G27K Doyon Strip       87.26  19 IAmb    IAmb   21 35 43.5
     comp=Z,14nm,1.3s
G27K Doyon Strip       87.26  19 P       P      21 35 23.3 +0.9
     baz=236
D25K Kavik River       87.33  16 P       P      21 35 23.6 +1.0
     baz=231
P33M Teslin, Yukon     87.37  27 P       P      21 35 23.7 +0.6
     baz=244
M31M Drury Creek, Y    87.59  25 P       P      21 35 24.8 +0.8
     baz=243
I29M Ogilvie Camp,     87.62  21 IAmb    IAmb   21 35 45.3
     comp=Z,20nm,1.1s
I29M Ogilvie Camp,     87.62  21 P       P      21 35 25.0 +0.9
     baz=239
DGZ  Jazzator, Alta    87.63 321 i P     P      21 35 24.3 -0.3
DGZ                                pmax  pmax
     comp=Z,7.0nm,2.0s
N32M Quiet Lake        87.67  26 P       P      21 35 25.4 +1.0
     baz=244
R33M Jennings River    87.87  28 P       P      21 35 26.2 +0.7
     baz=246
DLBC Dease Lake        87.92  29 LR      LR     22 07 40.4
     comp=Z,32nm,20.0s,baz=280,slow=31
DLBC Dease Lake        87.92  29 P       P      21 35 26.4 +0.7
     baz=246
J30M Hart River        87.95  22 P       P      21 35 26.6 +0.8
     baz=241
H29M Whitestone        88.05  21 P       P      21 35 27.3 +1.3
     baz=239
E27K Coleen River      88.06  18 IAmb    IAmb   21 35 47.4
     comp=Z,26nm,1.3s
E27K Coleen River      88.06  18 P       P      21 35 27.7 +1.6
     baz=236
J05D Fort Rock, OR     88.06  45 IAmb    IAmb   21 35 48.1
     comp=Z,21nm,1.1s
C26K Camden Bay        88.11  16 P       P      21 35 27.8 +1.6
     baz=233
K05A Summer Lake       88.14  46 P       P      21 35 27.8 +0.5
K05A                             IAmb    IAmb   21 35 29.6
     comp=Z,15nm,1.0s
I30M Mount Dempster    88.25  22 P       P      21 35 28.5 +1.3
     baz=241
C27K Jago River        88.27  17 IAmb    IAmb   21 35 48.2
     comp=Z,18nm,1.2s
C27K Jago River        88.27  17 P       P      21 35 28.2 +1.2
     baz=234
F28M Old Crow          88.28  19 P       P      21 35 28.3 +1.1
     baz=237
PINE Pine Mountain     88.40  45 IAmb    IAmb   21 36 02.1
     comp=Z,16nm,1.1s
G29M Pine Creek        88.52  20 IAmb    IAmb   21 36 06.6
     comp=Z,13nm,1.1s
G29M Pine Creek        88.52  20 P       P      21 35 29.6 +1.2
     baz=239
EPYK Eagle Plains      88.70  21 P       P      21 35 30.4 +1.2
     baz=240
D27M Malcolm River     88.84  18 P       P      21 35 30.5 +0.6
     baz=236
CLC  China Lake        88.87  53 IAmb    IAmb   21 35 52.6
     comp=Z,9.3nm,1.0s
E28M Babbage River     88.92  18 P       P      21 35 31.4 +1.3
     baz=238
NVAR Mina Array Bea    88.95  51 P       P      21 35 32.4 +1.1
     comp=Z,2.7nm,0.8s,baz=237,slow=7.5,SNR=11
NVAR                             pP      pP     21 35 50.9 +0.5
     comp=Z,4.5nm,0.8s,baz=239,slow=7.7,SNR=5.8
NVAR                             LR      LR     22 06 17.7
     comp=Z,52nm,21.7s,baz=271,slow=29
     comp=Z,2.7nm,0.8s
DSP  Deep Springs      88.95  52 IAmb    IAmb   21 35 33.8
     comp=Z,12nm,1.2s
NV11 Mina Array Sit    89.06  51 IAmb    IAmb   21 36 18.2
     comp=Z,13nm,1.3s
WTLY Watson Lake, Y    89.16  28 P       P      21 35 32.9 +1.4
     baz=248
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G30M  tAoh Zraii Nji    89.17  20 IAmb    IAmb   21 36 19.1
      comp=Z,17nm,1.2s
G30M  tAoh Zraii Nji    89.17  20 P       P      21 35 32.2 +0.9
      baz=241
BORC  Borrego Spring    89.24  56 IAmb    IAmb   21 35 53.6
      comp=Z,13nm,1.2s
H31M  Peel River        89.28  22 P       P      21 35 32.8 +1.0
      baz=242
PFO   Pinyon Flats O    89.28  56 LR      LR     22 07 17.5
      comp=Z,76nm,21.1s,baz=265,slow=30
E29M  Blow River        89.33  19 P       P      21 35 33.2 +1.2
      baz=239
VTX   Valle De La Tr    89.36  58 IAmb    IAmb   21 35 55.5
      comp=Z,11nm,1.0s
QSM   Queen of Sheba    89.48  53 IAmb    IAmb   21 35 55.1
      comp=Z,8.5nm,1.0s
D28M  Stokes Point      89.56  18 P       P      21 35 33.8 +0.8
      baz=238
F30M  Barrier River     89.63  20 P       P      21 35 34.8 +1.4
      baz=241
WVOR  Wild Horse Val    89.68  47 IAmb    IAmb   21 35 37.1
      comp=Z,17nm,1.2s
GWY   Greenwater Val    89.69  53 IAmb    IAmb   21 35 55.5
      comp=Z,22nm,1.6s
BELC  Belle Mtn. Jos    89.75  55 IAmb    IAmb   21 35 57.7
      comp=Z,7.8nm,0.9s
G31M  Satah River       89.82  21 IAmb    IAmb   21 35 59.8
      comp=Z,10nm,1.1s
G31M  Satah River       89.82  21 P       P      21 35 35.5 +1.2
      baz=243
WCT   Wildcat Mounta    89.86  53 IAmb    IAmb   21 35 56.5
      comp=Z,10nm,1.1s
SHOC  Shoshone, Teco    89.94  54 IAmb    IAmb   21 35 57.7
      comp=Z,21nm,1.2s
J08A  Circle Bar Ran    90.02  46 IAmb    IAmb   21 35 57.1
      comp=Z,15nm,1.2s
MKAR  Makanchi Array    90.07 318 P       P      21 35 35.2 -0.8
      comp=Z,1.5nm,0.4s,baz=93,slow=5.8,SNR=35
MKAR                              pP      pP     21 35 55.6 +0.5
      comp=Z,7.7nm,0.8s,baz=99,slow=6.7,SNR=7.8
MKAR                              LR      LR     22 15 47.5
      comp=Z,46nm,20.8s,baz=102,slow=35
      comp=Z,1.5nm,0.4s
MKAR  Makanchi Array    90.07 318 P       P      21 35 34.2 -1.8
MKAR  Makanchi Array    90.07 318 P       P      21 35 34.2 -1.8
F31M  Tsiigehtchic      90.24  20 P       P      21 35 37.2 +0.9
      baz=243
EPH   Ephrata           90.26  42 IAmb    IAmb   21 36 02.9
      comp=Z,51nm,2.0s
IRM   Iron Mountain     90.47  55 IAmb    IAmb   21 36 00.1
      comp=Z,8.2nm,1.0s
ZALV  Zalesovo Beam     90.48 325 P       P      21 35 36.4 -1.3
      comp=Z,0.8nm,0.6s,baz=86,slow=4.6,SNR=5.9
ZALV                              pP      pP     21 35 58.4 +1.6
      comp=Z,1.8nm,0.7s,baz=112,slow=6.6,SNR=5.3
      comp=Z,0.8nm,0.6s
ZALV  Zalesovo Beam     90.48 325 P       P      21 35 35.4 -2.3
INK   Inuvik            90.71  20 LR      LR     22 09 23.4
      comp=Z,138nm,21.6s,baz=324,slow=31
INK   Inuvik            90.71  20 P       P      21 35 39.1 +0.7
      baz=243
R11B  Troy Canyon, C    91.01  51 IAmb    IAmb   21 36 01.9
      comp=Z,9.0nm,1.2s
E09A  Wood Farm, Sta    91.01  43 IAmb    IAmb   21 36 21.4
      comp=Z,11nm,1.1s
V12A  Nelson            91.03  54 IAmb    IAmb   21 36 02.1
      comp=Z,7.9nm,1.1s
SYO   Syowa Base        91.12 198⇓eP      P      21 35 41.0 +0.5
BMO   Blue Mountains    91.19  45 IAmb    IAmb   21 36 04.3
      comp=Z,8.2nm,1.1s
ELK   Elko              91.78  49 IAmb    IAmb   21 36 05.5
      comp=Z,6.7nm,0.9s
NEW   Newport           92.10  41 LR      LR     22 15 10.4
      comp=Z,24nm,18.7s,baz=256,slow=34
NEW   Newport           92.10  41 P       P      21 35 45.5 +0.1
NEW   Newport           92.10  41 P       P      21 35 45.5 +0.1
NEW                               pmax    pmax
      comp=Z,17nm,1.3s
SPR3  Spring Creek 3    92.10  51 IAmb    IAmb   21 36 20.9
      comp=Z,22nm,1.8s
PLID  Pearl Lake        92.15  45 P       P      21 35 46.2 +0.2
WRGLY Wrigley           92.63  26 P       P      21 35 47.8 +0.4
      baz=252
LPIG  La Paz            92.71  66 LR      LR     22 12 22.3
      comp=Z,31nm,18.3s,baz=358,slow=32
HLID  Hailey            92.95  46 IAmb    IAmb   21 36 11.1
      comp=Z,11nm,1.2s
KSH   Kashi             92.95 309 P       P      21 35 56.5 +6.8
KSH                               pmax    pmax
      comp=Z,2.0nm,1.7s
KURK  Kurchatov         93.35 321 P       P      21 35 49.6 -1.4
KURK  Kurchatov         93.35 321ceP      P      21 35 50.6 -0.5
KURK                              pmax    pmax
      comp=Z,4.0nm,1.0s
KURBB Kurchatov Arra    93.39 321 P       P      21 35 49.7 -1.5
      comp=Z,1.4nm,0.8s,baz=115,slow=3.2,SNR=9.6
KURBB                             pP      pP     21 36 11.8 +1.4
      comp=Z,3.3nm,0.8s,baz=104,slow=3.5,SNR=8.1
KURBB                             LR      LR     22 18 30.7
      comp=Z,45nm,20.6s,baz=179,slow=36
      comp=Z,1.4nm,0.8s
HVU   Hansel Valley     93.80  48 IAmb    IAmb   21 36 16.2
      comp=Z,8.1nm,1.0s
NRIK  Noril'sk          93.98 340 P       P      21 35 52.2 -1.4
      comp=Z,1.9nm,0.6s,baz=104,slow=7.3,SNR=3.8
NRIK                              LR      LR     22 17 36.2
      comp=Z,177nm,21.2s,baz=104,slow=35
      comp=Z,1.9nm,0.6s
C36M  Paulatuk          94.28  20 P       P      21 35 55.5 +0.6
      baz=252
A36M  Sachs Harbour     94.74  17 IAmb    IAmb   21 36 36.4
      comp=Z,11nm,1.0s
A36M  Sachs Harbour     94.74  17 P       P      21 35 58.0 +1.0
      baz=251
PDAR  Pinedale Array    96.31  48 P       P      21 36 05.4 +0.2
      comp=Z,0.9nm,0.7s,baz=236,slow=2.5,SNR=9.9
PDAR                              LR      LR     22 20 31.0
      comp=Z,33nm,18.3s,baz=274,slow=36
      comp=Z,0.9nm,0.7s
PDAR  Pinedale Array    96.31  48 P       P      21 36 04.6 -0.5
YKA   Yellowknife Ar    96.39  28 P       P      21 36 04.0 -0.7
      comp=Z,1.5nm,0.8s,baz=259,slow=5.1,SNR=9.5
      comp=Z,1.5nm,0.8s
YKA   Yellowknife Ar    96.39  28 P       P      21 36 04.3 -0.3
NVL   N'lazarevskaya    96.44 190 eP      P      21 36 06.8 +1.9
NVL                               e              21 40 00.3
NVL                               ePPP    PPP    21 42 06.8
NVL                               eS      SKSac  21 46 37.8 +2.6
NVL                               eSS     SS     21 53 59.3 +6.6
NVL                               eSSS    SSS    21 57 44.4
NVL                                pmax   pmax
      comp=Z,18nm,1.4s
TROLL Troll, Antarti    96.61 187 ⇑P      P      21 36 04.7 -1.2
      comp=Z,359nm,0.9s
SNAA  Sanae             97.46 185 ⇓P      P      21 36 08.2 -1.4
SNAA  Sanae             97.46 185 P       P      21 36 08.1 -1.4
      comp=Z,2.6nm,0.8s,baz=119,slow=2.1,SNR=12
SNAA                              LR      LR     22 17 52.4
      comp=Z,71nm,18.9s,baz=191,slow=34
      comp=Z,2.6nm,0.8s
SNAA  Sanae             97.46 185 P       P      21 36 09.1 -0.5
SNAA  Sanae             97.46 185ceP      P      21 36 08.9 -0.7
SNAA                              pmax    pmax
      comp=Z,3.0nm,0.9s
ANMO  Albuquerque       97.67  56 LR      LR     22 11 16.2
      comp=Z,62nm,21.8s,baz=257,slow=30
PMSA  Palmer Station    97.74 162 LR      LR     22 12 37.0
      comp=Z,74nm,21.6s,baz=251,slow=31
VNA3  Neumayer Olymp    98.35 183 ⇓P      P      21 36 11.2 -2.3
BVAR  Borovoye Array    98.75 322 P       P      21 36 14.1 -1.4
      comp=Z,1.1nm,0.7s,baz=81,slow=8.9,SNR=4.3
BVAR                              pP      pP     21 36 36.2 +1.5
      comp=Z,3.9nm,0.9s,baz=101,slow=6.3,SNR=5.6
BVAR                              LR      LR     22 20 08.7
      comp=Z,63nm,21.9s,baz=76,slow=35
      comp=Z,1.1nm,0.7s
BORK  Borovoye          98.79 322 i P     P      21 36 14.4 -1.3
BORK                              pmax    pmax
      comp=Z,2.0nm,0.9s
TXAR  Lajitas Array     99.34  62 P       Pdif   21 36 20.4 +1.4
      comp=Z,0.4nm,0.9s,baz=255,slow=2.3,SNR=3.5
TXAR                              PP      PP     21 40 18.3 -4.7
      comp=Z,0.4nm,0.9s,baz=252,slow=5.5,SNR=3.8
      comp=Z,0.4nm,0.9s
TXAR  Lajitas Array     99.34  62 P       Pdif   21 36 18.6 -0.3
TXAR  Lajitas Array     99.34  62 P       Pdif   21 36 18.6 -0.3
ARCES ARCESS Array B   114.55 344 PKP     PKiKP  21 41 13.5 -1.9
      comp=Z,4.1nm,1.1s,baz=72,slow=1.0,SNR=6.6
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MOS   Moscow           117.14 328 ePKIKP  PKiKP  21 41 23.4 +2.7
MOS                               e              21 42 26.7
OBN   Obninsk          117.94 328 i PKIKP PKPdf  21 41 20.9 -1.3
OBN                               e              21 42 36.5
OBN                               ePPP    PPP    21 45 02.4
OBN                               e              21 48 20.0
OBN                                pmax   pmax
      comp=Z,5.0nm,0.8s
OBN                                MLR    MLR
      comp=Z,134nm,18.0s
MNK   Minsk            122.67 330 i P     Pdif   21 37 58.4 -3.5
MNK                               i              21 41 28.2
MNK                               i              21 43 06.3
MNK                               i PPP   PPP    21 45 43.0
MNK                               i              21 48 34.7
MNK                               i SS    SS     21 59 45.2 -0.6
MNK                               i SSS   SSS    22 04 17.5
MNK                                pmax   pmax
      comp=Z,6.0nm,0.9s
MNK                                pmax   pmax
      comp=N,12nm,0.8s
MNK                                pmax   pmax
      comp=E,7.0nm,0.8s
MNK                                MLR    MLR
      comp=E,455nm,21.0s
MNK                                MLR    MLR
      comp=N,203nm,17.0s
MNK                                MLR    MLR
      comp=Z,103nm,17.0s
AKASG Malin Array Be   123.87 325 PKP     PKPdf  21 41 33.8  0.0
      comp=Z,0.8nm,0.7s,baz=71,slow=1.8,SNR=1.9
LUBAR Lubar, Ukraine   125.07 325 PKP     PKiKP  21 41 36.4 -0.1
BRTR  Keskin Array B   125.28 312 PKP     PKPdf  21 41 36.2 -0.9
      comp=Z,0.6nm,0.8s,baz=81,slow=2.8,SNR=1.4
KEST  Kesra            144.15 319 PKP     PKPab  21 42 09.8 -0.1
      comp=Z,4.7nm,0.9s,baz=91,slow=5.9,SNR=4.3
KEST  Kesra            144.15 319         PKPbc  21 42 11.2 +0.8
CRHA  Rehia            145.20 321 P       PKPbc  21 42 13.6 -0.1
CSGS  Sigus            145.53 322 P       PKPbc  21 42 14.7 -0.1
CASM  Ain Smara        145.58 323 P       PKPdf  21 42 14.4 -0.2
COAT  Oued Athmania    145.72 323 P       PKPbc  21 42 15.2 -0.1
CTEI  Djebel Teioual   145.76 322 P       PKPbc  21 42 15.4 -0.2
CBBAR Babar            145.88 320 P       PKPbc  21 42 16.2 +0.2
CJSR  Ain Djasser      146.18 323 P       PKPbc  21 42 16.9 +0.1
ESDC  Sonseca Array    148.01 338 PKPbc   PKPbc  21 42 22.0 +0.3
      comp=Z,1.6nm,0.9s,baz=22,slow=3.6,SNR=5.6
ESDC  Sonseca Array    148.01 338 PKPdf   PKPdf  21 42 17.9 -0.7
ADCK  Dar Chioukh      148.31 324 P       PKPbc  21 42 23.3 +0.5
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IDC 01 21:36:35.6±4.6,**4°.78S**×**153°.07E,h0km,mb3.5**/3,
mbtmp3.5/3,**Error ellipse: s-maj=136.8km**
s-min=37.7km az=108.0,New Ireland region

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Code  Station Name       Δ°   AZ°    Phase ID           Time     Res
                                     Op      ISC      h  m  s    ISC
WRA   Warramunga Arr   23.66 229     P       P       21 41 49.8 +0.8
      0.5nm,0.5s,baz=56,slow=10,SNR=7.8
      0.5nm,0.5s
ASAR  Alice Springs    26.35 223     P       P       21 42 13.4 -0.3
      0.4nm,0.6s,baz=56,slow=9.5,SNR=5.2
      0.4nm,0.6s
MKAR  Makanchi Array   80.48 319     P       P       21 48 49.3 -0.3
      0.4nm,0.7s,baz=91,slow=7.9,SNR=4.4
      0.4nm,0.7s
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*SFS **01** 21:38:20.1,36°.52N×4°.62W,h64km,Mjma3.6/10,*
ML2.2/14,ML2.7/11,MLv2.0/14
*MDD **01** 21:38:20.1±0.6,36°.43N×4°.60W,h61km±7km,Mb3.2/21,*
Error ellipse: s-maj=5.2km s-min=2.5km az=174.0
*INMG **01** 21:38:21.2±1.4,36°.56N×4°.67W,h53km±6km,ML1.8,Error*
ellipse: s-maj=3.2km s-min=2.6km az=164.0,
#DIST_RANGE: REGIONAL #IPMA_REGION: SW
Malaga (ESP)
*CNRM **01** 21:38:21.9,36°.26N×4°.85W,h82km,ML1.7*
ISC 01 21:38:19.1±1.2,**36°.52N**±0°.02×**4°.63W**±0°.02,**h67km**±6km,
n67,σ1ˢ.**40**/108,**14C,Strait of Gibraltar**

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Code  Station Name       Δ°   AZ°    Phase ID           Time     Res
                                     Op      ISC      h  m  s    ISC
EMIJ  Mijas             0.12 291     Pn      Pn      21 38 28.8 -0.3
EMIJ                                 Sn      Sn      21 38 34.9 -1.6
EMIJ  Mijas             0.12 291     Pg      Pn      21 38 28.8 -0.3
EMIJ                                 Sg      Sn      21 38 34.8 -1.6
EJIF  Jimena Fronter    0.68 264     Pg      Pn      21 38 33.4 -0.1
EJIF                                 Sg      Sn      21 38 43.5 -0.6
UMV12 Villanueva de     0.68 320     Pg      Pn      21 38 34.3 +0.6
UMV12                                Sg      Sn      21 38 46.5 +2.1
EGOR  Sierra Gorda,     0.72  35     Pn      Pn      21 38 35.3 +1.0
EGOR                                 Sn      Sn      21 38 47.4 +2.1
EGOR  Sierra Gorda,     0.72  35     Pg      Pn      21 38 35.2 +1.0
EGOR                                 Sg      Sn      21 38 46.7 +1.3
ELGU  Los Guajares,     0.88  67     Pn      Pn      21 38 35.0 -1.1
ELGU                                 Sn      Sn      21 38 47.7 -0.9
ELGU  Los Guajares,     0.88  67     Pg      Pn      21 38 35.5 -0.6
ELGU                              ⇑i IVmb_VC         21 38 41.5
      672nm,SNR=4.0
ELGU                                 Sg      Sn      21 38 48.5 -0.1
SMIR  Smir Dam          1.03 216     P       Pn      21 38 38.4 +0.5
SMIR  Smir Dam          1.03 216     S       Sn      21 38 50.9 -0.9
ESPR  Espera            1.04 290     Pn      Pn      21 38 39.3 +1.3
ESPR  Espera            1.04 290     Pg      Pn      21 38 38.6 +0.6
ESPR                              ⇑i IVmb_VC         21 38 41.7
      189nm,SNR=1.8
ESPR                                 Sg      Sn      21 38 53.4 +1.4
EQTA  Presa de Quent    1.18  54     Pn      Pn      21 38 41.0 +1.2
EQTA                                 Sn      Sn      21 38 56.8 +1.5
EQUE  Quentar           1.18  54     Pg      Pn      21 38 40.7 +0.8
EQUE                              ⇑i IVmb_VC         21 38 48.1
      131nm,SNR=1.6
EQUE                                 Sg      Sn      21 38 56.3 +1.1
PALE  Palemas           1.42 156     P       Pn      21 38 44.4 +1.4
PALE  Palemas           1.42 156     S       Sn      21 39 01.4 +0.5
EADA  Adamuz            1.64   2     Pn      Pn      21 38 43.0 -2.9
EADA                                 Sn      Sn      21 39 04.9 -1.4
EADA  Adamuz            1.64   2     Pg      Pn      21 38 46.6 +0.6
EADA                              ⇑i IVmb_VC         21 38 53.0
      210nm,SNR=1.8
EADA                                 Sn      Sn      21 39 06.7 +0.4
ECAB  El Cabril         1.67 338     Pn      Pn      21 38 47.0 +0.6
ECAB                                 Sn      Sn      21 39 05.7 -1.3
ECAB  El Cabril         1.67 338     Pn      Pn      21 38 47.7 +1.4
ECAB                              ⇑i IVmb_VC         21 38 54.8
      199nm,SNR=1.7
ECAB                                 Sn      Sn      21 39 06.7 -0.2
EQES  Quesada           1.79  44     Pn      Pn      21 38 48.4 +0.5
EQES                              ⇑i IVmb_VC         21 38 53.5
      192nm,SNR=1.6
EQES                                 Sn      Sn      21 39 10.2 +0.4
E0802 Ubeda,Jaen        1.81  33     Pn      Pn      21 38 49.1 +1.0
E0802                                Sn      Sn      21 39 10.4 +0.2
GOG   Mont Gurugu       1.86 134     P       Pn      21 38 50.9 +2.1
GOG   Mont Gurugu       1.86 134     S       Sn      21 39 15.2 +3.7
ENIJ  Nijar             2.00  76     Pn      Pn      21 38 50.8  0.0
ENIJ                              ⇑i IVmb_VC         21 38 56.5
      225nm,SNR=1.4
ENIJ                                 Sn      Sn      21 39 14.9 +0.1
EMIN  Mina Concepcio    2.05 308     Pn      Pn      21 38 51.9 +0.5
EMIN                                 Sn      Sn      21 39 15.2 -0.7
EMIN  Mina Concepcio    2.05 308     Pn      Pn      21 38 52.0 +0.6
EMIN                              ⇑i IVmb_VC         21 38 52.1
      442nm,SNR=3.7
EMIN                                 Sn      Sn      21 39 16.0  0.0
AKLM  AKL               2.10 162     P       Pn      21 38 51.3 -0.9
AKLM  AKL               2.10 162     S       Sn      21 39 14.2 -3.1
PSIM  Granatula de C    2.40  17     Pn      Pn      21 38 56.7 +0.5
PSIM                                 Sn      Sn      21 39 24.2 -0.3
TAF   Taforalt          2.48 133     P       Pn      21 38 59.8 +2.4
TAF   Taforalt          2.48 133     S       Sn      21 39 29.5 +2.9
EGRO  El Granado        2.49 295     Pn      Pn      21 38 58.3 +0.9
EGRO  El Granado        2.49 295     Pn      Pn      21 38 58.1 +0.8
EGRO                              ⇑i IVmb_VC         21 39 01.3
      255nm,SNR=1.5
EGRO                                 Sn      Sn      21 39 27.3 +0.5
PBAR  Barrancos         2.53 311     Pn      Pn      21 38 58.7 +0.8
PBAR                                 Sn      Sn      21 39 26.7 -0.9
PBAR  Barrancos         2.53 311     eP      Pn      21 38 58.7 +0.8
PBAR                                 eS      Sn      21 39 27.1 -0.5
PBAR                                 i IAML          21 39 29.2
PBAR                                 i IAML          21 39 32.3
PBAR                                 i IAML          21 39 53.1
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PVAQ	Vaqueiros	2.62	291	*e*P	Pn	21 38 59.9	+0.8
PVAQ				*e*S	Sn	21 39 29.1	-0.8
PVAQ				*i* IAML		21 39 32.3	
PVAQ				*i* IAML		21 39 32.6	
PVAQ				*i* IAML		21 39 33.0	
PBDV	Barranco-do-Ve	2.74	286	Sn	Sn	21 39 31.9	-0.9
PBDV	Barranco-do-Ve	2.74	286	*e*P	Pn	21 39 02.5	+1.7
PBDV				*e*S	Sn	21 39 32.0	-0.8
PBDV				*i* IAML		21 39 37.6	
EBAD	Badajoz	2.92	320	Pn	Pn	21 39 04.1	+0.9
EBAD				Sn	Sn	21 39 35.9	-1.3
EBAD	Badajoz	2.92	320	Pn	Pn	21 39 04.2	+0.9
EBAD				⇑*i*IVmb_VC		21 39 12.0	
	273nm,SNR=1.6						
EBAD				Sn	Sn	21 39 38.1	+0.9
PCVE	Castro Verde	2.94	293	*e*P	Pn	21 39 04.6	+1.1
PCVE				*e*S	Sn	21 39 37.6	-0.1
PAB	San Pablo	3.03	4	Pn	Pn	21 39 05.4	+0.6
PAB				⇑*i*IVmb_VC		21 39 06.0	
	141nm,SNR=1.4						
PAB				Sn	Sn	21 39 39.8	0.0
MESJ	Messejana	3.15	296	*e*S	Sn	21 39 41.6	-1.2
ESDC	Sonseca Array	3.19	9	Pn	Pn	21 39 08.0	+1.1
ESDC				⇑*i*IVmb_VC		21 39 11.6	
	152nm,SNR=1.6						
ESDC				Sn	Sn	21 39 42.8	-1.0
ETOB	Tobarra	3.24	48	Pn	Pn	21 39 07.9	+0.2
ETOB				Sn	Sn	21 39 41.1	-4.0
ETOB	Tobarra	3.24	48	Pn	Pn	21 39 07.7	0.0
ETOB				⇑*i*IVmb_VC		21 39 09.2	
	252nm,SNR=1.6						
ETOB				Sn	Sn	21 39 43.7	-1.4
MORF	Marmelete	3.31	285	*e*P	Pn	21 39 10.5	+1.9
PESTR	Estremoz	3.31	316	*e*S	Sn	21 39 45.5	-1.3
ZHG	ZHG	3.48	209	P	Pn	21 39 11.8	+0.8
ZHG	ZHG	3.48	209	S	Sn	21 39 50.4	-0.7
PARRA	Arraiolos	3.54	311	*e*P	Pn	21 39 12.6	+0.9
PARRA				*e*S	Sn	21 39 51.0	-1.4
PARRA				*i* IAML		21 39 53.1	
MOE	Montemor	3.57	305	*e*S	Sn	21 39 52.5	-0.5
PMRV	Marv??o	3.63	324	*e*P	Pn	21 39 14.5	+1.6
PMRV				*e*S	Sn	21 39 52.5	-2.0
MD31	MD31	3.65	182	P	Pn	21 39 12.8	-0.4
MD31	MD31	3.65	182	S	Sn	21 39 52.6	-2.5
MDT	Midelt	3.70	180	P	Pn	21 39 13.8	-0.1
MDT	Midelt	3.70	180	S	Sn	21 39 53.6	-2.8
PMTG	Montargil	3.82	313	*e*P	Pn	21 39 16.9	+1.5
PMTG				*e*S	Sn	21 39 59.2	+0.2
EVIV	Cofrentes, Val	3.90	44	Pn	Pn	21 39 16.5	-0.2
EVIV				Sn	Sn	21 39 59.5	-1.8
PCBR	Castelo Branco	4.00	327	*e*P	Pn	21 39 19.5	+1.6
GUD	Guadarrama	4.13	5	Pn	Pn	21 39 21.1	+1.2
GUD				⇑*i*IVmb_VC		21 39 21.3	
	129nm,SNR=1.4						
GUD				Sn	Sn	21 40 06.2	-0.8
PSARD	Sardoal	4.15	319	*e*P	Pn	21 39 21.4	+1.5
PSARD				*e*S	Sn	21 40 05.7	-1.5
PSARD				*i* IAML		21 40 07.1	
PSARD				*i* IAML		21 40 07.7	
PSARD				*i* IAML		21 40 08.4	
ECHE	Chera	4.21	42	Pn	Pn	21 39 20.9	0.0
ECHE				Sn	Sn	21 40 05.2	-3.6
ECHE	Chera	4.21	42	Pn	Pn	21 39 20.7	-0.2
ECHE				Sn	Sn	21 40 06.1	-2.7
PSBE	So Bento	4.44	314	*e*P	Pn	21 39 25.8	+1.9
PVIS	Viseu	4.91	330	*e*S	Sn	21 40 23.8	-2.0

NOU 01 21:43:01.4, 16°.83S×167°.26E, h12^{km}, MLv4.7/26, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	1.26	135	P	Pn	21 43 24.4	-0.4
SANVU	Saraoutou	1.38	358	P	Pn	21 43 25.1	-1.3
RTV	Rentapao	1.47	131	P	Pn	21 43 27.4	-0.3
RTV	Rentapao	1.47	131	S	Sb	21 43 47.9	+0.6
INH	Isangel	3.31	145	P	Pn	21 43 53.0	-0.1
INH	Isangel	3.31	145	S	Sn	21 44 32.8	+0.4
KOUNC	Koumac, New Ca	4.65	217	P	Pn	21 44 11.7	+0.2
KOUNC	Koumac, New Ca	4.65	217	S	Sn	21 45 06.0	+0.5
MARNC	Mare, Loyalty	4.68	171	P	Pn	21 44 11.8	-0.1
YATNC	Mamie plateau,	5.21	184	P	Pn	21 44 18.0	-1.3
DZM	Mont Dzumac	5.27	188	P	Pn	21 44 20.3	+0.2
ONTNC	Ouen Toro	5.50	188	P	Pn	21 44 23.3	+0.1
OUENC	Ouen Island, N	5.57	184	P	Pn	21 44 25.0	+0.8
PINNC	Pines Island,	5.76	178	P	Pn	21 44 27.9	+1.2
NGOA	Tingoa Renbel	8.73	306	P	Pn	21 45 07.7	+0.2
SAVO	Savo Central	10.53	316	P	Pn	21 45 34.2	+1.9

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*MEX **01** 22:07:52.0±1.3, 14°.70N×92°.62W, h79^{km}±14^{km}, MD4.3*
*GCG **01** 22:07:52.7±1.3, 14°.63N×92°.58W, h62^{km}±10^{km}, MD4.2, ML3.9*
ISC 01 22:07:48.6±1.4, **14°.40N**±0°.08×**92°.73W**±0°.05, **h54**^{km}±21^{km}, **n26**, σ**2^{s}.29**/40, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
THIG		0.68	42	*e*P	Pn	22 08 03.3	+1.1
THIG				*e*S	Sn	22 08 12.9	+0.7
THIG		0.68	42	*i* P	Pn	22 08 03.5	+1.2
THIG				*e*S	Sn	22 08 12.9	+0.7
THIG				IAML		22 08 13.4	
	comp=N,4μm,0.2s						
SMCA	Catarina	0.78	54	*e*P	Pn	22 08 05.1	+1.5
SMCA				*i* S	Sn	22 08 15.1	+0.5
SMCA				IAML		22 08 16.0	
	comp=N,3μm,0.5s						
PATR	El Naranjo	0.86	34	*e*P	Pn	22 08 04.5	-0.3
PATR				*e*S	Sn	22 08 14.0	-2.7
CHUJ	Union Juarez	0.92	41	*e*P	Pn	22 08 05.4	-0.1
CHUJ				*e*S	Sn	22 08 16.6	-1.4
PAVE	Pavencul	0.96	34	*e*P	Pn	22 08 05.8	-0.2
PAVE				*e*S	Sn	22 08 17.1	-1.8
RTAL	Retalhuleu	1.01	83	*e*S	Sn	22 08 16.9	-3.0
QUEO	Labor Ovalle	1.27	68	*e*P	Pn	22 08 12.8	+2.5
QUEO				*i* S	Sn	22 08 28.5	+2.0
STG2	El Palmar, Qui	1.31	88	*e*P	Pn	22 08 10.1	-0.7
STG2				*e*S	Sn	22 08 23.6	-3.8
STG8	El Palmar, Qui	1.34	88	*e*P	Pn	22 08 10.6	-0.6
STG8				*e*S	Sn	22 08 24.8	-3.3
STG8				IAML		22 08 26.1	
	comp=N,3μm,0.2s						
STG5	El Palmar, Qui	1.34	90	*e*P	Pn	22 08 10.6	-0.5
STG5				*e*S	Sn	22 08 24.5	-3.4
PCIG		1.38	340	*i* P	Pn	22 08 11.8	+0.2
PCIG				*e*S	Sn	22 08 26.4	-2.4
HUEH	Huehuetenango	1.50	52	*e*S	Sn	22 08 33.5	+1.5
HUEH	Huehuetenango	1.50	52	*e*S	Sn	22 08 33.5	+1.5
HUEH				IAML		22 08 35.8	
	comp=N,3μm,0.6s						
ESSG	Sabana Grande	1.84	90	*e*P	Pn	22 08 21.2	+3.3
CCIG	Comitan	1.96	17	*e*P	Pn	22 08 20.4	+0.8
CCIG				*e*S	Sn	22 08 40.1	-3.1
CCIG	Comitan	1.96	17	*e*P	Pn	22 08 20.4	+0.8
CCIG				IAML		22 08 49.1	
	comp=E,1μm,0.5s						
UXUV	UXUV	3.21	335	*e*P	Pn	22 08 36.9	+0.4
UXUV				*e*S	Sn	22 09 14.5	+1.0
CMIG	Matias Romero	3.38	323	*e*P	Pn	22 08 40.0	+1.1
CMIG				*e*S	Sn	22 09 12.9	-5.0
HUIG	Huatulco	3.53	293	*e*S	Sn	22 09 14.4	-7.2
PETF	Flores	3.73	47	*e*P	Pn	22 08 45.2	+1.5
NEUV	Arroyo Zacate	4.42	319	*e*P	Pn	22 08 54.4	+1.2
NEUV				*e*S	Sn	22 09 31.8	-12
PEIG	Puerto Escondi	4.55	291	*e*P	Pn	22 08 55.7	+0.8
PEIG				*e*S	Sn	22 09 40.1	-6.4
YOIG	Yosondua	5.24	298	*e*P	Pn	22 09 09.2	+4.5
YOIG				*e*S	Sn	22 10 00.6	-3.4
TOIG	Toxpalan	5.55	312	*e*P	Pn	22 09 10.0	+1.2
TOIG				*e*S	Sn	22 09 58.7	-13
TXIG	Tlaxiaco	5.62	301	*e*P	Pn	22 09 13.7	+3.9
TXIG				*e*S	Sn	22 09 58.8	-14

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*NAO **01** 22:41:25.5, 40°.46N×17°.43E, h10^{km}, MB3.4*
*IDC **01** 22:41:29.5±2.0, 41°.26N×19°.38E, h0^{km}, mb3.5/7, mbtmp3.7/11, ML2.8/2, MS3.7/2, Error ellipse: s-maj=32.7km s-min=17.7km az=28.0*
*SKO **01** 22:41:32.4, 41°.49N×19°.46E, h0^{km}, ML3.3*
*PRU **01** 22:41:33.4, 41°.19N×19°.55E, h10^{km}*
*BEO **01** 22:41:33.4±0.6, 41°.35N×19°.78E, h4^{km}±3^{km}, ML3.3/17*
*PDG **01** 22:41:34.6±0.3, 41°.42N×19°.50E, h25^{km}±1^{km}, MD3.5/6, ML3.4/13, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*TIR **01** 22:41:34.7, 41°.53N×19°.73E, h39^{km}, Ml3.5/7*
ISC 01 22:41:34.0±0.8, **41°.43N**±0°.02×**19°.59E**±0°.02, **h16**^{km}±6^{km}, **n181**, σ**1^{s}.50**/232, **mb3.8**/4, **25C-21D**, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.22	110	⇓Pg	Pg	22 41 39.0	-0.2
TIR				Sg	Sg	22 41 41.9	-0.7
TIR				AML	AML	22 41 43.0	
	47nm,0.3s						
TIR	Tirane	0.22	110	*i* Pg	Pg	22 41 38.9	-0.2
TIR				*i* Sg	Sg	22 41 42.9	+0.3
ULC	Ulcinj	0.60	334	*e*Pg	Pg	22 41 45.8	0.0
ULC				*i* Sg	Sb	22 41 55.6	+1.3
SDA	Shkodra	0.63	354	⇑Pg	Pg	22 41 46.1	-0.4
SDA				Sg	Sg	22 41 55.5	+0.7
PHP	Peshkopia	0.69	68	⇑Pg	Pg	22 41 46.2	-1.4
PHP				Sg	Sg	22 41 55.1	-1.7
PHP				AML	AML	22 41 59.5	
	13nm,0.5s						
DRME	Dracevica, Mon	0.82	338	*e*Pg	Pb	22 41 49.9	0.0
DRME				*e*Sg	Sn	22 42 03.0	+0.3
VLO	Vlora	0.96	184	⇑Pg	Pn	22 41 55.0	+2.2
VLO				Sg	Sn	22 42 08.8	+2.7
VLO				AML	AML	22 42 15.2	
	12nm,0.6s						
VLO	Vlora	0.96	184	P	Pn	22 41 54.6	+1.8
OHR	Ohrid	0.96	109	*i* Pg	Pb	22 41 51.4	-1.0
OHR				*i* Sg	Sg	22 42 06.8	+1.4
OHR				*e*Lg	Lg	22 42 07.8	
	comp=N,398nm,0.4s						
OHR				*e*Lg	Lg	22 42 09.1	
	comp=E,440nm,0.2s						
BUM	Brajici-Budva	1.02	330	*e*Pg	Pb	22 41 53.2	-0.1
BUM				*i* Sg	Sn	22 42 09.1	+1.4
PDG	Podgorica	1.03	346	Pg	Pb	22 41 53.2	-0.3
PDG				Sg	Sb	22 42 06.8	-0.1
PDG	Podgorica	1.03	346	⇑P	Pb	22 41 54.0	+0.4
PDG	Podgorica	1.03	346	*e*Pg	Pb	22 41 53.4	-0.1
PDG				*e*Sg	Sn	22 42 10.9	+2.9
PDG	Podgorica	1.03	346	⇓*i*Pg	Pb	22 41 53.5	-0.1
PDG				*i* Sg	Sn	22 42 09.7	+1.7
PVY	Plav	1.20	13	*e*Pg	Pn	22 41 55.3	-1.0
PVY				*i* Sg	Sg	22 42 14.8	+1.9
KBN	Korca	1.21	131	Pn	Pn	22 41 57.0	+0.6
KBN				Sn	Sb	22 42 13.1	+1.2
KBN				AML	AML	22 42 18.6	
	comp=E,2.5nm,0.4s						
KBN	Korca	1.21	131	P	Pn	22 41 56.5	+0.2
CEME	Cevo	1.23	336	⇑*i*Pg	Pn	22 41 56.8	+0.2
CEME				*e*Sg	Sg	22 42 14.4	+0.6
HCY	Herceg Novi	1.31	322	*e*Pg	Pn	22 41 57.8	+0.2
HCY				*i* Sg	Sg	22 42 16.1	-0.2
NKME	Niksic	1.42	341	*e*Pg	Pn	22 41 59.6	+0.3
NKME				*e*Sg	Sb	22 42 19.2	+1.1
KOME	Kolasin	1.43	358	*e*Pg	Pn	22 41 59.9	+0.6
KOME				*e*Sg	Sg	22 42 20.5	+0.4
IVA	Berane	1.46	9	⇑*i*Pg	Pn	22 42 00.5	+0.6
IVA				*i* Sg	Sb	22 42 20.9	+1.6
SKO	Skopje	1.49	68	*i* Pg	Pn	22 42 00.3	+0.2
SKO				*i* Sg	Sb	22 42 22.1	+2.1
NEST	Nestorio	1.50	132	Pn	Pn	22 42 01.7	+1.4
NEST				Sn	Sb	22 42 21.7	+1.3
NEST				AML	AML	22 42 26.9	
	comp=E,0.1nm,0.2s						
NEST	Nestorio	1.50	132	P	Pb	22 42 02.4	+0.9
TREB	Trebinje	1.59	325	*e*Pn	Pn	22 42 02.5	+1.0
BRY	Bratogost	1.67	332	*e*Pn	Pn	22 42 02.9	+0.2
BRY				*i* Sn	Sn	22 42 25.0	+1.1
PENT	Pentalofos	1.70	136	P	Pb	22 42 05.4	+0.4
UPM	Unac-Piva	1.85	344	*e*Pn	Pn	22 42 05.6	+0.4
UPM				*i* Sn	Sn	22 42 29.6	+1.2
SJES	Sjenica	1.86	9	*e*Pg	Pb	22 42 07.8	+0.1
SJES				*e*Sg	Sb	22 42 32.5	+1.8
PLE	Pljevlja	1.91	356	*e*Pn	Pn	22 42 06.6	+0.6
PLE				*i* Sn	Sn	22 42 31.3	+1.5
IGT	Igoumenitsa	1.97	163	Pn	Pb	22 42 09.2	-0.4
IGT				Sn	Sb	22 42 36.0	+2.0
IGT	Igoumenitsa	1.97	163	P	Pn	22 42 08.1	+1.3
IGT	Igoumenitsa	1.97	163	*i* Pn	Pb	22 42 08.9	-0.6
IGT				*i* Sn	Sg	22 42 40.7	+3.1
KPRO	Kipourio	1.99	137	P	Pn	22 42 09.1	+1.9
KZN	Kozani	2.00	123	P	Pn	22 42 09.2	+2.1
NOCI	Noci	2.01	252	⇑Pn	Pn	22 42 07.8	+0.5
NOCI				Sn	Sg	22 42 38.3	-0.4
NOCI				AML	AML	22 42 41.3	
	comp=E,3.1nm,0.3s						
JAN	Janina	2.01	151	P	Pn	22 42 09.3	+1.9
SELS	Selova	2.12	32	*e*Pn	Pn	22 42 10.3	+1.4
SELS				*e*Sn	Sb	22 42 37.5	-0.7
BARS	Barje	2.16	49	*i* Pn	Pn	22 42 10.2	+0.8
BARS	Barje	2.16	49	*e*Pn	Pn	22 42 10.2	+0.8
BARS				*e*Sn	Sn	22 42 34.7	-1.2
GRG	Griva	2.17	102	P	Pn	22 42 10.5	+1.0
GRG	Griva	2.17	102	*i* Pn	Pn	22 42 11.0	+1.4
IVAS	Ivanjica	2.19	11	*e*Pn	Pn	22 42 10.9	+1.1
IVAS				*e*Sn	Sb	22 42 41.2	+1.0
RUDO	Rudo	2.20	356	*e*Pn	Pn	22 42 11.0	+1.1
VAY	Valandovo	2.25	92	*i* Pn	Pn	22 42 12.0	+1.4
VAY				*i* Sn	Sg	22 42 45.4	-0.8
VAY				*e*Lg	Lg	22 42 45.8	
	comp=E,172nm,0.9s						
VAY				*e*Lg	Lg	22 42 47.4	
	comp=N,210nm,0.8s						
MATE	Matera	2.31	251	⇑P	Pn	22 42 13.2	+1.7
GOCS	Kraljevo Serbi	2.34	24	*e*Pn	Pn	22 42 13.1	+1.2
GOCS				*e*Sn	Sn	22 42 42.1	+1.8
BOSS	Bosilegrad	2.41	63	*e*Pn	Pn	22 42 13.4	+0.6
BOSS				*e*Sn	Sn	22 42 41.4	-0.5
BBLS	Lazi&#263i	2.44	357	*e*Pn	Pn	22 42 14.7	+1.4
BBLS				*e*Sn	Sb	22 42 48.6	+1.1
TETR	Tetrakomo, Epi	2.44	148	P	Pn	22 42 15.1	+1.8
KNT	Kendrikon	2.51	95	P	Pn	22 42 15.1	+0.9
KNT	Kendrikon	2.51	95	*i* Pn	Pn	22 42 14.9	+0.8
LIT	Litokhoron	2.57	120	P	Pn	22 42 16.6	+1.6
LIT	Litokhoron	2.57	120	*i* Pn	Pn	22 42 17.1	+2.1
GRUS	Gruza	2.60	18	*e*Pn	Pn	22 42 16.6	+1.2
THL	Klokotos Trika	2.62	134	P	Pn	22 42 17.4	+1.7
THE	Thessaloniki	2.67	106	P	Pn	22 42 17.2	+0.8
THE	Thessaloniki	2.67	106	*i* Pn	Pn	22 42 17.2	+0.8
TRAN	Tran	2.68	57	*i* P	Pn	22 42 17.9	+1.4
KKB	Krupnik	2.69	80	P	Pn	22 42 17.5	+0.9
KKB	Krupnik	2.69	80	*i* P	Pn	22 42 17.6	+1.0
KKB	Krupnik	2.69	80	*i* Pn	Pn	22 42 17.7	+1.1
BOVS	Bovan	2.71	35	⇓P	Pn	22 42 17.9	+1.1
BOVS	Bovan	2.71	35	*e*Pn	Pn	22 42 18.0	+1.1
BOVS				*e*Sn	Sn	22 42 49.3	+0.1
TSLK	Tsoukalades, L	2.72	162	P	Pn	22 42 18.0	+0.9
LKD2	Lefkada island	2.76	162	P	Pn	22 42 18.4	+0.8
AMPL	Ampelaki	2.79	153	P	Pn	22 42 19.6	+1.5
NYDR	Nydri-Lefkada	2.84	162	P	Pn	22 42 19.1	+0.4
DRAG	Dragano-Lefkad	2.84	164	P	Pn	22 42 18.9	+0.2
TRUS	Trudelj	2.86	12	*e*Pn	Pn	22 42 20.0	+1.0
TRUS				*e*Sn	Sn	22 42 54.9	+1.8
SGRT	San Giovanni R	2.90	278	Pn	Pn	22 42 19.9	+0.3
SGRT				Sn	Sb	22 42 59.9	-0.8
SOH	Sokhos	2.91	101	P	Pn	22 42 20.7	+1.1
SOH	Sokhos	2.91	101	*i* Pn	Pn	22 42 21.0	+1.3
ZAPS	Zavoj	2.92	50	*e*Pn	Pn	22 42 21.2	+1.4
EVGI	Lefkada island	2.92	163	P	Pn	22 42 20.2	+0.4
VTS	Vitosha	2.97	65	P	Pn	22 42 21.6	+1.0
VTS	Vitosha	2.97	65	*i* P	Pn	22 42 21.5	+1.0
EVR	Evrytania	3.03	145	P	Pn	22 42 23.6	+2.2
SRS	Serrai	3.03	95	P	Pn	22 42 22.0	+0.7
SRS	Serrai	3.03	95	*i* Pn	Pn	22 42 22.4	+1.0
PLNA	Plana	3.05	69	*i* P	Pn	22 42 23.5	+1.8
FSK	Fiskardo	3.06	166	P	Pn	22 42 21.7	+0.1
SVIS	Svilajnac	3.08	22	*e*Pn	Pn	22 42 23.5	+1.5
ZAGS	Zajecar	3.08	38	*e*Pn	Pn	22 42 23.0	+1.0
ZAGS				*e*Sn	Sn	22 43 00.6	+2.1
BLSH	Balsha	3.09	61	*e*P	Pn	22 42 23.9	+1.7
MAKR	Makrakomi, Fth	3.10	140	P	Pn	22 42 24.1	+1.8
PLG	Polygyros	3.11	109	P	Pn	22 42 23.6	+1.2
TIP	Timpagrande	3.12	225	⇓P	Pn	22 42 23.5	+1.0
TEKS	Tekeris	3.12	359	*e*Pn	Pn	22 42 22.9	+0.3
MMB	Musomishta	3.13	86	P	Pn	22 42 23.6	+0.9
MMB	Musomishta	3.13	86	*i* P	Pn	22 42 24.4	+1.7
MMB	Musomishta	3.13	86	*i* Pn	Pn	22 42 24.0	+1.3
PVO	Paravola	3.17	151	P	Pn	22 42 24.8	+1.5
BORS2	Bor- Borsko je	3.21	33	*e*Pn	Pn	22 42 23.5	-0.3
BORS2				*e*Sn	Sn	22 43 00.9	-0.8
DMLN	Damoulianata-K	3.24	169	P	Pn	22 42 23.8	-0.4
VLS	Valsamata	3.33	166	P	Pn	22 42 25.0	-0.5
KUBS	Kucevo	3.35	26	*e*Pn	Pn	22 42 25.2	-0.6
KUBS				*e*Sn	Sn	22 43 06.1	+0.8
RTZL	Ratzakli, Kefa	3.47	164	P	Pn	22 42 28.1	+0.8
EFP	Efpalio	3.48	149	P	Pn	22 42 29.6	+2.1
PGB	Panagyurishte	3.59	71	*i* P	Pn	22 42 31.1	+2.1
MPEP	Malo Peshtene	3.63	57	*i* P	Pn	22 42 31.4	+1.9
MDVR	Moldovita	3.70	24	⇓P	Pn	22 42 31.5	+1.0
FRGS	Fruska Gora	3.73	2	*e*Pn	Pn	22 42 31.5	+0.5
FRGS				*e*Sn	Sn	22 43 16.1	+1.5
BLY	Banja Luka	3.76	333	*e*Pn	Pb	22 42 38.9	-1.1
BLY	Banja Luka	3.76	333	⇑P	Pn	22 42 33.0	+1.7
BLY	Banja Luka	3.76	333	*e*Pn	Pn	22 42 33.3	+2.0
PUNG	Punghina	3.76	40	⇑P	Pn	22 42 33.0	+1.6
RZN	Rozhen	3.87	84	*i* P	Pn	22 42 34.6	+1.5
PLD	Plovdiv	3.92	78	*i* Pn	Pn	22 42 35.1	+1.5
HERR	Herculane	4.03	30	⇓P	Pn	22 42 36.0	+1.0
SRE	Strehaia	4.18	38	⇓P	Pn	22 42 39.2	+2.0
PLVB	Pleven	4.21	61	⇑P	Pn	22 42 39.0	+1.5
KDZ	Kurdzhali	4.32	85	*i* P	Pn	22 42 40.4	+1.3
BZS	Buzias	4.44	19	⇑P	Pn	22 42 41.2	+0.5
GZR	Gura Zlata	4.60	29	⇓P	Pn	22 42 44.4	+1.5
SURR	Surduc	4.70	22	⇓P	Pn	22 42 45.8	+1.5
AQU	L'Aquila	4.71	283	*e*Pn	Pn	22 42 45.7	+1.2
PYL	PYLOS	4.82	159	P	Pn	22 42 45.9	-0.1
MORH	Mrgy, Hungar	4.84	352	*e*Pn	Pn	22 42 47.0	+0.9
MORH	Mrgy, Hungar	4.84	352	⇓P	Pn	22 42 47.0	+0.9
ELND	Elena	4.91	70	⇓P	Pn	22 42 48.6	+1.5
HUMR	Humele	5.03	50	⇓P	Pn	22 42 50.6	+1.8
LOT	Lotru	5.04	36	⇓P	Pn	22 42 50.4	+1.4
DEV	Deva	5.06	27	⇓P	Pn	22 42 50.4	+1.1
SIRR	Siria	5.07	16	⇓P	Pn	22 42 51.3	+2.0
SZH	Strazhitsa	5.08	67	*i* P	Pn	22 42 50.8	+1.4
JMB	Yambol	5.28	76	*e*P	Pn	22 42 54.2	+1.9
ARR	Arges	5.39	41	⇑P	Pn	22 42 55.6	+1.9
BEHE	Becsehely	5.44	339	*e*Pn	Pn	22 42 55.7	+1.3
VOIR		5.65	43	⇓P	Pn	22 42 59.4	+2.0
DRGR		5.82	22	⇓P	Pn	22 43 00.3	+0.6
MARR	Marisel-Cluj	5.83	25	⇑P	Pn	22 43 01.6	+1.7
MDB	Medias	5.85	35	⇑P	Pn	22 43 02.9	+2.9
NEF	NEVSHA	5.98	70	*e*P	Pn	22 43 04.0	+2.1
MLR	Muntele Rosu	6.16	47	Pn	Pn	22 43 07.3	+2.9
	comp=N,11nm,0.7s,baz=212,slow=1.0,SNR=26						
MLR				Sn	Sn	22 44 14.0	-0.4
	comp=N,0.3nm,0.3s,baz=93,slow=19,SNR=1.5						
MLR	Muntele Rosu	6.16	47	⇑P	Pn	22 43 07.1	+2.8
DOPR	Dopca	6.19	41	⇑P	Pn	22 43 06.8	+2.1
SOKA	Soboth	6.19	330	*e*Pn	Pn	22 43 04.6	-0.2
	comp=N,1.6nm,0.3s						
OBKA	Obir	6.25	326	*e*Pn	Pn	22 43 06.7	+1.1
	comp=N,1.7nm,0.3s						
OBKA				*e*Sn	Sn	22 44 18.0	+1.3
	comp=N,10nm,0.5s						
ISR	Istrita	6.28	52	⇑P	Pn	22 43 08.6	+2.7
NEHR	Nehoiu	6.31	48	⇑P	Pn	22 43 09.0	+2.6
OZUR		6.47	42	⇑P	Pn	22 43 11.1	+2.4
PSZ	Piszkesteto	6.50	2	⇓P	Pn	22 43 10.1	+1.1
ARSA	Arzberg	6.51	335	*e*Pn	Pn	22 43 10.2	+1.1
	comp=N,1.5nm,0.4s						
COVR	Voineasa-Covas	6.52	45	⇑P	Pn	22 43 11.7	+2.4
ICOR	Ion Corvin	6.61	63	⇓P	Pn	22 43 12.8	+2.3
PLOR	Plostina	6.77	47	⇓P	Pn	22 43 15.1	+2.4
VRI	Vrincioaia	6.82	47	⇑P	Pn	22 43 15.7	+2.3
KECS	Kecovo	7.09	5	*e*PN	Pn	22 43 20.2	+3.2
KECS				*e*SN	Sn	22 44 40.0	+2.9
MODS	Modra-Piesok	7.14	348	*e*SN	Sn	22 44 41.9	+3.4
KBA	Koelnbreinsper	7.21	324	*e*Pn	Pn	22 43 19.6	+0.7
	comp=N,2.1nm,0.3s						
CFR	Carcaliu	7.28	56	⇑P	Pn	22 43 21.3	+1.7
TPGR	Topolog	7.31	59	⇑P	Pn	22 43 21.8	+1.7
ABTA	Abfaltersbach	7.36	319	*i* Pn	Pn	22 43 20.8	-0.1
	comp=N,0.1nm,0.1s						
ABTA				*e*Sn	Sn	22 44 44.8	+0.7
	comp=N,7.9nm,0.6s						
BURAR	Bucovina Array	7.38	31	⇑P	Pn	22 43 24.4	+3.3
IDI	Anoyia	7.41	144	Pn	Pn	22 43 19.3	-2.2
	comp=N,3.9nm,0.7s,baz=335,slow=17,SNR=1.0						
IDI				Sn	Sn	22 44 37.9	-7.3
	comp=N,0.2nm,0.3s,baz=153,slow=9.0,SNR=1.3						
MOA	Molln	7.46	331	*e*Pn	Pn	22 43 22.2	+0.1
	comp=N,0.7nm,0.3s						
BIOA	Bad Ischl, Aus	7.57	328	*e*Pn	Pn	22 43 24.1	+0.5
	comp=N,0.8nm,0.3s						
TLCR		7.71	58	⇓P	Pn	22 43 28.1	+2.6
LESA	Schwarzleotal	7.77	323	*e*Pn	Pn	22 43 26.4	-0.1
	comp=N,0.4nm,0.2s						
LESA				*e*Sn	Sn	22 44 53.1	-1.0
	comp=N,1.2nm,0.3s						
STHS	Stebnicka Huta	8.08	8	*e*PN	Pn	22 43 34.5	+3.9
WTTA	Wattenberg	8.15	318	*i* Pn	Pn	22 43 32.4	+0.6
	comp=N,1.7nm,0.2s,SNR=6.6						
WTTA				*e*Sn	Sn	22 45 04.7	+1.0
	comp=N,14nm,0.7s						
WATA	Walderalm	8.23	319	*e*Pn	Pn	22 43 33.8	+0.9
	comp=N,4.0nm,0.6s,SNR=11						
SQTA	Sankt Quirin	8.34	317	*e*Pn	Pn	22 43 35.3	+1.0
	comp=N,1.8nm,0.4s						
MOTA	Moosalm	8.48	317	*e*Pn	Pn	22 43 36.9	+0.7
	comp=N,0.9nm,0.2s						
MOTA				*e*Sn	Sn	22 45 11.0	-0.6
	comp=N,1.7nm,0.4s						
GERES	GERESS Array B	8.50	333	Pn	Pn	22 43 36.3	-0.2
	baz=148,slow=14,SNR=5.8						
	comp=N,0.3nm,0.4s						
KHC	Kasperske Hory	8.79	333	*e*PN	Pn	22 43 41.0	+0.6
KHC				*e*SN	Sn	22 45 19.6	+0.5
DAVOX	Davos/Dischmat	8.80	311	Pn	Pn	22 43 41.5	+0.8
	comp=N,0.6nm,0.3s,baz=281,slow=3.2,SNR=9.8						
DAVOX				Sn	Sn	22 45 17.3	-2.2
	comp=N,0.4nm,0.3s,baz=189,slow=19,SNR=2.3						
DAVA	Damuels	9.09	313	*e*Pn	Pn	22 43 45.0	+0.4
	comp=N,0.6nm,0.2s						
DAVA				*e*Sn	Sn	22 45 25.9	-0.7
	comp=N,3.1nm,0.6s						
HFS	Hagfors	19.08	351	P	P	22 45 54.7	-0.9
	comp=N,0.3nm,0.3s,baz=182,slow=17,SNR=3.3						
	comp=N,7.1nm,1.0s						
NB2	NORSAR Subarra	20.30	348	P	P	22 46 08.0	-0.9
	comp=Z,1.8nm,0.8s,baz=167,slow=11						
NOA	NORSAR Array B	20.30	348	P	P	22 46 08.1	-0.9
	comp=Z,0.9nm,0.9s,baz=166,slow=11,SNR=4.1						
	comp=Z,0.9nm,0.9s						
EKA	Eskdalemuir Ar	20.41	321	P	P	22 46 09.6	-0.6
	comp=Z,2.2nm,0.8s,baz=112,slow=9.1,SNR=4.6						
	comp=Z,2.2nm,0.8s						
FINES	FINESS Array B	20.43	9	P	P	22 46 08.6	-1.7
	comp=Z,2.5nm,0.6s,baz=187,slow=11,SNR=8.4						
	comp=Z,2.5nm,0.6s						
BELG	Belogornoye	21.93	50	LR	LR	22 55 35.4	
	comp=Z,527nm,20.0s,baz=96,slow=38						
KIRV	Kirov	25.42	37	LR	LR	22 58 04.7	
	comp=Z,53nm,19.9s,baz=150,slow=39						
KURBB	Kurchatov Arra	40.95	56	P	P	22 49 15.2	-0.5
	comp=Z,0.1nm,0.3s,baz=292,slow=10,SNR=2.7						
	comp=Z,0.1nm,0.3s						
ZALV	Zalesovo Beam	44.12	50	P	P	22 49 40.9	-0.4
	comp=Z,1.4nm,0.5s,baz=271,slow=9.8,SNR=7.3						
	comp=Z,1.4nm,0.5s						
MKAR	Makanchi Array	44.28	61	P	P	22 49 41.6	-1.2
	comp=Z,0.9nm,0.8s,baz=273,slow=8.2,SNR=5.0						
	comp=Z,0.9nm,0.8s						
SONM	Songino Array	58.98	52	P	P	22 51 31.8	-1.0
	comp=Z,0.4nm,0.4s,baz=280,slow=8.5,SNR=2.7						
	comp=Z,0.4nm,0.4s						

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*MOS **01** 23:36:07.1±1.0, 43°.87N×147°.01E, h100^{km}, mb4.3/17, Error ellipse: s-maj=8.7km s-min=7.3km az=116.8*
MOS Felt (II-III) at Malokuril'skoye, (II) at Yuzhno-Kuril'sk.
*NIED **01** 23:36:08.6, 43°.75N×147°.05E, h85^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.78; $M_{\theta\theta}$1.28; $M_{\phi\phi}$1.50; $M_{r\theta}$2.14; $M_{\theta\phi}$4.37; $M_{\phi r}$2.09; Fault plane solution: $M_0$5.22000×10^{14} NP1:ϕ_s36.00000°, δ28.00000°, λ-102.00000°. NP2:ϕ_s229.00000°, δ63.00000°, λ-84.00000°.*
*JMA **01** 23:36:08.6±0.2, 43°.8N±0°.8×14°7E±°, h85^{km}±2^{km},*

MV4.2/38, E OFF HOKKAIDO

*IDC **01** 23:36:09.3±2.5, 43°.94N×146°.91E, h103^{km}±20^{km}, mb3.8/18, mbtmp4.1/22, MS3.2/2, Error ellipse: s-maj=18.7km s-min=15.6km az=86.0*

*NEIC **01** 23:36:09.3±1.8, 43°.92N±0°.09×146°.9E±0°.1, h97^{km}±8^{km}, mb4.4/31, Error ellipse: s-maj=13.7km s-min=12.3km az=107.0*

*SKHL **01** 23:36:09.0±0.0, 43°.90N×147°.00E, h97^{km}±2^{km}, mb5.7/4, msha6.1/4*

ISC 01 23:36:08.0±0.8**, 43°.85N**±0°.05×**147°.05E**±0°.05**, h95**^{km}±6^{km}**, n162, σ1.s02**/172**, mb4.3**/42**, 7D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.16	279	eP	Pn	23 36 28.5	+7.0
SHO				AMB	AMB	23 36 29.0	
	2µm,0.3s						
SHO				eS	Sn	23 36 37.5	+5.9
SHO				A	A	23 36 38.4	
	8µm,0.5s						
SHO				A	A	23 36 38.4	
	11µm,0.5s						
YUK	Yuzh-Kuril'sk	0.88	283	d iPN	Pn	23 36 26.2	-0.5
YUK				eS	Sn	23 36 39.2	-1.6
YUK				pmax	pmax		
	comp=Z,12µm,0.2s						
YUK				pmax	pmax		
	comp=N,2µm,0.1s						
YUK				pmax	pmax		
	comp=E,2µm,0.1s						
YUK				smax	smax		
	comp=N,7µm,0.2s						
YUK				smax	smax		
	comp=E,4µm,0.2s						
YUK	Yuzh-Kuril'sk	0.88	283	i P	Pn	23 36 26.3	-0.5
YUK				AMB	AMB	23 36 26.5	
	comp=E,11µm,0.4s						
YUK				eS	Sn	23 36 39.3	-1.6
YUK				A	A	23 36 40.0	
	comp=E,6µm,0.3s						
YUK				A	A	23 36 40.0	
	comp=E,5µm,0.3s						
NEM2	Nemuro 2	1.06	244	P	Pn	23 36 28.4	-0.4
NEM2				eS	Sn	23 36 43.0	-1.5
NMR	Nemuro--Hokkai	1.07	244	⇓iPN	Pn	23 36 28.3	-0.6
NMR				eS	Sn	23 36 42.9	-1.7
NMR	Nemuro--Hokkai	1.07	244	i P	Pn	23 36 28.4	-0.5
NMR				eS	Sn	23 36 42.9	-1.7
GLVR	Golovnino	1.12	265	⇓iPN	Pn	23 36 29.3	-0.1
GLVR				eS	Sn	23 36 44.9	-0.5
GLVR				pmax	pmax		
	comp=Z,2µm,0.1s						
GLVR				smax	smax		
	comp=N,3µm,0.2s						
GLVR				smax	smax		
	comp=E,4µm,0.3s						
GLVR	Golovnino	1.12	265	i P	Pn	23 36 29.3	-0.1
GLVR				AMB	AMB	23 36 29.5	
	comp=E,2µm,0.4s						
GLVR				eS	Sn	23 36 44.9	-0.5
GLVR				A	A	23 36 45.5	
	comp=E,3µm,0.4s						
GLVR				A	A	23 36 45.5	
	comp=E,4µm,0.4s						
RUSJ	Misakicho	1.33	282	⇓iPN	Pn	23 36 32.3	+0.4
RUSJ				eS	Sn	23 36 50.6	+0.7
JRA	Rausu	1.40	274	P	Pn	23 36 33.2	+0.5
JRA				S	Sn	23 36 51.7	+0.3
JNSB	Nemuroshibetsu	1.48	268	P	Pn	23 36 34.4	+0.6
JNSB				eS	Sn	23 36 53.8	+0.5
KUR	Kuril'sk	1.51	22	d iPN	Pn	23 36 32.2	-1.9
KUR				eS	Sn	23 36 51.3	-2.5
KUR				pmax	pmax		
	comp=N,452nm,0.4s						
KUR				pmax	pmax		
	comp=E,363nm,0.4s						
KUR				pmax	pmax		
	comp=Z,1µm,0.4s						
KUR				smax	smax		
	comp=N,1µm,0.3s						
KUR				smax	smax		
	comp=E,531nm,0.3s						
KUR	Kuril'sk	1.51	22	i P	Pn	23 36 33.7	-0.4
KUR				AMB	AMB	23 36 34.1	
	comp=E,1µm,0.4s						
KUR				eS	Sn	23 36 52.6	-1.2
KUR				A	A	23 36 54.0	
	comp=E,1µm,0.4s						
KUR				A	A	23 36 54.0	
	comp=E,1µm,0.4s						
JKHN	Kushirohamanak	1.57	242	eP	Pn	23 36 34.9	0.0
JKHN				eS	Sn	23 36 54.6	-0.8
JNK	Nakash	1.71	262	P	Pn	23 36 36.8	+0.1
AKK	Akkeshi	1.81	244	eP	Pn	23 36 37.7	-0.2
JAK	Akkeshi	1.92	245	P	Pn	23 36 39.2	-0.1
JAK				S	Sn	23 37 02.1	-1.0
JTKR	Abashiri--Toko	2.28	274	P	Pn	23 36 44.8	+0.8
JTKR				eS	Sn	23 37 11.6	0.0
JAR	Ashorobuto	2.45	258	P	Pn	23 36 47.2	+1.0
JAR				eS	Sn	23 37 16.4	+0.7
JOB	Onbets	2.53	249	P	Pn	23 36 48.0	+0.6
JOB				eS	Sn	23 37 17.2	-0.3
JMP	Maruseppu	2.67	275	P	Pn	23 36 50.1	+0.8
JMP				eS	Sn	23 37 21.8	+0.8
JCH	Churui	2.96	247	P	Pn	23 36 53.3	+0.2
JKK2	Kamakawa 2	3.11	272	eP	Pn	23 36 56.5	+1.3
JKA	Kamikawa-asahi	3.23	276		Pn	23 36 57.3	+0.7
JKA					Sn	23 37 32.9	-1.3
JKA	Kamikawa-asahi	3.23	276	eP	Pn	23 36 58.2	+1.6
ASAJ	Asahikawa	3.23	276	P	Pn	23 36 58.2	+1.5
	comp=E,12nm,0.4s,baz=80,slow=13,SNR=16						
ASAJ				S	Sn	23 37 33.6	-0.7
	comp=E,26nm,0.6s,baz=229,slow=19,SNR=5.9						
ASAJ	Asahikawa	3.23	276	eP	Pn	23 36 58.4	+1.7
JFR	Furan	3.31	260	eP	Pn	23 36 59.4	+1.6
JFR				eS	Sn	23 37 37.9	+1.5
JSE	Soyaes	3.39	291	eP	Pn	23 36 59.5	+0.6
ERM	Erimo	3.40	239		Pn	23 37 00.3	+1.4
ERM	Erimo	3.40	239	PN	Pn	23 37 00.3	+1.4
JEM	Erimo	3.40	239	P	Pn	23 37 00.3	+1.4
JNBK	Urakawa-nobuka	3.52	245	eP	Pn	23 37 00.5	-0.1
YSS	Yuzhno-Sakhali	4.34	317	Pn	Pn	23 37 11.4	-0.2
YSS	Yuzhno-Sakhali	4.34	317	ePN	Pn	23 37 12.8	+1.2
YSS				eS	Sn	23 38 00.8	-0.3
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				smax	smax		
	comp=N,50nm,1.0s						
YSS				smax	smax		
	comp=E,40nm,0.8s						
YSS	Yuzhno-Sakhali	4.34	317	eP	Pn	23 37 12.3	+0.7
YSS				eS	Sn	23 38 00.7	-0.3
JTM	Tenmabayashi	5.39	237	Pn	Pn	23 37 25.1	-0.8
TYV	Tymovskoe	7.63	339	eP	Pn	23 37 57.6	+1.3
MJA0	Matsu Arr-Jizo	9.92	226	ePN	Pn	23 38 27.5	-0.2
MJAR	Matsushiro Arr	9.94	226	P	Pn	23 38 27.2	-0.7
	comp=E,6.5nm,0.7s,baz=28,slow=13,SNR=15						
MJB9	Matsu-Tunnel	9.94	226		Pn	23 38 28.8	+0.9
MAJO	Matsushiro	9.94	226		Pn	23 38 27.2	-0.7
MAJO	Matsushiro	9.94	226	i PN	Pn	23 38 27.0	-1.0
VLA	Vladivostok	11.05	271	i PN	Pn	23 38 42.8	-0.1
JGF	Kuroka	11.11	225	Pn	Pn	23 38 42.8	-1.0
SEY	Seymchan	19.37	7	P	P	23 40 26.9	+1.0
	comp=E,1.9nm,0.5s,baz=207,slow=16,SNR=4.0						
SEY				LR	LR	23 47 00.4	
	comp=E,28nm,20.4s,baz=344,slow=34						
SEY	Seymchan	19.37	7	i P	P	23 40 25.8	-0.1
SEY				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HIA	Hailar	19.49	296	i P	P	23 40 26.2	-1.1
HIA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HILR	Hailar Array B	19.52	297	P	P	23 40 25.4	-2.2
	comp=Z,0.8nm,0.3s,baz=93,slow=8.9,SNR=4.6						
YAK	Yakutsk	20.88	337	i P	P	23 40 42.5	+0.3
YAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
YAK	Yakutsk	20.88	337	eP	P	23 40 42.5	+0.3
HHC	Hu-ho-hao-te	26.28	276	eP	P	23 41 32.5	-2.0
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,4.6s						
SONM	Songino Array	28.37	293	P	P	23 41 52.9	-0.2
	comp=Z,1.3nm,0.6s,baz=74,slow=8.5,SNR=9.9						
	comp=Z,1.3nm,0.6s						
SONM	Songino Array	28.37	293	IAmb	IAmb	23 41 56.3	
	comp=Z,1.1nm,0.9s						
H11N2	WAKE ISLAND Hy	29.22	139	T	T	00 12 55.3	
	baz=330,slow=76,SNR=199						
H11N1	WAKE ISLAND Hy	29.23	139	T	T	00 12 56.3	
	baz=330,slow=76,SNR=149						
H11N3	WAKE ISLAND Hy	29.24	139	T	T	00 12 58.0	
	baz=330,slow=76,SNR=199						
H11S1	WAKE ISLAND Hy	30.18	141	T	T	00 14 06.5	
	baz=331,slow=76,SNR=207						
H11S3	WAKE ISLAND Hy	30.19	141	T	T	00 14 11.0	
	baz=331,slow=76,SNR=170						
H11S2	WAKE ISLAND Hy	30.20	141	T	T	00 14 07.2	
	baz=331,slow=76,SNR=139						
PZH	PanZhiHua	40.33	260	P	P	23 43 34.2	-2.1
ZALV	Zalesovo Beam	40.88	307	P	P	23 43 37.9	-2.5
	comp=Z,0.6nm,0.3s,baz=82,slow=8.1,SNR=4.8						
	comp=Z,0.6nm,0.3s						
ZALV	Zalesovo Beam	40.88	307	i P	P	23 43 39.4	-1.0
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ILAR	Eielson Array	41.45	36	P	P	23 43 45.0	+0.1
	comp=Z,0.8nm,0.6s,baz=277,slow=8.5,SNR=11						
	comp=Z,0.8nm,0.6s						
ILAR	Eielson Array	41.45	36	eP	P	23 43 46.7	+1.8
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WMQ	Urumqi	41.99	291	eP	P	23 43 50.3	+0.6
CTGM	Chitina Glacie	44.45	41	P	P	23 44 11.3	+2.0
CTGM				IAmb	IAmb	23 44 29.0	
	comp=Z,8.4nm,1.2s						
MK31	Makanchi Array	44.48	297	i P	P	23 44 09.6	0.0
MKAR	Makanchi Array	44.48	297	P	P	23 44 09.7	+0.1
	comp=Z,2.7nm,0.5s,baz=78,slow=9.0,SNR=46						
	comp=Z,2.7nm,0.5s						
MKAR	Makanchi Array	44.48	297	eP	P	23 44 09.5	-0.1
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MKAR	Makanchi Array	44.48	297	eP	P	23 44 09.5	-0.1
MAKZ	Makanchi	44.67	298	P	P	23 44 10.9	-0.2
MAKZ				IAmb	IAmb	23 44 12.4	
	comp=Z,8.4nm,1.1s						
MAKZ	Makanchi	44.67	298	P	P	23 44 10.9	-0.2
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.2s						
E29M	Blow River	44.74	31	P	P	23 44 12.3	+1.0
E29M				IAmb	IAmb	23 44 14.2	
	comp=Z,2.7nm,1.0s						
H29M	Whitestone	44.85	34	P	P	23 44 13.2	+1.0
G29M	Pine Creek	44.88	33	P	P	23 44 14.2	+1.7
KURK	Kurchatov	45.42	304	P	P	23 44 16.4	-0.6
KURK	Kurchatov	45.42	304	IAmb	IAmb	23 44 17.5	
	comp=Z,3.3nm,0.7s						
KURK	Kurchatov	45.42	304	i P	P	23 44 16.5	-0.4
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	Kurchatov	45.42	304	eP	P	23 44 16.5	-0.4
M29M	Somme Creek	45.48	39	P	P	23 44 17.0	-0.4
L29M	L29M	45.50	38	P	P	23 44 18.1	+0.7
L29M				IAmb	IAmb	23 44 25.9	
	comp=Z,3.7nm,1.1s						
KURBB	Kurchatov Arra	45.50	304	P	P	23 44 16.4	-1.2
	comp=Z,2.2nm,0.7s,baz=76,slow=8.8,SNR=7.9						
	comp=Z,2.2nm,0.7s						
G30M	tAoh Zraii Nji	45.57	32	P	P	23 44 19.1	+1.1
G30M				IAmb	IAmb	23 44 19.5	
	comp=Z,2.0nm,0.8s						
F30M	Barrier River	45.64	31	P	P	23 44 19.8	+1.4
F30M				IAmb	IAmb	23 44 21.5	
	comp=Z,3.0nm,1.0s						
I30M	Mount Dempster	45.83	35	P	P	23 44 21.0	+0.9
G31M	Satah River	46.34	32	P	P	23 44 24.9	+1.0
G31M				IAmb	IAmb	23 44 27.0	
	comp=Z,1.7nm,0.4s						
INK	Inuvik	46.35	30	P	P	23 44 24.6	+0.6
INK	Inuvik	46.35	30	P	P	23 44 24.6	+0.6
INK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
H31M	Peel River	46.54	34	P	P	23 44 26.4	+0.8
PRZ	Przheval'sk	48.75	294	P	P	23 44 44.0	+0.8
PRZ	Przheval'sk	48.75	294	P	P	23 44 44.0	+0.8
PRZ				pmax	pmax		
	comp=Z,11nm,0.8s						
WUS	Wushi	48.78	292		P	23 44 44.3	+0.9
BVAR	Borovoye Array	49.39	309	P	P	23 44 47.0	-0.7
	comp=Z,0.6nm,0.3s,baz=81,slow=9.7,SNR=10						
	comp=Z,0.6nm,0.3s						
BVAR	Borovoye Array	49.39	309	P	P	23 44 47.0	-0.7
BORK	Borovoye	49.42	309	i P	P	23 44 48.5	+0.6
BORK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
C36M	Paulatuk	49.43	28	P	P	23 44 47.7	0.0
C36M				IAmb	IAmb	23 44 48.1	
	comp=Z,2.0nm,0.4s						
TARG	Taragay, Kyrgy	49.49	293	P	P	23 44 49.7	+0.6
TARG				IAmb	IAmb	23 44 50.5	
	comp=Z,3.9nm,1.1s						
TARG	Taragay, Kyrgy	49.49	293	P	P	23 44 49.7	+0.6
TARG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KDJ	Kajisay	49.72	294	P	P	23 44 51.2	+0.6
KDJ				IAmb	IAmb	23 45 10.3	
	comp=Z,6.5nm,1.0s						
KDJ	Kajisay	49.72	294	P	P	23 44 51.2	+0.6
KDJ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BOOM	Boomskoye usch	50.37	295		P	23 44 56.4	+0.9
BOOM	Boomskoye usch	50.37	295	P	P	23 44 56.4	+0.9
BOOM				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AAK	Ala-Archa	51.25	295		P	23 45 02.3	+0.2
AAK				IAmb	IAmb	23 45 02.8	
	comp=Z,3.0nm,0.5s						
AAK	Ala-Archa	51.25	295	i P	P	23 45 02.4	+0.3
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AAK	Ala-Archa	51.25	295	eP	P	23 45 02.4	+0.3
KSH	Kashi	51.76	291	P	P	23 45 10.7	+4.9
KSH				pmax	pmax		
	comp=Z,2.0nm,0.8s						
RUBB	Prince Rupert	52.17	47	P	P	23 45 09.0	+0.6
KK31	Karatay Array	53.61	298		P	23 45 19.5	+0.2
KK31				IAmb	IAmb	23 45 20.1	
	comp=Z,4.7nm,0.8s						
KK31	Karatay Array	53.61	298	P	P	23 45 19.5	+0.2
KK31				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KKAR	Karatay Array	53.61	298		P	23 45 19.4	+0.1
KKAR	Karatay Array	53.61	298	P	P	23 45 19.4	+0.1
ARTI	Arti	54.34	317	P	P	23 45 23.8	-0.5
ARTI				IAmb	IAmb	23 45 24.1	
	comp=Z,4.9nm,0.6s						
ARTI	Arti	54.34	317	d iP	P	23 45 23.8	-0.5
ARTI				S	S	23 52 56.0	+1.3
ARTI				SS	SS	23 56 37.3	0.0
ARTI				pmax	pmax		
	comp=Z,10.0nm,2.4s						
CHGR	Chuyangaron	56.76	294		P	23 45 42.0	-0.1
CHGR	Chuyangaron	56.76	294	P	P	23 45 42.0	-0.1
CHGR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
AB31	Akbulak array	56.95	309		P	23 45 43.2	+0.1
AB31				IAmb	IAmb	23 45 43.7	
	comp=Z,6.0nm,0.9s						
ABKAR	Akbulak array	56.95	309		P	23 45 43.0	-0.1
SHAA	Shahritus	58.03	293		P	23 45 51.6	+0.6
SHAA				IAmb	IAmb	23 45 51.8	
	comp=Z,6.2nm,0.5s						
ARCES	ARCESS Array B	59.13	340	P	P	23 45 56.8	-1.3
	comp=Z,1.8nm,0.8s,baz=35,slow=6.6,SNR=5.1						
	comp=Z,1.8nm,0.8s						
ARCES	ARCESS Array B	59.13	340	eP	P	23 45 58.7	+0.6
ARCES				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WRA	Warramunga Arr	64.54	193	P	P	23 46 35.5	+0.7
	comp=Z,1.4nm,0.9s,baz=10,slow=6.8,SNR=6.2						
	comp=Z,1.4nm,0.9s						
FINES	FINESS Array B	64.76	333	P	P	23 46 34.4	-1.4
	comp=Z,2.2nm,0.4s,baz=42,slow=8.1,SNR=35						
	comp=Z,2.2nm,0.4s						
FINES	FINESS Array B	64.76	333	P	P	23 46 34.3	-1.5
FINES	FINESS Array B	64.76	333	eP	P	23 46 34.9	-0.9
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
OBN	Obninsk	65.20	324	i P	P	23 46 38.5	-0.2
OBN				i		23 47 11.1	
OBN				i		23 49 03.9	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
OBN	Obninsk	65.20	324	eP	P	23 46 38.5	-0.2
PALK	Pallekele	67.99	259	LR	LR	00 20 21.1	
	comp=Z,33nm,18.1s,baz=110,slow=39						
ASAR	Alice Springs	68.25	193	P	P	23 46 59.5	+1.0
	comp=Z,0.5nm,0.7s,baz=11,slow=5.9,SNR=3.8						
	comp=Z,0.5nm,0.7s						
NB2	NORSAR Subarra	69.49	339	P	P	23 47 05.3	-0.5
	comp=Z,1.6nm,0.4s,baz=31,slow=6.5						
NOA	NORSAR Array B	69.49	339	P	P	23 47 05.2	-0.5
	comp=Z,2.3nm,0.5s,baz=32,slow=6.6,SNR=30						
	comp=Z,2.3nm,0.5s						
NOA	NORSAR Array B	69.49	339	eP	P	23 47 05.2	-0.5
NOA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
HFS	Hagfors	69.58	337	P	P	23 47 05.4	-0.8
	comp=Z,4.2nm,0.4s,baz=40,slow=5.8,SNR=32						
	comp=Z,4.2nm,0.4s						
KIV	Kislovodsk	69.65	312	P	P	23 47 08.6	+1.4
KIV	Kislovodsk	69.65	312	eP	P	23 47 07.3	+0.2
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
KIV	Kislovodsk	69.65	312	eP	P	23 47 07.3	+0.2
KBZ	Khabaz	69.68	311	P	P	23 47 08.5	+1.3
	comp=Z,6.2nm,0.8s,baz=55,slow=5.3,SNR=11						
	comp=Z,6.2nm,0.8s						
KBZ	Khabaz	69.68	311	i P	P	23 47 07.5	+0.3
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KBZ	Khabaz	69.68	311	eP	P	23 47 07.5	+0.3
SHA1	Shidzhatmaz	69.81	312	i P	P	23 47 07.5	-0.8
AKASG	Malin Array Be	71.46	324	P	P	23 47 17.5	-0.3
	comp=Z,1.0nm,0.4s,baz=41,slow=5.6,SNR=11						
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	71.46	324	IAmb	IAmb	23 47 19.3	
	comp=Z,4.6nm,1.1s						
AKASG	Malin Array Be	71.46	324	i P	P	23 47 17.8	-0.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BUR08	Bucovina Ar. S	75.50	324	P	P	23 47 42.3	+0.5
BUR08				IAmb	IAmb	23 47 43.7	
	comp=Z,3.3nm,0.6s						
BURAR	Bucovina Array	75.52	324	P	P	23 47 42.1	+0.3
OJC	Ojcow	75.66	328	P	P	23 47 41.9	-0.6
OJC	Ojcow	75.66	328	P	P	23 47 41.9	-0.6
STHS	Stebnicka Huta	75.74	327	eP	P	23 47 43.8	+0.8
STHS	Stebnicka Huta	75.74	327	eP	P	23 47 43.8	+0.8
CLL	Collm	77.20	332	eP	P	23 47 51.0	-0.1
CLL	Collm	77.20	332	eP	P	23 47 51.0	-0.1
BRTR	Keskin Array B	77.43	314	P	P	23 47 53.0	+0.2
	comp=Z,1.0nm,0.7s,baz=101,slow=3.9,SNR=4.5						
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	77.43	314	P	P	23 47 53.2	+0.3
BRTR	Keskin Array B	77.43	314	eP	P	23 47 53.9	+1.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
EKA	Eskdalemuir Ar	78.01	343	P	P	23 47 56.4	+0.8
	comp=Z,1.2nm,0.7s,baz=14,slow=6.3,SNR=1.8						
	comp=Z,1.2nm,0.7s						
GERES	GERESS Array B	79.04	331	P	P	23 48 01.2	-0.3
	comp=Z,0.4nm,0.3s,baz=28,slow=6.8,SNR=6.0						
	comp=Z,0.4nm,0.3s						
GERES	GERESS Array B	79.04	331	eP	P	23 48 02.1	+0.6
RCHB	Rochefort	80.64	336	dP	P	23 48 15.2	+5.2
TXAR	Lajitas Array	82.66	56	P	P	23 48 22.1	+1.0
	comp=Z,0.2nm,0.5s,baz=260,slow=3.5,SNR=4.2						
	comp=Z,0.2nm,0.5s						
H03N2	Juan Fernandez	143.03	90	T	T	02 34 44.8	
	baz=304,slow=77,SNR=19						
H03N3	Juan Fernandez	143.05	90	T	T	02 34 54.5	
	baz=304,slow=77,SNR=17						
H03N1	Juan Fernandez	143.05	90	T	T	02 34 49.9	
	baz=304,slow=77,SNR=20						

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*GCG **01** 23:37:43.9±1.1, 14°.15N×90°.42W, h135^{km}±5^{km}, MD4.2, ML4.4*

*SNET **01** 23:37:43.4±1.7, 14°.08N×90°.41W, h139^{km}, ML4.0*

*NEIC **01** 23:37:43.9±1.7, 14°.14N±0°.05×90°.39W±0°.07, h148^{km}±7^{km}, mb4.4/70, Error ellipse: s-maj=11.7km s-min=3.9km az=60.0*

*CATAC **01** 23:37:44.8±0.4, 14°N±4°×9°0W±°, h125^{km}±3^{km}, M4.0/27, MLv4.0/27, Error ellipse: s-maj=10.8km s-min=2.9km az=29.2, confirmed*

*IDC **01** 23:37:44.6±1.7, 14°.35N×90°.22W, h146^{km}±4^{km}, mb3.6/4, mbtmp4.0/7, Error ellipse: s-maj=39.5km s-min=20.4km az=39.0*

*UCR **01** 23:37:45.2±1.3, 13°.79N×90°.42W, h148^{km}, MW4.2, MB4.4(NEIC)*

ISC 01 23:37:43.4±0.6**, 14°.18N**±0°.05×**90°.38W**±0°.04**, h144**^{km}±5^{km}**, n189, σ1.s25**/213**, mb4.4**/24**, 4C-5D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG5	San Vicente Pa	0.04	4	i P	Pn	23 38 03.2	+0.2
PCG5				eS	Sn	23 38 18.4	+0.5
FG16	Alotenango, Sa	0.16	306	i P	Pn	23 38 04.4	+1.2
FG16				IAML		23 38 34.5	
	comp=E,16µm,0.2s						
GCG4	OSOP	0.43	340	i P	Pn	23 38 04.5	+0.6
ESSG	Sabana Grande	0.48	295	i P	Pn	23 38 03.6	-0.4
ESSG				eS	Sn	23 38 18.7	-1.0
FAME	Alcaldia de Sa	0.49	133	P	Pn	23 38 03.7	-0.3
SLOZ	Alcaldia de Sa	0.60	105	eP	Pn	23 38 00.8	-3.8
LOAL	Lomas de Alarc	0.61	107	S	Sn	23 38 21.4	+0.5
LOAL	Lomas de Alarc	0.61	107	P	Pn	23 38 04.9	+0.2
ESSJ	San Jos, E	0.63	191	i P	Pn	23 38 04.2	-0.6
NUBE	Las Nubes	0.64	115	i P	Pn	23 38 04.9	-0.1
NUBE				eS	Sn	23 38 21.0	-0.6
NUBE	Las Nubes	0.64	115	i P	Pn	23 38 05.0	-0.1
NUBE	Las Nubes	0.64	115	S	Sn	23 38 21.4	-0.1
NUBE	Las Nubes	0.64	115	P	Pn	23 38 05.0	-0.1
RBDL	Robledal	0.68	96	⇓iP	Pn	23 38 05.2	-0.1
RBDL				eS	Sn	23 38 22.5	+0.6
SBLS	San Blas	0.81	115	eP	Pn	23 38 06.5	+0.2
CEVE	Cerro Verde	0.81	115	i P	Pn	23 38 06.4	+0.1
CEVE				eS	Sn	23 38 24.7	+0.9
CEVE	Cerro Verde	0.81	115	P	Pn	23 38 06.6	+0.2
SNJE	San Jose	0.81	112	eP	Pn	23 38 06.3	0.0
APG	El Apazote	0.82	354	P	Pn	23 38 07.2	+0.8
	comp=E,68nm,0.3s,baz=156,slow=12,SNR=1017						
APG				LR	LR	23 38 13.7	
	comp=E,6.7nm,18.5s,baz=6.5,slow=42						
APG				S	Sn	23 38 24.9	+0.9
	comp=E,48nm,0.7s,baz=73,slow=20,SNR=42						
APG	El Apazote	0.82	354	i P	Pn	23 38 07.2	+0.8
APG				i S	Sn	23 38 24.9	+0.9
UNIC	Universidad Ca	0.83	104	eP	Pn	23 38 06.3	0.0
UNIC	Universidad Ca	0.83	104	P	Pn	23 38 06.3	0.0
STG5	El Palmar, Qui	0.97	283	i P	Pn	23 38 09.9	+2.5
STG5				eS	Sn	23 38 30.3	+4.7
STG8	El Palmar, Qui	0.98	286	i P	Pn	23 38 10.6	+2.9
STG8				eS	Sn	23 38 33.4	+7.2
STG2	El Palmar, Qui	1.00	285	i P	Pn	23 38 10.8	+3.0
MTO3	Montecristo	1.01	77		Pn	23 38 08.2	+0.3
MTO3				Sn	Sn	23 38 27.0	+0.4
MTO3	Montecristo	1.01	77	i P	Pn	23 38 08.3	+0.3
MTO3	Montecristo	1.01	77	P	Pn	23 38 08.2	+0.3
CEDA	San Andres	1.03	111	i P	Pn	23 38 07.7	-0.2
CEDA				eS	Sn	23 38 26.5	0.0
CEDA	San Andres	1.03	111	P	Pn	23 38 08.1	+0.2
JAYA	Jayaque - finc	1.04	120	eP	Pn	23 38 07.8	-0.4
JAYA				eS	Sn	23 38 26.7	-0.4
JAYA	Jayaque - finc	1.04	120	i P	Pn	23 38 08.2	0.0
JAYA				eS	Sn	23 38 26.4	-0.6
JAYA	Jayaque - finc	1.04	120	S	Sn	23 38 27.1	0.0
JAYA	Jayaque - finc	1.04	120	P	Pn	23 38 08.1	0.0
ZAFR2	Estanzuela, Za	1.07	68	i P	Pn	23 38 09.4	+1.1
ESQI	Esquipulas	1.07	69	Pn	Pn	23 38 08.9	+0.5
ESQI	Esquipulas	1.07	69	i P	Pn	23 38 09.2	+0.9
ESQI	Esquipulas	1.07	69	P	Pn	23 38 09.3	+0.9
PMON	Piamonte	1.13	114	i P	Pn	23 38 09.2	+0.2
PMON	Piamonte	1.13	114	P	Pn	23 38 09.1	+0.2
BOQS	Boqueron	1.16	112	i P	Pn	23 38 09.4	+0.1
SOKI	Kika Raxquin	1.18	303	eP	Pn	23 38 10.3	+0.6
UEES	Universidad Ev	1.20	112	P	Pn	23 38 09.9	+0.3
LALI	Alcalda de L	1.24	124	eP	Pn	23 38 09.9	+0.2

LALI				eS	Sn	23 38 29.7	-0.2
LALI	Alcalda de L	1.24	124	iP	Pn	23 38 10.0	+0.2
LALI				eS	Sn	23 38 29.3	-0.6
LALI	Alcalda de L	1.24	124	P	Pn	23 38 10.0	+0.2
UTEC	Universidad Te	1.24	112	P	Pn	23 38 09.9	0.0
IGN	Direccin Gen	1.26	111	P	Pn	23 38 10.3	+0.2
UDBS	Universidad Do	1.27	111	P	Pn	23 38 10.5	+0.2
UDBS	Universidad Do	1.27	111	S	Sn	23 38 30.2	-0.5
LOMA	Loma Larga	1.29	114	eP	Pn	23 38 10.6	+0.1
LOMA	Loma Larga	1.29	114	P	Pn	23 38 09.7	-0.8
LOMA	Loma Larga	1.29	114	S	Sn	23 38 29.6	-1.5
QUEO	Labor Ovalle	1.30	302	eP	Pn	23 38 11.8	+1.1
LFU	La Fuente	1.30	109	iP	Pn	23 38 10.8	+0.3
QUIS	Sacapulas	1.30	328	eP	Pn	23 38 11.3	+0.7
RTAL	Retalhuleu	1.32	285	Pn	Pn	23 38 10.8	+0.1
RTAL	Retalhuleu	1.32	285	P	Pn	23 38 10.8	+0.1
LLGN	La Laguna	1.39	91	P	Pn	23 38 11.8	+0.3
LFRS	El Faro	1.39	113	eP	Pn	23 38 11.5	0.0
PAVA	Las Pavas	1.48	108	⇓iP	Pn	23 38 12.5	+0.1
PAVA				eS	Sn	23 38 35.5	+1.0
PAVA	Las Pavas	1.48	108	P	Pn	23 38 12.9	+0.5
PAVA	Las Pavas	1.48	108	S	Sn	23 38 36.2	+1.7
HUEH	Huehuetenango	1.57	316	Pn	Pn	23 38 14.9	+1.4
SNVI	San Vicente	1.60	110	eP	Pn	23 38 14.2	+0.4
UESV	Universidad de	1.64	109	P	Pn	23 38 14.4	+0.3
SCLA	Alcaldia de Sa	1.67	106	⇓iP	Pn	23 38 14.9	+0.5
SCLA	Alcaldia de Sa	1.67	106	S	Sn	23 38 39.5	+1.3
SCLA	Alcaldia de Sa	1.67	106	P	Pn	23 38 15.1	+0.6
TECO	Alcaldia de Te	1.68	112	P	Pn	23 38 14.8	+0.3
SMCA	Catarina	1.77	292	eP	Pn	23 38 15.4	-0.2
SMCA				eS	Sn	23 38 39.6	-0.7
SMCA				IAML		23 38 41.6	
	comp=N,3µm,0.2s						
TECA	Tecapa	1.95	110	iP	Pn	23 38 18.0	+0.2
THIG		1.96	292	iP	Pn	23 38 18.4	+0.6
THIG				eS	Sn	23 38 43.8	-0.3
PACA	Pacayal	2.12	109	P	Pn	23 38 20.4	+0.7
LCY	Lacayo	2.16	110	eP	Pn	23 38 21.0	+0.8
LCND	La Caada	2.57	109	P	Pn	23 38 25.6	+0.5
CNCH	Conchagua	2.63	110	P	Pn	23 38 26.8	+0.8
CCIG	Comitan	2.69	321	Pn	Pn	23 38 26.9	0.0
CCIG	Comitan	2.69	321	eP	Pn	23 38 27.1	+0.3
CCIG	Comitan	2.69	321	P	Pn	23 38 28.0	+1.2
PETF	Flores	2.77	10	Pn	Pn	23 38 28.6	+1.0
PETF	Flores	2.77	10	eP	Pn	23 38 28.9	+1.3
PETF	Flores	2.77	10	eP	Pn	23 38 29.0	+1.4
PETF				IAML		23 39 04.5	
	comp=N,600nm,0.7s						
CSGN	Cosiguina Volc	2.99	113	P	Pn	23 38 31.2	+0.6
CSGN				S	Sn	23 39 09.1	+2.1
CSGN	Cosiguina Volc	2.99	113	⇑eP	Pn	23 38 30.8	+0.3
CSGN				eS	Sn	23 39 08.2	+1.3
TGUH	Tegucigalpa,Un	3.02	92	Pn	Pn	23 38 30.7	-0.2
POTN	Potosi Cosigui	3.03	112	eP	Pn	23 38 33.3	+2.3
POTN				eS	Sn	23 39 10.1	+2.4
CRIN	San Cristobal	3.56	114	Pn	Pn	23 38 38.5	+0.6
CRIN	San Cristobal	3.56	114	eP	Pn	23 38 39.4	+1.5
CRIN				eS	Sn	23 39 21.0	+1.0
CNGN	Cerro Negro	3.95	115	Pn	Pn	23 38 42.7	-0.2
CNGN	Cerro Negro	3.95	115	eP	Pn	23 38 43.0	0.0
COPN	Copaltepe	4.19	118	⇑iP	Pn	23 38 46.6	+0.6
MGAN	Managua	4.50	116	Pn	Pn	23 38 50.1	-0.1
MGAN	Managua	4.50	116	eP	Pn	23 38 51.4	+1.2
BOAB	BOACO BROADBAN	4.90	110	Pn	Pn	23 38 55.7	+0.2
CMIG	Matias Romero	5.22	304	P	Pn	23 38 59.9	+0.2
	comp=N,12nm,0.2s,baz=154,slow=9.7,SNR=67						
CMIG				S	Sn	23 39 54.7	-4.4
	comp=N,18nm,0.3s,baz=314,slow=23,SNR=9.3						
LCRUZ	La Cruz	5.57	123	eP	Pn	23 39 04.5	+0.2
CARN	Rivas	5.59	122	eP	Pn	23 39 05.3	+0.6
LAPC	Finca la Perla	5.90	125	eP	Pn	23 39 09.2	+0.4
ALIBA	Liberia Airpor	5.92	127	⇓iP	Pn	23 39 11.2	+2.2
BUAI	Buenos Aires	5.92	123	⇓eP	Pn	23 39 10.1	+1.0
VRLE	La Escondida,	5.94	124	eP	Pn	23 39 10.4	+1.0
SAJU	San Juanillo,	6.13	131	eP	Pn	23 39 13.1	+1.3
VMAR	Armenia, Volca	6.13	122	eP	Pn	23 39 12.8	+0.9
CUI	Cuipilapa	6.18	124	⇑iP	Pn	23 39 13.7	+1.1
JUD3	Juan Diaz 3	6.19	130	eP	Pn	23 39 14.0	+1.2
PLVR	Palo Verde	6.22	127	eP	Pn	23 39 15.1	+1.9
TEIG	Tepich	6.34	18	Pn	Pn	23 39 14.6	-0.1
INVE	Universidad In	6.37	125	eP	Pn	23 39 17.3	+2.3
JTS	Las Juntas de	6.56	125	P	Pn	23 39 19.0	+1.3
	comp=N,35nm,0.4s,baz=298,slow=23,SNR=42						
JTS				S	Sn	23 40 27.7	-3.7
	comp=N,26nm,0.4s,baz=156,slow=20,SNR=7.4						
JTS	Las Juntas de	6.56	125	Pn	Pn	23 39 19.3	+1.6
JTS	Las Juntas de	6.56	125	eP	Pn	23 39 19.0	+1.3
ARE1	Arenal 1	6.65	123	eP	Pn	23 39 20.3	+1.4
VARE2	V. Arenal	6.65	123	eP	Pn	23 39 20.2	+1.3
JCR1	Jicaral	6.71	129	eP	Pn	23 39 21.0	+1.3
PICV	PH. Pirrs	7.56	126	eP	Pn	23 39 33.0	+2.0
BUS1	Rivas	7.95	125	⇑eP	Pn	23 39 38.3	+1.6
EDPE	Pejibaye, P	8.33	126	eP	Pn	23 39 43.2	+1.9
DRK0	Durika	8.52	124	eP	Pn	23 39 44.9	+0.8
TLIG	Tlapa	8.56	294	Pn	Pn	23 39 45.2	+0.7
PIRO	Carate, Puerto	8.98	129	Pn	Pn	23 39 53.2	+3.2
PIRO	Carate, Puerto	8.98	129	eP	Pn	23 39 53.6	+3.6
BRU2	Volcan	9.24	125	Pn	Pn	23 39 54.1	+0.4
MTDJ	Mount Denham	12.97	70	P	P	23 40 49.4	+1.6
CAIB	Caibarien	13.24	50	P	P	23 40 52.0	+1.5
061Z	Ochoppi	14.63	36	P	P	23 41 07.9	+1.9
HNDO	Hondo	17.35	333	P	Pn	23 41 37.6	+0.8
HNDO				IAmb	IAmb	23 41 40.0	
	comp=Z,7.9nm,0.7s						
435B	Jarrell	17.80	339	P	Pn	23 41 42.4	+0.1
435B				IAmb	IAmb	23 41 43.8	
	comp=Z,15nm,0.8s						
VBMS	Vicksburg	17.96	360	P	Pn	23 41 44.2	+0.2
146A	Union	18.41	4	P	Pn	23 41 49.4	-0.1
146A				IAmb	IAmb	23 41 51.1	
	comp=Z,33nm,1.0s						
BRDY	Brady	18.77	337	P	P	23 41 51.6	0.0
BRDY				IAmb	IAmb	23 41 54.1	
	comp=Z,12nm,0.7s						
WHTX	Lake Whitney,	18.88	341		P	23 41 53.3	+0.7
LRAL	Lakeview Retre	19.02	9	P	P	23 41 55.1	+0.9
LRAL				IAmb	IAmb	23 42 00.8	
	comp=Z,18nm,0.9s						
Z47A	Carrollton	19.05	6	P	P	23 41 54.8	+0.3
Z47A				IAmb	IAmb	23 41 57.8	
	comp=Z,19nm,0.6s						
TXAR	Lajitas Array	19.46	323	P	Pn	23 42 01.5	-0.3
	comp=Z,0.9nm,0.7s,baz=145,slow=10,SNR=18						
TX31	Lajitas Ar. Si	19.46	323	P	Pn	23 42 01.8	0.0
PLPT	Palo Pinto	19.91	340	P	P	23 42 04.0	+0.1
PLPT				IAmb	IAmb	23 42 05.2	
	comp=Z,9.9nm,0.6s						
GOGA	Godfrey	20.15	17	P	P	23 42 06.9	+0.5
GOGA				IAmb	IAmb	23 42 10.3	
	comp=Z,13nm,0.7s						
ABTX	Abilene, Hawle	20.21	337		P	23 42 08.2	+1.0
ABTX				IAmb	IAmb	23 42 10.5	
	comp=Z,5.6nm,0.6s						
X48A	Hartselle	20.41	8	P	P	23 42 10.3	+1.2
X48A				IAmb	IAmb	23 42 12.8	
	comp=Z,12nm,0.8s						
MIAR	Mount Ida	20.48	352	P	P	23 42 09.9	0.0
FPAL	Fort Paine	20.73	11	P	P	23 42 13.8	+1.2
FPAL				IAmb	IAmb	23 42 16.0	
	comp=Z,8.4nm,0.7s						
APMT	Aspermont	21.02	337	P	P	23 42 14.7	-1.0
SWET	Sewanee	21.33	10	P	P	23 42 19.1	+0.1
SWET				IAmb	IAmb	23 42 21.9	
	comp=Z,14nm,0.7s						
W50A	Signal Mountai	21.42	11	P	P	23 42 21.3	+1.2
W50A				IAmb	IAmb	23 42 22.3	
	comp=Z,12nm,0.5s						
DKNS	Dickens	21.63	336	P	P	23 42 23.3	+1.0
V48A	Smith Brothers	21.71	8	P	P	23 42 23.6	+0.6
V48A				IAmb	IAmb	23 42 25.1	
	comp=Z,11nm,0.6s						
BG3	Lake Jocassee	21.79	17	P	P	23 42 25.1	+1.2
BG3				IAmb	IAmb	23 42 26.0	
	comp=Z,19nm,1.0s						
WMOK	Wichita Mounta	21.83	341	P	P	23 42 23.5	-0.8
FNO	Franklin	21.92	344	P	P	23 42 25.2	-0.1
WVT	Waverly	21.98	6	P	P	23 42 26.2	+0.4
OKCSW	OKLAHOMA CITY	22.07	345	P	P	23 42 26.4	-0.4
CLTN	Cedars of Leba	22.12	9	P	P	23 42 28.1	+0.9
CLTN				IAmb	IAmb	23 42 29.0	
	comp=Z,9.9nm,0.9s						
TKL	Tuckaleechee C	22.20	14		P	23 42 29.2	+1.1
TKL				IAmb	IAmb	23 42 29.8	
	comp=Z,14nm,0.8s						
OK052	Battle Ridge R	22.47	346	P	P	23 42 29.8	-1.0
U49A	Red Boiling Sp	22.62	10	P	P	23 42 32.7	+0.6
SMWD	Samnorwood	22.65	339		P	23 42 33.4	+0.9
T45A	Paducah	22.80	4	P	P	23 42 35.8	+2.1
W57A	Gilead	22.89	22	P	P	23 42 34.5	-0.1
W57A				IAmb	IAmb	23 42 47.1	
	comp=Z,19nm,1.1s						
T47A	Sharon Grove	22.90	7	P	P	23 42 35.4	+0.6
TZTN	Tazewell	23.09	14	P	P	23 42 37.0	+0.4
TZTN				IAmb	IAmb	23 42 38.7	
	comp=Z,14nm,0.8s						
V55A	Taylorsville	23.10	19	P	P	23 42 37.1	+0.5
V55A				IAmb	IAmb	23 42 38.2	
	comp=Z,15nm,0.9s						
CROK	Carrier	23.25	344	P	P	23 42 35.9	-2.1
T35A	Sooner Cattle	23.30	347	P	P	23 42 38.0	-0.4
T35A				IAmb	IAmb	23 42 46.9	
	comp=Z,8.2nm,1.1s						
CCM	Cathedral Cave	23.79	358	P	P	23 42 43.2	+0.3
S51A	Beattyville	24.13	13	P	P	23 42 46.6	+0.6
S51A				IAmb	IAmb	23 42 59.9	
	comp=Z,5.6nm,0.9s						
WCI	Wyandotte Cave	24.23	8	P	P	23 42 47.5	+0.7
R49A	Shelbyville	24.46	10	P	P	23 42 49.2	+0.3
OLIL	Olney	24.54	4	P	P	23 42 50.8	+1.1
R50A	Paris	24.60	11	P	P	23 42 50.1	-0.1
R50A				IAmb	IAmb	23 42 50.9	
	comp=Z,8.0nm,0.6s						
RTBA	Rita Blanca	24.77	336	P	P	23 42 52.1	+0.1
RTBA				IAmb	IAmb	23 42 54.4	
	comp=Z,9.9nm,1.1s						
T57A	Hurt	24.80	22	P	P	23 42 52.5	+0.4
T57A				IAmb	IAmb	23 42 57.9	
	comp=Z,8.1nm,1.1s						
S54A	Dingess, Beckl	24.87	17	P	P	23 42 52.2	-0.5
S54A				IAmb	IAmb	23 43 02.3	
	comp=Z,12nm,1.1s						
PDAR	Pinedale Array	32.94	334	P	P	23 44 05.1	+0.7
	comp=Z,0.1nm,0.5s,baz=142,slow=9.6,SNR=2.3						
	comp=Z,0.1nm,0.5s						
AGMN	Agassiz Nation	34.32	354	P	P	23 44 15.5	-0.6
G62A	West of Eustis	35.21	25	P	P	23 44 23.3	-0.5
G62A				IAmb	IAmb	23 44 26.6	
	comp=Z,4.3nm,1.1s						
EPLO	Experimental L	35.50	356	P	P	23 44 24.9	-1.3
EPLO				IAmb	IAmb	23 44 45.5	
	comp=Z,4.6nm,1.1s						
ULM	Lac du Bonnet	36.25	354	P	P	23 44 31.4	-1.1
	comp=Z,3.6nm,0.4s,baz=172,slow=10,SNR=5.2						
	comp=Z,3.6nm,0.4s						
FFC	Flin Flon	41.46	350	P	P	23 45 15.7	-0.1
EDM	Edmonton	42.99	340	P	P	23 45 28.6	+0.2
EDM				IAmb	IAmb	23 45 29.3	
	comp=Z,6.5nm,0.7s						
SCHQ	Schefferville	44.52	19	P	P	23 45 39.7	-0.8
	comp=Z,6.7nm,0.4s,baz=216,slow=6.2,SNR=18						
	comp=Z,6.7nm,0.4s						
YKA	Yellowknife Ar	51.23	346	P	P	23 46 31.3	-0.6
	comp=Z,0.4nm,0.6s,baz=181,slow=2.9,SNR=5.9						
	comp=Z,0.4nm,0.6s						
ITAB	Concordia	55.43	138	P	P	23 47 01.7	-1.4
ITAB				IAmb	IAmb	23 47 25.1	
	comp=Z,5.7nm,1.0s						
M29M	Somme Creek	58.88	336	P	P	23 47 26.7	-0.3
RES	Resolute Bay	60.55	359	P	P	23 47 35.8	-2.3
RES				IAmb	IAmb	23 47 37.5	
	comp=Z,3.1nm,0.8s						
F30M	Barrier River	60.94	342	P	P	23 47 39.3	-1.6
F28M	Old Crow	62.21	341	P	P	23 47 48.5	-0.9
J25K	Salcha River,	62.64	337	P	P	23 47 52.1	-0.2
BMAR	Burnt Mountain	63.67	340	P	P	23 47 58.4	-0.7

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*IDC **01** 23:44:18.9±3.4, 4°.61S×130°.63E, h52^{km}±31^{km}, mb4.0/14, mbtmp4.3/16, ML4.8/3, MS3.4/14, Error ellipse: s-maj=26.9km s-min=12.4km az=75.0*

*NEIC **01** 23:44:20.8±1.6, 4°.54S±0°.06×130°.69E±0°.07, h62^{km}±6^{km}, mb4.7/46, Error ellipse: s-maj=10.7km s-min=8.6km az=98.0*

*DJA **01** 23:44:21.1±0.2, 4°S±2°×13°1E±°, h86^{km}±3^{km}, M4.9/62, mB5.4/20, mb4.9/62, MLv5.3/18, Mw4.5/85, Mw(mB)4.8/20, MwMwp4.8/1, Mwp5.1/1*

ISC 01 23:44:18.9±0.3, **4°.61S**±0°.04×**130°.67E**±0°.04, **h50**^{km}, **n209**, σ1^{s}.**87**/206, **mb4.5**/43, **MS3.4**/10, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	0.77	277	P	Pn	23 44 36.3	+2.7
BNDI	Bandanaira	0.77	277	S	Sn	23 44 47.6	+3.4
BNDI	Bandanaira	0.77	277	Pg	Pn	23 44 36.2	+2.7
BNDI				Sg	Sn	23 44 46.3	+2.1
MSAI	Masohi	2.15	306	P	Pn	23 44 53.2	+0.9
FAKI	Fak Fak	2.30	43		Pn	23 44 55.0	+0.5
FAKI				Sn	Sn	23 45 22.0	+0.3
FAKI	Fak Fak	2.30	43	P	Pn	23 44 56.8	+2.3
FAKI	Fak Fak	2.30	43	P	Pn	23 44 56.7	+2.3
KRAI	Karang Ratu	2.61	299	P	Pn	23 45 00.6	+2.0
AAI	Ambon	2.63	290	P	Pn	23 45 00.5	+1.5
KMPI	Kaimana, Papua	3.17	73	P	Pn	23 45 09.3	+3.0
SAUI	Saumlaki	3.41	169		Pn	23 45 12.4	+2.8
SAUI	Saumlaki	3.41	169	P	Pn	23 45 13.6	+4.0
SAUI	Saumlaki	3.41	169	S	Sn	23 45 52.0	+3.2
SAUI	Saumlaki	3.41	169	P	Pn	23 45 13.3	+3.7
SWI	Sorong	3.77	9	P	Pn	23 45 14.8	+0.2
NLAI	Namlea	3.81	291	P	Pn	23 45 17.1	+1.9
RKPI	Ransiki, Papua	4.66	49	P	Pn	23 45 28.5	+1.6
MWPI	Manokwari, Pap	4.97	43	P	Pn	23 45 31.7	+0.6
SANI	Sanana	5.32	298	P	Pn	23 45 35.8	-0.1
SANI	Sanana	5.32	298	P	Pn	23 45 35.3	-0.6
	4µm122nm,0.7s						
SRPI	Serui, Papua	6.19	64	P	Pn	23 45 48.6	+0.8
TNTI	Ternate	6.28	328	Pn	Pn	23 45 49.2	+0.1
TNTI	Ternate	6.28	328	P	Pn	23 45 49.5	+0.4
	82nm,0.4s						
BAKI	Biak	6.41	58	P	Pn	23 45 53.1	+2.4
DRS	Darwin Rock St	7.77	178	P	Pn	23 46 10.9	+1.4
SOEI	Soe	8.15	231		Pn	23 46 16.1	+1.2
SOEI	Soe	8.15	231	P	Pn	23 46 19.4	+4.6
MTN	Manton Dam	8.19	177	P	Pn	23 46 15.9	+0.6
	comp=Z,206nm,0.6s						
MTN	Manton Dam	8.19	177		Pn	23 46 16.1	+0.8
KDU	Kakadu	8.22	168	P	Pn	23 46 15.3	-0.3
	comp=Z,60nm,0.5s						
KDU				P		23 46 15.6	
MNI	Manado	8.37	316	P	Pn	23 46 17.8	0.0
	comp=Z,182nm,0.7s						
SMPI	Sarmi	8.44	72	P	Pn	23 46 20.3	+1.7
	comp=Z,63nm,0.7s						
LUWI	Luwuk	8.65	294		Pn	23 46 23.9	+2.4
LUWI	Luwuk	8.65	294	P	Pn	23 46 22.8	+1.3
	comp=Z,4µmcomp=Z,93nm,0.8s						
BATI	Baumata	8.90	231	P	Pn	23 46 29.6	+4.7
	comp=Z,248nm,0.7s,baz=112,slow=1.2,SNR=36						
BATI				S	Sn	23 48 02.9	-1.0
	comp=Z,21nm,0.3s,baz=131,slow=20,SNR=0.9						
BATI	Baumata	8.90	231	P	Pn	23 46 27.4	+2.5
KKSI	Kolaka, Sulawe	9.00	272	P	Pn	23 46 30.5	+4.1
	comp=Z,2µmcomp=Z,40nm,0.6s						
MMRI	Maumere	9.28	244		Pn	23 46 33.6	+3.5
MMRI	Maumere	9.28	244	P	Pn	23 46 34.5	+4.3
	comp=Z,194nm,1.2s						
GENI	Genyem	9.69	78	P	Pn	23 46 37.3	+1.5
	comp=Z,88nm,0.7s						
APSI	Ampana	9.73	292	P	Pn	23 46 38.4	+2.1
	comp=Z,64nm,1.0s						
EDFI	Ende, Flores	9.82	245	P	Pn	23 46 42.3	+4.6
	comp=Z,1µmcomp=Z,106nm,1.1s						
MRSI	Marisa	10.08	300	P	Pn	23 46 41.9	+0.8
	comp=Z,51nm,0.5s						
JAY	Jayapura	10.23	79	P	Pn	23 46 44.5	+1.2
	comp=Z,2.7nm,0.3s,baz=220,slow=9.9,SNR=6.1						
	comp=Z,18nm,0.6s						
JAY	Jayapura	10.23	79	P	Pn	23 46 44.8	+1.6
	comp=Z,25nm,0.7s						
BSSI	Bau Bau, Buton	10.25	261	P	Pn	23 46 47.7	+4.3
BKSI	Bulukumba	10.53	266	P	Pn	23 46 51.0	+3.7
	comp=Z,1µmcomp=Z,99nm,1.0s						
BNSI	Bone	10.53	271	P	Pn	23 46 50.8	+3.5
	comp=Z,1µmcomp=Z,68nm,0.8s						
TABU	Tabubil	10.53	94	P	Pn	23 46 49.2	+1.8
KAPI	Kappang	10.89	267	P	Pn	23 46 56.3	+4.1
	comp=Z,47nm,0.5s,baz=96,slow=7.4,SNR=32						
KAPI				LR	LR	23 50 56.3	
	comp=Z,137nm,20.6s,baz=80,slow=37						
KAPI	Kappang	10.89	267		Pn	23 46 55.3	+3.1
KAPI	Kappang	10.89	267	P	Pn	23 46 56.2	+4.1
	comp=Z,48nm,0.6s						
SPSI	Sidrap Palu	10.89	273	P	Pn	23 46 55.8	+3.6
TTSI	Tana Toraja	10.94	278	P	Pn	23 46 56.2	+3.3
	comp=Z,41nm,0.7s						
KNRA	Kununurra	11.15	190	P	Pn	23 46 54.5	-1.3
KNRA				P		23 46 54.6	
KNRA	Kununurra	11.15	190		Pn	23 46 54.4	-1.5
LBFI	Labuhan Bajo,	11.38	250	P	Pn	23 47 02.4	+3.5
	comp=Z,47nm,0.8s						
TOLI2	Tolitoli	11.40	300		Pn	23 47 00.5	+1.4
TOLI2	Tolitoli	11.40	300	P	Pn	23 47 00.9	+1.7
WSI	Waingapu	11.45	243	P	Pn	23 47 03.0	+3.1
	comp=Z,156nm,1.1s						
PMSI	Majene	11.78	275	P	Pn	23 47 06.9	+2.5
	comp=Z,53nm,1.5s						
MPSI	Mapaga	11.83	294	P	Pn	23 47 08.0	+2.9
	comp=Z,18nm,0.8s						
MMSI	Mamuju	11.89	279	P	Pn	23 47 07.8	+1.9
	comp=Z,20nm,0.6s						
WBSI	Waikabubak, Su	12.25	245	P	Pn	23 47 12.0	+1.1
	comp=Z,56nm,0.7s						
DAV	Davao City (W)	12.67	336	LR	LR	23 52 39.1	
	comp=Z,365nm,19.6s,baz=144,slow=40						
DBNI	Kabupaten Domp	12.87	252	P	Pn	23 47 21.4	+2.1
	comp=Z,27nm,0.4s						
PLAI	Plampang	13.47	251	P	Pn	23 47 28.9	+1.4
PLAI	Plampang	13.47	251	P	Pn	23 47 29.2	+1.7
	comp=Z,58nm,0.7s						
FITZ	Fitzroy Crossi	14.28	200	P	Pn	23 47 37.8	-0.6
	comp=Z,4.1nm,0.6s						
FITZ				P	P	23 47 37.9	-6.4
FITZ				P	P	23 47 38.0	-6.3
FITZ				P	P	23 47 41.3	-3.0
FITZ	Fitzroy Crossi	14.28	200	P	Pn	23 47 36.3	-2.1
	comp=Z,1.7nm,0.3s,baz=31,slow=13,SNR=24						
FITZ				S	Sn	23 50 04.6	-11
	comp=Z,15nm,0.7s,baz=58,slow=19,SNR=1.7						
	comp=Z,5.1nm,0.4s						
FITZ	Fitzroy Crossi	14.28	200	Pn	Pn	23 47 39.2	+0.8
FITZ	Fitzroy Crossi	14.28	200	P	Pn	23 47 38.8	+0.4
TWSI	Taliwang, Sumb	14.29	253	P	Pn	23 47 38.8	+0.2
	comp=Z,36nm,0.7s						
KLNI	Mataram	14.97	255	P	Pn	23 47 47.0	-0.5
KHKI	Kahang-Kahang	15.42	255	P	Pn	23 47 53.4	0.0
	comp=Z,65nm,0.8s						
COEN	Coen	15.43	128	P	Pn	23 47 52.1	-1.4
	comp=Z,61nm,0.5s						
COEN	Coen	15.43	128		Pn	23 47 52.4	-1.2
COEN				IAmb	IAmb	23 47 59.5	
	comp=Z,40nm,0.5s						
COEN	Coen	15.43	128	P	Pn	23 47 52.6	-0.9
WB0	Warramunga Arr	15.49	167		Pn	23 47 52.5	-1.8
MYLDM	Lahad Datu	15.57	309	P	Pn	23 47 56.2	+1.0
MYLDM				IAmb	IAmb	23 48 07.8	
	comp=Z,34nm,0.9s						
MYLDM	Lahad Datu	15.57	309	P	Pn	23 47 56.6	+1.4
	comp=Z,47nm,1.1s						
WRA	Warramunga Arr	15.65	167	P	Pn	23 47 51.3	-5.0
	comp=Z,8.4nm,0.4s,baz=336,slow=14,SNR=40						
WRA				S	Sn	23 50 34.4	-14
	comp=Z,10.0nm,0.7s,baz=14,slow=17,SNR=4.7						
SRBI	Singaraja	15.74	257	P	Pn	23 47 58.1	+0.6
	comp=Z,78nm,0.8s						
IGBI	Denpasar	15.97	254	P	Pn	23 47 58.6	-1.8
	comp=Z,3µmcomp=Z,98nm,0.6s						
RTBI	Rangdo, Negare	16.09	255	P	Pn	23 48 01.9	0.0
	comp=Z,81nm,0.9s						
ABJI	Asem Bagus	16.64	258	P	Pn	23 48 08.5	-0.4
	comp=Z,108nm,1.0s						
KMMI	Kalianget	16.79	261	P	Pn	23 48 13.1	+2.3
	comp=Z,2µmcomp=Z,47nm,1.3s						
JAGI	Jajag, Banyuwa	16.85	256	IAmb	IAmb	23 48 18.2	
	comp=Z,65nm,1.1s						
JAGI	Jajag, Banyuwa	16.85	256	P	Pn	23 48 11.3	-0.2
JAGI	Jajag, Banyuwa	16.85	256	P	Pn	23 48 11.3	-0.2
	comp=Z,51nm,0.8s						
PMG	Port Moresby	17.04	107	P	P	23 48 17.8	+2.7
	comp=Z,9.3nm,0.4s,baz=292,slow=11,SNR=6.9						
PMG				S	Sn	23 51 14.7	-7.8
	comp=Z,9.8nm,0.4s,baz=26,slow=24,SNR=7.2						
PMG				LR	LR	23 56 47.5	
	comp=Z,100nm,20.2s,baz=327,slow=44						
BLJI	Banyuglugur	17.26	259	P	Pn	23 48 16.2	-0.3
	comp=Z,95nm,0.9s						
GMJI	Gumukmas	17.50	257	P	Pn	23 48 18.4	-1.1
	comp=Z,39nm,0.8s						
KKM	Kota Kinabalu	17.90	306	P	Pn	23 48 25.6	+1.0
KKM				IAmb	IAmb	23 48 34.8	
	comp=Z,56nm,1.2s						
KKM	Kota Kinabalu	17.90	306	P	Pn	23 48 25.5	+1.0
KKM	Kota Kinabalu	17.90	306	P	Pn	23 48 24.0	-0.5
	comp=Z,37nm,1.0s						
QIS	Mount Isa	18.08	152	P	P	23 48 24.8	-1.6
	comp=Z,198nm,0.6s						
QIS				P	Pn	23 48 25.1	-1.4
QIS	Mount Isa	18.08	152	P	P	23 48 25.7	-0.8
QIS				P	Pn	23 48 25.9	-0.7
QIS	Mount Isa	18.08	152	P	P	23 48 25.6	-0.9
TBJI	Tambak Boyo	18.86	262	P	P	23 48 34.5	-0.6
	comp=Z,132nm,0.8s						
MTSU	Mount Surprise	18.94	136	P	P	23 48 35.2	-0.8
	comp=Z,30nm,0.4s						
MTSU				P	Pn	23 48 38.1	+1.1
MTSU				P	P	23 48 38.4	+2.4
SNJI	Sawahan-Nganju	19.06	260	P	P	23 48 36.7	-0.8
	comp=Z,41nm,0.7s						
AS31	Alice Springs	19.20	171		P	23 48 40.1	+1.3
ASAR	Alice Springs	19.20	171	P	P	23 48 38.9	+0.1
	comp=Z,15nm,0.3s,baz=350,slow=11,SNR=421						
ASAR				S	S	23 52 07.0	-6.9
	comp=Z,6.4nm,0.8s,baz=340,slow=18,SNR=4.8						
ASAR				LR	LR	23 56 30.1	
	comp=Z,112nm,18.8s,baz=46,slow=38						
ASAR	Alice Springs	19.20	171		P	23 48 39.6	+0.8
MBWA	Marble Bar	19.58	212	P	P	23 48 42.4	-0.6
MBWA				IAmb	IAmb	23 48 42.8	
	comp=Z,31nm,1.1s						
MBWA	Marble Bar	19.58	212	P	P	23 48 42.6	-0.3
PCJI	Pacitan	19.69	259	P	P	23 48 41.4	-2.8
	comp=Z,89nm,1.0s						
SBUM	Sibu	19.73	290		P	23 48 45.2	+0.6
SBUM				IAmb	IAmb	23 48 46.2	
	comp=Z,35nm,0.8s						
SBUM	Sibu	19.73	290	P	P	23 48 45.4	+0.8
SBUM	Sibu	19.73	290	P	P	23 48 45.1	+0.5
	comp=Z,59nm,1.0s						
PSAC2	Pilbara Seismi	19.83	211	P	P	23 48 44.6	-1.0
	comp=Z,33nm,0.8s						
PSAC2				P	Pn	23 48 45.4	-2.2
PSAC1	Pilbara Seismi	19.85	211	P	P	23 48 45.5	-0.3
	comp=Z,34nm,0.9s						
PSA00	Pilbara Seismi	19.86	211	P	P	23 48 45.1	-0.9
	comp=Z,39nm,0.8s						
PSA00				P	Pn	23 48 45.7	-2.2
PSA00				P	Pn	23 48 45.9	-2.0
PSA00	Pilbara Seismi	19.86	211	IAmb	IAmb	23 48 46.1	
	comp=Z,27nm,0.6s						
PSA00	Pilbara Seismi	19.86	211	IAmb	IAmb	23 48 46.1	
	comp=Z,13nm,1.0s						
PSA00	Pilbara Seismi	19.86	211	P	P	23 48 45.2	-0.9
PSAB3	Pilbara Seismi	19.88	211	P	P	23 48 45.9	-0.3
	comp=Z,42nm,0.8s						
UGM	Wanagama	20.29	260	P	P	23 48 51.9	+1.1
UGM				IAmb	IAmb	23 48 54.9	
	comp=Z,66nm,1.2s						
UGM	Wanagama	20.29	260	P	P	23 48 51.6	+0.8
UGM	Wanagama	20.29	260	P	P	23 48 51.1	+0.3
	comp=Z,55nm,1.5s						
WRKA	Warakurna	20.44	186	P	P	23 48 52.0	-0.3
	comp=Z,28nm,0.7s						
WRKA				P	Pn	23 48 52.1	-2.7
TGY	Tagaytay City	20.95	333	LR	LR	23 58 33.6	
	comp=Z,464nm,20.7s,baz=3.5,slow=41						
CTA	Charters Tower	21.61	137	P	P	23 49 06.8	+2.0
	comp=Z,1.0nm,0.9s						
CTA	Charters Tower	21.61	137	P	P	23 49 07.0	+2.1
CTAO	Charters Tower	21.61	137		P	23 49 06.6	+1.7
CTAO				IAmb	IAmb	23 49 12.5	
	comp=Z,28nm,0.8s						
CTAO	Charters Tower	21.61	137	P	P	23 49 07.2	+2.3
KPJI	Karang Pucung	21.79	262	P	P	23 49 05.4	-1.4
	comp=Z,28nm,0.7s						

MISM	Misima Island	22.78	107	P	P	23 49 19.3	+1.9
GIRL	Giralia	23.96	220	P	P	23 49 28.4	-0.3
GIRL				IAmb	IAmb	23 49 30.9	
	comp=Z,33nm,1.1s						
MEEK	Meekatharra	24.75	207	P	P	23 49 34.6	-1.4
INKA	Innaminka	24.92	158		P	23 49 38.4	+0.9
INKA				IAmb	IAmb	23 49 41.1	
	comp=Z,22nm,0.8s						
QLP	Quilpie	25.41	151	P	P	23 49 43.0	+1.1
	comp=Z,62nm,0.6s						
QLP	Quilpie	25.41	151	P	P	23 49 44.1	+2.2
FORT	Forrest	26.14	185	P	P	23 49 48.4	-0.1
	comp=Z,30nm,0.7s						
FORT	Forrest	26.14	185		P	23 49 48.2	-0.3
FORT				IAmb	IAmb	23 49 49.0	
	comp=Z,19nm,0.7s						
KMBL	Kambalda	27.87	196	P	P	23 50 03.5	-0.5
	comp=Z,20nm,0.8s						
MORW	Morawa	28.00	208	P	P	23 50 04.1	-1.1
MORW				IAmb	IAmb	23 50 20.3	
	comp=Z,8.5nm,0.8s						
MORW	Morawa	28.00	208	P	P	23 50 04.2	-1.1
BBOO	Buckleboo	28.50	170	P	P	23 50 10.0	+0.3
BBOO				IAmb	IAmb	23 50 14.0	
	comp=Z,18nm,0.8s						
BBOO	Buckleboo	28.50	170	P	P	23 50 09.4	-0.3
STKA	Stephens Creek	29.00	161	P	P	23 50 14.6	+0.5
	comp=Z,97nm,0.9s						
STKA	Stephens Creek	29.00	161	P	P	23 50 13.8	-0.2
	comp=Z,6.0nm,0.3s,baz=336,slow=8.0,SNR=14						
	comp=Z,6.0nm,0.3s						
STKA	Stephens Creek	29.00	161		P	23 50 14.4	+0.3
STKA	Stephens Creek	29.00	161	P	P	23 50 14.2	+0.2
BLDU	Ballidu	29.02	205	P	P	23 50 13.2	-1.1
KLBR	Kellerberrin	29.45	203	P	P	23 50 18.0	-0.1
	comp=Z,56nm,0.8s						
KLBR	Kellerberrin	29.45	203	P	P	23 50 17.7	-0.4
HTT	Hallett	29.69	166	P	P	23 50 20.5	+0.3
CMSA	Cobar Meteorol	30.27	154	P	P	23 50 26.0	+0.6
CMSA	Cobar Meteorol	30.27	154	P	P	23 50 26.2	+0.8
MUN	Mundaring	30.42	205	P	P	23 50 26.4	-0.2
NWAO	Narrogin (SRO)	30.84	202	P	P	23 50 29.8	-0.5
NWAO				IAmb	IAmb	23 50 30.5	
	comp=Z,13nm,0.8s						
NWAO	Narrogin (SRO)	30.84	202	P	P	23 50 29.9	-0.5
IPM	Ipoh	30.96	287	P	P	23 50 29.5	-2.2
	comp=Z,14nm,1.0s						
KULM	Kulim	31.55	288	P	P	23 50 35.2	-1.7
	comp=Z,21nm,2.3s						
ARMA	Armidale	32.40	145	P	P	23 50 45.1	+0.9
ARMA				IAmb	IAmb	23 50 46.5	
	comp=Z,4.9nm,0.7s						
YNG	Young	33.81	153	P	P	23 50 58.0	+1.6
	comp=Z,30nm,1.1s						
CAN	Canberra	34.94	153	P	P	23 51 07.8	+1.6
	comp=Z,23nm,0.9s						
CAN	Canberra	34.94	153		P	23 51 07.6	+1.4
CAN	Canberra	34.94	153	P	P	23 51 07.7	+1.5
TOO	Toolangi	35.49	160	P	P	23 51 12.1	+1.2
TOO				IAmb	IAmb	23 51 13.6	
	comp=Z,8.5nm,0.9s						
JNU	Nakatsue	37.53	0	LR	LR	00 05 48.0	
	comp=Z,58nm,20.4s,baz=150,slow=34						
NJ2	Nanjing	38.16	344	eP	P	23 51 35.2	+1.7
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
JMN	Monobe	38.25	4	P	P	23 51 34.1	-0.2
JMN	Monobe	38.25	4	P	P	23 51 34.9	+0.5
DZM	Mont Dzumac	38.74	120	P	P	23 51 38.8	+0.1
DZM				IAmb	IAmb	23 51 46.3	
	comp=Z,18nm,1.4s						
CMAR	Chiang Mai Arr	38.77	307	P	P	23 51 38.5	-0.4
	comp=Z,1.8nm,0.4s,baz=137,slow=7.5,SNR=12						
	comp=Z,1.8nm,0.4s						
CHTO	Chiang Mai	38.97	308		P	23 51 39.9	-0.7
CHTO				IAmb	IAmb	23 51 48.1	
	comp=Z,5.7nm,0.7s						
MJAR	Matsushiro Arr	41.54	9	P	P	23 52 00.5	-1.1
	comp=Z,1.5nm,0.7s,baz=170,slow=7.4,SNR=2.5						
MJAR				LR	LR	00 07 28.0	
	comp=Z,19nm,21.2s,baz=216,slow=33						
	comp=Z,1.5nm,0.7s						
KSRS	Korea Array	41.93	357	P	P	23 52 04.0	-0.7
	comp=Z,1.3nm,0.5s,baz=180,slow=10.0,SNR=4.5						
	comp=Z,1.3nm,0.5s						
LZDM	Lanzhou Array	47.62	330	P	P	23 52 50.6	+0.1
	comp=Z,0.9nm,0.3s,baz=153,slow=10.0,SNR=4.3						
	comp=Z,0.9nm,0.3s						
HHC	Hu-ho-hao-te	48.51	341	eP	P	23 52 58.2	+1.2
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,5.1s						
USRK	Ussuriysk Ar.	48.60	1	P	P	23 52 57.6	+0.1
	comp=Z,2.7nm,0.6s,baz=163,slow=6.5,SNR=4.7						
	comp=Z,2.7nm,0.6s						
ASAJ	Asahikawa	49.68	11	LR	LR	00 12 56.2	
	comp=Z,17nm,19.6s,baz=179,slow=35						
GTA	Gaotai	52.23	330	eP	P	23 53 25.6	+0.4
GTA				pP	pwP	23 53 49.1	+4.8
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WHZ	Wether Hill Ro	52.33	148	P	P	23 53 26.0	+0.3
LBZ	Lake Benmore	52.62	145	P	P	23 53 28.7	+0.8
THZ	Tophouse	52.76	141	P	P	23 53 30.5	+1.4
EVN	Everest	53.23	310		P	23 53 32.4	-1.0
EVN				IAmb	IAmb	23 53 40.5	
	comp=Z,7.7nm,0.6s						
SONM	Songino Array	56.41	341	P	P	23 53 55.5	+0.1
	comp=Z,0.7nm,0.6s,baz=153,slow=7.8,SNR=4.8						
SONM				LR	LR	00 20 47.9	
	comp=Z,29nm,18.4s,baz=305,slow=39						
	comp=Z,0.7nm,0.6s						
SONM	Songino Array	56.41	341	P	P	23 53 55.7	+0.2
MKAR	Makanchi Array	66.62	326	P	P	23 55 04.1	-0.1
	comp=Z,3.8nm,0.4s,baz=112,slow=7.7,SNR=114						
MKAR				LR	LR	00 26 33.9	
	comp=Z,20nm,18.3s,baz=322,slow=38						
	comp=Z,3.8nm,0.4s						
MKAR	Makanchi Array	66.62	326		P	23 55 04.0	-0.3
KSH	Kashi	66.74	317	P	P	23 55 05.0	-0.3
KSH				pP	pwP	23 55 27.3	+2.4
KSH				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MAKZ	Makanchi	66.80	326		P	23 55 05.3	-0.1
AAK	Ala-Archa	69.17	319	LR	LR	00 29 53.3	
	comp=Z,23nm,18.1s,baz=78,slow=40						
ZAA0	Zalesovo Array	69.76	333	IAmb	IAmb	23 55 28.1	
	comp=Z,2.7nm,0.5s						
ZALV	Zalesovo Beam	69.76	333	P	P	23 55 22.9	-0.7
	comp=Z,2.8nm,0.5s,baz=123,slow=7.1,SNR=10						
	comp=Z,2.8nm,0.5s						
ZALV	Zalesovo Beam	69.76	333	P	P	23 55 23.1	-0.6
KBL	Kabul	69.76	309		P	23 55 23.5	-0.9
GAR	Garm	70.48	314		P	23 55 27.9	-0.7
GAR				IAmb	IAmb	23 55 31.6	
	comp=Z,7.2nm,0.6s						
KURBB	Kurchatov Arra	70.85	328	P	P	23 55 30.1	-0.3
	comp=Z,3.1nm,0.6s,baz=126,slow=5.3,SNR=32						
	comp=Z,3.1nm,0.6s						
KURK	Kurchatov	70.85	328		P	23 55 30.1	-0.4
KURK				IAmb	IAmb	23 55 38.5	
	comp=Z,4.3nm,0.7s						
VNDA	Vanda	74.72	173	P	P	23 55 52.8	-0.2
	comp=Z,1.7nm,0.9s,baz=295,slow=6.8,SNR=4.4						
VNDA				LR	LR	00 29 52.9	
	comp=Z,32nm,18.2s,baz=341,slow=37						
	comp=Z,1.7nm,0.9s						
VNDA	Vanda	74.72	173	IAmb	IAmb	23 55 54.0	
	comp=Z,3.7nm,1.1s						
BVAR	Borovoye Array	76.42	327	P	P	23 56 02.5	-0.6
	comp=Z,1.4nm,0.7s,baz=126,slow=7.5,SNR=6.8						
	comp=Z,1.4nm,0.7s						
BORK	Borovoye	76.47	327		P	23 56 03.2	-0.1
MAW	Mawson	77.40	201	P	P	23 56 08.2	-0.1
	comp=Z,1.8nm,0.5s,baz=77,slow=5.4,SNR=9.5						
	comp=Z,1.8nm,0.5s						
PPT	Papeete	78.87	107	LR	LR	00 28 12.3	
	comp=Z,19nm,20.5s,baz=283,slow=33						
QSPA	South Pole Qui	85.35	180	P	P	23 56 53.1	+2.5
	comp=Z,1.3nm,0.7s,baz=269,slow=0.6,SNR=4.5						
QSPA	South Pole Qui	85.35	180	IAmb	IAmb	23 56 54.6	
	comp=Z,3.9nm,1.1s						
RAYN	Ar Rayn	87.40	294		P	23 57 00.3	-1.2
ILAR	Eielson Array	90.92	25	P	P	23 57 15.6	-1.5
	comp=Z,0.5nm,0.8s,baz=270,slow=5.3,SNR=5.4						
	comp=Z,0.5nm,0.8s						
GURO	Guroymak-BITLI	91.78	308	IAmb	IAmb	23 57 23.2	
	comp=Z,3.6nm,0.9s						
MBAR	Mbarara	99.85	269	LR	LR	00 38 17.6	
	comp=Z,13nm,18.9s,baz=142,slow=32						
TORD	Torodi Ar. Bea	128.96	283	PKP	PKPdf	00 03 21.4	-0.9
	comp=Z,0.6nm,0.6s,baz=40,slow=5.2,SNR=4.7						
CPUP	Villa Florida	148.28	166	PKPbc	PKPdf	00 03 57.7	+0.7
	comp=Z,0.5nm,0.6s,baz=268,slow=2.6,SNR=2.9						
LPAZ	La Paz	152.12	139	PKPbc	PKPbc	00 04 11.5	+0.8
	comp=Z,0.9nm,0.3s,baz=276,slow=5.4,SNR=9.6						
LPAZ				PKPab	pPKPdf	00 04 19.9	+2.5
	comp=Z,2.5nm,0.8s,baz=198,slow=2.8,SNR=8.9						

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*UCR **01** 23:53:01.0±0.7, 11°.44N×85°.74W, h158^{km}±4^{km}, MW3.6*

*CATAC **01** 23:53:02.1±0.4, 11°N±3°×8°6W±°, h148^{km}±3^{km}, M3.1/21, MLv3.1/21, Error ellipse: s-maj=10.0km s-min=4.8km az=50.6, confirmed*

ISC 01 23:53:02.4±1.8, **11°.38N**±0°.07×**85°.80W**±0°.09, **h153**^{km}±10^{km}, **n70**, σ**0^{s}.54**/78, **6C-8D, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARIN	Rivas	0.08	338	S	Sn	23 53 37.1	-1.5
CONN	Concepcion	0.25	44	P	Pn	23 53 22.9	-0.3
CONN				S	Sn	23 53 39.4	+0.3
CARN	Rivas	0.34	125	⇓P	Pn	23 53 23.2	-0.2
CARN				S	Sn	23 53 39.7	+0.3
CARN	Rivas	0.34	125	eP	Pn	23 53 23.2	-0.2
CARN				eS	Sn	23 53 39.4	0.0
LCRUZ	La Cruz	0.34	150	eP	Pn	23 53 22.9	-0.6
NADN	Granada	0.43	329	⇓P	Pn	23 53 23.7	-0.1
NADN				S	Sn	23 53 40.9	+0.8
NADN	Granada	0.43	329	eP	Pn	23 53 23.6	-0.2
NANN	Nandasmo	0.64	331	S	Sn	23 53 43.8	+1.6
NANN	Nandasmo	0.64	331	⇓P	Pn	23 53 25.9	+1.0
SABN	Sabanita	0.67	329	⇓P	Pn	23 53 25.0	-0.1
BUAI	Buenos Aires	0.68	137	eP	Pn	23 53 25.1	-0.1
PEJA	Penjamo Buenos	0.68	135	eP	Pn	23 53 25.0	-0.2
MASN	Masaya	0.69	331	P	Pn	23 53 24.5	-0.7
LAPC	Finca la Perla	0.71	149	eP	Pn	23 53 24.8	-0.6
VORI	VORI	0.72	141	eP	Pn	23 53 25.2	-0.4
VRLE	La Escondida,	0.73	144	eP	Pn	23 53 25.3	-0.3
MAS3	Al N del Volca	0.74	330	P	Pn	23 53 25.4	-0.1
MAS3				S	Sn	23 53 43.8	+0.5
GPS3	Bodega del ICE	0.76	145	eP	Pn	23 53 26.3	+0.6
GPS2	Hotel Rincn d	0.77	144	eP	Pn	23 53 25.4	-0.4
ELI1	Hacienda Flor	0.77	161	P	Pn	23 53 25.7	-0.1
ELI1	Hacienda Flor	0.77	161	S	Sn	23 53 44.2	+0.6
ELI1	Hacienda Flor	0.77	161	eP	Pn	23 53 25.6	-0.1
UNAN	Cigeo UNAN	0.86	328	⇑P	Pn	23 53 26.2	-0.2
UNAN				S	Sn	23 53 45.2	+0.4
WILN	Americas 2	0.86	334	P	Pn	23 53 25.1	-1.3
WILN				S	Sn	23 53 45.1	+0.3
MESS	Mesas	0.87	137	eP	Pn	23 53 26.1	-0.4
VMAR	Armenia, Volca	0.88	130	eP	Pn	23 53 26.1	-0.5
COLC	Colonia	0.92	140	eP	Pn	23 53 26.6	-0.3
CUI	Cuipilapa	0.95	139	eP	Pn	23 53 27.0	-0.2
SAPS	Ciudad Sandino	0.98	323	⇑P	Pn	23 53 27.2	-0.2
BOAB	BOACO BROADBAN	1.07	7	⇑P	Pn	23 53 27.5	-0.6
TIMP	Tierras Morena	1.10	136	eP	Pn	23 53 28.0	-0.5
COPN	Copaltepe	1.11	316	P	Pn	23 53 27.8	-0.6
COPN	Copaltepe	1.11	316	eP	Pn	23 53 27.7	-0.7
INVE	Universidad In	1.16	141	eP	Pn	23 53 28.3	-0.5
QUEB	Quebradon, Cot	1.17	130	eP	Pn	23 53 28.5	-0.5
TILA	Tilaran	1.22	138	eP	Pn	23 53 28.7	-0.8
MOM2	El Cardon	1.25	328	⇑P	Pn	23 53 29.5	-0.2
NICO	Nicoya	1.29	164	eP	Pn	23 53 29.9	-0.2
SAJU	San Juanillo,	1.31	176	eP	Pn	23 53 29.8	-0.5
MOM3	MOM3	1.32	328	⇑P	Pn	23 53 30.2	-0.2
JTS	Las Juntas de	1.37	142	⇓P	Pn	23 53 30.0	-0.8
JTS	Las Juntas de	1.37	142	eP	Pn	23 53 30.1	-0.8
CEDE	Laguna Cedeo	1.40	129	eP	Pn	23 53 31.1	-0.1
CMARA	Lajas Hojancha	1.40	164	⇓P	Pn	23 53 31.1	-0.3
CMARA	Lajas Hojancha	1.40	164	eP	Pn	23 53 31.0	-0.3
ARE1	Arenal 1	1.40	130	eP	Pn	23 53 31.1	-0.1
VARE2	V. Arenal	1.40	130	eP	Pn	23 53 31.2	-0.1
CNGA	Al SSO del Vol	1.41	322	P	Pn	23 53 31.0	-0.3
CNGN	Cerro Negro	1.42	322	S	Sn	23 53 54.1	+0.4
CNGN	Cerro Negro	1.42	322	⇑P	Pn	23 53 31.0	-0.4
CNGN	Cerro Negro	1.42	322	eP	Pn	23 53 31.0	-0.4
VACR	Volcan Arenal	1.43	129	eP	Pn	23 53 31.4	-0.1
NYURE	Nandayure	1.48	158	eP	Pn	23 53 31.7	-0.3
SOCE	Pocosol	1.53	130	⇓P	Pn	23 53 32.2	-0.4
SOCE	Pocosol	1.53	130	eP	Pn	23 53 32.1	-0.4
TEL3	Telica 3	1.56	319	⇓P	Pn	23 53 32.7	-0.1
JCR1	Jicaral	1.67	156	eP	Pn	23 53 33.9	-0.1
PKGN	Cerro Pekin	1.72	318	P	Pn	23 53 33.9	-0.7
VPL2	V. Platanar	1.76	127	eP	Pn	23 53 34.8	-0.3
CBL1	Cabuya	1.91	158	eP	Pn	23 53 36.1	-0.6
VPS8	V Poas	1.94	128	eP	Pn	23 53 38.1	+0.7
RCON	San Juan de Ri	2.12	351	P	Pn	23 53 38.9	-0.4
RCVN	Varillal2	2.22	350	P	Pn	23 53 40.1	-0.4
CSGN	Cosiguina Volc	2.34	313	eP	Pn	23 53 41.7	-0.1
PICV	PH. Pirrs	2.35	138	e	Pn	23 53 41.7	-0.3
PICV				eP	Pn	23 53 41.7	-0.3
BUS1	Rivas	2.72	132	eP	Pn	23 53 46.3	-0.5
SAJE	San Jernim	3.03	132	eP	Pn	23 53 50.0	-0.5
EDPE	Pejibaye, P	3.11	135	eP	Pn	23 53 52.4	+1.0
DRK0	Durika	3.28	130	eP	Pn	23 53 53.3	-0.3
ALCO	Alturas Coton,	3.79	129	eP	Pn	23 54 00.1	-0.2

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*IDC **01** 23:57:56.1±3.2, 6°.32S×155°.20E, h200^{km}±31^{km}, mb3.5/11, mbtmp4.2/14, MS3.2/1, Error ellipse: s-maj=18.4km s-min=16.2km az=56.0*

ISC 01 23:57:51.3±0.6, **6°.11S**±0°.09×**155°.32E**±0°.08, **h150**^{km}, **n53**, σ**1^{s}.13**/53, **mb3.8**/12, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TATA	Tatamba Isabel	4.99	117	P	Pn	23 59 04.8	+0.2
SAVO	Savo Central	5.38	124	P	Pn	23 59 09.3	-0.5
NGOA	Tingoa Renbel	7.15	139	P	Pn	23 59 33.8	+0.4
PMG	Port Moresby	8.73	247	P	Pn	23 59 56.1	+1.6
	21nm,0.8s,baz=90,slow=5.4,SNR=6.2						
COEN	Coen	14.27	236	P	P	00 01 09.5	-0.1
JAY	Jayapura	15.01	283	P	Pn	00 01 17.1	+1.1
	24nm,0.5s,baz=147,slow=10,SNR=8.1						
JAY				LR	LR	00 06 54.9	
	comp=Z,100nm,19.7s,baz=68,slow=36						
DZM	Mont Dzumac	19.16	147	P	P	00 02 03.8	+0.4
	13nm,0.4s,baz=266,slow=9.0,SNR=54						
DZM	Mont Dzumac	19.16	147	P	P	00 02 04.0	+0.6
YATNC	Mamie plateau,	19.40	146	P	P	00 02 06.0	+0.1
EIDS	Eidsvold	19.57	192	P	P	00 02 09.8	+2.1
QIS	Mount Isa	20.95	225	P	P	00 02 24.0	+1.5
QLP	Quilpie	22.94	206	P	P	00 02 42.3	-0.3
ARMA	Armidale	24.43	188	P	P	00 02 56.1	-0.1
WRAB	Tennant Creek	24.58	234	P	P	00 02 56.6	-1.0
WRA	Warramunga Arr	24.59	234	P	P	00 02 56.9	-0.9
	1.4nm,0.3s,baz=57,slow=9.8,SNR=25						
	1.4nm,0.3s						
CMSA	Cobar Meteorol	26.85	198	P	P	00 03 19.4	+1.4
ASAR	Alice Springs	27.00	228	P	P	00 03 17.6	-1.9
	0.3nm,0.3s,baz=55,slow=9.5,SNR=4.8						
	0.3nm,0.3s						
STKA	Stephens Creek	28.67	205	P	P	00 03 31.7	-2.4
	2.9nm,0.7s,baz=0.0,slow=11,SNR=2.0						
	2.9nm,0.7s						
BBOO	Buckleboo	32.05	212	P	P	00 04 05.2	+1.3
OUZ	Omahuta	33.50	152	P	P	00 04 16.9	+0.5
HIZ	Hauiti	36.79	154	P	P	00 04 45.8	+1.2
HAZ	Te Kaha	37.54	150	P	P	00 04 50.6	-0.3
WTVZ	West Tongariro	37.61	154	P	P	00 04 54.6	+2.9
URZ	Urewera	37.61	151	P	P	00 04 51.4	-0.1
URZ	Urewera	37.61	151	P	P	00 04 52.5	+0.9
MTHZ	Maungataniwha	37.96	152	P	P	00 04 55.2	+0.7
BKZ	Black Stump Fm	38.05	153	P	P	00 04 55.1	-0.2
BKZ	Black Stump Fm	38.05	153	P	P	00 04 55.2	-0.2
CNGZ	Carnagh Statio	38.32	151	P	P	00 04 57.4	0.0
ARHZ	Aropaoanui	38.36	152	P	P	00 04 58.1	+0.3
MCHZ	McNeill Hill	38.37	153	P	P	00 04 58.5	+0.6
KRHZ	Kereru	38.39	153	P	P	00 04 58.0	-0.1
NNZ	Nelson	38.49	158	P	P	00 05 01.3	+2.4
TSZ	Takapari Road	38.55	154	P	P	00 04 59.3	-0.1
DVHZ	Dannevirke	38.84	154	P	P	00 05 02.0	+0.2
MRZ	Mangatainoka R	38.89	155	P	P	00 05 01.3	-0.9
PXZ	Pawanui	38.92	153	P	P	00 05 02.0	-0.5
BFZ	Birch Farm	39.19	155	P	P	00 05 04.0	-0.7
BFZ	Birch Farm	39.19	155	P	P	00 05 04.1	-0.6
LTZ	Lake Taylor	39.48	160	P	P	00 05 07.0	-0.1
KHZ	Kahutara	39.59	159	P	P	00 05 07.3	-0.7
KHZ	Kahutara	39.59	159	P	P	00 05 07.0	-1.0
GVZ	Greta Valley S	39.90	160	P	P	00 05 10.2	-0.4
RPZ	Rata Peaks	39.92	162	P	P	00 05 10.5	-0.2
SONM	Songino Array	68.78	327	P	P	00 08 39.8	+0.5
	0.4nm,0.5s,baz=127,slow=3.8,SNR=2.8						
	0.4nm,0.5s						
VNDA	Vanda	71.45	179	P	P	00 08 52.1	-2.8
	1.2nm,0.7s,baz=318,slow=5.1,SNR=5.9						
	1.2nm,0.7s						
ILAR	Eielson Array	82.44	21	P	P	00 09 56.6	+0.1
	0.9nm,0.7s,baz=233,slow=5.9,SNR=17						
	0.9nm,0.7s						
MKAR	Makanchi Array	82.96	319	P	P	00 09 58.8	-0.9
	1.1nm,0.9s,baz=116,slow=4.2,SNR=5.0						
	1.1nm,0.9s						
ZALV	Zalesovo Beam	83.64	326	P	P	00 10 01.5	-1.4
	0.2nm,0.3s,baz=94,slow=6.4,SNR=1.9						
	0.2nm,0.3s						
QSPA	South Pole Qui	83.86	180	P	P	00 10 05.6	+1.7
	3.3nm,0.5s,baz=351,slow=1.6,SNR=11						
MAW	Mawson	85.33	203	P	P	00 10 09.8	-1.3
	3.7nm,0.8s,baz=99,slow=8.2,SNR=11						
	3.7nm,0.8s						
NVAR	Mina Array Bea	90.92	52	P	P	00 10 39.4	+0.7
	0.5nm,0.5s,baz=299,slow=4.7,SNR=2.3						
	0.5nm,0.5s						
YKA	Yellowknife Ar	95.41	28	P	P	00 10 59.2	+0.8
	1.0nm,0.8s,baz=270,slow=4.8,SNR=7.1						
	1.0nm,0.8s						

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*IDC **02** 00:04:53.3±1.2, 4°.15N×127°.93E, h0^{km}, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=89.3km s-min=19.8km az=71.0*

ISC 02 00:04:58.2±1.2, **4°.2N**±0°.2×**128°.2E**±0°.6, **h35**^{km}, **n7**, σ**0^{s}.75**/7, **mb3.8**/7, **North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.75	166	P	P	00 10 16.9	+0.3
	1.2nm,0.5s,baz=344,slow=9.0,SNR=8.6						
	1.2nm,0.5s						
ASAR	Alice Springs	28.26	169	P	P	00 10 48.1	-0.2
	0.2nm,0.4s,baz=348,slow=8.9,SNR=2.1						
	0.2nm,0.4s						
KSRS	Korea Array	33.09	360	P	P	00 11 30.8	+0.1
	0.5nm,0.3s,baz=177,slow=8.7,SNR=1.2						
	0.5nm,0.3s						
MKAR	Makanchi Array	58.02	324	P	P	00 14 46.8	-0.8
	0.7nm,0.4s,baz=124,slow=6.9,SNR=19						
	0.7nm,0.4s						
ZALV	Zalesovo Beam	60.84	332	P	P	00 15 06.3	-0.7
	0.4nm,0.4s,baz=130,slow=7.3,SNR=2.5						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	62.15	327	P	P	00 15 16.1	+0.2
	1.2nm,0.5s,baz=128,slow=6.0,SNR=17						
	1.2nm,0.5s						
BVAR	Borovoye Array	67.73	326	P	P	00 15 53.1	+0.9
	0.3nm,0.4s,baz=117,slow=5.5,SNR=2.6						
	0.3nm,0.4s						

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*HEL **02** 00:15:46.6±0.2, 67°.85N×20°.05E, h0^{km}, ML1.5, Suspected explosion*

*UPP **02** 00:15:47.1±0.1, 67°.84N×20°.19E, h0^{km}, ML2.3, Suspected explosion*

ISC 02 00:15:46.4±0.8, **67°.81N**±0°.02×**20°.32E**±0°.02, **h0**^{km}, **n30**, σ**0^{s}.95**/52, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATU	Laukkuluspa	0.28	274	P	Pg	00 15 51.6	0.0
	baz=71						
RATU				S	Sg	00 15 54.8	-0.5
RATU	Laukkuluspa	0.28	274	P	Pg	00 15 51.9	+0.2
	baz=82						
RATU				S	Sg	00 15 55.2	-0.1
KOVU	Salmi	0.42	352	P	Pg	00 15 54.6	+0.1
KOVU				S	Sg	00 15 60.0	0.0
KOVU	Salmi	0.42	352	P	Pg	00 15 54.8	+0.3
KOVU				S	Sg	00 16 00.4	+0.5
NIKU	Nikkaluokta	0.49	278	P	Pg	00 15 55.5	-0.2
NIKU				S	Sg	00 16 01.5	-0.7
NIKU	Nikkaluokta	0.49	278	P	Pg	00 15 55.8	0.0
NIKU				S	Sg	00 16 02.0	-0.1
LANU	Lannavaara	0.68	68	P	Pb	00 16 00.6	-0.5
LANU	Lannavaara	0.68	68	P	Pb	00 16 00.6	-0.5
LANU				S	Sb	00 16 10.3	-0.7
LANU	Lannavaara	0.68	68	PG	Pb	00 16 00.6	-0.5
LANU				SB	Sb	00 16 10.0	-1.0
DUNU	Dundret	0.69	172	P	Pb	00 16 00.8	-0.5
DUNU				S	Sb	00 16 10.8	-0.6
MASU	Masugnsbyn	0.73	118	P	Pb	00 16 02.0	0.0
SALU	Saltoluokta	0.82	239	P	Pg	00 16 02.2	+0.2
SALU				S	Sg	00 16 12.8	+0.3
KIF	Kilpisjarvi	1.22	8	eP	Pn	00 16 10.4	-0.2
KIF	Kilpisjarvi	1.22	8	PN	Pn	00 16 10.6	0.0
KIF				MSG		00 16 23.7	
	comp=Z,7.2nm,0.2s						
KIF				SN	Sg	00 16 25.9	+0.4
HEF	Hetta	1.39	63	eP	Pb	00 16 13.3	+0.1
HEF	Hetta	1.39	63	PG	Pb	00 16 13.3	+0.1
HEF				MSG		00 16 30.4	
	comp=Z,4.7nm,0.2s						
HEF				SG	Sn	00 16 31.8	-0.3
ERTU	Ertsjaerv	1.45	149	P	Pb	00 16 14.8	+0.6
ERTU	Ertsjaerv	1.45	149	PG	Pb	00 16 14.6	+0.3
ERTU				SN	Sn	00 16 35.3	+1.7
KLF	Kolari	1.51	111	PG	Pg	00 16 15.8	+0.4
	baz=298						
KLF				MSG		00 16 35.3	
	comp=Z,1.5nm,0.2s						
KLF				SN	Sn	00 16 38.2	+3.1
KTK1	Kautokeino	1.62	40	PG	Pb	00 16 16.8	-0.3
KTK1				SN	Sg	00 16 38.4	0.0
HARU	Harads	1.67	171	P	Pg	00 16 18.4	+0.1
KALU	Kalix	2.29	147	PB	Pb	00 16 27.9	-0.7
KALU				SB	Sg	00 16 59.0	-0.9
TOF	Tornio	2.34	136	PB	Pb	00 16 28.9	-0.5
TOF				MSG		00 16 58.9	
	comp=Z,1.7nm,0.2s						
TOF				SG	Sg	00 17 01.5	0.0
RNF	Rovaniemi	2.52	116	PB	Pb	00 16 31.8	-0.6
	baz=303						
RNF				SB	Sg	00 17 05.8	-1.4
ARA0	ARCESS Array S	2.57	45	PB	Pb	00 16 31.6	-1.7
	baz=236						
ARA0				SB	Sb	00 17 04.5	-0.9
RAJF	Raja-Jooseppi	3.06	74	PB	Pb	00 16 40.2	-1.5
RAJF				SG	Sb	00 17 20.7	+1.1
RANF	Ranua	3.12	122	PG	Pg	00 16 45.3	-0.7
RANF				SG	Sg	00 17 25.2	-1.2
KEV	Kevo	3.12	48	SN	Sn	00 17 17.1	+2.5
MSF	Maaselka	3.93	115	PB	Pb	00 16 54.4	-2.1
MSF				SG	Sg	00 17 54.1	+1.6
KU6	Riekki	4.17	111	SG	Sg	00 18 00.2	0.0

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*IDC **02** 00:29:00.2±0.5, 14°.17N×120°.80E, h200^{km}±4^{km}, mb3.5/15, mbtmp4.0/15, Error ellipse: s-maj=25.6km s-min=13.3km az=58.0*

*NEIC **02** 00:29:01.6±0.8, 14°.3N±0°.1×120°.7E±0°.1, h194^{km}±7^{km}, mb4.0/44, Error ellipse: s-maj=22.9km s-min=11.2km az=211.0*

ISC 02 00:29:00.4±0.7, **14°.2N**±0°.1×**120°.8E**±0°.1, **h200**^{km}, **n71**, σ**1^{s}.27**/72, **mb4.0**/36, **Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.17	133	P	Pn	00 29 27.1	+0.3
	901nm,0.3s,baz=319,slow=11,SNR=17						
TGY				S	Sn	00 29 47.5	+0.3
	691nm,0.5s,baz=273,slow=17,SNR=4.0						
YOJ	Yonaguni jima	10.40	11	Pn	Pn	00 31 23.4	-1.4
JOW	Kunigami	14.36	28	Pn	Pn	00 32 13.3	-1.5
CMAR	Chiang Mai Arr	21.40	284	P	P	00 33 32.2	-0.5
	1.2nm,0.3s,baz=101,slow=9.4,SNR=7.2						
	1.2nm,0.3s						
LZDM	Lanzhou Array	26.54	328	P	P	00 34 20.7	+0.7
	1.0nm,0.3s,baz=154,slow=8.0,SNR=1.6						
	1.0nm,0.3s						

SONM	Songino Array	35.59	343	P	P	00 35 39.4	+0.5
	1.8nm,0.7s,baz=164,slow=10.0,SNR=9.9						
	1.8nm,0.7s						
SONM	Songino Array	35.59	343	P	P	00 35 39.1	+0.2
WRA	Warramunga Arr	36.46	158	P	P	00 35 45.7	-0.8
	0.9nm,0.7s,baz=331,slow=10.0,SNR=5.8						
	0.9nm,0.7s						
ASAR	Alice Springs	39.77	161	P	P	00 36 13.5	-0.5
	0.3nm,0.3s,baz=341,slow=8.3,SNR=2.2						
	0.3nm,0.3s						
MKAR	Makanchi Array	45.68	323	P	P	00 37 01.5	+0.3
	0.5nm,0.3s,baz=114,slow=7.6,SNR=13						
	0.5nm,0.3s						
MAKZ	Makanchi	45.87	323	P	P	00 37 02.7	0.0
ZAA0	Zalesovo Array	48.65	332	P	P	00 37 23.8	-0.2
ZAA0				IAmb	IAmb	00 37 24.0	
	comp=Z,2.7nm,0.3s						
ZALV	Zalesovo Beam	48.65	332	P	P	00 37 23.6	-0.4
	comp=Z,2.8nm,0.4s,baz=124,slow=6.7,SNR=21						
	comp=Z,2.8nm,0.4s						
ZALV	Zalesovo Beam	48.65	332	P	P	00 37 23.9	-0.1
KURK	Kurchatov	49.82	326		P	00 37 33.0	+0.1
KURBB	Kurchatov Arra	49.82	326	P	P	00 37 33.4	+0.4
	comp=Z,3.8nm,0.8s,baz=128,slow=7.4,SNR=38						
	comp=Z,3.8nm,0.8s						
KK31	Karatay Array	51.69	314	P	P	00 37 47.1	+0.1
KKAR	Karatay Array	51.69	314	P	P	00 37 47.3	+0.2
BVAR	Borovoye Array	55.41	326	P	P	00 38 14.0	+0.1
	comp=Z,2.1nm,0.6s,baz=112,slow=8.9,SNR=21						
	comp=Z,2.1nm,0.6s						
NRIK	Noril'sk	58.94	347	P	P	00 38 37.9	-0.3
	comp=Z,2.5nm,0.8s,baz=148,slow=13,SNR=6.3						
	comp=Z,2.5nm,0.8s						
AB31	Akbulak array	60.41	319	P	P	00 38 48.6	-0.1
AB31				IAmb	IAmb	00 38 49.2	
	comp=Z,2.3nm,0.6s						
ABKAR	Akbulak array	60.41	319	P	P	00 38 48.6	-0.1
RAYN	Ar Rayn	71.18	290	P	P	00 39 57.6	-0.4
RAYN				IAmb	IAmb	00 39 58.3	
	comp=Z,1.8nm,0.8s						
F17K	Baldwin Pennin	72.25	24	P	P	00 40 05.4	+2.0
F17K				IAmb	IAmb	00 40 19.1	
	comp=Z,3.2nm,1.1s						
N15K	Kwethluk River	72.36	31	P	P	00 40 06.0	+1.7
C18K	Utukok River	72.48	22	P	P	00 40 06.4	+1.5
C18K				IAmb	IAmb	00 40 25.2	
	comp=Z,4.3nm,1.1s						
E18K	Tukpahlearik C	72.59	23	P	P	00 40 06.8	+1.3
H17K	Granite Mounta	72.68	26	P	P	00 40 07.1	+1.0
H17K				IAmb	IAmb	00 40 09.3	
	comp=Z,3.4nm,1.0s						
M16K	Timber Creek	72.94	30	P	P	00 40 09.2	+1.6
J17K	VABM Dome	72.97	28	P	P	00 40 09.6	+1.8
C19K	Lookout Ridge	73.11	22	P	P	00 40 10.3	+1.8
G18K	Tagagawik	73.26	25	P	P	00 40 11.1	+1.6
G18K				IAmb	IAmb	00 40 11.2	
	comp=Z,2.5nm,1.0s						
K17K	Iditarod	73.30	28	P	P	00 40 11.9	+2.2
K17K				IAmb	IAmb	00 40 16.7	
	comp=Z,4.0nm,1.1s						
D19K	Kuna River	73.60	22	P	P	00 40 13.2	+1.8
E19K	Redstone River	73.89	23	P	P	00 40 14.9	+1.8
E19K				IAmb	IAmb	00 40 15.3	
	comp=Z,4.4nm,1.1s						
B20K	Meade River	74.01	21	P	P	00 40 15.5	+1.8
J18K	Innoko River	74.03	28	P	P	00 40 15.6	+1.6
J18K				IAmb	IAmb	00 40 25.3	
	comp=Z,3.0nm,1.1s						
D20K	Etivluk River	74.16	22	P	P	00 40 16.5	+1.8
D20K				IAmb	IAmb	00 40 17.9	
	comp=Z,1.8nm,0.7s						
H19K	Roundabout Mou	74.16	25	P	P	00 40 16.8	+2.1
F20K	Avaraart Lake	74.47	24	P	P	00 40 18.1	+1.7
B21K	Ikpikpuk River	74.89	21	P	P	00 40 20.4	+1.6
J20K	Nowinta River	75.16	27	P	P	00 40 22.5	+2.0
J20K				IAmb	IAmb	00 40 26.4	
	comp=Z,2.9nm,1.1s						
G21K	Allakaket	75.35	24	P	P	00 40 23.5	+1.9
G21K				IAmb	IAmb	00 40 24.1	
	comp=Z,2.2nm,0.7s						
D22K	Ayikyak River	75.59	22	P	P	00 40 24.3	+1.5
D22K				IAmb	IAmb	00 40 27.2	
	comp=Z,2.9nm,1.1s						
H21K	Melozitna Rive	75.67	25	P	P	00 40 25.2	+1.9
H21K				IAmb	IAmb	00 40 26.2	
	comp=Z,1.8nm,0.7s						
M20K	Styx River	75.73	29	P	P	00 40 25.4	+1.5
M20K				IAmb	IAmb	00 40 26.5	
	comp=Z,2.1nm,0.7s						
PPLA	Purkeypile	76.10	28	P	P	00 40 27.5	+1.5
PPLA				IAmb	IAmb	00 40 41.5	
	comp=Z,4.4nm,1.1s						
H22K	Ishtalitna Cre	76.25	25	P	P	00 40 28.9	+2.3
C23K	Itkillik River	76.27	21	P	P	00 40 28.3	+1.7
D23K	Nanushuk River	76.31	22	P	P	00 40 28.9	+2.0
L22K	Petersville	76.78	28	P	P	00 40 30.7	+0.9
SUA	Susitna One	76.89	30	P	P	00 40 31.0	+0.5
TRF	Thorofare Moun	76.92	27	P	P	00 40 32.2	+1.6
MCK	McKinley	77.49	27	P	P	00 40 34.3	+0.7
H24K	Noodor Dome	77.68	25	P	P	00 40 36.5	+1.8
G24K	Hadweenzic Riv	77.74	24	P	P	00 40 36.7	+1.8
G24K				IAmb	IAmb	00 40 37.5	
	comp=Z,2.9nm,0.8s						
WRH	Wood River Hil	77.77	26	P	P	00 40 35.9	+0.9
D25K	Kavik River	77.81	21	P	P	00 40 36.4	+1.1
D25K				IAmb	IAmb	00 40 37.4	
	comp=Z,2.8nm,0.9s						
CCB	Clear Creek Bu	77.87	26	P	P	00 40 36.1	+0.5
ILAR	Eielson Array	78.24	26	P	P	00 40 37.5	-0.2
	comp=Z,0.2nm,0.5s,baz=309,slow=6.7,SNR=6.3						
	comp=Z,0.2nm,0.5s						
ILAR	Eielson Array	78.24	26	P	P	00 40 37.6	0.0
HDA	Harding Lake	78.27	26	P	P	00 40 38.0	+0.2
HDA				IAmb	IAmb	00 40 38.4	
	comp=Z,2.1nm,0.7s						
ARCES	ARCESS Array B	78.64	339	P	P	00 40 39.7	-0.1
	comp=Z,4.3nm,0.9s,baz=78,slow=5.1,SNR=7.3						
	comp=Z,4.3nm,0.9s						
ARCES	ARCESS Array B	78.64	339	P	P	00 40 39.5	-0.3
ARCES				IAmb	IAmb	00 40 46.9	
	comp=Z,3.7nm,0.9s						
C27K	Jago River	78.69	21	P	P	00 40 41.8	+1.8
PRP	Porcupine Dome	78.69	25	P	P	00 40 41.3	+1.0
PRP				IAmb	IAmb	00 40 43.8	
	comp=Z,2.4nm,1.1s						
BMAR	Burnt Mountain	78.75	23	P	P	00 40 42.1	+1.6
FINES	FINESS Array B	79.89	331	P	P	00 40 46.0	-0.7
	comp=Z,1.4nm,0.6s,baz=85,slow=8.5,SNR=5.3						
	comp=Z,1.4nm,0.6s						
NOA	NORSAR Array B	86.85	333	P	P	00 41 21.9	-0.4
	comp=Z,0.3nm,0.5s,baz=67,slow=4.8,SNR=1.6						
	comp=Z,0.3nm,0.5s						
YKA	Yellowknife Ar	92.26	22	P	P	00 41 47.2	-0.2
	comp=Z,0.3nm,0.7s,baz=308,slow=5.1,SNR=4.2						
	comp=Z,0.3nm,0.7s						
TXAR	Lajitas Array	119.03	44	PKP	PKPdf	00 47 26.8	+0.7
	comp=Z,0.3nm,1.0s,baz=318,slow=3.3,SNR=4.3						

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*IDC **02** 00:35:01.0±1.1, 2°.56N×129°.08E, h0^{km}, mb3.6/8, mbtmp3.7/9, ML4.2/1, MS3.2/1, Error ellipse: s-maj=47.2km s-min=19.5km az=80.0*

*DJA **02** 00:35:11.5±0.4, 2°N±6°×12°8E±°, h35^{km}±6^{km}, M4.1/9, mB5.1/1, mb4.4/4, MLv4.0/9, Mw(mB)4.4/1*

ISC 02 00:35:07.8±1.0**, 2°.4N**±0°.1×**128°.58E**±0°.10**, h35^{km}, n17, σ1^{s}35**/15**, mb3.8**/8**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAMI	Galela, Maluku	0.97	234	P	Pn	00 35 25.7	+0.7
TNTI	Ternate	2.03	217	P	Pn	00 35 37.9	-1.7
SWI	Sorong	4.22	140	P	Pn	00 36 11.2	+1.5
GTOI	Gorontalo	5.84	253	P	Pn	00 36 34.2	+2.3
	0.1nm30nm,0.6s						
FAKI	Fak Fak	6.44	145	P	Pn	00 36 40.8	+0.5
	0.1nm14nm,1.7s						
MRSI	Marisa	6.91	254	P	Pn	00 36 47.9	+1.3
	1µm21nm,0.5s						
SPSI	Sidrap Palu	10.84	234	P	Pn	00 37 39.9	-0.8
KAPI	Kappang	11.49	230	Pn	Pn	00 37 51.2	+1.6
	1.4nm,0.3s,baz=50,slow=16,SNR=2.4						
	4.4nm,0.2s						
WRA	Warramunga Arr	22.92	166	P	P	00 40 06.9	-2.2
	0.3nm,0.3s,baz=344,slow=9.0,SNR=5.3						
	0.3nm,0.3s						
ASAR	Alice Springs	26.43	169	P	P	00 40 41.2	-0.4
	0.2nm,0.4s,baz=352,slow=11,SNR=1.5						
	0.2nm,0.4s						
MJAR	Matsushiro Arr	35.11	14	P	P	00 41 52.6	-5.4
	0.8nm,0.5s,baz=185,slow=9.3,SNR=4.6						
	0.8nm,0.5s						
STKA	Stephens Creek	36.27	161	LR	LR	00 57 16.9	
	comp=Z,32nm,19.2s,baz=198,slow=37						
SONM	Songino Array	49.14	340	P	P	00 43 52.5	+0.2
	0.6nm,0.6s,baz=151,slow=9.2,SNR=2.5						
	0.6nm,0.6s						
MKAR	Makanchi Array	59.69	325	P	P	00 45 08.7	-0.1
	0.5nm,0.4s,baz=113,slow=8.1,SNR=16						
	0.5nm,0.4s						
ZALV	Zalesovo Beam	62.59	333	P	P	00 45 27.5	-0.9
	0.2nm,0.3s,baz=107,slow=5.0,SNR=1.7						
	0.2nm,0.3s						
KURBB	Kurchatov Arra	63.84	327	P	P	00 45 36.1	-0.6
	0.5nm,0.5s,baz=126,slow=5.7,SNR=8.1						
	0.5nm,0.5s						
BVAR	Borovoye Array	69.42	327	P	P	00 46 11.8	-0.5
	0.3nm,0.4s,baz=104,slow=6.5,SNR=3.8						
	0.3nm,0.4s						

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*NEIC **02** 01:12:44.5±1.6, 23°.09N±0°.05×93°.67E±0°.06, h53^{km}±6^{km}, mb4.6/80, Error ellipse: s-maj=7.9km s-min=7.4km az=60.0*

*NDI **02** 01:12:44.4±1.1, 23°.06N×93°.68E, h55^{km}, ML4.5, MW4.4, mb4.6(NEIC)*

*IDC **02** 01:12:45.6±1.4, 23°.11N×93°.68E, h69^{km}±15^{km}, mb4.0/23, mbtmp4.3/25, MS3.4/9, Error ellipse: s-maj=14.4km s-min=9.4km az=26.0*

ISC 02 01:12:44.6±0.6**, 23°.12N**±0°.04×**93°.62E**±0°.04**, h58^{km}**±5^{km}**, n151, σ1^{s}19**/144**, mb4.5**/64**, MS3.4**/8**, 1D, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAIH	SAIHA	0.85	223	*e*P	Pn	01 13 00.4	-0.4
SAIH				*e*S	Sn	01 13 12.1	-0.6
SAIH				IAML		01 13 15.5	
	comp=N,18µm,0.6s						
SAIH				IAML		01 13 17.0	
	comp=E,24µm,0.9s						
MORE	Moreh	1.28	29		Pn	01 13 06.7	+0.4
IMP	Imphal	1.73	10	*e*P	Pn	01 13 13.2	+0.7
IMP				*e*S	Sn	01 13 33.1	-0.5
IMP				IAML		01 13 43.3	
	comp=E,4µm,0.8s						
IMP				IAML		01 13 47.0	
	comp=N,5µm,0.9s						
BRDH	Bariadhala	1.87	257	P	Pn	01 13 15.1	+0.9
	comp=N,518nm,0.5s,baz=65,slow=14,SNR=23						
BRDH				S	Sn	01 13 40.1	+3.2
	comp=N,2µm,0.3s,baz=319,slow=20,SNR=16						
AGT	Agartala	2.31	290	*e*P	Pn	01 13 21.8	+1.6
AGT				*e*S	Sn	01 13 48.1	+0.7
AGT				IAML		01 13 58.3	
	comp=N,4µm,0.5s						
AGT				IAML		01 13 59.4	
	comp=E,3µm,0.3s						
KOHI	KOHIMA	2.63	10	*e*P	Pn	01 13 25.4	+0.6
KOHI				*e*S	Sn	01 13 55.2	-0.4
KOHI				IAML		01 13 56.0	
	comp=N,3µm,0.5s						
KOHI				IAML		01 13 56.5	
	comp=E,4µm,0.6s						
SHL	Shillong	2.91	327	Pn	Pn	01 13 28.4	-0.2
MOKO	MOKOCHONG	3.29	14	*e*P	Pn	01 13 34.4	+0.5
MOKO				*e*S	Sn	01 14 09.8	-2.1
MOKO				IAML		01 14 22.5	
	comp=N,3µm,0.5s						
MOKO				IAML		01 14 24.5	
	comp=E,3µm,0.4s						
GUWA	GUWAHATI	3.53	331	*e*P	Pn	01 13 36.7	-0.2
GUWA				*e*S	Sn	01 14 16.8	-0.7
GUWA				IAML		01 14 17.0	
	comp=N,3µm,0.3s						
GUWA				IAML		01 14 18.7	
	comp=E,3µm,0.7s						
TEZP	TEZPUR	3.57	348	*e*P	Pn	01 13 38.2	+0.8
TEZP				*e*S	Sn	01 14 16.4	-1.9
TEZP				IAML		01 14 22.1	
	comp=E,3µm,0.3s						
TEZP				IAML		01 14 23.9	
	comp=N,3µm,0.2s						
TNCH	TengChong	4.87	66	P	Pn	01 13 59.6	+4.2
TNCH				S	Sn	01 14 51.8	+1.2
TNCH				LR	LR		
	comp=N,560nm,5.0s						
TNCH				LR	LR		
	comp=E,460nm,5.9s						
TNCH				LR	LR		
	comp=Z,390nm,9.7s						
CHTO	Chiang Mai	6.56	130	Pn	Pn	01 14 19.1	+0.6
CHTO	Chiang Mai	6.56	130	P	Pn	01 14 19.7	+1.2
	comp=Z,0.2nmcomp=Z,22nm,0.8s						
CM31	Chiang Mai Arr	6.80	132	Pn	Pn	01 14 21.2	-0.6
CMAR	Chiang Mai Arr	6.80	132	P	Pn	01 14 22.1	+0.3
	comp=Z,25nm,1.1s,baz=315,slow=14,SNR=39						
CMAR				S	Sn	01 15 39.9	+2.0
	comp=Z,13nm,0.7s,baz=317,slow=21,SNR=5.9						
CMAR				LR	LR	01 17 04.1	
	comp=Z,59nm,20.6s,baz=300,slow=38						
LSA	Lhasa	6.92	342		Pn	01 14 25.0	+1.2
LSA	Lhasa	6.92	342	Pn	Pn	01 14 21.2	-2.6
LSA				Sn	Sn	01 15 25.4	-16
LSA				pmax	pmax		
	comp=Z,65nm,0.4s						
LSA				smax	smax		
	comp=N,100nm,0.6s						
LSA				smax	smax		
	comp=E,160nm,0.6s						
EVN	Everest	7.81	310	Pn	Pn	01 14 34.9	-1.3
PZH	PanZhiHua	8.12	64	P	Pn	01 14 42.6	+2.7
KMI	Kunming	8.57	75	P	Pn	01 14 51.5	+5.3
KMI				pmax	pmax		
	comp=Z,15nm,0.8s						
KMI				LR	LR		
	comp=Z,240nm,12.5s						
GOMU	GeErMu	13.08	4	P	Pn	01 15 45.0	-2.9
GOMU				sP	P	01 15 50.8	-5.5
GOMU				S	S	01 18 47.5	+13
GOMU				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HYB	Hyderabad	15.23	251	*e*P	P	01 16 20.8	+0.8
HYB				*e*sP	sP	01 16 39.7	-0.5
LZDM	Lanzhou Array	15.50	32	P	Pn	01 16 18.3	-1.5
	comp=Z,2.0nm,0.4s,baz=219,slow=11,SNR=9.0						
LZH	Lanzhou	15.68	32	*e*P	P	01 16 25.0	0.0
LZH				pP	pP	01 16 38.3	+0.7
LZH				sP	sP	01 16 46.5	+1.4
LZH				pmax	pmax		
	comp=Z,50nm,1.1s						
ENH	Enshi	15.86	60	Pn	Pn	01 16 23.8	-0.4
ENH				IAmb	IAmb	01 16 26.0	
	comp=Z,23nm,0.5s						
GTA	Gaotai	17.08	17	*e*P	P	01 16 41.3	+0.9
GTA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
XAN	Xi'an	17.27	48	P	Pn	01 16 40.4	-1.4
XAN				pmax	pmax		
	comp=Z,19nm,0.7s						
MLSI	Meulaboh, Aceh	18.93	171	P	P	01 16 59.9	-0.9
	comp=Z,37nm,0.9s						
IPM	Ipoh	19.86	158	P	P	01 17 09.7	-1.3
IPM				IAmb	IAmb	01 17 33.6	
	comp=Z,36nm,1.5s						
IPM	Ipoh	19.86	158	P	P	01 17 08.6	-2.4
	comp=Z,17nm,0.6s						
KCSI	Kotacane, Aceh	19.89	168	P	P	01 17 09.9	-1.4
	comp=Z,20nm,1.0s						
LYN	LuoYang	20.03	51	*e*P	Pn	01 17 15.8	+0.9
LYN				pmax	pmax		
	comp=Z,20nm,0.7s						
TPTI		20.04	170	P	P	01 17 11.5	-1.4
	comp=Z,31nm,0.7s						
PALK	Pallekele	20.06	220	P	P	01 17 13.5	+0.3
	comp=Z,4.0nm,0.6s,baz=31,slow=12,SNR=1.9						
PALK				LR	LR	01 24 55.1	
	comp=Z,55nm,21.8s,baz=27,slow=36						
	comp=Z,4.0nm,0.6s						
PALK	Pallekele	20.06	220	P	P	01 17 13.3	+0.1
NIL	Nilore	20.73	305	P	P	01 17 20.1	-0.2
NIL				IAmb	IAmb	01 17 41.2	
	comp=Z,22nm,0.9s						
PSI	Prapat	20.84	165	LR	LR	01 26 39.7	
	comp=Z,46nm,21.1s,baz=338,slow=40						
PSI	Prapat	20.84	165	P	P	01 17 22.7	+1.0
	comp=Z,33nm,0.9s						
RPSI	Rantau Prapat	20.94	165	P	P	01 17 21.2	-1.4
RPSI				IAmb	IAmb	01 17 27.3	
	comp=Z,25nm,0.9s						
WMQ	Urumqi	21.22	348	*e*P	P	01 17 28.0	+2.4
WUS	Wushi	21.71	330	P	P	01 17 31.2	+0.3
WUS				IAmb	IAmb	01 17 46.9	
	comp=Z,16nm,0.8s						
KSH	Kashi	22.17	322	P	P	01 17 36.6	+0.7
KSH				pP	sP	01 17 54.0	-2.7
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BTO	Baotou	22.25	35	*e*P	P	01 17 35.5	-1.2
BTO				pP	pP	01 17 49.6	-0.2
BTO				sP	sP	01 17 57.2	0.0
BTO				PP	PnPn	01 18 05.2	+3.8
BTO				pmax	pmax		
	comp=Z,26nm,1.0s						
BTO				pmax	pmax		
	comp=Z,470nm,5.9s						
TARG	Taragay, Kyrgy	22.80	328	P	P	01 17 43.2	+0.4
HNS	HongShan	23.05	47	⇓P	P	01 17 49.1	+4.2
HNS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC	Hu-ho-hao-te	23.25	36	*e*P	P	01 17 48.3	+1.3
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,100nm,6.0s						
PBSI	Pulau Batu	23.47	168	P	P	01 17 49.5	+0.4
	comp=Z,32nm,1.8s						
MANEM	Manem	23.70	312	P	P	01 17 51.9	+0.4
MANEM				IAmb	IAmb	01 18 18.6	
	comp=Z,27nm,0.8s						
NJ2	Nanjing	24.03	63	*e*P	P	01 17 54.9	+0.8
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
KBL	Kabul	24.29	303	P	P	01 17 57.2	+0.5
TPRI	Tanjung Pinang	24.48	153	P	P	01 17 43.7	-15
DRK	Karamyk	24.68	316	P	P	01 18 01.2	+0.9
PDSI	Padang	24.79	163	P	P	01 17 58.6	-2.6
SISI	Saibi	24.87	167	P	P	01 18 02.6	+0.7
	comp=Z,51nm,1.2s						
AAK	Ala-Archa	25.13	325	P	P	01 18 05.8	+1.5
MKAR	Makanchi Array	25.33	342	P	P	01 18 06.9	+1.0
	comp=Z,10nm,0.7s,baz=154,slow=10.0,SNR=59						
	comp=Z,10nm,0.7s						
GAR	Garm	25.37	314	P	P	01 18 06.7	+0.2
MAKZ	Makanchi	25.43	341	P	P	01 18 06.9	+0.1
CHGR	Chuyangaron	25.98	312	P	P	01 18 12.5	+0.6
SHAA	Shahritus	26.19	309	P	P	01 18 14.1	+0.2
SHAA				IAmb	IAmb	01 18 53.1	
	comp=Z,27nm,1.0s						
SONM	Songino Array	26.70	19	P	P	01 18 18.9	+0.5
	comp=Z,7.3nm,0.7s,baz=200,slow=9.4,SNR=30						
SONM				LR	LR	01 30 49.6	
	comp=Z,22nm,19.5s,baz=172,slow=41						
	comp=Z,7.3nm,0.7s						
SONM	Songino Array	26.70	19	P	P	01 18 18.6	+0.2
ULN	Ulaanbaatar	26.93	20	P	P	01 18 20.5	+0.1
ULN				IAmb	IAmb	01 18 24.6	
	comp=Z,8.0nm,0.7s						
ULN	Ulaanbaatar	26.93	20	P	P	01 18 20.7	+0.2
KKAR	Karatay Array	27.63	322	P	P	01 18 24.6	-2.0
KURBB	Kurchatov Arra	29.87	341	P	P	01 18 47.2	+0.7
	comp=Z,2.3nm,0.8s,baz=153,slow=8.3,SNR=17						
KURBB				PcP	PcP	01 21 48.2	0.0
	comp=Z,0.8nm,0.6s,baz=169,slow=2.9,SNR=6.5						
	comp=Z,2.3nm,0.8s						
KURK	Kurchatov	29.93	341	P	P	01 18 47.4	+0.6
ZAA0	Zalesovo Array	31.50	350	P	P	01 19 01.7	+1.0
ZAA0				IAmb	IAmb	01 19 02.6	
	comp=Z,5.1nm,0.6s						
ZALV	Zalesovo Beam	31.50	350	P	P	01 19 01.5	+0.8
	comp=Z,4.6nm,0.4s,baz=167,slow=8.3,SNR=29						
	comp=Z,4.6nm,0.4s						
ZALV	Zalesovo Beam	31.50	350	P	P	01 19 01.3	+0.6
HILR	Hailar Array B	33.44	31	P	P	01 19 17.8	0.0
	comp=Z,2.3nm,0.4s,baz=226,slow=8.6,SNR=10						
	comp=Z,2.3nm,0.4s						
BVAR	Borovoye Array	34.70	335	P	P	01 19 29.3	+0.6
	comp=Z,0.9nm,0.6s,baz=139,slow=11,SNR=6.1						
	comp=Z,0.9nm,0.6s						
AB31	Akbulak array	37.17	323	P	P	01 19 50.9	+1.1
AB31				IAmb	IAmb	01 19 51.5	
	comp=Z,4.1nm,0.5s						
ABKAR	Akbulak array	37.17	323	P	P	01 19 50.9	+1.1
HEH	HeiHe	37.77	36	*e*P	P	01 19 55.4	+0.5
HEH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MJAR	Matsushiro Arr	40.59	60	P	P	01 20 17.5	-1.1
	comp=Z,1.7nm,0.3s,baz=271,slow=10,SNR=7.8						
	comp=Z,1.7nm,0.3s						
ARTI	Arti	42.04	331	P	P	01 20 30.8	+0.6
	comp=Z,2.7nm,0.6s,baz=135,slow=8.1,SNR=6.3						
	comp=Z,2.7nm,0.6s						
ARTI	Arti	42.04	331	P	P	01 20 30.6	+0.3
NRIK	Noril'sk	46.38	357	P	P	01 21 05.4	+0.6
	comp=Z,4.9nm,0.6s,baz=165,slow=7.9,SNR=12						
	comp=Z,4.9nm,0.6s						
NRIK	Noril'sk	46.38	357	P	P	01 21 04.5	-0.2
NRIK				IAmb	IAmb	01 21 06.3	
	comp=Z,5.2nm,0.7s						
GIRL	Giralia	49.71	155	P	P	01 21 30.9	-0.1
MBWA	Marble Bar	50.84	148	P	P	01 21 39.5	0.0
TIXI	Tiksi	52.53	13	P	P	01 21 51.1	-0.4
MA2	Magadan	53.83	32	LR	LR	01 46 40.0	
	comp=Z,38nm,19.9s,baz=279,slow=38						
SEY	Seymchan	55.56	28	LR	LR	01 47 54.5	
	comp=Z,35nm,19.3s,baz=117,slow=38						
AKASG	Malin Array Be	56.34	316	P	P	01 22 19.0	-0.5
	comp=Z,0.6nm,0.4s,baz=85,slow=6.3,SNR=4.3						
	comp=Z,0.6nm,0.4s						
PETK	Petropavlovsk-	56.35	41	P	P	01 22 18.5	-1.0
	comp=Z,1.8nm,0.5s,baz=284,slow=5.8,SNR=2.3						
	comp=Z,1.8nm,0.5s						
PETK	Petropavlovsk-	56.35	41	P	P	01 22 18.2	-1.4
WB0	Warramunga Arr	58.30	134	P	P	01 22 33.2	-0.5
WRA	Warramunga Arr	58.39	134	P	P	01 22 34.0	-0.3
	comp=Z,1.3nm,0.6s,baz=317,slow=7.1,SNR=15						
	comp=Z,1.3nm,0.6s						
WRA	Warramunga Arr	58.39	134	P	P	01 22 31.7	-2.6
MLR	Muntele Rosu	58.44	310	P	P	01 22 34.3	-0.2
	comp=Z,2.0nm,0.7s,baz=114,slow=12,SNR=3.1						
	comp=Z,2.0nm,0.7s						
MLR	Muntele Rosu	58.44	310	P	P	01 22 34.2	-0.3
MLR				IAmb	IAmb	01 23 12.8	
	comp=Z,5.7nm,0.9s						
WR8	Warramunga Arr	58.51	134	P	P	01 22 34.4	-0.7
BURAR	Bucovina Array	58.89	313	P	P	01 22 36.3	-1.3
BUR08	Bucovina Ar. S	58.90	313	P	P	01 22 37.7	0.0
FINES	FINESS Array B	59.25	329	P	P	01 22 39.3	-0.4
	comp=Z,2.9nm,0.8s,baz=94,slow=7.8,SNR=7.4						
FINES				LR	LR	01 50 01.2	
	comp=Z,191nm,18.5s,baz=343,slow=38						
	comp=Z,2.9nm,0.8s						
FINES	FINESS Array B	59.25	329	P	P	01 22 39.6	0.0
ASAR	Alice Springs	60.78	137	P	P	01 22 50.9	+0.2
	comp=Z,13nm,0.5s,baz=318,slow=6.8,SNR=13						
	comp=Z,13nm,0.5s						
COEN	Coen	60.90	122	P	P	01 22 50.0	-1.7
ARCES	ARCESS Array B	60.91	338	P	P	01 22 51.6	+0.6
	comp=Z,3.7nm,0.9s,baz=112,slow=7.8,SNR=2.2						
	comp=Z,3.7nm,0.9s						
HFS	Hagfors	65.26	327	P	P	01 23 19.7	-0.2
	comp=Z,3.3nm,0.7s,baz=79,slow=7.5,SNR=6.6						
	comp=Z,3.3nm,0.7s						
NOA	NORSAR Array B	66.41	328	P	P	01 23 27.3	-0.1
	comp=Z,0.6nm,0.5s,baz=91,slow=4.5,SNR=1.4						
	comp=Z,0.6nm,0.5s						
GERES	GERESS Array B	66.45	315	P	P	01 23 28.5	+0.6
	comp=Z,1.2nm,0.6s,baz=81,slow=6.7,SNR=12						
	comp=Z,1.2nm,0.6s						
NC204	NORSAR Array S	66.60	329	P	P	01 23 28.4	-0.3
F17K	Baldwin Pennin	74.88	24	IAmb	IAmb	01 24 20.3	
	comp=Z,6.7nm,0.7s						
EKA	Eskdalemuir Ar	75.03	324	P	P	01 24 19.9	+0.1
	comp=Z,0.6nm,0.5s,baz=75,slow=6.5,SNR=3.6						
	comp=Z,0.6nm,0.5s						
E19K	Redstone River	75.89	22	IAmb	IAmb	01 24 27.5	
	comp=Z,3.9nm,0.8s						
F20K	Avaraart Lake	76.60	22	P	P	01 24 28.9	+0.4

F20K				IAmb	IAmb	01 24 30.3	
	comp=Z,11nm,1.4s						
D22K	Ayikyak River	76.72	20	IAmb	IAmb	01 24 32.7	
	comp=Z,5.3nm,0.8s						
F21K	Alatna River	77.29	22	IAmb	IAmb	01 24 34.2	
	comp=Z,7.0nm,1.1s						
C24K	Franklin Bluff	77.48	18	P	P	01 24 34.0	+0.5
C24K				IAmb	IAmb	01 25 01.6	
	comp=Z,9.9nm,1.4s						
D24K	Happy Valley	77.76	19	IAmb	IAmb	01 24 36.6	
	comp=Z,6.5nm,0.8s						
TOLK	Toolik Lake Re	77.81	20	P	P	01 24 35.6	+0.2
TOLK				IAmb	IAmb	01 24 37.1	
	comp=Z,6.3nm,0.9s						
J18K	Innoko River	77.90	26	IAmb	IAmb	01 24 37.5	
	comp=Z,10nm,1.2s						
E23K	Chandalar	78.12	20	IAmb	IAmb	01 24 38.3	
	comp=Z,3.3nm,0.6s						
D25K	Kavik River	78.38	18	IAmb	IAmb	01 24 40.3	
	comp=Z,4.8nm,0.8s						
E24K	Your Creek	78.46	20	P	P	01 24 39.4	+0.3
C27K	Jago River	78.95	17	IAmb	IAmb	01 24 45.5	
	comp=Z,4.6nm,0.8s						
E25K	Arctic Village	79.33	19	P	P	01 24 45.1	+1.3
E25K				IAmb	IAmb	01 25 25.5	
	comp=Z,8.3nm,1.5s						
F25K	Christian Rive	79.62	20	IAmb	IAmb	01 24 47.4	
	comp=Z,3.6nm,0.7s						
BPAW	Bear Paw Mtn.	79.79	24	P	P	01 24 46.7	+0.4
BPAW				IAmb	IAmb	01 24 47.1	
	comp=Z,6.8nm,1.0s						
BMAR	Burnt Mountain	80.05	19	P	P	01 24 49.1	+1.4
M20K	Styx River	80.12	26	P	P	01 24 48.8	+0.6
M20K				IAmb	IAmb	01 25 25.4	
	comp=Z,15nm,1.4s						
TRF	Thorofare Moun	80.40	24	P	P	01 24 50.1	+0.3
TRF				IAmb	IAmb	01 25 10.7	
	comp=Z,14nm,1.5s						
G26K	Porcupine Rive	80.59	20	IAmb	IAmb	01 24 54.1	
	comp=Z,5.5nm,0.8s						
CCB	Clear Creek Bu	80.64	23	P	P	01 24 50.9	+0.1
CCB				IAmb	IAmb	01 25 18.3	
	comp=Z,7.5nm,1.5s						
SKT	Skwentna	80.71	26	P	P	01 24 50.8	-0.4
SKT				IAmb	IAmb	01 25 29.7	
	comp=Z,14nm,1.4s						
L22K	Petersville	80.72	25	IAmb	IAmb	01 24 53.0	
	comp=Z,5.9nm,0.6s						
IL31		80.89	22	P	P	01 24 51.2	-0.8
ILAR	Eielson Array	80.89	22	P	P	01 24 51.1	-1.0
	comp=Z,1.4nm,0.7s,baz=307,slow=5.5,SNR=22						
ILAR				PP	PP	01 27 56.8	+0.2
	comp=Z,0.4nm,0.9s,baz=300,slow=7.1,SNR=4.3						
	comp=Z,1.4nm,0.7s						
ILAR	Eielson Array	80.89	22	P	P	01 24 51.4	-0.8
PRP	Porcupine Dome	80.91	21	P	P	01 24 53.1	+0.7
PRP				IAmb	IAmb	01 24 53.6	
	comp=Z,4.8nm,0.9s						
F28M	Old Crow	81.33	18	P	P	01 24 55.2	+0.8
A36M	Sachs Harbour	81.49	11	P	P	01 24 55.6	+0.4
H27K	Steamboat Moun	81.75	20	IAmb	IAmb	01 25 00.3	
	comp=Z,3.7nm,0.8s						
I26K	Coal Creek Min	81.82	21	P	P	01 24 57.2	+0.2
I26K				IAmb	IAmb	01 24 58.5	
	comp=Z,6.1nm,1.2s						
K24K	Donnelly Dome	81.85	23	P	P	01 24 57.1	-0.1
J26L	Joseph Creek	82.19	22	IAmb	IAmb	01 25 00.1	
	comp=Z,5.2nm,0.8s						
SCRK	Sand Creek	82.37	22	P	P	01 25 00.3	+0.2
SCRK				IAmb	IAmb	01 25 01.1	
	comp=Z,4.1nm,0.9s						
INK	Inuvik	82.56	16	P	P	01 25 00.6	-0.2
INK				IAmb	IAmb	01 25 04.1	
	comp=Z,5.4nm,1.1s						
K27K	Chicken	82.99	21	P	P	01 25 04.0	+0.8
K27K				IAmb	IAmb	01 25 06.4	
	comp=Z,6.6nm,0.9s						
BOSA	Boshof	83.54	235	LR	LR	01 58 16.3	
	comp=Z,17nm,21.0s,baz=358,slow=33						
C36M	Paulatuk	83.89	13	P	P	01 25 07.2	-0.4
I30M	Mount Dempster	84.00	19	IAmb	IAmb	01 25 09.4	
	comp=Z,5.1nm,1.1s						
H31M	Peel River	84.17	18	IAmb	IAmb	01 25 12.2	
	comp=Z,7.7nm,1.1s						
DLBC	Dease Lake	91.06	21	LR	LR	02 11 15.0	
	comp=Z,112nm,19.1s,baz=63,slow=38						
YKA	Yellowknife Ar	91.77	13	P	P	01 25 43.6	-2.1
	comp=Z,0.4nm,0.6s,baz=336,slow=5.3,SNR=5.3						
	comp=Z,0.4nm,0.6s						
YKA	Yellowknife Ar	91.77	13	P	P	01 25 45.3	-0.4
TXAR	Lajitas Array	125.26	19	PKP	PKPdf	01 31 39.7	+0.3
	comp=Z,0.2nm,0.6s,baz=340,slow=3.3,SNR=4.5						
TXAR	Lajitas Array	125.26	19		PKPdf	01 31 39.4	0.0

IDC 02 01:18:45.5±2.9, 5°.57N×125°.95E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=277.6km s-min=26.7km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.66	162	P	P	01 24 26.1	-0.2
	0.9nm,0.8s,baz=342,slow=9.5,SNR=2.9						
	0.9nm,0.8s						
ASAR	Alice Springs	30.07	165	P	P	01 24 56.9	+0.2
	0.7nm,0.6s,baz=342,slow=8.2,SNR=2.9						
	0.7nm,0.6s						
MKAR	Makanchi Array	55.62	325	P	P	01 28 23.2	-0.1
	0.6nm,0.5s,baz=119,slow=7.5,SNR=11						
	0.6nm,0.5s						

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*RHSSO **02** 01:35:01.0±0.5, 43°.24N×18°.02E, h9km, ML2.2/4*

*PDG **02** 01:35:02.7±0.3, 43°.18N×18°.10E, h10km±2km, ML2.5/11, Error ellipse: s-maj=1.1km s-min=2.1km az=0.0*

ISC 02 01:35:01.4±1.1, 43°.24N±0°.03×18°.06E±0°.02, h9km±9km, n24, σ0ˢ.83/48, 3C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	Ston	0.45	216	*e*Pg	Pg	01 35 10.1	-0.2
STON				Sg	Sg	01 35 16.5	+0.3
BRY	Bratogost	0.48	134	*e*Pg	Pg	01 35 10.6	-0.3
BRY				*i* Sg	Sb	01 35 19.7	+0.2
TREB	Trebinje	0.56	158	*e*Pg	Pg	01 35 11.7	-0.6
TREB				*e*Sg	Sb	01 35 20.7	-0.9
DBRK	Dubrovnik	0.57	174	*e*Pg	Pg	01 35 12.5	0.0
DBRK				Sg	Sb	01 35 21.0	-0.8
UPM	Unac-Piva	0.62	93	*e*Pg	Pg	01 35 13.4	0.0
UPM				*i* Sg	Sb	01 35 23.0	-0.4
RICI	Ricice	0.72	291	*e*Pg	Pg	01 35 14.9	-0.5
RICI				Sg	Sg	01 35 25.8	+0.9
MAKA	Makarska	0.76	274	*e*Pg	Pg	01 35 15.5	-0.6
MAKA				Sg	Sg	01 35 26.3	+0.3
NKME	Niksic	0.81	125	*e*Pg	Pg	01 35 16.5	-0.4
NKME				*e*Sg	Sb	01 35 28.9	+0.2
HCY	Herceg Novi	0.85	158	⥣*i*Pg	Pg	01 35 17.1	-0.7
HCY				*i* Sg	Sn	01 35 30.9	-1.3
CEME	Cevo	0.93	137	*e*Pg	Pg	01 35 16.8	-2.6
CEME				*e*Sg	Sb	01 35 32.7	+0.3
PLE	Pljevlja	0.97	84	*e*Pg	Pg	01 35 20.6	+0.4
PLE				*i* Sg	Sb	01 35 33.8	+0.2
LSTV	Lastovo	0.98	242	*e*Pg	Pg	01 35 20.0	-0.2
LSTV				Sg	Sg	01 35 32.2	-0.7
RUDO	Rudo	1.03	68	⥣*i*Pg	Pg	01 35 20.2	-1.0
RUDO				*e*Sg	Sg	01 35 34.6	+0.1
BUM	Brajici-Budva	1.12	147	*e*Pg	Pg	01 35 22.1	-0.8
BUM				*i* Sg	Sn	01 35 40.6	+1.7
KOME	Kolasin	1.13	109	*e*Pg	Pg	01 35 23.1	-0.1
KOME				*e*Sg	Sn	01 35 39.5	+0.2
HVAR	Hvar	1.18	268	*e*Pg	Pb	01 35 24.2	+0.1
HVAR				Sg	Sb	01 35 38.9	-0.5
PDG	Podgorica	1.19	132	*e*Pg	Pb	01 35 23.3	-0.9
PDG				*i* Sg	Sn	01 35 42.0	+1.4
DRME	Dracevica, Mon	1.34	141	*e*Pg	Pb	01 35 26.8	+0.1
DRME				*e*Sg	Sg	01 35 45.8	+1.4
KIJV	Kijevo	1.43	303	*i* Pg	Pg	01 35 29.3	+0.5
KIJV				Sg	Sg	01 35 47.9	+0.5
PVY	Plav	1.53	114	*e*Pg	Pg	01 35 30.9	0.0
PVY				*i* Sg	Sg	01 35 52.3	+1.5
BLY	Banja Luka	1.64	338	⥣*i*Pn	Pn	01 35 29.9	-0.6
BLY				*e*Sn	Sn	01 35 51.0	-0.7
ZIRJ	Zirje	1.81	284	*e*Pn	Pn	01 35 33.7	+0.9
ZIRJ				Sn	Sb	01 35 57.2	-0.3
MORI	Morici	1.82	291	*i* Pn	Pn	01 35 34.3	+1.3
MORI				Sn	Sb	01 35 57.9	0.0
MORH	Mrgy, Hungar	3.01	8	*e*Pn	Pn	01 35 48.4	-0.8
MORH				*e*Sn	Sn	01 36 25.0	-0.4

IDC 02 01:38:51.2±10.0, 17°.22S×172°.62W, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=453.3km s-min=40.4km az=140.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	50.18	258	P	P	01 47 49.0	-0.1
	0.5nm,0.7s,baz=97,slow=7.2,SNR=2.5						
	0.5nm,0.7s						
ASAR	Alice Springs	50.28	253	P	P	01 47 49.9	-0.1
	1.1nm,0.7s,baz=89,slow=8.0,SNR=8.9						
	1.1nm,0.7s						
ILAR	Eielson Array	84.08	11	P	P	01 51 23.4	0.0
	0.2nm,0.6s,baz=213,slow=6.5,SNR=4.4						
	0.2nm,0.6s						

NNC 02 01:42:44.3±1.0, 43°.97N×86°.82E, h0km, mb3.5, mpv3.1, 6C-1D, Error ellipse: s-maj=7.6km s-min=5.7km az=106.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	Makanchi Array	4.26	313	Pn	Pn	01 43 50.7	+0.2
	2.2nm,0.7s,baz=126,slow=14,SNR=36						
MK31				⥣Lg	Lg	01 45 00.6	
	4.6nm,0.6s,baz=135,slow=29,SNR=5.0						
MAKZ	Makanchi	4.44	311	⥣Pn	Pn	01 43 53.0	0.0
	2.6nm,0.5s						
MAKZ				⥣Sn	Sn	01 44 46.3	+0.9
	4.3nm,0.8s						
MAKZ				⥣Lg	Lg	01 45 05.2	
	3.6nm,0.6s						
PDGK	Podgornoye	5.36	266	⥣Pn	Pn	01 44 05.4	-0.2
	1.0nm,0.4s						
PDGK				⥣Sn	Sn	01 45 09.4	+1.4
	3.4nm,0.6s						
PDGK				⥥Lg	Lg	01 45 35.1	
	15nm,1.2s						

RSNC 02 02:27:29.3±0.0, 7°N±1°×7°3W±°, h145km±1km, M3.2, mb3.5, mB4.9, ML2.9, Mw(mB)4.2, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.23	188	P	Pn	02 27 48.8	-0.6
BARC				S	Sn	02 28 02.9	-1.7
BRJC	Barrancabermej	0.61	285	P	Pn	02 27 50.5	-0.2
BRJC				S	Sn	02 28 07.7	+0.8
PAMC	Pamplona, Colo	0.68	41	P	Pn	02 27 51.6	-0.1
PAMC				S	Sn	02 28 08.9	+0.1
RUSC	La Rusia	0.92	176	P	Pn	02 27 52.7	-0.9
RUSC				S	Sn	02 28 11.5	-0.5
PTBC	PUERTO BERRIO,	1.33	258	P	Pn	02 27 55.4	-1.3
PTBC				S	Sn	02 28 16.6	-1.0
OCAC	Ocana	1.42	353	P	Pn	02 27 57.1	-0.7
OCAC				S	Sn	02 28 18.7	-1.0
SPBC	San Pablo de B	1.48	218	P	Pn	02 27 57.7	-0.7
SPBC				S	Sn	02 28 19.5	-1.1
CHIC	Chingaza	2.25	195	P	Pn	02 28 07.1	-0.5
CHIC				S	Sn	02 28 36.4	-0.6
ROSC	El Rosal	2.29	211	P	Pn	02 28 08.6	+0.6
ROSC				S	Sn	02 28 38.5	+0.9
UREC	San Jos de Ur	2.54	292	P	Pn	02 28 08.6	-2.1
UREC				S	Sn	02 28 39.5	-3.1
GUY2C	Guyana, Caldas	2.71	234	P	Pn	02 28 13.4	+0.1
GUY2C				S	Sn	02 28 47.1	-0.1
VILC	Villavicencio,	2.74	191	P	Pn	02 28 12.0	-1.4
VILC				S	Sn	02 28 46.2	-1.2
CBOC	Ciudad Bolivar	3.00	252	P	Pn	02 28 16.2	-0.4
CBOC				S	Sn	02 28 53.9	+0.7
DBBC	Dabeiba	3.04	274	P	Pn	02 28 16.2	-0.9
DBBC				S	Sn	02 28 53.2	-0.9
ARGC	Ariguani, Magd	3.21	340	P	Pn	02 28 19.0	-0.2
ARGC				S	Sn	02 28 57.8	0.0
ANIL	Santa Ana	3.22	224	P	Pn	02 28 20.1	+0.5
ANIL				S	Sn	02 28 58.2	-0.3
SDV	Santo Domingo	3.23	50	P	Pn	02 28 18.4	-1.2
SDV				S	Sn	02 28 55.3	-3.2
PRAC	Prado	3.54	209	P	Pn	02 28 22.4	-1.1
PRAC				S	Sn	02 29 04.5	-0.9
ORTC	Ortega, Tolima	3.57	216	P	Pn	02 28 23.1	-0.7
ORTC				S	Sn	02 29 06.5	+0.4
PLMC	San Jos del P	3.65	239	P	Pn	02 28 24.2	-0.8
PLMC				S	Sn	02 29 06.4	-1.7
URMC	La Uribe, Meta	3.75	199	P	Pn	02 28 25.6	-0.7
URMC				S	Sn	02 29 09.7	-0.9
YOTC	Yotoco, Valle	4.25	229	P	Pn	02 28 31.4	-1.5
YOTC				S	Sn	02 29 22.8	+0.6
MACC	Macarena, Meta	4.70	189	P	Pn	02 28 35.9	-2.8
MACC				S	Sn	02 29 28.3	-4.4
GARC	Garzon, Huila	5.16	207	P	Pn	02 28 43.0	-2.1
GARC				S	Sn	02 29 40.7	-3.4
POPC	Popayan, Colom	5.51	220	P	Pn	02 28 48.9	-0.9
	2.9nm,0.6s						
POPC				S	Sn	02 29 51.7	-0.8
	2.9nm,0.6s						
FLOC	Florencia	5.77	206	P	Pn	02 28 51.5	-1.5
	7.5nm,1.1s						
FLOC				S	Sn	02 29 58.1	-0.3
	7.5nm,1.1s						
BBAC	Balboa, Cauca	6.28	221	P	Pn	02 28 59.8	-0.1
BBAC				S	Sn	02 30 09.0	-1.8

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*IDC **02** 02:44:09.4±6.9, 28°.44N×55°.34E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=135.2km s-min=55.2km az=112.0*

*TEH **02** 02:44:10.8, 28°.22N×54°.92E, h11km±19km*

*OMAN **02** 02:44:15.5±0.1, 27°.96N×54°.81E, h10km, ml3.1/18, Error ellipse: s-maj=1.3km s-min=0.7km az=9.0*

*DSN **02** 02:44:15.1±1.6, 28°.04N×54°.94E, h10km, ML2.7/9, Error ellipse: s-maj=20.5km s-min=9.5km az=27.0*

ISC 02 02:44:14.4±0.8, 28°.19N±0°.05×54°.86E±0°.04, h26km, n69, σ0ˢ.95/89, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAR1	LAR	0.67	220	Pg	Pb	02 44 26.3	-1.2
JHRM	Jahrom	1.18	286	Pg	Pn	02 44 34.8	-0.5
GENO	Geno	1.40	124	Pg	Pn	02 44 37.8	-0.7
GENO				Sg	Sb	02 44 58.0	+0.5
QIR1	Qir	1.63	281	Pg	Pn	02 44 42.0	+0.6
IBND	Bandar-abas	1.66	116	Pg	Pn	02 44 41.5	-0.2
LMD1	Lamerd	1.72	241	Pg	Pb	02 44 45.7	+0.4
NGRK	Negar Kerman	2.19	48	Pn	Pn	02 44 48.6	-0.8
SHME	Shamm	2.42	152	P	Pn	02 44 52.4	+0.2
SHME	Shamm	2.42	152	P	Pn	02 44 51.5	-0.7
KRBR	Kerman	2.44	42	Pn	Pn	02 44 53.2	+0.4
BANOM	Banah	2.59	150	P	Pn	02 44 55.6	+0.9
BANOM				S	Sn	02 45 27.2	+1.8
BANOM	Banah	2.59	150	P	Pn	02 44 55.0	+0.3
BANOM				S	Sn	02 45 25.7	+0.3
KHGB	Koh Gabri	2.60	33	Pn	Pn	02 44 55.1	+0.1
CHMN	Cheshme madani	2.88	54	Pn	Pn	02 44 59.4	+0.5
MASF	Masafi	3.04	157	P	Pn	02 45 01.6	+0.9
	SNR=18						
MASF				S	Sn	02 45 37.5	+1.2
MSFE	Esma-Masafi	3.04	157	P	Pn	02 45 01.6	+0.7
KRM1	Kerman Provinc	3.12	42	Pn	Pn	02 45 02.0	-0.1
ZRDN	Zarand Kerman	3.13	27	Pn	Pn	02 45 02.1	-0.2
MDH	Madha	3.15	156	P	Pn	02 45 02.9	+0.6
MDH				S	Sn	02 45 39.3	+0.2
DSBU	Dashti - Bushe	3.18	274	Pn	Pn	02 45 04.7	+1.9
IMEH	Mehriz	3.20	356	Pn	Pn	02 45 03.8	+0.6
NAZ	Nazwa, Dubai	3.27	167	P	Pn	02 45 04.6	+0.7
NAZ				S	Sn	02 45 42.8	+0.9
NAZ	Nazwa, Dubai	3.27	167	P	Pn	02 45 04.8	+0.9
KBAM	BAM	3.29	72	Pn	Pn	02 45 04.7	+0.3
UOSS	Minazif	3.44	159	P	Pn	02 45 06.9	+0.5
UOSS				S	Sn	02 45 45.8	-0.6
UOSS	Minazif	3.44	159	Pn	Pn	02 45 07.0	+0.6
IBAF	Bafgh	3.45	10	Pn	Pn	02 45 06.8	+0.2
FAQ	Al Faqa, Dubai	3.49	169	P	Pn	02 45 07.8	+0.8
HATD	Hatta, Dubai	3.54	161	P	Pn	02 45 08.6	+1.0
HATD				S	Sn	02 45 49.4	+0.8
HATD	Hatta, Dubai	3.54	161	P	Pn	02 45 08.3	+0.7
ASUD	Al Ashush, Dub	3.57	173	P	Pn	02 45 09.7	+1.6
ASUD				S	Sn	02 45 50.2	+0.8
ASUD	Al Ashush, Dub	3.57	173	P	Pn	02 45 09.2	+1.1
AJN	Ajban	3.61	178	P	Pn	02 45 09.8	+1.1
ASHO	Ashiyiah	3.65	163	P	Pn	02 45 10.0	+0.7
	SNR=23						
ASHO				S	Sn	02 45 52.0	+0.6
ASHO	Ashiyiah	3.65	163	P	Pn	02 45 09.2	0.0
JRN	Qarnain Island	3.70	210	P	Pn	02 45 09.9	+0.1
JRN				S	Sn	02 45 49.7	-2.9
KLNJ	Kolanjah	4.00	315	Pn	Pn	02 45 14.5	+0.1
SHMA	Al-Shehemyia	4.18	237	P	Pn	02 45 18.0	+1.5
	SNR=28						
SHMA				S	Sn	02 46 06.1	+1.6
ALNE	Al Ain	4.19	169	P	Pn	02 45 17.6	+1.0
ALNE				S	Sn	02 46 05.3	+0.5
ALNE	Al Ain	4.19	169	P	Pn	02 45 17.5	+0.8
IRAM	Ramesheh	4.20	330	Pn	Pn	02 45 17.5	+0.5
SOHO	SOHO	4.31	159	P	Pn	02 45 19.2	+1.0
SOHO				S	Sn	02 46 06.7	-0.9
MZWR	Madinat Zayed	4.50	192	P	Pn	02 45 21.0	+0.2
TRNA	Turayna	4.74	224	P	Pn	02 45 24.2	0.0
TRNA				S	Sn	02 46 17.5	-0.9
SMRA	Abu-Samra	4.98	227	P	Pn	02 45 28.2	+0.7
SMRA				S	Sn	02 46 23.9	-0.4
ARQ	Araqi	5.06	162	P	Pn	02 45 29.5	+0.9
	SNR=10						
ARQ				S	Sn	02 46 24.4	-1.8
TPRV	Parvadeh(Tabas	5.08	18	Pn	Pn	02 45 28.9	+0.1
ANAR	Anarak	5.08	349	Pn	Pn	02 45 29.6	+0.6
HOQ	Hoqain	5.09	154	P	Pn	02 45 29.1	+0.1
HOQ				S	Sn	02 46 26.5	-0.5
MZR	Muzera	5.31	194	P	Pn	02 45 31.3	-0.8
MZR				S	Sn	02 46 31.6	-0.8
UMZA	Um Al Zommool	5.46	177	P	Pn	02 45 34.0	0.0
UMZA				S	Sn	02 46 34.9	-1.1
BSY	Bisya	5.82	158	P	Pn	02 45 40.3	+1.3
IKLH	Kolahrood	5.84	332	Pn	Pn	02 45 40.5	+1.0
SMDO	Samad	5.86	150	P	Pn	02 45 40.8	+1.1
	SNR=5.9						
TNSJ	Nastanj	5.95	14	Pn	Pn	02 45 40.6	-0.3
WSAR	Wadi Sarin	5.99	145	P	Pn	02 45 41.5	+0.2
JMDO	Jabal Madar	6.49	152	P	Pn	02 45 48.5	+0.2
ISFB	Sefidab	6.54	341	Pn	Pn	02 45 49.4	+0.4
WBK	Wadi Bani Khal	6.68	145	P	Pn	02 45 51.3	+0.5
SRVN	Saravan	6.72	95	Pn	Pn	02 45 51.5	0.0
JLN	Jalan Bani Buh	7.29	145	P	Pn	02 45 58.8	-0.4
MHTO	MHTO	7.71	158	P	Pn	02 46 04.5	-0.4
DQM	DQM	8.58	163	P	Pn	02 46 16.0	-0.9
	SNR=5.9						
DOK	Doka	9.55	184	P	Pn	02 46 28.7	-1.5
WHFO	Wadi Hawf	10.27	186	P	Pn	02 46 38.0	-2.1
	SNR=16						
ABTO	Aybut	10.88	188	P	Pn	02 46 47.0	-1.5
	SNR=12						
BRTR	Keskin Array B	20.98	309	P	P	02 48 56.3	+0.6
	0.6nm,0.6s,baz=133,slow=10,SNR=3.5						
	0.6nm,0.6s						
FINES	FINESS Array B	38.39	338	P	P	02 51 31.4	-1.8
	2.7nm,1.0s,baz=145,slow=8.2,SNR=3.7						
	2.7nm,1.0s						
TORD	Torodi Ar. Bea	51.56	265	P	P	02 53 20.9	+2.3
	0.5nm,0.7s,baz=56,slow=8.4,SNR=4.3						
	0.5nm,0.7s						

JMA 02 02:47:24.6±0.5, 25°N±4°×12°3E±°, h210km, MV3.5/17, NW OFF ISHIGAKIJIMA IS, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	1.05	196	*e*P	Pn	02 47 56.6	+0.8
IRIF	Iriomote-Funau	1.19	162	*e*P	Pn	02 47 56.6	-0.2
IRIF				*e*S	S	02 48 21.3	-0.4
JISG	Ishigakijimahi	1.26	135	*e*P	Pn	02 47 57.2	0.0
JISG				*e*S	S	02 48 22.1	-0.3
JIJ	Ishigaki jima	1.33	146	*e*P	Pn	02 47 57.8	-0.1
JIJ				*e*S	S	02 48 22.7	-0.8
JKRS	Kuro-shima	1.38	153	*e*P	Pn	02 47 58.5	+0.2
JKRS				*e*S	S	02 48 24.1	-0.1
HATJ	Hateruma jima	1.48	163	*e*P	Pn	02 47 59.3	+0.2
JTJ	Tarama	1.50	123	*e*S	S	02 48 26.1	+0.3
JIRB	Irabujima	1.79	111	*e*S	S	02 48 29.7	-0.8
JMJ2	Miyako jima3	1.95	112	*e*P	Pn	02 48 03.8	+0.4
JMJ2				*e*S	S	02 48 33.9	+0.6
JOGS	Gusukube	2.01	110	*e*S	S	02 48 34.7	+0.4
JJT3	Tamagusuku3	4.07	80	*e*P	Pn	02 48 26.7	-0.9
JNTH	Nagotoyohara	4.35	75	*e*P	Pn	02 48 29.3	-1.8

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*IDC **02** 03:05:19.4±0.8, 1°.50N×126°.30E, h0km, mb4.0/10, mbtmp4.0/12, ML4.1/2, MS3.1/4, Error ellipse: s-maj=44.3km s-min=14.5km az=73.0*

*DJA **02** 03:05:22.7±0.3, 1°N±2°×12°6E±°, h10km, M4.2/11, mB5.1/1, mb4.7/2, MLv4.0/11, Mw(mB)4.4/1*

*NEIC **02** 03:05:23.6±1.6, 1°.45N±0°.10×126°.32E±0°.07, h21km±5km, mb4.5/24, Error ellipse: s-maj=14.4km s-min=8.9km az=200.0*

ISC 02 03:05:26.0±0.5, 1°.43N±0°.06×126°.26E±0°.05, h47km, n57, σ1ˢ.20/58, mb4.3/22, MS3.0/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.29	121		Pn	03 05 45.5	-2.1
TNTI	Ternate	1.29	121	P	Pn	03 05 46.3	-1.3
MNI	Manado	1.42	270	P	Pn	03 05 47.9	-1.4
MNI				S	Sn	03 06 05.7	-1.1
GAMI	Galela, Maluku	1.58	75	P	Pn	03 05 49.5	-2.1
GAMI				S	Sn	03 06 13.2	+2.3
SGSI	Sangihe	2.35	342	P	Pn	03 06 01.8	-0.4
SANI	Sanana	3.47	184	P	Pn	03 06 17.2	-0.3
LUWI	Luwuk	4.26	235	Pn	Pn	03 06 28.5	+0.1
LUWI	Luwuk	4.26	235	P	Pn	03 06 28.8	+0.4
APSI	Ampana	5.16	243	P	Pn	03 06 41.6	+0.9
TOLI2	Tolitoli	5.48	267	Pn	Pn	03 06 43.6	-1.5
KAPI	Kappang	9.12	225	Pn	Pn	03 07 33.6	-1.5
	1.2nm,0.3s,baz=40,slow=18,SNR=4.4						
	4.1nm,0.2s						
KAPI	Kappang	9.12	225	Pn	Pn	03 07 38.7	+3.6
BATI	Baumata	11.85	193	LR	LR	03 13 18.1	
	comp=Z,74nm,20.8s,baz=332,slow=40						
FITZ	Fitzroy Crossi	19.42	182	P	P	03 09 47.8	-0.6
	0.5nm,0.3s,baz=6.7,slow=6.8,SNR=12						
	2.9nm,0.5s						
FITZ	Fitzroy Crossi	19.42	182	P	P	03 09 47.5	-0.9
TPUB	Ta-pu	22.41	346	P	P	03 10 20.6	-0.2
WB0	Warramunga Arr	22.53	160	P	P	03 10 21.3	-0.8
WB0				IAmb	IAmb	03 10 24.0	
	comp=Z,11nm,0.9s						
WRAB	Tennant Creek	22.67	160	P	P	03 10 22.7	-0.8
WRA	Warramunga Arr	22.67	160	P	P	03 10 22.7	-0.8
	comp=Z,4.6nm,0.6s,baz=338,slow=10,SNR=21						
	comp=Z,4.6nm,0.6s						
WRA	Warramunga Arr	22.67	160	P	P	03 10 22.4	-1.1
COEN	Coen	22.69	133	P	P	03 10 21.9	-1.9
WR8	Warramunga Arr	22.74	160	P	P	03 10 23.3	-1.0
WR8				IAmb	IAmb	03 10 34.5	
	comp=Z,7.1nm,0.9s						
MBWA	Marble Bar	23.34	196	P	P	03 10 29.8	-0.4
MBWA				IAmb	IAmb	03 11 05.7	
	comp=Z,20nm,1.1s						
PMG	Port Moresby	23.44	118	LR	LR	03 23 00.2	
	comp=Z,49nm,19.0s,baz=168,slow=45						
PSA00	Pilbara Seismi	23.71	195	P	P	03 10 34.3	+0.6
PSA00				IAmb	IAmb	03 10 36.5	
	comp=Z,21nm,1.2s						
AS31	Alice Springs	26.03	164	P	P	03 10 54.9	-0.1
ASAR	Alice Springs	26.03	164	P	P	03 10 54.9	0.0
	comp=Z,1.2nm,0.5s,baz=345,slow=7.3,SNR=27						
ASAR				PcP	PcP	03 14 22.8	+0.5
	comp=Z,0.4nm,0.5s,baz=355,slow=1.4,SNR=4.4						
	comp=Z,1.2nm,0.5s						
ASAR	Alice Springs	26.03	164	P	P	03 10 55.0	0.0
ASAR				PcP	PcP	03 14 23.2	+0.9
CMAR	Chiang Mai Arr	31.69	304	LR	LR	03 24 46.3	
	comp=Z,15nm,20.6s,baz=65,slow=37						
MORW	Morawa	31.87	197	P	P	03 11 47.0	+0.2
FORT	Forrest	32.08	177	P	P	03 11 48.5	0.0
FORT				IAmb	IAmb	03 11 54.2	
	comp=Z,12nm,0.9s						
NWAO	Narrogin (SRO)	35.22	193	P	P	03 12 16.0	+0.1

BBOO	Buckleboo	35.30	166	P	P	03 12 16.3	-0.3
STKA	Stephens Creek	36.18	158	P	P	03 12 24.8	+0.6
	comp=Z,2.1nm,0.7s,baz=332,slow=12,SNR=3.8						
	comp=Z,2.1nm,0.7s						
STKA	Stephens Creek	36.18	158	P	P	03 12 24.3	+0.2
EVN	Everest	46.01	309	P	P	03 13 46.7	+0.9
EVN				IAmb	IAmb	03 13 59.8	
	comp=Z,5.2nm,1.4s						
HILR	Hailar Array B	48.27	354	P	P	03 14 02.4	+0.1
	comp=Z,2.6nm,0.6s,baz=178,slow=8.7,SNR=2.0						
	comp=Z,2.6nm,0.6s						
MKAR	Makanchi Array	59.18	326	P	P	03 15 21.3	-0.9
	comp=Z,1.1nm,0.5s,baz=119,slow=8.1,SNR=16						
	comp=Z,1.1nm,0.5s						
MKAR	Makanchi Array	59.18	326	P	P	03 15 21.2	-1.0
ZALV	Zalesovo Beam	62.42	334	P	P	03 15 44.7	+0.7
	comp=Z,0.4nm,0.3s,baz=137,slow=7.3,SNR=2.4						
ZALV				LR	LR	03 43 35.8	
	comp=Z,24nm,18.1s,baz=32,slow=37						
	comp=Z,0.4nm,0.3s						
KURBB	Kurchatov Arra	63.42	328	P	P	03 15 50.1	-0.6
	comp=Z,1.1nm,0.5s,baz=128,slow=5.8,SNR=9.3						
	comp=Z,1.1nm,0.5s						
KKAR	Karatay Array	64.59	318	P	P	03 15 57.4	-1.3
BVAR	Borovoye Array	68.99	328	P	P	03 16 27.1	+0.7
	comp=Z,0.4nm,0.5s,baz=134,slow=4.2,SNR=2.6						
	comp=Z,0.4nm,0.5s						
ABKAR	Akbulak array	73.63	321	P	P	03 16 54.6	+0.1
M13K	Dall Lake	79.16	28	P	P	03 17 24.0	-1.6
K15K	Wolf Creek Mou	80.52	27	P	P	03 17 34.5	+1.6
K15K				IAmb	IAmb	03 17 37.9	
	comp=Z,12nm,1.2s						
VNDA	Vanda	81.22	173	P	P	03 17 37.2	+0.9
	comp=Z,0.4nm,0.4s,baz=310,slow=6.3,SNR=1.9						
	comp=Z,0.4nm,0.4s						
VNDA	Vanda	81.22	173	P	P	03 17 37.9	+1.5
F17K	Baldwin Pennin	81.74	23	P	P	03 17 41.5	+2.2
F17K				IAmb	IAmb	03 18 24.5	
	comp=Z,9.5nm,1.4s						
H17K	Granite Mounta	81.89	24	P	P	03 17 42.4	+2.2
H17K				IAmb	IAmb	03 18 14.0	
	comp=Z,4.6nm,1.4s						
J18K	Innoko River	82.94	26	P	P	03 17 47.0	+1.3
J18K				IAmb	IAmb	03 18 19.3	
	comp=Z,3.3nm,1.1s						
C19K	Lookout Ridge	83.05	20	P	P	03 17 46.2	0.0
H19K	Roundabout Mou	83.44	24	P	P	03 17 50.2	+2.0
H19K				IAmb	IAmb	03 17 51.5	
	comp=Z,4.1nm,0.8s						
IMAR	Indian Mountai	84.62	24	P	P	03 17 54.1	-0.1
ILAR	Eielson Array	87.37	25	P	P	03 18 06.8	-1.0
	comp=Z,0.4nm,0.9s,baz=266,slow=6.3,SNR=1.8						
	comp=Z,0.4nm,0.9s						
C27K	Jago River	88.68	21	P	P	03 18 13.4	-0.5
C27K				IAmb	IAmb	03 18 54.9	
	comp=Z,5.3nm,1.4s						
BCAR	Beaver Creek A	89.62	27	P	P	03 18 19.2	+0.6

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*IDC **02** 03:10:39.3±13.0, 1°.67N×122°.07E, h262^{km}±150^{km}, mb3.2/5, mbtmp3.8/6, Error ellipse: s-maj=115.6km s-min=22.2km az=59.0*

ISC 02 03:10:38.2±1.1, **1°.7N**±0°.3×**122°.0E**±0°.7, **h250**^{km}, **n6**, σ**0^s.35**/6, **mb3.5**/5, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.95	170	P	P	03 14 52.0	+0.3
	3.0nm,0.9s,baz=356,slow=12,SNR=3.9						
WRA	Warramunga Arr	24.63	151	P	P	03 15 36.5	+0.2
	0.6nm,0.4s,baz=335,slow=9.5,SNR=12						
	0.6nm,0.4s						
ASAR	Alice Springs	27.69	156	P	P	03 16 03.6	0.0
	0.4nm,0.7s,baz=331,slow=8.7,SNR=5.8						
	0.4nm,0.7s						
STKA	Stephens Creek	38.16	153	P	P	03 17 33.5	-0.4
	3.3nm,0.7s,baz=326,slow=7.3,SNR=3.4						
	3.3nm,0.7s						
SONM	Songino Array	47.95	346	P	P	03 18 52.2	+0.2
	0.4nm,0.5s,baz=164,slow=5.8,SNR=2.3						
	0.4nm,0.5s						
MKAR	Makanchi Array	56.70	328	P	P	03 19 55.7	-0.2
	0.5nm,0.3s,baz=121,slow=8.9,SNR=12						
	0.5nm,0.3s						

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*NNC **02** 03:19:39.6±0.6, 42°.30N×76°.44E, h0^{km}, mb2.9, mpv2.9, Error ellipse: s-maj=3.5km s-min=2.4km az=0.0*
*KRNET **02** 03:19:39.5±0.1, 42°.35N×76°.44E, h24^{km}, mb2.3*
*SOME **02** 03:19:40.0, 42°.32N×76°.38E, h10^{km}*

ISC 02 03:19:39.5±1.1, **42°.31N**±0°.03×**76°.44E**±0°.02, **h11**^{km}±9^{km}, **n30**, σ**0^s.51**/55, **12C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOOM	Boomskoye usch	0.41	296	⇓*e*P	Pg	03 19 47.9	+0.2
BOOM				⇓*e*S	Sg	03 19 53.8	+0.6
KDJ	Kajisay	0.58	108	⇑*i*P	Pb	03 19 51.6	-0.1
KDJ				⇑*i*S	Sb	03 19 59.9	-0.2
KST	Kastek	0.81	335	P	Pb	03 19 55.5	-0.2
	1.3nm,0.1s						
KST				S	Sb	03 20 06.8	0.0
	16nm,0.2s						
KST	Kastek	0.81	335	*e*P	Pb	03 19 55.5	-0.2
	1.3nm,0.1s						
KST				*e*S	Sb	03 20 06.8	0.0
	16nm,0.2s						
TNSS	Tian-Shan	0.82	27	P	Pb	03 19 56.0	+0.1
	1.2nm,0.1s						
TNSS				S	Sb	03 20 07.3	+0.1
	4.8nm,0.2s						
TNSS	Tian-Shan	0.82	27	*e*P	Pb	03 19 56.0	+0.1
	1.2nm,0.1s						
TNSS				*e*S	Sb	03 20 07.3	+0.1
	4.8nm,0.2s						
MTBS	Maitube	0.82	359	P	Pb	03 19 55.9	+0.1
	10nm,0.1s						
MTBS				S	Sb	03 20 07.4	+0.4
	29nm,0.2s						
MTBS	Maitube	0.82	359	*e*P	Pb	03 19 55.9	+0.1
	10nm,0.1s						
MTBS				*e*S	Sb	03 20 07.4	+0.4
	29nm,0.2s						
MDOK	Medeo	0.96	27	Pg	Pb	03 19 58.5	+0.1
	4.5nm,0.2s						
MDOK				Lg	Lg	03 20 11.8	
	8.7nm,0.5s						
KNDC	Almaty	0.99	23	⇑P	Pg	03 19 58.4	0.0
	18nm,0.5s						
KNDC				⇓S	Sn	03 20 12.7	-0.8
	5.1nm,0.2s						
KOTS	Kotyrbulak	1.05	28	P	Pn	03 20 00.3	0.0
	4.4nm,0.3s						
KOTS				S	Sn	03 20 15.0	-0.1
	31nm,0.5s						
KOTS	Kotyrbulak	1.05	28	*e*P	Pn	03 20 00.3	0.0
	4.4nm,0.3s						
KOTS				*e*S	Sn	03 20 15.0	-0.1
	31nm,0.5s						
DGS	Degeres	1.05	332	P	Pb	03 19 59.8	0.0
	3.0nm,0.1s						
DGS				S	Sb	03 20 14.1	+0.3
	7.7nm,0.2s						
DGS	Degeres	1.05	332	*e*P	Pb	03 19 59.8	0.0
	3.0nm,0.1s						
DGS				*e*S	Sb	03 20 14.1	+0.3
	7.7nm,0.2s						
TARG	Taragay, Kyrgy	1.17	119	⇑*i*P	Pg	03 20 01.7	-0.3
TARG				⇑*i*S	Sg	03 20 17.2	0.0
JNKS	Jany-Kuch	1.38	206	⇑*e*P	Pn	03 20 05.3	+0.3
JNKS				⇑*e*S	Sn	03 20 23.9	+0.5
KTBS	Karatobe	1.41	7	P	Pg	03 20 06.6	0.0
	7.4nm,0.1s						
KTBS				S	Sg	03 20 25.5	+0.5
	0.2nm,0.1s						
PRZ	Przheval'sk	1.46	83	⇑*e*P	Pn	03 20 06.1	+0.1
PRZ				⇑*e*S	Sn	03 20 25.0	-0.3
KRBS	Karabastau	1.50	338	P	Pg	03 20 07.8	-0.4
	2.2nm,0.1s						
KRBS				S	Sg	03 20 27.6	0.0
	10nm,0.2s						
KRBS	Karabastau	1.50	338	*e*P	Pg	03 20 07.8	-0.4
	2.2nm,0.1s						
KRBS				*e*S	Sg	03 20 27.6	0.0
	10nm,0.2s						
SATY	Saty	1.63	62	P	Pg	03 20 10.6	-0.2
	1.1nm,0.1s						
SATY				S	Sg	03 20 32.4	+0.4
	32nm,0.1s						
ARLS	Aral	1.64	255	⇑*i*P	Pb	03 20 09.6	-0.2
ARLS				⇑*i*S	Sb	03 20 30.9	+0.3
SGDS	Sogindy	1.75	311	P	Pb	03 20 11.9	+0.2
	2.5nm,0.2s						
SGDS				S	Sg	03 20 35.0	-0.9
	7.0nm,0.3s						
KPKS	Kokpek	2.01	54	Pg	Pb	03 20 17.1	+0.9
	0.4nm,0.2s						
KPKS				Lg	Lg	03 20 43.8	
	12nm,0.2s						
KPKS	Kokpek	2.01	54	*e*P	Pb	03 20 17.1	+0.9
	0.4nm,0.2s						
KPKS				*e*S	Sg	03 20 43.8	-0.4
	12nm,0.2s						
UZB	Uzynbulak	2.08	65	Pg	Pb	03 20 17.3	0.0
	2.8nm,0.2s						
UZB				Lg	Lg	03 20 44.2	
	6.7nm,0.2s						
UZB	Uzynbulak	2.08	65	*e*P	Pb	03 20 17.3	0.0
	2.8nm,0.2s						
UZB				*e*S	Sb	03 20 44.2	+1.0
	6.7nm,0.2s						
MRKS	Merke	2.42	281	Pg	Pb	03 20 23.7	+0.6
	0.8nm,0.2s						
MRKS				Lg	Lg	03 20 55.1	
	6.6nm,0.3s						
MRKS	Merke	2.42	281	*e*P	Pb	03 20 23.6	+0.6
	0.8nm,0.2s						
MRKS				*e*S	Sg	03 20 55.1	-1.9
	6.6nm,0.3s						
PDGK	Podgornoye	2.46	65	⇓Pg	Pb	03 20 22.7	-1.2
	2.6nm,0.9s						
PDGK				⇑Lg	Lg	03 20 57.2	
	4.5nm,0.6s						

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*TAP **02** 03:36:34.6, 23°.79N×121°.57E, h27^{km}, ML3.5, B*

ISC 02 03:36:34.4±0.9, **23°.77N**±0°.02×**121°.61E**±0°.02, **h30**^{km}±4^{km}, **n101**, σ**0^s.77**/162, **4C-22D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHUL	Shoufeng	0.05	288	⇑*i*P	Pb	03 36 39.4	0.0
SHUL				*i* S	Sb	03 36 43.1	+0.3
TEGC	Jichi Village	0.09	226	*e*P	Pb	03 36 39.6	0.0
TEYL	Yanliau Villag	0.10	353	P	Pb	03 36 39.9	+0.3
TEYL				*e*S	Sb	03 36 44.2	+0.9
ESL	Shilin	0.17	284	⇓*i*P	Pb	03 36 39.8	-0.5
ESL				S	Sb	03 36 43.4	-0.9
EGFH	Guangfu	0.20	238	P	Pb	03 36 40.2	-0.4
EGFH				S	Sb	03 36 44.2	-0.5
HWA	Hwalien	0.20	358	P	Pb	03 36 40.7	+0.1
HWA				S	Sb	03 36 45.9	+1.0
WARBT	Fenglin Townsh	0.21	255	⇓*i*P	Pb	03 36 40.1	-0.6
WARBT				S	Sb	03 36 43.9	-1.2
ETM	Tongmen	0.22	330	⇓*i*P	Pb	03 36 40.5	-0.4
ETM				*i* S	Sb	03 36 45.0	-0.2
TWD	Chiawan	0.31	357	⇑*i*P	Pb	03 36 41.5	-0.4
TWD				S	Sb	03 36 47.0	0.0
HGSD	Ruisui	0.33	212	⇑*i*P	Pb	03 36 42.6	+0.4
HGSD				S	Sn	03 36 49.7	+0.8
EHYH	Wanrong	0.37	221	P	Pb	03 36 42.4	-0.4
EHY	Hungye	0.38	225	*e*P	Pb	03 36 42.1	-0.8
ETL	Fush Village	0.38	2	P	Pb	03 36 42.5	-0.5
NACB	Ninganchiao	0.40	358	P	Pb	03 36 42.5	-0.8
NACB	Ninganchiao	0.40	358	S	Sb	03 36 48.0	-1.3
NACB	Ninganchiao	0.40	358	*i* P	Pb	03 36 42.8	-0.5
NACB				S	Sb	03 36 48.5	-0.8
VWDT	VWDT	0.43	268	⇓*i*P	Pb	03 36 43.5	-0.2
VWDT				S	Sb	03 36 48.8	-1.3
OWD	Renai	0.44	294	⇓*i*P	Pb	03 36 43.3	-0.6
OWD				S	Sb	03 36 49.2	-1.3
ETLH	Xiulin Townshi	0.45	345	⇓P	Pb	03 36 43.4	-0.7
ETLH				*e*S	Sb	03 36 49.3	-1.4
YULB	Yu-li	0.48	217	P	Pn	03 36 45.7	+0.5
YULB	Yu-li	0.48	217	S	Sb	03 36 52.0	+0.7
YULB	Yu-li	0.48	217	⇓P	Pb	03 36 43.5	-0.9
YULB				S	Sb	03 36 50.4	-0.9
ECBN	Changbin	0.48	198	P	Pb	03 36 45.0	+0.5
ECBN				S	Sn	03 36 52.9	+0.3
WHF	Hehuan Shan	0.49	320	⇓*i*P	Pb	03 36 44.0	-0.9
WUSB	Renai	0.50	296	⇓*i*P	Pb	03 36 44.5	-0.4
TWF1	Yuli	0.51	215	⇓P	Pb	03 36 44.1	-0.8
EAHA	Aohua	0.57	12	*e*P	Pb	03 36 45.4	-0.5
EAHA				*e*S	Sb	03 36 54.3	+0.5
FUSS	Fushou	0.58	325	⇓P	Pb	03 36 45.8	-0.5
FUSS				*e*S	Sb	03 36 53.8	-0.6
SSLB	Suanglung	0.60	271	P	Pb	03 36 46.1	-0.4
SSLB	Suanglung	0.60	271	⇓*i*P	Pb	03 36 45.7	-0.8
SSLB				S	Sb	03 36 53.4	-1.3
CHKH	Chenggong	0.61	199	P	Pb	03 36 46.9	+0.2
CHKH				S	Sn	03 36 55.9	0.0
TWT	Tachien	0.62	320	⇓*i*P	Pb	03 36 46.6	-0.3
TWT				*e*S	Sb	03 36 54.5	-1.0
TDCB	Techi	0.63	319	⇓P	Pb	03 36 46.6	-0.4
TDCB				S	Sb	03 36 53.9	-1.9
FULB	Fuli	0.64	207	*e*P	Pb	03 36 47.1	0.0
FULB				*e*S	Sn	03 36 56.6	-0.1
SMLT	Sun Moon Lake	0.66	280	⇓*i*P	Pb	03 36 47.0	-0.5
SMLT				S	Sb	03 36 55.6	-0.9
ENA	Nanau	0.66	10	*e*P	Pb	03 36 47.0	-0.5
ENA				*e*S	Sb	03 36 56.3	-0.1
NNSB	Datong	0.69	342	⇓P	Pb	03 36 47.1	-0.8
NNSB				S	Sb	03 36 55.5	-1.7
NNS	Nan Shan	0.70	342	P	Pb	03 36 47.5	-0.6
NNS				S	Sb	03 36 56.4	-1.2
WHYT	Xinyi Township	0.70	264	P	Pb	03 36 47.9	-0.2
WHYT				S	Sb	03 36 56.9	-0.6
WCS	Beigang Elemen	0.70	294	⇓*i*P	Pb	03 36 47.6	-0.5
TYC	Yuchr	0.70	281	⇓*i*P	Pb	03 36 47.5	-0.6
TYC				S	Sb	03 36 56.6	-0.9
CHKT	Chengkung	0.71	199	P	Pb	03 36 48.5	+0.3
CHKT				S	Sn	03 36 58.5	+0.2
EOS4	EOS4	0.73	62	P	Pb	03 36 48.3	-0.1
EOS4				S	Sb	03 36 58.9	+0.9
LATG	Datong	0.76	354	⇓*i*P	Pb	03 36 48.2	-1.0
LATG				S	Sb	03 36 58.5	-0.9
ALS	Alishan	0.78	251	⇑*i*P	Pn	03 36 49.6	0.0
ALS				S	Sb	03 36 59.7	-0.5
WHP	Taichung City	0.79	310	P	Pb	03 36 49.3	-0.4
WHP				S	Sb	03 36 59.2	-0.8
ELDTW	Lidau	0.80	223	P	Pb	03 36 48.5	-1.3
WJS	Zhushan	0.81	274	P	Pn	03 36 50.2	+0.4
WJS				S	Sn	03 37 01.5	+0.7
EOS3	EOS3	0.82	52	*e*P	Pb	03 36 50.2	+0.1
ESAO	Su ao	0.83	15	*e*P	Pn	03 36 50.6	+0.6
EDH	Donghe	0.85	200	*e*P	Pb	03 36 49.4	-1.1
EDH				*e*S	Sb	03 37 02.0	+0.4
WNT	Mingjian	0.85	277	P	Pn	03 36 51.0	+0.6
WNT				*e*S	Sn	03 37 02.8	+0.9
EOS2	EOS2	0.86	41	P	Pb	03 36 51.2	+0.6
TWC	Suao	0.86	15	*e*P	Pb	03 36 50.3	-0.5
NDS	Dongshan	0.86	6	*e*P	Pn	03 36 51.5	+1.0
ENTT	Nioudou	0.86	357	*e*P	Pb	03 36 50.0	-0.9
CHN5	Tsauling	0.87	259	P	Pn	03 36 51.2	+0.5
CHN5				S	Sn	03 37 03.1	+0.6
YHNB	Yeheng	0.92	347	P	Pn	03 36 50.6	-0.8
YHNB	Yeheng	0.92	347	⇓*i*P	Pn	03 36 51.1	-0.3
NSK	Sanguang	0.93	346	⇓*i*P	Pn	03 36 51.2	-0.3
NSK				S	Sb	03 37 02.3	-1.7
TCU	Taichung	0.93	294	*e*S	Sn	03 37 05.6	+1.7
TWE	Neicheng	0.94	3	*e*P	Pb	03 36 52.2	0.0
TWQ1	Liyutan	0.96	307	⇓*i*P	Pb	03 36 52.7	+0.3
TWQ1				S	Sn	03 37 05.1	+0.6
NFF	Wufeng Townshi	0.97	332	*e*P	Pn	03 36 52.1	+0.1
NFF				*e*S	Sn	03 37 04.6	-0.2
LONT	Longtian	0.97	207	P	Pn	03 36 50.9	-1.1
STYH	Taoyuan	0.97	232	P	Pn	03 36 52.0	0.0
STYH				S	Sb	03 37 04.7	-0.5
FUSB	Fushanzhiwuyua	0.98	359	P	Pn	03 36 51.9	-0.3
FUSB				S	Sb	03 37 04.0	-1.5
WCKO	Fanlu	0.98	250	P	Pb	03 36 53.2	+0.4
WCKO				S	Sn	03 37 06.2	+1.1
WDLH	Douliu	0.99	265	*e*P	Pb	03 36 53.2	+0.3
WDLH				S	Sn	03 37 06.4	+1.3
NWLT	Wulai	1.00	354	P	Pn	03 36 51.9	-0.6
NSY	Sanyi	1.01	310	P	Pb	03 36 54.3	+1.0
NSY				S	Sn	03 37 07.8	+2.1
TPUB	Ta-pu	1.02	243	P	Pn	03 36 52.9	+0.3
TPUB	Ta-pu	1.02	243	S	Sn	03 37 07.5	+1.6
TPUB	Ta-pu	1.02	243	P	Pb	03 36 53.4	-0.1
TPUB				*e*S	Sn	03 37 06.8	+0.9
WCH1	Changhua City	1.02	287	*e*S	Sn	03 37 07.8	+1.8
NSTT	Nanjuang	1.02	327	P	Pb	03 36 53.4	0.0
NSTT				S	Sb	03 37 05.7	-0.8
LIOB	Emei	1.02	328	P	Pb	03 36 53.6	0.0
LIOB				S	Sn	03 37 06.8	+0.6
WTP	Ta-pu	1.05	240	*e*P	Pb	03 36 54.1	0.0
WTP				*e*S	Sb	03 37 08.2	+0.7
NMLH	Miaoli	1.07	316	*e*S	Sb	03 37 08.2	+0.3
TWGBT	Beinan	1.07	207	P	Pn	03 36 52.0	-1.4
TWGBT	Beinan	1.07	207	*e*P	Pn	03 36 51.8	-1.6
TWG	Pinlang	1.07	208	*e*P	Pn	03 36 52.7	-0.7
KSHI	Guanxi Townshi	1.07	338	*e*P	Pb	03 36 54.7	+0.3
CHY	Chiayi	1.12	256	*e*P	Pb	03 36 55.4	+0.2
CHY				*e*S	Sb	03 37 09.5	+0.1
TWK	Hsinying	1.15	244	*e*P	Pb	03 36 55.4	-0.2
TWK				*e*S	Sb	03 37 11.0	+0.7
CHN1	Nanshi	1.15	240	*e*P	Pb	03 36 55.8	0.0
CHN1				*e*S	Sb	03 37 11.3	+0.9
SNST	Tainan City	1.16	242	*e*P	Pb	03 36 56.1	+0.3
SNST				*e*S	Sb	03 37 10.4	-0.2
SGST	Jiashian	1.17	234	*e*P	Pn	03 36 55.2	+0.5
SGST				*e*S	Sb	03 37 11.2	+0.4
HSN	Hsinchu	1.18	330	*e*P	Pb	03 36 56.4	+0.2
HSN				*e*S	Sb	03 37 11.8	+0.7
TIPB	Shuangxi	1.21	9	*e*P	Pn	03 36 55.9	+0.6
WSL	Shuilin Townsh	1.29	259	*e*P	Pb	03 36 57.5	-0.6
WSL				*e*S	Sb	03 37 13.9	-0.4
ECL	Taimali	1.32	207	*e*P	Pn	03 36 56.3	-0.5
SXI1	Grass Mountain	1.34	10	*e*P	Pb	03 36 59.0	+0.1
SXI1				*e*S	Sb	03 37 15.5	-0.2
CHN8	Yiju	1.35	252	*e*S	Sb	03 37 16.5	+0.5
SCST	Cishan	1.35	230	*e*P	Pb	03 36 59.4	+0.3
YM01	YM01	1.37	358	*e*P	Pb	03 36 58.7	-0.7
MASBT	Mashibuluo	1.47	218	*e*P	Pn	03 36 59.3	+0.5
MASBT				*e*S	Sb	03 37 18.4	-0.8
EAST	Anshuo	1.55	207	*e*P	Pn	03 37 00.9	+0.9
SCZT	Fangliau	1.67	213	*e*P	Pb	03 37 03.5	-1.0
SCZT				*e*S	Sb	03 37 25.1	0.0
LYUB	Lan-yu	1.76	181	*e*P	Pn	03 37 01.2	-1.7
LYUB				*e*S	Sn	03 37 23.1	-1.3
PHUB	P'eng-hu	1.89	263	*e*P	Pn	03 37 04.9	+0.3
PHUB				*e*S	Sn	03 37 27.7	+0.3

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*IDC **02** 03:55:38.4±1.9, 9°.35S×113°.04E, h0^{km}, mb3.9/8, mbtmp3.9/9, ML3.8/1, Error ellipse: s-maj=81.5km s-min=18.2km az=49.0*
*NEIC **02** 03:55:42.8±1.6, 9°.70S±0°.09×112°.90E±0°.07, h35^{km}±2^{km}, mb4.1/11, Error ellipse: s-maj=15.0km s-min=12.0km az=181.0*
*DJA **02** 03:55:43.0±0.7, 10°S±4°×11°3E±°, h18^{km}±8^{km}, M4.2/25, mb4.3/5, MLv4.1/25*

ISC 02 03:55:44.6±1.0, **9°.68S**±0°.06×**112°.95E**±0°.04, **h55**^{km}±11^{km}, **n70**, σ**1^s.45**/80, **mb4.0**/12, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMJI	Gumukmas	1.48	19	P	Pn	03 56 06.7	-2.2
JAGI	Jajag, Banyuwa	1.69	45	Pn	Pn	03 56 10.4	-1.3
JAGI	Jajag, Banyuwa	1.69	45	P	Pn	03 56 11.1	-0.7
JAGI	Jajag, Banyuwa	1.69	45	P	Pn	03 56 10.7	-1.1
JAGI				S	Sn	03 56 32.4	+0.1
BYJI	Banyuwangi	2.01	44	P	Pn	03 56 16.6	+0.4
BYJI				S	Sn	03 56 41.7	+1.5
BLJI	Banyuglugur	2.02	19	P	Pn	03 56 16.6	+0.3
BLJI				S	Sn	03 56 41.2	+0.7
SNJI	Sawahan-Nganju	2.22	328	P	Pn	03 56 19.3	+0.1
SNJI				S	Sn	03 56 47.1	+1.6
SJI	Sawahan	2.25	329	P	Pn	03 56 18.7	-0.9
SJI				S	Sn	03 56 47.5	+1.2
ABJI	Asem Bagus	2.26	34	P	Pn	03 56 19.0	-0.6
ABJI				S	Sn	03 56 48.3	+2.0
PCJI	Pacitan	2.29	310	P	Pn	03 56 18.6	-1.3
PCJI				S	Sn	03 56 46.9	0.0
RTBI	Rangdo, Negare	2.31	59	P	Pn	03 56 20.2	-0.1
RTBI				S	Sn	03 56 48.3	+0.7
IGBI	Denpasar	2.33	69	P	Pn	03 56 21.7	+1.2
DNP	Denpasar	2.45	66	P	Pn	03 56 22.8	+0.7
WOJI	Wonogiri, Jawa	2.71	312	P	Pn	03 56 25.0	-0.7
WOJI				S	Sn	03 56 58.3	+1.0
NGJI	Ngawi	2.73	327	P	Pn	03 56 27.7	+1.8
NGJI				S	Sn	03 57 04.8	+7.1
SRBI	Singaraja	2.74	55	P	Pn	03 56 27.0	+0.9
GRJI	Gresik	2.78	350	P	Pn	03 56 26.0	-0.7
KMMI	Kalianget	2.80	21	P	Pn	03 56 27.0	+0.1
KHKI	Kahang-Kahang	2.94	64	P	Pn	03 56 30.2	+1.4
UGM	Wanagama	2.97	306	Pn	Pn	03 56 28.3	-1.0
UGM	Wanagama	2.97	306	P	Pn	03 56 29.4	+0.1
UGM	Wanagama	2.97	306	P	Pn	03 56 28.3	-1.0
TBJI	Tambak Boyo	3.04	339	P	Pn	03 56 30.5	+0.3
KLNI	Mataram	3.35	68	P	Pn	03 56 35.1	+0.6
SMRI	Semarang	3.60	316	Pn	Pn	03 56 36.2	-1.7
SMRI	Semarang	3.60	316	P	Pn	03 56 37.0	-0.9
BWJI	Bawean	3.81	356	P	Pn	03 56 41.2	+0.4
TWSI	Taliwang, Sumb	4.00	77	P	Pn	03 56 44.9	+1.6
KPJI	Karang Pucung	4.60	300	P	Pn	03 56 52.6	+0.9
CMJI	Cimerak	4.83	293	P	Pn	03 56 54.0	-0.7
PLAI	Plampang	4.84	80	P	Pn	03 56 55.9	+1.0
PLAI	Plampang	4.84	80	P	Pn	03 56 55.9	+1.0
DBNI	Kabupaten Domp	5.43	78	P	Pn	03 57 04.6	+1.6
	0.1nm14nm,0.7s						
BBJI	Bungbulang	5.68	292	P	Pn	03 57 07.1	+0.6
BBJI	Bungbulang	5.68	292	P	Pn	03 57 07.3	+0.8
LBFI	Labuhan Bajo,	6.96	81	P	Pn	03 57 20.9	-3.1
KAPI	Kappang	8.19	56	Pn	Pn	03 57 40.4	-0.4
BSSI	Bau Bau, Buton	8.26	65	P	Pn	03 57 42.4	+0.6
	14nm,0.5s						
EDFI	Ende, Flores	8.68	85	P	Pn	03 57 46.4	-1.3
GIRL	Giralia	12.95	175	Pn	Pn	03 58 44.4	-1.5
MBWA	Marble Bar	13.15	151	Pn	Pn	03 58 45.8	-2.9
PSA00	Pilbara Seismi	13.56	152	Pn	Pn	03 58 52.0	-2.3
PSA00	Pilbara Seismi	13.56	152	P	Pn	03 58 54.8	+0.6
FITZ	Fitzroy Crossi	14.89	126	Pn	Pn	03 59 11.2	-0.7
	0.3nm,0.3s,baz=319,slow=11,SNR=9.2						
FITZ				Sn	Sn	04 01 46.2	-9.5
	0.7nm,0.3s,baz=3.1,slow=20,SNR=11						
	1.3nm,0.4s						
FITZ	Fitzroy Crossi	14.89	126	Pn	Pn	03 59 09.8	-2.1
FITZ	Fitzroy Crossi	14.89	126	P	Pn	03 59 13.0	+1.1
KNRA	Kununurra	16.54	113		Pn	03 59 33.3	+0.4
MEEK	Meekatharra	17.70	163	P	P	03 59 49.2	+1.6
MTN	Manton Dam	18.11	102		Pn	03 59 53.1	+0.7
MTN				IAmb	IAmb	04 00 08.6	
	comp=Z,14nm,1.3s						
FAKI	Fak Fak	20.32	72	P	P	04 00 15.3	-1.0
FAKI				IAmb	IAmb	04 00 15.8	
	comp=Z,28nm,1.4s						
WB0	Warramunga Arr	23.01	118	P	P	04 00 43.9	-1.1
WRA	Warramunga Arr	23.03	119	P	P	04 00 46.0	+0.7
	comp=Z,0.8nm,0.7s,baz=293,slow=12,SNR=6.6						
	comp=Z,0.8nm,0.7s						
WRAB	Tennant Creek	23.04	119	P	P	04 00 47.4	+2.1
WRAB				IAmb	IAmb	04 01 13.0	
	comp=Z,6.8nm,1.3s						
WR8	Warramunga Arr	23.18	119	P	P	04 00 46.1	-0.6
WR8				IAmb	IAmb	04 00 52.0	
	comp=Z,7.1nm,1.2s						
ASAR	Alice Springs	24.38	127	P	P	04 01 00.1	+2.3
	comp=Z,1.6nm,0.7s,baz=305,slow=9.0,SNR=18						
	comp=Z,1.6nm,0.7s						
COEN	Coen	29.88	101	P	P	04 01 49.0	+1.7
COEN				IAmb	IAmb	04 01 51.0	
	comp=Z,8.0nm,1.3s						
CMAR	Chiang Mai Arr	31.19	334	P	P	04 01 57.8	-0.9
	comp=Z,0.8nm,0.3s,baz=155,slow=8.7,SNR=5.6						
	comp=Z,0.8nm,0.3s						
MJAR	Matsushiro Arr	51.75	26	P	P	04 04 44.8	-1.8
	comp=Z,4.2nm,1.1s,baz=198,slow=8.9,SNR=2.8						
	comp=Z,4.2nm,1.1s						
SONM	Songino Array	57.55	355	P	P	04 05 28.6	+0.1
	comp=Z,0.7nm,0.4s,baz=175,slow=8.2,SNR=5.2						
	comp=Z,0.7nm,0.4s						
SONM	Songino Array	57.55	355	P	P	04 05 27.8	-0.8
SONM				IAmb	IAmb	04 05 28.6	
	comp=Z,1.5nm,1.0s						
MKAR	Makanchi Array	62.52	337	P	P	04 06 02.0	-0.5
	comp=Z,1.4nm,0.5s,baz=151,slow=7.6,SNR=27						
	comp=Z,1.4nm,0.5s						

MKAR	Makanchi Array	62.52	337	P	P	04 06 01.9	-0.6
KKAR	Karatay Array	65.21	327	P	P	04 06 20.5	+0.2
KURBB	Kurchatov Arra	67.09	337	P	P	04 06 31.4	-0.6
	comp=Z,0.5nm,0.7s,baz=159,slow=5.9,SNR=3.3						
	comp=Z,0.5nm,0.7s						
KURK	Kurchatov	67.13	337	P	P	04 06 31.7	-0.6
KURK				IAmb	IAmb	04 06 47.9	
	comp=Z,4.4nm,1.4s						
ZALV	Zalesovo Beam	67.71	342	P	P	04 06 34.9	-1.0
	comp=Z,1.0nm,0.6s,baz=149,slow=5.2,SNR=5.2						
	comp=Z,1.0nm,0.6s						
ZALV	Zalesovo Beam	67.71	342	P	P	04 06 35.7	-0.2
AB31	Akbulak array	74.78	327	P	P	04 07 18.8	+0.1
ABKAR	Akbulak array	74.78	327	P	P	04 07 18.9	+0.2
ARTI	Arti	79.68	333	P	P	04 07 46.1	0.0

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*IDC **02** 04:00:42.0±1.0, 36°.46N×143°.27E, h0^{km}, mb3.7/7, mbtmp3.8/10, ML3.8/2, MS2.4/1, Error ellipse: s-maj=27.9km s-min=20.2km az=100.0*

*NIED **02** 04:00:46.2, 36°.59N×143°.13E, h55^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.09; $M_{\theta\theta}$0.83; $M_{\phi\phi}$1.26; $M_{r\theta}$0.87; $M_{\theta\phi}$1.72; $M_{\phi r}$1.06; Fault plane solution: $M_0$2.79000×10^{14} NP1:ϕ_s43.00000°, δ30.00000°, λ-87.00000°. NP2:ϕ_s220.00000°, δ60.00000°, λ-92.00000°.*

*JMA **02** 04:00:46.2±0.2, 36°.6N±0°.7×14°3E±°, h55^{km}, MV3.7/26, FAR E OFF CENTRAL HONSHU*

*NEIC **02** 04:00:47.3±1.2, 36°.52N±0°.09×143°.1E±0°.1, h30^{km}±4^{km}, mb4.4/17, Error ellipse: s-maj=16.6km s-min=12.3km az=120.0*

ISC 02 04:00:46.1±0.8**, 36°.56N**±0°.05×**143°.24E**±0°.07**, h29**^{km}**, n51,** σ**1^{s}84**/58**, mb4.3**/16**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	2.03	286	eS	Sn	04 01 40.2	-2.7
JFK	Kawauchi	2.06	294	eP	Pn	04 01 18.0	-0.8
JFK				eS	Sn	04 01 41.3	-2.2
JHO	Hitachi	2.15	272	eP	Pn	04 01 19.3	-0.7
JHO				eS	Sn	04 01 43.6	-2.2
JHYU	Hitachinakayam	2.15	265	eS	Sn	04 01 43.5	-2.3
JOTO	OTAMA OYAMA	2.53	294	P	Pn	04 01 25.4	+0.1
JOTO				eS	Sn	04 01 54.1	-1.0
BSO1	Boso 1	2.65	225	eP	Pn	04 01 26.4	-0.1
JMK	Ichinoseki	2.87	327	P	Pn	04 01 29.4	-0.5
JMK				eS	Sn	04 02 01.6	-1.9
JAG	Ashikaga	3.06	269	P	Pn	04 01 32.4	-0.1
JYK	Kaneyama	3.28	317	P	Pn	04 01 35.6	0.0
JOM	Ohasama	3.29	333	eP	Pn	04 01 35.2	-0.4
JOM				eS	Sn	04 02 11.6	-2.2
JRY	Ryogami san	3.55	262	eP	Pn	04 01 38.9	-0.4
JANG	Nango	4.04	341	eS	Sn	04 02 28.2	-4.0
MJAR	Matsushiro Arr	4.05	271	Pn	Pn	04 01 46.0	-0.2
	2.1nm,0.3s,baz=96,slow=11,SNR=9.0						
MJAR				Sn	Sn	04 02 31.5	-1.2
	0.2nm,0.3s,baz=124,slow=11,SNR=4.1						
MJAR	Matsushiro Arr	4.05	271		Pn	04 01 45.5	-0.7
MAJO	Matsushiro	4.06	271	Pn	Pn	04 01 46.9	+0.7
MJB9	Matsu-Tunnel	4.06	271	Pn	Pn	04 01 46.2	-0.1
JSD	Sado	4.24	292	Pn	Pn	04 01 48.8	+0.1
JHJ2	Mitsune	4.45	220	Pn	Pn	04 01 50.7	-0.9
JHJ	Hachijo jima 2	4.46	221	Pn	Pn	04 01 49.2	-2.6
	6.4nm,0.3s,baz=253,slow=17,SNR=1.9						
JHJ				Sn	Sn	04 02 37.9	-4.9
	11nm,0.3s,baz=52,slow=21,SNR=1.6						
	138nm,0.9s						
JTM	Tenmabayashi	4.55	339	Pn	Pn	04 01 52.1	-0.8
JGF	Kuroka	4.86	260	Pn	Pn	04 01 59.3	+1.9
ERM	Erimo	5.44	359	Pn	Pn	04 02 02.9	-2.3
JKA	Kamikawa-asahi	7.56	356	Pn	Pn	04 02 32.6	-1.7
ASAJ	Asahikawa	7.56	356	Pn	Pn	04 02 33.6	-0.7
	2.0nm,0.3s,baz=224,slow=12,SNR=9.3						
ASAJ				Sn	Sn	04 03 53.3	-5.7
	1.0nm,0.3s,baz=208,slow=33,SNR=2.3						
	5.7nm,0.3s						
PETK	Petropavlovsk-	19.40	27	LR	LR	04 12 27.1	
	comp=Z,11nm,21.6s,baz=276,slow=36						
HILR	Hailar Array B	21.41	315	P	P	04 05 31.9	+0.3
	0.7nm,0.4s,baz=116,slow=13,SNR=2.5						
	0.7nm,0.4s						
L16K	Owhat River	43.21	36	P	P	04 08 45.0	+0.8
K17K	Iditarod	43.90	34	P	P	04 08 50.8	+1.0
G18K	Tagagawik	44.31	30	P	P	04 08 53.9	+0.8
E19K	Redstone River	45.19	28	P	P	04 09 01.7	+1.7
E19K				IAmb	IAmb	04 09 37.7	
	comp=Z,4.4nm,1.1s						
B20K	Meade River	45.81	24	P	P	04 09 06.6	+1.8
B21K	Ikpikpuk River	46.58	25	P	P	04 09 12.7	+1.8
B21K				IAmb	IAmb	04 09 14.1	
	comp=Z,8.2nm,1.1s						
D22K	Ayikyak River	47.13	26	P	P	04 09 16.8	+1.6
D22K				IAmb	IAmb	04 09 59.9	
	comp=Z,12nm,1.4s						
E22K	Anaktuvuk Pass	47.34	27	P	P	04 09 18.9	+2.0
E22K				IAmb	IAmb	04 09 39.2	
	comp=Z,4.3nm,1.3s						
KURBB	Kurchatov Arra	47.45	309	P	P	04 09 19.0	+1.1
	comp=Z,0.5nm,0.6s,baz=81,slow=7.3,SNR=5.2						
	comp=Z,0.5nm,0.6s						
C23K	Itkillik River	47.99	25	P	P	04 09 23.9	+2.0
C23K				IAmb	IAmb	04 09 47.4	
	comp=Z,9.1nm,1.5s						
SML	Sawmill	48.50	36	P	P	04 09 27.6	+1.5
SCM	Sheep Creek Mo	48.98	36	P	P	04 09 29.9	+0.2
ILAR	Eielson Array	49.11	32	P	P	04 09 31.5	+0.9
	comp=Z,0.7nm,0.7s,baz=260,slow=6.2,SNR=11						
	comp=Z,0.7nm,0.7s						
D25K	Kavik River	49.42	26	P	P	04 09 35.0	+2.0
D25K				IAmb	IAmb	04 09 35.5	
	comp=Z,3.2nm,0.8s						
C27K	Jago River	50.37	26	P	P	04 09 42.2	+2.1
C27K				IAmb	IAmb	04 09 44.2	
	comp=Z,4.4nm,1.4s						
I28M	Miner Creek	52.01	31	P	P	04 09 54.1	+1.5
G29M	Pine Creek	52.62	29	P	P	04 09 59.4	+2.4
G29M				IAmb	IAmb	04 10 36.9	
	comp=Z,4.8nm,1.3s						
F30M	Barrier River	53.39	28	P	P	04 10 05.5	+2.9
F30M				IAmb	IAmb	04 10 30.4	
	comp=Z,4.8nm,1.3s						
INK	Inuvik	54.13	27	P	P	04 10 08.2	+0.2
WRA	Warramunga Arr	56.83	190	P	P	04 10 27.1	-0.8
	comp=Z,0.8nm,0.7s,baz=12,slow=7.6,SNR=4.8						
	comp=Z,0.8nm,0.7s						
ABKAR	Akbulak array	59.36	311	P	P	04 10 45.6	+0.2
ASAR	Alice Springs	60.55	190	P	P	04 10 53.7	-0.1
	comp=Z,0.4nm,0.5s,baz=2.3,slow=7.3,SNR=5.1						
	comp=Z,0.4nm,0.5s						
AKASG	Malin Array Be	75.56	323	P	P	04 12 28.9	+1.1
	comp=Z,0.7nm,0.5s,baz=47,slow=5.6,SNR=2.9						
	comp=Z,0.7nm,0.5s						
TXAR	Lajitas Array	89.23	53	P	P	04 13 40.6	+1.0
	comp=Z,0.3nm,0.6s,baz=305,slow=4.4,SNR=3.5						
	comp=Z,0.3nm,0.6s						
TXAR	Lajitas Array	89.23	53	P	P	04 13 40.9	+1.3

IDC 02 04:06:19.2±3.1**, 33°.44S**×**178°.13W, h0**^{km}**, mb3.9**/3**, mbtmp3.9**/4**, ML3.6**/1**, Error ellipse: s-maj=74.0km s-min=36.2km az=121.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.17	217	Pn	Pn	04 07 52.0	+0.4
	1.5nm,0.3s,baz=251,slow=4.5,SNR=17						
URZ				Sn	Sn	04 09 02.5	-0.3
	7.2nm,0.3s,baz=172,slow=21,SNR=18						
	12nm,1.1s						
ASAR	Alice Springs	42.93	270	P	P	04 14 19.9	-0.1
	1.4nm,0.5s,baz=112,slow=7.3,SNR=5.1						
	1.4nm,0.5s						
WRA	Warramunga Arr	44.19	275	P	P	04 14 29.6	-0.5
	0.7nm,0.5s,baz=117,slow=7.5,SNR=8.7						
	0.7nm,0.5s						
FITZ	Fitzroy Crossi	52.31	272	P	P	04 15 33.4	+0.5
	1.1nm,0.8s,baz=112,slow=5.4,SNR=1.3						
	1.1nm,0.8s						
FINES	FINESS Array B	147.94	338	PKPbc	PKPbc	04 26 04.9	-0.8
	2.2nm,0.8s,baz=56,slow=3.5,SNR=6.1						

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*IDC **02** 04:14:07.6±2.5, 8°.47S×120°.91E, h178^{km}±31^{km}, mb3.8/1, mbtmp3.8/6, Error ellipse: s-maj=108.5km s-min=24.5km az=57.0*

*DJA **02** 04:14:08.3±0.5, 8°S±4°×12°1E±°, h161^{km}±6^{km}, M3.6/11, MLv3.6/11*

ISC 02 04:14:06.5±1.0**, 8°.50S**±0°.06×**120°.97E**±0°.05**, h150**^{km}**, n18,** σ**3^{s}13**/26**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDFI	Ende, Flores	0.75	110	P	Pn	04 14 33.4	+3.9
LBFI	Labuhan Bajo,	1.07	271	P	Pn	04 14 35.0	+3.1
LBFI				S	Sn	04 14 54.5	+3.3
WSI	Waingapu	1.34	210	P	Pn	04 14 37.0	+2.6
WSI				S	Sn	04 15 00.3	+4.4
BASI	Baing, Sumba	1.75	193	P	Pn	04 14 41.4	+2.6
WBSI	Waikabubak, Su	1.93	234	P	Pn	04 14 42.6	+1.7
WBSI				S	Sn	04 15 09.3	+2.0
BSSI	Bau Bau, Buton	2.39	348	P	Pn	04 14 47.1	+0.8
DBNI	Kabupaten Domp	2.63	270	P	Pn	04 14 50.7	+1.4
DBNI				S	Sn	04 15 23.0	+0.7
BATI	Baumata	3.15	123	P	Pn	04 14 59.3	+3.4
	25nm,0.5s,baz=270,slow=2.0,SNR=2.0						
BATI				S	Sn	04 15 34.9	+0.9
	33nm,0.4s,baz=106,slow=19,SNR=1.9						
BATI	Baumata	3.15	123	P	Pn	04 14 59.5	+3.7
PLAI	Plampang	3.18	264	P	Pn	04 14 57.5	+1.4
PLAI				S	Sn	04 15 34.7	+0.2
SOEI	Soe	3.48	111	P	Pn	04 15 04.1	+3.9
KAPI	Kappang	3.67	341	P	Pn	04 15 03.8	+1.3
	7.2nm,0.3s,baz=163,slow=14,SNR=12						
TWSI	Taliwang, Sumb	4.05	266	P	Pn	04 15 08.0	+0.5
KLNI	Mataram	4.83	271	P	Pn	04 15 18.6	+0.9
FITZ	Fitzroy Crossi	10.57	155	P	Pn	04 16 34.6	+0.5
	1.8nm,0.8s,baz=341,slow=10,SNR=2.0						
FITZ				S	Sn	04 18 26.9	-4.1
	2.9nm,0.5s,baz=219,slow=21,SNR=7.3						
WRA	Warramunga Arr	17.23	133	P	P	04 17 56.9	-0.5
	0.6nm,0.5s,baz=309,slow=12,SNR=14						
WRA				S	S	04 21 00.3	-9.1
	0.4nm,0.5s,baz=314,slow=24,SNR=4.6						
ASAR	Alice Springs	19.52	142	P	P	04 18 21.9	-0.4
	1.1nm,0.3s,baz=332,slow=12,SNR=16						
STKA	Stephens Creek	30.14	143	P	P	04 20 01.7	-0.7
	1.7nm,0.5s,baz=324,slow=8.5,SNR=4.1						
	1.7nm,0.5s						

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*PRU **02** 04:23:40.8, 41°.87N×19°.55E, h176^{km}*

*BEO **02** 04:23:55.0±0.3, 43°.27N×18°.01E, h12^{km}±2^{km}, ML3.8/21*

*PDG **02** 04:23:55.3±0.0, 43°.19N×18°.05E, h14^{km}, MD3.9/13, ML3.9/13, Error ellipse: s-maj=0.1km s-min=0.1km az=90.0*

*RHSSO **02** 04:23:55.6±0.3, 43°.23N×18°.07E, h9^{km}, ML3.8/6*

ISC 02 04:23:55.2±1.0**, 43°.23N**±0°.02×**18°.07E**±0°.01**, h12**^{km}±8^{km}**, n121,** σ**1^{s}49**/194**, 24C-14D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLINJ	Klinje	0.39	99	ePg	Pg	04 24 03.1	+0.2
KLINJ				eSg	Sb	04 24 09.5	-0.4
STON	Ston	0.45	217	i Pg	Pg	04 24 03.5	-0.5
STON				Sg	Sg	04 24 10.2	+0.2
STON	Ston	0.45	217	ePg	Pg	04 24 03.5	-0.5
STON				eSg	Sg	04 24 10.2	+0.2
BRY	Bratogost	0.48	133	⇑iPg	Pg	04 24 04.2	-0.4
BRY				i Sg	Sg	04 24 11.7	+0.7
TREB	Trebinje	0.56	158	⇑iPg	Pg	04 24 05.4	-0.6
TREB				eSg	Sb	04 24 14.4	-0.3
DBRK	Dubrovnik	0.56	174	ePg	Pg	04 24 05.8	-0.4
DBRK				Sg	Sg	04 24 14.1	+0.4
UPM	Unac-Piva	0.61	92	ePg	Pg	04 24 07.1	-0.1
UPM				i Sg	Sb	04 24 17.1	+0.5
RICI	Ricice	0.73	291	i Pg	Pg	04 24 08.6	-0.7
RICI				Sg	Sg	04 24 19.2	+0.3
MAKA	Makarska	0.77	275	i Pg	Pg	04 24 09.0	-1.0
MAKA				Sg	Sg	04 24 20.2	+0.1
NKME	Niksic	0.80	125	⇓iPg	Pg	04 24 10.0	-0.7
NKME				eSg	Sb	04 24 22.5	+0.7
HCY	Herceg Novi	0.84	158	⇑iPg	Pg	04 24 10.5	-1.0
HCY				i Sg	Sb	04 24 23.4	+0.4
CEME	Cevo	0.93	137	⇓iPg	Pb	04 24 12.3	-0.9
CEME				eSg	Sn	04 24 26.6	-0.7
PLE	Pljevlja	0.97	84	⇑iPg	Pb	04 24 13.7	-0.3
PLE				i Sg	Sn	04 24 29.3	+0.8
LSTV	Lastovo	0.98	242	ePg	Pb	04 24 12.7	-1.4
LSTV				Sg	Sb	04 24 26.8	-0.1
RUDO	Rudo	1.03	67	ePg	Pb	04 24 14.1	-0.8
RUDO				eSg	Sb	04 24 28.2	-0.1
BUM	Brajici-Budva	1.11	146	⇑iPg	Pb	04 24 15.4	-1.0
BUM				i Sg	Sn	04 24 32.7	+0.8
KOME	Kolasin	1.13	109	⇑iPg	Pb	04 24 16.2	-0.5
KOME				eSg	Sn	04 24 34.1	+1.8
BBLS	Lazi&#263i	1.16	56	ePg	Pn	04 24 17.4	+0.1
BBLS				eSg	Sn	04 24 33.2	+0.1
HVAR	Hvar	1.18	268	ePg	Pn	04 24 16.6	-0.9
HVAR				Sg	Sn	04 24 33.2	-0.3
PDG	Podgorica	1.19	132	⇓P	Pn	04 24 16.5	-1.1
PDG				⇑S	Sg	04 24 34.7	+1.3
PDG	Podgorica	1.19	132	ePg	Pn	04 24 16.4	-1.1
PDG				eSg	Sg	04 24 34.6	+1.2
PDG	Podgorica	1.19	132	ePg	Pn	04 24 16.2	-1.3
PDG				i Sg	Sg	04 24 35.5	+2.1
DRME	Dracevica, Mon	1.33	141	⇓iPg	Pn	04 24 19.5	0.0
DRME				eSg	Sg	04 24 40.1	+2.1
IVA	Berane	1.39	104	⇑iPg	Pb	04 24 21.0	-0.1
IVA				i Sg	Sg	04 24 42.0	+2.2
SJES	Sjenica	1.39	88	ePg	Pg	04 24 22.0	0.0
SJES				eSg	Sg	04 24 41.2	+1.1
KIJV	Kijevo	1.43	303	ePn	Pn	04 24 21.2	+0.2
KIJV				Sg	Sb	04 24 40.5	+0.5
PVY	Plav	1.53	114	ePg	Pb	04 24 23.3	-0.2
PVY				i Sg	Sg	04 24 45.3	+0.9
ULC	Ulcinj	1.54	145	ePg	Pb	04 24 23.0	-0.6
ULC				i Sg	Sg	04 24 45.0	+0.4
IVAS	Ivanjica	1.56	76	ePg	Pn	04 24 23.1	+0.3
IVAS				eSg	Sb	04 24 44.1	+0.4
BLY	Banja Luka	1.65	338	⇑iPn	Pb	04 24 24.7	-0.7
BLY				eSn	Sb	04 24 45.7	-0.4
BLY	Banja Luka	1.65	338	ePn	Pb	04 24 25.0	-0.4
BLY				eSn	Sn	04 24 45.1	+0.1
TEKS	Tekeris	1.69	38	ePn	Pn	04 24 24.1	-0.4
TEKS				eSn	Sn	04 24 46.2	+0.1
ZIRJ	Zirje	1.81	284	ePn	Pb	04 24 27.3	-1.0
ZIRJ				Sn	Sb	04 24 51.9	+0.9
MORI	Morici	1.83	291	i Pn	Pb	04 24 27.6	-1.0
MORI				Sn	Sb	04 24 50.7	-0.7
TRUS	Trudelj	1.96	59	ePn	Pn	04 24 28.3	0.0
TRUS				eSn	Sn	04 24 52.3	-0.5
GRUS	Gruza	2.04	70	ePn	Pn	04 24 29.8	+0.6
GRUS				eSn	Sn	04 24 55.5	+0.9
GOCS	Kraljevo Serbi	2.07	80	ePn	Pn	04 24 30.4	+0.5
GOCS				eSn	Sb	04 24 57.2	-1.3
SELS	Selova	2.23	89	ePn	Pn	04 24 32.9	+0.9
SELS				eSn	Sn	04 25 00.8	+1.4
AVAS	Avala Beograd	2.29	50	ePn	Pn	04 24 31.8	-1.0
AVAS				eSn	Sn	04 25 01.0	0.0
FRGS	Fruska Gora	2.30	32	ePn	Pn	04 24 32.1	-0.8
FRGS				eSn	Sn	04 24 59.8	-1.3
DUGI	Dugi Otok	2.31	290	ePn	Pb	04 24 35.1	-1.7
DUGI				Sn	Sb	04 25 03.4	-1.9
VIRC	Vir	2.43	297	ePn	Pn	04 24 36.3	+1.7
VIRC				Sn	Sb	04 25 06.6	-2.0
SVIS	Svilajnac	2.50	65	eSn	Sn	04 25 04.9	-1.2
BOVS	Bovan	2.68	80	⇑P	Pn	04 24 38.7	+0.6
BOVS				⇓S	Sb	04 25 14.0	-2.0
BOVS	Bovan	2.68	80	ePn	Pn	04 24 38.7	+0.6
BOVS				eSn	Sn	04 25 10.3	-0.2
BARS	Barje	2.78	97	ePn	Pn	04 24 40.5	+1.0
BARS				eSn	Sn	04 25 14.9	+1.9
KUBS	Kucevo	2.87	64	ePn	Pn	04 24 39.2	-1.5
KUBS				eSn	Sn	04 25 15.3	+0.2
OHR	Ohrid	2.94	135	i Pn	Pb	04 24 44.7	-2.7
OHR				i Sn	Sb	04 25 21.7	-1.6
BORS2	Bor- Borsko je	2.99	72	ePn	Pn	04 24 41.2	-1.2
BORS2				eSn	Sn	04 25 17.3	-0.9
MORH	Mrgy, Hungar	3.01	8	ePn	Pn	04 24 42.7	+0.1
MORH				eSn	Sn	04 25 19.5	+0.9
MORH	Mrgy, Hungar	3.01	8	⇓P	Pn	04 24 41.9	-0.7
BOJS	Bojanci	3.04	319	i Pn	Pn	04 24 44.9	+1.9
BOJS				eSn	Sn	04 25 22.1	+2.8
BOJS				IAML		04 25 24.5	
	comp=Z,158nm,0.7s						
BANR	Banloc	3.08	45	⇑P	Pn	04 24 43.5	-0.1
ZAGS	Zajecar	3.09	78	ePn	Pn	04 24 44.4	+0.7
ZAGS				eSn	Sn	04 25 20.3	-0.2
CRES	Cresnjevec Ost	3.20	325	i Pn	Pn	04 24 47.0	+1.8
BOSS	Bosilegrad	3.33	101	ePn	Pn	04 24 48.5	+1.5
BOSS				eSn	Sn	04 25 26.3	-0.2
ZAPS	Zavoj	3.34	88	ePn	Pn	04 24 48.4	+1.2
ZAPS				eSn	Sn	04 25 27.1	+0.4
BEHE	Becsehely	3.37	345	⇑iPn	Pn	04 24 48.5	+1.0
BEHE				eSn	Sn	04 25 27.8	+0.4
TRAN	Tran	3.38	95	eP	Pn	04 24 50.4	+2.6
BZS	Buzias	3.49	46	⇓P	Pn	04 24 48.8	-0.4
DJES	Djerdap	3.52	64	⇑P	Pn	04 24 50.6	+0.9
AQU	L'Aquila	3.54	257	⇑iPn	Pn	04 24 50.9	+0.9
AQU				eSn	Sn	04 25 32.3	+0.5
HERR	Herculane	3.54	61	⇓P	Pn	04 24 50.4	+0.4
PUNG	Punghina	3.68	72	⇑P	Pn	04 24 52.0	+0.2
GROS	Grobnik	3.71	331	i Pn	Pn	04 24 53.2	+0.9
BLSH	Balsha	3.84	94	eP	Pn	04 24 56.7	+2.6
VTS	Vitosha	3.84	97	i P	Pn	04 24 56.6	+2.3
SURR	Surduc	3.85	48	⇓P	Pn	04 24 53.6	-0.5
VAY	Valandovo	3.85	118	i Pn	Pn	04 24 56.2	+2.0
VAY				i Sn	Sn	04 25 41.4	+2.2
SIRR	Siria	3.97	39	⇑P	Pn	04 24 55.1	-0.8
SRE	Strehaia	3.98	67	⇑P	Pn	04 24 56.7	+0.8
KKB	Krupnik	3.99	109	eP	Pn	04 24 58.3	+2.2
PERS	Pernice	4.00	329	ePn	Pn	04 24 57.3	+1.0
GZR	Gura Zlata	4.01	56	⇑P	Pn	04 24 56.3	-0.2
SOKA	Soboth	4.06	329	Pn	Pn	04 24 58.7	+1.5
	comp=Z,22nm,0.4s,SNR=11						
SOKA				eSn	Sn	04 25 46.4	+1.7
	comp=Z,16nm,0.7s						
VOJS	Vojsko	4.09	315	i Pn	Pn	04 24 59.5	+1.9
OBKA	Obir	4.12	324	i Pn	Pn	04 24 59.8	+1.8
	comp=Z,8.0nm,0.4s,SNR=6.1						
OBKA				eSn	Sn	04 25 48.6	+2.4
	comp=Z,44nm,0.7s						
MPEP	Malo Peshtene	4.14	86	eP	Pn	04 25 00.4	+2.2
BSZH	Besenyszg	4.36	20	⇑P	Pn	04 24 59.2	-1.8
DEV	Deva	4.36	51	⇑P	Pn	04 25 01.8	+0.7
ARSA	Arzberg	4.40	337	Pn	Pn	04 25 03.1	+1.3
	comp=Z,3.9nm,0.3s,SNR=11						
ARSA				eSn	Sn	04 25 53.7	+0.8
	comp=Z,5.4nm,0.3s						
MMB	Musomishta	4.53	110	i P	Pn	04 25 05.9	+2.3
SRO	Srobarova	4.59	2	eSN	Sn	04 25 59.3	+1.9
MYKA	Terra Mystica	4.63	319	Pn	Pn	04 25 06.8	+1.8
	comp=Z,7.6nm,0.4s,SNR=8.7						
RONA	Rosalia, Austr	4.64	345	ePn	Pn	04 25 06.3	+1.2
	comp=Z,1.4nm,0.4s						
RONA				eSn	Sn	04 25 59.7	+0.8
	comp=Z,7.7nm,0.3s						
LOT	Lotru	4.65	60	⇑P	Pn	04 25 04.9	-0.4
DRGR		4.85	41	⇓P	Pn	04 25 07.4	-0.6
PSZ	Piszkesteto	4.86	15	⇓P	Pn	04 25 07.9	-0.2
CONA	Conrad Observa	4.95	343	i Pn	Pn	04 25 12.1	+2.8
	comp=Z,1.3nm,0.3s,SNR=5.0						
CONA				eSn	Sn	04 26 05.5	-1.0
	comp=Z,4.2nm,0.4s						
MARR	Marisel-Cluj	4.97	44	⇑P	Pn	04 25 08.8	-0.9
KBA	Koelnbreinsper	5.09	321	ePn	Pn	04 25 14.1	+2.7
	comp=Z,9.4nm,0.5s,SNR=5.3						
KBA				eSn	Sn	04 26 10.7	+0.4
	comp=Z,12nm,0.6s						
RZN	Rozhen	5.17	105	i P	Pn	04 25 15.2	+2.7
MODS	Modra-Piesok	5.17	354	ePN	Pn	04 25 11.9	-0.5
MODS				eSN	Sn	04 26 11.0	-0.9
ARR	Arges	5.17	63	⇑P	Pn	04 25 12.8	+0.3
ABTA	Abfaltersbach	5.28	314	Pn	Pn	04 25 15.3	+1.4
	comp=Z,4.4nm,0.3s,SNR=26						
ABTA				eSn	Sn	04 26 17.7	+3.1
	comp=Z,30nm,1.2s						
MOA	Molln	5.33	331	Pn	Pn	04 25 17.1	+2.5
	comp=Z,6.8nm,0.3s,SNR=19						
MOA				eSn	Sn	04 26 18.6	+2.7
	comp=Z,14nm,0.7s						
BIOA	Bad Ischl, Aus	5.44	327	Pn	Pn	04 25 18.7	+2.6
	comp=Z,7.6nm,0.3s,SNR=24						
BIOA				eSn	Sn	04 26 21.2	+2.7
	comp=Z,6.9nm,0.3s						
VOIR		5.47	64	⇓P	Pn	04 25 16.8	+0.3
KECS	Kecovo	5.52	17	ePN	Pn	04 25 18.6	+1.5
KECS				eSN	Sn	04 26 17.1	-3.3
JAVC	Velka Javorina	5.64	357	ePN	Pn	04 25 19.6	+0.8
LESA	Schwarzleotal	5.66	320	Pn	Pn	04 25 21.3	+2.2
	comp=Z,9.2nm,0.3s,SNR=43						
SZH	Strazhitsa	5.78	87	eP	Pn	04 25 21.8	+1.1
KRUC	Moravsky	5.95	349	ePN	Pn	04 25 23.9	+0.9
LANS	Liptovska Anna	6.00	9	ePN	Pn	04 25 25.0	+1.2
LANS				eSN	Sn	04 26 29.9	-2.5
WTTA	Wattenberg	6.07	314	i Pn	Pn	04 25 27.2	+2.4
	comp=Z,15nm,0.4s,SNR=21						
MLR	Muntele Rosu	6.08	65	⇓P	Pn	04 25 25.7	+0.7
WATA	Walderalm	6.15	314	i Pn	Pn	04 25 28.2	+2.3
	comp=Z,8.4nm,0.3s,SNR=18						
VRAC	Vranov	6.16	351	ePN	Pn	04 25 26.9	+0.9
CKRC	Cesky Krumlov	6.17	336	ePN	Pn	04 25 29.4	+3.3
CKRC				eSN	Sn	04 26 34.0	-2.5
SQTA	Sankt Quirin	6.27	312	i Pn	Pn	04 25 30.9	+3.3
	comp=Z,4.2nm,0.4s						
TURR	Turia	6.33	61	⇓P	Pn	04 25 29.4	+1.1
MOTA	Moosalm	6.41	312	i Pn	Pn	04 25 31.6	+2.2
	comp=Z,17nm,0.4s,SNR=28						
FETA	Feichten	6.42	309	ePn	Pn	04 25 32.1	+2.4
	comp=Z,0.9nm,0.3s						
FETA				eSn	Sn	04 26 45.0	+1.9
	comp=Z,5.0nm,0.8s						
MORC	Moravsky Berou	6.56	357	ePN	Pn	04 25 32.0	+0.6
STHS	Stebnicka Huta	6.57	18	ePN	Pn	04 25 33.6	+2.1
STHS				eSN	Sn	04 26 43.9	-2.3
KHC	Kasperske Hory	6.67	334	ePN	Pn	04 25 35.5	+2.5
KHC				eSN	Sn	04 26 47.1	-1.8
RETA	Reutte	6.68	312	i Pn	Pn	04 25 36.1	+3.0
	comp=Z,3.9nm,0.4s,SNR=5.3						
VRI	Vrincioaia	6.72	64	⇑P	Pn	04 25 33.7	0.0
ZVC	Zvikov	6.76	338	ePN	Pn	04 25 37.3	+3.1
ZVC				eSN	Sn	04 26 47.9	-3.2
DAVA	Damuels	7.06	308	ePn	Pn	04 25 40.1	+1.8
	comp=Z,0.4nm,0.2s						
CLL	Collm	8.78	339	eSn	Sn	04 27 36.0	-4.6
CLL				eSb	Sg	04 28 06.0	-31
CLL				eSg	Sg	04 28 36.0	-0.7

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*CATAC **02** 04:30:45.7±0.6, 15°N±3°×9°3W±°, h29^{km}±4^{km}, M4.0/13, MLv4.0/13, Error ellipse: s-maj=8.5km s-min=3.6km az=37.3, confirmed*

*MEX **02** 04:30:46.2±1.3, 14°.80N×93°.09W, h10^{km}±14^{km}, MD4.3*

*GCG **02** 04:30:47.2±1.4, 14°.82N×92°.89W, h56^{km}±15^{km}, MD4.2, ML4.2*

ISC 02 04:30:42.4±1.3**, 14°.76N**±0°.05×**93°.04W**±0°.03**, h19**^{km}±3^{km}**, n61,** σ**2^{s}36**/93**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.77	79	eP	Pn	04 31 00.0	+1.8
THIG				eS	Sn	04 31 09.8	+0.5
THIG		0.77	79	i P	Pn	04 31 00.0	+1.8
THIG				eS	Sn	04 31 10.4	+1.1
PATR	El Naranjo	0.86	65	eP	Pn	04 31 00.1	+0.4
PATR				eS	Sn	04 31 12.0	+0.1
SMCA	Catarina	0.94	84	eP	Pn	04 31 02.1	+1.4
SMCA				eS	Sn	04 31 14.2	+0.6
SMCA				IAML		04 31 14.8	
	comp=E,4µm,0.1s						
PAVE	Pavencul	0.94	63	eP	Pn	04 31 01.7	+0.9
PAVE				eS	Sn	04 31 13.9	0.0
PCIG		0.95	350	eP	Pn	04 31 01.7	+0.8
PCIG				eS	Sn	04 31 13.1	-0.9
CHUJ	Union Juarez	0.96	70	eP	Pn	04 31 01.7	+0.5
CHUJ				eS	Sn	04 31 14.7	+0.3
RTAL	Retalhuleu	1.32	100	i P	Pg	04 31 07.9	-0.1
RTAL				eS	Sg	04 31 24.7	-0.6
RTAL	Retalhuleu	1.32	100	P	Pg	04 31 08.2	+0.2
RTAL	Retalhuleu	1.32	100	S	Sg	04 31 25.4	+0.1
QUEO	Labor Ovalle	1.48	86	i P	Pg	04 31 10.7	-0.4
QUEO				i S	Sg	04 31 29.4	-1.1
QUEO				IAML		04 31 30.1	
	comp=N,5µm,0.3s						

SOKI	Kika Raxquin	1.58	88	eP	Pb	04 31 12.1	+0.7
HUEH	Huehuetenango	1.59	69	i P	Pb	04 31 11.6	+0.3
HUEH				eS	Sb	04 31 31.9	+0.8
HUEH	Huehuetenango	1.59	69	eP	Pb	04 31 12.1	+0.7
HUEH				eS	Sb	04 31 31.8	+0.7
HUEH				IAML		04 31 38.8	
	comp=N,4µm,0.4s						
HUEH	Huehuetenango	1.59	69	P	Pb	04 31 11.9	+0.6
HUEH	Huehuetenango	1.59	69	S	Sg	04 31 32.3	-1.6
STG2	El Palmar, Qui	1.64	101	eP	Pn	04 31 08.2	-2.2
STG2				eS	Sn	04 31 24.7	-6.5
STG8	El Palmar, Qui	1.67	100	eP	Pn	04 31 08.7	-2.1
STG8				eS	Sn	04 31 25.3	-6.6
STG5	El Palmar, Qui	1.68	102	eP	Pn	04 31 08.8	-2.1
STG5				eS	Sn	04 31 25.7	-6.2
CCIG	Comitan	1.75	30	eP	Pb	04 31 13.7	-0.3
CCIG				eS	Sn	04 31 30.0	-3.7
CCIG	Comitan	1.75	30	i P	Pb	04 31 13.8	-0.3
CCIG				IAML		04 31 41.3	
	comp=N,842nm,0.4s						
CCIG	Comitan	1.75	30	P	Pb	04 31 13.8	-0.2
CCIG	Comitan	1.75	30	S	Sb	04 31 34.5	-1.2
QUIS	Sacapulas	1.96	74	eP	Pb	04 31 17.2	-0.4
QUIS				IAML		04 31 46.0	
	comp=E,1µm,0.4s						
FG16	Alotenango, Sa	2.50	101	eP	Pn	04 31 20.0	-2.3
FG16				IAML		04 32 02.1	
	comp=N,4µm,0.3s						
APG	El Apazote	2.50	84	eP	Pn	04 31 24.4	+2.0
UXUV	UXUV	2.76	337	eP	Pn	04 31 27.2	+1.5
UXUV				eS	Sn	04 31 56.0	-2.4
CMIG	Matias Romero	2.92	323	eP	Pn	04 31 29.0	+1.1
CMIG				eS	Sn	04 32 02.1	-0.4
FAME	Alcaldia de Sa	3.07	107	P	Pn	04 31 32.9	+2.9
FAME	Alcaldia de Sa	3.07	107	S	Sn	04 32 07.6	+1.3
HUIG	Huatulco	3.12	289	eP	Pn	04 31 31.1	+0.3
HUIG				eS	Sn	04 32 02.9	-4.7
NUBE	Las Nubes	3.27	105	eP	Pn	04 31 35.8	+2.9
NUBE	Las Nubes	3.27	105	P	Pn	04 31 35.9	+3.0
NUBE	Las Nubes	3.27	105	S	Sn	04 32 12.5	+1.0
CEVE	Cerro Verde	3.44	105	S	Sn	04 32 18.2	+2.5
JAYA	Jayaque - finc	3.65	107	eP	Pn	04 31 39.8	+1.7
JAYA	Jayaque - finc	3.65	107	P	Pn	04 31 40.7	+2.6
JAYA	Jayaque - finc	3.65	107	S	Sn	04 32 21.5	+0.7
PETF	Flores	3.73	55	eP	Pn	04 31 39.5	+0.4
PETF				eS	Sn	04 32 19.5	-3.1
PMON	Piamonte	3.76	106	P	Pn	04 31 43.5	+3.9
PMON	Piamonte	3.76	106	S	Sn	04 32 25.6	+2.2
NEUV	Arroyo Zacate	3.96	318	eP	Pn	04 31 43.2	+1.1
NEUV				eS	Sn	04 32 28.0	-0.1
PEIG	Puerto Escondi	4.15	288	eP	Pn	04 31 46.1	+1.2
PEIG				e		04 32 25.5	
VHO	Vista Hermosa	4.23	303	eP	Pn	04 31 47.2	+1.0
VHO				eS	Sn	04 32 31.2	-4.0
SCIG	Sabancuy	4.54	23	eP	Pn	04 31 50.1	-0.2
SCIG				e		04 32 32.0	
YOIG	Yosondua	4.81	296	eP	Pn	04 31 57.8	+3.6
YOIG				eS	Sn	04 32 48.5	-1.1
TOIG	Toxpalan	5.09	311	eP	Pn	04 31 59.7	+1.8
TOIG				eS	Sn	04 32 56.6	+0.3
PNIG	Pinotepa	5.16	289	eP	Pn	04 32 00.3	+1.5
PNIG				eS	Sn	04 32 53.2	-4.8
TXIG	Tlaxiaco	5.18	299	eP	Pn	04 32 01.8	+2.6
TXIG				e		04 32 47.8	
HLIG	Huajuapan de L	5.50	304	eP	Pn	04 32 06.5	+2.9
HLIG				eS	Sn	04 33 02.9	-3.6
FTIG	Fresnillo de T	5.80	303	eP	Pn	04 32 10.1	+2.4
FTIG				eS	Sn	04 33 11.3	-2.6
JAUV	Jalcomulco	5.82	322	eP	Pn	04 32 06.7	-1.2
JAUV				e		04 33 07.2	
MGIG	Malinaltepec	5.91	295	eP	Pn	04 32 12.0	+2.7
MGIG				eS	Sn	04 33 15.9	-0.8
TLIG	Tlapa	6.00	298	eP	Pn	04 32 13.4	+3.0
TLIG				eS	Sn	04 33 18.4	-0.2
CRIG	Cruz Grande	6.18	289	eP	Pn	04 32 14.9	+2.1
DAIG	Los Arroyos	6.75	290	eS	Sn	04 33 36.8	-0.1
PPM	Popocatepetl	6.85	309	eP	Pn	04 32 25.9	+3.5
PPM				eS	Sn	04 33 42.0	+1.9
PPM				eS	Sn	04 33 45.5	+5.3
CXUV	Coxquihui	6.92	322	eP	Pn	04 32 22.8	-0.1
CXUV				e		04 33 29.0	
YAIG	Yautepec	7.07	306	eP	Pn	04 32 25.4	+0.4
YAIG				eS	Sn	04 33 40.4	-4.6
CAIG	El Cayaco	7.32	289	i P	Pn	04 32 30.0	+1.7
ARIG	Puente Sto Nin	7.83	298	eP	Pn	04 32 39.1	+3.6
ARIG				eS	Sn	04 34 05.0	+1.3

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*MOS **02** 04:31:46.1±0.8, 55°.53N×154°.60W, h11^{km}, mb4.7/27, MS4.1/5, Error ellipse: s-maj=11.8km s-min=5.4km az=90.2*

*IDC **02** 04:31:46.0±0.6, 55°.39N×154°.68W, h0^{km}, mb4.4/28, mbtmp4.3/33, ML3.9/5, MS3.7/11, Error ellipse: s-maj=14.7km s-min=11.4km az=10.0*

*NEIC **02** 04:31:47.6±1.6, 55°.43N±0°.06×154°.52W±0°.08, h10^{km}±1^{km}, mb4.7/82, ML4.2/52, ML4.2(AEIC), Error ellipse: s-maj=9.7km s-min=7.5km az=156.0*

*AEIC **02** 04:31:49.9±4.4, 55°.30N±0°.06×154°.40W±0°.08, h7^{km}±3^{km}, Error ellipse: s-maj=8.1km s-min=6.3km az=188.0*

*ANF **02** 04:31:49.2±0.7, 55°.43N×154°.57W, h26^{km}±7^{km}, ML4.5/24, Error ellipse: s-maj=3.3km s-min=1.4km az=8.0*

ISC 02 04:31:47.0±1.6, **55°.45N**±0°.05×**154°.47W**±0°.03, **h8**^{km}±9^{km}, **n683, σ0^{s}.97**/692, **mb4.7**/89, **MS4.0**/14, **6C-1D, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHIR	Chirikof Islan	0.75	300		Pb	04 32 02.4	0.0
CHIR					Sb	04 32 13.7	+1.0
CHIR				IAML		04 32 15.2	
	comp=E,10µm,0.9s						
CHIR	Chirikof Islan	0.75	300	P	Pb	04 32 02.7	+0.3
	baz=121,SNR=61						
CHIR				S	Sb	04 32 14.0	+1.3
	baz=121						
SII	Sitkinak Islan	1.12	8		Pg	04 32 08.3	-0.2
SII				Sg	Sn	04 32 24.5	-0.2
SII				IAML		04 32 43.6	
	comp=E,6µm,0.7s						
SII				IAML		04 32 46.5	
	comp=N,6µm,0.8s						
SII	Sitkinak Islan	1.12	8	P	Pb	04 32 08.7	0.0
SII	Sitkinak Islan	1.12	8	P	Pb	04 32 08.6	0.0
	baz=188,SNR=20						
SII				S	Sn	04 32 24.7	0.0
	baz=188						
OHAK	Old Harbor	1.89	20	Pn	Pn	04 32 18.5	-1.1
OHAK				Sn	Sn	04 32 42.2	-1.4
OHAK	Old Harbor	1.89	20	P	Pn	04 32 18.9	-0.7
OHAK	Old Harbor	1.89	20	P	Pn	04 32 19.4	-0.2
	baz=200,SNR=30						
OHAK				S	Sn	04 32 42.1	-1.5
	baz=200						
PLK4	Peulik 4	2.42	335	Pn	Pn	04 32 27.3	+0.3
PLK4				IAML		04 33 02.5	
	comp=E,2µm,0.7s						
R17L	Mt. Peulik Vol	2.42	335	P	Pn	04 32 27.6	+0.7
	baz=154,SNR=17						
PLK3	Peulik 3	2.45	337		Pn	04 32 27.7	+0.4
ANPB	Aniakchak Plen	2.53	304		Pn	04 32 28.1	-0.3
ANPB					Sn	04 32 59.1	-0.3
PLK2	Peulik 2	2.54	337		Sn	04 32 59.8	+0.3
AZAC	Aniakchak	2.55	306		Pn	04 32 28.9	+0.1
KDAK	Kodiak Island	2.56	23	Pn	Pn	04 32 28.6	-0.2
	comp=E,22nm,0.3s,baz=206,slow=7.0,SNR=334						
KDAK				Sn	Sn	04 32 57.8	-2.2
	comp=E,75nm,0.3s,baz=325,slow=20,SNR=33						
KDAK				LR	LR	04 33 17.1	
	comp=E,674nm,21.0s,baz=202,slow=34 comp=E,119nm,0.4s						
KDAK	Kodiak Island	2.56	23	Pn	Pn	04 32 28.0	-0.7
KDAK				Sn	Sn	04 32 57.1	-2.9
KDAK	Kodiak Island	2.56	23	i P	Pn	04 32 28.0	-0.7
KDAK	Kodiak Island	2.56	23	P	Pn	04 32 28.4	-0.3
	baz=204						
KDAK				S	Sn	04 32 58.1	-1.9
	baz=204						
ANNW	Aniakchak Nort	2.59	307		Pn	04 32 29.0	-0.2
PLBL	Peulik Blue Cr	2.60	331		Pn	04 32 30.2	+0.8
PLK1	Peulik 1	2.64	334		Pn	04 32 30.8	+1.0
CAHL	Cahill	2.65	350		Pn	04 32 30.2	+0.2
KJL	Kejulik	2.68	347		Pn	04 32 30.6	+0.1
KJL					Pn	04 32 31.1	+0.6
VNSG	Veniaminof 6	2.69	286		Pn	04 32 29.8	-0.8
VNSG					Sn	04 33 01.3	-2.2
MGLS	Mageik Landsli	2.72	352		Pn	04 32 31.3	+0.4
R16K	Pilot Point	2.73	322		Pn	04 32 31.1	0.0
VNHG	Veniaminof 1	2.76	288		Pn	04 32 31.1	-0.5
ACHA	Angle Creek He	2.81	351	Pn	Pn	04 32 31.7	-0.5
ANCK	Angle Creek	2.81	349		Pn	04 32 32.9	+0.6
VNNF	Veniaminof 3	2.86	289		Pn	04 32 32.9	-0.1
KABU	Katmai Buttres	2.86	351		Pn	04 32 33.3	+0.3
KABU					Pn	04 32 33.4	+0.4
KAKN	Katmai Knife C	2.87	354		Pn	04 32 33.3	+0.2
PLK5	Peulik 5	2.88	333		Pn	04 32 33.6	+0.5
VNSS	Veniaminof 8	2.92	287		Pn	04 32 33.4	-0.4
Q17K	Contact Creek	2.92	345	P	Pn	04 32 34.1	+0.2
	baz=164,SNR=19						
VNWF	Veniaminof 8	2.96	286		Pn	04 32 34.1	-0.2
S14K	Fog Glacier	2.98	288	P	Pn	04 32 33.8	-0.9
	baz=105						
VNFG	Fog Glacier, M	2.98	288		Pn	04 32 34.4	-0.3
VNFG	Fog Glacier, M	2.98	288	Pn	Pn	04 32 33.8	-0.9
VNFG				IAML		04 33 24.8	
	comp=E,2µm,0.8s						
VNFG				IAML		04 33 49.1	
	comp=N,3µm,1.1s						
CHNA	Chernabura Isl	3.01	260	P	Pn	04 32 32.7	-2.2
	baz=77						
CNBA	Chernabura Isl	3.01	260	Pn	Pn	04 32 32.4	-2.5
Q18K	Katmai Hardscr	3.22	355	P	Pn	04 32 38.4	+0.4
	baz=174,SNR=10						
Q20K	Shuyak Island	3.36	19	P	Pn	04 32 40.3	+0.5
	baz=200						
Q20K				S	Sn	04 33 20.4	+0.6
	baz=200						
Q20K				S	Sn	04 33 20.4	+0.6
	baz=200						
SYI	Shuyak Island	3.36	19	Pn	Pn	04 32 40.3	+0.5
SYI				IAML		04 34 11.2	
	comp=E,463nm,1.4s						
SYI				IAML		04 34 13.1	
	comp=N,436nm,1.3s						
SDPT	Sand Point	3.43	271	Pn	Pn	04 32 38.1	-2.6
SDPT				IAML		04 34 11.4	
	comp=E,599nm,1.6s						
SDPT				IAML		04 34 41.6	
	comp=N,580nm,1.5s						
SDPT	Sand Point	3.43	271	P	Pn	04 32 38.9	-1.8
	baz=86						
Q16K	King Salmon	3.45	341		Pn	04 32 40.8	-0.1
Q16K	King Salmon	3.45	341	P	Pn	04 32 41.4	+0.5
	baz=159						
Q19K	Cape Douglas,	3.51	7	Pn	Pn	04 32 42.5	+0.6
Q19K	Cape Douglas,	3.51	7	P	Pn	04 32 43.2	+1.2
	baz=188,SNR=8.2						
AUI	Augustine Isla	3.93	8		Pn	04 32 48.3	+0.6
AUJK	Augustine Jueg	3.95	8		Pn	04 32 48.5	+0.6
AGU	Augustine-Summ	3.96	8		Pn	04 32 48.6	+0.5
AUW	Augustine West	3.96	7		Pn	04 32 48.8	+0.7
P18K	Big Mountain,	3.97	354	Pn	Pn	04 32 48.8	+0.5
P18K	Big Mountain,	3.97	354	P	Pn	04 32 48.7	+0.5
	baz=174						
PS1A	Pavlof South-1	4.14	273		Pn	04 32 49.1	-1.5
PS4A	Pavlof South-4	4.21	272		Pn	04 32 49.8	-1.7
DOL	Dolgoi Island	4.24	269		Pn	04 32 49.9	-2.0
P19K	Oil Pt	4.26	8	Pn	Pn	04 32 53.1	+0.9
P19K	Oil Pt	4.26	8	P	Pn	04 32 52.9	+0.7
	baz=189						
P19K				S	Sn	04 33 43.5	+1.4
	baz=189						
P19K				S	Sn	04 33 43.5	+1.4
	baz=189						
PN7A	Pavlof North-7	4.29	273		Pn	04 32 51.1	-1.5
S12K	Black Hills	4.32	276	Pn	Pn	04 32 51.3	-1.7
S12K				IAML		04 33 30.8	
	comp=E,253nm,0.9s						
S12K				IAML		04 33 59.8	
	comp=N,306nm,1.2s						
S12K	Black Hills	4.32	276	P	Pn	04 32 51.9	-1.0
	baz=91						
O18K	Koktuh Hills	4.43	355	Pn	Pn	04 32 55.1	+0.6
O18K				IAML		04 35 01.0	
	comp=E,222nm,2.3s						
O18K	Koktuh Hills	4.43	355	P	Pn	04 32 54.8	+0.3
	baz=175						
CNPM	China Poot	4.44	22	Pn	Pn	04 32 54.4	-0.2
CNPM				IAML		04 33 46.8	
	comp=N,322nm,1.5s						
CNPM				IAML		04 33 53.1	
	comp=E,348nm,1.0s						
DT1	Dutton Round H	4.48	269		Pn	04 32 53.0	-2.1
HOM	Homer	4.48	19	Pn	Pn	04 32 56.2	+1.1
HOM	Homer	4.48	19	P	Pn	04 32 55.7	+0.6
	baz=201						
O17K	Koliganek Bris	4.56	343	P	Pn	04 32 55.9	-0.3
	baz=161,SNR=7.0						
ILS	Iliamna Low So	4.58	9		Pn	04 32 56.7	+0.1
O16K	Kokwok River B	4.59	336	Pn	Pn	04 32 56.6	-0.1
O16K				IAML		04 34 47.6	
	comp=E,173nm,1.7s						
O16K				IAML		04 35 07.0	
	comp=N,159nm,1.6s						
O16K	Kokwok River B	4.59	336	P	Pn	04 32 56.9	+0.3
	baz=153,SNR=6.8						
ILSW	Iliamna Southw	4.60	8	Pn	Pn	04 32 56.9	0.0
ILSW				IAML		04 33 53.5	
	comp=N,202nm,0.4s						
ILSW				IAML		04 33 59.1	
	comp=E,167nm,0.7s						
ILW	Iliamna West	4.67	8		Pn	04 32 58.1	+0.1
O15K	Ungalikthiuk R	4.73	324	Pn	Pn	04 32 58.3	-0.2
O15K				IAML		04 35 01.0	
	comp=E,187nm,1.6s						
O15K	Ungalikthiuk R	4.73	324	P	Pn	04 32 58.5	0.0
	baz=140,SNR=13						
BRLK	Bradley Lake	4.73	23	Pn	Pn	04 32 57.8	-0.9
BRSE	Bradley Lake S	4.74	23	P	Pn	04 32 58.4	-0.4
	baz=206,SNR=10						
O20K	Slope Mountain	4.75	11		Pn	04 32 59.4	+0.5
O20K	Slope Mountain	4.75	11	P	Pn	04 32 59.9	+1.1
	baz=193						
O19K	Port Alsworth	4.76	1	Pn	Pn	04 32 58.4	-0.5
O19K	Port Alsworth	4.76	1	P	Pn	04 32 59.2	+0.3
	baz=181,SNR=12						
RED	Redoubt Volcan	5.06	10	Pn	Pn	04 33 03.2	-0.1
RED				IAML		04 34 17.6	
	comp=N,120nm,1.1s						
RED				IAML		04 35 11.6	
	comp=E,198nm,1.9s						
RDWB	Redoubt West	5.12	9		Pn	04 33 04.5	+0.4
FALS	False Pass	5.17	267	Pn	Pn	04 33 02.3	-2.3
FALS	False Pass	5.17	267	P	Pn	04 33 02.7	-1.9
	baz=80						
N17K	Nushagak Hills	5.29	345	Pn	Pn	04 33 06.1	-0.1
N17K				IAML		04 35 03.4	
	comp=E,155nm,1.6s						
N17K				IAML		04 35 22.5	
	comp=N,147nm,1.6s						
N17K	Nushagak Hills	5.29	345	P	Pn	04 33 07.2	+1.0
	baz=163,SNR=7.7						
O14K	Tigyukauivet M	5.30	319	Pn	Pn	04 33 06.1	-0.2
O14K				IAML		04 35 01.4	
	comp=E,144nm,1.9s						
O14K				IAML		04 35 08.9	
	comp=N,186nm,2.5s						
O14K	Tigyukauivet M	5.30	319	P	Pn	04 33 06.2	-0.1
	baz=133						
N18K	Kilae Creek	5.30	352	Pn	Pn	04 33 07.3	+0.9
N18K				IAML		04 35 15.9	
	comp=N,112nm,2.0s						
N18K				IAML		04 35 18.5	
	comp=E,192nm,2.2s						
N18K	Kilae Creek	5.30	352	P	Pn	04 33 07.2	+0.9
	baz=171						
N19K	Bonanza Creek	5.38	360	Pn	Pn	04 33 07.7	+0.1
N19K	Bonanza Creek	5.38	360	P	Pn	04 33 08.3	+0.7
	baz=180,SNR=12						
SEW	Seward	5.38	28	Pn	Pn	04 33 05.9	-1.5
SEW	Seward	5.38	28	P	Pn	04 33 06.1	-1.4
	baz=212						
N16K	Nishlik Lake	5.53	337		Pn	04 33 09.9	+0.3
N16K	Nishlik Lake	5.53	337	P	Pn	04 33 10.1	+0.5
	baz=154,SNR=14						
SLKM	Skilak Lake	5.55	22	Pn	Pn	04 33 09.3	-0.6
N15K	Kwethluk River	5.60	330	Pn	Pn	04 33 10.7	+0.2
N15K	Kwethluk River	5.60	330	P	Pn	04 33 11.0	+0.4
	baz=145						
O22K	Cooper Landing	5.64	25	Pn	Pn	04 33 10.9	-0.1
O22K	Cooper Landing	5.64	25	P	Pn	04 33 11.7	+0.7
	baz=208,SNR=7.4						
CKL	Chakachamna La	5.87	10		Pn	04 33 14.3	0.0
N20K	Mount Spurr	5.89	11	P	Pn	04 33 15.1	+0.6
	baz=192						
SPCR	Spurr Chakacha	5.89	11		Pn	04 33 14.8	+0.2
SPCR	Spurr Chakacha	5.89	11		Pn	04 33 14.9	+0.4
SPCR	Spurr Chakacha	5.89	11	P	Pn	04 33 15.0	+0.5
	baz=192						
N14K	Kuskokwak Cree	5.92	322	Pn	Pn	04 33 14.8	-0.1
N14K	Kuskokwak Cree	5.92	322	P	Pn	04 33 15.2	+0.3
	baz=136,SNR=9.9						
P23K	Montague Islan	5.92	37	Pn	Pn	04 33 15.9	+1.0
P23K	Montague Islan	5.92	37	P	Pn	04 33 16.1	+1.2
	baz=222						
Q23K	Middleton Isla	5.92	44	P	Pn	04 33 15.9	+1.0
	baz=231						
SPWE	Spurr West	5.92	9		Pn	04 33 15.9	+0.9
SPBG	Spurr Blockage	5.93	10		Pn	04 33 15.7	+0.6
M16K	Timber Creek	6.07	339	Pn	Pn	04 33 16.7	-0.3
M16K	Timber Creek	6.07	339	P	Pn	04 33 17.5	+0.5
	baz=155,SNR=15						
M18K	Stony River	6.10	354		Pn	04 33 17.9	+0.6
M18K	Stony River	6.10	354	P	Pn	04 33 18.1	+0.7
	baz=173						
M17K	Holitna River	6.17	347	Pn	Pn	04 33 18.3	0.0
M17K	Holitna River	6.17	347	P	Pn	04 33 18.7	+0.4
	baz=164						
RC01	Rabbit Creek A	6.18	22	Pn	Pn	04 33 19.8	+1.3
RC01	Rabbit Creek A	6.18	22	P	Pn	04 33 18.9	+0.4
	baz=206,SNR=11						
M15K	Kasigluk River	6.21	330		Pn	04 33 19.2	+0.4
M15K	Kasigluk River	6.21	330	P	Pn	04 33 18.9	+0.1
	baz=145						
STLK	Strandline Lak	6.22	12	Pn	Pn	04 33 20.1	+1.0
PWL	Port Wells	6.32	28	Pn	Pn	04 33 19.1	-1.2
PWL	Port Wells	6.32	28	P	Pn	04 33 19.5	-0.9
	baz=213,SNR=10						
SUA	Susitna One	6.34	16	Pn	Pn	04 33 22.2	+1.5
SUA	Susitna One	6.34	16	P	Pn	04 33 20.9	+0.1
	baz=199,SNR=10						
M20K	Styx River	6.49	6	Pn	Pn	04 33 23.0	+0.3
M20K	Styx River	6.49	6	P	Pn	04 33 23.6	+0.9
	baz=187						
HIN	Hinchinbrook I	6.52	37	Pn	Pn	04 33 23.3	+0.1
M14K	Bethel	6.63	326	Pn	Pn	04 33 24.6	0.0
M14K	Bethel	6.63	326	P	Pn	04 33 25.0	+0.4
	baz=140,SNR=19						
GLI	Glacier Island	6.69	33	Pn	Pn	04 33 26.3	+0.8
GLI	Glacier Island	6.69	33	P	Pn	04 33 24.8	-0.7
	baz=219						
AHB	Akutan Harbor	6.70	263		Pn	04 33 22.9	-2.8
M22K	Willow	6.71	18	Pn	Pn	04 33 27.2	+1.5
SKT	Skwentna	6.72	12	Pn	Pn	04 33 27.6	+1.7
SKT	Skwentna	6.72	12	P	Pn	04 33 27.1	+1.1
	baz=194						
L19K	White Mountain	6.75	358	Pn	Pn	04 33 26.2	-0.1
L19K	White Mountain	6.75	358	P	Pn	04 33 27.4	+1.0
	baz=178,SNR=22						
KNK	Knik Glacier	6.76	25	Pn	Pn	04 33 26.3	-0.1
KNK	Knik Glacier	6.76	25	P	Pn	04 33 26.1	-0.3
	baz=210,SNR=13						
PMR	Palmer	6.76	22	Pn	Pn	04 33 26.6	+0.3
PMR	Palmer	6.76	22	P	Pn	04 33 26.0	-0.4
PMR	Palmer	6.76	22	P	Pn	04 33 26.7	+0.3
PMR	Palmer	6.76	22	P	Pn	04 33 26.1	-0.2
	baz=207						
FID	Port Fidalgo	6.79	35	Pn	Pn	04 33 26.8	-0.1
L16K	Owhat River	6.80	339	Pn	Pn	04 33 25.9	-1.0
L16K	Owhat River	6.80	339	P	Pn	04 33 26.6	-0.3
	baz=155						
M13K	Dall Lake	6.86	320	Pn	Pn	04 33 27.6	-0.2
M13K	Dall Lake	6.86	320	P	Pn	04 33 28.0	+0.3
	baz=133,SNR=7.2						
L18K	Granite Mounta	6.88	351	Pn	Pn	04 33 28.2	+0.1
L18K	Granite Mounta	6.88	351	P	Pn	04 33 28.4	+0.3
	baz=169						
EYAK	Cordova Ski Ar	6.89	39	Pn	Pn	04 33 29.1	+0.9
EYAK	Cordova Ski Ar	6.89	39	P	Pn	04 33 27.3	-0.9
EYAK	Cordova Ski Ar	6.89	39	P	Pn	04 33 27.4	-0.9
	baz=226						
GHO	Glory Hole Cre	6.96	22	Pn	Pn	04 33 29.6	+0.3
L17K	Donlin	6.99	345		Pn	04 33 29.1	-0.5
L17K	Donlin	6.99	345	P	Pn	04 33 29.5	-0.1
	baz=162						
KAIM	Kayak Island	7.00	46	P	Pn	04 33 30.8	+1.0
	baz=234						
L20K	Farewell, AK	7.05	2	Pn	Pn	04 33 30.6	+0.1
L20K	Farewell, AK	7.05	2	P	Pn	04 33 31.1	+0.6
	baz=183,SNR=11						
SML	Sawmill	7.13	24	Pn	Pn	04 33 32.4	+0.9
SML	Sawmill	7.13	24	P	Pn	04 33 31.1	-0.5
	baz=209,SNR=13						
UNV	Unalaska Valle	7.17	262	Pn	Pn	04 33 28.9	-3.1
UNV	Unalaska Valle	7.17	262	P	Pn	04 33 29.2	-2.8
	baz=72						
L15K	Ungalak Mounta	7.24	332		Pn	04 33 32.4	-0.6
L15K	Ungalak Mounta	7.24	332	P	Pn	04 33 32.7	-0.3
	baz=147,SNR=6.4						
MNAT	Makushin Natee	7.26	263		Pn	04 33 30.6	-2.7
M23K	Glacier View	7.26	26		Pn	04 33 32.7	-0.6
M23K	Glacier View	7.26	26	P	Pn	04 33 34.3	+0.9
	baz=212,SNR=14						
GOAT	Goat Mountain	7.29	41		Pn	04 33 32.5	-1.2
CUT	Chulitna	7.30	16	Pn	Pn	04 33 34.0	+0.1
DIV	Divide	7.30	35	Pn	Pn	04 33 34.1	+0.2
MSW	Makushin Switc	7.31	263		Pn	04 33 31.5	-2.5
L14K	Kuka Creek	7.31	327	P	Pn	04 33 34.1	+0.2
	baz=140						
L22K	Petersville	7.35	14	Pn	Pn	04 33 35.4	+0.9
SCM	Sheep Creek Mo	7.40	27	Pn	Pn	04 33 35.6	+0.3
SCM	Sheep Creek Mo	7.40	27	P	Pn	04 33 35.6	+0.3
SCM	Sheep Creek Mo	7.40	27	P	Pn	04 33 35.0	-0.2
	baz=213,SNR=28						
KLU	Klutina	7.53	33	Pn	Pn	04 33 36.4	-0.6
KLU	Klutina	7.53	33	P	Pn	04 33 37.2	+0.1
	baz=220						
K17K	Iditarod	7.55	346	Pn	Pn	04 33 37.6	+0.4
K17K	Iditarod	7.55	346	P	Pn	04 33 36.7	-0.5
	baz=163,SNR=12						
PPLA	Purkeypile	7.56	8	Pn	Pn	04 33 39.6	+2.1
PPLA	Purkeypile	7.56	8	P	Pn	04 33 38.4	+0.9
	baz=190						
BMRM	Bremner River	7.59	39	Pn	Pn	04 33 37.1	-0.8
BMRM	Bremner River	7.59	39	P	Pn	04 33 38.1	+0.2
	baz=227						
K15K	Wolf Creek Mou	7.77	335	Pn	Pn	04 33 40.4	+0.1
K15K	Wolf Creek Mou	7.77	335	P	Pn	04 33 40.6	+0.3
	baz=149						
KHIT	Khitrov Hills	7.78	45		Pn	04 33 39.8	-0.8
K20K	Telida	7.93	1	Pn	Pn	04 33 41.9	-0.6
K20K	Telida	7.93	1	P	Pn	04 33 42.9	+0.3
	baz=182,SNR=14						
M24K	Tolsona, Glenn	7.94	29	Pn	Pn	04 33 42.8	+0.2
M24K	Tolsona, Glenn	7.94	29	P	Pn	04 33 42.8	+0.2
	baz=216,SNR=14						
WAT6	Susitna Watana	7.94	23		Pn	04 33 42.9	+0.1
WAT6	Susitna Watana	7.94	23	P	Pn	04 33 43.4	+0.6
	baz=209,SNR=18						
WAT7	Susitna Watana	7.94	19		Pn	04 33 42.5	-0.2
WAX	Waxell Ridge	7.95	46	Pn	Pn	04 33 43.6	+0.8
M11K	Mekoryuk	7.96	313	Pn	Pn	04 33 42.6	-0.2
M11K	Mekoryuk	7.96	313	P	Pn	04 33 42.8	-0.1
	baz=124						
WAT1	Susitna Watana	8.00	20	P	Pn	04 33 43.8	+0.4
	baz=205						
CRQM	Cirque	8.01	44	Pn	Pn	04 33 45.1	+1.4
CRQE	Cirque	8.03	44	P	Pn	04 33 44.5	+0.6
	baz=233						
N25K	Chitina, Valde	8.04	36	Pn	Pn	04 33 44.8	+0.8
N25K	Chitina, Valde	8.04	36	P	Pn	04 33 43.8	-0.3
	baz=224						
J18K	Innoko River	8.12	353	Pn	Pn	04 33 45.5	+0.5
J18K	Innoko River	8.12	353	P	Pn	04 33 46.2	+1.1
	baz=171,SNR=40						
TGL	Tana Glacier	8.13	44	Pn	Pn	04 33 45.6	+0.2
VRDI	Verde Repeater	8.18	40	Pn	Pn	04 33 45.9	-0.2
MESA	MESA	8.19	50	Pn	Pn	04 33 46.8	+0.6
MESA	MESA	8.19	50	P	Pn	04 33 47.2	+1.1
	baz=240						

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GLB   Gilahina Butte     8.20  39  Pn    Pn     04 33 45.8 -0.3
ISLE  Juniper Island     8.24  46  Pn    Pn     04 33 47.0 +0.1
TRF   Thorofare Moun     8.30  13  Pn    Pn     04 33 49.1 +1.5
TRF   Thorofare Moun     8.30  13  P     Pn     04 33 48.9 +1.2
      baz=197,SNR=10
J17K  VABM Dome          8.31 345  Pn    Pn     04 33 47.5 -0.1
J17K  VABM Dome          8.31 345  P     Pn     04 33 48.1 +0.5
      baz=162
YAH   Yahtse             8.37  49  Pn    Pn     04 33 48.8 +0.1
K13K  Kusilvak Mount     8.38 325  Pn    Pn     04 33 48.4 -0.2
K13K  Kusilvak Mount     8.38 325  P     Pn     04 33 48.9 +0.3
      baz=136
WACK  Wrangell Chich     8.40  35        Pn     04 33 48.6 -0.5
WASW  Wrangell South     8.41  35        Pn     04 33 49.0 -0.2
KIAG  Kiagna River       8.42  44        Pn     04 33 48.4 -1.0
MCARA McCarthy VSAT      8.44  41  Pn    Pn     04 33 51.2 +1.7
MCARA McCarthy VSAT      8.44  41  P     Pn     04 33 50.5 +1.1
      baz=230
J16K  Anvik River        8.45 341  Pn    Pn     04 33 48.5 -1.1
J16K  Anvik River        8.45 341  P     Pn     04 33 49.2 -0.4
      baz=156
DHY   Denali Highway     8.46  22  P     Pn     04 33 50.1 +0.2
      baz=208,SNR=15
HARP  HAARP              8.46  31        Pn     04 33 50.0 +0.3
HARP  HAARP              8.46  31  P     Pn     04 33 50.7 +0.9
      baz=219
RND   Reindeer           8.47  17  Pn    Pn     04 33 50.5 +0.6
RND   Reindeer           8.47  17  P     Pn     04 33 50.5 +0.6
BALM  Baldy              8.49  44        Pn     04 33 49.6 -0.7
RKAV  Rock Avalanche     8.51  50        Pn     04 33 50.3 -0.2
WAZA  Wrangell Mount     8.53  35        Pn     04 33 50.9  0.0
CHUM  Lake Minchumin     8.53   6        Pn     04 33 51.1 +0.5
CHUM  Lake Minchumin     8.53   6  P     Pn     04 33 51.5 +0.9
      baz=188
PTPK  Patty Peak         8.53  43        Pn     04 33 50.2 -0.7
GRNC  Granite Creek      8.56  47  Pn    Pn     04 33 51.7 +0.5
J19K  Poorman            8.59 357  Pn    Pn     04 33 51.7 +0.2
J19K  Poorman            8.59 357  P     Pn     04 33 52.1 +0.6
      baz=176,SNR=14
TABL  Table Mountain     8.66  49  Pn    Pn     04 33 53.9 +1.2
J14K  Nanvaranak Lak     8.68 331  Pn    Pn     04 33 52.7 +0.1
J14K  Nanvaranak Lak     8.68 331  P     Pn     04 33 53.2 +0.6
      baz=144
SAMH  Samovar Hills      8.68  52        Pn     04 33 52.5 -0.3
J20K  Nowinta River      8.76   1  Pn    Pn     04 33 54.0 +0.2
J20K  Nowinta River      8.76   1  P     Pn     04 33 53.9 +0.1
      baz=181,SNR=5.3
MCK   McKinley           8.76  16  Pn    Pn     04 33 55.4 +1.5
MCK   McKinley           8.76  16  P     Pn     04 33 55.4 +1.5
MCK   McKinley           8.76  16  P     Pn     04 33 54.6 +0.7
      baz=201,SNR=16
PAX   Paxson             8.83  28  Pn    Pn     04 33 55.5 +0.6
PAX   Paxson             8.83  28  P     Pn     04 33 55.5 +0.6
PAX   Paxson             8.83  28  P     Pn     04 33 55.6 +0.7
      baz=215,SNR=15
BPAW  Bear Paw Mtn.      8.85  10  Pn    Pn     04 33 55.6 +0.5
BPAW  Bear Paw Mtn.      8.85  10  P     Pn     04 33 55.6 +0.5
      baz=193,SNR=5.2
CTG   Chitna Glacier     8.85  46  P     Pn     04 33 56.0 +0.8
      baz=237
CTGM  Chitina Glacie     8.86  46  Pn    Pn     04 33 56.0 +0.8
PCA   Pinnacle           8.90  53  Pn    Pn     04 33 56.5 +0.7
PINM  Pinnacle           8.90  53  P     Pn     04 33 56.5 +0.7
      baz=244
LOGN  Logan Glacier      8.92  47  Pn    Pn     04 33 57.0 +0.9
I17K  Unalakleet         9.02 342  P     Pn     04 33 58.3 +0.9
      baz=157
BWN   Browne             9.10  14  Pn    Pn     04 33 59.3 +0.8
M26K  Nabesna, AK        9.14  36  P     Pn     04 34 00.7 +1.7
      baz=225
O28M  Mount Upton        9.24  49  P     Pn     04 34 01.1 +0.5
      baz=241
I20K  Naaghedeneel       9.38 360  Pn    Pn     04 34 03.4 +1.2
I20K  Naaghedeneel       9.38 360  P     Pn     04 34 02.5 +0.3
      baz=180
GCSA  Galena City Sc     9.40 354        Pn     04 34 02.9 +0.4
GCSA  Galena City Sc     9.40 354  P     Pn     04 34 02.9 +0.4
      baz=172,SNR=7.7
K24K  Donnelly Dome      9.45  24  P     Pn     04 34 04.9 +1.6
      baz=212,SNR=7.6
L26K  Log Cabin Wild     9.48  32  Pn    Pn     04 34 06.9 +3.2
M27K  Edge Creek, AK     9.49  38  P     Pn     04 34 05.6 +1.6
      baz=229
NEA2  Nenana             9.55  14  Pn    Pn     04 34 04.9 +0.2
NEA2  Nenana             9.55  14  P     Pn     04 34 05.1 +0.4
      baz=199,SNR=13
WRH   Wood River Hil     9.59  17  Pn    Pn     04 34 05.6 +0.4
RIDG  Independent Ri     9.62  26  Pn    Pn     04 34 07.4 +1.6
RIDG  Independent Ri     9.62  26  P     Pn     04 34 06.8 +1.1
      baz=215,SNR=7.9
YUK3  Moose Creek        9.66  43  P     Pn     04 34 07.5 +1.1
      baz=235
YUK8  Steele Glacier     9.67  47  P     Pn     04 34 07.4 +0.8
      baz=239
HDA   Harding Lake       9.74  20  Pn    Pn     04 34 07.8 +0.6
HDA   Harding Lake       9.74  20  P     Pn     04 34 08.6 +1.4
      baz=206,SNR=24
O29M  Mount Kennedy      9.75  54  Pn    Pn     04 34 08.7 +1.2
O29M  Mount Kennedy      9.75  54  P     Pn     04 34 08.8 +1.3
      baz=247
DOT   Dot Lake           9.76  28  Pn    Pn     04 34 09.5 +2.0
CCB   Clear Creek Bu     9.80  17  Pn    Pn     04 34 07.5 -0.5
H17K  Granite Mounta     9.89 346  Pn    Pn     04 34 09.6 +0.3
H17K  Granite Mounta     9.89 346  P     Pn     04 34 09.9 +0.7
      baz=162,SNR=17
BVCY  Beaver Creek       9.89  40  P     Pn     04 34 10.4 +1.1
      baz=231
P29M  Windy Craggy       9.91  58  P     Pn     04 34 10.7 +1.1
      baz=252
H18K  Honhosa River      9.92 350  P     Pn     04 34 10.0 +0.3
      baz=167
L27K  Beaver Creek,      9.99  35  P     Pn     04 34 11.3 +0.6
      baz=226
H16K  Elim               9.99 340        Pn     04 34 10.9 +0.3
H16K  Elim               9.99 340  P     Pn     04 34 10.3 -0.3
      baz=154,SNR=8.2
BCAR  Beaver Creek A    10.00  35  Pn    Pn     04 34 12.4 +1.5
COLA  College           10.00  16  Pn    Pn     04 34 11.1 +0.4
COLA  College           10.00  16  P     Pn     04 34 11.2 +0.4
COLA  College           10.00  16 iP     Pn     04 34 10.9 +0.1
COLA  College           10.00  16  P     Pn     04 34 11.6 +0.8
      baz=202
SCRK  Sand Creek        10.04  27  Pn    Pn     04 34 12.1 +0.6
SCRK  Sand Creek        10.04  27  P     Pn     04 34 11.1 -0.3
      baz=216
I23K  Minto, Yukon-K    10.05  12  Pn    Pn     04 34 10.8 -0.6
I23K  Minto, Yukon-K    10.05  12  P     Pn     04 34 10.9 -0.5
      baz=197,SNR=19
IL31                    10.07  19  Pn    Pn     04 34 11.8 +0.1
ILAR  Eielson Array     10.07  19  Pn    Pn     04 34 10.5 -1.3
      comp=E,3.3nm,0.3s,baz=201,slow=15,SNR=137
ILAR                               Sn    Sn     04 36 00.3 -4.6
      comp=E,2.0nm,0.3s,baz=93,slow=17,SNR=8.6
      comp=E,9.2nm,0.5s
ILAR  Eielson Array     10.07  19  Pn    Pn     04 34 11.7 -0.1
ILAR  Eielson Array     10.07  19  P     Pn     04 34 11.7 -0.1
H20K  Anotleneega Mo    10.08 359  P     Pn     04 34 12.0 +0.1
      baz=179
YUK6  Outpost Mounta    10.11  50  P     Pn     04 34 12.6 +0.1
      baz=244
H19K  Roundabout Mou    10.16 355  Pn    Pn     04 34 13.1 +0.2
H19K  Roundabout Mou    10.16 355  P     Pn     04 34 12.7 -0.2
      baz=174
YUK4  Talbot Arm        10.17  48  P     Pn     04 34 15.4 +2.0
      baz=241
J25K  Salcha River,     10.24  23  Pn    Pn     04 34 14.5 +0.3
J25K  Salcha River,     10.24  23  P     Pn     04 34 14.8 +0.6
      baz=210
H21K  Melozitna Rive    10.27   4  Pn    Pn     04 34 14.3 -0.2
H21K  Melozitna Rive    10.27   4  P     Pn     04 34 14.6 +0.1
      baz=185,SNR=15
POKR  Poker Plat Res    10.30  17  Pn    Pn     04 34 14.4 -0.5
POKR  Poker Plat Res    10.30  17  P     Pn     04 34 14.8 -0.1
      baz=203
S31K  Pelican           10.33  68  Pn    Pn     04 34 14.4 -0.9
S31K  Pelican           10.33  68  P     Pn     04 34 14.6 -0.8
      baz=264
P30M  Million Dollar    10.44  56  P     Pn     04 34 17.4 +0.6
      baz=251
HYT   Haines Junctio    10.44  52  P     Pn     04 34 17.7 +0.7
      baz=246
G17K  Kiwalik Mounta    10.53 346  P     Pn     04 34 18.6 +0.6
      baz=160
IMAR  Indian Mountai    10.57   2  Pn    Pn     04 34 18.2 -0.4
J26L  Joseph Creek      10.57  26  Pn    Pn     04 34 18.6 -0.1
J26L  Joseph Creek      10.57  26  P     Pn     04 34 19.3 +0.6
      baz=216
H22K  Ishtalitna Cre    10.58   7  Pn    Pn     04 34 19.0 +0.2
H22K  Ishtalitna Cre    10.58   7  P     Pn     04 34 19.1 +0.3
      baz=190
K27K  Chicken           10.61  31  P     Pn     04 34 20.6 +1.4
      baz=221
ANM   Nome              10.63 334  Pn    Pn     04 34 21.1 +1.7
ANM   Nome              10.63 334  P     Pn     04 34 21.1 +1.7
ANM   Nome              10.63 334  P     Pn     04 34 19.4 +0.1
      baz=144
G15K  Niukluk           10.67 338  P     Pn     04 34 20.1 +0.2
      baz=149
G18K  Tagagawik         10.67 351  Pn    Pn     04 34 19.8 -0.2
G18K  Tagagawik         10.67 351  P     Pn     04 34 20.7 +0.6
      baz=167
H23K  Yukon River       10.68  11  Pn    Pn     04 34 19.9 -0.3
H23K  Yukon River       10.68  11  P     Pn     04 34 19.6 -0.5
      baz=195
G16K  Koyuk River       10.70 342  P     Pn     04 34 20.9 +0.6
      baz=155
SIT   Sitka             10.77  74  P     Pn     04 34 19.3 -2.0
G19K  Purcell Mounta    10.80 354  Pn    Pn     04 34 21.2 -0.6
G19K  Purcell Mounta    10.80 354  P     Pn     04 34 21.5 -0.2
      baz=172
M29M  Somme Creek       10.81  43  Pn    Pn     04 34 21.0 -1.0
M29M  Somme Creek       10.81  43  P     Pn     04 34 22.2 +0.2
      baz=237
N30M  Aishikik Lake     10.89  49  P     Pn     04 34 23.3 +0.2
      baz=244
H24K  Noodor Dome       10.90  14  Pn    Pn     04 34 23.3 +0.1
H24K  Noodor Dome       10.90  14  P     Pn     04 34 23.5 +0.3
      baz=200
PRP   Porcupine Dome    11.00  20  Pn    Pn     04 34 24.3 -0.3
PRP   Porcupine Dome    11.00  20  P     Pn     04 34 25.2 +0.6
      baz=208,SNR=23
O30N  Mendenhall        11.06  54  Pn    Pn     04 34 27.2 +1.7
G21K  Allakaket         11.11   2  Pn    Pn     04 34 24.9 -1.1
G21K  Allakaket         11.11   2  P     Pn     04 34 25.2 -0.8
      baz=183
L29M  L29M              11.31  41  Pn    Pn     04 34 28.4 -0.4
L29M  L29M              11.31  41  P     Pn     04 34 28.8  0.0
      baz=235
I26K  Coal Creek Min    11.33  25  Pn    Pn     04 34 28.4 -0.6
I26K  Coal Creek Min    11.33  25  P     Pn     04 34 29.6 +0.5
      baz=214
F15K  North Star Dit    11.42 338  P     Pn     04 34 30.3 +0.1
      baz=150
F18K  Selawik           11.46 350  P     Pn     04 34 30.5 -0.2
      baz=165
DAWY  Dawson            11.47  35  Pn    Pn     04 34 31.6 +0.6
DAWY  Dawson            11.47  35  P     Pn     04 34 31.2 +0.3
      baz=228
G23K  Bananza Creek     11.50   9  Pn    Pn     04 34 29.8 -1.4
G23K  Bananza Creek     11.50   9  P     Pn     04 34 31.0 -0.3
      baz=193
F17K  Baldwin Pennin    11.50 346  Pn    Pn     04 34 31.8 +0.5
F17K  Baldwin Pennin    11.50 346  P     Pn     04 34 31.4 +0.2
      baz=160
F19K  Shaleruckik Mo    11.53 353  P     Pn     04 34 31.5 -0.2
      baz=171
M30M  Minto, Yukon      11.54  45  P     Pn     04 34 32.3 +0.3
      baz=240
WHY   Whitehorse        11.59  55  Pn    Pn     04 34 31.3 -1.3
WHY   Whitehorse        11.59  55  P     Pn     04 34 33.2 +0.6
      baz=252
G22K  Bettles           11.60   6  P     Pn     04 34 32.4 -0.2
      baz=188
H25L  Birch Creek       11.62  18  P     Pn     04 34 33.8 +0.9
      baz=205,SNR=6.0
F20K  Avaraart Lake     11.65 358  P     Pn     04 34 33.7 +0.3
      baz=176
G24K  Hadweenzic Riv    11.77  14  P     Pn     04 34 34.7 -0.3
      baz=200
F21K  Alatna River      11.82   2  P     Pn     04 34 35.4 -0.3
      baz=183
P32M  Atlin             11.88  61  P     Pn     04 34 37.0 +0.4
      baz=258
I27K  Kandik River      11.96  26  Pn    Pn     04 34 38.6 +1.0
I27K  Kandik River      11.96  26  P     Pn     04 34 37.6 +0.1
      baz=218
K29M  Barlow Dome       11.97  39  P     Pn     04 34 38.1 +0.2
      baz=233
COLD  Coldfoot          11.99   8  Pn    Pn     04 34 36.4 -1.6
COLD  Coldfoot          11.99   8  P     Pn     04 34 37.4 -0.6
      baz=192
FYU   Fort Yukon        12.00  18  Pn    Pn     04 34 37.7 -0.3
G25K  Bearman Lake      12.03  16  P     Pn     04 34 38.8 +0.3
      baz=203,SNR=7.8
E19K  Redstone River    12.12 355  P     Pn     04 34 40.2 +0.5
      baz=172
F22K  John River        12.15   4  P     Pn     04 34 40.5 +0.4
      baz=186
E17K  Hotham Inlet      12.18 346  P     Pn     04 34 40.7 +0.1
      baz=160
I28M  Miner Creek       12.29  30  Pn    Pn     04 34 43.9 +1.8
I28M  Miner Creek       12.29  30  P     Pn     04 34 42.5 +0.3
      baz=222,SNR=8.2
E18K  Tukpahlearik C    12.35 349  P     Pn     04 34 43.0 +0.1
      baz=164
M31M  Drury Creek, Y    12.37  49  Pn    Pn     04 34 45.0 +1.8
M31M  Drury Creek, Y    12.37  49  P     Pn     04 34 44.0 +0.8
      baz=246
P33M  Teslin, Yukon     12.45  59  Pn    Pn     04 34 45.0 +0.6
P33M  Teslin, Yukon     12.45  59  P     Pn     04 34 45.0 +0.6
      baz=257
H27K  Steamboat Moun    12.48  25  Pn    Pn     04 34 44.5 -0.3
H27K  Steamboat Moun    12.48  25  P     Pn     04 34 45.0 +0.3
      baz=216
F24K  Squaw Lake        12.50  12  P     Pn     04 34 44.6 -0.4
      baz=198
Q32M  Nakina River      12.52  65  P     Pn     04 34 45.9 +0.5
      baz=263
G26K  Porcupine Rive    12.60  20  Pn    Pn     04 34 46.0 -0.4
G26K  Porcupine Rive    12.60  20  P     Pn     04 34 46.9 +0.5
      baz=209
E22K  Anaktuvuk Pass    12.79   4  Pn    Pn     04 34 48.5 -0.4
E22K  Anaktuvuk Pass    12.79   4  P     Pn     04 34 48.5 -0.4
      baz=187
J30M  Hart River        12.83  37  Pn    Pn     04 34 51.2 +1.7
J30M  Hart River        12.83  37  P     Pn     04 34 49.4 -0.1
      baz=233
E23K  Chandalar         12.85   8  P     Pn     04 34 49.4 -0.4
      baz=192
F25K  Christian Rive    12.87  15  P     Pn     04 34 49.5 -0.5
      baz=203
E20K  Nigu River        12.88 357  P     Pn     04 34 50.9 +0.7
      baz=176
BMAR  Burnt Mountain    12.89  17  Pn    Pn     04 34 51.2 +1.0
G27K  Doyon Strip       12.93  23  Pn    Pn     04 34 50.3 -0.5
G27K  Doyon Strip       12.93  23  P     Pn     04 34 50.9 +0.1
      baz=214
E24K  Your Creek        12.97  10  Pn    Pn     04 34 50.1 -1.3
E24K  Your Creek        12.97  10  P     Pn     04 34 50.6 -0.8
      baz=195
V35K  Ketchikan         12.98  81  P     Pn     04 34 52.7 +1.1
      baz=280
E21K  Killik River      13.04   1  Pn    Pn     04 34 52.5 +0.2
E21K  Killik River      13.04   1  P     Pn     04 34 52.3  0.0
      baz=181
S34M  Telegraph Cree    13.04  70  P     Pn     04 34 52.4  0.0
      baz=269
D19K  Kuna River        13.20 354  Pn    Pn     04 34 55.6 +1.1
D19K  Kuna River        13.20 354  P     Pn     04 34 55.2 +0.7
      baz=171
F26K  Sheenjek River    13.20  17  Pn    Pn     04 34 54.2 -0.3
F26K  Sheenjek River    13.20  17  P     Pn     04 34 54.9 +0.3
      baz=206,SNR=5.7
I30M  Mount Dempster    13.21  35  P     Pn     04 34 55.5 +0.7
      baz=231
R33M  Jennings River    13.23  63  P     Pn     04 34 54.9 -0.2
      baz=263
RDOG  Red Dog Mine      13.24 346  Pn    Pn     04 34 55.0 -0.1
RDOG  Red Dog Mine      13.24 346  P     Pn     04 34 55.3 +0.2
      baz=159
H29M  Whitestone        13.29  29  Pn    Pn     04 34 56.9 +1.1
H29M  Whitestone        13.29  29  P     Pn     04 34 56.7 +0.9
      baz=223
D20K  Etivluk River     13.35 357  P     Pn     04 34 55.9 -0.6
      baz=175
E25K  Arctic Village    13.37  15  Pn    Pn     04 34 54.8 -2.0
E25K  Arctic Village    13.37  15  P     Pn     04 34 55.9 -0.9
      baz=202,SNR=7.1
TOLK  Toolik Lake Re    13.43   8  Pn    Pn     04 34 58.0 +0.3
TOLK  Toolik Lake Re    13.43   8  P     Pn     04 34 57.8 +0.1
      baz=192
D22K  Ayikyak River     13.50   3  P     Pn     04 34 57.9 -0.8
      baz=184
DLBC  Dease Lake        13.64  67  Pn    Pn     04 35 02.3 +1.6
      comp=E,0.3nm,0.3s,baz=230,slow=8.2,SNR=7.7
DLBC                               Sn    Sn     04 37 27.2 -5.1
      comp=E,0.1nm,0.3s,baz=99,slow=16,SNR=1.4
DLBC                               LR    LR     04 39 45.8
      comp=E,360nm,18.8s,baz=263,slow=35
      comp=E,1.3nm,0.4s
DLBC  Dease Lake        13.64  67  P     Pn     04 35 00.7  0.0
      baz=268
C17K  DeLong Mountai    13.67 346  P     Pn     04 35 00.5 -0.4
      baz=159
D23K  Nanushuk River    13.67   6  Pn    Pn     04 35 01.5 +0.6
D23K  Nanushuk River    13.67   6  P     Pn     04 35 00.9  0.0
      baz=189
C21K  Knifeblade Rid    13.76 360  P     Pn     04 35 01.6 -0.5
      baz=179
C16K  Lisburne Hills    13.82 343  Pn    Pn     04 35 04.5 +1.6
EPYK  Eagle Plains      13.87  31  Pn    Pn     04 35 05.5 +1.8
EPYK  Eagle Plains      13.87  31  P     Pn     04 35 05.2 +1.5
      baz=226
G29M  Pine Creek        13.90  28  Pn    Pn     04 35 07.8 +3.8
G29M  Pine Creek        13.90  28  P     Pn     04 35 04.2 +0.2
      baz=222
C19K  Lookout Ridge     13.90 352  P     Pn     04 35 05.3 +1.2
      baz=168
F28M  Old Crow          13.99  24  Pn    Pn     04 35 05.5 +0.2
F28M  Old Crow          13.99  24  P     Pn     04 35 05.3 +0.1
      baz=216
D24K  Happy Valley      13.99   8  Pn    Pn     04 35 04.9 -0.3
D24K  Happy Valley      13.99   8  P     Pn     04 35 05.3  0.0
      baz=193
E27K  Coleen River      14.10  20  Pn    Pn     04 35 07.0 +0.2
E27K  Coleen River      14.10  20  P     Pn     04 35 07.3 +0.6
      baz=211
H31M  Peel River        14.24  35  Pn    Pn     04 35 09.7 +0.9
H31M  Peel River        14.24  35  P     Pn     04 35 10.2 +1.4
      baz=233
D25K  Kavik River       14.39  12  Pn    Pn     04 35 09.1 -1.8
D25K  Kavik River       14.39  12  P     Pn     04 35 09.4 -1.5
      baz=199
WTLY  Watson Lake, Y    14.42  61  P     Pn     04 35 12.2 +1.0
      baz=262
G30M  tAoh Zraii Nji    14.44  30  Pn    Pn     04 35 13.2 +1.7
G30M  tAoh Zraii Nji    14.44  30  P     Pn     04 35 12.3 +0.8
      baz=226,SNR=5.7
C23K  Itkillik River    14.54   5  Pn    Pn     04 35 09.6 -3.2
C23K  Itkillik River    14.54   5  P     Pn     04 35 12.1 -0.6
      baz=189
C24K  Franklin Bluff    14.55   8  Pn    Pn     04 35 11.6 -1.3
C24K  Franklin Bluff    14.55   8  P     Pn     04 35 10.7 -2.2
      baz=193
B20K  Meade River       14.66 356  P     Pn     04 35 14.5 +0.1
      baz=174
E28M  Babbage River     14.87  22  Pn    Pn     04 35 17.2 -0.1
E28M  Babbage River     14.87  22  P     Pn     04 35 18.0 +0.8
      baz=215
B22K  Teshekpuk Lake    14.95   1  Pn    Pn     04 35 19.0 +0.7
G31M  Satah River       14.97  32  Pn    Pn     04 35 19.2 +0.7
G31M                               IAmb  IAmb   04 35 32.8
      comp=Z,34nm,0.9s
G31M  Satah River       14.97  32  P     Pn     04 35 19.3 +0.7
      baz=230
F30M  Barrier River     15.00  28  Pn    Pn     04 35 20.9 +1.8
F30M                               IAmb  IAmb   04 35 49.3
      comp=Z,30nm,0.8s
F30M  Barrier River     15.00  28  P     Pn     04 35 20.0 +1.0
      baz=225
C27K  Jago River        15.02  15  Pn    Pn     04 35 19.6 +0.3
C27K  Jago River        15.02  15  P     Pn     04 35 19.5 +0.2
      baz=204
E29M  Blow River        15.06  24  Pn    Pn     04 35 19.9 +0.1
E29M                               IAmb  IAmb   04 35 32.1
      comp=Z,37nm,0.8s
E29M  Blow River        15.06  24  P     Pn     04 35 20.8 +1.0
      baz=219,SNR=20
D27M  Malcolm River     15.13  19  Pn    Pn     04 35 21.5 +0.7
D27M  Malcolm River     15.13  19  P     Pn     04 35 21.5 +0.7
      baz=211
C26K  Camden Bay        15.13  13  P     Pn     04 35 21.2 +0.4
      baz=201,SNR=14
F31M  Tsiigehtchic      15.46  31  Pn    Pn     04 35 25.3 +0.2
F31M  Tsiigehtchic      15.46  31  P     Pn     04 35 25.6 +0.6
      baz=229
A22K  Sinclair Lake     15.61 359  P     Pn     04 35 27.7 +0.6
      baz=179
D28M  Stokes Point      15.63  21  P     Pn     04 35 28.9 +1.6
      baz=215,SNR=5.7
LIRD  Liard River Hi    15.72  64  P     Pn     04 35 30.1 +1.7
      baz=268
BBB   Bella Bella       15.86  91  Pn    P      04 35 32.9 -1.3
      comp=Z,0.2nm,0.3s,baz=306,slow=17,SNR=1.6
BBB                                LR    LR     04 40 17.0
      comp=Z,152nm,18.1s,baz=258,slow=32
      comp=Z,5.3nm,1.0s
A21K  Barrow            15.96 357  P     Pn     04 35 31.3 -0.2
      baz=176
INK   Inuvik            16.10  29  Pn    Pn     04 35 33.8 +0.4
      comp=Z,0.4nm,0.3s,baz=250,slow=16,SNR=24
INK                                LR    LR     04 42 47.5
      comp=Z,444nm,19.4s,baz=244,slow=41
      comp=Z,6.0nm,0.8s
INK   Inuvik            16.10  29  Pn    Pn     04 35 33.3  0.0
INK   Inuvik            16.10  29  P     Pn     04 35 34.2 +0.8
      baz=227
WRGLY Wrigley           17.47  51        P      04 35 52.7 +0.8
WRGLY                              IAmb  IAmb   04 36 16.1
      comp=Z,54nm,1.0s
C36M  Paulatuk          19.48  33  P     P      04 36 13.9  0.0
C36M                               IAmb  IAmb   04 36 41.5
      comp=Z,37nm,0.9s
C36M  Paulatuk          19.48  33  P     Pn     04 36 14.7 -0.5
      baz=240,SNR=11
NLWA  Neilton Lookou    20.58 100  P     Pn     04 36 27.6 -0.8
NLWA                               IAmb  IAmb   04 36 32.3
      comp=Z,28nm,1.2s
A36M  Sachs Harbour     20.65  26  P     Pn     04 36 28.2 -0.7
A36M  Sachs Harbour     20.65  26  P     Pn     04 36 28.4 -0.5
      baz=232,SNR=47
YKAW3 Yellowknife Wh    21.42  54  P     P      04 36 35.7 +0.7
YKAW3                              IAmb  IAmb   04 37 06.8
      comp=Z,24nm,1.0s
YKA   Yellowknife Ar    21.42  55  P     P      04 36 36.8 +1.8
      comp=Z,3.1nm,0.9s,baz=272,slow=11,SNR=12
      comp=Z,3.1nm,0.9s
YKA   Yellowknife Ar    21.42  55  P     P      04 36 37.2 +2.3
YKA   Yellowknife Ar    21.42  55  P     P      04 36 37.3 +2.3
B08A  Colville Reser    22.62  94  P     P      04 36 48.9 +0.9
B08A                               IAmb  IAmb   04 37 09.2
      comp=Z,19nm,1.1s
EPH   Ephrata           23.01  96  P     P      04 36 53.9 +1.7
EPH                                IAmb  IAmb   04 37 08.2
      comp=Z,29nm,1.3s
H04A  Detroit Lake      23.14 104  P     P      04 36 54.7 +1.2
H04A                               IAmb  IAmb   04 37 11.2
      comp=Z,29nm,1.0s
G05A  Wamic             23.27 102  P     P      04 36 56.4 +1.5
C09A  Chrisman Ranch    23.52  94  P     P      04 36 58.9 +1.7
D08A  Wollman Farm,     23.55  96  P     P      04 36 58.5 +0.9
I04A  Tendick Farm,     23.59 106  P     P      04 36 59.5 +1.5
I04A                               IAmb  IAmb   04 37 18.4
      comp=Z,45nm,1.4s
F07A  Phinny Hill Vi    23.66  99  P     P      04 37 00.6 +2.0
F07A                               IAmb  IAmb   04 37 13.2
      comp=Z,28nm,1.5s
WIFE  Three Sisters-    23.74 105  P     P      04 37 00.6 +0.9
WIFE                               IAmb  IAmb   04 37 16.2
      comp=Z,47nm,1.4s
EDM   Edmonton          23.83  78  P     P      04 37 01.3 +1.0
EDM                                IAmb  IAmb   04 37 06.3
      comp=Z,49nm,1.5s
EDM   Edmonton          23.83  78  P     P      04 37 01.3 +1.0
EDM                                pmax  pmax
      comp=Z,49nm,1.5s
NEW   Newport           23.92  92  P     P      04 37 01.9 +0.6
NEW   Newport           23.92  92  P     P      04 37 01.9 +0.6
NEW                                pmax  pmax
      comp=Z,14nm,1.2s
E09A  Wood Farm, Sta    24.30  96  P     P      04 37 04.7  0.0
E09A                               IAmb  IAmb   04 37 24.3
      comp=Z,19nm,1.1s
PINE  Pine Mountain     24.40 104  P     P      04 37 05.5 -0.3
PINE                               IAmb  IAmb   04 37 09.9
      comp=Z,24nm,1.2s
G08A  Pilot Rock        24.56 100  P     P      04 37 07.9 +0.7
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J05D   Fort Rock, OR     24.57 106   P      P      04 37 07.9 +0.5
LNOR   Lincton Mounta    24.60  98   P      P      04 37 07.7 +0.2
I07A   Izee              25.01 102   P      P      04 37 12.5 +1.2
I07A                                 IAmb   IAmb   04 37 27.9
       comp=Z,18nm,1.1s
K05A   Summer Lake       25.13 106   P      P      04 37 14.3 +1.9
JTMT   Jette             25.82  90   P      P      04 37 19.9 +1.3
J08A   Circle Bar Ran    26.05 103   P      P      04 37 22.2 +1.6
O03E   Paynes Creek      26.33 111   P      P      04 37 23.6 +0.4
O03E                                 IAmb   IAmb   04 37 36.8
       comp=Z,22nm,1.2s
WVOR   Wild Horse Val    26.56 104   P      P      04 37 26.6 +1.2
WVOR   Wild Horse Val    26.56 104   P      P      04 37 26.6 +1.2
WVOR                                 pmax   pmax
       comp=Z,9.0nm,1.0s
PET    Petropavlovsk     27.10 285  eP      P      04 37 29.7  -0.2
PET                                 eS      S      04 42 07.8  -0.2
PET                                  pmax   pmax
       comp=Z,62nm,1.1s
PET                                  MLR    MLR
       comp=Z,200nm,20.0s
PET                                  MLR    MLR
       comp=Z,400nm,18.0s
LYMT   Lyon Mountain     27.38  90   P      P      04 37 33.4 +0.6
BEKR   Beckworth         27.41 110   P      P      04 37 34.0 +0.9
MFID   Camas Ranch       27.49 100   P      P      04 37 34.4 +0.7
PEA0B  Petropavlovsk-    27.59 285   P      P      04 37 33.2  -1.2
PEA0B  Petropavlovsk-    27.59 285 i P      P      04 37 33.8  -0.6
PETK   Petropavlovsk-    27.59 285   P      P      04 37 33.7  -0.7
       comp=Z,9.3nm,0.5s,baz=67,slow=14,SNR=28
PETK                                 LR     LR     04 49 13.8
       comp=Z,98nm,20.5s,baz=78,slow=38
       comp=Z,9.3nm,0.5s
PETK   Petropavlovsk-    27.59 285   P      P      04 37 32.8  -1.6
MCMT   McKenzie Canyo    28.30  94   P      P      04 37 40.9  -0.1
MA2    Magadan           28.99 301   LR     LR     04 50 14.7
       comp=Z,298nm,18.3s,baz=100,slow=38
YHH    Holmes Hill       29.46  93   P      P      04 37 51.4  -0.1
NVAR   Mina Array Bea    29.55 110   P      P      04 37 53.7 +1.5
       comp=Z,1.7nm,0.7s,baz=304,slow=8.3,SNR=13
NVAR                                 PcP    PcP    04 40 57.5 +0.4
       comp=Z,1.9nm,0.9s,baz=327,slow=5.0,SNR=5.5
       comp=Z,1.7nm,0.7s
NVAR   Mina Array Bea    29.55 110   P      P      04 37 52.9 +0.7
ELK    Elko              29.58 103   LR     LR     04 47 33.6
       comp=Z,65nm,19.0s,baz=327,slow=32
RES    Resolute Bay      29.66  28   LR     LR     04 51 13.5
       comp=Z,243nm,18.2s,baz=14,slow=39
PDAR   Pinedale Array    31.44  95   P      P      04 38 09.8 +0.9
       comp=Z,1.0nm,0.7s,baz=306,slow=5.1,SNR=11
       comp=Z,1.0nm,0.7s
PDAR   Pinedale Array    31.44  95   P      P      04 38 09.5 +0.6
SRU    San Rafael Swe    33.33 101   P      P      04 38 25.9 +0.5
SRU                                  IAmb   IAmb   04 38 47.0
       comp=Z,17nm,1.3s
SRU    San Rafael Swe    33.33 101   P      P      04 38 25.9 +0.5
SRU                                  pmax   pmax
       comp=Z,17nm,1.3s
RSSD   Black Hills       33.74  88   P      P      04 38 29.6 +0.6
RSSD                                 IAmb   IAmb   04 38 41.0
       comp=Z,4.1nm,0.7s
RSSD   Black Hills       33.74  88   P      P      04 38 29.6 +0.6
RSSD                                 pmax   pmax
       comp=Z,4.0nm,0.7s
O20A   White River Ci    33.92  97   P      P      04 38 30.5   0.0
O20A                                 IAmb   IAmb   04 38 50.7
       comp=Z,12nm,0.9s
PFO    Pinyon Flats O    34.16 114   LR     LR     04 50 22.8
       comp=Z,106nm,18.6s,baz=292,slow=33
PV10   Paradox Valley    34.68 100   P      P      04 38 37.5 +0.3
PV10                                 IAmb   IAmb   04 38 51.0
       comp=Z,7.8nm,1.0s
BAR    Barrett           34.78 115   P      P      04 38 37.5  -0.4
BAR                                  IAmb   IAmb   04 38 44.1
       comp=Z,8.2nm,1.2s
TIXI   Tiksi             34.80 327   LR     LR     04 53 58.8
       comp=Z,138nm,18.1s,baz=51,slow=38
TIXI   Tiksi             34.80 327   P      P      04 38 37.2  -0.3
TIXI                                 IAmb   IAmb   04 38 38.3
       comp=Z,7.4nm,0.8s
TIXI   Tiksi             34.80 327ceP       P      04 38 37.5   0.0
TIXI                                 pmax   pmax
       comp=Z,5.0nm,0.6s
PV18   Skein Mesa, Pa    34.84 100   P      P      04 38 38.8 +0.2
PV18                                 IAmb   IAmb   04 38 47.8
       comp=Z,11nm,1.0s
ULM    Lac du Bonnet     34.84  74   P      P      04 38 40.2 +2.1
       comp=Z,1.4nm,0.4s,baz=319,slow=9.3,SNR=3.5
ULM                                  LR     LR     04 51 57.4
       comp=Z,116nm,21.0s,baz=250,slow=35
       comp=Z,1.4nm,0.4s
BLYC   Blythe            35.08 111   P      P      04 38 41.2 +0.8
TYV    Tymovskoe         36.84 290  eP      P      04 38 55.3 +0.1
TYV                                  pmax   pmax
       comp=Z,19nm,0.8s
TYV                                  pmax   pmax
       comp=Z,200nm,4.1s
YAK    Yakutsk           37.77 312  eP      P      04 39 02.1  -0.9
YAK                                 e              04 40 28.1
YAK                                 e              04 41 18.9
YAK                                 eS      S      04 44 53.7 +0.2
YAK                                 e              04 49 15.6
YAK                                  pmax   pmax
       comp=Z,23nm,0.9s
YAK                                  pmax   pmax
       comp=N,2.0nm,0.9s
YAK                                  pmax   pmax
       comp=E,3.0nm,0.9s
YAK                                  pmax   pmax
       comp=Z,38nm,2.5s
YAK                                  smax   smax
       comp=N,71nm,3.2s
YAK                                  smax   smax
       comp=E,37nm,2.8s
YAK                                  MLR    MLR
       comp=Z,591nm,17.0s
YAK                                  MLR    MLR
       comp=N,411nm,17.0s
YAK                                  MLR    MLR
       comp=E,430nm,17.0s
YSS    Yuzhno-Sakhali    38.99 284  eP      P      04 39 12.5  -1.0
YSS                                  pmax   pmax
       comp=Z,20nm,0.7s
YSS                                  MLR    MLR
       comp=Z,200nm,16.0s
GRNR   Gornyy            40.19 293  eP      P      04 39 21.1  -2.4
GRNR                                 MLR    MLR
       comp=E,150nm,15.0s
GRNR                                 MLR    MLR
       comp=N,130nm,14.0s
GRNR                                 MLR    MLR
       comp=Z,170nm,16.0s
N35A   Tabor             40.60  86   P      P      04 39 26.9  -0.1
CLN7   Carlsbad 7        41.94 102   P      P      04 39 38.9 +0.7
WMOK   Wichita Mounta    43.06  95   P      P      04 39 48.0 +0.8
WMOK   Wichita Mounta    43.06  95   P      P      04 39 48.0 +0.8
WMOK                                 pmax   pmax
       comp=Z,5.0nm,0.8s
ZEA    Zeya              43.13 302  eP      P      04 39 46.8  -0.6
ZEA                                  MLR    MLR
       comp=Z,200nm,13.0s
P40A   Paris             43.53  84   P      P      04 39 51.0 +0.2
SGCY   Sterling City     43.81 100   P      P      04 39 53.5 +0.2
SGCY                                 IAmb   IAmb   04 39 55.4
       comp=Z,10nm,1.0s
TX31   Lajitas Ar. Si    44.36 105   P      P      04 39 58.4 +0.7
TXAR   Lajitas Array     44.36 105   P      P      04 39 59.1 +1.3
       comp=Z,3.7nm,0.7s,baz=314,slow=5.8,SNR=38
TXAR                                 PcP    PP     04 41 41.0   0.0
       comp=Z,0.4nm,0.6s,baz=324,slow=3.8,SNR=1.4
       comp=Z,3.7nm,0.7s
TXAR   Lajitas Array     44.36 105   P      P      04 39 58.7 +0.9
OZNA   Ozona             44.56 101   P      P      04 39 59.8 +0.5
JCT    Junction City     45.63 100   P      P      04 40 07.8   0.0
JCT    Junction City     45.63 100   P      P      04 40 07.8   0.0
JCT                                  pmax   pmax
       comp=Z,13nm,0.8s
H11N2  WAKE ISLAND Hy    45.97 235   T      T      05 29 26.6
       baz=29,slow=76
H11N3  WAKE ISLAND Hy    45.98 235   T      T      05 29 34.7
       baz=29,slow=76
DRIO   Del Rio           45.98 102   P      P      04 40 10.7 +0.1
DRIO                                 IAmb   IAmb   04 40 11.7
       comp=Z,7.2nm,0.8s
H11N1  WAKE ISLAND Hy    45.99 235   T      T      05 29 31.0
       baz=29,slow=76
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SPITS  Spitsbergen Ar    46.51   3   P      P      04 40 14.7 +0.6
       comp=Z,7.3nm,0.6s,baz=29,slow=3.8,SNR=14
       comp=Z,7.3nm,0.6s
SCHQ   Schefferville     46.85  52   P      P      04 40 17.5 +0.5
       comp=Z,3.9nm,0.6s,baz=298,slow=8.9,SNR=5.3
       comp=Z,3.9nm,0.6s
SCHQ   Schefferville     46.85  52   P      P      04 40 16.9  -0.1
H11S1  WAKE ISLAND Hy    47.12 234   T      T      05 31 12.9
       baz=28,slow=76,SNR=238
H11S2  WAKE ISLAND Hy    47.14 234   T      T      05 31 07.0
       baz=28,slow=76,SNR=205
H11S3  WAKE ISLAND Hy    47.14 234   T      T      05 30 52.1
       baz=28,slow=76,SNR=184
NRIK   Noril'sk          47.66 335   P      P      04 40 24.0 +0.8
       comp=Z,14nm,0.5s,baz=48,slow=6.8,SNR=24
       comp=Z,14nm,0.5s
NRIK   Noril'sk          47.66 335   P      P      04 40 22.6  -0.5
BNX    BinXian           48.03 293 ⇓P       P      04 40 26.0  -0.3
BNX                                  pmax   pmax
       comp=Z,11nm,1.3s
WVT    Waverly           48.29  85   P      P      04 40 28.8 +0.3
WVT                                  IAmb   IAmb   04 40 34.9
       comp=Z,10nm,0.9s
WVT    Waverly           48.29  85   P      P      04 40 28.8 +0.3
WVT                                  pmax   pmax
       comp=Z,10.0nm,1.0s
MJAR   Matsushiro Arr    48.39 276   P      P      04 40 28.8  -0.4
       comp=Z,3.4nm,0.9s,baz=53,slow=6.9,SNR=2.1
       comp=Z,3.4nm,0.9s
Q51A   Peebles           48.78  78   P      P      04 40 32.5 +0.3
V48A   Smith Brothers    49.14  84   P      P      04 40 37.0 +2.0
V48A                                 IAmb   IAmb   04 40 42.7
       comp=Z,9.0nm,0.8s
CLTN   Cedars of Leba    49.17  83   P      P      04 40 35.7 +0.5
HILR   Hailar Array B    49.38 301   P      P      04 40 36.3  -0.5
       comp=Z,1.0nm,0.4s,baz=64,slow=10,SNR=5.6
       comp=Z,1.0nm,0.4s
CN2    Changchun         50.37 292   P      P      04 40 43.9  -0.3
CN2                                  pmax   pmax
       comp=Z,10.0nm,0.5s
KSRS   Korea Array       53.49 285   P      P      04 41 07.7 +0.1
       comp=Z,3.6nm,0.7s,baz=46,slow=7.7,SNR=6.7
       comp=Z,3.6nm,0.7s
TLY    Talaya            55.24 312   P      P      04 41 18.7  -1.5
TLY                                  IAmb   IAmb   04 41 21.9
       comp=Z,8.9nm,0.9s
ARCES  ARCESS Array B    55.32   0   P      P      04 41 20.6 +0.2
       comp=Z,2.9nm,0.9s,baz=355,slow=9.1,SNR=1.1
       comp=Z,2.9nm,0.9s
ULN    Ulaanbaatar       56.56 307 i P      P      04 41 29.3  -0.6
ULN                                  pmax   pmax
       comp=Z,4.0nm,1.0s
SONM   Songino Array     56.88 307   P      P      04 41 32.8 +0.7
       comp=Z,10nm,0.9s,baz=48,slow=6.1,SNR=39
       comp=Z,10nm,0.9s
SONM   Songino Array     56.88 307   P      P      04 41 32.1   0.0
SONM                                 IAmb   IAmb   04 41 33.4
       comp=Z,9.5nm,0.8s
SONM   Songino Array     56.88 307   P      P      04 41 32.1   0.0
SONM                                 pmax   pmax
       comp=Z,9.0nm,0.8s
HHC    Hu-ho-hao-te      59.63 299  eP      P      04 41 50.4  -1.0
HHC                                  pmax   pmax
       comp=Z,9.0nm,0.6s
HHC                                  pmax   pmax
       comp=Z,85nm,5.6s
BTO    Baotou            60.58 300  eP      P      04 41 58.5 +0.6
BTO                                  pmax   pmax
       comp=Z,12nm,1.1s
BTO                                  pmax   pmax
       comp=Z,150nm,4.1s
ZAA0   Zalesovo Array    60.60 324   P      P      04 41 57.5  -0.2
ZAA0                                 IAmb   IAmb   04 41 58.8
       comp=Z,6.0nm,0.7s
ZALV   Zalesovo Beam     60.60 324   P      P      04 41 58.2 +0.6
       comp=Z,5.9nm,0.7s,baz=41,slow=6.7,SNR=24
       comp=Z,5.9nm,0.7s
HNS    HongShan          60.63 294 ⇑P       P      04 41 58.6 +0.5
HNS                                  pmax   pmax
       comp=Z,17nm,0.7s
DGZ    Jazzator, Alta    63.20 320 i P      P      04 42 15.2  -0.3
DGZ                                  pmax   pmax
       comp=Z,3.0nm,1.0s
NB2    NORSAR Subarra    63.30   8   P      P      04 42 16.2 +0.4
       comp=Z,26nm,1.4s,baz=352,slow=6.9
NB2    NORSAR Subarra    63.30   8   P      P      04 42 16.2 +0.4
       baz=352,slow=6.9
NOA    NORSAR Array B    63.30   8   P      P      04 42 16.5 +0.7
       comp=Z,1.2nm,0.7s,baz=352,slow=6.7,SNR=6.2
       comp=Z,1.2nm,0.7s
FINES  FINESS Array B    63.45 360   P      P      04 42 16.8 +0.1
       comp=Z,3.4nm,0.9s,baz=4.0,slow=8.2,SNR=6.6
       comp=Z,3.4nm,0.9s
FINES  FINESS Array B    63.45 360   P      P      04 42 17.4 +0.7
FINES  FINESS Array B    63.45 360 i P      P      04 42 16.2  -0.5
FINES                                pmax   pmax
       comp=Z,3.0nm,0.9s
KLMR   Klimovskoe        63.51 352  eP      P      04 42 15.8  -1.3
KLMR                                 pmax   pmax
       comp=Z,36nm,1.5s
LYN    LuoYang           63.97 293  eP      P      04 42 20.8 +0.2
LYN                                  sP     sP     04 42 28.3 +4.9
LYN                                  pmax   pmax
       comp=Z,16nm,0.7s
HFS    Hagfors           64.38   7   P      P      04 42 23.2 +0.4
       comp=Z,2.6nm,0.6s,baz=358,slow=4.6,SNR=11
       comp=Z,2.6nm,0.6s
KIRV   Kirov             64.71 346 i P      P      04 42 25.3 +0.3
TAOE   Nuku Hiva Isla    65.18 164  eLR     LR     05 01 54.2
       comp=Z,72nm,23.6s
KURK   Kurchatov         65.36 326   P      P      04 42 29.2  -0.1
KURK                                 IAmb   IAmb   04 42 39.8
       comp=Z,6.3nm,0.8s
KURK   Kurchatov         65.36 326ceP       P      04 42 30.2 +0.8
KURK                                 pmax   pmax
       comp=Z,14nm,1.7s
ARTI   Arti              65.36 341   P      P      04 42 29.3   0.0
ARTI   Arti              65.36 341   P      P      04 42 29.3   0.0
ARTI                                 pmax   pmax
       comp=Z,18nm,0.5s
KURBB  Kurchatov Arra    65.47 326   P      P      04 42 30.6 +0.5
       comp=Z,2.3nm,0.3s,baz=32,slow=6.5,SNR=18
       comp=Z,2.3nm,0.3s
BORK   Borovoye          65.73 332   P      P      04 42 32.2 +0.5
BORK                                 IAmb   IAmb   04 42 32.9
       comp=Z,3.8nm,0.7s
BORK   Borovoye          65.73 332ceP       P      04 42 32.3 +0.5
BORK                                 pmax   pmax
       comp=Z,8.0nm,1.3s
BVAR   Borovoye Array    65.73 332   P      P      04 42 32.3 +0.6
       comp=Z,7.5nm,0.6s,baz=33,slow=7.0,SNR=32
       comp=Z,7.5nm,0.6s
GTA    Gaotai            66.41 306   P      P      04 42 36.2  -0.3
GTA                                  pP     pwP    04 42 44.4 +3.9
GTA                                  sP     sP     04 42 48.7 +9.3
GTA                                  pmax   pmax
       comp=Z,12nm,1.0s
GTA                                  LR     LR
       comp=N,340nm,17.5s
GTA                                  LR     LR
       comp=E,280nm,17.8s
GTA                                  LR     LR
       comp=Z,160nm,17.8s
EKA    Eskdalemuir Ar    67.11  17   P      P      04 42 40.6   0.0
       comp=Z,1.7nm,0.6s,baz=318,slow=4.7,SNR=13
       comp=Z,1.7nm,0.6s
MKAR   Makanchi Array    67.50 322   P      P      04 42 42.4  -0.9
       comp=Z,1.1nm,0.6s,baz=35,slow=7.7,SNR=7.9
       comp=Z,1.1nm,0.6s
MKAR   Makanchi Array    67.50 322   P      P      04 42 42.7  -0.6
MKAR   Makanchi Array    67.50 322   P      P      04 42 42.7  -0.6
WMQ    Urumqi            68.00 316  eP      P      04 42 48.7 +2.2
WMQ                                  pmax   pmax
       comp=Z,11nm,0.7s
WMQ                                  LR     LR
       comp=N,970nm,11.3s
WMQ                                  LR     LR
       comp=E,810nm,6.9s
WMQ                                  LR     LR
       comp=Z,1µm,18.1s
OBN    Obninsk           69.42 353 i P      P      04 42 55.4 +0.4
OBN                                  pmax   pmax
       comp=Z,3.0nm,0.8s
BELG   Belogornoye       70.97 346 i P      P      04 43 04.8 +0.3
BELG                                 pmax   pmax
       comp=Z,6.0nm,1.2s
GOMU   GeErMu            71.32 307   P      P      04 43 08.3 +0.9
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GOMU                                 pmax   pmax
       comp=Z,4.0nm,0.9s
LPSR   Galich'ya Gora    71.74 351  eP      P      04 43 07.9  -1.3
LPSR                                 pmax   pmax
       comp=Z,6.0nm,0.8s
AB31   Akbulak array     71.76 337   P      P      04 43 09.2  -0.1
ABKAR  Akbulak array     71.76 337   P      P      04 43 09.6 +0.2
PPT2   Papeete2          72.87 175  eLR     LR     05 05 34.5
       comp=Z,82nm,22.2s
PPT2                                eLR     LR     05 05 37.5
       comp=Z,106nm,33.5s
VSR    Storozhevoye      73.10 351  eP      P      04 43 17.4 +0.1
VSR                                  pmax   pmax
       comp=Z,6.0nm,0.9s
VORD   Divnogorie        73.33 351  eP      P      04 43 17.3  -1.4
VORD                                 pmax   pmax
       comp=Z,8.0nm,0.9s
TARG   Taragay, Kyrgy    73.50 322   P      P      04 43 21.1 +0.7
TARG   Taragay, Kyrgy    73.50 322   P      P      04 43 21.1 +0.7
TARG                                 pmax   pmax
       comp=Z,4.0nm,0.9s
AAK    Ala-Archa         73.82 325   P      P      04 43 22.4 +0.5
AAK                                  IAmb   IAmb   04 43 54.7
       comp=Z,11nm,1.4s
AAK    Ala-Archa         73.82 325ceP       P      04 43 21.5  -0.4
AAK                                  pmax   pmax
       comp=Z,3.0nm,1.0s
AKASG  Malin Array Be    74.17 358   P      P      04 43 22.3  -1.4
       comp=Z,1.4nm,0.6s,baz=7.8,slow=5.8,SNR=4.8
       comp=Z,1.4nm,0.6s
AKASG  Malin Array Be    74.17 358 i P      P      04 43 22.2  -1.4
AKASG                                pmax   pmax
       comp=Z,2.0nm,0.6s
KK31   Karatay Array     74.67 328   P      P      04 43 26.4  -0.3
KK31                                 IAmb   IAmb   04 43 39.2
       comp=Z,6.9nm,1.2s
KK31   Karatay Array     74.67 328   P      P      04 43 26.4  -0.3
KK31                                 pmax   pmax
       comp=Z,7.0nm,1.2s
KKAR   Karatay Array     74.67 328   P      P      04 43 26.8 +0.1
KKAR   Karatay Array     74.67 328   P      P      04 43 26.8 +0.1
STHS   Stebnicka Huta    75.44   3  eP      P      04 43 31.8 +0.8
STHS   Stebnicka Huta    75.44   3  eP      P      04 43 31.8 +0.8
GERES  GERESS Array B    75.60   8   P      P      04 43 32.2 +0.2
       comp=Z,1.1nm,0.7s,baz=3.4,slow=4.5,SNR=7.3
       comp=Z,1.1nm,0.7s
LANS   Liptovska Anna    75.64   4  eP      P      04 43 34.2 +2.0
LANS   Liptovska Anna    75.64   4  eP      P      04 43 34.1 +1.9
KSH    Kashi             76.10 322   P      P      04 43 37.3 +2.2
KSH                                  pmax   pmax
       comp=Z,4.0nm,1.3s
MODS   Modra-Piesok      76.31   6  eP      P      04 43 39.2 +3.2
MODS   Modra-Piesok      76.31   6  eP      P      04 43 39.2 +3.2
BUR08  Bucovina Ar. S    77.28   0   P      P      04 43 41.1  -0.5
BUR08                                IAmb   IAmb   04 44 17.8
       comp=Z,7.8nm,1.4s
BURAR  Bucovina Array    77.30   0   P      P      04 43 41.2  -0.6
GAR    Garm              78.46 326   P      P      04 43 47.8  -0.5
CHGR   Chuyangaron       79.14 327   P      P      04 43 50.9  -1.2
CHGR   Chuyangaron       79.14 327   P      P      04 43 50.9  -1.2
CHGR                                 pmax   pmax
       comp=Z,18nm,0.8s
KIV    Kislovodsk        79.90 348   P      P      04 43 55.6  -0.6
KIV    Kislovodsk        79.90 348  eP      P      04 43 55.5  -0.6
KIV                                  pmax   pmax
       comp=Z,19nm,1.1s
KBZ    Khabaz            80.10 347   P      P      04 43 57.9 +0.9
       comp=Z,5.2nm,0.9s,baz=352,slow=1.7,SNR=10
       comp=Z,5.2nm,0.9s
KBZ    Khabaz            80.10 347ceP       P      04 43 57.6 +0.6
KBZ                                  pmax   pmax
       comp=Z,6.0nm,0.9s
RUSC   La Rusia          80.29  94   P      P      04 43 57.9  -1.1
RUSC                                 IAmb   IAmb   04 44 10.5
       comp=Z,13nm,1.2s
AKT    Akhty             81.61 343  eP      P      04 44 03.3  -2.0
AKT                                 e              04 47 10.3
AKT                                  pmax   pmax
       comp=Z,15nm,0.9s
EVN    Everest           81.89 308   P      P      04 44 07.3  -0.3
ESDC   Sonseca Array     81.96  23   P      P      04 44 08.1 +1.0
       comp=Z,0.9nm,0.7s,baz=331,slow=4.9,SNR=6.3
       comp=Z,0.9nm,0.7s
ESDC   Sonseca Array     81.96  23   P      P      04 44 08.0 +1.0
CMAR   Chiang Mai Arr    84.02 294   P      P      04 44 16.9  -1.2
       comp=Z,1.7nm,0.3s,baz=18,slow=5.5,SNR=9.3
       comp=Z,1.7nm,0.3s
CMAR   Chiang Mai Arr    84.02 294   P      P      04 44 17.0  -1.0
BR131  Keskin Array S    84.94 354 i P      P      04 44 22.4  -0.2
BRTR   Keskin Array B    84.94 354   P      P      04 44 22.4  -0.2
       comp=Z,1.9nm,0.9s,baz=350,slow=2.5,SNR=5.5
       comp=Z,1.9nm,0.9s
BRTR   Keskin Array B    84.94 354   P      P      04 44 22.8 +0.2
MARD   Mardin            86.68 348   P      P      04 44 31.2   0.0
QSPA   South Pole Qui   145.24 180   PKPbc  PKPdf  04 51 25.2 +1.5
       comp=Z,8.3nm,0.9s,baz=31,slow=1.0,SNR=23
QSPA   South Pole Qui   145.24 180          PKPdf  04 51 24.3 +0.7
BOSA   Boshof           153.18   1   PKPab  PKPab  04 51 57.6 +0.9
       comp=Z,3.0nm,0.7s,baz=0.9,slow=2.6,SNR=7.0
BOSA   Boshof           153.18   1   PKPdf  PKPdf  04 51 38.1 +0.4
BOSA                                        PKPab  04 51 57.1 +0.4
BOSA   Boshof           153.18   1   PKP2   PKPab  04 51 57.2 +0.4
SNAA   Sanae            159.76 154   PKPab  PKPab  04 52 22.4  -1.5
       comp=Z,2.1nm,1.0s,baz=256,slow=9.2,SNR=5.1
SNAA   Sanae            159.76 154   PKPdf  PKPdf  04 51 47.0 +2.2
SNAA                                 PKPab  PKPab  04 52 21.9  -2.0
SNAA   Sanae            159.76 154   PKIKP  PKPdf  04 51 47.0 +2.2
SNAA                                               04 52 21.9
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*BJI **02** 05:01:49.3, 51°.30N×178°.20W, h10^{km}, mB6.2/81, mb6.0/90, Ms6.2/99, Ms7 6.0/96*

*BGR **02** 05:01:53.0, 51°.03N×179°.12W, h33^{km}, mb5.7, Ms5.9*

*MOS **02** 05:01:53.5±1.0, 51°.31N×178°.12W, h29^{km}, mb6.0/82, MS5.8/58, Error ellipse: s-maj=7.0km s-min=4.2km az=108.0*

*ISC-PP **02** 05:01:54, 51°.19N×178°.10W, h28^{km}, Mwppsm6.5, Moment Tensor Solution. s58 Moment tensor: Scale 10^{18}Nm; M_{rr}0.67±.12; $M_{\theta\theta}$-0.69±.17; $M_{\phi\phi}$0.03±.16; $M_{r\theta}$-0.16±.15; $M_{\theta\phi}$-0.08±.10; $M_{\phi r}$0.08±.32; Fault plane solution: $M_0$7.24000×10^{18} NP1:ϕ_s268.50000°,δ51.70000°, λ80.10000°. NP2:ϕ_s104.20000°,δ39.30000°,λ102.30000°.*

*IPGP **02** 05:01:54.0, 51°.32N×178°.24W, h35^{km}, Mw6.1, Fault plane solution: NP1:ϕ_s259.00000°,δ29.00000°,λ108.00000°. NP2:ϕ_s58.00000°,δ63.00000°,λ80.00000°.*

*NEIC **02** 05:01:54.8±2.1, 51°.19N±0°.05×178°.10W±0°.05, h28^{km}±1^{km}, mb5.8/1024, ML5.9/16, Ms_20 5.9/661, Mwb6.0/292, Mww6.0/63, ML5.5(AEIC), Error ellipse: s-maj=7.9km s-min=5.4km az=185.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.87; $M_{\theta\theta}$-0.63; $M_{\phi\phi}$-0.24; $M_{r\theta}$0.53; $M_{\theta\phi}$-0.40; $M_{\phi r}$0.42; Fault plane solution: $M_0$1.11000×10^{18} NP1:ϕ_s54.22000°,δ63.89000°, λ86.48000°. NP2:ϕ_s242.17000°,δ26.33000°,λ97.13000°. Principal axes: T 1.1041, Plg71.0000°, Azm317.0000°; N 0.0097, Plg3.0000°, Azm56.0000°; P -1.1137, Plg19.0000°, Azm147.0000°;*

*AEIC **02** 05:01:54.7±2.3, 51°.13N±0°.04×178°.09W±0°.05, h26^{km}±3^{km} Error ellipse: s-maj=6.3km s-min=4.8km az=177.0*

*NEIC **02** 05:01:55, 51°.22N×178°.11W, h30^{km}*

*NEIC **02** 05:01:55, 51°.02N×178°.11W, h30^{km}, Moment Tensor Solution. Duration: 5^{s}4 Moment tensor: Scale 10^{18}Nm; M_{rr}1.07; $M_{\theta\theta}$-1.09; $M_{\phi\phi}$0.02; $M_{r\theta}$0.66; $M_{\theta\phi}$-0.57; $M_{\phi r}$0.55; Fault plane solution: $M_0$1.49000×10^{18} NP1: ϕ_s261.28000°,δ29.23000°,λ112.66000°. NP2: ϕ_s55.71000°,δ63.21000°,λ77.83000°. Principal axes: T 1.3710, Plg69.0000°, Azm301.0000°; N 0.2113, Plg11.0000°, Azm61.0000°; P -1.5822, Plg17.0000°, Azm155.0000°;*

*NEIC **02** 05:01:55.1, 51°.26N×178°.12W, h28^{km}*

*IDC **02** 05:01:55.3±1.3, 51°.37N×178°.06W, h28^{km}±7^{km}, mb5.4/37, mbtmp5.6/42, ML5.7/3, MS5.8/90, Error ellipse: s-maj=12.1km s-min=8.7km az=166.0*

*GCMT **02** 05:01:56.8±0.1, 51°.18N×178°.07W, h30^{km}, MW6.1/159, Moment Tensor Solution. s157,c372; s159,c574; Duration: 2^{s}8 Moment tensor: Scale 10^{18}Nm; M_{rr}1.26±.01; $M_{\theta\theta}$-1.18±.01; $M_{\phi\phi}$-0.08±.01; $M_{r\theta}$0.89±.01; $M_{\theta\phi}$-0.59±.01; $M_{\phi r}$0.83±.01; Best double couple:*

$M_0$1.82200×10^{18} NP1:ϕ_s261.00000°,δ26.00000°, λ116.00000°. NP2:ϕ_s53.00000°,δ66.00000°,λ78.00000°. Principal axes: T 1.7740, Plg66.0000°, Azm301.0000°; N 0.0910, Plg11.0000°, Azm58.0000°; P -1.8700, Plg21.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function

ISC 02 05:01:54.6±0.3**, 51°.13N**±0°.03×**178°.04W**±0°.02**, h31**^{km}±2^{km}**,**
h30^{km}**:pP-P, n2337,** σ**1**^{s}**.76**/1939**, mb5.8**/766**, MS5.9**/500**,**
206C-102D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAFL	**Tanaga Flats**	**0.63**	**8**		**Pb**	**05 02 07.1**	**-0.1**
TAFL					**Sn**	**05 02 16.4**	**0.0**
TAFL					**Sb**	**05 02 16.6**	**+0.8**
GAKI	**Gareloi-Kavalg**	**0.64**	**311**		**Pb**	**05 02 06.6**	**-0.8**
GAKI					**Sb**	**05 02 15.7**	**-0.3**
TAPA	**Tanaga Point A**	**0.70**	**12**		**Pb**	**05 02 08.0**	**-0.3**
TASE	**Tanaga Southea**	**0.70**	**0**		**Pb**	**05 02 08.3**	**-0.2**
TASE					**Sn**	**05 02 19.2**	**+0.9**
TASE					**Sb**	**05 02 19.3**	**+1.5**
TAFP	**Tanaga Falls P**	**0.77**	**3**		**Pn**	**05 02 09.1**	**-0.3**
GALAA	**Gareloi Lava P**	**0.78**	**324**		**Pn**	**05 02 09.3**	**-0.2**
GAEA	**Gareloi East**	**0.78**	**326**		**Pb**	**05 02 09.7**	**-0.1**
TANO	**Tanaga North**	**0.78**	**357**		**Pn**	**05 02 09.6**	**0.0**
TANO					**Sn**	**05 02 20.9**	**+0.7**
KIMD	**Kanaga Island**	**0.81**	**39**		**Pn**	**05 02 09.6**	**-0.3**
KIMD					**Pb**	**05 02 09.9**	**-0.3**
KIMD					**Sb**	**05 02 20.6**	**-0.1**
GASW	**Gareloi Southw**	**0.82**	**322**		**Pn**	**05 02 09.7**	**-0.4**
GANE	**Gareloi Northe**	**0.82**	**327**		**Pn**	**05 02 09.9**	**-0.3**
GANO	**Gareloi North**	**0.83**	**326**		**Pn**	**05 02 09.8**	**-0.5**
KIWB	**Kanaga Island**	**0.91**	**37**		**Pn**	**05 02 10.8**	**-0.5**
KIWB					**Sn**	**05 02 22.9**	**-0.5**
KIWB				IAML		05 02 25.1	
	comp=N,561µm,0.6s						
KIWB				IAML		05 02 26.4	
	comp=E,397µm,0.6s						
KIKV	**Kanaga Island**	**0.92**	**36**		**Pn**	**05 02 11.6**	**+0.1**
KIKV					**Sb**	**05 02 24.2**	**+0.2**
KICM	**Kanaga Island**	**0.95**	**34**		**Pb**	**05 02 12.4**	**-0.1**
KIRH	**Kanaga Island**	**0.97**	**37**		**Pb**	**05 02 12.7**	**-0.2**
KINC	**Kanaga Island**	**0.98**	**35**		**Pb**	**05 02 12.8**	**-0.3**
ADK	**Adak**	**1.13**	**48**		**Pn**	**05 02 14.5**	**+0.2**
ADK					**Sn**	**05 02 27.1**	**-1.8**
ADK	**Adak**	**1.13**	**48**	P	**Pn**	**05 02 14.5**	**+0.2**
ADK						05 02 27.1	
ADK	**Adak**	**1.13**	**48**	⇑P	**Pn**	**05 02 12.8**	**-1.6**
ETKA	**Kagalaska Isla**	**1.26**	**54**		**Pn**	**05 02 15.8**	**-0.3**
ETKA					**Sn**	**05 02 31.8**	**-0.1**
GSTD	**Great Sitkin T**	**1.50**	**51**		**Pn**	**05 02 20.2**	**+0.7**
GSTR	**Great Sitkin T**	**1.57**	**51**	Pn	**Pb**	**05 02 21.7**	**-1.3**
GSTR				Sn	**Sb**	**05 02 41.8**	**-0.6**
GSTR				IAML		05 02 52.9	
	comp=E,196µm,0.8s						
GSIG	**Igitkin Island**	**1.57**	**56**		**Pn**	**05 02 20.8**	**+0.4**
CERB	**Semis' Cerberu**	**1.66**	**300**		**Pn**	**05 02 22.5**	**+0.9**
CESW	**Semis' Southwe**	**1.68**	**298**		**Pn**	**05 02 22.1**	**+0.2**
AMKA	**Amchitka**	**1.69**	**279**	Pn	**Pn**	**05 02 21.8**	**-0.2**
LSSE	**Little Sitkin**	**2.26**	**292**		**Pn**	**05 02 29.9**	**0.0**
LSPA	**Little Sitkin**	**2.27**	**293**		**Pn**	**05 02 30.5**	**+0.5**
ATKA	**Atka Island**	**2.62**	**64**	Pn	**Pn**	**05 02 35.9**	**+1.1**
ATKA				IAML		05 03 15.5	
	comp=E,33µm,0.7s						
ATKA				IAML		05 03 16.5	
	comp=N,51µm,1.1s						
ATKA	**Atka Island**	**2.62**	**64**	⇑P	**Pn**	**05 02 34.6**	**-0.2**
KONW	**Korovin Northw**	**2.70**	**61**		**Pn**	**05 02 38.4**	**+2.5**
KOKV	**Korovin Volcan**	**2.71**	**62**		**Pn**	**05 02 38.7**	**+2.7**
KONE	**Korovin Northe**	**2.75**	**61**		**Pn**	**05 02 38.7**	**+2.2**
KOSE	**Korovin Southe**	**2.76**	**62**		**Pn**	**05 02 39.3**	**+2.5**
SHEM	**Shemya Is, Ala**	**5.12**	**291**	Pn	**Pn**	**05 03 10.1**	**+1.1**
	comp=N,86nm,0.3s,baz=26,slow=9.8,SNR=33						
SHEM				Sn	**Sn**	**05 04 07.7**	**+0.7**
	comp=N,177nm,0.3s,baz=336,slow=14,SNR=4.6						
SHEM				LR	LR	05 05 17.6	
	comp=N,263µm,18.0s,baz=138,slow=40						
	comp=N,2µm,0.7s						
SHEM	**Shemya Is, Ala**	**5.12**	**291**	Pn	**Pn**	**05 03 10.2**	**+1.2**
SHEM				IAML		05 04 32.0	
	comp=E,7µm,1.3s						
SHEM				IAML		05 04 35.0	
	comp=N,5µm,1.5s						
SMY	**Shemya**	**5.12**	**291**	Pn	**Pn**	**05 03 10.2**	**+1.1**
SMY				IAML		05 04 39.8	
	comp=N,9µm,1.4s						
SMY	**Shemya**	**5.12**	**291**	P	**Pn**	**05 03 10.2**	**+1.1**
SMY	**Shemya**	**5.12**	**291**	⇓P	**Pn**	**05 03 09.8**	**+0.7**
CLES	**Cleveland East**	**5.31**	**68**	Pn	**Pn**	**05 03 15.9**	**+4.1**
CLCO	**Concord Point,**	**5.41**	**69**		**Pn**	**05 03 15.1**	**+2.1**
NIKH	**Nikolski High**	**5.96**	**68**	Pn	**Pn**	**05 03 23.1**	**+2.4**
NIKH	**Nikolski High**	**5.96**	**68**	P	**Pn**	**05 03 23.9**	**+3.2**
	baz=258,SNR=30						
OKSP	**Okmok Steeple**	**6.36**	**67**		**Pn**	**05 03 29.0**	**+2.8**
OKCE	**Okmok Cone E**	**6.48**	**65**		**Pn**	**05 03 31.2**	**+3.3**
OKNC	**Okmok New Cone**	**6.51**	**65**		**Pn**	**05 03 32.0**	**+3.7**
OKFG	**Magazine Ridge**	**6.62**	**66**		**Pn**	**05 03 32.8**	**+3.1**
MGOD	**Makushin Gods**	**7.33**	**64**		**Pn**	**05 03 43.1**	**+3.6**
MREP	**Makushin Rep't**	**7.40**	**64**		**Pn**	**05 03 44.0**	**+3.5**
MSW	**Makushin Switc**	**7.41**	**64**		**Pn**	**05 03 43.7**	**+3.1**
P08K	**Saint George I**	**7.43**	**39**	Pn	**Pn**	**05 03 43.3**	**+2.6**
P08K	**Saint George I**	**7.43**	**39**	P	**Pn**	**05 03 41.6**	**+0.9**
	baz=228,SNR=12						
UNV	**Unalaska Valle**	**7.55**	**64**	Pn	**Pn**	**05 03 45.8**	**+3.3**
UNV	**Unalaska Valle**	**7.55**	**64**	P	**Pn**	**05 03 45.4**	**+2.9**
	baz=255,SNR=30						
SPIA	**Saint Paul Isl**	**7.58**	**34**	Pn	**Pn**	**05 03 46.6**	**+3.7**
SPIA	**Saint Paul Isl**	**7.58**	**34**	P	**Pn**	**05 03 44.1**	**+1.2**
	baz=222,SNR=64						
AKRB	**Akutan Reef Bi**	**7.88**	**63**		**Pn**	**05 03 50.3**	**+3.3**
LVA	**Lava Point**	**7.91**	**63**	Pn	**Pn**	**05 03 51.3**	**+3.9**
ZRO	**Akutan Zero**	**7.92**	**63**		**Pn**	**05 03 51.5**	**+4.0**
AKV	**Akutan Volcano**	**7.94**	**63**		**Pn**	**05 03 51.5**	**+3.6**
AKGG	**Akutan Green G**	**7.94**	**63**		**Pn**	**05 03 51.6**	**+3.7**
AKBBA	**Akutan Broad B**	**7.95**	**63**		**Pn**	**05 03 51.3**	**+3.4**
AKLV	**Akutan Long Va**	**7.95**	**63**		**Pn**	**05 03 51.7**	**+3.7**
AHB	**Akutan Harbor**	**8.02**	**63**		**Pn**	**05 03 53.0**	**+4.1**
AKUT	**Akutan**	**8.05**	**63**	Pn	**Pn**	**05 03 53.9**	**+4.7**
AKUT	**Akutan**	**8.05**	**63**	⇑P	**Pn**	**05 03 53.2**	**+4.0**
AKSA	**Akutan Strait**	**8.09**	**63**		**Pn**	**05 03 53.7**	**+3.8**
SSBA	**Shishaldin**	**9.16**	**61**		**Pn**	**05 04 08.1**	**+3.5**
ISNN	**Isanotski Nort**	**9.37**	**61**		**Pn**	**05 04 11.5**	**+4.1**
FALS	**False Pass**	**9.57**	**61**	Pn	**Pn**	**05 04 14.1**	**+3.9**
FALS	**False Pass**	**9.57**	**61**	P	**Pn**	**05 04 13.5**	**+3.4**
	baz=254,SNR=8.2						
S12K	**Black Hills**	**10.57**	**58**	Pn	**Pn**	**05 04 27.9**	**+4.0**
S12K	**Black Hills**	**10.57**	**58**	P	**Pn**	**05 04 27.0**	**+3.1**
	baz=252,SNR=6.6						
SDPT	**Sand Point**	**11.33**	**61**	Pn	**Pn**	**05 04 35.5**	**+1.3**
SDPT	**Sand Point**	**11.33**	**61**	P	**Pn**	**05 04 35.8**	**+1.6**
	baz=256,SNR=8.0						
M11K	**Mekoryuk**	**11.40**	**31**	Pn	**Pn**	**05 04 38.1**	**+3.0**
M11K	**Mekoryuk**	**11.40**	**31**	P	**Pn**	**05 04 37.1**	**+2.0**
	baz=222,SNR=87						
CNBA	**Chernabura Isl**	**11.71**	**64**	Pn	**Pn**	**05 04 39.7**	**+0.3**
CHNA	**Chernabura Isl**	**11.72**	**64**	P	**Pn**	**05 04 40.3**	**+0.8**
	baz=260,SNR=10						
M13K	**Dall Lake**	**12.41**	**36**	P	**Pn**	**05 04 51.1**	**+2.1**
	baz=229,SNR=60						
O14K	**Tigyukauivet M**	**12.54**	**43**	P	**Pn**	**05 04 53.5**	**+2.8**
	baz=238,SNR=41						
N14K	**Kuskokwak Cree**	**12.75**	**40**	P	**Pn**	**05 04 56.1**	**+2.6**
	baz=234,SNR=30						
K13K	**Kusilvak Mount**	**13.07**	**29**	P	**Pn**	**05 05 02.0**	**+4.1**
	baz=221,SNR=28						
GAMB	**Gambell**	**13.12**	**12**	Pn	**Pn**	**05 05 00.9**	**+2.4**
GAMB	**Gambell**	**13.12**	**12**	P	**Pn**	**05 05 01.7**	**+3.2**
	baz=199,SNR=13						
O15K	**Ungalikthiuk R**	**13.13**	**45**	P	**Pn**	**05 05 01.6**	**+2.8**
	baz=241,SNR=118						
M14K	**Bethel**	**13.15**	**37**	Pn	**Pn**	**05 05 02.4**	**+3.4**
M14K	**Bethel**	**13.15**	**37**	P	**Pn**	**05 05 02.8**	**+3.7**
	baz=231,SNR=44						
L14K	**Kuka Creek**	**13.28**	**34**	P	**Pn**	**05 05 04.2**	**+3.4**
	baz=227						
N15K	**Kwethluk River**	**13.54**	**41**	P	**Pn**	**05 05 07.5**	**+3.1**
	baz=237,SNR=27						
M15K	**Kasigluk River**	**13.61**	**39**	P	**Pn**	**05 05 08.7**	**+3.4**
	baz=234,SNR=110						
L15K	**Ungalak Mounta**	**13.94**	**34**	P	**Pn**	**05 05 13.3**	**+3.6**
	baz=229,SNR=84						
J14K	**Nanvaranak Lak**	**14.03**	**28**	P	**Pn**	**05 05 13.6**	**+2.6**
	baz=221,SNR=71						
O16K	**Kokwok River B**	**14.11**	**45**	P	**Pn**	**05 05 15.7**	**+3.6**
	baz=243,SNR=34						
CHIR	**Chirikof Islan**	**14.13**	**62**	Pn	**Pn**	**05 05 14.0**	**+1.6**
R17L	**Mt. Peulik Vol**	**14.17**	**54**	P	**Pn**	**05 05 14.3**	**+1.2**
	baz=253,SNR=10						
PLK4	**Peulik 4**	**14.17**	**54**	Pn	**Pn**	**05 05 13.3**	**+0.2**
N16K	**Nishlik Lake**	**14.26**	**42**	P	**Pn**	**05 05 15.1**	**+0.9**
	baz=238,SNR=165						
K15K	**Wolf Creek Mou**	**14.34**	**32**	P	**Pn**	**05 05 15.4**	**+0.1**
	baz=227,SNR=70						
Q16K	**King Salmon**	**14.39**	**50**	P	**Pn**	**05 05 17.1**	**+1.2**
	baz=248,SNR=63						
PET	**Petropavlovsk**	**14.44**	**287**	Pn	**Pn**	**05 05 17.4**	**+0.7**
PET	**Petropavlovsk**	**14.44**	**287**	*ce*P	**Pn**	**05 05 17.0**	**+0.4**
PET				*e*S	**Sn**	**05 07 56.4**	**+0.9**
PET				pmax	pmax		
	comp=Z,6µm,16.7s						
PET				pmax	pmax		
	comp=Z,139nm,1.2s						
PET				MLR	MLR		
	comp=Z,21µm,16.0s						
PET				MLR	MLR		
	comp=Z,20µm,16.0s						
PET	**Petropavlovsk**	**14.44**	**287**	⇑P	**Pn**	**05 05 16.7**	**0.0**
PET	**Petropavlovsk**	**14.44**	**287**	P	**Pn**	**05 05 16.7**	**0.0**
	comp=Z,9µmcomp=Z,234nm,2.1s						
M16K	**Timber Creek**	**14.49**	**40**	P	**Pn**	**05 05 18.5**	**+1.2**
	baz=236,SNR=98						
Q17K	**Contact Creek**	**14.62**	**52**	P	**Pn**	**05 05 20.4**	**+1.3**
	baz=251,SNR=27						
O17K	**Koliganek Bris**	**14.64**	**46**	P	**Pn**	**05 05 20.0**	**+0.7**
	baz=244,SNR=84						
L16K	**Owhat River**	**14.69**	**37**	Pn	**Pn**	**05 05 21.6**	**+1.5**
L16K	**Owhat River**	**14.69**	**37**	P	**Pn**	**05 05 21.2**	**+1.1**
	baz=233,SNR=258						
ACHA	**Angle Creek He**	**14.88**	**53**	Pn	**Pn**	**05 05 23.1**	**+0.4**
N17K	**Nushagak Hills**	**14.96**	**43**	P	**Pn**	**05 05 24.2**	**+0.6**
	baz=241,SNR=48						
ANM	**Nome**	**15.01**	**21**	P	**Pn**	**05 05 24.3**	**0.0**
	baz=213,SNR=31						
PEA0B	**Petropavlovsk-**	**15.01**	**287**	*c i*P	**Pn**	**05 05 22.8**	**-1.6**
PETK	**Petropavlovsk-**	**15.01**	**287**	Pn	**Pn**	**05 05 25.7**	**+1.3**
	comp=Z,60nm,0.8s,baz=85,slow=18,SNR=50						
PETK				Sn	**Sn**	**05 08 08.7**	**-0.8**
	comp=Z,1.0nm,0.3s,baz=78,slow=28,SNR=1.3						
PETK				PcP	**PcP**	**05 10 32.0**	**+0.7**
	comp=Z,9.9nm,0.8s,baz=67,slow=3.7,SNR=3.9						
PETK				LR	LR	05 10 55.9	
	comp=Z,78µm,21.9s,baz=89,slow=36						
PETK				ScP	**ScP**	**05 14 03.6**	**+0.8**
	comp=Z,4.8nm,0.8s,baz=132,slow=2.2,SNR=3.9						
PETK	**Petropavlovsk-**	**15.01**	**287**	Pn	**Pn**	**05 05 24.8**	**+0.4**
SII	**Sitkinak Islan**	**15.05**	**60**	IAmb	IAmb	05 05 32.8	
	comp=Z,255nm,0.5s						
SII	**Sitkinak Islan**	**15.05**	**60**	P	**Pn**	**05 05 26.0**	**+1.1**
	baz=260,SNR=9.9						
Q18K	**Katmai Hardscr**	**15.18**	**51**	P	**Pn**	**05 05 26.7**	**0.0**
	baz=251,SNR=83						
M17K	**Holitna River**	**15.31**	**40**	P	**Pn**	**05 05 28.1**	**-0.2**
	baz=238,SNR=88						
J16K	**Anvik River**	**15.34**	**31**	P	**Pn**	**05 05 27.2**	**-1.3**
	baz=226,SNR=221						
P18K	**Big Mountain,**	**15.34**	**49**	IAmb	IAmb	05 05 37.1	
	comp=Z,358nm,0.8s						
P18K	**Big Mountain,**	**15.34**	**49**	P	**Pn**	**05 05 29.9**	**+1.2**
	baz=248,SNR=32						
TNA	**Tin City**	**15.38**	**16**	Pn	**Pn**	**05 05 28.8**	**-0.3**
TNA	**Tin City**	**15.38**	**16**	⇑P	**P**	**05 05 31.4**	**-1.9**
TNA	**Tin City**	**15.38**	**16**	P	**Pn**	**05 05 27.6**	**-1.5**
	baz=205						
L17K	**Donlin**	**15.39**	**37**	P	**Pn**	**05 05 30.8**	**+1.5**
	baz=234,SNR=206						
O18K	**Koktuh Hills**	**15.54**	**47**	IAmb	IAmb	05 05 39.4	
	comp=Z,450nm,0.8s						
O18K	**Koktuh Hills**	**15.54**	**47**	P	**Pn**	**05 05 31.5**	**+0.2**
	baz=247,SNR=12						
N18K	**Kilae Creek**	**15.59**	**44**	P	**Pn**	**05 05 32.2**	**+0.2**
	baz=243,SNR=65						
F14K	**Arctic Creek**	**15.60**	**18**	P	**Pn**	**05 05 30.9**	**-1.0**
	baz=209						
OHAK	**Old Harbor**	**15.67**	**58**	Pn	**Pn**	**05 05 30.5**	**-2.4**
OHAK				IAmb	IAmb	05 05 40.6	
	comp=Z,509nm,0.6s						
OHAK	**Old Harbor**	**15.67**	**58**	P	**Pn**	**05 05 33.8**	**+0.9**
	baz=258,SNR=50						
G15K	**Niukluk**	**15.69**	**22**	P	**Pn**	**05 05 33.7**	**+0.6**
	baz=215,SNR=263						
I17K	**Unalakleet**	**15.74**	**29**	P	**Pn**	**05 05 34.4**	**+0.7**
	baz=225,SNR=51						
K17K	**Iditarod**	**15.75**	**35**	P	**Pn**	**05 05 34.1**	**+0.2**
	baz=232,SNR=148						
H16K	**Elim**	**15.86**	**25**	P	**Pn**	**05 05 36.4**	**+1.1**
	baz=220,SNR=148						
J17K	**VABM Dome**	**15.92**	**32**	P	**Pn**	**05 05 37.4**	**+1.4**
	baz=229,SNR=211						
Q19K	**Cape Douglas,**	**15.94**	**51**	Pn	**Pn**	**05 05 35.9**	**-0.5**
Q19K	**Cape Douglas,**	**15.94**	**51**	P	**Pn**	**05 05 37.8**	**+1.3**
	baz=252,SNR=14						
M18K	**Stony River**	**16.02**	**41**	P	**Pn**	**05 05 38.5**	**+1.2**
	baz=240,SNR=46						
L18K	**Granite Mounta**	**16.06**	**38**	P	**Pn**	**05 05 38.2**	**+0.3**
	baz=237,SNR=166						
O19K	**Port Alsworth**	**16.08**	**47**	P	**P**	**05 05 39.9**	**-1.3**
	baz=247,SNR=84						
F15K	**North Star Dit**	**16.15**	**20**	P	**Pn**	**05 05 39.4**	**+0.3**
	baz=212,SNR=103						
KDAK	**Kodiak Island**	**16.16**	**56**	Pn	**Pn**	**05 05 37.6**	**-1.7**
	comp=Z,12nm,0.3s,baz=237,slow=8.9,SNR=73						
KDAK				Sn	**Sn**	**05 08 27.8**	**-10**
	comp=Z,1.9nm,0.3s,baz=9.9,slow=20,SNR=2.3						
	comp=Z,129nm,0.4s						
KDAK	**Kodiak Island**	**16.16**	**56**	Pn	**Pn**	**05 05 37.2**	**-2.0**
KDAK				IAmb	IAmb	05 05 46.7	
	comp=Z,626nm,1.1s						
KDAK	**Kodiak Island**	**16.16**	**56**	⇑P	**Pn**	**05 05 36.3**	**-2.9**
KDAK	**Kodiak Island**	**16.16**	**56**	P	**Pn**	**05 05 39.6**	**+0.4**
	baz=257						
N19K	**Bonanza Creek**	**16.27**	**44**	P	**P**	**05 05 42.6**	**-0.9**
	baz=245,SNR=98						
SKR	**Severo-Kuril's**	**16.28**	**279**	*e*P	**Pn**	**05 05 41.1**	**+0.3**
SKR				*e*S	**Sn**	**05 08 37.2**	**-3.1**
SKR				pmax	pmax		
	comp=Z,676nm,1.0s						
SKR				pmax	pmax		
	comp=Z,4.0nm,5.9s						
SKR				smax	smax		
	comp=N,200nm,0.8s						
SKR				smax	smax		
	comp=E,194nm,0.6s						
SKR				MLR	MLR		
	comp=Z,7µm,15.0s						
P19K	**Oil Pt**	**16.39**	**49**	IAmb	IAmb	05 05 51.6	
	comp=Z,353nm,0.7s						
P19K	**Oil Pt**	**16.39**	**49**	P	**P**	**05 05 43.5**	**-1.2**
	baz=250,SNR=18						
G16K	**Koyuk River**	**16.43**	**24**	P	**P**	**05 05 43.9**	**-1.1**
	baz=218,SNR=152						
Q20K	**Shuyak Island**	**16.47**	**53**	P	**P**	**05 05 44.6**	**-1.0**
	baz=255						
SYI	**Shuyak Island**	**16.47**	**53**	Pn	**Pn**	**05 05 43.2**	**+0.1**
H17K	**Granite Mounta**	**16.74**	**27**	P	**P**	**05 05 47.6**	**-1.0**
	baz=224,SNR=203						
L19K	**White Mountain**	**16.77**	**40**	IAmb	IAmb	05 05 55.9	
	comp=Z,783nm,0.9s						
L19K	**White Mountain**	**16.77**	**40**	P	**P**	**05 05 48.5**	**-0.4**
	baz=240,SNR=320						
J18K	**Innoko River**	**16.78**	**34**	P	**P**	**05 05 48.8**	**-0.2**
	baz=233,SNR=170						
O20K	**Slope Mountain**	**16.82**	**48**	P	**P**	**05 05 49.4**	**-0.2**
	baz=250,SNR=61						
RED	**Redoubt Volcan**	**16.88**	**47**	IAmb	IAmb	05 05 55.9	
	comp=Z,1µm,1.0s						
G17K	**Kiwalik Mounta**	**16.96**	**25**	P	**P**	**05 05 50.3**	**-0.6**
	baz=221,SNR=88						
HOM	**Homer**	**17.15**	**50**	IAmb	IAmb	05 05 59.0	
	comp=Z,1µm,0.8s						
HOM	**Homer**	**17.15**	**50**	P	**P**	**05 05 53.3**	**+0.2**
	baz=253,SNR=7.7						
L20K	**Farewell, AK**	**17.31**	**40**	IAmb	IAmb	05 06 01.9	
	comp=Z,431nm,0.9s						
L20K	**Farewell, AK**	**17.31**	**40**	P	**P**	**05 05 55.7**	**+0.8**
	baz=241,SNR=252						
M20K	**Styx River**	**17.33**	**42**	P	**P**	**05 05 56.4**	**+1.2**
	baz=244,SNR=129						
H18K	**Honhosa River**	**17.35**	**28**	IAmb	IAmb	05 06 02.4	
	comp=Z,528nm,0.9s						
H18K	**Honhosa River**	**17.35**	**28**	P	**P**	**05 05 56.9**	**+1.6**
	baz=226						
N20K	**Mount Spurr**	**17.44**	**45**	P	**P**	**05 05 57.1**	**+0.7**
	baz=247,SNR=131						
SPCR	**Spurr Chakacha**	**17.44**	**45**	P	**P**	**05 05 57.2**	**+0.9**
	baz=247,SNR=124						
J19K	**Poorman**	**17.49**	**34**	IAmb	IAmb	05 06 03.2	
	comp=Z,652nm,0.9s						
J19K	**Poorman**	**17.49**	**34**	P	**P**	**05 05 57.6**	**+0.8**
	baz=234,SNR=440						
GCSA	**Galena City Sc**	**17.54**	**31**	P	**P**	**05 05 58.3**	**+1.0**
	baz=230,SNR=147						
F17K	**Baldwin Pennin**	**17.54**	**23**	P	**P**	**05 05 59.2**	**+1.9**
	baz=218,SNR=58						
BRSE	**Bradley Lake S**	**17.61**	**50**	P	**P**	**05 05 57.9**	**-0.3**
	baz=254,SNR=58						
K20K	**Telida**	**17.69**	**37**	IAmb	IAmb	05 06 06.6	
	comp=Z,390nm,0.8s						
K20K	**Telida**	**17.69**	**37**	P	**P**	**05 06 00.1**	**+1.0**
	baz=238,SNR=223						
STLK	**Strandline Lak**	**17.73**	**44**		**P**	**05 05 59.7**	**+0.2**
CAPN	**Captain Cook N**	**17.75**	**47**	P	**P**	**05 06 01.4**	**+1.7**
	baz=250						
G18K	**Tagagawik**	**17.80**	**26**	P	**P**	**05 06 01.5**	**+1.3**
	baz=224,SNR=182						
E17K	**Hotham Inlet**	**17.93**	**21**	P	**P**	**05 06 03.5**	**+1.9**
	baz=215,SNR=229						
SKT	**Skwentna**	**18.06**	**43**		**P**	**05 06 04.5**	**+1.4**
SKT				IAmb	IAmb	05 06 13.6	
	comp=Z,731nm,1.0s						
SKT	**Skwentna**	**18.06**	**43**	P	**P**	**05 06 03.4**	**+0.3**
	baz=246,SNR=163						
F18K	**Selawik**	**18.06**	**24**	P	**P**	**05 06 04.7**	**+1.6**
	baz=220,SNR=60						
SLKM	**Skilak Lake**	**18.09**	**48**		**P**	**05 06 04.4**	**+0.8**
SLKM				IAmb	IAmb	05 06 09.8	
	comp=Z,833nm,0.9s						
J20K	**Nowinta River**	**18.12**	**35**	P	**P**	**05 06 04.6**	**+0.8**
J20K	**Nowinta River**	**18.12**	**35**	P	**P**	**05 06 04.7**	**+0.9**
	baz=236,SNR=242						
D17K	**Noatak River**	**18.18**	**18**	P	**Pn**	**05 06 04.2**	**-0.1**
	baz=212,SNR=122						
SUA	**Susitna One**	**18.19**	**45**		**P**	**05 06 05.6**	**+0.9**
SUA	**Susitna One**	**18.19**	**45**	P	**P**	**05 06 04.8**	**+0.1**
	baz=248,SNR=20						
H19K	**Roundabout Mou**	**18.19**	**29**		**P**	**05 06 04.7**	**+0.2**
H19K	**Roundabout Mou**	**18.19**	**29**	P	**P**	**05 06 05.7**	**+1.2**
	baz=229,SNR=88						
PPLA	**Purkeypile**	**18.19**	**40**		**Pn**	**05 06 04.7**	**0.0**
PPLA	**Purkeypile**	**18.19**	**40**	P	**P**	**05 06 06.0**	**+1.2**
	baz=242,SNR=59						
C16K	**Lisburne Hills**	**18.27**	**15**		**Pn**	**05 06 05.5**	**0.0**
C16K	**Lisburne Hills**	**18.27**	**15**	P	**Pn**	**05 06 06.1**	**+0.7**
	baz=207,SNR=59						
O22K	**Cooper Landing**	**18.32**	**48**	P	**P**	**05 06 05.8**	**-0.2**
O22K	**Cooper Landing**	**18.32**	**48**	P	**P**	**05 06 05.7**	**-0.2**
	baz=253,SNR=63						
SEW	**Seward**	**18.34**	**50**	P	**P**	**05 06 05.3**	**-0.8**
SEW				IAmb	IAmb	05 06 12.2	
	comp=Z,493nm,0.7s						
SEW	**Seward**	**18.34**	**50**	P	**Pn**	**05 06 06.3**	**+0.1**
	baz=254,SNR=63						
I20K	**Naaghedeneel**	**18.37**	**33**	P	**Pn**	**05 06 07.4**	**+0.8**
	baz=234,SNR=93						
G19K	**Purcell Mounta**	**18.43**	**27**	P	**Pn**	**05 06 08.1**	**+0.7**
	baz=226,SNR=228						
E18K	**Tukpahlearik C**	**18.48**	**21**	P	**Pn**	**05 06 09.5**	**+1.5**
	baz=217						
RC01	**Rabbit Creek A**	**18.51**	**47**		**Pn**	**05 06 09.7**	**+1.2**
RC01	**Rabbit Creek A**	**18.51**	**47**	P	**P**	**05 06 08.0**	**-0.1**
	baz=251,SNR=19						
RDOG	**Red Dog Mine**	**18.52**	**18**	P	**Pn**	**05 06 09.8**	**+1.4**
	baz=212,SNR=79						
M22K	**Willow**	**18.58**	**44**	IAmb	IAmb	05 06 17.9	
	comp=Z,1µm,0.9s						
M22K	**Willow**	**18.58**	**44**	P	**Pn**	**05 06 09.6**	**+0.4**
	baz=248,SNR=92						
L22K	**Petersville**	**18.61**	**42**	IAmb	IAmb	05 06 15.2	
	comp=Z,785nm,1.0s						
CHUM	**Lake Minchumin**	**18.64**	**37**	P	**Pn**	**05 06 10.4**	**+0.5**
	baz=240,SNR=222						
H20K	**Anotleneega Mo**	**18.67**	**31**	P	**Pn**	**05 06 10.6**	**+0.3**
	baz=231,SNR=351						
F19K	**Shaleruckik Mo**	**18.73**	**25**	P	**Pn**	**05 06 11.2**	**+0.2**
	baz=223						
CUT	**Chulitna**	**18.77**	**42**	IAmb	IAmb	05 06 18.7	
	comp=Z,849nm,1.2s						
CUT	**Chulitna**	**18.77**	**42**	P	**P**	**05 06 10.5**	**-0.4**
	baz=246,SNR=43						
C17K	**DeLong Mountai**	**18.83**	**17**	P	**Pn**	**05 06 12.8**	**+0.5**
	baz=211,SNR=105						
PMR	**Palmer**	**18.96**	**45**	P	**P**	**05 06 12.8**	**-0.1**
	baz=250,SNR=14						
PWL	**Port Wells**	**19.09**	**48**	P	**P**	**05 06 14.7**	**+0.3**
	baz=253,SNR=32						
KNK	**Knik Glacier**	**19.20**	**46**	IAmb	IAmb	05 06 22.1	
	comp=Z,695nm,0.8s						
KNK	**Knik Glacier**	**19.20**	**46**	P	**Pn**	**05 06 16.5**	**-0.3**
	baz=252,SNR=136						
TRF	**Thorofare Moun**	**19.22**	**39**	P	**P**	**05 06 16.2**	**+0.2**
	baz=244,SNR=150						
BPAW	**Bear Paw Mtn.**	**19.25**	**37**	IAmb	IAmb	05 06 22.7	
	comp=Z,487nm,0.7s						
BPAW	**Bear Paw Mtn.**	**19.25**	**37**	P	**Pn**	**05 06 16.9**	**-0.5**
	baz=241,SNR=205						
P23K	**Montague Islan**	**19.30**	**51**	IAmb	IAmb	05 06 23.4	
	comp=Z,578nm,0.9s						
P23K	**Montague Islan**	**19.30**	**51**	P	**Pn**	**05 06 18.3**	**+0.4**
	baz=257,SNR=12						
E19K	**Redstone River**	**19.34**	**24**	IAmb	IAmb	05 06 25.7	
	comp=Z,394nm,0.8s						
E19K	**Redstone River**	**19.34**	**24**	P	**Pn**	**05 06 18.2**	**-0.2**
	baz=223						
IMAR	**Indian Mountai**	**19.34**	**31**	P	**P**	**05 06 17.4**	**+0.3**
C18K	**Utukok River**	**19.36**	**19**	P	**Pn**	**05 06 18.9**	**+0.2**
	baz=214,SNR=67						
SML	**Sawmill**	**19.39**	**45**	IAmb	IAmb	05 06 27.9	
	comp=Z,298nm,0.8s						
SML	**Sawmill**	**19.39**	**45**	P	**P**	**05 06 17.1**	**-0.7**
	baz=251,SNR=31						
F20K	**Avaraart Lake**	**19.45**	**27**	P	**Pn**	**05 06 19.3**	**-0.4**
	baz=226,SNR=110						
H21K	**Melozitna Rive**	**19.45**	**32**	P	**Pn**	**05 06 19.2**	**-0.5**
	baz=234,SNR=205						
MA2	**Magadan**	**19.48**	**308**	P	**P**	**05 06 18.7**	**0.0**
	comp=Z,4.4nm,0.3s,baz=90,slow=9.7,SNR=50						
MA2				LR	LR	05 13 18.4	
	comp=Z,52µm,19.9s,baz=105,slow=35						
	comp=Z,137nm,0.7s						
MA2	**Magadan**	**19.48**	**308**	P	**Pn**	**05 06 19.8**	**-0.2**
MA2	**Magadan**	**19.48**	**308**	*ce*P	**P**	**05 06 17.8**	**-0.9**
MA2				pmax	pmax		
	comp=Z,165nm,0.8s						
MA2				MLR	MLR		
	comp=Z,43µm,18.0s						
MA2	**Magadan**	**19.48**	**308**	⇑P	**P**	**05 06 18.8**	**+0.1**
M23K	**Glacier View**	**19.66**	**45**	P	**P**	**05 06 21.0**	**+0.4**
	baz=252,SNR=233						
WAT1	**Susitna Watana**	**19.67**	**42**	P	**P**	**05 06 20.6**	**-0.2**
	baz=248						
GLI	**Glacier Island**	**19.67**	**48**	IAmb	IAmb	05 06 26.9	
	comp=Z,247nm,0.7s						
GLI	**Glacier Island**	**19.67**	**48**	P	**P**	**05 06 21.3**	**+0.5**
	baz=255,SNR=29						
SEY	**Seymchan**	**19.74**	**318**	P	**P**	**05 06 21.6**	**+0.1**
	comp=Z,93nm,0.7s,baz=115,slow=11,SNR=48						
SEY				LR	LR	05 13 48.7	
	comp=Z,53µm,18.6s,baz=120,slow=36						
SEY				ScP	**ScP**	**05 14 13.4**	**+1.0**
	comp=Z,15nm,0.8s,baz=129,slow=4.5,SNR=8.1						
SEY	**Seymchan**	**19.74**	**318**	*ce*P	**P**	**05 06 21.3**	**-0.2**
SEY				pmax	pmax		
	comp=Z,538nm,2.5s						
SEY				MLR	MLR		
	comp=Z,42µm,16.0s						
G21K	**Allakaket**	**19.75**	**30**	P	**Pn**	**05 06 22.7**	**-0.6**
	baz=231						
RND	**Reindeer**	**19.78**	**40**	P	**P**	**05 06 21.3**	**-0.7**
RND				IAmb	IAmb	05 06 26.1	
	comp=Z,330nm,0.7s						
RND	**Reindeer**	**19.78**	**40**	P	**P**	**05 06 21.3**	**-0.7**
RND				pmax	pmax		
	comp=Z,330nm,0.7s						
HIN	**Hinchinbrook I**	**19.83**	**50**	IAmb	IAmb	05 06 29.2	
	comp=Z,746nm,1.2s						
SCM	**Sheep Creek Mo**	**19.85**	**46**	IAmb	IAmb	05 06 30.5	
	comp=Z,453nm,0.7s						

SCM	**Sheep Creek Mo**	**19.85**	**46**	P	**P**	**05 06 21.3**	**-1.5**
	baz=252,SNR=47						
B18K	**Kokolik River**	**19.85**	**17**	P	**Pn**	**05 06 23.7**	**-0.7**
	baz=212						
BWN	**Browne**	**19.87**	**38**	IAmb	IAmb	05 06 28.8	
	comp=Z,570nm,0.9s						
MCK	**McKinley**	**19.88**	**40**	IAmb	IAmb	05 06 31.8	
	comp=Z,364nm,0.8s						
MCK	**McKinley**	**19.88**	**40**	P	**P**	**05 06 21.9**	**-1.3**
	baz=245,SNR=130						
D19K	**Kuna River**	**19.91**	**22**	IAmb	IAmb	05 06 33.1	
	comp=Z,735nm,1.1s						
D19K	**Kuna River**	**19.91**	**22**	P	**P**	**05 06 23.7**	**+0.3**
	baz=220						
WAT6	**Susitna Watana**	**19.92**	**43**	P	**P**	**05 06 22.0**	**-1.7**
	baz=250,SNR=77						
FID	**Port Fidalgo**	**19.93**	**49**	P	**P**	**05 06 23.8**	**+0.1**
FID				IAmb	IAmb	05 06 29.8	
	comp=Z,734nm,0.9s						
H22K	**Ishtalitna Cre**	**20.07**	**32**	P	**P**	**05 06 25.0**	**-0.1**
	baz=236,SNR=207						
C19K	**Lookout Ridge**	**20.07**	**19**	IAMs_20	IAMs_20	05 14 22.6	
	comp=Z,56µm,20.0s						
C19K	**Lookout Ridge**	**20.07**	**19**	P	**P**	**05 06 23.7**	**-1.4**
	baz=216,SNR=37						
E20K	**Nigu River**	**20.20**	**24**	P	**P**	**05 06 26.9**	**+0.4**
	baz=223						
F21K	**Alatna River**	**20.22**	**28**	IAmb	IAmb	05 06 33.6	
	comp=Z,501nm,0.7s						
F21K				IAMs_20	IAMs_20	05 14 24.7	
	comp=Z,40µm,19.0s						
F21K	**Alatna River**	**20.22**	**28**	P	**P**	**05 06 27.7**	**+1.0**
	baz=230,SNR=536						
NEA2	**Nenana**	**20.22**	**37**	IAmb	IAmb	05 06 35.6	
	comp=Z,566nm,0.9s						
NEA2	**Nenana**	**20.22**	**37**	P	**P**	**05 06 25.8**	**-0.9**
	baz=243,SNR=396						
EYAK	**Cordova Ski Ar**	**20.23**	**50**	IAMs_20	IAMs_20	05 14 59.0	
	comp=Z,61µm,20.0s						
EYAK	**Cordova Ski Ar**	**20.23**	**50**	P	**P**	**05 06 27.1**	**+0.2**
	baz=257,SNR=15						
DHY	**Denali Highway**	**20.26**	**42**	P	**P**	**05 06 26.8**	**-0.6**
DHY				IAmb	IAmb	05 06 31.8	
	comp=Z,632nm,0.8s						
DHY	**Denali Highway**	**20.26**	**42**	P	**P**	**05 06 26.4**	**-0.9**
	baz=249,SNR=492						
DIV	**Divide**	**20.36**	**48**	IAmb	IAmb	05 06 35.9	
	comp=Z,233nm,0.8s						
DIV				IAMs_20	IAMs_20	05 15 36.2	
	comp=Z,47µm,22.0s						
I23K	**Minto, Yukon-K**	**20.38**	**36**	IAmb	IAmb	05 06 35.7	
	comp=Z,394nm,0.6s						
I23K	**Minto, Yukon-K**	**20.38**	**36**	P	**P**	**05 06 29.1**	**+0.7**
	baz=241,SNR=315						
KLU	**Klutina**	**20.39**	**47**	IAMs_20	IAMs_20	05 15 41.8	
	comp=Z,56µm,21.0s						
KLU	**Klutina**	**20.39**	**47**	P	**P**	**05 06 28.9**	**+0.2**
	baz=255,SNR=98						
D20K	**Etivluk River**	**20.43**	**22**	IAMs_20	IAMs_20	05 14 32.5	
	comp=Z,39µm,19.0s						
D20K	**Etivluk River**	**20.43**	**22**	P	**P**	**05 06 29.8**	**+0.7**
	baz=222						
M24K	**Tolsona, Glenn**	**20.45**	**45**	IAmb	IAmb	05 06 38.5	
	comp=Z,906nm,1.1s						
M24K	**Tolsona, Glenn**	**20.45**	**45**	P	**P**	**05 06 28.8**	**-0.5**
	baz=253,SNR=33						
WRH	**Wood River Hil**	**20.54**	**38**	P	**P**	**05 06 29.5**	**-0.7**
G22K	**Bettles**	**20.63**	**30**	P	**P**	**05 06 31.4**	**+0.3**
	baz=234						
H23K	**Yukon River**	**20.66**	**34**	IAmb	IAmb	05 06 37.7	
	comp=Z,466nm,0.9s						
H23K	**Yukon River**	**20.66**	**34**	P	**P**	**05 06 32.0**	**+0.4**
	baz=239						
A19K	**Wainwright**	**20.71**	**16**	P	**P**	**05 06 31.5**	**-0.4**
	baz=212						
RAGM	**Ragged Mountai**	**20.72**	**51**	IAMs_20	IAMs_20	05 15 31.8	
	comp=Z,50µm,20.0s						
CCB	**Clear Creek Bu**	**20.73**	**38**	IAmb	IAmb	05 06 50.6	
	comp=Z,560nm,1.4s						
KAIM	**Kayak Island**	**20.76**	**52**	IAMs_20	IAMs_20	05 15 51.1	
	comp=Z,47µm,19.0s						
F22K	**John River**	**20.79**	**28**	P	**P**	**05 06 33.2**	**+0.3**
	baz=231,SNR=264						
COLA	**College**	**20.82**	**37**	P	**P**	**05 06 33.7**	**+0.6**
COLA				IAmb	IAmb	05 06 42.6	
	comp=Z,575nm,0.9s						
COLA	**College**	**20.82**	**37**	*i* P	**P**	**05 06 33.7**	**+0.6**
COLA				pmax	pmax		
	comp=Z,587nm,0.9s						
COLA	**College**	**20.82**	**37**	⇑P	**P**	**05 06 32.5**	**-0.6**
COLA	**College**	**20.82**	**37**	P	**P**	**05 06 34.1**	**+1.0**
	baz=244						
BMRM	**Bremner River**	**20.88**	**49**	IAmb	IAmb	05 06 44.0	
	comp=Z,494nm,0.8s						
BMRM				IAMs_20	IAMs_20	05 15 10.9	
	comp=Z,44µm,20.0s						
BMRM	**Bremner River**	**20.88**	**49**	P	Pn	05 06 35.3	-1.3
	baz=258,SNR=62						
E21K	**Killik River**	**20.90**	**25**	IAmb	IAmb	05 06 40.2	
	comp=Z,222nm,0.7s						
E21K				IAMs_20	IAMs_20	05 14 38.2	
	comp=Z,34µm,20.0s						
E21K	**Killik River**	**20.90**	**25**	P	**P**	**05 06 34.4**	**+0.2**
	baz=227						
HMT	**Hamilton**	**20.91**	**51**	IAmb	IAmb	05 06 52.6	
	comp=Z,290nm,0.9s						
HMT				IAMs_20	IAMs_20	05 15 48.0	
	comp=Z,31µm,19.0s						
HDA	**Harding Lake**	**20.96**	**39**	P	**P**	**05 06 33.9**	**-0.9**
HDA				IAmb	IAmb	05 06 46.9	
	comp=Z,156nm,0.6s						
HDA				IAMs_20	IAMs_20	05 15 41.7	
	comp=Z,39µm,19.0s						
HDA	**Harding Lake**	**20.96**	**39**	P	**P**	**05 06 34.6**	**-0.2**
	baz=246,SNR=95						
G23K	**Bananza Creek**	**20.98**	**31**	IAmb	IAmb	05 06 44.5	
	comp=Z,416nm,0.9s						
G23K	**Bananza Creek**	**20.98**	**31**	P	**P**	**05 06 35.4**	**+0.4**
	baz=236,SNR=226						
HARP	**HAARP**	**21.00**	**45**	P	**P**	**05 06 34.5**	**-0.7**
	baz=253,SNR=48						
N25K	**Chitina, Valde**	**21.03**	**47**	IAmb	IAmb	05 06 44.8	
	comp=Z,291nm,0.7s						
N25K	**Chitina, Valde**	**21.03**	**47**	P	**P**	**05 06 35.4**	**-0.2**
	baz=256,SNR=109						
PAX	**Paxson**	**21.04**	**43**	IAmb	IAmb	05 06 44.5	
	comp=Z,429nm,1.1s						
PAX				IAMs_20	IAMs_20	05 16 00.6	
	comp=Z,41µm,20.0s						
PAX	**Paxson**	**21.04**	**43**	P	**P**	**05 06 34.6**	**-1.1**
	baz=252,SNR=103						
POKR	**Poker Plat Res**	**21.09**	**37**	P	**P**	**05 06 35.6**	**-0.5**
POKR				IAmb	IAmb	05 06 45.5	
	comp=Z,452nm,0.9s						
POKR	**Poker Plat Res**	**21.09**	**37**	P	**P**	**05 06 35.1**	**-1.0**
	baz=244,SNR=126						
SUCK	**Suckling Hills**	**21.10**	**52**	IAMs_20	IAMs_20	05 16 02.1	
	comp=Z,39µm,20.0s						
IL31		**21.14**	**38**	IAmb	IAmb	05 06 56.2	
	comp=Z,319nm,0.7s						
ILAR	**Eielson Array**	**21.14**	**38**	P	**P**	**05 06 35.3**	**-1.4**
	comp=Z,31nm,0.6s,baz=241,slow=9.3,SNR=88						
ILAR				PcP	**PcP**	**05 10 42.2**	**+0.8**
	comp=Z,12nm,0.8s,baz=304,slow=2.0,SNR=5.3						
ILAR				ScP	**ScP**	**05 14 16.4**	**+0.7**
	comp=Z,10nm,0.8s,baz=276,slow=2.7,SNR=12						
ILAR				ScS	**ScS**	**05 17 58.0**	**-1.0**
	comp=Z,1.7nm,0.9s,baz=232,slow=6.6,SNR=8.0						
	comp=Z,31nm,0.6s						
ILAR	**Eielson Array**	**21.14**	**38**	P	**P**	**05 06 35.5**	**-1.2**
ILAR	**Eielson Array**	**21.14**	**38**	P	**P**	**05 06 35.5**	**-1.2**
BERG	**Berg Lake**	**21.19**	**51**	IAmb	IAmb	05 06 47.0	
	comp=Z,314nm,1.0s						
K24K	**Donnelly Dome**	**21.20**	**41**	IAmb	IAmb	05 06 46.6	
	comp=Z,527nm,0.8s						
K24K				IAMs_20	IAMs_20	05 16 04.6	
	comp=Z,45µm,20.0s						
K24K	**Donnelly Dome**	**21.20**	**41**	P	**P**	**05 06 36.5**	**-0.9**
	baz=249,SNR=90						
C21K	**Knifeblade Rid**	**21.21**	**23**	P	**P**	**05 06 37.7**	**+0.4**
	baz=224						
COLD	**Coldfoot**	**21.22**	**30**	IAmb	IAmb	05 06 45.9	
	comp=Z,301nm,0.8s						
COLD				IAMs_20	IAMs_20	05 14 45.7	
	comp=Z,33µm,20.0s						
COLD	**Coldfoot**	**21.22**	**30**	P	**P**	**05 06 38.2**	**+0.6**
	baz=235,SNR=197						
H24K	**Noodor Dome**	**21.26**	**35**	IAmb	IAmb	05 06 44.8	
	comp=Z,482nm,0.7s						
H24K	**Noodor Dome**	**21.26**	**35**	P	**P**	**05 06 37.7**	**-0.3**
	baz=241,SNR=511						
E22K	**Anaktuvuk Pass**	**21.30**	**27**	IAmb	IAmb	05 06 46.3	
	comp=Z,307nm,0.7s						
E22K				IAMs_20	IAMs_20	05 15 18.5	
	comp=Z,38µm,18.0s						
E22K	**Anaktuvuk Pass**	**21.30**	**27**	P	**P**	**05 06 38.2**	**-0.1**
	baz=231,SNR=217						
B20K	**Meade River**	**21.31**	**20**	IAMs_20	IAMs_20	05 15 16.1	
	comp=Z,51µm,20.0s						
B20K	**Meade River**	**21.31**	**20**	P	**P**	**05 06 38.1**	**-0.2**
	baz=219,SNR=103						
GLB	**Gilahina Butte**	**21.36**	**48**	P	**P**	**05 06 38.6**	**-0.5**
GLB				IAmb	IAmb	05 06 47.5	
	comp=Z,304nm,0.6s						
VRDI	**Verde Repeater**	**21.48**	**49**	IAMs_20	IAMs_20	05 15 40.8	
	comp=Z,36µm,22.0s						
CRQM	**Cirque**	**21.53**	**50**	P	**P**	**05 06 42.1**	**+1.0**
CRQM				IAmb	IAmb	05 07 01.0	
	comp=Z,323nm,0.8s						
CRQM				IAMs_20	IAMs_20	05 16 01.0	
	comp=Z,33µm,20.0s						
D22K	**Ayikyak River**	**21.55**	**25**	IAMs_20	IAMs_20	05 15 38.2	
	comp=Z,44µm,19.0s						
D22K	**Ayikyak River**	**21.55**	**25**	P	**P**	**05 06 41.3**	**+0.2**
	baz=228						
CRQE	**Cirque**	**21.55**	**50**	P	**P**	**05 06 40.2**	**-1.1**
	baz=260,SNR=45						
RIDG	**Independent Ri**	**21.56**	**42**	IAmb	IAmb	05 06 51.8	
	comp=Z,278nm,0.7s						
RIDG				IAMs_20	IAMs_20	05 15 20.3	
	comp=Z,42µm,20.0s						
RIDG	**Independent Ri**	**21.56**	**42**	P	**P**	**05 06 39.6**	**-1.6**
	baz=250,SNR=61						
SNH	**Sunshine Point**	**21.58**	**52**	IAmb	IAmb	05 06 52.2	
	comp=Z,234nm,0.8s						
SNH				IAMs_20	IAMs_20	05 16 28.8	
	comp=Z,35µm,20.0s						
B21K	**Ikpikpuk River**	**21.59**	**22**	IAMs_20	IAMs_20	05 15 31.7	
	comp=Z,40µm,19.0s						
B21K	**Ikpikpuk River**	**21.59**	**22**	P	**P**	**05 06 41.0**	**-0.4**
	baz=223,SNR=258						
WAX	**Waxell Ridge**	**21.62**	**51**	IAmb	IAmb	05 06 52.5	
	comp=Z,348nm,1.0s						
WAX				IAMs_20	IAMs_20	05 16 21.7	
	comp=Z,43µm,19.0s						
J25K	**Salcha River,**	**21.67**	**39**	IAMs_20	IAMs_20	05 16 11.7	
	comp=Z,47µm,20.0s						
J25K	**Salcha River,**	**21.67**	**39**	P	**P**	**05 06 40.5**	**-1.9**
	baz=248,SNR=168						
TGL	**Tana Glacier**	**21.68**	**50**	IAMs_20	IAMs_20	05 16 05.3	
	comp=Z,35µm,20.0s						
MCARA	**McCarthy VSAT**	**21.71**	**48**	IAMs_20	IAMs_20	05 15 38.0	
	comp=Z,40µm,22.0s						
MCARA	**McCarthy VSAT**	**21.71**	**48**	P	**P**	**05 06 40.9**	**-1.9**
	baz=258,SNR=75						
MENT	**Mentasta**	**21.79**	**44**	IAmb	IAmb	05 07 01.3	
	comp=Z,403nm,1.4s						
G24K	**Hadweenzic Riv**	**21.83**	**33**	IAmb	IAmb	05 06 49.8	
	comp=Z,496nm,1.1s						
G24K	**Hadweenzic Riv**	**21.83**	**33**	P	**P**	**05 06 44.4**	**+0.3**
	baz=240,SNR=378						
DOT	**Dot Lake**	**21.86**	**42**	IAmb	IAmb	05 06 50.6	
	comp=Z,352nm,0.9s						
ISLE	**Juniper Island**	**21.89**	**51**	IAMs_20	IAMs_20	05 16 21.0	
	comp=Z,43µm,20.0s						
E23K	**Chandalar**	**21.90**	**29**	IAMs_20	IAMs_20	05 15 19.1	
	comp=Z,40µm,19.0s						
E23K	**Chandalar**	**21.90**	**29**	P	**P**	**05 06 45.3**	**+0.5**
	baz=234,SNR=107						
M26K	**Nabesna, AK**	**21.96**	**46**	IAMs_20	IAMs_20	05 16 45.7	
	comp=Z,54µm,20.0s						
M26K	**Nabesna, AK**	**21.96**	**46**	P	**P**	**05 06 45.3**	**-0.3**
	baz=256,SNR=90						
L26K	**Log Cabin Wild**	**21.98**	**44**	IAmb	IAmb	05 06 57.6	
	comp=Z,479nm,0.9s						
L26K	**Log Cabin Wild**	**21.98**	**44**	P	**P**	**05 06 45.3**	**-0.4**
	baz=254,SNR=164						
PRP	**Porcupine Dome**	**21.98**	**37**	P	**P**	**05 06 44.7**	**-1.1**
	baz=245,SNR=83						
SCRK	**Sand Creek**	**22.00**	**41**	P	**P**	**05 06 44.5**	**-1.5**
SCRK				IAmb	IAmb	05 06 51.3	
	comp=Z,265nm,0.8s						
SCRK				IAMs_20	IAMs_20	05 16 37.8	
	comp=Z,40µm,20.0s						
SCRK	**Sand Creek**	**22.00**	**41**	P	**P**	**05 06 44.3**	**-1.8**
	baz=251,SNR=214						
MESA	**MESA**	**22.02**	**52**	P	**P**	**05 06 45.9**	**-0.5**
	baz=262,SNR=8.3						
F24K	**Squaw Lake**	**22.13**	**31**	IAMs_20	IAMs_20	05 15 52.7	
	comp=Z,32µm,18.0s						
F24K	**Squaw Lake**	**22.13**	**31**	P	**P**	**05 06 47.7**	**+0.4**
	baz=238,SNR=844						
YAH	**Yahtse**	**22.15**	**51**	IAmb	IAmb	05 07 05.3	
	comp=Z,214nm,0.9s						
D23K	**Nanushuk River**	**22.15**	**26**	IAmb	IAmb	05 06 53.8	
	comp=Z,478nm,0.8s						
D23K				IAMs_20	IAMs_20	05 16 06.8	
	comp=Z,39µm,18.0s						
D23K	**Nanushuk River**	**22.15**	**26**	P	**P**	**05 06 46.7**	**-0.7**
	baz=231,SNR=304						
GRNC	**Granite Creek**	**22.20**	**50**	IAMs_20	IAMs_20	05 16 30.0	
	comp=Z,39µm,20.0s						
H25L	**Birch Creek**	**22.21**	**35**	P	**P**	**05 06 47.8**	**-0.2**
	baz=243,SNR=328						
E24K	**Your Creek**	**22.25**	**29**	IAmb	IAmb	05 06 55.5	
	comp=Z,299nm,0.9s						
E24K				IAMs_20	IAMs_20	05 15 21.4	
	comp=Z,39µm,20.0s						
E24K	**Your Creek**	**22.25**	**29**	P	**P**	**05 06 48.5**	**-0.1**
	baz=236,SNR=354						
TOLK	**Toolik Lake Re**	**22.26**	**27**	IAmb	IAmb	05 06 55.9	
	comp=Z,215nm,0.7s						
TOLK				IAMs_20	IAMs_20	05 16 19.1	
	comp=Z,46µm,18.0s						
TOLK	**Toolik Lake Re**	**22.26**	**27**	P	**P**	**05 06 48.4**	**-0.4**
	baz=233,SNR=156						
G25K	**Bearman Lake**	**22.34**	**34**	P	**P**	**05 06 49.4**	**-0.1**
	baz=242,SNR=87						
J26L	**Joseph Creek**	**22.36**	**40**	IAmb	IAmb	05 06 55.8	
	comp=Z,329nm,0.8s						
J26L				IAMs_20	IAMs_20	05 16 50.8	
	comp=Z,46µm,19.0s						
J26L	**Joseph Creek**	**22.36**	**40**	P	**P**	**05 06 48.2**	**-1.6**
	baz=250,SNR=241						
B22K	**Teshekpuk Lake**	**22.40**	**22**	IAMs_20	IAMs_20	05 16 10.4	
	comp=Z,39µm,19.0s						
B22K	**Teshekpuk Lake**	**22.40**	**22**	P	**P**	**05 06 48.8**	**-1.2**
	baz=224						
CTG	**Chitna Glacier**	**22.44**	**50**	P	**P**	**05 06 51.0**	**+0.3**
	baz=261,SNR=30						
CTGM	**Chitina Glacie**	**22.44**	**50**	IAmb	IAmb	05 07 03.1	
	comp=Z,180nm,0.8s						
CTGM				IAMs_20	IAMs_20	05 16 39.3	
	comp=Z,33µm,21.0s						
TABL	**Table Mountain**	**22.45**	**51**	IAmb	IAmb	05 07 10.8	
	comp=Z,215nm,0.9s						
TABL				IAMs_20	IAMs_20	05 17 06.9	
	comp=Z,32µm,20.0s						
M27K	**Edge Creek, AK**	**22.46**	**46**	IAmb	IAmb	05 06 57.9	
	comp=Z,518nm,0.9s						
M27K				IAMs_20	IAMs_20	05 17 00.1	
	comp=Z,48µm,22.0s						
M27K	**Edge Creek, AK**	**22.46**	**46**	P	**P**	**05 06 51.1**	**+0.1**
	baz=257,SNR=174						
A21K	**Barrow**	**22.47**	**18**	P	**P**	**05 06 49.8**	**-0.9**
	baz=218						
A22K	**Sinclair Lake**	**22.55**	**20**	P	**P**	**05 06 51.3**	**-0.3**
	baz=220,SNR=20						
LOGN	**Logan Glacier**	**22.58**	**50**	IAMs_20	IAMs_20	05 16 52.0	
	comp=Z,34µm,21.0s						
L27K	**Beaver Creek,**	**22.65**	**44**	P	**P**	**05 06 52.1**	**-0.8**
	baz=256,SNR=58						
BCAR	**Beaver Creek A**	**22.67**	**44**	P	**P**	**05 06 52.1**	**-1.1**
C23K	**Itkillik River**	**22.74**	**24**	IAMs_20	IAMs_20	05 16 10.2	
	comp=Z,32µm,19.0s						
C23K	**Itkillik River**	**22.74**	**24**	P	**P**	**05 06 53.1**	**-0.6**
	baz=229,SNR=329						
D24K	**Happy Valley**	**22.79**	**27**	IAmb	IAmb	05 07 00.7	
	comp=Z,473nm,0.8s						
D24K				IAMs_20	IAMs_20	05 16 19.7	
	comp=Z,46µm,19.0s						
D24K	**Happy Valley**	**22.79**	**27**	P	**P**	**05 06 53.5**	**-0.7**
	baz=233,SNR=378						
I26K	**Coal Creek Min**	**22.81**	**38**	IAMs_20	IAMs_20	05 16 46.6	
	comp=Z,37µm,20.0s						
I26K	**Coal Creek Min**	**22.81**	**38**	P	**P**	**05 06 51.8**	**-2.7**
	baz=249						
K27K	**Chicken**	**22.82**	**42**	IAmb	IAmb	05 07 01.6	
	comp=Z,180nm,0.8s						
K27K	**Chicken**	**22.82**	**42**	P	**P**	**05 06 53.9**	**-0.7**
	baz=253						
PCA	**Pinnacle**	**22.85**	**52**	IAmb	IAmb	05 07 06.6	
	comp=Z,232nm,0.8s						
PCA				IAMs_20	IAMs_20	05 16 27.5	
	comp=Z,37µm,21.0s						
PINM	**Pinnacle**	**22.85**	**52**	P	**P**	**05 06 54.2**	**-0.9**
	baz=264,SNR=8.7						
F25K	**Christian Rive**	**22.90**	**32**	IAmb	IAmb	05 07 01.3	
	comp=Z,438nm,0.8s						
F25K	**Christian Rive**	**22.90**	**32**	P	**P**	**05 06 55.1**	**-0.4**
	baz=241,SNR=660						
BVCY	**Beaver Creek**	**22.93**	**46**	P	**P**	**05 06 54.3**	**-1.5**
	baz=258,SNR=191						
O28M	**Mount Upton**	**22.96**	**51**	IAMs_20	IAMs_20	05 17 03.2	
	comp=Z,33µm,21.0s						
O28M	**Mount Upton**	**22.96**	**51**	P	**P**	**05 06 54.9**	**-1.5**
	baz=263,SNR=14						
YUK3	**Moose Creek**	**22.99**	**48**	P	**P**	**05 06 55.4**	**-1.2**
	baz=260,SNR=125						
BCPM	**Bancas Point**	**23.15**	**53**	IAMs_20	IAMs_20	05 16 33.3	
	comp=Z,42µm,21.0s						
C24K	**Franklin Bluff**	**23.17**	**26**	IAMs_20	IAMs_20	05 16 59.7	
	comp=Z,40µm,18.0s						
C24K	**Franklin Bluff**	**23.17**	**26**	P	**P**	**05 06 57.7**	**-0.4**
	baz=232						
BMAR	**Burnt Mountain**	**23.18**	**33**	P	**P**	**05 06 57.7**	**-0.7**
E25K	**Arctic Village**	**23.20**	**31**	IAmb	IAmb	05 07 03.5	
	comp=Z,384nm,0.9s						
E25K				IAMs_20	IAMs_20	05 16 45.9	
	comp=Z,28µm,18.0s						
E25K	**Arctic Village**	**23.20**	**31**	P	**P**	**05 06 58.5**	**+0.1**
	baz=240,SNR=318						
G26K	**Porcupine Rive**	**23.24**	**34**	IAMs_20	IAMs_20	05 16 37.4	
	comp=Z,26µm,19.0s						
G26K	**Porcupine Rive**	**23.24**	**34**	P	**P**	**05 06 57.8**	**-1.1**
	baz=244,SNR=1000						
YUK8	**Steele Glacier**	**23.24**	**49**	P	**P**	**05 06 58.1**	**-1.1**
	baz=262,SNR=50						
KUR	**Kuril'sk**	**23.34**	**269***c*	*i*P	**P**	**05 06 59.5**	**-0.5**
KUR				*e*S	**S**	**05 11 09.6**	**-0.9**
KUR				pmax	pmax		
	comp=Z,2µm,2.5s						
KUR				pmax	pmax		
	comp=Z,22µm,4.8s						
KUR				MLR	MLR		
	comp=Z,10µm,19.0s						
F26K	**Sheenjek River**	**23.45**	**32**	IAmb	IAmb	05 07 07.8	
	comp=Z,231nm,0.8s						
F26K	**Sheenjek River**	**23.45**	**32**	P	**P**	**05 07 00.8**	**-0.3**
	baz=242,SNR=255						
I27K	**Kandik River**	**23.52**	**38**	IAMs_20	IAMs_20	05 17 19.1	
	comp=Z,39µm,20.0s						
I27K	**Kandik River**	**23.52**	**38**	P	**P**	**05 06 59.8**	**-1.9**
	baz=250,SNR=111						
D25K	**Kavik River**	**23.60**	**28**	IAMs_20	IAMs_20	05 16 26.0	
	comp=Z,32µm,20.0s						
D25K	**Kavik River**	**23.60**	**28**	P	**P**	**05 07 02.0**	**-0.4**
	baz=236,SNR=632						
O29M	**Mount Kennedy**	**23.70**	**52**	IAMs_20	IAMs_20	05 17 14.9	
	comp=Z,41µm,20.0s						
O29M	**Mount Kennedy**	**23.70**	**52**	P	**P**	**05 07 03.5**	**-0.2**
	baz=266						
H27K	**Steamboat Moun**	**23.77**	**37**	P	**P**	**05 07 02.4**	**-1.7**
	baz=249,SNR=34						
YUK4	**Talbot Arm**	**23.78**	**49**	P	**P**	**05 07 04.2**	**-0.2**
	baz=263,SNR=49						
YUK6	**Outpost Mounta**	**23.87**	**50**	P	**P**	**05 07 04.1**	**-1.2**
	baz=264,SNR=10.0						
G27K	**Doyon Strip**	**23.95**	**35**	IAMs_20	IAMs_20	05 17 17.9	
	comp=Z,27µm,19.0s						
G27K	**Doyon Strip**	**23.95**	**35**	P	**P**	**05 07 05.1**	**-0.6**
	baz=248,SNR=72						
DAWY	**Dawson**	**23.96**	**43**	IAmb	IAmb	05 07 10.9	
	comp=Z,235nm,0.8s						
DAWY	**Dawson**	**23.96**	**43**	P	**P**	**05 07 04.9**	**-1.0**
	baz=256,SNR=225						
M29M	**Somme Creek**	**24.04**	**47**	IAmb	IAmb	05 07 12.1	
	comp=Z,286nm,0.8s						
M29M				IAMs_20	IAMs_20	05 18 07.8	
	comp=Z,31µm,20.0s						
M29M	**Somme Creek**	**24.04**	**47**	P	**P**	**05 07 05.1**	**-1.5**
	baz=261						
P29M	**Windy Craggy**	**24.08**	**54**	IAMs_20	IAMs_20	05 16 56.9	
	comp=Z,35µm,21.0s						
P29M	**Windy Craggy**	**24.08**	**54**	P	**P**	**05 07 06.1**	**-0.9**
	baz=268						
I28M	**Miner Creek**	**24.12**	**39**	IAmb	IAmb	05 07 12.9	
	comp=Z,433nm,1.1s						
I28M				IAMs_20	IAMs_20	05 17 57.2	
	comp=Z,47µm,19.0s						
I28M	**Miner Creek**	**24.12**	**39**	P	**P**	**05 07 06.2**	**-1.2**
	baz=253,SNR=361						
HYT	**Haines Junctio**	**24.28**	**51**	P	**P**	**05 07 08.0**	**-0.9**
	baz=265,SNR=21						
L29M	**L29M**	**24.30**	**45**	IAmb	IAmb	05 07 15.1	
	comp=Z,280nm,0.9s						
L29M				IAMs_20	IAMs_20	05 18 07.2	
	comp=Z,35µm,22.0s						
L29M	**L29M**	**24.30**	**45**	P	**P**	**05 07 08.7**	**-0.4**
	baz=260,SNR=123						
C26K	**Camden Bay**	**24.36**	**27**	P	**P**	**05 07 09.6**	**+0.2**
	baz=237,SNR=260						
P30M	**Million Dollar**	**24.50**	**53**	P	**P**	**05 07 10.1**	**-0.8**
	baz=268						
E27K	**Coleen River**	**24.54**	**32**	IAMs_20	IAMs_20	05 17 18.7	
	comp=Z,30µm,20.0s						
E27K	**Coleen River**	**24.54**	**32**	P	**P**	**05 07 11.4**	**+0.2**
	baz=245,SNR=641						
TYV	**Tymovskoe**	**24.54**	**285**	*e*P	**P**	**05 07 12.6**	**+1.4**
TYV				*e*S	**S**	**05 11 35.2**	**+5.5**
TYV				pmax	pmax		
	comp=Z,11µm,5.0s						
TYV				pmax	pmax		
	comp=Z,541nm,1.0s						
TYV				smax	smax		
	comp=N,50nm,2.4s						
TYV				smax	smax		
	comp=E,77nm,2.4s						
TYV				smax	smax		
	comp=N,8µm,5.5s						
TYV				smax	smax		
	comp=E,11µm,5.5s						
TYV				MLR	MLR		
	comp=Z,31µm,22.0s						
TYV				MLR	MLR		
	comp=E,26µm,20.0s						
N30M	**Aishikik Lake**	**24.54**	**49**	IAMs_20	IAMs_20	05 18 05.9	
	comp=Z,32µm,19.0s						
N30M	**Aishikik Lake**	**24.54**	**49**	P	**P**	**05 07 10.0**	**-1.3**
	baz=264,SNR=23						
C27K	**Jago River**	**24.55**	**28**	IAmb	IAmb	05 07 16.3	
	comp=Z,222nm,0.8s						
C27K				IAMs_20	IAMs_20	05 16 57.3	
	comp=Z,35µm,20.0s						
C27K	**Jago River**	**24.55**	**28**	P	**P**	**05 07 10.6**	**-0.6**
	baz=239,SNR=193						
J29N	**Klondike Camp**	**24.55**	**42**	P	**P**	**05 07 11.6**	**+0.2**
J29N				IAMs_20	IAMs_20	05 17 14.5	
	comp=Z,30µm,20.0s						
J29N	**Klondike Camp**	**24.55**	**42**	P	**P**	**05 07 10.6**	**-0.7**
	baz=257,SNR=27						
K29M	**Barlow Dome**	**24.72**	**44**	IAMs_20	IAMs_20	05 18 37.4	
	comp=Z,30µm,19.0s						
K29M	**Barlow Dome**	**24.72**	**44**	P	**P**	**05 07 11.6**	**-1.3**
	baz=259,SNR=205						
I29M	**Ogilvie Camp,**	**24.75**	**40**	IAmb	IAmb	05 07 19.9	
	comp=Z,358nm,0.8s						
I29M	**Ogilvie Camp,**	**24.75**	**40**	P	**P**	**05 07 12.0**	**-1.1**
	baz=255,SNR=206						
PLBC	**Pleasant Camp**	**24.77**	**54**	P	**P**	**05 07 13.8**	**+0.5**
	baz=269						
M30M	**Minto, Yukon**	**24.82**	**47**	IAMs_20	IAMs_20	05 18 41.0	
	comp=Z,34µm,21.0s						
M30M	**Minto, Yukon**	**24.82**	**47**	P	**P**	**05 07 13.4**	**-0.4**
	baz=262,SNR=33						
S31K	**Pelican**	**24.86**	**58**	P	**P**	**05 07 13.5**	**-0.6**
	baz=273						
F28M	**Old Crow**	**24.90**	**34**	IAmb	IAmb	05 07 21.7	
	comp=Z,318nm,0.9s						
F28M				IAMs_20	IAMs_20	05 17 47.1	
	comp=Z,27µm,19.0s						
F28M	**Old Crow**	**24.90**	**34**	P	**P**	**05 07 14.5**	**+0.1**
	baz=248,SNR=285						
O30N	**Mendenhall**	**24.97**	**51**	IAMs_20	IAMs_20	05 17 56.3	

	comp=Z,39µm,20.0s						
O30N	Mendenhall	24.97	51	P	P	05 07 14.1	-1.0
	baz=267,SNR=12						
H29M	Whitestone	24.98	38	IAMs_20	IAMs_20	05 18 23.9	
	comp=Z,26µm,20.0s						
H29M	Whitestone	24.98	38	P	P	05 07 13.7	-1.4
	baz=253,SNR=66						
NKL	Nikolayevsk	25.16	291	*e*P	P	05 07 15.7	-1.1
NKL				*e*S	S	05 11 36.4	-3.3
NKL				pmax	pmax		
	comp=E,137nm,1.0s						
NKL				pmax	pmax		
	comp=N,236nm,1.1s						
NKL				pmax	pmax		
	comp=Z,643nm,1.1s						
NKL				smax	smax		
	comp=E,2µm,3.6s						
NKL				smax	smax		
	comp=N,3µm,3.7s						
NKL				MLR	MLR		
	comp=N,65µm,19.0s						
NKL				MLR	MLR		
	comp=E,16µm,21.0s						
NKL				MLR	MLR		
	comp=Z,111µm,21.0s						
YUK	Yuzh-Kuril'sk	25.16	268	*c i*P	P	05 07 17.5	+0.6
YUK				*e*PPP	PPP	05 07 58.8	
YUK				*e*S	S	05 11 39.9	+0.1
YUK				*e*SSS	SSS	05 12 47.9	
YUK				pmax	pmax		
	comp=Z,3µm,1.1s						
YUK				pmax	pmax		
	comp=N,1µm,1.2s						
YUK				pmax	pmax		
	comp=E,2µm,1.2s						
N31M	Braeburn, Yuko	25.17	49	IAMs_20	IAMs_20	05 18 23.5	
	comp=Z,24µm,20.0s						
N31M	Braeburn, Yuko	25.17	49	P	P	05 07 15.7	-1.2
	baz=266,SNR=7.2						
D27M	Malcolm River	25.21	30	IAmb	IAmb	05 07 23.7	
	comp=Z,182nm,0.9s						
D27M				IAMs_20	IAMs_20	05 17 37.8	
	comp=Z,36µm,19.0s						
D27M	Malcolm River	25.21	30	P	P	05 07 16.8	-0.4
	baz=244,SNR=176						
SKAG	Skagway	25.30	54	P	P	05 07 17.6	-0.5
	baz=270						
G29M	Pine Creek	25.32	36	IAMs_20	IAMs_20	05 18 27.7	
	comp=Z,25µm,20.0s						
G29M	Pine Creek	25.32	36	P	P	05 07 17.2	-1.0
	baz=252,SNR=53						
J30M	Hart River	25.38	42	IAmb	IAmb	05 07 25.5	
	comp=Z,108nm,0.6s						
J30M				IAMs_20	IAMs_20	05 17 51.5	
	comp=Z,39µm,21.0s						
J30M	Hart River	25.38	42	P	P	05 07 19.1	+0.2
	baz=258,SNR=109						
MAYO	Mayo, Yukon	25.38	44	IAmb	IAmb	05 07 43.2	
	comp=Z,229nm,0.9s						
MAYO	Mayo, Yukon	25.38	44	P	P	05 07 18.6	-0.2
	baz=261,SNR=15						
SIT	Sitka	25.40	60	P	P	05 07 18.7	-0.3
	baz=275						
E28M	Babbage River	25.41	32	IAmb	IAmb	05 07 25.6	
	comp=Z,297nm,0.8s						
E28M				IAMs_20	IAMs_20	05 17 56.0	
	comp=Z,24µm,20.0s						
E28M	Babbage River	25.41	32	P	P	05 07 19.2	+0.3
	baz=247,SNR=356						
UGL	Uglegorsk	25.45	281	*e*P	P	05 07 21.1	+1.6
UGL				*e*S	S	05 11 45.4	+1.1
UGL				pmax	pmax		
	comp=Z,10µm,7.7s						
UGL				pmax	pmax		
	comp=Z,1µm,0.9s						
UGL				smax	smax		
	comp=N,7µm,6.2s						
UGL				smax	smax		
	comp=E,7µm,6.2s						
UGL				MLR	MLR		
	comp=E,15µm,14.0s						
UGL				MLR	MLR		
	comp=N,4µm,12.0s						
UGL				MLR	MLR		
	comp=Z,10µm,14.0s						
I30M	Mount Dempster	25.50	41	IAmb	IAmb	05 07 28.0	
	comp=Z,183nm,0.8s						
I30M				IAMs_20	IAMs_20	05 19 02.7	
	comp=Z,36µm,20.0s						
I30M	Mount Dempster	25.50	41	P	P	05 07 18.2	-1.8
	baz=257,SNR=135						
WHY	Whitehorse	25.55	51	P	P	05 07 19.2	-1.3
	baz=268,SNR=12						
BESE	Bessie Mountai	25.56	56	IAMs_20	IAMs_20	05 18 29.6	
	comp=Z,23µm,19.0s						
EPYK	Eagle Plains	25.66	38	IAmb	IAmb	05 07 28.2	
	comp=Z,209nm,0.8s						
EPYK	Eagle Plains	25.66	38	P	P	05 07 19.4	-1.8
	baz=254,SNR=66						
R32K	Eaglecrest	25.75	57	P	P	05 07 21.2	-1.0
	baz=274						
S32K	Killisnoo	25.77	59	P	P	05 07 21.8	-0.5
	baz=275						
YSS	Yuzhno-Sakhali	25.82	276	P	P	05 07 23.8	+1.0
YSS	Yuzhno-Sakhali	25.82	276	α *i*P	P	05 07 24.1	+1.3
YSS				*e**SP	pwP	05 07 35.3	+0.1
YSS				*e*		05 07 56.5	
YSS				*e*S	S	05 11 50.1	0.0
YSS				*e*SS	SnSn	05 12 51.3	+4.5
YSS				pmax	pmax		
	comp=Z,8µm,6.4s						
YSS				pmax	pmax		
	comp=N,2µm,5.9s						
YSS				pmax	pmax		
	comp=E,4µm,5.4s						
YSS				pmax	pmax		
	comp=N,330nm,0.9s						
YSS				pmax	pmax		
	comp=E,620nm,0.9s						
YSS				pmax	pmax		
	comp=Z,800nm,0.9s						
YSS				smax	smax		
	comp=E,10µm,12.4s						
YSS				MLR	MLR		
	comp=Z,10µm,18.0s						
YSS				MLR	MLR		
	comp=N,10µm,13.0s						
YSS	Yuzhno-Sakhali	25.82	276	⇑P	P	05 07 24.4	+1.6
E29M	Blow River	25.88	33	IAmb	IAmb	05 07 31.3	
	comp=Z,343nm,0.8s						
E29M				IAMs_20	IAMs_20	05 19 01.5	
	comp=Z,28µm,19.0s						
E29M	Blow River	25.88	33	P	P	05 07 22.7	-0.5
	baz=249,SNR=280						
M31M	Drury Creek, Y	25.89	48	IAMs_20	IAMs_20	05 19 02.4	
	comp=Z,35µm,20.0s						
M31M	Drury Creek, Y	25.89	48	P	P	05 07 20.9	-2.5
	baz=265,SNR=37						
D28M	Stokes Point	25.97	31	P	P	05 07 23.1	-0.8
	baz=246,SNR=12						
G30M	tAoh Zraii Nji	26.02	37	P	P	05 07 22.1	-2.4
	baz=254,SNR=40						
P32M	Atlin	26.12	54	P	P	05 07 25.0	-0.6
	baz=271						
F30M	Barrier River	26.37	35	IAmb	IAmb	05 07 36.5	
	comp=Z,192nm,0.8s						
F30M				IAMs_20	IAMs_20	05 19 02.9	
	comp=Z,35µm,19.0s						
F30M	Barrier River	26.37	35	P	P	05 07 26.2	-1.4
	baz=253						
N32M	Quiet Lake	26.45	50	IAMs_20	IAMs_20	05 18 42.8	
	comp=Z,38µm,20.0s						
N32M	Quiet Lake	26.45	50	P	P	05 07 28.2	-0.3
	baz=269						
H31M	Peel River	26.46	40	P	P	05 07 26.8	-1.8
	baz=258,SNR=42						
P33M	Teslin, Yukon	26.57	52	P	P	05 07 28.6	-1.1
	baz=271,SNR=14						
T33K	Petersburg	26.72	60	P	P	05 07 30.4	-0.5
	baz=278						
U33K	Whale Pass	26.72	62	P	P	05 07 29.9	-1.0
	baz=279						
G31M	Satah River	26.75	37	P	P	05 07 29.7	-1.4
	baz=256,SNR=29						
JMP	Maruseppu	26.75	270	P	P	05 07 32.1	+0.8
CRAG	Craig	26.82	63	⇓P	P	05 07 34.7	+2.9
CRAG	Craig	26.82	63	P	P	05 07 30.7	-1.2
	baz=280						
Q32M	Nakina River	26.89	55	IAMs_20	IAMs_20	05 19 13.7	
	comp=Z,26µm,19.0s						
Q32M	Nakina River	26.89	55	P	P	05 07 31.2	-1.5
	baz=274						
F31M	Tsiigehtchic	27.08	36	IAMs_20	IAMs_20	05 19 42.2	
	comp=Z,22µm,20.0s						
F31M	Tsiigehtchic	27.08	36	P	P	05 07 33.6	-0.4
	baz=256,SNR=72						
WRAK	Wrangell Islan	27.11	61	P	P	05 07 35.3	+0.9
	baz=279						
JKA	Kamikawa-asahi	27.18	271	IAmb	IAmb	05 07 39.4	
	comp=Z,480nm,1.1s						
ASAJ	Asahikawa	27.18	271	LR	LR	05 18 01.1	
	comp=Z,12µm,20.3s,baz=72,slow=36						
ASAJ	Asahikawa	27.18	271	P	P	05 07 36.5	+1.3
INK	Inuvik	27.39	35	⇓P	P	05 07 41.3	+4.5
INK	Inuvik	27.39	35	P	P	05 07 36.5	-0.3
	baz=254,SNR=59						
R33M	Jennings River	27.53	54	IAMs_20	IAMs_20	05 20 05.3	
	comp=Z,27µm,18.0s						
R33M	Jennings River	27.53	54	P	P	05 07 38.6	+0.3
	baz=274						
S34M	Telegraph Cree	27.57	57	P	P	05 07 38.2	-0.4
	baz=277						
V35K	Ketchikan	27.70	63	P	P	05 07 39.6	0.0
	baz=281						
ERM	Erimo	27.90	266	P	P	05 07 42.7	+1.1
ERM				IAmb	IAmb	05 07 45.0	
	comp=Z,234nm,0.9s						
ERM	Erimo	27.90	266	P	P	05 07 42.7	+1.1
ERM				pmax	pmax		
	comp=Z,234nm,0.9s						
ERM				MLR	MLR		
	comp=Z,17µm,22.0s						
ERM	Erimo	27.90	266	⇑P	P	05 07 42.0	+0.4
MOBC	Moresby Island	27.98	68	IAmb	IAmb	05 08 11.9	
	comp=Z,189nm,1.2s						
DLBC	Dease Lake	28.10	56	LR	LR	05 20 10.6	
	comp=Z,15µm,18.2s,baz=260,slow=39						
DLBC	Dease Lake	28.10	56	P	P	05 07 43.0	-0.4
	baz=277						
T35M	Bob Quinn	28.17	59	P	P	05 07 44.3	+0.4
	baz=279						
GRNR	Gornyy	28.34	287	⇑*i*P	P	05 07 45.8	+0.3
GRNR				pmax	pmax		
	comp=N,10.0nm,1.2s						
GRNR				pmax	pmax		
	comp=E,30nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,50nm,1.2s						
GRNR				MLR	MLR		
	comp=E,11µm,21.0s						
GRNR				MLR	MLR		
	comp=N,8µm,22.0s						
GRNR				MLR	MLR		
	comp=Z,15µm,23.0s						
U35K	Hyder	28.47	61	P	P	05 07 46.5	-0.1
	baz=281						
WTLY	Watson Lake, Y	28.58	52	P	P	05 07 48.3	+0.7
	baz=274,SNR=7.2						
JOT	Ohata	29.57	267	P	P	05 07 57.5	+1.0
YAK	Yakutsk	29.93	312	LR	LR	05 20 15.6	
	comp=Z,38µm,18.7s,baz=93,slow=37						
YAK	Yakutsk	29.93	312	P	P	05 07 59.2	-0.3
YAK	Yakutsk	29.93	312	*e*P	P	05 07 57.4	-2.1
YAK				*e*		05 08 52.7	
YAK				*e*		05 11 00.8	
YAK				*e*S	S	05 12 54.6	-0.1
YAK				*e*SS	SnSn	05 14 25.2	-1.7
YAK				*e*		05 14 44.4	
YAK				*e*		05 18 33.1	
YAK				pmax	pmax		
	comp=Z,62nm,1.0s						
YAK				pmax	pmax		
	comp=E,17nm,1.0s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,648nm,2.3s						
YAK				pmax	pmax		
	comp=E,641nm,2.2s						
YAK				pmax	pmax		
	comp=N,134nm,2.1s						
YAK				smax	smax		
	comp=N,196nm,2.1s						
YAK				smax	smax		
	comp=E,164nm,2.7s						
YAK				MLR	MLR		
	comp=Z,40µm,19.0s						
YAK				MLR	MLR		
	comp=N,2µm,19.0s						
YAK				MLR	MLR		
	comp=E,30µm,20.0s						
LIRD	Liard River Hi	30.01	54	P	P	05 08 00.6	+0.3
	baz=278						
BBB	Bella Bella	30.50	68	LR	LR	05 20 38.5	
	comp=E,10µm,18.3s,baz=291,slow=37						
BBB	Bella Bella	30.50	68	⇑P	P	05 08 06.7	+2.1
JOM	Ohasama	30.50	264	P	P	05 08 05.8	+1.1
TEY	Ternei	30.51	276	⇑*e*P	P	05 08 05.0	+0.3
TEY				pmax	pmax		
	comp=E,20nm,1.2s						
TEY				pmax	pmax		
	comp=N,20nm,1.5s						
TEY				pmax	pmax		
	comp=Z,30nm,2.3s						
TEY				pmax	pmax		
	comp=E,100nm,4.7s						
TEY				pmax	pmax		
	comp=N,200nm,3.7s						
TEY				pmax	pmax		
	comp=Z,400nm,5.3s						
TEY				MLR	MLR		
	comp=E,100nm,15.0s						
TEY				MLR	MLR		
	comp=N,200nm,16.0s						
TEY				MLR	MLR		
	comp=Z,200nm,16.0s						
TOAD	Toad River Com	30.53	55	P	P	05 08 05.2	+0.3
	baz=279						
WRGLY	Wrigley	30.94	46	IAmb	IAmb	05 08 14.2	
	comp=Z,186nm,0.8s						
WRGLY	Wrigley	30.94	46	P	P	05 08 07.9	-0.5
	baz=273,SNR=72						
KOTAN	Kotaneelee Air	30.94	52	P	P	05 08 08.9	+0.5
	baz=278,SNR=9.5						
C36M	Paulatuk	30.96	34	P	P	05 08 07.5	-1.0
	baz=262,SNR=36						
HOLB	Holberg	31.00	71	IAmb	IAmb	05 08 22.5	
	comp=Z,133nm,0.9s						
A36M	Sachs Harbour	31.07	29	P	P	05 08 09.4	+0.1
	baz=257,SNR=342						
TIXI	Tiksi	31.08	331	LR	LR	05 21 14.4	
	comp=Z,30µm,19.6s,baz=141,slow=38						
TIXI	Tiksi	31.08	331	P	P	05 08 09.4	-0.1
TIXI				IAMs_20	IAMs_20	05 21 02.9	
	comp=Z,30µm,20.0s						
TIXI	Tiksi	31.08	331	*ce*P	P	05 08 08.3	-1.2
TIXI				pmax	pmax		
	comp=Z,134nm,1.7s						
TIXI				MLR	MLR		
	comp=Z,27µm,18.0s						
JMM	Marumori	31.78	262	P	P	05 08 17.2	+1.2
ZEA	Zeya	32.76	296	*e*P	P	05 08 23.5	-0.9
ZEA				*e*		05 09 42.9	
ZEA				*e*S	S	05 13 34.2	-4.8
ZEA				pmax	pmax		
	comp=E,900nm,4.8s						
ZEA				pmax	pmax		
	comp=Z,2µm,4.6s						
ZEA				pmax	pmax		
	comp=E,40nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,150nm,0.9s						
ZEA				smax	smax		
	comp=N,2µm,5.1s						
ZEA				MLR	MLR		
	comp=E,6µm,18.0s						
ZEA				MLR	MLR		
	comp=N,4µm,22.0s						
ZEA				MLR	MLR		
	comp=Z,10µm,22.0s						
CBB	Campbell River	32.88	71	IAmb	IAmb	05 08 51.3	
	comp=Z,121nm,1.2s						
OZB	Mount Ozzard	33.23	73	IAmb	IAmb	05 08 38.2	
	comp=Z,138nm,0.6s						
OZB	Mount Ozzard	33.23	73	⇑P	P	05 08 31.4	+2.8
JSD	Sado	33.26	264	IAmb	IAmb	05 08 32.0	
	comp=Z,192nm,0.9s						
JSD	Sado	33.26	264	⇑P	P	05 08 30.1	+1.1
H11N2	WAKE ISLAND Hy	33.52	206	T	T	05 44 18.7	
	baz=22,slow=74						
H11N3	WAKE ISLAND Hy	33.52	206	T	T	05 44 24.0	
	baz=22,slow=74						
H11N1	WAKE ISLAND Hy	33.53	206	T	T	05 44 22.0	
	baz=22						
USRK	Ussuriysk Ar.	33.80	278	P	P	05 08 34.1	+0.5
	comp=Z,153nm,0.7s,baz=60,slow=8.4,SNR=163						
USRK				PcP	PcP	05 11 13.7	+1.6
	comp=Z,19nm,0.8s,baz=53,slow=1.2,SNR=6.3						
	comp=Z,153nm,0.7s						
HEH	HeiHe	33.90	290	*e*P	P	05 08 32.7	-1.7
HEH				sP	pP	05 08 37.0	-5.6
HEH				PP	PP	05 09 49.4	-1.8
HEH				S	S	05 13 51.8	-4.9
HEH				pmax	pmax		
	comp=Z,300nm,1.2s						
HEH				pmax	pmax		
	comp=Z,4µm,7.1s						
HEH				LR	LR		
	comp=Z,16µm,19.6s						
HEH				LR	LR		
	comp=Z,13µm,21.0s						
HEH				LR	LR		
	comp=Z,27µm,20.8s						
JRY	Ryogami san	34.12	261	P	P	05 08 38.1	+1.6
MAJO	Matsushiro	34.22	262	P	P	05 08 38.3	+0.9
MAJO	Matsushiro	34.22	262	IAMs_20	IAMs_20	05 20 04.6	
	comp=Z,23µm,22.0s						
MAJO	Matsushiro	34.22	262	*c i*P	P	05 08 38.2	+0.9
MAJO				pmax	pmax		
	comp=Z,182nm,0.9s						
MAJO	Matsushiro	34.22	262	⇑P	P	05 08 38.6	+1.3
MAT	Matsushiro	34.22	262	P	P	05 08 38.9	+1.5
MJAR	Matsushiro Arr	34.22	262	P	P	05 08 38.6	+1.3
	comp=Z,86nm,0.8s,baz=51,slow=7.7,SNR=124						
MJAR				PcP	PcP	05 11 15.1	+1.6
	comp=Z,45nm,0.8s,baz=76,slow=2.2,SNR=20						
MJAR				LR	LR	05 20 39.8	
	comp=Z,23µm,21.8s,baz=52,slow=33						
	comp=Z,86nm,0.8s						
MJAR	Matsushiro Arr	34.22	262	P	P	05 08 38.0	+0.7
MJAR				IAmb	IAmb	05 08 40.8	
	comp=Z,257nm,1.1s						
VLA	Vladivostok	34.41	277	*i* P	P	05 08 39.1	+0.2
VLA				pmax	pmax		
	comp=Z,357nm,2.0s						
VLA				MLR	MLR		
	comp=Z,13µm,21.0s						
PGC	Sidney	34.58	72	IAmb	IAmb	05 09 09.3	
	comp=Z,85nm,1.0s						
LLLB	Lillooet	34.71	68	IAmb	IAmb	05 08 46.7	
	comp=Z,109nm,0.8s						
H11S1	WAKE ISLAND Hy	34.73	206	T	T	05 45 53.1	
	baz=11,slow=76						
H11S2	WAKE ISLAND Hy	34.75	206	T	T	05 45 53.6	
	baz=11,slow=76						
H11S3	WAKE ISLAND Hy	34.75	206	T	T	05 45 54.8	
	baz=11,slow=76						
B04A	Port Angeles	34.81	73	IAmb	IAmb	05 08 53.2	
	comp=Z,77nm,0.7s						
NLWA	Neilton Lookou	34.88	74	IAmb	IAmb	05 09 06.7	
	comp=Z,158nm,1.1s						
NLWA				IAMs_20	IAMs_20	05 19 52.0	
	comp=Z,20µm,22.0s						
NLWA	Neilton Lookou	34.88	74	⇑P	P	05 08 45.6	+2.6
YKAW3	Yellowknife Wh	35.04	46	IAmb	IAmb	05 08 49.3	
	comp=Z,116nm,0.9s						
YKA	Yellowknife Ar	35.06	46	P	P	05 08 43.5	-0.7
	comp=Z,71nm,0.9s,baz=284,slow=9.1,SNR=70						
YKA				PcP	PcP	05 11 17.0	+1.6
	comp=Z,10.0nm,0.8s,baz=290,slow=3.9,SNR=5.8						
YKA				ScP	ScP	05 14 57.7	-0.7
	comp=Z,7.7nm,0.9s,baz=290,slow=3.6,SNR=8.3						
YKA				LR	LR	05 25 02.3	
	comp=Z,20µm,18.5s,baz=275,slow=40						
	comp=Z,71nm,0.9s						
YKA	Yellowknife Ar	35.06	46	P	P	05 08 43.2	-1.0
YKA	Yellowknife Ar	35.06	46	*ce*P	P	05 08 43.5	-0.7
YKA				pmax	pmax		
	comp=Z,73nm,0.9s						
WISH	Wishkah	35.07	75	IAmb	IAmb	05 09 02.9	
	comp=Z,222nm,1.2s						
MDJ	Mudanjiang	35.08	280	IAmb	IAmb	05 08 46.7	
	comp=Z,164nm,0.9s						
MDJ				IAMs_20	IAMs_20	05 22 01.4	
	comp=Z,20µm,22.0s						
MDJ	Mudanjiang	35.08	280	P	P	05 08 44.0	-0.7
MDJ				PP	PP	05 10 05.7	+1.3
MDJ				S	S	05 14 15.0	-0.1
MDJ				pmax	pmax		
	comp=Z,86nm,0.8s						
MDJ				LR	LR		
	comp=Z,10µm,18.9s						
MDJ				LR	LR		
	comp=Z,16µm,20.6s						
MDJ				LR	LR		
	comp=Z,26µm,22.3s						
MDJ	Mudanjiang	35.08	280	P	P	05 08 44.5	-0.2
YKAW1	Yellowknife Wh	35.11	46	IAmb	IAmb	05 08 50.0	
	comp=Z,97nm,0.8s						
MSHR	Mys Shultsa	35.15	276	*i* P	P	05 08 45.5	+0.2
MSHR				pmax	pmax		
	comp=Z,271nm,0.9s						
MSHR				MLR	MLR		
	comp=Z,11µm,22.0s						
PSTR	Posyet	35.33	277	*i* P	P	05 08 47.0	+0.1
JGF	Kuroka	35.35	262	⇑P	P	05 08 48.5	+1.3
JGF	Kuroka	35.35	262	P	P	05 08 48.9	+1.7
RADR	Rader Ridge	35.37	76	IAmb	IAmb	05 09 04.2	
	comp=Z,146nm,1.0s						
GNW	Green Mountain	35.44	74	IAmb	IAmb	05 09 01.9	
	comp=Z,136nm,0.9s						
JHJ2	Mitsune	35.48	256	⇑P	P	05 08 50.0	+1.8
JHJ	Hachijo jima 2	35.49	256	LR	LR	05 21 27.6	
	comp=Z,6µm,21.3s,baz=90,slow=33						
INU	Inuyama	35.72	261	IAmb	IAmb	05 08 53.1	
	comp=Z,85nm,0.9s						
INU	Inuyama	35.72	261	⇑P	P	05 08 50.9	+0.6
F03A	Seaside	35.75	77	IAmb	IAmb	05 09 20.3	
	comp=Z,164nm,0.8s						
BNX	BinXian	35.88	283	P	P	05 08 50.8	-0.7
BNX				pP	pP	05 08 58.3	-1.5
BNX				PcP	PcP	05 11 16.7	-1.4
BNX				S	S	05 14 26.4	-0.9
BNX				pmax	pmax		
	comp=Z,500nm,0.8s						
BNX				pmax	pmax		
	comp=Z,3µm,5.8s						
BNX				LR	LR		
	comp=Z,10µm,18.5s						
BNX				LR	LR		
	comp=Z,21µm,20.0s						
BNX				LR	LR		
	comp=Z,20µm,19.8s						
POHA	Pohakuloa	35.99	142	IAMs_20	IAMs_20	05 20 41.5	
	comp=Z,25µm,20.0s						
G03D	McMinnville, O	36.28	77	IAmb	IAmb	05 09 18.7	
	comp=Z,101nm,0.9s						
I02E	Swisshome, OR	36.47	79	IAmb	IAmb	05 09 06.8	
	comp=Z,94nm,0.7s						
COR	Corvallis	36.57	78	P	P	05 08 59.7	+2.3
COR				IAmb	IAmb	05 09 07.3	
	comp=Z,166nm,0.8s						
COR	Corvallis	36.57	78	IAMs_20	IAMs_20	05 20 13.9	
	comp=Z,16µm,22.0s						
COR	Corvallis	36.57	78	P	P	05 08 59.7	+2.3
COR				pmax	pmax		
	comp=Z,166nm,0.9s						
COR	Corvallis	36.57	78	⇑P	P	05 09 00.9	+3.5
JWT	Wachi	36.77	263	P	P	05 09 00.1	+0.8
KEBM	Edson Butte	36.81	81	P	P	05 09 02.3	+2.6
KEBM				IAmb	IAmb	05 09 16.8	
	comp=Z,171nm,1.0s						
LTY	Liberty	36.88	73	IAmb	IAmb	05 09 13.3	
	comp=Z,87nm,0.9s						
J01E	Myrtle Point	36.91	81	IAmb	IAmb	05 09 12.7	
	comp=Z,132nm,1.0s						
H04D	Lebanon	36.95	78	IAmb	IAmb	05 09 18.8	
	comp=Z,140nm,0.8s						
BUCK	Buck Mountain	36.96	79	IAmb	IAmb	05 09 10.8	
	comp=Z,120nm,0.9s						
I03D	Drain, OR	36.99	80	IAmb	IAmb	05 09 14.4	
	comp=Z,111nm,1.0s						

B08A	**Colville Reser**	**37.17**	**71**	IAmb	IAmb	05 09 15.0	
	comp=Z,182nm,0.9s						
H04A	**Detroit Lake**	**37.21**	**78**	IAmb	IAmb	05 09 20.0	
	comp=Z,202nm,0.8s						
EPH	**Ephrata**	**37.48**	**72**	IAmb	IAmb	05 09 18.0	
	comp=Z,202nm,0.9s						
I04A	**Tendick Farm,**	**37.52**	**79**	IAmb	IAmb	05 09 15.4	
	comp=Z,189nm,0.8s						
E07A	**Sunnyside**	**37.70**	**74**	IAmb	IAmb	05 09 23.0	
	comp=Z,107nm,0.8s						
WIFE	**Three Sisters-**	**37.75**	**78**	IAmb	IAmb	05 09 25.0	
	comp=Z,172nm,0.8s						
JAD	**Aida**	**37.77**	**263**	P	**P**	**05 09 09.3**	**+1.6**
WAH2	**Wahluke Slope**	**37.78**	**73**	P	**P**	**05 09 09.2**	**+1.5**
I05D	**Terrebonne, OR**	**37.90**	**78**	IAmb	IAmb	05 09 26.0	
	comp=Z,190nm,0.9s						
HAWA	**Hanford**	**37.98**	**74**	IAmb	IAmb	05 09 22.9	
	comp=Z,176nm,0.8s						
HAWA	**Hanford**	**37.98**	**74**	⇑P	**P**	**05 09 11.2**	**+1.9**
F07A	**Phinny Hill Vi**	**37.98**	**74**	IAmb	IAmb	05 09 30.9	
	comp=Z,139nm,0.8s						
D08A	**Wollman Farm,**	**38.02**	**72**	IAmb	IAmb	05 09 22.1	
	comp=Z,143nm,0.9s						
C09A	**Chrisman Ranch**	**38.06**	**71**	IAmb	IAmb	05 09 22.2	
	comp=Z,154nm,0.8s						
CN2	**Changchun**	**38.06**	**282**	⇑*i*P	**P**	**05 09 09.7**	**-0.4**
CN2				PP	**PnPn**	**05 10 39.5**	**+0.8**
CN2				PcP	**PcP**	**05 11 25.2**	**+0.4**
CN2				S	**S**	**05 14 58.2**	**-2.3**
CN2				pmax	pmax		
	comp=Z,60nm,0.8s						
CN2				pmax	pmax		
	comp=Z,3µm,4.0s						
CN2				LR	LR		
	comp=Z,8µm,18.0s						
CN2				LR	LR		
	comp=Z,10µm,18.0s						
CN2				LR	LR		
	comp=Z,9µm,17.0s						
KHMM	**Horse Mountain**	**38.28**	**84**	IAmb	IAmb	05 09 53.3	
	comp=Z,156nm,1.3s						
KHMM				IAMs_20	IAMs_20	05 24 49.6	
	comp=Z,12µm,18.0s						
KMPM	**Mount Pierce**	**38.30**	**85**	IAmb	IAmb	05 09 26.1	
	comp=Z,152nm,1.2s						
JHS	**Saijyo**	**38.39**	**264**	P	**P**	**05 09 14.4**	**+1.4**
JCJ	**Chichijima**	**38.41**	**247**	LR	LR	05 22 23.7	
	comp=Z,8µm,21.9s,baz=30,slow=32						
JCJ	**Chichijima**	**38.41**	**247**	⇓P	**P**	**05 09 14.9**	**+1.7**
L04D	**Klamath Falls**	**38.43**	**81**	IAmb	IAmb	05 09 33.1	
	comp=Z,151nm,1.1s						
PINE	**Pine Mountain**	**38.43**	**78**	IAmb	IAmb	05 09 40.3	
	comp=Z,141nm,1.0s						
YBH	**Yreka Blue Hor**	**38.45**	**82**	LR	LR	05 22 04.2	
	comp=Z,722nm,21.9s,baz=288,slow=32						
YPT	**Yellepit**	**38.49**	**74**	IAmb	IAmb	05 09 27.0	
	comp=Z,148nm,1.0s						
EDM	**Edmonton**	**38.52**	**61**	IAmb	IAmb	05 09 16.2	
	comp=Z,171nm,0.6s						
J05D	**Fort Rock, OR**	**38.52**	**79**	IAmb	IAmb	05 09 24.5	
	comp=Z,130nm,0.9s						
NEW	**Newport**	**38.52**	**70**	LR	LR	05 22 46.3	
	comp=Z,10µm,21.6s,baz=293,slow=32						
NEW	**Newport**	**38.52**	**70**	IAmb	IAmb	05 09 26.4	
	comp=Z,167nm,0.9s						
NEW	**Newport**	**38.52**	**70**	⇑P	**P**	**05 09 15.2**	**+1.2**
M02C	**Callahan**	**38.54**	**82**	P	**P**	**05 09 16.6**	**+2.3**
K04D	**Chiloquin, OR**	**38.55**	**80**	IAmb	IAmb	05 09 34.1	
	comp=Z,222nm,0.7s						
HILR	**Hailar Array B**	**38.68**	**293**	P	**P**	**05 09 15.0**	**-0.3**
	comp=Z,17nm,0.4s,baz=74,slow=11,SNR=59						
HILR				PcP	**PcP**	**05 11 28.4**	**+1.7**
	comp=Z,4.9nm,0.4s,baz=92,slow=3.8,SNR=5.7						
HILR				ScP	**ScP**	**05 15 13.1**	**+0.8**
	comp=Z,6.1nm,0.8s,baz=83,slow=4.6,SNR=4.1						
HILR				LR	LR	05 26 26.8	
	comp=Z,29µm,19.2s,baz=70,slow=38						
	comp=Z,17nm,0.4s						
JMN	**Monobe**	**38.74**	**262**	⇑P	**P**	**05 09 17.9**	**+1.9**
E09A	**Wood Farm, Sta**	**38.75**	**73**	IAmb	IAmb	05 09 28.8	
	comp=Z,142nm,1.0s						
HIA	**Hailar**	**38.82**	**292**	IAmb	IAmb	05 09 18.1	
	comp=Z,216nm,0.8s						
HIA	**Hailar**	**38.82**	**292**	P	**P**	**05 09 16.4**	**0.0**
HIA				PcP	**PcP**	**05 11 29.4**	**+2.3**
K05A	**Summer Lake**	**39.03**	**79**	IAmb	IAmb	05 09 35.7	
	comp=Z,247nm,0.9s						
KCPM	**Cahto Peak**	**39.06**	**85**	IAMs_20	IAMs_20	05 25 19.2	
	comp=Z,12µm,18.0s						
M03C	**McCloud**	**39.07**	**82**	IAmb	IAmb	05 09 52.1	
	comp=Z,124nm,1.0s						
I07A	**Izee**	**39.16**	**77**	IAmb	IAmb	05 09 29.7	
	comp=Z,117nm,0.9s						
O02D	**Mt. Diablo Mer**	**39.27**	**84**	IAmb	IAmb	05 09 45.3	
	comp=Z,385nm,1.9s						
F10A	**Beach Ranch, E**	**39.58**	**73**	IAmb	IAmb	05 09 35.3	
	comp=Z,113nm,0.9s						
HATC	**Hat Creek Radi**	**39.74**	**82**	IAmb	IAmb	05 09 37.5	
	comp=Z,193nm,0.8s						
RES	**Resolute Bay**	**39.77**	**24**	LR	LR	05 28 53.9	
	comp=Z,13µm,20.0s,baz=272,slow=41						
RES	**Resolute Bay**	**39.77**	**24**	⇑P	**P**	**05 09 24.9**	**+0.9**
HOPS	**Hopland Field**	**39.78**	**86**	IAMs_20	IAMs_20	05 25 57.5	
	comp=Z,15µm,18.0s						
O03E	**Paynes Creek**	**39.82**	**83**	IAmb	IAmb	05 09 50.3	
	comp=Z,167nm,1.1s						
BMO	**Blue Mountains**	**40.10**	**74**	IAMs_20	IAMs_20	05 22 58.1	
	comp=Z,13µm,22.0s						
BMO	**Blue Mountains**	**40.10**	**74**	⇑P	**P**	**05 09 28.6**	**+1.3**
KSRS	**Korea Array**	**40.12**	**272**	P	**P**	**05 09 28.8**	**+1.4**
	comp=Z,99nm,0.7s,baz=53,slow=8.2,SNR=180						
KSRS				PcP	**PcP**	**05 11 33.1**	**+1.8**
	comp=Z,15nm,0.9s,baz=47,slow=3.5,SNR=5.5						
KSRS				LR	LR	05 24 58.6	
	comp=Z,3626µm,21.8s,baz=55,slow=34						
	comp=Z,99nm,0.7s						
KS19	**Wonju Array Si**	**40.12**	**272**	IAmb	IAmb	05 09 30.7	
	comp=Z,136nm,0.8s						
KSAR	**Wonju Array Be**	**40.15**	**272**	P	**P**	**05 09 28.4**	**+0.8**
KSAR	**Wonju Array Be**	**40.15**	**272**	P	**P**	**05 09 28.4**	**+0.8**
MNRC	**McLaughlin Min**	**40.25**	**85**	IAmb	IAmb	05 10 04.5	
	comp=Z,280nm,1.8s						
MNRC				IAMs_20	IAMs_20	05 26 13.8	
	comp=Z,14µm,18.0s						
SNY	**Shenyang**	**40.28**	**280**	⇑P	**P**	**05 09 29.4**	**+0.7**
SNY				pmax	pmax		
	comp=Z,160nm,0.8s						
SNY				pmax	pmax		
	comp=Z,4µm,5.7s						
SNY				LR	LR		
	comp=Z,10µm,21.1s						
SNY				LR	LR		
	comp=Z,6µm,21.6s						
SNY				LR	LR		
	comp=Z,17µm,21.3s						
MCCM	**Marconi Confer**	**40.41**	**87**	IAMs_20	IAMs_20	05 26 04.2	
	comp=Z,11µm,18.0s						
JTMT	**Jette**	**40.45**	**69**	P	**P**	**05 09 30.6**	**+0.4**
WVOR	**Wild Horse Val**	**40.59**	**78**	IAmb	IAmb	05 09 47.8	
	comp=Z,164nm,0.9s						
WVOR	**Wild Horse Val**	**40.59**	**78**	⇑P	**P**	**05 09 33.2**	**+1.9**
PLID	**Pearl Lake**	**40.77**	**73**	IAMs_20	IAMs_20	05 23 30.7	
	comp=Z,18µm,22.0s						
INCN	**Inchon**	**40.91**	**273**	P	**P**	**05 09 34.5**	**+0.5**
INCN	**Inchon**	**40.91**	**273**	P	**P**	**05 09 34.7**	**+0.8**
INCN				IAmb	IAmb	05 09 36.9	
	comp=Z,281nm,0.8s						
INCN	**Inchon**	**40.91**	**273**	P	**P**	**05 09 34.7**	**+0.8**
INCN				pmax	pmax		
	comp=Z,281nm,0.8s						
INCN				MLR	MLR		
	comp=Z,5µm,20.0s						
INCN	**Inchon**	**40.91**	**273**	⇑P	**P**	**05 09 34.9**	**+1.0**
JNU	**Nakatsue**	**41.02**	**264**	LR	LR	05 25 18.0	
	comp=Z,19µm,22.0s,baz=50,slow=34						
JNU	**Nakatsue**	**41.02**	**264**	⇑P	**P**	**05 09 36.3**	**+1.4**
CIT	**Chita**	**41.08**	**299**	*e*P	**P**	**05 09 35.4**	**+0.2**
CIT				*e*		05 09 43.2	
CIT				*e*		05 09 52.0	
CIT				*e*		05 11 09.8	
CIT				*e*		05 11 42.6	
CIT				*e*		05 15 53.6	
CIT				pmax	pmax		
	comp=Z,677nm,3.4s						
MSO	**Missoula**	**41.10**	**70**	IAmb	IAmb	05 09 55.9	
	comp=Z,145nm,1.0s						
MSO	**Missoula**	**41.10**	**70**	⇑P	**P**	**05 09 36.4**	**+0.8**
TJN	**Taejon**	**41.13**	**271**	P	**P**	**05 09 36.1**	**+0.4**
TJN	**Taejon**	**41.13**	**271**	*i* P	**P**	**05 09 36.2**	**+0.5**
WELL	**Weller Preserv**	**41.59**	**85**	IAMs_20	IAMs_20	05 27 09.3	
	comp=Z,11µm,18.0s						
MHC	**Mount Hamilton**	**41.68**	**87**	IAMs_20	IAMs_20	05 26 50.8	
	comp=Z,10µm,18.0s						
BLKN	**Baker Lake**	**42.53**	**40**	P	**P**	**05 09 45.5**	**-1.2**
HLID	**Hailey**	**42.55**	**74**	IAMs_20	IAMs_20	05 24 25.8	
	comp=Z,13µm,22.0s						
HLID	**Hailey**	**42.55**	**74**	⇑P	**P**	**05 09 48.7**	**+1.2**
BCYI	**Bear Canyon**	**42.75**	**73**	IAmb	IAmb	05 10 01.9	
	comp=Z,248nm,0.9s						
HULI	**Fort Hunter Li**	**42.75**	**88**	IAmb	IAmb	05 10 09.5	
	comp=Z,227nm,1.1s						
EGMT	**Eagleton**	**42.94**	**66**	IAmb	IAmb	05 09 53.9	
	comp=Z,162nm,0.8s						
EGMT	**Eagleton**	**42.94**	**66**	⇑P	**P**	**05 09 49.9**	**-0.6**
NVAR	**Mina Array Bea**	**43.11**	**83**	P	**P**	**05 09 54.1**	**+2.0**
	comp=Z,27nm,0.8s,baz=291,slow=7.1,SNR=89						
NVAR				ScP	**ScP**	**05 15 31.1**	**+1.0**
	comp=Z,6.0nm,0.8s,baz=282,slow=4.2,SNR=7.5						
NVAR				LR	LR	05 24 29.9	
	comp=Z,5µm,21.8s,baz=293,slow=31						
	comp=Z,27nm,0.8s						
NVAR	**Mina Array Bea**	**43.11**	**83**	P	**P**	**05 09 53.2**	**+1.1**
BOZ	**Bozeman (W)**	**43.12**	**70**	IAmb	IAmb	05 10 03.7	
	comp=Z,168nm,0.8s						
BOZ	**Bozeman (W)**	**43.12**	**70**	⇑P	**P**	**05 09 52.9**	**+0.9**
DL2	**Dalian**	**43.19**	**278**	P	**P**	**05 09 52.6**	**+0.1**
DL2				PP	**PP**	**05 11 33.1**	**+0.2**
DL2				S	**S**	**05 16 16.1**	**-0.9**
DL2				pmax	pmax		
	comp=Z,130nm,0.7s						
DL2				pmax	pmax		
	comp=Z,3µm,4.3s						
DL2				LR	LR		
	comp=Z,9µm,18.5s						
DL2				LR	LR		
	comp=Z,8µm,16.8s						
DL2				LR	LR		
	comp=Z,14µm,19.2s						
PKD	**Bear Valley Ra**	**43.24**	**88**	P	**P**	**05 09 55.0**	**+2.0**
Q09A	**Carvers**	**43.57**	**82**	P	**P**	**05 09 58.0**	**+2.3**
Q09A				IAmb	IAmb	05 10 09.3	
	comp=Z,180nm,0.7s						
ELK	**Elko**	**43.64**	**78**	LR	LR	05 28 21.6	
	comp=Z,10µm,18.4s,baz=311,slow=36						
ELK	**Elko**	**43.64**	**78**	IAmb	IAmb	05 10 01.4	
	comp=Z,94nm,0.8s						
ELK				IAMs_20	IAMs_20	05 28 28.1	
	comp=Z,11µm,18.0s						
ELK	**Elko**	**43.64**	**78**	⇑P	**P**	**05 09 58.0**	**+1.6**
XLT	**XiLinHaoTe**	**43.72**	**287**	*e*P	**P**	**05 09 57.6**	**+0.8**
XLT				PcP	**PcP**	**05 11 45.8**	**+2.5**
XLT				S	**S**	**05 16 20.5**	**-4.3**
XLT				SS	**SS**	**05 19 34.5**	**-6.0**
XLT				ScS	**ScS**	**05 19 52.5**	**-1.0**
XLT				pmax	pmax		
	comp=Z,390nm,1.8s						
XLT				pmax	pmax		
	comp=Z,5µm,7.5s						
XLT				LR	LR		
	comp=Z,20µm,19.5s						
XLT				LR	LR		
	comp=Z,24µm,22.2s						
YHL	**Hebgen Lake**	**43.79**	**71**	IAmb	IAmb	05 10 10.2	
	comp=Z,252nm,1.0s						
YHB	**Horse Butte**	**43.83**	**71**	IAmb	IAmb	05 10 10.3	
	comp=Z,239nm,0.9s						
FFC	**Flin Flon**	**43.90**	**54**	P	**P**	**05 09 57.5**	**-0.5**
FFC	**Flin Flon**	**43.90**	**54**	IAMs_20	IAMs_20	05 30 14.9	
	comp=Z,14µm,18.0s						
FFC	**Flin Flon**	**43.90**	**54**	P	**P**	**05 09 57.5**	**-0.5**
FFC				pmax	pmax		
	comp=Z,23nm,1.0s						
FFC				MLR	MLR		
	comp=Z,14µm,18.0s						
TIN	**Tinemaha, Big**	**44.00**	**85**	IAmb	IAmb	05 10 12.0	
	comp=Z,139nm,0.9s						
YMR	**Madison River**	**44.02**	**71**	IAmb	IAmb	05 10 11.9	
	comp=Z,194nm,0.9s						
YNM	**Yellowstone No**	**44.14**	**71**	IAmb	IAmb	05 10 15.0	
	comp=Z,111nm,0.9s						
YNR	**Norris Junctio**	**44.16**	**71**	IAmb	IAmb	05 10 13.6	
	comp=Z,221nm,0.9s						
YFT	**Old Faithful**	**44.21**	**71**	IAmb	IAmb	05 10 19.8	
	comp=Z,198nm,0.9s						
VES	**Vestal, Richgr**	**44.22**	**87**	IAmb	IAmb	05 10 13.6	
	comp=Z,162nm,0.7s						
YPP	**Pitchstone Pla**	**44.33**	**71**	IAmb	IAmb	05 10 32.9	
	comp=Z,95nm,1.0s						
YNE	**Yellowstone No**	**44.40**	**70**	IAmb	IAmb	05 10 14.1	
	comp=Z,113nm,0.8s						
LKWY	**Lake**	**44.41**	**71**	IAmb	IAmb	05 10 21.5	
	comp=Z,182nm,0.8s						
LKWY	**Lake**	**44.41**	**71**	⇓P	**P**	**05 10 05.6**	**+3.1**
YMP	**Mirror Lake Pl**	**44.46**	**71**	IAmb	IAmb	05 10 27.7	
	comp=Z,91nm,0.8s						
HVU	**Hansel Valley**	**44.55**	**76**	IAmb	IAmb	05 10 06.8	
	comp=Z,89nm,0.7s						
GRAC	**Grapevine Rang**	**44.58**	**84**	IAmb	IAmb	05 10 43.4	
	comp=Z,242nm,1.6s						
RLMT	**Red Lodge**	**44.77**	**70**	IAmb	IAmb	05 10 18.1	
	comp=Z,204nm,0.8s						
RLMT	**Red Lodge**	**44.77**	**70**	⇑P	**P**	**05 10 06.3**	**+0.9**
SNOW	**Snow King Moun**	**44.81**	**72**	IAMs_20	IAMs_20	05 25 52.7	
	comp=Z,11µm,22.0s						
NRIK	**Noril'sk**	**44.86**	**330**	P	**P**	**05 10 04.8**	**-0.6**
	comp=Z,37nm,0.7s,baz=79,slow=9.5,SNR=29						
NRIK				PcP	**PcP**	**05 11 47.4**	**+0.8**
	comp=Z,22nm,0.8s,baz=30,slow=3.5,SNR=4.3						
NRIK				ScP	**ScP**	**05 15 36.2**	**-0.3**
	comp=Z,13nm,0.8s,baz=57,slow=4.8,SNR=5.8						
NRIK				LR	LR	05 32 08.3	
	comp=Z,9µm,19.0s,baz=60,slow=41						
	comp=Z,37nm,0.7s						
POIN	**Pond Inlet**	**44.93**	**25**	P	**P**	**05 10 05.9**	**0.0**
TULEG	**Thule**	**45.06**	**18**	⇑P	**P**	**05 10 07.5**	**+0.5**
S11A	**Rachel**	**45.19**	**82**	IAmb	IAmb	05 10 28.5	
	comp=Z,143nm,1.0s						
FURC	**Furnace Creek,**	**45.22**	**84**	IAmb	IAmb	05 10 25.1	
	comp=Z,95nm,0.7s						
OSI	**Osito Audit: C**	**45.23**	**88**	IAmb	IAmb	05 10 23.8	
	comp=Z,90nm,0.8s						
TPNV	**Topopah Spring**	**45.30**	**83**	IAmb	IAmb	05 10 22.7	
	comp=Z,124nm,0.7s						
TPNV				IAMs_20	IAMs_20	05 29 34.5	
	comp=Z,13µm,18.0s						
TPNV	**Topopah Spring**	**45.30**	**83**	⇑P	**P**	**05 10 10.9**	**+1.3**
HWUT	**Hardware Ranch**	**45.39**	**75**	P	**P**	**05 10 11.0**	**+0.7**
HWUT	**Hardware Ranch**	**45.39**	**75**	⇑P	**P**	**05 10 11.6**	**+1.3**
ILON	**Igloolik, Nuna**	**45.41**	**30**	P	**P**	**05 10 09.3**	**-0.6**
DUG	**Dugway, Tooele**	**45.46**	**77**	IAmb	IAmb	05 10 29.4	
	comp=Z,179nm,1.0s						
DUG	**Dugway, Tooele**	**45.46**	**77**	⇑P	**P**	**05 10 12.1**	**+1.3**
TCUT	**Toone Canyon**	**45.77**	**75**	IAmb	IAmb	05 10 16.5	
	comp=Z,94nm,0.7s						
FCC	**Fort Churchill**	**45.79**	**46**	IAmb	IAmb	05 10 17.8	
	comp=Z,100nm,0.9s						
PSUT	**Pine Spring**	**45.82**	**80**	IAmb	IAmb	05 10 25.9	
	comp=Z,144nm,1.0s						
DGMT	**Dagmar**	**45.87**	**63**	IAMs_20	IAMs_20	05 30 14.8	
	comp=Z,13µm,19.0s						
DGMT	**Dagmar**	**45.87**	**63**	⇓P	**P**	**05 10 15.1**	**+1.3**
BJI	**Beijing**	**45.89**	**283**	P	**P**	**05 10 14.6**	**+0.6**
BJI				PP	**PP**	**05 12 02.7**	**+1.1**
BJI				S	**S**	**05 16 53.6**	**-2.5**
BJI				SS	**ScS**	**05 20 09.9**	**+2.7**
BJI				pmax	pmax		
	comp=Z,88nm,0.8s						
BJI				pmax	pmax		
	comp=Z,2µm,7.6s						
BJI				LR	LR		
	comp=Z,4µm,16.4s						
BJI				LR	LR		
	comp=Z,4µm,17.5s						
BJI				LR	LR		
	comp=Z,7µm,17.0s						
MWC	**Mount Wilson**	**45.90**	**88**	IAmb	IAmb	05 10 33.5	
	comp=Z,129nm,1.1s						
BJT	**Baijiatuau**	**45.91**	**283**	IAmb	IAmb	05 10 16.8	
	comp=Z,147nm,0.9s						
BJT	**Baijiatuau**	**45.91**	**283**	IAMs_20	IAMs_20	05 32 45.7	
	comp=Z,13µm,18.0s						
BJT	**Baijiatuau**	**45.91**	**283**	P	**P**	**05 10 15.2**	**+1.0**
BW06	**Boulder Array**	**45.93**	**72**	IAMs_20	IAMs_20	05 26 39.3	
	comp=Z,11µm,21.0s						
PDAR	**Pinedale Array**	**45.93**	**72**	P	**P**	**05 10 15.6**	**+0.9**
	comp=Z,105nm,0.7s,baz=304,slow=3.5,SNR=470						
PDAR				ScP	**ScP**	**05 15 41.5**	**-0.2**
	comp=Z,5.1nm,0.9s,baz=329,slow=2.8,SNR=4.6						
PDAR				LR	LR	05 26 50.7	
	comp=Z,7µm,21.9s,baz=300,slow=33						
	comp=Z,105nm,0.7s						
PDAR	**Pinedale Array**	**45.93**	**72**	P	**P**	**05 10 14.8**	**+0.2**
SHOC	**Shoshone, Teco**	**45.95**	**84**	IAmb	IAmb	05 10 26.6	
	comp=Z,137nm,0.8s						
IRK	**Irkutsk**	**45.97**	**303**	*e*P	**P**	**05 10 12.5**	**-2.0**
IRK				pmax	pmax		
	comp=Z,232nm,2.7s						
TLY	**Talaya**	**46.59**	**303**	P	**P**	**05 10 18.5**	**-0.9**
TLY				S	S	05 16 48.2	-18
TLY	**Talaya**	**46.59**	**303**	P	**P**	**05 10 18.4**	**-1.1**
TLY	**Talaya**	**46.59**	**303**	⇑P	**P**	**05 10 18.8**	**-0.6**
MTPC	**Mountain Pass**	**46.66**	**84**	IAmb	IAmb	05 10 32.4	
	comp=Z,135nm,1.6s						
ELS	**Elsinore Mount**	**46.67**	**88**	IAmb	IAmb	05 10 32.6	
	comp=Z,210nm,1.8s						
ULN	**Ulaanbaatar**	**46.79**	**297**	P	**P**	**05 10 21.3**	**+0.1**
ULN				S	S	05 16 51.0	-18
ULN	**Ulaanbaatar**	**46.79**	**297**	P	**P**	**05 10 21.2**	**+0.1**
ULN				IAmb	IAmb	05 10 23.8	
	comp=Z,165nm,0.9s						
ULN	**Ulaanbaatar**	**46.79**	**297**	P	**P**	**05 10 21.1**	**-0.1**
ULN	**Ulaanbaatar**	**46.79**	**297**	*c* *i*P	**P**	**05 10 20.1**	**-1.1**
ULN				pmax	pmax		
	comp=Z,125nm,0.9s						
ULN	**Ulaanbaatar**	**46.79**	**297**	⇑P	**P**	**05 10 21.3**	**+0.1**
ULN	**Ulaanbaatar**	**46.79**	**297**	P	**P**	**05 10 21.8**	**+0.6**
ULN				PcP	**PcP**	**05 11 55.7**	**+1.8**
JOW	**Kunigami**	**46.99**	**260**	LR	LR	05 29 21.3	
	comp=Z,3µm,20.4s,baz=60,slow=35						
NOR	**Nord**	**47.13**	**4**	⇑P	**P**	**05 10 22.3**	**-0.9**
LCMT	**Little Creek M**	**47.14**	**81**	IAmb	IAmb	05 10 45.1	
	comp=Z,89nm,1.1s						
SONM	**Songino Array**	**47.18**	**297**	P	**P**	**05 10 25.1**	**+0.9**
	comp=Z,96nm,0.8s,baz=59,slow=9.2,SNR=266						
SONM				PcP	**PcP**	**05 11 56.1**	**+0.8**
	comp=Z,22nm,0.8s,baz=68,slow=1.9,SNR=5.4						
SONM				ScP	**ScP**	**05 15 47.5**	**+0.8**
	comp=Z,9.5nm,0.8s,baz=66,slow=2.0,SNR=7.3						
SONM				LR	LR	05 31 07.2	
	comp=Z,39µm,19.9s,baz=64,slow=37						
	comp=Z,96nm,0.8s						
DNR	**Dunn Ranch,Anz**	**47.23**	**87**	IAmb	IAmb	05 10 39.9	
	comp=Z,94nm,0.7s						
PFO	**Pinyon Flats O**	**47.31**	**87**	LR	LR	05 25 55.1	
	comp=Z,5µm,20.9s,baz=297,slow=30						
PFO	**Pinyon Flats O**	**47.31**	**87**	P	**P**	**05 10 26.2**	**+0.9**
PFO	**Pinyon Flats O**	**47.31**	**87**	P	**P**	**05 10 26.2**	**+0.9**
PFO				pmax	pmax		
	comp=Z,47nm,1.2s						
DANC	**Danby, Needles**	**47.32**	**85**	IAmb	IAmb	05 10 57.4	
	comp=Z,83nm,1.1s						
KNB	**Kanab**	**47.40**	**81**	IAmb	IAmb	05 10 48.1	
	comp=Z,114nm,1.1s						
ZAK	**Zakamensk**	**47.49**	**302**	*e*P	**P**	**05 10 26.3**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,178nm,1.9s						
BORC	**Borrego Spring**	**47.56**	**87**	IAmb	IAmb	05 10 40.3	
	comp=Z,70nm,1.0s						
TIA	**Tai'an**	**47.67**	**278**	P	**P**	**05 10 28.2**	**+0.2**
TIA				PcS	**PcS**	**05 15 54.3**	**+1.7**
TIA				S	**S**	**05 17 19.5**	**-2.2**
TIA				pmax	pmax		
	comp=Z,140nm,1.0s						
TIA				pmax	pmax		
	comp=Z,4µm,4.4s						
TIA				LR	LR		
	comp=Z,9µm,20.7s						
TIA				LR	LR		
	comp=Z,10µm,20.1s						
TIA				LR	LR		
	comp=Z,15µm,22.3s						
BAR	**Barrett**	**47.79**	**88**	P	**P**	**05 10 29.8**	**+0.8**
K22A	**Casper**	**47.81**	**71**	IAmb	IAmb	05 10 40.9	
	comp=Z,129nm,0.7s						
GUMO	**Guam**	**47.93**	**232**	LR	LR	05 28 50.3	
	comp=Z,4µm,20.9s,baz=38,slow=34						
W13A	**Hualapai Mount**	**47.96**	**84**	IAmb	IAmb	05 10 43.1	
	comp=Z,47nm,0.7s						
MOY	**Mondy**	**47.99**	**304**	*e*P	**P**	**05 10 31.0**	**+0.6**
MOY				pmax	pmax		
	comp=Z,206nm,3.2s						
CBX	**Cerro Bola**	**48.04**	**88**	IAmb	IAmb	05 10 50.3	
	comp=Z,88nm,1.0s						
U15A	**North Rim**	**48.10**	**81**	IAmb	IAmb	05 10 51.0	
	comp=Z,92nm,0.8s						
HHC	**Hu-ho-hao-te**	**48.21**	**287**	*e*P	**P**	**05 10 33.1**	**+0.8**
HHC				PP	**PP**	**05 12 25.0**	**+0.5**
HHC				S	**S**	**05 17 24.6**	**-4.9**
HHC				sS	sS	05 17 41.7	-1.7
HHC				SS	**SS**	**05 20 50.4**	**-8.1**
HHC				pmax	pmax		
	comp=Z,340nm,1.9s						
HHC				pmax	pmax		
	comp=Z,6µm,7.3s						
HHC				LR	LR		
	comp=Z,14µm,17.0s						
HHC				LR	LR		
	comp=Z,21µm,19.6s						
HHC				LR	LR		
	comp=Z,32µm,19.6s						
PATS	**Pohnpei**	**48.32**	**212**	IAMs_20	IAMs_20	05 27 45.4	
	comp=Z,13µm,21.0s						
RSSD	**Black Hills**	**48.41**	**68**	P	**P**	**05 10 33.8**	**-0.1**
RSSD	**Black Hills**	**48.41**	**68**	P	**P**	**05 10 33.8**	**-0.1**
RSSD				pmax	pmax		
	comp=Z,46nm,0.9s						
RSSD				MLR	MLR		
	comp=Z,4µm,19.0s						
HNS	**HongShan**	**48.42**	**281**	⇑P	**P**	**05 10 34.5**	**+0.8**
HNS				PP	**PP**	**05 12 25.4**	**-0.8**
HNS				S	**S**	**05 17 28.5**	**-3.7**
HNS				pmax	pmax		
	comp=Z,290nm,0.9s						
HNS				pmax	pmax		
	comp=Z,5µm,7.5s						
HNS				LR	LR		
	comp=Z,7µm,18.2s						
HNS				LR	LR		
	comp=Z,11µm,18.8s						
HNS				LR	LR		
	comp=Z,13µm,21.9s						
BLYC	**Blythe**	**48.43**	**85**	IAmb	IAmb	05 10 46.0	
	comp=Z,92nm,1.1s						
SSE	**Sheshan**	**48.47**	**270**	P	**P**	**05 10 34.7**	**+0.5**
SSE				S	**S**	**05 17 33.1**	**0.0**
SSE				sS	**sS**	**05 17 48.9**	**+2.4**
SSE				pmax	pmax		
	comp=Z,120nm,1.1s						
SSE				pmax	pmax		
	comp=Z,2µm,3.8s						
SSE				LR	LR		
	comp=Z,1µm,20.6s						
SSE	**Sheshan**	**48.47**	**270**	P	**P**	**05 10 35.6**	**+1.4**
SSE				PcP	**PcP**	**05 12 00.5**	**+0.5**
GLA	**Glamis**	**48.70**	**86**	IAmb	IAmb	05 10 48.8	
	comp=Z,108nm,1.1s						
MDND	**Maddock**	**48.78**	**61**	IAMs_20	IAMs_20	05 29 32.5	
	comp=Z,11µm,22.0s						
E28A	**Huff**	**48.90**	**63**	IAMs_20	IAMs_20	05 31 59.9	
	comp=Z,12µm,20.0s						
WUAZ	**Wupatki**	**49.26**	**81**	IAmb	IAmb	05 10 59.7	
	comp=Z,167nm,1.2s						
WUAZ				IAMs_20	IAMs_20	05 32 28.0	
	comp=Z,8µm,18.0s						
WUAZ	**Wupatki**	**49.26**	**81**	⇑P	**P**	**05 10 40.8**	**+0.4**
BTO	**Baotou**	**49.29**	**287**	⇑*i*P	**P**	**05 10 41.8**	**+1.3**
BTO				pP	**pwP**	**05 10 51.6**	**-0.2**
BTO				PP	**PP**	**05 12 35.4**	**+1.1**
BTO				S	**S**	**05 17 45.4**	**+0.7**
BTO				sS	**sS**	**05 18 00.5**	**+1.9**
BTO				SS	**SS**	**05 21 10.3**	**-5.6**
BTO				pmax	pmax		
	comp=Z,1µm,1.8s						
BTO				pmax	pmax		
	comp=Z,15µm,7.4s						
BTO				LR	LR		
	comp=Z,18µm,20.4s						
BTO				LR	LR		
	comp=Z,35µm,22.6s						
BTO				LR	LR		

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      comp=Z,57µm,21.2s
NJ2   Nanjing           49.30 273⇑iP      P         05 10 40.6 +0.1
NJ2                               sP      pP        05 10 48.0 -0.6
NJ2                               PP      PP        05 12 32.5 -1.9
NJ2                               pmax    pmax
      comp=Z,140nm,0.9s
NJ2                               pmax    pmax
      comp=Z,3µm,7.1s
NJ2                               LR      LR
      comp=Z,6µm,20.8s
NJ2                               LR      LR
      comp=Z,5µm,23.7s
NJ2                               LR      LR
      comp=Z,11µm,24.6s
ULM   Lac du Bonnet     49.42  57 P       P         05 10 41.0 -0.2
      comp=Z,26nm,0.8s,baz=300,slow=7.9,SNR=14
ULM                               ScP     ScP       05 15 57.6 +1.6
      comp=Z,6.7nm,0.7s,baz=298,slow=3.3,SNR=4.9
ULM                               LR      LR        05 31 22.9
      comp=Z,9µm,21.9s,baz=306,slow=36
      comp=Z,26nm,0.8s
TIY   Taiyuan           49.62 283 eP      P         05 10 44.5 +1.4
TIY                               PP      PP        05 12 42.0 +4.7
TIY                               S       S         05 17 52.6 +3.3
TIY                               pmax    pmax
      comp=Z,240nm,0.8s
TIY                               pmax    pmax
      comp=Z,4µm,3.6s
TIY                               LR      LR
      comp=Z,8µm,20.6s
TIY                               LR      LR
      comp=Z,7µm,18.6s
TIY                               LR      LR
      comp=Z,8µm,20.6s
X16A  Lo Mia Camp, P    49.93  83 IAmb    IAmb      05 10 58.2
      comp=Z,69nm,0.8s
MVCO  Mesa Verde        49.95  78 IAMs_20 IAMs_20   05 29 11.3
      comp=Z,10µm,21.0s
KBS   Kingsbay          50.06 357 P       P         05 10 45.5 -0.3
KBS                               IAmb    IAmb      05 10 50.4
      comp=Z,84nm,0.7s
KBS                               IAMs_20 IAMs_20   05 32 58.8
      comp=Z,9µm,19.0s
KBS   Kingsbay          50.06 357 eP      P         05 10 46.3 +0.5
KBS                               eS      S         05 17 53.8 -0.5
KBS                               IVMs_BB IVMs_BB   05 33 08.2
      comp=Z,4µm,15.2s
KBS   Kingsbay          50.06 357 P       P         05 10 45.5 -0.3
KBS                               pmax    pmax
      comp=Z,84nm,0.7s
KBS                               MLR     MLR
      comp=Z,9µm,19.0s
KBS   Kingsbay          50.06 357 ⇑P      P         05 10 45.5 -0.3
ISCO  Idaho Springs     50.09  73 IAmb    IAmb      05 11 07.5
      comp=Z,78nm,1.1s
ISCO                              IAMs_20 IAMs_20   05 29 16.4
      comp=Z,12µm,22.0s
ISCO  Idaho Springs     50.09  73 ⇑P      P         05 10 48.0 +1.1
TARA  Tarawa            50.19 192 IAMs_20 IAMs_20   05 27 32.7
      comp=Z,12µm,20.0s
KNGR  Kungurtug, Tuv    50.40 305 i P     P         05 10 48.7 -0.2
KNGR                              pmax    pmax
      comp=Z,58nm,0.8s
W18A  Petrified Fore    50.53  81 IAmb    IAmb      05 11 09.8
      comp=Z,145nm,1.0s
AGMN  Agassiz Nation    50.56  59 IAMs_20 IAMs_20   05 35 40.6
      comp=Z,11µm,19.0s
AGMN  Agassiz Nation    50.56  59 ⇑P      P         05 10 49.7 -0.2
SPA0  Spitsbergen Ar    50.65 356 eP      P         05 10 49.4 -0.9
SPITS Spitsbergen Ar    50.65 356 P       P         05 10 49.3 -0.9
      comp=Z,83nm,0.5s,baz=51,slow=6.6,SNR=110
SPITS                             PcP     PcP       05 12 09.2 +2.0
      comp=Z,38nm,0.8s,baz=69,slow=7.9,SNR=2.0
SPITS                             LR      LR        05 33 09.8
      comp=Z,5µm,18.4s,baz=7.0,slow=37
      comp=Z,83nm,0.5s
X18A  Snowflake         50.78  81 IAmb    IAmb      05 11 11.2
      comp=Z,69nm,0.9s
SUSD  Miller            51.15  65 IAMs_20 IAMs_20   05 33 07.7
      comp=Z,9µm,20.0s
SDCO  Great Sand Dun    51.45  75 ⇑P      P         05 10 56.4 -0.7
OGNE  Ogallala          51.51  70 IAmb    IAmb      05 11 14.4
      comp=Z,177nm,1.1s
OGNE  Ogallala          51.51  70 ⇓P      P         05 10 59.4 +2.0
LYN   LuoYang           51.64 280⇑iP      P         05 10 58.9 +0.7
LYN                               pP      pP        05 11 05.3 -1.0
LYN                               PP      PP        05 12 59.2 +3.6
LYN                               S       S         05 18 15.6 -1.6
LYN                               pmax    pmax
      comp=Z,410nm,0.8s
LYN                               pmax    pmax
      comp=Z,6µm,3.7s
LYN                               LR      LR
      comp=Z,7µm,20.2s
LYN                               LR      LR
      comp=Z,9µm,22.2s
LYN                               LR      LR
      comp=Z,13µm,26.4s
TUC   Tucson            51.73  84 P       P         05 10 59.7 +0.6
TUC   Tucson            51.73  84 P       P         05 10 59.7 +0.6
TUC                               pmax    pmax
      comp=Z,47nm,1.0s
TUC                               MLR     MLR
      comp=Z,4µm,18.0s
TUC   Tucson            51.73  84 ⇑P      P         05 11 00.1 +1.0
HOPEN Hopen             51.77 353 eP      P         05 10 57.6 -1.0
HOPEN                             eS      S         05 18 22.0 +3.9
F33A  5 Mile Ranch,     51.80  62 IAMs_20 IAMs_20   05 37 06.5
      comp=Z,13µm,18.0s
HSPB  Hornsund (broa    51.85 356 eP      P         05 10 59.6 +0.4
HSPB                              eL      L         05 28 34.7
      comp=Z,7µm,27.4s
XMAS  Kiritimati        51.91 153 IAMs_20 IAMs_20   05 28 09.9
      comp=Z,13µm,21.0s
KSCO  Kaye Shedlock'    52.38  72 IAmb    IAmb      05 11 07.8
      comp=Z,160nm,0.8s
KSCO                              IAMs_20 IAMs_20   05 31 02.0
      comp=Z,10µm,21.0s
DUN6  Lazy B Ranch      52.63  83 IAmb    IAmb      05 11 18.1
      comp=Z,110nm,1.0s
TASM  ASL Pad, Albuq    52.68  79 IAmb    IAmb      05 11 23.9
      comp=Z,33nm,0.9s
ANMO  Albuquerque       52.68  79 LR      LR        05 30 51.3
      comp=Z,9µm,21.5s,baz=312,slow=33
ANMO  Albuquerque       52.68  79 P       P         05 11 06.1 -0.1
ANMO  Albuquerque       52.68  79 IAMs_20 IAMs_20   05 30 40.5
      comp=Z,9µm,22.0s
ANMO  Albuquerque       52.68  79ceP      P         05 11 07.5 +1.3
ANMO                              pmax    pmax
      comp=Z,22nm,0.8s
ANMO  Albuquerque       52.68  79 ⇑P      P         05 11 07.1 +0.9
YHNB  Yeheng            52.85 264 IAmb    IAmb      05 11 08.8
      comp=Z,83nm,0.8s
YHNB                              IAMs_20 IAMs_20   05 31 58.0
      comp=Z,13µm,22.0s
ECSD  EROS Data Cent    52.91  64 IAMs_20 IAMs_20   05 34 32.3
      comp=Z,9µm,20.0s
ECSD  EROS Data Cent    52.91  64 ⇑P      P         05 11 06.9 -0.7
FRB   Frobisher Bay     52.99  32 LR      LR        05 36 43.1
      comp=Z,20µm,18.7s,baz=304,slow=40
FRB   Frobisher Bay     52.99  32 ⇑P      P         05 11 07.2 -0.5
Y22A  Socorro           53.03  80 IAmb    IAmb      05 11 27.1
      comp=Z,91nm,1.0s
NACB  Ninganchiao       53.07 263 IAmb    IAmb      05 11 10.3
      comp=Z,106nm,0.9s
NACB                              IAMs_20 IAMs_20   05 32 09.9
      comp=Z,10µm,20.0s
EYMN  Ely               53.10  57 IAMs_20 IAMs_20   05 36 52.7
      comp=Z,11µm,19.0s
EYMN  Ely               53.10  57 ⇓P      P         05 11 09.4 +0.5
WHN   Wuhan             53.15 275 ⇑P      P         05 11 09.5 +0.1
WHN                               pP      pP        05 11 14.8 -2.8
WHN                               PcP     PcP       05 12 19.0 +1.7
WHN                               S       S         05 18 39.2 +1.3
WHN                               pmax    pmax
      comp=Z,950nm,0.8s
WHN                               pmax    pmax
      comp=Z,8µm,3.8s
WHN                               LR      LR
      comp=Z,14µm,18.9s
WHN                               LR      LR
      comp=Z,34µm,22.4s
WHN                               LR      LR
      comp=Z,28µm,19.2s
121A  Cookes Peak, D    53.46  82 IAmb    IAmb      05 11 30.8
      comp=Z,81nm,1.0s
BGNE  Belgrade          53.50  67 IAMs_20 IAMs_20   05 34 34.1
      comp=Z,9µm,20.0s
SSLB  Suanglung         53.75 263 IAMs_20 IAMs_20   05 32 29.9
      comp=Z,11µm,21.0s
TBO   Thunder Bay       53.76  55 IAmb    IAmb      05 11 19.9
      comp=Z,66nm,0.6s
YULB  Yu-li             53.83 263 IAMs_20 IAMs_20   05 32 33.9
      comp=Z,8µm,21.0s
ILULI Ilulissat         53.83  21 ⇓P      P         05 11 14.2 +0.3
HSIG                    53.88  87 ⇑P      P         05 11 21.2 +6.4
E38A  The Farm, Brul    53.91  58 IAmb    IAmb      05 11 20.6
      comp=Z,72nm,0.8s
E38A                              IAMs_20 IAMs_20   05 37 02.1
      comp=Z,9µm,19.0s
RTBA  Rita Blanca       53.98  75 IAmb    IAmb      05 11 33.0
      comp=Z,94nm,0.8s
SPMN  Marine on St.     54.10  60 IAMs_20 IAMs_20   05 37 23.4
      comp=Z,10µm,19.0s
BJO1  Bjornoya          54.13 354 eP      P         05 11 13.1 -2.9
XAN   Xi'an             54.17 282 ⇑P      P         05 11 17.0  0.0
XAN                               pP      pP        05 11 26.3 +1.2
XAN                               PP      PP        05 13 20.8 +2.2
XAN                               S       S         05 18 51.6 -0.2
XAN                               sS      sS        05 19 07.6 +1.7
XAN                               SS      SS        05 22 36.5 +3.1
XAN                               pmax    pmax
      comp=Z,220nm,0.9s
XAN                               pmax    pmax
      comp=Z,4µm,4.0s
XAN                               LR      LR
      comp=Z,12µm,17.7s
XAN                               LR      LR
      comp=Z,15µm,16.3s
XAN                               LR      LR
      comp=Z,15µm,17.5s
XAN   Xi'an             54.17 282 P       P         05 11 17.2 +0.2
XAN                               PcP     PcP       05 12 21.6 +0.4
CBKS  Cedar Bluff       54.23  71 ⇑P      P         05 11 18.2 +0.9
QZH   Quanzhou          54.40 266⇑iP      P         05 11 18.6  0.0
QZH                               pP      sP        05 11 29.6 -0.6
QZH                               PP      PP        05 13 22.3 +1.6
QZH                               S       S         05 18 59.8 +4.8
QZH                               pmax    pmax
      comp=Z,300nm,1.3s
QZH                               pmax    pmax
      comp=Z,5µm,3.9s
QZH                               LR      LR
      comp=Z,6µm,20.7s
QZH                               LR      LR
      comp=Z,3µm,21.6s
QZH                               LR      LR
      comp=Z,7µm,23.8s
I37A  Lemond, Waseca    54.54  62 IAmb    IAmb      05 11 22.0
      comp=Z,129nm,0.8s
I37A                              IAMs_20 IAMs_20   05 35 44.2
      comp=Z,12µm,20.0s
ZALV  Zalesovo Beam     54.54 314 P       P         05 11 18.1 -1.2
      comp=Z,11nm,0.5s,baz=40,slow=8.0,SNR=17
ZALV                              PcP     PcP       05 12 23.1 +0.9
      comp=Z,157nm,0.8s,baz=35,slow=3.8,SNR=47
ZALV                              LR      LR        05 35 38.5
      comp=Z,12µm,20.3s,baz=52,slow=37
      comp=Z,11nm,0.5s
PH02  Texas Public H    55.15  75 IAmb    IAmb      05 11 41.5
      comp=Z,170nm,0.8s
N35A  Tabor             55.30  66 IAMs_20 IAMs_20   05 37 41.7
      comp=Z,8µm,19.0s
G40A  Rib Lake          55.49  59 IAMs_20 IAMs_20   05 35 35.0
      comp=Z,9µm,19.0s
MNTX  Cornudas Mount    55.52  81 IAmb    IAmb      05 11 45.6
      comp=Z,108nm,0.9s
MNTX  Cornudas Mount    55.52  81 ⇑P      P         05 11 27.6 +0.9
MSTX  Muleshoe          55.60  77 IAmb    IAmb      05 11 44.1
      comp=Z,87nm,0.9s
MSTX                              IAMs_20 IAMs_20   05 36 24.6
      comp=Z,6µm,18.0s
AMTX  Amarillo          55.65  75 IAmb    IAmb      05 11 37.8
      comp=Z,89nm,1.0s
AMTX  Amarillo          55.65  75 ⇑P      P         05 11 28.5 +0.8
CNSH  ChangSha          55.67 274 P       P         05 11 28.1 +0.3
CNSH                              S       S         05 19 16.4 +4.5
CNSH                              pmax    pmax
      comp=Z,64nm,0.7s
CNSH                              LR      LR
      comp=Z,5µm,25.0s
CNSH                              LR      LR
      comp=Z,2µm,28.8s
CNSH                              LR      LR
      comp=Z,6µm,26.0s
SFJD  Kangerlussuaq     55.70  22 LR      LR        05 36 59.2
      comp=Z,9µm,21.1s,baz=312,slow=38
SFJD  Kangerlussuaq     55.70  22 P       P         05 11 26.6 -0.8
SFJD  Kangerlussuaq     55.70  22 IAMs_20 IAMs_20   05 39 20.0
      comp=Z,12µm,20.0s
SFJD  Kangerlussuaq     55.70  22 P       P         05 11 26.6 -0.8
SFJD                              pmax    pmax
      comp=Z,38nm,0.8s
SFJD                              MLR     MLR
      comp=Z,12µm,20.0s
SFJD  Kangerlussuaq     55.70  22 ⇓P      P         05 11 27.6 +0.2
KSU1  Kansas State U    55.89  68 IAMs_20 IAMs_20   05 38 29.5
      comp=Z,8µm,19.0s
KSU1  Kansas State U    55.89  68 ⇑P      P         05 11 30.2 +1.0
LZH   Lanzhou           55.91 287 ⇑P      P         05 11 30.8 +1.2
LZH                               pP      pP        05 11 36.2 -2.2
LZH                               PP      PP        05 13 38.0 +3.8
LZH                               S       S         05 19 15.7 +0.4
LZH                               pmax    pmax
      comp=Z,410nm,1.2s
LZH                               pmax    pmax
      comp=Z,6µm,4.5s
LZH                               LR      LR
      comp=Z,20µm,20.1s
LZH                               LR      LR
      comp=Z,19µm,20.8s
LZH                               LR      LR
      comp=Z,30µm,22.0s
SCIA  State Center      56.00  64 IAmb    IAmb      05 11 32.6
      comp=Z,136nm,0.9s
SCIA                              IAMs_20 IAMs_20   05 36 00.1
      comp=Z,10µm,20.0s
SCIA  State Center      56.00  64 ⇓P      P         05 11 31.1 +1.1
DGZ   Jazzator, Alta    56.06 309c iP     P         05 11 29.8 -0.7
DGZ                               pmax    pmax
      comp=Z,57nm,0.9s
LZDM  Lanzhou Array     56.08 287 P       P         05 11 32.1 +1.0
      comp=Z,68nm,0.8s,baz=42,slow=2.4,SNR=60
LZDM                              PcP     PcP       05 12 31.3 +2.4
      comp=Z,12nm,0.4s,baz=46,slow=6.2,SNR=5.6
LZDM                              ScP     ScP       05 16 26.3 +0.7
      comp=Z,2.6nm,0.2s,baz=58,slow=11,SNR=7.0
LZDM                              LR      LR        05 36 57.6
      comp=Z,22µm,20.6s,baz=55,slow=38
      comp=Z,68nm,0.8s
GTA   Gaotai            56.10 292 P       P         05 11 31.2 +0.3
GTA                               pP      pP        05 11 40.0 +0.4
GTA                               PP      PP        05 13 39.8 +4.0
GTA                               S       S         05 19 16.9 -0.8
GTA                               pmax    pmax
      comp=Z,1µm,1.0s
GTA                               pmax    pmax
      comp=Z,6µm,4.9s
GTA                               LR      LR
      comp=Z,17µm,20.0s
GTA                               LR      LR
      comp=Z,16µm,19.3s
GTA                               LR      LR
      comp=Z,29µm,20.0s
NOKA  Waynoka           56.15  72 IAmb    IAmb      05 11 48.6
      comp=Z,76nm,0.7s
I40A  Norwalk           56.16  60 IAmb    IAmb      05 11 33.7
      comp=Z,86nm,0.9s
I40A                              IAMs_20 IAMs_20   05 36 39.7
      comp=Z,10µm,18.0s
ELIS  Ellis County      56.23  73 IAmb    IAmb      05 11 40.7
      comp=Z,86nm,0.9s
F42A  Maple Grove Fa    56.27  57 IAMs_20 IAMs_20   05 38 24.6
      comp=Z,11µm,18.0s
KAN08 Anthony NE Sta    56.33  71 IAmb    IAmb      05 11 43.2
      comp=Z,88nm,0.9s
OK038 West end E0370    56.36  72 IAmb    IAmb      05 11 41.1
      comp=Z,107nm,0.9s
SMWD  Samnorwood        56.38  74 IAmb    IAmb      05 11 50.3
      comp=Z,103nm,0.7s
ENH   Enshi             56.38 278 IAMs_20 IAMs_20   05 34 43.2
      comp=Z,7µm,22.0s
ENH   Enshi             56.38 278 P       P         05 11 33.0 +0.1
ENH                               PcP     PcP       05 12 30.6 +0.8
VHRN  Van Horn          56.39  81 IAmb    IAmb      05 11 52.4
      comp=Z,66nm,0.9s
KAN01 Argonia South     56.50  71 IAmb    IAmb      05 11 38.0
      comp=Z,122nm,0.9s
N38A  Joes South For    56.72  65 IAMs_20 IAMs_20   05 36 21.2
      comp=Z,7µm,19.0s
CROK  Carrier           56.80  72 IAmb    IAmb      05 11 51.0
      comp=Z,77nm,0.8s
DKNS  Dickens           56.93  76 IAmb    IAmb      05 11 47.0
      comp=Z,102nm,0.8s
POST  Post              56.99  77 IAmb    IAmb      05 11 40.5
      comp=Z,107nm,0.8s
ODSA  Odessa            56.99  78 IAmb    IAmb      05 11 54.2
      comp=Z,86nm,0.8s
JFWS  Jewell Farm       57.00  61 IAmb    IAmb      05 11 39.2
      comp=Z,103nm,0.8s
JFWS  Jewell Farm       57.00  61 IAMs_20 IAMs_20   05 39 26.2
      comp=Z,11µm,20.0s
JFWS  Jewell Farm       57.00  61 ⇓P      P         05 11 36.7 -0.4
L40A  Anamosa           57.02  62 IAMs_20 IAMs_20   05 37 19.9
      comp=Z,10µm,20.0s
I42A  Draeger Farm,     57.08  59 IAmb    IAmb      05 11 43.9
      comp=Z,94nm,1.0s
I42A                              IAMs_20 IAMs_20   05 34 41.3
      comp=Z,10µm,22.0s
H43A  Windswept, Lux    57.32  58 IAMs_20 IAMs_20   05 39 16.3
      comp=Z,9µm,18.0s
P38A  Dawn              57.33  66 IAMs_20 IAMs_20   05 41 03.4
      comp=Z,8µm,19.0s
SN07  Snyder 07         57.34  76 IAmb    IAmb      05 11 51.4
      comp=Z,58nm,0.7s
MNHN  Monahans          57.39  79 IAmb    IAmb      05 11 57.5
      comp=Z,126nm,0.8s
T35A  Sooner Cattle     57.40  70 IAmb    IAmb      05 11 43.1
      comp=Z,141nm,1.0s
VADS  Vadso             57.43 349 eP      P         05 11 39.2 -0.4
VADS                              eS      S         05 19 33.1 -1.0
OK048 Pawnee Station    57.48  71 IAmb    IAmb      05 11 43.2
      comp=Z,132nm,0.9s
OK051 E0350 and S346    57.48  71 IAmb    IAmb      05 11 43.1
      comp=Z,107nm,0.9s
WMOK  Wichita Mounta    57.51  74 IAmb    IAmb      05 11 58.2
      comp=Z,69nm,0.8s
WMOK                              IAMs_20 IAMs_20   05 33 32.9
      comp=Z,9µm,22.0s
WMOK  Wichita Mounta    57.51  74 ⇑P      P         05 11 41.5 +0.7
HAMF  Hammerfest        57.52 352 eP      P         05 11 39.0 -1.3
HAMF                              IVmB_BB           05 11 44.7
      comp=Z,7µm,4.2s
HAMF                              eS      S         05 19 35.3 -0.1
HAMF                              eSS     SS        05 23 28.9 +4.4
APMT  Aspermont         57.66  76 IAmb    IAmb      05 11 50.6
      comp=Z,92nm,0.8s
LPIG  La Paz            57.76  91 LR      LR        05 30 55.5
      comp=Z,3µm,21.0s,baz=308,slow=30
QUOK  Quay              57.78  71 IAmb    IAmb      05 11 45.3
      comp=Z,96nm,0.8s
OK052 Battle Ridge R    57.85  71 IAmb    IAmb      05 11 53.7
      comp=Z,140nm,1.0s
OKCSW OKLAHOMA CITY     57.87  72 IAmb    IAmb      05 11 54.2
      comp=Z,132nm,0.8s
E46A  Sault Ste Mari    57.87  55 IAmb    IAmb      05 11 45.9
      comp=Z,97nm,0.9s
E46A                              IAMs_20 IAMs_20   05 36 23.7
      comp=Z,10µm,20.0s
JNW   Jan Mayen West    57.92   4 eP      P         05 11 45.0 +1.9
L42A  Oliver, Polo      57.92  62 IAmb    IAmb      05 11 45.8
      comp=Z,68nm,0.8s
L42A                              IAMs_20 IAMs_20   05 39 45.7
      comp=Z,10µm,19.0s
JMIC  Jan Mayen         57.95   4 LR      LR        05 38 25.2
      comp=Z,3µm,19.0s,baz=350,slow=38
JNE   Jan Mayen East    57.96   4 eP      P         05 11 38.3 -5.1
JMI   Jan Mayen         58.00   4 eP      P         05 11 45.3 +1.6
KEV   Kevo              58.04 350 P       P         05 11 43.1 -0.9
KEV                               IAmb    IAmb      05 11 46.6
      comp=Z,83nm,1.2s
KEV   Kevo              58.04 350 P       P         05 11 43.1 -0.9
KEV                               pmax    pmax
      comp=Z,83nm,1.2s
KEV   Kevo              58.04 350 ⇑P      P         05 11 44.1 +0.1
N41A  Harden Midland    58.13  63 IAmb    IAmb      05 11 46.5
      comp=Z,80nm,0.8s
N41A                              IAMs_20 IAMs_20   05 37 35.3
      comp=Z,11µm,20.0s
X34A  Smith Ranch, M    58.17  73 IAmb    IAmb      05 12 05.9
      comp=Z,72nm,0.8s
K43A  Burlington        58.19  60 IAMs_20 IAMs_20   05 38 26.6
      comp=Z,9µm,18.0s
TX31  Lajitas Ar. Si    58.22  82 IAmb    IAmb      05 12 04.4
      comp=Z,57nm,0.8s
TXAR  Lajitas Array     58.22  82 P       P         05 11 46.4 +0.4
      comp=Z,21nm,0.9s,baz=297,slow=4.2,SNR=88
TXAR                              LR      LR        05 36 12.9
      comp=Z,4µm,19.1s,baz=321,slow=35
      comp=Z,21nm,0.9s
TXAR  Lajitas Array     58.22  82 P       P         05 11 46.1 +0.1
P40A  Paris             58.24  65 IAMs_20 IAMs_20   05 37 18.5
      comp=Z,7µm,20.0s
SLBS  Sierra La Lagu    58.29  91 P       P         05 11 47.8 +1.3
SLBS                              IAmb    IAmb      05 11 58.7
      comp=Z,74nm,1.1s
SLBS  Sierra La Lagu    58.29  91 ⇓P      P         05 11 48.9 +2.4
WTFS  Witchita Falls    58.36  74 IAmb    IAmb      05 12 00.6
      comp=Z,131nm,1.2s
ARA0  ARCESS Array S    58.41 351 eP      P         05 11 45.6 -1.1
ARCES ARCESS Array B    58.41 351 P       P         05 11 45.5 -1.1
      comp=Z,37nm,0.6s,baz=25,slow=7.2,SNR=84
ARCES                             PcP     PcP       05 12 37.4 +0.3
      comp=Z,78nm,0.8s,baz=15,slow=5.0,SNR=14
ARCES                             PKP2ab  P'P'ab    05 41 48.8 -9.2
      comp=Z,12nm,1.1s,baz=318,slow=3.4,SNR=4.1
      comp=Z,37nm,0.6s
ARCES ARCESS Array B    58.41 351 P       P         05 11 45.6 -1.1
ARCES                             IAmb    IAmb      05 12 38.8
      comp=Z,98nm,0.9s
I45A  Fountain          58.43  58 IAMs_20 IAMs_20   05 39 49.7
      comp=Z,10µm,18.0s
ABTX  Abilene, Hawle    58.43  76 IAmb    IAmb      05 11 57.7
      comp=Z,122nm,0.9s
ABTX                              IAMs_20 IAMs_20   05 38 46.5
      comp=Z,6µm,18.0s
HPIG                    58.66  85 ⇑P      P         05 11 50.1 +0.9
OZNA  Ozona             58.69  78 IAmb    IAmb      05 12 06.0
      comp=Z,77nm,0.8s
GLMI  Grayling          58.75  56 IAMs_20 IAMs_20   05 41 55.2
      comp=Z,7µm,19.0s
GLMI  Grayling          58.75  56 ⇓P      P         05 11 50.8 +1.4
LVZ   Lovozero          58.79 346 P       P         05 11 48.1 -1.2
LVZ                               IAmb    IAmb      05 11 51.4
      comp=Z,105nm,0.8s
LVZ   Lovozero          58.79 346 P       P         05 11 48.1 -1.2
LVZ                               pmax    pmax
      comp=Z,105nm,0.8s
LVZ                               MLR     MLR
      comp=Z,12µm,21.0s
LVZ   Lovozero          58.79 346 ⇓P      P         05 11 48.2 -1.1
LVZ   Lovozero          58.79 346 P       P         05 11 47.9 -1.4
      comp=Z,208nm,0.9s
ZSN   Zaisan            58.83 308 eP      P         05 11 49.1 -0.8
      comp=Z,76nm,1.3s
ZSN                               eS      S         05 19 54.3 +1.1
ZSN   Zaisan            58.83 308 eP      P         05 11 49.1 -0.8
ZSN                               eS      S         05 19 54.2 +1.1
ZSN                               pmax    pmax
      comp=Z,76nm,1.3s
JETT  Jettan, Norway    58.87 353 eP      P         05 11 49.9 +0.1
JETT                              eS      S         05 19 54.1 +1.1
TRO   Tromso            58.91 353 eP      P         05 11 49.6 -0.4
TRO                               eS      S         05 19 52.5 -0.9
R40A  Maddies Statio    58.95  66 IAmb    IAmb      05 12 00.3
      comp=Z,83nm,0.7s
R40A                              IAMs_20 IAMs_20   05 41 37.5
      comp=Z,7µm,19.0s
U38A  Gravette          58.98  69 IAmb    IAmb      05 12 01.5
      comp=Z,84nm,0.9s
GZH   Guangzhou         59.05 269 P       P         05 11 49.0 -2.6
GZH                               PcP     PcP       05 12 39.1 -1.2
GZH                               S       S         05 19 54.0 -2.4
GZH                               pmax    pmax
      comp=Z,250nm,0.8s
GZH                               LR      LR
      comp=Z,5µm,20.9s
GZH                               LR      LR
      comp=Z,3µm,18.2s
GZH                               LR      LR
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	comp=Z,6µm,24.1s						
PLPT	**Palo Pinto**	**59.11**	**75**	IAmb	IAmb	05 12 07.3	
	comp=Z,139nm,1.0s						
HKPS	**Hong Kong Po S**	**59.13**	**268**	IAMs_20	IAMs_20	05 34 30.0	
	comp=Z,8µm,22.0s						
KTK1	**Kautokeino**	**59.14**	**351**	*e*P	**P**	**05 11 50.9**	**-0.8**
KTK1				*e*S	**S**	**05 19 54.2**	**-2.3**
M44A	**Midewin, Midew**	**59.24**	**61**	IAmb	IAmb	05 11 55.8	
	comp=Z,112nm,0.9s						
M44A				IAMs_20	IAMs_20	05 40 42.5	
	comp=Z,10µm,20.0s						
APA	**Apatity**	**59.28**	**347**	⇓*i*P	**P**	**05 11 51.9**	**-0.8**
APA				*i*		05 12 39.6	
APA				*i*		05 14 02.2	
APA				*i* S	**S**	**05 19 56.1**	**-2.2**
APA				*i*		05 21 32.7	
APA				MLR	MLR		
	comp=Z,9µm,22.2s						
GULI	**GuiLin**	**59.33**	**273**	P	**P**	**05 11 52.0**	**-1.6**
GULI				S	**S**	**05 20 00.7**	**+0.6**
GULI				pmax	pmax		
	comp=Z,160nm,1.0s						
GULI				LR	LR		
	comp=Z,2µm,18.4s						
GULI				LR	LR		
	comp=Z,4µm,20.1s						
GULI				LR	LR		
	comp=Z,7µm,22.8s						
HHAR	**Hobbs**	**59.35**	**69**	IAmb	IAmb	05 12 03.8	
	comp=Z,73nm,0.8s						
Z35A	**Perchaven, San**	**59.40**	**74**	IAmb	IAmb	05 12 11.1	
	comp=Z,64nm,0.8s						
FW06	**Azle**	**59.46**	**74**	IAmb	IAmb	05 12 11.2	
	comp=Z,117nm,1.1s						
CD2	**Chengdu**	**59.49**	**282**	P	**P**	**05 11 54.8**	**+0.1**
CD2				sP	pwP	05 12 07.2	-0.7
CD2				PP	**PP**	**05 14 06.8**	**+0.8**
CD2				S	**S**	**05 20 01.3**	**-0.8**
CD2				SS	**SS**	**05 24 01.5**	**+4.4**
CD2				pmax	pmax		
	comp=Z,220nm,0.8s						
CD2				pmax	pmax		
	comp=Z,4µm,6.2s						
CD2				LR	LR		
	comp=Z,11µm,17.8s						
CD2				LR	LR		
	comp=Z,10µm,17.3s						
CD2				LR	LR		
	comp=Z,16µm,19.0s						
KURK	**Kurchatov**	**59.53**	**314**	P	**P**	**05 11 53.2**	**-1.5**
KURK				S	S	05 19 43.7	-18
KURK	**Kurchatov**	**59.53**	**314**	P	**P**	**05 11 52.6**	**-2.1**
KURK				IAmb	IAmb	05 12 44.5	
	comp=Z,74nm,0.8s						
KURK	**Kurchatov**	**59.53**	**314**	*ce*P	**P**	**05 11 53.3**	**-1.3**
KURK				pmax	pmax		
	comp=Z,16nm,0.7s						
KURK				MLR	MLR		
	comp=Z,20µm,19.0s						
KURK	**Kurchatov**	**59.53**	**314**	P	**P**	**05 11 53.5**	**-1.1**
KURK				PcP	**PcP**	**05 12 43.1**	**+1.3**
P43A	**Skaggs, Pawnee**	**59.60**	**63**	IAMs_20	IAMs_20	05 38 30.4	
	comp=Z,10µm,21.0s						
KURBB	**Kurchatov Arra**	**59.64**	**314**	P	**P**	**05 11 54.1**	**-1.3**
	comp=Z,59nm,0.9s,baz=45,slow=6.7,SNR=111						
KURBB				PcP	**PcP**	**05 12 42.9**	**+0.7**
	comp=Z,58nm,0.9s,baz=47,slow=3.7,SNR=13						
KURBB				LR	LR	05 39 00.1	
	comp=Z,19µm,19.4s,baz=47,slow=37						
KURBB				PKPPKP	P'P'df	05 41 21.4	-8.1
	comp=Z,0.9nm,0.9s,baz=255,slow=4.1,SNR=4.5						
	comp=Z,59nm,0.9s						
CCM	**Cathedral Cave**	**59.70**	**66**	P	**P**	**05 11 55.6**	**-0.4**
CCM				IAmb	IAmb	05 12 12.9	
	comp=Z,49nm,0.7s						
CCM	**Cathedral Cave**	**59.70**	**66**	IAMs_20	IAMs_20	05 42 22.3	
	comp=Z,6µm,18.0s						
CCM	**Cathedral Cave**	**59.70**	**66**	P	**P**	**05 11 55.6**	**-0.4**
CCM				pmax	pmax		
	comp=Z,49nm,0.7s						
CCM				MLR	MLR		
	comp=Z,6µm,18.0s						
CCM	**Cathedral Cave**	**59.70**	**66**	⇑P	**P**	**05 11 55.3**	**-0.8**
J47A	**Sunmer**	**59.72**	**58**	IAMs_20	IAMs_20	05 40 55.1	
	comp=Z,8µm,18.0s						
MGMO	**Mountain Grove**	**59.73**	**67**	IAmb	IAmb	05 12 11.9	
	comp=Z,95nm,0.8s						
L46A	**Eue Claire**	**59.77**	**60**	IAMs_20	IAMs_20	05 36 23.4	
	comp=Z,9µm,22.0s						
JCT	**Junction City**	**59.82**	**78**	IAmb	IAmb	05 12 08.1	
	comp=Z,58nm,0.6s						
JCT				IAMs_20	IAMs_20	05 34 56.4	
	comp=Z,10µm,22.0s						
WMQ	**Urumqi**	**59.87**	**303**	P	**P**	**05 11 58.9**	**+1.7**
WMQ				pP	pP	05 12 06.0	+0.1
WMQ				PcP	**PcP**	**05 12 46.0**	**+2.6**
WMQ				PP	**PP**	**05 14 10.6**	**+1.6**
WMQ				S	**S**	**05 20 08.5**	**+1.7**
WMQ				pmax	pmax		
	comp=Z,160nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,1µm,3.7s						
WMQ				LR	LR		
	comp=Z,13µm,19.3s						
WMQ				LR	LR		
	comp=Z,12µm,24.1s						
WMQ				LR	LR		
	comp=Z,18µm,24.1s						
SCHQ	**Schefferville**	**59.90**	**39**	P	**P**	**05 11 56.5**	**-0.7**
	comp=Z,24nm,0.9s,baz=308,slow=5.9,SNR=18						
SCHQ				LR	LR	05 39 43.5	
	comp=Z,16µm,18.6s,baz=316,slow=38						
	comp=Z,24nm,0.9s						
DRIO	**Del Rio**	**60.05**	**79**	IAmb	IAmb	05 12 14.8	
	comp=Z,38nm,0.8s						
VLDQ	**Val d'Or**	**60.08**	**49**	IAmb	IAmb	05 12 00.1	
	comp=Z,47nm,0.9s						
WHTX	**Lake Whitney,**	**60.20**	**75**	IAmb	IAmb	05 12 09.6	
	comp=Z,78nm,0.6s						
Q44A	**Meyer Farm, Va**	**60.39**	**64**	IAMs_20	IAMs_20	05 38 56.4	
	comp=Z,10µm,21.0s						
SFIN	**Lafayette**	**60.45**	**61**	IAMs_20	IAMs_20	05 41 31.7	
	comp=Z,10µm,20.0s						
MK31	**Makanchi Array**	**60.56**	**309**	*ce*P	**P**	**05 12 00.5**	**-1.3**
MKAR	**Makanchi Array**	**60.56**	**309**	P	**P**	**05 12 00.3**	**-1.5**
	comp=Z,84nm,0.9s,baz=52,slow=6.3,SNR=120						
MKAR				PcP	**PcP**	**05 12 46.7**	**+0.6**
	comp=Z,16nm,0.7s,baz=46,slow=5.2,SNR=3.9						
MKAR				LR	LR	05 40 22.7	
	comp=Z,6µm,20.1s,baz=33,slow=38						
MKAR				PKPPKP	**P'P'df**	**05 41 21.2**	**-6.6**
	comp=Z,0.7nm,0.8s,baz=225,slow=3.3,SNR=4.0						
	comp=Z,84nm,0.9s						
MKAR	**Makanchi Array**	**60.56**	**309**	P	**P**	**05 11 59.6**	**-2.2**
MAKZ	**Makanchi**	**60.70**	**309**	P	**P**	**05 12 00.9**	**-1.9**
MAKZ				IAmb	IAmb	05 12 04.9	
	comp=Z,76nm,1.0s						
MAKZ	**Makanchi**	**60.70**	**309**	P	**P**	**05 12 00.9**	**-1.9**
MAKZ				pmax	pmax		
	comp=Z,76nm,1.0s						
MAKZ				MLR	MLR		
	comp=Z,17µm,22.0s						
MAKZ	**Makanchi**	**60.70**	**309**	⇑P	**P**	**05 12 00.8**	**-2.0**
MAKZ	**Makanchi**	**60.70**	**309**	P	**P**	**05 12 01.3**	**-1.4**
MAKZ				PcP	**PcP**	**05 12 47.9**	**+1.2**
LOF	**Lofoten**	**60.74**	**355**	*e*P	**P**	**05 12 02.8**	**+0.2**
LOF				IVmB_BB		05 12 21.5	
	comp=Z,5µm,4.3s						
LOF				*e*S	**S**	**05 20 14.8**	**-2.2**
MIAR	**Mount Ida**	**60.76**	**70**	⇑P	**P**	**05 12 03.6**	**+0.3**
GYA	**Guiyang**	**60.82**	**277**	⇑P	**P**	**05 12 03.9**	**-0.1**
GYA				sP	pwP	05 12 16.3	-0.8
GYA				S	**S**	**05 20 18.2**	**-1.2**
GYA				pmax	pmax		
	comp=Z,3µm,4.2s						
GYA				LR	LR		
	comp=Z,7µm,18.2s						
GYA				LR	LR		
	comp=Z,6µm,21.0s						
GYA				LR	LR		
	comp=Z,11µm,20.3s						
STEI	**Steigen**	**60.84**	**354**	*e*P	**P**	**05 12 03.3**	**0.0**
STEI				IVmB_BB		05 12 17.7	
	comp=Z,4µm,3.7s						
STEI				*e*S	**S**	**05 20 17.7**	**-0.5**
STEI				IVMs_BB	IVMs_BB	05 39 40.6	
	comp=Z,6µm,4.4s						
N47A	**Urbana**	**60.88**	**60**	IAMs_20	IAMs_20	05 36 55.6	
	comp=Z,12µm,22.0s						
435B	**Jarrell**	**60.97**	**76**	IAmb	IAmb	05 12 13.4	
	comp=Z,89nm,1.1s						
AAM	**Ann Arbor**	**60.99**	**58**	IAmb	IAmb	05 12 07.5	
	comp=Z,133nm,1.0s						
AAM				IAMs_20	IAMs_20	05 41 12.4	
	comp=Z,8µm,18.0s						
AAM	**Ann Arbor**	**60.99**	**58**	⇓P	**P**	**05 12 05.5**	**+0.8**
BUKO	**Buck Lake**	**61.00**	**53**	IAmb	IAmb	05 12 08.1	
	comp=Z,93nm,1.0s						
WHAR	**Wooly Hollow**	**61.00**	**69**	IAmb	IAmb	05 12 07.1	
	comp=Z,93nm,0.9s						
TGY	**Tagaytay City**	**61.04**	**256**	LR	LR	05 38 18.9	
	comp=Z,2µm,19.4s,baz=27,slow=36						
PBMO	**Poplar Bluff**	**61.05**	**66**	IAmb	IAmb	05 12 07.4	
	comp=Z,100nm,0.8s						
S44A	**Carbondale**	**61.09**	**65**	IAmb	IAmb	05 12 09.2	
	comp=Z,79nm,0.8s						
S44A				IAMs_20	IAMs_20	05 38 56.9	
	comp=Z,7µm,20.0s						
SIUC	**Southern Illin**	**61.10**	**65**	IAmb	IAmb	05 12 07.9	
	comp=Z,88nm,0.8s						
LCAR	**Lake Charles**	**61.12**	**67**	IAmb	IAmb	05 12 08.6	
	comp=Z,68nm,0.9s						
GOMU	**GeErMu**	**61.18**	**293**	P	**P**	**05 12 06.1**	**-0.5**
GOMU				sP	pP	05 12 12.4	-3.0
GOMU				S	**S**	**05 20 20.7**	**-3.6**
GOMU				pmax	pmax		
	comp=Z,490nm,0.8s						
GOMU				LR	LR		
	comp=Z,12µm,17.7s						
GOMU				LR	LR		
	comp=Z,11µm,16.7s						
237A	**Washetta, Mont**	**61.19**	**74**	IAmb	IAmb	05 12 21.4	
	comp=Z,83nm,0.8s						
K50A	**Casco**	**61.21**	**57**	IAmb	IAmb	05 12 08.9	
	comp=Z,116nm,0.9s						
X40A	**Basin Creek Fa**	**61.24**	**70**	IAmb	IAmb	05 12 09.2	
	comp=Z,70nm,0.8s						
UALR	**University of**	**61.33**	**69**	IAmb	IAmb	05 12 18.3	
	comp=Z,131nm,1.4s						
BVAR	**Borovoye Array**	**61.38**	**320**	P	**P**	**05 12 06.3**	**-0.9**
	comp=Z,53nm,0.5s,baz=49,slow=6.5,SNR=165						
BVAR				PcP	**PcP**	**05 12 49.8**	**+0.6**
	comp=Z,67nm,0.7s,baz=54,slow=3.8,SNR=12						
BVAR				LR	LR	05 41 02.4	
	comp=Z,25µm,19.2s,baz=44,slow=38						
BVAR				PKPPKP	**P'P'df**	**05 41 21.7**	**-5.3**
	comp=Z,2.0nm,0.8s,baz=212,slow=5.3,SNR=5.3						
	comp=Z,53nm,0.5s						
FAUS	**Fauske**	**61.38**	**354**	*e*P	**P**	**05 12 08.4**	**+1.4**
FAUS				*e*S	**S**	**05 20 24.6**	**-0.6**
FAUS				*e*		05 24 48.1	
BORK	**Borovoye**	**61.39**	**320**	P	**P**	**05 12 05.8**	**-1.5**
BORK				IAmb	IAmb	05 12 51.2	
	comp=Z,53nm,0.8s						
BORK	**Borovoye**	**61.39**	**320**	*ce*P	**P**	**05 12 06.6**	**-0.7**
BORK				pmax	pmax		
	comp=Z,13nm,0.6s						
BORK				MLR	MLR		
	comp=Z,25µm,19.0s						
BORK	**Borovoye**	**61.39**	**320**	⇑P	**P**	**05 12 06.2**	**-1.2**
833A	**Chaparral WMA,**	**61.59**	**79**	IAmb	IAmb	05 12 28.5	
	comp=Z,86nm,1.1s						
SADO	**Sadowa**	**61.60**	**53**	LR	LR	05 39 29.5	
	comp=Z,6µm,20.3s,baz=342,slow=37						
SADO	**Sadowa**	**61.60**	**53**	IAmb	IAmb	05 12 11.0	
	comp=Z,52nm,0.9s						
O48B	**Farmland**	**61.60**	**60**	IAMs_20	IAMs_20	05 37 17.9	
	comp=Z,10µm,22.0s						
N49A	**Columbus Grove**	**61.67**	**59**	IAMs_20	IAMs_20	05 40 59.5	
	comp=Z,8µm,18.0s						
EF02	**Christine**	**61.80**	**78**	IAmb	IAmb	05 12 27.5	
	comp=Z,87nm,1.0s						
PEBM	**Pemiscott Bayo**	**61.84**	**67**	IAmb	IAmb	05 12 26.4	
	comp=Z,132nm,1.0s						
T45A	**Paducah**	**61.91**	**65**	IAMs_20	IAMs_20	05 39 21.6	
	comp=Z,7µm,21.0s						
M50A	**Fremont**	**61.95**	**58**	IAMs_20	IAMs_20	05 41 49.7	
	comp=Z,9µm,18.0s						
MLDN	**Muldoon**	**61.99**	**77**	IAmb	IAmb	05 12 19.7	
	comp=Z,101nm,0.9s						
P48A	**Milroy**	**62.01**	**61**	IAMs_20	IAMs_20	05 42 47.8	
	comp=Z,9µm,19.0s						
SVE	**Sverdlovsk**	**62.05**	**328**	*de*P	**P**	**05 12 11.4**	**-0.3**
SVE				*e*S	**S**	**05 20 34.9**	**+0.9**
SVE				pmax	pmax		
	comp=Z,153nm,1.2s						
SVE				MLR	MLR		
	comp=N,9µm,21.0s						
SVE				MLR	MLR		
	comp=E,13µm,20.0s						
SVE				MLR	MLR		
	comp=Z,22µm,20.0s						
NATX	**Nacogdoches**	**62.06**	**73**	IAmb	IAmb	05 12 25.4	
	comp=Z,59nm,0.9s						
NATX	**Nacogdoches**	**62.06**	**73**	⇓P	**P**	**05 12 13.2**	**+1.1**
O49A	**Covington**	**62.10**	**60**	IAmb	IAmb	05 12 14.6	
	comp=Z,104nm,1.0s						
O49A				IAMs_20	IAMs_20	05 44 02.0	
	comp=Z,9µm,18.0s						
Z41A	**Richland Creek**	**62.12**	**71**	IAmb	IAmb	05 12 24.3	
	comp=Z,81nm,1.0s						
VAGH	**Vaagaholmen**	**62.15**	**355**	*e*P	**P**	**05 12 11.5**	**-0.6**
735A	**Kenedy**	**62.19**	**78**	IAmb	IAmb	05 12 35.4	
	comp=Z,59nm,0.7s						
735A				IAMs_20	IAMs_20	05 36 31.1	
	comp=Z,11µm,21.0s						
WCI	**Wyandotte Cave**	**62.39**	**63**	P	**P**	**05 12 14.2**	**-0.1**
WCI	**Wyandotte Cave**	**62.39**	**63**	P	**P**	**05 12 14.2**	**-0.1**
WCI				pmax	pmax		
	comp=Z,240nm,0.8s						
WCI				MLR	MLR		
	comp=Z,11µm,18.0s						
WCI	**Wyandotte Cave**	**62.39**	**63**	⇑P	**P**	**05 12 14.3**	**-0.1**
RAUS	**Rausandaksla**	**62.40**	**355**	*e*P	**P**	**05 12 13.1**	**-0.8**
RAUS				*e*S	**S**	**05 20 38.1**	**+0.1**
SNAG	**San Augustine**	**62.52**	**73**	IAmb	IAmb	05 12 30.6	
	comp=Z,96nm,1.0s						
DELO	**Deloro Mine**	**62.55**	**52**	IAmb	IAmb	05 12 54.1	
	comp=Z,125nm,1.5s						
HKT	**Hockley**	**62.62**	**76**	P	**P**	**05 12 16.6**	**+0.9**
HKT				IAmb	IAmb	05 12 33.1	
	comp=Z,49nm,0.8s						
HKT	**Hockley**	**62.62**	**76**	IAMs_20	IAMs_20	05 36 44.0	
	comp=Z,8µm,22.0s						
HKT	**Hockley**	**62.62**	**76**	P	**P**	**05 12 16.7**	**+0.9**
HKT				pmax	pmax		
	comp=Z,49nm,0.9s						
HKT	**Hockley**	**62.62**	**76**	⇓P	**P**	**05 12 17.2**	**+1.4**
MOR8	**Moi Rana**	**62.63**	**354**	*e*P	**P**	**05 12 13.9**	**-1.6**
MOR8				*e*S	**S**	**05 20 37.8**	**-3.3**
MOR8				IVMs_BB	IVMs_BB	05 38 31.8	
	comp=Z,4µm,6.4s						
BRZS	**Berezniki**	**62.69**	**317**	*e*P	**P**	**05 12 15.1**	**-1.0**
BRZS				*e*S	**S**	**05 20 43.4**	**+1.0**
BRZS	**Berezniki**	**62.69**	**317**	*e*P	**P**	**05 12 15.1**	**-1.0**
BRZS				*e*S	**S**	**05 20 43.3**	**+1.0**
M52A	**Chesterland**	**62.74**	**57**	IAmb	IAmb	05 12 19.7	
	comp=Z,108nm,0.8s						
GAC	**Glen Almond**	**62.75**	**50**	⇓P	**P**	**05 12 16.7**	**+0.2**
LEIR	**Leirfjorden**	**62.77**	**355**	*e*P	**P**	**05 12 16.1**	**-0.2**
LEIR				IVmB_BB		05 12 21.1	
	comp=Z,3µm,4.6s						
LEIR				*e*S	**S**	**05 20 42.7**	**0.0**
ACSO	**Alum Creek Sta**	**62.80**	**59**	IAMs_20	IAMs_20	05 38 17.5	
	comp=Z,9µm,22.0s						
ACSO	**Alum Creek Sta**	**62.80**	**59**	⇑P	**P**	**05 12 17.4**	**+0.5**
HBVL	**Hebbronville**	**62.93**	**80**	IAmb	IAmb	05 12 36.3	
	comp=Z,54nm,0.9s						
R49A	**Shelbyville**	**62.98**	**62**	IAmb	IAmb	05 12 20.9	
	comp=Z,73nm,0.9s						
WVT	**Waverly**	**63.00**	**65**	P	**P**	**05 12 17.9**	**-0.4**
WVT				IAmb	IAmb	05 12 21.3	
	comp=Z,73nm,0.9s						
WVT	**Waverly**	**63.00**	**65**	IAMs_20	IAMs_20	05 39 55.4	
	comp=Z,8µm,22.0s						
WVT	**Waverly**	**63.00**	**65**	P	**P**	**05 12 18.0**	**-0.4**
WVT				pmax	pmax		
	comp=Z,73nm,0.9s						
WVT				MLR	MLR		
	comp=Z,8µm,22.0s						
WVT	**Waverly**	**63.00**	**65**	⇑P	**P**	**05 12 18.6**	**+0.3**
BORG	**Borgarnes**	**63.05**	**11**	LR	LR	05 42 17.3	
	comp=Z,5µm,18.7s,baz=333,slow=39						
ERPA	**Erie**	**63.05**	**56**	IAMs_20	IAMs_20	05 41 11.8	
	comp=Z,9µm,19.0s						
ERPA	**Erie**	**63.05**	**56**	⇑P	**P**	**05 12 19.8**	**+1.1**
LDAQ	**Lac Daran**	**63.09**	**46**	IAmb	IAmb	05 12 58.1	
	comp=Z,57nm,1.1s						
ARTI	**Arti**	**63.15**	**329**	LR	LR	05 43 16.0	
	comp=Z,9µm,18.4s,baz=40,slow=39						
ARTI	**Arti**	**63.15**	**329**	P	**P**	**05 12 18.6**	**-0.4**
ARTI				IAMs_20	IAMs_20	05 42 54.6	
	comp=Z,10µm,20.0s						
ARTI	**Arti**	**63.15**	**329**	*c i*P	**P**	**05 12 18.2**	**-0.8**
ARTI						05 12 54.4	
ARTI						05 14 38.9	
ARTI				PPP	PPP	05 16 04.2	
ARTI				S	**S**	**05 20 51.3**	**+3.5**
ARTI						05 22 11.2	
ARTI				SS	**SS**	**05 24 56.2**	**+3.1**
ARTI				pmax	pmax		
	comp=Z,228nm,1.0s						
ARTI				MLR	MLR		
	comp=Z,9µm,18.0s						
ARTI	**Arti**	**63.15**	**329**	⇑P	**P**	**05 12 18.3**	**-0.7**
ARTI	**Arti**	**63.15**	**329**	P	**P**	**05 12 18.7**	**-0.3**
OXF	**Oxford**	**63.23**	**68**	IAMs_20	IAMs_20	05 40 44.8	
	comp=Z,6µm,20.0s						
OXF	**Oxford**	**63.23**	**68**	⇑P	**P**	**05 12 20.0**	**+0.1**
PECO	**Prince Edward**	**63.28**	**53**	IAmb	IAmb	05 12 22.9	
	comp=Z,77nm,0.9s						
P51A	**Williamsport**	**63.29**	**60**	IAmb	IAmb	05 12 22.6	
	comp=Z,103nm,0.9s						
143A	**Socs Landing,**	**63.34**	**70**	IAMs_20	IAMs_20	05 43 23.9	
	comp=Z,6µm,18.0s						
J55A	**Hilton**	**63.34**	**54**	IAMs_20	IAMs_20	05 41 11.3	
	comp=Z,9µm,19.0s						
WBO	**Williamsburg**	**63.35**	**51**	IAmb	IAmb	05 13 04.8	
	comp=Z,66nm,1.2s						
R50A	**Paris**	**63.45**	**61**	IAMs_20	IAMs_20	05 43 33.9	
	comp=Z,9µm,20.0s						
Q51A	**Peebles**	**63.46**	**60**	IAMs_20	IAMs_20	05 41 29.1	
	comp=Z,8µm,18.0s						
N53A	**Lisbon**	**63.54**	**57**	IAmb	IAmb	05 12 25.0	
	comp=Z,79nm,0.9s						
ZAIG	**Zacatecas**	**63.60**	**86**	P	**P**	**05 12 23.6**	**+0.8**
PAOC	**Oil Creek Stat**	**63.64**	**56**	IAmb	IAmb	05 13 06.9	
	comp=Z,98nm,1.2s						
441A	**DeRidder**	**63.66**	**73**	IAmb	IAmb	05 12 28.7	
	comp=Z,71nm,0.9s						
PLAL	**Pickwick Lake**	**63.67**	**66**	IAmb	IAmb	05 12 38.8	
	comp=Z,104nm,0.8s						
ICQ	**Pointe Anglais**	**63.68**	**43**	IAmb	IAmb	05 12 24.9	
	comp=Z,44nm,0.9s						
MMNY	**Mt. Morris Dam**	**63.68**	**54**	IAmb	IAmb	05 12 25.2	
	comp=Z,103nm,0.8s						
P52A	**Corning**	**63.69**	**59**	IAmb	IAmb	05 12 25.1	
	comp=Z,106nm,0.8s						
TDK	**Taldyqorghan**	**63.73**	**310**	*e*P	**P**	**05 12 22.7**	**-0.5**
	comp=Z,60nm,0.6s						
TDK				LR	LR	05 42 33.4	
	comp=Z,6µm,16.5s						
TDK	**Taldyqorghan**	**63.73**	**310**	*e*P	**P**	**05 12 22.6**	**-0.5**
TDK				pmax	pmax		
	comp=Z,60nm,0.6s						
TDK				MLR	MLR		
	comp=Z,6µm,17.0s						
MNTQ	**Montreal, Queb**	**63.79**	**49**	IAmb	IAmb	05 13 01.8	
	comp=Z,103nm,1.7s						
LMQ	**La Malbaie**	**63.81**	**46**	IAmb	IAmb	05 13 01.8	
	comp=Z,236nm,1.9s						
DAV	**Davao City (W)**	**63.82**	**247**	LR	LR	05 35 58.7	
	comp=Z,7µm,21.4s,baz=39,slow=32						
PAMR	**Moraine State**	**63.84**	**57**	IAmb	IAmb	05 12 49.4	
	comp=Z,215nm,1.6s						
PZH	**PanZhiHua**	**63.85**	**280**	P	**P**	**05 12 24.7**	**+0.4**
PZH				PP	**PP**	**05 14 45.1**	**+0.5**
PZH				S	**S**	**05 20 55.8**	**-1.8**
PZH				SS	**SS**	**05 25 07.2**	**+1.5**
PZH				pmax	pmax		
	comp=Z,300nm,1.2s						
PZH				pmax	pmax		
	comp=Z,1µm,5.4s						
PZH				LR	LR		
	comp=Z,4µm,22.5s						
PZH				LR	LR		
	comp=Z,3µm,19.2s						
PZH				LR	LR		
	comp=Z,3µm,21.2s						
V48A	**Smith Brothers**	**63.85**	**65**	IAmb	IAmb	05 12 26.8	
	comp=Z,68nm,0.8s						
V48A				IAMs_20	IAMs_20	05 40 30.9	
	comp=Z,9µm,21.0s						
U49A	**Red Boiling Sp**	**63.90**	**64**	IAmb	IAmb	05 12 27.2	
	comp=Z,129nm,1.0s						
U49A				IAMs_20	IAMs_20	05 41 24.9	
	comp=Z,9µm,20.0s						
JAY	**Jayapura**	**63.94**	**227**	LR	LR	05 35 43.7	
	comp=Z,8µm,21.2s,baz=11,slow=32						
JAY	**Jayapura**	**63.94**	**227**	P	**P**	**05 12 25.2**	**+0.5**
	comp=Z,2µmcomp=Z,82nm,1.2s						
LONY	**Lake Ozonia**	**63.97**	**51**	⇑P	**P**	**05 12 23.7**	**-1.0**
KIRV	**Kirov**	**64.00**	**335**	LR	LR	05 42 28.7	
	comp=Z,21µm,21.4s,baz=27,slow=38						
KIRV	**Kirov**	**64.00**	**335**	*ce*P	**P**	**05 12 24.0**	**-0.5**
Q52A	**Bidwell**	**64.09**	**60**	IAMs_20	IAMs_20	05 45 04.8	
	comp=Z,8µm,18.0s						
J57A	**Williamstown**	**64.16**	**52**	IAmb	IAmb	05 13 04.0	
	comp=Z,74nm,0.8s						
J57A				IAMs_20	IAMs_20	05 40 52.6	
	comp=Z,7µm,20.0s						
P53A	**Whipple**	**64.19**	**59**	IAmb	IAmb	05 12 29.2	
	comp=Z,105nm,0.9s						
VBMS	**Vicksburg**	**64.21**	**70**	IAMs_20	IAMs_20	05 44 45.9	
	comp=Z,7µm,18.0s						
VBMS	**Vicksburg**	**64.21**	**70**	⇓P	**P**	**05 12 28.1**	**+1.8**
KMI	**Kunming**	**64.23**	**279**	⇑P	**P**	**05 12 27.3**	**+0.4**
KMI				pP	sP	05 12 37.2	-1.2
KMI				PP	**PP**	**05 14 49.3**	**+1.2**
KMI				S	**S**	**05 20 59.3**	**-3.2**
KMI				SS	**SS**	**05 25 13.2**	**+1.4**
KMI				pmax	pmax		
	comp=Z,150nm,0.8s						
KMI				pmax	pmax		
	comp=Z,3µm,7.9s						
KMI				LR	LR		
	comp=Z,3µm,21.3s						
KMI				LR	LR		
	comp=Z,5µm,17.8s						
KMI				LR	LR		
	comp=Z,5µm,17.3s						
QIZ	**Qiongzhong**	**64.23**	**269**	P	**P**	**05 12 26.6**	**-0.1**
QIZ				PP	**PP**	**05 14 46.6**	**-1.3**
QIZ				S	**S**	**05 21 03.5**	**+1.3**
QIZ				SS	**SS**	**05 25 08.3**	**-3.3**
QIZ				pmax	pmax		
	comp=Z,120nm,1.9s						
QIZ				pmax	pmax		
	comp=Z,3µm,10.3s						
QIZ				LR	LR		
	comp=Z,5µm,20.4s						
QIZ				LR	LR		
	comp=Z,3µm,22.4s						
QIZ				LR	LR		
	comp=Z,5µm,22.2s						
O54A	**Avella**	**64.23**	**57**	IAmb	IAmb	05 13 15.0	
	comp=Z,82nm,0.9s						
GENI	**Genyem**	**64.25**	**228**	P	**P**	**05 12 28.1**	**+1.3**
	comp=Z,6µmcomp=Z,4µmcomp=Z,210nm,2.1s						
L56A	**Greenwood**	**64.29**	**54**	IAMs_20	IAMs_20	05 41 51.4	
	comp=Z,8µm,19.0s						
KLMR	**Klimovskoe**	**64.36**	**341**	*e*P	**P**	**05 12 24.8**	**-2.1**
KLMR				*e*		05 12 59.0	
KLMR				S	**S**	**05 21 00.7**	**-2.0**
KLMR				pmax	pmax		
	comp=Z,118nm,1.2s						
KLMR				MLR	MLR		
	comp=Z,10µm,18.0s						
K57A	**Scipio Center**	**64.39**	**53**	IAmb	IAmb	05 12 29.7	
	comp=Z,105nm,0.8s						
K57A				IAMs_20	IAMs_20	05 41 03.9	
	comp=Z,6µm,20.0s						
NSS	**Namsos**	**64.41**	**355**	*e*P	**P**	**05 12 27.9**	**+0.8**
SMPI	**Sarmi**	**64.41**	**229**	P	**P**	**05 12 28.9**	**+1.1**
	comp=Z,7µmcomp=Z,129nm,2.4s						
SHLS	**Shalkode**	**64.56**	**308**	*e*P	**P**	**05 12 26.7**	**-2.0**
	comp=Z,51nm,1.0s						
SHLS	**Shalkode**	**64.56**	**308**	*e*P	**P**	**05 12 26.7**	**-2.0**
SHLS				pmax	pmax		

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          comp=Z,51nm,1.0s
ARXS  Arharly           64.59 309 eP        P         05 12 28.6 -0.2
SWET  Sewanee           64.74  65  IAmb     IAmb      05 12 46.3
          comp=Z,75nm,0.8s
D62A  Allapoint, All    64.74  46  IAmb     IAmb      05 12 32.9
          comp=Z,69nm,0.8s
146A  Union             64.77  69  IAMs_20  IAMs_20   05 45 39.7
          comp=Z,7µm,18.0s
UZB   Uzynbulak         64.79 308 eP        P         05 12 29.6 -0.6
          comp=Z,33nm,0.9s
UZB   Uzynbulak         64.79 308 eP        P         05 12 29.6 -0.6
UZB                                pmax     pmax
          comp=Z,33nm,0.9s
Q54A  Coxs Mills        64.86  59  IAmb     IAmb      05 12 33.3
          comp=Z,122nm,1.1s
E62A  Clayton Lake      64.87  46  IAmb     IAmb      05 13 00.5
          comp=Z,172nm,1.8s
MCWV  Mont Chateau      64.90  58  IAmb     IAmb      05 12 33.5
          comp=Z,78nm,0.8s
MCWV  Mont Chateau      64.90  58 ⇓P        P         05 12 31.4 +0.7
BAKI  Biak              64.99 232  P        P         05 12 33.7 +2.1
          comp=Z,7µmcomp=Z,124nm,1.4s
AFI   Afiamalu          65.00 173  IAMs_20  IAMs_20   05 35 27.0
          comp=Z,5µm,19.0s
BINY  Binghamton        65.05  53  IAmb     IAmb      05 12 59.1
          comp=Z,116nm,1.0s
BINY                               IAMs_20  IAMs_20   05 41 14.7
          comp=Z,6µm,20.0s
BINY  Binghamton        65.05  53 ⇑P        P         05 12 31.9 +0.2
VT1   Waterbury         65.07  50  IAmb     IAmb      05 13 04.7
          comp=Z,213nm,1.9s
M57A  Sunshine Farm,    65.09  55  IAmb     IAmb      05 13 07.8
          comp=Z,63nm,0.9s
TZTN  Tazewell          65.13  62 ⇑P        P         05 12 33.0 +0.6
SATY  Saty              65.16 308 eP        P         05 12 32.1 -0.6
          comp=Z,78nm,1.3s
SATY                              eS        S         05 21 14.8 +1.4
SATY  Saty              65.16 308 eP        P         05 12 32.0 -0.6
SATY                              eS        S         05 21 14.7 +1.4
SATY                               pmax     pmax
          comp=Z,79nm,1.3s
SSPA  Standing Stone    65.22  56  P        P         05 12 32.6 -0.2
SSPA                               IAmb     IAmb      05 12 35.3
          comp=Z,85nm,1.0s
SSPA  Standing Stone    65.22  56 ⇑P        P         05 12 32.9 +0.1
CPCT  Cooper Cave       65.37  64  IAmb     IAmb      05 12 44.6
          comp=Z,87nm,0.9s
FPAL  Fort Paine        65.40  65  IAmb     IAmb      05 12 50.9
          comp=Z,111nm,0.8s
346A  Big Creek Wild    65.43  70  IAMs_20  IAMs_20   05 46 40.3
          comp=Z,8µm,18.0s
Y49A  Blount Mountai    65.44  66  IAMs_20  IAMs_20   05 43 46.1
          comp=Z,6µm,21.0s
S54A  Dingess, Beckl    65.45  60  IAMs_20  IAMs_20   05 45 57.0
          comp=Z,7µm,18.0s
L59A  Walton            65.53  53  IAmb     IAmb      05 12 37.2
          comp=Z,83nm,0.8s
L59A                               IAMs_20  IAMs_20   05 43 51.4
          comp=Z,6µm,18.0s
LBNH  Lisbon            65.53  49 ⇑P        P         05 12 35.4 +0.6
PRZ   Przheval'sk       65.59 308  IAmb     IAmb      05 13 10.0
          comp=Z,100nm,1.0s
KSPA  Keystone Colle    65.63  54  IAmb     IAmb      05 13 02.7
          comp=Z,111nm,1.2s
TKL   Tuckaleechee C    65.64  63  LR       LR        05 42 22.1
          comp=Z,7µm,19.4s,baz=326,slow=37
TKL   Tuckaleechee C    65.64  63 ⇑P        P         05 12 35.9 +0.2
H62A  Milan             65.65  49  IAmb     IAmb      05 12 38.2
          comp=Z,79nm,0.7s
N58A  Sunbury           65.67  55  IAmb     IAmb      05 12 38.3
          comp=Z,88nm,1.0s
LRAL  Lakeview Retre    65.69  67  IAmb     IAmb      05 12 41.1
          comp=Z,102nm,0.8s
LRAL                               IAMs_20  IAMs_20   05 41 59.8
          comp=Z,5µm,20.0s
LRAL  Lakeview Retre    65.69  67 ⇓P        P         05 12 35.9 -0.1
Q56A  Snyder Ridge,     65.69  58  IAmb     IAmb      05 13 09.9
          comp=Z,59nm,0.8s
Q56A                               IAMs_20  IAMs_20   05 42 55.2
          comp=Z,7µm,19.0s
R55A  Marlinton         65.75  59  IAmb     IAmb      05 12 39.4
          comp=Z,110nm,0.9s
MDOK  Medeo             65.75 309 eP        P         05 12 35.9 -0.5
MDOK                              eS        S         05 21 21.8 +1.1
MDOK                               LR       LR        05 43 29.4
MDOK  Medeo             65.75 309 eP        P         05 12 35.8 -0.6
MDOK                              eS        S         05 21 21.7 +1.1
BTLS  Baital            65.78 312 eP        P         05 12 35.8 -0.6
          comp=Z,42nm,1.2s
BTLS  Baital            65.78 312 eP        P         05 12 35.8 -0.6
BTLS                               pmax     pmax
          comp=Z,41nm,1.2s
AAA   Alma-Ata          65.78 309 eP        P         05 12 36.2 -0.4
          comp=Z,66nm,0.9s
AAA                                LR       LR        05 43 42.0
          comp=Z,9µm,19.4s
AAA   Alma-Ata          65.78 309 eP        P         05 12 36.1 -0.4
AAA                                pmax     pmax
          comp=Z,67nm,0.9s
AAA                                MLR      MLR
          comp=Z,9µm,19.0s
X51A  Calhoun           65.82  65  IAmb     IAmb      05 12 52.8
          comp=Z,102nm,0.9s
TNSS  Tian-Shan         65.89 309 eP        P         05 12 36.9 -0.9
TNSS  Tian-Shan         65.89 309 eP        P         05 12 36.8 -0.9
BATG  Bathurst New B    65.91  44  IAmb     IAmb      05 13 10.9
          comp=Z,57nm,1.0s
W52A  Murphy            65.96  64  IAmb     IAmb      05 12 41.3
          comp=Z,120nm,0.9s
W52A                               IAMs_20  IAMs_20   05 42 37.8
          comp=Z,8µm,20.0s
F64A  Sherman           65.98  46  IAmb     IAmb      05 13 23.6
          comp=Z,241nm,1.8s
P57A  Homestead Farm    65.99  57  IAmb     IAmb      05 12 40.4
          comp=Z,61nm,1.1s
P57A                               IAMs_20  IAMs_20   05 43 07.0
          comp=Z,8µm,18.0s
PKME  Peaks-Kenny Pk    66.00  47  IAmb     IAmb      05 13 15.6
          comp=Z,93nm,1.3s
PKME  Peaks-Kenny Pk    66.00  47 ⇓P        P         05 12 38.1 +0.4
U54A  Nelsons Funny     66.10  61  IAMs_20  IAMs_20   05 40 00.3
          comp=Z,10µm,22.0s
PAGS  Pennsylvania G    66.12  55  IAmb     IAmb      05 13 22.9
          comp=Z,203nm,1.6s
FINES FINESS Array B    66.13 348  P        P         05 12 37.4 -0.9
          comp=Z,106nm,0.8s,baz=25,slow=6.3,SNR=74
FINES                              PcP      PcP       05 13 08.1 -0.4
          comp=Z,60nm,0.8s,baz=35,slow=5.1,SNR=11
FINES                              LR       LR        05 41 45.1
          comp=Z,3µm,21.9s,baz=22,slow=36
          comp=Z,106nm,0.8s
FINES FINESS Array B    66.13 348  P        P         05 12 36.6 -1.8
FINES FINESS Array B    66.13 348ceP        P         05 12 37.4 -0.9
FINES                              pmax     pmax
          comp=Z,107nm,0.8s
WUS   Wushi             66.13 306  IAMs_20  IAMs_20   05 42 27.2
          comp=Z,7µm,21.0s
RKPI  Ransiki, Papua    66.24 234  P        P         05 12 40.9 +1.2
          comp=Z,6µmcomp=Z,116nm,1.1s
I63A  Otisfield         66.31  49  IAmb     IAmb      05 12 41.9
          comp=Z,60nm,0.9s
I63A                               IAMs_20  IAMs_20   05 42 09.9
          comp=Z,9µm,20.0s
WVL   Waterville        66.36  48  IAmb     IAmb      05 13 13.3
          comp=Z,53nm,1.0s
BLA   Blacksburg        66.37  60  IAmb     IAmb      05 12 42.6
          comp=Z,88nm,0.8s
BLA                                IAMs_20  IAMs_20   05 40 29.2
          comp=Z,8µm,22.0s
TARG  Taragay, Kyrgy    66.44 308  IAmb     IAmb      05 13 13.7
          comp=Z,44nm,0.7s
KDJ   Kajisay           66.45 308  IAmb     IAmb      05 12 44.3
          comp=Z,80nm,0.8s
MOL   Molde             66.56 357 eP        P         05 12 40.6 -0.4
SGDS  Sogindy           66.70 311 eP        P         05 12 41.9 -0.5
S57A  Dark Hollow, R    66.76  58  IAmb     IAmb      05 12 45.7
          comp=Z,53nm,0.9s
Y52A  Lilburn           66.78  65  IAmb     IAmb      05 12 59.8
          comp=Z,95nm,0.7s
G65A  Princeton         66.84  46  IAmb     IAmb      05 13 30.8
          comp=Z,182nm,1.8s
LKP   Lekhapani         66.88 285 eP        P         05 12 43.3 -0.3
LKP                                IAmb     IAmb      05 12 48.1
          comp=Z,297nm,0.3s
250A  Grady             66.88  67  IAMs_20  IAMs_20   05 45 03.5
          comp=Z,5µm,18.0s
TNCH  TengChong         66.92 282⇑iP        P         05 12 45.4 +1.2
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TNCH                               PcP      PcP       05 13 13.7 +1.1
TNCH                               PP       PP        05 15 11.6 +0.1
TNCH                               S        S         05 21 31.4 -3.9
TNCH                               pmax     pmax
          comp=Z,340nm,1.0s
TNCH                               pmax     pmax
          comp=Z,4µm,3.5s
TNCH                               LR       LR
          comp=Z,3µm,25.1s
TNCH                               LR       LR
          comp=Z,4µm,24.5s
TNCH                               LR       LR
          comp=Z,6µm,25.6s
AKN   Aaknes            66.96 357 eP        P         05 12 43.3 -0.4
AKN                               eS        S         05 21 32.5 -2.0
AKN                                IVMs_BB  IVMs_BB   05 37 39.1
          comp=Z,5µm,4.0s
PAL   Palisades         66.98  53  IAmb     IAmb      05 12 46.8
          comp=Z,88nm,0.8s
PAL                                IAMs_20  IAMs_20   05 43 54.8
          comp=Z,8µm,18.0s
BRAL  Brewton           67.01  69  IAMs_20  IAMs_20   05 43 06.0
          comp=Z,6µm,19.0s
BRAL  Brewton           67.01  69 ⇓P        P         05 12 46.5 +2.0
DOMB  Dombas            67.03 356 eP        P         05 12 44.5 +0.3
DOMB                              i                   05 20 55.1
PUL   Pulkovo           67.09 345ceP        P         05 12 44.0 -0.5
PUL                                pmax     pmax
          comp=Z,133nm,0.7s
PUL                                MLR      MLR
          comp=Z,7µm,22.0s
CPNY  Central Park      67.11  53  IAmb     IAmb      05 12 47.3
          comp=Z,134nm,0.9s
WSPT  Westport, CT      67.14  52  IAMs_20  IAMs_20   05 43 40.1
          comp=Z,8µm,18.0s
T57A  Hurt              67.16  59  IAmb     IAmb      05 12 47.9
          comp=Z,100nm,0.8s
R58B  Mineral           67.18  58  IAmb     IAmb      05 12 48.2
          comp=Z,60nm,0.9s
FRU1  Bishkek           67.19 310  IAmb     IAmb      05 12 48.5
          comp=Z,111nm,0.8s
SWI   Sorong            67.20 237  P        P         05 12 46.4 +0.6
WES   Weston            67.22  50  IAmb     IAmb      05 12 47.9
          comp=Z,52nm,0.9s
WES                                IAMs_20  IAMs_20   05 43 38.9
          comp=Z,8µm,18.0s
GGN   Saint George      67.23  46  IAmb     IAmb      05 12 48.2
          comp=Z,51nm,0.9s
EMMW  East Machias      67.27  46  IAmb     IAmb      05 12 48.5
          comp=Z,56nm,0.9s
CBN   Corbin Frederi    67.27  57  IAmb     IAmb      05 12 48.6
          comp=Z,56nm,0.9s
152A  Waverly Hall      67.27  66  IAmb     IAmb      05 12 47.2
          comp=Z,54nm,0.7s
152A                               IAMs_20  IAMs_20   05 44 52.7
          comp=Z,6µm,20.0s
BCX   Boston College    67.33  50  IAMs_20  IAMs_20   05 43 42.8
          comp=Z,8µm,19.0s
KMSC  Kings Mountain    67.38  62  IAMs_20  IAMs_20   05 45 49.2
          comp=Z,9µm,19.0s
AAK   Ala-Archa         67.38 310  LR       LR        05 44 15.0
          comp=Z,11µm,21.1s,baz=30,slow=38
AAK   Ala-Archa         67.38 310  P        P         05 12 46.2 -0.7
AAK   Ala-Archa         67.38 310  P        P         05 12 45.6 -1.3
AAK                                IAmb     IAmb      05 12 50.3
          comp=Z,86nm,0.8s
AAK   Ala-Archa         67.38 310 i P       P         05 12 46.5 -0.4
          SNR=118
AAK   Ala-Archa         67.38 310ceP        P         05 12 45.9 -1.0
AAK                                pmax     pmax
          comp=Z,83nm,0.7s
AAK                                MLR      MLR
          comp=Z,11µm,21.0s
AAK   Ala-Archa         67.38 310  P        P         05 12 47.0 +0.1
AAK                                PcP      PcP       05 13 14.6 +0.2
PMG   Port Moresby      67.39 218  LR       LR        05 39 17.8
          comp=Z,6µm,19.9s,baz=50,slow=33
PMG   Port Moresby      67.39 218  P        P         05 12 47.5 +0.5
PMG                                IAmb     IAmb      05 12 50.2
          comp=Z,141nm,1.4s
PMG   Port Moresby      67.39 218  IAMs_20  IAMs_20   05 39 16.0
          comp=Z,6µm,20.0s
PMG   Port Moresby      67.39 218  P        P         05 12 47.7 +0.8
PMG   Port Moresby      67.39 218ceP        P         05 12 47.9 +1.0
PMG                                pmax     pmax
          comp=Z,180nm,2.5s
GOGA  Godfrey           67.45  65  IAmb     IAmb      05 13 03.5
          comp=Z,112nm,0.8s
GOGA  Godfrey           67.45  65 ⇑P        P         05 12 47.0 -0.2
P61A  Hammonton         67.52  54  IAMs_20  IAMs_20   05 42 21.4
          comp=Z,9µm,20.0s
LMN   Caledonia Moun    67.56  44  IAmb     IAmb      05 12 50.9
          comp=Z,90nm,0.8s
FOO   Floro             67.59 358 eP        P         05 12 47.5 -0.1
FOO                               e                   05 21 48.2
M63A  Gales Ferry       67.60  51  IAmb     IAmb      05 12 49.9
          comp=Z,94nm,0.8s
NC204 NORSAR Array S    67.72 355  IAmb     IAmb      05 12 49.9
          comp=Z,56nm,0.7s
NC303 NORSAR Array S    67.74 355  IAmb     IAmb      05 12 50.0
          comp=Z,54nm,0.8s
L64A  Middleborough     67.79  50  IAMs_20  IAMs_20   05 43 47.1
          comp=Z,8µm,20.0s
NC405 NORSAR Array S    67.83 355  IAmb     IAmb      05 13 17.4
          comp=Z,69nm,0.9s
DRLN  Deer Lake         67.86  38  P        P         05 12 50.3 +0.7
DRLN                               IAmb     IAmb      05 13 51.1
          comp=Z,101nm,1.3s
DRLN  Deer Lake         67.86  38 ⇓P        P         05 12 49.3 -0.3
NB201 NORSAR Array S    67.92 355  IAmb     IAmb      05 12 51.1
          comp=Z,64nm,0.7s
NB2   NORSAR Subarra    67.93 355  P        P         05 12 49.0 -0.9
          comp=Z,100nm,1.1s,baz=7.2,slow=6.5
NB2   NORSAR Subarra    67.93 355  P        P         05 12 49.0 -0.9
          baz=7.2,slow=6.5
NOA   NORSAR Array B    67.93 355  P        P         05 12 48.5 -1.3
          comp=Z,38nm,0.9s,baz=5.5,slow=6.3,SNR=94
NOA                                LR       LR        05 41 01.6
          comp=Z,4µm,21.6s,baz=10.0,slow=35
          comp=Z,38nm,0.9s
ZIRO  ZIRO              67.94 287 eP        P         05 12 51.7 +1.0
ZIRO                               IAmb     IAmb      05 12 55.2
          comp=Z,77nm,0.9s
TNTI  Ternate           67.95 242  P        P         05 12 50.8 +0.3
LSA   Lhasa             67.97 290  P        P         05 12 52.8 +1.7
LSA   Lhasa             67.97 290  P        P         05 12 48.5 -2.7
LSA                                S        S         05 21 41.9 -6.5
LSA                                pmax     pmax
          comp=Z,700nm,0.9s
LSA                                LR       LR
          comp=Z,6µm,20.2s
LSA                                LR       LR
          comp=Z,6µm,18.8s
LSA                                LR       LR
          comp=Z,11µm,19.4s
LSA   Lhasa             67.97 290  P        P         05 12 52.4 +1.3
HYA   Hoyanger          68.00 358 eP        P         05 12 51.8 +1.6
HYA                                IVmB_BB            05 12 59.0
          comp=Z,2µm,5.7s
HYA                               eS        S         05 21 45.8 -1.0
HYA                               eSS       SS        05 26 09.5 +1.6
352A  Blakely           68.02  67  IAMs_20  IAMs_20   05 43 23.2
          comp=Z,6µm,21.0s
T59A  Double "B" Far    68.09  58  IAmb     IAmb      05 12 54.0
          comp=Z,114nm,0.9s
W57A  Gilead            68.11  61  IAmb     IAmb      05 12 54.1
          comp=Z,97nm,0.8s
W57A                               IAMs_20  IAMs_20   05 41 10.5
          comp=Z,8µm,22.0s
TAOE  Nuku Hiva Isla    68.12 139 eP        P         05 12 53.0 +1.3
          comp=Z,323nm,1.2s
TAOE                              eS        S         05 21 42.7 -6.9
          comp=Z,3µm,30.9s
TAOE                              eSS       SS        05 26 00.9  -12
          comp=Z,3µm,29.3s
TAOE                              eLQ       LQ        05 30 08.8
          comp=Z,3µm,34.8s
TAOE                              eLR       LR        05 33 23.7
          comp=Z,24µm,22.3s
SUE   Sulen             68.14 359 eP        P         05 12 52.0 +1.0
SUE                                IVmB_BB            05 13 03.3
          comp=Z,3µm,4.9s
SUE                               eS        S         05 21 49.9 +1.5
AKTO  Aktyubinsk        68.16 325  LR       LR        05 44 50.4
          comp=Z,16µm,19.9s,baz=34,slow=38
M65A  Busby, Falmout    68.17  50  P        P         05 12 52.0 +0.4
          baz=320
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451A  Vernon            68.18  68  IAMs_20  IAMs_20   05 43 31.9
          comp=Z,5µm,20.0s
NC602 NORSAR Array S    68.22 355 eP        P         05 12 50.8 -0.8
NC602                             eS        S         05 21 47.3 -2.1
154A  Montrose          68.24  65  IAMs_20  IAMs_20   05 43 06.2
          comp=Z,9µm,21.0s
KMPI  Kaimana, Papua    68.32 233  P        P         05 12 53.2 +0.4
          comp=Z,5µmcomp=Z,4µmcomp=Z,168nm,1.1s
AB31  Akbulak array     68.42 323  IAmb     IAmb      05 13 20.4
          comp=Z,66nm,0.9s
ABKAR Akbulak array     68.42 323  P        P         05 12 51.8 -1.2
SKAR  Skarslia          68.42 357 eP        P         05 12 52.5 -0.4
SKAR                               IVmBBB             05 12 53.7
          comp=Z,2µm,2.8s
SKAR                              eS        S         05 21 51.7 -0.3
SKAR                               IVMs_BB  IVMs_BB   05 36 45.1
          comp=Z,2µm,4.8s
MOKO  MOKOCHONG         68.42 285 eP        P         05 12 53.5 -0.2
MOKO                               IAmb     IAmb      05 12 58.8
          comp=Z,61nm,1.2s
FAKI  Fak Fak           68.43 235  P        P         05 12 54.3 +0.8
          comp=Z,6µmcomp=Z,4µmcomp=Z,192nm,2.2s
FAKI  Fak Fak           68.43 235 ⇑P        P         05 12 54.0 +0.4
S61A  Accomac           68.56  56  IAMs_20  IAMs_20   05 44 42.9
          comp=Z,7µm,19.0s
MSVF  Nonsavu           68.65 184  IAMs_20  IAMs_20   05 38 01.0
          comp=Z,5µm,20.0s
HFS   Hagfors           68.68 354  P        P         05 12 53.6 -0.9
          comp=Z,56nm,0.8s,baz=28,slow=3.5,SNR=92
HFS                                PKP2ab   P'P'ab    05 41 13.1 -3.6
          comp=Z,11nm,1.1s,baz=126,slow=9.3,SNR=3.9
HFS                                LR       LR        05 43 33.1
          comp=Z,5µm,20.1s,baz=7.0,slow=36
          comp=Z,56nm,0.8s
DZA   Taraz             68.68 312 eP        P         05 12 54.5 -0.4
DZA   Taraz             68.68 312 eP        P         05 12 54.4 -0.4
ASK   Askoy             68.70 358 eP        P         05 12 56.0 +1.3
BER   Bergen            68.80 358 eP        P         05 12 54.6 -0.7
BER                                IVmB_BB            05 13 01.9
          comp=Z,2µm,3.6s
BER                               eS        S         05 21 57.3 +0.9
TIGA  Tifton            68.82  66  IAmb     IAmb      05 13 15.6
          comp=Z,123nm,1.0s
TIGA                               IAMs_20  IAMs_20   05 45 58.8
          comp=Z,5µm,20.0s
KK31  Karatay Array     68.90 313  IAmb     IAmb      05 12 59.3
          comp=Z,49nm,0.8s
KKAR  Karatay Array     68.90 313  P        P         05 12 54.4 -1.8
KKAR  Karatay Array     68.90 313  P        P         05 12 54.4 -1.8
VSU   Vasula            68.90 346ceP        P         05 12 54.1 -1.8
VSU                                pmax     pmax
          comp=Z,186nm,0.8s
VSU   Vasula            68.90 346 ⇑P        P         05 12 54.1 -1.8
KSH   Kashi             69.03 307  P        P         05 13 00.1 +2.9
KSH                                PcP      PcP       05 13 24.3 +3.1
KSH                                S        S         05 22 02.6 +2.6
KSH                                ScS      ScS       05 22 59.4 +3.9
KSH                                SS       SS        05 26 28.3 +3.1
KSH                                pmax     pmax
          comp=Z,100nm,0.7s
KSH                                pmax     pmax
          comp=Z,3µm,5.3s
KSH                                LR       LR
          comp=Z,14µm,22.3s
KSH                                LR       LR
          comp=Z,10µm,17.2s
KSH                                LR       LR
          comp=Z,17µm,22.7s
HAL   Halifax           69.05  44  IAmb     IAmb      05 13 54.5
          comp=Z,171nm,1.7s
LRW   Lerwick           69.06   2 ⇑P        P         05 12 57.1 +0.3
OSL   Oslo              69.06 355 eP        P         05 12 57.5 +0.7
OSL                               eS        S         05 21 59.0 -0.4
TAWA  Tawang            69.09 288 eP        P         05 12 57.7 -0.3
TAWA                               IAmb     IAmb      05 13 10.7
          comp=Z,89nm,0.8s
ARSB  Arslanbob         69.11 310  IAmb     IAmb      05 13 01.3
          comp=Z,74nm,1.0s
KOHI  KOHIMA            69.11 285 eP        P         05 12 57.6 -0.3
KOHI                               IAmb     IAmb      05 13 04.3
          comp=Z,88nm,0.9s
ODD1  Odda              69.24 357 eP        P         05 12 58.6 +0.5
ODD1                               IVmB_BB            05 13 12.9
          comp=Z,2µm,4.0s
ODD1                              eS        S         05 21 58.8 -3.0
ODD1                              eSS       SS        05 26 28.6 +1.3
TEZP  TEZPUR            69.25 287 eP        P         05 12 58.4 -0.2
553A  Crawfordville     69.26  68  IAMs_20  IAMs_20   05 48 38.4
          comp=Z,6µm,20.0s
BRLS  Borolday          69.27 313 eP        P         05 12 59.5 +1.0
BRLS  Borolday          69.27 313 eP        P         05 12 59.4 +1.0
GBN   Guysborough       69.33  42  IAmb     IAmb      05 14 01.9
          comp=Z,208nm,1.7s
KONO  Kongsberg         69.40 356  P        P         05 12 57.7 -1.3
KONO                               IAmb     IAmb      05 13 01.8
          comp=Z,60nm,0.8s
KONO  Kongsberg         69.40 356  IAMs_20  IAMs_20   05 46 33.7
          comp=Z,6µm,21.0s
KONO  Kongsberg         69.40 356 eP        P         05 12 59.4 +0.4
KONO                              eS        S         05 22 04.0 +0.5
KONO                              eSS       SS        05 26 32.6 +3.0
KONO  Kongsberg         69.40 356  P        P         05 12 57.7 -1.3
KONO                               pmax     pmax
          comp=Z,60nm,0.8s
KONO                               MLR      MLR
          comp=Z,6µm,21.0s
KONO  Kongsberg         69.40 356 ⇑P        P         05 12 59.4 +0.4
MOS   Moscow            69.45 339 eP        P         05 12 55.4 -4.0
MOS                               e                   05 13 17.2
MOS                               ePPP      PPP       05 17 12.4
MOS                               eS        S         05 22 03.5 -0.7
MOS                               e                   05 22 53.3
MOS                               eSS       SS        05 26 34.9 +4.3
MOS                                pmax     pmax
          comp=Z,258nm,0.8s
MYLDM Lahad Datu        69.51 252  P        P         05 13 01.4 +1.1
          comp=Z,6µmcomp=Z,191nm,2.3s
NHSC  New Hope          69.53  63 ⇑P        P         05 13 01.6 +1.4
RGRS  Roger Stewart     69.67  63  IAmb     IAmb      05 13 04.8
          comp=Z,333nm,0.8s
BLS5  Blasjo            69.74 358 eP        P         05 13 01.8 +0.7
BLS5                               IVmB_BB            05 13 20.3
          comp=Z,2µm,4.4s
BLS5                              eS        S         05 22 03.3 -4.3
IUG   Iuzhnay           69.87 313 eP        P         05 13 01.9 -0.5
          comp=Z,92nm,1.0s
IUG   Iuzhnay           69.87 313 eP        P         05 13 01.8 -0.5
IUG                                pmax     pmax
          comp=Z,92nm,1.0s
IMP   Imphal            69.87 285 eP        P         05 13 02.4 -0.1
IMP                                IAmb     IAmb      05 13 06.7
          comp=Z,63nm,1.0s
BELG  Belogornoye       69.89 332  LR       LR        05 47 43.1
          comp=Z,15µm,18.1s,baz=35,slow=39
BELG  Belogornoye       69.89 332 i P       P         05 13 01.3 -0.8
BELG                               pmax     pmax
          comp=Z,30nm,0.9s
BELG                               MLR      MLR
          comp=Z,2µm,21.0s
257A  Skidaway Islan    69.89  64  IAMs_20  IAMs_20   05 44 19.9
          comp=Z,7µm,20.0s
CHM   Chimkent          69.93 313 eP        P         05 13 02.2 -0.5
          comp=Z,33nm,0.6s
CHM                                LR       LR        05 45 59.4
CHM   Chimkent          69.93 313 eP        P         05 13 02.1 -0.5
CHM                                pmax     pmax
          comp=Z,33nm,0.6s
Y60A  Bolivia           69.94  61  IAMs_20  IAMs_20   05 44 29.0
          comp=Z,7µm,19.0s
TLIG  Tlapa             69.96  87  P        P         05 13 04.1 +0.8
TLIG                               IAmb     IAmb      05 13 25.2
          comp=Z,133nm,1.9s
KMY   Karmoy            69.98 358 eP        P         05 13 04.2 +1.7
KMY                                IVmB_BB            05 13 17.6
          comp=Z,1µm,3.2s
KMY                               eS        S         05 22 09.6 -0.7
KMY                               eSS       SS        05 26 43.2 +4.7
KKM   Kota Kinabalu     70.20 255  P        P         05 13 04.5 -0.2
          comp=Z,8µmcomp=Z,4µmcomp=Z,131nm,2.3s
GUWA  GUWAHATI          70.23 287 eP        P         05 13 04.6  0.0
GUWA                               IAmb     IAmb      05 13 08.0
          comp=Z,78nm,1.1s
456A  Hilliard          70.25  65  IAMs_20  IAMs_20   05 44 18.5
          comp=Z,6µm,20.0s
OBN   Obninsk           70.26 340  LR       LR        05 50 26.5
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      comp=Z,6µm,18.2s,baz=332,slow=42
OBN   Obninsk          70.26 340   P        P         05 13 03.0 -1.3
OBN                                IAMs_20  IAMs_20   05 45 10.4
      comp=Z,9µm,22.0s
OBN   Obninsk          70.26 340c iP        P         05 13 03.5 -0.8
OBN                               i                   05 13 15.5
OBN                               i                   05 13 24.8
OBN                               i                   05 15 47.5
OBN                               i S       S         05 22 13.0 -0.7
OBN                               i SS      SS        05 26 50.6 +7.6
OBN                                pmax     pmax
      comp=Z,125nm,0.9s
OBN                                MLR      MLR
      comp=Z,9µm,22.0s
GTOI  Gorontalo        70.52 245   P        P         05 13 06.3 -0.1
      comp=Z,2µmcomp=Z,64nm,1.8s
MSAI  Masohi           70.53 238   P        P         05 13 07.5 +1.0
      comp=Z,6µmcomp=Z,4µmcomp=Z,122nm,1.1s
SHL   Shillong         70.57 287   P        P         05 13 07.0  0.0
      SNR=132
SHL   Shillong         70.57 287  eP        P         05 13 06.7 -0.3
SHL                                IAmb     IAmb      05 13 08.7
      comp=Z,61nm,0.7s
SILR  SILCHAR          70.60 286  eP        P         05 13 06.6 -0.2
SILR                               IAML               05 13 12.2
      comp=Z,68nm,1.1s
KRAI  Karang Ratu      70.79 238   P        P         05 13 08.7 +0.6
      comp=Z,6µmcomp=Z,4µmcomp=Z,104nm,2.0s
SNART Snartemo         70.80 357  eP        P         05 13 08.2 +0.6
HOMB  Homborsund       70.82 356  eP        P         05 13 07.2 -0.4
HOMB                              eS        S         05 22 17.0 -3.2
HOMB                              eSS       SS        05 26 49.2 -2.3
PMOR  Pomariorio Ree   70.93 149  eP        P         05 13 10.5 +1.7
      comp=Z,99nm,1.1s
PMOR                              eS        S         05 22 22.5 +0.3
      comp=Z,4µm,27.9s
PMOR  Pomariorio Ree   70.93 149  eLR       LR        05 34 42.4
      comp=Z,16µm,21.2s
656A  Willston         70.97  67   IAMs_20  IAMs_20   05 48 26.6
      comp=Z,6µm,19.0s
BNDI  Bandanaira       71.01 236   P        P         05 13 09.2 -0.2
      comp=Z,5µmcomp=Z,199nm,2.5s
SANI  Sanana           71.05 241   P        P         05 13 08.6 -1.0
SANI  Sanana           71.05 241   P        P         05 13 09.5 -0.1
      comp=Z,6µmcomp=Z,3µmcomp=Z,117nm,1.3s
SANI  Sanana           71.05 241  ⇑P        P         05 13 09.2 -0.4
DRK   Karamyk          71.11 310   IAmb     IAmb      05 13 38.4
      comp=Z,65nm,0.8s
AAI   Ambon            71.21 238   P        P         05 13 11.1 +0.5
      comp=Z,8µmcomp=Z,4µmcomp=Z,259nm,1.9s
GTK   Tadong           71.23 290  eP        P         05 13 10.7 -0.3
GTK                                IAmb     IAmb      05 13 14.2
      comp=Z,62nm,1.1s
CHTO  Chiang Mai       71.24 277   P        P         05 13 10.8 -0.1
CHTO  Chiang Mai       71.24 277   P        P         05 13 10.1 -0.8
CHTO                               IAmb     IAmb      05 13 13.1
      comp=Z,101nm,1.2s
CHTO                               IAMs_20  IAMs_20   05 49 29.2
      comp=Z,5µm,18.0s
CHTO  Chiang Mai       71.24 277   P        P         05 13 11.0 +0.1
      comp=Z,8µmcomp=Z,3µmcomp=Z,85nm,2.2s
CHTO  Chiang Mai       71.24 277   P        P         05 13 10.1 -0.8
CHTO                               pmax     pmax
      comp=Z,101nm,1.2s
CHTO                               MLR      MLR
      comp=Z,5µm,18.0s
CHTO  Chiang Mai       71.24 277  ⇑P        P         05 13 10.5 -0.4
MRSI  Marisa           71.26 246   P        P         05 13 10.7 -0.3
      comp=Z,4µmcomp=Z,223nm,1.0s
DHUB  DHUBRI           71.37 288  eP        P         05 13 10.7 -0.9
DHUB                               IAmb     IAmb      05 13 13.2
      comp=Z,69nm,1.8s
TOLI2 Tolitoli         71.42 248   IAmb     IAmb      05 13 13.8
      comp=Z,110nm,1.0s
NLAI  Namlea           71.43 239   P        P         05 13 12.5 +0.6
      comp=Z,9µmcomp=Z,3µmcomp=Z,67nm,1.0s
COBR  COOCHBEHAR       71.49 289  eP        P         05 13 12.4 +0.1
COBR                               IAmb     IAmb      05 13 16.1
      comp=Z,62nm,0.5s
CM31  Chiang Mai Arr   71.51 277   P        P         05 13 13.1 +0.6
      SNR=22
CM31  Chiang Mai Arr   71.51 277   IAmb     IAmb      05 13 14.9
      comp=Z,80nm,0.8s
CMAR  Chiang Mai Arr   71.51 277   P        P         05 13 12.8 +0.3
      comp=Z,55nm,0.8s,baz=27,slow=6.7,SNR=196
CMAR                               LR       LR        05 48 36.4
      comp=Z,5µm,18.7s,baz=45,slow=39
      comp=Z,55nm,0.8s
CMAR  Chiang Mai Arr   71.51 277   P        P         05 13 12.4 -0.1
CMAR  Chiang Mai Arr   71.51 277ceP         P         05 13 12.8 +0.3
CMAR                               pmax     pmax
      comp=Z,58nm,0.8s
MCD   Coleburn Disti   71.56   3  eP        P         05 13 12.3 +0.1
MCD                                IAmb     IAmb      05 13 13.7
      comp=Z,71nm,1.1s
KPL   Plockton         71.71   4  eP        P         05 13 13.6 +0.5
KPL                                IAmb     IAmb      05 13 14.9
      comp=Z,45nm,0.9s
JPG   JALPAIGURI       71.74 290  eP        P         05 13 13.4 -0.3
JPG                                IAmb     IAmb      05 13 17.2
      comp=Z,88nm,1.3s
LUWI  Luwuk            72.02 245   P        P         05 13 14.4 -1.1
LUWI  Luwuk            72.02 245   P        P         05 13 15.1 -0.4
LUWI  Luwuk            72.02 245  ⇑P        P         05 13 15.1 -0.4
LPSR  Galich'ya Gora   72.04 337c iP        P         05 13 14.6 -0.5
LPSR                               pmax     pmax
      comp=Z,219nm,0.9s
SAIH  SAIHA            72.19 284  eP        P         05 13 16.4 -0.3
SAIH                               IAmb     IAmb      05 13 23.8
      comp=Z,68nm,0.5s
AGT   Agartala         72.21 286  eP        P         05 13 16.6  0.0
AGT                                IAmb     IAmb      05 13 21.8
      comp=Z,56nm,1.0s
DRUM  Mains of Drumt   72.25   3  eP        P         05 13 16.2 -0.2
DRUM                               IAmb     IAmb      05 13 20.3
      comp=Z,22nm,0.7s
ALCI  Alchi Leh        72.45 303  eP        P         05 13 17.6 -0.8
ALCI                               IAmb     IAmb      05 13 21.3
      comp=Z,65nm,1.2s
MNK   Minsk            72.53 344d iP        P         05 13 17.0 -1.0
DWPF  Disney Wildern   72.55  67   P        P         05 13 19.5 +0.9
DWPF  Disney Wildern   72.55  67   IAMs_20  IAMs_20   05 48 27.5
      comp=Z,4µm,20.0s
DWPF  Disney Wildern   72.55  67  ⇓P        P         05 13 19.9 +1.3
DWPF  Disney Wildern   72.55  67  i P       P         05 13 20.0 +1.4
APSI  Ampana           72.56 246   P        P         05 13 18.5 -0.2
      comp=Z,2µmcomp=Z,77nm,1.4s
MPSI  Mapaga           72.56 248   P        P         05 13 18.8 +0.1
      comp=Z,6µmcomp=Z,3µmcomp=Z,177nm,0.9s
HNLY  HANLEY           72.59 301  eP        P         05 13 18.6 -0.9
HNLY                               IAmb     IAmb      05 13 22.6
      comp=Z,55nm,0.7s
VRH   Novokhopyorsk    72.61 335  eP        P         05 13 17.6 -0.9
VRH                                pmax     pmax
      comp=Z,233nm,0.9s
CMIG  Matias Romero    72.63  84   LR       LR        05 40 23.2
      comp=Z,4µm,21.9s,baz=304,slow=32
MANEM Manem            72.68 309   IAmb     IAmb      05 13 39.7
      comp=Z,186nm,0.8s
INVG  Invergeldie, C   72.69   3  eP        P         05 13 18.9 -0.1
PPT   Papeete          72.82 152   LR       LR        05 41 23.9
      comp=Z,5µm,18.8s,baz=316,slow=32
VORR  Voronezh         72.82 337  eP        P         05 13 19.5 -0.3
VORR                               pmax     pmax
      comp=Z,130nm,0.6s
PPT2  Papeete2         72.84 152  eP        P         05 13 27.0 +6.7
      comp=Z,839nm,28.2s
PPT2  Papeete2         72.84 152  ePP       PP        05 15 56.3 -6.6
      comp=Z,595nm,36.5s
PPT2                              eS        SKiKP     05 22 51.9 +0.7
      comp=Z,6µm,29.5s
PPT2                              eSS       SS        05 27 33.8 +8.5
      comp=Z,3µm,26.2s
PPT2                              eLQ       LQ        05 32 41.0
      comp=Z,2µm,24.0s
PPT2                              eLR       LR        05 35 31.6
      comp=Z,17µm,28.5s
PPT2                              eLR       LR        05 35 41.1
      comp=Z,11µm,30.0s
PPTF  Pamatai, Papee   72.84 152   IAMs_20  IAMs_20   05 38 15.8
      comp=Z,6µm,18.0s
BRDH  Bariadhala       72.87 285   LR       LR        05 50 05.2
      comp=Z,6µm,18.4s,baz=42,slow=40
TIAR  Tiarei           72.88 151  eP        P         05 13 23.3 +2.8
      comp=Z,95nm,1.0s
TIAR                              eS        S         05 22 38.6 -6.0
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      comp=Z,4µm,27.5s
TIAR  Tiarei           72.88 151  eLR       LR        05 35 37.0
      comp=Z,10µm,22.6s
PAE   Paea             72.91 152  eP        P         05 13 27.9 +7.3
      comp=Z,21nm,1.2s
PAE                               eS        S         05 22 41.9 -3.0
      comp=Z,551nm,27.4s
PAE                               eSS       SS        05 27 18.8 -7.3
      comp=Z,357nm,22.9s
PAE                               eLR       LR        05 35 37.2
      comp=Z,2µm,22.0s
COEN  Coen             73.10 219   IAmb     IAmb      05 13 24.9
      comp=Z,73nm,1.0s
TVO   Taravao          73.12 151  eP        P         05 13 28.8 +6.9
      comp=Z,22nm,1.1s
TVO                               eS        S         05 22 45.8 -1.6
      comp=Z,813nm,27.9s
TVO                               eSS       SS        05 27 28.2 -1.3
      comp=Z,1µm,25.9s
TVO                               eLR       LR        05 35 42.9
      comp=Z,2µm,22.0s
SAUI  Saumlaki         73.23 233   P        P         05 13 24.7 +2.0
VSR   Storozhevoye     73.25 337  eP        P         05 13 21.4 -1.0
VSR                                pmax     pmax
      comp=Z,150nm,0.7s
VSR                                MLR      MLR
      comp=Z,16µm,18.0s
PGBU  Glenifferbraes   73.29   4  eP        P         05 13 22.3 -0.2
PGBU                               IAmb     IAmb      05 13 24.3
      comp=Z,236nm,1.0s
VORD  Divnogorie       73.45 336  eP        P         05 13 22.6 -0.9
VORD                               pmax     pmax
      comp=Z,270nm,0.9s
VORD                               MLR      MLR
      comp=Z,6µm,17.0s
PCI   Palu             73.60 247   P        P         05 13 24.9  0.0
      comp=Z,108nm,1.2s
SUW   Suwalki          73.72 347  eP        P         05 13 23.2 -1.9
SUW                               eL        L         05 46 07.2
      comp=Z,6µm,23.6s
SUW   Suwalki          73.72 347   IAMs_20  IAMs_20   05 49 03.9
      comp=Z,6µm,20.0s
RAR   Rarotonga        73.81 162   LR       LR        05 39 50.9
      comp=Z,11µm,20.2s,baz=312,slow=31
EKA   Eskdalemuir Ar   73.81   3   P        P         05 13 25.3 -0.3
      comp=Z,20nm,0.5s,baz=357,slow=4.8,SNR=80
      comp=Z,20nm,0.5s
ESK   Eskdalemuir      73.83   3   P        P         05 13 25.8 +0.1
ESK   Eskdalemuir      73.83   3   IAMs_20  IAMs_20   05 44 18.8
      comp=Z,5µm,22.0s
ESK   Eskdalemuir      73.83   3  eP        P         05 13 25.6 -0.1
ESK                                IAmb     IAmb      05 13 27.9
      comp=Z,34nm,0.8s
ESK   Eskdalemuir      73.83   3   P        P         05 13 25.8 +0.1
ESK                                pmax     pmax
      comp=Z,49nm,0.9s
IDGL  Inch Island, C   73.87   6   P        P         05 13 24.7 -1.2
IDGL  Inch Island, C   73.87   6  eP        P         05 13 26.6 +0.7
IDGL                               IAmb     IAmb      05 13 28.4
      comp=Z,93nm,1.0s
CLGH  Cloghs, Cushen   73.94   5  eP        P         05 13 27.1 +0.7
CLGH                               IAmb     IAmb      05 13 29.2
      comp=Z,51nm,0.8s
JOSI  Joshimath        73.97 299  eP        P         05 13 26.4 -0.9
JOSI                               IAmb     IAmb      05 13 30.7
      comp=Z,44nm,0.7s
060A  Indiantown       73.98  67   IAMs_20  IAMs_20   05 46 39.4
      comp=Z,5µm,20.0s
NEWG  New Galloway     73.99   4  eP        P         05 13 26.4 -0.2
NEWG                               IAmb     IAmb      05 13 28.2
      comp=Z,55nm,1.0s
DZM   Mont Dzumac      74.16 195  eP        P         05 13 28.1 +0.1
      comp=Z,206nm,1.4s
DZM   Mont Dzumac      74.16 195  ePP       PP        05 16 11.4 -2.8
      comp=Z,381nm,26.4s
DZM                               eS        S         05 23 04.9 +5.8
      comp=Z,3µm,25.4s
DZM                               eSS       SS        05 27 53.7 +8.3
      comp=Z,3µm,28.2s
DZM                               eLQ       LQ        05 32 51.1
      comp=Z,8µm,27.8s
DZM                               eLR       LR        05 36 28.1
      comp=Z,14µm,24.1s
DZM   Mont Dzumac      74.16 195   P        P         05 13 29.4 +1.4
DZM                                IAmb     IAmb      05 13 40.6
      comp=Z,143nm,1.4s
GAL1  Galloway         74.22   4  eP        P         05 13 27.8 -0.2
GAL1                               IAmb     IAmb      05 13 30.1
      comp=Z,36nm,0.9s
RGN   Rugen            74.26 353   IAMs_20  IAMs_20   05 50 10.0
      comp=Z,6µm,21.0s
RGN   Rugen            74.26 353  eS        SKiKP     05 22 55.5 +2.9
      baz=6.1,slow=11
EDMD  Edmundbyers      74.35   2  eP        P         05 13 28.7 -0.1
EDMD                               IAmb     IAmb      05 13 35.5
      comp=Z,22nm,0.7s
TEIG  Tepich           74.38  77   P        P         05 13 30.0 +0.6
ONTNC Ouen Toro        74.39 195   IAMs_20  IAMs_20   05 39 37.1
      comp=Z,4µm,20.0s
SHAA  Shahritus        74.39 311   IAmb     IAmb      05 13 32.9
      comp=Z,209nm,0.6s
JMUI  Jamui            74.43 290  eP        P         05 13 30.2 +0.5
JMUI                               IAmb     IAmb      05 13 33.3
      comp=Z,34nm,0.5s
DHRM  DHARAMSHALA      74.44 302  eP        P         05 13 28.7 -1.2
DHRM                               IAmb     IAmb      05 13 32.0
      comp=Z,47nm,0.7s
061Z  Ochoppi          74.55  68  i P       P         05 13 31.8 +1.4
JMU   Jammu            74.80 303  eP        P         05 13 31.3 -0.5
JMU                                IAmb     IAmb      05 13 34.1
      comp=Z,40nm,0.6s
IOMK  Kirk Michael     74.83   4  eP        P         05 13 31.8 +0.3
IOMK                               IAmb     IAmb      05 13 35.8
      comp=Z,28nm,0.7s
SMLA  Simla            74.84 301   IAmb     IAmb      05 13 34.9
      comp=Z,48nm,0.8s
HLG   Helgoland        74.93 356  eS        S         05 23 03.0 -4.0
      baz=6.1,slow=11
NIL   Nilore           74.94 305   P        P         05 13 32.3 -0.3
NIL   Nilore           74.94 305   P        P         05 13 32.3 -0.3
NIL                                pmax     pmax
      comp=Z,203nm,0.9s
NIL                                MLR      MLR
      comp=Z,12µm,19.0s
DDI   Dehra Dun        74.98 300  eP        P         05 13 31.9 -1.0
DDI                                IAmb     IAmb      05 13 35.9
      comp=Z,61nm,0.7s
ILTH  Belurgan, Co L   74.98   5   P        P         05 13 32.8 +0.4
CAL   Calcutta         74.98 287  eP        P         05 13 33.0 +0.1
CAL                                IAmb     IAmb      05 13 41.0
      comp=Z,56nm,0.5s
BHK   Bhakra           75.02 301  eP        P         05 13 31.4 -1.6
BHK                                IAmb     IAmb      05 13 35.8
      comp=Z,49nm,0.9s
BSEG  Bad Segeberg     75.07 355  eP        P         05 13 32.5 -0.3
      comp=Z,56nm,0.9s,baz=6.6,slow=5.5
BSEG                              eS        S         05 23 04.6 -3.9
      baz=6.1,slow=11
KHAM  Kharkiv          75.09 338   P        P         05 13 33.2  0.0
GAYA  Gaya             75.11 291  eP        P         05 13 33.8 +0.2
GAYA                               IAmb     IAmb      05 13 36.1
      comp=Z,84nm,1.3s
BRCI  Bahraich         75.12 295  eP        P         05 13 33.3 -0.4
BRCI                               IAmb     IAmb      05 13 36.0
      comp=Z,91nm,1.3s
GKP   Gorka Klasztor   75.18 351  eP        P         05 13 33.0 -0.5
GKP                               eL        L         05 48 04.0
      comp=Z,10µm,21.0s
KKSI  Kolaka, Sulawe   75.22 244   P        P         05 13 34.6 +0.3
      comp=Z,7µmcomp=Z,3µmcomp=Z,123nm,1.4s
HPK   Haverah Park     75.24   2  eP        P         05 13 34.2 +0.3
HPK                                IAmb     IAmb      05 13 37.6
      comp=Z,23nm,0.7s
TTSI  Tana Toraja      75.34 246   P        P         05 13 34.5 -0.5
      comp=Z,3µmcomp=Z,145nm,1.0s
IGLA  Glengowla, Co    75.38   7   P        P         05 13 34.4 -0.3
IGLA  Glengowla, Co    75.38   7  eP        P         05 13 34.8 +0.1
IGLA                               IAmb     IAmb      05 13 36.3
      comp=Z,126nm,0.8s
SBUM  Sibu             75.46 256   P        P         05 13 36.3 +0.5
      comp=Z,7µmcomp=Z,4µmcomp=Z,112nm,1.8s
BOK   Bokaro           75.49 290  eP        P         05 13 35.9 +0.1
BOK                                IAmb     IAmb      05 13 38.7
      comp=Z,75nm,1.7s
MMSI  Mamuju           75.58 247   P        P         05 13 36.3 -0.1
BKB   Balikpapan       75.60 249   P        P         05 13 36.5  0.0
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      comp=Z,7µmcomp=Z,269nm,2.6s
SOR   Soroa            75.64  72   IAmb     IAmb      05 13 49.2
      comp=Z,105nm,1.2s
SOR   Soroa            75.64  72  i P       P         05 13 37.6 +0.9
R9F13 Warsaw-Wawer     75.75 348  eP        P         05 13 36.6 -0.2
DSB   Dublin           75.76   5   P        P         05 13 35.8 -1.1
DSB   Dublin           75.76   5   P        P         05 13 37.3 +0.4
DSB   Dublin           75.76   5   P        P         05 13 36.4 -0.5
DSB                                IAmb     IAmb      05 13 39.0
      comp=Z,115nm,0.8s
DSB                                IAMs_20  IAMs_20   05 47 36.4
      comp=Z,5µm,20.0s
DSB   Dublin           75.76   5  eP        P         05 13 37.4 +0.4
DSB                                IAmb     IAmb      05 13 39.7
      comp=Z,99nm,0.8s
LBWR  Ladybower, Pea   75.79   2  eP        P         05 13 37.5 +0.4
LBWR                               IAmb     IAmb      05 13 41.1
      comp=Z,50nm,0.9s
AK23  Malin Array Si   75.89 343   P        P         05 13 36.6 -1.1
AK21  Malin Array Si   75.89 343   P        P         05 13 36.6 -1.1
AK22  Malin Array Si   75.90 343   P        P         05 13 36.7 -1.0
AK03  Malin Array Si   75.90 343   P        P         05 13 36.7 -1.1
RNPP8 Varash           75.91 345   P        P         05 13 37.2 -0.6
AK04  Malin Array Si   75.92 343   P        P         05 13 36.9 -0.9
AKASG Malin Array Be   75.92 343   P        P         05 13 36.7 -1.2
      comp=Z,113nm,0.7s,baz=23,slow=5.9,SNR=180
AKASG                              LR       LR        05 50 18.4
      comp=Z,6µm,21.3s,baz=20,slow=38
      comp=Z,113nm,0.7s
AKASG Malin Array Be   75.92 343   P        P         05 13 36.4 -1.5
AKASG Malin Array Be   75.92 343ceP         P         05 13 36.7 -1.2
AKASG                              pmax     pmax
      comp=Z,115nm,0.7s
AKBB  Malin Array Si   75.92 343ceP         P         05 13 36.3 -1.6
AKBB                               pmax     pmax
      comp=Z,161nm,0.9s
AKBB  Malin Array Si   75.92 343   P        P         05 13 37.0 -0.9
KIEV  Kiev             75.94 343   P        P         05 13 36.2 -1.7
KIEV  Kiev             75.94 343   IAMs_20  IAMs_20   05 49 46.1
      comp=Z,7µm,21.0s
KIEV  Kiev             75.94 343  ⇓P        P         05 13 37.6 -0.3
KIEV  Kiev             75.94 343  i P       P         05 13 36.7 -1.2
      SNR=11
KIEV  Kiev             75.94 343   P        P         05 13 37.6 -0.3
KIEV  Kiev             75.94 343   P        P         05 13 37.3 -0.7
GORT1 Trebel           75.95 354  eP        P         05 13 37.5 -0.4
      comp=Z,200nm,1.5s,baz=6.6,slow=5.5
STNC  Stoke            76.09   3  eP        P         05 13 38.3 -0.5
SPSI  Sidrap Palu      76.12 245   P        P         05 13 39.7 +0.3
      comp=Z,6µmcomp=Z,6µmcomp=Z,81nm,0.9s
BEL   Belsk            76.17 348  eP        P         05 13 39.0 -0.3
BEL                               eL        L         05 54 10.9
      comp=Z,10µm,17.7s
PMSI  Majene           76.23 246   P        P         05 13 40.4 +0.3
      comp=Z,7µmcomp=Z,4µmcomp=Z,154nm,1.5s
FOEL  Foel Wylfa       76.26   3  eP        P         05 13 40.4 +0.6
FOEL                               IAmb     IAmb      05 13 42.1
      comp=Z,51nm,0.9s
RUE   Ruedersdorf      76.28 353  eP        P         05 13 38.7 -1.1
      comp=Z,73nm,0.8s,baz=6.6,slow=5.5
RUE                               eS        S         05 23 16.3 -5.6
      baz=6.1,slow=11
BNSI  Bone             76.28 245   P        P         05 13 40.6 +0.2
      comp=Z,3µmcomp=Z,115nm,1.2s
RETH  Rethem/Aller,    76.31 355  eP        P         05 13 39.6 -0.4
      comp=Z,104nm,1.4s,baz=6.6,slow=5.5
KBL   Kabul            76.36 309   P        P         05 13 39.8 -1.1
      SNR=54
KBL   Kabul            76.36 309   P        P         05 13 39.7 -1.2
KBL                                IAmb     IAmb      05 13 43.2
      comp=Z,163nm,0.9s
KBL   Kabul            76.36 309   P        P         05 13 39.7 -1.2
KBL                                pmax     pmax
      comp=Z,163nm,0.9s
CAMR  Camarioca        76.41  70   IAmb     IAmb      05 13 58.8
      comp=Z,204nm,0.8s
CAMR  Camarioca        76.41  70  i P       P         05 13 41.9 +0.8
WACR  West Acre        76.51   1  eP        P         05 13 41.0 -0.1
MTKI  Muara Teweh, K   76.53 251   P        P         05 13 42.2 +0.4
IWEX  Carrickbyrne,    76.60   5   P        P         05 13 41.7  0.0
FLTG  Flechtingen      76.61 354  eP        P         05 13 40.6 -1.1
      comp=Z,74nm,1.1s,baz=6.6,slow=5.5
FLTG                              eS        S         05 23 20.5 -5.1
      baz=6.1,slow=11
HLM1  Long Mynd        76.64   3  eP        P         05 13 42.2 +0.3
HLM1                               IAmb     IAmb      05 13 43.7
      comp=Z,14nm,0.7s
BISR  Bishrakh         76.67 299  eP        P         05 13 41.7 -0.8
BISR                               IAmb     IAmb      05 13 45.5
      comp=Z,82nm,1.4s
ALBI  Allahabad        76.72 294  eP        P         05 13 42.5 -0.3
ALBI                               IAmb     IAmb      05 13 44.2
      comp=Z,89nm,1.1s
VAL   Valentia         76.78   8   P        P         05 13 42.0 -0.7
VAL   Valentia         76.78   8   P        P         05 13 43.1 +0.4
VAL   Valentia         76.78   8  eP        P         05 13 43.1 +0.4
IBBN  Ibbenburen       76.82 356  eP        P         05 13 42.6 -0.3
      comp=Z,119nm,1.1s,baz=6.6,slow=5.5
IBBN                              eS        S         05 23 22.7 -5.1
      baz=6.1,slow=11
ASSE  Asse, Remlinge   76.85 354  eP        P         05 13 42.1 -0.9
      comp=Z,490nm,2.3s,baz=6.6,slow=5.5
ASSE                              eS        S         05 23 22.5 -5.5
      baz=6.1,slow=11
AYAN  Aya Nagar        76.91 299  eP        P         05 13 42.8 -1.0
AYAN                               IAmb     IAmb      05 13 46.2
      comp=Z,82nm,3.1s
LUBAR Lubar, Ukraine   76.95 343   P        P         05 13 42.0 -1.7
KAPI  Kappang          76.98 245   P        P         05 13 45.2 +0.8
      comp=Z,33nm,0.8s,baz=52,slow=7.0,SNR=39
KAPI                               LR       LR        05 45 24.7
      comp=Z,732nm,21.1s,baz=36,slow=34
      comp=Z,33nm,0.8s
KAPI  Kappang          76.98 245   P        P         05 13 46.1 +1.8
KAPI                               S        S         05 23 30.1 -0.5
KAPI  Kappang          76.98 245   P        P         05 13 44.9 +0.6
KAPI                               IAmb     IAmb      05 13 59.2
      comp=Z,162nm,1.5s
KAPI  Kappang          76.98 245   P        P         05 13 45.0 +0.6
JHJR  Jhajjar          77.08 300  eP        P         05 13 43.9 -0.9
JHJR                               IAmb     IAmb      05 13 46.3
      comp=Z,90nm,0.6s
RSBS  Rosebush, Pemb   77.13   4  eP        P         05 13 44.5 -0.2
RSBS                               IAmb     IAmb      05 13 46.3
      comp=Z,81nm,1.0s
CLZ   Clausthal        77.15 355  eP        P         05 13 44.4 -0.5
      comp=Z,98nm,1.0s,baz=6.6,slow=5.5
CLZ                               eS        S         05 23 26.6 -5.0
      baz=6.1,slow=11
MCH1  Michaelchurch    77.16   3  eP        P         05 13 44.6 -0.2
MCH1                               IAmb     IAmb      05 13 46.4
      comp=Z,62nm,0.9s
MKS   Makassar         77.31 245   P        P         05 13 46.6 +0.4
MONM  Monmouth         77.32   3  eP        P         05 13 45.1 -0.6
MONM                               IAmb     IAmb      05 13 47.5
      comp=Z,101nm,1.0s
GTTG  Gottingen        77.47 355  eP        P         05 13 45.9 -0.7
      comp=Z,90nm,1.0s,baz=6.6,slow=5.5
GTTG                              eS        S         05 23 30.8 -4.3
      baz=6.1,slow=11
BSSI  Bau Bau, Buton   77.48 243   P        P         05 13 47.3 +0.2
      comp=Z,5µmcomp=Z,3µmcomp=Z,141nm,1.6s
MTN   Manton Dam       77.49 231   IAmb     IAmb      05 13 49.8
      comp=Z,119nm,0.9s
CLL   Collm            77.50 353   IAMs_20  IAMs_20   05 50 56.8
      comp=Z,5µm,21.0s
CLL   Collm            77.50 353  i P       P         05 13 45.4 -1.3
CLL                               i *PP     pP        05 13 56.3 +0.7
CLL                                pmax     pmax
      comp=Z,69nm,1.1s
CLL   Collm            77.50 353  eP        P         05 13 45.6 -1.2
      comp=Z,43nm,0.9s,baz=6.6,slow=5.5
CLL                               eS        S         05 23 29.1 -6.3
      baz=6.1,slow=11
CLL   Collm            77.50 353   P        P         05 13 45.5 -1.3
      comp=Z,2µmcomp=Z,72nm,0.8s
CTA   Charters Tower   77.54 214   LR       LR        05 44 03.8
      comp=Z,100nm,20.8s,baz=19,slow=32
CTAO  Charters Tower   77.54 214   P        P         05 13 47.7 +0.4
CTAO                               IAmb     IAmb      05 13 50.6
      comp=Z,68nm,1.1s
CTAO  Charters Tower   77.54 214   P        P         05 13 47.7 +0.4
CTAO                               pmax     pmax
      comp=Z,68nm,1.1s
KSP   Ksiaz            77.67 351  eP        P         05 13 46.5 -1.3
KSP                               eL        L         05 48 54.0
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      comp=Z,7µm,21.4s
NEUB  Neuenburg        77.69 354  eP      P        05 13 47.1 -0.7
      comp=Z,118nm,1.0s,baz=6.6,slow=5.5
NEUB                              eS      S        05 23 31.8 -5.6
      baz=6.1,slow=11
BUG   Bochum--Univer   77.70 357  eP      P        05 13 46.7 -1.2
      comp=Z,90nm,1.2s,baz=6.6,slow=5.5
BUG                               eS      S        05 23 33.3 -4.2
      baz=6.1,slow=11
STKI  Sintang          77.79 255   P      P        05 13 49.1 +0.2
      comp=Z,7µmcomp=Z,53nm,0.7s
GOF   Gofitskoye       77.81 332c iP      P        05 13 47.7 -0.9
GOF                               eS      S        05 23 37.7 -1.2
BRG   Berggiesshubel   77.86 352  eP      P        05 13 47.4 -1.4
      comp=Z,52nm,1.0s,baz=6.6,slow=5.5
BRG                               eS      S        05 23 31.7 -7.5
      baz=6.1,slow=11
HORU  Horodok          77.86 344   P      P        05 13 48.2 -0.7
OJC   Ojcow            77.89 348  eP      P        05 13 48.4 -0.6
OJC                               eL      L        05 49 52.3
      comp=Z,6µm,21.8s
KASTN Kahler Asten     77.89 356  eP      P        05 13 48.2 -0.9
      comp=Z,66nm,1.3s,baz=6.6,slow=5.5
KASTN                             eS      S        05 23 35.6 -4.1
      baz=6.1,slow=11
CHVC  Chvalec          77.95 351  eP      P        05 13 49.3  0.0
CHVC                              eS      S        05 23 36.4 -3.9
CHVC                               MLR    MLR
      comp=Z,6µm,21.2s
CHVC  Chvalec          77.95 351  eP      P        05 13 49.3  0.0
CHVC                              eS      S        05 23 36.4 -3.9
CHVC                               AMS    AMS      05 48 30.0
      comp=Z,6µm,21.2s
ERBR  Yeremizino-Bor   77.95 333  eP      P        05 13 49.0 -0.4
ERBR                              e*PP    pP       05 13 52.7 -5.6
ERBR                              eS      S        05 23 39.4 -1.0
ERBR                              eSS     SS       05 28 48.1 +7.8
ERBR                               pmax   pmax
      comp=N,29nm,1.0s
ERBR                               pmax   pmax
      comp=Z,337nm,0.9s
ERBR                               pmax   pmax
      comp=E,17nm,0.7s
ERBR                               MLR    MLR
      comp=N,28µm,19.0s
ERBR                               MLR    MLR
      comp=E,8µm,18.0s
ERBR                               MLR    MLR
      comp=Z,19µm,18.0s
MGV   Manicaragua      77.96  70  i P     P        05 13 51.2 +1.4
OSTC  Ostas            77.96 351  eP      P        05 13 50.0 +0.6
OSTC                              eS      S        05 23 31.8 -8.6
OSTC                               MLR    MLR
      comp=Z,6µm,19.1s
OSTC  Ostas            77.96 351  eP      P        05 13 50.0 +0.6
OSTC                              eS      S        05 23 31.8 -8.6
OSTC                               AMS    AMS      05 48 30.0
      comp=Z,6µm,19.1s
UPC   Upice            78.03 351  eP      P        05 13 49.6 -0.2
UPC                               eS      S        05 23 39.7 -1.4
UPC                                MLR    MLR
      comp=Z,6µm,20.6s
UPC   Upice            78.03 351  eP      P        05 13 49.6 -0.2
UPC                               eS      S        05 23 39.7 -1.4
UPC                                AMS    AMS      05 48 20.0
      comp=Z,6µm,20.6s
KWP   Kalwaria Pacla   78.06 346  eP      P        05 13 50.0 +0.1
KWP                               eL      L        05 49 36.4
      comp=Z,8µm,23.0s
HTL   Hartland         78.10   4  eP      P        05 13 50.2 +0.1
HTL                                IAmb   IAmb     05 13 52.8
      comp=Z,46nm,0.9s
MTO3  Montecristo      78.12  82   P      P        05 13 51.6 +0.5
PVCC  Panska Ves       78.15 352  eP      P        05 13 50.3 -0.1
PVCC                              eS      S        05 23 39.4 -3.0
PVCC                               MLR    MLR
      comp=Z,6µm,21.3s
PVCC  Panska Ves       78.15 352  eP      P        05 13 50.3 -0.1
PVCC                              eS      S        05 23 39.4 -3.0
PVCC                              eSS     SS       05 28 54.8  +12
PVCC                               AMS    AMS      05 50 40.0
      comp=Z,6µm,21.3s
DPC   Dobruska-Polom   78.16 351  eP      P        05 13 50.7 +0.2
DPC                               eS      S        05 23 40.8 -1.8
DPC                                MLR    MLR
      comp=Z,6µm,19.6s
DPC   Dobruska-Polom   78.16 351  eP      P        05 13 50.7 +0.2
DPC                               eS      S        05 23 40.8 -1.8
DPC                                AMS    AMS      05 48 30.0
      comp=Z,6µm,19.6s
HSKC  Hora Svate Kat   78.17 353  eP      P        05 13 50.5  0.0
HSKC                              eS      S        05 23 37.2 -5.4
HSKC                              eSS     SS       05 28 38.9 -4.4
HSKC                               AMS    AMS      05 51 20.0
      comp=Z,5µm,20.5s
RICC  Richard          78.17 352  eP      P        05 13 51.9 +1.4
RICC                               AMS    AMS      05 50 10.0
      comp=Z,6µm,20.6s
UBBA  Unterbreizbach   78.19 355  eP      P        05 13 49.6 -0.9
      comp=Z,216nm,2.1s,baz=6.6,slow=5.5
UBBA                              eS      S        05 23 38.0 -4.7
      baz=6.1,slow=11
BWNR  Bhubaneshwar     78.20 288  eP      P        05 13 51.8 +0.7
BWNR                               IAmb   IAmb     05 13 53.7
      comp=Z,84nm,0.9s
MAK   Makhachkala      78.26 328c iP      P        05 13 48.1 -3.0
MAK                               eS      S        05 23 40.4 -3.4
MAK                               eSS     SS       05 28 39.4 -5.7
MAK                                pmax   pmax
      comp=Z,315nm,0.9s
MAK                                MLR    MLR
      comp=Z,9µm,17.0s
MOX   Moxa             78.27 354  eP      P        05 13 50.1 -1.0
      comp=Z,51nm,1.0s,baz=6.6,slow=5.5
MOX                               eS      S        05 23 37.8 -5.8
      baz=6.1,slow=11
MOX                               eL      L        05 52 32.1
      comp=Z,5µm,20.8s
JHSG  JHARSUGUGA       78.30 290  eP      P        05 13 52.3 +0.6
JHSG                               IAmb   IAmb     05 13 55.6
      comp=Z,74nm,1.5s
BBSR  BB Station       78.32  52   P      P        05 13 51.7 +0.1
BBSR                               IAmb   IAmb     05 13 54.1
      comp=Z,120nm,0.8s
BBSR  BB Station       78.32  52   IAMs_20 IAMs_20 05 50 25.8
      comp=Z,5µm,20.0s
TBI   Tubuai           78.32 153  eP      P        05 13 50.7 -0.8
      comp=Z,3µm,29.0s
TBI   Tubuai           78.32 153  eLQ     LQ       05 34 52.3
      comp=Z,6µm,24.8s
TBI                               eLR     LR       05 38 09.8
      comp=Z,50µm,23.0s
TBI                               eLR     LR       05 38 13.2
      comp=Z,16µm,27.0s
KRLC  Kraliky          78.38 350  eP      P        05 13 51.7 -0.1
KRLC                              eS      S        05 23 46.2 +1.2
KRLC                               MLR    MLR
      comp=Z,5µm,19.9s
KRLC  Kraliky          78.38 350  eP      P        05 13 51.7 -0.1
KRLC                              eS      S        05 23 46.2 +1.2
KRLC                               AMS    AMS      05 53 20.0
      comp=Z,5µm,19.9s
PLN   Plauen           78.39 353  eP      P        05 13 50.8 -0.9
      comp=Z,17nm,1.1s,baz=6.6,slow=5.5
PLN                               eS      S        05 23 39.7 -5.2
      baz=6.1,slow=11
SOEI  Soe              78.39 238   P      P        05 13 52.2 -0.1
SOEI  Soe              78.39 238   IAmb   IAmb     05 14 14.6
      comp=Z,133nm,1.0s
SOEI  Soe              78.39 238   P      P        05 13 51.8 -0.5
      comp=Z,7µmcomp=Z,3µmcomp=Z,136nm,1.1s
BEBN  Eben Emael       78.40 358  dP      P        05 13 51.8  0.0
      comp=Z,57nm,0.8s
UCC   Uccle            78.42 358  dP      P        05 13 52.0 +0.2
TANN  Tannenbergstha   78.43 353  eP      P        05 13 51.0 -1.0
      comp=Z,52nm,1.1s,baz=6.6,slow=5.5
TANN                              eS      S        05 23 41.0 -4.5
      baz=6.1,slow=11
JHNI  Jhansi           78.44 296  eP      P        05 13 51.7 -0.9
JHNI                               IAmb   IAmb     05 13 53.5
      comp=Z,84nm,0.7s
OKC   Ostrava-Krasne   78.46 349  eP      P        05 13 52.7 +0.6
OKC                               eS      S        05 23 52.2 +6.5
OKC                                MLR    MLR
      comp=Z,7µm,19.5s
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OKC   Ostrava-Krasne   78.46 349  eP      P        05 13 52.7 +0.6
OKC                               eS      S        05 23 52.2 +6.5
OKC                                AMS    AMS      05 51 40.0
      comp=Z,7µm,19.5s
STHS  Stebnicka Huta   78.48 347  eP      P        05 13 52.6 +0.3
STHS                               pmax   pmax
      comp=Z,69nm,1.0s
STHS  Stebnicka Huta   78.48 347  eP      P        05 13 52.6 +0.3
KMPD  K-Podol'skiy     78.49 344   P      P        05 13 51.7 -0.6
SORM  Soroca           78.55 342 ⇑P      P        05 13 52.1 -0.6
SORM  Soroca           78.55 342   P      P        05 13 52.0 -0.6
MMRI  Maumere          78.56 241   P      P        05 13 52.3 -0.8
      comp=Z,5µmcomp=Z,87nm,0.8s
MEM   Membach          78.58 357  dP      P        05 13 52.6 -0.2
      comp=Z,76nm,0.9s
BBKI  Banjar Baru      78.58 250   P      P        05 13 52.8 -0.5
      comp=Z,6µmcomp=Z,124nm,1.6s
MORC  Moravsky Berou   78.59 350 ⇑P      P        05 13 52.8 -0.1
MORC  Moravsky Berou   78.59 350  eP      P        05 13 52.2 -0.7
MORC  Moravsky Berou   78.59 350   P      P        05 13 52.8 -0.1
BTNL  Ternell          78.59 357  dP      P        05 13 52.8 -0.1
      comp=Z,44nm,0.9s
NIE   Niedzica         78.61 348  eP      P        05 13 53.0  0.0
NIE                               eL      L        05 48 41.2
      comp=Z,3µm,23.9s
BSTI  Sart Tilman      78.61 358  dP      P        05 13 53.4 +0.4
      comp=Z,12nm,0.7s
PRA   Prague           78.61 352  eP      P        05 13 53.8 +0.8
PRA                               eS      S        05 23 52.3 +5.0
PRA                               eSS     SS       05 28 54.9 +5.0
PRA                                MLR    MLR
      comp=Z,6µm,20.4s
PRA   Prague           78.61 352  eP      P        05 13 53.8 +0.8
PRA                               eS      S        05 23 52.3 +5.0
PRA                               eSS     SS       05 28 54.9 +5.0
PRA                                AMS    AMS      05 50 40.0
      comp=Z,6µm,20.4s
PRU   Pruhonice        78.69 352  eP      P        05 13 53.2 -0.2
PRU                               eS      S        05 23 45.4 -2.7
PRU                                MLR    MLR
      comp=Z,7µm,22.4s
PRU   Pruhonice        78.69 352  eP      P        05 13 53.2 -0.2
PRU                               eS      S        05 23 45.4 -2.7
PRU                                AMS    AMS      05 50 50.0
      comp=Z,7µm,22.4s
BCLA  Clavier          78.78 358  dP      P        05 13 53.8 -0.1
      comp=Z,43nm,0.9s
BGES  Gesves           78.82 358  dP      P        05 13 54.1  0.0
      comp=Z,45nm,1.1s
BHOU  Houvegnez        78.83 357  dP      P        05 13 54.5 +0.3
LABN  Labinsk          78.86 333  eP      P        05 13 54.0 -0.5
LABN                              e*PP    PcP      05 13 57.7 -5.4
LABN                              eS      S        05 23 49.6 -0.7
LABN                              eSS     SS       05 28 59.2 +5.1
LABN                               pmax   pmax
      comp=Z,153nm,0.8s
LABN                               MLR    MLR
      comp=N,28µm,22.0s
LABN                               MLR    MLR
      comp=E,5µm,17.0s
LABN                               MLR    MLR
      comp=Z,19µm,20.0s
TNS   Taunus Mts       78.87 356  eP      P        05 13 53.5 -0.9
      comp=Z,65nm,1.0s,baz=6.6,slow=5.5
TNS                               eS      S        05 23 45.4 -4.8
      baz=6.1,slow=11
CCA1  Carnmenellis     78.87   5  eP      P        05 13 54.3 -0.1
CCA1                               IAmb   IAmb     05 13 57.1
      comp=Z,78nm,0.8s
MANZ  Manzenberg       78.89 353  eP      P        05 13 53.5 -1.0
      comp=Z,10.0nm,1.0s,baz=6.6,slow=5.5
MANZ                              eS      S        05 23 44.5 -5.9
      baz=6.1,slow=11
KVAR  Kislovodsk Arr   78.91 331   LR     LR       05 52 34.0
      comp=Z,9µm,20.8s,slow=39
BMRD  Maredsous        78.91 358  dP      P        05 13 54.3 -0.3
      comp=Z,74nm,1.1s
KIV   Kislovodsk       78.91 331   P      P        05 13 55.0 +0.1
KIV   Kislovodsk       78.91 331   P      P        05 13 54.5 -0.4
KIV   Kislovodsk       78.91 331 ⇑P      P        05 13 55.4 +0.5
KIV   Kislovodsk       78.91 331  i P     P        05 13 54.6 -0.3
      SNR=14
KIV   Kislovodsk       78.91 331  eP      P        05 13 54.4 -0.4
KIV                               e                05 16 51.1
KIV                               eS      S        05 23 52.3 +1.3
KIV                               eSS     SS       05 28 57.4 +2.4
KIV                                pmax   pmax
      comp=Z,225nm,1.1s
KIV                                pmax   pmax
      comp=Z,623nm,4.5s
KIV                                MLR    MLR
      comp=Z,8µm,19.0s
EDFI  Ende, Flores     78.96 241   P      P        05 13 53.6 -1.8
      comp=Z,5µmcomp=Z,3µmcomp=Z,135nm,1.7s
BLSP  Bilaspur         78.98 291  eP      P        05 13 55.0 -0.5
BLSP                               IAmb   IAmb     05 13 57.4
      comp=Z,81nm,1.1s
LANS  Liptovska Anna   78.98 348  eP      P        05 13 55.8 +0.7
LANS                               pmax   pmax
      comp=Z,51nm,0.8s
LANS  Liptovska Anna   78.98 348  eP      P        05 13 55.8 +0.7
RCHB  Rochefort        79.05 358  dP      P        05 13 55.2 -0.1
      comp=Z,42nm,1.0s
KBZ   Khabaz           79.05 331   P      P        05 13 55.6 +0.2
      comp=Z,159nm,0.8s,baz=64,slow=2.1,SNR=146
KBZ                                LR     LR       05 53 47.1
      comp=Z,15µm,20.2s,baz=30,slow=40
      comp=Z,159nm,0.8s
KBZ   Khabaz           79.05 331ceP      P        05 13 55.7 +0.2
KBZ                                pmax   pmax
      comp=Z,140nm,0.9s
BATI  Baumata          79.09 239   LR     LR       05 45 14.7
      comp=Z,2µm,22.0s,baz=34,slow=33
BATI  Baumata          79.09 239   P      P        05 13 56.5 +0.5
      comp=Z,5µmcomp=Z,3µmcomp=Z,192nm,0.9s
ROTZ  Rotzenmuhle      79.10 353  eP      P        05 13 54.8 -0.9
      comp=Z,15nm,1.1s,baz=6.6,slow=5.5
ROTZ                              eS      S        05 23 47.1 -5.5
      baz=6.1,slow=11
SHA1  Shidzhatmaz      79.12 331c iP      P        05 13 55.8 -0.4
DOU   Dourbes          79.12 358  dP      P        05 13 55.3 -0.5
      comp=Z,42nm,1.1s
VRAC  Vranov           79.16 350   LR     LR       05 48 02.9
      comp=Z,4µm,21.6s,baz=13,slow=35
VRAC  Vranov           79.16 350 ⇓P      P        05 13 56.4 +0.4
VRAC  Vranov           79.16 350  eP      P        05 13 55.8 -0.2
VRAC  Vranov           79.16 350   P      P        05 13 56.4 +0.4
GRA1  Grafenberg Arr   79.24 354   IAmb   IAmb     05 13 59.4
      comp=Z,122nm,0.9s
GRA1                               IAMs_20 IAMs_20 05 53 01.8
      comp=Z,6µm,21.0s
GRF   Grafenberg Arr   79.24 354  eP      P        05 13 55.9 -0.6
      comp=Z,125nm,0.9s,baz=6.6,slow=5.5
GRF                               eS      S        05 23 50.2 -3.9
      baz=6.1,slow=11
GRF                               eL      L        05 53 01.7
      comp=Z,6µm,21.2s
GRFO  Grafenberg       79.24 354   P      P        05 13 56.6 +0.2
DGPR  DIGLIPUR         79.26 278  eP      P        05 13 56.8 -0.2
DGPR                               IAmb   IAmb     05 13 58.9
      comp=Z,79nm,0.8s
ZVC   Zvikov           79.26 352  eP      P        05 13 56.7 +0.1
ZVC                               eS      S        05 23 55.0 +0.7
ZVC                               eSS     SS       05 28 46.6  -13
ZVC                                AMS    AMS      05 51 10.0
      comp=Z,6µm,21.6s
TREC  Trest            79.28 351   AMS    AMS      05 48 50.0
      comp=Z,6µm,21.1s
BKNR  BIKANER          79.37 302  eP      P        05 13 56.1 -1.4
BKNR                               IAmb   IAmb     05 13 59.4
      comp=Z,79nm,0.6s
KRUC  Moravsky         79.42 350  eP      P        05 13 56.9 -0.5
JAVC  Velka Javorina   79.48 350  eP      P        05 13 58.6 +0.8
KECS  Kecovo           79.50 348  eP      P        05 13 58.7 +0.8
KECS                               pmax   pmax
      comp=Z,116nm,0.9s
KECS  Kecovo           79.50 348  eP      P        05 13 58.7 +0.8
AKT   Akhty            79.50 327  eP      P        05 13 58.0 -0.2
AKT                               e                05 14 06.0
AKT                               e                05 16 58.3
AKT                               ePPP    PPP      05 18 50.2
AKT                               eS      S        05 23 54.2 -3.2
AKT                               e                05 24 17.2
AKT                                pmax   pmax
      comp=Z,626nm,1.2s
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AKT                                pmax   pmax
      comp=Z,358nm,1.0s
AKT                                pmax   pmax
      comp=N,78nm,0.7s
AKT                                pmax   pmax
      comp=E,89nm,0.8s
AKT                                smax   smax
      comp=N,447nm,2.6s
AKT                                smax   smax
      comp=E,826nm,4.0s
AKT                                MLR    MLR
      comp=Z,19µm,21.0s
AKT                                MLR    MLR
      comp=E,8µm,19.0s
AKT                                MLR    MLR
      comp=N,13µm,22.0s
WLF   Walferdange      79.52 357   P      P        05 13 57.5 -0.4
WLF   Walferdange      79.52 357   IAmb   IAmb     05 14 00.3
      comp=Z,88nm,1.0s
WLF                                IAMs_20 IAMs_20 05 54 43.1
      comp=Z,7µm,21.0s
WLF   Walferdange      79.52 357  eP      P        05 13 57.4 -0.6
      comp=Z,96nm,1.0s,baz=6.6,slow=5.5
WLF                               eS      S        05 23 54.2 -2.8
      baz=6.1,slow=11
WLF   Walferdange      79.52 357  dP      P        05 13 58.4 +0.4
      comp=Z,46nm,1.0s
KIS   Kishinev         79.55 342 ⇑P      P        05 13 58.2 +0.1
KIS   Kishinev         79.55 342   P      P        05 13 58.2 +0.1
KIS   Kishinev         79.55 342⇑iP      P        05 13 57.0 -1.1
      comp=Z,640nm,1.7s
KIS                               i S     S        05 23 51.0 -6.4
KIS                               i SKS   SKSac    05 24 07.0 -5.2
BUR08 Bucovina Ar. S   79.59 344   IAmb   IAmb     05 14 01.4
      comp=Z,131nm,0.8s
IASR  Iasi             79.62 343 ⇑P      P        05 13 59.2 +0.7
BURAR Bucovina Array   79.62 344   P      P        05 13 58.3 -0.4
BURAR Bucovina Array   79.62 344 ⇓P      P        05 13 58.6 -0.1
BURAR Bucovina Array   79.62 344   P      P        05 13 58.5 -0.1
KHC   Kasperske Hory   79.62 352   IAmb   IAmb     05 14 01.3
      comp=Z,79nm,1.0s
KHC                                IAMs_20 IAMs_20 05 53 24.8
      comp=Z,5µm,21.0s
KHC   Kasperske Hory   79.62 352  eP      P        05 13 58.6  0.0
KHC                               eS      S        05 23 49.0 -9.2
KHC                                MLR    MLR
      comp=Z,5µm,20.3s
KHC   Kasperske Hory   79.62 352  eP      P        05 13 58.6  0.0
KHC                               eS      S        05 23 49.0 -9.2
KHC                               eSS     SS       05 28 55.4  -10
KHC                                AMS    AMS      05 53 10.0
      comp=Z,5µm,20.3s
MILM  Milestii Mici    79.62 342 ⇑P      P        05 13 57.8 -0.7
MILM  Milestii Mici    79.62 342   P      P        05 13 57.8 -0.7
MILM  Milestii Mici    79.62 342⇑iP      P        05 13 56.4 -2.1
      comp=Z,1µm,1.7s
MILM                              i S     S        05 23 53.0 -5.2
MILM                              i SKS   SKSac    05 24 07.0 -5.7
MILM                              eL      L        05 39 14.0
MILM                               LRM    MLR      05 52 48.0
      comp=Z,7µm,20.0s
ANN   Anapa            79.63 335  eP      P        05 13 57.1 -1.5
ANN                               e*PP    PcP      05 14 00.9 -5.5
ANN                               e                05 17 01.4
ANN                               eS      S        05 23 58.9 +0.6
ANN                               e                05 24 15.5
ANN                                pmax   pmax
      comp=N,32nm,1.0s
ANN                                pmax   pmax
      comp=Z,125nm,0.8s
ANN                                pmax   pmax
      comp=E,29nm,0.8s
WET   Wettzell         79.66 353  eP      P        05 13 58.0 -0.8
      comp=E,50nm,1.1s,baz=6.6,slow=5.5
WET                               eS      S        05 23 54.3 -4.3
      baz=6.1,slow=11
TGUH  Tegucigalpa,Un   79.68  81   IAmb   IAmb     05 14 18.8
      comp=Z,126nm,0.8s
HRA   Herat            79.73 313   IAmb   IAmb     05 14 01.7
      comp=Z,78nm,0.8s
LBFI  Labuhan Bajo,    79.73 243   P      P        05 13 58.7 -0.8
PURM  Purcari          79.78 341 ⇑P      P        05 13 59.3 -0.1
GUNA  GUNA             79.79 297  eP      P        05 13 59.6 -0.3
GUNA                               IAmb   IAmb     05 14 00.8
      comp=Z,66nm,2.0s
SMOL  Smolenice        79.85 350  eP      P        05 14 00.1 +0.3
SMOL                               pmax   pmax
      comp=Z,33nm,0.8s
CKRC  Cesky Krumlov    79.86 352  eP      P        05 13 59.8 -0.1
CKRC                              eS      S        05 24 04.6 +3.8
CKRC                               MLR    MLR
      comp=Z,6µm,22.5s
CKRC  Cesky Krumlov    79.86 352  eP      P        05 13 59.8 -0.1
CKRC                              eS      S        05 24 04.6 +3.8
CKRC                              eSS     SS       05 29 01.3 -7.5
CKRC                               AMS    AMS      05 51 20.0
      comp=Z,6µm,22.5s
GEC2  GERESS Array S   79.89 352  eP      P        05 13 59.3 -0.8
      comp=Z,46nm,0.9s,baz=6.6,slow=5.5
GEC2                              eS      S        05 23 54.6 -6.6
      baz=6.1,slow=11
GERES GERESS Array B   79.89 352   P      P        05 13 60.0 -0.1
      comp=Z,27nm,0.8s,baz=23,slow=4.8,SNR=104
GERES                              PKKPbc PKKPbc   05 32 44.9 +1.4
      comp=Z,0.1nm,0.4s,baz=211,slow=4.7,SNR=3.7
GERES                              PKPPKP P'P'df   05 40 49.9 -5.5
      comp=Z,0.3nm,0.5s,baz=222,slow=1.8,SNR=4.1
GERES                              LR     LR       05 51 50.9
      comp=Z,3µm,19.7s,baz=9.0,slow=38
      comp=Z,27nm,0.8s
GERES GERESS Array B   79.89 352   P      P        05 14 00.0 -0.1
AJM   Ajmer            79.89 300  eP      P        05 13 59.3 -0.8
AJM                                IAmb   IAmb     05 14 01.9
      comp=Z,56nm,0.8s
CBCY  The Bluff, Cay   79.91  71  i P     P        05 14 01.4 +0.9
CCCC  Cccc             79.96  69  i P     P        05 14 02.6 +1.8
MODS  Modra-Piesok     80.00 350  eP      P        05 14 01.0 +0.4
MODS                               pmax   pmax
      comp=Z,155nm,1.0s
MODS  Modra-Piesok     80.00 350  eP      P        05 14 01.0 +0.4
GIRR  Girov            80.03 343 ⇑P      P        05 14 01.3 +0.5
RAO   Raoul Island     80.03 180   LR     LR       05 43 27.7
      comp=Z,8µm,20.8s,baz=16,slow=31
VASR  Vaslui           80.09 342 ⇑P      P        05 14 02.0 +0.9
SOC   Sochi            80.12 333  eP      P        05 13 58.2 -3.1
SOC                               eS      S        05 23 53.4  -10
SOC                                pmax   pmax
      comp=Z,122nm,1.0s
SOC                                MLR    MLR
      comp=Z,18µm,22.0s
PSZ   Piszkesteto      80.13 348   IAmb   IAmb     05 14 04.5
      comp=Z,97nm,1.0s
PSZ   Piszkesteto      80.13 348 ⇑P      P        05 14 02.0 +0.6
PSZ   Piszkesteto      80.13 348   P      P        05 14 02.0 +0.6
ARCR  ARCALIA          80.28 345 ⇑P      P        05 14 03.4 +1.3
STU   Stuttgart        80.28 355  eP      P        05 14 00.9 -1.2
      comp=Z,123nm,1.0s,baz=6.6,slow=5.5
STU                               eS      S        05 24 01.0 -4.1
      baz=6.1,slow=11
SIM   Simferopol'      80.33 337  eP      P        05 14 01.7 -0.7
SIM                                S      S        05 23 55.3  -10
SIM                                pmax   pmax
      comp=Z,119nm,0.8s
LTVH  Ltavrtes, Hu     80.37 346 ⇑P      P        05 14 04.0 +1.4
TESR  Tescani          80.43 343 ⇑P      P        05 14 03.0 +0.1
SRO   Srobarova        80.44 349  eP      P        05 14 03.8 +0.9
SRO                                pmax   pmax
      comp=Z,60nm,1.0s
SRO   Srobarova        80.44 349  eP      P        05 14 03.8 +0.9
MESR  Meseseni         80.44 346 ⇓P      P        05 14 04.0 +1.0
KULM  Kulim            80.45 267   IAmb   IAmb     05 14 05.8
      comp=Z,222nm,1.6s
KULM  Kulim            80.45 267   P      P        05 14 02.7 -0.8
      comp=Z,7µmcomp=Z,3µmcomp=Z,97nm,2.1s
BIR   Birlad           80.48 342 ⇑P      P        05 14 04.3 +1.1
BIR   Birlad           80.48 342   P      P        05 14 04.3 +1.1
WSI   Waingapu         80.48 242   P      P        05 14 01.7 -1.8
      comp=Z,6µmcomp=Z,295nm,1.9s
PBA   Port Blair       80.54 277   P      P        05 14 03.7 -0.2
CONA  Conrad Observa   80.60 351  i P     P        05 14 03.7 -0.2
      comp=Z,31nm,0.8s,SNR=30
DBNI  Kabupaten Domp   80.64 244   P      P        05 14 02.6 -1.8
      comp=Z,4µmcomp=Z,42nm,1.2s
ONER  Baraj Valea Uz   80.65 343 ⇑P      P        05 14 05.0 +0.8
BORR  Bors             80.68 346 ⇓P      P        05 14 05.5 +1.3
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BSZH  Besenyszg          80.69 347 ⇑P      P        05 14 05.8 +1.6
CBBR  Cluj-Babes-Bol     80.72 345 ⇑P      P        05 14 05.7 +1.2
GHRR                     80.72 342 ⇑P      P        05 14 05.8 +1.4
FUR   Furstenfeldbru     80.76 354 eP      P        05 14 03.6 -1.1
      comp=Z,108nm,1.1s,baz=6.6,slow=5.5
FUR                                eS      S        05 24 05.9 -4.2
      baz=6.1,slow=11
CJR   Cluj-Napoca        80.76 345 ⇓P      P        05 14 05.5 +0.7
CJR   Cluj-Napoca        80.76 345  P      P        05 14 05.5 +0.7
BFO   Black Forest       80.76 356  P      P        05 14 04.4 -0.3
BFO   Black Forest       80.76 356  P      P        05 14 04.4 -0.3
BFO                                 pmax   pmax
      comp=Z,76nm,1.3s
BFO   Black Forest       80.76 356 eP      P        05 14 03.7 -1.1
      comp=Z,78nm,1.3s,baz=6.6,slow=5.5
BFO                                eS      S        05 24 05.1 -5.2
      baz=6.1,slow=11
RONA  Rosalia, Austr     80.78 350 i P     P        05 14 05.0 +0.2
      comp=Z,33nm,0.8s,SNR=30
BASI  Baing, Sumba       80.78 241  P      P        05 14 03.9 -1.2
TGMR  Targu Mures        80.79 344 ⇓P      P        05 14 06.3 +1.4
VARL  Varlezi            80.79 342 ⇑P      P        05 14 05.8 +1.0
VLDR  Vladesti           80.80 342 ⇑P      P        05 14 05.9 +1.0
DRGR                     80.83 346 ⇑P      P        05 14 05.2  0.0
DRGR                     80.83 346  P      P        05 14 05.1  0.0
MOA   Molln              80.83 352 i P     P        05 14 04.9 -0.2
      comp=Z,23nm,1.1s,SNR=14
BHPL  Bhopal             80.83 296 eP      P        05 14 05.2 -0.4
BHPL                                IAmb   IAmb     05 14 07.0
      comp=Z,59nm,0.7s
IPM   Ipoh               80.84 266  IAmb   IAmb     05 14 07.4
      comp=Z,81nm,1.0s
IPM   Ipoh               80.84 266  P      P        05 14 03.9 -1.7
      comp=Z,3µmcomp=Z,107nm,1.1s
MARR  Marisel-Cluj       80.88 345 ⇑P      P        05 14 05.5 +0.1
ECH   Echery             80.93 356  IAmb   IAmb     05 14 08.0
      comp=Z,60nm,0.9s
ECH                                 IAMs_20 IAMs_20 05 54 34.4
      comp=Z,4µm,20.0s
COSR  Cosmesti PH        80.94 342 ⇓P      P        05 14 06.9 +1.2
PANC  Panciu             80.95 342 ⇓P      P        05 14 07.2 +1.5
WBSI  Waikabubak, Su     80.97 242  P      P        05 14 05.0 -1.2
      comp=Z,5µmcomp=Z,3µmcomp=Z,106nm,0.8s
WBSI                                pP     pP       05 14 14.1 -0.8
      comp=Z,5µmcomp=Z,3µmcomp=Z,106nm,0.8s
SCTR  Scanteiesti        80.98 342 ⇑P      P        05 14 07.2 +1.4
TURR  Turia              80.99 343 ⇓P      P        05 14 06.9 +0.9
OZUR                     80.99 343 ⇓P      P        05 14 07.4 +1.4
BOSR  Bodos              81.03 344 ⇑P      P        05 14 07.2 +1.0
VRI   Vrincioaia         81.04 343 ⇓P      P        05 14 06.9 +0.7
VRI   Vrincioaia         81.04 343  P      P        05 14 06.9 +0.7
BIOA  Bad Ischl, Aus     81.04 352 i P     P        05 14 06.0 -0.2
      comp=Z,21nm,0.8s,SNR=22
PLOR  Plostina           81.07 343 ⇑P      P        05 14 07.4 +0.9
PLOR  Plostina           81.07 343  P      P        05 14 07.3 +0.9
RJOB  Jochberg           81.07 353 eP      P        05 14 05.4 -1.0
      comp=Z,41nm,0.9s,baz=6.6,slow=5.5
RJOB                               eS      S        05 24 08.8 -4.7
      baz=6.1,slow=11
KNRA  Kununurra          81.08 231  IAmb   IAmb     05 14 09.4
      comp=Z,149nm,1.4s
TSSL  Sulina             81.12 341 ⇓P      P        05 14 07.5 +0.9
GIUM  Giurgiulesti       81.12 342 ⇑P      P        05 14 07.1 +0.5
TUDR                     81.12 342 ⇓P      P        05 14 07.9 +1.3
NEGRR Negrea             81.13 342 ⇓P      P        05 14 07.2 +0.5
MYKOM Kota Tinggi        81.15 262  IAmb   IAmb     05 14 10.1
      comp=Z,74nm,1.1s
MYKOM Kota Tinggi        81.15 262  P      P        05 14 06.7 -0.5
      comp=Z,7µmcomp=Z,3µmcomp=Z,83nm,1.9s
IZVR  Izvoarele          81.15 342 ⇓P      P        05 14 07.7 +1.0
COVR  Voineasa-Covas     81.15 343 ⇓P      P        05 14 08.0 +1.1
DOPR  Dopca              81.18 344 ⇑P      P        05 14 07.9 +0.9
MDB   Medias             81.19 344 ⇓P      P        05 14 08.5 +1.5
MDB   Medias             81.19 344  P      P        05 14 08.5 +1.5
GISR  Galati             81.19 342 ⇑P      P        05 14 07.3 +0.4
SCHLR Schela             81.21 342 ⇓P      P        05 14 07.6 +0.5
PLAI  Plampang           81.21 244  P      P        05 14 05.2 -2.2
      comp=Z,5µmcomp=Z,3µmcomp=Z,124nm,2.2s
CLF   Chambon-Foret      81.22 360  IAMs_20 IAMs_20 05 51 03.2
      comp=Z,4µm,21.0s
CLF   Chambon-Foret      81.22 360  P      P        05 14 07.8 +0.7
TLCR                     81.28 341 ⇑P      P        05 14 07.9 +0.4
TLCR                     81.28 341  P      P        05 14 07.9 +0.4
ARSA  Arzberg            81.30 351 i P     P        05 14 07.5 -0.1
      comp=Z,63nm,1.0s,SNR=23
UBR   Ueberruh           81.31 354 eP      P        05 14 06.9 -0.9
      comp=Z,62nm,1.3s,baz=6.6,slow=5.5
UBR                                eS      S        05 24 12.0 -4.1
      baz=6.1,slow=11
LESA  Schwarzleotal      81.39 353 i P     P        05 14 07.9 -0.3
      comp=Z,17nm,0.9s,SNR=24
CFR   Carcaliu           81.43 342 ⇓P      P        05 14 09.1 +0.8
CFR   Carcaliu           81.43 342  P      P        05 14 09.0 +0.8
GRER                     81.46 342 ⇑P      P        05 14 09.7 +1.3
RETA  Reutte             81.47 354 i P     P        05 14 07.8 -0.7
      comp=Z,19nm,1.1s,SNR=11
SIUN  Universidad Ur     81.49  79  IAmb   IAmb     05 14 30.9
      comp=Z,59nm,1.4s
SIRR  Siria              81.50 346 ⇑P      P        05 14 09.8 +1.2
JASL  Jaisalmer          81.51 303 eP      P        05 14 08.9 -0.1
JASL                                IAmb   IAmb     05 14 10.6
      comp=Z,49nm,1.0s
BTDF  Bukit Timah Da     81.53 262  P      P        05 14 08.5 -0.7
      comp=Z,4µmcomp=Z,59nm,1.4s
NEHR  Nehoiu             81.54 343 ⇓P      P        05 14 09.7 +0.8
MLR   Muntele Rosu       81.54 343  LR     LR       05 55 38.7
      comp=Z,8µm,18.7s,baz=24,slow=40
MLR   Muntele Rosu       81.54 343 ⇓P      P        05 14 10.4 +1.3
MLR   Muntele Rosu       81.54 343  P      P        05 14 10.4 +1.3
WATA  Walderalm          81.56 353 i P     P        05 14 08.3 -0.8
      comp=Z,52nm,1.2s,SNR=24
MOTA  Moosalm            81.58 354 i P     P        05 14 08.5 -0.8
      comp=Z,37nm,1.1s,SNR=30
WTTA  Wattenberg         81.63 353 i P     P        05 14 09.2 -0.3
      comp=Z,58nm,1.1s,SNR=34
VIS   Vishakhapatnam     81.67 288 eP      P        05 14 10.3 +0.3
VIS                                 IAmb   IAmb     05 14 12.2
      comp=Z,60nm,0.9s
PINC  Pinares de May     81.67  68 i P     P        05 14 10.5 +0.6
KBA   Koelnbreinsper     81.68 352 i P     P        05 14 09.4 -0.4
      comp=Z,125nm,0.7s,SNR=59
TPGR  Topolog            81.68 341 ⇓P      P        05 14 10.0 +0.4
DEV   Deva               81.68 345 ⇓P      P        05 14 10.6 +0.9
DEV   Deva               81.68 345  P      P        05 14 10.5 +0.9
SQTA  Sankt Quirin       81.70 354 eP      P        05 14 09.3 -0.5
      comp=Z,33nm,0.8s,SNR=18
CHIV  Chivirico          81.70  69  IAmb   IAmb     05 14 30.0
      comp=Z,77nm,1.0s
DAVA  Damuels            81.72 355  P      P        05 14 07.1 -2.9
      comp=Z,20nm,1.3s
VOIR                     81.76 344 ⇓P      P        05 14 11.2 +1.1
VOIR                     81.76 344  P      P        05 14 11.2 +1.1
ISR   Istrita            81.79 343 ⇑P      P        05 14 10.4 +0.1
ISR   Istrita            81.79 343  P      P        05 14 10.4 +0.1
KARS  Kars               81.81 330  IAmb   IAmb     05 14 13.8
      comp=Z,131nm,0.8s
KLNI  Mataram            81.84 246  P      P        05 14 09.6 -1.2
      comp=Z,5µmcomp=Z,4µmcomp=Z,79nm,1.4s
ARR   Arges              81.90 344 ⇑P      P        05 14 11.6 +0.8
BOAB  BOACO BROADBAN81.91   80  IAmb   IAmb     05 14 32.0
      comp=Z,82nm,0.9s
BOAB                                IAMs_20 IAMs_20 05 51 15.8
      comp=Z,6µm,21.0s
PGOR  Pogoanele          81.91 342 ⇑P      P        05 14 11.6 +0.8
SOKA  Soboth             81.92 351 i P     P        05 14 10.7 -0.2
      comp=Z,82nm,0.8s,SNR=53
SURR  Surduc             81.93 346 ⇓P      P        05 14 11.5 +0.6
FETA  Feichten           81.93 354 i P     P        05 14 10.8 -0.3
      comp=Z,42nm,0.9s,SNR=49
BEHE  Becsehely          81.94 350⇑iP      P        05 14 10.8 -0.1
PERS  Pernice            81.95 351 i P     P        05 14 10.8 -0.3
MTUR  Matau              81.96 344 ⇓P      P        05 14 12.7 +1.5
MTUR  Matau              81.96 344  P      P        05 14 12.7 +1.5
LOT   Lotru              81.96 345 ⇓P      P        05 14 11.3  0.0
MORH  Mrgy, Hungar       81.97 348⇑iP      P        05 14 09.8 -1.3
KMMI  Kalianget          81.97 248  P      P        05 14 13.3 +1.8
      comp=Z,5µmcomp=Z,171nm,1.4s
WB0   Warramunga Arr     81.99 225  P      P        05 14 10.8 -0.6
WB0                                 IAmb   IAmb     05 14 14.7
      comp=Z,124nm,1.5s
TLBR  Topalu             82.05 341 ⇑P      P        05 14 11.6 +0.1
TIRR  Tirgusor           82.06 341 ⇑P      P        05 14 11.9 +0.3
TIRR  Tirgusor           82.06 341  P      P        05 14 11.8 +0.3
KHKI  Kahang-Kahang      82.07 246  P      P        05 14 10.4 -1.6
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      comp=Z,5µmcomp=Z,2µmcomp=Z,135nm,1.0s
ABTA  Abfaltersbach      82.08 353 i P     P        05 14 10.9 -0.9
      comp=Z,40nm,1.0s,SNR=28
SRBI  Singaraja          82.08 247  P      P        05 14 10.4 -1.6
      comp=Z,6µmcomp=Z,3µmcomp=Z,109nm,1.0s
GROS  Grobnik            82.08 351 i P     P        05 14 11.2 -0.6
GROS                               eS      S        05 24 19.3 -4.7
NMDO  Nuevo Mundo        82.09  67  IAmb   IAmb     05 14 15.2
      comp=Z,67nm,1.0s
PLAR  PLOIESTI           82.09 343 ⇓P      P        05 14 12.8 +1.1
MYKA  Terra Mystica      82.10 352 i P     P        05 14 11.1 -0.8
      comp=Z,16nm,1.3s,SNR=13
WR8   Warramunga Arr     82.11 224  IAmb   IAmb     05 14 14.3
      comp=Z,240nm,1.9s
RCC   Rio Carpintero     82.11  68 i P     P        05 14 12.6 +0.4
AMRR  Amara              82.13 342 ⇑P      P        05 14 12.6 +0.6
AMRR  Amara              82.13 342  P      P        05 14 12.5 +0.6
OBKA  Obir               82.13 351 i P     P        05 14 11.5 -0.6
      comp=Z,33nm,0.9s,SNR=24
BZS   Buzias             82.14 346 ⇑P      P        05 14 12.1 +0.1
BZS   Buzias             82.14 346  P      P        05 14 12.1 +0.1
WRAB  Tennant Creek      82.16 225  P      P        05 14 11.8 -0.5
WRAB                                IAmb   IAmb     05 14 15.6
      comp=Z,130nm,1.6s
WRAB  Tennant Creek      82.16 225  IAMs_20 IAMs_20 05 48 03.3
      comp=Z,4µm,21.0s
WRAB  Tennant Creek      82.16 225ceP      P        05 14 12.3  0.0
WRAB                                pmax   pmax
      comp=Z,96nm,1.7s
WRA   Warramunga Arr     82.17 225  P      P        05 14 12.5 +0.1
      comp=Z,17nm,0.8s,baz=37,slow=6.2,SNR=90
WRA                                 PKKPbc PKKPbc   05 32 40.0 +0.5
      comp=Z,1.2nm,0.7s,baz=222,slow=2.4,SNR=6.5
WRA                                 LR     LR       05 48 04.3
      comp=Z,4µm,20.6s,baz=18,slow=34
      comp=Z,17nm,0.8s
WRA   Warramunga Arr     82.17 225  P      P        05 14 11.3 -1.1
WRA   Warramunga Arr     82.17 225 i P     P        05 14 12.5 +0.1
WRA                                 pmax   pmax
      comp=Z,19nm,0.8s
GZR   Gura Zlata         82.18 345 ⇓P      P        05 14 12.5 +0.2
GZR   Gura Zlata         82.18 345  P      P        05 14 12.5 +0.2
DAVOX Davos/Dischmat     82.23 355  LR     LR       05 49 52.6
      comp=Z,4µm,21.6s,baz=5.0,slow=35
CVDA  Cernavoda          82.26 341 ⇑P      P        05 14 12.9 +0.3
SULR                     82.27 343 ⇓P      P        05 14 13.3 +0.6
TSCT  Constanta Port     82.30 341 ⇓P      P        05 14 13.5 +0.7
STFAR Stefanesti-Arg     82.33 344 ⇓P      P        05 14 13.9 +0.9
MFTR  Murfatlar          82.33 341 ⇓P      P        05 14 13.5 +0.5
TPI   Tanjungpandan      82.35 256  P      P        05 14 13.1 -0.4
      comp=Z,6µmcomp=Z,3µmcomp=Z,115nm,2.5s
LEHL  Lehliu             82.36 342 ⇓P      P        05 14 14.0 +0.8
EFOR  EFORIE             82.38 341 ⇑P      P        05 14 14.3 +1.0
MTDJ  Mount Denham       82.40  71  IAmb   IAmb     05 14 30.9
      comp=Z,87nm,0.9s
MTDJ                                IAMs_20 IAMs_20 05 53 19.9
      comp=Z,4µm,21.0s
MTDJ  Mount Denham       82.40  71 i P     P        05 14 16.4 +2.5
ABJI  Asem Bagus         82.41 248  P      P        05 14 13.7 -0.1
      comp=Z,7µmcomp=Z,3µmcomp=Z,114nm,0.9s
BANR  Banloc             82.44 346 ⇓P      P        05 14 15.0 +1.4
DSRI  Dabo               82.46 260  P      P        05 14 15.0 +0.9
      comp=Z,7µmcomp=Z,3µmcomp=Z,107nm,1.4s
QMBU  Quimbuelo          82.47  67 i P     P        05 14 14.7 +0.6
GTBY  Guantanamo Bay     82.51  68 i P     P        05 14 15.9 +1.6
ICOR  Ion Corvin         82.51 342 ⇑P      P        05 14 14.6 +0.7
RTBI  Rangdo, Negare     82.54 247  P      P        05 14 12.7 -1.8
      comp=Z,4µmcomp=Z,138nm,0.8s
BUC   Bucharest          82.56 343 ⇓P      P        05 14 14.8 +0.6
BUC   Bucharest          82.56 343  P      P        05 14 14.8 +0.6
TUE   Stuetta            82.56 355  IAmb   IAmb     05 14 16.8
      comp=Z,54nm,0.8s
TUE                                 IAMs_20 IAMs_20 05 54 34.7
      comp=Z,6µm,22.0s
CICN  Ciocanesti         82.59 342 ⇓P      P        05 14 14.5 +0.1
BUC1  Bucharest          82.63 343 ⇓P      P        05 14 15.3 +0.7
BUC1  Bucharest          82.63 343  P      P        05 14 15.3 +0.7
MANR  Mangalia           82.64 341 ⇓P      P        05 14 15.3 +0.7
HUMR  Humele             82.65 344 ⇓P      P        05 14 14.7  0.0
IGBI  Denpasar           82.71 246  P      P        05 14 13.4 -1.9
      comp=Z,151nm,1.0s
HERR  Herculane          82.74 345 ⇓P      P        05 14 14.9 -0.2
SABO  M.te Sabotino      82.74 352  IAmb   IAmb     05 14 16.2
      comp=Z,46nm,0.8s
BLJI  Banyuglugur        82.75 248  P      P        05 14 15.4 -0.1
      comp=Z,6µmcomp=Z,2µmcomp=Z,81nm,0.8s
SGRR  Singureni          82.76 343 ⇑P      P        05 14 15.6 +0.3
SENIN Lac Senin/Sane     82.77 356  IAMs_20 IAMs_20 05 55 49.3
      comp=Z,5µm,21.0s
PPBI  Pangkal Pinang     82.81 258  P      P        05 14 15.0 -0.9
SRE   Strehaia           82.82 345 ⇑P      P        05 14 16.5 +0.8
SRE   Strehaia           82.82 345  P      P        05 14 16.4 +0.8
LHMI  Lhok Sumawe        82.83 269  IAMs_20 IAMs_20 05 49 22.8
      comp=Z,4µm,21.0s
LHMI  Lhok Sumawe        82.83 269  P      P        05 14 16.0  0.0
RMGR  Halanga-Turnu      82.91 345 ⇑P      P        05 14 16.6 +0.6
PSN   Preselentsi        82.91 341 i P     P        05 14 16.3 +0.3
DJES  Djerdap            82.93 345 ⇓P      P        05 14 16.3 +0.2
MDVR  Moldovita          82.94 346 ⇑P      P        05 14 17.0 +0.7
COPA  Copaceanca         82.99 343 ⇓P      P        05 14 16.3 -0.1
JAGI  Jajag, Banyuwa     83.00 247  P      P        05 14 14.7 -2.2
CRAR  CRAIOVA            83.05 344 ⇑P      P        05 14 17.7 +0.9
CRAR  CRAIOVA            83.05 344  P      P        05 14 17.6 +0.9
BOJS  Bojanci            83.06 351 i P     P        05 14 16.4 -0.4
AKL   Akola              83.06 294 eP      P        05 14 17.1 -0.2
AKL                                 IAmb   IAmb     05 14 19.2
      comp=Z,59nm,0.9s
TSI   Tuntungan          83.14 267  P      P        05 14 17.5 -0.1
      comp=Z,121nm,0.7s
PUNG  Punghina           83.24 345 ⇑P      P        05 14 18.0 +0.3
GMJI  Gumukmas           83.26 248  P      P        05 14 16.9 -1.2
VLAD  Vladila            83.26 344 ⇓P      P        05 14 18.1 +0.2
RAZG  Razgrad            83.30 342 ⇓P      P        05 14 18.0 -0.1
CMBY  CAMPBELL BAY       83.36 273 eP      P        05 14 18.3 -0.4
CMBY                                IAmb   IAmb     05 14 26.7
      comp=Z,55nm,0.7s
BAIL  Bailesti           83.42 345 ⇓P      P        05 14 19.4 +0.7
NEF   NEVSHA             83.44 342 i P     P        05 14 19.3 +0.5
PSI   Prapat             83.45 266  LR     LR       05 53 42.7
      comp=Z,993nm,20.1s,baz=30,slow=37
PSI   Prapat             83.45 266  P      P        05 14 18.7 -0.7
      comp=Z,4µmcomp=Z,2µmcomp=Z,134nm,0.9s,comp=Z,6µm,0.9s,
      comp=Z,3µm,0.9s
PSI                                 P      PcP      05 14 19.3 -4.4
      comp=Z,4µmcomp=Z,2µmcomp=Z,134nm,0.9s,comp=Z,6µm,0.9s,
      comp=Z,3µm,0.9s
LOZB  Loznitsa           83.47 342 ⇑P      P        05 14 19.4 +0.4
PRD   Provadia           83.51 342 i P     P        05 14 19.7 +0.6
BLY   Banja Luka         83.59 349⇑iP      P        05 14 18.9 -0.6
BLY   Banja Luka         83.59 349 ⇑P      P        05 14 19.7 +0.2
KCSI  Kotacane, Aceh     83.62 268  P      P        05 14 18.2 -1.9
SZH   Strazhitsa         83.69 343  P      P        05 14 19.2 -0.9
SZH   Strazhitsa         83.69 343 i P     P        05 14 20.0 -0.1
NGJI  Ngawi              83.70 250  P      P        05 14 20.6 +0.2
      comp=Z,4µmcomp=Z,101nm,1.6s
VALD  Valchedram         83.73 345 i P     P        05 14 20.5 +0.2
JUD3  Juan Diaz 3        83.74  82  P      P        05 14 21.5 +0.7
JUD3                                IAmb   IAmb     05 14 40.2
      comp=Z,58nm,0.9s
SJI   Sawahan            83.81 250  P      P        05 14 20.0 -1.1
      comp=Z,3µmcomp=Z,108nm,2.9s
PLVB  Pleven             83.82 344 ⇓P      P        05 14 21.1 +0.3
SNJI  Sawahan-Nganju     83.85 250  P      P        05 14 21.0 -0.4
      comp=Z,3µmcomp=Z,88nm,2.1s
MLSI  Meulaboh, Aceh     83.91 269  P      P        05 14 19.8 -1.8
      comp=Z,4µmcomp=Z,109nm,0.8s
SSB   Saint Sauveur      83.94 358  IAmb   IAmb     05 14 23.7
      comp=Z,69nm,1.0s
SSB   Saint Sauveur      83.94 358  IAMs_20 IAMs_20 05 53 11.2
      comp=Z,4µm,22.0s
PVL   Pavlikeni          83.97 343 i P     P        05 14 21.3 -0.2
MPEP  Malo Peshtene      84.00 344 i P     P        05 14 22.0 +0.3
JTS   Las Juntas de      84.01  81  LR     LR       05 52 38.3
      comp=Z,1µm,21.7s,baz=313,slow=36
ELND  Elena              84.03 343 ⇓P      P        05 14 21.6 -0.3
BKNI  Bangkinang         84.04 263  P      P        05 14 22.1 -0.2
SMRI  Semarang           84.05 251  P      P        05 14 21.9 -0.4
      comp=Z,231nm,1.3s
BOVS  Bovan              84.06 346 ⇓P      P        05 14 21.7 -0.3
ILGA  Ilgaz              84.09 336  IAmb   IAmb     05 14 28.8
      comp=Z,78nm,0.9s
BNI   Bardonecchia       84.11 357  P      P        05 14 22.6 +0.2
BNI                                 IAmb   IAmb     05 14 27.4
      comp=Z,78nm,0.8s
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BNI                                 IAMs_20 IAMs_20 05 58 26.5
      comp=Z,4µm,20.0s
BNI   Bardonecchia       84.11 357  P      P        05 14 22.6 +0.2
BNI                                 pmax   pmax
      comp=Z,78nm,0.8s
JMB   Yambol             84.33 342  P      P        05 14 22.8 -0.6
JMB   Yambol             84.33 342 i P     P        05 14 23.1 -0.2
WOJI  Wonogiri, Jawa     84.39 250  P      P        05 14 23.0 -1.0
      comp=Z,4µmcomp=Z,3µmcomp=Z,88nm,2.2s
RUDO  Rudo               84.42 347 eP      P        05 14 23.3 -0.5
PCJI  Pacitan            84.53 250  P      P        05 14 24.1 -0.5
BLSH  Balsha             84.57 344 i P     P        05 14 25.0 +0.4
MNSI  Mandailing Nat     84.59 265  P      P        05 14 23.6 -1.4
      comp=Z,6µmcomp=Z,94nm,0.8s
FITZ  Fitzroy Crossi     84.69 233  P      P        05 14 26.4 +1.1
      comp=Z,106nm,0.8s,baz=41,slow=4.0,SNR=128
FITZ                                LR     LR       05 49 37.7
      comp=Z,4µm,21.0s,baz=46,slow=34
      comp=Z,106nm,0.8s
FITZ  Fitzroy Crossi     84.69 233  P      P        05 14 25.9 +0.6
UGM   Wanagama           84.69 251  P      P        05 14 24.8 -0.7
      comp=Z,201nm,2.1s
PLE   Pljevlja           84.70 347⇑iP      P        05 14 24.9 -0.5
PGB   Panagyurishte      84.74 344 i P     P        05 14 25.8 +0.3
HYB   Hyderabad          84.75 291 eP      P        05 14 26.2 +0.3
HYB                                 IVmB_BB         05 14 26.7
      comp=Z,5µm,2.2s
HYB                                epP     pP       05 14 35.1 +0.8
HYB                                ePP     PP       05 17 42.9 +1.2
HYB                                eSKSac  SKSac    05 24 48.4 +0.4
HYB                                 IVMs_BB IVMs_BB 05 55 19.9
      comp=Z,3µm,17.8s
HDC   Heredia            84.75  81 eP      P        05 14 26.9 +0.8
CTJI  Waduk Cacaban      84.77 252  P      P        05 14 25.5 -0.4
      comp=Z,5µmcomp=Z,163nm,2.1s
VLC   Villacollemand     84.81 354  P      P        05 14 25.1 -0.7
VTS   Vitosha            84.81 344  P      P        05 14 25.2 -0.7
VTS   Vitosha            84.81 344 i P     P        05 14 25.7 -0.3
PLNA  Plana              84.91 344 i P     P        05 14 26.7 +0.2
DIM   Dimitrovgrad       84.94 343 i P     P        05 14 26.9 +0.5
KLINJ Klinje             84.97 348 eP      P        05 14 26.6 -0.1
SAHE  Sakarya_HENDEK 84.98 338 ⇓P      P        05 14 26.9 +0.2
PLD   Plovdiv            85.00 343  P      P        05 14 26.3 -0.4
PLD   Plovdiv            85.00 343 i P     P        05 14 26.5 -0.2
PPI   Padang Panjang     85.05 263  P      P        05 14 26.4 -0.9
      comp=Z,3µmcomp=Z,5µmcomp=Z,87nm,2.4s
IVA   Berane             85.08 347⇑iP      P        05 14 26.9 -0.4
BHUJ  Bhuj               85.13 301 eP      P        05 14 27.6  0.0
BHUJ                                IAmb   IAmb     05 14 29.6
      comp=Z,47nm,1.0s
KOME  Kolasin            85.16 347⇑iP      P        05 14 26.7 -0.9
KPJI  Karang Pucung      85.18 252  P      P        05 14 26.8 -1.1
      comp=Z,5µmcomp=Z,3µmcomp=Z,148nm,0.9s
BRY   Bratogost          85.24 348⇑iP      P        05 14 27.3 -0.8
NKME  Niksic             85.31 348⇑iP      P        05 14 27.6 -0.8
PVY   Plav               85.34 347⇑iP      P        05 14 27.5 -1.1
PDSI  Padang             85.36 263  P      P        05 14 27.3 -1.6
      comp=Z,5µmcomp=Z,156nm,0.9s
BR131 Keskin Array S     85.36 336  P      P        05 14 28.7 -0.1
      SNR=62
BRTR  Keskin Array B     85.36 336  P      P        05 14 28.5 -0.3
      comp=Z,174nm,0.8s,baz=45,slow=2.3,SNR=361
BRTR                                PKPPKP P'P'df   05 40 40.0 -5.0
      comp=Z,0.5nm,0.7s,baz=149,slow=3.0,SNR=3.8
BRTR                                LR     LR       05 57 53.3
      comp=Z,4µm,19.6s,baz=40,slow=39
      comp=Z,174nm,0.8s
BRTR  Keskin Array B     85.36 336ceP      P        05 14 28.5 -0.3
BRTR                                pmax   pmax
      comp=Z,179nm,0.8s
KDZ   Kurdzhali          85.39 343  P      P        05 14 28.2 -0.5
KDZ   Kurdzhali          85.39 343 i P     P        05 14 28.2 -0.5
SNSI  Sinabang, Aceh     85.39 268  P      P        05 14 29.3 +0.2
      comp=Z,6µmcomp=Z,262nm,1.4s
SC01  Santiago de lo     85.42  65  IAmb   IAmb     05 14 56.4
      comp=Z,89nm,0.9s
RZN   Rozhen             85.44 343  P      P        05 14 27.9 -1.3
ANTO  Ankara             85.44 337  P      P        05 14 29.5 +0.4
ANTO                                S      SKSac    05 24 43.3 -8.6
ANTO  Ankara             85.44 337  P      P        05 14 29.3 +0.2
ANTO  Ankara             85.44 337 ⇓P      P        05 14 30.0 +0.9
ANTO  Ankara             85.44 337  P      P        05 14 30.0 +0.9
ANTO  Ankara             85.44 337  P      P        05 14 29.3 +0.2
TREB  Trebinje           85.44 348 eP      P        05 14 28.2 -0.8
GSI   Gunungsitoli       85.45 266  P      P        05 14 29.2 -0.2
      comp=Z,5µmcomp=Z,123nm,1.3s
SDDR  Presa de Saban     85.46  65  IAmb   IAmb     05 14 47.5
      comp=Z,45nm,1.0s
SDDR                                IAMs_20 IAMs_20 05 53 35.3
      comp=Z,5µm,20.0s
ARMA  Armidale           85.49 206  IAmb   IAmb     05 14 46.7
      comp=Z,60nm,0.9s
CEME  Cevo               85.54 348⇑iP      P        05 14 28.7 -0.8
KKB   Krupnik            85.58 344  P      P        05 14 29.4 -0.3
KKB   Krupnik            85.58 344 i P     P        05 14 29.5 -0.2
PDG   Podgorica          85.60 347 ⇓P      P        05 14 29.7 -0.1
PDG   Podgorica          85.60 347⇑iP      P        05 14 29.1 -0.6
ASAR  Alice Springs      85.63 223  P      P        05 14 30.9 +0.9
      comp=Z,34nm,0.8s,baz=29,slow=4.7,SNR=166
ASAR                                PKKPbc PKKPbc   05 32 32.7 +1.2
      comp=Z,0.8nm,0.6s,baz=199,slow=2.0,SNR=4.7
ASAR                                PKPPKP P'P'df   05 40 39.1 +3.8
      comp=Z,0.7nm,0.8s,baz=204,slow=3.5,SNR=5.3
ASAR                                LR     LR       05 49 48.0
      comp=Z,4µm,20.3s,baz=28,slow=34
      comp=Z,34nm,0.8s
ASAR  Alice Springs      85.63 223  P      P        05 14 29.9 -0.1
KRJI  Kerinci            85.65 261  P      P        05 14 30.8 +0.3
KLSI                     85.65 257  P      P        05 14 29.0 -1.3
      comp=Z,6µmcomp=Z,3µmcomp=Z,192nm,1.1s
HCY   Herceg Novi        85.69 348⇑iP      P        05 14 29.6 -0.6
KLI   Kotabumi           85.71 257  P      P        05 14 29.6 -1.0
      comp=Z,5µmcomp=Z,158nm,0.9s
SKO   Skopje             85.73 346 i P     P        05 14 31.1 +0.7
MMB   Musomishta         85.76 344  P      P        05 14 30.3 -0.3
MMB   Musomishta         85.76 344 i P     P        05 14 30.4 -0.2
BUM   Brajici-Budva      85.78 347⇑iP      P        05 14 29.6 -1.1
RDO   Rodhopi            85.82 342  P      P        05 14 30.1 -0.7
MDSI  Maura Dua          85.83 258  P      P        05 14 28.8 -2.4
      comp=Z,2µmcomp=Z,85nm,1.0s
KIRS  Kirsehir-Merke     85.85 336 ⇑P      P        05 14 31.3 +0.1
DRME  Dracevica, Mon     85.85 347⇑iP      P        05 14 28.9 -2.1
DBJI  Dramaga            85.88 254  P      P        05 14 29.6 -1.9
      comp=Z,81nm,1.1s
MASI  Maura Aman, Be     85.98 260  P      P        05 14 30.9 -1.1
      comp=Z,4µmcomp=Z,203nm,1.3s
BBJI  Bungbulang         86.05 253  P      P        05 14 30.2 -2.2
ULC   Ulcinj             86.06 347⇑iP      P        05 14 31.4 -0.7
ENEZ  Enez               86.09 342  P      P        05 14 34.5 +2.3
KAVA  Kavala             86.15 343  P      P        05 14 31.3 -1.2
PHP   Peshkopia          86.16 346  P      P        05 14 31.4 -1.2
VAY   Valandovo          86.18 345 i P     P        05 14 33.2 +0.6
SRS   Serrai             86.20 344  P      P        05 14 31.7 -1.1
KNT   Kendrikon          86.28 344  P      P        05 14 32.1 -1.1
LWLI  Liwa               86.32 257  P      P        05 14 32.3 -1.5
SKJI  Sukabumi           86.36 254  P      P        05 14 31.5 -2.3
      comp=Z,4µmcomp=Z,164nm,1.1s
AQU   L'Aquila           86.36 352  P      P        05 14 33.2 -0.3
AQU   L'Aquila           86.36 352⇑iP      P        05 14 33.6  0.0
KASI  Kota Agung         86.45 257  P      P        05 14 32.4 -1.8
      comp=Z,77nm,1.5s
SMTH  Samothraki Isl     86.47 342  P      P        05 14 32.6 -1.5
THAS  Thassos island     86.50 343  P      P        05 14 33.3 -0.9
SOH   Sokhos             86.53 344  P      P        05 14 33.4 -1.0
SISI  Saibi              86.54 264  P      P        05 14 34.4 -0.3
      comp=Z,7µmcomp=Z,4µmcomp=Z,152nm,2.3s
GRG   Griva              86.56 345  P      P        05 14 34.0 -0.6
POO   Poona              86.59 295 eP      P        05 14 35.0  0.0
POO                                 IAmb   IAmb     05 14 36.9
      comp=Z,62nm,0.7s
CEST  Esterri de Car     86.64   1  IAmb   IAmb     05 14 38.1
      comp=Z,93nm,1.0s
OHR   Ohrid              86.67 346 i P     P        05 14 35.3 +0.2
GADA  Gvkgeada           86.67 342  P      P        05 14 34.3 -0.8
EJON  La Jonquera        86.79 359  P      P        05 14 35.1 -0.5
HORT  Hortiatis          86.79 344  P      P        05 14 34.6 -1.2
BALB  Balikesir          86.80 340  IAmb   IAmb     05 14 37.9
      comp=Z,56nm,0.8s
PGAV  Gavieira, Arco     86.85   8 eP      P        05 14 36.0 -0.1
PGAV                               i IAmb  IAmb     05 14 39.5
      comp=Z,77nm,1.3s
PGAV                               ePP     PP       05 18 03.7 +5.8
PGAV                               eS      S        05 25 13.2 +1.4
PGAV                               eLR     LR       05 43 19.9
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PGAV				*i* IAMs_20	IAMs_20	05 55 04.8	
	comp=Z,3µm,22.0s						
OUR	**Ouranopolis**	**86.89**	**343**	P	**P**	**05 14 35.4**	**-0.7**
EZN	**Ezine**	**86.94**	**341**	P	**P**	**05 14 35.6**	**-0.8**
PLG	**Polygyros**	**86.95**	**344**	P	**P**	**05 14 36.1**	**-0.4**
ECAL	**Calabor**	**86.99**	**6**	P	**P**	**05 14 35.8**	**-1.0**
PPSI	**Pulau Pagai**	**87.08**	**262**	P	**P**	**05 14 37.8**	**+0.5**
	comp=Z,4µmcomp=Z,148nm,1.3s						
LIA	**Limnos Island**	**87.09**	**342**	P	**P**	**05 14 36.8**	**-0.3**
PCAB	**Cabril**	**87.12**	**7**	*e*P	**P**	**05 14 37.2**	**-0.1**
PBRG	**Braganca**	**87.13**	**6**	*e*P	**P**	**05 14 37.0**	**-0.3**
PBRG				*i* IAmb	IAmb	05 15 04.2	
	comp=Z,58nm,1.8s						
KBN	**Korca**	**87.15**	**346**	P	**P**	**05 14 36.6**	**-0.9**
CORI	**Orista**	**87.27**	**360**	IAmb	IAmb	05 14 41.0	
	comp=Z,55nm,0.9s						
KZN	**Kozani**	**87.30**	**345**	P	**P**	**05 14 36.8**	**-1.5**
NEST	**Nestorio**	**87.31**	**346**	P	**P**	**05 14 37.3**	**-1.0**
LIT	**Litokhoron**	**87.38**	**344**	P	**P**	**05 14 37.0**	**-1.5**
LIT	**Litokhoron**	**87.38**	**344**	IAmb	IAmb	05 14 39.8	
	comp=Z,68nm,0.7s						
POLO	**Lamas de Olo**	**87.48**	**7**	*e*P	**P**	**05 14 38.7**	**-0.4**
POLO				*i* IAmb	IAmb	05 14 40.7	
	comp=Z,39nm,1.0s						
VLO	**Vlora**	**87.49**	**347**	P	**P**	**05 14 38.7**	**-0.3**
PRK	**Paraskevi**	**87.51**	**341**	P	**P**	**05 14 38.3**	**-0.9**
PENT	**Pentalofos**	**87.51**	**345**	P	**P**	**05 14 38.6**	**-0.7**
PAOL	**Paolisi**	**87.55**	**350**	IAmb	IAmb	05 14 47.8	
	comp=Z,50nm,1.0s						
PVRL	**Vila Real**	**87.58**	**7**	*e*P	**P**	**05 14 39.4**	**-0.1**
PVRL				*i* IAmb	IAmb	05 14 42.6	
	comp=Z,68nm,2.2s						
SIGR	**SIGRI**	**87.62**	**342**	P	**P**	**05 14 37.5**	**-2.2**
PTO	**Porto**	**87.64**	**8**	*e*P	**P**	**05 14 39.6**	**-0.1**
EGSI	**Enggano, Bengk**	**87.68**	**259**	P	**P**	**05 14 40.2**	**0.0**
	comp=Z,5µmcomp=Z,4µmcomp=Z,152nm,1.6s						
MATE	**Matera**	**87.69**	**349**	⇑P	**P**	**05 14 39.4**	**-0.6**
KPRO	**Kipourio**	**87.71**	**345**	P	**P**	**05 14 38.9**	**-1.3**
MVO	**Moncorvo**	**87.75**	**7**	*e*P	**P**	**05 14 39.6**	**-0.7**
MVO				*i* IAmb	IAmb	05 14 41.8	
	comp=Z,85nm,0.9s						
MVO				*e*S	**S**	**05 25 22.9**	**+2.6**
MVO				*e*SS	**SS**	**05 31 12.0**	**+6.6**
MVO				*e*LR	LR	05 44 28.9	
MVO				*i* IAMs_20	IAMs_20	06 05 39.2	
	comp=Z,4µm,18.0s						
MANT	**Manisa**	**87.75**	**339**	IAmb	IAmb	05 14 41.6	
	comp=Z,39nm,1.0s						
NGCH	**Negor - Chabah**	**87.78**	**309**	P	**P**	**05 14 43.0**	**+2.4**
	SNR=10						
ISP	**Isparta**	**87.94**	**338**	*ce*P	**P**	**05 14 40.7**	**-0.7**
ISP				pmax	pmax		
	comp=Z,80nm,0.8s						
NEO	**Neokhori**	**88.03**	**344**	P	**P**	**05 14 40.1**	**-1.5**
JAN	**Janina**	**88.08**	**346**	P	**P**	**05 14 41.4**	**-0.5**
PVIS	**Viseu**	**88.12**	**7**	*e*P	**P**	**05 14 41.9**	**-0.2**
PRMD	**Pramanda**	**88.17**	**345**	P	**P**	**05 14 41.8**	**-0.6**
BLCB	**Balcova**	**88.18**	**341**	P	**P**	**05 14 40.6**	**-1.7**
KEK	**Kerkira**	**88.19**	**346**	P	**P**	**05 14 46.1**	**+3.7**
IGT	**Igoumenitsa**	**88.29**	**346**	P	**P**	**05 14 41.7**	**-1.2**
TETR	**Tetrakomo, Epi**	**88.32**	**345**	P	**P**	**05 14 42.7**	**-0.4**
CUC	**Castrocucco**	**88.44**	**349**	IAMs_20	IAMs_20	05 58 42.2	
	comp=Z,6µm,20.0s						
AGG	**Agios Georgios**	**88.46**	**344**	P	**P**	**05 14 42.3**	**-1.5**
MTE	**Manteigas**	**88.47**	**7**	IAMs_20	IAMs_20	06 01 09.8	
	comp=Z,3µm,19.0s						
MTE	**Manteigas**	**88.47**	**7**	*e*P	**P**	**05 14 43.3**	**-0.4**
MTE				*i* IAmb	IAmb	05 14 45.2	
	comp=Z,93nm,0.9s						
MTE				*e*PP	**PP**	**05 18 14.4**	**+3.5**
MTE				*e*S	**S**	**05 25 28.9**	**+1.7**
MTE				*e*SS	SS	05 31 27.9	+12
MTE				*e*LR	LR	05 44 03.1	
MTE				*i* IAMs_20	IAMs_20	06 06 41.5	
	comp=Z,3µm,20.0s						
MAKR	**Makrakomi, Fth**	**88.50**	**344**	P	**P**	**05 14 42.3**	**-1.7**
KYMI	**Kymi, Euboea I**	**88.52**	**343**	P	**P**	**05 14 42.4**	**-1.6**
EVR	**Evrytania**	**88.65**	**345**	P	**P**	**05 14 43.0**	**-1.7**
AXAR	**Agios Charalam**	**88.65**	**344**	P	**P**	**05 14 42.5**	**-2.2**
ATAL	**Atalanti**	**88.66**	**344**	P	**P**	**05 14 42.1**	**-2.5**
TOZ	**Tahuroa Road**	**88.67**	**185**	IAmb	IAmb	05 15 04.1	
	comp=Z,111nm,1.6s						
LKR	**Lokris**	**88.71**	**344**	P	**P**	**05 14 42.3**	**-2.5**
PCAS	**Casmilo, Conde**	**88.73**	**8**	*e*P	**P**	**05 14 44.6**	**-0.4**
PCAS				*i* IAmb	IAmb	05 14 45.5	
	comp=Z,73nm,0.9s						
AMPL	**Ampelaki**	**88.74**	**345**	P	**P**	**05 14 43.2**	**-1.8**
UCM	**Universidad Co**	**88.82**	**4**	P	**P**	**05 14 45.1**	**-0.3**
TSLK	**Tsoukalades, L**	**88.93**	**345**	P	**P**	**05 14 44.8**	**-1.1**
ANX	**Ano Chora**	**88.95**	**344**	P	**P**	**05 14 44.3**	**-1.9**
LKD2	**Lefkada island**	**88.96**	**345**	P	**P**	**05 14 44.6**	**-1.4**
GOA	**Goa**	**89.02**	**294**	*e*P	**P**	**05 14 45.9**	**-0.7**
GOA				IAmb	IAmb	05 14 48.0	
	comp=Z,49nm,1.0s						
PCBR	**Castelo Branco**	**89.03**	**7**	*e*P	**P**	**05 14 45.5**	**-0.8**
PCBR				*i* IAmb	IAmb	05 14 46.7	
	comp=Z,53nm,1.0s						
NYDR	**Nydri-Lefkada**	**89.03**	**345**	P	**P**	**05 14 45.1**	**-1.3**
SJG	**San Juan**	**89.06**	**62**	LR	LR	05 58 23.8	
	comp=Z,3µm,18.8s,baz=324,slow=38						
SJG	**San Juan**	**89.06**	**62**	P	**P**	**05 14 47.9**	**+1.1**
SJG				IAmb	IAmb	05 14 50.5	
	comp=Z,64nm,0.8s						
SJG	**San Juan**	**89.06**	**62**	P	**P**	**05 14 47.9**	**+1.1**
SJG				pmax	pmax		
	comp=Z,64nm,0.8s						
SJG				MLR	MLR		
	comp=Z,6µm,21.0s						
SJG	**San Juan**	**89.06**	**62**	P	**P**	**05 14 46.7**	**-0.1**
	comp=Z,49nm,1.6s						
DRAG	**Dragano-Lefkad**	**89.08**	**346**	P	**P**	**05 14 45.3**	**-1.3**
DION	**Dionisos Attik**	**89.09**	**343**	P	**P**	**05 14 44.6**	**-2.1**
SERG	**Sergoula**	**89.10**	**344**	P	**P**	**05 14 44.7**	**-2.1**
ELL	**Elmali**	**89.11**	**338**	IAmb	IAmb	05 14 52.9	
	comp=Z,51nm,0.8s						
KALE	**Kalithea**	**89.11**	**344**	P	**P**	**05 14 45.9**	**-0.9**
YER	**Yerkesik**	**89.11**	**339**	P	**P**	**05 14 45.4**	**-1.4**
EFP	**Efpalio**	**89.11**	**344**	P	**P**	**05 14 45.4**	**-1.3**
URZ	**Urewera**	**89.12**	**184**	LR	LR	05 49 08.3	
	comp=Z,6µm,20.5s,baz=45,slow=32						
EVGI	**Lefkada island**	**89.13**	**345**	P	**P**	**05 14 45.8**	**-1.0**
TIP	**Timpagrande**	**89.13**	**349**	⇓P	**P**	**05 14 46.8**	**-0.2**
PTL	**Penteli**	**89.13**	**343**	P	**P**	**05 14 45.0**	**-1.9**
HUMP	**Col San Antoni**	**89.20**	**62**	IAmb	IAmb	05 14 50.4	
	comp=Z,68nm,0.9s						
PSARD	**Sardoal**	**89.21**	**8**	*e*P	**P**	**05 14 46.6**	**-0.6**
PSARD				*i* IAmb	IAmb	05 14 48.3	
	comp=Z,75nm,0.9s						
PSBE	**So Bento**	**89.24**	**8**	*e*P	**P**	**05 14 47.0**	**-0.3**
FSK	**Fiskardo**	**89.30**	**345**	P	**P**	**05 14 45.3**	**-2.3**
LTK	**Loutraki**	**89.32**	**344**	P	**P**	**05 14 45.4**	**-2.4**
MAHO	**Mahon**	**89.33**	**358**	P	**P**	**05 14 47.1**	**-0.6**
MAHO	**Mahon**	**89.33**	**358**	IAMs_20	IAMs_20	06 01 49.6	
	comp=Z,4µm,19.0s						
VLY	**Voula,Athens**	**89.34**	**343**	P	**P**	**05 14 46.1**	**-1.7**
ESBB	**Sonseca Array**	**89.42**	**5**	IAmb	IAmb	05 14 49.6	
	comp=Z,35nm,0.8s						
ESDC	**Sonseca Array**	**89.42**	**5**	P	**P**	**05 14 47.3**	**-1.0**
	comp=Z,44nm,1.0s,baz=345,slow=4.1,SNR=123						
ESDC				LR	LR	05 56 13.2	
	comp=Z,3µm,19.9s,baz=353,slow=36						
	comp=Z,44nm,1.0s						
ESDC	**Sonseca Array**	**89.42**	**5**	P	**P**	**05 14 47.2**	**-1.0**
ESDC				IAmb	IAmb	05 14 49.6	
	comp=Z,30nm,0.8s						
AXS	**Araxos**	**89.43**	**345**	P	**P**	**05 14 46.5**	**-1.7**
PMRV	**Marv??o**	**89.44**	**7**	*e*P	**P**	**05 14 47.6**	**-0.7**
PMRV				*i* IAmb	IAmb	05 14 50.1	
	comp=Z,41nm,1.0s						
PMRV				*e*PP	**PP**	**05 18 26.0**	**+7.4**
PMRV				*e*S	**S**	**05 25 38.4**	**+2.0**
PMRV				*e*LR	LR	05 44 23.4	
PMRV				*i* IAMs_20	IAMs_20	06 06 41.6	
	comp=Z,3µm,18.0s						
KLV	**Kalavryta, Ach**	**89.44**	**344**	P	**P**	**05 14 46.6**	**-1.8**
ETOS	**Mallorca**	**89.47**	**359**	P	**P**	**05 14 48.9**	**+0.5**
HIZ	**Hauiti**	**89.49**	**186**	IAMs_20	IAMs_20	05 50 43.3	
	comp=Z,5µm,20.0s						
VSL	**Villasalto**	**89.51**	**354**	IAmb	IAmb	05 14 50.1	
	comp=Z,74nm,0.9s						
VSL				IAMs_20	IAMs_20	06 02 06.6	
	comp=Z,4µm,20.0s						
GUR	**Goura**	**89.52**	**344**	P	**P**	**05 14 46.9**	**-1.9**
PAB	**San Pablo**	**89.53**	**5**	P	**P**	**05 14 47.0**	**-1.8**
PAB	**San Pablo**	**89.53**	**5**	IAMs_20	IAMs_20	05 56 14.8	
	comp=Z,4µm,21.0s						
PAB	**San Pablo**	**89.53**	**5**	P	**P**	**05 14 48.7**	**-0.1**
DMLN	**Damoulianata-K**	**89.55**	**346**	P	**P**	**05 14 47.5**	**-1.3**
RLS	**Riolos of Patr**	**89.55**	**345**	P	**P**	**05 14 47.5**	**-1.3**
SHME	**Shamm**	**89.57**	**313**	P	**P**	**05 14 48.1**	**-1.0**
SHME	**Shamm**	**89.57**	**313**	*i* P	**P**	**05 14 47.7**	**-1.4**
	SNR=8.8						
VLS	**Valsamata**	**89.57**	**345**	P	**P**	**05 14 47.6**	**-1.3**
BANOM	**Banah**	**89.60**	**313**	P	**P**	**05 14 48.1**	**-1.2**
BANOM	**Banah**	**89.60**	**313**	*i* P	**P**	**05 14 48.0**	**-1.2**
	SNR=15						
DRO	**Drossia**	**89.61**	**345**	P	**P**	**05 14 47.9**	**-1.2**
RTZL	**Ratzakli, Kefa**	**89.64**	**345**	P	**P**	**05 14 48.0**	**-1.2**
PMTG	**Montargil**	**89.73**	**8**	*e*P	**P**	**05 14 49.0**	**-0.6**
PMTG				*i* IAmb	IAmb	05 15 09.0	
	comp=Z,53nm,1.6s						
PMAFR	**Mafra**	**89.75**	**9**	*e*P	**P**	**05 14 49.3**	**-0.4**
ORTH	**Orthonies,Zaky**	**89.87**	**345**	P	**P**	**05 14 49.7**	**-0.6**
CSS	**Mathiatis**	**89.93**	**335**	IAmb	IAmb	05 14 53.9	
	comp=Z,70nm,1.0s						
CSS				IAMs_20	IAMs_20	06 00 55.7	
	comp=Z,3µm,22.0s						
STKA	**Stephens Creek**	**89.98**	**213**	P	**P**	**05 14 51.7**	**+1.1**
	comp=Z,46nm,0.9s,baz=9.8,slow=7.0,SNR=36						
STKA				LR	LR	05 52 10.0	
	comp=Z,7µm,20.2s,baz=16,slow=33						
	comp=Z,46nm,0.9s						
PESTR	**Estremoz**	**89.98**	**7**	IAmb	IAmb	05 14 51.9	
	comp=Z,70nm,0.9s						
PESTR	**Estremoz**	**89.98**	**7**	*e*P	**P**	**05 14 50.3**	**-0.6**
PESTR				*i* IAmb	IAmb	05 14 52.4	
	comp=Z,61nm,0.9s						
LTHK	**Lithakia**	**89.99**	**345**	P	**P**	**05 14 49.3**	**-1.5**
LIS	**Lisbon**	**90.00**	**9**	*e*P	**P**	**05 14 50.6**	**-0.3**
LIS				*e*SKSac	**SKSac**	**05 25 19.4**	**0.0**
LIS				IAMs_20	IAMs_20	05 50 55.1	
	comp=N,10µm,35.2s						
LIS	**Lisbon**	**90.00**	**9**	*e*P	**P**	**05 14 51.6**	**+0.8**
LIS				*i* IAmb	IAmb	05 14 54.3	
	comp=N,235nm,1.8s						
LIS	**Lisbon**	**90.00**	**9**	*e*P	**P**	**05 14 50.6**	**-0.3**
LIS				*e*		05 25 19.4	
PARRA	**Arraiolos**	**90.00**	**8**	*e*P	**P**	**05 14 50.2**	**-0.7**
PARRA				*i* IAmb	IAmb	05 14 53.8	
	comp=N,33nm,2.0s						
VLX	**Vlachokerasia**	**90.06**	**344**	P	**P**	**05 14 49.4**	**-2.0**
MDH	**Madha**	**90.14**	**313**	P	**P**	**05 14 49.5**	**-2.3**
MDH				S	**SKSac**	**05 25 12.1**	**-8.5**
MDH	**Madha**	**90.14**	**313**	*i* P	**P**	**05 14 49.4**	**-2.3**
	SNR=9.2						
MASF	**Masafi**	**90.14**	**313**	P	**P**	**05 14 51.2**	**-0.7**
	SNR=8.2						
CEL	**Celeste**	**90.14**	**349**	IAMs_20	IAMs_20	06 01 08.3	
	comp=Z,3µm,20.0s						
MSFE	**Esma-Masafi**	**90.15**	**313**	*i* P	**P**	**05 14 50.4**	**-1.5**
	SNR=10						
UMQ	**Umm Al-Quwin**	**90.24**	**313**	P	**P**	**05 14 52.1**	**-0.1**
MOE	**Montemor**	**90.26**	**8**	*e*P	**P**	**05 14 51.8**	**-0.3**
MOE				*i* IAmb	IAmb	05 14 53.8	
	comp=Z,69nm,1.5s						
MBWA	**Marble Bar**	**90.27**	**236**	P	**P**	**05 14 51.7**	**-0.4**
MBWA				IAmb	IAmb	05 14 54.4	
	comp=Z,65nm,0.9s						
ITM	**Ithomi**	**90.33**	**344**	P	**P**	**05 14 50.6**	**-1.9**
ITM	**Ithomi**	**90.33**	**344**	IAmb	IAmb	05 14 53.0	
	comp=Z,56nm,1.0s						
UOSS	**Minazif**	**90.48**	**313**	P	**P**	**05 14 51.8**	**-1.6**
UOSS	**Minazif**	**90.48**	**313**	P	**P**	**05 14 51.2**	**-2.2**
UOSS				IAmb	IAmb	05 14 53.6	
	comp=Z,40nm,0.7s						
PSA00	**Pilbara Seismi**	**90.55**	**235**	P	**P**	**05 14 53.2**	**-0.3**
PSA00				IAmb	IAmb	05 14 55.7	
	comp=Z,54nm,1.1s						
PSA00	**Pilbara Seismi**	**90.55**	**235**	IAmb	IAmb	05 14 55.8	
	comp=Z,68nm,1.1s						
VLI	**Veliai**	**90.60**	**343**	P	**P**	**05 14 51.9**	**-1.9**
MALK	**Mahakanadarawa**	**90.61**	**284**	P	**P**	**05 14 53.9**	**-0.2**
HATD	**Hatta, Dubai**	**90.62**	**313**	P	**P**	**05 14 53.3**	**-0.8**
	SNR=16						
HATD	**Hatta, Dubai**	**90.62**	**313**	*i* P	**P**	**05 14 53.0**	**-1.1**
	SNR=11						
PYL	**PYLOS**	**90.63**	**344**	P	**P**	**05 14 52.0**	**-1.9**
NAZ	**Nazwa, Dubai**	**90.70**	**313**	P	**P**	**05 14 52.9**	**-1.4**
	SNR=11						
NAZ	**Nazwa, Dubai**	**90.70**	**313**	*i* P	**P**	**05 14 53.0**	**-1.4**
	SNR=24						
PBAR	**Barrancos**	**90.72**	**7**	*e*P	**P**	**05 14 53.7**	**-0.6**
PBAR				*i* IAmb	IAmb	05 14 56.1	
	comp=Z,58nm,1.0s						
ASHO	**Ashiyiah**	**90.78**	**313**	P	**P**	**05 14 53.5**	**-1.3**
	SNR=13						
ASHO	**Ashiyiah**	**90.78**	**313**	*i* P	**P**	**05 14 53.1**	**-1.7**
	SNR=20						
WSAR	**Wadi Sarin**	**90.79**	**310**	LR	LR	05 59 09.1	
	comp=Z,35nm,21.7s,baz=87,slow=38						
WSAR	**Wadi Sarin**	**90.79**	**310**	P	**P**	**05 14 55.0**	**+0.1**
	SNR=13						
BIDO	**Bidbid**	**90.79**	**310**	P	**P**	**05 14 54.3**	**-0.5**
	SNR=10						
PBEJ	**Beja**	**90.80**	**8**	*e*P	**P**	**05 14 54.6**	**0.0**
PBEJ				*i* IAmb	IAmb	05 15 11.7	
	comp=Z,48nm,1.9s						
CAN	**Canberra**	**90.84**	**206**	IAMs_20	IAMs_20	05 48 31.6	
	comp=Z,3µm,21.0s						
KARP	**Karpathos**	**90.88**	**340**	P	**P**	**05 14 53.2**	**-1.9**
KARP	**Karpathos**	**90.88**	**340**	IAMs_20	IAMs_20	06 03 29.0	
	comp=Z,5µm,20.0s						
ARGC	**Ariguani, Magd**	**90.92**	**73**	P	**P**	**05 14 54.8**	**-0.7**
	comp=Z,4µmcomp=Z,2µmcomp=Z,42nm,1.0s						
FAQ	**Al Faqa, Dubai**	**90.94**	**313**	P	**P**	**05 14 54.1**	**-1.4**
	SNR=8.5						
FAQ	**Al Faqa, Dubai**	**90.94**	**313**	*i* P	**P**	**05 14 54.1**	**-1.4**
	SNR=17						
MESJ	**Messejana**	**90.95**	**8**	*e*P	**P**	**05 14 55.1**	**-0.3**
MESJ				*e*SKSac	**SKSac**	**05 25 24.8**	**-0.1**
MESJ				IAMs_20	IAMs_20	05 49 54.8	
	comp=Z,2µm,23.1s						
MESJ	**Messejana**	**90.95**	**8**	*e*P	**P**	**05 14 55.1**	**-0.3**
MESJ				*e*		05 25 24.8	
SOHO	**SOHO**	**91.03**	**312**	P	**P**	**05 14 54.8**	**-1.1**
SOHO	**SOHO**	**91.03**	**312**	*i* P	**P**	**05 14 54.1**	**-1.8**
	SNR=9.8						
SABA	**Saba**	**91.06**	**60**	IAMs_20	IAMs_20	05 55 60.0	
	comp=Z,4µm,21.0s						
VAE	**Valguarnera**	**91.08**	**350**	LR	LR	06 00 00.2	
	comp=Z,5µm,19.4s,baz=22,slow=38						
HOQ	**Hoqain**	**91.13**	**311**	P	**P**	**05 14 55.5**	**-1.0**
	SNR=11						
ASUD	**Al Ashush, Dub**	**91.16**	**313**	P	**P**	**05 14 56.1**	**-0.4**
	SNR=13						
ASUD	**Al Ashush, Dub**	**91.16**	**313**	*i* P	**P**	**05 14 55.5**	**-1.1**
	SNR=32						
PCVE	**Castro Verde**	**91.17**	**8**	*e*P	**P**	**05 14 56.4**	**0.0**
PCVE				*i* IAmb	IAmb	05 15 05.5	
	comp=Z,65nm,1.8s						
MMAI	**Mount Meron Ar**	**91.18**	**332**	P	**P**	**05 14 56.0**	**-0.6**
	comp=Z,42nm,0.8s,baz=10,slow=5.1,SNR=26						
MMAI				LR	LR	06 02 03.0	
	comp=Z,4µm,18.1s,baz=16,slow=40						
	comp=Z,42nm,0.8s						
PTEO	**Sao Teotonio**	**91.20**	**8**	*e*P	**P**	**05 14 56.7**	**+0.2**
SMDO	**Samad**	**91.22**	**310**	P	**P**	**05 14 56.7**	**-0.3**
	SNR=11						
SEUS	**St. Eustatius**	**91.30**	**60**	IAMs_20	IAMs_20	06 01 18.5	
	comp=Z,3µm,20.0s						
JLN	**Jalan Bani Buh**	**91.33**	**309**	P	**P**	**05 14 57.4**	**+0.1**
	SNR=9.6						
AJN	**Ajban**	**91.38**	**313**	P	**P**	**05 14 56.6**	**-0.9**
	SNR=9.3						
AJN	**Ajban**	**91.38**	**313**	*i* P	**P**	**05 14 55.9**	**-1.6**
	SNR=8.1						
PALK	**Pallekele**	**91.39**	**283**	LR	LR	05 59 10.3	
	comp=Z,4µm,20.6s,baz=24,slow=38						
PALK	**Pallekele**	**91.39**	**283**	P	**P**	**05 14 59.0**	**+1.2**
PALK	**Pallekele**	**91.39**	**283**	P	**P**	**05 14 57.8**	**0.0**
PALK				IAmb	IAmb	05 15 02.0	
	comp=Z,38nm,0.9s						
PALK	**Pallekele**	**91.39**	**283**	IAMs_20	IAMs_20	05 59 19.5	
	comp=Z,4µm,21.0s						
PALK	**Pallekele**	**91.39**	**283**	P	**P**	**05 14 58.6**	**+0.8**
PALK	**Pallekele**	**91.39**	**283**	P	**P**	**05 14 57.8**	**0.0**
PALK				pmax	pmax		
	comp=Z,38nm,0.9s						
PALK				MLR	MLR		
	comp=Z,4µm,21.0s						
PVAQ	**Vaqueiros**	**91.43**	**8**	*e*P	**P**	**05 14 57.4**	**-0.2**
PVAQ				*e*PP	**PP**	**05 18 40.1**	**+5.8**
PVAQ				*e*S	**S**	**05 25 50.6**	**-4.0**
PVAQ				*e*LR	LR	05 45 59.4	
PVAQ				*i* IAMs_20	IAMs_20	06 07 43.8	
	comp=Z,3µm,18.0s						
MORF	**Marmelete**	**91.44**	**8**	*e*P	**P**	**05 14 57.4**	**-0.3**
MORF				*e*SKSac	**SKSac**	**05 25 28.1**	**+0.2**
MORF				IAMs_20	IAMs_20	05 51 33.9	
	comp=Z,7µm,27.8s						
MORF	**Marmelete**	**91.44**	**8**	*e*P	**P**	**05 14 57.6**	**-0.1**
MORF	**Marmelete**	**91.44**	**8**	*e*P	**P**	**05 14 57.4**	**-0.3**
MORF				*e*		05 25 28.1	
ALNE	**Al Ain**	**91.46**	**312**	P	**P**	**05 14 57.6**	**-0.4**
	SNR=24						
ALNE	**Al Ain**	**91.46**	**312**	*i* P	**P**	**05 14 57.5**	**-0.4**
	SNR=46						
ASF	**Jabal al Asfar**	**91.52**	**331**	LR	LR	06 02 55.1	
	comp=Z,8µm,18.9s,baz=21,slow=40						
PBDV	**Barranco-do-Ve**	**91.57**	**8**	*e*P	**P**	**05 14 58.2**	**-0.1**
PBDV				*i* IAmb	IAmb	05 14 60.0	
	comp=Z,106nm,1.7s						
PFVI	**Vila Bisbo**	**91.60**	**9**	*e*P	**P**	**05 14 58.7**	**+0.4**
IDI	**Anoyia**	**91.61**	**341**	LR	LR	06 01 50.9	
	comp=Z,3µm,18.4s,baz=20,slow=39						
IDI	**Anoyia**	**91.61**	**341**	P	**P**	**05 14 56.6**	**-2.0**
CART	**Cartagena**	**91.61**	**2**	P	**P**	**05 14 57.8**	**-0.6**
CART	**Cartagena**	**91.61**	**2**	IAMs_20	IAMs_20	05 56 04.3	
	comp=Z,5µm,21.0s						
IMMV	**Iera Moni Meta**	**91.62**	**342**	P	**P**	**05 14 56.6**	**-1.9**
ARQ	**Araqi**	**91.71**	**311**	P	**P**	**05 14 58.6**	**-0.5**
	SNR=13						
JMDO	**Jabal Madar**	**91.78**	**310**	P	**P**	**05 14 59.0**	**-0.5**
	SNR=12						
JRN	**Qarnain Island**	**92.01**	**315**	P	**P**	**05 14 59.5**	**-0.9**
	SNR=12						
SHMA	**Al-Shehemyia**	**92.04**	**317**	P	**P**	**05 14 59.6**	**-1.0**
	SNR=5.6						
CBOGS	**Bougous**	**92.35**	**355**	P	**P**	**05 15 01.7**	**-0.1**
BHW	**Baring Head**	**92.37**	**185**	IAMs_20	IAMs_20	05 49 29.6	
	comp=Z,5µm,22.0s						
CMAH	**Djebel Manchou**	**92.48**	**356**	P	**P**	**05 15 03.9**	**+1.4**
MZWR	**Madinat Zayed**	**92.57**	**314**	P	**P**	**05 15 02.5**	**-0.5**
CNIL	**Conil**	**92.58**	**6**	P	**P**	**05 15 02.8**	**-0.1**
WDD	**Wied Dalam**	**92.69**	**350**	IAMs_20	IAMs_20	06 02 25.8	
	comp=Z,3µm,21.0s						
TRD	**Trivandrum**	**92.70**	**287**	*e*P	**P**	**05 15 05.0**	**+1.2**
TRD				IAmb	IAmb	05 15 05.8	
	comp=Z,67nm,0.9s						
EBNH	**Beni Haoua**	**92.72**	**0**	P	**P**	**05 15 03.9**	**+0.4**
GHAJ	**Ghor Haditha**	**92.73**	**332**	IAmb	IAmb	05 15 04.9	
	comp=Z,39nm,0.9s						
OCAC	**Ocana**	**92.75**	**73**	P	**P**	**05 15 03.0**	**-1.2**
	comp=Z,3µmcomp=Z,2µmcomp=Z,58nm,0.7s						
CTCHA	**Tamokra**	**92.78**	**358**	P	**P**	**05 15 03.6**	**-0.2**
GHWR	**Ruwais**	**92.85**	**315**	P	**P**	**05 15 03.7**	**-0.6**
UMZA	**Um Al Zommool**	**92.88**	**312**	P	**P**	**05 15 03.8**	**-0.7**
CASM	**Ain Smara**	**92.89**	**356**	P	**P**	**05 15 04.6**	**+0.2**
TRNA	**Turayna**	**92.91**	**316**	P	**P**	**05 15 03.6**	**-1.0**
	SNR=6.0						
ABD	**La Joyeuse, An**	**92.95**	**59**	IAMs_20	IAMs_20	05 59 30.0	
	comp=Z,4µm,22.0s						
GDHS	**Morne Mazeau,**	**92.96**	**60**	IAMs_20	IAMs_20	05 55 48.2	
	comp=Z,6µm,22.0s						
CBOC	**Ciudad Bolivar**	**92.97**	**77**	P	**P**	**05 15 04.6**	**-0.6**
	comp=Z,947nmcomp=Z,35nm,0.8s						
CSGS	**Sigus**	**93.00**	**356**	P	**P**	**05 15 05.4**	**+0.4**
MHTO	**MHTO**	**93.02**	**309**	P	**P**	**05 15 04.6**	**-0.6**
	SNR=7.9						
EHRZ	**Djelida**	**93.04**	**360**	P	**P**	**05 15 05.3**	**+0.2**
ADJB	**Djebel Djouab**	**93.07**	**359**	P	**P**	**05 15 05.6**	**+0.3**
SMRA	**Abu-Samra**	**93.07**	**317**	P	**P**	**05 15 04.4**	**-0.9**
	SNR=14						
CTEI	**Djebel Teioual**	**93.08**	**356**	P	**P**	**05 15 05.0**	**-0.4**
CBE	**Ff, Capester**	**93.21**	**60**	IAMs_20	IAMs_20	05 55 55.3	
	comp=Z,5µm,21.0s						
KEST	**Kesra**	**93.26**	**354**	P	**P**	**05 15 06.2**	**0.0**
	comp=Z,39nm,0.9s,baz=355,slow=1.7,SNR=30						
	comp=Z,39nm,0.9s						
KEST	**Kesra**	**93.26**	**354**	IAmb	IAmb	05 15 07.7	
	comp=Z,43nm,0.9s						
SLWR	**Sila**	**93.28**	**316**	P	**P**	**05 15 05.6**	**-0.7**
CJSR	**Ain Djasser**	**93.30**	**357**	P	**P**	**05 15 06.6**	**+0.2**
GDSD	**La Dsirade Is**	**93.31**	**59**	IAMs_20	IAMs_20	05 59 49.7	
	comp=Z,4µm,22.0s						
MZR	**Muzera**	**93.41**	**314**	P	**P**	**05 15 06.3**	**-0.6**
	SNR=15						
MZR	**Muzera**	**93.41**	**314**	*i* P	**P**	**05 15 05.5**	**-1.5**
	SNR=38						
KHZ	**Kahutara**	**93.46**	**186**	IAMs_20	IAMs_20	06 01 41.2	
	comp=Z,4µm,20.0s						
SDV	**Santo Domingo**	**93.85**	**71**	LR	LR	05 58 19.6	
	comp=Z,2µm,21.6s,baz=351,slow=36						
SDV	**Santo Domingo**	**93.85**	**71**	P	**P**	**05 15 09.4**	**+0.2**
SDV				IAmb	IAmb	05 15 25.3	
	comp=Z,33nm,0.9s						
SDV				IAMs_20	IAMs_20	06 03 42.3	
	comp=Z,3µm,19.0s						
SDV	**Santo Domingo**	**93.85**	**71**	*e*P	**P**	**05 15 10.1**	**+0.8**
SDV	**Santo Domingo**	**93.85**	**71**	P	**P**	**05 15 09.5**	**+0.2**
	comp=Z,2µmcomp=Z,1µmcomp=Z,41nm,0.9s						
GUY2C	**Guyana, Caldas**	**93.87**	**77**	P	**P**	**05 15 09.1**	**-0.6**
	comp=Z,931nmcomp=Z,78nm,0.7s						
GIRL	**Giralia**	**94.39**	**239**	IAmb	IAmb	05 15 14.3	
	comp=Z,34nm,0.8s						
EIL	**Elat**	**94.44**	**332**	LR	LR	06 05 41.5	
	comp=Z,7µm,18.0s,baz=38,slow=41						
SVN	**Savane Anatole**	**94.46**	**60**	IAMs_20	IAMs_20	05 55 39.4	
	comp=Z,5µm,22.0s						
CXM	**Morne La Croix**	**94.48**	**60**	IAmb	IAmb	05 15 15.1	
	comp=Z,119nm,0.8s						
CTZ	**Chatham Island**	**94.50**	**179**	IAMs_20	IAMs_20	05 53 14.8	
	comp=Z,5µm,20.0s						
PMPST	**Porto Santo, M**	**94.61**	**15**	*e*P	**P**	**05 15 09.8**	**-2.5**
PMPST				*i* IAmb	IAmb	05 15 29.0	
	comp=Z,311nm,1.4s						
JAMC	**Jamundi, Valle**	**94.63**	**79**	P	**P**	**05 15 14.4**	**+1.5**
	comp=Z,2µmcomp=Z,1µmcomp=Z,42nm,0.9s						
PMOZ	**Porto Moniz, M**	**94.72**	**16**	*e*PP	**PP**	**05 19 05.4**	**+5.0**
PMOZ				*e*LR	LR	05 48 27.1	
PMOZ				*i* IAMs_20	IAMs_20	05 57 28.4	
	comp=Z,3µm,22.0s						
RUSC	**La Rusia**	**94.74**	**75**	IAmb	IAmb	05 15 29.6	
	comp=Z,26nm,0.9s						
RPZ	**Rata Peaks**	**94.94**	**188**	LR	LR	05 55 24.1	
	comp=Z,8µm,19.0s,baz=32,slow=34						
MPOM	**Morne Pois Mar**	**94.95**	**60**	IAMs_20	IAMs_20	05 56 38.4	
	comp=Z,6µm,22.0s						
POPC	**Popayan, Colom**	**95.16**	**80**	P	**P**	**05 15 15.6**	**+0.2**
	comp=Z,534nmcomp=Z,13nm,0.9s						
IFR	**Ifrane**	**95.48**	**6**	P	**P**	**05 15 16.2**	**-0.3**
MD01	**Midelt array s**	**96.15**	**6**	P	**P**	**05 15 18.0**	**-1.6**
MDT	**Midelt**	**96.21**	**6**	LR	LR	05 59 40.3	
	comp=Z,2µm,20.1s,baz=9.0,slow=36						
HMDM	**Hanimaadhoo**	**96.34**	**289**	IAMs_20	IAMs_20	06 01 29.3	
	comp=Z,3µm,20.0s						
RAYN	**Ar Rayn**	**96.37**	**320**	P	**P**	**05 15 19.5**	**-1.1**
RAYN	**Ar Rayn**	**96.37**	**320**	*i* P	**P**	**05 15 19.7**	**-0.9**
	SNR=50						
RAYN	**Ar Rayn**	**96.37**	**320**	P	**P**	**05 15 20.3**	**-0.3**
BBGH	**Gun Hill**	**96.73**	**60**	IAMs_20	IAMs_20	06 00 58.5	
	comp=Z,5µm,22.0s						
MLZ	**Mavora Lakes**	**96.86**	**190**	IAMs_20	IAMs_20	05 57 45.2	
	comp=Z,4µm,20.0s						
DOK	**Doka**	**96.89**	**311**	P	**P**	**05 15 22.4**	**-0.5**
DCZ	**Deep Cove**	**97.07**	**190**	IAMs_20	IAMs_20	05 57 26.6	
	comp=Z,5µm,20.0s						
WHFO	**Wadi Hawf**	**97.66**	**311**	P	**P**	**05 15 25.4**	**-1.1**
TIO	**Tiouine**	**97.89**	**8**	P	**P**	**05 15 26.5**	**-0.9**
RPN	**Rapa Nui**	**98.53**	**123**	LR	LR	05 51 44.1	
	comp=Z,3µm,20.4s,baz=322,slow=30						
BOAV	**Boa Vista**	**104.99**	**67**	*e*P	**Pdif**	**05 15 59.9**	**+0.9**
TAM	**Tamanrasset**	**106.33**	**357**	IAMs_20	IAMs_20	06 10 27.3	
	comp=Z,4µm,21.0s						
MACA	**Manacapuru-AM**	**109.37**	**70**	*e*P	**Pdif**	**05 16 19.9**	**+1.4**
SACV	**Santiago Islan**	**110.49**	**26**	IAMs_20	IAMs_20	06 04 47.2	
	comp=Z,3µm,20.0s						
MBO	**M'Bour**	**112.69**	**20**	IAMs_20	IAMs_20	06 09 16.1	
	comp=Z,2µm,19.0s						
ITTB	**Itaituba**	**113.24**	**67**	*e*P	**Pdif**	**05 16 36.7**	**+1.0**
PB16	**IPOC Station P**	**115.66**	**88**	IAMs_20	IAMs_20	05 59 27.3	
	comp=Z,2µm,20.0s						
TA01	**Diego Aracena**	**116.89**	**90**	IAMs_20	IAMs_20	05 59 08.9	
	comp=Z,2µm,21.0s						
PATCX	**Punta Patache**	**117.10**	**90**	IAMs_20	IAMs_20	06 01 46.3	
	comp=Z,2µm,20.0s						

PB08	IPOC Station P	117.22	89	PKP	PKiKP	05 20 39.0	+1.9
PB02	IPOC Station P	117.62	90	IAMs_20	IAMs_20	05 59 50.4	
	comp=Z,2µm,20.0s						
PB09	IPOC Station P	118.39	90	IAMs_20	IAMs_20	06 00 01.5	
	comp=Z,2µm,22.0s						
LODK	Lodwar	118.62	321	P	PKiKP	05 20 41.3	+1.5
LODK	Lodwar	118.62	321	IAMs_20	IAMs_20	06 19 14.5	
	comp=Z,3µm,20.0s						
PB14	IPOC Station P	119.71	93	IAMs_20	IAMs_20	06 00 57.8	
	comp=Z,3µm,21.0s						
GO02	Mina Guanaco	120.60	93	IAMs_20	IAMs_20	06 01 35.5	
	comp=Z,4µm,22.0s						
H03N2	Juan Fernandez	120.62	106	T	T	07 33 15.3	
	baz=317,slow=78						
H03N1	Juan Fernandez	120.63	106	T	T	07 33 12.1	
	baz=317,slow=78						
H03N3	Juan Fernandez	120.64	106	T	T	07 33 09.8	
	baz=317,slow=78						
AC04	Llanos de Chal	121.83	96	IAMs_20	IAMs_20	06 01 14.3	
	comp=Z,3µm,22.0s						
DBIC	Dimbokro	122.13	8	PKP	PKPdf	05 20 45.8	-0.6
	comp=Z,23nm,0.5s,baz=20,slow=2.2,SNR=79						
DBIC				SKP	SKPdf	05 24 19.1	-0.3
	comp=Z,4.3nm,0.8s,baz=226,slow=0.6,SNR=3.8						
DBIC	Dimbokro	122.13	8		PKPdf	05 20 46.3	-0.1
DBIC	Dimbokro	122.13	8	PKIKP	PKPdf	05 20 46.3	-0.1
KIBK	Kibwezi	122.70	316	PKP	PKPdf	05 20 47.5	-0.1
AC05	El Transito	122.77	96	IAMs_20	IAMs_20	06 01 19.2	
	comp=Z,3µm,22.0s						
MBAR	Mbarara	124.08	324	P	PKiKP	05 20 51.8	+1.1
VA06	Catapilco	124.70	100	IAMs_20	IAMs_20	06 02 22.4	
	comp=Z,3µm,20.0s						
VA01	Torpederas	124.79	101	IAMs_20	IAMs_20	06 03 44.2	
	comp=Z,2µm,20.0s						
EDA	Edea	124.85	350		PKPdf	05 20 51.3	-0.4
EDA				IAMs_20	IAMs_20	06 21 12.7	
	comp=Z,2µm,21.0s						
RCBR	Riachuelo	124.98	48	IAMs_20	IAMs_20	06 15 25.6	
	comp=Z,3µm,20.0s						
VA05	Santo Domingo	125.24	102	IAMs_20	IAMs_20	06 03 35.9	
	comp=Z,3µm,20.0s						
MT02	Curacav	125.27	101	IAMs_20	IAMs_20	06 03 48.6	
	comp=Z,3µm,21.0s						
VA03	San Esteban	125.30	100	IAMs_20	IAMs_20	06 11 44.3	
	comp=Z,3µm,18.0s						
PEL	Peldehue	125.47	101	IAMs_20	IAMs_20	06 02 13.1	
	comp=Z,2µm,22.0s						
MURT	Porto Murtinho	125.58	80	*e*P	PKPdf	05 20 52.3	-0.4
MT01	Popeta	125.60	102	IAMs_20	IAMs_20	06 03 45.5	
	comp=Z,3µm,20.0s						
MT09	Talagante	125.71	101	IAMs_20	IAMs_20	06 04 10.2	
	comp=Z,3µm,20.0s						
MT16	CCHEN	125.76	101	IAMs_20	IAMs_20	06 02 21.6	
	comp=Z,3µm,22.0s						
MT03	Universidad Ad	125.81	101	IAMs_20	IAMs_20	06 04 46.0	
	comp=Z,2µm,20.0s						
BO01	Tunca	126.06	102	IAMs_20	IAMs_20	06 03 59.6	
	comp=Z,3µm,20.0s						
BO04	La Punta	126.08	101	IAMs_20	IAMs_20	06 11 28.2	
	comp=Z,2µm,19.0s						
MT08	Bocatoma Ro	126.09	100	IAMs_20	IAMs_20	06 04 38.6	
	comp=Z,3µm,21.0s						
MT13	San Alfonso	126.12	101	IAMs_20	IAMs_20	06 05 26.1	
	comp=Z,2µm,20.0s						
LMEL	Las Melosas	126.24	101	IAMs_20	IAMs_20	06 05 29.2	
	comp=Z,2µm,20.0s						
BO02	Sierra Bellavi	126.51	102	IAMs_20	IAMs_20	06 04 15.5	
	comp=Z,3µm,21.0s						
ML02	Panimavida	126.76	103	IAMs_20	IAMs_20	06 03 26.2	
	comp=Z,3µm,21.0s						
BDFB	Brasilia	126.76	67	PKP	PKPdf	05 20 54.8	-0.5
	comp=Z,7.7nm,0.9s,baz=178,slow=2.4,SNR=10						
BDFB				PP	PP	05 22 53.4	+1.1
	comp=Z,8.2nm,0.9s,baz=322,slow=6.9,SNR=4.8						
BDFB	Brasilia	126.76	67		PKiKP	05 20 56.7	+0.9
BI02	San Fabin de	127.44	104	IAMs_20	IAMs_20	06 05 58.1	
	comp=Z,3µm,20.0s						
CASY	Casey	128.97	210	IAMs_20	IAMs_20	06 09 22.3	
	comp=Z,3µm,22.0s						
VNDA	Vanda	129.00	186	PKP	PKiKP	05 21 00.3	+2.1
	comp=Z,1.9nm,0.8s,baz=296,slow=6.6,SNR=7.1						
SBA	Scott Base	129.06	184	IAMs_20	IAMs_20	06 08 11.6	
	comp=Z,3µm,22.0s						
CPUP	Villa Florida	129.15	84	PKP	PKiKP	05 20 60.0	-0.1
	comp=Z,1.2nm,0.8s,baz=152,slow=3.5,SNR=6.6						
CPUP				SKP	SKPbc	05 24 26.0	+7.7
	comp=Z,1.1nm,0.8s,baz=300,slow=2.4,SNR=4.9						
CPUP	Villa Florida	129.15	84	PKIKP	PKiKP	05 21 00.0	-0.1
LR05	Currie	129.26	108	IAMs_20	IAMs_20	06 10 14.6	
	comp=Z,3µm,20.0s						
PLCA	Paso Flores	130.44	108	PKP	PKiKP	05 21 02.1	-0.3
	comp=Z,11nm,0.9s,baz=255,slow=3.7,SNR=18						
PLCA				SKPbc	SKPbc	05 24 22.5	0.0
	comp=Z,5.9nm,0.8s,baz=288,slow=5.5,SNR=7.2						
PLCA	Paso Flores	130.44	108		PKiKP	05 21 02.5	+0.2
OPO	Ambohidratompo	131.81	295	PKP	PKiKP	05 21 05.8	0.0
	comp=Z,6.0nm,0.8s,baz=266,slow=0.6,SNR=6.4						
OPO				SKPbc	SKPbc	05 24 28.3	+0.1
	comp=Z,5.1nm,0.8s,baz=8.1,slow=5.4,SNR=4.2						
ABPO	Ambohimpanom	132.15	295	IAMs_20	IAMs_20	06 22 33.3	
	comp=Z,3µm,20.0s						
SPB	Sao Paulo	133.26	73	IAMs_20	IAMs_20	06 25 27.9	
	comp=Z,3µm,22.0s						
TRQA	Tornquist	134.05	99	IAMs_20	IAMs_20	06 14 12.0	
	comp=Z,2µm,20.0s						
VOI	Vohitsoka	134.66	293	IAMs_20	IAMs_20	06 19 49.2	
	comp=Z,3µm,21.0s						
MG02	Cerro Sombrero	137.76	121		PKPdf	05 21 15.4	+0.8
QSPA	South Pole Qui	140.89	180	PKP	PKPdf	05 21 19.2	-0.9
	comp=Z,6.3nm,0.7s,baz=134,slow=0.7,SNR=14						
QSPA				SKPbc	SKPbc	05 24 55.0	+0.9
	comp=Z,19nm,1.0s,baz=223,slow=2.5,SNR=5.7						
QSPA	South Pole Qui	140.89	180		PKPpre	05 21 17.1	
QSPA	South Pole Qui	140.89	180	IAMs_20	IAMs_20	06 21 30.1	
	comp=Z,3µm,20.0s						
PMSA	Palmer Station	144.24	138		PKPdf	05 21 26.1	+0.2
PMSA	Palmer Station	144.24	138	IAMs_20	IAMs_20	06 12 10.0	
	comp=Z,3µm,21.0s						
TSUM	Tsumeb	145.82	333	PKPbc	PKPbc	05 21 30.9	+0.1
	comp=Z,197nm,0.8s,baz=12,slow=5.3,SNR=148						
TSUM	Tsumeb	145.82	333		PKPab	05 21 31.1	-0.2
MAW	Mawson	146.58	217	PKPbc	PKPab	05 21 32.2	-0.4
	comp=Z,56nm,0.9s,baz=64,slow=2.6,SNR=60						
LPHEP	Lephephe	146.67	317	*i* P	PKPab	05 21 34.5	+0.1
GRTLG	Ghanzi	146.68	326	*i* P	PKPbc	05 21 33.8	+0.4
CRLN	Carolina, Mapu	147.02	309	*e*P	PKPbc	05 21 33.5	-0.7
CRZF	Crozet Islands	147.30	258		PKPab	05 21 35.4	-0.7
KGCAE	Kacgae	147.69	323	*i* P	PKiKP	05 21 37.3	-0.9
LBTB	Lobatse	148.24	316	PKPbc	PKPbc	05 21 38.1	+0.6
	comp=Z,197nm,0.7s,baz=350,slow=1.7,SNR=140						
LBTB	Lobatse	148.24	316		PKPdf	05 21 35.6	+1.5
SKOMA	Sekoma	148.50	319	*i* P	PKiKP	05 21 39.2	-0.6
MAKGR	Makgori	149.28	317	*i* P	PKPbc	05 21 40.8	+0.6
BOSA	Boshof	151.49	313	PKP	PKPdf	05 21 40.7	+1.4
	comp=Z,70nm,0.6s,baz=17,slow=2.5,SNR=17						
BOSA				PKPbc	PKPbc	05 21 45.5	+0.1
	comp=Z,68nm,0.5s,baz=28,slow=2.7,SNR=66						
BOSA	Boshof	151.49	313	*e*P	PKPdf	05 21 41.0	+1.8
SYO	Syowa Base	154.71	211	⇑*i*PKPdf	PKPdf	05 21 42.8	+0.4
SYO	Syowa Base	154.71	211	⇑*i*pPKPdf	PKPbc	05 21 50.4	-0.6
SYO	Syowa Base	154.71	211	⇑*i*pPKPbc	PKPab	05 22 03.2	-2.9
BFON	Badsfontein, M	154.90	312	*e*P	PKPbc	05 21 52.6	-0.2
BRAK	Brakfontein	155.25	313	*e*P	PKPdf	05 21 53.4	+8.9
FRAZ	Fraserburg	156.04	316	*e*P	PKPdf	05 21 55.3	+10
TROLL	Troll, Antarti	159.05	180	⇓P	PKPdf	05 21 48.0	-0.1
	comp=Z,922nm,0.9s						
VNA3	Neumayer Olymp	159.14	169	⇓P	PKPdf	05 21 47.2	-0.9
	comp=Z,15nm,0.8s						
VNA3	Neumayer Olymp	159.14	169	⇑P	PKPab	05 22 25.9	+0.7
	comp=Z,9.3nm,0.7s						
SNAA	Sanae	159.28	176	⇓P	PKPdf	05 21 47.8	-0.5
	comp=Z,188nm,0.8s						
SNAA	Sanae	159.28	176	PKP	PKPdf	05 21 47.7	-0.6
	comp=Z,11nm,0.9s,baz=179,slow=2.4,SNR=22						
SNAA				PKPab	PKPab	05 22 26.6	+0.7
	comp=Z,5.3nm,0.8s,baz=243,slow=4.6,SNR=7.0						
VNA2	Neumayer--Watz	159.68	171	⇓P	PKPdf	05 21 48.8	+0.1
	comp=Z,23nm,0.9s,baz=85,slow=4.6						
VNA2	Neumayer--Watz	159.68	171	⇓P	PKPab	05 22 28.9	+1.3
	baz=138,slow=1.3						
VNA1	Neumayer--Stat	159.85	170	⇓P	PKPdf	05 21 48.4	-0.4
	comp=Z,8.3nm,1.0s						
VNA1	Neumayer--Stat	159.85	170	⇓P	PKPab	05 22 28.5	+0.3

DJA 02 05:37:27.5±0.7,**10°S**±3°×**11°4E**±°,**h12**km±6km,**M3.5**/17,
mb3.6/2,**MLv3.5**/17,**South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	1.28	358	P	Pn	05 37 50.0	-1.3
JAGI				S	Sb	05 38 06.9	-1.2
IGBI	Denpasar	1.33	45	P	Pn	05 37 50.9	-1.0
DNP	Denpasar	1.47	43	P	Pn	05 37 53.7	-0.2
DNP				S	Sb	05 38 13.6	0.0
RTBI	Rangdo, Negare	1.49	30	P	Pn	05 37 54.0	-0.1
RTBI				S	Sn	05 38 13.7	+0.1
BYJI	Banyuwangi	1.54	6	P	Pn	05 37 54.9	0.0
BYJI				S	Sg	05 38 17.9	+0.6
GMJI	Gumukmas	1.65	333	P	Pn	05 37 54.8	-1.5
GMJI				S	Sn	05 38 15.0	-2.5
SRBI	Singaraja	1.95	31	P	Pn	05 38 00.7	+0.3
ABJI	Asem Bagus	1.95	1	P	Pn	05 38 01.4	+0.9
KHKI	Kahang-Kahang	1.97	45	P	Pn	05 38 01.2	+0.5
BLJI	Banyuglugur	2.09	344	P	Pn	05 38 03.0	+0.7
KLNI	Mataram	2.30	55	P	Pn	05 38 04.7	-0.6
KLNI				S	Sn	05 38 31.8	-1.8
KMMI	Kalianget	2.70	355	P	Pn	05 38 12.1	+1.3
TWSI	Taliwang, Sumb	2.84	69	P	Pn	05 38 12.3	-0.5
TWSI				S	Sn	05 38 47.6	+0.6
SNJI	Sawahan-Nganju	3.10	309	P	Pn	05 38 16.4	-0.1
SJI	Sawahan	3.13	310	P	Pn	05 38 10.4	-6.3
PCJI	Pacitan	3.36	297	P	Pn	05 38 19.8	0.0
PLAI	Plampang	3.66	76	P	Pn	05 38 24.9	+0.9
WOJI	Wonogiri, Jawa	3.75	300	P	Pn	05 38 24.7	-0.5
UGM	Wanagama	4.06	297	P	Pn	05 38 29.3	-0.3
DBNI	Kabupaten Domp	4.26	73	P	Pn	05 38 34.6	+2.4
BBJI	Bungbulang	6.86	289	P	Pn	05 39 05.8	-2.2

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*IDC **02** 05:46:39.4±0.7,56°.11N×149°.57W,h0km,mb4.2/20, mbtmp4.2/25,ML4.4/6,MS4.6/1,Error ellipse: s-maj=19.4km s-min=10.8km az=34.0*

*NEIC **02** 05:46:40.5,56°.11N×149°.56W,h36km*

*NEIC **02** 05:46:40.5,56°.21N×151°.00W,h36km,Moment Tensor Solution. Duration: 1s.1 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.20; $M_{\theta\theta}$0.12; $M_{\phi\phi}$0.08; $M_{r\theta}$-0.39; $M_{\theta\phi}$0.73; $M_{\phi r}$0.68; Fault plane solution: $M_0$1.09000×10^{16} NP1:ϕ_s82.13000°, δ51.77000°,λ-17.60000°. NP2:ϕ_s183.24000°,δ76.26000°, λ-140.42000°. Principal axes: T 0.8825, Plg16.0000°, Azm308.0000°; N 0.3306, Plg48.0000°, Azm199.0000°; P -1.2132, Plg37.0000°, Azm50.0000°;*

*NEIC **02** 05:46:40.3±1.9,56°.08N±0°.07×149°.51W±0°.09,h10km±1km, mb4.6/156,ML4.9/63,Mww4.6/9,ML4.7(AEIC) Error ellipse: s-maj=12.9km s-min=8.1km az=198.0*

*PMR **02** 05:46:42.0,56°.08N×149°.54W,h27km*

*ANF **02** 05:46:43.2±0.2,56°.13N×149°.57W,h42km±12km,ML5.1/30, Error ellipse: s-maj=2.6km s-min=1.4km az=3.0*

*AEIC **02** 05:46:45.0±1.4,56°.11N±0°.08×149°.6W±0°.1,h11km±2km, Error ellipse: s-maj=12.3km s-min=8.1km az=181.0*

ISC 02 05:46:43.4±2.4,**56°.16N**±0°.05×**149°.48W**±0°.04,
h26km±18km,**n553**,σ**1s.29**/347,**mb4.5**/87,**Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.36	315	Pn	Pn	05 47 19.1	-1.3
	154nm,0.3s,baz=62,slow=0.6,SNR=1658						
KDAK				Sn	Sn	05 47 45.1	-3.3
	151nm,0.3s,baz=20,slow=9.6,SNR=26						
	584nm,0.5s						
KDAK	Kodiak Island	2.36	315	Pn	Pn	05 47 19.0	-1.5
KDAK	Kodiak Island	2.36	315		Pn	05 47 19.1	-1.3
KDAK					Sn	05 47 46.1	-2.4
KDAK	Kodiak Island	2.36	315	P	Pn	05 47 19.1	-1.3
	baz=134						
KDAK				S	Sn	05 47 45.4	-3.0
	baz=134						
OHAK	Old Harbor	2.36	299		Pn	05 47 18.6	-1.8
OHAK					Sn	05 47 45.1	-3.4
OHAK	Old Harbor	2.36	299	P	Pn	05 47 18.3	-2.1
OHAK	Old Harbor	2.36	299	P	Pn	05 47 18.8	-1.7
	baz=117,SNR=136						
OHAK				S	Sn	05 47 44.6	-3.9
	baz=117						
SII	Sitkinak Islan	2.65	281		Pn	05 47 22.6	-1.9
SII					Sn	05 47 51.9	-3.9
SII	Sitkinak Islan	2.65	281	IAML		05 47 53.0	
	comp=N,5µm,0.7s						
SII				IAML		05 47 53.1	
	comp=E,6µm,0.8s						
SII	Sitkinak Islan	2.65	281	P	Pn	05 47 22.2	-2.3
SII	Sitkinak Islan	2.65	281	P	Pn	05 47 22.4	-2.1
	baz=98,SNR=52						
SII				S	Sn	05 47 51.9	-3.9
	baz=98						
Q20K	Shuyak Island	2.92	329	P	Pn	05 47 26.9	-1.3
	baz=147,SNR=23						
Q20K				S	Sn	05 48 00.9	-1.6
	baz=147						
Q20K				S	Sn	05 48 00.9	-1.6
	baz=147						
SYI	Shuyak Island	2.92	329		Pn	05 47 26.9	-1.3
SYI				IAML		05 48 02.2	
	comp=E,2µm,0.6s						
SYI	Shuyak Island	2.92	329		Sn	05 48 00.9	-1.5
CHIR	Chirikof Islan	3.47	267		Pn	05 47 33.7	-2.0
CHIR				IAML		05 48 11.2	
	comp=E,3µm,0.8s						
CHIR				IAML		05 48 11.5	
	comp=N,3µm,0.7s						
CHIR	Chirikof Islan	3.47	267	P	Pn	05 47 33.4	-2.3
CHIR	Chirikof Islan	3.47	267	P	Pn	05 47 33.5	-2.3
	baz=83,SNR=6.7						
CHIR				S	Sn	05 48 10.3	-5.6
	baz=83						
CNPM	China Poot	3.51	345		Pn	05 47 35.0	-1.2
CNPM				IAML		05 48 16.9	
	comp=N,2µm,0.5s						
CNPM				IAML		05 48 17.6	
	comp=E,2µm,0.6s						
Q19K	Cape Douglas,	3.57	323		Pn	05 47 36.8	-0.4
Q19K	Cape Douglas,	3.57	323	P	Pn	05 47 36.5	-0.7
	baz=140,SNR=54						
Q19K				S	Sn	05 48 18.1	-0.5
	baz=140						
Q19K				S	Sn	05 48 18.1	-0.5
	baz=140						
KAHG	Katmai Hook Gl	3.61	313		Pn	05 47 37.5	-0.3
KAWH	Katmai	3.65	310		Pn	05 47 37.8	-0.5
BRSE	Bradley Lake S	3.66	350		Pn	05 47 36.7	-1.6
BRSE	Bradley Lake S	3.66	350	P	Pn	05 47 36.8	-1.6
	baz=170,SNR=21						
BRSE				S	Sn	05 48 17.8	-2.9
	baz=170						
MGLS	Mageik Landsli	3.68	305		Pn	05 47 37.7	-0.9
KARR	Katmai Rainbow	3.68	312		Pn	05 47 38.7	0.0
Q23K	Middleton Isla	3.69	26	P	Pn	05 47 37.4	-1.2
	baz=208,SNR=10.0						
MID	Middleton Isla	3.69	26		Pn	05 47 37.4	-1.3
BRLK	Bradley Lake	3.70	349		Pn	05 47 37.5	-1.3
BRLK				IAML		05 48 19.7	
	comp=E,1µm,0.5s						
HOM	Homer	3.70	343		Pn	05 47 38.1	-0.8
HOM				IAML		05 48 39.1	
	comp=E,3µm,0.7s						
HOM	Homer	3.70	343		Sn	05 48 19.7	-1.8
HOM	Homer	3.70	343	P	Pn	05 47 37.8	-1.0
	baz=162						
CAHL	Cahill	3.70	303		Pn	05 47 38.0	-1.0
KAKN	Katmai Knife C	3.72	308		Pn	05 47 38.6	-0.6
ACHA	Angle Creek He	3.79	305		Pn	05 47 39.1	-1.1
AUI	Augustine Isla	3.83	328		Pn	05 47 39.9	-0.7
Q18K	Katmai Hardscr	3.90	312	P	Pn	05 47 41.2	-0.5
	baz=129,SNR=195						
SEW	Seward	3.96	0		Pn	05 47 40.5	-1.9
SEW	Seward	3.96	0	P	Pn	05 47 40.7	-1.7
	baz=181,SNR=9.3						
SEW				S	Sn	05 48 24.0	-4.0
	baz=181						
P23K	Montague Islan	4.01	15		Pn	05 47 41.9	-1.2
P23K				IAML		05 48 26.6	
	comp=E,2µm,0.6s						
P23K				IAML		05 48 30.5	
	comp=N,2µm,0.6s						
P23K	Montague Islan	4.01	15	P	Pn	05 47 41.9	-1.2
	baz=197,SNR=9.8						
P23K				S	Sn	05 48 25.6	-3.6
	baz=197						
P23K				S	Sn	05 48 25.6	-3.6
	baz=197						
P19K	Oil Pt	4.04	332		Pn	05 47 42.6	-0.9
P19K	Oil Pt	4.04	332	P	Pn	05 47 42.6	-0.9
	baz=150,SNR=14						
P19K				S	Sn	05 48 29.5	-0.5
	baz=150						
P19K				S	Sn	05 48 29.5	-0.5
	baz=150						
PLK4	Peulik 4	4.05	294		Pn	05 47 42.6	-1.2
PLK4				IAML		05 48 28.4	
	comp=E,1µm,0.6s						
PLK4				IAML		05 48 30.6	
	comp=N,1µm,0.6s						
R17L	Mt. Peulik Vol	4.05	294	P	Pn	05 47 42.7	-1.1
	baz=110,SNR=76						
R17L				S	Sn	05 48 27.4	-2.9
	baz=110						
R17L				S	Sn	05 48 27.4	-2.9
	baz=110						
Q17K	Contact Creek	4.08	304	P	Pn	05 47 43.3	-0.9
	baz=120,SNR=108						
PLK2	Peulik 2	4.08	296		Pn	05 47 43.2	-0.9
O20K	Slope Mountain	4.28	338	P	Pn	05 47 45.4	-1.5
	baz=156						
O20K				S	Sn	05 48 34.7	-1.2
	baz=156						
O20K				S	Sn	05 48 34.7	-1.2
	baz=156						
ILSW	Iliamna Southw	4.30	335		Pn	05 47 45.5	-1.7
ILSW				IAML		05 48 36.4	
	comp=N,1µm,0.5s						
ILSW				IAML		05 48 39.2	
	comp=E,1µm,0.6s						
IVE	Iliamna Volcan	4.30	336		Pn	05 47 45.4	-1.9
PLBL	Peulik Blue Cr	4.31	294		Pn	05 47 46.6	-0.6
O22K	Cooper Landing	4.34	358		Pn	05 47 46.3	-1.4
O22K	Cooper Landing	4.34	358	P	Pn	05 47 46.3	-1.4
	baz=179,SNR=14						
SLKM	Skilak Lake	4.38	355		Pn	05 47 46.6	-1.7
SLKM				IAML		05 48 37.9	
	comp=N,2µm,0.4s						
PLK5	Peulik 5	4.44	298		Pn	05 47 47.5	-1.6
P18K	Big Mountain,	4.47	319	P	Pn	05 47 47.9	-1.7
	baz=135,SNR=19						
P18K				S	Sn	05 48 37.1	-3.6
	baz=135						
P18K				S	Sn	05 48 37.1	-3.6
	baz=135						
HIN	Hinchinbrook I	4.53	19	IAML		05 48 42.6	
	comp=E,1µm,0.8s						
HIN				IAML		05 48 45.6	
	comp=N,1µm,0.6s						
Q16K	King Salmon	4.63	306	P	Pn	05 47 50.8	-0.9
	baz=121,SNR=91						
KAIM	Kayak Island	4.64	33		Pn	05 47 51.3	-0.5
KAIM				IAML		05 48 46.1	
	comp=N,1µm,0.6s						
KAIM				IAML		05 48 46.8	
	comp=E,881nm,0.9s						
KAIM	Kayak Island	4.64	33	P	Pn	05 47 51.2	-0.5
	baz=217,SNR=26						
R16K	Pilot Point	4.66	291		Pn	05 47 51.3	-0.8
PWL	Port Wells	4.76	7	P	Pn	05 47 52.1	-1.3
	baz=188,SNR=19						
PWL				S	Sn	05 48 43.5	-4.2
	baz=188						
RDJH	Redoubt Jeurge	4.78	340		Pn	05 47 52.1	-1.7
O19K	Port Alsworth	4.79	330		Pn	05 47 52.2	-1.6
O19K	Port Alsworth	4.79	330	P	Pn	05 47 52.2	-1.6
	baz=146,SNR=39						
O19K				S	Sn	05 48 45.6	-2.8
	baz=146						
O19K				S	Sn	05 48 45.6	-2.8
	baz=146						
O18K	Koktuh Hills	4.80	323		Pn	05 47 52.4	-1.6
O18K	Koktuh Hills	4.80	323	IAML		05 48 48.2	
	comp=N,655nm,0.8s						
O18K	Koktuh Hills	4.80	323	P	Pn	05 47 52.5	-1.5
	baz=139,SNR=12						
O18K				S	Sn	05 48 45.8	-2.9
	baz=139						
O18K				S	Sn	05 48 45.8	-2.9
	baz=139						
EYAK	Cordova Ski Ar	4.82	22	IAML		05 48 49.0	
	comp=E,532nm,0.6s						
EYAK				IAML		05 48 49.8	
	comp=N,663nm,0.5s						
EYAK	Cordova Ski Ar	4.82	22	P	Pn	05 47 53.3	-1.0
EYAK	Cordova Ski Ar	4.82	22	P	Pn	05 47 53.5	-0.8
	baz=206,SNR=80						
EYAK				S	Sn	05 48 45.6	-3.6
	baz=206						
FID	Port Fidalgo	4.87	18	IAML		05 48 46.5	
	comp=E,871nm,0.6s						
FID				IAML		05 48 48.6	
	comp=N,640nm,0.4s						
GLI	Glacier Island	4.90	14	IAML		05 48 49.5	
	comp=N,842nm,0.7s						
GLI				IAML		05 48 49.8	
	comp=E,798nm,0.5s						
GLI	Glacier Island	4.90	14	P	Pn	05 47 54.1	-1.2
	baz=196,SNR=23						
GLI				S	Sn	05 48 47.5	-3.7
	baz=196						
ANPB	Aniakchak Plen	4.92	281		Pn	05 47 54.3	-1.4
RAGM	Ragged Mountai	4.94	29	IAML		05 48 55.6	
	comp=E,1µm,0.6s						
RC01	Rabbit Creek A	4.95	359	IAML		05 48 51.7	
	comp=N,733nm,0.5s						
RC01				IAML		05 48 54.3	
	comp=E,949nm,0.5s						
RC01	Rabbit Creek A	4.95	359	P	Pn	05 47 54.6	-1.4
	baz=179						
RC01				S	Sn	05 48 48.3	-4.1
	baz=179						
SUCK	Suckling Hills	4.96	35		Pn	05 47 55.7	-0.5
SUCK	Suckling Hills	4.96	35	IAML		05 48 53.1	
	comp=N,876nm,0.5s						
HMT	Hamilton	5.02	31		Pn	05 47 56.6	-0.4
BGLC	Bering Glacier	5.15	37	P	Pn	05 47 58.7	-0.1
	baz=222						
N20K	Mount Spurr	5.26	345	P	Pn	05 47 59.2	-1.1
	baz=164,SNR=9.0						
SPCR	Spurr Chakacha	5.26	345		Pn	05 47 59.1	-1.2
SPCR	Spurr Chakacha	5.26	345	P	Pn	05 47 59.3	-1.0
	baz=164,SNR=6.7						
CKL	Chakachamna La	5.27	345		Pn	05 47 58.8	-1.7
SPCN	Chakachatna No	5.28	346		Pn	05 47 59.4	-1.2
KNK	Knik Glacier	5.30	5	IAML		05 49 05.1	
	comp=N,396nm,0.6s						
KNK				IAML		05 49 05.6	
	comp=E,758nm,0.9s						
KNK	Knik Glacier	5.30	5	P	Pn	05 47 59.6	-1.3
	baz=186,SNR=11						
SPBG	Spurr Blockage	5.34	345		Pn	05 48 00.1	-1.3
SNH	Sunshine Point	5.35	38		Pn	05 48 01.1	-0.4
N19K	Bonanza Creek	5.36	333	Pn	Pn	05 47 59.8	-1.9
N19K	Bonanza Creek	5.36	333	P	Pn	05 47 59.8	-1.9
	baz=149,SNR=10						
SUA	Susitna One	5.37	353		Pn	05 48 00.2	-1.6
SUA	Susitna One	5.37	353	P	Pn	05 48 00.3	-1.5
	baz=173						
VNSG	Veniaminof 6	5.37	274		Pn	05 48 00.3	-1.6
VNHG	Veniaminof 1	5.41	275		Pn	05 48 01.0	-1.4
O17K	Koliganek Bris	5.44	315	P	Pn	05 48 01.6	-1.1
	baz=129,SNR=36						
PMR	Palmer	5.46	2		Pn	05 48 01.7	-1.2
PMR	Palmer	5.46	2	P	Pn	05 48 01.9	-1.1
PMR	Palmer	5.46	2	P	Pn	05 48 02.0	-0.9
	baz=182,SNR=20						
BMRM	Bremner River	5.46	26	P	Pn	05 48 02.5	-0.5
	baz=210,SNR=94						
SPNN	North Nagishla	5.49	344		Pn	05 48 02.1	-1.4
STLK	Strandline Lak	5.50	348		Pn	05 48 02.3	-1.3
VNKR	Veniaminof 5	5.54	273		Pn	05 48 02.5	-1.6
M22K	Willow	5.62	357	P	Pn	05 48 04.3	-0.9
	baz=177						
S14K	Fog Glacier	5.62	275	P	Pn	05 48 04.3	-1.1
	baz=88						
VNFG	Fog Glacier, M	5.62	275		Pn	05 48 03.9	-1.5
GHO	Glory Hole Cre	5.64	3		Pn	05 48 04.8	-0.8
N18K	Kilae Creek	5.65	326	P	Pn	05 48 04.0	-1.7
	baz=141,SNR=29						
KLU	Klutina	5.66	18		Pn	05 48 05.2	-0.7
KLU	Klutina	5.66	18	P	Pn	05 48 05.4	-0.4

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           baz=201,SNR=78
MESA  MESA              5.67  42       Pn    05 48 05.5  -0.6
MESA  MESA              5.67  42  P    Pn    05 48 05.6  -0.6
           baz=228,SNR=28
CRQE  Cirque            5.70  33  P    Pn    05 48 05.9  -0.6
           baz=219,SNR=105
SML   Sawmill           5.70   5  P    Pn    05 48 05.8  -0.6
           baz=187,SNR=32
M23K  Glacier View      5.73   8  P    Pn    05 48 06.2  -0.5
           baz=190,SNR=39
O16K  Kokwok River B    5.74 310       Pn    05 48 05.9  -1.0
O16K  Kokwok River B    5.74 310  P    Pn    05 48 06.1  -0.9
           baz=124,SNR=82
SCM   Sheep Creek Mo    5.80  10  P    Pn    05 48 07.3  -0.5
           baz=192,SNR=17
ISLE  Juniper Island    5.83  37       Pn    05 48 08.0  -0.3
YAH   Yahtse            5.87  41       Pn    05 48 08.4  -0.5
CHNA  Chernabura Isl    5.90 261  P    Pn    05 48 06.9  -2.2
CHNA  Chernabura Isl    5.90 261  P    Pn    05 48 06.8  -2.3
           baz=74,SNR=5.7
CNBA  Chernabura Isl    5.90 261       Pn    05 48 06.8  -2.3
SKT   Skwentna          5.94 351       Pn    05 48 08.4  -1.2
SKT   Skwentna          5.94 351  P    Pn    05 48 08.7  -0.9
           baz=169,SNR=9.9
N17K  Nushagak Hills    5.97 320       Pn    05 48 08.5  -1.5
N17K  Nushagak Hills    5.97 320  P    Pn    05 48 08.5  -1.5
           baz=135,SNR=35
N25K  Chitina, Valde    6.02  23  P    Pn    05 48 10.4  -0.4
           baz=207,SNR=100
M20K  Styx River        6.04 343       Pn    05 48 09.2  -2.0
M20K  Styx River        6.04 343  P    Pn    05 48 09.5  -1.6
           baz=161
SAMH  Samovar Hills     6.09  46       Pn    05 48 11.3  -0.4
M24K  Tolsona, Glenn    6.21  15       Pn    05 48 13.3   0.0
M24K  Tolsona, Glenn    6.21  15  P    Pn    05 48 13.3   0.0
           baz=198,SNR=38
MCARA McCarthy VSAT     6.22  30  P    Pn    05 48 13.0  -0.5
           baz=215,SNR=124
YKU2  Yakutat           6.22  53  P    Pn    05 48 12.7  -0.8
SDPT  Sand Point        6.26 267       Pn    05 48 12.2  -1.9
SDPT  Sand Point        6.26 267  P    Pn    05 48 12.1  -1.9
SDPT  Sand Point        6.26 267  P    Pn    05 48 12.2  -1.9
           baz=79,SNR=15
M18K  Stony River       6.28 331  P    Pn    05 48 12.3  -2.0
           baz=146,SNR=32
PINM  Pinnacle          6.28  47  P    Pn    05 48 14.1  -0.3
           baz=235,SNR=38
O15K  Ungalikthiuk R    6.32 303  P    Pn    05 48 14.2  -0.7
           baz=115,SNR=118
WASW  Wrangell South    6.40  23       Pn    05 48 15.8  -0.4
CTG   Chitna Glacier    6.43  38  P    Pn    05 48 16.2  -0.3
           baz=225,SNR=65
WAT6  Susitna Watana    6.51   7  P    Pn    05 48 16.7  -0.9
           baz=189,SNR=30
N16K  Nishlik Lake      6.53 315       Pn    05 48 17.1  -0.6
N16K  Nishlik Lake      6.53 315  P    Pn    05 48 16.7  -1.1
           baz=128,SNR=125
WAZA  Wrangell Mount    6.54  23       Pn    05 48 17.8  -0.3
HARP  HAARP             6.64  18  P    Pn    05 48 19.4  +0.2
           baz=201,SNR=76
L19K  White Mountain    6.64 338  P    Pn    05 48 18.0  -1.3
           baz=154,SNR=19
M17K  Holitna River     6.69 325       Pn    05 48 18.5  -1.4
M17K  Holitna River     6.69 325  P    Pn    05 48 18.7  -1.2
           baz=139,SNR=27
WAT1  Susitna Watana    6.71   4       Pn    05 48 19.7  -0.6
WAT1  Susitna Watana    6.71   4  P    Pn    05 48 19.8  -0.5
           baz=185
O28M  Mount Upton       6.72  43       Pn    05 48 20.3  -0.3
O28M  Mount Upton       6.72  43  P    Pn    05 48 20.2  -0.3
           baz=230,SNR=53
L20K  Farewell, AK      6.73 342  P    Pn    05 48 19.5  -1.0
           baz=159
PPLA  Purkeypile        6.90 350  P    Pn    05 48 21.9  -1.0
           baz=168
N15K  Kwethluk River    6.90 310  P    Pn    05 48 22.7  -0.2
           baz=122,SNR=117
M16K  Timber Creek      6.95 318       Pn    05 48 22.2  -1.3
M16K  Timber Creek      6.95 318  P    Pn    05 48 22.9  -0.6
           baz=131,SNR=16
DHY   Denali Highway    7.02   8  P    Pn    05 48 24.1  -0.5
           baz=190,SNR=33
O14K  Tigyukauivet M    7.04 301       Pn    05 48 23.9  -0.7
O14K  Tigyukauivet M    7.04 301  P    Pn    05 48 23.7  -0.9
           baz=112,SNR=24
HAG   Hague Volcano     7.07 268       Pn    05 48 23.4  -1.8
DOL   Dolgoi Island     7.08 267       Pn    05 48 23.0  -2.4
M26K  Nabesna, AK       7.09  25       Pn    05 48 25.0  -0.4
M26K  Nabesna, AK       7.09  25  P    Pn    05 48 24.9  -0.5
           baz=211,SNR=26
S12K  Black Hills       7.09 272  P    Pn    05 48 23.3  -2.1
           baz=82,SNR=8.5
O29M  Mount Kennedy     7.10  50       Pn    05 48 25.6   0.0
O29M  Mount Kennedy     7.10  50  P    Pn    05 48 25.7  +0.1
           baz=239,SNR=78
L18K  Granite Mounta    7.12 332       Pn    05 48 23.6  -2.1
L18K  Granite Mounta    7.12 332  P    Pn    05 48 23.7  -2.1
           baz=146
PAX   Paxson            7.13  15  P    Pn    05 48 25.7  -0.4
           baz=198,SNR=63
P29M  Windy Craggy      7.16  56       Pn    05 48 25.9  -0.5
P29M  Windy Craggy      7.16  56  P    Pn    05 48 25.9  -0.5
           baz=246,SNR=141
YUK2  White River       7.19  35       Pn    05 48 27.1  +0.2
YUK8  Steele Glacier    7.21  41  P    Pn    05 48 28.1  +0.9
           baz=229,SNR=83
YUK3  Moose Creek       7.31  36  P    Pn    05 48 29.2  +0.6
           baz=223,SNR=177
TRF   Thorofare Moun    7.33 357  P    Pn    05 48 28.1  -0.7
           baz=177,SNR=8.3
M27K  Edge Creek, AK    7.33  29  P    Pn    05 48 28.8  -0.1
           baz=215,SNR=41
M15K  Kasigluk River    7.43 312  P    Pn    05 48 29.6  -0.5
           baz=123,SNR=74
S31K  Pelican           7.45  70       Pn    05 48 27.9  -2.3
S31K  Pelican           7.45  70  P    Pn    05 48 28.4  -1.9
           baz=261,SNR=16
N14K  Kuskokwak Cree    7.50 305       Pn    05 48 30.3  -0.6
N14K  Kuskokwak Cree    7.50 305  P    Pn    05 48 30.4  -0.5
           baz=116,SNR=54
L17K  Donlin            7.51 327       Pn    05 48 29.3  -1.8
L17K  Donlin            7.51 327  P    Pn    05 48 30.4  -0.8
           baz=140,SNR=5.3
YUK6  Outpost Mounta    7.54  46  P    Pn    05 48 32.4  +0.7
           baz=235,SNR=149
K20K  Telida            7.58 344  P    Pn    05 48 29.9  -2.3
           baz=161,SNR=7.1
L16K  Owhat River       7.59 321  P    Pn    05 48 31.1  -1.2
           baz=133,SNR=28
MCK   McKinley          7.61   2  P    Pn    05 48 32.6  +0.1
           baz=182,SNR=15
YUK4  Talbot Arm        7.66  43  P    Pn    05 48 35.6  +2.2
           baz=232,SNR=157
BVCY  Beaver Creek      7.67  32       Pn    05 48 33.5  +0.2
BVCY  Beaver Creek      7.67  32  P    Pn    05 48 33.8  +0.4
           baz=219,SNR=48
P30M  Million Dollar    7.72  54       Pn    05 48 34.4  +0.3
P30M  Million Dollar    7.72  54  P    Pn    05 48 34.4  +0.3
           baz=244
PLBC  Pleasant Camp     7.74  59       Pn    05 48 34.2  -0.1
PLBC  Pleasant Camp     7.74  59  P    Pn    05 48 34.3  -0.1
           baz=250,SNR=163
HYT   Haines Junctio    7.82  48       Pn    05 48 35.9  +0.3
HYT   Haines Junctio    7.82  48  P    Pn    05 48 35.9  +0.3
           baz=238,SNR=21
SIT   Sitka             7.86  78       Pn    05 48 33.0  -3.1
SIT   Sitka             7.86  78  P    Pn    05 48 32.8  -3.2
SIT   Sitka             7.86  78  P    Pn    05 48 32.9  -3.1
           baz=269
CHUM  Lake Minchumin    7.88 351  P    Pn    05 48 35.3  -1.0
           baz=169,SNR=12
K24K  Donnelly Dome     7.89  12  P    Pn    05 48 36.4  -0.1
           baz=195,SNR=36
L27K  Beaver Creek,     7.93  26  P    Pn    05 48 36.5  -0.5
           baz=213,SNR=17
BCAR  Beaver Creek A    7.95  26       Pn    05 48 36.5  -0.7
RIDG  Independent Ri    7.95  15       Pn    05 48 37.3   0.0
RIDG  Independent Ri    7.95  15  P    Pn    05 48 36.9  -0.4
           baz=199,SNR=66
K17K  Iditarod          7.96 329       Pn    05 48 35.1  -2.3
K17K  Iditarod          7.96 329  P    Pn    05 48 35.5  -1.8
           baz=142,SNR=13
DOT   Dot Lake          7.99  18       Pn    05 48 38.2  +0.4
M14K  Bethel            8.00 310       Pn    05 48 36.9  -0.9
M14K  Bethel            8.00 310  P    Pn    05 48 37.0  -0.9
           baz=120,SNR=22
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BPAW  Bear Paw Mtn.     8.01 355  P    Pn    05 48 36.3  -1.7
           baz=174,SNR=13
FALS  False Pass        8.02 266       Pn    05 48 36.0  -2.1
FALS  False Pass        8.02 266  P    Pn    05 48 36.4  -1.8
FALS  False Pass        8.02 266  P    Pn    05 48 36.1  -2.0
           baz=76,SNR=26
J18K  Innoko River      8.18 337       Pn    05 48 38.4  -2.0
J18K  Innoko River      8.18 337  P    Pn    05 48 38.7  -1.7
           baz=151,SNR=8.7
ISNN  Isanotski Nort    8.23 267       Pn    05 48 39.4  -1.7
SKAG  Skagway           8.25  60       Pn    05 48 41.0  -0.2
SKAG  Skagway           8.25  60  P    Pn    05 48 41.1  -0.2
           baz=252
BESE  Bessie Mountai    8.27  67       Pn    05 48 40.5  -1.1
S32K  Killisnoo         8.28  75  P    Pn    05 48 39.4  -2.3
           baz=267
SCRK  Sand Creek        8.31  17       Pn    05 48 41.2  -1.1
SCRK  Sand Creek        8.31  17  P    Pn    05 48 41.8  -0.4
           baz=202,SNR=23
L15K  Ungalak Mounta    8.31 317       Pn    05 48 40.9  -1.2
L15K  Ungalak Mounta    8.31 317  P    Pn    05 48 41.0  -1.2
           baz=127,SNR=23
N30M  Aishikik Lake     8.34  45       Pn    05 48 42.6   0.0
N30M  Aishikik Lake     8.34  45  P    Pn    05 48 42.5   0.0
           baz=236,SNR=46
WRH   Wood River Hil    8.37   4       Pn    05 48 42.3  -0.7
J20K  Nowinta River     8.37 346       Pn    05 48 41.7  -1.3
J20K  Nowinta River     8.37 346  P    Pn    05 48 41.3  -1.7
           baz=162
HDA   Harding Lake      8.38   8       Pn    05 48 42.7  -0.3
HDA   Harding Lake      8.38   8  P    Pn    05 48 42.7  -0.3
           baz=190,SNR=30
R32K  Eaglecrest        8.39  69       Pn    05 48 41.7  -1.5
R32K  Eaglecrest        8.39  69  P    Pn    05 48 41.5  -1.7
           baz=261
O30N  Mendenhall        8.40  51  P    Pn    05 48 43.2  -0.2
           baz=242,SNR=25
J19K  Poorman           8.44 341       Pn    05 48 41.7  -2.1
J19K  Poorman           8.44 341  P    Pn    05 48 41.5  -2.4
           baz=156
SSBA  Shishaldin        8.44 267       Pn    05 48 41.1  -2.8
M29M  Somme Creek       8.45  37  Pn   Pn    05 48 44.3  +0.2
M29M  Somme Creek       8.45  37  P    Pn    05 48 44.4  +0.3
           baz=227,SNR=152
M13K  Dall Lake         8.46 306       Pn    05 48 43.4  -0.7
M13K  Dall Lake         8.46 306  P    Pn    05 48 43.5  -0.6
           baz=115,SNR=25
JIS   Juneau Island     8.46  69       Pn    05 48 43.0  -1.2
JIS   Juneau Island     8.46  69  P    Pn    05 48 43.0  -1.2
NEA2  Nenana            8.47   1       Pn    05 48 43.4  -0.9
NEA2  Nenana            8.47   1  P    Pn    05 48 43.7  -0.6
           baz=182,SNR=13
CCB   Clear Creek Bu    8.56   5       Pn    05 48 44.6  -0.9
L14K  Kuka Creek        8.60 313       Pn    05 48 45.1  -1.0
L14K  Kuka Creek        8.60 313  P    Pn    05 48 45.4  -0.7
           baz=122,SNR=33
K15K  Wolf Creek Mou    8.71 320  P    Pn    05 48 47.1  -0.5
           baz=130,SNR=19
K27K  Chicken           8.71  22       Pn    05 48 46.5  -1.2
K27K  Chicken           8.71  22  P    Pn    05 48 46.9  -0.7
           baz=208
J17K  VABM Dome         8.72 330  P    Pn    05 48 45.5  -2.3
           baz=142,SNR=10.0
J25K  Salcha River,     8.72  12       Pn    05 48 46.5  -1.3
J25K  Salcha River,     8.72  12  P    Pn    05 48 46.7  -1.2
           baz=195,SNR=23
ILAR  Eielson Array     8.74   7  Pn   Pn    05 48 46.3  -1.7
           comp=E,4.9nm,0.3s,baz=190,slow=13,SNR=157
ILAR                              Sn   Sn    05 50 20.5  -5.0
           comp=E,6.8nm,0.3s,baz=310,slow=8.4,SNR=11
           comp=E,13nm,0.4s
ILAR  Eielson Array     8.74   7       Pn    05 48 46.9  -1.0
COLA  College           8.78   5       Pn    05 48 47.2  -1.4
COLA  College           8.78   5  P    Pn    05 48 48.7  +0.1
COLA  College           8.78   5  P    Pn    05 48 47.7  -0.9
           baz=186
WEBT  Westdahl Beart    8.84 266       Pn    05 48 46.8  -2.7
J26L  Joseph Creek      8.87  17  P    Pn    05 48 49.1  -0.7
           baz=202,SNR=159
N31M  Braeburn, Yuko    8.88  47       Pn    05 48 50.5  +0.5
N31M  Braeburn, Yuko    8.88  47  P    Pn    05 48 50.4  +0.5
           baz=239,SNR=48
WHY   Whitehorse        8.89  53       Pn    05 48 50.2  +0.1
WHY   Whitehorse        8.89  53  P    Pn    05 48 50.5  +0.4
           baz=246,SNR=47
I20K  Naaghedeneel      9.01 346  P    Pn    05 48 50.4  -1.2
           baz=162
I23K  Minto, Yukon-K    9.02   0       Pn    05 48 50.8  -1.0
I23K  Minto, Yukon-K    9.02   0  P    Pn    05 48 51.3  -0.5
           baz=181,SNR=18
L29M  L29M              9.02  35       Pn    05 48 51.9  -0.1
L29M  L29M              9.02  35  P    Pn    05 48 52.1  +0.2
           baz=224,SNR=156
POKR  Poker Plat Res    9.05   6       Pn    05 48 51.7  -0.5
POKR  Poker Plat Res    9.05   6  P    Pn    05 48 52.1  -0.1
           baz=188,SNR=6.5
P32M  Atlin             9.07  61  Pn   Pn    05 48 52.4  -0.2
P32M  Atlin             9.07  61  P    Pn    05 48 52.1  -0.6
           baz=254,SNR=19
J16K  Anvik River       9.08 326  P    Pn    05 48 50.9  -1.8
           baz=137
M30M  Minto, Yukon      9.12  40  Pn   Pn    05 48 53.2  -0.1
M30M  Minto, Yukon      9.12  40  P    Pn    05 48 53.4  +0.1
           baz=231,SNR=35
U33K  Whale Pass        9.14  83       Pn    05 48 50.3  -3.1
U33K  Whale Pass        9.14  83  P    Pn    05 48 50.4  -3.1
           baz=277
CRAG  Craig             9.24  87       Pn    05 48 51.9  -2.9
CRAG  Craig             9.24  87  P    Pn    05 48 52.6  -2.2
           baz=281
GCSA  Galena City Sc    9.35 340  P    Pn    05 48 54.8  -1.5
           baz=154
DAWY  Dawson            9.38  28  P    Pn    05 48 56.4  -0.4
           baz=217,SNR=21
WRAK  Wrangell Islan    9.53  81  P    Pn    05 48 57.8  -1.0
           baz=275
AKUT  Akutan            9.55 265  P    Pn    05 48 56.6  -2.5
I17K  Unalakleet        9.56 329       Pn    05 48 57.2  -1.9
I17K  Unalakleet        9.56 329  P    Pn    05 48 57.2  -1.9
           baz=140
AHB   Akutan Harbor     9.58 264       Pn    05 48 56.8  -2.7
PRP   Porcupine Dome    9.59  10  P    Pn    05 48 58.8  -1.0
           baz=194,SNR=21
AKLV  Akutan Long Va    9.64 265       Pn    05 48 57.4  -3.0
Q32M  Nakina River      9.66  66  P    Pn    05 48 59.6  -1.2
           baz=260
H21K  Melozitna Rive    9.67 352  P    Pn    05 48 59.2  -1.5
           baz=169,SNR=26
I26K  Coal Creek Min    9.68  16  P    Pn    05 49 00.4  -0.5
           baz=202
P33M  Teslin, Yukon     9.68  58  P    Pn    05 49 00.5  -0.5
           baz=252,SNR=66
H23K  Yukon River       9.70 360  P    Pn    05 49 00.7  -0.5
           baz=180
K13K  Kusilvak Mount    9.71 313  P    Pn    05 49 01.1  -0.3
           baz=120,SNR=29
H20K  Anotleneega Mo    9.73 347  P    Pn    05 49 00.6  -0.9
           baz=162
J14K  Nanvaranak Lak    9.73 319  P    Pn    05 49 00.8  -0.7
           baz=127,SNR=11
K29M  Barlow Dome       9.74  33  P    Pn    05 49 01.6  -0.3
           baz=223,SNR=68
H24K  Noodor Dome       9.75   4  P    Pn    05 49 02.0  +0.2
           baz=186,SNR=13
M11K  Mekoryuk          9.77 303       Pn    05 49 00.7  -1.4
M11K  Mekoryuk          9.77 303  P    Pn    05 49 00.8  -1.2
           baz=109,SNR=6.9
H22K  Ishtalitna Cre    9.81 355  P    Pn    05 49 02.4  -0.4
           baz=174,SNR=19
M31M  Drury Creek, Y    9.82  46  P    Pn    05 49 03.4  +0.6
           baz=238,SNR=64
N32M  Quiet Lake        9.89  53  P    Pn    05 49 03.2  -0.6
           baz=247
H19K  Roundabout Mou    9.99 343       Pn    05 49 03.8  -1.2
H19K  Roundabout Mou    9.99 343  P    Pn    05 49 03.2  -1.9
           baz=157
J29N  Klondike Camp    10.01  29       Pn    05 49 05.6  +0.2
J29N  Klondike Camp    10.01  29  P    Pn    05 49 05.2  -0.2
           baz=219,SNR=23
H18K  Honhosa River    10.01 338  P    Pn    05 49 03.2  -2.2
           baz=151
UNV   Unalaska Valle   10.05 264       Pn    05 49 03.3  -2.7
UNV   Unalaska Valle   10.05 264  P    Pn    05 49 02.7  -3.3
UNV   Unalaska Valle   10.05 264  P    Pn    05 49 03.2  -2.8
           baz=70,SNR=5.1
IMAR  Indian Mountai   10.07 350  Pn   Pn    05 49 04.2  -2.1
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V35K  Ketchikan        10.11  87  P    Pn    05 49 05.2  -1.5
           baz=282
S34M  Telegraph Cree   10.15  72  Pn   Pn    05 49 06.8  -0.5
S34M  Telegraph Cree   10.15  72  P    Pn    05 49 06.7  -0.6
           baz=268
H17K  Granite Mounta   10.18 334  P    Pn    05 49 06.3  -1.4
           baz=145
MREP  Makushin Rep’t   10.20 264       Pn    05 49 05.6  -2.4
I27K  Kandik River     10.21  19  P    Pn    05 49 07.7  -0.6
           baz=206,SNR=36
H25L  Birch Creek      10.30   8  P    Pn    05 49 08.9  -0.4
           baz=192,SNR=11
R33M  Jennings River   10.40  64  P    Pn    05 49 10.1  -0.7
           baz=260,SNR=31
I28M  Miner Creek      10.41  23  P    Pn    05 49 10.9   0.0
           baz=211,SNR=13
H16K  Elim             10.57 329  P    Pn    05 49 11.3  -1.7
           baz=138
G21K  Allakaket        10.57 351  P    Pn    05 49 12.1  -1.0
           baz=168
G23K  Bananza Creek    10.60 359  P    Pn    05 49 12.4  -1.1
           baz=178,SNR=17
G24K  Hadweenzic Riv   10.62   4  P    Pn    05 49 13.2  -0.6
           baz=186,SNR=22
J30M  Hart River       10.64  32  P    Pn    05 49 13.8  -0.3
           baz=224,SNR=41
T35M  Bob Quinn        10.64  78  P    Pn    05 49 13.1  -1.0
           baz=273
G19K  Purcell Mounta   10.66 343  P    Pn    05 49 13.3  -1.0
           baz=157
G18K  Tagagawik        10.72 339  P    Pn    05 49 14.2  -0.9
           baz=152
DLBC  Dease Lake       10.76  70  Pn   Pn    05 49 15.6  -0.2
           comp=E,4.6nm,0.3s,baz=256,slow=7.2,SNR=60
DLBC                              Sn   Sn    05 51 09.8  -5.5
           comp=E,3.7nm,0.3s,baz=148,slow=27,SNR=5.9
           comp=E,15nm,0.4s
DLBC  Dease Lake       10.76  70  P    Pn    05 49 15.6  -0.2
           baz=266,SNR=12
G25K  Bearman Lake     10.77   7  P    Pn    05 49 15.3  -0.4
           baz=190,SNR=9.7
H27K  Steamboat Moun   10.80  17  P    Pn    05 49 15.6  -0.6
           baz=204,SNR=24
G17K  Kiwalik Mounta   10.82 335  P    Pn    05 49 15.4  -1.0
           baz=145
G22K  Bettles          10.85 356  P    Pn    05 49 15.7  -1.1
           baz=174
I30M  Mount Dempster   11.10  30  P    Pn    05 49 19.9  -0.6
           baz=221,SNR=19
COLD  Coldfoot         11.12 359  Pn   Pn    05 49 19.2  -1.3
COLD  Coldfoot         11.12 359  P    Pn    05 49 19.6  -0.9
           baz=178
G26K  Porcupine Rive   11.16  12  P    Pn    05 49 20.1  -1.0
           baz=197
G16K  Koyuk River      11.17 331  P    Pn    05 49 19.5  -1.8
           baz=140
F21K  Alatna River     11.26 352  P    Pn    05 49 21.6  -0.9
           baz=169,SNR=5.6
G27K  Doyon Strip      11.31  16  P    Pn    05 49 22.6  -0.6
           baz=203
F20K  Avaraart Lake    11.32 347  P    Pn    05 49 23.0  -0.3
           baz=162,SNR=5.8
G15K  Niukluk          11.36 327  P    Pn    05 49 21.8  -2.0
           baz=135
H29M  Whitestone       11.40  23  P    Pn    05 49 23.8  -0.6
           baz=213,SNR=6.6
F19K  Shaleruckik Mo   11.41 343  P    Pn    05 49 23.2  -1.2
           baz=156
F24K  Squaw Lake       11.43   3  P    Pn    05 49 24.5  -0.3
           baz=185,SNR=7.2
F22K  John River       11.46 355  P    Pn    05 49 24.2  -1.1
           baz=173,SNR=5.7
SPIA  Saint Paul Isl   11.47 284       Pn    05 49 23.0  -2.3
SPIA  Saint Paul Isl   11.47 284  P    Pn    05 49 23.9  -1.4
SPIA  Saint Paul Isl   11.47 284  P    Pn    05 49 22.8  -2.5
           baz=87
ANM   Nome             11.50 324  P    Pn    05 49 24.3  -1.4
           baz=130
F18K  Selawik          11.54 339  P    Pn    05 49 24.9  -1.3
           baz=151
BMAR  Burnt Mountain   11.54   9       Pn    05 49 25.5  -0.9
WTLY  Watson Lake, Y   11.61  62  P    Pn    05 49 27.2  -0.1
           baz=259,SNR=14
F25K  Christian Rive   11.62   7  P    Pn    05 49 26.5  -0.9
           baz=191,SNR=8.7
NIKH  Nikolski High    11.68 262  Pn   Pn    05 49 26.5  -1.8
NIKH  Nikolski High    11.68 262  P    Pn    05 49 25.3  -3.0
           baz=67
F17K  Baldwin Pennin   11.74 336  P    Pn    05 49 27.6  -1.4
           baz=146
F26K  Sheenjek River   11.84  10  P    Pn    05 49 29.6  -0.9
           baz=195,SNR=12
E19K  Redstone River   11.90 345  P    Pn    05 49 30.0  -1.2
           baz=159
EPYK  Eagle Plains     11.91  26  P    Pn    05 49 30.6  -0.8
           baz=217,SNR=23
E23K  Chandalar        11.95 360  P    Pn    05 49 30.8  -1.2
           baz=180
E24K  Your Creek       11.97   2  P    Pn    05 49 30.3  -2.0
           baz=183,SNR=8.6
F15K  North Star Dit   12.05 329  P    Pn    05 49 31.9  -1.3
           baz=136
G29M  Pine Creek       12.07  22  P    Pn    05 49 32.8  -0.7
           baz=212,SNR=24
E22K  Anaktuvuk Pass   12.07 356  P    Pn    05 49 32.8  -0.8
           baz=174,SNR=5.6
H31M  Peel River       12.11  31  P    Pn    05 49 33.1  -0.9
           baz=224
E25K  Arctic Village   12.14   7  P    Pn    05 49 33.4  -1.2
           baz=191,SNR=9.6
F28M  Old Crow         12.33  17  P    Pn    05 49 36.5  -0.7
           baz=206,SNR=18
E17K  Hotham Inlet     12.40 337  P    Pn    05 49 36.6  -1.4
           baz=146
E18K  Tukpahlearik C   12.44 340  P    Pn    05 49 36.9  -1.6
           baz=150
E21K  Killik River     12.50 352  P    Pn    05 49 37.8  -1.7
           baz=168,SNR=9.9
G30M  tAoh Zraii Nji   12.52  25  P    Pn    05 49 38.6  -1.2
           baz=216,SNR=13
E20K  Nigu River       12.53 348  P    Pn    05 49 38.6  -1.3
           baz=163
TOLK  Toolik Lake Re   12.53 360       Pn    05 49 40.5  +0.6
TOLK  Toolik Lake Re   12.53 360  P    Pn    05 49 38.7  -1.2
           baz=180,SNR=13
E27K  Coleen River     12.61  14  P    Pn    05 49 39.5  -1.4
           baz=201,SNR=7.7
D22K  Ayikyak River    12.85 355       Pn    05 49 45.0  +0.8
D22K  Ayikyak River    12.85 355  P    Pn    05 49 42.2  -2.1
           baz=172
D23K  Nanushuk River   12.87 358  P    Pn    05 49 43.0  -1.4
           baz=177,SNR=20
G31M  Satah River      12.96  27  P    Pn    05 49 44.8  -0.8
           baz=221,SNR=27
TNA   Tin City         12.96 324  P    Pn    05 49 43.5  -2.3
           baz=128
D19K  Kuna River       13.00 346  P    Pn    05 49 44.6  -1.6
           baz=158
D20K  Etivluk River    13.01 348  P    Pn    05 49 44.8  -1.6
           baz=162
D24K  Happy Valley     13.05   1  P    Pn    05 49 45.9  -1.0
           baz=182
BBB   Bella Bella      13.12  99  Pn   Pn    05 49 45.9  -1.9
           comp=E,0.4nm,0.3s,baz=311,slow=10,SNR=5.2
BBB                               Sn   Sn    05 52 04.6  -8.1
           comp=E,0.7nm,0.3s,baz=169,slow=23,SNR=6.7
           comp=E,11nm,0.7s
F30M  Barrier River    13.13  24  P    Pn    05 49 47.7  -0.4
           baz=216,SNR=18
D17K  Noatak River     13.19 337  P    Pn    05 49 47.0  -1.7
           baz=145
C21K  Knifeblade Rid   13.27 352  P    Pn    05 49 48.6  -1.2
           baz=167
TOAD  Toad River Com   13.29  68  P    Pn    05 49 49.8  -0.4
           baz=268,SNR=9.1
E28M  Babbage River    13.29  16  P    Pn    05 49 50.3  +0.2
           baz=205,SNR=32
D25K  Kavik River      13.29   5  P    Pn    05 49 50.2   0.0
           baz=188,SNR=13
E29M  Blow River       13.37  19  P    Pn    05 49 50.5  -0.7
           baz=209,SNR=19
GAMB  Gambell          13.43 314  P    Pn    05 49 50.1  -2.0
           baz=115
RDOG  Red Dog Mine     13.44 338  P    Pn    05 49 51.0  -1.2
           baz=146
F31M  Tsiigehtchic     13.48  27  P    Pn    05 49 51.8  -0.9
           baz=221,SNR=26
C24K  Franklin Bluff   13.62   1  P    Pn    05 49 53.6  -1.1
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	baz=182,SNR=8.2						
D27M	Malcolm River	13.68	13	P	Pn	05 49 54.7	-0.9
	baz=201,SNR=18						
C23K	Itkillik River	13.74	358	P	Pn	05 49 55.4	-0.9
	baz=178						
C27K	Jago River	13.76	9	P	Pn	05 49 55.9	-0.7
	baz=194,SNR=13						
C19K	Lookout Ridge	13.77	345	P	Pn	05 49 55.2	-1.5
	baz=156						
C17K	DeLong Mountai	13.85	339	P	Pn	05 49 56.5	-1.3
	baz=147						
C26K	Camden Bay	13.96	7	P	Pn	05 49 58.7	-0.6
	baz=191,SNR=8.0						
KOTAN	Kotaneelee Air	13.96	63	P	Pn	05 49 58.3	-1.1
	baz=264,SNR=23						
D28M	Stokes Point	14.07	16	P	Pn	05 50 00.1	-0.6
	baz=205,SNR=11						
INK	Inuvik	14.21	25	Pn	Pn	05 50 02.8	+0.2
	comp=E,2.0nm,0.3s,baz=214,slow=15,SNR=148						
INK	Inuvik	14.21	25	P	Pn	05 50 02.6	0.0
	baz=219,SNR=75						
B20K	Meade River	14.31	349	P	Pn	05 50 02.1	-2.0
	baz=163						
B22K	Teshekpuk Lake	14.34	355	P	Pn	05 50 02.3	-2.2
	baz=171						
B18K	Kokolik River	14.36	342	P	Pn	05 50 02.5	-2.2
	baz=151						
WRGLY	Wrigley	14.84	51	P	Pn	05 50 10.1	-1.1
	baz=253,SNR=12						
ATKA	Atka Island	14.97	265	P	Pn	05 50 10.6	-2.5
A19K	Wainwright	14.99	345	P	Pn	05 50 11.2	-2.1
	baz=154						
A22K	Sinclair Lake	15.09	353	P	Pn	05 50 13.0	-1.5
	baz=168						
CLRS	Cowichan Lake	17.02	105	P	Pn	05 50 39.5	+0.1
C36M	Paulatuk	17.41	31	P	Pn	05 50 43.0	-1.1
C36M				IAmb	IAmb	05 50 46.7	
	comp=Z,35nm,0.8s						
C36M	Paulatuk	17.41	31	P	Pn	05 50 42.3	-1.7
	baz=233,SNR=30						
YKA	Yellowknife Ar	18.70	56	P	P	05 50 59.8	+0.2
	comp=Z,0.7nm,0.3s,baz=268,slow=11,SNR=25						
	comp=Z,5.9nm,0.8s						
YKA	Yellowknife Ar	18.70	56	P	P	05 50 58.6	-1.0
YKAW3	Yellowknife Wh	18.70	56	P	P	05 51 00.1	+0.5
A36M	Sachs Harbour	18.84	23	P	P	05 51 00.4	-0.5
	baz=225,SNR=65						
LTY	Liberty	19.82	105	P	P	05 51 11.8	-0.2
LTY				IAmb	IAmb	05 51 15.5	
	comp=Z,57nm,1.3s						
B08A	Colville Reser	19.91	100		P	05 51 12.8	-0.1
B08A				IAmb	IAmb	05 51 16.5	
	comp=Z,27nm,1.2s						
HOOD	Mount Hood Mea	20.53	110	P	P	05 51 19.9	+0.1
E07A	Sunnyside	20.69	105	IAmb	IAmb	05 51 22.6	
	comp=Z,24nm,0.8s						
D08A	Wollman Farm,	20.89	103	IAmb	IAmb	05 51 24.4	
	comp=Z,29nm,0.9s						
EDM	Edmonton	20.93	83	IAmb	IAmb	05 51 24.8	
	comp=Z,15nm,0.8s						
HAWA	Hanford	20.97	105	IAmb	IAmb	05 51 25.3	
	comp=Z,18nm,0.8s						
F07A	Phinny Hill Vi	21.07	107	IAmb	IAmb	05 51 26.7	
	comp=Z,29nm,1.0s						
NEW	Newport	21.18	98	P	P	05 51 26.6	0.0
	comp=Z,13nm,0.8s,baz=311,slow=9.6,SNR=24						
	comp=Z,13nm,0.8s						
NEW	Newport	21.18	98	IAmb	IAmb	05 51 30.3	
	comp=Z,19nm,0.9s						
I04A	Tendick Farm,	21.19	114	IAmb	IAmb	05 51 27.9	
	comp=Z,40nm,1.2s						
I05D	Terrebonne, OR	21.36	112	IAmb	IAmb	05 51 51.1	
	comp=Z,38nm,1.2s						
YPT	Yellepit	21.49	105	IAmb	IAmb	05 51 30.9	
	comp=Z,34nm,1.0s						
E09A	Wood Farm, Sta	21.65	103	IAmb	IAmb	05 51 32.2	
	comp=Z,41nm,1.3s						
LNOR	Lincton Mounta	21.97	105	IAmb	IAmb	05 51 36.1	
	comp=Z,40nm,1.3s						
G08A	Pilot Rock	21.98	107	IAmb	IAmb	05 51 37.7	
	comp=Z,26nm,1.4s						
F10A	Beach Ranch, E	22.48	103	IAmb	IAmb	05 51 42.0	
	comp=Z,18nm,0.9s						
I07A	Izee	22.50	110	IAmb	IAmb	05 51 42.7	
	comp=Z,22nm,1.1s						
YBH	Yreka Blue Hor	22.55	118	P	P	05 51 41.5	+0.1
	comp=Z,0.5nm,0.6s,baz=345,slow=6.2,SNR=18						
M02C	Callahan	22.74	119	IAmb	IAmb	05 51 46.3	
	comp=Z,37nm,1.4s						
WVOR	Wild Horse Val	24.10	112	IAmb	IAmb	05 51 59.5	
	comp=Z,27nm,1.3s						
ORV	Oroville	24.81	120	P	P	05 52 02.8	-0.5
ORV				IAmb	IAmb	05 52 03.3	
	comp=Z,9.1nm,0.8s						
MFID	Camas Ranch	24.91	106	IAmb	IAmb	05 52 06.6	
	comp=Z,18nm,1.3s						
BEKR	Beckworth	25.13	118	IAmb	IAmb	05 52 08.1	
	comp=Z,7.8nm,0.9s						
DLMT	Dillon	25.40	99	IAmb	IAmb	05 52 11.4	
	comp=Z,14nm,1.0s						
HLID	Hailey	25.57	105	IAmb	IAmb	05 52 13.0	
	comp=Z,9.9nm,1.1s						
BCYI	Bear Canyon	25.63	102	IAmb	IAmb	05 52 11.3	
	comp=Z,16nm,1.4s						
PAHR	Pah Rah Range	25.73	117	IAmb	IAmb	05 52 12.2	
	comp=Z,9.4nm,0.8s						
YMR	Madison River	26.74	99	IAmb	IAmb	05 52 21.7	
	comp=Z,7.8nm,0.9s						
YNR	Norris Junctio	26.87	99	IAmb	IAmb	05 52 23.5	
	comp=Z,19nm,1.5s						
NVAR	Mina Array Bea	27.25	117	P	P	05 52 25.6	+0.1
	comp=Z,6.0nm,0.8s,baz=304,slow=8.9,SNR=33						
	comp=Z,6.0nm,0.8s						
NV11	Mina Array Sit	27.32	117	IAmb	IAmb	05 52 27.1	
	comp=Z,9.4nm,1.1s						
RES	Resolute Bay	27.72	28	P	P	05 52 28.7	-0.4
	comp=Z,1.9nm,0.7s,baz=264,slow=10,SNR=4.1						
	comp=Z,1.9nm,0.7s						
R11B	Troy Canyon, C	28.68	114	IAmb	IAmb	05 52 39.1	
	comp=Z,9.3nm,0.9s						
PD31	Pinedale Array	28.75	101	P	P	05 52 38.5	-0.5
PDAR	Pinedale Array	28.75	101	P	P	05 52 38.1	-0.8
	comp=Z,2.8nm,0.6s,baz=312,slow=5.0,SNR=33						
	comp=Z,2.8nm,0.6s						
PDAR	Pinedale Array	28.75	101	P	P	05 52 38.4	-0.5
GRAC	Grapevine Rang	28.83	118	IAmb	IAmb	05 52 41.2	
	comp=Z,13nm,1.1s						
SPR3	Spring Creek 3	28.84	112	IAmb	IAmb	05 52 41.8	
	comp=Z,8.8nm,1.1s						
SEY	Seymchan	29.29	307	P	P	05 52 41.6	-1.6
	comp=Z,2.7nm,0.8s,baz=100,slow=9.4,SNR=3.6						
	comp=Z,2.7nm,0.8s						
WCT	Wildcat Mounta	29.36	117	IAmb	IAmb	05 52 45.4	
	comp=Z,7.9nm,1.0s						
TPNV	Topopah Spring	29.42	117	IAmb	IAmb	05 52 46.1	
	comp=Z,13nm,1.2s						
FURC	Furnace Creek,	29.50	118	IAmb	IAmb	05 52 46.7	
	comp=Z,12nm,1.1s						
BSUT	Blindstream Ca	29.62	105	IAmb	IAmb	05 52 47.7	
	comp=Z,6.8nm,0.8s						
LRMC	Laurel Mtn Rad	29.88	120	P	P	05 52 48.8	-0.1
QSM	Queen of Sheba	29.89	119	IAmb	IAmb	05 52 50.7	
	comp=Z,18nm,1.4s						
CCCA	Chr Cany lake	30.00	120	IAmb	IAmb	05 52 50.6	
	comp=Z,7.5nm,0.7s						
PETK	Petropavlovsk-	30.11	287	LR	LR	06 05 12.5	
	comp=Z,1µm,20.5s,baz=236,slow=37						
TCRU	Three Creeks R	30.12	110	IAmb	IAmb	05 52 52.6	
	comp=Z,7.1nm,0.9s						
RDMU	Red Mountain	30.24	104	IAmb	IAmb	05 52 53.8	
	comp=Z,14nm,1.5s						
CCUT	Cedar City	30.43	112	IAmb	IAmb	05 52 55.2	
	comp=Z,13nm,1.4s						
Q16A	Castle Valley	30.57	108	IAmb	IAmb	05 52 55.7	
	comp=Z,4.0nm,0.7s						
MTPC	Mountain Pass	30.92	118	IAmb	IAmb	05 52 59.4	
	comp=Z,5.7nm,0.9s						
RSSD	Black Hills	30.94	93	P	P	05 52 58.1	-0.1
V12A	Nelson	31.08	116	IAmb	IAmb	05 53 01.0	
	comp=Z,11nm,0.9s						
KNB	Kanab	31.12	112	IAmb	IAmb	05 53 00.6	
	comp=Z,5.8nm,1.0s						
HAYD	Hayden	31.54	102	IAmb	IAmb	05 53 04.4	
	comp=Z,8.2nm,0.7s						
W13A	Hualapai Mount	32.06	116	IAmb	IAmb	05 53 09.5	
	comp=Z,7.4nm,1.0s						
PV07	Paradox Valley	32.27	106	IAmb	IAmb	05 53 10.5	
	comp=Z,8.8nm,0.9s						
PV05	Paradox Valley	32.28	107	IAmb	IAmb	05 53 11.8	
	comp=Z,4.6nm,0.7s						
BORC	Borrego Spring	32.29	121	P	P	05 53 09.2	-0.7
Y14A	Wickenburg	33.42	116	IAmb	IAmb	05 53 21.1	
	comp=Z,8.6nm,0.9s						
X16A	Lo Mia Camp, P	33.84	114	IAmb	IAmb	05 53 25.4	
	comp=Z,9.1nm,0.9s						
X18A	Snowflake	34.52	112	IAmb	IAmb	05 53 30.9	
	comp=Z,7.9nm,1.2s						
ECSD	EROS Data Cent	35.33	88	IAmb	IAmb	05 53 35.8	
	comp=Z,6.4nm,0.9s						
T25A	Trinidad	35.51	103	IAmb	IAmb	05 53 39.2	
	comp=Z,7.4nm,1.0s						
TIXI	Tiksi	35.72	328	P	P	05 53 39.0	-0.3
	comp=Z,3.6nm,0.3s,baz=68,slow=8.5,SNR=4.4						
	comp=Z,3.6nm,0.3s						
TIXI	Tiksi	35.72	328	P	P	05 53 38.7	-0.6
TUC	Tucson	35.84	115	P	P	05 53 40.3	-0.6
Y22A	Socorro	36.54	109	IAmb	IAmb	05 54 00.5	
	comp=Z,8.3nm,1.2s						
AMTX	Amarillo	38.66	103	IAmb	IAmb	05 54 05.6	
	comp=Z,16nm,1.1s						
SMWD	Samnorwood	39.28	101	IAmb	IAmb	05 54 10.8	
	comp=Z,16nm,1.1s						
P38A	Dawn	39.78	90	IAmb	IAmb	05 54 14.0	
	comp=Z,14nm,0.7s						
POST	Post	40.13	105	P	P	05 54 16.5	-0.5
POST				IAmb	IAmb	05 54 17.7	
	comp=Z,7.7nm,0.8s						
ODSA	Odessa	40.29	107	IAmb	IAmb	05 54 19.0	
	comp=Z,17nm,1.1s						
WMOK	Wichita Mounta	40.36	100	IAmb	IAmb	05 54 19.6	
	comp=Z,10nm,1.1s						
P40A	Paris	40.68	89	IAmb	IAmb	05 54 21.5	
	comp=Z,12nm,0.8s						
SGCY	Sterling City	41.21	105	IAmb	IAmb	05 54 26.2	
	comp=Z,9.0nm,1.0s						
ABTX	Abilene, Hawle	41.48	103	IAmb	IAmb	05 54 27.8	
	comp=Z,6.4nm,0.7s						
TXAR	Lajitas Array	41.88	110	P	P	05 54 31.4	-0.2
	comp=Z,4.2nm,0.9s,baz=319,slow=6.2,SNR=20						
	comp=Z,4.2nm,0.9s						
OZNA	Ozona	41.98	106	IAmb	IAmb	05 54 32.6	
	comp=Z,10nm,0.7s						
PLPT	Palo Pinto	42.06	102	IAmb	IAmb	05 54 32.9	
	comp=Z,11nm,1.0s						
SAND	Sanderson	42.21	108	IAmb	IAmb	05 54 34.9	
	comp=Z,9.7nm,1.2s						
R50A	Paris	45.86	84	P	P	05 55 02.5	-0.7
NRIK	Noril'sk	48.18	336	P	P	05 55 22.3	+1.4
	comp=Z,1.7nm,0.5s,baz=63,slow=7.8,SNR=3.7						
	comp=Z,1.7nm,0.5s						
H11N2	WAKE ISLAND Hy	48.72	240	T	T	06 48 03.1	
	baz=30,slow=76,SNR=9.6						
H11N3	WAKE ISLAND Hy	48.73	240	T	T	06 48 02.4	
	baz=30,slow=76,SNR=9.0						
H11N1	WAKE ISLAND Hy	48.74	240	T	T	06 48 07.4	
	baz=30,slow=76,SNR=8.8						
H11S1	WAKE ISLAND Hy	49.87	239	T	T	06 49 22.8	
	baz=30,slow=76,SNR=12						
H11S2	WAKE ISLAND Hy	49.88	239	T	T	06 49 30.7	
	baz=30,slow=76,SNR=10.0						
H11S3	WAKE ISLAND Hy	49.88	239	T	T	06 49 27.3	
	baz=30,slow=76,SNR=9.0						
CN2	Changchun	52.67	295	P	P	05 55 56.8	+1.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ARCES	ARCESS Array B	54.56	2	P	P	05 56 10.8	+2.1
	comp=Z,9.6nm,1.0s,baz=12,slow=6.2,SNR=5.0						
	comp=Z,9.6nm,1.0s						
KSRS	Korea Array	56.00	288	P	P	05 56 19.0	-0.5
	comp=Z,1.1nm,0.8s,baz=41,slow=7.2,SNR=1.7						
	comp=Z,1.1nm,0.8s						
SONM	Songino Array	58.64	310	P	P	05 56 38.3	+0.1
	comp=Z,1.7nm,0.7s,baz=45,slow=6.7,SNR=8.5						
	comp=Z,1.7nm,0.7s						
SONM	Songino Array	58.64	310		P	05 56 37.6	-0.5
SONM				IAmb	IAmb	05 56 52.0	
	comp=Z,5.6nm,0.8s						
ZAA0	Zalesovo Array	61.61	327	P	P	05 56 57.6	-0.6
ZAA0				IAmb	IAmb	05 57 12.3	
	comp=Z,2.5nm,0.7s						
ZALV	Zalesovo Beam	61.61	327	P	P	05 56 58.1	-0.1
	comp=Z,1.1nm,0.4s,baz=29,slow=6.9,SNR=6.6						
	comp=Z,1.1nm,0.4s						
ZALV	Zalesovo Beam	61.61	327	P	P	05 56 57.4	-0.8
HHC	Hu-ho-hao-te	61.71	302	*e*P	P	05 56 58.5	-0.7
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,340nm,6.7s						
NB2	NORSAR Subarra	62.16	10	P	P	05 57 00.7	-1.2
	comp=Z,4.7nm,1.0s,baz=348,slow=6.9						
NOA	NORSAR Array B	62.16	10	P	P	05 57 01.1	-0.7
	comp=Z,2.3nm,1.0s,baz=348,slow=6.8,SNR=3.4						
	comp=Z,2.3nm,1.0s						
FIA1	FINESS Array S	62.69	2		P	05 57 04.8	-0.5
FINES	FINESS Array B	62.69	2	P	P	05 57 04.7	-0.6
	comp=Z,3.1nm,0.9s,baz=359,slow=9.5,SNR=5.0						
	comp=Z,3.1nm,0.9s						
FINES	FINESS Array B	62.69	2		P	05 57 04.8	-0.5
NJ2	Nanjing	64.92	290	*e*P	P	05 57 19.4	-1.0
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
BVAR	Borovoye Array	66.35	335	P	P	05 57 28.7	-0.7
	comp=Z,0.5nm,0.5s,baz=30,slow=7.2,SNR=4.9						
	comp=Z,0.5nm,0.5s						
KURBB	Kurchatov Arra	66.39	329	P	P	05 57 28.9	-0.7
	comp=Z,1.1nm,0.7s,baz=29,slow=6.3,SNR=5.7						
	comp=Z,1.1nm,0.7s						
MK31	Makanchi Array	68.63	325	P	P	05 57 43.2	-0.8
MK31				IAmb	IAmb	05 57 58.4	
	comp=Z,4.4nm,1.0s						
MKAR	Makanchi Array	68.63	325	P	P	05 57 43.1	-0.8
	comp=Z,0.7nm,0.8s,baz=27,slow=6.1,SNR=2.5						
	comp=Z,0.7nm,0.8s						
MKAR	Makanchi Array	68.63	325	P	P	05 57 43.3	-0.7
AB31	Akbulak array	72.13	340	P	P	05 58 05.0	-0.2
ABKAR	Akbulak array	72.13	340	P	P	05 58 05.0	-0.3
AKASG	Malin Array Be	73.50	1	P	P	05 58 12.9	-0.4
	comp=Z,0.3nm,0.4s,baz=8.6,slow=6.8,SNR=1.5						
	comp=Z,0.3nm,0.4s						
GERES	GERESS Array B	74.43	11	P	P	05 58 19.6	+0.7
	comp=Z,0.2nm,0.3s,baz=19,slow=6.2,SNR=1.2						
	comp=Z,0.2nm,0.3s						
KK31	Karatay Array	75.50	331		P	05 58 24.7	-0.5
KK31				IAmb	IAmb	05 58 39.4	
	comp=Z,2.9nm,0.8s						
KKAR	Karatay Array	75.50	331		P	05 58 24.5	-0.6
KSH	Kashi	77.19	326	P	P	05 58 35.1	+0.2
KSH				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PZH	PanZhiHua	78.08	300	P	P	05 58 39.5	-0.6
CMAR	Chiang Mai Arr	86.24	298	P	P	05 59 21.3	-1.4
	comp=Z,1.0nm,0.4s,baz=29,slow=5.2,SNR=5.9						
	comp=Z,1.0nm,0.4s						
QSPA	South Pole Qui	145.95	180	PKPbc	PKPab	06 06 20.4	+0.6
	comp=Z,1.4nm,0.7s,baz=131,slow=1.3,SNR=6.8						
BOSA	Boshof	152.22	10	PKPbc	PKiKP	06 06 39.0	+2.2
	comp=Z,2.1nm,1.0s,baz=207,slow=2.3,SNR=1.6						

SJA ***02*** *05:57:48.5±0.7, 27°.05S×69°.38W, h101^{km}±3^{km}, ML3.7, MW3.7*

IDC ***02*** *05:57:49.6±3.0, 27°.15S×69°.32W, h97^{km}±23^{km}, mb3.9/1, mbtmp3.6/4, Error ellipse: s-maj=52.8km s-min=17.5km az=93.0*

GUC ***02*** *05:57:49.3±0.7, 27°.03S×69°.38W, h95^{km}±3^{km}, ML3.9*

ISC 02 05:57:49.4±0.8**, 27°.10S**±0°.03×**69°.39W**±0°.04**, h98**^{km}±6^{km}**, n58, σ1.^{s}52**/77**, 2C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AC02	Maricunga	0.35	42	*e*P	Pn	05 58 04.8	+0.2
AC02				*e*S	Sn	05 58 16.1	+0.1
AC02				IAML		05 58 16.6	
	comp=E,15µm,0.2s						
AC02	Maricunga	0.35	42	*e*P	Pn	05 58 04.7	0.0
AC02				*e*S	Sn	05 58 16.4	+0.5
AC02				IAML		05 58 17.1	
	comp=Z,2µm,0.1s						
AC06	Mina Casimiro	0.89	253	*e*P	Pn	05 58 08.7	+0.2
AC06				*e*S	Sn	05 58 23.7	+0.7
AC06				IAML		05 58 25.0	
	comp=E,2µm,0.1s						
GO03	Copiapo	0.90	236	*e*P	Pn	05 58 09.0	+0.5
GO03				*e*S	Sn	05 58 24.3	+1.2
GO03				IAML		05 58 24.8	
	comp=E,7µm,0.1s						
GO03	Copiapo	0.90	236	*e*P	Pn	05 58 09.1	+0.5
GO03				*e*S	Sn	05 58 24.5	+1.5
AC01	Pan de Azucar	1.44	311	⇓*i*P	Pn	05 58 14.9	+0.1
AC01				*e*S	Sn	05 58 33.6	-0.4
AC01				IAML		05 58 35.3	
	comp=E,2µm,0.2s						
AC01	Pan de Azucar	1.44	311	*e*P	Pn	05 58 14.8	+0.1
AC01				*e*S	Sn	05 58 34.1	+0.2
AC01				IAML		05 58 34.6	
	comp=Z,1µm,0.6s						
AC04	Llanos de Chal	1.85	233	⇑*i*P	Pn	05 58 20.7	+0.7
AC04				IAML		05 58 49.5	
	comp=E,1µm,0.2s						
AC04	Llanos de Chal	1.85	233	*e*P	Pn	05 58 20.9	+0.9
AC04				IAML		05 58 50.9	
	comp=Z,720nm,1.1s						
TINO	Tinogasta	1.88	121	*e*P	Pn	05 58 20.8	+0.4
TINO				*e*S	Sn	05 58 41.1	-3.0
AC05	El Transito	1.90	204	⇑*i*P	Pn	05 58 22.0	+1.3
AC05				*e*S	Sn	05 58 47.0	+2.5
AC05				IAML		05 58 48.6	
	comp=E,1µm,0.3s						
AC05	El Transito	1.90	204	*e*P	Pn	05 58 22.0	+1.3
AC05				IAML		05 58 51.5	
	comp=Z,428nm,0.6s						
GO02	Mina Guanaco	1.94	355	*e*P	Pn	05 58 21.3	-0.1
GO02	Mina Guanaco	1.94	355	*e*P	Pn	05 58 21.4	+0.1
GO02				*e*S	Sn	05 58 47.9	+2.2
GO02				IAML		05 58 50.9	
	comp=Z,376nm,0.2s						
VCA	Vinchina	1.94	147	*e*P	Pn	05 58 10.1	-11
VCA				*e*S	Sn	05 58 45.3	-0.2
VCA				IAML		05 58 52.7	
	comp=Z,267nm,0.2s						
LCO	Las Campanas	2.23	211	*e*P	Pn	05 58 25.3	+0.2
LCO	Las Campanas	2.23	211	*e*P	Pn	05 58 25.8	+0.7
LCO				IAML		05 58 57.2	
	comp=Z,742nm,0.2s						
AGUA	GUANDACOL	2.51	162	*e*P	Pn	05 58 31.1	+2.5
AGUA				IAML		05 59 08.9	
	comp=Z,178nm,0.6s						
PB14	IPOC Station P	2.63	340	*e*P	Pn	05 58 30.1	-0.3
PB14	IPOC Station P	2.63	340	*e*P	Pn	05 58 30.1	-0.3
PB14				*e*S	Sn	05 58 49.0	-13
PB14				IAML		05 59 08.3	
	comp=Z,223nm,0.8s						
AANI	Anillaco	2.76	129	*e*P	Pn	05 58 33.4	+1.3
AANI				IAML		05 59 12.9	
	comp=Z,468nm,0.7s						
CO01	Juntas del Tor	2.93	192	*e*P	Pn	05 58 36.5	+2.0
CO01				IAML		05 59 06.6	
	comp=N,105nm,0.5s						
CO01	Juntas del Tor	2.93	192	*e*P	Pn	05 58 36.7	+2.3
AROD	Rodeo	3.06	181	*e*P	Pn	05 58 39.1	+3.0
ACDV	Cuesta del Vie	3.07	176	*e*P	Pn	05 58 39.1	+3.0
ACDV				*e*S	Sn	05 58 59.8	-12
ACLC	CERRO LA CRUZ	3.16	138	*e*P	Pn	05 58 38.7	+1.3
ACLC				*e*S	Sn	05 59 16.2	+1.7
ACLC				IAML		05 59 18.4	
	comp=Z,89nm,0.3s						
FSA	Cafayete	3.21	73	*e*P	Pn	05 58 39.4	+1.3
CO05	La Serena	3.24	210	*e*P	Pn	05 58 37.6	-0.7
CO05				IAML		05 59 36.2	
	comp=E,553nm,0.7s						
GO04	Tololo Observa	3.30	202	*e*P	Pn	05 58 39.3	-0.1
GO04	Tololo Observa	3.30	202	*e*P	Pn	05 58 39.5	+0.2
GO04				IAML		05 59 49.7	
	comp=Z,330nm,0.5s						
CYA	Choya	3.45	114	*e*P	Pn	05 58 41.6	+0.5
CYA				*e*S	Sn	05 59 21.4	+0.2
CYA				IAML		05 59 22.8	
	comp=Z,64nm,0.6s						
ACCO	Cerro Coronel	3.49	175	*e*P	Pn	05 58 44.1	+2.2
PB10	IPOC Station P	3.72	343	*e*P	Pn	05 58 43.4	-1.4
PB10	IPOC Station P	3.72	343	*e*P	Pn	05 58 43.8	-1.0
PB10				*e*S	Sn	05 59 06.8	-21
PB10				IAML		05 59 11.2	
	comp=Z,65nm,1.8s						
CO03	El Pedregal	3.90	197	*e*P	Pn	05 58 47.1	-0.1
CO03	El Pedregal	3.90	197	*e*P	Pn	05 58 47.6	+0.4
CO03				IAML		06 00 07.2	
	comp=Z,99nm,0.8s						
AVFE	Valle Fertil	3.93	155	*e*P	Pn	05 58 48.8	+1.1
AVFE				*e*S	Sn	05 59 33.7	+0.8
AVFE				IAML		05 59 36.1	
	comp=Z,176nm,0.7s						
CO06	Fray Jorge	4.07	208	*e*P	Pn	05 58 47.5	-1.9
APLL	PUNTA DE LOS L	4.14	143	*e*P	Pn	05 58 51.3	+0.9
APLL				*e*S	Sn	05 59 37.6	-0.1
APLL				IAML		05 59 38.8	
	comp=Z,52nm,1.1s						
AF01	San Pedro de A	4.27	15	*e*P	Pn	05 58 52.4	-0.1
PB05	IPOC Station P	4.29	350	*e*P	Pn	05 58 50.1	-2.4
PB05	IPOC Station P	4.29	350	*e*P	Pn	05 58 50.2	-2.4
PB05				*e*S	Sn	05 59 48.9	+7.2
PB05				IAML		06 00 05.2	
	comp=Z,77nm,0.7s						
RTLL	Cerro Villicun	4.29	169	*e*P	Pn	05 58 54.0	+1.5
RTLL				*e*S	Sn	05 59 41.2	-0.3
RTLL				IAML		05 59 42.0	
	comp=Z,128nm,0.4s						
CO02	Combarbal	4.32	199	*e*P	Pn	05 58 52.0	-1.0
CO02	Combarbal	4.32	199	*e*P	Pn	05 58 52.2	-0.8
CO02				IAML		06 00 23.3	
	comp=Z,145nm,0.4s						
PB06	IPOC Station P	4.38	358	*e*P	Pn	05 58 52.1	-1.7
CFA	Coronel Fontan	4.60	168	P	Pn	05 58 57.8	+1.0
	comp=Z,8.0nm,0.4s,baz=7.8,slow=16,SNR=55						
CFA				S	Sn	05 59 47.8	-1.3
	comp=Z,11nm,0.3s,baz=95,slow=23,SNR=12						
CFA	Coronel Fontan	4.60	168	*e*P	Pn	05 58 57.7	+1.0
CFA				*e*S	Sn	05 59 49.1	+0.1
CO04	Los Peladeros	5.12	195	*e*P	Pn	05 59 02.6	-1.3
PB09	IPOC Station P	5.28	2	*e*P	Pn	05 58 49.5	-17
PB09				IAML		06 00 18.9	
	comp=Z,51nm,0.8s						
CPUP	Villa Florida	10.81	89	P	Pn	06 00 19.5	-1.7
	comp=Z,0.5nm,0.8s,baz=118,slow=13,SNR=6.0						
LPAZ	La Paz	10.82	6	P	Pn	06 00 22.0	+0.1
	comp=Z,0.7nm,0.5s,baz=155,slow=13,SNR=2.3						
SNAA	Sanae	57.18	160	P	P	06 07 25.6	-0.2
	comp=Z,1.7nm,0.5s,baz=283,slow=6.9,SNR=23						
	comp=Z,1.7nm,0.5s						
ASAR	Alice Springs	124.74	206	PKP	PKPdf	06 16 37.0	-1.2
	comp=Z,0.3nm,0.4s,baz=127,slow=1.9,SNR=4.1						
WRA	Warramunga Arr	127.89	209	PKP	PKPdf	06 16 43.9	-0.5
	comp=Z,0.3nm,0.5s,baz=173,slow=1.6,SNR=6.2						
KURBB	Kurchatov Arra	146.15	37	PKPbc	PKPbc	06 17 18.1	+0.2
	comp=Z,0.8nm,0.5s,baz=305,slow=3.3,SNR=6.2						
ZALV	Zalesovo Beam	147.13	28	PKPbc	PKPbc	06 17 20.9	+0.2
	comp=Z,1.1nm,0.5s,baz=313,slow=2.4,SNR=6.0						
ZALV				pPKPbc	pPKPbc	06 17 47.7	-1.0
	comp=Z,2.1nm,0.7s,baz=299,slow=3.9,SNR=6.3						
MKAR	Makanchi Array	150.28	41	PKPbc	PKPbc	06 17 28.8	-0.1
	comp=Z,1.1nm,0.6s,baz=330,slow=2.6,SNR=7.5						
MKAR				pPKPbc	pPKPbc	06 17 57.6	+0.4
	comp=Z,1.1nm,0.7s,baz=333,slow=2.3,SNR=4.4						

IDC 02 06:26:03.7±7.0**, 3°.94S**×**141°.89E, h171**^{km}±73^{km}**, mb2.8**/2**, mbtmp3.4**/3**, Error ellipse: s-maj=155.5km s-min=24.4km az=102.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	1.85	320	P	Pn	06 26 39.4	+0.7
	3.6nm,0.3s,baz=159,slow=17,SNR=1.6						
JAY				S	Sn	06 27 05.6	0.0
	4.2nm,0.4s,baz=184,slow=18,SNR=1.4						
WRA	Warramunga Arr	17.53	204	P	P	06 29 55.2	-1.2
	0.6nm,0.4s,baz=26,slow=12,SNR=6.2						
ASAR	Alice Springs	21.07	201	P	P	06 30 35.3	+0.5
	0.6nm,0.9s,baz=35,slow=11,SNR=6.3						
	0.6nm,0.9s						
ILAR	Eielson Array	85.64	24	P	P	06 38 22.7	-0.1
	0.4nm,0.9s,baz=234,slow=4.0,SNR=1.2						
	0.4nm,0.9s						

IDC 02 06:29:11.2±3.8**, 22°.62N**×**143°.12E, h77**^{km}±39^{km}**, mb3.5**/3**, mbtmp4.0**/4**, ML4.4**/1**, Error ellipse: s-maj=79.5km s-min=23.1km az=84.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	4.53	349	P	Pn	06 30 18.7	+1.3
	17nm,0.3s,baz=127,slow=20,SNR=8.1						
JCJ				S	Sn	06 31 09.0	+0.2
	44nm,0.4s,baz=200,slow=11,SNR=6.2						
	53nm,0.3s						
WRA	Warramunga Arr	43.17	192	P	P	06 37 04.4	-0.1
	1.0nm,0.5s,baz=16,slow=8.8,SNR=17						
	1.0nm,0.5s						
ASAR	Alice Springs	46.88	192	P	P	06 37 33.4	-0.5
	0.3nm,0.3s,baz=13,slow=8.1,SNR=7.8						
	0.3nm,0.3s						
BVAR	Borovoye Array	61.93	319	P	P	06 39 22.8	0.0
	0.6nm,0.3s,baz=98,slow=7.9,SNR=4.0						
	0.6nm,0.3s						
PLCA	Paso Flores	146.41	130	PKPbc	PKPbc	06 48 43.2	-0.4
	0.8nm,0.8s,baz=244,slow=4.5,SNR=1.6						

DJA 02 06:32:56.1±1.0**, 3˚N**±7˚×**12˚6E**±˚**, h99**^{km}±16^{km}**, M4.0**/9**, mB5.1**/2**, mb4.4**/1**, MLv3.8**/9**, Mw(mB)4.5**/2**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	0.94	354	P	Pn	06 33 15.1	-0.8
GAMI	Galela, Maluku	2.34	112	P	Pn	06 33 33.5	+0.4
GTOI	Gorontalo	3.34	231	P	Pn	06 33 47.3	+0.9
SANI	Sanana	4.77	176	P	Pn	06 34 04.4	-1.4
NLAI	Namlea	6.12	166	P	Pn	06 34 23.3	-0.8
	0.3nm2μm22nm,0.5s						
KRAI	Karang Ratu	6.63	155	P	Pn	06 34 31.6	+0.6

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*AEIC **02** 06:40:59.8±1.6, 51˚.06N±0˚.07×178˚.06W±0˚.05, h19^{km}±4^{km}, Error ellipse: s-maj=9.5km s-min=4.4km az=177.0*

*NEIC **02** 06:41:02.2±1.4, 51˚.19N±0˚.03×178˚.07W±0˚.04, h35^{km}±1^{km}, mb4.2/95, ML4.1/11, ML3.6(AEIC), Error ellipse: s-maj=6.3km s-min=3.7km az=140.0*

*IDC **02** 06:41:06.9±2.9, 51˚.38N×177˚.96W, h77^{km}±24^{km}, mb3.6/20, mbtmp3.9/23, Error ellipse: s-maj=22.6km s-min=13.3km az=176.0*

ISC 02 06:41:02.2±1.5**, 51˚.19N**±0˚.09×**178˚.07W**±0˚.03**, h40**^{km}±12^{km}**, n162, σ0^{s}95**/158**, mb4.2**/49**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAFL	Tanaga Flats	0.58	11		Pn	06 41 13.4	-0.7
TAFL					Sn	06 41 23.1	+0.7
GAKI	Gareloi-Kavalg	0.59	309		Pn	06 41 12.6	-1.6
GAKI					Sn	06 41 21.9	-0.8
TAPA	Tanaga Point A	0.65	14		Pn	06 41 14.4	-0.6
TAPA					Sn	06 41 24.9	+0.7
TASE	Tanaga Southea	0.65	2		Pn	06 41 14.8	-0.3
TASE					Sn	06 41 25.6	+1.4
TAFP	Tanaga Falls P	0.72	4		Pn	06 41 15.6	-0.4
TAFP					Sn	06 41 26.5	+0.7
GALAA	Gareloi Lava P	0.72	323		Pn	06 41 15.7	-0.3
TANO	Tanaga North	0.73	357		Pn	06 41 16.1	0.0
GAEA	Gareloi East	0.73	325		Pn	06 41 15.8	-0.4
GAEA					Sn	06 41 26.4	+0.2
GASW	Gareloi Southw	0.77	321		Pn	06 41 16.1	-0.5
GANE	Gareloi Northe	0.77	325		Pn	06 41 16.3	-0.4
KIMD	Kanaga Island	0.78	42		Pn	06 41 15.9	-0.9
KIMD					Sn	06 41 27.2	0.0
GANO	Gareloi North	0.78	324		Pn	06 41 16.2	-0.6
KIWB	Kanaga Island	0.88	40	Pn	Pn	06 41 17.6	-0.5
KIWB					Sn	06 41 29.9	+0.2
KIWB				IAML		06 41 30.6	
	comp=N,5μm,0.6s						
KIWB				IAML		06 41 30.8	
	comp=E,7μm,0.6s						
KIKV	Kanaga Island	0.89	39		Sn	06 41 30.7	+0.7
KIRH	Kanaga Island	0.94	40		Pn	06 41 18.5	-0.4
KINC	Kanaga Island	0.95	38		Pn	06 41 18.7	-0.4
ADK	Adak	1.11	51		Pn	06 41 20.5	-0.8
ADK					Sn	06 41 35.3	0.0
ADK				IAML		06 41 39.5	
	comp=E,3μm,0.4s						
ADK				IAML		06 41 40.3	
	comp=E,3μm,0.6s						
GSTD	Great Sitkin T	1.48	53		Pn	06 41 26.3	-0.2
GSMY	Great Sitkin M	1.52	55		Pn	06 41 27.1	+0.2
GSMY					Sn	06 41 47.9	+2.4
GSTR	Great Sitkin T	1.55	53		Pn	06 41 27.2	-0.1
CERB	Semis' Cerberu	1.62	298		Pn	06 41 28.4	+0.1
CEPE	Semis' Perret	1.62	300		Pn	06 41 28.3	-0.1
CESW	Semis' Southwe	1.64	297		Pn	06 41 28.4	-0.2
AMKA	Amchitka	1.66	278	Pn	Pn	06 41 27.0	-1.8
LSPA	Little Sitkin	2.23	292		Pn	06 41 36.6	-0.1
LSNW	Little Sitkin	2.27	292		Pn	06 41 37.8	+0.6
ATKA	Atka Island	2.62	66		Pn	06 41 41.8	-0.2
ATKA				IAML		06 42 21.8	
	comp=E,786nm,0.6s						
ATKA				IAML		06 42 22.3	
	comp=N,831nm,0.6s						
KOWE	Korovin West	2.65	62		Pn	06 41 43.2	+0.8
KOKL	Mount Kliuchef	2.66	63		Pn	06 41 43.7	+1.0
KOFP	Korovin Flat P	2.70	65		Pn	06 41 44.1	+1.0
KOSE	Korovin Southe	2.75	64		Pn	06 41 44.6	+0.7
SHEM	Shemya Is, Ala	5.08	291	P	Pn	06 42 20.5	+4.7
	comp=N,70nm,0.8s,baz=94,slow=2.0,SNR=7.3						
SHEM				S	Sn	06 43 19.0	+5.8
	comp=N,39nm,0.8s,baz=83,slow=16,SNR=1.2						
SHEM	Shemya Is, Ala	5.08	291	Pn	Pn	06 42 15.4	-0.3
SMY	Shemya	5.08	291	Pn	Pn	06 42 15.9	+0.1
SMY				IAML		06 43 37.9	
	comp=N,190nm,2.3s						
P08K	Saint George I	7.40	40	Pn	Pn	06 42 47.6	+0.1
UNV	Unalaska Valle	7.54	65	Pn	Pn	06 42 50.9	+1.4
SDPT	Sand Point	11.32	62	Pn	Pn	06 43 41.3	+0.1
PETK	Petropavlovsk-	14.98	287	P	P	06 44 34.8	-1.1
	comp=N,2.0nm,0.9s,baz=100,slow=16,SNR=1.4						
OHAK	Old Harbor	15.65	58	Pn	Pn	06 44 39.0	-0.7
K17K	Iditarod	15.71	35	Pn	Pn	06 44 40.5	+0.1
J17K	VABM Dome	15.88	32	Pn	Pn	06 44 43.1	+0.6
J17K				IAmb	IAmb	06 44 51.4	
	comp=Z,14nm,1.0s						
KDAK	Kodiak Island	16.15	56	P	Pn	06 44 43.7	-2.2
	comp=Z,26nm,1.2s,baz=269,slow=7.5,SNR=13						
KDAK				S	Sn	06 47 44.6	+0.9
	comp=Z,4.2nm,0.7s,baz=330,slow=17,SNR=1.4						
KDAK	Kodiak Island	16.15	56	Pn	Pn	06 44 43.5	-2.5
N19K	Bonanza Creek	16.24	45	Pn	Pn	06 44 47.2	-0.1
N19K				IAmb	IAmb	06 44 56.7	
	comp=Z,15nm,1.1s						
SYI	Shuyak Island	16.45	53	Pn	Pn	06 44 50.5	+0.6
ILSW	Iliamna Southw	16.52	48	Pn	Pn	06 44 51.5	+0.7
ILSW				IAmb	IAmb	06 45 31.4	
	comp=Z,50nm,1.5s						
L20K	Farewell, AK	17.28	40	P	P	06 45 02.7	+1.4
CNPM	China Poot	17.29	51	P	Pn	06 44 58.9	-1.4
CNPM				IAmb	IAmb	06 45 06.6	
	comp=Z,24nm,0.9s						
F17K	Baldwin Pennin	17.50	23	P	Pn	06 45 02.8	0.0
BRLK	Bradley Lake	17.52	50	P	Pn	06 45 03.3	0.0
K20K	Telida	17.66	37	P	P	06 45 06.0	+0.5
STLK	Strandline Lak	17.70	44	P	P	06 45 05.8	-0.1
SKT	Skwentna	18.03	43	P	P	06 45 11.0	+1.5
SKT				IAmb	IAmb	06 45 40.7	
	comp=Z,17nm,1.2s						
SLKM	Skilak Lake	18.07	48	P	Pn	06 45 10.0	+0.1
SLKM				IAmb	IAmb	06 45 14.7	
	comp=Z,23nm,1.0s						
J20K	Nowinta River	18.09	35	P	P	06 45 11.7	+1.6
SEW	Seward	18.32	50	P	P	06 45 11.9	-0.7
PWL	Port Wells	19.06	48	P	P	06 45 21.4	+0.5
PWL				IAmb	IAmb	06 45 54.2	
	comp=Z,25nm,1.0s						
KNK	Knik Glacier	19.18	46	P	Pn	06 45 23.6	+0.3
KNK				IAmb	IAmb	06 45 27.6	
	comp=Z,11nm,0.7s						
TRF	Thorofare Moun	19.18	40	P	P	06 45 22.2	-0.2
TRF				IAmb	IAmb	06 45 29.5	
	comp=Z,15nm,0.9s						
C18K	Utukok River	19.32	19	P	P	06 45 23.7	0.0
C18K				IAmb	IAmb	06 45 59.5	
	comp=Z,20nm,1.4s						
SML	Sawmill	19.36	45	P	P	06 45 24.8	+0.6
SML				IAmb	IAmb	06 45 39.1	
	comp=Z,14nm,1.0s						
SEY	Seymchan	19.70	318	P	P	06 45 27.5	-0.2
	comp=Z,2.6nm,0.8s,baz=70,slow=16,SNR=1.8						
G21K	Allakaket	19.71	30	IAmb	IAmb	06 45 33.3	
	comp=Z,11nm,0.8s						
RND	Reindeer	19.75	41	P	P	06 45 28.0	-0.4
RND				IAmb	IAmb	06 45 34.7	
	comp=Z,8.9nm,0.7s						
SCM	Sheep Creek Mo	19.82	46	P	P	06 45 28.6	-0.7
FID	Port Fidalgo	19.91	49	P	P	06 45 30.4	+0.3
F21K	Alatna River	20.18	28	IAmb	IAmb	06 45 39.3	
	comp=Z,5.3nm,0.7s						
NEA2	Nenana	20.19	37	P	P	06 45 34.2	+1.1
NEA2				IAmb	IAmb	06 45 41.1	
	comp=Z,9.9nm,1.1s						
DHY	Denali Highway	20.23	42	P	P	06 45 33.5	-0.2
DHY				IAmb	IAmb	06 45 37.8	
	comp=Z,6.2nm,0.7s						
I23K	Minto, Yukon-K	20.35	36	P	P	06 45 35.4	+0.6
I23K				IAmb	IAmb	06 45 48.1	
	comp=Z,18nm,1.4s						
H23K	Yukon River	20.63	34	IAmb	IAmb	06 45 42.5	
	comp=Z,8.0nm,1.0s						
CCB	Clear Creek Bu	20.70	38	P	P	06 45 38.7	+0.1
N25K	Chitina, Valde	21.01	47		P	06 45 43.3	+1.2
N25K				IAmb	IAmb	06 46 01.3	
	comp=Z,10nm,0.9s						
ILAR	Eielson Array	21.11	38	P	P	06 45 41.6	-1.4
	comp=Z,0.6nm,0.8s,baz=250,slow=10,SNR=10						
	comp=Z,0.6nm,0.8s						
ILAR	Eielson Array	21.11	38	P	P	06 45 43.7	+0.7
K24K	Donnelly Dome	21.17	41	P	P	06 45 42.7	-1.0
K24K				IAmb	IAmb	06 45 48.3	
	comp=Z,17nm,1.2s						
GLB	Gilahina Butte	21.33	48	P	P	06 45 45.5	0.0
GLB				IAmb	IAmb	06 46 21.4	
	comp=Z,22nm,1.4s						
VRDI	Verde Repeater	21.45	49	P	P	06 45 47.5	+0.5
D22K	Ayikyak River	21.51	25	IAmb	IAmb	06 45 52.0	
	comp=Z,9.6nm,0.9s						
RIDG	Independent Ri	21.53	42	P	P	06 45 45.8	-1.8
RIDG				IAmb	IAmb	06 46 10.9	
	comp=Z,21nm,1.4s						
B21K	Ikpikpuk River	21.55	22	P	P	06 45 47.9	+0.2
J25K	Salcha River,	21.64	39	P	P	06 45 48.2	-0.6
G24K	Hadweenzic Riv	21.80	33	IAmb	IAmb	06 45 55.5	
	comp=Z,7.8nm,1.1s						
SCRK	Sand Creek	21.97	41	P	P	06 45 51.2	-1.2
F24K	Squaw Lake	22.09	31	P	P	06 45 54.9	+1.3
F24K				IAmb	IAmb	06 45 59.7	
	comp=Z,14nm,1.3s						
D23K	Nanushuk River	22.11	26	P	P	06 45 54.3	+0.6
D23K				IAmb	IAmb	06 45 59.6	
	comp=Z,11nm,0.8s						
J26L	Joseph Creek	22.32	40	IAmb	IAmb	06 45 58.9	
	comp=Z,8.3nm,1.3s						
M27K	Edge Creek, AK	22.43	46	P	P	06 45 57.2	-0.3
M27K				IAmb	IAmb	06 46 03.5	
	comp=Z,15nm,1.1s						
L27K	Beaver Creek,	22.63	44	P	P	06 45 58.8	-0.6
BCAR	Beaver Creek A	22.65	44	P	P	06 45 58.9	-0.6
C23K	Itkillik River	22.70	24	P	P	06 45 59.9	0.0
C23K				IAmb	IAmb	06 46 05.5	
	comp=Z,10nm,0.8s						
D24K	Happy Valley	22.75	27	IAmb	IAmb	06 46 05.6	
	comp=Z,8.4nm,0.8s						
C24K	Franklin Bluff	23.13	26	P	P	06 46 04.5	0.0
C24K				IAmb	IAmb	06 46 09.3	
	comp=Z,7.3nm,0.7s						
BMAR	Burnt Mountain	23.15	33	P	P	06 46 05.8	+1.1
D25K	Kavik River	23.56	28	P	P	06 46 08.6	0.0
D25K				IAmb	IAmb	06 46 13.0	
	comp=Z,5.4nm,0.7s						
DAWY	Dawson	23.93	43	P	P	06 46 12.6	+0.3
I28M	Miner Creek	24.09	39	P	P	06 46 12.9	-0.8
I28M				IAmb	IAmb	06 46 17.4	
	comp=Z,5.0nm,0.9s						
L29M	L29M	24.28	45	P	P	06 46 14.0	-1.4
L29M				IAmb	IAmb	06 46 20.2	
	comp=Z,7.6nm,1.1s						
K29M	Barlow Dome	24.69	44	P	P	06 46 18.4	-0.8
K29M				IAmb	IAmb	06 46 24.3	
	comp=Z,5.4nm,0.9s						
F28M	Old Crow	24.86	34	P	P	06 46 20.8	+0.1
F28M				IAmb	IAmb	06 46 26.9	
	comp=Z,6.6nm,1.0s						
H29M	Whitestone	24.94	38	P	P	06 46 20.1	-1.2
I30M	Mount Dempster	25.47	41	P	P	06 46 24.9	-1.4
I30M				IAmb	IAmb	06 46 33.1	
	comp=Z,3.5nm,0.8s						
E29M	Blow River	25.84	33	IAmb	IAmb	06 46 35.7	
	comp=Z,4.7nm,0.8s						
INK	Inuvik	27.35	35	P	P	06 46 43.6	+0.6
A36M	Sachs Harbour	31.03	29	P	P	06 47 16.6	+1.0
H11N2	WAKE ISLAND Hy	33.55	206	T	T	07 23 28.2	
	baz=17,slow=75,SNR=9.5						
H11N3	WAKE ISLAND Hy	33.56	206	T	T	07 23 27.0	
	baz=17,slow=75,SNR=13						
H11N1	WAKE ISLAND Hy	33.57	206	T	T	07 23 38.2	
	baz=17,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	34.77	206	T	T	07 24 57.4	
	baz=17,slow=76,SNR=19						
H11S2	WAKE ISLAND Hy	34.79	206	T	T	07 24 58.3	
	baz=17,slow=76,SNR=13						
H11S3	WAKE ISLAND Hy	34.79	206	T	T	07 24 59.3	
	baz=17,slow=76,SNR=11						
YKA	Yellowknife Ar	35.03	46	P	P	06 47 49.1	-1.5
	comp=Z,0.7nm,0.7s,baz=282,slow=9.0,SNR=4.3						
	comp=Z,0.7nm,0.7s						
EDM	Edmonton	38.51	61	P	P	06 48 20.5	+0.2
NEW	Newport	38.52	70	P	P	06 48 21.1	+0.6
NEW				IAmb	IAmb	06 48 23.9	
	comp=Z,4.5nm,1.1s						
J05D	Fort Rock, OR	38.52	79	P	P	06 48 21.7	+1.0
J05D				IAmb	IAmb	06 48 36.7	
	comp=Z,8.5nm,1.4s						
WVOR	Wild Horse Val	40.59	78	P	P	06 48 39.1	+1.2
WVOR				IAmb	IAmb	06 48 52.1	
	comp=Z,8.6nm,1.5s						
MSO	Missoula	41.10	70	P	P	06 48 43.1	+1.1
MSO				IAmb	IAmb	06 48 48.5	
	comp=Z,5.7nm,1.4s						
BCYI	Bear Canyon	42.75	73	P	P	06 48 56.6	+0.9
BOZ	Bozeman (W)	43.11	70	P	P	06 48 58.3	-0.2
NVAR	Mina Array Bea	43.12	83	P	P	06 48 59.6	+0.9
	comp=Z,0.2nm,0.3s,baz=318,slow=8.1,SNR=3.0						
	comp=Z,0.2nm,0.3s						
YHH	Holmes Hill	44.02	71	P	P	06 49 06.5	+0.6
PD31	Pinedale Array	45.93	72	P	P	06 49 20.9	-0.2
PD31				IAmb	IAmb	06 49 33.4	
	comp=Z,5.9nm,1.4s						
PDAR	Pinedale Array	45.93	72	P	P	06 49 21.6	+0.5
	comp=Z,0.5nm,0.4s,baz=330,slow=2.4,SNR=13						
	comp=Z,0.5nm,0.4s						
PDAR	Pinedale Array	45.93	72		P	06 49 21.2	+0.1
SONM	Songino Array	47.14	297	P	P	06 49 31.6	+1.2
	comp=Z,0.7nm,0.5s,baz=60,slow=7.8,SNR=6.2						
	comp=Z,0.7nm,0.5s						
O20A	White River Ci	48.29	75	P	P	06 49 40.2	+0.7
O20A				IAmb	IAmb	06 50 10.6	
	comp=Z,2.5nm,0.7s						
PV13	Radium Mtn., P	49.16	77	P	P	06 49 47.3	+1.1
SPITS	Spitsbergen Ar	50.60	356	P	P	06 49 56.0	-0.3
	comp=Z,11nm,1.0s,baz=354,slow=12,SNR=1.7						
	comp=Z,11nm,1.0s						
ZALV	Zalesovo Beam	54.49	314	P	P	06 50 26.7	+1.3
	comp=Z,0.3nm,0.3s,baz=45,slow=6.3,SNR=1.8						
ZALV				PcP	PcP	06 51 28.7	+0.3
	comp=Z,0.6nm,0.4s,baz=71,slow=4.0,SNR=4.6						
	comp=Z,0.3nm,0.3s						
TXAR	Lajitas Array	58.23	82	P	P	06 50 52.5	0.0
	comp=Z,0.2nm,0.6s,baz=319,slow=8.2,SNR=1.9						
	comp=Z,0.2nm,0.6s						
ARCES	ARCESS Array B	58.36	350	P	P	06 50 52.2	-0.5
	comp=Z,4.7nm,1.0s,baz=19,slow=8.6,SNR=1.4						
	comp=Z,4.7nm,1.0s						
R40A	Maddies Statio	58.95	66	P	P	06 50 56.4	-0.9
KURBB	Kurchatov Arra	59.59	314	P	P	06 51 00.5	-1.0
	comp=Z,0.9nm,0.3s,baz=44,slow=5.7,SNR=1.9						
	comp=Z,0.9nm,0.3s						
MK31	Makanchi Array	60.51	309	P	P	06 51 06.8	-1.1
MK31				IAmb	IAmb	06 51 16.7	
	comp=Z,4.5nm,1.3s						
MKAR	Makanchi Array	60.51	309	P	P	06 51 06.9	-1.1
	comp=Z,0.6nm,0.5s,baz=48,slow=5.3,SNR=5.6						
MKAR				PcP	PcP	06 51 52.5	+0.2
	comp=Z,0.4nm,0.6s,baz=61,slow=3.7,SNR=2.4						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	60.51	309	P	P	06 51 07.0	-0.9
FCAR	Ozark Folk Cen	60.68	68	P	P	06 51 08.1	-1.1
BVAR	Borovoye Array	61.33	320	P	P	06 51 13.2	-0.2
	comp=Z,1.2nm,0.3s,baz=56,slow=6.7,SNR=5.2						
	comp=Z,1.2nm,0.3s						
L56A	Greenwood	64.27	54	P	P	06 51 33.5	+0.3
Z47A	Carrollton	64.94	68	P	P	06 51 37.6	0.0
SSPA	Standing Stone	65.20	56	P	P	06 51 39.4	+0.3
FINES	FINESS Array B	66.07	348	P	P	06 51 43.8	-0.6
	comp=Z,3.4nm,1.0s,baz=22,slow=7.0,SNR=1.3						
	comp=Z,3.4nm,1.0s						
V53A	Saluda	66.16	62	P	P	06 51 46.0	+0.6
AB31	Akbulak array	68.37	323	P	P	06 51 59.3	+0.1
AB31				IAmb	IAmb	06 52 22.7	
	comp=Z,1.2nm,0.8s						
KK31	Karatay Array	68.85	313	P	P	06 52 02.0	-0.4
KK31				IAmb	IAmb	06 52 02.4	
	comp=Z,1.2nm,0.6s						
KKAR	Karatay Array	68.85	313	P	P	06 52 02.3	0.0
EKA	Eskdalemuir Ar	73.76	3	P	P	06 52 30.4	-1.3
	comp=Z,1.8nm,1.0s,baz=4.3,slow=6.2,SNR=1.6						
	comp=Z,1.8nm,1.0s						
AKASG	Malin Array Be	75.87	343	P	P	06 52 43.8	-0.2
	comp=Z,0.5nm,0.4s,baz=20,slow=5.8,SNR=4.0						
	comp=Z,0.5nm,0.4s						
KBZ	Khabaz	79.00	331	P	P	06 53 02.2	+0.6
	comp=Z,3.5nm,1.1s,baz=56,slow=3.6,SNR=2.2						
	comp=Z,3.5nm,1.1s						
BUR08	Bucovina Ar. S	79.54	344	P	P	06 53 05.3	+0.7
BUR08				IAmb	IAmb	06 53 27.9	
	comp=Z,5.7nm,1.2s						
BURAR	Bucovina Array	79.56	344	P	P	06 53 05.6	+0.8
WRA	Warramunga Arr	82.20	225	P	P	06 53 20.7	+1.8
	comp=Z,0.1nm,0.7s,baz=28,slow=5.1,SNR=2.0						
	comp=Z,0.1nm,0.7s						
FITZ	Fitzroy Crossi	84.71	233	P	P	06 53 32.5	+0.7
	comp=Z,1.4nm,0.7s,baz=274,slow=4.8,SNR=3.1						
	comp=Z,1.4nm,0.7s						
FITZ	Fitzroy Crossi	84.71	233	P	P	06 53 32.6	+0.8
FITZ				IAmb	IAmb	06 53 38.7	
	comp=Z,1.5nm,1.2s						
BR131	Keskin Array S	85.31	336	P	P	06 53 35.0	+0.1
BRTR	Keskin Array B	85.31	336	P	P	06 53 35.0	+0.1
	comp=Z,1.4nm,0.8s,baz=29,slow=2.8,SNR=4.9						
	comp=Z,1.4nm,0.8s						
ASAR	Alice Springs	85.66	223	P	P	06 53 36.8	+0.2
	comp=Z,0.4nm,0.6s,baz=25,slow=5.7,SNR=5.2						
	comp=Z,0.4nm,0.6s						
H03N2	Juan Fernandez	120.65	106	T	T	09 12 13.3	
	baz=317,slow=78,SNR=6.8						
H03N1	Juan Fernandez	120.66	106	T	T	09 12 14.6	
	baz=317,slow=78,SNR=8.1						
H03N3	Juan Fernandez	120.67	106	T	T	09 12 13.9	
	baz=317,slow=78,SNR=7.6						
QSPA	South Pole Qui	140.94	180	PKP	PKPdf	07 00 25.7	-0.8
	comp=Z,0.4nm,0.3s,baz=63,slow=2.3,SNR=1.6						
BOSA	Boshof	151.44	313	PKPbc	PKPbc	07 00 51.3	-0.3
	comp=Z,2.1nm,0.8s,baz=19,slow=1.5,SNR=5.7						

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*IDC **02** 06:42:16.4±0.9, 1˚.71N×126˚.58E, h0^{km}, mb4.0/8, mbtmp4.0/10, ML4.0/2, Error ellipse: s-maj=53.2km s-min=15.6km az=71.0*

*DJA **02** 06:42:20.1±0.3, 2˚N±2˚×12˚6E±˚, h10^{km}, M4.2/13, mb4.5/3, MLv4.0/13*

ISC 02 06:42:23.0±0.8**, 1˚.63N**±0˚.06×**126˚.41E**±0˚.07**, h47**^{km}**, n20, σ0^{s}63**/24**, mb3.9**/8**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.28	132	P	Pn	06 42 44.3	-0.3
GAMI	Galela, Maluku	1.39	82	P	Pn	06 42 45.9	-0.1
MNI	Manado	1.58	263	P	Pn	06 42 47.7	-0.9
MNI				S	Sn	06 43 07.5	-0.4
SGSI	Sangihe	2.22	337	P	Pn	06 42 56.9	-0.5
SGSI				S	Sn	06 43 24.5	+0.9
GTOI	Gorontalo	3.54	254	P	Pn	06 43 16.3	+0.8
SANI	Sanana	3.68	187	P	Pn	06 43 17.4	-0.1
LUWI	Luwuk	4.50	234	P	Pn	06 43 29.8	+1.0
MRSI	Marisa	4.61	256	P	Pn	06 43 30.9	+0.6
APSI	Ampana	5.39	242	P	Pn	06 43 41.4	+0.5
	0.4nm74nm,1.0s						
MYLDM	Lahad Datu	8.64	294	P	Pn	06 44 25.3	-0.3
KAPI	Kappang	9.37	225	Pn	Pn	06 44 35.8	+0.2
	2.5nm,0.3s,baz=8.6,slow=19,SNR=4.6						
	7.2nm,0.4s						
FITZ	Fitzroy Crossi	19.62	182	P	P	06 46 46.9	-0.9
	0.2nm,0.3s,baz=16,slow=8.7,SNR=7.3						
	1.7nm,0.7s						
WRA	Warramunga Arr	22.81	160	P	P	06 47 20.9	-1.1
	2.2nm,0.5s,baz=337,slow=11,SNR=22						
WRA				PcP	PcP	06 51 12.5	+0.1
	0.7nm,1.1s,baz=333,slow=2.0,SNR=2.1						
	2.2nm,0.5s						
ASAR	Alice Springs	26.18	164	P	P	06 47 53.3	-0.1
	1.9nm,0.7s,baz=348,slow=14,SNR=16						
ASAR				PcP	PcP	06 51 20.4	+0.7
	0.4nm,0.6s,baz=328,slow=1.4,SNR=5.1						
	1.9nm,0.7s						
STKA	Stephens Creek	36.31	158	P	P	06 49 21.8	-0.5
	2.4nm,0.7s,baz=348,slow=9.3,SNR=3.2						
	2.4nm,0.7s						
SONM	Songino Array	49.18	342	P	P	06 51 06.3	-0.2
	0.5nm,0.6s,baz=152,slow=6.5,SNR=1.0						
	0.5nm,0.6s						
MKAR	Makanchi Array	59.09	326	P	P	06 52 18.6	-0.1
	0.6nm,0.4s,baz=115,slow=8.3,SNR=9.5						
	0.6nm,0.4s						
ZALV	Zalesovo Beam	62.30	334	P	P	06 52 40.8	+0.5
	0.2nm,0.3s,baz=123,slow=5.3,SNR=1.6						
	0.2nm,0.3s						
KURBB	Kurchatov Arra	63.33	328	P	P	06 52 47.0	-0.2
	1.4nm,0.2s,baz=130,slow=6.2,SNR=4.9						
	1.4nm,0.2s						
VNDA	Vanda	81.40	173	P	P	06 54 35.2	+0.8
	0.7nm,0.6s,baz=316,slow=7.5,SNR=4.0						
	0.7nm,0.6s						

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*TAP **02** 06:49:41.6, 24˚.49N×121˚.63E, h45^{km}, ML3.7, B*

ISC 02 06:49:42.0±1.2**, 24˚.52N**±0˚.02×**121˚.63E**±0˚.02**, h44**^{km}±4^{km}**, n121, σ1^{s}27**/213**, 21C-13D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LATG	Datong	0.09	280	⇑*i*P	Pn	06 49 49.6	+0.4
LATG				*i* S	Sn	06 49 54.8	+0.5
ENTT	Nioudou	0.13	335	⇓*i*P	Pn	06 49 49.7	+0.4
ENTT				S	Sn	06 49 55.0	+0.5
ENA	Nanau	0.14	131	⇓P	Pn	06 49 49.2	-0.1
ENA				S	Sn	06 49 54.5	0.0
NDS	Dongshan	0.14	35	⇓*i*P	Pn	06 49 49.6	+0.3
NDS				S	Sn	06 49 55.0	+0.5
EWUT	Wuta	0.16	118	⇓*i*P	Pn	06 49 49.1	-0.2
EWUT				S	Sn	06 49 54.1	-0.4
TWE	Neicheng	0.20	10	⇓*i*P	Pn	06 49 50.3	+0.6
TWE				S	Sn	06 49 56.0	+0.8
ESAO	Su ao	0.20	74	*e*P	Pn	06 49 49.6	-0.1
ESAO				S	Sn	06 49 55.3	+0.1
EAHA	Aohua	0.21	152	P	Pn	06 49 49.2	-0.6
EAHA				S	Sn	06 49 55.0	-0.3
TWC	Suao	0.22	66	⇓*i*P	Pn	06 49 50.0	+0.1
TWC				S	Sn	06 49 55.6	+0.2
EHP	Heping Village	0.23	154	*e*S	Sn	06 49 55.4	-0.2
NNSB	Datong	0.24	248	⇑*i*P	Pn	06 49 50.5	+0.3
NNSB				S	Sn	06 49 56.2	+0.2
FUSB	Fushanzhiwuyua	0.24	351	⇓P	Pn	06 49 50.5	+0.3
FUSB				S	Sn	06 49 56.2	+0.4
NNS	Nan Shan	0.24	251	⇑*i*P	Pn	06 49 50.5	+0.3
NNS				S	Sn	06 49 56.3	+0.3
ILA	Ilan	0.27	24	P	Pn	06 49 50.5	+0.3
ILA				S	Sn	06 49 57.2	+1.1
YHNB	Yeheng	0.27	303	P	Pn	06 49 50.6	+0.2
YHNB	Yeheng	0.27	303	⇓*i*P	Pn	06 49 50.6	+0.2
YHNB				S	Sn	06 49 56.5	+0.1
NWLT	Wulai	0.28	336	P	Pn	06 49 50.8	+0.3
NWLT				S	Sn	06 49 56.9	+0.4
NSK	Sanguang	0.29	303	⇓*i*P	Pn	06 49 50.7	+0.1
NSK				S	Sn	06 49 56.7	+0.1
ETLH	Xiulin Townshi	0.34	203	⇑*i*P	Pn	06 49 50.8	-0.3
ETLH				S	Sn	06 49 57.1	-0.4
NACB	Ninganchiao	0.34	185	P	Pn	06 49 50.1	-1.0
NACB	Ninganchiao	0.34	185	S	Sn	06 49 57.0	-0.5
NACB	Ninganchiao	0.34	185	⇑*i*P	Pn	06 49 50.1	-1.0

NACB				S	Sn	06 49 55.8	-1.7
ETL	**Fush Village**	0.36	181	P	Pn	06 49 50.3	-1.0
ETL				S	Sn	06 49 56.4	-1.4
NTC	**Toucheng**	0.38	29	*e*P	Pn	06 49 51.5	+0.1
NTC				S	Sn	06 49 59.5	+1.4
EGS		0.43	40	P	Pn	06 49 52.8	+0.8
EGS				S	Sn	06 50 00.8	+1.7
TWD	**Chiawan**	0.44	184	⇑*i*P	Pn	06 49 51.1	-1.1
TWD				S	Sn	06 49 58.3	-1.0
FUSS	**Fushou**	0.44	232	⇑*i*P	Pn	06 49 52.8	+0.4
FUSS				S	Sn	06 50 00.0	+0.2
NHDH	**Xindian Distri**	0.45	348	P	Pn	06 49 52.7	+0.4
NHDH				S	Sn	06 50 00.4	+0.8
TWA	**Mucha**	0.46	355	⇑*i*P	Pn	06 49 52.8	+0.4
TWA				S	Sn	06 50 00.4	+0.5
NFF	**Wufeng Townshi**	0.48	284	P	Pn	06 49 53.0	+0.3
NFF				S	Sn	06 50 00.9	+0.6
KSHI	**Guanxi Townshi**	0.48	302	P	Pn	06 49 53.6	+0.9
KSHI				S	Sn	06 50 02.1	+1.8
TIPB	**Shuangxi**	0.48	22	⇓*i*P	Pn	06 49 53.4	+0.6
TIPB				S	Sn	06 50 01.2	+0.8
TWT	**Tachien**	0.49	237	⇑*i*P	Pn	06 49 53.7	+0.8
TWT				*i* S	Sn	06 50 01.4	+0.6
WHF	**Hehuan Shan**	0.50	222	⇑*i*P	Pn	06 49 53.2	-0.1
WHF				S	Sn	06 50 01.6	+0.3
TDCB	**Techi**	0.50	238	⇑*i*P	Pn	06 49 53.7	+0.6
TDCB				S	Sn	06 50 01.1	+0.1
NHY	**Taipei**	0.52	354	*e*S	Sn	06 50 02.0	+0.9
TAP	**Taipei**	0.53	348	*e*P	Pn	06 49 53.6	+0.3
TAP				*e*S	Sn	06 50 01.9	+0.6
HWA	**Hwalien**	0.54	182	P	Pn	06 49 52.7	-0.7
EOS2	**EOS2**	0.56	100	P	Pn	06 49 54.8	+1.3
EOS2				*e*S	Sn	06 50 04.8	+3.0
ETM	**Tongmen**	0.56	193	P	Pn	06 49 52.6	-1.2
ETM				*e*S	Sn	06 50 00.9	-1.3
NWF	**Wu-fen Shan**	0.57	14	P	Pn	06 49 54.3	+0.4
NWF				S	Sn	06 50 02.8	+0.5
WFSB	**Wu-fen Shan**	0.57	14	⇑P	Pn	06 49 54.3	+0.5
WFSB				S	Sn	06 50 02.7	+0.5
LIOB	**Emei**	0.57	283	⇓P	Pn	06 49 54.5	+0.7
LIOB				S	Sn	06 50 03.2	+0.9
NSTT	**Nanjuang**	0.58	281	⇓P	Pn	06 49 54.5	+0.5
NSTT				S	Sn	06 50 03.3	+0.8
TWB1	**Santiao Chiao**	0.59	34	P	Pn	06 49 54.6	+0.6
TWB1				S	Sn	06 50 03.4	+0.8
NCU	**National Centr**	0.60	318	S	Sn	06 50 02.8	-0.2
NCUH	**Zhongli**	0.60	318	*e*P	Pn	06 49 54.7	+0.5
NCUH				*e*S	Sn	06 50 04.1	+1.1
TWS1	**Kuangyinshan**	0.61	342	⇑P	Pn	06 49 54.7	+0.3
TWS1				S	Sn	06 50 04.5	+1.3
SXI1	**Grass Mountain**	0.61	21	P	Pn	06 49 54.8	+0.3
SXI1				S	Sn	06 50 04.0	+0.6
YM01	**YM01**	0.63	355	⇑P	Pn	06 49 54.7	+0.1
YM01				*e*S	Sn	06 50 03.9	+0.2
TNOU	**National Taiwa**	0.64	12	P	Pn	06 49 54.8	0.0
TNOU				*e*S	Sn	06 50 03.9	0.0
SBCB	**Hsinchu**	0.64	295	*e*P	Pn	06 49 55.0	+0.2
SBCB				*e*S	Sn	06 50 05.4	+1.4
ZUZH	**Zhuzihu**	0.64	353	P	Pn	06 49 54.9	+0.1
ZUZH				S	Sn	06 50 04.0	-0.1
TEYL	**Yanliau Villag**	0.65	182	*e*P	Pn	06 49 54.3	-0.6
HSN	**Hsinchu**	0.66	295	*e*S	Sn	06 50 04.8	+0.4
NTST	**Danshui**	0.66	346	P	Pn	06 49 55.4	+0.4
NTST				S	Sn	06 50 05.2	+0.8
WHP	**Taichung City**	0.67	249	P	Pn	06 49 56.5	+1.3
WHP				*e*S	Sn	06 50 05.7	+1.1
YM08	**YM08**	0.67	357	⇑P	Pn	06 49 54.8	-0.3
YM08				S	Sn	06 50 03.9	-0.7
ANP	**Anpu**	0.67	352	P	Pn	06 49 55.0	-0.2
ANP				S	Sn	06 50 04.6	-0.2
EOS3	**EOS3**	0.67	110	⇑P	Pn	06 49 56.2	+1.3
EOS3				*e*S	Sn	06 50 07.0	+2.7
OWD	**Renai**	0.70	216	⇑*i*P	Pn	06 49 55.6	0.0
OWD				S	Sn	06 50 05.0	-0.4
WUSB	**Renai**	0.70	222	⇑*i*P	Pn	06 49 56.1	+0.5
WUSB				S	Sn	06 50 06.1	+0.6
ESL	**Shilin**	0.72	194	⇑*i*P	Pn	06 49 54.2	-1.7
SHUL	**Shoufeng**	0.73	185	*e*P	Pn	06 49 55.2	-0.8
SHUL				*e*S	Sn	06 50 05.9	-0.1
EOS4	**EOS4**	0.74	122	*e*P	Pn	06 49 56.1	+0.3
EOS4				*e*S	Sn	06 50 06.5	+0.7
TWY	**Chenhua**	0.75	358	*e*P	Pn	06 49 56.3	+0.1
TWY				*e*S	Sn	06 50 06.9	+0.3
NMLH	**Miaoli**	0.76	272	*e*P	Pn	06 49 56.8	+0.4
NMLH				*e*S	Sn	06 50 08.6	+1.8
NSY	**Sanyi**	0.80	263	*e*P	Pn	06 49 58.0	+1.1
NSY				*e*S	Sn	06 50 10.2	+2.6
TWQ1	**Liyutan**	0.80	258	P	Pn	06 49 57.4	+0.5
TWQ1				S	Sn	06 50 09.4	+1.8
WCS	**Beigang Elemen**	0.80	235	*e*S	Sn	06 50 08.4	+0.8
WARBT	**Fenglin Townsh**	0.83	195	⇑*i*P	Pn	06 49 55.4	-1.9
WARBT				*e*S	Sn	06 50 06.0	-2.4
VWDT	**VWDT**	0.88	210	⇑*i*P	Pn	06 49 58.1	+0.1
VWDT				S	Sn	06 50 10.0	+0.3
SMLT	**Sun Moon Lake**	0.92	226	P	Pn	06 49 59.6	+1.0
SMLT				S	Sn	06 50 11.9	+1.2
TYC	**Yuchr**	0.93	229	P	Pn	06 49 59.8	+1.1
TYC				S	Sn	06 50 11.8	+0.9
SSLB	**Suanglung**	0.95	220	P	Pn	06 49 59.8	+0.8
SSLB	**Suanglung**	0.95	220	S	Sn	06 50 14.9	+3.4
SSLB	**Suanglung**	0.95	220	⇓P	Pn	06 49 59.4	+0.4
SSLB				*e*S	Sn	06 50 12.1	+0.7
HGSD	**Ruisui**	1.04	190	*e*P	Pn	06 49 59.5	-0.6
EHY	**Hungye**	1.05	196	*e*P	Pn	06 49 58.9	-1.4
EHY				*e*S	Sn	06 50 11.3	-2.4
EHYH	**Wanrong**	1.05	194	*e*P	Pn	06 49 59.9	-0.4
EHYH				*e*S	Sn	06 50 12.4	-1.4
WNT	**Mingjian**	1.07	234	*e*P	Pn	06 50 01.1	+0.6
WNT				*e*S	Sn	06 50 16.3	+2.0
WJS	**Zhushan**	1.08	230	*e*P	Pn	06 50 02.1	+1.5
WJS				*e*S	Sn	06 50 16.5	+2.1
WHYT	**Xinyi Township**	1.08	221	*e*P	Pn	06 50 02.1	+1.3
WHYT				*e*S	Sn	06 50 16.9	+2.3
YULB	**Yu-li**	1.16	195	P	Pn	06 50 01.4	-0.4
YULB	**Yu-li**	1.16	195	S	Sn	06 50 15.7	-0.8
YULB	**Yu-li**	1.16	195	*e*P	Pn	06 50 01.2	-0.6
YULB				*e*S	Sn	06 50 13.7	-2.8
YUS	**Yu-Shan**	1.20	211	*e*P	Pn	06 50 03.3	+0.5
YUS				*e*S	Sn	06 50 18.4	+0.4
TWF1	**Yuli**	1.20	195	*e*P	Pn	06 50 01.9	-0.5
TWF1				*e*S	Sn	06 50 16.1	-1.3
ALS	**Alishan**	1.25	217	*e*P	Pn	06 50 04.5	+1.2
ALS				*e*S	Sn	06 50 21.1	+1.9
YOJ	**Yonaguni jima**	1.26	92	*e*P	Pn	06 50 03.3	+0.2
CHN5	**Tsauling**	1.26	224	P	Pn	06 50 04.1	+0.8
CHN5				S	Sn	06 50 20.7	+1.6
WDLH	**Douliu**	1.29	230	P	Pn	06 50 04.4	+0.8
WDLH				S	Sn	06 50 21.3	+1.6
CHKH	**Chenggong**	1.34	189	S	Sn	06 50 18.8	-2.0
FULB	**Fuli**	1.35	193	*e*P	Pn	06 50 04.0	-0.5
FULB				*e*S	Sn	06 50 20.2	-0.9
EHD	**Haiduan**	1.42	196	*e*P	Pn	06 50 05.1	-0.3
EHD				*e*S	Sn	06 50 19.9	-2.9
ELDTW	**Lidau**	1.44	203	*e*P	Pn	06 50 05.2	-0.5
ELDTW				*e*S	Sn	06 50 22.3	-1.1
CHY	**Chiayi**	1.50	227	S	Sn	06 50 26.5	+1.7
CHN4	**Tsaushan**	1.50	219	P	Pn	06 50 07.7	+1.2
CHN4				*e*S	Sn	06 50 27.9	+3.1
TPUB	**Ta-pu**	1.52	217	P	Pn	06 50 08.2	+1.5
TPUB	**Ta-pu**	1.52	217	S	Sn	06 50 28.4	+3.1
TPUB	**Ta-pu**	1.52	217	P	Pn	06 50 07.8	+1.1
TPUB				S	Sn	06 50 28.0	+2.7
STYH	**Taoyuan**	1.55	210	P	Pn	06 50 08.0	+0.9
STYH				*e*S	Sn	06 50 28.0	+2.0
EDH	**Donghe**	1.57	191	S	Sn	06 50 24.7	-1.8
WSL	**Shuilin Townsh**	1.62	232	*e*P	Pn	06 50 08.5	+0.4
WSL				*e*S	Sn	06 50 29.2	+1.5
TWK	**Hsinying**	1.63	220	*e*P	Pn	06 50 09.5	+1.3
TWK				*e*S	Sn	06 50 30.7	+2.8
SNST	**Tainan City**	1.66	219	*e*S	Sn	06 50 30.7	+2.1
CHN1	**Nanshi**	1.67	217	*e*P	Pn	06 50 09.6	+0.9
CHN1				*e*S	Sn	06 50 31.5	+2.5
SGST	**Jiashian**	1.72	214	*e*P	Pn	06 50 09.9	+0.4
SGST				*e*S	Sn	06 50 32.8	+2.5
TWGBT	**Beinan**	1.77	197	S	Sn	06 50 34.0	+2.6
TSCK	**Chigu Township**	1.96	226	*e*S	Sn	06 50 38.2	+2.0
MASBT	**Mashibuluo**	2.11	206	*e*P	Pn	06 50 16.3	+1.6
MASBT				*e*S	Sn	06 50 41.2	+1.5
PHUB	**P'eng-hu**	2.13	242	*e*S	Sn	06 50 38.7	-1.6
MATB	**Ma-tsu**	2.23	317	*e*P	Pn	06 50 15.7	-0.7
MATB				*e*S	Sn	06 50 40.3	-2.4
EAST	**Anshuo**	2.24	199	*e*P	Pn	06 50 18.1	+1.4
EAST				*e*S	Sn	06 50 44.9	+1.8
SCZT	**Fangliau**	2.33	204	*e*P	Pn	06 50 19.1	+1.3
PTMZ	**Houxiangcun**	2.34	283	*e*P	Pn	06 50 17.0	-0.9
PTMZ				*e*S	Sn	06 50 42.2	-3.2
XPSS	**Dashiqiu**	2.73	332	*e*P	Pn	06 50 22.1	-1.1
XPSS				*e*S	Sn	06 50 52.5	-2.5
MHZQ	**Yeshan**	2.83	304	*e*S	Sn	06 50 53.8	-3.7
KNMB	**Chin-men Tao**	2.95	270	*e*P	Pn	06 50 25.3	-1.0
AXDP	**Jialang**	3.35	277	*e*P	Pn	06 50 31.3	-0.5
AXDP				*e*S	Sn	06 51 07.2	-3.1
SXFK	**Yanhouchang**	4.06	298	*e*P	Pn	06 50 40.5	-1.0
SXFK				*e*S	Sn	06 51 25.1	-2.7

GUC 02 06:53:29.2±0.7**,21°.57S**×**68°.41W,h141**^{km}±6^{km}**,ML3.6,6C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	0.81	253	⇑*i*P	Pn	06 53 51.5	-0.2
PB09				*i* S	Sn	06 54 08.8	-0.1
PB01	**IPOC Station P**	1.13	297	⇑*i*P	Pn	06 53 53.8	-0.7
PB03	**IPOC Station P**	1.34	249	⇑*i*P	Pn	06 53 56.1	-0.5
PB03				*i* S	Sn	06 54 16.7	-0.7
PB03				IAML		06 54 17.7	
	comp=E,858nm,0.3s						
PB07	**IPOC Station P**	1.38	263	⇑*i*P	Pn	06 53 56.7	-0.3
PB07				*i* S	Sn	06 54 17.6	-0.6
PB07				IAML		06 54 18.7	
	comp=E,2µm,0.4s						
PB02	**IPOC Station P**	1.41	280	⇑*i*P	Pn	06 53 56.8	-0.4
PB02				*i* S	Sn	06 54 17.6	-0.9
PB02				IAML		06 54 18.6	
	comp=N,2µm,0.2s						
PB06	**IPOC Station P**	1.57	223	*e*P	Pn	06 53 58.6	-0.4
PB06				*i* S	Sn	06 54 20.7	-1.1
PB06				IAML		06 54 22.9	
	comp=E,566nm,0.2s						
PB08	**IPOC Station P**	1.58	334	⇑*i*P	Pn	06 53 59.3	-0.1
PB08				*i* S	Sn	06 54 22.0	-0.4
PATCX	**Punta Patache**	1.79	294	*e*P	Pn	06 54 00.9	-0.6
PATCX				*i* S	Sn	06 54 25.2	-0.9
PATCX				IAML		06 54 27.7	
	comp=N,988nm,0.4s						
GO01	**Chusmiza**	2.03	339	*e*P	Pn	06 54 04.1	-0.6
GO01				*i* S	Sn	06 54 31.0	-0.7
GO01				IAML		06 54 34.1	
	comp=N,200nm,0.2s						
PB05	**IPOC Station P**	2.10	232	*e*P	Pn	06 54 04.5	-0.6
PB05				*i* S	Sn	06 54 31.0	-1.7
PB05				IAML		06 54 34.5	
	comp=E,193nm,0.2s						
PB11	**IPOC Station P**	2.14	327	*e*P	Pn	06 54 04.5	-1.2
PB11				*i* S	Sn	06 54 32.0	-1.7
PB11				IAML		06 54 34.2	
	comp=N,302nm,0.3s						
PB10	**IPOC Station P**	2.77	225	*e*P	Pn	06 54 12.5	-0.9
PB10				*i* S	Sn	06 54 44.0	-3.4
PB10				IAML		06 54 50.4	
	comp=E,53nm,0.3s						
PB12	**IPOC Station P**	3.45	328	*e*P	Pn	06 54 19.6	-2.5
PB12				*i* S	Sn	06 54 59.9	-3.1
PB12				IAML		06 55 03.2	
	comp=E,56nm,0.6s						

NNC ***02*** *07:11:22.4±0.6,43°.22N×78°.25E,h0*^{km}*,mpv3.2,Error ellipse: s-maj=7.8km s-min=3.4km az=179.0*
SOME ***02*** *07:11:23.4,43°.20N×78°.22E,h10*^{km}
KRNET ***02*** *07:11:24.0±0.1,43°.21N×78°.11E,h26*^{km}*,mb2.2*
ISC 02 07:11:23.3±1.1**,43°.23N**±0°.03×**78°.27E**±0°.03**,h18**^{km}±3^{km}**, n14,**σ**0**^{s}**.52**/28**,5C-7D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	**Saty**	0.19	149	P	Pb	07 11 27.9	-0.1
	96nm,0.1s						
SATY				S	Sb	07 11 31.1	+0.1
	630nm,0.1s						
KPKS	**Kokpek**	0.39	51	P	Pb	07 11 31.6	-0.1
KPKS				S	Sb	07 11 37.6	+0.1
KPKS	**Kokpek**	0.39	51	*e*P	Pb	07 11 31.6	-0.1
KPKS				*e*S	Sb	07 11 37.6	+0.1
UZB	**Uzynbulak**	0.56	98	P	Pg	07 11 34.0	-0.5
	15nm,0.1s						
UZB				S	Sb	07 11 41.6	-0.6
	60nm,0.1s						
UZB	**Uzynbulak**	0.56	98	*e*P	Pg	07 11 34.0	-0.5
	15nm,0.1s						
UZB				*e*S	Sb	07 11 41.6	-0.6
	60nm,0.1s						
PRZ	**Przheval'sk**	0.75	173	⇓*e*P	Pb	07 11 38.2	+0.3
PRZ				⇓*e*S	Sg	07 11 48.9	+0.9
BLB	**Baldybastay**	0.88	10	P	Pg	07 11 40.7	+0.1
	9.2nm,0.1s						
BLB				S	Sn	07 11 52.9	-0.5
	12nm,0.2s						
PDGK	**Podgornoye**	0.90	83	⇑P	Pb	07 11 39.9	-0.5
	2.1nm,0.3s						
PDGK				⇓S	Sb	07 11 51.7	-0.3
	4.4nm,0.5s						
KNDC	**Almaty**	0.95	270	⇑P	Pb	07 11 40.5	-0.9
	13nm,0.2s						
KNDC				⇑S	Sb	07 11 53.2	-0.5
	5.5nm,0.3s						
ARXS	**Arharly**	1.04	342	P	Pb	07 11 43.1	+0.3
	1.1nm,0.1s						
ARXS				S	Sn	07 11 57.3	+0.1
	8.2nm,0.2s						
ARXS	**Arharly**	1.04	342	*e*P	Pb	07 11 43.1	+0.3
	1.1nm,0.1s						
ARXS				*e*S	Sn	07 11 57.3	+0.1
	8.2nm,0.2s						
KDJ	**Kajisay**	1.36	217	⇓*e*P	Pn	07 11 47.3	-0.2
KDJ				⇓*e*S	Sn	07 12 04.4	-0.8
TARG	**Taragay, Kyrgy**	1.53	193	⇑*e*P	Pn	07 11 50.9	+0.7
TARG				⇑*e*S	Sn	07 12 10.6	+0.8
BOOM	**Boomskoye usch**	1.86	248	⇓*e*P	Pn	07 11 55.1	+0.6
BOOM				⇓*e*S	Sn	07 12 17.1	-0.6

IDC 02 07:33:46.3±2.0**,7°.07S**×**154°.93E,h0**^{km}**,mb3.4**/3**, mbtmp3.5**/4**,ML1.5**/1**,Error ellipse: s-maj=91.9km s-min=26.1km az=140.0,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	8.04	253	Pn	Pn	07 35 45.2	+0.8
	0.3nm,0.3s,baz=314,slow=20,SNR=1.3						
PMG				Sn	Sn	07 37 17.0	+0.9
	0.9nm,0.3s,baz=139,slow=9.3,SNR=3.3 2.9nm,0.5s						
WRA	**Warramunga Arr**	23.72	235	P	P	07 39 00.3	0.0
	0.8nm,0.6s,baz=60,slow=9.1,SNR=5.1 0.8nm,0.6s						
ASAR	**Alice Springs**	26.08	228	P	P	07 39 21.4	-0.5
	0.5nm,0.8s,baz=60,slow=8.6,SNR=4.6 0.5nm,0.8s						
ILAR	**Eielson Array**	83.46	22	P	P	07 46 15.8	+0.3
	0.2nm,0.5s,baz=238,slow=5.4,SNR=7.5 0.2nm,0.5s						

BEO ***02*** *07:43:43.8±0.5,41°.44N×19°.58E,h5*^{km}*±2*^{km}*,ML2.8/16*
SKO ***02*** *07:43:44.8,41°.60N×19°.41E,h1*^{km}*,ML3.0*
TIR ***02*** *07:43:45.1,41°.51N×19°.52E,h28*^{km}*±2*^{km}*,Ml3.2/6*
THE ***02*** *07:43:45.4,42°N±27°×2°0E±4°3,h3*^{km}*±29*^{km}*,M3.0/4, MLh3.0/4*
PDG ***02*** *07:43:45.1±0.8,41°.50N×19°.35E,h27*^{km}*±2*^{km}*,MD3.3/4, ML3.2/5,Error ellipse: s-maj=0.9km s-min=2.4km az=0.0*
ISC 02 07:43:45.1±1.1**,41°.50N**±0°.02×**19°.47E**±0°.02**,h12**^{km}±9^{km}**, n72,**σ**1**^{s}**.10**/113**,7C-11D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	0.33	117	Pg	Pg	07 43 52.1	+0.3
TIR				Sg	Sb	07 43 57.1	-1.1
TIR				AML	AML	07 43 57.6	
	18nm,0.2s						
TIR				AML	AML	07 43 58.1	
	7.1nm,0.2s						
TIR	**Tirane**	0.33	117	*i* Pg	Pg	07 43 52.1	+0.3
TIR				*i* Sg	Sb	07 43 58.5	+0.2
ULC	**Ulcinj**	0.49	340	⇓*i*Pg	Pg	07 43 54.9	+0.1
ULC				*i* Sg	Sb	07 44 03.0	0.0
SDA	**Shkodra**	0.55	2	Pg	Pg	07 43 55.7	-0.2
SDA				Sg	Sb	07 44 04.9	+0.3
DRME	**Dracevica, Mon**	0.72	343	*e*Pg	Pg	07 43 58.4	-0.7
PHP	**Peshkopia**	0.75	75	Pg	Pg	07 43 58.8	-0.9
PHP				Sg	Sb	07 44 09.5	-0.9
PHP				AML	AML	07 44 11.8	
	4.6nm,0.4s						
PHP	**Peshkopia**	0.75	75	P	Pg	07 43 58.7	-0.9
PHP				S	Sb	07 44 09.7	-0.7
BUM	**Brajici-Budva**	0.91	332	⇓*i*Pg	Pg	07 44 01.6	-1.1
BUM				*i* Sg	Sb	07 44 15.9	+0.9
PDG	**Podgorica**	0.94	350	Pg	Pg	07 44 02.4	-0.9
PDG				Sg	Sb	07 44 16.9	+1.0
PDG	**Podgorica**	0.94	350	⇑P	Pg	07 44 02.6	-0.7
PDG				⇑S	Sg	07 44 15.6	-0.1
PDG	**Podgorica**	0.94	350	*e*Pg	Pg	07 44 02.4	-0.9
PDG				*e*Sg	Sb	07 44 17.1	+1.2
VLO	**Vlora**	1.03	179	Pg	Pb	07 44 05.7	+0.8
VLO				Sg	Sg	07 44 18.8	+0.5
VLO				AML	AML	07 44 27.5	
	7.1nm,0.3s						
VLO	**Vlora**	1.03	179	P	Pb	07 44 05.4	+0.5
VLO				S	Sn	07 44 20.7	+1.1
OHR	**Ohrid**	1.07	111	*i* Pg	Pb	07 44 05.5	-0.1
OHR				*i* Sg	Sn	07 44 21.6	+0.7
OHR				*e*Lg	Lg	07 44 22.5	
	comp=N,440nm,0.6s						
OHR				*e*Lg	Lg	07 44 23.9	
	comp=E,266nm,0.7s						
PVY	**Plav**	1.16	18	⇑*i*Pg	Pg	07 44 05.8	-1.5
PVY				*i* Sg	Sn	07 44 23.9	+0.9
KBN	**Korca**	1.32	131	Pg	Pb	07 44 10.3	+0.4
KBN				Sg	Sb	07 44 27.2	+0.3
KBN				AML	AML	07 44 30.7	
	comp=E,1.5nm,0.7s						
KBN	**Korca**	1.32	131	P	Pb	07 44 10.4	+0.4
KBN				S	Sn	07 44 29.3	+2.2
TREB	**Trebinje**	1.48	326	*e*Pg	Pn	07 44 10.7	-0.8
TREB				*e*Sg	Sn	07 44 32.0	+1.2
SKO	**Skopje**	1.55	72	*i* Pg	Pn	07 44 13.0	+0.5
SKO				*i* Sg	Sg	07 44 34.1	-0.8
BRY	**Bratogost**	1.56	334	⇓*i*Pg	Pn	07 44 11.3	-1.6
BRY				*i* Sg	Sn	07 44 32.9	-0.2
NEST	**Nestorio**	1.61	132	Pn	Pn	07 44 14.1	+0.6
NEST				Sn	Sn	07 44 35.2	+1.0
NEST				AML	AML	07 44 43.5	
	comp=E,0.9nm,0.4s						
NEST	**Nestorio**	1.61	132	P	Pn	07 44 14.0	+0.6
NEST				S	Sb	07 44 35.7	+0.5
SJES	**Sjenica**	1.80	12	*e*Pn	Pn	07 44 17.1	+1.0
SJES				*e*Sn	Sb	07 44 41.2	+0.5
PENT	**Pentalofos**	1.81	135	P	Pn	07 44 16.9	+0.7
PLE	**Pljevlja**	1.83	358	⇑*i*Pn	Pn	07 44 15.8	-0.7
PLE				*i* Sn	Sn	07 44 40.0	+0.3
STON	**Ston**	1.90	317	*e*Pn	Pn	07 44 16.6	-0.7
STON				*e*Sn	Sb	07 44 44.0	+0.6
NOCI	**Noci**	1.95	249	Pn	Pn	07 44 16.5	-1.6
NOCI				Sn	Sn	07 44 38.3	-4.2
NOCI				AML	AML	07 44 54.9	
	comp=E,2.1nm,0.4s						
IGT	**Igoumenitsa**	2.07	161	Pn	Pn	07 44 19.7	0.0
IGT				Sn	Sn	07 44 42.2	-3.3
IGT	**Igoumenitsa**	2.07	161	*i* Pn	Pn	07 44 19.6	0.0
IGT				*i* Sn	Sn	07 44 44.8	-0.7
KPRO	**Kipourio**	2.11	136	P	Pn	07 44 21.0	+0.7
SELS	**Selova**	2.11	35	*e*Pn	Pn	07 44 20.6	+0.3
SELS				*e*Sn	Sn	07 44 46.2	-0.2
RUDO	**Rudo**	2.12	358	*e*Pn	Pn	07 44 21.6	+1.2
RUDO				*e*Sn	Sn	07 44 47.7	+1.0
IVAS	**Ivanjica**	2.14	13	*e*Pn	Pn	07 44 20.3	-0.4
IVAS				*e*Sn	Sn	07 44 48.6	+1.4
BARS	**Barje**	2.19	52	*e*Pn	Pn	07 44 19.6	-1.7
BARS				*e*Sn	Sn	07 44 48.4	+0.1
MATE	**Matera**	2.26	249	⇓P	Pb	07 44 27.1	+1.4
GOCS	**Kraljevo Serbi**	2.31	26	*e*Pn	Pn	07 44 23.3	+0.2
GOCS				*e*Sn	Sn	07 44 51.1	-0.4
VAY	**Valandovo**	2.34	93	*i* Pn	Pn	07 44 20.9	-2.5
VAY				*i* Sn	Sn	07 44 54.1	+2.1
VAY				*e*Lg	Lg	07 44 57.1	
	comp=N,50nm,0.7s						
VAY				*e*Lg	Lg	07 44 59.3	
	comp=E,42nm,0.5s						
BBLS	**Lazi&#263i**	2.37	359	*e*Pn	Pn	07 44 24.9	+1.1
BBLS				*e*Sn	Sb	07 44 55.8	-1.1
BOSS	**Bosilegrad**	2.46	65	*e*Pn	Pn	07 44 24.5	-0.5
BOSS				*e*Sn	Sn	07 44 52.8	-2.1
GRUS	**Gruza**	2.56	21	*e*Pn	Pn	07 44 25.9	-0.5
GRUS				*e*Sn	Sn	07 44 57.6	+0.1
KNT	**Kendrikon**	2.60	96	*i* Pn	Pn	07 44 28.5	+1.5
KNT				*i* Sn	Sn	07 44 57.2	-1.3
LIT	**Litokhoron**	2.68	120	*i* Pn	Pn	07 44 29.2	+1.1
BOVS	**Bovan**	2.70	37	⇓P	Pn	07 44 29.1	+0.8
BOVS	**Bovan**	2.70	37	*e*Pn	Pn	07 44 29.3	+1.0
BOVS				*e*Sn	Sn	07 45 00.1	-0.8
KKB	**Krupnik**	2.76	82	*i* Pn	Pn	07 44 29.7	+0.5
THE	**Thessaloniki**	2.78	107	*i* Pn	Pn	07 44 28.9	-0.5
TRUS	**Trudelj**	2.81	14	*e*Pn	Pn	07 44 30.8	+0.9
ZAPS	**Zavoj**	2.94	52	*e*Pn	Pn	07 44 30.0	-1.7
ZAPS				*e*Sn	Sn	07 45 05.5	-1.4
SOH	**Sokhos**	3.01	102	*i* Pn	Pn	07 44 32.4	-0.3
VTS	**Vitosha**	3.02	67	*i* P	Pn	07 44 32.9	0.0
TEKS	**Tekeris**	3.05	1	*e*Pn	Pn	07 44 33.6	+0.4
ZAGS	**Zajecar**	3.08	40	*e*Pn	Pn	07 44 33.2	-0.4
ZAGS				*e*Sn	Sn	07 45 08.0	-2.4
PLNA	**Plana**	3.11	70	*e*P	Pn	07 44 34.1	+0.1
SRS	**Serrai**	3.13	96	*i* Pn	Pn	07 44 33.9	-0.4
BLSH	**Balsha**	3.14	63	*e*P	Pn	07 44 34.3	-0.1
BORS2	**Bor- Borsko je**	3.20	35	*e*Pn	Pn	07 44 33.5	-1.7
BORS2				*e*Sn	Sn	07 45 12.6	-0.7
MMB	**Musomishta**	3.21	88	*e*P	Pn	07 44 35.7	+0.3
MMB	**Musomishta**	3.21	88	*i* Pn	Pn	07 44 35.6	+0.1
AVAS	**Avala Beograd**	3.29	13	*e*Pn	Pn	07 44 37.7	+1.3
KUBS	**Kucevo**	3.33	28	*e*Pn	Pn	07 44 35.3	-1.7
MPEP	**Malo Peshtene**	3.67	58	*e*P	Pn	07 44 41.8	+0.2
MDVR	**Moldovita**	3.67	26	⇓P	Pn	07 44 41.8	+0.1
RZN	**Rozhen**	3.96	85	*e*P	Pn	07 44 46.3	+0.5
HERR	**Herculane**	4.01	32	⇓P	Pn	07 44 46.6	+0.2
BZS	**Buzias**	4.40	20	⇑P	Pn	07 44 52.2	+0.5
MORH	**Mrgy, Hungar**	4.75	353	⇓P	Pn	07 44 58.0	+1.5
ARR	**Arges**	5.39	42	⇓P	Pn	07 45 06.5	+1.1
VOIR		5.66	44	⇓P	Pn	07 45 08.7	-0.3
MLR	**Muntele Rosu**	6.17	48	⇓P	Pn	07 45 15.8	-0.3
PLOR	**Plostina**	6.78	48	⇑P	Pn	07 45 25.3	+0.9
VRI	**Vrincioaia**	6.83	48	⇑P	Pn	07 45 25.6	+0.5
KECS	**Kecovo**	7.02	6	*e*PN	Pn	07 45 32.7	+5.0
KECS				*e*SN	Sn	07 46 49.8	+2.4

IDC ***02*** *08:21:24.7±1.5,6°.15S×130°.31E,h0*^{km}*,mb4.0/3, mbtmp4.1/6,ML4.3/3,Error ellipse: s-maj=79.1km s-min=21.8km az=72.0*
DJA ***02*** *08:21:38.8±0.3,6°S±2°×13°1E±°,h106*^{km}*±7*^{km}*,M4.4/11, mB4.8/3,mb4.3/6,MLv4.4/11,Mw(mB)4.1/3*
ISC 02 08:21:37.2±0.9**,6°.29S**±0°.06×**130°.57E**±0°.09**,h100**^{km}**,n16,** σ**2**^{s}**.37**/16**,mb3.8**/3**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	1.83	157	P	Pn	08 22 10.8	+3.3
SAUI				S	Sn	08 22 33.8	+3.2
BNDI	**Bandanaira**	1.88	339	P	Pn	08 22 10.5	+2.3
MSAI	**Masohi**	3.36	331	P	Pn	08 22 30.5	+2.8
KRAI	**Karang Ratu**	3.67	324	P	Pn	08 22 35.4	+3.5
FAKI	**Fak Fak**	3.75	27	P	Pn	08 22 35.1	+2.1
KMPI	**Kaimana, Papua**	4.07	50	P	Pn	08 22 38.0	+0.7
SWI	**Sorong**	5.44	7	P	Pn	08 22 55.2	-0.7
	0.5nm3µm67nm,0.8s						
SANI	**Sanana**	6.22	312	P	Pn	08 23 08.4	+1.9
	0.1nm12nm,0.5s						
SOEI	**Soe**	7.13	241	P	Pn	08 23 19.3	+0.3
	0.2nm14nm,0.8s						
FITZ	**Fitzroy Crossi**	12.68	202	Pn	Pn	08 24 28.7	-5.3
	1.1nm,0.3s,baz=24,slow=11,SNR=34						
FITZ				Sn	Sn	08 26 42.0	-11
	2.5nm,0.3s,baz=57,slow=17,SNR=9.1 2.5nm,0.3s						

WRA	**Warramunga Arr**	14.05	165	Pn	Pn	08 24 48.4	-3.4
	1.4nm,0.3s,baz=342,slow=13,SNR=59						
WRA				Sn	Sn	08 27 12.7	-14
	1.9nm,0.3s,baz=345,slow=23,SNR=9.5						
	1.8nm,0.3s						
ASAR	**Alice Springs**	17.57	170	P	P	08 25 34.7	-0.7
	1.3nm,0.3s,baz=2.6,slow=11,SNR=71						
ASAR				S	Sn	08 28 40.0	-12
	0.7nm,0.4s,baz=358,slow=28,SNR=4.9						
	5.3nm,0.6s						
UGM	**Wanagama**	19.96	264	P	P	08 26 02.9	+1.2
STKA	**Stephens Creek**	27.46	159	P	P	08 27 13.2	-0.7
	1.1nm,0.4s,baz=318,slow=8.8,SNR=3.1						
	1.1nm,0.4s						
MKAR	**Makanchi Array**	67.95	326	P	P	08 32 24.3	-1.1
	1.0nm,0.4s,baz=118,slow=8.0,SNR=17						
	1.0nm,0.4s						
KURBB	**Kurchatov Arra**	72.21	328	P	P	08 32 49.6	-1.7
	0.3nm,0.4s,baz=127,slow=5.2,SNR=2.7						
	0.3nm,0.4s						

DJA 02 08:23:42.2±0.2,9˚S±6˚×11˚6E±˚,h105^{km}±4^{km},M3.9/20, mB5.1/1,mb4.0/7,MLv3.8/20,Mw(mB)4.5/1,South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLNI	**Mataram**	0.61	16	P	Pn	08 23 59.4	0.0
KHKI	**Kahang-Kahang**	0.71	334	P	Pn	08 24 01.0	+0.8
KHKI				S	Sn	08 24 13.9	+0.2
DNP	**Denpasar**	0.78	295	P	Pn	08 24 02.2	+1.4
DNP				S	Sn	08 24 17.0	+2.3
IGBI	**Denpasar**	0.79	284	P	Pn	08 24 02.4	+1.5
IGBI				S	Sn	08 24 16.8	+1.9
TWSI	**Taliwang, Sumb**	0.99	74	P	Pn	08 24 03.9	+1.0
RTBI	**Rangdo, Negare**	1.11	299	P	Pn	08 24 04.7	+0.5
RTBI				S	Sn	08 24 21.0	+0.1
SRBI	**Singaraja**	1.16	323	P	Pn	08 24 04.9	+0.2
BYJI	**Banyuwangi**	1.74	297	P	Pn	08 24 11.8	+0.1
JAGI	**Jajag, Banyuwa**	1.83	287	P	Pn	08 24 13.2	+0.4
JAGI				S	Sn	08 24 35.5	-0.6
PLAI	**Plampang**	1.84	84	P	Pn	08 24 14.6	+1.6
PLAI				S	Sn	08 24 38.4	+1.9
ABJI	**Asem Bagus**	2.06	306	P	Pn	08 24 16.0	+0.3
DBNI	**Kabupaten Domp**	2.42	78	P	Pn	08 24 21.7	+1.3
GMJI	**Gumukmas**	2.56	286	P	Pn	08 24 22.5	+0.3
BLJI	**Banyuglugur**	2.62	298	P	Pn	08 24 23.5	+0.4
KMMI	**Kalianget**	2.75	315	P	Pn	08 24 26.2	+1.5
WBSI	**Waikabubak, Su**	3.48	101	P	Pn	08 24 33.8	-0.8
LBFI	**Labuhan Bajo,**	3.96	83	P	Pn	08 24 39.7	-1.2
SNJI	**Sawahan-Nganju**	4.29	286	P	Pn	08 24 45.5	-0.1
SJI	**Sawahan**	4.30	287	P	Pn	08 24 44.9	-0.7
BASI	**Baing, Sumba**	4.75	105	P	Pn	08 24 51.3	-0.3
PCJI	**Pacitan**	4.76	279	P	Pn	08 24 51.5	-0.2
BSSI	**Bau Bau, Buton**	5.35	58	P	Pn	08 25 00.6	+0.8
	0.1nm17nm,0.5s						
UGM	**Wanagama**	5.45	281	P	Pn	08 25 01.8	+0.7
	80nm,2.2s						
EDFI	**Ende, Flores**	5.71	88	P	Pn	08 25 03.4	-1.3
SOEI	**Soe**	8.27	96	P	Pn	08 25 37.2	-2.3
BBJI	**Bungbulang**	8.33	280	P	Pn	08 25 39.3	-1.0
	11nm,1.4s						

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*PRU **02** 08:26:16.5,40˚.47N×20˚.16E,h90^{km},M4.5*

*NAO **02** 08:26:19.5,40˚.76N×17˚.43E,h10^{km},MB3.5*

*IDC **02** 08:26:21.9±0.7,41˚.39N×19˚.85E,h0^{km},mb4.1/15, mbtmp4.1/25,ML3.2/8,MS3.4/16,Error ellipse: s-maj=11.6km s-min=10.5km az=13.0*

*MOS **02** 08:26:21.7±1.1,41˚.36N×19˚.59E,h10^{km},mb4.5/10,Error ellipse: s-maj=7.4km s-min=3.9km az=69.7*

*RHSSO **02** 08:26:24.8±1.0,41˚.37N×19˚.54E,h8^{km}±4^{km},ML4.2/5*

*NEIC **02** 08:26:24.5±1.5,41˚.45N±0˚.05×19˚.64E±0˚.07,h10^{km}±1^{km}, mb4.5/19,Error ellipse: s-maj=9.1km s-min=7.9km az=247.0*

*SKO **02** 08:26:24.7,41˚.48N×19˚.52E,h12^{km},ML4.0*

*MED_RC **02** 08:26:25.0±1.1,41˚.46N×19˚.58E,h34^{km}±3^{km},MW4.3/5, Moment Tensor Solution.Mantle waves: s5,c5; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.18±.64; M$_{\theta\theta}$-2.76±.86; M$_{\phi\phi}$1.58±.68; M$_{r\theta}$0.07±.22; M$_{\theta\phi}$2.42±.69; M$_{\phi r}$-1.15±.15; Best double couple: M$_0$3.54000×10^{15} NP1:φ$_s$252.00000°,δ66.00000°,λ16.00000°. NP2: φ$_s$155.00000°,δ76.00000°,λ156.00000°. Principal axes: T 3.1900, Plg27.0000°, Azm112.0000°; N 0.7100, Plg62.0000°, Azm307.0000°; P -3.9000, Plg6.0000°, Azm205.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*THE **02** 08:26:25.8,42˚N±6˚×2˚0E±˚,h7^{km}±22^{km},M3.9/15, MLh3.9/15*

*BEO **02** 08:26:25.4±0.5,41˚.39N×19˚.68E,h11^{km}±2^{km},ML3.8/18*

*ROM **02** 08:26:25.6±0.1,41˚.384N±0˚.010×19˚.57E±0˚.02, h17^{km}±2^{km},ML4.2/204,Error ellipse: s-maj=1.8km s-min=0.7km az=64.0*

*TIR **02** 08:26:26.1,41˚.49N×19˚.70E,h34^{km}±2^{km},Ml4.4/6*

*PDG **02** 08:26:26.6±0.1,41˚.49N×19˚.64E,h11^{km},MD4.0/13, ML4.0/13,Error ellipse: s-maj=0.3km s-min=0.3km az=0.0*

ISC 02 08:26:25.0±0.8,41˚.45N±0˚.02×19˚.65E±0˚.02,h17^{km}±4^{km}, n429,σ1^{s}67/498,mb4.5/30,MS3.6/8,43C-33D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	0.19	122	Pg	Pb	08 26 30.4	+0.4
TIR				AML	AML	08 26 33.3	
	112nm,0.2s						
TIR				Sg	Sg	08 26 33.3	+0.5
TIR				AML	AML	08 26 34.4	
	118nm,0.4s						
TIR	**Tirane**	0.19	122	⇑P	Pb	08 26 30.4	+0.4
TIR				S	Sg	08 26 34.3	+1.4
TIR				AML	AML		
TIR				AML	AML		
ULC	**Ulcinj**	0.60	330	*e*Pg	Pb	08 26 36.9	-0.1
ULC				*i* Sg	Sb	08 26 45.8	+0.6
SDA	**Shkodra**	0.61	349	Pg	Pb	08 26 37.6	+0.3
SDA				Sg	Sn	08 26 47.9	-0.4
PHP	**Peshkopia**	0.64	68	Pg	Pb	08 26 37.6	-0.1
PHP				Sg	Sb	08 26 46.7	+0.4
PHP				AML	AML	08 26 51.5	
	119nm,0.5s						
PHP	**Peshkopia**	0.64	68	P	Pb	08 26 37.5	-0.1
PHP				S	Sb	08 26 46.7	+0.4
DRME	**Dracevica, Mon**	0.82	335	*e*Pg	Pb	08 26 41.0	+0.3
DRME				*e*Sg	Sn	08 26 53.2	-0.2
OHR	**Ohrid**	0.93	111	*i* Pg	Pn	08 26 43.2	-0.1
OHR				*i* Sg	Sn	08 26 58.0	+1.8
OHR				*e*Lg	Lg	08 26 59.0	
	comp=N,6µm,0.7s						
OHR				*e*Lg	Lg	08 27 00.0	
	comp=E,4µm,0.6s						
VLO	**Vlora**	0.98	187	Pg	Pn	08 26 45.7	+1.8
VLO				Sg	Sn	08 26 59.8	+2.3
VLO				AML	AML	08 27 06.4	
	comp=E,46nm,0.4s						
VLO	**Vlora**	0.98	187	P	Pn	08 26 45.8	+1.8
VLO				S	Sn	08 27 01.5	+4.1
VLO	**Vlora**	0.98	187	P	Pn	08 26 45.7	+1.8
VLO				S	Sn	08 27 01.6	+4.1
VLO				AML	AML		
	comp=N,19700µm,0.7s						
VLO				AML	AML		
	comp=E,15250µm,0.4s						
BUM	**Brajici-Budva**	1.02	327	*e*Pg	Pn	08 26 44.9	+0.3
BUM				*i* Sg	Sn	08 27 00.3	+1.7
PDG	**Podgorica**	1.02	343	Pg	Pn	08 26 44.4	-0.1
PDG				Sg	Sn	08 27 00.1	+1.7
PDG	**Podgorica**	1.02	343		Pn	08 26 44.4	-0.1
PDG	**Podgorica**	1.02	343	⇑P	Pn	08 26 45.2	+0.7
PDG				⇓S	Sn	08 27 00.9	+2.4
PDG	**Podgorica**	1.02	343	*e*Pg	Pn	08 26 44.8	+0.3
PDG				*e*Sg	Sn	08 27 01.1	+2.6
PDG	**Podgorica**	1.02	343	P	Pn	08 26 44.6	+0.1
PDG				S	Sn	08 27 00.2	+1.7
PDG				AML	AML		
	comp=N,5340µm,0.3s						
PDG				AML	AML		
	comp=N,5390µm,0.3s						
PDG				AML	AML		
	comp=E,4755µm,0.4s						
PDG				AML	AML		
	comp=E,4815µm,0.4s						
PDG	**Podgorica**	1.02	343	⇓*i*Pg	Pn	08 26 44.8	+0.3
PDG				*i* Sg	Sn	08 27 00.2	+1.7
PVY	**Plav**	1.17	11	*e*Pg	Pg	08 26 47.4	-0.2
PVY				*i* Sg	Sb	08 26 59.0	-2.7
KBN	**Korca**	1.19	133	Pn	Pg	08 26 48.6	+0.6
KBN				Sn	Sn	08 27 05.7	+3.1
KBN				AML	AML	08 27 10.3	
	comp=E,26nm,0.8s						
KBN	**Korca**	1.19	133	P	Pg	08 26 48.7	+0.7
KBN				S	Sn	08 27 06.5	+3.9
KBN	**Korca**	1.19	133	P	Pg	08 26 47.9	-0.1
KBN				S	Sn	08 27 05.8	+3.1
CEME	**Cevo**	1.23	334	*e*Pg	Pg	08 26 48.4	-0.3
CEME				*e*Sg	Sn	08 27 07.0	+3.4
HCY	**Herceg Novi**	1.32	320	⇓*i*Pg	Pg	08 26 50.3	-0.1
HCY				*i* Sg	Sg	08 27 10.4	+2.7
KOME	**Kolasin**	1.41	356	⇑*i*Pg	Pg	08 26 51.7	-0.4
KOME				*e*Sg	Sg	08 27 13.1	+2.7
NKME	**Niksic**	1.42	339	*e*Pg	Pg	08 26 52.0	-0.3
NKME				*e*Sg	Sg	08 27 13.5	+2.7
IVA	**Berane**	1.43	7	⇓*i*Pg	Pg	08 26 52.3	-0.3
IVA				*i* Sg	Sg	08 27 14.2	+2.9
SKO	**Skopje**	1.44	68	*i* Pg	Pg	08 26 52.0	-0.7
SKO				*i* Sg	Sg	08 27 13.6	+2.2
NEST	**Nestorio**	1.48	134	Pn	Pg	08 26 53.0	-0.5
NEST				Sn	Sg	08 27 13.2	+0.4
NEST				AML	AML	08 27 18.2	
	comp=E,12nm,0.6s						
NEST	**Nestorio**	1.48	134	P	Pg	08 26 53.8	+0.3
NEST				S	Sg	08 27 14.7	+1.9
TREB	**Trebinje**	1.59	323	⇑*i*Pg	Pb	08 26 53.7	-0.3
TREB				*e*Sg	Sg	08 27 15.8	-0.6
TREB	**Trebinje**	1.59	323	*e*Pn	Pb	08 26 53.7	-0.3
TREB				*e*Sg	Sg	08 27 17.4	+1.0
MESG	**Mesagne**	1.61	238	P	Pn	08 26 52.7	+0.1
MESG				S	Sn	08 27 11.9	-1.0
BRY	**Bratogost**	1.67	331	⇓*i*Pn	Pg	08 26 56.1	-1.0
BRY				*i* Sn	Sg	08 27 19.8	+0.9
PENT	**Pentalofos**	1.69	137	P	Pg	08 26 56.3	-1.1
PENT				S	Sg	08 27 19.7	+0.4
KEK	**Kerkira**	1.74	176		Pg	08 27 00.0	+1.7
KEK	**Kerkira**	1.74	176	P	Pg	08 26 60.0	+1.7
SJES	**Sjenica**	1.83	7	*e*Pn	Pg	08 26 59.0	-1.1
SJES				*e*Sn	Sb	08 27 20.9	+0.3
UPM	**Unac-Piva**	1.84	343	*e*Pn	Pb	08 26 58.5	+0.3
UPM				*i* Sn	Sg	08 27 23.6	-0.7
PLE	**Pljevlja**	1.89	354	*e*Pn	Pb	08 26 59.4	+0.3
PLE				*i* Sn	Sg	08 27 25.1	-0.8
KLINJ	**Klinje**	1.89	336	*e*Pn	Pb	08 26 58.5	-0.6
KLINJ				*e*Sn	Sb	08 27 22.7	+0.2
KZN	**Kozani**	1.97	125	P	Pb	08 26 59.8	-0.7
KPRO	**Kipourio**	1.98	138	P	Pb	08 27 01.1	+0.5
IGT	**Igoumenitsa**	1.98	165	Pn	Pb	08 26 59.3	-1.2
IGT	**Igoumenitsa**	1.98	165	P	Pb	08 26 59.1	-1.5
JAN	**Janina**	2.01	153	P	Pb	08 27 00.7	-0.3
TAR1	**Taranto**	2.01	244	P	Pn	08 26 58.0	-0.2
TAR1				S	Sn	08 27 21.6	-1.3
TAR1				AML	AML		
	comp=N,5725µm,0.5s						
TAR1				AML	AML		
	comp=E,5260µm,0.5s						
STON	**Ston**	2.03	315	*e*Pn	Pn	08 26 59.6	+1.3
STON				*e*Sn	Sb	08 27 27.4	+1.1
STON	**Ston**	2.03	315	P	Pn	08 26 59.6	+1.3
STON				S	Sn	08 27 24.5	+1.2
STON				AML	AML		
	comp=N,1400µm,0.6s						
STON				AML	AML		
	comp=E,1420µm,0.6s						
NOCI	**Noci**	2.06	252	Pn	Pn	08 26 59.0	+0.1
NOCI				Sn	Sn	08 27 25.5	+1.4
NOCI				AML	AML	08 27 35.2	
	comp=E,13nm,0.3s						
NOCI	**Noci**	2.06	252	P	Pn	08 26 58.9	+0.1
NOCI				S	Sn	08 27 23.1	-1.0
NOCI				AML	AML		
	comp=N,8165µm,0.9s						
NOCI				AML	AML		
	comp=E,4945µm,0.5s						
SELS	**Selova**	2.08	31	*e*Pn	Pb	08 27 01.1	-1.1
SELS				*e*Sn	Sb	08 27 27.3	-0.5
BARS	**Barje**	2.11	49	*i* Pn	Pb	08 27 01.3	-1.5
BARS	**Barje**	2.11	49	*e*Pn	Pb	08 27 01.2	-1.6
BARS				*e*Sn	Sb	08 27 28.6	-0.1
GRG	**Griva**	2.13	102	*i* Pn	Pb	08 27 01.9	-1.3
IVAS	**Ivanjica**	2.16	10	*e*Pn	Pb	08 27 02.0	-1.6
IVAS				*e*Sn	Sb	08 27 28.8	-1.3
RUDO	**Rudo**	2.18	355	*e*Pn	Pb	08 27 02.6	-1.3
RUDO				*e*Sn	Sb	08 27 30.4	-0.2
RUDO	**Rudo**	2.18	355	*e*Pn	Pb	08 27 03.6	-0.3
RUDO				*e*Sn	Sb	08 27 30.5	-0.2
VAY	**Valandovo**	2.20	92	*i* Pn	Pn	08 27 02.1	+1.4
VAY				*i* Sn	Sb	08 27 30.7	-0.5
VAY				*e*Lg	Lg	08 27 30.9	
	comp=N,514nm,0.7s						
VAY				*e*Lg	Lg	08 27 33.5	
	comp=E,553nm,0.8s						
GOCS	**Kraljevo Serbi**	2.30	23	*e*Pn	Pn	08 27 04.0	+1.9
GOCS				*e*Sn	Sb	08 27 33.7	-0.5
LTRZ	**Laterza**	2.30	249	P	Pn	08 27 02.0	-0.1
LTRZ				AML	AML		
	comp=E,2480µm,1.6s						
LTRZ				AML	AML		
	comp=N,3875µm,1.0s						
BOSS	**Bosilegrad**	2.36	63	*e*Pn	Pn	08 27 04.5	+1.6
BOSS				*e*Sn	Sn	08 27 32.7	+1.3
AMUR	**Altamura**	2.36	258	⇓P	Pn	08 27 03.2	+0.2
AMUR				S	Sn	08 27 29.8	-1.7
AMUR				AML	AML		
	comp=N,2725µm,0.5s						
AMUR				AML	AML		
	comp=E,2840µm,0.5s						
MATE	**Matera**	2.37	251	⇑P	Pn	08 27 03.3	+0.4
MATE	**Matera**	2.37	251	P	Pn	08 27 03.4	+0.4
MATE				AML	AML		
	comp=E,3770µm,0.4s						
MATE				AML	AML		
	comp=N,3495µm,0.4s						
BBLS	**Lazi&#263i**	2.42	356	*e*Pn	Pb	08 27 06.1	-2.0
KNT	**Kendrikon**	2.46	96	P	Pn	08 27 05.6	+1.3
KNT	**Kendrikon**	2.46	96	*i* Pn	Pn	08 27 05.8	+1.5
LIT	**Litokhoron**	2.54	121	P	Pn	08 27 06.8	+1.4
LIT	**Litokhoron**	2.54	121		Pn	08 27 06.7	+1.4
LIT	**Litokhoron**	2.54	121	P	Pn	08 27 06.7	+1.3
GRUS	**Gruza**	2.56	17	*e*Pn	Pn	08 27 07.5	+1.8
GRUS				*e*Sn	Sb	08 27 40.3	-1.4
THL	**Klokotos Trika**	2.60	135	P	Pn	08 27 08.1	+1.8
THL				AML	AML		
	comp=E,143µm,1.2s						
THL				AML	AML		
	comp=N,164µm,1.0s						
KKB	**Krupnik**	2.64	80	P	Pn	08 27 08.4	+1.7
KKB	**Krupnik**	2.64	80	*i* Pn	Pn	08 27 08.6	+1.9
THE	**Thessaloniki**	2.64	107	*i* Pn	Pn	08 27 08.2	+1.5
BOVS	**Bovan**	2.66	34	⇓P	Pn	08 27 09.4	+2.3
BOVS	**Bovan**	2.66	34	*e*Pn	Pn	08 27 08.9	+1.9
BOVS				*e*Sn	Sn	08 27 41.0	+2.1
CRAC	**Craco**	2.67	247	P	Pn	08 27 07.4	+0.3
CRAC				AML	AML		
	comp=E,4280µm,0.5s						
CRAC				AML	AML		
	comp=N,5105µm,1.4s						
TSLK	**Tsoukalades, L**	2.73	163	P	Pn	08 27 09.3	+1.3
LKD2	**Lefkada island**	2.77	163	P	Pn	08 27 09.6	+1.1
AMPL	**Ampelaki**	2.79	154	P	Pn	08 27 10.8	+2.0
MSAG	**Monte S. Angel**	2.82	277	P	Pn	08 27 09.6	+0.3
MSAG				AML	AML		
	comp=N,1150µm,0.5s						
MSAG				AML	AML		
	comp=N,2785µm,0.5s						
MSAG				AML	AML		
	comp=E,695µm,0.5s						
MSAG				AML	AML		
	comp=E,1770µm,0.5s						
TRUS	**Trudelj**	2.83	11	*e*Pn	Pn	08 27 11.2	+1.8
TRUS				*e*Sn	Sn	08 27 45.8	+2.8
PALZ	**Palazzo San Ge**	2.83	261	P	Pn	08 27 09.6	+0.3
PALZ				AML	AML		
	comp=N,3980µm,0.9s						
PALZ				AML	AML		
	comp=E,4280µm,0.9s						
SOH	**Sokhos**	2.87	101	P	Pn	08 27 11.5	+1.6
SOH	**Sokhos**	2.87	101	*i* Pn	Pn	08 27 11.7	+1.8
ZAPS	**Zavoj**	2.87	49	*e*Pn	Pn	08 27 12.0	+2.1
ZAPS				*e*Sn	Sn	08 27 46.6	+2.6
ACER	**Acerenza**	2.88	258		Pn	08 27 11.1	+1.0
ACER	**Acerenza**	2.88	258	P	Pn	08 27 11.0	+1.0
ACER				AML	AML		
	comp=N,4170µm,0.5s						
ACER				AML	AML		
	comp=N,4030µm,0.5s						
ACER				AML	AML		
	comp=E,4005µm,0.7s						
ACER				AML	AML		
	comp=E,3865µm,0.7s						
CAPA	**Cerignola FG**	2.90	266	P	Pn	08 27 10.9	+0.6
CAPA				AML	AML		
	comp=N,2535µm,1.2s						
CAPA				AML	AML		
	comp=N,2050µm,1.2s						
CAPA				AML	AML		
	comp=E,4365µm,0.8s						
CAPA				AML	AML		
	comp=E,3205µm,0.8s						
VTS	**Vitosha**	2.92	65	P	Pn	08 27 12.4	+1.8
VTS	**Vitosha**	2.92	65	*i* P	Pn	08 27 12.5	+1.8
SGRT	**San Giovanni R**	2.95	277	Pn	Pn	08 27 10.7	-0.4
SGRT	**San Giovanni R**	2.95	277		Pn	08 27 11.3	+0.2
SGRT	**San Giovanni R**	2.95	277	P	Pn	08 27 11.0	0.0
SGRT				AML	AML		
	comp=E,1455µm,0.6s						
SGRT				AML	AML		
	comp=N,1390µm,0.7s						
SALB	**San Lorenzo Be**	2.96	239	P	Pn	08 27 10.9	-0.3
SALB				AML	AML		
	comp=N,1110µm,1.5s						
SALB				AML	AML		
	comp=E,1345µm,0.7s						
LADO	**San Nicola del**	2.97	224	P	Pn	08 27 11.3	0.0
LADO				AML	AML		
	comp=E,94µm,0.5s						
LADO				AML	AML		
	comp=N,62µm,0.5s						
SRS	**Serrai**	2.99	95	*i* Pn	Pn	08 27 12.8	+1.3
PLNA	**Plana**	3.00	69	*i* P	Pn	08 27 14.3	+2.5
ZAGS	**Zajecar**	3.04	38	*e*Pn	Pn	08 27 14.1	+1.9
ZAGS				*e*Sn	Sn	08 27 49.5	+1.4
SVIS	**Svilajnac**	3.04	22	*e*Pn	Pn	08 27 14.7	+2.5
BLSH	**Balsha**	3.04	61	*e*P	Pb	08 27 15.6	-3.1
MMB	**Musomishta**	3.08	87	*i* P	Pn	08 27 14.5	+1.6
MMB	**Musomishta**	3.08	87	*i* Pn	Pn	08 27 14.4	+1.6
APRC	**Apricena**	3.10	277	P	Pn	08 27 13.3	+0.3
APRC				AML	AML		
	comp=E,1030µm,0.4s						
APRC				AML	AML		
	comp=N,2255µm,0.5s						
TEKS	**Tekeris**	3.10	358	*e*Pn	Pn	08 27 14.4	+1.3
MCEL	**Monticello**	3.13	250	P	Pn	08 27 13.7	+0.2
MCEL				AML	AML		
	comp=N,1755µm,0.8s						
MCEL				AML	AML		
	comp=N,1715µm,0.7s						
MCEL				AML	AML		
	comp=E,1705µm,0.6s						
MCEL				AML	AML		
	comp=E,1685µm,0.7s						
SIRI	**Monte Sirino -**	3.14	247	P	Pn	08 27 13.9	+0.3
SIRI				AML	AML		
	comp=E,1770µm,0.4s						
SIRI				AML	AML		
	comp=E,1745µm,0.4s						
SIRI				AML	AML		
	comp=N,1165µm,0.5s						
SIRI				AML	AML		
	comp=N,1155µm,0.5s						
CELI	**Celico**	3.15	231	P	Pn	08 27 13.5	-0.4
CELI				AML	AML		
	comp=E,1275µm,1.2s						
CELI				AML	AML		
	comp=E,526µm,1.2s						
CELI				AML	AML		
	comp=N,458µm,1.3s						
CELI				AML	AML		
	comp=N,1165µm,1.3s						
BORS2	**Bor- Borsko je**	3.16	33	*e*Pn	Pn	08 27 14.4	+0.4
BORS2				*e*Sn	Sn	08 27 51.5	+0.2
TIP	**Timpagrande**	3.17	225		Pn	08 27 14.1	0.0
TIP	**Timpagrande**	3.17	225	⇓P	Pn	08 27 14.2	+0.2
TIP	**Timpagrande**	3.17	225	P	Pn	08 27 13.8	-0.3
TIP				AML	AML		
	comp=N,420µm,1.4s						
TIP				AML	AML		
	comp=N,427µm,1.4s						
TIP				AML	AML		
	comp=E,361µm,1.4s						
TIP				AML	AML		
	comp=E,378µm,1.4s						
MMN	**Mormanno**	3.19	242	P	Pn	08 27 15.1	+0.8
MMN				AML	AML		
	comp=E,1335µm,0.4s						
MMN				AML	AML		
	comp=N,1188µm,0.5s						
SLCN	**Sala Consilina**	3.22	252	P	Pn	08 27 15.6	+0.8
SLCN				AML	AML		
	comp=N,1715µm,0.5s						
SLCN				AML	AML		
	comp=N,1970µm,0.5s						
SLCN				AML	AML		
	comp=E,2325µm,0.7s						
SLCN				AML	AML		
	comp=E,2520µm,0.7s						
CUC	**Castrocucco**	3.26	245	Pn	Pn	08 27 15.9	+0.6
CUC	**Castrocucco**	3.26	245		Pn	08 27 15.8	+0.6
CUC	**Castrocucco**	3.26	245	P	Pn	08 27 15.7	+0.5
CUC				AML	AML		
	comp=E,1305µm,0.4s						
CUC				AML	AML		
	comp=E,1325µm,0.4s						
CUC				AML	AML		
	comp=N,920µm,1.4s						
CUC				AML	AML		
	comp=N,920µm,1.4s						
AVAS	**Avala Beograd**	3.31	11	*e*Pn	Pn	08 27 17.4	+1.5
AVAS				*e*Sn	Sn	08 27 55.6	+0.8
KUBS	**Kucevo**	3.31	26	*e*Pn	Pn	08 27 16.4	+0.4
KUBS				*e*Sn	Sn	08 27 55.9	+0.9
SPS2	**Spezzano della**	3.32	231	P	Pn	08 27 16.5	+0.3
SPS2				AML	AML		
	comp=N,282µm,0.4s						
SPS2				AML	AML		
	comp=E,301µm,0.9s						
VLS	**Valsamata**	3.35	167	P	Pn	08 27 16.2	-0.3
VLS				AML	AML		
	comp=E,538µm,1.2s						
VLS				AML	AML		
	comp=N,711µm,0.5s						
CAFE	**Carife**	3.35	264	P	Pn	08 27 17.6	+0.9
CAFE				AML	AML		
	comp=N,1323µm,1.1s						
CAFE				AML	AML		
	comp=N,1206µm,0.5s						
CAFE				AML	AML		
	comp=E,1865µm,1.1s						
CAFE				AML	AML		
	comp=E,1330µm,0.5s						
MGR	**Morigerati**	3.37	249	P	Pn	08 27 18.0	+1.2
MGR				AML	AML		
	comp=N,1415µm,0.5s						
MGR				AML	AML		
	comp=E,834µm,1.7s						
MGR				AML	AML		
	comp=E,886µm,1.7s						
MGR				AML	AML		
	comp=N,1350µm,0.3s						
SNAL	**S. Angelo Dei**	3.39	263	P	Pn	08 27 17.7	+0.6
SNAL				AML	AML		
	comp=N,2325µm,1.2s						
SNAL				AML	AML		
	comp=N,2380µm,1.1s						
SNAL				AML	AML		
	comp=E,1805µm,0.7s						
SNAL				AML	AML		
	comp=E,1780µm,0.8s						
MELA	**Melanico ??? S**	3.40	276	P	Pn	08 27 17.6	+0.4
MELA				AML	AML		
	comp=E,2190µm,0.6s						

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MELA                               AML    AML
      comp=E,2130µm,0.6s
MELA                               AML    AML
      comp=N,2490µm,1.0s
MELA                               AML    AML
      comp=N,2600µm,1.0s
CET2  Cetraro           3.41 237   P      Pn        08 27 18.1 +0.7
CET2                               AML    AML
      comp=N,2130µm,1.0s
CET2                               AML    AML
      comp=E,1545µm,1.2s
CAR1  CAROLEI           3.42 231   P      Pn        08 27 17.6  0.0
CAR1                               AML    AML
      comp=E,1210µm,0.5s
CAR1                               AML    AML
      comp=N,826µm,0.5s
CAR1                               AML    AML
      comp=N,792µm,0.6s
CAR1                               AML    AML
      comp=E,1270µm,0.7s
CDRU  Civita di Ruta    3.43 255   P      Pn        08 27 18.2 +0.5
CDRU                               AML    AML
      comp=N,692µm,0.3s
CDRU                               AML    AML
      comp=E,927µm,0.3s
MCRV  Calabrutti - M    3.45 260   P      Pn        08 27 18.2 +0.2
MCRV                               AML    AML
      comp=E,992µm,0.4s
MCRV                               AML    AML
      comp=N,1255µm,0.6s
CMPR  Campora           3.48 253   P      Pn        08 27 18.9 +0.5
CMPR                               AML    AML
      comp=N,1135µm,1.7s
CMPR                               AML    AML
      comp=E,827µm,0.4s
BULG  Bulgheria - Ca    3.52 249   P      Pn        08 27 19.7 +0.8
BULG                               AML    AML
      comp=N,1835µm,0.3s
BULG                               AML    AML
      comp=N,1895µm,0.3s
BULG                               AML    AML
      comp=E,902µm,0.3s
BULG                               AML    AML
      comp=E,936µm,0.3s
PGB   Panagyurishte     3.54  71 i P      Pn        08 27 21.8 +2.7
MRB1  Monte Rocchett    3.54 266   P      Pn        08 27 20.3 +1.2
MRB1                               AML    AML
      comp=N,1420µm,0.6s
MRB1                               AML    AML
      comp=N,1310µm,0.6s
MRB1                               AML    AML
      comp=E,1150µm,0.4s
MRB1                               AML    AML
      comp=E,1095µm,0.4s
MTMR  Montemarano       3.55 263   P      Pn        08 27 19.9 +0.6
MTMR                               AML    AML
      comp=E,764µm,1.6s
MTMR                               AML    AML
      comp=N,838µm,0.4s
GATE  Gambatesa         3.56 273   P      Pn        08 27 20.9 +1.5
GATE                               AML    AML
      comp=E,935µm,0.6s
GATE                               AML    AML
      comp=E,945µm,0.6s
GATE                               AML    AML
      comp=N,1046µm,0.6s
GATE                               AML    AML
      comp=N,1010µm,0.6s
CIGN  Sant'Elia a Pi    3.57 275   P      Pn        08 27 20.1 +0.6
CIGN                               AML    AML
      comp=N,487µm,0.4s
CIGN                               AML    AML
      comp=E,634µm,0.6s
MPEP  Malo Peshtene     3.58  56 i P      Pn        08 27 22.2 +2.5
GRI   Girifalco         3.61 224   P      Pn        08 27 19.5 -0.5
GRI                                AML    AML
      comp=N,366µm,1.6s
GRI                                AML    AML
      comp=E,378µm,0.6s
MDVR  Moldovita         3.66  24 ⇑P      Pn        08 27 22.8 +2.0
FRGS  Fruska Gora       3.71   2 ePn     Pn        08 27 22.4 +0.9
PUNG  Punghina          3.72  39 ⇓P      Pn        08 27 24.0 +2.4
SACR  S. Croce Del S    3.72 271   P      Pn        08 27 22.6 +1.0
SACR                               AML    AML
      comp=N,536µm,0.8s
SACR                               AML    AML
      comp=N,534µm,0.9s
SACR                               AML    AML
      comp=E,546µm,0.7s
SACR                               AML    AML
      comp=E,537µm,0.7s
BLY   Banja Luka        3.76 332⇑iPn     Pn        08 27 23.2 +1.1
BLY                              eSn     Sn        08 28 06.9 +0.9
BLY   Banja Luka        3.76 332 ⇑P      Pn        08 27 24.1 +1.9
BLY   Banja Luka        3.76 332 ePn     Pn        08 27 24.2 +2.1
FRES  Fresagrandinar    3.77 280   P      Pn        08 27 23.2 +1.0
FRES                               AML    AML
      comp=E,1250µm,0.9s
FRES                               AML    AML
      comp=N,828µm,0.5s
VITU  Vitulano (BN)     3.79 268   P      Pn        08 27 24.2 +1.6
VITU                               AML    AML
      comp=E,1205µm,1.6s
VITU                               AML    AML
      comp=N,1225µm,0.7s
BSSO  Busso             3.80 273   P      Pn        08 27 23.9 +1.1
BSSO                               AML    AML
      comp=N,210µm,0.5s
BSSO                               AML    AML
      comp=E,210µm,1.5s
RZN   Rozhen            3.83  85 i P      Pn        08 27 25.4 +2.2
DJES  Djerdap           3.84  32 ePn     Pn        08 27 25.4 +2.1
PAOL  Paolisi           3.85 265          Pn        08 27 24.9 +1.4
PAOL  Paolisi           3.85 265   P      Pn        08 27 24.3 +0.8
PAOL                               AML    AML
      comp=N,752µm,0.6s
PAOL                               AML    AML
      comp=N,689µm,0.9s
PAOL                               AML    AML
      comp=E,591µm,1.0s
PAOL                               AML    AML
      comp=E,625µm,1.0s
PLD   Plovdiv           3.87  78 i P      Pn        08 27 25.7 +2.0
PLAC  Placanica         3.88 221   P      Pn        08 27 23.4 -0.5
PLAC                               AML    AML
      comp=N,256µm,0.6s
PLAC                               AML    AML
      comp=E,249µm,0.6s
PLAC                               AML    AML
      comp=E,238µm,0.4s
PLAC                               AML    AML
      comp=N,242µm,1.5s
KLV   Kalavryta, Ach    3.91 150   P      Pn        08 27 26.4 +2.1
KLV                                AML    AML
      comp=N,158µm,0.8s
KLV                                AML    AML
      comp=E,230µm,1.2s
HERR  Herculane         3.98  30 ⇓P      Pn        08 27 27.6 +2.4
VBKN  Vesuvio Bunker    3.99 263   P      Pn        08 27 26.0 +0.6
VBKN                               AML    AML
      comp=N,1470µm,0.3s
VBKN                               AML    AML
      comp=E,1750µm,1.4s
VTIR  Vesuvio Tirone    4.00 262   P      Pn        08 27 25.6 +0.2
VTIR                               AML    AML
      comp=N,414µm,0.4s
VTIR                               AML    AML
      comp=E,456µm,0.6s
JOPP  Joppolo           4.05 227   P      Pn        08 27 25.5 -0.6
JOPP                               AML    AML
      comp=E,194µm,0.8s
JOPP                               AML    AML
      comp=N,186µm,1.1s
VAGA  Valle Agricola    4.07 271   P      Pn        08 27 27.9 +1.4
VAGA                               AML    AML
      comp=E,522µm,1.6s
VAGA                               AML    AML
      comp=E,542µm,1.6s
VAGA                               AML    AML
      comp=N,912µm,0.5s
VAGA                               AML    AML
      comp=N,878µm,0.4s
PIGN  Pignataro Magg    4.13 268   P      Pn        08 27 27.5 +0.3
PIGN                               AML    AML
      comp=N,300µm,0.7s
PIGN                               AML    AML
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      comp=E,312µm,0.9s
PIGN                               AML    AML
      comp=N,257µm,0.5s
PIGN                               AML    AML
      comp=E,282µm,1.0s
RNI2  Rionero Sannit    4.13 275   P      Pn        08 27 28.8 +1.4
RNI2                               AML    AML
      comp=N,504µm,0.9s
RNI2                               AML    AML
      comp=N,506µm,0.9s
RNI2                               AML    AML
      comp=E,698µm,1.5s
RNI2                               AML    AML
      comp=E,678µm,1.5s
LPEL  Lama dei Pelig    4.13 280   P      Pn        08 27 28.6 +1.2
LPEL                               AML    AML
      comp=N,482µm,0.3s
LPEL                               AML    AML
      comp=E,673µm,0.3s
SRE   Strehaia          4.14  38 ⇓P      Pn        08 27 29.9 +2.5
SRE   Strehaia          4.14  38   P      Pn        08 27 29.8 +2.5
PLVB  Pleven            4.16  61 ⇑P      Pn        08 27 29.9 +2.3
CERA  Filignano         4.23 274   P      Pn        08 27 30.7 +2.0
CERA                               AML    AML
      comp=N,762µm,1.2s
CERA                               AML    AML
      comp=E,1200µm,0.5s
KDZ   Kurdzhali         4.27  86 i P      Pn        08 27 31.1 +1.9
CEL   Celeste           4.30 223          Pn        08 27 29.4 -0.2
CEL   Celeste           4.30 223   P      Pn        08 27 29.2 -0.5
CEL                                AML    AML
      comp=N,216µm,1.1s
CEL                                AML    AML
      comp=E,216µm,0.6s
CEL                                AML    AML
      comp=E,194µm,0.6s
CEL                                AML    AML
      comp=N,256µm,0.7s
MODR  Mondragone        4.36 268   P      Pn        08 27 31.0 +0.6
MODR                               AML    AML
      comp=E,233µm,0.9s
MODR                               AML    AML
      comp=N,242µm,0.9s
SOI   Samo              4.36 221   P      Pn        08 27 29.8 -0.6
SOI                                AML    AML
      comp=E,190µm,0.5s
SOI                                AML    AML
      comp=N,198µm,0.7s
MCI   Monte Cassino     4.38 272   P      Pn        08 27 32.5 +1.7
MCI                                AML    AML
      comp=N,550µm,0.4s
MCI                                AML    AML
      comp=E,922µm,0.3s
BZS   Buzias            4.41  18 ⇑P      Pn        08 27 32.7 +1.6
BZS   Buzias            4.41  18   P      Pn        08 27 32.6 +1.6
RDO   Rodhopi           4.45  92   Pn     Pn        08 27 27.4 -4.1
T0110 Collepietro       4.46 282   P      Pn        08 27 32.8 +1.0
T0110                              AML    AML
      comp=N,598µm,0.8s
T0110                              AML    AML
      comp=E,641µm,0.5s
POFI  Posta Fibreno     4.46 275   P      Pn        08 27 33.3 +1.4
POFI                               AML    AML
      comp=E,308µm,0.5s
POFI                               AML    AML
      comp=N,162µm,0.5s
VVLD  Villa Vallelon    4.54 277   P      Pn        08 27 34.0 +1.1
VVLD                               AML    AML
      comp=N,385µm,1.0s
VVLD                               AML    AML
      comp=N,375µm,0.8s
VVLD                               AML    AML
      comp=E,398µm,0.9s
VVLD                               AML    AML
      comp=E,406µm,0.9s
GZR   Gura Zlata        4.55  29 ⇑P      Pn        08 27 34.9 +1.7
GZR   Gura Zlata        4.55  29   P      Pn        08 27 34.8 +1.7
ITM   Ithomi            4.61 157          Pn        08 27 35.3 +1.4
SURR  Surduc            4.66  22 ⇑P      Pn        08 27 36.6 +2.1
MPNC  Port Mandanici    4.67 226   AML    AML
      comp=N,526µm,1.6s
MPNC                               AML    AML
      comp=E,460µm,1.5s
AQU   L'Aquila          4.75 283 ePn     Pn        08 27 35.1 -0.7
AQU                              eSn     Sn        08 28 28.8 -1.7
MNTT  Montottone        4.77 292   P      Pn        08 27 37.8 +1.7
MNTT                               AML    AML
      comp=E,1410µm,0.5s
MNTT                               AML    AML
      comp=N,1280µm,1.7s
CAMP  Campotosto        4.78 285          Pn        08 27 37.5 +1.3
CAMP  Campotosto        4.78 285   P      Pn        08 27 36.8 +0.6
CAMP                               AML    AML
      comp=N,297µm,0.7s
CAMP                               AML    AML
      comp=E,330µm,1.3s
MORH  Mrgy, Hungar      4.82 352⇑iPn     Pn        08 27 37.4 +0.7
MORH                             eSn     Sn        08 28 32.7 +0.6
MORH  Mrgy, Hungar      4.82 352 ⇑P      Pn        08 27 37.7 +1.0
MF5   Montefalcone A    4.85 291   P      Pn        08 27 38.5 +1.4
MF5                                AML    AML
      comp=N,893µm,1.2s
MF5                                AML    AML
      comp=E,498µm,0.5s
SMA1  SAN MARTINO       4.85 286   P      Pn        08 27 37.9 +0.7
SMA1                               AML    AML
      comp=E,826µm,0.5s
SMA1                               AML    AML
      comp=N,594µm,0.5s
ELND  Elena             4.86  70 ⇑P      Pn        08 27 39.2 +2.0
AIO   Antillo           4.86 226   P      Pn        08 27 36.3 -1.0
AIO                                AML    AML
      comp=E,151µm,1.7s
AIO                                AML    AML
      comp=N,158µm,0.4s
COPA  Copaceanca        4.90  55 ⇓P      Pn        08 27 40.1 +2.4
RM33  Pellescritta (    4.91 285   P      Pn        08 27 39.2 +1.1
RM33                               AML    AML
      comp=E,468µm,1.4s
RM33                               AML    AML
      comp=E,552µm,1.0s
RM33                               AML    AML
      comp=N,336µm,1.0s
RM33                               AML    AML
      comp=N,289µm,0.5s
MMO1  Montemonaco       4.92 289   P      Pn        08 27 39.2 +1.0
FIAM  Fiamignano        4.95 282   P      Pn        08 27 40.1 +1.6
FIAM                               AML    AML
      comp=E,224µm,0.5s
FIAM                               AML    AML
      comp=N,230µm,0.6s
GUMA  Gualdo di Mace    4.96 291          Pn        08 27 39.7 +1.1
HUMR  Humele            4.98  50 ⇑P      Pn        08 27 41.8 +3.0
LOT   Lotru             5.00  35 ⇓P      Pn        08 27 41.5 +2.3
CERT  Cerreto           5.02 278   P      Pn        08 27 40.7 +1.3
MC2   Monte Cornacci    5.02 289   P      Pn        08 27 40.7 +1.1
DEV   Deva              5.02  27 ⇓P      Pn        08 27 42.3 +2.8
DEV   Deva              5.02  27   P      Pn        08 27 42.3 +2.8
SIRR  Siria             5.03  16 ⇑P      Pn        08 27 42.2 +2.6
NRCA  Norcia            5.05 288          Pn        08 27 41.2 +1.2
NRCA  Norcia            5.05 288   P      Pn        08 27 41.1 +1.1
NRCA                               AML    AML
      comp=E,392µm,0.7s
NRCA                               AML    AML
      comp=N,416µm,0.2s
NRCA                               AML    AML
      comp=N,492µm,0.3s
NRCA                               AML    AML
      comp=E,394µm,0.5s
CSP1  Cessapalombo      5.06 291   P      Pn        08 27 40.8 +0.8
LNSS  Leonessa          5.06 285   P      Pn        08 27 41.4 +1.3
LNSS                               AML    AML
      comp=E,630µm,0.7s
LNSS                               AML    AML
      comp=E,654µm,0.6s
LNSS                               AML    AML
      comp=N,614µm,1.0s
LNSS                               AML    AML
      comp=N,580µm,0.5s
FDMO  Fiordimonte       5.12 290          Pn        08 27 41.9 +1.0
FDMO  Fiordimonte       5.12 290   P      Pn        08 27 41.8 +0.9
BOJS  Bojanci           5.17 323 i Pn     Pn        08 27 42.9 +1.4
BOJS  Bojanci           5.17 323   P      Pn        08 27 42.7 +1.3
EPZF  Pizzo Felice      5.17 227   P      Pn        08 27 42.0 +0.3
JMB   Yambol            5.23  76 i P      Pn        08 27 44.3 +1.9
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SNTG  Esanatoglia       5.29 292   P      Pn        08 27 43.7 +0.5
CRES  Cresnjevec Ost    5.33 327 ePn     Pn        08 27 44.9 +1.2
ARR   Arges             5.34  41 ⇓P      Pn        08 27 46.9 +2.9
COR1  Corinaldo         5.38 296   P      Pn        08 27 45.5 +1.2
CESX  Cesi              5.39 285          Pn        08 27 45.9 +1.4
SGRR  Singureni         5.41  57 ⇑P      Pn        08 27 47.5 +2.7
BEHE  Becsehely         5.43 339          Pn        08 27 47.6 +2.5
BEHE  Becsehely         5.43 339 ePn     Pn        08 27 46.9 +1.8
BEHE                             eSn     Sn        08 28 47.9 +0.7
MOMA  Monte Martano     5.44 287   P      Pn        08 27 47.1 +1.8
MTUR  Matau             5.46  44 ⇑P      Pn        08 27 48.9 +3.2
MTUR  Matau             5.46  44   P      Pn        08 27 48.8 +3.2
ATCC  AVT- Casa Cast    5.48 291   P      Pn        08 27 46.9 +1.1
LOZB  Loznitsa          5.49  67 ⇑P      Pn        08 27 48.1 +2.2
RAZG  Razgrad           5.49  65 ⇑P      Pn        08 27 48.5 +2.5
HLNI  Lentini           5.52 224   P      Pn        08 27 44.3 -2.0
FRON  Frontone          5.52 294   P      Pn        08 27 47.1 +0.7
SSY   Sortino           5.57 221   P      Pn        08 27 44.3 -2.7
MURB  Monte Urbino      5.58 291          Pn        08 27 49.0 +1.8
VOIR                    5.60  43 ⇓P      Pn        08 27 50.3 +2.9
VOIR                    5.60  43   P      Pn        08 27 50.3 +2.9
PIEI  Pieia             5.66 294   P      Pn        08 27 48.8 +0.5
VAE   Valguarnera       5.67 227   Pn     Pn        08 27 49.1 +0.7
      comp=N,6.2nm,0.3s,baz=4.6,slow=11,SNR=1.3
VAE                                Sn     Sn        08 28 54.6 +1.5
      baz=216,slow=22
      comp=N,18nm,0.3s
ATVO  AVT- Monte Val    5.70 292   P      Pn        08 27 50.1 +1.3
DRGR                    5.78  21 ⇑P      Pn        08 27 52.7 +2.7
DRGR                    5.78  21   P      Pn        08 27 52.6 +2.7
ATMI  Monte Miggiano    5.78 291   P      Pn        08 27 52.3 +2.3
MARR  Marisel-Cluj      5.79  24 ⇓P      Pn        08 27 53.1 +2.9
SULR                    5.82  54 ⇑P      Pn        08 27 53.5 +3.1
BADI  Badiali           5.85 293   P      Pn        08 27 52.1 +1.3
GBAS  Gorenja Brezov    5.86 322 ePn     Pn        08 27 52.1 +1.1
RAFF  Raffo Rosso       5.88 226   P      Pn        08 27 50.1 -1.2
LJU   Ljubljana         5.90 323   P      Pn        08 27 52.9 +1.3
NEF   NEVSHA            5.93  70 i P      Pn        08 27 54.4 +2.4
CJR   Cluj-Napoca       5.98  27 ⇓P      Pn        08 27 54.7 +1.9
CJR   Cluj-Napoca       5.98  27   P      Pn        08 27 54.6 +1.9
PRD   Provadia          6.00  71 eP      Pn        08 27 55.1 +2.2
TRI   Trieste           6.03 317   Pn     Pn        08 27 53.2 -0.1
TRI   Trieste           6.03 317   P      Pn        08 27 53.2 -0.1
MLR   Muntele Rosu      6.11  46   Pn     Pn        08 27 54.7 +0.2
      comp=N,43nm,0.7s,baz=177,slow=7.8,SNR=62
MLR                                Sn     Sn        08 29 02.0 -1.9
      comp=N,0.6nm,0.3s,baz=236,slow=21,SNR=0.9
MLR                                LR     LR        08 31 17.8
      comp=N,161nm,19.7s,baz=224,slow=49
MLR   Muntele Rosu      6.11  46          Pn        08 27 57.0 +2.5
MLR   Muntele Rosu      6.11  46 ⇑P      Pn        08 27 57.8 +3.3
DOPR  Dopca             6.14  41 ⇑P      Pn        08 27 57.7 +2.8
SOKA  Soboth            6.20 329   Pn     Pn        08 27 57.1 +1.4
      comp=N,8.8nm,0.5s,SNR=5.5
ISR   Istrita           6.22  52 ⇓P      Pn        08 27 59.3 +3.3
ISR   Istrita           6.22  52   P      Pn        08 27 59.3 +3.3
OBKA  Obir              6.25 326 ePn     Pn        08 27 57.4 +0.9
      comp=N,3.3nm,0.3s
NEHR  Nehoiu            6.26  48 ⇑P      Pn        08 27 59.9 +3.3
SABO  M.te Sabotino     6.30 318   P      Pn        08 27 57.6 +0.5
APE   Apeiranthos       6.32 132⇑eP      Pn        08 27 58.3 +1.0
OZUR                    6.43  42 ⇑P      Pn        08 28 01.5 +2.7
PSZ   Piszkesteto       6.47   1          Pn        08 28 00.4 +0.9
PSZ   Piszkesteto       6.47   1 ⇓P      Pn        08 28 01.2 +1.7
PSZ   Piszkesteto       6.47   1   P      Pn        08 28 00.4 +0.9
COVR  Voineasa-Covas    6.47  45 ⇑P      Pn        08 28 02.6 +3.1
ARSA  Arzberg           6.51 334          Pn        08 28 01.7 +1.8
ARSA  Arzberg           6.51 334 ePn     Pn        08 28 01.8 +1.8
      comp=N,2.8nm,0.3s,SNR=4.4
OSSC  Osservatorio P    6.55 291   Pn     Pn        08 28 00.5  0.0
ICOR  Ion Corvin        6.56  63 ⇓P      Pn        08 28 03.4 +2.8
GRER                    6.62  51 ⇓P      Pn        08 28 05.1 +3.6
RONA  Rosalia, Austr    6.69 340 ePn     Pn        08 28 04.0 +1.5
      comp=N,2.9nm,0.3s
PLOR  Plostina          6.72  47 ⇓P      Pn        08 28 06.0 +3.1
PLOR  Plostina          6.72  47   P      Pn        08 28 05.9 +3.1
PTCC  Patocco-Chiusa    6.72 320   P      Pn        08 28 03.2 +0.4
MYKA  Terra Mystica     6.75 322 ePn     Pn        08 28 04.4 +1.2
      comp=N,1.0nm,0.2s
VRI   Vrincioaia        6.77  47 ⇓P      Pn        08 28 05.6 +2.1
VRI   Vrincioaia        6.77  47   P      Pn        08 28 05.5 +2.1
TLBR  Topalu            6.89  61 ⇓P      Pn        08 28 07.8 +2.7
ONER  Baraj Valea Uz    6.90  43 ⇑P      Pn        08 28 07.7 +2.5
STAL  STALIGIAL         6.95 316          Pn        08 28 07.2 +1.3
MFTR  Murfatlar         7.00  64 ⇑P      Pn        08 28 08.7 +2.0
CONA  Conrad Observa    7.02 339 ePn     Pn        08 28 09.7 +2.8
      comp=N,3.1nm,0.3s
KECS  Kecovo            7.06   5 eP      Pn        08 28 09.9 +2.5
KECS  Kecovo            7.06   5 ePN     Pn        08 28 09.9 +2.5
TIRR  Tirgusor          7.10  62          Pn        08 28 08.2 +0.3
TIRR  Tirgusor          7.10  62   P      Pn        08 28 08.2 +0.3
MODS  Modra-Piesok      7.13 347 eP      Pn        08 28 11.2 +2.8
MODS                             e                  08 29 28.9
MODS  Modra-Piesok      7.13 347 ePN     Pn        08 28 11.2 +2.8
MODS                             eSN     Sn        08 29 28.9  0.0
TESR  Tescani           7.15  43 ⇑P      Pn        08 28 11.9 +3.2
KBA   Koelnbreinsper    7.22 323 ePn     Pn        08 28 11.5 +1.7
      comp=N,5.5nm,0.4s
CFR   Carcaliu          7.22  56 ⇑P      Pn        08 28 12.1 +2.5
CFR   Carcaliu          7.22  56   P      Pn        08 28 12.1 +2.5
TPGR  Topolog           7.26  59 ⇓P      Pn        08 28 12.6 +2.4
BURAR Bucovina Array    7.33  31          Pn        08 28 13.9 +2.6
BURAR Bucovina Array    7.33  31 ⇑P      Pn        08 28 14.9 +3.5
BURAR Bucovina Array    7.33  31   P      Pn        08 28 14.8 +3.5
BUR08 Bucovina Ar. S    7.35  31   Pn     Pn        08 28 14.4 +2.8
ABTA  Abfaltersbach     7.38 318 i Pn     Pn        08 28 12.9 +1.0
      comp=N,1.3nm,0.2s
IDI   Anoyia            7.40 145   Pn     Pn        08 28 10.6 -1.6
      comp=N,4.9nm,0.3s,baz=319,slow=14,SNR=7.3
IDI                                Sn     Sn        08 29 32.3 -3.4
      comp=N,3.2nm,0.3s,baz=298,slow=20,SNR=3.6
IDI   Anoyia            7.40 145   Pn     Pn        08 28 11.8 -0.4
MANT  Manisa            7.45 110          Pn        08 28 16.2 +3.2
MOA   Molln             7.46 331 ePn     Pn        08 28 15.2 +2.2
      comp=N,1.4nm,0.3s
JAVC  Velka Javorina    7.54 350 ePN     Pn        08 28 13.9 -0.2
BIOA  Bad Ischl, Aus    7.57 328 i Pn     Pn        08 28 16.6 +2.1
      comp=N,5.1nm,0.3s
TLCR                    7.66  58 ⇑P      Pn        08 28 18.9 +3.3
TLCR                    7.66  58   P      Pn        08 28 18.8 +3.3
LESA  Schwarzleotal     7.78 322   Sg     Pn        08 28 18.7 +1.3
      comp=N,4.3nm,0.4s,SNR=8.2
KRUC  Moravsky          7.95 344 ePN     Pn        08 28 22.0 +2.3
STHS  Stebnicka Huta    8.05   7 eP      Pn        08 28 25.7 +4.7
STHS                             e                  08 29 54.6
STHS  Stebnicka Huta    8.05   7 ePN     Pn        08 28 25.7 +4.7
STHS                             eSN     Sn        08 29 54.6 +3.1
VRAC  Vranov            8.15 346   LR     LR        08 32 01.5
      comp=N,135nm,21.2s,baz=159,slow=41
VRAC  Vranov            8.15 346 ePN     Pn        08 28 23.6 +1.2
WTTA  Wattenberg        8.17 318 ePn     Pn        08 28 25.1 +2.3
      comp=N,3.5nm,0.2s,SNR=9.2
WTTA                             eSn     Sn        08 29 53.1 -1.7
      comp=N,9.8nm,0.5s
WTTA  Wattenberg        8.17 318   P      Pn        08 28 25.3 +2.4
WATA  Walderalm         8.25 318 ePn     Pn        08 28 26.3 +2.4
      comp=N,4.8nm,0.3s,SNR=6.0
WATA                             eSn     Sn        08 29 57.3 +0.7
      comp=N,16nm,0.7s
CKRC  Cesky Krumlov     8.28 335 eP      Pn        08 28 25.5 +1.3
CKRC                             e                  08 29 57.8
CKRC  Cesky Krumlov     8.28 335 ePN     Pn        08 28 25.5 +1.3
CKRC                             eSN     Sn        08 29 57.8 +0.5
SQTA  Sankt Quirin      8.36 316 ePn     Pn        08 28 27.8 +2.5
      comp=N,5.1nm,0.3s,SNR=4.3
SQTA                             eSn     Sn        08 29 56.5 -2.9
      comp=N,8.0nm,0.4s
BORA  Eskisehir         8.36  97          Pn        08 28 25.7 +0.4
FETA  Feichten          8.49 314 ePn     Pn        08 28 28.9 +1.8
      comp=N,0.8nm,0.3s
FETA                             eSn     Sn        08 30 03.1 +0.6
      comp=N,13nm,1.0s
MOTA  Moosalm           8.49 317 ePn     Pn        08 28 28.8 +1.5
      comp=N,2.2nm,0.3s
GERES GERESS Array B    8.51 332   Pn     Pn        08 28 28.8 +1.5
      comp=N,0.1nm,0.3s,baz=150,slow=14,SNR=8.8
GERES                              Sn     Sn        08 30 05.9 +3.0
      comp=N,0.1nm,0.3s,baz=151,slow=23,SNR=1.4
GERES                              LR     LR        08 32 15.1
      comp=N,165nm,18.9s,baz=139,slow=41
      comp=N,1.6nm,0.5s
KHC   Kasperske Hory    8.79 333          Pn        08 28 32.3 +1.1
KHC   Kasperske Hory    8.79 333⇑eP      Pn        08 28 31.8 +0.6
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KHC                                    pmax       pmax
         comp=Z,3.0nm,0.8s
KHC      Kasperske Hory     8.79 333  ePN        Pn         08 28 32.6 +1.4
KHC                                   eSN        Sn         08 30 11.0 +1.1
DAVOX    Davos/Dischmat     8.82 310   Pn        Pn         08 28 32.9 +1.2
         comp=Z,1.8nm,0.3s,baz=87,slow=14,SNR=11
DAVOX                                  Sn        Sn         08 30 04.3 -6.4
         comp=Z,0.8nm,0.3s,baz=135,slow=22,SNR=1.6
         comp=Z,3.7nm,0.3s
DAVA     Damuels            9.11 313  ePn        Pn         08 28 37.1 +1.4
         comp=Z,0.6nm,0.1s
KEST     Kesra              9.88 238   Pn        Pn         08 28 47.8 +1.6
         comp=Z,0.1nm,0.3s,baz=72,slow=13,SNR=4.1
KEST                                   LR        LR         08 33 54.8
         comp=Z,306nm,18.4s,baz=289,slow=45
         comp=Z,3.4nm,0.8s
SENIN    Lac Senin/Sane    10.17 303             Pn         08 28 50.7 +0.4
BFO      Black Forest      10.57 314   Pn        Pn         08 28 56.0 +0.5
BFO      Black Forest      10.57 314   P         Pn         08 28 56.0 +0.5
BRTR     Keskin Array B    10.78  95   Pn        Pn         08 28 56.0 -2.6
         comp=Z,0.1nm,0.3s,baz=293,slow=12,SNR=1.4
BRTR                                   LR        LR         08 33 54.5
         comp=Z,186nm,18.3s,baz=280,slow=43
AKASG    Malin Array Be    11.38  32   Pn        Pn         08 29 04.4 -2.3
         comp=Z,0.4nm,0.3s,baz=222,slow=13,SNR=6.4
AKASG                                  LR        LR         08 33 52.0
         comp=Z,169nm,20.3s,baz=224,slow=40
         comp=Z,0.7nm,0.6s
AKASG    Malin Array Be    11.38  32 i P         Pn         08 29 08.1 +1.4
AKASG                                  pmax      pmax
         comp=Z,1.0nm,0.4s
AKBB     Malin Array Si    11.38  32⇓eP          Pn         08 29 09.3 +2.6
NACGM    Naroch            14.27  17  eP         P          08 29 53.3 +0.1
         comp=Z,27nm,0.9s,baz=202
MMAI     Mount Meron Ar    15.09 119   Pn        Pn         08 29 55.0 -2.4
         comp=Z,2.0nm,0.5s,baz=315,slow=9.4,SNR=4.1
VORD     Divnogorie        16.55  48  eP         Pn         08 30 16.2 +0.1
VORD                                   pmax      pmax
         comp=Z,8.0nm,1.1s
VSR      Storozhevoye      16.60  47  eP         Pn         08 30 16.8 +0.1
VSR                                    pmax      pmax
         comp=Z,5.0nm,1.0s
KIV      Kislovodsk        17.11  74  eP         Pn         08 30 21.1 -2.2
KIV                                    pmax      pmax
         comp=Z,6.0nm,1.1s
KIV                                    MLR       MLR
         comp=Z,34nm,14.0s
LPSR     Galich'ya Gora    17.18  43  eP         Pn         08 30 23.1 -0.8
LPSR                                   pmax      pmax
         comp=Z,10.0nm,0.9s
KBZ      Khabaz            17.26  75   P         Pn         08 30 21.6 -3.5
         comp=Z,0.1nm,0.3s,baz=330,slow=6.6,SNR=5.0
         comp=Z,2.1nm,1.0s
KBZ      Khabaz            17.26  75⇑eP          Pn         08 30 23.4 -1.6
KBZ                                    pmax      pmax
         comp=Z,43nm,4.1s
VSU      Vasula            17.61  12⇑eP          Pn         08 30 28.8 -0.5
VSU                                    pmax      pmax
         comp=Z,21nm,0.7s
OBN      Obninsk           17.64  33  eP         Pn         08 30 29.3 -0.4
OBN                                    pmax      pmax
         comp=Z,12nm,0.9s
NCK      Nalchik           17.77  75deP          Pn         08 30 30.2 -1.2
NCK                                    pmax      pmax
         comp=Z,17nm,0.6s
ESDC     Sonseca Array     18.02 272   LR        LR         08 37 57.8
         comp=Z,37nm,20.0s,baz=77,slow=38
VRH      Novokhopyorsk     18.03  50  eP         Pn         08 30 31.4 -3.1
VRH                                    pmax      pmax
         comp=Z,6.0nm,0.9s
MOS      Moscow            18.51  33  eP         P          08 30 32.5 -7.6
HFS      Hagfors           19.07 351   P         P          08 30 46.0 -0.3
         comp=Z,0.4nm,0.3s,baz=173,slow=13,SNR=8.8
HFS                                    LR        LR         08 39 41.4
         comp=Z,101nm,20.9s,baz=352,slow=42
         comp=Z,10nm,0.8s
HFS      Hagfors           19.07 351   P         P          08 30 46.0 -0.3
NC602    NORSAR Array S    19.94 348   P         P          08 30 55.8  0.0
NC405    NORSAR Array S    20.28 349   P         P          08 30 59.9 +0.4
NC405                                  IAmb      IAmb       08 31 03.4
         comp=Z,18nm,1.1s
NB2      NORSAR Subarra    20.28 348   P         P          08 30 58.9 -0.6
         comp=Z,2.1nm,0.7s,baz=166,slow=11
NOA      NORSAR Array B    20.28 348   P         P          08 30 59.8 +0.2
         comp=Z,1.1nm,0.7s,baz=150,slow=9.8,SNR=6.7
NOA                                    LR        LR         08 40 07.4
         comp=Z,74nm,19.1s,baz=300,slow=40
         comp=Z,1.1nm,0.7s
FINES    FINESS Array B    20.40   9   P         P          08 31 00.4 -0.3
         comp=Z,4.9nm,0.6s,baz=193,slow=9.1,SNR=13
         comp=Z,4.9nm,0.6s
FINES    FINESS Array B    20.40   9   P         P          08 31 00.7  0.0
FINES    FINESS Array B    20.40   9   P         P          08 31 00.7  0.0
FIA1     FINESS Array S    20.40   9   P         P          08 31 00.9 +0.1
EKA      Eskdalemuir Ar    20.42 321   P         P          08 31 01.0  0.0
         comp=Z,2.3nm,0.6s,baz=118,slow=11,SNR=5.4
         comp=Z,2.3nm,0.6s
BELG     Belogornoye       21.88  50   P         P          08 31 16.5 -0.2
         comp=Z,24nm,1.0s,baz=256,slow=6.8,SNR=8.1
         comp=Z,24nm,1.0s
BELG     Belogornoye       21.88  50deP          P          08 31 16.7  0.0
BELG                                   pmax      pmax
         comp=Z,4.0nm,1.0s
TAM      Tamanrasset       22.06 217             P          08 31 19.2 +0.1
TAM      Tamanrasset       22.06 217   P         P          08 31 19.2 +0.1
TAM                                    pmax      pmax
         comp=Z,150nm,0.2s
KLMR     Klimovskoe        22.91  25  eP         P          08 31 24.2 -3.4
KLMR                                   pmax      pmax
         comp=Z,32nm,1.1s
KIRV     Kirov             25.37  37   LR        LR         08 42 54.8
         comp=Z,170nm,19.5s,baz=9.4,slow=39
KIRV     Kirov             25.37  37⇓eP          P          08 31 49.8 -1.1
ARCES    ARCESS Array B    28.32   4   P         P          08 32 18.2 +0.9
         comp=Z,3.6nm,1.0s,baz=196,slow=8.3,SNR=4.7
ARCES                                  LR        LR         08 43 11.7
         comp=Z,186nm,18.0s,baz=30,slow=36
         comp=Z,3.6nm,1.0s
ARTI     Arti              29.05  46   LR        LR         08 44 46.5
         comp=Z,121nm,19.7s,baz=44,slow=38
ARTI     Arti              29.05  46   P         P          08 32 23.3 -0.7
ARTI                                   IAmb      IAmb       08 32 24.2
         comp=Z,8.2nm,0.8s
ARTI     Arti              29.05  46c iP         P          08 32 23.5 -0.5
ARTI                                   S         S          08 37 17.2 +2.7
ARTI                                   SS        SnSn       08 38 39.4 +1.2
ARTI                                   pmax      pmax
         comp=Z,8.0nm,0.8s
TORD     Torodi Ar. Bea    32.26 214   P         P          08 32 52.7 +0.1
         comp=Z,1.4nm,0.3s,baz=29,slow=8.5,SNR=1.3
         comp=Z,1.4nm,0.3s
HRA      Herat             34.06  88   P         P          08 33 09.0 +0.4
BORK     Borovoye          35.58  53   P         P          08 33 21.1  0.0
BORK                                   IAmb      IAmb       08 33 23.0
         comp=Z,4.2nm,0.8s
BORK     Borovoye          35.58  53⇓eP          P          08 33 20.8 -0.3
BORK                                   pmax      pmax
         comp=Z,4.0nm,0.7s
BVAR     Borovoye Array    35.62  53   P         P          08 33 20.5 -1.0
         comp=Z,2.8nm,0.7s,baz=284,slow=6.0,SNR=16
         comp=Z,2.8nm,0.7s
KK31     Karatay Array     37.20  70   P         P          08 33 34.7 -0.5
KK31     Karatay Array     37.20  70   P         P          08 33 34.7 -0.5
KK31                                   pmax      pmax
         comp=Z,2.0nm,0.9s
KKAR     Karatay Array     37.20  70   P         P          08 33 34.6 -0.5
KKAR     Karatay Array     37.20  70   P         P          08 33 34.6 -0.5
AAK      Ala-Archa         40.14  69⇓eP          P          08 34 00.4 +0.4
AAK                                    pmax      pmax
         comp=Z,1.0nm,1.0s
KURBB    Kurchatov Arra    40.90  56   P         P          08 34 03.3 -2.6
         comp=Z,0.6nm,0.6s,baz=282,slow=8.9,SNR=5.4
KURBB                                  LR        LR         08 54 17.0
         comp=Z,110nm,18.0s,baz=168,slow=41
         comp=Z,0.6nm,0.6s
DBIC     Dimbokro          40.93 219   P         P          08 34 07.0 +0.5
DBIC                                   IAmb      IAmb       08 34 48.6
         comp=Z,12nm,1.2s
DBIC     Dimbokro          40.93 219   P         P          08 34 07.0 +0.5
DBIC                                   pmax      pmax
         comp=Z,13nm,1.2s
KURK     Kurchatov         40.94  56⇑eP          P          08 34 06.5 +0.2
KURK                                   pmax      pmax
         comp=Z,9.0nm,2.5s
ZALV     Zalesovo Beam     44.07  50   P         P          08 34 31.3 -0.4
         comp=Z,6.5nm,0.7s,baz=281,slow=8.9,SNR=25
         comp=Z,6.5nm,0.7s
ZALV     Zalesovo Beam     44.07  50   P         P          08 34 31.4 -0.3
NRIK     Noril'sk          44.20  28   P         P          08 34 31.7 -0.8
         comp=Z,1.0nm,0.3s,baz=288,slow=10.0,SNR=2.3
         comp=Z,1.0nm,0.3s
MK31     Makanchi Array    44.23  61   P         P          08 34 32.7 -0.5
MK31     Makanchi Array    44.23  61⇑eP          P          08 34 32.5 -0.7
MKAR     Makanchi Array    44.23  61   P         P          08 34 32.9 -0.3
         comp=Z,2.9nm,0.6s,baz=281,slow=7.0,SNR=16
         comp=Z,2.9nm,0.6s
MKAR     Makanchi Array    44.23  61   P         P          08 34 33.2  0.0
DGZ      Jazzator, Alta    46.68  56⇑eP          P          08 34 52.6  0.0
DGZ                                    pmax      pmax
         comp=Z,4.0nm,0.9s
WMQ      Urumqi            48.82  63  eP         P          08 35 11.4 +2.2
WMQ                                    pP        sP         08 35 15.9 -0.9
WMQ                                    pmax      pmax
         comp=Z,14nm,0.9s
EVN      Everest           55.56  81   P         P          08 35 59.7 -0.5
EVN                                    IAmb      IAmb       08 36 00.2
         comp=Z,6.0nm,0.9s
TLY      Talaya            55.60  49   P         P          08 36 00.4 +1.0
TLY                                    IAmb      IAmb       08 36 01.1
         comp=Z,4.4nm,0.8s
TIXI     Tiksi             56.83  21   LR        LR         09 02 48.0
         comp=Z,78nm,19.0s,baz=43,slow=38
TIXI     Tiksi             56.83  21⇓eP          P          08 36 07.4 -0.5
TIXI                                   pmax      pmax
         comp=Z,1.0nm,1.0s
SONM     Songino Array     58.93  52   P         P          08 36 23.2  0.0
         comp=Z,3.2nm,0.8s,baz=290,slow=8.4,SNR=13
         comp=Z,3.2nm,0.8s
SONM     Songino Array     58.93  52   P         P          08 36 23.3 +0.1
YAK      Yakutsk           62.60  30   LR        LR         09 05 46.5
         comp=Z,54nm,21.2s,baz=262,slow=38
LZH      Lanzhou           63.37  64  eP         P          08 36 43.8  -10
LZH                                    pP        pP         08 36 47.9  -11
HHC      Hu-ho-hao-te      65.76  56  eP         P          08 37 09.6 +0.7
HHC                                    pmax      pmax
         comp=Z,13nm,0.6s
HHC                                    pmax      pmax
         comp=Z,96nm,5.2s
PZH      PanZhiHua         67.33  74   P         P          08 37 20.6 +1.4
C27K     Jago River        68.57 354   P         P          08 37 26.5 +0.4
C27K                                   IAmb      IAmb       08 37 52.3
         comp=Z,4.6nm,1.2s
F31M     Tsiigehtchic      69.57 349   P         P          08 37 32.6 +0.2
F31M                                   IAmb      IAmb       08 37 42.8
         comp=Z,3.5nm,0.6s
CMAR     Chiang Mai Arr    70.12  83   P         P          08 37 34.6 -1.9
         comp=Z,0.9nm,0.3s,baz=308,slow=8.0,SNR=4.9
         comp=Z,0.9nm,0.3s
CMAR     Chiang Mai Arr    70.12  83ceP          P          08 37 36.0 -0.5
CMAR                                   pmax      pmax
         comp=Z,1.0nm,0.3s
G31M     Satah River       70.13 349   P         P          08 37 36.0 +0.2
G31M                                   IAmb      IAmb       08 38 19.8
         comp=Z,5.7nm,1.5s
G29M     Pine Creek        70.63 351   P         P          08 37 39.4 +0.5
G29M                                   IAmb      IAmb       08 38 10.7
         comp=Z,6.7nm,1.4s
IMAR     Indian Mountai    72.78 357   P         P          08 37 51.8  0.0
DAWY     Dawson            73.53 351   P         P          08 37 56.7 +0.3
ILAR     Eielson Array     73.59 354   P         P          08 37 57.5 +0.8
ILAR     Eielson Array     73.59 354   P         P          08 37 57.5 +0.8
BCAR     Beaver Creek A    74.78 351   P         P          08 38 04.2 +0.5
NJ2      Nanjing           75.75  60  eP         P          08 38 08.4 -1.3
NJ2                                    pmax      pmax
         comp=Z,12nm,0.5s
PDAR     Pinedale Array    84.48 325   P         P          08 38 58.5 +1.5
         comp=Z,0.4nm,0.8s,baz=6.6,slow=3.3,SNR=2.0
         comp=Z,0.4nm,0.8s
TXAR     Lajitas Array     92.24 313   P         P          08 39 34.0 -0.2
         comp=Z,0.5nm,0.9s,baz=41,slow=4.0,SNR=3.7
         comp=Z,0.5nm,0.9s
TXAR     Lajitas Array     92.24 313   P         P          08 39 34.0 -0.2
CPUP     Villa Florida     97.98 242   LR        LR         09 26 53.8
         comp=Z,9.2nm,18.0s,baz=220,slow=37
ASAR     Alice Springs    123.12  94   PKP       PKPdf      08 45 19.0 -1.7
         comp=Z,0.5nm,0.7s,baz=320,slow=0.9,SNR=6.4
ASAR     Alice Springs    123.12  94             PKPdf      08 45 19.6 -1.1
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*TRN **02** 08:27:37.5, 10°.85N×62°.42W, h106km, MD3.4, North of the Paria peninsula.*
*FUNV **02** 08:27:38.5, 10°.82N×62°.45W, h23km, MW3.3*
ISC 02 08:27:32.5±2.5**, 10°.74N**±0°.09×**62°.34W**±0°.09**,**
h148km±23km**, n10,** σ**2s.26**/17**, Near coast of Venezuela**

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Code     Station Name         Δ°  AZ°     Phase ID          Time       Res
                                       Op        ISC        h  m  s    ISC
TRN      Trinidad (W)       0.93  95  eP         Pn         08 27 58.8 +2.3
TRN                                   eS         Sn         08 28 13.4 -1.3
GRGR     Grenville          1.54  26  eP         Pn         08 28 03.4 +1.0
GRGR                                  eS         Sn         08 28 22.9 -2.3
GRHS     Sauteurs           1.63  25  eP         Pn         08 28 04.2 +1.0
GRHS                                  eS         Sn         08 28 24.5 -2.4
GCMP     Grenada, Carri     1.96  27  eP         Pn         08 28 08.3 +1.4
GCMP                                  eS         Sn         08 28 32.6 -0.9
PCRV     Puerto La Cruz     2.32 256  eP         Pn         08 28 13.8 +2.4
PCRV                                  eS         Sn         08 28 38.4 -2.9
PCRV     Puerto La Cruz     2.32 256  eP         Pn         08 28 13.8 +2.4
PCRV                                  eS         Sn         08 28 40.6 -0.7
TACV     Tcata              4.64 263  eS         Sn         08 29 32.9 -1.8
CACV     CAICARA DEL OR     5.21 233  eP         Pn         08 28 47.1 -1.5
CACV                                  eS         Sn         08 29 39.4 -8.7
BENV     Beln               5.23 262  eP         Pn         08 28 52.4 +3.5
BENV                                  eS         Sn         08 29 47.0 -1.6
TEPV     Terepaima          6.78 264  eS         Sn         08 30 24.1 -1.7
```

RSNC 02 09:27:16.5±0.0**, 7°N**±2°×**7°3W**±°**, h120**km±2km**, M2.5, mb3.6,**
ML2.3, Northern Colombia

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Code     Station Name         Δ°  AZ°     Phase ID          Time       Res
                                       Op        ISC        h  m  s    ISC
BARC     Barichara          0.22  95   P         Pn         09 27 33.2 -0.3
BARC                                   S         Sn         09 27 46.5 +0.3
BRJC     Barrancabermej     0.50 317   P         Pn         09 27 33.6 -0.8
BRJC                                   S         Sn         09 27 47.4 -0.6
RUSC     La Rusia           0.78 156   P         Pn         09 27 36.6 -0.5
RUSC                                   S         Sn         09 27 51.9 -0.7
PAMC     Pamplona, Colo     1.00  44   P         Pn         09 27 39.2 +0.1
PAMC                                   S         Sn         09 27 56.2  0.0
PTBC     PUERTO BERRIO,     1.05 266   P         Pn         09 27 36.9 -2.2
PTBC                                   S         Sn         09 27 53.3 -2.8
SPBC     San Pablo de B     1.16 215   P         Pn         09 27 39.5 -0.8
SPBC                                   S         Sn         09 27 56.3 -2.0
OCAC     Ocana              1.62   3   P         Pn         09 27 44.8 -0.7
OCAC                                   S         Sn         09 28 08.1 +0.5
CHIC     Chingaza           2.00 190   P         Pn         09 27 49.4 -0.9
CHIC                                   S         Sn         09 28 16.0 -0.1
GUY2C    Guyana, Caldas     2.39 235   P         Pn         09 27 55.5 +0.1
GUY2C                                  S         Sn         09 28 27.0 +1.9
UREC     San Jos de Ur      2.40 298   P         Pn         09 27 53.4 -1.6
UREC                                   S         Sn         09 28 21.9 -2.7
VILC     Villavicencio,     2.50 187   P         Pn         09 27 55.4 -1.0
VILC                                   S         Sn         09 28 27.2 +0.1
RECRC    Villamaria, Ca     2.54 230   P         Pn         09 27 59.8 +2.4
RECRC                                  S         Sn         09 28 30.9 +2.2
CBOC     Ciudad Bolivar     2.70 254   P         Pn         09 27 58.2 -0.9
CBOC                                   S         Sn         09 28 31.5 -0.3
DBBC     Dabeiba            2.82 278   P         Pn         09 27 58.5 -2.0
DBBC                                   S         Sn         09 28 33.1 -1.3
ANIL     Santa Ana          2.90 224   P         Pn         09 28 03.0 +1.2
ANIL                                   S         Sn         09 28 39.0 +2.4
PRAC     Prado              3.23 207   P         Pn         09 28 04.5 -1.5
PRAC                                   S         Sn         09 28 43.1 -1.1
ORTC     Ortega, Tolima     3.25 215   P         Pn         09 28 04.7 -1.5
ORTC                                   S         Sn         09 28 44.4 -0.2
PLMC     San Jos del P      3.33 240   P         Pn         09 28 07.2  0.0
ARGC     Ariguani, Magd     3.33 346   P         Pn         09 28 07.2  0.0
ARGC                                   S         Sn         09 28 46.2 -0.2
URMC     La Uribe, Meta     3.48 196   P         Pn         09 28 09.0 -0.3
URMC                                   S         Sn         09 28 49.7 -0.3
SDV      Santo Domingo      3.55  50   P         Pn         09 28 10.8 +0.5
SDV                                    S         Sn         09 28 50.2 -1.7
YOTC     Yotoco, Valle      3.92 228   P         Pn         09 28 13.1 -2.1
MACC     Macarena, Meta     4.46 186   P         Pn         09 28 19.2 -3.0
MACC                                   S         Sn         09 29 10.2 -3.1
URIC     Uribia, Colomb     5.25  15   P         Pn         09 28 30.4 -2.4
         15nm,1.1s
URIC                                   S         Sn         09 29 31.8 -0.4
         15nm,1.1s
FLOC     Florencia          5.48 204   P         Pn         09 28 35.2 -0.8
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*UPP **02** 09:37:52.3±0.1, 67°.19N×20°.57E, h0km, ML2.5, Confirmed Induced event*
*HEL **02** 09:37:52.3±0.5, 67°.16N×20°.58E, h0km, ML1.2, Suspected explosion*
ISC 02 09:37:52.0±1.0**, 67°.18N**±0°.03×**20°.66E**±0°.03**, h0**km**, n14,**
σ**0s.78**/21**, Sweden**

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Code     Station Name         Δ°  AZ°     Phase ID          Time       Res
                                       Op        ISC        h  m  s    ISC
DUNU     Dundret            0.07 211   P         Pg         09 37 53.9 +0.6
         baz=39
DUNU                                   S         Sg         09 37 54.9 +0.8
MASU     Masugnsbyn         0.59  61   P         Pg         09 38 04.0 +0.6
MASU                                   S         Sg         09 38 12.2 +1.3
RATU     Laukkuluspa        0.77 328   P         Pg         09 38 06.2 -0.6
RATU                                   S         Sg         09 38 16.1 -0.5
KUA      Kurravaara         0.79 351   P         Pg         09 38 07.0 -0.2
ERTU     Ertsjaerv          0.87 135   PG        Pg         09 38 07.7 -1.0
ERTU                                   SB        Sg         09 38 19.7 -0.2
KLF      Kolari             1.29  86   PG        Pg         09 38 16.2 -0.5
         baz=264
KLF                                    MSG                  09 38 32.2
         comp=Z,0.7nm,0.2s
KLF                                    SG        Sg         09 38 32.8 -0.6
HEF      Hetta              1.68  41   MSG                  09 38 43.6
         comp=Z,1.2nm,0.2s
HEF                                    SN        Sg         09 38 46.5 +0.5
KALU     Kalix              1.71 140   SN        Sg         09 38 47.9 +1.0
TOF      Tornio             1.83 125   PG        Pb         09 38 25.7 -0.6
TOF                                    MSG                  09 38 47.2
         comp=Z,1.4nm,0.2s
TOF                                    SG        Sb         09 38 49.7 -0.1
KIF      Kilpisjarvi        1.84   2   MSG                  09 38 48.8
         comp=Z,2.3nm,0.2s
KIF                                    SG        Sg         09 38 52.1 +1.2
KTK1     Kautokeino         2.08  27   PG        Pb         09 38 29.9 -0.7
KTK1                                   SG        Sb         09 38 57.5 +0.5
RNF      Rovaniemi          2.19 103   SG        Sb         09 39 01.0 +1.0
RANF     Ranua              2.71 113   SG        Sb         09 39 15.7 +0.6
MSF      Maaselka           3.58 107   PG        Pb         09 38 55.8 -0.5
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*SOME **02** 09:40:57.3, 44°.65N×81°.92E, h15km*
*NNC **02** 09:40:58.3±1.5, 44°.71N×81°.88E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=22.4km s-min=4.2km az=118.0, Suspected Mining explosion.*
ISC 02 09:40:56.7±1.8**, 44°.60N**±0°.07×**82°.0E**±0°.1**, h0**km**, n13,**
σ**0s.51**/21**, 3C-2D, Northern Xinjiang**

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Code     Station Name         Δ°  AZ°     Phase ID          Time       Res
                                       Op        ISC        h  m  s    ISC
KTMS     Ketmen             1.67 227   P         Pn         09 41 27.6 +0.2
         4.9nm,0.1s
KTMS                                   S         Sn         09 41 49.2 -0.5
         26nm,0.5s
KTMS     Ketmen             1.67 227  eP         Pn         09 41 27.6 +0.2
         4.9nm,0.1s
KTMS                                  eS         Sn         09 41 49.2 -0.5
         26nm,0.5s
KNOS     Konyrlen           2.06 264   Pg        Pb         09 41 34.5 -0.6
         18nm,0.3s
KNOS                                   Lg        Lg         09 42 01.1
         18nm,0.3s
MK31     Makanchi Array     2.21   4   Pn        Pn         09 41 35.1 +0.5
         2.9nm,0.3s,baz=185,slow=14,SNR=155
MK31                                  ⇑Sn        Sn         09 42 02.5 -0.1
         1.0nm,0.2s,baz=191,slow=24,SNR=9.9
MAKZ     Makanchi           2.21 359  ⇑Pn        Pn         09 41 34.9 +0.2
         3.0nm,0.3s
MAKZ                                  ⇑Sn        Sn         09 42 02.5 -0.3
         6.6nm,0.3s
PDGK     Podgornoye         2.23 236  ⇓Pn        Pb         09 41 37.4 -0.6
         6.5nm,0.5s
PDGK                                  ⇓Sn        Sb         09 42 07.3 +1.1
         7.1nm,0.5s
SHLS     Shalkode           2.35 233   Pg        Pn         09 41 37.2 +0.5
         21nm,0.2s
SHLS                                   Lg        Lg         09 42 06.0
         22nm,0.2s
SHLS     Shalkode           2.35 233  eP         Pn         09 41 37.2 +0.5
         21nm,0.2s
SHLS                                  eS         Sn         09 42 06.0 -0.4
         22nm,0.2s
UZB      Uzynbulak          2.62 238   Pg        Pb         09 41 44.1 -0.5
         8.7nm,0.3s
UZB                                    Lg        Lg         09 42 17.9
         5.2nm,0.5s
UZB      Uzynbulak          2.62 238  eP         Pb         09 41 44.1 -0.5
         8.7nm,0.3s
UZB                                   eS         Sb         09 42 17.9 +0.5
         5.2nm,0.5s
KPKS     Kokpek             2.67 246   Pg        Pb         09 41 45.0 -0.5
         0.3nm,0.3s
KPKS                                   Lg        Lg         09 42 19.3
         22nm,0.4s
ARXS     Arharly            3.04 264  eP         Pb         09 41 51.3 -0.5
ARXS                                  eS         Sb         09 42 29.9 +0.4
SATY     Saty               3.04 241   Pg        Pb         09 41 51.6 -0.2
         4.7nm,0.3s
SATY                                   Lg        Lg         09 42 30.4
         9.6nm,0.2s
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*TIR **02** 09:58:23.1, 40°.47N×20°.81E, h17km±1km, Ml2.8/6*
*THE **02** 09:58:23.0, 40°.5N±0°.9×2°1E±°, h8km±3km, M2.7/6, MLh2.7/6*
*SKO **02** 09:58:24.7, 40°.50N×20°.75E, h17km, ML2.7*
*ATH **02** 09:58:24.2, 40°.46N×20°.88E, h11km±3km, ML2.6/13, Manual Solution by A.Andreou First location: 2019/12/02 09:59:41, This location: 2020/09/02 12:23:14 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
ISC 02 09:58:23.4±0.8**, 40°.48N**±0°.02×**20°.83E**±0°.02**, h13**km±6km**,**
n43, σ**0s.91**/68**, Greece-Albania border region**

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Code     Station Name         Δ°  AZ°     Phase ID          Time       Res
                                       Op        ISC        h  m  s    ISC
KBN      Korca              0.14 347   Pg        Pg         09 58 26.7 -0.4
KBN                                    Sg        Sg         09 58 29.3 -0.3
KBN                                    AML       AML        09 58 30.1
         29nm,0.3s
KBN      Korca              0.14 347   P         Pg         09 58 26.7 -0.4
KBN                                    S         Sg         09 58 29.2 -0.5
NEST     Nestorio           0.18 113   Pg        Pg         09 58 27.9 +0.3
NEST                                   Sg        Sg         09 58 30.8 +0.3
NEST                                   AML       AML        09 58 32.1
         25nm,0.3s
NEST     Nestorio           0.18 113   P         Pg         09 58 27.9 +0.3
NEST                                   S         Sb         09 58 31.6 -0.6
PENT     Pentalofos         0.37 141   P         Pg         09 58 30.7 -0.2
PENT                                   S         Sg         09 58 36.6 +0.6
PENT     Pentalofos         0.37 141   P         Pg         09 58 30.6 -0.4
PENT                                   S         Sg         09 58 36.0  0.0
OHR      Ohrid              0.63 358 i Pg        Pg         09 58 36.3 +0.6
OHR                                  i Sg        Sb         09 58 46.2 +1.2
OHR                                   eLg        Lg         09 58 46.9
         comp=E,996nm,0.6s
OHR                                   eLg        Lg         09 58 46.9
         comp=N,390nm,0.6s
KPRO     Kipourio           0.67 142   P         Pg         09 58 35.6 -0.8
KPRO                                   S         Sb         09 58 46.4 +0.2
KPRO     Kipourio           0.67 142   P         Pg         09 58 35.7 -0.8
KPRO                                   S         Sg         09 58 44.8 -0.4
KZN      Kozani             0.74 104   P         Pb         09 58 38.0 -0.2
KZN                                    S         Sn         09 58 49.4 -1.4
KZN      Kozani             0.74 104   P         Pb         09 58 38.2  0.0
KZN                                    S         Sb         09 58 47.4 -0.9
JAN      Janina             0.83 179   P         Pb         09 58 37.7 -2.0
JAN                                    S         Sb         09 58 49.9 -0.8
JAN      Janina             0.83 179   P         Pb         09 58 39.8 +0.2
JAN                                    S         Sg         09 58 50.8 +0.5
PRMD     Pramanda           0.97 168   P         Pb         09 58 41.1 -1.1
PRMD                                   S         Sg         09 58 55.3 +0.3
IGT      Igoumenitsa        1.02 202   Pg        Pb         09 58 42.3 -0.7
IGT                                    Sg        Sb         09 58 56.1 -0.3
IGT                                    AML       AML        09 59 00.7
         comp=N,0.6nm,0.4s
IGT      Igoumenitsa        1.02 202   P         Pb         09 58 42.3 -0.7
IGT                                    S         Sb         09 58 56.7 +0.3
```

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
IGT	**Igoumenitsa**	**1.02**	**202**	*i* Pg	**Pb**	**09 58 42.3**	**-0.7**
IGT				*i* Sg	**Sn**	**09 58 58.7**	**+1.0**
KEK	**Kerkira**	**1.10**	**226**	P	**Pg**	**09 58 45.6**	**+0.9**
TETR	**Tetrakomo, Epi**	**1.19**	**163**	P	**Pg**	**09 58 46.6**	**+0.3**
TETR				S	**Sn**	**09 59 01.4**	**-0.5**
PHP	**Peshkopia**	**1.23**	**346**	Pg	**Pn**	**09 58 46.1**	**-0.4**
PHP				Sg	**Sg**	**09 59 03.7**	**+0.4**
PHP				AML	AML	09 59 07.8	
	comp=N,0.4nm,0.3s						
PHP	**Peshkopia**	**1.23**	**346**	P	**Pn**	**09 58 46.1**	**-0.4**
GRG	**Griva**	**1.28**	**68**	*i* Pg	**Pg**	**09 58 47.8**	**-0.4**
GRG				*i* Sg	**Sg**	**09 59 08.8**	**+4.0**
GRG	**Griva**	**1.28**	**68**	P	**Pg**	**09 58 47.8**	**-0.4**
THL	**Klokotos Trika**	**1.29**	**135**	Pn	**Pb**	**09 58 47.4**	**-0.2**
THL				Sn	**Sg**	**09 59 05.6**	**+0.5**
THL	**Klokotos Trika**	**1.29**	**135**	P	**Pb**	**09 58 47.4**	**-0.2**
LIT	**Litokhoron**	**1.32**	**106**	*i* Pg	**Pg**	**09 58 48.4**	**-0.5**
LIT				*i* Sg	**Sg**	**09 59 09.0**	**+2.8**
LIT	**Litokhoron**	**1.32**	**106**	P	**Pg**	**09 58 48.8**	**-0.1**
LIT				S	**Sn**	**09 59 04.5**	**-0.7**
VAY	**Valandovo**	**1.56**	**57**	*i* Pn	**Pb**	**09 58 51.7**	**-0.5**
VAY				*i* Sn	**Sg**	**09 59 13.3**	**-0.4**
VAY				*e*Lg	Lg	09 59 16.2	
	comp=N,32nm,0.6s						
VAY				*e*Lg	Lg	09 59 17.6	
	comp=E,30nm,0.6s						
TSLK	**Tsoukalades, L**	**1.66**	**185**	P	**Pb**	**09 58 54.2**	**+0.3**
LKD2	**Lefkada island**	**1.70**	**185**	Pn	**Pb**	**09 58 55.4**	**+0.9**
LKD2				Sn	**Sg**	**09 59 18.3**	**+0.2**
LKD2				AML	AML	09 59 24.7	
	comp=E,0.5nm,0.5s						
LKD2	**Lefkada island**	**1.70**	**185**	P	**Pb**	**09 58 54.5**	**0.0**
KNT	**Kendrikon**	**1.71**	**66**	*i* Pn	**Pb**	**09 58 54.4**	**-0.3**
KNT	**Kendrikon**	**1.71**	**66**	P	**Pb**	**09 58 54.0**	**-0.7**
EVR	**Evrytania**	**1.74**	**154**	P	**Pb**	**09 58 55.0**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.78**	**145**	P	**Pb**	**09 58 55.0**	**-0.9**
DRAG	**Dragano-Lefkad**	**1.81**	**186**	P	**Pb**	**09 58 56.5**	**+0.1**
AGG	**Agios Georgios**	**1.86**	**141**	P	**Pb**	**09 58 56.3**	**-1.1**
EVGI	**Lefkada island**	**1.87**	**184**	P	**Pb**	**09 58 57.4**	**+0.1**
PVO	**Paravola**	**1.94**	**164**	P	**Pb**	**09 58 57.5**	**-1.2**
PLG	**Polygyros**	**2.00**	**92**	P	**Pb**	**09 58 58.5**	**-1.1**
FSK	**Fiskardo**	**2.03**	**186**	P	**Pb**	**09 58 59.2**	**-1.0**
ANX	**Ano Chora**	**2.07**	**156**	P	**Pn**	**09 58 59.1**	**+1.2**
SGRT	**San Giovanni R**	**4.05**	**290**	Pn	**Pn**	**09 59 25.3**	**+0.2**

TEH ***02*** *10:02:24.0, 27°.69N×57°.39E, h8^{km}±40^{km}*

DSN ***02*** *10:02:25.8±2.4, 27°.60N×57°.58E, h15^{km}, ML2.7/6, Error ellipse: s-maj=60.8km s-min=15.2km az=136.0*

ISC 02 10:02:25.4±1.2**, 27°.66N**±0°.05×**57°.46E**±0°.07**, h25**^{km}**, n13, σ1^{s}.56**/16**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	**0.36**	**37**	Pg	**Pb**	**10 02 32.4**	**-1.1**
GENO	**Geno**	**1.17**	**258**	Pg	**Pb**	**10 02 46.6**	**-0.4**
GENO				Sg	**Sb**	**10 03 02.6**	**+0.7**
BNDS	**Bandar-Abbas**	**1.17**	**258**	Pg	**Pb**	**10 02 46.7**	**-0.3**
KBAM	**BAM**	**1.71**	**31**	Pg	**Pb**	**10 02 56.3**	**0.0**
SHME	**Shamm**	**1.98**	**217**	P	**Pb**	**10 02 59.4**	**-1.5**
SHME				S	**Sb**	**10 03 24.8**	**-0.3**
BANOM	**Banah**	**2.01**	**211**	P	**Pb**	**10 02 59.3**	**-2.1**
BANOM				S	**Sb**	**10 03 25.4**	**-0.6**
NGRK	**Negar Kerman**	**2.08**	**342**	Pn	**Pb**	**10 03 01.8**	**-0.9**
KRBR	**Kerman**	**2.40**	**345**	Pn	**Pb**	**10 03 06.8**	**-1.3**
MSFE	**Esma-Masafi**	**2.56**	**207**	P	**Pn**	**10 03 07.1**	**+1.6**
MDH	**Madha**	**2.57**	**204**	P	**Pn**	**10 03 04.5**	**-0.9**
KHGB	**Koh Gabri**	**2.84**	**343**	Pn	**Pb**	**10 03 13.5**	**-2.1**
HATD	**Hatta, Dubai**	**3.06**	**203**	P	**Pn**	**10 03 15.1**	**+2.9**
ASHO	**Ashiyiah**	**3.22**	**203**	P	**Pn**	**10 03 16.4**	**+2.0**

VIE ***02*** *11:02:38.5±0.4, 48°.79N×10°.05E, h0^{km}, mb2.2/8, ml2.6/9, Error ellipse: s-maj=3.8km s-min=2.0km az=137.0   33 km W of Noerdlingen Suspected Mining explosion.*

ISC 02 11:02:39.3±1.3**, 48°.78N**±0°.04×**10°.16E**±0°.08**, h0**^{km}**, n11, σ0^{s}.85**/20**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RETA	**Reutte**	**1.36**	**162**	Pg	**Pb**	**11 03 05.6**	**0.0**
	1.9nm,0.1s,SNR=5.7						
RETA				*e*Sg	**Sn**	**11 03 24.6**	**+0.3**
	13nm,0.3s,SNR=5.4						
DAVA	**Damuels**	**1.51**	**187**	*e*Pg	**Pn**	**11 03 06.7**	**-1.0**
	0.1nm,0.1s,SNR=6.8						
DAVA				*e*Sg	**Sn**	**11 03 29.1**	**+1.0**
	25nm,0.4s,SNR=6.6						
MOTA	**Moosalm**	**1.57**	**156**	*i* Pn	**Pn**	**11 03 07.4**	**-1.1**
	0.6nm,0.1s						
MOTA				*e*Pg	**Pg**	**11 03 09.2**	**-0.1**
	1.7nm,0.1s,SNR=8.1						
MOTA				*e*Sg	**Sg**	**11 03 31.0**	**+1.3**
	24nm,0.4s,SNR=8.5						
SQTA	**Sankt Quirin**	**1.71**	**155**	*i* Pg	**Pg**	**11 03 12.0**	**-0.1**
	1.1nm,0.1s						
WATA	**Walderalm**	**1.73**	**146**	*e*Pn	**Pn**	**11 03 09.9**	**-0.8**
	0.9nm,0.1s,SNR=4.3						
FETA	**Feichten**	**1.80**	**168**	*e*Pn	**Pn**	**11 03 11.2**	**-0.6**
	0.2nm,0.1s,SNR=5.8						
FETA				*e*Sn	**Sn**	**11 03 35.5**	**+0.1**
	1.7nm,0.2s,SNR=5.0						
WTTA	**Wattenberg**	**1.81**	**146**	*e*Pn	**Pn**	**11 03 11.7**	**-0.2**
	1.2nm,0.3s,SNR=5.2						
WTTA				*e*Sg	**Sg**	**11 03 38.4**	**+0.8**
	35nm,0.5s,SNR=10						
BIOA	**Bad Ischl, Aus**	**2.57**	**114**	*e*Pg	**Pg**	**11 03 28.7**	**+0.2**
	2.6nm,0.2s,SNR=4.3						
MOA	**Molln**	**2.90**	**107**	*e*Pn	**Pn**	**11 03 27.5**	**+0.8**
	0.5nm,0.3s,SNR=5.1						
MOA				*e*Pg	**Pg**	**11 03 34.3**	**-0.5**
	2.3nm,0.1s						
CLL	**Collm**	**3.12**	**35**	*i* Pn	**Pn**	**11 03 28.6**	**-1.1**
CLL				*e*Pg	**Pg**	**11 03 40.0**	**+0.9**
CLL				*e*Sg	**Sg**	**11 04 20.0**	**+0.5**
	comp=Z,10.0nm,0.5s						
KRUC	**Moravsky**	**4.12**	**84**	*e*SN	**Sg**	**11 04 50.1**	**-1.5**

RSNC 02 11:12:26.0±0.0**, 13°N**±3°×**8°0W**±°**, h50**^{km}±9^{km}**, M3.0, mb4.5, ML3.0, 1D, Caribbean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RNCC	**Cayo Roncador,**	**0.54**	**355**	P	Pn	11 12 39.0	+1.3
RNCC				S	Sn	11 12 50.2	+4.1
PRVC	**Isla de Provid**	**1.33**	**285**	P	Pn	11 12 47.7	-0.5
PRVC				S	Sn	11 13 05.0	+0.2
SAIC	**Isla e San And**	**1.71**	**253**	P	Pn	11 12 52.1	-1.2
SAIC				S	Sn	11 13 13.3	-0.7
LCBC	**Los crdobas,**	**5.50**	**139**	P	Pn	11 13 42.3	-3.1
	87nm,1.3s						
MTDJ	**Mount Denham**	**5.69**	**25**	*e*P	Pn	11 13 51.5	+3.4
MTDJ	**Mount Denham**	**5.69**	**25**	P	Pn	11 13 50.9	+2.8
MTDJ				S	Sn	11 14 53.7	+1.4
LCCY	**Blossom Villag**	**6.59**	**360**	*e*P	Pn	11 14 04.3	+4.0
CBCY	**The Bluff, Cay**	**6.67**	**2**	⇓*e*P	Pn	11 14 04.9	+3.5
LMGC	**Las Mercedes**	**7.57**	**22**	*e*P	Pn	11 14 16.7	+2.9
MARVS	**Santiago de Cu**	**7.98**	**29**	*e*P	Pn	11 14 24.0	+4.6
RCC	**Rio Carpintero**	**8.07**	**30**	*e*P	Pn	11 14 23.8	+3.1
CCCC	**Cccc**	**8.40**	**15**	*e*P	Pn	11 14 31.4	+6.2
PINC	**Pinares de May**	**8.45**	**28**	*e*P	Pn	11 14 29.2	+3.4
QMBU	**Quimbuelo**	**8.70**	**34**	*e*P	Pn	11 14 32.6	+3.2
MGV	**Manicaragua**	**9.02**	**0**	*e*P	Pn	11 14 36.3	+2.7

IDC 02 11:15:29.6±1.6**, 4°.50N**×**122°.93E, h0**^{km}**, mb3.7**/5**, mbtmp3.8**/5**, MS3.3**/2**, Error ellipse: s-maj=159.8km s-min=21.4km az=66.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.61**	**173**	P	P	11 20 32.2	+0.1
	1.6nm,0.9s,baz=354,slow=10,SNR=1.6						
FITZ				LR	LR	11 30 21.3	
	comp=Z,51nm,21.8s,baz=259,slow=39						
	1.6nm,0.9s						
WRA	**Warramunga Arr**	**26.75**	**156**	P	P	11 21 11.4	+0.2
	0.5nm,0.3s,baz=335,slow=9.9,SNR=15						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**29.97**	**160**	P	P	11 21 39.6	-0.3
	0.3nm,0.4s,baz=336,slow=8.7,SNR=10						
	0.3nm,0.4s						
JHJ	**Hachijo jima 2**	**32.53**	**27**	LR	LR	11 34 38.9	
	comp=Z,69nm,20.6s,baz=100,slow=35						
MKAR	**Makanchi Array**	**54.81**	**327**	P	P	11 25 00.5	-1.0
	0.4nm,0.6s,baz=122,slow=8.0,SNR=2.7						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**59.09**	**329**	P	P	11 25 32.5	+0.8
	1.0nm,0.2s,baz=144,slow=7.1,SNR=1.8						
	1.0nm,0.2s						

NNC ***02*** *11:27:44.6±2.3, 50°.01N×76°.19E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=20.4km s-min=14.2km az=12.0, Suspected Mining explosion.*

IDC ***02*** *11:27:46.1±1.0, 50°.15N×76°.21E, h0^{km}, mbtmp3.0/3, ML2.3/3, Error ellipse: s-maj=14.9km s-min=7.9km az=31.0*

ISC 02 11:27:44.9±1.1**, 50°.05N**±0°.07×**76°.15E**±0°.06**, h0**^{km}**, n10, σ1^{s}.14**/17**, 4C-8D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**1.63**	**69**	Pn	**Pn**	**11 28 14.9**	**+0.1**
	1.2nm,0.3s,baz=255,slow=15,SNR=16						
KURBB				Lg	Lg	11 28 36.0	
	1.1nm,0.3s,baz=258,slow=28,SNR=8.7						
KURBB	**Kurchatov Arra**	**1.63**	**69**	⇓Pn	**Pn**	**11 28 14.8**	**+0.1**
	5.5nm,0.5s						
KURBB				⇓Sn	**Sg**	**11 28 37.9**	**+0.8**
	32nm,0.5s						
KURK	**Kurchatov**	**1.71**	**66**	⇓Pn	**Pn**	**11 28 15.4**	**-0.5**
	2.2nm,0.3s						
KURK				⇑Sn	**Sn**	**11 28 38.8**	**+0.3**
	5.9nm,0.4s						
BVA0	**Borovoye Array**	**4.67**	**312**	⇑Pn	**Pn**	**11 28 57.1**	**+0.5**
	3.8nm,1.2s,baz=277,slow=28,SNR=18						
BVA0				⇑Sn	**Sn**	**11 29 52.7**	**+1.3**
	1.6nm,0.7s,baz=0.3,slow=33,SNR=3.9						
BVA0				⇓Lg	Lg	11 30 15.2	
	5.3nm,1.1s,baz=134,slow=24,SNR=4.4						
BVAR	**Borovoye Array**	**4.67**	**312**	Pn	**Pn**	**11 28 57.2**	**+0.7**
	0.1nm,0.3s,baz=123,slow=13,SNR=12						
BVAR				Sn	**Sn**	**11 29 49.3**	**-2.1**
	baz=121,slow=25,SNR=2.4						
BVAR				Lg	Lg	11 30 12.9	
	0.1nm,0.3s,baz=121,slow=26,SNR=5.1						
	0.7nm,0.3s						
MAKZ	**Makanchi**	**5.06**	**128**	⇓Sn	**Sn**	**11 30 00.8**	**-0.2**
	2.4nm,0.7s						
MAKZ				⇑Lg	Lg	11 30 21.9	
	6.8nm,1.1s						
MK31	**Makanchi Array**	**5.23**	**126**	⇓Pg	**Pb**	**11 29 16.8**	**-0.3**
	0.2nm,0.2s,baz=319,slow=15,SNR=8.7						
MK31				⇓Sn	**Sn**	**11 30 03.9**	**-1.3**
	0.2nm,0.2s,baz=262,slow=51,SNR=4.3						
MK31				⇓Lg	Lg	11 30 26.0	
	1.3nm,0.5s,baz=321,slow=27,SNR=4.1						
MKAR	**Makanchi Array**	**5.23**	**126**	Pn	**Pn**	**11 29 05.4**	**+1.1**
	0.1nm,0.3s,baz=312,slow=2.3,SNR=13						
MKAR				Pg	**Pb**	**11 29 16.1**	**-1.0**
	0.3nm,0.3s,baz=306,slow=12,SNR=8.6						
MKAR				Sn	**Sn**	**11 30 06.7**	**+1.5**
	0.6nm,0.3s,baz=306,slow=26,SNR=7.2						
MKAR				Lg	Lg	11 30 25.3	
	0.7nm,0.3s,baz=316,slow=25,SNR=7.0						
	0.5nm,0.5s						
I46RU	**ZALESOVO INFRA**	**6.62**	**51**	I	I	12 07 00.0	
	baz=236,slow=332,SNR=1.1						
ZALV	**Zalesovo Beam**	**6.62**	**51**	Pn	**Pn**	**11 29 24.2**	**+0.9**
	0.6nm,0.3s,baz=243,slow=15,SNR=11						
ZALV				Sn	**Sn**	**11 30 37.6**	**-1.8**
	0.3nm,0.3s,baz=239,slow=22,SNR=5.5						
ZALV				Lg	Lg	11 31 12.9	
	0.1nm,0.3s,baz=237,slow=25,SNR=1.7						
	1.1nm,0.3s						

DJA ***02*** *11:36:59.0±0.2, 2°N±3°×12°6E±°, h10^{km}, M4.2/13, mB5.0/2, mb4.4/5, MLv4.1/13, Mw(mB)4.3/2*

NEIC ***02*** *11:37:01.9±2.3, 1°.50N±0°.08×126°.43E±0°.06, h35^{km}±2^{km}, mb4.3/17, Error ellipse: s-maj=14.3km s-min=8.8km az=21.0*

IDC ***02*** *11:37:03.3±3.2, 1°.50N×126°.20E, h64^{km}±29^{km}, mb3.7/13, mbtmp3.9/15, ML3.8/2, Error ellipse: s-maj=32.5km s-min=10.5km az=74.0*

ISC 02 11:37:01.7±0.5**, 1°.61N**±0°.06×**126°.37E**±0°.05**, h47**^{km}**, n50, σ1^{s}.29**/51**, mb4.2**/19**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.29**	**130**		**Pn**	**11 37 22.6**	**-0.9**
TNTI	**Ternate**	**1.29**	**130**	P	**Pn**	**11 37 22.4**	**-1.0**
GAMI	**Galela, Maluku**	**1.43**	**81**	P	**Pn**	**11 37 24.5**	**-0.8**
GAMI				S	**Sn**	**11 37 44.4**	**+1.4**
MNI	**Manado**	**1.54**	**264**	P	**Pn**	**11 37 25.4**	**-1.4**
MNI				S	**Sn**	**11 37 45.4**	**-0.3**
SGSI	**Sangihe**	**2.23**	**338**	P	**Pn**	**11 37 33.3**	**-3.0**
GTOI	**Gorontalo**	**3.50**	**254**	P	**Pn**	**11 37 54.1**	**+0.4**
SANI	**Sanana**	**3.65**	**186**	P	**Pn**	**11 37 56.0**	**+0.2**
LUWI	**Luwuk**	**4.46**	**234**		**Pn**	**11 38 07.5**	**+0.6**
LUWI	**Luwuk**	**4.46**	**234**	P	**Pn**	**11 38 07.2**	**+0.3**
MRSI	**Marisa**	**4.57**	**256**	P	**Pn**	**11 38 10.1**	**+1.7**
KRAI	**Karang Ratu**	**5.29**	**158**	P	**Pn**	**11 38 21.3**	**+2.9**
	0.2nm13nm,0.6s						
APSI	**Ampana**	**5.35**	**242**	P	**Pn**	**11 38 21.4**	**+2.3**
MPSI	**Mapaga**	**6.60**	**259**	P	**Pn**	**11 38 37.7**	**+1.5**
FAKI	**Fak Fak**	**7.40**	**127**		**Pn**	**11 38 46.0**	**-1.3**
MYLDM	**Lahad Datu**	**8.62**	**294**		**Pn**	**11 39 06.5**	**+2.4**
MYLDM	**Lahad Datu**	**8.62**	**294**	P	**Pn**	**11 39 04.6**	**+0.6**
	40nm,0.8s						
BNSI	**Bone**	**8.65**	**226**	P	**Pn**	**11 39 05.3**	**+0.9**
KAPI	**Kappang**	**9.33**	**225**	P	**Pn**	**11 39 13.8**	**+0.1**
	0.6nm,0.3s,baz=36,slow=19,SNR=1.4						
	4.6nm,0.6s						
EDFI	**Ende, Flores**	**11.30**	**204**	P	**Pn**	**11 39 42.9**	**+2.1**
MTN	**Manton Dam**	**15.12**	**162**	Pn	**Pn**	**11 40 32.2**	**-0.1**
KNRA	**Kununurra**	**17.34**	**172**		**Pn**	**11 40 59.9**	**-0.6**
KNRA				IAmb	IAmb	11 41 22.5	
	comp=Z,13nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.60**	**182**	P	**P**	**11 41 25.1**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=9.4,slow=8.1,SNR=12						
	comp=Z,1.9nm,0.5s						
TPUB	**Ta-pu**	**22.27**	**346**	P	**P**	**11 41 54.3**	**-0.7**
WB0	**Warramunga Arr**	**22.65**	**160**	P	**P**	**11 41 58.4**	**-0.8**
WB0				IAmb	IAmb	11 42 00.7	
	comp=Z,9.8nm,0.8s						
COEN	**Coen**	**22.73**	**133**	P	**P**	**11 41 59.0**	**-0.9**
COEN				IAmb	IAmb	11 42 08.5	
	comp=Z,9.0nm,1.3s						
WRAB	**Tennant Creek**	**22.79**	**160**	P	**P**	**11 41 59.8**	**-0.8**
WRAB				IAmb	IAmb	11 42 01.8	
	comp=Z,7.8nm,0.6s						
WRA	**Warramunga Arr**	**22.80**	**160**	P	**P**	**11 41 59.4**	**-1.2**
	comp=Z,7.4nm,0.5s,baz=338,slow=11,SNR=78						
WRA				PcP	**PcP**	**11 45 51.6**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=332,slow=2.2,SNR=6.6						
WRA				S	**S**	**11 46 05.5**	**-1.1**
	comp=Z,0.9nm,1.0s,baz=334,slow=21,SNR=4.2						
	comp=Z,7.4nm,0.5s						
WRA	**Warramunga Arr**	**22.80**	**160**	P	**P**	**11 41 58.4**	**-2.3**
WR8	**Warramunga Arr**	**22.86**	**160**	P	**P**	**11 42 00.3**	**-1.1**
WR8				IAmb	IAmb	11 42 06.9	
	comp=Z,7.2nm,0.6s						
MBWA	**Marble Bar**	**23.54**	**196**	P	**P**	**11 42 07.0**	**-0.9**
MBWA				IAmb	IAmb	11 42 08.0	
	comp=Z,5.8nm,0.8s						
AS31	**Alice Springs**	**26.17**	**164**	P	**P**	**11 42 31.8**	**-0.1**
ASAR	**Alice Springs**	**26.17**	**164**	P	**P**	**11 42 31.9**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=344,slow=7.5,SNR=48						
ASAR				PcP	**PcP**	**11 45 59.1**	**+0.8**
	comp=Z,1.3nm,0.5s,baz=348,slow=2.1,SNR=18						
	comp=Z,1.6nm,0.5s						
CMAR	**Chiang Mai Arr**	**31.69**	**304**	P	**P**	**11 43 21.9**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=107,slow=12,SNR=1.8						
	comp=Z,0.4nm,0.3s						
BBOO	**Buckleboo**	**35.44**	**166**	P	**P**	**11 43 53.0**	**-0.5**
STKA	**Stephens Creek**	**36.30**	**158**	P	**P**	**11 44 00.5**	**-0.5**
	comp=Z,2.3nm,0.6s,baz=331,slow=10,SNR=4.5						
	comp=Z,2.3nm,0.6s						
STKA	**Stephens Creek**	**36.30**	**158**	IAmb	IAmb	11 44 03.3	
	comp=Z,91nm,1.5s						
MJAR	**Matsushiro Arr**	**36.44**	**16**	P	**P**	**11 44 04.4**	**+2.3**
	comp=Z,1.3nm,0.6s,baz=185,slow=8.6,SNR=2.8						
	comp=Z,1.3nm,0.6s						
MJAR	**Matsushiro Arr**	**36.44**	**16**	IAmb	IAmb	11 44 30.6	
	comp=Z,10nm,1.4s						
HILR	**Hailar Array B**	**48.10**	**354**	P	**P**	**11 45 37.4**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=200,slow=12,SNR=1.4						
	comp=Z,0.2nm,0.3s						
SONM	**Songino Array**	**49.19**	**342**	P	**P**	**11 45 44.7**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=148,slow=8.5,SNR=2.8						
	comp=Z,0.4nm,0.6s						
SONM	**Songino Array**	**49.19**	**342**	IAmb	IAmb	11 45 49.1	
	comp=Z,1.8nm,1.4s						
PETK	**Petropavlovsk-**	**57.52**	**22**	P	**P**	**11 46 46.9**	**+0.7**
	comp=Z,2.5nm,0.9s,baz=166,slow=5.9,SNR=5.7						
	comp=Z,2.5nm,0.9s						
MKAR	**Makanchi Array**	**59.10**	**326**	P	**P**	**11 46 55.9**	**-1.6**
	comp=Z,1.2nm,0.6s,baz=120,slow=8.5,SNR=13						
	comp=Z,1.2nm,0.6s						
MAKZ	**Makanchi**	**59.28**	**326**	P	**P**	**11 46 58.8**	**+0.1**
ZALV	**Zalesovo Beam**	**62.31**	**334**	P	**P**	**11 47 19.2**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=126,slow=7.3,SNR=2.6						
	comp=Z,0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**63.33**	**328**	P	**P**	**11 47 25.1**	**-0.8**
	comp=Z,1.2nm,0.5s,baz=129,slow=6.4,SNR=13						
	comp=Z,1.2nm,0.5s						
KURK	**Kurchatov**	**63.34**	**328**	P	**P**	**11 47 25.5**	**-0.5**
KURK				IAmb	IAmb	11 47 31.2	
	comp=Z,3.3nm,0.6s						
BVAR	**Borovoye Array**	**68.90**	**328**	P	**P**	**11 48 01.0**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=134,slow=6.2,SNR=2.1						
	comp=Z,0.3nm,0.3s						
VNDA	**Vanda**	**81.38**	**173**	P	**P**	**11 49 10.6**	**-2.4**
	comp=Z,0.5nm,0.5s,baz=2.3,slow=4.9,SNR=5.7						
	comp=Z,0.5nm,0.5s						
VNDA	**Vanda**	**81.38**	**173**	IAmb	IAmb	11 49 20.9	
	comp=Z,5.0nm,1.5s						

ROM 02 11:37:57.7±0.2**, 37°.769N**±0°.009×**14°.18E**±0°.01**, h19**^{km}±1^{km}**, ML2.4**/20**, 3C, Error ellipse: s-maj=1.0km s-min=0.6km az=209.0, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETRA	**Petralia Sopra**	**0.08**	**323**	⇑P	Pg	11 38 01.0	-0.5
PETRA				S	Sg	11 38 04.3	+0.1
PETRA				AML	AML		
	comp=E,4375µm,0.8s						
PETRA				AML	AML		
	comp=N,3075µm,0.4s						
PETRA				AML	AML		
	comp=E,4375µm,1.2s						
PETRA				AML	AML		
	comp=N,3075µm,1.6s						
PETRA				AML	AML		
	comp=N,2243µm,0.2s						
PETRA				AML	AML		
	comp=E,4223µm,0.5s						
RESU	**Resuttano**	**0.15**	**218**	P	Pg	11 38 01.7	-0.5
RESU				S	Sg	11 38 05.5	+0.4
RESU				AML	AML		
	comp=E,4510µm,0.4s						
RESU				AML	AML		
	comp=N,6580µm,0.5s						
RESU				AML	AML		
	comp=N,6584µm,0.5s						
RESU				AML	AML		
	comp=E,4512µm,0.4s						
CSLB	**Castelbuono**	**0.19**	**331**	P	Pg	11 38 02.4	-0.3
CSLB				S	Sg	11 38 06.9	+0.8
CSLB				AML	AML		
	comp=N,466µm,0.8s						
CSLB				AML	AML		
	comp=E,405µm,0.4s						
CSLB				AML	AML		
	comp=N,465µm,0.8s						
CSLB				AML	AML		
	comp=N,401µm,0.4s						
CSLB				AML	AML		
	comp=E,405µm,0.4s						
PLLN	**Pollina**	**0.22**	**353**	⇑P	Pg	11 38 03.2	0.0
PLLN				S	Sg	11 38 08.0	+1.1
PLLN				AML	AML		
	comp=E,1646µm,0.8s						
PLLN				AML	AML		
	comp=E,1646µm,1.2s						
PLLN				AML	AML		
	comp=N,2115µm,0.4s						
PLLN				AML	AML		
	comp=E,1586µm,0.3s						
PLLN				AML	AML		
	comp=N,2113µm,0.4s						
GIB	**Gibilmanna**	**0.25**	**332**	P	Pb	11 38 03.3	-0.2
GIB				S	Sg	11 38 08.8	+1.3
GIB				AML	AML		
	comp=N,1705µm,0.5s						
GIB				AML	AML		
	comp=E,1270µm,0.4s						
GIB				AML	AML		
	comp=E,1271µm,0.4s						
GIB				AML	AML		
	comp=N,1707µm,0.5s						
CAGR	**Agira**	**0.30**	**120**	AML	AML		
	comp=E,842µm,0.4s						
CAGR				AML	AML		
	comp=N,564µm,0.8s						
CAGR				AML	AML		
	comp=N,660µm,0.4s						
GALF	**Gagliano Caste**	**0.32**	**100**	P	Pb	11 38 05.0	+0.3
GALF				AML	AML		
	comp=N,762µm,0.7s						
GALF				AML	AML		
	comp=E,1185µm,0.6s						
GALF				AML	AML		
	comp=N,762µm,0.7s						
ALJA	**Alia**	**0.34**	**267**	P	Pb	11 38 05.3	+0.2
ALJA				AML	AML		
	comp=N,423µm,0.4s						
CPTP	**Pietraperzia**	**0.36**	**182**	P	Pb	11 38 06.2	+0.5
CMDO	**Montedoro**	**0.41**	**223**	P	Pn	11 38 08.0	-0.6
MSFR	**San Fratello**	**0.42**	**51**	⇑P	Pg	11 38 06.4	-0.1
MSFR				AML	AML		
	comp=E,132µm,1.0s						
MSFR				AML	AML		
	comp=N,160µm,0.8s						
MSFR				AML	AML		
	comp=N,160µm,1.2s						
MSFR				AML	AML		
	comp=N,121µm,0.7s						
MSFR				AML	AML		
	comp=E,104µm,0.3s						
SOLUN	**Solunto**	**0.60**	**303**	P	Pb	11 38 09.2	-0.3
SOLUN				AML	AML		
	comp=E,277µm,1.1s						
SOLUN				AML	AML		
	comp=N,236µm,0.6s						
SOLUN				AML	AML		
	comp=E,277µm,0.9s						
SOLUN				AML	AML		
	comp=E,271µm,0.9s						
SOLUN				AML	AML		
	comp=N,236µm,0.6s						
MUCR	**Ucria**	**0.62**	**63**	P	Pb	11 38 09.7	-0.2
MUCR				AML	AML		
	comp=E,188µm,0.4s						
MUCR				AML	AML		
	comp=N,270µm,1.6s						
MUCR				AML	AML		
	comp=N,270µm,0.4s						
MUCR				AML	AML		
	comp=E,188µm,1.6s						
MUCR				AML	AML		
	comp=E,189µm,0.4s						
MUCR				AML	AML		
	comp=N,238µm,0.4s						
IACL	**Alicudi**	**0.78**	**11**	P	Pb	11 38 12.6	-0.1
IACL				AML	AML		
	comp=N,294µm,0.3s						
IACL				AML	AML		
	comp=E,280µm,0.4s						
IACL				AML	AML		
	comp=E,280µm,1.6s						
IACL				AML	AML		
	comp=N,294µm,0.3s						
IACL				AML	AML		
	comp=E,279µm,0.4s						
IFIL	**Filicudi I Eol**	**0.85**	**21**	P	Pb	11 38 13.8	-0.1
IFIL				AML	AML		
	comp=E,938µm,0.6s						
IFIL				AML	AML		
	comp=N,360µm,0.7s						
IFIL				AML	AML		
	comp=E,938µm,1.4s						

IFIL				AML	AML		
	comp=N,310µm,0.3s						
IFIL				AML	AML		
	comp=E,888µm,0.4s						
SSY	**Sortino**	**0.94**	**130**	P	Pb	11 38 14.9	-0.5
SSY				AML	AML		
	comp=E,305µm,0.3s						
SSY				AML	AML		
	comp=N,660µm,0.3s						
SSY				AML	AML		
	comp=E,305µm,0.3s						
SSY				AML	AML		
	comp=N,661µm,0.3s						

ROM 02 11:38:53.1±0.2**,37°.764N**±0°.008×**14°.19E**±0°.01**,h17**^{km}±2^{km}**,**
ML2.4/30**,3C,Error ellipse: s-maj=1.0km s-min=0.3km**
az=61.0,Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETRA	**Petralia Sopra**	**0.09**	**322**	⇑P	Pg	11 38 56.2	-0.6
PETRA				S	Sg	11 38 59.4	+0.2
PETRA				AML	AML		
	comp=N,4520µm,0.4s						
PETRA				AML	AML		
	comp=E,5710µm,0.8s						
PETRA				AML	AML		
	comp=N,3127µm,0.3s						
PETRA				AML	AML		
	comp=E,4760µm,0.4s						
RESU	**Resuttano**	**0.15**	**221**	P	Pg	11 38 56.9	-0.5
RESU				S	Sb	11 39 01.2	+0.7
RESU				AML	AML		
	comp=E,5645µm,0.5s						
RESU				AML	AML		
	comp=N,9025µm,0.5s						
RESU				AML	AML		
	comp=N,9025µm,1.5s						
RESU				AML	AML		
	comp=N,9027µm,0.5s						
RESU				AML	AML		
	comp=E,5646µm,0.5s						
CSLB	**Castelbuono**	**0.20**	**330**	P	Pg	11 38 57.5	-0.5
CSLB				S	Sb	11 39 02.1	+0.3
CSLB				AML	AML		
	comp=N,638µm,0.8s						
CSLB				AML	AML		
	comp=E,502µm,0.4s						
CSLB				AML	AML		
	comp=N,638µm,1.2s						
CSLB				AML	AML		
	comp=N,611µm,0.2s						
CSLB				AML	AML		
	comp=E,501µm,0.4s						
PLLN	**Pollina**	**0.23**	**352**	P	Pg	11 38 58.4	-0.2
PLLN				S	Sb	11 39 03.4	+0.6
PLLN				AML	AML		
	comp=N,2565µm,0.4s						
PLLN				AML	AML		
	comp=E,1835µm,0.5s						
PLLN				AML	AML		
	comp=N,2565µm,1.6s						
PLLN				AML	AML		
	comp=E,1835µm,1.5s						
PLLN				AML	AML		
	comp=E,1834µm,0.5s						
PLLN				AML	AML		
	comp=N,2566µm,0.4s						
GIB	**Gibilmanna**	**0.26**	**331**	P	Pg	11 38 58.5	-0.5
GIB				S	Sb	11 39 04.1	+0.5
GIB				AML	AML		
	comp=N,1655µm,0.5s						
GIB				AML	AML		
	comp=E,1475µm,0.4s						
GIB				AML	AML		
	comp=E,1475µm,0.4s						
GIB				AML	AML		
	comp=N,1651µm,0.5s						
CAGR	**Agira**	**0.29**	**119**	AML	AML		
	comp=E,1066µm,0.6s						
CAGR				AML	AML		
	comp=N,696µm,0.4s						
CAGR				AML	AML		
	comp=N,696µm,1.6s						
CAGR				AML	AML		
	comp=E,1066µm,1.4s						
GALF	**Gagliano Caste**	**0.31**	**100**	P	Pb	11 39 00.2	0.0
GALF				AML	AML		
	comp=E,150µm,1.3s						
GALF				AML	AML		
	comp=E,1320µm,0.6s						
GALF				AML	AML		
	comp=E,151µm,1.3s						
GALF				AML	AML		
	comp=N,206µm,0.6s						
GALF				AML	AML		
	comp=N,1084µm,0.9s						
GALF				AML	AML		
	comp=N,1076µm,0.6s						
GALF				AML	AML		
	comp=E,140µm,0.4s						
GALF				AML	AML		
	comp=N,188µm,0.6s						
GALF				AML	AML		
	comp=E,1320µm,0.6s						
ALJA	**Alia**	**0.34**	**268**	P	Pg	11 39 00.3	0.0
ALJA				AML	AML		
	comp=N,585µm,0.3s						
CPTP	**Pietraperzia**	**0.36**	**183**	P	Pb	11 39 01.6	+0.7
CPTP				AML	AML		
	comp=E,548µm,0.6s						
CPTP				AML	AML		
	comp=N,688µm,0.9s						
CMDO	**Montedoro**	**0.41**	**224**	P	Pn	11 39 04.4	+0.1
MSFR	**San Fratello**	**0.42**	**50**	⇑P	Pg	11 39 01.6	-0.1
MSFR				AML	AML		
	comp=E,132µm,0.8s						
MSFR				AML	AML		
	comp=N,180µm,0.8s						
MSFR				AML	AML		
	comp=N,180µm,1.2s						
MSFR				AML	AML		
	comp=N,144µm,0.3s						
MSFR				AML	AML		
	comp=E,119µm,0.3s						
RAFF	**Raffo Rosso**	**0.56**	**165**	P	Pg	11 39 03.9	-0.3
RAFF				AML	AML		
	comp=E,134µm,1.2s						
RAFF				AML	AML		
	comp=N,144µm,1.4s						
RAFF				AML	AML		
	comp=N,144µm,0.6s						
RAFF				AML	AML		
	comp=E,129µm,0.5s						
SOLUN	**Solunto**	**0.61**	**303**	P	Pb	11 39 05.6	+0.3
SOLUN				AML	AML		
	comp=E,317µm,0.7s						
SOLUN				AML	AML		
	comp=N,298µm,1.2s						
SOLUN				AML	AML		
	comp=N,298µm,0.8s						
SOLUN				AML	AML		
	comp=E,317µm,0.7s						
SOLUN				AML	AML		
	comp=N,266µm,0.6s						
MUCR	**Ucria**	**0.61**	**63**	⇑P	Pg	11 39 04.9	-0.4
MUCR				AML	AML		
	comp=E,234µm,0.5s						
MUCR				AML	AML		
	comp=N,304µm,1.6s						
MUCR				AML	AML		
	comp=N,304µm,0.4s						
MUCR				AML	AML		
	comp=E,234µm,0.5s						
MUCR				AML	AML		
	comp=N,300µm,0.8s						
HLNI	**Lentini**	**0.69**	**127**	P	Pb	11 39 06.2	-0.3
HLNI				AML	AML		
	comp=E,84µm,1.0s						
HLNI				AML	AML		
	comp=N,134µm,0.3s						
HLNI				AML	AML		
	comp=E,80µm,0.2s						
HLNI				AML	AML		
	comp=N,133µm,0.3s						
IACL	**Alicudi**	**0.78**	**10**	P	Pb	11 39 08.1	-0.1
IACL				AML	AML		
	comp=N,352µm,1.3s						
IACL				AML	AML		
	comp=E,431µm,1.6s						
IACL				AML	AML		
	comp=N,352µm,0.7s						
IACL				AML	AML		
	comp=E,431µm,0.4s						
IACL				AML	AML		
	comp=N,305µm,0.2s						
IACL				AML	AML		
	comp=E,362µm,0.3s						
IFIL	**Filicudi I Eol**	**0.85**	**20**	P	Pg	11 39 09.6	-0.1
IFIL				AML	AML		
	comp=E,1290µm,0.9s						
IFIL				AML	AML		
	comp=N,516µm,0.7s						
IFIL				AML	AML		
	comp=N,516µm,1.3s						
IFIL				AML	AML		
	comp=E,1128µm,0.2s						
IFIL				AML	AML		
	comp=N,437µm,0.2s						
AIO	**Antillo**	**0.85**	**76**	P	Pg	11 39 09.7	-0.1
AIO				AML	AML		
	comp=E,185µm,0.6s						
AIO				AML	AML		
	comp=N,204µm,0.5s						
AIO				AML	AML		
	comp=N,204µm,0.5s						
AIO				AML	AML		
	comp=E,185µm,0.6s						
VPL	**Vulcano Piano**	**0.88**	**45**	P	Pb	11 39 09.7	-0.2
VPL				AML	AML		
	comp=E,310µm,0.8s						
VPL				AML	AML		
	comp=N,292µm,0.4s						
VPL				AML	AML		
	comp=N,292µm,1.6s						
VPL				AML	AML		
	comp=N,292µm,0.4s						
VPL				AML	AML		
	comp=E,310µm,0.8s						
SSY	**Sortino**	**0.93**	**130**	P	Pb	11 39 10.2	-0.6
SSY				AML	AML		
	comp=N,1125µm,0.9s						
SSY				AML	AML		
	comp=E,410µm,1.1s						
SSY				AML	AML		
	comp=E,410µm,0.9s						
SSY				AML	AML		
	comp=E,323µm,0.2s						
SSY				AML	AML		
	comp=N,997µm,0.3s						
HPAC	**Pachino**	**1.30**	**145**	P	Pn	11 39 15.6	-0.8

HEL 02 11:43:24.3±0.1**,60°.37N**×**24°.90E,h0**^{km}**,ML1.5,**
Explosion,Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUR	**Nurmijarvi**	**0.19**	**319**	PG	Pg	11 43 27.6	-0.3
	baz=136						
NUR				SG	Sg	11 43 30.1	-0.1
HEL1	**Helsinki**	**0.19**	**182**	PG	Pg	11 43 27.7	-0.2
HEL1				SG	Sg	11 43 30.4	0.0
HEL5	**Espoo, Suvisaa**	**0.27**	**197**	PG	Pg	11 43 29.1	-0.3
	baz=21						
HEL5				SG	Sg	11 43 32.6	-0.2
MEF	**Metsahovi**	**0.29**	**239**	*e*P	Pg	11 43 31.1	+1.2
MEF	**Metsahovi**	**0.29**	**239**	PG	Pg	11 43 29.7	-0.2
MEF				SG	Sg	11 43 33.5	-0.1
PVF	**Pernaja**	**0.51**	**69**	PG	Pg	11 43 33.4	-0.6
PVF				SG	Sg	11 43 40.4	-0.2
PVF				MSG		11 43 40.6	
	comp=Z,3.9nm,0.2s						
TVF	**Tvarminne**	**0.98**	**238**	PB	Pg	11 43 42.6	-0.4
TVF				MSG		11 43 54.4	
	comp=Z,1.1nm,0.2s						
TVF				SB	Sg	11 43 55.7	0.0
FIA0	**FINESS Array S**	**1.22**	**28**	PG	Pg	11 43 46.4	-1.3
FIA0				MSG		11 44 01.4	
	comp=Z,3.5nm,0.2s						
FIA0				SN	Sn	11 44 07.5	+1.7
VJF	**Virojoki**	**1.33**	**82**	PN	Pg	11 43 49.5	-0.2
VJF				MSG		11 44 04.5	
	comp=Z,7.0nm,0.2s						
VJF				SG	Sg	11 44 06.3	-0.6
RAF	**Rauma**	**1.68**	**294**	PG	Pn	11 43 54.3	-0.5
	baz=111						
RAF				MSG		11 44 14.3	
	comp=Z,2.3nm,0.2s						
KEF	**Keuruu**	**1.80**	**360**	*e*P	Pb	11 43 58.3	+0.1
KEF	**Keuruu**	**1.80**	**360**	PG	Pb	11 43 57.8	-0.4
KEF				MSG		11 44 17.9	
	comp=Z,3.2nm,0.2s						
KEF				SG	Sb	11 44 21.2	-0.1
KPF	**Kankaanpaa**	**2.01**	**318**	PG	Pb	11 44 01.2	-0.4
KPF				MSG		11 44 23.9	
	comp=Z,1.4nm,0.2s						
KPF				SG	Sb	11 44 26.7	-0.5
RUF	**Ruokolahti**	**2.25**	**60**	SN	Sn	11 44 28.2	-2.8
RUF				MSG		11 44 30.9	
	comp=Z,18nm,0.2s						
VAF	**Ylistaro**	**2.88**	**339**	*e*P	Pn	11 44 09.8	-1.7
OBF8	**Ulkokalla**	**4.03**	**351**	SN	Sn	11 45 15.3	+0.2
BURU	**Burvik**	**4.53**	**340**	SG	Sb	11 45 43.6	+3.9

IDC ***02*** *11:44:02.9±1.7,63°.06N×27°.96E,h0*^{km}*,mbtmp3.1/3,*
ML2.2/3,Error ellipse: s-maj=21.8km s-min=6.2km
az=103.0
HEL ***02*** *11:44:02.3±0.1,63°.16N×27°.73E,h0*^{km}*,ML2.1,Explosion*
ISC 02 11:44:01.7±0.8**,63°.08N**±0°.02×**27°.70E**±0°.03**,h0**^{km}**,n43,**
σ**1**^{s}**.79**/60**,Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIF	**Nilsia**	**0.31**	**9**	PG	**Pg**	**11 44 06.8**	**-0.9**
	baz=190						
NIF				SG	**Sg**	**11 44 11.8**	**+0.1**
SUF	**Sumiainen**	**0.80**	**244**	PG	**Pg**	**11 44 17.5**	**+0.6**
	baz=62						
SUF				SG	**Sg**	**11 44 27.3**	**+0.1**
SUF				MSG		11 44 28.5	
	comp=Z,10nm,0.2s						
RMF	**Romuvaara**	**1.51**	**40**	PN	**Pn**	**11 44 29.4**	**-0.6**
RMF				MSG		11 44 45.9	
	comp=Z,13nm,0.2s						
KEF	**Keuruu**	**1.60**	**236**	PG	**Pb**	**11 44 32.3**	**+0.2**
KEF				MSG		11 44 51.8	
	comp=Z,8.3nm,0.2s						
KEF				SN	**Sg**	**11 44 54.2**	**+1.3**
JOF	**Joensuu**	**1.66**	**94**	*e*P	**Pn**	**11 44 31.4**	**-0.6**
JOF	**Joensuu**	**1.66**	**94**	PB	**Pn**	**11 44 32.2**	**+0.2**
JOF	**Joensuu**	**1.66**	**94**	PG	**Pn**	**11 44 32.2**	**+0.2**
	baz=283						
JOF				SN	**Sn**	**11 44 54.0**	**+0.1**
RUF	**Ruokolahti**	**1.76**	**160**	PG	**Pg**	**11 44 35.2**	**-0.2**
	baz=344						
RUF				MSG		11 44 56.7	
	comp=Z,11nm,0.2s						
FIA0	**FINESS Array S**	**1.81**	**206**	PG	**Pg**	**11 44 36.1**	**-0.2**
FIA0				MSG		11 44 58.3	
	comp=Z,12nm,0.2s						
FIA0				SG	**Sg**	**11 45 00.1**	**+0.3**
FINES	**FINESS Array B**	**1.81**	**206**	Pg	**Pg**	**11 44 36.2**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=25,slow=17,SNR=13						
FINES				Lg	Lg	11 45 00.6	
	comp=Z,1.4nm,0.3s,baz=28,slow=28,SNR=19						
OUF	**Merijarvi**	**1.85**	**316**	PB	**Pn**	**11 44 31.7**	**-2.9**
OUF	**Merijarvi**	**1.85**	**316**	PB	**Pn**	**11 44 31.7**	**-2.9**
OUF				MSG		11 44 56.2	
	comp=Z,25nm,0.2s						
OBF4	**Vikkela, Lumij**	**2.08**	**328**	PB	**Pn**	**11 44 39.1**	**+1.3**
OBF4	**Vikkela, Lumij**	**2.08**	**328**	PG	**Pn**	**11 44 39.1**	**+1.3**
	baz=142						
OBF4				MSG		11 45 02.4	
	comp=Z,10nm,0.2s						
OBF0	**Syolatti, Pyha**	**2.09**	**314**	PG	**Pn**	**11 44 39.3**	**+1.3**
OBF0	**Syolatti, Pyha**	**2.09**	**314**	PG	**Pn**	**11 44 39.3**	**+1.3**
OBF0				MSG		11 45 03.2	
	comp=Z,17nm,0.2s						
OUL	**Oulu**	**2.16**	**339**	PB	**Pg**	**11 44 43.1**	**+0.1**
OUL	**Oulu**	**2.16**	**339**	PG	**Pn**	**11 44 40.0**	**+1.2**
	baz=153						
OUL				SG	**Sb**	**11 45 08.3**	**-0.6**
VAF	**Ylistaro**	**2.29**	**271**	PG	**Pb**	**11 44 43.2**	**-0.6**
	baz=84						
VAF				MSG		11 45 10.4	
	comp=Z,8.9nm,0.2s						
VAF				SG	**Sb**	**11 45 13.7**	**+1.1**
VAF	**Ylistaro**	**2.29**	**271**	SN	**Pb**	**11 44 43.2**	**-0.6**
VJF	**Virojoki**	**2.55**	**182**	PB	**Pb**	**11 44 47.6**	**-0.7**
VJF				MSG		11 45 19.8	
	comp=Z,11nm,0.2s						
VJF				SB	**Sb**	**11 45 19.9**	**-0.3**
KU1	**Kurvinen**	**2.62**	**17**	PG	**Pn**	**11 44 46.8**	**+1.6**
KU2	**Taivalkoski**	**2.65**	**5**	PG	**Pn**	**11 44 47.8**	**+2.2**
	baz=183						
KU2				SG	**Sb**	**11 45 23.6**	**+0.7**
MSF	**Maaselka**	**2.90**	**11**	PB	**Pn**	**11 44 50.3**	**+1.2**
	baz=192						
MSF				SG	**Sb**	**11 45 27.8**	**-2.3**
KPF	**Kankaanpaa**	**2.90**	**247**	PG	**Pb**	**11 44 54.0**	**-0.2**
KPF				MSG		11 45 28.8	
	comp=Z,3.6nm,0.2s						
NUR	**Nurmijarvi**	**2.96**	**211**	SN	**Sn**	**11 45 24.6**	**-1.5**
NUR				MSG		11 45 31.4	
	comp=Z,4.7nm,0.2s						
RANF	**Ranua**	**2.97**	**353**	PB	**Pn**	**11 44 52.9**	**+2.9**
	baz=175						
RANF				SG	**Sb**	**11 45 30.0**	**-2.2**
KU6	**Riekki**	**3.10**	**17**	PB	**Pn**	**11 44 53.5**	**+1.7**
	baz=203						
KU6				MSG		11 45 31.4	
	comp=Z,3.1nm,0.2s						
KU6				SB	**Sn**	**11 45 32.2**	**+2.7**
BURU	**Burvik**	**3.18**	**301**	PB	**Pn**	**11 44 54.5**	**+1.6**
UMAU	**Umeaa**	**3.25**	**287**	PN	**Pn**	**11 44 54.8**	**+0.9**
UMAU				SB	**Sb**	**11 45 37.5**	**-2.8**
HEL5	**Espoo, Suvisaa**	**3.29**	**207**	PN	**Pn**	**11 44 54.2**	**-0.2**
OLKF	**Oulanka, Finla**	**3.33**	**12**	PB	**Pn**	**11 44 57.2**	**+2.2**
OLKF				SG	**Sb**	**11 45 40.4**	**-2.2**
TOF	**Tornio**	**3.34**	**336**	PB	**Pn**	**11 44 57.4**	**+2.3**
KALU	**Kalix**	**3.36**	**328**	PB	**Pn**	**11 44 58.2**	**+2.9**
	baz=147						
RNF	**Rovaniemi**	**3.61**	**349**	PB	**Pn**	**11 45 01.2**	**+2.4**
RNF				SG	**Sb**	**11 45 48.8**	**-1.9**
ARBE	**Arbavere**	**3.75**	**194**	SN	**Sn**	**11 45 48.0**	**+2.5**
PAJU	**Pajala**	**4.41**	**336**	SB	**Sn**	**11 46 07.2**	**+5.5**
HEMU	**Hemsoen**	**4.44**	**269**	SN	**Pn**	**11 45 12.2**	**+2.0**
HEMU	**Hemsoen**	**4.44**	**269**	PN	**Pn**	**11 45 12.2**	**+2.0**
KLF	**Kolari**	**4.46**	**341**	PN	**Pn**	**11 45 11.9**	**+1.5**
ARCES	**ARCESS Array B**	**6.54**	**353**	Pn	**Pn**	**11 45 39.1**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=167,slow=15,SNR=1.5						
ARCES				Sn	**Sn**	**11 46 50.9**	**-3.3**
	comp=Z,0.1nm,0.3s,baz=171,slow=23,SNR=1.5						
	comp=Z,3.2nm,1.0s						
HFS	**Hagfors**	**7.30**	**252**	Pn	**Pn**	**11 45 51.0**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=58,slow=20,SNR=1.2						
HFS				Sn	**Sn**	**11 47 10.6**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=62,slow=25,SNR=1.8						
	comp=Z,1.1nm,0.7s						
NOA	**NORSAR Array B**	**8.01**	**263**	Pn	**Pn**	**11 46 00.4**	**+1.3**
	baz=48,slow=5.2,SNR=1.4						
	comp=Z,0.4nm,0.6s						

IDC 02 11:47:47.7±999.0**,55°.07N**×**42°.42E,h0**^{km}**,Error ellipse:**
s-maj=985.9km s-min=208.9km az=103.0,Baltic
States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**10.55**	**110**	I	I	12 52 10.0	
	0.1nm,0.5s,baz=302,slow=307,SNR=1.1						
I46RU	**ZALESOVO INFRA**	**24.37**	**75**	I	I	14 17 00.9	
	baz=286,slow=334						
I34MN	**SONGINO INFRAS**	**39.27**	**73**	I	I	15 46 30.0	
	baz=307,slow=321,SNR=0.4						

IDC ***02*** *11:47:40.5±1.1,1°.92N×126°.87E,h0*^{km}*,mb3.7/5,*
mbtmp3.7/6,ML3.8/1,MS3.7/2,Error ellipse: s-maj=92.6km
s-min=17.8km az=71.0
DJA ***02*** *11:47:45.5±0.2,2°N±3°×12°6E±°,h10*^{km}*,M4.1/12,mb4.7/1,*
MLv3.8/12
ISC 02 11:47:47.7±0.8**,1°.66N**±0°.07×**126°.38E**±0°.05**,h47**^{km}**,n17,**
σ**1**^{s}**.17**/19**,mb3.7**/5**,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.32**	**132**	P	**Pn**	**11 48 10.4**	**+0.7**
GAMI	**Galela, Maluku**	**1.42**	**83**	P	**Pn**	**11 48 11.3**	**+0.2**
GAMI				S	**Sn**	**11 48 30.9**	**+2.3**
MNI	**Manado**	**1.55**	**262**	P	**Pn**	**11 48 13.2**	**+0.3**
MNI				S	**Sn**	**11 48 32.2**	**+0.3**
SGSI	**Sangihe**	**2.19**	**337**	P	**Pn**	**11 48 22.4**	**+0.7**
GTOI	**Gorontalo**	**3.52**	**253**	P	**Pn**	**11 48 40.9**	**+1.0**
SANI	**Sanana**	**3.70**	**186**	P	**Pn**	**11 48 42.5**	**+0.1**
LUWI	**Luwuk**	**4.49**	**233**	P	**Pn**	**11 48 53.4**	**+0.1**
MRSI	**Marisa**	**4.59**	**255**	P	**Pn**	**11 48 56.8**	**+2.2**
APSI	**Ampana**	**5.37**	**242**	P	**Pn**	**11 49 06.7**	**+1.3**
BATI	**Baumata**	**12.09**	**193**	LR	LR	11 56 24.1	
	comp=Z,81nm,18.3s,baz=234,slow=42						
TGY	**Tagaytay City**	**13.49**	**337**	LR	LR	11 55 42.6	
	comp=Z,1µm,20.1s,baz=206,slow=36						
FITZ	**Fitzroy Crossi**	**19.64**	**182**	P	**P**	**11 52 12.2**	**-0.3**
	0.2nm,0.3s,baz=13,slow=13,SNR=6.3						
	1.2nm,0.5s						
WRA	**Warramunga Arr**	**22.84**	**160**	P	**P**	**11 52 45.7**	**-1.4**
	2.5nm,0.6s,baz=343,slow=11,SNR=23						
WRA				PcP	**PcP**	**11 56 37.9**	**+0.8**
	0.3nm,0.6s,baz=331,slow=2.0,SNR=5.0						
	2.5nm,0.6s						
ASAR	**Alice Springs**	**26.21**	**164**	P	**P**	**11 53 18.4**	**0.0**
	0.7nm,0.5s,baz=348,slow=7.1,SNR=20						
ASAR				PcP	**PcP**	**11 56 45.5**	**+1.1**
	0.5nm,0.5s,baz=349,slow=2.3,SNR=12						
	0.7nm,0.5s						
SONM	**Songino Array**	**49.15**	**342**	P	**P**	**11 56 29.1**	**-1.8**
	0.3nm,0.4s,baz=156,slow=7.3,SNR=1.9						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**59.06**	**326**	P	**P**	**11 57 42.9**	**-0.2**
	0.5nm,0.5s,baz=126,slow=7.9,SNR=6.8						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**63.30**	**328**	P	**P**	**11 58 10.9**	**-0.7**
	0.4nm,0.5s,baz=130,slow=6.4,SNR=6.6						
	0.4nm,0.5s						

GCG ***02*** *11:58:14.2±1.0,13°.78N×92°.20W,h0*^{km}*±148*^{km}*,ML3.4*
MEX ***02*** *11:58:15.6±0.9,13°.74N×92°.48W,h16*^{km}*±43*^{km}*,MD3.7*
ISC 02 11:58:11.9±2.6**,13°.80N**±0°.09×**92°.48W**±0°.07**,h7**^{km}±13^{km}**,**
n14,σ**1**^{s}**.75**/23**,Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**1.04**	**47**	*e*P	**Pg**	**11 58 33.0**	**+1.0**
RTAL				*e*S	**Sg**	**11 58 44.0**	**-1.5**
THIG		**1.12**	**11**	*e*P	**Pg**	**11 58 33.7**	**+0.3**
THIG				*e*S	**Sg**	**11 58 47.4**	**-0.5**
PATR	**El Naranjo**	**1.33**	**10**	*e*P	**Pn**	**11 58 36.6**	**-0.5**
PATR				*e*S	**Sb**	**11 58 53.7**	**-0.9**
CHUJ	**Union Juarez**	**1.33**	**15**	*e*P	**Pn**	**11 58 36.6**	**-0.6**
CHUJ				*e*S	**Sb**	**11 58 53.5**	**-1.3**
PAVE	**Pavencul**	**1.41**	**12**	*e*P	**Pn**	**11 58 37.9**	**-0.3**
PAVE				*e*S	**Sb**	**11 58 54.9**	**-2.2**
SOKI	**Kika Raxquin**	**1.45**	**46**	*e*P	**Pn**	**11 58 39.2**	**+0.3**
PCIG		**2.02**	**339**	*e*P	**Pn**	**11 58 46.4**	**-0.1**
PCIG				*e*S	**Sn**	**11 59 10.0**	**-1.9**
APG	**El Apazote**	**2.29**	**58**	*e*P	**Pn**	**11 58 51.7**	**+1.4**
CCIG	**Comitan**	**2.49**	**8**	*e*P	**Pn**	**11 58 56.3**	**+3.3**
CCIG				*e*S	**Sn**	**11 59 27.2**	**+3.5**
CCIG	**Comitan**	**2.49**	**8**	*e*P	**Pn**	**11 58 56.4**	**+3.4**
NUBE	**Las Nubes**	**2.62**	**88**	*e*P	**Pn**	**11 58 54.2**	**-0.6**
UXUV	**UXUV**	**3.85**	**335**	*e*P	**Pn**	**11 59 13.1**	**+1.5**
UXUV				*e*S	**Sn**	**11 59 56.5**	**-0.6**
CMIG	**Matias Romero**	**4.01**	**325**	*e*P	**Pn**	**11 59 14.0**	**+0.2**
CMIG				*e*S	**Sn**	**12 00 00.2**	**-0.9**
NEUV	**Arroyo Zacate**	**5.04**	**321**	*e*P	**Pn**	**11 59 29.3**	**+1.4**
NEUV				*e*S	Sn	12 00 17.1	-9.2

PRE ***02*** *12:02:30.6±0.8,25°.16S×25°.13E,h5*^{km}*,ML3.4*
BGSI ***02*** *12:02:34.8±2.2,25°.17S×25°.24E,h4*^{km}*±7*^{km}*,ML3.3*
BUL ***02*** *12:02:35.8±1.9,25°.15S×25°.44E,h10*^{km}*,MD3.6*

ISC 02 12:02:33.0±1.0**, 25°.19S**±0°.03×**25°.23E**±0°.03**, h15**^{km}±8^{km}**,**
n42, σ**1^{s}.88**/78**, 4C-1D, Botswana**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	Lobatse	0.38	63	⇑iP	Pg	12 02 40.0	-0.6
LBTB				IAML		12 02 44.3	
	comp=E,2µm,0.1s						
LBTB	Lobatse	0.38	63	eP	Pg	12 02 40.1	-0.6
LBTB				eS	Sg	12 02 44.6	-1.4
LBTB				IAML		12 02 47.7	
	comp=Z,711nm,0.3s						
LBTB	Lobatse	0.38	63	i P	Pg	12 02 40.0	-0.6
MAKGR	Makgori	0.73	212	⇑iP	Pb	12 02 48.3	+0.8
MAKGR				i S	Sb	12 02 58.3	+0.9
MAKGR				IAML		12 02 59.0	
	comp=E,4µm,0.4s						
SKOMA	Sekoma	1.35	299	⇓iP	Pg	12 02 59.2	+0.1
SKOMA				i S	Sg	12 03 17.6	+0.9
SKOMA				IAML		12 03 19.8	
	comp=N,625nm,0.5s						
LPHEP	Lephephe	1.90	18	⇑iP	Pb	12 03 06.6	-0.8
LPHEP				i S	Sn	12 03 29.9	+1.1
LPHEP				IAML		12 03 32.9	
	comp=E,420nm,0.4s						
SWZ	Schweizer	1.99	177	eP	Pn	12 03 06.1	-0.1
SWZ				eS	Sn	12 03 31.7	+0.8
SWZ				IAML		12 03 38.0	
	comp=Z,409nm,0.6s						
PHPEN	Phepeng	2.17	262	i P	Pb	12 03 11.6	-0.4
PHPEN				i S	Sn	12 03 34.8	-0.4
PHPEN				IAML		12 03 50.8	
	comp=E,729nm,0.5s						
HRAO	HartRAO	2.33	108	eP	Pn	12 03 12.2	+1.4
HRAO				eS	Sb	12 03 42.2	-1.1
HRAO				IAML		12 03 46.3	
	comp=Z,534nm,0.3s						
PRYS	Parys	2.58	133	eP	Pn	12 03 15.5	+1.1
PRYS				eS	Sn	12 03 47.4	+1.8
PRYS				IAML		12 03 59.4	
	comp=Z,152nm,0.3s						
LEPH	Lephalale, Lim	2.69	61	eP	Pn	12 03 15.9	+0.2
LEPH				eS	Sn	12 03 49.1	+1.0
LEPH				IAML		12 04 00.6	
	comp=Z,149nm,0.5s						
KHWEE	KHWEE	3.23	4	i P	Pn	12 03 25.1	+1.9
KHWEE				i S	Sn	12 03 59.8	-1.7
KHWEE				IAML		12 04 14.3	
	comp=N,897nm,0.3s						
BOSA	Boshof	3.41	180	⇑iP	Pn	12 03 27.4	+1.6
BOSA				i S	Sn	12 04 06.3	+0.3
BOSA				IAML		12 04 24.7	
	comp=N,101nm,0.4s						
BOSA	Boshof	3.41	180	eP	Pn	12 03 25.4	-0.4
BOSA				eS	Sn	12 04 05.3	-0.7
BOSA				IAML		12 04 25.2	
	comp=Z,163nm,0.5s						
BOSA	Boshof	3.41	180	i P	Pn	12 03 27.4	+1.6
BOSA				i S	Sn	12 04 10.0	+4.0
KGCAE	Kacgae	3.61	309	i P	Pn	12 03 30.0	+1.6
KGCAE				i S	Sn	12 04 11.3	+0.5
KGCAE				IAML		12 04 27.1	
	comp=E,286nm,0.2s						
LKGWB	Lokgwabe	3.80	285	i P	Pn	12 03 32.2	+1.1
LKGWB				i S	Sn	12 04 14.3	-1.3
LKGWB				IAML		12 04 26.0	
	comp=N,399nm,0.7s						
SNKL	Senekal, Frees	3.83	144	eP	Pn	12 03 32.1	+0.6
SNKL				eS	Sn	12 04 17.7	+1.4
SNKL				IAML		12 04 37.1	
	comp=Z,172nm,0.8s						
BROLN	Tlhalogang	4.50	26	i P	Pn	12 03 41.9	+1.1
BROLN				i S	Sn	12 04 30.6	-2.4
BROLN				IAML		12 04 51.5	
	comp=N,55nm,0.3s						
UPI	Upington	4.76	227	eP	Pn	12 03 42.9	-1.3
UPI				eS	Sn	12 04 36.0	-3.1
UPI				IAML		12 05 05.2	
	comp=Z,34nm,0.3s						
NWCL	Newcastle	4.89	122	eP	Pn	12 03 47.4	+1.3
NWCL				eS	Sn	12 04 43.5	+1.0
NWCL				IAML		12 05 06.7	
	comp=Z,124nm,0.5s						
PILG	Pilgrimsrest,	4.98	88	eP	Pn	12 03 48.8	+1.5
PILG				eS	Sn	12 04 45.3	+0.6
PILG				IAML		12 05 10.8	
	comp=Z,84nm,0.5s						
KOOLE	Kule	5.09	294	i P	Pn	12 03 50.9	+2.0
KOOLE				i S	Sn	12 04 44.7	-2.8
KOOLE				IAML		12 05 23.2	
	comp=E,82nm,1.1s						
MUSN	Musina, Limpop	5.13	57	eP	Pn	12 03 50.3	+1.0
MUSN				eS	Sn	12 04 47.9	-0.4
MUSN				IAML		12 05 21.0	
	comp=Z,37nm,0.4s						
MUSN	Musina, Limpop	5.13	57	i P	Pn	12 03 49.1	-0.2
MUSN				i S	Sn	12 04 43.8	-4.5
KEIM	Keimoes	5.17	226	eP	Pn	12 03 49.2	-0.6
KEIM				eS	Sn	12 04 46.8	-2.5
KEIM				IAML		12 05 17.1	
	comp=Z,47nm,0.4s						
ALKP	Alkanpan, Nort	5.43	209	eP	Pn	12 03 52.9	-0.5
ALKP				eS	Sn	12 04 53.2	-2.5
ALKP				IAML		12 05 24.6	
	comp=Z,76nm,0.6s						
AUGR	Augrabies	5.53	231	eP	Pn	12 03 53.6	-1.2
AUGR				eS	Sn	12 04 54.7	-3.4
AUGR				IAML		12 05 31.4	
	comp=Z,27nm,0.3s						
ARMS	Ukamas	5.68	239	eP	Pn	12 03 55.6	-1.2
ARMS				eS	Sn	12 04 58.5	-3.3
MOPA	Mopani	5.87	75	eP	Pn	12 04 00.3	+0.9
MOPA				eS	Sn	12 05 05.6	-0.7
MOPA				IAML		12 05 39.2	
	comp=Z,80nm,0.3s						
POGA	Pongola	6.20	112	eP	Pn	12 04 04.9	+1.0
POGA				eS	Sn	12 05 13.6	-1.0
POGA				IAML		12 05 45.7	
	comp=Z,89nm,0.9s						
KSTD	Kokstad	6.50	147	eP	Pn	12 04 09.5	+1.2
KSTD				eS	Sn	12 05 20.3	-2.0
KSTD				IAML		12 06 03.2	
	comp=Z,21nm,0.4s						
BFON	Badsfontein, M	6.73	191	eP	Pn	12 04 11.7	+0.4
BFON				eS	Sn	12 05 25.0	-2.7
BFON				IAML		12 06 10.0	
	comp=Z,70nm,0.5s						
BRAK	Brakfontein	6.88	197	eP	Pn	12 04 13.4	0.0
BRAK				eS	Sn	12 05 28.3	-3.2
BRAK				IAML		12 06 08.8	
	comp=Z,95nm,0.6s						
GRAF	Camdeboo Natio	7.10	185	eP	Pn	12 04 16.3	-0.1
GRAF				eS	Sn	12 05 34.6	-2.2
GRAF				IAML		12 06 19.8	
	comp=Z,65nm,0.5s						
ROOI	Rooidraai Farm	7.43	191	eP	Pn	12 04 21.1	+0.2
ROOI				eS	Sn	12 05 41.3	-3.7
ROOI				IAML		12 06 28.1	
	comp=Z,52nm,0.5s						
FRAZ	Fraserburg	7.51	206	eP	Pn	12 04 22.0	0.0
FRAZ				eS	Sn	12 05 43.3	-3.7
FRAZ				IAML		12 06 36.2	
	comp=Z,32nm,0.6s						
GRAN	Grantham	7.58	200	eP	Pn	12 04 23.2	+0.2
GRAN				eS	Sn	12 05 45.0	-3.7
GRAN				IAML		12 06 35.2	
	comp=Z,49nm,0.6s						
WIN	Windhoek	7.88	288	Lg	Lg	12 06 38.2	
MERW	Merweville	8.13	203	eP	Pn	12 04 30.9	+0.3
MERW				eS	Sn	12 05 58.5	-3.8
MERW				IAML		12 06 56.5	
	comp=Z,26nm,0.7s						
TSUM	Tsumeb	9.25	309	IAML		12 07 23.3	
	comp=Z,5.8nm,0.7s						
TSUM	Tsumeb	9.25	309	i P	Pn	12 04 49.5	+3.5
TSUM				i S	Sn	12 06 26.2	-3.7

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*NEIC **02** 12:06:08.5±2.1, 24°.1S±0°.2×180°.0E±0°.2, h501^{km}±9^{km}, mb4.3/20, Error ellipse: s-maj=25.0km s-min=21.5km az=170.0*

*IDC **02** 12:06:09.6±5.0, 23°.09S×179°.42E, h496^{km}±38^{km}, mb3.5/3, mbtmp4.4/3, Error ellipse: s-maj=119.9km s-min=37.2km az=149.0*

ISC 02 12:06:08.3±0.9**, 24°.1S**±0°.1×**179°.9E**±0°.1**, h500**^{km}**, n30,**
σ**1^{s}.07**/29**, mb4.3**/12**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	6.51	344	P	P	12 07 48.8	-1.0
MARNC	Mare, Loyalty	11.23	281	P	P	12 08 39.9	+1.2
ONTNC	Ouen Toro	12.47	275	P	P	12 08 52.8	+0.9
ARMA	Armidale	25.87	250	P	P	12 11 01.1	+1.5
ARMA				IAmb	IAmb	12 11 42.0	
	comp=Z,13nm,1.4s						
EIDS	Eidsvold	26.18	261	P	P	12 11 02.5	+0.2
EIDS				IAmb	IAmb	12 11 31.0	
	comp=Z,13nm,1.1s						
CTAO	Charters Tower	31.37	271	P	P	12 11 48.7	+1.1
STKA	Stephens Creek	34.57	248	P	P	12 12 14.5	-0.1
	comp=Z,3.0nm,0.5s,baz=104,slow=8.3,SNR=4.8						
	comp=Z,3.0nm,0.5s						
STKA	Stephens Creek	34.57	248	IAmb	IAmb	12 12 17.8	
	comp=Z,51nm,1.3s						
INKA	Innaminka	35.30	255	P	P	12 12 21.4	+0.7
BBOO	Buckleboo	39.29	247	P	P	12 12 52.6	-0.8
AS31	Alice Springs	41.90	261	P	P	12 13 14.4	-0.2
ASAR	Alice Springs	41.91	261	P	P	12 13 14.2	-0.3
	comp=Z,2.3nm,0.6s,baz=93,slow=7.1,SNR=67						
	comp=Z,2.3nm,0.6s						
WR8	Warramunga Arr	42.14	266		P	12 13 15.8	-0.6
WR8				IAmb	IAmb	12 13 16.1	
	comp=Z,18nm,1.5s						
WRAB	Tennant Creek	42.28	266	P	P	12 13 17.1	-0.4
WRAB				IAmb	IAmb	12 13 17.6	
	comp=Z,8.5nm,1.0s						
WB0	Warramunga Arr	42.28	267		P	12 13 17.1	-0.5
WB0				IAmb	IAmb	12 13 17.7	
	comp=Z,7.5nm,0.6s						
WRA	Warramunga Arr	42.29	266	P	P	12 13 16.8	-0.9
	comp=Z,6.1nm,0.5s,baz=98,slow=8.4,SNR=140						
WRA				ScP	ScP	12 18 02.4	-0.5
	comp=Z,1.9nm,1.0s,baz=100,slow=3.8,SNR=7.1						
	comp=Z,6.1nm,0.5s						
WRA	Warramunga Arr	42.29	266	P	P	12 13 17.1	-0.5
FORT	Forrest	46.16	250	P	P	12 13 45.5	-2.0
FORT				IAmb	IAmb	12 13 46.5	
	comp=Z,6.2nm,0.7s						
MTN	Manton Dam	47.36	275	P	P	12 13 56.5	-0.3
MTN				IAmb	IAmb	12 13 59.0	
	comp=Z,22nm,1.4s						
KNRA	Kununurra	48.58	270	P	P	12 14 06.1	+0.2
KNRA				IAmb	IAmb	12 14 24.1	
	comp=Z,12nm,0.9s						
FITZ	Fitzroy Crossi	50.71	266	P	P	12 14 21.7	+0.2
MORW	Morawa	56.72	250	P	P	12 15 03.1	-1.1
MORW				IAmb	IAmb	12 15 26.9	
	comp=Z,12nm,1.3s						
QSPA	South Pole Qui	66.03	180	P	P	12 16 06.6	+1.9
KKM	Kota Kinabalu	68.84	287	P	P	12 16 21.5	-1.3
BELA	Belgrano 2	76.30	173	P	P	12 17 02.5	-2.2
HMU	Henry Mountain	89.63	48	P	P	12 18 13.5	+0.9
HFS	Hagfors	142.67	349	PKhKP	PKPpre	12 24 39.4	
	comp=Z,2.9nm,1.0s,baz=90,slow=7.4,SNR=1.7						
AKASG	Malin Array Be	145.04	327	PKP	PKPdf	12 24 47.5	-0.4
	comp=Z,0.4nm,0.3s,baz=54,slow=4.5,SNR=2.2						
BRTR	Keskin Array B	147.58	307	PKPbc	PKPbc	12 24 56.8	+0.5
	comp=Z,0.7nm,0.9s,baz=41,slow=4.6,SNR=3.8						
EKA	Eskdalemuir Ar	148.67	3	PKPbc	PKPdf	12 24 55.7	+1.8
	comp=Z,0.3nm,0.4s,baz=357,slow=2.3,SNR=2.1						

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*IDC **02** 12:07:10.8±0.9, 15°.12S×167°.37E, h0^{km}, mb4.2/13, mbtmp4.3/14, ML4.4/1, MS3.1/2, Error ellipse: s-maj=25.3km s-min=21.0km az=85.0*

*NEIC **02** 12:07:21.2±1.7, 15°.24S±0°.10×167°.3E±0°.1, h75^{km}±4^{km}, mb4.3/23, Error ellipse: s-maj=18.2km s-min=14.1km az=91.0*

*NOU **02** 12:07:22.5, 15°.37S×167°.15E, h67^{km}, mb4.7/35, Vanuatu Islands*

ISC 02 12:07:21.4±0.7**, 15°.30S**±0°.06×**167°.25E**±0°.09**, h75**^{km}**, n76,**
σ**1^{s}.09**/68**, mb4.3**/20**, 3C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.16	196		Pn	12 07 32.5	+0.1
SANVU	Saraoutou	0.16	196	P	Pn	12 07 32.6	+0.1
DVP	Devils Point	2.58	160	P	Pn	12 08 02.0	+1.0
INH	Isangel	4.65	156	P	Pn	12 08 30.0	+0.8
KOUNC	Koumac, New Ca	5.94	208	P	Pn	12 08 47.0	+0.2
MARNC	Mare, Loyalty	6.20	173	Pn	Pn	12 08 50.0	-0.3
MARNC	Mare, Loyalty	6.20	173	P	Pn	12 08 50.1	-0.2
YATNC	Mamie plateau,	6.74	183	P	Pn	12 08 57.4	-0.3
DZM	Mont Dzumac	6.78	186	Pn	Pn	12 08 56.2	-2.2
	6.2nm,0.3s,baz=305,slow=21,SNR=405						
DZM				Sn	Sn	12 10 11.6	-2.6
	12nm,0.3s,baz=94,slow=24,SNR=7.1						
	23nm,0.3s						
DZM	Mont Dzumac	6.78	186		Pn	12 08 57.4	-1.0
DZM	Mont Dzumac	6.78	186	P	Pn	12 08 58.7	+0.3
DZM	Mont Dzumac	6.78	186	S	Sn	12 10 13.8	-0.4
ONTNC	Ouen Toro	7.01	186	P	Pn	12 09 02.2	+0.7
ONTNC	Ouen Toro	7.01	186	S	Sn	12 10 19.8	0.0
HURO	Huro Makira	7.09	312	P	Pn	12 09 03.3	+0.8
OUENC	Ouen Island, N	7.09	183	P	Pn	12 09 03.5	+0.9
OUENC	Ouen Island, N	7.09	183	S	Sn	12 10 21.9	+0.1
PINNC	Pines Island,	7.28	179		Pn	12 09 05.8	+0.7
PINNC	Pines Island,	7.28	179	P	Pn	12 09 05.6	+0.5
PINNC	Pines Island,	7.28	179	S	Sn	12 10 26.1	-0.2
NGOA	Tingoa Renbel	7.92	297	P	Pn	12 09 13.9	0.0
SAVO	Savo Central	9.49	309	P	Pn	12 09 37.1	+1.7
SAVO	Savo Central	9.49	309	S	Sn	12 11 21.5	+0.9
TATA	Tatamba Isabel	10.01	312	P	Pn	12 09 44.8	+2.3
TATA	Tatamba Isabel	10.01	312	S	Sn	12 11 34.7	+1.5
EIDS	Eidsvold	18.16	234	Pn	Pn	12 11 29.8	+1.2
TV1H	Townsville Har	19.92	256	P	P	12 11 46.6	-0.7
PMG	Port Moresby	20.47	284	P	P	12 11 52.4	-0.9
	3.3nm,0.7s,baz=108,slow=6.5,SNR=4.1						
	3.3nm,0.7s						
PMG	Port Moresby	20.47	284	IAmb	IAmb	12 12 15.4	
	comp=Z,12nm,0.8s						
ARMA	Armidale	20.79	221	P	P	12 11 57.7	+1.1
ARMA				IAmb	IAmb	12 12 01.4	
	comp=Z,18nm,1.1s						
ARMA	Armidale	20.79	221	P	P	12 11 58.4	+1.7
COEN	Coen	23.33	270	P	P	12 12 23.1	-0.2
COEN	Coen	23.33	270	P	P	12 12 23.3	-0.1
QLP	Quilpie	24.21	239	P	P	12 12 31.6	+0.4
BKZ	Black Stump Fm	25.13	163	P	P	12 12 40.6	+1.1
BKZ				IAmb	IAmb	12 12 41.7	
	comp=Z,14nm,1.1s						
BKZ	Black Stump Fm	25.13	163	P	P	12 12 40.7	+1.2
CMSA	Cobar Meteorol	25.47	227	P	P	12 12 44.6	+2.0
CNB	Canberra Magne	25.59	216	P	P	12 12 44.7	+1.0
QIS	Mount Isa	26.80	255	P	P	12 12 55.2	+0.5
INKA	Innaminka	27.52	239	P	P	12 13 01.5	+0.4
INKA				IAmb	IAmb	12 13 02.3	
	comp=Z,6.9nm,0.8s						
STKA	Stephens Creek	28.61	230	P	P	12 13 10.6	-0.2
	comp=Z,1.6nm,0.3s,baz=51,slow=9.9,SNR=10						
	comp=Z,1.6nm,0.3s						
STKA	Stephens Creek	28.61	230	IAmb	IAmb	12 13 14.6	
	comp=Z,44nm,1.4s						
STKA	Stephens Creek	28.61	230	P	P	12 13 11.1	+0.3
WR8	Warramunga Arr	31.52	257	P	P	12 13 35.4	-1.3
WR8				IAmb	IAmb	12 13 35.8	
	comp=Z,3.9nm,0.9s						
WB0	Warramunga Arr	31.61	257	IAmb	IAmb	12 13 36.2	
	comp=Z,6.1nm,0.8s						
WB0				P	P	12 13 36.3	-1.2
WRAB	Tennant Creek	31.66	257	P	P	12 13 36.7	-1.2
WRAB				IAmb	IAmb	12 13 36.9	
	comp=Z,3.6nm,1.0s						
WRA	Warramunga Arr	31.67	257	P	P	12 13 36.4	-1.6
	comp=Z,2.8nm,0.6s,baz=85,slow=8.9,SNR=13						
	comp=Z,2.8nm,0.6s						
WRA	Warramunga Arr	31.67	257	IAmb	IAmb	12 13 37.0	
	comp=Z,0.4nm,1.2s						
RAR	Rarotonga	31.83	106	LR	LR	12 24 44.9	
	comp=Z,23nm,21.1s,baz=158,slow=33						
AS31	Alice Springs	32.45	250	P	P	12 13 44.0	-0.9
ASAR	Alice Springs	32.46	250	P	P	12 13 43.8	-1.1
	comp=Z,3.9nm,0.4s,baz=75,slow=9.2,SNR=37						
	comp=Z,3.9nm,0.4s						
BBOO	Buckleboo	33.22	233	P	P	12 13 51.8	+0.4
BBOO	Buckleboo	33.22	233	P	P	12 13 51.5	+0.1
FAKI	Fak Fak	36.61	286	P	P	12 14 19.8	-1.0
FAKI				IAmb	IAmb	12 14 22.1	
	comp=Z,5.7nm,0.9s						
KNRA	Kununurra	37.06	264	P	P	12 14 23.2	-1.3
FORT	Forrest	38.99	240	P	P	12 14 40.5	-0.2
FITZ	Fitzroy Crossi	39.89	260	P	P	12 14 47.9	-0.5
	comp=Z,7.2nm,0.5s,baz=90,slow=7.9,SNR=8.8						
	comp=Z,7.2nm,0.5s						
FITZ	Fitzroy Crossi	39.89	260	IAmb	IAmb	12 14 48.2	
	comp=Z,1.8nm,0.6s						
MBWA	Marble Bar	45.38	255	P	P	12 15 32.5	-0.2
MORW	Morawa	49.01	245	P	P	12 16 00.7	-0.2
MORW				IAmb	IAmb	12 16 00.8	
	comp=Z,8.7nm,0.9s						
VNDA	Vanda	62.30	181	P	P	12 17 35.3	0.0
	comp=Z,0.9nm,0.5s,baz=358,slow=5.4,SNR=6.0						
	comp=Z,0.9nm,0.5s						
VNDA	Vanda	62.30	181	IAmb	IAmb	12 18 04.0	
	comp=Z,4.0nm,1.2s						
QSPA	South Pole Qui	74.73	180	P	P	12 18 55.5	+2.4
	comp=Z,2.0nm,0.7s,baz=12,slow=6.7,SNR=5.6						
	comp=Z,2.0nm,0.7s						
QSPA	South Pole Qui	74.73	180	IAmb	IAmb	12 18 57.5	
	comp=Z,5.6nm,1.2s						
CMAR	Chiang Mai Arr	75.16	294	P	P	12 18 56.5	+0.2
	comp=Z,0.7nm,0.3s,baz=131,slow=4.9,SNR=6.5						
	comp=Z,0.7nm,0.3s						
LZDM	Lanzhou Array	78.73	312	P	P	12 19 17.1	+0.8
	comp=Z,1.5nm,0.3s,baz=190,slow=7.3,SNR=3.1						
	comp=Z,1.5nm,0.3s						
SONM	Songino Array	82.94	324	P	P	12 19 37.6	-0.6
	comp=Z,0.4nm,0.7s,baz=123,slow=5.3,SNR=2.5						
	comp=Z,0.4nm,0.7s						
ILAR	Eielson Array	87.07	18	P	P	12 19 56.4	-1.9
	comp=Z,0.4nm,0.6s,baz=240,slow=5.1,SNR=8.4						
	comp=Z,0.4nm,0.6s						
TROLL	Troll, Antarti	92.30	185	⇑P	P	12 20 22.5	-0.6
	comp=Z,125nm,0.6s						
SNAA	Sanae	92.98	183	⇑P	P	12 20 25.1	-1.1
	comp=Z,25nm,0.6s						
SNAA	Sanae	92.98	183	P	P	12 20 24.9	-1.3
	comp=Z,0.8nm,0.6s,baz=202,slow=14,SNR=9.7						
	comp=Z,0.8nm,0.6s						
SNAA	Sanae	92.98	183	IAmb	IAmb	12 20 30.6	
	comp=Z,2.0nm,1.1s						
VNA3	Neumayer Olymp	93.65	181	⇑P	P	12 20 27.9	-1.3
	comp=Z,3.8nm,0.6s						
ANMO	Albuquerque	95.64	55	LR	LR	12 56 34.5	
	comp=Z,15nm,18.6s,baz=15,slow=31						
MKAR	Makanchi Array	97.60	316	P	P	12 20 47.3	-0.2
	comp=Z,0.5nm,0.7s,baz=95,slow=6.9,SNR=2.6						
	comp=Z,0.5nm,0.7s						
ARCES	ARCESS Array B	120.79	345	PKP	PKPdf	12 26 02.3	-2.0
	comp=Z,2.8nm,0.8s,baz=38,slow=1.9,SNR=4.5						

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*IDC **02** 12:12:09.8±1.0, 35°.76N×96°.87W, h0^{km}, mbtmp3.6/4, ML2.5/3, Error ellipse: s-maj=14.9km s-min=10.1km az=135.0*

*NEIC **02** 12:12:10.9±0.6, 35°.537N±0°.010×96°.76W±0°.01, h5^{km}±1^{km}, mb_Lg3.5/131, ML3.8/27, ML3.7/62, Error ellipse: s-maj=2.9km s-min=1.8km az=144.0*

*NEIC **02** 12:12:11.3±0.6, 35°.54N±0°.01×96°.76W±0°.01, h10^{km}±8^{km}, Error ellipse: s-maj=1.8km s-min=1.6km az=66.0*

ISC 02 12:12:11.1±1.2**, 35°.61N**±0°.04×**96°.81W**±0°.03**, h13**^{km}±10^{km}**,**
n90, σ**0^{s}.92**/42**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEOK	Depew	0.35	47		Pb	12 12 19.0	-0.2
DEOK					Sb	12 12 24.4	-0.3
DEOK				IAML		12 12 24.5	
	comp=E,10µm,0.2s						
DEOK				IAML		12 12 24.7	
	comp=N,8µm,0.1s						
OK052	Battle Ridge R	0.39	1		Pb	12 12 20.4	+0.5
OK052					Sb	12 12 27.0	+1.2
OK052				IAML		12 12 27.2	
	comp=N,6µm,0.1s						
ADOK	Arcadia Dam	0.46	276		Pb	12 12 21.1	+0.1
OK004	Okla Sci Mus	0.55	261		Pb	12 12 22.2	-0.3
OK004					Sb	12 12 30.7	+0.4
OKCSW	OKLAHOMA CITY	0.55	249		Pb	12 12 22.2	-0.5
OKCSW					Sb	12 12 30.4	0.0
OKCSW				IAML		12 12 30.6	
	comp=N,5µm,0.3s						
QUOK	Quay	0.57	9		Pb	12 12 23.5	+0.5
QUOK					Sb	12 12 32.4	+1.3
QUOK				IAML		12 12 32.8	
	comp=N,6µm,0.1s						
FNO	Franklin	0.59	234		Pg	12 12 22.8	0.0
FNO					Sg	12 12 31.2	+0.6
BCOK	Bluff Creek, N	0.65	275		Pb	12 12 24.5	+0.2
BCOK					Sb	12 12 34.4	+1.0
OK048	Pawnee Station	0.81	353		Pn	12 12 27.8	-0.5
OK048				IAML		12 12 42.3	
	comp=N,2µm,0.1s						
OK048				IAML		12 12 42.3	
	comp=N,3µm,0.3s						
OK048	Pawnee Station	0.81	353		Pn	12 12 27.6	-0.8
OK048					Sn	12 12 39.6	-0.7
W34A	Bridge Creek,	0.87	245		Pg	12 12 27.6	-0.3
W34A					Sg	12 12 39.7	+0.4
TUL3	Leonard	0.88	70		Pb	12 12 27.7	-0.6
TUL3					Sb	12 12 39.6	-0.5
OK051	E0350 and S346	0.90	359		Pn	12 12 29.2	-0.3
X34A	Smith Ranch, M	1.31	220		Pg	12 12 35.4	-0.8
X34A				IAML		12 12 54.4	
	comp=N,2µm,0.6s						
X34A				IAML		12 12 54.9	
	comp=E,2µm,0.4s						
T35A	Sooner Cattle	1.33	10		Pn	12 12 36.4	+0.9
CSTR	Hydro, Custer	1.53	272		Pg	12 12 39.8	-0.7
RLO	Rose Lookout	1.56	69		Pn	12 12 39.0	+0.5
LOOK	Love County	1.64	191		Pn	12 12 40.2	+0.5
KAN01	Argonia South	1.72	334	IAmb_Lg		12 13 11.1	
	comp=Z,362nm,1.0s						
WMOK	Wichita Mounta	1.83	242		Pn	12 12 43.5	+1.1
WMOK	Wichita Mounta	1.83	242	IAmb_Lg		12 13 09.4	
	comp=Z,210nm,0.7s						
KAN08	Anthony NE Sta	1.87	330	IAmb_Lg		12 13 17.6	
	comp=Z,214nm,0.8s						
NOKA	Waynoka	2.00	301		Pb	12 12 47.5	+0.1
U38A	Gravette	2.14	66		Pn	12 12 48.0	+1.4
ELIS	Ellis County	2.17	283		Pb	12 12 49.6	-0.6
ELIS				IAmb_Lg		12 13 26.3	
	comp=Z,272nm,0.8s						
WTFS	Witchita Falls	2.29	217		Pn	12 12 50.1	+1.5
Z35A	Perchaven, San	2.30	189		Pn	12 12 49.5	+0.7
Z35A					Sn	12 13 19.6	+2.6
Z35A				IAmb_Lg		12 13 26.2	
	comp=Z,290nm,1.2s						
HHAR	Hobbs	2.43	73		Pn	12 12 51.4	+0.8
FW06	Azle	2.70	193	IAmb_Lg		12 13 36.1	
	comp=Z,138nm,0.7s						
SMWD	Samnorwood	2.85	261	IAmb_Lg		12 13 47.1	
	comp=Z,98nm,0.7s						
KSU1	Kansas State U	3.49	3	IAmb_Lg		12 14 07.0	
	comp=Z,128nm,0.8s						
WHAR	Wooly Hollow	3.71	94	IAmb_Lg		12 14 12.6	
	comp=Z,79nm,0.8s						
UALR	University of	3.75	101	IAmb_Lg		12 14 11.5	
	comp=Z,177nm,0.8s						
ABTX	Abilene, Hawle	3.79	219	IAmb_Lg		12 14 20.9	
	comp=Z,124nm,1.1s						
FCAR	Ozark Folk Cen	3.82	84	IAmb_Lg		12 14 12.1	
	comp=Z,91nm,0.8s						
DKNS	Dickens	3.90	241	IAmb_Lg		12 14 17.7	
	comp=Z,122nm,1.1s						
MGMO	Mountain Grove	3.98	66		Pn	12 13 13.3	+1.4
MGMO				IAmb_Lg		12 14 15.9	
	comp=Z,117nm,0.8s						
PH02	Texas Public H	4.19	269	IAmb_Lg		12 14 24.1	
	comp=Z,37nm,0.8s						
SN07	Snyder 07	4.21	235	IAmb_Lg		12 14 25.5	
	comp=Z,69nm,0.8s						
CCAR	Cane Creek	4.48	111	IAmb_Lg		12 14 42.8	
	comp=Z,150nm,0.9s						
R40A	Maddies Statio	4.52	52	IAmb_Lg		12 14 32.5	
	comp=Z,75nm,0.8s						
LCAR	Lake Charles	4.62	83	IAmb_Lg		12 14 36.8	
	comp=Z,72nm,0.8s						
POST	Post	4.63	238	IAmb_Lg		12 14 41.1	
	comp=Z,59nm,0.8s						
BRDY	Brady	4.68	204	IAmb_Lg		12 14 41.0	
	comp=Z,134nm,0.8s						

P38A	Dawn	4.78	32	IAmb_Lg		12 14 44.0	
	comp=Z,88nm,1.0s						
435B	Jarrell	4.86	188	IAmb_Lg		12 14 48.7	
	comp=Z,102nm,0.8s						
RTBA	Rita Blanca	4.87	282	IAmb_Lg		12 15 00.4	
	comp=Z,88nm,1.0s						
CCM	Cathedral Cave	5.09	60	IAmb_Lg		12 14 52.0	
	comp=Z,64nm,0.8s						
MSTX	Muleshoe	5.17	253	IAmb_Lg		12 15 02.1	
	comp=Z,74nm,1.1s						
143A	Socs Landing,	5.34	121	IAmb_Lg		12 15 05.8	
	comp=Z,50nm,0.7s						
P40A	Paris	5.45	43	IAmb_Lg		12 15 11.4	
	comp=Z,92nm,0.7s						
FVM	French Village	5.65	63	IAmb_Lg		12 15 17.6	
	comp=Z,41nm,0.7s						
KSCO	Kaye Shedlock’	5.75	308	IAmb_Lg		12 15 19.1	
	comp=Z,60nm,0.8s						
MLDN	Muldoon	5.81	182	IAmb_Lg		12 15 24.5	
	comp=Z,61nm,0.8s						
OZNA	Ozona	5.91	219	IAmb_Lg		12 15 29.5	
	comp=Z,72nm,0.8s						
CGM3	Cape Girardeau	6.01	72	IAmb_Lg		12 15 22.5	
	comp=Z,47nm,0.7s						
SLM	Saint Louis	6.06	58	IAmb_Lg		12 15 34.9	
	comp=Z,49nm,0.8s						
HALT	Halls	6.08	85	IAmb_Lg		12 15 39.0	
	comp=Z,90nm,0.8s						
VBMS	Vicksburg	6.23	121	IAmb_Lg		12 15 34.8	
	comp=Z,35nm,0.8s						
S44A	Carbondale	6.42	69	IAmb_Lg		12 15 37.3	
	comp=Z,64nm,0.8s						
MNHN	Monahans	6.54	231	IAmb_Lg		12 15 50.5	
	comp=Z,51nm,0.9s						
OGNE	Ogallala	6.73	324	IAmb_Lg		12 16 01.7	
	comp=Z,62nm,0.7s						
735A	Kenedy	6.79	187	IAmb_Lg		12 16 01.4	
	comp=Z,46nm,0.8s						
SCIA	State Center	6.89	23	IAmb_Lg		12 15 49.1	
	comp=Z,74nm,0.7s						
DRIO	Del Rio	6.95	209	IAmb_Lg		12 15 51.4	
	comp=Z,85nm,0.9s						
EF02	Christine	6.97	193	IAmb_Lg		12 16 08.2	
	comp=Z,73nm,0.9s						
Q44A	Meyer Farm, Va	7.03	60	IAmb_Lg		12 16 06.4	
	comp=Z,49nm,0.8s						
PLAL	Pickwick Lake	7.17	92	IAmb_Lg		12 15 58.4	
	comp=Z,50nm,1.1s						
SAND	Sanderson	7.19	220	IAmb_Lg		12 16 01.3	
	comp=Z,61nm,0.8s						
SDCO	Great Sand Dun	7.30	290	IAmb_Lg		12 16 15.3	
	comp=Z,46nm,1.0s						
K30B	Basset	7.38	344	IAmb_Lg		12 16 18.1	
	comp=Z,71nm,0.8s						
Q24A	Divide	7.44	299	IAmb_Lg		12 16 09.3	
	comp=Z,32nm,0.9s						
833A	Chaparral WMA,	7.59	197	IAmb_Lg		12 16 21.6	
	comp=Z,66nm,1.0s						
OLIL	Olney	7.62	63	IAmb_Lg		12 16 16.1	
	comp=Z,54nm,1.0s						
USIN	University of	7.71	70	IAmb_Lg		12 16 34.7	
	comp=Z,75nm,1.3s						
L40A	Anamosa	7.78	32	IAmb_Lg		12 16 23.2	
	comp=Z,58nm,0.7s						
ANMO	Albuquerque	7.92	268	Pn	Pn	12 14 06.3	+0.2
	comp=Z,0.1nm,0.3s,baz=156,slow=13,SNR=1.7						
ANMO				Pg	Pb	12 14 33.7	+5.4
	comp=Z,0.7nm,0.3s,baz=81,slow=15,SNR=9.6						
ANMO				Lg	Lg	12 16 19.6	
	comp=Z,1.0nm,0.3s,baz=176,slow=12,SNR=3.0						
TASM	ASL Pad, Albuq	7.92	268	IAmb_Lg		12 16 39.1	
	comp=Z,14nm,0.8s						
TASM	ASL Pad, Albuq	7.92	268	IAmb_Lg		12 16 39.1	
	comp=Z,14nm,0.8s						
TASM	ASL Pad, Albuq	7.92	268	IAmb_Lg		12 16 33.3	
	comp=Z,14nm,0.7s						
X48A	Hartselle	8.10	95	IAmb_Lg		12 16 26.7	
	comp=Z,28nm,1.0s						
ECSD	EROS Data Cent	8.12	1	IAmb_Lg		12 16 33.3	
	comp=Z,39nm,1.0s						
ISCO	Idaho Springs	8.13	304	IAmb_Lg		12 16 48.7	
	comp=Z,28nm,0.9s						
TXAR	Lajitas Array	8.52	225	Pn	Pn	12 14 14.2	-0.2
	comp=Z,0.6nm,0.4s,baz=54,slow=11,SNR=22						
TXAR				Pg	Pg	12 14 38.4	-16
	comp=Z,1.9nm,0.3s,baz=40,slow=19,SNR=14						
TXAR				Sn	Sn	12 15 48.5	-1.9
	comp=Z,0.8nm,0.3s,baz=66,slow=15,SNR=1.3						
TXAR				Lg	Lg	12 16 34.9	
	comp=Z,1.6nm,0.3s,baz=72,slow=17,SNR=6.0						
JFWS	Jewell Farm	8.89	33	IAmb_Lg		12 16 57.1	
	comp=Z,47nm,0.8s						
SUSD	Miller	8.98	350	IAmb_Lg		12 17 18.7	
	comp=Z,36nm,0.8s						
I40A	Norwalk	9.55	28	IAmb_Lg		12 17 25.4	
	comp=Z,30nm,0.7s						
TKL	Tuckaleechee C	10.61	86	Pn	Pn	12 14 42.2	-0.7
	comp=Z,0.1nm,0.3s,baz=279,slow=13,SNR=1.5						
TKL				Lg	Lg	12 17 39.5	
	comp=Z,0.8nm,0.3s,baz=270,slow=20,SNR=4.2						
	comp=Z,2.6nm,0.7s						
PDAR	Pinedale Array	12.19	310	Pn	Pn	12 15 03.7	-1.1
	comp=Z,0.4nm,0.4s,baz=123,slow=14,SNR=7.5						
PDAR				Pg		12 15 51.6	
	comp=Z,0.5nm,0.3s,baz=123,slow=12,SNR=6.0						
PDAR				Lg	Lg	12 18 28.6	
	comp=Z,0.2nm,0.3s,baz=118,slow=33,SNR=3.1						
ULM	Lac du Bonnet	14.65	2	Pn	Pn	12 15 31.3	-6.7
	comp=Z,0.3nm,0.3s,baz=172,slow=14,SNR=1.5						
ULM				Sn	Sn	12 18 05.5	-15
	comp=Z,0.2nm,0.3s,baz=108,slow=20,SNR=1.8						
ULM				Lg	Lg	12 19 39.2	
	comp=Z,0.3nm,0.3s,baz=160,slow=12,SNR=2.3						
	comp=Z,2.1nm,0.7s						

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*IDC **02** 12:15:28.1±1.3, 1°.55N×126°.39E, h0km, mb3.7/5, mbtmp3.7/6, ML3.4/1, Error ellipse: s-maj=113.8km s-min=18.3km az=69.0*

*DJA **02** 12:15:32.6±0.2, 2°N±2°×12°6E±°, h10km, M3.7/9, mb4.0/1, MLv3.6/9*

ISC 02 12:15:35.0±0.9**, 1°.53N**±0°.06×**126°.53E**±0°.04**, h47km, n14, σ1s.04**/19**, mb3.6**/5**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.12	132	P	Pn	12 15 54.3	-0.1
TNTI				S	Sn	12 16 08.5	-0.2
GAMI	Galela, Maluku	1.29	76	P	Pn	12 15 57.5	+0.9
GAMI				S	Sn	12 16 14.4	+1.6
MNI	Manado	1.69	267	P	Pn	12 16 02.2	0.0
MNI				S	Sn	12 16 22.7	0.0
SGSI	Sangihe	2.36	335	P	Pn	12 16 11.4	+0.1
SGSI				S	Sn	12 16 40.6	+1.5
SANI	Sanana	3.60	189	P	Pn	12 16 29.5	+1.2
GTOI	Gorontalo	3.63	256	P	Pn	12 16 29.7	+0.9
LUWI	Luwuk	4.55	236	P	Pn	12 16 43.5	+2.1
APSI	Ampana	5.45	244	P	Pn	12 16 54.2	+0.4
FITZ	Fitzroy Crossi	19.53	183	P	P	12 19 58.2	-0.5
	0.1nm,0.3s,baz=15,slow=12,SNR=1.7						
	1.2nm,0.7s						
WRA	Warramunga Arr	22.68	161	P	P	12 20 31.6	-1.0
	0.8nm,0.3s,baz=339,slow=11,SNR=6.2						
	0.8nm,0.3s						
ASAR	Alice Springs	26.05	164	P	P	12 21 03.7	-0.5
	0.6nm,0.4s,baz=338,slow=7.8,SNR=25						
ASAR				PcP	PcP	12 24 32.1	+0.7
	0.2nm,0.8s,baz=342,slow=2.3,SNR=0.8						
	0.6nm,0.4s						
MKAR	Makanchi Array	59.25	326	P	P	12 25 30.5	-1.2
	0.3nm,0.3s,baz=118,slow=7.3,SNR=6.6						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	63.48	328	P	P	12 25 59.4	-0.8
	0.6nm,0.5s,baz=128,slow=6.0,SNR=13						
	0.6nm,0.5s						
BVAR	Borovoye Array	69.05	328	P	P	12 26 35.0	-0.8
	0.4nm,0.5s,baz=134,slow=6.2,SNR=2.1						
	0.4nm,0.5s						

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*IDC **02** 12:17:24.3±0.8, 49°.51S×117°.37E, h0km, mb4.2/8, mbtmp4.3/9, ML2.9/1, MS3.8/22, Error ellipse: s-maj=36.5km s-min=16.6km az=107.0*

*NEIC **02** 12:17:26.3±1.0, 49°.49S±0°.08×117°.3E±0°.3, h10km±1km, mb4.3/15, Error ellipse: s-maj=29.7km s-min=13.0km az=92.0*

ISC 02 12:17:26.4±0.6**, 49°.53S**±0°.08×**117°.4E**±0°.2**, h12km, n48, σ1s.11**/29**, mb4.3**/14**, MS3.8**/21**, 2D, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	14.81	349	T	T	12 36 06.1	
	baz=171,slow=74,SNR=112						
H01W1	Cape Leeuwin H	14.82	350	T	T	12 36 04.4	
	baz=171,slow=74,SNR=96						
H01W3	Cape Leeuwin H	14.83	349	T	T	12 36 02.9	
	baz=171,slow=74,SNR=133						
NWAO	Narrogin (SRO)	16.59	360	Pn	Pn	12 21 19.9	+1.2
	2.1nm,0.3s,baz=180,slow=11,SNR=17						
NWAO				LR	LR	12 26 02.0	
	comp=Z,456nm,21.3s,baz=205,slow=31						
	19nm,0.6s						
CASY	Casey	17.17	189	Pn	P	12 21 26.1	-1.3
CASY				IAmb	IAmb	12 21 36.6	
	comp=Z,22nm,1.2s						
MORW	Morawa	20.46	357		P	12 22 05.2	+1.5
MORW				IAmb	IAmb	12 22 14.3	
	comp=Z,9.4nm,0.8s						
STKA	Stephens Creek	25.27	55	P	P	12 22 53.2	+0.8
	comp=Z,3.0nm,0.7s,baz=222,slow=6.5,SNR=2.9						
	comp=Z,3.0nm,0.7s						
INKA	Innaminka	28.18	48	P	P	12 23 18.4	-0.2
INKA				IAmb	IAmb	12 23 25.8	
	comp=Z,3.9nm,1.1s						
ASAR	Alice Springs	28.88	33	P	P	12 23 24.7	-0.3
	comp=Z,1.6nm,0.8s,baz=208,slow=9.0,SNR=14						
ASAR				PcP	PcP	12 26 32.7	-1.4
	comp=Z,0.4nm,0.8s,baz=165,slow=2.2,SNR=4.7						
ASAR				LR	LR	12 33 46.6	
	comp=Z,232nm,19.8s,baz=178,slow=34						
	comp=Z,1.6nm,0.8s						
AS31	Alice Springs	28.89	33	P	P	12 23 25.5	+0.5
FITZ	Fitzroy Crossi	32.05	15	P	P	12 23 53.0	+0.1
	comp=Z,3.8nm,0.9s,baz=187,slow=8.3,SNR=8.9						
FITZ				LR	LR	12 35 43.1	
	comp=Z,242nm,20.8s,baz=185,slow=34						
	comp=Z,3.8nm,0.9s						
MAW	Mawson	32.27	216	P	P	12 23 54.6	+0.2
	comp=Z,5.0nm,0.9s,baz=77,slow=14,SNR=6.1						
MAW				LR	LR	12 34 58.6	
	comp=Z,159nm,18.2s,baz=88,slow=33						
	comp=Z,5.0nm,0.9s						
WRA	Warramunga Arr	32.48	31	P	P	12 23 55.9	-0.8
	comp=Z,2.0nm,0.8s,baz=201,slow=8.6,SNR=7.1						
WRA				PcP	PcP	12 26 42.3	-1.2
	comp=Z,0.9nm,0.8s,baz=212,slow=2.7,SNR=4.9						
	comp=Z,2.0nm,0.8s						
WR8	Warramunga Arr	32.52	31	P	P	12 23 56.4	-0.7
WR8				IAmb	IAmb	12 24 11.1	
	comp=Z,5.7nm,1.1s						
WB0	Warramunga Arr	32.66	31	P	P	12 23 58.2	-0.1
WB0				IAmb	IAmb	12 24 06.5	
	comp=Z,6.8nm,1.2s						
VNDA	Vanda	32.69	164	P	P	12 23 58.7	+0.6
	comp=Z,1.8nm,0.8s,baz=284,slow=4.5,SNR=8.4						
VNDA				LR	LR	12 36 01.6	
	comp=Z,124nm,21.2s,baz=328,slow=34						
	comp=Z,1.8nm,0.8s						
VNDA	Vanda	32.69	164	IAmb	IAmb	12 24 06.9	
	comp=Z,3.6nm,0.9s						
BATI	Baumata	39.54	10	LR	LR	12 41 50.0	
	comp=Z,181nm,18.0s,baz=232,slow=37						
QSPA	South Pole Qui	40.60	180	P	P	12 25 08.2	+2.5
	comp=Z,2.1nm,0.6s,baz=327,slow=3.4,SNR=7.3						
QSPA				LR	LR	12 40 50.4	
	comp=Z,109nm,20.4s,baz=353,slow=35						
QSPA	South Pole Qui	40.60	180	P	P	12 25 08.2	+2.5
QSPA				IAmb	IAmb	12 25 17.0	
	comp=Z,9.0nm,1.2s						
COEN	Coen	41.28	40	P	P	12 25 12.0	+0.4
COEN				IAmb	IAmb	12 25 13.3	
	comp=Z,8.6nm,1.1s						
KAPI	Kappang	44.40	3	LR	LR	12 43 12.2	
	comp=Z,86nm,19.4s,baz=187,slow=35						
PMG	Port Moresby	47.05	42	LR	LR	12 45 13.3	
	comp=Z,76nm,18.2s,baz=164,slow=36						
TROLL	Troll, Antarti	50.52	201	⇓P	P	12 26 24.3	+0.3
	comp=Z,119nm,1.1s						
JAY	Jayapura	50.88	31	LR	LR	12 47 23.4	
	comp=Z,211nm,21.1s,baz=212,slow=35						
BELA	Belgrano 2	51.70	187	P	P	12 26 31.7	-0.9
BELA				IAmb	IAmb	12 26 42.5	
	comp=Z,7.9nm,1.2s						
SNAA	Sanae	51.99	200	⇓P	P	12 26 34.2	-0.8
	comp=Z,75nm,0.9s						
SNAA	Sanae	51.99	200	P	P	12 26 34.6	-0.4
	comp=Z,2.7nm,1.1s,baz=131,slow=11,SNR=4.3						
SNAA				LR	LR	12 47 11.8	
	comp=Z,213nm,20.1s,baz=191,slow=34						
	comp=Z,2.7nm,1.1s						
SNAA	Sanae	51.99	200	P	P	12 26 36.0	+1.0
PSI	Prapat	54.52	337	LR	LR	12 47 13.1	
	comp=Z,50nm,19.8s,baz=161,slow=33						
H08S2	Diego Garcia H	56.10	303	T	T	13 27 49.1	
	baz=147,slow=76,SNR=37						
H08S1	Diego Carcia H	56.11	303	T	T	13 27 50.5	
	baz=147,slow=76,SNR=33						
H08S3	Diego Garcia H	56.12	303	T	T	13 27 49.8	
	baz=147,slow=76,SNR=42						
DAV	Davao City (W)	56.81	10	LR	LR	12 51 59.7	
	comp=Z,60nm,19.0s,baz=182,slow=36						
PALK	Pallekele	64.98	319	LR	LR	12 49 49.2	
	comp=Z,58nm,21.2s,baz=126,slow=30						
PMSA	Palmer Station	66.03	179	LR	LR	12 56 14.6	
	comp=Z,120nm,18.7s,baz=232,slow=35						
GUMO	Guam	67.35	29	LR	LR	12 57 36.4	
	comp=Z,30nm,18.1s,baz=104,slow=36						
CMAR	Chiang Mai Arr	69.64	341	P	P	12 28 35.4	-0.1
	comp=Z,3.0nm,0.7s,baz=192,slow=5.6,SNR=23						
CMAR				LR	LR	12 55 23.1	
	comp=Z,17nm,21.6s,baz=170,slow=33						
	comp=Z,3.0nm,0.7s						
CMAR	Chiang Mai Arr	69.64	341	P	P	12 28 35.1	-0.4
LBTB	Lobatse	72.52	252	LR	LR	12 54 41.1	
	comp=Z,62nm,19.1s,baz=156,slow=31						
TSUM	Tsumeb	81.78	250	LR	LR	13 00 00.3	
	comp=Z,48nm,18.3s,baz=145,slow=31						
EVN	Everest	81.81	333	P	P	12 29 45.5	-0.3
PLCA	Paso Flores	89.85	174	LR	LR	13 08 09.8	
	comp=Z,21nm,18.9s,baz=190,slow=34						
SONM	Songino Array	97.45	353	LR	LR	13 17 47.5	
	comp=Z,31nm,18.3s,baz=348,slow=37						
AAK	Ala-Archa	99.19	329	LR	LR	13 10 38.0	
	comp=Z,33nm,19.8s,baz=188,slow=32						
TXAR	Lajitas Array	143.01	108	PKP	PKPdf	12 36 58.4	-1.6
	comp=Z,0.3nm,0.7s,baz=195,slow=5.7,SNR=4.0						
PDAR	Pinedale Array	147.22	84	PKPbc	PKPbc	12 37 07.9	-1.3
	comp=Z,1.0nm,0.9s,baz=236,slow=1.6,SNR=7.4						
YKA	Yellowknife Ar	149.10	45	PKPbc	PKPbc	12 37 12.4	-0.9
	comp=Z,1.3nm,0.7s,baz=284,slow=2.8,SNR=7.4						

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*JMA **02** 12:20:34.2±0.4, 32°N±4°×13°8E±°, h432km, MV3.2/23, FAR S OFF TOKAI DISTRICT*

*IDC **02** 12:20:37.4±0.8, 32°.40N×137°.58E, h394km±10km, mb2.8/9, mbtmp3.6/13, Error ellipse: s-maj=20.9km s-min=12.9km az=69.0*

ISC 02 12:20:37.4±0.8**, 32°.38N**±0°.10×**137°.62E**±0°.07**, h394km, n24, σ0s.96**/28**, mb3.1**/9**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TK02	Tokai 2	1.57	4	eP	Pn	12 21 31.9	+1.9
JHJ	Hachijo jima 2	1.97	67	P	Pn	12 21 34.2	+1.6
	55nm,0.3s,baz=323,slow=20,SNR=9.2						
JHJ				S	S	12 22 17.1	-0.1
	131nm,0.9s,baz=255,slow=20,SNR=1.3						
JHJ2	Mitsune	1.99	68	P	Pn	12 21 34.3	+1.6
JTNC	Tanabenakahech	2.21	311	P	Pn	12 21 34.6	+0.4
JAI	Aioi	3.01	299	P	Pn	12 21 40.7	+0.5
JOD2	Odawara 2	3.13	23	P	Pn	12 21 42.4	+1.2
JOD2				eS	S	12 22 33.5	+0.6
JMN	Monobe	3.42	294	P	Pn	12 21 44.4	+0.7
JWT	Wachi	3.44	328	eP	Pn	12 21 44.4	+0.6
BSO1	Boso 1	3.61	50	P	Pn	12 21 44.0	-0.8
BSO1				S	S	12 22 37.4	-2.1
JRY	Ryogami san	3.78	16	P	Pn	12 21 47.8	+0.8
JRY				eS	S	12 22 44.1	+0.6
JTO	Tosashimizu	4.09	278	P	Pn	12 21 50.2	+0.2
MJAR	Matsushiro Arr	4.18	7	P	Pn	12 21 50.6	-0.2
	5.9nm,0.7s,baz=192,slow=10,SNR=10.0						
MAT	Matsushiro	4.18	7	eP	Pn	12 21 51.3	+0.5
KSRS	Korea Array	9.43	305	P	P	12 22 50.0	+1.3
	1.7nm,0.6s,baz=119,slow=10,SNR=6.8						
ASAJ	Asahikawa	12.35	17	P	Pn	12 23 22.6	0.0
	3.1nm,0.4s,baz=251,slow=14,SNR=7.9						
SONM	Songino Array	28.20	312	P	P	12 25 55.4	-0.3
	0.3nm,0.4s,baz=120,slow=7.5,SNR=1.7						
	0.3nm,0.4s						
CMAR	Chiang Mai Arr	37.37	258	P	P	12 27 14.2	-0.3
	0.3nm,0.3s,baz=61,slow=8.7,SNR=1.2						
	0.3nm,0.3s						
ZALV	Zalesovo Beam	42.92	316	P	P	12 27 58.4	-0.6
	0.5nm,0.4s,baz=85,slow=8.3,SNR=3.3						
	0.5nm,0.4s						
MKAR	Makanchi Array	44.11	306	P	P	12 28 07.7	-0.8
	0.5nm,0.4s,baz=90,slow=8.4,SNR=7.6						
	0.5nm,0.4s						
KURBB	Kurchatov Arra	46.55	311	P	P	12 28 26.2	-1.1
	0.4nm,0.3s,baz=90,slow=9.1,SNR=10						
	0.4nm,0.3s						
BVAR	Borovoye Array	51.50	315	P	P	12 29 03.5	-0.8
	0.5nm,0.5s,baz=92,slow=7.5,SNR=3.0						
	0.5nm,0.5s						
WRA	Warramunga Arr	52.12	184	P	P	12 29 09.0	-0.1
	0.4nm,0.3s,baz=0.1,slow=7.7,SNR=26						
	0.4nm,0.3s						
ILAR	Eielson Array	55.09	30	P	P	12 29 29.9	0.0
	0.2nm,0.5s,baz=252,slow=5.7,SNR=7.1						
	0.2nm,0.5s						
ASAR	Alice Springs	55.84	184	P	P	12 29 35.8	+0.1
	0.1nm,0.4s,baz=355,slow=4.5,SNR=6.5						
	0.1nm,0.4s						

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*BER **02** 12:30:13.7±0.8, 67°.85N×33°.55E, h0km, ML1.5, Suspected explosion*

*KOLA **02** 12:30:16.0, 68°.12N×33°.23E, h0km, ML1.9, Error ellipse: s-maj=2.5km s-min=1.6km az=100.0, Olenegorsk City, Mines*

HEL 02 12:30:15.8±0.4**, 68°.13N×33°.16E, h0km, ML1.5, Suspected explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA0	Apatity Array	0.53	187	P	Pg	12 30 24.9	-1.1
APA0				S	Sg	12 30 31.6	-1.2
APA	Apatity	0.57	171	S	Sg	12 30 33.4	-0.8
LVZ	Lovozero	0.61	112	P	Pg	12 30 26.2	-1.2
LVZ				S	Sg	12 30 34.2	-1.1
TERR	Teriberka	1.29	33	P	Pg	12 30 38.6	-1.9
TERR				S	Sg	12 30 55.4	-1.8
VRF	Varrio	1.40	256	PG	Pg	12 30 40.7	-1.8
VRF				MSG		12 30 57.8	
	comp=Z,6.2nm,0.2s						
VRF				SG	Sg	12 30 59.1	-1.5
KVDA	Kovda	1.45	185	P	Pn	12 30 41.4	-1.9
KVDA				S	Sg	12 31 01.1	-1.2
RAJF	Raja-Jooseppi	1.83	283	PG	Pn	12 30 48.6	0.0
RAJF				SN	Sn	12 31 11.8	-0.6
OLKF	Oulanka, Finla	2.33	221	PB	Pn	12 30 56.0	+0.6
OLKF				MSG		12 31 24.7	
	comp=Z,1.5nm,0.2s						
OLKF				SG	Sb	12 31 27.6	-0.4
VADS	Vadso	2.42	328	P	Pn	12 30 56.8	+0.2
VADS				S	Sn	12 31 28.2	+1.5
VADS	Vadso	2.42	328	eP	Pn	12 30 56.5	0.0
VADS				eS	Sb	12 31 29.1	-1.2
VADS				IAML		12 31 32.6	
	comp=Z,4.6nm,0.4s						
KU6	Riekki	2.47	213	PB	Pn	12 30 58.4	+1.2
KU6				MSG		12 31 28.9	
	comp=Z,1.1nm,0.2s						
KU6				SG	Sb	12 31 31.2	-0.8
MSF	Maaselka	2.75	218	PB	Pn	12 31 03.3	+2.1
KEV	Kevo	2.76	309	eP	Pn	12 31 01.9	+0.7
KEV				eS	Sn	12 31 36.2	+1.1
KEV	Kevo	2.76	309	PB	Pn	12 31 01.9	+0.7
KEV				SB	Sn	12 31 36.2	+1.1
ARA0	ARCESS Array S	3.12	300	eP	Pn	12 31 05.7	-0.4
ARA0	ARCESS Array S	3.12	300	PN	Pn	12 31 06.5	+0.4
ARA0				SB	Sn	12 31 44.0	+0.1
ARCES	ARCESS Array B	3.12	300	P	Pn	12 31 05.9	-0.2
ARCES				S	Sn	12 31 43.0	-0.9
RNF	Rovaniemi	3.16	244	PN	Pn	12 31 06.4	-0.2
	baz=59						
RNF				SN	Sn	12 31 44.6	-0.3
RANF	Ranua	3.28	233	PN	Pn	12 31 07.7	-0.6
RANF				SG	Sb	12 31 54.4	-0.6
HEF	Hetta	3.54	279	eP	Pn	12 31 10.9	-1.1
HEF	Hetta	3.54	279	PN	Pn	12 31 11.4	-0.6
	baz=92						
KLF	Kolari	3.62	260	PN	Pn	12 31 13.3	+0.2
	baz=69						
KTK1	Kautokeino	3.75	288	PN	Pn	12 31 14.4	-0.4
KTK1				SN	Sn	12 31 59.5	-0.1
PAJU	Pajala	4.01	259	PN	Pn	12 31 17.8	-0.5
TOF	Tornio	4.02	243	SN	Sn	12 32 04.2	-2.0
RMF	Romuvaara	4.14	200	PN	Pn	12 31 19.7	-0.5
ERTU	Ertsjaerv	4.53	255	PN	Pn	12 31 24.6	-0.9

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*HEL **02** 12:31:31.9±0.4, 67°.78N×20°.10E, h0km, ML1.5, Suspected explosion*

UPP 02 12:31:29.4±0.3**, 67°.85N×20°.30E, h0km, ML2.2, Confirmed Induced event, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.11	8	P	Pg	12 31 31.7	+0.3
	baz=221						
KUA				S	Sg	12 31 33.0	+0.2
RATU	Laukkuluspa	0.27	265	P	Pg	12 31 34.6	+0.1
RATU				S	Sg	12 31 38.5	+0.5
KOVU	Salmi	0.38	352	S	Sg	12 31 42.2	+0.7
NIKU	Nikkaluokta	0.48	273	P	Pg	12 31 38.6	0.0
LANU	Lannavaara	0.67	72	PG	Pn	12 31 46.0	-0.2
LANU				SG	Sb	12 31 53.0	-0.9
KIF	Kilpisjarvi	1.18	9	PG	Pn	12 31 55.2	+2.1
KIF				SG	Sn	12 32 09.4	-0.3
KIF				MSG		12 32 11.1	
	comp=Z,5.4nm,0.2s						
PAJU	Pajala	1.37	126	PG	Pb	12 31 56.0	+0.2
	baz=308						
PAJU				SG	Sn	12 32 15.0	+0.5
HEF	Hetta	1.38	64	MSG		12 32 16.5	
	comp=Z,2.5nm,0.2s						
HEF				SN	Sn	12 32 19.0	+4.2
ERTU	Ertsjaerv	1.50	150	PG	Pg	12 31 58.6	+0.7
ERTU				SG	Sn	12 32 18.1	+0.5
KLF	Kolari	1.54	112	PN	Pg	12 32 01.3	+2.5
KLF				MSG		12 32 19.3	
	comp=Z,3.3nm,0.2s						
KLF				SN	Sg	12 32 23.6	+4.8
KTK1	Kautokeino	1.60	42	PG	Pg	12 32 02.4	+2.4
KTK1				SG	Sg	12 32 24.8	+4.2
TRO	Tromso	1.86	345	SG	Sg	12 32 30.8	+1.7
KALU	Kalix	2.33	147	PB	Pb	12 32 12.0	-0.3
KALU				SG	Sg	12 32 44.5	+0.2
TOF	Tornio	2.38	136	PB	Pb	12 32 12.9	-0.2
TOF				MSG		12 32 42.4	
	comp=Z,1.7nm,0.2s						
TOF				SG	Sg	12 32 45.1	-0.7
ARA0	ARCESS Array S	2.55	46	SB	Sg	12 32 49.8	-1.4
RNF	Rovaniemi	2.55	117	PB	Pb	12 32 16.7	+0.8
	baz=297						
RNF				SB	Sg	12 32 49.5	-1.7
RAJF	Raja-Jooseppi	3.06	74	PG	Pg	12 32 29.5	+1.5
RAJF				SB	Sg	12 33 05.4	-2.3
KEV	Kevo	3.10	49	SN	Sb	12 33 01.8	-1.8

HEL 02 12:31:59.5±0.1**, 63°.96N×28°.11E, h0km, ML1.5, Suspected explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIF	Nilsia	0.59	193	PG	Pg	12 32 10.4	-0.3
	baz=16						
NIF				MSG		12 32 18.2	
	comp=Z,6.7nm,0.2s						
NIF				SG	Sg	12 32 18.3	0.0
RMF	Romuvaara	0.84	71	PB	Pg	12 32 15.3	-0.3
RMF				SB	Sg	12 32 25.7	-0.9
RMF				MSG		12 32 25.7	

	comp=Z,4.5nm,0.2s						
OUL	**Oulu**	**1.48**	**321**	PN	Pn	12 32 26.8	-0.6
OUL				SN	Sg	12 32 46.8	-0.2
SUF	**Sumiainen**	**1.52**	**216**	PN	Pn	12 32 27.4	-0.6
SUF				MSG		12 32 45.4	
	comp=Z,1.6nm,0.2s						
SUF				SN	Sn	12 32 48.8	+0.3
OUF	**Merijarvi**	**1.53**	**287**	PN	Pn	12 32 27.4	-0.7
OUF				MSG		12 32 45.4	
	comp=Z,5.1nm,0.2s						
OUF				SN	Sn	12 32 48.6	0.0
OBF4	**Vikkela, Lumij**	**1.56**	**305**	PG	Pn	12 32 28.0	-0.5
	baz=119						
OBF4				MSG		12 32 46.4	
	comp=Z,4.1nm,0.2s						
OBF4				SN	Sn	12 32 49.4	+0.1
KU1	**Kurvinen**	**1.73**	**20**	PG	Pn	12 32 30.6	-0.2
KU2	**Taivalkoski**	**1.76**	**2**	PG	Pn	12 32 31.7	+0.5
KU2				SN	Sn	12 32 54.7	+0.4
OBF0	**Syolatti, Pyha**	**1.77**	**289**	PG	Pn	12 32 31.5	+0.1
OBF0				MSG		12 32 52.4	
	comp=Z,4.8nm,0.2s						
OBF0				SN	Sn	12 32 54.6	0.0
JOF	**Joensuu**	**1.78**	**124**	*e*P	Pn	12 32 32.1	+0.6
JOF	**Joensuu**	**1.78**	**124**	PG	Pn	12 32 31.5	0.0
	baz=312						
JOF				SN	Sn	12 32 55.2	+0.4
MSF	**Maaselka**	**2.00**	**11**	PG	Pn	12 32 35.2	+0.7
	baz=189						
MSF				SG	Sn	12 33 01.0	+0.8
RANF	**Ranua**	**2.14**	**345**	PG	Pb	12 32 38.2	-0.9
RANF				SG	Sb	12 33 05.7	-0.4
KU6	**Riekki**	**2.21**	**19**	PG	Pb	12 32 39.3	-1.0
KU6				MSG		12 33 04.8	
	comp=Z,1.6nm,0.2s						
KU6				SG	Sb	12 33 06.9	-1.3
KEF	**Keuruu**	**2.33**	**221**	*e*P	Pb	12 32 40.7	-1.5
KEF	**Keuruu**	**2.33**	**221**	PG	Pb	12 32 41.1	-1.1
KEF				MSG		12 33 08.2	
	comp=Z,3.5nm,0.2s						
KEF				SG	Sb	12 33 11.4	-0.1
OLKF	**Oulanka, Finla**	**2.43**	**12**	MSG		12 33 11.3	
	comp=Z,2.0nm,0.2s						
OLKF				SG	Sb	12 33 13.9	-0.7
RUF	**Ruokolahti**	**2.57**	**171**	PG	Pb	12 32 45.0	-1.5
	baz=351						
RUF				MSG		12 33 15.4	
	comp=Z,2.1nm,0.2s						
RUF				SG	Sb	12 33 19.6	+1.0
VAF	**Ylistaro**	**2.60**	**252**	*e*P	Pb	12 32 45.2	-1.8
VAF	**Ylistaro**	**2.60**	**252**	PG	Pb	12 32 45.4	-1.6
	baz=69						
VAF				MSG		12 33 16.5	
	comp=Z,2.3nm,0.2s						
VAF				SG	Sb	12 33 19.0	-0.4
FIA0	**FINESS Array S**	**2.69**	**201**	PG	Pb	12 32 46.5	-2.0
	baz=21						
FIA0				MSG		12 33 18.8	
	comp=Z,1.3nm,0.2s						
FIA0				SG	Sb	12 33 21.0	-1.0
BURU	**Burvik**	**3.00**	**285**	PG	Pb	12 32 53.2	-0.5
RAF	**Rauma**	**4.16**	**228**	*e*P	Pn	12 33 05.4	+1.3
HEMU	**Hemsoen**	**4.72**	**259**	PN	Pn	12 33 12.2	+0.4
	baz=68						

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*IDC **02** 12:51:18.8±7.8, 32°.94N×47°.07E, h0^{km}, mb3.6/6, mbtmp3.6/6, MS2.8/1, Error ellipse: s-maj=160.5km s-min=31.0km az=4.0*

*ISN **02** 12:51:23.4±0.9, 33°.49N×47°.18E, h9^{km}±4^{km}, ML3.2*

*TEH **02** 12:51:24.8, 33°.55N×47°.16E, h8^{km}±35^{km}*

ISC 02 12:51:26.0±0.8, **33°.54N**±0°.04×**47°.12E**±0°.03, **h17^{km}, n33, σ1^{s}.47**/37, **mb3.5**/6, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCHF	**Cheshme Sefid,**	**0.73**	**355**	Pg	**Pb**	**12 51 39.0**	**-1.4**
KCHF				Sg	**Sb**	**12 51 49.5**	**-0.8**
ILBA	**Ilam Banvizeh**	**0.76**	**276**	Pg	**Pb**	**12 51 40.2**	**-0.7**
IGHG	**Ghaleghazi**	**0.91**	**330**	Pg	**Pb**	**12 51 42.6**	**-0.8**
IDOB	**Doab**	**0.92**	**74**	Pg	**Pb**	**12 51 42.2**	**-1.4**
IBDR	**Badra**	**1.08**	**247**	*e*Pg	**Pb**	**12 51 45.5**	**-0.8**
IBDR				*e*Sg	**Sb**	**12 52 00.0**	**-0.1**
IBDR				AML	AML	12 52 06.7	
	comp=N,365nm,0.7s						
IBDR				AML	AML	12 52 08.6	
	comp=E,776nm,0.6s						
IBZA	**Bozab**	**1.11**	**34**	Pg	**Pn**	**12 51 45.6**	**-1.4**
GLG1	**Gilan-e-Gharb**	**1.16**	**300**	Pg	**Pn**	**12 51 48.1**	**+0.6**
IDHR	**Dehrash**	**1.30**	**332**	Pg	**Pn**	**12 51 50.4**	**+0.7**
SNQR	**Sonqor, Kerman**	**1.38**	**18**	Pg	**Pn**	**12 51 51.4**	**+0.7**
RAFI	**Al-Rafai**	**2.00**	**205**	*e*Pn	**Pn**	**12 51 59.0**	**0.0**
RAFI				*e*Sn	**Sb**	**12 52 25.0**	**-1.6**
HAGD	**Aghdareh**	**2.11**	**52**	Pn	**Pn**	**12 52 02.4**	**+1.7**
BHD	**Baghdad**	**2.31**	**264**	*e*Pn	**Pn**	**12 52 04.0**	**+0.8**
BHD				*e*Sn	**Sn**	**12 52 34.0**	**+2.8**
IKRK	**Kirkuk**	**2.95**	**310**	*e*Pn	**Pn**	**12 52 13.0**	**+0.9**
IKRK				*e*Sn	**Sn**	**12 52 50.0**	**+2.9**
QABG	**Abgarm-Qazvin**	**2.97**	**43**	Pn	**Pn**	**12 52 14.2**	**+1.7**
ZNGN	**Zangian**	**3.45**	**113**	Pn	**Pn**	**12 52 20.7**	**+1.4**
IQOM	**Qom**	**3.52**	**67**	Pn	**Pn**	**12 52 21.7**	**+1.5**
QAMS	**Qamsar**	**3.58**	**86**	Pn	**Pn**	**12 52 22.8**	**+1.9**
IKLH	**Kolahrood**	**3.74**	**92**	Pn	**Pn**	**12 52 24.8**	**+1.6**
IVRN	**Varamin**	**4.08**	**68**	Pn	**Pn**	**12 52 29.7**	**+2.0**
KRSH	**Karshahi**	**4.20**	**83**	Pn	**Pn**	**12 52 31.1**	**+1.6**
ISFB	**Sefidab**	**4.33**	**78**	Pn	**Pn**	**12 52 32.7**	**+1.5**
IZEF	**Zefreh**	**4.42**	**97**	Pn	**Pn**	**12 52 33.9**	**+1.4**
IDMV	**Damavand**	**4.53**	**62**	Pn	**Pn**	**12 52 36.0**	**+1.9**
KLNJ	**Kolanjah**	**4.55**	**122**	Pn	**Pn**	**12 52 35.4**	**+0.9**
IRAM	**Ramesheh**	**4.76**	**110**	Pn	**Pn**	**12 52 38.7**	**+1.5**
ANAR	**Anarak**	**5.54**	**92**	Pn	**Pn**	**12 52 48.8**	**+0.9**
EIL	**Elat**	**11.07**	**253**	LR	LR	12 59 29.3	
	comp=E,47nm,18.5s,baz=70,slow=45						
AKASG	**Malin Array Be**	**21.59**	**328**	P	**P**	**12 56 15.0**	**+0.2**
	comp=E,0.3nm,0.4s,baz=136,slow=9.2,SNR=3.3						
	comp=E,0.3nm,0.4s						
BVAR	**Borovoye Array**	**25.61**	**34**	P	**P**	**12 56 55.1**	**+0.8**
	comp=E,1.7nm,0.9s,baz=216,slow=7.3,SNR=5.0						
	comp=E,1.7nm,0.9s						
KURBB	**Kurchatov Arra**	**28.60**	**44**	P	**P**	**12 57 21.5**	**+0.4**
	comp=E,0.5nm,0.6s,baz=248,slow=9.2,SNR=4.3						
	comp=E,0.5nm,0.6s						
MKAR	**Makanchi Array**	**29.70**	**53**	P	**P**	**12 57 29.9**	**-1.1**
	comp=E,0.5nm,0.9s,baz=251,slow=10,SNR=1.5						
	comp=E,0.5nm,0.9s						
ZALV	**Zalesovo Beam**	**33.47**	**41**	P	**P**	**12 58 01.8**	**-2.1**
	comp=E,0.3nm,0.4s,baz=248,slow=7.6,SNR=1.8						
	comp=E,0.3nm,0.4s						
EKA	**Eskdalemuir Ar**	**40.86**	**318**	P	**P**	**12 59 05.6**	**-1.1**
	comp=E,1.6nm,0.7s,baz=100,slow=7.7,SNR=4.4						
	comp=E,1.6nm,0.7s						

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*SOME **02** 13:13:20.7, 42°.32N×84°.33E, h10^{km}*

*NNC **02** 13:13:28.7±4.1, 42°.53N×83°.99E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=32.1km s-min=14.6km az=134.0*

ISC 02 13:13:14.7±3.9, **42°.1N**±0°.2×**84°.5E**±0°.1, **h10^{km}, n8, σ1^{s}.43**/13, **2C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**3.34**	**295**	*e*P	**Pb**	**13 14 16.2**	**+2.0**
	2.4nm,0.3s						
KTMS				*e*S	**Sb**	**13 14 56.6**	**+1.7**
	11nm,0.4s						
SHLS	**Shalkode**	**3.87**	**287**	*e*P	**Pb**	**13 14 22.4**	**-0.7**
	5.3nm,0.3s						
SHLS				*e*S	**Sb**	**13 15 07.1**	**-3.0**
	27nm,0.3s						
PDGK	**Podgornoye**	**3.90**	**290**	⇓Pg	**Pg**	**13 14 30.5**	**+1.1**
	3.2nm,0.6s						
PDGK				⇓Lg	Lg	13 15 17.2	
	18nm,0.6s						
UZB	**Uzynbulak**	**4.18**	**286**	*e*P	**Pg**	**13 14 34.5**	**-0.3**
	4.9nm,0.7s						
UZB				*e*S	**Sg**	**13 15 27.6**	**-1.3**
	9.9nm,0.5s						
MK31	**Makanchi Array**	**4.95**	**342**	⇑Pg	**Pg**	**13 14 49.9**	**+0.4**
	1.5nm,0.4s,baz=156,slow=16,SNR=19						
MK31				⇓Lg	Lg	13 15 47.7	
	6.4nm,0.5s,baz=157,slow=29,SNR=6.1						
MAKZ	**Makanchi**	**5.04**	**340**	⇑Pg	**Pg**	**13 14 51.5**	**+0.3**
	7.3nm,0.9s						
MAKZ				⇓Lg	Lg	13 15 52.8	
	9.0nm,0.9s						
ZSN	**Zaisan**	**5.35**	**3**	*e*P	**Pg**	**13 14 56.9**	**-0.3**
	2.4nm,0.3s						
ZSN				*e*S	**Sg**	**13 16 05.8**	**-0.7**
	6.7nm,0.3s						
KOTS	**Kotyrbulak**	**5.57**	**284**	*e*P	**Pg**	**13 15 01.3**	**0.0**
	1.9nm,0.4s						
KOTS				*e*S	**Sg**	**13 16 13.8**	**+0.3**
	12nm,0.8s						

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*IDC **02** 13:40:47.4±1.0, 1°.31N×124°.50E, h0^{km}, mb4.1/7, mbtmp4.0/8, ML4.0/1, Error ellipse: s-maj=102.9km s-min=15.4km az=67.0*

*NEIC **02** 13:41:14.1±1.9, 0°.64N±0°.09×123°.58E±0°.08, h242^{km}±8^{km}, mb4.3/23, Error ellipse: s-maj=13.7km s-min=11.5km az=202.0*

*DJA **02** 13:41:17.4±0.5, 0°N±4°×12°4E±°, h218^{km}±6^{km}, M4.0/12, mB4.3/1, mb3.6/2, MLv4.1/12, Mw(mB)3.4/1*

ISC 02 13:41:15.0±0.5, **0°.54N**±0°.06×**123°.53E**±0°.06, **h264^{km}, n45, σ1^{s}.66**/48, **mb4.1**/18, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**1.59**	**268**	P	**Pn**	**13 41 54.3**	**-1.0**
MRSI				S	**S**	**13 42 23.2**	**-3.9**
LUWI	**Luwuk**	**1.75**	**206**		**Pn**	**13 41 54.9**	**-1.7**
LUWI				Sn	**S**	**13 42 24.2**	**-5.2**
LUWI	**Luwuk**	**1.75**	**206**	P	**Pn**	**13 41 54.8**	**-1.7**
LUWI				S	**S**	**13 42 24.3**	**-5.1**
APSI	**Ampana**	**2.37**	**233**	P	**Pn**	**13 42 01.5**	**-0.5**
TOLI2	**Tolitoli**	**2.81**	**282**		**Pn**	**13 42 06.0**	**-0.3**
SANI	**Sanana**	**3.56**	**136**	P	**Pn**	**13 42 11.6**	**-2.8**
TNTI	**Ternate**	**3.84**	**87**		**Pn**	**13 42 16.3**	**-1.3**
TNTI	**Ternate**	**3.84**	**87**	P	**Pn**	**13 42 16.7**	**-0.9**
TTSI	**Tana Toraja**	**5.14**	**226**	P	**Pn**	**13 42 34.5**	**+1.5**
NLAI	**Namlea**	**5.18**	**137**	P	**Pn**	**13 42 34.5**	**+1.1**
	16nm,0.9s						
SBUM	**Sibu**	**11.47**	**280**	P	**P**	**13 43 56.3**	**+1.4**
SMRI	**Semarang**	**15.08**	**240**	P	**Pn**	**13 44 36.7**	**+1.0**
MTN	**Manton Dam**	**15.29**	**151**		**Pn**	**13 44 38.4**	**+0.2**
MTN				IAmb	IAmb	13 44 39.5	
	comp=Z,11nm,0.7s						
KNRA	**Kununurra**	**16.92**	**162**	P	**Pn**	**13 44 56.5**	**-0.8**
KNRA				IAmb	IAmb	13 44 58.5	
	comp=Z,12nm,0.6s						
FITZ	**Fitzroy Crossi**	**18.64**	**174**	P	**P**	**13 45 13.9**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=355,slow=8.4,SNR=16						
	comp=Z,0.9nm,0.3s						
FITZ	**Fitzroy Crossi**	**18.64**	**174**	P	**P**	**13 45 13.9**	**+0.2**
TWG	**Pinlang**	**22.27**	**354**	P	**P**	**13 45 49.0**	**-1.4**
TWG				IAmb	IAmb	13 45 58.1	
	comp=Z,19nm,0.9s						
WB0	**Warramunga Arr**	**22.82**	**153**	P	**P**	**13 45 55.9**	**+0.5**
WB0				IAmb	IAmb	13 45 57.4	
	comp=Z,6.1nm,1.0s						
WRA	**Warramunga Arr**	**22.95**	**153**	P	**P**	**13 45 57.5**	**+0.9**
	comp=Z,3.0nm,0.4s,baz=337,slow=10,SNR=98						
	comp=Z,3.0nm,0.4s						
WRA	**Warramunga Arr**	**22.95**	**153**	P	**P**	**13 45 55.8**	**-0.8**
WR8	**Warramunga Arr**	**23.03**	**153**	P	**P**	**13 45 58.0**	**+0.6**
WR8				IAmb	IAmb	13 45 59.7	
	comp=Z,7.2nm,0.7s						
COEN	**Coen**	**24.21**	**127**	P	**P**	**13 46 08.6**	**+0.5**
COEN				IAmb	IAmb	13 46 33.8	
	comp=Z,9.0nm,1.3s						
AS31	**Alice Springs**	**26.09**	**158**	P	**P**	**13 46 24.1**	**-0.8**
ASAR	**Alice Springs**	**26.09**	**158**	P	**P**	**13 46 26.2**	**+1.3**
	comp=Z,0.7nm,0.4s,baz=333,slow=8.5,SNR=22						
	comp=Z,0.7nm,0.4s						
ASAR	**Alice Springs**	**26.09**	**158**	P	**P**	**13 46 24.2**	**-0.8**
FORT	**Forrest**	**31.44**	**173**	P	**P**	**13 47 13.3**	**+1.3**
FORT				IAmb	IAmb	13 47 29.6	
	comp=Z,11nm,1.1s						
INKA	**Innaminka**	**32.62**	**151**	P	**P**	**13 47 24.1**	**+1.8**
INKA				IAmb	IAmb	13 47 46.1	
	comp=Z,7.1nm,1.4s						
BBOO	**Buckleboo**	**35.22**	**162**	P	**P**	**13 47 45.5**	**+0.9**
STKA	**Stephens Creek**	**36.50**	**154**	P	**P**	**13 47 55.8**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=333,slow=11,SNR=3.5						
	comp=Z,1.8nm,0.6s						
STKA	**Stephens Creek**	**36.50**	**154**	P	**P**	**13 47 55.8**	**+0.4**
CAN	**Canberra**	**42.87**	**149**	P	**P**	**13 48 49.9**	**+2.1**
EVN	**Everest**	**44.48**	**311**	P	**P**	**13 48 59.8**	**-1.6**
EVN				IAmb	IAmb	13 49 04.5	
	comp=Z,2.4nm,0.6s						
SONM	**Songino Array**	**49.40**	**345**	P	**P**	**13 49 36.6**	**-1.7**
	comp=Z,0.6nm,0.6s,baz=157,slow=7.8,SNR=3.7						
	comp=Z,0.6nm,0.6s						
SONM	**Songino Array**	**49.40**	**345**	P	**P**	**13 49 38.7**	**+0.3**
MKAR	**Makanchi Array**	**58.44**	**328**	P	**P**	**13 50 44.3**	**+0.9**
	comp=Z,1.2nm,0.4s,baz=122,slow=7.7,SNR=19						
	comp=Z,1.2nm,0.4s						
MKAR	**Makanchi Array**	**58.44**	**328**	P	**P**	**13 50 43.9**	**+0.5**
BKZ	**Black Stump Fm**	**62.46**	**136**	P	**P**	**13 51 12.3**	**+1.6**
KURBB	**Kurchatov Arra**	**62.77**	**330**	P	**P**	**13 51 13.1**	**+0.7**
	comp=Z,1.7nm,0.2s,baz=132,slow=5.7,SNR=9.0						
	comp=Z,1.7nm,0.2s						
KURK	**Kurchatov**	**62.78**	**330**	P	**P**	**13 51 12.9**	**+0.5**
KURK				IAmb	IAmb	13 51 15.0	
	comp=Z,5.8nm,0.6s						
BVAR	**Borovoye Array**	**68.30**	**329**	P	**P**	**13 51 49.0**	**+1.3**
	comp=Z,1.0nm,0.7s,baz=114,slow=7.2,SNR=4.1						
	comp=Z,1.0nm,0.7s						
TIXI	**Tiksi**	**71.08**	**2**	P	**P**	**13 52 05.0**	**+0.8**
TIXI				IAmb	IAmb	13 52 05.8	
	comp=Z,3.5nm,1.1s						
AB31	**Akbulak array**	**72.63**	**322**	P	**P**	**13 52 13.8**	**0.0**
ABKAR	**Akbulak array**	**72.63**	**322**	P	**P**	**13 52 13.8**	**0.0**
L16K	**Owhat River**	**83.37**	**28**	P	**P**	**13 53 12.7**	**+0.3**
L16K				IAmb	IAmb	13 53 53.5	
	comp=Z,11nm,1.5s						
H17K	**Granite Mounta**	**83.83**	**25**	P	**P**	**13 53 15.2**	**+0.5**
H17K				IAmb	IAmb	13 53 46.2	
	comp=Z,3.4nm,1.4s						

SJA 02 13:45:35.2±0.8, **31°.53S**×**69°.38W, h125^{km}**±2^{km}, **ML3.5, MW3.5, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTLS	**Leoncito**	**0.28**	**165**	*e*P	Pn	13 45 53.2	+0.2
RTLS				*e*S	Sn	13 46 04.7	-1.9
ZON	**Zonda**	**0.60**	**92**	*e*P	Pn	13 45 55.0	+0.6
ZON				*e*S	Sn	13 46 09.3	+0.4
ZON				IAML		13 46 10.1	
	comp=Z,1μm,0.2s						
SJA	**San Juan**	**0.70**	**90**	*e*P	Pn	13 45 56.2	+1.1
SJA				*e*S	Sn	13 46 11.5	+1.4
SJA				IAML		13 46 12.3	
	comp=Z,1μm,0.2s						
RTLL	**Cerro Villicun**	**0.80**	**76**	*e*P	Pn	13 45 56.4	+0.5
RTLL				*e*S	Sn	13 46 12.1	+0.5
RTLL				IAML		13 46 12.8	
	comp=Z,886nm,0.3s						
ACCO	**Cerro Coronel**	**0.98**	**16**	*e*P	Pn	13 45 58.5	+0.7
ACCO				*e*S	Sn	13 46 16.6	+1.7
CFA	**Coronel Fontan**	**0.98**	**95**	*e*P	Pn	13 45 58.2	+0.7
CFA				*e*S	Sn	13 46 15.1	+0.7
AROD	**Rodeo**	**1.36**	**357**	*e*P	Pn	13 46 03.0	+1.2
AROD				*e*S	Sn	13 46 23.6	+1.8
ARCO	**CERRO ARCO**	**1.36**	**164**	*e*P	Pn	13 46 02.8	+1.2
ARCO				*e*S	Sn	13 46 22.9	+1.2
ARCO				IAML		13 46 25.8	
	comp=Z,1μm,0.3s						
ACDV	**Cuesta del Vie**	**1.37**	**10**	*e*P	Pn	13 46 02.9	+1.2
ACDV				*e*S	Sn	13 46 18.1	-3.7
CO02	**Combarbal**	**1.42**	**283**	*e*P	Pn	13 46 01.6	-0.6
CO02				*e*S	Sn	13 46 22.1	-0.6
CO02				IAML		13 46 23.8	
	comp=Z,941nm,0.3s						
VA03	**San Esteban**	**1.58**	**219**	*e*P	Pn	13 46 04.7	+0.7
VA03				*e*S	Sn	13 46 26.8	+0.9
VA03				IAML		13 46 30.1	
	comp=Z,381nm,0.3s						
AAGR	**Agrelo**	**1.62**	**163**	*e*P	Pn	13 46 05.7	+1.3
AAGR				*e*S	Sn	13 46 28.2	+1.4
AAGR				IAML		13 46 29.4	
	comp=Z,274nm,0.2s						
CO01	**Juntas del Tor**	**1.66**	**338**	*e*P	Pn	13 46 06.6	+1.5
CO01				IAML		13 46 33.0	
	comp=Z,154nm,0.3s						
GO04	**Tololo Observa**	**1.82**	**318**	*e*P	Pn	13 46 06.7	-0.2
GO04				*e*S	Sn	13 46 30.9	-0.2
GO04				IAML		13 46 35.0	
	comp=Z,1μm,0.6s						
AVFE	**Valle Fertil**	**1.87**	**63**	*e*P	Pn	13 46 08.2	+0.9
AVFE				*e*S	Sn	13 46 33.0	+1.2
AVFE				IAML		13 46 33.7	
	comp=Z,287nm,0.3s						
PEL	**Peldehue**	**1.95**	**214**	*e*P	Pn	13 46 08.8	+0.4
PEL				*e*S	Sn	13 46 34.1	+0.4
PEL				IAML		13 46 34.5	
	comp=Z,218nm,1.0s						
MT04	**Ro Olivares**	**1.98**	**199**	*e*P	Pn	13 46 10.0	+1.1
MT04				*e*S	Sn	13 46 35.1	+0.5
MT08	**Bocatoma Ro**	**1.98**	**196**	*e*P	Pn	13 46 10.7	+1.7
MT08				*e*S	Sn	13 46 41.2	+6.5
ROC1	**El Roble**	**2.00**	**223**	*e*P	Pn	13 46 08.8	-0.4
ROC1				*e*S	Sn	13 46 34.6	-0.5
AVIZ	**Vizcacheras**	**2.07**	**160**	*e*P	Pn	13 46 11.5	+1.6
AGUA	**GUANDACOL**	**2.17**	**21**	*e*P	Pn	13 46 13.0	+1.8
AGUA				IAML		13 46 47.9	
	comp=Z,174nm,0.2s						
MT03	**Universidad Ad**	**2.18**	**206**	*e*P	Pn	13 46 12.2	+1.0
MT03				*e*S	Sn	13 46 40.6	+1.8
MT03				IAML		13 46 42.0	
	comp=Z,305nm,0.3s						
MT05	**Renca**	**2.18**	**211**	*e*P	Pn	13 46 12.0	+0.8
MT05				*e*S	Sn	13 46 39.9	+1.0
MT05				IAML		13 46 40.9	
	comp=Z,289nm,0.9s						
MT02	**Curacav**	**2.28**	**220**	*e*P	Pn	13 46 11.8	-0.5
MT02				*e*S	Sn	13 46 39.9	-0.9
MT02				IAML		13 46 44.8	
	comp=Z,144nm,0.5s						
MT13	**San Alfonso**	**2.34**	**199**	*e*P	Pn	13 46 14.6	+1.4
MT13				*e*S	Sn	13 46 41.3	-1.1
MT13				IAML		13 46 47.1	
	comp=Z,102nm,0.4s						
ACHE	**Chepes**	**2.35**	**82**	*e*P	Pn	13 46 14.6	+1.1
ACHE				*e*S	Sn	13 46 44.2	+1.4
LMEL	**Las Melosas**	**2.42**	**196**	*e*P	Pn	13 46 15.3	+1.1
LMEL				*e*S	Sn	13 46 49.2	+5.0
LMEL				*e*S		13 46 51.4	
LMEL				IAML		13 46 53.0	
	comp=Z,86nm,0.3s						
VA01	**Torpederas**	**2.43**	**232**	*e*P	Pn	13 46 13.6	-0.7
VA01				*e*S	Sn	13 46 43.5	-0.8
VA01				IAML		13 46 50.9	
	comp=Z,80nm,0.5s						
APLL	**PUNTA DE LOS L**	**2.70**	**66**	*e*P	Pn	13 46 18.7	+0.9
APLL				*e*S	Sn	13 46 51.4	+0.9
APLL				IAML		13 46 52.9	
	comp=Z,201nm,0.3s						
LCO	**Las Campanas**	**2.76**	**335**	*e*P	Pn	13 46 18.9	+0.2
LCO				*e*S	Sn	13 46 51.2	-1.0
LCO				IAML		13 46 52.2	
	comp=Z,630nm,0.3s						
AC05	**El Transito**	**2.79**	**344**	*e*P	Pn	13 46 20.4	+1.4
AC05				*e*S	Sn	13 46 53.9	+1.0
AC05				IAML		13 46 54.8	
	comp=Z,100nm,0.2s						
MT01	**Popeta**	**2.81**	**214**	*e*P	Pn	13 46 18.1	-1.1
MT01				*e*S	Sn	13 46 51.5	-1.6
MT01				IAML		13 46 57.5	
	comp=Z,66nm,0.8s						
VCA	**Vinchina**	**2.96**	**20**	*e*P	Pn	13 46 23.0	+1.6
VCA				*e*S	Sn	13 47 00.6	+3.8
VCA				IAML		13 47 07.9	
	comp=Z,70nm,0.2s						
ACLC	**CERRO LA CRUZ**	**2.96**	**46**	*e*P	Pn	13 46 22.5	+1.1
ACLC				*e*S	Sn	13 46 58.1	+1.1
ACLC				IAML		13 46 59.5	
	comp=Z,95nm,0.2s						
BO01	**Tunca**	**3.19**	**206**	*e*P	Pn	13 46 23.3	-0.8
BO01				*e*S	Sn	13 47 01.3	-0.7
MRA	**San Martin**	**3.24**	**107**	*e*P	Pn	13 46 25.9	+1.0
MRA				*e*S	Sn	13 47 03.2	0.0
MRA				IAML		13 47 08.2	
	comp=Z,104nm,0.3s						
RFA	**San Rafael**	**3.32**	**167**	*e*P	Pn	13 46 26.5	+0.6
RFA				*e*S	Sn	13 47 04.7	-0.5
RFA				IAML		13 47 05.5	
	comp=Z,90nm,0.7s						
BO02	**Sierra Bellavi**	**3.46**	**199**	*e*P	Pn	13 46 27.8	+0.1
BO02				*e*S	Sn	13 47 09.9	+1.5
BO02				IAML		13 47 13.8	
	comp=Z,69nm,0.5s						
AC04	**Llanos de Chal**	**3.62**	**336**	*e*P	Pn	13 46 29.8	-0.1
AC04				*e*S	Sn	13 47 03.8	-8.3
AC04				IAML		13 47 32.4	
	comp=Z,51nm,0.5s						
TINO	**Tinogasta**	**3.80**	**25**	*e*P	Pn	13 46 33.7	+1.4
TINO				*e*S	Sn	13 46 59.1	-17
TCA	**Tanti**	**4.10**	**89**	*e*P	Pn	13 46 36.8	+0.6
TCA				*e*S	Sn	13 47 22.5	-1.0
TCA				IAML		13 47 23.8	
	comp=Z,65nm,0.9s						
AC02	**Maricunga**	**4.68**	**3**	*e*P	Pn	13 46 47.0	+2.6
AC02				*e*S	Sn	13 47 37.7	-0.4

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*OSPL **02** 13:53:55.7±2.1, 18°.47N×69°.06W, h119^{km}±18^{km}, ML2.9, Presumed earthquake*

*SDD **02** 13:53:56.2±2.3, 18°.65N×69°.07W, h112^{km}±7^{km}, MD3.6, ML3.1, MW3.4, Presumed earthquake*

ISC 02 13:53:52.6±1.3, **18°.63N**±0°.07×**69°.09W**±0°.03, **h126^{km}**±7^{km}, **n35, σ1^{s}.68**/62, **Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPM1	**San Pedro UASD**	**0.28**	**229**	*e*Pg	**Pn**	**13 54 09.9**	**-0.2**
SPM1				*e*Sg	**Sn**	**13 54 22.5**	**-0.9**
SPM1				IAML		13 54 38.5	
	comp=N,889nm,2.6s						
HATOM	**Hato Mayor del**	**0.32**	**299**	*e*Pg	**Pn**	**13 54 10.0**	**-0.3**
HATOM				*e*Sg	**Sn**	**13 54 22.3**	**-1.5**
HATOM				IAML		13 54 22.8	
	comp=N,829nm,0.3s						
MIDR	**Miches**	**0.35**	**6**	*e*Pg	**Pn**	**13 54 11.0**	**+0.5**
MIDR				*e*Sg	**Sn**	**13 54 23.8**	**-0.2**
MIDR				IAML		13 54 24.6	
	comp=N,678nm,0.2s						
HIDR	**Higuey Centro**	**0.35**	**96**	*e*Pg	**Pn**	**13 54 10.5**	**0.0**
HIDR				*e*Sg	**Sn**	**13 54 22.4**	**-1.5**
HIDR				IAML		13 54 23.4	
	comp=N,3μm,0.2s						
SMDR	**Samana, DR**	**0.66**	**352**	*e*Pg	**Pn**	**13 54 12.9**	**+0.6**
SMDR				IAML		13 54 32.9	
	comp=N,529nm,0.2s						
SDD	**Santo Domingo**	**0.80**	**258**	*e*Pg	**Pn**	**13 54 14.2**	**+0.9**
SDD				*e*Sg	**Sn**	**13 54 28.2**	**-0.7**
SDD				IAML		13 54 30.7	
	comp=N,46nm,0.2s						
SDD	**Santo Domingo**	**0.80**	**258**	*i* P	**Pn**	**13 54 15.6**	**+2.2**
SDD				*e*S	**Sn**	**13 54 28.3**	**-0.7**
DR08	**Loma La Naviza**	**0.94**	**291**	*e*Pg	**Pn**	**13 54 15.2**	**+0.5**
DR08				*e*Sg	**Sn**	**13 54 31.1**	**-0.3**
DR08				IAML		13 54 33.6	
	comp=N,11μm,0.2s						
BANI	**BANI**	**1.23**	**259**	*e*Pg	**Pn**	**13 54 19.2**	**+1.7**
BANI				*e*Sg	**Sn**	**13 54 37.6**	**+1.1**
BANI				IAML		13 54 45.7	
	comp=N,410nm,0.2s						
SFDR	**San Fco. de Ma**	**1.27**	**301**	*e*Pg	**Pn**	**13 54 19.9**	**+2.0**
SFDR				*e*Sg	**Sn**	**13 54 37.3**	**+0.2**
SFDR				IAML		13 54 45.1	
	comp=N,964nm,0.5s						
ABDR	**Alto Bandera**	**1.47**	**277**	*e*Pg	**Pn**	**13 54 22.1**	**+1.7**
ABDR				*e*Sg	**Sn**	**13 54 40.9**	**-0.6**
ABDR				IAML		13 55 09.5	
	comp=N,0.2nm,0.3s						
SC01	**Santiago de lo**	**1.74**	**297**	*i* P	**Pn**	**13 54 25.3**	**+2.0**
AGPR	**Aguadilla, PR**	**1.88**	**95**	*e*Pg	**Pn**	**13 54 27.4**	**+2.5**
AGPR				*e*Sg	**Sn**	**13 54 47.8**	**-1.8**
AGPR				IAML		13 54 56.2	
	comp=N,178nm,0.3s						
AGPR	**Aguadilla, PR**	**1.88**	**95**	*i* P	**Pn**	**13 54 26.4**	**+1.5**
AGPR				IAML		13 54 56.7	
	comp=Z,106nm,0.3s						
PRSN	**Puerto Rico Se**	**1.89**	**102**	*e*Pg	**Pn**	**13 54 27.2**	**+2.3**
PRSN				*e*Sg	**Sn**	**13 54 49.2**	**-0.5**
PRSN				IAML		13 54 57.3	
	comp=N,244nm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.98**	**108**	*e*Pg	**Pn**	**13 54 26.9**	**+0.9**

CRPR				eSg	Sn	13 54 50.8	-0.9
CRPR				IAML		13 55 06.0	
	comp=N,67nm,0.3s						
CRPR	Cabo Rojo, PR	1.98	108	i P	Pn	13 54 27.0	+0.9
CRPR				IAML		13 55 02.2	
	comp=Z,45nm,1.5s						
MLPR	Magueyes Islan	2.05	108	ePg	Pn	13 54 27.4	+0.5
MLPR				eSg	Sn	13 54 53.1	-0.2
MLPR				IAML		13 54 59.2	
	comp=N,20nm,0.5s						
SDDR	Presa de Saban	2.11	280	eP	Pn	13 54 31.2	+3.4
SDDR				eS	Sn	13 54 59.4	+4.7
SDDR	Presa de Saban	2.11	280	ePg	Pn	13 54 31.0	+3.3
SDDR				eSg	Sn	13 54 54.4	-0.3
SDDR				IAML		13 55 02.8	
	comp=N,60nm,0.3s						
SDDR	Presa de Saban	2.11	280	i P	Pn	13 54 31.1	+3.3
SDDR				IAML		13 55 03.6	
	comp=Z,47nm,0.4s						
PODR	Polo	2.13	258	ePg	Pn	13 54 29.2	+1.1
PODR				eSg	Sn	13 54 55.2	-0.2
PODR				IAML		13 55 01.7	
	comp=N,84nm,0.5s						
PODR	Polo	2.13	258	i P	Pn	13 54 29.2	+1.1
PODR				eS	Sn	13 54 55.2	-0.2
LUDR	Luperon	2.16	306	ePg	Pn	13 54 28.1	-0.2
AOPR	Arecibo Observ	2.23	97	ePg	Pn	13 54 31.2	+2.0
AOPR				eSg	Sn	13 54 56.6	-0.8
AOPR				IAML		13 55 04.3	
	comp=N,520nm,0.3s						
LONE3	El Aguacate, B	2.25	270	i P	Pn	13 54 31.2	+1.6
LONE3				IAML		13 55 08.7	
	comp=Z,17nm,0.3s						
LODU1	El Espartillar	2.28	263	i P	Pn	13 54 31.7	+1.9
LODU1				IAML		13 55 13.8	
	comp=Z,56nm,0.4s						
LOVI	El Cajuil, Ovi	2.32	249	i P	Pn	13 54 30.5	+0.2
LOVI				eS	Sn	13 54 57.0	-2.2
LOVI				IAML		13 55 02.0	
	comp=Z,82nm,1.1s						
LOPP1	Punta Rusia, P	2.34	302	i P	Pn	13 54 31.6	+1.1
LOPP1				eS	Sn	13 55 01.9	+2.3
LOPP1				IAML		13 55 08.3	
	comp=Z,62nm,0.5s						
LOBH	Bahia de las A	2.54	253	i P	Pn	13 54 34.0	+0.9
LOBH				eS	Sn	13 55 03.6	-0.7
LOBH				IAML		13 55 10.6	
	comp=Z,40nm,1.3s						
MCDR	Montecristi	2.73	298	ePg	Pn	13 54 36.1	+0.5
MCDR				eSg	Sn	13 55 08.4	-0.2
MCDR				IAML		13 55 24.1	
	comp=N,145nm,0.2s						
SJG	San Juan	2.84	100	ePg	Pn	13 54 38.4	+1.5
SJG				eSg	Sn	13 55 10.1	-1.1
MASC	Masc	5.09	288	eP	Pn	13 55 06.3	-0.5
MASC				eS	Sn	13 56 01.8	-2.8
QMBU	Quimbuelo	5.62	287	eP	Pn	13 55 12.4	-1.6
QMBU				eS	Sn	13 56 14.7	-2.8
RCC	Rio Carpintero	6.39	283	eP	Pn	13 55 23.0	-1.3
RCC				eS	Sn	13 56 32.8	-3.1

DJA 02 14:02:58.2±0.3**, 8°S**±3°×**13°0E**±°**, h10^{km}, M4.2**/7**, mB4.5**/1**, mb4.3**/4**, MLv4.1**/7**, Mw(mB)3.6**/1**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.47	108	P	Pb	14 03 25.2	-0.4
SAUI				S	Sb	14 03 44.4	0.0
BNDI	Bandanaira	2.99	0	P	Pn	14 03 44.9	-0.8
BNDI				S	Sn	14 04 19.8	-1.8
KRAI	Karang Ratu	4.44	340	P	Pn	14 04 05.3	-0.4
FAKI	Fak Fak	5.15	27	P	Pn	14 04 13.4	-2.0
	0.1nm16nm,1.3s						
KMPI	Kaimana, Papua	5.40	45	P	Pn	14 04 18.8	-0.1
	0.5nm93nm,0.6s						
BASI	Baing, Sumba	9.58	253	P	Pn	14 05 16.6	+0.3

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*BEO **02** 14:12:44.8±0.3, 43°.24N×17°.98E, h11^{km}±2^{km}, ML2.8/20*
*PDG **02** 14:12:44.7±0.1, 43°.21N×18°.01E, h13^{km}, MD3.1/4, ML3.0/12, Error ellipse: s-maj=0.2km s-min=0.2km az=90.0*
*RHSSO **02** 14:12:45.2±0.4, 43°.18N×18°.03E, h8^{km}, ML2.8/5*
ISC 02 14:12:44.7±1.0**, 43°.21N**±0°.02×**18°.04E**±0°.02**, h9^{km}**±9^{km}**, n53, σ0^s.96**/98**, 7C-6D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLINJ	Klinje	0.40	96	ePg	Pg	14 12 52.9	+0.3
KLINJ				eSg	Sb	14 12 59.2	-1.2
STON	Ston	0.42	216	ePg	Pg	14 12 52.7	-0.2
STON				Sg	Sb	14 12 59.3	-1.4
STON	Ston	0.42	216	ePg	Pg	14 12 52.4	-0.5
STON				eSg	Sg	14 12 59.2	+0.8
BRY	Bratogost	0.48	130	ePg	Pg	14 12 54.0	0.0
BRY				i Sg	Sb	14 13 02.1	-0.6
TREB	Trebinje	0.55	155	⇑iPg	Pg	14 12 54.7	-0.5
TREB				eSg	Sb	14 13 02.9	-1.5
TREB	Trebinje	0.55	155	ePg	Pg	14 12 54.8	-0.5
TREB				eSg	Sb	14 13 03.6	-0.8
DBRK	Dubrovnik	0.55	171	i Pg	Pg	14 12 55.2	0.0
DBRK				Sg	Sb	14 13 03.7	-0.8
UPM	Unac-Piva	0.64	90	⇓iPg	Pg	14 12 56.9	-0.1
UPM				i Sg	Sb	14 13 07.4	+0.2
RICI	Ricice	0.72	294	i Pg	Pg	14 12 57.6	-0.9
RICI				Sg	Sg	14 13 07.8	-0.1
MAKA	Makarska	0.75	276	ePg	Pg	14 12 58.0	-1.0
MAKA				Sg	Sg	14 13 08.8	0.0
NKME	Niksic	0.81	123	⇓iPg	Pg	14 13 00.0	-0.2
NKME				eSg	Sn	14 13 12.7	-1.8
HCY	Herceg Novi	0.83	156	⇓iPg	Pg	14 13 00.0	-0.7
HCY				i Sg	Sn	14 13 13.4	-1.7
CEME	Cevo	0.93	135	⇓iPg	Pg	14 13 01.5	-1.0
CEME				eSg	Sn	14 13 16.7	-0.8
LSTV	Lastovo	0.95	243	ePg	Pg	14 13 02.6	-0.3
LSTV				Sg	Sg	14 13 15.2	0.0
PLE	Pljevlja	0.99	83	⇓iPg	Pg	14 13 03.6	-0.2
PLE				i Sg	Sn	14 13 19.6	+0.4
RUDO	Rudo	1.05	67	ePg	Pg	14 13 03.8	-1.1
RUDO				eSg	Sb	14 13 19.3	+0.3
RUDO	Rudo	1.05	67	ePg	Pg	14 13 03.8	-1.1
RUDO				eSg	Sg	14 13 18.8	+0.2
BUM	Brajici-Budva	1.11	145	⇑iPg	Pg	14 13 05.2	-0.7
BUM				i Sg	Sn	14 13 22.9	+1.0
KOME	Kolasin	1.14	108	⇑iPg	Pn	14 13 06.7	-0.3
KOME				eSg	Sn	14 13 24.4	+1.5
HVAR	Hvar	1.16	269	ePg	Pb	14 13 05.9	-1.0
HVAR				Sg	Sg	14 13 22.4	+0.4
PDG	Podgorica	1.19	131	ePg	Pn	14 13 07.6	+0.1
PDG				eSg	Sn	14 13 25.0	+1.1
PDG	Podgorica	1.19	131	⇑iPg	Pb	14 13 06.2	-1.2
PDG				i Sg	Sn	14 13 24.9	+1.1
BBLS	Lazi&#263i	1.19	56	ePg	Pb	14 13 07.1	-0.4
BBLS				eSn	Sg	14 13 22.9	-0.1
DRME	Dracevica, Mon	1.33	140	⇓iPg	Pb	14 13 09.4	-0.4
DRME				eSg	Sn	14 13 30.4	+3.1
IVA	Berane	1.40	103	ePg	Pb	14 13 11.0	-0.1
IVA				i Sg	Sg	14 13 32.7	+2.9
SJES	Sjenica	1.42	87	ePg	Pg	14 13 11.7	-0.1
SJES				eSn	Sn	14 13 29.6	0.0
KIJV	Kijevo	1.43	304	ePg	Pb	14 13 11.8	+0.4
KIJV				Sg	Sn	14 13 29.9	+0.2
ULC	Ulcinj	1.53	144	⇑iPg	Pb	14 13 12.7	-0.6
ULC				i Sg	Sg	14 13 35.4	+1.4
PVY	Plav	1.54	113	⇑iPg	Pb	14 13 13.3	-0.2
PVY				i Sg	Sg	14 13 35.8	+1.6
IVAS	Ivanjica	1.58	76	ePn	Pn	14 13 13.0	0.0
IVAS				eSn	Sg	14 13 35.3	-0.3
BLY	Banja Luka	1.66	338	ePn	Pn	14 13 15.1	+1.1
BLY				eSn	Sn	14 13 36.8	+1.4
BLY	Banja Luka	1.66	338	ePg	Pb	14 13 15.5	+0.1
BLY				eSg	Sb	14 13 37.0	+0.6
TEKS	Tekeris	1.72	38	ePn	Pn	14 13 13.8	-1.0
TEKS				eSn	Sn	14 13 36.9	-0.1
ZIRJ	Zirje	1.80	285	ePn	Pn	14 13 16.2	+0.3
ZIRJ				Sn	Sb	14 13 40.6	+0.2
MORI	Morici	1.82	292	ePn	Pn	14 13 17.2	+1.1
MORI				Sn	Sb	14 13 40.9	0.0
TRUS	Trudelj	1.99	59	ePn	Pn	14 13 18.0	-0.6
TRUS				eSn	Sn	14 13 44.1	+0.4
GRUS	Gruza	2.06	70	ePn	Pn	14 13 19.8	+0.3
GRUS				eSn	Sb	14 13 47.1	-1.0
GOCS	Kraljevo Serbi	2.10	79	ePn	Pn	14 13 20.3	+0.2
GOCS				eSn	Sn	14 13 46.5	+0.1
SELS	Selova	2.25	89	ePn	Pn	14 13 22.5	+0.3
SELS				eSn	Sn	14 13 49.3	-0.9
FRGS	Fruska Gora	2.33	33	ePn	Pn	14 13 21.4	-1.8
FRGS				eSn	Sn	14 13 50.4	-1.6
BOVS	Bovan	2.71	80	ePn	Pn	14 13 28.3	-0.1
BOVS				eSn	Sn	14 14 02.0	+0.7
BARS	Barje	2.80	97	ePn	Pn	14 13 31.1	+1.4
BARS				eSn	Sn	14 14 03.3	-0.3
BORS2	Bor- Borsko je	3.02	72	ePn	Pn	14 13 34.5	+1.8
BORS2				eSn	Sn	14 14 08.6	-0.5
MORH	Mrgy, Hungar	3.03	8	⇑iPn	Pn	14 13 33.7	+0.8
MORH				eSn	Sn	14 14 10.2	+0.9
BOJS	Bojanci	3.04	320	ePn	Pn	14 13 33.9	+0.9
ZAGS	Zajecar	3.11	77	ePn	Pn	14 13 34.3	+0.3
ZAGS				eSn	Sn	14 14 11.9	+0.6
BOSS	Bosilegrad	3.34	101	ePn	Pn	14 13 39.1	+1.9
ZAPS	Zavoj	3.36	87	ePn	Pn	14 13 38.1	+0.7
BEHE	Becsehely	3.38	345	ePn	Pn	14 13 38.6	+0.9
BEHE				eSn	Sn	14 14 18.5	+0.6
BLKB	Belogradchik	3.40	81	ePn	Pn	14 13 39.3	+1.3
VTS	Vitosha	3.86	97	ePn	Pn	14 13 44.9	+0.4
SIRR	Siria	4.00	39	ePn	Pn	14 13 44.7	-1.5
MODS	Modra-Piesok	5.19	354	ePN	Pn	14 13 55.3	-7.2

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*PDG **02** 14:26:23.9±0.1, 43°.23N×17°.99E, h14^{km}, ML2.6/12, Error ellipse: s-maj=0.2km s-min=0.2km az=90.0*
*RHSSO **02** 14:26:24.2±0.5, 43°.18N×18°.00E, h8^{km}, ML2.5/4*
ISC 02 14:26:24.0±1.0**, 43°.21N**±0°.03×**18°.00E**±0°.02**, h9^{km}**±9^{km}**, n26, σ0^s.91**/52**, 5C-7D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	Ston	0.40	213	i Pg	Pg	14 26 31.9	0.0
STON				Sg	Sb	14 26 38.6	-0.9
KLINJ	Klinje	0.43	95	ePg	Pg	14 26 32.2	-0.3
KLINJ				eSg	Sg	14 26 39.3	+1.2
BRY	Bratogost	0.50	128	⇓iPg	Pg	14 26 33.4	-0.4
BRY				i Sg	Sb	14 26 42.0	-0.6
DBRK	Dubrovnik	0.55	169	ePg	Pg	14 26 34.7	0.0
DBRK				Sg	Sg	14 26 42.4	+0.5
TREB	Trebinje	0.56	152	⇑iPg	Pg	14 26 34.1	-0.7
TREB				eSg	Sg	14 26 42.1	0.0
UPM	Unac-Piva	0.66	90	⇑iPg	Pg	14 26 36.4	-0.5
UPM				i Sg	Sb	14 26 47.0	-0.3
RICI	Ricice	0.69	295	ePg	Pg	14 26 37.0	-0.4
RICI				Sg	Sb	14 26 47.5	-0.5
MAKA	Makarska	0.72	277	ePg	Pg	14 26 37.5	-0.4
MAKA				Sg	Sb	14 26 48.5	-0.3
NKME	Niksic	0.83	122	⇓iPg	Pg	14 26 39.5	-0.5
NKME				eSg	Sn	14 26 52.8	-1.5
HCY	Herceg Novi	0.84	154	⇑iPg	Pg	14 26 39.7	-0.6
HCY				i Sg	Sn	14 26 53.8	-0.8
LSTV	Lastovo	0.92	242	ePg	Pg	14 26 40.9	-0.9
LSTV				Sg	Sb	14 26 55.2	+0.6
CEME	Cevo	0.94	134	⇓iPg	Pg	14 26 41.3	-0.9
CEME				eSg	Sn	14 26 56.7	-0.5
PLE	Pljevlja	1.02	83	⇓iPg	Pg	14 26 43.0	-0.7
PLE				i Sg	Sn	14 26 59.1	-0.1
RUDO	Rudo	1.08	67	ePg	Pb	14 26 43.3	-1.6
RUDO				eSg	Sg	14 26 58.6	-0.2
BUM	Brajici-Budva	1.12	144	⇑iPg	Pb	14 26 44.7	-0.9
BUM				i Sg	Sn	14 27 03.2	+1.6
HVAR	Hvar	1.13	269	ePg	Pb	14 26 45.4	-0.5
HVAR				Sg	Sn	14 27 01.2	-0.6
KOME	Kolasin	1.17	107	ePg	Pb	14 26 45.6	-0.8
KOME				eSg	Sn	14 27 04.0	+1.3
PDG	Podgorica	1.21	130	⇓iPg	Pn	14 26 46.6	-0.5
PDG				i Sg	Sn	14 27 05.9	+2.3
DRME	Dracevica, Mon	1.34	139	⇓iPg	Pb	14 26 49.1	-0.3
DRME				eSg	Sg	14 27 09.8	+2.6
KIJV	Kijevo	1.41	305	ePg	Pg	14 26 50.8	-0.2
KIJV				Sg	Sg	14 27 09.3	0.0
IVA	Berane	1.43	103	⇑iPg	Pb	14 26 50.5	-0.4
IVA				i Sg	Sg	14 27 11.8	+1.8
ULC	Ulcinj	1.55	143	⇓iPg	Pb	14 26 52.5	-0.4
ULC				i Sg	Sg	14 27 14.8	+1.0
BLY	Banja Luka	1.65	339	ePn	Pn	14 26 53.7	+0.5
BLY				eSn	Sb	14 27 15.6	+0.1
ZIRJ	Zirje	1.77	285	ePn	Pb	14 26 55.8	-0.9
ZIRJ				Sn	Sb	14 27 19.6	+0.5
MORI	Morici	1.79	292	i Pn	Pb	14 26 56.6	-0.4
MORI				Sn	Sb	14 27 20.2	+0.7
MORH	Mrgy, Hungar	3.04	8	ePn	Pn	14 27 13.2	+0.9
MORH				eSn	Sn	14 27 49.4	+0.6

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*MDD **02** 14:40:56.7±1.1, 35°.59N×4°.60W, h20^{km}±9^{km}, mb_Lg2.5/6, Error ellipse: s-maj=8.7km s-min=4.7km az=98.0*
*SFS **02** 14:40:58.2, 35°.55N×4°.69W, h35^{km}, ML3.0/7, ML2.3/10, MLv2.0/10*
*INMG **02** 14:40:58.9±1.1, 35°.74N×4°.76W, h12^{km}, ML1.8, Error ellipse: s-maj=4.2km s-min=3.4km az=143.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Alboran*
*CNRM **02** 14:41:11.3, 34°.32N×3°.70W, h44^{km}, ML1.3*
ISC 02 14:40:56.4±1.2**, 35°.53N**±0°.03×**4°.65W**±0°.04**, h35^{km}, n30, σ1^s.56**/39**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKLM	AKL	1.21	147	P	Pn	14 41 20.7	+3.8
AKLM	AKL	1.21	147	S	Sn	14 41 27.9	-4.2
ELGU	Los Guajares,	1.57	32	Pn	Pn	14 41 23.0	+1.1
ELGU				Sn	Sn	14 41 41.7	+0.7
ELGU	Los Guajares,	1.57	32	Pg	Pn	14 41 23.1	+1.2
ELGU				i IVmb_Lg		14 41 32.6	
ELGU				Sg	Sn	14 41 42.1	+1.1
IFR	Ifrane	2.05	191	Pn	Pn	14 41 30.1	+1.6
IFR				Sn	Sn	14 41 53.0	+0.1
JBK	JBK	2.09	124	P	Pn	14 41 26.5	-2.6
JBK	JBK	2.09	124	S	Sn	14 41 38.3	-16
ECAB	El Cabril	2.61	347	Pn	Pn	14 41 36.7	+0.6
ECAB				Sn	Sn	14 42 05.4	-1.2
ECAB	El Cabril	2.61	347	Pn	Pn	14 41 37.7	+1.6
ECAB				Sn	Sn	14 42 05.6	-1.0
ECAB				i IVmb_Lg		14 43 21.3	
EADA	Adamuz	2.63	1	Pn	Pn	14 41 37.6	+1.3
EADA				Sn	Sn	14 42 06.4	-0.7
EADA	Adamuz	2.63	1	Pn	Pn	14 41 37.7	+1.3
EADA				Sn	Sn	14 42 06.1	-1.0
EADA				i IVmb_Lg		14 43 27.2	
MD31	MD31	2.66	182	P	Pn	14 41 38.6	+1.8
MD31	MD31	2.66	182	S	Sn	14 41 59.2	-8.7
MDT	Midelt	2.71	179	P	Pn	14 41 38.7	+1.1
MDT	Midelt	2.71	179	S	Sn	14 41 60.0	-9.2
EMIN	Mina Concepcio	2.76	325	Pn	Pn	14 41 39.0	+0.9
EMIN				Sn	Sn	14 42 08.5	-1.7
EMIN	Mina Concepcio	2.76	325	Pn	Pn	14 41 38.8	+0.7
EMIN				Sn	Sn	14 42 09.1	-1.1
EMIN				i IVmb_Lg		14 42 51.0	
EGRO	El Granado	3.03	312	Pn	Pn	14 41 42.5	+0.7
EGRO	El Granado	3.03	312	Pn	Pn	14 41 42.7	+0.8
EGRO				Sn	Sn	14 42 15.5	-1.4
EGRO				i IVmb_Lg		14 43 13.9	
PVAQ	Vaqueiros	3.10	308	eP	Pn	14 41 43.6	+0.9
PVAQ				eS	Sn	14 42 17.6	-0.9
PVAQ				i IAML		14 42 18.4	
PVAQ				i IAML		14 42 18.8	
PVAQ				i IAML		14 42 18.8	
PBDV	Barranco-do-Ve	3.15	304	Sn	Sn	14 42 19.0	-0.8
PBDV	Barranco-do-Ve	3.15	304	eS	Sn	14 42 19.5	-0.3
PBDV				i IAML		14 42 19.7	
PBDV				i IAML		14 42 19.9	
PBAR	Barrancos	3.26	325	Sn	Sn	14 42 20.9	-1.7
PBAR	Barrancos	3.26	325	eS	Sn	14 42 21.0	-1.5
PBAR				i IAML		14 42 22.1	
PBAR				i IAML		14 42 22.8	
PBAR				i IAML		14 42 22.9	
PCVE	Castro Verde	3.44	309	Pn	Pn	14 41 48.0	+0.6
PCVE	Castro Verde	3.44	309	eP	Pn	14 41 48.2	+0.7
PCVE				eS	Sn	14 42 25.8	-1.2
MESJ	Messejana	3.68	310	eS	Sn	14 42 31.6	-1.3
MESJ				i IAML		14 42 33.3	
MORF	Marmelete	3.68	300	eS	Sn	14 42 31.8	-1.2
MORF				i IAML		14 42 34.6	
MORF				i IAML		14 42 35.0	
MORF				i IAML		14 42 35.1	
EBAD	Badajoz	3.73	330	Sn	Sn	14 42 32.0	-2.1
PTEO	Sao Teotonio	3.84	303	eP	Pn	14 41 54.1	+1.1

NOU 02 14:56:48.5, 14°.58S×167°.25E, h95^{km}, MLv4.7/18**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.86	183	P	Pn	14 57 07.4	+0.3
SANVU	Saraoutou	0.86	183	P	Sn	14 57 22.7	+1.7
DVP	Devils Point	3.25	164	P	Pn	14 57 38.0	+0.4
DVP	Devils Point	3.25	164	S	Sn	14 58 15.9	+0.5
YATNC	Mamie plateau,	7.45	183	P	Pn	14 58 33.0	-1.5
DZM	Mont Dzumac	7.49	186	P	Pn	14 58 35.5	+0.3
ONTNC	Ouen Toro	7.72	185	P	Pn	14 58 38.6	+0.4
OUENC	Ouen Island, N	7.81	183	P	Pn	14 58 40.9	+1.5
PINNC	Pines Island,	7.99	179	P	Pn	14 58 41.9	0.0

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*SNET **02** 14:57:26.8±1.5, 13°.03N×89°.45W, h25^{km}, ML4.0*
*CATAC **02** 14:57:26.9±0.4, 13°N±2°×8°9W±°, h22^{km}±2^{km}, M4.2/33, MLv4.2/33, Error ellipse: s-maj=5.0km s-min=2.5km az=33.1, confirmed*
*GCG **02** 14:57:28.6±1.0, 13°.14N×89°.55W, h34^{km}±5^{km}, MD4.2, ML4.1*
ISC 02 14:57:27.6±1.3**, 13°.07N**±0°.05×**89°.45W**±0°.03**, h26^{km}**±12^{km}**, n103, σ0^s.55**/127**, 1C-1D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.43	16	eP	Pn	14 57 37.7	-0.5
LALI				eS	Sn	14 57 44.8	-0.4
LALI	Alcalda de L	0.43	16	eP	Pn	14 57 37.6	-0.6
LALI				eS	Sn	14 57 44.6	-0.7
LALI	Alcalda de L	0.43	16	P	Pn	14 57 37.9	-0.3
LALI	Alcalda de L	0.43	16	S	Sn	14 57 45.6	+0.3
JAYA	Jayaque - finc	0.58	360	eP	Pb	14 57 39.5	+0.3
JAYA				eS	Sb	14 57 48.0	+0.7
JAYA	Jayaque - finc	0.58	360	i P	Pb	14 57 39.6	+0.3
JAYA				eS	Sb	14 57 48.3	+1.0
JAYA	Jayaque - finc	0.58	360	S	Sn	14 57 49.1	-0.1
JAYA	Jayaque - finc	0.58	360	P	Pn	14 57 39.7	-0.7
PANCS	Alcalda de	0.60	26	eP	Pn	14 57 39.9	-0.6
PANCS	Alcalda de	0.60	26	P	Pn	14 57 39.9	-0.6
PANCS	Alcalda de	0.60	26	S	Sn	14 57 49.4	0.0
LOMA	Loma Larga	0.63	25	eP	Pb	14 57 39.5	-0.6
LOMA				eS	Sn	14 57 49.9	-0.4
LOMA	Loma Larga	0.63	25	P	Pb	14 57 39.6	-0.5
PMON	Piamonte	0.65	11	eP	Pn	14 57 40.6	-0.6
PMON				eS	Sn	14 57 50.6	-0.2
PMON	Piamonte	0.65	11	P	Pn	14 57 40.7	-0.6
PMON	Piamonte	0.65	11	S	Sn	14 57 51.1	+0.3
LFRS	El Faro	0.66	34	⇑eP	Pb	14 57 40.7	0.0
LFRS				eS	Sb	14 57 50.3	+0.8
UTEC	Universidad Te	0.67	21	eP	Pn	14 57 41.0	-0.5
UTEC				eS	Sn	14 57 50.8	-0.4
UTEC	Universidad Te	0.67	21	P	Pn	14 57 41.1	-0.4
UTEC	Universidad Te	0.67	21	S	Sn	14 57 51.3	+0.1
UEES	Universidad Ev	0.67	17	eP	Pn	14 57 41.0	-0.6
UEES				eS	Sn	14 57 51.2	-0.1
UEES	Universidad Ev	0.67	17	P	Pn	14 57 41.0	-0.6
BOQS	Boqueron	0.68	14	eP	Pb	14 57 41.2	+0.2
BOQS				eS	Sn	14 57 51.2	-0.5
UESS	Universidad de	0.69	20	eP	Pn	14 57 41.2	-0.5
UESS				eS	Sn	14 57 51.9	+0.2
IGN	Direccin Gen	0.69	23	eP	Pn	14 57 41.5	-0.3
IGN				eS	Sn	14 57 51.9	+0.1
IGN	Direccin Gen	0.69	23	P	Pn	14 57 41.5	-0.3
IGN	Direccin Gen	0.69	23	S	Sn	14 57 52.2	+0.4
PIC2	El Picacho	0.69	15	eP	Pb	14 57 41.4	+0.2
UDBS	Universidad Do	0.70	24	eP	Pn	14 57 41.4	-0.5
UDBS				eS	Sn	14 57 52.2	+0.2
UDBS	Universidad Do	0.70	24	P	Pn	14 57 41.7	-0.3
CEDA	San Andres	0.73	4	eP	Pn	14 57 42.3	0.0
CEDA	San Andres	0.73	4	P	Pn	14 57 42.1	-0.2
CEDA	San Andres	0.73	4	S	Sn	14 57 52.8	+0.2
LFU	La Fuente	0.75	26	eP	Pn	14 57 42.3	-0.3
LBRS	Las Brisas	0.77	31	eP	Pn	14 57 42.7	-0.2
CEVE	Cerro Verde	0.77	347	eP	Pb	14 57 42.3	-0.3
CEVE				eS	Sn	14 57 54.2	+0.2
CEVE	Cerro Verde	0.77	347	S	Sn	14 57 54.0	0.0
CEVE	Cerro Verde	0.77	347	P	Pn	14 57 42.5	-0.6
SBLS	San Blas	0.78	347	eP	Pb	14 57 42.6	-0.1
TECO	Alcaldia de Te	0.80	54	eP	Pb	14 57 42.2	-0.7
TECO				eS	Sb	14 57 53.9	+0.6
TECO	Alcaldia de Te	0.80	54	P	Pb	14 57 42.3	-0.5
SNVI	San Vicente	0.80	48	eP	Pb	14 57 42.7	-0.3
PAVA	Las Pavas	0.81	38	eP	Pn	14 57 43.1	-0.3
PAVA				eS	Sn	14 57 54.6	-0.1
PAVA	Las Pavas	0.81	38	P	Pn	14 57 43.2	-0.3
PAVA	Las Pavas	0.81	38	S	Sn	14 57 55.3	+0.6
SNJE	San Jose	0.81	349	eP	Pb	14 57 42.8	-0.3
RTR	El Retiro	0.84	347	eP	Pb	14 57 43.3	-0.5
UESV	Universidad de	0.85	49	eP	Pb	14 57 43.3	-0.5
UESV	Universidad de	0.85	49	S	Sn	14 57 55.6	-0.1
UESV	Universidad de	0.85	49	P	Pb	14 57 43.4	-0.4
NUBE	Las Nubes	0.89	339	eP	Pb	14 57 43.3	-1.2
NUBE	Las Nubes	0.89	339	eP	Pb	14 57 43.5	-1.0
NUBE				eS	Sb	14 57 54.8	-1.2
NUBE	Las Nubes	0.89	339	P	Pb	14 57 43.7	-0.7
NUBE	Las Nubes	0.89	339	S	Sb	14 57 56.0	0.0
UNIC	Universidad Ca	0.91	354	eP	Pn	14 57 44.5	-0.4
UNIC				eS	Sn	14 57 57.2	0.0
UNIC	Universidad Ca	0.91	354	P	Pb	14 57 44.7	-0.1
SCLA	Alcaldia de Sa	0.94	48	eP	Pn	14 57 44.9	-0.3
SCLA	Alcaldia de Sa	0.94	48	P	Pb	14 57 45.3	+0.1
SCLA	Alcaldia de Sa	0.94	48	S	Sn	14 57 58.7	+0.9
FAME	Alcaldia de Sa	0.94	324	P	Pn	14 57 44.1	-1.2
LOAL	Lomas de Alarc	0.98	341	S	Sn	14 57 59.4	+0.6
LOAL	Lomas de Alarc	0.98	341	P	Pb	14 57 45.9	0.0
TECA	Tecapa	1.01	65	eP	Pn	14 57 45.2	-1.1
RBDL	Robledal	1.06	347	eP	Pn	14 57 46.5	-0.5
RBDL				eS	Sb	14 58 01.1	+0.2
PACA	Pacayal	1.16	70	eP	Pn	14 57 48.3	0.0
PACA				eS	Sn	14 58 03.4	-0.1
PACA	Pacayal	1.16	70	P	Pn	14 57 48.3	0.0
LCY	Lacayo	1.18	73	eP	Pn	14 57 47.7	-0.8
RANC	El Ranchito	1.18	72	eP	Pn	14 57 48.0	-0.6
RANC				eS	Sb	14 58 04.5	0.0
LLGN	La Laguna	1.19	24	eP	Pn	14 57 48.4	-0.3
LLGN				eS	Sb	14 58 04.8	+0.2
LLGN	La Laguna	1.19	24	P	Pn	14 57 48.8	+0.1
VSM	San Miguel	1.20	73	eP	Pn	14 57 48.5	-0.5
BLLM	Bellamira	1.23	72	eP	Pn	14 57 48.8	-0.5
BLLM				eS	Sn	14 58 04.3	-0.8
MTO3	Montecristo	1.32	4	eP	Pn	14 57 50.1	-0.5
MTO3	Montecristo	1.32	4	eP	Pn	14 57 50.2	-0.4
MTO3	Montecristo	1.32	4	S	Sn	14 58 08.2	+0.6
MTO3	Montecristo	1.32	4	P	Pn	14 57 50.4	-0.3
ESQI	Esquipulas	1.48	4	eP	Pn	14 57 52.5	-0.2
ESQI	Esquipulas	1.48	4	P	Pn	14 57 52.8	0.0
ESQI	Esquipulas	1.48	4	S	Sn	14 58 12.2	+0.8
LCND	La Caada	1.53	81	⇓eP	Pn	14 57 52.9	-0.4
LCND	La Caada	1.53	81	P	Pn	14 57 53.0	-0.3
FG16	Alotenango, Sa	1.58	319	i P	Pb	14 57 58.1	+1.8
FG16				IAML		14 58 29.7	
	comp=N,10µm,0.2s						
CNCH	Conchagua	1.58	82	eP	Pn	14 57 53.2	-0.9
CNCH	Conchagua	1.58	82	P	Pn	14 57 53.7	-0.5
CSGN	Cosiguina Volc	1.84	93	P	Pn	14 57 56.6	-1.1
POTN	Potosi Cosigui	1.89	92	P	Pn	14 57 57.9	-0.4
POTN				S	Sn	14 58 22.1	+0.8
APG	El Apazote	2.16	333	eP	Pn	14 58 02.1	-0.1
STG5	El Palmar, Qui	2.27	306	eP	Pb	14 58 07.4	-0.6
STG8	El Palmar, Qui	2.30	307	eP	Pb	14 58 08.0	-0.6
STG2	El Palmar, Qui	2.31	306	eP	Pb	14 58 08.3	-0.4
TGUH	Tegucigalpa,Un	2.33	65	P	Pn	14 58 05.3	+0.9
PKGN	Cerro Pekin	2.44	99	P	Pn	14 58 05.0	-0.8
SOKI	Kika Raxquin	2.58	313	eP	Pn	14 58 08.4	+0.4
SOKI				IAML		14 58 48.2	
	comp=N,596nm,0.5s						
POLN	Al Sur del Vol	2.60	99	P	Pn	14 58 06.9	-1.2
RTAL	Retalhuleu	2.62	304	P	Pn	14 58 08.2	-0.1
YUSH	Yuscaran	2.68	71	P	Pn	14 58 08.9	-0.3
CNGN	Cerro Negro	2.74	102	S	Sn	14 58 43.6	+1.3
CNGN	Cerro Negro	2.74	102	P	Pn	14 58 10.4	+0.4
LIMN	Finca el Limon	3.00	90	P	Pn	14 58 12.8	-0.8

NANN	Nandasmo	3.44	109	P	Pn	14 58 19.9	+0.3
BOAB	BOACO BROADBAN	3.74	99	P	Pn	14 58 24.0	+0.4
CCIG	Comitan	4.12	321	P	Pn	14 58 29.1	0.0
CARN	Rivas	4.27	116	P	Pn	14 58 31.0	0.0

TAP 02 15:13:09.5, 23°.27N×120°.59E, h4km, ML0.5, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WTP	Ta-pu	0.03	134	*i* P	Pg	15 13 10.9	+0.5
WTP				*i* S	Sg	15 13 12.3	+1.2
TPUB	Ta-pu	0.05	49	*i* P	Pg	15 13 11.2	+0.5
TPUB				*i* S	Sg	15 13 12.7	+1.2
CHN4	Tsaushan	0.08	3	*i* P	Pg	15 13 12.3	+1.0
CHN4				*i* S	Sg	15 13 14.0	+1.6
TWK	Hsinying	0.09	269	*e*P	Pg	15 13 12.6	+1.2
SNST	Tainan City	0.10	240	*i* P	Pg	15 13 12.7	+1.2
SNST				*i* S	Sg	15 13 14.4	+1.5
CHN1	Nanshi	0.10	214	*e*P	Pg	15 13 12.5	+0.9
CHN1				*e*S	Sg	15 13 15.0	+2.1
WCKO	Fanlu	0.17	5	*e*P	Pg	15 13 14.1	+1.2
SGST	Jiashian	0.18	182	*e*P	Pg	15 13 14.4	+1.2

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*IDC **02** 15:23:51.4±2.4, 53°.53N×166°.86W, h51km±19km, mb3.7/25,*
mbtmp4.0/27, ML3.9/2, MS3.3/29, Error ellipse:
s-maj=21.7km s-min=12.3km az=3.0
*NEIC **02** 15:23:52.7±1.4, 53°.41N±0°.05×166°.69W±0°.08, h61km±3km,*
mb4.3/106, ML4.7/16, ML4.4(AEIC), Error ellipse:
s-maj=8.4km s-min=4.5km az=137.0
*AEIC **02** 15:23:53.0±2.6, 53°.28N±0°.04×166°.56W±0°.07, h24km±4km,*
Error ellipse: s-maj=6.9km s-min=4.7km az=131.0
ISC 02 15:23:53.5±0.5**, 53°.46N**±0°.06×**166°.61W**±0°.04**, h71**km**,**
n444, σ1^{s}.**33**/388**, mb4.2**/45**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MREP	Makushin Rep't	0.36	347		Pn	15 24 03.7	-1.6
MGOD	Makushin Gods	0.37	335		Pn	15 24 03.5	-1.9
UNV	Unalaska Valle	0.39	9		Pn	15 24 03.5	-1.8
UNV	Unalaska Valle	0.39	9		Sn	15 24 12.5	-1.7
UNV	Unalaska Valle	0.39	9	P	Pn	15 24 03.6	-1.8
UNV	Unalaska Valle	0.39	9	S	Sn	15 24 12.8	-1.4
UNV	Unalaska Valle	0.39	9	P	Pn	15 24 03.6	-1.8
	baz=183,SNR=1000						
MAPS	Pakushin South	0.40	331		Pn	15 24 03.8	-1.7
MNAT	Makushin Natee	0.43	354		Pn	15 24 04.3	-1.5
MSW	Makushin Switc	0.47	347		Pn	15 24 04.8	-1.3
MSW					Sn	15 24 14.6	-0.8
ZRO	Akutan Zero	0.74	30		Pn	15 24 08.0	-0.8
ZRO					Sn	15 24 19.9	-0.4
AKRB	Akutan Reef Bi	0.74	25		Pn	15 24 08.5	-0.5
AKBBA	Akutan Broad B	0.76	32		Pn	15 24 08.2	-0.9
AKV	Akutan Volcano	0.77	29		Pn	15 24 08.6	-0.8
AKV					Sn	15 24 20.7	-0.3
LVA	Lava Point	0.78	25		Pn	15 24 08.8	-0.6
LVA	Lava Point	0.78	25		Sn	15 24 21.4	+0.2
OKFG	Magazine Ridge	0.78	267		Pn	15 24 06.9	-2.5
AHB	Akutan Harbor	0.81	35		Sn	15 24 21.6	-0.2
AKUT	Akutan	0.84	36		Pn	15 24 09.1	-1.0
AKUT				IAML		15 24 22.6	
	comp=E,18μm,0.3s						
AKUT				IAML		15 24 22.8	
	comp=N,14μm,0.3s						
AKUT	Akutan	0.84	36		Sn	15 24 22.0	-0.3
AKUT	Akutan	0.84	36	P	Pn	15 24 09.2	-0.8
AKUT	Akutan	0.84	36	S	Sn	15 24 22.5	+0.2
OKTU	Okmok Mt. Tuli	0.86	266		Pn	15 24 08.2	-2.2
AKSA	Akutan Strait	0.87	38		Pn	15 24 09.1	-1.3
OKNC	Okmok New Cone	0.91	271		Pn	15 24 09.2	-1.7
NIKH	Nikolski High	1.44	251		Pn	15 24 15.2	-2.5
NIKH				IAML		15 24 37.7	
	comp=E,12μm,0.6s						
NIKH				IAML		15 24 38.2	
	comp=N,14μm,0.5s						
NIKH	Nikolski High	1.44	251		Sn	15 24 32.9	-2.9
NIKH	Nikolski High	1.44	251	P	Pn	15 24 15.6	-2.0
	baz=76,SNR=66						
WEBT	Westdahl Beart	1.58	43		Pn	15 24 19.9	+0.4
CLCO	Concord Point,	2.00	252		Pn	15 24 24.0	-1.0
CLES	Cleveland East	2.08	254		Pn	15 24 25.1	-1.1
CLES				IAML		15 24 59.1	
	comp=E,7μm,0.5s						
CLES				IAML		15 25 00.0	
	comp=N,7μm,0.4s						
ISNN	Isanotski Nort	2.16	49		Pn	15 24 28.1	+0.8
FALS	False Pass	2.34	52		Pn	15 24 29.4	-0.3
FALS	False Pass	2.34	52	P	Pn	15 24 31.1	+1.5
FALS	False Pass	2.34	52	P	Pn	15 24 31.2	+1.5
	baz=231,SNR=31						
DT1	Dutton Round H	3.03	55		Pn	15 24 39.7	+0.7
DTNA	Dutton South F	3.06	55		Pn	15 24 40.1	+0.6
HAG	Hague Volcano	3.32	54		Pn	15 24 44.2	+1.2
PS4A	Pavlof South-4	3.36	54		Pn	15 24 44.6	+1.1
PS1A	Pavlof South-1	3.46	53		Pn	15 24 46.5	+1.6
S12K	Black Hills	3.47	48		Pn	15 24 46.1	+1.1
S12K	Black Hills	3.47	48	IAML		15 25 48.5	
	comp=N,532nm,0.8s						
S12K	Black Hills	3.47	48	P	Pn	15 24 46.0	+0.9
	baz=229						
P08K	Saint George I	3.58	333		Pn	15 24 46.8	+0.4
P08K	Saint George I	3.58	333	P	Pn	15 24 46.8	+0.4
	baz=151						
SDPT	Sand Point	4.05	60		Pn	15 24 52.1	-0.8
SDPT	Sand Point	4.05	60	P	Pn	15 24 54.0	+1.1
SDPT	Sand Point	4.05	60	P	Pn	15 24 53.0	+0.1
	baz=242						
SPIA	Saint Paul Isl	4.27	332		Pn	15 24 55.7	-0.2
SPIA	Saint Paul Isl	4.27	332	P	Pn	15 24 56.5	+0.6
SPIA	Saint Paul Isl	4.27	332	S	Sn	15 25 45.7	+1.4
SPIA	Saint Paul Isl	4.27	332	P	Pn	15 24 56.5	+0.6
	baz=150,SNR=16						
CHNA	Chernabura Isl	4.35	69	P	Pn	15 24 59.0	+2.0
CHNA	Chernabura Isl	4.35	69	P	Pn	15 24 57.1	+0.1
	baz=252						
KOFP	Korovin Flat P	4.69	258		Pn	15 25 01.9	+0.2
ATKA	Atka Island	4.77	258		Pn	15 25 01.8	-1.0
ATKA	Atka Island	4.77	258	P	Pn	15 25 02.3	-0.5
ATKA	Atka Island	4.77	258	S	Sn	15 25 57.0	+0.3
S14K	Fog Glacier	4.96	52	P	Pn	15 25 06.2	+0.8
	baz=236						
ANPB	Aniakchak Plen	5.83	52		Pn	15 25 18.9	+1.6
GSIG	Igitkin Island	5.85	259		Pn	15 25 16.8	-0.8
GSMY	Great Sitkin M	5.91	260		Pn	15 25 18.4	0.0
ETKA	Kagalaska Isla	6.17	259		Pn	15 25 21.2	-0.8
ADK	Adak	6.33	260		Pn	15 25 23.6	-0.5
ADK	Adak	6.33	260	P	Pn	15 25 24.0	-0.1
ADK	Adak	6.33	260	S	Sn	15 26 35.5	+0.6
O14K	Tigyukauivet M	6.52	25		Pn	15 25 28.5	+1.9
O14K	Tigyukauivet M	6.52	25	P	Pn	15 25 29.1	+2.4
	baz=208,SNR=7.1						
CHIR	Chirikof Islan	6.80	65	P	Pn	15 25 33.0	+2.5
CHIR	Chirikof Islan	6.80	65	P	Pn	15 25 30.5	0.0
	baz=253						
O15K	Ungalikthiuk R	6.86	31		Pn	15 25 33.0	+1.7
O15K	Ungalikthiuk R	6.86	31	P	Pn	15 25 33.1	+1.8
	baz=215,SNR=7.2						
M11K	Mekoryuk	6.95	2		Pn	15 25 33.9	+1.5
M11K	Mekoryuk	6.95	2	P	Pn	15 25 34.4	+2.0
	baz=182,SNR=16						
N14K	Kuskokwak Cree	7.02	21		Pn	15 25 35.4	+1.9
N14K	Kuskokwak Cree	7.02	21	P	Pn	15 25 35.3	+1.9
	baz=204,SNR=11						
R17L	Mt. Peulik Vol	7.16	50	P	Pn	15 25 36.1	+0.7
	baz=237,SNR=5.9						
PLK4	Peulik 4	7.16	50		Pn	15 25 37.3	+1.9
M13K	Dall Lake	7.20	13		Pn	15 25 38.1	+2.3
M13K	Dall Lake	7.20	13	P	Pn	15 25 37.7	+1.9
	baz=195,SNR=9.4						
N15K	Kwethluk River	7.62	25		Pn	15 25 43.6	+2.0
N15K	Kwethluk River	7.62	25	P	Pn	15 25 43.3	+1.7
	baz=210,SNR=26						
Q16K	King Salmon	7.64	43	P	Pn	15 25 43.4	+1.6
	baz=230						
Q17K	Contact Creek	7.71	47	P	Pn	15 25 44.0	+0.9
	baz=235						
CNTC	Contact Creek	7.71	47		Pn	15 25 43.5	+0.4
M14K	Bethel	7.74	17		Pn	15 25 44.6	+1.4
M14K	Bethel	7.74	17	P	Pn	15 25 45.1	+1.9
	baz=200,SNR=20						
O16K	Kokwok River B	7.74	34		Pn	15 25 44.8	+1.5
O16K	Kokwok River B	7.74	34	P	Pn	15 25 44.5	+1.2
	baz=220,SNR=16						
SII	Sitkinak Islan	7.79	62	P	Pn	15 25 44.7	+0.7
	baz=250						
ANCK	Angle Creek	7.85	48		Pn	15 25 46.0	+1.2
ACHA	Angle Creek He	7.93	49		Pn	15 25 47.6	+1.6
M15K	Kasigluk River	7.94	22		Pn	15 25 47.2	+1.3
M15K	Kasigluk River	7.94	22	P	Pn	15 25 47.8	+1.9
	baz=206,SNR=18						
KABU	Katmai Buttres	7.99	48		Pn	15 25 47.8	+1.0
L14K	Kuka Creek	8.18	13	P	Pn	15 25 51.3	+2.0
	baz=196,SNR=17						
O17K	Koliganek Bris	8.21	36		Pn	15 25 50.3	+0.5
O17K	Koliganek Bris	8.21	36	P	Pn	15 25 51.1	+1.4
	baz=223,SNR=8.5						
N16K	Nishlik Lake	8.23	28	P	Pn	15 25 51.9	+1.9
	baz=214						
KAHC	Katmai Hardscr	8.31	47		Pn	15 25 51.7	+0.5
Q18K	Katmai Hardscr	8.31	47	P	Pn	15 25 53.1	+1.9
	baz=235						
CEPE	Semis' Perret	8.48	265		Pn	15 25 53.2	-0.3
K13K	Kusilvak Mount	8.56	6	P	Pn	15 25 56.8	+2.3
	baz=188,SNR=24						
M16K	Timber Creek	8.64	26	P	Pn	15 25 57.7	+2.2
	baz=211						
P18K	Big Mountain,	8.66	42		Pn	15 25 56.2	+0.3
P18K	Big Mountain,	8.66	42	P	Pn	15 25 56.8	+1.0
	baz=231						
L15K	Ungalak Mounta	8.69	16	P	Pn	15 25 58.5	+2.4
	baz=200						
N17K	Nushagak Hills	8.75	32	P	Pn	15 25 58.8	+1.8
	baz=219,SNR=7.3						
O18K	Koktuh Hills	8.96	40	P	Pn	15 26 00.8	+0.8
	baz=228						
KDAK	Kodiak Island	9.04	56	P	Pn	15 25 59.5	-1.5
	comp=N,1.9nm,0.3s,baz=252,slow=9.6,SNR=23						
KDAK				S	Sn	15 27 34.5	-6.4
	comp=N,5.6nm,0.4s,baz=307,slow=20,SNR=1.2						
KDAK				LR	LR	15 29 14.9	
	comp=N,90nm,21.4s,baz=207,slow=36						
	comp=N,8.5nm,0.4s						
KDAK	Kodiak Island	9.04	56	P	Pn	15 26 01.6	+0.6
	baz=246						
Q19K	Cape Douglas,	9.06	48	P	Pn	15 26 02.1	+0.7
	baz=237						
L16K	Owhat River	9.11	22		Pn	15 26 03.2	+1.2
L16K	Owhat River	9.11	22	P	Pn	15 26 03.7	+1.7
	baz=207,SNR=11						
K15K	Wolf Creek Mou	9.26	15	P	Pn	15 26 05.6	+1.6
	baz=199,SNR=15						
N18K	Kilae Creek	9.29	35	P	Pn	15 26 05.7	+1.3
	baz=223						
M17K	Holitna River	9.36	28	P	Pn	15 26 06.6	+1.1
	baz=215						
J14K	Nanvaranak Lak	9.46	9	P	Pn	15 26 08.0	+1.3
	baz=191,SNR=10.0						
Q20K	Shuyak Island	9.47	51	P	Pn	15 26 06.5	-0.4
	baz=242						
SYI	Shuyak Island	9.48	51		Pn	15 26 06.8	-0.1
P19K	Oil Pt	9.63	45	P	Pn	15 26 09.9	+0.7
	baz=235						
L17K	Donlin	9.76	24	P	Pn	15 26 12.5	+1.7
	baz=210						
N19K	Bonanza Creek	9.87	37		Pn	15 26 14.4	+1.9
N19K	Bonanza Creek	9.87	37	P	Pn	15 26 13.9	+1.4
	baz=226,SNR=5.0						
M18K	Stony River	9.91	31	P	Pn	15 26 14.7	+1.8
	baz=220,SNR=12						
O20K	Slope Mountain	10.13	44	P	Pn	15 26 16.9	+0.9
	baz=234						
L18K	Granite Mounta	10.24	27	P	Pn	15 26 18.4	+1.0
	baz=215						
K17K	Iditarod	10.26	22	P	Pn	15 26 18.5	+0.8
	baz=208,SNR=6.0						
HOM	Homer	10.32	47	P	Pn	15 26 18.8	+0.4
	baz=239						
J16K	Anvik River	10.34	15	P	Pn	15 26 20.3	+1.5
	baz=200						
GAMB	Gambell	10.68	348		Pn	15 26 24.6	+1.3
GAMB	Gambell	10.68	348	P	Pn	15 26 25.0	+1.7
	baz=163,SNR=20						
J17K	VABM Dome	10.71	19		Pn	15 26 24.9	+1.2
J17K	VABM Dome	10.71	19	P	Pn	15 26 25.7	+1.9
	baz=204,SNR=13						
L19K	White Mountain	10.74	31	P	Pn	15 26 25.7	+1.5
	baz=220,SNR=12						
BRSE	Bradley Lake S	10.76	48	P	Pn	15 26 25.3	+0.8
	baz=240						
I17K	Unalakleet	10.90	14		Pn	15 26 26.3	+0.1
I17K	Unalakleet	10.90	14	P	Pn	15 26 28.0	+1.7
	baz=199						
N20K	Mount Spurr	10.97	39	P	Pn	15 26 28.4	+1.1
	baz=231						
M20K	Styx River	11.08	35	P	Pn	15 26 30.3	+1.4
	baz=226						
ANM	Nome	11.16	3	P	Pn	15 26 31.7	+1.8
	baz=184						
L20K	Farewell, AK	11.27	32	P	Pn	15 26 32.9	+1.5
	baz=222						
J18K	Innoko River	11.28	23	P	Pn	15 26 33.4	+1.9
	baz=211						
H16K	Elim	11.43	10	P	Pn	15 26 35.7	+2.1
	baz=193						
SEW	Seward	11.50	48	P	Pn	15 26 35.4	+0.9
	baz=241						
G15K	Niukluk	11.65	5	P	Pn	15 26 38.3	+1.8
	baz=187,SNR=10						
SUA	Susitna One	11.69	40	P	Pn	15 26 38.4	+1.2
	baz=233						
SKT	Skwentna	11.71	37	P	Pn	15 26 38.7	+1.2
	baz=229						
K20K	Telida	11.88	28	P	Pn	15 26 40.7	+1.0
	baz=218						
RC01	Rabbit Creek A	11.88	43	P	Pn	15 26 40.4	+0.7
	baz=237						
J19K	Poorman	11.98	24	P	Pn	15 26 42.6	+1.4
	baz=213						
H17K	Granite Mounta	12.00	14	P	Pn	15 26 43.6	+2.2
	baz=199,SNR=5.6						
F14K	Arctic Creek	12.06	1	P	Pn	15 26 44.0	+1.9
	baz=181						
TNA	Tin City	12.16	357		Pn	15 26 45.3	+1.8
TNA	Tin City	12.16	357	P	Pn	15 26 44.9	+1.4
	baz=176						
G16K	Koyuk River	12.16	8	P	Pn	15 26 45.9	+2.4
	baz=192						
F15K	North Star Dit	12.33	4	P	Pn	15 26 47.5	+1.7
	baz=185,SNR=5.9						
PWL	Port Wells	12.35	46	P	Pn	15 26 46.5	+0.3
	baz=240						
GCSA	Galena City Sc	12.35	20	P	Pn	15 26 47.5	+1.4
	baz=208						
PMR	Palmer	12.40	42	P	Pn	15 26 47.7	+1.0
	baz=236						
CUT	Chulitna	12.44	37	P	Pn	15 26 48.0	+0.6
	baz=231						
G17K	Kiwalik Mounta	12.45	12	P	Pn	15 26 48.9	+1.5
	baz=196						
H18K	Honhosa River	12.45	16	P	Pn	15 26 48.5	+1.0
	baz=203						
J20K	Nowinta River	12.51	26	P	Pn	15 26 49.3	+1.1
	baz=216,SNR=7.9						
KNK	Knik Glacier	12.57	43	P	Pn	15 26 49.7	+0.5
	baz=238						
Q23K	Middleton Isla	12.67	54	P	Pn	15 26 50.1	-0.4
	baz=250						
CHUM	Lake Minchumin	12.79	30	P	Pn	15 26 53.3	+1.2
	baz=221						
SML	Sawmill	12.83	42	P	Pn	15 26 53.2	+0.4
	baz=237						
GLI	Glacier Island	12.89	47	P	Pn	15 26 53.8	+0.3
	baz=243						
I20K	Naaghedeneel	12.93	24	P	Pn	15 26 55.2	+1.2
	baz=214						
HIN	Hinchinbrook I	12.96	50		Pn	15 26 51.6	-2.8
M23K	Glacier View	13.07	43	P	Pn	15 26 56.6	+0.7
	baz=238						
G18K	Tagagawik	13.09	15	P	Pn	15 26 57.5	+1.4
	baz=201,SNR=10						
TRF	Thorofare Moun	13.12	34	P	Pn	15 26 57.4	+0.8
	baz=227						
H19K	Roundabout Mou	13.13	19	P	Pn	15 26 57.9	+1.2
	baz=207						
SCM	Sheep Creek Mo	13.25	43	P	Pn	15 26 59.1	+0.7
	baz=239,SNR=5.5						
F17K	Baldwin Pennin	13.29	9	P	Pn	15 27 00.0	+1.2
	baz=194						
WAT1	Susitna Watana	13.33	38	P	Pn	15 26 59.8	+0.4
	baz=233						
BPAW	Bear Paw Mtn.	13.35	31	P	Pn	15 27 00.4	+0.8
	baz=224						
EYAK	Cordova Ski Ar	13.36	50	P	Pn	15 26 59.6	-0.1
	baz=246						
H20K	Anotleneega Mo	13.43	21	P	Pn	15 27 01.8	+1.2
	baz=211						
WAT6	Susitna Watana	13.49	40	P	Pn	15 27 02.4	+0.7
	baz=235						
G19K	Purcell Mounta	13.57	17	P	Pn	15 27 04.3	+1.8
	baz=205,SNR=9.0						
F18K	Selawik	13.62	12	P	Pn	15 27 05.0	+1.9
	baz=198						
KLU	Klutina	13.68	46	P	Pn	15 27 04.5	+0.5
	baz=243,SNR=9.5						
MCK	McKinley	13.76	35	P	Pn	15 27 05.6	+0.6
	baz=229						
M24K	Tolsona, Glenn	13.86	43	P	Pn	15 27 06.8	+0.3
	baz=240						
E17K	Hotham Inlet	13.87	8	P	Pn	15 27 08.1	+1.7
	baz=192,SNR=5.8						
DHY	Denali Highway	13.91	39	P	Pn	15 27 07.4	+0.2
	baz=234						
BMRM	Bremner River	14.04	49	P	Pn	15 27 09.0	+0.2
	baz=247						
H21K	Melozitna Rive	14.04	24	P	Pn	15 27 10.1	+1.4
	baz=216,SNR=5.5						
F19K	Shaleruckik Mo	14.10	14	P	Pn	15 27 11.0	+1.6
	baz=202,SNR=9.9						
NEA2	Nenana	14.29	32	P	Pn	15 27 13.2	+1.2
	baz=226						
N25K	Chitina, Valde	14.30	46	P	Pn	15 27 12.7	+0.5
	baz=244						
E18K	Tukpahlearik C	14.31	9	P	Pn	15 27 13.9	+1.7
	baz=194						
D17K	Noatak River	14.39	5	P	Pn	15 27 15.0	+1.8
	baz=188						
HARP	HAARP	14.42	43	P	Pn	15 27 14.8	+1.1
	baz=241						
GLB	Gilahina Butte	14.58	48		Pn	15 27 13.5	-2.3
PAX	Paxson	14.58	41	P	Pn	15 27 16.9	+1.0
	baz=238						
H22K	Ishtalitna Cre	14.59	25	P	Pn	15 27 17.3	+1.5
	baz=218,SNR=15						
I23K	Minto, Yukon-K	14.59	30	P	Pn	15 27 17.3	+1.5
	baz=224,SNR=6.5						
G21K	Allakaket	14.59	21	P	Pn	15 27 17.1	+1.2
	baz=212,SNR=8.6						
F20K	Avaraart Lake	14.63	17	P	Pn	15 27 18.1	+1.8
	baz=206						
CRQE	Cirque	14.65	51	P	Pn	15 27 17.4	+0.6
	baz=250						
VRDI	Verde Repeater	14.66	49		Pn	15 27 14.4	-2.5
CCB	Clear Creek Bu	14.73	33		Pn	15 27 17.7	+0.1
E19K	Redstone River	14.76	14	P	Pn	15 27 19.6	+1.6
	baz=202,SNR=10						
HDA	Harding Lake	14.86	35	P	Pn	15 27 20.2	+0.8
	baz=231						
C16K	Lisburne Hills	14.88	2	P	Pn	15 27 20.9	+1.4
	baz=183						
MCARA	McCarthy VSAT	14.90	48	P	Pn	15 27 20.6	+0.7
	baz=248						
K24K	Donnelly Dome	14.92	38	P	Pn	15 27 21.5	+1.4
	baz=235						
MESA	MESA	15.02	54	P	Pn	15 27 21.7	+0.1
	baz=254						
H23K	Yukon River	15.03	28	P	Pn	15 27 22.3	+0.8
	baz=222						
ILAR	Eielson Array	15.11	34	P	Pn	15 27 21.8	-0.8
	comp=N,0.4nm,0.3s,baz=233,slow=13,SNR=24						
ILAR				S	Sn	15 30 13.1	+4.3
	comp=N,0.4nm,0.5s,baz=218,slow=8.7,SNR=1.5						
ILAR				LR	LR	15 32 56.6	
	comp=N,110nm,18.0s,baz=241,slow=36						
	comp=N,0.6nm,0.6s						
C17K	DeLong Mountai	15.16	5	P	Pn	15 27 24.7	+1.6
	baz=188						
F21K	Alatna River	15.20	20	IAmb	IAmb	15 27 45.6	
	comp=Z,16nm,1.1s						
F21K	Alatna River	15.20	20	P	Pn	15 27 25.4	+1.6
	baz=211						
RIDG	Independent Ri	15.23	39	IAmb	IAmb	15 27 42.6	
	comp=Z,12nm,0.7s						
RIDG	Independent Ri	15.23	39	P	Pn	15 27 25.2	+1.0
	baz=237						
M26K	Nabesna, AK	15.32	45	IAmb	IAmb	15 27 45.7	
	comp=Z,21nm,1.2s						
M26K	Nabesna, AK	15.32	45	P	Pn	15 27 25.6	+0.3
	baz=244						
G22K	Bettles	15.38	23	P	Pn	15 27 26.9	+1.0
	baz=216						
BARN	Barnard Glacie	15.41	51	IAmb	IAmb	15 27 33.6	
	comp=Z,14nm,0.8s						
L26K	Log Cabin Wild	15.45	43	IAmb	IAmb	15 27 33.5	
	comp=Z,12nm,0.4s						
L26K	Log Cabin Wild	15.45	43	P	Pn	15 27 27.7	+0.7
	baz=242,SNR=5.7						
C18K	Utukok River	15.46	7	IAmb	IAmb	15 27 35.0	
	comp=Z,16nm,0.9s						
C18K	Utukok River	15.46	7	P	P	15 27 29.1	-1.0
	baz=192						
H24K	Noodor Dome	15.51	30	P	Pn	15 27 29.1	+1.4
	baz=225,SNR=7.5						
J25K	Salcha River,	15.53	36	P	Pn	15 27 28.8	+0.8
	baz=234						
CTG	Chitna Glacier	15.53	51	P	Pn	15 27 28.2	0.0
	baz=252						
CTGM	Chitina Glacie	15.54	51	IAmb	IAmb	15 27 34.3	
	comp=Z,20nm,0.7s						
G23K	Bananza Creek	15.57	25		Pn	15 27 30.2	+1.7
G23K				IAmb	IAmb	15 27 36.7	
	comp=Z,15nm,0.8s						
G23K	Bananza Creek	15.57	25	P	Pn	15 27 29.7	+1.3
	baz=219,SNR=15						
D19K	Kuna River	15.61	12	P	Pn	15 27 30.4	+1.4
	baz=199						
E20K	Nigu River	15.65	14	P	Pn	15 27 31.3	+1.8
	baz=203						
SCRK	Sand Creek	15.68	39		Pn	15 27 28.9	-1.0
SCRK	Sand Creek	15.68	39	P	Pn	15 27 30.3	+0.4
	baz=238,SNR=7.9						
F22K	John River	15.71	21	P	Pn	15 27 31.9	+1.6
	baz=213						
M27K	Edge Creek, AK	15.78	46	P	Pn	15 27 32.3	+1.0
	baz=246						
COLD	Coldfoot	15.93	24	P	Pn	15 27 34.6	+1.6
	baz=218,SNR=6.3						
D20K	Etivluk River	16.01	13		P	15 27 36.5	+0.3
D20K				IAmb	IAmb	15 27 38.4	
	comp=Z,24nm,1.2s						
D20K	Etivluk River	16.01	13	P	P	15 27 35.7	-0.5
	baz=202						
O28M	Mount Upton	16.02	52	P	Pn	15 27 34.2	-0.1
	baz=254						
PRP	Porcupine Dome	16.03	33	P	Pn	15 27 35.4	+1.0
	baz=231						
L27K	Beaver Creek,	16.09	44	P	Pn	15 27 35.4	+0.3
	baz=244						
J26L	Joseph Creek	16.11	38	P	Pn	15 27 36.1	+0.8
	baz=237,SNR=6.9						
B18K	Kokolik River	16.12	6	P	P	15 27 37.3	0.0
	baz=190						
E21K	Killik River	16.18	17	P	Pn	15 27 37.0	+0.9
	baz=208						
YUK3	Moose Creek	16.19	49	P	Pn	15 27 37.2	+0.7
	baz=250						
BVCY	Beaver Creek	16.24	46	P	Pn	15 27 37.1	+0.2
	baz=248						
G24K	Hadweenzic Riv	16.24	28	P	Pn	15 27 38.0	+1.2
	baz=224,SNR=9.5						
E22K	Anaktuvuk Pass	16.32	20	P	Pn	15 27 39.2	+1.3
	baz=213,SNR=10						
YUK8	Steele Glacier	16.36	51	P	Pn	15 27 38.4	-0.2
	baz=253						
H25L	Birch Creek	16.42	31	P	Pn	15 27 40.1	+1.0
	baz=228						
K27K	Chicken	16.43	40	P	Pn	15 27 40.2	+0.9
	baz=241						
G25K	Bearman Lake	16.68	29	P	Pn	15 27 43.0	+0.7
	baz=226						
O29M	Mount Kennedy	16.68	55	P	Pn	15 27 42.8	+0.3
	baz=258						
C21K	Knifeblade Rid	16.69	15	P	P	15 27 43.6	0.0
	baz=205						
I26K	Coal Creek Min	16.70	36	P	Pn	15 27 43.4	+0.8
	baz=235						
E23K	Chandalar	16.73	22	P	P	15 27 44.4	+0.2
	baz=217,SNR=8.1						

F24K	Squaw Lake	16.73	25	P	P	15 27 44.5	+0.3
	baz=221,SNR=5.8						
D22K	Ayikyak River	16.79	18		P	15 27 45.7	+0.9
D22K	Ayikyak River	16.79	18	P	P	15 27 45.1	+0.3
	baz=210						
YUK4	Talbot Arm	16.89	51	P	P	15 27 46.7	+0.5
	baz=254						
YUK6	Outpost Mounta	16.93	53	P	Pn	15 27 46.4	+0.7
	baz=256						
P29M	Windy Craggy	16.98	57	P	Pn	15 27 46.6	+0.5
	baz=261						
E24K	Your Creek	17.01	24	P	P	15 27 48.0	+0.8
	baz=219,SNR=12						
B21K	Ikpikpuk River	17.14	14	IAmb	IAmb	15 27 54.4	
	comp=Z,18nm,0.8s						
B21K	Ikpikpuk River	17.14	14	P	P	15 27 49.5	+1.0
	baz=205						
TOLK	Toolik Lake Re	17.21	21	IAmb	IAmb	15 28 07.3	
	comp=Z,21nm,1.2s						
TOLK	Toolik Lake Re	17.21	21	P	P	15 27 50.2	+0.8
	baz=216						
D23K	Nanushuk River	17.24	20	P	P	15 27 50.9	+1.1
	baz=213,SNR=8.8						
M29M	Somme Creek	17.30	48	P	Pn	15 27 50.1	0.0
	baz=251						
HYT	Haines Junctio	17.31	53	IAmb	IAmb	15 27 58.7	
	comp=Z,18nm,0.8s						
HYT	Haines Junctio	17.31	53	P	P	15 27 51.0	+0.3
	baz=257,SNR=7.9						
F25K	Christian Rive	17.38	27	P	P	15 27 51.7	+0.4
	baz=225,SNR=10						
I27K	Kandik River	17.40	36	P	P	15 27 52.1	+0.4
	baz=237						
P30M	Million Dollar	17.44	56	P	Pn	15 27 51.8	0.0
	baz=260						
G26K	Porcupine Rive	17.49	31	P	P	15 27 53.2	+0.8
	baz=230						
DAWY	Dawson	17.50	42		P	15 27 53.3	+0.6
DAWY	Dawson	17.50	42	P	P	15 27 53.1	+0.3
	baz=245						
N30M	Aishikik Lake	17.65	51	P	P	15 27 54.0	-0.4
	baz=256						
PLBC	Pleasant Camp	17.65	58	P	P	15 27 54.4	+0.1
	baz=263						
L29M	L29M	17.66	46	P	P	15 27 54.4	-0.1
	baz=250						
E25K	Arctic Village	17.77	26	IAmb	IAmb	15 27 59.9	
	comp=Z,15nm,0.6s						
E25K	Arctic Village	17.77	26	P	Pn	15 27 56.3	+0.6
	baz=224,SNR=14						
H27K	Steamboat Moun	17.78	34	P	Pn	15 27 56.5	+0.7
	baz=236,SNR=6.6						
D24K	Happy Valley	17.78	21	P	Pn	15 27 57.1	+1.3
	baz=216						
F26K	Sheenjek River	17.87	28	P	Pn	15 27 57.6	+0.7
	baz=228,SNR=8.5						
I28M	Miner Creek	17.93	38	P	Pn	15 27 58.1	+0.4
	baz=240						
B22K	Teshekpuk Lake	17.96	14	P	Pn	15 27 59.1	+1.1
	baz=206						
O30N	Mendenhall	17.98	54	IAmb	IAmb	15 28 07.1	
	comp=Z,17nm,0.6s						
O30N	Mendenhall	17.98	54	P	P	15 27 58.0	+0.1
	baz=259						
C23K	Itkillik River	17.99	18	IAmb	IAmb	15 28 18.0	
	comp=Z,24nm,1.4s						
C23K	Itkillik River	17.99	18	P	Pn	15 27 59.3	+0.9
	baz=212						
G27K	Doyon Strip	18.07	33	P	Pn	15 28 00.1	+0.8
	baz=234						
M30M	Minto, Yukon	18.08	48	Pn	Pn	15 28 01.1	+1.6
M30M	Minto, Yukon	18.08	48	P	P	15 27 59.6	+0.5
	baz=253						
J29N	Klondike Camp	18.13	41	IAmb	IAmb	15 28 11.4	
	comp=Z,8.8nm,0.6s						
K29M	Barlow Dome	18.18	44	P	P	15 28 00.3	+0.1
	baz=248,SNR=6.8						
N31M	Braeburn, Yuko	18.27	52	P	P	15 28 01.2	+0.1
	baz=257						
C24K	Franklin Bluff	18.27	20	P	Pn	15 28 02.2	+0.6
	baz=216						
A22K	Sinclair Lake	18.36	12	P	Pn	15 28 03.2	+0.5
	baz=202						
D25K	Kavik River	18.46	23	P	Pn	15 28 04.6	+0.5
	baz=220,SNR=8.4						
S32K	Killisnoo	18.50	65	P	P	15 28 02.9	-0.6
	baz=271						
R32K	Eaglecrest	18.53	62	P	P	15 28 03.8	-0.1
	baz=268						
WHY	Whitehorse	18.55	55	IAmb	IAmb	15 28 12.1	
	comp=Z,24nm,0.8s						
WHY	Whitehorse	18.55	55	P	P	15 28 04.4	+0.1
	baz=261						
MAYO	Mayo, Yukon	18.77	45	IAmb	IAmb	15 28 41.5	
	comp=Z,28nm,0.9s						
MAYO	Mayo, Yukon	18.77	45	P	P	15 28 07.3	+0.6
	baz=251						
H29M	Whitestone	18.87	36	IAmb	IAmb	15 28 13.8	
	comp=Z,17nm,0.8s						
H29M	Whitestone	18.87	36	P	P	15 28 08.3	+0.7
	baz=241,SNR=8.2						
E27K	Coleen River	18.92	29	P	P	15 28 09.1	+0.9
	baz=231						
J30M	Hart River	18.93	42	P	P	15 28 09.1	+0.7
	baz=248						
P32M	Atlin	19.01	58	IAmb	IAmb	15 28 20.5	
	comp=Z,21nm,0.8s						
P32M	Atlin	19.01	58	P	P	15 28 09.5	+0.2
	baz=265						
M31M	Drury Creek, Y	19.07	50	IAmb	IAmb	15 28 13.8	
	comp=Z,23nm,0.8s						
M31M	Drury Creek, Y	19.07	50	P	P	15 28 10.7	+0.8
	baz=257,SNR=11						
F28M	Old Crow	19.10	32	P	P	15 28 11.0	+0.8
	baz=235						
I30M	Mount Dempster	19.16	40	P	P	15 28 11.0	0.0
	baz=246						
C26K	Camden Bay	19.25	23	P	P	15 28 12.4	+0.7
	baz=222						
C27K	Jago River	19.32	24	P	Pn	15 28 14.3	+0.1
	baz=224,SNR=19						
G29M	Pine Creek	19.33	35	P	P	15 28 13.8	+1.1
	baz=239						
U33K	Whale Pass	19.38	69	P	P	15 28 13.0	-0.3
	baz=276						
N32M	Quiet Lake	19.49	53	P	P	15 28 15.1	+0.6
	baz=261						
P33M	Teslin, Yukon	19.51	56	Pn	Pn	15 28 16.9	+0.3
P33M	Teslin, Yukon	19.51	56	P	P	15 28 15.2	+0.5
	baz=264,SNR=9.7						
EPYK	Eagle Plains	19.53	37	IAmb	IAmb	15 28 17.5	
	comp=Z,12nm,0.7s						
EPYK	Eagle Plains	19.53	37	P	P	15 28 14.8	-0.1
	baz=243,SNR=11						
D27M	Malcolm River	19.78	27	IAmb	IAmb	15 28 55.4	
	comp=Z,16nm,1.4s						
D27M	Malcolm River	19.78	27	P	P	15 28 18.6	+1.1
	baz=230						
E28M	Babbage River	19.78	30	P	P	15 28 18.0	+0.4
	baz=233,SNR=5.4						
G30M	tAoh Zraii Nji	19.98	36		P	15 28 18.3	-1.5
G30M				IAmb	IAmb	15 28 26.9	
	comp=Z,21nm,1.2s						
G30M	tAoh Zraii Nji	19.98	36	P	P	15 28 19.8	0.0
	baz=242,SNR=7.8						
E29M	Blow River	20.15	31		P	15 28 21.5	-0.1
E29M				IAmb	IAmb	15 28 29.8	
	comp=Z,12nm,0.7s						
E29M	Blow River	20.15	31	P	P	15 28 21.7	+0.2
	baz=236,SNR=5.3						
H31M	Peel River	20.17	40		P	15 28 21.2	-0.6
H31M				IAmb	IAmb	15 28 26.9	
	comp=Z,9.6nm,0.7s						
H31M	Peel River	20.17	40	P	P	15 28 21.7	-0.1
	baz=247						
S34M	Telegraph Cree	20.33	63	P	P	15 28 22.8	-0.7
	baz=272						
R33M	Jennings River	20.40	59	IAmb	IAmb	15 28 36.6	
	comp=Z,13nm,0.8s						
R33M	Jennings River	20.40	59	P	P	15 28 23.2	-1.2
	baz=268						
F30M	Barrier River	20.43	34		P	15 28 23.5	-1.0
F30M				IAmb	IAmb	15 28 39.5	
	comp=Z,11nm,0.8s						
F30M	Barrier River	20.43	34	P	P	15 28 24.6	0.0
	baz=241						
D28M	Stokes Point	20.45	28	P	P	15 28 25.0	+0.3
	baz=233						
G31M	Satah River	20.65	37	P	P	15 28 24.6	-2.2
G31M				IAmb	IAmb	15 28 51.1	
	comp=Z,13nm,0.9s						
G31M	Satah River	20.65	37	P	P	15 28 27.1	+0.3
	baz=245						
DLBC	Dease Lake	20.89	62	P	Pn	15 28 32.0	-0.9
	comp=Z,8.4nm,0.8s,baz=270,slow=20,SNR=8.1						
DLBC				LR	LR	15 36 31.3	
	comp=Z,46nm,19.1s,baz=234,slow=36						
	comp=Z,8.4nm,0.8s						
F31M	Tsiigehtchic	21.05	36	P	P	15 28 31.7	+0.4
	baz=244						
PETK	Petropavlovsk-	21.21	284	P	P	15 28 31.7	-1.4
	comp=Z,1.2nm,0.5s,baz=75,slow=13,SNR=17						
PETK				LR	LR	15 35 31.6	
	comp=Z,27nm,19.8s,baz=0.6,slow=33						
	comp=Z,1.2nm,0.5s						
INK	Inuvik	21.51	34	P	P	15 28 34.7	-1.4
	comp=Z,4.1nm,0.5s,baz=244,slow=8.5,SNR=23						
INK				S	S	15 32 22.1	-8.3
	comp=Z,0.5nm,0.6s,baz=256,slow=8.3,SNR=1.1						
INK				LR	LR	15 37 29.7	
	comp=Z,110nm,19.3s,baz=315,slow=38						
	comp=Z,4.1nm,0.5s						
INK	Inuvik	21.51	34	P	P	15 28 34.3	-1.8
INK	Inuvik	21.51	34	P	P	15 28 36.6	+0.5
	baz=242,SNR=25						
SEY	Seymchan	23.20	310	LR	LR	15 38 18.5	
	comp=Z,48nm,18.2s,baz=101,slow=38						
KOTAN	Kotaneelee Air	23.89	57	P	P	15 29 00.7	+0.5
	baz=272						
MA2	Magadan	23.95	302	LR	LR	15 37 40.0	
	comp=Z,32nm,20.9s,baz=134,slow=35						
WRGLY	Wrigley	24.19	49	P	P	15 29 03.3	+0.5
	baz=266						
C36M	Paulatuk	25.08	34	P	P	15 29 11.0	+0.1
C36M	Paulatuk	25.08	34	P	P	15 29 12.0	+1.1
	baz=252,SNR=7.7						
A36M	Sachs Harbour	25.66	28	P	P	15 29 17.7	+1.6
A36M	Sachs Harbour	25.66	28	P	P	15 29 17.9	+1.8
	baz=246,SNR=17						
YKAW3	Yellowknife Wh	28.25	50	P	P	15 29 40.5	+1.1
YKAW3				IAmb	IAmb	15 30 20.9	
	comp=Z,4.8nm,0.9s						
YKA	Yellowknife Ar	28.26	51	P	P	15 29 40.4	+0.9
	comp=Z,2.4nm,0.5s,baz=277,slow=8.9,SNR=26						
YKA				PcP	PcP	15 32 52.3	+1.5
	comp=Z,0.9nm,0.9s,baz=277,slow=2.7,SNR=3.1						
YKA				ScP	ScP	15 36 27.6	+2.3
	comp=Z,0.7nm,0.7s,baz=287,slow=4.6,SNR=3.8						
YKA				LR	LR	15 42 21.3	
	comp=Z,77nm,20.1s,baz=300,slow=39						
	comp=Z,2.4nm,0.5s						
NEW	Newport	31.14	79	IAmb	IAmb	15 30 13.2	
	comp=Z,4.4nm,0.7s						
TIXI	Tiksi	32.68	328	LR	LR	15 42 38.2	
	comp=Z,62nm,19.5s,baz=189,slow=35						
YAK	Yakutsk	33.73	310	LR	LR	15 44 50.9	
	comp=Z,47nm,18.5s,baz=106,slow=38						
RES	Resolute Bay	34.66	26	LR	LR	15 45 28.9	
	comp=Z,52nm,20.5s,baz=21,slow=37						
BCYI	Bear Canyon	35.40	83	IAmb	IAmb	15 30 60.0	
	comp=Z,6.2nm,1.2s						
EGMT	Eagleton	35.55	75	P	P	15 30 45.3	+1.7
NVAR	Mina Array Bea	36.05	95	P	P	15 30 48.6	+0.5
	comp=Z,1.0nm,0.7s,baz=311,slow=7.4,SNR=4.3						
NVAR				PcP	PcP	15 33 13.5	+0.6
	comp=Z,0.6nm,0.5s,baz=305,slow=4.4,SNR=3.7						
	comp=Z,1.0nm,0.7s						
ELK	Elko	36.41	89	P	P	15 30 51.5	+0.3
YHL	Hebgen Lake	36.41	81	P	P	15 30 51.4	+0.1
YHL				IAmb	IAmb	15 31 06.5	
	comp=Z,4.3nm,0.8s						
HVU	Hansel Valley	37.25	86	IAmb	IAmb	15 31 02.3	
	comp=Z,3.5nm,1.1s						
R11B	Troy Canyon, C	37.72	93	IAmb	IAmb	15 31 05.3	
	comp=Z,4.5nm,1.2s						
GWY	Greenwater Val	38.51	96	IAmb	IAmb	15 31 30.5	
	comp=Z,5.9nm,1.2s						
PD31	Pinedale Array	38.58	82	IAmb	IAmb	15 31 16.7	
	comp=Z,3.2nm,0.8s						
PDAR	Pinedale Array	38.58	82	P	P	15 31 10.6	+1.2
	comp=Z,2.1nm,0.9s,baz=310,slow=8.1,SNR=9.8						
PDAR				PcP	PcP	15 33 20.8	+0.2
	comp=Z,0.2nm,0.4s,baz=292,slow=1.5,SNR=1.7						
	comp=Z,2.1nm,0.9s						
PDAR	Pinedale Array	38.58	82	P	P	15 31 10.1	+0.6
H11N2	WAKE ISLAND Hy	39.37	222	T	T	16 13 28.2	
	baz=25,slow=76,SNR=979						
H11N3	WAKE ISLAND Hy	39.37	221	T	T	16 13 17.4	
	baz=25,slow=76,SNR=1291						
H11N1	WAKE ISLAND Hy	39.38	221	T	T	16 13 36.0	
	baz=25,slow=76,SNR=1003						
TMUT	Trail Mountain	39.73	88	IAmb	IAmb	15 31 27.0	
	comp=Z,4.2nm,0.8s						
H11S1	WAKE ISLAND Hy	40.55	221	T	T	16 15 05.7	
	baz=24						
H11S2	WAKE ISLAND Hy	40.56	221	T	T	16 14 52.2	
	baz=24,slow=74						
H11S3	WAKE ISLAND Hy	40.56	221	T	T	16 14 39.1	
	baz=24,slow=74						
BORC	Borrego Spring	40.68	99	P	P	15 31 27.5	+0.8
BORC				IAmb	IAmb	15 31 29.9	
	comp=Z,4.6nm,0.9s						
IRM	Iron Mountain	40.81	97	P	P	15 31 30.3	+2.5
IRM				IAmb	IAmb	15 31 30.8	
	comp=Z,5.3nm,1.0s						
U15A	North Rim	40.96	92	IAmb	IAmb	15 31 32.5	
	comp=Z,7.9nm,1.2s						
MJAR	Matsushiro Arr	41.40	269	P	P	15 31 31.4	-1.2
	comp=Z,2.2nm,1.0s,baz=46,slow=8.7,SNR=2.2						
	comp=Z,2.2nm,1.0s						
MJAR	Matsushiro Arr	41.40	269	IAmb	IAmb	15 32 11.7	
	comp=Z,5.7nm,1.4s						
BLYC	Blythe	41.46	97	P	P	15 31 34.7	+1.6
BLYC				IAmb	IAmb	15 31 36.0	
	comp=Z,5.8nm,0.9s						
PV03	Paradox Valley	41.81	87	IAmb	IAmb	15 31 43.4	
	comp=Z,5.8nm,0.7s						
ESJX	Sierra Juarez	41.86	100	IAmb	IAmb	15 31 39.6	
	comp=Z,7.5nm,1.1s						
PV01	Paradox Valley	42.05	87	IAmb	IAmb	15 31 45.5	
	comp=Z,4.8nm,0.5s						
X16A	Lo Mia Camp, P	42.83	94	IAmb	IAmb	15 31 47.8	
	comp=Z,3.5nm,0.9s						
TUC	Tucson	44.70	95	P	P	15 32 01.3	+2.0
TUC				IAmb	IAmb	15 32 02.7	
	comp=Z,9.0nm,1.2s						
NRIK	Noril'sk	46.26	332	LR	LR	15 51 58.3	
	comp=Z,25nm,20.4s,baz=14,slow=37						
FRB	Frobisher Bay	47.11	37	LR	LR	15 52 60.0	
	comp=Z,90nm,20.4s,baz=355,slow=37						
SUMG	Summit	49.23	18	P	P	15 32 35.0	+0.5
SUMG				IAmb	IAmb	15 32 45.9	
	comp=Z,3.5nm,0.7s						
DKNS	Dickens	49.64	86	IAmb	IAmb	15 33 07.0	
	comp=Z,4.9nm,1.0s						
BLOK	Blackwell	49.71	80	P	P	15 32 38.0	-0.1
P40A	Paris	50.86	74	P	P	15 32 47.0	+0.3
TXAR	Lajitas Array	51.08	92	P	P	15 32 49.8	+1.1
	comp=Z,1.9nm,0.4s,baz=317,slow=6.7,SNR=16						
TXAR				PcP	PcP	15 34 04.7	+1.2
	comp=Z,1.3nm,0.8s,baz=325,slow=3.3,SNR=1.8						
	comp=Z,1.9nm,0.4s						
SONM	Songino Array	52.17	302	P	P	15 32 55.6	-1.1
	comp=Z,0.3nm,0.5s,baz=60,slow=5.7,SNR=1.6						
SONM				PcP	PcP	15 34 07.4	0.0
	comp=Z,0.9nm,0.6s,baz=49,slow=4.0,SNR=4.4						
SONM				ScP	ScP	15 37 58.8	+0.9
	comp=Z,1.1nm,0.7s,baz=46,slow=4.2,SNR=4.7						
	comp=Z,0.3nm,0.5s						
SCHQ	Schefferville	53.49	45	P	P	15 33 05.4	-0.7
	comp=Z,2.7nm,0.6s,baz=307,slow=16,SNR=1.7						
SCHQ				LR	LR	15 58 03.4	
	comp=Z,76nm,19.0s,baz=110,slow=38						
	comp=Z,2.7nm,0.6s						
HHC	Hu-ho-hao-te	54.08	292	*e*P	P	15 33 16.0	+5.3
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,92nm,5.2s						
ARCES	ARCESS Array B	57.00	355	P	P	15 33 30.4	-0.7
	comp=Z,5.4nm,1.0s,baz=6.7,slow=10.0,SNR=1.8						
	comp=Z,5.4nm,1.0s						
ZALV	Zalesovo Beam	57.73	318	P	P	15 33 35.8	-0.7
	comp=Z,0.4nm,0.3s,baz=52,slow=7.5,SNR=2.7						
ZALV				LR	LR	15 58 47.9	
	comp=Z,25nm,20.7s,baz=38,slow=36						
	comp=Z,0.4nm,0.3s						
KURK	Kurchatov	62.65	319	P	P	15 34 10.4	+0.3
KURK	Kurchatov	62.65	319	IAmb	IAmb	15 34 54.6	
	comp=Z,2.6nm,1.2s						
KURBB	Kurchatov Arra	62.76	319	P	P	15 34 10.4	-0.4
	comp=Z,0.3nm,0.4s,baz=40,slow=7.7,SNR=4.7						
	comp=Z,0.3nm,0.4s						
BVAR	Borovoye Array	63.77	326	P	P	15 34 16.9	-0.6
	comp=Z,1.2nm,0.6s,baz=45,slow=9.0,SNR=5.6						
BVAR				PcP	PcP	15 34 53.0	+0.1
	comp=Z,1.4nm,0.6s,baz=23,slow=5.2,SNR=4.3						
BVAR				LR	LR	16 04 03.4	
	comp=Z,30nm,19.6s,baz=354,slow=38						
	comp=Z,1.2nm,0.6s						
MKAR	Makanchi Array	64.25	315	P	P	15 34 20.0	-0.8
	comp=Z,0.3nm,0.4s,baz=47,slow=6.3,SNR=6.4						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	64.25	315	P	P	15 34 20.0	-0.8
ARTI	Arti	64.47	334	LR	LR	16 05 58.1	
	comp=Z,52nm,18.2s,baz=12,slow=39						
FINES	FINESS Array B	65.00	353	P	P	15 34 23.9	-1.5
	comp=Z,2.9nm,0.8s,baz=8.6,slow=6.6,SNR=4.8						
	comp=Z,2.9nm,0.8s						
NOA	NORSAR Array B	65.84	1	P	P	15 34 30.7	-0.1
	comp=Z,1.0nm,0.9s,baz=359,slow=6.1,SNR=3.3						
NOA				LR	LR	16 03 49.9	
	comp=Z,6.9nm,18.5s,baz=290,slow=36						
	comp=Z,1.0nm,0.9s						
TAOE	Nuku Hiva Isla	66.02	151	*e*LR	LR	15 54 11.5	
	comp=Z,72nm,29.3s						
HFS	Hagfors	66.76	360	P	P	15 34 35.8	-0.9
	comp=Z,1.7nm,0.6s,baz=0.0,slow=1.4,SNR=5.9						
HFS				LR	LR	16 05 42.7	
	comp=Z,33nm,18.0s,baz=340,slow=38						
	comp=Z,1.7nm,0.6s						
PZH	PanZhiHua	70.11	288	P	P	15 35 02.1	+3.9
EKA	Eskdalemuir Ar	70.72	10	P	P	15 35 01.6	+0.3
	comp=Z,2.0nm,0.8s,baz=351,slow=5.9,SNR=4.1						
	comp=Z,2.0nm,0.8s						
AAK	Ala-Archa	70.87	317	LR	LR	16 07 50.9	
	comp=Z,21nm,19.1s,baz=7.0,slow=37						
PPT2	Papeete2	72.26	163	*e*LR	LR	15 57 13.7	
	comp=Z,63nm,24.2s						
AKASG	Malin Array Be	75.36	350	P	P	15 35 26.8	-1.9
	comp=Z,0.5nm,0.4s,baz=16,slow=6.3,SNR=3.2						
AKASG				LR	LR	16 13 13.6	
	comp=Z,14nm,18.5s,baz=33,slow=39						
	comp=Z,0.5nm,0.4s						
AKASG	Malin Array Be	75.36	350	IAmb	IAmb	15 35 59.4	
	comp=Z,5.1nm,1.4s						
VRAC	Vranov	77.57	358	LR	LR	16 08 37.9	
	comp=Z,14nm,21.8s,baz=342,slow=35						
TBI	Tubuai	77.92	164	*e*LR	LR	15 59 40.4	
	comp=Z,396nm,30.5s						
CMAR	Chiang Mai Arr	77.98	285	P	P	15 35 42.5	-1.6
	comp=Z,0.7nm,0.7s,baz=39,slow=6.8,SNR=7.2						
	comp=Z,0.7nm,0.7s						
GERES	GERESS Array B	78.07	360	P	P	15 35 46.1	+1.8
	comp=Z,0.4nm,0.5s,baz=340,slow=5.2,SNR=3.3						
GERES				LR	LR	16 10 50.5	
	comp=Z,18nm,18.1s,baz=322,slow=36						
	comp=Z,0.4nm,0.5s						
DZM	Mont Dzumac	78.75	205	*e*LR	LR	16 00 19.2	
	comp=Z,116nm,27.8s						
KBZ	Khabaz	79.93	339	LR	LR	16 17 42.6	
	comp=Z,14nm,19.6s,baz=36,slow=40						
DAVOX	Davos/Dischmat	80.09	2	LR	LR	16 12 11.0	
	comp=Z,12nm,19.8s,baz=262,slow=36						
BRTR	Keskin Array B	85.56	344	P	P	15 36 23.4	-0.4
	comp=Z,0.9nm,0.6s,baz=23,slow=3.0,SNR=6.4						
BRTR				LR	LR	16 18 29.2	
	comp=Z,19nm,19.9s,baz=306,slow=38						
	comp=Z,0.9nm,0.6s						
ESDC	Sonseca Array	86.03	13	P	P	15 36 25.7	-0.3
	comp=Z,0.6nm,0.6s,baz=358,slow=4.1,SNR=5.3						
	comp=Z,0.6nm,0.6s						
WRA	Warramunga Arr	89.00	234	P	P	15 36 39.0	-1.2
	comp=Z,1.1nm,0.8s,baz=31,slow=4.8,SNR=7.2						
	comp=Z,1.1nm,0.8s						
WRA	Warramunga Arr	89.00	234	IAmb	IAmb	15 36 45.9	
	comp=Z,0.4nm,1.4s						
MMAI	Mount Meron Ar	91.79	342	LR	LR	16 22 53.1	
	comp=Z,8.6nm,18.2s,baz=312,slow=39						
ASF	Jabal al Asfar	92.31	340	LR	LR	16 24 46.6	
	comp=Z,18nm,18.1s,baz=322,slow=40						
EIL	Elat	95.12	341	LR	LR	16 24 18.7	
	comp=Z,9.3nm,18.4s,baz=31,slow=38						
H03N2	Juan Fernandez	114.79	113	T	T	17 47 24.3	
	baz=322,slow=77,SNR=416						
H03N1	Juan Fernandez	114.80	113	T	T	17 47 25.6	
	baz=322,slow=77,SNR=506						
H03N3	Juan Fernandez	114.81	113	T	T	17 47 24.8	
	baz=322,slow=77,SNR=513						
QSPA	South Pole Qui	143.22	180	PKP	PKPdf	15 43 17.7	-0.2
	comp=Z,2.4nm,0.8s,baz=35,slow=0.6,SNR=17						
QSPA	South Pole Qui	143.22	180		PKPdf	15 43 18.0	+0.1
BOSA	Boshof	153.69	336	PKPbc	PKiKP	15 43 44.4	+0.3
	comp=Z,1.5nm,0.4s,baz=332,slow=2.6,SNR=1.8						

IDC 02 15:45:21.3±1.3**, 0°.35N×121°.38E, h0^{km}, mb3.5**/4**,**
mbtmp3.5/4**, Error ellipse: s-maj=324.7km**
s-min=23.1km az=60.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.84	149	P	P	15 50 35.9	-0.4
	0.6nm,0.8s,baz=330,slow=9.1,SNR=10						
	0.6nm,0.8s						
ASAR	Alice Springs	26.80	154	P	P	15 51 03.3	-0.1
	0.2nm,0.9s,baz=335,slow=8.2,SNR=1.2						
	0.2nm,0.9s						
MKAR	Makanchi Array	57.47	329	P	P	15 55 13.6	+1.4
	0.4nm,0.8s,baz=133,slow=8.9,SNR=4.1						
	0.4nm,0.8s						
KURBB	Kurchatov Arra	61.85	331	P	P	15 55 41.1	-1.2
	0.6nm,0.2s,baz=131,slow=5.1,SNR=2.2						
	0.6nm,0.2s						

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*IDC **02** 15:46:39.1±0.7, 10°.46S×164°.92E, h0^{km}, mb4.1/14, mbtmp4.1/15, ML4.3/1, MS3.3/9, Error ellipse: s-maj=26.2km s-min=18.4km az=102.0*

*NOU **02** 15:46:43.5, 10°.71S×165°.03E, h0^{km}, mb5.1/19, Santa Cruz Islands*

*NEIC **02** 15:46:44.5±1.4, 10°.62S±0°.09×165°.16E±0°.09, h35^{km}±1^{km}, mb4.6/30, Error ellipse: s-maj=15.4km s-min=14.2km az=61.0*

ISC 02 15:46:45.3±0.5**, 10°.70S**±0°.07×**165°.14E**±0°.08**, h46^{km}, n79,**
σ1^{s}.64/68**, mb4.4**/27**, MS3.3**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HURO	Huro Makira	3.19	274	P	Pn	15 47 33.1	+0.1
NGOA	Tingoa Renbel	5.05	260	P	Pn	15 47 57.3	-1.3
SANVU	Saraoutou	5.13	157		Pn	15 47 60.0	+0.3
SANVU	Saraoutou	5.13	157	P	Pn	15 48 00.8	+1.1
SAVO	Savo Central	5.47	286	P	Pn	15 48 06.3	+2.0
SAVO	Savo Central	5.47	286	S	Sn	15 49 08.6	+2.6
TATA	Tatamba Isabel	5.74	293	P	Pn	15 48 08.7	+0.7
TATA	Tatamba Isabel	5.74	293	S	Sn	15 49 14.5	+1.8
DVP	Devils Point	7.59	157	P	Pn	15 48 36.8	+3.4
MARNC	Mare, Loyalty	11.08	166	P	Pn	15 49 23.8	+2.6
DZM	Mont Dzumac	11.38	174	Pn	Pn	15 49 27.0	+1.6
	1.9nm,0.3s,baz=330,slow=20,SNR=33						
DZM				Sn	Sn	15 51 26.4	-4.9
	2.2nm,0.3s,baz=323,slow=20,SNR=8.7						
DZM				LR	LR	15 53 25.4	
	comp=Z,109nm,18.6s,baz=34,slow=35						
	4.6nm,0.3s						
DZM	Mont Dzumac	11.38	174		Pn	15 49 25.3	-0.1
DZM	Mont Dzumac	11.38	174	P	Pn	15 49 27.9	+2.5
YATNC	Mamie plateau,	11.42	172	P	Pn	15 49 27.7	+1.8
ONTNC	Ouen Toro	11.61	174	Pn	Pn	15 49 28.4	-0.1
ONTNC	Ouen Toro	11.61	174	P	Pn	15 49 31.3	+2.8
OUENC	Ouen Island, N	11.77	172	P	Pn	15 49 33.5	+2.9
PINNC	Pines Island,	12.05	170	P	Pn	15 49 38.1	+3.6
PMG	Port Moresby	17.75	273	LR	LR	15 57 21.8	
	comp=Z,173nm,19.3s,baz=152,slow=37						
MANU	Manus Island	19.63	295		Pn	15 51 11.6	-0.3
MANU				IAmb	IAmb	15 51 13.0	
	comp=Z,18nm,0.9s						
EIDS	Eidsvold	19.76	221		Pn	15 51 13.7	+0.3
ARMA	Armidale	23.30	211	P	P	15 51 50.3	+0.9
ARMA				IAmb	IAmb	15 52 22.6	
	comp=Z,21nm,1.3s						
RAO	Raoul Island	24.32	142	LR	LR	15 59 44.8	

	comp=Z,49nm,18.4s,baz=44,slow=32						
INKA	**Innaminka**	28.50	230	P	**P**	**15 52 36.6**	**+0.1**
H11S2	**WAKE ISLAND Hy**	29.04	3	T	T	16 23 13.2	
	baz=183						
H11S3	**WAKE ISLAND Hy**	29.05	3	T	T	16 23 18.4	
	baz=183						
H11S1	**WAKE ISLAND Hy**	29.06	3	T	T	16 23 14.4	
	baz=183						
URZ	**Urewera**	29.47	161	LR	LR	16 03 34.1	
	comp=Z,81nm,21.3s,baz=358,slow=34						
RTZ	**Ruatahuna**	29.75	161	P	**P**	**15 52 48.4**	**+0.8**
RTZ				IAmb	IAmb	15 52 58.6	
	comp=Z,31nm,1.2s						
H11N1	**WAKE ISLAND Hy**	30.27	3	T	T	16 24 44.4	
	baz=182,slow=74						
H11N3	**WAKE ISLAND Hy**	30.27	3	T	T	16 24 44.7	
	baz=182,slow=74						
H11N2	**WAKE ISLAND Hy**	30.29	3	T	T	16 24 45.7	
	baz=182						
STKA	**Stephens Creek**	30.29	222	P	**P**	**15 52 51.3**	**-1.0**
	comp=Z,4.7nm,0.8s,baz=50,slow=14,SNR=8.1						
STKA				LR	LR	16 04 38.8	
	comp=Z,68nm,18.1s,baz=32,slow=36						
	comp=Z,4.7nm,0.8s						
STKA	**Stephens Creek**	30.29	222	P	**P**	**15 52 51.8**	**-0.6**
WR8	**Warramunga Arr**	30.90	249	P	**P**	**15 52 56.1**	**-1.8**
WB0	**Warramunga Arr**	30.96	249	P	**P**	**15 52 56.6**	**-1.8**
WB0				IAmb	IAmb	15 52 59.4	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	31.05	249	P	**P**	**15 52 57.0**	**-2.2**
	comp=Z,0.7nm,0.8s,baz=77,slow=9.2,SNR=5.2						
	comp=Z,0.7nm,0.8s						
WRA	**Warramunga Arr**	31.05	249	P	**P**	**15 52 56.8**	**-2.3**
GUMO	**Guam**	31.41	320	LR	LR	16 03 35.0	
	comp=Z,50nm,21.6s,baz=81,slow=33						
BFZ	**Birch Farm**	31.44	164	P	**P**	**15 53 01.7**	**-0.6**
TOO	**Toolangi**	32.06	210	P	**P**	**15 53 08.8**	**+0.8**
TOO				IAmb	IAmb	15 53 09.1	
	comp=Z,12nm,1.3s						
AS31	**Alice Springs**	32.42	242	P	**P**	**15 53 09.5**	**-1.7**
ASAR	**Alice Springs**	32.42	242	P	**P**	**15 53 09.3**	**-2.0**
	comp=Z,0.7nm,0.6s,baz=73,slow=9.1,SNR=22						
ASAR				PcP	**PcP**	**15 55 56.8**	**-1.1**
	comp=Z,0.5nm,1.0s,baz=86,slow=2.5,SNR=2.3						
ASAR				LR	LR	16 05 59.3	
	comp=Z,52nm,18.0s,baz=81,slow=36						
	comp=Z,0.7nm,0.6s						
LTZ	**Lake Taylor**	32.56	170	P	**P**	**15 53 11.4**	**-0.8**
BBOO	**Buckleboo**	34.63	226	P	**P**	**15 53 30.4**	**0.0**
PPT	**Papeete**	44.36	104	LR	LR	16 09 30.2	
	comp=Z,45nm,18.5s,baz=290,slow=31						
YHNB	**Yeheng**	55.30	310	P	**P**	**15 56 13.6**	**-1.0**
VNDA	**Vanda**	66.83	181	P	**P**	**15 57 34.7**	**+2.8**
	comp=Z,1.8nm,1.1s,baz=6.3,slow=5.4,SNR=3.2						
	comp=Z,1.8nm,1.1s						
VNDA	**Vanda**	66.83	181	P	**P**	**15 57 32.0**	**+0.1**
VNDA				IAmb	IAmb	15 57 33.8	
	comp=Z,9.0nm,1.5s						
P08K	**Saint George I**	70.26	15	P	**P**	**15 57 53.7**	**+0.2**
MA2	**Magadan**	70.99	352	LR	LR	16 24 12.9	
	comp=Z,20nm,19.5s,baz=40,slow=32						
CMAR	**Chiang Mai Arr**	71.43	294	P	**P**	**15 58 01.3**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=107,slow=5.8,SNR=9.9						
	comp=Z,1.0nm,0.6s						
CMAR	**Chiang Mai Arr**	71.43	294	P	**P**	**15 58 00.6**	**-0.8**
HILR	**Hailar Array B**	71.97	331	P	**P**	**15 58 03.6**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=133,slow=6.1,SNR=1.5						
	comp=Z,1.1nm,0.5s						
LZDM	**Lanzhou Array**	74.13	312	P	**P**	**15 58 17.2**	**-0.4**
	comp=Z,1.8nm,0.3s,baz=114,slow=6.5,SNR=3.2						
	comp=Z,1.8nm,0.3s						
K15K	**Wolf Creek Mou**	77.25	15	P	**P**	**15 58 34.2**	**-0.1**
K15K				IAmb	IAmb	15 58 58.4	
	comp=Z,12nm,1.3s						
ULN	**Ulaanbaatar**	77.67	324	P	**P**	**15 58 37.6**	**+0.3**
ULN				IAmb	IAmb	15 58 38.0	
	comp=Z,3.6nm,0.9s						
SONM	**Songino Array**	78.03	324	P	**P**	**15 58 38.6**	**-0.6**
	comp=Z,1.6nm,0.9s,baz=124,slow=7.7,SNR=5.7						
	comp=Z,1.6nm,0.9s						
SONM	**Songino Array**	78.03	324	IAmb	IAmb	15 58 40.1	
	comp=Z,2.5nm,1.0s						
QSPA	**South Pole Qui**	79.30	180	P	**P**	**15 58 49.1**	**+3.1**
	comp=Z,8.8nm,0.9s,baz=358,slow=3.1,SNR=27						
	comp=Z,8.8nm,0.9s						
QSPA	**South Pole Qui**	79.30	180	P	**P**	**15 58 49.5**	**+3.5**
QSPA				IAmb	IAmb	15 58 51.3	
	comp=Z,15nm,1.1s						
H17K	**Granite Mounta**	79.85	14	P	**P**	**15 58 48.4**	**-0.2**
H17K				IAmb	IAmb	15 58 59.3	
	comp=Z,6.6nm,1.5s						
P23K	**Montague Islan**	79.95	22	P	**P**	**15 58 49.6**	**+0.3**
IMAR	**Indian Mountai**	82.25	16	P	**P**	**15 59 01.1**	**-0.3**
E19K	**Redstone River**	82.53	14	P	**P**	**15 59 02.8**	**0.0**
E19K				IAmb	IAmb	15 59 12.6	
	comp=Z,4.7nm,1.1s						
D19K	**Kuna River**	83.17	13	P	**P**	**15 59 05.9**	**-0.3**
D19K				IAmb	IAmb	15 59 34.9	
	comp=Z,15nm,1.5s						
ILAR	**Eielson Array**	83.38	19	P	**P**	**15 59 05.9**	**-1.4**
	comp=Z,0.3nm,0.6s,baz=237,slow=6.0,SNR=10						
	comp=Z,0.3nm,0.6s						
D20K	**Etivluk River**	83.68	13	P	**P**	**15 59 08.4**	**-0.3**
D20K				IAmb	IAmb	15 59 35.8	
	comp=Z,13nm,1.4s						
I26K	**Coal Creek Min**	84.92	19	P	**P**	**15 59 15.6**	**+0.4**
I26K				IAmb	IAmb	15 59 43.6	
	comp=Z,4.4nm,1.3s						
NVAR	**Mina Array Bea**	86.26	50	P	**P**	**15 59 22.5**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=247,slow=7.8,SNR=2.1						
	comp=Z,0.7nm,0.8s						
NVAR	**Mina Array Bea**	86.26	50	P	**P**	**15 59 22.0**	**-0.7**
G27K	**Doyon Strip**	86.34	19	P	**P**	**15 59 22.3**	**+0.1**
G27K				IAmb	IAmb	15 59 34.7	
	comp=Z,3.5nm,0.9s						
I30M	**Mount Dempster**	87.18	21	P	**P**	**15 59 26.3**	**-0.1**
BCYI	**Bear Canyon**	91.35	45	P	**P**	**15 59 45.5**	**-1.2**
BCYI				IAmb	IAmb	15 59 50.8	
	comp=Z,4.0nm,1.4s						
MKAR	**Makanchi Array**	92.86	317	P	**P**	**15 59 52.7**	**-0.7**
	comp=Z,1.5nm,0.9s,baz=103,slow=6.4,SNR=6.5						
	comp=Z,1.5nm,0.9s						
MKAR	**Makanchi Array**	92.86	317	P	**P**	**15 59 51.8**	**-1.6**
ZALV	**Zalesovo Beam**	92.93	324	P	**P**	**15 59 51.7**	**-1.7**
	comp=Z,0.9nm,0.8s,baz=91,slow=7.2,SNR=4.8						
	comp=Z,0.9nm,0.8s						
PDAR	**Pinedale Array**	93.76	47	P	**P**	**15 59 57.4**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=250,slow=4.1,SNR=1.0						
	comp=Z,0.2nm,0.3s						
KEST	**Kesra**	146.78	322	PKPbc	**PKPbc**	**16 06 22.5**	**-0.5**
	comp=Z,4.6nm,0.8s,baz=39,slow=2.9,SNR=4.0						

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*TIR **02** 15:57:37.6, 41°.40N×19°.71E, h30^{km}, Ml2.4/2*
*PDG **02** 15:57:39.6±0.2, 41°.53N×19°.62E, h18^{km}, ML2.5/13, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
ISC 02 15:57:38.7±1.3, **41°.46N**±0°.06×**19°.66E**±0°.05, **h8**^{km}±10^{km}, **n16,** σ**0ˢ.76**/32, **9C-3D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	0.19	125	Pg	**Pg**	**15 57 42.5**	**0.0**
TIR				Sg	**Sg**	**15 57 45.7**	**+0.7**
TIR				AML	AML	15 57 45.9	
	1.3nm,0.2s						
ULC	**Ulcinj**	0.60	328	⇑*i*Pg	**Pg**	**15 57 49.3**	**-0.9**
ULC				*i* Sg	**Sg**	**15 57 57.9**	**-0.1**
SDA	**Shkodra**	0.61	348	Pg	**Pg**	**15 57 51.1**	**+0.6**
SDA				S	**Sb**	**15 58 01.1**	**+0.8**
PHP	**Peshkopia**	0.63	68	Pg	**Pg**	**15 57 49.8**	**-1.0**
PHP				Sg	**Sg**	**15 57 59.0**	**0.0**
PHP				AML	AML	15 58 03.5	
	1.1nm,0.4s						
DRME	**Dracevica, Mon**	0.81	334	⇓*i*Pg	**Pg**	**15 57 53.5**	**-0.8**
DRME				*e*Sg	**Sg**	**15 58 05.3**	**+0.4**
PDG	**Podgorica**	1.02	343	⇑*i*Pg	**Pg**	**15 57 57.3**	**-1.0**
PDG				*i* Sg	**Sg**	**15 58 12.0**	**+0.5**
BUM	**Brajici-Budva**	1.02	326	⇑*i*Pg	**Pg**	**15 57 57.7**	**-0.6**
BUM				*i* Sg	**Sg**	**15 58 12.4**	**+0.8**
PVY	**Plav**	1.16	11	⇑*i*Pg	**Pg**	**15 58 00.1**	**-0.9**
PVY				*i* Sg	**Sb**	**15 58 17.2**	**+0.9**
CEME	**Cevo**	1.22	333	⇑*i*Pg	**Pn**	**15 58 00.7**	**-1.5**
CEME				*e*Sg	**Sg**	**15 58 18.9**	**+0.8**
HCY	**Herceg Novi**	1.32	319	⇓*i*Pg	**Pn**	**15 58 02.8**	**-0.6**
HCY				*i* Sg	**Sg**	**15 58 22.0**	**+0.9**
KOME	**Kolasin**	1.40	356	⇑*i*Pg	**Pn**	**15 58 04.2**	**-0.4**
KOME				*e*Sg	**Sn**	**15 58 24.1**	**+0.8**
NKME	**Niksic**	1.41	338	⇑*i*Pg	**Pn**	**15 58 04.5**	**-0.3**
NKME				*e*Sg	**Sb**	**15 58 24.3**	**+0.8**
IVA	**Berane**	1.43	7	*e*Pg	**Pn**	**15 58 04.7**	**-0.3**
IVA				*e*Sg	**Sb**	**15 58 24.8**	**+0.9**
BRY	**Bratogost**	1.67	330	⇑*i*Pn	**Pn**	**15 58 07.8**	**-0.6**
BRY				*i* Sn	**Sn**	**15 58 30.7**	**+0.6**
UPM	**Unac-Piva**	1.83	342	⇑*i*Pn	**Pn**	**15 58 10.0**	**-0.7**
UPM				*i* Sn	**Sn**	**15 58 34.1**	**-0.1**
PLE	**Pljevlja**	1.89	354	⇓*i*Pn	**Pn**	**15 58 10.3**	**-1.0**
PLE				*i* Sn	**Sn**	**15 58 35.5**	**+0.2**

IDC 02 16:01:44.6±7.6, **6°.51S**×**149°.81E, h160**^{km}±47^{km}, **mb2.6**/2, **mbtmp3.0**/3, **Error ellipse: s-maj=126.5km s-min=59.5km az=117.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	3.90	222	P	Pn	16 02 41.9	-1.8
	1.2nm,0.4s,baz=195,slow=16,SNR=1.9						
PMG				S	Sn	16 03 31.9	+2.0
	2.4nm,0.6s,baz=201,slow=10,SNR=1.8						
WRA	**Warramunga Arr**	20.10	227	P	P	16 06 05.0	-1.1
	0.4nm,0.8s,baz=51,slow=11,SNR=2.1						
	0.4nm,0.8s						
ASAR	**Alice Springs**	22.91	220	P	P	16 06 34.3	-0.5
	0.6nm,0.7s,baz=55,slow=9.1,SNR=9.8						
	0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	147.93	284	PKPbc	PKPbc	16 21 12.6	+0.5
	1.0nm,0.3s,baz=64,slow=5.8,SNR=1.1						

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*IDC **02** 16:03:31.7±0.9, 45°.98N×154°.71E, h0^{km}, mb3.8/15, mbtmp3.8/19, ML3.2/4, MS2.9/4, Error ellipse: s-maj=22.8km s-min=17.6km az=128.0*
*NEIC **02** 16:03:35.0±1.4, 46°.14N±0°.10×154°.4E±0°.1, h10^{km}±1^{km}, mb4.6/25, Error ellipse: s-maj=17.8km s-min=12.8km az=144.0*
*MOS **02** 16:03:36.0±1.3, 46°.11N×154°.39E, h43^{km}, mb4.2/1, Error ellipse: s-maj=12.6km s-min=9.3km az=52.2*
*SKHL **02** 16:03:36.3±0.2, 46°.30N×154°.20E, h36^{km}±3^{km}, mb4.6/5*
ISC 02 16:03:35.7±0.5, **46°.15N**±0°.08×**154°.31E**±0°.06, **h19**^{km}, **n71,** σ**1ˢ.56**/74, **mb4.3**/29, **1C, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	4.61	261	⇑*i*PN	**Pn**	**16 04 45.5**	**+1.2**
KUR				pmax	pmax		
	comp=Z,71nm,0.5s						
KUR	**Kuril'sk**	4.61	261	*e*P	**Pn**	**16 04 43.9**	**-0.4**
KUR				AMB	AMB	16 04 46.3	
	comp=Z,50nm,0.6s						
KUR				*e*S	**Sn**	**16 05 34.5**	**-2.8**
KUR				A	A	16 05 39.3	
	comp=Z,70nm,0.5s						
KUR				A	A	16 05 39.3	
	comp=Z,100nm,0.5s						
SKR	**Severo-Kuril’s**	4.69	14	*e*P	**Pn**	**16 04 44.7**	**-0.8**
SKR				AMB	AMB	16 04 48.8	
	comp=Z,40nm,0.4s						
SKR				*e*S	**Sn**	**16 05 35.2**	**-4.1**
SKR				A	A	16 05 41.6	
	comp=Z,50nm,0.5s						
SKR				A	A	16 05 41.6	
	comp=Z,40nm,0.5s						
PAU	**Pauzhetka**	5.57	16	*e*P	**Pn**	**16 04 57.3**	**-0.2**
PAU				AMB	AMB	16 05 00.7	
	comp=Z,30nm,0.4s						
PAU				*e*S	**Sn**	**16 05 57.9**	**-3.1**
PAU				A	A	16 06 03.5	
	comp=Z,40nm,0.3s						
PAU				A	A	16 06 03.5	
	comp=Z,40nm,0.3s						
YUK	**Yuzh-Kuril'sk**	6.35	254	PN	**Pn**	**16 05 07.8**	**-0.4**
YUK				pmax	pmax		
	comp=Z,68nm,0.3s						
YUK	**Yuzh-Kuril'sk**	6.35	254	*e*P	**Pn**	**16 05 08.3**	**+0.1**
YUK				AMB	AMB	16 05 10.4	
	comp=Z,80nm,0.7s						
YUK				*e*S	**Sn**	**16 06 17.2**	**-2.9**
YUK				A	A	16 06 24.0	
	comp=Z,160nm,0.5s						
YUK				A	A	16 06 24.0	
	comp=Z,170nm,0.5s						
GLVR	**Golovnino**	6.69	252	PN	**Pn**	**16 05 13.8**	**+0.9**
GLVR	**Golovnino**	6.69	252	*e*P	**Pn**	**16 05 13.8**	**+0.9**
GLVR				*e*S	**Sn**	**16 06 25.7**	**-2.8**
NMR	**Nemuro--Hokkai**	6.71	249	*e*PN	**Pn**	**16 05 12.9**	**-0.3**
NMR	**Nemuro--Hokkai**	6.71	249	*e*P	**Pn**	**16 05 11.7**	**-1.5**
NMR				*e*S	**Sn**	**16 06 24.2**	**-4.9**
RUSJ	**Misakicho**	6.73	256	*e*PN	**Pn**	**16 05 14.9**	**+1.4**
PEA0B	**Petropavlovsk-**	7.30	16	Pn	**Pn**	**16 05 20.1**	**-1.1**
PEA0B	**Petropavlovsk-**	7.30	16	PN	**Pn**	**16 05 20.2**	**-1.1**
PETK	**Petropavlovsk-**	7.30	16	Pn	**Pn**	**16 05 19.5**	**-1.8**
	comp=Z,0.5nm,0.3s,baz=201,slow=14,SNR=27						
PETK				LR	LR	16 09 56.4	
	comp=Z,41nm,18.0s,baz=165,slow=52						
	comp=Z,1.3nm,0.4s						
PETK	**Petropavlovsk-**	7.30	16		**Pn**	**16 05 20.4**	**-0.9**
PETK	**Petropavlovsk-**	7.30	16	PN	**Pn**	**16 05 20.4**	**-0.9**
JKA	**Kamikawa-asahi**	8.53	260		**Pn**	**16 05 39.7**	**+1.6**
JKA	**Kamikawa-asahi**	8.53	260	*e*P	**Pn**	**16 05 39.9**	**+1.8**
ASAJ	**Asahikawa**	8.53	260	Pn	**Pn**	**16 05 39.9**	**+1.7**
	comp=Z,0.8nm,0.3s,baz=100,slow=12,SNR=7.5						
ASAJ				LR	LR	16 08 58.6	
	comp=Z,40nm,21.2s,baz=106,slow=37						
	comp=Z,3.1nm,0.5s						
MA2	**Magadan**	13.62	352	Pn	**Pn**	**16 06 49.2**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=98,slow=20,SNR=1.6						
MJAR	**Matsushiro Arr**	15.41	237	Pn	**Pn**	**16 07 13.8**	**+1.7**
	baz=47,slow=11,SNR=1.4						
	comp=Z,0.5nm,0.5s						
USRK	**Ussuriysk Ar.**	15.86	271	Pn	**Pn**	**16 07 18.1**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=72,slow=15,SNR=4.5						
	comp=Z,3.3nm,0.6s						
SEY	**Seymchan**	16.86	357	LR	LR	16 13 39.4	
	comp=Z,40nm,20.1s,baz=102,slow=36						
AMKA	**Amchitka**	17.25	63		**P**	**16 07 36.1**	**-0.6**
KSRS	**Korea Array**	21.43	256	P	**P**	**16 08 23.0**	**+0.5**
	comp=Z,2.4nm,1.0s,baz=58,slow=12,SNR=2.8						
	comp=Z,2.4nm,1.0s						
HILR	**Hailar Array B**	23.32	291	P	**P**	**16 08 41.9**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=57,slow=10,SNR=2.2						
NIKH	**Nikolski High**	24.64	60	P	**P**	**16 08 55.5**	**+0.8**
J14K	**Nanvaranak Lak**	28.90	40	P	**P**	**16 09 34.0**	**+1.0**
J14K				IAmb	IAmb	16 09 51.0	
	comp=Z,20nm,1.4s						
J16K	**Anvik River**	30.34	39	P	**P**	**16 09 46.3**	**+0.6**
J16K				IAmb	IAmb	16 10 12.1	
	comp=Z,11nm,1.4s						
F17K	**Baldwin Pennin**	30.94	33	P	**P**	**16 09 51.1**	**+0.2**
F17K				IAmb	IAmb	16 10 27.4	
	comp=Z,10.0nm,1.3s						
C18K	**Utukok River**	31.73	29	P	**P**	**16 09 58.0**	**-0.1**
C18K				IAmb	IAmb	16 10 17.5	
	comp=Z,18nm,1.4s						
F19K	**Shaleruckik Mo**	32.38	33	P	**P**	**16 10 03.6**	**-0.1**
D20K	**Etivluk River**	33.33	30	P	**P**	**16 10 12.3**	**+0.2**
D20K				IAmb	IAmb	16 10 49.9	
	comp=Z,11nm,1.4s						
B20K	**Meade River**	33.56	28	P	**P**	**16 10 14.2**	**+0.3**
H21K	**Melozitna Rive**	34.10	36	P	**P**	**16 10 19.3**	**+0.6**
H21K				IAmb	IAmb	16 10 27.5	
	comp=Z,8.6nm,1.5s						
B22K	**Teshekpuk Lake**	34.88	28	P	**P**	**16 10 25.8**	**+0.5**
C23K	**Itkillik River**	35.69	29	P	**P**	**16 10 32.8**	**+0.5**
E24K	**Your Creek**	36.13	32	P	**P**	**16 10 36.7**	**+0.5**
ILAR	**Eielson Array**	36.51	38	P	**P**	**16 10 38.3**	**-1.1**
	comp=Z,0.3nm,0.7s,baz=250,slow=7.7,SNR=6.1						
	comp=Z,0.3nm,0.7s						
D25K	**Kavik River**	37.06	30	P	**P**	**16 10 44.4**	**+0.3**
BCAR	**Beaver Creek A**	38.81	41	P	**P**	**16 10 59.4**	**+0.4**
LZDM	**Lanzhou Array**	38.91	273	P	**P**	**16 11 01.6**	**+1.1**
	comp=Z,0.9nm,0.3s,baz=15,slow=6.1,SNR=2.2						
	comp=Z,0.9nm,0.3s						
CTGM	**Chitina Glacie**	39.26	44	P	**P**	**16 11 03.2**	**+0.3**
CTGM				IAmb	IAmb	16 11 03.8	
	comp=Z,35nm,1.4s						
ZALV	**Zalesovo Beam**	43.64	307	P	**P**	**16 11 39.2**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=43,slow=6.9,SNR=2.0						
ZALV				LR	LR	16 30 14.0	
	comp=Z,35nm,18.0s,baz=111,slow=36						
	comp=Z,0.3nm,0.3s						
MKAR	**Makanchi Array**	47.96	298	P	**P**	**16 12 15.9**	**+3.0**
	comp=Z,0.4nm,0.6s,baz=74,slow=10,SNR=4.3						
	comp=Z,0.4nm,0.6s						
MKAR	**Makanchi Array**	47.96	298	P	**P**	**16 12 14.1**	**+1.2**
KURK	**Kurchatov**	48.39	305	P	**P**	**16 12 19.6**	**+3.5**
KURK	**Kurchatov**	48.39	305	*e*P	**P**	**16 12 15.9**	**-0.2**
KURBB	**Kurchatov Arra**	48.48	304	P	**P**	**16 12 19.6**	**+2.8**
	comp=Z,0.9nm,0.7s,baz=66,slow=8.5,SNR=5.1						
	comp=Z,0.9nm,0.7s						
HATHI	**Halemaʻumaʻu T**	49.03	106	P	**P**	**16 12 21.1**	**-0.5**
BVAR	**Borovoye Array**	51.88	310	P	**P**	**16 12 44.1**	**+1.6**
	comp=Z,0.4nm,0.4s,baz=90,slow=0.4,SNR=2.6						
	comp=Z,0.4nm,0.4s						
ABKAR	**Akbulak array**	59.45	311	P	**P**	**16 13 37.4**	**+0.4**
NV11	**Mina Array Sit**	62.06	63	P	**P**	**16 13 54.5**	**-0.7**
NV11				IAmb	IAmb	16 14 23.5	
	comp=Z,5.1nm,1.4s						
FINES	**FINESS Array B**	64.94	335	P	**P**	**16 14 13.9**	**+0.5**
	comp=Z,4.1nm,1.0s,baz=36,slow=6.3,SNR=5.6						
	comp=Z,4.1nm,1.0s						
FINES	**FINESS Array B**	64.94	335	P	**P**	**16 14 14.0**	**+0.5**
ULM	**Lac du Bonnet**	66.43	41	P	**P**	**16 14 26.6**	**+3.2**
	comp=Z,1.2nm,0.4s,baz=51,slow=6.5,SNR=1.1						
WB0	**Warramunga Arr**	68.04	200	P	**P**	**16 14 32.4**	**-1.5**
WB0				IAmb	IAmb	16 14 34.3	
	comp=Z,7.7nm,1.3s						
WR8	**Warramunga Arr**	68.20	200	P	**P**	**16 14 33.3**	**-1.4**
WR8				IAmb	IAmb	16 14 34.1	
	comp=Z,8.0nm,1.2s						
WRA	**Warramunga Arr**	68.22	200	P	**P**	**16 14 33.4**	**-1.5**
	comp=Z,0.8nm,0.7s,baz=20,slow=6.8,SNR=8.8						
	comp=Z,0.8nm,0.7s						
WRA	**Warramunga Arr**	68.22	200	IAmb	IAmb	16 14 38.4	
	comp=Z,0.2nm,1.1s						
ONTNC	**Ouen Toro**	69.02	168	P	**P**	**16 14 40.2**	**+0.4**
HFS	**Hagfors**	69.31	340	P	**P**	**16 14 41.4**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=48,slow=6.4,SNR=4.1						
	comp=Z,1.8nm,0.7s						
KBZ	**Khabaz**	71.87	315	P	**P**	**16 14 58.5**	**+1.3**
	comp=Z,2.4nm,0.8s,baz=243,slow=6.8,SNR=2.8						
	comp=Z,2.4nm,0.8s						
ASAR	**Alice Springs**	71.91	200	P	**P**	**16 14 56.2**	**-1.3**
	comp=Z,0.4nm,0.9s,baz=27,slow=6.1,SNR=6.3						
	comp=Z,0.4nm,0.9s						
AKASG	**Malin Array Be**	72.51	327	P	**P**	**16 15 00.0**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=38,slow=6.9,SNR=2.1						
	comp=Z,0.2nm,0.3s						
AKASG	**Malin Array Be**	72.51	327	IAmb	IAmb	16 15 07.3	
	comp=Z,5.0nm,1.4s						
BUR08	**Bucovina Ar. S**	76.53	327	P	**P**	**16 15 25.1**	**+0.7**
BUR08				IAmb	IAmb	16 15 54.2	
	comp=Z,6.6nm,1.2s						
BURAR	**Bucovina Array**	76.55	327	P	**P**	**16 15 24.9**	**+0.4**
TXAR	**Lajitas Array**	77.06	61	P	**P**	**16 15 26.3**	**-1.4**
	comp=Z,0.2nm,0.5s,baz=313,slow=6.3,SNR=3.8						
	comp=Z,0.2nm,0.5s						
EKA	**Eskdalemuir Ar**	77.11	347	P	**P**	**16 15 28.7**	**+1.3**
	comp=Z,1.5nm,0.9s,baz=21,slow=6.8,SNR=3.7						
	comp=Z,1.5nm,0.9s						
LMQ	**La Malbaie**	78.83	29	P	**P**	**16 15 36.7**	**-0.4**
LMQ				IAmb	IAmb	16 15 36.9	
	comp=Z,15nm,1.1s						

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*IDC **02** 16:04:33.3±2.6, 16°.06N×98°.53W, h0^{km}, mb3.8/7, mbtmp3.8/9, ML3.6/2, MS3.8/32, Error ellipse: s-maj=47.1km s-min=16.8km az=12.0*
*MEX **02** 16:04:36.5±0.5, 16°.02N×98°.65W, h16^{km}±5^{km}, MD4.6*
*NEIC **02** 16:04:37.4±1.3, 16°.20N±0°.03×98°.40W±0°.04, h10^{km}±1^{km}, mb4.4/95, Md4.6/133(MEX), Error ellipse: s-maj=7.4km s-min=5.1km az=242.0*
ISC 02 16:04:33.7±1.0, **16°.08N**±0°.03×**98°.57W**±0°.02, **h2**^{km}±5^{km}, **n258,** σ**2ˢ.25**/308, **mb4.4**/44, **MS3.9**/31, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	0.53	54		**Pn**	**16 04 46.3**	**-2.1**
PNIG	**Pinotepa**	0.53	54	*e*P	**Pn**	**16 04 46.3**	**-2.1**
PNIG				*e*S	**Sb**	**16 04 54.6**	**+0.7**
CRIG	**Cruz Grande**	0.84	321		**Pg**	**16 04 49.5**	**-0.4**
CRIG					**Sg**	**16 05 00.5**	**-0.3**
CRIG	**Cruz Grande**	0.84	321	*e*P	**Pg**	**16 04 49.5**	**-0.4**
CRIG				*e*S	**Sg**	**16 05 00.5**	**-0.3**
MGIG	**Malinaltepec**	1.15	357		**Pg**	**16 04 55.1**	**-0.7**
MGIG					**Sg**	**16 05 09.5**	**-1.1**
MGIG	**Malinaltepec**	1.15	357	*e*P	**Pg**	**16 04 55.1**	**-0.7**
MGIG				*e*S	**Sg**	**16 05 09.5**	**-1.1**
YOIG	**Yosondua**	1.25	52		**Pn**	**16 04 57.3**	**-1.3**
YOIG	**Yosondua**	1.25	52	*e*P	**Pn**	**16 04 57.3**	**-1.3**
PEIG	**Puerto Escondi**	1.37	93		**Pg**	**16 04 58.8**	**-1.3**
PEIG					**Sb**	**16 05 15.9**	**-2.3**
PEIG	**Puerto Escondi**	1.37	93	*e*P	**Pg**	**16 04 58.8**	**-1.3**
PEIG				*e*S	**Sb**	**16 05 15.9**	**-2.3**
DAIG	**Los Arroyos**	1.39	312		**Pn**	**16 04 57.4**	**-2.9**
DAIG					**Sb**	**16 05 13.7**	**-5.1**
DAIG	**Los Arroyos**	1.39	312	*e*P	**Pn**	**16 04 57.4**	**-2.9**
DAIG				*e*S	**Sb**	**16 05 13.7**	**-5.1**
TXIG	**Tlaxiaco**	1.40	33		**Pb**	**16 04 59.6**	**-1.2**
TXIG					**Sb**	**16 05 16.2**	**-3.0**
TXIG	**Tlaxiaco**	1.40	33	*e*P	**Pb**	**16 04 59.6**	**-1.2**
TXIG				*e*S	**Sb**	**16 05 16.2**	**-3.0**
TLIG	**Tlapa**	1.47	0	Pn	**Pn**	**16 05 00.6**	**-0.8**
TLIG				Sn	**Sn**	**16 05 21.1**	**-0.3**
TLIG	**Tlapa**	1.47	0	*e*P	**Pn**	**16 05 00.3**	**-1.1**
TLIG				*e*S	**Sg**	**16 05 19.2**	**-1.9**
FTIG	**Fresnillo de T**	1.86	13		**Pn**	**16 05 06.3**	**-0.6**
FTIG					**Sn**	**16 05 27.4**	**-3.7**
FTIG	**Fresnillo de T**	1.86	13	*e*P	**Pn**	**16 05 06.3**	**-0.6**
FTIG				*e*S	**Sn**	**16 05 27.4**	**-3.7**
CAIG	**El Cayaco**	1.89	301		**Pn**	**16 05 04.7**	**-2.3**
CAIG					**Sn**	**16 05 25.5**	**-5.9**
CAIG	**El Cayaco**	1.89	301	*e*P	**Pn**	**16 05 04.7**	**-2.3**
CAIG				*e*S	**Sn**	**16 05 25.5**	**-5.9**
HLIG	**Huajuapan de L**	1.89	23		**Pn**	**16 05 06.5**	**-0.8**
HLIG					**Sb**	**16 05 30.8**	**-2.5**
HLIG	**Huajuapan de L**	1.89	23	*e*P	**Pn**	**16 05 06.5**	**-0.8**
HLIG				*e*S	**Sb**	**16 05 30.8**	**-2.5**
OXIG	**Oaxaca**	2.02	61		**Pn**	**16 05 08.8**	**-0.2**
OXIG					**Sb**	**16 05 34.2**	**-2.9**
VHO	**Vista Hermosa**	2.02	61	*e*P	**Pn**	**16 05 08.8**	**-0.2**
VHO				*e*S	**Sb**	**16 05 34.2**	**-2.9**
OXBJ	**Oaxaca**	2.03	61		**Pb**	**16 05 10.3**	**-1.1**
OXBJ					**Sg**	**16 05 37.8**	**-1.1**
OXBJ	**Oaxaca**	2.03	61	*e*P	**Pb**	**16 05 10.3**	**-1.1**
OXBJ				*e*S	**Sg**	**16 05 37.8**	**-1.1**
OXLC	**Oaxaca**	2.04	61		**Pn**	**16 05 08.6**	**-0.8**
OXLC					**Sg**	**16 05 35.6**	**-3.9**
OXLC	**Oaxaca**	2.04	61	*e*P	**Pn**	**16 05 08.6**	**-0.8**
OXLC				*e*S	**Sg**	**16 05 35.6**	**-3.9**
MEIG	**Mezcala**	2.09	332		**Pn**	**16 05 08.6**	**-1.3**
MEIG					**Sn**	**16 05 34.2**	**-2.3**
MEIG	**Mezcala**	2.09	332	*e*P	**Pn**	**16 05 08.6**	**-1.3**
MEIG				*e*S	**Sn**	**16 05 34.2**	**-2.3**
HUIG	**Huatulco**	2.39	97		**Pn**	**16 05 12.6**	**-1.5**
HUIG					**Sn**	**16 05 40.5**	**-3.5**
HUIG	**Huatulco**	2.39	97	*e*P	**Pn**	**16 05 12.6**	**-1.5**
HUIG				*e*S	**Sn**	**16 05 40.5**	**-3.5**
TOIG	**Toxpalan**	2.47	36		**Pn**	**16 05 14.6**	**-0.5**
TOIG					**Sb**	**16 05 46.2**	**-3.7**
TOIG	**Toxpalan**	2.47	36	*e*P	**Pn**	**16 05 14.6**	**-0.5**
TOIG				*e*S	**Sb**	**16 05 46.2**	**-3.7**
TPIG	**Tehuac#an**	2.60	26		**Pn**	**16 05 16.2**	**-0.7**
TPIG					**Sn**	**16 05 47.5**	**-1.8**
TPIG	**Tehuac#an**	2.60	26	*e*P	**Pn**	**16 05 16.2**	**-0.7**
TPIG				*e*S	**Sn**	**16 05 47.5**	**-1.8**
ARIG	**Puente Sto Nin**	2.77	322		**Pn**	**16 05 18.4**	**-0.8**
ARIG					**Sn**	**16 05 50.5**	**-2.7**
ARIG	**Puente Sto Nin**	2.77	322	*e*P	**Pn**	**16 05 18.4**	**-0.8**
ARIG				*e*S	**Sn**	**16 05 50.5**	**-2.7**
YAIG	**Yautepec**	2.81	350		**Pn**	**16 05 20.9**	**+1.0**
YAIG					**Sn**	**16 05 51.9**	**-2.4**
YAIG	**Yautepec**	2.81	350	*e*P	**Pn**	**16 05 20.9**	**+1.0**
YAIG				*e*S	**Sn**	**16 05 51.9**	**-2.4**
PPIG	**Popocatepetl**	2.97	359		**Pn**	**16 05 22.5**	**+0.1**
PPIG					**Sn**	**16 06 00.1**	**+1.2**
PPM	**Popocatepetl**	2.97	359	*e*P	**Pn**	**16 05 22.5**	**+0.1**
PPM				*e*S	**Sn**	**16 06 00.1**	**+1.2**
MAVM	**Malinalco, Edo**	2.99	343		**Pn**	**16 05 23.4**	**+1.0**
MAVM					**Sn**	**16 05 57.2**	**-1.9**
MAVM	**Malinalco, Edo**	2.99	343	*e*P	**Pn**	**16 05 23.4**	**+1.0**
MAVM				*e*S	**Sn**	**16 05 57.2**	**-1.9**
NEUV	**Arroyo Zacate**	3.11	58		**Pn**	**16 05 23.7**	**-0.2**

NEUV					Sn	16 06 00.3	-1.4
NEUV	Arroyo Zacate	3.11	58	eP	Pn	16 05 23.7	-0.2
NEUV				eS	Sn	16 06 00.3	-1.4
MPVM	San Francisco	3.13	352		Pn	16 05 25.9	+1.6
MPVM					Sn	16 06 01.6	-0.9
MPVM	San Francisco	3.13	352	eP	Pn	16 05 25.9	+1.6
MPVM				eS	Sn	16 06 01.6	-0.9
MZVM		3.15	349		Pn	16 05 23.1	-1.4
MZVM					Sn	16 06 03.6	+0.9
MZVM		3.15	349	eP	Pn	16 05 23.1	-1.4
MZVM				eS	Sn	16 06 03.6	+0.9
ZIIG	Zihuatanejo	3.16	299		Pn	16 05 22.5	-2.0
ZIIG					Sn	16 05 59.6	-3.2
ZIIG	Zihuatanejo	3.16	299	eP	Pn	16 05 22.5	-2.0
ZIIG				eS	Sn	16 05 59.6	-3.2
TLVM	San Miguel Top	3.16	350		Pn	16 05 27.1	+2.2
TLVM					Sn	16 06 04.1	+0.7
TLVM	San Miguel Top	3.16	350	eP	Pn	16 05 27.1	+2.2
TLVM				eS	Sn	16 06 04.1	+0.7
XCVM	Xochimilco	3.20	351		Pn	16 05 26.6	+1.3
XCVM					Sn	16 05 59.9	-4.3
XCVM	Xochimilco	3.20	351	eP	Pn	16 05 26.6	+1.3
XCVM				eS	Sn	16 05 59.9	-4.3
THVM	De Xico	3.23	353		Pn	16 05 26.3	+0.5
THVM					Sn	16 06 02.7	-2.4
THVM	De Xico	3.23	353	eP	Pn	16 05 26.3	+0.5
THVM				eS	Sn	16 06 02.7	-2.4
AOVM	Tlapan	3.25	347		Pn	16 05 24.8	-1.4
AOVM					Sn	16 06 07.4	+1.6
AOVM	Tlapan	3.25	347	eP	Pn	16 05 24.8	-1.4
AOVM				eS	Sn	16 06 07.4	+1.6
INVM	La Marquesa	3.28	347		Pn	16 05 26.2	-0.4
INVM					Sn	16 06 04.4	-2.1
INVM	La Marquesa	3.28	347	eP	Pn	16 05 26.2	-0.4
INVM				eS	Sn	16 06 04.4	-2.1
MCRU	Las Cruces	3.29	349	eS	Sn	16 06 08.0	+1.5
COVM	Coyoacan	3.30	350		Sn	16 06 05.2	-1.5
COVM	Coyoacan	3.30	350	eS	Sn	16 06 05.2	-1.5
COVM				eS	Sb	16 06 09.5	-4.4
BJVM	Benito Juarez	3.32	350		Pn	16 05 25.3	-1.8
BJVM					Sn	16 06 05.7	-1.7
BJVM	Benito Juarez	3.32	350	eP	Pn	16 05 25.3	-1.8
BJVM				eS	Sn	16 06 05.7	-1.7
TOVM	TOLUCA	3.35	342		Pn	16 05 27.2	-0.3
TOVM					Sn	16 06 10.7	+2.5
TOVM	TOLUCA	3.35	342	eP	Pn	16 05 27.2	-0.3
TOVM				eS	Sn	16 06 10.7	+2.5
PBVM	Pinon	3.38	352		Pn	16 05 28.6	+1.1
PBVM					Sn	16 06 05.7	-2.6
PBVM	Pinon	3.38	352	eP	Pn	16 05 28.6	+1.1
PBVM				eS	Sn	16 06 05.7	-2.6
APVM	Azcapotzalco	3.44	350		Pn	16 05 32.1	+3.4
APVM					Sn	16 06 08.9	-1.3
APVM	Azcapotzalco	3.44	350	eP	Pn	16 05 32.1	+3.4
APVM				eS	Sn	16 06 08.9	-1.3
PTVM	Pico Tres Padr	3.53	352		Pn	16 05 33.6	+3.7
PTVM					Sn	16 06 13.0	+0.6
PTVM	Pico Tres Padr	3.53	352	eP	Pn	16 05 33.6	+3.7
PTVM				eS	Sn	16 06 13.0	+0.6
AZVM	Cuida Lopez Ma	3.55	349		Pn	16 05 32.5	+2.3
AZVM					Sn	16 06 11.7	-1.2
AZVM	Cuida Lopez Ma	3.55	349	eP	Pn	16 05 32.5	+2.3
AZVM				eS	Sn	16 06 11.7	-1.2
VTVM	Tizayuca	3.67	357		Pn	16 05 32.6	+0.7
VTVM					Sn	16 06 15.2	-0.8
VTVM	Tizayuca	3.67	357	eP	Pn	16 05 32.6	+0.7
VTVM				eS	Sn	16 06 15.2	-0.8
JAUV	Jalcomulco	3.68	27		Pn	16 05 30.9	-0.8
JAUV					Sn	16 06 12.5	-3.2
JAUV	Jalcomulco	3.68	27	eP	Pn	16 05 30.9	-0.8
JAUV				eS	Sn	16 06 12.5	-3.2
CMIG	Matias Romero	3.68	74	Pn	Pn	16 05 31.4	-0.3
	12nm,0.3s,baz=268,slow=11,SNR=57						
CMIG				Sn	Sn	16 06 14.1	-1.5
	26nm,0.3s,baz=293,slow=13,SNR=5.5						
CMIG				Lg	Lg	16 06 29.8	
	43nm,0.3s,baz=263,slow=14,SNR=4.7						
	72nm,0.6s						
CMIG	Matias Romero	3.68	74		Pn	16 05 30.6	-1.1
CMIG					Sn	16 06 11.7	-4.0
CMIG	Matias Romero	3.68	74	eP	Pn	16 05 30.6	-1.1
CMIG				eS	Sn	16 06 11.7	-4.0
ZUVM	ZUMPANGO	3.75	353		Pn	16 05 30.4	-2.6
ZUVM					Sn	16 06 15.6	-2.4
ZUVM	ZUMPANGO	3.75	353	eP	Pn	16 05 30.4	-2.6
ZUVM				eS	Sn	16 06 15.6	-2.4
ATVM	ATLACOMULCO	3.85	342		Pn	16 05 36.7	+2.3
ATVM					Sn	16 06 20.9	+0.4
ATVM	ATLACOMULCO	3.85	342	eP	Pn	16 05 36.7	+2.3
ATVM				eS	Sn	16 06 20.9	+0.4
ACIG	Acambay	4.07	342		Pb	16 05 44.8	-1.5
ACIG					Sn	16 06 29.7	+4.1
ACIG	Acambay	4.07	342	eP	Pb	16 05 44.8	-1.5
ACIG				eS	Sn	16 06 29.7	+4.1
PMUV	Sontecomapan	4.11	53		Pn	16 05 36.2	-1.4
PMUV					Sn	16 06 27.5	+1.1
PMUV	Sontecomapan	4.11	53	eP	Pn	16 05 36.2	-1.4
PMUV				eS	Sn	16 06 27.5	+1.1
LVIG	Laguna Verde	4.16	29		Pn	16 05 36.4	-2.0
LVIG					Sn	16 06 26.2	-1.5
LVIG	Laguna Verde	4.16	29	eP	Pn	16 05 36.4	-2.0
LVIG				eS	Sn	16 06 26.2	-1.5
CXUV	Coxquihui	4.17	13		Pn	16 05 40.9	+2.3
CXUV					Sn	16 06 28.2	+0.2
CXUV	Coxquihui	4.17	13	eP	Pn	16 05 40.9	+2.3
CXUV				eS	Sn	16 06 28.2	+0.2
DEIG	Demacu	4.22	354	eP	Pn	16 05 43.9	+4.5
DEIG				eS	Sn	16 06 31.7	+2.3
DHIG	Demacu	4.22	354		Pn	16 05 43.9	+4.5
DHIG					Sn	16 06 31.7	+2.3
MOIG	Morelia	4.36	326		Pn	16 05 44.9	+3.6
MOIG	Morelia	4.36	326		Sn	16 06 25.4	-7.4
MOIG	Morelia	4.36	326		Pn	16 05 37.0	-4.3
MOIG	Morelia	4.36	326	eP	Pn	16 05 37.0	-4.3
MOIG				eS	Sn	16 06 25.4	-7.4
UXUV	UXUV	4.42	73		Pn	16 05 40.1	-1.8
UXUV					Sn	16 06 33.4	-0.6
UXUV	UXUV	4.42	73	eP	Pn	16 05 40.1	-1.8
UXUV				eS	Sn	16 06 33.4	-0.6
TUIG	Tuzandepetl	4.42	63		Pn	16 05 38.4	-3.5
TUIG					Sn	16 06 33.9	-0.1
TUIG	Tuzandepetl	4.42	63	eP	Pn	16 05 38.4	-3.5
TUIG				eS	Sn	16 06 33.9	-0.1
JRQG	Juriquilla Cam	4.93	339		Pn	16 05 51.6	+2.5
JRQG					Sb	16 06 54.5	-6.4
JRQG	Juriquilla Cam	4.93	339	eP	Pn	16 05 51.6	+2.5
JRQG				eS	Sb	16 06 54.5	-6.4
MMIG	Aquila	5.06	296		Pn	16 05 49.8	-1.0
MMIG					Sn	16 06 42.0	-7.8
MMIG	Aquila	5.06	296	eP	Pn	16 05 49.8	-1.0
MMIG				eS	Sn	16 06 42.0	-7.8
PCIG		5.17	93		Pn	16 05 48.2	-4.0
PCIG					Sn	16 06 47.0	-5.4
PCIG		5.17	93	eP	Pn	16 05 48.2	-4.0
PCIG				eS	Sn	16 06 47.0	-5.4
TGIG		5.28	82		Pn	16 05 53.7	-0.1
TGIG					Sn	16 06 53.4	-1.9
TGIG		5.28	82	eP	Pn	16 05 53.7	-0.1
TGIG				eS	Sn	16 06 53.4	-1.9
IGIG	Irapuato, Guan	5.33	331		Sn	16 07 03.9	+7.1
IGIG	Irapuato, Guan	5.33	331	eS	Sn	16 07 03.9	+7.1
CTUV	Llano Grande	5.37	2		Pn	16 06 00.2	+5.3
CTUV					Sn	16 07 00.6	+3.3
CTUV	Llano Grande	5.37	2	eP	Pn	16 06 00.2	+5.3
CTUV				eS	Sn	16 07 00.6	+3.3
MNGA	Volcan de Coli	5.87	306	eP	Pn	16 06 03.5	+1.5
MNGA				eS	Sn	16 07 13.8	+3.7
INCO	Volcan de Coli	5.89	306	eP	Pn	16 06 04.5	+2.0
INCO				eS	Sn	16 07 11.7	+0.9
SOMAC	Volcano de Col	5.91	306	eP	Pn	16 06 03.5	+0.8
SOMAC				eS	Sn	16 07 13.1	+1.8
CDAR	Ciudad de Arme	5.92	300	eP	Pn	16 05 59.7	-2.7
CDAR				eS	Sn	16 07 00.5	-10
CEGR	Campo Tres	6.01	304	eP	Pn	16 06 02.1	-1.9
CEGR				eS	Sn	16 07 10.8	-2.8
PATR	El Naranjo	6.18	98		Pn	16 06 05.2	-1.2
PATR					Sn	16 07 12.4	-5.4
PATR	El Naranjo	6.18	98	eP	Pn	16 06 05.2	-1.2
PATR				eS	Sn	16 07 12.4	-5.4
CCIG	Comitan	6.19	87		Pn	16 06 04.1	-2.3
CCIG					Sn	16 07 17.6	-0.3
CCIG	Comitan	6.19	87	eP	Pn	16 06 04.1	-2.3
CCIG				eS	Sn	16 07 17.6	-0.3
PAVE	Pavencul	6.23	97		Pn	16 06 07.1	+0.1
PAVE					Sn	16 07 15.5	-3.4
PAVE	Pavencul	6.23	97	eP	Pn	16 06 07.1	+0.1
PAVE				eS	Sn	16 07 15.5	-3.4
CHUJ	Union Juarez	6.31	98	eP	Pn	16 06 08.1	0.0
CHUJ				eS	Sn	16 07 16.9	-4.0
CJM	Chamela	7.04	300	eP	Pn	16 06 15.8	-2.1
APG	El Apazote	7.89	97	Pn	Pn	16 06 29.6	-0.2
	baz=227,slow=22,SNR=1.0						
APG				Sn	Sn	16 07 59.4	-0.5
	0.1nm,0.3s,baz=232,slow=20,SNR=4.4						
LNIG	Linares	8.81	355	eP	Pn	16 06 52.4	+10
HERN	Volcan Telica	11.89	105		Pn	16 07 23.8	-0.7
LPIG	La Paz	13.60	308	LR	LR	16 12 01.2	
	comp=Z,298nm,21.1s,baz=25,slow=33						
TXAR	Lajitas Array	14.00	341	Pn	Pn	16 07 53.9	+0.5
	baz=142,slow=9.4,SNR=3.3						
TXAR				Lg	Lg	16 12 01.4	
	baz=169,slow=24,SNR=5.3						
TXAR				LR	LR	16 13 16.3	
	comp=Z,426nm,18.5s,baz=154,slow=37						
	0.5nm,0.9s						
TXAR	Lajitas Array	14.00	341	Pn	Pn	16 07 55.2	+1.9
SAND	Sanderson	14.19	347		Pn	16 07 58.0	+2.1
VHRN	Van Horn	15.77	339		P	16 08 22.3	+1.0
ABTX	Abilene, Hawle	16.50	357		P	16 08 30.4	+1.2
PLPT	Palo Pinto	16.66	1	Pn	Pn	16 08 29.3	+0.8
PLPT				IAmb	IAmb	16 08 35.0	
	comp=Z,29nm,1.1s						
SN07	Snyder 07	17.07	353		P	16 08 37.4	+1.9
Z38A	Mt. Pleasant	17.41	10		P	16 08 40.4	+1.2
Z38A				IAmb	IAmb	16 09 14.8	
	comp=Z,22nm,0.9s						
DKNS	Dickens	17.64	354	P	P	16 08 43.5	+1.7
MIAR	Mount Ida	18.93	13	P	Pn	16 08 56.2	-0.3
Z47A	Carrollton	19.51	27	P	P	16 09 02.1	-0.3
Z47A				IAmb	IAmb	16 09 16.4	
	comp=Z,50nm,1.5s						
DEOK	Depew	19.77	5	P	Pn	16 09 06.6	0.0
DEOK				IAmb	IAmb	16 09 07.3	
	comp=Z,14nm,0.8s						
WHAR	Wooly Hollow	19.94	15	P	Pn	16 09 08.1	-0.5
WHAR				IAmb	IAmb	16 09 32.4	
	comp=Z,19nm,1.2s						
ABQ	Albuquerque	20.07	341		P	16 09 09.7	+1.0
ANMO	Albuquerque	20.07	341	P	P	16 09 10.1	+1.4
	comp=Z,2.3nm,0.6s,baz=135,slow=11,SNR=6.3						
ANMO				LR	LR	16 17 34.7	
	comp=Z,640nm,18.7s,baz=153,slow=39						
	comp=Z,2.3nm,0.6s						
ANMO	Albuquerque	20.07	341	P	Pn	16 09 11.2	+0.8
TASM	ASL Pad, Albuq	20.07	341	P	P	16 09 10.2	+1.4
TASM	ASL Pad, Albuq	20.07	341		P	16 09 09.9	+1.2
TASM				IAmb	IAmb	16 09 35.4	
	comp=Z,4.4nm,1.0s						
TASM	ASL Pad, Albuq	20.07	341	IAmb	IAmb	16 09 35.4	
	comp=Z,4.2nm,0.9s						
OK048	Pawnee Station	20.30	4	P	P	16 09 10.9	-0.1
OK048				IAmb	IAmb	16 09 30.3	
	comp=Z,16nm,0.9s						
RTBA	Rita Blanca	20.61	350		P	16 09 15.0	+0.5
RTBA				IAmb	IAmb	16 09 19.0	
	comp=Z,30nm,1.5s						
Y49A	Blount Mountai	20.82	30	P	P	16 09 15.9	-0.7
Y49A				IAmb	IAmb	16 09 39.0	
	comp=Z,41nm,1.5s						
T25A	Trinidad	21.60	347	P	P	16 09 26.4	+1.1
T25A				IAmb	IAmb	16 09 32.8	
	comp=Z,31nm,1.5s						
Y14A	Wickenburg	22.03	326		P	16 09 32.2	+2.5
WVT	Waverly	22.14	24	P	P	16 09 30.2	-0.6
WVT				IAmb	IAmb	16 09 41.4	
	comp=Z,32nm,1.3s						
SWET	Sewanee	22.16	28	P	P	16 09 30.4	-0.8
SWET				IAmb	IAmb	16 09 32.8	
	comp=Z,15nm,0.8s						
SDCO	Great Sand Dun	22.43	345	P	P	16 09 34.6	+0.4
WUAZ	Wupatki	22.48	332		P	16 09 36.9	+2.1
WUAZ				IAmb	IAmb	16 09 40.9	
	comp=Z,16nm,1.2s						
R40A	Maddies Statio	22.81	13	P	P	16 09 38.5	+0.6
R40A				IAmb	IAmb	16 09 40.3	
	comp=Z,14nm,0.7s						
SIUC	Southern Illin	23.08	19	P	P	16 09 41.0	+0.2
SIUC				IAmb	IAmb	16 09 43.4	
	comp=Z,12nm,0.7s						
T47A	Sharon Grove	23.17	24		P	16 09 42.0	+0.2
T47A				IAmb	IAmb	16 09 48.7	
	comp=Z,25nm,1.2s						
IRM	Iron Mountain	23.37	323	IAmb	IAmb	16 09 55.0	
	comp=Z,19nm,1.5s						
PFO	Pinyon Flats O	23.77	321	LR	LR	16 19 31.4	
	comp=Z,268nm,20.2s,baz=132,slow=38						
PV13	Radium Mtn., P	23.77	340	P	P	16 09 49.4	+1.4
PV13				IAmb	IAmb	16 09 51.4	
	comp=Z,14nm,1.5s						
PV02	Paradox Valley	23.79	340	IAmb	IAmb	16 10 09.0	
	comp=Z,23nm,1.4s						
PV18	Skein Mesa, Pa	23.88	340	IAmb	IAmb	16 10 09.2	
	comp=Z,25nm,1.4s						
PV11	David Mesa, Pa	23.92	340	IAmb	IAmb	16 10 15.0	
	comp=Z,18nm,1.4s						
PV16	Nyswonger Mesa	23.94	340	IAmb	IAmb	16 10 05.9	
	comp=Z,10nm,1.3s						
PV19	Morning Glory	23.96	340	IAmb	IAmb	16 10 05.9	
	comp=Z,8.8nm,1.0s						
PV20	West Nyswonger	23.99	340	IAmb	IAmb	16 10 06.2	
	comp=Z,16nm,1.2s						
PV04	Paradox Valley	24.01	340	IAmb	IAmb	16 09 59.4	
	comp=Z,18nm,1.5s						
PV22	Blue Mesa, Par	24.10	340	IAmb	IAmb	16 10 02.9	
	comp=Z,15nm,1.5s						
ISCO	Idaho Springs	24.42	347		P	16 09 55.1	+1.0
ISCO				IAmb	IAmb	16 10 10.7	
	comp=Z,10nm,1.1s						
MTPU	Mount Pierson	24.95	334	IAmb	IAmb	16 10 11.3	
	comp=Z,5.2nm,0.8s						
SRU	San Rafael Swe	25.22	338	IAmb	IAmb	16 10 17.6	
	comp=Z,6.6nm,1.0s						
Q16A	Castle Valley	25.29	337	IAmb	IAmb	16 10 19.0	
	comp=Z,5.1nm,0.7s						
O20A	White River Ci	25.40	343	IAmb	IAmb	16 10 18.7	
	comp=Z,13nm,1.2s						
TMUT	Trail Mountain	25.64	337	IAmb	IAmb	16 10 42.5	
	comp=Z,14nm,1.3s						
WSHM	Spangler Hills	25.75	323	IAmb	IAmb	16 10 13.1	
	comp=Z,6.2nm,0.4s						
TPNV	Topopah Spring	26.03	326	IAmb	IAmb	16 10 57.7	
	comp=Z,8.4nm,1.4s						
SDV	Santo Domingo	28.18	101	LR	LR	16 23 25.8	
	comp=Z,210nm,18.0s,baz=37,slow=40						
PD31	Pinedale Array	28.21	343	IAmb	IAmb	16 10 35.4	
	comp=Z,16nm,1.5s						
PDAR	Pinedale Array	28.21	343	P	P	16 10 28.7	+0.5
	comp=Z,0.9nm,0.9s,baz=141,slow=7.0,SNR=6.5						
PDAR				LR	LR	16 21 07.8	
	comp=Z,144nm,20.7s,baz=156,slow=35						
	comp=Z,0.9nm,0.9s						
NVAR	Mina Array Bea	28.22	326	P	P	16 10 27.8	-0.6
	comp=Z,0.9nm,0.7s,baz=151,slow=4.7,SNR=4.0						
NVAR				LR	LR	16 23 16.5	
	comp=Z,398nm,18.4s,baz=138,slow=40						
	comp=Z,0.9nm,0.7s						
ATAH	Atahualpa	30.52	138	LR	LR	16 20 53.5	
	comp=Z,144nm,18.0s,baz=327,slow=32						
WVOR	Wild Horse Val	31.40	331	IAmb	IAmb	16 11 13.3	
	comp=Z,6.6nm,1.3s						
J08A	Circle Bar Ran	32.04	332	IAmb	IAmb	16 11 26.6	
	comp=Z,12nm,1.5s						
PLID	Pearl Lake	32.43	337		P	16 11 07.5	+2.0
PLID				IAmb	IAmb	16 11 09.9	
	comp=Z,8.7nm,1.5s						
YBH	Yreka Blue Hor	32.94	326	LR	LR	16 25 42.9	
	comp=Z,13nm,18.6s,baz=140,slow=38						
SADO	Sadowa	32.97	26	LR	LR	16 27 00.0	
	comp=Z,35nm,18.2s,baz=146,slow=41						
KSXB	Camp Six Broad	33.65	325	P	P	16 11 18.5	+2.4
EPLO	Experimental L	33.73	6	P	P	16 11 17.0	+0.4
ULM	Lac du Bonnet	34.15	3	P	P	16 11 18.5	-1.7
	comp=Z,1.5nm,0.4s,baz=181,slow=12,SNR=1.9						
ULM				LR	LR	16 27 39.9	
	comp=Z,92nm,18.5s,baz=188,slow=41						
	comp=Z,1.5nm,0.4s						
ULM	Lac du Bonnet	34.15	3	P	P	16 11 20.8	+0.7
ULM				IAmb	IAmb	16 11 26.3	
	comp=Z,8.1nm,1.3s						
J01E	Myrtle Point	34.58	326	P	P	16 11 25.0	+1.0
NEW	Newport	35.53	339	LR	LR	16 27 27.3	
	comp=Z,331nm,19.5s,baz=168,slow=39						
WISH	Wishkah	37.33	331	P	P	16 11 47.6	+0.2
FFC	Flin Flon	38.65	357	P	P	16 11 59.2	+0.6
FFC				IAmb	IAmb	16 12 07.6	
	comp=Z,11nm,1.4s						
EDM	Edmonton	38.84	346	P	P	16 12 01.4	+1.2
EDM				IAmb	IAmb	16 12 02.9	
	comp=Z,6.6nm,0.7s						
E62A	Clayton Lake	38.86	32	P	P	16 11 59.1	-1.3
BOAV	Boa Vista	39.84	106	P	P	16 12 07.0	-2.1
BOAV				IAmb	IAmb	16 12 36.5	
	comp=Z,10nm,1.5s						
FCC	Fort Churchill	42.74	3	P	P	16 12 33.4	+1.2
FCC				IAmb	IAmb	16 12 47.8	
	comp=Z,12nm,1.5s						
LPAZ	La Paz	44.01	136	LR	LR	16 29 55.7	
	comp=Z,128nm,18.1s,baz=282,slow=35						
SCHQ	Schefferville	45.77	25	P	P	16 12 56.6	0.0
	comp=Z,4.2nm,0.7s,baz=240,slow=10.0,SNR=5.4						
SCHQ				LR	LR	16 37 18.1	
	comp=Z,117nm,18.5s,baz=247,slow=43						
	comp=Z,4.2nm,0.7s						
MDP	Montagnes des	46.34	98	LR	LR	16 33 04.3	
	comp=Z,95nm,18.5s,baz=289,slow=37						
YKA	Yellowknife Ar	47.72	350	P	P	16 13 10.6	-1.2
	comp=Z,0.5nm,0.8s,baz=162,slow=7.0,SNR=3.8						
	comp=Z,0.5nm,0.8s						
TAOE	Nuku Hiva Isla	48.04	242	eS	S	16 20 18.8	+4.3
	comp=Z,26nm,24.1s						
TAOE				eLR	LR	16 26 50.9	
	comp=Z,140nm,24.7s						
DLBC	Dease Lake	48.28	338	LR	LR	16 33 10.2	
	comp=Z,363nm,19.2s,baz=90,slow=36						
R32K	Eaglecrest	49.84	336	P	P	16 13 27.8	-0.4
H03N2	Juan Fernandez	52.69	159	T	T	17 10 36.7	
	baz=337,slow=77,SNR=886						
H03N1	Juan Fernandez	52.70	159	T	T	17 10 37.9	
	baz=337,slow=77,SNR=876						
H03N3	Juan Fernandez	52.71	159	T	T	17 10 38.7	
	baz=337,slow=77,SNR=1312						
L29M	L29M	54.39	339	P	P	16 14 04.0	+2.0
J30M	Hart River	54.80	341	P	P	16 14 07.3	+2.2
J30M				IAmb	IAmb	16 14 25.5	
	comp=Z,7.8nm,1.5s						
I30M	Mount Dempster	55.27	342	P	P	16 14 09.8	+1.4
DAWY	Dawson	55.45	340	P	P	16 14 11.2	+1.6
DAWY				IAmb	IAmb	16 14 27.6	
	comp=Z,7.2nm,1.5s						
BCAR	Beaver Creek A	55.66	338	P	P	16 14 12.4	+1.2
G31M	Satah River	55.89	344	P	P	16 14 12.4	-0.3
I28M	Miner Creek	56.52	341	P	P	16 14 19.1	+1.7
H29M	Whitestone	56.55	342	P	P	16 14 19.0	+1.5
INK	Inuvik	56.73	345	LR	LR	16 41 48.3	
	comp=Z,225nm,19.4s,baz=296,slow=39						
INK	Inuvik	56.73	345	P	P	16 14 20.1	+1.4
INK				IAmb	IAmb	16 14 37.0	
	comp=Z,3.6nm,1.1s						
J26L	Joseph Creek	57.15	339	P	P	16 14 23.2	+1.4
KDAK	Kodiak Island	57.65	329	LR	LR	16 38 00.4	
	comp=Z,111nm,18.4s,baz=105,slow=35						
CPUP	Villa Florida	58.18	136	LR	LR	16 38 56.3	
	comp=Z,13nm,20.3s,baz=200,slow=36						
PRP	Porcupine Dome	58.42	339	P	P	16 14 32.2	+1.4
PRP				IAmb	IAmb	16 14 46.9	
	comp=Z,6.1nm,1.3s						
ILAR	Eielson Array	58.48	338	P	P	16 14 32.4	+1.2
	comp=Z,0.9nm,1.0s,baz=149,slow=4.2,SNR=11						
	comp=Z,0.9nm,1.0s						
BDFB	Brasilia	59.03	120	LR	LR	16 39 19.7	
	comp=Z,87nm,18.3s,baz=75,slow=35						
TRF	Thorofare Moun	59.10	336	P	P	16 14 37.2	+1.5
H24K	Noodor Dome	59.41	339	P	P	16 14 39.2	+1.6
H24K				IAmb	IAmb	16 15 16.4	
	comp=Z,2.8nm,1.1s						
I23K	Minto, Yukon-K	59.58	338	P	P	16 14 40.5	+1.8
I23K				IAmb	IAmb	16 14 58.6	
	comp=Z,3.3nm,0.9s						
PPT	Papeete	60.36	239	LR	LR	16 33 16.0	
	comp=Z,61nm,21.9s,baz=70,slow=28						
PPT2	Papeete2	60.37	239	eS	S	16 23 07.2	+6.2
	comp=Z,40nm,24.8s						
PPT2				eLR	LR	16 32 29.7	
	comp=Z,105nm,22.8s						
PPT2				eLR	LR	16 32 35.1	
	comp=Z,43nm,20.2s						
K20K	Telida	60.58	335	P	P	16 14 47.1	+1.5
J20K	Nowinta River	60.95	336	P	P	16 14 49.4	+1.2
PLCA	Paso Flores	62.23	156	LR	LR	16 36 13.7	
	comp=Z,80nm,21.8s,baz=294,slow=31						
L16K	Owhat River	62.30	332	P	P	16 14 58.6	+1.3
C23K	Itkillik River	62.40	342	P	P	16 14 59.1	+1.3
J16K	Anvik River	63.30	333	P	P	16 15 05.8	+2.0
TBI	Tubuai	63.33	233	eLR	LR	16 33 55.3	
	comp=Z,806nm,42.2s						
RAR	Rarotonga	70.54	240	LR	LR	16 38 36.3	
	comp=Z,62nm,18.8s,baz=218,slow=29						
SPITS	Spitsbergen Ar	79.29	11	LR	LR	16 53 08.2	
	comp=Z,96nm,19.0s,baz=300,slow=37						
MDT	Midelt	84.69	58	LR	LR	16 49 44.1	
	comp=Z,42nm,18.4s,baz=46,slow=32						
ARCES	ARCESS Array B	86.09	17	LR	LR	16 59 07.4	
	comp=Z,37nm,19.4s,baz=7.5,slow=38						
HFS	Hagfors	86.79	28	LR	LR	16 58 10.8	
	comp=Z,47nm,18.1s,baz=260,slow=37						
TIXI	Tiksi	86.84	346	LR	LR	17 02 35.7	
	comp=Z,48nm,18.0s,baz=204,slow=40						
DAVOX	Davos/Dischmat	90.52	41	LR	LR	17 00 29.6	
	comp=Z,34nm,18.2s,baz=270,slow=37						
FINES	FINESS Array B	91.22	23	LR	LR	17 02 25.4	
	comp=Z,46nm,18.2s,baz=298,slow=38						
YAK	Yakutsk	93.38	339	LR	LR	17 03 28.6	
	comp=Z,45nm,18.0s,baz=74,slow=38						
VRAC	Vranov	93.41	36	LR	LR	17 05 51.1	
	comp=Z,46nm,18.1s,baz=302,slow=39						
CESX	Cesi	94.04	44	P	P	16 17 54.5	+0.6
AKASG	Malin Array Be	99.33	31	LR	LR	17 06 02.5	
	comp=Z,33nm,18.0s,baz=329,slow=37						
DZM	Mont Dzumac	100.39	250	eLR	LR	16 51 09.3	
	comp=Z,86nm,26.9s						

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*GCG **02** 16:38:15.0±2.1, 13°.71N×93°.29W, h36^{km}±999^{km}, MD3.9, ML3.9*

*MEX **02** 16:38:16.5±0.3, 13°.87N×93°.36W, h7^{km}±9^{km}, MD4.1*

ISC 02 16:38:10.9±2.0**, 13°.92N**±0°.07×**93°.34W**±0°.04**, h5**^{km}±11^{km}**, n25,** σ1^{s}99/41**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.43	46	iS	Sn	16 38 59.7	+3.1
SMCA	Catarina	1.54	52	eP	Pg	16 38 41.8	+1.4
SMCA				eS	Sg	16 39 01.1	+0.7
SMCA				IAML		16 39 02.4	
	comp=N,698nm,0.4s						
PATR	El Naranjo	1.60	42	eP	Pg	16 38 42.4	+0.8
PATR				eS	Sg	16 39 02.8	+0.4
CHUJ	Union Juarez	1.67	45	eP	Pg	16 38 43.4	+0.5
CHUJ				eS	Sg	16 39 04.7	+0.2
PAVE	Pavencul	1.69	41	eP	Pg	16 38 44.2	+0.8
PAVE				eS	Sg	16 39 05.6	+0.2
RTAL	Retalhuleu	1.70	69	eP	Pg	16 38 44.0	+0.4
RTAL				eS	Sb	16 39 05.0	+0.7
PCIG		1.78	4	eP	Pg	16 38 45.0	-0.1
PCIG				eS	Sg	16 39 07.2	-0.9
STG2	El Palmar, Qui	1.97	75	eP	Pn	16 38 45.5	+0.5
STG2				eS	Sn	16 39 08.1	-2.1
STG5	El Palmar, Qui	1.99	76	eP	Pn	16 38 45.6	+0.3
STG8	El Palmar, Qui	2.00	74	eP	Pn	16 38 46.2	+0.7
STG8				eS	Sn	16 39 08.8	-2.2
STG8				IAML		16 39 10.5	
	comp=N,2µm,0.3s						
QUEO	Labor Ovalle	2.00	62	IAML		16 39 22.8	
	comp=E,2µm,0.5s						
HUEH	Huehuetenango	2.25	52	eS	Sg	16 39 21.7	-1.7
HUEH	Huehuetenango	2.25	52	eS	Sg	16 39 21.9	-1.6
CCIG	Comitan	2.62	26	eP	Pb	16 38 59.0	+0.5
CCIG				eS	Sb	16 39 30.4	-0.6
CCIG	Comitan	2.62	26	eP	Pg	16 38 59.9	-1.3
CCIG				eS	Sg	16 39 32.6	-2.6
CCIG				IAML		16 39 37.8	

	comp=N,508nm,0.4s						
TGIG		2.85	4	eP	Pb	16 39 01.9	-0.5
TGIG				eS	Sb	16 39 35.0	-2.6
TGIG		2.85	4	eP	Pb	16 39 01.9	-0.5
TGIG				eS	Sb	16 39 36.3	-1.3
TGIG				IAML		16 39 41.6	
	comp=N,167nm,0.6s						
APG	El Apazote	2.98	68	eP	Pb	16 39 03.9	-0.8
HUIG	Huatulco	3.25	305	i P	Pn	16 39 05.3	+2.7
HUIG				i S	Sn	16 39 38.6	-3.1
HUIG	Huatulco	3.25	305	eP	Pn	16 39 05.1	+2.6
HUIG				eS	Sn	16 39 37.9	-3.8
UXUV	UXUV	3.47	347	eP	Pb	16 39 10.4	-2.4
UXUV				eS	Sn	16 39 49.9	+2.9
CMIG	Matias Romero	3.49	335	eP	Pn	16 39 09.9	+4.0
CMIG				eS	Sn	16 39 48.3	+0.8
YOIG	Yosondua	5.00	306	eP	Pn	16 39 31.5	+4.6
YOIG				eS	Sn	16 40 24.7	-0.5
TXIG	Tlaxiaco	5.41	308	eP	Pn	16 39 37.8	+5.4
TXIG				eS	Sn	16 40 32.9	-2.4
FTIG	Fresnillo de T	6.09	311	eP	Pn	16 39 48.2	+6.6
FTIG				eS	Sn	16 40 50.1	-1.6

NEIC ***02*** *16:39:28.9±1.9, 10°.75N±0°.07×125°.6E±0°.1, h66^{km}±6^{km}, mb4.6/55, Error ellipse: s-maj=15.3km s-min=9.1km az=72.0*

IDC ***02*** *16:39:29.8±2.0, 10°.71N×125°.64E, h82^{km}±19^{km}, mb3.9/19, mbtmp4.3/23, MS3.6/19, Error ellipse: s-maj=22.7km s-min=9.4km az=72.0*

DJA ***02*** *16:39:48.1±0.5, 9°N±3°×12°6E±°, h56^{km}±10^{km}, M4.9/21, mb4.8/21, mB5.4/3, MLv4.9/7, Mw(mB)4.9/3*

ISC 02 16:39:26.6±0.4**, 10°.74N**±0°.05×**125°.75E**±0°.08**, h50**^{km}**, n131, σ1^{s}.25**/104**, mb4.5**/46**, MS3.6**/16**, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	3.65	183	P	Pn	16 40 22.2	+1.5
	352nm,0.4s,baz=278,slow=6.5,SNR=7.8						
DAV				S	Sn	16 41 06.8	+4.3
	486nm,0.7s,baz=338,slow=17,SNR=1.7						
DAV				LR	LR	16 42 13.3	
	comp=Z,2µm,20.2s,baz=356,slow=45						
DAV	Davao City (W)	3.65	183	P	Pn	16 40 16.8	-3.8
TGY	Tagaytay City	5.76	306	P	Pn	16 40 50.9	+1.3
	118nm,0.3s,baz=141,slow=18,SNR=3.8						
TGY				LR	LR	16 43 03.5	
	comp=Z,590nm,21.7s,baz=104,slow=38						
SGSI	Sangihe	7.01	182	P	Pn	16 41 04.4	-2.4
MYLDM	Lahad Datu	9.06	233	Pn	Pn	16 41 35.4	+0.7
TNTI	Ternate	10.04	171		Pn	16 41 49.9	+1.7
TNTI	Ternate	10.04	171	P	Pn	16 41 47.6	-0.6
	30nm,1.0s						
GTOI	Gorontalo	10.40	195	P	Pn	16 41 52.1	-1.1
	91nm,0.9s						
MRSI	Marisa	10.88	201	P	Pn	16 42 01.0	+1.3
	930nm20nm,0.4s						
LUWI	Luwuk	12.08	194		Pn	16 42 16.7	+0.6
LUWI	Luwuk	12.08	194	P	Pn	16 42 17.0	+0.9
	4µm54nm,0.9s						
APSI	Ampana	12.28	200	P	Pn	16 42 19.1	+0.3
	39nm,1.2s						
SANI	Sanana	12.71	179	P	Pn	16 42 22.1	-2.6
	64nm,0.7s						
PCI	Palu	12.98	207	P	Pn	16 42 30.8	+2.4
	33nm,1.0s						
NLAI	Namlea	13.96	174	P	Pn	16 42 40.2	-1.5
	35nm,0.9s						
KRAI	Karang Ratu	14.22	169	P	Pn	16 42 44.5	-0.7
MWPI	Manokwari, Pap	14.23	144	P	Pn	16 42 46.7	+1.3
	73nm,1.4s						
TATO	Taipei	14.72	345	Pn	Pn	16 42 53.1	+1.3
BKB	Balikpapan	14.82	217	P	P	16 42 57.8	-0.3
	40nm,0.9s						
TTSI	Tana Toraja	14.91	204	P	P	16 42 57.0	-2.1
	42nm,1.0s						
FAKI	Fak Fak	15.04	154	Pn	P	16 42 58.9	-1.6
FAKI	Fak Fak	15.04	154	P	P	16 42 58.8	-1.6
	19nm,0.9s						
SBUM	Sibu	15.75	239	P	P	16 43 16.7	+8.3
	19nm,1.1s						
KAPI	Kappang	16.75	201	P	P	16 43 19.4	-0.1
	6.4nm,0.3s,baz=21,slow=6.5,SNR=8.0						
GUMO	Guam	18.91	79	LR	LR	16 49 32.2	
	comp=Z,60nm,20.8s,baz=232,slow=32						
JAY	Jayapura	19.88	131	P	Pn	16 43 55.5	-0.4
	23nm,0.9s,baz=273,slow=16,SNR=4.0						
SOEI	Soe	20.42	184	P	Pn	16 44 03.7	+1.4
	32nm,1.2s						
BATI	Baumata	20.92	186	P	Pn	16 44 06.5	-1.6
	20nm,0.8s,baz=138,slow=3.4,SNR=7.6						
BATI				LR	LR	16 52 47.2	
	comp=Z,64nm,21.5s,baz=3.0,slow=38						
	20nm,0.8s						
BATI	Baumata	20.92	186	P	Pn	16 44 06.7	-1.4
JCJ	Chichijima	22.46	41	P	P	16 44 22.9	+1.3
JNU	Nakatsue	22.77	11	LR	LR	16 52 29.5	
	comp=Z,86nm,21.1s,baz=186,slow=34						
MTN	Manton Dam	24.04	167	P	P	16 44 37.0	-0.2
MTN				IAmb	IAmb	16 44 39.5	
	comp=Z,13nm,0.9s						
KNRA	Kununurra	26.42	173	P	P	16 44 58.7	0.0
KNRA				IAmb	IAmb	16 45 32.3	
	comp=Z,16nm,1.2s						
KSAR	Wonju Array Be	26.65	4	P	P	16 44 59.7	-1.0
KSRS	Korea Array	26.67	4	P	P	16 45 01.2	+0.4
	comp=Z,1.9nm,0.7s,baz=188,slow=10,SNR=8.2						
	comp=Z,1.9nm,0.7s						
CMAR	Chiang Mai Arr	27.02	290	P	P	16 45 04.2	0.0
	comp=Z,0.5nm,0.5s,baz=97,slow=6.8,SNR=5.1						
	comp=Z,0.5nm,0.5s						
CMAR	Chiang Mai Arr	27.02	290	P	P	16 45 03.4	-0.8
MJAR	Matsushiro Arr	28.05	22	LR	LR	16 54 40.9	
	comp=Z,87nm,20.7s,baz=200,slow=32						
FITZ	Fitzroy Crossi	28.66	180	P	P	16 45 18.8	0.0
PMG	Port Moresby	29.23	132		P	16 45 24.6	+0.7
PMG				IAmb	IAmb	16 45 35.5	
	comp=Z,9.2nm,0.9s						
COEN	Coen	30.02	144		P	16 45 30.8	-0.1
COEN				IAmb	IAmb	16 45 39.2	
	comp=Z,18nm,1.2s						
WB0	Warramunga Arr	31.49	164	P	P	16 45 42.7	-1.2
WB0				IAmb	IAmb	16 45 43.4	
	comp=Z,8.5nm,0.7s						
WRA	Warramunga Arr	31.64	164	P	P	16 45 44.0	-1.2
	comp=Z,4.1nm,0.6s,baz=345,slow=9.3,SNR=43						
WRA				PcP	PcP	16 48 35.5	-1.0
	comp=Z,0.9nm,0.8s,baz=340,slow=3.4,SNR=3.2						
	comp=Z,4.1nm,0.6s						
WRA	Warramunga Arr	31.64	164	P	P	16 45 43.1	-2.1
WR8	Warramunga Arr	31.70	164		P	16 45 44.4	-1.2
WR8				IAmb	IAmb	16 45 45.4	
	comp=Z,12nm,1.2s						
USRK	Ussuriysk Ar.	33.77	8	P	P	16 46 04.5	+1.0
	comp=Z,3.2nm,0.7s,baz=190,slow=10,SNR=6.9						
	comp=Z,3.2nm,0.7s						
AS31	Alice Springs	35.12	167		P	16 46 14.9	-0.5
ASAR	Alice Springs	35.12	167	P	P	16 46 15.0	-0.5
	comp=Z,2.7nm,0.7s,baz=349,slow=6.8,SNR=77						
ASAR				PcP	PcP	16 48 45.5	-0.8
	comp=Z,0.4nm,0.7s,baz=334,slow=3.1,SNR=2.1						
	comp=Z,2.7nm,0.7s						
ASAR	Alice Springs	35.12	167	P	P	16 46 14.9	-0.5
ASAJ	Asahikawa	36.30	21	LR	LR	17 02 30.8	
	comp=Z,31nm,19.4s,baz=14,slow=38						
CTAO	Charters Tower	36.69	147	P	P	16 46 29.4	+0.5
CTAO				IAmb	IAmb	16 46 37.4	
	comp=Z,12nm,1.4s						
H11S3	WAKE ISLAND Hy	40.28	74	T	T	17 30 18.4	
	baz=317,slow=76,SNR=32						
H11S1	WAKE ISLAND Hy	40.30	74	T	T	17 30 11.3	
	baz=317,slow=76,SNR=21						
H11S2	WAKE ISLAND Hy	40.30	74	T	T	17 29 53.3	
	baz=317,slow=76,SNR=22						
SONM	Songino Array	40.40	340	P	P	16 47 01.2	+1.3
	comp=Z,0.3nm,0.4s,baz=148,slow=8.7,SNR=4.3						
	comp=Z,0.3nm,0.4s						
SONM	Songino Array	40.40	340	P	P	16 46 58.8	-1.1
H11N1	WAKE ISLAND Hy	40.60	72	T	T	17 30 36.1	
	baz=265,slow=74,SNR=83						
H11N2	WAKE ISLAND Hy	40.61	72	T	T	17 30 23.7	
	baz=265,slow=74,SNR=56						
H11N3	WAKE ISLAND Hy	40.62	72	T	T	17 30 37.5	
	baz=265,slow=74,SNR=80						
INKA	Innaminka	40.92	160	P	P	16 47 04.2	0.0
FORT	Forrest	41.34	177	P	P	16 47 08.1	+0.4
FORT				IAmb	IAmb	16 47 10.3	
	comp=Z,12nm,1.0s						
BBOO	Buckleboo	44.41	168	P	P	16 47 32.7	+0.2
BBOO				IAmb	IAmb	16 47 33.5	
	comp=Z,20nm,0.8s						
PALK	Pallekele	44.59	269	LR	LR	17 06 36.2	
	comp=Z,26nm,19.5s,baz=94,slow=37						
STKA	Stephens Creek	45.01	161	P	P	16 47 37.3	0.0
	comp=Z,6.1nm,0.7s,baz=333,slow=8.0,SNR=9.9						
	comp=Z,6.1nm,0.7s						
STKA	Stephens Creek	45.01	161		P	16 47 37.1	-0.2
ARMA	Armidale	47.90	149	P	P	16 48 01.5	+1.4
ARMA				IAmb	IAmb	16 48 35.1	
	comp=Z,18nm,1.2s						
SANVU	Saraoutou	48.61	122	P	P	16 48 07.0	+1.3
PEA0B	Petropavlovsk-	49.42	25	P	P	16 48 12.1	+0.7
PETK	Petropavlovsk-	49.42	25	P	P	16 48 11.9	+0.6
	comp=Z,1.7nm,0.7s,baz=224,slow=7.3,SNR=5.7						
	comp=Z,1.7nm,0.7s						
PETK	Petropavlovsk-	49.42	25	P	P	16 48 11.8	+0.4
MKAR	Makanchi Array	51.34	323	P	P	16 48 25.6	-0.4
	comp=Z,3.5nm,0.6s,baz=115,slow=7.4,SNR=26						
	comp=Z,3.5nm,0.6s						
MKAR	Makanchi Array	51.34	323		P	16 48 25.3	-0.8
MAKZ	Makanchi	51.53	323	P	P	16 48 26.4	-1.1
MAKZ				IAmb	IAmb	16 48 48.9	
	comp=Z,12nm,1.4s						
DZM	Mont Dzumac	51.55	129	P	P	16 48 29.3	+1.3
ONTNC	Ouen Toro	51.69	130	P	P	16 48 29.6	+0.7
TARG	Taragay, Kyrgy	52.01	315	P	P	16 48 30.6	-1.0
TARG				IAmb	IAmb	16 48 41.1	
	comp=Z,6.5nm,1.5s						
KSH	Kashi	52.53	312	P	P	16 48 41.3	+6.1
KSH				pmax	pmax		
	comp=Z,2.0nm,1.0s						
PINNC	Pines Island,	52.62	129	P	P	16 48 37.3	+1.5
ZALV	Zalesovo Beam	53.97	331	P	P	16 48 44.0	-1.2
	comp=Z,0.7nm,0.4s,baz=108,slow=5.8,SNR=4.9						
	comp=Z,0.7nm,0.4s						
AAK	Ala-Archa	54.63	315	LR	LR	17 13 48.7	
	comp=Z,64nm,21.0s,baz=70,slow=38						
KURK	Kurchatov	55.39	326		P	16 48 54.1	-1.5
KURK				IAmb	IAmb	16 49 05.8	
	comp=Z,7.4nm,0.9s						
KURBB	Kurchatov Arra	55.39	325	P	P	16 48 54.6	-1.0
	comp=Z,1.5nm,0.4s,baz=127,slow=7.0,SNR=11						
	comp=Z,1.5nm,0.4s						
KK31	Karatay Array	57.55	315		P	16 49 09.8	-1.5
KKAR	Karatay Array	57.55	315	P	P	16 49 10.2	-1.0
BVAR	Borovoye Array	60.98	325	P	P	16 49 34.2	-0.5
	comp=Z,1.3nm,0.7s,baz=140,slow=7.7,SNR=9.0						
	comp=Z,1.3nm,0.7s						
BORK	Borovoye	61.03	325		P	16 49 33.9	-1.1
BORK				IAmb	IAmb	16 49 45.1	
	comp=Z,4.4nm,0.8s						
GSTR	Great Sitkin T	62.27	36	P	P	16 49 44.2	+0.8
NRIK	Noril'sk	63.43	346	P	P	16 49 49.9	-0.9
	comp=Z,1.8nm,0.7s,baz=127,slow=6.1,SNR=5.3						
NRIK				LR	LR	17 18 45.8	
	comp=Z,44nm,20.9s,baz=30,slow=37						
	comp=Z,1.8nm,0.7s						
NRIK	Noril'sk	63.43	346	IAmb	IAmb	16 50 20.3	
	comp=Z,7.3nm,1.1s						
AB31	Akbulak array	66.18	319	P	P	16 50 07.7	-1.4
AB31				IAmb	IAmb	16 50 18.9	
	comp=Z,4.0nm,0.9s						
ABKAR	Akbulak array	66.18	319	P	P	16 50 07.6	-1.5
AKTO	Aktyubinsk	67.63	320	LR	LR	17 21 58.1	
	comp=Z,126nm,18.7s,baz=197,slow=38						
LTZ	Lake Taylor	68.13	145	P	P	16 50 22.0	+0.5
URZ	Urewera	68.36	139	LR	LR	17 20 17.2	
	comp=Z,26nm,19.3s,baz=319,slow=36						
KIRV	Kirov	73.78	328	LR	LR	17 25 36.1	
	comp=Z,53nm,18.6s,baz=30,slow=38						
L18K	Granite Mounta	74.77	28	P	P	16 51 02.5	+1.3
L18K				IAmb	IAmb	16 51 05.8	
	comp=Z,5.0nm,1.1s						
H19K	Roundabout Mou	75.23	25	P	P	16 51 05.1	+1.4
H19K				IAmb	IAmb	16 51 25.7	
	comp=Z,6.6nm,1.1s						
B20K	Meade River	75.56	20	P	P	16 51 06.8	+1.3
IMAR	Indian Mountai	76.39	25	P	P	16 51 11.2	+0.9
B22K	Teshekpuk Lake	76.86	20	P	P	16 51 13.7	+0.7
B22K				IAmb	IAmb	16 51 31.1	
	comp=Z,6.9nm,1.0s						
D23K	Nanushuk River	77.73	22	P	P	16 51 19.3	+1.4
C23K	Itkillik River	77.79	21	P	P	16 51 19.6	+1.5
C23K				IAmb	IAmb	16 51 41.5	
	comp=Z,18nm,1.4s						
TOLK	Toolik Lake Re	78.13	22	P	P	16 51 21.6	+1.4
MCK	McKinley	78.37	27	P	P	16 51 22.1	+0.6
MCK				IAmb	IAmb	16 51 38.5	
	comp=Z,18nm,1.4s						
E24K	Your Creek	78.53	22	P	P	16 51 23.2	+0.8
F24K	Squaw Lake	78.76	23	IAmb	IAmb	16 51 28.8	
	comp=Z,5.9nm,1.0s						
ILAR	Eielson Array	79.24	26	P	P	16 51 26.5	+0.2
	comp=Z,0.7nm,0.7s,baz=234,slow=5.1,SNR=16						
	comp=Z,0.7nm,0.7s						
ILAR	Eielson Array	79.24	26	P	P	16 51 26.1	-0.2
D25K	Kavik River	79.28	21	IAmb	IAmb	16 51 28.7	
	comp=Z,3.7nm,0.8s						
J25K	Salcha River,	79.90	26	P	P	16 51 30.1	+0.1
SCRK	Sand Creek	80.55	27	P	P	16 51 34.5	+1.0
D27M	Malcolm River	81.20	21	IAmb	IAmb	16 51 39.9	
	comp=Z,4.1nm,0.8s						
I27K	Kandik River	81.39	25	P	P	16 51 38.7	+0.8
I27K				IAmb	IAmb	16 51 41.9	
	comp=Z,10nm,1.2s						
F28M	Old Crow	81.82	23	P	P	16 51 41.7	+1.6
F28M				IAmb	IAmb	16 51 42.5	
	comp=Z,4.1nm,0.8s						
G29M	Pine Creek	82.64	23	P	P	16 51 45.7	+1.3
G29M				IAmb	IAmb	16 52 12.4	
	comp=Z,8.2nm,1.2s						
F30M	Barrier River	83.36	22	P	P	16 51 49.1	+1.1
F30M				IAmb	IAmb	16 51 50.2	
	comp=Z,9.3nm,1.1s						
ARCES	ARCESS Array B	83.57	340	P	P	16 51 48.5	-0.6
	comp=Z,6.0nm,1.0s,baz=59,slow=4.4,SNR=5.1						
	comp=Z,6.0nm,1.0s						
BRTR	Keskin Array B	84.83	309	P	P	16 51 56.1	-0.3
	comp=Z,0.4nm,0.7s,baz=77,slow=8.1,SNR=4.4						
	comp=Z,0.4nm,0.7s						
FIA1	FINESS Array S	85.23	332	P	P	16 51 56.2	-1.4
FINES	FINESS Array B	85.23	332	P	P	16 51 56.1	-1.5
	comp=Z,4.1nm,0.9s,baz=85,slow=4.0,SNR=6.4						
	comp=Z,4.1nm,0.9s						
MLR	Muntele Rosu	89.20	316	LR	LR	17 35 57.9	
	comp=Z,86nm,20.6s,baz=70,slow=38						
MAW	Mawson	89.97	200	LR	LR	17 34 09.5	
	comp=Z,30nm,18.3s,baz=190,slow=36						
VNDA	Vanda	90.46	173	P	P	16 52 20.2	-2.1
	comp=Z,2.3nm,0.9s,baz=276,slow=5.0,SNR=6.8						
	comp=Z,2.3nm,0.9s						
VNDA	Vanda	90.46	173		P	16 52 22.1	-0.1
VNDA				IAmb	IAmb	16 52 22.9	
	comp=Z,5.0nm,1.2s						
NOA	NORSAR Array B	92.11	334	LR	LR	17 37 00.6	
	comp=Z,49nm,19.0s,baz=265,slow=38						
JMIC	Jan Mayen	92.85	346	LR	LR	17 39 39.8	
	comp=Z,45nm,18.6s,baz=336,slow=39						
MBAR	Mbarara	95.03	270	LR	LR	17 33 04.3	
	comp=Z,22nm,20.9s,baz=358,slow=34						
GERES	GERESS Array B	96.00	322	LR	LR	17 42 08.0	
	comp=Z,40nm,18.0s,baz=33,slow=39						
TXAR	Lajitas Array	117.90	49	PKP	PKPdf	16 58 07.7	-0.8
	comp=Z,0.4nm,0.9s,baz=330,slow=4.3,SNR=2.5						
PLCA	Paso Flores	146.84	157	PKPbc	PKPab	16 59 04.5	-0.6
	comp=Z,1.9nm,0.7s,baz=256,slow=2.5,SNR=6.4						
PLCA	Paso Flores	146.84	157	PKPab	PKPab	16 59 04.6	-0.5

SKO ***02*** *16:43:50.6, 41°.51N×19°.55E, h18^{km}, ML3.4*

THE ***02*** *16:43:52.0, 41°N±6°×2°0E±°, h3^{km}±18^{km}, M3.3/14, MLh3.3/14*

BEO ***02*** *16:43:52.3±0.4, 41°.44N×19°.68E, h18^{km}±2^{km}, ML3.5/30*

PDG ***02*** *16:43:52.0±0.3, 41°.48N×19°.68E, h10^{km}±1^{km}, MD3.8/10, ML3.7/12, Error ellipse: s-maj=1.5km s-min=1.9km az=0.0*

TIR ***02*** *16:43:52.0, 41°.48N×19°.72E, h42^{km}±4^{km}, Ml3.8/3*

IDC ***02*** *16:43:58.2±2.3, 41°.76N×19°.44E, h85^{km}±22^{km}, mb3.7/6, mbtmp3.8/12, MS3.1/3, Error ellipse: s-maj=21.3km s-min=14.6km az=156.0*

ISC 02 16:43:51.4±0.8**, 41°.45N**±0°.02×**19°.64E**±0°.02**, h19**^{km}±2^{km}**, n159, σ1^{s}.53**/241**, mb4.0**/4**, 30C-21D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.19	120	Pg	Pb	16 43 55.9	+0.2
TIR				Sg	Sb	16 43 58.9	+0.5
TIR				AML	AML	16 43 59.3	
	22nm,0.3s						
ULC	Ulcinj	0.60	330	⇓iPg	Pb	16 44 02.5	-0.6
ULC				i Sg	Sg	16 44 12.8	+1.4
SDA	Shkodra	0.61	350	P	Pb	16 44 03.5	+0.1
SDA				Sg	Sn	16 44 14.3	-0.1
PHP	Peshkopia	0.65	68	Pg	Pb	16 44 03.0	-1.0
PHP				S	Sg	16 44 13.1	+0.2
PHP				AML	AML	16 44 16.9	
	20nm,0.5s						
PHP	Peshkopia	0.65	68	P	Pb	16 44 02.7	-1.2
PHP				S	Sg	16 44 13.5	+0.6
DRME	Dracevica, Mon	0.82	335	⇑iPg	Pb	16 44 06.6	-0.3
DRME				eSg	Sn	16 44 21.0	+1.6
OHR	Ohrid	0.93	111	⇑iPg	Pb	16 44 08.7	-0.3
OHR				i Sg	Sn	16 44 23.7	+1.4
OHR				eLg	Lg	16 44 24.9	
	comp=N,1µm,0.7s						
OHR				eLg	Lg	16 44 25.3	
	comp=E,948nm,0.6s						
VLO	Vlora	0.98	187	Pg	Pg	16 44 11.4	+0.9
VLO				Sg	Sn	16 44 24.9	+1.5
VLO				AML	AML	16 44 33.7	
	comp=E,12nm,0.5s						
VLO	Vlora	0.98	187	P	Pg	16 44 11.4	+0.9
VLO				S	Sn	16 44 25.8	+2.4
BUM	Brajici-Budva	1.02	327	⇑iPg	Pb	16 44 10.8	+0.3
BUM				i Sg	Sg	16 44 26.8	+2.1
PDG	Podgorica	1.02	344	Pg	Pn	16 44 10.9	+0.3
PDG				Sg	Sg	16 44 26.1	+1.3
PDG	Podgorica	1.02	344	⇑P	Pn	16 44 11.0	+0.3
PDG				⇑S	Sg	16 44 25.8	+1.0
PDG	Podgorica	1.02	344	ePg	Pn	16 44 11.2	+0.5
PDG				eSg	Sg	16 44 26.8	+2.0
PDG	Podgorica	1.02	344	⇓iPg	Pn	16 44 11.0	+0.3
PDG				i Sg	Sg	16 44 26.3	+1.5
PVY	Plav	1.17	12	⇑iPg	Pn	16 44 12.5	-0.4
PVY				i Sg	Sg	16 44 30.9	+1.4
KBN	Korca	1.19	133	Pg	Pg	16 44 14.3	-0.2
KBN				Sg	Sg	16 44 29.8	-0.3
KBN	Korca	1.19	133	P	Pg	16 44 14.3	-0.2
KBN				S	Sg	16 44 31.6	+1.5
CEME	Cevo	1.23	334	⇓iPg	Pb	16 44 14.2	+0.2
CEME				eSg	Sg	16 44 33.2	+2.0
HCY	Herceg Novi	1.32	320	⇓iPg	Pb	16 44 16.4	+0.9
HCY				i Sg	Sg	16 44 35.3	+1.2
KOME	Kolasin	1.41	356	⇓iPg	Pb	16 44 17.7	+0.6
KOME				eSg	Sg	16 44 38.6	+1.6
NKME	Niksic	1.42	339	⇓iPg	Pb	16 44 17.4	+0.2
NKME				eSg	Sg	16 44 37.7	+0.4
IVA	Berane	1.44	7	⇓iPg	Pn	16 44 17.2	+0.7
IVA				i Sg	Sg	16 44 39.4	+1.5
SKO	Skopje	1.45	68	i Pg	Pb	16 44 17.6	-0.1
SKO				i Sg	Sg	16 44 38.1	0.0
NEST	Nestorio	1.48	134	P	Pb	16 44 19.0	+0.6
NEST				S	Sg	16 44 39.0	-0.3
TREB	Trebinje	1.59	323	ePn	Pn	16 44 19.3	+0.8
TREB	Trebinje	1.59	323	ePn	Pn	16 44 19.5	+1.0
TREB				eSg	Sg	16 44 42.6	-0.3
BRY	Bratogost	1.67	331	⇓iPn	Pb	16 44 21.7	+0.1
BRY				i Sn	Sg	16 44 46.1	+0.8
KEK	Kerkira	1.73	176	S	Sg	16 44 48.4	+1.1
SJES	Sjenica	1.83	8	ePg	Pb	16 44 24.4	+0.1
SJES				eSn	Sb	16 44 46.3	-0.6
UPM	Unac-Piva	1.84	343	⇓iPn	Pb	16 44 24.6	+0.1
UPM				i Sn	Sg	16 44 50.0	-0.8
KLINJ	Klinje	1.89	336	ePn	Pn	16 44 23.7	+1.0
PLE	Pljevlja	1.89	354	⇓iPn	Pb	16 44 25.5	+0.1
PLE				i Sn	Sg	16 44 52.1	-0.3
KZN	Kozani	1.98	124	P	Pb	16 44 26.3	-0.4
KZN				S	Sb	16 44 51.8	+0.9
IGT	Igoumenitsa	1.98	164	Pn	Pn	16 44 25.2	+1.3
IGT				Sn	Sb	16 44 51.5	+0.4
IGT	Igoumenitsa	1.98	164	P	Pn	16 44 24.6	+0.7
IGT				S	Sb	16 44 50.6	-0.5
KPRO	Kipourio	1.98	138	P	Pb	16 44 26.2	-0.6
KPRO				S	Sb	16 44 52.5	+1.3
LFKM	Lefkimmi	2.02	171	P	Pb	16 44 27.1	-0.3
LFKM				S	Sb	16 44 53.1	+0.9
STON	Ston	2.03	315	ePn	Pb	16 44 26.4	-1.2
STON				eSn	Sb	16 44 52.3	-0.1
SELS	Selova	2.08	31	ePn	Pn	16 44 26.8	+1.5
SELS				eSn	Sn	16 44 52.2	+1.5
BARS	Barje	2.12	49	i Pn	Pn	16 44 26.7	+1.0
BARS	Barje	2.12	49	ePn	Pn	16 44 26.8	+1.0
BARS				eSn	Sn	16 44 52.0	+0.4
GRG	Griva	2.14	102	P	Pn	16 44 27.5	+1.4
GRG				S	Sn	16 44 53.9	+1.8
GRG	Griva	2.14	102	i Pn	Pn	16 44 27.3	+1.2
IVAS	Ivanjica	2.16	10	ePn	Pn	16 44 27.4	+1.0
IVAS				eSn	Sn	16 44 53.8	+1.1
RUDO	Rudo	2.18	355	ePn	Pb	16 44 29.0	-1.2
RUDO	Rudo	2.18	355	ePn	Pb	16 44 29.2	-1.0
RUDO				eSn	Sn	16 44 53.4	+0.3
VAY	Valandovo	2.21	92	i Pn	Pn	16 44 28.0	+1.0
VAY				i Sn	Sn	16 44 54.8	+1.1
VAY				eLg	Lg	16 44 56.2	
	comp=N,139nm,0.8s						
VAY				eLg	Lg	16 44 56.7	
	comp=E,132nm,0.7s						
PRMD	Pramanda	2.21	149	P	Pb	16 44 29.1	-1.7
GOCS	Kraljevo Serbi	2.30	23	ePn	Pn	16 44 29.8	+1.4
GOCS				eSn	Sb	16 44 58.8	-1.7
MATE	Matera	2.36	251	⇑P	Pn	16 44 28.6	-0.5
MATE				⇑S	Sn	16 44 56.8	-0.6
BOSS	Bosilegrad	2.36	63	ePn	Pn	16 44 30.1	+1.0
BOSS				eSn	Sn	16 44 59.5	+1.9
BBLS	Lazi&#263i	2.43	356	ePn	Pn	16 44 31.8	+1.8
BBLS				eSn	Sn	16 45 01.8	+2.6
TETR	Tetrakomo, Epi	2.44	149	P	Pn	16 44 32.5	+2.2
TETR				S	Sb	16 45 03.1	-1.3
KNT	Kendrikon	2.47	96	P	Pn	16 44 31.6	+1.0
KNT	Kendrikon	2.47	96	i Pn	Pn	16 44 31.7	+1.0
LIT	Litokhoron	2.55	121	P	Pn	16 44 32.5	+0.9
GRUS	Gruza	2.57	18	ePn	Pn	16 44 33.4	+1.5
GRUS				eSn	Sn	16 45 02.8	+0.2
TRAN	Tran	2.63	57	P	Pn	16 44 34.5	+1.6
THE	Thessaloniki	2.64	107	i Pn	Pn	16 44 33.8	+0.9
KKB	Krupnik	2.64	80	S	Sn	16 45 05.8	+1.3
KKB				P	Pn	16 44 34.2	+1.2
KKB	Krupnik	2.64	80	i Pn	Pn	16 44 34.1	+1.1
BOVS	Bovan	2.67	34	⇑P	Pn	16 44 34.5	+1.2
BOVS				⇑S	Sn	16 45 06.7	+1.7
BOVS	Bovan	2.67	34	ePn	Pn	16 44 34.5	+1.2
BOVS				eSn	Sn	16 45 05.2	+0.1
TRUS	Trudelj	2.83	11	ePn	Pn	16 44 37.8	+2.2
TRUS				eSn	Sn	16 45 10.4	+1.2
SOH	Sokhos	2.87	101	i Pn	Pn	16 44 37.3	+1.1
ZAPS	Zavoj	2.87	50	ePn	Pn	16 44 37.4	+1.2
ZAPS				eSn	Sn	16 45 11.6	+1.4
VTS	Vitosha	2.92	65	P	Pn	16 44 38.1	+1.1
VTS				S	Sn	16 45 13.0	+1.4
VTS	Vitosha	2.92	65	ePn	Pn	16 44 38.0	+1.1
VTS				eSn	Sn	16 45 11.0	-0.6
SRS	Serrai	3.00	95	i Pn	Pn	16 44 38.7	+0.9
PLNA	Plana	3.00	69	P	Pn	16 44 40.5	+2.5
ZAGS	Zajecar	3.04	38	ePn	Pn	16 44 39.9	+1.5
ZAGS				eSn	Sn	16 45 14.1	-0.2
SVIS	Svilajnac	3.05	22	ePn	Pn	16 44 38.8	+0.3
SVIS				eSn	Sn	16 45 15.1	+0.7
MMB	Musomishta	3.09	87	P	Pn	16 44 41.0	+1.9
MMB	Musomishta	3.09	87	i Pn	Pn	16 44 40.2	+1.1
TEKS	Tekeris	3.10	359	ePn	Pn	16 44 39.8	+0.5
BLKB	Belogradchik	3.12	45	⇑S	Sn	16 45 19.3	+2.9
BLKB	Belogradchik	3.12	45	ePn	Pn	16 44 41.4	+1.8
BLKB				eSn	Sn	16 45 16.1	-0.3
TIP	Timpagrande	3.16	225	⇑P	Pn	16 44 39.8	-0.3
BORS2	Bor- Borsko je	3.17	33	ePn	Pn	16 44 40.1	-0.1
BORS2				eSn	Sn	16 45 16.6	-0.9
AVAS	Avala Beograd	3.31	11	ePn	Pn	16 44 42.8	+0.6
AVAS				eSn	Sn	16 45 21.1	+0.1
KUBS	Kucevo	3.32	26	ePn	Pn	16 44 41.8	-0.5
KUBS				eSn	Sn	16 45 19.9	-1.3
MPEP	Malo Peshtene	3.59	56	P	Pn	16 44 47.6	+1.7

VALD	Valchedram	3.59	50	P	Pn	16 44 47.4	+1.5
MDVR	Moldovita	3.66	24	⇑P	Pn	16 44 47.9	+0.8
MDVR	Moldovita	3.66	24	ePn	Pn	16 44 47.8	+0.8
MDVR				eSn	Sn	16 45 31.0	+1.3
FRGS	Fruska Gora	3.71	2	ePn	Pn	16 44 48.2	+0.5
PUNG	Punghina	3.72	39	⇓P	Pn	16 44 49.7	+1.9
BLY	Banja Luka	3.76	332	ePn	Pb	16 44 56.6	-0.5
BLY	Banja Luka	3.76	332	ePn	Pn	16 44 49.7	+1.4
BLY				eSn	Sn	16 45 36.2	+4.2
VRSS	Vrsac	3.88	18	ePn	Pn	16 44 50.6	+0.7
VRSS				eSn	Sn	16 45 35.3	+0.4
PLD	Plovdiv	3.88	78	ePn	Pn	16 44 51.1	+1.1
HERR	Herculane	3.99	30	⇓P	Pn	16 44 52.6	+1.1
BANR	Banloc	4.08	15	⇓P	Pn	16 44 54.2	+1.4
SRE	Strehaia	4.14	38	⇓P	Pn	16 44 55.4	+1.8
PLVB	Pleven	4.17	61	⇓P	Pn	16 44 55.9	+2.0
BZS	Buzias	4.41	18	⇓P	Pn	16 44 58.0	+0.8
GZR	Gura Zlata	4.56	29	⇑P	Pn	16 45 01.0	+1.7
SURR	Surduc	4.67	22	⇓P	Pn	16 45 01.8	+1.1
AQU	L'Aquila	4.75	283	ePn	Pn	16 45 01.4	-0.5
MORH	Mrgy, Hungar	4.82	352	ePn	Pn	16 45 03.5	+0.6
MORH	Mrgy, Hungar	4.82	352	⇑P	Pn	16 45 03.5	+0.6
ELND	Elena	4.86	70	⇑P	Pn	16 45 04.9	+1.4
HUMR	Humele	4.98	50	⇑P	Pn	16 45 06.8	+1.7
LOT	Lotru	5.00	36	⇓P	Pn	16 45 07.2	+1.7
SIRR	Siria	5.04	16	⇓P	Pn	16 45 07.7	+1.8
SIRR	Siria	5.04	16	ePn	Pn	16 45 07.4	+1.5
SIRR				eSn	Sn	16 46 03.0	-0.5
BOJS	Bojanci	5.16	323	ePn	Pn	16 45 08.5	+0.9
BOJS				eSn	Sn	16 46 04.8	-1.8
ARR	Arges	5.35	41	⇑P	Pn	16 45 12.2	+2.0
MTUR	Matau	5.47	44	⇑P	Pn	16 45 14.0	+2.2
VOIR		5.61	43	⇑P	Pn	16 45 16.0	+2.3
CEY	Cerknica	5.72	320	ePn	Pn	16 45 16.5	+1.2
CEY				eSn	Sn	16 46 18.9	-1.5
DRGR		5.78	21	⇑P	Pn	16 45 17.7	+1.5
SKDS	Skadanscina	5.79	317	ePn	Pn	16 45 15.9	-0.3
SKDS				eSn	Sn	16 46 20.7	-1.4
MARR	Marisel-Cluj	5.80	24	⇑P	Pn	16 45 18.0	+1.7
MLR	Muntele Rosu	6.11	46	P	Pn	16 45 23.2	+2.4
	comp=E,16nm,0.7s,baz=165,slow=9.6,SNR=22						
MLR				S	Sn	16 46 34.0	+3.8
	comp=E,16nm,0.8s,baz=205,slow=12,SNR=5.0						
MLR				LR	LR	16 48 24.2	
	comp=E,122nm,21.2s,baz=220,slow=44						
MLR	Muntele Rosu	6.11	46	⇑P	Pn	16 45 23.3	+2.5
DOPR	Dopca	6.14	41	⇓P	Pn	16 45 23.3	+2.2
SOKA	Soboth	6.20	329	i Pn	Pn	16 45 22.8	+1.0
	comp=E,3.0nm,0.5s						
OBKA	Obir	6.25	326	ePn	Pn	16 45 23.6	+1.0
	comp=E,4.1nm,0.4s						
OBKA				i Sn	Sn	16 46 34.9	+1.3
	comp=E,14nm,0.4s						
OZUR		6.43	42	⇑P	Pn	16 45 27.4	+2.3
ARSA	Arzberg	6.51	334	ePn	Pn	16 45 27.7	+1.6
	comp=E,2.8nm,0.4s						
ARSA				i Sn	Sn	16 46 39.0	-0.8
	comp=E,2.5nm,0.4s						
ARSA	Arzberg	6.51	334	ePn	Pn	16 45 27.6	+1.5
TURR	Turia	6.52	43	⇑P	Pn	16 45 27.2	+0.9
RONA	Rosalia, Austr	6.69	340	ePn	Pn	16 45 30.0	+1.4
	comp=E,2.0nm,0.4s						
RONA				i Sn	Sn	16 46 43.8	-0.5
	comp=E,2.1nm,0.3s						
PLOR	Plostina	6.72	47	⇓P	Pn	16 45 31.4	+2.4
MYKA	Terra Mystica	6.75	322	i Pn	Pn	16 45 31.0	+1.6
	comp=E,2.1nm,0.3s						
MYKA				i Sn	Sn	16 46 43.9	-1.8
	comp=E,3.3nm,0.3s						
VRI	Vrincioaia	6.78	47	⇑P	Pn	16 45 32.0	+2.3
ONER	Baraj Valea Uz	6.90	43	⇑P	Pn	16 45 33.9	+2.4
CONA	Conrad Observa	7.02	339	ePn	Pn	16 45 34.2	+1.0
	comp=E,1.5nm,0.4s						
CONA				i Sn	Sn	16 46 52.4	0.0
	comp=E,2.4nm,0.5s						
KECS	Kecovo	7.06	5	ePN	Pn	16 45 37.2	+3.5
KECS				eSN	Sn	16 46 51.9	-1.4
MODS	Modra-Piesok	7.13	347	eSN	Sn	16 46 53.7	-1.3
CFR	Carcaliu	7.23	56	⇑P	Pn	16 45 37.4	+1.4
BURAR	Bucovina Array	7.34	31	⇑P	Pn	16 45 39.5	+1.9
ABTA	Abfaltersbach	7.38	318	i Pn	Pn	16 45 39.6	+1.6
	comp=E,1.4nm,0.2s						
ABTA				i Sn	Sn	16 46 58.3	-2.9
	comp=E,5.9nm,0.4s						
MOA	Molln	7.46	331	i Pn	Pn	16 45 41.7	+2.6
	comp=E,0.8nm,0.2s						
MOA				i Sn	Sn	16 47 02.9	-0.3
	comp=E,1.9nm,0.3s						
TLCR		7.66	58	⇑P	Pn	16 45 44.5	+2.6
LESA	Schwarzleotal	7.78	323	i Pn	Pn	16 45 44.5	+0.9
	comp=E,2.0nm,0.3s						
LESA				eSn	Sn	16 47 09.4	-1.8
	comp=E,4.4nm,0.6s						
STHS	Stebnicka Huta	8.05	7	ePN	Pn	16 45 51.2	+4.0
STHS				e		16 47 21.6	
WTTA	Wattenberg	8.17	318	i Pn	Pn	16 45 50.0	+1.1
	comp=E,2.5nm,0.3s						
WTTA				i Sn	Sn	16 47 18.2	-2.5
	comp=E,11nm,0.5s						
WATA	Walderalm	8.24	318	i Pn	Pn	16 45 51.6	+1.6
	comp=E,3.8nm,0.3s						
WATA				i Sn	Sn	16 47 21.7	-0.9
	comp=E,3.1nm,0.4s						
SQTA	Sankt Quirin	8.36	317	i Pn	Pn	16 45 53.8	+2.3
	comp=E,2.3nm,0.3s						
SQTA				i Sn	Sn	16 47 24.0	-1.3
	comp=E,5.0nm,0.4s						
FETA	Feichten	8.48	314	i Pn	Pn	16 45 55.6	+2.3
	comp=E,0.8nm,0.3s						
FETA				eSn	Sn	16 47 26.6	-1.9
	comp=E,2.4nm,0.5s						
MOTA	Moosalm	8.49	317	i Pn	Pn	16 45 55.6	+2.3
	comp=E,1.8nm,0.3s						
MOTA				i Sn	Sn	16 47 27.1	-1.6
	comp=E,16nm,0.7s						
GERES	GERESS Array B	8.50	332	P	Pn	16 45 53.5	0.0
	comp=E,0.4nm,0.3s,baz=154,slow=14,SNR=4.9						
GERES				S	Sn	16 47 21.2	-7.7
	comp=E,0.4nm,0.5s,baz=152,slow=26,SNR=1.7						
KHC	Kasperske Hory	8.79	333	ePN	Pn	16 45 59.2	+1.8
KHC				eSN	Sn	16 47 30.9	-5.0
DAVOX	Davos/Dischmat	8.81	310	P	Pn	16 45 59.9	+2.1
	comp=E,1.8nm,0.3s,baz=113,slow=7.0,SNR=7.2						
DAVOX				S	Sn	16 47 35.2	-1.5
	comp=E,1.7nm,0.3s,baz=183,slow=22,SNR=3.7						
DAVA	Damuels	9.11	313	i Pn	Pn	16 46 03.6	+1.8
	comp=E,1.5nm,0.2s						
DAVA				eSn	Sn	16 47 41.5	-2.2
	comp=E,2.5nm,0.3s						
KEST	Kesra	9.87	238	P	Pn	16 46 18.0	+5.8
	comp=E,3.8nm,0.9s,baz=56,slow=11,SNR=2.2						
BRTR	Keskin Array B	10.79	95	LR	LR	16 51 20.3	
	comp=E,68nm,19.3s,baz=281,slow=40						
HFS	Hagfors	19.07	351	P	P	16 48 09.4	-3.0
	comp=E,4.7nm,0.9s,baz=181,slow=13,SNR=3.5						
NOA	NORSAR Array B	20.29	348	P	P	16 48 23.9	-1.8
	comp=E,0.6nm,0.7s,baz=151,slow=11,SNR=2.0						
FINES	FINESS Array B	20.41	9	P	P	16 48 25.7	-1.2
	comp=E,4.7nm,0.8s,baz=180,slow=11,SNR=7.7						
	comp=E,4.7nm,0.8s						
TORD	Torodi Ar. Bea	32.25	214	P	P	16 50 19.9	+1.3
	comp=E,0.9nm,0.3s,baz=18,slow=9.0,SNR=1.9						
	comp=E,0.9nm,0.3s						
BVAR	Borovoye Array	35.62	53	P	P	16 50 46.6	-1.0
	comp=E,1.1nm,0.7s,baz=278,slow=10.0,SNR=4.7						
	comp=E,1.1nm,0.7s						
ZALV	Zalesovo Beam	44.08	50	P	P	16 51 56.9	-1.0
	comp=E,2.3nm,0.7s,baz=283,slow=8.5,SNR=10						
	comp=E,2.3nm,0.7s						
MKAR	Makanchi Array	44.24	61	P	P	16 51 58.2	-1.1
	comp=E,1.7nm,0.8s,baz=292,slow=6.4,SNR=7.4						
	comp=E,1.7nm,0.8s						
SONM	Songino Array	58.94	52	P	P	16 53 48.5	-0.8
	comp=E,0.9nm,0.7s,baz=296,slow=9.8,SNR=4.8						
	comp=E,0.9nm,0.7s						
PDAR	Pinedale Array	84.48	325	LR	LR	17 35 19.7	
	comp=E,23nm,18.6s,baz=328,slow=37						
ASAR	Alice Springs	123.12	94	PKP	PKPdf	17 02 44.4	-2.4
	comp=E,0.2nm,0.8s,baz=320,slow=1.9,SNR=1.7						

IDC 02 17:05:30.8±1.9, 26°.44S×176°.56W, h0^{km}, mb3.9/3, mbtmp3.9/3, MS3.4/2, Error ellipse: s-maj=56.1km s-min=36.6km az=37.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPT	Papeete	26.49	76	LR	LR	17 19 56.8	
	comp=Z,47nm,18.3s,baz=216,slow=33						
ASAR	Alice Springs	44.74	262	P	P	17 13 45.2	-1.1
	0.7nm,0.6s,baz=90,slow=7.5,SNR=30						
ASAR				PcP	PcP	17 15 28.9	+0.1
	0.3nm,0.9s,baz=99,slow=3.0,SNR=1.6						
	0.7nm,0.6s						
WRA	Warramunga Arr	45.38	267	P	P	17 13 52.2	+0.9
	0.5nm,0.3s,baz=108,slow=8.2,SNR=14						
	0.5nm,0.3s						
QSPA	South Pole Qui	63.66	180	P	P	17 16 03.7	0.0
	2.7nm,0.9s,baz=348,slow=4.2,SNR=9.7						
	2.7nm,0.9s						
JHJ	Hachijo jima 2	72.33	323	LR	LR	17 50 51.6	
	comp=Z,43nm,18.1s,baz=254,slow=38						
NOA	NORSAR Array B	145.00	353	PKPbc	PKPbc	17 25 07.6	-1.2
	1.4nm,0.9s,baz=11,slow=2.3,SNR=3.6						

IDC 02 17:13:04.3±5.6, 7°.38S×128°.97E, h243^{km}±60^{km}, mb2.7/1, mbtmp3.4/4, Error ellipse: s-maj=58.8km s-min=29.6km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.13	197	P	Pn	17 15 38.1	+0.9
	0.5nm,0.4s,baz=28,slow=10.0,SNR=9.9						
FITZ				S	S	17 17 40.2	-1.2
	1.5nm,0.8s,baz=231,slow=22,SNR=1.4						
WRA	Warramunga Arr	13.53	158	P	Pn	17 16 05.0	-2.0
	0.4nm,0.4s,baz=337,slow=13,SNR=7.5						
WRA				S	S	17 18 27.1	-10
	0.3nm,0.3s,baz=341,slow=22,SNR=7.0						
ASAR	Alice Springs	16.87	164	P	Pn	17 16 46.9	-0.1
	0.7nm,0.6s,baz=347,slow=12,SNR=18						
ASAR				S	S	17 19 49.0	+0.2
	0.1nm,0.3s,baz=341,slow=25,SNR=4.4						
MKAR	Makanchi Array	67.99	327	P	P	17 23 37.1	-0.3
	0.1nm,0.3s,baz=129,slow=6.6,SNR=1.6						
	0.1nm,0.3s						

IDC 02 17:28:56.9±1.5, 1°.99N×126°.99E, h0^{km}, mb3.3/5, mbtmp3.4/5, Error ellipse: s-maj=153.7km s-min=20.4km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.96	162	P	P	17 34 02.8	-0.4
	0.8nm,0.7s,baz=339,slow=11,SNR=6.6						
	0.8nm,0.7s						
ASAR	Alice Springs	26.38	166	P	P	17 34 35.4	+0.2
	0.3nm,0.9s,baz=343,slow=11,SNR=10						
	0.3nm,0.9s						
SONM	Songino Array	49.02	342	P	P	17 37 44.5	-1.1
	0.3nm,0.8s,baz=151,slow=6.3,SNR=1.6						
	0.3nm,0.8s						
MKAR	Makanchi Array	59.12	326	P	P	17 39 00.5	+1.1
	0.2nm,0.4s,baz=124,slow=7.5,SNR=6.2						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	63.33	328	P	P	17 39 27.3	-0.5
	0.3nm,0.4s,baz=109,slow=7.0,SNR=2.0						
	0.3nm,0.4s						

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*BGR **02** 17:53:25.4, 7°.75N×94°.36E, h166^{km}, mb5.1*
*BJI **02** 17:53:27.5, 8°.00N×94°.35E, h207^{km}, mB4.8/11, mb4.6/57*
*MOS **02** 17:53:29.4±1.0, 8°.35N×94°.40E, h200^{km}, mb5.0/52, Error ellipse: s-maj=8.0km s-min=3.9km az=115.6*
*NEIC **02** 17:53:30.0±1.9, 8°.35N±0°.06×94°.53E±0°.07, h186^{km}±5^{km}, mb5.0/152, Error ellipse: s-maj=10.7km s-min=8.2km az=61.0*
*DJA **02** 17:53:30.6±0.4, 8°N±3°×9°5E±°, h200^{km}±7^{km}, M4.8/24, mb4.9/24, mB5.3/14, MLv5.2/10, Mw(mB)4.7/14*
*NDI **02** 17:53:30.6±1.0, 8°.32N×94°.57E, h180^{km}, ML4.9, MW4.8, mb5.0(NEIC)*
*IDC **02** 17:53:31.6±1.2, 8°.30N×94°.50E, h206^{km}±10^{km}, mb4.3/34, mbtmp4.8/36, Error ellipse: s-maj=9.5km s-min=7.4km az=82.0*

ISC 02 17:53:28.7±0.5, 8°.29N±0°.03×94°.39E±0°.04, h182^{km}±4^{km}, n849, σ1$\overset{s}{.}$60/857, mb4.9/212, 33C-55D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	1.35	200	eP	Pn	17 54 00.3	+0.8
CMBY				eS	Sn	17 54 22.6	-0.7
CMBY				IAML		17 54 26.1	
	comp=N,33µm,0.4s						
CMBY				IAML		17 54 26.6	
	comp=E,30µm,0.6s						
PBA	Port Blair	3.72	334		Pn	17 54 26.8	+0.5
PBA				Sn	Sn	17 55 08.3	-3.2
PBA	Port Blair	3.72	334	eP	Pn	17 54 28.9	+2.6
PBA				eS	Sn	17 55 11.2	-0.3
PBA				IAML		17 55 18.8	
	comp=N,2µm,0.4s						
PBA				IAML		17 55 19.5	
	comp=E,2µm,0.3s						
LHMI	Lhok Sumawe	3.96	140		Pn	17 54 30.3	+0.8
LHMI	Lhok Sumawe	3.96	140	P	Pn	17 54 30.7	+1.2
LHMI	Lhok Sumawe	3.96	140	P	Pn	17 54 29.7	+0.2
LHMI				S	Sn	17 55 18.9	+1.9
MLSI	Meulaboh, Aceh	4.47	153	P	Pn	17 54 34.2	-1.7
MLSI				S	Sn	17 55 24.2	-4.5
DGPR	DIGLIPUR	5.06	344	eP	Pn	17 54 45.9	+2.3
DGPR				eS	Sn	17 55 40.3	-2.2
DGPR				IAML		17 55 45.5	
	comp=E,2µm,0.4s						
DGPR				IAML		17 55 48.9	
	comp=N,2µm,0.3s						
TPTI		5.72	151	P	Pn	17 54 48.8	-3.3
	comp=N,1.2nmcomp=N,7µmcomp=N,174nm,0.6s						
KCSI	Kotacane, Aceh	5.81	144	P	Pn	17 54 51.7	-1.6
	comp=N,0.6nmcomp=N,3µmcomp=N,137nm,0.8s						
KCSI				S	Sn	17 55 55.1	-4.9
	comp=N,0.6nmcomp=N,3µmcomp=N,137nm,0.8s						
SNSI	Sinabang, Aceh	6.15	162	P	Pn	17 54 52.4	-5.4
SNSI				S	Sn	17 56 00.4	-7.6
TSI	Tuntungan	6.32	139	P	Pn	17 54 59.2	-0.7
KULM	Kulim	6.89	115		Pn	17 55 04.1	-3.5
KULM	Kulim	6.89	115	P	Pn	17 55 07.3	-0.2
KULM	Kulim	6.89	115	P	Pn	17 55 06.7	-0.8
PSI	Prapat	7.08	140	P	Pn	17 55 09.1	-1.0
PSI	Prapat	7.08	140	P	Pn	17 55 08.1	-2.0
	comp=N,0.6nmcomp=N,172nm,1.2s						
PSI	Prapat	7.08	140	P	Pn	17 55 08.7	-1.4
RPSI	Rantau Prapat	7.16	141		Pn	17 55 08.7	-2.3
IPM	Ipoh	7.60	119		Pn	17 55 15.6	-1.3
IPM	Ipoh	7.60	119	P	Pn	17 55 16.1	-0.8
IPM	Ipoh	7.60	119	P	Pn	17 55 15.0	-1.9
	comp=N,0.3nmcomp=N,81nm,1.0s						
GSI	Gunungsitoli	7.63	155		Pn	17 55 12.7	-4.6
GSI	Gunungsitoli	7.63	155	P	Pn	17 55 13.7	-3.5
GSI	Gunungsitoli	7.63	155	P	Pn	17 55 12.2	-5.0
	comp=N,0.7nmcomp=N,2µmcomp=N,55nm,0.6s						
MNSI	Mandailing Nat	9.06	145	P	Pn	17 55 32.0	-4.1
	comp=N,167nm,0.4s						
PBSI	Pulau Batu	9.15	155	P	Pn	17 55 33.1	-4.1
	comp=N,83nm,0.9s						
BKNI	Bangkinang	10.32	140		Pn	17 55 49.2	-3.3
BKNI	Bangkinang	10.32	140	P	Pn	17 55 50.1	-2.4
BKNI	Bangkinang	10.32	140	P	Pn	17 55 50.0	-2.4
	comp=N,2µmcomp=N,138nm,0.5s						
PPI	Padang Panjang	10.55	145	P	Pn	17 55 52.5	-3.0
	comp=N,70nm,0.8s						
SISI	Saibi	10.64	154	P	Pn	17 55 52.7	-4.0
	comp=N,47nm,1.0s						
PDSI	Padang	10.96	146	P	Pn	17 55 57.1	-3.8
	comp=N,2µmcomp=N,64nm,0.6s						
CM31	Chiang Mai Arr	11.03	23	P	Pn	17 56 03.7	+2.0
	SNR=12						
CM31	Chiang Mai Arr	11.03	23		Pn	17 56 02.1	+0.4
CMAR	Chiang Mai Arr	11.03	23	P	Pn	17 56 03.4	+1.7
	comp=N,16nm,0.8s,baz=216,slow=13,SNR=132						
CMAR				ScP	ScP	18 04 55.0	-3.5
	comp=N,0.3nm,0.3s,baz=222,slow=1.5,SNR=4.1						
CMAR	Chiang Mai Arr	11.03	23		Pn	17 56 01.3	-0.4
CMAR	Chiang Mai Arr	11.03	23	P	Pn	17 56 01.3	-0.4
CHTO	Chiang Mai	11.36	22	P	Pn	17 56 07.4	+1.5
CHTO	Chiang Mai	11.36	22		Pn	17 56 06.6	+0.7
CHTO	Chiang Mai	11.36	22	P	Pn	17 56 07.6	+1.7
CHTO	Chiang Mai	11.36	22	P	Pn	17 56 07.0	+1.1
CHTO	Chiang Mai	11.36	22	P	Pn	17 56 06.6	+0.7
MYKOM	Kota Tinggi	11.42	124		Pn	17 56 06.6	-0.1
MYKOM	Kota Tinggi	11.42	124	P	Pn	17 56 06.8	0.0
MYKOM	Kota Tinggi	11.42	124	P	Pn	17 56 04.9	-1.9
	comp=N,1µmcomp=N,132nm,1.2s						
TPRI	Tanjung Pinang	12.47	125	P	Pn	17 56 19.5	-0.8
	comp=N,2µmcomp=N,115nm,1.4s						
PALK	Pallekele	13.60	267	P	P	17 56 38.4	+1.0
	comp=N,66nm,0.7s,baz=76,slow=11,SNR=30						
PALK				S	Sn	17 59 00.5	-5.5
	comp=N,7.2nm,0.3s,baz=170,slow=22,SNR=9.8						
PALK	Pallekele	13.60	267	P	P	17 56 41.9	+4.5
PALK	Pallekele	13.60	267		Pn	17 56 35.9	+1.4
PALK	Pallekele	13.60	267	P	P	17 56 40.3	+2.9
	comp=N,52nm,0.8s						
PALK	Pallekele	13.60	267	deP	P	17 56 36.6	-0.8
MASI	Maura Aman, Be	13.79	145	P	Pn	17 56 34.1	-2.8
	comp=N,3µmcomp=N,234nm,1.1s						
SAIH	SAIHA	14.18	355	eP	P	17 56 46.7	+2.8
SAIH				eS	Sn	17 59 09.5	-10
SAIH				IAML		17 59 20.8	
	comp=N,155nm,0.5s						
SAIH				IAML		17 59 25.4	
	comp=E,170nm,0.8s						
KSI	Kapahiang	14.41	145	P	Pn	17 56 40.7	-3.9
	comp=E,4µmcomp=E,156nm,0.8s						
BWNR	Bhubaneshwar	14.50	326	eP	P	17 56 52.1	+4.4
BWNR				eS	Sn	17 59 18.5	-10
BWNR				IAML		17 59 27.9	
	comp=N,282nm,0.4s						
BWNR				IAML		17 59 28.8	
	comp=E,431nm,0.6s						
BRDH	Bariadhala	14.55	350	P	P	17 56 53.8	+6.0
	comp=E,160nm,0.3s,baz=158,slow=9.0,SNR=3.9						
RAGD	RAYAGADA	15.20	317	eP	P	17 57 01.8	+6.8
RAGD				eS	Sn	17 59 35.5	-8.7
RAGD				IAML		17 59 43.4	
	comp=E,67nm,0.6s						
RAGD				IAML		17 59 44.1	
	comp=N,65nm,0.6s						
VJD	Vijayawada	15.70	303	eP	P	17 57 09.1	+8.4
VJD				eS	S	17 59 48.0	-7.3
VJD				IAML		18 00 00.1	
	comp=E,59nm,0.6s						
VJD				IAML		18 00 00.2	
	comp=N,70nm,0.4s						
MORE	Moreh	15.86	360	P	Pn	17 57 01.2	-1.0
MORE				Sn	S	17 59 51.7	-6.8
MDSI	Maura Dua	16.01	142	P	P	17 57 00.2	-3.9
KLSI		16.51	141	P	P	17 57 06.5	-3.1
KOD	Kodaikanal	16.81	278	eP	Pn	17 57 24.0	+10
KOD				eS	S	18 00 15.1	-4.4
KOD				IAML		18 00 28.1	
	comp=E,17nm,0.4s						
KOD				IAML		18 00 31.2	
	comp=N,17nm,0.6s						
JHSG	JHARSUGUGA	16.85	324	eP	Pn	17 57 22.6	+8.4
JHSG				eS	S	18 00 13.5	-6.3
KASI	Kota Agung	17.03	143	P	P	17 57 13.1	-2.1
TNCH	TengChong	17.11	13	P	Pn	17 57 18.4	+1.0
TNCH				S	S	18 00 19.5	-5.8
TNCH				pmax	pmax		
	comp=N,110nm,0.8s						
KOHI	KOHIMA	17.34	359	eP	Pn	17 57 26.9	+6.8
KOHI				eS	S	18 00 21.7	-8.3
KOHI				IAML		18 00 41.5	
	comp=N,192nm,0.9s						
KOHI				IAML		18 00 42.4	
	comp=E,249nm,0.7s						
SHL	Shillong	17.35	352	P	P	17 57 18.5	-0.4
	SNR=6.4						
SHL	Shillong	17.35	352	P	P	17 57 17.8	-1.1
SHL	Shillong	17.35	352	eP	Pn	17 57 28.8	+8.6
SHL				eS	S	18 00 23.2	-7.0
SHL	Shillong	17.35	352	P	P	17 57 17.8	-1.1
HYB	Hyderabad	17.89	302	eP	Pn	17 57 27.2	+0.6
HYB				epP	pP	17 57 57.4	+2.6
MOKO	MOKOCHONG	17.93	0	eP	Pn	17 57 35.9	+8.8
MOKO				eS	S	18 00 37.7	-4.1
MOKO				IAML		18 00 43.7	
	comp=E,196nm,1.2s						
MOKO				IAML		18 00 45.6	
	comp=N,143nm,0.8s						
KMI	Kunming	18.54	24	P	Pn	17 57 35.5	+1.2
KMI				pmax	pmax		
	comp=N,25nm,0.7s						
SBUM	Sibu	18.67	107	Pn	P	17 57 34.3	+1.1
PZH	PanZhiHua	19.41	20	P	P	17 57 42.6	+1.3
COCO	West Island	20.49	173	P	P	17 57 51.6	-1.1
COCO	West Island	20.49	173	P	P	17 57 46.8	-5.9
COCO	West Island	20.49	173	P	P	17 57 51.6	-1.1
EVN	Everest	20.83	341	P	P	17 57 55.8	-1.2
LSA	Lhasa	21.52	352		P	17 58 03.7	-0.3
LSA	Lhasa	21.52	352	P	P	17 58 04.2	+0.1
LSA	Lhasa	21.52	352	P	P	17 58 03.7	-0.3
CD2	Chengdu	24.15	20	eP	P	17 58 28.9	+0.7
CD2				pmax	pmax		
	comp=N,40nm,0.6s						
GOMU	GeErMu	27.78	1	P	P	17 59 02.7	+1.6
GOMU				pmax	pmax		
	comp=N,9.0nm,0.7s						
KAPI	Kappang	28.54	117	⇓eP	P	17 59 07.7	0.0
KAPI				pmax	pmax		
	comp=Z,13nm,1.3s						
LZDM	Lanzhou Array	28.82	16	P	P	17 59 11.0	+0.7
	comp=Z,6.1nm,0.3s,baz=197,slow=9.3,SNR=10						
	comp=Z,6.1nm,0.3s						
XAN	Xi'an	28.91	26	P	P	17 59 11.0	+0.2
XAN				pP	pwP	17 59 55.5	+5.0
XAN				pmax	pmax		
	comp=Z,20nm,0.8s						
WHN	Wuhan	28.96	37	P	P	17 59 12.7	+1.5
LZH	Lanzhou	28.98	16	eP	P	17 59 12.5	+1.0
LZH				pP	pP	17 59 49.6	+1.1
LZH				pmax	pmax		
	comp=Z,26nm,1.1s						
LUWI	Luwuk	29.77	107	P	P	17 59 18.3	-0.3
LUWI				IAmb	IAmb	17 59 59.6	
	comp=Z,45nm,1.0s						
LYN	LuoYang	30.97	30	P	P	17 59 30.9	+2.0
LYN				pmax	pmax		
	comp=Z,23nm,0.7s						
GTA	Gaotai	31.37	8	P	P	17 59 34.0	+1.5
GTA				pP	pwP	18 00 12.6	+0.6
GTA				PcP	PcP	18 02 23.1	+1.3
GTA				S	S	18 04 26.5	+0.2
GTA				pmax	pmax		
	comp=Z,16nm,0.8s						
NIL	Nilore	31.90	325		P	17 59 37.1	0.0
NIL				IAmb	IAmb	17 59 38.1	
	comp=Z,33nm,0.7s						
NIL	Nilore	31.90	325	P	P	17 59 37.1	0.0
NIL				pmax	pmax		
	comp=Z,33nm,0.7s						
NJ2	Nanjing	32.80	40	eP	P	17 59 44.7	-0.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TIY	Taiyuan	33.54	26	eP	P	17 59 50.8	-0.5
TIY				pmax	pmax		
	comp=Z,330nm,5.1s						
HNS	HongShan	34.34	29	⇑P	P	18 00 00.4	+2.3
HNS				pmax	pmax		
	comp=Z,23nm,0.9s						
KBL	Kabul	35.00	322	P	P	18 00 04.6	+0.5
	SNR=5.6						
KBL	Kabul	35.00	322		P	18 00 04.2	+0.1
KBL				IAmb	IAmb	18 00 05.7	
	comp=Z,18nm,0.8s						
KBL					PcP	18 02 33.0	+0.8
KBL	Kabul	35.00	322	P	P	18 00 04.2	+0.1
KBL						18 02 33.0	
KBL				pmax	pmax		
	comp=Z,18nm,0.8s						
KSH	Kashi	35.20	335	P	P	18 00 04.5	-1.2
KSH				PcP	PcP	18 02 33.8	+1.2
KSH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WUS	Wushi	35.43	340		P	18 00 08.2	+0.5
WUS	Wushi	35.43	340	P	P	18 00 08.4	+0.7
WUS				PcP	PcP	18 02 34.7	+1.4
MANEM	Manem	35.65	328		P	18 00 10.8	+1.1
MANEM				IAmb	IAmb	18 00 15.2	
	comp=Z,95nm,0.7s						

HHC	Hu-ho-hao-te	35.84	22	eP	P	18 00 10.7	-0.4
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,99nm,5.5s						
WMQ	Urumqi	35.87	352	eP	P	18 00 13.2	+1.9
NGCH	Negor - Chabah	35.92	302	P	P	18 00 15.4	+3.5
JLN	Jalan Bani Buh	36.34	296	P	P	18 00 17.9	+2.5
TARG	Taragay, Kyrgy	36.39	339	P	P	18 00 16.0	-0.1
TARG	Taragay, Kyrgy	36.39	339	P	P	18 00 16.0	-0.1
TARG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PRZ	Przheval'sk	36.85	340	P	P	18 00 17.4	-2.3
PRZ	Przheval'sk	36.85	340	P	P	18 00 17.5	-2.3
PRZ				pmax	pmax		
	comp=Z,17nm,1.0s						
WBK	Wadi Bani Khal	36.87	297	P	P	18 00 23.1	+3.2
	SNR=14						
KDJ	Kajisay	36.97	339	P	P	18 00 19.4	-1.3
KDJ	Kajisay	36.97	339	P	P	18 00 19.4	-1.3
KDJ				pmax	pmax		
	comp=Z,14nm,1.0s						
DRK	Karamyk	37.07	330	P	P	18 00 22.4	+0.7
DRK	Karamyk	37.07	330	P	P	18 00 22.4	+0.7
DRK				pmax	pmax		
	comp=Z,75nm,0.6s						
SHLS	Shalkode	37.12	342	eP	P	18 00 21.5	-0.4
SHLS	Shalkode	37.12	342	eP	P	18 00 21.4	-0.4
BJI	Beijing	37.13	28	P	P	18 00 23.5	+1.7
BJI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
UZB	Uzynbulak	37.25	341	eP	P	18 00 23.6	+0.6
UZB	Uzynbulak	37.25	341	eP	P	18 00 23.5	+0.6
MHTO	MHTO	37.33	294	P	P	18 00 26.2	+2.4
SATY	Saty	37.37	341	eP	P	18 00 24.5	+0.5
SATY	Saty	37.37	341	eP	P	18 00 24.4	+0.5
GAR	Garm	37.45	328		P	18 00 24.7	0.0
GAR				IAmb	IAmb	18 00 25.7	
	comp=Z,52nm,1.1s						
DQM	DQM	37.47	292	P	P	18 00 28.1	+3.0
JMDO	Jabal Madar	37.57	296	P	P	18 00 28.7	+2.9
SHAA	Shahritus	37.61	325		P	18 00 25.5	-0.5
SHAA				IAmb	IAmb	18 00 28.5	
	comp=Z,27nm,0.5s						
SMDO	Samad	37.81	297	P	P	18 00 30.8	+2.8
CHGR	Chuyangaron	37.81	327		P	18 00 27.2	-0.5
CHGR				IAmb	IAmb	18 00 28.3	
	comp=Z,59nm,1.0s						
CHGR	Chuyangaron	37.81	327	P	P	18 00 27.2	-0.5
CHGR				pmax	pmax		
	comp=Z,59nm,1.0s						
TNSS	Tian-Shan	37.84	339	eP	P	18 00 28.7	+0.3
TNSS	Tian-Shan	37.84	339	eP	P	18 00 28.6	+0.3
BIDO	Bidbid	37.88	298	P	P	18 00 31.6	+3.2
	SNR=5.3						
MDOK	Medeo	37.92	339	eP	P	18 00 29.3	+0.6
MDOK	Medeo	37.92	339	eP	P	18 00 29.2	+0.6
AAA	Alma-Ata	38.01	339	eP	P	18 00 29.9	+0.6
AAA	Alma-Ata	38.01	339	eP	P	18 00 29.9	+0.6
UCH	Uchtor	38.08	336	P	P	18 00 31.2	+0.9
	SNR=6.4						
TKM2	Tokmak 2	38.24	338	P	P	18 00 32.2	+0.8
	SNR=5.3						
KBK	Karagaybulak	38.26	337	P	P	18 00 33.2	+1.6
	SNR=6.6						
MBWA	Marble Bar	38.42	140	P	P	18 00 31.4	-1.5
AAK	Ala-Archa	38.43	336	P	P	18 00 34.6	+1.8
	SNR=6.4						
AAK	Ala-Archa	38.43	336	P	P	18 00 34.3	+1.4
AAK	Ala-Archa	38.43	336		P	18 00 33.6	+0.7
AAK	Ala-Archa	38.43	336	i P	P	18 00 33.8	+0.9
	SNR=6.5						
AAK	Ala-Archa	38.43	336	ceP	P	18 00 34.5	+1.6
AAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
AAK	Ala-Archa	38.43	336	P	P	18 00 34.7	+1.8
AAK				PcP	PcP	18 02 44.1	+1.7
BSY	Bisya	38.47	296	P	P	18 00 36.5	+3.1
	SNR=8.5						
HOQ	Hoqain	38.61	298	P	P	18 00 37.2	+2.6
SHAO	Shalim	38.89	288	P	P	18 00 40.1	+3.2
	SNR=15						
SHAO	Shalim	38.89	288	i P	P	18 00 39.9	+3.0
	SNR=15						
USP	Ospenovka	38.96	337	P	P	18 00 38.1	+1.0
	SNR=8.9						
SGDS	Sogindy	39.06	337	eP	P	18 00 38.7	+0.6
ARQ	Araqi	39.23	297	P	P	18 00 42.3	+2.5
	SNR=16						
SOHO	SOHO	39.45	298	P	P	18 00 43.9	+2.5
SOHO	SOHO	39.45	298	P	P	18 00 43.5	+2.0
DMTO	DMTO	39.48	288	P	P	18 00 44.7	+2.9
MK31	Makanchi Array	39.74	347	deP	P	18 00 43.8	+0.2
MKAR	Makanchi Array	39.74	347	P	P	18 00 44.1	+0.6
	comp=Z,11nm,0.6s,baz=159,slow=9.8,SNR=131						
MKAR				PcP	PcP	18 02 48.3	+2.0
	comp=Z,1.7nm,0.8s,baz=139,slow=5.3,SNR=2.4						
	comp=Z,11nm,0.6s						
MKAR	Makanchi Array	39.74	347	P	P	18 00 43.8	+0.2
MAKZ	Makanchi	39.82	347	P	P	18 00 44.6	+0.4
MAKZ				IAmb	IAmb	18 00 45.5	
	comp=Z,16nm,0.5s						
MAKZ	Makanchi	39.82	347	P	P	18 00 44.6	+0.4
MAKZ				pmax	pmax		
	comp=Z,16nm,0.5s						
MAKZ	Makanchi	39.82	347	P	P	18 00 44.7	+0.4
ZSN	Zaisan	39.86	350	eP	P	18 00 45.4	+0.8
ZSN	Zaisan	39.86	350	eP	P	18 00 45.3	+0.8
DZA	Taraz	39.97	333	eP	P	18 00 46.1	+0.6
DZA	Taraz	39.97	333	eP	P	18 00 46.1	+0.6
UOSS	Minazif	39.98	299	P	P	18 00 46.6	+0.7
IUG	Iuzhnay	39.98	331	eP	P	18 00 46.4	+0.7
	comp=Z,15nm,0.8s						
IUG	Iuzhnay	39.98	331	eP	P	18 00 46.4	+0.7
IUG				pmax	pmax		
	comp=Z,15nm,0.8s						
HATD	Hatta, Dubai	40.01	299	P	P	18 00 48.5	+2.4
HATD	Hatta, Dubai	40.01	299	P	P	18 00 47.7	+1.6
MDH	Madha	40.01	300	P	P	18 00 46.9	+0.9
MDH	Madha	40.01	300	P	P	18 00 46.7	+0.7
ASHO	Ashiyiah	40.03	299	P	P	18 00 48.5	+2.2
ASHO	Ashiyiah	40.03	299	P	P	18 00 48.4	+2.1
ALNE	Al Ain	40.12	298	P	P	18 00 49.3	+2.3
ALNE	Al Ain	40.12	298	i P	P	18 00 48.9	+1.9
	SNR=9.9						
MSFE	Esma-Masafi	40.15	300	P	P	18 00 49.8	+2.5
MASF	Masafi	40.15	300	P	P	18 00 48.8	+1.6
RBK	Rabkut	40.15	287	P	P	18 00 50.0	+2.6
BANOM	Banah	40.21	301	P	P	18 00 50.2	+2.4
XLT	XiLinHaoTe	40.21	24	eP	P	18 00 49.5	+2.0
XLT				pmax	pmax		
	comp=Z,13nm,0.9s						
UMZA	Um Al Zommool	40.28	295	P	P	18 00 50.9	+2.6
CHM	Chimkent	40.32	331	eP	P	18 00 49.1	+0.7
CHM	Chimkent	40.32	331	eP	P	18 00 49.1	+0.7
SHME	Shamm	40.38	301	P	P	18 00 51.0	+1.9
SHME	Shamm	40.38	301	P	P	18 00 51.0	+1.9
DOK	Doka	40.39	289	P	P	18 00 52.0	+2.8
NAZ	Nazwa, Dubai	40.46	299	P	P	18 00 51.3	+1.5
KK31	Karatay Array	40.51	333		P	18 00 50.3	+0.4
KK31	Karatay Array	40.51	333	P	P	18 00 50.3	+0.4
KK31				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KKAR	Karatay Array	40.51	333	P	P	18 00 50.2	+0.3
KKAR	Karatay Array	40.51	333	P	P	18 00 50.2	+0.3
WHFO	Wadi Hawf	40.62	288	P	P	18 00 53.9	+2.6
BTLS	Baital	40.63	338	eP	P	18 00 51.2	+0.3
BTLS	Baital	40.63	338	eP	P	18 00 51.1	+0.3
ASUD	Al Ashush, Dub	40.65	298	P	P	18 00 53.7	+2.4
ASUD	Al Ashush, Dub	40.65	298	i P	P	18 00 53.6	+2.3
	SNR=11						
SONM	Songino Array	40.71	12	P	P	18 00 52.2	+0.6
	comp=Z,9.5nm,0.9s,baz=193,slow=8.7,SNR=44						
SONM				PcP	PcP	18 02 50.1	+0.6
	comp=Z,4.9nm,0.7s,baz=191,slow=3.2,SNR=11						
SONM				ScP	ScP	18 06 18.7	-3.2
	comp=Z,0.6nm,0.7s,baz=177,slow=2.5,SNR=2.3						
	comp=Z,9.5nm,0.9s						
SONM	Songino Array	40.71	12	P	P	18 00 51.9	+0.3
BRLS	Borolday	40.76	332	eP	P	18 00 50.8	-1.2
BRLS	Borolday	40.76	332	eP	P	18 00 50.8	-1.2
ULN	Ulaanbaatar	40.88	13	P	P	18 00 53.9	+0.9
ULN	Ulaanbaatar	40.88	13		P	18 00 53.1	+0.1
ULN	Ulaanbaatar	40.88	13	d iP	P	18 00 53.3	+0.3
ULN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AJN	Ajban	40.93	298	P	P	18 00 55.5	+1.9
ABTO	Aybut	40.99	287	P	P	18 00 56.9	+2.7
MZWR	Madinat Zayed	41.68	297	P	P	18 01 01.8	+2.0
DGZ	Jazzator, Alta	41.69	353	⇓eP	P	18 01 00.3	+0.7
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MZR	Muzera	41.85	295	P	P	18 01 03.7	+2.5
	SNR=9.9						
MZR	Muzera	41.85	295	i P	P	18 01 03.4	+2.2
	SNR=42						
KSRS	Korea Array	41.99	41	P	P	18 01 02.1	+0.1
	comp=Z,1.3nm,0.7s,baz=243,slow=7.9,SNR=5.4						
KSRS				PcP	PcP	18 02 54.0	+0.2
	comp=Z,2.4nm,0.6s,baz=232,slow=3.0,SNR=9.6						
KNGR	Kungurtug, Tuv	42.26	3	ceP	P	18 01 05.7	+1.5
KNGR				pmax	pmax		
	comp=Z,14nm,0.9s						
GHWR	Ruwais	42.62	296	P	P	18 01 09.1	+1.7
JRN	Qarnain Island	42.90	298	P	P	18 01 10.7	+1.1
SLWR	Sila	43.70	296	P	P	18 01 17.8	+1.8
KURBB	Kurchatov Arra	44.21	346	P	P	18 01 20.7	+1.1
	comp=Z,9.0nm,0.3s,baz=168,slow=6.9,SNR=107						
KURBB				PcP	PcP	18 03 01.3	+0.4
	comp=Z,3.3nm,0.7s,baz=159,slow=2.8,SNR=9.2						
	comp=Z,9.0nm,0.3s						
KURK	Kurchatov	44.27	346	P	P	18 01 21.2	+1.2
KURK	Kurchatov	44.27	346	P	P	18 01 20.9	+0.9
KURK	Kurchatov	44.27	346		PcP	18 03 01.3	+0.1
KURK	Kurchatov	44.27	346	d iP	P	18 01 21.0	+0.9
KURK				pmax	pmax		
	comp=Z,16nm,1.0s						
KURK	Kurchatov	44.27	346	P	P	18 01 20.9	+0.9
KURK				PcP	PcP	18 03 01.9	+0.7
TRNA	Turayna	44.28	297	P	P	18 01 22.1	+1.4
CN2	Changchun	44.55	32	P	P	18 01 23.5	+1.1
CN2				PcP	PcP	18 03 02.0	-0.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SMRA	Abu-Samra	44.63	297	P	P	18 01 24.8	+1.5
SHMA	Al-Shehemyia	44.78	298	P	P	18 01 26.1	+1.5
BRZS	Berezniki	45.33	340	eP	P	18 01 29.3	+0.7
BRZS	Berezniki	45.33	340	eP	P	18 01 29.2	+0.7
HIA	Hailar	46.05	23	P	P	18 01 34.0	-0.2
HIA	Hailar	46.05	23	P	P	18 01 34.0	-0.2
HIA				pmax	pmax		
	comp=Z,13nm,0.8s						
ZAA0	Zalesovo Array	46.18	352		P	18 01 35.4	+0.3
ZAA0				IAmb	IAmb	18 01 37.0	
	comp=Z,29nm,0.8s						
ZALV	Zalesovo Beam	46.18	352	P	P	18 01 36.0	+1.0
	comp=Z,20nm,0.4s,baz=179,slow=7.7,SNR=144						
ZALV				S	S	18 08 06.0	-1.2
	comp=Z,3.2nm,1.0s,baz=167,slow=13,SNR=7.6						
	comp=Z,20nm,0.4s						
ZALV	Zalesovo Beam	46.18	352	P	P	18 01 35.7	+0.7
HILR	Hailar Array B	46.28	23	P	P	18 01 37.9	+1.8
	comp=Z,3.7nm,0.4s,baz=218,slow=9.4,SNR=9.6						
HILR				PcP	PcP	18 03 08.3	0.0
	comp=Z,4.3nm,0.4s,baz=180,slow=5.9,SNR=7.3						
	comp=Z,3.7nm,0.4s						
BNX	BinXian	46.89	32	⇑P	P	18 01 41.6	+0.9
BNX				pmax	pmax		
	comp=Z,11nm,0.8s						
WB0	Warramunga Arr	48.26	126	P	P	18 01 49.7	-1.9
WRA	Warramunga Arr	48.30	126	P	P	18 01 50.6	-1.4
	comp=Z,1.1nm,0.4s,baz=304,slow=8.7,SNR=50						
WRA				PcP	PcP	18 03 13.7	-2.3
	comp=Z,1.6nm,0.8s,baz=299,slow=8.3,SNR=1.3						
WRA				ScP	ScP	18 06 49.9	-3.7
	comp=Z,1.9nm,0.8s,baz=308,slow=4.3,SNR=9.9						
	comp=Z,1.1nm,0.4s						
WR8	Warramunga Arr	48.44	126	P	P	18 01 50.5	-2.5
BVAR	Borovoye Array	48.68	341	P	P	18 01 54.7	+0.4
	comp=Z,5.7nm,0.4s,baz=141,slow=9.3,SNR=58						
BVAR				PcP	PcP	18 03 17.6	+0.8
	comp=Z,5.0nm,0.6s,baz=141,slow=4.4,SNR=8.3						
BVAR				S	S	18 08 41.1	-1.4
	comp=Z,0.6nm,0.6s,baz=145,slow=15,SNR=4.2						
	comp=Z,5.7nm,0.4s						
MJAR	Matsushiro Arr	48.70	48	P	P	18 01 56.2	+1.3
	comp=Z,1.7nm,0.7s,baz=216,slow=7.6,SNR=2.7						
MJAR				PcP	PcP	18 03 17.6	+0.3
	comp=Z,9.4nm,0.8s,baz=248,slow=4.4,SNR=15						
	comp=Z,1.7nm,0.7s						
MJAR	Matsushiro Arr	48.70	48		PcP	18 03 17.2	-0.1
MJAR	Matsushiro Arr	48.70	48	P	P	18 01 56.2	+1.3
MJAR						18 03 17.2	
MJAR				pmax	pmax		
	comp=Z,12nm,1.1s						
BORK	Borovoye	48.72	341	P	P	18 01 54.9	+0.2
BORK	Borovoye	48.72	341	deP	P	18 01 55.0	+0.3
BORK				pmax	pmax		
	comp=Z,21nm,1.0s						
BORK	Borovoye	48.72	341	P	P	18 01 55.1	+0.5
BORK				PcP	PcP	18 03 17.9	+1.0
RAYN	Ar Rayn	49.14	294	P	P	18 02 00.1	+1.7
RAYN	Ar Rayn	49.14	294	P	P	18 01 59.9	+1.4
RAYN	Ar Rayn	49.14	294	i P	P	18 01 59.9	+1.4
	SNR=51						
RAYN	Ar Rayn	49.14	294	P	P	18 01 59.9	+1.4
RAYN				pmax	pmax		
	comp=Z,52nm,0.6s						
AB31	Akbulak array	49.99	331		P	18 02 05.2	+0.9
ABKAR	Akbulak array	49.99	331	P	P	18 02 05.2	+0.9
ASAR	Alice Springs	49.99	130	P	P	18 02 03.1	-1.7
	comp=Z,1.5nm,0.7s,baz=302,slow=7.1,SNR=32						
ASAR				PcP	PcP	18 03 22.1	-0.1
	comp=Z,1.8nm,0.6s,baz=303,slow=4.3,SNR=8.8						
ASAR				ScP	ScP	18 06 56.9	-3.9
	comp=Z,1.6nm,0.7s,baz=310,slow=4.5,SNR=8.3						
	comp=Z,1.5nm,0.7s						
HEH	HeiHe	50.02	27	eP	P	18 02 05.4	+0.8
HEH				PcP	PcP	18 03 21.3	-0.4
HEH				pmax	pmax		
	comp=Z,17nm,0.6s						
ATD	Arta Tunnel	50.82	278	P	P	18 02 14.3	+3.1
	comp=Z,0.7nm,0.7s,baz=85,slow=5.6,SNR=8.6						
ATD	Arta Tunnel	50.82	278	P	P	18 02 14.5	+3.2
ATD	Arta Tunnel	50.82	278	P	P	18 02 14.2	+2.9
ZEA	Zeya	52.48	24	eP	P	18 02 23.9	+1.1
ZEA				e		18 03 31.3	
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AKT	Akhty	52.78	317	eP	P	18 02 24.1	-1.3
AKT				e		18 03 33.0	
AKT				eS	S	18 09 32.7	-6.9
AKT				pmax	pmax		
	comp=Z,32nm,1.2s						
OPO	Ambohidratompo	53.66	240	P	P	18 02 34.9	+2.7
	comp=Z,12nm,0.5s,baz=63,slow=5.4,SNR=32						
	comp=Z,12nm,0.5s						
ABPO	Ambohimpanom	53.83	239	P	P	18 02 35.4	+2.0
ABPO	Ambohimpanom	53.83	239	P	P	18 02 35.4	+2.0
ABPO				pmax	pmax		
	comp=Z,13nm,0.7s						
ABPO	Ambohimpanom	53.83	239	P	P	18 02 35.9	+2.5
ASAJ	Asahikawa	54.94	41	P	P	18 02 42.3	+1.4
	comp=Z,14nm,1.1s,baz=246,slow=12,SNR=2.2						
	comp=Z,14nm,1.1s						
ASAJ	Asahikawa	54.94	41	P	P	18 02 42.3	+1.4
ASAJ				pmax	pmax		
	comp=Z,216nm,1.8s						
JKA	Kamikawa-asahi	54.94	41	P	P	18 02 42.3	+1.4
SVE	Sverdlovsk	55.11	338	eP	P	18 02 43.0	+1.2
SVE				eS	S	18 10 09.7	-0.4
SVE				pmax	pmax		
	comp=Z,41nm,0.8s						
PMG	Port Moresby	55.42	107	P	P	18 02 44.7	0.0
PMG	Port Moresby	55.42	107	deP	P	18 02 44.8	0.0
PMG				pmax	pmax		
	comp=Z,5.0nm,1.3s						
VOI	Vohitsoka	55.48	236	P	P	18 02 46.6	+1.4
VOI				IAmb	IAmb	18 02 58.5	
	comp=Z,27nm,1.4s						
ARTI	Arti	55.65	337	P	P	18 02 45.5	-0.2
ARTI	Arti	55.65	337	d iP	P	18 02 45.9	+0.3
ARTI				*PP	pwP	18 03 31.7	+0.8
ARTI						18 03 40.6	
ARTI				PPP	PPP	18 06 10.3	
ARTI				S	S	18 10 18.5	+1.2
ARTI				SS	SS	18 14 01.5	-3.8
ARTI				pmax	pmax		
	comp=Z,43nm,1.0s						
ARTI	Arti	55.65	337	P	P	18 02 46.0	+0.4
GURO	Guroymak-BITLI	55.75	311	P	P	18 02 47.1	+0.2
MARD	Mardin	56.32	310	IAmb	IAmb	18 02 51.2	
	comp=Z,14nm,0.8s						
NCK	Nalchik	56.39	317	⇑eP	P	18 02 51.6	+0.4
NCK				pmax	pmax		
	comp=Z,11nm,0.9s						
FOMA	Nahampoana Res	56.79	233	P	P	18 02 55.6	+1.4
FOMA				IAmb	IAmb	18 02 56.7	
	comp=Z,24nm,0.6s						
NEUR	Neytrino	56.91	317	i P	P	18 02 55.7	+0.7
KBZ	Khabaz	56.95	317	P	P	18 02 55.1	0.0
	comp=Z,12nm,0.9s,baz=146,slow=5.8,SNR=17						
KBZ				PcP	PcP	18 03 48.8	+0.5
	comp=Z,5.8nm,0.7s,baz=86,slow=6.8,SNR=6.0						
	comp=Z,12nm,0.9s						
KBZ	Khabaz	56.95	317	deP	P	18 02 55.1	0.0
KBZ				pmax	pmax		
	comp=Z,15nm,0.9s						
SHA1	Shidzhatmaz	57.11	317	deP	P	18 02 56.6	0.0
KIBK	Kibwezi	57.16	262	P	P	18 02 59.9	+2.6
KIBK	Kibwezi	57.16	262	P	P	18 02 58.7	+1.5
KIV	Kislovodsk	57.18	318	P	P	18 02 57.4	+0.5
KIV	Kislovodsk	57.18	318	P	P	18 02 57.0	+0.1
KIV	Kislovodsk	57.18	318	⇑P	P	18 02 57.3	+0.5
KIV	Kislovodsk	57.18	318	i P	P	18 02 57.2	+0.3
	SNR=7.6						
KIV	Kislovodsk	57.18	318	eP	P	18 02 56.9	+0.1
KIV				pmax	pmax		
	comp=Z,39nm,1.1s						
BELG	Belogornoye	58.09	328	d iP	P	18 03 02.8	0.0
BELG				pmax	pmax		
	comp=Z,13nm,0.9s						
LABN	Labinsk	58.74	318	eP	P	18 03 07.3	-0.3
LABN				e*PP	PcP	18 03 54.5	-0.8
LABN				eS	S	18 11 01.3	+3.1
LABN				pmax	pmax		
	comp=Z,20nm,0.8s						
LODK	Lodwar	58.87	269	P	P	18 03 11.9	+2.8
LODK	Lodwar	58.87	269	P	P	18 03 10.5	+1.4
GHAJ	Ghor Haditha	59.16	301	P	P	18 03 10.8	+0.1
GHAJ				IAmb	IAmb	18 03 12.4	
	comp=Z,20nm,1.0s						
ERBR	Yeremizino-Bor	59.29	319	eP	P	18 03 10.3	-1.0
ERBR				e*PP	PcP	18 03 57.7	+0.2
ERBR				eS	S	18 11 03.5	-1.7
ERBR				pmax	pmax		
	comp=Z,40nm,0.8s						
YAK	Yakutsk	59.53	18	P	P	18 03 12.4	-0.2
YAK	Yakutsk	59.53	18	d iP	P	18 03 12.5	-0.1
YAK				e		18 03 57.3	
YAK				e*PP	PcP	18 03 59.9	+1.8
YAK				eS	S	18 11 06.4	-1.2
YAK				e		18 12 39.9	
YAK				eSS	SS	18 15 05.7	-0.3
YAK				pmax	pmax		
	comp=Z,72nm,0.9s						
YAK				pmax	pmax		
	comp=E,16nm,1.2s						
YAK				pmax	pmax		
	comp=N,19nm,1.1s						
YAK				pmax	pmax		
	comp=Z,106nm,3.8s						
YAK				pmax	pmax		
	comp=N,84nm,2.7s						
YAK				pmax	pmax		
	comp=E,90nm,3.0s						
YAK				smax	smax		
	comp=E,167nm,2.8s						
YAK				smax	smax		
	comp=N,75nm,2.3s						
YAK	Yakutsk	59.53	18	P	P	18 03 12.5	-0.1
YAK				PcP	PcP	18 03 58.4	+0.3
MMAI	Mount Meron Ar	59.59	303	P	P	18 03 13.9	+0.1
	comp=N,3.5nm,0.8s,baz=82,slow=15,SNR=2.7						
	comp=N,3.5nm,0.8s						
VRH	Novokhopyorsk	60.73	325	d iP	P	18 03 20.5	-0.5
VRH				pmax	pmax		
	comp=Z,104nm,0.7s						
KIRV	Kirov	60.74	335	deP	P	18 03 21.3	+0.4
ANN	Anapa	61.00	317	eP	P	18 03 22.9	0.0
ANN				pmax	pmax		
	comp=Z,28nm,1.1s						
NRIK	Noril'sk	61.14	357	P	P	18 03 23.9	+0.5
	comp=Z,9.6nm,0.5s,baz=159,slow=6.3,SNR=21						
	comp=Z,9.6nm,0.5s						
NRIK	Noril'sk	61.14	357	IAmb	IAmb	18 03 24.3	
	comp=Z,12nm,0.6s						
KIRS	Kirsehir-Merke	62.01	310	⇓P	P	18 03 29.6	-0.3
VORD	Divnogorie	62.03	324	eP	P	18 03 27.1	-2.6
VORD				pmax	pmax		
	comp=Z,50nm,0.9s						
VSR	Storozhevoye	62.20	324	eP	P	18 03 28.2	-2.6
VSR				pmax	pmax		
	comp=Z,30nm,0.9s						
BR131	Keskin Array S	62.35	311	P	P	18 03 31.5	-0.8
BR131	Keskin Array S	62.35	311	IAmb	IAmb	18 03 32.1	
	comp=Z,17nm,0.8s						
BR131	Keskin Array S	62.35	311	d iP	P	18 03 31.1	-1.1
BRTR	Keskin Array B	62.35	311	P	P	18 03 31.2	-1.0
	comp=Z,12nm,0.7s,baz=128,slow=7.5,SNR=84						
BRTR				PcP	PcP	18 04 10.2	0.0
	comp=Z,3.7nm,0.8s,baz=142,slow=5.0,SNR=6.1						
	comp=Z,12nm,0.7s						
BRTR	Keskin Array B	62.35	311	P	P	18 03 30.9	-1.4
VORR	Voronezh	62.36	325	eP	P	18 03 31.3	-0.6
VORR				pmax	pmax		
	comp=Z,74nm,0.6s						
ILGA	Ilgaz	62.59	312	IAmb	IAmb	18 03 34.7	
	comp=Z,18nm,0.9s						
LPSR	Galich'ya Gora	62.89	326	c iP	P	18 03 35.0	-0.3
LPSR				pmax	pmax		
	comp=Z,62nm,1.0s						
ANTO	Ankara	63.01	311	P	P	18 03 36.0	-0.6
ANTO				IAmb	IAmb	18 03 36.7	
	comp=Z,11nm,0.8s						
ANTO	Ankara	63.01	311	P	P	18 03 36.0	-0.6
ANTO				pmax	pmax		
	comp=Z,11nm,0.8s						
SIM	Simferopol'	63.30	316	eP	P	18 03 37.4	-0.8
SIM				pmax	pmax		
	comp=Z,21nm,0.8s						
MBAR	Mbarara	64.04	265	P	P	18 03 46.4	+2.5
MBAR	Mbarara	64.04	265	P	P	18 03 44.8	+0.9
MBAR	Mbarara	64.04	265	deP	P	18 03 46.1	+2.2
MBAR				pmax	pmax		
	comp=Z,11nm,1.1s						
ISP	Isparta	64.36	308	⇓eP	P	18 03 45.4	-0.1
ISP				pmax	pmax		
	comp=Z,14nm,0.9s						
MOS	Moscow	64.86	328	eP	P	18 03 47.4	-0.7
MOS				e		18 06 14.9	
MOS				pmax	pmax		
	comp=Z,47nm,0.7s						
OBN	Obninsk	65.16	328	P	P	18 03 49.9	-0.2
OBN	Obninsk	65.16	328	d iP	P	18 03 49.5	-0.6
OBN				pmax	pmax		
	comp=Z,43nm,1.2s						
MANT	Manisa	66.00	308	P	P	18 03 55.3	-0.8
KLMR	Klimovskoe	66.19	334	eP	P	18 03 54.4	-2.2
KLMR				pmax	pmax		
	comp=Z,52nm,1.4s						
PURM	Purcari	66.57	317	⇓P	P	18 03 59.2	-0.1
BAND	Balkesir-Ban	66.64	310	⇓P	P	18 03 59.6	-0.3
TIXI	Tiksi	66.78	11	P	P	18 03 59.8	-0.3
TIXI	Tiksi	66.78	11	deP	P	18 03 59.8	-0.3
TIXI				pmax	pmax		
	comp=Z,46nm,1.0s						
TIXI	Tiksi	66.78	11	P	P	18 03 59.9	-0.2
TLCR		67.00	316	⇓P	P	18 04 01.7	-0.4
TLCR		67.00	316	P	P	18 04 01.7	-0.4
TIRR	Tirgusor	67.14	315	IAmb	IAmb	18 04 03.6	
	comp=Z,25nm,0.8s						
TIRR	Tirgusor	67.14	315	⇑P	P	18 04 02.4	-0.5
TIRR	Tirgusor	67.14	315	P	P	18 04 02.4	-0.5
MILM	Milestii Mici	67.37	317	⇓P	P	18 04 02.5	-1.9
MILM	Milestii Mici	67.37	317	P	P	18 04 02.4	-1.9
CFR	Carcaliu	67.47	316	⇓P	P	18 04 05.2	+0.1
CFR	Carcaliu	67.47	316	P	P	18 04 05.1	+0.1
PETK	Petropavlovsk-	67.53	36	P	P	18 04 04.5	-0.8
	comp=Z,1.7nm,0.8s,baz=256,slow=3.9,SNR=1.8						
	comp=Z,1.7nm,0.8s						
VLDR	Vladesti	67.64	316	⇓P	P	18 04 06.0	-0.1
VARL	Varlezi	67.81	316	⇑P	P	18 04 07.1	0.0

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SORM  Soroca           67.94 319 ⇓P    P      18 04 07.5 -0.3
SORM  Soroca           67.94 319  P    P      18 04 07.5 -0.3
AKASG Malin Array Be   67.98 322  P    P      18 04 07.2 -0.9
      comp=Z,9.3nm,0.5s,baz=89,slow=6.0,SNR=49
      comp=Z,9.3nm,0.5s
AKASG Malin Array Be   67.98 322  P    P      18 04 06.8 -1.3
AKASG Malin Array Be   67.98 322 i P   P      18 04 07.4 -0.7
AKASG                             pmax pmax
      comp=Z,10.0nm,0.4s
AKBB  Malin Array Si   67.98 322  IAmb IAmb   18 04 08.2
      comp=Z,31nm,1.0s
AKBB  Malin Array Si   67.98 322deP    P      18 04 07.2 -0.9
KIEV  Kiev             67.99 321  P    P      18 04 06.9 -1.2
KIEV                              IAmb IAmb   18 04 08.2
      comp=Z,28nm,1.0s
KIEV  Kiev             67.99 321 i P   P      18 04 07.3 -0.8
      SNR=14
KIEV  Kiev             67.99 321  P    P      18 04 06.9 -1.2
KIEV                              pmax pmax
      comp=Z,28nm,1.0s
CICN  Ciocanesti       68.07 314 ⇑P    P      18 04 09.3 +0.6
GHRR                   68.14 316 ⇑P    P      18 04 10.0 +0.8
PANC  Panciu           68.29 316 ⇓P    P      18 04 10.8 +0.7
ODBI  Odobesti         68.33 316 ⇓P    P      18 04 11.2 +0.8
RAZG  Razgrad          68.33 314 ⇑P    P      18 04 10.6 +0.2
SEY   Seymchan         68.45  25⇑eP    P      18 04 11.1 +0.3
SEY                               pmax pmax
      comp=Z,20nm,2.5s
BISRR Bisoca           68.53 316 ⇑P    P      18 04 12.4 +0.7
VRI   Vrincioaia       68.57 316 ⇑P    P      18 04 12.3 +0.4
VRI   Vrincioaia       68.57 316  P    P      18 04 12.3 +0.4
PLOR  Plostina         68.62 316 ⇑P    P      18 04 13.0 +0.7
PLOR  Plostina         68.62 316  P    P      18 04 13.0 +0.7
ELND  Elena            68.69 313 ⇑P    P      18 04 12.4 -0.2
TESR  Tescani          68.75 317 ⇓P    P      18 04 13.2 +0.2
NEHR  Nehoiu           68.79 316 ⇑P    P      18 04 14.1 +0.8
ONER  Baraj Valea Uz   68.89 316 ⇑P    P      18 04 14.0 +0.1
COVR  Voineasa-Covas   68.93 316 ⇓P    P      18 04 14.4 +0.3
MLR   Muntele Rosu     69.05 316       P      18 04 15.3 +0.3
MLR                               IAmb IAmb   18 04 16.6
      comp=Z,40nm,0.9s
MLR   Muntele Rosu     69.05 316 ⇑P    P      18 04 15.2 +0.2
MLR   Muntele Rosu     69.05 316  P    P      18 04 15.3 +0.3
MLR                               pmax pmax
      comp=Z,40nm,0.9s
TURR  Turia            69.10 316 ⇓P    P      18 04 15.4 +0.2
PRAR  RASCA            69.19 318 ⇑P    P      18 04 15.9 +0.2
DOPR  Dopca            69.51 316 ⇓P    P      18 04 17.8  0.0
HUMR  Humele           69.57 314 ⇑P    P      18 04 18.3 +0.2
MTUR  Matau            69.62 315 ⇑P    P      18 04 18.4 -0.1
MTUR  Matau            69.62 315  P    P      18 04 18.3 -0.1
LSZ   Lusaka           69.64 250  P    P      18 04 20.8 +1.6
LSZ   Lusaka           69.64 250  P    P      18 04 20.0 +0.9
LSZ                               IAmb IAmb   18 04 21.0
      comp=Z,13nm,0.6s
LSZ   Lusaka           69.64 250  P    P      18 04 20.0 +0.9
LSZ                               pmax pmax
      comp=Z,13nm,0.6s
LSZ   Lusaka           69.64 250  P    P      18 04 20.5 +1.4
LSZ                               PcP  PcP    18 04 42.0 +1.1
VOIR                   69.66 315 ⇑P    P      18 04 18.6 -0.2
VOIR                   69.66 315  P    P      18 04 18.5 -0.2
PLVB  Pleven           69.66 313 ⇓P    P      18 04 19.0 +0.4
MNK   Minsk            69.73 325 i P   P      18 04 19.0 +0.2
MNK                              i            18 04 39.9
MNK                              i *PP pwP    18 05 05.1 -0.8
MNK                              i            18 06 55.9
MNK                              i PPP PPP    18 08 39.2
MNK                              i S   S      18 13 13.7 +0.9
MNK                              i PS  PnS    18 13 48.0  -19
MNK                              i SS  SS     18 17 37.3 -7.4
MNK                               pmax pmax
      comp=N,42nm,0.9s
MNK                               pmax pmax
      comp=Z,75nm,0.8s
MNK                               pmax pmax
      comp=E,7.0nm,0.8s
BURAR Bucovina Array   69.91 318  P    P      18 04 20.4 +0.2
BURAR                             IAmb IAmb   18 04 21.5
      comp=Z,22nm,0.7s
BURAR Bucovina Array   69.91 318 ⇑P    P      18 04 21.2 +1.0
BURAR Bucovina Array   69.91 318  P    P      18 04 21.2 +1.0
BUR08 Bucovina Ar. S   69.92 318  IAmb IAmb   18 04 21.8
      comp=Z,16nm,0.8s
ARR   Arges            69.94 315 ⇓P    P      18 04 20.3 -0.1
POGA  Pongola          70.21 237  P    P      18 04 22.8 +0.6
POGA                              IAmb IAmb   18 04 24.5
      comp=Z,19nm,0.7s
MDB   Medias           70.23 316 ⇑P    P      18 04 22.4 +0.3
MDB   Medias           70.23 316  P    P      18 04 22.4 +0.3
LIT   Litokhoron       70.87 309  IAmb IAmb   18 04 25.9
      comp=Z,25nm,0.8s
MARR  Marisel-Cluj     71.17 316 ⇑P    P      18 04 28.1 +0.3
GZR   Gura Zlata       71.24 315 ⇓P    P      18 04 28.1 -0.2
GZR   Gura Zlata       71.24 315  P    P      18 04 28.0 -0.2
VSU   Vasula           71.36 329deP    P      18 04 27.6 -1.0
VSU                               pmax pmax
      comp=Z,31nm,1.1s
HERR  Herculane        71.43 315 ⇓P    P      18 04 29.6 +0.3
SURR  Surduc           71.74 315 ⇑P    P      18 04 31.7 +0.5
BOVS  Bovan            71.80 313 ⇑P    P      18 04 31.3 -0.2
KWP   Kalwaria Pacla   71.88 319 eP    P      18 04 32.3 +0.4
MDVR  Moldovita        71.92 314 ⇑P    P      18 04 32.0 -0.2
BROLN Tlhalogang       72.00 245 i P   P      18 04 34.8 +1.5
BZS   Buzias           72.08 315 ⇓P    P      18 04 33.3 +0.2
BZS   Buzias           72.08 315  P    P      18 04 33.3 +0.2
SUW   Suwalki          72.31 324 eP    P      18 04 34.2 -0.2
FINES FINESS Array B   72.46 332  P    P      18 04 35.0 -0.1
      comp=Z,12nm,0.5s,baz=99,slow=5.9,SNR=106
      comp=Z,12nm,0.5s
FINES FINESS Array B   72.46 332 i P   P      18 04 35.2 +0.1
FINES                             pmax pmax
      comp=Z,12nm,0.5s
STHS  Stebnicka Huta   72.79 319 eP    P      18 04 37.8 +0.5
STHS                              pmax pmax
      comp=Z,8.0nm,0.6s
STHS  Stebnicka Huta   72.79 319 eP    P      18 04 37.8 +0.5
KSANE Kasane           73.09 249  P    P      18 04 41.0 +1.3
KSANE                             IAmb IAmb   18 04 42.3
      comp=Z,22nm,0.7s
KSANE Kasane           73.09 249 i P   P      18 04 41.7 +2.0
KECS  Kecovo           73.17 318 eP    P      18 04 40.4 +0.8
KECS                              pmax pmax
      comp=Z,17nm,0.6s
KECS  Kecovo           73.17 318 eP    P      18 04 40.4 +0.8
BEL   Belsk            73.40 322 eP    P      18 04 41.2 +0.4
NIE   Niedzica         73.40 319 eP    P      18 04 41.8 +0.9
PSZ   Piszkesteto      73.50 317 ⇑P    P      18 04 41.9 +0.3
PSZ   Piszkesteto      73.50 317  P    P      18 04 41.9 +0.3
OJC   Ojcow            73.82 320 eP    P      18 04 44.0 +0.7
VADS  Vadso            73.89 341 eP    P      18 04 44.2 +0.9
LANS  Liptovska Anna   73.91 319 eP    P      18 04 45.1 +1.2
LANS                              pmax pmax
      comp=Z,6.0nm,1.1s
LANS  Liptovska Anna   73.91 319 eP    P      18 04 45.1 +1.2
KHWEE KHWEE            73.92 244 i P   P      18 04 45.9 +1.3
LPHEP Lephephe         73.95 243  IAmb IAmb   18 04 47.1
      comp=Z,23nm,0.8s
LPHEP Lephephe         73.95 243 i P   P      18 04 46.2 +1.5
MORH  Mrgy, Hungar     74.20 316 ⇓P    P      18 04 45.1 -0.5
SRO   Srobarova        74.55 317 eP    P      18 04 49.0 +1.4
SRO                               pmax pmax
      comp=Z,32nm,0.7s
SRO   Srobarova        74.55 317 eP    P      18 04 49.0 +1.4
LBTB  Lobatse          74.66 241  IAmb IAmb   18 04 51.0
      comp=Z,23nm,0.8s
LBTB  Lobatse          74.66 241  P    P      18 04 50.3 +1.6
OKC   Ostrava-Krasne   74.84 319 eP    P      18 04 50.4 +1.2
OKC   Ostrava-Krasne   74.84 319 eP    P      18 04 50.4 +1.2
ARA0  ARCESS Array S   74.96 340 eP    P      18 04 50.1 +0.6
ARCES ARCESS Array B   74.96 340  P    P      18 04 49.9 +0.4
      comp=Z,13nm,0.6s,baz=94,slow=6.2,SNR=66
      comp=Z,13nm,0.6s
ARCES ARCESS Array B   74.96 340  P    P      18 04 49.9 +0.4
ARCES                             pmax pmax
      comp=Z,143nm,1.9s
JAVC  Velka Javorina   75.06 318 eP    P      18 04 52.0 +1.4
BLY   Banja Luka       75.13 314 ⇑P    P      18 04 51.3 +0.4
SMOL  Smolenice        75.20 318 eP    P      18 04 52.2 +0.9
SMOL                              pmax pmax
      comp=Z,7.0nm,1.3s
MORC  Moravsky Berou   75.22 319  IAmb IAmb   18 04 53.4
      comp=Z,53nm,1.2s
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MORC  Moravsky Berou   75.22 319 ⇓P    P      18 04 52.5 +1.0
MORC  Moravsky Berou   75.22 319 eP    P      18 04 52.4 +0.9
MORC  Moravsky Berou   75.22 319  P    P      18 04 52.5 +1.0
MODS  Modra-Piesok     75.29 318 eP    P      18 04 52.7 +0.9
MODS                              pmax pmax
      comp=Z,36nm,1.0s
MODS  Modra-Piesok     75.29 318 eP    P      18 04 52.7 +0.9
BEHE  Becsehely        75.51 316  P    P      18 04 54.4 +1.3
MAKGR Makgori          75.58 241 i P   P      18 04 55.1 +1.2
KTK1  Kautokeino       75.59 339 eP    P      18 04 53.8 +0.6
GKP   Gorka Klasztor   75.72 323 eP    P      18 04 54.2 +0.1
KRLC  Kraliky          75.74 320 eP    P      18 04 55.7 +1.3
KRLC  Kraliky          75.74 320 eP    P      18 04 55.7 +1.3
VRAC  Vranov           75.80 319 eP    P      18 04 55.5 +0.8
RONA  Rosalia, Austr   75.90 317 i P   P      18 04 55.8 +0.4
      comp=Z,16nm,1.2s
KRUC  Moravsky         75.92 318 eP    P      18 04 55.9 +0.5
SKOMA Sekoma           75.97 242 i P   P      18 04 57.6 +1.4
BOSA  Boshof           76.01 238  P    P      18 04 57.5 +1.1
      comp=Z,18nm,0.6s,baz=86,slow=3.8,SNR=64
      comp=Z,18nm,0.6s
BOSA  Boshof           76.01 238  P    P      18 04 57.3 +0.9
BOSA                              IAmb IAmb   18 04 58.2
      comp=Z,19nm,0.7s
BOSA  Boshof           76.01 238  P    P      18 04 57.3 +0.9
BOSA                              pmax pmax
      comp=Z,19nm,0.7s
BOSA  Boshof           76.01 238  P    P      18 04 57.7 +1.2
BOSA                              PcP  PcP    18 05 08.7 +0.8
DPC   Dobruska-Polom   76.05 320 eP    P      18 04 57.7 +1.5
DPC   Dobruska-Polom   76.05 320 eP    P      18 04 57.7 +1.5
KSP   Ksiaz            76.10 320 eP    P      18 04 57.3 +0.9
OSTC  Ostas            76.13 320 eP    P      18 04 57.8 +1.2
OSTC  Ostas            76.13 320 eP    P      18 04 57.8 +1.2
CONA  Conrad Observa   76.21 317 eP    P      18 04 57.3 +0.2
      comp=Z,15nm,1.1s
CHVC  Chvalec          76.24 320 eP    P      18 04 58.5 +1.3
CHVC  Chvalec          76.24 320 eP    P      18 04 58.5 +1.3
GMARE Gumare           76.24 248  P    P      18 04 59.4 +1.5
GMARE                             IAmb IAmb   18 05 00.6
      comp=Z,28nm,0.7s
UPC   Upice            76.26 320 eP    P      18 04 58.6 +1.3
UPC   Upice            76.26 320 eP    P      18 04 58.6 +1.3
ARSA  Arzberg          76.41 317  IAmb IAmb   18 05 00.0
      comp=Z,25nm,1.2s
ARSA  Arzberg          76.41 317 i P   P      18 04 58.9 +0.7
      comp=Z,15nm,0.9s
TREC  Trest            76.53 319 eP    P      18 04 59.8 +1.0
TREC  Trest            76.53 319 eP    P      18 04 59.8 +1.0
JETT  Jettan, Norway   76.70 340 eP    P      18 04 59.6 +0.2
SOKA  Soboth           76.72 316 eP    P      18 05 00.7 +0.7
      comp=Z,30nm,1.0s,SNR=7.0
OBKA  Obir             77.05 316 eP    P      18 05 02.7 +0.8
      comp=Z,17nm,0.7s
KGCAE Kacgae           77.05 244  IAmb IAmb   18 05 04.8
      comp=Z,56nm,1.1s
KGCAE Kacgae           77.05 244 i P   P      18 05 04.0 +1.7
PHPEN Phepeng          77.17 242  IAmb IAmb   18 05 05.0
      comp=Z,22nm,0.8s
PRU   Pruhonice        77.17 319 eP    P      18 05 03.5 +1.1
PRU   Pruhonice        77.17 319 eP    P      18 05 03.5 +1.1
PVCC  Panska Ves       77.18 320 eP    P      18 05 03.5 +1.1
PVCC  Panska Ves       77.18 320 eP    P      18 05 03.5 +1.1
TRO   Tromso           77.22 340 eP    P      18 05 02.5 +0.3
MOA   Molln            77.28 317 i P   P      18 05 03.4 +0.3
      comp=Z,8.4nm,0.6s
CKRC  Cesky Krumlov    77.28 318 eP    P      18 05 04.2 +1.1
CKRC  Cesky Krumlov    77.28 318 eP    P      18 05 04.2 +1.1
ZVC   Zvikov           77.38 319 eP    P      18 05 04.5 +0.9
RICC  Richard          77.48 320 eP    P      18 05 05.4 +1.3
GRTLG Ghanzi           77.57 246 i P   P      18 05 07.0 +1.7
BRG   Berggiesshubel   77.59 320 eP    P      18 05 05.5 +0.8
      comp=Z,12nm,0.7s,baz=88,slow=5.5
MYKA  Terra Mystica    77.67 316 i P   P      18 05 05.7 +0.4
      comp=Z,7.9nm,0.6s
GEC2  GERESS Array S   77.68 318  IAmb IAmb   18 05 07.0
      comp=Z,28nm,0.9s
GEC2  GERESS Array S   77.68 318 eP    P      18 05 06.0 +0.6
      comp=Z,29nm,0.9s,baz=88,slow=5.5
GERES GERESS Array B   77.68 318  P    P      18 05 06.1 +0.7
      comp=Z,17nm,0.7s,baz=73,slow=4.9,SNR=89
      comp=Z,17nm,0.7s
BIOA  Bad Ischl, Aus   77.70 317 eP    P      18 05 05.5 +0.1
      comp=Z,13nm,0.5s,SNR=5.2
RUE   Ruedersdorf      77.75 322 eP    P      18 05 06.2 +0.7
      comp=Z,98nm,0.6s,baz=88,slow=5.5
KHC   Kasperske Hory   77.77 318deP    P      18 05 06.3 +0.5
KHC                               pmax pmax
      comp=Z,18nm,1.3s
KHC   Kasperske Hory   77.77 318 eP    P      18 05 06.6 +0.8
KBA   Koelnbreinsper   77.89 316 eP    P      18 05 06.5 -0.1
      comp=Z,10nm,0.6s
HSKC  Hora Svate Kat   77.91 320 eP    P      18 05 07.6 +1.1
CLL   Collm            78.20 321 i P   P      18 05 08.4 +0.4
CLL                               pmax pmax
      comp=Z,11nm,0.8s
CLL   Collm            78.20 321 eP    P      18 05 08.3 +0.4
      comp=Z,22nm,1.3s,baz=88,slow=5.5
CLL   Collm            78.20 321 i P   P      18 05 08.4 +0.4
      comp=Z,11nm,0.8s
FAUS  Fauske           78.20 337 eP    P      18 05 08.1 +0.4
HFS   Hagfors          78.22 330  P    P      18 05 08.2 +0.2
      comp=Z,16nm,0.3s,baz=103,slow=4.7,SNR=168
      comp=Z,16nm,0.3s
WET   Wettzell         78.23 318 eP    P      18 05 08.9 +0.6
      comp=Z,14nm,0.7s,baz=88,slow=5.5
STEI  Steigen          78.29 338 eP    P      18 05 08.1  0.0
LESA  Schwarzleotal    78.34 317 i P   P      18 05 08.9 -0.2
      comp=Z,26nm,0.4s,SNR=11
MOR8  Moi Rana         78.40 336 eP    P      18 05 08.7 -0.2
ABTA  Abfaltersbach    78.45 316 i P   P      18 05 09.4 -0.3
      comp=Z,8.1nm,0.6s
TANN  Tannenbergstha   78.52 320 eP    P      18 05 10.4 +0.5
      comp=Z,15nm,1.3s,baz=88,slow=5.5
RAUS  Rausandaksla     78.59 336 eP    P      18 05 10.3 +0.5
ROTZ  Rotzenmuhle      78.68 319 eP    P      18 05 11.7 +1.0
      comp=Z,4.4nm,0.9s,baz=88,slow=5.5
PLN   Plauen           78.72 320 eP    P      18 05 11.4 +0.5
      comp=Z,2.9nm,0.8s,baz=88,slow=5.5
MANZ  Manzenberg       78.74 319 eP    P      18 05 12.1 +1.0
      comp=Z,9.1nm,1.4s,baz=88,slow=5.5
NEUB  Neuenburg        78.97 321 eP    P      18 05 12.6 +0.4
      comp=Z,23nm,0.8s,baz=88,slow=5.5
MAW   Mawson           78.99 192  P    P      18 05 12.9 +1.1
      comp=Z,4.2nm,0.7s,baz=6.5,slow=5.7,SNR=12
      comp=Z,4.2nm,0.7s
WTTA  Wattenberg       79.05 317 i P   P      18 05 12.9 -0.2
      comp=Z,22nm,0.4s,SNR=8.8
CTI   Castel Tesino    79.05 315  IAmb IAmb   18 05 14.5
      comp=Z,32nm,0.8s
MOX   Moxa             79.06 320 eP    P      18 05 13.3 +0.5
      comp=Z,9.2nm,0.7s,baz=88,slow=5.5
WATA  Walderalm        79.09 317 i P   P      18 05 12.7 -0.5
      comp=Z,14nm,0.5s,SNR=5.5
NC405 NORSAR Array S   79.25 331  IAmb IAmb   18 05 14.4
      comp=Z,20nm,0.8s
GORT1 Trebel           79.27 322 eP    P      18 05 14.5 +0.8
      comp=Z,32nm,1.0s,baz=88,slow=5.5
FUR   Furstenfeldbru   79.29 317 eP    P      18 05 14.2 +0.1
      comp=Z,22nm,0.8s,baz=88,slow=5.5
NSS   Namsos           79.31 334 eP    P      18 05 13.7  0.0
GRA1  Grafenberg Arr   79.32 319  IAmb IAmb   18 05 16.2
      comp=Z,24nm,0.9s
GRF   Grafenberg Arr   79.32 319 eP    P      18 05 15.2 +1.0
      comp=Z,24nm,0.9s,baz=88,slow=5.5
GRF                              epP   pP     18 05 56.0 -1.6
NC602 NORSAR Array S   79.32 330  IAmb IAmb   18 05 14.6
      comp=Z,17nm,0.8s
NC602 NORSAR Array S   79.32 330 eP    P      18 05 13.3 -0.7
SQTA  Sankt Quirin     79.34 316 i P   P      18 05 14.4 -0.1
      comp=Z,25nm,0.5s,SNR=12
MOTA  Moosalm          79.41 317 i P   P      18 05 14.6 -0.4
      comp=Z,26nm,0.9s,SNR=6.7
SPA0  Spitsbergen Ar   79.48 348 eP    P      18 05 15.1 +0.4
SPITS Spitsbergen Ar   79.48 348  P    P      18 05 14.9 +0.4
      comp=Z,14nm,0.6s,baz=104,slow=10,SNR=60
      comp=Z,14nm,0.6s
SPITS Spitsbergen Ar   79.48 348  P    P      18 05 15.0 +0.4
SPITS                             pmax pmax
      comp=Z,66nm,1.4s
NB2   NORSAR Subarra   79.49 331  P    P      18 05 14.6 -0.3
      comp=Z,6.0nm,0.5s,baz=95,slow=5.1
NB2   NORSAR Subarra   79.49 331  P    P      18 05 14.6 -0.3
      baz=95,slow=5.1
NOA   NORSAR Array B   79.49 331  P    P      18 05 14.8 -0.2
      comp=Z,6.2nm,0.7s,baz=92,slow=5.7,SNR=26
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      comp=Z,6.2nm,0.7s
POSS  Possen           79.54 321 eP    P      18 05 15.7 +0.4
      baz=88,slow=5.5
ZCCA  Zocca            79.56 314  IAmb IAmb   18 05 18.5
      comp=Z,30nm,0.7s
RETA  Reutte           79.64 317 i P   P      18 05 16.2 +0.1
      comp=Z,27nm,0.5s,SNR=8.5
ASSE  Asse, Remlinge   79.66 321 eP    P      18 05 16.3 +0.4
      comp=Z,23nm,1.0s,baz=88,slow=5.5
FETA  Feichten         79.67 316 i P   P      18 05 16.5 +0.1
      comp=Z,13nm,0.6s
OSL   Oslo             79.70 329 eP    P      18 05 16.8 +0.8
NC204 NORSAR Array S   79.72 331  IAmb IAmb   18 05 17.2
      comp=Z,22nm,1.1s
CLZ   Clausthal        79.84 321 eP    P      18 05 17.6 +0.5
      comp=Z,27nm,0.6s,baz=88,slow=5.5
BSEG  Bad Segeberg     79.87 323 eP    P      18 05 17.9 +0.9
      comp=Z,22nm,0.9s,baz=88,slow=5.5
UBR   Ueberruh         80.08 317 eP    P      18 05 18.3 -0.1
      comp=Z,15nm,0.6s,baz=88,slow=5.5
UBBA  Unterbreizbach   80.09 320 eP    P      18 05 18.6 +0.4
      comp=Z,4.8nm,0.8s,baz=88,slow=5.5
GTTG  Gottingen        80.10 321 eP    P      18 05 19.0 +0.6
      comp=Z,15nm,0.8s,baz=88,slow=5.5
DAVA  Damuels          80.25 317 i P   P      18 05 19.7 +0.2
      comp=Z,15nm,0.7s,SNR=5.9
TSUM  Tsumeb           80.41 249  P    P      18 05 21.3 +0.6
RETH  Rethem/Aller,    80.45 322 eP    P      18 05 20.8 +0.6
      comp=Z,22nm,1.1s,baz=88,slow=5.5
DOMB  Dombas           80.54 332 eP    P      18 05 19.8 -0.7
TUE   Stuetta          80.64 316  IAmb IAmb   18 05 25.8
      comp=Z,15nm,0.7s
STU   Stuttgart        80.66 318 eP    P      18 05 21.5 +0.1
      baz=88,slow=5.5
SUR   Sutherland       80.77 235  P    P      18 05 23.9 +1.4
KASTN Kahler Asten     81.08 321 eP    P      18 05 24.1 +0.5
      comp=Z,12nm,0.9s,baz=88,slow=5.5
TNS   Taunus Mts       81.10 320 eP    P      18 05 24.3 +0.5
      comp=Z,12nm,0.8s,baz=88,slow=5.5
KEST  Kesra            81.21 305  P    P      18 05 25.3 +0.6
      comp=Z,12nm,0.9s,baz=228,slow=0.8,SNR=8.6
      comp=Z,12nm,0.9s
KEST  Kesra            81.21 305  IAmb IAmb   18 05 26.6
      comp=Z,26nm,1.3s
MOL   Molde            81.25 332 eP    P      18 05 25.2 +1.1
BFO   Black Forest     81.25 318  P    P      18 05 24.7 +0.1
BFO                               IAmb IAmb   18 05 25.4
      comp=Z,13nm,0.7s
BFO   Black Forest     81.25 318  P    P      18 05 24.7 +0.1
BFO                               pmax pmax
      comp=Z,13nm,0.7s
BFO   Black Forest     81.25 318 eP    P      18 05 24.5  0.0
      comp=Z,12nm,0.8s,baz=88,slow=5.5
BFO   Black Forest     81.25 318  P    P      18 05 24.6  0.0
IBBN  Ibbenburen       81.44 322 eP    P      18 05 26.1 +0.7
      comp=Z,45nm,0.7s,baz=88,slow=5.5
WIN   Windhoek         81.57 246  IAmb IAmb   18 05 29.9
      comp=Z,25nm,0.7s
BUG   Bochum--Univer   81.79 321 eP    P      18 05 27.8 +0.6
      comp=Z,24nm,0.7s,baz=88,slow=5.5
BLS5  Blasjo           81.87 329 eP    P      18 05 28.7 +1.2
ECH   Echery           82.04 318  IAmb IAmb   18 05 29.9
      comp=Z,33nm,1.7s
SENIN Lac Senin/Sane   82.06 316  IAmb IAmb   18 05 31.4
      comp=Z,17nm,0.8s
BTNL  Ternell          82.56 320 dP    P      18 05 31.9 +0.5
      comp=Z,11nm,0.9s
BNI   Bardonecchia     82.58 314  P    P      18 05 33.1 +1.3
BNI   Bardonecchia     82.58 314  P    P      18 05 33.1 +1.3
BNI                               pmax pmax
      comp=Z,12nm,0.8s
WLF   Walferdange      82.61 319 eP    P      18 05 32.5 +0.9
      comp=Z,15nm,1.1s,baz=88,slow=5.5
WLF   Walferdange      82.61 319 dP    P      18 05 33.0 +1.4
      comp=Z,8.5nm,1.0s
WLF                              dPP   PP     18 08 42.3 -1.3
MEM   Membach          82.63 320 dP    P      18 05 31.9 +0.2
      comp=Z,11nm,0.9s
BHOU  Houvegnez        82.65 320 dP    P      18 05 32.7 +0.9
CMAH  Djebel Manchou   82.69 306  P    P      18 05 36.3 +3.9
BSTI  Sart Tilman      82.92 320 dP    P      18 05 34.0 +0.8
CBBAR Babar            83.01 304  P    P      18 05 35.9 +1.7
RCHB  Rochefort        83.17 320 dP    P      18 05 37.3 +2.9
BGES  Gesves           83.24 320 dP    P      18 05 35.2 +0.4
      comp=Z,9.7nm,0.9s
CSGS  Sigus            83.31 305  P    P      18 05 37.3 +1.7
BMRD  Maredsous        83.45 320 dP    P      18 05 36.2 +0.3
      comp=Z,5.6nm,0.9s
CASM  Ain Smara        83.47 306  P    P      18 05 38.1 +1.7
CTGD  Timgad           83.51 305  P    P      18 05 38.0 +1.4
CTEI  Djebel Teioual   83.56 305  P    P      18 05 38.0 +1.1
DOU   Dourbes          83.58 320 dP    P      18 05 37.2 +0.7
      comp=Z,6.4nm,1.0s
COAT  Oued Athmania    83.64 306  P    P      18 05 38.9 +1.6
EDA   Edea             83.77 273  IAmb IAmb   18 05 40.4
      comp=Z,28nm,1.2s
CJSR  Ain Djasser      83.95 305  P    P      18 05 39.9 +1.0
SSB   Saint Sauveur    84.07 315  IAmb IAmb   18 06 08.6
      comp=Z,60nm,1.8s
CTCHA Tamokra          84.93 306  P    P      18 05 44.9 +1.2
CLF   Chambon-Foret    85.33 318  IAmb IAmb   18 05 46.8
      comp=Z,21nm,0.7s
CLF   Chambon-Foret    85.33 318  P    P      18 05 45.9 +0.5
AKET  Djebel Ketaf     85.59 306  P    P      18 05 48.9 +1.7
TNA   Tin City         85.69  24  P    P      18 05 47.4 +0.6
      baz=280
SYO   Syowa Base       85.87 197⇓eP    P      18 05 49.0 +1.5
SYO   Syowa Base       85.87 197⇑ePcP  PcP    18 05 53.0 +3.1
ADJB  Djebel Djouab    85.94 306  P    P      18 05 52.9 +4.1
SPIA  Saint Paul Isl   86.00  33  P    P      18 05 48.8 +0.3
      baz=279
ADCK  Dar Chioukh      86.09 305  P    P      18 05 51.5 +1.9
C16K  Lisburne Hills   86.14  22  P    P      18 05 49.5 +0.5
      baz=283
F14K  Arctic Creek     86.36  24  P    P      18 05 50.3 +0.3
      baz=282
P08K  Saint George I   86.47  33  P    P      18 05 50.8 +0.1
      baz=280
C17K  DeLong Mountai   86.88  21  P    P      18 05 53.1 +0.5
      baz=285
ANM   Nome             86.95  25  P    P      18 05 53.6 +0.7
      baz=283
F15K  North Star Dit   86.99  24  P    P      18 05 53.9 +0.8
      baz=283
RDOG  Red Dog Mine     87.08  22  P    P      18 05 54.1 +0.6
      baz=285
D17K  Noatak River     87.11  22  P    P      18 05 54.6 +1.0
      baz=285
B18K  Kokolik River    87.12  20  P    P      18 05 55.0 +1.3
      baz=286
A19K  Wainwright       87.13  19  P    P      18 05 54.6 +0.9
      baz=286
G15K  Niukluk          87.41  25  P    P      18 05 55.7 +0.6
      baz=284
M11K  Mekoryuk         87.48  29  P    P      18 05 56.1 +0.6
      baz=282
NIKH  Nikolski High    87.50  37  P    P      18 05 56.1 +0.3
      baz=280
EKA   Eskdalemuir Ar   87.52 325  P    P      18 05 56.6 +0.7
      comp=Z,9.5nm,0.6s,baz=95,slow=5.3,SNR=33
      comp=Z,9.5nm,0.6s
C18K  Utukok River     87.53  21  P    P      18 05 56.4 +0.7
      baz=286
E17K  Hotham Inlet     87.74  22  P    P      18 05 57.5 +0.8
      baz=286
C19K  Lookout Ridge    87.95  20  P    P      18 05 58.8 +1.0
      baz=288
G16K  Koyuk River      87.99  24  IAmb IAmb   18 05 59.7
      comp=Z,10nm,0.8s
G16K  Koyuk River      87.99  24  P    P      18 05 58.7 +0.9
      baz=285
E18K  Tukpahlearik C   88.10  22  P    P      18 05 59.6 +1.2
      baz=287
F17K  Baldwin Pennin   88.14  23  P    P      18 05 59.8 +1.3
      baz=286
J14K  Nanvaranak Lak   88.17  27  P    P      18 05 59.7 +1.0
      baz=284
A21K  Barrow           88.18  18  P    P      18 05 59.5 +0.9
      baz=291
H16K  Elim             88.24  25  P    P      18 05 59.6 +0.5
      baz=286
B20K  Meade River      88.47  19  P    P      18 06 00.9 +0.9
      baz=290
G17K  Kiwalik Mounta   88.64  24  P    P      18 06 01.8 +0.8
      baz=287
D19K  Kuna River       88.66  21  P    P      18 06 02.1 +1.0
      baz=289
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F18K  Selawik            88.70  23  P       P        18 06 02.1 +0.9
      baz=288
ALE   Alert              88.71 357  P       P        18 06 00.8 -0.2
A22K  Sinclair Lake      88.79  18  P       P        18 06 02.5 +1.0
      baz=292
L14K  Kuka Creek         88.93  28  P       P        18 06 03.2 +0.9
      baz=285
I17K  Unalakleet         89.10  25  P       P        18 06 03.9 +0.8
      baz=287
D20K  Etivluk River      89.10  20  IAmb    IAmb     18 06 05.1
      comp=Z,21nm,0.8s
D20K  Etivluk River      89.10  20  P       P        18 06 04.1 +1.0
      baz=291
H17K  Granite Mounta     89.11  24  P       P        18 06 04.3 +1.2
      baz=288
K15K  Wolf Creek Mou     89.19  27  P       P        18 06 04.5 +0.9
      baz=286
G18K  Tagagawik          89.31  23  P       P        18 06 05.1 +1.1
      baz=289
J16K  Anvik River        89.32  26  P       P        18 06 05.1 +0.9
      baz=287
E19K  Redstone River     89.32  21  P       P        18 06 05.2 +1.1
      baz=290
F19K  Shaleruckik Mo     89.34  22  P       P        18 06 05.1 +0.9
      baz=290,SNR=8.2
L15K  Ungalak Mounta     89.39  28  P       P        18 06 05.3 +0.8
      baz=286
E20K  Nigu River         89.41  21  P       P        18 06 05.7 +1.1
      baz=291,SNR=13
M14K  Bethel             89.42  29  P       P        18 06 05.8 +1.1
      baz=286
B21K  Ikpikpuk River     89.43  19  P       P        18 06 05.6 +1.0
      baz=292
B22K  Teshekpuk Lake     89.53  18  P       P        18 06 05.8 +0.9
      baz=294
C21K  Knifeblade Rid     89.55  20  P       P        18 06 06.2 +1.1
      baz=292,SNR=5.1
H18K  Honhosa River      89.67  24  P       P        18 06 06.6 +0.8
      baz=289
N14K  Kuskokwak Cree     89.78  29  P       P        18 06 07.1 +0.7
      baz=286
OSBL  Sidi Abdelli       89.79 305  P       P        18 06 09.9 +2.9
G19K  Purcell Mounta     89.83  23  P       P        18 06 07.5 +1.0
      baz=290,SNR=12
J17K  VABM Dome          89.94  26  IAmb    IAmb     18 06 09.2
      comp=Z,31nm,1.5s
J17K  VABM Dome          89.94  26  P       P        18 06 08.2 +1.1
      baz=288
F20K  Avaraart Lake      90.02  22  P       P        18 06 08.5 +1.2
      baz=292
M15K  Kasigluk River     90.04  28  P       P        18 06 08.7 +1.2
      baz=287
E21K  Killik River       90.10  20  P       P        18 06 08.8 +1.1
      baz=293
FALS  False Pass         90.23  34  P       P        18 06 08.9 +0.4
      baz=285
H19K  Roundabout Mou     90.29  23  P       P        18 06 10.1 +1.5
      baz=291,SNR=17
L16K  Owhat River        90.29  27  P       P        18 06 09.7 +1.0
      baz=288
D22K  Ayikyak River      90.36  20  IAmb    IAmb     18 06 11.0
      comp=Z,15nm,0.8s
D22K  Ayikyak River      90.36  20  P       P        18 06 10.0 +1.1
      baz=294
GCSA  Galena City Sc     90.40  24  P       P        18 06 10.4 +1.3
      baz=290
N15K  Kwethluk River     90.48  29  P       P        18 06 10.7 +1.1
      baz=288
K17K  Iditarod           90.49  26  P       P        18 06 10.9 +1.3
      baz=289
C23K  Itkillik River     90.61  18  P       P        18 06 11.4 +1.4
      baz=296,SNR=5.1
L17K  Donlin             90.69  27  P       P        18 06 11.7 +1.1
      baz=289
TORD  Torodi Ar. Bea     90.74 283  P       P        18 06 12.6 +0.8
      comp=Z,5.0nm,0.9s,baz=74,slow=6.8,SNR=27
TORD                                PP      PP       18 09 51.0 +1.1
      comp=Z,1.0nm,0.7s,baz=63,slow=9.2,SNR=5.5
      comp=Z,5.0nm,0.9s
TORD  Torodi Ar. Bea     90.74 283  P       P        18 06 12.3 +0.5
M16K  Timber Creek       90.75  28  P       P        18 06 11.8 +1.0
      baz=289
S12K  Black Hills        90.76  33  P       P        18 06 11.5 +0.5
      baz=286
F21K  Alatna River       90.76  21  P       P        18 06 11.7 +0.9
      baz=294
O15K  Ungalikthiuk R     90.91  30  P       P        18 06 12.4 +0.8
      baz=288
H20K  Anotleneega Mo     90.91  23  P       P        18 06 12.9 +1.3
      baz=292,SNR=22
J18K  Innoko River       90.92  25  P       P        18 06 12.7 +1.1
      baz=291
E22K  Anaktuvuk Pass     90.96  20  IAmb    IAmb     18 06 13.7
      comp=Z,12nm,1.2s
E22K  Anaktuvuk Pass     90.96  20  P       P        18 06 12.7 +0.9
      baz=295
D23K  Nanushuk River     90.98  19  P       P        18 06 12.8 +1.0
      baz=296
N16K  Nishlik Lake       91.01  28  P       P        18 06 13.0 +0.9
      baz=289
G21K  Allakaket          91.03  22  P       P        18 06 13.2 +1.1
      baz=294
F22K  John River         91.10  21  P       P        18 06 13.7 +1.3
      baz=295
ESDC  Sonseca Array      91.14 310  P       P        18 06 14.2 +0.9
      comp=Z,15nm,0.8s,baz=61,slow=4.2,SNR=87
      comp=Z,15nm,0.8s
ESDC  Sonseca Array      91.14 310  P       P        18 06 13.6 +0.4
ESDC                                IAmb    IAmb     18 06 15.0
      comp=Z,10nm,0.8s
IMAR  Indian Mountai     91.16  22  P       P        18 06 13.3 +0.6
J19K  Poorman            91.18  24  IAmb    IAmb     18 06 15.3
      comp=Z,18nm,1.0s
J19K  Poorman            91.18  24  P       P        18 06 13.8 +0.9
      baz=292
C24K  Franklin Bluff     91.26  18  P       P        18 06 13.8 +0.8
      baz=298
M17K  Holitna River      91.32  27  P       P        18 06 14.4 +0.9
      baz=290
I20K  Naaghedeneel       91.34  24  P       P        18 06 14.9 +1.4
      baz=293,SNR=7.5
L18K  Granite Mounta     91.37  26  P       P        18 06 14.9 +1.2
      baz=291
PAB   San Pablo          91.46 310  P       P        18 06 15.3 +0.5
PAB                                 IAmb    IAmb     18 06 16.6
      comp=Z,13nm,0.8s
PAB   San Pablo          91.46 310  P       P        18 06 15.3 +0.5
PAB                                 pmax    pmax
      comp=Z,13nm,0.8s
TOLK  Toolik Lake Re     91.48  19  P       P        18 06 15.6 +1.4
      baz=297
D24K  Happy Valley       91.49  19  P       P        18 06 15.3 +1.2
      baz=298
G22K  Bettles            91.59  21  P       P        18 06 15.7 +1.1
      baz=295
O16K  Kokwok River B     91.62  29  P       P        18 06 15.8 +0.9
      baz=289
H21K  Melozitna Rive     91.64  22  P       P        18 06 16.4 +1.4
      baz=294
J20K  Nowinta River      91.71  24  IAmb    IAmb     18 06 17.7
      comp=Z,19nm,1.0s
J20K  Nowinta River      91.71  24  P       P        18 06 16.7 +1.4
      baz=293
SDPT  Sand Point         91.72  33  P       P        18 06 16.0 +0.6
      baz=287
N17K  Nushagak Hills     91.73  28  P       P        18 06 16.8 +1.3
      baz=290
E23K  Chandalar          91.74  20  P       P        18 06 16.7 +1.2
      baz=297
COLD  Coldfoot           91.91  21  IAmb    IAmb     18 06 17.7
      comp=Z,6.1nm,0.7s
COLD  Coldfoot           91.91  21  P       P        18 06 17.5 +1.4
      baz=297
M18K  Stony River        92.01  27  P       P        18 06 18.0 +1.4
      baz=291
O17K  Koliganek Bris     92.03  29  P       P        18 06 18.0 +1.2
      baz=290
K20K  Telida             92.06  25  P       P        18 06 18.5 +1.6
      baz=293
H22K  Ishtalitna Cre     92.08  22  IAmb    IAmb     18 06 19.4
      comp=Z,14nm,0.8s
H22K  Ishtalitna Cre     92.08  22  P       P        18 06 18.4 +1.4
      baz=295
E24K  Your Creek         92.10  20  P       P        18 06 18.3 +1.2
      baz=298
D25K  Kavik River        92.17  18  P       P        18 06 18.3 +1.0
      baz=300
L19K  White Mountain     92.18  26  IAmb    IAmb     18 06 19.9
      comp=Z,20nm,1.0s
L19K  White Mountain     92.18  26  P       P        18 06 18.9 +1.3
      baz=292
G23K  Bananza Creek      92.21  21  P       P        18 06 18.8 +1.3
      baz=297
N18K  Kilae Creek        92.28  28  P       P        18 06 19.4 +1.4
      baz=291
C26K  Camden Bay         92.30  17  P       P        18 06 19.4 +1.5
      baz=302
L20K  Farewell, AK       92.49  26  P       P        18 06 20.4 +1.4
      baz=293
CHUM  Lake Minchumin     92.57  24  P       P        18 06 20.8 +1.6
      baz=294
F24K  Squaw Lake         92.57  20  IAmb    IAmb     18 06 21.3
      comp=Z,11nm,0.8s
F24K  Squaw Lake         92.57  20  P       P        18 06 20.5 +1.3
      baz=299
H23K  Yukon River        92.78  22  P       P        18 06 21.7 +1.5
      baz=297
C27K  Jago River         92.81  17  P       P        18 06 21.6 +1.4
      baz=303,SNR=8.1
N19K  Bonanza Creek      92.87  27  P       P        18 06 21.9 +1.1
      baz=292
O18K  Koktuh Hills       92.89  28  P       P        18 06 22.1 +1.3
      baz=292
BPAW  Bear Paw Mtn.      93.00  24  IAmb    IAmb     18 06 23.2
      comp=Z,16nm,0.9s
BPAW  Bear Paw Mtn.      93.00  24  P       P        18 06 22.4 +1.1
      baz=296
PPLA  Purkeypile         93.03  25  P       P        18 06 22.3 +0.8
      baz=295
E25K  Arctic Village     93.03  19  IAmb    IAmb     18 06 23.2
      comp=Z,8.1nm,0.8s
E25K  Arctic Village     93.03  19  P       P        18 06 22.5 +1.2
      baz=301
M20K  Styx River         93.05  26  P       P        18 06 22.5 +1.0
      baz=294
G24K  Hadweenzic Riv     93.11  21  P       P        18 06 22.7 +1.1
      baz=299
R17L  Mt. Peulik Vol     93.14  31  P       P        18 06 23.1 +1.1
      baz=291
Q17K  Contact Creek      93.15  30  P       P        18 06 22.2  0.0
      baz=291
I23K  Minto, Yukon-K     93.16  22  IAmb    IAmb     18 06 24.8
      comp=Z,5.5nm,0.7s
I23K  Minto, Yukon-K     93.16  22  P       P        18 06 22.7 +0.8
      baz=297
O19K  Port Alsworth      93.18  28  P       P        18 06 22.8 +0.8
      baz=293
F25K  Christian Rive     93.28  19  P       P        18 06 24.0 +1.5
      baz=301
VNDA  Vanda              93.28 168  P       P        18 06 21.3 -0.9
      comp=Z,0.6nm,0.7s,baz=280,slow=6.2,SNR=4.1
      comp=Z,0.6nm,0.7s
VNDA  Vanda              93.28 168  P       P        18 06 21.3 -0.9
VNDA                                pmax    pmax
      comp=Z,5.0nm,1.4s
H24K  Noodor Dome        93.39  21  IAmb    IAmb     18 09 17.3
      comp=Z,20nm,1.8s
H24K  Noodor Dome        93.39  21  P       P        18 06 24.2 +1.2
      baz=299
Q18K  Katmai Hardscr     93.44  29  P       P        18 06 23.7 +0.2
      baz=292
NEA2  Nenana             93.53  23  P       P        18 06 24.4 +0.7
      baz=298
G25K  Bearman Lake       93.55  20  P       P        18 06 24.6 +0.9
      baz=300
TRF   Thorofare Moun     93.57  24  P       P        18 06 24.6 +0.6
      baz=296
SKT   Skwentna           93.69  26  P       P        18 06 25.0 +0.5
      baz=295
F26K  Sheenjek River     93.72  19  P       P        18 06 25.4 +0.9
      baz=302
N20K  Mount Spurr        93.73  26  P       P        18 06 25.8 +1.1
      baz=294
L22K  Petersville        93.78  25  IAmb    IAmb     18 06 27.0
      comp=Z,14nm,0.9s
D27M  Malcolm River      93.83  17  P       P        18 06 26.2 +1.2
      baz=305
H25L  Birch Creek        93.90  21  P       P        18 06 26.7 +1.4
      baz=301
MCK   McKinley           93.98  23  P       P        18 06 26.8 +1.1
      baz=298
CUT   Chulitna           94.04  25  P       P        18 06 27.6 +1.6
      baz=296
G26K  Porcupine Rive     94.23  20  P       P        18 06 28.4 +1.6
      baz=302
E27K  Coleen River       94.25  18  P       P        18 06 27.6 +0.7
      baz=305,SNR=7.2
SUA   Susitna One        94.25  26  P       P        18 06 27.7 +0.5
      baz=296
IL31                     94.27  22  P       P        18 06 26.3 -0.7
IL31                                IAmb    IAmb     18 08 31.8
      comp=Z,33nm,1.9s
ILAR  Eielson Array      94.27  22  P       P        18 06 26.3 -0.7
      comp=Z,1.5nm,0.7s,baz=298,slow=4.3,SNR=21
ILAR                                PP      PP       18 10 16.4 +0.4
      comp=Z,0.5nm,0.8s,baz=308,slow=8.5,SNR=5.5
      comp=Z,1.5nm,0.7s
PRP   Porcupine Dome     94.39  21  P       P        18 06 27.9 +0.2
PRP                                 IAmb    IAmb     18 06 29.9
      comp=Z,8.1nm,1.0s
PRP   Porcupine Dome     94.39  21  P       P        18 06 28.5 +0.7
      baz=301
M22K  Willow             94.40  26  P       P        18 06 28.2 +0.6
      baz=296
D28M  Stokes Point       94.42  17  P       P        18 06 28.8 +1.3
      baz=307
HDA   Harding Lake       94.42  22  P       P        18 06 28.1 +0.4
      baz=299
WAT1  Susitna Watana     94.56  24  P       P        18 06 28.8 +0.3
      baz=298
E28M  Babbage River      94.62  17  P       P        18 06 29.3 +0.7
      baz=307,SNR=15
Q20K  Shuyak Island      94.71  29  P       P        18 06 29.6 +0.4
      baz=294
OHAK  Old Harbor         94.84  30  P       P        18 06 30.3 +0.5
      baz=293
RC01  Rabbit Creek A     94.86  26  P       P        18 06 30.0 +0.2
      baz=297
PMR   Palmer             94.89  25  P       P        18 06 30.2 +0.3
      baz=297
DHY   Denali Highway     94.91  24  P       P        18 06 30.6 +0.4
      baz=299
J25K  Salcha River,      94.91  22  P       P        18 06 30.3 +0.2
      baz=301
WAT6  Susitna Watana     95.00  24  P       P        18 06 30.8 +0.1
      baz=299
BRSE  Bradley Lake S     95.01  27  P       P        18 06 30.8 +0.3
      baz=296
G27K  Doyon Strip        95.02  19  P       P        18 06 30.8 +0.4
      baz=304
F28M  Old Crow           95.11  18  IAmb    IAmb     18 06 32.3
      comp=Z,5.9nm,0.8s
F28M  Old Crow           95.11  18  P       P        18 06 31.4 +0.6
      baz=306
SML   Sawmill            95.13  25  P       P        18 06 31.5 +0.4
      baz=298
O22K  Cooper Landing     95.14  27  P       P        18 06 31.2 +0.1
      baz=297
K24K  Donnelly Dome      95.17  23  P       P        18 06 31.5 +0.3
      baz=300
E29M  Blow River         95.23  17  P       P        18 06 32.2 +0.8
      baz=308
KNK   Knik Glacier       95.26  25  P       P        18 06 32.0 +0.4
      baz=298
I26K  Coal Creek Min     95.34  21  P       P        18 06 32.5 +0.6
      baz=303
H27K  Steamboat Moun     95.39  20  P       P        18 06 32.8 +0.6
      baz=305,SNR=7.1
M23K  Glacier View       95.39  25  P       P        18 06 32.6 +0.4
      baz=299
SCM   Sheep Creek Mo     95.53  25  P       P        18 06 33.4 +0.4
      baz=299
PWL   Port Wells         95.57  26  P       P        18 06 33.7 +0.6
      baz=298
J26L  Joseph Creek       95.64  22  P       P        18 06 33.8 +0.4
      baz=303
I27K  Kandik River       95.71  20  P       P        18 06 34.7 +1.0
      baz=304
PAX   Paxson             95.72  23  P       P        18 06 33.7 -0.1
      baz=301
SCRK  Sand Creek         95.76  22  IAmb    IAmb     18 07 37.6
      comp=Z,15nm,1.6s
SCRK  Sand Creek         95.76  22  P       P        18 06 34.6 +0.6
      baz=302
A36M  Sachs Harbour      95.80  12  P       P        18 06 34.5 +0.7
      baz=321
M24K  Tolsona, Glenn     95.87  24  P       P        18 06 34.9 +0.4
      baz=300
G29M  Pine Creek         96.11  18  P       P        18 06 36.1 +0.7
      baz=308
HARP  HAARP              96.14  24  P       P        18 06 36.1 +0.4
      baz=301
KLU   Klutina            96.29  25  P       P        18 06 36.6 +0.2
      baz=300
F30M  Barrier River      96.34  17  P       P        18 06 37.0 +0.6
      baz=310
I28M  Miner Creek        96.38  20  P       P        18 06 37.0 +0.2
      baz=306
P23K  Montague Islan     96.39  26  P       P        18 06 36.8  0.0
      baz=299
H29M  Whitestone         96.43  19  P       P        18 06 37.3 +0.4
      baz=308
K27K  Chicken            96.44  22  P       P        18 06 37.3 +0.4
      baz=304
L26K  Log Cabin Wild     96.51  23  P       P        18 06 37.7 +0.4
      baz=303
INK   Inuvik             96.53  16  IAmb    IAmb     18 06 38.4
      comp=Z,11nm,1.1s
INK   Inuvik             96.53  16  P       P        18 06 37.4 +0.2
      baz=312
G30M  tAoh Zraii Nji     96.62  18  IAmb    IAmb     18 06 38.5
      comp=Z,8.4nm,0.9s
G30M  tAoh Zraii Nji     96.62  18  P       P        18 06 38.3 +0.5
      baz=310
N25K  Chitina, Valde     96.77  24  P       P        18 06 38.9 +0.3
      baz=301
EPYK  Eagle Plains       96.86  18  P       P        18 06 38.8 -0.1
      baz=309
I29M  Ogilvie Camp,      96.97  20  P       P        18 06 39.9 +0.5
      baz=308
M26K  Nabesna, AK        96.99  23  P       P        18 06 40.0 +0.5
      baz=303
G31M  Satah River        97.24  17  P       P        18 06 40.2 -0.3
      baz=312
DAWY  Dawson             97.38  21  P       P        18 06 40.5 -0.7
      baz=306
M27K  Edge Creek, AK     97.45  23  P       P        18 06 41.3 -0.4
      baz=304
I30M  Mount Dempster     97.70  19  P       P        18 06 42.7 -0.1
      baz=309
H31M  Peel River         97.96  18  P       Pdif     18 06 43.9 +0.1
      baz=311
C36M  Paulatuk           98.11  13  P       Pdif     18 06 44.4 +0.1
      baz=322
J30M  Hart River         98.12  20  P       P        18 06 44.4 -0.2
      baz=309
DBIC  Dimbokro           98.13 278  P       Pdif     18 06 46.5 +0.9
      comp=Z,2.6nm,0.7s,baz=112,slow=4.8,SNR=2.2
      comp=Z,2.6nm,0.7s
K29M  Barlow Dome        98.18  21  P       P        18 06 44.7 -0.2
      baz=308
QSPA  South Pole Qui     98.19 180  P       Pdif     18 06 46.7 +1.9
      comp=Z,0.5nm,0.8s,baz=308,slow=4.4,SNR=1.4
      comp=Z,0.5nm,0.8s
QSPA  South Pole Qui     98.19 180  IAmb    IAmb     18 07 45.2
      comp=Z,15nm,1.8s
YUK3  Moose Creek        98.33  23  P       P        18 06 45.6 -0.2
      baz=305
L29M  L29M               98.41  21  P       Pdif     18 06 46.0 +0.1
      baz=308
YUK4  Talbot Arm         99.29  23  P       Pdif     18 06 49.4 -0.6
      baz=307
PINM  Pinnacle           99.38  24  P       Pdif     18 06 49.6 -0.7
      baz=305
YUK6  Outpost Mounta     99.64  23  P       Pdif     18 06 50.3 -1.4
      baz=307
PPT   Papeete           117.22 105  PKP     PKiKP    18 11 53.9 +0.6
      comp=Z,17nm,0.3s,baz=39,slow=19,SNR=2.4
ULM   Lac du Bonnet     121.02   8  PKP     PKPdf    18 11 59.0 -0.7
      comp=Z,4.3nm,0.7s,baz=20,slow=3.0,SNR=4.9
NVAR  Mina Array Bea    124.44  31  PKP     PKiKP    18 12 07.6 +0.4
      comp=Z,3.2nm,0.7s,baz=296,slow=2.0,SNR=15
NV11  Mina Array Sit    124.51  31          PKiKP    18 12 07.8 +0.5
PDAR  Pinedale Array    124.69  21  PKP     PKPdf    18 12 06.8 -0.5
      comp=Z,2.0nm,0.7s,baz=70,slow=1.8,SNR=18
PDAR                                PKKPbc  PKKPab   18 21 48.0 -2.6
      comp=Z,0.4nm,0.6s,baz=148,slow=4.5,SNR=4.5
ECSD  EROS Data Cent    127.27  10          PKPdf    18 12 12.0 +0.1
TXAR  Lajitas Array     138.75  24  PKhKP   PKPpre   18 12 24.5
      comp=Z,0.7nm,0.5s,baz=312,slow=0.3,SNR=11
TXAR                                PKP     PKPdf    18 12 34.2 +0.2
      comp=Z,0.8nm,0.4s,baz=347,slow=2.8,SNR=15
TXAR                                PP      PP       18 15 26.6 +0.8
      comp=Z,1.0nm,1.0s,baz=5.0,slow=5.3,SNR=4.1
TXAR                                SKPbc   SKPbc    18 15 50.3 -1.5
      comp=Z,0.6nm,0.7s,baz=341,slow=2.8,SNR=5.5
BDFB  Brasilia          142.55 255  PKhKP   PKPpre   18 12 37.8
      comp=Z,3.0nm,0.5s,baz=135,slow=2.9,SNR=3.5
MDP   Montagnes des     144.53 291  PKP     PKPbc    18 12 44.1 +0.4
      comp=Z,13nm,0.5s,baz=65,slow=3.1,SNR=13
PLCA  Paso Flores       145.02 200  PKPbc   PKPab    18 12 44.6  0.0
      comp=Z,24nm,0.8s,baz=140,slow=2.1,SNR=50
PLCA  Paso Flores       145.02 200          PKPdf    18 12 44.8  0.0
PLCA  Paso Flores       145.02 200  PKIKP   PKPdf    18 12 44.8  0.0
GDHS  Morne Mazeau,     146.05 316  PKPdf   PKPbc    18 12 48.1 -0.2
CPUP  Villa Florida     147.71 233  PKPbc   PKPbc    18 12 52.3 -0.3
      comp=Z,3.8nm,0.8s,baz=358,slow=1.9,SNR=17
CFA   Coronel Fontan    151.72 213  PKP     PKPdf    18 12 54.2 -1.7
      comp=Z,1.9nm,0.7s,baz=34,slow=3.6,SNR=5.8
CFA                                 PKPbc   PKPbc    18 13 02.2 -0.1
      comp=Z,12nm,0.5s,baz=129,slow=1.2,SNR=29
LPAZ  La Paz            161.17 243  PKP     PKPdf    18 13 09.4 +0.3
      comp=Z,2.5nm,0.8s,baz=35,slow=2.4,SNR=10
LPAZ                                PKPab   PKPab    18 13 53.4 -0.2
      comp=Z,2.8nm,0.6s,baz=70,slow=7.2,SNR=12
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IDC ***02*** *18:00:24.8±1.4, 22°.01S×178°.35W, h0^{km}, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=42.6km s-min=34.6km az=51.0*

ISC 02 18:00:28.6±1.3**, 21°.9S**±0°.3×**178°.2W**±0°.3**, h35**^{km}**, n8, σ0^{s}.86**/8**, mb3.6**/4**, Fiji Islands region**

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Code  Station Name          Δ°   AZ°    Phase ID            Time     Res
                                      Op      ISC        h  m  s    ISC
ASAR  Alice Springs      44.03 258  P       P        18 08 33.3  0.0
      0.3nm,0.5s,baz=98,slow=7.3,SNR=4.4
      0.3nm,0.5s
WRA   Warramunga Arr     44.23 263  P       P        18 08 35.1 +0.2
      0.4nm,0.4s,baz=90,slow=6.8,SNR=23
      0.4nm,0.4s
VNDA  Vanda              56.53 185  P       P        18 10 06.0 -1.0
      0.6nm,0.7s,baz=13,slow=5.8,SNR=1.9
      0.6nm,0.7s
QSPA  South Pole Qui     68.20 180  P       P        18 11 26.6 +1.2
      0.9nm,0.6s,baz=350,slow=10.0,SNR=7.7
      0.9nm,0.6s
BVAR  Borovoye Array    119.99 320  PKP     PKiKP    18 19 15.9 +0.5
      0.3nm,0.4s,baz=67,slow=3.6,SNR=2.4
HFS   Hagfors           140.85 351  PKP     PKPdf    18 19 53.8 -0.6
      1.4nm,0.3s,baz=66,slow=3.5,SNR=16
EKA   Eskdalemuir Ar    146.38   5  PKPbc   PKiKP    18 20 08.9 +0.3
      0.5nm,0.5s,baz=358,slow=2.4,SNR=3.5
MMAI  Mount Meron Ar    148.30 298  PKPbc   PKiKP    18 20 12.7 -0.6
      0.8nm,0.4s,baz=67,slow=3.1,SNR=1.7
```

IDC ***02*** *18:14:51.2±1.9, 21°.31S×67°.33W, h167^{km}±18^{km}, mb3.3/3, mbtmp3.7/5, Error ellipse: s-maj=35.1km s-min=16.0km az=84.0*

SJA ***02*** *18:14:52.7±1.0, 21°.16S×67°.43W, h182^{km}±11^{km}, ML3.5, MW3.6*

SCB ***02*** *18:14:53.9±1.3, 21°.22S×67°.51W, h176^{km}±15^{km}, MB5.9, ML3.5/3, Error ellipse: s-maj=6.6km s-min=4.4km az=1.0*

ISC 02 18:14:53.2±0.8**, 21°.25S**±0°.04×**67°.49W**±0°.04**, h187**^{km}±8^{km}**, n39, σ1^{s}.35**/59**, 5D, Chile-Bolivia border region**

```
Code  Station Name          Δ°   AZ°    Phase ID            Time     Res
                                      Op      ISC        h  m  s    ISC
PB09  IPOC Station P      1.72 251 ⇓iP      Pn       18 15 29.4 +1.4
PB09                                eS      Sn       18 15 56.4 +1.3
PB09  IPOC Station P      1.72 251  Pg      Pn       18 15 29.4 +1.4
PB09  IPOC Station P      1.72 251  eP      Pn       18 15 29.0 +1.0
PB09                                eS      Sn       18 15 55.8 +0.7
PB09                                IAML             18 15 60.0
      comp=Z,191nm,0.2s
PB01  IPOC Station P      1.87 276  eP      Pn       18 15 29.9 +0.3
PB01                                eS      Sn       18 15 57.0 -0.7
PB01                                IAML             18 15 59.0
      comp=N,316nm,0.3s
PB01  IPOC Station P      1.87 276  Pg      Pn       18 15 29.8 +0.3
PB01                                Sg      Sn       18 15 57.2 -0.5
PB01                                IAML             18 15 59.0
```

	comp=N,184nm,0.3s						
PB01	IPOC Station P	1.87	276	*e*P	Pn	18 15 29.9	+0.3
PB01				*e*S	Sn	18 15 57.9	+0.2
PB01				IAML		18 15 59.5	
	comp=Z,305nm,0.1s						
YJA	Yavi	2.06	117	Pg	Pn	18 15 32.7	+0.8
YJA	Yavi	2.06	117	*e*P	Pn	18 15 32.9	+1.0
YJA				*e*S	Sn	18 16 00.7	-1.2
YJA				IAML		18 16 03.6	
	comp=Z,34nm,0.7s						
GO01	Chusmiza	2.24	314	Pg	Pn	18 15 34.2	+0.3
PB02	IPOC Station P	2.24	268	⇓*e*P	Pn	18 15 34.3	+0.8
PB02				*e*S	Sn	18 16 03.5	-1.3
PB02				IAML		18 16 06.2	
	comp=E,1μm,0.2s						
PB02	IPOC Station P	2.24	268	Pg	Pn	18 15 33.6	+0.1
PB02				Sg	Sn	18 16 03.8	-1.0
PB02				IAML		18 16 05.0	
	comp=E,256nm,0.3s						
PB02	IPOC Station P	2.24	268	*e*P	Pn	18 15 34.0	+0.5
PB02				*e*S	Sn	18 16 04.3	-0.5
PB02				IAML		18 16 06.2	
	comp=Z,748nm,0.1s						
PB06	IPOC Station P	2.42	233	⇓*i*P	Pn	18 15 36.4	+1.0
PB06				*e*S	Sn	18 16 08.7	+0.2
PB06				IAML		18 16 10.1	
	comp=E,538nm,0.1s						
PB06	IPOC Station P	2.42	233	Pg	Pn	18 15 36.5	+1.0
PB06	IPOC Station P	2.42	233	*e*P	Pn	18 15 36.4	+1.0
PB06				*e*S	Sn	18 16 08.9	+0.4
PB06				IAML		18 16 15.0	
	comp=Z,195nm,0.3s						
HMBC	Humberstone	2.44	293	*e*P	Pn	18 15 35.4	-0.3
HMBC				*e*S	Sn	18 16 07.8	-1.0
HMBC				IAML		18 16 10.3	
	comp=Z,320nm,0.3s						
PB11	IPOC Station P	2.51	306	Pg	Pn	18 15 36.6	0.0
PB11				Sg	Sn	18 16 08.6	-1.7
PB11				IAML		18 16 12.9	
	comp=Z,161nm,0.3s						
PB11	IPOC Station P	2.51	306	*e*P	Pn	18 15 36.6	0.0
PB11				*e*S	Sn	18 16 08.8	-1.6
PB11				IAML		18 16 11.3	
	comp=Z,182nm,0.2s						
PATCX	Punta Patache	2.52	279	⇓*e*P	Pn	18 15 36.9	+0.3
PATCX				*e*S	Sn	18 16 08.5	-1.9
PATCX				IAML		18 16 11.4	
	comp=N,380nm,0.2s						
PATCX	Punta Patache	2.52	279	*e*P	Pn	18 15 36.9	+0.3
PATCX				*e*S	Sn	18 16 09.6	-0.8
PATCX				IAML		18 16 11.5	
	comp=Z,145nm,0.2s						
TA02	Huaiquique	2.65	291	*e*P	Pn	18 15 37.6	-0.5
SOEO	Opoqueri	2.69	352	Pg	Pn	18 15 40.2	+1.1
HJA	Humahuaca	2.75	136	*e*P	Pn	18 15 40.7	+1.2
HJA				*e*S	Sn	18 16 15.2	-0.5
HJA				IAML		18 16 22.1	
	comp=Z,39nm,0.6s						
PB05	IPOC Station P	2.98	237	⇓*e*P	Pn	18 15 42.9	+0.9
PB05				*e*S	Sn	18 16 18.5	-1.7
PB05				IAML		18 16 19.8	
	comp=N,226nm,0.2s						
PB16	IPOC Station P	3.46	326	Pg	Pn	18 15 49.5	+1.1
SOET	ToroToro	3.49	27	Pg	Pn	18 15 48.3	-0.3
BBOJ	La Paz, Jacaqu	4.30	351	Pg	Pn	18 15 59.8	+0.9
PB14	IPOC Station P	4.30	218	Pg	Pn	18 15 59.4	+0.7
GO02	Mina Guanaco	4.35	206	Pg	Pn	18 16 00.2	+1.0
BBOE	La Paz, Chanca	4.43	354	Pg	Pn	18 16 01.5	+0.9
BBOD	La Paz, Gloria	4.70	347	Pg	Pn	18 16 04.8	+0.8
LPAZ	La Paz	4.97	353	P	Pn	18 16 08.1	+0.6
	comp=N,4.6nm,0.4s,baz=170,slow=5.5,SNR=28						
LPAZ				S	Sn	18 17 03.7	-2.2
	comp=N,1.8nm,0.5s,baz=152,slow=15,SNR=1.6						
LPAZ	La Paz	4.97	353	Pg	Pn	18 16 07.5	0.0
BBOB	La Paz, Bander	5.11	353	Pg	Pn	18 16 09.5	+0.2
CFA	Coronel Fontan	10.34	184	P	Pn	18 17 16.3	-0.7
	comp=N,0.6nm,0.3s,baz=3.6,slow=16,SNR=7.2						
CFA				S	Sn	18 19 05.0	-7.2
	comp=N,0.6nm,0.4s,baz=64,slow=16,SNR=1.8						
TXAR	Lajitas Array	61.19	324	P	P	18 24 49.4	+1.1
	comp=N,0.1nm,0.4s,baz=119,slow=6.7,SNR=1.5						
	comp=N,0.1nm,0.4s						
TORD	Torodi Ar. Bea	76.03	70	P	P	18 26 19.8	-0.5
	comp=N,1.1nm,0.3s,baz=257,slow=4.6,SNR=12						
	comp=N,1.1nm,0.3s						
NVAR	Mina Array Bea	76.11	321	P	P	18 26 21.7	+1.0
	comp=N,0.4nm,0.6s,baz=112,slow=5.8,SNR=1.9						
	comp=N,0.4nm,0.6s						
MKAR	Makanchi Array	144.65	37	PKP	PKPdf	18 34 08.0	+0.5
	comp=N,0.9nm,0.5s,baz=319,slow=1.9,SNR=13						

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*SOME **02** 18:32:35.8, 41°.70N×80°.02E, h10^{km}*
*NNC **02** 18:32:37.1±1.7, 41°.72N×79°.97E, h0^{km}, mb3.0, mpv3.0,*
Error ellipse: s-maj=11.7km s-min=8.2km az=123.0
*KRNET **02** 18:32:42.7±0.1, 41°.77N×79°.72E, h19^{km}, mb2.5*
ISC 02 18:32:34.9±2.4, **41°.64N**±0°.09×**80°.21E**±0°.09, **h4**^{km}±15^{km},
n22, σ1^{s}**25**/36, **11C-5D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	Przheval'sk	1.59	303	⇑*e*P	Pb	18 33 06.0	+1.0
PRZ				⇑*e*S	Sn	18 33 22.9	-2.3
SHLS	Shalkode	1.62	340	*e*P	Pn	18 33 03.2	-1.2
	5.4nm,0.2s						
SHLS				*e*S	Sn	18 33 23.1	-2.6
	24nm,0.2s						
UZB	Uzynbulak	1.75	330	*e*P	Pn	18 33 06.3	+0.1
	4.6nm,0.2s						
UZB				*e*S	Sn	18 33 27.7	-1.3
	12nm,0.1s						
PDGK	Podgornoye	1.77	343	⇑P	Pn	18 33 07.0	+0.5
	2.0nm,0.3s						
PDGK				⇓S	Sn	18 33 30.1	+0.5
	9.2nm,0.4s						
TARG	Taragay, Kyrgy	1.81	274	⇓*e*P	Pg	18 33 09.8	+0.3
TARG				⇓*e*S	Sn	18 33 29.6	-1.2
KTMS	Ketmen	1.81	3	*e*P	Pb	18 33 09.0	+0.2
	1.6nm,0.1s						
KTMS				*e*S	Sb	18 33 32.8	+0.9
	6.3nm,0.2s						
KDJ	Kajisay	2.32	283	⇑*e*P	Pb	18 33 18.2	+0.8
KDJ				⇑*e*S	Sn	18 33 44.2	+1.1
BLB	Baldybastay	2.77	333	Pg	Pb	18 33 24.6	-0.5
	2.6nm,0.1s						
BLB				Lg	Lg	18 33 58.9	
	44nm,0.3s						
KOTS	Kotyrbulak	2.79	306	Pg	Pb	18 33 25.4	-0.2
	2.6nm,0.2s						
KOTS				Lg	Lg	18 34 00.5	
	9.8nm,0.5s						
KOTS	Kotyrbulak	2.79	306	*e*P	Pb	18 33 25.4	-0.2
	2.6nm,0.2s						
KOTS				*e*S	Sb	18 34 00.5	+0.3
	9.8nm,0.5s						
MDOK	Medeo	2.79	304	Pg	Pb	18 33 24.9	-0.6
	1.3nm,0.2s						
MDOK				Lg	Lg	18 33 59.8	
	6.2nm,0.5s						
KNOS	Konyrlen	2.82	345	Pg	Pb	18 33 25.7	-0.4
	0.8nm,0.1s						
KNOS				Lg	Lg	18 34 01.0	
	8.7nm,0.2s						
ULHL	Ulahol	3.02	283	⇑*e*P	Pb	18 33 28.5	-1.0
ULHL				⇑*e*S	Sn	18 34 02.0	+1.4
ARXS	Arharly	3.11	327	Pg	Pb	18 33 30.3	-0.6
	1.8nm,0.2s						
ARXS				Lg	Lg	18 34 09.0	
	4.3nm,0.2s						
ARXS	Arharly	3.11	327	*e*P	Pb	18 33 30.3	-0.6
ARXS				*e*S	Sb	18 34 09.0	-0.3
MTBS	Maitube	3.17	299	Pg	Pb	18 33 32.3	+0.3
	0.6nm,0.1s						
MTBS				Lg	Lg	18 34 12.3	
	2.3nm,0.2s						
MTBS	Maitube	3.17	299	*e*P	Pb	18 33 32.3	+0.3
	0.6nm,0.1s						
MTBS				*e*S	Sb	18 34 12.3	+1.3
	2.3nm,0.2s						
BOOM	Boomskoye usch	3.29	286	⇑*e*P	Pb	18 33 32.2	-1.8
BOOM				⇑*e*S	Sn	18 34 08.3	+1.1
JNKS	Jany-Kuch	3.48	262	⇑*e*P	Pb	18 33 35.5	-1.8
JNKS				⇑*e*S	Sn	18 34 14.2	+2.3
TKM2	Tokmak 2	3.66	292	⇓*e*P	Pb	18 33 37.3	-2.9
TKM2				⇓*e*S	Sn	18 34 17.1	+0.9
KAPS	Kapalarasan	3.70	351	Pg	Pb	18 33 41.6	+0.8
	1.5nm,0.1s						
KAPS				Lg	Lg	18 34 28.2	
	10nm,0.1s						
KRBS	Karabastau	3.93	303	Pg	Pb	18 33 45.0	+0.2
	0.5nm,0.2s						
KRBS				Lg	Lg	18 34 34.2	
	1.7nm,0.4s						

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*AFAD **02** 19:12:07.1, 35°.75N×35°.46E, h26^{km}±2^{km}, ML2.7*
*ISK **02** 19:12:08.0, 35°.82N×35°.49E, h14^{km}, ML2.5/23*
*GRAL **02** 19:12:11.0±0.4, 35°.90N×35°.46E, h11^{km}±5^{km}, MD3.2*
*GII **02** 19:12:11.3±0.0, 35°.745N±0°.008×35°.433E±0°.001, h0^{km},*
confirmed
*NIC **02** 19:12:12.6, 35°.90N×35°.56E, h32^{km}±24^{km}, Ml2.4/7*
ISC 02 19:12:09.6±1.2, **35°.89N**±0°.03×**35°.54E**±0°.03, **h10**^{km}±10^{km},
n81, σ1^{s}**16**/42, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASUZ	Hatay-Arsuz	0.45	26	P	Pg	19 12 18.6	+0.1
TAHT	Tahtakopru-Hat	0.71	47	Pg	Pg	19 12 23.8	+0.4
RHAN	Hatay/Reyhanl	0.94	66	P	Pg	19 12 28.1	+0.5
RHAN				S	Sg	19 12 38.9	-1.0
RHAN				*i* IAML		19 12 41.0	
	comp=N,667nm,0.3s						
RHAN				*i* IAML		19 12 41.0	
	comp=E,378nm,0.4s						
YURE	YUREGIR	0.94	5	P	Pg	19 12 27.7	0.0
YURE				S	Sg	19 12 43.4	+3.4
YURE				*i* IAML		19 12 47.0	
	comp=E,95nm,1.0s						
CEYT	Ceyhan	1.13	8	Pn	Pg	19 12 31.2	-0.2
CEYT				Sn	Sg	19 12 47.9	+1.8
HASA	Hatay-Hassa-Ha	1.15	41	P	Pg	19 12 31.4	-0.4
HASA				S	Sg	19 12 44.6	-2.1
HASA				*i* IAML		19 12 49.0	
	comp=E,251nm,0.3s						
HASA				*i* IAML		19 12 51.0	
	comp=N,257nm,0.4s						
KIZK	Mersin	1.27	298	P	Pg	19 12 31.8	-2.3
KIZK	Mersin	1.27	298	Pn	Pg	19 12 31.9	-2.2
MERS	Mersin	1.28	320	Pn	Pg	19 12 32.5	-1.7
MERS				Sn	Sg	19 12 50.1	-0.7
SILI	Silifke-Mersin	1.39	291	Pn	Pg	19 12 33.6	-2.8
KARA	Karaisali	1.43	344	Pn	Pn	19 12 34.6	-1.0
KARA				Sn	Sg	19 12 55.2	-0.3
BEIL	Beino	1.44	158	*e*P	Pn	19 12 36.6	+0.8
BEIL				*e*S	Sg	19 12 55.2	-0.9
PARAL	Paralimni	1.52	234	P	Pn	19 12 37.8	+1.1
PARAL				AML	AML	19 13 09.2	
	0.1nm,1.5s						
PARAL				AML	AML	19 13 11.7	
	0.3nm,1.3s						
KUZU	Kuzuini	1.52	54	P	Pn	19 12 37.5	+0.6
KUZU				S	Sn	19 12 57.2	+0.4
KUZU				*i* IAML		19 13 00.0	
	comp=N,146nm,0.2s						
KUZU				*i* IAML		19 13 01.0	
	comp=E,235nm,0.3s						
GULE	Gulek	1.52	336	P	Pn	19 12 36.9	-0.2
TISA	Tisan-Mersin	1.53	281	Pn	Pn	19 12 35.4	-1.6
IKL	Isikli	1.54	284	Pn	Pn	19 12 35.6	-1.5
KEBE	Keben-Mersin	1.58	291	Pn	Pn	19 12 36.2	-1.5
KAMA	Osmaniye	1.58	35	P	Pn	19 12 37.7	-0.1
KAMA				S	Sn	19 12 55.6	-2.7
KAMA				*i* IAML		19 13 00.0	
	comp=E,29nm,0.5s						
KOZT	Kozan	1.61	8	Pn	Pn	19 12 37.9	-0.2
HWQ	Hawqa	1.64	168	*e*P	Pn	19 12 38.8	+0.2
GULN	MERSIN_Gulnar	1.65	281	P	Pn	19 12 36.1	-2.5
GULN				S	Sn	19 12 55.0	-4.7
LFK	Lefkose	1.75	250	Pn	Pn	19 12 38.1	-1.9
TEVE	Tevekalti-Mers	1.78	288	Pn	Pn	19 12 39.2	-1.3
MVOU	Mavrovouni	1.78	241	P	Pn	19 12 41.1	+0.7
MVOU				S	Sn	19 13 04.1	+0.9
MVOU				AML	AML	19 13 12.4	
	0.1nm,0.9s						
MVOU				AML	AML	19 13 16.2	
	0.1nm,0.9s						
FKH	Fakeheh	1.79	156	*e*P	Pn	19 12 41.3	+0.7
FKH				*e*S	Sn	19 13 03.9	+0.4
ANDN	Andirin	1.81	21	P	Pn	19 12 40.8	-0.2
CMRD	Camardi-Nigde	1.82	346	Pn	Pn	19 12 40.8	-0.4
GAZ	Gaziantep	1.86	46	Pn	Pn	19 12 41.3	-0.3
GAZ	Gaziantep	1.86	46	P	Pn	19 12 41.7	+0.1
GAZ				S	Sn	19 13 04.9	-0.2
GAZ				AML	AML	19 13 11.9	
	0.2nm,0.4s						
GAZ				AML	AML	19 13 14.2	
	0.2nm,0.4s						
KERG	Konya-Eregli	1.90	324	P	Pn	19 12 42.2	-0.1
KERG				*i* IAML		19 13 01.0	
	comp=N,33nm,1.2s						
KERG				S	Sn	19 13 05.8	-0.5
BERE	Bereket-Mersin	1.93	284	Pn	Pn	19 12 41.1	-1.5
KMRS	Kahramanmaras	1.95	34	Pn	Pn	19 12 42.6	-0.2
BHL	Bhannes	1.98	177	*e*P	Pn	19 12 43.8	+0.5
TEKE	Tekeli-Mersin	1.98	278	Pn	Pn	19 12 41.7	-1.5
ZAHL	Zahle	2.04	172	*e*P	Pn	19 12 44.7	+0.5
BOZY	Bozyazi-Mersin	2.09	277	Pn	Pn	19 12 43.2	-1.5
DQRL	Deir Qamar	2.18	179	*e*P	Pn	19 12 46.4	+0.4
GZT	Gaziantep	2.19	47	P	Pn	19 12 51.5	+5.3
GZT				S	Sn	19 13 11.7	-1.7
NIDE	Nigde/Merkez-G	2.19	344	P	Pn	19 12 47.7	+1.4
NIDE				S	Sn	19 13 15.8	+2.2
NIDE				*i* IAML		19 13 19.0	
	comp=N,25nm,0.3s						
YAHY	KAYSERI_Yahyal	2.21	356	P	Pn	19 12 47.9	+1.5
XYLS	Xyliatos	2.21	248	P	Pn	19 12 47.4	+1.0
XYLS				S	Sn	19 13 14.5	+0.6
XYLS				AML	AML	19 13 19.3	
XYLS				AML	AML	19 13 23.6	
KRMN	Karaman	2.24	306	Pn	Pn	19 12 45.2	-1.6
QRWL	Qaraoun	2.34	177	*e*P	Pn	19 12 48.7	+0.6
TROD	Troodos	2.38	248	P	Pn	19 12 50.1	+1.3
TROD				S	Sn	19 13 16.4	-1.7
TROD				AML	AML	19 13 23.7	
TROD				AML	AML	19 13 33.0	
	0.1nm,0.7s						
YESY	Yesilyurt	2.38	323	Pn	Pn	19 12 47.9	-0.9
RCY	Rachaya	2.40	174	*e*P	Pn	19 12 49.5	+0.5
KKBE	Karaman, Kazim	2.48	303	P	Pn	19 12 50.3	+0.2
ALFC	Alefka	2.51	254	P	Pn	19 12 51.1	+0.7
ALFC				AML	AML	19 13 20.1	
ALFC				S	Sn	19 13 21.5	+0.4
ALFC				AML	AML	19 13 26.7	
SHBL	Chebaa	2.54	176	*e*P	Pn	19 12 51.4	+0.4
SARI	SarD1z-Kayseri	2.61	15	Pn	Pn	19 12 52.1	+0.1
NATI	Neve Ativ	2.62	176	P	Pn	19 12 53.1	+1.1
NATI	Neve Ativ	2.62	176	S	Sn	19 13 26.4	+2.5
GULA	Gulagac	2.66	337	Pn	Pn	19 12 52.6	-0.1
SURC	SANLIURFA_SURC	2.67	67	P	Pn	19 12 53.2	+0.5
GEM	Giv'at Ha'Em	2.67	178	P	Pn	19 12 54.0	+1.4
GEM	Giv'at Ha'Em	2.67	178	S	Sn	19 13 26.9	+1.8
MMC7	Mount Meron ar	2.86	182	P	Pn	19 12 56.5	+1.1
MMA0B	Mount Meron ar	2.87	182	P	Pn	19 12 56.7	+1.3
MMA0B	Mount Meron ar	2.87	182	S	Sn	19 13 30.7	+0.7
KSHT	Keshet	2.91	176	P	Pn	19 12 57.6	+1.6
KSHT	Keshet	2.91	176	S	Sn	19 13 33.1	+2.1
BNN	Bunyan	2.97	5	Pn	Pn	19 12 57.2	+0.3
OFRI	`Ofer	3.29	188	P	Pn	19 13 02.2	+0.9
OFRI	`Ofer	3.29	188	S	Sn	19 13 42.1	+1.6
MMLI	Mount Malkishu	3.44	182	P	Pn	19 13 04.7	+1.4
MMLI	Mount Malkishu	3.44	182	P	Pn	19 13 04.2	+0.9
MMLI				AML	AML	19 13 40.1	
	0.1nm,1.9s						
MMLI				AML	AML	19 13 41.1	
	0.1nm,1.9s						
MMLI				S	Sn	19 13 45.1	+0.9
HMDT	Nahal Hemdat	3.63	180	P	Pn	19 13 07.2	+1.4
HMDT	Nahal Hemdat	3.63	180	S	Sn	19 13 50.7	+2.1
SLTI	Sal'it	3.66	187	P	Pn	19 13 07.8	+1.5
SLTI	Sal'it	3.66	187	S	Sn	19 13 51.7	+2.2
DSI	Dead Sea	4.31	182	P	Pn	19 13 16.4	+1.3
DSI	Dead Sea	4.31	182	S	Sn	19 14 07.0	+1.5
AMAZ	Amatzia	4.38	187	P	Pn	19 13 17.7	+1.6
AMAZ	Amatzia	4.38	187	S	Sn	19 14 09.1	+1.9
YTIR	Yattir	4.53	185	P	Pn	19 13 19.9	+1.7
YTIR	Yattir	4.53	185	S	Sn	19 14 13.4	+2.4
PRNI	Paran	5.54	185	P	Pn	19 13 33.9	+1.8
PRNI	Paran	5.54	185	S	Sn	19 14 38.2	+2.3
KRMI	Paran Flat	5.79	187	P	Pn	19 13 37.4	+1.8
KRMI	Paran Flat	5.79	187	S	Sn	19 14 44.7	+2.5

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*IDC **02** 19:25:35.1±5.7, 41°.49N×19°.59E, h0^{km}, mb3.7/3,*
mbtmp3.6/4, ML2.5/1, Error ellipse: s-maj=105.9km
s-min=19.6km az=40.0
*BEO **02** 19:25:36.9±0.6, 41°.42N×19°.34E, h18^{km}±3^{km}, ML3.1/16*
*THE **02** 19:25:37.3, 42°N±7°×1°9E±°, h12^{km}, M3.0/12, MLh3.0/12*
*TIR **02** 19:25:38.1, 41°.58N×19°.55E, h2^{km}±1^{km}, Ml3.1/3*
*SKO **02** 19:25:38.6, 41°.53N×19°.44E, h18^{km}, ML2.9*
*PDG **02** 19:25:40.4±0.4, 41°.67N×19°.50E, h6^{km}±3^{km}, MD3.1/3,*
ML3.0/13, Error ellipse: s-maj=2.0km s-min=2.1km az=0.0
ISC 02 19:25:37.6±1.0, **41°.53N**±0°.02×**19°.44E**±0°.02, **h13**^{km}±7^{km},
n96, σ1^{s}**18**/153, **26C-13D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.37	119	Pg	Pg	19 25 44.0	-1.0
TIR				Sg	Sg	19 25 49.1	-0.8
TIR				AML	AML	19 25 49.5	
	12nm,0.5s						
ULC	Ulcinj	0.46	341	⇓*i*Pg	Pb	19 25 47.2	-0.4
ULC				*i* Sg	Sb	19 25 54.5	+0.2
DRME	Dracevica, Mon	0.69	344	⇑*i*Pg	Pg	19 25 50.8	-0.1
DRME				*e*Sg	Sb	19 26 01.1	+0.3
PHP	Peshkopia	0.77	78	P	Pg	19 25 51.1	-1.4
PHP				Sg	Sg	19 26 01.7	-0.8
PHP				AML	AML	19 26 07.7	
	3.9nm,0.4s						
BUM	Brajici-Budva	0.87	332	⇑*i*Pg	Pg	19 25 54.9	+0.4
BUM				*i* Sg	Sg	19 26 06.8	+0.9
PDG	Podgorica	0.91	351	Pn	Pb	19 25 54.7	-0.6
PDG				S	Sn	19 26 08.8	-0.3
PDG	Podgorica	0.91	351	⇑P	Pn	19 25 56.0	-0.1
PDG				⇑S	Sn	19 26 09.5	+0.4
PDG	Podgorica	0.91	351	*e*Pg	Pb	19 25 54.6	-0.6
PDG				*e*Sg	Sn	19 26 09.6	+0.5
PDG	Podgorica	0.91	351	⇑*i*Pg	Pb	19 25 54.6	-0.6
PDG				*i* Sg	Sn	19 26 08.1	-1.0
VLO	Vlora	1.06	178	Pg	Pg	19 25 59.2	+1.2
VLO				Sg	Sn	19 26 15.1	+2.4
VLO				AML	AML	19 26 19.9	
	4.6nm,0.3s						
VLO	Vlora	1.06	178	S	Sn	19 26 14.5	+1.8
CEME	Cevo	1.09	339	⇓*i*Pg	Pb	19 25 58.2	-0.1
CEME				*e*Sg	Sn	19 26 13.9	+0.3
OHR	Ohrid	1.10	112	*i* Pg	Pb	19 25 57.7	-0.9
OHR				*i* Sg	Sg	19 26 15.0	+1.7
OHR				*e*Lg	Lg	19 26 16.4	
	comp=N,404nm,0.7s						
OHR				*e*Lg	Lg	19 26 17.2	
	comp=E,364nm,0.6s						
PVY	Plav	1.13	20	⇑*i*Pg	Pb	19 25 58.5	-0.6
PVY				*i* Sg	Sg	19 26 14.5	+0.3
HCY	Herceg Novi	1.16	323	⇑*i*Pg	Pg	19 26 00.7	+0.8
HCY				*i* Sg	Sg	19 26 16.7	+1.7
NKME	Niksic	1.29	344	⇓*i*Pg	Pg	19 26 02.6	+0.2
NKME				*e*Sg	Sg	19 26 20.3	+1.1
KOME	Kolasin	1.32	2	⇓*i*Pg	Pg	19 26 03.3	+0.3
KOME				*e*Sg	Sg	19 26 21.1	+0.9
KBN	Korca	1.36	131	P	Pb	19 26 03.9	+0.9
KBN				Sg	Sg	19 26 23.4	+1.9
KBN	Korca	1.36	131	S	Sg	19 26 23.2	+1.7
IVA	Berane	1.38	14	⇑*i*Pg	Pb	19 26 03.0	-0.4
IVA				*i* Sg	Sg	19 26 21.8	-0.4
BRY	Bratogost	1.53	334	⇓*i*Pg	Pg	19 26 06.6	-0.3
BRY				*i* Sg	Sg	19 26 26.0	-0.8
SKO	Skopje	1.56	73	*i* Pg	Pb	19 26 06.6	+0.2
SKO				*i* Sg	Sg	19 26 28.2	+0.4
NEST	Nestorio	1.65	132	P	Pn	19 26 07.1	+0.8
NEST				S	Sg	19 26 30.6	-0.1
UPM	Unac-Piva	1.72	347	⇓*i*Pn	Pb	19 26 09.4	+0.2
UPM				*i* Sn	Sb	19 26 30.4	-0.4
SJES	Sjenica	1.78	13	*e*Pg	Pb	19 26 10.3	+0.2
SJES				*e*Sg	Sg	19 26 35.2	+0.4
PLE	Pljevlja	1.80	359	⇓*i*Pn	Pg	19 26 11.4	-0.8
PLE				*i* Sn	Sn	19 26 31.7	+0.5
SELS	Selova	2.10	36	*e*Pn	Pn	19 26 13.6	+1.1
SELS				*e*Sn	Sb	19 26 41.0	-0.5
IGT	Igoumenitsa	2.11	161	P	Pn	19 26 12.6	0.0
IGT				S	Sn	19 26 39.1	+0.5
IVAS	Ivanjica	2.11	14	*e*Pn	Pn	19 26 13.7	+1.0
IVAS				*e*Sn	Sb	19 26 41.4	-0.6
KPRO	Kipourio	2.15	136	P	Pn	19 26 14.3	+1.2
KPRO				S	Sn	19 26 40.9	+1.2
KZN	Kozani	2.15	124	P	Pn	19 26 14.3	+1.1
KZN				S	Sb	19 26 42.0	-0.9
BARS	Barje	2.19	53	*i* Pn	Pn	19 26 14.8	+1.2
BARS	Barje	2.19	53	*e*Pn	Pn	19 26 14.3	+0.7
BARS				*e*Sn	Sb	19 26 43.6	-0.4
MATE	Matera	2.25	248	⇓P	Pn	19 26 14.0	-0.4
MATE				⇑S	Sn	19 26 40.1	-1.9
GOCS	Kraljevo Serbi	2.29	27	*e*Pn	Pn	19 26 16.6	+1.4
GOCS				*e*Sn	Sb	19 26 45.9	-1.2
GRG	Griva	2.31	103	P	Pn	19 26 16.0	+0.7
GRG				S	Sn	19 26 43.9	+0.4
GRG	Griva	2.31	103	*i* Pn	Pn	19 26 16.1	+0.8
BBLS	Lazi&#263i	2.34	359	*e*Pn	Pn	19 26 17.5	+1.7
BBLS				*e*Sn	Sn	19 26 45.8	+1.4
PRMD	Pramanda	2.36	147	P	Pn	19 26 17.5	+1.4
PRMD				S	Sn	19 26 47.3	+2.3
VAY	Valandovo	2.36	94	*i* Pn	Pn	19 26 16.9	+0.9
VAY				*i* Sn	Sn	19 26 43.9	-1.0
VAY				*e*Lg	Lg	19 26 45.8	
	comp=E,45nm,0.9s						
VAY				*e*Lg	Lg	19 26 47.5	
	comp=N,39nm,0.6s						
BOSS	Bosilegrad	2.46	66	*e*Pn	Pn	19 26 18.1	+0.6
BOSS				*e*Sn	Sn	19 26 48.1	+0.7
GRUS	Gruza	2.54	21	*e*Pn	Pn	19 26 19.7	+1.2
GRUS				*e*Sn	Sb	19 26 52.8	-1.3
TETR	Tetrakomo, Epi	2.59	147	P	Pn	19 26 20.2	+0.9
TETR				S	Sn	19 26 51.2	+0.4
KNT	Kendrikon	2.63	97	P	Pn	19 26 20.1	+0.3
KNT				S	Sn	19 26 51.1	-0.4
KNT	Kendrikon	2.63	97	*i* Pn	Pn	19 26 20.6	+0.9
BOVS	Bovan	2.69	38	⇑P	Pn	19 26 21.7	+1.2
BOVS				⇑S	Sn	19 26 54.4	+1.4
BOVS	Bovan	2.69	38	*e*Pn	Pn	19 26 21.4	+0.9
BOVS				*e*Sn	Sn	19 26 53.1	+0.1
KKB	Krupnik	2.78	82	S	Sn	19 26 55.4	+0.2
KKB	Krupnik	2.78	82	*i* Pn	Pn	19 26 23.0	+1.2
TRUS	Trudelj	2.79	14	*e*Pn	Pn	19 26 20.7	-1.2
TSLK	Tsoukalades, L	2.86	161	P	Pn	19 26 22.5	-0.4
LKD2	Lefkada island	2.89	161	P	Pn	19 26 22.4	-0.9
LKD2				S	Sn	19 26 56.3	-1.7
ZAPS	Zavoj	2.94	53	*e*Pn	Pn	19 26 25.4	+1.4
ZAPS				*e*Sn	Sn	19 27 01.3	+2.1
NYDR	Nydri-Lefkada	2.97	161	P	Pn	19 26 23.8	-0.6
TEKS	Tekeris	3.02	1	*e*Pn	Pn	19 26 25.7	+0.6
TEKS				*e*Sn	Sn	19 27 01.8	+0.6
SOH	Sokhos	3.04	102	*i* Pn	Pn	19 26 26.0	+0.6
ZAGS	Zajecar	3.07	41	*e*Pn	Pn	19 26 27.2	+1.4
ZAGS				*e*Sn	Sn	19 27 03.5	+1.0
TIP	Timpagrande	3.12	222	⇑P	Pn	19 26 26.1	-0.3
SRS	Serrai	3.15	96	*i* Pn	Pn	19 26 27.6	+0.7
BLKB	Belogradchik	3.18	48	⇑S	Sn	19 27 07.4	+2.4
EVR	Evrytania	3.18	144	P	Pn	19 26 28.6	+1.2
BORS2	Bor- Borsko je	3.19	36	*e*Pn	Pn	19 26 26.9	-0.5
BORS2				*e*Sn	Sn	19 27 05.0	-0.3
MMB	Musomishta	3.23	88	*i* Pn	Pn	19 26 29.3	+1.2
AVAS	Avala Beograd	3.26	14	*e*Pn	Pn	19 26 28.6	+0.2
AVAS				*e*Sn	Sn	19 27 07.8	+0.7
KUBS	Kucevo	3.32	29	*e*Pn	Pn	19 26 28.4	-0.8
KUBS				*e*Sn	Sn	19 27 06.9	-1.6
FRGS	Fruska Gora	3.64	4	*e*Pn	Pn	19 26 33.6	0.0
FRGS				*e*Sn	Sn	19 27 16.1	-0.3
MDVR	Moldovita	3.65	26	⇑P	Pn	19 26 34.7	+0.9
MDVR				⇑S	Sn	19 27 17.8	+1.0
VRSS	Vrsac	3.85	20	*e*Pn	Pn	19 26 37.1	+0.6
VRSS				*e*Sn	Sn	19 27 22.2	+0.7
HERR	Herculane	4.00	32	⇑P	Pn	19 26 39.6	+1.1
SRE	Strehaia	4.17	40	⇓P	Pn	19 26 42.2	+1.3
BZS	Buzias	4.38	20	⇑P	Pn	19 26 44.3	+0.5
GZR	Gura Zlata	4.56	31	⇑P	Pn	19 26 47.8	+1.4
GZR				⇑S	Sn	19 27 41.2	+1.9
SURR	Surduc	4.65	24	⇑P	Pn	19 26 47.9	+0.4

MORH	Mrgy, Hungar	4.72	353	⇓P	Pn	19 26 49.2	+0.7
ELND	Elena	4.98	72	⇑P	Pn	19 26 53.6	+1.6
ARR	Arges	5.39	43	⇑P	Pn	19 26 59.8	+2.1
VOIR		5.65	44	⇓P	Pn	19 27 03.8	+2.5
MARR	Marisel-Cluj	5.79	26	⇑P	Pn	19 27 05.1	+1.9
SOKA	Soboth	6.05	330	*i* Pn	Pn	19 27 07.7	+0.9
	comp=N,2.1nm,0.5s						
MLR	Muntele Rosu	6.17	48	⇑P	Pn	19 27 11.0	+2.5
DOPR	Dopca	6.18	42	⇑P	Pn	19 27 10.9	+2.4
NEHR	Nehoiu	6.33	50	⇓P	Pn	19 27 11.8	+1.2
PLOR	Plostina	6.78	48	⇑P	Pn	19 27 18.8	+2.0
VRI	Vrincioaia	6.83	48	⇓P	Pn	19 27 19.8	+2.3
KECS	Kecovo	6.99	6	*e*SN	Sn	19 28 43.6	+4.6
ABTA	Abfaltersbach	7.21	319	*i* Pn	Pn	19 27 23.3	+0.5
	comp=N,0.8nm,0.3s						
LESA	Schwarzleotal	7.62	323	*i* Pn	Pn	19 27 29.1	+0.7
	comp=N,1.3nm,0.3s						
STHS	Stebnicka Huta	7.99	9	*e*SN	Sn	19 29 01.5	-2.0
WTTA	Wattenberg	8.00	318	*i* Pn	Pn	19 27 34.5	+0.8
	comp=N,1.7nm,0.3s						
WTTA				*i* Sn	Sn	19 29 04.0	-0.1
	comp=N,4.4nm,0.5s						
WATA	Walderalm	8.08	319	*i* Pn	Pn	19 27 35.4	+0.7
	comp=N,2.8nm,0.4s						
SQTA	Sankt Quirin	8.19	317	*i* Pn	Pn	19 27 37.1	+0.8
	comp=N,1.3nm,0.4s						
SQTA				*i* Sn	Sn	19 29 07.4	-1.3
	comp=N,3.9nm,0.6s						
MOTA	Moosalm	8.33	317	*i* Pn	Pn	19 27 39.9	+1.8
	comp=N,0.9nm,0.3s						
MOTA				*i* Sn	Sn	19 29 11.8	-0.3
	comp=N,3.6nm,0.7s						
GERES	GERESS Array B	8.36	333	Pn	Pn	19 27 40.0	+1.5
	baz=149,slow=13,SNR=2.5						
GERES				Sn	Sn	19 29 14.9	+2.2
	baz=150,slow=25,SNR=1.8						
	comp=N,0.3nm,0.5s						
FINES	FINESS Array B	20.35	9	P	P	19 30 11.9	-1.4
	comp=N,2.6nm,0.8s,baz=188,slow=9.5,SNR=6.4						
	comp=N,2.6nm,0.8s						
ZALV	Zalesovo Beam	44.14	50	P	P	19 33 44.5	-1.0
	comp=N,0.6nm,0.4s,baz=295,slow=10.0,SNR=3.6						
	comp=N,0.6nm,0.4s						
MKAR	Makanchi Array	44.33	61	P	P	19 33 46.2	-1.0
	comp=N,0.9nm,0.7s,baz=283,slow=7.6,SNR=10.0						
	comp=N,0.9nm,0.7s						

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*MDD **02** 20:01:58.1±0.8, 36°.90N×3°.93E, h0^{km}, Mb4.4/19, M_mb3.8/19, Error ellipse: s-maj=6.9km s-min=5.0km az=142.0*

ISC 02 20:02:00.5±3.6**, 37°.1N**±0°.2×**3°.7E**±0°.1**, h10^{km}, n12, σ1ˢ.28**/20**, 6C, Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETOS	Mallorca	2.77	346	Pn	Pn	20 02 44.9	0.0
ETOS				Sn	Sn	20 03 15.8	-2.5
ETOS	Mallorca	2.77	346	Pn	Pn	20 02 44.7	-0.2
ETOS				⇑*i*IVmb_VC		20 02 54.7	
	729nm,SNR=1.1						
ETOS				Sn	Sn	20 03 19.4	+1.1
CART	Cartagena	3.78	279	Pn	Pn	20 02 57.5	-1.3
EVIV	Cofrentes, Val	4.38	301	Pn	Pn	20 03 06.8	-0.3
EVIV				⇑*i*IVmb_VC		20 03 16.8	
	354nm,SNR=1.4						
EVIV				Sn	Sn	20 03 59.8	+1.6
ETOB	Tobarra	4.44	292	Pn	Pn	20 03 08.1	+0.2
ETOB				Sn	Sn	20 03 56.3	-3.3
ETOB	Tobarra	4.44	292	Pn	Pn	20 03 08.5	+0.6
ETOB				⇑*i*IVmb_VC		20 03 14.3	
	304nm,SNR=1.1						
ETOB				Sn	Sn	20 04 00.9	+1.3
ECHE	Chera	4.44	306	Pn	Pn	20 03 08.8	+0.8
EMOS	Mosqueruela	4.62	316	Pn	Pn	20 03 10.8	+0.3
EMOS				⇑*i*IVmb_VC		20 03 17.9	
	399nm,SNR=1.8						
EMOS				Sn	Sn	20 04 04.2	-0.1
EPOB	Poblet	4.72	335	Pn	Pn	20 03 11.8	0.0
EPOB				⇑*i*IVmb_VC		20 03 20.9	
	175nm,SNR=1.0						
EPOB				Sn	Sn	20 04 06.3	-0.4
EJON	La Jonquera	5.39	354	Pn	Pn	20 03 21.5	+0.6
EJON	La Jonquera	5.39	354	Pn	Pn	20 03 21.6	+0.6
EQES	Quesada	5.44	280	Pn	Pn	20 03 22.2	+0.5
EQES				⇑*i*IVmb_VC		20 03 22.3	
	189nm,SNR=1.8						
EQES				Sn	Sn	20 04 25.2	+0.8

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*NNC **02** 20:02:31.4±0.5, 42°.79N×77°.95E, h0^{km}, mb1.7, mpv2.8, Error ellipse: s-maj=4.8km s-min=1.5km az=0.0*

*KRNET **02** 20:02:32.3±0.1, 42°.69N×77°.98E, h35^{km}, mb2.3*

*SOME **02** 20:02:32.2, 42°.77N×77°.92E, h15^{km}*

ISC 02 20:02:32.2±1.0**, 42°.76N**±0°.02×**77°.92E**±0°.02**, h14^{km}**±8^{km}**, n40, σ1ˢ.70**/79**, 15C-9D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.45	128	⇑*e*P	Pb	20 02 41.6	-0.4
PRZ				⇑*e*S	Sb	20 02 48.3	-0.3
SATY	Saty	0.47	50	P	Pg	20 02 40.7	-0.8
	24nm,0.1s						
SATY				S	Sg	20 02 46.9	-0.9
	55nm,0.1s						
KURS	Kuram	0.75	14	P	Pg	20 02 46.0	-0.8
	1.9nm,0.1s						
KURS				S	Sg	20 02 56.0	-0.8
	2.3nm,0.1s						
MDOK	Medeo	0.76	302	Pg	Pg	20 02 46.5	-0.4
	2.3nm,0.1s						
MDOK				Lg	Lg	20 02 56.8	
	12nm,0.3s						
KOTS	Kotyrbulak	0.76	309	P	Pg	20 02 46.5	-0.5
	5.6nm,0.1s						
KOTS				S	Sg	20 02 56.9	-0.1
	7.3nm,0.2s						
KOTS	Kotyrbulak	0.76	309	*e*P	Pg	20 02 46.5	-0.5
	5.6nm,0.1s						
KOTS				*e*S	Sg	20 02 57.0	-0.1
	7.3nm,0.2s						
TNSS	Tian-Shan	0.77	291	P	Pg	20 02 46.9	-0.4
	0.7nm,0.1s						
TNSS				S	Sg	20 02 57.5	+0.1
	4.2nm,0.2s						
TNSS	Tian-Shan	0.77	291	*e*P	Pg	20 02 46.9	-0.4
	0.7nm,0.1s						
TNSS				*e*S	Sg	20 02 57.5	+0.1
	4.2nm,0.2s						
KDJ	Kajisay	0.83	221	⇑*e*P	Pg	20 02 48.1	-0.3
KDJ				⇑*e*S	Sg	20 02 59.5	+0.1
KNDC	Almaty	0.84	303	⇓P	Pb	20 02 47.6	-1.0
	5.2nm,0.4s						
KNDC				⇑S	Sg	20 02 59.1	-0.4
	11nm,0.5s						
UZB	Uzynbulak	0.90	64	P	Pb	20 02 47.9	-1.7
	3.0nm,0.1s						
UZB				S	Sg	20 02 59.1	-2.2
	6.4nm,0.1s						
UZB	Uzynbulak	0.90	64	*e*P	Pb	20 02 47.9	-1.7
	3.0nm,0.1s						
UZB				*e*S	Sg	20 02 59.1	-2.2
	6.4nm,0.1s						
KPKS	Kokpek	0.90	38	P	Pb	20 02 48.3	-1.3
	0.1nm,0.1s						
KPKS				S	Sb	20 02 59.9	-1.6
	13nm,0.1s						
KPKS	Kokpek	0.90	38	*e*P	Pb	20 02 48.3	-1.3
	0.1nm,0.1s						
KPKS				*e*S	Sb	20 02 59.9	-1.6
	13nm,0.1s						
TARG	Taragay, Kyrgy	1.03	185	⇑*e*P	Pb	20 02 50.8	-1.3
TARG				⇑*e*S	Sb	20 03 04.0	-1.7
MTBS	Maitube	1.16	289	P	Pn	20 02 53.7	-0.3
	1.3nm,0.1s						
MTBS				S	Sb	20 03 09.1	+0.2
	8.5nm,0.2s						
MTBS	Maitube	1.16	289	*e*P	Pn	20 02 53.7	-0.3
	1.3nm,0.1s						
MTBS				*e*S	Sb	20 03 09.1	+0.2
	8.5nm,0.2s						
SHLS	Shalkode	1.20	70	P	Pg	20 02 59.2	+3.9
	2.0nm,0.1s						
SHLS				S	Sg	20 03 18.6	+7.7
	4.2nm,0.2s						
SHLS	Shalkode	1.20	70	*e*P	Pg	20 02 59.2	+3.9
	2.0nm,0.1s						
SHLS				*e*S	Sg	20 03 18.6	+7.7
	4.2nm,0.2s						
PDGK	Podgornoye	1.28	63	⇓P	Pn	20 02 54.7	-1.1
	0.7nm,0.4s						
PDGK				⇓S	Sb	20 03 11.0	-1.6
	2.1nm,0.6s						
KTBS	Karatobe	1.31	317	P	Pn	20 02 56.5	+0.3
	2.3nm,0.1s						
KTBS				S	Sn	20 03 14.1	+0.7
	0.2nm,0.1s						
BLB	Baldybastay	1.40	17	P	Pb	20 02 57.5	-0.6
	3.6nm,0.1s						
BLB				S	Sb	20 03 15.6	-0.3
	17nm,0.1s						
ARXS	Arharly	1.45	357	P	Pb	20 02 58.5	-0.6
	3.1nm,0.2s						
ARXS				S	Sb	20 03 17.3	-0.2
	12nm,0.1s						
ARXS	Arharly	1.45	357	*e*P	Pb	20 02 58.5	-0.6
	3.1nm,0.2s						
ARXS				*e*S	Sb	20 03 17.3	-0.2
	12nm,0.1s						
KST	Kastek	1.47	282	P	Pb	20 02 59.3	0.0
	0.5nm,0.1s						
KST				S	Sb	20 03 18.6	+0.8
	3.6nm,0.2s						
KST	Kastek	1.47	282	*e*P	Pb	20 02 59.3	0.0
	0.5nm,0.1s						
KST				*e*S	Sb	20 03 18.6	+0.8
	3.6nm,0.2s						
BOOM	Boomskoye usch	1.49	260	⇑*e*P	Pn	20 02 58.8	+0.2
BOOM				⇑*e*S	Sn	20 03 18.0	+0.1
DGS	Degeres	1.65	288	P	Pb	20 03 02.7	+0.3
	0.5nm,0.1s						
DGS				S	Sb	20 03 24.6	+1.6
	4.2nm,0.2s						
DGS	Degeres	1.65	288	*e*P	Pb	20 03 02.7	+0.3
	0.5nm,0.1s						
DGS				*e*S	Sb	20 03 24.6	+1.6
	4.2nm,0.2s						
TKM2	Tokmak 2	1.72	276	⇓*e*P	Pn	20 03 02.4	+0.6
TKM2				⇓*e*S	Sn	20 03 24.1	+0.5
KNOS	Konyrlen	1.84	29	P	Pb	20 03 05.3	-0.4
	0.5nm,0.1s						
KNOS				S	Sb	20 03 29.2	+0.5
	0.7nm,0.1s						
KRBS	Karabastau	1.89	300	P	Pb	20 03 06.7	+0.3
	0.6nm,0.1s						
KRBS				S	Sb	20 03 31.5	+1.5
	3.9nm,0.2s						
KRBS	Karabastau	1.89	300	*e*P	Pb	20 03 06.7	+0.3
	0.6nm,0.1s						
KRBS				*e*S	Sb	20 03 31.5	+1.5
	3.9nm,0.2s						
KTMS	Ketmen	1.91	68	P	Pb	20 03 06.6	-0.2
	0.3nm,0.1s						
KTMS				S	Sg	20 03 31.3	-2.3
	5.0nm,0.1s						
KTMS	Ketmen	1.91	68	*e*P	Pb	20 03 06.7	-0.2
	0.3nm,0.1s						
KTMS				*e*S	Sg	20 03 31.3	-2.3
	5.0nm,0.1s						
KBK	Karagaybulak	2.19	268	⇑*e*P	Pn	20 03 08.8	+0.4
KBK				⇑*e*S	Sn	20 03 35.2	-0.2
JNKS	Jany-Kuch	2.40	226	⇑*e*P	Pn	20 03 10.6	-0.6
JNKS				⇑*e*S	Sn	20 03 38.6	-1.9
AAK	Ala-Archa	2.53	268	⇑*e*P	Pn	20 03 13.4	+0.5
AAK				⇑*e*S	Sn	20 03 43.3	-0.3
USP	Ospenovka	2.56	283	⇓*e*P	Pn	20 03 14.1	+0.8
USP				⇓*e*S	Sn	20 03 44.3	+0.1
UCH	Uchtor	2.58	259	⇓*e*P	Pn	20 03 14.1	+0.2
UCH				⇓*e*S	Sn	20 03 44.4	-0.8

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*IDC **02** 20:12:53.5±1.6, 22°.64N×93°.71E, h0^{km}, mb3.7/7, mbtmp3.7/7, ML2.4/1, Error ellipse: s-maj=99.3km s-min=14.9km az=55.0*

*NDI **02** 20:13:11.4±2.0, 23°.45N×94°.62E, h16^{km}±16^{km}, ML3.7, MW3.5*

ISC 02 20:13:09.8±1.6**, 23°.46N**±0°.08×**94°.62E**±0°.09**, h99^{km}, n30, σ2ˢ.00**/47**, mb3.5**/7**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMP	Imphal	1.49	336	*e*P	Pn	20 13 39.1	+3.1
IMP				*e*S	Sn	20 13 58.0	+2.2
IMP				IAML		20 14 01.2	
	comp=N,311nm,0.2s						
IMP				IAML		20 14 04.8	
	comp=E,123nm,0.4s						
SAIH	SAIHA	1.79	237	*e*P	Pn	20 13 41.2	+1.5
SAIH				*e*S	Sn	20 14 04.9	+2.4
SAIH				IAML		20 14 06.1	
	comp=N,581nm,0.3s						
SAIH				IAML		20 14 07.6	
	comp=E,738nm,0.4s						
KOHI	KOHIMA	2.29	348	*e*P	Pn	20 13 50.4	+4.0
KOHI				*e*S	Sn	20 14 16.8	+2.5
KOHI				IAML		20 14 20.8	
	comp=N,624nm,0.7s						
KOHI				IAML		20 14 23.0	
	comp=E,470nm,0.8s						
MOKO	MOKOCHONG	2.85	358	*e*P	Pn	20 13 56.8	+3.2
MOKO				*e*S	Sn	20 14 29.8	+2.5
MOKO				IAML		20 14 33.1	
	comp=N,645nm,0.5s						
MOKO				IAML		20 14 33.3	
	comp=E,799nm,0.3s						
SHL	Shillong	3.25	311	*e*P	Pn	20 14 02.2	+3.1
SHL				*e*S	Sn	20 14 38.3	+1.2
SHL				IAML		20 14 41.5	
	comp=E,248nm,0.2s						
SHL				IAML		20 14 41.8	
	comp=N,250nm,0.0s						
TEZP	TEZPUR	3.55	333	*e*P	Pn	20 14 04.4	+1.5
TEZP				*e*S	Sn	20 14 45.3	+1.5
TEZP				IAML		20 14 46.0	
	comp=E,862nm,0.2s						
TEZP				IAML		20 14 47.0	
	comp=N,752nm,0.1s						
ITAN	ITANAGAR	3.75	348	*e*S	Sn	20 14 50.4	+1.6
ITAN				IAML		20 14 50.8	
	comp=E,920nm,0.2s						
ITAN				IAML		20 14 51.2	
	comp=N,2µm,0.3s						
LKP	Lekhapani	4.01	16	*e*x	Pn	20 14 08.9	-0.2
LKP				*e*x	Sn	20 14 49.7	-5.4
LKP				IAML		20 14 50.1	
	comp=N,176nm,0.3s						
LKP				IAML		20 14 50.4	
	comp=E,257nm,0.1s						
TAWA	Tawang	4.80	329	*e*P	Pn	20 14 23.1	+2.9
TAWA				*e*S	Sn	20 15 15.6	+0.7
TAWA				IAML		20 15 19.1	
	comp=E,474nm,0.4s						
TAWA				IAML		20 15 20.1	
	comp=N,521nm,0.3s						
DHUB	DHUBRI	4.91	302	*e*P	Pn	20 14 23.9	+2.6
DHUB				*e*S	Sn	20 15 17.8	+0.9
DHUB				IAML		20 15 22.4	
	comp=E,112nm,0.0s						
DHUB				IAML		20 15 22.9	
	comp=N,101nm,0.3s						
CMAR	Chiang Mai Arr	6.42	140	Pn	Pn	20 14 30.1	-12
	baz=314,slow=13,SNR=1.3						
CMAR				Lg	Lg	20 16 18.9	
	comp=N,0.2nm,0.3s,baz=303,slow=19,SNR=1.5						
TAPN	Taplejung	7.34	303	Pn	Pn	20 14 55.8	+1.1
	baz=300,slow=0.0						
TAPN				Sn	Sn	20 16 16.1	-0.5
	comp=N,24nm,0.5s,baz=300,slow=0.0						
ODAN	Odare	7.37	299	Pn	Pn	20 14 56.3	+1.4
	baz=296,slow=0.0						
ODAN				Sn	Sn	20 16 17.5	+0.4
	comp=N,55nm,0.4s,baz=296,slow=0.0						
RAMN	Ramite	8.05	297	Pn	Pn	20 15 06.1	+1.9
	baz=294,slow=0.0						
RAMN				Sn	Sn	20 16 33.1	-0.5
	comp=N,21nm,0.4s,baz=294,slow=0.0						
JIRN	Jiri	8.68	301	Pn	Pn	20 15 14.9	+2.0
	baz=298,slow=0.0						
JIRN				Sn	Sn	20 16 48.7	-0.5
	comp=N,18nm,0.3s,baz=298,slow=0.0						
GUN	Gumba	9.04	301	Pn	Pn	20 15 18.7	+1.0
	baz=299,slow=0.0						
GUN				Sn	Sn	20 16 56.9	-1.0
	comp=N,20nm,0.4s,baz=299,slow=0.0						
PKI	Pulchoki	9.27	298	Pn	Pn	20 15 22.7	+1.9
	baz=296,slow=0.0						
PKI				Sn	Sn	20 17 02.4	-1.0
	comp=N,6.2nm,0.3s,baz=296,slow=0.0						
PKIN	Phulchoki	9.28	298	Pn	Pn	20 15 22.8	+1.9
	baz=296,slow=0.0						
PKIN				Sn	Sn	20 17 02.5	-1.2
	comp=N,11nm,0.3s,baz=296,slow=0.0						
KKN	Kakani	9.46	299	Pn	Pn	20 15 24.7	+1.3
	baz=297,slow=0.0						
KKN				Sn	Sn	20 17 07.5	-0.5
	comp=N,12nm,0.4s,baz=297,slow=0.0						
DMN	Daman	9.53	298	Pn	Pn	20 15 25.7	+1.4
	baz=295,slow=0.0						
DMN				Sn	Sn	20 17 09.3	-0.4
	comp=N,12nm,0.6s,baz=295,slow=0.0						
GKN	Gorkha	10.07	299	Pn	Pn	20 15 32.2	+0.6
	baz=297,slow=0.0						
GKN				Sn	Sn	20 17 20.7	-2.0
	comp=N,17nm,0.4s,baz=297,slow=0.0						
KOLN	Koldanda	10.82	296	Pn	Pn	20 15 43.6	+1.7
	baz=294,slow=0.0						
DANN	Dangsing	10.91	299	Pn	Pn	20 15 45.4	+2.2
	baz=297,slow=0.0						
DANN				Sn	Sn	20 17 41.6	-1.9
	comp=N,12nm,0.6s,baz=297,slow=0.0						
MKAR	Makanchi Array	25.30	340	P	P	20 18 27.1	0.0
	comp=N,0.7nm,0.4s,baz=147,slow=10,SNR=20						
	comp=N,0.7nm,0.4s						
KURBB	Kurchatov Arra	29.86	339	P	P	20 19 06.8	-0.8
	comp=N,0.3nm,0.5s,baz=146,slow=9.5,SNR=4.1						
	comp=N,0.3nm,0.5s						
ZALV	Zalesovo Beam	31.32	349	P	P	20 19 19.6	-1.0
	comp=N,0.3nm,0.4s,baz=163,slow=7.5,SNR=1.9						
	comp=N,0.3nm,0.4s						
BVAR	Borovoye Array	34.78	334	P	P	20 19 49.3	-1.3
	comp=N,0.3nm,0.4s,baz=129,slow=10,SNR=2.3						
	comp=N,0.3nm,0.4s						
WRA	Warramunga Arr	57.98	135	P	P	20 22 47.6	-4.7
	comp=N,0.2nm,0.4s,baz=322,slow=7.4,SNR=8.8						
	comp=N,0.2nm,0.4s						
FINES	FINESS Array B	59.42	329	P	P	20 22 59.4	-2.4
	comp=N,1.5nm,0.8s,baz=196,slow=11,SNR=3.8						
	comp=N,1.5nm,0.8s						
ASAR	Alice Springs	60.42	138	P	P	20 23 05.0	-4.2
	comp=N,0.6nm,0.4s,baz=317,slow=6.7,SNR=14						
	comp=N,0.6nm,0.4s						

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*KOLA **02** 20:16:08.4, 67°.63N×33°.85E, h0^{km}, ML1.4, Error ellipse: s-maj=3.2km s-min=1.6km az=140.0, Khibiny, mines Rasvumchorr, Central*

HEL 02 20:16:08.3±0.2**, 67°.59N×33°.92E, h0^{km}, ML1.4, Suspected explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA	Apatity	0.20	265	P	Pg	20 16 11.7	-0.4
APA0	Apatity Array	0.36	273	P	Pg	20 16 14.1	-1.0
APA0				S	Sg	20 16 18.7	-1.0
LVZ	Lovozero	0.42	41	P	Pg	20 16 15.4	-0.9
LVZ				S	Sg	20 16 21.0	-0.6
LVZ	Lovozero	0.42	41	PG	Pg	20 16 15.9	-0.3
	baz=225						
LVZ				SG	Sg	20 16 21.2	-0.5
KVDA	Kovda	0.99	205	P	Pg	20 16 27.1	-0.1
KVDA				S	Sg	20 16 39.8	-0.3
VRF	Varrio	1.66	278	PG	Pn	20 16 36.4	-2.2
VRF				MSG		20 16 57.8	
	comp=Z,2.8nm,0.2s						
VRF				SB	Sn	20 16 58.2	-2.3
TERR	Teriberka	1.68	15	P	Pn	20 16 37.8	-1.1
TERR				S	Sn	20 16 58.8	-2.2
OLKF	Oulanka, Finla	2.19	237	PG	Pb	20 16 47.8	-0.8
OLKF				MSG		20 17 13.1	
	comp=Z,1.5nm,0.2s						
OLKF				SG	Sb	20 17 16.1	-0.2
KU6	Riekki	2.24	227	PG	Pn	20 16 47.9	+1.4
	baz=43						
KU6				MSG		20 17 14.6	
	comp=Z,0.9nm,0.2s						
KU6				SG	Sb	20 17 17.6	-0.1
RAJF	Raja-Jooseppi	2.29	295	PB	Pn	20 16 47.6	+0.3
RAJF				SN	Sn	20 17 15.6	-0.6
MSF	Maaselka	2.57	231	PG	Pb	20 16 54.0	-1.1
MSF				SG	Sb	20 17 28.0	+0.8
VADS	Vadso	3.03	329	S	Sn	20 17 32.0	-2.4
RANF	Ranua	3.23	244	PB	Pb	20 17 04.6	-2.0
RANF				SG	Sb	20 17 46.7	+0.3
RNF	Rovaniemi	3.25	256	SB	Sb	20 17 45.2	-1.5
KEV	Kevo	3.33	314	PN	Pn	20 17 01.3	-0.3
	baz=126						
KEV				SN	Sn	20 17 39.9	-1.9
ARA0	ARCESS Array S	3.66	306	PN	Pn	20 17 05.1	-0.9
ARA0				SN	Sn	20 17 47.9	-1.9
ARCES	ARCESS Array B	3.66	306	P	Pn	20 17 04.9	-1.1
ARCES				S	Sn	20 17 46.8	-3.0
HEF	Hetta	3.95	287	SG	Sg	20 18 12.5	-2.4

KRSC 02 21:15:06.8±1.7**, 49°.88N×157°.21E, h48^{km}**±27^{km}**, Ml3.7, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.07	319	*e*P	Pn	21 15 25.5	+0.3
SKR				*e*S	Sn	21 15 38.0	-1.0
PAU	Pauzhetka	1.61	351	*e*P	Pn	21 15 34.3	+1.6
PAU				*e*S	Sn	21 15 53.6	+1.3
KDTR	Khodutka, Kamc	2.01	16	*e*P	Pn	21 15 41.4	+3.3
KDTR				*e*S	Sn	21 16 06.0	+4.0
ASAK	Asacha	2.54	10	*e*P	Pn	21 15 48.9	+3.3
ASAK				*e*S	Sn	21 16 19.7	+4.4
MTVR	Mutnovka	2.68	13	*e*P	Pn	21 15 50.7	+3.2
MTVR				*e*S	Sn	21 16 22.7	+4.0
RUS	Russkaya	2.68	17	*e*P	Pn	21 15 50.1	+2.8
RUS				*e*S	Sn	21 16 21.1	+2.5
GRL	Gorelyy	2.73	11	*e*P	Pn	21 15 51.7	+3.5
GRL				*e*S	Sn	21 16 24.2	+4.2
UGLR	Uglovaya	3.48	16	*e*P	Pn	21 16 02.2	+3.7
UGLR				*e*S	Sn	21 16 43.0	+4.6
AVH	Avacha	3.52	15	*e*P	Pn	21 16 03.0	+4.0
AVH				*e*S	Sn	21 16 44.2	+4.8
KOK	Koryaka	3.53	14	*e*P	Pn	21 16 03.6	+4.5
KOK				*e*S	Sn	21 16 45.3	+5.8
SDLR	Sedlovina	3.56	16	*e*P	Pn	21 16 02.6	+3.1
SDLR				*e*S	Sn	21 16 43.9	+3.5
KRER	Koryakskii	3.56	15	*e*S	Sn	21 16 44.4	+3.9
KRX	Arik	3.60	14	*e*P	Pn	21 16 03.4	+3.4
KRX				*e*S	Sn	21 16 45.7	+4.4
SPN	Mys Shipunski	3.67	28	*e*P	Pn	21 16 04.9	+4.0
SPN				*e*S	Sn	21 16 45.7	+2.8
KZV	Kizimen	5.57	19	*e*P	Pn	21 16 32.0	+4.9
KBTR	Krutoberegovo	7.18	26	*e*P	Pn	21 16 52.9	+3.9

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*IDC **02** 21:23:41.9±1.2, 30°.43N×139°.04E, h423^{km}±13^{km}, mb3.4/6, mbtmp4.1/9, Error ellipse: s-maj=42.2km s-min=18.5km az=81.0*

*JMA **02** 21:23:42.5±0.5, 30°N±3°×13°9E±°, h460^{km}, MV3.8/17, NEAR TORISHIMA IS*

ISC 02 21:23:37.4±1.1**, 29°.8N**±0°.1×**138°.8E**±0°.2**, h400^{km}, n16, σ1ˢ.14**/14**, mb3.9**/6**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	3.40	15	P	Pn	21 24 44.9	+1.0
	167nm,0.8s,baz=275,slow=21,SNR=1.9						
JHJ				S	S	21 25 35.7	-2.2
	159nm,0.8s,baz=63,slow=23,SNR=1.7						
CBIJ	Chichi jima	4.05	131	*e*S	S	21 26 03.2	+14
JCJ	Chichijima	4.05	131	P	Pn	21 24 50.1	0.0
	153nm,1.0s,baz=302,slow=16,SNR=1.7						
JCJ				S	S	21 25 50.2	+1.2
	56nm,0.4s,baz=278,slow=22,SNR=7.9						
TK02	Tokai 2	4.20	349	*e*P	Pn	21 24 57.1	+6.0
JOD2	Odawara 2	5.44	3	*e*P	Pn	21 25 06.3	+2.4
JNY	Yasuok	5.58	352	*e*P	Pn	21 25 09.3	+3.8
JAG	Ashikaga	6.61	5	*e*P	P	21 25 17.1	-0.1
MJAR	Matsushiro Arr	6.72	356	P	P	21 25 18.2	-0.2
	4.9nm,0.5s,baz=172,slow=11,SNR=12						

JHO	**Hitachi**	6.94	12	*e*P	P	21 25 21.1	+0.2
USRK	**Ussuriysk Ar.**	15.33	341	P	P	21 26 53.0	-0.2
	0.9nm,0.3s,baz=153,slow=8.9,SNR=4.3						
WRA	**Warramunga Arr**	49.66	185	P	P	21 31 57.8	+7.3
	0.3nm,0.3s,baz=1.4,slow=7.9,SNR=8.1						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	54.00	316	P	P	21 32 22.0	+0.2
	0.5nm,0.5s,baz=79,slow=7.5,SNR=2.0						
	0.5nm,0.5s						
ARCES	**ARCESS Array B**	69.97	340	P	P	21 34 06.4	-0.1
	6.5nm,1.1s,baz=61,slow=6.4,SNR=5.3						
	6.5nm,1.1s						
FINES	**FINESS Array B**	74.17	333	P	P	21 34 30.7	-0.5
	1.9nm,0.7s,baz=74,slow=6.3,SNR=7.8						
	1.9nm,0.7s						
HFS	**Hagfors**	79.72	335	P	P	21 35 01.2	-0.6
	2.7nm,1.0s,baz=60,slow=8.5,SNR=1.6						
	2.7nm,1.0s						
NVAR	**Mina Array Bea**	81.17	51	P	P	21 35 09.6	-0.5
	0.8nm,0.3s,baz=341,slow=5.7,SNR=3.8						
	0.8nm,0.3s						

RSNC 02 21:38:59.4±0.0, 6°N±2°×7°8W±°, h13km±4km, M2.8, mB3.8, mb4.0, ML2.5, MLv3.4, Mw(mB)2.8, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOLC	**Bahia Solano**	0.49	38	P	Pg	21 39 09.1	+0.1
SOLC				S	Sg	21 39 13.5	-2.0
PIZC	**Pizarro, Choco**	0.94	158	P	Pb	21 39 14.8	-2.7
CBOC	**Ciudad Bolivar**	1.69	89	P	Pn	21 39 25.6	-3.2
CBOC				S	Sn	21 39 44.3	-6.1
PLMC	**San Jos del P**	1.70	123	P	Pn	21 39 25.4	-3.4
DBBC	**Dabeiba**	1.90	52	P	Pn	21 39 30.6	-1.0
HELC	**Santa Helena**	2.20	81	P	Pn	21 39 34.5	-1.5
HELC				S	Sn	21 39 57.1	-6.1
YOTC	**Yotoco, Valle**	2.29	144	P	Pn	21 39 34.7	-2.4
GUY2C	**Guyana, Caldas**	2.41	105	P	Pn	21 39 37.1	-1.9
RECRC	**Villamaria, Ca**	2.50	110	P	Pn	21 39 38.5	-1.9
ANIL	**Santa Ana**	2.66	120	P	Pn	21 39 40.8	-1.5
NORC	**Norcasia**	2.84	95	P	Pn	21 39 44.6	+0.1
UREC	**San Jos de Ur**	2.88	49	P	Pn	21 39 45.2	+0.2
ORTC	**Ortega, Tolima**	3.12	128	P	Pn	21 39 46.7	-1.6
PTBC	**PUERTO BERRIO,**	3.31	78	P	Pn	21 39 51.7	+0.7
POPC	**Popayan, Colom**	3.44	162	P	Pn	21 39 51.4	-1.5
PRAC	**Prado**	3.52	127	P	Pn	21 39 53.8	-0.1
SPBC	**San Pablo de B**	3.62	93	P	Pn	21 39 54.5	-0.9
BBAC	**Balboa, Cauca**	3.82	173	P	Pn	21 39 58.2	0.0
BCIP	**Isla Barro Col**	3.92	328	P	Pn	21 39 57.8	-1.6
GARC	**Garzon, Huila**	4.25	149	P	Pn	21 39 58.3	-5.8
RUSC	**La Rusia**	4.60	89	P	Pn	21 40 08.0	-1.2
PAMC	**Pamplona, Colo**	5.20	73	P	Pn	21 40 15.4	-1.9

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*IDC **02** 21:45:58.4±1.4, 62°.92N×151°.65W, h111km±14km, mb3.5/13, mbtmp3.8/17, Error ellipse: s-maj=17.0km s-min=10.6km az=110.0*

*NEIC **02** 21:46:00.4±0.9, 62°.95N±0°.04×151°.37W±0°.08, h131km±4km, Error ellipse: s-maj=5.4km s-min=5.2km az=202.0*

*AEIC **02** 21:46:01.0±1.0, 62°.95N±0°.04×151°.32W±0°.08, h126km±4km, ML3.3, mb3.8/5(NEIC), ML3.5/256(NEIC), Error ellipse: s-maj=5.5km s-min=4.9km az=48.0*

ISC 02 21:46:00.6±0.6, **62°.94N**±0°.03×**151°.36W**±0°.04, **h132**km±5km, **n241**, σ**0.73**/257, **mb3.7**/14, **Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPLA	**Purkeypile**	0.38	264		Pn	21 46 19.4	-0.2
PPLA					Sn	21 46 33.2	-0.6
PPLA				IAML		21 46 34.2	
	comp=E,552nm,0.6s						
PPLA				IAML		21 46 34.3	
	comp=N,824nm,0.7s						
L22K	**Petersville**	0.49	147	Pn	Pn	21 46 19.8	-0.2
TRF	**Thorofare Moun**	0.71	43	Pn	Pn	21 46 21.0	-0.4
TRF				Sn	Sn	21 46 36.6	-0.7
TRF				IAML		21 46 37.8	
	comp=E,2μm,0.6s						
TRF				IAML		21 46 39.8	
	comp=N,706nm,0.6s						
CUT	**Chulitna**	0.73	136	Pn	Pn	21 46 21.1	-0.3
CUT				Sn	Sn	21 46 36.8	-0.4
CUT				IAML		21 46 44.0	
	comp=N,1μm,0.5s						
SKT	**Skwentna**	0.96	185	Pn	Pn	21 46 23.3	-0.2
SKT				Sn	Sn	21 46 39.6	-1.1
CHUM	**Lake Minchumin**	1.04	336		Pn	21 46 24.3	+0.2
CHUM					Sn	21 46 41.3	-0.6
WAT7	**Susitna Watana**	1.15	94		Pn	21 46 25.1	-0.1
WAT7					Sn	21 46 43.4	-0.7
BPAW	**Bear Paw Mtn.**	1.18	8	Pn	Pn	21 46 25.2	-0.3
RND	**Reindeer**	1.23	66	Pn	Pn	21 46 25.6	-0.4
RND				Sn	Sn	21 46 44.0	-1.3
RND				IAML		21 46 45.8	
	comp=N,836nm,0.5s						
RND				IAML		21 46 48.0	
	comp=E,755nm,0.3s						
L20K	**Farewell, AK**	1.25	250	Pn	Pn	21 46 26.0	-0.2
L20K				IAML		21 46 46.8	
	comp=N,201nm,0.7s						
WAT1	**Susitna Watana**	1.29	94		Pn	21 46 26.5	-0.1
WAT1					Sn	21 46 46.0	-0.4
K20K	**Telida**	1.30	290	Pn	Pn	21 46 26.6	-0.1
K20K					Sn	21 46 45.3	-1.3
K20K				IAML		21 46 46.2	
	comp=E,378nm,0.7s						
K20K				IAML		21 46 46.4	
	comp=N,258nm,0.6s						
M22K	**Willow**	1.32	154	Pn	Pn	21 46 26.9	+0.1
M20K	**Styx River**	1.34	219	Pn	Pn	21 46 26.9	-0.3
M20K				Sn	Sn	21 46 46.1	-1.4
M20K				IAML		21 46 47.4	
	comp=E,205nm,0.5s						
MCK	**McKinley**	1.35	53	Pn	Pn	21 46 27.0	-0.2
MCK				IAML		21 46 47.3	
	comp=N,336nm,0.7s						
MCK				IAML		21 46 49.8	
	comp=E,418nm,0.6s						
STLK	**Strandline Lak**	1.46	189	Pn	Pn	21 46 28.4	-0.1
STLK				Sn	Sn	21 46 49.2	-0.5
STLK				IAML		21 46 50.1	
	comp=E,947nm,0.8s						
STLK				IAML		21 46 51.9	
	comp=N,475nm,0.4s						
BWN	**Browne**	1.50	33	Pn	Pn	21 46 29.0	+0.1
BWN				IAML		21 46 52.5	
	comp=E,308nm,1.0s						
BWN				IAML		21 46 59.2	
	comp=N,272nm,0.7s						
SUA	**Susitna One**	1.51	169	Pn	Pn	21 46 29.3	+0.2
SUA				IAML		21 46 53.0	
	comp=N,394nm,1.0s						
SUA				IAML		21 46 53.1	
	comp=E,521nm,0.4s						
GHO	**Glory Hole Cre**	1.63	135	Pn	Pn	21 46 30.4	0.0
GHO				IAML		21 47 00.4	
	comp=E,663nm,0.3s						
GHO				IAML		21 47 00.8	
	comp=N,603nm,0.3s						
SPNN	**North Nagishla**	1.70	202		Pn	21 46 31.6	+0.3
WAT6	**Susitna Watana**	1.70	101		Pn	21 46 30.8	-0.5
WAT6					Sn	21 46 53.4	-1.3
PMR	**Palmer**	1.71	141	Pn	Pn	21 46 30.8	-0.4
PMR				Sn	Sn	21 46 53.5	-0.9
PMR				IAML		21 46 55.8	
	comp=N,493nm,0.5s						
PMR				IAML		21 47 01.6	
	comp=E,379nm,0.6s						
SPBG	**Spurr Blockage**	1.75	196		Pn	21 46 32.5	+0.7
SPCN	**Chakachatna No**	1.76	193		Pn	21 46 32.4	+0.5
SPWE	**Spurr West**	1.76	199		Pn	21 46 32.4	+0.4
J20K	**Nowinta River**	1.76	316	Pn	Pn	21 46 31.5	-0.3
J20K				IAML		21 46 56.0	
	comp=N,336nm,0.7s						
J20K				IAML		21 46 56.0	
	comp=E,255nm,0.6s						
L19K	**White Mountain**	1.79	246	Pn	Pn	21 46 32.1	-0.1
CKL	**Chakachamna La**	1.81	195		Pn	21 46 32.8	+0.3
SML	**Sawmill**	1.81	127	Pn	Pn	21 46 31.8	-0.6
SML				IAML		21 47 02.9	
	comp=N,597nm,0.8s						
DHY	**Denali Highway**	1.82	84	Pn	Pn	21 46 32.4	-0.3
FIS	**Fire Island**	1.88	163	Pn	Pn	21 46 34.3	+1.1
NEA2	**Nenana**	1.95	30	Pn	Pn	21 46 33.3	-0.7
NEA2				IAML		21 46 58.3	
	comp=E,110nm,0.5s						
RC01	**Rabbit Creek A**	2.01	157	Pn	Pn	21 46 34.4	-0.4
RC01				IAML		21 47 01.6	
	comp=E,431nm,0.3s						
RC01				IAML		21 47 02.6	
	comp=N,572nm,0.4s						
M23K	**Glacier View**	2.04	123		Pn	21 46 34.7	-0.5
KNK	**Knik Glacier**	2.05	137	Pn	Pn	21 46 34.9	-0.3
KNK				IAML		21 47 09.9	
	comp=N,462nm,0.4s						
WRH	**Wood River Hil**	2.12	42	Pn	Pn	21 46 35.6	-0.5
WRH				IAML		21 47 03.4	
	comp=N,87nm,0.9s						
SCM	**Sheep Creek Mo**	2.18	119	Pn	Pn	21 46 36.3	-0.6
SCM				IAML		21 47 14.4	
	comp=N,418nm,0.6s						
SCM				IAML		21 47 14.7	
	comp=E,459nm,0.6s						
J19K	**Poorman**	2.19	301	Pn	Pn	21 46 37.0	+0.1
J19K				IAML		21 47 06.0	
	comp=N,275nm,0.8s						
J19K				IAML		21 47 06.1	
	comp=E,183nm,0.9s						
I21K	**Tanana**	2.27	353		Pn	21 46 37.8	-0.1
I20K	**Naaghedeneel**	2.32	325	Pn	Pn	21 46 38.8	+0.2
CCB	**Clear Creek Bu**	2.33	41	Pn	Pn	21 46 38.1	-0.6
CCB				IAML		21 47 09.1	
	comp=E,94nm,0.6s						
CCB				IAML		21 47 09.8	
	comp=N,88nm,0.5s						
I23K	**Minto, Yukon-K**	2.39	21	Pn	Pn	21 46 39.2	-0.2
I23K				IAML		21 47 09.5	
	comp=N,93nm,1.0s						
RDT	**Redoubt**	2.42	192		Pn	21 46 40.3	+0.3
DFR	**Drift River**	2.44	196		Pn	21 46 40.7	+0.5
HDA	**Harding Lake**	2.46	51	Pn	Pn	21 46 39.6	-0.7
HDA				IAML		21 47 15.0	
	comp=E,190nm,0.5s						
HDA				IAML		21 47 15.1	
	comp=N,167nm,0.4s						
J18K	**Innoko River**	2.48	285	Pn	Pn	21 46 40.9	+0.3
J18K				IAML		21 47 12.8	
	comp=N,84nm,0.9s						
J18K				IAML		21 47 12.8	
	comp=E,150nm,1.1s						
COLA	**College**	2.49	37	Pn	Pn	21 46 40.2	-0.4
COLA				IAML		21 47 30.9	
	comp=E,168nm,0.5s						
COLA				IAML		21 47 37.1	
	comp=E,205nm,0.5s						
SLKM	**Skilak Lake**	2.50	167	Pn	Pn	21 46 40.8	-0.1
SLKM				IAML		21 47 13.1	
	comp=N,275nm,0.3s						
SLKM				IAML		21 47 13.4	
	comp=E,440nm,0.5s						
PWL	**Port Wells**	2.53	144	Pn	Pn	21 46 40.6	-0.7
M24K	**Tolsona, Glenn**	2.54	107	Pn	Pn	21 46 41.6	+0.1
M24K				IAML		21 47 22.7	
	comp=E,431nm,0.6s						
M18K	**Stony River**	2.55	237		Pn	21 46 41.3	-0.1
RDWB	**Redoubt West**	2.56	197		Pn	21 46 41.8	0.0
L18K	**Granite Mounta**	2.57	256	Pn	Pn	21 46 41.8	+0.1
O22K	**Cooper Landing**	2.58	162	Pn	Pn	21 46 41.8	-0.1
N19K	**Bonanza Creek**	2.59	216	Pn	Pn	21 46 42.2	0.0
RED	**Redoubt Volcan**	2.62	196	Pn	Pn	21 46 43.1	+0.7
RED				IAML		21 47 16.7	
	comp=E,89nm,1.2s						
RED				IAML		21 47 18.4	
	comp=N,83nm,0.8s						
K24K	**Donnelly Dome**	2.66	68	Pn	Pn	21 46 43.0	+0.1
K24K				IAML		21 47 24.6	
	comp=N,311nm,0.6s						
K24K				IAML		21 47 28.4	
	comp=E,385nm,0.5s						
PAX	**Paxson**	2.69	87	Pn	Pn	21 46 43.3	-0.1
PAX				IAML		21 47 23.7	
	comp=N,380nm,0.5s						
IL31		2.70	45	Pn	Pn	21 46 42.7	-0.7
ILAR	**Eielson Array**	2.70	45	P	Pn	21 46 42.6	-0.8
	comp=N,32nm,0.5s,baz=229,slow=13,SNR=429						
ILAR				S	Sn	21 47 15.9	-0.5
	comp=N,12nm,0.4s,baz=218,slow=23,SNR=4.1						
IL01		2.70	45		Pn	21 46 42.9	-0.5
POKR	**Poker Plat Res**	2.79	37	Pn	Pn	21 46 44.0	-0.5
H21K	**Melozitna Rive**	2.80	348	Pn	Pn	21 46 44.3	-0.4
H21K				IAML		21 47 17.9	
	comp=E,70nm,1.0s						
H21K				IAML		21 47 19.7	
	comp=N,61nm,1.5s						
GLI	**Glacier Island**	2.89	134	Pn	Pn	21 46 45.3	-0.5
GLI				IAML		21 47 35.5	
	comp=N,310nm,0.5s						
HARP	**HAARP**	2.91	98		Pn	21 46 46.4	+0.3
KLU	**Klutina**	2.93	117	Pn	Pn	21 46 45.3	-1.1
KLU				IAML		21 47 32.9	
	comp=N,291nm,0.7s						
KLU				IAML		21 47 34.7	
	comp=E,228nm,0.5s						
H22K	**Ishtalitna Cre**	2.97	360	Pn	Pn	21 46 46.3	-0.5
H22K				IAML		21 47 22.9	
	comp=N,78nm,1.0s						
SEW	**Seward**	2.99	161	Pn	Pn	21 46 46.6	-0.4
SEW				IAML		21 47 22.7	
	comp=N,181nm,0.4s						
H20K	**Anotleneega Mo**	2.99	331		Pn	21 46 47.0	-0.1
IVE	**Iliamna Volcan**	3.04	196		Pn	21 46 48.2	+0.3
RIDG	**Independent Ri**	3.04	72	Pn	Pn	21 46 47.8	-0.1
RIDG				IAML		21 47 34.5	
	comp=E,250nm,0.7s						
RIDG				IAML		21 47 40.0	
	comp=N,142nm,0.6s						
N18K	**Kilae Creek**	3.12	226	Pn	Pn	21 46 48.6	-0.3
J25K	**Salcha River,**	3.15	55	Pn	Pn	21 46 48.4	-0.8
J25K				IAML		21 47 26.3	
	comp=E,113nm,0.5s						
J25K				IAML		21 47 26.7	
	comp=N,109nm,0.5s						
FID	**Port Fidalgo**	3.19	131	Pn	Pn	21 46 48.7	-1.0
BRLK	**Bradley Lake**	3.19	176	Pn	Pn	21 46 50.1	+0.3
K17K	**Iditarod**	3.19	269	Pn	Pn	21 46 50.1	+0.3
K17K				IAML		21 47 43.2	
	comp=N,38nm,1.2s						
DIV	**Divide**	3.20	122	Pn	Pn	21 46 48.1	-1.8
DIV				IAML		21 47 26.9	
	comp=E,179nm,0.6s						
DIV				IAML		21 47 45.5	
	comp=N,200nm,0.5s						
BRSE	**Bradley Lake S**	3.22	174		Pn	21 46 50.0	-0.1
IMAR	**Indian Mountai**	3.23	342	Pn	Pn	21 46 49.7	-0.5
IM02	**Indian Mountai**	3.25	342		Pn	21 46 50.2	-0.3
H24K	**Noodor Dome**	3.28	26	Pn	Pn	21 46 50.4	-0.5
L17K	**Donlin**	3.31	259		Pn	21 46 51.5	+0.1
DOT	**Dot Lake**	3.37	75	Pn	Pn	21 46 51.4	-0.7
DOT				IAML		21 47 37.7	
	comp=N,113nm,0.7s						
DOT				IAML		21 47 54.9	
	comp=E,100nm,0.9s						
H19K	**Roundabout Mou**	3.42	322	Pn	Pn	21 46 52.8	+0.1
CNPM	**China Poot**	3.42	179	Pn	Pn	21 46 53.0	+0.2
CNPM				IAML		21 47 33.2	
	comp=E,193nm,0.6s						
CNPM				IAML		21 47 34.4	
	comp=N,210nm,0.3s						
N25K	**Chitina, Valde**	3.43	110	Pn	Pn	21 46 52.3	-0.6
N25K				IAML		21 47 45.6	
	comp=E,91nm,0.4s						
N25K				IAML		21 47 46.4	
	comp=N,133nm,0.6s						
HIN	**Hinchinbrook I**	3.44	136	Pn	Pn	21 46 52.5	-0.5
HIN				IAML		21 47 35.6	
	comp=N,161nm,0.3s						
HIN				IAML		21 47 36.0	
	comp=E,179nm,0.6s						
SCRK	**Sand Creek**	3.47	69	Pn	Pn	21 46 52.9	-0.6
SCRK				IAML		21 47 38.9	
	comp=E,72nm,0.9s						
SCRK				IAML		21 47 39.1	
	comp=N,61nm,0.9s						
WASW	**Wrangell South**	3.49	104		Pn	21 46 53.6	-0.2
MENT	**Mentasta**	3.49	87	Pn	Pn	21 46 53.3	-0.4
P23K	**Montague Islan**	3.51	145	Pn	Pn	21 46 52.9	-0.9
J17K	**VABM Dome**	3.53	281	Pn	Pn	21 46 54.2	+0.1
J17K				IAML		21 47 36.5	
	comp=E,32nm,1.2s						
EYAK	**Cordova Ski Ar**	3.58	129	Pn	Pn	21 46 54.5	-0.4
EYAK				IAML		21 47 40.3	
	comp=N,76nm,0.7s						
EYAK				IAML		21 47 59.6	
	comp=E,82nm,0.6s						
PRP	**Porcupine Dome**	3.63	42	Pn	Pn	21 46 55.0	-0.6
PRP				IAML		21 48 06.6	
	comp=N,27nm,0.7s						
L26K	**Log Cabin Wild**	3.66	85	Pn	Pn	21 46 56.2	+0.3
N17K	**Nushagak Hills**	3.68	232	Pn	Pn	21 46 56.2	+0.1
G21K	**Allakaket**	3.71	347	Pn	Pn	21 46 56.5	+0.1
G21K				IAML		21 47 41.9	
	comp=N,35nm,1.2s						
BMRM	**Bremner River**	3.75	119	Pn	Pn	21 46 55.7	-1.4
BMRM				IAML		21 47 56.4	
	comp=N,116nm,0.6s						
BMRM				IAML		21 48 03.7	
	comp=E,151nm,0.8s						
H18K	**Honhosa River**	3.80	309	Pn	Pn	21 46 57.9	+0.2
H18K				IAML		21 47 42.6	
	comp=E,23nm,0.9s						
H18K				IAML		21 47 43.8	
	comp=N,26nm,1.3s						
J26L	**Joseph Creek**	3.81	62	Pn	Pn	21 46 58.0	+0.2
J26L				IAML		21 47 44.4	
	comp=N,119nm,0.9s						
J26L				IAML		21 47 48.8	
	comp=E,74nm,0.7s						
G23K	**Bananza Creek**	3.83	8	Pn	Pn	21 46 58.1	0.0
G23K				IAML		21 47 43.5	
	comp=N,30nm,0.7s						
GLB	**Gilahina Butte**	3.84	110	Pn	Pn	21 46 57.7	-0.6
GLB				IAML		21 47 42.4	
	comp=E,78nm,0.4s						
GLB				IAML		21 47 42.8	
	comp=N,98nm,0.8s						
M26K	**Nabesna, AK**	3.89	94	Pn	Pn	21 46 58.7	-0.3
M26K				IAML		21 48 03.1	
	comp=E,125nm,0.5s						
M26K				IAML		21 48 07.1	
	comp=N,134nm,0.5s						
L16K	**Owhat River**	3.98	256	Pn	Pn	21 47 00.3	+0.2
G22K	**Bettles**	4.00	359		Pn	21 47 00.1	-0.2
G19K	**Purcell Mounta**	4.06	325	Pn	Pn	21 47 00.4	-0.7
M16K	**Timber Creek**	4.07	245	Pn	Pn	21 47 01.2	-0.1
RAGM	**Ragged Mountai**	4.08	126	Pn	Pn	21 47 01.2	-0.3
VRDI	**Verde Repeater**	4.09	111	Pn	Pn	21 47 00.8	-0.9
VRDI				IAML		21 47 49.4	
	comp=E,61nm,0.9s						
VRDI				IAML		21 48 09.2	
	comp=N,70nm,1.3s						
H25L	**Birch Creek**	4.11	33		Pn	21 47 01.6	-0.1
G24K	**Hadweenzic Riv**	4.13	22	Pn	Pn	21 47 01.8	-0.2
Q19K	**Cape Douglas,**	4.17	197	Pn	Pn	21 47 03.1	+0.4
MCARA	**McCarthy VSAT**	4.21	108	Pn	Pn	21 47 02.7	-0.4
O17K	**Koliganek Bris**	4.21	224		Pn	21 47 03.1	+0.1
J16K	**Anvik River**	4.21	279	Pn	Pn	21 47 03.3	+0.2
J16K				IAML		21 47 53.2	
	comp=E,19nm,1.1s						
HMT	**Hamilton**	4.27	124	Pn	Pn	21 47 03.2	-0.8
H17K	**Granite Mounta**	4.28	302	Pn	Pn	21 47 04.0	+0.1
H17K				IAML		21 47 55.9	
	comp=E,42nm,1.4s						
MID	**Middleton Isla**	4.28	143	Pn	Pn	21 47 04.4	+0.5
K27K	**Chicken**	4.30	71	Pn	Pn	21 47 03.5	-0.9
K27K				IAML		21 47 52.5	
	comp=E,42nm,0.7s						
K27K				IAML		21 47 55.9	
	comp=N,45nm,0.5s						
I17K	**Unalakleet**	4.30	287	Pn	Pn	21 47 04.9	+0.6
I17K				IAML		21 47 55.0	
	comp=N,19nm,0.7s						
I17K				IAML		21 47 56.9	
	comp=E,36nm,0.8s						
N16K	**Nishlik Lake**	4.31	238		Pn	21 47 04.5	+0.1
I26K	**Coal Creek Min**	4.31	53	Pn	Pn	21 47 03.5	-0.8
I26K				IAML		21 48 28.4	
	comp=E,44nm,0.8s						
I26K				IAML		21 48 34.0	
	comp=N,40nm,0.9s						
COLD	**Coldfoot**	4.34	6	Pn	Pn	21 47 04.6	-0.1
G18K	**Tagagawik**	4.34	316	Pn	Pn	21 47 04.8	0.0
G18K				IAML		21 47 57.4	
	comp=N,15nm,1.0s						
L27K	**Beaver Creek,**	4.35	84	Pn	Pn	21 47 04.1	-0.9
L27K				IAML		21 48 15.8	
	comp=N,41nm,1.1s						
L27K				IAML		21 48 18.8	
	comp=E,34nm,1.1s						
BC02	**Beaver Creek A**	4.36	84		Pn	21 47 04.3	-0.8
SYI	**Shuyak Island**	4.37	187	Pn	Pn	21 47 05.8	+0.6
F21K	**Alatna River**	4.40	349	Pn	Pn	21 47 05.9	+0.3
M27K	**Edge Creek, AK**	4.41	93	Pn	Pn	21 47 06.2	+0.2
M27K				IAML		21 48 17.3	
	comp=N,58nm,0.9s						
M27K				IAML		21 48 27.4	
	comp=E,59nm,1.0s						
NICHA	**Nichawak Mount**	4.45	124		Pn	21 47 05.8	-0.6
BERG	**Berg Lake**	4.45	122	Pn	Pn	21 47 05.4	-1.0
CRQM	**Cirque**	4.46	116	Pn	Pn	21 47 06.6	-0.1
FYU	**Fort Yukon**	4.49	33	Pn	Pn	21 47 06.3	-0.5
FYU				IAML		21 48 49.7	
	comp=E,16nm,0.7s						
FYU				IAML		21 50 11.9	
	comp=N,16nm,1.5s						
KAIM	**Kayak Island**	4.50	129	Pn	Pn	21 47 06.0	-0.9
F20K	**Avaraart Lake**	4.53	338	Pn	Pn	21 47 06.7	-0.5
TGL	**Tana Glacier**	4.59	115	Pn	Pn	21 47 07.4	-0.9
TGL				IAML		21 48 19.1	
	comp=E,73nm,0.6s						
F22K	**John River**	4.60	356		Pn	21 47 08.4	+0.1
SUCK	**Suckling Hills**	4.63	125	Pn	Pn	21 47 08.2	-0.5
KAHC	**Katmai Hardscr**	4.66	204		Pn	21 47 09.4	+0.2
O16K	**Kokwok River B**	4.67	227	Pn	Pn	21 47 09.6	+0.4
GRIN	**Grindle Hills**	4.67	121		Pn	21 47 08.7	-0.5
K15K	**Wolf Creek Mou**	4.74	267	Pn	Pn	21 47 10.8	+0.6
WAX	**Waxell Ridge**	4.75	118	Pn	Pn	21 47 10.0	-0.5
F19K	**Shaleruckik Mo**	4.77	328	Pn	Pn	21 47 10.4	-0.1
G17K	**Kiwalik Mounta**	4.80	306		Pn	21 47 11.1	+0.1
F24K	**Squaw Lake**	4.83	16	Pn	Pn	21 47 10.8	-0.6
BVCY	**Beaver Creek**	4.87	92		Pn	21 47 11.6	-0.3
KAWH	**Katmai**	4.87	202		Pn	21 47 12.4	+0.4
ISLE	**Juniper Island**	4.88	115	Pn	Pn	21 47 11.7	-0.5
ISLE				IAML		21 48 29.7	
	comp=E,73nm,1.3s						
L15K	**Ungalak Mounta**	4.89	260		Pn	21 47 12.6	+0.4
SNH	**Sunshine Point**	4.92	120	Pn	Pn	21 47 12.7	0.0
BARK	**Barkley Ridge**	4.93	117		Pn	21 47 12.4	-0.4
BARN	**Barnard Glacie**	4.94	108	Pn	Pn	21 47 12.8	-0.3
BARN				IAML		21 48 12.3	
	comp=E,37nm,0.7s						
BARN				IAML		21 48 36.3	
	comp=N,36nm,1.1s						
KAKN	**Katmai Knife C**	5.00	203		Pn	21 47 14.1	+0.3
I27K	**Kandik River**	5.02	53	Pn	Pn	21 47 14.7	+0.8
I27K				IAML		21 48 26.2	
	comp=N,21nm,0.7s						
I27K				IAML		21 49 04.6	
	comp=E,25nm,1.1s						
BAGL	**Bagley Icefiel**	5.04	115		Pn	21 47 13.6	-0.6
GRNC	**Granite Creek**	5.06	112	Pn	Pn	21 47 13.8	-0.8
GRNC				IAML		21 48 32.5	
	comp=E,25nm,0.6s						
GRNC				IAML		21 48 35.8	
	comp=N,44nm,1.2s						
P16K	**Nushagak River**	5.08	222		Pn	21 47 15.3	+0.7
F18K	**Selawik**	5.11	320		Pn	21 47 15.5	+0.5
CTGM	**Chitina Glacie**	5.13	108	Pn	Pn	21 47 15.2	-0.3
CTGM				IAML		21 48 38.7	
	comp=N,31nm,1.4s						
CTGM				IAML		21 48 52.5	
	comp=E,21nm,1.2s						
ACHA	**Angle Creek He**	5.13	204	Pn	Pn	21 47 16.3	+0.8
G26K	**Porcupine Rive**	5.15	35	Pn	Pn	21 47 13.9	-1.7
G26K				IAML		21 48 15.9	
	comp=N,19nm,1.2s						
G26K				IAML		21 48 49.4	
	comp=E,10nm,0.9s						
E19K	**Redstone River**	5.17	334	Pn	Pn	21 47 16.1	+0.3
ANCK	**Angle Creek**	5.17	205		Pn	21 47 16.8	+0.8

CNTC	Contact Creek	5.19	207		Pn	21 47 17.3	+1.0
E23K	Chandalar	5.19	7	Pn	Pn	21 47 15.7	-0.6
E23K				IAML		21 48 29.3	
	comp=E,10nm,1.1s						
KDAK	Kodiak Island	5.21	187	P	Pn	21 47 14.3	-2.1
	comp=E,16nm,0.5s,baz=58,slow=4.7,SNR=22						
KDAK				S	Sn	21 48 10.7	-4.8
	comp=E,43nm,0.6s,baz=6.0,slow=8.9,SNR=4.2						
KDAK	Kodiak Island	5.21	187	Pn	Pn	21 47 15.5	-0.9
E22K	Anaktuvuk Pass	5.22	358	Pn	Pn	21 47 17.3	+0.7
F25K	Christian Rive	5.25	25	Pn	Pn	21 47 16.9	-0.2
YAH	Yahtse	5.26	115	Pn	Pn	21 47 16.4	-0.8
YAH				IAML		21 48 19.8	
	comp=E,45nm,0.8s						
CAHL	Cahill	5.27	203		Pn	21 47 18.0	+0.7
MESA	MESA	5.28	117	Pn	Pn	21 47 17.3	-0.2
E24K	Your Creek	5.30	12	Pn	Pn	21 47 16.9	-0.7
E24K				IAML		21 48 31.8	
	comp=E,9.1nm,1.1s						
LOGN	Logan Glacier	5.34	109	Pn	Pn	21 47 17.9	-0.4
LOGN				IAML		21 48 43.4	
	comp=N,25nm,0.9s						
LOGN				IAML		21 48 46.8	
	comp=E,20nm,1.0s						
H27K	Steamboat Moun	5.37	48	Pn	Pn	21 47 17.7	-0.8
H27K				IAML		21 49 02.3	
	comp=E,11nm,1.0s						
H27K				IAML		21 49 09.0	
	comp=N,9.1nm,1.3s						
G16K	Koyuk River	5.40	302	Pn	Pn	21 47 19.2	+0.3
RKAV	Rock Avalanche	5.46	114		Pn	21 47 19.5	-0.4
TABL	Table Mountain	5.47	113	Pn	Pn	21 47 19.5	-0.6
DAWY	Dawson	5.48	73	Pn	Pn	21 47 19.0	-1.0
F17K	Baldwin Pennin	5.51	314	Pn	Pn	21 47 21.1	+0.7
L14K	Kuka Creek	5.55	258	Pn	Pn	21 47 22.2	+1.3
O15K	Ungalikthiuk R	5.58	231	Pn	Pn	21 47 22.0	+0.6
I28M	Miner Creek	5.59	58	Pn	Pn	21 47 21.0	-0.6
J14K	Nanvaranak Lak	5.59	274	Pn	Pn	21 47 21.6	+0.2
E21K	Killik River	5.63	350	Pn	Pn	21 47 23.0	+1.0
F26K	Sheenjek River	5.65	29	Pn	Pn	21 47 21.9	-0.4
G27K	Doyon Strip	5.67	42	Pn	Pn	21 47 20.2	-2.4
O28M	Mount Upton	5.71	107	Pn	Pn	21 47 23.6	+0.1
E25K	Arctic Village	5.73	22	Pn	Pn	21 47 23.4	0.0
TOLK	Toolik Lake Re	5.78	7	Pn	Pn	21 47 25.3	+1.3
SAMH	Samovar Hills	5.79	114		Pn	21 47 25.1	+0.8
PLK3	Peulik 3	5.80	207		Pn	21 47 24.9	+0.4
OHAK	Old Harbor	5.81	190	Pn	Pn	21 47 22.3	-2.2
G15K	Niukluk	5.95	296		Pn	21 47 26.9	+0.5
M29M	Somme Creek	5.96	89	Pn	Pn	21 47 26.2	-0.4
D22K	Ayikyak River	5.99	355	Pn	Pn	21 47 27.5	+0.6
PCA	Pinnacle	6.03	113	Pn	Pn	21 47 27.7	+0.3
O14K	Tigyukauivet M	6.06	237	Pn	Pn	21 47 28.7	+0.9
D23K	Nanushuk River	6.06	2	Pn	Pn	21 47 28.9	+1.1
D20K	Etivluk River	6.19	342	Pn	Pn	21 47 30.0	+0.5
D19K	Kuna River	6.24	336	Pn	Pn	21 47 31.0	+0.8
K29M	Barlow Dome	6.28	76	Pn	Pn	21 47 30.3	-0.6
BCPM	Bancas Point	6.37	113	Pn	Pn	21 47 32.1	+0.2
ANM	Nome	6.43	291	Pn	Pn	21 47 33.5	+0.7
YUK6	Outpost Mounta	6.45	102		Pn	21 47 32.6	-0.6
H29M	Whitestone	6.49	54	Pn	Pn	21 47 33.2	-0.3
M30M	Minto, Yukon	6.70	87	Pn	Pn	21 47 35.1	-1.3
B21K	Ikpikpuk River	6.84	350	Pn	Pn	21 47 38.2	0.0
J30M	Hart River	6.86	70	Pn	Pn	21 47 38.8	+0.1
C23K	Itkillik River	6.94	2	Pn	Pn	21 47 40.5	+1.0
I30M	Mount Dempster	6.95	64	Pn	Pn	21 47 39.2	-0.6
P29M	Windy Craggy	7.35	111	Pn	Pn	21 47 45.5	+0.4
C27K	Jago River	7.38	21	Pn	Pn	21 47 46.0	+0.4
B22K	Teshekpuk Lake	7.48	355	Pn	Pn	21 47 46.8	0.0
INK	Inuvik	9.10	46	P	Pn	21 48 08.0	-0.6
	comp=N,0.9nm,0.5s,baz=239,slow=15,SNR=6.4						
INK				S	Sn	21 49 48.5	-0.7
	comp=N,0.8nm,0.7s,baz=224,slow=13,SNR=1.3						
INK	Inuvik	9.10	46	Pn	Pn	21 48 07.7	-0.9
BESE	Bessie Mountai	9.17	111	Pn	Pn	21 48 09.2	-0.5
Q32M	Nakina River	10.09	105	Pn	Pn	21 48 21.4	-0.6
DLBC	Dease Lake	11.36	104	P	Pn	21 48 39.2	+0.4
	comp=N,2.2nm,0.8s,baz=28,slow=23,SNR=3.0						
T35M	Bob Quinn	12.11	110	Pn	Pn	21 48 50.1	+1.5
YKAW3	Yellowknife Wh	16.69	75		P	21 49 47.2	+0.9
YKAW3				IAmb	IAmb	21 50 10.2	
	comp=Z,4.4nm,1.1s						
YKA	Yellowknife Ar	16.71	75	P	P	21 49 46.4	-0.2
	comp=Z,0.4nm,0.7s,baz=261,slow=9.5,SNR=4.4						
PDAR	Pinedale Array	31.49	110	P	P	21 52 11.4	+1.6
	comp=Z,0.2nm,0.4s,baz=321,slow=7.4,SNR=2.9						
	comp=Z,0.2nm,0.4s						
PDAR	Pinedale Array	31.49	110		P	21 52 10.4	+0.6
PV18	Skein Mesa, Pa	35.52	114	P	P	21 52 46.3	+1.6
PV18				IAmb	IAmb	21 53 08.0	
	comp=Z,3.5nm,1.1s						
SPITS	Spitsbergen Ar	38.92	4	P	P	21 53 11.9	-0.8
	comp=Z,1.1nm,0.4s,baz=338,slow=11,SNR=11						
	comp=Z,1.1nm,0.4s						
TXAR	Lajitas Array	45.39	115	P	P	21 54 07.0	+1.2
	comp=Z,0.3nm,0.5s,baz=331,slow=6.6,SNR=8.1						
	comp=Z,0.3nm,0.5s						
TXAR	Lajitas Array	45.39	115	P	P	21 54 07.2	+1.5
HILR	Hailar Array B	47.11	297	P	P	21 54 18.4	-0.4
	comp=Z,1.0nm,0.4s,baz=34,slow=8.0,SNR=4.4						
	comp=Z,1.0nm,0.4s						
ARCES	ARCESS Array B	47.79	1	P	P	21 54 23.8	-0.1
	comp=Z,13nm,1.3s,baz=14,slow=6.6,SNR=1.6						
	comp=Z,13nm,1.3s						
SONM	Songino Array	53.72	305	P	P	21 55 09.3	+0.7
	comp=Z,0.7nm,0.7s,baz=1.4,slow=4.1,SNR=4.5						
	comp=Z,0.7nm,0.7s						
SONM	Songino Array	53.72	305	P	P	21 55 09.4	+0.8
SONM				IAmb	IAmb	21 55 10.6	
	comp=Z,1.2nm,1.0s						
ZALV	Zalesovo Beam	55.47	323	P	P	21 55 21.1	+0.1
	comp=Z,0.5nm,0.6s,baz=53,slow=7.4,SNR=2.0						
	comp=Z,0.5nm,0.6s						
NOA	NORSAR Array B	55.64	10	P	P	21 55 22.1	0.0
	comp=Z,0.9nm,0.9s,baz=334,slow=9.1,SNR=2.1						
	comp=Z,0.9nm,0.9s						
FINES	FINESS Array B	55.92	1	P	P	21 55 23.5	-0.6
	comp=Z,5.1nm,1.1s,baz=27,slow=7.6,SNR=2.3						
	comp=Z,5.1nm,1.1s						
EKA	Eskdalemuir Ar	59.49	20	P	P	21 55 49.1	0.0
	comp=Z,0.4nm,0.4s,baz=333,slow=5.2,SNR=4.9						
	comp=Z,0.4nm,0.4s						
BVAR	Borovoye Array	59.83	332	P	P	21 55 50.7	-0.7
	comp=Z,0.5nm,0.7s,baz=33,slow=8.8,SNR=4.1						
	comp=Z,0.5nm,0.7s						
MKAR	Makanchi Array	62.62	321	P	P	21 56 09.3	-1.1
	comp=Z,0.3nm,0.4s,baz=32,slow=6.4,SNR=6.8						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	62.62	321	P	P	21 56 08.9	-1.5
AKASG	Malin Array Be	66.71	360	P	P	21 56 36.6	-0.1
	comp=Z,0.7nm,0.3s,baz=3.7,slow=6.5,SNR=4.1						
	comp=Z,0.7nm,0.3s						

NEIC ***02*** *22:01:30.8±1.9, 21°.1S±0°.1×173°.4W±0°.1, h10^{km}±1^{km}, mb4.7/19, Error ellipse: s-maj=20.9km s-min=18.0km az=182.0*

IDC ***02*** *22:01:32.7±0.7, 20°.79S×173°.99W, h0^{km}, mb4.1/10, mbtmp4.1/11, ML4.2/1, MS3.6/8, Error ellipse: s-maj=29.4km s-min=19.6km az=125.0*

ISC 02 22:01:31.6±0.4**, 21°.11S**±0°.10×**173°.34W**±0°.06**, h10**^{km}**, n61, σ2^s.39**/54**, mb4.5**/18**, MS3.8**/7**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	3.79	58		Pn	22 02 29.7	-0.4
NIUE				Sn	Sn	22 03 09.7	-5.1
AFI	Afiamalu	7.31	12	Pn	Pn	22 03 18.2	-0.4
RAR	Rarotonga	12.66	93	Pn	Pn	22 04 31.8	-0.1
	4.1nm,0.3s,baz=276,slow=9.3,SNR=7.6						
RAR				Sn	Sn	22 06 46.8	-6.2
	0.3nm,0.3s,baz=193,slow=13,SNR=1.6						
RAR				LR	LR	22 09 29.1	
	comp=Z,193nm,18.6s,baz=283,slow=36						
MARNC	Mare, Loyalty	17.37	265		Pn	22 05 32.9	-1.4
MARNC				IAmb	IAmb	22 05 53.2	
	comp=Z,135nm,1.3s						
DZM	Mont Dzumac	18.83	263	P	Pn	22 05 50.9	-1.4
	comp=Z,7.3nm,0.7s,baz=71,slow=21,SNR=7.0						
DZM	Mont Dzumac	18.83	263	*e*P	Pn	22 05 52.5	+0.2
	comp=Z,23nm,0.9s						
DZM				*e*S	Sn	22 09 10.5	-13
	comp=Z,82nm,23.4s						
DZM				*e*LR	LR	22 10 09.7	
	comp=Z,231nm,22.4s						
DZM	Mont Dzumac	18.83	263	P	P	22 05 50.1	-1.7
URZ	Urewera	18.98	204	P	Pn	22 05 56.2	+2.3
	comp=Z,0.7nm,0.3s,baz=156,slow=6.6,SNR=3.0						
	comp=Z,18nm,0.9s						
TBI	Tubuai	22.21	100	*e*LR	LR	22 11 37.2	
	comp=Z,1µm,30.2s						
TBI				*e*LR	LR	22 11 52.2	
	comp=Z,941nm,30.5s						
PPT2	Papeete2	22.69	85	*e*S	S	22 10 43.3	+1.1
	comp=Z,240nm,29.0s						
PPT2				*e*LR	LR	22 11 53.5	
	comp=Z,243nm,27.0s						
PPT2				*e*LR	LR	22 11 55.5	
	comp=Z,160nm,26.5s						
PPT	Papeete	22.69	85	LR	LR	22 13 56.2	
	comp=Z,144nm,19.1s,baz=217,slow=32						
TAOE	Nuku Hiva Isla	34.21	74	*e*LR	LR	22 17 10.9	
	comp=Z,178nm,25.8s						
PMG	Port Moresby	39.73	281	LR	LR	22 23 30.0	
	comp=Z,90nm,18.2s,baz=168,slow=34						
STKA	Stephens Creek	41.48	245	P	P	22 09 17.1	-1.9
	comp=Z,4.5nm,0.8s,baz=101,slow=6.7,SNR=4.3						
	comp=Z,4.5nm,0.8s						
STKA	Stephens Creek	41.48	245	P	P	22 09 16.8	-2.2
COEN	Coen	41.97	272	P	P	22 09 19.9	-3.3
COEN				IAmb	IAmb	22 09 23.0	
	comp=Z,5.3nm,1.0s						
AS31	Alice Springs	48.62	257	P	P	22 10 13.7	-2.4
ASAR	Alice Springs	48.62	257	P	P	22 10 13.8	-2.2
	comp=Z,5.2nm,0.9s,baz=89,slow=8.3,SNR=47						
ASAR				PcP	PcP	22 11 42.9	+1.3
	comp=Z,1.6nm,1.0s,baz=114,slow=4.1,SNR=4.5						
ASAR				LR	LR	22 29 59.3	
	comp=Z,90nm,18.2s,baz=108,slow=36						
	comp=Z,5.2nm,0.9s						
ASAR	Alice Springs	48.62	257	P	P	22 10 12.5	-3.5
WR8	Warramunga Arr	48.68	262	P	P	22 10 13.3	-3.1
WR8				IAmb	IAmb	22 10 14.8	
	comp=Z,3.4nm,0.8s						
WB0	Warramunga Arr	48.81	262	P	P	22 10 14.8	-2.7
WB0				IAmb	IAmb	22 10 15.1	
	comp=Z,5.3nm,0.8s						
WRA	Warramunga Arr	48.83	262	P	P	22 10 14.7	-3.0
	comp=Z,2.4nm,0.8s,baz=98,slow=5.6,SNR=18						
WRA				PcP	PcP	22 11 44.1	+1.8
	comp=Z,1.1nm,0.7s,baz=95,slow=3.2,SNR=2.6						
	comp=Z,2.4nm,0.8s						
WRA	Warramunga Arr	48.83	262	P	P	22 10 14.4	-3.2
FORT	Forrest	53.06	247	P	P	22 10 47.7	-1.6
FORT				IAmb	IAmb	22 10 48.9	
	comp=Z,6.6nm,0.7s						
MTN	Manton Dam	53.52	269	P	P	22 10 51.8	-1.1
MTN				IAmb	IAmb	22 11 16.6	
	comp=Z,15nm,1.2s						
FITZ	Fitzroy Crossi	57.26	262	P	P	22 11 17.3	-2.5
VNDA	Vanda	57.74	186	P	P	22 11 27.4	+5.1
	comp=Z,1.2nm,0.8s,baz=13,slow=7.7,SNR=5.5						
	comp=Z,1.2nm,0.8s						
PSA00	Pilbara Seismi	61.77	256	P	P	22 11 49.1	-1.8
PSA00				IAmb	IAmb	22 11 49.9	
	comp=Z,13nm,1.0s						
MBWA	Marble Bar	61.97	257	P	P	22 11 49.6	-2.6
MORW	Morawa	63.62	247	P	P	22 12 02.8	-0.4
MORW				IAmb	IAmb	22 12 05.8	
	comp=Z,10nm,1.2s						
GIRL	Giralia	66.58	254	P	P	22 12 22.1	-0.4
QSPA	South Pole Qui	68.97	180	P	P	22 12 45.3	+8.3
	comp=Z,2.9nm,0.8s,baz=48,slow=2.4,SNR=7.0						
QSPA	South Pole Qui	68.97	180	P	P	22 12 35.3	-1.7
QSPA				IAmb	IAmb	22 13 10.3	
	comp=Z,8.0nm,1.1s						
MJAR	Matsushiro Arr	73.35	321	P	P	22 13 02.6	-1.1
	comp=Z,3.1nm,0.6s,baz=143,slow=6.4,SNR=6.6						
	comp=Z,3.1nm,0.6s						
MJAR	Matsushiro Arr	73.35	321	P	P	22 13 04.0	+0.2
MJAR				IAmb	IAmb	22 13 14.8	
	comp=Z,9.0nm,1.4s						
MAW	Mawson	82.43	199	P	P	22 13 57.4	+3.6
	comp=Z,2.9nm,0.8s,baz=31,slow=0.0,SNR=4.1						
	comp=Z,2.9nm,0.8s						
K15K	Wolf Creek Mou	83.64	6	P	P	22 14 02.9	+3.0
TXAR	Lajitas Array	83.76	55	P	P	22 14 05.3	+3.8
	comp=Z,0.3nm,0.8s,baz=236,slow=4.6,SNR=1.0						
TXAR				LR	LR	22 44 53.2	
	comp=Z,62nm,18.4s,baz=256,slow=31						
	comp=Z,0.3nm,0.8s						
CMIG	Matias Romero	85.75	70	LR	LR	22 44 17.6	
	comp=Z,41nm,18.6s,baz=185,slow=30						
PDAR	Pinedale Array	86.47	41	P	P	22 14 18.1	+3.2
	comp=Z,0.3nm,0.8s,baz=301,slow=3.0,SNR=2.3						
	comp=Z,0.3nm,0.8s						
SNAA	Sanae	87.24	177	P	P	22 14 21.6	+3.5
	comp=Z,0.9nm,0.9s,baz=122,slow=20,SNR=2.2						
	comp=Z,0.9nm,0.9s						
SNAA	Sanae	87.24	177	P	P	22 14 17.1	-0.9
SNAA				IAmb	IAmb	22 14 42.0	
	comp=Z,4.9nm,1.4s						
ILAR	Eielson Array	88.00	11	P	P	22 14 22.2	+0.7
	comp=Z,0.5nm,0.9s,baz=214,slow=5.9,SNR=5.2						
	comp=Z,0.5nm,0.9s						
CMAR	Chiang Mai Arr	94.44	288	LR	LR	22 52 57.3	
	comp=Z,7.2nm,22.0s,baz=150,slow=33						
LPAZ	La Paz	97.78	111	LR	LR	22 50 54.8	
	comp=Z,49nm,19.3s,baz=256,slow=30						
KURBB	Kurchatov Arra	117.45	317	PKP	PKiKP	22 20 18.1	+0.6
	comp=Z,0.3nm,0.3s,baz=67,slow=2.2,SNR=4.3						
BVAR	Borovoye Array	122.34	320	PKP	PKiKP	22 20 27.7	+0.7
	comp=Z,2.5nm,0.7s,baz=79,slow=3.9,SNR=13						
SPITS	Spitsbergen Ar	122.69	358	PKP	PKiKP	22 20 28.8	+1.8
	comp=Z,2.4nm,0.7s,baz=70,slow=6.3,SNR=1.5						
EKA	Eskdalemuir Ar	145.03	10	PKP	PKPdf	22 21 09.9	+1.0
	comp=Z,0.9nm,0.6s,baz=350,slow=4.2,SNR=3.8						
AKASG	Malin Array Be	145.55	334	PKPbc	PKPab	22 21 11.0	+0.7
	comp=Z,4.8nm,0.6s,baz=42,slow=4.2,SNR=26						
AKASG	Malin Array Be	145.55	334		PKPdf	22 21 09.2	-0.8
CHVC	Chvalec	149.66	348	*e*PKP	PKPab	22 21 33.9	+7.3
DPC	Dobruska-Polom	149.83	348	*e*PKP	PKPab	22 21 35.9	+8.6
BRTR	Keskin Array B	150.41	315	PKPbc	PKiKP	22 21 25.5	+0.9
	comp=Z,2.0nm,0.7s,baz=129,slow=3.4,SNR=14						
BRTR	Keskin Array B	150.41	315		PKPbc	22 21 20.4	-3.4
PRU	Pruhonice	150.51	350	*e*PKP	PKiKP	22 21 25.7	+1.4
KHC	Kasperske Hory	151.50	350	*e*PKP	PKiKP	22 21 28.6	+2.2
CKRC	Cesky Krumlov	151.68	349	*e*PKP	PKiKP	22 21 29.0	+2.3
GERES	GERESS Array B	151.75	350	PKPbc	PKiKP	22 21 29.1	+2.1
	comp=Z,0.6nm,0.6s,baz=40,slow=2.3,SNR=5.2						
MMAI	Mount Meron Ar	151.88	301	PKPbc	PKiKP	22 21 29.9	+2.1
	comp=Z,5.5nm,0.9s,baz=14,slow=3.8,SNR=3.9						
ESDC	Sonseca Array	159.38	24	PKPab	PKPab	22 22 10.6	+2.4
	comp=Z,0.5nm,0.8s,baz=355,slow=3.3,SNR=1.9						

IDC ***02*** *22:02:31.5±1.6, 28°.14N×100°.69E, h0^{km}, mb3.7/6, mbtmp3.8/6, MS3.1/1, Error ellipse: s-maj=60.2km s-min=26.6km az=57.0*

ISC 02 22:02:36.8±1.5**, 28°.2N**±0°.2×**100°.8E**±0°.3**, h35**^{km}**, n6, σ0^s.71**/6**, mb3.8**/5**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	20.06	11	P	P	22 07 07.3	+0.3
	1.1nm,1.0s,baz=193,slow=6.1,SNR=5.0						
	1.1nm,1.0s						
MKAR	Makanchi Array	23.55	327	P	P	22 07 43.1	-0.7
	0.8nm,0.7s,baz=138,slow=10,SNR=5.6						
	0.8nm,0.7s						
AAK	Ala-Archa	25.68	311	P	P	22 08 04.3	+0.7
	2.0nm,0.8s,baz=135,slow=2.9,SNR=6.1						
AAK				LR	LR	22 18 05.8	
	comp=Z,47nm,20.6s,baz=228,slow=36						
	2.0nm,0.8s						
KURBB	Kurchatov Arra	28.02	329	P	P	22 08 23.7	-0.6
	1.3nm,0.2s,baz=143,slow=9.5,SNR=1.4						
	1.3nm,0.2s						
ZALV	Zalesovo Beam	28.25	340	P	P	22 08 26.1	-0.3
	0.6nm,0.6s,baz=140,slow=9.2,SNR=3.9						
	0.6nm,0.6s						
WRA	Warramunga Arr	57.83	142	P	P	22 12 24.9	-0.1
	0.6nm,0.7s,baz=324,slow=7.6,SNR=2.6						
	0.6nm,0.7s						

IDC ***02*** *22:06:36.2±1.9, 28°.29N×66°.08E, h0^{km}, mb3.6/8, mbtmp3.6/9, ML3.1/1, MS3.1/3, Error ellipse: s-maj=47.9km s-min=26.8km az=81.0*

ISC 02 22:06:42.2±1.5**, 28°.4N**±0°.1×**66°.2E**±0°.2**, h35**^{km}**, n11, σ1^s.13**/10**, mb3.5**/8**, MS2.9**/3**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	15.72	23	Pn	Pn	22 10 19.9	-1.2
	0.1nm,0.3s,baz=212,slow=13,SNR=1.7						
AAK				Sn	Sn	22 13 13.7	-0.6
	0.1nm,0.3s,baz=101,slow=23,SNR=1.1						
	0.6nm,0.6s						
MKAR	Makanchi Array	22.29	30	P	P	22 11 36.6	+0.2
	0.7nm,0.8s,baz=225,slow=11,SNR=6.1						
	0.7nm,0.8s						
AKTO	Aktyubinsk	22.85	347	LR	LR	22 22 21.6	
	comp=Z,41nm,18.1s,baz=2.0,slow=41						
KURBB	Kurchatov Arra	24.09	20	P	P	22 11 53.4	-0.8
	0.7nm,0.2s,baz=204,slow=8.7,SNR=1.3						
KURBB				LR	LR	22 22 48.0	
	comp=Z,49nm,19.0s,baz=176,slow=40						
	0.7nm,0.2s						
BVAR	Borovoye Array	24.79	6	P	P	22 12 00.7	+0.1
	0.3nm,0.6s,baz=169,slow=8.9,SNR=4.8						
	0.3nm,0.6s						
ASF	Jabal al Asfar	25.50	286	LR	LR	22 25 29.2	
	comp=Z,38nm,20.0s,baz=81,slow=44						
ZALV	Zalesovo Beam	28.95	23	P	P	22 12 38.1	+0.1
	0.3nm,0.3s,baz=213,slow=6.7,SNR=1.8						
	0.3nm,0.3s						
SONM	Songino Array	36.60	47	P	P	22 13 46.9	+1.8
	0.5nm,0.7s,baz=258,slow=7.2,SNR=3.1						
	0.5nm,0.7s						
FINES	FINESS Array B	42.36	333	P	P	22 14 32.9	+0.3
	2.0nm,0.9s,baz=112,slow=8.9,SNR=1.5						
	2.0nm,0.9s						
WRA	Warramunga Arr	81.52	118	P	P	22 18 56.7	+0.2
	0.5nm,0.9s,baz=304,slow=5.7,SNR=1.7						
	0.5nm,0.9s						
ASAR	Alice Springs	83.28	121	P	P	22 19 03.9	-1.7
	0.4nm,0.6s,baz=303,slow=5.5,SNR=1.6						
	0.4nm,0.6s						

IDC ***02*** *22:10:50.3±0.8, 30°.97N×142°.72E, h0^{km}, mb4.0/11, mbtmp4.0/14, ML3.0/2, MS3.3/3, Error ellipse: s-maj=31.6km s-min=16.4km az=69.0*

JMA ***02*** *22:10:52.2±0.2, 31°.1N±0°.7×14°3E±°, h46^{km}, MV4.0/21, FAR E OFF IZU ISLANDS*

NEIC ***02*** *22:10:54.6±1.3, 31°.05N±0°.08×142°.6E±0°.1, h24^{km}±6^{km}, mb4.4/29, Error ellipse: s-maj=15.6km s-min=6.7km az=52.0*

ISC 02 22:10:55.8±0.6**, 31°.09N**±0°.06×**142°.7E**±0°.1**, h37**^{km}**, n66, σ1^s.46**/70**, mb4.2**/25**, MS3.7**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	3.17	310	Pn	Pn	22 11 41.9	-1.1
JHJ2	Mitsune	3.17	310	*e*S	Sn	22 12 19.4	-0.2
JHJ	Hachijo jima 2	3.20	310	Pn	Pn	22 11 42.0	-1.4
	117nm,0.8s,baz=94,slow=21,SNR=1.0						
JHJ				Sn	Sn	22 12 17.5	-2.7
	25nm,0.3s,baz=239,slow=17,SNR=1.9						
BSO1	Boso 1	3.83	338	*e*P	Pn	22 11 50.8	-0.9
BSO1				*e*S	Sn	22 12 34.5	-0.8
CBIJ	Chichi jima	4.01	187	*e*P	Pn	22 11 53.0	-1.6
JCJ	Chichijima	4.01	187	Pn	Pn	22 11 40.7	-14
	11nm,0.3s,baz=3.8,slow=19,SNR=9.3						
JCJ				Sn	Sn	22 12 23.4	-17
	11nm,0.3s,baz=267,slow=21,SNR=1.2						
JCJ	Chichijima	4.01	187	Pn	Pn	22 11 53.5	-1.2
BSO3	Boso 3	4.13	334	*e*P	Pn	22 11 55.1	-1.0
JOD2	Odawara 2	5.14	325	*e*P	Pn	22 12 09.7	-0.6
JOD2				*e*S	Sn	22 13 07.1	-1.2
JHO	Hitachi	5.78	343	*e*S	Sn	22 13 21.8	-2.3
JRY	Ryogami san	5.84	328	*e*P	Pn	22 12 19.6	-0.2
JRY				*e*S	Sn	22 13 25.3	-0.3
JAG	Ashikaga	5.97	334	*e*P	Pn	22 12 20.3	-1.2
JAG				*e*S	Sn	22 13 26.2	-2.3
JGF	Kuroka	6.34	317	Pn	Pn	22 12 26.3	-0.4
JFK	Kawauchi	6.44	347	*e*S	Sn	22 13 33.9	-6.3
MJAR	Matsushiro Arr	6.59	327	Pn	Pn	22 12 29.8	-0.3
	0.2nm,0.3s,baz=155,slow=11,SNR=10						
MJAR				Sn	Sn	22 13 41.6	-2.4
	0.1nm,0.3s,baz=129,slow=25,SNR=2.0						
	2.9nm,0.6s						
MJAR	Matsushiro Arr	6.59	327	Pn	Pn	22 12 30.0	-0.2
KSRS	Korea Array	13.76	301	Pn	Pn	22 14 08.2	0.0
	0.1nm,0.3s,baz=110,slow=13,SNR=1.7						
	0.8nm,0.6s						
HILR	Hailar Array B	25.25	323	P	P	22 16 19.2	+0.9
	4.4nm,0.8s,baz=119,slow=8.9,SNR=9.3						
	4.4nm,0.8s						
MA2	Magadan	29.00	8	LR	LR	22 30 47.6	
	comp=Z,6.4nm,18.6s,baz=150,slow=41						
ULN	Ulaanbaatar	31.86	312	P	P	22 17 17.6	+0.2
ULN				IAmb	IAmb	22 17 23.7	
	comp=Z,6.4nm,1.4s						
SONM	Songino Array	32.27	312	P	P	22 17 22.6	+1.6
	comp=Z,1.4nm,0.6s,baz=124,slow=7.4,SNR=11						
	comp=Z,1.4nm,0.6s						
SONM	Songino Array	32.27	312	P	P	22 17 23.6	+2.6
COEN	Coen	44.79	179	P	P	22 19 05.4	-0.6
COEN				IAmb	IAmb	22 19 37.9	
	comp=Z,4.5nm,1.1s						
BATI	Baumata	44.94	207	LR	LR	22 39 24.1	
	comp=Z,83nm,18.4s,baz=92,slow=38						
MTN	Manton Dam	45.08	196	P	P	22 19 07.2	-1.1
ZALV	Zalesovo Beam	46.84	317	P	P	22 19 22.1	+0.4
	comp=Z,0.8nm,0.6s,baz=112,slow=4.0,SNR=4.5						
ZALV				PcP	PcP	22 20 54.8	+0.5
	comp=Z,0.5nm,0.4s,baz=84,slow=4.5,SNR=2.5						
	comp=Z,0.8nm,0.6s						
MKAR	Makanchi Array	48.36	307	P	P	22 19 34.7	+0.9
	comp=Z,1.7nm,0.8s,baz=84,slow=10,SNR=11						
	comp=Z,1.7nm,0.8s						
MKAR	Makanchi Array	48.36	307	P	P	22 19 33.8	0.0
MAKZ	Makanchi	48.58	307	P	P	22 19 36.3	+0.9
MAKZ				IAmb	IAmb	22 20 08.7	
	comp=Z,10nm,1.5s						
F19K	Shaleruckik Mo	49.90	26	P	P	22 19 47.6	+2.4
PSI	Prapat	49.94	245	LR	LR	22 42 44.7	
	comp=Z,76nm,18.0s,baz=160,slow=38						
KURK	Kurchatov	50.58	312	P	P	22 19 50.8	+0.3
KURBB	Kurchatov Arra	50.64	312	P	P	22 19 51.3	+0.3
	comp=Z,0.8nm,0.4s,baz=91,slow=6.5,SNR=5.9						
	comp=Z,0.8nm,0.4s						
WB0	Warramunga Arr	51.19	190	P	P	22 19 53.7	-1.8
WB0				IAmb	IAmb	22 19 54.7	
	comp=Z,3.8nm,0.7s						
WR8	Warramunga Arr	51.36	190	P	P	22 19 55.1	-1.7
WR8				IAmb	IAmb	22 19 56.0	
	comp=Z,2.9nm,0.7s						
WRA	Warramunga Arr	51.38	190	P	P	22 19 55.7	-1.2
	comp=Z,2.1nm,0.7s,baz=9.3,slow=7.8,SNR=14						
	comp=Z,2.1nm,0.7s						
WRA	Warramunga Arr	51.38	190	P	P	22 19 55.4	-1.4
G21K	Allakaket	51.49	27	P	P	22 19 57.6	+0.4
FITZ	Fitzroy Crossi	51.58	201	P	P	22 19 57.4	-1.0
E22K	Anaktuvuk Pass	52.42	25	P	P	22 20 05.2	+1.0
E22K				IAmb	IAmb	22 20 33.0	
	comp=Z,4.9nm,1.4s						
C23K	Itkillik River	53.15	23	P	P	22 20 11.1	+1.6
D24K	Happy Valley	53.66	24	P	P	22 20 14.4	+1.1
D24K				IAmb	IAmb	22 20 16.0	
	comp=Z,8.5nm,1.3s						
ILAR	Eielson Array	54.02	30	P	P	22 20 16.5	+0.5
	comp=Z,0.4nm,0.7s,baz=272,slow=7.4,SNR=6.4						
	comp=Z,0.4nm,0.7s						
ILAR	Eielson Array	54.02	30	P	P	22 20 15.7	-0.2
D25K	Kavik River	54.55	24	P	P	22 20 20.7	+0.9
D25K				IAmb	IAmb	22 20 59.6	
	comp=Z,3.4nm,1.4s						
ASAR	Alice Springs	55.10	190	P	P	22 20 23.1	-1.2
	comp=Z,0.7nm,0.5s,baz=7.2,slow=6.4,SNR=12						
ASAR				PcP	PcP	22 21 25.8	+0.5
	comp=Z,0.3nm,0.6s,baz=14,slow=5.2,SNR=1.8						
	comp=Z,0.7nm,0.5s						
ASAR	Alice Springs	55.10	190	P	P	22 20 22.9	-1.3
J26L	Joseph Creek	55.44	30	P	P	22 20 26.9	+0.6
J26L				IAmb	IAmb	22 21 04.8	
	comp=Z,2.6nm,1.1s						
C27K	Jago River	55.51	24	P	P	22 20 27.7	+1.0
C27K				IAmb	IAmb	22 21 08.3	
	comp=Z,4.8nm,1.3s						
PSA00	Pilbara Seismi	56.77	206	P	P	22 20 34.7	-1.5
PSA00				IAmb	IAmb	22 20 49.6	
	comp=Z,7.8nm,1.4s						
KK31	Karatay Array	57.18	304	P	P	22 20 40.6	+1.6
KK31				IAmb	IAmb	22 20 43.3	
	comp=Z,1.9nm,0.8s						

KKAR	Karatay Array	57.18	304	P	P	22 20 40.9	+1.9
NIL	Nilore	57.68	292	P	P	22 20 45.4	+2.7
NIL				IAmb	IAmb	22 20 45.5	
	comp=Z,4.5nm,0.8s						
L29M	L29M	57.93	32	P	P	22 20 45.1	+1.1
F30M	Barrier River	58.45	26	P	P	22 20 49.8	+2.2
G31M	Satah River	59.12	27	P	P	22 20 52.9	+0.8
INK	Inuvik	59.23	25	P	P	22 20 52.2	-0.6
CHGR	Chuyangaron	59.34	299	P	P	22 20 53.7	-0.5
ARTI	Arti	61.68	321	P	P	22 21 09.8	0.0
	comp=Z,1.7nm,0.5s,baz=78,slow=4.7,SNR=3.9						
	comp=Z,1.7nm,0.5s						
ARTI	Arti	61.68	321	P	P	22 21 10.3	+0.5
ARTI				IAmb	IAmb	22 21 28.1	
	comp=Z,8.0nm,1.3s						
AB31	Akbulak array	62.67	313	P	P	22 21 16.5	0.0
AB31				IAmb	IAmb	22 21 23.0	
	comp=Z,2.6nm,1.2s						
ABKAR	Akbulak array	62.67	313	P	P	22 21 16.9	+0.3
FORT	Forrest	63.09	194	P	P	22 21 19.2	-0.1
FINES	FINESS Array B	74.58	334	P	P	22 22 31.2	+0.7
	comp=Z,5.7nm,1.1s,baz=94,slow=5.6,SNR=5.2						
	comp=Z,5.7nm,1.1s						
NOA	NORSAR Array B	80.08	338	P	P	22 23 01.9	+0.5
	comp=Z,0.7nm,0.8s,baz=46,slow=4.8,SNR=2.5						
	comp=Z,0.7nm,0.8s						
LPAZ	La Paz	148.28	69	PKPbc	PKPbc	22 30 39.8	+0.4
	comp=Z,1.2nm,0.8s,baz=268,slow=5.5,SNR=4.3						

*JMA **02** 22:54:18.3±0.1, 24°.3N±0°.3×123°.8E±0°.3, h17^{km}, MD4.2/10, MV4.0/10, NEAR ISHIGAKIJIMA ISLAND*
JMA Felt III J1 at NEAR ISHIGAKIJIMA ISLAND.
*NEIC **02** 22:54:22.0±1.9, 24°.31N±0°.08×123°.63E±0°.07, h43^{km}±8^{km}, mb4.5/19, Error ellipse: s-maj=12.1km s-min=8.4km az=190.0*
*IDC **02** 22:54:24.6±4.0, 24°.40N×123°.80E, h79^{km}±38^{km}, mb3.5/12, mbtmp3.8/13, MS2.7/1, Error ellipse: s-maj=27.6km s-min=16.0km az=67.0*
ISC 02 22:54:17.9±0.8, **24°.22N**±0°.04×**123°.79E**±0°.02, **h17**^{km}±5^{km}, **n75**, σ**1^s.26**/70, **mb4.2**/23, **Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.12	335	i P	Pg	22 54 21.8	+0.1
IRIF				eS	Sb	22 54 24.6	+0.3
IRIF	Iriomote-Funau	0.12	335	A	A	22 54 21.8	
	comp=N,69nm,0.4s,comp=E,57nm,0.4s						
HATJ	Hateruma jima	0.17	174	i P	Pg	22 54 22.9	+0.6
HATJ				S	Sg	22 54 26.3	+1.1
HATJ	Hateruma jima	0.17	174	A	A	22 54 22.9	
	comp=N,74nm,3.8s,comp=E,62nm,0.5s						
JKRS	Kuro-shima	0.20	86	i P	Pg	22 54 23.1	+0.3
JKRS				S	Sb	22 54 26.8	+0.1
JKRS	Kuro-shima	0.20	86	A	A	22 54 23.1	
	comp=N,73nm,0.4s,comp=E,66nm,0.9s						
JIJ	Ishigaki jima	0.35	67	i P	Pg	22 54 25.0	-0.3
JIJ				S	Sg	22 54 29.8	-0.5
JIJ	Ishigaki jima	0.35	67	A	A	22 54 25.0	
	comp=N,12nm,1.9s,comp=E,15nm,0.7s						
JISG	Ishigakijimahi	0.60	53	i P	Pg	22 54 29.3	-0.5
JISG				S	Sb	22 54 37.6	-0.4
JISG	Ishigakijimahi	0.60	53	A	A	22 54 29.3	
	comp=N,48nm,0.7s,comp=E,45nm,0.4s						
YOJ	Yonaguni jima	0.75	289		Pb	22 54 32.4	0.0
YOJ				Sn	Sb	22 54 42.4	+0.2
YOJ	Yonaguni jima	0.75	289	P	Pg	22 54 33.0	+0.5
YOJ	Yonaguni jima	0.75	289	S	Sg	22 54 43.4	+1.0
YOJ	Yonaguni jima	0.75	289	i P	Pb	22 54 32.9	+0.5
YOJ				S	Sg	22 54 43.3	+0.9
YOJ	Yonaguni jima	0.75	289	A	A	22 54 32.9	
	comp=N,10.0nm,3.9s,comp=E,12nm,0.8s						
JYNG	Yonagunijimaku	0.80	287	P	Pb	22 54 33.6	+0.4
JYNG				S	Sg	22 54 45.1	+1.0
JYNG	Yonagunijimaku	0.80	287	A	A	22 54 33.6	
	comp=N,19nm,0.6s,comp=E,19nm,0.7s						
JTJ	Tarama	0.93	63	i P	Pb	22 54 35.3	-0.2
JTJ				S	Sg	22 54 48.3	0.0
JTJ	Tarama	0.93	63	A	A	22 54 35.3	
	comp=N,15nm,4.4s,comp=E,23nm,1.5s						
NACB	Ninganchiao	2.00	269	Pn	Pn	22 54 51.8	+0.9
NACB	Ninganchiao	2.00	269	P	Pn	22 54 52.3	+1.5
TATO	Taipei	2.22	290	Pn	Pn	22 54 54.5	+0.7
TATO	Taipei	2.22	290	P	Pn	22 54 55.5	+1.6
YHNB	Yeheng	2.24	282	Pn	Pn	22 54 55.6	+1.4
YHNB	Yeheng	2.24	282	P	Pn	22 54 55.5	+1.3
YULB	Yu-li	2.42	251	Pn	Pn	22 54 56.8	+0.1
YULB	Yu-li	2.42	251	P	Pn	22 54 57.2	+0.5
SSLB	Suanglung	2.63	261	Pn	Pn	22 55 00.7	+1.2
SSLB	Suanglung	2.63	261	P	Pn	22 55 01.0	+1.5
TWGBT	Beinan	2.85	241	P	Pn	22 55 02.7	+0.2
TWGBT	Beinan	2.85	241	S	Sn	22 55 36.1	-0.4
TWG	Pinlang	2.85	241	Pn	Pn	22 55 02.3	-0.3
TPUB	Ta-pu	3.03	253	Pn	Pn	22 55 06.9	+1.8
TPUB	Ta-pu	3.03	253	P	Pn	22 55 07.4	+2.3
JOW	Kunigami	4.82	56	P	Pn	22 55 32.9	+3.3
	comp=E,41nm,0.9s,baz=132,slow=12,SNR=2.5						
JOW				S	Sn	22 56 27.4	+2.4
	comp=E,17nm,0.5s,baz=83,slow=19,SNR=1.1						
JOW	Kunigami	4.82	56	Pn	Pn	22 55 32.7	+3.1
CMAR	Chiang Mai Arr	23.82	261	LR	LR	23 10 15.7	
	comp=E,16nm,19.6s,baz=85,slow=40						
SONM	Songino Array	27.32	334	P	P	22 59 59.8	-2.0
	comp=E,0.5nm,0.6s,baz=141,slow=9.2,SNR=1.3						
	comp=E,0.5nm,0.6s						
SOEI	Soe	33.77	179	P	P	23 01 00.7	+1.7
KNRA	Kununurra	39.95	173	P	P	23 01 51.7	+0.3
KNRA				IAmb	IAmb	23 02 09.7	
	comp=Z,18nm,1.2s						
MKAR	Makanchi Array	39.98	315	P	P	23 01 50.6	-0.9
	comp=Z,0.4nm,0.3s,baz=98,slow=9.2,SNR=14						
	comp=Z,0.4nm,0.3s						
H11N1	WAKE ISLAND Hy	40.11	88	T	T	23 44 33.1	
	baz=283,slow=74,SNR=4.8						
H11N2	WAKE ISLAND Hy	40.11	88	T	T	23 44 33.8	
	baz=283,slow=74,SNR=5.7						
H11N3	WAKE ISLAND Hy	40.13	88	T	T	23 44 34.0	
	baz=283,slow=74,SNR=6.3						
MAKZ	Makanchi	40.19	315	P	P	23 01 52.3	-0.9
H11S3	WAKE ISLAND Hy	40.24	90	T	T	23 44 38.8	
	baz=284,slow=75,SNR=8.6						
H11S1	WAKE ISLAND Hy	40.25	90	T	T	23 44 43.4	
	baz=284,slow=75,SNR=9.2						
H11S2	WAKE ISLAND Hy	40.26	90	T	T	23 44 43.8	
	baz=284,slow=75,SNR=7.3						
ZALV	Zalesovo Beam	41.52	326	P	P	23 02 03.0	-1.1
	comp=Z,0.8nm,0.5s,baz=108,slow=9.3,SNR=4.5						
	comp=Z,0.8nm,0.5s						
COEN	Coen	42.41	151	P	P	23 02 12.9	+1.2
COEN				IAmb	IAmb	23 02 41.3	
	comp=Z,5.9nm,1.2s						
KURBB	Kurchatov Arra	43.62	319	P	P	23 02 20.4	-0.8
	comp=Z,0.3nm,0.5s,baz=107,slow=9.3,SNR=7.0						
	comp=Z,0.3nm,0.5s						
AAK	Ala-Archa	44.38	307	P	P	23 02 30.9	+3.3
WB0	Warramunga Arr	44.93	166	P	P	23 02 30.8	-1.1
WB0				IAmb	IAmb	23 02 38.8	
	comp=Z,4.5nm,1.1s						
WRA	Warramunga Arr	45.09	166	P	P	23 02 33.9	+0.7
	comp=Z,2.5nm,0.8s,baz=349,slow=8.3,SNR=11						
	comp=Z,2.5nm,0.8s						
WRA	Warramunga Arr	45.09	166	P	P	23 02 34.0	+0.9
WR8	Warramunga Arr	45.13	166	P	P	23 02 33.4	-0.2
WR8				IAmb	IAmb	23 02 39.7	
	comp=Z,3.6nm,0.8s						
ASAR	Alice Springs	48.61	168	P	P	23 03 01.9	+1.2
	comp=Z,0.6nm,0.6s,baz=355,slow=14,SNR=8.5						
	comp=Z,0.6nm,0.6s						
AB31	Akbulak array	55.12	314	P	P	23 03 48.4	-0.6
AB31				IAmb	IAmb	23 04 17.0	
	comp=Z,4.5nm,1.5s						
ABKAR	Akbulak array	55.12	314	P	P	23 03 48.8	-0.2
D19K	Kuna River	63.34	24	P	P	23 04 46.3	+0.6
D19K				IAmb	IAmb	23 05 24.2	
	comp=Z,9.0nm,1.3s						
F19K	Shaleruckik Mo	63.44	26	P	P	23 04 46.6	+0.3
F19K				IAmb	IAmb	23 05 27.9	
	comp=Z,5.7nm,1.5s						
D20K	Etivluk River	63.90	24	P	P	23 04 48.4	-0.9
D20K				IAmb	IAmb	23 05 27.1	
	comp=Z,8.9nm,1.3s						
J19K	Poorman	64.41	29	P	P	23 04 53.6	+0.9
J19K				IAmb	IAmb	23 04 55.4	
	comp=Z,5.6nm,1.4s						
D22K	Ayikyak River	65.32	23	P	P	23 04 59.1	+0.5
PPLA	Purkeypile	66.03	30	P	P	23 05 03.8	+0.4
BPAW	Bear Paw Mtn.	66.43	29	P	P	23 05 06.1	+0.3
F24K	Squaw Lake	67.24	25	P	P	23 05 11.8	+0.8
F24K				IAmb	IAmb	23 05 15.5	
	comp=Z,4.4nm,1.4s						
ILAR	Eielson Array	68.08	28	P	P	23 05 14.9	-1.4
	comp=Z,0.2nm,0.7s,baz=270,slow=5.9,SNR=1.4						
	comp=Z,0.2nm,0.7s						
M26K	Nabesna, AK	70.29	30	P	P	23 05 29.7	-0.4
M26K				IAmb	IAmb	23 05 58.9	
	comp=Z,12nm,1.4s						
FINES	FINESS Array B	72.60	330	P	P	23 05 41.8	-2.1
	comp=Z,2.0nm,0.9s,baz=65,slow=5.0,SNR=1.8						
	comp=Z,2.0nm,0.9s						
HFS	Hagfors	78.68	331	P	P	23 06 16.7	-2.1
	comp=Z,1.5nm,0.7s,baz=95,slow=7.2,SNR=1.6						
	comp=Z,1.5nm,0.7s						
NOA	NORSAR Array B	79.29	333	P	P	23 06 20.3	-1.9
	comp=Z,1.0nm,1.0s,baz=56,slow=5.4,SNR=1.9						
	comp=Z,1.0nm,1.0s						
YKAW3	Yellowknife Wh	81.95	23	P	P	23 06 35.8	-0.6
YKA	Yellowknife Ar	82.00	24	P	P	23 06 34.9	-1.7
	comp=Z,0.8nm,0.6s,baz=309,slow=5.8,SNR=5.0						
	comp=Z,0.8nm,0.6s						
GERES	GERESS Array B	84.31	321	P	P	23 06 47.6	-1.4
	comp=Z,0.5nm,0.5s,baz=57,slow=6.3,SNR=4.9						
	comp=Z,0.5nm,0.5s						

*IDC **02** 23:01:37.1±6.8, 31°.59S×179°.32W, h146^{km}±55^{km}, mb3.5/3, mbtmp4.0/4, Error ellipse: s-maj=51.7km s-min=27.9km az=41.0*
ISC 02 23:01:38.1±1.1, **31°.6S**±0°.1×**179°.5W**±0°.3, **h150**^{km}, **n10**, σ**1^s.64**/11, **mb3.8**/4, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.23	201	P	Pn	23 03 22.6	+1.4
	18nm,1.0s,baz=75,slow=6.7,SNR=8.6						
URZ				S	Sn	23 04 39.3	-2.8
	7.8nm,0.3s,baz=352,slow=19,SNR=9.7						
ASAR	Alice Springs	41.75	269	P	P	23 09 13.9	+1.1
	1.4nm,0.6s,baz=111,slow=8.5,SNR=14						
	1.4nm,0.6s						
WRA	Warramunga Arr	42.85	274	P	P	23 09 22.5	+0.9
	1.1nm,0.3s,baz=114,slow=8.3,SNR=13						
	1.1nm,0.3s						
QSPA	South Pole Qui	58.55	180	P	P	23 11 20.5	+1.8
	2.6nm,0.7s,baz=47,slow=1.0,SNR=7.3						
SNAA	Sanae	77.03	179	P	P	23 13 14.2	+0.1
	0.4nm,0.4s,baz=208,slow=17,SNR=5.8						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	120.93	313	PKP	PKPdf	23 20 10.2	-2.0
	0.3nm,0.6s,baz=111,slow=2.1,SNR=2.3						
FINES	FINESS Array B	145.75	338	PKPbc	PKPdf	23 20 57.3	-0.7
	4.9nm,1.0s,baz=46,slow=4.0,SNR=12						
NOA	NORSAR Array B	149.67	350	PKPbc	PKPbc	23 21 08.8	-0.6
	1.6nm,1.2s,baz=17,slow=3.7,SNR=1.7						
MMAI	Mount Meron Ar	150.51	282	PKPbc	PKiKP	23 21 12.7	-0.3
	1.8nm,0.8s,baz=68,slow=3.9,SNR=4.3						
BRTR	Keskin Array B	151.96	296	PKPbc	PKPbc	23 21 14.3	-1.3
	0.3nm,0.6s,baz=60,slow=3.5,SNR=2.5						

*NAO **02** 23:22:48.5, 40°.22N×18°.25E, h10^{km}, MB3.8*
*PRU **02** 23:22:51.3, 40°.26N×20°.07E, h121^{km}, M4.4*
*IDC **02** 23:22:56.7±0.8, 41°.31N×19°.45E, h0^{km}, mb4.0/15, mbtmp4.0/25, ML3.4/7, MS3.2/19, Error ellipse: s-maj=12.7km s-min=10.3km az=22.0*
*MOS **02** 23:22:57.6±1.1, 41°.30N×19°.46E, h16^{km}, mb4.5/8, Error ellipse: s-maj=6.8km s-min=4.2km az=77.0*
*BGR **02** 23:22:58.2±0.9, 41°.15N×19°.90E, h10^{km}, ML4.1, Error ellipse: s-maj=14.5km s-min=12.2km az=15.0*
*NEIC **02** 23:23:00.4±2.4, 41°.41N±0°.06×19°.59E±0°.06, h10^{km}±1^{km}, mb4.5/13, Error ellipse: s-maj=11.4km s-min=7.0km az=200.0*
*BEO **02** 23:23:01.7±0.5, 41°.39N×19°.66E, h15^{km}±2^{km}, ML3.8/19*
*PDG **02** 23:23:01.3±0.6, 41°.41N×19°.57E, h21^{km}±1^{km}, MD4.0/12, ML4.0/13, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*SKO **02** 23:23:01.4, 41°.53N×19°.56E, h13^{km}, ML3.7*
*TIR **02** 23:23:02.6, 41°.54N×19°.73E, h36^{km}±1^{km}, Ml4.0/5*
*THE **02** 23:23:02.2, 42°N±5°×2°0E±°, h4^{km}±19^{km}, M3.6/36, MLh3.6/36*
ISC 02 23:23:01.1±0.4, **41°.43N**±0°.02×**19°.63E**±0°.02, **h20**^{km}±2^{km}, **n359**, σ**1^s.91**/443, **mb4.3**/21, **MS3.6**/11, **57C-17D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.19	116	⇑Pg	Pb	23 23 06.4	-0.3
TIR				Sg	Sb	23 23 09.9	-0.6
TIR				AML	AML	23 23 11.4	
	28nm,0.3s						
ULC	Ulcinj	0.60	331	⇑iPg	Pb	23 23 13.2	+0.1
ULC				i Sg	Sn	23 23 23.4	-0.4
SDA	Shkodra	0.63	351	⇑Pg	Pb	23 23 13.5	+0.1
SDA				Sg	Sb	23 23 22.7	+0.9
PHP	Peshkopia	0.66	67	Pg	Pb	23 23 13.7	-0.3
PHP				Sn	Sb	23 23 22.6	-0.1
PHP				AML	AML	23 23 27.6	
	42nm,0.4s						
PHP	Peshkopia	0.66	67	P	Pb	23 23 13.5	-0.5
DRME	Dracevica, Mon	0.82	336	⇓iPg	Pb	23 23 17.2	+0.4
DRME				eSg	Sn	23 23 30.6	+1.4
OHR	Ohrid	0.94	110	i Pg	Pn	23 23 19.3	+0.1
OHR				i Sg	Sn	23 23 34.1	+2.1
OHR				eLg	Lg	23 23 35.5	
	comp=N,3µm,0.7s						
OHR				eLg	Lg	23 23 36.0	
	comp=E,2µm,0.6s						
VLO	Vlora	0.97	186	Pg	Pn	23 23 22.1	+2.6
VLO				Sg	Sn	23 23 37.9	+5.3
VLO				AML	AML	23 23 40.4	
	comp=E,25nm,0.6s						
VLO	Vlora	0.97	186	P	Pn	23 23 21.8	+2.3
VLO				S	Sn	23 23 36.8	+4.1
BUM	Brajici-Budva	1.03	328	⇑iPg	Pn	23 23 20.9	+0.5
BUM				i Sg	Sn	23 23 37.0	+2.7
PDG	Podgorica	1.04	344	Pg	Pn	23 23 21.1	+0.6
PDG				Sg	Sn	23 23 34.8	+0.5
PDG	Podgorica	1.04	344	Pn	Pn	23 23 21.0	+0.6
PDG	Podgorica	1.04	344	⇑P	Pn	23 23 21.3	+0.9
PDG				⇓S	Sn	23 23 35.5	+1.2
PDG	Podgorica	1.04	344	ePg	Pn	23 23 21.4	+0.9
PDG				eSg	Sn	23 23 37.2	+2.9
PDG	Podgorica	1.04	344	⇑iPg	Pb	23 23 20.5	+0.2
PDG				i Sg	Sn	23 23 37.7	+3.4
PVY	Plav	1.19	12	⇑iPg	Pn	23 23 23.1	+0.4
PVY				i Sg	Sn	23 23 42.6	+4.3
KBN	Korca	1.19	132	Pg	Pb	23 23 24.9	+1.9
KBN				Sg	Sn	23 23 41.7	+3.4
KBN	Korca	1.19	132	P	Pb	23 23 24.7	+1.7
KBN				S	Sn	23 23 42.7	+4.4
CEME	Cevo	1.23	335	⇑iPg	Pb	23 23 24.4	+0.6
CEME				eSg	Sn	23 23 42.9	+3.5
HCY	Herceg Novi	1.32	320	⇓iPg	Pb	23 23 25.7	+0.5
HCY				i Sg	Sb	23 23 44.7	+2.9
KOME	Kolasin	1.42	356	⇓iPg	Pb	23 23 28.1	+1.2
KOME				eSg	Sb	23 23 47.6	+3.0
NKME	Niksic	1.43	339	⇑iPg	Pb	23 23 27.5	+0.5
NKME				eSg	Sb	23 23 47.9	+3.1
IVA	Berane	1.45	8	⇑iPg	Pb	23 23 28.0	+0.5
IVA				eSg	Sb	23 23 49.0	+3.5
SKO	Skopje	1.46	68	i Pg	Pb	23 23 28.3	+0.8
SKO				i Sg	Sb	23 23 48.0	+2.4
NEST	Nestorio	1.48	133	Pn	Pb	23 23 29.7	+1.8
NEST				Sn	Sb	23 23 50.0	+3.7
NEST				AML	AML	23 23 53.2	
	comp=E,6.3nm,0.8s						
NEST	Nestorio	1.48	133	P	Pb	23 23 29.2	+1.3
NEST				S	Sb	23 23 50.8	+4.5
TREB	Trebinje	1.60	324	ePn	Pb	23 23 29.8	-0.2
BRY	Bratogost	1.68	331	⇑iPn	Pb	23 23 30.9	-0.5
BRY				i Sn	Sb	23 23 53.9	+1.8
PENT	Pentalofos	1.68	137	P	Pb	23 23 32.6	+1.2
PENT				S	Sb	23 23 55.4	+3.2
KEK	Kerkira	1.72	176	Pn	Pb	23 23 35.7	+3.7
SJES	Sjenica	1.84	8	ePg	Pb	23 23 35.4	+1.2
SJES				eSg	Sb	23 23 59.7	+2.8
UPM	Unac-Piva	1.85	343	⇓iPn	Pb	23 23 33.9	-0.4
UPM				i Sn	Sb	23 23 57.9	+0.8
KLINJ	Klinje	1.90	336	ePn	Pb	23 23 34.6	-0.6
PLE	Pljevlja	1.91	355	⇑iPn	Pb	23 23 35.7	+0.5
PLE				i Sn	Sb	23 23 59.7	+1.1
IGT	Igoumenitsa	1.97	164	Pn	Pb	23 23 36.0	-0.3
IGT				Sn	Sb	23 23 59.9	-0.5
IGT				AML	AML	23 24 14.9	
	comp=E,2.3nm,1.0s						
IGT	Igoumenitsa	1.97	164	P	Pb	23 23 35.2	-1.1
IGT				S	Sb	23 24 02.0	+1.6
KZN	Kozani	1.97	124	P	Pb	23 23 36.1	-0.3
KZN				S	Sb	23 24 01.9	+1.4
KPRO	Kipourio	1.98	138	P	Pb	23 23 36.6	+0.2
KPRO				S	Sb	23 24 03.1	+2.4
JAN	Janina	2.00	152	P	Pb	23 23 36.4	-0.4
JAN				S	Sb	23 24 02.7	+1.4
LFKM	Lefkimmi	2.01	171	S	Sb	23 24 04.6	+3.2
SELS	Selova	2.10	31	ePn	Pb	23 23 37.2	-1.3
SELS				eSn	Sb	23 24 03.6	-0.5
BARS	Barje	2.13	49	i Pn	Pn	23 23 37.3	+1.8
BARS	Barje	2.13	49	ePn	Pn	23 23 37.2	+1.6
GRG	Griva	2.14	102	P	Pb	23 23 38.0	-1.3
GRG				S	Sb	23 24 04.6	-0.7
GRG	Griva	2.14	102	i Pn	Pb	23 23 37.9	-1.3
IVAS	Ivanjica	2.18	10	ePn	Pn	23 23 37.8	+1.6
IVAS				eSn	Sb	23 24 06.3	-0.1
RUDO	Rudo	2.19	355	ePn	Pb	23 23 39.4	-0.7
PRMD	Pramanda	2.20	149	P	Pb	23 23 39.7	-0.6
VAY	Valandovo	2.21	92	i Pn	Pn	23 23 38.3	+1.7
VAY				i Sn	Sb	23 24 06.6	-0.8
VAY				eLg	Lg	23 24 07.2	
	comp=E,229nm,0.7s						
VAY				eLg	Lg	23 24 09.3	
	comp=N,267nm,0.7s						
GOCS	Kraljevo Serbi	2.32	23	ePn	Pn	23 23 40.0	+1.8
GOCS				eSn	Sn	23 24 08.0	+1.9
MATE	Matera	2.35	252	⇓P	Pn	23 23 39.6	+1.1
MATE				⇓S	Sn	23 24 08.0	+1.3
BOSS	Bosilegrad	2.37	62	ePn	Pn	23 23 40.6	+1.7
BOSS				eSn	Sn	23 24 10.0	+2.6
TETR	Tetrakomo, Epi	2.43	148	P	Pb	23 23 42.9	-1.4
TETR				S	Sb	23 24 13.3	-0.5
BBLS	Lazi&#263i	2.44	356	ePn	Pn	23 23 41.8	+2.0
BBLS				eSn	Sb	23 24 13.8	-0.1
KNT	Kendrikon	2.47	95	P	Pn	23 23 41.9	+1.7
KNT				S	Sn	23 24 11.0	+1.1
KNT	Kendrikon	2.47	95	i Pn	Pn	23 23 41.7	+1.4
LIT	Litokhoron	2.54	121	P	Pn	23 23 42.8	+1.6
LIT	Litokhoron	2.54	121	Pn	Pn	23 23 42.6	+1.4
LIT	Litokhoron	2.54	121	P	Pn	23 23 42.6	+1.4
GRUS	Gruza	2.58	18	ePn	Pn	23 23 43.7	+2.0
GRUS				eSn	Sb	23 24 15.8	-2.1
THL	Klokotos Trika	2.60	135	P	Pn	23 23 43.7	+1.7
THE	Thessaloniki	2.64	107	P	Pn	23 23 43.8	+1.3
THE	Thessaloniki	2.64	107	i Pn	Pn	23 23 44.0	+1.5
TRAN	Tran	2.65	57	P	Pn	23 23 44.3	+1.7
KKB	Krupnik	2.65	80	P	Pn	23 23 44.5	+1.8
KKB				S	Sn	23 24 15.7	+1.5
KKB	Krupnik	2.65	80	i P	Pn	23 23 44.7	+2.0
KKB				S	Sn	23 24 16.4	+2.2
KKB	Krupnik	2.65	80	i Pn	Pn	23 23 44.8	+2.1
BOVS	Bovan	2.68	34	⇓P	Pn	23 23 45.2	+2.1
BOVS				⇑S	Sn	23 24 17.7	+2.7
TSLK	Tsoukalades, L	2.72	163	P	Pn	23 23 45.0	+1.4
HORT	Hortiatis	2.75	107	P	Pn	23 23 45.2	+1.0
LKD2	Lefkada island	2.75	163	P	Pn	23 23 45.3	+1.1
AMPL	Ampelaki	2.78	154	P	Pb	23 23 47.1	-3.1
NYDR	Nydri-Lefkada	2.84	163	P	Pn	23 23 46.1	+0.9
DRAG	Dragano-Lefkad	2.84	165	P	Pn	23 23 46.2	+0.9
TRUS	Trudelj	2.85	11	ePn	Pn	23 23 46.9	+1.5
TRUS				eSn	Sn	23 24 22.4	+3.4
ACER	Acerenza	2.86	258	Pn	Pn	23 23 46.7	+1.0
SOH	Sokhos	2.88	101	P	Pn	23 23 47.4	+1.6
SOH	Sokhos	2.88	101	i Pn	Pn	23 23 47.6	+1.8
ZAPS	Zavoj	2.89	49	ePn	Pn	23 23 48.0	+2.1
ZAPS				eSn	Sn	23 24 23.1	+3.0
EVGI	Lefkada island	2.92	164	P	Pn	23 23 46.8	+0.5
VTS	Vitosha	2.93	65	P	Pn	23 23 48.0	+1.4
VTS	Vitosha	2.93	65	i P	Pn	23 23 48.8	+2.1
VTS				S	Sn	23 24 23.6	+2.2
SGRT	San Giovanni R	2.94	278	Pn	Pn	23 23 46.3	-0.3
SRS	Serrai	3.00	95	P	Pn	23 23 48.9	+1.4
SRS	Serrai	3.00	95	i Pn	Pn	23 23 48.9	+1.4
PLNA	Plana	3.01	69	P	Pn	23 23 50.3	+2.5
EVR	Evrytania	3.02	146	P	Pn	23 23 50.3	+2.5
FSK	Fiskardo	3.05	166	P	Pn	23 23 48.3	+0.1
ZAGS	Zajecar	3.06	38	ePn	Pn	23 23 50.2	+2.0
ZAGS				eSn	Sn	23 24 25.8	+1.6
BLSH	Balsha	3.06	61	P	Pn	23 23 51.0	+2.6
SVIS	Svilajnac	3.06	22	ePn	Pn	23 23 50.9	+2.6
SVIS				eSn	Sn	23 24 25.6	+1.3
PLG	Polygyros	3.08	109	P	Pn	23 23 50.3	+1.7
MAKR	Makrakomi, Fth	3.08	141	P	Pn	23 23 51.1	+2.4
MMB	Musomishta	3.09	87	P	Pn	23 23 50.6	+1.8
MMB	Musomishta	3.09	87	i P	Pn	23 23 50.5	+1.7
MMB				S	Sb	23 24 29.4	-3.3
MMB	Musomishta	3.09	87	i Pn	Pn	23 23 50.7	+1.8
TEKS	Tekeris	3.12	359	ePn	Pn	23 23 49.9	+0.8
TEKS				eSn	Sn	23 24 27.3	+1.6
TIP	Timpagrande	3.15	225	Pn	Pn	23 23 50.2	+0.6
TIP	Timpagrande	3.15	225	⇑P	Pn	23 23 50.4	+0.9
PVO	Paravola	3.17	152	P	Pn	23 23 51.6	+1.9
AGG	Agios Georgios	3.17	139	P	Pn	23 23 51.9	+2.0
BORS2	Bor- Borsko je	3.18	33	ePn	Pn	23 23 50.3	+0.3
BORS2				eSn	Sn	23 24 30.4	+3.0
CUC	Castrocucco	3.24	245	Pn	Pn	23 23 51.1	+0.3
DMLN	Damoulianata-K	3.24	170	P	Pn	23 23 50.9	+0.1
LXR1	Lixouri, Cepha	3.29	169	P	Pn	23 23 52.0	+0.6
AVAS	Avala Beograd	3.33	11	ePn	Pn	23 23 53.2	+1.2
AVAS				eSn	Sn	23 24 31.2	+0.4
KUBS	Kucevo	3.33	26	ePn	Pn	23 23 52.4	+0.3
KUBS				eSn	Sn	23 24 31.6	+0.5
VLS	Valsamata	3.33	167	P	Pn	23 23 52.5	+0.4
ANX	Ano Chora	3.34	147	P	Pn	23 23 55.3	+3.1
RTZL	Ratzakli, Kefa	3.46	165	P	Pn	23 23 54.7	+0.8
NEO	Neokhori	3.47	127	P	Pn	23 23 55.4	+1.5
OUR	Ouranopolis	3.47	107	P	Pn	23 23 55.9	+1.9
AXS	Araxos	3.50	157	P	Pn	23 23 55.8	+1.5
PGB	Panagyurishte	3.55	71	i P	Pn	23 23 57.7	+2.6
PGB				S	Sn	23 24 39.0	+2.5
MPEP	Malo Peshtene	3.60	56	P	Pn	23 23 58.6	+2.9
MDVR	Moldovita	3.68	24	⇑P	Pn	23 23 58.4	+1.6
FRGS	Fruska Gora	3.73	2	ePn	Pn	23 23 58.7	+1.2
FRGS				eSn	Sn	23 24 42.1	+1.4
BAIL	Bailesti	3.76	45	⇑P	Pn	23 24 00.4	+2.5
BLY	Banja Luka	3.77	332	ePn	Pn	23 24 00.1	+2.1
BLY	Banja Luka	3.77	332	ePn	Pn	23 24 00.3	+2.3
RZN	Rozhen	3.84	84	P	Pn	23 24 01.4	+2.2
PAOL	Paolisi	3.84	266	Pn	Pn	23 24 00.8	+1.7
DJES	Djerdap	3.86	32	⇑P	Pn	23 24 01.0	+1.7
PLD	Plovdiv	3.89	78	P	Pn	23 24 01.1	+1.4
VRSS	Vrsac	3.89	18	ePn	Pn	23 24 00.8	+1.1
VRSS				eSn	Sn	23 24 45.0	+0.2
RMGR	Halanga-Turnu	3.93	34	⇑P	Pn	23 24 02.4	+2.2
HERR	Herculane	4.00	30	⇑P	Pn	23 24 02.8	+1.6
BANR	Banloc	4.10	15	⇓P	Pn	23 24 04.3	+1.8
SRE	Strehaia	4.16	38	⇑P	Pn	23 24 05.4	+2.1
SRE	Strehaia	4.16	38	P	Pn	23 24 05.4	+2.1
PLVB	Pleven	4.18	60	⇑P	Pn	23 24 05.6	+2.0
CEL	Celeste	4.28	223	Pn	Pn	23 24 05.2	+0.1
KDZ	Kurdzhali	4.29	85	P	Pn	23 24 07.1	+1.9
BZS	Buzias	4.42	18	⇑P	Pn	23 24 08.2	+1.1
BZS	Buzias	4.42	18	P	Pn	23 24 08.3	+1.3
PVL	Pavlikeni	4.44	66	P	Pn	23 24 09.7	+2.4
RDO	Rodhopi	4.46	92	Pn	Pn	23 24 08.1	+0.6
DIM	Dimitrovgrad	4.49	80	P	Pn	23 24 10.7	+2.8
GZR	Gura Zlata	4.57	29	⇑P	Pn	23 24 11.1	+2.0
GZR	Gura Zlata	4.57	29	P	Pn	23 24 11.1	+2.0
ITM	Ithomi	4.60	157	Pn	Pn	23 24 11.1	+1.5
AQU	L'Aquila	4.74	283	ePn	Pn	23 24 13.1	+1.6
CAMP	Campotosto	4.77	285	Pn	Pn	23 24 12.2	+0.3
MORH	Mrgy, Hungar	4.83	352	ePn	Pn	23 24 13.9	+1.3
MORH	Mrgy, Hungar	4.83	352	⇑P	Pn	23 24 14.0	+1.4
ELND	Elena	4.87	70	⇑P	Pn	23 24 15.5	+2.3
COPA	Copaceanca	4.92	55	⇓P	Pn	23 24 16.3	+2.5
HUMR	Humele	5.00	50	⇑P	Pn	23 24 17.3	+2.4
LOT	Lotru	5.02	35	⇓P	Pn	23 24 17.4	+2.1
DEV	Deva	5.04	27	⇑P	Pn	23 24 18.0	+2.5
DEV	Deva	5.04	27	P	Pn	23 24 18.0	+2.5
SZH	Strazhitsa	5.04	67	P	Pn	23 24 18.4	+2.8
NRCA	Norcia	5.05	288	Pn	Pn	23 24 17.0	+1.4

FDMO	Fiordimonte	5.12	290	Pn	Pn	23 24 17.6	+1.0
BOJS	Bojanci	5.17	323	i Pn	Pn	23 24 18.9	+1.6
JMB	Yambol	5.25	76	P	Pn	23 24 20.5	+2.1
CRES	Cresnjevec Ost	5.34	327	ePn	Pn	23 24 21.0	+1.4
ARR	Arges	5.36	41	⇑P	Pn	23 24 22.5	+2.5
CESX	Cesi	5.38	285	Pn	Pn	23 24 21.5	+1.3
TNR	Turnu Rosu	5.40	37	⇓P	Pn	23 24 23.2	+2.7
TNR	Turnu Rosu	5.40	37	P	Pn	23 24 23.1	+2.7
SGRR	Singureni	5.43	57	⇑P	Pn	23 24 23.3	+2.4
BEHE	Becsehely	5.44	339	Pn	Pn	23 24 22.5	+1.5
BEHE	Becsehely	5.44	339	ePn	Pn	23 24 23.2	+2.2
LOZB	Loznitsa	5.50	67	⇑P	Pn	23 24 24.3	+2.4
MURB	Monte Urbino	5.58	292	Pn	Pn	23 24 24.5	+1.6
VOIR		5.62	43	⇑P	Pn	23 24 26.6	+3.1
VOIR		5.62	43	P	Pn	23 24 26.6	+3.1
VAE	Valguarnera	5.65	227	Pn	Pn	23 24 19.9	-4.1
	comp=N,2.8nm,0.4s,baz=35,slow=18,SNR=1.5						
VAE				Sn	Sn	23 25 31.0	+2.7
	comp=N,0.9nm,0.3s,baz=255,slow=24,SNR=1.9						
MARR	Marisel-Cluj	5.81	24	⇑P	Pn	23 24 28.6	+2.4
MDB	Medias	5.83	35	⇑P	Pn	23 24 29.8	+3.5
MDB	Medias	5.83	35	P	Pn	23 24 29.8	+3.5
SULR		5.83	54	⇑P	Pn	23 24 29.5	+3.1
RAFF	Raffo Rosso	5.86	226	Pn	Pn	23 24 25.9	-0.9
CJR	Cluj-Napoca	6.00	27	⇑P	Pn	23 24 31.5	+2.8
CJR	Cluj-Napoca	6.00	27	P	Pn	23 24 31.5	+2.8
TRI	Trieste	6.04	317	Pn	Pn	23 24 28.9	-0.2
TRI	Trieste	6.04	317	P	Pn	23 24 28.9	-0.2
LEHL	Lehliu	6.08	58	⇑P	Pn	23 24 33.1	+3.2
CICN	Ciocanesti	6.10	61	⇑P	Pn	23 24 32.5	+2.5
MLR	Muntele Rosu	6.13	46	Pn	Pn	23 24 33.9	+3.3
	comp=N,35nm,0.7s,baz=160,slow=12,SNR=27						
MLR				Sn	Sn	23 25 46.0	+6.0
	comp=N,1.6nm,0.3s,baz=252,slow=20,SNR=3.9						
MLR				LR	LR	23 28 00.7	
	comp=N,56nm,20.8s,baz=254,slow=48						
MLR	Muntele Rosu	6.13	46	Pn	Pn	23 24 34.2	+3.6
MLR	Muntele Rosu	6.13	46	⇑P	Pn	23 24 33.7	+3.1
MLR	Muntele Rosu	6.13	46	P	Pn	23 24 33.6	+3.1
DOPR	Dopca	6.16	41	⇓P	Pn	23 24 33.8	+2.9
LTVH	Ltavrtes, Hu	6.17	14	⇑P	Pn	23 24 33.4	+2.5
SOKA	Soboth	6.20	329	i Pn	Pn	23 24 32.6	+1.1
	comp=N,5.7nm,0.3s,SNR=17						
VOJS	Vojsko	6.20	320	i Pn	Pn	23 24 32.7	+1.1
OBKA	Obir	6.26	326	i Pn	Pn	23 24 34.2	+1.9
	comp=N,10nm,0.3s,SNR=13						
OBKA				i Sn	Sn	23 25 45.7	+2.4
	comp=N,27nm,0.6s						
SABO	M.te Sabotino	6.31	318	Pn	Pn	23 24 33.4	+0.5
APE	Apeiranthos	6.32	132	deP	Pn	23 24 34.4	+1.3
PSZ	Piszkesteto	6.49	2	Pn	Pn	23 24 36.2	+0.8
PSZ	Piszkesteto	6.49	2	eP	Pn	23 24 36.7	+1.2
PSZ	Piszkesteto	6.49	2	P	Pn	23 24 36.2	+0.8
PSZ	Piszkesteto	6.49	2	ePn	Pn	23 24 36.9	+1.5
PSZ				eSn	Sn	23 25 49.9	+1.0
COVR	Voineasa-Covas	6.49	45	⇑P	Pn	23 24 38.5	+3.0
ARSA	Arzberg	6.52	335	Pn	Pn	23 24 37.8	+2.0
ARSA	Arzberg	6.52	335	i Pn	Pn	23 24 37.9	+2.0
	comp=N,5.7nm,0.3s,SNR=9.6						
BALB	Balikesir	6.53	103	Pn	Pn	23 24 38.2	+2.2
OSSC	Osservatorio P	6.54	291	Pn	Pn	23 24 37.0	+0.8
ICOR	Ion Corvin	6.58	63	⇑P	Pn	23 24 39.4	+2.7
ARCR	ARCALIA	6.59	29	⇑P	Pn	23 24 39.9	+3.1
RONA	Rosalia, Austr	6.70	340	i Pn	Pn	23 24 40.4	+2.0
	comp=N,4.4nm,0.5s						
RONA				i Sn	Sn	23 25 53.5	-0.6
	comp=N,5.2nm,0.5s						
PLOR	Plostina	6.74	47	⇑P	Pn	23 24 42.1	+3.3
PLOR	Plostina	6.74	47	P	Pn	23 24 42.1	+3.3
MYKA	Terra Mystica	6.75	322	i Pn	Pn	23 24 41.2	+2.1
	comp=N,4.0nm,0.3s						
MYKA				eSn	Sn	23 25 54.5	-1.0
	comp=N,10nm,0.6s						
VRI	Vrincioaia	6.79	47	⇑P	Pn	23 24 42.7	+3.2
VRI	Vrincioaia	6.79	47	P	Pn	23 24 42.7	+3.2
ONER	Baraj Valea Uz	6.92	43	⇑P	Pn	23 24 44.5	+3.2
STAL	STALIGIAL	6.95	316	Pn	Pn	23 24 41.9	+0.2
ZCCA	Zocca	6.99	298	Pn	Pn	23 24 43.2	+0.8
TEOL	Teolo	7.00	307	Pn	Pn	23 24 42.8	+0.3
MFTR	Murfatlar	7.02	64	⇑P	Pn	23 24 45.2	+2.5
CONA	Conrad Observa	7.03	339	ePn	Pn	23 24 45.4	+2.5
	comp=N,1.7nm,0.3s						
CONA				eSn	Sn	23 26 03.7	+1.6
	comp=N,7.1nm,0.7s						
KECS	Kecovo	7.08	5	eP	Pn	23 24 45.7	+2.3
KECS				e		23 26 02.3	
KECS	Kecovo	7.08	5	ePN	Pn	23 24 45.7	+2.3
KECS				eSN	Sn	23 26 02.3	-0.9
TIRR	Tirgusor	7.12	62	Pn	Pn	23 24 45.3	+1.3
TIRR	Tirgusor	7.12	62	P	Pn	23 24 45.3	+1.3
CIMO	Cimolais	7.12	316	Pn	Pn	23 24 44.0	-0.2
MODS	Modra-Piesok	7.14	347	eP	Pn	23 24 48.2	+3.9
MODS				e		23 26 03.9	
MODS	Modra-Piesok	7.14	347	ePN	Pn	23 24 48.2	+3.9
MODS				eSN	Sn	23 26 03.9	-0.9
CFR	Carcaliu	7.24	56	⇓P	Pn	23 24 47.2	+1.4
CFR	Carcaliu	7.24	56	P	Pn	23 24 47.1	+1.4
TPGR	Topolog	7.28	59	⇑P	Pn	23 24 48.0	+1.8
BURAR	Bucovina Array	7.36	31	Pn	Pn	23 24 51.3	+4.0
BURAR	Bucovina Array	7.36	31	⇑P	Pn	23 24 50.7	+3.3
BURAR	Bucovina Array	7.36	31	P	Pn	23 24 50.6	+3.3
BUR08	Bucovina Ar. S	7.37	31	Pn	Pn	23 24 51.3	+3.7
ABTA	Abfaltersbach	7.38	318	i Pn	Pn	23 24 48.3	+0.6
	comp=N,3.2nm,0.2s,SNR=5.5						
ABTA				i Sn	Sn	23 26 09.0	-1.8
	comp=N,10nm,0.3s						
IDI	Anoyia	7.39	144	Pn	Pn	23 24 46.0	-1.9
	comp=N,2.1nm,0.3s,baz=322,slow=12,SNR=12						
IDI				Sn	Sn	23 26 05.8	-5.4
	comp=N,2.5nm,0.3s,baz=302,slow=19,SNR=5.9						
IDI	Anoyia	7.39	144	Pn	Pn	23 24 47.2	-0.7
CTI	Castel Tesino	7.39	311	Pn	Pn	23 24 47.7	-0.2
CTI	Castel Tesino	7.39	311	P	Pn	23 24 47.7	-0.2
MANT	Manisa	7.46	110	Pn	Pn	23 24 50.8	+1.9
MOA	Molln	7.47	331	i Pn	Pn	23 24 51.3	+2.4
	comp=N,3.5nm,0.3s,SNR=8.8						
MOA				i Sn	Sn	23 26 15.0	+2.0
	comp=N,11nm,0.5s						
JAVC	Velka Javorina	7.55	350	ePN	Pn	23 24 53.0	+2.9
BIOA	Bad Ischl, Aus	7.58	328	ePn	Pn	23 24 52.1	+1.7
	comp=N,9.5nm,0.3s,SNR=19						
BIOA				i Sn	Sn	23 26 15.7	0.0
	comp=N,11nm,0.5s						
TLCR		7.67	58	⇑P	Pn	23 24 54.3	+2.7
TLCR		7.67	58	P	Pn	23 24 54.3	+2.7
LANS	Liptovska Anna	7.72	359	eP	Pn	23 24 57.7	+5.4
LANS				e		23 26 19.4	
LANS	Liptovska Anna	7.72	359	ePN	Pn	23 24 57.7	+5.4
LANS				eSN	Sn	23 26 19.4	+0.3
LESA	Schwarzleotal	7.79	323	ePn	Pn	23 24 54.7	+1.4
	comp=N,6.3nm,0.4s,SNR=10						
LESA				i Sn	Sn	23 26 20.2	-0.6
	comp=N,8.2nm,0.4s						
SALO	Salr	7.83	305	Pn	Pn	23 24 54.8	+1.0
KRUC	Moravsky	7.96	344	ePN	Pn	23 24 57.7	+2.1
KRUC	Moravsky	7.96	344	ePn	Pn	23 24 58.3	+2.7
MSSA	Maissana	7.97	295	Pn	Pn	23 24 56.4	+0.6
VSL	Villasalto	8.05	259	Pn	Pn	23 24 56.4	-0.5
STHS	Stebnicka Huta	8.06	8	eP	Pn	23 24 59.8	+2.8
STHS				e		23 26 28.3	
STHS	Stebnicka Huta	8.06	8	ePN	Pn	23 24 59.8	+2.8
STHS				eSN	Sn	23 26 28.3	+0.8
VRAC	Vranov	8.16	346	LR	LR	23 29 05.8	
	comp=N,137nm,18.9s,baz=144,slow=45						
VRAC	Vranov	8.16	346	ePN	Pn	23 25 01.0	+2.7
WTTA	Wattenberg	8.17	318	i Pn	Pn	23 24 59.8	+1.1
	comp=N,7.4nm,0.2s,SNR=13						
WTTA				i Sn	Sn	23 26 31.8	+1.4
	comp=N,16nm,0.5s						
WATA	Walderalm	8.25	318	ePn	Pn	23 25 01.4	+1.7
	comp=N,15nm,0.3s,SNR=20						
WATA				eSn	Sn	23 26 31.3	-1.1
	comp=N,12nm,0.4s						
CKRC	Cesky Krumlov	8.29	335	eP	Pn	23 25 02.2	+2.1
CKRC				e		23 26 32.5	
CKRC	Cesky Krumlov	8.29	335	ePN	Pn	23 25 02.2	+2.1
CKRC				eSN	Sn	23 26 32.5	-0.6
CKRC	Cesky Krumlov	8.29	335	ePn	Pn	23 25 02.1	+2.1
KARP	Karpathos	8.33	132	eP	Pb	23 25 21.7	-2.9
KW1	Garching a.d.	8.35	326	ePn	Pn	23 25 03.4	+2.4
SQTA	Sankt Quirin	8.36	317	i Pn	Pn	23 25 03.1	+2.0
	comp=N,5.2nm,0.2s,SNR=12						
SQTA				i Sn	Sn	23 26 34.5	-0.5
	comp=N,20nm,0.7s						
BORA	Eskisehir	8.37	97	Pn	Pn	23 25 03.5	+2.2
FETA	Feichten	8.49	314	i Pn	Pn	23 25 04.9	+1.9
	comp=N,1.9nm,0.3s						
FETA				i Sn	Sn	23 26 36.5	-1.7
	comp=N,3.9nm,0.4s						
MOTA	Moosalm	8.50	317	i Pn	Pn	23 25 04.7	+1.6
	comp=N,3.4nm,0.4s,SNR=4.7						
MOTA				i Sn	Sn	23 26 38.1	-0.3
	comp=N,14nm,0.7s						
GEC2	GERESS Array S	8.51	333	Pn	Pn	23 25 03.9	+0.7
GEC2	GERESS Array S	8.51	333	ePn	Pn	23 25 04.1	+0.9
GEC2				eSn	Sn	23 26 41.4	+2.7
GERES	GERESS Array B	8.51	333	Pn	Pn	23 25 04.0	+0.7
	comp=N,0.1nm,0.3s,baz=148,slow=13,SNR=22						
GERES				Sn	Sn	23 26 36.2	-2.5
	comp=N,0.1nm,0.3s,baz=149,slow=24,SNR=5.0						
GERES				LR	LR	23 29 00.8	
	comp=N,106nm,21.0s,baz=132,slow=42						
	comp=N,1.4nm,0.3s						
PART	Garmisch-Parte	8.59	318	ePn	Pn	23 25 06.8	+2.5
PART				eSn	Sn	23 26 41.8	+1.2
ZUGS	Zugspitze, Sch	8.61	317	ePn	Pn	23 25 06.4	+1.7
ZUGS				eSn	Sn	23 26 43.5	+2.2
RETA	Reutte	8.77	317	eSn	Sn	23 26 45.4	+0.5
	comp=N,11nm,0.4s						
KHC	Kasperske Hory	8.80	333	Pn	Pn	23 25 08.3	+1.1
KHC	Kasperske Hory	8.80	333	⇑eP	Pn	23 25 07.8	+0.7
KHC				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KHC	Kasperske Hory	8.80	333	ePN	Pn	23 25 08.6	+1.5
KHC				eSN	Sn	23 26 42.8	-2.8
KHC	Kasperske Hory	8.80	333	ePn	Pn	23 25 09.0	+1.9
DAVOX	Davos/Dischmat	8.82	311	Pn	Pn	23 25 07.2	-0.3
	comp=Z,1.5nm,0.3s,baz=120,slow=20,SNR=26						
DAVOX				Sn	Sn	23 26 46.3	0.0
	comp=Z,1.2nm,0.3s,baz=198,slow=20,SNR=4.6						
DAVOX				LR	LR	23 30 07.9	
	comp=Z,81nm,18.2s,baz=104,slow=49						
	comp=Z,2.1nm,0.3s						
BE1	Monatshausen	8.82	320	ePn	Pn	23 25 08.7	+1.3
OBER	Oberstdorf	8.96	315	eSn	Sn	23 26 51.5	+1.9
TUE	Stuetta	8.96	308	Pn	Pn	23 25 11.2	+1.6
DAVA	Damuels	9.11	313	i Pn	Pn	23 25 14.2	+2.7
	comp=Z,4.5nm,0.3s,SNR=6.0						
DAVA				eSn	Sn	23 26 53.1	-0.3
	comp=Z,8.3nm,0.4s						
UBR	Ueberruh	9.23	316	ePn	Pn	23 25 13.9	+0.9
PRU	Pruhonice	9.27	339	ePn	Pn	23 25 16.3	+2.9
KEST	Kesra	9.86	238	Pn	Pn	23 25 20.8	-0.9
	comp=Z,0.1nm,0.3s,baz=68,slow=19,SNR=1.5						
KEST				LR	LR	23 30 02.8	
	comp=Z,98nm,20.2s,baz=240,slow=44						
BNI	Bardonecchia	10.12	295	Pn	Pn	23 25 24.8	-0.5
BNI	Bardonecchia	10.12	295	P	Pn	23 25 24.8	-0.5
SENIN	Lac Senin/Sane	10.17	303	Pn	Pn	23 25 25.9	-0.2
BFO	Black Forest	10.57	315	Pn	Pn	23 25 30.9	-0.5
BFO	Black Forest	10.57	315	P	Pn	23 25 30.9	-0.5
BFO	Black Forest	10.57	315	ePn	Pn	23 25 30.5	-0.8
BR131	Keskin Array S	10.79	94	⇑eP	Pn	23 25 34.7	+0.2
BRTR	Keskin Array B	10.79	94	Pn	Pn	23 25 35.5	+1.0
	comp=Z,0.1nm,0.3s,baz=280,slow=16,SNR=1.9						
BRTR				LR	LR	23 30 37.9	
	comp=Z,72nm,19.7s,baz=284,slow=42						
ECH	Echery	11.15	312	Pn	Pn	23 25 39.1	-0.2
ECH	Echery	11.15	312	P	Pn	23 25 39.1	-0.2
AKASG	Malin Array Be	11.40	32	Pn	Pn	23 25 43.5	+0.8
	comp=Z,0.4nm,0.3s,baz=221,slow=12,SNR=2.2						
AKASG				LR	LR	23 30 34.7	
	comp=Z,127nm,19.4s,baz=190,slow=40						
	comp=Z,0.9nm,0.5s						
AKBB	Malin Array Si	11.40	32	⇑eP	Pn	23 25 41.2	-1.5
NACGM	Naroch	14.29	17	eP	Pn	23 26 21.5	-0.6
	comp=Z,5.0nm,1.0s,baz=203						
PABE	Paberze	14.37	10	Pn	Pn	23 26 24.6	+1.5
PABE	Paberze	14.37	10	eP	P	23 26 30.1	+0.1
ISAL	Salakas	14.78	15	eP	P	23 26 36.2	+1.6
MMAI	Mount Meron Ar	15.10	119	Pn	Pn	23 26 33.4	+0.2
	comp=Z,2.7nm,0.5s,baz=312,slow=9.4,SNR=11						
MMAI				LR	LR	23 33 36.9	
	comp=Z,40nm,20.8s,baz=82,slow=42						
KIV	Kislovodsk	17.12	74	eP	Pn	23 26 58.4	-0.8
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KBZ	Khabaz	17.28	75	P	P	23 27 02.8	+0.5
	comp=Z,0.1nm,0.3s,baz=268,slow=5.6,SNR=5.5						
	comp=Z,1.4nm,0.7s						
KBZ	Khabaz	17.28	75	⇑eP	P	23 27 03.1	+0.8
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
VSU	Vasula	17.63	12	eP	P	23 27 06.6	+0.5
ESDC	Sonseca Array	18.01	272	P	Pn	23 27 07.9	-2.3
	comp=Z,0.1nm,0.3s,baz=77,slow=11,SNR=1.8						
ESDC				LR	LR	23 34 18.6	
	comp=Z,37nm,18.2s,baz=296,slow=38						
	comp=Z,0.6nm,0.8s						
HFS	Hagfors	19.08	351	P	P	23 27 21.6	-0.5
	comp=Z,0.3nm,0.3s,baz=167,slow=12,SNR=8.8						
HFS				LR	LR	23 35 13.9	
	comp=Z,70nm,20.0s,baz=252,slow=38						
	comp=Z,7.9nm,0.7s						
NC602	NORSAR Array S	19.96	348	P	P	23 27 31.0	-0.6
NC405	NORSAR Array S	20.29	349	P	P	23 27 34.8	-0.5
NC405				IAmb	IAmb	23 27 36.2	
	comp=Z,11nm,0.8s						
NB2	NORSAR Subarra	20.30	348	P	P	23 27 34.7	-0.7
	comp=Z,5.5nm,1.0s,baz=165,slow=11						
NOA	NORSAR Array B	20.30	348	P	P	23 27 33.0	-2.4
	comp=Z,1.9nm,0.8s,baz=162,slow=11,SNR=11						
NOA				LR	LR	23 36 49.7	
	comp=Z,41nm,19.3s,baz=285,slow=41						
	comp=Z,1.9nm,0.8s						
NOA	NORSAR Array B	20.30	348	P	P	23 27 33.0	-2.4
FINES	FINESS Array B	20.42	9	P	P	23 27 35.7	-0.9
	comp=Z,8.9nm,0.8s,baz=194,slow=9.8,SNR=24						
FINES				LR	LR	23 37 18.7	
	comp=Z,54nm,18.9s,baz=220,slow=42						
	comp=Z,8.9nm,0.8s						
FINES	FINESS Array B	20.42	9	P	P	23 27 34.9	-1.7
FIA1	FINESS Array S	20.42	9	P	P	23 27 35.1	-1.6
EKA	Eskdalemuir Ar	20.43	321	P	P	23 27 37.0	+0.2
	comp=Z,1.5nm,0.5s,baz=117,slow=10.0,SNR=7.4						
	comp=Z,1.5nm,0.5s						
EKA	Eskdalemuir Ar	20.43	321	P	P	23 27 37.0	+0.2
KEF	Keuruu	21.00	7	eP	P	23 27 42.4	-0.6
BELG	Belogornoye	21.90	50	P	P	23 27 51.3	-1.3
	comp=Z,24nm,1.0s,baz=270,slow=1.0,SNR=7.1						
	comp=Z,24nm,1.0s						
BELG	Belogornoye	21.90	50	⇑eP	P	23 27 53.2	+0.6
BELG				pmax	pmax		
	comp=Z,15nm,3.0s						
KLMR	Klimovskoe	22.93	25	eP	P	23 28 01.8	-1.7
KLMR				pmax	pmax		
	comp=Z,14nm,0.8s						
KIRV	Kirov	25.39	37	LR	LR	23 39 29.5	
	comp=Z,75nm,19.4s,baz=204,slow=39						
ARCES	ARCESS Array B	28.34	4	P	P	23 28 52.4	-0.8
	comp=Z,4.5nm,1.0s,baz=185,slow=7.9,SNR=2.2						
ARCES				LR	LR	23 41 10.7	
	comp=Z,61nm,20.1s,baz=88,slow=38						
	comp=Z,4.5nm,1.0s						
ARTI	Arti	29.07	46	LR	LR	23 41 49.2	
	comp=Z,59nm,19.9s,baz=233,slow=39						
ARTI	Arti	29.07	46	P	P	23 28 58.5	-1.3
ARTI				IAmb	IAmb	23 29 00.3	
	comp=Z,7.0nm,0.6s						
ARTI	Arti	29.07	46c	iP	P	23 28 58.9	-0.9
ARTI						23 29 49.9	
ARTI				S	S	23 33 52.8	+2.6
ARTI				SS	SnSn	23 35 18.3	+4.1
ARTI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AB31	Akbulak array	29.11	61	P	P	23 28 59.9	-0.3
ABKAR	Akbulak array	29.11	61	P	P	23 28 59.5	-0.7
TORD	Torodi Ar. Bea	32.23	214	P	P	23 29 24.8	-3.3
	comp=Z,0.3nm,0.5s,baz=27,slow=14,SNR=1.3						
	comp=Z,0.3nm,0.5s						
BORK	Borovoye	35.59	53	⇓eP	P	23 29 57.7	+0.7
BORK				pmax	pmax		
	comp=Z,14nm,2.5s						
BVAR	Borovoye Array	35.64	53	P	P	23 29 58.3	+1.0
	comp=Z,2.9nm,0.7s,baz=267,slow=5.6,SNR=9.9						
	comp=Z,2.9nm,0.7s						
KKAR	Karatay Array	37.22	70	P	P	23 30 10.9	-0.1
KKAR	Karatay Array	37.22	70	P	P	23 30 10.9	-0.1
ARSB	Arslanbob	39.49	72	P	P	23 30 30.4	+0.1
ARSB	Arslanbob	39.49	72	P	P	23 30 30.4	+0.1
ARSB				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURBB	Kurchatov Arra	40.92	56	P	P	23 30 40.5	-1.3
	comp=Z,0.3nm,0.3s,baz=286,slow=9.3,SNR=9.3						
	comp=Z,0.3nm,0.3s						
KURK	Kurchatov	40.96	56	⇓eP	P	23 30 42.0	-0.1
KURK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ZAA0	Zalesovo Array	44.09	50	P	P	23 31 07.2	-0.3
ZAA0				IAmb	IAmb	23 31 08.2	
	comp=Z,5.4nm,0.8s						
ZALV	Zalesovo Beam	44.09	50	P	P	23 31 07.0	-0.5
	comp=Z,3.4nm,0.4s,baz=281,slow=8.6,SNR=25						
	comp=Z,3.4nm,0.4s						
ZALV	Zalesovo Beam	44.09	50	P	P	23 31 07.3	-0.2
ZALV	Zalesovo Beam	44.09	50	i P	P	23 31 07.4	-0.1
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.4s						
NRIK	Noril'sk	44.22	28	P	P	23 31 08.1	-0.3
	comp=Z,2.5nm,0.8s,baz=283,slow=4.1,SNR=4.7						
	comp=Z,2.5nm,0.8s						
MK31	Makanchi Array	44.25	61c	iP	P	23 31 08.6	-0.4
MKAR	Makanchi Array	44.25	61	P	P	23 31 08.8	-0.1
	comp=Z,2.4nm,0.6s,baz=284,slow=7.3,SNR=20						
	comp=Z,2.4nm,0.6s						
MKAR	Makanchi Array	44.25	61	P	P	23 31 08.7	-0.3
MKAR	Makanchi Array	44.25	61	i P	P	23 31 08.8	-0.1
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
DGZ	Jazzator, Alta	46.70	56	⇑eP	P	23 31 28.6	+0.1
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TIXI	Tiksi	56.85	21	LR	LR	00 00 36.0	
	comp=Z,43nm,18.3s,baz=198,slow=40						
SONM	Songino Array	58.95	52	P	P	23 32 58.9	-0.1
	comp=Z,2.9nm,0.8s,baz=294,slow=7.8,SNR=10						
SONM				LR	LR	00 00 48.0	
	comp=Z,58nm,19.5s,baz=4.0,slow=38						
	comp=Z,2.9nm,0.8s						
SONM	Songino Array	58.95	52	P	P	23 32 58.7	-0.3
SONM				IAmb	IAmb	23 33 00.1	
	comp=Z,3.6nm,1.0s						
LZDM	Lanzhou Array	63.35	65	P	P	23 33 27.9	-1.3
	comp=Z,0.8nm,0.3s,baz=296,slow=7.9,SNR=1.7						
	comp=Z,0.8nm,0.3s						
HHC	Hu-ho-hao-te	65.78	56	eP	P	23 33 45.7	+1.0
HHC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,190nm,4.9s						
PZH	PanZhiHua	67.35	74	P	P	23 33 56.7	+1.7
E29M	Blow River	69.21	351	P	P	23 34 06.3	+0.5
E29M				IAmb	IAmb	23 34 47.2	
	comp=Z,5.3nm,1.1s						
SEY	Seymchan	69.35	21	LR	LR	00 07 09.9	
	comp=Z,54nm,18.4s,baz=263,slow=38						
FFC	Flin Flon	72.04	329	P	P	23 34 24.2	+0.9
FFC				IAmb	IAmb	23 35 04.2	
	comp=Z,7.9nm,1.4s						
FFC	Flin Flon	72.04	329	P	P	23 34 24.2	+0.9
FFC				pmax	pmax		
	comp=Z,8.0nm,1.5s						
KSRS	Korea Array	77.80	51	P	P	23 34 56.8	0.0
	comp=Z,1.0nm,0.6s,baz=316,slow=6.6,SNR=2.0						
	comp=Z,1.0nm,0.6s						
TGY	Tagaytay City	89.05	72	LR	LR	00 23 35.0	
	comp=Z,422nm,18.6s,baz=321,slow=41						
TXAR	Lajitas Array	92.25	313	P	P	23 36 10.0	+0.1
	comp=Z,0.5nm,0.8s,baz=34,slow=9.1,SNR=5.4						
TXAR				LR	LR	00 16 51.5	
	comp=Z,38nm,18.8s,baz=338,slow=35						
	comp=Z,0.5nm,0.8s						
TXAR	Lajitas Array	92.25	313	P	P	23 36 10.0	+0.1
NVL	N'lazarevskaya	112.03	183	i PKIKP	PKiKP	23 41 30.5	-3.0
NVL				e		23 42 14.9	
NVL				ePPP	PPP	23 44 36.7	
NVL				eSS	SS	23 57 49.7	-5.1
NVL				eSSS	SSS	00 02 00.4	
NVL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NVL				MLR	MLR		
	comp=Z,780nm,22.0s						
ASAR	Alice Springs	123.13	94	PKP	PKPdf	23 41 55.5	-0.9
	comp=Z,0.4nm,0.5s,baz=303,slow=1.8,SNR=6.1						

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*MOS **02** 23:25:16.7±0.9, 40°.24N×141°.98E, h55^{km}, mb4.8/26, Error ellipse: s-maj=7.2km s-min=5.5km az=98.5*

*JMA **02** 23:25:17.4±0.1, 40°.2N±0°.2×142°.0E±0°.6, h42^{km}, MD4.5/39, MV4.7/39, NE OFF IWATE PREF*

JMA Felt III J1 at NE OFF IWATE PREF .

*NIED **02** 23:25:17.4, 40°.20N×142°.03E, h42^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.02; $M_{\theta\theta}$-3.48; $M_{\phi\phi}$2.46; $M_{r\theta}$-0.43; $M_{\theta\phi}$-0.45; $M_{\phi r}$1.44; Fault plane solution: $M_0$3.47000×10^{15} NP1:ϕ_s45.00000°, δ65.00000°, λ21.00000°. NP2:ϕ_s306.00000°, δ71.00000°, λ153.00000°.*

*BJI **02** 23:25:17.0, 40°.18N×141°.87E, h61^{km}, mB4.8/5, mb4.6/43, Ms3.7/2, Ms7 3.5/3*

*IDC **02** 23:25:18.0±0.8, 40°.23N×142°.05E, h54^{km}±6^{km}, mb4.0/24, mbtmp4.3/29, MS3.3/18, Error ellipse: s-maj=16.8km s-min=10.4km az=94.0*

*NEIC **02** 23:25:19.8±1.3, 40°.30N±0°.06×141°.83E±0°.08, h57^{km}±7^{km}, mb4.6/66, Error ellipse: s-maj=9.0km s-min=8.5km az=115.0*

ISC 02 23:25:17.4±0.5, **40°.22N**±0°.03×**142°.01E**±0°.05, **h47**^{km}±4^{km}, **h47**^{km}**:pP-P, n246,** σ1^{s}.**22**/226, **mb4.5**/80, **MS3.4**/17, **16C-15D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKEN	Kujiedanarisaw	0.23	268	i P	Pn	23 25 25.2	-0.4
JKEN				eS	Sn	23 25 30.6	-0.8
JKEN	Kujiedanarisaw	0.23	268	A	A	23 25 25.2	
	comp=N,77nm,0.5s,comp=E,49nm,0.3s						
JTH	Tanohata	0.30	202	P	Pn	23 25 25.8	-0.4
JTH				S	Sn	23 25 31.3	-1.2
JTH	Tanohata	0.30	202	A	A	23 25 25.8	
	comp=N,55nm,1.0s,comp=E,52nm,0.7s						
JANG	Nango	0.41	293	⇓P	Pn	23 25 27.2	-0.2
JANG				⇓S	Sn	23 25 34.1	-0.5
JANG	Nango	0.41	293	A	A	23 25 27.2	
	comp=N,31nm,0.5s,comp=E,28nm,0.3s						
MIYJ	Miyakonagasawa	0.66	193	A	A	23 25 30.1	
	comp=N,51nm,0.7s,comp=E,28nm,1.1s						
JTM	Tenmabayashi	0.92	309	Pn	Pn	23 25 33.4	-0.6
JTM				Sn	Sn	23 25 45.4	-0.7
JTM	Tenmabayashi	0.92	309	P	Pn	23 25 34.1	+0.1
JTM				S	Sn	23 25 46.0	-0.1
JTM	Tenmabayashi	0.92	309	A	A	23 25 34.1	
	comp=N,11nm,1.6s,comp=E,32nm,0.8s						
JOM	Ohasama	0.93	217	⇓P	Pn	23 25 34.0	-0.1
JOM				⇓S	Sn	23 25 45.6	-0.7
JOM	Ohasama	0.93	217	A	A	23 25 34.0	
	comp=N,51nm,0.4s,comp=E,88nm,0.3s						
JARK	Aomorirokkasho	0.93	328	⇓P	Pn	23 25 34.0	-0.1
JARK				⇓S	Sn	23 25 46.0	-0.4
JARK	Aomorirokkasho	0.93	328	A	A	23 25 34.0	
	comp=N,13nm,0.4s,comp=E,20nm,0.6s						
JSZI	Iwateshizukuis	0.94	240	A	A	23 25 34.5	
	comp=N,28nm,2.1s,comp=E,27nm,1.8s						
JAH	Hinai	1.05	269	P	Pn	23 25 36.1	+0.4
JAH				S	Sn	23 25 49.8	+0.4
JAH	Hinai	1.05	269	A	A	23 25 36.1	
	comp=N,10.0nm,0.9s,comp=E,16nm,0.6s						
OFUJ	Ofunato	1.17	193	A	A	23 25 37.4	
	comp=N,12nm,0.6s,comp=E,19nm,0.7s						
JAHD	Aomorihigashid	1.17	334	A	A	23 25 38.0	
	comp=N,36nm,0.5s,comp=E,49nm,0.4s						
JHHS	Hirosakihyakuz	1.33	290	A	A	23 25 40.4	
	comp=N,34nm,0.9s,comp=E,33nm,1.3s						
JRG	Rokugo	1.34	233	P	Pn	23 25 40.3	+0.6
JRG				eS	Sn	23 25 58.2	+1.8
JRG	Rokugo	1.34	233	A	A	23 25 40.3	
	comp=N,28nm,0.5s,comp=E,43nm,0.8s						
JOT	Ohata	1.38	328	⇓P	Pn	23 25 40.2	+0.1
JOT	Ohata	1.38	328	A	A	23 25 40.2	
	comp=N,7.0nm,3.9s,comp=E,7.0nm,0.9s						
JMK	Ichinoseki	1.40	206	⇓P	Pn	23 25 40.6	+0.1
JMK				⇓S	Sn	23 25 58.0	+0.2
JMK	Ichinoseki	1.40	206	A	A	23 25 40.6	
	comp=N,9.0nm,0.7s,comp=E,20nm,1.1s						

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JKMT  Kesennumamotoy  1.46 197   A      A        23 25 41.8
      comp=N,15nm,0.4s,comp=E,25nm,0.4s
JYW   Yuwa            1.54 245   A      A        23 25 43.3
      comp=N,18nm,1.6s,comp=E,25nm,1.2s
JIW   Iwasaki         1.58 284   A      A        23 25 44.0
      comp=N,8.0nm,2.1s,comp=E,7.0nm,0.6s
JSR   Shiriuchi       1.79 318   A      A        23 25 47.0
      comp=N,5.0nm,0.8s,comp=E,5.0nm,0.3s
JYK   Kaneyama        1.82 225   A      A        23 25 47.1
      comp=N,7.0nm,2.8s,comp=E,10.0nm,2.5s
JOFO  Osakifurukawao  1.82 208   A      A        23 25 47.1
      comp=N,17nm,2.2s,comp=E,28nm,3.0s
ERM   Erimo           2.00  25   Pn     Pn       23 25 49.7 +1.1
ERM   Erimo           2.00  25   P      Pn       23 25 49.7 +1.1
JOU   Okura           2.12 210   A      A        23 25 51.4
      comp=N,7.0nm,1.7s,comp=E,7.0nm,1.0s
JNBK  Urakawa-nobuka  2.14  15   A      A        23 25 51.9
      comp=N,8.0nm,0.6s,comp=E,8.0nm,0.7s
JSHD  Hidakashinhida  2.22   9   A      A        23 25 53.1
      comp=N,7.0nm,1.7s,comp=E,10.0nm,3.5s
JIAM  Iburiatsuma     2.41 358   A      A        23 25 55.8
      comp=N,16nm,0.4s,comp=E,18nm,0.7s
JYA   Atsumi          2.41 228   A      A        23 25 55.6
      comp=N,8.0nm,1.5s,comp=E,8.0nm,0.5s
JYS   Shirataka       2.50 218   A      A        23 25 56.8
      comp=N,11nm,1.9s,comp=E,12nm,1.3s
JYAR  Yonezawaarcadi  2.72 213   A      A        23 25 59.9
      comp=N,17nm,1.0s,comp=E,15nm,0.9s
JSD   Sado            3.64 234   Pn     Pn       23 26 11.1  -0.1
ASAJ  Asahikawa       3.92   6   P      Pn       23 26 16.8 +1.8
      comp=E,228nm,0.3s,baz=211,slow=8.3,SNR=266
ASAJ                             S      Sn       23 27 01.1 +1.3
      comp=E,62nm,0.3s,baz=196,slow=19,SNR=4.5
JKA   Kamikawa-asahi  3.92   6   Pn     Pn       23 26 16.3 +1.2
NMR   Nemuro--Hokkai  4.20  40⇓iP     Pn       23 26 17.8  -1.1
NMR                             i S     Sn       23 27 02.8  -3.8
GLVR  Golovnino       4.38  35  eP      Pn       23 26 21.1  -0.3
GLVR                            eS      Sn       23 27 10.1  -1.0
GLVR                             pmax   pmax
      comp=Z,137nm,0.1s
GLVR                             smax   smax
      comp=N,509nm,0.2s
GLVR                             smax   smax
      comp=E,2µm,0.3s
RUSJ  Misakicho       4.57  31  eP      Pn       23 26 24.9 +1.0
RUSJ                            eS      Sn       23 27 16.6 +0.9
MJB9  Matsu-Tunnel    4.73 220   Pn     Pn       23 26 28.3 +2.1
MAJO  Matsushiro      4.73 220   Pn     Pn       23 26 27.8 +1.5
MAJO  Matsushiro      4.73 220c iP      Pn       23 26 27.9 +1.7
MJAR  Matsushiro Arr  4.73 220   P      Pn       23 26 28.4 +2.1
      comp=E,20nm,0.6s,baz=40,slow=14,SNR=37
MJAR                             LR     LR       23 28 37.8
      comp=E,169nm,20.2s,baz=37,slow=42
MJAR  Matsushiro Arr  4.73 220   Pn     Pn       23 26 27.9 +1.6
YUK   Yuzh-Kuril'sk   4.77  36  eP      Pn       23 26 28.6 +1.9
YUK                             i S     Sn       23 27 17.2  -3.4
YUK                              pmax   pmax
      comp=Z,225nm,0.2s
YUK                              pmax   pmax
      comp=E,53nm,0.1s
YUK                              smax   smax
      comp=N,1µm,0.5s
YUK                              smax   smax
      comp=E,790nm,0.5s
JGF   Kuroka          5.90 220   Pn     Pn       23 26 45.8 +3.6
INU   Inuyama         6.26 221   Pn     Pn       23 26 50.4 +3.2
KUR   Kuril'sk        6.61  39  eP      Pn       23 26 51.8  -0.1
KUR                             eS      Sn       23 28 03.2  -2.7
YSS   Yuzhno-Sakhali  6.76   4  eP      Pn       23 26 56.3 +2.4
YSS                              pmax   pmax
      comp=Z,30nm,0.8s
YSS                              MLR    MLR
      comp=Z,500nm,12.0s
JHJ   Hachijo jima 2  7.30 195   P      Pn       23 26 59.8  -1.7
      comp=Z,54nm,0.3s,baz=41,slow=19,SNR=1.3
JHJ                              S      Sn       23 28 19.2  -3.9
      comp=Z,60nm,0.3s,baz=55,slow=18,SNR=1.8
USRK  Ussuriysk Ar.   8.44 301   P      Pn       23 27 19.2 +2.2
      comp=Z,29nm,0.7s,baz=109,slow=15,SNR=26
PSTR  Posyet          8.77 290⇑eP      Pn       23 27 22.2 +0.8
JMN   Monobe          9.18 228   Pn     Pn       23 27 29.8 +2.6
MDJ   Mudanjiang     10.18 300          Pn       23 27 42.6 +1.8
KSRS  Korea Array    11.33 260   P      Pn       23 27 59.4 +2.8
      comp=Z,3.1nm,0.6s,baz=67,slow=14,SNR=7.9
KS19  Wonju Array Si 11.36 261   Pn     Pn       23 27 57.3 +0.3
KSAR  Wonju Array Be 11.36 260   Pn     Pn       23 27 57.5 +0.6
KSAR  Wonju Array Be 11.36 260   P      Pn       23 27 57.6 +0.6
JNU   Nakatsue       11.40 235   LR     LR       23 32 39.0
      comp=Z,97nm,19.0s,baz=64,slow=39
BNX   BinXian        12.03 302 ⇓P      Pn       23 28 09.8 +3.7
BNX                              pmax   pmax
      comp=Z,8.0nm,1.0s
PETK  Petropavlovsk- 16.75  34   LR     LR       23 35 24.3
      comp=Z,77nm,18.9s,baz=183,slow=36
ZEA   Zeya           16.82 328  eP      P        23 29 11.3 +0.4
ZEA                              pmax   pmax
      comp=E,10.0nm,0.4s
ZEA                              pmax   pmax
      comp=Z,10.0nm,0.6s
HILR  Hailar Array B 18.27 308   P      P        23 29 25.5  -1.6
      comp=Z,15nm,0.6s,baz=111,slow=12,SNR=17
XLT   XiLinHaoTe     19.57 289  eP      P        23 29 40.1  -1.3
XLT                              pmax   pmax
      comp=Z,17nm,1.0s
BJI   Beijing        19.74 278   P      P        23 29 41.5  -1.6
BJI                              pP     pP       23 29 53.5  -0.7
BJI                              pmax   pmax
      comp=Z,6.0nm,0.8s
BJT   Baijiatuau     19.75 278   P      P        23 29 41.8  -1.4
BJT   Baijiatuau     19.75 278   P      P        23 29 41.8  -1.4
BJT                              pmax   pmax
      comp=Z,9.0nm,0.8s
MA2   Magadan        20.15  13   LR     LR       23 37 22.8
      comp=Z,55nm,19.9s,baz=280,slow=36
NJ2   Nanjing        20.36 254  eP      P        23 29 49.6  -0.3
NJ2                              pmax   pmax
      comp=Z,35nm,1.0s
HNS   HongShan       21.43 271 ⇑P      P        23 30 02.0 +0.6
HNS                              pmax   pmax
      comp=Z,11nm,0.7s
YAK   Yakutsk        23.09 345   LR     LR       23 39 10.2
      comp=Z,41nm,20.8s,baz=88,slow=36
YAK   Yakutsk        23.09 345⇑eP      P        23 30 18.9 +0.1
YAK                              pmax   pmax
      comp=Z,16nm,0.8s
HHC   Hu-ho-hao-te   23.10 282  eP      P        23 30 16.1  -3.1
HHC                              pmax   pmax
      comp=Z,12nm,0.7s
HHC                              pmax   pmax
      comp=Z,200nm,4.4s
SEY   Seymchan       23.58  12   LR     LR       23 40 17.3
      comp=Z,75nm,18.9s,baz=214,slow=38
BTO   Baotou         24.30 281  eP      P        23 30 27.3  -3.1
BTO                              pP     pP       23 30 41.6  -1.2
BTO                              sP     sP       23 30 49.0 +0.6
BTO                              pmax   pmax
      comp=Z,13nm,0.8s
BTO                              pmax   pmax
      comp=Z,340nm,11.0s
ULN   Ulaanbaatar    26.09 299          P        23 30 46.5  -0.3
ULN   Ulaanbaatar    26.09 299⇑eP      P        23 30 46.4  -0.3
ULN                              pmax   pmax
      comp=Z,3.0nm,0.6s
SONM  Songino Array  26.54 299   P      P        23 30 50.4  -0.3
      comp=Z,3.5nm,0.5s,baz=95,slow=8.3,SNR=29
SONM                             LR     LR       23 41 46.7
      comp=Z,55nm,19.5s,baz=22,slow=37
      comp=Z,3.5nm,0.5s
SONM  Songino Array  26.54 299   P      P        23 30 50.5  -0.3
SONM  Songino Array  26.54 299   P      P        23 30 50.5  -0.2
SONM                             pmax   pmax
      comp=Z,4.0nm,1.3s
XAN   Xi'an          26.99 267   P      P        23 30 53.9  -0.9
XAN                              pmax   pmax
      comp=Z,9.0nm,0.9s
H11N2 WAKE ISLAND Hy 29.52 126   T      T        00 02 05.5
      baz=319,slow=76,SNR=968
H11N1 WAKE ISLAND Hy 29.53 126   T      T        00 02 03.7
      baz=319,slow=76,SNR=629
H11N3 WAKE ISLAND Hy 29.54 126   T      T        00 02 04.4
      baz=319,slow=76,SNR=282
LZDM  Lanzhou Array  30.30 274   P      P        23 31 24.5  -0.1
      comp=Z,1.7nm,0.3s,baz=100,slow=6.0,SNR=5.9
      comp=Z,1.7nm,0.3s
H11S1 WAKE ISLAND Hy 30.33 128   T      T        00 03 11.9
      baz=321,slow=76,SNR=166
H11S3 WAKE ISLAND Hy 30.33 128   T      T        00 03 07.8
      baz=321,slow=76,SNR=143
H11S2 WAKE ISLAND Hy 30.34 128   T      T        00 03 18.8
      baz=321,slow=76,SNR=122
TIXI  Tiksi          32.20 352   LR     LR       23 45 58.0
      comp=Z,29nm,18.7s,baz=206,slow=38
TIXI  Tiksi          32.20 352⇑eP      P        23 31 40.2  -0.2
TIXI                             pmax   pmax
      comp=Z,8.0nm,1.4s
GTA   Gaotai         32.20 282  eP      P        23 31 40.6  -0.5
GTA                              pmax   pmax
      comp=Z,6.0nm,0.7s
KNGR  Kungurtug, Tuv 32.47 304⇑eP      P        23 31 43.2   0.0
KNGR                             pmax   pmax
      comp=Z,9.0nm,1.0s
PZH   PanZhiHua      36.00 260   P      P        23 32 13.4  -0.7
GOMU  GeErMu         36.96 279   P      P        23 32 21.5  -1.0
GOMU                             pmax   pmax
      comp=Z,9.0nm,0.7s
DGZ   Jazzator, Alta 38.99 303ceP      P        23 32 40.1 +1.0
DGZ                              pmax   pmax
      comp=Z,18nm,0.7s
TNCH  TengChong      39.23 261   P      P        23 32 41.7 +0.2
TNCH                             S      S        23 38 37.9  -1.0
TNCH                             pmax   pmax
      comp=Z,99nm,1.4s
WMQ   Urumqi         39.91 294  eP      P        23 32 47.8 +1.0
ZAA0  Zalesovo Array 40.18 310   P      P        23 32 48.9 +0.1
ZALV  Zalesovo Beam  40.18 310   P      P        23 32 48.9 +0.1
      comp=Z,17nm,0.5s,baz=88,slow=7.9,SNR=64
ZALV                             PcP    PcP      23 34 52.0  -0.1
      comp=Z,1.5nm,0.4s,baz=83,slow=3.1,SNR=5.0
      comp=Z,17nm,0.5s
ZALV  Zalesovo Beam  40.18 310   P      P        23 32 48.1  -0.7
NRIK  Noril'sk       40.60 334   P      P        23 32 51.5  -0.6
      comp=Z,1.5nm,0.6s,baz=107,slow=14,SNR=2.0
      comp=Z,1.5nm,0.6s
G18K  Tagagawik      41.69  32   P      P        23 33 02.8 +1.7
LSA   Lhasa          42.48 272          P        23 33 08.1  -0.4
LSA                              IAmb   IAmb     23 33 11.2
      comp=Z,7.0nm,0.5s
LSA   Lhasa          42.48 272   P      P        23 33 08.1  -0.4
LSA                              pmax   pmax
      comp=Z,7.0nm,0.5s
H19K  Roundabout Mou 42.55  33   P      P        23 33 09.6 +1.5
H19K                             IAmb   IAmb     23 33 25.6
      comp=Z,8.0nm,0.8s
CHTO  Chiang Mai     42.60 253   P      P        23 33 09.3 +0.2
CHTO                             IAmb   IAmb     23 33 13.7
      comp=Z,7.4nm,0.8s
CHTO  Chiang Mai     42.60 253   P      P        23 33 09.3 +0.2
CHTO                             pmax   pmax
      comp=Z,7.0nm,0.8s
CMAR  Chiang Mai Arr 42.83 252   P      P        23 33 11.6 +0.7
      comp=Z,2.1nm,0.7s,baz=52,slow=7.9,SNR=10
      comp=Z,2.1nm,0.7s
CMAR  Chiang Mai Arr 42.83 252ceP      P        23 33 11.3 +0.4
CMAR                             pmax   pmax
      comp=Z,1.0nm,0.4s
MK31  Makanchi Array 42.90 299c iP      P        23 33 10.8  -0.4
MKAR  Makanchi Array 42.90 299   P      P        23 33 10.9  -0.2
      comp=Z,12nm,0.7s,baz=83,slow=9.6,SNR=81
MKAR                             PcP    PcP      23 35 01.0  -0.2
      comp=Z,1.0nm,0.8s,baz=60,slow=3.5,SNR=1.2
      comp=Z,12nm,0.7s
MKAR  Makanchi Array 42.90 299   P      P        23 33 10.8  -0.4
MAKZ  Makanchi       43.10 299   P      P        23 33 12.5  -0.3
MAKZ                             IAmb   IAmb     23 33 13.8
      comp=Z,12nm,0.8s
MAKZ  Makanchi       43.10 299   P      P        23 33 12.5  -0.3
MAKZ                             pmax   pmax
      comp=Z,12nm,0.9s
IMAR  Indian Mountai 43.70  32   P      P        23 33 18.8 +1.4
PPLA  Purkeypile     44.32  37   P      P        23 33 23.4 +0.8
PPLA                             IAmb   IAmb     23 33 41.4
      comp=Z,19nm,1.3s
KURK  Kurchatov      44.40 306   P      P        23 33 23.2   0.0
KURK  Kurchatov      44.40 306d iP      P        23 33 23.3 +0.2
KURK                             pmax   pmax
      comp=Z,27nm,0.6s
KURBB Kurchatov Arra 44.48 306   P      P        23 33 23.5  -0.3
      comp=Z,35nm,0.6s,baz=79,slow=8.5,SNR=187
KURBB                            PcP    PcP      23 35 06.4   0.0
      comp=Z,0.8nm,0.3s,baz=90,slow=3.7,SNR=2.6
E22K  Anaktuvuk Pass 44.59  29   P      P        23 33 25.6 +1.1
TOLK  Toolik Lake Re 45.44  29   P      P        23 33 33.5 +2.2
D24K  Happy Valley   45.73  28   P      P        23 33 34.8 +1.3
D24K                             IAmb   IAmb     23 33 59.0
      comp=Z,21nm,1.5s
E24K  Your Creek     45.83  29   P      P        23 33 36.2 +1.8
E24K                             IAmb   IAmb     23 33 37.0
      comp=Z,13nm,1.5s
IL31                 46.58  34   P      P        23 33 40.8 +0.7
IL31                             IAmb   IAmb     23 34 05.9
      comp=Z,7.2nm,1.1s
ILAR  Eielson Array  46.58  34   P      P        23 33 41.1 +0.9
ILAR  Eielson Array  46.58  34   P      P        23 33 41.1 +0.9
EVN   Everest        46.64 273   P      P        23 33 41.9  -0.1
E25K  Arctic Village 46.93  29   P      P        23 33 45.0 +2.1
PRP   Porcupine Dome 47.09  33   P      P        23 33 46.4 +2.0
TARG  Taragay, Kyrgy 47.48 294   P      P        23 33 48.2 +0.2
TARG                             IAmb   IAmb     23 33 49.6
      comp=Z,9.7nm,0.6s
TARG  Taragay, Kyrgy 47.48 294   P      P        23 33 48.3 +0.2
TARG                             pmax   pmax
      comp=Z,10.0nm,0.6s
F26K  Sheenjek River 47.48  30   IAmb   IAmb     23 33 50.7
      comp=Z,3.3nm,0.6s
SCRK  Sand Creek     47.91  35   P      P        23 33 51.5 +0.8
SCRK                             IAmb   IAmb     23 34 06.9
      comp=Z,12nm,1.4s
BOOM  Boomskoye usch 48.51 295   P      P        23 33 55.3  -0.4
BOOM                             IAmb   IAmb     23 33 57.1
      comp=Z,11nm,0.8s
BOOM  Boomskoye usch 48.51 295   P      P        23 33 55.3  -0.4
BOOM                             pmax   pmax
      comp=Z,11nm,0.8s
VRDI  Verde Repeater 48.58  38   P      P        23 33 57.5 +1.5
BVAR  Borovoye Array 48.83 310   P      P        23 33 57.6  -0.1
      comp=Z,4.8nm,0.4s,baz=72,slow=9.3,SNR=43
BVAR                             PcP    PcP      23 35 21.4  -0.4
      comp=Z,2.3nm,0.8s,baz=72,slow=4.0,SNR=3.6
      comp=Z,4.8nm,0.4s
BORK  Borovoye       48.86 310   P      P        23 33 57.9  -0.1
BORK                             IAmb   IAmb     23 33 59.3
      comp=Z,5.7nm,0.5s
BORK  Borovoye       48.86 310c iP      P        23 33 57.9  -0.1
BORK                             pmax   pmax
      comp=Z,5.0nm,0.8s
BCAR  Beaver Creek A 49.02  36   P      P        23 34 00.9 +1.7
F28M  Old Crow       49.12  30   P      P        23 34 01.8 +2.0
F28M                             IAmb   IAmb     23 34 34.9
      comp=Z,6.7nm,1.4s
AAK   Ala-Archa      49.45 296   LR     LR       23 55 38.1
      comp=Z,35nm,21.3s,baz=60,slow=37
AAK   Ala-Archa      49.45 296   P      P        23 34 02.2  -0.7
AAK                              IAmb   IAmb     23 34 05.4
      comp=Z,4.1nm,0.9s
AAK   Ala-Archa      49.45 296deP      P        23 34 03.1 +0.2
AAK                              pmax   pmax
      comp=Z,9.0nm,1.7s
KSH   Kashi          49.60 292   P      P        23 34 08.2 +4.2
KSH                              pmax   pmax
      comp=Z,4.0nm,0.7s
EPYK  Eagle Plains   50.55  31   P      P        23 34 12.9 +2.2
EPYK                             IAmb   IAmb     23 34 30.7
      comp=Z,15nm,1.4s
I30M  Mount Dempster 50.93  32   IAmb   IAmb     23 34 39.8
      comp=Z,7.9nm,1.0s
ARSB  Arslanbob      50.99 295   P      P        23 34 14.4  -0.2
ARSB  Arslanbob      50.99 295   P      P        23 34 14.4  -0.2
ARSB                             pmax   pmax
      comp=Z,14nm,0.9s
INK   Inuvik         51.35  28   P      P        23 34 18.0 +1.4
INK   Inuvik         51.35  28   P      P        23 34 18.0 +1.4
INK                              pmax   pmax
      comp=Z,4.0nm,1.1s
G31M  Satah River    51.38  30   P      P        23 34 18.1 +1.3
KK31  Karatay Array  51.99 298   P      P        23 34 20.8  -1.0
KK31                             IAmb   IAmb     23 34 22.4
      comp=Z,3.9nm,0.9s
KK31  Karatay Array  51.99 298   P      P        23 34 20.8  -1.0
KK31                             pmax   pmax
      comp=Z,4.0nm,0.9s
KKAR  Karatay Array  51.99 298   P      P        23 34 20.9  -0.9
KKAR  Karatay Array  51.99 298   P      P        23 34 20.9  -0.9
DRK   Karamyk        52.56 293   P      P        23 34 25.9  -0.5
DRK                              IAmb   IAmb     23 34 29.9
      comp=Z,5.0nm,0.6s
DRK   Karamyk        52.56 293   P      P        23 34 26.0  -0.5
DRK                              pmax   pmax
      comp=Z,5.0nm,0.6s
MANEM Manem          53.48 291   P      P        23 34 34.5 +1.3
MANEM                            IAmb   IAmb     23 34 37.6
      comp=Z,16nm,0.8s
COEN  Coen           53.90 179   P      P        23 34 36.6 +0.5
COEN                             IAmb   IAmb     23 34 46.4
      comp=Z,5.5nm,1.3s
NIL   Nilore         54.12 286          P        23 34 38.7 +1.0
NIL   Nilore         54.12 286   P      P        23 34 38.7 +1.0
NIL                              pmax   pmax
      comp=Z,26nm,0.7s
ARTI  Arti           54.42 317   LR     LR       00 00 14.9
      comp=Z,45nm,18.0s,baz=52,slow=38
ARTI  Arti           54.42 317   P      P        23 34 39.4  -0.1
ARTI  Arti           54.42 317c iP      P        23 34 39.6 +0.1
ARTI                                             23 35 41.7
ARTI                                             23 36 39.0
ARTI                             S      S        23 42 13.3  -1.1
ARTI                             SS     SKiKP    23 45 49.4 +4.5
ARTI                             pmax   pmax
      comp=Z,11nm,0.7s
CHGR  Chuyangaron    54.77 294   P      P        23 34 41.8  -0.6
CHGR  Chuyangaron    54.77 294   P      P        23 34 41.8  -0.6
CHGR                             pmax   pmax
      comp=Z,21nm,0.7s
SHAA  Shahritus      55.99 293   P      P        23 34 50.8  -0.4
SHAA                             IAmb   IAmb     23 34 56.3
      comp=Z,13nm,0.9s
AB31  Akbulak array  56.28 309   P      P        23 34 52.4  -0.5
AB31                             IAmb   IAmb     23 34 54.3
      comp=Z,3.6nm,0.8s
ABKAR Akbulak array  56.28 309   P      P        23 34 52.4  -0.5
KBL   Kabul          56.76 289   P      P        23 34 55.8  -1.1
KBL                              IAmb   IAmb     23 34 57.6
      comp=Z,9.5nm,0.9s
KBL   Kabul          56.76 289   P      P        23 34 55.8  -1.1
KBL                              pmax   pmax
      comp=Z,10.0nm,0.9s
KNRA  Kununurra      56.96 195   P      P        23 34 58.2 +0.2
KIRV  Kirov          58.02 322⇑eP      P        23 35 05.1 +0.1
WB0   Warramunga Arr 60.09 188   P      P        23 35 18.6  -1.2
WB0                              IAmb   IAmb     23 35 20.9
      comp=Z,9.9nm,1.4s
WR8   Warramunga Arr 60.27 188   P      P        23 35 20.5  -0.5
WR8                              IAmb   IAmb     23 35 22.7
      comp=Z,3.3nm,0.8s
WRA   Warramunga Arr 60.27 188   P      P        23 35 20.6  -0.4
      comp=Z,1.7nm,0.7s,baz=7.9,slow=6.8,SNR=15
WRA                              pP     pP       23 35 36.0 +1.8
      comp=Z,2.0nm,0.7s,baz=9.1,slow=7.0,SNR=6.1
      comp=Z,1.7nm,0.7s
YKA   Yellowknife Ar 60.84  31   pP     pP       23 35 39.7 +2.1
      comp=Z,0.6nm,0.5s,baz=301,slow=7.3,SNR=4.2
ARCES ARCESS Array B 61.19 339   P      P        23 35 26.9 +0.2
      comp=Z,3.0nm,0.9s,baz=52,slow=5.8,SNR=4.1
      comp=Z,3.0nm,0.9s
BELG  Belogornoye    61.81 316   P      P        23 35 31.2 +0.1
      comp=Z,10nm,0.7s,baz=18,slow=20,SNR=4.9
      comp=Z,10nm,0.7s
BELG  Belogornoye    61.81 316d iP      P        23 35 31.3 +0.1
BELG                             pmax   pmax
      comp=Z,1.0nm,0.7s
PALK  Pallekele      63.54 256   LR     LR       00 07 36.2
      comp=Z,20nm,18.4s,baz=36,slow=40
ASAR  Alice Springs  64.00 188   P      P        23 35 45.5  -0.4
      comp=Z,0.6nm,0.4s,baz=8.5,slow=8.0,SNR=13
ASAR                             LR     LR       00 03 39.4
      comp=Z,23nm,19.3s,baz=291,slow=36
      comp=Z,0.6nm,0.4s
OBN   Obninsk        65.84 323 i P      P        23 35 56.6  -1.0
OBN                            i                 23 38 27.4
OBN                              pmax   pmax
      comp=Z,6.0nm,0.9s
FIA1  FINESS Array S 66.23 332   P      P        23 35 59.9   0.0
FINES FINESS Array B 66.23 332   P      P        23 35 59.3  -0.7
      comp=Z,2.5nm,0.6s,baz=48,slow=7.5,SNR=18
FINES                            pP     pP       23 36 12.9  -0.4
      comp=Z,1.6nm,0.4s,baz=50,slow=6.6,SNR=2.6
FINES                            LR     LR       00 06 51.5
      comp=Z,47nm,18.6s,baz=358,slow=38
      comp=Z,2.5nm,0.6s
FINES FINESS Array B 66.23 332   P      P        23 35 59.6  -0.4
FINES FINESS Array B 66.23 332 i P      P        23 35 59.7  -0.3
FINES                            pmax   pmax
      comp=Z,2.0nm,0.6s
AKT   Akhty          67.58 306  eP      P        23 36 08.5  -0.6
AKT                              pmax   pmax
      comp=Z,10.0nm,1.5s
KVAR  Kislovodsk Arr 69.19 310   P      P        23 36 19.6 +0.5
      comp=Z,5.6nm,0.9s,baz=45,slow=20,SNR=3.6
      comp=Z,5.6nm,0.9s
KIV   Kislovodsk     69.19 310   P      P        23 36 19.1   0.0
KIV   Kislovodsk     69.19 310  eP      P        23 36 19.7 +0.6
KIV                              pmax   pmax
      comp=Z,12nm,1.0s
KIV                              MLR    MLR
      comp=Z,28nm,17.0s
KBZ   Khabaz         69.20 310   P      P        23 36 19.2 +0.1
      comp=Z,2.5nm,0.5s,baz=45,slow=2.9,SNR=13
      comp=Z,2.5nm,0.5s
KBZ   Khabaz         69.20 310c iP      P        23 36 19.6 +0.6
KBZ                              pmax   pmax
      comp=Z,3.0nm,0.9s
PABE  Paberze        71.09 328   P      P        23 36 30.5 +0.1
PABE                             IAmb   IAmb     23 36 31.3
      comp=Z,10nm,0.7s
NC405 NORSAR Array S 71.23 337   P      P        23 36 30.9  -0.3
NC405                            IAmb   IAmb     23 37 10.6
      comp=Z,14nm,1.3s
UOSS  Minazif        71.30 287   P      P        23 36 31.6  -0.6
UOSS                             IAmb   IAmb     23 36 33.4
      comp=Z,5.4nm,0.8s
HFS   Hagfors        71.39 336   P      P        23 36 31.8  -0.3
      comp=Z,1.8nm,0.5s,baz=46,slow=6.2,SNR=12
HFS                              LR     LR       00 15 01.2
      comp=Z,43nm,18.4s,baz=72,slow=42
      comp=Z,1.8nm,0.5s
NB201 NORSAR Array S 71.41 337   P      P        23 36 32.0  -0.3
NB2   NORSAR Subarra 71.44 337   P      P        23 36 32.5   0.0
      comp=Z,0.7nm,0.4s,baz=36,slow=6.5
NOA   NORSAR Array B 71.44 337   P      P        23 36 32.3  -0.2
      comp=Z,1.2nm,0.6s,baz=37,slow=6.1,SNR=7.3
NOA                              LR     LR       00 11 21.4
      comp=Z,13nm,18.7s,baz=330,slow=39
      comp=Z,1.2nm,0.6s
AKASG Malin Array Be 72.08 322   P      P        23 36 35.7  -0.7
      comp=Z,1.8nm,0.4s,baz=46,slow=6.6,SNR=8.3
      comp=Z,1.8nm,0.4s
AKASG Malin Array Be 72.08 322ceP      P        23 36 36.4   0.0
AKASG                            pmax   pmax
      comp=Z,2.0nm,0.4s
MARD  Mardin         74.38 306   P      P        23 36 51.1 +0.7
MARD                             IAmb   IAmb     23 36 51.9
      comp=Z,7.0nm,0.7s
PDAR  Pinedale Array 75.12  46   P      P        23 36 53.9  -0.9
      comp=Z,0.2nm,0.5s,baz=313,slow=6.6,SNR=1.9
      comp=Z,0.2nm,0.5s
BUR08 Bucovina Ar. S 76.10 322   P      P        23 37 00.1   0.0
BUR08                            IAmb   IAmb     23 37 01.0
      comp=Z,5.0nm,0.9s
BURAR Bucovina Array 76.11 322   P      P        23 36 59.8  -0.4
BR131 Keskin Array S 77.10 311   P      P        23 37 05.4  -0.5
BR131 Keskin Array S 77.10 311   P      P        23 37 05.4  -0.5
BR131                            pmax   pmax
      comp=Z,7.0nm,1.5s
BRTR  Keskin Array B 77.10 311   P      P        23 37 05.6  -0.3
      comp=Z,0.9nm,0.5s,baz=90,slow=3.0,SNR=11
      comp=Z,0.9nm,0.5s
BRTR  Keskin Array B 77.10 311   P      P        23 37 05.3  -0.6
BRTR  Keskin Array B 77.10 311ceP      P        23 37 06.3 +0.3
BRTR                             pmax   pmax
      comp=Z,1.0nm,0.4s
LANS  Liptovska Anna 77.61 325  eP      P        23 37 09.4 +0.9
LANS  Liptovska Anna 77.61 325  eP      P        23 37 09.4 +0.9
MORC  Moravsky Berou 77.95 327  eP      P        23 37 10.8 +0.4
CLL   Collm          78.57 330  i P     P        23 37 13.9 +0.2
CLL   Collm          78.57 330  i P     P        23 37 13.9 +0.2
VRAC  Vranov         78.71 327  eP      P        23 37 15.5 +1.0
KRUC  Moravsky       78.98 327  eP      P        23 37 16.7 +0.7
RAYN  Ar Rayn        79.89 292   P      P        23 37 21.3  -0.1
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RAYN	Ar Rayn	79.89	292	P	P	23 37 21.3	-0.1
RAYN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KHC	Kasperske Hory	80.08	329	P	P	23 37 22.7	+0.7
KHC	Kasperske Hory	80.08	329	⇓eP	P	23 37 22.8	+0.7
KHC				pmax	pmax		
	comp=Z,5.0nm,2.5s						
KHC	Kasperske Hory	80.08	329	eSG	P	23 37 22.8	+0.7
GERES	GERESS Array B	80.26	328	P	P	23 37 23.4	+0.3
	comp=Z,0.5nm,0.5s,baz=37,slow=7.0,SNR=3.8						
	comp=Z,0.5nm,0.5s						
EKA	Eskdalemuir Ar	80.29	341	P	P	23 37 22.8	-0.2
	comp=Z,0.9nm,0.7s,baz=32,slow=6.7,SNR=3.4						
	comp=Z,0.9nm,0.7s						
CSS	Mathiatis	80.48	308	P	P	23 37 24.2	-0.2
CSS				IAmb	IAmb	23 37 57.6	
	comp=Z,18nm,1.2s						
MMAI	Mount Meron Ar	80.51	305	P	P	23 37 25.5	+0.8
	comp=Z,1.0nm,0.6s,baz=31,slow=3.4,SNR=1.5						
	comp=Z,1.0nm,0.6s						
ELL	Elmali	81.28	311	P	P	23 37 28.5	-0.3
ELL				IAmb	IAmb	23 38 12.4	
	comp=Z,7.9nm,1.2s						
ELL	Elmali	81.28	311	P	P	23 37 28.5	-0.3
ELL				pmax	pmax		
	comp=Z,8.0nm,1.2s						
RAR	Rarotonga	81.66	127	LR	LR	00 03 58.7	
	comp=Z,17nm,21.8s,baz=264,slow=28						
ITM	Ithomi	85.39	316	P	P	23 37 48.8	-1.0
PPT	Papeete	85.65	117	LR	LR	00 10 35.5	
	comp=Z,24nm,20.6s,baz=352,slow=32						
TXAR	Lajitas Array	87.82	53	P	P	23 38 03.0	+1.1
	comp=Z,0.2nm,0.8s,baz=327,slow=9.0,SNR=1.8						
TXAR				pP	pP	23 38 17.7	+1.9
	comp=Z,0.2nm,0.5s,baz=322,slow=5.5,SNR=2.8						
	comp=Z,0.2nm,0.8s						
H06N1	SOCORRO T-PHAS	90.31	65	T	T	01 19 02.5	
	SNR=4.2						
ESDC	Sonseca Array	94.64	334	P	P	23 38 32.7	-0.6
	comp=Z,0.5nm,0.7s,baz=20,slow=4.8,SNR=2.0						
ESDC				LR	LR	00 28 11.6	
	comp=Z,29nm,18.1s,baz=316,slow=40						
	comp=Z,0.5nm,0.7s						
NVL	N'lazarevskaya	140.40	203	ePKIKP	PKPdf	23 44 39.1	-0.9
NVL				e		23 47 39.8	
NVL				ePPP	PPP	23 50 44.6	
NVL				eSS	SS	00 06 00.8	+1.1
NVL				eSSS	SSS	00 11 15.3	
NVL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NVL				MLR	MLR		
	comp=Z,875nm,23.0s						
SNAA	Sanae	143.92	198	PKP	PKPab	23 44 43.9	+0.2
	comp=Z,1.0nm,0.5s,baz=164,slow=8.9,SNR=11						

PRU 02 23:35:57.7,51°.27N×16°.04E,h24^{km},Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHVC	Chvalec	0.68	179	ePG	Pb	23 36 11.2	+0.2
CHVC				eSG	Sn	23 36 21.0	-0.8
UPC	Upice	0.76	181	ePG	Pb	23 36 11.6	-0.7
UPC				eSG	Sn	23 36 24.3	+0.6
DPC	Dobruska-Polom	0.94	169	eSG	Sb	23 36 27.5	+0.2
PVCC	Panska Ves	1.19	232	eSG	Sb	23 36 35.1	+0.6

IDC ***02*** *23:52:01.8±1.5,3°.31N×123°.33E,h489^{km}±17^{km},mb3.3/12, mbtmp4.2/13,Error ellipse: s-maj=35.7km s-min=9.3km az=70.0*

NEIC ***02*** *23:52:01.5±1.1,3°.4N±0°.1×123°.4E±0°.2,h480^{km}±11^{km}, mb4.0/31,Error ellipse: s-maj=24.5km s-min=13.8km az=62.0*

DJA ***02*** *23:52:02.2±0.6,3°N±6°×12°3E±°,h474^{km}±7^{km},M4.2/12, mB4.8/3,mb3.9/9,MLv4.3/12,Mw(mB)4.0/3*

ISC 02 23:52:02.2±0.5**,3°.28N**±0°.06×**123°.38E**±0°.09**,h500**^{km}**,n71,** σ**1^{s}.27**/78**,mb4.0**/26**,Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNI	Manado	2.33	141	P	P	23 53 07.8	-1.4
GTOI	Gorontalo	2.65	188	P	P	23 53 08.1	-2.9
MRSI	Marisa	3.13	207	P	P	23 53 12.5	-1.7
TOLI2	Tolitoli	3.37	230	P	P	23 53 13.9	-2.0
TOLI2					S	23 54 11.8	-3.9
LUWI	Luwuk	4.33	188	P	P	23 53 21.8	-1.7
LUWI				S	S	23 54 25.0	-4.6
LUWI	Luwuk	4.33	188	P	P	23 53 21.2	-2.3
APSI	Ampana	4.51	203	P	P	23 53 23.7	-1.2
MPSI	Mapaga	4.54	230	P	P	23 53 24.3	-1.0
GAMI	Galela, Maluku	4.63	108	P	P	23 53 23.6	-2.4
MYLDM	Lahad Datu	5.22	291	P	P	23 53 31.3	0.0
MYLDM	Lahad Datu	5.22	291	P	P	23 53 31.4	+0.1
	0.2nm47nm,1.4s						
SANI	Sanana	5.90	154	P	P	23 53 34.9	-2.7
NLAI	Namlea	7.46	150	P	P	23 53 53.8	+0.6
	56nm,0.7s						
KKM	Kota Kinabalu	7.66	291	P	P	23 53 53.5	-1.8
KKM	Kota Kinabalu	7.66	291	P	P	23 53 54.1	-1.2
	38nm,1.4s						
SPSI	Sidrap Palu	8.05	207	P	P	23 53 59.9	+0.7
	5µm17nm,0.7s						
BNSI	Bone	8.30	203	P	P	23 54 02.1	+0.3
	41nm,0.8s						
KAPI	Kappang	9.00	204	P	P	23 54 09.0	-0.2
	4.9nm,0.2s,baz=22,slow=5.4,SNR=5.1						
KAPI				S	S	23 55 53.2	-0.1
	3.4nm,0.2s,baz=113,slow=15,SNR=1.0						
KAPI	Kappang	9.00	204	P	P	23 54 09.4	+0.3
BKSI	Bulukumba	9.14	201	P	P	23 54 11.1	+0.5
	9.3nm,1.1s						
BSSI	Bau Bau, Buton	9.79	197	P	P	23 54 17.6	+0.1
	12nm,0.8s						
SOEI	Soe	12.97	176	P	P	23 54 51.2	-0.2
BATI	Baumata	13.40	179	S	S	23 57 20.5	+1.8
	28nm,0.4s,baz=300,slow=14,SNR=2.4						
MTN	Manton Dam	17.77	154	P	P	23 55 41.1	+0.5
KNRA	Kununurra	19.57	164	P	P	23 55 57.9	+0.8
TPUB	Ta-pu	20.08	353	P	P	23 56 02.3	+0.6
YULB	Yu-li	20.10	354	P	P	23 56 00.7	-1.1
SSLB	Suanglung	20.53	354	P	P	23 56 05.6	-0.1
YOJ	Yonaguni jima	21.07	359	P	P	23 56 09.1	-1.5
FITZ	Fitzroy Crossi	21.36	174	P	P	23 56 13.3	+0.1
	2.0nm,0.5s,baz=360,slow=8.5,SNR=16						
	2.0nm,0.5s						
FITZ	Fitzroy Crossi	21.36	174	P	P	23 56 13.6	+0.3
PSA00	Pilbara Seismi	24.94	188	P	P	23 56 44.4	-0.9
WB0	Warramunga Arr	25.33	155	P	P	23 56 48.6	-0.2
WB0				IAmb	IAmb	23 56 50.3	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	25.46	155	P	P	23 56 49.9	-0.1
	comp=Z,1.6nm,0.3s,baz=336,slow=9.0,SNR=26						
WRA				ScP	ScP	00 02 58.4	+1.1
	comp=Z,0.1nm,0.3s,baz=332,slow=3.1,SNR=6.4						
	comp=Z,1.6nm,0.3s						
WRA	Warramunga Arr	25.46	155	P	P	23 56 49.1	-0.9
WR8	Warramunga Arr	25.54	155	P	P	23 56 50.2	-0.4
WR8				IAmb	IAmb	23 57 10.8	
	comp=Z,4.6nm,1.1s						
COEN	Coen	26.05	132	P	P	23 56 55.1	-0.1
COEN				IAmb	IAmb	23 57 33.7	
	comp=Z,11nm,1.5s						
AS31	Alice Springs	28.67	160	P	P	23 57 18.3	+0.1
AS31				IAmb	IAmb	23 57 19.1	
	comp=Z,1.4nm,0.3s						
ASAR	Alice Springs	28.68	160	P	P	23 57 18.8	+0.6
	comp=Z,1.4nm,0.3s,baz=337,slow=9.1,SNR=28						
ASAR				ScP	ScP	00 03 08.3	+1.1
	comp=Z,0.6nm,0.6s,baz=344,slow=4.1,SNR=5.8						
	comp=Z,1.4nm,0.3s						
ASAR	Alice Springs	28.68	160	P	P	23 57 18.6	+0.4
FORT	Forrest	34.16	173	P	P	23 58 05.7	+0.6
FORT				IAmb	IAmb	23 58 25.0	
	comp=Z,8.7nm,1.1s						
INKA	Innaminka	35.08	153	P	P	23 58 14.9	+2.0
INKA				IAmb	IAmb	23 58 15.5	
	comp=Z,3.6nm,0.4s						
BBOO	Buckleboo	37.85	162	P	P	23 58 36.4	+0.7
STKA	Stephens Creek	39.01	155	P	P	23 58 46.9	+1.7
	comp=Z,3.6nm,0.4s,baz=327,slow=11,SNR=10						
	comp=Z,3.6nm,0.4s						
STKA	Stephens Creek	39.01	155	P	P	23 58 45.4	+0.2
EIDS	Eidsvold	39.15	138	P	P	23 58 46.6	+0.2
EIDS				IAmb	IAmb	23 58 51.9	
	comp=Z,15nm,1.2s						
GTA	Gaotai	41.86	332	eP	P	23 59 09.8	+1.8
GTA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
EVN	Everest	42.62	309	P	P	23 59 15.2	+0.2
EVN				IAmb	IAmb	23 59 16.9	
	comp=Z,4.7nm,0.6s						
ARMA	Armidale	43.02	143	P	P	23 59 18.1	+0.8
CAN	Canberra	45.29	150	P	P	23 59 36.9	+2.1
HILR	Hailar Array B	46.22	357	P	P	23 59 41.0	-0.6
	comp=Z,2.4nm,0.4s,baz=174,slow=9.4,SNR=7.1						
	comp=Z,2.4nm,0.4s						
ULN	Ulaanbaatar	46.60	345	P	P	23 59 44.7	0.0
ULN				IAmb	IAmb	00 00 17.3	
	comp=Z,3.6nm,1.4s						
SONM	Songino Array	46.74	344	P	P	23 59 46.3	+0.5
	comp=Z,1.5nm,0.8s,baz=160,slow=8.9,SNR=9.9						
	comp=Z,1.5nm,0.8s						
SONM	Songino Array	46.74	344	P	P	23 59 46.0	+0.3
WUS	Wushi	54.71	320	P	P	00 00 45.2	+1.1
MKAR	Makanchi Array	56.07	327	P	P	00 00 53.7	+0.4
	comp=Z,2.2nm,0.5s,baz=121,slow=8.3,SNR=63						
MKAR				PcP	PcP	00 01 45.9	+1.5
	comp=Z,0.3nm,0.5s,baz=121,slow=5.2,SNR=2.2						
MKAR				ScP	ScP	00 04 55.9	+0.6
	comp=Z,0.3nm,0.7s,baz=106,slow=4.7,SNR=2.3						
	comp=Z,2.2nm,0.5s						
MAKZ	Makanchi	56.25	327	P	P	00 00 54.9	+0.4
MAKZ				IAmb	IAmb	00 01 23.8	
	comp=Z,8.1nm,1.5s						
KDJ	Kajisay	56.50	320	P	P	00 00 57.4	+0.8
KDJ				IAmb	IAmb	00 00 57.8	
	comp=Z,7.7nm,0.8s						
PET	Petropavlovsk	57.48	24	P	P	00 01 01.6	-1.2
ZALV	Zalesovo Beam	59.52	335	P	P	00 01 16.0	-0.6
	comp=Z,0.6nm,0.4s,baz=134,slow=6.1,SNR=4.4						
	comp=Z,0.6nm,0.4s						
ZALV	Zalesovo Beam	59.52	335	P	P	00 01 15.6	-1.0
GAR	Garm	59.80	314	P	P	00 01 18.9	-0.1
GAR				IAmb	IAmb	00 01 19.3	
	comp=Z,7.8nm,1.4s						
KURBB	Kurchatov Arra	60.36	329	P	P	00 01 21.9	-0.4
	comp=Z,1.4nm,0.7s,baz=129,slow=6.2,SNR=20						
	comp=Z,1.4nm,0.7s						
KURK	Kurchatov	60.37	329	P	P	00 01 22.4	+0.1
KURK				IAmb	IAmb	00 01 23.0	
	comp=Z,6.4nm,1.0s						
KK31	Karatay Array	61.31	318	P	P	00 01 28.3	-0.5
KKAR	Karatay Array	61.31	318	P	P	00 01 29.2	+0.4
BVAR	Borovoye Array	65.91	328	P	P	00 01 58.2	+0.2
	comp=Z,0.3nm,0.3s,baz=127,slow=4.9,SNR=2.7						
	comp=Z,0.3nm,0.3s						
NRIK	Noril'sk	70.10	347	P	P	00 02 23.7	+0.4
	comp=Z,1.2nm,0.4s,baz=124,slow=3.6,SNR=2.0						
	comp=Z,1.2nm,0.4s						
AB31	Akbulak array	70.41	322	P	P	00 02 25.9	+0.4
ABKAR	Akbulak array	70.41	322	P	P	00 02 25.2	-0.3
FINES	FINESS Array B	90.64	332	P	P	00 04 09.9	-0.8
	comp=Z,1.4nm,0.8s,baz=92,slow=3.2,SNR=4.2						
	comp=Z,1.4nm,0.8s						

IDC ***03*** *00:34:04.1±2.5,14°.68S×76°.12W,h50^{km}±23^{km},mb3.5/3, mbtmp3.8/7,ML3.8/4,MS3.4/6,Error ellipse: s-maj=51.5km s-min=15.0km az=63.0*

ISC 03 00:34:01.8±1.0**,14°.7S**±0°.1×**75°.8W**±0°.2**,h29**^{km}**,n21,** σ**0^{s}.72**/11**,mb4.1**/3**,MS3.5**/5**,Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	2.84	339	P	Pn	00 34 45.3	0.0
	10.0nm,0.3s,baz=160,slow=14,SNR=24						
NNA				S	Sn	00 35 19.0	+0.4
	489nm,0.5s,baz=122,slow=6.3,SNR=12						
	54nm,0.4s						
LPAZ	La Paz	7.58	103	P	Pn	00 35 57.5	+6.6
	2.2nm,0.3s,baz=288,slow=7.3,SNR=71						
LPAZ				LR	LR	00 39 18.0	
	comp=Z,164nm,19.5s,baz=282,slow=40						
	9.4nm,0.5s						
ATAH	Atahualpa	7.90	341	P	Pn	00 35 56.0	+0.9
	1.5nm,0.3s,baz=153,slow=6.8,SNR=6.8						
ATAH				S	Sn	00 37 24.4	+0.6
	7.1nm,0.5s,baz=106,slow=19,SNR=1.8						
	2.0nm,0.6s						
SIV	San Ignacio	14.28	97	P	Pn	00 37 22.1	-0.1
CFA	Coronel Fontan	18.23	159	P	Pn	00 38 13.7	+0.9
	0.1nm,0.3s,baz=325,slow=12,SNR=4.5						
	0.9nm,0.4s						
H03N1	Juan Fernandez	18.90	188	T	T	00 57 38.6	
	baz=8.5,slow=74,SNR=1814						
H03N2	Juan Fernandez	18.90	188	T	T	00 57 37.3	
	baz=8.5,slow=74,SNR=737						
H03N3	Juan Fernandez	18.92	188	T	T	00 57 37.3	
	baz=8.5,slow=74,SNR=888						
CPUP	Villa Florida	20.81	127	LR	LR	00 48 29.7	
	comp=Z,19nm,21.3s,baz=191,slow=41						
SDV	Santo Domingo	23.96	13	P	P	00 39 13.9	0.0
	3.3nm,0.5s,baz=200,slow=9.7,SNR=5.1						
	3.3nm,0.5s						
BDFB	Brasilia	26.84	96	LR	LR	00 51 29.5	
	comp=Z,193nm,18.5s,baz=320,slow=38						
MDP	Montagnes des	30.23	51	LR	LR	00 52 25.9	
	comp=Z,83nm,19.1s,baz=284,slow=36						
TXAR	Lajitas Array	51.35	329	P	P	00 43 02.8	-1.1
	0.1nm,0.5s,baz=148,slow=7.9,SNR=5.0						
	0.1nm,0.5s						
PPT	Papeete	70.51	256	LR	LR	01 08 19.3	
	comp=Z,25nm,20.1s,baz=238,slow=29						
SNAA	Sanae	70.83	161	P	P	00 45 15.8	+0.3
	2.2nm,0.9s,baz=273,slow=6.9,SNR=8.1						
	2.2nm,0.9s						
DBIC	Dimbokro	73.46	78	LR	LR	01 16 08.9	
	comp=Z,45nm,20.2s,baz=294,slow=34						
H11N3	WAKE ISLAND Hy	120.15	284	T	T	03 03 51.2	
	baz=96,slow=74,SNR=21						
H11N2	WAKE ISLAND Hy	120.16	284	T	T	03 03 58.3	
	baz=96,slow=74,SNR=31						
H11N1	WAKE ISLAND Hy	120.17	284	T	T	03 03 51.6	
	baz=96,slow=74,SNR=13						
ZALV	Zalesovo Beam	137.96	17	PKP	PKPdf	00 53 22.8	-0.7
	0.4nm,0.3s,baz=336,slow=3.2,SNR=1.5						
SONM	Songino Array	146.88	357	PKPbc	PKPbc	00 53 41.0	-0.5
	0.8nm,0.6s,baz=335,slow=2.0,SNR=5.4						

IDC 03 00:42:20.9±1.7**,1°.51N**×**126°.27E,h0**^{km}**,mb3.4**/4**, mbtmp3.5**/5**,ML3.2**/1**,MS3.5**/1**,Error ellipse: s-maj=122.7km s-min=22.2km az=69.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	19.50	182	P	P	00 46 49.1	-0.6
	0.1nm,0.3s,baz=0.0,slow=8.1,SNR=1.4						
	1.4nm,0.8s						
WRA	Warramunga Arr	22.74	160	P	P	00 47 24.6	-0.2
	0.4nm,0.4s,baz=339,slow=11,SNR=7.8						
	0.4nm,0.4s						
ASAR	Alice Springs	26.11	164	P	P	00 47 57.2	+0.6
	0.2nm,0.3s,baz=344,slow=11,SNR=4.2						
	0.2nm,0.3s						
PSI	Prapat	27.35	273	LR	LR	01 01 29.8	
	comp=Z,95nm,18.4s,baz=348,slow=42						
MKAR	Makanchi Array	59.12	326	P	P	00 52 23.7	+0.4
	0.2nm,0.5s,baz=119,slow=8.6,SNR=2.0						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	63.36	328	P	P	00 52 51.5	-0.5
	0.2nm,0.2s,baz=128,slow=5.6,SNR=1.9						
	0.2nm,0.2s						

IDC ***03*** *00:43:02.0±18.0,13°.89N×120°.84E,h241^{km}±200^{km}, mb3.0/7,mbtmp3.6/7,Error ellipse: s-maj=67.8km s-min=16.0km az=61.0*

ISC 03 00:42:53.4±1.2**,14°.0N**±0°.2×**121°.0E**±0°.3**,h152**^{km}**,n7,** σ**0^{s}.72**/7**,mb3.4**/7**,Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	21.66	285	P	P	00 47 32.3	+0.1
	1.3nm,0.3s,baz=98,slow=8.3,SNR=6.2						
	1.3nm,0.3s						
SONM	Songino Array	35.88	343	P	P	00 49 39.6	+0.7
	0.6nm,0.6s,baz=161,slow=9.9,SNR=4.5						
	0.6nm,0.6s						
WRA	Warramunga Arr	36.17	158	P	P	00 49 41.5	+0.1
	0.4nm,0.6s,baz=333,slow=8.8,SNR=2.9						
	0.4nm,0.6s						
ASAR	Alice Springs	39.48	161	P	P	00 50 09.1	-0.1
	0.2nm,0.3s,baz=343,slow=8.3,SNR=4.1						
	0.2nm,0.3s						
MKAR	Makanchi Array	45.99	323	P	P	00 51 01.1	-0.4
	0.3nm,0.6s,baz=106,slow=8.1,SNR=1.8						
	0.3nm,0.6s						
ZALV	Zalesovo Beam	48.95	332	P	P	00 51 23.0	-1.1
	0.6nm,0.4s,baz=126,slow=6.3,SNR=2.2						
	0.6nm,0.4s						
KURBB	Kurchatov Arra	50.13	326	P	P	00 51 33.0	-0.1
	0.3nm,0.3s,baz=129,slow=7.3,SNR=5.5						
	0.3nm,0.3s						

TEH ***03*** *00:46:20.8,37°.90N×45°.67E,h8^{km}±48^{km}*

AZER ***03*** *00:46:22.0,38°.04N×45°.64E,h6^{km},ml2.6*

ISC 03 00:46:21.7±1.1**,37°.97N**±0°.03×**45°.70E**±0°.03**,h6**^{km}±11^{km}**, n28,** σ**1^{s}.40**/45**,Northwestern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISHB	Shabestar	0.32	348	Pg	Pg	00 46 28.4	+0.3
IAZR	Azarshahr	0.36	142	Pg	Pg	00 46 28.5	-0.3
IAZR				Sg	Sg	00 46 33.0	-0.6
ITBZ	Tabriz	0.44	53	Pg	Pg	00 46 30.4	+0.2
IMRD	Marand	0.75	0	Pg	Pb	00 46 37.3	+0.1
ORD	Ordubad	0.99	13	P	Pn	00 46 41.7	-0.6
ORD				S	Sn	00 46 56.8	+0.2
IHRS	Heris	1.11	71	Pg	Pg	00 46 43.5	+0.5
MAHB	Mahabad	1.20	180	Pg	Pg	00 46 42.4	-2.2
NAX	Nakhchivan	1.22	352	P	Pn	00 46 45.9	+0.5
NAX				S	Sn	00 47 03.9	+1.6
SBZ	Shahbuz	1.43	355	P	Pg	00 46 49.5	+0.3
SBZ				S	Sg	00 47 10.3	+2.5
ISRB	Sarab	1.56	95	Pg	Pb	00 46 51.0	-0.2
MAKU	Maku	1.60	330	Pg	Pg	00 46 51.4	-1.0
HAKT	HAKKARI	1.63	256	P	Pg	00 46 53.7	+0.6
HAKT				S	Sg	00 47 18.2	+4.1
HYR	Heyderabad	1.87	339	P	Pg	00 46 56.9	-0.7
HYR				S	Sg	00 47 23.7	+1.8
GRMI	Germi	1.92	63	Pn	Pb	00 46 57.0	-0.2
QRD	Qoradiz	1.96	40	P	Pg	00 46 58.8	-0.4
QRD				S	Sg	00 47 26.4	+1.8
LRK	Lerik	2.18	71	P	Pb	00 47 02.8	+1.1
LRK				S	Sg	00 47 33.1	+1.3
YRD	Yardimli	2.21	64	P	Pb	00 47 02.7	+0.5
YRD				S	Sg	00 47 32.9	+0.3
BLQ	Beylaqan	2.27	39	P	Pg	00 47 04.6	-0.7
BLQ				S	Sg	00 47 35.1	+0.4
IGDI	IGDIR	2.28	327	P	Pg	00 47 05.5	+0.1
IGDI				S	Sg	00 47 32.8	-2.3
AGDM	Agdam	2.40	27	P	Pb	00 47 04.5	-1.0
AGDM				S	Sg	00 47 37.2	-1.7
GLBA	Clilabad	2.46	58	P	Pb	00 47 06.5	+0.1
GLBA				S	Sg	00 47 40.1	-0.8
ASTR	Astara	2.50	75	P	Pb	00 47 07.6	+0.5
ASTR				S	Sg	00 47 42.4	+0.3
BRDA	Brd	2.56	26	S	Sb	00 47 41.3	+1.4
GANJ	Ganja	2.72	10	P	Pb	00 47 08.7	-2.1
GANJ				S	Sb	00 47 43.2	-1.2
GDB	GEDABAY	2.75	1	P	Pb	00 47 09.9	-1.5
GDB				S	Sb	00 47 46.5	+1.0
ZRD	Zardab	2.78	33	S	Sb	00 47 47.8	+1.7
QZX	Qazax, Azerbai	3.10	355	P	Pb	00 47 14.8	-2.5
QZX				S	Sb	00 47 53.8	-1.5
SEKA	Sheki	3.44	19	S	Sb	00 48 03.4	-1.8

NIED ***03*** *01:11:19.7,36°.00N×139°.08E,h128^{km},MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.52; $M_{\theta\theta}$3.45; $M_{\phi\phi}$-2.93; $M_{r\theta}$-1.64; $M_{\theta\phi}$-1.64; $M_{\phi r}$3.21; Fault plane solution: $M_0$5.10000×10^{14} NP1: ϕ_s241.00000°,δ45.00000°,λ-174.00000°. NP2: ϕ_s147.00000°,δ86.00000°,λ-45.00000°.*

IDC ***03*** *01:11:19.4±0.7,36°.05N×138°.68E,h133^{km}±5^{km},mb3.2/4, mbtmp3.7/5 Error ellipse: s-maj=30.1km s-min=11.2km az=73.0*

JMA ***03*** *01:11:19.7±0.2,36°.0N±0°.7×139°.1E±0°.8,h128^{km}±1^{km}, MV3.5/38,WESTERN SAITAMA PREF*

ISC 03 01:11:19.5±0.9**,36°.05N**±0°.05×**138°.98E**±0°.06**,h127**^{km}±6^{km}**, n14,** σ**1^{s}.28**/21**,mb3.4**/4**,Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JRY	Ryogami san	0.07	242	P	Pn	01 11 37.5	+0.6
JRY				eS	Sn	01 11 50.9	+0.9
JAG	Ashikaga	0.53	45	P	Pn	01 11 38.7	+0.2
JAG				eS	Sn	01 11 52.7	-0.2
JOD2	Odawara 2	0.79	174	P	Pn	01 11 40.0	-0.4
JOD2				eS	Sn	01 11 55.1	-1.0
MJAR	Matsushiro Arr	0.79	308	P	Pn	01 11 39.5	-0.8
	238nm,0.5s,baz=150,slow=7.1,SNR=326						
MJAR				S	Sn	01 11 55.9	-0.3
	70nm,0.4s,baz=96,slow=10.0,SNR=11						
MAT	Matsushiro	0.80	308	iP	Pn	01 11 41.0	+0.6
MAT				eS	Sn	01 11 56.7	+0.5
JNS	Sasagawa	1.79	9	P	Pn	01 11 51.9	+1.1
JOTO	OTAMA OYAMA	1.86	35	P	Pn	01 11 52.8	+1.2
JYTA	Yamagatataniai	1.88	257	eP	Pn	01 11 52.6	+0.7
JYTA				eS	Sn	01 12 18.0	+1.4
BSO1	Boso 1	2.15	130	eP	Pn	01 11 54.0	-0.6
JHJ	Hachijo jima 2	3.00	167	P	Pn	01 12 06.6	+0.6
	103nm,0.4s,baz=323,slow=20,SNR=5.9						
JHJ				S	Sn	01 12 45.6	+3.6
	89nm,0.3s,baz=84,slow=23,SNR=1.9						
KURBB	Kurchatov Arra	45.07	308	P	P	01 19 22.0	-0.5
	0.3nm,0.4s,baz=84,slow=7.9,SNR=1.9						
	0.3nm,0.4s						
ILAR	Eielson Array	51.37	32	P	P	01 20 10.7	+0.1
	0.3nm,0.6s,baz=280,slow=5.3,SNR=5.2						
	0.3nm,0.6s						
WRA	Warramunga Arr	55.86	185	P	P	01 20 41.7	-2.1
	1.0nm,0.5s,baz=1.0,slow=7.5,SNR=12						
	1.0nm,0.5s						
ASAR	Alice Springs	59.59	185	P	P	01 21 10.1	+0.2
	0.1nm,0.3s,baz=358,slow=5.3,SNR=2.2						
	0.1nm,0.3s						

BJI ***03*** *01:17:55.7,35°.89N×140°.50E,h53^{km},mB5.1/20,mb4.9/65, Ms4.3/11,Ms7 4.1/14*

MOS ***03*** *01:18:01.6±0.9,36°.18N×139°.84E,h51^{km},mb5.2/54, MS4.0/8,Error ellipse: s-maj=7.2km s-min=4.3km az=117.3*

IDC ***03*** *01:18:04.9±0.9,36°.05N×139°.73E,h70^{km}±7^{km},mb4.4/28, mbtmp4.7/33,MS3.7/54,Error ellipse: s-maj=11.3km s-min=6.6km az=75.0*

BGR ***03*** *01:18:04.0,36°.73N×140°.24E,h33^{km},mb4.9*

JMA ***03*** *01:18:04.6±0.1,36°.1N±0°.2×139°.8E±0°.3,h52^{km},MD4.7/39, MW4.7/39,SW IBARAKI PREF*

JMA Felt IV J1 at SW IBARAKI PREF .

NEIC ***03*** *01:18:04.1±1.9,36°.13N±0°.05×139°.87E±0°.06,h53^{km}±5^{km}, mb4.8/227,Mwr4.6/13,Error ellipse: s-maj=7.6km s-min=6.8km az=93.0,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.63; $M_{\theta\theta}$-0.48; $M_{\phi\phi}$-0.14; $M_{r\theta}$0.10; $M_{\theta\phi}$-0.76; $M_{\phi r}$0.57; Fault plane solution: $M_0$1.11000×10^{16} NP1:ϕ_s264.33000°,δ42.61000°, λ144.27000°. NP2:ϕ_s22.23000°,δ66.71000°,λ53.25000°. Principal axes: T 0.9914, Plg53.0000°, Azm247.0000°; N 0.2099, Plg33.0000°, Azm39.0000°; P -1.2013, Plg14.0000°, Azm138.0000°;*

NIED ***03*** *01:18:04.6,36°.14N×139°.82E,h52^{km},MW4.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.64; $M_{\theta\theta}$-0.60; $M_{\phi\phi}$-0.04; $M_{r\theta}$0.28; $M_{\theta\phi}$-0.50; $M_{\phi r}$0.74; Fault plane solution: $M_0$1.12000×10^{16} NP1: ϕ_s268.00000°,δ32.00000°,λ141.00000°. NP2: ϕ_s32.00000°,δ70.00000°,λ64.00000°.*

NEIC ***03*** *01:18:04.4,36°.16N×139°.84E,h59^{km}*

ISC 03 01:18:03.1±0.4**,36°.14N**±0°.03×**139°.91E**±0°.04**,h54**^{km}±2^{km}**, h54**^{km}**:pP-P,n872,** σ**1^{s}.11**/782**,mb4.9**/241**,MS3.8**/55**, 48C-28D,Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYT	Yasato	0.25	69	P	Pn	01 18 14.0	+1.9
JYT				eS	Sn	01 18 20.8	+2.0
JYT	Yasato	0.25	69	A	A	01 18 14.0	

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             comp=N,83nm,0.3s,comp=E,78nm,0.4s
JAG   Ashikaga          0.47 308 ⇓P    Pn    01 18 15.0 +0.8
JAG                              ⇓S    Sn    01 18 22.1 -0.2
JAG   Ashikaga          0.47 308  A    A     01 18 15.0
             comp=N,174nm,0.4s,comp=E,168nm,1.0s
TOK   Tokyo             0.47 195  A    A     01 18 15.4
             comp=N,148nm,0.6s,comp=E,212nm,1.2s
JIHU  Itakohorinouch    0.53 109  A    A     01 18 17.2
             comp=N,119nm,2.2s,comp=E,89nm,2.1s
JHYU  Hitachinakayam    0.59  70  A    A     01 18 17.8
             comp=N,21nm,0.3s,comp=E,22nm,1.3s
JHO   Hitachi           0.71  48  A    A     01 18 19.3
             comp=N,37nm,1.1s,comp=E,22nm,0.2s
JSGW  Sagamiharawaka    0.78 227  A    A     01 18 18.9
             comp=N,30nm,1.3s,comp=E,34nm,0.6s
JCCN  Chibachonan       0.80 160  A    A     01 18 20.2
             comp=N,85nm,3.3s,comp=E,58nm,1.3s
JKT   Katashina         0.82 320 ⇓P    Pn    01 18 19.1 +0.4
JKT                             ⇓eS    Sn    01 18 29.7 -0.3
JKT   Katashina         0.82 320  A    A     01 18 19.1
             comp=N,141nm,0.3s,comp=E,163nm,0.6s
JRY   Ryogami san       0.82 262 ⇓P    Pn    01 18 19.1 +0.5
JRY                             ⇓eS    Sn    01 18 29.0 -1.0
JRY   Ryogami san       0.82 262  A    A     01 18 19.1
             comp=N,47nm,1.6s,comp=E,33nm,1.1s
JSB   Shiboa            0.83   1  A    A     01 18 20.2
             comp=N,150nm,0.9s,comp=E,189nm,0.8s
JCAJ  Choshiashikaji    0.88 118  A    A     01 18 21.8
             comp=N,31nm,3.7s,comp=E,28nm,2.3s
JYO   Yokosk            0.93 192  A    A     01 18 21.5
             comp=N,62nm,2.8s,comp=E,91nm,1.9s
JKUC  kamogawauchiur    1.00 166  A    A     01 18 23.0
             comp=N,35nm,1.9s,comp=E,34nm,1.9s
JFFD  Fukushimafurud    1.09  29  A    A     01 18 24.3
             comp=N,42nm,0.8s,comp=E,61nm,0.9s
JOD2  Odawara 2         1.10 218  P    Pn    01 18 23.4 +1.2
JOD2                             eS    Sn    01 18 37.0 +0.6
JOD2  Odawara 2         1.10 218  A    A     01 18 23.4
             comp=N,35nm,1.3s,comp=E,34nm,1.6s
TATJ  Tateyama 2        1.10 181  A    A     01 18 24.1
             comp=N,87nm,1.2s,comp=E,75nm,1.1s
JGK   Kuni              1.11 293  A    A     01 18 23.2
             comp=N,23nm,1.2s,comp=E,31nm,0.2s
ONAJ  Iwakimizuishiy    1.20  36  A    A     01 18 26.0
             comp=N,33nm,0.3s,comp=E,45nm,1.9s
JUON  Uonuma            1.27 328⇓iP    Pn    01 18 25.2 +0.7
JUON  Uonuma            1.27 328  A    A     01 18 25.2
             comp=N,15nm,2.6s,comp=E,17nm,4.2s
JFY   Yanaizu           1.28 353⇓iP    Pn    01 18 25.9 +1.3
JFY                             ⇓eS    Sn    01 18 40.8  0.0
JFY   Yanaizu           1.28 353  A    A     01 18 25.9
             comp=N,19nm,1.3s,comp=E,61nm,2.1s
JFNN  Fujinakano        1.37 227  A    A     01 18 27.1
             comp=N,31nm,2.2s,comp=E,23nm,2.3s
JHTM  Izuhatsuma        1.39 212  A    A     01 18 27.6
             comp=N,74nm,1.0s,comp=E,56nm,1.0s
MJAR  Matsushiro Arr    1.43 287  P    Pn    01 18 26.8 +0.1
             comp=E,4µm,0.4s,baz=88,slow=9.0,SNR=3575
MJAR                              S    Sn    01 18 44.5 +0.1
             comp=E,869nm,0.4s,baz=130,slow=44,SNR=4.1
MJAR                              LR   LR    01 19 04.0
             comp=E,2µm,18.6s,baz=136,slow=45
MJAR  Matsushiro Arr    1.43 287  Pn   Pn    01 18 26.2 -0.5
MAJO  Matsushiro        1.43 287  Pn   Pn    01 18 27.1 +0.4
MAJO  Matsushiro        1.43 287  P    Pn    01 18 27.5 +0.8
MAJO  Matsushiro        1.43 287  P    Pn    01 18 27.1 +0.4
MAT   Matsushiro        1.43 287  P    Pn    01 18 26.6 -0.1
MAT                              eS    Sn    01 18 43.8 -0.6
MJB9  Matsu-Tunnel      1.43 287       Pn    01 18 27.7 +0.9
JFK   Kawauchi          1.45  32  A    A     01 18 29.5
             comp=N,16nm,1.6s,comp=E,16nm,2.4s
JNT   Takato            1.46 260⇓iP    Pn    01 18 28.7 +1.6
JNT                             ⇓eS    Sn    01 18 46.1 +0.9
JNT   Takato            1.46 260  A    A     01 18 28.7
             comp=N,30nm,0.9s,comp=E,21nm,3.8s
JOTO  OTAMA OYAMA       1.46  13  A    A     01 18 29.3
             comp=N,75nm,1.1s,comp=E,107nm,1.7s
JIM2  Oshima 3          1.47 195  A    A     01 18 29.0
             comp=N,38nm,0.9s,comp=E,54nm,1.3s
JNG   Nsakai            1.48 281  A    A     01 18 28.5
             comp=N,18nm,0.9s,comp=E,14nm,0.7s
JIZS  Izushimoda        1.65 211  A    A     01 18 31.3
             comp=N,26nm,0.7s,comp=E,25nm,0.9s
JIZZ  Izumozaki         1.69 326  A    A     01 18 31.8
             comp=N,33nm,3.8s,comp=E,28nm,1.6s
JJN   Nakama            1.70 305  A    A     01 18 31.7
             comp=N,19nm,0.7s,comp=E,18nm,0.6s
JNS   Sasagawa          1.74 344  A    A     01 18 32.8
             comp=N,7.0nm,1.5s,comp=E,6.0nm,1.9s
SHZ3  Shizuoka 3        1.75 233  A    A     01 18 32.4
             comp=N,28nm,1.2s,comp=E,19nm,2.2s
JMST  Minamisoumatoc    1.77  26  A    A     01 18 33.9
             comp=N,11nm,0.9s,comp=E,12nm,2.0s
JYAR  Yonezawaarcadi    1.78   6  A    A     01 18 33.7
             comp=N,19nm,1.1s,comp=E,24nm,1.5s
JNY   Yasuok            1.84 246  A    A     01 18 33.5
             comp=N,36nm,1.1s,comp=E,30nm,0.6s
JMM   Marumori          1.86  22  Pn   Pn    01 18 33.5 +0.9
JMM   Marumori          1.86  22  A    A     01 18 35.2
             comp=N,11nm,3.4s,comp=E,14nm,3.9s
JSKK  Shikinejimakit    1.89 198  A    A     01 18 34.9
             comp=N,16nm,2.0s,comp=E,38nm,0.8s
JSG   Sagara            2.03 224       Pn    01 18 36.1 +1.4
JSG   Sagara            2.03 224  P    Pn    01 18 37.7 +2.9
JSG   Sagara            2.03 224  A    A     01 18 36.5
             comp=N,21nm,1.4s,comp=E,20nm,1.7s
JYS   Shirataka         2.08   3  A    A     01 18 38.0
             comp=N,16nm,1.4s,comp=E,23nm,2.4s
JKKS  Kakegawashinom    2.09 229  A    A     01 18 37.4
             comp=N,16nm,3.1s,comp=E,15nm,2.6s
JTT   Ttatey            2.13 283  A    A     01 18 37.6
             comp=N,8.0nm,1.9s,comp=E,7.0nm,1.8s
JGF   Kuroka            2.14 256       Pn    01 18 38.1 +1.7
JGF   Kuroka            2.14 256  P    Pn    01 18 39.1 +2.7
JGF   Kuroka            2.14 256  A    A     01 18 37.8
             comp=N,16nm,1.2s,comp=E,20nm,1.7s
HMMJ  Hamamatsu 2       2.19 235  A    A     01 18 38.7
             comp=N,6.0nm,2.9s,comp=E,4.0nm,2.2s
JOU   Okura             2.30  15  A    A     01 18 41.3
             comp=N,11nm,0.9s,comp=E,14nm,2.8s
JSD   Sado              2.31 326       Pn    01 18 39.3 +0.6
JSD   Sado              2.31 326  P    Pn    01 18 39.5 +0.9
JAO   Obara             2.32 249  A    A     01 18 40.5
             comp=N,12nm,1.9s,comp=E,11nm,1.2s
JYA   Atsumi            2.46 356  A    A     01 18 43.2
             comp=N,10.0nm,1.1s,comp=E,12nm,1.2s
INU   Inuyama           2.48 252       Pn    01 18 42.2 +1.2
INU   Inuyama           2.48 252  P    Pn    01 18 43.4 +2.4
JOFO  Osakifurukawao    2.59  18  A    A     01 18 45.4
             comp=N,35nm,4.9s,comp=E,45nm,1.7s
JICN  Ichinomiyachia    2.63 252  A    A     01 18 44.8
             comp=N,31nm,2.2s,comp=E,17nm,1.1s
JAA   Atsumi            2.71 237  A    A     01 18 46.1
             comp=N,6.0nm,2.8s,comp=E,5.0nm,1.5s
JYK   Kaneyama          2.80   7  A    A     01 18 48.2
             comp=N,6.0nm,3.1s,comp=E,8.0nm,2.9s
JHJ   Hachijo jima 2    3.01 182  P    Pn    01 18 49.1 +0.8
             comp=E,780nm,0.3s,baz=329,slow=18,SNR=85
JHJ                               S    Sn    01 19 23.1 -0.1
             comp=E,2µm,0.5s,baz=55,slow=20,SNR=9.8
JHJ                               LR   LR    01 19 30.8
             comp=E,179nm,21.3s,baz=320,slow=29
JHJ2  Mitsune           3.02 181       Pn    01 18 49.3 +0.9
JHJ2  Mitsune           3.02 181  P    Pn    01 18 49.7 +1.3
JTM   Tenmabayashi      4.73  11       Pn    01 19 14.5 +2.7
JTM   Tenmabayashi      4.73  11  P    Pn    01 19 15.7 +3.9
JMN   Monobe            5.50 246       Pn    01 19 23.2 +0.8
JMN   Monobe            5.50 246  P    Pn    01 19 23.8 +1.3
ERM   Erimo             6.39  22  Pn   Pn    01 19 36.0 +1.6
ERM   Erimo             6.39  22  P    Pn    01 19 36.1 +1.6
JNU   Nakatsue          8.03 251  P    Pn    01 19 56.9 -0.2
             comp=E,36nm,0.9s,baz=67,slow=7.6,SNR=17
JNU                               LR   LR    01 23 15.0
             comp=E,539nm,20.6s,baz=54,slow=39
JNU   Nakatsue          8.03 251       Pn    01 19 58.6 +1.6
JNU   Nakatsue          8.03 251  P    Pn    01 19 59.6 +2.6
ASAJ  Asahikawa         8.23  14  P    Pn    01 20 02.2 +2.5
             comp=E,10nm,0.4s,baz=211,slow=13,SNR=8.2
ASAJ                              S    Sn    01 21 27.6 -3.6
             comp=E,17nm,0.8s,baz=2.6,slow=32,SNR=1.4
JKA   Kamikawa-asahi    8.23  14  Pn   Pn    01 20 01.0 +1.3
NMR   Nemuro--Hokkai    8.50  30 eP    Pn    01 20 02.1 -1.3
NMR                              eS    Sn    01 21 33.0 -4.8
GLVR  Golovnino         8.73  28  P    Pn    01 20 07.0 +0.5
GLVR                             eS    Sn    01 21 39.6 -3.8
RUSJ  Misakicho         8.95  26 eP    Pn    01 20 13.8 +4.3
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RUSJ                             eS    Sn    01 21 46.1 -2.6
YUK   Yuzh-Kuril'sk     9.11  28  P    Pn    01 20 11.3 -0.4
YUK                              eS    Sn    01 21 50.2 -2.6
YUK                               pmax pmax
             comp=Z,85nm,0.2s
YUK                               pmax pmax
             comp=N,27nm,0.1s
JCJ   Chichijima        9.22 167  P    Pn    01 20 01.8  -12
             comp=N,119nm,0.3s,baz=331,slow=19,SNR=16
JCJ                               S    Sn    01 21 38.4  -17
             comp=N,124nm,0.5s,baz=304,slow=23,SNR=2.7
JCJ   Chichijima        9.22 167  Pn   Pn    01 20 12.3 -1.1
TEY   Ternei            9.24 345⇑eP    Pn    01 20 18.1 +4.6
TEY                               pmax pmax
             comp=E,10.0nm,0.9s
TEY                               pmax pmax
             comp=Z,60nm,0.8s
TEY                               pmax pmax
             comp=N,60nm,0.8s
PSTR  Posyet            9.58 315⇑eP    Pn    01 20 17.5 -0.7
KSRS  Korea Array       9.70 281  P    Pn    01 20 23.1 +3.2
             comp=N,39nm,0.5s,baz=93,slow=14,SNR=83
KSAR  Wonju Array Be    9.73 281       Pn    01 20 22.2 +1.9
KSAR  Wonju Array Be    9.73 281  P    Pn    01 20 22.2 +1.9
KS19  Wonju Array Si    9.75 282       Pn    01 20 21.2 +0.6
USRK  Ussuriysk Ar.    10.07 325  P    Pn    01 20 26.7 +1.8
             comp=N,21nm,0.6s,baz=136,slow=12,SNR=23
YSS   Yuzhno-Sakhali   11.02  10  Pn   Pn    01 20 38.7 +1.0
YSS   Yuzhno-Sakhali   11.02  10 eP    Pn    01 20 38.9 +1.1
YSS                               pmax pmax
             comp=Z,40nm,0.9s
YSS                               MLR  MLR
             comp=Z,2µm,12.0s
MDJ   Mudanjiang       11.55 320       Pn    01 20 45.1  0.0
MDJ   Mudanjiang       11.55 320  P    Pn    01 20 50.7 +5.6
MDJ                               pmax pmax
             comp=Z,66nm,1.3s
BNX   BinXian          13.45 319 ⇑P    Pn    01 21 13.0 +2.0
BNX                               pmax pmax
             comp=Z,14nm,0.9s
CN2   Changchun        13.46 309  P    P     01 21 16.4 -2.5
CN2                               pmax pmax
             comp=Z,20nm,1.1s
JOW   Kunigami         13.57 230  LR   LR    01 26 19.6
             comp=Z,103nm,19.9s,baz=340,slow=37
DL2   Dalian           14.77 286  P    P     01 21 34.1 +0.7
DL2                               S    Sn    01 24 15.0 +4.1
DL2                               pmax pmax
             comp=Z,78nm,1.2s
DL2                               pmax pmax
             comp=Z,640nm,5.1s
DL2                               LR   LR
             comp=Z,670nm,8.3s
DL2                               LR   LR
             comp=Z,560nm,9.0s
DL2                               LR   LR
             comp=Z,750nm,13.3s
TYV   Tymovskoe        14.85   7 eP    P     01 21 34.5 +0.2
TYV                               pmax pmax
             comp=Z,48nm,0.9s
TYV                               pmax pmax
             comp=Z,1µm,3.8s
HEH   HeiHe            16.76 331 eP    Pn    01 21 52.3 -1.6
HEH                               pmax pmax
             comp=Z,11nm,0.6s
OKH   Okha             17.54   6deP    Pn    01 22 00.2 -3.3
OKH                              eS    Sn    01 25 05.5  -12
OKH                               MLR  MLR
             comp=Z,300nm,11.0s
OKH                               MLR  MLR
             comp=N,500nm,13.0s
NJ2   Nanjing          17.90 263 eP    P     01 22 09.5 +1.4
NJ2                               pmax pmax
             comp=N,18nm,0.6s
TIA   Tai'an           18.39 277  P    P     01 22 12.9 -0.6
TIA                               pmax pmax
             comp=N,24nm,1.0s
SKR   Severo-Kuril's   18.65  34 eP    Pn    01 22 36.1  +19
SKR                              eS    S     01 25 46.9 +1.3
SKR                               pmax pmax
             comp=Z,1µm,2.6s
SKR                               MLR  MLR
             comp=Z,1µm,13.0s
BJI   Beijing          19.07 289  P    P     01 22 20.4 -0.5
BJI                               pP   pP    01 22 32.1 -0.9
BJI                               PcP  PcP   01 26 43.4 -0.2
BJI                               pmax pmax
             comp=Z,13nm,0.7s
BJI                               pmax pmax
             comp=Z,110nm,5.4s
BJT   Baijiatuau       19.07 289       P     01 22 20.9 -0.1
BJT   Baijiatuau       19.07 289  P    P     01 22 20.9 -0.1
BJT                               pmax pmax
             comp=Z,19nm,0.6s
ZEA   Zeya             19.69 337 eP    P     01 22 25.7 -1.9
ZEA                               pmax pmax
             comp=E,10.0nm,0.7s
ZEA                               pmax pmax
             comp=N,10.0nm,0.5s
ZEA                               pmax pmax
             comp=Z,30nm,0.7s
ZEA                               MLR  MLR
             comp=Z,200nm,18.0s
XLT   XiLinHaoTe       19.78 300 eP    P     01 22 28.2 -0.6
XLT                               pP   pP    01 22 41.9 +1.0
XLT                               PP   sP    01 22 50.3 +2.5
XLT                               pmax pmax
             comp=Z,17nm,1.1s
XLT                               pmax pmax
             comp=Z,160nm,4.4s
XLT                               LR   LR
             comp=Z,410nm,15.5s
XLT                               LR   LR
             comp=Z,440nm,14.4s
NACB  Ninganchiao      19.78 238  P    P     01 22 27.2 -1.6
NACB                              IAmb IAmb  01 22 45.6
             comp=Z,58nm,1.4s
HILR  Hailar Array B   19.87 319  P    P     01 22 28.2 -1.5
             comp=Z,6.1nm,0.4s,baz=119,slow=8.9,SNR=8.6
HILR                              LR   LR    01 30 17.0
             comp=Z,187nm,18.1s,baz=250,slow=37
HNS   HongShan         20.21 281 ⇓P    P     01 22 31.3 -2.1
HNS                               pmax pmax
             comp=Z,21nm,0.8s
SSLB  Suanglung        20.48 238  P    P     01 22 35.4 -1.0
SSLB                              IAmb IAmb  01 22 44.2
             comp=Z,104nm,1.5s
TPUB  Ta-pu            21.02 238  P    P     01 22 39.5 -2.7
TPUB                              IAmb IAmb  01 22 40.9
             comp=Z,133nm,1.4s
PEA0B Petropavlovsk-   21.07  31  P    P     01 22 42.6 +0.1
PEA0B                             IAmb IAmb  01 22 46.5
             comp=Z,101nm,1.5s
PEA0B Petropavlovsk-   21.07  31  P    P     01 22 42.6 +0.1
PEA0B                             pmax pmax
             comp=Z,101nm,1.5s
PETK  Petropavlovsk-   21.07  31  P    P     01 22 44.4 +1.9
             comp=Z,3.0nm,0.6s,baz=222,slow=15,SNR=2.1
PETK                              LR   LR    01 30 49.7
             comp=Z,81nm,18.8s,baz=237,slow=36
             comp=Z,3.0nm,0.6s
PETK  Petropavlovsk-   21.07  31  P    P     01 22 44.0 +1.4
PET   Petropavlovsk    21.42  32  P    P     01 22 46.4 +0.2
             comp=Z,52nm,1.2s
WHN   Wuhan            22.04 263  P    P     01 22 52.9 -0.2
LYN   LuoYang          22.41 274  P    P     01 22 53.6 -3.5
LYN                               pmax pmax
             comp=Z,15nm,0.9s
HHC   Hu-ho-hao-te     22.63 291 eP    P     01 23 00.4 +0.9
HHC                               pmax pmax
             comp=Z,14nm,0.8s
GUMO  Guam             22.89 168  LR   LR    01 31 47.9
             comp=Z,55nm,18.0s,baz=81,slow=36
MA2   Magadan          24.49  13  LR   LR    01 33 17.6
             comp=Z,91nm,19.9s,baz=142,slow=37
MA2   Magadan          24.49  13  P    P     01 23 18.0 +1.1
MA2                               IAmb IAmb  01 23 48.8
             comp=Z,35nm,0.9s
MA2   Magadan          24.49  13  P    P     01 23 18.0 +1.1
MA2                               pmax pmax
             comp=Z,35nm,0.9s
MA2   Magadan          24.49  13  P    P     01 23 16.8 -0.1
             comp=Z,55nm,0.9s
XAN   Xi'an            25.39 274  P    P     01 23 23.8 -1.6
XAN                               pmax pmax
             comp=Z,19nm,0.6s
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ENH   Enshi            26.05 266       P     01 23 29.7 -1.7
YAK   Yakutsk          26.70 349  LR   LR    01 34 14.6
             comp=Z,184nm,18.9s,baz=126,slow=36
YAK   Yakutsk          26.70 349  P    P     01 23 37.3 +0.5
YAK                               IAmb IAmb  01 23 40.3
             comp=Z,35nm,0.8s
YAK   Yakutsk          26.70 349 eP    P     01 23 36.8  0.0
YAK                              e*PP  sP    01 23 53.1 -3.8
YAK                              e           01 24 17.7
YAK                              e           01 26 58.8
YAK                              eS    S     01 28 07.7 -0.4
YAK                              eSS   SnSn  01 29 17.6 +1.8
YAK                              e           01 34 23.5
YAK                               pmax pmax
             comp=Z,31nm,1.1s
YAK                               pmax pmax
             comp=N,20nm,1.6s
YAK                               pmax pmax
             comp=E,7.0nm,1.1s
YAK                               pmax pmax
             comp=Z,106nm,2.0s
YAK                               pmax pmax
             comp=N,103nm,2.8s
YAK                               pmax pmax
             comp=E,96nm,2.5s
YAK                               smax smax
             comp=N,53nm,2.1s
YAK                               smax smax
             comp=E,31nm,2.2s
ULN   Ulaanbaatar      26.88 306  P    P     01 23 38.2 -0.6
ULN   Ulaanbaatar      26.88 306  P    P     01 23 38.4 -0.4
             comp=E,39nm,0.6s
ULN   Ulaanbaatar      26.88 306⇑eP    P     01 23 37.7 -1.1
ULN                               pmax pmax
             comp=Z,4.0nm,0.5s
SONM  Songino Array    27.30 306  P    P     01 23 41.5 -1.1
             comp=Z,5.6nm,0.8s,baz=107,slow=8.5,SNR=21
SONM                              PcP  PcP   01 27 00.9  0.0
             comp=Z,0.9nm,0.5s,baz=129,slow=1.8,SNR=5.8
SONM                              ScP  ScP   01 30 36.1 -0.6
             comp=Z,0.3nm,0.4s,baz=119,slow=5.1,SNR=2.5
SONM                              LR   LR    01 35 03.2
             comp=Z,115nm,20.9s,baz=122,slow=37
             comp=Z,5.6nm,0.8s
SONM  Songino Array    27.30 306  P    P     01 23 41.5 -1.1
SONM                                   PcP   01 27 01.8 +1.0
SONM                                   ScP   01 30 32.9 -3.7
SEY   Seymchan         27.91  12  LR   LR    01 35 29.0
             comp=Z,154nm,19.6s,baz=196,slow=37
SEY   Seymchan         27.91  12⇑eP    P     01 23 49.4 +1.7
SEY                               pmax pmax
             comp=Z,5.0nm,0.6s
LZH   Lanzhou          29.03 281 eP    P     01 24 01.0 +2.9
LZH                               pP   pP    01 24 12.7 +0.8
LZH                               pmax pmax
             comp=Z,19nm,1.1s
LZH                               LR   LR
             comp=Z,300nm,14.9s
LZH                               LR   LR
             comp=Z,350nm,14.9s
LZH                               LR   LR
             comp=Z,330nm,15.8s
SHEM  Shemya Is, Ala   29.16  45  LR   LR    01 35 29.8
             comp=Z,33nm,20.1s,baz=316,slow=36
LZDM  Lanzhou Array    29.17 281  P    P     01 23 57.9 -1.7
             comp=Z,1.5nm,0.4s,baz=75,slow=11,SNR=5.1
             comp=Z,1.5nm,0.4s
GYA   Guiyang          29.88 261 ⇑P    P     01 24 04.7 -0.9
GYA                               pmax pmax
             comp=Z,43nm,1.0s
GTA   Gaotai           31.68 288 eP    P     01 24 21.3 -0.1
GTA                               PcP  PcP   01 27 13.4 +1.2
GTA                               pmax pmax
             comp=Z,10.0nm,0.5s
KMI   Kunming          33.63 261  P    P     01 24 37.7 -1.0
KMI                               pmax pmax
             comp=Z,28nm,1.0s
PZH   PanZhiHua        33.80 264  P    P     01 24 41.8 +1.7
TIXI  Tiksi            36.04 354  LR   LR    01 40 51.6
             comp=Z,122nm,18.1s,baz=214,slow=38
TIXI  Tiksi            36.04 354  P    P     01 24 58.6 -0.1
TIXI                              IAmb IAmb  01 25 00.3
             comp=Z,6.9nm,0.8s
TIXI  Tiksi            36.04 354⇓eP    P     01 24 58.5 -0.2
TIXI                              pmax pmax
             comp=Z,9.0nm,1.0s
GOMU  GeErMu           36.15 284  P    P     01 24 59.8 -0.7
GOMU                              PcP  PcP   01 27 26.5 +1.2
GOMU                              pmax pmax
             comp=Z,14nm,0.6s
KKM   Kota Kinabalu    37.00 222  P    P     01 25 07.0 -0.7
GTOI  Gorontalo        38.65 208  P    P     01 25 19.7 -1.7
             comp=Z,24nm,0.7s
SPIA  Saint Paul Isl   39.04  41  P    P     01 25 24.6 +0.4
             baz=259
NIKH  Nikolski High    39.28  48  P    P     01 25 26.3  0.0
             baz=266
FAKI  Fak Fak          39.51 192       P     01 25 28.2 -0.3
FAKI                              IAmb IAmb  01 25 30.5
             comp=Z,24nm,0.9s
FAKI  Fak Fak          39.51 192  P    P     01 25 28.7 +0.2
             comp=Z,31nm,0.7s
DGZ   Jazzator, Alta   39.94 307d iP   P     01 25 33.1 +1.1
DGZ                               pmax pmax
             comp=Z,33nm,0.7s
CMAR  Chiang Mai Arr   40.09 255  P    P     01 25 32.1 -1.3
             comp=Z,1.8nm,0.3s,baz=44,slow=8.1,SNR=6.7
CMAR                              PcP  PcP   01 27 38.3 +1.0
             comp=Z,0.9nm,0.3s,baz=348,slow=2.2,SNR=5.7
CMAR                              LR   LR    01 42 58.2
             comp=Z,52nm,18.6s,baz=60,slow=37
             comp=Z,1.8nm,0.3s
CMAR  Chiang Mai Arr   40.09 255  P    P     01 25 32.2 -1.2
CMAR                                   PcP   01 27 37.1 -0.2
CMAR  Chiang Mai Arr   40.09 255ceP    P     01 25 35.0 +1.5
CMAR                              pmax pmax
             comp=Z,2.0nm,0.3s
GAMB  Gambell          40.11  31  P    P     01 25 32.8 -0.1
             baz=250
SANI  Sanana           40.15 202  P    P     01 25 32.2 -1.7
             comp=Z,19nm,0.7s
WMQ   Urumqi           40.17 298 eP    P     01 25 37.6 +3.7
WMQ                               pmax pmax
             comp=Z,25nm,0.9s
KRAI  Karang Ratu      40.70 198  P    P     01 25 39.8 +1.4
UNV   Unalaska Valle   40.74  47  P    P     01 25 38.3  0.0
             baz=267
LSA   Lhasa            41.08 275  P    P     01 25 42.7 +0.6
ZAA0  Zalesovo Array   41.63 313       P     01 25 45.0 -0.6
ZAA0                              IAmb IAmb  01 25 46.7
             comp=Z,27nm,0.8s
ZALV  Zalesovo Beam    41.63 313  P    P     01 25 45.1 -0.5
             comp=Z,29nm,0.6s,baz=91,slow=6.5,SNR=121
ZALV                              PcP  PcP   01 27 41.5 -0.1
             comp=Z,7.3nm,0.4s,baz=110,slow=3.4,SNR=16
ZALV                              LR   LR    01 43 43.6
             comp=Z,46nm,18.4s,baz=82,slow=37
             comp=Z,29nm,0.6s
M11K  Mekoryuk         41.71  37  P    P     01 25 46.1 -0.1
             baz=260
ZSN   Zaisan           41.75 303 eP    P     01 25 47.1 +0.3
             comp=Z,10nm,0.8s
ZSN   Zaisan           41.75 303 eP    P     01 25 47.1 +0.3
ZSN                               pmax pmax
             comp=Z,10.0nm,0.8s
SHL   Shillong         42.18 269       P     01 25 49.2 -1.6
SHL                               PcP  PcP   01 27 43.9 -0.4
SHL   Shillong         42.18 269  P    P     01 25 49.2 -1.6
SHL                                          01 27 43.9
SHL                               pmax pmax
             comp=Z,30nm,0.7s
TNA   Tin City         42.23  29  P    P     01 25 50.5 +0.1
             baz=252
FALS  False Pass       42.59  46  P    P     01 25 53.6 +0.2
             baz=268
K13K  Kusilvak Mount   42.73  35  P    P     01 25 54.6 +0.1
             baz=259
F14K  Arctic Creek     42.84  30  P    P     01 25 55.3  0.0
             baz=254
M13K  Dall Lake        43.11  37  P    P     01 25 56.6 -0.9
             baz=262
J14K  Nanvaranak Lak   43.39  34  P    P     01 25 58.7 -1.1
             baz=260
S12K  Black Hills      43.40  44  P    P     01 25 58.6 -1.4
             baz=268
L14K  Kuka Creek       43.56  36  P    P     01 25 59.9 -1.3
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      baz=262
MK31  Makanchi Array    43.57 303ceP    P      01 26 01.2 -0.4
MKAR  Makanchi Array    43.57 303  P    P      01 26 01.4 -0.2
      comp=Z,11nm,0.6s,baz=85,slow=9.2,SNR=75
MKAR                               LR   LR     01 44 57.2
      comp=Z,130nm,18.2s,baz=34,slow=37
      comp=Z,11nm,0.6s
MKAR  Makanchi Array    43.57 303       P      01 26 01.0 -0.6
F15K  North Star Dit    43.57  30  P    P      01 26 00.6 -0.6
      baz=255
NRIK  Noril'sk          43.58 336  P    P      01 26 01.1 -0.1
      comp=Z,14nm,0.9s,baz=107,slow=9.1,SNR=21
NRIK                               LR   LR     01 45 39.9
      comp=Z,154nm,18.2s,baz=130,slow=38
      comp=Z,14nm,0.9s
NRIK  Noril'sk          43.58 336  P    P      01 26 00.5 -0.8
NRIK                               IAmb IAmb   01 26 03.1
      comp=Z,21nm,1.1s
G15K  Niukluk           43.65  31  P    P      01 26 00.9 -1.0
      baz=257
BRDH  Bariadhala        43.72 266  LR   LR     01 45 42.6
      comp=Z,89nm,19.3s,baz=145,slow=38
MAKZ  Makanchi          43.78 303       P      01 26 02.9 -0.4
MAKZ                               IAmb IAmb   01 26 04.8
      comp=Z,14nm,0.7s
MAKZ  Makanchi          43.78 303  P    P      01 26 02.9 -0.4
MAKZ                               pmax pmax
      comp=Z,14nm,0.7s
M14K  Bethel            43.84  37  P    P      01 26 03.3 -0.1
      baz=263
N14K  Kuskokwak Cree    43.88  38  P    P      01 26 04.0 +0.3
      baz=264
O14K  Tigyukauivet M    44.03  39  P    P      01 26 05.1 +0.1
      baz=265
C16K  Lisburne Hills    44.04  26  P    P      01 26 05.1 +0.2
      baz=252
L15K  Ungalak Mounta    44.18  36  P    P      01 26 05.6 -0.5
      baz=263
K15K  Wolf Creek Mou    44.24  35  P    P      01 26 06.5 -0.2
      baz=262
SDPT  Sand Point        44.29  45  P    P      01 26 06.9 -0.2
      baz=270
H16K  Elim              44.32  31  P    P      01 26 07.9 +0.6
      baz=259
G16K  Koyuk River       44.43  30  P    P      01 26 07.6 -0.5
      baz=258
M15K  Kasigluk River    44.45  37  P    P      01 26 08.1 -0.2
      baz=264
D17K  Noatak River      44.69  27  P    P      01 26 10.6 +0.4
      baz=255
N15K  Kwethluk River    44.70  38  P    P      01 26 09.7 -0.6
      baz=265
O15K  Ungalikthiuk R    44.76  39  P    P      01 26 09.9 -0.9
      baz=267
CHNA  Chernabura Isl    44.81  46  P    P      01 26 09.8 -1.5
      baz=271
J16K  Anvik River       44.81  34  P    P      01 26 09.9 -1.3
      baz=262
S14K  Fog Glacier       44.82  44  P    P      01 26 10.3 -1.2
      baz=270
RDOG  Red Dog Mine      44.85  27  P    P      01 26 10.3 -1.1
      baz=255
I17K  Unalakleet        44.86  33  P    P      01 26 11.1 -0.4
      baz=261
C17K  DeLong Mountai    44.87  26  P    P      01 26 10.8 -0.8
      baz=254
E17K  Hotham Inlet      45.01  28  P    P      01 26 11.8 -0.9
      baz=257
F17K  Baldwin Pennin    45.09  29  P    P      01 26 12.4 -1.0
      baz=258
L16K  Owhat River       45.13  36  P    P      01 26 13.1 -0.7
      baz=264
G17K  Kiwalik Mounta    45.15  30  P    P      01 26 13.1 -0.8
      baz=260
EVN   Everest           45.26 275       P      01 26 15.3 -0.7
M16K  Timber Creek      45.32  37  P    P      01 26 14.1 -1.2
      baz=266
H17K  Granite Mounta    45.36  31  P    P      01 26 14.9 -0.6
      baz=261
N16K  Nishlik Lake      45.38  38  P    P      01 26 15.3 -0.4
      baz=266
J17K  VABM Dome         45.50  34  P    P      01 26 16.8 +0.1
      baz=263
KURK  Kurchatov         45.54 309       P      01 26 16.4 -0.7
KURK                                    PcP    01 27 53.5 -1.5
KURK  Kurchatov         45.54 309c iP   P      01 26 16.6 -0.5
KURK                               pmax pmax
      comp=Z,39nm,0.6s
E18K  Tukpahlearik C    45.55  28       P      01 26 18.7 +1.7
E18K                               IAmb IAmb   01 26 22.4
      comp=Z,11nm,0.9s
E18K  Tukpahlearik C    45.55  28  P    P      01 26 17.1 +0.1
      baz=258
B18K  Kokolik River     45.59  25  P    P      01 26 17.0 -0.2
      baz=255
KURBB Kurchatov Arra    45.60 309  P    P      01 26 17.2 -0.4
      comp=Z,38nm,0.6s,baz=84,slow=7.8,SNR=182
KURBB                              PcP  PcP    01 27 54.4 -0.8
      comp=Z,2.8nm,0.8s,baz=83,slow=3.0,SNR=3.5
KURBB                              LR   LR     01 46 14.3
      comp=Z,129nm,19.0s,baz=154,slow=37
      comp=Z,38nm,0.6s
C18K  Utukok River      45.62  26       P      01 26 19.5 +1.9
C18K                               IAmb IAmb   01 26 21.8
      comp=Z,20nm,1.0s
C18K                               PcP  PcP    01 27 57.1 +2.0
C18K  Utukok River      45.62  26  P    P      01 26 17.3 -0.3
      baz=256
O16K  Kokwok River B    45.67  39  P    P      01 26 17.8 -0.3
      baz=268
L17K  Donlin            45.73  35  P    P      01 26 19.1 +0.6
      baz=265
F18K  Selawik           45.75  29  P    P      01 26 18.3 -0.3
      baz=260
K17K  Iditarod          45.78  35  P    P      01 26 18.5 -0.4
      baz=264
PMG   Port Moresby      45.81 170  LR   LR     01 45 23.1
      comp=Z,44nm,18.2s,baz=4.0,slow=36
G18K  Tagagawik         46.03  30  P    P      01 26 22.9 +2.1
G18K  Tagagawik         46.03  30  P    P      01 26 20.3 -0.5
      baz=261
H18K  Honhosa River     46.04  31  P    P      01 26 20.5 -0.4
      baz=262
M17K  Holitna River     46.08  36  P    P      01 26 21.3 +0.1
      baz=267
N17K  Nushagak Hills    46.16  38  P    P      01 26 21.9 -0.1
      baz=268
O17K  Koliganek Bris    46.18  39  P    P      01 26 22.0  0.0
      baz=268
SHLS  Shalkode          46.18 298 eP    P      01 26 19.7 -2.8
      comp=Z,7.5nm,0.8s
SHLS  Shalkode          46.18 298 eP    P      01 26 19.7 -2.8
SHLS                               pmax pmax
      comp=Z,8.0nm,0.8s
C19K  Lookout Ridge     46.29  26  P    P      01 26 22.3 -0.5
      baz=257
Q16K  King Salmon       46.39  40  P    P      01 26 23.1 -0.6
      baz=270
L18K  Granite Mounta    46.49  35  P    P      01 26 23.6 -0.9
      baz=266
UZB   Uzynbulak         46.50 298 eP    P      01 26 24.7 -0.3
      comp=Z,6.8nm,0.6s
UZB   Uzynbulak         46.50 298 eP    P      01 26 24.7 -0.3
UZB                                pmax pmax
      comp=Z,7.0nm,0.6s
F19K  Shaleruckik Mo    46.53  29  P    P      01 26 24.1 -0.6
      baz=261
TDK   Taldyqorghan      46.54 301 eP    P      01 26 25.3 +0.1
      comp=Z,6.9nm,0.4s
TDK   Taldyqorghan      46.54 301 eP    P      01 26 25.3 +0.1
TDK                                pmax pmax
      comp=Z,7.0nm,0.4s
R17L  Mt. Peulik Vol    46.55  42  P    P      01 26 24.4 -0.7
      baz=271
J18K  Innoko River      46.57  34  P    P      01 26 24.4 -0.7
      baz=265
GCSA  Galena City Sc    46.62  32  P    P      01 26 24.9 -0.5
      baz=264
D19K  Kuna River        46.69  27  P    P      01 26 28.1 +2.1
D19K                               IAmb IAmb   01 26 31.5
      comp=Z,24nm,1.2s
D19K                               PcP  PcP    01 28 00.8 +2.0
D19K  Kuna River        46.69  27  P    P      01 26 25.9 -0.1
      baz=259
G19K  Purcell Mounta    46.70  30  P    P      01 26 25.8 -0.3
      baz=262
Q17K  Contact Creek     46.80  41  P    P      01 26 26.7 -0.3
      baz=271
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N18K  Kilae Creek       46.80  37  P    P      01 26 26.3 -0.7
      baz=269
WUS   Wushi             46.82 296       P      01 26 28.7 +1.2
E19K  Redstone River    46.83  28       P      01 26 29.4 +2.3
E19K                               IAmb IAmb   01 26 32.8
      comp=Z,10nm,0.7s
E19K  Redstone River    46.83  28  P    P      01 26 27.2 +0.1
      baz=261,SNR=11
M18K  Stony River       46.86  36  P    P      01 26 27.1 -0.3
      baz=268
H19K  Roundabout Mou    46.88  31       P      01 26 29.6 +2.1
H19K                               IAmb IAmb   01 27 08.8
      comp=Z,18nm,1.3s
H19K                               PcP  PcP    01 28 01.7 +2.3
H19K  Roundabout Mou    46.88  31  P    P      01 26 27.8 +0.3
      baz=264
SATY  Saty              46.96 298 eP    P      01 26 28.4 -0.2
SATY  Saty              46.96 298 eP    P      01 26 28.4 -0.2
CHIR  Chirikof Islan    47.03  44  P    P      01 26 28.7 -0.1
      baz=274
J19K  Poorman           47.09  33  P    P      01 26 31.5 +2.3
J19K                               IAmb IAmb   01 26 47.9
      comp=Z,8.7nm,0.9s
J19K  Poorman           47.09  33  P    P      01 26 29.6 +0.4
      baz=266
P18K  Big Mountain,     47.13  39  P    P      01 26 29.7 +0.2
      baz=270
O18K  Koktuh Hills      47.13  39  P    P      01 26 29.7 +0.1
      baz=270
Q18K  Katmai Hardscr    47.25  40  P    P      01 26 30.0 -0.6
      baz=271
D20K  Etivluk River     47.27  26       P      01 26 32.5 +2.0
D20K                               IAmb IAmb   01 26 36.0
      comp=Z,15nm,1.0s
D20K                               PcP  PcP    01 28 02.7 +1.9
D20K  Etivluk River     47.27  26  P    P      01 26 29.6 -0.9
      baz=260
B20K  Meade River       47.31  25  P    P      01 26 30.4 -0.3
      baz=259
L19K  White Mountain    47.35  35  P    P      01 26 30.2 -1.0
      baz=268
E20K  Nigu River        47.35  27  P    P      01 26 30.4 -0.8
      baz=261
F20K  Avaraart Lake     47.36  29  P    P      01 26 30.5 -0.6
      baz=263
N19K  Bonanza Creek     47.50  37  P    P      01 26 32.1 -0.3
      baz=270
H20K  Anotleneega Mo    47.53  31  P    P      01 26 32.5 -0.1
      baz=265
O19K  Port Alsworth     47.58  38  P    P      01 26 32.3 -0.6
      baz=270
I20K  Naaghedeneel      47.65  32  P    P      01 26 32.0 -1.4
      baz=266
TARG  Taragay, Kyrgy    47.71 297  P    P      01 26 35.4 +0.6
TARG  Taragay, Kyrgy    47.71 297  P    P      01 26 35.4 +0.6
TARG                               pmax pmax
      comp=Z,29nm,0.8s
K20K  Telida            47.75  34  P    P      01 26 36.2 +1.9
K20K                               IAmb IAmb   01 26 54.0
      comp=Z,8.3nm,0.8s
K20K  Telida            47.75  34  P    P      01 26 33.0 -1.3
      baz=268
J20K  Nowinta River     47.75  33  P    P      01 26 36.2 +1.9
J20K                               IAmb IAmb   01 26 53.8
      comp=Z,22nm,1.5s
J20K                               PcP  PcP    01 28 04.9 +2.3
J20K  Nowinta River     47.75  33  P    P      01 26 33.5 -0.8
      baz=267
SII   Sitkinak Islan    47.79  43  P    P      01 26 33.6 -1.1
      baz=274
L20K  Farewell, AK      47.81  35  P    P      01 26 34.2 -0.6
      baz=269
EDFI  Ende, Flores      47.83 205  P    P      01 26 34.3 -1.2
MDOK  Medeo             47.90 299 eP    P      01 26 36.1 +0.1
MDOK  Medeo             47.90 299 eP    P      01 26 36.0 +0.1
Q19K  Cape Douglas,     47.95  40  P    P      01 26 35.3 -0.6
      baz=272
AAA   Alma-Ata          47.98 299 eP    P      01 26 36.5  0.0
      comp=Z,14nm,0.9s
AAA   Alma-Ata          47.98 299 eP    P      01 26 36.5  0.0
AAA                                pmax pmax
      comp=Z,14nm,0.9s
C21K  Knifeblade Rid    47.99  26  P    P      01 26 35.5 -0.5
      baz=262
TNSS  Tian-Shan         48.00 299 eP    P      01 26 36.7 -0.3
TNSS  Tian-Shan         48.00 299 eP    P      01 26 36.7 -0.3
KDJ   Kajisay           48.06 297  P    P      01 26 37.3 +0.1
KDJ                                IAmb IAmb   01 26 37.9
      comp=Z,12nm,0.8s
KDJ   Kajisay           48.06 297  P    P      01 26 37.3 +0.1
KDJ                                pmax pmax
      comp=Z,13nm,0.8s
B21K  Ikpikpuk River    48.12  25       P      01 26 39.1 +2.1
B21K                               IAmb IAmb   01 26 44.3
      comp=Z,21nm,1.1s
B21K  Ikpikpuk River    48.12  25  P    P      01 26 36.7 -0.3
      baz=262
P19K  Oil Pt            48.14  39  P    P      01 26 36.6 -0.7
      baz=272
M20K  Styx River        48.15  36  P    P      01 26 36.5 -1.0
      baz=270
G21K  Allakaket         48.18  30  P    P      01 26 37.4 -0.1
      baz=266
E21K  Killik River      48.19  27  P    P      01 26 39.2 +1.6
E21K                               IAmb IAmb   01 26 41.6
      comp=Z,9.4nm,0.9s
E21K  Killik River      48.19  27  P    P      01 26 37.4 -0.2
      baz=263
A22K  Sinclair Lake     48.22  23  P    P      01 26 38.2 +0.4
      baz=260
OHAK  Old Harbor        48.23  42  P    P      01 26 37.3 -0.8
      baz=274
F21K  Alatna River      48.25  29  P    P      01 26 37.4 -0.7
      baz=265
H21K  Melozitna Rive    48.40  31  P    P      01 26 39.1 -0.2
      baz=267
O20K  Slope Mountain    48.43  38  P    P      01 26 39.7  0.0
      baz=272
CHUM  Lake Minchumin    48.55  33  P    P      01 26 39.8 -0.5
      baz=269
KDAK  Kodiak Island     48.57  41  LR   LR     01 48 24.8
      comp=Z,40nm,20.9s,baz=164,slow=37
KDAK  Kodiak Island     48.57  41  P    P      01 26 40.6 -0.1
      baz=274
PPLA  Purkeypile        48.59  34  P    P      01 26 41.0  0.0
      baz=270
SPCR  Spurr Chakacha    48.60  37  P    P      01 26 40.9 -0.1
      baz=271
Q20K  Shuyak Island     48.62  40  P    P      01 26 40.8 -0.2
      baz=274
B22K  Teshekpuk Lake    48.63  24  P    P      01 26 42.6 +1.8
B22K  Teshekpuk Lake    48.63  24  P    P      01 26 40.6 -0.3
      baz=262
D22K  Ayikyak River     48.71  26       P      01 26 43.7 +2.1
D22K                               IAmb IAmb   01 26 45.7
      comp=Z,11nm,0.9s
D22K  Ayikyak River     48.71  26  P    P      01 26 41.9 +0.3
      baz=264
F22K  John River        48.77  28  P    P      01 26 42.0 -0.1
      baz=266
DBNI  Kabupaten Domp    48.83 209  P    P      01 26 42.3 -0.8
SKT   Skwentna          48.91  36  P    P      01 26 43.5 +0.3
      baz=271
HOM   Homer             48.94  39  P    P      01 26 43.6 +0.1
      baz=273
E22K  Anaktuvuk Pass    48.96  27       P      01 26 45.8 +2.2
E22K                               IAmb IAmb   01 26 47.6
      comp=Z,9.7nm,0.9s
E22K  Anaktuvuk Pass    48.96  27  P    P      01 26 43.3 -0.3
      baz=266,SNR=8.9
TKM2  Tokmak 2          48.99 299  P    P      01 26 45.2 +0.8
      SNR=46
G22K  Bettles           49.00  29  P    P      01 26 44.2 +0.4
      baz=267
H22K  Ishtalitna Cre    49.00  30  P    P      01 26 43.9  0.0
      baz=268
KDU   Kakadu            49.06 190  P    P      01 26 44.8  0.0
      comp=Z,17nm,0.9s
CAPN  Captain Cook N    49.13  37  P    P      01 26 44.7 -0.2
      baz=273
BPAW  Bear Paw Mtn.     49.13  33  P    P      01 26 47.5 +2.5
BPAW                               IAmb IAmb   01 26 58.5
      comp=Z,8.5nm,1.2s
BPAW                               PcP  PcP    01 28 09.5 +1.9
BPAW  Bear Paw Mtn.     49.13  33  P    P      01 26 45.5 +0.5
      baz=270
SUA   Susitna One       49.30  36  P    P      01 26 45.8 -0.5
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      baz=272
PLAI  Plampang          49.34 209  P    P      01 26 44.0 -3.0
      comp=Z,14nm,0.8s
BRSE  Bradley Lake S    49.40  39  P    P      01 26 46.2 -0.7
      baz=274
MTN   Manton Dam        49.42 191  P    P      01 26 47.4 -0.1
      comp=Z,45nm,0.7s
MTN   Manton Dam        49.42 191       P      01 26 47.4 -0.1
D23K  Nanushuk River    49.44  26  P    P      01 26 47.1  0.0
      baz=266
TRF   Thorofare Moun    49.45  34  P    P      01 26 47.3 -0.2
      baz=271
CUT   Chulitna          49.49  35  P    P      01 26 48.0 +0.4
      baz=272
KBK   Karagaybulak      49.52 299  P    P      01 26 49.0 +0.6
      SNR=40
COLD  Coldfoot          49.52  29  P    P      01 26 47.9 +0.1
      baz=268
C23K  Itkillik River    49.53  25       P      01 26 49.5 +1.7
C23K                               IAmb IAmb   01 26 52.5
      comp=Z,12nm,1.0s
C23K                               PcP  PcP    01 28 10.2 +1.4
C23K  Itkillik River    49.53  25  P    P      01 26 47.4 -0.4
      baz=265
SGDS  Sogindy           49.54 300 eP    P      01 26 48.4  0.0
BTLS  Baital            49.55 302 eP    P      01 26 48.1 -0.2
      comp=Z,19nm,1.0s
BTLS  Baital            49.55 302 eP    P      01 26 48.1 -0.2
BTLS                               pmax pmax
      comp=Z,19nm,1.0s
CHMS  Chumysh           49.57 299  P    P      01 26 48.9 +0.3
      SNR=9.9
G23K  Bananza Creek     49.58  29  P    P      01 26 48.2 -0.1
      baz=269
M22K  Willow            49.59  36  P    P      01 26 47.7 -0.7
      baz=273
TWSI  Taliwang, Sumb    49.62 211  P    P      01 26 48.3 -0.8
KLNI  Mataram           49.66 212  P    P      01 26 48.3 -1.2
      comp=Z,34nm,1.0s
KSH   Kashi             49.66 294  P    P      01 26 53.2 +3.7
KSH                                sP   sP     01 27 15.8 +5.6
KSH                                pmax pmax
      comp=Z,14nm,0.8s
USP   Ospenovka         49.68 299  P    P      01 26 49.5  0.0
      SNR=22
H23K  Yukon River       49.76  31  P    P      01 26 49.9 +0.3
      baz=270
E23K  Chandalar         49.78  28  P    P      01 26 51.3 +1.4
E23K                               IAmb IAmb   01 26 55.9
      comp=Z,12nm,0.9s
E23K                               PcP  PcP    01 28 12.5 +2.5
E23K  Chandalar         49.78  28  P    P      01 26 49.6 -0.2
      baz=268,SNR=8.6
RC01  Rabbit Creek A    49.80  37  P    P      01 26 50.5 +0.4
      baz=274
TOLK  Toolik Lake Re    49.82  27  P    P      01 26 50.3 +0.2
      baz=267
I23K  Minto, Yukon-K    49.83  31  P    P      01 26 50.1 -0.1
      baz=270
AAK   Ala-Archa         49.85 299  P    P      01 26 51.2 +0.3
      SNR=19
AAK   Ala-Archa         49.85 299  LR   LR     01 49 06.4
      comp=Z,137nm,19.4s,baz=76,slow=37
AAK   Ala-Archa         49.85 299       P      01 26 50.9 +0.1
AAK   Ala-Archa         49.85 299 i P   P      01 26 51.1 +0.3
      SNR=27
AAK   Ala-Archa         49.85 299ceP    P      01 26 51.0 +0.1
AAK                                pmax pmax
      comp=Z,16nm,0.8s
O22K  Cooper Landing    49.85  38  P    P      01 26 50.6 +0.2
      baz=274
COEN  Coen              49.92 176  P    P      01 26 52.5 +1.2
      comp=Z,16nm,0.8s
COEN  Coen              49.92 176       P      01 26 52.8 +1.5
COEN                               IAmb IAmb   01 26 56.4
      comp=Z,11nm,0.8s
UCH   Uchtor            49.95 298  P    P      01 26 52.5 +0.5
      SNR=15
NEA2  Nenana            49.97  32  IAmb IAmb   01 26 54.7
      comp=Z,15nm,1.3s
NEA2  Nenana            49.97  32  P    P      01 26 51.8 +0.5
      baz=271
MCK   McKinley          50.05  33  P    P      01 26 52.2 +0.3
      baz=272
PMR   Palmer            50.06  36  P    P      01 26 52.3 +0.3
      baz=274
D24K  Happy Valley      50.11  26  P    P      01 26 52.6 +0.3
      baz=268
C24K  Franklin Bluff    50.18  25  IAmb IAmb   01 27 10.4
      comp=Z,13nm,0.8s
C24K  Franklin Bluff    50.18  25  P    P      01 26 52.8  0.0
      baz=267
E24K  Your Creek        50.20  28  IAmb IAmb   01 27 25.6
      comp=Z,12nm,1.4s
E24K  Your Creek        50.20  28  P    P      01 26 52.4 -0.7
      baz=269
WAT1  Susitna Watana    50.26  34  P    P      01 26 53.7 +0.1
      baz=273
BVAR  Borovoye Array    50.28 313  P    P      01 26 53.6 -0.2
      comp=Z,13nm,0.5s,baz=90,slow=9.1,SNR=40
BVAR                               PcP  PcP    01 28 11.9  0.0
      comp=Z,2.8nm,0.5s,baz=74,slow=3.8,SNR=2.3
BVAR                               LR   LR     01 49 31.7
      comp=Z,84nm,18.1s,baz=67,slow=38
      comp=Z,13nm,0.5s
PSI   Prapat            50.29 238  LR   LR     01 49 42.7
      comp=Z,77nm,18.3s,baz=25,slow=38
BORK  Borovoye          50.32 313       P      01 26 54.1  0.0
BORK  Borovoye          50.32 313deP    P      01 26 54.2 +0.1
BORK                               pmax pmax
      comp=Z,13nm,0.8s
EKS2  Erkin-Say         50.35 299  P    P      01 26 54.8 +0.2
      SNR=14
WRH   Wood River Hil    50.39  32  P    P      01 26 56.5 +2.0
WRH                                IAmb IAmb   01 27 11.5
      comp=Z,7.0nm,1.0s
WRH                                PcP  PcP    01 28 13.1 +1.0
KNK   Knik Glacier      50.40  36  P    P      01 26 53.7 -0.9
      baz=274
F24K  Squaw Lake        50.42  28  P    P      01 26 53.9 -0.8
      baz=270
SML   Sawmill           50.43  36  P    P      01 26 53.6 -1.3
      baz=274
H24K  Noodor Dome       50.44  31  P    P      01 26 53.7 -1.1
      baz=271
COLA  College           50.48  32  P    P      01 26 54.0 -1.0
      baz=272
PWL   Port Wells        50.50  37  P    P      01 26 54.5 -0.9
      baz=275
G24K  Hadweenzic Riv    50.59  29  P    P      01 26 55.2 -0.7
      baz=271
POKR  Poker Plat Res    50.65  31  P    P      01 26 55.4 -1.0
      baz=272
WAT6  Susitna Watana    50.65  35  P    P      01 26 56.1 -0.5
      baz=274
M23K  Glacier View      50.72  36  P    P      01 26 57.0  0.0
      baz=275
DHY   Denali Highway    50.78  34  P    P      01 26 56.8 -0.8
      baz=274
HDA   Harding Lake      50.89  32  P    P      01 26 59.6 +1.4
HDA                                IAmb IAmb   01 27 04.3
      comp=Z,5.0nm,0.7s
HDA   Harding Lake      50.89  32  P    P      01 26 57.5 -0.7
      baz=273
IL31                    50.90  32       P      01 26 59.8 +1.6
IL31                               IAmb IAmb   01 27 15.4
      comp=Z,8.2nm,0.9s
ILAR  Eielson Array     50.90  32  P    P      01 26 59.2 +1.0
      comp=Z,2.4nm,0.6s,baz=269,slow=5.6,SNR=47
      comp=Z,2.4nm,0.6s
ILAR  Eielson Array     50.90  32  P    P      01 26 59.5 +1.2
ILAR  Eielson Array     50.90  32  P    P      01 26 59.5 +1.2
SCM   Sheep Creek Mo    50.90  36  P    P      01 26 57.9 -0.5
      baz=275
D25K  Kavik River       50.99  26  P    P      01 27 00.7 +1.8
D25K                               IAmb IAmb   01 27 04.3
      comp=Z,6.2nm,0.8s
D25K  Kavik River       50.99  26  P    P      01 26 58.8 -0.1
      baz=270
P23K  Montague Islan    51.05  38  P    P      01 26 59.5 +0.1
      baz=276
GLI   Glacier Island    51.11  37  P    P      01 26 59.2 -0.6
      baz=276
G25K  Bearman Lake      51.13  29  P    P      01 27 00.1 +0.1
      baz=272
H25L  Birch Creek       51.27  30  P    P      01 27 00.3 -0.7
      baz=273
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F25K   Christian Rive    51.28  28  P       P        01 27 00.9 -0.2
       baz=272
E25K   Arctic Village    51.30  28  P       P        01 27 01.6 +0.4
       baz=272
M24K   Tolsona, Glenn    51.42  35  P       P        01 27 02.0 -0.3
       baz=276
PRP    Porcupine Dome    51.43  31          P        01 27 03.5 +1.1
PRP                                 IAmb    IAmb     01 27 08.8
       comp=Z,9.7nm,1.2s
PRP    Porcupine Dome    51.43  31  P       P        01 27 02.2 -0.2
       baz=274
K24K   Donnelly Dome     51.44  33  P       P        01 27 02.1 -0.3
       baz=275
C26K   Camden Bay        51.50  25  P       P        01 27 02.9 +0.2
       baz=271
J25K   Salcha River,     51.56  32  P       P        01 27 03.0 -0.3
       baz=274
KLU    Klutina           51.60  36  P       P        01 27 04.2 +0.5
       baz=276
Q23K   Middleton Isla    51.65  39  P       P        01 27 03.9  0.0
       baz=278
PAX    Paxson            51.66  34  P       P        01 27 04.0 -0.1
       baz=276
EYAK   Cordova Ski Ar    51.80  37  P       P        01 27 05.3 +0.3
       baz=277
F26K   Sheenjek River    51.85  28  IAmb    IAmb     01 27 11.4
       comp=Z,7.0nm,0.8s
F26K   Sheenjek River    51.85  28  P       P        01 27 05.2 -0.2
       baz=273,SNR=8.9
HARP   HAARP             51.86  35  P       P        01 27 05.3 -0.2
       baz=276
RIDG   Independent Ri    51.86  33  P       P        01 27 05.0 -0.6
       baz=276
C27K   Jago River        51.92  26  P       P        01 27 06.3 +0.4
       baz=272
DZA    Taraz             52.01 300 eP       P        01 27 07.2 +0.2
       comp=Z,10nm,0.7s
DZA    Taraz             52.01 300 eP       P        01 27 07.1 +0.2
DZA                                 pmax    pmax
       comp=Z,10.0nm,0.7s
G26K   Porcupine Rive    52.04  29  IAmb    IAmb     01 27 25.2
       comp=Z,13nm,1.2s
G26K   Porcupine Rive    52.04  29  P       P        01 27 06.8 +0.1
       baz=274
KPJI   Karang Pucung     52.12 220  P       P        01 27 06.8 -1.1
       comp=Z,37nm,1.4s
SCRK   Sand Creek        52.22  33          P        01 27 09.4 +1.2
SCRK                                IAmb    IAmb     01 27 11.0
       comp=Z,20nm,1.5s
SCRK   Sand Creek        52.22  33  P       P        01 27 08.4 +0.1
       baz=276,SNR=5.3
N25K   Chitina, Valde    52.22  36  P       P        01 27 08.6 +0.4
       baz=278
BMRM   Bremner River     52.30  37  P       P        01 27 09.1 +0.3
       baz=278
J26L   Joseph Creek      52.34  32  P       P        01 27 09.3 +0.1
       baz=276
I26K   Coal Creek Min    52.43  31  P       P        01 27 09.8 +0.1
       baz=276
MDSI   Maura Dua         52.44 227  P       P        01 27 09.3 -1.1
       comp=Z,22nm,1.0s
KKAR   Karatay Array     52.52 300          P        01 27 10.9 +0.2
KKAR                                PcP     PcP      01 28 20.4 -0.1
KKAR   Karatay Array     52.52 300  P       P        01 27 10.9 +0.2
KKAR                                                 01 28 20.4
KAIM   Kayak Island      52.55  38  P       P        01 27 10.2 -0.4
       baz=279
KNRA   Kununurra         52.60 194  P       P        01 27 11.9 +0.6
       comp=Z,42nm,1.0s
KNRA   Kununurra         52.60 194          P        01 27 11.9 +0.6
L26K   Log Cabin Wild    52.62  34  P       P        01 27 11.1  0.0
       baz=278
E27K   Coleen River      52.78  27  IAmb    IAmb     01 27 16.6
       comp=Z,12nm,1.4s
E27K   Coleen River      52.78  27  P       P        01 27 12.2  0.0
       baz=275
M26K   Nabesna, AK       52.86  35  P       P        01 27 13.4 +0.4
       baz=278
G27K   Doyon Strip       52.89  29  P       P        01 27 13.4 +0.3
       baz=276
D27M   Malcolm River     52.91  26  P       P        01 27 14.4 +1.2
D27M                                PcP     PcP      01 28 23.3 +1.7
D27M   Malcolm River     52.91  26  P       P        01 27 14.0 +0.7
       baz=275
MCARA  McCarthy VSAT     53.00  36  P       P        01 27 14.5 +0.6
       baz=279
H27K   Steamboat Moun    53.00  30  IAmb    IAmb     01 27 21.6
       comp=Z,16nm,1.5s
H27K   Steamboat Moun    53.00  30  P       P        01 27 14.2 +0.3
       baz=277
BRLS   Borolday          53.02 300 eP       P        01 27 15.9 +1.5
       comp=Z,11nm,0.7s
BRLS   Borolday          53.02 300 eP       P        01 27 15.9 +1.5
BRLS                                pmax    pmax
       comp=Z,11nm,0.7s
I27K   Kandik River      53.04  31  P       P        01 27 15.0 +0.7
       baz=277
K27K   Chicken           53.05  33  IAmb    IAmb     01 27 39.2
       comp=Z,8.4nm,0.9s
K27K   Chicken           53.05  33  P       P        01 27 14.6 +0.4
       baz=278
CRQE   Cirque            53.07  37  P       P        01 27 14.5  0.0
       baz=279
BGLC   Bering Glacier    53.08  38  P       P        01 27 14.9 +0.4
       baz=280
IUG    Iuzhnay           53.15 299 eP       P        01 27 15.7 +0.1
       comp=Z,12nm,0.6s
IUG    Iuzhnay           53.15 299 eP       P        01 27 15.6 +0.1
IUG                                 pmax    pmax
       comp=Z,12nm,0.6s
L27K   Beaver Creek,     53.30  34  P       P        01 27 16.3 +0.2
       baz=279
M27K   Edge Creek, AK    53.38  35  P       P        01 27 17.0  0.0
       baz=279
CHM    Chimkent          53.40 300 eP       P        01 27 17.3 +0.1
       comp=Z,8.7nm,0.6s
CHM    Chimkent          53.40 300 eP       P        01 27 17.3 +0.1
CHM                                 pmax    pmax
       comp=Z,9.0nm,0.6s
F28M   Old Crow          53.49  28  IAmb    IAmb     01 27 21.4
       comp=Z,9.9nm,1.2s
F28M   Old Crow          53.49  28  P       P        01 27 17.2 -0.2
       baz=277
MANEM  Manem             53.49 293  IAmb    IAmb     01 27 20.0
       comp=Z,58nm,0.6s
E28M   Babbage River     53.49  27          P        01 27 19.6 +2.1
E28M                                IAmb    IAmb     01 27 23.0
       comp=Z,7.4nm,1.1s
E28M                                PcP     PcP      01 28 25.8 +2.1
E28M   Babbage River     53.49  27  P       P        01 27 17.6 +0.1
       baz=277
D28M   Stokes Point      53.70  26  P       P        01 27 18.9 +0.1
       baz=277
MESA   MESA              53.72  37  P       P        01 27 18.8 -0.7
       baz=281
NIL    Nilore            53.74 288          P        01 27 20.4 +0.5
NIL    Nilore            53.74 288  P       P        01 27 20.4 +0.5
NIL                                 pmax    pmax
       comp=Z,23nm,0.9s
I28M   Miner Creek       53.75  31  IAmb    IAmb     01 27 25.1
       comp=Z,8.0nm,0.7s
I28M   Miner Creek       53.75  31  P       P        01 27 19.5  0.0
       baz=279,SNR=7.3
BVCY   Beaver Creek      53.84  35  P       P        01 27 21.0 +0.8
       baz=280
CTG    Chitna Glacier    53.88  36  P       P        01 27 20.7 +0.1
       baz=281
E29M   Blow River        54.12  27  IAmb    IAmb     01 27 40.9
       comp=Z,19nm,1.4s
E29M   Blow River        54.12  27  P       P        01 27 22.1 +0.1
       baz=278,SNR=8.5
YUK3   Moose Creek       54.14  35  P       P        01 27 22.5 -0.1
       baz=281
DAWY   Dawson            54.21  32  P       P        01 27 22.8  0.0
       baz=280
H29M   Whitestone        54.27  30  P       P        01 27 23.0 -0.1
       baz=279
G29M   Pine Creek        54.30  29  P       P        01 27 23.9 +0.5
       baz=279
I29M   Ogilvie Camp,     54.44  31  IAmb    IAmb     01 27 30.4
       comp=Z,10nm,1.1s
O28M   Mount Upton       54.46  36  P       P        01 27 24.8 -0.2
       baz=282
YUK8   Steele Glacier    54.56  36  P       P        01 27 25.1 -0.6
       baz=282
PINM   Pinnacle          54.57  37  P       P        01 27 25.2 -0.4
       baz=282
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J29N   Klondike Camp     54.64  32  P       P        01 27 26.1 +0.1
       baz=281
EPYK   Eagle Plains      54.90  29  P       P        01 27 27.9 +0.2
       baz=281,SNR=10
M29M   Somme Creek       54.93  34  P       P        01 27 28.0 -0.2
       baz=282
L29M   L29M              54.94  33  P       P        01 27 29.1 +0.9
       baz=282
G30M   tAoh Zraii Nji    54.98  29  IAmb    IAmb     01 27 43.4
       comp=Z,13nm,1.0s
G30M   tAoh Zraii Nji    54.98  29  P       P        01 27 28.3 -0.1
       baz=281
SVE    Sverdlovsk        55.02 319 eP       P        01 27 29.4 +0.7
SVE                                 pmax    pmax
       comp=Z,19nm,1.1s
F30M   Barrier River     55.03  28  IAmb    IAmb     01 27 34.9
       comp=Z,14nm,0.8s
F30M   Barrier River     55.03  28  P       P        01 27 28.7 +0.1
       baz=281,SNR=9.0
K29M   Barlow Dome       55.06  32  IAmb    IAmb     01 27 48.5
       comp=Z,5.7nm,0.9s
K29M   Barlow Dome       55.06  32  P       P        01 27 29.5 +0.4
       baz=282
YUK4   Talbot Arm        55.08  36  P       P        01 27 30.3 +0.9
       baz=283
I30M   Mount Dempster    55.26  31  P       P        01 27 31.3 +0.8
       baz=282
YUK6   Outpost Mounta    55.30  36  P       P        01 27 31.0  0.0
       baz=283
O29M   Mount Kennedy     55.34  37  P       P        01 27 31.1 -0.1
       baz=283
J30M   Hart River        55.42  31  P       P        01 27 31.8 +0.1
       baz=282
M30M   Minto, Yukon      55.66  34  P       P        01 27 33.6 +0.3
       baz=283
INK    Inuvik            55.73  27  IAmb    IAmb     01 27 38.8
       comp=Z,8.1nm,0.9s
INK    Inuvik            55.73  27  P       P        01 27 34.0 +0.4
       baz=282,SNR=6.1
HYT    Haines Junctio    55.74  36  P       P        01 27 34.0  0.0
       baz=284
G31M   Satah River       55.75  28  P       P        01 27 35.5 +1.8
G31M                                IAmb    IAmb     01 27 39.2
       comp=Z,9.4nm,0.9s
G31M   Satah River       55.75  28  P       P        01 27 33.8  0.0
       baz=282
N30M   Aishikik Lake     55.78  35  P       P        01 27 34.2  0.0
       baz=284
F31M   Tsiigehtchic      55.84  28  P       P        01 27 35.1 +0.7
       baz=283
P29M   Windy Craggy      55.91  37  P       P        01 27 35.4 +0.2
       baz=284
H31M   Peel River        55.97  30  IAmb    IAmb     01 27 40.5
       comp=Z,13nm,1.0s
H31M   Peel River        55.97  30  P       P        01 27 35.8 +0.4
       baz=283
WRAB   Tennant Creek     56.01 186deP       P        01 27 36.4 +0.2
WRAB                                pmax    pmax
       comp=Z,6.0nm,0.5s
WRA    Warramunga Arr    56.02 186  P       P        01 27 36.4 +0.1
       comp=Z,9.8nm,0.4s,baz=1.3,slow=7.5,SNR=228
WRA                                 S       S        01 35 16.2 -4.6
       comp=Z,1.2nm,1.1s,baz=3.9,slow=12,SNR=3.2
       comp=Z,9.8nm,0.4s
WRA    Warramunga Arr    56.02 186  P       P        01 27 35.8 -0.4
WRA    Warramunga Arr    56.02 186ceP       P        01 27 36.4 +0.1
WRA                                 pmax    pmax
       comp=Z,12nm,0.4s
SHAA   Shahritus         56.12 295  IAmb    IAmb     01 27 40.9
       comp=Z,86nm,0.7s
P30M   Million Dollar    56.17  37  P       P        01 27 36.9 -0.1
       baz=285
ARTI   Arti              56.33 319  LR      LR       01 54 40.9
       comp=Z,75nm,18.2s,baz=74,slow=39
ARTI   Arti              56.33 319          P        01 27 38.1 -0.1
ARTI   Arti              56.33 319c iP      P        01 27 37.8 -0.3
ARTI                                *PP     pP       01 27 53.8 +1.0
ARTI                                                 01 28 32.9
ARTI                                S       S        01 35 25.4 +1.2
ARTI                                SS      SS       01 39 05.7 -5.5
ARTI                                pmax    pmax
       comp=Z,16nm,0.6s
N31M   Braeburn, Yuko    56.38  35  P       P        01 27 37.9 -0.6
       baz=285
QIS    Mount Isa         56.39 180  P       P        01 27 38.8 -0.1
       comp=Z,19nm,0.8s
KBL    Kabul             56.60 291          P        01 27 40.2 -0.5
KBL    Kabul             56.60 291  P       P        01 27 40.2 -0.5
KBL                                 pmax    pmax
       comp=Z,17nm,0.8s
PLBC   Pleasant Camp     56.64  37  P       P        01 27 40.6 +0.4
       baz=286
M31M   Drury Creek, Y    56.84  34  P       P        01 27 41.9 +0.2
       baz=285
A36M   Sachs Harbour     57.54  22  P       P        01 27 46.7 +0.3
       baz=287,SNR=24
ABKAR  Akbulak array     57.59 310          P        01 27 46.9 -0.2
P33M   Teslin, Yukon     58.13  36  P       P        01 27 50.6 -0.3
       baz=288
AKTO   Aktyubinsk        58.37 312  LR      LR       01 53 49.2
       comp=Z,82nm,18.3s,baz=212,slow=37
C36M   Paulatuk          58.75  24  IAmb    IAmb     01 27 59.9
       comp=Z,9.5nm,0.8s
C36M   Paulatuk          58.75  24  P       P        01 27 55.2 +0.3
       baz=290,SNR=5.2
AS31   Alice Springs     59.75 186  IAmb    IAmb     01 28 06.7
       comp=Z,4.5nm,0.5s
ASAR   Alice Springs     59.75 186  P       P        01 28 02.3  0.0
       comp=Z,6.9nm,0.7s,baz=9.7,slow=6.2,SNR=52
ASAR                                S       S        01 36 07.5 -1.9
       comp=Z,0.7nm,0.9s,baz=2.0,slow=11,SNR=5.6
ASAR                                PKP2bc  P'P'bc   01 57 40.4 +6.0
       comp=Z,0.8nm,0.9s,baz=172,slow=2.5,SNR=6.5
       comp=Z,6.9nm,0.7s
ASAR   Alice Springs     59.75 186          P        01 28 02.7 +0.3
ASAR   Alice Springs     59.75 186  P       P        01 28 02.7 +0.3
DLBC   Dease Lake        60.08  37  P       P        01 28 04.0 -0.3
       baz=291
MBWA   Marble Bar        60.10 202          P        01 28 04.6 -0.1
KIRV   Kirov             60.23 323  LR      LR       01 55 59.9
       comp=Z,108nm,20.7s,baz=81,slow=38
KIRV   Kirov             60.23 323c iP      P        01 28 05.4 +0.2
PSA00  Pilbara Seismi    60.45 202          P        01 28 06.9 -0.2
PSA00                               IAmb    IAmb     01 28 08.1
       comp=Z,7.6nm,0.9s
PSAB3  Pilbara Seismi    60.47 202  P       P        01 28 07.7 +0.5
       comp=Z,33nm,2.0s
T35M   Bob Quinn         60.49  39  P       P        01 28 07.2 +0.1
       baz=292
PALK   Pallekele         60.99 257  LR      LR       01 59 06.8
       comp=Z,28nm,19.5s,baz=48,slow=40
PALK   Pallekele         60.99 257  P       P        01 28 11.2 +0.1
SPITS  Spitsbergen Ar    61.16 349  P       P        01 28 11.6 +0.2
       comp=Z,3.8nm,0.6s,baz=44,slow=4.4,SNR=7.2
SPITS                               LR      LR       01 55 29.8
       comp=Z,62nm,20.1s,baz=44,slow=37
       comp=Z,3.8nm,0.6s
WRGLY  Wrigley           61.24  31  P       P        01 28 12.4 +0.4
       baz=294
LIRD   Liard River Hi    61.59  35  P       P        01 28 14.8 +0.3
       baz=293
HRA    Herat             61.76 294          P        01 28 16.8 +0.5
WRKA   Warakurna         61.83 192  P       P        01 28 17.1 +0.7
       comp=Z,13nm,0.7s
TOAD   Toad River Com    62.23  36  P       P        01 28 19.3 +0.5
       baz=294
APA    Apatity           63.00 336⇓eP       P        01 28 23.0 -0.8
APA                                e                 01 28 55.8
APA                                 MLR     MLR
       comp=Z,1µm,4.4s
BELG   Belogornoye       63.63 317c iP      P        01 28 27.8 -0.3
BELG                                pmax    pmax
       comp=Z,12nm,0.9s
RES    Resolute Bay      63.77  14  P       P        01 28 30.0 +1.3
RES                                 IAmb    IAmb     01 28 32.8
       comp=Z,7.4nm,0.8s
RES    Resolute Bay      63.77  14  P       P        01 28 30.0 +1.3
RES                                 pmax    pmax
       comp=Z,7.0nm,0.9s
KLMR   Klimovskoe        63.86 328 eP       P        01 28 28.7 -0.9
KLMR                               e*PP     pP       01 28 44.7 +0.2
KLMR                               e                 01 30 49.5
KLMR                                pmax    pmax
       comp=Z,12nm,0.6s
ARCES  ARCESS Array B    64.40 339  P       P        01 28 33.1 +0.1
       comp=Z,3.0nm,0.5s,baz=51,slow=6.3,SNR=19
ARCES                               LR      LR       01 59 46.4
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       comp=Z,86nm,19.6s,baz=56,slow=39
       comp=Z,3.0nm,0.5s
ARCES  ARCESS Array B    64.40 339  P       P        01 28 33.6 +0.6
ARCES                               IAmb    IAmb     01 28 46.9
       comp=Z,21nm,1.4s
ARCES  ARCESS Array B    64.40 339  P       P        01 28 33.6 +0.6
ARCES                               pmax    pmax
       comp=Z,21nm,1.4s
YKA    Yellowknife Ar    65.19  30  P       P        01 28 38.8 +0.6
       comp=Z,2.0nm,0.8s,baz=297,slow=7.5,SNR=8.1
       comp=Z,2.0nm,0.8s
YKA    Yellowknife Ar    65.19  30  P       P        01 28 39.4 +1.2
YKA    Yellowknife Ar    65.19  30ceP       P        01 28 39.2 +1.0
YKA                                 pmax    pmax
       comp=Z,2.0nm,0.8s
MEEK   Meekatharra       65.59 201  P       P        01 28 41.1 -0.1
       comp=Z,16nm,0.9s
MOS    Moscow            67.24 323 eP       P        01 28 49.3 -2.1
MOS                                e                 01 29 04.3
MOS                                 pmax    pmax
       comp=Z,25nm,0.8s
VRH    Novokhopyorsk     67.42 318 eP       P        01 28 51.9 -0.8
VRH                                 pmax    pmax
       comp=Z,34nm,0.6s
FORT   Forrest           67.49 191  P       P        01 28 53.5 +0.3
       comp=Z,21nm,0.7s
FORT   Forrest           67.49 191          P        01 28 53.8 +0.6
FORT                                IAmb    IAmb     01 28 56.0
       comp=Z,11nm,0.7s
CMSA   Cobar Meteorol    67.54 175  P       P        01 28 53.9 +0.4
STKA   Stephens Creek    67.68 178  P       P        01 28 54.5 +0.2
       comp=Z,5.4nm,0.8s,baz=355,slow=9.6,SNR=6.4
       comp=Z,5.4nm,0.8s
STKA   Stephens Creek    67.68 178  P       P        01 28 55.2 +0.9
STKA   Stephens Creek    67.68 178  P       P        01 28 55.2 +0.9
STKA                                pmax    pmax
       comp=Z,49nm,1.3s
MAK    Makhachkala       68.05 308 eP       P        01 28 54.4 -2.4
MAK                                e*PP     pP       01 29 10.9 -0.9
MAK                                e*SP     sP       01 29 18.4 +0.4
MAK                                ePPP     PPP      01 33 06.1
MAK                                eS       S        01 37 49.5 -2.6
MAK                                e*SS     sS       01 38 19.6 +1.7
MAK                                eSS      SS       01 42 19.3 +4.8
MAK                                 pmax    pmax
       comp=Z,131nm,1.6s
MAK                                 MLR     MLR
       comp=Z,90nm,12.0s
OBN    Obninsk           68.08 323  LR      LR       02 00 12.8
       comp=Z,137nm,20.1s,baz=50,slow=37
OBN    Obninsk           68.08 323⇓iP       P        01 28 55.6 -1.1
OBN                                e                 01 29 08.4
OBN                                i *PP    sP       01 29 14.3 -3.6
OBN                                e*SP     PcP      01 29 18.2 -4.3
OBN                                                  01 31 24.0
OBN                                 S       S        01 37 55.0 +3.0
OBN                                e                 01 38 53.2
OBN                                 SS      SS       01 42 12.0 -2.4
OBN                                 pmax    pmax
       comp=Z,71nm,2.5s
OBN                                 MLR     MLR
       comp=Z,113nm,18.0s
LPSR   Galich'ya Gora    68.21 320 eP       P        01 28 56.4 -1.2
LPSR                                pmax    pmax
       comp=Z,39nm,0.8s
VORR   Voronezh          68.54 319 eP       P        01 28 59.1 -0.6
VORR                                pmax    pmax
       comp=Z,50nm,1.0s
AKT    Akhty             68.63 306 eP       P        01 29 00.3 -0.3
AKT                                e*PP     sP       01 29 21.0 -0.8
AKT                                e                 01 29 24.3
AKT                                e                 01 31 30.8
AKT                                 pmax    pmax
       comp=Z,21nm,0.6s
VSR    Storozhevoye      68.80 318 eP       P        01 28 59.4 -1.9
VSR                                 pmax    pmax
       comp=Z,20nm,0.9s
VORD   Divnogorie        68.86 318 eP       P        01 29 00.0 -1.7
VORD                                pmax    pmax
       comp=Z,10.0nm,1.0s
FINES  FINESS Array B    69.04 332  P       P        01 29 02.4 -0.2
       comp=Z,15nm,0.8s,baz=56,slow=5.8,SNR=38
FINES                               LR      LR       02 01 01.3
       comp=Z,85nm,18.2s,baz=44,slow=37
       comp=Z,15nm,0.8s
FINES  FINESS Array B    69.04 332  P       P        01 29 02.9 +0.3
FINES  FINESS Array B    69.04 332  P       P        01 29 02.9 +0.3
BANOM  Banah             70.34 288  P       P        01 29 11.4 +0.2
SHME   Shamm             70.39 288 i P      P        01 29 11.8 +0.2
       SNR=8.7
YNG    Young             70.52 173  P       P        01 29 14.2 +2.3
       comp=Z,13nm,0.4s
KBZ    Khabaz            70.56 310  P       P        01 29 12.1 -0.1
       comp=Z,24nm,0.9s,baz=66,slow=3.3,SNR=39
KBZ                                 LR      LR       02 02 16.2
       comp=Z,52nm,19.4s,baz=100,slow=38
       comp=Z,24nm,0.9s
KBZ    Khabaz            70.56 310c iP      P        01 29 12.5 +0.3
KBZ                                 pmax    pmax
       comp=Z,24nm,0.9s
KIV    Kislovodsk        70.57 311          P        01 29 12.9 +0.4
KIV    Kislovodsk        70.57 311 ⇑P       P        01 29 13.0 +0.5
KIV    Kislovodsk        70.57 311 i P      P        01 29 13.0 +0.5
       SNR=17
KIV    Kislovodsk        70.57 311 eP       P        01 29 12.8 +0.4
KIV                                 pmax    pmax
       comp=Z,56nm,1.1s
KIV                                 MLR     MLR
       comp=Z,44nm,17.0s
KIV    Kislovodsk        70.57 311  P       P        01 29 12.1 -0.4
       comp=Z,54nm,0.9s
VSU    Vasula            70.61 329ceP       P        01 29 11.6 -0.7
VSU                                 pmax    pmax
       comp=Z,29nm,1.3s
BLKN   Baker Lake        70.69  22  P       P        01 29 13.6 +1.0
BLKN                                IAmb    IAmb     01 29 14.5
       comp=Z,16nm,0.9s
SHA1   Shidzhatmaz       70.70 310c iP      P        01 29 13.4 -0.1
MSFE   Esma-Masafi       70.74 288  P       P        01 29 14.0 +0.2
HATD   Hatta, Dubai      71.04 287  P       P        01 29 16.0 +0.5
SOHO   SOHO              71.09 286 i P      P        01 29 16.0 +0.2
       SNR=8.1
NAZ    Nazwa, Dubai      71.32 288  P       P        01 29 16.4 -0.8
FAQ    Al Faqa, Dubai    71.50 287  P       P        01 29 17.8 -0.5
SUMG   Summit            71.57 359          P        01 29 19.4 +1.0
SUMG   Summit            71.57 359  P       P        01 29 19.4 +1.0
SUMG                                pmax    pmax
       comp=Z,20nm,0.8s
ALNE   Al Ain            71.74 287 i P      P        01 29 19.7  0.0
       SNR=11
ASUD   Al Ashush, Dub    71.76 287  P       P        01 29 20.2 +0.3
PINE   Pine Mountain     71.84  49          P        01 29 21.8 +1.5
PINE                                IAmb    IAmb     01 29 40.0
       comp=Z,12nm,0.9s
KARS   Kars              72.09 307  IAmb    IAmb     01 29 24.2
       comp=Z,14nm,0.8s
PLTM   Poltava           72.16 319  P       P        01 29 21.8  0.0
MNK    Minsk             72.55 325 i P      P        01 29 23.9 -0.1
MNK                                i *PP    pP       01 29 39.5 +0.2
MNK                                i                 01 32 05.6
MNK                                i PPP    PPP      01 33 51.4
MNK                                i S      S        01 38 44.4 +0.2
MNK                                i SS     SS       01 43 25.5 +2.5
MNK                                 pmax    pmax
       comp=N,14nm,1.3s
MNK                                 pmax    pmax
       comp=Z,32nm,0.8s
MNK                                 pmax    pmax
       comp=E,22nm,1.2s
MNK                                 MLR     MLR
       comp=Z,74nm,20.0s
BMO    Blue Mountains    73.43  46          P        01 29 30.0 +0.4
BMO    Blue Mountains    73.43  46  P       P        01 29 30.0 +0.4
BMO                                 pmax    pmax
       comp=Z,4.0nm,1.1s
PABE   Paberze           73.65 328          P        01 29 31.1 +0.6
GURO   Guroymak-BITLI    73.89 306  IAmb    IAmb     01 29 34.3
       comp=Z,18nm,0.8s
MZR    Muzera            74.06 287 i P      P        01 29 33.1 -0.4
       SNR=13
AK03   Malin Array Si    74.24 322  P       P        01 29 33.8 -0.3
AKASG  Malin Array Be    74.26 322  P       P        01 29 33.8 -0.3
       comp=Z,9.3nm,0.5s,baz=50,slow=6.0,SNR=36
AKASG                               LR      LR       02 04 49.5
       comp=Z,177nm,18.4s,baz=50,slow=38
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	comp=Z,9.3nm,0.5s						
AKASG	Malin Array Be	74.26	322	P	P	01 29 34.1	-0.1
AKASG				IAmb	IAmb	01 29 35.0	
	comp=Z,7.0nm,0.9s						
AKASG	Malin Array Be	74.26	322	ceP	P	01 29 33.7	-0.5
AKASG				pmax	pmax		
	comp=Z,10.0nm,0.5s						
AKBB	Malin Array Si	74.26	322	ceP	P	01 29 33.7	-0.5
AKBB	Malin Array Si	74.26	322	P	P	01 29 33.9	-0.3
KIEV	Kiev	74.27	322		P	01 29 33.9	-0.2
KIEV	Kiev	74.27	322	⇓P	P	01 29 34.0	-0.2
KIEV	Kiev	74.27	322	i P	P	01 29 33.6	-0.6
	SNR=8.5						
KIEV	Kiev	74.27	322	P	P	01 29 34.0	-0.2
KIEV	Kiev	74.27	322	P	P	01 29 33.9	-0.2
	comp=Z,115nm,0.8s						
AK04	Malin Array Si	74.27	322	P	P	01 29 33.9	-0.3
NC405	NORSAR Array S	74.32	337	IAmb	IAmb	01 29 37.7	
	comp=Z,16nm,0.8s						
NC303	NORSAR Array S	74.35	337	IAmb	IAmb	01 29 52.6	
	comp=Z,26nm,1.4s						
AK17	Malin Array Si	74.35	322	P	P	01 29 34.5	-0.2
AK07	Malin Array Si	74.36	322	P	P	01 29 34.6	-0.2
HFS	Hagfors	74.40	335	P	P	01 29 34.5	-0.3
	comp=Z,9.0nm,0.8s,baz=46,slow=10,SNR=13						
HFS				LR	LR	02 04 41.1	
	comp=Z,118nm,19.3s,baz=66,slow=38						
	comp=Z,9.0nm,0.8s						
NB2	NORSAR Subarra	74.54	337	P	P	01 29 35.7	0.0
	comp=Z,8.6nm,0.7s,baz=42,slow=5.9						
NOA	NORSAR Array B	74.54	337	P	P	01 29 35.3	-0.4
	comp=Z,5.9nm,0.6s,baz=40,slow=5.9,SNR=26						
NOA				LR	LR	02 05 28.4	
	comp=Z,86nm,19.0s,baz=40,slow=38						
	comp=Z,5.9nm,0.6s						
SIM	Simferopol'	75.11	315	eP	P	01 29 38.0	-1.2
SIM				eS	S	01 39 14.5	+1.1
SIM				pmax	pmax		
	comp=Z,60nm,1.1s						
SIM				smax	smax		
	comp=N,30nm,15.9s						
SIM				MLR	MLR		
	comp=Z,79nm,29.8s						
MARD	Mardin	75.40	306		P	01 29 41.7	+0.5
RNPP9	Sopachiv	75.44	324	P	P	01 29 40.8	-0.2
LUBAR	Lubar, Ukraine	75.48	322	P	P	01 29 41.0	-0.2
RNPP8	Varash	75.50	324	P	P	01 29 41.4	+0.1
DLMT	Dillon	75.83	44	IAmb	IAmb	01 29 49.4	
	comp=Z,16nm,1.4s						
HLID	Hailey	75.87	46		P	01 29 44.8	+1.0
TOKA	Tokat	76.42	310	IAmb	IAmb	01 29 48.6	
	comp=Z,20nm,1.1s						
LHV	Little Huntoon	76.47	52	IAmb	IAmb	01 29 51.2	
	comp=Z,9.5nm,1.0s						
NVAR	Mina Array Bea	76.50	52	P	P	01 29 49.5	+1.9
	comp=Z,3.4nm,0.8s,baz=289,slow=5.9,SNR=16						
	comp=Z,3.4nm,0.8s						
NVAR	Mina Array Bea	76.50	52	P	P	01 29 48.4	+0.9
SFJD	Kangerlussuaq	76.87	4	LR	LR	02 06 19.3	
	comp=Z,41nm,18.2s,baz=334,slow=38						
YHL	Hebgen Lake	76.93	44	IAmb	IAmb	01 30 09.1	
	comp=Z,6.8nm,1.0s						
KMPD	K-Podol'skiy	77.00	321	P	P	01 29 49.9	0.0
BEL	Belsk	77.52	326	eP	P	01 29 53.5	+0.7
KSV	Kosov	77.87	322	P	P	01 29 54.3	-0.5
BIR	Birlad	77.88	319	⇑P	P	01 29 55.5	+0.6
BIR	Birlad	77.88	319	P	P	01 29 55.4	+0.6
STNU	Starunia	77.89	322	P	P	01 29 54.7	-0.2
FRB	Frobisher Bay	77.92	13	LR	LR	02 07 11.1	
	comp=Z,48nm,19.7s,baz=89,slow=38						
GRAC	Grapevine Rang	77.94	53	IAmb	IAmb	01 29 59.3	
	comp=Z,4.5nm,0.7s						
GIRR	Girov	78.03	320	⇑P	P	01 29 55.9	+0.2
SHIU	Shidnytsya	78.10	323	P	P	01 29 56.1	0.0
KWP	Kalwaria Pacla	78.14	324	eP	P	01 29 56.9	+0.6
TESR	Tescani	78.24	320	⇑P	P	01 29 56.6	-0.2
TESR	Tescani	78.24	320	P	P	01 29 57.0	+0.2
	comp=Z,29nm,1.1s						
BUR08	Bucovina Ar. S	78.24	321	IAmb	IAmb	01 29 58.4	
	comp=Z,9.4nm,0.8s						
BURAR	Bucovina Array	78.25	321		P	01 29 57.6	+0.6
BURAR				IAmb	IAmb	01 29 58.7	
	comp=Z,11nm,0.8s						
BURAR	Bucovina Array	78.25	321	⇑P	P	01 29 57.2	+0.2
BURAR	Bucovina Array	78.25	321	P	P	01 29 57.2	+0.2
TPGR	Topolog	78.36	317	⇑P	P	01 29 57.9	+0.4
RAKU	Rahkiv	78.51	322	P	P	01 29 57.8	-0.5
BR131	Keskin Array S	78.53	311	IAmb	IAmb	01 30 03.7	
	comp=Z,7.8nm,0.9s						
BR131	Keskin Array S	78.53	311	d iP	P	01 29 59.3	+0.5
BRTR	Keskin Array B	78.53	311	P	P	01 29 58.9	+0.1
	comp=Z,5.2nm,0.9s,baz=124,slow=4.5,SNR=21						
	comp=Z,5.2nm,0.9s						
BR106	Keskin Array S	78.54	311	P	P	01 29 58.8	0.0
	comp=Z,57nmcomp=Z,6.6nm,1.1s						
BR104	Keskin Array S	78.54	311	P	P	01 29 58.8	0.0
	comp=Z,71nmcomp=Z,8.1nm,1.1s						
VRI	Vrincioaia	78.61	319	⇑P	P	01 29 59.4	+0.4
VRI	Vrincioaia	78.61	319	P	P	01 29 59.4	+0.4
VRI	Vrincioaia	78.61	319	P	P	01 29 59.1	+0.1
PLOR	Plostina	78.67	319	⇑P	P	01 30 00.4	+1.1
PLOR	Plostina	78.67	319	P	P	01 30 00.3	+1.1
ANTO	Ankara	78.95	311	P	P	01 30 01.6	+0.6
ANTO				IAmb	IAmb	01 30 05.0	
	comp=Z,18nm,1.1s						
ANTO	Ankara	78.95	311	⇑P	P	01 30 01.4	+0.4
ANTO	Ankara	78.95	311	P	P	01 30 01.6	+0.6
ANTO				pmax	pmax		
	comp=Z,18nm,1.2s						
STHS	Stebnicka Huta	78.98	324	eP	P	01 30 02.1	+1.2
STHS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
STHS	Stebnicka Huta	78.98	324	eP	P	01 30 02.1	+1.2
BOSR	Bodos	79.04	320	⇑P	P	01 30 02.3	+1.0
ARCR	ARCALIA	79.04	321	⇑P	P	01 30 01.9	+0.6
OJC	Ojcow	79.10	326	eP	P	01 30 02.1	+0.6
PDAR	Pinedale Array	79.16	45	P	P	01 30 03.6	+1.4
	comp=Z,2.4nm,0.9s,baz=213,slow=1.3,SNR=13						
	comp=Z,2.4nm,0.9s						
PDAR	Pinedale Array	79.16	45	P	P	01 30 03.3	+1.0
ICOR	Ion Corvin	79.17	317	⇑P	P	01 30 02.3	+0.3
DOPR	Dopca	79.25	320	⇑P	P	01 30 03.1	+0.6
MLR	Muntele Rosu	79.28	319	LR	LR	02 08 46.3	
	comp=Z,90nm,18.5s,baz=64,slow=38						
NIE	Niedzica	79.43	325	eP	P	01 30 04.5	+1.2
CBBR	Cluj-Babes-Bol	79.66	321	⇑P	P	01 30 05.2	+0.6
RAYN	Ar Rayn	79.86	292		P	01 30 06.3	+0.1
RAYN				IAmb	IAmb	01 30 07.1	
	comp=Z,14nm,0.7s						
RAYN	Ar Rayn	79.86	292	i P	P	01 30 06.2	-0.1
	SNR=14						
RAYN	Ar Rayn	79.86	292	P	P	01 30 06.3	+0.1
RAYN				pmax	pmax		
	comp=Z,14nm,0.7s						
MARR	Marisel-Cluj	79.94	321	⇑P	P	01 30 06.6	+0.3
LANS	Liptovska Anna	80.00	325	eP	P	01 30 07.8	+1.3
LANS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LANS	Liptovska Anna	80.00	325	eP	P	01 30 07.8	+1.3
ARR	Arges	80.05	320	⇑P	P	01 30 07.8	+1.0
RUE	Ruedersdorf	80.06	330	eP	P	01 30 07.0	+0.4
	comp=Z,14nm,0.6s,baz=39,slow=5.2						
DRGR		80.07	322	⇑P	P	01 30 07.4	+0.4
DRGR		80.07	322	P	P	01 30 07.4	+0.4
KSP	Ksiaz	80.22	328	eP	P	01 30 08.2	+0.6
STEB	Steborice	80.22	326	eP	P	01 30 08.4	+0.8
BSEG	Bad Segeberg	80.30	332	eP	P	01 30 08.4	+0.5
	comp=Z,7.6nm,1.0s,baz=39,slow=5.2						
BORA	Eskisehir	80.36	313	IAmb	IAmb	01 30 09.5	
	comp=Z,6.9nm,0.8s						
MORC	Moravsky Berou	80.44	326	IAmb	IAmb	01 30 10.4	
	comp=Z,10nm,0.9s						
MORC	Moravsky Berou	80.44	326	⇑P	P	01 30 08.6	-0.3
MORC	Moravsky Berou	80.44	326	eP	P	01 30 09.2	+0.4
MORC	Moravsky Berou	80.44	326	P	P	01 30 08.5	-0.3
CHVC	Chvalec	80.50	328	eP	P	01 30 09.6	+0.4
CHVC	Chvalec	80.50	328	eP	P	01 30 09.6	+0.4
PFO	Pinyon Flats O	80.55	55	LR	LR	01 57 35.7	
	comp=Z,48nm,22.0s,baz=281,slow=29						
PFO	Pinyon Flats O	80.55	55		P	01 30 10.5	+0.7
PFO				IAmb	IAmb	01 30 12.9	
	comp=Z,8.8nm,1.1s						
PFO	Pinyon Flats O	80.55	55	P	P	01 30 10.5	+0.7
PFO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
DPC	Dobruska-Polom	80.56	327	eP	P	01 30 10.5	+1.0
DPC	Dobruska-Polom	80.56	327	eP	P	01 30 10.5	+1.0
UPC	Upice	80.58	328	eP	P	01 30 10.4	+0.9
UPC	Upice	80.58	328	eP	P	01 30 10.4	+0.9
MAUC	Maruska	80.60	326	eP	P	01 30 10.5	+0.8
RAR	Rarotonga	80.63	125	LR	LR	01 58 47.6	
	comp=Z,49nm,19.7s,baz=278,slow=30						
PSZ	Piszkesteto	80.67	324	IAmb	IAmb	01 30 11.9	
	comp=Z,14nm,0.9s						
PSZ	Piszkesteto	80.67	324	⇑P	P	01 30 11.0	+0.9
PSZ	Piszkesteto	80.67	324	P	P	01 30 11.0	+0.9
P18A	Preston Nutter	80.75	47	IAmb	IAmb	01 30 30.4	
	comp=Z,13nm,1.3s						
KNB	Kanab	80.82	51	IAmb	IAmb	01 30 30.9	
	comp=Z,11nm,1.2s						
SRU	San Rafael Swe	80.91	48	IAmb	IAmb	01 30 30.7	
	comp=Z,7.0nm,0.9s						
BAR	Barrett	80.96	56	IAmb	IAmb	01 30 14.7	
	comp=Z,10.0nm,1.0s						
ASF	Jabal al Asfar	80.99	303	LR	LR	02 09 48.4	
	comp=Z,50nm,18.5s,baz=26,slow=38						
GZR	Gura Zlata	80.99	321	⇑P	P	01 30 11.5	-0.5
GZR	Gura Zlata	80.99	321	P	P	01 30 11.4	-0.5
ELND	Elena	81.01	317	⇑P	P	01 30 12.3	+0.4
JAVC	Velka Javorina	81.04	326	eP	P	01 30 13.4	+1.3
SURR	Surduc	81.08	321	⇑P	P	01 30 12.4	+0.2
FLTG	Flechtingen	81.19	331	eP	P	01 30 12.5	-0.2
	comp=Z,13nm,0.9s,baz=39,slow=5.2						
PVCC	Panska Ves	81.19	328	eP	P	01 30 13.5	+0.7
PVCC	Panska Ves	81.19	328	eP	P	01 30 13.5	+0.7
BRG	Berggiesshubel	81.20	329	eP	P	01 30 13.1	+0.3
	comp=Z,6.6nm,0.9s,baz=39,slow=5.2						
VRAC	Vranov	81.20	326	LR	LR	02 08 45.6	
	comp=Z,65nm,18.1s,baz=50,slow=37						
VRAC	Vranov	81.20	326	⇓P	P	01 30 13.4	+0.5
VRAC	Vranov	81.20	326	eP	P	01 30 13.5	+0.6
VRAC	Vranov	81.20	326	P	P	01 30 13.3	+0.5
CLL	Collm	81.26	329	IAmb	IAmb	01 30 14.1	
	comp=Z,19nm,1.0s						
CLL	Collm	81.26	329	⇑iP	P	01 30 13.0	-0.1
CLL				pmax	pmax		
	comp=Z,20nm,1.0s						
CLL	Collm	81.26	329	eP	P	01 30 12.9	-0.1
	comp=Z,19nm,1.0s,baz=39,slow=5.2						
CLL	Collm	81.26	329	⇑iP	P	01 30 13.0	-0.1
	comp=Z,20nm,1.0s						
CLL				ePP	PP	01 33 17.0	-1.4
PLVB	Pleven	81.38	318	⇑P	P	01 30 13.9	0.0
SMOL	Smolenice	81.40	325	eP	P	01 30 15.5	+1.6
SMOL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BZS	Buzias	81.43	321	⇑P	P	01 30 13.9	-0.2
BZS	Buzias	81.43	321	P	P	01 30 13.9	-0.2
KRUC	Moravsky	81.47	326	eP	P	01 30 14.7	+0.4
MMAI	Mount Meron Ar	81.48	305	P	P	01 30 15.3	+0.5
	comp=Z,7.9nm,0.8s,baz=37,slow=8.4,SNR=7.6						
MMAI				LR	LR	02 10 20.3	
	comp=Z,54nm,18.8s,baz=46,slow=38						
	comp=Z,7.9nm,0.8s						
YUH	Yuha Desert	81.49	56	IAmb	IAmb	01 30 17.7	
	comp=Z,5.9nm,0.9s						
ASSE	Asse, Remlinge	81.56	331	eP	P	01 30 14.8	+0.2
	comp=Z,9.8nm,0.9s,baz=39,slow=5.2						
MODS	Modra-Piesok	81.57	325	eP	P	01 30 15.9	+1.0
MODS				pmax	pmax		
	comp=Z,18nm,1.0s						
MODS	Modra-Piesok	81.57	325	eP	P	01 30 15.9	+1.0
RETH	Rethem/Aller,	81.59	332	eP	P	01 30 14.9	+0.1
	comp=Z,8.8nm,1.0s,baz=39,slow=5.2						
PRU	Pruhonice	81.60	328	eP	P	01 30 15.8	+0.8
PRU	Pruhonice	81.60	328	eP	P	01 30 15.8	+0.8
HSKC	Hora Svate Kat	81.61	329	eP	P	01 30 15.7	+0.7
URZ	Urewera	81.63	151	LR	LR	02 01 54.9	
	comp=Z,33nm,19.8s,baz=4.0,slow=32						
TREC	Trest	81.70	327	eP	P	01 30 16.0	+0.5
TREC	Trest	81.70	327	eP	P	01 30 16.0	+0.5
BLYC	Blythe	81.74	54	IAmb	IAmb	01 30 19.2	
	comp=Z,5.9nm,0.9s						
NEUB	Neuenburg	81.83	330	eP	P	01 30 16.4	+0.2
	comp=Z,15nm,0.9s,baz=39,slow=5.2						
ESJX	Sierra Juarez	81.86	56	IAmb	IAmb	01 30 20.5	
	comp=Z,9.0nm,0.9s						
CLZ	Clausthal	81.91	331	eP	P	01 30 16.9	+0.3
	comp=Z,12nm,1.0s,baz=39,slow=5.2						
MDVR	Moldovita	81.96	321	⇑P	P	01 30 16.7	-0.3
BALB	Balikesir	82.03	314	IAmb	IAmb	01 30 19.4	
	comp=Z,13nm,0.9s						
ZVC	Zvikov	82.16	328	eP	P	01 30 18.3	+0.4
PV23	Carpenter Ridg	82.24	48	IAmb	IAmb	01 30 26.0	
	comp=Z,10nm,0.9s						
PV14	Lion Creek, Pa	82.29	48	IAmb	IAmb	01 30 22.1	
	comp=Z,5.7nm,0.9s						
GTTG	Gottingen	82.30	331	eP	P	01 30 18.8	+0.2
	comp=Z,14nm,1.0s,baz=39,slow=5.2						
MOX	Moxa	82.33	330	eP	P	01 30 18.9	+0.1
	comp=Z,11nm,1.3s,baz=39,slow=5.2						
PV20	West Nyswonger	82.34	48	IAmb	IAmb	01 30 38.4	
	comp=Z,12nm,0.9s						
PV04	Paradox Valley	82.34	48	IAmb	IAmb	01 30 38.8	
	comp=Z,10nm,1.4s						
PV19	Morning Glory	82.35	48	IAmb	IAmb	01 30 38.6	
	comp=Z,22nm,1.2s						
MANT	Manisa	82.38	312	IAmb	IAmb	01 30 21.3	
	comp=Z,7.5nm,0.9s						
PV16	Nyswonger Mesa	82.39	48	IAmb	IAmb	01 30 25.9	
	comp=Z,5.5nm,0.9s						
PV05	Paradox Valley	82.43	48	IAmb	IAmb	01 30 39.1	
	comp=Z,8.5nm,0.8s						
PV18	Skein Mesa, Pa	82.44	48	IAmb	IAmb	01 30 26.1	
	comp=Z,11nm,0.9s						
PV12	Saucer Basin,	82.45	48	IAmb	IAmb	01 30 27.0	
	comp=Z,9.0nm,1.0s						
PV03	Paradox Valley	82.47	48	IAmb	IAmb	01 30 26.3	
	comp=Z,9.8nm,1.2s						
RONA	Rosalia, Austr	82.51	325	i P	P	01 30 20.9	+1.0
	comp=Z,6.9nm,0.7s,SNR=4.7						
IBBN	Ibbenburen	82.54	333	eP	P	01 30 19.7	0.0
	comp=Z,20nm,1.1s,baz=39,slow=5.2						
CONA	Conrad Observa	82.55	326	i P	P	01 30 20.9	+0.8
	comp=Z,4.5nm,0.7s						
PV13	Radium Mtn., P	82.55	48	IAmb	IAmb	01 30 27.7	
	comp=Z,14nm,1.5s						
PV02	Paradox Valley	82.56	48	IAmb	IAmb	01 30 39.7	
	comp=Z,8.2nm,1.0s						
CKRC	Cesky Krumlov	82.58	327	eP	P	01 30 20.2	+0.1
CKRC	Cesky Krumlov	82.58	327	eP	P	01 30 20.2	+0.1
MANZ	Manzenberg	82.64	329	eP	P	01 30 20.6	+0.2
	comp=Z,1.3nm,0.8s,baz=39,slow=5.2						
KHC	Kasperske Hory	82.66	328	IAmb	IAmb	01 30 22.0	
	comp=Z,9.2nm,1.0s						
KHC	Kasperske Hory	82.66	328	⇑iP	P	01 30 20.8	+0.2
KHC				pmax	pmax		
	comp=Z,12nm,1.3s						
KHC	Kasperske Hory	82.66	328	eP	P	01 30 21.2	+0.6
ELL	Elmali	82.68	310	IAmb	IAmb	01 30 32.0	
	comp=Z,22nm,1.4s						
ROTZ	Rotzenmuhle	82.76	329	eP	P	01 30 21.6	+0.5
	comp=Z,5.1nm,1.5s,baz=39,slow=5.2						
GEC2	GERESS Array S	82.82	328	IAmb	IAmb	01 30 22.5	
	comp=Z,6.0nm,0.9s						
GEC2	GERESS Array S	82.82	328	eP	P	01 30 21.4	0.0
	comp=Z,6.0nm,0.9s,baz=39,slow=5.2						
GERES	GERESS Array B	82.82	328	P	P	01 30 21.5	0.0
	comp=Z,2.3nm,0.7s,baz=31,slow=5.4,SNR=15						
GERES				LR	LR	02 08 48.8	
	comp=Z,78nm,18.8s,baz=56,slow=37						
	comp=Z,2.3nm,0.7s						
WET	Wettzell	82.95	328	eP	P	01 30 22.6	+0.5
	comp=Z,11nm,1.3s,baz=39,slow=5.2						
GRA1	Grafenberg Arr	83.23	329	IAmb	IAmb	01 30 25.2	
	comp=Z,14nm,0.8s						
GRF	Grafenberg Arr	83.23	329	eP	P	01 30 24.0	+0.6
	comp=Z,15nm,0.9s,baz=39,slow=5.2						
MOA	Molln	83.32	327	i P	P	01 30 25.1	+1.1
	comp=Z,6.7nm,1.1s						
EKA	Eskdalemuir Ar	83.56	340	P	P	01 30 25.3	+0.3
	comp=Z,1.0nm,0.5s,baz=36,slow=4.3,SNR=9.4						
EKA				LR	LR	02 11 07.1	
	comp=Z,6.0nm,18.2s,baz=7.5,slow=38						
	comp=Z,1.0nm,0.5s						
BIOA	Bad Ischl, Aus	83.72	327	i P	P	01 30 26.3	+0.2
	comp=Z,4.0nm,0.8s						
EIL	Elat	83.84	302	LR	LR	02 10 33.3	
	comp=Z,32nm,18.3s,baz=72,slow=38						
SOKA	Soboth	83.85	325	eP	P	01 30 27.1	+0.3
	comp=Z,17nm,1.0s,SNR=14						
TNS	Taunus Mts	83.93	331	eP	P	01 30 27.1	-0.1
	comp=Z,4.8nm,0.9s,baz=39,slow=5.2						
LESA	Schwarzleotal	84.35	327	i P	P	01 30 28.6	-0.7
	comp=Z,9.4nm,1.3s,SNR=4.5						
FUR	Furstenfeldbru	84.39	328	eP	P	01 30 29.7	+0.3
	comp=Z,15nm,0.9s,baz=39,slow=5.2						
MYKA	Terra Mystica	84.52	326	i P	P	01 30 29.8	-0.4
	comp=Z,8.6nm,0.8s						
BTNL	Ternell	84.53	332	dP	P	01 30 29.8	-0.3
	comp=Z,4.4nm,1.1s						
MEM	Membach	84.55	333	dP	P	01 30 30.2	+0.1
	comp=Z,5.2nm,0.9s						
STU	Stuttgart	84.78	330	eP	P	01 30 31.5	+0.1
	comp=Z,24nm,0.5s,baz=39,slow=5.2						
BGES	Gesves	85.08	333	dP	P	01 30 32.1	-0.7
	comp=Z,5.3nm,1.1s						
BGES				dPP	PP	01 33 48.5	-1.1
MOTA	Moosalm	85.09	328	eP	P	01 30 33.1	0.0
	comp=Z,6.1nm,1.0s						
RETA	Reutte	85.13	328	i P	P	01 30 33.5	+0.3
	comp=Z,7.0nm,0.8s						
SQTA	Sankt Quirin	85.14	328	i P	P	01 30 33.4	+0.1
	comp=Z,5.9nm,1.1s						
RCHB	Rochefort	85.21	333	dP	P	01 30 33.3	-0.2
	comp=Z,4.2nm,1.0s						
BMRD	Maredsous	85.26	333	dP	P	01 30 33.8	+0.1
	comp=Z,5.0nm,1.0s						
WLF	Walferdange	85.27	332	eP	P	01 30 34.3	+0.5
	comp=Z,20nm,1.5s,baz=39,slow=5.2						
PPT	Papeete	85.33	116	LR	LR	01 59 52.9	
	comp=Z,34nm,21.4s,baz=336,slow=29						
PPT2	Papeete2	85.34	116	eLR	LR	01 57 23.8	
	comp=Z,170nm,29.8s						
PPT2				eLR	LR	01 57 34.3	
	comp=Z,118nm,26.8s						
BFO	Black Forest	85.48	330		P	01 30 34.7	-0.2
BFO				IAmb	IAmb	01 30 35.7	
	comp=Z,10nm,1.0s						
BFO	Black Forest	85.48	330	P	P	01 30 34.7	-0.2
BFO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BFO	Black Forest	85.48	330	eP	P	01 30 34.9	0.0
	comp=Z,9.5nm,1.0s,baz=39,slow=5.2						
FETA	Feichten	85.51	328	i P	P	01 30 34.9	-0.3
	comp=Z,5.7nm,1.1s						
DAVA	Damuels	85.66	328	i P	P	01 30 35.9	-0.1
	comp=Z,9.3nm,1.0s						
T25A	Trinidad	85.83	46	IAmb	IAmb	01 30 40.3	
	comp=Z,5.4nm,0.8s						
ECH	Echery	86.04	331	IAmb	IAmb	01 30 38.5	
	comp=Z,5.4nm,0.8s						
DAVOX	Davos/Dischmat	86.06	328	LR	LR	02 13 19.3	
	comp=Z,65nm,18.1s,baz=76,slow=38						
SCHQ	Schefferville	86.52	15	P	P	01 30 40.7	+0.8
	comp=Z,4.9nm,0.8s,baz=344,slow=7.4,SNR=2.3						
	comp=Z,4.9nm,0.8s						
SCHQ	Schefferville	86.52	15	P	P	01 30 41.2	+1.3
TAOE	Nuku Hiva Isla	87.14	103	eLR	LR	01 58 17.2	
	comp=Z,120nm,26.0s						
TBI	Tubuai	89.12	120	eLR	LR	01 59 17.3	
	comp=Z,745nm,30.8s						
DKNS	Dickens	90.29	47	IAmb	IAmb	01 31 01.9	
	comp=Z,6.9nm,0.9s						
LPIG	La Paz	90.69	59	LR	LR	02 04 30.8	
	comp=Z,14nm,19.6s,baz=27,slow=31						
VAE	Valguarnera	91.04	320	LR	LR	02 17 31.5	
	comp=Z,47nm,18.8s,baz=246,slow=39						
TX31	Lajitas Ar. Si	91.63	51	IAmb	IAmb	01 31 31.1	
	comp=Z,5.8nm,1.4s						
TXAR	Lajitas Array	91.63	51	P	P	01 31 05.9	+1.3
	comp=Z,1.2nm,0.7s,baz=323,slow=3.8,SNR=14						
TXAR	Lajitas Array	91.63	51	P	P	01 31 05.0	+0.4
SADO	Sadowa	92.05	27	LR	LR	02 19 55.8	
	comp=Z,38nm,19.2s,baz=10,slow=40						
KEST	Kesra	94.98	322	LR	LR	02 17 33.9	
	comp=Z,55nm,18.8s,baz=322,slow=38						
ESDC	Sonseca Array	97.54	333	LR	LR	02 19 41.6	
	comp=Z,48nm,18.5s,baz=34,slow=38						
M65A	Busby, Falmout	97.76	23	P	P	01 31 31.1	-1.1
	baz=336						
BOSA	Boshof	125.21	258	PKP	PKiKP	01 36 58.3	+0.1
	comp=Z,4.1nm,1.1s,baz=60,slow=3.2,SNR=6.1						
BOSA	Boshof	125.21	258		PKPdf	01 36 57.9	+0.1
QSPA	South Pole Qui	125.88	180	PKP	PKiKP	01 37 00.4	+2.2
	comp=Z,2.4nm,0.7s,baz=336,slow=2.0,SNR=6.9						
DBIC	Dimbokro	126.09	315	PKP	PKPdf	01 36 59.6	-0.2
	comp=Z,2.6nm,0.6s,baz=52,slow=3.0,SNR=5.0						
NVL	N'lazarevskaya	136.00	202	ePKIKP	PKiKP	01 37 17.7	-0.7
NVL				e		01 39 57.8	
NVL				ePPP	PPP	01 42 55.2	
NVL				eSS	SS	01 57 53.8	+1.8
NVL				eSSS	SSS	02 02 57.2	
NVL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SNAA	Sanae	139.54	197	PKhKP	PKPpre	01 37 15.6	
	comp=Z,1.1nm,0.7s,baz=308,slow=2.5,SNR=6.2						
H03N2	Juan Fernandez	148.13	97	T	T	04 23 09.4	
	baz=291,slow=76,SNR=46						
H03N3	Juan Fernandez	148.14	97	T	T	04 23 09.1	
	baz=291,slow=76,SNR=50						
H03N1	Juan Fernandez	148.15	97	T	T	04 23 10.0	
	baz=291,slow=76,SNR=34						
LPAZ	La Paz	148.19	59	PKPbc	PKPbc	01 37 43.9	-0.3
	comp=Z,2.9nm,0.7s,baz=309,slow=0.7,SNR=9.7						
LPAZ	La Paz	148.19	59	PKPbc	PKPbc	01 37 43.6	-0.5

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*CATAC **03** 02:04:39.4±0.6, 15°N±4°×9°4W±°, h1km, M4.3/6, MLv4.3/6, Error ellipse: s-maj=9.8km s-min=5.7km az=29.8, confirmed*

*MEX **03** 02:04:40.9±1.0, 15°.22N×94°.57W, h34km±31km, MD4.2*

ISC 03 02:04:30.3±1.3**, 15°.13N**±0°.05×**94°.65W**±0°.02**, h10**km±10km**,**
n45, σ2s.51/68**, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.49	67	i P	Pg	02 05 02.0	+3.0
PCIG				eS	Sg	02 05 18.1	-0.3
HUIG	Huatulco	1.54	294	eP	Pg	02 05 05.1	+5.3
HUIG				i S	Sg	02 05 22.0	+2.1
CMIG	Matias Romero	1.96	353	i P	Pg	02 05 08.8	+0.9
CMIG				i S	Sb	02 05 30.1	-0.5
TGIG		2.20	42	eP	Pg	02 05 12.4	-0.1
TGIG				eS	Sb	02 05 36.1	-1.4
UXUV	UXUV	2.23	13	i P	Pg	02 05 13.2	+0.2
UXUV				eS	Sb	02 05 36.9	-1.4
THIG		2.32	95	eP	Pg	02 05 15.2	+0.5
THIG				eS	Sb	02 05 39.2	-1.6
PATR	El Naranjo	2.33	90	eP	Pg	02 05 14.5	-0.6
PATR				eS	Sb	02 05 39.8	-1.8
PAVE	Pavencul	2.39	88	eP	Pg	02 05 15.9	-0.2
PAVE				eS	Sb	02 05 42.0	-1.3
CHUJ	Union Juarez	2.46	91	eP	Pg	02 05 16.8	-0.7
CHUJ				eS	Sb	02 05 43.1	-2.0
PEIG	Puerto Escondi	2.56	290	i P	Pg	02 05 19.4	+0.1
PEIG				eS	Sb	02 05 46.3	-1.5
CCIG	Comitan	2.68	64	eP	Pg	02 05 20.3	-1.4
CCIG				eS	Sb	02 05 51.2	-0.2
CCIG	Comitan	2.68	64	S	Sb	02 05 50.4	-1.1
CCIG	Comitan	2.68	64	P	Pg	02 05 19.9	-1.7
VHO	Vista Hermosa	2.78	314	eP	Pg	02 05 23.8	+0.2
VHO				eS	Sb	02 05 53.8	-0.7
NEUV	Arroyo Zacate	2.79	337	eP	Pb	02 05 21.0	+0.7
NEUV				i S	Sn	02 05 51.9	+3.0
TUIG	Tuzandepetl	2.89	4	eP	Pb	02 05 22.0	0.0
TUIG				eS	Sn	02 05 48.5	-2.8
YOIG	Yosondua	3.27	302	eP	Pg	02 05 31.6	-1.4
YOIG				eS	Sb	02 06 06.1	-2.5
PMUV	Sontecomapan	3.42	352	eP	Pb	02 05 28.5	-2.6
PMUV				eS	Sn	02 06 02.7	-1.8
PNIG	Pinotepa	3.57	291	eP	Pb	02 05 34.2	+0.6
PNIG				eS	Sn	02 06 09.7	+1.5
TXIG	Tlaxiaco	3.66	306	eP	Pb	02 05 36.9	+1.6
TXIG				eS	Sn	02 06 08.1	-2.6
TOIG	Toxpalan	3.75	322	eP	Pb	02 05 38.2	+1.5
TOIG				eS	Sn	02 06 12.5	0.0
HLIG	Huajuapan de L	4.04	312	eP	Pb	02 05 42.3	+0.5
HLIG				eS	Sn	02 06 24.6	+4.6
TPIG	Tehuac#an	4.17	322	eP	Pb	02 05 45.0	+1.0
TPIG				eS	Sb	02 06 29.7	-4.9
FTIG	Fresnillo de T	4.33	310	eP	Pb	02 05 46.5	-0.1
FTIG				eS	Sn	02 06 29.0	+2.0
MGIG	Malinaltepec	4.36	299	eP	Pb	02 05 46.8	-0.4
MGIG				eS	Sn	02 06 32.3	+4.5

TLIG	**Tlapa**	**4.47**	**303**	eP	**Pb**	**02 05 46.8**	**-2.1**
TLIG				e		02 06 29.1	
TLIG	**Tlapa**	**4.47**	**303**	P	**Pb**	**02 05 48.6**	**-0.4**
CRIG	**Cruz Grande**	**4.59**	**291**	eP	**Pb**	**02 05 48.8**	**-2.3**
CRIG				eS	**Sn**	**02 06 33.8**	**+0.4**
JAUV	**Jalcomulco**	**4.69**	**334**	eP	Pn	02 05 46.5	+5.4
JAUV				eS	**Sn**	**02 06 29.6**	**-6.0**
SCIG	**Sabancuy**	**5.05**	**41**	e	**Pn**	**02 05 49.8**	**+3.7**
SCIG				e		02 06 33.9	
SCIG	**Sabancuy**	**5.05**	**41**	P	Pb	02 05 51.9	-6.9
DAIG	**Los Arroyos**	**5.16**	**292**	eP	**Pb**	**02 05 56.7**	**-4.0**
DAIG				eS	**Sn**	**02 06 42.2**	**-5.1**
PPCL	**Tochimilco**	**5.34**	**315**	eP	**Pb**	**02 06 01.5**	**-2.5**
PPCL				eS	**Sn**	**02 06 51.3**	**-0.8**
PPPT	**Popocatepetl**	**5.39**	**316**	eP	**Pb**	**02 06 02.1**	**-2.7**
PPPT				eS	**Sn**	**02 06 58.2**	**+4.6**
PBXN	**Popocatepetl**	**5.43**	**316**	eP	**Pb**	**02 06 02.0**	**-3.6**
PBXN				eS	**Sn**	**02 06 53.7**	**-1.1**
PPM	**Popocatepetl**	**5.46**	**316**	e	**Pb**	**02 06 03.5**	**-2.5**
PPM				e		02 06 53.2	
MEIG	**Mezcala**	**5.52**	**301**	eP	**Pb**	**02 06 02.6**	**-4.2**
MEIG				eS	**Sn**	**02 07 01.6**	**+5.4**
YAIG	**Yautepec**	**5.62**	**312**	eP	**Pb**	**02 06 04.2**	**-4.5**
YAIG				eS	**Sn**	**02 07 01.6**	**+2.7**
CAIG	**El Cayaco**	**5.72**	**290**	eP	Pb	02 06 04.8	-5.5
CAIG				eS	**Sn**	**02 07 01.9**	**+0.7**
CXUV	**Coxquihui**	**5.74**	**331**	e	Pn	02 06 02.8	+7.1
CXUV				e		02 06 58.9	
ARIG	**Puente Sto Nin**	**6.29**	**301**	eP	Pb	02 06 13.9	-6.1
ARIG				eS	**Sn**	**02 07 18.7**	**+3.4**
MNGA	**Volcan de Coli**	**9.59**	**298**	e	Pn	02 07 02.0	+13
INCO	**Volcan de Coli**	**9.60**	**298**	e	Pn	02 07 02.6	+14
SOMAC	**Volcano de Col**	**9.62**	**298**	e	Pn	02 07 01.8	+12
CEGR	**Campo Tres**	**9.76**	**297**	e	Pn	02 07 03.7	+13

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*SJA **03** 02:29:45.0±0.7, 31°.75S×71°.48W, h48^{km}±7^{km}, ML3.6, MW3.8*

*GUC **03** 02:29:46.9±0.7, 31°.77S×71°.21W, h64^{km}±2^{km}, ML3.8*

ISC 03 02:29:47.8±1.2**, 31°.77S**±0°.02×**71°.36W**±0°.04**, h42**^{km}±16^{km}**, n60, σ1^{s}68**/102**, 4C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO04	**Los Peladeros**	**0.42**	**130**	⇑iP	**Pn**	**02 29 57.9**	**-0.1**
CO04				i S	**Sn**	**02 30 05.7**	**+0.7**
CO02	**Combarbal**	**0.64**	**28**	⇑iP	**Pn**	**02 29 60.0**	**-0.7**
CO02				i S	**Sn**	**02 30 09.5**	**-0.3**
CO02				IAML		02 30 12.3	
	comp=E,10µm,0.1s						
CO02	**Combarbal**	**0.64**	**28**	eP	**Pn**	**02 29 59.6**	**-1.0**
CO02				IAML		02 30 12.1	
	comp=Z,1µm,0.2s						
VA06	**Catapilco**	**0.79**	**176**	eP	**Pn**	**02 30 02.9**	**+0.4**
VA06				i S	**Sn**	**02 30 14.1**	**+0.9**
VA06				IAML		02 30 17.0	
	comp=E,10µm,0.4s						
CO03	**El Pedregal**	**1.09**	**32**	eP	**Pn**	**02 30 05.8**	**-1.0**
CO03				i S	**Sn**	**02 30 20.0**	**-0.7**
CO03	**El Pedregal**	**1.09**	**32**	eP	**Pn**	**02 30 05.7**	**-1.1**
CO03				eS	**Sn**	**02 30 20.9**	**+0.2**
CO03				IAML		02 30 22.8	
	comp=Z,1µm,0.2s						
CO06	**Fray Jorge**	**1.12**	**348**	eP	**Pn**	**02 30 07.5**	**+0.4**
CO06				i S	**Sn**	**02 30 22.8**	**+1.5**
CO06				IAML		02 30 28.0	
	comp=E,2µm,0.1s						
VA03	**San Esteban**	**1.20**	**146**	⇑iP	**Pn**	**02 30 07.1**	**-1.1**
VA03				i S	**Sn**	**02 30 22.3**	**-1.1**
VA03				IAML		02 30 23.9	
	comp=E,6µm,0.1s						
VA03	**San Esteban**	**1.20**	**146**	eP	**Pn**	**02 30 07.1**	**-1.1**
VA03				eS	**Sn**	**02 30 22.7**	**-0.7**
VA03				IAML		02 30 24.2	
	comp=Z,2µm,0.2s						
ROCH	**El Roble**	**1.23**	**166**	eP		02 30 08.1	
ROCH				eP	**Pn**	**02 30 08.0**	**-0.8**
ROCH				i S	**Sn**	**02 30 24.6**	**+0.3**
ROCH				i S		02 30 24.8	
ROCH				IAML		02 30 30.2	
	comp=N,3µm,0.4s						
ROC1	**El Roble**	**1.23**	**167**	eP	**Pn**	**02 30 08.1**	**-0.8**
ROC1				eS	**Sn**	**02 30 23.6**	**-0.9**
VA01	**Torpederas**	**1.27**	**191**	eP	**Pn**	**02 30 08.8**	**-0.3**
VA01				eS	**Sn**	**02 30 27.3**	**+2.4**
VA01				IAML		02 30 31.2	
	comp=Z,696nm,0.3s						
PEL	**Peldehue**	**1.48**	**158**	eP	**Pn**	**02 30 11.2**	**-0.8**
PEL				i S	**Sn**	**02 30 29.5**	**-0.7**
PEL	**Peldehue**	**1.48**	**158**	eP	**Pn**	**02 30 11.3**	**-0.8**
PEL				eS	**Sn**	**02 30 30.3**	**+0.1**
PEL				IAML		02 30 34.1	
	comp=Z,576nm,0.4s						
MT02	**Curacav**	**1.49**	**173**	eP	**Pn**	**02 30 11.8**	**-0.3**
MT02				i S	**Sn**	**02 30 30.4**	**-0.1**
MT02				IAML		02 30 31.4	
	comp=N,1µm,0.3s						
MT02	**Curacav**	**1.49**	**173**	eP	**Pn**	**02 30 12.0**	**-0.2**
MT02				eS	**Sn**	**02 30 30.6**	**+0.1**
MT02				IAML		02 30 31.6	
	comp=Z,1µm,0.2s						
MT10	**Hacienda Santa**	**1.65**	**155**	eP	**Pn**	**02 30 13.7**	**-0.8**
MT10				i S	**Sn**	**02 30 33.5**	**-0.9**
GO04	**Tololo Observa**	**1.67**	**17**	eP	**Pn**	**02 30 14.0**	**-0.7**
GO04				i S	**Sn**	**02 30 34.8**	**-0.2**
GO04	**Tololo Observa**	**1.67**	**17**	eP	**Pn**	**02 30 14.3**	**-0.4**
GO04				eS	**Sn**	**02 30 35.5**	**+0.4**
GO04				IAML		02 30 37.4	
	comp=Z,2µm,0.2s						
MT05	**Renca**	**1.70**	**162**	eP	**Pn**	**02 30 14.7**	**-0.3**
MT05				eS	**Sn**	**02 30 38.3**	**+2.8**
MT05				IAML		02 30 41.9	
	comp=Z,469nm,0.2s						
RTLS	**Leoncito**	**1.75**	**91**	eP	**Pn**	**02 30 15.5**	**-0.5**
RTLS				eS	**Sn**	**02 30 37.7**	**+0.4**
RTLS				IAML		02 30 38.5	
	comp=Z,741nm,0.3s						
CO05	**La Serena**	**1.85**	**3**	eP	**Pn**	**02 30 16.3**	**-0.8**
CO05				i S	**Sn**	**02 30 38.9**	**-0.4**
CO05				IAML		02 30 51.0	
	comp=E,773nm,0.2s						
MT03	**Universidad Ad**	**1.86**	**158**	eP	**Pn**	**02 30 16.6**	**-0.7**
MT03				i S	**Sn**	**02 30 39.0**	**-0.6**
MT03				IAML		02 30 48.2	
	comp=E,2µm,0.2s						
MT03	**Universidad Ad**	**1.86**	**158**	eP	**Pn**	**02 30 16.9**	**-0.4**
MT03				eS	**Sn**	**02 30 41.0**	**+1.4**
MT03				IAML		02 30 46.9	
	comp=Z,703nm,0.2s						
MT04	**Ro Olivares**	**1.93**	**148**	eP	**Pn**	**02 30 18.0**	**-0.3**
MT04				i S	**Sn**	**02 30 41.5**	**0.0**
MT04				IAML		02 30 47.3	
	comp=E,726nm,0.3s						
MT04	**Ro Olivares**	**1.93**	**148**	eP	**Pn**	**02 30 18.2**	**-0.1**
MT04				eS	**Sn**	**02 30 42.8**	**+1.3**
MT04				IAML		02 30 47.4	
	comp=Z,339nm,0.2s						
MT08	**Bocatoma Ro**	**2.01**	**146**	eP	**Pn**	**02 30 20.2**	**+0.7**
MT08				eS	**Sn**	**02 30 46.3**	**+2.7**
MT08				IAML		02 30 47.0	
	comp=Z,322nm,0.6s						
MT01	**Popeta**	**2.09**	**178**	eP	**Pn**	**02 30 19.5**	**-0.8**
MT01				IAML		02 30 54.7	
	comp=Z,327nm,0.2s						
CO01	**Juntas del Tor**	**2.09**	**32**	⇑iP	**Pn**	**02 30 20.1**	**-0.5**
CO01				i S	**Sn**	**02 30 44.7**	**-0.9**
CO01				IAML		02 30 46.5	
	comp=N,760nm,0.2s						
CO01	**Juntas del Tor**	**2.09**	**32**	eP	**Pn**	**02 30 20.2**	**-0.5**
CO01				eS	**Sn**	**02 30 45.5**	**-0.1**
CO01				IAML		02 30 45.6	
	comp=Z,411nm,0.5s						
MT13	**San Alfonso**	**2.16**	**156**	eP	**Pn**	**02 30 22.0**	**+0.6**
MT13				eS	**Sn**	**02 30 49.0**	**+1.9**
MT13				IAML		02 30 52.6	
	comp=Z,370nm,0.2s						
AROD	**Rodeo**	**2.27**	**46**	eP	**Pn**	**02 30 23.6**	**+0.4**
AROD				eS	**Sn**	**02 30 47.5**	**-2.7**
LMEL	**Las Melosas**	**2.29**	**155**	eP	**Pn**	**02 30 23.4**	**+0.2**
LMEL				eS	**Sn**	**02 30 51.5**	**+1.3**
LMEL				IAML		02 30 56.1	
	comp=Z,284nm,0.1s						
ACCO	**Cerro Coronel**	**2.29**	**60**	eP	**Pn**	**02 30 24.2**	**+0.8**
ACCO				eS	**Sn**	**02 30 52.9**	**+2.3**
BO04	**La Punta**	**2.30**	**164**	eP	**Pn**	**02 30 22.5**	**-0.7**
BO04				i S	**Sn**	**02 30 50.0**	**-0.3**
BO04				IAML		02 30 53.1	
	comp=N,477nm,0.3s						
ARCO	**CERRO ARCO**	**2.31**	**118**	eP	**Pn**	**02 30 24.7**	**+1.1**
ARCO				eS	Sn	02 30 59.7	+8.8
ARCO				IAML		02 31 00.3	
	comp=Z,192nm,0.2s						
SJA	**San Juan**	**2.40**	**85**	eP	Pn	02 30 10.3	-14
SJA				eS	**Sn**	**02 30 55.9**	**+3.1**
ACDV	**Cuesta del Vie**	**2.50**	**51**	eP	**Pn**	**02 30 27.4**	**+1.3**
ACDV				eS	**Sn**	**02 30 55.6**	**+0.1**
ACDV				IAML		02 31 06.7	
	comp=Z,121nm,0.3s						
RTLL	**Cerro Villicun**	**2.50**	**81**	eP	**Pn**	**02 30 26.3**	**+0.2**
RTLL				eS	**Sn**	**02 30 55.5**	**+0.2**
RTLL				IAML		02 31 00.1	
	comp=Z,232nm,0.2s						
AAGR	**Agrelo**	**2.51**	**122**	eP	**Pn**	**02 30 27.1**	**+1.0**
AAGR				eS	**Sn**	**02 30 46.8**	**-8.8**
BO01	**Tunca**	**2.62**	**175**	eP	**Pn**	**02 30 27.1**	**-0.5**
BO01	**Tunca**	**2.62**	**175**	eP	Pn	02 30 15.7	-12
BO01				IAML		02 31 11.2	
	comp=Z,144nm,0.5s						
CFA	**Coronel Fontan**	**2.66**	**87**	eP	**Pn**	**02 30 24.2**	**-4.1**
CFA				eS	**Sn**	**02 31 03.4**	**+4.0**
BO03	**Pichilemu**	**2.76**	**190**	eP	**Pn**	**02 30 28.5**	**-1.1**
BO03				IAML		02 31 17.5	
	comp=N,223nm,0.3s						
LCO	**Las Campanas**	**2.81**	**12**	eP	**Pn**	**02 30 30.0**	**-0.5**
LCO				eS	**Sn**	**02 31 04.0**	**+0.7**
LCO				IAML		02 31 11.9	
	comp=Z,438nm,0.7s						
BO02	**Sierra Bellavi**	**3.05**	**171**	eP	**Pn**	**02 30 33.3**	**-0.3**
BO02				eS	**Sn**	**02 31 09.0**	**+0.1**
BO02				IAML		02 31 20.1	
	comp=Z,183nm,0.2s						
AC05	**El Transito**	**3.07**	**18**	eP	**Pn**	**02 30 33.6**	**-0.4**
AC05				i S	**Sn**	**02 31 08.3**	**-1.3**
AC05				IAML		02 31 14.1	
	comp=N,428nm,0.4s						
AC05	**El Transito**	**3.07**	**18**	eP	**Pn**	**02 30 33.7**	**-0.3**
AC05				eS	**Sn**	**02 31 09.5**	**-0.1**
AC05				IAML		02 31 13.7	
	comp=Z,189nm,0.2s						
GO05	**Hualane**	**3.26**	**188**	eP	**Pn**	**02 30 35.7**	**-0.8**
GO05				eS	Sn	02 31 26.0	+12
GO05				IAML		02 31 29.9	
	comp=Z,118nm,0.7s						
AGUA	**GUANDACOL**	**3.36**	**48**	eS	Sn	02 31 25.7	+9.1
AGUA				IAML		02 31 29.1	
	comp=Z,300nm,0.3s						
AVFE	**Valle Fertil**	**3.52**	**73**	eS	**Sn**	**02 31 22.4**	**+1.9**
AVFE				IAML		02 31 25.7	
	comp=Z,193nm,0.6s						
AC04	**Llanos de Chal**	**3.56**	**4**	eP	**Pn**	**02 30 39.8**	**-0.8**
AC04				eS	**Sn**	**02 31 22.6**	**+1.1**
AC04				IAML		02 31 34.0	
	comp=Z,263nm,0.6s						
RFA	**San Rafael**	**3.85**	**142**	eP	**Pn**	**02 30 44.4**	**-0.2**
RFA				IAML		02 32 03.0	
	comp=Z,37nm,0.5s						
ACHE	**Chepes**	**4.05**	**83**	eP	**Pn**	**02 30 48.1**	**+0.6**
ACHE				eS	**Sn**	**02 31 27.3**	**-6.5**
ACHE				eS		02 31 30.8	
VCA	**Vinchina**	**4.07**	**43**	eP	**Pn**	**02 30 49.0**	**+1.2**
VCA				eS	Sn	02 31 47.3	+13
GO03	**Copiapo**	**4.28**	**13**	eP	**Pn**	**02 30 49.8**	**-0.7**
GO03				eS	**Sn**	**02 31 39.3**	**+0.1**
GO03				IAML		02 31 59.1	
	comp=Z,136nm,0.7s						
APLL	**PUNTA DE LOS L**	**4.36**	**73**	eS	**Sn**	**02 31 43.4**	**+2.1**
APLL				IAML		02 32 01.9	
	comp=Z,58nm,0.6s						
ACLC	**CERRO LA CRUZ**	**4.46**	**59**	eS	**Sn**	**02 31 48.4**	**+4.5**
ACLC				IAML		02 31 52.0	
	comp=Z,76nm,0.5s						
TINO	**Tinogasta**	**4.95**	**43**	eP	Pn	02 30 53.8	-5.9
TINO				eS	**Sn**	**02 31 58.3**	**+2.6**
AC02	**Maricunga**	**5.29**	**22**	eP	**Pn**	**02 31 04.0**	**-0.8**
AC02				eS	Sn	02 32 21.6	+17
AC02				IAML		02 32 22.6	
	comp=Z,36nm,0.8s						

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*TIR **03** 02:33:00.2, 41°.68N×19°.69E, h41^{km}±1^{km}, Ml2.5/5*

*PDG **03** 02:33:00.6±0.1, 41°.58N×19°.61E, h9^{km}, ML2.4/13, Error ellipse: s-maj=0.1km s-min=0.5km az=0.0*

ISC 03 02:32:59.3±1.2**, 41°.51N**±0°.02×**19°.55E**±0°.03**, h0**^{km}±11^{km}**, n21, σ0^{s}96**/41**, 6C-3D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.29**	**125**	⇑Pg	**Pb**	**02 33 06.4**	**-0.8**
TIR				Sg	**Sg**	**02 33 10.0**	**+1.5**
TIR				AML	AML	02 33 11.6	
	1.8nm,0.6s						
ULC	**Ulcinj**	**0.51**	**333**	⇑iPg	**Pg**	**02 33 09.1**	**+0.1**
ULC				i Sg	**Sg**	**02 33 16.5**	**+1.0**
SDA	**Shkodra**	**0.54**	**356**	Pg	**Pg**	**02 33 09.7**	**+0.1**
SDA				Sg	**Sg**	**02 33 17.4**	**+0.8**
PHP	**Peshkopia**	**0.69**	**75**	Pg	**Pg**	**02 33 12.5**	**+0.1**
PHP				Sg	**Sg**	**02 33 20.8**	**-0.6**
PHP				AML	AML	02 33 28.4	
	0.5nm,0.5s						
DRME	**Dracevica, Mon**	**0.73**	**338**	⇑iPg	**Pg**	**02 33 13.1**	**-0.1**
DRME				eSg	**Sg**	**02 33 24.1**	**+1.5**
BUM	**Brajici-Budva**	**0.93**	**328**	ePg	**Pg**	**02 33 17.4**	**+0.3**
BUM				i Sg	**Sb**	**02 33 31.2**	**+0.1**
PDG	**Podgorica**	**0.94**	**346**	Pg	**Pg**	**02 33 16.5**	**-0.9**
PDG				Sg	**Sg**	**02 33 27.8**	**-1.8**
PDG	**Podgorica**	**0.94**	**346**	⇑iPg	**Pg**	**02 33 17.3**	**0.0**
PDG				eSg	**Sg**	**02 33 30.3**	**+0.7**
VLO	**Vlora**	**1.04**	**182**	Pg	**Pn**	**02 33 21.3**	**+0.2**
VLO				Sg	**Sn**	**02 33 38.2**	**+1.9**
VLO				AML	AML	02 33 44.0	
	0.7nm,0.5s						
PVY	**Plav**	**1.12**	**15**	ePg	**Pg**	**02 33 19.9**	**-0.9**
PVY				i Sg	**Sg**	**02 33 36.5**	**+1.2**
CEME	**Cevo**	**1.14**	**336**	⇑iPg	**Pg**	**02 33 20.5**	**-0.5**
CEME				eSg	**Sn**	**02 33 38.0**	**-0.8**
HCY	**Herceg Novi**	**1.22**	**320**	ePg	**Pn**	**02 33 23.0**	**-0.6**
HCY				i Sg	**Sn**	**02 33 41.1**	**+0.3**
NKME	**Niksic**	**1.33**	**341**	⇓iPg	**Pn**	**02 33 24.6**	**-0.5**
NKME				eSg	**Sn**	**02 33 44.1**	**+0.6**
KOME	**Kolasin**	**1.34**	**359**	ePg	**Pn**	**02 33 24.4**	**-0.8**
KOME				eSg	**Sn**	**02 33 43.9**	**+0.1**
IVA	**Berane**	**1.38**	**10**	⇓iPg	**Pn**	**02 33 24.6**	**-1.2**
IVA				i Sg	**Sg**	**02 33 45.2**	**+1.6**
NEST	**Nestorio**	**1.58**	**134**	⇓Pn	**Pg**	**02 33 30.3**	**+0.8**
NEST				Sn	**Sg**	**02 33 50.1**	**+0.2**
NEST				AML	AML	02 33 58.0	
	0.1nm,0.4s						
BRY	**Bratogost**	**1.58**	**332**	⇑iPg	**Pb**	**02 33 28.9**	**-0.5**
BRY				i Sg	**Sg**	**02 33 52.2**	**+2.2**
UPM	**Unac-Piva**	**1.76**	**344**	ePn	**Pn**	**02 33 31.1**	**0.0**
UPM				eSn	**Sg**	**02 33 56.3**	**+0.6**
PLE	**Pljevlja**	**1.82**	**356**	ePn	**Pn**	**02 33 32.4**	**+0.5**
PLE				eSn	**Sb**	**02 33 57.5**	**+0.6**
NOCI	**Noci**	**2.01**	**250**	Pn	**Pg**	**02 33 37.0**	**-0.9**
NOCI				Sn	**Sg**	**02 34 04.5**	**+0.5**
NOCI				AML	AML	02 34 14.9	
	0.1nm,0.6s						
IGT	**Igoumenitsa**	**2.07**	**163**	Pg	**Pg**	**02 33 37.4**	**-1.5**

NOU 03 02:42:16.9, 16°.26S×168°.39E, h6^{km}**, MLv4.3**/12**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**1.40**	**305**	P	Pn	02 42 41.3	-1.7
DVP	**Devils Point**	**1.47**	**188**	P	Pn	02 42 44.2	+0.2
RTV	**Rentapao**	**1.52**	**179**	P	Pn	02 42 44.1	-0.6
YATNC	**Mamie plateau,**	**5.94**	**194**	P	Pn	02 43 44.8	-0.7
DZM	**Mont Dzumac**	**6.07**	**197**	P	Pn	02 43 47.8	+0.5

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*IDC **03** 02:58:39.0±2.7, 21°.64N×143°.09E, h292^{km}±26^{km}, mb3.6/24, mbtmp4.3/27, Error ellipse: s-maj=15.7km s-min=9.8km az=82.0*

*NEIC **03** 02:58:40.8±1.6, 21°.70N±0°.04×143°.1E±0°.1, h304^{km}±7^{km}, mb4.5/16, Error ellipse: s-maj=19.6km s-min=3.5km az=74.0*

ISC 03 02:58:40.9±0.5**, 21°.67N**±0°.06×**143°.1E**±0°.1**, h311**^{km}**, n64, σ0^{s}71**/71**, mb3.9**/26**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.46**	**351**	P	Pn	02 59 53.6	-11
	202nm,0.3s,baz=270,slow=24,SNR=27						
JCJ				S	S	03 00 59.4	-12
	229nm,0.5s,baz=302,slow=22,SNR=9.0						
JCJ	**Chichijima**	**5.46**	**351**		**Pn**	**03 00 03.6**	**-0.6**
JCJ					**S**	**03 01 09.5**	**-1.7**
DPSS	**Saipan**	**6.89**	**158**	Pn	**Pn**	**03 00 21.7**	**+0.5**
JHJ2	**Mitsune**	**11.76**	**346**		**Pn**	**03 01 20.2**	**0.0**
JHJ	**Hachijo jima 2**	**11.78**	**346**	P	**Pn**	**03 01 19.7**	**-0.7**
	76nm,0.3s,baz=73,slow=23,SNR=5.4						
JHJ				S	**S**	**03 03 31.6**	**-0.1**
	184nm,0.8s,baz=258,slow=23,SNR=2.2						
JMN	**Monobe**	**14.51**	**328**	Pn	**Pn**	**03 01 54.5**	**+1.3**
INU	**Inuyama**	**14.63**	**340**		**P**	**03 01 53.5**	**+0.2**
JGF	**Kuroka**	**14.76**	**341**	P	**P**	**03 01 54.7**	**0.0**
MJAR	**Matsushiro Arr**	**15.42**	**345**	P	**P**	**03 02 01.8**	**-0.1**
	5.2nm,0.4s,baz=158,slow=5.7,SNR=15						
MJAR				S	**S**	**03 04 47.3**	**-1.3**
	1.9nm,0.6s,baz=131,slow=49,SNR=1.9						
MJAR	**Matsushiro Arr**	**15.42**	**345**		**P**	**03 02 00.7**	**-1.2**
MJAR				IAmb	IAmb	03 02 04.1	
	comp=Z,19nm,1.4s						
MAJO	**Matsushiro**	**15.42**	**345**		**P**	**03 02 02.3**	**+0.4**
MAJO				IAmb	IAmb	03 02 04.3	
	comp=Z,49nm,1.4s						
MJB9	**Matsu-Tunnel**	**15.42**	**345**	Pn	**Pn**	**03 02 03.3**	**-0.5**
MJB9				IAmb	IAmb	03 02 05.2	
	comp=Z,46nm,1.4s						
JNU	**Nakatsue**	**15.72**	**319**	P	**P**	**03 02 06.3**	**+1.0**
	comp=Z,7.4nm,0.7s,baz=135,slow=4.3,SNR=5.7						
JNU	**Nakatsue**	**15.72**	**319**	P	**P**	**03 02 04.8**	**-0.5**
JNU				IAmb	IAmb	03 02 33.6	
	comp=Z,63nm,1.5s						
JSD	**Sado**	**16.84**	**347**	P	**P**	**03 02 17.7**	**+0.4**
KSRS	**Korea Array**	**20.49**	**323**	P	**P**	**03 02 55.1**	**-0.8**
	comp=Z,5.7nm,0.7s,baz=146,slow=9.4,SNR=8.6						
	comp=Z,5.7nm,0.7s						
TPUB	**Ta-pu**	**20.82**	**279**	P	**P**	**03 02 59.4**	**+0.1**
USRK	**Ussuriysk Ar.**	**24.28**	**340**	P	**P**	**03 03 30.0**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=172,slow=11,SNR=4.3						
	comp=Z,1.9nm,0.7s						
FAKI	**Fak Fak**	**26.64**	**205**	P	**P**	**03 03 50.9**	**-1.1**
FAKI				IAmb	IAmb	03 03 52.7	
	comp=Z,8.5nm,1.2s						
LZDM	**Lanzhou Array**	**37.08**	**301**	P	**P**	**03 05 23.0**	**+0.5**
	comp=Z,3.5nm,0.4s,baz=140,slow=4.7,SNR=8.8						
	comp=Z,3.5nm,0.4s						
SONM	**Songino Array**	**39.31**	**321**	P	**P**	**03 05 40.9**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=132,slow=6.3,SNR=8.5						
	comp=Z,0.6nm,0.4s						
CMAR	**Chiang Mai Arr**	**41.49**	**274**	P	**P**	**03 05 58.9**	**+0.3**
	comp=Z,2.2nm,0.4s,baz=84,slow=6.3,SNR=11						
	comp=Z,2.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**41.49**	**274**	P	**P**	**03 05 58.4**	**-0.2**
WRA	**Warramunga Arr**	**42.24**	**192**	P	**P**	**03 06 03.5**	**-1.0**
	comp=Z,1.8nm,0.2s,baz=18,slow=9.0,SNR=20						
	comp=Z,1.8nm,0.2s						
WRA	**Warramunga Arr**	**42.24**	**192**	P	**P**	**03 06 03.1**	**-1.4**
ASAR	**Alice Springs**	**45.95**	**192**	P	**P**	**03 06 32.6**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=11,slow=8.3,SNR=13						
ASAR				PcP	**PcP**	**03 08 06.1**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=15,slow=3.8,SNR=3.1						
	comp=Z,0.6nm,0.3s						
ASAR	**Alice Springs**	**45.95**	**192**	P	**P**	**03 06 33.1**	**-0.6**
STKA	**Stephens Creek**	**53.26**	**182**	P	**P**	**03 07 27.7**	**-0.6**
	comp=Z,1.8nm,0.5s,baz=10,slow=11,SNR=3.1						
	comp=Z,1.8nm,0.5s						
STKA	**Stephens Creek**	**53.26**	**182**	P	**P**	**03 07 28.3**	**0.0**
STKA				IAmb	IAmb	03 07 30.6	
	comp=Z,49nm,1.5s						
ZALV	**Zalesovo Beam**	**54.18**	**322**	P	**P**	**03 07 34.7**	**0.0**
	comp=Z,1.6nm,0.5s,baz=107,slow=6.3,SNR=8.1						
ZALV				PcP	**PcP**	**03 08 34.4**	**-0.5**
	comp=Z,3.1nm,0.4s,baz=122,slow=3.9,SNR=12						
	comp=Z,1.6nm,0.5s						
ZALV	**Zalesovo Beam**	**54.18**	**322**	P	**P**	**03 07 35.4**	**+0.7**
ZALV					**PcP**	**03 08 34.3**	**-0.5**
MKAR	**Makanchi Array**	**54.65**	**313**	P	**P**	**03 07 38.3**	**0.0**
	comp=Z,1.2nm,0.6s,baz=92,slow=8.3,SNR=11						
MKAR				PcP	**PcP**	**03 08 37.1**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=77,slow=4.7,SNR=7.1						
	comp=Z,1.2nm,0.6s						
KURK	**Kurchatov**	**57.44**	**317**		**P**	**03 07 57.8**	**+0.1**
KURBB	**Kurchatov Arra**	**57.49**	**317**	P	**P**	**03 07 57.8**	**-0.3**
	comp=Z,5.3nm,0.6s,baz=94,slow=7.4,SNR=50						
	comp=Z,5.3nm,0.6s						
NRIK	**Noril'sk**	**57.99**	**340**	P	**P**	**03 08 01.3**	**+0.1**
	comp=Z,2.4nm,0.5s,baz=124,slow=4.2,SNR=4.8						
	comp=Z,2.4nm,0.5s						
NRIK	**Noril'sk**	**57.99**	**340**	P	**P**	**03 08 01.1**	**-0.1**
ILAR	**Eielson Array**	**62.10**	**27**	P	**P**	**03 08 28.8**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=258,slow=5.4,SNR=20						
	comp=Z,1.2nm,0.7s						
ILAR	**Eielson Array**	**62.10**	**27**	P	**P**	**03 08 28.5**	**-0.5**
BVAR	**Borovoye Array**	**62.64**	**320**	P	**P**	**03 08 33.1**	**+0.3**
	comp=Z,9.2nm,0.3s,baz=97,slow=7.9,SNR=79						
BVAR				PcP	**PcP**	**03 09 08.3**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=86,slow=4.5,SNR=4.2						
	comp=Z,9.2nm,0.3s						
BORK	**Borovoye**	**62.68**	**320**		**P**	**03 08 33.4**	**+0.4**
KK31	**Karatay Array**	**63.01**	**308**		**P**	**03 08 35.9**	**+0.5**
KKAR	**Karatay Array**	**63.01**	**308**	P	**P**	**03 08 35.8**	**+0.4**
D25K	**Kavik River**	**63.04**	**22**	P	**P**	**03 08 37.0**	**+1.8**
D25K				IAmb	IAmb	03 08 37.8	
	comp=Z,3.0nm,0.6s						
AB31	**Akbulak array**	**69.51**	**316**		**P**	**03 09 16.5**	**+0.3**
AB31				IAmb	IAmb	03 09 17.0	
	comp=Z,7.0nm,0.6s						
ABKAR	**Akbulak array**	**69.51**	**316**		**P**	**03 09 16.4**	**+0.2**
SPITS	**Spitsbergen Ar**	**75.84**	**350**	P	**P**	**03 09 53.5**	**+0.7**
	comp=Z,3.6nm,0.8s,baz=39,slow=9.3,SNR=1.3						
	comp=Z,3.6nm,0.8s						
YKA	**Yellowknife Ar**	**76.52**	**28**	P	**P**	**03 09 57.4**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=296,slow=16,SNR=4.2						
	comp=Z,0.9nm,0.6s						
ARCES	**ARCESS Array B**	**78.92**	**341**	P	**P**	**03 10 11.0**	**+1.1**
	comp=Z,2.0nm,0.6s,baz=76,slow=8.6,SNR=15						
	comp=Z,2.0nm,0.6s						
ARCES	**ARCESS Array B**	**78.92**	**341**	P	**P**	**03 10 10.7**	**+0.8**
KBZ	**Khabaz**	**82.33**	**314**	P	**P**	**03 10 29.0**	**+0.7**
	comp=Z,5.2nm,0.8s,baz=106,slow=3.6,SNR=12						
	comp=Z,5.2nm,0.8s						
FINES	**FINESS Array B**	**83.17**	**334**	P	**P**	**03 10 31.9**	**-0.4**
	comp=Z,3.2nm,0.4s,baz=64,slow=5.0,SNR=35						
	comp=Z,3.2nm,0.4s						
FINES	**FINESS Array B**	**83.17**	**334**	P	**P**	**03 10 31.7**	**-0.5**
NVAR	**Mina Array Bea**	**83.22**	**51**	P	**P**	**03 10 34.3**	**+1.0**
	comp=Z,1.3nm,0.7s,baz=268,slow=6.0,SNR=12						
	comp=Z,1.3nm,0.7s						
NVAR	**Mina Array Bea**	**83.22**	**51**	P	**P**	**03 10 33.1**	**-0.2**
PDAR	**Pinedale Array**	**87.47**	**45**	P	**P**	**03 10 53.3**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=135,slow=2.0,SNR=5.3						
	comp=Z,0.2nm,0.5s						
PDAR	**Pinedale Array**	**87.47**	**45**	P	**P**	**03 10 53.8**	**-0.3**
AKASG	**Malin Array Be**	**87.48**	**324**	P	**P**	**03 10 52.5**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=50,slow=5.5,SNR=2.5						
	comp=Z,0.5nm,0.4s						
HFS	**Hagfors**	**88.72**	**337**	P	**P**	**03 10 58.1**	**-1.2**
	comp=Z,1.1nm,0.4s,baz=46,slow=4.2,SNR=14						
	comp=Z,1.1nm,0.4s						
BRTR	**Keskin Array B**	**90.30**	**313**	P	**P**	**03 11 07.0**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=72,slow=4.0,SNR=3.7						
	comp=Z,0.6nm,0.7s						
BRTR	**Keskin Array B**	**90.30**	**313**	P	**P**	**03 11 06.8**	**-0.5**
PLCA	**Paso Flores**	**145.80**	**131**	PKPbc	**PKPbc**	**03 17 44.2**	**+0.3**
	comp=Z,2.0nm,0.5s,baz=253,slow=2.8,SNR=10.0						
PLCA	**Paso Flores**	**145.80**	**131**		**PKPab**	**03 17 44.9**	**-0.1**
LPAZ	**La Paz**	**150.02**	**85**	PKPbc	**PKiKP**	**03 17 57.6**	**+0.5**
	comp=Z,3.3nm,0.6s,baz=324,slow=2.9,SNR=19						
LPAZ	**La Paz**	**150.02**	**85**		**PKPbc**	**03 17 56.2**	**-0.1**

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*IPEC **03** 03:04:35.1±0.2, 51°.53N×16°.24E, h1^{km}, ML2.0/7, Error ellipse: s-maj=2.3km s-min=1.3km az=70.0*

*VIE **03** 03:04:36.2±0.7, 51°.46N×16°.51E, h0^{km}, mb2.6/4, ml2.4/3, Error ellipse: s-maj=7.7km s-min=4.5km az=106.0 54 km NW of Wroclaw Suspected Mining induced.*

*PRU **03** 03:04:36.6, 51°.50N×16°.14E, h0^{km}*

ISC 03 03:04:34.4±1.2**, 51°.55N**±0°.06×**16°.12E**±0°.03**, h0^{km}, n24, σ0^{s}.76**/48**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.71**	**171**	*e*Pg	**Pg**	**03 04 48.7**	**+0.6**
KSP				*e*Sg	**Sg**	**03 04 58.0**	**+0.7**
CHVC	**Chvalec**	**0.96**	**182**	*e*PG	**Pb**	**03 04 53.6**	**-0.3**
OSTC	**Ostas**	**0.99**	**176**	*e*PG	**Pb**	**03 04 54.2**	**-0.3**
OSTC				*e*SG	**Sb**	**03 05 07.4**	**-0.8**
	comp=Z,13nm,0.3s						
UPC	**Upice**	**1.04**	**184**	*e*PG	**Pg**	**03 04 54.8**	**+0.4**
UPC				*e*SG	**Sn**	**03 05 11.0**	**-0.6**
DPC	**Dobruska-Polom**	**1.21**	**174**	*e*PG	**Pg**	**03 04 57.6**	**+0.1**
DPC				*e*SG	**Sg**	**03 05 13.2**	**+0.1**
	comp=Z,9.5nm,0.5s						
PIVO	**Bartosovice**	**1.39**	**169**	*e*Pg	**Pg**	**03 05 00.6**	**-0.4**
	baz=352						
PIVO				*e*Sg	**Sg**	**03 05 17.7**	**-1.3**
	21nm,0.3s,baz=352						
PVCC	**Panska Ves**	**1.41**	**224**	*e*PG	**Pb**	**03 05 02.1**	**+0.5**
PVCC				*e*SG	**Sn**	**03 05 21.5**	**+0.8**
	comp=Z,39nm,0.3s						
KRLC	**Kraliky**	**1.53**	**164**	*e*PG	**Pn**	**03 05 02.6**	**-0.5**
KRLC				*e*SG	**Sg**	**03 05 23.3**	**-0.3**
	comp=Z,13nm,0.3s						
ANAC	**Anensky vrch**	**1.68**	**151**	*e*Pn	**Pn**	**03 05 04.9**	**-0.2**
	baz=334						
ANAC				*e*Sg	**Sn**	**03 05 26.2**	**-1.1**
	10nm,0.4s,baz=334						
RYBC	**Ceska Rybna**	**1.74**	**181**	*e*Pn	**Pn**	**03 05 06.3**	**+0.4**
	baz=3.6						
RYBC				*e*Sg	**Sb**	**03 05 29.2**	**-0.4**
	15nm,0.4s,baz=3.6						
PRU	**Pruhonice**	**1.85**	**213**	*e*PG	**Pb**	**03 05 09.2**	**+0.1**
PRU				*e*SG	**Sg**	**03 05 33.9**	**0.0**
STEB	**Steborice**	**1.93**	**146**	*e*PG	**Pb**	**03 05 10.3**	**-0.1**
STEB				*e*SG	**Sb**	**03 05 34.7**	**-0.3**
	comp=Z,24nm,0.6s						
HSKC	**Hora Svate Kat**	**1.94**	**242**	*e*PG	**Pb**	**03 05 10.0**	**-0.6**
HSKC				*e*SG	**Sg**	**03 05 36.6**	**0.0**
CLL	**Collm**	**1.96**	**264**	*e*Pn	**Pn**	**03 05 08.0**	**-0.9**
CLL				*e*Pg	**Pg**	**03 05 12.0**	**0.0**
CLL				*i* x	x	03 05 15.4	
CLL				*e*Sg	**Sg**	**03 05 38.0**	**+0.5**
	comp=Z,12nm,0.8s						
MORC	**Moravsky Berou**	**1.99**	**152**	*e*Pn	**Pn**	**03 05 08.8**	**-0.6**
	baz=335						
MORC				*e*Sg	**Sb**	**03 05 36.0**	**-0.9**
	comp=Z,9.1nm,0.6s,baz=335						
VRAC	**Vranov**	**2.26**	**172**	*e*Pn	**Pn**	**03 05 13.4**	**+0.3**
	baz=354						
VRAC				*e*Sg	**Sb**	**03 05 45.5**	**+0.9**
	comp=Z,7.3nm,0.5s,baz=354						
MAUC	**Maruska**	**2.44**	**153**	*e*PN	**Pn**	**03 05 15.4**	**-0.2**
MAUC				*e*PG	**Pg**	**03 05 20.5**	**-0.7**
KRUC	**Moravsky**	**2.50**	**176**	*e*Pn	**Pn**	**03 05 16.8**	**+0.6**
	baz=358						
KRUC				*e*Sg	**Sb**	**03 05 52.4**	**+1.1**
	comp=Z,4.9nm,0.6s,baz=358						
OJC	**Ojcow**	**2.68**	**118**	*e*Pg	**Pg**	**03 05 26.2**	**+0.4**
OJC				*e*Sg	**Sg**	**03 06 00.4**	**-0.2**
KHC	**Kasperske Hory**	**2.92**	**215**	*e*PN	**Pn**	**03 05 22.2**	**+0.1**
KHC				*e*PG	**Pb**	**03 05 27.1**	**-0.2**
KHC				*e*SG	**Sg**	**03 06 07.3**	**-0.7**
	comp=Z,6.3nm,0.4s						
LANS	**Liptovska Anna**	**3.22**	**137**	*e*PG	**Pg**	**03 05 37.1**	**+1.0**
LANS				*e*SG	**Sb**	**03 06 14.6**	**+2.4**
LANS				*e*LG	Lg	03 06 19.4	
CONA	**Conrad Observa**	**3.63**	**183**	*i* Pn	**Pn**	**03 05 32.7**	**+0.8**
	comp=Z,0.6nm,0.3s						
CONA				*e*Sg	**Sg**	**03 06 30.3**	**-0.6**
	comp=Z,1.2nm,0.2s						
RONA	**Rosalia, Austr**	**3.85**	**178**	*e*Sg	**Sg**	**03 06 36.5**	**-1.6**
	comp=Z,2.9nm,0.4s						
MOA	**Molln**	**3.89**	**199**	*i* Pn	**Pn**	**03 05 36.0**	**+0.5**
	comp=Z,1.1nm,0.3s						
MOA				*e*Sg	**Sg**	**03 06 40.7**	**+1.3**
	comp=Z,1.7nm,0.3s						

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*IDC **03** 03:18:58.6±1.1, 6°.53N×124°.86E, h0^{km}, mb3.6/5, mbtmp3.6/5, MS2.9/3, Error ellipse: s-maj=22.3km s-min=11.3km az=144.0*

ISC 03 03:19:03.5±1.1**, 6°.6N**±0°.1×**125°.1E**±0°.2**, h35^{km}, n9, σ0^{s}.35**/6**, mb3.8**/5**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.64**	**47**	Pg	**Pn**	**03 19 16.0**	**0.0**
	274nm,0.3s,baz=239,slow=18,SNR=8.2						
DAV				Lg	Lg	03 19 27.9	
	292nm,0.3s,baz=359,slow=23,SNR=26						
KAPI	**Kappang**	**12.74**	**205**	LR	LR	03 27 03.9	
	comp=Z,30nm,18.9s,baz=24,slow=39						
PMG	**Port Moresby**	**27.14**	**126**	LR	LR	03 37 39.0	
	comp=Z,15nm,18.5s,baz=116,slow=41						
WRA	**Warramunga Arr**	**27.92**	**161**	P	**P**	**03 24 50.2**	**-0.3**
	0.5nm,0.6s,baz=338,slow=9.9,SNR=3.4						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**31.31**	**164**	P	**P**	**03 25 20.8**	**+0.2**
	0.2nm,0.3s,baz=339,slow=7.1,SNR=4.6						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**54.27**	**325**	P	**P**	**03 28 25.8**	**-0.3**
	0.6nm,0.6s,baz=109,slow=9.0,SNR=5.9						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**58.44**	**327**	P	**P**	**03 28 56.1**	**+0.3**
	0.7nm,0.7s,baz=121,slow=6.4,SNR=4.9						
	0.7nm,0.7s						
BVAR	**Borovoye Array**	**64.03**	**327**	P	**P**	**03 29 33.6**	**+0.1**
	0.5nm,0.5s,baz=123,slow=5.3,SNR=2.3						
	0.5nm,0.5s						
EIL	**Elat**	**86.90**	**299**	LR	LR	04 16 08.1	
	comp=Z,12nm,19.0s,baz=136,slow=40						

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*IDC **03** 03:34:10.4±1.0, 40°.35N×114°.59E, h0^{km}, mb3.6/6, mbtmp3.6/8, ML4.0/2, MS3.2/2, Error ellipse: s-maj=30.8km s-min=19.9km az=64.0*

ISC 03 03:34:15.3±1.9**, 40°.8N**±0°.2×**114°.4E**±0°.1**, h10^{km}, n12, σ1^{s}.17**/8**, mb3.6**/6**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**9.06**	**323**	Pn	**Pn**	**03 36 26.9**	**+0.7**
	0.6nm,0.3s,baz=144,slow=13,SNR=11						
SONM				Sn	**Sn**	**03 38 07.7**	**-0.7**
	0.2nm,0.3s,baz=167,slow=35,SNR=1.8						
SONM				Lg	Lg	03 39 06.5	
	1.1nm,0.3s,baz=137,slow=27,SNR=5.3						
SONM				LR	LR	03 40 35.9	
	comp=Z,88nm,18.1s,baz=194,slow=40						
	1.3nm,0.3s						
HILR	**Hailar Array B**	**9.51**	**21**	Pn	**Pn**	**03 36 31.9**	**-0.3**
	baz=200,slow=12						
HILR				Sn	**Sn**	**03 38 19.5**	**+0.4**
	baz=184,slow=19						
HILR				Lg	Lg	03 39 18.9	
	baz=230,slow=51						
	2.2nm,0.4s						
LZDM	**Lanzhou Array**	**9.72**	**243**	Pg	Pn	03 37 05.2	+30
	baz=52,slow=16						
LZDM				Lg	Lg	03 39 09.4	
	baz=47,slow=40						
KSRS	**Korea Array**	**11.01**	**103**	Lg	Lg	03 39 52.6	
	0.3nm,0.3s,baz=291,slow=28,SNR=4.2						
USRK	**Ussuriysk Ar.**	**13.39**	**70**	Lg	Lg	03 41 14.9	
	0.2nm,0.3s,baz=264,slow=39,SNR=2.4						
MKAR	**Makanchi Array**	**23.83**	**295**	P	**P**	**03 39 28.2**	**-0.2**
	0.4nm,0.8s,baz=82,slow=7.7,SNR=2.0						
	0.4nm,0.8s						
KURBB	**Kurchatov Arra**	**26.67**	**304**	P	**P**	**03 39 56.1**	**+1.9**
	0.2nm,0.3s,baz=99,slow=9.5,SNR=2.0						
	0.2nm,0.3s						
ILAR	**Eielson Array**	**57.37**	**30**	P	**P**	**03 44 03.6**	**+0.3**
	0.2nm,0.5s,baz=284,slow=5.6,SNR=5.2						
	0.2nm,0.5s						
NOA	**NORSAR Array B**	**61.02**	**327**	P	**P**	**03 44 27.3**	**-1.3**
	0.6nm,0.8s,baz=49,slow=7.9,SNR=1.4						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**63.23**	**159**	P	P	03 44 36.8	-7.0
	1.2nm,0.8s,baz=346,slow=7.3,SNR=5.7						
	1.2nm,0.8s						
ASAR	**Alice Springs**	**66.67**	**161**	P	P	03 44 60.0	-6.2
	0.8nm,0.7s,baz=339,slow=5.2,SNR=9.4						
	0.8nm,0.7s						
ULM	**Lac du Bonnet**	**85.49**	**19**	LR	LR	04 29 49.3	
	comp=Z,19nm,18.1s,baz=9.0,slow=39						

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*RSPR **03** 03:37:08.8, 19°.31N×64°.52W, h97^{km}±16^{km}, MD3.7/15*

*NEIC **03** 03:37:11.3±1.6, 19°.0N±0°.1×64°.58W±0°.05, h35^{km}±2^{km}, ML3.7/16, Md3.7/15(RSPR), Error ellipse: s-maj=23.4km s-min=7.5km az=8.0*

*OSPL **03** 03:37:12.1±3.5, 19°.10N×64°.61W, h23^{km}±279^{km}, ML3.6, Presumed earthquake*

ISC 03 03:37:11.3±1.5**, 19°.1N**±0°.1×**64°.60W**±0°.05**, h42^{km}, n72, σ1^{s}.86**/68**, 8C-9D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUMP	**Col San Antoni**	**1.53**	**231**		**Pn**	**03 37 34.0**	**-2.2**
HUMP					**Sn**	**03 37 52.9**	**-2.0**
HUMP				IAML		03 37 58.8	
	comp=E,1µm,0.2s						
HUMP				IAML		03 37 59.6	
	comp=N,1µm,0.2s						
HUMP	**Col San Antoni**	**1.53**	**231**	⇓*e*P	**Pn**	**03 37 34.6**	**-1.5**
GCPR	**Guaynabo City**	**1.62**	**240**		**Pn**	**03 37 35.2**	**-2.2**
GCPR					**Sn**	**03 37 55.5**	**-1.5**
GCPR	**Guaynabo City**	**1.62**	**240**	⇑*e*P	**Pn**	**03 37 35.2**	**-2.2**
SJG	**San Juan**	**1.78**	**236**		**Pn**	**03 37 37.3**	**-2.2**
SJG				IAML		03 38 07.4	
	comp=N,651nm,0.2s						
SJG				IAML		03 38 14.9	
	comp=N,586nm,0.5s						
SJG	**San Juan**	**1.78**	**236**	⇑*e*P	**Pn**	**03 37 39.4**	**-0.1**
SJG	**San Juan**	**1.78**	**236**	*e*S	**Sn**	**03 38 00.9**	**0.0**
SJG	**San Juan**	**1.78**	**236**	*e*P	**Pn**	**03 37 37.6**	**-1.9**
SJG	**San Juan**	**1.78**	**236**	*i* P	**Pn**	**03 37 38.0**	**-1.6**
SJG				IAML		03 38 04.0	
	comp=Z,308nm,0.6s						
ECPR	**Experimental S**	**1.85**	**245**	⇑*e*P	**Pn**	**03 37 38.8**	**-1.8**
ECPR	**Experimental S**	**1.85**	**245**	*e*S	**Sn**	**03 38 03.1**	**+0.4**
EMPR	**Esperanza - Ma**	**1.94**	**251**		**Pn**	**03 37 40.9**	**-0.8**
EMPR	**Esperanza - Ma**	**1.94**	**251**	⇑*e*P	**Pn**	**03 37 40.9**	**-0.8**
EMPR	**Esperanza - Ma**	**1.94**	**251**	*e*S	**Sn**	**03 38 08.4**	**+3.6**
SABA	**Saba**	**1.97**	**139**		**Pn**	**03 37 40.2**	**-2.0**
SABA				IAML		03 38 32.7	
	comp=N,645nm,0.6s						
SABA	**Saba**	**1.97**	**139**	⇑*e*P	**Pn**	**03 37 42.3**	**+0.1**
SABA	**Saba**	**1.97**	**139**	*e*S	**Sn**	**03 38 07.6**	**+1.9**
AOPR	**Arecibo Observ**	**2.18**	**250**		**Pn**	**03 37 43.5**	**-1.6**
AOPR					**Sn**	**03 38 09.7**	**-1.2**
AOPR				IAML		03 38 26.4	
	comp=N,910nm,0.4s						
AOPR	**Arecibo Observ**	**2.18**	**250**	⇓*e*P	**Pn**	**03 37 44.7**	**-0.4**
AOPR	**Arecibo Observ**	**2.18**	**250**	*e*S	**Sn**	**03 38 13.8**	**+2.9**
AOPR	**Arecibo Observ**	**2.18**	**250**	*e*P	**Pn**	**03 37 44.2**	**-0.9**
OBIP	**Obispado Ponce**	**2.18**	**241**		**Pn**	**03 37 43.9**	**-1.2**
OBIP					**Sn**	**03 38 09.5**	**-1.4**
OBIP				IAML		03 38 14.4	
	comp=E,436nm,0.9s						
OBIP	**Obispado Ponce**	**2.18**	**241**	⇓*e*P	**Pn**	**03 37 45.3**	**+0.2**
OBIP	**Obispado Ponce**	**2.18**	**241**	*e*S	**Sn**	**03 38 12.8**	**+1.9**
GBPR	**Guanica, Bosqu**	**2.44**	**243**		**Pn**	**03 37 49.6**	**+0.9**
GBPR	**Guanica, Bosqu**	**2.44**	**243**	⇓*e*P	**Pn**	**03 37 49.6**	**+0.9**
AGPR	**Aguadilla, PR**	**2.46**	**255**		**Pn**	**03 37 48.6**	**-0.4**
AGPR	**Aguadilla, PR**	**2.46**	**255**	⇑*e*P	**Pn**	**03 37 48.6**	**-0.4**
AGPR	**Aguadilla, PR**	**2.46**	**255**	*e*S	**Sn**	**03 38 20.6**	**+2.7**
AGPR	**Aguadilla, PR**	**2.46**	**255**	*i* P	**Pn**	**03 37 48.5**	**-0.4**
AGPR				IAML		03 38 22.2	
	comp=Z,160nm,0.6s						
SKI	**Saint Kitts**	**2.50**	**135**	*e*P	Pn	03 37 44.6	-5.0
LSP	**Las Mesas**	**2.54**	**249**		**Pn**	**03 37 50.5**	**+0.5**
LSP	**Las Mesas**	**2.54**	**249**	⇑*e*P	**Pn**	**03 37 50.5**	**+0.5**
LSP	**Las Mesas**	**2.54**	**249**	*e*S	**Sn**	**03 38 23.1**	**+3.4**
PRSN	**Puerto Rico Se**	**2.57**	**250**		**Pn**	**03 37 50.9**	**+0.4**
PRSN					**Sn**	**03 38 21.8**	**+1.3**
PRSN	**Puerto Rico Se**	**2.57**	**250**	⇓*e*P	**Pn**	**03 37 50.9**	**+0.4**
PRSN	**Puerto Rico Se**	**2.57**	**250**	*e*S	**Sn**	**03 38 21.8**	**+1.3**
MLPR	**Magueyes Islan**	**2.58**	**244**	⇓*e*P	**Pn**	**03 37 51.0**	**+0.4**
MLPR	**Magueyes Islan**	**2.58**	**244**	*e*S	**Sn**	**03 38 23.9**	**+3.1**
CRPR	**Cabo Rojo, PR**	**2.62**	**246**		**Pn**	**03 37 50.7**	**-0.5**
CRPR	**Cabo Rojo, PR**	**2.62**	**246**	IAML		03 38 39.1	
	comp=E,257nm,0.9s						
CRPR	**Cabo Rojo, PR**	**2.62**	**246**	⇑*e*P	**Pn**	**03 37 50.7**	**-0.5**
CRPR	**Cabo Rojo, PR**	**2.62**	**246**	*e*S	**Sn**	**03 38 25.3**	**+3.5**
CRPR	**Cabo Rojo, PR**	**2.62**	**246**	*i* P	**Pn**	**03 37 50.8**	**-0.3**
CRPR				IAML		03 38 29.5	
	comp=Z,159nm,0.6s						
IDE	**Isla Desecheo**	**2.82**	**256**		**Pn**	**03 37 53.9**	**0.0**
IDE	**Isla Desecheo**	**2.82**	**256**	⇓*e*P	**Pn**	**03 37 53.9**	**0.0**
IDE	**Isla Desecheo**	**2.82**	**256**	*e*S	**Sn**	**03 38 29.9**	**+3.2**
ANWB	**Willy Bob**	**3.04**	**118**	*e*P	Pn	03 37 52.4	-4.5
DHSZ	**Broadband at M**	**3.91**	**136**	*e*P	**Pn**	**03 38 07.5**	**-1.4**
ATGZ	**Broadband at L**	**4.07**	**137**	*e*P	Pn	03 38 08.0	-3.0
MMLZ	**Guadeloupe Bro**	**4.14**	**137**	*e*P	**Pn**	**03 38 10.1**	**-1.9**
CBE	**Ff, Capester**	**4.16**	**136**		**Pn**	**03 38 10.3**	**-2.1**
CBE					**Sn**	**03 38 57.9**	**-1.9**
CBE	**Ff, Capester**	**4.16**	**136**	⇓*e*P	**Pn**	**03 38 12.4**	**0.0**
CBE	**Ff, Capester**	**4.16**	**136**	*e*S	**Sn**	**03 39 00.1**	**+0.2**
MIDR	**Miches**	**4.21**	**269**	⇓*e*P	**Pn**	**03 38 14.2**	**+1.2**
MIDR	**Miches**	**4.21**	**269**	*e*S	**Sn**	**03 39 02.8**	**+1.9**
TBG	**Guadaloupe-3**	**4.30**	**139**	*e*P	Pn	03 38 10.9	-3.3
DSLB	**Salisbury**	**4.75**	**140**	*e*P	Pn	03 38 16.1	-4.4
LOPP1	**Punta Rusia, P**	**6.27**	**278**	*i* P	**Pn**	**03 38 41.1**	**-0.2**
SDDR	**Presa de Saban**	**6.33**	**270**		**Pn**	**03 38 42.7**	**+0.5**
SDDR	**Presa de Saban**	**6.33**	**270**	*i* P	**Pn**	**03 38 41.7**	**-0.4**
SDDR				IAML		03 40 01.2	
	comp=Z,15nm,1.8s						
LONE3	**El Aguacate, B**	**6.51**	**267**	*i* P	**Pn**	**03 38 46.0**	**+1.3**
LONE3				IAML		03 40 07.7	
	comp=Z,11nm,2.7s						
LOVI	**El Cajuil, Ovi**	**6.55**	**260**	*i* P	**Pn**	**03 38 44.6**	**-0.6**
LOVI				IAML		03 40 05.6	
	comp=Z,39nm,1.9s						
LODU1	**El Espartillar**	**6.56**	**264**	*i* P	**Pn**	**03 38 47.5**	**+2.3**
LODU1				IAML		03 40 15.8	
	comp=Z,22nm,4.0s						
GRTK	**Grand Turk**	**6.58**	**292**	*i* P	Pn	03 38 43.4	-2.1
GRTK				*e*S	**Sn**	**03 39 53.3**	**-5.9**
GRTK				IAML		03 39 55.9	
	comp=Z,40nm,1.1s						
LOBH	**Bahia de las A**	**6.79**	**261**	*i* P	**Pn**	**03 38 48.9**	**+0.4**
LOBH				IAML		03 40 19.6	
	comp=Z,33nm,2.3s						
MASC	**Masc**	**9.14**	**278**	*e*P	Pn	03 39 17.4	-3.2
MASC				IAmb	IAmb	03 39 18.3	
	comp=Z,8.2nm,0.6s						
MASC				*e*S	Sn	03 40 53.0	-9.1
QMBU	**Quimbuelo**	**9.68**	**278**	*e*P	Pn	03 39 24.5	-3.6
QMBU				IAmb	IAmb	03 39 26.6	
	comp=Z,6.1nm,0.5s						
QMBU				*e*S	Sn	03 41 05.5	-10
QMBU				IAML		03 41 12.6	
	comp=E,8.3nm,0.3s						
GTBY	**Guantanamo Bay**	**9.94**	**276**	*e*P	Pn	03 39 29.1	-2.6
RCC	**Rio Carpintero**	**10.50**	**277**	*e*P	Pn	03 39 36.3	-2.9
RCC				IAML		03 39 41.3	
	comp=Z,1.4nm,0.3s						
RCC				*e*S	Sn	03 41 26.3	-9.3
PINC	**Pinares de May**	**10.62**	**279**	*e*P	Pn	03 39 35.9	-5.0
PINC				*e*S	Sn	03 41 26.1	-13
PINC				IAML		03 41 37.6	
	comp=E,0.8nm,0.1s						
PINC				IAML		03 41 45.2	
	comp=N,1.1nm,0.1s						
HLGC	**Holguin**	**10.92**	**281**	*e*P	**Pn**	**03 39 44.5**	**-0.5**
HLGC				*e*S	**Sn**	**03 41 41.0**	**-4.9**

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*KRNET **03** 03:53:49.5±0.1, 41°.21N×73°.63E, h30^{km}, mb3.3*

*NNC **03** 03:53:51.4±1.2, 41°.29N×73°.56E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=9.4km s-min=5.5km az=165.0*

*SOME **03** 03:53:52.0, 41°.25N×73°.58E, h20^{km}*

*KNET **03** 03:53:53.4±0.6, 41°.41N×73°.66E, h10^{km}±4^{km}, ml2.5, Error ellipse: s-maj=4.9km s-min=4.3km az=124.0*

ISC 03 03:53:49.2±1.0**, 41°.24N**±0°.02×**73°.69E**±0°.02**, h16^{km}**±9^{km}**, n57, σ1^{s}.20**/97**, 37C-25D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALK	**Salom-Alik**	**0.37**	**164**	⇑*i*P	**Pb**	**03 53 57.8**	**+0.3**
SALK				⇑*i*S	**Sb**	**03 54 03.7**	**+0.7**
ARSB	**Arslanbob**	**0.54**	**279**	⇑*i*P	**Pg**	**03 54 00.2**	**+0.3**
ARSB				⇑*i*S	**Sg**	**03 54 07.6**	**+0.5**
ARLS	**Aral**	**0.79**	**37**	⇓*i*P	**Pn**	**03 54 05.5**	**-0.3**
ARLS				⇓*i*S	**Sn**	**03 54 16.9**	**-0.4**
OHH	**Osh**	**0.99**	**224**	⇑*i*P	**Pb**	**03 54 07.2**	**-0.8**
OHH				⇑*i*S	**Sb**	**03 54 19.7**	**-1.1**
UCH	**Uchtor**	**1.17**	**32**	⇑P	**Pg**	**03 54 13.0**	**+1.2**
	13nm,0.1s,SNR=18						
UCH				⇑S	**Sn**	**03 54 29.2**	**+2.0**
	37nm,0.2s						
UCH	**Uchtor**	**1.17**	**32**	⇑*i*P	**Pg**	**03 54 12.0**	**+0.2**
UCH				⇑*i*S	**Sn**	**03 54 28.2**	**+1.0**
SFK	**Sufi-Kurgan**	**1.23**	**187**	⇑*i*P	**Pn**	**03 54 11.6**	**-0.4**
SFK				⇑*i*S	**Sb**	**03 54 27.4**	**-0.6**
ARK	**Arkit**	**1.41**	**294**	⇓*i*P	**Pn**	**03 54 14.6**	**+0.3**
ARK				⇓*i*S	**Sn**	**03 54 32.8**	**+0.1**
EKS2	**Erkin-Say**	**1.43**	**3**	⇓P	**Pg**	**03 54 17.1**	**+0.5**
	23nm,0.2s,SNR=42						
EKS2				⇓S	**Sg**	**03 54 35.3**	**+0.1**
	42nm,0.2s						
EKS2	**Erkin-Say**	**1.43**	**3**	⇓*i*P	**Pb**	**03 54 15.7**	**+0.2**
EKS2				⇓*i*S	**Sg**	**03 54 34.7**	**-0.5**
JNKS	**Jany-Kuch**	**1.50**	**96**	⇑*e*P	**Pg**	**03 54 17.1**	**-0.9**
JNKS				⇑*e*S	**Sg**	**03 54 37.0**	**-0.5**
AAK	**Ala-Archa**	**1.52**	**23**	⇑P	**Pg**	**03 54 19.2**	**+0.7**
	13nm,0.2s,SNR=26						
AAK				⇑S	**Sg**	**03 54 39.3**	**+1.0**
	42nm,0.2s						
AAK	**Ala-Archa**	**1.52**	**23**	⇓*i*P	**Pg**	**03 54 17.4**	**-1.1**
AAK				⇓*i*S	**Sg**	**03 54 37.6**	**-0.7**
AAK	**Ala-Archa**	**1.52**	**23**	⇓P	**Pg**	**03 54 19.6**	**+1.1**
	3.6nm,0.4s						
AAK				⇑S	**Sg**	**03 54 39.9**	**+1.6**
	3.5nm,0.3s						
MNAS	**Manas**	**1.53**	**325**	⇓*i*P	**Pb**	**03 54 17.0**	**-0.3**
MNAS				⇓*i*S	**Sb**	**03 54 36.9**	**+0.4**
MRKS	**Merke**	**1.54**	**347**	P	**Pg**	**03 54 19.1**	**+0.1**
	78nm,0.3s						
MRKS				S	**Sg**	**03 54 39.1**	**0.0**
	128nm,0.2s						
MRKS	**Merke**	**1.54**	**347**	*e*P	**Pg**	**03 54 19.0**	**+0.1**
	18nm,0.2s						
MRKS				*e*S	**Sg**	**03 54 38.4**	**-0.6**
	128nm,0.2s						
KBK	**Karagaybulak**	**1.70**	**33**	⇓P	**Pg**	**03 54 23.0**	**+1.1**
	10nm,0.1s,SNR=22						
KBK				⇑S	**Sg**	**03 54 45.5**	**+1.5**
	190nm,0.4s						
KBK	**Karagaybulak**	**1.70**	**33**	⇑*i*P	**Pb**	**03 54 20.0**	**-0.2**
KBK				⇑*i*S	**Sg**	**03 54 42.0**	**-2.0**
FRU1	**Bishkek**	**1.72**	**24**	⇑*i*P	**Pb**	**03 54 20.3**	**-0.2**
FRU1				⇑*i*S	**Sg**	**03 54 42.7**	**-1.9**
CHMS	**Chumysh**	**1.93**	**24**	⇑P	**Pg**	**03 54 27.1**	**+0.9**
	32nm,0.2s,SNR=9.2						
CHMS				⇑S	**Sg**	**03 54 52.4**	**+1.1**
	36nm,0.2s						
CHMS	**Chumysh**	**1.93**	**24**	⇓*i*P	**Pb**	**03 54 22.9**	**-1.1**
CHMS				⇓*i*S	**Sb**	**03 54 47.3**	**-0.6**
TRKS	**Terek-Say**	**1.94**	**280**	⇑*i*P	**Pn**	**03 54 21.5**	**-0.1**
TRKS				⇑*i*S	**Sn**	**03 54 44.9**	**-0.9**
BOOM	**Boomskoye usch**	**2.10**	**53**	⇑*i*P	**Pb**	**03 54 25.5**	**-1.5**
BOOM				⇑*i*S	**Sb**	**03 54 51.6**	**-1.3**
USP	**Ospenovka**	**2.12**	**16**	⇓P	**Pg**	**03 54 29.5**	**-0.2**
	30nm,0.3s,SNR=50						
USP				⇑S	**Sg**	**03 54 57.7**	**+0.5**
	65nm,0.4s						
USP	**Ospenovka**	**2.12**	**16**	⇓*i*P	**Pb**	**03 54 25.4**	**-1.8**
USP				⇓*i*S	**Sb**	**03 54 51.7**	**-1.6**
TKM2	**Tokmak 2**	**2.20**	**40**	⇓P	**Pg**	**03 54 31.5**	**0.0**
	21nm,0.3s,SNR=19						
TKM2				⇑S	**Sg**	**03 55 00.6**	**+0.5**
	19nm,0.3s						
TKM2	**Tokmak 2**	**2.20**	**40**	⇑*i*P	**Pb**	**03 54 26.9**	**-1.9**
TKM2				⇑*i*S	**Sb**	**03 54 54.2**	**-1.7**
DRK	**Karamyk**	**2.27**	**220**	⇓*i*P	**Pn**	**03 54 26.5**	**+0.2**
DRK				⇓*i*S	**Sn**	**03 54 53.4**	**-0.8**
SGDS	**Sogindy**	**2.32**	**17**	Pg	**Pg**	**03 54 33.3**	**-0.3**
	8.9nm,0.3s						
SGDS				Lg	Lg	03 55 03.4	
	31nm,0.4s						
KST	**Kastek**	**2.47**	**42**	Pg	**Pg**	**03 54 36.3**	**-0.3**
	8.9nm,0.4s						
KST				Lg	Lg	03 55 08.3	
	32nm,0.6s						
KST	**Kastek**	**2.47**	**42**	*e*P	**Pg**	**03 54 36.3**	**-0.3**
	8.9nm,0.4s						
KST				*e*S	**Sg**	**03 55 08.3**	**-0.4**
	32nm,0.6s						
DGS	**Degeres**	**2.53**	**37**	Pg	**Pg**	**03 54 38.2**	**+0.5**
	15nm,0.6s						
DGS				Lg	Lg	03 55 11.5	
	29nm,0.5s						
KDJ	**Kajisay**	**2.76**	**70**	⇑*i*P	**Pn**	**03 54 34.8**	**+1.8**
KDJ				⇑*i*S	**Sn**	**03 55 07.8**	**+1.6**
MTBS	**Maitube**	**2.78**	**46**	Pg	**Pg**	**03 54 43.2**	**+0.8**
	4.2nm,0.3s						
MTBS				Lg	Lg	03 55 19.9	
	33nm,0.5s						
MTBS	**Maitube**	**2.78**	**46**	*e*P	**Pg**	**03 54 43.2**	**+0.8**
	4.2nm,0.3s						
MTBS				*e*S	**Sg**	**03 55 19.9**	**+1.4**
	33nm,0.5s						
KRBS	**Karabastau**	**2.86**	**30**	Pg	**Pg**	**03 54 43.8**	**-0.3**
	4.7nm,0.4s						
KRBS				Lg	Lg	03 55 21.0	
	18nm,0.4s						
IUG	**Iuzhnay**	**2.88**	**290**	Pg	**Pb**	**03 54 39.9**	**-0.5**
	27nm,0.3s						
IUG				Lg	Lg	03 55 14.5	
	247nm,0.5s						
KK31	**Karatay Array**	**3.01**	**309**	⇑Pn	**Pb**	**03 54 41.6**	**-0.8**
	1.5nm,0.2s,baz=137,slow=14,SNR=28						
KK31				⇑Lg	Lg	03 55 26.7	
	16nm,0.3s,baz=130,slow=28,SNR=14						
TNSS	**Tian-Shan**	**3.02**	**52**	Pg	**Pg**	**03 54 48.0**	**+1.0**
	1.9nm,0.4s						
TNSS				Lg	Lg	03 55 28.6	
	4.8nm,0.5s						
TNSS	**Tian-Shan**	**3.02**	**52**	*e*P	**Pg**	**03 54 48.0**	**+1.0**
	1.9nm,0.4s						
TNSS				*e*S	**Sg**	**03 55 28.6**	**+2.4**
	4.8nm,0.5s						
MDOK	**Medeo**	**3.15**	**51**	Pg	**Pg**	**03 54 50.7**	**+1.1**
	2.7nm,0.4s						
MDOK				Lg	Lg	03 55 33.0	
	13nm,0.4s						
KOTS	**Kotyrbulak**	**3.23**	**51**	Pg	**Pg**	**03 54 51.4**	**+0.3**
	7.2nm,0.5s						
KOTS				Lg	Lg	03 55 34.2	
	29nm,0.7s						
KOTS	**Kotyrbulak**	**3.23**	**51**	*e*P	**Pg**	**03 54 51.4**	**+0.3**
	3.7nm,0.4s						
KOTS				*e*S	**Sg**	**03 55 34.2**	**+1.2**
	29nm,0.7s						
KUU	**Kurty**	**3.30**	**36**	*e*P	**Pg**	**03 54 51.8**	**-0.6**
	3.7nm,0.0s						
KUU				*e*S	**Sg**	**03 55 34.5**	**-0.6**
	5.3nm,0.1s						
KTBS	**Karatobe**	**3.32**	**41**	Pg	**Pg**	**03 54 51.8**	**-1.0**
	2.4nm,0.2s						
KTBS				Lg	Lg	03 55 34.9	
	8.1nm,0.3s						
BRLS	**Borolday**	**3.38**	**303**	Pg	**Pb**	**03 54 48.5**	**-0.2**
	3.8nm,0.5s						
BRLS				Lg	Lg	03 55 29.5	
	15nm,0.5s						
BRLS	**Borolday**	**3.38**	**303**	*e*P	**Pb**	**03 54 51.4**	**+2.7**
	3.8nm,0.5s						
BRLS				*e*S	**Sb**	**03 55 33.8**	**+4.2**
	15nm,0.5s						
PRZ	**Przheval'sk**	**3.73**	**69**	⇓*i*P	**Pn**	**03 54 48.2**	**+1.9**
PRZ				⇓*i*S	**Sn**	**03 55 31.0**	**+0.9**
BTLS	**Baital**	**3.81**	**4**	Pg	**Pg**	**03 54 59.8**	**-2.4**
	3.4nm,0.6s						
BTLS				Lg	Lg	03 55 48.7	
	10nm,0.4s						
BTLS	**Baital**	**3.81**	**4**	*e*P	**Pg**	**03 54 59.8**	**-2.4**
	3.4nm,0.6s						
BTLS				*e*S	**Sg**	**03 55 48.7**	**-2.8**
	10nm,0.4s						
SATY	**Saty**	**3.95**	**61**	Pg	**Pg**	**03 55 04.8**	**0.0**
	2.4nm,0.3s						
SATY				Lg	Lg	03 55 57.7	
	12nm,0.5s						
ARXS	**Arharly**	**4.26**	**44**	Pg	**Pg**	**03 55 10.0**	**-0.8**
	3.8nm,0.6s						
ARXS				Lg	Lg	03 56 06.3	
	9.1nm,0.5s						
ARXS	**Arharly**	**4.26**	**44**	*e*P	**Pg**	**03 55 10.0**	**-0.8**

ARXS				eS	Sg	03 56 06.3	+0.4
UZB	Uzynbulak	4.40	63	Pg	Pg	03 55 12.9	-0.5
	4.0nm,0.2s						
UZB				Lg	Lg	03 56 11.2	
	4.9nm,0.4s						
UZB	Uzynbulak	4.40	63	eP	Pg	03 55 12.9	-0.5
	4.0nm,0.2s						
UZB				eS	Sg	03 56 11.2	+0.8
	4.9nm,0.4s						
PDGK	Podgornoye	4.79	62	⇓Pn	Pg	03 55 17.9	-2.9
	5.5nm,1.2s						
PDGK				⇑Lg	Lg	03 56 22.9	
	8.9nm,0.9s						

*DJA **03** 03:58:40.3±0.5, 8°S±5°×12°4E±°, h165^{km}±5^{km}, M3.5/12, mB4.7/1, mb3.6/4, MLv3.5/12, Mw(mB)3.9/1*

*IDC **03** 03:58:45.7±1.4, 8°.91S×122°.91E, h208^{km}±8^{km}, mb2.9/1, mbtmp3.4/4, Error ellipse: s-maj=73.6km s-min=15.9km az=60.0*

ISC 03 03:58:39.9±1.2**, 7°.98S**±0°.08×**124°.1E**±0°.1**, h150**^{km}**, n15, σ1^{s}79**/18**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.78	174	P	Pn	03 59 14.4	+1.7
SOEI				S	Sn	03 59 39.7	+1.9
MMRI	Maumere	1.94	250	P	Pn	03 59 15.9	+1.6
BATI	Baumata	2.25	190	P	Pn	03 59 18.7	+0.6
	61nm,0.3s,baz=331,slow=5.9,SNR=8.6						
BATI				S	Sn	03 59 47.2	-0.3
	58nm,0.4s,baz=99,slow=23,SNR=7.3						
BATI	Baumata	2.25	190	P	Pn	03 59 18.8	+0.7
EDFI	Ende, Flores	2.48	252	P	Pn	03 59 22.4	+1.4
BASI	Baing, Sumba	4.11	237	P	Pn	03 59 41.3	-0.4
WBSI	Waikabubak, Su	4.92	250	P	Pn	03 59 50.7	-1.6
DBNI	Kabupaten Domp	5.73	264	P	Pn	04 00 02.6	-0.5
	0.1nm4.4nm,1.5s						
PLAI	Plampang	6.29	262	P	Pn	04 00 09.5	-1.1
TTSI	Tana Toraja	6.48	319	P	Pn	04 00 11.7	-1.3
	16nm,1.0s						
TWSI	Taliwang, Sumb	7.16	263	P	Pn	04 00 20.5	-1.7
	12nm,0.9s						
FITZ	Fitzroy Crossi	10.18	172	P	Pn	04 00 59.1	-3.1
	1.8nm,0.8s,baz=344,slow=13,SNR=7.3						
FITZ				S	Sn	04 02 45.2	-10
	4.4nm,0.4s,baz=288,slow=20,SNR=11						
WRA	Warramunga Arr	15.50	141	P	P	04 02 13.2	+1.4
	0.3nm,0.4s,baz=323,slow=12,SNR=2.1						
WRA				S	Sn	04 04 54.0	-9.3
	0.2nm,0.5s,baz=319,slow=25,SNR=1.7						
ASAR	Alice Springs	18.23	150	P	P	04 02 42.1	+0.3
	0.2nm,0.3s,baz=332,slow=12,SNR=1.2						
ASAR				S	S	04 05 58.9	-3.7
	0.2nm,0.3s,baz=310,slow=22,SNR=2.0						
MKAR	Makanchi Array	65.97	330	P	P	04 09 11.3	+1.2
	0.2nm,0.4s,baz=131,slow=7.4,SNR=4.1						
	0.2nm,0.4s						

*NEIC **03** 04:07:33.5±0.4, 19°.81N±0°.05×154°.65W±0°.07, h33^{km}±9^{km}, Error ellipse: s-maj=10.2km s-min=6.3km az=73.0*

HVO 03 04:07:34.0±0.9**, 19°.82N**±0°.05×**154°.51W**±0°.07**, h34**^{km}±8^{km}**, ML3.3**/54**, ML3.5**/47(NEIC)**, Error ellipse: s-maj=9.9km s-min=7.4km az=78.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PKL	Puu Kaliu	0.54	227		Pn	04 07 43.6	-1.6
HIL	Hilo	0.56	259		Pn	04 07 43.6	-1.8
HIL					Sb	04 07 51.9	-1.7
HIL	Hilo	0.56	259	IAML		04 07 52.1	
	comp=N,3µm,0.4s						
HIL				IAML		04 07 53.1	
	comp=E,2µm,0.2s						
JOKA	Jonika Flow	0.61	231		Pn	04 07 44.5	-1.7
JOKA					Sn	04 07 52.9	-2.0
JOKA	Jonika Flow	0.61	231	IAML		04 08 04.9	
	comp=N,4µm,0.8s						
JOKA				IAML		04 08 07.2	
	comp=E,2µm,0.7s						
KLCH	Kalalua Cone	0.68	232		Pn	04 07 45.4	-1.7
JCUZ	Jacuzzi	0.71	232		Pn	04 07 45.9	-1.8
JCUZ					Sn	04 07 54.5	-3.0
NPOC	North of Pu‘u	0.71	233		Pn	04 07 45.9	-1.9
NPOC					Sn	04 07 54.5	-3.0
STCH	Steam Cracks	0.73	233		Pn	04 07 46.0	-1.9
STCH					Sn	04 07 54.6	-3.4
STCH	Steam Cracks	0.73	233	IAML		04 08 06.8	
	comp=N,1µm,0.4s						
KNHH	Kane Nui o Ham	0.77	235		Pn	04 07 46.5	-2.0
KAE	Kaena	0.80	228		Pn	04 07 47.3	-1.5
ESR	Escape Road	0.81	239		Pn	04 07 47.0	-2.1
ESR					Sn	04 07 56.2	-3.6
PUH	Pauahi	0.81	236		Pn	04 07 47.0	-2.0
PUH					Sn	04 07 56.8	-3.1
PUH	Pauahi	0.81	236	IAML		04 08 13.3	
	comp=E,1µm,0.6s						
PUH				IAML		04 08 16.6	
	comp=N,2µm,0.8s						
RSD	Rainshed	0.81	244		Pn	04 07 47.2	-1.9
RSD					Sn	04 07 56.7	-3.4
RSD	Rainshed	0.81	244	IAML		04 08 08.7	
	comp=E,3µm,0.4s						
HATHI	Halema‘uma‘u T	0.82	241		Pn	04 07 47.1	-2.1
HATHI					Sn	04 07 56.9	-3.3
SBLHI	Steaming Bluff	0.82	241		Pn	04 07 47.1	-2.2
SBLHI					Sn	04 07 56.9	-3.3
BYL	Byron's Ledge	0.82	240		Pn	04 07 47.1	-2.1
BYL					Sn	04 07 57.0	-3.2
UWB	Uwekahuna Bluf	0.83	242		Pn	04 07 47.1	-2.2
UWB					Sn	04 07 57.1	-3.3
KKO	Keanakako'i	0.83	240		Pn	04 07 47.4	-2.1
KKO					Sn	04 07 57.1	-3.4
OBL	Observatory Le	0.84	241		Pn	04 07 47.4	-2.1
OBL					Sn	04 07 57.5	-3.1
RIM	Rim	0.84	240		Pn	04 07 47.5	-2.1
RIM					Sn	04 07 57.6	-3.1
UWE	Uwekahuna	0.84	242		Pn	04 07 47.4	-2.2
AHA	Ahua	0.84	238		Pn	04 07 47.4	-2.2
AHA	Ahua	0.84	238		Pn	04 07 47.3	-2.3
OUT	Outlet	0.85	240		Pn	04 07 47.5	-2.1
WRMHI	West Rim	0.86	241		Pn	04 07 47.5	-2.3
SDHHI	Sand Hill	0.86	240		Pn	04 07 47.8	-2.0
PWH	Poliokeawe Pal	0.87	232		Pn	04 07 48.1	-1.6
CPK	Cone Peak	0.89	241		Pn	04 07 48.0	-2.2
KNH	Kipuka Nene	0.89	237		Pn	04 07 48.1	-2.0
MLH	Mauna Loa	0.89	249		Pn	04 07 48.2	-2.2
MLH					Sn	04 07 59.4	-2.8
MLH	Mauna Loa	0.89	249	IAML		04 08 16.1	
	comp=E,1µm,0.5s						
MLH				IAML		04 08 23.1	
	comp=N,2µm,1.0s						
HPU	Hale Pohaku	0.90	267		Pn	04 07 48.2	-2.4
HLP	Hilina Pali	0.92	235		Pn	04 07 48.7	-1.9
HLP					Sn	04 07 59.7	-3.0
HLP	Hilina Pali	0.92	235	IAML		04 08 26.2	
	comp=E,1µm,1.2s						
HLP				IAML		04 08 27.0	
	comp=N,2µm,0.9s						
PLL	Puu Ulaula	0.95	252		Pn	04 07 48.9	-2.3
HMH	Humu‘ula Sheep	0.95	257		Pn	04 07 49.1	-2.0
HMH					Sn	04 08 00.2	-3.4
HMH	Humu‘ula Sheep	0.95	257	IAML		04 08 14.1	
	comp=N,2µm,0.7s						
HMH				IAML		04 08 24.1	
	comp=E,1µm,0.6s						
DES	Desert	0.96	240		Pn	04 07 48.9	-2.3
DES					Sn	04 08 00.6	-3.1
DES	Desert	0.96	240	IAML		04 08 26.7	
	comp=N,933nm,1.0s						
DES				IAML		04 08 29.2	
	comp=E,1µm,0.8s						
POHA	Pohakuloa	0.97	266		Pn	04 07 48.5	-2.9
POHA	Pohakuloa	0.97	266	IAML		04 08 17.8	
	comp=E,1µm,0.6s						
POHA				IAML		04 08 21.4	
	comp=E,1µm,0.8s						
AIN	Ainahou	1.00	244		Pn	04 07 49.8	-2.1
AIN					Sn	04 08 02.0	-2.9
HTC	Hot Caves	1.02	235		Pn	04 07 50.2	-1.8
MLOA	Mauna Loa Obse	1.05	254		Pn	04 07 50.6	-2.0
MLOA	Mauna Loa Obse	1.05	254	IAML		04 08 26.5	
	comp=E,1µm,0.8s						
MLOA				IAML		04 08 32.0	
	comp=N,1µm,1.2s						
TRH	Trail	1.06	248		Pn	04 07 50.6	-2.2
WIH	Wilkes Camp	1.08	251		Pn	04 07 50.8	-2.3
WIH					Sn	04 08 03.9	-3.2
MWH	Mokuaweoweo	1.08	252		Pn	04 07 51.1	-2.1
MWH				IAML		04 08 32.1	
	comp=N,1µm,0.9s						
MWH				IAML		04 08 32.8	
	comp=E,2µm,0.6s						
MWH	Mokuaweoweo	1.08	252		Sn	04 08 03.9	-3.4
SWH	Southwest Rift	1.10	251		Pn	04 07 51.1	-2.3
WOH	Wood Valley	1.10	239		Pn	04 07 51.2	-1.9
ALEP	Alea Permanent	1.11	255		Pn	04 07 51.1	-2.3
ALEP					Pb	04 07 58.7	+3.8
ALEP					Sn	04 08 04.2	-3.5
PPL	Puu Pili	1.12	234		Pn	04 07 51.2	-2.0
HPAH	Hawaii Prepara	1.14	281		Pn	04 07 53.4	-0.2
DAH	Dandelion	1.19	247		Pn	04 07 51.9	-2.7
KHU	Kahuku	1.20	241		Pn	04 07 52.6	-1.9
KHU					Sn	04 08 05.8	-3.8
HUH	Hualalai	1.26	264		Pn	04 07 53.3	-2.1
KHLU	Kahalu`u	1.33	260		Pn	04 07 53.6	-2.6
KHLU	Kahalu`u	1.33	260	IAML		04 08 35.7	
	comp=E,697nm,1.3s						
KHLU				IAML		04 08 37.0	
	comp=N,712nm,0.9s						
OVEH	Oceanview Est	1.36	241	Pn	Pn	04 07 54.6	-2.1
OVEH				IAML		04 08 32.6	
	comp=N,534nm,0.6s						
OVEH				IAML		04 08 42.1	
	comp=E,490nm,0.7s						
SPT	South Point	1.38	233		Pn	04 07 56.6	-0.3
SPT				IAML		04 08 44.0	
	comp=E,377nm,4.8s						

*NEIC **03** 04:21:22.8±1.8, 31°.57N±0°.06×140°.68E±0°.09, h58^{km}±7^{km}, mb4.6/25, Error ellipse: s-maj=11.6km s-min=8.1km az=69.0*

*IDC **03** 04:21:24.8±1.8, 31°.62N×140°.24E, h68^{km}±13^{km}, mb3.6/15, mbtmp3.9/16, MS3.0/11, Error ellipse: s-maj=27.3km s-min=14.1km az=80.0*

*NIED **03** 04:21:26.2, 31°.89N×140°.76E, h37^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.15; M$_{\theta\theta}$-0.56; M$_{\phi\phi}$0.40; M$_{r\theta}$0.03; M$_{\theta\phi}$-0.50; M$_{\phi r}$-2.31; Fault plane solution: M$_0$2.37000×10^{15} NP1:φ$_s$97.00000°, δ14.00000°, λ-176.00000°. NP2:φ$_s$4.00000°, δ89.00000°, λ-76.00000°.*

*JMA **03** 04:21:26.2±0.2, 31°.9N±0°.9×140°.8E±0°.8, h37^{km}, MV3.9/26, NEAR TORISHIMA IS*

ISC 03 04:21:21.6±0.8**, 31°.58N**±0°.06×**140°.71E**±0°.07**, h35**^{km}**, n90, σ1^{s}69**/57**, mb4.3**/26**, MS3.0**/9**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.19	318	eS	Sn	04 21 57.4	+0.6
JHCJ	Hachijojimakas	1.68	333	eS	Sn	04 22 08.1	-0.7
JHJ2	Mitsune	1.71	334	Pn	Pn	04 21 51.1	+2.2
JHJ2					Sn	04 22 09.4	-0.1
JHJ2	Mitsune	1.71	334	eP	Pn	04 21 51.0	+2.2
JHJ2				eS	Sn	04 22 08.9	-0.5
JHJ	Hachijo jima 2	1.73	333	P	Pn	04 21 50.0	+0.8
	69nm,0.4s,baz=62,slow=22,SNR=8.5						
JHJ				S	Sn	04 22 09.0	-0.9
	342nm,0.3s,baz=62,slow=24,SNR=13						
JMYK	Miyake Tsubota	2.66	339	eS	Sn	04 22 33.2	+0.2
BSO1	Boso 1	3.08	4	eP	Pn	04 22 08.9	+1.7
TK02	Tokai 2	3.43	314	eP	Pn	04 22 15.5	+3.1
TTO1	TONANKAI O.B.S	3.89	303	eP	Pn	04 22 21.2	+2.6
JOD2	Odawara 2	3.92	340	eP	Pn	04 22 22.1	+2.8
JOD2				eS	Sn	04 23 04.2	+0.1
JIE	Ise	4.38	311	eP	Pn	04 22 28.2	+2.6
CBIJ	Chichi jima	4.65	163	eS	Sn	04 23 25.2	+3.2
JCJ	Chichijima	4.65	163	P	Pn	04 22 30.6	+1.3
	80nm,0.6s,baz=330,slow=20,SNR=1.5						
JCJ				S	Sn	04 23 14.2	-7.8
	88nm,0.3s,baz=283,slow=22,SNR=6.9						
JCJ	Chichijima	4.65	163		Pn	04 22 30.8	+1.5
JRY	Ryogami san	4.68	342	eP	Pn	04 22 33.9	+4.1
JRY				eS	Sn	04 23 24.2	+1.4
JTNC	Tanabenakahech	4.84	299	eP	Pn	04 22 34.3	+2.3
JGF	Kuroka	4.89	326		Pn	04 22 35.5	+2.8
JGF					Sn	04 23 29.1	+1.0
JAG	Ashikaga	4.95	348	eP	Pn	04 22 36.2	+2.8
JAG				eS	Sn	04 23 29.2	-0.3
JWY	Kouya	5.04	303	eP	Pn	04 22 37.8	+3.0
MJAR	Matsushiro Arr	5.37	338	P	Pn	04 22 41.1	+1.9
	2.4nm,0.5s,baz=163,slow=14,SNR=8.5						
MJAR				S	Sn	04 23 39.0	-0.9
	2.8nm,0.7s,baz=146,slow=16,SNR=1.5						
MJAR				LR	LR	04 24 51.0	
	comp=Z,37nm,21.4s,baz=108,slow=40						
MJAR	Matsushiro Arr	5.37	338		Pn	04 22 40.4	+1.1
MAJO	Matsushiro	5.37	338	Pn	Pn	04 22 40.1	+0.9
MJB9	Matsu-Tunnel	5.38	338	Pn	Pn	04 22 41.0	+1.7
JOTO	OTAMA OYAMA	5.98	357	eS	Sn	04 23 53.2	-1.7
JMN	Monobe	6.14	292		Pn	04 22 51.9	+2.0
JNU	Nakatsue	8.46	283	P	Pn	04 23 21.7	0.0
	20nm,0.9s,baz=99,slow=19,SNR=5.7						
JNU				LR	LR	04 26 42.8	
	comp=Z,73nm,18.3s,baz=130,slow=40						
JOW	Kunigami	11.84	250	LR	LR	04 28 12.1	
	comp=Z,121nm,21.8s,baz=180,slow=36						
YHNB	Yeheng	18.37	253	Pn	P	04 25 34.3	+0.8
YHNB				IAmb	IAmb	04 26 06.5	
	comp=Z,73nm,1.4s						
BJT	Baijiatuau	21.56	300	P	P	04 26 06.5	-1.5
H11N2	WAKE ISLAND Hy	26.32	110	T	T	04 54 55.7	
	baz=301						
H11N1	WAKE ISLAND Hy	26.32	110	T	T	04 55 29.1	
	baz=301,slow=74						
H11N3	WAKE ISLAND Hy	26.34	110	T	T	04 55 28.9	
	baz=301,slow=74						
H11S3	WAKE ISLAND Hy	26.82	113	T	T	04 56 09.3	
	baz=304,slow=75,SNR=31						
H11S1	WAKE ISLAND Hy	26.82	113	T	T	04 55 38.8	
	baz=304,slow=75,SNR=25						
H11S2	WAKE ISLAND Hy	26.84	113	T	T	04 55 40.1	
	baz=304,slow=75,SNR=19						
DAV	Davao City (W)	28.18	213	LR	LR	04 37 36.4	
	comp=Z,18nm,19.4s,baz=348,slow=35						
MA2	Magadan	28.81	11	LR	LR	04 38 53.4	
	comp=Z,35nm,18.5s,baz=142,slow=36						
SONM	Songino Array	30.68	312	LR	LR	04 40 26.7	
	comp=Z,30nm,18.9s,baz=208,slow=38						
SEY	Seymchan	32.25	10	LR	LR	04 41 28.6	
	comp=Z,14nm,21.2s,baz=338,slow=37						
CMAR	Chiang Mai Arr	39.80	261	LR	LR	04 45 47.5	
	comp=Z,16nm,18.0s,baz=85,slow=37						
AKUT	Akutan	43.95	43	P	P	04 29 24.7	-0.3
COEN	Coen	45.33	177	P	P	04 29 33.8	-2.6
COEN				IAmb	IAmb	04 29 49.4	
	comp=Z,7.7nm,1.3s						
MKAR	Makanchi Array	46.71	306	P	P	04 29 43.9	-3.2
	comp=Z,0.6nm,0.5s,baz=83,slow=9.9,SNR=4.4						
MKAR				ScP	ScP	04 35 03.9	-7.2
	comp=Z,0.4nm,0.7s,baz=70,slow=4.7,SNR=2.4						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	46.71	306	P	P	04 29 44.3	-2.7
M14K	Bethel	47.15	34	P	P	04 29 50.8	+0.7
KURK	Kurchatov	48.99	312	P	P	04 30 01.6	-2.9
KURK	Kurchatov	48.99	312	IAmb	IAmb	04 30 03.3	
	comp=Z,1.5nm,0.8s						
J17K	VABM Dome	48.99	31	P	P	04 30 04.7	+0.2
J17K				IAmb	IAmb	04 30 28.9	
	comp=Z,12nm,1.3s						
KURBB	Kurchatov Arra	49.05	312	P	P	04 30 01.6	-3.4
	comp=Z,0.5nm,0.3s,baz=94,slow=5.6,SNR=1.7						
	comp=Z,0.5nm,0.3s						
C19K	Lookout Ridge	50.15	24	P	P	04 30 14.3	+1.1
WB0	Warramunga Arr	51.41	188	P	P	04 30 22.3	-0.8
WB0				IAmb	IAmb	04 30 24.3	
	comp=Z,3.8nm,1.1s						
FITZ	Fitzroy Crossi	51.46	198	P	P	04 30 22.0	-1.5
M20K	Styx River	51.52	34	P	P	04 30 22.3	-1.4
M20K				IAmb	IAmb	04 30 46.0	
	comp=Z,14nm,1.4s						
WR8	Warramunga Arr	51.58	187	P	P	04 30 21.9	-2.5
WR8				IAmb	IAmb	04 30 28.8	
	comp=Z,12nm,1.5s						
WB2	Warramunga Arr	51.58	188	P	P	04 30 22.4	-2.0
WB2				IAmb	IAmb	04 30 52.7	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	51.59	188	P	P	04 30 22.7	-1.8
	comp=Z,0.5nm,0.4s,baz=5.2,slow=7.6,SNR=19						
WRA				PcP	PcP	04 31 38.3	+0.3
	comp=Z,0.5nm,0.7s,baz=5.5,slow=3.7,SNR=2.0						
	comp=Z,0.5nm,0.4s						
WRA	Warramunga Arr	51.59	188	P	P	04 30 20.9	-3.6
WRA					PcP	04 31 37.2	-0.9
CTAO	Charters Tower	51.64	173	P	P	04 30 22.7	-2.2
CTAO				IAmb	IAmb	04 31 06.3	
	comp=Z,10.0nm,1.4s						
BOOM	Boomskoye usch	51.70	302	P	P	04 30 22.4	-3.1
BOOM				IAmb	IAmb	04 30 50.8	
	comp=Z,4.8nm,1.0s						
SYI	Shuyak Island	51.74	38	P	P	04 30 23.9	-1.4
H21K	Melozitna Rive	52.02	29	P	P	04 30 26.2	-1.1
H21K				IAmb	IAmb	04 30 59.8	
	comp=Z,7.3nm,1.5s						
D22K	Ayikyak River	52.52	25	P	P	04 30 32.3	+1.3
D22K				IAmb	IAmb	04 31 10.1	
	comp=Z,9.8nm,1.3s						
FRU1	Bishkek	52.59	302	P	P	04 30 29.9	-2.0
H22K	Ishtalitna Cre	52.64	29	P	P	04 30 31.5	-0.3
TOLK	Toolik Lake Re	53.62	25	P	P	04 30 39.5	+0.4
TOLK				IAmb	IAmb	04 31 13.6	
	comp=Z,9.7nm,1.4s						
KNK	Knik Glacier	53.73	34	P	P	04 30 39.8	-0.2
BVAR	Borovoye Array	53.92	315	P	P	04 30 39.9	-1.6
	comp=Z,0.3nm,0.4s,baz=111,slow=7.9,SNR=2.6						
BVAR				PcP	PcP	04 31 44.5	-2.0
	comp=Z,0.7nm,0.7s,baz=94,slow=2.2,SNR=3.5						
	comp=Z,0.3nm,0.4s						
ILAR	Eielson Array	54.45	30	P	P	04 30 45.7	+0.5
	comp=Z,0.4nm,0.8s,baz=292,slow=5.9,SNR=4.4						
	comp=Z,0.4nm,0.8s						
ILAR	Eielson Array	54.45	30	P	P	04 30 44.4	-0.8
ASAR	Alice Springs	55.31	188	P	P	04 30 52.0	+0.2
	comp=Z,0.4nm,0.5s,baz=17,slow=14,SNR=9.8						
	comp=Z,0.4nm,0.5s						
ASAR	Alice Springs	55.31	188	P	P	04 30 48.8	-3.0
YKA	Yellowknife Ar	68.84	29	P	P	04 32 22.8	+0.7
	comp=Z,0.8nm,0.9s,baz=304,slow=7.5,SNR=3.3						
	comp=Z,0.8nm,0.9s						
ARCES	ARCESS Array B	68.90	340	P	P	04 32 21.1	-1.3
	comp=Z,4.7nm,0.8s,baz=66,slow=5.0,SNR=1.3						
	comp=Z,4.7nm,0.8s						
ARCES	ARCESS Array B	68.90	340	P	P	04 32 20.7	-1.8
ARCES				IAmb	IAmb	04 32 48.2	
	comp=Z,4.5nm,1.2s						
FINES	FINESS Array B	73.38	333	P	P	04 32 47.9	-1.7
	comp=Z,4.2nm,0.9s,baz=44,slow=4.5,SNR=9.5						
	comp=Z,4.2nm,0.9s						
FINES	FINESS Array B	73.38	333	P	P	04 32 48.2	-1.4
KBZ	Khabaz	74.05	312	P	P	04 32 51.7	-2.1
	comp=Z,2.8nm,0.8s,baz=78,slow=2.4,SNR=4.8						
	comp=Z,2.8nm,0.8s						
AKASG	Malin Array Be	78.27	323	P	P	04 33 15.4	-2.3
	comp=Z,0.3nm,0.3s,baz=53,slow=5.4,SNR=5.5						
AKASG				LR	LR	05 08 31.9	
	comp=Z,25nm,18.5s,baz=88,slow=36						
	comp=Z,0.3nm,0.3s						
AKASG	Malin Array Be	78.27	323	P	P	04 33 14.6	-3.1
NVAR	Mina Array Bea	78.77	52	P	P	04 33 22.2	+1.1
	comp=Z,0.2nm,0.5s,baz=280,slow=8.3,SNR=2.6						
	comp=Z,0.2nm,0.5s						
NVAR	Mina Array Bea	78.77	52	P	P	04 33 19.4	-1.6
HFS	Hagfors	78.82	336	P	P	04 33 18.8	-1.8
	comp=Z,2.1nm,0.8s,baz=60,slow=8.5,SNR=1.9						
	comp=Z,2.1nm,0.8s						
NOA	NORSAR Array B	78.99	338	P	P	04 33 19.3	-2.2
	comp=Z,0.9nm,0.8s,baz=48,slow=5.3,SNR=3.9						
NOA				LR	LR	05 10 00.3	
	comp=Z,6.0nm,20.7s,baz=5.0,slow=37						
	comp=Z,0.9nm,0.8s						
ELK	Elko	79.56	49	LR	LR	05 00 58.7	
	comp=Z,145nm,20.7s,baz=277,slow=30						
BRTR	Keskin Array B	82.04	312	P	P	04 33 36.4	-2.1
	comp=Z,1.5nm,0.8s,baz=48,slow=2.1,SNR=9.0						
BRTR				LR	LR	05 11 42.5	
	comp=Z,13nm,21.6s,baz=73,slow=37						
	comp=Z,1.5nm,0.8s						
BRTR	Keskin Array B	82.04	312	P	P	04 33 36.1	-2.4
CLL	Collm	85.53	330	eP	P	04 33 54.0	-1.9
H03N2	Juan Fernandez	146.66	104	T	T	07 25 46.7	
	baz=273,slow=74,SNR=4.9						
H03N3	Juan Fernandez	146.67	104	T	T	07 25 46.8	
	baz=273,slow=74,SNR=8.3						
H03N1	Juan Fernandez	146.67	104	T	T	07 25 46.8	
	baz=273,slow=74,SNR=10						

*SJA **03** 04:33:02.1±1.9, 20°.93S×70°.91W, h19^{km}±18^{km}, ML3.1, MW3.5*

*GUC **03** 04:33:04.9±0.9, 20°.89S×70°.87W, h20^{km}±6^{km}, ML3.1*

ISC 03 04:33:02.9±1.8**, 20°.89S**±0°.03×**70°.93W**±0°.07**, h19**^{km}±4^{km}**, n26, σ0^{s}85**/32**, 1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PATCX	Punta Patache	0.73	84	⇓iP	Pg	04 33 17.3	-0.1
PATCX				eS	Sg	04 33 26.4	-0.7
PATCX				IAML		04 33 29.0	
	comp=E,974nm,0.3s						
PATCX	Punta Patache	0.73	84	iP	Pb	04 33 16.6	-0.5
PATCX				IAML		04 33 29.3	
	comp=Z,716nm,0.5s						
TA01	Diego Aracena	0.78	65	iP	Pb	04 33 17.6	-0.2
TA01				eS	Sg	04 33 28.4	-0.1
TA01				IAML		04 33 29.4	
	comp=N,1µm,0.4s						
TA01	Diego Aracena	0.78	65	iP	Pb	04 33 17.0	-0.8
TA01				IAML		04 33 29.1	
	comp=Z,651nm,0.3s						
TA02	Huaiquique	0.97	51	eP	Pb	04 33 21.0	-0.1
PB02	IPOC Station P	1.06	114	eP	Pg	04 33 23.3	-0.2
PB02				eS	Sg	04 33 36.9	-0.5
PB02				IAML		04 33 39.4	
	comp=E,2µm,0.3s						
PB07	IPOC Station P	1.28	131	eP	Pb	04 33 26.7	+0.2
PB07				eS	Sn	04 33 42.8	+0.2
PB07				IAML		04 33 47.4	
	comp=E,380nm,0.3s						
PB01	IPOC Station P	1.36	97	eP	Pb	04 33 27.6	-0.2
PB01				eS	Sb	04 33 44.8	0.0
PB03	IPOC Station P	1.59	137	eP	Pb	04 33 31.1	-0.7
PB03				eS	Sb	04 33 50.9	-0.6
PB03	IPOC Station P	1.59	137	iP	Pn	04 33 30.8	+0.7
PB03				IAML		04 33 59.0	
	comp=Z,287nm,0.2s						
PB11	IPOC Station P	1.64	47	eP	Pn	04 33 31.2	+0.3
PB11				IAML		04 33 57.5	
	comp=N,981nm,0.6s						
PB11	IPOC Station P	1.64	47	iP	Pn	04 33 31.1	+0.2
PB11				IAML		04 33 57.5	
	comp=Z,463nm,0.3s						
PB09	IPOC Station P	1.81	120	eP	Pb	04 33 35.4	-0.2
PB09				IAML		04 34 08.6	
	comp=E,235nm,0.4s						
PB09	IPOC Station P	1.81	120	iP	Pb	04 33 35.0	-0.6
PB09				IAML		04 34 03.7	
	comp=Z,230nm,0.6s						
PB08	IPOC Station P	1.83	66	eP	Pb	04 33 35.4	-0.6
PB08				IAML		04 34 03.3	
	comp=E,419nm,0.4s						
GO01	Chusmiza	2.04	54	eP	Pn	04 33 37.2	+0.6
GO01				IAML		04 34 08.9	
	comp=N,370nm,0.2s						
GO01	Chusmiza	2.04	54	iP	Pn	04 33 37.7	+1.1
GO01				IAML		04 34 09.0	
	comp=Z,208nm,0.4s						
PB05	IPOC Station P	2.06	161	eP	Pn	04 33 37.1	+0.5
PB05				IAML		04 34 16.6	
	comp=E,115nm,0.3s						
PB06	IPOC Station P	2.20	145	eP	Pn	04 33 39.5	+0.9
PB06				IAML		04 34 19.2	
	comp=N,182nm,0.5s						
PB06	IPOC Station P	2.20	145	iP	Pn	04 33 40.1	+1.5
PB06				IAML		04 34 18.4	
	comp=Z,147nm,0.3s						
PB12	IPOC Station P	2.34	14	eP	Pb	04 33 43.7	-0.8
PB12				IAML		04 34 26.0	
	comp=N,156nm,0.6s						
PB12	IPOC Station P	2.34	14	iP	Pb	04 33 43.5	-1.0
PB12				IAML		04 34 22.4	
	comp=Z,95nm,0.6s						
PB10	IPOC Station P	2.63	172	eP	Pn	04 33 44.9	+0.6

PB10	IPOC Station P	2.63	172	*i* P	Pn	04 33 44.6	+0.3
PB10				IAML		04 34 37.1	
	comp=Z,40nm,0.7s						
PB16	IPOC Station P	2.88	28	*e*P	Pb	04 33 52.7	-1.3
PB16				IAML		04 34 36.7	
	comp=N,53nm,0.4s						
PB16	IPOC Station P	2.88	28	*i* P	Pn	04 33 51.0	+2.7
PB16				IAML		04 34 34.9	
	comp=Z,51nm,0.5s						

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*MOS **03** 04:41:43.9±0.9, 5°.48S×154°.16E, h108^{km}, mb4.9/25, Error ellipse: s-maj=11.2km s-min=7.4km az=98.0*

*BJI **03** 04:41:43.6, 5°.16S×154°.64E, h108^{km}, mB5.1/12, mb5.0/53*

*DJA **03** 04:41:44.5±0.8, 5°S±3°×15°4E±°, h114^{km}±7^{km}, M5.3/28, mb5.1/28, mB5.8/12, Mw(mB)5.4/12, MwMwp6.7/1, Mwp6.6/1*

*NEIC **03** 04:41:44.8, 5°.54S×154°.19E, h100^{km}, Moment Tensor Solution. Duration: 1^{s}4 Moment tensor: Scale 10^{16}Nm; M_{rr}0.40; $M_{\theta\theta}$-0.08; $M_{\phi\phi}$-0.32; $M_{r\theta}$-1.63; $M_{\theta\phi}$-1.48; $M_{\phi r}$0.08; Fault plane solution: $M_0$2.24000×10^{16} NP1:ϕ_s2.13000°, δ42.44000°, λ10.69000°. NP2:ϕ_s264.19000°, δ82.81000°, λ131.94000°. Principal axes: T 2.2739, Plg38.0000°, Azm211.0000°; N -0.0723, Plg42.0000°, Azm78.0000°; P -2.2016, Plg26.0000°, Azm323.0000°;*

*NEIC **03** 04:41:44.6±1.0, 5°.49S±0°.07×154°.28E±0°.04, h99^{km}±5^{km}, mb4.9/136, Mww4.8/10 Error ellipse: s-maj=10.0km s-min=5.5km az=165.0*

*NEIC **03** 04:41:44.8, 5°.44S×154°.29E, h100^{km}*

*GCMT **03** 04:41:45.6±0.3, 5°.54S±0°.02×154°.02E±0°.02, h92^{km}±4^{km}, MW4.9/84, Moment Tensor Solution. s19,c21; s84,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.26±.13; $M_{\theta\theta}$0.13±.15; $M_{\phi\phi}$-0.38±.13; $M_{r\theta}$-1.85±.06; $M_{\theta\phi}$-1.89±.14; $M_{\phi r}$0.21±.07; Best double couple: $M_0$2.66600×10^{16} NP1:ϕ_s360.00000°, δ47.00000°, λ7.00000°. NP2: ϕ_s265.00000°, δ85.00000°, λ136.00000°. Principal axes: T 2.7980, Plg33.0000°, Azm213.0000°; N -0.2650, Plg46.0000°, Azm80.0000°; P -2.5330, Plg25.0000°, Azm321.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **03** 04:41:45.9±1.6, 5°.52S×154°.20E, h116^{km}±13^{km}, mb4.6/25, mbtmp5.0/26, MS3.3/32 Error ellipse: s-maj=14.4km s-min=8.6km az=107.0*

ISC 03 04:41:45.3±0.5**, 5°.45S**±0°.04×**154°.23E**±0°.05**, h109**^{km}±4^{km}**, n630, σ1^{s}19**/627**, mb5.0**/127**, 16C-6D,**
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	2.41	301		Pn	04 42 23.0	-0.6
RABL				Sn	Sn	04 42 53.3	+0.4
TATA	Tatamba Isabel	6.25	118	P	Pn	04 43 16.0	+0.9
SAVO	Savo Central	6.64	124	P	Pn	04 43 21.3	+0.8
MANU	Manus Island	7.64	296		Pn	04 43 34.3	+0.3
PMG	Port Moresby	8.04	240	P	Pn	04 43 40.4	+1.1
	813nm,0.8s,baz=55,slow=6.5,SNR=102						
PMG				S	Sn	04 45 09.2	+0.6
	233nm,0.5s,baz=106,slow=23,SNR=8.9						
PMG				LR	LR	04 47 11.1	
	comp=Z,106nm,18.9s,baz=56,slow=41						
PMG	Port Moresby	8.04	240		Pn	04 43 40.6	+1.3
PMG					Sn	04 45 08.2	-0.4
PMG	Port Moresby	8.04	240	P	Pn	04 43 41.0	+1.7
PMG	Port Moresby	8.04	240	S	Sn	04 45 13.3	+4.7
PMG	Port Moresby	8.04	240	P	Pn	04 43 40.7	+1.3
PMG	Port Moresby	8.04	240	S	Sn	04 45 13.5	+4.9
PMG	Port Moresby	8.04	240	P	Pn	04 43 40.2	+0.9
PMG				S	Sn	04 45 12.7	+4.1
PMG	Port Moresby	8.04	240	*c i*P	Pn	04 43 39.8	+0.5
NGOA	Tingoa Renbel	8.37	137	P	Pn	04 43 46.3	+2.5
NGOA	Tingoa Renbel	8.37	137	S	Sn	04 45 22.9	+6.3
PATS	Pohnpei	12.87	19	Pn	Pn	04 44 42.2	-2.2
COEN	Coen	13.78	231	P	Pn	04 44 57.4	+1.2
	comp=Z,54nm,0.8s						
COEN	Coen	13.78	231		Pn	04 44 55.4	-0.8
JAY	Jayapura	13.80	282	P	P	04 45 02.2	+0.9
	comp=Z,20nm,0.7s,baz=152,slow=19,SNR=4.2						
JAY				LR	LR	04 51 04.3	
	comp=Z,47nm,18.2s,baz=352,slow=40						
TV1H	Townsville Har	15.52	207	P	P	04 45 20.9	+0.7
SMPI	Sarmi	15.86	282	P	Pn	04 45 22.1	-0.5
	comp=Z,4μmcomp=Z,87nm,1.1s						
MTSU	Mount Surprise	15.89	217	P	P	04 45 24.2	-0.3
	comp=Z,63nm,1.1s						
SANVU	Saraoutou	16.16	129	Pn	Pn	04 45 24.3	-1.9
CTA	Charters Tower	16.48	207	P	P	04 45 31.4	+0.4
	comp=Z,2.8nm,1.1s						
CTA	Charters Tower	16.48	207	LR	LR	04 51 41.8	
	comp=Z,4.3nm,18.4s,baz=45,slow=36						
CTA	Charters Tower	16.48	207	P	P	04 45 32.2	+1.3
CTAO	Charters Tower	16.48	207	Pn	Pn	04 45 28.6	-1.7
CTAO	Charters Tower	16.48	207	P	P	04 45 32.3	+1.3
CTAO	Charters Tower	16.48	207	P	Pn	04 45 28.6	-1.7
BAKI	Biak	18.58	283	P	P	04 45 54.0	-0.1
	comp=Z,59nm,0.8s						
EIDS	Eidsvold	20.03	188	P	P	04 46 10.3	+0.5
	comp=Z,98nm,1.1s,comp=Z,0.0nm						
EIDS	Eidsvold	20.03	188		P	04 46 08.5	-1.2
EIDS	Eidsvold	20.03	188	P	P	04 46 10.5	+0.7
DZM	Mont Dzumac	20.31	146	P	P	04 46 12.6	-0.3
	comp=Z,54nm,0.5s,baz=318,slow=8.6,SNR=140						
	comp=Z,54nm,0.5s						
DZM	Mont Dzumac	20.31	146	*e*P	P	04 46 11.0	-1.9
	comp=Z,109nm,0.8s						
DZM				*e*LR	LR	04 51 06.2	
	comp=Z,457nm,29.5s						
DZM	Mont Dzumac	20.31	146	P	P	04 46 12.2	-0.7
DZM	Mont Dzumac	20.31	146	P	P	04 46 13.2	+0.3
ONTNC	Ouen Toro	20.50	146		P	04 46 13.3	-1.6
ONTNC	Ouen Toro	20.50	146	P	P	04 46 15.2	+0.3
YATNC	Mamie plateau,	20.56	145	P	P	04 46 14.7	-0.8
QIS	Mount Isa	20.67	222	P	P	04 46 16.6	-0.1
	comp=Z,256nm,0.7s						
QIS	Mount Isa	20.67	222	P	P	04 46 16.8	+0.1
MARNC	Mare, Loyalty	20.80	141	P	P	04 46 16.4	-1.7
MARNC	Mare, Loyalty	20.80	141	P	P	04 46 18.1	0.0
OUENC	Ouen Island, N	20.81	145	P	P	04 46 17.5	-0.7
GUMO	Guam	21.08	334	P	P	04 46 21.1	+0.1
	comp=Z,87nm,0.3s,baz=189,slow=9.2,SNR=4.5						
GUMO				LR	LR	04 53 46.3	
	comp=Z,26nm,21.8s,baz=119,slow=34						
	comp=Z,87nm,0.3s						
PINNC	Pines Island,	21.31	144	P	P	04 46 21.8	-1.7
RMQ	Roma	21.56	193	P	P	04 46 27.8	+1.7
	comp=Z,55nm,0.8s						
RMQ	Roma	21.56	193	P	P	04 46 26.6	+0.5
FAKI	Fak Fak	22.06	276		P	04 46 31.3	-0.4
FAKI	Fak Fak	22.06	276	P	P	04 46 32.3	+0.7
DPSS	Saipan	22.20	338	P	P	04 46 31.7	-1.2
SAUI	Saumlaki	22.91	262		P	04 46 40.1	-0.1
SAUI	Saumlaki	22.91	262	P	P	04 46 42.6	+2.4
	comp=Z,22μmcomp=Z,366nm,1.2s						
QLP	Quilpie	23.08	203	P	P	04 46 41.1	-0.5
MTN	Manton Dam	23.94	251		P	04 46 49.0	-0.7
WB0	Warramunga Arr	23.98	232	P	P	04 46 48.4	-1.5
WR8	Warramunga Arr	24.00	231	P	P	04 46 49.2	-1.0
WRAB	Tennant Creek	24.10	232	P	P	04 46 50.7	-0.4
WRAB	Tennant Creek	24.10	232	P	P	04 46 50.6	-0.5
WRAB	Tennant Creek	24.10	232	*c i*P	P	04 46 50.6	-0.5
WRAB				pmax	pmax		
	comp=Z,65nm,0.7s						
WRA	Warramunga Arr	24.12	232	P	P	04 46 50.7	-0.6
	comp=Z,87nm,0.6s,baz=57,slow=9.9,SNR=202						
WRA				PcP	PcP	04 50 28.9	-0.9
	comp=Z,1.0nm,0.6s,baz=61,slow=2.7,SNR=1.9						
WRA				S	S	04 50 59.6	-1.8
	comp=Z,2.8nm,0.9s,baz=54,slow=15,SNR=7.4						
WRA				ScP	ScP	04 53 57.6	-1.0
	comp=Z,3.2nm,0.9s,baz=53,slow=3.1,SNR=7.5						
	comp=Z,87nm,0.6s						
WRA	Warramunga Arr	24.12	232	P	P	04 46 50.6	-0.6
WRA					PcP	04 50 29.0	-0.8
WRA					ScP	04 53 57.2	-1.4
WRA	Warramunga Arr	24.12	232	*i* P	P	04 46 49.7	-1.5
WRA				pmax	pmax		
	comp=Z,96nm,0.6s						
ARMA	Armidale	24.95	185	P	P	04 46 58.2	-0.6
ARMA	Armidale	24.95	185	P	P	04 46 59.0	+0.2
INKA	Innaminka	25.61	209	P	P	04 47 03.6	-1.0
AS31	Alice Springs	26.66	225	P	P	04 47 13.2	-1.1
ASAR	Alice Springs	26.66	225	P	P	04 47 13.5	-0.8
	comp=Z,22nm,0.6s,baz=57,slow=8.8,SNR=151						
ASAR				PcP	PcP	04 50 35.0	-0.5
	comp=Z,1.9nm,0.8s,baz=57,slow=2.3,SNR=2.3						
ASAR				S	S	04 51 39.5	-2.2
	comp=Z,1.5nm,0.8s,baz=53,slow=14,SNR=3.3						
ASAR				ScP	ScP	04 54 05.4	-0.5
	comp=Z,2.9nm,0.9s,baz=47,slow=3.4,SNR=8.0						
ASAR				LR	LR	04 57 10.2	
	comp=Z,74nm,19.9s,baz=98,slow=35						
	comp=Z,22nm,0.6s						
ASAR	Alice Springs	26.66	225	P	P	04 47 13.4	-0.8
ASAR					PcP	04 50 34.1	-1.5
ASAR					ScP	04 54 04.8	-1.1
H11S3	WAKE ISLAND Hy	26.78	27	T	T	05 15 23.5	
	baz=207,slow=72,SNR=18						
H11S2	WAKE ISLAND Hy	26.79	27	T	T	05 15 25.1	
	baz=207,slow=72,SNR=71						
H11S1	WAKE ISLAND Hy	26.80	27	T	T	05 15 25.5	
	baz=207,slow=72,SNR=22						
KNRA	Kununurra	26.98	246		P	04 47 16.8	-0.3
KNRA				IAmb	IAmb	04 47 20.0	
	comp=Z,40nm,0.8s						
CMSA	Cobar Meteorol	27.16	196	P	P	04 47 18.0	-0.5
STKA	Stephens Creek	28.83	203	P	P	04 47 32.1	-1.4
	comp=Z,26nm,0.6s,baz=31,slow=14,SNR=41						
STKA				ScP	ScP	04 54 12.1	-0.2
	comp=Z,2.9nm,0.7s,baz=9.5,slow=6.1,SNR=3.8						
STKA				LR	LR	04 59 30.9	
	comp=Z,152nm,20.6s,baz=27,slow=37						
	comp=Z,26nm,0.6s						
STKA	Stephens Creek	28.83	203		P	04 47 32.4	-1.0
STKA					ScP	04 54 11.6	-0.7
STKA	Stephens Creek	28.83	203	P	P	04 47 32.0	-1.4
STKA	Stephens Creek	28.83	203	*c i*P	P	04 47 31.8	-1.6
CNB	Canberra Magne	30.05	188	P	P	04 47 45.0	+0.7
SGSI	Sangihe	30.07	287	P	P	04 47 44.6	0.0
FITZ	Fitzroy Crossi	30.62	243	LR	LR	04 59 35.6	
	comp=Z,82nm,20.9s,baz=34,slow=35						
FITZ	Fitzroy Crossi	30.62	243		P	04 47 48.4	-1.0
FITZ				IAmb	IAmb	04 47 49.1	
	comp=Z,24nm,0.7s						
FITZ	Fitzroy Crossi	30.62	243	P	P	04 47 48.2	-1.2
HTT	Hallett	31.27	205	P	P	04 47 54.1	-0.9
BBOO	Buckleboo	32.06	210		P	04 48 00.7	-1.3
BBOO	Buckleboo	32.06	210	P	P	04 48 00.6	-1.3
EDFI	Ende, Flores	32.45	262	P	P	04 48 03.7	-2.0
	comp=Z,23nm,0.6s						
BNSI	Bone	34.01	270	P	P	04 48 18.2	-0.9
	comp=Z,25nm,1.1s						
KAPI	Kappang	34.33	269		P	04 48 21.9	0.0
KAPI				IAmb	IAmb	04 48 22.4	
	comp=Z,11nm,0.8s						
KAPI	Kappang	34.33	269	P	P	04 48 21.7	-0.2
KAPI	Kappang	34.33	269	*de*P	P	04 48 21.6	-0.3
KAPI				pmax	pmax		
	comp=Z,13nm,0.8s						
KAPI	Kappang	34.33	269	P	P	04 48 21.3	-0.6
SPSI	Sidrap Palu	34.37	271	P	P	04 48 31.3	+9.0
JCJ	Chichijima	34.39	341	LR	LR	05 00 37.5	
	comp=Z,58nm,21.0s,baz=350,slow=33						
MPSI	Mapaga	34.76	278	P	P	04 48 25.7	+0.1
	comp=Z,960nmcomp=Z,23nm,0.5s						
FORT	Forrest	35.21	221		P	04 48 27.7	-1.6
WCZ	Waipu Caves	35.53	151	P	P	04 48 32.8	+0.9
MBAZ	Motutapu North	36.47	152	P	P	04 48 40.7	+0.9
MBWA	Marble Bar	36.90	242		P	04 48 42.0	-1.8
MBWA	Marble Bar	36.90	242	P	P	04 48 41.9	-1.8
MBWA	Marble Bar	36.90	242	P	P	04 48 42.5	-1.3
PSA00	Pilbara Seismi	36.94	241	P	P	04 48 42.6	-1.5
PSA00	Pilbara Seismi	36.94	241		P	04 48 42.6	-1.5
PSA00				IAmb	IAmb	04 48 43.8	
	comp=Z,19nm,0.8s						
PSA00	Pilbara Seismi	36.94	241	P	P	04 48 42.9	-1.3
MOO	Moorlands	37.36	189	P	P	04 48 48.0	+0.6
TAU	Tasmania Unive	37.80	188	P	P	04 48 51.3	+0.3
HIZ	Hauiti	37.86	153	P	P	04 48 52.5	+0.8
HIZ	Hauiti	37.86	153	P	P	04 48 52.6	+0.9
HAZ	Te Kaha	38.66	150	P	P	04 48 58.7	+0.4
URZ	Urewera	38.71	151	P	P	04 48 57.1	-1.7
URZ	Urewera	38.71	151	P	P	04 48 58.8	0.0
QRZ	Quartz Range	38.85	158	P	P	04 49 00.4	+0.5
QRZ	Quartz Range	38.85	158	P	P	04 49 00.6	+0.6
PKGZ	Pakihiroa	38.89	149	P	P	04 49 00.2	-0.1
MWZ	Matawai	38.98	150	P	P	04 49 01.3	+0.2
TWGZ	Tauwhareparae	39.08	150	P	P	04 49 02.3	+0.3
BKZ	Black Stump Fm	39.14	152	P	P	04 49 01.7	-0.7
BKZ	Black Stump Fm	39.14	152	P	P	04 49 02.0	-0.5
PUZ	Puketiti	39.14	149	P	P	04 49 00.9	-1.5
NMHZ	Naumai	39.23	152	P	P	04 49 04.0	+0.8
SNGZ	Shannon Statio	39.23	151	P	P	04 49 03.3	+0.1
DSZ	Denniston Nort	39.39	159	P	P	04 49 06.1	+1.7
CNGZ	Carnagh Statio	39.43	150	P	P	04 49 04.2	-0.6
ARHZ	Aropaoanui	39.45	152	P	P	04 49 05.0	+0.1
MCHZ	McNeill Hill	39.46	152	P	P	04 49 05.2	+0.2
KRHZ	Kereru	39.47	153	P	P	04 49 04.1	-1.0
NNZ	Nelson	39.52	157	P	P	04 49 04.9	-0.6
KNZ	Kokohu	39.59	151	P	P	04 49 05.3	-0.7
PNHZ	Pukenui	39.61	153	P	P	04 49 04.8	-1.5
TSZ	Takapari Road	39.62	154	P	P	04 49 05.9	-0.5
MHGZ	Mahia Peninsul	39.80	151	P	P	04 49 07.5	-0.4
THZ	Tophouse	39.80	158		P	04 49 07.1	-0.8
THZ	Tophouse	39.80	158	P	P	04 49 07.4	-0.6
TCW	Tory Channel	39.86	156	P	P	04 49 08.0	-0.3
TUWZ	Tuamarina	39.92	157	P	P	04 49 08.0	-0.7
MRZ	Mangatainoka R	39.95	154	P	P	04 49 08.0	-1.0
MEEK	Meekatharra	39.96	234	P	P	04 49 08.2	-1.2
PXZ	Pawanui	40.00	153	P	P	04 49 08.7	-0.8
SNZO	South Karori	40.12	156	P	P	04 49 09.1	-1.3
INZ	Inchbonnie	40.13	160	P	P	04 49 09.8	-0.7
LTZ	Lake Taylor	40.47	159	P	P	04 49 12.7	-0.6
LTZ	Lake Taylor	40.47	159	P	P	04 49 13.1	-0.2
KHZ	Kahutara	40.61	158	P	P	04 49 13.1	-1.3
KHZ	Kahutara	40.61	158	P	P	04 49 13.2	-1.3
OXZ	Oxford	40.87	160	P	P	04 49 15.7	-0.9
OXZ	Oxford	40.87	160	P	P	04 49 15.7	-0.9
RPZ	Rata Peaks	40.89	161	P	P	04 49 16.8	0.0
GVZ	Greta Valley S	40.90	159	P	P	04 49 15.8	-1.1
GVZ	Greta Valley S	40.90	159	P	P	04 49 16.1	-0.7
LBZ	Lake Benmore	41.23	163	P	P	04 49 18.5	-1.0
MQZ	McQueen's Vall	41.41	160	P	P	04 49 20.3	-0.7
TMZ	Timaru	41.47	162	P	P	04 49 19.9	-1.6
MLZ	Mavora Lakes	41.56	165	P	P	04 49 21.8	-0.5
ODZ	Otahua Downs	41.96	163	P	P	04 49 24.4	-1.1
ODZ	Otahua Downs	41.96	163	P	P	04 49 24.4	-1.1
WHZ	Wether Hill Ro	42.01	166	P	P	04 49 25.0	-0.9
TUZ	Tuapeka	42.50	164	P	P	04 49 29.3	-0.5
SYZ	Scrubby Hill	42.91	165	P	P	04 49 32.7	-0.4
SYZ	Scrubby Hill	42.91	165	P	P	04 49 32.2	-1.0
KLBR	Kellerberrin	42.91	228	P	P	04 49 31.6	-1.9
MORW	Morawa	43.06	232		P	04 49 33.5	-1.1
MORW	Morawa	43.06	232	P	P	04 49 33.4	-1.3
BLDU	Ballidu	43.23	230	P	P	04 49 34.3	-1.7
INU	Inuyama	43.70	340	P	P	04 49 39.0	-0.6
NWAO	Narrogin (SRO)	43.96	227	LR	LR	05 07 04.6	
	comp=Z,62nm,21.0s,baz=62,slow=35						
MUN	Mundaring	44.25	229	P	P	04 49 43.1	-1.1
JNU	Nakatsue	44.30	332		P	04 49 44.0	-0.5
MJAR	Matsushiro Arr	44.39	341	P	P	04 49 43.8	-1.3
	comp=Z,7.1nm,0.7s,baz=175,slow=9.8,SNR=15						
MJAR				LR	LR	05 05 15.9	
	comp=Z,20nm,21.6s,baz=185,slow=32						
	comp=Z,7.1nm,0.7s						
MJAR	Matsushiro Arr	44.39	341		P	04 49 44.8	-0.3
MJAR	Matsushiro Arr	44.39	341	P	P	04 49 44.8	-0.3
MJAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MAJO	Matsushiro	44.39	341	P	P	04 49 44.6	-0.5
MAJO				IAmb	IAmb	04 49 48.2	
	comp=Z,24nm,0.9s						
MAJO	Matsushiro	44.39	341	⇓*e*P	P	04 49 44.0	-1.1
MAJO				pmax	pmax		
	comp=Z,65nm,2.2s						
MAJO	Matsushiro	44.39	341	P	P	04 49 43.2	-1.9
MJB9	Matsu-Tunnel	44.39	341	P	P	04 49 44.5	-0.7
MJB9				IAmb	IAmb	04 49 49.2	
	comp=Z,24nm,1.0s						
RAR	Rarotonga	47.22	114	LR	LR	05 07 29.2	
	comp=Z,27nm,18.7s,baz=278,slow=33						
TJN	Taejon	48.63	331		P	04 50 18.6	+0.4
TJN	Taejon	48.63	331	⇓*e*P	P	04 50 18.8	+0.6
KSRS	Korea Array	49.23	332	P	P	04 50 22.6	-0.1
	comp=Z,11nm,0.6s,baz=146,slow=6.9,SNR=30						
	comp=Z,11nm,0.6s						
KSAR	Wonju Array Be	49.24	332		P	04 50 23.4	+0.5
KSAR	Wonju Array Be	49.24	332	P	P	04 50 23.4	+0.5
KS19	Wonju Array Si	49.30	332	P	P	04 50 23.6	+0.3
INCN	Inchon	49.86	331		P	04 50 28.1	+0.5
INCN	Inchon	49.86	331	P	P	04 50 28.1	+0.5
INCN				pmax	pmax		
	comp=Z,78nm,0.7s						
INCN	Inchon	49.86	331	P	P	04 50 27.9	+0.3
NJ2	Nanjing	50.25	320	*e*P	P	04 50 32.4	+1.8
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
JKA	Kamikawa-asahi	50.45	349		P	04 50 32.9	+1.0
ASAJ	Asahikawa	50.45	349	P	P	04 50 32.9	+1.0
ASAJ				pmax	pmax		
	comp=Z,64nm,0.8s						
WHN	Wuhan	52.31	316	P	P	04 50 49.8	+3.7
YSS	Yuzhno-Sakhali	53.16	350	*e*P	P	04 50 52.8	+0.8
YSS				pmax	pmax		
	comp=Z,50nm,1.3s						
USRK	Ussuriysk Ar.	53.33	340	P	P	04 50 53.6	+0.3
	comp=Z,12nm,0.5s,baz=156,slow=3.9,SNR=27						
	comp=Z,12nm,0.5s						
DL2	Dalian	53.47	328	P	P	04 50 54.9	+0.5
DL2				pmax	pmax		
	comp=Z,56nm,0.9s						
PPI	Padang Panjang	53.97	273	P	P	04 50 57.3	-1.2
	comp=Z,1μmcomp=Z,45nm,0.8s						
TIA	Tai'an	54.09	323	P	P	04 50 59.9	+0.9
TIA				pmax	pmax		
	comp=Z,19nm,0.7s						
MDJ	Mudanjiang	54.54	339	P	P	04 51 03.6	+1.5
MDJ				pmax	pmax		
	comp=Z,13nm,0.6s						
CN2	Changchun	55.48	335	P	P	04 51 08.9	0.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LYN	LuoYang	55.97	318	P	P	04 51 15.3	+2.7
LYN				pmax	pmax		
	comp=Z,19nm,0.8s						
PPT2	Papeete2	56.17	107	*e*S	S	04 58 53.0	-2.9
	comp=Z,38nm,25.5s						
PPT2				*e*LR	LR	05 07 47.5	
	comp=Z,28nm,24.8s						
BNX	BinXian	56.30	338	⇑P	P	04 51 14.4	-0.3
BNX				pmax	pmax		
	comp=Z,18nm,0.8s						
HNS	HongShan	56.33	322	⇑P	P	04 51 15.6	+0.6
HNS				pmax	pmax		
	comp=Z,21nm,1.4s						
TBI	Tubuai	56.99	114	*e*S	S	04 58 56.0	-10
	comp=Z,625nm,35.8s						
TBI				*e*LR	LR	05 08 07.6	
	comp=Z,696nm,33.8s						
BJI	Beijing	57.23	326	P	P	04 51 22.7	+1.4
BJI				pP	pP	04 51 46.7	+0.1
BJI				sP	sP	04 51 57.9	-0.3
BJI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XAN	Xi'an	58.08	316	P	P	04 51 27.2	-0.3
XAN				pmax	pmax		
	comp=Z,36nm,0.7s						
XAN	Xi'an	58.08	316	P	P	04 51 26.9	-0.7
PETK	Petropavlovsk-	58.41	2	P	P	04 51 30.0	+0.6
	comp=Z,7.1nm,0.5s,baz=153,slow=6.1,SNR=23						
PETK				LR	LR	05 12 54.5	
	comp=Z,23nm,20.5s,baz=246,slow=32						
	comp=Z,7.1nm,0.5s						
PETK	Petropavlovsk-	58.41	2	P	P	04 51 30.0	+0.6
CMAR	Chiang Mai Arr	59.44	295	P	P	04 51 38.3	+1.1
	comp=Z,4.2nm,0.6s,baz=115,slow=5.3,SNR=15						
CMAR				LR	LR	05 17 18.8	
	comp=Z,8.3nm,20.1s,baz=175,slow=36						
	comp=Z,4.2nm,0.6s						
CMAR	Chiang Mai Arr	59.44	295	P	P	04 51 37.6	+0.5
CMAR	Chiang Mai Arr	59.44	295	*i* P	P	04 51 39.2	+2.0
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PZH	PanZhiHua	59.91	305	P	P	04 51 42.7	+2.3
XLT	XiLinHaoTe	59.95	329	*e*P	P	04 51 40.6	+0.3
XLT				pmax	pmax		
	comp=Z,61nm,0.7s						
CD2	Chengdu	60.24	310	*e*P	P	04 51 42.7	+0.2
SHEM	Shemya Is, Ala	60.37	14	LR	LR	05 18 03.9	
	comp=Z,28nm,18.0s,baz=278,slow=36						
HHC	Hu-ho-hao-te	60.41	324	*e*P	P	04 51 46.9	+3.4
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,7.6s						
BTO	Baotou	61.18	323	*e*P	P	04 51 51.2	+2.5
BTO				pP	pwP	04 52 18.2	-0.5
BTO				sP	PcP	04 52 30.9	+0.4
BTO				pmax	pmax		
	comp=Z,18nm,0.7s						
BTO				pmax	pmax		
	comp=Z,280nm,11.3s						
DRV	Dumont d'Urvil	61.90	186	P	P	04 51 52.4	-0.6
DRV				sP	sP	04 52 27.4	-3.4
HIA	Hailar	62.21	335		P	04 51 55.9	+0.5
HIA				IAmb	IAmb	04 51 56.8	
	comp=Z,11nm,0.8s						
HIA	Hailar	62.21	335	P	P	04 51 55.9	+0.5
HIA				pmax	pmax		
	comp=Z,11nm,0.8s						
HILR	Hailar Array B	62.43	335	P	P	04 51 57.0	+0.2
	comp=Z,13nm,0.6s,baz=137,slow=7.0,SNR=26						
	comp=Z,13nm,0.6s						
LZH	Lanzhou	62.69	315	*e*P	P	04 52 00.4	+1.4
LZH				pP	pP	04 52 24.4	-0.5
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
LZDM	Lanzhou Array	62.73	315	P	P	04 51 59.9	+0.4
	comp=Z,7.1nm,0.4s,baz=151,slow=6.3,SNR=15						
	comp=Z,7.1nm,0.4s						
ZEA	Zeya	63.19	342	*e*P	P	04 52 02.4	+0.7
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MA2	Magadan	64.88	358	LR	LR	05 19 59.2	
	comp=Z,12nm,19.2s,baz=236,slow=35						
MA2	Magadan	64.88	358	*de*P	P	04 52 13.2	+0.5
MA2				pmax	pmax		
	comp=Z,61nm,1.7s						
MA2	Magadan	64.88	358	P	P	04 52 13.2	+0.5
GTA	Gaotai	67.10	317	*e*P	P	04 52 28.9	+1.4
GTA				pP	pP	04 52 53.6	0.0
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ULN	Ulaanbaatar	67.30	328		P	04 52 29.3	+0.7
ULN				IAmb	IAmb	04 52 31.0	
	comp=Z,16nm,0.8s						
ULN	Ulaanbaatar	67.30	328	P	P	04 52 29.6	+0.9
	comp=Z,89nm,1.1s						
ULN	Ulaanbaatar	67.30	328	*c i*P	P	04 52 29.8	+1.1
ULN				pmax	pmax		
	comp=Z,18nm,1.0s						
ULN	Ulaanbaatar	67.30	328	P	P	04 52 29.8	+1.1
UNV	Unalaska Valle	67.63	24	P	P	04 52 31.6	+1.2
	baz=223						
SONM	Songino Array	67.64	327	P	P	04 52 30.9	+0.2
	comp=Z,13nm,0.5s,baz=143,slow=6.6,SNR=60						
SONM				LR	LR	05 25 00.4	
	comp=Z,17nm,18.0s,baz=140,slow=38						
	comp=Z,13nm,0.5s						
SONM	Songino Array	67.64	327	P	P	04 52 30.7	0.0
SONM				IAmb	IAmb	04 52 32.8	
	comp=Z,13nm,0.6s						
SHL	Shillong	67.86	300		P	04 52 32.6	-0.1
SHL	Shillong	67.86	300	P	P	04 52 32.6	-0.1
SHL				pmax	pmax		
	comp=Z,15nm,0.5s						
SEY	Seymchan	68.21	359	LR	LR	05 17 40.9	
	comp=Z,16nm,21.6s,baz=150,slow=32						
P08K	Saint George I	68.56	21	P	P	04 52 37.3	+1.3
	baz=219						
FALS	False Pass	69.61	25	P	P	04 52 44.0	+1.3
	baz=226						
YAK	Yakutsk	69.90	348	LR	LR	05 21 48.2	
	comp=Z,14nm,21.0s,baz=110,slow=34						
YAK	Yakutsk	69.90	348	*de*P	P	04 52 45.1	+0.9
YAK				pmax	pmax		
	comp=Z,11nm,0.5s						
RKT	Rikitea	70.23	112	*e*LR	LR	05 14 16.6	
	comp=Z,6μm,32.0s						

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S12K  Black Hills        70.76  24 P      P      04 52 50.7 +1.0
      baz=227
ZAK   Zakamensk          70.79 328 eP     P      04 52 50.0 -0.1
ZAK                                pmax   pmax
      comp=Z,29nm,1.1s
SDPT  Sand Point         71.19  25 P      P      04 52 53.3 +1.1
      baz=228
CHNA  Chernabura Isl     71.23  26 P      P      04 52 53.4 +0.9
      baz=229
TLY   Talaya             71.36 329        P      04 52 53.6 +0.2
TLY                                IAmb   IAmb   04 52 55.8
      comp=Z,12nm,0.8s
CCD   Concordia, Ant     71.81 188 P      P      04 52 55.9 -0.3
VNDA  Vanda              72.13 178 P      P      04 52 57.1 -0.5
      comp=Z,13nm,0.6s,baz=330,slow=6.7,SNR=77
      comp=Z,13nm,0.6s
VNDA  Vanda              72.13 178        P      04 52 57.4 -0.2
VNDA                               IAmb   IAmb   04 52 58.3
      comp=Z,15nm,0.7s
VNDA  Vanda              72.13 178 P      P      04 52 57.4 -0.2
VNDA                               pmax   pmax
      comp=Z,15nm,0.7s
S14K  Fog Glacier        72.20  25 P      P      04 52 59.8 +1.4
      baz=229
M11K  Mekoryuk           72.59  19 P      P      04 53 02.1 +1.6
      baz=222
O14K  Tigyukauivet M     73.52  22 P      P      04 53 07.6 +1.6
      baz=227
M13K  Dall Lake          73.58  20 P      P      04 53 07.7 +1.4
      baz=224
CHIR  Chirikof Islan     73.62  27 P      P      04 53 07.0 +0.4
      baz=233
GAMB  Gambell            73.63  15 P      P      04 53 07.8 +1.2
      baz=215
N14K  Kuskokwak Cree     73.82  21 P      P      04 53 09.2 +1.5
      baz=226
O15K  Ungalikthiuk R     74.01  23 P      P      04 53 10.2 +1.3
      baz=228
KNGR  Kungurtug, Tuv     74.01 326 diP    P      04 53 10.8 +1.5
KNGR                               pmax   pmax
      comp=Z,19nm,0.9s
K13K  Kusilvak Mount     74.24  19 P      P      04 53 11.3 +1.1
      baz=223
M14K  Bethel             74.30  21 P      P      04 53 11.7 +1.2
      baz=226
R17L  Mt. Peulik Vol     74.41  25 P      P      04 53 12.3 +1.1
      baz=232
L14K  Kuka Creek         74.47  20 P      P      04 53 12.4 +0.9
L14K                               IAmb   IAmb   04 53 14.3
      comp=Z,13nm,0.8s
L14K  Kuka Creek         74.47  20 P      P      04 53 12.9 +1.4
      baz=225
N15K  Kwethluk River     74.58  22 P      P      04 53 13.6 +1.4
      baz=228
SII   Sitkinak Islan     74.70  27 P      P      04 53 13.9 +0.9
      baz=234
M15K  Kasigluk River     74.72  21 P      P      04 53 14.4 +1.5
      baz=227
Q16K  King Salmon        74.94  24 P      P      04 53 15.4 +1.2
      baz=231
O16K  Kokwok River B     74.95  23 P      P      04 53 15.7 +1.4
      baz=230
Q17K  Contact Creek      75.00  25 P      P      04 53 15.5 +0.7
      baz=232
L15K  Ungalak Mounta     75.11  20 P      P      04 53 16.8 +1.6
      baz=226
J14K  Nanvaranak Lak     75.19  19 P      P      04 53 17.4 +1.8
      baz=224
ACHA  Angle Creek He     75.20  25 P      P      04 53 16.9 +1.0
ACHA                               IAmb   IAmb   04 53 18.3
      comp=Z,8.4nm,0.6s
N16K  Nishlik Lake       75.27  22 P      P      04 53 17.3 +1.2
      baz=229
O17K  Koliganek Bris     75.45  23 P      P      04 53 18.3 +1.1
      baz=230
OHAK  Old Harbor         75.49  26 P      P      04 53 18.2 +0.7
      baz=234
K15K  Wolf Creek Mou     75.53  20        P      04 53 18.7 +1.1
K15K                               IAmb   IAmb   04 53 20.6
      comp=Z,20nm,0.8s
K15K  Wolf Creek Mou     75.53  20 P      P      04 53 18.9 +1.3
      baz=226
M16K  Timber Creek       75.56  22        P      04 53 19.3 +1.5
M16K                               IAmb   IAmb   04 53 21.2
      comp=Z,15nm,0.7s
M16K  Timber Creek       75.56  22 P      P      04 53 18.7 +0.9
      baz=228
Q18K  Katmai Hardscr     75.60  25 P      P      04 53 19.3 +1.1
      baz=233
L16K  Owhat River        75.84  21 P      P      04 53 19.9 +0.6
L16K  Owhat River        75.84  21 P      P      04 53 21.2 +1.8
      baz=228
N17K  Nushagak Hills     75.90  22 P      P      04 53 21.5 +1.7
      baz=230
P18K  Big Mountain,      75.96  24 P      P      04 53 21.2 +1.1
      baz=232
ANM   Nome               75.98  17 P      P      04 53 21.5 +1.3
      baz=222
TNA   Tin City           76.04  15 P      P      04 53 21.4 +1.0
      baz=219
KDAK  Kodiak Island      76.12  26 LR     LR     05 20 08.0
      comp=Z,69nm,21.0s,baz=212,slow=30
KDAK  Kodiak Island      76.12  26 P      P      04 53 21.7 +0.6
      baz=235
Q19K  Cape Douglas,      76.33  25 P      P      04 53 23.4 +1.2
      baz=234
M17K  Holitna River      76.37  22 P      P      04 53 23.6 +1.2
      baz=230
F14K  Arctic Creek       76.40  16 P      P      04 53 23.7 +1.3
      baz=220
N18K  Kilae Creek        76.49  23 P      P      04 53 24.3 +1.1
N18K                               IAmb   IAmb   04 53 57.2
      comp=Z,15nm,0.8s
N18K  Kilae Creek        76.49  23 P      P      04 53 24.7 +1.6
      baz=231
J16K  Anvik River        76.53  19        P      04 53 24.3 +1.1
J16K                               IAmb   IAmb   04 53 26.6
      comp=Z,53nm,1.6s
J16K  Anvik River        76.53  19 P      P      04 53 24.4 +1.1
      baz=226
L17K  Donlin             76.54  21 P      P      04 53 24.7 +1.4
      baz=229
G15K  Niukluk            76.69  17 P      P      04 53 25.6 +1.6
      baz=223
O19K  Port Alsworth      76.81  24 P      P      04 53 26.7 +1.8
      baz=233
I17K  Unalakleet         76.91  19 P      P      04 53 27.1 +1.8
      baz=226
K17K  Iditarod           76.92  20 P      P      04 53 27.0 +1.6
      baz=229
P19K  Oil Pt             76.93  24 P      P      04 53 26.7 +1.0
      baz=234
H16K  Elim               76.96  18 P      P      04 53 26.7 +1.1
      baz=225
M18K  Stony River        77.03  22 P      P      04 53 27.7 +1.6
      baz=231
F15K  North Star Dit     77.04  16 P      P      04 53 27.4 +1.3
      baz=222
J17K  VABM Dome          77.11  20        P      04 53 27.9 +1.4
J17K                               IAmb   IAmb   04 53 30.0
      comp=Z,11nm,0.7s
J17K  VABM Dome          77.11  20 P      P      04 53 27.3 +0.8
      baz=228
N19K  Bonanza Creek      77.12  23 P      P      04 53 27.5 +0.8
      baz=233
L18K  Granite Mounta     77.17  21 P      P      04 53 28.6 +1.8
      baz=230
WMQ   Urumqi             77.19 317 eP     P      04 53 29.4 +1.9
O20K  Slope Mountain     77.43  24 P      P      04 53 29.6 +1.1
      baz=235
G16K  Koyuk River        77.47  17        P      04 53 29.6 +1.2
G16K                               IAmb   IAmb   04 53 31.6
      comp=Z,16nm,0.8s
G16K  Koyuk River        77.47  17 P      P      04 53 29.9 +1.4
      baz=224,SNR=6.4
HOM   Homer              77.59  25 P      P      04 53 30.8 +1.5
      baz=236
L19K  White Mountain     77.82  22        P      04 53 31.2 +0.7
L19K                               IAmb   IAmb   04 53 33.8
      comp=Z,16nm,0.6s
L19K  White Mountain     77.82  22 P      P      04 53 32.0 +1.4
      baz=232
H17K  Granite Mounta     77.88  18        P      04 53 31.6 +0.8
H17K                               IAmb   IAmb   04 53 33.6
      comp=Z,14nm,0.7s
H17K  Granite Mounta     77.88  18 P      P      04 53 32.5 +1.7
      baz=227
J18K  Innoko River       77.96  20        P      04 53 32.0 +0.8
J18K  Innoko River       77.96  20 P      P      04 53 33.0 +1.7
      baz=230
BRSE  Bradley Lake S     78.02  25 P      P      04 53 33.2 +1.5
      baz=236
G17K  Kiwalik Mounta     78.05  18 P      P      04 53 33.5 +1.8
      baz=226
M20K  Styx River         78.28  23 P      P      04 53 34.2 +1.1
M20K  Styx River         78.28  23 P      P      04 53 34.3 +1.1
      baz=234
L20K  Farewell, AK       78.36  22 P      P      04 53 35.2 +1.7
L20K  Farewell, AK       78.36  22 P      P      04 53 34.8 +1.3
      baz=233
H18K  Honhosa River      78.52  19 P      P      04 53 36.1 +1.8
      baz=228
F17K  Baldwin Pennin     78.53  17        P      04 53 35.2 +0.9
F17K                               IAmb   IAmb   04 53 37.7
      comp=Z,13nm,0.7s
F17K  Baldwin Pennin     78.53  17 P      P      04 53 35.7 +1.4
      baz=225
SLKM  Skilak Lake        78.66  25 P      P      04 53 35.8 +0.6
J19K  Poorman            78.67  20 P      P      04 53 36.1 +1.0
J19K                               IAmb   IAmb   04 54 04.7
      comp=Z,38nm,1.7s
J19K  Poorman            78.67  20 P      P      04 53 36.7 +1.5
      baz=231
GCSA  Galena City Sc     78.73  19 P      P      04 53 36.5 +1.1
      baz=230,SNR=6.1
TIXI  Tiksi              78.73 352 LR     LR     05 25 11.7
      comp=Z,12nm,21.7s,baz=194,slow=33
TIXI  Tiksi              78.73 352 ⇑eP    P      04 53 34.8 -0.5
TIXI                               pmax   pmax
      comp=Z,17nm,2.5s
SEW   Seward             78.76  25 P      P      04 53 36.9 +1.2
      baz=238
C16K  Lisburne Hills     78.78  14 P      P      04 53 36.8 +1.2
      baz=221
K20K  Telida             78.82  21 P      P      04 53 37.0 +0.9
K20K  Telida             78.82  21 P      P      04 53 36.9 +0.9
      baz=233
E17K  Hotham Inlet       78.82  16 P      P      04 53 37.1 +1.2
      baz=225,SNR=10
O22K  Cooper Landing     78.85  25 P      P      04 53 37.1 +1.0
      baz=237
G18K  Tagagawik          78.92  18 P      P      04 53 36.9 +0.4
G18K                               IAmb   IAmb   04 53 38.2
      comp=Z,28nm,1.6s
G18K  Tagagawik          78.92  18 P      P      04 53 37.5 +1.0
      baz=228
D17K  Noatak River       78.93  15 P      P      04 53 37.7 +1.2
      baz=223
SKT   Skwentna           78.96  23 P      P      04 53 37.9 +1.1
      baz=235
SUA   Susitna One        78.98  24 P      P      04 53 38.2 +1.1
      baz=236
F18K  Selawik            79.10  17 P      P      04 53 39.1 +1.7
      baz=227
RC01  Rabbit Creek A     79.18  24 P      P      04 53 39.0 +1.0
      baz=237
RDOG  Red Dog Mine       79.23  15        P      04 53 39.6 +1.4
RDOG                               IAmb   IAmb   04 53 42.0
      comp=Z,28nm,1.2s
RDOG  Red Dog Mine       79.23  15 P      P      04 53 39.6 +1.4
      baz=224
PPLA  Purkeypile         79.23  22 P      P      04 53 39.8 +1.4
      baz=234
J20K  Nowinta River      79.29  20        P      04 53 39.4 +0.8
J20K                               IAmb   IAmb   04 53 41.5
      comp=Z,16nm,0.7s
J20K  Nowinta River      79.29  20 P      P      04 53 39.1 +0.6
      baz=232,SNR=18
H19K  Roundabout Mou     79.37  19        P      04 53 39.3 +0.4
H19K                               IAmb   IAmb   04 53 41.5
      comp=Z,14nm,0.7s
H19K  Roundabout Mou     79.37  19 P      P      04 53 39.8 +0.9
      baz=230
M22K  Willow             79.39  24 P      P      04 53 40.0 +1.0
      baz=237
E18K  Tukpahlearik C     79.40  16 P      P      04 53 39.8 +0.8
E18K                               IAmb   IAmb   04 53 41.6
      comp=Z,43nm,1.7s
E18K  Tukpahlearik C     79.40  16 P      P      04 53 40.3 +1.3
      baz=226
DGZ   Jazzator, Alta     79.46 323 ⇑eP    P      04 53 40.7 +0.7
DGZ                                pmax   pmax
      comp=Z,7.0nm,0.8s
C17K  DeLong Mountai     79.47  15 P      P      04 53 40.9 +1.4
      baz=223
I20K  Naaghedeneel       79.56  20 P      P      04 53 41.4 +1.4
      baz=232
L22K  Petersville        79.56  23 P      P      04 53 39.8 -0.3
G19K  Purcell Mounta     79.57  18 P      P      04 53 40.5 +0.5
G19K                               IAmb   IAmb   04 55 02.6
      comp=Z,30nm,1.8s
G19K  Purcell Mounta     79.57  18 P      P      04 53 41.2 +1.2
      baz=229
PWL   Port Wells         79.63  25 P      P      04 53 41.5 +1.0
      baz=238
CUT   Chulitna           79.69  23 P      P      04 53 41.9 +1.2
      baz=236
PMR   Palmer             79.70  24 P      P      04 53 41.9 +1.2
      baz=238
CHUM  Lake Minchumin     79.77  21 P      P      04 53 42.0 +0.9
      baz=234,SNR=9.4
F19K  Shaleruckik Mo     79.81  17 P      P      04 53 41.3 +0.1
F19K                               IAmb   IAmb   04 54 15.3
      comp=Z,35nm,1.9s
F19K  Shaleruckik Mo     79.81  17 P      P      04 53 42.3 +1.0
      baz=229
H20K  Anotleneega Mo     79.86  19 P      P      04 53 43.1 +1.5
      baz=232
KNK   Knik Glacier       79.87  24 P      P      04 53 43.1 +1.3
      baz=238
C18K  Utukok River       80.11  15 P      P      04 53 44.5 +1.5
      baz=225
SML   Sawmill            80.13  24 P      P      04 53 44.1 +0.9
SML                                IAmb   IAmb   04 53 45.8
      comp=Z,21nm,0.6s
SML   Sawmill            80.13  24 P      P      04 53 44.3 +1.1
      baz=238,SNR=5.3
GLI   Glacier Island     80.17  25 P      P      04 53 44.8 +1.4
      baz=240
TRF   Thorofare Moun     80.26  22        P      04 53 44.2 +0.2
TRF   Thorofare Moun     80.26  22 P      P      04 53 44.9 +0.9
      baz=236
BPAW  Bear Paw Mtn.      80.37  21        P      04 53 44.1 -0.3
BPAW  Bear Paw Mtn.      80.37  21 P      P      04 53 45.1 +0.7
      baz=236
M23K  Glacier View       80.37  24 P      P      04 53 46.0 +1.6
      baz=239
E19K  Redstone River     80.39  17 P      P      04 53 44.6 +0.2
E19K                               IAmb   IAmb   04 53 47.4
      comp=Z,14nm,0.6s
E19K  Redstone River     80.39  17 P      P      04 53 46.3 +1.9
      baz=229
IMAR  Indian Mountai     80.53  19 P      P      04 53 45.2  0.0
F20K  Avaraart Lake      80.57  18 P      P      04 53 46.0 +0.7
F20K                               IAmb   IAmb   04 54 20.1
      comp=Z,31nm,1.9s
F20K  Avaraart Lake      80.57  18 P      P      04 53 46.8 +1.5
      baz=231
WAT1  Susitna Watana     80.59  23 P      P      04 53 46.8 +1.2
      baz=238
H21K  Melozitna Rive     80.64  20 P      P      04 53 47.3 +1.5
      baz=234
WAT6  Susitna Watana     80.78  23 P      P      04 53 47.9 +1.2
      baz=239
RND   Reindeer           80.78  22 P      P      04 53 47.1 +0.4
RND                                IAmb   IAmb   04 56 42.0
      comp=Z,16nm,0.6s
RND   Reindeer           80.78  22 P      P      04 53 47.1 +0.4
RND                                pmax   pmax
      comp=Z,16nm,0.6s
D19K  Kuna River         80.82  16 P      P      04 53 47.9 +1.2
      baz=228
C19K  Lookout Ridge      80.84  15 P      P      04 53 47.6 +0.7
      baz=227
KAIM  Kayak Island       80.86  27 P      P      04 53 47.5 +0.5
      baz=242
MCK   McKinley           80.92  22        P      04 53 47.2 -0.1
MCK                                IAmb   IAmb   04 53 48.7
      comp=Z,13nm,0.7s
MCK   McKinley           80.92  22 P      P      04 53 47.2 -0.1
MCK                                pmax   pmax
      comp=Z,13nm,0.7s
MCK   McKinley           80.92  22 P      P      04 53 47.4 +0.1
      baz=238,SNR=10.0
G21K  Allakaket          80.93  19 P      P      04 53 47.9 +0.6
G21K                               IAmb   IAmb   04 53 50.5
      comp=Z,42nm,1.9s
G21K  Allakaket          80.93  19 P      P      04 53 48.2 +0.9
      baz=233
KLU   Klutina            80.96  25 P      P      04 53 48.1 +0.4
      baz=241
M24K  Tolsona, Glenn     81.16  24 P      P      04 53 49.4 +0.7
      baz=240
DHY   Denali Highway     81.17  23 P      P      04 53 50.2 +1.3
DHY   Denali Highway     81.17  23 P      P      04 53 49.7 +0.8
      baz=239
E20K  Nigu River         81.21  17 P      P      04 53 49.7 +0.9
      baz=230
H22K  Ishtalitna Cre     81.26  20 P      P      04 53 49.7 +0.6
H22K  Ishtalitna Cre     81.26  20 P      P      04 53 50.6 +1.6
      baz=235
BMRM  Bremner River      81.27  26 P      P      04 53 50.2 +0.9
      baz=242
NEA2  Nenana             81.34  21 P      P      04 53 49.8 +0.3
NEA2                               IAmb   IAmb   04 53 51.0
      comp=Z,9.1nm,0.6s
NEA2  Nenana             81.34  21 P      P      04 53 50.5 +1.0
      baz=237,SNR=8.2
F21K  Alatna River       81.36  18 P      P      04 53 50.9 +1.2
      baz=233
D20K  Etivluk River      81.38  16 P      P      04 53 51.1 +1.4
      baz=230
I23K  Minto, Yukon-K     81.54  21 P      P      04 53 50.5 +0.1
I23K                               IAmb   IAmb   04 53 54.8
      comp=Z,51nm,2.0s
I23K  Minto, Yukon-K     81.54  21 P      P      04 53 52.2 +1.7
      baz=237,SNR=6.2
N25K  Chitina, Valde     81.58  25 P      P      04 53 52.0 +1.1
      baz=242
HARP  HAARP              81.72  24 P      P      04 53 52.9 +1.3
      baz=241
MK31  Makanchi Array     81.75 319 ceP    P      04 53 51.6 -0.5
MKAR  Makanchi Array     81.75 319 P      P      04 53 51.7 -0.4
      comp=Z,5.8nm,0.5s,baz=99,slow=6.4,SNR=63
      comp=Z,5.8nm,0.5s
MKAR  Makanchi Array     81.75 319        P      04 53 51.5 -0.6
G22K  Bettles            81.81  19 P      P      04 53 53.3 +1.4
      baz=235
CRQE  Cirque             81.83  26 P      P      04 53 53.0 +0.6
      baz=243
CCB   Clear Creek Bu     81.83  22        P      04 53 51.3 -0.8
H23K  Yukon River        81.84  20 P      P      04 53 52.2  0.0
H23K                               IAmb   IAmb   04 55 19.2
      comp=Z,30nm,1.8s
H23K  Yukon River        81.84  20 P      P      04 53 53.7 +1.5
      baz=237
PAX   Paxson             81.87  24 P      P      04 53 53.9 +1.4
      baz=241
COLA  College            81.93  21 P      P      04 53 52.7 +0.1
COLA  College            81.93  21 ⇑eP    P      04 53 52.0 -0.6
COLA                               pmax   pmax
      comp=Z,7.0nm,0.7s
COLA  College            81.93  21 P      P      04 53 53.9 +1.3
      baz=238
COLA  College            81.93  21 P      P      04 53 52.6 +0.1
F22K  John River         81.94  18 P      P      04 53 54.3 +1.7
      baz=234
E21K  Killik River       81.96  17 P      P      04 53 53.6 +0.8
E21K                               IAmb   IAmb   04 54 21.8
      comp=Z,24nm,1.5s
E21K  Killik River       81.96  17 P      P      04 53 53.4 +0.7
      baz=232
MAKZ  Makanchi           81.96 319        P      04 53 53.5 +0.3
MAKZ                               IAmb   IAmb   04 53 55.3
      comp=Z,14nm,0.6s
MAKZ  Makanchi           81.96 319 P      P      04 53 53.5 +0.3
MAKZ                               pmax   pmax
      comp=Z,14nm,0.6s
HDA   Harding Lake       82.02  22 P      P      04 53 53.1  0.0
HDA                                IAmb   IAmb   04 53 55.0
      comp=Z,10nm,0.5s
HDA   Harding Lake       82.02  22 P      P      04 53 54.2 +1.1
      baz=239,SNR=8.9
B20K  Meade River        82.08  15 P      P      04 53 54.8 +1.5
      baz=229
MCARA McCarthy VSAT      82.14  26 P      P      04 53 55.6 +1.8
      baz=243
K24K  Donnelly Dome      82.16  23 P      P      04 53 54.7 +0.8
      baz=240
G23K  Bananza Creek      82.17  19        P      04 53 54.8 +0.8
G23K  Bananza Creek      82.17  19 P      P      04 53 55.0 +1.1
      baz=236
C21K  Knifeblade Rid     82.18  16 P      P      04 53 55.1 +1.3
      baz=231
POKR  Poker Plat Res     82.21  21 P      P      04 53 55.2 +1.2
      baz=239
IL31                     82.23  22        P      04 53 52.8 -1.3
ILAR  Eielson Array      82.23  22 P      P      04 53 53.5 -0.7
      comp=Z,6.5nm,0.5s,baz=244,slow=5.4,SNR=100
ILAR                               LR     LR     05 27 04.0
      comp=Z,25nm,20.0s,baz=252,slow=33
      comp=Z,6.5nm,0.5s
COLD  Coldfoot           82.41  19 P      P      04 53 55.8 +0.7
COLD  Coldfoot           82.41  19 P      P      04 53 56.9 +1.9
      baz=236
E22K  Anaktuvuk Pass     82.42  18        P      04 53 55.8 +0.6
E22K                               IAmb   IAmb   04 55 23.8
      comp=Z,36nm,1.9s
E22K  Anaktuvuk Pass     82.42  18 P      P      04 53 55.9 +0.7
      baz=234,SNR=6.2
H24K  Noodor Dome        82.43  21 P      P      04 53 56.0 +0.7
H24K                               IAmb   IAmb   04 53 56.7
      comp=Z,29nm,1.8s
H24K  Noodor Dome        82.43  21 P      P      04 53 56.1 +0.9
      baz=238
ZAA0  Zalesovo Array     82.48 326        P      04 53 54.8 -0.9
ZALV  Zalesovo Beam      82.48 326 P      P      04 53 55.2 -0.5
      comp=Z,4.0nm,0.4s,baz=120,slow=6.6,SNR=20
ZALV                               LR     LR     05 33 47.8
      comp=Z,13nm,18.1s,baz=52,slow=38
      comp=Z,4.0nm,0.4s
ZALV  Zalesovo Beam      82.48 326        P      04 53 54.7 -1.0
RIDG  Independent Ri     82.49  23 P      P      04 53 56.1 +0.5
RIDG  Independent Ri     82.49  23 P      P      04 53 57.0 +1.4
      baz=241
B21K  Ikpikpuk River     82.52  16 P      P      04 53 57.3 +1.8
      baz=231
MENT  Mentasta           82.56  24 P      P      04 53 56.5 +0.5
MENT                               IAmb   IAmb   04 54 04.0
      comp=Z,34nm,1.6s
D22K  Ayikyak River      82.61  17        P      04 53 56.9 +0.8
D22K                               IAmb   IAmb   04 53 59.1
      comp=Z,13nm,0.5s
D22K  Ayikyak River      82.61  17 P      P      04 53 57.8 +1.7
      baz=233
M26K  Nabesna, AK        82.61  25 P      P      04 53 57.3 +1.0
      baz=243
CTG   Chitna Glacier     82.69  26 P      P      04 53 57.8 +0.9
      baz=245
J25K  Salcha River,      82.72  22 P      P      04 53 56.7 -0.1
J25K  Salcha River,      82.72  22 P      P      04 53 57.2 +0.4
      baz=241,SNR=26
L26K  Log Cabin Wild     82.75  24 P      P      04 53 57.8 +0.8
L26K                               IAmb   IAmb   04 53 59.4
      comp=Z,8.7nm,0.7s
L26K  Log Cabin Wild     82.75  24 P      P      04 53 58.1 +1.1
      baz=243,SNR=5.6
SCRK  Sand Creek         82.94  23 P      P      04 53 57.8 -0.3
SCRK  Sand Creek         82.94  23 P      P      04 53 59.0 +0.9
      baz=242,SNR=5.1
G24K  Hadweenzic Riv     83.02  20 P      P      04 53 59.4 +1.2
      baz=238
E23K  Chandalar          83.06  18 P      P      04 53 59.2 +0.7
E23K  Chandalar          83.06  18 P      P      04 53 60.0 +1.5
      baz=236
M27K  Edge Creek, AK     83.06  25 P      P      04 53 59.2 +0.4
M27K  Edge Creek, AK     83.06  25 P      P      04 54 00.0 +1.3
      baz=244,SNR=7.1
A21K  Barrow             83.08  14 P      P      04 54 00.2 +1.7
      baz=229
O28M  Mount Upton        83.12  27 P      P      04 54 00.2 +1.0
      baz=246
D23K  Nanushuk River     83.24  17 P      P      04 54 00.2 +0.9
D23K  Nanushuk River     83.24  17 P      P      04 54 00.9 +1.6
      baz=235
B22K  Teshekpuk Lake     83.28  16 P      P      04 54 00.6 +1.1
      baz=232
A22K  Sinclair Lake      83.29  15 P      P      04 54 00.7 +1.3
      baz=231
F24K  Squaw Lake         83.32  19        P      04 54 00.6 +0.8
F24K  Squaw Lake         83.32  19 P      P      04 54 01.2 +1.4
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	baz=238						
J26L	Joseph Creek	83.35	23		P	04 54 00.3	+0.2
J26L				IAmb	IAmb	04 54 03.1	
	comp=Z,34nm,1.8s						
J26L	Joseph Creek	83.35	23	P	P	04 54 01.3	+1.2
	baz=242						
H25L	Birch Creek	83.37	21	P	P	04 54 01.7	+1.6
	baz=240						
L27K	Beaver Creek,	83.39	24	P	P	04 54 01.2	+0.9
L27K	Beaver Creek,	83.39	24	P	P	04 54 01.8	+1.6
	baz=244						
TOLK	Toolik Lake Re	83.39	18	P	P	04 54 00.5	+0.3
TOLK				IAmb	IAmb	04 54 02.8	
	comp=Z,7.1nm,0.6s						
TOLK	Toolik Lake Re	83.39	18	P	P	04 54 01.8	+1.6
	baz=236						
YUK3	Moose Creek	83.42	26	P	P	04 54 01.8	+1.2
	baz=246						
E24K	Your Creek	83.42	19	P	P	04 54 01.9	+1.6
	baz=237						
BVCY	Beaver Creek	83.52	25	P	P	04 54 02.6	+1.6
	baz=245						
YUK8	Steele Glacier	83.52	26	P	P	04 54 02.6	+1.3
	baz=246						
G25K	Bearman Lake	83.52	20	P	P	04 54 02.5	+1.8
	baz=240						
TARG	Taragay, Kyrgy	83.55	313	P	P	04 54 02.2	+0.2
TARG	Taragay, Kyrgy	83.55	313	P	P	04 54 02.2	+0.2
TARG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
O29M	Mount Kennedy	83.67	28	P	P	04 54 03.3	+1.5
	baz=247						
K27K	Chicken	83.72	23	P	P	04 54 03.0	+1.1
K27K	Chicken	83.72	23	P	P	04 54 03.6	+1.7
	baz=244						
C23K	Itkillik River	83.76	17	P	P	04 54 02.3	+0.3
C23K	Itkillik River	83.76	17	P	P	04 54 03.6	+1.6
	baz=235						
P29M	Windy Craggy	83.81	28	P	P	04 54 03.5	+1.1
	baz=248						
I26K	Coal Creek Min	83.88	22	P	P	04 54 02.8	+0.1
I26K	Coal Creek Min	83.88	22	P	P	04 54 04.0	+1.3
	baz=243						
D24K	Happy Valley	83.90	18		P	04 54 03.4	+0.7
D24K				IAmb	IAmb	04 54 05.6	
	comp=Z,9.9nm,0.6s						
D24K	Happy Valley	83.90	18	P	P	04 54 04.4	+1.7
	baz=237						
YUK4	Talbot Arm	84.04	27	P	P	04 54 04.7	+0.9
	baz=247						
F25K	Christian Rive	84.09	20		P	04 54 04.5	+0.8
F25K	Christian Rive	84.09	20	P	P	04 54 05.0	+1.2
	baz=240						
KDJ	Kajisay	84.10	313		P	04 54 04.3	-0.2
KDJ	Kajisay	84.10	313	P	P	04 54 04.3	-0.2
KDJ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
C24K	Franklin Bluff	84.25	17	P	P	04 54 04.7	+0.3
C24K				IAmb	IAmb	04 54 06.9	
	comp=Z,11nm,0.7s						
C24K	Franklin Bluff	84.25	17	P	P	04 54 05.8	+1.4
	baz=237						
P30M	Million Dollar	84.35	28	P	P	04 54 06.2	+0.9
	baz=249						
HYT	Haines Junctio	84.36	27		P	04 54 05.3	-0.1
HYT	Haines Junctio	84.36	27	P	P	04 54 06.7	+1.3
	baz=248						
E25K	Arctic Village	84.38	19	P	P	04 54 06.8	+1.6
	baz=240						
G26K	Porcupine Rive	84.42	20	P	P	04 54 06.2	+0.9
G26K				IAmb	IAmb	04 54 08.2	
	comp=Z,10.0nm,0.6s						
G26K	Porcupine Rive	84.42	20	P	P	04 54 07.0	+1.7
	baz=242						
KSH	Kashi	84.44	310	P	P	04 54 08.6	+2.4
KSH				pP	pP	04 54 32.7	-0.8
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
QSPA	South Pole Qui	84.51	180	P	P	04 54 08.9	+2.9
	comp=Z,33nm,0.7s,baz=308,slow=0.5,SNR=152						
QSPA	South Pole Qui	84.51	180	P	P	04 54 06.7	+0.6
QSPA	South Pole Qui	84.51	180	P	P	04 54 09.8	+3.8
M29M	Somme Creek	84.55	26	P	P	04 54 07.3	+1.1
	baz=247						
I27K	Kandik River	84.58	22	P	P	04 54 06.8	+0.5
I27K	Kandik River	84.58	22	P	P	04 54 07.3	+1.0
	baz=244						
F26K	Sheenjek River	84.64	20	P	P	04 54 05.7	-0.8
F26K	Sheenjek River	84.64	20	P	P	04 54 08.1	+1.5
	baz=242						
D25K	Kavik River	84.73	18	P	P	04 54 07.1	+0.1
D25K	Kavik River	84.73	18	P	P	04 54 08.0	+1.0
	baz=239						
CRAG	Craig	84.75	33	P	P	04 54 07.9	+0.7
	baz=252						
DAWY	Dawson	84.80	24		P	04 54 08.7	+1.3
DAWY				IAmb	IAmb	04 54 50.5	
	comp=Z,37nm,1.9s						
DAWY	Dawson	84.80	24	P	P	04 54 09.0	+1.6
	baz=246						
H27K	Steamboat Moun	84.89	22		P	04 54 08.5	+0.6
H27K	Steamboat Moun	84.89	22	P	P	04 54 09.3	+1.5
	baz=244						
L29M	L29M	84.95	25	P	P	04 54 08.8	+0.7
L29M				IAmb	IAmb	04 54 11.5	
	comp=Z,10nm,0.6s						
L29M	L29M	84.95	25	P	P	04 54 09.9	+1.7
	baz=248						
O30N	Mendenhall	84.98	28	P	P	04 54 09.5	+1.1
	baz=250						
G27K	Doyon Strip	85.10	21		P	04 54 09.7	+0.9
G27K	Doyon Strip	85.10	21	P	P	04 54 10.8	+2.0
	baz=244						
I28M	Miner Creek	85.15	22	P	P	04 54 09.3	+0.1
I28M	Miner Creek	85.15	22	P	P	04 54 10.5	+1.3
	baz=246						
KURK	Kurchatov	85.16	322		P	04 54 08.4	-1.0
KURK				IAmb	IAmb	04 54 10.6	
	comp=Z,5.1nm,0.4s						
KURK	Kurchatov	85.16	322	⇑eP	P	04 54 09.0	-0.4
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KURBB	Kurchatov Arra	85.19	322	P	P	04 54 08.5	-1.0
	comp=Z,2.9nm,0.5s,baz=99,slow=5.0,SNR=33						
	comp=Z,2.9nm,0.5s						
M30M	Minto, Yukon	85.32	26	P	P	04 54 11.6	+1.6
	baz=249						
N31M	Braeburn, Yuko	85.38	27	P	P	04 54 12.4	+2.1
	baz=250						
J29N	Klondike Camp	85.43	24	P	P	04 54 11.2	+0.7
J29N	Klondike Camp	85.43	24	P	P	04 54 12.2	+1.7
	baz=247						
K29M	Barlow Dome	85.48	24		P	04 54 11.3	+0.5
K29M	Barlow Dome	85.48	24	P	P	04 54 12.1	+1.3
	baz=248						
C26K	Camden Bay	85.48	18	P	P	04 54 12.9	+2.3
	baz=241						
WHY	Whitehorse	85.51	28	P	P	04 54 12.7	+1.6
	baz=251						
MAW	Mawson	85.52	203	P	P	04 54 10.2	-0.6
	comp=Z,22nm,0.6s,baz=94,slow=5.8,SNR=38						
	comp=Z,22nm,0.6s						
V35K	Ketchikan	85.54	33	P	P	04 54 12.0	+0.9
	baz=254						
C27K	Jago River	85.70	18	P	P	04 54 12.5	+0.8
C27K				IAmb	IAmb	04 54 14.3	
	comp=Z,35nm,1.6s						
C27K	Jago River	85.70	18	P	P	04 54 13.0	+1.3
	baz=242						
E27K	Coleen River	85.73	20		P	04 54 12.5	+0.6
E27K				IAmb	IAmb	04 54 14.9	
	comp=Z,12nm,0.6s						
E27K	Coleen River	85.73	20	P	P	04 54 13.0	+1.1
	baz=244						
I29M	Ogilvie Camp,	85.74	23	P	P	04 54 12.6	+0.6
I29M				IAmb	IAmb	04 54 17.4	
	comp=Z,10nm,0.6s						
I29M	Ogilvie Camp,	85.74	23	P	P	04 54 12.9	+0.9
	baz=247,SNR=9.6						
H29M	Whitestone	86.05	22		P	04 54 13.3	-0.2
H29M	Whitestone	86.05	22	P	P	04 54 14.7	+1.1
	baz=247						
F28M	Old Crow	86.07	21		P	04 54 13.9	+0.3
F28M	Old Crow	86.07	21	P	P	04 54 14.7	+1.0
	baz=246						
AAK	Ala-Archa	86.15	313	P	P	04 54 14.3	-0.4
	comp=Z,2.3nm,0.6s,baz=114,slow=4.1,SNR=5.7						
AAK				LR	LR	05 34 41.4	
	comp=Z,10.0nm,18.8s,baz=80,slow=37						
	comp=Z,2.3nm,0.6s						
AAK	Ala-Archa	86.15	313	P	P	04 54 14.7	-0.1
AAK	Ala-Archa	86.15	313	⇑eP	P	04 54 14.0	-0.7
AAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
J30M	Hart River	86.23	24		P	04 54 14.9	+0.3
J30M				IAmb	IAmb	04 54 17.9	
	comp=Z,9.2nm,0.6s						
J30M	Hart River	86.23	24	P	P	04 54 15.4	+0.8
	baz=249						
M31M	Drury Creek, Y	86.24	26	P	P	04 54 15.3	+0.7
	baz=251						
D27M	Malcolm River	86.40	19		P	04 54 15.9	+0.8
D27M				IAmb	IAmb	04 54 19.2	
	comp=Z,8.8nm,0.5s						
D27M	Malcolm River	86.40	19	P	P	04 54 16.0	+0.8
	baz=244						
I30M	Mount Dempster	86.44	23		P	04 54 15.5	-0.1
I30M				IAmb	IAmb	04 54 17.9	
	comp=Z,6.5nm,0.6s						
I30M	Mount Dempster	86.44	23	P	P	04 54 16.7	+1.0
	baz=249						
G29M	Pine Creek	86.45	21	P	P	04 54 15.8	+0.4
G29M				IAmb	IAmb	04 54 50.7	
	comp=Z,20nm,1.2s						
G29M	Pine Creek	86.45	21	P	P	04 54 16.7	+1.2
	baz=247						
S34M	Telegraph Cree	86.51	31	P	P	04 54 16.8	+0.9
	baz=254						
E28M	Babbage River	86.60	20		P	04 54 16.2	+0.1
E28M				IAmb	IAmb	04 54 18.0	
	comp=Z,21nm,1.6s						
E28M	Babbage River	86.60	20	P	P	04 54 16.9	+0.7
	baz=246						
T35M	Bob Quinn	86.72	32	P	P	04 54 17.8	+0.8
	baz=255						
EPYK	Eagle Plains	86.73	22	P	P	04 54 17.1	+0.2
EPYK	Eagle Plains	86.73	22	P	P	04 54 17.5	+0.6
	baz=249,SNR=8.1						
BBB	Bella Bella	86.75	37	LR	LR	05 31 49.4	
	comp=Z,39nm,18.4s,baz=211,slow=35						
NRIK	Noril'sk	87.04	341	P	P	04 54 17.8	-0.4
	comp=Z,9.6nm,0.7s,baz=115,slow=3.8,SNR=19						
NRIK				LR	LR	05 32 45.7	
	comp=Z,15nm,20.6s,baz=111,slow=35						
	comp=Z,9.6nm,0.7s						
NRIK	Noril'sk	87.04	341	P	P	04 54 18.4	+0.2
NRIK				IAmb	IAmb	04 54 19.0	
	comp=Z,9.6nm,0.7s						
NRIK	Noril'sk	87.04	341	P	P	04 54 18.4	+0.2
NRIK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
E29M	Blow River	87.06	20		P	04 54 17.7	-0.7
E29M				IAmb	IAmb	04 55 26.4	
	comp=Z,34nm,1.9s						
E29M	Blow River	87.06	20	P	P	04 54 19.7	+1.3
	baz=247						
G30M	tAoh Zraii Nji	87.14	22	P	P	04 54 20.1	+1.3
	baz=249						
D28M	Stokes Point	87.15	19	P	P	04 54 20.0	+1.2
	baz=246						
H31M	Peel River	87.44	23		P	04 54 20.4	+0.1
H31M	Peel River	87.44	23	P	P	04 54 21.3	+1.0
	baz=251						
F30M	Barrier River	87.52	21		P	04 54 20.6	0.0
F30M	Barrier River	87.52	21	P	P	04 54 21.6	+1.0
	baz=249						
G31M	Satah River	87.84	22		P	04 54 21.9	-0.2
G31M				IAmb	IAmb	04 54 24.7	
	comp=Z,10.0nm,0.6s						
G31M	Satah River	87.84	22	P	P	04 54 23.1	+1.1
	baz=251,SNR=5.7						
F31M	Tsiigehtchic	88.20	22	P	P	04 54 24.8	+1.0
	baz=251						
YBH	Yreka Blue Hor	88.43	48	LR	LR	05 29 29.6	
	comp=Z,5.4nm,19.0s,baz=278,slow=32						
BVAR	Borovoye Array	90.61	323	P	P	04 54 33.6	-1.9
	comp=Z,6.0nm,0.6s,baz=106,slow=6.2,SNR=19						
BVAR				LR	LR	05 38 20.8	
	comp=Z,12nm,18.2s,baz=90,slow=38						
	comp=Z,6.0nm,0.6s						
BORK	Borovoye	90.66	323	⇑eP	P	04 54 34.8	-0.8
BORK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NVAR	Mina Array Bea	91.37	52	P	P	04 54 39.6	0.0
	comp=Z,0.6nm,0.7s,baz=261,slow=6.8,SNR=5.1						
	comp=Z,0.6nm,0.7s						
NVAR	Mina Array Bea	91.37	52	P	P	04 54 39.2	-0.3
C36M	Paulatuk	92.14	21		P	04 54 42.7	+0.6
C36M	Paulatuk	92.14	21	P	P	04 54 42.9	+0.8
	baz=260						
A36M	Sachs Harbour	92.22	18		P	04 54 42.5	0.0
A36M				IAmb	IAmb	04 54 44.1	
	comp=Z,4.5nm,0.7s						
A36M	Sachs Harbour	92.22	18	P	P	04 54 43.5	+1.1
	baz=259						
PFO	Pinyon Flats O	92.41	57	LR	LR	05 32 16.6	
	comp=Z,31nm,18.1s,baz=258,slow=33						
WCT	Wildcat Mounta	92.54	53	P	P	04 54 43.4	-1.5
WCT				IAmb	IAmb	04 55 11.9	
	comp=Z,9.3nm,1.6s						
NEW	Newport	93.13	42	LR	LR	05 32 06.2	
	comp=Z,64nm,18.5s,baz=282,slow=32						
SYO	Syowa Base	93.52	199	⇑eP	P	04 54 47.2	-1.4
ELK	Elko	93.92	50	LR	LR	05 32 36.3	
	comp=Z,28nm,18.4s,baz=302,slow=32						
YKA	Yellowknife Ar	95.34	28	P	P	04 54 57.4	+0.4
	comp=Z,0.6nm,0.6s,baz=276,slow=5.2,SNR=6.0						
	comp=Z,0.6nm,0.6s						
YKA	Yellowknife Ar	95.34	28	P	P	04 54 57.7	+0.7
YKA	Yellowknife Ar	95.34	28	ceP	P	04 54 58.7	+1.7
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
LPIG	La Paz	97.18	66	LR	LR	05 33 18.8	
	comp=Z,44nm,19.6s,baz=272,slow=32						
ARTI	Arti	97.75	326	LR	LR	05 43 16.8	
	comp=Z,14nm,18.3s,baz=98,slow=38						
PDAR	Pinedale Array	98.23	48	P	Pdif	04 55 11.6	+0.7
	comp=Z,0.2nm,0.6s,baz=301,slow=4.8,SNR=2.0						
PDAR				LR	LR	05 36 08.9	
	comp=Z,29nm,18.2s,baz=291,slow=33						
	comp=Z,0.2nm,0.6s						
PDAR	Pinedale Array	98.23	48	P	P	04 55 10.3	-0.5
NVL	N'lazarevskaya	99.92	192	eP	Pdif	04 55 16.7	-0.8
NVL				e		04 59 25.1	
NVL				ePPP	PPP	05 01 28.4	
NVL				eS	SKSac	05 05 44.6	-1.3
NVL				eSS	SS	05 13 37.8	+1.6
NVL				eSSS	SSS	05 17 28.4	
NVL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
FINES	FINESS Array B	112.23	336	c iPKIKP	PKiKP	05 00 09.3	+1.3
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRTR	Keskin Array B	116.80	312	PKP	PKiKP	05 00 18.4	+0.7
	comp=Z,0.7nm,0.9s,baz=76,slow=7.6,SNR=2.0						
BRTR	Keskin Array B	116.80	312		PKPdf	05 00 17.3	-0.3
HFS	Hagfors	117.80	339	PKP	PKPdf	05 00 18.5	-0.3
	comp=Z,3.5nm,1.0s,baz=33,slow=3.5,SNR=4.4						
NOA	NORSAR Array B	118.00	341	PKP	PKPdf	05 00 17.9	-1.3
	comp=Z,0.6nm,0.7s,baz=76,slow=1.9,SNR=1.9						
CLL	Collm	124.10	332	ePKIKP	PKiKP	05 00 32.0	+0.6
CLL				pmax	pmax		
	comp=Z,3.0nm,0.5s						
CLL	Collm	124.10	332	ePKPdf	PKiKP	05 00 32.0	+0.6
	comp=Z,3.0nm,0.5s						
GERES	GERESS Array B	125.35	329	PKP	PKPdf	05 00 32.7	-1.0
	comp=Z,1.4nm,0.6s,baz=64,slow=2.3,SNR=8.8						
EKA	Eskdalemuir Ar	127.06	344	PKP	PKPdf	05 00 36.8	+0.1
	comp=Z,0.3nm,0.4s,baz=24,slow=2.6,SNR=4.0						
ESDC	Sonseca Array	140.66	333	PKP	PKPdf	05 01 03.1	+0.5
	comp=Z,0.4nm,0.5s,baz=19,slow=2.5,SNR=1.9						
BDFB	Brasilia	149.59	134	PKPbc	PKPbc	05 01 21.9	-1.4
	comp=Z,1.5nm,0.4s,baz=211,slow=3.5,SNR=4.9						
BDFB	Brasilia	149.59	134	PKPdf	PKPdf	05 01 17.8	-0.9
BDFB	Brasilia	149.59	134	PKHKP	PKPpre	05 01 22.0	

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*IDC **03** 05:07:09.6±1.2, 23°.95N×123°.20E, h0km, mb3.9/15, mbtmp4.0/15, MS3.4/1, Error ellipse: s-maj=39.1km s-min=25.0km az=47.0*

*JMA **03** 05:07:12.4±0.2, 24°N±1°×123°.4E±0°.6, h47km±2km, MV3.6/12, NEAR ISHIGAKIJIMA ISLAND*

ISC 03 05:07:11.8±0.8, 23°.73N±0°.06×123°.32E±0°.03, h20km±6km, n35, σ0ˢ.99/43, mb3.9/14, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.55	54	P	Pb	05 07 24.2	+1.5
HATJ				S	Sn	05 07 32.7	-0.4
IRIF	Iriomote-Funau	0.71	32	P	Pn	05 07 26.9	+0.3
IRIF				S	Sn	05 07 37.0	0.0
YOJ	Yonaguni jima	0.78	339	P	Pn	05 07 28.8	+1.2
YOJ	Yonaguni jima	0.78	339	S	Sn	05 07 40.5	+1.8
YOJ	Yonaguni jima	0.78	339	P	Pn	05 07 28.8	+1.2
YOJ				S	Sn	05 07 40.0	+1.3
JYNG	Yonagunijimaku	0.79	335	P	Pn	05 07 28.7	+0.9
JYNG				S	Sn	05 07 40.1	+1.0
JKRS	Kuro-shima	0.81	51	P	Pn	05 07 28.2	+0.2
JKRS				eS	Sn	05 07 39.1	-0.3
JIJ	Ishigaki jima	0.98	50	P	Pn	05 07 30.0	-0.4
JIJ				S	Sn	05 07 42.8	-1.0
JISG	Ishigakijimahi	1.25	47	P	Pn	05 07 33.7	-0.3
JISG				S	Sn	05 07 49.6	-0.6
JTJ	Tarama	1.56	54	eP	Pn	05 07 38.4	+0.1
JTJ				eS	Sn	05 07 58.0	+0.1
NACB	Ninganchiao	1.64	286	P	Pn	05 07 39.9	+0.5
YULB	Yu-li	1.89	260	P	Pn	05 07 42.9	+0.1
YULB	Yu-li	1.89	260	S	Sn	05 08 05.5	-0.5
YHNB	Yeheng	2.00	298	P	Pb	05 07 46.5	-1.1
JIRB	Irabujima	2.02	57	eP	Pn	05 07 44.9	+0.3
JIRB				S	Sn	05 08 08.5	-0.7
TATO	Taipei	2.08	307	P	Pb	05 07 47.9	-0.9
SSLB	Suanglung	2.17	272	P	Pn	05 07 47.5	+0.8
TWGBT	Beinan	2.25	247	P	Pn	05 07 47.7	-0.1
TPUB	Ta-pu	2.50	261	P	Pn	05 07 53.2	+1.8
LZDM	Lanzhou Array	20.89	310	P	P	05 11 52.1	-1.0
	1.0nm,0.3s,baz=108,slow=13,SNR=2.4						
	1.0nm,0.3s						
SONM	Songino Array	27.57	335	P	P	05 12 56.1	-1.4
	0.7nm,0.5s,baz=149,slow=10,SNR=4.8						
	0.7nm,0.5s						
MKAR	Makanchi Array	40.02	315	P	P	05 14 45.1	-0.3
	0.8nm,0.4s,baz=98,slow=10.0,SNR=13						
	0.8nm,0.4s						
ZALV	Zalesovo Beam	41.69	326	P	P	05 14 57.4	-1.6
	1.0nm,0.4s,baz=122,slow=7.2,SNR=5.6						
	1.0nm,0.4s						
KURBB	Kurchatov Arra	43.72	320	P	P	05 15 14.3	-1.1
	0.5nm,0.6s,baz=108,slow=10,SNR=4.7						
	0.5nm,0.6s						
WRA	Warramunga Arr	44.72	165	P	P	05 15 26.4	+2.7
	0.4nm,0.9s,baz=341,slow=7.5,SNR=1.9						
	0.4nm,0.9s						
TIXI	Tiksi	48.05	2	LR	LR	05 38 44.6	
	comp=Z,36nm,19.0s,baz=203,slow=40						
BVAR	Borovoye Array	49.26	320	P	P	05 15 57.8	-1.1
	1.1nm,0.5s,baz=111,slow=6.6,SNR=4.4						
	1.1nm,0.5s						
ILAR	Eielson Array	68.72	27	P	P	05 18 13.9	+0.2
	0.3nm,0.5s,baz=267,slow=5.4,SNR=10.0						
	0.3nm,0.5s						
SPITS	Spitsbergen Ar	70.34	348	P	P	05 18 22.8	-0.8
	12nm,1.1s,baz=81,slow=12,SNR=7.5						
	12nm,1.1s						
FINES	FINESS Array B	72.82	330	P	P	05 18 38.4	-0.3
	5.1nm,0.8s,baz=72,slow=7.2,SNR=15						
	5.1nm,0.8s						
AKASG	Malin Array Be	74.50	319	P	P	05 18 48.2	-0.5
	0.6nm,0.4s,baz=62,slow=6.2,SNR=3.4						
	0.6nm,0.4s						
HFS	Hagfors	78.91	331	P	P	05 19 13.3	-0.2
	2.3nm,0.7s,baz=64,slow=7.0,SNR=5.5						
	2.3nm,0.7s						
NOA	NORSAR Array B	79.53	333	P	P	05 19 16.6	-0.3
	0.5nm,0.6s,baz=57,slow=5.6,SNR=3.3						
	0.5nm,0.6s						
YKA	Yellowknife Ar	82.62	23	P	P	05 19 34.6	+1.3
	1.2nm,0.8s,baz=308,slow=6.0,SNR=5.4						
	1.2nm,0.8s						
GERES	GERESS Array B	84.42	321	P	P	05 19 43.1	+0.1
	0.4nm,0.6s,baz=45,slow=8.5,SNR=3.7						
	0.4nm,0.6s						

DJA 03 05:20:01.8±0.5, 8°S±18°×11°6E±°, h137km±5km, M3.5/11, mb4.2/3, MLv3.2/11, Bali region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLNI	Mataram	0.29	86	P	Pn	05 20 21.3	+0.6
DNP	Denpasar	0.63	248	P	Pn	05 20 23.8	+1.4
SRBI	Singaraja	0.68	301	P	Pn	05 20 23.8	+1.0
IGBI	Denpasar	0.75	240	P	Pn	05 20 23.9	+0.7
RTBI	Rangdo, Negare	0.85	269	P	Pn	05 20 24.6	+0.5
RTBI				S	Sn	05 20 42.6	+1.6
TWSI	Taliwang, Sumb	1.11	106	P	Pn	05 20 26.6	+0.2
TWSI				S	Sn	05 20 45.6	+0.6
JAGI	Jajag, Banyuwa	1.63	269	P	Pn	05 20 31.7	-0.2
JAGI				S	Sn	05 20 54.8	0.0
PLAI	Plampang	1.99	101	P	Pn	05 20 36.2	+0.1
GMJI	Gumukmas	2.34	274	P	Pn	05 20 40.1	-0.2
DBNI	Kabupaten Domp	2.49	92	P	Pn	05 20 41.9	-0.2
PCJI	Pacitan	4.58	273	P	Pn	05 21 09.5	+0.1
BASI	Baing, Sumba	5.04	111	P	Pn	05 21 15.3	-0.2
	74nm,0.7s						
UGM	Wanagama	5.25	275	P	Pn	05 21 18.7	+0.3
	42nm,1.6s						

IDC 03 05:20:08.0±4.7, 42°.85N×101°.97E, h0km, mbtmp3.1/2, ML3.1/2, Error ellipse: s-maj=93.9km s-min=25.2km az=105.0, Mongolia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I34MN	SONGINO INFRAS	5.86	31	I	I	05 55 40.0	
	0.1nm,0.7s,baz=213,slow=327,SNR=1.6						
SONM	Songino Array	5.88	30	Pn	Pn	05 21 36.1	-0.3
	0.2nm,0.3s,baz=215,slow=15,SNR=5.6						
SONM				Pg	Pb	05 21 54.4	+3.1
	0.2nm,0.3s,baz=225,slow=16,SNR=3.8						
SONM				Lg	Lg	05 23 15.8	
	0.2nm,0.3s,baz=213,slow=30,SNR=5.5						
	0.7nm,0.5s						
LZDM	Lanzhou Array	7.01	168	Pn	Pn	05 21 52.6	+0.3
	baz=346,slow=15						
	0.9nm,0.3s						

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*IDC **03** 05:29:17.5±1.8, 4°.47N×126°.82E, h0km, mb3.7/5, mbtmp3.7/5, MS4.3/1, Error ellipse: s-maj=111.7km s-min=21.3km az=70.0*

*DJA **03** 05:29:26.0±0.4, 4°N±4°×12°6E±°, h10km, M3.7/6, MLv3.7/6*

ISC 03 05:29:23.6±1.4, 4°.3N±0°.1×126°.5E±0°.1, h35km, n10, σ1ˢ.77/9, mb3.7/5, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.11	236	P	Pn	05 29 45.7	+3.0
SGSI				S	Sn	05 29 55.2	-1.7
GTOI	Gorontalo	5.02	223	P	Pn	05 30 37.3	+0.9
MRSI	Marisa	5.90	230	P	Pn	05 30 47.1	-1.5
KAPI	Kappang	11.43	216	LR	LR	05 37 15.2	
	comp=Z,11nm,20.0s,baz=54,slow=41						
FITZ	Fitzroy Crossi	22.28	182	P	P	05 34 19.2	+1.2
	4.3nm,0.7s,baz=11,slow=8.4,SNR=10						
	4.3nm,0.7s						
WRA	Warramunga Arr	25.32	162	P	P	05 34 46.0	-1.2
	2.0nm,0.7s,baz=340,slow=10,SNR=16						
	2.0nm,0.7s						
ASAR	Alice Springs	28.74	166	P	P	05 35 17.4	-0.6
	0.6nm,0.6s,baz=350,slow=7.3,SNR=11						
	0.6nm,0.6s						
MKAR	Makanchi Array	56.92	325	P	P	05 39 04.5	-0.9
	0.2nm,0.5s,baz=111,slow=7.9,SNR=1.4						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	61.10	327	P	P	05 39 34.5	+0.3
	0.3nm,0.5s,baz=128,slow=6.0,SNR=1.8						
	0.3nm,0.5s						
OBN	Obninsk	86.43	325	LR	LR	06 25 39.3	
	comp=Z,142nm,19.3s,baz=11,slow=39						

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*RSPR **03** 05:33:02.6, 19°.63N×64°.42W, h39km±22km, MD3.7/11*

*NEIC **03** 05:33:03.8±1.7, 19°.4N±0°.1×64°.59W±0°.05, h14km±15km, ML3.1/22, Md3.7/11(RSPR), Error ellipse: s-maj=16.2km s-min=7.3km az=181.0*

ISC 03 05:33:02.6±7.0, 19°.8N±0°.2×64°.6W±0°.1, h35km±14km, n52,

σ2^{s}35/57, 6C-5D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUMP	Col San Antoni	2.00	215		Pn	05 33 33.1	-0.8
HUMP					Sn	05 33 57.0	-0.7
HUMP	Col San Antoni	2.00	215	⇑iP	Pn	05 33 33.1	-0.8
HUMP	Col San Antoni	2.00	215	eS	Sn	05 33 57.0	-0.7
GCPR	Guaynabo City	2.01	223		Pn	05 33 33.5	-0.6
GCPR					Sn	05 33 57.7	-0.2
GCPR	Guaynabo City	2.01	223	⇓eP	Pn	05 33 33.5	-0.6
GCPR	Guaynabo City	2.01	223	eS	Sn	05 33 57.7	-0.2
ECPR	Experimental S	2.19	229	⇑iP	Pn	05 33 36.1	-0.4
ECPR	Experimental S	2.19	229	eS	Sn	05 34 02.9	+0.4
SJG	San Juan	2.20	221		Pn	05 33 36.5	-0.1
SJG	San Juan	2.20	221	IAML		05 34 16.3	
	66nm,0.8s						
SJG				IAML		05 34 23.1	
	66nm,0.7s						
SJG	San Juan	2.20	221	⇑eP	Pn	05 33 36.5	-0.1
SJG	San Juan	2.20	221	eS	Sn	05 34 03.2	+0.6
AOPR	Arecibo Observ	2.46	235		Pn	05 33 40.4	+0.1
AOPR					Sn	05 34 10.9	+1.7
AOPR	Arecibo Observ	2.46	235	IAML		05 34 22.1	
	comp=E,266nm,0.3s						
AOPR				IAML		05 34 32.8	
	comp=N,139nm,1.0s						
AOPR	Arecibo Observ	2.46	235	⇑eP	Pn	05 33 40.4	+0.1
AOPR	Arecibo Observ	2.46	235	eS	Sn	05 34 10.9	+1.7
UUPR	Utuado, UPR, P	2.50	233	Pn	Pn	05 33 41.4	+0.6
SABA	Saba	2.52	148	Pn	Pn	05 33 38.1	-3.0
SABA				IAML		05 34 20.9	
	comp=N,153nm,0.5s						
SABA				IAML		05 34 39.4	
	comp=E,261nm,0.9s						
OBIP	Obispado Ponce	2.55	227		Pn	05 33 41.7	+0.3
OBIP					Sn	05 34 11.3	0.0
OBIP	Obispado Ponce	2.55	227	IAML		05 34 27.8	
	comp=E,52nm,0.7s						
OBIP	Obispado Ponce	2.55	227	⇑iP	Pn	05 33 41.7	+0.3
OBIP	Obispado Ponce	2.55	227	eS	Sn	05 34 11.3	0.0
AGPR	Aguadilla, PR	2.69	241	Pn	Pn	05 33 45.0	+1.7
AGPR				IAML		05 34 29.9	
	comp=E,106nm,0.8s						
AGPR				IAML		05 34 59.1	
	comp=E,103nm,2.5s						
LSP	Las Mesas	2.82	236		Pn	05 33 46.1	+0.9
LSP					Sn	05 34 19.5	+1.5
LSP	Las Mesas	2.82	236	⇓eP	Pn	05 33 46.1	+0.9
LSP	Las Mesas	2.82	236	eS	Sn	05 34 19.5	+1.5
PRSN	Puerto Rico Se	2.84	237	Pn	Pn	05 33 46.6	+1.1
PRSN				IAML		05 34 23.6	
	comp=E,175nm,0.3s						
PRSN	Puerto Rico Se	2.84	237		Sn	05 34 20.4	+2.0
PRSN	Puerto Rico Se	2.84	237	⇑eP	Pn	05 33 46.5	+1.0
PRSN	Puerto Rico Se	2.84	237	eS	Sn	05 34 20.4	+2.0
MLPR	Magueyes Islan	2.91	232	⇑eP	Pn	05 33 46.6	+0.2
MLPR	Magueyes Islan	2.91	232	eS	Sn	05 34 21.3	+1.1
CRPR	Cabo Rojo, PR	2.94	233		Pn	05 33 47.0	+0.3
CRPR					Sn	05 34 22.6	+1.8
CRPR	Cabo Rojo, PR	2.94	233	IAML		05 34 36.3	
	comp=E,46nm,1.2s						
CRPR				IAML		05 34 41.2	
	comp=E,52nm,0.9s						
CRPR	Cabo Rojo, PR	2.94	233	⇓eP	Pn	05 33 47.0	+0.3
CRPR	Cabo Rojo, PR	2.94	233	eS	Sn	05 34 22.6	+1.8
HIDR	Higuey Centro	4.04	254	⇓eP	Pn	05 34 06.1	+4.1
MIDR	Miches	4.25	260	⇑eP	Pn	05 34 05.3	+0.6
MIDR	Miches	4.25	260	eS	Sn	05 34 53.4	+0.3
DR12	Loma Pena Alta	4.59	258	Pn	Pn	05 34 10.7	+1.1
CBE	Ff, Capester	4.69	142		Pn	05 34 10.3	-0.6
CBE					Sn	05 34 58.1	-5.9
CBE	Ff, Capester	4.69	142	⇑eP	Pn	05 34 10.3	-0.6
CBE	Ff, Capester	4.69	142	eS	Sn	05 34 58.1	-5.9
BANI	BANI	5.59	257	Pn	Pn	05 34 25.5	+2.2
SC01	Santiago de lo	5.76	267		Pn	05 34 29.5	+3.9
SC01	Santiago de lo	5.76	267	⇓eP	Pn	05 34 29.5	+3.9
SDDR	Presa de Saban	6.33	264		Pn	05 34 36.0	+2.5
MASC	Masc	9.04	274	eP	Pn	05 35 09.5	-1.0
MASC				eS	Sn	05 36 45.2	-5.9
QMBU	Quimbuelo	9.58	274	eP	Pn	05 35 16.2	-1.9
QMBU				eS	Sn	05 36 57.8	-6.8
GTBY	Guantanamo Bay	9.86	273	eP	Pn	05 35 20.6	-1.3
GTBY				eS	Sn	05 37 05.5	-6.0
RCC	Rio Carpintero	10.41	273	eP	Pn	05 35 26.8	-2.6
PINC	Pinares de May	10.51	276	eP	Pn	05 35 28.9	-1.8

IDC ***03*** *06:05:58.8±0.6, 36°.70N×67°.15E, h0^{km}, mb4.3/30, mbtmp4.3/36, ML4.0/6, MS3.7/20, Error ellipse: s-maj=11.7km s-min=9.3km az=156.0*

MOS ***03*** *06:06:03.8±1.2, 37°.07N×67°.12E, h39^{km}, mb4.7/20, Error ellipse: s-maj=5.8km s-min=3.9km az=73.1*

NNC ***03*** *06:06:03.6±1.8, 37°.40N×66°.92E, h0^{km}, mb4.8, mpv4.7, Error ellipse: s-maj=14.5km s-min=10.2km az=4.0*

NEIC ***03*** *06:06:05.8±1.6, 37°.00N±0°.05×67°.07E±0°.07, h35^{km}±4^{km}, mb4.7/70, Error ellipse: s-maj=9.5km s-min=5.4km az=133.0*

ISC 03 06:06:02.3±0.4, **37°.02N**±0°.04×**67°.16E**±0°.03, **h10**^{km}, **n256,** σ**1**^{s}**82**/254, **mb4.6**/78, **MS3.7**/20, **30C-16D,**
Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHAA	Shahritus	0.94	55		Pn	06 06 24.2	+2.6
CHGR	Chuyangaron	2.27	44		Pn	06 06 42.3	+2.3
CHGR	Chuyangaron	2.27	44	PN	Pn	06 06 42.3	+2.3
KBL	Kabul	2.91	148		Pn	06 06 52.2	+3.4
KBL	Kabul	2.91	148	PN	Pn	06 06 52.3	+3.4
GAR	Garm	3.18	51		Pn	06 06 54.8	+2.3
MANEM	Manem	3.64	80		Pn	06 07 02.1	+3.1
DRK	Karamyk	4.40	55		Pn	06 07 11.8	+2.5
DRK	Karamyk	4.40	55	PN	Pn	06 07 11.9	+2.5
HRA	Herat	4.79	238		Pn	06 07 15.4	+0.7
IUG	Iuzhnay	5.58	23	ePn	Pn	06 07 27.4	+2.0
IUG				ePg	Pb	06 07 46.8	+7.0
IUG				eSn	Sn	06 08 29.2	-0.4
IUG				eLg	Lg	06 09 02.2	
IUG	Iuzhnay	5.58	23	ePN	Pn	06 07 27.4	+2.0
IUG				e		06 08 29.2	
CHM	Chimkent	5.62	19	ePn	Pn	06 07 27.8	+1.9
CHM				ePg	Pb	06 07 47.1	+6.7
CHM	Chimkent	5.62	19	ePN	Pn	06 07 27.7	+1.9
NIL	Nilore	6.01	122		Pn	06 07 33.1	+1.8
NIL	Nilore	6.01	122	PN	Pn	06 07 33.1	+1.8
ARSB	Arslanbob	6.24	45		Pn	06 07 36.1	+1.6
ARSB	Arslanbob	6.24	45	PN	Pn	06 07 36.1	+1.6
BRLS	Borolday	6.34	18	ePn	Pn	06 07 33.7	-2.1
BRLS				ePg	Pb	06 07 56.2	+3.5
BRLS				eSn	Sn	06 08 42.0	-6.4
BRLS				eLg	Lg	06 09 18.5	
BRLS	Borolday	6.34	18	ePN	Pn	06 07 33.7	-2.1
KK31	Karatay Array	6.59	22		Pn	06 07 41.0	+1.7
KK31	Karatay Array	6.59	22	⇓Pn	Pn	06 07 40.7	+1.4
	13nm,0.2s,baz=205,slow=16,SNR=141						
KK31				⇑Sn	Sn	06 08 52.5	-2.0
	32nm,0.4s,baz=210,slow=21,SNR=6.2						
KK31				⇓Lg	Lg	06 09 26.5	
	127nm,0.5s,baz=206,slow=31,SNR=5.0						
KK31	Karatay Array	6.59	22	PN	Pn	06 07 41.0	+1.7
KKAR	Karatay Array	6.59	22		Pn	06 07 40.7	+1.4
KKAR	Karatay Array	6.59	22	PN	Pn	06 07 40.7	+1.4
DZA	Taraz	6.68	27	ePn	Pn	06 07 42.6	+2.1
DZA				ePg	Pb	06 08 07.1	+8.6
DZA	Taraz	6.68	27	ePN	Pn	06 07 42.6	+2.1
KSH	Kashi	7.37	68	Pn	Pn	06 07 46.2	-3.8
KSH				Sn	Sn	06 09 05.4	-8.3
KSH				smax	smax		
	comp=N,210nm,0.6s						
KSH				smax	smax		
	comp=E,190nm,0.6s						
EKS2	Erkin-Say	7.59	40	P	Pn	06 07 54.8	+1.7
	SNR=15						
UCH	Uchtor	7.69	45	P	Pn	06 07 56.5	+1.7
	SNR=34						
AAK	Ala-Archa	7.95	43	P	Pn	06 07 59.9	+1.8
	SNR=52						
AAK	Ala-Archa	7.95	43	Pn	Pn	06 07 59.6	+1.5
	comp=E,12nm,0.3s,baz=160,slow=4.7,SNR=85						
AAK				Sn	Sn	06 09 29.5	+1.4
	comp=E,9.4nm,0.3s,baz=218,slow=19,SNR=6.3						
AAK				Lg	Lg	06 10 19.8	
	comp=E,4.1nm,0.3s,baz=252,slow=20,SNR=1.9						
AAK				LR	LR	06 11 42.5	
	comp=E,436nm,19.3s,baz=240,slow=42						
	comp=E,23nm,0.3s						
AAK	Ala-Archa	7.95	43	⇑Pn	Pn	06 07 59.0	+0.9
	comp=E,21nm,0.5s						
AAK				⇑Sn	Sn	06 09 28.1	-0.1
	comp=E,103nm,1.0s						
AAK				⇑Lg	Lg	06 10 14.5	
	comp=E,27nm,0.6s						
AAK	Ala-Archa	7.95	43	d iP	Pn	06 07 59.4	+1.3
FRU1	Bishkek	8.14	42		Pn	06 08 02.2	+1.6
FRU1	Bishkek	8.14	42	P	Pn	06 08 02.2	+1.6
KBK	Karagaybulak	8.22	44	P	Pn	06 08 03.8	+2.1
	SNR=41						
CHMS	Chumysh	8.34	42	P	Pn	06 08 05.3	+2.1
	SNR=5.5						
USP	Ospenovka	8.39	40	P	Pn	06 08 05.8	+1.8
	SNR=11						
THN	Thein Dam	8.42	120	eP	Pn	06 08 06.0	+1.9
THN				eS	Sn	06 09 35.6	-3.3
THN				IAML		06 09 43.4	
	comp=N,194nm,0.4s						
THN				IAML		06 09 46.0	
	comp=E,193nm,1.1s						
TSSA	Tissa	8.48	117	eP	Pn	06 08 06.7	+1.3
TSSA				eS	Sn	06 09 36.9	-4.4
TSSA				IAML		06 09 41.6	
	comp=N,254nm,0.5s						
TSSA				IAML		06 09 51.5	
	comp=E,369nm,0.5s						
SGDS	Sogindy	8.59	39	ePn	Pn	06 08 07.8	+1.1
SGDS				ePg	Pg	06 08 41.4	-5.3
BOOM	Boomskoye usch	8.69	48		Pn	06 08 10.0	+1.8
BOOM	Boomskoye usch	8.69	48	P	Pn	06 08 10.0	+1.8
ULHL	Ulahol	8.73	51	P	Pn	06 08 10.6	+1.7
	SNR=13						
TKM2	Tokmak 2	8.75	45	P	Pn	06 08 10.2	+1.2
	SNR=34						
DHRM	DHARAMSHALA	8.91	120	eP	Pn	06 08 12.2	+0.9
DHRM				eS	Sn	06 09 46.2	-5.6
DHRM				IAML		06 09 51.5	
	comp=N,233nm,0.8s						
DHRM				IAML		06 10 04.9	
	comp=E,226nm,1.0s						
KDJ	Kajisay	9.26	54		Pn	06 08 17.7	+1.6
KDJ	Kajisay	9.26	54	P	Pn	06 08 17.7	+1.6
TARG	Taragay, Kyrgy	9.49	57		Pn	06 08 20.1	+0.8
TARG	Taragay, Kyrgy	9.49	57	P	Pn	06 08 20.1	+0.8
BTLS	Baital	9.55	31	ePn	Pn	06 08 21.9	+2.1
BTLS				ePg		06 08 58.7	
BTLS	Baital	9.55	31	eP	Pn	06 08 21.9	+2.1
MDOK	Medeo	9.74	48	ePn	Pn	06 08 23.4	+0.7
MDOK				ePg		06 09 02.8	
MDOK	Medeo	9.74	48	eP	Pn	06 08 23.3	+0.7
SMLA	Simla	10.17	122	eP	Pn	06 08 28.6	+0.3
SMLA				eS	Sn	06 10 14.9	-7.5
SMLA				IAML		06 10 18.9	
	comp=E,189nm,0.6s						
SMLA				IAML		06 10 20.3	
	comp=N,188nm,1.0s						
WUS	Wushi	10.26	62		Pn	06 08 31.3	+1.7
SATY	Saty	10.52	52	ePn	Pn	06 08 33.9	+0.7
SATY				ePg		06 09 16.8	
SATY				eSn	Sn	06 10 30.6	-0.5
SATY				eLg	Lg	06 11 38.8	
SATY	Saty	10.52	52	eP	Pn	06 08 33.9	+0.7
SATY				e		06 10 30.6	
KLP	Kalpa	10.68	118	eP	Pn	06 08 36.3	+0.6
KLP				eS	Sn	06 10 27.8	-7.7
KLP				IAML		06 10 35.3	
	comp=E,101nm,0.7s						
KLP				IAML		06 10 36.4	
	comp=N,84nm,0.7s						
ARXS	Arharly	10.82	45	eP	Pn	06 08 39.3	+1.9
SHLS	Shalkode	11.23	53	eP	Pn	06 08 47.2	+4.2
DDI	Dehra Dun	11.27	123	eS	Sn	06 10 41.7	-7.7
PDGK	Podgornoye	11.34	52	⇓Pn	Pn	06 08 43.7	-0.8
	comp=N,12nm,0.7s						
PDGK				⇓Sn	Sn	06 10 54.1	+2.9
	comp=N,21nm,1.1s						
PDGK				⇑Lg	Lg	06 12 02.5	
	comp=N,34nm,1.4s						
PDGK	Podgornoye	11.34	52	P	Pn	06 08 43.6	-0.8
AB31	Akbulak array	13.30	339		Pn	06 09 09.5	-1.6
AB31	Akbulak array	13.30	339	⇑Pn	Pn	06 09 08.7	-2.4
	comp=N,3.5nm,0.3s,baz=157,slow=14,SNR=149						
AB31				⇑Sn	Sn	06 11 30.8	-8.2
	comp=N,21nm,0.9s,baz=152,slow=25,SNR=6.3						
AB31				⇑Lg	Lg	06 12 50.9	
	comp=N,22nm,0.7s						
AB31	Akbulak array	13.30	339	eP	Pn	06 09 09.0	-2.1
ABKAR	Akbulak array	13.30	339		Pn	06 09 09.6	-1.5
MAKZ	Makanchi	14.72	44	Pn	Pn	06 09 33.0	+2.5
MAKZ	Makanchi	14.72	44	⇑Pn	Pn	06 09 30.6	+0.1
	comp=N,23nm,0.7s						
MAKZ				⇑Lg	Lg	06 13 48.3	
	comp=N,14nm,1.2s						
MAKZ	Makanchi	14.72	44	P	Pn	06 09 33.0	+2.5
MK31	Makanchi Array	14.88	44	⇑Pn	Pn	06 09 32.1	-0.6
	comp=N,6.0nm,0.4s,baz=236,slow=13,SNR=38						
MK31				⇑Lg	Lg	06 13 53.0	
	comp=N,13nm,1.1s						
MK31	Makanchi Array	14.88	44	ceP	Pn	06 09 32.0	-0.7
MKAR	Makanchi Array	14.88	44	Pn	Pn	06 09 32.3	-0.4
	comp=N,0.4nm,0.3s,baz=238,slow=14,SNR=14						
MKAR				Sn	Sn	06 12 12.1	-5.5
	comp=N,0.3nm,0.3s,baz=246,slow=17,SNR=1.5						
MKAR				Lg	Lg	06 14 00.1	
	comp=N,0.2nm,0.3s,baz=248,slow=29,SNR=2.3						
MKAR				LR	LR	06 15 57.3	
	comp=N,261nm,18.7s,baz=220,slow=40						
	comp=N,2.9nm,0.7s						
MKAR	Makanchi Array	14.88	44		Pn	06 09 32.2	-0.5
MKAR	Makanchi Array	14.88	44	P	Pn	06 09 32.2	-0.5
AKTO	Aktyubinsk	14.93	337	Pn	Pn	06 09 32.4	-0.9
	comp=N,1.2nm,0.3s,baz=164,slow=11,SNR=17						
AKTO				Sn	Sn	06 12 12.7	-6.0
	comp=N,1.1nm,0.3s,baz=155,slow=19,SNR=2.1						
AKTO				Lg	Lg	06 14 05.3	
	comp=N,1.0nm,0.3s,baz=235,slow=18,SNR=3.6						
AKTO				LR	LR	06 16 05.4	
	comp=N,202nm,19.1s,baz=40,slow=40						
	comp=N,2.3nm,0.3s						
AKTO	Aktyubinsk	14.93	337	⇑Pn	Pn	06 09 31.1	-2.2
	comp=N,11nm,0.8s						
AKTO				⇓Sn	Sn	06 12 11.3	-7.4
	comp=N,10.0nm,0.9s						
AKTO				⇑Lg	Lg	06 13 41.7	
	comp=N,15nm,0.9s						
AKT	Akhty	15.69	292	eP	Pn	06 09 42.1	-1.4
AKT				eS	Sn	06 12 35.9	-1.5
AKT				pmax	pmax		
	comp=Z,14nm,1.2s						
KURBB	Kurchatov Arra	15.85	27	Pn	Pn	06 09 42.6	-2.8
	comp=Z,0.1nm,0.3s,baz=215,slow=13,SNR=16						
KURBB				Sn	Sn	06 12 33.5	-7.6
	comp=Z,0.1nm,0.3s,baz=217,slow=15,SNR=2.1						
KURBB				Lg	Lg	06 14 32.6	
	comp=Z,0.1nm,0.3s,baz=221,slow=33,SNR=4.4						
	comp=Z,1.8nm,0.6s						
KURBB	Kurchatov Arra	15.85	27	⇑Pn	Pn	06 09 42.6	-2.8
	comp=Z,20nm,0.8s						
KURBB				⇓Lg	Lg	06 14 22.2	
	comp=Z,55nm,0.9s						
KURK	Kurchatov	15.96	27	⇓Pn	Pn	06 09 46.3	-0.5
	comp=Z,6.6nm,0.9s						
KURK				⇑Lg	Lg	06 14 23.2	
	comp=Z,22nm,1.4s						
KURK	Kurchatov	15.96	27	⇓eP	Pn	06 09 44.9	-1.9
KURK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BVA0	Borovoye Array	16.16	7	⇑Pn	Pn	06 09 48.3	-1.1
	comp=Z,7.3nm,0.4s						
BVA0				⇑Sn	Sn	06 12 44.3	-4.3
	comp=Z,14nm,0.6s						
BVA0				⇓Lg	Lg	06 14 25.1	
	comp=Z,37nm,1.4s						
BVA0	Borovoye Array	16.16	7	P	Pn	06 09 48.3	-1.1
BVA0						06 12 36.4	
BVAR	Borovoye Array	16.16	7	Pn	Pn	06 09 47.8	-1.6
	comp=Z,0.6nm,0.3s,baz=181,slow=9.5,SNR=53						
BVAR				Sn	Sn	06 12 40.3	-8.3
	comp=Z,0.6nm,0.3s,baz=180,slow=25,SNR=5.5						
BVAR				Lg	Lg	06 14 43.4	
	baz=200,slow=28						
BVAR				LR	LR	06 16 53.8	
	comp=Z,435nm,18.1s,baz=187,slow=40						
	comp=Z,6.4nm,0.3s						
BORK	Borovoye	16.18	7		Pn	06 09 48.6	-1.0
BORK				IAmb	IAmb	06 10 23.3	
	comp=Z,29nm,0.7s						
BORK	Borovoye	16.18	7	deP	Pn	06 09 47.7	-1.9
BORK				pmax	pmax		
	comp=Z,15nm,1.0s						
MAK	Makhachkala	16.18	298	c iP	Pn	06 09 48.9	-0.7
MAK				eS	Sn	06 12 47.5	-1.5
MAK				pmax	pmax		
	comp=Z,194nm,1.2s						
MAK				MLR	MLR		
	comp=Z,220nm,17.0s						
WMQ	Urumqi	17.03	60	eP	P	06 10 04.2	+1.9
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WMQ				LR	LR		
	comp=Z,190nm,20.5s						
EVN	Everest	18.86	113	P	P	06 10 21.6	-1.6
EVN				IAmb	IAmb	06 10 39.0	
	comp=Z,29nm,0.7s						
DGZ	Jazzator, Alta	19.36	43	⇑eP	P	06 10 28.2	+0.1
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KBZ	Khabaz	19.62	297	P	P	06 10 29.6	-1.2
	comp=Z,0.3nm,0.3s,baz=110,slow=2.7,SNR=5.2						
KBZ				S	S	06 14 02.1	-10
	comp=Z,3.1nm,0.8s,baz=104,slow=8.3,SNR=1.2						
	comp=Z,2.9nm,0.7s						
KBZ	Khabaz	19.62	297	ceP	P	06 10 30.9	+0.1
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SHA1	Shidzhatmaz	19.80	297	d iP	P	06 10 33.5	+0.5
KIV	Kislovodsk	19.82	298	eP	P	06 10 33.0	-0.1
KIV				eS	S	06 14 15.3	-1.0
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,52nm,14.0s						
KIV	Kislovodsk	19.82	298	P	P	06 10 33.2	+0.1
	comp=Z,22nm,0.9s						
ARTI	Arti	20.25	346	P	P	06 10 39.0	+1.4
	comp=Z,5.5nm,0.4s,baz=166,slow=8.0,SNR=9.8						
ARTI				S	S	06 14 19.4	-5.1
	comp=Z,3.5nm,0.4s,baz=159,slow=22,SNR=2.0						
ARTI				Lg	Lg	06 16 53.6	
	comp=Z,0.3nm,0.3s,baz=108,slow=16,SNR=1.4						
ARTI				LR	LR	06 19 13.4	
	comp=Z,193nm,19.4s,baz=174,slow=39						
	comp=Z,5.5nm,0.4s						
ARTI	Arti	20.25	346	P	P	06 10 39.2	+1.7
ARTI				IAmb	IAmb	06 11 06.5	
	comp=Z,18nm,0.7s						
ARTI	Arti	20.25	346	c iP	P	06 10 39.0	+1.4
ARTI						06 10 55.7	
ARTI				SS	Sn	06 14 47.7	+20
ARTI				pmax	pmax		
	comp=Z,14nm,1.5s						
BELG	Belogornoye	20.61	324	P	P	06 10 41.9	+0.4
	comp=Z,41nm,0.7s,baz=354,slow=1.7,SNR=14						
BELG				S	S	06 14 28.9	-2.7
	comp=Z,8.1nm,0.6s,baz=60,slow=13,SNR=1.7						
	comp=Z,41nm,0.7s						
BELG	Belogornoye	20.61	324	d iP	P	06 10 41.6	+0.2
BELG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ZAA0	Zalesovo Array	20.87	30	P	P	06 10 44.5	+0.2
ZAA0				IAmb	IAmb	06 10 48.6	
	comp=Z,20nm,0.8s						
ZALV	Zalesovo Beam	20.87	30	P	P	06 10 44.3	0.0
	comp=Z,20nm,0.6s,baz=227,slow=10,SNR=58						
ZALV				S	S	06 14 32.8	-4.0
	comp=Z,2.2nm,0.7s,baz=217,slow=22,SNR=3.3						
ZALV				LR	LR	06 19 38.8	
	comp=Z,205nm,18.4s,baz=230,slow=39						
	comp=Z,20nm,0.6s						
ZALV	Zalesovo Beam	20.87	30	P	P	06 10 44.6	+0.3
LSA	Lhasa	21.29	103	P	P	06 10 50.1	+0.5
LSA	Lhasa	21.29	103	P	P	06 10 50.1	+0.5
LSA				pmax	pmax		
	comp=Z,15nm,0.7s						
ARPR	Arapgir-MALATY	22.75	284	IAmb	IAmb	06 11 08.9	
	comp=Z,38nm,1.3s						
VRH	Novokhopyorsk	22.97	316	eP	P	06 11 05.7	-1.0
VRH				pmax	pmax		
	comp=Z,20nm,1.0s						
RAYN	Ar Rayn	22.97	240	P	P	06 11 06.8	-0.3
RAYN	Ar Rayn	22.97	240	P	P	06 11 06.8	-0.3
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SHL	Shillong	23.94	111	P	P	06 11 14.9	-2.0
SHL				IAmb	IAmb	06 11 37.2	
	comp=Z,20nm,0.6s						
SHL	Shillong	23.94	111	P	P	06 11 14.9	-2.0
SHL				pmax	pmax		
	comp=Z,20nm,0.6s						
VORD	Divnogorie	24.24	314	eP	P	06 11 17.4	-1.7
VORD				pmax	pmax		
	comp=Z,8.0nm,1.0s						
VSR	Storozhevoye	24.41	314	eP	P	06 11 18.1	-2.7
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KIRV	Kirov	24.50	337	P	P	06 11 22.5	+1.1
	comp=Z,5.9nm,0.5s,baz=93,slow=10,SNR=3.6						
	comp=Z,5.9nm,0.5s						
KIRV	Kirov	24.50	337	⇓eP	P	06 11 21.5	+0.1
VORR	Voronezh	24.58	315	eP	P	06 11 19.9	-2.4
VORR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LPSR	Galich'ya Gora	25.15	317	eP	P	06 11 23.7	-3.7
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
KNGR	Kungurtug, Tuv	25.56	48	⇓eP	P	06 11 33.0	+1.7
KNGR				pmax	pmax		
	comp=Z,13nm,0.8s						
GTA	Gaotai	25.69	75	eP	P	06 11 33.8	+1.1
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GTA				LR	LR		
	comp=N,97nm,11.3s						
GTA				LR	LR		
	comp=E,240nm,12.4s						
GTA				LR	LR		
	comp=Z,280nm,14.5s						
BR104	Keskin Array S	26.33	286	P	P	06 11 38.9	+0.4
	comp=Z,88nmcomp=Z,12nm,0.8s						
BR131	Keskin Array S	26.33	286	P	P	06 11 38.4	0.0
BR131	Keskin Array S	26.33	286	c iP	P	06 11 38.5	0.0
BRTR	Keskin Array B	26.33	286	P	P	06 11 39.1	+0.7
	comp=Z,9.2nm,0.8s,baz=96,slow=8.8,SNR=41						
	comp=Z,9.2nm,0.8s						
BRTR	Keskin Array B	26.33	286	P	P	06 11 38.1	-0.3
BR106	Keskin Array S	26.35	286	P	P	06 11 39.1	+0.5
	comp=Z,112nmcomp=Z,15nm,0.8s						
BR106				pP	sP	06 11 48.2	+5.2
	comp=Z,112nmcomp=Z,15nm,0.8s						
BR105	Keskin Array S	26.35	286	P	P	06 11 39.3	+0.7
	comp=Z,107nmcomp=Z,14nm,0.8s						
OBN	Obninsk	27.56	321	⇑eP	P	06 11 51.0	+1.9
OBN				i		06 12 01.7	
OBN				i		06 12 32.7	
OBN				i PPP	PPP	06 12 43.6	
OBN				eS	S	06 16 28.9	-1.2
OBN				e*SS	sS	06 16 45.5	+10
OBN				eSS	SnSn	06 17 42.3	+1.8
OBN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,199nm,19.0s						
KLMR	Klimovskoe	29.56	333	eP	P	06 12 04.7	-2.1
KLMR				pmax	pmax		
	comp=Z,27nm,1.7s						
ELL	Elmali	29.68	281	P	P	06 12 08.6	+0.2
ELL	Elmali	29.68	281	P	P	06 12 08.6	+0.2
ELL				pmax	pmax		
	comp=Z,16nm,0.6s						
AK09	Malin Array Si	30.16	309	P	P	06 12 12.1	-0.2
AK09				pP	sP	06 12 22.2	+5.4
AK10	Malin Array Si	30.18	309	P	P	06 12 12.2	-0.3
AK08	Malin Array Si	30.18	309	P	P	06 12 12.3	-0.2
AK07	Malin Array Si	30.20	309	P	P	06 12 12.5	-0.2
AKASG	Malin Array Be	30.22	309	P	P	06 12 12.6	-0.3
	comp=Z,2.2nm,0.4s,baz=88,slow=7.3,SNR=16						
	comp=Z,2.2nm,0.4s						

AKASG	Malin Array Be	30.22	309	P	P	06 12 12.4	-0.3
AKASG	Malin Array Be	30.22	309	ceP	P	06 12 12.6	-0.3
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
AKBB	Malin Array Si	30.22	309	P	P	06 12 11.7	-1.2
AKBB				IAmb	IAmb	06 12 23.4	
	comp=Z,17nm,1.2s						
AKBB	Malin Array Si	30.22	309	⇑eP	P	06 12 11.9	-0.9
AK12	Malin Array Si	30.25	309	P	P	06 12 12.7	-0.4
AK13	Malin Array Si	30.30	309	P	P	06 12 13.1	-0.5
SONM	Songino Array	30.61	57	P	P	06 12 17.1	+0.6
	comp=Z,1.0nm,0.5s,baz=267,slow=8.9,SNR=5.9						
SONM				LR	LR	06 25 47.3	
	comp=Z,100nm,20.4s,baz=230,slow=39						
	comp=Z,1.0nm,0.5s						
SONM	Songino Array	30.61	57	P	P	06 12 17.1	+0.6
SONM				pmax	pmax		
	comp=Z,4.0nm,1.4s						
LUBAR	Lubar, Ukraine	31.00	307	P	P	06 12 18.6	-1.1
ULN	Ulaanbaatar	31.05	57	⇑eP	P	06 12 20.9	+0.5
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PZH	PanZhiHua	31.07	100	P	P	06 12 23.6	+2.9
KMPD	K-Podol'skiy	31.66	304	P	P	06 12 25.2	-0.3
HORU	Horodok	31.75	306	P	P	06 12 26.3	-0.1
MNK	Minsk	31.97	316	iP	P	06 12 27.4	-0.8
	comp=E,10.0nm,0.6s						
MNK				iP	P	06 12 27.4	-0.8
	comp=N,26nm,0.9s						
MNK				iP	P	06 12 27.4	-0.8
	comp=Z,5.0nm,0.5s,baz=107						
MNK				iPP	PnPn	06 13 33.5	+0.5
MNK				iPPP	PPP	06 13 43.7	
MNK				iS	S	06 17 37.2	-2.2
MNK				iSS	SnSn	06 19 30.4	+2.5
MNK				iSSS	SSS	06 19 45.5	
MNK				iLQ	LQ	06 23 15.9	
MNK				iLR	LR	06 25 43.5	
MNK				iLRM	MLR	06 27 39.8	
	comp=E,169nm,24.4s						
MNK				iLRM	MLR	06 27 48.0	
	comp=Z,158nm,16.8s						
MNK				iLRM	MLR	06 27 52.0	
	comp=N,177nm,18.1s						
MNK	Minsk	31.97	316	iP	P	06 12 27.3	-0.8
MNK				i		06 13 33.5	
MNK				iPPP	PPP	06 13 43.7	
MNK				iS	S	06 17 37.2	-2.2
MNK				iSS	SnSn	06 19 30.3	+2.5
MNK				iSSS	SSS	06 19 45.5	
MNK				pmax	pmax		
	comp=E,10.0nm,0.6s						
MNK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MNK				pmax	pmax		
	comp=N,26nm,0.9s						
MNK				MLR	MLR		
	comp=E,169nm,24.0s						
MNK				MLR	MLR		
	comp=Z,158nm,17.0s						
MNK				MLR	MLR		
	comp=N,177nm,18.0s						
PALK	Pallekele	32.08	154	LR	LR	06 27 53.4	
	comp=N,86nm,18.8s,baz=337,slow=41						
RNPP5	Staryi Chortor	32.39	309	P	P	06 12 32.0	0.0
RNPP9	Sopachiv	32.42	310	P	P	06 12 31.8	-0.4
RNPP8	Varash	32.43	309	P	P	06 12 32.4	+0.1
VOIR		32.46	298	P	P	06 12 33.2	+0.5
	comp=N,8.6nm,2.6s						
STNU	Starunia	32.96	304	P	P	06 12 37.4	+0.4
MORS	Morshin	33.40	305	P	P	06 12 41.2	+0.4
CMAR	Chiang Mai Arr	33.44	115	P	P	06 12 37.2	-4.3
	comp=N,1.9nm,0.3s,baz=305,slow=8.2,SNR=9.9						
CMAR				LR	LR	06 30 21.9	
	comp=N,35nm,19.7s,baz=205,slow=44						
	comp=N,1.9nm,0.3s						
CMAR	Chiang Mai Arr	33.44	115	ceP	P	06 12 40.4	-1.1
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
SHIU	Shidnytsya	33.75	305	P	P	06 12 44.8	+0.9
KWP	Kalwaria Pacla	34.21	306	P	P	06 12 48.5	+0.6
	comp=Z,29nm,1.9s						
NRIK	Noril'sk	34.23	13	P	P	06 12 48.8	+1.0
	comp=Z,0.9nm,0.3s,baz=196,slow=4.1,SNR=1.8						
NRIK				LR	LR	06 29 32.8	
	comp=Z,182nm,18.6s,baz=198,slow=41						
	comp=Z,0.9nm,0.3s						
NRIK	Noril'sk	34.23	13	P	P	06 12 48.8	+1.0
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
HHC	Hu-ho-hao-te	34.47	70	eP	P	06 12 52.1	+1.7
HHC				pmax	pmax		
	comp=Z,39nm,0.9s						
FIA1	FINESS Array S	35.35	327	P	P	06 12 57.8	+0.3
FINES	FINESS Array B	35.35	327	P	P	06 12 57.5	0.0
	comp=Z,4.1nm,0.6s,baz=116,slow=8.9,SNR=16						
FINES				LR	LR	06 28 44.6	
	comp=Z,140nm,19.2s,baz=108,slow=38						
	comp=Z,4.1nm,0.6s						
OJC	Ojcow	36.12	307	P	P	06 13 04.6	+0.2
MORH	Mrgy, Hungar	36.91	300	P	P	06 13 11.1	0.0
	comp=Z,5.4nm,2.6s						
HNS	HongShan	37.55	75	⇓P	P	06 13 19.3	+2.7
HNS				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HILR	Hailar Array B	39.50	54	P	P	06 13 31.8	-1.2
	comp=Z,0.3nm,0.3s,baz=298,slow=4.6,SNR=0.5						
	comp=Z,0.3nm,0.3s						
ARCES	ARCESS Array B	39.51	338	P	P	06 13 32.2	-0.4
	comp=Z,1.9nm,0.5s,baz=111,slow=6.6,SNR=18						
ARCES				LR	LR	06 31 01.2	
	comp=Z,95nm,18.2s,baz=120,slow=38						
	comp=Z,1.9nm,0.5s						
ARCES	ARCESS Array B	39.51	338	P	P	06 13 32.7	0.0
ARCES				IAmb	IAmb	06 13 56.8	
	comp=Z,24nm,1.4s						
TIA	Tai'an	39.74	76	P	P	06 13 36.4	+1.4
TIA				pmax	pmax		
	comp=Z,11nm,0.8s						
GERES	GERESS Array B	40.10	305	P	P	06 13 37.4	-0.6
	comp=Z,0.7nm,0.6s,baz=92,slow=8.1,SNR=3.7						
	comp=Z,0.7nm,0.6s						
CLL	Collm	40.46	308	iP	P	06 13 41.0	+0.2
CLL				e*PP	sP	06 13 51.0	+5.7
CLL	Collm	40.46	308	iP	P	06 13 41.0	+0.2
CLL				epP	sP	06 13 51.0	+5.7
HFS	Hagfors	40.76	322	P	P	06 13 42.2	-0.9
	comp=Z,6.3nm,0.7s,baz=108,slow=8.4,SNR=8.6						
HFS				LR	LR	06 33 28.0	
	comp=Z,142nm,19.0s,baz=78,slow=40						
	comp=Z,6.3nm,0.7s						
CIMO	Cimolais	41.19	301	P	P	06 13 45.6	-1.3
CIMO				IAmb	IAmb	06 13 57.8	
	comp=Z,17nm,1.5s						
NC405	NORSAR Array S	41.88	323	P	P	06 13 50.7	-1.7
NC405				IAmb	IAmb	06 14 04.0	
	comp=Z,16nm,1.2s						
NC303	NORSAR Array S	42.06	323	P	P	06 13 53.9	0.0
NC303				IAmb	IAmb	06 14 19.0	
	comp=Z,21nm,1.1s						
NB2	NORSAR Subarra	42.11	323	P	P	06 13 53.3	-1.0
	comp=Z,1.5nm,0.6s,baz=99,slow=8.6						
NOA	NORSAR Array B	42.11	323	P	P	06 13 53.6	-0.7
	comp=Z,2.2nm,0.6s,baz=100,slow=8.1,SNR=11						
	comp=Z,2.2nm,0.6s						
NJ2	Nanjing	42.45	81	eP	P	06 13 57.4	0.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HEH	HeiHe	44.39	53	eP	P	06 14 13.2	+0.4
HEH				pmax	pmax		
	comp=Z,17nm,0.7s						
SENIN	Lac Senin/Sane	44.70	302	P	P	06 14 14.6	-1.0
SENIN				IAmb	IAmb	06 14 22.6	
	comp=Z,14nm,1.5s						
YAK	Yakutsk	45.34	36	LR	LR	06 35 02.4	
	comp=Z,159nm,18.4s,baz=286,slow=38						
KEST	Kesra	45.94	287	P	P	06 14 25.1	-0.4
	comp=Z,3.6nm,0.5s,baz=17,slow=3.6,SNR=7.9						
	comp=Z,3.6nm,0.5s						
KEST	Kesra	45.94	287	P	P	06 14 25.8	+0.4
KEST				IAmb	IAmb	06 14 27.6	
	comp=Z,20nm,1.3s						
SPITS	Spitsbergen Ar	46.29	347	P	P	06 14 28.3	+0.7
	comp=Z,2.7nm,0.6s,baz=124,slow=12,SNR=4.9						
	comp=Z,2.7nm,0.6s						
SPITS	Spitsbergen Ar	46.29	347	P	P	06 14 28.3	+0.7
SPITS				pmax	pmax		
	comp=Z,45nm,1.4s						
TIXI	Tiksi	46.46	23	LR	LR	06 35 37.9	
	comp=Z,103nm,18.5s,baz=198,slow=38						
TIXI	Tiksi	46.46	23	P	P	06 14 29.2	+0.3
TIXI				IAmb	IAmb	06 14 30.6	
	comp=Z,9.8nm,0.8s						
TIXI	Tiksi	46.46	23	ceP	P	06 14 29.4	+0.5
TIXI				pmax	pmax		
	comp=Z,11nm,0.8s						
KMBO	Kilima Mbogo	47.01	223	iP	P	06 14 31.3	-2.9
KMBO				pmax	pmax		
	comp=Z,294nm,0.6s						
KSRS	Korea Array	47.61	70	P	P	06 14 38.8	+0.4
	comp=Z,4.7nm,0.7s,baz=278,slow=7.0,SNR=10						
	comp=Z,4.7nm,0.7s						
USRK	Ussuriysk Ar.	48.60	60	P	P	06 14 44.7	-1.2
	comp=Z,0.8nm,0.3s,baz=278,slow=8.0,SNR=2.1						
	comp=Z,0.8nm,0.3s						
EKA	Eskdalemuir Ar	49.76	315	P	P	06 14 53.1	-1.5
	comp=Z,1.6nm,0.6s,baz=84,slow=8.5,SNR=5.3						
EKA				LR	LR	06 41 27.2	
	comp=Z,6.2nm,18.6s,baz=336,slow=43						
	comp=Z,1.6nm,0.6s						
JOW	Kunigami	52.08	83	LR	LR	06 39 20.3	
	comp=Z,93nm,19.5s,baz=316,slow=38						
ESDC	Sonseca Array	54.47	296	P	P	06 15 28.8	-1.3
	comp=Z,1.1nm,0.8s,baz=56,slow=7.7,SNR=4.9						
	comp=Z,1.1nm,0.8s						
MJAR	Matsushiro Arr	55.62	67	P	P	06 15 37.5	-0.8
	comp=Z,1.5nm,0.4s,baz=294,slow=8.8,SNR=4.6						
MJAR				LR	LR	06 40 36.7	
	comp=Z,43nm,18.0s,baz=322,slow=37						
	comp=Z,1.5nm,0.4s						
MJAR	Matsushiro Arr	55.62	67	IAmb	IAmb	06 15 39.9	
	comp=Z,12nm,1.5s						
MJAR	Matsushiro Arr	55.62	67	P	P	06 15 37.5	-0.8
MJAR				pmax	pmax		
	comp=Z,12nm,1.5s						
JTM	Tenmabayashi	56.04	62	P	P	06 15 40.2	-1.1
TORD	Torodi Ar. Bea	62.66	266	P	P	06 16 25.4	-2.0
	comp=Z,2.3nm,0.3s,baz=46,slow=7.0,SNR=2.1						
	comp=Z,2.3nm,0.3s						
SFJD	Kangerlussuaq	66.13	338	LR	LR	06 44 12.0	
	comp=Z,41nm,19.0s,baz=78,slow=34						
RES	Resolute Bay	67.94	355	LR	LR	06 49 06.1	
	comp=Z,36nm,18.9s,baz=16,slow=38						
C19K	Lookout Ridge	68.72	16	P	P	06 17 06.3	+0.5
B21K	Ikpikpuk River	69.36	14	P	P	06 17 10.5	+0.8
C23K	Itkillik River	69.94	13	P	P	06 17 14.2	+1.0
C23K				IAmb	IAmb	06 17 21.1	
	comp=Z,5.1nm,0.7s						
TOLK	Toolik Lake Re	71.16	13	IAmb	IAmb	06 17 22.1	
	comp=Z,6.8nm,0.7s						
E22K	Anaktuvuk Pass	71.17	14	P	P	06 17 21.2	+0.4
E22K				IAmb	IAmb	06 17 38.6	
	comp=Z,8.2nm,1.3s						
C27K	Jago River	71.28	11	IAmb	IAmb	06 17 23.3	
	comp=Z,4.5nm,0.8s						
ILON	Igloolik, Nuna	71.48	349	P	P	06 17 21.8	-0.8
DBIC	Dimbokro	71.66	264	P	P	06 17 21.6	-2.9
	comp=Z,2.7nm,0.6s,baz=80,slow=5.8,SNR=4.4						
	comp=Z,2.7nm,0.6s						
DBIC	Dimbokro	71.66	264	IAmb	IAmb	06 17 53.8	
	comp=Z,16nm,1.5s						
DBIC	Dimbokro	71.66	264	P	P	06 17 21.7	-2.8
DBIC				pmax	pmax		
	comp=Z,16nm,1.5s						
E25K	Arctic Village	72.33	12	P	P	06 17 28.5	+0.7
IMAR	Indian Mountai	72.57	16	P	P	06 17 29.3	+0.1
E28M	Babbage River	72.82	10	P	P	06 17 31.2	+0.5
J17K	VABM Dome	73.38	20	P	P	06 17 34.7	+0.7
C36M	Paulatuk	73.62	4	P	P	06 17 35.0	-0.3
J19K	Poorman	73.79	18	P	P	06 17 36.9	+0.5
J19K				IAmb	IAmb	06 17 45.9	
	comp=Z,8.9nm,1.4s						
INK	Inuvik	73.85	8	IAmb	IAmb	06 17 37.8	
	comp=Z,5.7nm,0.6s						
J20K	Nowinta River	74.00	18	P	P	06 17 38.3	+0.7
J20K				IAmb	IAmb	06 17 39.1	
	comp=Z,8.0nm,1.2s						
F31M	Tsiigehtchic	74.65	8	IAmb	IAmb	06 17 42.4	
	comp=Z,7.6nm,0.7s						
K20K	Telida	74.70	18	IAmb	IAmb	06 17 43.2	
	comp=Z,18nm,1.3s						
NEA2	Nenana	74.79	15	IAmb	IAmb	06 17 43.3	
	comp=Z,8.5nm,1.1s						
BPAW	Bear Paw Mtn.	74.80	16	P	P	06 17 42.3	-0.1
BPAW				IAmb	IAmb	06 18 16.6	
	comp=Z,7.0nm,1.1s						
CCB	Clear Creek Bu	75.00	15	P	P	06 17 43.4	-0.1
ILAR	Eielson Array	75.08	14	P	P	06 17 43.4	-0.5
	comp=Z,1.8nm,0.9s,baz=324,slow=4.7,SNR=16						
	comp=Z,1.8nm,0.9s						
ILAR	Eielson Array	75.08	14	P	P	06 17 43.8	-0.1
H29M	Whitestone	75.22	10	IAmb	IAmb	06 18 04.0	
	comp=Z,7.8nm,1.1s						
PPLA	Purkeypile	75.55	17	P	P	06 17 46.7	-0.2
PPLA				IAmb	IAmb	06 18 15.3	
	comp=Z,10nm,1.1s						
BOSA	Boshof	76.23	217	P	P	06 17 48.5	-2.5
	comp=Z,3.7nm,1.1s,baz=0.0,slow=9.1,SNR=1.5						
	comp=Z,3.7nm,1.1s						
BOSA	Boshof	76.23	217	IAmb	IAmb	06 18 31.7	
	comp=Z,9.3nm,1.2s						
BOSA	Boshof	76.23	217	P	P	06 17 48.5	-2.5
BOSA				pmax	pmax		
	comp=Z,9.0nm,1.3s						
SCRK	Sand Creek	76.36	14	P	P	06 17 51.2	-0.2
SCRK				IAmb	IAmb	06 17 52.6	
	comp=Z,6.8nm,1.1s						
RIDG	Independent Ri	76.41	14	P	P	06 17 51.5	-0.1
RIDG				IAmb	IAmb	06 18 04.0	
	comp=Z,5.8nm,0.9s						
SKT	Skwentna	76.50	18	P	P	06 17 51.9	-0.2
DAWY	Dawson	77.08	12	P	P	06 17 55.7	+0.3
DAWY				IAmb	IAmb	06 17 56.7	
	comp=Z,6.8nm,1.1s						
K29M	Barlow Dome	77.58	11	IAmb	IAmb	06 18 24.3	
	comp=Z,14nm,1.4s						
BCAR	Beaver Creek A	77.59	13	P	P	06 17 59.0	+0.7
BLKN	Baker Lake	78.12	353	P	P	06 18 00.6	-0.5
BLKN				IAmb	IAmb	06 18 01.4	
	comp=Z,7.8nm,0.8s						
SCHQ	Schefferville	80.36	335	P	P	06 18 13.0	-0.6
	comp=Z,7.5nm,1.0s,baz=31,slow=4.8,SNR=1.6						
	comp=Z,7.5nm,1.0s						
YKA	Yellowknife Ar	80.82	1	P	P	06 18 15.4	-0.4
	comp=Z,2.2nm,0.6s,baz=353,slow=5.6,SNR=33						
	comp=Z,2.2nm,0.6s						
YKA	Yellowknife Ar	80.82	1	P	P	06 18 14.1	-1.7
YKA	Yellowknife Ar	80.82	1	P	P	06 18 14.1	-1.7
WRA	Warramunga Arr	84.91	119	P	P	06 18 34.4	-3.3
	comp=Z,0.6nm,0.8s,baz=325,slow=4.9,SNR=6.8						
	comp=Z,0.6nm,0.8s						
ASAR	Alice Springs	87.11	122	P	P	06 18 45.5	-3.1
	comp=Z,0.6nm,0.5s,baz=311,slow=4.5,SNR=7.3						
	comp=Z,0.6nm,0.5s						
NEW	Newport	95.00	3	LR	LR	07 08 02.9	
	comp=Z,35nm,18.2s,baz=330,slow=39						
BOZ	Bozeman (W)	97.75	359	P	P	06 19 36.9	-0.9
BOZ	Bozeman (W)	97.75	359	P	P	06 19 36.9	-0.9
BOZ				pmax	pmax		
	comp=Z,10.0nm,1.5s						
PLCA	Paso Flores	147.10	250	PKPbc	PKPdf	06 25 44.1	+0.9
	comp=Z,1.7nm,0.7s,baz=47,slow=4.3,SNR=5.5						

NOU 03 06:13:41.8,15°.92S×168°.70E,h10km,MLv4.5/12, Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.52	288	P	Pn	06 14 08.3	-0.7
DVP	Devils Point	1.86	195	P	Pn	06 14 13.2	-0.6
RTV	Rentapao	1.88	188	P	Pn	06 14 12.9	-1.1
KOUNC	Koumac, New Ca	6.23	222	P	Pn	06 15 13.8	0.0
YATNC	Mamie plateau,	6.34	195	P	Pn	06 15 15.1	-0.3
DZM	Mont Dzumac	6.48	199	P	Pn	06 15 18.6	+1.2
ONTNC	Ouen Toro	6.70	198	P	Pn	06 15 21.3	+1.0

IDC 03 06:31:48.1±1.2,1°.24N×132°.14E,h0km,mb3.7/6, mbtmp3.7/6,Error ellipse: s-maj=77.9km s-min=21.6km az=76.0

ISC 03 06:31:53.3±1.2,1°.2N±0°.2×132°.1E±0°.5,h35km,n9,σ0s44/6, mb3.7/6,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.11	174	P	P	06 36 34.9	-0.2
	1.5nm,0.9s,baz=354,slow=11,SNR=8.8						
	1.5nm,0.9s						
ASAR	Alice Springs	24.77	176	P	P	06 37 12.3	+0.3
	0.9nm,0.8s,baz=2.1,slow=10,SNR=11						
	0.9nm,0.8s						
H11N1	WAKE ISLAND Hy	38.71	59	T	T	07 19 06.2	
	baz=245,slow=75,SNR=8.7						
H11N2	WAKE ISLAND Hy	38.72	59	T	T	07 19 05.1	
	baz=245,slow=75,SNR=7.8						
H11N3	WAKE ISLAND Hy	38.73	59	T	T	07 19 05.4	
	baz=245,slow=75,SNR=12						
MKAR	Makanchi Array	62.72	324	P	P	06 42 14.5	-0.4
	0.8nm,0.7s,baz=116,slow=6.6,SNR=1.4						
	0.8nm,0.7s						
KURBB	Kurchatov Arra	66.79	326	P	P	06 42 41.8	+0.5
	1.0nm,0.8s,baz=120,slow=5.6,SNR=7.7						
	1.0nm,0.8s						
BVAR	Borovoye Array	72.38	326	P	P	06 43 15.9	+0.1
	0.8nm,0.7s,baz=96,slow=7.4,SNR=3.6						
	0.8nm,0.7s						
ILAR	Eielson Array	85.10	25	P	P	06 44 25.4	0.0
	0.4nm,0.9s,baz=259,slow=5.1,SNR=2.3						
	0.4nm,0.9s						

NNC 03 06:38:51.0±1.9,43°.44N×87°.58E,h0km,mb3.6,mpv3.2, 4C-5D,Error ellipse: s-maj=14.4km s-min=11.1km az=95.0,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	Makanchi Array	5.03	314	⇓Pn	Pn	06 40 07.7	0.0
	4.0nm,1.1s,baz=130,slow=14,SNR=2.6						
MK31				⇑Sn	Sn	06 41 08.2	+1.7
	1.2nm,0.6s						
MK31				⇓Lg	Lg	06 41 29.3	
	3.0nm,0.7s,baz=136,slow=23,SNR=4.2						
MAKZ	Makanchi	5.20	312	⇑Pn	Pn	06 40 10.8	+0.6
	2.2nm,0.8s						
MAKZ				⇑Sn	Sn	06 41 11.5	+0.7
	2.0nm,0.8s						
MAKZ				⇓Lg	Lg	06 41 35.3	
	4.1nm,1.2s						
PDGK	Podgornoye	5.89	272	⇓Pn	Pn	06 40 18.8	-0.9
	2.3nm,0.9s						
PDGK				⇑Sn	Sn	06 41 29.9	+1.9
	4.1nm,0.8s						
PDGK				⇓Lg	Lg	06 41 58.0	
	7.5nm,0.9s						

NEIC 03 07:16:52.5±2.0,15°.82S±0°.08×73°.03W±0°.04,h71km±5km, mb4.5/42,Mwr4.5(GUC),Error ellipse: s-maj=12.9km s-min=1.8km az=208.0

GUC 03 07:16:53.3±0.5,16°.24S×73°.14W,h110km±5km,ML4.5

IDC 03 07:16:54.8±0.8,15°.73S×72°.95W,h102km±6km,mb4.0/13, mbtmp4.4/17,Error ellipse: s-maj=17.6km s-min=9.4km az=44.0

VAO 03 07:16:56.5±1.1,15°.61S×72°.62W,h122km±7km,mb4.6, Presumed earthquake

ISC 03 07:16:53.8±0.4,15°.78S±0°.05×72°.84W±0°.06,h100km, n136,σ1s59/135,mb4.4/27,8D,Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	3.51	137		Pn	07 17 46.4	-0.1
AP01	Chacalluta	3.51	137	eP	Pn	07 17 46.3	-0.2
AP01				eS	Sn	07 18 25.5	-1.6
PB18	Visviri	3.69	120		Pn	07 17 52.9	+3.6
PB18	Visviri	3.69	120	⇓eP	Pn	07 17 52.9	+3.6
PB18				IAML		07 19 07.5	
	comp=E,367nm,0.5s						
PB12	IPOC Station P	3.70	140		Pn	07 17 48.2	-1.0
PB12	IPOC Station P	3.70	140	⇓eP	Pn	07 17 48.1	-1.0
PB12				eS	Sn	07 18 29.1	-2.8
PB16	IPOC Station P	4.08	129		Pn	07 17 55.4	+0.8
PB16	IPOC Station P	4.08	129	⇓eP	Pn	07 17 55.4	+0.8
PB16				eS	Sn	07 18 42.3	+0.8
LPAZ	La Paz	4.56	97	P	Pn	07 18 03.7	+2.6
	comp=E,57nm,0.6s,baz=285,slow=8.0,SNR=306						
LPAZ				S	Sn	07 18 56.8	+3.4
	comp=E,42nm,0.8s,baz=181,slow=23,SNR=1.9						
LPAZ	La Paz	4.56	97		Pn	07 18 04.2	+3.0
LPAZ	La Paz	4.56	97	eP	Pn	07 18 01.5	+0.4
PSGCX	Pisagua	4.59	146	Pn	Pn	07 17 59.7	-1.5
PB11	IPOC Station P	4.99	143		Pn	07 18 05.2	-1.3
PB11	IPOC Station P	4.99	143	eP	Pn	07 18 04.9	-1.6
PB11				eS	Sn	07 18 59.7	-3.4
GO01	Chusmiza	5.20	139		Pn	07 18 09.0	-0.7
GO01	Chusmiza	5.20	139	⇓eP	Pn	07 18 09.3	-0.4
GO01				eS	Sn	07 19 07.2	-1.5
HMBC	Humberstone	5.28	148		Pn	07 18 09.0	-1.5
TA01	Diego Aracena	5.39	152		Pn	07 18 09.9	-1.9
NNA	Nana	5.42	314	P	Pn	07 18 11.1	-1.2
	comp=E,115nm,0.4s,baz=156,slow=9.9,SNR=42						
NNA				S	Sn	07 19 10.2	-3.2
	comp=E,149nm,0.3s,baz=68,slow=5.1,SNR=3.6						
NNA	Nana	5.42	314		Pn	07 18 11.4	-0.8
PB08	IPOC Station P	5.58	142		Pn	07 18 13.8	-1.0
PATCX	Punta Patache	5.62	153		Pn	07 18 13.0	-2.1
PB01	IPOC Station P	6.12	149		Pn	07 18 20.3	-1.6
PB02	IPOC Station P	6.17	154		Pn	07 18 20.8	-1.8
PB07	IPOC Station P	6.54	155		Pn	07 18 25.8	-1.8
PB03	IPOC Station P	6.88	155		Pn	07 18 30.2	-2.1
PB09	IPOC Station P	6.88	151		Pn	07 18 31.3	-1.0
PB05	IPOC Station P	7.46	161		Pn	07 18 37.1	-3.0
PB06	IPOC Station P	7.55	156		Pn	07 18 39.1	-2.2
PB10	IPOC Station P	7.99	165		Pn	07 18 44.1	-3.0
PB14	IPOC Station P	9.09	166		Pn	07 18 59.2	-3.2
GO02	Mina Guanaco	9.82	162		Pn	07 19 10.6	-1.7
ATAH	Atahualpa	10.17	327	P	Pn	07 19 17.3	0.0
	comp=E,3.8nm,0.9s,baz=147,slow=6.6,SNR=18						
ATAH				S	Sn	07 21 07.1	-2.7
	comp=E,15nm,0.8s,baz=2.9,slow=23,SNR=1.5						
SIV	San Ignacio	11.32	93	P	Pn	07 19 30.3	-2.4
	baz=274,slow=15						
AC06	Mina Casimiro	11.75	169		Pn	07 19 35.3	-2.9
VILB	Vilhena	12.57	79		Pn	07 19 47.0	-2.1
VILB	Vilhena	12.57	79	eP	Pn	07 19 46.6	-2.5
PTLB	Pontes e Lacer	13.21	90	P	Pn	07 19 55.7	-1.8
LCO	Las Campanas	13.31	172	Pn	Pn	07 19 57.2	-1.9
TEFE	Tefe	14.63	34	eP	Pn	07 20 13.8	-2.1
CO03	El Pedregal	15.12	173	P	Pn	07 20 22.0	-0.2
CO03				IAmb	IAmb	07 20 27.2	
	comp=Z,26nm,0.9s						
CFA	Coronel Fontan	16.30	166	P	P	07 20 37.6	-0.4
	comp=Z,17nm,0.7s,baz=348,slow=11,SNR=26						
SALV	Santo Antonio	16.50	93	eP	Pn	07 20 37.5	-1.9
AQDB	Aquidauana	16.94	109		P	07 20 45.4	+0.2
CLDB	Colider	17.29	76	eP	P	07 20 47.2	-1.8
PP1B	Ponte de Pedra	17.30	99	eP	P	07 20 48.3	-0.9
MACA	Manacapuru-AM	17.34	45		P	07 20 47.7	-1.9
MACA				IAmb	IAmb	07 20 50.3	
	comp=Z,32nm,0.7s						
MT08	Bocatoma Ro	17.77	172	P	P	07 20 54.5	+0.1
CPUP	Villa Florida	17.86	129	P	P	07 20 54.7	-0.5
	comp=Z,1.9nm,1.0s,baz=155,slow=11,SNR=7.5						
CPUP	Villa Florida	17.86	129		Pn	07 20 55.7	-0.2
CPUP	Villa Florida	17.86	129	eP	P	07 20 55.2	0.0
MT13	San Alfonso	18.03	173		P	07 20 57.4	+0.2
MT13				IAmb	IAmb	07 21 01.5	
	comp=Z,22nm,0.8s						
H03N1	Juan Fernandez	18.42	196	T	T	07 39 42.5	
	baz=17,slow=74,SNR=970						
H03N2	Juan Fernandez	18.42	196	T	T	07 39 40.6	
	baz=17,slow=74,SNR=1294						
H03N3	Juan Fernandez	18.44	196	T	T	07 39 39.8	
	baz=17,slow=74,SNR=1522						
BO02	Sierra Bellavi	19.02	175	P	P	07 21 08.5	+0.6
NPGB	Novo Progresso	19.20	65	eP	P	07 21 07.9	-2.1
C2SB	Chapadao do Su	19.33	102	eP	P	07 21 10.6	-0.8
ML02	Panimavida	19.94	177	P	P	07 21 18.4	+0.6
ARAG	Araguaiana, MT	20.24	93	eP	P	07 21 20.0	-1.2
ITTB	Itaituba	20.28	58	eP	P	07 21 19.6	-2.1
ROSC	El Rosal	20.54	356	P	P	07 21 25.4	+0.5
	comp=Z,9.1nm,0.3s,baz=162,slow=17,SNR=4.6						
	comp=Z,9.1nm,0.3s						
ROSC	El Rosal	20.54	356	IAmb	IAmb	07 21 58.1	
	comp=Z,23nm,1.1s						
PSAL	Palomas, Salto	20.63	140	eP	P	07 21 26.6	+1.2

BI02	San Fabin de	20.84	176	P	P	07 21 28.0	+0.4
BI02				IAmb	IAmb	07 21 32.3	
	comp=Z,36nm,0.8s						
SNDB	Serra Nova Dou	21.25	82	eP	P	07 21 30.6	-1.5
RUSC	La Rusia	21.54	359		P	07 21 35.6	0.0
BOAV	Boa Vista	21.79	35		P	07 21 38.1	+0.3
BOAV				IAmb	IAmb	07 21 43.9	
	comp=Z,16nm,0.9s						
BOAV	Boa Vista	21.79	35	eP	P	07 21 36.4	-1.5
ITAB	Concordia	22.35	124		P	07 21 44.9	+1.2
CPSB	Cacapava Do Su	22.98	133	eP	P	07 21 49.5	-0.4
FRTB	Fartura	23.17	113	eP	P	07 21 51.3	-0.6
BB19B	Bebedouro	23.64	107	eP	P	07 21 55.4	-0.9
IPMB	Ipameri, GO	23.66	99	eP	P	07 21 55.2	-1.3
PLTB	Pedras Altas	23.66	136	P	P	07 21 56.9	+0.6
PLTB				IAmb	IAmb	07 22 03.9	
	comp=Z,17nm,0.9s						
LR03	Panguipulli	23.77	179	IAmb	IAmb	07 21 59.1	
	comp=Z,22nm,0.8s						
BDFB	Brasilia	23.90	93	P	P	07 22 00.1	+1.4
	comp=Z,2.6nm,0.6s,baz=262,slow=10,SNR=6.3						
	comp=Z,2.6nm,0.6s						
TRQA	Tornquist	24.17	159		P	07 22 00.9	+0.1
TRQA				IAmb	IAmb	07 22 03.0	
	comp=Z,24nm,1.4s						
CNLB	Canela	24.31	127	eP	P	07 22 02.7	+0.5
PRPB	Parauapebas	24.51	70	eP	P	07 22 02.1	-2.0
PLCA	Paso Flores	24.94	176	P	P	07 22 09.2	+1.3
	comp=Z,9.5nm,0.9s,baz=353,slow=10,SNR=15						
	comp=Z,9.5nm,0.9s						
PLCA	Paso Flores	24.94	176		P	07 22 09.2	+1.3
PLCA				IAmb	IAmb	07 22 09.9	
	comp=Z,27nm,1.1s						
PLCA	Paso Flores	24.94	176	eP	P	07 22 09.2	+1.3
PMNB	Patos De Minas	25.37	100	eP	P	07 22 11.2	-0.8
SDBA	SAO DESIDERIO	27.29	87	eP	P	07 22 28.0	-1.3
JANB	Januaria	27.50	92	eP	P	07 22 30.0	-1.2
DIAM	Diamantina, MG	27.99	99	eP	P	07 22 34.2	-1.4
COYC	Coyhaique	29.70	179		P	07 22 51.0	+0.7
GUA01	Guaratinga, BA	31.72	96	eP	P	07 23 07.8	-0.6
CMC01	Camacan, BA	32.08	94	eP	P	07 23 10.1	-1.5
HNDO	Hondo	51.77	330	P	P	07 25 52.5	+1.0
TXAR	Lajitas Array	53.83	326	P	P	07 26 07.4	+0.7
	comp=Z,0.7nm,0.6s,baz=150,slow=9.0,SNR=11						
TXAR				pP	pP	07 26 32.0	+0.2
	comp=Z,0.5nm,0.5s,baz=153,slow=8.0,SNR=4.6						
	comp=Z,0.7nm,0.6s						
MNTX	Cornudas Mount	56.60	327	P	P	07 26 27.0	+0.5
MNTX				IAmb	IAmb	07 26 27.7	
	comp=Z,4.1nm,1.2s						
ABQ	Albuquerque	59.70	328	IAmb	IAmb	07 26 49.9	
	comp=Z,2.6nm,0.8s						
ANMO	Albuquerque	59.70	328	P	P	07 26 49.3	+1.1
ANMO				IAmb	IAmb	07 26 49.9	
	comp=Z,2.3nm,0.8s						
SDCO	Great Sand Dun	61.46	331	IAmb	IAmb	07 27 02.3	
	comp=Z,4.6nm,0.8s						
X16A	Lo Mia Camp, P	61.97	324	IAmb	IAmb	07 27 06.6	
	comp=Z,3.1nm,1.0s						
KNB	Kanab	64.63	325	P	P	07 27 22.8	+1.7
KNB				IAmb	IAmb	07 28 07.7	
	comp=Z,10nm,1.5s						
BELA	Belgrano 2	64.91	172	P	P	07 27 23.5	+1.4
BELA				IAmb	IAmb	07 27 24.6	
	comp=Z,10nm,1.3s						
PSUT	Pine Spring	66.29	326	P	P	07 27 33.4	+1.6
VNA3	Neumayer Olymp	66.65	162	⇓P	P	07 27 34.4	+1.0
	comp=Z,10nm,0.9s						
VNA1	Neumayer--Stat	66.88	161	⇓P	P	07 27 36.5	+1.7
	comp=Z,20nm,0.9s						
PDAR	Pinedale Array	67.33	332	P	P	07 27 39.2	+0.8
	comp=Z,0.5nm,0.9s,baz=203,slow=1.3,SNR=2.7						
	comp=Z,0.5nm,0.9s						
NVAR	Mina Array Bea	68.71	323	P	P	07 27 47.5	+0.4
	comp=Z,0.8nm,0.9s,baz=141,slow=6.0,SNR=4.6						
	comp=Z,0.8nm,0.9s						
ULM	Lac du Bonnet	68.80	344	P	P	07 27 47.0	-0.1
	comp=Z,3.5nm,0.5s,baz=180,slow=6.7,SNR=4.3						
	comp=Z,3.5nm,0.5s						
ULM	Lac du Bonnet	68.80	344	IAmb	IAmb	07 27 47.4	
	comp=Z,4.4nm,0.6s						
SNAA	Sanae	68.86	161	⇓P	P	07 27 48.5	+1.2
	comp=Z,333nm,0.7s						
SNAA	Sanae	68.86	161	P	P	07 27 48.6	+1.2
	comp=Z,17nm,0.8s,baz=281,slow=7.5,SNR=60						
	comp=Z,17nm,0.8s						
SNAA	Sanae	68.86	161		P	07 27 48.8	+1.4
YNE	Yellowstone No	69.28	333	IAmb	IAmb	07 27 53.4	
	comp=Z,10nm,0.9s						
TROLL	Troll, Antarti	70.58	161	⇓P	P	07 27 59.4	+1.4
	comp=Z,386nm,0.8s						
ORV	Oroville	71.32	322	IAmb	IAmb	07 28 05.7	
	comp=Z,5.6nm,1.1s						
QSPA	South Pole Qui	74.38	180	P	P	07 28 25.2	+4.6
	comp=Z,4.3nm,0.8s,baz=153,slow=2.8,SNR=12						
QSPA	South Pole Qui	74.38	180		P	07 28 23.6	+3.0
QSPA				IAmb	IAmb	07 28 26.7	
	comp=Z,6.8nm,1.0s						
WIFE	Three Sisters-	74.44	326	P	P	07 28 22.9	+1.6
EDM	Edmonton	77.05	336		P	07 28 36.3	+0.5
TORD	Torodi Ar. Bea	79.11	73	P	P	07 28 48.9	+1.0
	comp=Z,2.0nm,0.3s,baz=301,slow=3.7,SNR=1.7						
	comp=Z,2.0nm,0.3s						
VNDA	Vanda	81.79	190	P	P	07 29 02.4	+1.2
	comp=Z,1.8nm,0.9s,baz=150,slow=6.7,SNR=4.6						
	comp=Z,1.8nm,0.9s						
ESDC	Sonseca Array	84.50	46	P	P	07 29 17.6	+1.7
	comp=Z,2.5nm,1.0s,baz=258,slow=6.2,SNR=5.4						
ESDC				pP	pP	07 29 44.0	+0.3
	comp=Z,4.9nm,0.9s,baz=255,slow=5.1,SNR=11						
	comp=Z,2.5nm,1.0s						
ESDC	Sonseca Array	84.50	46	IAmb	IAmb	07 29 44.8	
	comp=Z,4.7nm,0.9s						
YKA	Yellowknife Ar	84.61	342	P	P	07 29 16.2	+0.5
	comp=Z,3.2nm,0.9s,baz=140,slow=4.3,SNR=16						
YKA				pP	pP	07 29 42.5	-0.7
	comp=Z,0.4nm,0.7s,baz=60,slow=20,SNR=1.7						
	comp=Z,3.2nm,0.9s						
MAW	Mawson	90.83	164	P	P	07 29 46.3	+0.6
	comp=Z,3.5nm,0.7s,baz=243,slow=9.0,SNR=3.9						
	comp=Z,3.5nm,0.7s						
AKTO	Aktyubinsk	127.63	38	PKP	PKiKP	07 35 48.2	+0.4
	comp=Z,1.0nm,0.5s,baz=337,slow=3.3,SNR=4.1						
ASAR	Alice Springs	132.88	214	PKP	PKPdf	07 35 58.2	0.0
	comp=Z,0.9nm,0.6s,baz=135,slow=1.9,SNR=14						
WRA	Warramunga Arr	135.57	218	PKP	PKiKP	07 36 04.2	-0.6
	comp=Z,2.6nm,0.9s,baz=145,slow=1.8,SNR=16						
WRA	Warramunga Arr	135.57	218		PKPdf	07 36 03.2	-0.1
ZALV	Zalesovo Beam	138.11	20	PKP	PKiKP	07 36 08.6	-0.3
	comp=Z,3.0nm,0.8s,baz=282,slow=2.0,SNR=10						
ZALV	Zalesovo Beam	138.11	20		PKiKP	07 36 08.4	-0.5
KURK	Kurchatov	138.27	27		PKPdf	07 36 08.3	+1.0
KURBB	Kurchatov Arra	138.30	27	PKP	PKPdf	07 36 08.3	+0.9
	comp=Z,0.6nm,0.3s,baz=303,slow=3.0,SNR=5.2						
MKAR	Makanchi Array	142.80	29	PKP	PKPdf	07 36 13.7	-2.0
	comp=Z,0.8nm,0.8s,baz=330,slow=4.3,SNR=4.2						
HILR	Hailar Array B	144.79	346	PKP	PKPdf	07 36 19.3	+0.3
	comp=Z,2.0nm,0.4s,baz=42,slow=2.4,SNR=6.4						
MJAR	Matsushiro Arr	145.54	313	PKPbc	PKPdf	07 36 20.6	-0.1
	comp=Z,1.8nm,0.4s,baz=83,slow=2.2,SNR=6.5						
MJAR	Matsushiro Arr	145.54	313		PKPdf	07 36 19.9	-0.8
SONM	Songino Array	148.03	1	PKPbc	PKPbc	07 36 27.1	-0.9
	comp=Z,3.2nm,0.6s,baz=325,slow=1.8,SNR=14						
KSRS	Korea Array	151.66	324	PKPbc	PKiKP	07 36 37.5	+0.2
	comp=Z,3.2nm,0.7s,baz=18,slow=3.0,SNR=5.3						

NNC 03 07:17:06.2±2.8, 40.°02N×82.°92E, h0km, mb3.7, mpv3.4, 5C-4D, Error ellipse: s-maj=20.4km s-min=18.7km az=16.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	Podgornoye	4.18	323	⇑Pn	Pn	07 18 10.5	-0.9
	2.7nm,0.3s						
PDGK				⇑Sn	Sn	07 19 02.5	+1.4
	7.0nm,0.6s						
PDGK				⇓Lg	Lg	07 19 20.1	
	9.4nm,0.6s						
MK31	Makanchi Array	6.78	356	⇑Pn	Pn	07 18 48.9	+1.8
	0.5nm,0.4s,baz=184,slow=12,SNR=15						
MK31				⇓Sn	Sn	07 20 05.6	+0.6
	0.4nm,0.5s						
MK31				⇓Lg	Lg	07 20 41.4	
	0.5nm,0.5s						
MAKZ	Makanchi	6.82	355	⇑Pn	Pn	07 18 47.3	-0.2
	6.8nm,1.3s						
MAKZ				⇑Sn	Sn	07 20 06.7	+1.0
	2.6nm,1.1s						
MAKZ				⇓Lg	Lg	07 20 42.2	
	5.8nm,1.4s						

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*SSNC **03** 07:18:47.6±1.6, 18.°76N×70.°79W, h31km±12km, MD3.4*
*SDD **03** 07:18:51.9±2.6, 19.°26N×71.°07W, h23km±16km, MD2.9, ML2.9, MW3.5, Presumed earthquake*
*OSPL **03** 07:18:52.3±6.9, 19.°22N×70.°97W, h5km±21km, ML2.9, Presumed earthquake*
ISC 03 07:18:51.7±1.1, **19.°22N**±0.°02×**71.°05W**±0.°02, **h21**km±2km, **n38, σ1.ˢ27**/65, **Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDDR	Presa de Saban	0.33	224	*i* P	Pb	07 18 58.4	-0.5
SDDR				*i* S	Sb	07 19 03.8	0.0
SDDR	Presa de Saban	0.33	224	ePg	Pb	07 18 58.4	-0.5
SDDR				eSg	Sb	07 19 04.7	+0.9
SDDR				IAML		07 19 05.2	
	comp=N,1µm,0.2s						
SDDR	Presa de Saban	0.33	224	*i* P	Pb	07 18 58.2	-0.7
SDDR				eS	Sb	07 19 04.3	+0.5
SDDR				IAML		07 19 04.9	
	comp=Z,813nm,0.1s						
REDR	Restauracion	0.33	261	ePg	Pn	07 19 02.9	+1.6
REDR				eSg	Sn	07 19 10.7	+3.2
REDR				IAML		07 19 12.6	
	comp=N,6µm,0.2s						
SC01	Santiago de lo	0.36	55	ePg	Pb	07 18 58.7	-0.7
SC01				eSg	Sb	07 19 05.8	+1.1
SC01				IAML		07 19 12.2	
	comp=N,1µm,0.6s						
SC01	Santiago de lo	0.36	55	*i* P	Pb	07 18 59.2	-0.2
SC01				eS	Sb	07 19 03.7	-1.0
SC01				IAML		07 19 12.0	
	comp=Z,1µm,0.5s						
ABDR	Alto Bandera	0.57	135	ePg	Pb	07 19 02.2	-1.1
ABDR				eSg	Sb	07 19 11.7	+0.6
ABDR				IAML		07 19 17.9	
	comp=N,0.2nm,0.4s						
ABDR				IAML		07 19 19.4	
	comp=E,62nm,0.3s						
LOPP1	Punta Rusia, P	0.65	347	*i* P	Pb	07 19 03.8	-0.7
LOPP1				eS	Sb	07 19 13.8	+0.8
LOPP1				IAML		07 19 15.1	
	comp=Z,988nm,0.6s						
LUDR	Luperon	0.68	7	ePg	Pb	07 19 04.7	-0.2
SODR	Sosua Marina B	0.69	40	ePg	Pb	07 19 05.4	+0.3
SODR				IAML		07 19 18.5	
	comp=N,880nm,0.4s						
LONE3	El Aguacate, B	0.72	213	*i* P	Pb	07 19 05.0	-0.8
LONE3				eS	Sb	07 19 15.0	-0.3
LONE3				IAML		07 19 15.9	
	comp=Z,705nm,0.3s						
SFDR	San Fco. de Ma	0.76	85	ePg	Pb	07 19 05.4	-0.9
SFDR				eSg	Sb	07 19 16.0	-0.3
SFDR				IAML		07 19 16.5	
	comp=N,5µm,0.2s						
NEDR	Neiba UASD	0.81	206	ePg	Pb	07 19 06.1	-1.0
NEDR				eSg	Sb	07 19 17.7	+0.1
NEDR				IAML		07 19 19.2	
	comp=N,474nm,1.0s						
LODU1	El Espartillar	0.95	205	*i* P	Pb	07 19 09.4	-0.1
LODU1				eS	Sn	07 19 23.8	+1.0
LODU1				IAML		07 19 24.0	
	comp=Z,840nm,0.4s						
DR08	Loma La Naviza	1.00	105	ePg	Pb	07 19 09.3	-1.1
DR08				IAML		07 19 27.7	
	comp=N,9µm,0.1s						
BRH1	Barahona	1.01	183	ePg	Pb	07 19 10.0	-0.5
BANI	BANI	1.05	141	ePg	Pb	07 19 11.4	+0.1
BANI				eSg	Sn	07 19 26.9	+1.5
BANI				IAML		07 19 29.2	
	comp=N,742nm,0.5s						
JIDR	Jimani	1.05	227	ePg	Pn	07 19 10.7	-0.5
JIDR				eSg	Sn	07 19 26.2	+1.0
JIDR				IAML		07 19 27.0	
	comp=N,1µm,0.5s						
PODR	Polo	1.07	192	ePg	Pn	07 19 10.7	-1.0
PODR				eSg	Sn	07 19 27.2	+1.2
PODR				IAML		07 19 31.6	
	comp=N,588nm,0.5s						
PODR	Polo	1.07	192	*i* P	Pn	07 19 10.9	-0.8
PODR				eS	Sn	07 19 26.9	+0.9
LONA1	Toro Cenizo, N	1.13	82	*i* P	Pb	07 19 30.0	+17
LONA1				eS	Sn	07 19 33.3	+6.2
SD01	Santo Domingo	1.31	125	ePg	Pn	07 19 13.9	-0.9
SD01				eSg	Sn	07 19 31.1	-0.4
SD01				IAML		07 19 34.6	
	comp=E,15nm,0.3s						
SDD	Santo Domingo	1.31	125	*i* P	Pn	07 19 14.0	-0.8
SDD				eS	Sn	07 19 31.0	-0.7
LOVI	El Cajuil, Ovi	1.45	192	*i* P	Pb	07 19 18.0	0.0
LOVI				eS	Sb	07 19 36.9	+1.0
LOVI				IAML		07 19 58.2	
	comp=Z,98nm,1.6s						
LOBH	Bahia de las A	1.46	203	*i* P	Pb	07 19 17.7	-0.5
LOBH				eS	Sb	07 19 38.5	+2.2
LOBH				IAML		07 20 01.1	
	comp=Z,97nm,0.7s						
GRTK	Grand Turk	2.28	358	eS	Sn	07 19 55.3	-0.3
MASC	Masc	3.15	288	*i* P	Pn	07 19 40.0	-0.1
MASC				*i* S	Sn	07 20 17.9	+0.8
MASC	Masc	3.15	288	*i* P	Pn	07 19 39.7	-0.4
QMBU	Quimbuelo	3.68	286	*i* P	Pn	07 19 47.2	-0.2
QMBU				*i* S	Sn	07 20 30.7	+0.5
GTBY	Guantanamo Bay	3.90	281	*i* P	Pn	07 19 48.9	-1.5
GTBY	Guantanamo Bay	3.90	281	*i* P	Pn	07 19 51.0	+0.7
NMDO	Nuevo Mundo	3.94	290	*i* P	Pn	07 19 49.8	-1.1
NMDO				*i* S	Sn	07 20 37.3	+0.8
MOAC	Moa	3.95	292	*i* P	Pn	07 19 50.1	-1.0
MOAC				*i* S	Sn	07 20 36.5	-0.4
RCC	Rio Carpintero	4.45	281	*i* P	Pn	07 19 56.1	-1.9
RCC				*i* S	Sn	07 20 49.6	+0.4
PINC	Pinares de May	4.64	287	*i* P	Pn	07 19 59.8	-0.8
PINC				*i* S	Sn	07 20 53.4	-0.5
MARVS	Santiago de Cu	4.64	280	*i* P	Pn	07 19 59.5	-1.1
MARVS				*i* S	Sn	07 20 52.7	-1.2
HLGC	Holguin	5.00	290	*i* P	Pn	07 20 06.1	+0.5
LMGC	Las Mercedes	5.68	280	*i* P	Pn	07 20 13.0	-1.9

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*LDG **03** 07:19:17.8±0.1, 44.°04N×8.°71E, h10km, Ml2.6/10, Error ellipse: s-maj=2.4km s-min=1.8km az=172.0*
*GEN **03** 07:19:18.1, 44.°14N×8.°64E, h4km±2km, Ml1.9*
*ROM **03** 07:19:18.1±0.3, 44.°12N±0.°01×8.°668E±0.°007, h11km±2km, ML2.1/34, Error ellipse: s-maj=1.1km s-min=0.5km az=351.0*
ISC 03 07:19:17.4±0.9, **44.°04N**±0.°03×**8.°67E**±0.°02, **h14**km±7km, **n49, σ0.ˢ75**/92, **1C, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CANO	Canova, Maglio	0.35	298	P	Pg	07 19 24.7	0.0
CANO				S	Sg	07 19 29.7	+0.1
CANO	Canova, Maglio	0.35	298	P	Pg	07 19 24.7	0.0
CANO				S	Sg	07 19 29.7	+0.1
CANO				AML	AML		
	comp=E,762µm,1.5s						
CANO				AML	AML		
	comp=N,894µm,1.1s						
CANO				AML	AML		
	comp=N,894µm,0.9s						
CANO				AML	AML		
	comp=E,762µm,0.5s						
QLNO	Quiliano	0.37	320	P	Pg	07 19 24.5	-0.4
QLNO				S	Sg	07 19 29.6	-0.3
QLNO	Quiliano	0.37	320	P	Pg	07 19 24.5	-0.4
QLNO				S	Sg	07 19 29.7	-0.3
QLNO				AML	AML		
	comp=E,444µm,0.8s						
QLNO				AML	AML		
	comp=N,756µm,0.2s						
GENL	Genova Univers	0.42	30	P	Pg	07 19 25.5	-0.3
GENL				S	Sg	07 19 30.9	-0.7
RORO	Rocca Rossa	0.44	279	P	Pg	07 19 26.6	+0.3
RORO				S	Sg	07 19 32.8	+0.5
RORO	Rocca Rossa	0.44	279	P	Pg	07 19 26.4	+0.1
RORO				S	Sb	07 19 33.0	-0.5
RORO				AML	AML		
	comp=E,603µm,1.3s						
RORO				AML	AML		
	comp=E,604µm,1.3s						
RORO				AML	AML		
	comp=N,384µm,0.7s						
RORO				AML	AML		
	comp=N,384µm,1.3s						
RORO				AML	AML		
	comp=E,604µm,0.7s						
RNCA	Ronca, Sant’Ol	0.47	25	P	Pg	07 19 26.4	-0.5
RNCA				S	Sg	07 19 32.7	-0.5
RNCA	Ronca, Sant’Ol	0.47	25	P	Pg	07 19 26.3	-0.5
RNCA				S	Sg	07 19 32.9	-0.3
RNCA				AML	AML		
	comp=E,213µm,0.5s						
RNCA				AML	AML		
	comp=N,105µm,1.4s						
RNCA				AML	AML		
	comp=N,105µm,0.6s						
PCP	Piancastagn	0.51	350	P	Pg	07 19 26.5	-1.0
PCP				S	Sg	07 19 33.1	-1.2
PCP	Piancastagn	0.51	350	P	Pg	07 19 26.6	-1.0
PCP				S	Sg	07 19 33.4	-0.9
PCP				AML	AML		
	comp=E,254µm,0.7s						
PCP				AML	AML		
	comp=N,345µm,0.4s						
PCP				AML	AML		
	comp=N,345µm,1.6s						
PCP				AML	AML		
	comp=E,254µm,1.3s						
IMI	Imperia	0.58	257	P	Pb	07 19 29.5	+0.1
IMI				S	Sb	07 19 38.3	+0.8
IMI	Imperia	0.58	257	P	Pb	07 19 29.5	+0.1
IMI				S	Sb	07 19 38.6	+1.1
IMI				AML	AML		
	comp=E,174µm,0.4s						
IMI				AML	AML		
	comp=N,233µm,1.5s						
GBOS	Grotte di Boss	0.63	289	P	Pg	07 19 29.8	0.0
GBOS				S	Sg	07 19 38.2	-0.1
GBOS	Grotte di Boss	0.63	289	P	Pg	07 19 29.8	0.0
GBOS				S	Sg	07 19 38.5	+0.3
GBOS				AML	AML		
	comp=E,103µm,1.3s						
GBOS				AML	AML		
	comp=N,142µm,0.5s						
GBOS				AML	AML		
	comp=E,103µm,0.7s						
MSSA	Maissana	0.67	65	P	Pg	07 19 30.3	-0.1
MSSA				S	Sg	07 19 39.9	+0.6
MSSA	Maissana	0.67	65	P	Pg	07 19 31.0	+0.6
MSSA				S	Sg	07 19 39.7	+0.5
MSSA				AML	AML		
	comp=E,188µm,0.4s						
MSSA				AML	AML		
	comp=N,178µm,1.6s						
MSSA				AML	AML		
	comp=E,188µm,0.4s						
MSSA				AML	AML		
	comp=N,178µm,0.4s						
GORR	Gorreto	0.72	38	P	Pg	07 19 31.4	-0.1
GORR				S	Sg	07 19 40.2	-0.7
GORR	Gorreto	0.72	38	P	Pg	07 19 31.4	-0.1
GORR				S	Sg	07 19 40.4	-0.5
GORR				AML	AML		
	comp=N,166µm,0.5s						
GORR				AML	AML		
	comp=E,210µm,1.1s						
GORR				AML	AML		
	comp=N,166µm,1.5s						
SAOF	Saorge	0.81	266	P	Pb	07 19 34.1	+0.8
SAOF				S	Sb	07 19 45.0	+0.9
SAOF	Saorge	0.81	266	⇑P	Pb	07 19 33.9	+0.6
SAOF				S	Sb	07 19 45.4	+1.2
SAOF				AML	AML		
	comp=E,126µm,0.4s						
SAOF				AML	AML		
	comp=N,112µm,0.8s						
SAOF				AML	AML		
	comp=E,126µm,1.6s						
SAOF				AML	AML		
	comp=N,112µm,1.2s						
BURY	Giardini Botan	0.85	253	P	Pn	07 19 35.5	+0.5
BURY				S	Sb	07 19 46.4	+1.3
PLMA	Palmaria, Port	0.85	89	P	Pg	07 19 33.6	-0.3
PLMA				S	Sg	07 19 44.8	-0.2
PLMA	Palmaria, Port	0.85	89	P	Pg	07 19 33.6	-0.3
PLMA				S	Sg	07 19 45.2	+0.2
SBF	Sospel	0.91	259	ePg	Pb	07 19 35.9	+0.8
SBF				eSg	Sb	07 19 47.4	+0.3
	comp=N,50nm,0.2s						
ENR	Entracque	0.92	282	P	Pg	07 19 35.2	-0.1
ENR				S	Sb	07 19 47.7	+0.3
ENR	Entracque	0.92	282	P	Pb	07 19 35.6	+0.4
ENR				S	Sb	07 19 47.7	+0.3
ENR				AML	AML		
	comp=N,183µm,0.2s						
ENR				AML	AML		
	comp=E,102µm,1.5s						
ENR				AML	AML		
	comp=E,102µm,0.5s						
TURF	col de Turini	0.93	266	P	Pn	07 19 36.5	+0.2
TURF				S	Sn	07 19 49.3	-0.2
ESCA	l'Escarene	0.96	258	P	Pn	07 19 37.6	+1.0
ESCA				S	Sn	07 19 51.3	+1.2
STV	Sant Anna di V	0.99	282	P	Pb	07 19 37.0	+0.6
STV				S	Sb	07 19 49.6	+0.2
STV	Sant Anna di V	0.99	282	P	Pb	07 19 37.0	+0.6
STV				S	Sb	07 19 49.9	+0.4
STV				AML	AML		
	comp=E,72µm,0.8s						
STV				AML	AML		
	comp=N,72µm,1.0s						
STV				AML	AML		
	comp=N,72µm,1.0s						
GRAM	Graiana	1.10	65	P	Pg	07 19 38.4	-0.2
GRAM				S	Sg	07 19 53.2	+0.3
GRAM				AML	AML		
	comp=E,156µm,0.4s						
GRAM				AML	AML		
	comp=N,232µm,0.3s						
GRAM				AML	AML		
	comp=E,156µm,1.6s						
MONC	Moncucco Torin	1.16	333	P	Pn	07 19 40.0	+0.6
MONC				S	Sn	07 19 56.1	+1.1
MONC	Moncucco Torin	1.16	333	P	Pn	07 19 39.9	+0.6
MONC				AML	AML		
	comp=E,177µm,0.4s						
MONC				AML	AML		
	comp=N,160µm,0.4s						
PZZ	Stroppo	1.21	293	P	Pg	07 19 39.0	-1.8
PZZ				S	Sg	07 19 56.0	-0.6
PZZ				AML	AML		
	comp=N,143µm,1.1s						
PZZ				AML	AML		
	comp=E,141µm,0.6s						
PZZ				AML	AML		
	comp=N,143µm,0.9s						
BHB	Bricherasio	1.29	309	P	Pn	07 19 41.5	+0.4
BHB				S	Sb	07 19 56.9	-1.1
BHB				AML	AML		
	comp=N,77µm,1.5s						
BHB				AML	AML		
	comp=E,93µm,1.0s						
BHB				AML	AML		
	comp=N,77µm,0.5s						
CARD	Cardoso	1.30	90	P	Pb	07 19 42.8	+1.0
RSP	Reno Superiore	1.50	318	P	Pn	07 19 44.0	-0.1
RSP				S	Sn	07 20 03.9	+0.5
RSP				AML	AML		
	comp=E,46µm,0.2s						
RSP				AML	AML		
	comp=N,49µm,1.0s						
PGF	Pioggiola	1.51	171	ePn	Pn	07 19 43.5	-0.7
PGF				eSn	Sn	07 20 01.1	-2.7
	comp=N,7.5nm,0.2s						
MBDF	Montbardon	1.53	297	ePn	Pn	07 19 43.7	-0.8
MBDF	Montbardon	1.53	297	eP	Pg	07 19 46.3	-0.5
MBDF				eSn	Sn	07 20 02.9	-1.3
	comp=N,9.0nm,0.2s						
LMR	La Mourre	1.72	246	ePn	Pn	07 19 46.2	-0.8
LMR				eSn	Sn	07 20 06.2	-2.6
	comp=N,3.8nm,0.2s						
LPG	La Plagne	2.00	317	ePn	Pn	07 19 51.3	+0.2

LPG	La Plagne	2.00	317	ePg	Pg	07 19 55.5	-0.3
LPG				eSn	Sn	07 20 16.0	-0.1
	comp=N,4.4nm,0.4s						
LPL	La Plagne	2.02	318	ePn	Pn	07 19 51.8	+0.5
LPL	La Plagne	2.02	318	ePg	Pg	07 19 55.4	-0.8
LPL				eSn	Sn	07 20 16.2	-0.3
	comp=N,8.8nm,0.5s						
ORIF	Oris-en-Rattie	2.18	295	ePn	Pn	07 19 54.8	+1.4
ORIF				eSg	Sg	07 20 28.0	+0.4
SMRF	Simiane la Rot	2.24	269	ePn	Pn	07 19 53.3	-0.8
SMRF	Simiane la Rot	2.24	269	ePg	Pg	07 20 00.0	-0.3
SMRF				eSg	Sg	07 20 29.0	-0.3
	comp=N,20nm,0.3s						

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*ASRS **03** 07:25:40.0±1.1, 53°.77N×91°.11E, h0km, M3.2, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*IDC **03** 07:25:51.2±3.3, 53°.46N×90°.31E, h0km, mbtmp3.3/3, ML2.7/3, Error ellipse: s-maj=27.8km s-min=21.5km az=59.0*

*NNC **03** 07:25:53.7±3.3, 53°.34N×90°.29E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=26.4km s-min=20.1km az=107.0, Suspected Mining explosion.*

ISC 03 07:25:49.7±4.0**, 53°.6N**±0°.1×**90°.4E**±0°.2**, h0km, n9, σ1ˢ43**/12**, 6C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.32	279	⇓Pn	Pb	07 26 47.7	-1.6
	1.1nm,0.7s						
ZAA0				⇑Lg	Lg	07 27 39.3	
	7.4nm,1.3s						
ZALV	Zalesovo Beam	3.32	279	Pn	Pn	07 26 44.0	+1.2
	0.9nm,0.3s,baz=98,slow=16,SNR=18						
ZALV				Sn	Sn	07 27 23.2	+0.3
	1.1nm,0.3s,baz=100,slow=24,SNR=4.5						
ZALV				Lg	Lg	07 27 36.0	
	4.0nm,0.3s,baz=101,slow=28,SNR=13						
	4.4nm,0.5s						
KURK	Kurchatov	7.78	253	⇓Pn	Pn	07 27 43.9	-0.1
	1.8nm,1.2s						
KURK				⇓Sn	Sn	07 29 14.2	+1.5
	2.6nm,0.8s						
KURK				⇑Lg	Lg	07 29 59.2	
	7.3nm,1.1s						
KURBB	Kurchatov Arra	7.87	253	Pn	Pn	07 27 45.8	+0.5
	0.1nm,0.3s,baz=65,slow=15,SNR=9.9						
KURBB				Sn	Sn	07 29 13.6	-1.5
	baz=69,slow=18,SNR=1.3						
KURBB				Lg	Lg	07 29 59.4	
	baz=67,slow=29,SNR=0.9						
	1.8nm,0.6s						
KURBB	Kurchatov Arra	7.87	253	⇓Pn	Pn	07 27 46.8	+1.5
	3.7nm,0.7s						
KURBB				⇑Sn	Sn	07 29 16.5	+1.5
	21nm,0.8s						
KURBB				⇓Lg	Lg	07 30 01.8	
	29nm,1.0s						
MK31	Makanchi Array	8.55	221	⇑Lg	Lg	07 30 21.1	
	2.0nm,0.6s,baz=30,slow=31,SNR=4.4						
MKAR	Makanchi Array	8.55	221	Pn	Pn	07 27 55.4	+0.8
	0.3nm,0.3s,baz=40,slow=13,SNR=6.1						
MKAR				Sn	Sn	07 29 29.9	-1.8
	baz=45,slow=18						
MKAR				Lg	Lg	07 30 18.7	
	0.1nm,0.3s,baz=50,slow=17,SNR=1.7						
	0.7nm,0.5s						
MAKZ	Makanchi	8.66	222	⇑Sn	Sn	07 29 35.7	+1.3
	2.7nm,1.2s						
MAKZ				⇑Lg	Lg	07 30 25.0	
	5.7nm,1.2s						
I34MN	SONGINO INFRAS	11.69	113	I	I	08 33 10.0	
	baz=311,slow=315,SNR=0.8						

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*SJA **03** 07:29:26.5±0.7, 20°.89S×70°.98W, h25km±4km, ML5.4, MW5.7*

*IDC **03** 07:29:28.4±0.4, 20°.78S×70°.62W, h0km, mb4.7/18, mbtmp4.6/24, ML4.2/5, MS4.7/48, Error ellipse: s-maj=17.4km s-min=12.3km az=70.0*

*MOS **03** 07:29:28.8±1.5, 20°.88S×70°.84W, h13km, mb5.4/18, Error ellipse: s-maj=12.9km s-min=7.1km az=104.0*

*VAO **03** 07:29:30.6±0.3, 20°.77S×70°.62W, h10km, mb5.2, Presumed earthquake*

*NEIC **03** 07:29:30.9, 20°.93S×70°.73W, h14km, Moment Tensor Solution. Duration: 2ˢ5 Moment tensor: Scale 10^{17}Nm; Mrr0.73; Mθθ0.09; Mφφ-0.82; Mrθ0.31; Mθφ0.17; Mφr-0.97; Fault plane solution: M0 1.29000×10^{17} NP1: φs357.99000°, δ19.47000°, λ103.79000°. NP2: φs163.40000°, δ71.12000°, λ85.19000°. Principal axes: T 1.2338, Plg64.0000°, Azm66.0000°; N 0.1138, Plg5.0000°, Azm165.0000°; P -1.3477, Plg26.0000°, Azm257.0000°;*

*NEIC **03** 07:29:30.9, 20°.93S×70°.73W, h10km*

*NEIC **03** 07:29:30.9, 20°.93S×70°.73W, h10km*

*NEIC **03** 07:29:30.9, 20°.93S×70°.73W, h14km*

*BJI **03** 07:29:30.3, 20°.90S×70°.70W, h10km, mB5.5/7, Ms5.6/15, Ms7 5.4/16*

*NEIC **03** 07:29:30.5±2.5, 20°.91S±0°.03×70°.76W±0°.05, h10km±1km, mb5.2/275, Mwb5.4/44, Mwr5.3/62, Mww5.3/29, Mwr5.3(GUC), Error ellipse: s-maj=7.9km s-min=5.2km az=111.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr0.24; Mθθ0.14; Mφφ-0.38; Mrθ0.22; Mθφ0.19; Mφr-1.03; Fault plane solution: M0 1.12000×10^{17} NP1: φs168.43000°, δ81.10000°, λ93.61000°. NP2: φs326.25000°, δ9.59000°, λ68.10000°. Principal axes: T 1.0132, Plg54.0000°, Azm83.0000°; N 0.1954, Plg4.0000°, Azm348.0000°; P -1.2086, Plg36.0000°, Azm255.0000°; Moment Tensor Solution. Moment tensor: Scale 10^{17} Nm; Mrr1.22; Mθθ-0.29; Mφφ-0.93; Mrθ0.36; Mθφ0.09; Mφr-1.24; Fault plane solution: M0 1.70000×10^{17} NP1: φs354.42000°, δ20.18000°, λ97.78000°. NP2: φs166.13000°, δ70.01000°, λ87.15000°. Principal axes: T 1.8251, Plg65.0000°, Azm71.0000°; N -0.2873, Plg3.0000°, Azm167.0000°; P -1.5378, Plg25.0000°, Azm258.0000°;*

*GUC **03** 07:29:31.4±0.9, 20°.88S×70°.84W, h23km±14km, ML5.2*

*GCMT **03** 07:29:34.5±0.1, 20°.84S±0°.01×70°.90W±0°.01, h14km, MW5.4/133, Moment Tensor Solution. s106,c164; s133,c228; Duration: 1ˢ2 Moment tensor: Scale 10^{17} Nm; Mrr0.79±.02; Mθθ0.01±.01; Mφφ-0.80±.01; Mrθ0.16±.02; Mθφ0.14±.01; Mφr-1.13±.05; Best double couple: M0 1.40000×10^{17} NP1: φs349.00000°, δ18.00000°, λ87.00000°. NP2: φs172.00000°, δ72.00000°, λ91.00000°. Principal axes: T 1.3810, Plg63.0000°, Azm83.0000°; N 0.0390, Plg1.0000°, Azm351.0000°; P -1.4200, Plg27.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 07:29:28.9±0.9**, 20°.89S**±0°.02×**70°.85W**±0°.03**, h7km**±5km**, n507, σ1ˢ54**/388**, mb5.2**/162**, MS4.8**/49**, 21C-6D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PATCX	Punta Patache	0.66	84		Pb	07 29 42.9	+0.2
PATCX	Punta Patache	0.66	84	⇓iP	Pb	07 29 42.8	0.0
PATCX				eS	Sb	07 29 52.4	+0.3
PATCX	Punta Patache	0.66	84	eP	Pg	07 29 42.1	+0.5
TA01	Diego Aracena	0.70	63		Pb	07 29 43.3	-0.2
TA01	Diego Aracena	0.70	63	⇓eP	Pb	07 29 43.2	-0.3
TA01				eS	Sb	07 29 52.5	-0.9
TA01	Diego Aracena	0.70	63	eP	Pg	07 29 42.5	0.0
TA02	Huaiquique	0.91	48	⇓eP	Pg	07 29 46.6	+0.1
TA02				eS	Sg	07 29 58.5	+0.2
TA02				IAML		07 30 03.0	
	comp=E,80µm,0.5s						
TA02	Huaiquique	0.91	48	eP	Pg	07 29 46.2	-0.2
PB02	IPOC Station P	0.99	116		Pn	07 29 49.0	-0.3
PB02	IPOC Station P	0.99	116	⇓iP	Pb	07 29 48.7	+0.2
PB02				IAML		07 30 08.9	
	comp=E,230µm,0.4s						
PB02	IPOC Station P	0.99	116	eP	Pg	07 29 48.1	+0.1
PB02				IAML		07 30 09.4	
	comp=Z,152µm,0.5s						
HMBC	Humberstone	1.09	56		Pg	07 29 49.9	+0.1
HMBC	Humberstone	1.09	56	⇓eP	Pg	07 29 49.6	-0.2
HMBC				eS	Sg	07 30 03.3	-0.6
HMBC				IAML		07 30 07.8	
	comp=E,137µm,0.3s						
HMBC	Humberstone	1.09	56	eP	Pg	07 29 48.9	-1.0
HMBC				IAML		07 30 11.1	
	comp=Z,62µm,0.5s						
PB07	IPOC Station P	1.23	133		Pb	07 29 52.4	-0.2
PB07	IPOC Station P	1.23	133	⇑eP	Pb	07 29 52.1	-0.4
PB07				eS	Sb	07 30 07.5	-1.2
PB07				IAML		07 30 18.0	
	comp=E,71µm,0.4s						
PB07	IPOC Station P	1.23	133	eP	Pb	07 29 51.6	-1.0
PB07				IAML		07 30 13.8	
	comp=Z,39µm,1.3s						
PX03	IPOC Station P	1.24	67	eP	Pb	07 29 51.5	-1.2
PX03				eS	Sb	07 30 07.9	-1.0
PX03				IAML		07 30 14.4	
	comp=N,124µm,0.8s						
PB01	IPOC Station P	1.28	97		Pb	07 29 53.4	-0.1
PB01	IPOC Station P	1.28	97	⇑eP	Pn	07 29 53.1	-0.3
PB01				IAML		07 30 12.5	
	comp=N,167µm,0.5s						
PB01	IPOC Station P	1.28	97	eP	Pn	07 29 52.5	-0.8
PB01				IAML		07 30 15.6	
	comp=Z,33µm,0.3s						
PSGCX	Pisagua	1.45	28		Pn	07 29 55.2	-0.5
PB03	IPOC Station P	1.54	139		Pn	07 29 57.2	+0.3
PB03	IPOC Station P	1.54	139	⇑eP	Pn	07 29 56.7	-0.3
PB03				eS	Sb	07 30 17.6	-0.1
PB03				IAML		07 30 23.3	
	comp=N,31µm,0.5s						
PB03	IPOC Station P	1.54	139	eP	Pn	07 29 56.1	-0.9
PB03				IAML		07 30 23.2	
	comp=Z,44µm,0.5s						
PB11	IPOC Station P	1.58	45		Pn	07 29 57.5	0.0
PB11	IPOC Station P	1.58	45	⇑eP	Pn	07 29 56.9	-0.7
PB11				eS	Sn	07 30 17.4	-1.0
PB11				IAML		07 30 23.0	
	comp=N,82µm,0.5s						
PB11	IPOC Station P	1.58	45	eP	Pn	07 29 56.3	-1.3
PB11				IAML		07 30 23.2	
	comp=Z,58µm,1.0s						
PB09	IPOC Station P	1.75	121		Pb	07 30 00.8	-0.7
PB09	IPOC Station P	1.75	121	⇑eP	Pb	07 30 00.9	-0.7
PB09				eS	Sb	07 30 22.9	-0.9
PB09				IAML		07 30 35.8	
	comp=E,36µm,0.6s						
PB09				IAML		07 30 38.4	
	comp=N,32µm,0.6s						
PB09	IPOC Station P	1.75	121	eP	Pn	07 30 00.3	+0.5
PB09				IAML		07 30 36.3	
	comp=Z,46µm,1.0s						
PB08	IPOC Station P	1.75	65		Pn	07 30 00.3	+0.2
PB08	IPOC Station P	1.75	65	⇑eP	Pn	07 30 00.1	0.0
PB08				eS	Sn	07 30 22.3	-0.6
PB08				IAML		07 30 29.4	
	comp=E,54µm,0.3s						
PB08	IPOC Station P	1.75	65	eP	Pn	07 29 59.5	-0.6
PB08				IAML		07 30 29.9	
	comp=Z,53µm,0.6s						
GO01	Chusmiza	1.97	52		Pn	07 30 03.8	+0.7
GO01	Chusmiza	1.97	52	⇑eP	Pn	07 30 03.0	-0.2
GO01				eS	Sb	07 30 29.8	-0.6
GO01				IAML		07 30 36.0	
	comp=N,40µm,0.3s						
GO01	Chusmiza	1.97	52	eP	Pn	07 30 02.3	-0.8
GO01				IAML		07 30 34.9	
	comp=Z,34µm,0.4s						
PB05	IPOC Station P	2.05	163		Pn	07 30 03.6	-0.2
PB05	IPOC Station P	2.05	163	eP	Pn	07 30 02.9	-1.0
PB05				eS	Sn	07 30 27.5	-2.2
PB05				IAML		07 30 47.7	
	comp=E,18µm,0.8s						
PB05	IPOC Station P	2.05	163	eP	Pn	07 30 02.3	-1.6
PB05				IAML		07 30 47.3	
	comp=Z,15µm,0.5s						
PB06	IPOC Station P	2.16	147		Pn	07 30 06.5	+1.0
PB06	IPOC Station P	2.16	147	⇑eP	Pn	07 30 05.0	-0.5
PB06				IAML		07 30 41.8	
	comp=E,30µm,0.4s						
PB06				IAML		07 30 45.8	
	comp=N,24µm,0.4s						
PB06	IPOC Station P	2.16	147	eP	Pn	07 30 04.6	-0.9
PB06				IAML		07 30 44.0	
	comp=Z,25µm,0.8s						
PB12	IPOC Station P	2.31	12		Pn	07 30 07.9	+0.4
PB12	IPOC Station P	2.31	12	⇑eP	Pn	07 30 06.3	-1.3
PB12				IAML		07 30 51.6	
	comp=N,11µm,0.5s						
PB12	IPOC Station P	2.31	12	eP	Pn	07 30 06.5	-1.1
PB12				IAML		07 30 46.3	
	comp=Z,14µm,1.1s						
AP01	Chacalluta	2.55	11		Pn	07 30 11.4	+0.8
AP01	Chacalluta	2.55	11	⇑eP	Pn	07 30 09.7	-1.0
AP01	Chacalluta	2.55	11	eP	Pn	07 30 11.2	+0.6
AP01				IAML		07 30 59.3	
	comp=Z,19µm,0.9s						
PB10	IPOC Station P	2.63	174		Pn	07 30 10.8	-0.9
PB10	IPOC Station P	2.63	174	⇑eP	Pn	07 30 10.3	-1.4
PB10	IPOC Station P	2.63	174	eP	Pn	07 30 10.0	-1.8
PB10				IAML		07 31 03.7	
	comp=Z,10µm,0.9s						
PB16	IPOC Station P	2.84	27	⇑eP	Pn	07 30 14.5	-0.7
PB16	IPOC Station P	2.84	27	eP	Pn	07 30 14.5	-0.7
PB16				IAML		07 31 04.3	
	comp=Z,13µm,1.3s						
AF01	San Pedro de A	3.22	130		Pn	07 30 22.0	+1.8
AF01	San Pedro de A	3.22	130	eP	Pn	07 30 22.9	+2.7
AF01	San Pedro de A	3.22	130	eP	Pn	07 30 22.5	+2.4
PB18	Visviri	3.53	22	⇑eP	Pn	07 30 26.6	+2.0
PB14	IPOC Station P	3.74	174		Pn	07 30 26.1	-1.3
PB14	IPOC Station P	3.74	174	eP	Pn	07 30 26.1	-1.3
PB14	IPOC Station P	3.74	174	eP	Pn	07 30 25.7	-1.7
PB14				IAML		07 31 46.1	
	comp=Z,4µm,0.6s						
GO02	Mina Guanaco	4.41	165		Pn	07 30 36.6	+0.1
GO02	Mina Guanaco	4.41	165	eP	Pn	07 30 35.8	-0.7
GO02				IAML		07 32 00.1	
	comp=Z,8µm,0.8s						
YJA	Yavi	5.13	105	eP	Pn	07 30 50.3	+3.7
AC01	Pan de Azucar	5.24	178		Pn	07 30 47.3	-0.4
AC01	Pan de Azucar	5.24	178	eP	Pn	07 30 45.1	-2.6
AC01				IAML		07 32 23.5	
	comp=Z,2µm,1.1s						
LPAZ	La Paz	5.25	30	Pn	Pn	07 30 49.4	+1.0
	comp=Z,3.1nm,0.3s,baz=197,slow=3.2,SNR=75						
LPAZ				Sn	Sn	07 31 47.4	-2.2
	comp=Z,22nm,0.3s,baz=188,slow=12,SNR=3.6						
LPAZ				LR	LR	07 32 49.6	
	comp=Z,2µm,20.9s,baz=222,slow=40						
LPAZ	La Paz	5.25	30		Pn	07 30 51.6	+3.2
LPAZ	La Paz	5.25	30	P	Pn	07 30 51.6	+3.2
LPAZ	La Paz	5.25	30	eP	Pn	07 30 46.4	-2.0
LPAZ	La Paz	5.25	30	P	Pn	07 30 51.3	+2.9
SALTA		5.33	129	⇑eP	Pn	07 30 51.5	+2.2
AC02	Maricunga	6.13	165		Pn	07 31 01.2	+0.9
SLA	San Lorenzo	6.23	129	eP	Pn	07 31 04.4	+2.9
AC06	Mina Casimiro	6.46	176		Pn	07 31 03.5	-0.9
GO03	Copiapo	6.70	175		Pn	07 31 08.6	+0.8
AC04	Llanos de Chal	7.29	182		Pn	07 31 15.3	-0.5
AC05	El Transito	7.93	176		Pn	07 31 25.0	+0.3
LCO	Las Campanas	8.09	179		Pn	07 31 26.9	-0.2
LCO	Las Campanas	8.09	179	P	Pn	07 31 26.9	-0.2
CO03	El Pedregal	9.91	179		Pn	07 31 50.4	-1.5
SIV	San Ignacio	10.48	64	Pn	Pn	07 31 58.2	-1.4
	comp=Z,175nm,0.6s,baz=274,slow=15						
SIV				Sn	Sn	07 33 54.1	-3.3
	baz=274,slow=15						
NNA	Nana	10.55	326	Pn	Pn	07 32 03.2	+2.5
	comp=Z,2.8nm,0.3s,baz=130,slow=13,SNR=4.3						
NNA				Sn	Sn	07 33 56.4	-2.8
	comp=Z,4.2nm,0.3s,baz=229,slow=19,SNR=2.6						
NNA				LR	LR	07 36 07.8	
	comp=Z,2µm,19.1s,baz=159,slow=38						
	comp=Z,7.0nm,0.3s						
NNA	Nana	10.55	326	i P	Pn	07 32 01.4	+0.7
CFA	Coronel Fontan	10.93	168	Pn	Pn	07 32 06.2	+0.4
	comp=Z,0.5nm,0.3s,baz=354,slow=13,SNR=15						
CFA				Sn	Sn	07 34 23.0	+15
	comp=Z,1.7nm,0.3s,baz=243,slow=17,SNR=10.0						
CFA				LR	LR	07 36 42.5	
	comp=Z,3µm,19.0s,baz=337,slow=40						
	comp=Z,1.4nm,0.3s						
MT02	Curacav	12.32	181		Pn	07 32 25.4	+0.5
MURT	Porto Murtinho	12.37	96	eP	Pn	07 32 23.4	-2.1
PTLB	Pontes e Lacer	12.37	66		Pn	07 32 23.5	-2.1
PTLB	Pontes e Lacer	12.37	66	eP	Pn	07 32 23.0	-2.6
VILB	Vilhena	12.88	54		Pn	07 32 32.4	-0.2
VILB	Vilhena	12.88	54	eP	Pn	07 32 30.3	-2.2
LMEL	Las Melosas	12.92	178		Pn	07 32 36.7	+3.6
MT01	Popeta	12.93	181		Pn	07 32 31.0	-2.1
BDQN	Bodoquena, MS	13.21	91	eP	Pn	07 32 35.0	-2.0
CPUP	Villa Florida	13.52	116	Pn	Pn	07 32 39.3	-1.9
	comp=Z,0.2nm,0.3s,baz=152,slow=12,SNR=10						
CPUP				Sn	Sn	07 35 11.4	-0.4
	comp=Z,0.1nm,0.3s,baz=150,slow=6.4,SNR=2.0						
CPUP				LR	LR	07 38 27.1	
	comp=Z,1µm,20.7s,baz=152,slow=40						
	comp=Z,1.1nm,0.6s						
CPUP	Villa Florida	13.52	116		Pn	07 32 40.7	-0.6
CPUP	Villa Florida	13.52	116	P	Pn	07 32 40.7	-0.6
CPUP	Villa Florida	13.52	116	eP	Pn	07 32 40.5	-0.7
AQDB	Aquidauana	14.19	91		Pn	07 32 49.9	-0.5
AQDB	Aquidauana	14.19	91	eP	Pn	07 32 48.6	-1.7
H03N1	Juan Fernandez	14.41	208	T	T	07 47 50.9	
	baz=35,slow=72,SNR=229						
H03N2	Juan Fernandez	14.41	208	T	T	07 48 06.1	
	baz=35,slow=72,SNR=194						
H03N3	Juan Fernandez	14.43	208	T	T	07 47 49.5	
	baz=35,slow=72,SNR=258						
AMBA	Amambai (Brazi	14.86	101	eP	Pn	07 32 57.9	-1.7
SALV	Santo Antonio	15.21	73	eP	Pn	07 33 02.3	-2.0
PP1B	Ponte de Pedra	15.43	80	eP	Pn	07 33 05.3	-1.9
ATAH	Atahualpa	15.50	331	Pn	Pn	07 33 08.6	+0.1
	comp=Z,0.3nm,0.3s,baz=144,slow=8.4,SNR=6.3						
ATAH				Sn	Sn	07 35 59.5	-1.2
	baz=293,slow=23,SNR=1.1						
ATAH				LR	LR	07 38 49.5	
	comp=Z,2µm,18.2s,baz=172,slow=36						
	comp=Z,7.9nm,1.1s						
PDRB	Porto dos Gac	16.39	58	eP	Pn	07 33 16.9	-2.6
C2SB	Chapadao do Su	17.08	86	eP	Pn	07 33 26.5	-1.8
CLDB	Colider	17.56	58	eP	Pn	07 33 32.4	-2.0
PTGB	Pitanga	17.73	106	eP	Pn	07 33 35.9	-0.6
ITAB	Concordia	18.21	114	eP	Pn	07 33 41.7	-0.7
TEFE	Tefe	18.30	20	eP	Pn	07 33 41.7	-1.7
CPSB	Cacapava Do Su	18.32	125	eP	Pn	07 33 43.4	-0.2
TRQA	Tornquist	18.75	158	P	Pn	07 33 49.2	+0.3
TRQA	Tornquist	18.75	158	P	Pn	07 33 49.2	+0.3
TRQA				pmax	pmax		
	comp=Z,80nm,1.3s						
ARAG	Araguaiana, MT	18.79	77	eP	P	07 33 47.2	-1.8
PLTB	Pedras Altas	18.85	129	P	P	07 33 47.0	-2.6
PLTB	Pedras Altas	18.85	129	eP	P	07 33 48.5	-1.1
ITRB	Iturama	19.26	90	eP	P	07 33 53.0	-1.2
PLCA	Paso Flores	19.78	179	P	Pn	07 34 02.0	+0.7
	comp=Z,0.5nm,0.3s,baz=360,slow=12,SNR=32						
	comp=Z,31nm,1.0s						
PLCA	Paso Flores	19.78	179		Pn	07 34 01.4	+0.1
PLCA	Paso Flores	19.78	179	P	Pn	07 34 02.0	+0.7
PLCA	Paso Flores	19.78	179	eP	Pn	07 34 02.2	+0.9
FRTB	Fartura	19.87	101	eP	P	07 33 59.9	-1.0
CNLB	Canela	19.94	119	eP	P	07 34 01.2	-0.4
MACA	Manacapuru-AM	20.21	31		P	07 34 03.7	-0.8
MACA				IAmb	IAmb	07 34 10.6	
	comp=Z,156nm,1.0s						
MACA	Manacapuru-AM	20.21	31	eP	P	07 34 03.3	-1.2
NPGB	Novo Progresso	20.35	50	eP	P	07 34 03.0	-3.1
SNDB	Serra Nova Dou	20.73	68	eP	P	07 34 07.5	-2.7
BB19B	Bebedouro	20.84	94	eP	P	07 34 10.2	-1.2
SGC2	Sao Gabriel da	20.95	11	P	P	07 34 11.8	-0.8
	comp=Z,4µmcomp=Z,2µmcomp=Z,145nm,1.3s						
PTLC	Puerto Leguiza	21.28	349	P	P	07 34 14.2	-1.9
LL01	San Ignacio de	21.47	183	IAmb	IAmb	07 34 29.3	
	comp=Z,221nm,1.4s						
IPMB	Ipameri, GO	21.54	86	eP	P	07 34 16.1	-2.9
RCLB	Rio Claro- Sao	21.73	98	eP	P	07 34 18.9	-2.1
SPB	Sao Paulo	21.84	101	P	P	07 34 21.4	-0.6
SPB				IAmb	IAmb	07 34 25.5	
	comp=Z,108nm,1.1s						
SPB	Sao Paulo	21.84	101	eP	P	07 34 21.0	-1.0
PET01	Itanhaem-SP	22.02	103	eP	P	07 34 24.1	+0.1
ITTB	Itaituba	22.04	44	eP	P	07 34 22.0	-2.3
BONI	La Bonita	22.19	342	P	P	07 34 29.8	+3.6
	comp=Z,2µmcomp=Z,101nm,1.1s						
VAO	Valinhos	22.25	100		P	07 34 25.1	-1.5
VAO				IAmb	IAmb	07 34 28.7	
	comp=Z,156nm,1.2s						
VAO	Valinhos	22.25	100	eP	P	07 34 25.3	-1.3
LL02	Futaleuf	22.25	182	P	P	07 34 25.3	-1.0
LL02				IAmb	IAmb	07 34 42.7	
	comp=Z,158nm,1.9s						
BDFB	Brasilia	22.30	80	P	P	07 34 25.1	-2.1
	comp=Z,20nm,0.8s,baz=264,slow=11,SNR=18						
BDFB				LR	LR	07 44 25.3	
	comp=Z,8µm,18.5s,baz=265,slow=41						
	comp=Z,20nm,0.8s						
BDFB	Brasilia	22.30	80		P	07 34 24.7	-2.4
BDFB				IAmb	IAmb	07 34 32.5	
	comp=Z,162nm,1.5s						
TULM	Tulcn-Chalpat	22.52	342	P	P	07 34 38.7	+8.8
FLOC	Florencia	22.82	348		P	07 34 33.6	+0.9
FLOC				IAmb	IAmb	07 34 48.8	
	comp=Z,140nm,1.1s						
FLOC	Florencia	22.82	348	P	P	07 34 34.6	+2.0
	comp=Z,2µmcomp=Z,3µmcomp=Z,149nm,1.4s						
GCUF	Volcan Galeras	22.88	343	P	P	07 34 38.3	+4.6
MACC	Macarena, Meta	23.08	352	P	P	07 34 36.1	+0.8
	comp=Z,681nmcomp=Z,21nm,1.1s						
PMNB	Patos De Minas	23.09	88	eP	P	07 34 33.9	-1.7
CRUC	La Cruz	23.10	344	P	P	07 34 44.4	+8.5
GARC	Garzon, Huila	23.38	348	P	P	07 34 39.6	+1.0
	comp=Z,2µmcomp=Z,102nm,0.9s						
PARB	Paraibuna	23.49	101	eP	P	07 34 37.7	-1.9
AY01	Puyuhuapi	23.52	183	IAmb	IAmb	07 35 00.3	
	comp=Z,136nm,1.8s						
BBAC	Balboa, Cauca	23.61	344	P	P	07 34 42.9	+2.0
	comp=Z,2µmcomp=Z,113nm,1.2s						
TUMC	Tumaco	23.85	340	P	P	07 34 50.0	+7.0
POPC	Popayan, Colom	23.97	346	P	P	07 34 45.4	+1.0
	comp=Z,2µmcomp=Z,91nm,1.1s						
BSCB	Bom Sucesso	24.35	95	eP	P	07 34 46.9	-0.8
COYC	Coyhaique	24.64	182		P	07 34 49.1	-0.9
MAL2	Monte Alegre,	24.82	43		P	07 34 50.0	-1.9
VILC	Villavicencio,	25.00	353	P	P	07 34 55.7	+2.0
	comp=Z,855nmcomp=Z,98nm,1.1s						
ORTC	Ortega, Tolima	25.02	350	P	P	07 34 55.4	+1.7
	comp=Z,3µmcomp=Z,3µmcomp=Z,277nm,1.2s						
PRPB	Parauapebas	25.09	57	eP	P	07 34 52.8	-1.7
BOAV	Boa Vista	25.25	25		P	07 34 55.0	-0.8
BOAV	Boa Vista	25.25	25	eP	P	07 34 56.0	+0.2
BOAV	Boa Vista	25.25	25	P	P	07 34 56.3	+0.5
	comp=Z,5µmcomp=Z,2µmcomp=Z,140nm,1.3s						
YOTC	Yotoco, Valle	25.30	347	P	P	07 34 58.7	+2.4
	comp=Z,2µmcomp=Z,37nm,1.1s						
SMTB	Santa Maria do	25.42	65	eP	P	07 34 56.5	-0.9
VAS01	Vassouras-RJ	25.51	98	eP	P	07 34 58.1	-0.1
CHIC	Chingaza	25.52	353	P	P	07 34 59.5	+0.9
	comp=Z,2µmcomp=Z,948nmcomp=Z,56nm,1.1s						
ANIL	Santa Ana	25.61	349	P	P	07 35 01.7	+2.3
DIAM	Diamantina, MG	25.72	89	eP	P	07 34 59.5	-0.8
ROSC	El Rosal	25.79	352	P	P	07 35 00.9	-0.2
	comp=Z,18nm,0.6s,baz=130,slow=3.2,SNR=12						
	comp=Z,18nm,0.6s						
ROSC	El Rosal	25.79	352		P	07 35 02.6	+1.4
ROSC				IAmb	IAmb	07 35 28.7	
	comp=Z,90nm,1.2s						
ROSC	El Rosal	25.79	352	P	P	07 35 02.6	+1.4
ROSC				pmax	pmax		
	comp=Z,91nm,1.2s						
JANB	Januaria	25.88	81	eP	P	07 35 00.6	-1.0
PLMC	San Jos del P	26.18	348	P	P	07 35 06.6	+2.3
	comp=Z,2µmcomp=Z,98nm,1.2s						
SDBA	SAO DESIDERIO	26.22	75	eP	P	07 35 03.6	-1.1
GUY2C	Guyana, Caldas	26.32	350	P	P	07 35 08.2	+2.2
	comp=Z,2µmcomp=Z,1µmcomp=Z,56nm,0.9s						
DUB01	Friburgo-RJ	26.51	98	eP	P	07 35 07.1	-0.1
SPBC	San Pablo de B	26.56	353	P	P	07 35 07.4	-0.4
RUSC	La Rusia	26.70	355	P	P	07 35 09.8	+0.3
RUSC	La Rusia	26.70	355	P	P	07 35 11.2	+1.7
	comp=Z,2µmcomp=Z,156nm,1.0s						
CBOC	Ciudad Bolivar	27.06	349	P	P	07 35 12.5	+0.1
CAM01	Campos-RJ	27.19	97	eP	P	07 35 12.6	-0.7
SJMB	Sao Joao De Ma	27.98	91	eP	P	07 35 19.8	-0.7
DBBC	Dabeiba	28.23	349	P	P	07 35 25.8	+3.1
BSFB	Barra de Sao F	28.27	91	eP	P	07 35 20.9	-2.2
TMAB	Tom-Au,PA,Br	28.82	53	eP	P	07 35 27.6	-0.4
UREC	San Jos de Ur	28.83	350	P	P	07 35 29.2	+1.2

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      comp=Z,22nm,1.1s
SDV   Santo Domingo   29.59   0  LR     LR      07 46 39.1
      comp=Z,3µm,19.4s,baz=229,slow=35
SDV   Santo Domingo   29.59   0  P      P       07 35 33.9 -1.1
SDV   Santo Domingo   29.59   0 eP      P       07 35 34.3 -0.6
SDV   Santo Domingo   29.59   0  P      P       07 35 34.4 -0.5
      comp=Z,507nmcomp=Z,30nm,1.6s
GUA01 Guaratinga, BA  29.68  87 eP      P       07 35 34.5 -1.1
ARGC  Ariguani, Magd  30.73 353  P      P       07 35 45.6 +0.8
MDP   Montagnes des   31.41  37  LR     LR      07 50 28.6
      comp=Z,1µm,20.3s,baz=213,slow=40
EFI   East Falkland   32.31 165  P      P       07 35 59.6 +1.3
EFI                              IAmb   IAmb    07 36 25.0
      comp=Z,47nm,1.2s
EFI   East Falkland   32.31 165 i P     P       07 35 59.3 +0.9
EFI                              pmax   pmax
      comp=Z,49nm,1.5s
USHA  Ushuaia         33.94 177  LR     LR      07 50 51.6
      comp=Z,2µm,18.4s,baz=100,slow=38
JTS   Las Juntas de   33.94 335 i P     P       07 36 13.3 +0.3
JTS                              pmax   pmax
      comp=Z,26nm,1.6s
RPN   Rapa Nui        35.60 252  LR     LR      07 47 38.8
      comp=Z,3µm,18.1s,baz=86,slow=30
RCBR  Riachuelo       37.03  71  P      P       07 36 39.1 -0.6
RCBR  Riachuelo       37.03  71  P      P       07 36 39.1 -0.6
RCBR                             pmax   pmax
      comp=Z,109nm,0.9s
RCBR  Riachuelo       37.03  71 eP      P       07 36 39.4 -0.3
CRPR  Cabo Rojo, PR   38.83   6  IAmb   IAmb    07 37 02.6
      comp=Z,81nm,1.1s
OBIP  Obispado Ponce  38.91   6  IAmb   IAmb    07 37 04.8
      comp=Z,74nm,1.2s
SJG   San Juan        39.03   7  LR     LR      07 54 30.9
      comp=Z,1µm,18.3s,baz=189,slow=39
SJG   San Juan        39.03   7  P      P       07 36 54.9 -1.5
SJG                              IAmb   IAmb    07 37 04.9
      comp=Z,40nm,0.8s
SJG   San Juan        39.03   7  P      P       07 36 54.9 -1.5
SJG                              pmax   pmax
      comp=Z,40nm,0.9s
APG   El Apazote      40.54 330  LR     LR      07 51 58.0
      comp=Z,80nm,21.1s,baz=90,slow=33
PMSA  Palmer Station  44.10 176  LR     LR      07 56 31.5
      comp=Z,952nm,18.2s,baz=329,slow=37
CMIG  Matias Romero   44.50 326  LR     LR      07 53 13.7
      comp=Z,650nm,21.2s,baz=148,slow=32
HKT   Hockley         55.98 334 i P     P       07 39 07.5 -0.4
HKT                              pmax   pmax
      comp=Z,32nm,2.4s
X48A  Hartselle       57.15 344  IAmb   IAmb    07 39 22.9
      comp=Z,28nm,1.3s
TKL   Tuckaleechee C  57.55 348  LR     LR      08 06 08.1
      comp=Z,545nm,18.6s,baz=168,slow=38
TKL   Tuckaleechee C  57.55 348  P      P       07 39 19.5 +0.3
TKL                              IAmb   IAmb    07 39 36.2
      comp=Z,29nm,1.2s
TKL   Tuckaleechee C  57.55 348  P      P       07 39 19.5 +0.3
TKL                              pmax   pmax
      comp=Z,29nm,1.2s
V48A  Smith Brothers  58.32 345  IAmb   IAmb    07 39 30.4
      comp=Z,46nm,1.5s
SAND  Sanderson       58.84 328  IAmb   IAmb    07 39 35.7
      comp=Z,35nm,1.6s
WVT   Waverly         58.94 344  P      P       07 39 28.2 -0.6
WVT   Waverly         58.94 344  P      P       07 39 28.3 -0.6
WVT                              pmax   pmax
      comp=Z,12nm,0.9s
LPIG  La Paz          58.95 317  LR     LR      07 59 28.5
      comp=Z,236nm,21.1s,baz=126,slow=30
RKT   Rikitea         59.06 255 eS      S       07 47 33.8 -3.8
      comp=Z,5µm,23.2s
RKT                             eLR     LR      07 56 43.6
      comp=Z,11µm,32.2s
TXAR  Lajitas Array   59.11 327  P      P       07 39 30.9 +0.6
      comp=Z,1.3nm,1.0s,baz=144,slow=8.7,SNR=10
TXAR                             LR     LR      08 04 01.7
      comp=Z,429nm,18.6s,baz=130,slow=35
      comp=Z,1.3nm,1.0s
OZNA  Ozona           59.15 330  IAmb   IAmb    07 39 36.5
      comp=Z,35nm,1.6s
T47A  Sharon Grove    59.57 345  IAmb   IAmb    07 39 50.4
      comp=Z,37nm,1.1s
BELA  Belgrano 2      59.61 172         P       07 39 33.8 +0.8
LCAR  Lake Charles    59.82 341  IAmb   IAmb    07 39 40.9
      comp=Z,27nm,1.5s
ABTX  Abilene, Hawle  59.91 332  IAmb   IAmb    07 40 05.0
      comp=Z,17nm,1.0s
PBMO  Poplar Bluff    60.26 342  IAmb   IAmb    07 39 46.0
      comp=Z,46nm,1.6s
MNHN  Monahans        60.28 329  IAmb   IAmb    07 39 45.5
      comp=Z,40nm,1.4s
HHAR  Hobbs           60.91 339  IAmb   IAmb    07 39 49.0
      comp=Z,46nm,1.5s
VHRN  Van Horn        60.95 326  IAmb   IAmb    07 39 50.3
      comp=Z,30nm,1.3s
TUL3  Leonard         61.23 337  IAmb   IAmb    07 39 52.4
      comp=Z,32nm,1.3s
VNA3  Neumayer Olymp  61.23 161 ⇑P      P       07 39 45.6 +1.4
      comp=Z,13nm,0.7s
VNA1  Neumayer--Stat  61.47 160 ⇑P      P       07 39 47.8 +2.0
      comp=Z,15nm,1.1s
CCM   Cathedral Cave  61.69 342         P       07 39 46.5 -1.1
CCM                              IAmb   IAmb    07 40 40.1
      comp=Z,22nm,1.0s
CCM   Cathedral Cave  61.69 342  P      P       07 39 46.5 -1.1
CCM                              pmax   pmax
      comp=Z,22nm,1.0s
ACSO  Alum Creek Sta  61.85 349  IAmb   IAmb    07 39 50.7
      comp=Z,30nm,1.1s
MNTX  Cornudas Mount  61.88 327  IAmb   IAmb    07 39 56.9
      comp=Z,20nm,1.4s
SMWD  Samnorwood      62.28 333  IAmb   IAmb    07 40 17.2
      comp=Z,17nm,0.9s
T35A  Sooner Cattle   62.39 337  IAmb   IAmb    07 40 49.8
      comp=Z,23nm,1.2s
MSTX  Muleshoe        62.45 330  IAmb   IAmb    07 39 58.8
      comp=Z,35nm,1.4s
SNAA  Sanae           63.45 161 ⇑P      P       07 40 00.4 +1.3
      comp=Z,413nm,0.9s
SNAA  Sanae           63.45 161  P      P       07 40 00.5 +1.3
      comp=Z,14nm,0.9s,baz=280,slow=5.0,SNR=28
SNAA                             LR     LR      08 07 58.0
      comp=Z,552nm,18.3s,baz=9.0,slow=36
      comp=Z,14nm,0.9s
SNAA  Sanae           63.45 161         P       07 40 00.0 +0.9
SNAA  Sanae           63.45 161 i P     P       07 39 59.6 +0.5
SNAA                             pmax   pmax
      comp=Z,38nm,1.2s
319A  Douglas         63.71 324  IAmb   IAmb    07 40 16.2
      comp=Z,15nm,0.9s
121A  Cookes Peak, D  63.79 326  IAmb   IAmb    07 40 09.6
      comp=Z,39nm,1.6s
N41A  Harden Midland  64.04 343  IAmb   IAmb    07 40 20.6
      comp=Z,36nm,1.2s
Y22A  Socorro         64.47 327  IAmb   IAmb    07 40 13.8
      comp=Z,25nm,1.4s
ABQ   Albuquerque     65.01 328  IAmb   IAmb    07 40 17.1
      comp=Z,28nm,1.6s
ANMO  Albuquerque     65.01 328  LR     LR      08 08 14.1
      comp=Z,311nm,19.9s,baz=122,slow=36
ANMO  Albuquerque     65.01 328  P      P       07 40 11.4 +1.3
ANMO                             IAmb   IAmb    07 40 17.1
      comp=Z,28nm,1.6s
ANMO  Albuquerque     65.01 328 i P     P       07 40 11.3 +1.3
ANMO                             pmax   pmax
      comp=Z,19nm,1.6s
TASM  ASL Pad, Albuq  65.01 328  IAmb   IAmb    07 40 17.1
      comp=Z,28nm,1.6s
TASM  ASL Pad, Albuq  65.01 328  IAmb   IAmb    07 40 17.1
      comp=Z,28nm,1.6s
TASM  ASL Pad, Albuq  65.01 328  IAmb   IAmb    07 40 17.1
      comp=Z,26nm,1.5s
TASM  ASL Pad, Albuq  65.01 328  IAmb   IAmb    07 40 17.1
      comp=Z,23nm,1.5s
TROLL Troll, Antarti  65.16 161 ⇑P      P       07 40 12.1 +1.7
      comp=Z,642nm,0.7s
TUC   Tucson          65.25 323         P       07 40 13.1 +1.6
TUC                              IAmb   IAmb    07 40 18.9
      comp=Z,28nm,1.6s
TUC   Tucson          65.25 323  P      P       07 40 13.1 +1.6
TUC                              pmax   pmax
      comp=Z,28nm,1.6s
SADO  Sadowa          65.78 354  LR     LR      08 12 51.6
      comp=Z,212nm,18.2s,baz=182,slow=40
T25A  Trinidad        65.82 331  IAmb   IAmb    07 40 54.4
      comp=Z,47nm,1.8s
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214A  Organ Pipe Nat  66.15 322  IAmb   IAmb    07 40 25.1
      comp=Z,22nm,1.2s
KSCO  Kaye Shedlock'  66.60 333  IAmb   IAmb    07 40 27.6
      comp=Z,35nm,1.3s
SDCO  Great Sand Dun  66.81 331  IAmb   IAmb    07 40 38.4
      comp=Z,18nm,1.1s
X16A  Lo Mia Camp, P  67.20 324  IAmb   IAmb    07 40 32.8
      comp=Z,18nm,1.4s
113A  Mohawk Valley,  67.29 322  IAmb   IAmb    07 40 32.1
      comp=Z,24nm,1.5s
TAOE  Nuku Hiva Isla  67.61 269 eP      P       07 40 28.4 +1.4
      comp=Z,85nm,25.1s
TAOE  Nuku Hiva Isla  67.61 269 ePP     PP      07 42 53.3 -2.8
      comp=Z,38nm,24.2s
TAOE                            eS      S       07 49 20.7 -4.1
      comp=Z,200nm,23.8s
TAOE                            eSS     SS      07 53 43.2 -2.5
      comp=Z,84nm,25.1s
TAOE                            eLR     LR      08 00 53.2
      comp=Z,653nm,25.2s
Y14A  Wickenburg      67.71 323  IAmb   IAmb    07 40 34.8
      comp=Z,24nm,1.5s
MVCO  Mesa Verde      67.81 328  IAmb   IAmb    07 40 36.0
      comp=Z,41nm,1.6s
WUAZ  Wupatki         67.99 325  IAmb   IAmb    07 40 41.4
      comp=Z,23nm,1.2s
NVL   N'lazarevskaya  68.04 159 eP      P       07 40 29.8 +1.2
NVL                             e               07 42 59.5
NVL                             ePPP    PPP     07 44 37.3
NVL                             eS      S       07 49 29.5 +1.4
NVL                             eSS     SS      07 53 52.5 +2.8
NVL                              pmax   pmax
      comp=Z,48nm,1.1s
ESJX  Sierra Juarez   68.05 320  IAmb   IAmb    07 40 37.5
      comp=Z,26nm,1.5s
BLYC  Blythe          68.44 322  IAmb   IAmb    07 40 39.6
      comp=Z,26nm,1.4s
YUH   Yuha Desert     68.48 320  P      P       07 40 34.1 +2.2
YUH                              IAmb   IAmb    07 40 39.9
      comp=Z,35nm,1.6s
ECSD  EROS Data Cent  68.52 340  IAmb   IAmb    07 40 39.2
      comp=Z,37nm,1.4s
ISCO  Idaho Springs   68.54 332  IAmb   IAmb    07 41 12.0
      comp=Z,41nm,1.9s
PV01  Paradox Valley  68.57 329  IAmb   IAmb    07 40 40.2
      comp=Z,22nm,1.3s
PV15  Paradox Valley  68.69 329  IAmb   IAmb    07 40 47.9
      comp=Z,17nm,0.9s
PV13  Radium Mtn., P  68.72 329  IAmb   IAmb    07 40 47.6
      comp=Z,15nm,1.0s
SPMN  Marine on St.   68.77 344  IAmb   IAmb    07 40 43.6
      comp=Z,14nm,1.0s
PV03  Paradox Valley  68.80 329  IAmb   IAmb    07 40 45.8
      comp=Z,28nm,1.5s
PV16  Nyswonger Mesa  68.88 329  IAmb   IAmb    07 40 44.7
      comp=Z,35nm,1.8s
BC3   Big Chuckawall  68.91 321  IAmb   IAmb    07 40 42.6
      comp=Z,31nm,1.5s
PV20  West Nyswonger  68.93 329  IAmb   IAmb    07 41 25.4
      comp=Z,37nm,1.4s
BAR   Barrett         68.96 320  IAmb   IAmb    07 41 12.7
      comp=Z,28nm,1.4s
PV10  Paradox Valley  68.99 329  IAmb   IAmb    07 41 23.7
      comp=Z,18nm,1.1s
PV22  Blue Mesa, Par  69.00 329  IAmb   IAmb    07 40 42.6
      comp=Z,30nm,1.5s
W13A  Hualapai Mount  69.05 323  IAmb   IAmb    07 40 43.9
      comp=Z,25nm,1.6s
IRM   Iron Mountain   69.09 322  IAmb   IAmb    07 41 00.9
      comp=Z,16nm,1.2s
U15A  North Rim       69.16 325  IAmb   IAmb    07 40 45.5
      comp=Z,35nm,1.6s
BORC  Borrego Spring  69.21 320  IAmb   IAmb    07 40 45.5
      comp=Z,32nm,1.5s
QSPA  South Pole Qui  69.30 180  P      P       07 40 37.4 +0.7
      comp=Z,2.2nm,0.4s,baz=151,slow=3.8,SNR=23
      comp=Z,2.2nm,0.4s
QSPA  South Pole Qui  69.30 180         P       07 40 38.2 +1.5
PFO   Pinyon Flats O  69.48 320         P       07 40 40.1 +1.8
PFO   Pinyon Flats O  69.48 320 i P     P       07 40 37.9 -0.4
PFO                              pmax   pmax
      comp=Z,20nm,1.1s
O20A  White River Ci  70.00 330  IAmb   IAmb    07 40 55.6
      comp=Z,27nm,1.2s
V12A  Nelson          70.05 323  IAmb   IAmb    07 40 49.4
      comp=Z,33nm,1.5s
ELS   Elsinore Mount  70.08 320  P      P       07 40 41.7 -0.3
ELS                              IAmb   IAmb    07 40 49.8
      comp=Z,34nm,1.5s
LCMT  Little Creek M  70.10 325  IAmb   IAmb    07 40 50.0
      comp=Z,23nm,1.5s
DBIC  Dimbokro        70.31  75  P      P       07 40 42.0 -1.6
      comp=Z,24nm,0.9s,baz=259,slow=5.9,SNR=24
DBIC                             LR     LR      08 11 38.4
      comp=Z,2µm,18.1s,baz=267,slow=36
      comp=Z,24nm,0.9s
DBIC  Dimbokro        70.31  75         P       07 40 42.1 -1.5
DBIC  Dimbokro        70.31  75  P      P       07 40 42.1 -1.5
DBIC                             pmax   pmax
      comp=Z,53nm,1.0s
MTPU  Mount Pierson   70.31 326  IAmb   IAmb    07 40 55.1
      comp=Z,34nm,1.7s
F33A  5 Mile Ranch,   70.32 341  IAmb   IAmb    07 40 48.5
      comp=Z,34nm,1.6s
SZCU  Shurtz Canyon   70.45 325  IAmb   IAmb    07 40 53.3
      comp=Z,28nm,1.5s
Q16A  Castle Valley   70.47 328  IAmb   IAmb    07 40 52.9
      comp=Z,51nm,1.6s
P18A  Preston Nutter  70.56 329  IAmb   IAmb    07 41 14.0
      comp=Z,26nm,1.1s
CCUT  Cedar City      70.57 325  IAmb   IAmb    07 40 53.6
      comp=Z,35nm,1.3s
P17A  Butcher Ranch,  70.68 328  IAmb   IAmb    07 40 58.0
      comp=Z,17nm,1.0s
DRLN  Deer Lake       70.83   9         P       07 40 45.5 -0.5
MWC   Mount Wilson    70.86 320  P      P       07 40 48.5 +1.7
MWC                              IAmb   IAmb    07 40 54.7
      comp=Z,19nm,1.2s
MWC   Mount Wilson    70.86 320  P      P       07 40 48.5 +1.7
MWC                              pmax   pmax
      comp=Z,19nm,1.2s
GSC   Goldstone, Bar  70.86 322  IAmb   IAmb    07 40 54.9
      comp=Z,40nm,1.7s
SHOC  Shoshone, Teco  70.98 322  IAmb   IAmb    07 40 55.2
      comp=Z,42nm,1.6s
QSM   Queen of Sheba  71.37 322  IAmb   IAmb    07 41 01.9
      comp=Z,22nm,1.4s
PRN   Pahroc Range    71.37 324  IAmb   IAmb    07 42 25.6
      comp=Z,14nm,0.6s
GWY   Greenwater Val  71.41 322  IAmb   IAmb    07 40 57.7
      comp=Z,25nm,1.3s
RSSD  Black Hills     71.48 335  P      P       07 40 51.1 +0.8
RSSD                             IAmb   IAmb    07 41 45.8
      comp=Z,24nm,1.4s
RSSD  Black Hills     71.48 335  P      P       07 40 51.1 +0.8
RSSD                             pmax   pmax
      comp=Z,24nm,1.5s
LRMC  Laurel Mtn Rad  71.50 321  IAmb   IAmb    07 40 58.4
      comp=Z,30nm,1.6s
MPU   Maple Canyon    71.53 328  IAmb   IAmb    07 40 58.4
      comp=Z,28nm,1.4s
TPNV  Topopah Spring  71.71 323  IAmb   IAmb    07 41 04.8
      comp=Z,28nm,1.3s
FURC  Furnace Creek,  71.72 322  IAmb   IAmb    07 41 05.0
      comp=Z,25nm,1.1s
WCT   Wildcat Mounta  71.81 323  IAmb   IAmb    07 41 00.8
      comp=Z,32nm,1.4s
TBI   Tubuai          71.98 251 eS      S       07 50 14.2 -1.5
      comp=Z,2µm,27.0s
TBI                             eSS     SS      07 54 48.3 -4.0
      comp=Z,447nm,24.8s
TBI                             eLR     LR      08 02 50.7
      comp=Z,5µm,27.5s
TBI                             eLR     LR      08 02 51.3
      comp=Z,2µm,29.8s
DUG   Dugway, Tooele  72.26 327  IAmb   IAmb    07 41 02.9
      comp=Z,30nm,1.4s
R11B  Troy Canyon, C  72.35 324  IAmb   IAmb    07 41 03.9
      comp=Z,30nm,1.6s
PD31  Pinedale Array  72.69 331         P       07 40 58.9 +1.2
PDAR  Pinedale Array  72.69 331  P      P       07 40 57.4 -0.3
      comp=Z,2.2nm,1.2s,baz=153,slow=1.7,SNR=7.4
PDAR                             LR     LR      08 14 49.0
      comp=Z,171nm,20.0s,baz=108,slow=37
      comp=Z,2.2nm,1.2s
DSP   Deep Springs    72.98 322  IAmb   IAmb    07 41 07.4
      comp=Z,30nm,1.5s
EPLO  Experimental L  73.13 345  IAmb   IAmb    07 41 10.0
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      comp=Z,18nm,1.0s
HVU   Hansel Valley   73.44 329  IAmb   IAmb    07 41 09.1
      comp=Z,52nm,1.8s
PPT2  Papeete2        73.69 257 eP      P       07 41 06.5 +2.5
      comp=Z,65nm,23.2s
PPT2                            eS      S       07 50 36.3 +0.7
      comp=Z,554nm,25.0s
PPT2                            eSS     SS      07 55 18.2 -0.7
      comp=Z,78nm,22.5s
PPT2                            eLQ     LQ      08 00 33.5
      comp=Z,182nm,25.0s
PPT2                            eLR     LR      08 03 33.0
      comp=Z,1µm,24.8s
PPT2                            eLR     LR      08 03 38.6
      comp=Z,886nm,26.2s
PPT   Papeete         73.70 257  LR     LR      08 05 29.4
      comp=Z,461nm,18.5s,baz=104,slow=29
LOHW  Long Hollow     73.83 331  P      P       07 41 05.9 +1.6
LHV   Little Huntoon  73.90 323  IAmb   IAmb    07 41 13.6
      comp=Z,27nm,1.3s
ELK   Elko            73.91 326  LR     LR      08 13 34.8
      comp=Z,460nm,18.5s,baz=134,slow=36
NVAR  Mina Array Bea  73.91 323  P      P       07 41 06.6 +1.6
      comp=Z,0.7nm,0.3s,baz=213,slow=26,SNR=3.6
NVAR                             LR     LR      08 12 08.3
      comp=Z,185nm,18.4s,baz=114,slow=35
      comp=Z,0.7nm,0.3s
ULM   Lac du Bonnet   74.21 344  P      P       07 41 06.3 +0.2
      comp=Z,6.1nm,1.0s,baz=176,slow=5.7,SNR=3.0
ULM                              LR     LR      08 15 55.3
      comp=Z,497nm,20.2s,baz=139,slow=38
      comp=Z,6.1nm,1.0s
ULM   Lac du Bonnet   74.21 344  IAmb   IAmb    07 41 12.3
      comp=Z,75nm,2.0s
ULM   Lac du Bonnet   74.21 344 i P     P       07 41 05.7 -0.4
YNE   Yellowstone No  74.66 332  IAmb   IAmb    07 41 21.6
      comp=Z,35nm,1.0s
YHH   Holmes Hill     74.86 332         P       07 41 12.2 +1.7
YHL   Hebgen Lake     75.06 332  IAmb   IAmb    07 41 24.7
      comp=Z,26nm,1.2s
PAHR  Pah Rah Range   75.40 323  IAmb   IAmb    07 41 21.6
      comp=Z,30nm,1.2s
SCHQ  Schefferville   75.49   2  P      P       07 41 13.7 +0.2
      comp=Z,5.9nm,1.0s,baz=3.9,slow=2.6,SNR=2.4
SCHQ                             LR     LR      08 16 15.6
      comp=Z,244nm,19.4s,baz=194,slow=37
      comp=Z,5.9nm,1.0s
MFID  Camas Ranch     76.16 328  IAmb   IAmb    07 41 31.3
      comp=Z,33nm,1.4s
ORV   Oroville        76.49 322  IAmb   IAmb    07 41 28.4
      comp=Z,61nm,1.6s
EGMT  Eagleton        76.95 334  P      P       07 41 23.4 +1.4
EGMT                             IAmb   IAmb    07 41 33.8
      comp=Z,29nm,1.1s
VNDA  Vanda           77.13 190  P      P       07 41 24.4 +1.8
      comp=Z,2.0nm,0.7s,baz=138,slow=6.4,SNR=9.0
      comp=Z,2.0nm,0.7s
VNDA  Vanda           77.13 190  IAmb   IAmb    07 41 44.0
      comp=Z,35nm,2.0s
SYO   Syowa Base      77.70 160⇑ipP     pP      07 41 27.3  0.0
SYO   Syowa Base      77.70 160⇓esP     sP      07 41 29.2 +1.5
SYO   Syowa Base      77.70 160⇑ePcP    PcP     07 41 34.4 -1.6
YBH   Yreka Blue Hor  78.63 323  LR     LR      08 14 46.9
      comp=Z,15nm,20.1s,baz=112,slow=35
F10A  Beach Ranch, E  78.70 329  P      P       07 41 33.2 +1.3
J05D  Fort Rock, OR   78.86 325  IAmb   IAmb    07 42 11.8
      comp=Z,37nm,1.5s
TORD  Torodi Ar. Bea  78.86  71  P      P       07 41 32.5 -0.9
      comp=Z,27nm,0.8s,baz=294,slow=3.8,SNR=23
TORD                             LR     LR      08 16 15.6
      comp=Z,2µm,18.4s,baz=243,slow=36
      comp=Z,27nm,0.8s
TORD  Torodi Ar. Bea  78.86  71  P      P       07 41 32.3 -1.0
PINE  Pine Mountain   79.05 326  IAmb   IAmb    07 41 41.8
      comp=Z,30nm,1.4s
I05D  Terrebonne, OR  79.63 326  IAmb   IAmb    07 41 50.5
      comp=Z,29nm,1.2s
K02D  Willamette Mer  79.80 323  IAmb   IAmb    07 41 41.6
      comp=Z,62nm,1.9s
HAWA  Hanford         80.13 328  IAmb   IAmb    07 41 48.0
      comp=Z,59nm,1.8s
G05A  Wamic           80.23 326  IAmb   IAmb    07 41 56.2
      comp=Z,52nm,1.3s
NEW   Newport         80.32 331  LR     LR      08 21 18.8
      comp=Z,491nm,18.8s,baz=119,slow=39
WIN   Windhoek        80.44 110  P      P       07 41 42.7 +0.6
WIN   Windhoek        80.44 110  P      P       07 41 42.7 +0.6
WIN                              pmax   pmax
      comp=Z,71nm,1.4s
HOOD  Mount Hood Mea  80.46 326  IAmb   IAmb    07 41 54.2
      comp=Z,26nm,1.2s
C09A  Chrisman Ranch  80.52 330  IAmb   IAmb    07 41 49.1
      comp=Z,44nm,1.6s
EPH   Ephrata         80.83 329  IAmb   IAmb    07 41 52.0
      comp=Z,39nm,1.6s
LTY   Liberty         81.29 328  IAmb   IAmb    07 41 53.9
      comp=Z,50nm,1.7s
B08A  Colville Reser  81.42 330         P       07 41 47.1 +0.7
B08A                             IAmb   IAmb    07 41 49.0
      comp=Z,37nm,1.8s
FCC   Fort Churchill  81.65 348  IAmb   IAmb    07 41 58.2
      comp=Z,24nm,1.1s
RAR   Rarotonga       81.73 251  LR     LR      08 10 25.8
      comp=Z,291nm,19.7s,baz=116,slow=30
D05A  Enumclaw        81.90 328  IAmb   IAmb    07 42 00.9
      comp=Z,27nm,1.0s
TSUM  Tsumeb          81.95 107  LR     LR      08 16 42.2
      comp=Z,605nm,19.0s,baz=310,slow=35
TSUM  Tsumeb          81.95 107         P       07 41 50.3 +0.2
MDT   Midelt          82.76  51  LR     LR      08 19 29.4
      comp=Z,570nm,18.2s,baz=257,slow=36
PVAQ  Vaqueiros       82.98  46 eLR     LR      08 09 31.8
PVAQ                            i IAMs_20 IAMs_20 08 14 40.4
      comp=Z,670nm,22.0s
PARRA Arraiolos       83.54  44 etx     tx      07 42 06.5
PESTR Estremoz        83.86  45 eP      P       07 41 59.7 +0.4
PSARD Sardoal         83.89  44 eP      P       07 42 00.3 +0.8
PSARD                           etx     tx      07 42 08.9
PSARD                           i IAmb  IAmb    07 42 11.2
      comp=Z,64nm,1.9s
LLLB  Lillooet        84.17 330  IAmb   IAmb    07 42 11.8
      comp=Z,26nm,1.2s
PMRV  Marv??o         84.30  44 eP      P       07 42 02.0 +0.4
PMRV                            eLR     LR      08 09 36.9
PMRV                            i IAMs_20 IAMs_20 08 19 41.7
      comp=Z,489nm,18.0s
FRB   Frobisher Bay   84.37   1  LR     LR      08 19 23.2
      comp=Z,495nm,21.7s,baz=177,slow=36
PHPEN Phepeng         84.44 115 i P     P       07 42 01.3 -1.5
GRTLG Ghanzi          84.44 111 i P     P       07 42 03.5 +0.5
MTE   Manteigas       84.72  43         P       07 42 03.6 -0.2
MTE   Manteigas       84.72  43 eP      P       07 42 03.8  0.0
MTE                             i IAmb  IAmb    07 42 05.3
      comp=Z,54nm,1.3s
MTE                             eS      S       07 52 32.5 +0.5
MTE                             eLQ     LQ      08 05 08.6
MTE                             eLR     LR      08 12 27.7
MTE                             i IAMs_20 IAMs_20 08 20 09.1
      comp=Z,870nm,18.0s
KGCAE Kacgae          84.78 112         P       07 42 04.0 -0.7
KGCAE Kacgae          84.78 112 i P     P       07 42 05.7 +1.0
PGAV  Gavieira, Arco  85.12  42 eLR     LR      08 14 20.3
PGAV                            i IAMs_20 IAMs_20 08 18 26.0
      comp=Z,926nm,20.0s
BOSA  Boshof          85.33 119  P      P       07 42 07.4 +0.1
      comp=Z,12nm,1.0s,baz=206,slow=8.7,SNR=5.9
BOSA                             LR     LR      08 16 30.6
      comp=Z,815nm,20.4s,baz=232,slow=33
      comp=Z,12nm,1.0s
BOSA  Boshof          85.33 119  IAmb   IAmb    07 42 19.0
      comp=Z,20nm,1.0s
MAW   Mawson          85.43 164  P      P       07 42 08.1 +1.3
      comp=Z,13nm,1.1s,baz=225,slow=7.2,SNR=12
MAW                              LR     LR      08 20 40.2
      comp=Z,444nm,18.7s,baz=238,slow=36
      comp=Z,13nm,1.1s
MVO   Moncorvo        85.47  43 eP      P       07 42 08.5 +1.0
MVO                             i IAmb  IAmb    07 42 09.2
      comp=Z,39nm,1.2s
MVO                             etx     tx      07 42 16.5
MVO                             eS      S       07 52 43.8 +4.5
MVO                             eLQ     LQ      08 03 59.8
MVO                             eLR     LR      08 12 52.7
MVO                             i IAMs_20 IAMs_20 08 17 03.8
      comp=Z,789nm,20.0s
XAUDM Khaudum         85.52 108 i P     P       07 42 08.1 -0.3
PBRG  Braganca        85.99  42 eP      P       07 42 11.0 +0.9
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PBRG				*i* IAmb	IAmb	07 42 13.3	
	comp=Z,48nm,2.0s						
PBRG				*e*tx	tx	07 42 19.3	
TAM	**Tamanrasset**	**86.17**	**64**		**P**	**07 42 11.9**	**+0.4**
TAM	**Tamanrasset**	**86.17**	**64**	P	**P**	**07 42 11.9**	**+0.4**
TAM				pmax	pmax		
	comp=Z,41nm,0.9s						
ESDC	**Sonseca Array**	**86.68**	**45**	P	**P**	**07 42 13.1**	**-0.5**
	comp=Z,2.3nm,1.0s,baz=235,slow=4.6,SNR=6.3						
ESDC				LR	LR	08 16 43.2	
	comp=Z,633nm,21.8s,baz=236,slow=33						
	comp=Z,2.3nm,1.0s						
ESDC	**Sonseca Array**	**86.68**	**45**		**P**	**07 42 12.8**	**-0.7**
LBTB	**Lobatse**	**86.92**	**115**	LR	LR	08 16 59.7	
	comp=Z,699nm,20.5s,baz=240,slow=33						
BBB	**Bella Bella**	**88.17**	**329**	LR	LR	08 23 22.0	
	comp=Z,222nm,19.1s,baz=116,slow=37						
SFJD	**Kangerlussuaq**	**88.92**	**8**	LR	LR	08 23 46.8	
	comp=Z,173nm,18.8s,baz=205,slow=37						
KSANE	**Kasane**	**89.17**	**109**	*i* P	**P**	**07 42 25.5**	**-0.6**
BROLN	**Tlhalogang**	**89.85**	**112**	*i* P	**P**	**07 42 29.6**	**+0.4**
YKAW1	**Yellowknife Wh**	**89.97**	**341**	IAmb	IAmb	07 42 39.6	
	comp=Z,19nm,1.1s						
YKA	**Yellowknife Ar**	**90.02**	**341**	P	**P**	**07 42 29.6**	**+0.8**
	comp=Z,8.6nm,1.1s,baz=147,slow=3.9,SNR=23						
YKA				LR	LR	08 26 26.7	
	comp=Z,228nm,19.8s,baz=122,slow=38						
	comp=Z,8.6nm,1.1s						
YKAW3	**Yellowknife Wh**	**90.07**	**341**	IAmb	IAmb	07 42 39.2	
	comp=Z,20nm,1.1s						
DLBC	**Dease Lake**	**92.83**	**333**	LR	LR	08 27 49.7	
	comp=Z,298nm,18.5s,baz=114,slow=38						
URZ	**Urewera**	**93.31**	**227**	LR	LR	08 17 18.0	
	comp=Z,1μm,18.2s,baz=150,slow=31						
BORG	**Borgarnes**	**93.43**	**19**	LR	LR	08 21 40.9	
	comp=Z,222nm,20.0s,baz=214,slow=34						
BORG	**Borgarnes**	**93.43**	**19**	*i* P	**P**	**07 42 47.6**	**+3.1**
RAO	**Raoul Island**	**93.87**	**237**	LR	LR	08 16 31.2	
	comp=Z,301nm,20.6s,baz=94,slow=30						
KEST	**Kesra**	**94.39**	**54**	P	**P**	**07 42 48.9**	**-0.8**
	comp=Z,2.6nm,0.8s,baz=180,slow=6.1,SNR=1.9						
KEST				LR	LR	08 25 22.2	
	comp=Z,560nm,20.4s,baz=237,slow=36						
	comp=Z,2.6nm,0.8s						
KEST	**Kesra**	**94.39**	**54**	IAmb	IAmb	07 42 59.0	
	comp=Z,22nm,1.4s						
EKA	**Eskdalemuir Ar**	**95.05**	**32**	P	**P**	**07 42 52.0**	**-0.1**
	comp=Z,7.4nm,1.2s,baz=304,slow=12,SNR=3.9						
EKA				LR	LR	08 20 37.0	
	comp=Z,34nm,21.8s,baz=221,slow=32						
	comp=Z,7.4nm,1.2s						
RES	**Resolute Bay**	**96.59**	**354**	LR	LR	08 28 42.7	
	comp=Z,356nm,20.1s,baz=132,slow=37						
VAE	**Valguarnera**	**98.82**	**53**	LR	LR	08 30 13.4	
	comp=Z,985nm,18.0s,baz=324,slow=37						
DAVOX	**Davos/Dischmat**	**98.86**	**43**	LR	LR	08 26 14.6	
	comp=Z,365nm,20.4s,baz=240,slow=34						
INK	**Inuvik**	**99.76**	**340**	LR	LR	08 34 01.2	
	comp=Z,318nm,18.0s,baz=64,slow=39						
CLL	**Collm**	**102.30**	**40**	*e*P	**Pdif**	**07 43 28.0**	**+3.2**
CLL				*e*		07 54 06.0	
CLL				*e*S	**Sdif**	**07 55 14.0**	**+5.3**
CLL				MLR	MLR		
	comp=Z,700nm,20.4s						
DZM	**Mont Dzumac**	**109.65**	**236**	*e*PP	PP	07 48 22.6	-9.3
	comp=Z,49nm,25.3s						
DZM	**Mont Dzumac**	**109.65**	**236**	*e*SS	SS	08 03 50.5	-5.0
	comp=Z,189nm,23.6s						
DZM	**Mont Dzumac**	**109.65**	**236**	*e*LR	LR	08 20 12.5	
	comp=Z,633nm,24.9s						
TOKA	**Tokat**	**116.19**	**54**		**PKPdf**	**07 48 12.1**	**-1.1**
KLMR	**Klimovskoe**	**117.93**	**31**	*e*PKIKP	**PKPdf**	**07 48 15.6**	**-0.2**
KLMR				SP	SP	07 59 16.5	+2.9
KLMR				pmax	pmax		
	comp=Z,22nm,1.4s						
KIV	**Kislovodsk**	**120.99**	**51**	*i* PKIKP	**PKiKP**	**07 48 25.8**	**+3.3**
KIV				*e*PS	**PS**	**07 59 48.2**	**+4.3**
KIV				*e*SS	SS	08 06 30.9	+6.3
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KBZ	**Khabaz**	**121.14**	**51**	*i* PKIKP	**PKiKP**	**07 48 22.7**	**+0.1**
H11S2	**WAKE ISLAND Hy**	**126.00**	**278**	T	T	10 07 50.4	
	baz=103,slow=74,SNR=322						
H11S1	**WAKE ISLAND Hy**	**126.01**	**278**	T	T	10 07 44.6	
	baz=103,slow=74,SNR=88						
H11S3	**WAKE ISLAND Hy**	**126.02**	**278**	T	T	10 07 52.3	
	baz=103,slow=74,SNR=71						
H11N3	**WAKE ISLAND Hy**	**126.07**	**280**	T	T	10 07 51.3	
	baz=102,slow=75,SNR=61						
H11N2	**WAKE ISLAND Hy**	**126.09**	**280**	T	T	10 08 00.4	
	baz=102,slow=75,SNR=50						
H11N1	**WAKE ISLAND Hy**	**126.09**	**280**	T	T	10 07 42.7	
	baz=102,slow=75,SNR=46						
TIXI	**Tiksi**	**127.95**	**352**		**PKPdf**	**07 48 34.9**	**+0.2**
TIXI	**Tiksi**	**127.95**	**352**	*i* PKIKP	**PKPdf**	**07 48 34.6**	**-0.1**
ARTI	**Arti**	**128.57**	**33**	*i* PKIKP	**PKPdf**	**07 48 35.9**	**-0.5**
ARTI						07 50 41.6	
ARTI						07 55 46.7	
ARTI				SS	SS	08 07 57.5	-1.3
SEY	**Seymchan**	**128.82**	**336**	*i* PKIKP	**PKPdf**	**07 48 35.1**	**-1.5**
AS31	**Alice Springs**	**129.58**	**210**		**PKiKP**	**07 48 40.4**	**+0.2**
ASAR	**Alice Springs**	**129.58**	**210**	PKP	**PKPdf**	**07 48 38.9**	**-0.5**
	comp=Z,1.8nm,0.9s,baz=154,slow=2.7,SNR=14						
ASAR	**Alice Springs**	**129.58**	**210**		**PKPdf**	**07 48 38.3**	**-1.1**
NRIK	**Noril'sk**	**129.79**	**10**	PKP	**PKPdf**	**07 48 37.2**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=108,slow=1.3,SNR=2.1						
AB31	**Akbulak array**	**131.92**	**42**		**PKiKP**	**07 48 44.3**	**+0.4**
ABKAR	**Akbulak array**	**131.92**	**42**		**PKiKP**	**07 48 44.0**	**0.0**
WRA	**Warramunga Arr**	**132.52**	**213**	PKP	**PKPdf**	**07 48 44.3**	**-0.8**
	comp=Z,2.0nm,0.9s,baz=155,slow=1.4,SNR=7.8						
WRA	**Warramunga Arr**	**132.52**	**213**		**PKPdf**	**07 48 45.4**	**+0.4**
WRAB	**Tennant Creek**	**132.52**	**213**	*i* PKIKP	**PKPdf**	**07 48 44.4**	**-0.7**
BORK	**Borovoye**	**136.25**	**33**	*i* PKIKP	**PKPdf**	**07 48 50.6**	**-0.3**
BVAR	**Borovoye Array**	**136.29**	**33**	PKP	**PKPdf**	**07 48 49.7**	**-1.4**
	comp=Z,3.0nm,0.9s,baz=270,slow=3.0,SNR=8.5						
YAK	**Yakutsk**	**136.50**	**346**	*i* PKIKP	**PKPdf**	**07 48 51.5**	**+0.4**
KURK	**Kurchatov**	**141.78**	**31**	PKPdf	**PKPdf**	**07 49 00.0**	**-1.1**
KURK	**Kurchatov**	**141.78**	**31**		pPKPdf	07 49 03.1	+0.7
KURK	**Kurchatov**	**141.78**	**31**	*i* PKIKP	**PKPdf**	**07 49 01.7**	**+0.6**
KURBB	**Kurchatov Arra**	**141.80**	**32**	PKhKP	PKPpre	07 48 56.5	
	comp=Z,1.3nm,0.5s,baz=314,slow=2.4,SNR=8.4						
KURBB				PKP	pPKPdf	07 49 03.1	+0.6
	comp=Z,3.8nm,0.6s,baz=304,slow=2.1,SNR=7.0						
ZALV	**Zalesovo Beam**	**142.14**	**23**	PKhKP	PKPpre	07 48 57.4	
	comp=Z,2.0nm,0.8s,baz=322,slow=4.1,SNR=8.8						
ZALV				PKP	**PKPdf**	**07 49 03.0**	**+1.3**
	comp=Z,7.8nm,0.8s,baz=310,slow=2.5,SNR=15						
ZALV	**Zalesovo Beam**	**142.14**	**23**	PKIKP	**PKPdf**	**07 49 03.0**	**+1.3**
AAK	**Ala-Archa**	**143.78**	**45**		**PKPdf**	**07 49 04.5**	**-0.7**
AAK	**Ala-Archa**	**143.78**	**45**	*i* PKIKP	**PKPdf**	**07 49 04.2**	**-1.0**
ZEA	**Zeya**	**144.40**	**342**	*e*PKIKP	**PKiKP**	**07 49 14.7**	**+5.4**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BOOM	**Boomskoye usch**	**144.81**	**45**		**PKPdf**	**07 49 06.9**	**-0.1**
BOOM	**Boomskoye usch**	**144.81**	**45**	PKIKP	**PKPdf**	**07 49 06.9**	**-0.1**
MAKZ	**Makanchi**	**146.00**	**34**		**PKPdf**	**07 49 08.8**	**+0.1**
MAKZ	**Makanchi**	**146.00**	**34**	PKP2	**PKPdf**	**07 49 08.8**	**+0.1**
KSH	**Kashi**	**146.10**	**49**	PKPbc	**PKPab**	**07 49 11.3**	**+0.6**
KSH				LR	LR		
	comp=Z,390nm,19.2s						
KSH				LR	LR		
	comp=Z,320nm,17.9s						
KSH				LR	LR		
	comp=Z,310nm,21.3s						
MK31	**Makanchi Array**	**146.17**	**34**	*i* PKP2	**PKPbc**	**07 49 09.5**	**-0.5**
MKAR	**Makanchi Array**	**146.17**	**34**	PKPbc	**PKPbc**	**07 49 09.9**	**-0.1**
	comp=Z,20nm,0.8s,baz=314,slow=3.2,SNR=77						
DGZ	**Jazzator, Alta**	**146.47**	**26**	*i* PKP2	**PKPab**	**07 49 11.4**	**-0.4**
HEH	**HeiHe**	**147.33**	**338**	PKPbc	**PKPdf**	**07 49 10.9**	**+0.1**
MOY	**Mondy**	**148.63**	**10**	*e*PKP2	**PKiKP**	**07 49 18.5**	**+0.3**
MOY				pmax	pmax		
	comp=Z,69nm,3.0s						
KNGR	**Kungurtug, Tuv**	**148.96**	**14**	*i* PKIKP	**PKPdf**	**07 49 12.8**	**-0.8**
USRK	**Ussuriysk Ar.**	**150.01**	**326**	PKPbc	**PKiKP**	**07 49 21.6**	**+0.5**
	comp=Z,12nm,0.9s,baz=64,slow=2.6,SNR=8.6						
HILR	**Hailar Array B**	**150.17**	**346**	PKPbc	**PKPbc**	**07 49 21.0**	**+0.5**
	comp=Z,16nm,0.8s,baz=1.0,slow=2.9,SNR=4.4						
HILR				PKPab	**pPKPab**	**07 49 28.2**	**+0.4**
	comp=Z,29nm,0.8s,baz=101,slow=2.3,SNR=17						
ZAK	**Zakamensk**	**150.20**	**8**	*e*PKIKP	**PKPbc**	**07 49 20.4**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,29nm,1.7s						
MJAR	**Matsushiro Arr**	**150.27**	**308**	PKPbc	**PKiKP**	**07 49 22.5**	**+0.6**
	comp=Z,4.7nm,0.8s,baz=113,slow=1.4,SNR=8.7						
MJAR	**Matsushiro Arr**	**150.27**	**308**		**PKiKP**	**07 49 22.8**	**+0.8**
HYB	**Hyderabad**	**150.91**	**92**	*e*PKiKP	**PKiKP**	**07 49 23.7**	**-0.1**
WMQ	**Urumqi**	**150.99**	**33**	*e*PKPbc	**PKiKP**	**07 49 24.1**	**+0.8**
WMQ				LR	LR		
	comp=Z,250nm,18.1s						
BNX	**BinXian**	**151.03**	**333**	⇑PKPbc	**PKPbc**	**07 49 21.6**	**-1.0**
KAPI	**Kappang**	**152.24**	**203**	PKPbc	**PKPbc**	**07 49 25.8**	**-0.5**
KAPI	**Kappang**	**152.24**	**203**	PKIKP	**PKPbc**	**07 49 25.8**	**-0.5**
SONM	**Songino Array**	**153.03**	**4**	PKP	**PKPdf**	**07 49 20.3**	**+0.3**
	comp=Z,2.4nm,1.0s,baz=17,slow=1.5,SNR=8.3						
SONM				PKPbc	**PKPbc**	**07 49 26.6**	**-0.6**
	comp=Z,2.1nm,0.5s,baz=329,slow=0.6,SNR=12						
SONM				PKPab	**PKPab**	**07 49 36.3**	**-2.2**
	comp=Z,6.9nm,1.0s,baz=318,slow=1.7,SNR=10						
SONM	**Songino Array**	**153.03**	**4**		**PKPbc**	**07 49 26.9**	**-0.3**
EVN	**Everest**	**158.50**	**67**	PKPdf	**PKPdf**	**07 49 28.4**	**-0.1**
EVN					**PKPab**	**07 50 01.8**	**-1.6**
GTA	**Gaotai**	**159.87**	**21**	*e*PKP	**PKPdf**	**07 49 30.3**	**+1.2**
GTA				PKPab	**PKPab**	**07 50 08.9**	**+0.7**
HHC	**Hu-ho-hao-te**	**160.00**	**355**	*e*PKP	**PKPdf**	**07 49 25.4**	**-3.8**
GOMU	**GeErMu**	**160.26**	**36**	PKP	**PKPdf**	**07 49 30.2**	**+0.2**
GOMU				PP	**PP**	**07 53 53.4**	**+1.5**
GOMU				SS	SS	08 14 05.7	+2.8
BTO	**Baotou**	**160.33**	**358**	*e*PKP	**PKPdf**	**07 49 24.0**	**-5.6**
BTO				PP	**PP**	**07 53 51.8**	**+0.6**
TIA	**Tai'an**	**163.22**	**337**	PKP	**PKPdf**	**07 49 34.4**	**+1.8**
LZH	**Lanzhou**	**164.16**	**16**	*e*PKP	**PKPdf**	**07 49 33.5**	**-0.1**
LZH				pPKP	sPKPdf	07 49 41.3	+5.8
LZH				PKPab	**PKPab**	**07 50 25.3**	**-1.7**
LZDM	**Lanzhou Array**	**164.25**	**17**	PKP	**PKPdf**	**07 49 34.2**	**+0.2**
	comp=Z,1.6nm,0.3s,baz=348,slow=6.2,SNR=1.0						
LZDM				PKPab	**PKPab**	**07 50 27.1**	**-0.5**
	comp=Z,1.8nm,0.3s,baz=306,slow=5.0,SNR=1.7						
NJ2	**Nanjing**	**165.90**	**324**	*e*PKP	**PKPdf**	**07 49 34.7**	**-0.3**
LYN	**LuoYang**	**166.08**	**349**	PKP	**PKPab**	**07 50 36.2**	**+1.0**
XAN	**Xi'an**	**166.90**	**1**	PKP	**PKPdf**	**07 49 37.1**	**+1.3**
XAN				PKPab	**PKPab**	**07 50 36.7**	**-2.2**
CD2	**Chengdu**	**168.91**	**25**	PKP	**PKPdf**	**07 49 37.0**	**-0.3**
TNCH	**TengChong**	**169.38**	**65**	PKP	**PKPdf**	**07 49 35.3**	**-2.6**
TNCH				PP	**PP**	**07 54 41.3**	**+0.9**
TNCH				SS	SS	08 15 31.9	-6.0
CMAR	**Chiang Mai Arr**	**170.08**	**102**	PKP	**PKPdf**	**07 49 39.5**	**+1.2**
	comp=Z,1.2nm,0.3s,baz=258,slow=1.2,SNR=5.2						
CMAR				PKPab	**PKPab**	**07 50 54.8**	**+1.0**
	comp=Z,1.1nm,0.3s,baz=259,slow=5.0,SNR=6.2						
PZH	**PanZhiHua**	**171.21**	**49**	PKP	**PKPdf**	**07 49 38.4**	**-0.5**
QIZ	**Qiongzhong**	**178.04**	**200**	PKP	**PKPdf**	**07 49 40.4**	**-0.6**
QIZ				PP	**PP**	**07 55 23.0**	**+2.3**
QIZ				SS	SS	08 17 01.4	+3.1
QIZ				AMB	AMB		
	comp=Z,750nm,5.1s						

IDC 03 07:57:16.0±300.0,**65°.05N**×**24°.57E**,**h0^{km}**,**Error ellipse: s-maj=112.4km s-min=84.0km az=1.0,Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I37NO	**I37NO**	**4.67**	**333**	I	I	08 26 43.2	
	baz=144,slow=330,SNR=0.9						
I43RU	**DUBNA INFRASON**	**10.36**	**138**	I	I	08 53 40.0	
	baz=325,slow=325,SNR=2.3						
I31KZ	**AKTYUBINSK INF**	**22.73**	**114**	I	I	10 18 20.0	
	baz=321,slow=328,SNR=0.3						

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*DSN **03** 08:01:52.6±1.1,27°.69N×54°.84E,h10^{km},ML3.1/11,Error ellipse: s-maj=13.4km s-min=5.7km az=19.0*
*TEH **03** 08:01:56.6,27°.21N×54°.92E,h14^{km}±22^{km}*
*OMAN **03** 08:01:57.7±0.7,27°.23N×54°.85E,h10^{km},ml3.3/16,Error ellipse: s-maj=8.0km s-min=4.5km az=18.0*
ISC 03 08:01:58.1±0.9,**27°.19N**±0°.05×**54°.90E**±0°.04,**h10^{km}**,**n48**,σ**1^{s}.84**/53,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAR1	**LAR**	**0.67**	**316**	Pg	**Pg**	**08 02 09.7**	**-1.4**
BNDS	**Bandar-Abbas**	**1.15**	**79**	Pg	**Pn**	**08 02 19.3**	**-1.2**
GENO	**Geno**	**1.15**	**79**	Pg	**Pn**	**08 02 19.8**	**-0.6**
IBND	**Bandar-abas**	**1.48**	**80**	Pg	**Pg**	**08 02 24.9**	**-1.7**
LMD1	**Lamerd**	**1.55**	**276**	Pg	**Pg**	**08 02 27.5**	**-0.4**
SHME	**Shamm**	**1.59**	**135**	Pn	**Pb**	**08 02 26.4**	**-1.1**
	SNR=9.1						
SHME				Sg	**Sg**	**08 02 51.3**	**+2.1**
SHME	**Shamm**	**1.59**	**135**	*e*P	**Pb**	**08 02 26.4**	**-1.1**
	SNR=9.0						
SHME				S	**Sg**	**08 02 52.6**	**+3.4**
JHRM	**Jahrom**	**1.76**	**318**	Pg	**Pb**	**08 02 29.6**	**-1.0**
BANOM	**Banah**	**1.78**	**135**	Pn	**Pb**	**08 02 29.2**	**-1.6**
BANOM				Sg	**Sg**	**08 02 59.1**	**+3.8**
BANOM	**Banah**	**1.78**	**135**	*e*P	**Pb**	**08 02 29.4**	**-1.4**
	SNR=55						
MASF	**Masafi**	**2.13**	**148**	Pn	**Pb**	**08 02 35.0**	**-1.9**
	SNR=9.7						
MASF				Sn	**Sb**	**08 03 02.9**	**-0.6**
MSFE	**Esma-Masafi**	**2.15**	**148**	*e*P	**Pb**	**08 02 35.1**	**-2.0**
	SNR=9.5						
MDH	**Madha**	**2.26**	**146**	Pn	**Pb**	**08 02 36.5**	**-2.6**
MDH	**Madha**	**2.26**	**146**	P	**Pb**	**08 02 36.4**	**-2.6**
NAZ	**Nazwa, Dubai**	**2.30**	**163**	P	**Pb**	**08 02 36.8**	**-2.9**
	SNR=7.1						
NAZ	**Nazwa, Dubai**	**2.30**	**163**	P	**Pb**	**08 02 38.0**	**-1.7**
UOSS	**Minazif**	**2.52**	**152**	Pn	**Pb**	**08 02 40.1**	**-3.5**
UOSS	**Minazif**	**2.52**	**152**	Pn	**Pn**	**08 02 39.9**	**+0.7**
HATD	**Hatta, Dubai**	**2.60**	**155**	P	**Pb**	**08 02 41.4**	**-3.4**
	SNR=18						
HATD	**Hatta, Dubai**	**2.60**	**155**	*i* P	**Pb**	**08 02 41.6**	**-3.2**
	SNR=18						
ASHO	**Ashiyiah**	**2.71**	**157**	P	**Pb**	**08 02 43.1**	**-3.6**
	SNR=91						
ASHO	**Ashiyiah**	**2.71**	**157**	*i* P	**Pb**	**08 02 42.9**	**-3.7**
	SNR=91						
ALNE	**Al Ain**	**3.21**	**166**	P	**Pn**	**08 02 50.1**	**+1.4**
	SNR=6.0						
ALNE	**Al Ain**	**3.21**	**166**	*i* P	**Pn**	**08 02 50.1**	**+1.4**
	SNR=6.2						
SOHO	**SOHO**	**3.38**	**154**	Pn	**Pn**	**08 02 51.2**	**+0.2**
SOHO	**SOHO**	**3.38**	**154**	P	**Pn**	**08 02 51.3**	**+0.4**
KHGB	**Koh Gabri**	**3.46**	**23**	Pn	**Pn**	**08 02 53.0**	**+0.7**
CHMN	**Cheshme madani**	**3.53**	**40**	Pn	**Pn**	**08 02 53.9**	**+0.5**
GHWR	**Ruwais**	**3.70**	**210**	Pn	**Pn**	**08 02 55.4**	**+0.1**
ARQ	**Araqi**	**4.11**	**159**	P	**Pn**	**08 03 02.2**	**+1.2**
	SNR=16						
IMEH	**Mehriz**	**4.19**	**357**	Pn	**Pn**	**08 03 03.1**	**+0.8**
HOQ	**Hoqain**	**4.20**	**148**	Pn	**Pn**	**08 03 03.2**	**+0.9**
HOQ	**Hoqain**	**4.20**	**148**	Pn	**Pn**	**08 03 03.2**	**+0.9**
MZR	**Muzera**	**4.36**	**197**	Pn	**Pn**	**08 03 05.3**	**+0.8**
IBAF	**Bafgh**	**4.42**	**7**	Pn	**Pn**	**08 03 05.5**	**0.0**
UMZA	**Um Al Zommool**	**4.46**	**177**	Pn	**Pn**	**08 03 07.2**	**+1.3**
UMZA				Sn	**Sn**	**08 04 00.8**	**+2.9**
BSY	**Bisya**	**4.89**	**154**	Pn	**Pn**	**08 03 13.5**	**+1.7**
SMDO	**Samad**	**5.01**	**145**	Pn	**Pn**	**08 03 14.8**	**+1.4**
IRAM	**Ramesheh**	**5.10**	**335**	Pn	**Pn**	**08 03 15.8**	**+1.0**
CHBR	**Chabahar**	**5.25**	**106**	Pn	**Pn**	**08 03 16.5**	**-0.1**
JMDO	**Jabal Madar**	**5.61**	**148**	Pn	**Pn**	**08 03 23.2**	**+1.5**
NGCH	**Negor - Chabah**	**5.89**	**107**	Pn	**Pn**	**08 03 25.4**	**0.0**
SRVN	**Saravan**	**6.67**	**86**	Pn	**Pn**	**08 03 37.5**	**+1.2**
DQM	**DQM**	**7.62**	**161**	Pn	**Pn**	**08 03 48.9**	**-0.3**
DOK	**Doka**	**8.56**	**185**	Pn	**Pn**	**08 04 01.9**	**-0.3**
SHAO	**Shalim**	**9.15**	**176**	P	**Pn**	**08 04 09.9**	**-0.3**
	SNR=11						
DMTO	**DMTO**	**9.43**	**180**	Pn	**Pn**	**08 04 13.3**	**-0.8**
ABTO	**Aybut**	**9.90**	**189**	Pn	**Pn**	**08 04 19.7**	**-0.9**

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*IDC **03** 08:23:04.2±1.2,1°.06N×125°.87E,h0^{km},mb3.8/7,mbtmp3.8/8,ML3.5/1,Error ellipse: s-maj=85.0km s-min=16.6km az=64.0*
*DJA **03** 08:23:07.2±0.3,1°N±3°×12°6E±°,h10^{km},M3.9/9,MLv3.9/9*
ISC 03 08:23:09.2±0.8,**1°.39N**±0°.06×**126°.08E**±0°.06,**h35^{km}**,**n15**,σ**2^{s}.60**/16,**mb3.9**/7,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**1.24**	**272**	P	**Pn**	**08 23 29.3**	**-0.8**
TNTI	**Ternate**	**1.43**	**116**	P	**Pn**	**08 23 33.4**	**+0.8**
GAMI	**Galela, Maluku**	**1.76**	**75**	P	**Pn**	**08 23 38.3**	**+1.1**
SGSI	**Sangihe**	**2.34**	**346**	P	**Pn**	**08 23 43.2**	**-2.0**
SGSI				S	**Sn**	**08 24 17.6**	**+4.8**
GTOI	**Gorontalo**	**3.16**	**256**	P	**Pn**	**08 23 57.4**	**+0.9**
SANI	**Sanana**	**3.42**	**182**	P	**Pn**	**08 24 02.8**	**+2.8**
LUWI	**Luwuk**	**4.10**	**234**	P	**Pn**	**08 24 11.3**	**+1.9**
FITZ	**Fitzroy Crossi**	**19.37**	**181**	P	**P**	**08 27 27.3**	**-4.8**
	0.1nm,0.3s,baz=14,slow=4.2,SNR=2.6						
	1.1nm,0.6s						
WRA	**Warramunga Arr**	**22.70**	**160**	P	**P**	**08 28 04.9**	**-3.1**
	0.6nm,0.4s,baz=337,slow=11,SNR=16						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**26.05**	**163**	P	**P**	**08 28 37.5**	**-1.9**
	0.7nm,0.6s,baz=348,slow=8.2,SNR=14						
	0.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**31.57**	**304**	P	**P**	**08 29 28.8**	**+0.2**
	0.8nm,0.3s,baz=119,slow=9.2,SNR=2.1						
	0.8nm,0.3s						
STKA	**Stephens Creek**	**36.21**	**157**	P	**P**	**08 30 07.0**	**-1.7**
	4.3nm,1.1s,baz=340,slow=11,SNR=3.6						
	4.3nm,1.1s						
MKAR	**Makanchi Array**	**59.11**	**326**	P	**P**	**08 33 07.0**	**+0.8**
	0.6nm,0.6s,baz=116,slow=8.2,SNR=4.0						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**63.36**	**328**	P	**P**	**08 33 36.8**	**+1.9**
	0.6nm,0.3s,baz=123,slow=6.0,SNR=6.3						
	0.6nm,0.3s						
BVAR	**Borovoye Array**	**68.92**	**328**	P	**P**	**08 34 12.3**	**+1.8**
	0.7nm,0.7s,baz=127,slow=6.0,SNR=2.6						
	0.7nm,0.7s						

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*SJA **03** 08:24:46.3±0.7,20°.90S×70°.84W,h23^{km}±2^{km},ML3.4,MW3.8*
*GUC **03** 08:24:49.2±0.9,20°.84S×70°.83W,h25^{km}±5^{km},ML3.3*
ISC 03 08:24:48.8±1.4,**20°.87S**±0°.02×**70°.74W**±0°.05,**h17^{km}**±9^{km},**n34**,σ**1^{s}.32**/65,**3C-6D**,**Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PATCX	**Punta Patache**	**0.55**	**85** ⇓	*e*P	**Pb**	**08 25 00.3**	**+0.2**
PATCX				*e*S	**Sb**	**08 25 09.1**	**+1.3**
PATCX				IAML		08 25 09.7	
	comp=N,2μm,0.3s						
PATCX	**Punta Patache**	**0.55**	**85**	*e*P	**Pg**	**08 24 59.6**	**-0.3**
PATCX				IAML		08 25 10.7	
	comp=Z,677nm,0.5s						
TA01	**Diego Aracena**	**0.61**	**60** ⇓	*e*P	**Pb**	**08 25 00.6**	**-0.4**
TA01				*e*S	**Sg**	**08 25 09.2**	**+0.3**
TA01	**Diego Aracena**	**0.61**	**60**	*e*P	**Pg**	**08 25 00.4**	**-0.4**
TA01				*e*S	**Sb**	**08 25 10.3**	**+1.0**
TA01				IAML		08 25 11.6	
	comp=Z,888nm,0.3s						
TA02	**Huaiquique**	**0.83**	**44** ⇑	*e*P	**Pb**	**08 25 04.5**	**-0.2**
TA02				*e*S	**Sg**	**08 25 15.3**	**-0.6**
TA02				IAML		08 25 19.4	
	comp=N,2μm,0.3s						
TA02	**Huaiquique**	**0.83**	**44**	*e*P	**Pg**	**08 25 04.1**	**-0.9**
TA02				*e*S	**Sn**	**08 25 17.5**	**0.0**
TA02				IAML		08 25 19.6	
	comp=Z,886nm,0.3s						
PB02	**IPOC Station P**	**0.91**	**120** ⇓	*e*P	**Pn**	**08 25 06.5**	**-0.5**
PB02				*e*S	**Sn**	**08 25 19.9**	**+0.2**
PB02	**IPOC Station P**	**0.91**	**120**	*e*P	**Pn**	**08 25 06.4**	**-0.5**
PB02				*e*S	**Sn**	**08 25 20.8**	**+1.1**
PB02				IAML		08 25 21.9	
	comp=Z,4μm,0.4s						
HMBC	**Humberstone**	**0.99**	**54** ⇓	*e*P	**Pb**	**08 25 06.9**	**-0.7**
HMBC				*e*S	**Sb**	**08 25 20.8**	**+0.2**
HMBC				IAML		08 25 24.7	
	comp=E,1μm,0.4s						
HMBC				IAML		08 25 26.8	
	comp=N,1μm,0.4s						
HMBC	**Humberstone**	**0.99**	**54**	*e*P	**Pb**	**08 25 06.9**	**-0.7**
HMBC				*e*S	**Sn**	**08 25 22.6**	**+0.8**
HMBC				IAML		08 25 26.1	
	comp=Z,974nm,0.5s						
PX03	**IPOC Station P**	**1.14**	**66**	*e*P	**Pn**	**08 25 09.3**	**-0.8**
PX03				*i* S	**Sb**	**08 25 25.1**	**+0.4**
PX03				IAML		08 25 27.5	
	comp=N,875nm,0.5s						
PB07	**IPOC Station P**	**1.17**	**137**	*e*P	**Pb**	**08 25 10.2**	**-0.4**
PB07				*e*S	**Sn**	**08 25 26.5**	**+0.3**
PB07				IAML		08 25 30.4	
	comp=N,563nm,0.6s						
PB07	**IPOC Station P**	**1.17**	**137**	*e*P	**Pn**	**08 25 09.8**	**-0.8**
PB07				*e*S	**Sn**	**08 25 27.1**	**+1.0**
PB07				IAML		08 25 35.5	
	comp=Z,544nm,0.3s						
PB01	**IPOC Station P**	**1.19**	**98** ⇓	*e*P	**Pb**	**08 25 10.7**	**-0.2**
PB01				*e*S	**Sg**	**08 25 27.3**	**0.0**
PB01	**IPOC Station P**	**1.19**	**98**	*e*P	**Pb**	**08 25 10.7**	**-0.2**
PB01				*e*S	**Sg**	**08 25 28.1**	**+0.8**
PB01				IAML		08 25 28.6	
	comp=Z,793nm,0.7s						
PB03	**IPOC Station P**	**1.49**	**142** ⇓	*e*P	**Pn**	**08 25 14.6**	**-0.3**
PB03				*e*S	**Sb**	**08 25 35.3**	**+0.4**
PB03				IAML		08 25 42.3	
	comp=N,318nm,0.4s						
PB03	**IPOC Station P**	**1.49**	**142**	*e*P	**Pn**	**08 25 14.7**	**-0.3**
PB03				*e*S	**Sg**	**08 25 39.1**	**+2.1**
PB03				IAML		08 25 42.3	
	comp=Z,419nm,0.4s						
PB11	**IPOC Station P**	**1.50**	**43** ⇑	*e*P	**Pn**	**08 25 14.4**	**-0.8**
PB11				*e*S	**Sn**	**08 25 34.2**	**-0.2**
PB11				IAML		08 25 39.9	
	comp=N,1μm,0.5s						
PB11	**IPOC Station P**	**1.50**	**43**	*e*P	**Pn**	**08 25 14.8**	**-0.3**
PB11				*e*S	**Sg**	**08 25 41.3**	**+3.9**
PB11				IAML		08 25 42.4	
	comp=Z,481nm,0.5s						
PB08	**IPOC Station P**	**1.66**	**64**	*e*P	**Pb**	**08 25 18.6**	**-0.5**
PB08				*e*S	**Sb**	**08 25 40.5**	**+0.7**
PB08				IAML		08 25 46.0	
	comp=Z,878nm,0.8s						
PB08	**IPOC Station P**	**1.66**	**64**	*e*P	**Pn**	**08 25 17.8**	**+0.4**
PB08				*e*S	**Sg**	**08 25 41.5**	**-0.9**
PB08				IAML		08 25 45.1	
	comp=Z,626nm,0.5s						
PB09	**IPOC Station P**	**1.68**	**124** ⇑	*e*P	**Pb**	**08 25 19.0**	**-0.3**
PB09				*e*S	**Sb**	**08 25 41.3**	**+1.1**
PB09				IAML		08 25 47.0	
	comp=E,506nm,0.3s						
PB09	**IPOC Station P**	**1.68**	**124**	*e*P	**Pn**	**08 25 13.5**	**-4.0**
PB09				*e*S	**Sn**	**08 25 36.0**	**-2.7**
PB09				IAML		08 25 45.6	
	comp=Z,537nm,0.5s						
GO01	**Chusmiza**	**1.88**	**51**	*e*P	**Pn**	**08 25 21.2**	**+0.6**
GO01				*e*S	**Sb**	**08 25 46.0**	**-0.5**
GO01				IAML		08 25 51.5	
	comp=N,786nm,0.4s						
GO01	**Chusmiza**	**1.88**	**51**	*e*P	**Pn**	**08 25 21.3**	**+0.7**
GO01				*e*S	**Sg**	**08 25 48.7**	**-0.9**
GO01				IAML		08 25 51.1	
	comp=Z,388nm,0.6s						
PB05	**IPOC Station P**	**2.03**	**166**	*e*P	**Pn**	**08 25 21.0**	**-1.4**
PB05				*e*S	**Sn**	**08 25 47.1**	**-0.4**
PB05				IAML		08 25 57.3	
	comp=Z,131nm,0.6s						
PB06	**IPOC Station P**	**2.12**	**149**	*e*P	**Pn**	**08 25 22.4**	**-1.3**
PB06				*e*S	**Sb**	**08 25 52.0**	**-1.1**
PB06				IAML		08 25 59.5	
	comp=E,312nm,0.4s						
PB06	**IPOC Station P**	**2.12**	**149**	*e*P	**Pn**	**08 25 23.2**	**-0.5**
PB06				*e*S	**Sn**	**08 25 47.4**	**-2.3**
PB06				IAML		08 26 03.7	
	comp=Z,264nm,0.4s						
PB12	**IPOC Station P**	**2.28**	**10**	*e*P	**Pn**	**08 25 26.6**	**+0.8**
PB12				*e*S	**Sn**	**08 25 54.9**	**+1.3**
PB12				IAML		08 26 05.7	
	comp=Z,170nm,0.5s						
AP01	**Chacalluta**	**2.52**	**9**	*e*P	**Pb**	**08 25 33.8**	**+0.3**
AP01				*e*S	**Sb**	**08 26 03.9**	**-0.3**
AP01				IAML		08 26 15.2	
	comp=Z,322nm,0.8s						
PB10	**IPOC Station P**	**2.63**	**176**	*e*P	**Pn**	**08 25 28.6**	**-1.9**
PB16	**IPOC Station P**	**2.78**	**25**	*e*S	**Sb**	**08 26 09.5**	**-2.9**
PB16				IAML		08 26 17.7	
	comp=Z,83nm,1.0s						
AF01	**San Pedro de A**	**3.15**	**131**	*e*P	**Pg**	**08 25 50.6**	**+1.3**
AF01				*e*S	**Sb**	**08 26 23.1**	**+0.2**
GO02	**Mina Guanaco**	**4.40**	**166**	*e*P	**Pn**	**08 25 54.6**	**-0.5**
GO02				*e*S	**Sn**	**08 26 50.5**	**+4.3**
GO02				IAML		08 27 15.1	
	comp=Z,58nm,0.6s						

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*SOME **03** 08:38:50.1,39°.98N×81°.70E,h10^{km}*
NNC 03 08:38:53.2±6.0,**40°.06N**×**81°.95E**,**h0^{km}**,**mb3.7**,**mpv3.4**,**6C-2D**,**Error ellipse: s-maj=45.4km s-min=37.4km az=23.0,Southern Xinjiang**

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

SHLS	**Shalkode**	**3.61**	**330**	Pg	Pb	08 39 54.3	-3.7
	7.8nm,0.2s						
SHLS				Lg	Lg	08 40 40.5	
	37nm,0.5s						
SHLS	**Shalkode**	**3.61**	**330**	*e*P	Pb	08 39 54.3	-3.7
	7.8nm,0.2s						
SHLS				*e*S	Sb	08 40 40.5	-1.9
	37nm,0.5s						
PDGK	**Podgornoye**	**3.75**	**331**	⇑Pn	Pn	08 39 55.8	+3.4
	2.0nm,0.3s						
PDGK				⇑Sn	Sn	08 40 40.8	+3.5
	6.9nm,0.6s						
PDGK				⇓Lg	Lg	08 40 56.1	
	12nm,0.6s						
UZB	**Uzynbulak**	**3.78**	**326**	Pg	Pb	08 39 59.7	-1.2
	3.0nm,0.3s						
UZB				Lg	Lg	08 40 50.0	
	6.6nm,0.2s						
UZB	**Uzynbulak**	**3.78**	**326**	*e*P	Pb	08 39 59.7	-1.2
	3.0nm,0.3s						
UZB				*e*S	Sb	08 40 50.0	+2.6
	6.6nm,0.2s						
SATY	**Saty**	**4.00**	**320**	Pg	Pb	08 40 03.8	-0.9
	1.6nm,0.2s						
SATY				Lg	Lg	08 40 57.0	
	12nm,0.1s						
MK31	**Makanchi Array**	**6.73**	**2**	Pn	Pn	08 40 32.2	-1.1
	0.4nm,0.3s,baz=194,slow=12,SNR=16						
MK31				⇓Sn	Sn	08 41 52.1	+1.4
	0.8nm,0.6s,baz=204,slow=31,SNR=3.5						
MK31				⇑Lg	Lg	08 42 30.4	
	3.2nm,1.0s,baz=174,slow=28						
MAKZ	**Makanchi**	**6.74**	**0**	⇑Pn	Pn	08 40 34.1	+0.6
	1.3nm,0.4s						
MAKZ				⇑Sn	Sn	08 41 53.4	+2.4
	0.9nm,0.4s						
MAKZ				⇑Lg	Lg	08 42 28.9	
	1.9nm,0.9s						

NNC 03 08:45:51.3±2.1**,43°.77N×89°.06E,h0^{km},mb3.6,mpv3.2, 9C-4D,Error ellipse: s-maj=17.3km s-min=15.6km az=36.0,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**5.65**	**305**	⇓Pn	Pn	08 47 17.1	+0.5
	0.3nm,0.2s,baz=112,slow=13,SNR=30						
MK31				⇑Sn	Sn	08 48 23.7	+1.5
	0.4nm,0.2s,baz=165,slow=53,SNR=2.9						
MK31				⇓Lg	Lg	08 48 53.1	
	7.1nm,0.9s						
MAKZ	**Makanchi**	**5.84**	**304**	⇑Pn	Pn	08 47 20.0	+0.8
	1.5nm,0.3s						
MAKZ				⇑Sn	Sn	08 48 27.5	+0.6
	1.0nm,0.3s						
MAKZ				⇑Lg	Lg	08 48 58.0	
	5.9nm,1.1s						
PDGK	**Podgornoye**	**6.97**	**270**	⇑Pn	Pn	08 47 35.5	+0.8
	0.9nm,0.3s						
PDGK				⇑Sn	Sn	08 48 55.5	+0.8
	3.1nm,0.6s						
PDGK				⇓Lg	Lg	08 49 29.7	
	7.6nm,1.4s						
KURBB	**Kurchatov Arra**	**9.91**	**317**	⇓Pn	Pn	08 48 13.9	-1.0
	1.5nm,0.6s						
KURBB				⇑Lg	Lg	08 51 07.3	
	3.3nm,0.9s						
KURK	**Kurchatov**	**9.92**	**318**	⇑Pn	Pn	08 48 13.5	-1.6
	0.2nm,0.2s						
KURK				⇑Lg	Lg	08 51 08.3	
	1.2nm,0.3s						

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*CATAC **03** 08:46:32.8±0.9, 18°S±2°×7°0W±°, h26^{km}±6^{km}, M5.8/22, mb5.7/22, mB6.0/20, MLv6.5/2, Mw(mB)5.7/20, MwMwp5.6/14, Mwp5.7/14, Error ellipse: s-maj=16.3km s-min=3.5km az=82.3, confirmed*

*MOS **03** 08:46:34.3±1.1, 18°.40S×70°.45W, h42^{km}, mb5.8/36, MS5.5/11, Error ellipse: s-maj=11.7km s-min=7.1km az=108.7*

*BJI **03** 08:46:34.6, 18°.58S×70°.55W, h40^{km}, mB6.0/56, Ms6.0/73, Ms7 5.9/74*

*GUC **03** 08:46:34.9±0.8, 18°.53S×70°.72W, h44^{km}±2^{km}, ML6.0*

*ISC-PP **03** 08:46:35, 18°.50S×70°.58W, h35^{km}, Mwppsm6.5, Moment Tensor Solution. s29 Moment tensor: Scale 10^{18}Nm; M_{rr}0.17±.09; $M_{\theta\theta}$0.47±.16; $M_{\phi\phi}$-0.58±.14; $M_{r\theta}$-0.13±.20; $M_{\theta\phi}$-0.33±.15; $M_{\phi r}$0.29±.12; Fault plane solution: $M_0$6.31000×10^{18} NP1:ϕ_s207.20000°,δ84.10000°, λ147.10000°. NP2:ϕ_s301.00000°,δ57.30000°,λ7.00000°.*

*IDC **03** 08:46:35.6±1.5, 18°.35S×70°.46W, h44^{km}±13^{km}, mb5.1/26, mbtmp5.3/29, ML4.1/3, MS5.4/56 Error ellipse: s-maj=11.8km s-min=8.5km az=61.0*

*NEIC **03** 08:46:35.8±2.8, 18°.50S±0°.04×70°.58W±0°.06, h38^{km}±1^{km}, mb5.8/706, Ms_20 5.6/478, Mwb5.9/135, Mwr6.0/63, Mww6.0/19, Error ellipse: s-maj=9.2km s-min=7.6km az=78.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.59; $M_{\theta\theta}$-0.28; $M_{\phi\phi}$-0.31; $M_{r\theta}$0.07; $M_{\theta\phi}$0.31; $M_{\phi r}$-0.88; Fault plane solution: $M_0$1.06000×10^{18} NP1: ϕ_s299.09000°,δ22.45000°,λ45.28000°. NP2: ϕ_s166.08000°,δ74.26000°,λ106.21000°. Principal axes: T 1.1291, Plg58.0000°, Azm98.0000°; N -0.1504, Plg16.0000°, Azm342.0000°; P -0.9787, Plg27.0000°, Azm243.0000°; Moment Tensor Solution. Moment tensor: Scale 10^{18} Nm; M_{rr}0.83; $M_{\theta\theta}$0.08; $M_{\phi\phi}$-0.91; $M_{r\theta}$0.12; $M_{\theta\phi}$0.32; $M_{\phi r}$-0.46; Fault plane solution: $M_0$1.04000×10^{18} NP1:ϕ_s342.86000°,δ31.31000°, λ88.79000°. NP2:ϕ_s164.28000°,δ58.70000°,λ90.74000°. Principal axes: T 0.9409, Plg76.0000°, Azm76.0000°; N 0.1751, Plg1.0000°, Azm344.0000°; P -1.1160, Plg14.0000°, Azm254.0000°;*

*NEIC **03** 08:46:36.5, 18°.65S×70°.73W, h46^{km}, Moment Tensor Solution. Duration: 4^s.9 Moment tensor: Scale 10^{18}Nm; M_{rr}0.76; $M_{\theta\theta}$-0.20; $M_{\phi\phi}$-0.56; $M_{r\theta}$0.31; $M_{\theta\phi}$0.44; $M_{\phi r}$-0.66; Fault plane solution: $M_0$1.09000×10^{18} NP1: ϕ_s318.94000°,δ24.46000°,λ77.89000°. NP2: ϕ_s152.20000°,δ66.12000°,λ95.45000°. Principal axes: T 1.0431, Plg68.0000°, Azm73.0000°; N 0.0883, Plg5.0000°, Azm330.0000°; P -1.1314, Plg21.0000°, Azm238.0000°;*

*NEIC **03** 08:46:36.5, 18°.55S×70°.63W, h34^{km}*

*NEIC **03** 08:46:36.5, 18°.55S×70°.63W, h46^{km}*

*NEIC **03** 08:46:36.5, 18°.55S×70°.63W, h34^{km}*

*IPGP **03** 08:46:36.0, 18°.56S×70°.65W, h43^{km}, Mw6.0, Fault plane solution: NP1:ϕ_s321.00000°,δ29.00000°,λ74.00000°. NP2:ϕ_s159.00000°,δ62.00000°,λ99.00000°.*

*VAO **03** 08:46:37.9±0.4, 18°.41S×70°.34W, h64^{km}±3^{km}, mb5.6, Presumed earthquake*

*GCMT **03** 08:46:39.8±0.1, 18°.59S±0°.01×71°.02W±0°.01, h60^{km}, MW6.0/148, Moment Tensor Solution. s148,c336; s147,c433; Duration: 2^s.5 Moment tensor: Scale 10^{18} Nm; M_{rr}1.07±.01; $M_{\theta\theta}$0.16±.01; $M_{\phi\phi}$-1.23±.01; $M_{r\theta}$0.19±.01; $M_{\theta\phi}$0.43±.01; $M_{\phi r}$-0.70±.01; Best double couple: $M_0$1.41400×10^{18} NP1:ϕ_s343.00000°,δ30.00000°, λ89.00000°. NP2:ϕ_s165.00000°,δ60.00000°,λ91.00000°. Principal axes: T 1.2720, Plg74.0000°, Azm77.0000°; N 0.2820, Plg1.0000°, Azm344.0000°; P -1.5560, Plg15.0000°, Azm254.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 03 08:46:35.0±0.3**,18°.46S**±0°.03×**70°.57W**±0°.03**,h42^{km}**±2^{km}**, h42^{km}:pP-P,n1487,**σ**1^s.74**/1019**,mb5.8**/420**,MS5.6**/324**, 71C-63D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AP01	**Chacalluta**	**0.24**	**68**		**Pn**	**08 46 44.1**	**+1.3**
AP01	**Chacalluta**	**0.24**	**68**	⇓*i*P	**Pn**	**08 46 44.0**	**+1.3**
AP01				*i* S	**Sn**	**08 46 50.3**	**+2.1**
AP01				IAML		08 46 52.1	
	comp=E,4140µm,0.6s						
PB12	**IPOC Station P**	**0.28**	**123**		**Pn**	**08 46 44.1**	**+0.9**
PB12	**IPOC Station P**	**0.28**	**123**	⇓*i*P	**Pn**	**08 46 44.1**	**+0.9**
PB12				*i* S	**Sn**	**08 46 50.2**	**+1.1**
PB12				IAML		08 46 52.9	
	comp=E,878µm,0.8s						
PB16	**IPOC Station P**	**1.02**	**83**		**Pn**	**08 46 55.0**	**+1.6**
PB16	**IPOC Station P**	**1.02**	**83**	⇓*i*P	**Pn**	**08 46 54.9**	**+1.6**
PB16				*i* S	**Sn**	**08 47 09.5**	**+2.7**
PSGCX	**Pisagua**	**1.21**	**159**		**Pn**	**08 46 56.7**	**+1.2**
PSGCX	**Pisagua**	**1.21**	**159**	⇓*e*P	**Pn**	**08 46 55.5**	**-0.1**
PSGCX				*e*S	**Sn**	**08 47 11.8**	**+1.0**
PB18	**Visviri**	**1.35**	**50**		**Pn**	**08 47 01.5**	**+3.6**
PB18	**Visviri**	**1.35**	**50**	*e*P	**Pn**	**08 47 01.5**	**+3.6**
PB18				*i* S	**Sn**	**08 47 22.0**	**+7.0**
PB11	**IPOC Station P**	**1.56**	**146**		**Pn**	**08 47 01.6**	**+1.2**
PB11	**IPOC Station P**	**1.56**	**146**	*e*P	**Pn**	**08 47 01.6**	**+1.2**
PB11				*i* S	**Sn**	**08 47 22.1**	**+2.7**
GO01	**Chusmiza**	**1.77**	**133**		**Pn**	**08 47 06.2**	**+2.6**
GO01	**Chusmiza**	**1.77**	**133**	*e*P	**Pn**	**08 47 05.4**	**+1.8**
GO01				*i* S	**Sn**	**08 47 29.2**	**+4.0**
GO01				IAML		08 47 32.9	
	comp=E,76µm,0.2s						
TA02	**Huaiquique**	**1.85**	**167**	*e*P	**Pn**	**08 47 05.3**	**+1.1**
TA02				*i* S	**Sn**	**08 47 27.5**	**+1.1**
TA02				IAML		08 47 33.6	
	comp=N,253µm,0.7s						
HMBC	**Humberstone**	**1.92**	**160**		**Pn**	**08 47 05.7**	**+0.4**
HMBC	**Humberstone**	**1.92**	**160**	*e*P	**Pn**	**08 47 05.7**	**+0.4**
HMBC				*i* S	**Sn**	**08 47 30.4**	**+2.1**
HMBC				IAML		08 47 38.9	
	comp=N,242µm,0.7s						
TA01	**Diego Aracena**	**2.12**	**170**		**Pn**	**08 47 08.9**	**+0.9**
TA01	**Diego Aracena**	**2.12**	**170**	*e*P	**Pn**	**08 47 08.6**	**+0.6**
TA01				*i* S	**Sn**	**08 47 33.9**	**+0.7**
TA01				IAML		08 47 49.1	
	comp=E,196µm,0.9s						
TA01	**Diego Aracena**	**2.12**	**170**	P	**Pn**	**08 47 09.0**	**+0.9**
TA01				S	**Sn**	**08 47 34.6**	**+1.4**
PX03	**IPOC Station P**	**2.13**	**155**	*e*P	**Pn**	**08 47 08.0**	**-0.1**
PX03				*i* S	**Sn**	**08 47 34.5**	**+1.1**
PX03				IAML		08 47 55.0	
	comp=N,101µm,0.3s						
PB08	**IPOC Station P**	**2.14**	**141**	P	**Pn**	**08 47 10.5**	**+2.0**
PB08	**IPOC Station P**	**2.14**	**141**		**Pn**	**08 47 10.6**	**+2.0**
PB08	**IPOC Station P**	**2.14**	**141**	*e*P	**Pn**	**08 47 10.5**	**+2.0**
PB08				*i* S	**Sn**	**08 47 37.9**	**+3.7**
PB08				IAML		08 47 46.2	
	comp=E,37µm,0.6s						
PATCX	**Punta Patache**	**2.38**	**170**		**Pn**	**08 47 12.7**	**+1.1**
PATCX	**Punta Patache**	**2.38**	**170**	*e*P	**Pn**	**08 47 11.1**	**-0.5**
PATCX				IAML		08 48 01.8	
	comp=N,64µm,0.5s						
PB01	**IPOC Station P**	**2.76**	**158**		**Pn**	**08 47 17.8**	**+0.9**
PB01	**IPOC Station P**	**2.76**	**158**	*e*P	**Pn**	**08 47 17.2**	**+0.3**
PB01				IAML		08 48 06.9	
	comp=E,40µm,0.5s						
PB02	**IPOC Station P**	**2.91**	**167**		**Pn**	**08 47 19.5**	**+0.6**
PB02	**IPOC Station P**	**2.91**	**167**	*e*P	**Pn**	**08 47 19.5**	**+0.6**
PB02				IAML		08 48 17.0	
	comp=E,80µm,0.7s						
I08BO	**LAS PENAS INFR**	**3.02**	**43**	P	Pn	08 47 26.3	+5.5
	baz=224,slow=28,SNR=1.9						
I08BO				I	I	09 06 20.0	
	baz=216,slow=324,SNR=1.2						
LPAZ	**La Paz**	**3.18**	**48**	P	**Pn**	**08 47 26.8**	**+3.7**
	comp=E,1µm,0.8s,baz=217,slow=9.2,SNR=1550						
LPAZ				S	**Sn**	**08 47 58.8**	**-1.3**
	comp=E,2µm,0.6s,baz=233,slow=10,SNR=4.3						
LPAZ	**La Paz**	**3.18**	**48**		Pn	08 47 28.1	+5.0
LPAZ	**La Paz**	**3.18**	**48**	P	Pn	08 47 28.1	+5.0
LPAZ	**La Paz**	**3.18**	**48**	*e*P	**Pn**	**08 47 23.3**	**+0.2**
PB07	**IPOC Station P**	**3.31**	**169**		**Pn**	**08 47 25.1**	**+0.6**
PB07	**IPOC Station P**	**3.31**	**169**	⇑*i*P	**Pn**	**08 47 25.0**	**+0.5**
PB07				IAML		08 48 17.6	
	comp=E,40µm,0.8s						
PB09	**IPOC Station P**	**3.54**	**160**		**Pn**	**08 47 29.3**	**+1.6**
PB09	**IPOC Station P**	**3.54**	**160**	⇑*i*P	**Pn**	**08 47 28.7**	**+1.0**
PB03	**IPOC Station P**	**3.65**	**168**	*e*P	**Pn**	**08 47 29.3**	**+0.2**
PB03				*i* S	**Sn**	**08 48 09.2**	**-1.9**
PB03				IAML		08 48 34.1	
	comp=E,19µm,0.4s						
PB06	**IPOC Station P**	**4.33**	**168**		**Pn**	**08 47 39.2**	**+0.8**
PB06	**IPOC Station P**	**4.33**	**168**	⇑*e*P	**Pn**	**08 47 37.9**	**-0.6**
PB05	**IPOC Station P**	**4.38**	**176**		**Pn**	**08 47 38.8**	**-0.3**
PB05	**IPOC Station P**	**4.38**	**176**	⇓*e*P	**Pn**	**08 47 37.9**	**-1.2**
PB10	**IPOC Station P**	**5.03**	**180**		**Pn**	**08 47 46.4**	**-1.5**
PB10	**IPOC Station P**	**5.03**	**180**	*e*P	**Pn**	**08 47 46.2**	**-1.7**
YJA	**Yavi**	**6.02**	**129**	*e*P	**Pn**	**08 48 05.9**	**+4.0**
PB14	**IPOC Station P**	**6.14**	**179**	S	**Sn**	**08 49 05.8**	**-6.7**
PB14				P	**Pn**	**08 48 01.5**	**-2.0**
PB14	**IPOC Station P**	**6.14**	**179**		**Pn**	**08 48 01.8**	**-1.6**
GO02	**Mina Guanaco**	**6.73**	**172**		**Pn**	**08 48 10.6**	**-1.0**
GO02	**Mina Guanaco**	**6.73**	**172**	⇑P	**Pn**	**08 48 10.6**	**-1.0**
SALTA		**6.96**	**146**	⇑*e*P	**Pn**	**08 48 16.8**	**+1.9**
AC01	**Pan de Azucar**	**7.65**	**180**		**Pn**	**08 48 20.9**	**-3.1**
AC01	**Pan de Azucar**	**7.65**	**180**	P	**Pn**	**08 48 21.6**	**-2.3**
AC01	**Pan de Azucar**	**7.65**	**180**	S	**Sn**	**08 49 43.6**	**-5.8**
SLA	**San Lorenzo**	**7.81**	**144**	*e*P	**Pn**	**08 48 27.9**	**+1.6**
NNA	**Nana**	**8.83**	**316**	P	**Pn**	**08 48 39.6**	**-0.6**
	comp=E,11nm,0.3s,baz=131,slow=8.6,SNR=15						
NNA				S	**Sn**	**08 50 21.0**	**+2.5**
	comp=E,274nm,0.7s,baz=42,slow=14,SNR=1.8						
	comp=E,22nm,0.3s						
NNA	**Nana**	**8.83**	**316**		**Pn**	**08 48 41.3**	**+1.1**
NNA	**Nana**	**8.83**	**316**	*ce*P	**Pn**	**08 48 41.7**	**+1.5**
NNA				pmax	pmax		
	comp=Z,212nm,1.7s						
NNA	**Nana**	**8.83**	**316**	⇓P	**Pn**	**08 48 37.0**	**-3.2**
NNA	**Nana**	**8.83**	**316**	P	**Pn**	**08 48 40.2**	**0.0**
GO03	**Copiapo**	**9.09**	**178**	⇓P	**Pn**	**08 48 41.8**	**-2.0**
SIV	**San Ignacio**	**9.41**	**76**	P	**Pn**	**08 48 48.2**	**+0.2**
	comp=Z,260nm,0.8s,baz=274,slow=14						
SIV				S	**Sn**	**08 50 29.5**	**-3.1**
SIV				LR	LR	08 53 15.5	
	comp=Z,131µm,18.1s,baz=274,slow=43						
BBSD	**Serra de San D**	**9.57**	**84**	*e*P	**Pn**	**08 48 49.5**	**-0.8**
VCA	**Vinchina**	**10.46**	**168**	*e*P	**Pn**	**08 49 01.5**	**-1.0**
LCO	**Las Campanas**	**10.50**	**181**		**Pn**	**08 49 00.9**	**-2.3**
LCO	**Las Campanas**	**10.50**	**181**	P	**Pn**	**08 49 01.0**	**-2.3**
LCO	**Las Campanas**	**10.50**	**181**	*e*P	**Pn**	**08 48 60.0**	**-3.2**
LCO	**Las Campanas**	**10.50**	**181**	⇑P	**Pn**	**08 49 00.1**	**-3.2**
LCO	**Las Campanas**	**10.50**	**181**	P	**Pn**	**08 49 02.6**	**-0.6**
PTLB	**Pontes e Lacer**	**11.35**	**76**		**Pn**	**08 49 14.8**	**+0.2**
PTLB	**Pontes e Lacer**	**11.35**	**76**	*e*P	**Pn**	**08 49 14.1**	**-0.5**
PTLB				*e*S	**Sn**	**08 51 20.0**	**-0.1**
VILB	**Vilhena**	**11.39**	**63**		**Pn**	**08 49 16.4**	**+1.1**
VILB	**Vilhena**	**11.39**	**63**	*e*P	**Pn**	**08 49 13.8**	**-1.4**
VILB				*e*S	**Sn**	**08 51 21.2**	**0.0**
GO04	**Tololo Observa**	**11.66**	**181**	⇑P	**Pn**	**08 49 20.1**	**+1.0**
CO03	**El Pedregal**	**12.32**	**180**	P	**Pn**	**08 49 25.7**	**-2.3**
MURT	**Porto Murtinho**	**12.59**	**107**	*e*P	**Pn**	**08 49 30.2**	**-1.4**
CO02	**Combarbal**	**12.69**	**182**	⇑P	**Pn**	**08 49 30.1**	**-2.9**
BDQN	**Bodoquena, MS**	**13.19**	**101**	*e*P	**Pn**	**08 49 37.7**	**-2.1**
CFA	**Coronel Fontan**	**13.26**	**171**	P	**Pn**	**08 49 38.4**	**-2.3**
	comp=Z,9.9nm,0.4s,baz=7.9,slow=13,SNR=41						
CFA				S	**Sn**	**08 52 11.6**	**+4.8**
	comp=Z,22nm,0.7s,baz=44,slow=21,SNR=1.8						
CFA				LR	LR	08 55 21.3	
	comp=Z,13µm,19.0s,baz=342,slow=39						
ATAH	**Atahualpa**	**13.59**	**325**	P	**Pn**	**08 49 43.9**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=168,slow=13,SNR=6.0						
ATAH				S	**Sn**	**08 52 18.1**	**+2.5**
	comp=Z,46nm,1.0s,baz=359,slow=8.7,SNR=1.4						
ATAH				LR	LR	08 55 18.7	
	comp=Z,36µm,20.6s,baz=156,slow=39						
VA06	**Catapilco**	**14.05**	**183**		**Pn**	**08 49 48.3**	**-3.2**
VA06	**Catapilco**	**14.05**	**183**	*e*P	**Pn**	**08 49 47.7**	**-3.8**
AQDB	**Aquidauana**	**14.17**	**101**	*e*P	**Pn**	**08 49 50.9**	**-2.2**
VA03	**San Esteban**	**14.24**	**180**	*e*P	**Pn**	**08 49 50.8**	**-3.4**
SALV	**Santo Antonio**	**14.45**	**82**	*e*P	**Pn**	**08 49 54.5**	**-2.4**
CPUP	**Villa Florida**	**14.53**	**125**	P	**Pn**	**08 49 56.9**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=158,slow=12,SNR=28						
CPUP				S	**Sn**	**08 52 40.0**	**+2.2**
	comp=Z,8.1nm,1.0s,baz=146,slow=11,SNR=1.5						
CPUP				LR	LR	08 56 44.9	
	comp=Z,4µm,19.0s,baz=162,slow=42						
	comp=Z,7.0nm,1.0s						
CPUP	**Villa Florida**	**14.53**	**125**		**Pn**	**08 49 57.8**	**-0.1**
CPUP	**Villa Florida**	**14.53**	**125**	P	**Pn**	**08 49 57.8**	**-0.1**
CPUP	**Villa Florida**	**14.53**	**125**	⇑P	**Pn**	**08 49 56.1**	**-1.8**
CPUP	**Villa Florida**	**14.53**	**125**	*e*P	**Pn**	**08 49 54.1**	**-3.8**
PEL	**Peldehue**	**14.62**	**180**	*e*P	**Pn**	**08 49 59.2**	**0.0**
PEL	**Peldehue**	**14.62**	**180**	⇑P	**Pn**	**08 49 59.6**	**+0.5**
PEL	**Peldehue**	**14.62**	**180**	P	**Pn**	**08 49 59.1**	**0.0**
PEL				S	**Sn**	**08 52 43.7**	**+3.7**
MT14	**Cerro Cal¡n**	**14.87**	**180**	*e*P	**Pn**	**08 50 03.8**	**+1.3**
MT16	**CCHEN**	**14.90**	**180**		**Pn**	**08 50 04.6**	**+1.7**
MT16	**CCHEN**	**14.90**	**180**	*e*P	**Pn**	**08 50 04.1**	**+1.1**
PP1B	**Ponte de Pedra**	**14.95**	**89**	*e*P	**Pn**	**08 50 01.8**	**-1.8**
PDRB	**Porto dos Gac**	**15.00**	**65**	*e*P	**Pn**	**08 50 01.1**	**-3.1**
MT15	**Las Vizcachas**	**15.07**	**180**	*e*P	**Pn**	**08 50 06.4**	**+1.2**
VA05	**Santo Domingo**	**15.16**	**183**	*e*P	Pn	08 49 57.9	-8.4
MT13	**San Alfonso**	**15.22**	**179**	Pn	**Pn**	**08 50 07.9**	**+0.7**
MT13	**San Alfonso**	**15.22**	**179**	*e*P	**Pn**	**08 50 09.3**	**+2.1**
AMBA	**Amambai (Brazi**	**15.24**	**110**	*e*P	**Pn**	**08 50 05.1**	**-2.3**
BO01	**Tunca**	**15.87**	**182**	Pn	**Pn**	**08 50 16.2**	**+0.8**
TEFE	**Tefe**	**15.96**	**22**	*e*P	**Pn**	**08 50 14.8**	**-1.9**
RPRD	**Ribas do Rio P**	**16.04**	**100**	*e*P	**Pn**	**08 50 15.4**	**-2.3**
CLDB	**Colider**	**16.16**	**64**	*e*P	**Pn**	**08 50 18.2**	**-1.1**
BO02	**Sierra Bellavi**	**16.27**	**181**	⇑P	**Pn**	**08 50 20.5**	**0.0**
GO05	**Hualane**	**16.53**	**184**	⇑P	**Pn**	**08 50 24.1**	**+0.3**
H03N1	**Juan Fernandez**	**16.68**	**205**	T	T	09 07 44.5	
	baz=29,slow=72,SNR=546						
H03N2	**Juan Fernandez**	**16.69**	**205**	T	T	09 07 51.2	
	baz=29,slow=72,SNR=666						
H03N3	**Juan Fernandez**	**16.70**	**205**	T	T	09 07 41.2	
	baz=29,slow=72,SNR=647						
C2SB	**Chapadao do Su**	**16.82**	**94**	*e*P	**Pn**	**08 50 26.0**	**-1.5**
VA04	**Juan Fernndez**	**16.83**	**204**	P	**Pn**	**08 50 27.5**	**0.0**
VA04	**Juan Fernndez**	**16.83**	**204**	*e*P	**Pn**	**08 50 26.8**	**-0.7**
VA04	**Juan Fernndez**	**16.83**	**204**	⇑P	**P**	**08 50 28.6**	**-0.6**
ITQB	**Itaqui**	**16.92**	**134**	*e*P	**Pn**	**08 50 26.5**	**-2.2**
PSAL	**Palomas, Salto**	**17.20**	**139**	*e*P	**Pn**	**08 50 29.9**	**-2.3**
ML02	**Panimavida**	**17.25**	**182**	IAmb	IAmb	08 50 41.5	
	comp=Z,1µm,1.9s						
TRCB	**Terra Rica**	**17.33**	**107**	*e*P	**Pn**	**08 50 31.9**	**-2.1**
MACA	**Manacapuru-AM**	**18.03**	**34**		**Pn**	**08 50 42.1**	**-0.4**
MACA	**Manacapuru-AM**	**18.03**	**34**	*e*P	**Pn**	**08 50 41.1**	**-1.4**
ARAG	**Araguaiana, MT**	**18.14**	**84**	*e*P	**P**	**08 50 42.8**	**-1.1**
PTGB	**Pitanga**	**18.30**	**113**	*e*P	**P**	**08 50 45.3**	**-0.3**
PCMB	**Pacaembu**	**18.41**	**103**	*e*P	**P**	**08 50 45.0**	**-1.9**
SGC2	**Sao Gabriel da**	**18.54**	**11**	P	**P**	**08 50 45.6**	**-2.6**
	comp=Z,27µmcomp=Z,10µmcomp=Z,511nm,0.9s						
NPGB	**Novo Progresso**	**18.66**	**54**	*e*P	**P**	**08 50 47.8**	**-1.8**
LDASE	**Londrina, Braz**	**18.82**	**108**	*e*P	**P**	**08 50 49.7**	**-1.6**
PTLC	**Puerto Leguiza**	**18.98**	**347**	P	**P**	**08 50 49.3**	**-3.7**
	comp=Z,12µmcomp=Z,5µmcomp=Z,369nm,0.9s						
ITAB	**Concordia**	**19.09**	**121**	P	**P**	**08 50 53.8**	**-0.4**
ITAB	**Concordia**	**19.09**	**121**	*e*P	**P**	**08 50 52.7**	**-1.5**
ITRB	**Iturama**	**19.15**	**97**	*e*P	**P**	**08 50 54.0**	**-0.9**
SLOR	**San Lorenzo -**	**19.26**	**335**		**Pn**	**08 51 00.0**	**+2.1**
PPLP	**Puerto Lpez**	**19.57**	**328**	P	Pn	08 51 09.6	+8.5
CPSB	**Cacapava Do Su**	**19.59**	**131**	*e*P	**P**	**08 50 59.6**	**+0.1**
SNDB	**Serra Nova Dou**	**19.68**	**74**	*e*P	**P**	**08 50 59.4**	**-1.4**
BONI	**La Bonita**	**20.00**	**339**	P	**P**	**08 51 04.4**	**-0.1**
	comp=Z,12µmcomp=Z,7µmcomp=Z,592nm,1.0s						
OTAV	**Otavalo**	**20.13**	**337**	P	Pn	08 51 07.8	-0.3
OTAV	**Otavalo**	**20.13**	**337**	P	Pn	08 51 07.8	-0.4
OTAV				pmax	pmax		
	comp=Z,86nm,1.0s						
OTAV				MLR	MLR		
	comp=Z,12µm,22.0s						
FLF1	**Flavio Alfaro-**	**20.16**	**332**	P	Pn	08 51 07.6	-0.6
	comp=Z,21µmcomp=Z,743nm,1.4s						
ITTB	**Itaituba**	**20.17**	**48**	*e*P	**P**	**08 51 03.9**	**-2.2**
FRTB	**Fartura**	**20.21**	**108**	*e*P	**P**	**08 51 05.8**	**-0.7**
PLTB	**Pedras Altas**	**20.25**	**134**	P	**P**	**08 51 05.7**	**-1.1**
PLTB				IAmb	IAmb	08 51 07.8	
	comp=Z,291nm,0.9s						
PLTB	**Pedras Altas**	**20.25**	**134**	*e*P	**P**	**08 51 05.5**	**-1.3**
TULM	**Tulcn-Chalpat**	**20.34**	**339**	P	Pn	08 51 12.6	+2.0
	comp=Z,11µmcomp=Z,1µm,0.9s						
FLOC	**Florencia**	**20.54**	**345**	P	**P**	**08 51 09.6**	**-0.5**
FLOC				IAmb	IAmb	08 51 23.5	
	comp=Z,830nm,1.2s						
FLOC	**Florencia**	**20.54**	**345**	P	**P**	**08 51 10.7**	**+0.7**
FLOC				S	Sn	08 55 01.4	-2.0
FLOC	**Florencia**	**20.54**	**345**	P	**P**	**08 51 10.1**	**0.0**
	comp=Z,13µmcomp=Z,9µmcomp=Z,608nm,1.0s						
CMBC	**Cumbal**	**20.56**	**339**	P	**P**	**08 51 11.9**	**+1.2**
GCUF	**Volcan Galeras**	**20.67**	**340**	P	Pn	08 51 13.4	-1.1
	comp=Z,15µmcomp=Z,23µmcomp=Z,979nm,0.9s						
MACC	**Macarena, Meta**	**20.73**	**351**	P	**P**	**08 51 11.6**	**-0.5**
	comp=Z,12µmcomp=Z,2µmcomp=Z,153nm,1.1s						
CRUC	**La Cruz**	**20.87**	**342**	P	Pn	08 51 15.9	-0.9
BB19B	**Bebedouro**	**20.91**	**101**	*e*P	**P**	**08 51 11.9**	**-2.1**
TRQA	**Tornquist**	**20.92**	**161**	P	**P**	**08 51 14.2**	**+0.2**
TRQA				IAmb	IAmb	08 51 26.0	
	comp=Z,456nm,1.0s						
TRQA	**Tornquist**	**20.92**	**161**	P	**P**	**08 51 14.2**	**+0.2**
TRQA				pmax	pmax		
	comp=Z,456nm,1.0s						
TRQA	**Tornquist**	**20.92**	**161**	*e*P	**P**	**08 51 14.1**	**0.0**
CNLB	**Canela**	**20.99**	**125**	*e*P	**P**	**08 51 12.8**	**-2.1**
GO06	**Curarrehue**	**21.06**	**182**	⇑P	**P**	**08 51 16.3**	**+0.7**
GARC	**Garzon, Huila**	**21.08**	**346**	P	**P**	**08 51 15.6**	**-0.6**
	comp=Z,13µmcomp=Z,10µmcomp=Z,1µm,1.0s						
IPMB	**Ipameri, GO**	**21.25**	**92**	*e*P	**P**	**08 51 15.8**	**-2.0**
BBAC	**Balboa, Cauca**	**21.39**	**341**	P	**P**	**08 51 19.1**	**-0.3**
	comp=Z,15µmcomp=Z,12µmcomp=Z,981nm,0.9s						
BETC	**Betania**	**21.55**	**347**	P	**P**	**08 51 20.9**	**-0.1**
TUMC	**Tumaco**	**21.70**	**337**	IAmb	IAmb	08 51 43.2	
	comp=Z,454nm,0.7s						
TUMC	**Tumaco**	**21.70**	**337**	P	**P**	**08 51 24.4**	**+1.9**
TUMC	**Tumaco**	**21.70**	**337**	P	**P**	**08 51 22.4**	**-0.1**
	comp=Z,14µmcomp=Z,11µmcomp=Z,766nm,1.2s						
POPC	**Popayan, Colom**	**21.72**	**343**	P	**P**	**08 51 24.4**	**+1.4**
	comp=Z,12µmcomp=Z,13µmcomp=Z,919nm,0.9s						
LR05	**Currie**	**21.73**	**183**	IAmb	IAmb	08 51 42.6	
	comp=Z,1µm,1.4s						
BDFB	**Brasilia**	**21.75**	**86**	P	**P**	**08 51 21.0**	**-2.2**
	comp=Z,77nm,0.7s,baz=263,slow=10,SNR=36						
BDFB				S	**S**	**08 55 22.1**	**+0.3**
	comp=Z,18nm,0.9s,baz=174,slow=26,SNR=1.5						
BDFB				LR	LR	09 01 18.2	
	comp=Z,14µm,18.9s,baz=260,slow=41						
	comp=Z,77nm,0.7s						
BDFB	**Brasilia**	**21.75**	**86**	P	**P**	**08 51 21.0**	**-2.2**
BDFB	**Brasilia**	**21.75**	**86**	P	**P**	**08 51 21.0**	**-2.2**
BDFB				pmax	pmax		
	comp=Z,212nm,0.9s						
URMC	**La Uribe, Meta**	**21.90**	**350**	P	**P**	**08 51 23.6**	**-1.1**
	comp=Z,13µmcomp=Z,3µmcomp=Z,164nm,1.0s						
RCLB	**Rio Claro- Sao**	**21.94**	**104**	*e*P	**P**	**08 51 22.6**	**-2.6**
SPB	**Sao Paulo**	**22.18**	**107**	P	**P**	**08 51 25.6**	**-2.1**
SPB	**Sao Paulo**	**22.18**	**107**	⇑P	**P**	**08 51 25.4**	**-2.3**
SPB	**Sao Paulo**	**22.18**	**107**	P	**P**	**08 51 24.3**	**-3.5**
SPB	**Sao Paulo**	**22.18**	**107**	*e*P	**P**	**08 51 25.6**	**-2.1**
PLCA	**Paso Flores**	**22.20**	**180**	P	**P**	**08 51 28.2**	**+0.4**
	comp=Z,111nm,0.8s,baz=358,slow=11,SNR=126						
PLCA				S	**S**	**08 55 31.7**	**+2.0**
	comp=Z,7.8nm,0.9s,baz=132,slow=14,SNR=1.4						
PLCA				LR	LR	08 59 31.9	
	comp=Z,6µm,20.0s,baz=8.0,slow=35						
	comp=Z,111nm,0.8s						
PLCA	**Paso Flores**	**22.20**	**180**	P	**P**	**08 51 28.2**	**+0.4**
PLCA				IAmb	IAmb	08 51 47.8	
	comp=Z,819nm,1.6s						
PLCA	**Paso Flores**	**22.20**	**180**	P	**P**	**08 51 28.2**	**+0.4**
PLCA				pmax	pmax		
	comp=Z,819nm,1.6s						
PLCA	**Paso Flores**	**22.20**	**180**	⇑P	**P**	**08 51 28.1**	**+0.3**
PLCA	**Paso Flores**	**22.20**	**180**	*e*P	**P**	**08 51 28.5**	**+0.7**
JAMC	**Jamundi, Valle**	**22.36**	**344**	P	**P**	**08 51 28.9**	**-1.0**
	comp=Z,14µmcomp=Z,8µmcomp=Z,560nm,0.9s						
PRAC	**Prado**	**22.44**	**349**	P	**P**	**08 51 29.7**	**-0.8**
PRAC	**Prado**	**22.44**	**349**	P	**P**	**08 51 28.9**	**-1.7**
	comp=Z,11µmcomp=Z,5µmcomp=Z,296nm,1.2s						
PET01	**Itanhaem-SP**	**22.44**	**109**	*e*P	**P**	**08 51 26.6**	**-3.9**
VAO	**Valinhos**	**22.53**	**106**	P	**P**	**08 51 29.4**	**-2.1**
VAO	**Valinhos**	**22.53**	**106**	*e*P	**P**	**08 51 29.3**	**-2.2**
VILC	**Villavicencio,**	**22.64**	**352**	P	**P**	**08 51 29.9**	**-2.9**
	comp=Z,1µmcomp=Z,164nm,0.7s						
LL03	**Petrohue**	**22.66**	**184**	IAmb	IAmb	08 51 57.0	
	comp=Z,634nm,0.9s						
ORTC	**Ortega, Tolima**	**22.70**	**348**	P	**P**	**08 51 29.2**	**-4.1**
	comp=Z,12µmcomp=Z,8µmcomp=Z,640nm,0.9s						
PMNB	**Patos De Minas**	**22.89**	**94**	*e*P	**P**	**08 51 32.7**	**-2.6**
MAL2	**Monte Alegre,**	**22.92**	**46**	P	**P**	**08 51 33.0**	**-2.6**
BOAV	**Boa Vista**	**22.97**	**27**	P	**P**	**08 51 34.9**	**-1.2**
BOAV				IAmb	IAmb	08 51 55.4	
	comp=Z,640nm,1.3s						
BOAV	**Boa Vista**	**22.97**	**27**	*e*P	**P**	**08 51 34.6**	**-1.4**
BOAV	**Boa Vista**	**22.97**	**27**	P	**P**	**08 51 34.1**	**-1.9**
	comp=Z,26µmcomp=Z,8µmcomp=Z,469nm,1.5s						
YOTC	**Yotoco, Valle**	**23.02**	**345**	P	**P**	**08 51 34.6**	**-2.1**
	comp=Z,13µmcomp=Z,7µmcomp=Z,425nm,0.9s						
CHIC	**Chingaza**	**23.16**	**352**	P	**P**	**08 51 34.8**	**-3.6**
	comp=Z,13µmcomp=Z,3µmcomp=Z,121nm,0.8s						
ANIL	**Santa Ana**	**23.30**	**348**	P	**P**	**08 51 36.1**	**-3.5**
	comp=Z,5µmcomp=Z,410nm,0.6s						
ROSC	**El Rosal**	**23.45**	**351**	P	**P**	**08 51 40.7**	**-0.5**
	comp=Z,70nm,0.8s,baz=158,slow=6.3,SNR=19						
ROSC				S	**S**	**08 55 50.4**	**-1.7**

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      comp=Z,12nm,0.6s,baz=168,slow=18,SNR=1.4
ROSC                            LR       LR       09 02 13.3
      comp=Z,20µm,21.9s,baz=201,slow=40
      comp=Z,70nm,0.8s
ROSC  El Rosal         23.45 351  P        P        08 51 40.7 -0.5
ROSC  El Rosal         23.45 351  P        P        08 51 40.7 -0.5
ROSC                            pmax     pmax
      comp=Z,180nm,1.1s
ROSC  El Rosal         23.45 351  P        P        08 51 39.3 -1.9
      comp=Z,14µmcomp=Z,4µmcomp=Z,188nm,1.0s
PRPB  Parauapebas      23.64  62 eP        P        08 51 40.2 -2.4
RECRC Villamaria, Ca   23.75 348  P        P        08 51 43.3 -0.9
      comp=Z,64µmcomp=Z,664nm,1.1s
PARB  Paraibuna        23.80 106 eP        P        08 51 42.6 -1.5
NIZA  Niza - Manizal   23.86 348  P        P        08 51 42.3 -2.7
LL01  San Ignacio de   23.89 183  IAmb     IAmb     08 52 08.4
      comp=Z,465nm,1.1s
LL01  San Ignacio de   23.89 183 ⇑P        P        08 51 45.4 +0.7
PLMC  San Jos del P    23.89 346  P        P        08 51 42.6 -2.4
      comp=Z,12µmcomp=Z,10µmcomp=Z,802nm,1.0s
GUY2C Guyana, Caldas   24.01 348  P        P        08 51 44.3 -2.2
      comp=Z,11µmcomp=Z,8µmcomp=Z,349nm,0.8s
SPBC  San Pablo de B   24.21 351  P        P        08 51 46.1 -1.9
      comp=Z,10µmcomp=Z,3µmcomp=Z,189nm,0.8s
PIZC  Pizarro, Choco   24.22 343  P        P        08 51 46.8 -1.2
      comp=Z,29µmcomp=Z,2µm,1.2s
SMTB  Santa Maria do   24.26  70 eP        P        08 51 46.1 -2.3
RUSC  La Rusia         24.33 354  P        P        08 51 47.8 -1.7
RUSC  La Rusia         24.33 354  P        P        08 51 49.6 +0.2
RUSC                              S        S        08 56 07.1 +0.7
RUSC  La Rusia         24.33 354  P        P        08 51 47.1 -2.4
      comp=Z,12µmcomp=Z,7µmcomp=Z,555nm,1.0s
BSCB  Bom Sucesso      24.41 100 eP        P        08 51 47.7 -2.1
LL02  Futaleuf         24.68 182  P        P        08 51 51.9  0.0
LL02                              IAmb     IAmb     08 52 19.0
      comp=Z,221nm,1.1s
LL02  Futaleuf         24.68 182 ⇓P        P        08 51 52.0 +0.1
CBOC  Ciudad Bolivar   24.76 347  P        P        08 51 52.1 -1.0
      comp=Z,9µmcomp=Z,5µmcomp=Z,223nm,1.2s
MAPC  Malpelo          24.83 333  P        P        08 51 56.6 +3.1
      comp=Z,7µmcomp=Z,235nm,0.8s
BARC  Barichara        25.03 354  P        P        08 51 53.3 -2.3
      comp=Z,118µmcomp=Z,13µm,0.7s
PTBC  PUERTO BERRIO,   25.14 351  P        P        08 51 52.6 -3.7
      comp=Z,2µmcomp=Z,195nm,0.9s
JANB  Januaria         25.36  86 eP        P        08 51 56.5 -2.0
SDBA  SAO DESIDERIO    25.45  80 eP        P        08 51 56.7 -2.6
BRJC  Barrancabermej   25.47 353  P        P        08 51 55.1 -4.2
      comp=Z,6µmcomp=Z,544nm,0.9s
DIAM  Diamantina, MG   25.52  94 eP        P        08 51 58.2 -1.8
VAS01 Vassouras-RJ     25.70 103 eP        P        08 52 00.2 -1.3
PAMC  Pamplona, Colo   25.72 355  P        P        08 51 59.8 -2.4
      comp=Z,2µmcomp=Z,242nm,0.7s
DBBC  Dabeiba          25.92 347  P        P        08 52 02.1 -1.4
PAYG  Puerto Ayora     26.21 310  P        P        08 52 03.3 -2.8
      comp=Z,5µmcomp=Z,2µmcomp=Z,65nm,1.2s
PTAC  Punta Ardita,    26.43 344  P        P        08 52 07.8 -0.2
      comp=Z,6µmcomp=Z,488nm,1.0s
UREC  San Jos de Ur    26.50 349  P        P        08 52 05.1 -3.6
      comp=Z,8µmcomp=Z,3µmcomp=Z,117nm,1.0s
OCAC  Ocana            26.67 354  P        P        08 52 07.3 -3.0
      comp=Z,7µmcomp=Z,2µmcomp=Z,205nm,0.7s
DUB01 Friburgo-RJ      26.68 103 eP        P        08 52 09.1 -1.3
COYC  Coyhaique        27.06 182  IAmb     IAmb     08 52 35.1
      comp=Z,524nm,1.4s
COYC  Coyhaique        27.06 182 ⇑P        P        08 52 13.5 +0.1
SDV   Santo Domingo    27.18 360  P        P        08 52 12.9 -2.1
SDV                               IAMs_20  IAMs_20  09 03 52.2
      comp=Z,19µm,20.0s
SDV   Santo Domingo    27.18 360 eP        P        08 52 12.8 -2.1
SDV   Santo Domingo    27.18 360  P        P        08 52 11.1 -3.8
      comp=Z,10µmcomp=Z,2µmcomp=Z,134nm,1.0s
TMAB  Tom-Au,PA,Br     27.22  57 eP        P        08 52 13.6 -1.6
CAM01 Campos-RJ        27.34 102 eP        P        08 52 15.5 -0.6
LCBC  Los crdobas,     27.74 348  P        P        08 52 18.8 -1.0
      comp=Z,7µmcomp=Z,473nm,1.0s
CAPC  Capurgana        27.74 345  P        P        08 52 19.8  0.0
      comp=Z,8µmcomp=Z,276nm,1.8s
NBBC  Barra do Corda   27.83  66 eP        P        08 52 18.5 -2.2
SJMB  Sao Joao De Ma   27.85  95 eP        P        08 52 19.2 -1.6
BSFB  Barra de Sao F   28.16  96 eP        P        08 52 22.1 -1.4
ARGC  Ariguani, Magd   28.37 352  P        P        08 52 22.5 -2.9
      comp=Z,8µmcomp=Z,5µmcomp=Z,424nm,0.9s
RIB01 Linhares ES      28.55  97 eP        P        08 52 25.1 -2.0
AY03  Cochrane         28.76 183  IAmb     IAmb     08 52 51.1
      comp=Z,468nm,1.7s
BCIP  Isla Barro Col   28.93 341  IAMs_20  IAMs_20  09 05 15.6
      comp=Z,12µm,22.0s
BCIP  Isla Barro Col   28.93 341  P        P        08 52 33.0 +2.6
BCIP  Isla Barro Col   28.93 341  P        P        08 52 31.0 +0.6
      comp=Z,7µmcomp=Z,4µmcomp=Z,124nm,1.0s
PCRV  Puerto La Cruz   29.05  12 eP        P        08 52 30.8 -0.8
MDP   Montagnes des    29.34  39  LR       LR       09 05 45.9
      comp=Z,7µm,20.8s,baz=216,slow=39
GUA01 Guaratinga, BA   29.38  91 eP        P        08 52 33.1 -1.4
PIRO  Carate, Puerto   29.52 334  P        P        08 52 36.6 +1.0
BRU2  Volcan           29.61 335  IAmb     IAmb     08 53 08.7
      comp=Z,122nm,0.9s
BRU2  Volcan           29.61 335  P        P        08 52 37.6 +1.0
CMC01 Camacan, BA      29.85  89 eP        P        08 52 36.5 -2.2
URIC  Uribia, Colomb   30.00 357  P        P        08 52 32.3 -7.6
      comp=Z,3µmcomp=Z,85nm,0.9s
NBIT  Itapeh - BA      30.01  88 eP        P        08 52 38.2 -1.8
DRK0  Durika           30.25 335  P        P        08 52 42.5 +0.2
ABR01 Abrolhos, BA     30.27  94 eP        P        08 52 40.5 -1.8
OCHAL Ojochal          30.27 334  P        P        08 52 40.7 -1.5
TRN   Trinidad (W)     30.31  18 eP        P        08 52 41.5 -1.1
LCR2  La Lucha 2       31.00 334  P        P        08 52 49.3 +0.3
HDC   Heredia          31.28 334  IAmb     IAmb     08 53 10.2
      comp=Z,154nm,0.8s
HDC   Heredia          31.28 334 ⇓P        P        08 52 54.4 +3.0
HDC   Heredia          31.28 334 eP        P        08 52 52.0 +0.7
GRGR  Grenville        31.65  17 ⇑P        P        08 52 53.0 -1.4
GRGR  Grenville        31.65  17 eP        P        08 52 51.8 -2.6
GRGR  Grenville        31.65  17  P        P        08 52 51.8 -2.6
      comp=Z,6µmcomp=Z,4µmcomp=Z,206nm,1.0s
GRW   Mount Saint Ca   31.67  17 eP        P        08 52 53.5 -1.2
NBPS  Pedro II - PI    31.71  67 eP        P        08 52 53.2 -2.0
GRHS  Sauteurs         31.74  17 eP        P        08 52 51.1 -4.1
SOCE  Pocosol          31.84 333  IAmb     IAmb     08 53 12.5
      comp=Z,278nm,1.0s
SOCE  Pocosol          31.84 333  P        P        08 52 58.6 +2.5
JTS   Las Juntas de    31.90 332  LR       LR       09 06 36.1
      comp=Z,9µm,18.6s,baz=156,slow=38
JTS   Las Juntas de    31.90 332  P        P        08 52 58.1 +1.5
JTS   Las Juntas de    31.90 332 i P       P        08 52 58.8 +2.1
JTS                               pmax     pmax
      comp=Z,79nm,1.6s
JTS   Las Juntas de    31.90 332  P        P        08 52 58.2 +1.5
JTS   Las Juntas de    31.90 332  P        P        08 52 55.0 -1.7
      comp=Z,5µmcomp=Z,2µmcomp=Z,92nm,1.2s
COVE  Coope Vega, Sa   32.05 334  P        P        08 52 59.0 +1.0
UPAL  Upala            32.47 333  P        P        08 53 05.0 +3.4
NBLA  Lagarto - SE     32.52  81 eP        P        08 52 59.6 -2.6
SAIC  Isla e San And   32.70 340  P        P        08 52 58.3 -5.3
      comp=Z,3µmcomp=Z,192nm,1.4s
GO09  Cerro Castillo   32.77 182  IAmb     IAmb     08 53 26.8
      comp=Z,209nm,1.5s
NBMA  Muriti-CE        32.85  75 eP        P        08 53 02.6 -2.4
NBPB  Pedra_Branca-C   32.85  71 eP        P        08 53 03.0 -2.1
NBTA  Tacaratu-PE      32.86  78 eP        P        08 53 03.2 -1.9
MG05  Puerto Natales   33.18 182  IAmb     IAmb     08 53 28.0
      comp=Z,152nm,1.1s
RNCC  Cayo Roncador,   33.19 343  P        P        08 53 06.5 -1.4
      comp=Z,13µmcomp=Z,904nm,1.1s
MCLT  Moule a Chique   33.35  17 eP        P        08 53 05.2 -4.1
PRVC  Isla de Provid   33.38 341  IAmb     IAmb     08 53 26.2
      comp=Z,268nm,1.0s
PRVC  Isla de Provid   33.38 341  P        P        08 53 09.5  0.0
      comp=Z,6µmcomp=Z,4µmcomp=Z,275nm,1.0s
NBMO  Morrinhos-CE     33.46  67 eP        P        08 53 08.5 -1.9
SLCP  Castries, St.    33.62  17 eP        P        08 53 12.6 +0.9
SLBI  Saint Lucia, B   33.64  17 eP        P        08 53 07.2 -4.6
MPOM  Morne Pois Mar   34.07  17  IAMs_20  IAMs_20  09 08 27.9
      comp=Z,11µm,18.0s
BIM   Bigot            34.08  17  IAMs_20  IAMs_20  09 08 27.7
      comp=Z,14µm,19.0s
BIM   Bigot            34.08  17 eP        P        08 53 09.8 -5.9
MG02  Cerro Sombrero   34.27 179 ⇓P        P        08 53 18.4 +1.6
NBAN  Anadia - AL      34.35  80 eP        P        08 53 15.9 -2.2
SVN   Savane Anatole   34.37  16  IAMs_20  IAMs_20  09 08 37.1
      comp=Z,14µm,19.0s
SVN   Savane Anatole   34.37  16 eP        P        08 53 12.3 -5.9
ILAM  Ilet Lapin Mar   34.38  17 eP        P        08 53 16.2 -2.0
EFI   East Falkland    34.58 166  P        P        08 53 19.7  0.0
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EFI   East Falkland    34.58 166  IAMs_20  IAMs_20  09 08 45.7
      comp=Z,13µm,18.0s
EFI   East Falkland    34.58 166ceP        P        08 53 20.4 +0.7
EFI                               pmax     pmax
      comp=Z,104nm,1.0s
EFI   East Falkland    34.58 166 ⇓P        P        08 53 19.7  0.0
EFI   East Falkland    34.58 166  P        P        08 53 19.9 +0.2
CNGN  Cerro Negro      34.63 331  P        P        08 53 29.2 +8.7
      comp=Z,710nm,1.1s
SIUN  Universidad Ur   34.91 335  IAmb     IAmb     08 53 39.9
      comp=Z,39nm,0.9s
NBPA  Parau_RN         34.99  73 eP        P        08 53 21.6 -2.0
NBCA  Caruaru-PE       35.07  78 eP        P        08 53 22.6 -1.8
MAGL  Barre de l'ile   35.40  16  IAMs_20  IAMs_20  09 09 05.4
      comp=Z,9µm,20.0s
CBE   Ff, Capester     35.43  15  IAMs_20  IAMs_20  09 09 09.2
      comp=Z,11µm,19.0s
GDHS  Morne Mazeau,    35.59  15  IAMs_20  IAMs_20  09 09 03.9
      comp=Z,12µm,21.0s
NBBL  Bica de Lurdes   35.72  79 eP        P        08 53 28.2 -1.7
GDSD  La Dsirade Is    35.80  16  IAMs_20  IAMs_20  09 09 29.1
      comp=Z,10µm,20.0s
ABD   La Joyeuse, An   35.85  15  IAMs_20  IAMs_20  09 09 21.4
      comp=Z,9µm,18.0s
RCBR  Riachuelo        36.06  74  P        P        08 53 31.9 -1.0
RCBR                              IAmb     IAmb     08 53 50.6
      comp=Z,245nm,1.6s
RCBR  Riachuelo        36.06  74  P        P        08 53 31.9 -1.0
RCBR                              pmax     pmax
      comp=Z,245nm,1.6s
RCBR                              MLR      MLR
      comp=Z,39µm,18.0s
RCBR  Riachuelo        36.06  74 ⇑P        P        08 53 31.7 -1.2
RCBR  Riachuelo        36.06  74 eP        P        08 53 32.2 -0.7
TGUH  Tegucigalpa,Un   36.27 332  IAmb     IAmb     08 53 50.0
      comp=Z,286nm,1.2s
TGUH                              IAMs_20  IAMs_20  09 08 28.0
      comp=Z,9µm,20.0s
TGUH  Tegucigalpa,Un   36.27 332 ⇑P        P        08 53 35.1 +0.5
TGUH  Tegucigalpa,Un   36.27 332  P        P        08 53 34.0 -0.6
      comp=Z,5µmcomp=Z,2µmcomp=Z,185nm,0.9s
USHA  Ushuaia          36.34 178  LR       LR       09 09 35.0
      comp=Z,9µm,18.0s,baz=357,slow=38
NBPV  Pedro Velho      36.39  75 eP        P        08 53 33.8 -1.9
MG01  Puerto William   36.47 177  IAmb     IAmb     08 53 56.5
      comp=Z,182nm,0.9s
SEUS  St. Eustatius    36.50  12  IAMs_20  IAMs_20  09 09 37.6
      comp=Z,13µm,21.0s
SABA  Saba             36.57  12  IAMs_20  IAMs_20  09 09 27.6
      comp=Z,12µm,22.0s
SJG   San Juan         36.60   7  LR       LR       09 09 36.0
      comp=Z,5µm,21.1s,baz=192,slow=38
SJG   San Juan         36.60   7 ⇓P        P        08 53 34.6 -2.7
SJG   San Juan         36.60   7  P        P        08 53 33.5 -3.8
      comp=Z,3µmcomp=Z,2µmcomp=Z,121nm,1.0s
SJG   San Juan         36.60   7  P        P        08 53 34.5 -2.7
RPN   Rapa Nui         36.64 249  LR       LR       09 04 44.9
      comp=Z,26µm,21.1s,baz=102,slow=30
RPN   Rapa Nui         36.64 249 eP        PP       08 54 55.2 -6.4
ANWB  Willy Bob        36.93  14  IAMs_20  IAMs_20  09 09 42.0
      comp=Z,13µm,22.0s
ANWB  Willy Bob        36.93  14  P        P        08 53 35.2 -4.9
      comp=Z,7µmcomp=Z,226nm,1.0s
MTDJ  Mount Denham     37.09 349  IAmb     IAmb     08 54 00.3
      comp=Z,94nm,0.9s
MTDJ  Mount Denham     37.09 349 ⇑P        P        08 53 41.3 -0.3
MTDJ  Mount Denham     37.09 349 eP        P        08 53 39.8 -1.8
MTDJ  Mount Denham     37.09 349  P        P        08 53 39.2 -2.4
      comp=Z,6µmcomp=Z,120nm,0.8s
SDDR  Presa de Saban   37.22 359  IAMs_20  IAMs_20  09 10 25.3
      comp=Z,13µm,21.0s
SDDR  Presa de Saban   37.22 359  P        P        08 53 39.5 -3.1
      comp=Z,6µmcomp=Z,2µmcomp=Z,44nm,0.6s
MTO3  Montecristo      37.54 329  IAmb     IAmb     08 54 01.4
      comp=Z,148nm,1.2s
SC01  Santiago de lo   37.65 360  IAmb     IAmb     08 53 58.4
      comp=Z,277nm,1.1s
ESQI  Esquipulas       37.67 329  IAmb     IAmb     08 54 09.1
      comp=Z,215nm,0.9s
GTBY  Guantanamo Bay   38.41 353  IAMs_20  IAMs_20  09 11 46.0
      comp=Z,7µm,20.0s
GTBY  Guantanamo Bay   38.41 353 ⇓P        P        08 53 51.7 -0.9
GTBY  Guantanamo Bay   38.41 353 eP        P        08 53 50.6 -2.0
GTBY  Guantanamo Bay   38.41 353  P        P        08 53 49.5 -3.1
      comp=Z,5µmcomp=Z,61nm,1.6s
RCC   Rio Carpintero   38.55 352 eP        P        08 53 50.5 -3.2
MASC  Masc             38.56 354 eP        P        08 53 52.3 -1.6
MARVS Santiago de Cu   38.58 352 eP        P        08 53 51.7 -2.3
APG   El Apazote       38.60 328  LR       LR       09 09 43.2
      comp=Z,931nm,18.6s,baz=260,slow=36
CHIV  Chivirico        38.63 351  IAmb     IAmb     08 54 26.8
      comp=Z,50nm,1.3s
PINC  Pinares de May   39.05 352 eP        P        08 53 53.5 -4.4
HLGC  Holguin          39.48 352 eP        P        08 54 00.9 -0.6
GRTK  Grand Turk       39.73 359  IAMs_20  IAMs_20  09 12 04.0
      comp=Z,10µm,19.0s
GRTK  Grand Turk       39.73 359 ⇑P        P        08 54 02.1 -1.5
GRTK  Grand Turk       39.73 359  P        P        08 53 58.7 -4.9
      comp=Z,6µmcomp=Z,320nm,0.9s
PETF  Flores           39.95 330  IAmb     IAmb     08 54 27.9
      comp=Z,182nm,1.0s
CCCC  Cccc             40.04 350 eP        P        08 54 05.0 -1.2
MGV   Manicaragua      41.36 347 eP        P        08 54 15.2 -1.9
TEIG  Tepich           42.19 335  P        P        08 54 23.5 -0.3
TEIG                              IAmb     IAmb     08 54 37.9
      comp=Z,121nm,0.8s
TEIG                              IAMs_20  IAMs_20  09 12 38.0
      comp=Z,8µm,20.0s
TEIG  Tepich           42.19 335 ⇓P        P        08 54 24.1 +0.3
TEIG  Tepich           42.19 335  P        P        08 54 21.4 -2.4
CAMR  Camarioca        42.59 345  IAmb     IAmb     08 54 42.5
      comp=Z,771nm,0.8s
CAMR  Camarioca        42.59 345 eP        P        08 54 28.6 +1.5
CMIG  Matias Romero    42.66 324  LR       LR       09 11 20.3
      comp=Z,6µm,21.1s,baz=145,slow=35
SOR   Soroa            42.77 343  IAmb     IAmb     08 54 45.1
      comp=Z,301nm,1.3s
SOR   Soroa            42.77 343 eP        P        08 54 25.2 -3.3
HOPE  Hope Point       44.28 152  P        P        08 54 41.6 +1.3
HOPE                              IAmb     IAmb     08 54 43.4
      comp=Z,118nm,0.8s
HOPE  Hope Point       44.28 152 i P       P        08 54 40.7 +0.3
HOPE  Hope Point       44.28 152 ⇑P        P        08 54 41.7 +1.3
HOPE  Hope Point       44.28 152  P        P        08 54 41.8 +1.4
TLIG  Tlapa            45.16 321 ⇓P        P        08 54 50.0 +2.0
ESPZ  Base Esperanza   45.86 172  P        P        08 54 52.7 -0.1
ESPZ                              IAmb     IAmb     08 55 12.9
      comp=Z,186nm,1.2s
PMSA  Palmer Station   46.49 176  LR       LR       09 14 04.2
      comp=Z,3µm,20.9s,baz=356,slow=35
PMSA  Palmer Station   46.49 176  P        P        08 54 58.4 +0.7
PMSA                              IAmb     IAmb     08 55 18.9
      comp=Z,299nm,1.4s
PMSA  Palmer Station   46.49 176 ⇓P        P        08 54 59.7 +2.0
PMSA  Palmer Station   46.49 176 eP        P        08 54 59.0 +1.3
UNM   Universidad Na   46.89 322  IAMs_20  IAMs_20  09 13 32.1
      comp=Z,6µm,20.0s
DWPF  Disney Wildern   47.48 347  P        P        08 55 06.6 +0.7
DWPF  Disney Wildern   47.48 347 ⇑P        P        08 55 06.5 +0.7
656A  Willston         48.93 346  IAMs_20  IAMs_20  09 16 54.5
      comp=Z,6µm,21.0s
456A  Hilliard         50.13 347  IAMs_20  IAMs_20  09 17 37.3
      comp=Z,6µm,21.0s
553A  Crawfordville    50.18 344  P        P        08 55 26.4 -0.1
553A                              IAMs_20  IAMs_20  09 17 04.0
      comp=Z,5µm,22.0s
BBSR  BB Station       50.86   6  P        P        08 55 30.3 -1.4
257A  Skidaway Islan   51.14 349  IAMs_20  IAMs_20  09 18 22.0
      comp=Z,5µm,21.0s
TIGA  Tifton           51.16 346  IAMs_20  IAMs_20  09 18 32.0
      comp=Z,7µm,20.0s
ZAIG  Zacatecas        51.55 321 ⇓P        P        08 55 39.3 +1.9
BRAL  Brewton          51.82 342 ⇓P        P        08 55 38.6 -0.3
RGRS  Roger Stewart    51.90 350  IAmb     IAmb     08 56 00.8
      comp=Z,1µm,1.5s
545A  Edgard           51.90 338  IAMs_20  IAMs_20  09 19 30.3
      comp=Z,7µm,21.0s
NHSC  New Hope         52.09 350  IAMs_20  IAMs_20  09 18 39.3
      comp=Z,5µm,21.0s
NHSC  New Hope         52.09 350 ⇑P        P        08 55 41.8 +0.9
154A  Montrose         52.18 347  IAMs_20  IAMs_20  09 19 07.0
      comp=Z,6µm,20.0s
152A  Waverly Hall     52.61 345  IAmb     IAmb     08 56 00.2
      comp=Z,134nm,1.0s
152A                              IAMs_20  IAMs_20  09 19 05.3
      comp=Z,5µm,21.0s
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346A  Big Creek Wild   52.78 340  IAmb     IAmb     08 56 00.8
      comp=Z,174nm,0.9s
Y58A  Scranton         52.79 351  IAMs_20  IAMs_20  09 19 24.9
      comp=Z,6µm,21.0s
Y57A  Sumter           53.02 350  IAMs_20  IAMs_20  09 19 17.8
      comp=Z,5µm,22.0s
GOGA  Godfrey          53.03 346  IAMs_20  IAMs_20  09 19 52.5
      comp=Z,5µm,20.0s
GOGA  Godfrey          53.03 346  IAmb     IAmb     08 56 02.4
      comp=Z,134nm,1.2s
GOGA  Godfrey          53.03 346 ⇑P        P        08 55 47.2 -0.6
X58A  Rowland          53.38 351  IAMs_20  IAMs_20  09 19 52.4
      comp=Z,7µm,22.0s
441A  DeRidder         53.55 336  IAmb     IAmb     08 56 07.1
      comp=Z,79nm,0.8s
LRAL  Lakeview Retre   53.56 343  IAmb     IAmb     08 56 13.8
      comp=Z,96nm,1.2s
LRAL  Lakeview Retre   53.56 343 ⇓P        P        08 55 50.6 -1.1
HODGE Hodges           53.57 348  IAmb     IAmb     08 56 06.6
      comp=Z,224nm,1.1s
Y52A  Lilburn          53.60 346  IAmb     IAmb     08 56 06.5
      comp=Z,104nm,1.1s
Y52A                              IAMs_20  IAMs_20  09 20 08.5
      comp=Z,5µm,21.0s
W59A  Clinton          53.85 352  IAmb     IAmb     08 56 14.1
      comp=Z,133nm,1.1s
VBMS  Vicksburg        53.89 339  IAmb     IAmb     08 56 14.7
      comp=Z,138nm,1.1s
HKT   Hockley          53.94 333 i P       P        08 55 55.4 +0.9
HKT                               pmax     pmax
      comp=Z,166nm,2.2s
HKT   Hockley          53.94 333 ⇓P        P        08 55 55.6 +1.1
Z47A  Carrollton       54.02 342  IAmb     IAmb     08 56 26.9
      comp=Z,136nm,1.1s
W57A  Gilead           54.06 350  IAMs_20  IAMs_20  09 20 01.6
      comp=Z,6µm,22.0s
Y49A  Blount Mountai   54.17 344  IAmb     IAmb     08 56 11.0
      comp=Z,75nm,1.1s
EF02  Christine        54.18 329  IAmb     IAmb     08 56 13.9
      comp=Z,103nm,0.8s
EF04  Eagle Ford 04    54.19 330  IAmb     IAmb     08 56 19.6
      comp=Z,109nm,0.9s
833A  Chaparral WMA,   54.23 328  IAmb     IAmb     08 56 16.9
      comp=Z,71nm,0.8s
KMSC  Kings Mountain   54.28 349  IAMs_20  IAMs_20  09 20 07.2
      comp=Z,6µm,22.0s
MLDN  Muldoon          54.34 331  IAmb     IAmb     08 56 13.0
      comp=Z,160nm,1.0s
BG3   Lake Jocassee    54.44 348  IAmb     IAmb     08 56 13.1
      comp=Z,147nm,1.0s
X51A  Calhoun          54.46 346  IAmb     IAmb     08 56 18.4
      comp=Z,156nm,1.2s
V58A  Windy Hill, Pi   54.56 351  IAMs_20  IAMs_20  09 19 53.8
      comp=Z,5µm,21.0s
143A  Socs Landing,    54.64 338  IAmb     IAmb     08 56 21.1
      comp=Z,293nm,1.5s
W52A  Murphy           54.75 347  IAmb     IAmb     08 56 15.2
      comp=Z,135nm,1.0s
W52A                              IAMs_20  IAMs_20  09 20 14.0
      comp=Z,5µm,20.0s
NATX  Nacogdoches      55.02 335  IAmb     IAmb     08 56 23.3
      comp=Z,144nm,1.1s
NATX  Nacogdoches      55.02 335 ⇑P        P        08 56 03.7 +1.3
V53A  Saluda           55.07 348  IAmb     IAmb     08 56 17.4
      comp=Z,107nm,1.0s
V53A                              IAMs_20  IAMs_20  09 22 51.1
      comp=Z,5µm,20.0s
HNDO  Hondo            55.17 329  IAmb     IAmb     08 56 20.0
      comp=Z,207nm,1.1s
W50A  Signal Mountai   55.17 345  IAmb     IAmb     08 56 18.5
      comp=Z,103nm,1.0s
W50A                              IAMs_20  IAMs_20  09 20 34.1
      comp=Z,4µm,21.0s
CPCT  Cooper Cave      55.23 346  IAmb     IAmb     08 56 24.0
      comp=Z,260nm,1.6s
TKL   Tuckaleechee C   55.26 347  LR       LR       09 20 20.2
      comp=Z,5µm,21.9s,baz=162,slow=37
TKL   Tuckaleechee C   55.26 347  IAmb     IAmb     08 56 18.5
      comp=Z,170nm,1.0s
TKL   Tuckaleechee C   55.26 347 ⇓P        P        08 56 03.0 -1.1
U56A  King             55.30 350  IAMs_20  IAMs_20  09 20 27.2
      comp=Z,5µm,22.0s
435B  Jarrell          55.43 332  IAmb     IAmb     08 56 28.7
      comp=Z,80nm,0.8s
T59A  Double "B" Far   55.53 353  IAmb     IAmb     08 56 25.9
      comp=Z,201nm,1.2s
ASCN  Ascension        55.53  87  P        P        08 56 05.7 -0.8
ASCN                              IAMs_20  IAMs_20  09 18 35.7
      comp=Z,6µm,22.0s
Z41A  Richland Creek   55.64 337  IAmb     IAmb     08 56 22.1
      comp=Z,171nm,1.1s
OXF   Oxford           55.65 341  IAmb     IAmb     08 56 21.4
      comp=Z,120nm,0.9s
OXF   Oxford           55.65 341 ⇓P        P        08 56 05.8 -1.0
PLAL  Pickwick Lake    55.69 343  IAmb     IAmb     08 56 32.6
      comp=Z,101nm,1.3s
U54A  Nelsons Funny    55.71 349  IAMs_20  IAMs_20  09 21 14.1
      comp=Z,4µm,21.0s
DRIO  Del Rio          55.74 328  IAmb     IAmb     08 56 23.6
      comp=Z,66nm,0.9s
T57A  Hurt             55.77 352  IAMs_20  IAMs_20  09 19 52.7
      comp=Z,7µm,22.0s
CCAR  Cane Creek       55.87 339  IAmb     IAmb     08 56 29.4
      comp=Z,131nm,1.0s
V48A  Smith Brothers   56.06 344  IAmb     IAmb     08 56 24.8
      comp=Z,115nm,1.0s
TZTN  Tazewell         56.07 347  IAmb     IAmb     08 56 29.2
      comp=Z,104nm,0.9s
TZTN                              IAMs_20  IAMs_20  09 23 22.9
      comp=Z,5µm,20.0s
TZTN  Tazewell         56.07 347 ⇑P        P        08 56 09.1 -0.7
BLA   Blacksburg       56.15 351  IAMs_20  IAMs_20  09 21 14.7
      comp=Z,6µm,22.0s
BLA   Blacksburg       56.15 351 ⇑P        P        08 56 10.8 +0.4
JCT   Junction City    56.20 330  IAmb     IAmb     08 56 27.5
      comp=Z,58nm,0.8s
JCT   Junction City    56.20 330 ⇓P        P        08 56 11.3 +0.4
WHTX  Lake Whitney,    56.40 333  IAmb     IAmb     08 56 32.6
      comp=Z,159nm,0.9s
Z38A  Mt. Pleasant     56.47 335  IAmb     IAmb     08 56 28.8
      comp=Z,129nm,0.8s
S57A  Dark Hollow, R   56.48 352  IAMs_20  IAMs_20  09 21 03.4
      comp=Z,4µm,22.0s
HPIG                   56.53 322 ⇓P        P        08 56 14.5 +1.0
R58B  Mineral          56.54 353  IAmb     IAmb     08 56 58.9
      comp=Z,116nm,1.1s
WVT   Waverly          56.70 343 ⇓P        P        08 56 12.7 -1.6
WVT   Waverly          56.70 343  P        P        08 56 13.0 -1.3
CBN   Corbin Frederi   56.73 354  IAmb     IAmb     08 56 34.5
      comp=Z,137nm,1.1s
T50A  Nancy            56.80 346  IAMs_20  IAMs_20  09 21 06.3
      comp=Z,6µm,21.0s
SLBS  Sierra La Lagu   56.84 316  P        P        08 56 17.3 +1.6
SLBS                              IAmb     IAmb     08 56 32.8
      comp=Z,73nm,0.9s
SLBS  Sierra La Lagu   56.84 316 ⇑P        P        08 56 17.7 +2.0
UALR  University of    56.84 339  IAmb     IAmb     08 56 35.7
      comp=Z,185nm,1.2s
S54A  Dingess, Beckl   56.87 350  IAMs_20  IAMs_20  09 22 01.7
      comp=Z,6µm,21.0s
SACV  Santiago Islan   56.96  57  P        P        08 56 15.2 -1.4
SACV                              IAmb     IAmb     08 56 34.5
      comp=Z,96nm,1.0s
SACV  Santiago Islan   56.96  57 ⇓P        P        08 56 15.8 -0.8
MIAR  Mount Ida        57.08 337  IAmb     IAmb     08 56 37.6
      comp=Z,122nm,0.8s
MIAR  Mount Ida        57.08 337 ⇑P        P        08 56 15.5 -1.6
S51A  Beattyville      57.13 348  IAmb     IAmb     08 56 31.8
      comp=Z,100nm,1.1s
S51A                              IAMs_20  IAMs_20  09 24 13.6
      comp=Z,5µm,20.0s
GNAR  Gosnell          57.18 341  IAmb     IAmb     08 56 37.9
      comp=Z,190nm,1.1s
TXAR  Lajitas Array    57.25 325  P        P        08 56 18.3 -0.2
      comp=Z,5.4nm,0.8s,baz=146,slow=8.0,SNR=56
TXAR                              LR       LR       09 19 48.0
      comp=Z,3µm,19.6s,baz=130,slow=35
      comp=Z,5.4nm,0.8s
TXAR  Lajitas Array    57.25 325  P        P        08 56 18.4 -0.1
TXAR  Lajitas Array    57.25 325  P        P        08 56 18.4 -0.1
FW06  Azle             57.28 333  IAmb     IAmb     08 56 43.0
      comp=Z,88nm,0.9s
T47A  Sharon Grove     57.32 344  IAMs_20  IAMs_20  09 25 14.8
      comp=Z,4µm,19.0s
LPIG  La Paz           57.37 316  LR       LR       09 16 10.9
      comp=Z,2µm,21.8s,baz=112,slow=31
PLPT  Palo Pinto       57.48 332  IAmb     IAmb     08 56 43.4
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      comp=Z,185nm,1.4s
R50A  Paris             57.90 347   IAMs_20 IAMs_20 09 24 38.5
      comp=Z,6µm,19.0s
ABTX  Abilene, Hawle    57.91 331   IAmb    IAmb    08 56 38.8
      comp=Z,102nm,0.7s
Q54A  Coxs Mills        57.95 351   IAMs_20 IAMs_20 09 22 56.4
      comp=Z,5µm,22.0s
P61A  Hammonton         57.97 356   IAMs_20 IAMs_20 09 22 00.9
      comp=Z,6µm,22.0s
SGCY  Sterling City     58.03 329   IAmb    IAmb    08 56 41.3
      comp=Z,73nm,0.9s
R49A  Shelbyville       58.09 346   IAMs_20 IAMs_20 09 22 39.5
      comp=Z,6µm,20.0s
Q52A  Bidwell           58.16 349   IAmb    IAmb    08 56 39.2
      comp=Z,172nm,1.1s
Q52A                                IAMs_20 IAMs_20 09 22 53.0
      comp=Z,5µm,21.0s
WCI   Wyandotte Cave    58.29 345   IAMs_20 IAMs_20 09 23 12.7
      comp=Z,4µm,22.0s
WCI   Wyandotte Cave    58.29 345 ⇓P       P      08 56 24.1 -1.4
WCI   Wyandotte Cave    58.29 345   P       P      08 56 24.2 -1.3
WTFS  Witchita Falls    58.35 333   IAmb    IAmb    08 56 46.3
      comp=Z,125nm,0.9s
MNHN  Monahans          58.37 328   IAmb    IAmb    08 56 42.8
      comp=Z,112nm,1.0s
MVL   Millersville      58.41 355   IAmb    IAmb    08 56 40.8
      comp=Z,190nm,1.3s
Q51A  Peebles           58.42 348   IAmb    IAmb    08 56 40.8
      comp=Z,160nm,1.2s
Q51A                                IAMs_20 IAMs_20 09 22 35.8
      comp=Z,5µm,21.0s
MCWV  Mont Chateau      58.46 352 ⇑P       P      08 56 27.1 +0.5
P53A  Whipple           58.53 350   IAMs_20 IAMs_20 09 23 24.6
      comp=Z,6µm,21.0s
APMT  Aspermont         58.72 331   IAmb    IAmb    08 56 44.5
      comp=Z,111nm,0.8s
HHAR  Hobbs             58.76 338   IAmb    IAmb    08 56 49.2
      comp=Z,158nm,1.2s
X34A  Smith Ranch, M    58.80 334   IAmb    IAmb    08 56 55.5
      comp=Z,172nm,1.1s
SN07  Snyder 07         58.88 330   IAmb    IAmb    08 56 45.3
      comp=Z,78nm,0.7s
ODSA  Odessa            58.89 328   IAmb    IAmb    08 56 53.7
      comp=Z,129nm,1.1s
BRNJ  Basking Ridge     58.96 356   IAmb    IAmb    08 56 44.5
      comp=Z,155nm,1.1s
MGMO  Mountain Grove    58.98 340   IAmb    IAmb    08 56 49.9
      comp=Z,114nm,1.1s
O54A  Avella            59.05 351   IAMs_20 IAMs_20 09 22 44.6
      comp=Z,5µm,21.0s
RLO   Rose Lookout      59.05 337   IAmb    IAmb    08 56 47.3
      comp=Z,160nm,1.1s
U38A  Gravette          59.06 338   IAmb    IAmb    08 57 28.3
      comp=Z,90nm,1.2s
VHRN  Van Horn          59.10 325   IAmb    IAmb    08 56 55.5
      comp=Z,70nm,1.1s
TUL3  Leonard           59.12 336   IAmb    IAmb    08 57 06.7
      comp=Z,102nm,0.9s
SSPA  Standing Stone    59.19 354   P       P      08 56 32.0 +0.3
SSPA  Standing Stone    59.19 354 ⇓P       P      08 56 31.9 +0.3
SSPA  Standing Stone    59.19 354   P       P      08 56 32.4 +0.7
O52A  Adamsville        59.21 350   IAMs_20 IAMs_20 09 23 22.8
      comp=Z,6µm,22.0s
PAL   Palisades         59.24 357   IAmb    IAmb    08 56 46.1
      comp=Z,190nm,1.3s
P48A  Milroy            59.27 347   IAMs_20 IAMs_20 09 23 13.6
      comp=Z,4µm,20.0s
WMOK  Wichita Mounta    59.31 333 ⇓P       P      08 56 32.4 -0.4
OKCSW OKLAHOMA CITY     59.33 335   IAmb    IAmb    08 57 15.2
      comp=Z,139nm,1.0s
DKNS  Dickens           59.37 331   IAmb    IAmb    08 56 48.7
      comp=Z,58nm,0.8s
CCM   Cathedral Cave    59.48 341   P       P      08 56 32.8 -1.0
CCM                                 IAmb    IAmb    08 56 54.6
      comp=Z,133nm,1.2s
CCM   Cathedral Cave    59.48 341   P       P      08 56 32.8 -1.0
CCM                                 pmax    pmax
      comp=Z,133nm,1.2s
CCM   Cathedral Cave    59.48 341 ⇓P       P      08 56 32.6 -1.1
ACSO  Alum Creek Sta    59.52 349   IAMs_20 IAMs_20 09 23 45.1
      comp=Z,4µm,22.0s
ACSO  Alum Creek Sta    59.52 349 ⇓P       P      08 56 33.1 -0.9
OK029 Liberty Lake      59.67 335   IAmb    IAmb    08 56 48.6
      comp=Z,119nm,0.9s
QUOK  Quay              59.70 336   IAmb    IAmb    08 56 51.5
      comp=Z,148nm,1.0s
N53A  Lisbon            59.73 351   IAMs_20 IAMs_20 09 23 04.6
      comp=Z,5µm,22.0s
O49A  Covington         59.74 348   IAMs_20 IAMs_20 09 23 15.6
      comp=Z,6µm,22.0s
P46A  Rosedale          59.83 345   IAMs_20 IAMs_20 09 26 07.4
      comp=Z,3µm,20.0s
RKT   Rikitea           59.97 254  eS       S      09 04 46.4 -0.9
      comp=Z,10µm,30.5s
RKT                                eSS      SS     09 08 41.1 -3.2
      comp=Z,8µm,35.2s
RKT                                eLQ      LQ      09 11 49.4
      comp=Z,10µm,42.2s
RKT                                eLR      LR      09 14 20.8
      comp=Z,29µm,30.2s
O48B  Farmland          59.98 347   IAMs_20 IAMs_20 09 26 36.3
      comp=Z,4µm,20.0s
MNTX  Cornudas Mount    60.02 326   IAmb    IAmb    08 57 01.1
      comp=Z,82nm,1.1s
MNTX  Cornudas Mount    60.02 326 ⇓P       P      08 56 36.9 -0.8
N51A  Ashland           60.09 350   IAmb    IAmb    08 56 52.2
      comp=Z,165nm,1.1s
T35A  Sooner Cattle     60.28 336   IAmb    IAmb    08 57 07.7
      comp=Z,110nm,1.0s
N49A  Columbus Grove    60.42 348   IAMs_20 IAMs_20 09 23 47.6
      comp=Z,5µm,21.0s
CROK  Carrier           60.50 335   IAmb    IAmb    08 57 06.1
      comp=Z,177nm,1.2s
MSTX  Muleshoe          60.50 329   IAmb    IAmb    08 56 57.0
      comp=Z,132nm,1.0s
SFIN  Lafayette         60.53 346   IAMs_20 IAMs_20 09 22 27.9
      comp=Z,5µm,22.0s
M52A  Chesterland       60.53 351   IAMs_20 IAMs_20 09 23 27.7
      comp=Z,4µm,22.0s
BINY  Binghamton        60.56 355   IAMs_20 IAMs_20 09 24 41.7
      comp=Z,4µm,20.0s
L61B  Northampton       60.64 358   IAmb    IAmb    08 56 55.8
      comp=Z,160nm,1.2s
L56A  Greenwood         60.64 354   IAMs_20 IAMs_20 09 24 03.6
      comp=Z,6µm,21.0s
HRV   Adam Dziewonsk    60.67 359   P       P      08 56 41.9 +0.1
HRV   Adam Dziewonsk    60.67 359   P       P      08 56 41.9 +0.1
HRV                                 pmax    pmax
      comp=Z,159nm,1.0s
HRV   Adam Dziewonsk    60.67 359 ⇑P       P      08 56 41.8  0.0
HRV   Adam Dziewonsk    60.67 359   P       P      08 56 41.6 -0.2
EPT   El Paso           60.68 325   IAMs_20 IAMs_20 09 22 14.2
      comp=Z,4µm,20.0s
N47A  Urbana            60.69 347   IAMs_20 IAMs_20 09 27 17.2
      comp=Z,4µm,18.0s
AMTX  Amarillo          60.73 331   IAmb    IAmb    08 57 05.4
      comp=Z,86nm,1.4s
OK038 West end E0370    60.78 334   IAmb    IAmb    08 57 08.1
      comp=Z,131nm,1.1s
K62A  Royalston         60.84 359   IAMs_20 IAMs_20 09 23 59.0
      comp=Z,6µm,22.0s
ERPA  Erie              60.90 352   IAMs_20 IAMs_20 09 24 23.5
      comp=Z,4µm,20.0s
ERPA  Erie              60.90 352 ⇓P       P      08 56 43.1 -0.3
TRY   Troy              60.95 357   IAMs_20 IAMs_20 09 22 54.0
      comp=Z,5µm,21.0s
NOKA  Waynoka           61.00 334   IAmb    IAmb    08 57 05.2
      comp=Z,108nm,1.2s
P40A  Paris             61.08 341   IAmb    IAmb    08 57 04.8
      comp=Z,96nm,0.9s
KAN08 Anthony NE Sta    61.12 335   IAmb    IAmb    08 57 06.1
      comp=Z,166nm,1.1s
PH02  Texas Public H    61.27 331   IAmb    IAmb    08 57 10.0
      comp=Z,220nm,1.9s
J61A  Chester           61.53 358   IAMs_20 IAMs_20 09 22 34.2
      comp=Z,6µm,22.0s
P38A  Dawn              61.64 340   IAmb    IAmb    08 57 03.9
      comp=Z,77nm,0.8s
AAM   Ann Arbor         61.65 349   IAmb    IAmb    08 57 11.5
      comp=Z,115nm,1.2s
J57A  Williamstown      61.77 356   IAMs_20 IAMs_20 09 26 13.5
      comp=Z,4µm,19.0s
J55A  Hilton            61.78 354   IAMs_20 IAMs_20 09 24 47.9
      comp=Z,6µm,21.0s
N41A  Harden Midland    61.81 343   IAMs_20 IAMs_20 09 27 35.8
      comp=Z,3µm,19.0s
HNH   Hanover           61.88 359   IAmb    IAmb    08 57 11.1
      comp=Z,171nm,1.3s
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L46A  Eue Claire        61.90 347   IAMs_20 IAMs_20 09 27 55.3
      comp=Z,3µm,19.0s
K50A  Casco             61.94 350   IAMs_20 IAMs_20 09 24 56.8
      comp=Z,6µm,22.0s
319A  Douglas           61.94 323   IAmb    IAmb    08 57 08.1
      comp=Z,86nm,0.9s
121A  Cookes Peak, D    61.96 325   IAmb    IAmb    08 57 10.7
      comp=Z,96nm,1.2s
HQIL  Hanson Quary C    62.05 345   IAMs_20 IAMs_20 09 24 39.3
      comp=Z,5µm,21.0s
MBO   M'Bour            62.11  62   IAMs_20 IAMs_20 09 20 57.3
      comp=Z,5µm,21.0s
KSU1  Kansas State U    62.23 337   IAmb    IAmb    08 57 20.4
      comp=Z,81nm,0.9s
LBNH  Lisbon            62.41 359 ⇓P       P      08 56 54.4 +0.8
L44A  Lake County Fo    62.43 346   IAmb    IAmb    08 57 13.1
      comp=Z,134nm,1.2s
L44A                                IAMs_20 IAMs_20 09 24 50.1
      comp=Z,5µm,20.0s
R32A  Long Quarter,     62.44 335   IAmb    IAmb    08 57 15.0
      comp=Z,147nm,1.2s
RTBA  Rita Blanca       62.50 331   IAmb    IAmb    08 56 58.4
      comp=Z,170nm,1.7s
VT1   Waterbury         62.52 358   IAmb    IAmb    08 57 08.4
      comp=Z,127nm,1.3s
N38A  Joes South For    62.60 341   IAMs_20 IAMs_20 09 28 03.6
      comp=Z,3µm,20.0s
H62A  Milan             62.73 360   IAMs_20 IAMs_20 09 22 56.0
      comp=Z,6µm,22.0s
J47A  Sunmer            62.78 348   IAMs_20 IAMs_20 09 25 21.0
      comp=Z,5µm,22.0s
LONY  Lake Ozonia       62.88 357 ⇓P       P      08 56 57.1 +0.5
K43A  Burlington        63.02 345   IAmb    IAmb    08 57 16.0
      comp=Z,152nm,1.0s
K43A                                IAMs_20 IAMs_20 09 25 40.0
      comp=Z,5µm,20.0s
I49A  Point Hope        63.10 350   IAMs_20 IAMs_20 09 25 32.8
      comp=Z,5µm,22.0s
ANMO  Albuquerque       63.11 327   LR      LR      09 23 53.5
      comp=Z,3µm,19.3s,baz=132,slow=36
ANMO  Albuquerque       63.11 327   P       P      08 56 58.2 -0.4
ANMO  Albuquerque       63.11 327ceP       P      08 56 59.4 +0.7
ANMO                                pmax    pmax
      comp=Z,130nm,2.5s
ANMO  Albuquerque       63.11 327 ⇑P       P      08 56 58.6  0.0
TASM  ASL Pad, Albuq    63.11 327   IAmb    IAmb    08 57 42.4
      comp=Z,37nm,1.0s
TASM  ASL Pad, Albuq    63.11 327   IAmb    IAmb    08 57 42.4
      comp=Z,35nm,1.0s
TASM  ASL Pad, Albuq    63.11 327   IAmb    IAmb    08 57 15.1
      comp=Z,35nm,1.0s
HAL   Halifax           63.12   6   IAmb    IAmb    08 56 59.1
      comp=Z,119nm,1.0s
WBO   Williamsburg      63.30 356   IAmb    IAmb    08 57 19.9
      comp=Z,122nm,1.0s
SADO  Sadowa            63.41 353   LR      LR      09 26 12.7
      comp=Z,3µm,20.1s,baz=188,slow=38
PKME  Peaks-Kenny Pk    63.43   1 ⇓P       P      08 57 00.8 +0.5
VNA3  Neumayer Olymp    63.44 162 ⇓P       P      08 57 00.5 +0.3
      comp=Z,99nm,0.8s
N35A  Tabor             63.45 339   IAmb    IAmb    08 57 21.7
      comp=Z,100nm,0.7s
TUC   Tucson            63.49 322   P       P      08 57 01.5 +0.4
TUC                                 IAMs_20 IAMs_20 09 24 13.4
      comp=Z,4µm,18.0s
TUC   Tucson            63.49 322   P       P      08 57 01.5 +0.4
TUC                                 pmax    pmax
      comp=Z,48nm,1.4s
TUC                                 MLR     MLR
      comp=Z,4µm,18.0s
TUC   Tucson            63.49 322 ⇑P       P      08 57 02.0 +0.9
TUC   Tucson            63.49 322   P       P      08 57 01.5 +0.4
SCIA  State Center      63.61 341   IAmb    IAmb    08 57 27.1
      comp=Z,79nm,0.8s
VNA1  Neumayer--Stat    63.66 161 ⇓P       P      08 57 02.4 +0.9
      comp=Z,116nm,0.9s
JFWS  Jewell Farm       63.70 344   IAMs_20 IAMs_20 09 24 53.8
      comp=Z,4µm,21.0s
JFWS  Jewell Farm       63.70 344 ⇓P       P      08 57 01.1 -1.1
I45A  Fountain          63.83 347   IAMs_20 IAMs_20 09 26 28.2
      comp=Z,3µm,20.0s
T25A  Trinidad          63.84 330   IAmb    IAmb    08 57 29.2
      comp=Z,79nm,1.2s
GAC   Glen Almond       64.01 356 ⇑P       P      08 57 07.3 +3.2
VNA2  Neumayer--Watz    64.02 161 ⇓P       P      08 57 03.8 -0.1
      comp=Z,123nm,1.0s,baz=273,slow=12
GBN   Guysborough       64.09   7   IAmb    IAmb    08 57 18.9
      comp=Z,190nm,1.1s
GLMI  Grayling          64.27 349 ⇑P       P      08 57 05.8  0.0
I42A  Draeger Farm,     64.28 345   IAmb    IAmb    08 57 26.3
      comp=Z,134nm,1.1s
214A  Organ Pipe Nat    64.43 321   IAmb    IAmb    08 57 11.3
      comp=Z,263nm,2.0s
TRQ   Mont Tremblant    64.48 357   IAmb    IAmb    08 57 27.6
      comp=Z,187nm,1.1s
H43A  Windswept, Lux    64.57 346   IAmb    IAmb    08 57 33.3
      comp=Z,115nm,1.0s
H43A                                IAMs_20 IAMs_20 09 26 15.8
      comp=Z,4µm,22.0s
KSCO  Kaye Shedlock'    64.57 333   IAmb    IAmb    08 57 34.3
      comp=Z,129nm,1.1s
I40A  Norwalk           64.71 344   IAMs_20 IAMs_20 09 25 21.5
      comp=Z,4µm,22.0s
E62A  Clayton Lake      64.78   1   IAMs_20 IAMs_20 09 24 53.3
      comp=Z,4µm,20.0s
SDCO  Great Sand Dun    64.85 330 ⇑P       P      08 57 10.3 +0.1
W18A  Petrified Fore    64.97 325   IAmb    IAmb    08 57 35.3
      comp=Z,74nm,1.0s
X16A  Lo Mia Camp, P    65.40 323   IAmb    IAmb    08 57 31.6
      comp=Z,75nm,1.0s
BATG  Bathurst New B    65.56   3   IAmb    IAmb    08 57 29.0
      comp=Z,145nm,1.0s
SNAA  Sanae             65.65 161 ⇓P       P      08 57 14.8 +0.2
      comp=Z,2µm,0.7s
SNAA  Sanae             65.65 161   P       P      08 57 14.6  0.0
      comp=Z,90nm,0.8s,baz=278,slow=6.7,SNR=206
SNAA                                LR      LR      09 24 05.9
      comp=Z,2µm,20.7s,baz=316,slow=34
      comp=Z,90nm,0.8s
SNAA  Sanae             65.65 161   IAmb    IAmb    08 57 16.3
      comp=Z,101nm,0.8s
SNAA  Sanae             65.65 161ceP       P      08 57 14.5 -0.1
SNAA                                pmax    pmax
      comp=Z,230nm,1.7s
SNAA  Sanae             65.65 161 ⇑P       P      08 57 14.4 -0.1
LMQ   La Malbaie        65.70   0   IAmb    IAmb    08 57 29.9
      comp=Z,112nm,1.1s
F42A  Maple Grove Fa    65.87 347   IAmb    IAmb    08 57 33.7
      comp=Z,68nm,1.1s
F42A                                IAMs_20 IAMs_20 09 26 48.4
      comp=Z,3µm,20.0s
VTX   Valle De La Tr    65.88 318   IAmb    IAmb    08 57 20.9
      comp=Z,206nm,2.0s
G40A  Rib Lake          65.89 345   IAmb    IAmb    08 57 18.7
      comp=Z,176nm,1.8s
G40A                                IAMs_20 IAMs_20 09 27 47.8
      comp=Z,4µm,21.0s
MVCO  Mesa Verde        65.91 327   IAmb    IAmb    08 58 01.7
      comp=Z,178nm,1.6s
MVCO  Mesa Verde        65.91 327 ⇓P       P      08 57 17.4 +0.5
OGNE  Ogallala          65.93 334   IAmb    IAmb    08 57 38.4
      comp=Z,137nm,1.1s
OGNE  Ogallala          65.93 334 ⇑P       P      08 57 17.4 +0.6
WUAZ  Wupatki           66.17 324   IAmb    IAmb    08 57 36.6
      comp=Z,117nm,1.2s
WUAZ                                IAMs_20 IAMs_20 09 26 23.3
      comp=Z,4µm,21.0s
WUAZ  Wupatki           66.17 324 ⇑P       P      08 57 19.6 +1.0
ECSD  EROS Data Cent    66.34 340   IAMs_20 IAMs_20 09 30 34.4
      comp=Z,3µm,19.0s
ECSD  EROS Data Cent    66.34 340 ⇑P       P      08 57 18.6 -0.7
GLA   Glamis            66.42 320   IAmb    IAmb    08 57 24.2
      comp=Z,197nm,1.9s
K30B  Basset            66.46 337   IAmb    IAmb    08 57 42.1
      comp=Z,158nm,1.0s
ISCO  Idaho Springs     66.55 331 ⇓P       P      08 57 21.5 +0.4
PV01  Paradox Valley    66.65 328   IAmb    IAmb    08 57 43.9
      comp=Z,73nm,1.0s
PV15  Paradox Valley    66.77 328   IAmb    IAmb    08 57 49.3
      comp=Z,106nm,1.0s
PV02  Paradox Valley    66.79 328   IAmb    IAmb    08 57 48.6
      comp=Z,123nm,1.2s
YUH   Yuha Desert       66.81 319   IAmb    IAmb    08 58 06.1
      comp=Z,106nm,1.4s
PV05  Paradox Valley    66.88 328   IAmb    IAmb    08 57 58.3
      comp=Z,89nm,1.3s
PV03  Paradox Valley    66.89 328   IAmb    IAmb    08 57 49.7
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      comp=Z,121nm,1.6s
PV18  Skein Mesa, Pa    66.91 328   IAmb    IAmb    08 57 49.1
      comp=Z,94nm,1.1s
PV12  Saucer Basin,     66.91 328   IAmb    IAmb    08 57 58.9
      comp=Z,278nm,1.6s
PV07  Paradox Valley    66.93 328   IAmb    IAmb    08 57 59.9
      comp=Z,105nm,1.4s
PV11  David Mesa, Pa    66.93 328   IAmb    IAmb    08 57 47.5
      comp=Z,114nm,1.4s
PV17  East Wray Mesa    66.96 328   IAmb    IAmb    08 57 27.2
      comp=Z,131nm,1.8s
PV16  Nyswonger Mesa    66.96 328   IAmb    IAmb    08 58 22.3
      comp=Z,79nm,1.3s
PV19  Morning Glory     67.00 328   IAmb    IAmb    08 57 59.8
      comp=Z,77nm,1.1s
PV20  West Nyswonger    67.01 328   IAmb    IAmb    08 57 48.0
      comp=Z,78nm,1.0s
PV04  Paradox Valley    67.02 328   IAmb    IAmb    08 57 49.3
      comp=Z,79nm,1.3s
CBX   Cerro Bola        67.05 319   IAmb    IAmb    08 57 47.0
      comp=Z,87nm,1.0s
PV22  Blue Mesa, Par    67.07 328   IAmb    IAmb    08 57 28.0
      comp=Z,92nm,1.4s
PV23  Carpenter Ridg    67.12 328   IAmb    IAmb    08 57 50.6
      comp=Z,90nm,1.2s
PV21  Cone Mtn., Par    67.19 328   IAmb    IAmb    08 58 02.9
      comp=Z,177nm,1.7s
BAR   Barrett           67.30 319   IAmb    IAmb    08 57 47.2
      comp=Z,80nm,1.0s
U15A  North Rim         67.34 324   IAmb    IAmb    08 57 46.5
      comp=Z,78nm,1.1s
TROLL Troll, Antarti    67.36 161 ⇓P       P      08 57 26.2 +0.5
      comp=Z,3µm,0.8s
E38A  The Farm, Brul    67.48 344   IAmb    IAmb    08 57 46.8
      comp=Z,282nm,1.7s
E38A                                IAMs_20 IAMs_20 09 28 48.8
      comp=Z,3µm,20.0s
BORC  Borrego Spring    67.54 319   IAmb    IAmb    08 57 50.9
      comp=Z,104nm,1.3s
HMU   Henry Mountain    67.62 327   IAmb    IAmb    08 57 54.5
      comp=Z,190nm,1.3s
DPP   Dos Picos Cty     67.68 319   IAmb    IAmb    08 57 46.1
      comp=Z,91nm,1.2s
CPE   Camp Elliot       67.71 319   IAmb    IAmb    08 57 46.3
      comp=Z,100nm,1.4s
SUSD  Miller            67.76 338   IAmb    IAmb    08 57 53.4
      comp=Z,243nm,1.4s
SUSD                                IAMs_20 IAMs_20 09 31 28.0
      comp=Z,3µm,22.0s
PMD   Palm Desert       67.77 320   IAmb    IAmb    08 58 05.7
      comp=Z,130nm,1.7s
BELC  Belle Mtn. Jos    67.78 320   IAmb    IAmb    08 57 53.7
      comp=Z,198nm,2.0s
PFO   Pinyon Flats O    67.79 320   LR      LR      09 24 17.7
      comp=Z,2µm,21.6s,baz=134,slow=33
PFO   Pinyon Flats O    67.79 320   P       P      08 57 30.0 +1.1
PFO                                 IAmb    IAmb    08 58 06.0
      comp=Z,191nm,1.8s
PFO   Pinyon Flats O    67.79 320 i P       P      08 57 30.3 +1.4
PFO                                 pmax    pmax
      comp=Z,170nm,2.2s
DANC  Danby, Needles    67.84 321   IAmb    IAmb    08 57 47.2
      comp=Z,88nm,0.9s
DNR   Dunn Ranch,Anz    67.87 320   IAmb    IAmb    08 57 50.6
      comp=Z,89nm,1.0s
HAYD  Hayden            67.88 331   IAmb    IAmb    08 57 56.6
      comp=Z,132nm,1.5s
TAOE  Nuku Hiva Isla    67.94 268  eP       P      08 57 26.5 -3.7
      comp=Z,169nm,1.2s
TAOE                               eS       S      09 06 22.8 -3.9
      comp=Z,2µm,26.3s
TAOE                               eSS      SS     09 10 49.8 +0.5
      comp=Z,2µm,29.5s
TAOE                               eLR      LR      09 17 56.9
      comp=Z,8µm,30.6s
O20A  White River Ci    68.04 330   IAmb    IAmb    08 57 57.2
      comp=Z,110nm,1.2s
O20A                                IAMs_20 IAMs_20 09 26 12.2
      comp=Z,3µm,21.0s
KNB   Kanab             68.06 325   IAmb    IAmb    08 57 58.3
      comp=Z,177nm,1.2s
PKCU  Pink Cliffs       68.09 325   IAmb    IAmb    08 58 07.2
      comp=Z,174nm,1.5s
DRLN  Deer Lake         68.41   9   IAmb    IAmb    08 57 46.5
      comp=Z,145nm,1.0s
DRLN  Deer Lake         68.41   9 ⇓P       P      08 57 31.2 -1.0
MTPC  Mountain Pass     68.53 322   IAmb    IAmb    08 57 53.5
      comp=Z,129nm,1.8s
Q16A  Castle Valley     68.58 327   IAmb    IAmb    08 58 03.9
      comp=Z,138nm,1.5s
SZCU  Shurtz Canyon     68.62 325   IAmb    IAmb    08 58 11.9
      comp=Z,233nm,1.8s
P18A  Preston Nutter    68.64 328   IAmb    IAmb    08 57 56.8
      comp=Z,70nm,1.0s
EYMN  Ely               68.71 345   IAMs_20 IAMs_20 09 29 33.5
      comp=Z,4µm,19.0s
EYMN  Ely               68.71 345   IAmb    IAmb    08 57 54.5
      comp=Z,164nm,1.4s
EYMN  Ely               68.71 345 ⇓P       P      08 57 33.6 -0.5
CCUT  Cedar City        68.74 325   IAmb    IAmb    08 57 39.8
      comp=Z,93nm,1.0s
TBO   Thunder Bay       68.89 347   IAmb    IAmb    08 57 55.7
      comp=Z,191nm,1.5s
RDMU  Red Mountain      69.02 329   IAmb    IAmb    08 58 13.4
      comp=Z,171nm,1.7s
GSC   Goldstone, Bar    69.15 321   IAmb    IAmb    08 57 55.8
      comp=Z,187nm,1.7s
SHOC  Shoshone, Teco    69.24 322   IAmb    IAmb    08 58 58.7
      comp=Z,76nm,1.0s
RSSD  Black Hills       69.40 335   P       P      08 57 38.9 +0.1
RSSD  Black Hills       69.40 335   P       P      08 57 38.9 +0.1
RSSD                                pmax    pmax
      comp=Z,61nm,1.2s
RSSD  Black Hills       69.40 335   P       P      08 57 39.3 +0.6
DBIC  Dimbokro          69.43  75   P       P      08 57 37.5 -1.9
      comp=Z,69nm,0.7s,baz=265,slow=6.0,SNR=62
DBIC                                LR      LR      09 27 05.4
      comp=Z,5µm,19.3s,baz=266,slow=35
      comp=Z,69nm,0.7s
DBIC  Dimbokro          69.43  75   IAmb    IAmb    08 57 59.4
      comp=Z,283nm,1.6s
DBIC  Dimbokro          69.43  75 ⇑P       P      08 57 37.5 -1.9
BSUT  Blindstream Ca    69.58 328   IAmb    IAmb    08 58 02.6
      comp=Z,92nm,1.0s
CCCA  Chr Cany lake     69.63 321   IAmb    IAmb    08 58 01.5
      comp=Z,254nm,1.3s
QSM   Queen of Sheba    69.64 321   IAmb    IAmb    08 58 03.9
      comp=Z,75nm,1.1s
PSUT  Pine Spring       69.72 325   IAmb    IAmb    08 57 45.3
      comp=Z,91nm,0.9s
WSHM  Spangler Hills    69.76 321   IAmb    IAmb    08 58 01.9
      comp=Z,103nm,1.2s
WSHM                                IAMs_20 IAMs_20 09 25 30.4
      comp=Z,3µm,22.0s
LRMC  Laurel Mtn Rad    69.80 320   IAmb    IAmb    08 57 45.6
      comp=Z,148nm,1.7s
TPNV  Topopah Spring    69.95 322   IAmb    IAmb    08 57 57.2
      comp=Z,68nm,0.9s
TPNV  Topopah Spring    69.95 322 ⇑P       P      08 57 43.4 +1.2
FURC  Furnace Creek,    69.97 322   IAmb    IAmb    08 58 00.0
      comp=Z,134nm,1.1s
WCT   Wildcat Mounta    70.06 322   IAmb    IAmb    08 58 06.0
      comp=Z,82nm,1.1s
S11A  Rachel            70.14 323   IAmb    IAmb    08 58 02.4
      comp=Z,216nm,1.5s
AGMN  Agassiz Nation    70.20 342 ⇓P       P      08 57 42.6 -0.7
NVL   N'lazarevskaya    70.21 160  eP       P      08 57 47.4 +4.2
NVL                                e                09 00 22.9
NVL                                ePPP     PPP     09 02 05.4
NVL                                eS       S      09 06 56.6 +5.1
NVL                                eSS      SS     09 11 28.1 +6.5
NVL                                 pmax    pmax
      comp=Z,118nm,0.9s
NVL                                 MLR     MLR
      comp=Z,2µm,23.0s
TCUT  Toone Canyon      70.34 328   IAmb    IAmb    08 58 15.8
      comp=Z,322nm,1.8s
DUG   Dugway, Tooele    70.37 327   IAmb    IAmb    08 57 59.3
      comp=Z,69nm,0.9s
DUG   Dugway, Tooele    70.37 327 ⇑P       P      08 57 45.7 +0.9
ISA   Isabella, Lake    70.40 320   IAmb    IAmb    08 58 06.1
      comp=Z,87nm,1.2s
EOSO  Osorio            70.52  50   P       P      08 57 45.1 -0.8
R11B  Troy Canyon, C    70.54 324   IAmb    IAmb    08 58 04.5
      comp=Z,187nm,1.8s
GRAC  Grapevine Rang    70.63 322   IAmb    IAmb    08 58 14.2
      comp=Z,153nm,1.6s
CWC   Cottonwood Cre    70.68 321   IAMs_20 IAMs_20 09 26 12.7
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              comp=Z,3µm,22.0s
PDAR  Pinedale Array    70.71 331   P         P          08 57 46.7  -0.2
              comp=Z,8.7nm,0.8s,baz=144,slow=4.5,SNR=43
PDAR                                PKP2bc    P'P'bc     09 25 38.3  -1.6
              comp=Z,0.2nm,0.5s,baz=116,slow=3.4,SNR=3.6
PDAR                                LR        LR         09 30 56.7
              comp=Z,994nm,18.5s,baz=127,slow=38
              comp=Z,8.7nm,0.8s
PDAR  Pinedale Array    70.71 331   P         P          08 57 46.1  -0.8
BW06  Boulder Array     70.71 331  ⇓P         P          08 57 47.2  +0.3
HWUT  Hardware Ranch    70.79 329   IAMs_20   IAMs_20    09 28 18.9
              comp=Z,4µm,22.0s
HWUT  Hardware Ranch    70.79 329  ⇓P         P          08 57 47.7  +0.4
EPLO  Experimental L    70.87 344   IAmb      IAmb       08 58 06.4
              comp=Z,96nm,1.1s
TIN   Tinemaha, Big     71.18 321   IAmb      IAmb       08 58 11.6
              comp=Z,83nm,0.9s
TIN                                 IAMs_20   IAMs_20    09 23 31.0
              comp=Z,3µm,22.0s
QSPA  South Pole Qui    71.71 180   P         P          08 57 55.0  +2.5
              comp=Z,41nm,0.8s,baz=152,slow=1.9,SNR=107
QSPA                                LR        LR         09 28 20.9
              comp=Z,2µm,21.6s,baz=181,slow=35
              comp=Z,41nm,0.8s
QSPA  South Pole Qui    71.71 180  ⇑P         P          08 57 57.2  +4.6
QSPA  South Pole Qui    71.71 180   P         P          08 57 57.6  +5.1
ULM   Lac du Bonnet     71.97 343   P         P          08 57 53.0  -1.0
              comp=Z,27nm,0.5s,baz=147,slow=5.8,SNR=39
ULM                                 LR        LR         09 32 11.2
              comp=Z,2µm,20.2s,baz=144,slow=38
              comp=Z,27nm,0.5s
ELK   Elko              72.05 326   LR        LR         09 28 45.3
              comp=Z,4µm,20.9s,baz=140,slow=35
ELK   Elko              72.05 326   IAMs_20   IAMs_20    09 28 34.0
              comp=Z,4µm,20.0s
ELK   Elko              72.05 326  ⇑P         P          08 57 55.5  +0.5
PMOZ  Porto Moniz, M    72.12  45  eP         P          08 57 58.0  +2.5
PMOZ                               eLR        LR         09 20 50.8
PMOZ                               i IAMs_20  IAMs_20    09 32 28.8
              comp=Z,2µm,18.0s
LHV   Little Huntoon    72.14 322   IAmb      IAmb       08 58 16.9
              comp=Z,108nm,1.1s
NVAR  Mina Array Bea    72.15 322   P         P          08 57 56.3  +0.6
              comp=Z,16nm,0.8s,baz=149,slow=6.8,SNR=90
NVAR                                PKPPKP    P'P'df     09 25 44.5  +4.0
              comp=Z,1.1nm,1.0s,baz=253,slow=2.5,SNR=5.0
NVAR                                LR        LR         09 29 56.9
              comp=Z,2µm,19.2s,baz=130,slow=36
              comp=Z,16nm,0.8s
NVAR  Mina Array Bea    72.15 322   P         P          08 57 56.5  +0.9
PMPB  Monarch Peak      72.19 319   IAmb      IAmb       08 58 16.1
              comp=Z,256nm,1.5s
PMAR  Madeira           72.26  45  eP         P          08 57 57.1  +0.8
HULI  Fort Hunter Li    72.33 319   IAmb      IAmb       08 58 01.4
              comp=Z,228nm,1.2s
RLMT  Red Lodge         72.41 332   IAmb      IAmb       08 58 00.8
              comp=Z,113nm,1.2s
RLMT                                IAMs_20   IAMs_20    09 32 26.9
              comp=Z,3µm,21.0s
LKWY  Lake              72.49 331   IAmb      IAmb       08 58 12.3
              comp=Z,90nm,1.1s
LKWY                                IAMs_20   IAMs_20    09 34 12.9
              comp=Z,4µm,19.0s
YMP   Mirror Lake Pl    72.51 332   IAmb      IAmb       08 58 35.1
              comp=Z,102nm,1.1s
BBGB  Big Mountain B    72.57 319   IAmb      IAmb       08 58 26.5
              comp=Z,121nm,0.9s
YNE   Yellowstone No    72.65 332   IAmb      IAmb       08 58 12.6
              comp=Z,146nm,0.9s
YNR   Norris Junctio    72.73 331   IAmb      IAmb       08 58 13.0
              comp=Z,198nm,1.8s
SAO   San Andreas Ge    72.94 319  ⇑P         P          08 58 01.9  +1.8
TBI   Tubuai            73.01 251  eS         S          09 07 23.7  -1.6
              comp=Z,17µm,30.2s
TBI   Tubuai            73.01 251  eLR        LR         09 20 23.6
              comp=Z,70µm,28.2s
YHL   Hebgen Lake       73.06 331   IAmb      IAmb       08 58 05.6
              comp=Z,177nm,1.5s
SCHQ  Schefferville     73.07   2   P         P          08 58 00.3  -0.1
              comp=Z,53nm,0.9s,baz=184,slow=4.4,SNR=26
SCHQ                                LR        LR         09 31 58.6
              comp=Z,1µm,20.6s,baz=191,slow=37
              comp=Z,53nm,0.9s
DGMT  Dagmar            73.08 337   IAMs_20   IAMs_20    09 35 13.7
              comp=Z,2µm,19.0s
DGMT  Dagmar            73.08 337  ⇓P         P          08 58 01.5  +0.8
VAH   Vaihoa            73.29 259  eP         P          08 58 05.3  +2.6
              comp=Z,14nm,0.9s
MHC   Mount Hamilton    73.43 320   IAmb      IAmb       08 58 23.7
              comp=Z,326nm,2.0s
PMOR  Pomariorio Ree    73.60 259  eP         P          08 58 05.7  +1.2
              comp=Z,68nm,0.9s
PMOR  Pomariorio Ree    73.60 259  eLR        LR         09 20 31.6
              comp=Z,13µm,21.9s
PAHR  Pah Rah Range     73.63 323   IAmb      IAmb       08 58 08.9
              comp=Z,123nm,0.9s
HLID  Hailey            73.65 328  ⇑P         P          08 58 05.2  +0.9
BCYI  Bear Canyon       73.70 329   IAmb      IAmb       08 58 09.1
              comp=Z,123nm,1.5s
BOZ   Bozeman (W)       73.84 331  ⇑P         P          08 58 06.3  +0.9
DLMT  Dillon            74.11 331   IAmb      IAmb       08 58 35.2
              comp=Z,145nm,1.5s
DLMT                                IAMs_20   IAMs_20    09 31 21.5
              comp=Z,3µm,21.0s
TVO   Taravao           74.15 256  eP         P          08 58 11.4  +3.6
              comp=Z,46nm,1.4s
TVO                                eS         S          09 07 35.7  -2.8
              comp=Z,2µm,37.0s
TVO   Taravao           74.15 256  eLR        LR         09 20 53.3
              comp=Z,1µm,27.6s
MFID  Camas Ranch       74.26 327   IAmb      IAmb       08 58 12.3
              comp=Z,148nm,1.1s
MFID                                IAMs_20   IAMs_20    09 32 56.4
              comp=Z,3µm,19.0s
TIAR  Tiarei            74.29 256  eLR        LR         09 20 57.1
              comp=Z,3µm,23.2s
PAE   Paea              74.48 256  eP         P          08 58 14.2  +4.6
              comp=Z,25nm,1.2s
PAE                                eS         S          09 07 45.6  +3.5
              comp=Z,644nm,25.9s
PAE   Paea              74.48 256  eLR        LR         09 20 59.1
              comp=Z,728nm,26.9s
PPT2  Papeete2          74.50 256  eP         P          08 58 07.8  -2.0
              comp=Z,844nm,35.5s
PPT2  Papeete2          74.50 256  eP         P          08 58 13.6  +3.8
              comp=Z,38nm,1.3s
PPT2  Papeete2          74.50 256  ePP        PP         09 00 56.1  -0.6
              comp=Z,396nm,28.8s
PPT2                               eS         S          09 07 42.3  -0.1
              comp=Z,4µm,27.8s
PPT2  Papeete2          74.50 256  eLQ        LQ         09 17 48.8
              comp=Z,2µm,28.8s
PPT2                               eLR        LR         09 20 57.3
              comp=Z,5µm,28.2s
PPT2                               eLR        LR         09 20 58.7
              comp=Z,3µm,29.8s
PPT   Papeete           74.50 256   LR        LR         09 23 45.0
              comp=Z,2µm,19.1s,baz=114,slow=30
CVS   Carmenet Viney    74.56 320   IAmb      IAmb       08 58 28.4
              comp=Z,130nm,1.1s
ORV   Oroville          74.76 322   IAmb      IAmb       08 58 15.2
              comp=Z,132nm,1.1s
EGMT  Eagleton          74.89 334   IAmb      IAmb       08 58 13.0
              comp=Z,76nm,1.0s
EGMT  Eagleton          74.89 334  ⇓P         P          08 58 11.8  +0.4
WVOR  Wild Horse Val    75.05 325   IAMs_20   IAMs_20    09 32 51.4
              comp=Z,2µm,20.0s
WVOR  Wild Horse Val    75.05 325  ⇑P         P          08 58 13.3  +0.9
O03E  Paynes Creek      75.41 322   IAmb      IAmb       08 58 19.3
              comp=Z,75nm,0.9s
PLID  Pearl Lake        75.54 329   IAMs_20   IAMs_20    09 33 47.4
              comp=Z,3µm,20.0s
MSO   Missoula          75.82 331   IAmb      IAmb       08 58 21.1
              comp=Z,250nm,1.8s
MSO                                 IAMs_20   IAMs_20    09 35 46.9
              comp=Z,2µm,20.0s
MSO   Missoula          75.82 331  ⇓P         P          08 58 18.4  +1.6
BMO   Blue Mountains    76.03 328   IAmb      IAmb       08 58 21.8
              comp=Z,81nm,1.0s
BMO                                 IAMs_20   IAMs_20    09 32 07.3
              comp=Z,3µm,21.0s
BMO   Blue Mountains    76.03 328  ⇑P         P          08 58 18.2  +0.3
M03C  McCloud           76.23 323   IAmb      IAmb       08 58 22.5
              comp=Z,84nm,0.9s
KUQ   Kuujjuuaa         76.30   1   IAmb      IAmb       08 58 46.6
              comp=Z,233nm,1.7s
KHBM  Hayfork Bally     76.48 322   IAmb      IAmb       08 58 24.9
              comp=Z,128nm,0.9s
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K05A  Summer Lake       76.48 324   IAmb      IAmb       08 58 45.8
              comp=Z,203nm,1.4s
KMRM  Mail Ridge        76.49 321   IAmb      IAmb       08 58 25.3
              comp=Z,85nm,1.1s
F10A  Beach Ranch, E    76.78 329   IAmb      IAmb       08 58 50.6
              comp=Z,62nm,0.8s
YBH   Yreka Blue Hor    76.86 323   LR        LR         09 33 03.2
              comp=Z,99nm,19.8s,baz=112,slow=36
KMPM  Mount Pierce      76.86 321   IAmb      IAmb       08 58 27.3
              comp=Z,94nm,0.9s
K04D  Chiloquin, OR     76.89 324   IAmb      IAmb       08 58 26.9
              comp=Z,135nm,0.9s
KHMM  Horse Mountain    76.92 321   IAmb      IAmb       08 58 27.5
              comp=Z,71nm,0.9s
JCC   Jacoby Creek,     77.06 321   IAmb      IAmb       08 58 41.8
              comp=Z,74nm,1.0s
PINE  Pine Mountain     77.21 325   IAmb      IAmb       08 58 29.3
              comp=Z,106nm,0.9s
KRPM  Rodgers           77.27 322   IAmb      IAmb       08 58 29.6
              comp=Z,159nm,1.2s
J04A  Umpqua Nationa    77.49 324   IAmb      IAmb       08 58 43.7
              comp=Z,104nm,0.7s
KSXB  Camp Six Broad    77.60 322   IAmb      IAmb       08 58 31.2
              comp=Z,85nm,1.0s
E09A  Wood Farm, Sta    77.61 329   IAmb      IAmb       08 58 30.4
              comp=Z,88nm,1.3s
FFC   Flin Flon         77.67 342   P         P          08 58 26.5  -0.4
FFC   Flin Flon         77.67 342   IAMs_20   IAMs_20    09 35 06.9
              comp=Z,3µm,22.0s
FFC   Flin Flon         77.67 342   P         P          08 58 26.5  -0.4
FFC                                 pmax      pmax
              comp=Z,39nm,1.1s
FFC                                 MLR       MLR
              comp=Z,3µm,22.0s
FFC   Flin Flon         77.67 342   P         P          08 58 26.2  -0.6
I05D  Terrebonne, OR    77.79 325   IAmb      IAmb       08 58 32.3
              comp=Z,103nm,0.8s
TORD  Torodi Ar. Bea    77.85  72   P         P          08 58 27.0  -1.8
              comp=Z,100nm,0.9s,baz=278,slow=3.1,SNR=51
TORD                                LR        LR         09 32 17.1
              comp=Z,9µm,18.3s,baz=246,slow=35
              comp=Z,100nm,0.9s
TORD  Torodi Ar. Bea    77.85  72   P         P          08 58 26.9  -1.8
TORD                                IAmb      IAmb       08 58 28.6
              comp=Z,91nm,0.9s
WIFE  Three Sisters-    77.86 325   IAmb      IAmb       08 58 31.0
              comp=Z,55nm,0.8s
G06A  Carlson Farm,     78.01 326   IAmb      IAmb       08 58 33.7
              comp=Z,256nm,2.0s
K02D  Willamette Mer    78.02 323   IAmb      IAmb       08 58 33.5
              comp=Z,349nm,1.8s
KBO   Bosley Butte      78.04 322   IAmb      IAmb       08 58 48.4
              comp=Z,100nm,1.2s
F07A  Phinny Hill Vi    78.08 327   IAmb      IAmb       08 58 34.3
              comp=Z,118nm,1.3s
TIO   Tiouine           78.15  52   P         P          08 58 30.2  -0.1
HAWA  Hanford           78.22 328   IAmb      IAmb       08 58 34.4
              comp=Z,104nm,1.1s
NEW   Newport           78.35 330   LR        LR         09 37 56.0
              comp=Z,2µm,18.1s,baz=130,slow=39
D08A  Wollman Farm,     78.37 329   IAmb      IAmb       08 58 57.4
              comp=Z,118nm,1.6s
G05A  Wamic             78.37 326   IAmb      IAmb       08 58 56.6
              comp=Z,221nm,1.2s
J01E  Myrtle Point      78.47 323   IAmb      IAmb       08 58 49.4
              comp=Z,81nm,0.9s
WAH2  Wahluke Slope     78.48 328   IAmb      IAmb       08 58 35.7
              comp=Z,73nm,1.0s
E07A  Sunnyside         78.50 328   IAmb      IAmb       08 58 36.2
              comp=Z,103nm,1.2s
KEBM  Edson Butte       78.52 323   IAmb      IAmb       08 58 56.9
              comp=Z,116nm,1.1s
C09A  Chrisman Ranch    78.57 329   IAmb      IAmb       08 58 36.1
              comp=Z,104nm,1.1s
BUCK  Buck Mountain     78.59 324   IAmb      IAmb       08 58 36.1
              comp=Z,97nm,1.0s
HOOD  Mount Hood Mea    78.60 326   IAmb      IAmb       08 58 51.0
              comp=Z,87nm,0.9s
EPH   Ephrata           78.91 328   IAmb      IAmb       08 59 03.8
              comp=Z,134nm,1.4s
G04A  Mulino            78.97 325   IAmb      IAmb       08 58 49.4
              comp=Z,149nm,0.8s
I02E  Swisshome, OR     79.02 324   IAmb      IAmb       08 58 38.9
              comp=Z,87nm,1.0s
COR   Corvallis         79.02 325   P         P          08 58 36.1  +1.5
COR                                 IAmb      IAmb       08 58 39.1
              comp=Z,146nm,1.1s
COR   Corvallis         79.02 325   IAMs_20   IAMs_20    09 31 49.4
              comp=Z,2µm,20.0s
COR   Corvallis         79.02 325   P         P          08 58 36.1  +1.5
COR                                 pmax      pmax
              comp=Z,146nm,1.1s
AVE   Averroes          79.23  50   P         P          08 58 36.1  +0.1
AVE   Averroes          79.23  50   IAMs_20   IAMs_20    09 34 53.1
              comp=Z,2µm,19.0s
LTY   Liberty           79.38 328   IAmb      IAmb       08 58 40.6
              comp=Z,145nm,1.3s
G03D  McMinnville, O    79.40 325   IAmb      IAmb       08 59 06.4
              comp=Z,305nm,2.0s
VNDA  Vanda             79.55 190   P         P          08 58 38.5  +1.5
              comp=Z,5.6nm,0.8s,baz=134,slow=4.4,SNR=17
VNDA                                LR        LR         09 29 50.8
              comp=Z,1µm,18.4s,baz=137,slow=33
              comp=Z,5.6nm,0.8s
VNDA  Vanda             79.55 190   IAmb      IAmb       08 58 52.4
              comp=Z,156nm,1.9s
VNDA  Vanda             79.55 190   P         P          08 58 38.8  +1.7
F04D  Rainier, OR       79.82 326   IAmb      IAmb       08 59 08.1
              comp=Z,152nm,1.2s
SYO   Syowa Base        79.88 160⇑eP          P          08 58 38.8  -0.1
SYO   Syowa Base        79.88 160⇓ePcP        PcP        08 58 45.4  -1.0
SYO   Syowa Base        79.88 160⇑epP         pP         08 58 48.9  -2.4
RTC   Rabat Centre      79.98  49   P         P          08 58 39.8  -0.2
D05A  Enumclaw          80.00 327   IAmb      IAmb       08 58 43.6
              comp=Z,173nm,0.9s
F03A  Seaside           80.02 326   IAmb      IAmb       08 59 05.4
              comp=Z,98nm,1.1s
PFVI  Vila Bisbo        80.22  46   P         P          08 58 41.4  +0.1
PFVI  Vila Bisbo        80.22  46  eP         P          08 58 42.1  +0.8
PFVI                               i IAmb     IAmb       08 58 58.7
              comp=Z,202nm,1.1s
MORF  Marmelete         80.43  46  eP         P          08 58 43.4  +1.0
MORF                                IAmb      IAmb       08 58 44.5
              comp=Z,86nm,0.8s
MORF                               eS         S          09 08 48.6  +2.8
MORF  Marmelete         80.43  46  eP         P          08 58 43.4  +1.0
MORF                               i IAmb     IAmb       08 58 48.2
              comp=Z,208nm,1.7s
MORF  Marmelete         80.43  46  eP         P          08 58 43.4  +1.0
MORF                               eS         S          09 08 48.6  +2.8
RADR  Rader Ridge       80.46 326   IAmb      IAmb       08 58 46.7
              comp=Z,154nm,1.0s
PTEO  Sao Teotonio      80.51  45  eP         P          08 58 44.1  +1.3
PTEO                               i IAmb     IAmb       08 59 04.3
              comp=Z,412nm,1.4s
GNW   Green Mountain    80.68 327   IAmb      IAmb       08 59 11.7
              comp=Z,120nm,1.6s
LIS   Lisbon            80.85  44  eP         P          08 58 45.6  +1.0
LIS                                 IAmb      IAmb       08 58 48.1
              comp=Z,247nm,1.1s
LIS   Lisbon            80.85  44  eP         P          08 58 45.6  +1.0
WISH  Wishkah           80.89 326   IAmb      IAmb       08 59 29.3
              comp=Z,153nm,1.3s
PBDV  Barranco-do-Ve    80.89  46   P         P          08 58 43.1  -1.8
PBDV  Barranco-do-Ve    80.89  46  eP         P          08 58 45.2  +0.3
PBDV                               i IAmb     IAmb       08 58 50.5
              comp=Z,213nm,1.6s
PMAFR Mafra             80.89  44  eP         P          08 58 45.7  +0.9
PMAFR                              i IAmb     IAmb       08 59 04.5
              comp=Z,187nm,1.4s
MD01  Midelt array s    80.95  51   P         P          08 58 45.7  +0.2
MD31  MD31              80.95  51   IAmb      IAmb       08 59 06.4
              comp=Z,147nm,1.2s
IFR   Ifrane            81.00  50   P         P          08 58 44.9  -0.9
MESJ  Messejana         81.00  45  eP         P          08 58 46.3  +0.8
MESJ                                IAmb      IAmb       08 58 50.2
              comp=Z,58nm,1.9s
MESJ                               eS         S          09 08 54.8  +3.1
MESJ  Messejana         81.00  45  eP         P          08 58 46.1  +0.7
MESJ                               i IAmb     IAmb       08 58 51.4
              comp=Z,31nm,1.9s
MESJ  Messejana         81.00  45  eP         P          08 58 46.3  +0.8
MESJ                               eS         S          09 08 54.8  +3.1
PCVE  Castro Verde      81.02  45   P         P          08 58 45.5   0.0
PCVE  Castro Verde      81.02  45  eP         P          08 58 46.6  +1.1
PCVE                               i IAmb     IAmb       08 59 16.2
              comp=Z,108nm,1.8s
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MDT   Midelt            81.04  51   LR        LR         09 36 09.5
              comp=Z,2µm,18.1s,baz=254,slow=37
NLWA  Neilton Lookou    81.11 327   IAMs_20   IAMs_20    09 34 55.8
              comp=Z,4µm,22.0s
PVAQ  Vaqueiros         81.11  46  eP         P          08 58 46.8  +0.7
PVAQ                               i IAmb     IAmb       08 58 52.0
              comp=Z,125nm,2.0s
PVAQ                               eS         S          09 08 55.6  +2.8
PVAQ                               eLQ        LQ         09 20 23.5
PVAQ                               eLR        LR         09 25 33.8
PVAQ                               i IAMs_20  IAMs_20    09 32 26.3
              comp=Z,2µm,20.0s
MOE   Montemor          81.27  45  eP         P          08 58 47.3  +0.4
MOE                                i IAmb     IAmb       08 59 08.4
              comp=Z,130nm,1.1s
PBEJ  Beja              81.34  45  eP         P          08 58 47.8  +0.5
PBEJ                               i IAmb     IAmb       08 59 08.8
              comp=Z,93nm,1.2s
EGRO  El Granado        81.34  46   P         P          08 58 47.6  +0.4
B04A  Port Angeles      81.35 327   IAmb      IAmb       08 59 04.9
              comp=Z,79nm,1.0s
A04D  Lummi Island      81.37 328   IAmb      IAmb       08 59 04.5
              comp=Z,114nm,1.0s
IVI   Ivigtut           81.41  11   IAmb      IAmb       08 58 48.3
              comp=Z,102nm,0.9s
IVI   Ivigtut           81.41  11   P         P          08 58 46.7  -0.2
SUR   Sutherland        81.47 121   P         P          08 58 49.6  +1.2
SUR   Sutherland        81.47 121   P         P          08 58 49.2  +0.7
PSBE  So Bento          81.50  44  eP         P          08 58 48.8  +0.6
PSBE                               i IAmb     IAmb       08 58 53.8
              comp=Z,128nm,1.9s
PARRA Arraiolos         81.63  44  eP         P          08 58 49.3  +0.5
PARRA                              i IAmb     IAmb       08 59 09.0
              comp=Z,114nm,1.2s
PMTG  Montargil         81.64  44  eP         P          08 58 49.5  +0.7
PMTG                               i IAmb     IAmb       08 58 54.4
              comp=Z,153nm,2.1s
SFS   San Fernando      81.68  47   P         P          08 58 50.2  +1.1
PGC   Sidney            81.70 328   IAmb      IAmb       08 58 52.9
              comp=Z,97nm,1.1s
CNIL  Conil             81.74  47   P         P          08 58 50.2  +0.8
FRB   Frobisher Bay     81.96   1   P         P          08 58 49.9   0.0
              comp=Z,36nm,1.0s,baz=163,slow=7.7,SNR=4.9
FRB                                 LR        LR         09 34 12.8
              comp=Z,1µm,21.7s,baz=178,slow=35
              comp=Z,36nm,1.0s
PESTR Estremoz          81.96  45   P         P          08 58 50.2  -0.4
PESTR Estremoz          81.96  45   IAmb      IAmb       08 59 11.3
              comp=Z,92nm,1.0s
PESTR Estremoz          81.96  45  eP         P          08 58 51.2  +0.7
PESTR                              i IAmb     IAmb       08 58 55.2
              comp=Z,138nm,2.2s
PSARD Sardoal           81.97  44  eP         P          08 58 51.1  +0.6
PSARD                              i IAmb     IAmb       08 58 55.7
              comp=Z,128nm,2.3s
PBAR  Barrancos         81.97  45   P         P          08 58 50.3  -0.3
PBAR  Barrancos         81.97  45  eP         P          08 58 50.6  +0.1
PBAR                               i IAmb     IAmb       08 58 56.1
              comp=Z,92nm,1.7s
ECEU  Ceuta             81.98  48   P         P          08 58 50.6   0.0
PCAS  Casmilo, Conde    81.98  43  eP         P          08 58 51.0  +0.4
PCAS                               i IAmb     IAmb       08 59 10.8
              comp=Z,104nm,1.2s
EMIN  Mina Concepcio    82.01  46   P         P          08 58 51.3  +0.5
LLLB  Lillooet          82.22 330   IAmb      IAmb       08 58 54.9
              comp=Z,99nm,1.1s
PMRV  Marv??o           82.38  44  eP         P          08 58 52.6  -0.1
PMRV                               i IAmb     IAmb       08 58 58.0
              comp=Z,50nm,2.2s
PMRV                               eS         SKSac      09 09 10.2  -0.2
PMRV                               eLR        LR         09 25 21.1
PMRV                               i IAMs_20  IAMs_20    09 36 33.9
              comp=Z,2µm,20.0s
EDA   Edea              82.42  83   IAMs_20   IAMs_20    09 31 31.2
              comp=Z,3µm,22.0s
TSUM  Tsumeb            82.43 108   LR        LR         09 33 28.9
              comp=Z,5µm,20.2s,baz=264,slow=34
TSUM  Tsumeb            82.43 108   P         P          08 58 53.5  -0.1
TSUM                                IAmb      IAmb       08 58 55.8
              comp=Z,119nm,1.0s
PTO   Porto             82.50  42  eP         P          08 58 53.8  +0.6
PTO                                i IAmb     IAmb       08 58 57.4
              comp=Z,183nm,1.8s
PCBR  Castelo Branco    82.54  44  eP         P          08 58 53.7  +0.2
PCBR                               i IAmb     IAmb       08 58 58.8
              comp=Z,91nm,1.9s
PVIS  Viseu             82.73  43  eP         P          08 58 54.7  +0.2
RAR   Rarotonga         82.78 250   LR        LR         09 26 32.4
              comp=Z,4µm,21.8s,baz=144,slow=29
MTE   Manteigas         82.79  43   IAmb      IAmb       08 59 14.5
              comp=Z,60nm,0.9s
MTE                                 IAMs_20   IAMs_20    09 31 56.3
              comp=Z,3µm,22.0s
MTE   Manteigas         82.79  43  eP         P          08 58 54.5  -0.4
MTE                                i IAmb     IAmb       08 59 15.9
              comp=Z,105nm,0.9s
MTE                                eS         S          09 09 10.6  +0.5
MTE                                eLQ        LQ         09 20 35.1
MTE                                eLR        LR         09 25 49.6
MTE                                i IAMs_20  IAMs_20    09 32 28.8
              comp=Z,2µm,20.0s
OZB   Mount Ozzard      82.94 327   IAmb      IAmb       08 58 58.7
              comp=Z,76nm,1.1s
PVRL  Vila Real         83.14  42  eP         P          08 58 57.1  +0.4
PVRL                               i IAmb     IAmb       08 59 01.7
              comp=Z,176nm,2.2s
POLO  Lamas de Olo      83.14  42  eP         P          08 58 56.7   0.0
POLO                               i IAmb     IAmb       08 59 01.9
              comp=Z,62nm,2.2s
PGAV  Gavieira, Arco    83.15  42  eP         P          08 58 56.9  +0.1
PGAV                               i IAmb     IAmb       08 59 04.0
              comp=Z,229nm,1.9s
PGAV                               eS         S          09 09 20.9  +7.2
PGAV                               eLR        LR         09 27 30.8
PGAV                               i IAMs_20  IAMs_20    09 33 33.6
              comp=Z,4µm,20.0s
PCAB  Cabril            83.17  42  eP         P          08 58 57.1  +0.3
PCAB                               i IAmb     IAmb       08 59 16.5
              comp=Z,182nm,1.1s
MVO   Moncorvo          83.52  43  eP         P          08 58 58.3  -0.3
MVO                                i IAmb     IAmb       08 59 03.9
              comp=Z,201nm,2.5s
MVO                                eS         S          09 09 18.1  +0.6
MVO                                eLQ        LQ         09 21 05.7
MVO                                eLR        LR         09 26 07.3
MVO                                i IAMs_20  IAMs_20    09 33 38.6
              comp=Z,3µm,20.0s
CBB   Campbell River    83.55 328   IAmb      IAmb       08 59 13.0
              comp=Z,57nm,1.0s
KOOLE Kule              83.66 112   IAmb      IAmb       08 59 01.9
              comp=Z,98nm,0.8s
PBRG  Braganca          84.04  42  eP         P          08 59 01.7  +0.4
PBRG                               i IAmb     IAmb       08 59 22.7
              comp=Z,210nm,1.2s
PAB   San Pablo         84.48  45   P         P          08 59 03.9  +0.3
PAB   San Pablo         84.48  45   P         P          08 59 03.9  +0.3
PAB                                 pmax      pmax
              comp=Z,185nm,1.1s
ESDC  Sonseca Array     84.80  45   P         P          08 59 05.3  +0.2
              comp=Z,40nm,1.0s,baz=251,slow=5.7,SNR=81
ESDC                                LR        LR         09 34 43.9
              comp=Z,2µm,19.5s,baz=249,slow=34
              comp=Z,40nm,1.0s
ESDC  Sonseca Array     84.80  45   P         P          08 59 05.5  +0.3
ESBB  Sonseca Array     84.80  45   IAmb      IAmb       08 59 25.9
              comp=Z,137nm,1.1s
BLKN  Baker Lake        84.83 349   IAmb      IAmb       08 59 25.4
              comp=Z,84nm,1.2s
TAM   Tamanrasset       84.88  64   IAmb      IAmb       08 59 07.5
              comp=Z,105nm,1.0s
TAM   Tamanrasset       84.88  64   P         P          08 59 06.3  +0.2
GRTLG Ghanzi            85.05 111  i P        P          08 59 06.5  -0.5
PHPEN Phepeng           85.22 115   IAmb      IAmb       08 59 09.0
              comp=Z,89nm,1.0s
KGCAE Kacgae            85.47 112  i P        P          08 59 08.8  -0.3
CART  Cartagena         85.87  48   P         P          08 59 10.1  -0.4
XAUDM Khaudum           86.02 108   IAmb      IAmb       08 59 19.0
              comp=Z,70nm,1.1s
BBB   Bella Bella       86.24 329   P         P          08 59 12.8  +0.9
              comp=Z,17nm,0.8s,baz=359,slow=6.3,SNR=3.4
BBB                                 LR        LR         09 41 38.0
              comp=Z,967nm,20.4s,baz=134,slow=38
              comp=Z,17nm,0.8s
BOSA  Boshof            86.26 119   P         P          08 59 13.1  +0.2
              comp=Z,21nm,1.0s,baz=268,slow=6.5,SNR=11
BOSA                                LR        LR         09 34 17.2
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             comp=Z,4µm,21.9s,baz=256,slow=33
             comp=Z,21nm,1.0s
SKOMA Sekoma           86.45 115 i P       P         08 59 13.8  -0.1
SFJD  Kangerlussuaq    86.49   8   P       P         08 59 12.5  -0.3
             comp=Z,36nm,0.9s,baz=191,slow=6.4,SNR=8.6
SFJD                               LR      LR        09 36 39.9
             comp=Z,1µm,21.6s,baz=204,slow=35
             comp=Z,36nm,0.9s
SFJD  Kangerlussuaq    86.49   8   P       P         08 59 12.9  +0.1
SFJD                               IAmb    IAmb      08 59 32.8
             comp=Z,75nm,1.1s
SFJD  Kangerlussuaq    86.49   8   P       P         08 59 12.9  +0.1
SFJD                               pmax    pmax
             comp=Z,75nm,1.1s
SFJD  Kangerlussuaq    86.49   8   P       P         08 59 12.2  -0.6
GMARE Gumare           86.50 109   IAmb    IAmb      08 59 16.3
             comp=Z,72nm,0.8s
MAKGR Makgori          86.78 116 i P       P         08 59 16.3  +0.8
VAL   Valentia         87.50  33   P       P         08 59 18.2  +0.2
EDDR  Deurdeur         87.50  51   P       pP        08 59 34.6  +3.3
MAW   Mawson           87.67 164   P       P         08 59 19.4  +0.7
             comp=Z,36nm,0.8s,baz=220,slow=6.3,SNR=37
MAW                                LR      LR        09 37 58.4
             comp=Z,2µm,21.5s,baz=226,slow=35
             comp=Z,36nm,0.8s
LBTB  Lobatse          87.72 115   LR      LR        09 34 57.0
             comp=Z,3µm,21.6s,baz=248,slow=33
LBTB  Lobatse          87.72 115   IAmb    IAmb      08 59 34.4
             comp=Z,75nm,1.4s
YKA   Yellowknife Ar   87.82 341   P       P         08 59 18.9  -0.5
             comp=Z,52nm,0.7s,baz=143,slow=4.2,SNR=287
YKA                                LR      LR        09 41 48.6
             comp=Z,3µm,20.1s,baz=122,slow=38
             comp=Z,52nm,0.7s
YKA   Yellowknife Ar   87.82 341   P       P         08 59 19.3  -0.1
YKA   Yellowknife Ar   87.82 341   P       P         08 59 19.3  -0.1
ILON  Igloolik, Nuna   87.96 356   IAmb    IAmb      08 59 22.8
             comp=Z,103nm,1.2s
ADJB  Djebel Djouab    88.47  51   P       pP        08 59 41.9  +5.9
LPHEP Lephephe         88.49 114 i P       P         08 59 23.5  -0.2
KHWEE KHWEE            88.59 113 i P       P         08 59 24.5  +0.2
ABSD  Ouled Sidi Bra   88.75  52   P       P         08 59 25.4  +0.9
AKET  Djebel Ketaf     88.76  51   P       pP        08 59 36.3  -1.1
IGLA  Glengowla, Co    88.77  32   P       P         08 59 24.1  +0.1
IWEX  Carrickbyrne,    89.53  33   P       P         08 59 26.7  -0.9
KSANE Kasane           89.70 109   IAmb    IAmb      08 59 44.5
             comp=Z,79nm,0.9s
KSANE Kasane           89.70 109 i P       P         08 59 29.7  +0.2
CKTS  El Kantara       89.78  53   P       P         08 59 30.4  +1.0
DSB   Dublin           90.19  33   P       P         08 59 29.7  -1.0
CJSR  Ain Djasser      90.22  52   P       P         08 59 31.6  +0.1
BROLN Tlhalogang       90.53 112 i P       P         08 59 32.9  -0.5
CTGD  Timgad           90.54  53   P       P         08 59 33.1  +0.2
IDGL  Inch Island, C   90.59  31   P       P         08 59 31.8  -0.7
ILTH  Belurgan, Co L   90.62  32   P       P         08 59 31.5  -1.2
CTEI  Djebel Teioual   90.64  52   P       P         08 59 33.8  +0.3
CASM  Ain Smara        90.78  52   P       P         08 59 33.5  -0.5
DLBC  Dease Lake       90.80 333   P       P         08 59 33.5  -0.1
             comp=Z,22nm,0.8s,baz=105,slow=6.7,SNR=27
DLBC                               LR      LR        09 46 42.5
             comp=Z,1µm,18.2s,baz=94,slow=40
             comp=Z,22nm,0.8s
CNGR  Negrine          90.89  54   P       P         08 59 34.7  +0.2
CBBAR Babar            90.89  53   P       P         08 59 36.2  +1.5
U33K  Whale Pass       90.90 330   IAMs_20 IAMs_20   09 41 01.1
             comp=Z,2µm,21.0s
CSGS  Sigus            90.90  52   P       P         08 59 35.3  +0.7
BORG  Borgarnes        91.06  19   LR      LR        09 37 37.1
             comp=Z,1µm,20.5s,baz=232,slow=34
BORG  Borgarnes        91.06  19 i P       P         08 59 35.4  +0.9
WRGLY Wrigley          91.22 339   IAmb    IAmb      09 00 37.4
             comp=Z,58nm,1.5s
WTLY  Watson Lake, Y   91.27 335   IAmb    IAmb      08 59 39.0
             comp=Z,39nm,0.9s
R33M  Jennings River   91.75 334   IAmb    IAmb      09 00 01.9
             comp=Z,32nm,1.1s
POGA  Pongola          92.05 120   IAmb    IAmb      09 00 00.2
             comp=Z,52nm,1.3s
KEST  Kesra            92.74  53   P       P         08 59 43.2   0.0
             comp=Z,4.2nm,0.6s,baz=295,slow=5.7,SNR=5.1
KEST                               LR      LR        09 43 08.6
             comp=Z,2µm,19.1s,baz=256,slow=37
             comp=Z,4.2nm,0.6s
EKA   Eskdalemuir Ar   92.87  32   P       P         08 59 42.4  -0.7
             comp=Z,8.9nm,1.0s,baz=248,slow=4.2,SNR=9.9
             comp=Z,8.9nm,1.0s
P33M  Teslin, Yukon    92.98 334   IAmb    IAmb      08 59 44.9
             comp=Z,53nm,1.6s
LSZ   Lusaka           93.28 107   P       P         08 59 46.6  +0.5
LSZ   Lusaka           93.28 107   P       P         08 59 46.0  -0.1
LSZ                                IAmb    IAmb      09 03 28.5
             comp=Z,55nm,1.9s
LSZ   Lusaka           93.28 107   P       P         08 59 46.0  -0.1
LSZ                                pmax    pmax
             comp=Z,55nm,1.9s
SUMG  Summit           93.32   9   P       P         08 59 45.2  -0.2
VSL   Villasalto       94.09  50   IAMs_20 IAMs_20   09 45 41.5
             comp=Z,2µm,19.0s
RES   Resolute Bay     94.22 354   P       P         08 59 48.4  -0.5
             comp=Z,4.3nm,0.8s,baz=141,slow=6.5,SNR=6.1
RES                                LR      LR        09 45 15.9
             comp=Z,1µm,20.3s,baz=162,slow=37
             comp=Z,4.3nm,0.8s
RES   Resolute Bay     94.22 354   IAmb    IAmb      09 00 09.4
             comp=Z,78nm,1.9s
TULEG Thule            94.80   0   IAmb    IAmb      09 00 06.0
             comp=Z,33nm,1.2s
DOU   Dourbes          94.84  39 dP        P         08 59 53.5  +1.2
DOU                              dpP       pP        09 00 04.3  -0.7
BMRD  Maredsous        95.02  39 dP        P         08 59 52.3  -0.9
SENIN Lac Senin/Sane   95.11  43   IAmb    IAmb      09 00 08.3
             comp=Z,52nm,1.9s
SENIN                              IAMs_20 IAMs_20   09 44 08.2
             comp=Z,2µm,20.0s
BHW   Baring Head      95.12 223   IAMs_20 IAMs_20   09 33 37.9
             comp=Z,3µm,20.0s
URZ   Urewera          95.14 227   LR      LR        09 34 12.3
             comp=Z,3µm,20.4s,baz=134,slow=30
RCHB  Rochefort        95.24  39 dP        P         08 59 53.2  -0.9
RCHB                             dpP       pP        09 00 06.9  +0.1
BGES  Gesves           95.24  39 dP        P         08 59 55.0  +0.8
RAO   Raoul Island     95.41 237   LR      LR        09 33 32.7
             comp=Z,2µm,20.4s,baz=106,slow=30
CASY  Casey            95.51 180   P       P         08 59 55.7  +0.5
CASY  Casey            95.51 180   IAMs_20 IAMs_20   09 43 41.7
             comp=Z,3µm,21.0s
WLF   Walferdange      95.60  39 ePdiff    P         08 59 55.7  -0.1
             baz=252,slow=4.2
WLF                              epPdiff   pP        09 00 09.5  +1.1
             baz=251,slow=4.5
WLF   Walferdange      95.60  39 dP        P         08 59 57.9  +2.0
ECH   Echery           95.69  41   IAmb    IAmb      09 00 15.7
             comp=Z,36nm,1.1s
ECH                                IAMs_20 IAMs_20   09 38 42.6
             comp=Z,2µm,20.0s
MEM   Membach          95.87  39 dP        P         08 59 58.9  +1.9
RPZ   Rata Peaks       96.33 220   LR      LR        09 33 07.2
             comp=Z,4µm,21.5s,baz=116,slow=29
BFO   Black Forest     96.46  41 ePdiff    P         08 59 58.8  -1.0
             baz=252,slow=4.2
TUE   Stuetta          96.47  43   IAMs_20 IAMs_20   09 45 05.3
             comp=Z,2µm,20.0s
TOZ   Tahuroa Road     96.51 227   IAMs_20 IAMs_20   09 36 51.0
             comp=Z,2µm,19.0s
H31M  Peel River       96.54 338   IAmb    IAmb      09 00 23.9
             comp=Z,30nm,1.2s
L29M  L29M             96.64 335   IAmb    IAmb      09 00 19.4
             comp=Z,32nm,1.1s
BUG   Bochum--Univer   96.92  38 ePdiff    P         09 00 01.3  -0.4
             baz=252,slow=4.2
BUG                              esPdiff   sP        09 00 21.0  +2.0
             baz=251,slow=4.5
DAVOX Davos/Dischmat   96.92  43   LR      LR        09 43 05.8
             comp=Z,2µm,19.4s,baz=255,slow=35
I30M  Mount Dempster   96.98 337   IAMs_20 IAMs_20   09 47 43.9
             comp=Z,3µm,21.0s
DAVA  Damuels          97.09  43 i P       Pdif      09 00 03.3  +0.4
             comp=Z,14nm,1.2s
FUORN Ofenpass-Fuorn   97.12  43   IAMs_20 IAMs_20   09 43 30.4
             comp=Z,2µm,20.0s
STU   Stuttgart        97.15  41   IAMs_20 IAMs_20   09 42 26.3
             comp=Z,2µm,20.0s
STU   Stuttgart        97.15  41 ePdiff    P         09 00 02.2  -0.7
             baz=252,slow=4.2
STU                              epPdiff   pP        09 00 16.0  +0.5
             baz=251,slow=4.5
VAE   Valguarnera      97.17  53   LR      LR        09 46 04.6
             comp=Z,2µm,18.8s,baz=281,slow=37
F31M  Tsiigehtchic     97.19 340   IAMs_20 IAMs_20   09 48 05.4
             comp=Z,2µm,20.0s
TNS   Taunus Mts       97.19  39 ePdiff    P         09 00 02.7  -0.3
             baz=252,slow=4.2
TNS                              esPdiff   sP        09 00 21.8  +1.4
             baz=251,slow=4.5
UBR   Ueberruh         97.36  42 ePdiff    P         09 00 03.7  -0.3
             baz=252,slow=4.2
A36M  Sachs Harbour    97.38 345   IAmb    IAmb      09 00 27.7
             comp=Z,25nm,0.8s
IBBN  Ibbenburen       97.50  37 ePdiff    P         09 00 04.1  -0.2
             baz=252,slow=4.2
IBBN                             epPdiff   pP        09 00 17.6  +0.6
             baz=251,slow=4.5
IBBN                             esPdiff   sP        09 00 22.8  +1.1
             baz=251,slow=4.5
KASTN Kahler Asten     97.51  39 ePdiff    P         09 00 03.9  -0.5
             baz=252,slow=4.2
KASTN                            epPdiff   pP        09 00 17.8  +0.6
             baz=251,slow=4.5
KASTN                            esPdiff   sP        09 00 23.3  +1.5
             baz=251,slow=4.5
FETA  Feichten         97.55  43 eP        P         09 00 03.6  -1.3
             comp=Z,8.2nm,1.0s
INK   Inuvik           97.57 340   P       P         09 00 04.2   0.0
             comp=Z,7.4nm,0.8s,baz=104,slow=8.9,SNR=11
INK                                LR      LR        09 46 12.2
             comp=Z,2µm,21.6s,baz=110,slow=37
             comp=Z,7.4nm,0.8s
TGL   Tana Glacier     97.59 332   IAMs_20 IAMs_20   09 45 11.2
             comp=Z,3µm,21.0s
EPYK  Eagle Plains     97.66 338   IAMs_20 IAMs_20   09 47 52.0
             comp=Z,3µm,20.0s
RETA  Reutte           97.72  43 i P       Pdif      09 00 05.8  +0.2
             comp=Z,12nm,1.1s
G30M  tAoh Zraii Nji   97.79 339   IAMs_20 IAMs_20   09 46 44.2
             comp=Z,2µm,21.0s
MOTA  Moosalm          97.89  43 eP        Pdif      09 00 06.8  +0.3
             comp=Z,14nm,1.1s
SQTA  Sankt Quirin     97.92  43 i P       P         09 00 06.1  -0.5
             comp=Z,17nm,1.0s
BCAR  Beaver Creek A   98.11 334   P       P         09 00 06.0  -0.9
L27K  Beaver Creek,    98.12 334   IAMs_20 IAMs_20   09 46 15.1
             comp=Z,2µm,19.0s
WATA  Walderalm        98.20  43 ePdiff    Pdif      09 00 07.9  +0.1
             comp=Z,26nm,2.0s
WTTA  Wattenberg       98.21  43 i Pdiff   P         09 00 06.9  -1.0
             comp=Z,14nm,1.0s
FUR   Furstenfeldbru   98.27  42 ePdiff    P         09 00 07.6  -0.3
             baz=252,slow=4.2
UBBA  Unterbreizbach   98.32  39 ePdiff    Pdif      09 00 08.0  +0.1
             baz=252,slow=4.2
UBBA                             epPdiff   pP        09 00 21.7  +1.0
             baz=251,slow=4.5
UBBA                             esPdiff   sP        09 00 26.7  +1.4
             baz=251,slow=4.5
M26K  Nabesna, AK      98.34 333   IAMs_20 IAMs_20   09 42 18.8
             comp=Z,3µm,22.0s
I28M  Miner Creek      98.41 337   IAMs_20 IAMs_20   09 48 17.5
             comp=Z,2µm,20.0s
GTTG  Gottingen        98.54  39 ePdiff    Pdif      09 00 09.0   0.0
             baz=252,slow=4.2
RETH  Rethem/Aller,    98.57  37 ePdiff    Pdif      09 00 09.5  +0.4
             baz=252,slow=4.2
ABTA  Abfaltersbach    98.62  44 i Pdiff   Pdif      09 00 10.0  +0.3
             comp=Z,15nm,1.0s
K27K  Chicken          98.63 335   IAmb    IAmb      09 00 12.1
             comp=Z,46nm,1.8s
GRA1  Grafenberg Arr   98.71  41   IAMs_20 IAMs_20   09 40 43.4
             comp=Z,2µm,22.0s
GRF   Grafenberg Arr   98.71  41 ePdiff    P         09 00 09.7  -0.1
             baz=252,slow=4.2
GRF                              eL        L         09 41 28.1
             comp=Z,2µm,22.0s
N25K  Chitina, Valde   98.72 332   IAMs_20 IAMs_20   09 48 47.9
             comp=Z,2µm,21.0s
JMIC  Jan Mayen        98.72  17   LR      LR        09 42 16.7
             comp=Z,493nm,20.6s,baz=238,slow=34
CLZ   Clausthal        98.87  38 ePdiff    Pdif      09 00 10.6  +0.1
             baz=252,slow=4.2
CLZ                              epPdiff   pP        09 00 23.9  +0.6
             baz=251,slow=4.5
CLZ                              esPdiff   sP        09 00 29.6  +1.7
             baz=251,slow=4.5
LESA  Schwarzleotal    98.94  43 i Pdiff   Pdif      09 00 11.1  +0.1
             comp=Z,10nm,1.2s
CUC   Castrocucco      98.95  51   IAMs_20 IAMs_20   09 49 17.3
             comp=Z,2µm,20.0s
I27K  Kandik River     99.11 337   IAMs_20 IAMs_20   09 48 60.0
             comp=Z,2µm,21.0s
ASSE  Asse, Remlinge   99.14  38 ePdiff    Pdif      09 00 12.1  +0.5
             baz=252,slow=4.2
ASSE                             epPdiff   pP        09 00 25.5  +1.2
             baz=251,slow=4.5
ASSE                             esPdiff   sP        09 00 30.5  +1.5
             baz=251,slow=4.5
MOX   Moxa             99.24  40 ePdiff    Pdif      09 00 11.4  -0.8
             baz=252,slow=4.2
MOX                              eL        L         09 41 31.7
             comp=Z,3µm,21.6s
H27K  Steamboat Moun   99.33 337   IAMs_20 IAMs_20   09 48 20.2
             comp=Z,2µm,20.0s
F28M  Old Crow         99.34 339   IAMs_20 IAMs_20   09 47 09.2
             comp=Z,2µm,20.0s
ROTZ  Rotzenmuhle      99.34  41 ePdiff    Pdif      09 00 12.7   0.0
             baz=252,slow=4.2
ROTZ                             esPdiff   sP        09 00 31.6  +1.5
             baz=251,slow=4.5
MANZ  Manzenberg       99.34  40 ePdiff    Pdif      09 00 12.8  +0.1
             baz=252,slow=4.2
MANZ                             epPdiff   pP        09 00 25.7  +0.2
             baz=251,slow=4.5
J26L  Joseph Creek     99.41 335   IAMs_20 IAMs_20   09 50 16.2
             comp=Z,2µm,20.0s
BSEG  Bad Segeberg     99.50  36 ePdiff    Pdif      09 00 13.0  -0.2
             baz=252,slow=4.2
NEUB  Neuenburg        99.51  39 ePdiff    Pdif      09 00 13.4   0.0
             baz=252,slow=4.2
PLN   Plauen           99.52  40 ePdiff    Pdif      09 00 13.4   0.0
             baz=252,slow=4.2
PLN                              esPdiff   sP        09 00 32.0  +1.2
             baz=251,slow=4.5
FLTG  Flechtingen      99.53  38 ePdiff    Pdif      09 00 13.1  -0.3
             baz=252,slow=4.2
WET   Wettzell         99.57  41 ePdiff    Pdif      09 00 13.5  -0.3
             baz=252,slow=4.2
WET                              epPdiff   pP        09 00 27.1  +0.6
             baz=251,slow=4.5
WET                              esPdiff   sP        09 00 32.7  +1.6
             baz=251,slow=4.5
PAX   Paxson           99.61 333   IAMs_20 IAMs_20   09 47 56.5
             comp=Z,2µm,20.0s
G27K  Doyon Strip      99.62 338   IAMs_20 IAMs_20   09 47 28.4
             comp=Z,2µm,21.0s
E28M  Babbage River    99.66 340   IAMs_20 IAMs_20   09 47 07.6
             comp=Z,2µm,22.0s
TANN  Tannenbergstha   99.69  40 ePdiff    Pdif      09 00 14.5  +0.3
             baz=252,slow=4.2
TANN                             epPdiff   pP        09 00 27.4  +0.4
             baz=251,slow=4.5
GEC2  GERESS Array S  100.01  42 ePdiff    Pdif      09 00 15.2  -0.6
             baz=252,slow=4.2
GEC2                             epPdiff   pPdif     09 00 28.3  -0.2
             baz=251,slow=4.5
GEC2                             esPdiff   sP        09 00 33.8  +0.7
             baz=251,slow=4.5
GERES GERESS Array B  100.01  42   P       Pdif      09 00 14.8  -1.0
             comp=Z,2.2nm,0.8s,baz=270,slow=3.5,SNR=9.9
GERES                              PP      PP        09 04 23.6  +2.0
             comp=Z,0.3nm,0.3s,baz=220,slow=6.1,SNR=4.6
GERES                              LR      LR        09 44 43.5
             comp=Z,1µm,19.9s,baz=246,slow=35
             comp=Z,2.2nm,0.8s
KHC   Kasperske Hory  100.01  42ceP        Pdif      09 00 15.1  -0.6
KHC                                pmax    pmax
             comp=Z,12nm,1.4s
KHC   Kasperske Hory  100.01  42 ePDIFF    Pdif      09 00 14.8  -0.9
KHC                              ex        x         09 11 08.8
KHC                                AMS     AMS       09 40 30.0
             comp=Z,2µm,19.8s
E27K  Coleen River    100.17 339   IAMs_20 IAMs_20   09 46 08.9
             comp=Z,3µm,22.0s
CLL   Collm           100.28  39   IAMs_20 IAMs_20   09 42 11.8
             comp=Z,2µm,20.0s
CLL   Collm           100.28  39 i P       Pdif      09 00 16.7  -0.1
CLL                                pmax    pmax
             comp=Z,205nm,3.0s
CLL   Collm           100.28  39 ePdiff    Pdif      09 00 16.8  +0.1
             baz=252,slow=4.2
CLL                              esPdiff   sP        09 00 36.1  +2.0
             baz=251,slow=4.5
CLL   Collm           100.28  39 i Pdif    Pdif      09 00 16.7  -0.1
             comp=Z,205nm,3.0s
CLL                              i pPdif   pP        09 00 29.9  +0.4
CLL                              i sPdif   sP        09 00 35.7  +1.5
CLL                              ePP       PP        09 04 22.0  -1.4
CLL                              ePPP      PPP       09 06 30.0
CLL                              eSKSac    SKSac     09 11 00.0  +7.9
CLL                              esSKSac   sSKSac    09 11 19.0  +4.8
CLL                              eSdif     Sdif      09 11 52.0  +2.8
CLL                              ePS       PS        09 13 21.0  -2.8
CLL                              ePPS      PPS       09 14 10.0
CLL                              eSS       SS        09 18 49.0  +4.0
CLL                              e(SSS)              09 23 09.0
CLL                                AMS     AMS       09 44 00.0
             comp=Z,2µm,20.5s
CLL                                R2                10 50 00.0
CLL                                R2                11 06 00.0
             comp=N,100nm,22.0s
CLL                                R2                11 06 00.0
             comp=E,200nm,23.2s
CLL                                R2                11 06 00.0
             comp=Z,300nm,19.6s
HSKC  Hora Svate Kat  100.34  40   AMS     AMS       09 41 50.0
             comp=Z,3µm,26.6s
CKRC  Cesky Krumlov   100.39  42 ex        x         09 11 14.8
CKRC                               AMS     AMS       09 39 40.0
             comp=Z,1µm,21.2s
DHY   Denali Highway  100.46 333   IAMs_20 IAMs_20   09 51 32.0
             comp=Z,2µm,20.0s
ZVC   Zvikov          100.48  41 ex        x         09 11 16.0
ZVC                                AMS     AMS       09 40 50.0
             comp=Z,2µm,21.2s
PRP   Porcupine Dome  100.57 336   IAMs_20 IAMs_20   09 49 52.8
             comp=Z,2µm,19.0s
GHO   Glory Hole Cre  100.71 332   IAMs_20 IAMs_20   09 50 04.5
             comp=Z,2µm,20.0s
BRG   Berggiesshubel  100.72  40 ePdiff    Pdif      09 00 19.0  +0.2
             baz=252,slow=4.2
BRG                              epPdiff   pP        09 00 32.4  +0.8
             baz=251,slow=4.5
HDA   Harding Lake    100.74 335   IAMs_20 IAMs_20   09 50 19.4
             comp=Z,2µm,21.0s
PRA   Prague          100.81  41   AMS     AMS       09 44 50.0
             comp=Z,2µm,18.0s
PRU   Pruhonice       100.85  41 ex        x         09 11 20.0
PRU                                AMS     AMS       09 41 50.0
             comp=Z,2µm,22.7s
F26K  Sheenjek River  100.86 338   IAMs_20 IAMs_20   09 49 07.2
             comp=Z,2µm,18.0s
PVCC  Panska Ves      101.01  40   AMS     AMS       09 42 00.0
             comp=Z,3µm,22.2s
CONA  Conrad Observa  101.14  43 i Pdiff   Pdif      09 00 21.2  +0.3
             comp=Z,6.8nm,1.3s
CCB   Clear Creek Bu  101.17 335   IAMs_20 IAMs_20   09 50 38.8
             comp=Z,2µm,20.0s
POKR  Poker Plat Res  101.18 335   IAMs_20 IAMs_20   09 48 39.0
             comp=Z,2µm,22.0s
RND   Reindeer        101.20 333   IAMs_20 IAMs_20   09 48 43.7
             comp=Z,3µm,21.0s
WRH   Wood River Hil  101.23 334   IAMs_20 IAMs_20   09 44 06.3
             comp=Z,2µm,21.0s
M22K  Willow          101.24 332   IAMs_20 IAMs_20   09 50 33.6
             comp=Z,2µm,20.0s
MCK   McKinley        101.34 334   IAMs_20 IAMs_20   09 49 42.3
             comp=Z,2µm,21.0s
C27K  Jago River      101.44 340   IAMs_20 IAMs_20   09 48 28.5
             comp=Z,2µm,22.0s
H24K  Noodor Dome     101.59 336   IAMs_20 IAMs_20   09 53 22.8
             comp=Z,2µm,19.0s
NEA2  Nenana          101.67 334   IAMs_20 IAMs_20   09 51 29.0
             comp=Z,2µm,20.0s
G24K  Hadweenzic Riv  101.73 337   IAMs_20 IAMs_20   09 47 58.3
             comp=Z,2µm,21.0s
UPC   Upice           101.90  41   AMS     AMS       09 41 00.0
             comp=Z,3µm,22.7s
SKT   Skwentna        101.95 332   IAMs_20 IAMs_20   09 52 07.3
             comp=Z,2µm,21.0s
I23K  Minto, Yukon-K  101.96 335   IAMs_20 IAMs_20   09 48 38.6
             comp=Z,2µm,21.0s
OSTC  Ostas           102.03  41   AMS     AMS       09 41 00.0
             comp=Z,2µm,22.7s
DPC   Dobruska-Polom  102.05  41   AMS     AMS       09 42 40.0
             comp=Z,2µm,20.8s
H23K  Yukon River     102.24 336   IAMs_20 IAMs_20   09 50 54.1
             comp=Z,2µm,19.0s
KRLC  Kraliky         102.27  41   AMS     AMS       09 46 00.0
             comp=Z,2µm,19.4s
PPLA  Purkeypile      102.50 332   IAMs_20 IAMs_20   09 53 29.8
             comp=Z,2µm,20.0s
E24K  Your Creek      102.54 338   IAMs_20 IAMs_20   09 51 22.7
             comp=Z,2µm,19.0s
G23K  Bananza Creek   102.69 336   IAMs_20 IAMs_20   09 49 14.6
             comp=Z,2µm,22.0s
AMPL  Ampelaki        102.71  53   P       Pdif      09 00 32.0  +4.1
O19K  Port Alsworth   102.77 329   IAMs_20 IAMs_20   09 55 48.0
             comp=Z,2µm,20.0s
ITM   Ithomi          102.86  55   P       Pdif      09 00 32.3  +3.7
TETR  Tetrakomo, Epi  102.86  53   P       Pdif      09 00 30.0  +1.3
PVO   Paravola        102.88  53   P       Pdif      09 00 33.0  +4.3
E23K  Chandalar       102.94 338   IAMs_20 IAMs_20   09 49 32.4
             comp=Z,2µm,19.0s
H22K  Ishtalitna Cre  102.98 335   IAMs_20 IAMs_20   09 50 47.5
             comp=Z,2µm,19.0s
N19K  Bonanza Creek   103.00 330   IAMs_20 IAMs_20   09 51 54.9
             comp=Z,2µm,18.0s
TOLK  Toolik Lake Re  103.09 338   IAMs_20 IAMs_20   09 51 21.5
             comp=Z,2µm,20.0s
EVR   Evrytania       103.16  53   P       Pdif      09 00 33.7  +3.6
ANX   Ano Chora       103.17  54   P       Pdif      09 00 32.4  +2.3
KLV   Kalavryta, Ach  103.23  54   P       Pdif      09 00 32.6  +2.2
SERG  Sergoula        103.24  54   P       Pdif      09 00 32.6  +2.3
K20K  Telida          103.44 333   IAMs_20 IAMs_20   09 52 28.7
             comp=Z,2µm,20.0s
H21K  Melozitna Rive  103.49 335   IAMs_20 IAMs_20   09 51 45.9
             comp=Z,2µm,20.0s
L19K  White Mountain  103.51 331   IAMs_20 IAMs_20   09 53 44.4
             comp=Z,2µm,19.0s
KTHA  Kythira Island  103.53  56   P       Pdif      09 00 34.2  +2.5
VLI   Veliai          103.54  56   P       Pdif      09 00 34.3  +2.6
AGG   Agios Georgios  103.58  53   P       Pdif      09 00 33.3  +1.5
N18K  Kilae Creek     103.64 330   IAMs_20 IAMs_20   09 55 24.1
             comp=Z,2µm,19.0s
PSZ   Piszkesteto     103.78  44   IAMs_20 IAMs_20   09 49 42.6
             comp=Z,1µm,19.0s
I20K  Naaghedeneel    103.96 334   IAMs_20 IAMs_20   09 51 08.4
             comp=Z,2µm,22.0s
G21K  Allakaket       103.98 336   IAMs_20 IAMs_20   09 52 33.9
             comp=Z,1µm,18.0s
F21K  Alatna River    104.14 337   IAMs_20 IAMs_20   09 49 47.1
             comp=Z,2µm,22.0s
N17K  Nushagak Hills  104.23 329   IAMs_20 IAMs_20   09 52 37.5
             comp=Z,2µm,20.0s
D22K  Ayikyak River   104.25 338   IAMs_20 IAMs_20   09 51 57.0
             comp=Z,2µm,21.0s
J19K  Poorman         104.27 333   IAMs_20 IAMs_20   09 48 49.4
             comp=Z,2µm,22.0s
L18K  Granite Mounta  104.36 331   IAMs_20 IAMs_20   09 52 01.8
             comp=Z,2µm,21.0s
M17K  Holitna River   104.53 330   IAMs_20 IAMs_20   09 55 41.4
             comp=Z,1µm,19.0s
E21K  Killik River    104.61 338   IAMs_20 IAMs_20   09 50 02.3
             comp=Z,2µm,22.0s
J18K  Innoko River    104.63 332   IAMs_20 IAMs_20   09 54 14.8
             comp=Z,2µm,20.0s
KKB   Krupnik         104.77  50   P       Pdif      09 00 39.5  +2.5
B22K  Teshekpuk Lake  104.84 340   IAMs_20 IAMs_20   09 48 22.6
             comp=Z,2µm,22.0s
KYMI  Kymi, Euboea I  104.85  54   P       Pdif      09 00 39.1  +1.7
H19K  Roundabout Mou  104.94 335   IAMs_20 IAMs_20   09 55 22.1
             comp=Z,2µm,19.0s
F20K  Avaraart Lake   104.96 336   IAMs_20 IAMs_20   09 50 36.6
             comp=Z,2µm,21.0s
VTS   Vitosha         105.00  50   P       Pdif      09 00 41.1  +2.8
M16K  Timber Creek    105.18 330   IAMs_20 IAMs_20   09 52 24.6
             comp=Z,2µm,21.0s
G19K  Purcell Mounta  105.31 335   IAMs_20 IAMs_20   09 55 22.9
             comp=Z,2µm,19.0s
FOMA  Nahampoana Res  105.44 123   IAMs_20 IAMs_20   09 44 17.5
             comp=Z,2µm,21.0s
L16K  Owhat River     105.55 330   IAMs_20 IAMs_20   09 55 51.4
             comp=Z,2µm,18.0s
N15K  Kwethluk River  105.58 329   IAMs_20 IAMs_20   09 55 49.2
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             comp=Z,2µm,20.0s
E19K  Redstone River    105.61 336    IAMs_20  IAMs_20  09 51 55.9
             comp=Z,2µm,22.0s
G18K  Tagagawik         105.90 335    IAMs_20  IAMs_20  09 53 18.6
             comp=Z,2µm,20.0s
O14K  Tigyukauivet M    106.02 328    IAMs_20  IAMs_20  09 55 40.7
             comp=Z,2µm,19.0s
D19K  Kuna River        106.12 337    IAMs_20  IAMs_20  09 51 37.4
             comp=Z,2µm,21.0s
H17K  Granite Mounta    106.27 334    IAMs_20  IAMs_20  09 52 59.1
             comp=Z,2µm,20.0s
CHOS  Chios island      106.31  54    P        Pdif     09 00 45.8 +1.8
RDO   Rodhopi           106.42  52    P        Pdif     09 00 46.4 +2.1
I17K  Unalakleet        106.45 333    IAMs_20  IAMs_20  09 56 39.1
             comp=Z,2µm,19.0s
KBS   Kingsbay          106.56  12    IAMs_20  IAMs_20  09 49 03.5
             comp=Z,2µm,22.0s
M14K  Bethel            106.59 329    IAMs_20  IAMs_20  09 52 43.8
             comp=Z,2µm,22.0s
K15K  Wolf Creek Mou    106.60 331    IAMs_20  IAMs_20  09 51 15.0
             comp=Z,2µm,21.0s
SMG   Samos             106.79  55    P        Pdif     09 00 48.6 +2.5
E18K  Tukpahlearik C    106.89 336    IAMs_20  IAMs_20  09 51 22.5
             comp=Z,2µm,21.0s
L14K  Kuka Creek        107.02 330    IAMs_20  IAMs_20  09 52 43.1
             comp=Z,1µm,21.0s
F17K  Baldwin Pennin    107.02 335    IAMs_20  IAMs_20  09 54 02.0
             comp=Z,1µm,20.0s
MLR   Muntele Rosu      107.43  47    IAMs_20  IAMs_20  09 55 51.5
             comp=Z,2µm,21.0s
J14K  Nanvaranak Lak    107.59 331    IAMs_20  IAMs_20  09 57 09.2
             comp=Z,2µm,19.0s
K13K  Kusilvak Mount    108.02 330    IAMs_20  IAMs_20  09 54 14.5
             comp=Z,1µm,19.0s
F15K  North Star Dit    108.33 334    IAMs_20  IAMs_20  09 57 00.8
             comp=Z,1µm,20.0s
ANM   Nome              108.55 333    IAMs_20  IAMs_20  09 56 40.8
             comp=Z,2µm,20.0s
C16K  Lisburne Hills    108.75 337    IAMs_20  IAMs_20  09 54 10.1
             comp=Z,2µm,22.0s
MILM  Milestii Mici     109.59  46⇓i P        Pdif     09 00 59.0 +0.7
             comp=Z,420nm,3.7s
TNA   Tin City          109.68 334    IAMs_20  IAMs_20  09 58 22.5
             comp=Z,2µm,20.0s
ISP   Isparta           109.69  56    IAMs_20  IAMs_20  09 50 01.5
             comp=Z,2µm,21.0s
MNK   Minsk             109.70  38  i P        Pdif     09 00 56.9 -1.7
MNK                                 i                   09 05 30.7
MNK                                 i PPP      PPP      09 07 49.2
MNK                                 i                   09 12 12.1
MNK                                 i SS       SS       09 20 55.7 +2.0
MNK                                 i SSS      SSS      09 25 01.3
MNK                                   MLR      MLR
             comp=Z,2µm,19.0s
MNK                                   MLR      MLR
             comp=N,2µm,19.0s
MNK                                   MLR      MLR
             comp=E,1µm,20.0s
P08K  Saint George I    110.13 324    IAMs_20  IAMs_20  09 57 44.5
             comp=Z,2µm,21.0s
KIEV  Kiev              110.21  42    IAMs_20  IAMs_20  09 51 16.0
             comp=Z,1µm,20.0s
AKASG Malin Array Be    110.22  42    PKiKP    PKiKP    09 05 02.0 -0.1
             comp=Z,1.8nm,0.8s,baz=269,slow=2.9,SNR=5.4
AKBB  Malin Array Si    110.22  42c i PKIKP    PKiKP    09 05 02.2  0.0
DZM   Mont Dzumac       111.20 237  e P        Pdif     09 01 09.5 +3.2
             comp=Z,131nm,38.4s
DZM   Mont Dzumac       111.20 237  e PP       PP       09 05 42.0 -2.4
             comp=Z,234nm,31.6s
DZM   Mont Dzumac       111.20 237  e LQ       LQ       09 33 21.3
             comp=Z,1µm,26.6s
DZM                                 e LR       LR       09 38 01.8
             comp=Z,4µm,22.1s
CSS   Mathiatis         111.53  59    IAMs_20  IAMs_20  09 54 44.5
             comp=Z,2µm,22.0s
APA   Apatity           112.25  24  i PKIKP    PKiKP    09 04 50.9  -15
APA                                 e                   09 05 54.4
BRTR  Keskin Array B    112.34  54    PKiKP    PKiKP    09 05 06.9 +0.1
             comp=Z,3.0nm,0.8s,baz=177,slow=4.9,SNR=11
SIM   Simferopol'       113.11  48  i PKIKP    PKiKP    09 05 18.8  +11
SIM                                   MLR      MLR
             comp=Z,707nm,16.2s
OBN   Obninsk           114.73  37⇑i PKIKP    PKPdf    09 05 10.4 -0.2
OBN                                 e                   09 05 21.2
OBN                                 i                   09 05 24.0
OBN                                 e                   09 06 13.0
OBN                                                     09 08 45.0
OBN                                 e                   09 11 58.6
OBN                                 i PPS      PPS      09 16 59.5
OBN                                 i SS       SS       09 22 06.1 +5.8
OBN                                   pmax     pmax
             comp=Z,46nm,1.7s
OBN                                   MLR      MLR
             comp=Z,2µm,20.0s
ANN   Anapa             115.46  49  i PKIKP    PKiKP    09 05 13.0 +0.7
ANN                                   pmax     pmax
             comp=Z,212nm,1.4s
KLMR  Klimovskoe        115.73  31  e PKIKP    PKiKP    09 05 11.3 -1.1
KLMR                                e                   09 15 48.1
KLMR                                  SP       SP       09 15 55.5 +4.4
KLMR                                  pmax     pmax
             comp=Z,16nm,1.0s
KLMR                                  MLR      MLR
             comp=Z,1µm,19.0s
LPSR  Galich'ya Gora    116.28  40  e PKIKP    PKPdf    09 05 13.4 -0.3
LPSR                                  pmax     pmax
             comp=Z,32nm,1.0s
VORR  Voronezh          116.51  41  e PKIKP    PKiKP    09 05 17.2 +3.1
VORR                                  pmax     pmax
             comp=Z,98nm,0.4s
VSR   Storozhevoye      116.51  41  e PKIKP    PKPdf    09 05 11.8 -2.4
VSR                                   pmax     pmax
             comp=Z,9.0nm,1.0s
VORD  Divnogorie        116.60  42  e PKIKP    PKPdf    09 05 12.6 -1.7
VORD                                  pmax     pmax
             comp=Z,8.0nm,1.0s
SOC   Sochi             117.09  50  i PKIKP    PKPdf    09 05 10.9 -4.6
SOC                                 e                   09 06 23.1
ERBR  Yeremizino-Bor    117.62  48  i PKIKP    PKiKP    09 05 16.6 +0.1
ERBR                                  pmax     pmax
             comp=Z,19nm,0.9s
LABN  Labinsk           117.81  49  i PKIKP    PKPdf    09 05 15.3 -1.6
LABN                                  pmax     pmax
             comp=Z,24nm,0.6s
VRH   Novokhopyorsk     118.11  41  e PKIKP    PKPdf    09 05 16.4 -0.8
VRH                                   pmax     pmax
             comp=Z,21nm,1.0s
KIV   Kislovodsk        119.24  49  i PKIKP    PKPdf    09 05 19.1 -0.7
KIV                                 e                   09 06 39.1
KIV                                 e PS       PS       09 16 26.7 -3.1
KIV                                 e SS       SS       09 23 00.8 +0.8
KIV                                   pmax     pmax
             comp=Z,13nm,1.1s
KIV                                   MLR      MLR
             comp=Z,636nm,22.0s
KBZ   Khabaz            119.40  50    PKP      PKPdf    09 05 19.9 -0.1
             comp=Z,23nm,0.9s,baz=202,slow=2.3,SNR=33
KBZ                                   PP       PP       09 06 42.4 +0.5
             comp=Z,5.0nm,0.9s,baz=322,slow=5.5,SNR=0.9
KBZ   Khabaz            119.40  50c i PKIKP    PKiKP    09 05 20.7 +0.7
RAYN  Ar Rayn           120.52  73             PKPdf    09 05 22.8  0.0
RAYN  Ar Rayn           120.52  73    PKIKP    PKPdf    09 05 22.8  0.0
RAYN                                  MLR      MLR
             comp=Z,3µm,22.0s
GNI   Garni             120.88  54    P        PKPdf    09 05 20.9 -2.2
GNI   Garni             120.88  54             PKPdf    09 05 23.1 -0.1
GNI   Garni             120.88  54    PKIKP    PKPdf    09 05 23.1 -0.1
KIRV  Kirov             121.11  32ce  PKIKP    PKiKP    09 05 23.4 +0.5
STKA  Stephens Creek    121.21 212    PKP      PKPdf    09 05 23.4 -0.6
             comp=Z,8.3nm,0.7s,baz=90,slow=1.8,SNR=13
BELG  Belogornoye       121.57  39    PKP      PKPdf    09 05 23.7 -0.2
             comp=Z,28nm,0.8s,baz=65,slow=2.1,SNR=5.9
BELG                                  PP       PP       09 06 52.3 -4.1
             comp=Z,8.2nm,0.7s,baz=107,slow=15,SNR=4.3
MAK   Makhachkala       122.80  50  e P        Pdif     09 01 47.4  -10
MAK                                 i                   09 05 24.2
MAK                                 e PPP      PPP      09 09 37.7
MAK                                 e                   09 12 21.6
MAK                                 e SS       SS       09 23 42.6 -2.8
MAK                                 e SSS      SSS      09 28 15.6
MAK                                   pmax     pmax
             comp=Z,424nm,1.8s
AKT   Akhty             123.08  52  i PKIKP    PKPdf    09 05 25.7 -1.6
AKT                                 e                   09 07 04.6
AKT                                 e                   09 12 35.7
AKT                                   pmax     pmax
             comp=Z,19nm,0.9s
SMRA  Abu-Samra         125.50  72    P        PKPdf    09 05 31.7 -0.6
TIXI  Tiksi             125.60 353  i PKIKP    PKPdf    09 05 30.0 -1.0
H11S2 WAKE ISLAND Hy125.88 280    T        T        11 24 34.9
             baz=100,slow=75,SNR=2640
H11N3 WAKE ISLAND Hy125.89 281    T        T        11 23 59.9
             baz=100,slow=75,SNR=234
H11S1 WAKE ISLAND Hy125.89 280    T        T        11 24 29.2
             baz=100,slow=75,SNR=832
H11S3 WAKE ISLAND Hy125.90 280    T        T        11 24 36.4
             baz=100,slow=75,SNR=2844
H11N2 WAKE ISLAND Hy125.90 281    T        T        11 23 31.9
             baz=100,slow=75,SNR=287
H11N1 WAKE ISLAND Hy125.91 281    T        T        11 23 58.6
             baz=100,slow=75,SNR=201
ARTI  Arti              126.41  33    PKP      PKiKP    09 05 33.6 +0.1
             comp=Z,18nm,0.7s,baz=238,slow=0.8,SNR=26
ARTI  Arti              126.41  33             PKPdf    09 05 33.0  0.0
ARTI                                  IAMs_20  IAMs_20  09 58 13.4
             comp=Z,2µm,20.0s
ARTI  Arti              126.41  33  i PKIKP    PKiKP    09 05 33.8 +0.3
ARTI                                                    09 07 29.3
ARTI                                                    09 12 45.0
ARTI                                  SS       SS       09 24 23.4 -6.3
ARTI                                  MLR      MLR
             comp=Z,1µm,19.0s
SEY   Seymchan          126.70 337    PKP      PKPdf    09 05 33.5 +0.1
             comp=Z,17nm,0.8s,baz=101,slow=3.2,SNR=25
SEY   Seymchan          126.70 337ce  PKIKP    PKiKP    09 05 35.0 +1.1
SEY                                   pmax     pmax
             comp=Z,40nm,1.7s
ABTO  Aybut             126.76  82    P        PKPdf    09 05 35.0 +0.1
GHWR  Ruwais            127.28  74    P        PKPdf    09 05 35.7  0.0
WHFO  Wadi Hawf         127.31  81    P        PKPdf    09 05 35.6 -0.4
CTAO  Charters Tower    127.34 225             PKPdf    09 05 35.4 -0.6
CTAO  Charters Tower    127.34 225    PKIKP    PKPdf    09 05 35.4 -0.6
SVE   Sverdlovsk        127.35  31  i PKIKP    PKPdf    09 05 34.9 +0.1
SVE                                   pmax     pmax
             comp=Z,15nm,0.6s
MZR   Muzera            127.74  75    P        PKPdf    09 05 32.8 -3.8
DOK   Doka              127.76  80    P        PKPdf    09 05 35.9 -0.8
AKTO  Aktyubinsk        128.36  40    PKP      PKiKP    09 05 37.4 -0.2
             comp=Z,17nm,0.9s,baz=292,slow=2.7,SNR=35
AKTO                                  PP       PP       09 07 41.5 -0.3
             comp=Z,3.1nm,0.9s,baz=246,slow=1.7,SNR=4.1
DMTO  DMTO              128.38  82    P        PKPdf    09 05 37.4 -0.6
PETK  Petropavlovsk-    129.20 325    PKP      PKPdf    09 05 38.3 -0.2
             comp=Z,9.6nm,0.8s,baz=99,slow=4.7,SNR=5.5
UMZA  Um Al Zommool     129.25  75    P        PKPdf    09 05 38.7 -0.7
AJN   Ajban             129.25  73    P        PKPdf    09 05 39.2 -0.2
MA2   Magadan           129.32 334    IAMs_20  IAMs_20  10 10 57.6
             comp=Z,1µm,20.0s
ASUD  Al Ashush, Dub    129.57  73    P        PKPdf    09 05 39.4 -0.6
FAQ   Al Faqa, Dubai    129.82  73    P        PKiKP    09 05 42.0 +0.7
             SNR=5.5
NAZ   Nazwa, Dubai      129.90  73    P        PKPdf    09 05 39.1 -1.5
ALNE  Al Ain            129.91  74    P        PKiKP    09 05 41.9 +0.3
             SNR=8.2
AB31  Akbulak array     129.93  41  i PKIKP    PKPdf    09 05 40.0  0.0
ABKAR Akbulak array     129.93  41             PKiKP    09 05 40.8  0.0
UMQ   Umm Al-Quwin      129.93  72    P        PKPdf    09 05 38.5 -2.2
ASHO  Ashiyiah          130.24  73    P        PKPdf    09 05 38.8 -2.6
HATD  Hatta, Dubai      130.31  73    P        PKPdf    09 05 40.8 -0.6
MASF  Masafi            130.37  72    P        PKPdf    09 05 40.5 -1.1
UOSS  Minazif           130.38  73    P        PKPdf    09 05 39.1 -2.5
UOSS  Minazif           130.38  73             PKPdf    09 05 41.1 -0.5
SHME  Shamm             130.39  71    P        PKPdf    09 05 41.2 -0.3
MDH   Madha             130.49  72    P        PKPdf    09 05 39.1 -2.6
BANOM Banah             130.52  71    P        PKPdf    09 05 41.3 -0.5
ARQ   Araqi             130.56  75    P        PKiKP    09 05 43.6 +0.7
SOHO  SOHO              130.63  74    P        PKPdf    09 05 42.3 +0.3
BSY   Bisya             131.13  76    P        PKPdf    09 05 36.1 -7.0
             SNR=5.3
DQM   DQM               131.14  79    P        PKiKP    09 05 45.2 +1.2
HOQ   Hoqain            131.30  75    P        PKPdf    09 05 43.8 +0.4
MHTO  MHTO              131.66  78    P        PKPdf    09 05 43.9 -0.2
ASAR  Alice Springs     131.79 211    PKP      PKPdf    09 05 43.8 -0.6
             comp=Z,12nm,0.8s,baz=129,slow=1.8,SNR=61
ASAR                                  PP       PP       09 08 11.2 +7.6
             comp=Z,3.2nm,1.1s,baz=147,slow=5.3,SNR=4.6
ASAR                                  SKPbc    SKPbc    09 09 05.3 -1.7
             comp=Z,8.0nm,1.0s,baz=148,slow=4.0,SNR=7.2
ASAR                                  PKKP     PKKPdf   09 15 38.5 -1.3
             comp=Z,0.8nm,0.9s,baz=345,slow=1.7,SNR=4.6
ASAR  Alice Springs     131.79 211             PKPdf    09 05 43.7 -0.8
JMDO  Jabal Madar       131.93  76    P        PKPdf    09 05 43.3 -1.3
SMDO  Samad             131.93  75    P        PKPdf    09 05 43.7 -1.0
             SNR=10
BIDO  Bidbid            132.04  75    P        PKiKP    09 05 45.9 +0.1
WBK   Wadi Bani Khal    132.75  76    P        PKiKP    09 05 46.8 -0.4
JLN   Jalan Bani Buh    133.11  77    P        PKPdf    09 05 46.4 -0.4
             SNR=5.6
PMG   Port Moresby      133.60 236    IAMs_20  IAMs_20  09 56 40.6
             comp=Z,1µm,20.0s
PMG   Port Moresby      133.60 236    PKP      PKiKP    09 05 50.8 +1.6
PMG   Port Moresby      133.60 236ce  PKIKP    PKPdf    09 05 46.9 -1.1
PMG                                   pmax     pmax
             comp=Z,38nm,1.7s
BORK  Borovoye          134.07  32             PKiKP    09 05 48.5 -0.5
BORK  Borovoye          134.07  32    PKIKP    PKiKP    09 05 48.5 -0.5
BORK                                  MLR      MLR
             comp=Z,2µm,22.0s
BVA0  Borovoye Array    134.12  32    PKIKP    PKPdf    09 05 48.1 +0.3
BVAR  Borovoye Array    134.12  32    PKP      PKiKP    09 05 48.7 -0.4
             comp=Z,8.5nm,0.7s,baz=274,slow=2.5,SNR=34
YAK   Yakutsk           134.22 347    IAMs_20  IAMs_20  10 10 10.5
             comp=Z,1µm,20.0s
YAK   Yakutsk           134.22 347  e PKIKP    PKPdf    09 05 46.9 -0.8
YAK                                 e                   09 05 59.2
YAK                                 e                   09 08 18.8
YAK                                 e SS       SS       09 26 09.8 +5.3
YAK                                   pmax     pmax
             comp=Z,24nm,1.4s
YAK                                   pmax     pmax
             comp=N,8.0nm,1.6s
YAK                                   pmax     pmax
             comp=E,14nm,4.0s
YAK                                   pmax     pmax
             comp=Z,589nm,4.9s
YAK                                   pmax     pmax
             comp=N,472nm,3.7s
YAK                                   pmax     pmax
             comp=E,131nm,3.1s
WRA   Warramunga Arr    134.68 214    PKP      PKPdf    09 05 49.2 -0.7
             comp=E,31nm,0.8s,baz=148,slow=1.8,SNR=77
WRAB  Tennant Creek     134.68 214             PKPdf    09 05 49.4 -0.5
WRAB  Tennant Creek     134.68 214ce  PKIKP    PKPdf    09 05 50.1 +0.2
WRAB                                  pmax     pmax
             comp=Z,39nm,0.8s
NGCH  Negor - Chabah    134.87  72    P        PKPdf    09 05 47.5 -2.5
BRLS  Boroldayy         138.62  45  e PKP      PKPdf    09 05 56.1 -0.4
BRLS  Borolday          138.62  45  e PKIKP    PKPdf    09 05 56.1 -0.4
CHM   Chimkent          138.75  46  e PKP      PKPdf    09 05 56.4 -0.3
CHM   Chimkent          138.75  46  e PKIKP    PKPdf    09 05 56.4 -0.3
PSA00 Pilbara Seismi    138.92 195             PKPdf    09 05 57.3 -0.4
KK31  Karatay Array     139.04  45  i PKIKP    PKPdf    09 05 57.5 +0.2
KKAR  Karatay Array     139.04  45             PKPdf    09 05 56.1 -1.2
KKAR  Karatay Array     139.04  45    PKIKP    PKPdf    09 05 56.1 -1.2
IUG   Iuzhnay           139.11  46  e PKP      PKPdf    09 05 57.1 -0.5
IUG   Iuzhnay           139.11  46  e PKIKP    PKPdf    09 05 57.0 -0.5
MBWA  Marble Bar        139.35 195             PKPdf    09 05 58.5  0.0
MBWA  Marble Bar        139.35 195    IAMs_20  IAMs_20  10 09 00.1
             comp=Z,1µm,18.0s
KURK  Kurchatov         139.57  30    P        PKPdf    09 05 54.8 -3.1
KURK  Kurchatov         139.57  30             PKPdf    09 05 58.2 +0.3
KURK  Kurchatov         139.57  30    IAMs_20  IAMs_20  10 10 21.2
             comp=Z,1µm,22.0s
KURK  Kurchatov         139.57  30    PKIKP    PKPdf    09 05 58.2 +0.3
KURBB Kurchatov Arra    139.59  30    PKhKP    PKPpre   09 05 50.9
             comp=Z,4.0nm,0.8s,baz=301,slow=2.9,SNR=16
KURBB                                 PKP      PKPdf    09 05 58.2 +0.3
             comp=Z,7.1nm,0.8s,baz=308,slow=2.8,SNR=15
KURBB                                 PP       PP       09 08 49.4 -3.5
             comp=Z,3.4nm,1.0s,baz=311,slow=6.4,SNR=7.1
KURBB Kurchatov Arra    139.59  30    PKHKP    PKPpre   09 05 50.5
DZA   Taraz             139.68  44  e PKP      PKPdf    09 05 57.9 -0.6
DZA   Taraz             139.68  44  e PKIKP    PKPdf    09 05 57.8 -0.6
ZALV  Zalesovo Beam     139.82  22    PKhKP    PKPpre   09 05 53.2
             comp=Z,8.7nm,0.8s,baz=318,slow=2.9,SNR=27
ZALV                                  PKP      PKPdf    09 05 59.2 +0.9
             comp=Z,32nm,0.7s,baz=294,slow=3.1,SNR=45
YSS   Yuzhno-Sakhali    140.59 324  e PKIKP    PKPdf    09 05 58.2 -1.7
YSS                                 e                   09 09 00.7
YSS                                 e SS       SS       09 27 26.2 +4.9
SGDS  Sogindy           141.57  42  e PKP      PKPdf    09 06 01.5 -0.4
AAK   Ala-Archa         141.87  43    PKP      PKPdf    09 06 01.4 -1.2
             comp=Z,16nm,0.8s,baz=329,slow=7.6,SNR=13
AAK   Ala-Archa         141.87  43    P        PKPdf    09 06 00.4 -2.2
ZEA   Zeya              142.19 343  e PKIKP    PKPdf    09 05 58.9 -3.7
ZEA                                   pmax     pmax
             comp=Z,20nm,1.2s
ARXS  Arharly           143.14  39  e PKIKP    PKPab    09 06 00.8 +0.6
GENI  Genyem            143.21 239    PKP      PKPbc    09 06 03.7 +1.1
MDOK  Medeo             143.23  41  e PKP      PKPdf    09 06 04.4 -0.7
MDOK                                e PP       PP       09 09 15.4 -0.2
MDOK  Medeo             143.23  41  e PKIKP    PKPdf    09 06 04.3 -0.7
MDOK                                e                   09 09 15.4
TNSS  Tian-Shan         143.24  41  e PKP      PKPdf    09 06 04.4 -1.0
TNSS                                e PP       PP       09 09 15.4 -0.6
TNSS  Tian-Shan         143.24  41  e PKIKP    PKPdf    09 06 04.3 -1.0
TNSS                                e                   09 09 15.4
JASL  Jaisalmer         143.59  70  e P        PKPbc    09 06 04.2 +0.8
MAKZ  Makanchi          143.84  32    PKHKP    PKPpre   09 06 01.9
MK31  Makanchi Array    144.00  32  i PKIKP    PKPab    09 06 02.9 -0.6
MKAR  Makanchi Array    144.00  32    PKP      PKPbc    09 06 04.0 -0.1
             comp=Z,29nm,0.9s,baz=319,slow=3.5,SNR=39
MKAR  Makanchi Array    144.00  32             PKPbc    09 06 04.1 +0.1
MKAR  Makanchi Array    144.00  32    PKIKP    PKPbc    09 06 04.1 +0.1
DGZ   Jazzator, Alta    144.18  25  i PKIKP    PKPab    09 06 04.2  0.0
KSH   Kashi             144.30  47    PKP      PKPdf    09 06 06.2 -0.7
KSH                                   pPKP     pPKPdf   09 06 19.5 -0.4
KSH                                   PP       PP       09 09 20.0 -2.2
KSH                                   SKKS              09 16 08.6
KSH                                   SS       SS       09 28 02.6 -2.7
KSH                                   LR       LR
             comp=Z,810nm,23.0s
KSH                                   LR       LR
             comp=Z,1µm,21.3s
KSH                                   LR       LR
             comp=Z,1µm,22.0s
NIL   Nilore            144.36  58             PKPbc    09 06 05.7 +0.1
NIL   Nilore            144.36  58    PKIKP    PKPbc    09 06 05.7 +0.2
UZB   Uzynbulak         144.45  40  e PKP      PKPbc    09 06 06.3 +0.6
UZB   Uzynbulak         144.45  40  e PKIKP    PKPbc    09 06 06.2 +0.5
PDGK  Podgornoye        144.63  39    PKIKP    PKPab    09 06 05.5 -0.5
SHLS  Shalkode          144.71  39  e PKP      PKPdf    09 06 07.4 -0.1
SHLS                                e PP       PP       09 09 25.7 +1.3
SHLS  Shalkode          144.71  39  e PKIKP    PKPdf    09 06 07.4 -0.1
SHLS                                e                   09 09 25.7
SMPI  Sarmi             144.74 238    PKP      PKPdf    09 06 08.2 -0.1
SMPI                                  PKP      PKPbc    09 06 09.5 +2.3
ZSN   Zaisan            144.79  29  e PKP      PKPdf    09 06 07.1 -0.4
ZSN                                 e PP       PP       09 09 24.6 +0.2
ZSN   Zaisan            144.79  29  e PKIKP    PKPdf    09 06 07.0 -0.4
ZSN                                 e                   09 09 24.5
HEH   HeiHe             145.17 340    PKPbc    PKPbc    09 06 06.6 -0.9
HEH                                   PP       PP       09 09 29.1 +2.8
HEH                                   AMB      AMB
             comp=Z,1µm,5.8s
HEH                                   LR       LR
             comp=Z,2µm,23.6s
HEH                                   LR       LR
             comp=Z,680nm,22.1s
HEH                                   LR       LR
             comp=Z,3µm,22.2s
BKNR  BIKANER           145.56  67  e P        PKPdf    09 06 08.8 -0.4
GOA   Goa               145.86  89  e P        PKPdf    09 06 09.1 -1.0
JMU   Jammu             145.88  58  e P        PKPdf    09 06 09.4 -0.3
IRK   Irkutsk           146.05   6  e PKP2     PKPbc    09 06 10.4 +0.2
IRK                                   pmax     pmax
             comp=Z,646nm,2.6s
MOY   Mondy             146.20   9  e PKP2     PKPab    09 06 11.4 -0.2
MOY                                   pmax     pmax
             comp=Z,344nm,2.4s
POO   Poona             146.29  84  e P        PKPdf    09 06 10.4 -0.4
CIT   Chita             146.35 355  e PKP2     PKPbc    09 06 11.4 +0.2
CIT                                 e                   09 09 33.0
CIT                                 e                   09 12 48.0
CIT                                   pmax     pmax
             comp=Z,555nm,3.2s
TLY   Talaya            146.54   7             PKPbc    09 06 11.7 -0.1
KNGR  Kungurtug, Tuv    146.55  14  i PKP2     PKPbc    09 06 11.7 -0.2
JYA   Atsumi            146.91 314    P        PKPab    09 06 14.2 -0.4
AJM   Ajmer             146.96  70  e P        PKPdf    09 06 10.9 -0.8
TRD   Trivandrum        146.97 103  e P        PKPdf    09 06 10.7 -1.3
DHRM  DHARAMSHALA       147.22  59  e P        PKPdf    09 06 11.3 -0.9
BAKI  Biak              147.29 236    PKP      PKiKP    09 06 17.7 +0.4
ALCI  Alchi Leh         147.29  55  e P        PKPdf    09 06 11.4 -1.1
BHK   Bhakra            147.52  60  e P        PKPdf    09 06 13.2 +0.7
JYT   Yasato            147.63 309    P        PKPbc    09 06 15.6 +0.4
ZAK   Zakamensk         147.78   7  e PKP2     PKPbc    09 06 14.6 -0.7
ZAK                                   pmax     pmax
             comp=Z,110nm,2.0s
HILR  Hailar Array B    147.88 347    PKPbc    PKPdf    09 06 13.4 +0.8
             comp=Z,48nm,0.7s,baz=48,slow=2.2,SNR=17
CGRH  CHANDIGARH        148.02  61  e P        PKPdf    09 06 12.4 -1.0
USRK  Ussuriysk Ar.     148.12 329    PKPbc    PKPbc    09 06 16.2 -0.1
             comp=Z,55nm,0.8s,baz=38,slow=1.5,SNR=47
BATI  Baumata           148.24 207    PKP      PKiKP    09 06 18.9 -0.3
SOEI  Soe               148.37 209    PKP      PKPdf    09 06 10.7 -3.9
SOEI  Soe               148.37 209    PKP      PKPbc    09 06 18.6 +0.6
JHJR  Jhajjar           148.38  65  e P        PKPdf    09 06 14.7 +0.7
RKPI  Ransiki, Papua    148.59 233    PKP      PKiKP    09 06 19.8 -0.2
JRY   Ryogami san       148.67 310    P        PKiKP    09 06 19.1 -0.5
WMQ   Urumqi            148.80  31    PKPbc    PKPbc    09 06 18.0 -0.2
WMQ                                   PKPab    pPKPdf   09 06 25.6 -1.7
WMQ                                   PP       PP       09 09 50.9 +2.8
WMQ                                   AMB      AMB
             comp=Z,690nm,11.1s
WMQ                                   LR       LR
             comp=Z,1µm,22.9s
WMQ                                   LR       LR
             comp=Z,1µm,22.9s
WMQ                                   LR       LR
             comp=Z,1µm,20.3s
AYAN  Aya Nagar         148.83  65  e P        PKPdf    09 06 14.3 -0.4
JOD2  Odawara 2         148.85 308    P        PKPbc    09 06 19.2 +0.7
MJAR  Matsushiro Arr    148.93 311    PKPbc    PKPbc    09 06 18.8 +0.1
             comp=Z,24nm,0.8s,baz=96,slow=1.4,SNR=37
MJAR  Matsushiro Arr    148.93 311             PKPbc    09 06 19.1 +0.4
MAJO  Matsushiro        148.93 311             PKPbc    09 06 18.7  0.0
MAJO  Matsushiro        148.93 311    PKP2     PKPbc    09 06 18.7  0.0
MAT   Matsushiro        148.93 311    P        PKPbc    09 06 19.0 +0.3
MDJ   Mudanjiang        148.94 331    PKPbc    PKPbc    09 06 16.5 -1.9
MDJ                                   AMB      AMB
             comp=Z,680nm,11.0s
MDJ                                   LR       LR
             comp=Z,870nm,10.3s
MDJ                                   LR       LR
             comp=Z,1µm,15.7s
MDJ                                   LR       LR
             comp=Z,2µm,21.8s
JMIU  JAMIA UNIVERSI 148.95  65  e P        PKPdf    09 06 13.9 -1.0
BNX   BinXian           148.98 335 ⇑ PKPbc    PKPdf    09 06 14.8 +0.4
BNX                                   PP       PP       09 09 48.9 +0.1
BNX                                   AMB      AMB
             comp=Z,700nm,8.1s
BNX                                   LR       LR
             comp=Z,1µm,19.7s
BNX                                   LR       LR
             comp=Z,1µm,21.4s
BNX                                   LR       LR
             comp=Z,2µm,22.7s
MWPI  Manokwari, Pap    149.06 234    PKP      PKiKP    09 06 21.4 +0.5
MWPI                                  PKP      PKPab    09 06 23.3 -0.6
FAKI  Fak Fak           149.07 229             PKPdf    09 06 16.8 +1.3
FAKI  Fak Fak           149.07 229    PKP      PKPbc    09 06 18.3 -1.4
DDI   Dehra Dun         149.19  61  e P        PKPdf    09 06 14.9 -0.4
HNLY  HANLEY            149.19  56  e P        PKPdf    09 06 14.6 -1.3
AKL   Akola             149.41  80  e P        PKPdf    09 06 14.3 -1.6
BASI  Baing, Sumba      149.45 202    PKP      PKPbc    09 06 19.1 -1.5
BASI                                  PKP      PKiKP    09 06 23.1 +1.4
BNDI  Bandanaira        149.52 223    PKP      PKPbc    09 06 21.2 +0.4
GUNA  GUNA              149.57  73  e P        PKPdf    09 06 15.0 -1.1
JGN   Niukaw            149.72 311    P        PKiKP    09 06 21.7  0.0
PALK  Pallekele         149.92 108    P        PKPdf    09 06 12.8 -4.2
PALK  Pallekele         149.92 108             PKPbc    09 06 21.0 -0.8
PALK  Pallekele         149.92 108    PKP      PKPbc    09 06 21.2 -0.6
PALK                                  PKP      PKiKP    09 06 22.6 -0.1
PALK  Pallekele         149.92 108    PKHKP    PKPpre   09 06 21.0
MALK  Mahakanadarawa150.22 106    PKP      PKPdf    09 06 13.9 -3.4
MMRI  Maumere           150.25 206    PKP      PKPbc    09 06 20.1 -2.5
MMRI                                  PKP      PKiKP    09 06 23.2 -0.2
JOSI  Joshimath         150.37  60  e P        PKPdf    09 06 14.4 -3.0
EDFI  Ende, Flores      150.38 205    PKP      PKPdf    09 06 17.7  0.0
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WBSI	**Waikabubak, Su**	**150.39**	**200**	PKP	**PKiKP**	**09 06 24.0**	**+0.3**
SONM	**Songino Array**	**150.60**	**4**	PKPbc	**PKPbc**	**09 06 22.9**	**+0.3**
	comp=Z,27nm,0.9s,baz=335,slow=1.5,SNR=72						
SONM				PP	**PP**	**09 10 04.0**	**+6.0**
	comp=Z,4.6nm,0.9s,baz=340,slow=3.0,SNR=3.8						
ULN	**Ulaanbaatar**	**150.61**	**3**		**PKPdf**	**09 06 18.3**	**+1.1**
ULN	**Ulaanbaatar**	**150.61**	**3**	IAMs_20	IAMs_20	10 18 53.8	
	comp=Z,1µm,22.0s						
ULN	**Ulaanbaatar**	**150.61**	**3**	PKP	**PKPdf**	**09 06 19.3**	**+2.1**
ULN	**Ulaanbaatar**	**150.61**	**3**	PKIKP	**PKPdf**	**09 06 18.3**	**+1.1**
HYB	**Hyderabad**	**150.63**	**87**	*e*PKPdf	**PKPdf**	**09 06 17.5**	**-0.4**
HYB				*e*PKPbc	**PKPbc**	**09 06 23.4**	**0.0**
HYB				*e*PKiKP	**PKiKP**	**09 06 24.4**	**+0.3**
JHNI	**Jhansi**	**150.63**	**71**	*e*P	**PKPdf**	**09 06 16.6**	**-1.0**
SWI	**Sorong**	**151.20**	**231**	PKP	**PKPbc**	**09 06 25.0**	**+0.2**
AAI	**Ambon**	**151.25**	**222**	PKP	**PKPbc**	**09 06 23.8**	**-1.1**
LBFI	**Labuhan Bajo,**	**151.31**	**202**	PKP	**PKPbc**	**09 06 24.4**	**-0.6**
CN2	**Changchun**	**151.36**	**335**	PKPbc	**PKPdf**	**09 06 18.1**	**-0.1**
CN2				PP	**PP**	**09 10 06.3**	**+3.7**
CN2				AMB	AMB		
	comp=Z,500nm,5.0s						
CN2				LR	LR		
	comp=Z,2µm,20.0s						
CN2				LR	LR		
	comp=Z,1µm,20.0s						
CN2				LR	LR		
	comp=Z,2µm,23.0s						
KRAI	**Karang Ratu**	**151.41**	**223**	PKP	**PKPdf**	**09 06 21.2**	**+2.0**
KRAI				PKP	**PKPbc**	**09 06 23.8**	**-1.5**
PLAI	**Plampang**	**151.66**	**198**	PKP	**PKPbc**	**09 06 24.7**	**-1.1**
PLAI				PKP	**PKiKP**	**09 06 28.4**	**+2.1**
DBNI	**Kabupaten Domp**	**151.81**	**199**	PKP	**PKPbc**	**09 06 26.1**	**-0.1**
TWSI	**Taliwang, Sumb**	**151.99**	**196**	PKP	**PKPbc**	**09 06 26.4**	**-0.2**
NLAI	**Namlea**	**152.28**	**221**	PKP	**PKPbc**	**09 06 27.0**	**-0.3**
KLNI	**Mataram**	**152.49**	**194**	PKP	**PKiKP**	**09 06 27.9**	**-0.1**
KHKI	**Kahang-Kahang**	**152.66**	**193**	PKP	**PKPab**	**09 06 40.7**	**+2.2**
RTBI	**Rangdo, Negare**	**152.70**	**192**	PKP	**PKiKP**	**09 06 30.5**	**+2.1**
JAGI	**Jajag, Banyuwa**	**152.84**	**190**		**PKPbc**	**09 06 28.0**	**-0.5**
JAGI				IAMs_20	IAMs_20	10 13 05.5	
	comp=Z,1µm,21.0s						
JAGI	**Jajag, Banyuwa**	**152.84**	**190**	PKP	**PKPdf**	**09 06 21.4**	**+0.1**
JAGI				PKP	**PKiKP**	**09 06 28.9**	**+0.2**
BRCI	**Bahraich**	**152.87**	**65**	*e*P	**PKPdf**	**09 06 20.4**	**-0.5**
BSSI	**Bau Bau, Buton**	**153.23**	**205**	PKP	**PKiKP**	**09 06 29.5**	**0.0**
SNY	**Shenyang**	**153.76**	**336**	⇑PKPbc	**PKPdf**	**09 06 19.5**	**-2.3**
SNY				PP	**PP**	**09 10 18.1**	**+1.9**
SNY				AMB	AMB		
	comp=Z,670nm,17.1s						
SNY				LR	LR		
	comp=Z,760nm,22.2s						
SNY				LR	LR		
	comp=Z,820nm,17.7s						
SNY				LR	LR		
	comp=Z,1µm,24.5s						
SNJI	**Sawahan-Nganju**	**153.82**	**185**	PKP	**PKPdf**	**09 06 22.8**	**-0.2**
SNJI				PKP	**PKPbc**	**09 06 26.9**	**-4.0**
SANI	**Sanana**	**153.90**	**220**	PKP	**PKPdf**	**09 06 21.7**	**-1.1**
SANI	**Sanana**	**153.90**	**220**	PKP	**PKPdf**	**09 06 23.5**	**+0.6**
XLT	**XiLinHaoTe**	**154.03**	**349**	*e*PKPbc	**PKPdf**	**09 06 24.1**	**+1.8**
XLT				pPKP	PKiKP	09 06 32.4	+2.0
XLT				sPKP	sPKPdf	09 06 36.5	-3.4
XLT				PP	**PP**	**09 10 21.0**	**+3.5**
XLT				AMB	AMB		
	comp=Z,530nm,7.8s						
XLT				LR	LR		
	comp=Z,170nm,23.0s						
XLT				LR	LR		
	comp=Z,800nm,20.1s						
XLT				LR	LR		
	comp=Z,3µm,23.9s						
BKSI	**Bulukumba**	**154.12**	**205**	PKP	**PKiKP**	**09 06 33.1**	**+1.8**
BBJI	**Bungbulang**	**154.18**	**176**	PKP	**PKPdf**	**09 06 23.2**	**-0.1**
BBJI				PKP	**PKiKP**	**09 06 32.1**	**+0.5**
BLSP	**Bilaspur**	**154.20**	**77**	*e*P	**PKPdf**	**09 06 21.9**	**-1.1**
KAPI	**Kappang**	**154.55**	**205**	P	**PKPdf**	**09 06 25.1**	**+1.3**
KAPI	**Kappang**	**154.55**	**205**	PKP	**PKPdf**	**09 06 25.6**	**+1.8**
BNSI	**Bone**	**154.96**	**206**	PKP	**PKiKP**	**09 06 34.0**	**+0.9**
KSRS	**Korea Array**	**155.09**	**323**	PKP	**PKPdf**	**09 06 24.8**	**+1.0**
	comp=Z,6.0nm,0.9s,baz=49,slow=1.1,SNR=15						
KSAR	**Wonju Array Be**	**155.12**	**323**		**PKPdf**	**09 06 23.8**	**0.0**
KSAR	**Wonju Array Be**	**155.12**	**323**	PKIKP	**PKPdf**	**09 06 23.8**	**0.0**
VIS	**Vishakhapatnam**	**155.19**	**88**	*e*P	**PKPdf**	**09 06 23.6**	**-0.9**
SPSI	**Sidrap Palu**	**155.49**	**206**	PKP	**PKPdf**	**09 06 25.1**	**0.0**
SPSI				PKP	**pPKPdf**	**09 06 39.0**	**+1.0**
INCN	**Inchon**	**155.78**	**325**	IAMs_20	IAMs_20	10 21 25.4	
	comp=Z,1µm,22.0s						
PMSI	**Majene**	**156.26**	**204**	PKP	**PKPdf**	**09 06 26.9**	**+0.8**
PMSI				PKP	**PKPdf**	**09 06 28.6**	**+2.5**
TTSI	**Tana Toraja**	**156.30**	**207**	PKP	**PKPdf**	**09 06 26.2**	**+0.1**
TTSI				PKP	**sPKPdf**	**09 06 46.4**	**+2.8**
LUWI	**Luwuk**	**156.59**	**216**	IAMs_20	IAMs_20	10 10 17.2	
	comp=Z,944nm,22.0s						
MDSI	**Maura Dua**	**156.62**	**167**	PKP	**PKPdf**	**09 06 25.7**	**-0.8**
MDSI				PKP	**PKPdf**	**09 06 26.5**	**0.0**
GAYA	**Gaya**	**156.66**	**70**	*e*P	**PKPdf**	**09 06 24.9**	**-1.3**
DL2	**Dalian**	**157.03**	**335**	PKP	**PKPdf**	**09 06 26.3**	**0.0**
DL2				AMB	AMB		
	comp=Z,820nm,8.2s						
DL2				LR	LR		
	comp=Z,1µm,19.9s						
DL2				LR	LR		
	comp=Z,830nm,17.1s						
DL2				LR	LR		
	comp=Z,1µm,21.2s						
BOK	**Bokaro**	**157.42**	**72**	*e*P	**PKPdf**	**09 06 25.9**	**-1.4**
GTA	**Gaotai**	**157.52**	**20**	*e*PKP	**PKPdf**	**09 06 27.2**	**+0.1**
GTA				SS	SS	09 30 30.6	+0.5
GTA				AMB	AMB		
	comp=Z,910nm,12.4s						
GTA				LR	LR		
	comp=Z,960nm,22.2s						
GTA				LR	LR		
	comp=Z,780nm,22.5s						
GTA				LR	LR		
	comp=Z,2µm,22.5s						
HHC	**Hu-ho-hao-te**	**157.61**	**356**	⇓*i*PKP	**PKPdf**	**09 06 30.3**	**+3.1**
HHC				PP	**PP**	**09 10 37.2**	**-0.2**
HHC				SS	SS	09 30 30.0	-0.5
HHC				AMB	AMB		
	comp=Z,860nm,9.5s						
HHC				LR	LR		
	comp=Z,2µm,23.7s						
HHC				LR	LR		
	comp=Z,570nm,20.8s						
HHC				LR	LR		
	comp=Z,1µm,23.7s						
BWNR	**Bhubaneshwar**	**157.66**	**82**	*e*P	**PKPdf**	**09 06 26.5**	**-1.1**
BJI	**Beijing**	**157.72**	**346**	PKP	**PKPdf**	**09 06 28.0**	**+0.9**
BJI				pPKP	**pPKPdf**	**09 06 39.1**	**-1.1**
BJI				sPKP	**sPKPdf**	**09 06 43.2**	**-1.6**
BJI				PP	**PP**	**09 10 40.6**	**+2.7**
BJI				SKS	**SKSdf**	**09 13 28.9**	**-0.9**
BJI				SS	**SS**	**09 30 33.6**	**+2.0**
BJI				AMB	AMB		
	comp=Z,430nm,17.1s						
BJI				LR	LR		
	comp=Z,630nm,24.3s						
BJI				LR	LR		
	comp=Z,460nm,23.1s						
BJI				LR	LR		
	comp=Z,1µm,24.6s						
BTO	**Baotou**	**157.93**	**359**	*e*PKP	**PKPdf**	**09 06 27.8**	**+0.3**
BTO				AMB	AMB		
	comp=Z,2µm,10.3s						
BTO				LR	LR		
	comp=Z,3µm,22.7s						
BTO				LR	LR		
	comp=Z,1µm,21.3s						
BTO				LR	LR		
	comp=Z,6µm,24.3s						
GTK	**Tadong**	**158.91**	**62**	*e*P	**PKPdf**	**09 06 28.2**	**-1.0**
MPSI	**Mapaga**	**159.26**	**211**	PKP	**PKPdf**	**09 06 30.0**	**+0.2**
MPSI				PKP	**PKPdf**	**09 06 31.2**	**+1.4**
GSI	**Gunungsitoli**	**159.36**	**144**	PKP	**PKPdf**	**09 06 32.8**	**+2.9**
TOLI2	**Tolitoli**	**159.47**	**214**	IAMs_20	IAMs_20	10 32 49.2	
	comp=Z,1µm,21.0s						
LSA	**Lhasa**	**159.94**	**53**	P	**PKPdf**	**09 06 30.6**	**-0.1**
DHUB	**DHUBRI**	**160.52**	**64**	*e*P	**PKPdf**	**09 06 29.9**	**-1.0**
HNS	**HongShan**	**160.57**	**347**	⇑PKP	**PKPdf**	**09 06 30.0**	**-0.5**
HNS				PKPab	**PKPab**	**09 07 13.3**	**+1.4**
HNS				PP	**PP**	**09 10 54.0**	**+0.6**
HNS				AMB	AMB		
	comp=Z,1µm,7.0s						
HNS				LR	LR		
	comp=Z,2µm,23.7s						
HNS				LR	LR		
	comp=Z,1µm,21.0s						
HNS				LR	LR		
	comp=Z,3µm,24.0s						
TIY	**Taiyuan**	**160.64**	**353**	*e*PKP	**PKPdf**	**09 06 31.3**	**+0.6**
TIY				PP	**PP**	**09 10 53.6**	**-0.2**
TIY				SS	SS	09 31 01.9	-0.6
TIY				AMB	AMB		
	comp=Z,1µm,5.8s						
TIY				LR	LR		
	comp=Z,2µm,23.4s						
TIY				LR	LR		
	comp=Z,750nm,24.7s						
TIY				LR	LR		
	comp=Z,2µm,26.1s						
TIA	**Tai'an**	**161.06**	**341**	PKP	**PKPdf**	**09 06 32.0**	**+0.8**
TIA				AMB	AMB		
	comp=Z,930nm,5.9s						
TIA				LR	LR		
	comp=Z,1µm,25.0s						
TIA				LR	LR		
	comp=Z,1µm,21.2s						
TIA				LR	LR		
	comp=Z,3µm,21.6s						
KCSI	**Kotacane, Aceh**	**161.28**	**141**	PKP	**PKPdf**	**09 06 33.6**	**+1.5**
PSI	**Prapat**	**161.34**	**145**	PKP	**PKPdf**	**09 06 34.0**	**+1.7**
PSI				PKP	**PKPdf**	**09 06 34.0**	**+1.7**
LZH	**Lanzhou**	**161.76**	**15**	⇑PKP	**PKPdf**	**09 06 32.9**	**+0.8**
LZH				pPKP	pPKPdf	09 06 43.4	-1.8
LZH				SS	SS	09 31 12.4	-2.3
LZH				AMB	AMB		
	comp=Z,980nm,8.1s						
LZH				LR	LR		
	comp=Z,1µm,18.7s						
LZH				LR	LR		
	comp=Z,2µm,19.4s						
LZH				LR	LR		
	comp=Z,3µm,23.2s						
LZDM	**Lanzhou Array**	**161.85**	**15**	PKP	**PKPdf**	**09 06 34.0**	**+1.5**
	comp=Z,1.4nm,0.3s,baz=265,slow=16,SNR=1.9						
LZDM				PKPab	**PKPab**	**09 07 17.6**	**-0.5**
	comp=Z,1.8nm,0.3s,baz=321,slow=3.8,SNR=5.8						
GUWA	**GUWAHATI**	**161.89**	**62**	*e*P	**PKPdf**	**09 06 31.1**	**-1.1**
AGT	**Agartala**	**162.22**	**69**	*e*P	**PKPdf**	**09 06 32.4**	**-0.2**
SHL	**Shillong**	**162.28**	**63**	P	**PKPdf**	**09 06 32.4**	**-0.5**
SHL	**Shillong**	**162.28**	**63**	*e*P	**PKPdf**	**09 06 31.9**	**-1.1**
TEZP	**TEZPUR**	**162.64**	**59**	*e*P	**PKPdf**	**09 06 31.4**	**-1.6**
BRDH	**Bariadhala**	**162.83**	**73**	PKP	**PKPdf**	**09 06 34.1**	**+0.8**
	comp=Z,143nm,0.3s,baz=235,slow=14,SNR=4.2						
ZIRO	**ZIRO**	**163.07**	**55**	*e*P	**PKPdf**	**09 06 32.6**	**-1.0**
SILR	**SILCHAR**	**163.32**	**65**	*e*P	**PKPdf**	**09 06 31.9**	**-1.8**
SSE	**Sheshan**	**163.52**	**322**	PKP	**PKPdf**	**09 06 33.5**	**-0.2**
SSE				PP	**PP**	**09 11 11.5**	**+1.6**
SSE				SS	SS	09 31 30.4	-3.4
SSE				AMB	AMB		
	comp=Z,470nm,5.1s						
SSE				LR	LR		
	comp=Z,460nm,25.4s						
SSE				LR	LR		
	comp=Z,360nm,26.1s						
LYN	**LuoYang**	**163.75**	**351**	PKP	**PKPdf**	**09 06 34.1**	**+0.2**
LYN				PKPab	**PKPab**	**09 07 26.2**	**+0.3**
LYN				PP	**PP**	**09 11 10.3**	**0.0**
LYN				AMB	AMB		
	comp=Z,2µm,6.2s						
LYN				LR	LR		
	comp=Z,2µm,23.4s						
LYN				LR	LR		
	comp=Z,1µm,16.8s						
LYN				LR	LR		
	comp=Z,3µm,22.3s						
PASG	**PASIGHAT**	**163.92**	**51**	*e*P	**PKPdf**	**09 06 33.5**	**-0.8**
NJ2	**Nanjing**	**164.02**	**330**	*e*PKP	**PKPdf**	**09 06 34.5**	**+0.3**
NJ2				sPKP	**sPKPdf**	**09 06 48.2**	**-3.4**
NJ2				AMB	AMB		
	comp=Z,1µm,6.4s						
NJ2				LR	LR		
	comp=Z,1µm,21.8s						
NJ2				LR	LR		
	comp=Z,700nm,19.9s						
NJ2				LR	LR		
	comp=Z,2µm,22.7s						
SAIH	**SAIHA**	**164.09**	**73**	*e*P	**PKPdf**	**09 06 34.7**	**0.0**
MOKO	**MOKOCHONG**	**164.16**	**58**	*e*P	**PKPdf**	**09 06 32.6**	**-2.1**
IMP	**Imphal**	**164.28**	**64**	*e*P	**PKPdf**	**09 06 33.5**	**-1.2**
XAN	**Xi'an**	**164.48**	**2**	PKP	**PKPdf**	**09 06 35.4**	**+0.8**
XAN				PKPab	**PKPab**	**09 07 29.1**	**-0.1**
XAN				PP	**PP**	**09 11 14.4**	**+0.3**
XAN				SS	SS	09 31 43.0	+0.8
XAN				AMB	AMB		
	comp=Z,2µm,8.4s						
XAN				LR	LR		
	comp=Z,1µm,19.9s						
XAN				LR	LR		
	comp=Z,2µm,18.2s						
XAN				LR	LR		
	comp=Z,3µm,22.5s						
LKP	**Lekhapani**	**164.70**	**52**	*e*P	**PKPdf**	**09 06 33.4**	**-1.5**
CD2	**Chengdu**	**166.58**	**21**	PKP	**PKPdf**	**09 06 37.0**	**+0.5**
CD2				pPKP	pPKPdf	09 06 47.4	-2.1
CD2				PP	**PP**	**09 11 25.0**	**-0.4**
CD2				AMB	AMB		
	comp=Z,1µm,5.9s						
CD2				LR	LR		
	comp=Z,3µm,28.0s						
CD2				LR	LR		
	comp=Z,2µm,20.1s						
WHN	**Wuhan**	**167.17**	**341**	PKP	**PKPdf**	**09 06 38.4**	**+1.6**
WHN				pPKP	**pPKPdf**	**09 06 50.2**	**+0.3**
WHN				PKPab	**PKPab**	**09 07 42.5**	**+1.4**
WHN				PP	**PP**	**09 11 29.0**	**+0.8**
WHN				LR	LR		
	comp=Z,7µm,29.7s						
TNCH	**TengChong**	**167.95**	**55**	PKP	**PKPdf**	**09 06 37.6**	**-0.2**
TNCH				pPKP	pPKPdf	09 06 50.3	-0.6
TNCH				PKPab	**PKPab**	**09 07 46.8**	**+1.6**
TNCH				PP	**PP**	**09 11 36.0**	**+2.2**
TNCH				AMB	AMB		
	comp=Z,1µm,7.6s						
TNCH				LR	LR		
	comp=Z,1µm,21.3s						
TNCH				LR	LR		
	comp=Z,1µm,20.7s						
TNCH				LR	LR		
	comp=Z,2µm,22.6s						
PZH	**PanZhiHua**	**169.30**	**40**	PKP	**PKPdf**	**09 06 39.1**	**+0.5**
PZH				PP	**PP**	**09 11 44.2**	**+4.2**
PZH				AMB	AMB		
	comp=Z,470nm,5.7s						
PZH				LR	LR		
	comp=Z,560nm,23.3s						
PZH				LR	LR		
	comp=Z,770nm,20.3s						
PZH				LR	LR		
	comp=Z,2µm,22.7s						
CMAR	**Chiang Mai Arr**	**170.05**	**88**	PKP	**PKPdf**	**09 06 39.5**	**+0.5**
	comp=Z,2.2nm,0.7s,baz=292,slow=2.0,SNR=17						
CMAR				PKPab	**PKPab**	**09 07 54.6**	**0.0**
	comp=Z,22nm,0.9s,baz=277,slow=5.8,SNR=26						
CMAR				PP	**PP**	**09 11 43.6**	**-1.5**
	comp=Z,2.1nm,0.3s,baz=268,slow=6.2,SNR=4.3						
CMAR	**Chiang Mai Arr**	**170.05**	**88**		**PKPdf**	**09 06 38.4**	**-0.7**
CMAR					**PKPab**	**09 07 53.8**	**-0.8**
CHTO	**Chiang Mai**	**170.06**	**86**	P	**PKPdf**	**09 06 39.1**	**+0.1**
CHTO	**Chiang Mai**	**170.06**	**86**		**PKPdf**	**09 06 39.6**	**+0.6**
CHTO					**PKPab**	**09 07 53.4**	**-1.2**
CHTO	**Chiang Mai**	**170.06**	**86**	PKP	**PKPdf**	**09 06 40.3**	**+1.3**
CHTO	**Chiang Mai**	**170.06**	**86**	PKIKP	**PKPdf**	**09 06 39.6**	**+0.6**
CHTO						09 07 53.4	
KMI	**Kunming**	**170.92**	**42**	PKP	**PKPdf**	**09 06 41.5**	**+1.9**
KMI				pPKP	pPKPdf	09 06 53.7	+1.0
QIZ	**Qiongzhong**	**179.31**	**325**	PKP	**PKPdf**	**09 06 42.9**	**+1.0**
QIZ				PKPab	pPKPab	09 08 40.0	-8.0
QIZ				PP	**PP**	**09 12 30.8**	**+2.7**
QIZ				SKKS		09 19 11.0	
QIZ				LR	LR		
	comp=Z,1µm,11.3s						
QIZ				LR	LR		
	comp=Z,1µm,20.6s						
QIZ				LR	LR		
	comp=Z,2µm,20.8s						

ASRS ***03*** *08:55:25.0±1.4, 54°.26N×86°.17E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

NNC 03 08:55:24.2±2.6**, 54°.29N×86°.29E, h0^{km}, mb3.6, mpv2.2, 3C-2D, Error ellipse: s-maj=14.7km s-min=9.3km az=68.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**0.93**	**249**	⇑P	Pg	08 55 41.8	-0.1
	0.1nm,0.2s,baz=66,slow=17						
ZAA0				⇑S	Sb	08 55 55.0	-1.0
	0.9nm,0.3s,baz=68,slow=29						
KURK	**Kurchatov**	**5.89**	**236**	⇓Lg	Lg	08 58 32.1	
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**6.00**	**235**	⇑Pn	Pn	08 56 56.4	+2.3
	1.3nm,0.6s						
KURBB				⇓Lg	Lg	08 58 37.5	
	3.3nm,0.8s						

GCG 03 09:11:05.4±0.9**, 14°.42N×92°.56W, h33^{km}±5^{km}, MD3.8, ML3.3, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
THIG		**0.56**	**30**	*e*P	Pb	09 11 15.9	-1.1
SMCA	**Catarina**	**0.64**	**47**	*e*P	Pn	09 11 17.9	-0.2
SMCA				*e*S	Sn	09 11 28.1	+1.0
QUEO	**Labor Ovalle**	**1.10**	**66**	*e*P	Pb	09 11 25.5	-0.7
QUEO				*i* S	Sb	09 11 42.1	+1.7
QUEO				IAML		09 11 42.3	
	comp=N,594nm,0.2s						
STG2	**El Palmar, Qui**	**1.14**	**89**	*e*P	Pn	09 11 22.7	-2.5
STG2				*e*S	Sn	09 11 36.6	-3.3
STG8	**El Palmar, Qui**	**1.17**	**88**	*e*P	Pn	09 11 23.3	-2.3
STG5	**El Palmar, Qui**	**1.17**	**91**	*e*P	Pn	09 11 22.9	-2.6
STG5				*e*S	Sn	09 11 36.5	-4.0
SOKI	**Kika Raxquin**	**1.19**	**70**	*e*P	Pn	09 11 26.8	+0.8
HUEH	**Huehuetenango**	**1.35**	**49**	*e*P	Pb	09 11 29.4	-1.0
CCIG	**Comitan**	**1.90**	**12**	*e*P	Pn	09 11 36.3	+0.7

NEIC ***03*** *09:30:31.8±1.4, 12°.92N±0°.08×145°.3E±0°.1, h10^{km}±1^{km}, mb4.7/34, Error ellipse: s-maj=23.1km s-min=12.5km az=98.0*

IDC ***03*** *09:30:36.5±1.4, 13°.10N×145°.07E, h42^{km}±9^{km}, mb4.0/17, mbtmp4.2/17, MS3.6/3, Error ellipse: s-maj=22.4km s-min=15.4km az=92.0*

ISC 03 09:30:37.9±0.6**, 13°.05N**±0°.08×**145°.12E**±0°.10**, h57^{km}, n75,** σ**0^{s}99**/70**, mb4.5**/36**, MS3.8**/4**, 1C, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.59**	**336**	P	**Pn**	**09 30 49.8**	**-0.8**
	2µm,0.3s,baz=130,slow=9.4,SNR=328						
GUMO				S	**Sn**	**09 30 57.5**	**-2.3**
	7µm,0.3s,baz=180,slow=20,SNR=22						
GUMO				LR	LR	09 31 12.9	
	comp=Z,3µm,21.4s,baz=32,slow=70						
DPSS	**Saipan**	**2.27**	**17**		**Pn**	**09 31 11.9**	**-1.2**
DPSS				Sn	**Sn**	**09 31 39.3**	**-0.7**
PATS	**Pohnpei**	**14.39**	**114**	Pn	Pn	09 33 51.3	-7.3
H11S3	**WAKE ISLAND Hy**	**21.45**	**73**	T	T	09 57 54.9	
	baz=261,slow=76						
H11S1	**WAKE ISLAND Hy**	**21.46**	**73**	T	T	09 58 05.0	
	baz=261,slow=76						
H11S2	**WAKE ISLAND Hy**	**21.46**	**73**	T	T	09 58 01.4	
	baz=261,slow=76						
H11N1	**WAKE ISLAND Hy**	**21.90**	**70**	T	T	09 58 26.3	
	baz=256,slow=75						
H11N2	**WAKE ISLAND Hy**	**21.91**	**69**	T	T	09 58 21.5	
	baz=256,slow=75						
H11N3	**WAKE ISLAND Hy**	**21.92**	**70**	T	T	09 58 28.3	
	baz=256,slow=75						
MJAR	**Matsushiro Arr**	**24.20**	**346**	P	**P**	**09 35 48.4**	**-0.8**
	2.0nm,0.9s,baz=223,slow=28,SNR=2.9						
	2.0nm,0.9s						
MJAR	**Matsushiro Arr**	**24.20**	**346**	P	**P**	**09 35 49.6**	**+0.5**
YULB	**Yu-li**	**24.81**	**298**	P	**P**	**09 35 55.6**	**+0.7**
TOLI2	**Tolitoli**	**26.86**	**246**	P	**P**	**09 36 13.6**	**+0.1**
TOLI2				IAmb	IAmb	09 36 25.3	
	comp=Z,12nm,1.0s						
CTA	**Charters Tower**	**32.95**	**178**	LR	LR	09 51 55.2	
	comp=Z,68nm,20.2s,baz=117,slow=39						
WB0	**Warramunga Arr**	**34.28**	**198**	P	**P**	**09 37 17.0**	**-1.8**
WB0				IAmb	IAmb	09 37 19.6	
	comp=Z,3.5nm,0.6s						
WR8	**Warramunga Arr**	**34.42**	**198**	P	**P**	**09 37 19.4**	**-0.8**
WR8				IAmb	IAmb	09 37 35.8	
	comp=Z,8.8nm,1.4s						
WRAB	**Tennant Creek**	**34.45**	**198**	P	**P**	**09 37 20.3**	**0.0**
WRAB				IAmb	IAmb	09 37 20.8	
	comp=Z,10.0nm,1.4s						
WB2	**Warramunga Arr**	**34.46**	**198**	P	**P**	**09 37 19.9**	**-0.5**
WRA	**Warramunga Arr**	**34.46**	**198**	P	**P**	**09 37 19.9**	**-0.6**
	comp=Z,1.4nm,0.5s,baz=22,slow=9.8,SNR=33						
	comp=Z,1.4nm,0.5s						
WRA	**Warramunga Arr**	**34.46**	**198**	P	**P**	**09 37 19.1**	**-1.4**
HNS	**HongShan**	**36.39**	**317**	⇑P	**P**	**09 37 37.4**	**+0.6**
HNS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
FITZ	**Fitzroy Crossi**	**36.43**	**212**	P	**P**	**09 37 37.6**	**+0.3**
AS31	**Alice Springs**	**38.10**	**197**	P	**P**	**09 37 50.4**	**-1.1**
ASAR	**Alice Springs**	**38.10**	**197**	P	**P**	**09 37 50.2**	**-1.3**
	comp=Z,1.2nm,1.0s,baz=22,slow=9.0,SNR=7.3						
	comp=Z,1.2nm,1.0s						
ASAR	**Alice Springs**	**38.10**	**197**	P	**P**	**09 37 49.5**	**-2.0**
HHC	**Hu-ho-hao-te**	**40.33**	**320**	*e*P	**P**	**09 38 12.8**	**+2.7**
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
CM31	**Chiang Mai Arr**	**44.67**	**283**	P	**P**	**09 38 45.7**	**+0.2**
CM31				IAmb	IAmb	09 38 46.9	
	comp=Z,7.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**44.67**	**283**	P	**P**	**09 38 46.2**	**+0.7**
	comp=Z,2.8nm,0.6s,baz=87,slow=6.3,SNR=11						
CMAR				PcP	**PP**	**09 40 29.1**	**-1.6**
	comp=Z,2.0nm,0.3s,baz=100,slow=1.6,SNR=8.1						
	comp=Z,2.8nm,0.6s						
CMAR	**Chiang Mai Arr**	**44.67**	**283**	P	**P**	**09 38 45.7**	**+0.2**
SONM	**Songino Array**	**47.31**	**325**	P	**P**	**09 39 05.3**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=119,slow=5.6,SNR=2.0						
SONM				PcP	**PcP**	**09 40 36.3**	**+0.1**
	comp=Z,1.9nm,0.8s,baz=140,slow=3.3,SNR=5.2						
	comp=Z,0.6nm,0.4s						
ATKA	**Atka Island**	**50.83**	**31**	P	**P**	**09 39 32.1**	**-0.6**
WMQ	**Urumqi**	**57.68**	**314**	*e*P	**P**	**09 40 26.6**	**+3.8**
WMQ				LR	LR		
	comp=N,960nm,19.1s						
WMQ				LR	LR		
	comp=E,1µm,17.3s						
WMQ				LR	LR		
	comp=Z,1µm,24.3s						
SDPT	**Sand Point**	**59.46**	**33**	P	**P**	**09 40 35.1**	**+0.3**
RPZ	**Rata Peaks**	**61.26**	**159**	LR	LR	10 02 45.2	
	comp=Z,229nm,21.9s,baz=124,slow=32						
K15K	**Wolf Creek Mou**	**61.95**	**25**	P	**P**	**09 40 51.7**	**+0.1**
MK31	**Makanchi Array**	**62.04**	**316**	P	**P**	**09 40 53.0**	**+0.4**
MK31				IAmb	IAmb	09 41 02.1	
	comp=Z,3.7nm,1.2s						
MKAR	**Makanchi Array**	**62.04**	**316**	P	**P**	**09 40 52.4**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=88,slow=9.2,SNR=10						
	comp=Z,0.4nm,0.3s						
MKAR	**Makanchi Array**	**62.04**	**316**	P	**P**	**09 40 52.8**	**+0.2**
ZALV	**Zalesovo Beam**	**62.20**	**325**	P	**P**	**09 40 53.8**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=109,slow=11,SNR=7.1						
ZALV				PcP	**PcP**	**09 41 32.7**	**-0.3**
	comp=Z,2.2nm,0.7s,baz=111,slow=3.0,SNR=7.7						
	comp=Z,0.6nm,0.3s						
J16K	**Anvik River**	**62.79**	**24**	P	**P**	**09 40 57.4**	**+0.2**
J16K				IAmb	IAmb	09 41 08.5	
	comp=Z,5.2nm,1.2s						
K17K	**Iditarod**	**63.48**	**25**	P	**P**	**09 41 02.2**	**+0.4**
J18K	**Innoko River**	**64.45**	**25**	P	**P**	**09 41 07.8**	**-0.4**
J19K	**Poorman**	**65.10**	**25**	P	**P**	**09 41 12.5**	**+0.1**
J19K				IAmb	IAmb	09 41 41.5	
	comp=Z,7.8nm,1.4s						
KURK	**Kurchatov**	**65.15**	**320**	P	**P**	**09 41 12.9**	**0.0**
KURK				IAmb	IAmb	09 41 15.0	
	comp=Z,3.9nm,0.9s						
KURBB	**Kurchatov Arra**	**65.19**	**320**	P	**P**	**09 41 12.1**	**-1.1**
	comp=Z,0.9nm,0.3s,baz=102,slow=6.6,SNR=12						
	comp=Z,0.9nm,0.3s						
L20K	**Farewell, AK**	**65.28**	**27**	P	**P**	**09 41 13.4**	**-0.2**

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L20K                                    IAmb   IAmb    09 41 39.4
      comp=Z,8.8nm,1.4s
K20K  Telida              65.51  26     P      P       09 41 15.5 +0.4
K20K                                    IAmb   IAmb    09 41 16.8
      comp=Z,13nm,1.5s
J20K  Nowinta River       65.77  25     P      P       09 41 17.2 +0.5
C19K  Lookout Ridge       65.89  19     P      P       09 41 17.2 -0.3
C19K                                    IAmb   IAmb    09 41 19.4
      comp=Z,9.3nm,1.2s
D20K  Etivluk River       66.67  20     P      P       09 41 22.2 -0.3
D20K                                    IAmb   IAmb    09 41 44.4
      comp=Z,10nm,1.4s
NRIK  Noril'sk            66.72 341     P      P       09 41 22.9 +0.3
      comp=Z,2.0nm,0.6s,baz=94,slow=7.2,SNR=3.8
      comp=Z,2.0nm,0.6s
NRIK  Noril'sk            66.72 341     P      P       09 41 22.8 +0.1
NRIK                                    IAmb   IAmb    09 41 23.9
      comp=Z,8.6nm,1.3s
BPAW  Bear Paw Mtn.       67.05  25     P      P       09 41 24.9 -0.1
BPAW                                    IAmb   IAmb    09 41 29.5
      comp=Z,8.4nm,1.3s
ILAR  Eielson Array       68.95  25     P      P       09 41 35.3 -1.5
      comp=Z,1.1nm,0.4s,baz=252,slow=5.7,SNR=57
      comp=Z,1.1nm,0.4s
ILAR  Eielson Array       68.95  25     P      P       09 41 36.4 -0.4
PAX   Paxson              69.14  27     P      P       09 41 37.7 -0.4
PAX                                     IAmb   IAmb    09 41 39.7
      comp=Z,7.5nm,1.1s
J25K  Salcha River,       69.54  26     P      P       09 41 39.8 -0.8
BVAR  Borovoye Array      70.50 322     P      P       09 41 46.5  0.0
      comp=Z,1.1nm,0.3s,baz=105,slow=8.5,SNR=8.4
      comp=Z,1.1nm,0.3s
HYT   Haines Junctio      72.55  30     P      P       09 41 59.9 +1.0
M30M  Minto, Yukon        73.02  28     P      P       09 42 01.8 +0.2
M30M                                    IAmb   IAmb    09 42 20.4
      comp=Z,11nm,1.4s
R33M  Jennings River      75.78  32     P      P       09 42 17.6 -0.1
R33M                                    IAmb   IAmb    09 42 20.2
      comp=Z,14nm,1.2s
AB31  Akbulak array       77.10 318     P      P       09 42 25.7 +0.4
ABKAR Akbulak array       77.10 318     P      P       09 42 25.7 +0.4
YBH   Yreka Blue Hor      83.04  49     LR     LR      10 15 06.3
      comp=Z,13nm,18.3s,baz=306,slow=32
YKA   Yellowknife Ar      83.22  27     P      P       09 42 57.5 -0.4
      comp=Z,1.8nm,0.9s,baz=283,slow=5.7,SNR=21
      comp=Z,1.8nm,0.9s
YKA   Yellowknife Ar      83.22  27     P      P       09 42 57.9 -0.1
SPITS Spitsbergen Ar      84.62 351     P      P       09 43 05.2 +0.4
      comp=Z,14nm,1.0s,baz=110,slow=4.9,SNR=2.5
      comp=Z,14nm,1.0s
NEW   Newport             85.47  42     P      P       09 43 11.2 +1.5
      comp=Z,1.7nm,0.5s,baz=264,slow=3.4,SNR=7.0
      comp=Z,1.7nm,0.5s
NVAR  Mina Array Bea      87.07  51     P      P       09 43 19.5 +1.5
      comp=Z,0.4nm,0.5s,baz=284,slow=7.5,SNR=5.8
      comp=Z,0.4nm,0.5s
ARCES ARCESS Array B      87.67 342     P      P       09 43 19.2 -0.8
      comp=Z,5.6nm,0.9s,baz=68,slow=4.2,SNR=5.5
      comp=Z,5.6nm,0.9s
FIA1  FINESS Array S      91.75 335     P      P       09 43 38.3 -0.9
FINES FINESS Array B      91.75 335     P      P       09 43 38.2 -1.0
      comp=Z,1.8nm,0.6s,baz=68,slow=4.1,SNR=9.8
      comp=Z,1.8nm,0.6s
FINES FINESS Array B      91.75 335     P      P       09 43 38.8 -0.4
DBIC  Dimbokro           144.31 302     PKP    PKPdf   09 50 07.5 -1.2
      comp=Z,4.6nm,0.5s,baz=67,slow=3.0,SNR=17
LPAZ  La Paz             147.70 100     PKPbc  PKPab   09 50 19.5 -0.8
      comp=Z,1.9nm,1.0s,baz=8.6,slow=2.2,SNR=4.2
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NOU 03 09:44:08.1, 18°.08S×168°.32E, h90^{km}, MLv4.1/21, Vanuatu Islands, Vanuatu Islands

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Code  Station Name         Δ°   AZ°     Phase ID         Time       Res
                                        Op     ISC      h  m  s     ISC
RTV   Rentapao            0.30  19      P      Pn      09 44 23.1 +1.5
DVP   Devils Point        0.38 340      P      Pn      09 44 24.0 +2.0
INH   Isangel             1.72 148      P      Pn      09 44 36.8 +0.2
INH   Isangel             1.72 148      S      Sn      09 44 59.5 +1.2
MARNC Mare, Loyalty       3.39 185      P      Pn      09 44 58.0 -0.9
MARNC Mare, Loyalty       3.39 185      S      Sn      09 45 36.8 -1.4
YATNC Mamie plateau,      4.18 199      P      Pn      09 45 09.6  0.0
YATNC Mamie plateau,      4.18 199      S      Sn      09 45 57.0 -0.3
DZM   Mont Dzumac         4.34 204      P      Pn      09 45 12.7 +0.8
DZM   Mont Dzumac         4.34 204      S      Sn      09 46 02.9 +1.5
OUENC Ouen Island, N      4.53 198      P      Pn      09 45 15.3 +0.9
OUENC Ouen Island, N      4.53 198      S      Sn      09 46 07.4 +1.5
PINNC Pines Island,       4.58 190      P      Pn      09 45 15.0 -0.1
PINNC Pines Island,       4.58 190      S      Sn      09 46 07.9 +0.8
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AFAD ***03*** *09:45:57.7, 35°.25N×27°.15E, h8^{km}±1^{km}, MW4.3*

IDC ***03*** *09:45:58.0±0.6, 35°.21N×27°.16E, h0^{km}, mb4.2/21, mbtmp4.2/32, ML4.0/10, Error ellipse: s-maj=13.2km s-min=10.2km az=176.0*

MOS ***03*** *09:45:58.1±1.0, 35°.20N×27°.16E, h12^{km}, mb4.4/11, Error ellipse: s-maj=7.0km s-min=4.1km az=75.8*

NIC ***03*** *09:45:58.6, 35°.27N×27°.24E, h6^{km}±1^{km}, Ml4.1/15*

ATH ***03*** *09:45:59.5, 35°.25N×27°.23E, h6^{km}, Mw4.3, Moment Tensor Solution. s6 Moment tensor: M_{rr}-1.54; $M_{\theta\theta}$-1.50; $M_{\phi\phi}$3.03; $M_{r\theta}$1.86; $M_{\theta\phi}$0.95; $M_{\phi r}$0.55; Fault plane solution: NP1: ϕ_s227.00000°, δ69.00000°, λ-43.00000°. NP2: ϕ_s335.00000°, δ50.00000°, λ-153.00000°.*

ISK ***03*** *09:46:00.1, 35°.32N×27°.17E, h8^{km}, ML4.2/38*

HLW ***03*** *09:46:00.4, 35°.27N×27°.22E, h6^{km}±1^{km}, Ml4.0*

NEIC ***03*** *09:46:00.3±1.5, 35°.28N±0°.04×27°.15E±0°.06, h10^{km}±1^{km}, mb4.5/43, Error ellipse: s-maj=7.9km s-min=6.2km az=288.0*

THE ***03*** *09:46:01.9, 35°N±4°×2°7E±°, h11^{km}±13^{km}, M4.0/10, MLh4.0/10*

MCSM ***03*** *09:46:01.5±0.6, 35°N±4°×2°7E±°, h10^{km}±3^{km}, mb4.2, mB4.4, MLv4.1, Mw(mB)3.5*

BGR ***03*** *09:46:38.5, 36°.85N×21°.97E, h11^{km}, mb4.2*

ISC 03 09:45:59.9±0.7, 35°.27N±0°.03×27°.18E±0°.02, h10^{km}±4^{km}, n347, σ1^{s}37/425, mb4.3/45, 9C-12D, Dodecanese Islands

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Code  Station Name         Δ°   AZ°     Phase ID         Time       Res
                                        Op     ISC      h  m  s     ISC
KARP  Karpathos           0.28 357      P      Pg      09 46 05.4 -0.2
KARP                                    S      Sg      09 46 09.2 -0.2
KARP  Karpathos           0.28 357             Pg      09 46 05.5 -0.2
KARP                                           Sg      09 46 09.1 -0.2
KARP  Karpathos           0.28 357      Pg     Pg      09 46 05.3 -0.3
KARP                                    Sg     Sg      09 46 08.9 -0.5
KARP  Karpathos           0.28 357      Pg     Pg      09 46 05.4 -0.2
KARP                                    Sg     Sg      09 46 10.0 +0.6
KARP  Karpathos           0.28 357      P      Pg      09 46 04.9 -0.7
KARP                                    S      Sg      09 46 09.6 +0.2
KARP                                    AML    AML     09 46 13.9
      175nm,0.6s
KARP                                    AML    AML     09 46 14.3
      174nm,0.4s
KARP  Karpathos           0.28 357      P      Pg      09 46 05.6  0.0
KARP                                    S      Sg      09 46 09.8 +0.4
ZKR   Zakros              0.80 259      P      Pg      09 46 15.1 -0.4
ZKR   Zakros              0.80 259      Pg     Pg      09 46 15.0 -0.4
ZKR                                     Sg     Sb      09 46 27.8 +0.9
ZKR   Zakros              0.80 259      P      Pg      09 46 15.0 -0.5
ZKR                                     S      Sn      09 46 28.2 -1.2
ZKR                                     AML    AML     09 46 29.2
      15nm,0.6s
ZKR                                     AML    AML     09 46 36.0
      22nm,0.9s
ZKR   Zakros              0.80 259      P      Pg      09 46 14.9 -0.5
ZKR                                     S      Sb      09 46 27.1 +0.1
SIT2  Siteia              0.88 266      P      Pb      09 46 17.2 -0.1
SIT2                                    S      Sb      09 46 29.1 -0.1
ARG   Arkhangelos         1.22  39      P      Pb      09 46 22.9 -0.2
ARG                                     S      Sb      09 46 39.6 +0.6
ARG   Arkhangelos         1.22  39      Pn     Pb      09 46 22.9 -0.2
ARG                                     Sn     Sb      09 46 39.5 +0.5
ARG   Arkhangelos         1.22  39      Pn     Pb      09 46 23.0 -0.2
ARG                                     Sn     Sn      09 46 40.4 +0.7
ARG   Arkhangelos         1.22  39      P      Pb      09 46 22.1 -1.0
ARG                                     S      Sb      09 46 38.6 -0.4
ARG                                     AML    AML     09 46 45.9
      43nm,1.3s
ARG                                     AML    AML     09 46 46.3
      37nm,0.5s
ARG   Arkhangelos         1.22  39      P      Pb      09 46 22.9 -0.2
ARG                                     S      Sb      09 46 38.8 -0.2
NPS   Neapolis            1.28 270      P      Pb      09 46 24.3  0.0
NPS                                     S      Sn      09 46 41.4 +0.2
NPS   Neapolis            1.28 270      P      Pb      09 46 24.2  0.0
NPS                                     S      Sn      09 46 42.1 +0.9
NISR  Nisiros             1.34 358      P      Pn      09 46 24.6 -0.1
NISR                                    S      Sb      09 46 41.5 -0.9
NISR  Nisiros             1.34 358      P      Pn      09 46 25.2 +0.4
NISR                                    S      Sn      09 46 42.9 +0.3
YAZI  Mula-Dat§a-         1.43   9      P      Pn      09 46 25.7 -0.3
YAZI                                    S      Sn      09 46 42.5 -2.4
ASTA  Astypalaia          1.44 332      P      Pn      09 46 25.6 -0.5
ASTA                                    S      Sg      09 46 46.8 +0.5
RODB  Rodos               1.45  35      P      Pn      09 46 26.5 +0.3
RODB                                    S      Sn      09 46 44.8 -0.5
RDI1  Rhodes Town Ha      1.45  35      P      Pn      09 46 26.7 +0.4
DAT   Datca               1.49  12      Pn     Pn      09 46 27.5 +0.5
DATC  Datca-Mugla         1.54  15      Pn     Pn      09 46 27.9 +0.4
KLNA  Kalymnos            1.69 354      P      Pn      09 46 30.1 +0.5
IACM  Heraklion           1.73 272      P      Pg      09 46 34.8 +1.7
TURN  Turunc              1.73  30      P      Pn      09 46 30.2 +0.1
TURN                                    S      Sb      09 46 54.5 +0.8
TURN  Turunc              1.73  30      Pn     Pn      09 46 30.8 +0.7
THERA Ancient Thera,      1.77 309      P      Pn      09 46 30.5 -0.1
THERA Ancient Thera,      1.77 309      P      Pn      09 46 30.6  0.0
THERA                                   S      Sb      09 46 55.2 +0.5
THR8  Santorini-Mono      1.79 310      P      Pn      09 46 30.7 -0.2
BODT  Bodrum              1.79   3      P      Pg      09 46 33.8 -0.5
BODT                                    S      Sg      09 46 58.0 +0.4
BODT  Bodrum              1.79   3      P      Pg      09 46 33.8 -0.5
BODT  Bodrum              1.79   3      Pn     Pn      09 46 31.6 +0.6
BDRM  Kayabasi            1.81   7      P      Pn      09 46 32.3 +1.1
BDRM                                    S      Sg      09 46 58.2 +0.2
THR6  Thira Island,       1.81 307      P      Pn      09 46 31.3 +0.1
SNT5  Nea Kammeni, S      1.84 309      P      Pn      09 46 31.6  0.0
SNT5  Nea Kammeni, S      1.84 309      P      Pn      09 46 31.6  0.0
THR3  Thira Island,       1.84 309      P      Pn      09 46 31.7 +0.1
THR2  Thira island,       1.84 310      P      Pn      09 46 31.8 +0.2
THR2  Thira island,       1.84 310      P      Pn      09 46 32.4 +0.8
YKAV  Yalikavak-Bodr      1.85   2      P      Pn      09 46 31.8  0.0
YKAV                                    S      Sb      09 46 57.9 +0.7
YKAV  Yalikavak-Bodr      1.85   2      Pn     Pn      09 46 32.5 +0.7
IDI   Anoyia              1.87 271      Pn     Pn      09 46 31.5 -0.6
      0.8nm,0.3s,baz=294,slow=16,SNR=7.7
IDI                                     Sn     Sn      09 46 55.5 -0.4
      41nm,0.3s,baz=240,slow=17,SNR=6.8
IDI   Anoyia              1.87 271      P      Pn      09 46 33.1 +1.0
IDI                                     S      Sn      09 46 55.5 -0.4
IDI   Anoyia              1.87 271             Pn      09 46 31.3 -0.9
IDI   Anoyia              1.87 271      Pn     Pb      09 46 33.4 -0.9
IDI   Anoyia              1.87 271      P      Pn      09 46 32.6 +0.5
IDI                                     S      Sb      09 46 57.5 -0.3
THR5  Thira Island,       1.88 308      P      Pn      09 46 32.3 +0.2
DALY  Dalyan (Mula)       1.95  37      Pn     Pn      09 46 34.0 +0.8
IZZE  Mula-Seydike        2.03  54      P      Pn      09 46 34.9 +0.6
IZZE                                    S      Sb      09 47 02.0 -0.3
FETY  Fethiye             2.06  48      P      Pn      09 46 26.9 -7.8
FETY                                    S      Sn      09 47 00.5  0.0
YER   Yerkesik            2.06  25      P      Pn      09 46 36.1 +1.3
YER                                     S      Sb      09 47 05.1 +1.8
YER   Yerkesik            2.06  25      P      Pn      09 46 35.5 +0.7
YER                                     S      Sn      09 47 00.9 +0.3
YER   Yerkesik            2.06  25      Pn     Pn      09 46 35.4 +0.6
MLSB  Milas               2.08  13      P      Pn      09 46 34.5 -0.5
MLSB                                    S      Sn      09 47 02.5 +1.5
MLSB  Milas               2.08  13      Pn     Pn      09 46 35.9 +0.9
DIDI  Didim-Aydin         2.10   1      Pn     Pn      09 46 35.8 +0.6
SABU  Mula-Dalaman        2.12  43      P      Pn      09 46 36.8 +1.2
SABU                                    S      Sg      09 47 10.3 +2.1
DDIM  Aydin, Didim        2.19   1      P      Pb      09 46 38.4 -1.2
DDIM                                    S      Sb      09 47 07.7 +1.0
MULA  Mugla, Merkez-      2.19  25      P      Pn      09 46 37.9 +1.4
MULA                                    S      Sb      09 47 07.0 +0.1
AKAS  Kas                 2.19  63      P      Pn      09 46 37.4 +0.8
AKAS  Kas                 2.19  63             Pn      09 46 37.6 +1.0
AKAS  Kas                 2.19  63      Pn     Pn      09 46 36.9 +0.3
APE   Apeiranthos         2.24 324      P      Pn      09 46 36.6 -0.5
APE                                     S      Sn      09 47 02.7 -2.1
APE   Apeiranthos         2.24 324      P      Pn      09 46 36.7 -0.5
APE                                     S      Sn      09 47 04.1 -0.8
APE   Apeiranthos         2.24 324      Pn     Pn      09 46 36.8 -0.3
APE   Apeiranthos         2.24 324    ⇑P      Pn      09 46 36.9 -0.3
APE   Apeiranthos         2.24 324    i P      Pn      09 46 36.6 -0.5
APE   Apeiranthos         2.24 324      P      Pn      09 46 36.8 -0.3
APE                                     S      Sb      09 47 07.0 -1.3
CAME  Cameli-Denizli      2.40  45      Pn     Pn      09 46 40.2 +0.8
DEMR  Demre-Antalya       2.42  66      Pn     Pn      09 46 40.9 +1.3
GCAM  G?zelcaml?          2.43   1      P      Pn      09 46 41.1 +1.4
GCAM                                    S      Sb      09 47 12.4 -1.3
GCAM  G?zelcaml?          2.43   1      Pn     Pn      09 46 40.6 +0.9
SMG   Samos               2.45 354      P      Pn      09 46 40.2 +0.2
SMG   Samos               2.45 354      P      Pn      09 46 40.4 +0.3
SMG                                     S      Sn      09 47 11.7 +1.6
KNIK  Mula-Seydike        2.50  50      P      Pn      09 46 41.8 +1.0
CAEL  Denizli, Camel      2.53  42      P      Pn      09 46 43.0 +1.7
CAEL                                    S      Sg      09 47 21.3 -0.1
GVD   Gavdhos             2.57 261      P      Pb      09 46 44.6 -1.6
GVD   Gavdhos             2.57 261      Pn     Pn      09 46 43.6 +1.9
GVD   Gavdhos             2.57 261      P      Pn      09 46 42.4 +0.7
KUSD  Kusadasi-Aydin      2.59   2      Pn     Pn      09 46 42.8 +0.9
TAVA  DENIZLI_Tavas       2.60  32      P      Pn      09 46 44.4 +2.2
TAVA                                    S      Sb      09 47 18.3 -0.5
IMMV  Iera Moni Meta      2.62 275      P      Pn      09 46 43.7 +1.3
IMMV  Iera Moni Meta      2.62 275      Pn     Pn      09 46 44.1 +1.7
IMMV  Iera Moni Meta      2.62 275      P      Pn      09 46 43.1 +0.8
ELL   Elmali              2.66  55      P      Pn      09 46 45.0 +1.9
ELL   Elmali              2.66  55             Pn      09 46 44.8 +1.8
ELL   Elmali              2.66  55      Pn     Pn      09 46 44.5 +1.5
ELL   Elmali              2.66  55      P      Pn      09 46 44.8 +1.8
MHLO  Agia Marina, M      2.66 303      P      Pn      09 46 43.9 +1.0
MHLO  Agia Marina, M      2.66 303      P      Pn      09 46 43.5 +0.6
ESEN  Aydn-Nazilli        2.69  20      P      Pn      09 46 44.5 +1.2
ESEN                                    S      Sn      09 47 14.3 -1.7
AYDB  Zeytinkoy-Aydi      2.73  12      Pn     Pn      09 46 44.8 +0.8
GOLH  Golhisar            2.75  44      P      Pn      09 46 46.4 +2.2
GOLH                                    S      Sn      09 47 21.0 +3.4
APMY  Acipayam-Deniz      2.79  37      Pn     Pn      09 46 45.9 +1.2
DNIZ  Denizli-Tavas-      2.79  32      P      Pn      09 46 46.3 +1.5
DNIZ                                    S      Sb      09 47 22.5 -1.7
GMLD  Gumuldur            2.81 356      Pn     Pn      09 46 45.9 +1.0
NAZL  Nazilli-Aydin       2.83  18      Pn     Pn      09 46 46.4 +1.1
KNDR  Palaiochora Ch      2.91 270      Pn     Pn      09 46 48.1 +1.8
ZEYE  Izmir, Urla-Ze      3.01 350      P      Pn      09 46 48.6 +0.9
ZEYE                                    S      Sb      09 47 27.7 -2.9
KEMT  Kemer-ANTALYA       3.05  63      Pn     Pn      09 46 49.9 +1.7
KIRA  zmir-Kiraz          3.08  18      P      Pn      09 46 49.9 +1.1
ODEM  Odemis-Izmir        3.09  13      Pn     Pn      09 46 50.3 +1.5
KORT  Korkueli            3.10  55      Pn     Pn      09 46 50.5 +1.5
INCE  Denizli-Bozkur      3.11  38      P      Pn      09 46 50.2 +1.0
BLCB  Balcova             3.11 358      P      Pn      09 46 50.5 +1.4
BLCB  Balcova             3.11 358      Pn     Pn      09 46 50.3 +1.2
URLA  Izmir               3.12 352      P      Pn      09 46 50.6 +1.4
URLA  Izmir               3.12 352      Pn     Pn      09 46 50.3 +1.0
ANKY  Antikythira Is      3.22 282      P      Pn      09 46 50.9 +0.3
CHOS  Chios island        3.24 344      Pn     Pn      09 46 51.8 +0.9
MANT  Manisa              3.40  19      P      Pn      09 46 54.0 +0.7
MANT  Manisa              3.40  19             Pn      09 46 54.0 +0.7
KULA  Kula-Manisa         3.45  20      Pn     Pn      09 46 55.2 +1.4
GOMA  Golmarmara-Man      3.48  10      Pn     Pn      09 46 55.6 +1.4
KTHA  Kythira Island      3.49 288      Pn     Pn      09 46 55.6 +1.3
BCK   Bucak               3.52  51      Pn     Pn      09 46 56.5 +1.8
KARY  Karystos            3.53 322      P      Pn      09 46 55.5 +0.6
AKS   Akhisar             3.64   8      Pn     Pn      09 46 57.8 +1.4
ISP   Isparta             3.71  46             Pn      09 46 58.2 +0.8
ISP   Isparta             3.71  46    i P      Pn      09 46 58.4 +1.0
ISP   Isparta             3.71  46      P      Pn      09 46 57.8 +0.4
VLI   Veliai              3.73 294      P      Pn      09 46 58.2 +0.6
VLY   Voula,Athens        3.75 314      P      Pn      09 46 58.7 +0.8
OSC1  CSNet OBS 1         3.82 116      P      Pn      09 46 58.6 -0.2
OSC1                                    S      Sn      09 47 45.2 +1.4
OSC1                                    AML    AML     09 47 59.2
      0.4nm,0.9s
OSC1                                    AML    AML     09 47 59.4
      0.3nm,0.7s
SLUM  Salum               4.11 204      P      Pn      09 47 03.4 +0.6
SLUM                                    S      Sn      09 47 49.9 -1.1
AKMS  Akamas              4.23  92      P      Pn      09 47 03.7 -0.8
AKMS                                    S      Sn      09 47 53.7 -0.3
AKMS                                    AML    AML     09 47 56.6
      1.2nm,0.4s
AKMS                                    AML    AML     09 47 56.7
      1.5nm,0.3s
AKMS  Akamas              4.23  92      P      Pn      09 47 03.7 -0.8
BALB  Balikesir           4.40   7             Pn      09 47 08.1 +1.3
ALFC  Alefka              4.44  90      P      Pn      09 47 06.2 -1.2
ALFC                                    S      Sn      09 47 58.6 -0.6
ALFC                                    AML    AML     09 47 59.8
      2.0nm,0.7s
ALFC                                    AML    AML     09 48 00.0
      2.6nm,0.6s
ALFC  Alefka              4.44  90      P      Pn      09 47 06.4 -1.0
NATA  Nata                4.45  95      P      Pn      09 47 07.2 -0.4
NATA                                    S      Sn      09 47 59.4  0.0
NATA                                    AML    AML     09 48 04.6
      1.7nm,0.8s
NATA                                    AML    AML     09 48 08.8
      2.4nm,0.7s
ITM   Ithomi              4.66 296             Pn      09 47 11.0 +0.7
TROD  Troodos             4.67  92      P      Pn      09 47 09.1 -1.7
TROD                                    S      Sn      09 48 05.4 +0.3
TROD                                    AML    AML     09 48 12.6
      0.6nm,0.5s
TROD                                    AML    AML     09 48 16.6
      0.8nm,0.5s
APOL  The Sanctuary       4.71  96      P      Pn      09 47 10.0 -1.0
APOL                                    S      Sn      09 48 05.7 +0.1
APOL                                    AML    AML     09 48 15.2
      0.7nm,0.6s
APOL                                    AML    AML     09 48 18.0
      0.7nm,0.7s
OSC2  CSNet OBS 4         4.75 116      P      Pn      09 47 10.9 -0.7
OSC2                                    S      Sn      09 48 07.2 +0.4
OSC2                                    AML    AML     09 48 15.8
      0.4nm,0.5s
OSC2                                    AML    AML     09 48 18.3
      0.6nm,0.6s
XYLS  Xyliatos            4.82  91      P      Pn      09 47 11.6 -1.1
XYLS                                    S      Sn      09 48 08.5  0.0
XYLS                                    AML    AML     09 48 10.2
      0.8nm,0.7s
XYLS                                    AML    AML     09 48 11.1
      0.5nm,0.3s
ASGA  Asgata              5.00  94      P      Pn      09 47 14.3 -0.8
ASGA                                    S      Sn      09 48 12.5 -0.5
ASGA                                    AML    AML     09 48 14.8
      0.5nm,0.7s
ASGA                                    AML    AML     09 48 19.3
      0.8nm,0.4s
CSS   Mathiatis           5.05  92             Pn      09 47 15.0 -0.8
CSS   Mathiatis           5.05  92      P      Pn      09 47 15.1 -0.8
CSS                                     S      Sn      09 48 14.9 +0.7
CSS                                     AML    AML     09 48 25.6
      0.6nm,0.7s
CSS                                     AML    AML     09 48 26.1
      0.5nm,0.9s
BAND  Balkesir-Ban        5.13   8    ⇑P      Pn      09 47 18.5 +1.6
BORA  Eskisehir           5.29  28             Pn      09 47 18.9 -0.2
MVOU  Mavrovouni          5.29  91      P      Pn      09 47 18.4 -0.6
MVOU                                    S      Sn      09 48 20.9 +0.8
MVOU                                    AML    AML     09 48 23.9
      0.5nm,0.4s
MVOU                                    AML    AML     09 48 29.4
      0.4nm,0.5s
PARAL Paralimni           5.63  91      P      Pn      09 47 22.4 -1.3
PARAL                                   S      Sn      09 48 29.5 +1.0
PARAL                                   AML    AML     09 48 44.5
      0.7nm,0.6s
PARAL                                   AML    AML     09 48 46.8
      0.7nm,1.5s
RDO   Rodhopi             6.01 348             Pn      09 47 29.8 +0.9
LIT   Litokhoron          6.09 324             Pn      09 47 31.1 +1.0
LIT   Litokhoron          6.09 324      P      Pn      09 47 31.1 +1.0
SWA2                      6.18 194      P      Pn      09 47 32.4 +1.1
ANTO  Ankara              6.40  42             Pn      09 47 35.0 +0.7
ANTO  Ankara              6.40  42      P      Pn      09 47 35.1 +0.7
ANTO  Ankara              6.40  42      Pn     Pn      09 47 35.3 +0.9
      0.1nm32nm,0.8s
KIRS  Kirsehir-Merke      6.62  52    ⇓P      Pn      09 47 38.9 +1.6
BR105 Keskin Array S      6.78  47      Pn     Pn      09 47 40.0 +0.4
      0.1nm165nm17nm,0.9s
BR104 Keskin Array S      6.78  47      Pn     Pn      09 47 40.4 +0.7
      0.1nm128nm12nm,0.8s
BR106 Keskin Array S      6.79  47      Pn     Pn      09 47 40.5 +0.8
      0.1nm147nm16nm,0.8s
BR131 Keskin Array S      6.79  47    i P      Pn      09 47 40.4 +0.6
BRTR  Keskin Array B      6.79  47      Pn     Pn      09 47 40.6 +0.8
      1.6nm,0.3s,baz=217,slow=15,SNR=26
BRTR                                    Sn     Sn      09 48 58.6 +1.3
      0.5nm,0.3s,baz=208,slow=24,SNR=5.4
      5.3nm,0.5s
BRTR  Keskin Array B      6.79  47             Pn      09 47 40.5 +0.6
BRTR  Keskin Array B      6.79  47    i P      Pn      09 47 40.7 +0.8
BRTR                                    pmax   pmax
      comp=Z,6.0nm,0.4s
MMAI  Mount Meron Ar      7.18 106      Pn     Pn      09 47 44.2 -0.9
      comp=Z,9.6nm,0.3s,baz=302,slow=13,SNR=9.0
MMAI                                    Sn     Sn      09 49 08.5 +1.7
      comp=Z,17nm,0.3s,baz=311,slow=33,SNR=6.1
      comp=Z,3.7nm,0.3s
QRWL  Qaraoun             7.23 101    eP      Pn      09 47 43.9 -2.0
HWQ   Hawqa               7.28  95    eP      Pn      09 47 45.1 -1.4
ZAHL  Zahle               7.32  99    eP      Pn      09 47 45.9 -1.2
RCY   Rachaya             7.37 101    eP      Pn      09 47 45.9 -1.9
BEIL  Beino               7.43  93    eP      Pn      09 47 46.7 -1.8
FKH   Fakeheh             7.67  95    eP      Pn      09 47 50.6 -1.2
ILGA  Ilgaz               7.74  40      Pn     Pn      09 47 52.9 +0.1
GHAJ  Ghor Haditha        8.06 117             Pn      09 47 57.4 +0.3
HFRF  Wahat Farafira      8.15 173      P      Pn      09 47 59.7 +1.3
EIL   Elat                8.62 128      Pn     Pn      09 48 03.5 -1.3
      comp=Z,1.7nm,0.3s,baz=345,slow=3.0,SNR=15
EIL                                     Sn     Sn      09 49 37.0 -5.1
      comp=Z,6.8nm,0.3s,baz=21,slow=4.1,SNR=8.5
      comp=Z,5.7nm,0.4s
ASF   Jabal al Asfar      8.66 108      Pn     Pn      09 48 04.6 -0.9
      comp=Z,0.7nm,0.3s,baz=169,slow=3.9,SNR=4.0
ASF                                     Sn     Sn      09 49 42.7 -0.6
      comp=Z,0.6nm,0.3s,baz=299,slow=14,SNR=2.5
      comp=Z,3.3nm,0.6s
BOVS  Bovan               9.36 335    ⇑P      Pn      09 48 16.7 +1.7
CEL   Celeste             9.53 292      Pn     Pn      09 48 17.6 +0.3
CUC   Castrocucco        10.17 301             Pn      09 48 25.9 -0.2
MLR   Muntele Rosu       10.25 355      Pn     Pn      09 48 29.3 +2.0
      comp=Z,0.4nm,0.3s,baz=188,slow=12,SNR=6.6
MLR                                     Sn     Sn      09 50 23.9 +1.6
      comp=Z,0.3nm,0.3s,baz=248,slow=19,SNR=0.9
      comp=Z,4.1nm,0.9s
MLR   Muntele Rosu       10.25 355    ⇓P      Pn      09 48 29.8 +2.6
VOIR                     10.29 352    ⇓P      Pn      09 48 30.2 +2.6
VOIR                     10.29 352      P      Pn      09 48 30.2 +2.6
ACER  Acerenza           10.43 305      Pn     Pn      09 48 29.5 -0.1
VAE   Valguarnera        10.53 286      Pn     Pn      09 48 30.4 -0.6
      comp=Z,9.6nm,0.5s,baz=134,slow=17,SNR=1.8
VAE                                     Sn     Sn      09 50 31.0 +2.0
      comp=Z,2.6nm,0.3s,baz=286,slow=5.3,SNR=1.8
PLOR  Plostina           10.58 358    ⇑P      Pn      09 48 34.2 +2.5
PLOR  Plostina           10.58 358      P      Pn      09 48 34.1 +2.5
VRI   Vrincioaia         10.59 358    ⇓P      Pn      09 48 33.5 +1.7
VRI   Vrincioaia         10.59 358      P      Pn      09 48 33.4 +1.7
MARR  Marisel-Cluj       11.80 346    ⇑P      Pn      09 48 50.1 +1.8
BURAR Bucovina Array     12.42 354    ⇓P      Pn      09 48 59.2 +2.2
BURAR Bucovina Array     12.42 354      P      Pn      09 48 59.1 +2.2
NRCA  Norcia             13.28 309      Pn     Pn      09 49 08.8 +0.3
NEUR  Neytrino           14.42  52    i P      Pn      09 49 25.5 +1.3
KEST  Kesra              14.54 277      Pn     Pn      09 49 25.1 -0.7
      comp=Z,0.7nm,0.3s,baz=80,slow=0.9,SNR=13
      comp=Z,5.9nm,0.9s
KEST  Kesra              14.54 277             Pn      09 49 25.0 -0.8
SHA1  Shidzhatmaz        14.62  50    i P      Pn      09 49 26.8 -0.3
LUBAR Lubar, Ukraine     14.65   1      Pn     Pn      09 49 28.2 +1.0
GNI   Garni              14.73  65    i P      Pn      09 49 29.0 +0.5
KIV   Kislovodsk         14.75  49      Pn     Pn      09 49 28.4 -0.3
KIV   Kislovodsk         14.75  49    eP      Pn      09 49 30.7 +2.0
KIV                                     pmax   pmax
      comp=Z,16nm,1.1s
KIV                                     MLR    MLR
      comp=Z,378nm,13.0s
KIV   Kislovodsk         14.75  49      Pn     Pn      09 49 29.7 +1.0
      comp=Z,17nm,1.3s
KBZ   Khabaz             14.77  50      Pn     P       09 49 33.5 -1.4
      comp=Z,0.3nm,0.3s,baz=241,slow=9.6,SNR=11
      comp=Z,4.8nm,0.9s
KBZ   Khabaz             14.77  50    i P      Pn      09 49 31.9 +3.1
STHS  Stebnicka Huta     14.80 345    eP      P       09 49 35.3 +0.1
MODS  Modra-Piesok       15.01 334    eP      P       09 49 43.9 +6.3
MODS                                    pmax   pmax
      comp=Z,10.0nm,1.0s
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MODS  Modra-Piesok       15.01 334  eP     P       09 49 43.9 +6.3
NIE   Niedzica           15.02 342   Pn    Pn      09 49 32.9 +0.7
      comp=Z,561nmcomp=Z,6.6nm,2.4s
JAVC  Velka Javorina     15.29 336  ePN    P       09 49 39.4 -1.3
KIEV  Kiev               15.49   5         Pn      09 49 38.1 -0.3
KIEV  Kiev               15.49   5   P     Pn      09 49 38.1 -0.3
KIEV                                 pmax  pmax
      comp=Z,7.0nm,0.9s
AKASG Malin Array Be     15.50   5   Pn    Pn      09 49 39.2 +0.8
      comp=Z,2.6nm,0.3s,baz=195,slow=12,SNR=12
      comp=Z,0.7nm,0.3s
AKASG Malin Array Be     15.50   5ceP      P       09 49 42.7 -0.2
AKASG                                pmax  pmax
      comp=Z,3.0nm,0.4s
AKBB  Malin Array Si     15.50   5         Pn      09 49 38.5 +0.1
AKBB  Malin Array Si     15.50   5  i P    Pn      09 49 39.3 +0.8
MAUC  Maruska            15.67 337  eP     P       09 49 47.4 +2.4
MOA   Molln              15.83 327  eP     P       09 49 47.6 +0.9
      baz=145,slow=11
KRUC  Moravsky           15.91 333  ePN    P       09 49 46.3 -1.2
VRAC  Vranov             16.04 334   Pn    P       09 49 47.7 -1.4
      comp=Z,0.7nm,0.3s,baz=118,slow=9.7,SNR=7.8
      comp=Z,6.7nm,0.7s
VRAC  Vranov             16.04 334  ePN    P       09 49 47.9 -1.1
RNPP8 Varash             16.09 357   P     Pn      09 49 47.0 +0.9
MORC  Moravsky Berou     16.12 337         Pn      09 49 45.5 -1.1
MORC  Moravsky Berou     16.12 337  ePN    P       09 49 49.1 -0.9
MORC  Moravsky Berou     16.12 337   P     Pn      09 49 45.5 -1.1
MORC                                 pmax  pmax
      comp=Z,8.0nm,0.9s
STEB  Steborice          16.19 338  eP     P       09 49 52.6 +2.0
CKRC  Cesky Krumlov      16.54 329  eP     Pn      09 49 53.4 +1.4
CKRC  Cesky Krumlov      16.54 329  eP     Pn      09 49 53.4 +1.4
KRLC  Kraliky            16.63 336  eP     P       09 49 56.1 +0.5
KRLC  Kraliky            16.63 336  eP     P       09 49 56.1 +0.5
GEC2  GERESS Array S     16.82 328  eP     Pn      09 49 56.6 +1.0
      baz=145,slow=11
GERES GERESS Array B     16.82 328   Pn    Pn      09 49 56.2 +0.6
      baz=149,slow=11,SNR=12
      comp=Z,2.1nm,0.6s
DPC   Dobruska-Polom     17.02 336  eP     P       09 49 59.3 -0.6
DPC   Dobruska-Polom     17.02 336  eP     P       09 49 59.3 -0.6
DPC   Dobruska-Polom     17.02 336   P     Pn      09 49 58.8 +0.8
      comp=Z,13nm,0.9s
ZVC   Zvikov             17.07 330  eP     P       09 50 02.9 +2.5
KHC   Kasperske Hory     17.09 328         Pn      09 50 00.0 +1.1
KHC   Kasperske Hory     17.09 328  i P    Pn      09 49 59.0 +0.1
KHC                                  pmax  pmax
      comp=Z,11nm,0.8s
KHC   Kasperske Hory     17.09 328  eP     Pn      09 49 59.7 +0.8
KHC   Kasperske Hory     17.09 328   P     Pn      09 49 59.6 +0.7
      comp=Z,15nm,1.0s
OSTC  Ostas              17.23 336  eP     P       09 50 04.7 +2.5
OSTC  Ostas              17.23 336  eP     P       09 50 04.7 +2.5
AKT   Akhty              17.25  63  eP     P       09 50 03.3 +0.7
AKT                                  pmax  pmax
      comp=Z,14nm,1.0s
PRU   Pruhonice          17.36 332  eP     P       09 50 05.6 +2.0
PRU   Pruhonice          17.36 332  eP     P       09 50 05.6 +2.0
WET   Wettzell           17.41 327  eP     P       09 50 03.8 -0.4
      baz=145,slow=11
VORD  Divnogorie         17.97  25  eP     Pn      09 50 08.7 -1.1
VORD                                 pmax  pmax
      comp=Z,10.0nm,0.8s
VSR   Storozhevoye       18.14  25  eP     Pn      09 50 11.0 -0.8
VSR                                  pmax  pmax
      comp=Z,5.0nm,1.1s
ROTZ  Rotzenmuhle        18.16 327  eP     P       09 50 12.9 +0.5
      baz=145,slow=11
BNI   Bardonecchia       18.42 308         Pn      09 50 15.6 +0.1
BNI                                  IAmb  IAmb    09 50 21.6
      comp=Z,30nm,1.5s
BNI   Bardonecchia       18.42 308   P     Pn      09 50 15.6 +0.1
BNI                                  pmax  pmax
      comp=Z,30nm,1.5s
VORR  Voronezh           18.53  24  eP     Pn      09 50 22.8 +6.2
VORR                                 pmax  pmax
      comp=Z,84nm,0.4s
GRF   Grafenberg Arr     18.55 326  eP     P       09 50 17.0 +0.2
      baz=145,slow=11
SENIN Lac Senin/Sane     18.63 313         P       09 50 16.9 -1.0
CLL   Collm              19.01 332   P     P       09 50 20.8 -0.9
CLL   Collm              19.01 332  i P    Pn      09 50 22.7 +0.3
CLL                                  pmax  pmax
      comp=Z,9.0nm,1.0s
CLL   Collm              19.01 332   P     Pn      09 50 22.7 +0.3
      comp=Z,8.8nm,0.8s
CLL   Collm              19.01 332  i P    Pn      09 50 22.7 +0.3
      comp=Z,9.0nm,1.0s
CLL                                 i pP   pwP     09 50 25.5 -0.9
CLL                                 i x    x       09 50 27.1
CLL                                 esPP           09 50 41.0
MOX   Moxa               19.07 328  eP     Pn      09 50 25.4 +2.2
      comp=Z,25nm,1.4s,baz=145,slow=11
VRH   Novokhopyorsk      19.07  29  eP     P       09 50 21.2 -1.2
VRH                                  pmax  pmax
      comp=Z,10.0nm,0.9s
LPSR  Galich'ya Gora     19.24  22  eP     P       09 50 25.0 +0.8
LPSR                                 pmax  pmax
      comp=Z,8.0nm,1.0s
MNK   Minsk              19.24   1  i P    P       09 50 21.3 -2.9
      comp=E,16nm,1.1s
MNK                                 i P    P       09 50 21.3 -2.9
      comp=N,9.0nm,1.0s
MNK                                 i P    P       09 50 21.3 -2.9
      comp=Z,11nm,0.8s,baz=182
MNK                                 i PP   PnPn    09 50 35.4 -2.6
MNK                                 i PPP  PPP     09 50 43.4
MNK                                 i S    Sn      09 53 58.9 -1.8
MNK                                 i SS   SnSn    09 54 14.3 -0.5
MNK                                 i SSS  SSS     09 54 27.1
MNK                                 i LQ   LQ      09 56 04.5
MNK                                 i LR   LR      09 57 34.3
MNK                                 i LRM  MLR     09 58 59.8
MNK                                 i LRM  MLR     09 59 06.7
      comp=Z,542nm,19.1s
MNK   Minsk              19.24   1  i P    P       09 50 21.2 -2.9
MNK                                 i S    Sn      09 53 58.9 -1.8
MNK                                  pmax  pmax
      comp=Z,11nm,0.8s
MNK                                  pmax  pmax
      comp=N,9.0nm,1.0s
MNK                                  pmax  pmax
      comp=E,16nm,1.1s
MNK                                  MLR   MLR
      comp=Z,542nm,19.0s
NACGM Naroch             19.64 359  eP     P       09 50 29.5 +1.0
      comp=Z,12nm,0.8s,baz=179
PABE  Paberze            20.36 355         P       09 50 36.2 -0.2
PABE                                 IAmb  IAmb    09 50 38.8
      comp=Z,23nm,0.7s
OBN   Obninsk            20.88  15⇑eP      P       09 50 41.7 -0.4
OBN                                 i *PP  sP      09 50 46.4 +0.9
OBN                                 e              09 51 03.5
OBN                                  PPP   PPP     09 51 12.0
OBN                                                09 54 48.0
OBN                                 eSSS   SSS     09 55 10.4
OBN                                  pmax  pmax
      comp=Z,33nm,1.3s
OBN                                  MLR   MLR
      comp=Z,800nm,18.0s
BTNL  Ternell            21.61 322  dP     P       09 50 54.2 +4.2
MEM   Membach            21.69 321  dP     P       09 50 52.8 +2.0
MOS   Moscow             21.69  16  eP     P       09 50 48.6 -2.2
RCHB  Rochefort          21.83 320  dP     P       09 50 54.3 +2.0
BSTI  Sart Tilman        21.90 321  dP     P       09 50 55.2 +2.1
BGES  Gesves             22.03 320  dP     P       09 50 56.0 +1.5
DOU   Dourbes            22.13 319  dP     P       09 50 55.6  0.0
      comp=Z,5.9nm,0.8s
DOU                                 dPP    PnPn    09 51 15.8 -1.7
BELG  Belogornoye        22.47  34   P     P       09 50 59.9 +0.7
      comp=Z,27nm,1.0s,baz=40,slow=5.4,SNR=8.5
      comp=Z,27nm,1.0s
BELG  Belogornoye        22.47  34  i P    P       09 50 59.1  0.0
BELG                                 pmax  pmax
      comp=Z,4.0nm,0.8s
ESBB  Sonseca Array      25.04 289   P     P       09 51 23.9 -0.4
ESBB                                 IAmb  IAmb    09 51 55.9
      comp=Z,17nm,1.2s
ESDC  Sonseca Array      25.04 289   P     P       09 51 23.4 -0.9
      comp=Z,4.3nm,0.7s,baz=81,slow=9.8,SNR=28
      comp=Z,4.3nm,0.7s
PAB   San Pablo          25.33 289   P     P       09 51 26.8 -0.2
PAB                                  IAmb  IAmb    09 51 53.8
      comp=Z,20nm,1.4s
PAB   San Pablo          25.33 289   P     P       09 51 26.8 -0.2
PAB                                  pmax  pmax
      comp=Z,20nm,1.5s
FINES FINESS Array B     26.20 359   P     P       09 51 34.1 -0.5
      comp=Z,1.7nm,0.5s,baz=165,slow=9.7,SNR=8.9
      comp=Z,1.7nm,0.5s
FIA1  FINESS Array S     26.20 359   P     P       09 51 34.6 +0.1
HFS   Hagfors            26.38 345   P     P       09 51 34.9 -1.2
      comp=Z,1.5nm,0.4s,baz=151,slow=6.8,SNR=5.2
      comp=Z,1.5nm,0.4s
MD01  Midelt array s     26.51 274   P     P       09 51 37.6 -0.2
KLMR  Klimovskoe         26.80  13  eP     P       09 51 38.3 -1.7
KLMR                                 pmax  pmax
      comp=Z,47nm,1.8s
AKTO  Aktyubinsk         26.97  46   P     P       09 51 42.0 +0.3
      comp=Z,2.4nm,0.7s,baz=246,slow=5.7,SNR=7.4
      comp=Z,2.4nm,0.7s
KIRV  Kirov              27.58  25ceP      P       09 51 47.6 +0.7
AB31  Akbulak array      27.74  50   P     P       09 51 48.6 +0.1
ABKAR Akbulak array      27.74  50   P     P       09 51 47.7 -0.8
MTE   Manteigas          27.78 291   P     P       09 51 49.2 +0.1
MTE                                  IAmb  IAmb    09 51 50.0
      comp=Z,11nm,1.0s
NBO00 NORSAR Array S     27.84 343   P     P       09 51 49.2 -0.2
NBO00                                IAmb  IAmb    09 51 51.1
      comp=Z,14nm,1.1s
EKA   Eskdalemuir Ar     28.92 323   P     P       09 52 00.1 +1.1
      comp=Z,0.7nm,0.5s,baz=120,slow=9.3,SNR=2.4
      comp=Z,0.7nm,0.5s
ARTI  Arti               29.89  35   P     P       09 52 09.9 +2.3
ARTI                                               09 53 04.0
ARTI                                 S     S       09 57 12.8 +8.2
ARTI                                 SS    ScP     09 58 45.3 -7.1
TORD  Torodi Ar. Bea     31.85 233   P     P       09 52 24.7 -0.5
      comp=Z,2.3nm,0.5s,baz=34,slow=16,SNR=4.4
      comp=Z,2.3nm,0.5s
KK31  Karatay Array      34.18  63   P     P       09 52 45.0 -0.4
KK31                                 IAmb  IAmb    09 53 01.3
      comp=Z,4.3nm,1.2s
KK31  Karatay Array      34.18  63   P     P       09 52 45.0 -0.4
KK31                                 pmax  pmax
      comp=Z,4.0nm,1.2s
KKAR  Karatay Array      34.18  63   P     P       09 52 45.1 -0.3
KKAR  Karatay Array      34.18  63   P     P       09 52 45.1 -0.3
ARCES ARCESS Array B     34.33 359   P     P       09 52 45.7 -0.7
      comp=Z,2.7nm,0.7s,baz=170,slow=6.3,SNR=8.9
      comp=Z,2.7nm,0.7s
BORK  Borovoye           35.04  46  i P    P       09 52 53.5 +0.8
BORK                                 pmax  pmax
      comp=Z,1.0nm,0.4s
BVAR  Borovoye Array     35.08  46   P     P       09 52 52.9 -0.2
      comp=Z,0.4nm,0.4s,baz=270,slow=2.9,SNR=1.6
      comp=Z,0.4nm,0.4s
AAK   Ala-Archa          37.13  64         P       09 53 10.9  0.0
AAK   Ala-Archa          37.13  64  i P    P       09 53 11.7 +0.8
AAK                                  pmax  pmax
      comp=Z,9.0nm,1.5s
NIL   Nilore             37.76  79   P     P       09 53 15.2 -1.0
NIL                                  IAmb  IAmb    09 53 18.0
      comp=Z,28nm,1.5s
NIL   Nilore             37.76  79   P     P       09 53 15.2 -1.0
NIL                                  pmax  pmax
      comp=Z,28nm,1.5s
KDJ   Kajisay            39.16  64   P     P       09 53 27.0 -1.0
KDJ                                  IAmb  IAmb    09 53 35.7
      comp=Z,5.4nm,1.1s
KDJ   Kajisay            39.16  64   P     P       09 53 27.0 -1.0
KDJ                                  pmax  pmax
      comp=Z,5.0nm,1.1s
KURBB Kurchatov Arra     39.77  51   P     P       09 53 32.5 -0.3
      comp=Z,2.0nm,0.8s,baz=275,slow=9.0,SNR=7.5
      comp=Z,2.0nm,0.8s
KURK  Kurchatov          39.83  51  i P    P       09 53 32.7 -0.6
KURK                                 pmax  pmax
      comp=Z,2.0nm,0.9s
WUS   Wushi              40.80  66   P     P       09 53 41.2 -0.4
WUS                                  IAmb  IAmb    09 53 43.2
      comp=Z,9.0nm,0.6s
DBIC  Dimbokro           40.94 234   P     P       09 53 41.7 -1.2
      comp=Z,2.3nm,0.7s,baz=83,slow=8.9,SNR=2.0
      comp=Z,2.3nm,0.7s
DBIC  Dimbokro           40.94 234   P     P       09 53 43.3 +0.4
DBIC                                 IAmb  IAmb    09 54 00.4
      comp=Z,12nm,1.2s
MK31  Makanchi Array     42.33  57   P     P       09 53 54.4 +0.4
MK31                                 IAmb  IAmb    09 53 59.9
      comp=Z,2.7nm,0.6s
MK31  Makanchi Array     42.33  57ceP      P       09 53 53.7 -0.3
MKAR  Makanchi Array     42.33  57   P     P       09 53 54.2 +0.2
      comp=Z,2.7nm,0.6s,baz=269,slow=8.5,SNR=14
      comp=Z,2.7nm,0.6s
SPITS Spitsbergen Ar     43.26 357   P     P       09 54 00.5 -0.7
      comp=Z,8.8nm,1.0s,baz=138,slow=10,SNR=6.0
      comp=Z,8.8nm,1.0s
ZAA0  Zalesovo Array     43.74  46   P     P       09 54 05.9 +0.7
ZALV  Zalesovo Beam      43.74  46   P     P       09 54 04.7 -0.5
      comp=Z,1.2nm,0.5s,baz=262,slow=8.4,SNR=6.9
      comp=Z,1.2nm,0.5s
ZALV  Zalesovo Beam      43.74  46   P     P       09 54 05.6 +0.4
ZALV  Zalesovo Beam      43.74  46  i P    P       09 54 06.6 +1.4
ZALV                                 pmax  pmax
      comp=Z,1.0nm,0.5s
DGZ   Jazzator, Alta     45.51  52  i P    P       09 54 19.4 -0.3
NRIK  Noril'sk           47.08  25   P     P       09 54 32.4 +0.8
      comp=Z,4.8nm,0.9s,baz=243,slow=6.5,SNR=6.4
      comp=Z,4.8nm,0.9s
TULEG Thule              57.40 344   P     P       09 55 48.3 +0.2
SONM  Songino Array      58.13  51   P     P       09 55 54.5 +0.7
      comp=Z,1.5nm,0.5s,baz=279,slow=7.6,SNR=8.6
      comp=Z,1.5nm,0.5s
SONM  Songino Array      58.13  51   P     P       09 55 54.0 +0.1
SONM                                 IAmb  IAmb    09 56 02.9
      comp=Z,4.0nm,1.4s
SONM  Songino Array      58.13  51   P     P       09 55 54.0 +0.1
SONM                                 pmax  pmax
      comp=Z,4.0nm,1.4s
SHEL  Horse Pasture      59.76 217   P     P       09 56 05.6 +0.3
SHEL  Horse Pasture      59.76 217   P     P       09 56 05.6 +0.3
SHEL                                 pmax  pmax
      comp=Z,114nm,1.1s
TIXI  Tiksi              60.48  21   P     P       09 56 11.2 +1.7
TIXI                                 IAmb  IAmb    09 56 16.1
      comp=Z,6.3nm,0.8s
TIXI  Tiksi              60.48  21  i P    P       09 56 10.8 +1.3
TIXI                                 pmax  pmax
      comp=Z,7.0nm,0.9s
BOSA  Boshof             63.56 182   P     P       09 56 30.9  0.0
      comp=Z,6.9nm,1.2s,baz=8.2,slow=8.5,SNR=5.0
      comp=Z,6.9nm,1.2s
BOSA  Boshof             63.56 182   P     P       09 56 31.1 +0.3
SCHQ  Schefferville      64.17 320   P     P       09 56 34.0 -0.6
      comp=Z,2.9nm,0.5s,baz=44,slow=6.3,SNR=8.3
      comp=Z,2.9nm,0.5s
SCHQ  Schefferville      64.17 320   P     P       09 56 33.9 -0.6
CMAR  Chiang Mai Arr     64.92  85   P     P       09 56 39.1 -0.8
      comp=Z,0.7nm,0.3s,baz=297,slow=7.7,SNR=6.4
      comp=Z,0.7nm,0.3s
D62A  Allapoint, All     68.96 313   P     P       09 57 05.2 -0.1
A36M  Sachs Harbour      71.30 351   P     P       09 57 18.1 -1.1
A36M                                 IAmb  IAmb    09 57 55.4
      comp=Z,3.2nm,0.8s
B21K  Ikpikpuk River     75.41   1   P     P       09 57 42.7 -0.7
B21K                                 IAmb  IAmb    09 57 52.5
      comp=Z,14nm,1.3s
USRK  Ussuriysk Ar.      75.59  46   P     P       09 57 44.3 -0.6
      comp=Z,5.8nm,0.7s,baz=276,slow=8.1,SNR=7.6
      comp=Z,5.8nm,0.7s
E29M  Blow River         76.05 354   P     P       09 57 46.4 -0.7
E29M                                 IAmb  IAmb    09 57 52.1
      comp=Z,3.6nm,1.1s
D22K  Ayikyak River      76.16 360   P     P       09 57 46.9 -0.9
D22K                                 IAmb  IAmb    09 58 18.7
      comp=Z,12nm,1.5s
C18K  Utukok River       76.21   3   P     P       09 57 47.3 -0.8
KSRS  Korea Array        76.90  53   P     P       09 57 52.6 +0.1
      comp=Z,2.4nm,0.7s,baz=301,slow=5.1,SNR=5.8
      comp=Z,2.4nm,0.7s
E24K  Your Creek         76.92 358   P     P       09 57 51.5 -0.7
E24K                                 IAmb  IAmb    09 58 09.6
      comp=Z,4.2nm,1.2s
E19K  Redstone River     77.54   2   P     P       09 57 54.8 -0.8
E19K                                 IAmb  IAmb    09 58 02.9
      comp=Z,7.8nm,1.3s
J30M  Hart River         79.64 353   P     P       09 58 06.6 -0.7
J30M                                 IAmb  IAmb    09 58 28.9
      comp=Z,2.6nm,0.8s
DAWY  Dawson             80.43 354   P     P       09 58 10.8 -0.8
DAWY                                 IAmb  IAmb    09 58 17.2
      comp=Z,4.3nm,1.2s
J20K  Nowinta River      80.88   1   P     P       09 58 13.7 -0.1
J20K                                 IAmb  IAmb    09 58 24.1
      comp=Z,3.8nm,1.1s
BCAR  Beaver Creek A     81.60 355   P     P       09 58 16.5 -1.3
M29M  Somme Creek        81.94 353   P     P       09 58 18.5 -1.1
PPLA  Purkeypile         82.17 360   P     P       09 58 20.0 -0.9
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BEO ***03*** *09:51:39.5±0.8, 40°.21N×19°.27E, h7^{km}±4^{km}, ML3.3/3*
SKO ***03*** *09:51:40.8, 40°.71N×19°.08E, h6^{km}, ML3.5*
TIR ***03*** *09:51:42.4, 40°.38N×19°.53E, h30^{km}, Ml3.5/8*
ATH ***03*** *09:51:42.8, 40°.36N×19°.52E, h15^{km}±6^{km}, ML3.4/33, Manual Solution by G.Panopoulou First location: 2019/12/03 09:52:56, This location: 2020/11/09 18:46:26 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*
PDG ***03*** *09:51:42.7±0.6, 40°.34N×19°.54E, h19^{km}±2^{km}, ML3.4/10, Error ellipse: s-maj=0.8km s-min=0.9km az=0.0*
THE ***03*** *09:51:42.6, 40°N±28°×2°0E±2°6, h1^{km}±22^{km}, M3.2/8, MLh3.2/8*
ISC 03 09:51:42.7±1.1, **40°.35N**±0°.02×**19°.51E**±0°.02, **h16**^{km}±9^{km}, **n117,**σ1^{s}**02**/164, **9C-13D, Albania**

```
Code  Station Name        Δ°   AZ°  Phase ID         Time       Res
                                    Op     ISC     h  m  s     ISC
VLO   Vlora              0.12 353   Pg     Pb      09 51 46.8 +0.1
VLO                                 Sg     Sb      09 51 50.3 +1.0
VLO                                 AML    AML     09 51 52.1
      220nm,0.3s
VLO                                 AML    AML     09 51 52.8
      187nm,0.3s
VLO   Vlora              0.12 353   P      Pb      09 51 46.6 -0.1
VLO                                 S      Sb      09 51 49.7 +0.4
KEK   Kerkira            0.67 161   P      Pn      09 52 00.0 +2.3
KRK1  kERKIRA            0.80 157   P      Pn      09 51 59.4 +0.1
KRK1                                S      Sb      09 52 09.4 +0.7
LFKM  Lefkimmi           1.00 155   P      Pn      09 52 02.7 +0.6
KBN   Korca              1.01  74   Pg     Pb      09 52 00.9 -1.0
KBN                                 Sg     Sb      09 52 14.6 -0.4
KBN   Korca              1.01  74   P      Pb      09 52 00.2 -1.7
KBN                                 S      Sb      09 52 13.8 -1.2
TIR   Tirane             1.03  15   Pg     Pn      09 52 03.0 +0.4
TIR                                 Sg     Sn      09 52 17.8 +1.0
TIR                                 AML    AML     09 52 19.4
      4.1nm,0.6s
IGT   Igoumenitsa        1.03 142   Pg     Pb      09 52 02.1 -0.2
IGT                                 Sg     Sn      09 52 16.9 +0.2
IGT                                 AML    AML     09 52 23.5
      4.6nm,0.4s
IGT   Igoumenitsa        1.03 142   P      Pb      09 52 00.2 -2.1
IGT                                 S      Sn      09 52 17.5 +0.7
IGT   Igoumenitsa        1.03 142   P      Pb      09 52 02.0 -0.2
IGT                                 S      Sn      09 52 16.6 -0.2
NEST  Nestorio           1.17  86   Pg     Pn      09 52 04.0 -0.6
NEST                                Sg     Sg      09 52 22.2 +1.4
NEST                                AML    AML     09 52 26.0
      3.9nm,0.6s
NEST  Nestorio           1.17  86   P      Pn      09 52 03.4 -1.3
NEST                                S      Sb      09 52 18.1 -1.7
NEST  Nestorio           1.17  86   P      Pn      09 52 04.2 -0.5
NEST                                S      Sg      09 52 20.4 -0.3
OHR   Ohrid              1.24  52  i Pg    Pb      09 52 05.4 -0.4
OHR                                i Sn    Sg      09 52 25.1 +2.4
      comp=E,582nm,0.8s
OHR                                i Sg    Sn      09 52 25.5 +3.6
OHR                                i Sn    Sb      09 52 25.7 +4.1
      comp=N,502nm,0.5s
JAN   Janina             1.24 124   P      Pb      09 52 05.9 +0.1
JAN   Janina             1.24 124   P      Pb      09 52 05.7 -0.1
JAN                                 S      Sb      09 52 20.9 -0.7
PENT  Pentalofos         1.25  97   P      Pn      09 52 05.6 -0.1
PENT                                S      Sn      09 52 22.4  0.0
PRGA  Parga              1.27 147   P      Pg      09 52 06.8 -0.3
MESG  Mesagne            1.29 281   P      Pn      09 52 06.4 +0.2
MESG                                S      Sb      09 52 23.1  0.0
LMS2  Laimos Florina     1.33  68   P      Pb      09 52 06.8 -0.6
KPRO  Kipourio           1.47 105   P      Pn      09 52 08.8  0.0
KPRO  Kipourio           1.47 105   P      Pn      09 52 09.0 +0.3
PHP   Peshkopia          1.50  27   Pg     Pb      09 52 09.5 -0.8
PHP                                 Sg     Sb      09 52 29.4 +0.1
PHP                                 AML    AML     09 52 34.0
      comp=N,3.4nm,1.2s
PHP   Peshkopia          1.50  27   P      Pb      09 52 10.1 -0.3
ULC   Ulcinj             1.62 353⇓i Pn     Pn      09 52 10.6 -0.2
ART2  Arta               1.66 136   P      Pn      09 52 11.9 +0.7
TETR  Tetrakomo, Epi     1.69 126   P      Pn      09 52 12.3 +0.6
TETR                                S      Sb      09 52 33.9 -0.7
SDA   Shkodra            1.70 360   Pn     Pn      09 52 12.0 +0.3
SDA                                 Sn     Sb      09 52 35.4 +0.6
KZN   Kozani             1.73  91   P      Pb      09 52 13.2 -0.9
KZN   Kozani             1.73  91   P      Pb      09 52 13.1 -1.1
KZN                                 S      Sn      09 52 34.0  0.0
TSLK  Tsoukalades, L     1.76 150   P      Pn      09 52 13.4 +0.7
TSLK                                S      Sb      09 52 35.8 -0.8
LKD2  Lefkada island     1.79 150   Pn     Pn      09 52 12.9 -0.1
LKD2                                Sn     Sb      09 52 38.9 +1.4
LKD2                                AML    AML     09 52 41.4
      comp=N,2.6nm,0.5s
LKD2  Lefkada island     1.79 150   P      Pn      09 52 13.0 -0.1
LKD2                                S      Sb      09 52 37.4 -0.2
DRME  Dracevica, Mon     1.85 352⇓i Pn     Pn      09 52 14.0 +0.1
DRME                               eSn     Sb      09 52 39.3 +0.1
DRAG  Dragano-Lefkad     1.86 153   P      Pn      09 52 13.9 -0.1
NYDR  Nydri-Lefkada      1.88 150   P      Pn      09 52 14.1 -0.1
NYDR                                S      Sn      09 52 38.3 +0.8
NOCI  Noci               1.92 284   P      Pn      09 52 15.0 +0.2
NOCI                                S      Sn      09 52 38.7 +0.1
EVGI  Lefkada island     1.94 153   P      Pn      09 52 15.4 +0.2
BUM   Brajici-Budva      2.00 347⇑i Pn     Pn      09 52 16.7 +0.7
BUM                                i Sn    Sb      09 52 43.5 -0.1
FSK   Fiskardo           2.06 156   P      Pn      09 52 16.2 -0.5
LTRZ  Laterza            2.07 278   P      Pn      09 52 17.6 +0.6
THL   Klokotos Trika     2.08 111   P      Pn      09 52 17.6 +0.7
THL                                 S      Sn      09 52 43.2 +0.7
PDG   Podgorica          2.09 355  ⇑P      Pn      09 52 17.9 +0.8
PDG                                ⇑S      Sb      09 52 44.3 -1.6
PDG   Podgorica          2.09 355  ePn     Pn      09 52 18.3 +1.2
PDG                                eSn     Sn      09 52 43.9 +1.1
PDG   Podgorica          2.09 355   P      Pn      09 52 17.2 +0.1
PDG                                 S      Sn      09 52 43.4 +0.6
PDG   Podgorica          2.09 355⇓i Pn     Pn      09 52 18.0 +0.9
PDG                                i Sn    Sb      09 52 45.5 -0.4
MATE  Matera             2.16 279  ⇓P      Pg      09 52 23.9 -0.4
MATE                               ⇓S      Sg      09 52 53.5 +1.2
SKO   Skopje             2.18  41  i Pg    Pb      09 52 20.4 -1.3
SKO                                i Sg    Sb      09 52 49.0 +0.4
DMLN  Damoulianata-K     2.21 162   P      Pn      09 52 18.8 -0.1
HCY   Herceg Novi        2.23 340⇑i Pn     Pn      09 52 19.7 +0.6
HCY                                eSn     Sb      09 52 49.0 -1.1
CEME  Cevo               2.24 349⇓i Pn     Pn      09 52 19.0 -0.3
CEME                               eSn     Sb      09 52 49.1 -1.3
PVY   Plav               2.27   8  ePn     Pn      09 52 20.5 +0.8
PVY                                eSn     Sb      09 52 50.1 -1.2
GRG   Griva              2.28  74   P      Pn      09 52 19.9 +0.2
EVR   Evrytania          2.28 128   P      Pn      09 52 21.4 +1.5
VLS   Valsamata          2.33 159   P      Pn      09 52 19.7 -0.8
PVO   Paravola           2.33 137   P      Pn      09 52 20.9 +0.4
MAKR  Makrakomi, Fth     2.42 123   P      Pn      09 52 22.8 +1.1
TIP   Timpagrande        2.43 242   P      Pn      09 52 22.9 +1.1
NKME  Niksic             2.45 350  ePn     Pn      09 52 22.8 +0.6
NKME                               eSn     Sb      09 52 54.4 -2.1
RTZL  Ratzakli, Kefa     2.47 156   P      Pn      09 52 22.2 -0.2
KOME  Kolasin            2.50   0⇓i Pn     Pb      09 52 25.0 -2.3
KOME                               eSn     Sb      09 52 55.6 -2.3
VAY   Valandovo          2.51  66  i Pn    Pn      09 52 23.3 +0.3
IVA   Berane             2.53   6  ePn     Pn      09 52 24.2 +0.8
IVA                                i Sn    Sb      09 52 56.2 -2.7
AGG   Agios Georgios     2.55 121   P      Pn      09 52 24.4 +0.9
ANX   Ano Chora          2.56 133   P      Pn      09 52 24.9 +1.2
AXS   Araxos             2.59 146   P      Pn      09 52 23.9 -0.2
BRY   Bratogost          2.65 344⇓i Pn     Pn      09 52 25.7 +0.7
BRY                                i Sn    Sn      09 52 59.0 +2.1
ORTH  Orthonies,Zaky     2.66 159   P      Pn      09 52 25.1  0.0
EFP   Efpalio            2.67 135   P      Pn      09 52 25.9 +0.7
KNT   Kendrikon          2.69  71   P      Pn      09 52 25.4 -0.1
HORT  Hortiatis          2.75  84   P      Pn      09 52 25.9 -0.4
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RLS	Riolos of Patr	2.75	146	P	Pn	09 52 26.2	0.0
LTHK	Lithakia	2.83	158	P	Pn	09 52 26.4	-0.9
CUC	Castrocucco	2.86	264	P	Pn	09 52 27.5	-0.3
STON	Ston	2.86	332	ePn	Pn	09 52 27.1	-0.7
STON				eSn	Sn	09 52 59.4	-2.5
UPM	Unac-Piva	2.89	351	⇑iPn	Pn	09 52 29.7	+1.4
AXAR	Agios Charalam	2.90	122	P	Pn	09 52 28.9	+0.5
SJES	Sjenica	2.93	7	ePn	Pn	09 52 30.1	+1.3
SJES				eSn	Sn	09 53 06.3	+2.6
DRO	Drossia	2.94	144	P	Pn	09 52 28.9	0.0
PLG	Polygyros	3.00	88	P	Pn	09 52 29.3	-0.5
BARS	Barje	3.01	34	i Pn	Pn	09 52 30.0	+0.2
BARS	Barje	3.01	34	ePn	Pn	09 52 29.7	-0.1
NEO	Neokhori	3.04	109	P	Pn	09 52 29.9	-0.3
KLV	Kalavryta, Ach	3.08	138	P	Pn	09 52 31.3	+0.5
SELS	Selova	3.11	22	ePn	Pn	09 52 30.9	-0.3
SELS				eSn	Sb	09 53 12.1	-3.3
LKR	Lokris	3.19	121	P	Pn	09 52 32.3	+0.1
IVAS	Ivanjica	3.26	8	ePn	Pn	09 52 32.7	-0.6
GUR	Goura	3.26	137	P	Pn	09 52 34.1	+0.7
CEL	Celeste	3.50	235	P	Pn	09 52 36.5	-0.2
BBLS	Lazi&#263i	3.51	359	ePn	Pn	09 52 37.0	+0.2
LTK	Loutraki	3.55	130	P	Pn	09 52 37.0	-0.3
VIL2	Platees	3.61	125	P	Pn	09 52 39.0	+0.8
GRUS	Gruza	3.65	14	ePn	Pn	09 52 38.3	-0.3
BOVS	Bovan	3.67	26	⇑P	Pn	09 52 38.7	-0.1
BOVS	Bovan	3.67	26	ePn	Pn	09 52 38.8	-0.1
BOVS				eSn	Sn	09 53 23.5	+1.8
ITM	Ithomi	3.69	148	P	Pn	09 52 39.4	+0.3
ZAPS	Zavoj	3.74	38	ePn	Pn	09 52 40.2	+0.4
STFN	Stefani	3.81	123	P	Pn	09 52 40.3	-0.5
PYL	PYLOS	3.87	152	P	Pn	09 52 40.8	-0.8
TRUS	Trudelj	3.93	9	ePn	Pn	09 52 42.4	0.0
KYMI	Kymi, Euboea I	3.94	114	P	Pn	09 52 43.0	+0.3
ZAGS	Zajecar	4.01	29	ePn	Pn	09 52 43.8	+0.3
MET4	Agioi Theodoro	4.07	131	P	Pn	09 52 43.8	-0.6
DION	Dionisos Attik	4.12	122	P	Pn	09 52 44.4	-0.6
VLY	Voula,Athens	4.16	125	P	Pn	09 52 45.0	-0.7
KARY	Karystos	4.47	120	P	Pn	09 52 49.4	-0.5
RDO	Rodhopi	4.64	78	P	Pn	09 52 51.7	-0.6
MDVR	Moldovita	4.72	19	⇑P	Pn	09 52 53.0	-0.4
BLY	Banja Luka	4.72	339	⇓P	Pn	09 52 54.8	+1.5
HERR	Herculane	5.01	24	⇓P	Pn	09 52 57.5	+0.3
ANKY	Antikythira Is	5.38	145	P	Pn	09 53 02.4	0.0
ELND	Elena	5.42	60	⇑P	Pn	09 53 03.2	+0.3
BZS	Buzias	5.48	16	⇑P	Pn	09 53 04.2	+0.4
GZR	Gura Zlata	5.58	24	⇓P	Pn	09 53 05.4	+0.2
SURR	Surduc	5.73	19	⇓P	Pn	09 53 07.7	+0.5
BURAR	Bucovina Array	8.34	28	⇓P	Pn	09 53 43.9	+0.8

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*IDC **03** 10:24:17.1±1.2, 1°.26N×125°.56E, h0^{km}, mb4.0/6, mbtmp4.0/7, ML3.9/1, Error ellipse: s-maj=107.9km s-min=17.1km az=67.0*

*DJA **03** 10:24:21.3±0.3, 2°N±3°×12°6E±°, h10^{km}, M4.0/12, mB5.4/2, mb4.2/5, MLv3.9/12, Mw(mB)4.8/2*

ISC 03 10:24:21.9±1.0, **1°.6N**±0°.1×**126°.22E**±0°.06, **h35^{km}, n19, σ1^{s}.80**/19, **mb3.9**/6, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNI	Manado	1.39	264	P	Pn	10 24 44.8	0.0
MNI				S	Sn	10 25 02.7	+0.7
TNTI	Ternate	1.40	125	P	Pn	10 24 44.7	-0.2
GAMI	Galela, Maluku	1.58	81	P	Pn	10 24 49.6	+2.1
SGSI	Sangihe	2.20	342	P	Pn	10 25 03.5	+7.5
GTOI	Gorontalo	3.35	254	P	Pn	10 25 13.2	+1.5
SANI	Sanana	3.61	184	P	Pn	10 25 17.7	+2.3
LUWI	Luwuk	4.32	233	P	Pn	10 25 26.6	+1.4
APSI	Ampana	5.20	242	P	Pn	10 25 39.3	+2.0
KRAI	Karang Ratu	5.33	156	P	Pn	10 25 43.2	+4.2
MPSI	Mapaga	6.44	259	P	Pn	10 25 56.6	+2.3
TTSI	Tana Toraja	7.88	234	P	Pn	10 26 13.5	-0.6
	16nm,0.9s						
SPSI	Sidrap Palu	8.48	229	P	Pn	10 26 21.1	-1.2
FITZ	Fitzroy Crossi	19.56	182	P	P	10 28 44.5	-2.4
	0.3nm,0.3s,baz=360,slow=11,SNR=8.0						
	0.8nm,0.4s						
WRA	Warramunga Arr	22.82	160	P	P	10 29 20.5	-1.6
	1.7nm,0.4s,baz=334,slow=11,SNR=28						
	1.7nm,0.4s						
ASAR	Alice Springs	26.18	164	P	P	10 29 52.8	-0.6
	1.6nm,0.6s,baz=347,slow=7.0,SNR=36						
	1.6nm,0.6s						
STKA	Stephens Creek	36.33	158	P	P	10 31 22.2	-0.3
	3.0nm,0.8s,baz=350,slow=6.1,SNR=3.9						
	3.0nm,0.8s						
MKAR	Makanchi Array	59.04	326	P	P	10 34 18.8	+0.3
	0.5nm,0.5s,baz=126,slow=8.0,SNR=6.8						
	0.5nm,0.5s						
ZALV	Zalesovo Beam	62.27	334	P	P	10 34 40.6	+0.3
	0.4nm,0.5s,baz=102,slow=6.1,SNR=1.5						
	0.4nm,0.5s						
KURBB	Kurchatov Arra	63.28	328	P	P	10 34 46.8	-0.2
	1.8nm,0.2s,baz=124,slow=6.6,SNR=4.3						
	1.8nm,0.2s						

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*IDC **03** 10:25:40.1±0.8, 0°.32N×30°.15E, h0^{km}, mb4.2/13, mbtmp4.2/14, ML4.6/1, MS4.2/1, Error ellipse: s-maj=22.9km s-min=9.6km az=63.0*

*NEIC **03** 10:25:42.0±1.4, 0°.28N±0°.07×30°.34E±0°.10, h10^{km}±1^{km}, mb4.4/15, Error ellipse: s-maj=16.9km s-min=11.3km az=264.0*

ISC 03 10:25:41.3±0.5, **0°.30N**±0°.06×**30°.28E**±0°.10, **h10^{km}, n40, σ0^{s}.79**/40, **mb4.3**/18, **Uganda**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBAR	Mbarara	1.01	153	Pg	Pn	10 26 01.9	+0.2
	1µm,0.3s,baz=324,slow=19,SNR=4195						
MBAR				Lg	Lg	10 26 15.0	
	13µm,0.3s,baz=322,slow=22,SNR=37						
MBAR	Mbarara	1.01	153	Pn	Pn	10 26 02.1	+0.4
LODK	Lodwar	5.95	59		Pn	10 27 09.7	0.0
KIBK	Kibwezi	8.20	109		Pn	10 27 40.4	-0.1
LSZ	Lusaka	15.61	188	Pn	Pn	10 29 22.4	+0.6
	0.5nm,0.3s,baz=14,slow=11,SNR=5.6						
LSZ				Sn	Sn	10 32 14.4	-0.7
	0.4nm,0.3s,baz=267,slow=22,SNR=1.3						
LSZ				Lg	Lg	10 33 46.5	
	1.3nm,0.3s,baz=64,slow=16,SNR=7.8						
	3.0nm,0.4s						
LSZ	Lusaka	15.61	188		Pn	10 29 21.7	-0.1
TSUM	Tsumeb	23.04	212	LR	LR	10 40 10.0	
	comp=Z,520nm,18.4s,baz=331,slow=38						
KGCAE	Kacgae	24.32	198	P	P	10 31 00.2	+0.7
KGCAE				IAmb	IAmb	10 31 24.7	
	comp=Z,26nm,1.1s						
KOOLE	Kule	25.14	202	P	P	10 31 06.9	-0.1
TORD	Torodi Ar. Bea	31.07	295	P	P	10 31 59.2	-0.8
	comp=Z,3.6nm,0.8s,baz=96,slow=12,SNR=5.2						
	comp=Z,3.6nm,0.8s						
TORD	Torodi Ar. Bea	31.07	295	P	P	10 32 00.5	+0.5
DBIC	Dimbokro	35.62	281	P	P	10 32 38.8	-0.9
	comp=Z,1.6nm,0.4s,baz=113,slow=9.1,SNR=4.9						
	comp=Z,1.6nm,0.4s						
DBIC	Dimbokro	35.62	281	P	P	10 32 39.6	0.0
DBIC				IAmb	IAmb	10 33 14.2	
	comp=Z,7.7nm,1.1s						
BR131	Keskin Array S	39.36	4	P	P	10 33 11.6	+0.4
BRTR	Keskin Array B	39.36	4	P	P	10 33 11.2	0.0
	comp=Z,2.9nm,0.9s,baz=174,slow=8.6,SNR=11						
	comp=Z,2.9nm,0.9s						
BRTR	Keskin Array B	39.36	4	P	P	10 33 11.6	+0.4
KBZ	Khabaz	44.69	13	P	P	10 33 54.1	-0.3
	comp=Z,3.2nm,1.0s,baz=167,slow=3.3,SNR=3.8						
	comp=Z,3.2nm,1.0s						
ESDC	Sonseca Array	50.11	326	P	P	10 34 36.1	-0.8
	comp=Z,1.7nm,0.9s,baz=145,slow=7.1,SNR=6.1						
	comp=Z,1.7nm,0.9s						
ESDC	Sonseca Array	50.11	326	P	P	10 34 36.9	0.0
ESDC				IAmb	IAmb	10 34 50.5	
	comp=Z,6.5nm,1.5s						
AKASG	Malin Array Be	50.22	359	P	P	10 34 36.8	-0.7
	comp=Z,1.1nm,0.6s,baz=186,slow=6.5,SNR=5.6						
	comp=Z,1.1nm,0.6s						
MORC	Moravsky Berou	50.49	349	P	P	10 34 39.6	+0.1
MORC				IAmb	IAmb	10 34 40.4	
	comp=Z,7.8nm,1.3s						
AB31	Akbulak array	55.02	23	P	P	10 35 13.3	+0.3
AB31				IAmb	IAmb	10 35 28.5	
	comp=Z,4.8nm,1.5s						
ABKAR	Akbulak array	55.02	23	P	P	10 35 13.6	+0.5
KK31	Karatay Array	55.76	35	P	P	10 35 18.9	+0.3
KK31				IAmb	IAmb	10 35 21.8	
	comp=Z,4.2nm,1.3s						
KKAR	Karatay Array	55.76	35	P	P	10 35 19.1	+0.6
ARTI	Arti	60.34	18		P	10 35 50.5	+0.2
BVAR	Borovoye Array	62.22	26	P	P	10 36 03.2	0.0
	comp=Z,0.6nm,0.5s,baz=193,slow=5.9,SNR=5.0						
	comp=Z,0.6nm,0.5s						
KURBB	Kurchatov Arra	64.65	32	P	P	10 36 19.5	+0.2
	comp=Z,2.5nm,0.2s,baz=241,slow=6.7,SNR=6.6						
	comp=Z,2.5nm,0.2s						
MKAR	Makanchi Array	64.75	37	P	P	10 36 20.5	+0.4
	comp=Z,0.8nm,0.6s,baz=244,slow=6.1,SNR=6.4						
	comp=Z,0.8nm,0.6s						
MKAR	Makanchi Array	64.75	37	P	P	10 36 19.7	-0.3
KURK	Kurchatov	64.75	32	P	P	10 36 18.9	-1.1
KURK				IAmb	IAmb	10 36 48.6	
	comp=Z,2.8nm,1.1s						
ARCES	ARCESS Array B	69.19	358	P	P	10 36 47.8	0.0
	comp=Z,4.8nm,1.0s,baz=152,slow=4.1,SNR=3.8						
	comp=Z,4.8nm,1.0s						
ARCES	ARCESS Array B	69.19	358	P	P	10 36 47.9	0.0
ZALV	Zalesovo Beam	69.69	31	P	P	10 36 52.0	+0.8
	comp=Z,0.8nm,0.6s,baz=246,slow=6.3,SNR=4.7						
	comp=Z,0.8nm,0.6s						
ZALV	Zalesovo Beam	69.69	31	P	P	10 36 50.6	-0.7
CM31	Chiang Mai Arr	69.70	71	P	P	10 36 50.0	-2.0
CM31				IAmb	IAmb	10 36 59.9	
	comp=Z,5.7nm,1.1s						
CMAR	Chiang Mai Arr	69.70	71	P	P	10 36 50.3	-1.7
NRIK	Noril'sk	78.66	18	P	P	10 37 45.2	+2.0
	comp=Z,5.0nm,1.0s,baz=267,slow=3.1,SNR=5.6						
	comp=Z,5.0nm,1.0s						
SONM	Songino Array	80.47	42	P	P	10 37 55.6	+1.8
	comp=Z,2.2nm,0.8s,baz=254,slow=5.8,SNR=8.9						
	comp=Z,2.2nm,0.8s						
SONM	Songino Array	80.47	42	P	P	10 37 52.9	-0.9
SONM				IAmb	IAmb	10 37 57.3	
	comp=Z,3.8nm,1.0s						

KRSC 03 10:29:51.3±0.6, **55°.96N**×**161°.10E, h127^{km}**±5^{km}**, Ml4.0, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZLN	Zelenaya	0.18	290	eP	Pn	10 30 10.1	+1.3
ZLN				eS	Sn	10 30 23.6	+1.5
BZGR	Bezymyannyi-Gr	0.23	266	eP	Pn	10 30 10.0	+1.0
BZGR				eS	Sn	10 30 23.4	+1.1
CIRR	Tsirk	0.25	309	eP	Pn	10 30 10.1	+1.0
CIRR				eS	Sn	10 30 23.4	+0.9
BZWR	Bezymyannyi-We	0.34	271	eP	Pn	10 30 10.3	+0.9
KIRR	Kirishev	0.43	270	eP	Pn	10 30 10.3	+0.5
KLY	Klyuchi	0.44	325	i P	Pn	10 30 10.2	+0.6
KLY				eS	Sn	10 30 23.7	+0.2
KMNR	Kamenistaya	0.53	248	i P	Pn	10 30 11.0	+0.7
KMNR				eS	Sn	10 30 25.3	+0.7
SMKR	Semkarok	0.66	18	i P	Pn	10 30 12.4	+1.3
SMKR				eS	Sn	10 30 27.3	+1.2
SRKR	Sorokina	0.70	3	i P	Pn	10 30 12.7	+1.3
KBG	Krutoberegovo	0.95	71	eP	Pn	10 30 14.4	+1.1
KBG				eS	Sn	10 30 31.5	+1.5
KZV	Kizimen	0.96	209	eP	Pn	10 30 15.2	+1.4
KBTR	Krutoberegovo	0.99	75	eP	Pn	10 30 14.8	+1.0
KBTR				eS	Sn	10 30 31.8	+0.9
ESO	Esso	1.35	270	eP	Pn	10 30 18.3	+0.9
MKZ	Mys Kozlova	1.45	165	eP	Pn	10 30 19.7	+1.2
BKI	Bering	2.87	103	eP	Pn	10 30 37.8	+1.8
BKI				eS	Sn	10 31 11.1	+0.7
SDLR	Sedlovina	2.98	207	eP	Pn	10 30 39.6	+2.0
KOK	Koryaka	3.03	209	eP	Pn	10 30 40.3	+2.1
DALK	Dalny	3.24	206	eP	Pn	10 30 42.7	+1.9
KRMR	Karymshinskiy	3.58	210	eP	Pn	10 30 46.9	+1.6
GRL	Gorelyy	3.85	209	eP	Pn	10 30 51.5	+2.6
MTVR	Mutnovka	3.88	207	eP	Pn	10 30 51.6	+2.2

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*CATAC **03** 10:30:31.6±0.8, 13°N±4°×9°0W±°, h9^{km}±3^{km}, M3.0/9, MLv3.0/9, Error ellipse: s-maj=9.7km s-min=8.0km az=85.7, confirmed*

*GCG **03** 10:30:32.5±1.1, 13°.12N×90°.24W, h14^{km}±23^{km}, MD3.5, ML3.2*

*SNET **03** 10:30:33.2±0.8, 13°.09N×90°.15W, h17^{km}, ML3.2*

ISC 03 10:30:32.2±2.2, **13°.07N**±0°.10×**90°.13W**±0°.05, **h14^{km}**±10^{km}, **n27, σ0^{s}.39**/34, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	Alcaldia de Sa	0.78	8	P	Pg	10 30 47.0	-0.4
JAYA	Jayaque - finc	0.88	49	eP	Pg	10 30 49.5	+0.1
JAYA				eS	Sb	10 31 01.8	+0.6
JAYA	Jayaque - finc	0.88	49	eP	Pg	10 30 49.4	0.0
JAYA				i S	Sb	10 31 01.5	+0.3
JAYA	Jayaque - finc	0.88	49	P	Pg	10 30 49.5	+0.1
JAYA	Jayaque - finc	0.88	49	S	Sn	10 31 02.4	-0.7
LALI	Alcalda de L	0.89	62	P	Pb	10 30 48.6	-0.9
NUBE	Las Nubes	0.90	22	eP	Pg	10 30 49.4	-0.2
NUBE				eS	Sb	10 31 01.9	+0.4
NUBE	Las Nubes	0.90	22	eP	Pg	10 30 49.1	-0.5
NUBE	Las Nubes	0.90	22	P	Pg	10 30 49.2	-0.5
SBLS	San Blas	0.91	33	eP	Pb	10 30 50.1	+0.1
SBLS				eS	Sn	10 31 03.9	0.0
PMON	Piamonte	1.02	51	eP	Pb	10 30 51.6	-0.1
PMON				eS	Sn	10 31 06.4	-0.1
PMON	Piamonte	1.02	51	P	Pb	10 30 51.7	-0.1
BOQS	Boqueron	1.06	51	eP	Pb	10 30 52.4	-0.1
BOQS				eS	Sg	10 31 07.4	+0.7
UNIC	Universidad Ca	1.07	32	S	Sg	10 31 07.1	+0.2
UNIC	Universidad Ca	1.07	32	P	Pb	10 30 52.0	-0.6
JUAM	Asuncion Mita	1.32	18	i P	Pn	10 30 56.2	-0.2
JUAM				eS	Sn	10 31 13.9	0.0
JUAM				IAML		10 31 16.0	
	comp=N,529nm,0.3s						
PAVA	Las Pavas	1.33	61	P	Pn	10 30 56.5	0.0
PAVA	Las Pavas	1.33	61	S	Sb	10 31 14.2	+0.3
SCLA	Alcaldia de Sa	1.50	65	P	Pn	10 30 59.2	+0.3
MTO3	Montecristo	1.52	30	P	Pn	10 30 59.2	0.0
MTO3	Montecristo	1.52	30	S	Sb	10 31 19.6	0.0
LLGN	La Laguna	1.59	47	P	Pn	10 30 59.5	-0.5
LLGN	La Laguna	1.59	47	S	Sn	10 31 20.9	+0.5
ESQI	Esquipulas	1.67	27	P	Pn	10 31 01.2	0.0
ESQI	Esquipulas	1.67	27	S	Sb	10 31 24.2	+0.4
STG5	El Palmar, Qui	1.78	318	eP	Pg	10 31 06.6	+0.2
APG	El Apazote	1.95	351	eP	Pn	10 31 05.2	+0.1

NNC 03 10:37:52.5±0.5, **50°.78N**×**73°.71E, h0^{km}, mb3.6, mpv3.2, 10C-6D, Error ellipse: s-maj=8.6km s-min=4.3km az=28.0, Suspected Mining explosion., Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BVA0	Borovoye Array	3.05	319	⇑Pn	Pn	10 38 42.5	+0.6
	8.0nm,0.7s						
BVA0				⇑Lg	Lg	10 39 26.2	
	80nm,1.1s						
KURBB	Kurchatov Arra	3.07	91	⇑Pn	Pn	10 38 42.5	+0.3
	24nm,0.8s						
KURBB				⇑Lg	Lg	10 39 29.1	
	178nm,0.8s						
KURK	Kurchatov	3.12	89	⇑Pn	Pn	10 38 43.4	+0.5
	2.7nm,0.7s						
KURK				⇑Lg	Lg	10 39 30.5	
	24nm,0.9s						
MAKZ	Makanchi	6.75	123	⇓Pn	Pn	10 39 33.0	+0.2
	4.7nm,1.1s						
MAKZ				⇑Lg	Lg	10 41 26.4	
	14nm,0.8s						
MK31	Makanchi Array	6.93	122	⇓Pn	Pn	10 39 35.2	-0.1
	0.3nm,0.4s,baz=305,slow=11,SNR=7.4						
MK31				⇑Pg	Pb	10 39 57.2	+3.5
	0.7nm,0.5s,baz=310,slow=12,SNR=5.0						
MK31				Lg	Lg	10 41 31.6	
	11nm,0.8s,baz=302,slow=21,SNR=4.2						
KK31	Karatay Array	7.99	197	⇑Lg	Lg	10 42 05.7	
	13nm,1.2s,baz=1.4,slow=25,SNR=5.1						
AAK	Ala-Archa	8.16	176	⇓Pn	Pn	10 39 51.9	-0.4
	2.4nm,1.1s						
AAK				⇑Lg	Lg	10 42 12.3	
	16nm,0.9s						
PDGK	Podgornoye	8.43	150	⇓Lg	Lg	10 42 19.3	
	20nm,0.9s						
AB31	Akbulak array	9.00	266	⇓Lg	Lg	10 42 38.2	
	4.5nm,1.0s						
AKTO	Aktyubinsk	9.99	274	⇓Lg	Lg	10 43 09.1	
	4.2nm,1.2s						

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*IPEC **03** 10:44:10.3±0.2, 50°.27N×18°.85E, h1^{km}, ML2.4/5, Error ellipse: s-maj=2.6km s-min=0.8km az=172.0*

PRU 03 10:44:09.9, 50°.40N×18°.78E, h0^{km}, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	Ojcow	0.68	105	ePg	Pg	10 44 21.9	-0.9
OJC				eSg	Sg	10 44 30.3	-1.3
OKC	Ostrava-Krasne	0.69	216	ePG	Pg	10 44 23.2	0.0
OKC				eSG	Sg	10 44 32.4	+0.2
	comp=Z,18nm,0.5s						
STEB	Steborice	0.80	235	ePG	Pg	10 44 25.2	0.0
STEB				eSG	Sg	10 44 36.0	+0.5
ANAC	Anensky vrch	0.96	251	ePg	Pb	10 44 29.0	-0.4
	baz=78						
ANAC				eSg	Sg	10 44 41.0	+0.4
	115nm,0.4s,baz=78						
MORC	Moravsky Berou	1.01	232	ePg	Pg	10 44 28.7	-0.6
	baz=59						
MORC				eSg	Sg	10 44 40.8	-1.6
	56nm,0.6s,baz=59						
LOSC	Losov	1.20	230	ePg	Pg	10 44 32.1	-0.7
	baz=55						
LOSC				eSg	Sg	10 44 46.5	-1.8
	52nm,0.5s,baz=55						
KRLC	Kraliky	1.32	257	eSG	Sg	10 44 51.9	-0.5
	comp=Z,22nm,0.5s						
LANS	Liptovska Anna	1.33	160	ePG	Pg	10 44 33.9	-1.4
LANS				eSG	Sg	10 44 50.4	-2.1
LANS				eLG	Lg	10 44 54.8	
NIE	Niedzica	1.39	134	ePg	Pg	10 44 34.7	-1.8
NIE				eSg	Sg	10 44 53.0	-1.5
KSP	Ksiaz	1.65	287	ePg	Pb	10 44 41.2	+0.2
KSP				eSg	Sg	10 45 03.4	+0.7
OSTC	Ostas	1.65	276	eSG	Sg	10 45 02.6	-0.1
JAVC	Velka Javorina	1.70	205	ePn	Pn	10 44 39.4	-1.5
	baz=28						
CHVC	Chvalec	1.75	277	ePG	Pn	10 44 41.3	-0.2
UPC	Upice	1.77	275	eSG	Sb	10 45 06.4	+0.4
	comp=Z,12nm,0.5s						
VRAC	Vranov	1.79	233	ePn	Pn	10 44 41.7	-0.3
	baz=56						
VRAC				eSg	Sn	10 45 05.1	-0.3
	21nm,0.7s,baz=56						
STHS	Stebnicka Huta	1.87	121	ePG	Pn	10 44 43.1	-0.1
STHS				eSG	Sb	10 45 08.5	-0.4
KRUC	Moravsky	2.05	230	ePg	Pn	10 44 46.7	+1.1
	baz=52						
KRUC				eSg	Sb	10 45 13.0	-0.9
	12nm,0.5s,baz=52						
CKRC	Cesky Krumlov	3.31	243	eSG	Sg	10 45 54.6	-1.6
	comp=Z,7.7nm,0.6s						
KHC	Kasperske Hory	3.60	251	eSG	Sb	10 46 01.7	+3.0

IDC 03 10:47:03.3±547.0, **55°.36N**×**2°.95E, h0^{km}, Error ellipse: s-maj=230.6km s-min=161.4km az=97.0, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I26DE	FREYUNG INFRAS	9.28	130	I	I	11 41 00.0	
	baz=321,slow=325,SNR=1.0						
I37NO	I37NO	15.50	21	I	I	12 19 20.0	
	baz=218,slow=329,SNR=0.9						
I43RU	DUBNA INFRASON	19.08	72	I	I	12 44 20.0	
	baz=277,slow=315,SNR=2.1						

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*MOS **03** 10:52:25.0±0.9, 1°.43N×126°.00E, h44^{km}, mb5.1/38, MS4.8/4, Error ellipse: s-maj=11.9km s-min=5.4km az=118.4*

*BJI **03** 10:52:25.3, 1°.05N×126°.07E, h68^{km}, mB5.3/20, mb4.8/58, Ms4.9/29, Ms7 4.7/28*

*IDC **03** 10:52:27.7±1.5, 1°.38N×125°.96E, h48^{km}±13^{km}, mb4.4/27, mbtmp4.7/31, ML4.8/4, Error ellipse: s-maj=21.4km s-min=8.7km az=81.0*

*DJA **03** 10:52:27.5±0.2, 2°N±2°×12°6E±°, h48^{km}±3^{km}, M5.0/66, mb5.0/66, mB5.4/33, MLv5.1/24, Mw(mB)4.9/33, MwMwp5.1/18, Mwp5.4/18*

*NEIC **03** 10:52:27.0±2.2, 1°.46N±0°.08×126°.21E±0°.06, h39^{km}±5^{km}, mb5.1/84, Error ellipse: s-maj=12.1km s-min=7.9km az=207.0*

ISC 03 10:52:27.5±0.4, **1°.43N**±0°.03×**126°.11E**±0°.05, **h49^{km}**±3^{km}, **h49^{km}:pP-P, n410, σ1^{s}.56**/413, **mb5.0**/136, **MS4.8**/13, **10C-1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNI	Manado	1.27	271	P	Pn	10 52 47.8	-1.1
TNTI	Ternate	1.41	118		Pn	10 52 48.1	-2.7
TNTI	Ternate	1.41	118	P	Pn	10 52 47.5	-3.3
GAMI	Galela, Maluku	1.72	76	P	Pn	10 52 52.2	-2.9
SGSI	Sangihe	2.32	345	P	Pn	10 53 00.7	-2.5
GTOI	Gorontalo	3.20	256	P	Pn	10 53 16.6	+1.3
SANI	Sanana	3.46	182	P	Pn	10 53 18.2	-0.7
SANI	Sanana	3.46	182	S	Sn	10 53 58.2	-0.4
SANI	Sanana	3.46	182	P	Pn	10 53 17.0	-1.9
LUWI	Luwuk	4.15	234		Pn	10 53 29.0	+0.7
LUWI	Luwuk	4.15	234	P	Pn	10 53 30.6	+2.3
LUWI	Luwuk	4.15	234	P	Pn	10 53 29.4	+1.1
MRSI	Marisa	4.28	257	P	Pn	10 53 31.1	+1.0
NLAI	Namlea	4.74	168	P	Pn	10 53 36.5	0.0
APSI	Ampana	5.03	243	P	Pn	10 53 41.9	+1.4
KRAI	Karang Ratu	5.24	154	P	Pn	10 53 44.6	+1.3
	0.7nm11µm3µm147nm,0.6s						
TOLI2	Tolitoli	5.34	267		Pn	10 53 44.4	-0.3
TOLI2	Tolitoli	5.34	267	P	Pn	10 53 44.6	-0.1
AAI	Ambon	5.49	158	P	Pn	10 53 48.4	+1.6
	0.7nm2µm164nm,1.0s						
MSAI	Masohi	5.51	149	P	Pn	10 53 46.6	-0.5
	1.0nm12µm3µm209nm,1.0s						
SWI	Sorong	5.63	114	P	Pn	10 53 48.3	-0.3
	16µm3µm103nm,1.2s						
DAV	Davao City (W)	5.63	355	P	Pn	10 53 50.6	+1.9
	55nm,0.3s,baz=268,slow=1.0,SNR=1.6						
DAV				S	Sn	10 54 55.0	+2.9
	235nm,0.6s,baz=59,slow=22,SNR=1.4						
	218nm,0.4s						
DAV	Davao City (W)	5.63	355	P	Pn	10 53 46.7	-2.0
MPSI	Mapaga	6.31	260	P	Pn	10 53 58.7	+0.7
	0.6nm2µm131nm,0.7s						
KDI	Kendari	6.39	213	P	Pn	10 53 59.5	+0.4
PCI	Palu	6.69	250	P	Pn	10 54 04.2	+0.9
	1.0nm9µm5µm335nm,0.8s						
BNDI	Bandanaira	7.02	147	P	Pn	10 54 07.6	-0.2
BNDI	Bandanaira	7.02	147	P	Pn	10 54 09.6	+1.8
	0.8nm7µm219nm,1.1s						
KKSI	Kolaka, Sulawe	7.13	219	P	Pn	10 54 11.4	+2.1
	0.9nm6µm3µm263nm,1.0s						
FAKI	Fak Fak	7.50	125		Pn	10 54 13.8	-0.6
FAKI	Fak Fak	7.50	125	P	Pn	10 54 15.1	+0.7
	0.5nm8µm145nm,1.1s						
TTSI	Tana Toraja	7.70	235	P	Pn	10 54 17.7	+0.5
MMSI	Mamuju	8.28	240	P	Pn	10 54 26.4	+1.3
	1µm78nm,0.7s						
SPSI	Sidrap Palu	8.30	230	P	Pn	10 54 26.6	+1.3
BNSI	Bone	8.34	226	P	Pn	10 54 26.5	+0.6
	0.6nm5µm2µm174nm,0.7s						
MYLDM	Lahad Datu	8.46	296		Pn	10 54 29.2	+1.7
MYLDM	Lahad Datu	8.46	296	P	Pn	10 54 30.0	+2.4
RKPI	Ransiki, Papua	8.57	110	P	Pn	10 54 29.3	+0.2
	10µm89nm,0.5s						
PMSI	Majene	8.70	236	P	Pn	10 54 33.2	+2.3
	2µm152nm,0.7s						
TARAI	Tarakan	8.74	283	P	Pn	10 54 31.4	0.0
BKSI	Bulukumba	8.99	222	P	Pn	10 54 34.6	-0.2
	5µm1µm142nm,0.9s						
KAPI	Kappang	9.02	225	P	Pn	10 54 34.7	-0.5
	5.3nm,0.3s,baz=42,slow=9.0,SNR=12						
	30nm,0.7s						
KAPI	Kappang	9.02	225		Pn	10 54 36.2	+1.0
KAPI	Kappang	9.02	225	P	Pn	10 54 37.2	+2.0
KAPI	Kappang	9.02	225	P	Pn	10 54 36.0	+0.8
	51nm,0.6s						
KAPI	Kappang	9.02	225	i P	Pn	10 54 36.2	+1.0
MKS	Makassar	9.36	225	P	Pn	10 54 39.9	0.0
	210nm,1.1s						

BSSI	Bau Bau, Buton	9.39	217	P	Pn	10 54 40.5	+0.3
	2µm127nm,0.5s						
BKB	Balikpapan	9.60	254	P	Pn	10 54 44.5	+1.4
BKB	Balikpapan	9.60	254	P	Pn	10 54 43.4	+0.3
SRPI	Serui, Papua	10.64	108	P	Pn	10 54 58.2	+0.8
MMRI	Maumere	10.72	201	Pn	Pn	10 55 00.0	+1.5
MMRI	Maumere	10.72	201	P	Pn	10 55 00.6	+2.1
	69nm,1.6s						
KKM	Kota Kinabalu	10.89	295	Pn	Pn	10 55 04.7	+3.8
KKM	Kota Kinabalu	10.89	295	P	Pn	10 55 03.9	+3.0
	6µm48nm,0.9s						
EDFI	Ende, Flores	11.03	203	P	Pn	10 55 05.6	+2.8
	44nm,0.9s						
SOEI	Soe	11.26	189		Pn	10 55 11.0	+5.0
SOEI	Soe	11.26	189	P	Pn	10 55 06.6	+0.6
MTKI	Muara Teweh, K	11.46	258	P	Pn	10 55 08.4	-0.2
	93nm,0.8s						
LBFI	Labuhan Bajo,	11.64	212	P	Pn	10 55 16.0	+5.0
	49nm,0.9s						
BATI	Baumata	11.81	192	P	Pn	10 55 13.9	+0.4
	5.8nm,0.3s,baz=69,slow=4.6,SNR=5.6						
	13nm,0.4s						
BATI	Baumata	11.81	192	P	Pn	10 55 16.7	+3.2
	1µm69nm,1.1s						
WSI	Waingapu	12.45	208	P	Pn	10 55 25.0	+2.8
	121nm,0.9s						
DBNI	Kabupaten Domp	12.56	218	P	Pn	10 55 28.7	+5.0
BASI	Baing, Sumba	12.82	205	P	Pn	10 55 28.7	+1.6
	2µm129nm,1.9s						
SMPI	Sarmi	13.04	105	P	Pn	10 55 32.1	+1.8
PLAI	Plampang	13.15	219	P	Pn	10 55 33.1	+1.4
PLAI	Plampang	13.15	219	P	Pn	10 55 32.5	+0.8
TWSI	Taliwang, Sumb	13.66	222	P	P	10 55 43.8	-2.4
SBUM	Sibu	13.92	274		Pn	10 55 43.9	+1.6
SBUM	Sibu	13.92	274	P	Pn	10 55 44.9	+2.6
KLNI	Mataram	13.98	225	P	Pn	10 55 45.6	+2.5
	113nm,0.8s						
GENI	Genyem	14.61	106	P	Pn	10 55 50.9	-0.5
RTBI	Rangdo, Negare	14.85	228	P	P	10 55 57.7	-1.7
IGBI	Denpasar	14.94	227	P	P	10 55 59.0	-1.4
MTN	Manton Dam	15.03	161	P	Pn	10 55 55.9	-1.1
	comp=Z,52nm,1.0s						
MTN	Manton Dam	15.03	161		Pn	10 55 55.5	-1.4
KDU	Kakadu	15.38	156	P	Pn	10 55 57.8	-3.7
	comp=Z,140nm,0.9s						
JAGI	Jajag, Banyuwa	15.46	230		Pn	10 56 02.7	+0.3
JAGI				IAmb	IAmb	10 56 10.9	
	comp=Z,94nm,1.0s						
JAGI	Jajag, Banyuwa	15.46	230	P	Pn	10 56 04.1	+1.6
JAGI	Jajag, Banyuwa	15.46	230	P	P	10 56 06.4	+0.2
	comp=Z,2µmcomp=Z,205nm,1.2s						
BLJI	Banyuglugur	15.46	234	P	P	10 56 06.9	+0.7
	comp=Z,3µmcomp=Z,126nm,0.9s						
GMJI	Gumukmas	15.89	232	P	P	10 56 11.2	+0.3
	comp=Z,91nm,1.0s						
SJI	Sawahan	16.96	237	P	P	10 56 24.0	+1.1
	comp=Z,3µmcomp=Z,84nm,0.9s						
SNJI	Sawahan-Nganju	16.99	237	P	P	10 56 24.2	+0.8
	comp=Z,2µmcomp=Z,92nm,1.1s						
KNRA	Kununurra	17.20	171	P	Pn	10 56 24.1	-0.3
	comp=Z,108nm,1.0s						
KNRA	Kununurra	17.20	171	P	Pn	10 56 23.5	-0.9
KNRA				IAmb	IAmb	10 56 26.3	
	comp=Z,90nm,0.9s						
PCJI	Pacitan	17.70	237	P	P	10 56 33.0	+2.0
	comp=Z,1µmcomp=Z,114nm,1.1s						
CTJI	Waduk Cacaban	18.86	243	P	Pn	10 56 45.6	+0.8
KPJI	Karang Pucung	19.23	243	P	Pn	10 56 50.1	+1.0
	comp=Z,45nm,0.9s						
FITZ	Fitzroy Crossi	19.41	181	P	P	10 56 49.0	-0.7
	comp=Z,2.2nm,0.3s,baz=16,slow=8.3,SNR=52						
	comp=Z,31nm,0.8s						
FITZ	Fitzroy Crossi	19.41	181		P	10 56 49.1	-0.7
FITZ	Fitzroy Crossi	19.41	181	P	P	10 56 49.4	-0.3
BBJI	Bungbulang	20.43	244	P	P	10 57 01.0	0.0
	comp=Z,25nm,0.7s						
MYKOM	Kota Tinggi	22.26	271	P	P	10 57 22.8	+2.2
	comp=Z,33nm,1.1s						
TPUB	Ta-pu	22.38	347	P	P	10 57 20.4	-1.5
WB0	Warramunga Arr	22.58	159		P	10 57 22.2	-1.7
KASI	Kota Agung	22.67	252	P	P	10 57 27.6	+2.6
	comp=Z,33nm,0.8s						
MDSI	Maura Dua	22.69	255	P	P	10 57 27.4	+2.2
	comp=Z,36nm,0.9s						
WRAB	Tennant Creek	22.71	160	P	P	10 57 23.4	-2.0
WRAB	Tennant Creek	22.71	160	P	P	10 57 24.1	-1.3
WRAB	Tennant Creek	22.71	160	*ce*P	P	10 57 24.5	-0.9
WRAB				pmax	pmax		
	comp=Z,198nm,1.3s						
WRA	Warramunga Arr	22.72	160	P	P	10 57 24.3	-1.1
	comp=Z,90nm,1.0s,baz=333,slow=11,SNR=126						
WRA	Warramunga Arr	22.72	160	P	P	10 57 23.9	-1.6
WB1	Warramunga Ar.	22.74	160	P	P	10 57 24.1	-1.6
COEN	Coen	22.79	133	P	P	10 57 24.4	-1.9
	comp=Z,29nm,1.2s						
COEN	Coen	22.79	133	P	P	10 57 25.4	-0.9
MBWA	Marble Bar	23.30	195	P	P	10 57 31.1	-0.1
	comp=Z,43nm,0.8s						
MBWA	Marble Bar	23.30	195		P	10 57 30.7	-0.6
MBWA				IAmb	IAmb	10 57 33.9	
	comp=Z,30nm,0.8s						
MBWA	Marble Bar	23.30	195	P	P	10 57 30.7	-0.6
PMG	Port Moresby	23.57	118		P	10 57 33.7	-0.1
PMG	Port Moresby	23.57	118	P	P	10 57 33.8	-0.1
PMG	Port Moresby	23.57	118	P	P	10 57 33.4	-0.5
	comp=Z,37nm,0.8s						
PMG	Port Moresby	23.57	118	*ce*P	P	10 57 34.1	+0.2
PMG				pmax	pmax		
	comp=Z,25nm,0.8s						
PSA00	Pilbara Seismi	23.67	195	P	P	10 57 35.2	+0.4
	comp=Z,44nm,0.7s						
PSA00	Pilbara Seismi	23.67	195	P	P	10 57 34.2	-0.5
QIZ	Qiongzhong	23.67	319	P	P	10 57 36.2	+1.4
QIZ				S	S	11 01 49.6	+3.3
QIZ				LR	LR		
	comp=Z,2µm,19.4s						
QIZ				LR	LR		
	comp=Z,1µm,22.0s						
QIZ				LR	LR		
	comp=Z,2µm,19.4s						
IPM	Ipoh	25.23	277	P	P	10 57 51.3	+2.1
IPM	Ipoh	25.23	277	P	P	10 57 48.9	-0.3
QIS	Mount Isa	25.54	150	P	P	10 57 51.6	-0.3
KULM	Kulim	25.70	279	P	P	10 57 52.8	-0.6
	comp=Z,30nm,1.2s						
ASAR	Alice Springs	26.07	164	P	P	10 57 56.0	-0.6
	comp=Z,27nm,0.8s,baz=347,slow=7.2,SNR=234						
ASAR				ScP	ScP	11 05 01.2	+1.7
	comp=Z,3.1nm,0.5s,baz=340,slow=2.4,SNR=5.7						
	comp=Z,27nm,0.8s						
ASAR	Alice Springs	26.07	164		P	10 57 55.9	-0.8
AUALC	St Philip's Co	26.09	164	P	P	10 57 56.4	-0.4
MTSU	Mount Surprise	26.44	138	P	P	10 58 01.6	+1.5
GIRL	Giralia	26.58	205	P	P	10 58 01.5	+0.2
GIRL				IAmb	IAmb	10 58 04.2	
	comp=Z,102nm,1.3s						
RABL	Rabaul	26.62	102	P	P	10 58 00.5	-1.3
RABL				IAmb	IAmb	10 58 05.5	
	comp=Z,32nm,0.7s						
PSI	Prapat	27.20	273	P	P	10 58 09.8	+2.7
PSI	Prapat	27.20	273	P	P	10 58 07.4	+0.3
	comp=Z,24nm,1.2s						
PSI				P	P	10 58 07.5	+0.3
	comp=Z,24nm,1.2s						
KCSI	Kotacane, Aceh	28.39	275	P	P	10 58 17.3	-0.3
GSI	Gunungsitoli	28.53	270	P	P	10 58 21.2	+2.3
MEEK	Meekatharra	28.83	194	P	P	10 58 21.7	+0.4
TV1H	Townsville Har	28.90	136	P	P	10 58 23.3	+1.3
CTA	Charters Tower	29.11	138	P	P	10 58 24.9	+1.0
CTAO	Charters Tower	29.11	138		P	10 58 24.7	+0.8
CTAO				IAmb	IAmb	10 58 48.7	
	comp=Z,61nm,1.9s						
CTAO	Charters Tower	29.11	138	P	P	10 58 24.9	+1.0
CTAO	Charters Tower	29.11	138	P	P	10 58 24.7	+0.8
CTAO				pmax	pmax		
	comp=Z,61nm,1.9s						
NJ2	Nanjing	31.22	348	*e*P	P	10 58 43.6	+1.2
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
NJ2				LR	LR		
	comp=Z,680nm,20.8s						
NJ2				LR	LR		
	comp=Z,870nm,21.8s						
NJ2				LR	LR		
	comp=Z,1µm,22.7s						
CMAR	Chiang Mai Arr	31.57	304	P	P	10 58 45.1	-0.6
	comp=Z,0.8nm,0.5s,baz=129,slow=7.5,SNR=9.8						
CMAR				PcP	PcP	11 01 39.1	+1.6
	comp=Z,0.5nm,0.3s,baz=116,slow=3.3,SNR=4.4						
	comp=Z,0.8nm,0.5s						
CMAR	Chiang Mai Arr	31.57	304	P	P	10 58 46.8	+1.1
CHTO	Chiang Mai	31.75	305	P	P	10 58 47.5	+0.2
CHTO	Chiang Mai	31.75	305	P	P	10 58 46.8	-0.4
CHTO	Chiang Mai	31.75	305	P	P	10 58 47.4	+0.2
CHTO	Chiang Mai	31.75	305	P	P	10 58 47.5	+0.2
CHTO				pmax	pmax		
	comp=Z,12nm,1.3s						
MORW	Morawa	31.82	197	IAmb	IAmb	10 58 50.3	
	comp=Z,22nm,0.9s						
MORW	Morawa	31.82	197	P	P	10 58 49.7	+2.0
FORT	Forrest	32.08	177	IAmb	IAmb	10 58 57.3	
	comp=Z,25nm,0.8s						
ENH	Enshi	32.74	333	P	P	10 58 55.2	-0.7
ENH				IAmb	IAmb	10 58 58.5	
	comp=Z,30nm,1.0s						
ENH	Enshi	32.74	333	P	P	10 58 55.6	-0.2
ENH	Enshi	32.74	333	P	P	10 58 54.9	-0.9
QLP	Quilpie	32.88	149	P	P	10 58 56.4	-0.7
BLDU	Ballidu	33.10	195	P	P	10 58 59.4	+0.5
KLBR	Kellerberrin	33.78	193	P	P	10 59 05.5	+0.6
PZH	PanZhiHua	34.21	319	P	P	10 59 11.6	+2.8
AUNRC	North Rockhamp	34.22	138	P	P	10 59 09.0	+0.2
NWAO	Narrogin (SRO)	35.19	193	P	P	10 59 19.0	+2.0
BBOO	Buckleboo	35.33	165	IAmb	IAmb	10 59 18.9	
	comp=Z,22nm,0.8s						
BBOO	Buckleboo	35.33	165	P	P	10 59 18.3	+0.1
LYN	LuoYang	35.33	340	P	P	10 59 21.2	+3.0
LYN				pmax	pmax		
	comp=Z,16nm,0.7s						
LYN				pmax	pmax		
	comp=Z,570nm,4.5s						
LYN				LR	LR		
	comp=Z,700nm,17.5s						
LYN				LR	LR		
	comp=Z,910nm,17.2s						
LYN				LR	LR		
	comp=Z,2µm,23.4s						
KSRS	Korea Array	35.89	2	P	P	10 59 25.2	+2.3
	comp=Z,7.8nm,0.9s,baz=182,slow=9.9,SNR=18						
	comp=Z,7.8nm,0.9s						
WHYH	Whyalla	35.95	163	P	P	10 59 23.4	0.0
EIDS	Eidsvold	35.97	139	IAmb	IAmb	10 59 25.1	
	comp=Z,16nm,1.0s						
EIDS	Eidsvold	35.97	139	P	P	10 59 23.9	+0.1
CD2	Chengdu	36.17	326	P	P	10 59 24.6	-0.9
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
XAN	Xi'an	36.21	335	P	P	10 59 24.6	-1.2
XAN				S	S	11 05 02.1	-0.7
XAN				pmax	pmax		
	comp=Z,28nm,0.8s						
XAN				pmax	pmax		
	comp=Z,300nm,4.1s						
XAN				LR	LR		
	comp=Z,1µm,18.7s						
XAN				LR	LR		
	comp=Z,1µm,19.9s						
XAN				LR	LR		
	comp=Z,2µm,24.2s						
XAN	Xi'an	36.21	335	P	P	10 59 24.6	-1.2
STKA	Stephens Creek	36.23	157	P	P	10 59 26.0	0.0
	comp=Z,40nm,0.8s,baz=329,slow=8.8,SNR=54						
STKA				PcP	PcP	11 01 50.9	+0.4
	comp=Z,3.6nm,0.7s,baz=20,slow=4.2,SNR=1.6						
STKA				ScP	ScP	11 05 31.5	-1.6
	comp=Z,3.6nm,0.5s,baz=352,slow=6.1,SNR=3.5						
	comp=Z,40nm,0.8s						
STKA	Stephens Creek	36.23	157	P	P	10 59 26.0	0.0
STKA	Stephens Creek	36.23	157	*i* P	P	10 59 25.5	-0.5
MJAR	Matsushiro Arr	36.69	16	P	P	10 59 30.1	+0.3
	comp=Z,1.8nm,0.6s,baz=185,slow=9.8,SNR=5.7						
	comp=Z,1.8nm,0.6s						
MJAR	Matsushiro Arr	36.69	16	P	P	10 59 30.6	+0.8
MJAR	Matsushiro Arr	36.69	16	P	P	10 59 30.6	+0.8
MJAR				pmax	pmax		
	comp=Z,13nm,1.2s						
MAJO	Matsushiro	36.69	16	*i* P	P	10 59 30.0	+0.2
MAJO				pmax	pmax		
	comp=Z,46nm,1.6s						
HTT	Hallett	36.72	162	P	P	10 59 30.8	+0.7
AULRC	Lightning Ridg	37.13	147	P	P	10 59 33.2	-0.5
HNS	HongShan	37.31	345	⇑P	P	10 59 37.0	+2.0
HNS				pmax	pmax		
	comp=Z,12nm,0.8s						
DL2	Dalian	37.52	354	P	P	10 59 38.4	+1.6
DL2				pmax	pmax		
	comp=Z,61nm,0.9s						
CMSA	Cobar Meteorol	37.69	152	P	P	10 59 38.7	+0.4
LKP	Lekhapani	38.79	314	*e*P	P	10 59 43.7	-4.0
LKP				IAmb	IAmb	10 59 47.4	
	comp=Z,469nm,0.2s						
IMP	Imphal	38.81	309	*e*P	P	10 59 45.2	-2.8
IMP				IAmb	IAmb	10 59 52.0	
	comp=Z,14nm,1.1s						
KOHI	KOHIMA	39.16	311	*e*P	P	10 59 47.4	-3.5
KOHI				IAmb	IAmb	10 59 52.0	
	comp=Z,19nm,0.6s						
MOKO	MOKOCHONG	39.18	312	*e*P	P	10 59 48.0	-3.2
MOKO				IAmb	IAmb	10 59 51.7	
	comp=Z,15nm,0.6s						
AUDCS	Dubbo College	39.69	149	P	P	10 59 55.6	+0.5
ARMA	Armidale	39.93	145	IAmb	IAmb	10 59 59.4	
	comp=Z,26nm,0.9s						
ARMA	Armidale	39.93	145	P	P	10 59 58.5	+1.2
LZDM	Lanzhou Array	40.16	331	P	P	10 59 58.7	-0.7
	comp=Z,0.8nm,0.3s,baz=141,slow=9.3,SNR=1.6						
	comp=Z,0.8nm,0.3s						
LZH	Lanzhou	40.19	332	*e*P	P	10 59 59.4	0.0
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				LR	LR		
	comp=Z,1µm,17.4s						
LZH				LR	LR		
	comp=Z,910nm,18.2s						
LZH				LR	LR		
	comp=Z,2µm,19.6s						
ITAN	ITANAGAR	40.23	312	*e*P	P	10 59 56.3	-3.4
ITAN				IAmb	IAmb	11 00 00.7	
	comp=Z,53nm,1.1s						
ZIRO	ZIRO	40.35	313	*e*P	P	10 59 58.5	-2.4
ZIRO				IAmb	IAmb	11 00 03.7	
	comp=Z,23nm,0.8s						
AGT	Agartala	40.46	306	*e*P	P	11 00 01.5	-0.1
AGT				IAmb	IAmb	11 00 07.7	
	comp=Z,387nm,0.5s						
TEZP	TEZPUR	40.63	311	*e*P	P	10 59 59.4	-3.6
TEZP				IAmb	IAmb	11 00 17.5	
	comp=Z,6.3nm,0.8s						
SHL	Shillong	40.79	309	P	P	11 00 03.8	-0.8
SHL	Shillong	40.79	309	*e*P	P	11 00 00.2	-4.4
SHL				IAmb	IAmb	11 00 05.2	
	comp=Z,118nm,0.1s						
SHL	Shillong	40.79	309	P	P	11 00 03.8	-0.8
SHL				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC	Hu-ho-hao-te	41.39	343	*e*P	P	11 00 12.2	+3.0
HHC				S	S	11 06 29.9	+9.1
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,190nm,10.4s						
HHC				LR	LR		
	comp=Z,560nm,16.1s						
HHC				LR	LR		
	comp=Z,450nm,19.9s						
HHC				LR	LR		
	comp=Z,820nm,24.6s						
CN2	Changchun	42.19	359	P	P	11 00 17.3	+1.8
CN2				S	S	11 06 34.7	+2.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				LR	LR		
	comp=Z,800nm,20.0s						
CN2				LR	LR		
	comp=Z,1µm,20.0s						
CN2				LR	LR		
	comp=Z,800nm,19.0s						
CAN	Canberra	42.36	152	P	P	11 00 18.2	+1.0
CAN				IAmb	IAmb	11 00 19.3	
	comp=Z,32nm,1.0s						
CAN	Canberra	42.36	152	P	P	11 00 18.1	+1.0
CAN	Canberra	42.36	152	P	P	11 00 18.2	+1.0
CAN				pmax	pmax		
	comp=Z,32nm,1.0s						
CAN	Canberra	42.36	152	P	P	11 00 18.0	+0.9
DHUB	DHUBRI	42.49	308	*e*P	P	11 00 15.5	-2.7
DHUB				IAmb	IAmb	11 00 30.0	
	comp=Z,245nm,0.1s						
USRK	Ussuriysk Ar.	42.91	6	P	P	11 00 21.6	+0.3
	comp=Z,7.4nm,0.8s,baz=183,slow=6.9,SNR=7.9						
	comp=Z,7.4nm,0.8s						
MDJ	Mudanjiang	43.12	4	P	P	11 00 25.0	+2.0
MDJ				pmax	pmax		
	comp=Z,26nm,2.1s						
MDJ	Mudanjiang	43.12	4	P	P	11 00 23.7	+0.7
LSA	Lhasa	43.53	314	P	P	11 00 26.4	-0.8
BWNR	Bhubaneshwar	43.58	298	*e*P	P	11 00 24.0	-3.3
SANVU	Saraoutou	43.94	114	P	P	11 00 29.5	-0.6
SANVU	Saraoutou	43.94	114	P	P	11 00 31.0	+0.9
BNX	BinXian	44.14	1	⇓P	P	11 00 33.5	+2.3
BNX				pmax	pmax		
	comp=Z,9.0nm,0.7s						
GTA	Gaotai	44.77	331	*e*P	P	11 00 36.7	+0.2
GTA				PP	PcP	11 02 19.8	+1.7
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ASAJ	Asahikawa	44.96	17	P	P	11 00 39.1	+1.4
	comp=Z,16nm,0.9s,baz=234,slow=8.7,SNR=2.4						
	comp=Z,16nm,0.9s						
GOMU	GeErMu	45.13	324	P	P	11 00 40.4	+0.6
GOMU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RAGD	RAYAGADA	45.35	296	*e*P	P	11 00 38.8	-2.5
DZM	Mont Dzumac	45.76	123	P	P	11 00 44.1	-0.5
DZM				IAmb	IAmb	11 00 46.2	
	comp=Z,21nm,0.9s						
DZM	Mont Dzumac	45.76	123	P	P	11 00 45.0	+0.4
DZM	Mont Dzumac	45.76	123	P	P	11 00 45.2	+0.6
EVN	Everest	45.90	309		P	11 00 45.3	-1.0
EVN				IAmb	IAmb	11 00 51.3	
	comp=Z,20nm,1.1s						
YATNC	Mamie plateau,	46.13	123	P	P	11 00 48.3	+0.9
HIA	Hailar	47.97	354	IAmb	IAmb	11 01 13.2	
	comp=Z,41nm,1.5s						
HIA	Hailar	47.97	354	P	P	11 01 02.4	+1.0
HILR	Hailar Array B	48.26	354	P	P	11 01 03.4	-0.2
	comp=Z,5.9nm,0.4s,baz=163,slow=10,SNR=2.1						
	comp=Z,5.9nm,0.4s						
HEH	HeiHe	48.66	1	*e*P	P	11 01 06.5	-0.1
HEH				pmax	pmax		
	comp=Z,30nm,0.9s						
ULN	Ulaanbaatar	49.11	343		P	11 01 10.5	+0.2
ULN	Ulaanbaatar	49.11	343	*i* P	P	11 01 09.0	-1.4
ULN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ULN	Ulaanbaatar	49.11	343	P	P	11 01 10.4	0.0
KOD	Kodaikanal	49.12	282	*e*P	P	11 01 07.7	-3.4
SONM	Songino Array	49.28	343	P	P	11 01 11.0	-0.6
	comp=Z,5.1nm,0.9s,baz=161,slow=7.9,SNR=12						
SONM				PcP	PcP	11 02 34.6	+0.7
	comp=Z,1.5nm,0.9s,baz=159,slow=4.0,SNR=1.8						
	comp=Z,5.1nm,0.9s						
SONM	Songino Array	49.28	343	P	P	11 01 11.8	+0.2
SONM	Songino Array	49.28	343	P	P	11 01 11.8	+0.2
SONM				pmax	pmax		
	comp=Z,8.0nm,1.2s						
HYB	Hyderabad	49.35	292	*e*P	P	11 01 13.6	+1.1
HYB				*e*pP	pP	11 01 24.2	-1.1
CIT	Chita	51.51	350	*e*P	P	11 01 28.8	+0.6
CIT				*e*		11 01 39.0	
CIT				*e*		11 01 44.6	
CIT				*e*		11 04 24.8	
AKL	Akola	51.57	295	*e*P	P	11 01 26.0	-3.2
JHNI	Jhansi	51.60	302	*e*P	P	11 01 25.2	-4.7
PTH	Pithoragarh	51.80	307	*e*P	P	11 01 27.4	-3.6
BHPL	Bhopal	51.92	299	*e*P	P	11 01 30.2	-1.6
NRDN	NARMADA NAGAR	51.99	298	*e*P	P	11 01 28.9	-3.4
ZEA	Zeya	52.14	1	*e*P	P	11 01 37.0	+4.1
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.5s						
ZEA				MLR	MLR		
	comp=Z,400nm,21.0s						
GUNA	GUNA	52.43	300	*e*P	P	11 01 31.9	-3.7
JOSI	Joshimath	52.73	308	*e*P	P	11 01 33.3	-4.7
KAD	Karad	53.40	290	*e*P	P	11 01 39.7	-3.2
AYAN	Aya Nagar	53.90	305	*e*P	P	11 01 43.4	-2.8
NPLP	NPLP New Delhi	53.92	305	*e*P	P	11 01 43.7	-2.7
KLP	Kalpa	54.16	309	*e*P	P	11 01 44.6	-3.9
WMQ	Urumqi	54.27	326	*e*P	P	11 01 49.7	+0.9
WMQ				S	S	11 09 22.9	-0.1
WMQ				pmax	pmax		
	comp=Z,16nm,1.1s						
WMQ				LR	LR		
	comp=Z,1µm,18.1s						
WMQ				LR	LR		
	comp=Z,980nm,15.9s						
WMQ				LR	LR		
	comp=Z,1µm,19.3s						
MSVF	Nonsavu	54.55	113	P	P	11 01 52.8	+1.5
MSVF	Nonsavu	54.55	113	*i* P	P	11 01 50.5	-0.8
MSVF				pmax	pmax		
	comp=Z,29nm,0.9s						
MSVF	Nonsavu	54.55	113	P	P	11 01 52.6	+1.3
KNGR	Kungurtug, Tuv	54.66	338	*i* P	P	11 01 49.5	-2.1
KNGR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SMLA	Simla	54.85	308	*e*P	P	11 01 49.8	-3.3
AJM	Ajmer	55.30	301	*e*P	P	11 01 53.1	-3.5
BHK	Bhakra	55.55	308	*e*P	P	11 01 52.1	-6.1
UDPR	Udaipur	55.56	299	*e*P	P	11 01 55.3	-3.2
DHRM	DHARAMSHALA	55.96	309	*e*P	P	11 01 58.3	-3.1
ALCI	Alchi Leh	56.07	311	*e*P	P	11 01 59.0	-3.3
TSSA	Tissa	56.31	309	*e*P	P	11 01 58.9	-4.9
PETK	Petropavlovsk-	57.78	22	P	P	11 02 14.4	+0.8
	comp=Z,7.6nm,1.0s,baz=215,slow=7.7,SNR=2.4						
	comp=Z,7.6nm,1.0s						
WUS	Wushi	57.88	319	IAmb	IAmb	11 02 22.1	
	comp=Z,8.1nm,0.7s						
PET	Petropavlovsk	58.07	23	P	P	11 02 14.7	-0.9
ZSN	Zaisan	58.11	328	*e*P	P	11 02 14.9	-1.2
ZSN	Zaisan	58.11	328	*e*P	P	11 02 14.9	-1.2
DGZ	Jazzator, Alta	58.30	332	*i* P	P	11 02 16.6	-0.9
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SHLS	Shalkode	58.73	321	*e*P	P	11 02 17.9	-2.7
SHLS	Shalkode	58.73	321	*e*P	P	11 02 17.9	-2.7
NIL	Nilore	58.86	309		P	11 02 22.3	+0.7
NIL				IAmb	IAmb	11 02 29.6	
	comp=Z,24nm,1.2s						
NIL	Nilore	58.86	309	P	P	11 02 22.3	+0.7
NIL				pmax	pmax		
	comp=Z,24nm,1.2s						
UZB	Uzynbulak	59.00	321	*e*P	P	11 02 21.8	-0.8
UZB	Uzynbulak	59.00	321	*e*P	P	11 02 21.7	-0.8
TARG	Taragay, Kyrgy	59.06	319	P	P	11 02 24.1	+0.8
TARG				IAmb	IAmb	11 02 36.4	
	comp=Z,11nm,1.0s						
TARG	Taragay, Kyrgy	59.06	319	P	P	11 02 24.1	+0.8
TARG				pmax	pmax		
	comp=Z,11nm,1.0s						
MK31	Makanchi Array	59.10	326	*ce*P	P	11 02 23.0	0.0
MKAR	Makanchi Array	59.10	326	P	P	11 02 22.1	-0.9
	comp=Z,9.2nm,0.6s,baz=121,slow=8.3,SNR=69						
MKAR				PcP	PcP	11 03 11.7	+0.4
	comp=Z,2.5nm,0.6s,baz=144,slow=6.8,SNR=3.6						
	comp=Z,9.2nm,0.6s						
MKAR	Makanchi Array	59.10	326		P	11 02 21.9	-1.1
KSH	Kashi	59.25	316	P	P	11 02 25.9	+1.6
KSH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSH				LR	LR		
	comp=Z,650nm,21.3s						
KSH				LR	LR		
	comp=Z,490nm,20.6s						
KSH				LR	LR		
	comp=Z,700nm,21.0s						
MAKZ	Makanchi	59.28	326		P	11 02 23.6	-0.7
MAKZ				IAmb	IAmb	11 02 29.7	
	comp=Z,14nm,0.9s						
MAKZ	Makanchi	59.28	326	P	P	11 02 23.6	-0.7
MAKZ				pmax	pmax		
	comp=Z,14nm,1.0s						
MAKZ	Makanchi	59.28	326	P	P	11 02 23.5	-0.7
SATY	Saty	59.34	321	*e*P	P	11 02 24.2	-0.7
	comp=Z,6.7nm,0.7s						

SATY	Saty	59.34	321	eP	P	11 02 24.2	-0.7
SATY				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MDOK	Medeo	60.26	320	eP	P	11 02 30.0	-1.2
MDOK	Medeo	60.26	320	eP	P	11 02 30.0	-1.2
TNSS	Tian-Shan	60.26	320	eP	P	11 02 30.4	-1.1
TNSS	Tian-Shan	60.26	320	eP	P	11 02 30.4	-1.1
TDK	Taldyqorghan	60.35	323	eP	P	11 02 30.8	-0.8
	comp=Z,12nm,0.8s						
TDK	Taldyqorghan	60.35	323	eP	P	11 02 30.8	-0.8
TDK				pmax	pmax		
	comp=Z,12nm,0.8s						
YAK	Yakutsk	60.51	2		P	11 02 33.0	+0.7
YAK	Yakutsk	60.51	2	eP	P	11 02 33.3	+1.0
YAK				e*PP	pP	11 02 44.8	-0.6
YAK				e		11 03 17.4	
YAK				e		11 04 46.7	
YAK				ePPP	PPP	11 06 10.6	
YAK				eS	S	11 10 46.5	+2.3
YAK				e*SS	sS	11 11 06.7	+0.4
YAK				e		11 12 20.6	
YAK				eSS	SS	11 14 46.1	+3.1
YAK				pmax	pmax		
	comp=Z,18nm,0.8s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.7s						
YAK				pmax	pmax		
	comp=Z,210nm,3.2s						
YAK				pmax	pmax		
	comp=N,207nm,3.3s						
YAK				pmax	pmax		
	comp=E,136nm,2.5s						
YAK				smax	smax		
	comp=N,177nm,3.0s						
YAK				smax	smax		
	comp=E,173nm,3.0s						
RTZ	Ruatahuna	61.39	136	P	P	11 02 38.5	-0.4
MANEM	Manem	61.50	313	IAmb	IAmb	11 02 49.2	
	comp=Z,17nm,0.7s						
AAK	Ala-Archa	61.66	319		P	11 02 41.1	+0.4
AAK	Ala-Archa	61.66	319	P	P	11 02 41.1	+0.4
AAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ARSB	Arslanbob	62.09	317	IAmb	IAmb	11 02 48.8	
	comp=Z,9.3nm,0.8s						
ZALV	Zalesovo Beam	62.36	334	P	P	11 02 43.5	-1.4
	comp=Z,4.1nm,0.6s,baz=128,slow=6.6,SNR=15						
	comp=Z,4.1nm,0.6s						
ZALV	Zalesovo Beam	62.36	334	i P	P	11 02 44.5	-0.5
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KBL	Kabul	62.45	309	P	P	11 02 45.4	-0.8
KBL				IAmb	IAmb	11 02 50.6	
	comp=Z,8.5nm,0.8s						
KBL	Kabul	62.45	309	P	P	11 02 45.4	-0.8
KBL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BTLS	Baital	63.05	321	eP	P	11 02 48.9	-1.0
BTLS	Baital	63.05	321	eP	P	11 02 48.8	-1.0
KURBB	Kurchatov Arra	63.34	328	P	P	11 02 50.8	-0.8
	comp=Z,8.0nm,0.5s,baz=126,slow=6.2,SNR=58						
	comp=Z,8.0nm,0.5s						
KURK	Kurchatov	63.35	328		P	11 02 50.3	-1.3
KURK	Kurchatov	63.35	328	ceP	P	11 02 50.8	-0.8
KURK				pmax	pmax		
	comp=Z,21nm,0.8s						
KURK	Kurchatov	63.35	328	P	P	11 02 50.7	-1.0
KURK				pP	pP	11 03 02.5	-2.4
SEY	Seymchan	64.40	13	i P	P	11 02 59.2	+0.9
SEY				pmax	pmax		
	comp=Z,27nm,1.3s						
IUG	Iuzhnay	64.44	317	eP	P	11 02 58.4	-0.7
	comp=Z,7.7nm,0.8s						
IUG	Iuzhnay	64.44	317	eP	P	11 02 58.4	-0.7
IUG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KKAR	Karatay Array	64.50	318	P	P	11 02 58.7	-0.7
KKAR	Karatay Array	64.50	318	P	P	11 02 58.7	-0.7
BRLS	Borolday	64.92	318	eP	P	11 03 01.0	-1.2
BRLS	Borolday	64.92	318	eP	P	11 03 01.0	-1.2
BRZS	Berezniki	66.21	325	eP	P	11 03 09.7	-0.6
BRZS	Berezniki	66.21	325	eP	P	11 03 09.6	-0.7
CASY	Casey	68.47	187	P	P	11 03 24.8	+0.5
BVAR	Borovoye Array	68.91	328	P	P	11 03 26.6	-0.7
	comp=Z,7.9nm,0.8s,baz=139,slow=7.9,SNR=23						
	comp=Z,7.9nm,0.8s						
BORK	Borovoye	68.96	328		P	11 03 27.0	-0.5
BORK	Borovoye	68.96	328	P	P	11 03 27.0	-0.5
BORK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BORK	Borovoye	68.96	328	P	P	11 03 26.8	-0.7
BORK				pP	pP	11 03 38.2	-2.5
TIXI	Tiksi	70.14	1		P	11 03 34.3	-0.1
TIXI				IAmb	IAmb	11 03 46.3	
	comp=Z,33nm,1.5s						
TIXI	Tiksi	70.14	1	ceP	P	11 03 34.7	+0.3
TIXI				pmax	pmax		
	comp=Z,24nm,1.7s						
TIXI	Tiksi	70.14	1	P	P	11 03 34.6	+0.1
NRIK	Noril'sk	72.51	347	P	P	11 03 49.0	+0.2
	comp=Z,14nm,0.8s,baz=136,slow=6.0,SNR=19						
	comp=Z,14nm,0.8s						
NRIK	Noril'sk	72.51	347	P	P	11 03 49.0	+0.2
ABKAR	Akbulak array	73.54	321		P	11 03 54.5	-0.8
SVE	Sverdlovsk	75.59	329	eP	P	11 04 06.9	-0.2
SVE				pmax	pmax		
	comp=Z,23nm,1.2s						
CCD	Concordia, Ant	76.45	181	P	P	11 04 13.2	+1.1
ARTI	Arti	76.63	328		P	11 04 12.2	-0.8
ARTI				IAmb	IAmb	11 04 14.7	
	comp=Z,11nm,0.6s						
ARTI	Arti	76.63	328	c iP	P	11 04 11.1	-1.9
ARTI						11 07 01.2	
ARTI				S	S	11 13 54.6	-1.1
ARTI				SS	SS	11 18 46.4	-5.4
ARTI				pmax	pmax		
	comp=Z,13nm,1.3s						
AKT	Akhty	80.35	312	eP	P	11 04 33.5	-0.5
AKT				e*SP	pwP	11 04 50.5	+0.3
AKT				pmax	pmax		
	comp=Z,7.0nm,0.5s						
AKT				MLR	MLR		
	comp=Z,1µm,28.0s						
VOI	Vohitsoka	80.63	248		P	11 04 36.3	+0.4
VOI				IAmb	IAmb	11 04 39.6	
	comp=Z,20nm,0.9s						
RAYN	Ar Rayn	80.82	293		P	11 04 36.9	+0.1
RAYN	Ar Rayn	80.82	293	P	P	11 04 36.9	+0.1
RAYN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VNDA	Vanda	81.24	173	P	P	11 04 38.1	+0.2
	comp=Z,3.3nm,0.6s,baz=314,slow=6.6,SNR=16						
	comp=Z,3.3nm,0.6s						
VNDA	Vanda	81.24	173	P	P	11 04 38.5	+0.7
VNDA				IAmb	IAmb	11 04 50.2	
	comp=Z,24nm,1.8s						
VNDA	Vanda	81.24	173	P	P	11 04 38.5	+0.7
VNDA				pmax	pmax		
	comp=Z,25nm,1.8s						
VNDA	Vanda	81.24	173	P	P	11 04 38.0	+0.2
J16K	Anvik River	81.25	26	IAmb	IAmb	11 04 59.8	
	comp=Z,12nm,1.0s						
L16K	Owhat River	81.39	28		P	11 04 39.7	+0.8
L16K				IAmb	IAmb	11 05 07.0	
	comp=Z,23nm,1.4s						
MAW	Mawson	81.40	200	P	P	11 04 39.2	+0.4
	comp=Z,10nm,0.9s,baz=74,slow=14,SNR=6.7						
	comp=Z,10nm,0.9s						
BELG	Belogornoye	81.85	323	i P	P	11 04 40.3	-1.2
BELG				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIRV	Kirov	81.86	329	ceP	P	11 04 41.7	+0.3
K17K	Iditarod	82.14	27	IAmb	IAmb	11 07 51.0	
	comp=Z,26nm,1.1s						
E18K	Tukpahlearik C	82.31	22	IAmb	IAmb	11 05 02.9	
	comp=Z,36nm,1.4s						
GNI	Garni	82.48	310	i P	P	11 04 45.2	-0.2
GNI				pmax	pmax		
	comp=Z,21nm,1.6s						
L18K	Granite Mounta	82.78	27	IAmb	IAmb	11 07 53.7	
	comp=Z,17nm,1.1s						
J18K	Innoko River	83.00	26	IAmb	IAmb	11 07 58.3	
	comp=Z,19nm,1.1s						
J19K	Poorman	83.58	26	IAmb	IAmb	11 07 58.1	
	comp=Z,16nm,1.0s						
N19K	Bonanza Creek	83.59	29	IAmb	IAmb	11 07 58.3	
	comp=Z,35nm,1.2s						
L19K	White Mountain	83.62	28	IAmb	IAmb	11 07 58.3	
	comp=Z,18nm,1.1s						
D20K	Etivluk River	84.06	21	IAmb	IAmb	11 05 25.3	
	comp=Z,38nm,1.3s						
F20K	Avaraart Lake	84.08	23	IAmb	IAmb	11 05 11.9	
	comp=Z,19nm,1.3s						
KBZ	Khabaz	84.11	314	P	P	11 04 54.0	+0.6
	comp=Z,6.0nm,1.1s,baz=171,slow=2.4,SNR=4.5						
	comp=Z,6.0nm,1.1s						
KBZ	Khabaz	84.11	314	i P	P	11 04 52.0	-1.4
KBZ				pmax	pmax		
	comp=Z,10.0nm,1.2s						
J20K	Nowinta River	84.25	26	IAmb	IAmb	11 08 06.8	
	comp=Z,21nm,1.4s						
KIV	Kislovodsk	84.27	314	eP	P	11 04 52.8	-1.6
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
SHA1	Shidzhatmaz	84.28	314	eP	P	11 04 52.8	-1.8
B21K	Ikpikpuk River	84.93	20	IAmb	IAmb	11 08 13.1	
	comp=Z,18nm,0.9s						
VRH	Novokhopyorsk	85.37	321	eP	P	11 04 59.1	-0.5
VRH				pmax	pmax		
	comp=Z,60nm,0.8s						
E22K	Anaktuvuk Pass	85.72	22	IAmb	IAmb	11 05 56.0	
	comp=Z,27nm,1.6s						
VSLR	Vesyoloye	86.17	313	i P	P	11 05 03.3	-0.5
VORD	Divnogorie	86.89	321	eP	P	11 05 04.7	-2.4
VORD				pmax	pmax		
	comp=Z,40nm,0.9s						
VORR	Voronezh	86.96	321	eP	P	11 05 06.5	-0.9
VORR				pmax	pmax		
	comp=Z,126nm,0.4s						
VSR	Storozhevoye	86.98	321	eP	P	11 05 05.2	-2.3
VSR				pmax	pmax		
	comp=Z,20nm,0.8s						
KLMR	Klimovskoe	87.10	331	eP	P	11 05 04.0	-3.9
KLMR				pmax	pmax		
	comp=Z,54nm,1.5s						
LPSR	Galich'ya Gora	87.16	322	eP	P	11 05 08.1	-0.3
LPSR				pmax	pmax		
	comp=Z,57nm,1.1s						
ILAR	Eielson Array	87.43	25	P	P	11 05 10.3	+0.9
	comp=Z,1.0nm,1.0s,baz=244,slow=4.3,SNR=8.4						
	comp=Z,1.0nm,1.0s						
ILAR	Eielson Array	87.43	25	P	P	11 05 08.5	-0.9
MOS	Moscow	87.97	326	eP	P	11 05 11.2	-1.0
MOS				e		11 15 35.6	
MOS				eS	S	11 15 48.9	-3.0
OBN	Obninsk	88.58	325	⇑eP	P	11 05 15.2	+0.2
OBN				*PP	pP	11 05 28.0	-0.7
OBN				*SP	sP	11 05 36.0	+2.1
OBN				PPP	PPP	11 10 44.2	
OBN				eS	SKSac	11 15 42.2	+2.1
OBN				e*SS	ScS	11 16 02.9	-0.2
OBN				e		11 17 02.5	
OBN				pmax	pmax		
	comp=Z,20nm,0.6s						
OBN				MLR	MLR		
	comp=Z,337nm,20.0s						
C27K	Jago River	88.73	21	IAmb	IAmb	11 08 39.8	
	comp=Z,5.9nm,0.8s						
BCAR	Beaver Creek A	89.69	27	P	P	11 05 21.0	+0.8
MMAI	Mount Meron Ar	89.83	303	P	P	11 05 22.9	+1.3
	comp=Z,2.3nm,0.4s,baz=108,slow=3.6,SNR=7.7						
	comp=Z,2.3nm,0.4s						
SYO	Syowa Base	90.07	201	⇑eP	P	11 05 21.0	-0.7
BR104	Keskin Array S	91.00	310	P	P	11 05 26.5	-0.5
	comp=Z,4.1nm,1.0s						
BRTR	Keskin Array B	91.00	310	P	P	11 05 26.1	-0.8
	comp=Z,2.5nm,0.9s,baz=131,slow=5.7,SNR=8.0						
	comp=Z,2.5nm,0.9s						
BR106	Keskin Array S	91.02	310	P	P	11 05 26.4	-0.7
	comp=Z,3.7nm,0.9s						
BR105	Keskin Array S	91.02	310	P	P	11 05 26.6	-0.5
	comp=Z,4.2nm,1.0s						
QSPA	South Pole Qui	91.35	180	P	P	11 05 27.7	-0.3
	comp=Z,1.1nm,0.7s,baz=357,slow=5.6,SNR=5.1						
	comp=Z,1.1nm,0.7s						
CSS	Mathiatis	91.47	305	P	P	11 05 28.8	-0.3
	comp=Z,16nm,0.7s						
ARCES	ARCESS Array B	92.38	340	P	P	11 05 32.0	-0.5
	comp=Z,3.2nm,0.8s,baz=50,slow=3.8,SNR=9.2						
	comp=Z,3.2nm,0.8s						
SPITS	Spitsbergen Ar	92.60	349	P	P	11 05 34.1	+0.7
	comp=Z,6.5nm,1.0s,baz=94,slow=8.5,SNR=4.3						
	comp=Z,6.5nm,1.0s						
AK09	Malin Array Si	93.25	321	P	P	11 05 36.4	-0.5
AK10	Malin Array Si	93.27	321	P	P	11 05 36.4	-0.6
AKASG	Malin Array Be	93.28	321	P	P	11 05 36.3	-0.7
	comp=Z,1.6nm,0.7s,baz=71,slow=4.3,SNR=5.2						
	comp=Z,1.6nm,0.7s						
AKASG	Malin Array Be	93.28	321	i P	P	11 05 37.7	+0.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	93.28	321	i P	P	11 05 34.9	-2.1
AKBB				pmax	pmax		
	comp=Z,43nm,3.0s						
AKBB	Malin Array Si	93.28	321	P	P	11 05 35.9	-1.1
AK01	Malin Array Si	93.28	321	P	P	11 05 36.0	-1.1
AK07	Malin Array Si	93.30	321	P	P	11 05 36.3	-0.9
FINES	FINESS Array B	93.55	332	P	P	11 05 38.3	+0.3
	comp=Z,2.9nm,0.6s,baz=46,slow=5.5,SNR=10						
	comp=Z,2.9nm,0.6s						
MNK	Minsk	93.63	325	i P	P	11 05 36.3	-2.3
MNK				i *PP	pP	11 05 51.0	-1.3
MNK				i		11 09 21.7	
MNK				i PPP	PPP	11 11 21.5	
MNK				i S	SKSac	11 16 06.2	-2.9
MNK				i SS	SS	11 23 01.6	-0.3
MNK				i SSS	SSS	11 26 42.4	
MNK				pmax	pmax		
	comp=N,13nm,0.9s						
MNK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MNK				MLR	MLR		
	comp=E,428nm,23.0s						
MNK				MLR	MLR		
	comp=Z,464nm,20.0s						
MNK				MLR	MLR		
	comp=N,385nm,21.0s						
LUBAR	Lubar, Ukraine	94.30	320	P	P	11 05 40.8	-1.0
KMPD	K-Podol'skiy	95.33	319	P	P	11 05 45.8	-0.7
TESR	Tescani	95.49	317	P	P	11 05 47.2	-0.1
	comp=N,21nm,1.1s						
VRI	Vrincioaia	95.52	316	P	P	11 05 48.2	+0.7
KSV	Kosov	96.28	319	P	P	11 05 49.9	-1.0
BURAR	Bucovina Array	96.29	318		P	11 05 51.3	+0.2
STNU	Starunia	96.59	319	P	P	11 05 52.3	0.0
STHS	Stebnicka Huta	98.56	320	eP	P	11 06 00.3	-0.8
STHS	Stebnicka Huta	98.56	320	ePDIFF	P	11 06 00.3	-0.8
MODS	Modra-Piesok	101.35	320	ePP	PP	11 10 20.5	-2.7
TORD	Torodi Ar. Bea	123.01	287	PKP	PKPdf	11 11 19.2	-0.4
	comp=N,5.5nm,0.9s,baz=35,slow=6.3,SNR=4.9						
TXAR	Lajitas Array	123.47	53	PKP	PKiKP	11 11 21.4	+0.9
	comp=N,0.7nm,0.9s,baz=211,slow=1.4,SNR=6.9						
FNO	Franklin	125.39	44		PKPdf	11 11 22.0	-1.6
GLAT	Glass	130.09	38		PKPdf	11 11 31.6	-0.9
DBIC	Dimbokro	130.41	280	PKP	PKiKP	11 11 34.9	+0.2
	comp=N,2.6nm,0.7s,baz=99,slow=3.6,SNR=3.1						
CO01	Juntas del Tor	147.70	153		PKiKP	11 12 09.4	-0.5
LCO	Las Campanas	148.23	151		PKiKP	11 12 10.6	-0.4
LCO	Las Campanas	148.23	151	PKP2	PKiKP	11 12 10.6	-0.4
AC05	El Transito	148.58	152		PKiKP	11 12 11.6	0.0
PLTB	Pedras Altas	149.83	180		PKiKP	11 12 15.2	+1.3
CPUP	Villa Florida	155.02	173	PKP	PKPdf	11 12 16.5	+0.6
	comp=N,0.5nm,0.8s,baz=250,slow=1.0,SNR=2.5						
LPAZ	La Paz	159.63	137	PKP	PKPdf	11 12 23.4	+0.7
	comp=N,1.1nm,0.8s,baz=270,slow=4.0,SNR=3.8						

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*MOS **03** 10:55:25.5±1.2, 1°.50N×125°.96E, h13^{km}, mb5.4/36, MS4.8/5, Error ellipse: s-maj=10.5km s-min=5.2km az=120.4*

*IDC **03** 10:55:25.9±0.4, 1°.40N×125°.86E, h0^{km}, mb4.8/29, mbtmp4.8/34, ML4.7/5, MS4.6/36, Error ellipse: s-maj=20.0km s-min=9.5km az=81.0*

*NEIC **03** 10:55:27.7±2.1, 1°.56N±0°.07×126°.24E±0°.05, h12^{km}±3^{km}, mb5.3/113, Mww5.3/10, Error ellipse: s-maj=9.6km s-min=7.3km az=186.0*

*NEIC **03** 10:55:28.7, 1°.35N×125°.65E, h24^{km}, Moment Tensor Solution. Duration: 2^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.68; $M_{\theta\theta}$-0.13; $M_{\phi\phi}$-0.55; $M_{r\theta}$-0.30; $M_{\theta\phi}$-0.15; $M_{\phi r}$-0.78; Fault plane solution: $M_0$1.05000×10^{17} NP1: ϕ_s15.78000°, δ18.64000°, λ85.58000°. NP2: ϕ_s200.45000°, δ71.41000°, λ91.49000°. Principal axes: T 1.0926, Plg64.0000°, Azm113.0000°; N -0.0867, Plg1.0000°, Azm20.0000°; P -1.0059, Plg26.0000°, Azm289.0000°;*

*NEIC **03** 10:55:28.7, 1°.55N×126°.25E, h24^{km}*

*DJA **03** 10:55:32.5±0.2, 2°N±2°×12°6E±°, h49^{km}±3^{km}, M5.2/67, mb5.2/67, mB5.6/29, MLv5.2/24, Mw(mB)5.1/29, MwMwp5.5/13, Mwp5.7/13*

ISC 03 10:55:30.9±0.2, **1°.47N**±0°.03×**126°.10E**±0°.04, **h35^{km}, n430, σ1^{s}85**/370, **mb5.2**/176, **MS4.7**/60, **15C-3D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNI	Manado	1.26	269	P	Pn	10 55 52.7	+0.6
TNTI	Ternate	1.44	119	Pn	Pn	10 55 52.6	-2.0
TNTI	Ternate	1.44	119	P	Pn	10 55 52.3	-2.3
GAMI	Galela, Maluku	1.73	78	P	Pn	10 55 57.2	-1.3
SGSI	Sangihe	2.27	345	P	Pn	10 56 06.9	+0.9
GTOI	Gorontalo	3.20	255	P	Pn	10 56 20.2	+1.5
SANI	Sanana	3.50	182	P	Pn	10 56 23.3	+0.4
LUWI	Luwuk	4.16	233	Pn	Pn	10 56 34.7	+2.7
LUWI	Luwuk	4.16	233	P	Pn	10 56 33.7	+1.7
MRSI	Marisa	4.27	257	P	Pn	10 56 35.3	+1.8
NLAI	Namlea	4.78	168	P	Pn	10 56 40.9	+0.4
APSI	Ampana	5.04	242	P	Pn	10 56 47.4	+3.3
KRAI	Karang Ratu	5.28	154	P	Pn	10 56 47.6	+0.2
	1.8nm187nm,0.8s						
TOLI2	Tolitoli	5.33	266	Pn	Pn	10 56 49.3	+1.2
AAI	Ambon	5.53	158	P	Pn	10 56 51.1	+0.2
	1.0nm150nm,0.6s						
MSAI	Masohi	5.56	149	P	Pn	10 56 51.7	+0.5
	1.6nm342nm,1.0s						
DAV	Davao City (W)	5.59	355	Pn	Pn	10 56 52.8	+1.2
	53nm,0.3s,baz=164,slow=19,SNR=1.8						
DAV				Sn	Sn	10 57 56.2	+1.5
	33nm,0.3s,baz=38,slow=15,SNR=3.7						
	168nm,0.4s						
DAV	Davao City (W)	5.59	355	P	Pn	10 56 53.0	+1.4
	510nm,0.7s						
SWI	Sorong	5.66	114	P	Pn	10 56 52.7	+0.2
	143nm,1.1s						
MPSI	Mapaga	6.30	260	P	Pn	10 57 04.0	+2.6
	0.9nm268nm,0.9s						
KDI	Kendari	6.42	213	P	Pn	10 57 03.7	+0.7
PCI	Palu	6.69	249	P	Pn	10 57 09.1	+2.3
BNDI	Bandanaira	7.06	147	P	Pn	10 57 14.0	+2.1
	1.4nm161nm,1.2s						
KKSI	Kolaka, Sulawe	7.15	218	P	Pn	10 57 13.6	+0.5
	1.3nm259nm,0.6s						
FAKI	Fak Fak	7.54	125	Pn	Pn	10 57 17.4	-1.0
FAKI	Fak Fak	7.54	125	P	Pn	10 57 19.3	+0.9
TTSI	Tana Toraja	7.72	234	P	Pn	10 57 21.5	+0.6
MMSI	Mamuju	8.29	240	P	Pn	10 57 33.7	+4.9
	141nm,0.8s						
SPSI	Sidrap Palu	8.32	230	P	Pn	10 57 31.3	+2.2
BNSI	Bone	8.36	226	P	Pn	10 57 31.8	+2.1
	329nm,0.9s						
MYLDM	Lahad Datu	8.43	296	Pn	Pn	10 57 32.4	+1.7
MYLDM	Lahad Datu	8.43	296	P	Pn	10 57 34.9	+4.2
PMSI	Majene	8.72	235	P	Pn	10 57 38.1	+3.5
	265nm,0.9s						
BKSI	Bulukumba	9.01	221	P	Pn	10 57 39.8	+1.2
	185nm,0.8s						
KAPI	Kappang	9.04	225	Pn	Pn	10 57 36.4	-2.6
	5.5nm,0.3s,baz=356,slow=6.6,SNR=9.2						
KAPI				Sn	Sn	10 59 17.3	-2.3
	baz=306,slow=23						
	14nm,0.3s						
KAPI	Kappang	9.04	225		Pn	10 57 41.3	+2.3
KAPI	Kappang	9.04	225	P	Pn	10 57 41.0	+2.0
	73nm,1.0s						
KAPI	Kappang	9.04	225	i P	Pn	10 57 40.0	+1.0
MKS	Makassar	9.38	225	P	Pn	10 57 47.2	+3.5
	3µm312nm,0.8s						
BSSI	Bau Bau, Buton	9.41	216	P	Pn	10 57 46.3	+2.2
	2µm200nm,0.6s						
BKB	Balikpapan	9.59	254		Pn	10 57 47.4	+0.8
BKB	Balikpapan	9.59	254	P	Pn	10 57 49.4	+2.8
	258nm,1.0s						
BAKI	Biak	10.35	105	P	Pn	10 57 59.5	+2.5
	257nm,1.0s						
MMRI	Maumere	10.75	201	P	Pn	10 58 05.3	+2.8
	13µm44nm,0.8s						
KKM	Kota Kinabalu	10.86	295		Pn	10 58 03.7	-0.3
KKM	Kota Kinabalu	10.86	295	P	Pn	10 58 06.5	+2.4
	2µm82nm,1.0s						
EDFI	Ende, Flores	11.06	203	P	Pn	10 58 09.4	+2.5
	11µm57nm,0.9s						
SOEI	Soe	11.30	189	P	Pn	10 58 13.1	+3.0
	3µm251nm,0.8s						
MTKI	Muara Teweh, K	11.46	258	P	Pn	10 58 14.8	+2.6
	114nm,1.0s						
LBFI	Labuhan Bajo,	11.66	212	P	Pn	10 58 20.2	+5.2
	10µm78nm,1.1s						
BATI	Baumata	11.85	192	Pn	Pn	10 58 16.0	-1.6
	4.3nm,0.3s,baz=342,slow=3.2,SNR=1.9						
	9.8nm,0.3s						
BATI	Baumata	11.85	192	P	Pn	10 58 19.9	+2.3
	84nm,0.7s						
BBKI	Banjar Baru	12.27	246	P	Pn	10 58 26.5	+3.1
	16µm76nm,0.8s						
DBNI	Kabupaten Domp	12.59	218	P	Pn	10 58 31.3	+3.7
BASI	Baing, Sumba	12.85	205	P	Pn	10 58 34.6	+3.4
	8µm3µm176nm,1.3s						
WBSI	Waikabubak, Su	12.90	211	P	Pn	10 58 36.4	+4.4
	3µm102nm,1.1s						
SMPI	Sarmi	13.07	105	P	Pn	10 58 36.8	+2.6
	22µm4µm104nm,2.0s						
PLAI	Plampang	13.17	219	P	Pn	10 58 41.2	+5.6
TWSI	Taliwang, Sumb	13.68	222	P	P	10 58 48.6	-2.3
SBUM	Sibu	13.91	274		Pn	10 58 46.5	+0.9
SBUM	Sibu	13.91	274	P	Pn	10 58 48.2	+2.5
	20µm74nm,1.1s						
KLNI	Mataram	14.00	225	P	Pn	10 58 50.2	+3.2
	2µm187nm,0.9s						
KHKI	Kahang-Kahang	14.31	227	P	Pn	10 58 54.1	+2.9
GENI	Genyem	14.63	106	P	Pn	10 58 55.4	-0.1
	17µm203nm,1.5s						
KMMI	Kalianget	14.77	235	P	P	10 59 02.3	-0.7
	2µm185nm,0.9s						
DNP	Denpasar	14.81	227	P	P	10 59 02.9	-0.5
RTBI	Rangdo, Negare	14.87	228	P	P	10 59 04.1	0.0
IGBI	Denpasar	14.96	227	P	P	10 59 04.1	-0.9
ABJI	Asem Bagus	14.99	232	P	P	10 59 05.4	0.0
	3µm130nm,1.0s						
MTN	Manton Dam	15.07	161	P	Pn	10 58 59.1	-2.3
	comp=Z,77nm,0.8s,comp=Z,0.0nm						
JAY	Jayapura	15.13	105	Pn	Pn	10 59 04.5	+2.3
	comp=Z,1.3nm,0.3s,baz=92,slow=11,SNR=4.2						
JAY				LR	LR	11 04 59.0	
	comp=Z,4µm,21.1s,baz=298,slow=37						
	comp=Z,18nm,0.7s						
JAY	Jayapura	15.13	105	P	Pn	10 59 03.6	+1.4
KDU	Kakadu	15.42	156	P	Pn	10 59 02.2	-3.8
	comp=Z,184nm,0.9s						
BLJI	Banyuglugur	15.47	234	P	Pn	10 59 09.7	+3.0
	comp=Z,2µmcomp=Z,166nm,1.1s						
JAGI	Jajag, Banyuwa	15.47	230	P	P	10 59 12.0	+1.2
	comp=Z,3µmcomp=Z,311nm,1.1s						
GMJI	Gumukmas	15.90	232	P	P	10 59 15.7	+0.2
	comp=Z,2µmcomp=Z,241nm,0.9s						
SJI	Sawahan	16.97	237	P	P	10 59 28.5	+1.0
	comp=Z,68nm,0.7s						
SNJI	Sawahan-Nganju	17.00	237	P	Pn	10 59 28.0	+1.7
	comp=Z,183nm,1.1s						
NGJI	Ngawi	17.04	239	P	P	10 59 29.7	+1.5
	comp=Z,111nm,1.0s						
KNRA	Kununurra	17.24	171	P	Pn	10 59 28.9	-0.1
	comp=Z,170nm,1.4s						
KNRA	Kununurra	17.24	171	P	Pn	10 59 29.0	-0.1
PCJI	Pacitan	17.71	237	P	Pn	10 59 36.6	+1.7
	comp=Z,185nm,1.0s						
UGM	Wanagama	18.12	239	P	Pn	10 59 39.1	-0.9
KPJI	Karang Pucung	19.23	243	P	P	10 59 52.4	+0.1
	comp=Z,72nm,0.8s						
FITZ	Fitzroy Crossi	19.45	181	P	P	10 59 53.5	-1.2
	comp=Z,11nm,1.3s						
FITZ	Fitzroy Crossi	19.45	181	P	P	10 59 53.2	-1.4
	comp=Z,2.1nm,0.3s,baz=13,slow=7.3,SNR=11						
	comp=Z,26nm,0.7s						
FITZ	Fitzroy Crossi	19.45	181	P	P	10 59 54.4	-0.3

MYKOM	Kota Tinggi	22.24	271	P	P	11 00 25.4	+0.4
MYKOM				IAmb	IAmb	11 00 27.6	
	comp=Z,138nm,1.2s						
MYKOM	Kota Tinggi	22.24	271	P	P	11 00 26.2	+1.3
	comp=Z,97nm,1.4s						
WB0	Warramunga Arr	22.62	159	P	P	11 00 27.2	-1.7
SSLB	Suanglung	22.74	348	P	P	11 00 27.7	-2.5
SSLB				IAmb	IAmb	11 00 38.9	
	comp=Z,78nm,1.0s						
WRAB	Tennant Creek	22.76	160	i P	P	11 00 28.3	-2.1
WRAB				pmax	pmax		
	comp=Z,184nm,0.9s						
WRA	Warramunga Arr	22.76	160	P	P	11 00 28.6	-1.8
	comp=Z,70nm,0.9s,baz=338,slow=10,SNR=22						
WRA				S	S	11 04 33.4	-3.8
	comp=Z,21nm,1.1s,baz=333,slow=15,SNR=9.0						
	comp=Z,70nm,0.9s						
WRA	Warramunga Arr	22.76	160	P	P	11 00 28.6	-1.8
WRA	Warramunga Arr	22.76	160	P	P	11 00 28.6	-1.8
WRA				pmax	pmax		
	comp=Z,18nm,0.9s						
COEN	Coen	22.83	133	P	P	11 00 28.9	-2.3
	comp=Z,33nm,1.0s						
COEN	Coen	22.83	133		P	11 00 28.7	-2.5
MBWA	Marble Bar	23.34	195	P	P	11 00 34.8	-1.4
	comp=Z,56nm,0.9s						
MBWA	Marble Bar	23.34	195		P	11 00 34.5	-1.7
PMG	Port Moresby	23.60	118	LR	LR	11 12 32.7	
	comp=Z,5µm,19.5s,baz=322,slow=43						
PMG	Port Moresby	23.60	118		P	11 00 37.1	-1.7
PMG	Port Moresby	23.60	118	P	P	11 00 37.8	-1.0
	comp=Z,809nmcomp=Z,47nm,0.8s						
PMG	Port Moresby	23.60	118	ceP	P	11 00 38.5	-0.3
PMG				pmax	pmax		
	comp=Z,90nm,1.7s						
QIZ	Qiongzhong	23.63	319	P	P	11 00 40.5	+1.4
QIZ				S	S	11 04 48.7	-2.8
QIZ				pmax	pmax		
	comp=Z,730nm,6.3s						
QIZ				LR	LR		
	comp=Z,1µm,16.7s						
QIZ				LR	LR		
	comp=Z,2µm,20.4s						
QIZ				LR	LR		
	comp=Z,2µm,18.6s						
PSAC1	Pilbara Seismi	23.68	195	P	P	11 00 38.2	-1.3
	comp=Z,41nm,0.8s						
PSAC2	Pilbara Seismi	23.68	194	P	P	11 00 38.3	-1.3
	comp=Z,52nm,0.8s						
PSA00	Pilbara Seismi	23.70	195	P	P	11 00 38.9	-0.8
	comp=Z,53nm,0.8s						
PSA00	Pilbara Seismi	23.70	195	P	P	11 00 38.3	-1.5
PSA00	Pilbara Seismi	23.70	195		P	11 00 38.0	-1.7
PSA00				IAmb	IAmb	11 00 42.0	
	comp=Z,17nm,0.9s						
PSAB3	Pilbara Seismi	23.72	195	P	P	11 00 38.7	-1.2
	comp=Z,44nm,0.8s						
IPM	Ipoh	25.22	277		P	11 00 53.5	-0.2
IPM				IAmb	IAmb	11 01 09.9	
	comp=Z,91nm,1.3s						
JOW	Kunigami	25.30	5	P	P	11 00 56.5	+2.1
	comp=Z,43nm,0.8s,baz=181,slow=7.5,SNR=3.5						
	comp=Z,43nm,0.8s						
QIS	Mount Isa	25.58	150	P	P	11 00 57.4	+0.4
	comp=Z,100nm,0.8s						
KULM	Kulim	25.68	279	P	P	11 00 56.7	-1.3
KULM				IAmb	IAmb	11 01 14.5	
	comp=Z,73nm,1.2s						
AS31	Alice Springs	26.11	164	P	P	11 01 00.2	-1.6
ASAR	Alice Springs	26.11	164	P	P	11 01 00.8	-0.9
	comp=Z,35nm,0.7s,baz=348,slow=6.4,SNR=34						
ASAR				S	S	11 05 29.9	-1.3
	comp=Z,2.1nm,0.8s,baz=345,slow=18,SNR=3.2						
ASAR				LR	LR	11 11 04.5	
	comp=Z,973nm,21.9s,baz=352,slow=36						
	comp=Z,35nm,0.7s						
ASAR	Alice Springs	26.11	164		P	11 01 00.5	-1.3
WRKA	Warakurna	26.44	176	P	P	11 01 05.2	+0.5
	comp=Z,36nm,0.9s						
GIRL	Giralia	26.61	205	P	P	11 01 06.2	-0.1
GIRL				IAmb	IAmb	11 01 24.5	
	comp=Z,82nm,1.1s						
GSI	Gunungsitoli	28.52	270	IAmb	IAmb	11 01 26.7	
	comp=Z,36nm,0.8s						
CTA	Charters Tower	29.15	138	LR	LR	11 15 14.7	
	comp=Z,48nm,18.4s,baz=314,slow=41						
CTAO	Charters Tower	29.15	138	P	P	11 01 27.9	-1.1
CTAO	Charters Tower	29.15	138	P	P	11 01 27.9	-1.1
CTAO				pmax	pmax		
	comp=Z,38nm,1.3s						
SSE	Sheshan	29.83	352	P	P	11 01 34.4	-0.4
SSE				S	S	11 06 30.2	+0.8
SSE				pmax	pmax		
	comp=Z,9.0nm,1.7s						
SSE				pmax	pmax		
	comp=Z,130nm,3.9s						
SSE				LR	LR		
	comp=Z,560nm,20.6s						
SSE				LR	LR		
	comp=Z,570nm,19.2s						
WHN	Wuhan	30.99	340	P	P	11 01 50.1	+5.0
NJ2	Nanjing	31.18	348	eP	P	11 01 48.9	+2.2
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
NJ2				LR	LR		
	comp=Z,730nm,22.7s						
NJ2				LR	LR		
	comp=Z,1µm,21.8s						
NJ2				LR	LR		
	comp=Z,770nm,18.9s						
CM31	Chiang Mai Arr	31.54	304	P	P	11 01 49.9	-0.2
CMAR	Chiang Mai Arr	31.54	304	P	P	11 01 50.4	+0.3
	comp=Z,2.9nm,0.9s,baz=120,slow=7.7,SNR=10.0						
CMAR				ScP	ScP	11 08 24.6	+1.4
	comp=Z,0.6nm,0.4s,baz=93,slow=3.3,SNR=5.3						
CMAR				LR	LR	11 15 12.6	
	comp=Z,1µm,20.7s,baz=115,slow=38						
	comp=Z,2.9nm,0.9s						
CMAR	Chiang Mai Arr	31.54	304	P	P	11 01 49.2	-0.9
CMAR	Chiang Mai Arr	31.54	304	P	P	11 01 49.2	-0.9
CHTO	Chiang Mai	31.71	305	P	P	11 01 51.7	0.0
JNU	Nakatsue	31.80	8	P	P	11 01 54.2	+1.9
	comp=Z,11nm,0.8s,baz=151,slow=5.1,SNR=7.7						
	comp=Z,11nm,0.8s						
JNU	Nakatsue	31.80	8	P	P	11 01 52.2	-0.1
JNU				IAmb	IAmb	11 02 21.4	
	comp=Z,43nm,1.0s						
MORW	Morawa	31.86	197	IAmb	IAmb	11 01 53.4	
	comp=Z,26nm,0.9s						
FORT	Forrest	32.12	177	IAmb	IAmb	11 02 32.2	
	comp=Z,42nm,0.8s						
INKA	Innaminka	32.28	155	P	P	11 01 56.4	-0.1
KMI	Kunming	32.58	318	P	P	11 02 00.4	+1.0
KMI				pmax	pmax		
	comp=Z,11nm,0.6s						
KMI				LR	LR		
	comp=Z,2µm,21.6s						
KMI				LR	LR		
	comp=Z,1µm,22.2s						
KMI				LR	LR		
	comp=Z,2µm,21.0s						
ENH	Enshi	32.70	333		P	11 01 59.5	-0.7
ENH				IAmb	IAmb	11 02 04.2	
	comp=Z,32nm,0.8s						
PZH	PanZhiHua	34.17	319	P	P	11 02 12.9	-0.3
PZH				S	S	11 07 33.8	-3.7
PZH				pmax	pmax		
	comp=Z,60nm,1.2s						
PZH				pmax	pmax		
	comp=Z,170nm,4.2s						
PZH				LR	LR		
	comp=Z,1µm,23.0s						
PZH				LR	LR		
	comp=Z,1µm,17.6s						
PZH				LR	LR		
	comp=Z,2µm,19.4s						
LYN	LuoYang	35.29	340	P	P	11 02 26.7	+4.1
LYN				pmax	pmax		
	comp=Z,25nm,0.8s						
LYN				pmax	pmax		
	comp=Z,300nm,9.3s						
LYN				LR	LR		
	comp=Z,800nm,15.5s						
LYN				LR	LR		
	comp=Z,800nm,19.9s						
LYN				LR	LR		
	comp=Z,1µm,21.6s						
BBOO	Buckleboo	35.37	165	IAmb	IAmb	11 02 23.8	
	comp=Z,41nm,0.8s						
KSRS	Korea Array	35.85	2	P	P	11 02 29.0	+1.7
	comp=Z,7.1nm,0.9s,baz=180,slow=9.9,SNR=10						
	comp=Z,7.1nm,0.9s						
EIDS	Eidsvold	36.01	139	IAmb	IAmb	11 02 41.5	
	comp=Z,77nm,1.8s						
CD2	Chengdu	36.12	326	P	P	11 02 29.2	-0.7
CD2				S	S	11 08 07.6	+0.2
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CD2				LR	LR		
	comp=Z,4µm,24.5s						
CD2				LR	LR		
	comp=Z,2µm,18.2s						
XAN	Xi'an	36.17	335	P	P	11 02 28.8	-1.4
XAN				pP	pP	11 02 42.0	+2.2
XAN				S	S	11 08 03.6	-4.3
XAN				pmax	pmax		
	comp=Z,29nm,0.8s						
XAN				pmax	pmax		
	comp=Z,340nm,5.2s						
XAN				LR	LR		
	comp=Z,2µm,18.2s						
XAN				LR	LR		
	comp=Z,1µm,19.6s						
XAN				LR	LR		
	comp=Z,3µm,22.7s						
STKA	Stephens Creek	36.27	157	P	P	11 02 30.6	-0.5
	comp=Z,50nm,0.8s,baz=332,slow=8.6,SNR=25						
	comp=Z,50nm,0.8s						
STKA	Stephens Creek	36.27	157		P	11 02 30.5	-0.6
STKA	Stephens Creek	36.27	157	i P	P	11 02 30.2	-0.9
HNS	HongShan	37.26	345	⇑P	P	11 02 42.0	+2.6
HNS				pmax	pmax		
	comp=Z,12nm,1.2s						
HNS				LR	LR		
	comp=Z,830nm,22.8s						
HNS				LR	LR		
	comp=Z,1µm,22.2s						
DL2	Dalian	37.48	354	P	P	11 02 43.1	+1.9
DL2				S	S	11 08 29.9	+2.2
DL2				pmax	pmax		
	comp=Z,79nm,1.2s						
DL2				pmax	pmax		
	comp=Z,780nm,4.3s						
DL2				LR	LR		
	comp=Z,680nm,13.7s						
DL2				LR	LR		
	comp=Z,1µm,17.5s						
DL2				LR	LR		
	comp=Z,2µm,21.0s						
IMP	Imphal	38.77	309	eP	P	11 02 45.2	-7.3
IMP				IAmb	IAmb	11 02 51.9	
	comp=Z,34nm,1.2s						
KOHI	KOHIMA	39.12	311	eP	P	11 02 49.6	-5.9
KOHI				IAmb	IAmb	11 02 59.5	
	comp=Z,94nm,2.5s						
MOKO	MOKOCHONG	39.15	312	eP	P	11 02 48.7	-7.0
MOKO				IAmb	IAmb	11 02 57.5	
	comp=Z,43nm,1.1s						
BJI	Beijing	39.44	348	P	P	11 02 58.3	+0.6
BJI				pP	pP	11 03 10.0	+2.6
BJI				sP	sP	11 03 15.1	+3.8
BJI				S	S	11 08 57.4	+0.2
BJI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BJI				LR	LR		
	comp=Z,310nm,22.0s						
BJI				LR	LR		
	comp=Z,350nm,22.7s						
BJI				LR	LR		
	comp=Z,360nm,22.0s						
BRDH	Bariadhala	39.55	305	LR	LR	11 20 10.5	
	comp=Z,1µm,21.5s,baz=138,slow=38						
BELO	BELONIA	39.97	306	eP	P	11 02 55.6	-6.7
LZDM	Lanzhou Array	40.12	331	P	P	11 03 02.7	-1.1
	comp=Z,0.8nm,0.3s,baz=119,slow=12,SNR=3.6						
LZDM				LR	LR	11 19 58.5	
	comp=Z,1µm,21.2s,baz=140,slow=37						
	comp=Z,0.8nm,0.3s						
LZH	Lanzhou	40.15	332	P	P	11 03 03.3	-0.6
LZH				pP	pP	11 03 14.2	+0.6
LZH				pmax	pmax		
	comp=Z,37nm,1.2s						
LZH				LR	LR		
	comp=Z,1µm,17.4s						
LZH				LR	LR		
	comp=Z,910nm,18.2s						
LZH				LR	LR		
	comp=Z,2µm,19.6s						
ITAN	ITANAGAR	40.19	312	eP	P	11 02 58.0	-6.2
ITAN				IAmb	IAmb	11 03 10.5	
	comp=Z,72nm,0.5s						
ZIRO	ZIRO	40.31	313	eP	P	11 02 57.8	-7.6
ZIRO				IAmb	IAmb	11 03 05.8	
	comp=Z,45nm,0.8s						
AGT	Agartala	40.43	306	eP	P	11 02 58.7	-7.5
AGT				IAmb	IAmb	11 03 04.3	
	comp=Z,44nm,0.6s						
TEZP	TEZPUR	40.59	311	eP	P	11 03 01.0	-6.5
TEZP				IAmb	IAmb	11 03 07.4	
	comp=Z,14nm,0.6s						
SHL	Shillong	40.75	309		P	11 03 08.4	-0.6
SHL				IAmb	IAmb	11 03 12.3	
	comp=Z,38nm,0.8s						
SHL	Shillong	40.75	309	eP	P	11 03 01.8	-7.2
SHL				IAmb	IAmb	11 03 12.5	
	comp=Z,40nm,1.0s						
SHL	Shillong	40.75	309	P	P	11 03 08.4	-0.6
SHL				pmax	pmax		
	comp=Z,38nm,0.8s						
HHC	Hu-ho-hao-te	41.35	343	eP	P	11 03 17.2	+3.6
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,260nm,9.5s						
HHC				LR	LR		
	comp=Z,620nm,17.1s						
HHC				LR	LR		
	comp=Z,370nm,21.8s						
HHC				LR	LR		
	comp=Z,860nm,19.9s						
BTO	Baotou	41.59	341	eP	P	11 03 20.8	+5.2
BTO				S	S	11 09 36.0	+6.4
BTO				pmax	pmax		
	comp=Z,18nm,0.5s						
BTO				pmax	pmax		
	comp=Z,540nm,5.6s						
BTO				LR	LR		
	comp=Z,1µm,19.7s						
BTO				LR	LR		
	comp=Z,2µm,19.8s						
BTO				LR	LR		
	comp=Z,2µm,19.2s						
TAWA	Tawang	41.82	312	eP	P	11 03 11.4	-6.6
TAWA				IAmb	IAmb	11 03 22.6	
	comp=Z,48nm,1.1s						
CN2	Changchun	42.15	359	P	P	11 03 18.8	-1.2
CN2				S	S	11 09 34.8	-2.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				LR	LR		
	comp=Z,800nm,20.0s						
CN2				LR	LR		
	comp=Z,1µm,20.0s						
CN2				LR	LR		
	comp=Z,800nm,19.0s						
DHUB	DHUBRI	42.45	308	eP	P	11 03 15.9	-6.8
DHUB				IAML		11 03 56.6	
	comp=Z,39nm,0.5s						
USRK	Ussuriysk Ar.	42.87	6	P	P	11 03 27.0	+1.2
	comp=Z,12nm,0.8s,baz=172,slow=6.1,SNR=11						
	comp=Z,12nm,0.8s						
USRK	Ussuriysk Ar.	42.87	6	P	P	11 03 27.0	+1.2
XLT	XiLinHaoTe	43.18	349	eP	P	11 03 29.3	+0.8
XLT				sP	sP	11 03 52.0	+10
XLT				pmax	pmax		
	comp=Z,10.0nm,1.5s						
XLT				pmax	pmax		
	comp=Z,290nm,4.9s						
XLT				LR	LR		
	comp=Z,820nm,24.7s						
XLT				LR	LR		
	comp=Z,670nm,24.4s						
LSA	Lhasa	43.49	314	P	P	11 03 27.6	-4.1
SANVU	Saraoutou	43.97	114	P	P	11 03 34.5	-0.7
SANVU				IAmb	IAmb	11 03 36.5	
	comp=Z,49nm,0.7s						
BNX	BinXian	44.10	1	⇑P	P	11 03 37.1	+1.4
BNX				pmax	pmax		
	comp=Z,9.0nm,1.5s						
GTA	Gaotai	44.73	331	eP	P	11 03 41.3	+0.3
GTA				PP	PP	11 05 28.0	+2.1
GTA				pmax	pmax		
	comp=Z,14nm,1.2s						
GTA				LR	LR		
	comp=Z,690nm,20.4s						
GTA				LR	LR		
	comp=Z,1µm,20.0s						
GTA				LR	LR		
	comp=Z,1µm,19.6s						
ASAJ	Asahikawa	44.92	17	P	P	11 03 43.4	+1.1
	comp=Z,12nm,0.8s,baz=36,slow=8.4,SNR=5.1						
	comp=Z,12nm,0.8s						
JKA	Kamikawa-asahi	44.92	17	P	P	11 03 41.4	-0.9
GOMU	GeErMu	45.09	324	P	P	11 03 44.1	-0.2
GOMU				S	S	11 10 25.1	+3.6
GOMU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
RAGD	RAYAGADA	45.32	296	eP	P	11 03 40.8	-5.1
RAGD				IAmb	IAmb	11 03 46.9	
	comp=Z,20nm,0.6s						
PALK	Pallekele	45.61	279	LR	LR	11 24 31.7	
	comp=Z,2µm,20.4s,baz=99,slow=38						
DZM	Mont Dzumac	45.79	123	eP	P	11 03 48.5	-1.3
	comp=Z,65nm,1.1s						
DZM				eS	S	11 10 34.7	+3.2
	comp=Z,1µm,35.2s						
DZM				eLR	LR	11 16 46.7	
	comp=Z,1µm,22.8s						
DZM	Mont Dzumac	45.79	123	P	P	11 03 48.4	-1.3
DZM				IAmb	IAmb	11 03 50.5	
	comp=Z,20nm,0.8s						
EVN	Everest	45.86	309		P	11 03 50.3	-0.5
EVN				IAmb	IAmb	11 03 56.3	
	comp=Z,50nm,1.1s						
PINNC	Pines Island,	46.86	123	P	P	11 03 57.0	-1.0
PINNC				IAmb	IAmb	11 03 59.4	
	comp=Z,39nm,1.0s						
MARNC	Mare, Loyalty	46.89	122		P	11 03 57.1	-1.1
HILR	Hailar Array B	48.21	354	P	P	11 04 08.5	+0.4
	comp=Z,5.2nm,0.5s,baz=169,slow=10.0,SNR=1.9						
HILR				LR	LR	11 24 54.5	
	comp=Z,727nm,21.4s,baz=105,slow=37						
	comp=Z,5.2nm,0.5s						
HEH	HeiHe	48.62	1	eP	P	11 04 12.5	+1.4
HEH				pmax	pmax		
	comp=Z,40nm,1.3s						
ULN	Ulaanbaatar	49.07	343		P	11 04 14.5	-0.4
ULN				IAmb	IAmb	11 05 02.2	
	comp=Z,24nm,1.2s						
ULN	Ulaanbaatar	49.07	343	i P	P	11 04 14.7	-0.2
ULN				pmax	pmax		
	comp=Z,14nm,1.3s						
KOD	Kodaikanal	49.10	282	eP	P	11 04 08.5	-7.3
KOD				IAmb	IAmb	11 04 15.8	
	comp=Z,38nm,0.5s						
SONM	Songino Array	49.24	343	P	P	11 04 15.4	-0.7
	comp=Z,5.2nm,0.8s,baz=165,slow=7.5,SNR=8.8						
SONM				LR	LR	11 26 05.8	
	comp=Z,889nm,21.4s,baz=158,slow=37						
	comp=Z,5.2nm,0.8s						
SONM	Songino Array	49.24	343	P	P	11 04 16.1	0.0
SONM	Songino Array	49.24	343	P	P	11 04 16.1	0.0
SONM				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HYB	Hyderabad	49.32	292	eP	P	11 04 11.2	-5.9
HYB				IAmb	IAmb	11 04 17.1	
	comp=Z,31nm,1.3s						
HYB	Hyderabad	49.32	292	eP	P	11 04 16.8	-0.4
HYB				epP	pP	11 04 21.0	-6.1
TRD	Trivandrum	49.41	280	eP	P	11 04 12.8	-5.1
TRD				IAmb	IAmb	11 04 17.8	
	comp=Z,26nm,0.7s						
CIT	Chita	51.46	350	eP	P	11 04 33.8	+1.0
CIT				e		11 05 42.4	
CIT				e		11 06 25.4	
CIT				pmax	pmax		
	comp=Z,148nm,2.6s						
PTH	Pithoragarh	51.77	307	eP	P	11 04 29.8	-5.9
PTH				IAmb	IAmb	11 04 39.4	
	comp=Z,24nm,0.4s						
LGTI	Lohaghat	51.81	307	eP	P	11 04 30.2	-4.7
LGTI				IAmb	IAmb	11 04 39.3	
	comp=Z,26nm,0.8s						
BHPL	Bhopal	51.89	299	eP	P	11 04 30.3	-6.2
BHPL				IAML		11 04 36.2	
	comp=Z,23nm,0.5s						
NRDN	NARMADA NAGAR	51.96	298	eP	P	11 04 31.3	-5.7
NRDN				IAmb	IAmb	11 04 40.3	
	comp=Z,35nm,1.9s						
MNGI	Mangalore	51.97	285	eP	P	11 04 30.2	-7.3
MNGI				IAmb	IAmb	11 04 37.4	
	comp=Z,40nm,0.9s						
ZEA	Zeya	52.10	1	eP	P	11 04 42.2	+4.8
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KAD	Karad	53.38	290	eP	P	11 04 42.4	-5.1
KAD				IAmb	IAmb	11 04 46.4	
	comp=Z,27nm,0.6s						
MERT	Meerut	53.54	305	eP	P	11 04 41.8	-6.7
MERT				IAmb	IAmb	11 04 48.3	
	comp=Z,30nm,0.3s						
NPLP	NPLP New Delhi	53.88	305	eP	P	11 04 44.7	-6.3
NPLP				IAmb	IAmb	11 04 54.2	
	comp=Z,40nm,1.1s						
POO	Poona	53.93	292	eP	P	11 04 46.4	-5.2
POO				IAmb	IAmb	11 04 50.7	
	comp=Z,27nm,0.8s						
KLP	Kalpa	54.12	309	eP	P	11 04 45.3	-7.8
KLP				IAmb	IAmb	11 04 57.7	
	comp=Z,30nm,0.3s						
WMQ	Urumqi	54.22	326	eP	P	11 04 56.9	+3.5
WMQ				pmax	pmax		
	comp=Z,32nm,1.1s						
WMQ				LR	LR		
	comp=Z,1µm,18.7s						
WMQ				LR	LR		
	comp=Z,1µm,21.7s						
WMQ				LR	LR		
	comp=Z,1µm,23.7s						
MOY	Mondy	54.29	341	eP	P	11 04 55.1	+1.4
MOY				pmax	pmax		
	comp=Z,46nm,2.0s						
MSVF	Nonsavu	54.58	113		P	11 04 54.2	-2.2
MSVF				IAmb	IAmb	11 04 58.7	
	comp=Z,23nm,0.8s						
MSVF	Nonsavu	54.58	113	i P	P	11 04 56.1	-0.3
MSVF				pmax	pmax		
	comp=Z,26nm,0.8s						
KNGR	Kungurtug, Tuv	54.62	338	i P	P	11 04 56.1	0.0
KNGR				pmax	pmax		
	comp=Z,16nm,1.2s						
SMLA	Simla	54.81	308	eP	P	11 04 51.5	-6.2
SMLA				IAmb	IAmb	11 05 02.6	
	comp=Z,38nm,0.7s						
UDPR	Udaipur	55.53	299	eP	P	11 04 56.7	-6.4
UDPR				IAmb	IAmb	11 05 03.0	
	comp=Z,23nm,1.9s						
DHRM	DHARAMSHALA	55.92	309	eP	P	11 05 00.2	-5.8
DHRM				IAmb	IAmb	11 05 07.3	
	comp=Z,23nm,0.7s						
TSSA	Tissa	56.27	309	eP	P	11 05 02.2	-6.2
TSSA				IAmb	IAmb	11 05 18.2	
	comp=Z,27nm,0.7s						
PEA0B	Petropavlovsk-	57.75	22	P	P	11 05 18.5	+0.2
PEA0B	Petropavlovsk-	57.75	22	P	P	11 05 18.5	+0.2
PEA0B				pmax	pmax		
	comp=Z,351nm,1.9s						
PETK	Petropavlovsk-	57.75	22	P	P	11 05 20.0	+1.7
	comp=Z,14nm,0.9s,baz=204,slow=3.3,SNR=6.2						
PETK				LR	LR	11 31 21.8	
	comp=Z,238nm,19.7s,baz=216,slow=37						
	comp=Z,14nm,0.9s						
PETK	Petropavlovsk-	57.75	22	P	P	11 05 18.7	+0.4
WUS	Wushi	57.84	319	IAmb	IAmb	11 05 27.1	
	comp=Z,21nm,1.0s						
ZSN	Zaisan	58.07	328	eP	P	11 05 19.5	-1.2
ZSN	Zaisan	58.07	328	eP	P	11 05 19.4	-1.2
DGZ	Jazzator, Alta	58.25	332	i P	P	11 05 20.8	-1.3
DGZ				pmax	pmax		

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      comp=Z,17nm,1.2s
SHLS  Shalkode          58.69 321 eP     P      11 05 22.1 -3.2
      comp=Z,15nm,0.8s
SHLS  Shalkode          58.69 321 eP     P      11 05 22.0 -3.3
SHLS                               pmax  pmax
      comp=Z,15nm,0.8s
NIL   Nilore            58.83 309        P      11 05 26.1 -0.2
NIL   Nilore            58.83 309  P     P      11 05 26.1 -0.2
NIL                                pmax  pmax
      comp=Z,57nm,1.4s
UZB   Uzynbulak         58.96 321 eP     P      11 05 25.9 -1.3
UZB   Uzynbulak         58.96 321 eP     P      11 05 25.8 -1.3
MK31  Makanchi Array    59.06 326ceP     P      11 05 27.0 -0.6
MKAR  Makanchi Array    59.06 326  P     P      11 05 26.9 -0.7
      comp=Z,19nm,0.8s,baz=122,slow=8.3,SNR=18
MKAR                               LR    LR     11 32 09.0
      comp=Z,1μm,20.2s,baz=118,slow=37
      comp=Z,19nm,0.8s
MKAR  Makanchi Array    59.06 326  P     P      11 05 26.6 -1.1
MAKZ  Makanchi          59.24 326  P     P      11 05 27.6 -1.2
MAKZ                               IAmb  IAmb   11 05 33.6
      comp=Z,32nm,0.9s
MAKZ  Makanchi          59.24 326  P     P      11 05 27.7 -1.2
MAKZ                               pmax  pmax
      comp=Z,32nm,0.9s
SATY  Saty              59.30 321 eP     P      11 05 28.4 -1.1
      comp=Z,28nm,0.9s
SATY  Saty              59.30 321 eP     P      11 05 28.4 -1.1
SATY                               pmax  pmax
      comp=Z,28nm,0.9s
MDOK  Medeo             60.22 320 eP     P      11 05 34.2 -1.6
MDOK  Medeo             60.22 320 eP     P      11 05 34.2 -1.6
TNSS  Tian-Shan         60.22 320 eP     P      11 05 34.2 -1.9
TNSS  Tian-Shan         60.22 320 eP     P      11 05 34.2 -1.9
RPZ   Rata Peaks        60.30 144  LR    LR     11 33 16.1
      comp=Z,1μm,20.8s,baz=308,slow=38
TDK   Taldyqorghan      60.31 323 eP     P      11 05 35.2 -1.0
      comp=Z,22nm,0.8s
TDK   Taldyqorghan      60.31 323 eP     P      11 05 35.2 -1.0
TDK                                pmax  pmax
      comp=Z,22nm,0.8s
AAA   Alma-Ata          60.32 320 eP     P      11 05 35.2 -1.3
      comp=Z,21nm,0.8s
AAA   Alma-Ata          60.32 320 eP     P      11 05 35.1 -1.3
AAA                                pmax  pmax
      comp=Z,21nm,0.8s
YAK   Yakutsk           60.47   2  LR    LR     11 32 28.7
      comp=Z,409nm,21.6s,baz=188,slow=37
YAK   Yakutsk           60.47   2 eP     P      11 05 35.9 -1.0
YAK                               e             11 06 20.0
YAK                               e             11 07 50.1
YAK                               ePPP   PPP    11 09 13.8
YAK                               eS     S      11 13 47.0 -2.7
YAK                               e*SS   sS     11 14 17.1 +11
YAK                               e             11 15 20.3
YAK                               eSS    SS     11 17 44.9 -3.2
YAK                                pmax  pmax
      comp=Z,55nm,0.9s
YAK                                pmax  pmax
      comp=N,15nm,1.0s
YAK                                pmax  pmax
      comp=E,16nm,1.7s
YAK                                pmax  pmax
      comp=Z,388nm,4.2s
YAK                                pmax  pmax
      comp=N,243nm,3.1s
YAK                                pmax  pmax
      comp=E,295nm,3.5s
YAK                                smax  smax
      comp=N,333nm,4.4s
YAK                                smax  smax
      comp=E,178nm,2.3s
TUWZ  Tuamarina         60.81 140  P     P      11 05 38.3 -1.3
URZ   Urewera           61.35 136  LR    LR     11 33 19.4
      comp=E,605nm,19.2s,baz=302,slow=37
BKZ   Black Stump Fm    61.35 137        P      11 05 42.5 -1.0
BKZ                                IAmb  IAmb   11 05 53.1
      comp=Z,22nm,0.8s
MANEM Manem             61.46 313  IAmb  IAmb   11 05 53.6
      comp=Z,54nm,0.9s
AAK   Ala-Archa         61.62 319  LR    LR     11 34 31.6
      comp=Z,651nm,21.3s,baz=112,slow=38
SGDS  Sogindy           61.90 320 eP     P      11 05 45.7 -1.5
ZALV  Zalesovo Beam     62.31 334  P     P      11 05 48.0 -1.6
      comp=Z,2.1nm,0.5s,baz=115,slow=6.4,SNR=9.5
ZALV                               LR    LR     11 33 44.0
      comp=Z,400nm,20.6s,baz=130,slow=37
      comp=Z,2.1nm,0.5s
ZALV  Zalesovo Beam     62.31 334        P      11 05 47.5 -2.0
ZALV  Zalesovo Beam     62.31 334  P     P      11 05 48.0 -1.6
KBL   Kabul             62.41 309        P      11 05 49.8 -1.1
KBL                                IAmb  IAmb   11 05 55.6
      comp=Z,28nm,1.1s
KBL   Kabul             62.41 309  P     P      11 05 49.8 -1.1
KBL                                pmax  pmax
      comp=Z,28nm,1.2s
BTLS  Baital            63.01 321 eP     P      11 05 53.2 -1.2
BTLS  Baital            63.01 321 eP     P      11 05 53.2 -1.2
KURBB Kurchatov Arra    63.30 328  P     P      11 05 54.6 -1.6
      comp=Z,33nm,0.8s,baz=127,slow=6.2,SNR=24
KURBB                              LR    LR     11 35 22.2
      comp=Z,338nm,20.2s,baz=156,slow=38
      comp=Z,33nm,0.8s
KURK  Kurchatov         63.31 328        P      11 05 55.0 -1.3
KURK  Kurchatov         63.31 328ceP     P      11 05 55.5 -0.8
KURK                               pmax  pmax
      comp=Z,46nm,0.7s
SEY   Seymchan          64.36  13  LR    LR     11 33 40.6
      comp=Z,175nm,21.3s,baz=212,slow=36
SEY   Seymchan          64.36  13ceP     P      11 06 01.4 -1.6
SEY                                pmax  pmax
      comp=Z,29nm,1.7s
IUG   Iuzhnay           64.41 317 eP     P      11 06 02.5 -1.3
      comp=Z,37nm,1.1s
IUG   Iuzhnay           64.41 317 eP     P      11 06 02.5 -1.3
IUG                                pmax  pmax
      comp=Z,37nm,1.1s
KK31  Karatay Array     64.46 318  P     P      11 06 02.8 -1.3
KK31                               IAmb  IAmb   11 06 09.1
      comp=Z,15nm,0.8s
KK31  Karatay Array     64.46 318  P     P      11 06 02.8 -1.3
KK31                               pmax  pmax
      comp=Z,15nm,0.9s
KKAR  Karatay Array     64.46 318  P     P      11 06 02.3 -1.8
KKAR  Karatay Array     64.46 318  P     P      11 06 02.3 -1.8
CHM   Chimkent          64.76 317 eP     P      11 06 04.7 -1.4
CHM   Chimkent          64.76 317 eP     P      11 06 04.7 -1.4
BRLS  Borolday          64.89 318 eP     P      11 06 05.4 -1.4
BRLS  Borolday          64.89 318 eP     P      11 06 05.4 -1.4
BRZS  Berezniki         66.17 325 eP     P      11 06 14.2 -0.9
BRZS  Berezniki         66.17 325 eP     P      11 06 14.1 -0.9
CASY  Casey             68.51 187  P     P      11 06 30.0 +0.5
CASY                               IAmb  IAmb   11 07 07.9
      comp=Z,13nm,0.9s
BVAR  Borovoye Array    68.87 328  P     P      11 06 31.1 -0.8
      comp=Z,14nm,0.8s,baz=133,slow=8.7,SNR=18
BVAR                               LR    LR     11 38 02.4
      comp=Z,562nm,21.4s,baz=125,slow=37
      comp=Z,14nm,0.8s
BORK  Borovoye          68.92 328        P      11 06 31.4 -0.8
BORK                               IAmb  IAmb   11 06 35.9
      comp=Z,18nm,0.7s
BORK  Borovoye          68.92 328ceP     P      11 06 31.6 -0.7
BORK                               pmax  pmax
      comp=Z,22nm,0.8s
TIXI  Tiksi             70.10   1        P      11 06 38.8 -0.4
TIXI                               IAmb  IAmb   11 06 48.3
      comp=Z,32nm,1.1s
TIXI  Tiksi             70.10   1ceP     P      11 06 39.9 +0.8
TIXI                               pmax  pmax
      comp=Z,34nm,1.3s
NRIK  Noril'sk          72.46 347  P     P      11 06 54.3 +0.8
      comp=Z,16nm,0.7s,baz=139,slow=6.0,SNR=13
      comp=Z,16nm,0.7s
ABKAR Akbulak array     73.50 321        P      11 06 58.8 -1.3
SVE   Sverdlovsk        75.55 329 eP     P      11 07 11.5 -0.3
SVE                                pmax  pmax
      comp=Z,38nm,1.0s
RAR   Rarotonga         75.76 112  LR    LR     11 38 37.5
      comp=Z,238nm,21.0s,baz=272,slow=34
ARTI  Arti              76.58 328        P      11 07 15.6 -2.1
ARTI                               IAmb  IAmb   11 07 21.4
      comp=Z,26nm,1.0s
ARTI  Arti              76.58 328c iP    P      11 07 15.9 -1.8
ARTI                               S     S      11 16 59.7 -1.7
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ARTI                               SS    SS     11 21 51.1 -5.9
ARTI                               pmax  pmax
      comp=Z,21nm,1.1s
L14K  Kuka Creek        79.78  28  IAmb  IAmb   11 07 41.0
      comp=Z,78nm,1.8s
OPO   Ambohidratompo    79.96 251  LR    LR     11 38 00.1
      comp=Z,120nm,21.6s,baz=226,slow=32
ABPO  Ambohimpanom      79.96 251        P      11 07 36.9 -0.5
ABPO  Ambohimpanom      79.96 251  P     P      11 07 36.9 -0.5
ABPO                               pmax  pmax
      comp=Z,14nm,0.9s
AKT   Akhty             80.31 312 eP     P      11 07 37.9 -0.9
AKT                               e             11 07 44.6
AKT                                pmax  pmax
      comp=Z,29nm,1.4s
VOI   Vohitsoka         80.63 248        P      11 07 40.2 -0.6
VOI                                IAmb  IAmb   11 07 41.4
      comp=Z,27nm,0.9s
RAYN  Ar Rayn           80.79 293        P      11 07 40.4 -1.2
RAYN  Ar Rayn           80.79 293  P     P      11 07 40.4 -1.2
RAYN                               pmax  pmax
      comp=Z,7.0nm,0.8s
VNDA  Vanda             81.28 173  P     P      11 07 43.5 +0.4
      comp=Z,9.0nm,0.7s,baz=315,slow=7.0,SNR=20
      comp=Z,9.0nm,0.7s
VNDA  Vanda             81.28 173  P     P      11 07 43.0  0.0
L16K  Owhat River       81.36  28        P      11 07 43.7  0.0
L16K                               IAmb  IAmb   11 07 54.3
      comp=Z,37nm,1.6s
MAW   Mawson            81.43 200  P     P      11 07 44.5 +0.6
      comp=Z,10.0nm,0.9s,baz=92,slow=4.5,SNR=9.9
MAW                                LR    LR     11 43 41.7
      comp=Z,206nm,18.8s,baz=68,slow=36
      comp=Z,10.0nm,0.9s
BELG  Belogornoye       81.81 323 i P    P      11 07 45.0 -1.3
BELG                               pmax  pmax
      comp=Z,13nm,0.9s
KIRV  Kirov             81.82 329ceP     P      11 07 46.1 -0.1
J17K  VABM Dome         81.92  26  IAmb  IAmb   11 08 19.4
      comp=Z,36nm,1.3s
H17K  Granite Mounta    81.92  24  IAmb  IAmb   11 08 03.0
      comp=Z,55nm,1.6s
K17K  Iditarod          82.11  27  IAmb  IAmb   11 07 55.1
      comp=Z,37nm,1.1s
E18K  Tukpahlearik C    82.27  22  IAmb  IAmb   11 08 20.2
      comp=Z,25nm,1.1s
GNI   Garni             82.44 310  LR    LR     11 46 30.7
      comp=Z,124nm,21.9s,baz=88,slow=37
GNI   Garni             82.44 310 i P    P      11 07 48.3 -1.9
GNI                                pmax  pmax
      comp=Z,39nm,1.4s
H18K  Honhosa River     82.61  24  IAmb  IAmb   11 08 22.3
      comp=Z,35nm,1.4s
G18K  Tagagawik         82.66  24  IAmb  IAmb   11 08 22.3
      comp=Z,39nm,1.5s
L18K  Granite Mounta    82.75  27  IAmb  IAmb   11 07 57.7
      comp=Z,20nm,1.0s
J18K  Innoko River      82.97  26  IAmb  IAmb   11 08 23.5
      comp=Z,17nm,0.9s
ATD   Arta Tunnel       83.10 281  LR    LR     11 43 57.3
      comp=Z,9.2nm,20.8s,baz=86,slow=35
F19K  Shaleruckik Mo    83.21  23  IAmb  IAmb   11 08 25.8
      comp=Z,18nm,1.2s
D19K  Kuna River        83.44  21  IAmb  IAmb   11 08 25.3
      comp=Z,34nm,1.0s
H19K  Roundabout Mou    83.47  24  IAmb  IAmb   11 08 25.8
      comp=Z,35nm,1.0s
J19K  Poorman           83.55  26  IAmb  IAmb   11 08 27.4
      comp=Z,21nm,1.0s
L19K  White Mountain    83.59  28  IAmb  IAmb   11 08 22.3
      comp=Z,38nm,1.4s
GOF   Gofitskoye        84.05 315ceP     P      11 07 57.8 -0.3
KBZ   Khabaz            84.07 314  P     P      11 07 57.3 -0.9
      comp=Z,6.6nm,1.0s,baz=174,slow=7.3,SNR=4.9
KBZ                                LR    LR     11 48 55.4
      comp=Z,196nm,21.9s,baz=64,slow=38
      comp=Z,6.6nm,1.0s
KBZ   Khabaz            84.07 314ceP     P      11 07 57.1 -1.1
KBZ                                pmax  pmax
      comp=Z,17nm,1.1s
KIV   Kislovodsk        84.24 314 eP     P      11 07 56.8 -2.4
KIV                                pmax  pmax
      comp=Z,13nm,1.1s
KIV                                MLR   MLR
      comp=Z,183nm,20.0s
SHA1  Shidzhatmaz       84.24 314 i P    P      11 07 58.3 -1.1
M20K  Styx River        84.35  28  IAmb  IAmb   11 08 35.5
      comp=Z,21nm,1.1s
IMAR  Indian Mountai    84.65  24  P     P      11 08 01.9 +1.2
B21K  Ikpikpuk River    84.90  20  IAmb  IAmb   11 08 23.4
      comp=Z,22nm,0.8s
PPT2  Papeete2          85.03 108 eP     P      11 08 04.2 +0.5
      comp=Z,405nm,35.5s
PPT2  Papeete2          85.03 108 eS     SKSac  11 18 30.0 +3.6
      comp=Z,461nm,27.5s
PPT2                              eSS    SS     11 24 00.0 -5.0
      comp=Z,586nm,29.0s
PPT2                              eLQ    LQ     11 31 14.6
      comp=Z,485nm,31.0s
PPT2                              eLR    LR     11 34 44.8
      comp=Z,388nm,25.2s
PPT2                              eLR    LR     11 34 51.7
      comp=Z,526nm,24.8s
VRH   Novokhopyorsk     85.33 321 eP     P      11 08 03.0 -1.4
VRH                                pmax  pmax
      comp=Z,101nm,1.1s
TBI   Tubuai            85.47 113 eLR    LR     11 35 11.6
      comp=Z,3μm,38.2s
VSLR  Vesyoloye         86.14 313 i P    P      11 08 08.0 -0.6
VSLR                               pmax  pmax
      comp=Z,164nm,1.3s
C23K  Itkillik River    86.31  20  IAmb  IAmb   11 08 28.3
      comp=Z,15nm,0.8s
SOC   Sochi             86.37 313 eP     P      11 08 07.3 -2.5
SOC                               e             11 11 26.3
SOC                               eS     SKSac  11 18 28.5 -5.2
SOC                               eSSS   SSS    11 27 49.8
SOC                                pmax  pmax
      comp=Z,27nm,0.9s
I23K  Minto, Yukon-K    86.37  25  IAmb  IAmb   11 08 39.6
      comp=Z,19nm,1.3s
E23K  Chandalar         86.50  22  IAmb  IAmb   11 08 41.4
      comp=Z,14nm,0.9s
VORD  Divnogorie        86.85 321 eP     P      11 08 09.9 -2.0
VORD                               pmax  pmax
      comp=Z,70nm,1.0s
VORR  Voronezh          86.92 321 eP     P      11 08 11.6 -0.7
VORR                               pmax  pmax
      comp=Z,204nm,1.0s
VSR   Storozhevoye      86.94 321 eP     P      11 08 09.5 -2.8
VSR                                pmax  pmax
      comp=Z,50nm,1.0s
KLMR  Klimovskoe        87.05 331 eP     P      11 08 09.6 -3.1
KLMR                               pmax  pmax
      comp=Z,94nm,1.4s
LPSR  Galich'ya Gora    87.12 322 eP     P      11 08 12.4 -0.8
LPSR                               pmax  pmax
      comp=Z,109nm,0.9s
ILAR  Eielson Array     87.40  25  P     P      11 08 13.8 -0.5
      comp=Z,1.2nm,0.8s,baz=238,slow=5.2,SNR=11
      comp=Z,1.2nm,0.8s
ILAR  Eielson Array     87.40  25  P     P      11 08 14.1 -0.2
ILAR  Eielson Array     87.40  25  P     P      11 08 14.1 -0.2
MOS   Moscow            87.93 326 eP     P      11 08 13.6 -3.4
MOS                               eS     S      11 18 53.7 -4.0
KIBK  Kibwezi           88.12 268        P      11 08 19.0  0.0
OBN   Obninsk           88.54 325d iP    P      11 08 19.9  0.0
OBN                               i             11 08 21.4
OBN                                S     SKSac  11 18 47.0 +0.7
OBN                               i *SS  ScS    11 19 11.4 +2.4
OBN                               e             11 20 12.7
OBN                               eSS    SS     11 24 48.3 -6.0
OBN                                pmax  pmax
      comp=Z,136nm,2.5s
OBN                                MLR   MLR
      comp=Z,454nm,21.0s
OBN   Obninsk           88.54 325  P     P      11 08 18.8 -1.1
      comp=Z,45nm,0.7s
ASF   Jabal al Asfar    88.55 302  LR    LR     11 52 35.5
      comp=Z,395nm,20.6s,baz=113,slow=39
C27K  Jago River        88.70  21  IAmb  IAmb   11 08 45.1
      comp=Z,15nm,1.2s
BNN   Bunyan            89.29 309  IAmb  IAmb   11 08 24.5
      comp=Z,13nm,1.0s
K27K  Chicken           89.49  26  IAmb  IAmb   11 08 30.2
      comp=Z,14nm,1.1s
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E27K  Coleen River      89.51  22  IAmb  IAmb   11 08 54.8
      comp=Z,32nm,1.9s
BCAR  Beaver Creek A    89.66  27  P     P      11 08 26.0 +0.9
APA   Apatity           89.69 337⇓eP     P      11 08 22.3 -2.7
APA                                MLR   MLR
      comp=Z,1μm,25.3s
GHAJ  Ghor Haditha      89.70 301  IAmb  IAmb   11 08 26.9
      comp=Z,36nm,0.8s
MMAI  Mount Meron Ar    89.79 303  P     P      11 08 26.4  0.0
      comp=Z,6.6nm,0.5s,baz=96,slow=3.4,SNR=16
      comp=Z,6.6nm,0.5s
SYO   Syowa Base        90.11 201⇑eP     P      11 08 28.4 +1.5
SYO   Syowa Base        90.11 201⇓ePcP   PcP    11 08 30.4 +2.3
EIL   Elat              90.28 300  LR    LR     11 52 50.9
      comp=Z,710nm,21.0s,baz=112,slow=38
SIM   Simferopol'       90.38 315 eP     P      11 08 28.1 -0.7
SIM                               eS     S      11 19 18.8 -2.4
SIM                                pmax  pmax
      comp=Z,23nm,0.8s
SIM                                smax  smax
      comp=E,185nm,22.4s
SIM                                MLR   MLR
      comp=Z,211nm,21.5s
BR104 Keskin Array S    90.97 310  P     P      11 08 29.9 -1.9
      comp=Z,5.9nm,0.9s
BR131 Keskin Array S    90.97 310 i P    P      11 08 29.9 -2.0
BRTR  Keskin Array B    90.97 310  P     P      11 08 30.6 -1.2
      comp=Z,5.0nm,1.0s,baz=123,slow=4.6,SNR=12
BRTR                               LR    LR     11 54 39.5
      comp=Z,202nm,21.4s,baz=74,slow=39
      comp=Z,5.0nm,1.0s
BR106 Keskin Array S    90.98 310  P     P      11 08 30.2 -1.7
      comp=Z,6.3nm,0.9s
BR105 Keskin Array S    90.98 310  P     P      11 08 30.2 -1.7
      comp=Z,7.7nm,1.0s
QSPA  South Pole Qui    91.39 180  P     P      11 08 33.5 +0.3
      comp=Z,1.8nm,0.6s,baz=296,slow=2.7,SNR=5.4
QSPA                               LR    LR     11 48 13.2
      comp=Z,395nm,21.2s,baz=355,slow=35
      comp=Z,1.8nm,0.6s
CSS   Mathiatis         91.44 305  P     P      11 08 32.4 -1.6
      comp=Z,43nm,0.9s
ARCES ARCESS Array B    92.34 340  P     P      11 08 37.6 +0.2
      comp=Z,6.3nm,0.9s,baz=52,slow=4.8,SNR=4.8
      comp=Z,6.3nm,0.9s
NE56  Odesa             92.52 317  P     P      11 08 36.8 -1.8
SPITS Spitsbergen Ar    92.56 349  P     P      11 08 39.8 +1.6
      comp=Z,3.2nm,0.6s,baz=102,slow=7.9,SNR=4.1
SPITS                              LR    LR     11 57 28.2
      comp=Z,250nm,18.6s,baz=62,slow=40
      comp=Z,3.2nm,0.6s
AK09  Malin Array Si    93.21 321  P     P      11 08 40.0 -1.7
AK08  Malin Array Si    93.22 321  P     P      11 08 39.9 -1.9
AK10  Malin Array Si    93.23 321  P     P      11 08 40.1 -1.8
AK03  Malin Array Si    93.23 321  P     P      11 08 40.1 -1.8
AKASG Malin Array Be    93.23 321  P     P      11 08 40.7 -1.2
      comp=Z,6.3nm,0.9s,baz=73,slow=4.1,SNR=14
      comp=Z,6.3nm,0.9s
AKASG Malin Array Be    93.23 321  P     P      11 08 40.5 -1.4
AKASG                              IAmb  IAmb   11 08 41.7
      comp=Z,20nm,1.4s
AKASG Malin Array Be    93.23 321c iP    P      11 08 40.7 -1.2
AKASG                              pmax  pmax
      comp=Z,4.0nm,0.8s
AKBB  Malin Array Si    93.23 321  IAmb  IAmb   11 08 41.4
      comp=Z,14nm,1.1s
AKBB  Malin Array Si    93.23 321ceP     P      11 08 39.8 -2.1
AKBB                               pmax  pmax
      comp=Z,17nm,1.1s
AKBB  Malin Array Si    93.23 321  P     P      11 08 40.3 -1.6
KIEV  Kiev              93.25 321        P      11 08 40.9 -1.0
KIEV                               IAmb  IAmb   11 08 41.4
      comp=Z,14nm,1.1s
KIEV  Kiev              93.25 321  P     P      11 08 40.9 -1.0
KIEV                               pmax  pmax
      comp=Z,14nm,1.1s
KIEV  Kiev              93.25 321  P     P      11 08 40.2 -1.7
      comp=Z,60nm,2.8s
AK05  Malin Array Si    93.26 321  P     P      11 08 40.4 -1.6
AK07  Malin Array Si    93.26 321  P     P      11 08 40.6 -1.4
FIA1  FINESS Array S    93.51 332  P     P      11 08 42.9  0.0
FINES FINESS Array B    93.51 332  P     P      11 08 43.4 +0.5
      comp=Z,2.6nm,0.6s,baz=46,slow=5.5,SNR=8.0
FINES                              LR    LR     11 54 22.2
      comp=Z,370nm,20.6s,baz=82,slow=38
      comp=Z,2.6nm,0.6s
FINES FINESS Array B    93.51 332  P     P      11 08 43.6 +0.7
TAOE  Nuku Hiva Isla    93.93  99 eLR    LR     11 39 06.3
      comp=Z,610nm,23.0s
LUBAR Lubar, Ukraine    94.26 320  P     P      11 08 45.1 -1.5
RNPP5 Staryi Chortor    95.26 322  P     P      11 08 49.8 -1.4
KMPD  K-Podol'skiy      95.29 319  P     P      11 08 49.7 -1.6
KMPD                               P     PcP    11 08 49.9 -1.7
MBAR  Mbarara           95.38 270  LR    LR     11 49 24.4
      comp=Z,360nm,21.4s,baz=74,slow=34
TESR  Tescani           95.45 317  P     P      11 08 50.5 -1.7
DLBC  Dease Lake        95.99  31  LR    LR     11 45 56.6
      comp=Z,474nm,21.3s,baz=274,slow=32
MLR   Muntele Rosu      96.08 316  IAmb  IAmb   11 08 57.3
      comp=Z,22nm,1.3s
BURAR Bucovina Array    96.25 318  P     P      11 08 54.2 -1.7
BUR08 Bucovina Ar. S    96.26 318  P     P      11 08 54.1 -1.9
BUR08                              IAmb  IAmb   11 09 03.3
      comp=Z,26nm,1.0s
LSZ   Lusaka            98.02 255  LR    LR     11 49 28.2
      comp=Z,900nm,21.9s,baz=110,slow=33
IDI   Anoyia            98.30 306  LR    LR     12 02 56.2
      comp=Z,65nm,18.8s,baz=86,slow=41
NVL   N'lazarevskaya    99.22 198 eP     Pdif   11 09 10.9 +2.3
NVL                               e             11 13 11.3
NVL                               ePPP   PPP    11 15 19.4
NVL                               eS     SKSac  11 19 45.8 +1.8
NVL                               eSS    SS     11 27 30.4 +4.5
NVL                               eSSS   SSS    11 31 19.6
NVL                                pmax  pmax
      comp=Z,8.0nm,0.7s
NVL                                MLR   MLR
      comp=Z,722nm,23.0s
LBTB  Lobatse          100.14 245  LR    LR     11 51 37.4
      comp=Z,552nm,18.8s,baz=102,slow=34
BOSA  Boshof           100.22 241  LR    LR     11 51 07.7
      comp=Z,532nm,19.8s,baz=109,slow=33
YKA   Yellowknife Ar   101.80  24  P     Pdif   11 09 21.4 +1.2
      comp=Z,0.3nm,0.6s,baz=289,slow=4.2,SNR=2.4
GERES GERESS Array B   103.44 321  Pdiff Pdif   11 09 28.1  0.0
      comp=Z,0.2nm,0.3s,baz=350,slow=6.8,SNR=4.2
TORD  Torodi Ar. Bea   122.99 287  PKP   PKiKP  11 14 27.2 +2.3
      comp=Z,28nm,0.3s,baz=72,slow=4.8,SNR=60
TXAR  Lajitas Array    123.46  53  PKP   PKPdf  11 14 26.4 +1.0
      comp=Z,1.2nm,0.8s,baz=243,slow=1.6,SNR=8.2
DBIC  Dimbokro         130.39 280  PKP   PKPdf  11 14 39.6 +0.7
      comp=Z,2.4nm,0.6s,baz=153,slow=2.5,SNR=3.7
PLCA  Paso Flores      138.11 161  PKP   PKPdf  11 14 54.5 +1.7
      comp=Z,2.3nm,0.9s,baz=262,slow=2.2,SNR=3.8
ACCO  Cerro Coronel    147.67 155 eP     PKPbc  11 15 14.2 +1.2
CO01  Juntas del Tor   147.74 153        PKPbc  11 15 14.4 +1.4
AROD  Rodeo            147.85 154 eP     PKPbc  11 15 15.2 +1.7
AVFE  Valle Fertil     148.25 157 eP     PKPbc  11 15 14.9 +0.7
LCO   Las Campanas     148.27 151        PKPbc  11 15 16.1 +1.6
LCO   Las Campanas     148.27 151  PKP2  PKPbc  11 15 16.1 +1.6
AC05  El Transito      148.62 152        PKPbc  11 15 16.7 +1.4
APLL  PUNTA DE LOS L148.84 159 eP     PKPdf  11 15 15.3 +3.6
CHIV  Chivirico        149.31  45        PKPbc  11 15 18.1 +1.1
ACLC  CERRO LA CRUZ149.55 157 eP      PKPbc  11 15 18.2 +0.5
VCA   Vinchina         149.64 155 eP     PKPbc  11 15 19.8 +1.9
PLTB  Pedras Altas     149.87 181        PKiKP  11 15 22.6 +3.5
TINO  Tinogasta        150.50 155 eP     PKPbc  11 15 21.2 +1.3
FSA   Cafayete         152.88 156 eP     PKPbc  11 15 26.9 +1.5
CPUP  Villa Florida    155.06 173  PKP   PKPdf  11 15 22.8 +1.7
      comp=Z,0.5nm,0.8s,baz=357,slow=0.9,SNR=1.3
LPAZ  La Paz           159.67 137  PKP   PKPdf  11 15 29.9 +1.9
      comp=Z,0.8nm,0.5s,baz=38,slow=4.6,SNR=3.9
LPAZ                               PKPab PKPab  11 16 07.3 +1.0
      comp=Z,4.1nm,0.8s,baz=222,slow=2.4,SNR=6.1
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*JMA **03** 10:57:30.6±0.2, 23°.9N±0°.7×125°.4E±0°.6, h57km, MV3.1/12,*
NEAR MIYAKOJIMA ISLAND

ISC 03 10:57:27.9±2.6**, 23°.8N**±0°.1×**125°.39E**±0°.10**, h13**km±12km**,**
n18, σ**0s.74**/25**, Southwestern Ryukyu Islands**

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Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                    Op    ISC     h  m  s     ISC
JMJ2  Miyako jima3       0.93 357  P     Pn     10 57 47.3 +0.6
JMJ2                              eS     Sn     10 57 59.1 -0.8
JOGS  Gusukube           0.95   1 eP     Pn     10 57 47.5 +0.6
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JOGS				eS	Sn	10 58 00.4	+0.1
JMJ	Miyako jima 2	1.01	355	P	Pg	10 57 47.0	-0.4
JIRB	Irabujima	1.03	349	P	Pn	10 57 48.6	+0.5
JIRB				eS	Sn	10 58 02.1	-0.4
JTJ	Tarama	1.04	323	eP	Pn	10 57 48.9	+0.7
JTJ				eS	Sn	10 58 02.7	+0.2
JIKM	Ikemajima	1.12	353	eP	Pn	10 57 49.9	+0.6
JISG	Ishigakijimahi	1.25	308	P	Pg	10 57 52.1	0.0
JIJ	Ishigaki jima	1.27	296	eP	Pg	10 57 52.2	0.0
JIJ				eS	Sn	10 58 08.1	0.0
JKRS	Kuro-shima	1.33	289	eP	Pg	10 57 53.5	0.0
JKRS				eS	Sb	10 58 09.3	-0.4
HATJ	Hateruma jima	1.47	280	eS	Sn	10 58 12.7	-0.5
IRIF	Iriomote-Funau	1.60	289	eP	Pb	10 57 57.2	-0.2
IRIF				eS	Sb	10 58 17.0	-0.5
JYNG	Yonagunijimaku	2.32	287	eS	Sn	10 58 33.4	-0.9
NACB	Ninganchiao	3.49	277	P	Pn	10 58 22.3	+0.4
YHNB	Yeheng	3.76	284	P	Pn	10 58 27.6	+1.9
YULB	Yu-li	3.77	265	P	Pn	10 58 25.7	-0.1
SSLB	Suanglung	4.06	271	P	Pn	10 58 31.0	+1.2
TWGBT	Beinan	4.08	257	P	Pn	10 58 29.7	-0.3
TPUB	Ta-pu	4.39	264	P	Pn	10 58 35.8	+1.4

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*NEIC **03** 11:02:02.7±0.5, 35°.77N±0°.06×140°.19E±0°.10, h75^{km}±9^{km}, mb4.4/10, Error ellipse: s-maj=12.1km s-min=8.7km az=106.0*

*JMA **03** 11:02:03.7±0.2, 35°.7N±0°.6×140°.0E±0°.9, h78^{km}±2^{km}, MD3.8/37, MV3.8/37, CENTRAL CHIBA PREF*

JMA Felt II J1 at CENTRAL CHIBA PREF .

*NIED **03** 11:02:03.7, 35°.73N×139°.97E, h78^{km}, MW3.9, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}2.69; $M_{\theta\theta}$2.16; $M_{\phi\phi}$-4.85; $M_{r\theta}$-1.75; $M_{\theta\phi}$-3.03; $M_{\phi r}$-5.93; Fault plane solution: $M_0$7.57000×10^{14} NP1:ϕ_s37.00000°, δ19.00000°, λ112.00000°. NP2:ϕ_s194.00000°, δ73.00000°, λ83.00000°.*

*IDC **03** 11:02:03.4±1.8, 35°.67N×140°.03E, h84^{km}±14^{km}, mb3.7/14, mbtmp4.0/17, MS4.0/1 Error ellipse: s-maj=27.3km s-min=6.9km az=66.0*

ISC 03 11:02:03.8±0.8, **35°.71N**±0°.04×**139°.98E**±0°.05, **h86**^{km}±6^{km}, **n68**, σ**0^{s}.79**/63, **mb4.2**/19, **2D**, **Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOK	Tokyo	0.18	264	P	Pn	11 02 16.1	-0.1
TOK	Tokyo	0.18	264	A	A	11 02 16.1	
	comp=N,21nm,0.4s,comp=E,20nm,1.1s						
JCCN	Chibachonan	0.38	147	P	Pn	11 02 17.4	+0.2
JCCN				S	Sn	11 02 28.6	+1.4
JCCN	Chibachonan	0.38	147	A	A	11 02 17.4	
	comp=N,41nm,0.3s,comp=E,40nm,0.3s						
JSMT	Sammumatsuo	0.38	100	⇓P	Pn	11 02 17.2	0.0
JYT	Yasato	0.55	18	A	A	11 02 17.6	
	comp=N,11nm,0.3s,comp=E,15nm,0.3s						
JYO	Yokosk	0.55	208	A	A	11 02 17.9	
	comp=N,13nm,0.7s,comp=E,18nm,0.6s						
JAG	Ashikaga	0.83	329	P	Pn	11 02 20.7	-0.7
JAG	Ashikaga	0.83	329	A	A	11 02 20.7	
	comp=N,4.0nm,1.5s,comp=E,3.0nm,0.6s						
JOD2	Odawara 2	0.85	239	P	Pn	11 02 20.6	-1.0
JOD2				S	Sn	11 02 33.2	-1.7
JOD2	Odawara 2	0.85	239	A	A	11 02 20.6	
	comp=N,9.0nm,0.2s,comp=E,8.0nm,0.4s						
JRY	Ryogami san	0.93	290	P	Pn	11 02 22.4	-0.1
BSO3	Boso 3	1.00	154	⇓P	Pn	11 02 22.4	-0.6
JIM2	Oshima 3	1.09	205	P	Pn	11 02 22.9	-1.4
JHTM	Izuhatsuma	1.09	227	A	A	11 02 24.1	
	comp=N,9.0nm,0.3s,comp=E,10.0nm,0.4s						
JKT	Katashina	1.21	331	P	Pn	11 02 25.3	-0.6
JKT				S	Sn	11 02 42.0	-0.5
BSO1	Boso 1	1.33	142	P	Pn	11 02 25.9	-0.8
JIZS	Izushimoda	1.34	223	eP	Pn	11 02 26.6	-0.7
JIZS				eS	Sn	11 02 44.2	-0.8
MJAR	Matsushiro Arr	1.66	301	P	Pn	11 02 31.5	+0.1
	comp=E,27nm,0.3s,baz=136,slow=11,SNR=198						
MJAR				S	Sn	11 02 52.3	-0.1
	comp=E,73nm,0.6s,baz=9.9,slow=30,SNR=5.4						
MJAR	Matsushiro Arr	1.66	301		Pn	11 02 31.2	-0.2
MJAR	Matsushiro Arr	1.66	301	P	P	11 02 31.5	-2.9
MAJO	Matsushiro	1.66	301		Pn	11 02 31.6	+0.2
MAJO	Matsushiro	1.66	301	P	P	11 02 31.6	-2.8
MJB9	Matsu-Tunnel	1.67	301		Pn	11 02 32.1	+0.6
JSG	Sagara	1.80	236		Pn	11 02 34.1	+0.9
JGF	Kuroka	2.14	268		Pn	11 02 38.7	+1.0
INU	Inuyama	2.44	262	Pn	Pn	11 02 42.3	+0.5
JHJ	Hachijo jima 2	2.59	184	P	Pn	11 02 43.7	0.0
	comp=E,150nm,0.3s,baz=328,slow=22,SNR=18						
JHJ				S	Sn	11 03 13.3	-1.0
	comp=E,331nm,0.3s,baz=225,slow=22,SNR=13						
JHJ2	Mitsune	2.59	183	Pn	Pn	11 02 43.7	-0.1
JSD	Sado	2.71	330		Pn	11 02 45.4	+0.2
JTM	Tenmabayashi	5.14	9	Pn	Pn	11 03 14.8	-3.4
JMN	Monobe	5.40	250	Pn	Pn	11 03 22.8	+1.0
JNU	Nakatsue	7.95	254	P	Pn	11 03 56.9	+0.3
	comp=E,3.9nm,0.4s,baz=42,slow=5.3,SNR=5.5						
JNU	Nakatsue	7.95	254		Pn	11 03 57.1	+0.5
KSRS	Korea Array	9.86	284	P	Pn	11 04 24.1	+1.7
	comp=E,4.6nm,0.7s,baz=98,slow=14,SNR=8.8						
JOW	Kunigami	13.35	232	LR	LR	11 08 41.1	
	comp=E,728nm,22.0s,baz=170,slow=30						
SONM	Songino Array	27.61	306	P	P	11 07 42.6	-0.4
	comp=E,1.2nm,0.7s,baz=112,slow=8.5,SNR=3.1						
	comp=E,1.2nm,0.7s						
H11N2	WAKE ISLAND Hy	28.52	117	T	T	11 37 39.6	
	baz=308,slow=75,SNR=8.8						
H11N1	WAKE ISLAND Hy	28.53	117	T	T	11 37 31.9	
	baz=308,slow=75,SNR=4.1						
H11N3	WAKE ISLAND Hy	28.54	117	T	T	11 37 43.4	
	baz=308,slow=75,SNR=3.1						
ZAA0	Zalesovo Array	41.97	313	P	P	11 09 46.3	+0.4
ZAA0				IAmb	IAmb	11 09 46.8	
	comp=Z,5.6nm,1.1s						
ZALV	Zalesovo Beam	41.97	313	P	P	11 09 46.3	+0.4
	comp=Z,2.5nm,0.3s,baz=106,slow=8.2,SNR=10.0						
	comp=Z,2.5nm,0.3s						
ZALV	Zalesovo Beam	41.97	313	P	P	11 09 46.6	+0.6
MK31	Makanchi Array	43.86	303	P	P	11 10 01.8	+0.4
MKAR	Makanchi Array	43.86	303	P	P	11 10 01.7	+0.4
	comp=Z,3.0nm,0.6s,baz=85,slow=9.3,SNR=9.7						
	comp=Z,3.0nm,0.6s						
MKAR	Makanchi Array	43.86	303	P	P	11 10 01.9	+0.5
MAKZ	Makanchi	44.07	303	P	P	11 10 03.7	+0.6
MAKZ				IAmb	IAmb	11 10 04.6	
	comp=Z,9.6nm,1.4s						
KURK	Kurchatov	45.85	309	P	P	11 10 17.3	+0.2
KURBB	Kurchatov Arra	45.92	309	P	P	11 10 17.7	+0.1
	comp=Z,2.7nm,0.5s,baz=82,slow=7.5,SNR=18						
	comp=Z,2.7nm,0.5s						
TARG	Taragay, Kyrgy	47.96	297	P	P	11 10 34.6	+0.5
TARG				IAmb	IAmb	11 10 36.3	
	comp=Z,4.8nm,0.9s						
BVAR	Borovoye Array	50.62	313	P	P	11 10 53.7	0.0
	comp=Z,0.4nm,0.3s,baz=107,slow=9.2,SNR=5.7						
	comp=Z,0.4nm,0.3s						
DOT	Dot Lake	52.55	33	P	P	11 11 07.8	-0.1
FITZ	Fitzroy Crossi	55.21	197	P	P	11 11 27.5	-0.3
	comp=Z,1.9nm,0.8s,baz=350,slow=6.1,SNR=2.1						
	comp=Z,1.9nm,0.8s						
WB2	Warramunga Arr	55.60	186	P	P	11 11 30.7	+0.1
WB2				IAmb	IAmb	11 11 38.0	
	comp=Z,5.3nm,1.3s						
WRA	Warramunga Arr	55.60	186	P	P	11 11 30.0	-0.6
	comp=Z,0.4nm,0.5s,baz=0.7,slow=7.6,SNR=8.6						
	comp=Z,0.4nm,0.5s						
WRA	Warramunga Arr	55.60	186	P	P	11 11 29.2	-1.4
AB31	Akbulak array	57.91	310	P	P	11 11 47.2	+0.5
AB31				IAmb	IAmb	11 11 48.4	
	comp=Z,5.6nm,1.5s						
ABKAR	Akbulak array	57.91	310	P	P	11 11 47.1	+0.4
ASAR	Alice Springs	59.33	186	P	P	11 11 57.6	+0.9
	comp=Z,0.6nm,0.9s,baz=336,slow=4.4,SNR=4.1						
	comp=Z,0.6nm,0.9s						
ARCES	ARCESS Array B	64.83	339	P	P	11 12 32.9	-0.1
	comp=Z,3.0nm,0.9s,baz=53,slow=6.6,SNR=7.4						
	comp=Z,3.0nm,0.9s						
FIA1	FINESS Array S	69.44	332	P	P	11 13 02.4	+0.1
FINES	FINESS Array B	69.44	332	P	P	11 13 02.3	+0.1
	comp=Z,1.3nm,0.4s,baz=76,slow=5.4,SNR=9.9						
	comp=Z,1.3nm,0.4s						
FINES	FINESS Array B	69.44	332	P	P	11 13 02.4	+0.2
AKASG	Malin Array Be	74.63	322	P	P	11 13 33.3	-0.1
	comp=Z,0.8nm,0.4s,baz=50,slow=6.1,SNR=4.3						
	comp=Z,0.8nm,0.4s						
NOA	NORSAR Array B	74.96	337	P	P	11 13 35.3	+0.1
	comp=Z,1.0nm,0.7s,baz=40,slow=5.9,SNR=3.7						
	comp=Z,1.0nm,0.7s						
NVAR	Mina Array Bea	76.71	52	P	P	11 13 45.8	-0.1
	comp=Z,0.3nm,0.6s,baz=312,slow=5.1,SNR=2.3						
	comp=Z,0.3nm,0.6s						
PDAR	Pinedale Array	79.42	45	P	P	11 14 01.0	+0.2
	comp=Z,0.2nm,0.5s,baz=310,slow=8.1,SNR=2.2						
	comp=Z,0.2nm,0.5s						
CLL	Collm	81.66	330	*i* P	P	11 14 12.3	0.0

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*IDC **03** 11:10:26.1±1.9, 2°.41S×125°.84E, h0^{km}, mb3.2/2, mbtmp3.2/3, ML3.4/1, Error ellipse: s-maj=167.5km s-min=27.9km az=64.0*

*DJA **03** 11:10:52.0±0.3, 1°N±4°×12°6E±°, h10^{km}, M4.0/10, mB5.5/1, mb4.4/2, MLv3.8/10, Mw(mB)5.0/1*

ISC 03 11:10:54.9±1.4, **1°.49N**±0°.07×**126°.10E**±0°.07, **h54**^{km}, **n9**, σ**2^{s}.00**/9, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNI	Manado	1.26	268	P	Pn	11 11 15.3	-0.9
TNTI	Ternate	1.46	119	P	Pn	11 11 17.1	-1.8
SGSI	Sangihe	2.26	345	P	Pn	11 11 30.2	+0.4
GTOI	Gorontalo	3.20	255	P	Pn	11 11 42.1	-0.6
SANI	Sanana	3.52	182	P	Pn	11 11 45.2	-1.9
LUWI	Luwuk	4.17	233	P	Pn	11 11 56.9	+0.9
KRAI	Karang Ratu	5.30	154	P	Pn	11 12 15.4	+3.9
	0.4nm5µm13nm,0.8s						
MSAI	Masohi	5.57	149	P	Pn	11 12 14.8	-0.5
MKAR	Makanchi Array	59.04	326	P	P	11 20 49.4	0.0
	0.2nm,0.4s,baz=112,slow=7.8,SNR=4.1						
	0.2nm,0.4s						

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*IDC **03** 11:15:57.5±2.0, 1°.51N×125°.66E, h0^{km}, mb3.5/3, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=122.7km s-min=26.6km az=67.0*

*DJA **03** 11:16:04.5±0.4, 2°N±6°×12°6E±°, h10^{km}, M3.5/5, MLv3.5/5*

ISC 03 11:16:02.6±1.5, **1°.7N**±0°.2×**126°.27E**±0°.10, **h35**^{km}, **n7**, σ**2^{s}.29**/7, **mb3.4**/3, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNI	Manado	1.46	258	P	Pn	11 16 27.3	+0.9
TNTI	Ternate	1.46	131	P	Pn	11 16 28.5	+2.0
GTOI	Gorontalo	3.44	251	P	Pn	11 16 56.1	+2.5
FITZ	Fitzroy Crossi	19.73	182	P	P	11 20 26.4	-2.9
	0.1nm,0.3s,baz=353,slow=8.9,SNR=1.8						
	1.3nm,0.7s						
WRA	Warramunga Arr	22.96	160	P	P	11 21 03.0	-1.1
	1.5nm,0.7s,baz=337,slow=10,SNR=12						
	1.5nm,0.7s						
ASAR	Alice Springs	26.33	164	P	P	11 21 35.2	-0.1
	0.4nm,0.4s,baz=347,slow=8.3,SNR=12						
	0.4nm,0.4s						
MKAR	Makanchi Array	58.92	326	P	P	11 25 57.8	-0.6
	0.1nm,0.4s,baz=134,slow=7.1,SNR=2.0						
	0.1nm,0.4s						

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*BJI **03** 11:24:16.7, 0°.10S×122°.74E, h94^{km}, mB5.5/10, mb5.0/64*

*MOS **03** 11:24:22.8±0.8, 0°.65N×122°.40E, h103^{km}, mb4.8/25, Error ellipse: s-maj=14.5km s-min=6.4km az=116.6*

*NEIC **03** 11:24:24.3±2.3, 0°.60N±0°.06×122°.27E±0°.05, h94^{km}±6^{km}, mb5.0/41, Error ellipse: s-maj=10.1km s-min=6.0km az=209.0*

*DJA **03** 11:24:24.4±0.1, 1°N±2°×12°2E±°, h85^{km}±3^{km}, M5.0/55, mb5.0/55, mB5.5/26, MLv5.2/30, Mw(mB)4.9/26*

*IDC **03** 11:24:26.2±1.3, 0°.50N×122°.44E, h122^{km}±11^{km}, mb4.2/23, mbtmp4.7/27, MS3.6/2, Error ellipse: s-maj=16.7km s-min=7.3km az=75.0*

ISC 03 11:24:23.9±0.4, **0°.55N**±0°.04×**122°.29E**±0°.04, **h98**^{km}±3^{km}, **h98**^{km}**:pP-P**, **n311**, σ**1^{s}.33**/327, **mb4.9**/79, **8C-2D**, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	Marisa	0.35	259	P	Pn	11 24 38.2	-0.2
MRSI				S	Sn	11 24 48.3	-1.0
GTOI	Gorontalo	0.73	83	P	Pn	11 24 41.1	-0.2
APSI	Ampana	1.58	204	P	Pn	11 24 51.8	+0.8
TOLI2	Tolitoli	1.60	290		Pn	11 24 50.7	-0.6
TOLI2				Sn	Sn	11 25 10.6	-1.6
TOLI2	Tolitoli	1.60	290	P	Pn	11 24 51.2	-0.1
LUWI	Luwuk	1.65	163		Pn	11 24 53.5	+1.6
LUWI	Luwuk	1.65	163	P	Pn	11 24 54.1	+2.2
LUWI	Luwuk	1.65	163	P	Pn	11 24 53.5	+1.6
MPSI	Mapaga	2.40	265	P	Pn	11 25 01.8	+0.2
MNI	Manado	2.71	71	P	Pn	11 25 05.3	-0.4
PCI	Palu	2.84	240	P	Pn	11 25 07.1	-0.4
TTSI	Tana Toraja	4.34	215	P	Pn	11 25 29.2	+1.6
KDI	Kendari	4.49	176	P	Pn	11 25 31.0	+1.3
SGSI	Sangihe	4.50	46	P	Pn	11 25 29.3	-0.5
SANI	Sanana	4.51	125	P	Pn	11 25 29.3	-0.7
SANI	Sanana	4.51	125	S	Sn	11 26 19.7	-1.6
SANI	Sanana	4.51	125	P	Pn	11 25 29.2	-0.7
MMSI	Mamuju	4.66	226	P	Pn	11 25 32.9	+0.9
KKSI	Kolaka, Sulawe	4.73	188	P	Pn	11 25 33.9	+0.9
SGKI	Sangatta, Kali	4.80	257	P	Pn	11 25 32.8	-1.1
TNTI	Ternate	5.09	87		Pn	11 25 38.6	+0.8
TNTI	Ternate	5.09	87	P	Pn	11 25 39.1	+1.3
TNTI	Ternate	5.09	87	S	Sn	11 26 34.9	-0.4
TNTI	Ternate	5.09	87	P	Pn	11 25 38.5	+0.7
	1µm82nm,0.7s						
SPSI	Sidrap Palu	5.14	209	P	Pn	11 25 39.9	+1.4
	0.8nm3µm278nm,0.9s						
PMSI	Majene	5.25	220	P	Pn	11 25 41.4	+1.4
	2.5nm6µm383nm,0.6s						
BNSI	Bone	5.37	204	P	Pn	11 25 43.4	+1.7
	1.0nm3µm274nm,0.8s						
TARAI	Tarakan	5.46	300	P	Pn	11 25 42.8	-0.1
	414nm,0.8s						
GAMI	Galela, Maluku	5.65	77	P	Pn	11 25 46.4	+1.0
BKB	Balikpapan	5.68	252		Pn	11 25 46.2	+0.4
BKB	Balikpapan	5.68	252	P	Pn	11 25 47.1	+1.3
BKB	Balikpapan	5.68	252	S	Sn	11 26 49.0	-0.8
BKB	Balikpapan	5.68	252	P	Pn	11 25 46.1	+0.3
MYLDM	Lahad Datu	5.96	321		Pn	11 25 50.1	+0.5
MYLDM	Lahad Datu	5.96	321	P	Pn	11 25 53.3	+3.7
MYLDM	Lahad Datu	5.96	321	P	Pn	11 25 49.9	+0.3
KAPI	Kappang	6.08	205	P	Pn	11 25 53.3	+2.1
	41nm,0.4s,baz=9.0,slow=7.1,SNR=12						
KAPI				LR	LR	11 28 32.8	
	comp=Z,600nm,20.9s,baz=38,slow=40						
KAPI	Kappang	6.08	205		Pn	11 25 51.7	+0.4
KAPI	Kappang	6.08	205	P	Pn	11 25 51.5	+0.3
KAPI	Kappang	6.08	205	P	Pn	11 25 52.9	+1.7
	73nm,0.8s						
KAPI	Kappang	6.08	205	*i* P	Pn	11 25 53.5	+2.3
NLAI	Namlea	6.11	128	P	Pn	11 25 53.0	+1.3
	3.2nm3µm302nm,1.0s						
BKSI	Bulukumba	6.22	200	P	Pn	11 25 54.8	+1.6
	0.3nm69nm,0.7s						
MKS	Makassar	6.38	206	P	Pn	11 25 57.6	+2.2
	0.8nm2µm113nm,0.7s						
BSSI	Bau Bau, Buton	6.88	195	P	Pn	11 26 03.7	+1.5
	0.4nm1µm99nm,0.6s						
KRAI	Karang Ratu	7.21	122	P	Pn	11 26 08.6	+1.9
AAI	Ambon	7.25	125	P	Pn	11 26 09.6	+2.4
	0.7nm4µm166nm,0.8s						
DAV	Davao City (W)	7.27	27	P	Pn	11 26 09.0	+1.5
	175nm,0.3s,baz=217,slow=5.6,SNR=5.0						
DAV				S	Sn	11 27 31.2	+2.7
	383nm,0.4s,baz=49,slow=23,SNR=4.7						
DAV	Davao City (W)	7.27	27		Pn	11 26 07.8	+0.4
DAV	Davao City (W)	7.27	27	P	Pn	11 26 07.6	+0.1
MTKI	Muara Teweh, K	7.54	259	P	Pn	11 26 12.2	+1.1
	1.3nm10µm114nm,0.5s						
MSAI	Masohi	7.68	120	P	Pn	11 26 15.0	+1.9
	0.8nm143nm,0.8s						
KKM	Kota Kinabalu	8.16	312		Pn	11 26 20.6	+0.9
KKM	Kota Kinabalu	8.16	312	P	Pn	11 26 21.1	+1.4
KKM	Kota Kinabalu	8.16	312	P	Pn	11 26 20.9	+1.2
	2µm148nm,0.8s						
BBKI	Banjar Baru	8.44	242	P	Pn	11 26 25.1	+1.7
	76nm,1.6s						
SWI	Sorong	9.08	99	P	Pn	11 26 33.6	+1.4
	51nm,0.8s						
MMRI	Maumere	9.12	180	P	Pn	11 26 36.1	+3.4
	3µm78nm,0.8s						
BNDI	Bandanaira	9.13	124	P	Pn	11 26 34.4	+1.6
	86nm,0.5s						
EDFI	Ende, Flores	9.25	184	P	Pn	11 26 36.1	+1.5
	41nm,0.9s						
DBNI	Kabupaten Domp	9.82	204	P	Pn	11 26 44.6	+2.3
SBUM	Sibu	10.24	281		Pn	11 26 49.3	+1.4
SBUM	Sibu	10.24	281	P	Pn	11 26 48.8	+0.9
PLAI	Plampang	10.34	206	P	Pn	11 26 49.6	+0.2
PLAI	Plampang	10.34	206	P	Pn	11 26 49.5	+0.2
	70nm,0.7s						
WSI	Waingapu	10.34	191	P	Pn	11 26 53.1	+3.8
	2µm116nm,0.9s						
SOEI	Soe	10.42	169	P	Pn	11 26 50.5	0.0
SOEI	Soe	10.42	169	P	Pn	11 26 56.6	+6.1
	49nm,0.8s						
WBSI	Waikabubak, Su	10.52	196	P	Pn	11 26 55.0	+3.2
	68nm,1.6s						
FAKI	Fak Fak	10.54	109	P	Pn	11 26 45.8	-6.2
TWSI	Taliwang, Sumb	10.68	210	P	Pn	11 26 56.4	+2.5
	79nm,1.1s						
BATI	Baumata	10.77	173	P	Pn	11 26 56.6	+1.4
	11nm,0.4s,baz=295,slow=1.5,SNR=4.1						
BATI	Baumata	10.77	173	P	Pn	11 26 56.8	+1.6
	69nm,0.8s						
BASI	Baing, Sumba	10.83	189	P	Pn	11 26 58.2	+2.2
	1µm119nm,1.4s						
KLNI	Mataram	10.84	215	P	Pn	11 26 58.5	+2.4
	108nm,0.7s						
KHKI	Kahang-Kahang	11.07	217	P	Pn	11 27 01.5	+2.2
	56nm,0.7s						
KMMI	Kalianget	11.22	228	P	Pn	11 27 05.1	+3.9
	2µm145nm,1.6s						
RTBI	Rangdo, Negare	11.56	219	P	Pn	11 27 08.6	+2.8
IGBI	Denpasar	11.71	217	P	Pn	11 27 09.5	+1.7
JAGI	Jajag, Banyuwa	12.08	222	Pn	Pn	11 27 14.2	+1.4
JAGI	Jajag, Banyuwa	12.08	222	P	Pn	11 27 14.8	+2.0
	109nm,0.8s						
GMJI	Gumukmas	12.43	225	P	Pn	11 27 17.8	+0.4
	81nm,1.2s						
SJI	Sawahan	13.33	232	P	Pn	11 27 32.2	+2.8
	73nm,1.4s						
NGJI	Ngawi	13.36	234	P	P	11 27 33.1	-2.5
	69nm,1.1s						
SNJI	Sawahan-Nganju	13.36	232	P	Pn	11 27 32.3	+2.4
	92nm,1.2s						
PCJI	Pacitan	14.07	232	P	Pn	11 27 40.6	+1.7
	140nm,1.3s						
KPJI	Karang Pucung	15.45	239	P	P	11 27 58.8	-0.1
	95nm,0.9s						
MTN	Manton Dam	15.94	147	P	P	11 28 04.2	-0.1
	comp=Z,20nm,1.3s						
MTN	Manton Dam	15.94	147		P	11 28 04.0	-0.4
KDU	Kakadu	16.58	143	P	P	11 28 13.1	+1.7
	comp=Z,9.5nm,1.1s						
BBJI	Bungbulang	16.62	241	P	P	11 28 12.1	+0.1
BBJI	Bungbulang	16.62	241	P	P	11 28 11.9	-0.1
CNJI	Cibinong	17.01	242	P	P	11 28 16.9	+0.7
KNRA	Kununurra	17.34	159	P	Pn	11 28 21.4	+1.5
	comp=Z,51nm,0.8s						
KNRA	Kununurra	17.34	159	P	Pn	11 28 21.0	+1.1
DSRI	Dabo	17.74	267	P	Pn	11 28 25.6	+0.9
	comp=Z,57nm,0.9s						
MYKOM	Kota Tinggi	18.47	274	P	Pn	11 28 33.2	-0.4
MYKOM	Kota Tinggi	18.47	274	P	P	11 28 33.0	+0.7
	comp=Z,31nm,0.8s						
BTDF	Bukit Timah Da	18.53	273	P	Pn	11 28 34.1	-0.1
KASI	Kota Agung	18.76	251	P	P	11 28 35.6	+0.2
	comp=Z,55nm,1.1s						
MDSI	Maura Dua	18.77	254	P	Pn	11 28 36.5	-0.6
	comp=Z,69nm,0.9s						
FITZ	Fitzroy Crossi	18.82	170	P	P	11 28 36.8	+0.8
	comp=Z,67nm,0.8s,baz=358,slow=8.9,SNR=267						
FITZ	Fitzroy Crossi	18.82	170	P	P	11 28 35.7	-0.3
IPM	Ipoh	21.59	281	P	P	11 29 06.9	+0.8
MBWA	Marble Bar	21.72	186		P	11 29 06.8	-0.5
MBWA	Marble Bar	21.72	186	P	P	11 29 07.1	-0.2
PDSI	Padang	21.87	266	P	P	11 29 09.3	+0.2
	comp=Z,4µmcomp=Z,58nm,1.0s						
PPI	Padang Panjang	21.91	267	P	P	11 29 10.2	+0.8
	comp=Z,52nm,0.7s						
KULM	Kulim	22.11	283	P	P	11 29 13.1	+1.6
KULM	Kulim	22.11	283	P	P	11 29 11.7	+0.2
	comp=Z,36nm,1.3s						
PSA00	Pilbara Seismi	22.11	186	P	P	11 29 11.2	-0.2
PSA00	Pilbara Seismi	22.11	186		P	11 29 10.1	-1.4
PSA00	Pilbara Seismi	22.11	186	P	P	11 29 11.2	-0.2
TPUB	Ta-pu	22.68	356	P	P	11 29 17.0	-0.3
TPUB	Ta-pu	22.68	356	P	P	11 29 19.4	+2.1
YULB	Yu-li	22.73	358	P	P	11 29 16.2	-1.7
YULB	Yu-li	22.73	358	P	P	11 29 19.2	+1.3
SSLB	Suanglung	23.14	357	P	P	11 29 21.0	-0.9
SSLB	Suanglung	23.14	357	P	P	11 29 23.5	+1.6
RPSI	Rantau Prapat	23.45	275		P	11 29 24.7	-0.1
PSI	Prapat	23.46	276	P	P	11 29 24.7	-0.4
WRAB	Tennant Creek	23.54	151	P	P	11 29 25.1	-0.4
WRAB	Tennant Creek	23.54	151	P	P	11 29 25.0	-0.6
WRAB	Tennant Creek	23.54	151	*ce*P	P	11 29 26.1	+0.5
WRAB				pmax	pmax		
	comp=Z,38nm,1.3s						
WRA	Warramunga Arr	23.54	151	P	P	11 29 25.1	-0.5
	comp=Z,14nm,0.7s,baz=333,slow=10,SNR=82						
WRA				PcP	PcP	11 33 07.8	-0.7
	comp=Z,1.5nm,0.6s,baz=327,slow=2.2,SNR=6.5						
WRA				S	S	11 33 27.1	-5.3
	comp=Z,1.9nm,0.9s,baz=336,slow=15,SNR=2.2						
WRA				ScP	ScP	11 36 35.6	-2.4
	comp=Z,0.8nm,0.7s,baz=336,slow=2.9,SNR=6.7						
	comp=Z,14nm,0.7s						
WRA	Warramunga Arr	23.54	151	P	P	11 29 24.5	-1.1
WRA	Warramunga Arr	23.54	151	*i* P	P	11 29 25.1	-0.5
WRA				pmax	pmax		
	comp=Z,16nm,0.7s						
YHNB	Yeheng	24.00	358	P	P	11 29 30.3	+0.6
GSI	Gunungsitoli	24.72	272	P	P	11 29 36.0	-0.3
GUMO	Guam	25.84	59	LR	LR	11 39 43.0	
	comp=Z,95nm,18.6s,baz=173,slow=36						
AS31	Alice Springs	26.58	156	P	P	11 29 52.1	-1.0
ASAR	Alice Springs	26.58	156	P	P	11 29 53.2	+0.1
	comp=Z,4.7nm,0.6s,baz=344,slow=14,SNR=130						
ASAR				PcP	PcP	11 33 14.7	-0.6
	comp=Z,3.5nm,0.5s,baz=338,slow=2.3,SNR=15						
ASAR				S	S	11 34 17.7	-3.2
	comp=Z,1.6nm,1.0s,baz=347,slow=20,SNR=5.7						
ASAR				ScP	ScP	11 36 44.0	-2.6
	comp=Z,1.0nm,0.5s,baz=340,slow=2.7,SNR=15						
	comp=Z,4.7nm,0.6s						
ASAR	Alice Springs	26.58	156	P	P	11 29 52.7	-0.4
ASAR	Alice Springs	26.58	156	P	P	11 29 52.7	-0.4
QIS	Mount Isa	26.97	142	P	P	11 29 57.3	+0.7
MEEK	Meekatharra	27.26	187	P	P	11 29 58.6	-0.5
CM31	Chiang Mai Arr	29.02	309	P	P	11 30 14.5	-0.4
CMAR	Chiang Mai Arr	29.02	309	P	P	11 30 17.1	+2.2
	comp=Z,3.2nm,0.9s,baz=136,slow=7.3,SNR=18						
CMAR				PcP	PcP	11 33 21.2	-0.1
	comp=Z,1.3nm,0.8s,baz=120,slow=2.2,SNR=5.6						
CMAR				ScP	ScP	11 36 53.4	-0.8
	comp=Z,2.8nm,0.7s,baz=160,slow=2.4,SNR=17						
	comp=Z,3.2nm,0.9s						
CMAR	Chiang Mai Arr	29.02	309	P	P	11 30 14.6	-0.3
CMAR	Chiang Mai Arr	29.02	309	P	P	11 30 14.6	-0.3
CHTO	Chiang Mai	29.23	310	P	P	11 30 18.5	+1.8
MORW	Morawa	30.05	191	IAmb	IAmb	11 30 24.3	
	comp=Z,47nm,0.8s						
MORW	Morawa	30.05	191	P	P	11 30 23.6	-0.2
WHN	Wuhan	30.77	347	P	P	11 30 32.4	+2.2
WHN				pmax	pmax		
	comp=Z,44nm,0.8s						
BLDU	Ballidu	31.44	189	P	P	11 30 35.2	-0.9
NJ2	Nanjing	31.50	354	eP	P	11 30 38.6	+2.0
NJ2				pmax	pmax		
	comp=Z,22nm,0.6s						
FORT	Forrest	31.63	170	IAmb	IAmb	11 30 38.3	
	comp=Z,29nm,0.7s						
ENH	Enshi	31.97	339	IAmb	IAmb	11 30 43.3	
	comp=Z,26nm,1.0s						
KLBR	Kellerberrin	32.25	187	P	P	11 30 42.4	-0.8
PZH	PanZhiHua	32.51	324	P	P	11 30 48.3	+2.6
MUN	Mundaring	32.86	190	P	P	11 30 48.1	-0.4
CD2	Chengdu	34.94	332	P	P	11 31 07.9	+1.3
CD2				pmax	pmax		
	comp=Z,90nm,0.6s						
LYN	LuoYang	35.05	346	P	P	11 31 09.2	+1.7
LYN				pmax	pmax		
	comp=Z,51nm,1.0s						
XAN	Xi'an	35.60	341	P	P	11 31 13.0	+0.8

XAN				pmax	pmax		
	comp=Z,22nm,0.7s						
BBOO	**Buckleboo**	35.63	160	P	P	11 31 12.0	-0.5
TIA	**Tai'an**	35.81	353	P	P	11 31 14.9	+1.0
TIA				pmax	pmax		
	comp=Z,12nm,0.9s						
STKA	**Stephens Creek**	37.07	152	P	P	11 31 24.4	-0.3
	comp=Z,7.5nm,0.6s,baz=320,slow=8.8,SNR=16						
	comp=Z,7.5nm,0.6s						
STKA	**Stephens Creek**	37.07	152		P	11 31 25.0	+0.3
STKA	**Stephens Creek**	37.07	152	P	P	11 31 24.7	0.0
STKA	**Stephens Creek**	37.07	152	*i* P	P	11 31 24.0	-0.7
KSRS	**Korea Array**	37.09	7	P	P	11 31 25.6	+0.8
	comp=Z,2.0nm,0.5s,baz=183,slow=10,SNR=13						
KSRS				ScP	ScP	11 37 18.8	-2.9
	comp=Z,1.6nm,0.7s,baz=169,slow=3.2,SNR=4.9						
	comp=Z,2.0nm,0.5s						
HTT	**Hallett**	37.25	157	P	P	11 31 26.9	+0.6
HNS	**HongShan**	37.33	350	⇓P	P	11 31 27.7	+0.9
HNS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
JGF	**Kuroka**	37.59	20	P	P	11 31 28.5	-0.6
DL2	**Dalian**	38.18	359	P	P	11 31 34.5	+0.6
DL2				pmax	pmax		
	comp=Z,29nm,0.6s						
SHL	**Shillong**	38.46	313		P	11 31 37.6	+0.9
SHL				IAmb	IAmb	11 32 13.1	
	comp=Z,17nm,1.0s						
SHL	**Shillong**	38.46	313	P	P	11 31 37.6	+0.9
SHL				pmax	pmax		
	comp=Z,17nm,1.0s						
MAJO	**Matsushiro**	38.74	21	P	P	11 31 38.0	-0.8
MAJO				IAmb	IAmb	11 32 12.9	
	comp=Z,72nm,1.6s						
MAJO	**Matsushiro**	38.74	21	P	P	11 31 40.0	+1.3
MAJO	**Matsushiro**	38.74	21	*i* P	P	11 31 36.4	-2.3
MAJO				pmax	pmax		
	comp=Z,22nm,1.0s						
MJAR	**Matsushiro Arr**	38.74	21	P	P	11 31 37.8	-0.9
	comp=Z,13nm,0.9s,baz=191,slow=8.4,SNR=20						
	comp=Z,13nm,0.9s						
MJAR	**Matsushiro Arr**	38.74	21	P	P	11 31 38.3	-0.4
MJAR	**Matsushiro Arr**	38.74	21	P	P	11 31 38.3	-0.4
MJAR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MJB9	**Matsu-Tunnel**	38.74	21	P	P	11 31 38.9	+0.2
CMSA	**Cobar Meteorol**	38.86	147	P	P	11 31 40.0	+0.2
LZDM	**Lanzhou Array**	39.24	336	P	P	11 31 44.1	+0.8
	comp=Z,2.9nm,0.4s,baz=172,slow=12,SNR=5.3						
	comp=Z,2.9nm,0.4s						
LZH	**Lanzhou**	39.29	336	*e*P	P	11 31 45.4	+1.9
LZH				pP	pP	11 32 03.8	-2.3
LZH				ScP	ScP	11 37 29.9	-0.5
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
BJI	**Beijing**	39.70	353	P	P	11 31 47.2	+0.6
BJI				pP	pP	11 32 09.2	0.0
BJI				sP	sP	11 32 21.6	+1.2
BJI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HHC	**Hu-ho-hao-te**	41.28	348	*e*P	P	11 32 02.2	+2.4
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
LSA	**Lhasa**	41.47	317	P	P	11 32 03.3	+1.4
ARMA	**Armidale**	41.57	140	P	P	11 32 03.8	+1.5
ARMA				IAmb	IAmb	11 33 36.3	
	comp=Z,73nm,1.9s						
JTM	**Tenmabayashi**	43.53	21	P	P	11 32 18.6	+0.8
JTM	**Tenmabayashi**	43.53	21	P	P	11 32 18.9	+1.0
CAN	**Canberra**	43.53	148	P	P	11 32 18.0	-0.1
GOMU	**GeErMu**	43.68	327	P	P	11 32 20.7	+1.1
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CNB	**Canberra Magne**	43.72	147	P	P	11 32 19.8	+0.2
GTA	**Gaotai**	43.79	335	*e*P	P	11 32 22.8	+2.6
GTA				pP	pP	11 32 45.3	+2.1
GTA				sP	sP	11 32 57.0	+2.7
GTA				pmax	pmax		
	comp=Z,35nm,1.0s						
USRK	**Ussuriysk Ar.**	44.32	10	P	P	11 32 24.3	+0.2
	comp=Z,8.7nm,0.7s,baz=193,slow=6.2,SNR=11						
	comp=Z,8.7nm,0.7s						
MDJ	**Mudanjiang**	44.36	7	P	P	11 32 24.3	-0.1
MDJ				IAmb	IAmb	11 32 25.5	
	comp=Z,22nm,0.8s						
MDJ	**Mudanjiang**	44.36	7	P	P	11 32 25.0	+0.6
MDJ				pmax	pmax		
	comp=Z,34nm,0.9s						
MDJ	**Mudanjiang**	44.36	7	P	P	11 32 24.8	+0.3
BNX	**BinXian**	45.23	5	⇑P	P	11 32 32.4	+1.1
BNX				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HYB	**Hyderabad**	46.16	294	*e*P	P	11 32 39.3	+0.1
ASAJ	**Asahikawa**	47.00	20	P	P	11 32 45.8	+0.6
ASAJ				pmax	pmax		
	comp=Z,344nm,2.0s						
JKA	**Kamikawa-asahi**	47.00	20	P	P	11 32 45.8	+0.5
HILR	**Hailar Array B**	48.87	358	P	P	11 32 59.8	+0.1
	comp=Z,5.9nm,0.5s,baz=170,slow=9.5,SNR=1.7						
	comp=Z,5.9nm,0.5s						
ULN	**Ulaanbaatar**	48.95	346	P	P	11 33 00.3	-0.2
ULN				IAmb	IAmb	11 33 38.8	
	comp=Z,13nm,1.1s						
ULN	**Ulaanbaatar**	48.95	346	*i* P	P	11 32 59.9	-0.6
ULN				pmax	pmax		
	comp=Z,11nm,1.0s						
ULN	**Ulaanbaatar**	48.95	346	P	P	11 33 00.8	+0.3
ULN				PcP	PcP	11 34 22.4	-0.9
SONM	**Songino Array**	49.08	346	P	P	11 33 02.1	+0.7
	comp=Z,6.9nm,0.7s,baz=167,slow=8.2,SNR=28						
	comp=Z,6.9nm,0.7s						
SONM	**Songino Array**	49.08	346	P	P	11 33 01.4	0.0
SONM	**Songino Array**	49.08	346	P	P	11 33 01.4	0.0
SONM				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HEH	**HeiHe**	49.72	4	*e*P	P	11 33 05.5	-0.5
HEH				pmax	pmax		
	comp=Z,11nm,0.8s						
WMQ	**Urumqi**	52.96	329	*e*P	P	11 33 32.0	+1.5
WMQ				pmax	pmax		
	comp=Z,28nm,0.9s						
MOY	**Mondy**	54.01	344	*e*P	P	11 33 39.2	+1.2
MOY				pmax	pmax		
	comp=Z,20nm,1.7s						
WUS	**Wushi**	56.12	322	IAmb	IAmb	11 33 56.1	
	comp=Z,24nm,1.3s						
ZSN	**Zaisan**	56.91	331	*e*P	P	11 33 59.5	+0.6
ZSN	**Zaisan**	56.91	331	*e*P	P	11 33 59.4	+0.6
SHLS	**Shalkode**	57.10	324	*e*P	P	11 33 59.1	-1.4
	comp=Z,7.6nm,0.9s						
SHLS	**Shalkode**	57.10	324	*e*P	P	11 33 59.0	-1.4
SHLS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KSH	**Kashi**	57.30	318	P	P	11 34 04.0	+2.2
KSH				pP	pP	11 34 27.7	+1.7
KSH				PcP	PcP	11 34 54.1	-0.9
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
DGZ	**Jazzator, Alta**	57.32	334	*i* P	P	11 34 02.8	+1.0
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
UZB	**Uzynbulak**	57.36	323	*e*P	P	11 34 02.5	+0.3
	comp=Z,7.6nm,0.8s						
UZB	**Uzynbulak**	57.36	323	*e*P	P	11 34 02.5	+0.3
UZB				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SATY	**Saty**	57.68	323	*e*P	P	11 34 05.1	+0.6
	comp=Z,9.0nm,0.6s						
SATY	**Saty**	57.68	323	*e*P	P	11 34 05.0	+0.6
SATY				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MK31	**Makanchi Array**	57.78	329	*ce*P	P	11 34 06.0	+1.1
MKAR	**Makanchi Array**	57.78	329	P	P	11 34 05.9	+1.0
	comp=Z,11nm,0.5s,baz=125,slow=8.7,SNR=137						
	comp=Z,11nm,0.5s						
MKAR	**Makanchi Array**	57.78	329	P	P	11 34 05.8	+0.8
MKAR	**Makanchi Array**	57.78	329	P	P	11 34 05.8	+0.8
KDJ	**Kajisay**	57.91	322	IAmb	IAmb	11 34 08.9	
	comp=Z,7.3nm,0.8s						
MAKZ	**Makanchi**	57.95	328	P	P	11 34 06.7	+0.6
MAKZ				IAmb	IAmb	11 34 07.8	
	comp=Z,10nm,0.6s						
MAKZ	**Makanchi**	57.95	328	P	P	11 34 06.7	+0.6
MAKZ				pmax	pmax		
	comp=Z,11nm,0.6s						
MAKZ	**Makanchi**	57.95	328	P	P	11 34 07.0	+0.9
MAKZ				sP	sP	11 34 40.5	-0.7
TNSS	**Tian-Shan**	58.55	322	*e*P	P	11 34 11.0	+0.1
TNSS	**Tian-Shan**	58.55	322	*e*P	P	11 34 10.9	+0.1
MDOK	**Medeo**	58.56	322	*e*P	P	11 34 10.9	+0.3
MDOK	**Medeo**	58.56	322	*e*P	P	11 34 10.9	+0.3
AAA	**Alma-Ata**	58.66	322	*e*P	P	11 34 11.9	+0.7
	comp=Z,13nm,0.6s						
AAA	**Alma-Ata**	58.66	322	*e*P	P	11 34 11.9	+0.7
AAA				pmax	pmax		
	comp=Z,13nm,0.6s						
TDK	**Taldyqorghan**	58.80	325	*e*P	P	11 34 12.7	+0.6
	comp=Z,5.9nm,0.4s						
TDK	**Taldyqorghan**	58.80	325	*e*P	P	11 34 12.7	+0.6
TDK				pmax	pmax		
	comp=Z,6.0nm,0.4s						
BOOM	**Boomskoye usch**	58.87	321	IAmb	IAmb	11 34 16.0	
	comp=Z,22nm,1.6s						
AAK	**Ala-Archa**	59.86	321	P	P	11 34 20.6	+1.0
	comp=Z,4.7nm,0.6s,baz=123,slow=4.0,SNR=11						
	comp=Z,4.7nm,0.6s						
AAK	**Ala-Archa**	59.86	321	*ce*P	P	11 34 19.3	-0.3
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PEA0B	**Petropavlovsk-**	60.07	24	P	P	11 34 20.5	-0.1
PEA0B	**Petropavlovsk-**	60.07	24	P	P	11 34 20.5	-0.1
PEA0B				pmax	pmax		
	comp=Z,206nm,1.7s						
PETK	**Petropavlovsk-**	60.07	24	P	P	11 34 21.2	+0.6
	comp=Z,4.5nm,0.6s,baz=194,slow=3.1,SNR=20						
	comp=Z,4.5nm,0.6s						
PETK	**Petropavlovsk-**	60.07	24	P	P	11 34 20.5	-0.1
PETK	**Petropavlovsk-**	60.07	24	P	P	11 34 20.5	-0.1
ARSB	**Arslanbob**	60.18	319	IAmb	IAmb	11 34 24.1	
	comp=Z,12nm,0.9s						
GAR	**Garm**	60.92	315	IAmb	IAmb	11 34 30.3	
	comp=Z,20nm,0.9s						
BTLS	**Baital**	61.39	323	*e*P	P	11 34 30.1	+0.3
BTLS	**Baital**	61.39	323	*e*P	P	11 34 30.0	+0.3
ZAA0	**Zalesovo Array**	61.52	336	IAmb	IAmb	11 34 31.0	
	comp=Z,23nm,0.9s						
ZALV	**Zalesovo Beam**	61.52	336	P	P	11 34 30.1	-0.4
	comp=Z,17nm,0.8s,baz=126,slow=5.8,SNR=69						
	comp=Z,17nm,0.8s						
YAK	**Yakutsk**	61.59	4	P	P	11 34 29.9	-0.7
YAK	**Yakutsk**	61.59	4	*e*P	P	11 34 30.0	-0.7
YAK				*e**PP	pP	11 34 57.0	+1.8
YAK				*e*		11 35 10.4	
YAK				*e*		11 36 46.9	
YAK				*e*PPP	PPP	11 38 13.8	
YAK				*e*S	S	11 42 44.1	-0.8
YAK				*e*		11 44 11.7	
YAK				*e*SS	SS	11 46 48.6	+0.8
YAK				pmax	pmax		
	comp=Z,18nm,0.8s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,12nm,1.3s						
YAK				pmax	pmax		
	comp=Z,599nm,5.3s						
YAK				pmax	pmax		
	comp=N,393nm,4.6s						
YAK				pmax	pmax		
	comp=E,461nm,3.7s						
YAK				smax	smax		
	comp=N,563nm,3.4s						
YAK				smax	smax		
	comp=E,503nm,7.3s						
CHGR	**Chuyangaron**	61.60	315	P	P	11 34 31.1	-0.3
CHGR				IAmb	IAmb	11 34 34.5	
	comp=Z,14nm,0.8s						
CHGR	**Chuyangaron**	61.60	315	P	P	11 34 31.1	-0.3
CHGR				pmax	pmax		
	comp=Z,14nm,0.8s						
KURBB	**Kurchatov Arra**	62.14	330	P	P	11 34 35.1	+0.5
	comp=Z,17nm,0.8s,baz=130,slow=6.0,SNR=80						
	comp=Z,17nm,0.8s						
KURK	**Kurchatov**	62.15	330		P	11 34 35.3	+0.6
KURK	**Kurchatov**	62.15	330	P	P	11 34 35.3	+0.6
KURK				pmax	pmax		
	comp=Z,40nm,0.7s						
KURK	**Kurchatov**	62.15	330	P	P	11 34 35.3	+0.6
KURK				x	x	11 35 08.5	
IUG	**Iuzhnay**	62.51	318	*e*P	P	11 34 38.0	+0.5
IUG	**Iuzhnay**	62.51	318	*e*P	P	11 34 37.9	+0.5
KK31	**Karatay Array**	62.64	320	P	P	11 34 38.5	+0.3
KK31	**Karatay Array**	62.64	320	P	P	11 34 38.5	+0.3
KK31				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KKAR	**Karatay Array**	62.64	320	P	P	11 34 38.6	+0.4
KKAR	**Karatay Array**	62.64	320	P	P	11 34 38.6	+0.4
MA2	**Magadan**	62.91	16	P	P	11 34 40.4	+0.9
BRLS	**Borolday**	63.04	319	*e*P	P	11 34 41.6	+0.7
BRLS	**Borolday**	63.04	319	*e*P	P	11 34 41.5	+0.7
BRZS	**Berezniki**	64.81	327	*e*P	P	11 34 53.1	+0.7
BRZS	**Berezniki**	64.81	327	*e*P	P	11 34 53.0	+0.7
SEY	**Seymchan**	66.16	15	*ce*P	P	11 34 59.3	-1.4
SEY				pmax	pmax		
	comp=Z,29nm,1.7s						
CASY	**Casey**	67.21	185	P	P	11 35 08.6	+1.3
CASY				IAmb	IAmb	11 35 44.4	
	comp=Z,29nm,1.8s						
BVAR	**Borovoye Array**	67.65	329	P	P	11 35 10.5	+0.1
	comp=Z,10nm,0.6s,baz=131,slow=9.2,SNR=48						
	comp=Z,10nm,0.6s						
BORK	**Borovoye**	67.70	329	P	P	11 35 10.7	+0.1
BORK				IAmb	IAmb	11 35 11.7	
	comp=Z,17nm,0.9s						
BORK	**Borovoye**	67.70	329	*ce*P	P	11 35 11.0	+0.4
BORK				pmax	pmax		
	comp=Z,23nm,1.0s						
BORK	**Borovoye**	67.70	329	P	P	11 35 10.9	+0.2
BORK				pP	pP	11 35 34.6	-0.9
BORK				PcP	PcP	11 35 36.7	-0.1
BORK				sP	sP	11 35 45.3	-1.0
TIXI	**Tiksi**	71.12	2		P	11 35 30.2	-1.1
TIXI				IAmb	IAmb	11 35 31.0	
	comp=Z,18nm,1.1s						
TIXI	**Tiksi**	71.12	2	P	P	11 35 30.2	-1.1
TIXI				pmax	pmax		
	comp=Z,18nm,1.1s						
TIXI	**Tiksi**	71.12	2	P	P	11 35 30.0	-1.3
TIXI				pP	pP	11 35 53.7	-2.6
ABKAR	**Akbulak array**	71.86	322	P	P	11 35 36.4	+0.1
ARTI	**Arti**	75.37	329		P	11 35 55.6	-1.1
ARTI				IAmb	IAmb	11 35 57.4	
	comp=Z,12nm,0.5s						
ARTI	**Arti**	75.37	329	*d i*P	P	11 35 54.9	-1.8
ARTI				*PP	pP	11 36 19.9	-2.1
ARTI				S	S	11 45 27.3	-1.3
ARTI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ARTI	**Arti**	75.37	329	P	P	11 35 55.9	-0.7
RAYN	**Ar Rayn**	77.67	294	P	P	11 36 09.2	-1.2
RAYN	**Ar Rayn**	77.67	294	P	P	11 36 09.2	-1.2
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
RAYN	**Ar Rayn**	77.67	294	P	P	11 36 09.3	-1.1
RAYN				pP	pP	11 36 33.9	-1.9
GNI	**Garni**	80.13	311	*i* P	P	11 36 25.1	+1.4
GNI				pmax	pmax		
	comp=Z,31nm,2.7s						
KIRV	**Kirov**	80.66	330	*i* P	P	11 36 25.0	-0.8
VNDA	**Vanda**	80.88	172	P	P	11 36 26.2	-0.5
	comp=Z,1.7nm,0.8s,baz=330,slow=4.6,SNR=7.4						
	comp=Z,1.7nm,0.8s						
VNDA	**Vanda**	80.88	172	P	P	11 36 27.0	+0.3
VNDA	**Vanda**	80.88	172	P	P	11 36 27.0	+0.3
VNDA				pmax	pmax		
	comp=Z,18nm,1.9s						
KBZ	**Khabaz**	81.95	314	P	P	11 36 33.5	+0.5
	comp=Z,3.0nm,1.0s,baz=25,slow=4.3,SNR=3.8						
	comp=Z,3.0nm,1.0s						
KBZ	**Khabaz**	81.95	314	*i* P	P	11 36 32.2	-0.8
KBZ				pmax	pmax		
	comp=Z,21nm,3.8s						
GOF	**Gofitskoye**	82.01	315	*ce*P	P	11 36 45.1	+12
SHA1	**Shidzhatmaz**	82.13	314	*i* P	P	11 36 34.3	0.0
KLMR	**Klimovskoe**	85.99	331	*e*P	P	11 36 51.3	-1.9
KLMR				*e**PP	pP	11 37 15.8	-3.2
KLMR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
IMAR	**Indian Mountai**	87.04	24	P	P	11 36 58.6	+0.4
SYO	**Syowa Base**	87.88	201	⇑*e*PcP	PcP	11 37 07.0	+3.1
BR131	**Keskin Array S**	88.61	310	*i* P	P	11 37 05.7	-0.8
ILAR	**Eielson Array**	89.86	25	P	P	11 37 09.6	-2.1
	comp=Z,0.3nm,0.5s,baz=237,slow=5.3,SNR=9.8						
	comp=Z,0.3nm,0.5s						
QSPA	**South Pole Qui**	90.47	180	P	P	11 37 12.9	-1.7
	comp=Z,1.2nm,0.7s,baz=298,slow=2.0,SNR=15						
	comp=Z,1.2nm,0.7s						
QSPA	**South Pole Qui**	90.47	180	P	P	11 37 18.4	+3.8
QSPA				IAmb	IAmb	11 39 58.3	
	comp=Z,12nm,1.6s						
ARCES	**ARCESS Array B**	91.87	340	P	P	11 37 18.9	-1.9
	comp=Z,0.5nm,0.4s,baz=35,slow=3.0,SNR=6.7						
	comp=Z,0.5nm,0.4s						
BCAR	**Beaver Creek A**	92.21	27	P	P	11 37 23.2	+0.6
FIA1	**FINESS Array S**	92.50	331	P	P	11 37 22.7	-1.1
FINES	**FINESS Array B**	92.50	331	P	P	11 37 22.0	-1.9
	comp=Z,1.1nm,0.7s,baz=76,slow=8.0,SNR=4.0						
	comp=Z,1.1nm,0.7s						
FINES	**FINESS Array B**	92.50	331	P	P	11 37 22.8	-1.0
FINES	**FINESS Array B**	92.50	331	*i* P	P	11 37 23.7	-0.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SPITS	**Spitsbergen Ar**	92.71	349	P	P	11 37 22.6	-2.0
	comp=Z,5.9nm,0.6s,baz=98,slow=8.5,SNR=8.5						
	comp=Z,5.9nm,0.6s						
NVL	**N'lazarevskaya**	97.17	198	*i* P	Pdif	11 37 46.4	+1.3
NVL				*e*		11 41 43.7	
NVL				*e*PPP	PPP	11 43 48.3	
NVL				*e*S	SKSac	11 48 14.6	+1.7
NVL				*e*SS	SS	11 55 42.8	+4.2
NVL				*e*SSS	SSS	11 59 29.2	
NVL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NVL				MLR	MLR		
	comp=Z,478nm,21.0s						
DBIC	**Dimbokro**	126.77	279	PKP	PKPdf	11 43 15.2	-2.0
	comp=Z,3.5nm,0.6s,baz=120,slow=5.5,SNR=3.9						
TXAR	**Lajitas Array**	127.05	52	PKP	PKPdf	11 43 16.9	-0.6
	comp=Z,0.3nm,0.7s,baz=139,slow=0.8,SNR=7.6						
BO04	**La Punta**	144.60	161		PKPbc	11 43 49.2	+0.5
CO02	**Combarbal**	147.01	159		PKPbc	11 43 56.3	+0.1
CO06	**Fray Jorge**	147.25	157	PKPbc	PKPbc	11 43 56.4	-0.2
CO03	**El Pedregal**	147.45	159		PKPbc	11 43 56.9	-0.5

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*IDC **03** 11:24:28.2±1.2, 28°.80N×64°.96E, $h0^{km}$, mb4.0/21, mbtmp4.0/22, ML4.2/1, Error ellipse: s-maj=26.5km s-min=17.0km az=14.0*

*NEIC **03** 11:24:31.6±0.8, 28°.9N±0°.2×65°.1E±0°.1, $h14^{km}±7^{km}$, mb4.3/29, Error ellipse: s-maj=23.1km s-min=14.3km az=186.0*

*OMAN **03** 11:24:53.4±0.3, 27°.93N×64°.00E, $h10^{km}$, mb5.5/23, Error ellipse: s-maj=5.8km s-min=3.4km az=20.0*

*DSN **03** 11:24:53.2±2.4, 28°.30N×63°.91E, $h10^{km}$, ML3.7/12, Error ellipse: s-maj=76.4km s-min=18.5km az=169.0*

ISC 03 11:24:34.6±0.5**, 28°.98N**±0°.06×**65°.31E**±0°.05**, $h35^{km}$, n107, σ1^{s}.96**/118**, mb4.2**/29**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NGCH	**Negor - Chabah**	5.18	227	P	Pn	11 25 51.6	+2.0
	SNR=31						
JASL	**Jaisalmer**	5.35	111	*e*P	Pn	11 25 53.7	+1.7
JASL				*e*S	Sn	11 26 53.2	+0.8
JASL				IAML		11 26 56.3	
	comp=E,900nm,0.5s						
JASL				IAML		11 26 58.2	
	comp=N,882nm,0.1s						
HRA	**Herat**	5.99	335		Pn	11 26 01.6	+0.6
KBL	**Kabul**	6.39	29		Pn	11 26 08.9	+2.5
NIL	**Nilore**	8.23	54	Pn	Pn	11 26 34.1	+2.5
BIDO	**Bidbid**	8.44	232	P	Pn	11 26 35.0	+0.6
BIDO				S	Sn	11 27 57.3	-11
WBK	**Wadi Bani Khal**	8.54	223	P	Pn	11 26 35.2	-0.6
	SNR=67						
WBK				S	Sn	11 27 59.1	-12
BANOM	**Banah**	8.57	251	P	Pn	11 26 37.4	+1.2
BANOM				S	Sn	11 27 58.7	-13
BANOM	**Banah**	8.57	251	*i* P	Pn	11 26 37.4	+1.2
	SNR=86						
BANOM				S	Sn	11 28 00.9	-11
JLN	**Jalan Bani Buh**	8.64	219	P	Pn	11 26 37.1	-0.1
	SNR=8.9						
JLN				S	Sn	11 28 02.6	-11
	SNR=16						
SHME	**Shamm**	8.65	252	P	Pn	11 26 39.6	+2.3
	SNR=36						
SHME				P		11 26 39.6	
	SNR=49						
SHME				S	Sn	11 28 02.9	-11
SHME	**Shamm**	8.65	252	*i* P	Pn	11 26 39.5	+2.2
	SNR=36						
UDPR	**Udaipur**	8.69	118	*e*P	Pn	11 26 38.4	+0.5
UDPR				*e*S	Sn	11 28 11.2	-3.5
UDPR				IAML		11 28 15.4	
	comp=N,78nm,0.3s						
UDPR				IAML		11 28 16.9	
	comp=E,90nm,0.7s						
SMDO	**Samad**	8.80	230	P	Pn	11 26 40.1	+0.6
	SNR=12						
SMDO				S	Sn	11 28 06.7	-11
MDH	**Madha**	8.83	248	P	Pn	11 26 40.3	+0.6
	SNR=29						
MDH				P		11 26 40.3	
	SNR=42						
MDH				S	Sn	11 28 06.5	-12
MDH	**Madha**	8.83	248	*i* P	Pn	11 26 40.2	+0.4
	SNR=29						
MASF	**Masafi**	8.91	248	P	Pn	11 26 41.1	+0.2
	SNR=10						
MASF				S	Sn	11 28 07.3	-13
MSFE	**Esma-Masafi**	8.91	248	*i* P	Pn	11 26 41.3	+0.4
	SNR=10						
HOQ	**Hoqain**	8.97	235	P	Pn	11 26 42.0	+0.3
	SNR=56						
HOQ				S	Sn	11 28 08.0	-14
JMU	**Jammu**	9.01	63	*e*P	Pn	11 26 44.3	+1.7
JMU				*e*S	Sn	11 28 21.3	-1.9
JMU				IAML		11 28 26.8	
	comp=N,70nm,0.6s						
JMU				IAML		11 28 27.1	
	comp=E,51nm,0.6s						
UOSS	**Minazif**	9.07	246	P	Pn	11 26 43.1	+0.1
UOSS				S	Sn	11 28 10.0	-14
UOSS	**Minazif**	9.07	246	Pn	Pn	11 26 40.9	-2.1
HATD	**Hatta, Dubai**	9.18	245	P	Pn	11 26 45.0	+0.4
	SNR=17						
HATD				S	Sn	11 28 12.7	-14
HATD	**Hatta, Dubai**	9.18	245	*i* P	Pn	11 26 44.9	+0.4
	SNR=18						
SOHO	**SOHO**	9.22	240	P	Pn	11 26 45.5	+0.3
SOHO				S	Sn	11 28 14.2	-13
SOHO	**SOHO**	9.22	240	*i* P	Pn	11 26 45.2	+0.1
	SNR=71						
JMDO	**Jabal Madar**	9.25	226	P	Pn	11 26 47.0	+1.4
	SNR=60						
UMQ	**Umm Al-Quwin**	9.25	250	P	Pn	11 26 49.1	+3.6
ASHO	**Ashiyiah**	9.31	245	P	Pn	11 26 47.0	+0.6
	SNR=68						
ASHO				S	Sn	11 28 14.1	-16
ASHO	**Ashiyiah**	9.31	245	*i* P	Pn	11 26 47.2	+0.8
	SNR=68						
NAZ	**Nazwa, Dubai**	9.48	247	P	Pn	11 26 52.1	+3.4
	SNR=8.8						
NAZ				S	Sn	11 28 20.1	-14
NAZ	**Nazwa, Dubai**	9.48	247	P	Pn	11 26 51.9	+3.2
BSY	**Bisya**	9.59	231	P	Pn	11 26 52.1	+1.9
	SNR=52						
FAQ	**Al Faqa, Dubai**	9.65	246	P	Pn	11 26 53.8	+2.8
	SNR=9.0						
FAQ				S	Sn	11 28 25.6	-13
FAQ	**Al Faqa, Dubai**	9.65	246	P	Pn	11 26 53.8	+2.8
ARQ	**Araqi**	9.69	237	P	Pn	11 26 55.0	+3.3
	SNR=69						
ARQ				S	Sn	11 28 26.8	-12
ALNE	**Al Ain**	9.87	242	P	Pn	11 26 55.9	+1.9
	SNR=24						
ALNE	**Al Ain**	9.87	242	*i* P	Pn	11 26 56.4	+2.4
	SNR=12						
ASUD	**Al Ashush, Dub**	9.92	246	P	Pn	11 26 57.8	+3.1
	SNR=29						
ASUD				S	Sn	11 28 34.3	-10
ASUD	**Al Ashush, Dub**	9.92	246	P	Pn	11 26 57.8	+3.1
DHRM	**DHARAMSHALA**	10.01	68	*e*P	Pn	11 26 57.7	+1.6

DHRM				eS	Sn	11 28 44.9	-2.5
DHRM				IAML		11 28 48.6	
	comp=N,89nm,0.6s						
DHRM				IAML		11 28 53.3	
	comp=E,86nm,0.5s						
TSSA	Tissa	10.07	65	eP	Pn	11 26 58.6	+1.6
TSSA				eS	Sn	11 28 46.1	-2.7
TSSA				IAML		11 28 50.6	
	comp=E,65nm,0.3s						
TSSA				IAML		11 28 50.7	
	comp=N,65nm,0.5s						
CHGR	Chuyangaron	10.16	17		Pn	11 26 59.7	+1.6
AJN	Ajban	10.22	247	P	Pn	11 27 01.5	+2.6
	SNR=9.0						
AJN	Ajban	10.22	247	i P	Pn	11 27 01.5	+2.6
	SNR=9.0						
MHTO	MHTO	10.38	222	P	Pn	11 27 01.3	+0.3
	SNR=6.2						
AYAN	Aya Nagar	10.38	90	eP	Pn	11 27 02.3	+1.2
AYAN				eS	Sn	11 28 52.6	-3.5
AYAN				IAML		11 28 55.3	
	comp=E,55nm,0.3s						
AYAN				IAML		11 28 56.5	
	comp=N,52nm,0.6s						
SMLA	Simla	10.49	75	eP	Pn	11 27 04.4	+1.9
SMLA				eS	Sn	11 28 55.9	-2.9
SMLA				IAML		11 29 01.1	
	comp=N,63nm,0.6s						
SMLA				IAML		11 29 03.5	
	comp=E,62nm,0.8s						
GAR	Garm	10.82	21	Pn	Pn	11 27 11.2	+4.1
KLP	Kalpa	11.47	74	eP	Pn	11 27 17.5	+1.2
KLP				eS	Sn	11 29 19.3	-3.9
KLP				IAML		11 29 24.9	
	comp=N,63nm,0.9s						
KLP				IAML		11 29 24.9	
	comp=E,62nm,0.6s						
JOSI	Joshimath	12.48	79	eP	Pn	11 27 30.9	+1.0
JOSI				eS	Sn	11 29 43.1	-4.7
JOSI				IAML		11 29 48.9	
	comp=E,63nm,0.8s						
JOSI				IAML		11 29 49.7	
	comp=N,64nm,1.1s						
PTH	Pithoragarh	13.01	84	eP	Pn	11 27 38.0	+0.6
PTH				eS	Sn	11 29 54.7	-6.4
PTH				IAML		11 30 02.8	
	comp=N,62nm,0.2s						
PTH				IAML		11 30 02.9	
	comp=E,47nm,0.1s						
ARSB	Arslanbob	13.81	25		Pn	11 27 49.4	+1.5
AAK	Ala-Archa	15.51	26	Pn	Pn	11 28 12.2	+1.4
	comp=E,1.0nm,0.3s,baz=165,slow=11,SNR=12						
AAK				Sn	Sn	11 30 58.7	-2.8
	comp=E,0.9nm,0.3s,baz=288,slow=5.5,SNR=4.1						
	comp=E,7.4nm,0.7s						
AAK	Ala-Archa	15.51	26		Pn	11 28 12.3	+1.4
BOOM	Boomskoye usch	15.98	30		Pn	11 28 18.6	+1.7
KDJ	Kajisay	16.27	33	Pn	Pn	11 28 22.2	+1.7
TARG	Taragay, Kyrgy	16.27	35		Pn	11 28 21.7	+0.9
WUS	Wushi	16.65	39		Pn	11 28 27.1	+1.8
WUS				IAmb	IAmb	11 28 32.1	
	comp=Z,17nm,0.9s						
PRZ	Przheval'sk	17.13	35	P	P	11 28 34.5	+1.7
PRZ				IAmb	IAmb	11 28 35.5	
	comp=Z,18nm,0.9s						
EVN	Everest	18.93	88	P	Pn	11 28 56.0	+2.0
EVN				IAmb	IAmb	11 28 59.9	
	comp=Z,11nm,0.7s						
GNI	Garni	20.23	309	P	P	11 29 03.5	-3.3
	comp=Z,9.7nm,0.7s,baz=17,slow=8.9,SNR=4.6						
	comp=Z,9.7nm,0.7s						
GNI	Garni	20.23	309	P	P	11 29 04.5	-2.2
GNI				IAmb	IAmb	11 29 08.7	
	comp=Z,15nm,1.0s						
AB31	Akbulak array	20.66	350	P	P	11 29 11.6	+0.4
AB31				IAmb	IAmb	11 29 13.9	
	comp=Z,10nm,0.7s						
ABKAR	Akbulak array	20.66	350	P	P	11 29 11.8	+0.6
MAKZ	Makanchi	22.05	32	P	P	11 29 26.9	+0.7
MAKZ				IAmb	IAmb	11 29 28.4	
	comp=Z,5.4nm,0.6s						
MK31	Makanchi Array	22.18	32	P	P	11 29 29.0	+1.4
MKAR	Makanchi Array	22.18	32	P	P	11 29 28.6	+1.0
	comp=Z,3.7nm,0.6s,baz=212,slow=10.0,SNR=23						
	comp=Z,3.7nm,0.6s						
MKAR	Makanchi Array	22.18	32	P	P	11 29 29.0	+1.4
KBZ	Khabaz	23.19	315	P	P	11 29 35.7	-2.4
	comp=Z,3.6nm,0.6s,baz=134,slow=9.9,SNR=11						
	comp=Z,3.6nm,0.6s						
KURBB	Kurchatov Arra	23.81	21	P	P	11 29 44.7	+0.6
	comp=Z,1.3nm,0.4s,baz=211,slow=8.8,SNR=5.1						
	comp=Z,1.3nm,0.4s						
BVAR	Borovoye Array	24.31	7	P	P	11 29 50.8	+2.0
	comp=Z,2.9nm,0.4s,baz=176,slow=9.0,SNR=24						
	comp=Z,2.9nm,0.4s						
BORK	Borovoye	24.32	7	P	P	11 29 49.7	+0.9
BORK				IAmb	IAmb	11 29 52.8	
	comp=Z,9.9nm,1.1s						
ZAA0	Zalesovo Array	28.72	24	P	P	11 30 29.3	+1.0
ZALV	Zalesovo Beam	28.72	24	P	P	11 30 29.1	+0.8
	comp=Z,1.5nm,0.5s,baz=227,slow=10,SNR=6.6						
	comp=Z,1.5nm,0.5s						
ZALV	Zalesovo Beam	28.72	24	P	P	11 30 28.8	+0.4
TIRR	Tirgusor	33.05	308	P	P	11 31 05.5	-1.2
AKASG	Malin Array Be	34.69	319	P	P	11 31 19.0	-1.8
	comp=Z,0.5nm,0.4s,baz=127,slow=7.5,SNR=3.4						
	comp=Z,0.5nm,0.4s						
AKBB	Malin Array Si	34.69	319	P	P	11 31 19.3	-1.5
AKBB				IAmb	IAmb	11 31 27.8	
	comp=Z,11nm,1.4s						
BURAR	Bucovina Array	36.06	312	P	P	11 31 31.3	-1.5
BUR08	Bucovina Ar. S	36.08	312	P	P	11 31 31.6	-1.3
BUR08				IAmb	IAmb	11 32 16.0	
	comp=Z,6.0nm,1.5s						
SONM	Songino Array	36.76	48	P	P	11 31 41.0	+2.2
	comp=Z,0.8nm,0.7s,baz=246,slow=9.3,SNR=4.0						
	comp=Z,0.8nm,0.7s						
FIA1	FINESS Array S	41.51	333	P	P	11 32 17.4	-0.8
FINES	FINESS Array B	41.51	333	P	P	11 32 17.4	-0.7
	comp=Z,2.2nm,0.5s,baz=132,slow=7.7,SNR=15						
	comp=Z,2.2nm,0.5s						
NRIK	Noril'sk	42.40	11	P	P	11 32 26.9	+1.6
	comp=Z,2.1nm,0.5s,baz=212,slow=11,SNR=2.8						
	comp=Z,2.1nm,0.5s						
GERES	GERESS Array B	43.84	312	P	P	11 32 35.2	-2.2
	comp=Z,0.7nm,0.4s,baz=78,slow=8.5,SNR=4.3						
	comp=Z,0.7nm,0.4s						
KEV	Kevo	46.27	343	P	P	11 32 56.5	+0.3
HFS	Hagfors	46.40	327	P	P	11 32 55.9	-1.5
	comp=Z,2.3nm,0.7s,baz=114,slow=11,SNR=6.9						
	comp=Z,2.3nm,0.7s						
ARCES	ARCESS Array B	46.53	342	P	P	11 32 57.2	-1.1
	comp=Z,3.0nm,0.8s,baz=120,slow=7.4,SNR=6.3						
	comp=Z,3.0nm,0.8s						
NOA	NORSAR Array B	47.84	328	P	P	11 33 07.0	-1.7
	comp=Z,0.3nm,0.4s,baz=115,slow=6.6,SNR=1.8						
	comp=Z,0.3nm,0.4s						
SENIN	Lac Senin/Sane	48.00	308	P	P	11 33 08.0	-2.3
BNI	Bardonecchia	48.45	306	P	P	11 33 12.2	-1.6
KSRS	Korea Array	52.22	63	P	P	11 33 43.3	+1.2
	comp=Z,1.9nm,0.8s,baz=267,slow=6.6,SNR=4.2						
	comp=Z,1.9nm,0.8s						
SPB2	Spitsbergen Ar	53.81	349	P	P	11 33 53.8	+0.5
SPITS	Spitsbergen Ar	53.82	349	P	P	11 33 53.5	+0.1
	comp=Z,14nm,1.0s,baz=134,slow=6.0,SNR=4.7						
	comp=Z,14nm,1.0s						
EKA	Eskdalemuir Ar	54.60	319	P	P	11 33 57.4	-2.0
	comp=Z,0.4nm,0.3s,baz=99,slow=7.3,SNR=4.9						
	comp=Z,0.4nm,0.3s						
ESDC	Sonseca Array	56.92	301	P	P	11 34 13.9	-2.5
	comp=Z,1.1nm,0.8s,baz=73,slow=7.0,SNR=4.7						
	comp=Z,1.1nm,0.8s						
SUMG	Summit	66.62	341	P	P	11 35 22.5	+0.9
SUMG				IAmb	IAmb	11 35 46.8	
	comp=Z,5.2nm,1.0s						
A36M	Sachs Harbour	79.04	3	P	P	11 36 36.0	+1.4
A36M				IAmb	IAmb	11 36 37.2	
	comp=Z,3.7nm,1.1s						
TOLK	Toolik Lake Re	79.32	12	P	P	11 36 37.6	+1.3
TOLK				IAmb	IAmb	11 37 12.7	
	comp=Z,6.8nm,1.4s						
C27K	Jago River	79.44	10	P	P	11 36 39.0	+2.1
C27K				IAmb	IAmb	11 37 23.4	
	comp=Z,4.4nm,1.4s						
IMAR	Indian Mountai	80.71	15	P	P	11 36 44.5	+0.7
H21K	Melozitna Rive	81.20	15	P	P	11 36 47.6	+1.1
H21K				IAmb	IAmb	11 37 31.9	
	comp=Z,3.2nm,1.2s						
WRA	Warramunga Arr	82.44	118	P	P	11 36 54.2	+0.5
	comp=Z,0.6nm,0.9s,baz=310,slow=6.4,SNR=2.5						
	comp=Z,0.6nm,0.9s						
ILAR	Eielson Array	83.23	13	P	P	11 36 56.6	-0.5
	comp=Z,0.2nm,0.6s,baz=325,slow=5.3,SNR=6.6						
	comp=Z,0.2nm,0.6s						
ASAR	Alice Springs	84.21	121	P	P	11 37 03.0	+0.2
	comp=Z,1.9nm,1.1s,baz=303,slow=5.0,SNR=4.7						
	comp=Z,1.9nm,1.1s						
YKA	Yellowknife Ar	88.84	360	P	P	11 37 25.0	+0.2

HEL 03 12:18:38.3±0.1**, 64°.45N×24°.68E, h0^{km}, ML1.2, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUF	Merijarvi	0.08	165	PG	Pg	12 18 38.3	-1.6
OUF				SG	Sg	12 18 39.1	-1.8
OBF0	Syolatti, Pyha	0.20	285	PG	Pg	12 18 41.5	-0.6
OBF0				SG	Sg	12 18 44.2	-0.5
OBF4	Vikkela, Lumij	0.41	26	PG	Pg	12 18 45.8	-0.4
	baz=205						
OBF4				SG	Sg	12 18 51.6	+0.1
OBF8	Ulkokalla	0.55	258	PG	Pg	12 18 48.8	0.0
OBF8				MSG		12 18 56.0	
	comp=Z,2.0nm,0.2s						
OUL	Oulu	0.83	39	PG	Pg	12 18 53.5	-0.6
	baz=219						
OUL				SB	Sg	12 19 04.6	-0.2
BURU	Burvik	1.44	277	PG	Pn	12 19 04.0	-1.6
BURU				SG	Sg	12 19 23.4	-1.0
KALU	Kalix	1.52	339	PG	Pn	12 19 06.1	-0.7
KALU				SN	Sn	12 19 28.7	+1.5
TOF	Tornio	1.65	355	PN	Pn	12 19 08.2	-0.2
TOF				MSG		12 19 27.6	
	comp=Z,1.0nm,0.2s						
TOF				SN	Sn	12 19 29.4	-0.8
VAF	Ylistaro	1.67	213	PG	Pn	12 19 08.8	+0.1
VAF				MSG		12 19 28.1	
	comp=Z,1.4nm,0.2s						
VAF				SG	Sn	12 19 30.1	-0.7
NIF	Nilsia	1.74	126	PG	Pn	12 19 09.6	-0.2
NIF				MSG		12 19 30.4	
	comp=Z,1.4nm,0.2s						
NIF				SG	Sb	12 19 33.4	0.0
RANF	Ranua	1.81	28	PG	Pn	12 19 10.9	+0.2
	baz=207						
RANF				SG	Sn	12 19 34.0	-0.2
UMAU	Umeaa	1.84	254	PG	Pn	12 19 10.7	-0.4
UMAU				SG	Sb	12 19 35.8	-0.5
SUF	Sumiainen	1.85	159	PG	Pn	12 19 11.3	0.0
	baz=337						
SUF				MSG		12 19 33.5	
	comp=Z,0.9nm,0.2s						
SUF				SG	Sb	12 19 36.5	-0.2
KU2	Taivalkoski	1.97	48	PG	Pn	12 19 13.1	+0.2
	baz=236						
KU2				SG	Sn	12 19 38.9	+0.8
RNF	Rovaniemi	2.24	14	SG	Sb	12 19 47.0	-0.8
KEF	Keuruu	2.29	178	PB	Pn	12 19 18.6	+1.3
KEF				MSG		12 19 46.2	
	comp=Z,1.4nm,0.2s						
KEF				SG	Sb	12 19 48.7	-0.5
RMF	Romuvaara	2.30	93	PG	Pb	12 19 19.0	-1.6
RMF				MSG		12 19 46.2	
	comp=Z,1.1nm,0.2s						
RMF				SG	Sb	12 19 49.6	+0.2
MSF	Maaselka	2.35	49	SG	Sb	12 19 49.9	-1.2
KU1	Kurvinen	2.35	59	SG	Sb	12 19 50.6	-0.5
ERTU	Ertsjaerv	2.36	335	PG	Pb	12 19 19.9	-1.7
	baz=150						
ERTU				SG	Sb	12 19 50.8	-0.4
PAJU	Pajala	2.67	347	PG	Pb	12 19 25.1	-1.8
PAJU				SB	Sn	12 19 57.3	+1.8
KU6	Riekki	2.71	52	MSG		12 19 58.1	
	comp=Z,0.6nm,0.2s						
KU6				SB	Sb	12 19 59.8	-1.4
OLKF	Oulanka, Finla	2.73	44	MSG		12 19 58.6	
	comp=Z,1.0nm,0.2s						
OLKF				SG	Sb	12 20 02.9	+1.1
KLF	Kolari	2.82	354	MSG		12 20 01.2	
	comp=Z,0.8nm,0.2s						
KLF				SG	Sb	12 20 04.2	-0.1
FIA0	FINESS Array S	3.08	167	PB	Pn	12 19 30.4	+2.3
	baz=352						
FIA0				MSG		12 20 08.7	
	comp=Z,0.7nm,0.2s						
FIA0				SB	Sb	12 20 10.3	-1.7
HEMU	Hemsoen	3.46	242	SN	Sn	12 20 15.0	0.0
KTK1	Kautokeino	4.62	354	SN	Sn	12 20 42.2	-1.4

*KOLA **03** 12:19:05.7, 67°.65N×33°.75E, h0^{km}, ML1.5, Error ellipse: s-maj=2.9km s-min=1.8km az=120.0, Khibiny, mines Kirovsk, Yukspor*

HEL 03 12:19:06.1±0.1**, 67°.63N×33°.81E, h0^{km}, ML1.4, Suspected explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA	Apatity	0.16	250	P	Pg	12 19 08.3	-0.9
APA0	Apatity Array	0.31	267	P	Pg	12 19 10.8	-1.3
APA0				S	Sg	12 19 15.0	-1.1
LVZ	Lovozero	0.42	49	S	Sg	12 19 19.1	-0.5
LVZ	Lovozero	0.42	49	PG	Pg	12 19 13.8	-0.4
LVZ				SG	Sg	12 19 15.4	-4.2
KVDA	Kovda	1.01	202	P	Pg	12 19 24.0	-1.3
KVDA				S	Sg	12 19 37.6	-0.7
VRF	Varrio	1.61	276	PG	Pn	12 19 35.1	-0.6
VRF				MSG		12 19 54.3	
	comp=Z,2.4nm,0.2s						
VRF				SN	Sn	12 19 55.5	-1.7
TERR	Teriberka	1.66	16	P	Pn	12 19 34.5	-1.8
TERR				S	Sn	12 19 55.9	-2.4
OLKF	Oulanka, Finla	2.17	235	PG	Pb	12 19 45.0	-1.3
OLKF				MSG		12 20 10.4	
	comp=Z,2.3nm,0.2s						
OLKF				SG	Sb	12 20 14.1	+0.5
KU6	Riekki	2.23	226	PG	Pb	12 19 46.0	-1.3
KU6				MSG		12 20 12.2	
	comp=Z,1.1nm,0.2s						
RAJF	Raja-Jooseppi	2.23	295	PG	Pb	12 19 46.1	-1.2
RAJF				SB	Sn	12 20 12.7	+0.1
MSF	Maaselka	2.56	230	SG	Sb	12 20 26.3	+1.6
VADS	Vadso	2.98	329	S	Sn	12 20 28.1	-2.8
RNF	Rovaniemi	3.21	255	SN	Sn	12 20 37.0	+0.4
KEV	Kevo	3.28	314	PN	Pn	12 19 58.3	-0.3
KEV				SN	Sn	12 20 36.7	-1.5
ARA0	ARCESS Array S	3.60	306	PN	Pn	12 20 01.6	-1.4
ARCES	ARCESS Array B	3.60	306	P	Pn	12 20 01.6	-1.5
ARCES				S	Sn	12 20 43.6	-2.6
KLF	Kolari	3.82	269	SG	Sb	12 21 03.9	+3.0
TOF	Tornio	4.05	252	SB	Sb	12 21 03.7	-4.0
OUL	Oulu	4.08	235	SB	Sb	12 21 06.3	-2.2
ERTU	Ertsjaerv	4.67	262	SG	Sb	12 21 30.1	+4.8

*IDC **03** 12:19:45.7±1.9, 16°.73S×178°.10W, h0^{km}, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=128.9km s-min=23.0km az=153.0*

ISC 03 12:19:51.0±2.0**, 16°.8S**±0°.8×**178°.1W**±0°.4**, h35^{km}, n6, σ0^s.22**/6**, mb3.7**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	45.12	258	P	P	12 28 04.6	+0.2
	0.3nm,0.4s,baz=97,slow=7.5,SNR=11						
	0.3nm,0.4s						
ASAR	Alice Springs	45.37	253	P	P	12 28 06.2	-0.2
	1.6nm,0.5s,baz=86,slow=8.9,SNR=45						
	1.6nm,0.5s						
NVAR	Mina Array Bea	78.42	44	P	P	12 31 48.4	-0.1
	0.3nm,0.7s,baz=257,slow=5.6,SNR=2.1						
	0.3nm,0.7s						
ILAR	Eielson Array	84.73	13	P	P	12 32 20.9	-0.1
	0.2nm,0.4s,baz=223,slow=4.9,SNR=8.4						
	0.2nm,0.4s						
TXAR	Lajitas Array	85.16	58	P	P	12 32 24.2	+0.1
	0.5nm,0.8s,baz=217,slow=5.6,SNR=6.1						
	0.5nm,0.8s						
PDAR	Pinedale Array	86.35	43	P	P	12 32 29.9	0.0
	0.4nm,0.6s,baz=204,slow=3.3,SNR=4.3						
	0.4nm,0.6s						

*IDC **03** 13:20:59.4±0.7, 1°.37N×125°.89E, h0^{km}, mb4.1/11, mbtmp4.1/12, ML4.2/1, MS3.6/4, Error ellipse: s-maj=70.6km s-min=13.5km az=71.0*

*DJA **03** 13:21:03.5±0.3, 1°N±3°×12°6E±°, h10^{km}, M4.3/12, mB5.0/1, mb4.6/5, MLv4.2/12, Mw(mB)4.3/1, MwMwp4.3/1, Mwp4.8/1*

*NEIC **03** 13:21:04.5±2.1, 1°.54N±0°.09×126°.55E±0°.07, h35^{km}±2^{km}, mb4.5/31, Error ellipse: s-maj=16.9km s-min=9.6km az=215.0*

ISC 03 13:21:04.4±0.5**, 1°.46N**±0°.06×**126°.36E**±0°.07**, h35^{km}, n73, σ1^s.66**/66**, mb4.4**/25**, MS3.5**/3**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.22	124		Pn	13 21 22.9	-2.0
TNTI	Ternate	1.22	124	P	Pn	13 21 27.5	+2.6
TNTI	Ternate	1.22	124	P	Pn	13 21 26.7	+1.8
MNI	Manado	1.52	269	P	Pn	13 21 26.8	-2.3
SGSI	Sangihe	2.36	339	P	Pn	13 21 44.1	+3.4
GTOI	Gorontalo	3.45	256	P	Pn	13 21 56.1	+0.5
SANI	Sanana	3.51	186	P	Pn	13 21 57.4	+1.0
SANI	Sanana	3.51	186	P	Pn	13 21 55.6	-0.8
LUWI	Luwuk	4.37	235	Pn	Pn	13 22 08.9	+0.6
LUWI	Luwuk	4.37	235	P	Pn	13 22 11.5	+3.3
LUWI	Luwuk	4.37	235	P	Pn	13 22 07.6	-0.6
APSI	Ampana	5.27	243	P	Pn	13 22 21.3	+0.6
TOLI2	Tolitoli	5.59	267	Pn	Pn	13 22 23.4	-1.7
TOLI2	Tolitoli	5.59	267	P	Pn	13 22 28.7	+3.6
SPSI	Sidrap Palu	8.51	231	P	Pn	13 23 03.3	-1.9
	32nm,0.8s						
BNSI	Bone	8.54	227	P	Pn	13 23 03.4	-2.2
	26nm,1.2s						
MYLDM	Lahad Datu	8.67	295		Pn	13 23 08.6	+1.2
MYLDM	Lahad Datu	8.67	295	P	Pn	13 23 12.8	+5.4
MYLDM	Lahad Datu	8.67	295	P	Pn	13 23 09.1	+1.7
BKSI	Bulukumba	9.18	223	P	Pn	13 23 13.5	-0.9
JAY	Jayapura	14.87	105	LR	LR	13 30 17.8	
	comp=Z,211nm,19.9s,baz=308,slow=36						
MTN	Manton Dam	14.98	162	Pn	Pn	13 24 32.9	-0.7
JAGI	Jajag, Banyuwa	15.67	231	Pn	Pn	13 24 45.0	+2.3
JAGI				IAmb	IAmb	13 25 19.2	
	comp=Z,43nm,1.2s						
KNRA	Kununurra	17.19	172	Pn	Pn	13 25 02.1	+0.1
KNRA				IAmb	IAmb	13 25 15.6	
	comp=Z,34nm,1.4s						
FITZ	Fitzroy Crossi	19.45	182	P	P	13 25 27.4	-0.7
	comp=Z,0.5nm,0.3s,baz=14,slow=8.8,SNR=18						
	comp=Z,2.5nm,0.4s						
FITZ	Fitzroy Crossi	19.45	182		P	13 25 27.5	-0.7
FITZ	Fitzroy Crossi	19.45	182	P	P	13 25 29.6	+1.5
TPUB	Ta-pu	22.41	346	P	P	13 25 57.7	-2.4
WB0	Warramunga Arr	22.52	160		P	13 26 01.4	+0.1
WB0				IAmb	IAmb	13 26 07.1	
	comp=Z,16nm,1.1s						
WRAB	Tennant Creek	22.66	160	P	P	13 26 03.0	+0.3
WRAB				IAmb	IAmb	13 26 12.5	
	comp=Z,18nm,1.1s						
WRAB	Tennant Creek	22.66	160	P	P	13 26 03.3	+0.5
WRA	Warramunga Arr	22.66	160	P	P	13 26 03.0	+0.2
	comp=Z,9.9nm,0.8s,baz=334,slow=11,SNR=58						
	comp=Z,9.9nm,0.8s						
WRA	Warramunga Arr	22.66	160	P	P	13 26 01.1	-1.7
WR8	Warramunga Arr	22.73	160		P	13 26 03.9	+0.3
WR8				IAmb	IAmb	13 26 09.3	
	comp=Z,40nm,1.4s						
PMG	Port Moresby	23.36	118	LR	LR	13 37 27.4	
	comp=Z,155nm,18.8s,baz=324,slow=42						
MBWA	Marble Bar	23.40	196	P	P	13 26 09.2	-1.1
MBWA				IAmb	IAmb	13 26 16.8	
	comp=Z,15nm,1.2s						
PSA00	Pilbara Seismi	23.76	195	P	P	13 26 13.6	-0.1
QIS	Mount Isa	25.44	150	P	P	13 26 31.7	+2.6
KULM	Kulim	25.94	279	P	P	13 26 35.6	+1.8
KULM				IAmb	IAmb	13 26 55.1	
	comp=Z,50nm,1.5s						
AS31	Alice Springs	26.03	164	P	P	13 26 29.8	-4.7
ASAR	Alice Springs	26.03	164	P	P	13 26 35.5	+1.0
	comp=Z,1.9nm,0.4s,baz=345,slow=7.2,SNR=58						
	comp=Z,1.9nm,0.4s						
ASAR	Alice Springs	26.03	164	P	P	13 26 29.8	-4.7
GIRL	Giralia	26.72	206	P	P	13 26 41.6	+1.0
GSI	Gunungsitoli	28.78	270	P	P	13 27 00.7	+1.4
GSI				IAmb	IAmb	13 27 31.9	
	comp=Z,12nm,1.2s						
MORW	Morawa	31.92	197	P	P	13 27 28.2	+1.4
MORW				IAmb	IAmb	13 27 46.1	
	comp=Z,8.7nm,1.2s						
FORT	Forrest	32.10	177	P	P	13 27 28.5	+0.2
FORT				IAmb	IAmb	13 27 41.8	
	comp=Z,7.6nm,1.1s						
BBOO	Buckleboo	35.30	166	P	P	13 27 56.6	+0.4
KSRS	Korea Array	35.85	2	P	P	13 28 02.1	+1.3
	comp=Z,1.5nm,0.9s,baz=182,slow=9.6,SNR=3.4						
	comp=Z,1.5nm,0.9s						
STKA	Stephens Creek	36.17	158	P	P	13 28 04.2	+0.6
	comp=Z,4.8nm,0.8s,baz=328,slow=7.3,SNR=6.8						
	comp=Z,4.8nm,0.8s						
STKA	Stephens Creek	36.17	158	IAmb	IAmb	13 28 06.1	
	comp=Z,24nm,0.8s						
PALK	Pallekele	45.87	279	LR	LR	13 50 50.2	
	comp=Z,61nm,20.3s,baz=96,slow=39						
SONM	Songino Array	49.33	342	P	P	13 29 49.9	-0.3
	comp=Z,0.8nm,0.9s,baz=160,slow=8.9,SNR=3.5						
SONM				LR	LR	13 53 40.1	
	comp=Z,62nm,18.1s,baz=183,slow=40						
	comp=Z,0.8nm,0.9s						
SONM	Songino Array	49.33	342	IAmb	IAmb	13 29 53.6	
	comp=Z,2.3nm,1.2s						
MSVF	Nonsavu	54.34	113	P	P	13 30 28.5	+0.4
MSVF				IAmb	IAmb	13 31 10.6	
	comp=Z,20nm,1.5s						
TARG	Taragay, Kyrgy	59.20	319	P	P	13 31 01.6	-1.0
TARG				IAmb	IAmb	13 31 07.3	
	comp=Z,2.0nm,0.9s						
MKAR	Makanchi Array	59.21	326	P	P	13 31 01.4	-0.7
	comp=Z,1.8nm,0.7s,baz=121,slow=7.4,SNR=15						
	comp=Z,1.8nm,0.7s						
MKAR	Makanchi Array	59.21	326	P	P	13 31 01.3	-0.9
MAKZ	Makanchi	59.39	326	P	P	13 31 03.1	-0.3
MAKZ				IAmb	IAmb	13 31 03.9	
	comp=Z,9.2nm,1.3s						
KDJ	Kajisay	59.80	319		P	13 31 07.3	+0.8
KDJ				IAmb	IAmb	13 31 08.2	
	comp=Z,2.7nm,0.7s						
ZAA0	Zalesovo Array	62.44	334	P	P	13 31 24.0	+0.1
ZAA0				IAmb	IAmb	13 31 35.5	
	comp=Z,5.3nm,1.5s						
ZALV	Zalesovo Beam	62.44	334	P	P	13 31 22.4	-1.4
	comp=Z,0.6nm,0.5s,baz=142,slow=5.3,SNR=3.8						
	comp=Z,0.6nm,0.5s						
ZALV	Zalesovo Beam	62.44	334	P	P	13 31 24.1	+0.2
KURBB	Kurchatov Arra	63.45	328	P	P	13 31 30.0	-0.7
	comp=Z,2.0nm,0.8s,baz=124,slow=6.2,SNR=17						
	comp=Z,2.0nm,0.8s						
KURK	Kurchatov	63.45	328	P	P	13 31 30.0	-0.7
KURK				IAmb	IAmb	13 31 37.1	
	comp=Z,3.5nm,0.7s						
BVAR	Borovoye Array	69.02	328	P	P	13 32 05.4	-1.0
	comp=Z,1.0nm,0.7s,baz=116,slow=6.6,SNR=6.0						
	comp=Z,1.0nm,0.7s						
NRIK	Noril'sk	72.53	347	P	P	13 32 27.9	+0.5
	comp=Z,1.9nm,0.4s,baz=141,slow=4.8,SNR=5.1						
	comp=Z,1.9nm,0.4s						
NRIK	Noril'sk	72.53	347	IAmb	IAmb	13 32 30.4	
	comp=Z,3.8nm,0.9s						
AB31	Akbulak array	73.67	321	P	P	13 32 33.7	-0.8
ABKAR	Akbulak array	73.67	321	P	P	13 32 33.7	-0.8
RAR	Rarotonga	75.52	112	P	P	13 32 43.8	-2.0
VNDA	Vanda	81.24	173	P	P	13 33 16.1	-0.1
	comp=Z,1.6nm,0.9s,baz=310,slow=4.4,SNR=4.1						
	comp=Z,1.6nm,0.9s						
PLK4	Peulik 4	81.97	32	P	P	13 33 19.6	-1.0
PPLA	Purkeypile	84.80	27	P	P	13 33 33.5	-1.7

DJA 03 13:24:27.0±0.3**, 1°N**±3°×**12°6E**±°**, h10^{km}, M4.1**/12**, mB5.1**/1**, mb4.3**/2**, MLv3.9**/12**, Mw(mB)4.4**/1**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNI	Manado	1.33	273	P	Pn	13 24 50.9	-0.8

TNTI	Ternate	1.34	117	P	Pn	13 24 50.6	-1.2
SGSI	Sangihe	2.38	344	P	Pn	13 25 06.9	+0.8
SANI	Sanana	3.41	183	P	Pn	13 25 20.1	-0.2
LUWI	Luwuk	4.16	235	P	Pn	13 25 32.0	+1.3
MRSI	Marisa	4.32	258	P	Pn	13 25 32.6	-0.2
NLAI	Namlea	4.68	169	P	Pn	13 25 37.9	+0.1
APSI	Ampana	5.06	243	P	Pn	13 25 44.3	+1.3

IDC 03 13:26:11.4±8.4**, 7°.49S×129°.80E, h86^{km}**±90^{km}**, mb4.0**/2**, mbtmp4.1**/5**, ML3.9**/3**, Error ellipse: s-maj=58.5km s-min=42.1km az=39.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	11.30	201	P	Pn	13 28 51.0	+1.0
	0.4nm,0.3s,baz=35,slow=16,SNR=7.7						
FITZ				S	Sn	13 30 55.6	+1.2
	2.6nm,0.3s,baz=80,slow=22,SNR=6.3 4.1nm,0.8s						
WRA	Warramunga Arr	13.14	161	P	Pn	13 29 16.4	+1.6
	0.7nm,0.3s,baz=340,slow=13,SNR=9.8						
WRA				S	Sn	13 31 38.0	-1.2
	3.2nm,0.5s,baz=333,slow=22,SNR=11 1.1nm,0.3s						
ASAR	Alice Springs	16.56	167	P	Pn	13 29 59.0	+0.5
	0.6nm,0.3s,baz=344,slow=10,SNR=15						
ASAR				S	Sn	13 32 59.2	-2.9
	0.5nm,0.6s,baz=354,slow=25,SNR=5.4 2.1nm,0.4s						
MKAR	Makanchi Array	68.52	327	P	P	13 37 04.7	-0.1
	1.4nm,0.5s,baz=118,slow=7.8,SNR=16 1.4nm,0.5s						
KURBB	Kurchatov Arra	72.82	329	P	P	13 37 30.6	-0.2
	0.8nm,0.2s,baz=126,slow=5.0,SNR=4.8 0.8nm,0.2s						

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*SFS **03** 13:29:31.0, 33°.67N×3°.68W, h6^{km}, mb4.0/5, ML4.0/13, ML4.0/18, MLv3.6/18*

*MDD **03** 13:29:30.3±0.8, 33°.59N×3°.63W, h12^{km}±9^{km}, Mb4.4/18, M_mb3.8/18, Error ellipse: s-maj=10.4km s-min=3.6km az=155.0*

*CNRM **03** 13:29:30.2, 33°.53N×3°.65W, h20^{km}, ML3.8*

*INMG **03** 13:29:31.3±3.0, 33°.57N×3°.58W, h60^{km}±13^{km}, ML3.2, Error ellipse: s-maj=10.7km s-min=6.4km az=119.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Fez (Marr)*

*IGIL **03** 13:29:31.7, 33°.64N×3°.78W, h12^{km}*

ISC 03 13:29:30.2±1.3**, 33°.66N**±0°.03×**3°.65W**±0°.03**, h21^{km}**±4^{km}**, n102, σ1^{s}83**/160**, 14C, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKLM	AKL	0.87	348	S	Sn	13 30 05.0	+5.7
LCRM	LCR	1.01	272	P	Pn	13 29 49.6	+0.4
LCRM	LCR	1.01	272	S	Sn	13 30 04.4	+1.5
JBK	JBK	1.12	53	P	Pn	13 29 50.5	-0.4
JBK	JBK	1.12	53	S	Sn	13 30 06.0	+0.1
MDT	Midelt	1.16	224	P	Pn	13 29 50.1	-1.2
MDT	Midelt	1.16	224	S	Sn	13 30 05.9	-0.7
MD31	MD31	1.22	230	P	Pn	13 29 51.7	-0.3
MD31	MD31	1.22	230	S	Sn	13 30 07.1	-0.9
IFR	Ifrane	1.24	264	Pg	Pb	13 29 53.2	+0.3
IFR				Sg	Sb	13 30 10.4	+1.8
CZD	Col de Zad	1.32	242	P	Pn	13 29 53.6	-0.1
CZD	Col de Zad	1.32	242	S	Sn	13 30 10.6	-0.1
PALE	Palemas	1.57	351	P	Pb	13 29 59.0	+0.4
GOG	Mont Gurugu	1.65	19	P	Pb	13 30 00.9	+1.0
GOG	Mont Gurugu	1.65	19	S	Sb	13 30 22.1	+1.8
EMEL	Melilla	1.73	19	P	Pn	13 29 59.3	+0.2
EMEL				P	Pb	13 29 59.5	-1.8
EMEL				S	Sn	13 30 21.0	+0.4
EMEL				S	Sb	13 30 21.4	-1.3
CHEFC	Chefchaouen	2.01	316	P	Pn	13 30 05.0	+2.0
CHEFC	Chefchaouen	2.01	316	S	Sb	13 30 31.0	+0.4
RSA	Sarsar	2.17	305	P	Pb	13 30 07.5	-1.3
RSA	Sarsar	2.17	305	S	Sb	13 30 34.8	-0.5
GOLM	Goulmima	2.24	210	P	Pn	13 30 06.5	+0.4
GOLM	Goulmima	2.24	210	S	Sn	13 30 33.3	+0.1
ARF	Arif	2.27	192	P	Pn	13 30 05.9	-0.7
ARF	Arif	2.27	192	S	Sn	13 30 31.4	-2.6
SMIR	Smir Dam	2.47	325	P	Pn	13 30 11.5	+2.3
SMIR	Smir Dam	2.47	325	S	Sb	13 30 42.5	-1.3
ZHG	ZHG	2.51	266	P	Pn	13 30 10.4	+0.6
FIGM	Figuig	2.52	126	P	Pn	13 30 08.4	-1.6
FIGM	Figuig	2.52	126	S	Sn	13 30 40.0	-0.2
ECEU	Ceuta	2.65	328	Sn	Sn	13 30 42.6	-0.5
ECEU				Pn	Pn	13 30 12.8	+1.1
ECEU	Ceuta	2.65	328	P	Pn	13 30 12.8	+1.1
ECEU				⇑*i*IVmb_VC		13 30 18.6	
	637nm,SNR=2.3						
ECEU				S	Sn	13 30 44.2	+1.1
RTC	Rabat Centre	2.69	278	Pn	Pn	13 30 13.4	+1.2
RTC				Sn	Sn	13 30 45.2	+1.1
EMIJ	Mijas	3.04	343	P	Pn	13 30 18.2	+1.1
EMIJ				S	Sn	13 30 52.6	-0.3
TISM	Timmit	3.04	231	P	Pn	13 30 16.9	-0.2
TISM	Timmit	3.04	231	S	Sn	13 30 51.8	-1.1
EJIF	Jimena Fronter	3.16	332	P	Pn	13 30 19.4	+0.7
EJIF				S	Sn	13 30 58.3	+2.6
ELGU	Los Guajares,	3.20	0	Pn	Pn	13 30 19.5	+0.1
ELGU				Sn	Sn	13 30 56.6	-0.3
ELGU	Los Guajares,	3.20	0	P	Pn	13 30 19.4	+0.1
ELGU				⇑*i*IVmb_VC		13 30 24.5	
	464nm,SNR=2.4						
ELGU				S	Sn	13 30 56.1	-0.8
TZRR	Tazzarine	3.29	210	P	Pn	13 30 18.8	-1.9
TZRR	Tazzarine	3.29	210	S	Sn	13 30 58.0	-1.3
EGOR	Sierra Gorda,	3.46	354	Pn	Pn	13 30 24.5	+1.5
EGOR	Sierra Gorda,	3.46	354	P	Pn	13 30 24.5	+1.5
EGOR				S	Sn	13 31 05.0	+1.5
EQUE	Quentar	3.54	3	P	Pn	13 30 25.4	+1.4
EQUE				⇑*i*IVmb_VC		13 30 32.8	
	224nm,SNR=2.1						
EQUE				S	Sn	13 31 05.7	+0.3
EQTA	Presa de Quent	3.54	3	Pn	Pn	13 30 25.3	+1.2
EQTA				Sn	Sn	13 31 05.8	+0.4
ESPR	Espera	3.67	331	Sn	Sn	13 31 07.9	-0.6
ESPR	Espera	3.67	331	P	Pn	13 30 27.6	+1.8
ESPR				⇑*i*IVmb_VC		13 30 35.1	
	248nm,SNR=2.5						
ESPR				S	Sn	13 31 08.0	-0.4
SRHM	Skhour des Reh	3.76	253	P	Pn	13 30 27.1	+0.2
SRHM	Skhour des Reh	3.76	253	S	Sn	13 31 15.7	+5.1
OUZM	OUZ	3.80	225	P	Pn	13 30 27.2	-0.4
OUZM	OUZ	3.80	225	S	Sn	13 31 15.7	+4.0
ZGR	Zagora	3.91	206	P	Pn	13 30 28.1	-1.0
EQES	Quesada	4.16	6	P	Pn	13 30 35.6	+3.0
EQES				⇑*i*IVmb_VC		13 30 43.9	
	344nm,SNR=2.2						
EQES				S	Sn	13 31 22.1	+1.5
OUK	Oukaimeden	4.32	237	P	Pn	13 30 33.3	-1.7
OUK	Oukaimeden	4.32	237	S	Sn	13 31 24.7	-0.2
EADA	Adamuz	4.56	351	Pn	Pn	13 30 39.9	+1.9
EADA	Adamuz	4.56	351	P	Pn	13 30 40.0	+1.9
EADA				⇑*i*IVmb_VC		13 30 44.7	
	207nm,SNR=2.5						
EADA				S	Sn	13 31 28.6	-1.8
EMUR	La Murta	4.61	24	Pn	Pn	13 30 39.2	+0.5
EMUR	La Murta	4.61	24	P	Pn	13 30 37.6	-1.1
EMUR				⇑*i*IVmb_VC		13 30 44.0	
	311nm,SNR=1.1						
EMUR				S	Sn	13 31 29.9	-1.7
ECAB	El Cabril	4.63	342	Pn	Pn	13 30 40.7	+1.7
ECAB				Sn	Sn	13 31 32.4	+0.2
ECAB	El Cabril	4.63	342	P	Pn	13 30 41.5	+2.5
ECAB				⇑*i*IVmb_VC		13 30 49.1	
	219nm,SNR=2.0						
ECAB				S	Sn	13 31 30.7	-1.5
EMIN	Mina Concepcio	4.78	330	Pn	Pn	13 30 42.2	+1.3
EMIN				Sn	Sn	13 31 33.9	-1.8
EMIN	Mina Concepcio	4.78	330	P	Pn	13 30 42.1	+1.2
EMIN				⇑*i*IVmb_VC		13 30 50.0	
	572nm,SNR=6.7						
EMIN				S	Sn	13 31 33.2	-2.5
EGRO	El Granado	4.97	322	Pn	Pn	13 30 44.0	+0.4
EGRO				Sn	Sn	13 31 37.1	-3.2
EGRO	El Granado	4.97	322	P	Pn	13 30 43.9	+0.3
EGRO				⇑*i*IVmb_VC		13 30 47.7	
	959nm,SNR=5.0						
EGRO				S	Sn	13 31 38.0	-2.3
PVAQ	Vaqueiros	4.99	320	*e*P	Pn	13 30 44.2	+0.3
PVAQ				*e*S	Sn	13 31 39.6	-1.4
PVAQ				*i* IAML		13 31 41.4	
PVAQ				*i* IAML		13 31 42.5	
PVAQ				*i* IAML		13 31 43.4	
PBDV	Barranco-do-Ve	5.00	317	Pn	Pn	13 30 44.0	0.0
PBDV				Sn	Sn	13 31 38.4	-2.8
PBDV	Barranco-do-Ve	5.00	317	*e*P	Pn	13 30 44.1	+0.1
PBDV				*e*S	Sn	13 31 39.0	-2.1
PBDV				*i* IAML		13 31 42.0	
PBDV				*i* IAML		13 31 43.2	
PBDV				*i* IAML		13 31 43.6	
PSIM	Granatula de C	5.15	359	P	Pn	13 30 47.0	+0.9
PSIM				S	Sn	13 31 49.2	+4.2
ETOB	Tobarra	5.26	18	Pn	Pn	13 30 49.4	+1.8
ETOB	Tobarra	5.26	18	P	Pn	13 30 48.4	+0.8
ETOB				⇑*i*IVmb_VC		13 30 52.9	
	261nm,SNR=0.7						
ETOB				S	Sn	13 31 45.1	-2.5
PBAR	Barrancos	5.28	330	Pn	Pn	13 30 48.3	+0.5
PBAR				Sn	Sn	13 31 45.8	-2.2
PBAR	Barrancos	5.28	330	*e*P	Pn	13 30 49.0	+1.2
PBAR				*e*S	Sn	13 31 46.4	-1.6
PBAR				*i* IAML		13 31 49.9	
PBAR				*i* IAML		13 31 49.9	
PBAR				*i* IAML		13 31 51.6	
PCVE	Castro Verde	5.33	319	Pn	Pn	13 30 49.4	+0.8
PCVE				Sn	Sn	13 31 47.4	-2.0
PCVE	Castro Verde	5.33	319	*e*P	Pn	13 30 49.4	+0.8
PCVE				*e*S	Sn	13 31 48.6	-0.8
PCVE				*i* IAML		13 31 52.4	
PCVE				*i* IAML		13 31 53.0	
PCVE				*i* IAML		13 31 53.8	
MORF	Marmelete	5.46	313	*e*P	Pn	13 30 50.0	-0.4
MORF	Marmelete	5.46	313	*e*P	Pn	13 30 50.6	+0.2
MORF				*e*S	Sn	13 31 50.5	-2.1
MORF				*i* IAML		13 31 54.8	
MORF				*i* IAML		13 31 55.3	
MORF				*i* IAML		13 31 55.9	
PFVI	Vila Bisbo	5.46	311	Pn	Pn	13 30 50.4	0.0
PFVI				Sn	Sn	13 31 50.5	-2.1
PFVI	Vila Bisbo	5.46	311	*e*P	Pn	13 30 50.9	+0.6
PFVI				*e*S	Sn	13 31 50.7	-1.9
PFVI				*i* IAML		13 31 52.6	
PFVI				*i* IAML		13 31 57.4	
PFVI				*i* IAML		13 31 58.3	
PBEJ	Beja	5.54	323	*e*P	Pn	13 30 52.2	+0.8
PBEJ				*e*S	Sn	13 31 53.1	-1.3
PBEJ				*i* IAML		13 31 56.2	
PBEJ				*i* IAML		13 31 57.7	
PBEJ				*i* IAML		13 31 57.8	
PTEO	Sao Teotonio	5.67	315	*e*P	Pn	13 30 53.3	+0.2
PTEO				*e*S	Sn	13 31 55.2	-2.3
PTEO				*i* IAML		13 31 58.2	
PTEO				*i* IAML		13 31 58.3	
PTEO				*i* IAML		13 31 59.7	
EBAD	Badajoz	5.77	333	Pn	Pn	13 30 56.0	+1.5
EBAD				Sn	Sn	13 31 58.2	-1.8
EBAD	Badajoz	5.77	333	P	Pn	13 30 55.7	+1.2
EBAD				⇑*i*IVmb_VC		13 30 59.5	
	1µm,SNR=11						
EBAD				S	Sn	13 31 58.2	-1.8
PAB	San Pablo	5.90	355	P	Pn	13 30 58.3	+1.8
PAB				⇑*i*IVmb_VC		13 31 06.2	
	97nm,SNR=0.8						
PAB				S	Sn	13 32 02.5	-0.9
PESTR	Estremoz	6.09	330	Pn	Pn	13 31 00.4	+1.4
PESTR				Sn	Sn	13 32 06.8	-1.3
PESTR	Estremoz	6.09	330	*e*P	Pn	13 31 00.7	+1.7
PESTR				*e*S	Sn	13 32 05.8	-2.3
PESTR				*i* IAML		13 32 08.6	
PESTR				*i* IAML		13 32 11.9	
PESTR				*i* IAML		13 32 12.7	
MOE	Montemor	6.17	323	*e*P	Pn	13 31 00.7	+0.7
MOE				*e*S	Sn	13 32 07.8	-2.1
MOE				*i* IAML		13 32 11.0	
MOE				*i* IAML		13 32 11.5	
MOE				*i* IAML		13 32 17.1	
PARRA	Arraiolos	6.25	327	*e*P	Pn	13 31 01.9	+0.8
PARRA				*e*S	Sn	13 32 09.6	-2.3
PARRA				*i* IAML		13 32 11.6	
PARRA				*i* IAML		13 32 11.8	
PARRA				*i* IAML		13 32 15.0	
PMRV	Marv??o	6.50	333	*e*P	Pn	13 31 05.5	+1.0
PMRV				*e*S	Sn	13 32 15.6	-2.5
PMRV				*i* IAML		13 32 18.0	
PMRV				*i* IAML		13 32 30.6	
PMRV				*i* IAML		13 32 31.3	
PMTG	Montargil	6.54	327	*e*P	Pn	13 31 05.8	+0.7
PMTG				*e*S	Sn	13 32 15.9	-3.1
PMTG				*i* IAML		13 32 25.6	
PMTG				*i* IAML		13 32 26.7	
PMTG				*i* IAML		13 32 30.0	
EPLA	Plasencia	6.68	344	P	Pn	13 31 09.2	+2.1
EPLA				⇑*i*IVmb_VC		13 31 11.1	
	460nm,SNR=4.3						
EPLA				S	Sn	13 32 22.0	-0.6
PCBR	Castelo Branco	6.89	335	*e*P	Pn	13 31 11.2	+1.3
PCBR				*e*S	Sn	13 32 23.0	-4.7
PCBR				*i* IAML		13 32 27.3	
PCBR				*i* IAML		13 32 29.3	
PCBR				*i* IAML		13 32 30.4	
PSARD	Sardoal	6.95	330	*e*P	Pn	13 31 11.9	+1.1
PSARD				*e*S	Sn	13 32 25.7	-3.5
PSARD				*i* IAML		13 32 28.4	
PSARD				*i* IAML		13 32 28.9	
PSARD				*i* IAML		13 32 43.8	
PMAFR	Mafra	6.97	321	*e*P	Pn	13 31 12.0	+1.0
PMAFR				*e*S	Sn	13 32 27.5	-2.1
PMAFR				*i* IAML		13 32 36.2	
PMAFR				*i* IAML		13 32 36.3	
PMAFR				*i* IAML		13 32 37.6	
PSBE	So Bento	7.16	326	*e*P	Pn	13 31 14.8	+1.1
PSBE				*e*S	Sn	13 32 32.3	-2.1
MTE	Manteigas	7.41	336	*e*P	Pn	13 31 19.8	+2.6
MTE				*e*S	Sn	13 32 40.6	0.0
MTE				*i* IAML		13 32 41.9	
MTE				*i* IAML		13 32 42.5	
MTE				*i* IAML		13 32 43.0	
PCAS	Casmilo, Conde	7.47	330	*e*P	Pn	13 31 19.3	+1.4
PCAS				*e*S	Sn	13 32 37.7	-4.3
PCAS				*i* IAML		13 33 03.1	
PCAS				*i* IAML		13 33 05.0	
PCAS				*i* IAML		13 33 05.6	
PVIS	Viseu	7.81	336	*e*P	Pn	13 31 25.2	+2.6
PVIS				*e*S	Sn	13 32 47.5	-3.0
MVO	Moncorvo	7.96	341	*e*P	Pn	13 31 26.3	+1.7
MVO				*e*S	Sn	13 32 50.7	-3.4
MVO				*i* IAML		13 32 54.7	
MVO				*i* IAML		13 33 17.6	
MVO				*i* IAML		13 33 17.9	
POLO	Lamas de Olo	8.37	338	*e*P	Pn	13 31 33.1	+2.7
POLO				*e*S	Sn	13 33 00.4	-3.9
POLO				*i* IAML		13 33 04.2	
POLO				*i* IAML		13 33 08.0	
POLO				*i* IAML		13 33 11.4	
PBRG	Braganca	8.49	344	*e*P	Pn	13 31 35.6	+3.7
PCAB	Cabril	8.75	338	*e*P	Pn	13 31 37.8	+2.3
PGAV	Gavieira, Arco	9.06	338	*e*P	Pn	13 31 42.4	+2.7
PGAV				*e*S	Sn	13 33 18.4	-2.8

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*CATAC **03** 13:37:56.6±0.7, 13°N±3°×8°9W±°, h27^{km}±6^{km}, M5.0/25, MLv5.0/25, Error ellipse: s-maj=6.7km s-min=2.4km az=34.4, confirmed*

*SNET **03** 13:37:56.9±0.9, 12°.67N×88°.75W, h28^{km}, ML5.0*

*NEIC **03** 13:37:59.0±1.6, 12°.79N±0°.07×88°.56W±0°.07, h49^{km}±1^{km}, mb4.9/439, Error ellipse: s-maj=12.2km s-min=6.2km az=220.0*

*GCMT **03** 13:37:59.0±0.5, 12°.52N±0°.03×88°.77W±0°.03, h40^{km}, MW4.9/52, Moment Tensor Solution. s41,c50; s52,c62; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.87±.18; M$_{\theta\theta}$-2.25±.11; M$_{\phi\phi}$-0.62±.12; M$_{r\theta}$0.16±.10; M$_{\theta\phi}$1.29±.08; M$_{\phi r}$-0.80±.11; Best double couple: M$_0$3.02800×10^{16} NP1:ϕ_s287.00000°, δ41.00000°, λ72.00000°. NP2: ϕ_s131.00000°, δ51.00000°, λ105.00000°. Principal axes: T 3.0450, Plg77.0000°, Azm96.0000°; N -0.0420, Plg12.0000°, Azm301.0000°; P -3.0110, Plg5.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*UCR **03** 13:37:59.8±1.1, 12°.81N×88°.56W, h49^{km}, MB4.9(NEIC)*

*GCG **03** 13:38:00.7±0.9, 12°.83N×88°.92W, h32^{km}±5^{km}, MD4.8, ML5.0*

*IDC **03** 13:38:00.3±1.4, 12°.93N×88°.38W, h63^{km}±12^{km}, mb4.3/22, mbtmp4.6/25, MS3.9/36, Error ellipse: s-maj=20.2km s-min=8.3km az=51.0*

*MOS **03** 13:38:01.6±1.2, 12°.93N×88°.40W, h89^{km}, mb4.8/13, Error ellipse: s-maj=15.8km s-min=6.6km az=107.8*

ISC 03 13:37:58.4±0.8**, 12°.72N**±0°.04×**88°.72W**±0°.03**, h55^{km}**±7^{km}**, n750, σ0^{s}97**/563**, mb4.8**/200**, MS4.0**/34**, 2C-25D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TECO	Alcaldia de Te	0.81	356	S	Sn	13 38 24.3	-0.9
TECO	Alcaldia de Te	0.81	356	⇓P	Pn	13 38 12.9	-0.9
PACA	Pacayal	0.84	28	P	Pn	13 38 13.8	-0.4
BLLM	Bellamira	0.86	33	*i* P	Pn	13 38 14.0	-0.5
UESV	Universidad de	0.91	356	S	Sn	13 38 27.5	+0.1
UESV	Universidad de	0.91	356	⇓P	Pn	13 38 14.6	-0.6
CNRM	Centro Naciona	0.92	36	*e*P	Pn	13 38 15.0	-0.2
CNRM				*e*S	Sn	13 38 28.6	+1.0
CNRM	Centro Naciona	0.92	36	P	Pn	13 38 15.1	-0.2
LALI	Alcalda de L	0.96	323	⇓*e*P	Pn	13 38 14.6	-1.1
LALI				*e*S	Sn	13 38 26.5	-2.0
LALI				IAML		13 38 28.2	
	comp=N,15µm,0.4s						
LALI	Alcalda de L	0.96	323	⇓P	Pn	13 38 14.6	-1.1
SCLA	Alcaldia de Sa	0.97	360	S	Sn	13 38 29.9	+1.0
SCLA	Alcaldia de Sa	0.97	360	P	Pn	13 38 15.8	-0.2
PANCS	Alcalda de	0.99	333	P	Pn	13 38 15.3	-0.9
LCND	La Caada	1.00	54	S	Sn	13 38 30.2	+0.8
LCND	La Caada	1.00	54	⇓P	Pn	13 38 15.4	-0.9
PAVA	Las Pavas	1.01	348	S	Sn	13 38 30.1	+0.3
PAVA	Las Pavas	1.01	348	⇓P	Pn	13 38 16.0	-0.5
LOMA	Loma Larga	1.01	335	P	Pn	13 38 14.5	-2.1
LOMA	Loma Larga	1.01	335	S	Sn	13 38 29.9	-0.1
CNCH	Conchagua	1.03	58	*e*P	Pn	13 38 15.8	-0.9
CNCH	Conchagua	1.03	58	⇓P	Pn	13 38 15.6	-1.1
UDBS	Universidad Do	1.07	337	S	Sn	13 38 30.7	-0.6
IGN	Direccin Gen	1.08	336	S	Sn	13 38 31.1	-0.3
IGN	Direccin Gen	1.08	336	P	Pn	13 38 16.9	-0.5
UTEC	Universidad Te	1.08	334	S	Sn	13 38 31.0	-0.5
UTEC	Universidad Te	1.08	334	P	Pn	13 38 16.7	-0.7
UEES	Universidad Ev	1.11	333	S	Sn	13 38 31.6	-0.6
UEES	Universidad Ev	1.11	333	P	Pn	13 38 17.0	-0.8
PMON	Piamonte	1.14	330	S	Sn	13 38 32.2	-0.8
PMON	Piamonte	1.14	330	⇓P	Pn	13 38 17.4	-0.8
BOQS	Boqueron	1.14	332	*i* P	Pn	13 38 17.7	-0.8
CAHU	Cacacuatique	1.15	26	*i* P	Pn	13 38 19.1	+0.5
CSGN	Cosiguina Volc	1.16	77	⇓P	Pn	13 38 17.1	-1.4
CSGN	Cosiguina Volc	1.16	77	⇓*i*P	Pn	13 38 17.1	-1.4
CSGN				*e*S	Sn	13 38 34.2	+0.8
JAYA	Jayaque - finc	1.17	323	*i* P	Pn	13 38 17.6	-1.0
JAYA	Jayaque - finc	1.17	323	S	Sn	13 38 32.8	-0.9
JAYA	Jayaque - finc	1.17	323	⇓P	Pn	13 38 17.6	-1.0
POTN	Potosi Cosigui	1.22	77	⇓P	Pn	13 38 18.0	-1.2
POTN	Potosi Cosigui	1.22	77	⇓*i*P	Pn	13 38 18.0	-1.2
POTN				*e*S	Sn	13 38 32.8	-1.9
CEDA	San Andres	1.26	329	S	Sn	13 38 35.6	-0.2
CEDA	San Andres	1.26	329	P	Pn	13 38 19.0	-0.8
CEVE	Cerro Verde	1.41	321	*e*P	Pn	13 38 21.7	-0.2
CEVE	Cerro Verde	1.41	321	P	Pn	13 38 21.6	-0.4
CEVE	Cerro Verde	1.41	321	S	Sn	13 38 39.5	-0.1
LLGN	La Laguna	1.45	351	P	Pn	13 38 22.8	+0.4
UNIC	Universidad Ca	1.49	327	S	Sn	13 38 42.3	+1.0
UNIC	Universidad Ca	1.49	327	P	Pn	13 38 22.1	-0.8
NUBE	Las Nubes	1.56	319	*i* P	Pn	13 38 23.4	-0.6
NUBE				*e*S	Sn	13 38 42.3	-1.0
NUBE	Las Nubes	1.56	319	⇓P	Pn	13 38 23.4	-0.6
CRIN	San Cristobal	1.63	91		Pn	13 38 23.1	-1.8
CRIN	San Cristobal	1.63	91	S	Sn	13 38 45.2	+0.3
CRIN	San Cristobal	1.63	91	P	Pn	13 38 24.4	-0.5
CRIN	San Cristobal	1.63	91	⇓*e*P	Pn	13 38 24.3	-0.6
CRIN				*e*S	Sn	13 38 44.8	-0.1
CRIN	San Cristobal	1.63	91	P	Pn	13 38 24.4	-0.5
FAME	Alcaldia de Sa	1.68	312	S	Sn	13 38 45.6	-0.4
FAME	Alcaldia de Sa	1.68	312	⇓P	Pn	13 38 24.4	-1.1
MTO3	Montecristo	1.78	340		Pn	13 38 26.9	-0.1
MTO3	Montecristo	1.78	340	⇓*i*P	Pn	13 38 27.3	+0.3
MTO3	Montecristo	1.78	340	⇓P	Pn	13 38 27.3	+0.3
HERN	Volcan Telica	1.85	93		Pn	13 38 25.0	-2.9
POLN	Al Sur del Vol	1.86	92	⇓P	Pn	13 38 26.8	-1.2
JUAM	Asuncion Mita	1.87	329	*e*P	Pn	13 38 28.2	+0.2
JUAM				IAML		13 38 54.0	
	comp=E,11µm,0.6s						
ESQI	Esquipulas	1.92	342	Pn	Pn	13 38 29.6	+0.7
TGUH	Tegucigalpa,Un	1.94	47		Pn	13 38 29.3	+0.2
ZAFR2	Estanzuela, Za	1.94	342	*e*P	Pn	13 38 35.9	+6.8
ILCN	San Idelfonso	1.98	94	P	Pn	13 38 28.3	-1.2
ILCN				S	Sn	13 38 53.5	+0.2
CNGA	Al SSO del Vol	1.99	96	⇓P	Pn	13 38 28.7	-1.0
CNGN	Cerro Negro	1.99	96		Pn	13 38 28.0	-1.7
CNGN	Cerro Negro	1.99	96	⇓P	Pn	13 38 28.1	-1.6
CNGN	Cerro Negro	1.99	96	⇓*i*P	Pn	13 38 28.1	-1.7
CNGN				*e*S	Sn	13 38 52.8	-0.7
COPN	Copaltepe	2.15	104	P	Pn	13 38 30.4	-1.5
COPN	Copaltepe	2.15	104	⇓*i*P	Pn	13 38 30.4	-1.5
COPN				*e*S	Sn	13 38 54.2	-3.2
MOMN	Momotombo	2.15	98	P	Pn	13 38 30.6	-1.4
MOM3	MOM3	2.16	95	P	Pn	13 38 30.9	-1.2
MOM2	El Cardon	2.20	97	⇓P	Pn	13 38 31.5	-1.1
MOM2				S	Sn	13 38 58.1	-0.6
FG16	Alotenango, Sa	2.32	312	*e*P	Pn	13 38 39.7	+5.3
FG16				IAML		13 39 27.6	
	comp=N,19µm,0.3s						
OCON	Estacion meteo	2.37	67	P	Pn	13 38 34.6	-0.3
OCON				S	Sn	13 39 04.0	+1.2
USIM	UNAN	2.47	104		Pn	13 38 35.1	-1.1
MGAN	Managua	2.48	103		Pn	13 38 35.2	-1.3
MGAN	Managua	2.48	103	*e*P	Pn	13 38 35.0	-1.4
MGAN				*e*S	Sn	13 39 04.0	-1.6
MGAN	Managua	2.48	103	P	Pn	13 38 35.5	-1.0
MASN	Masaya	2.62	106	*e*P	Pn	13 38 37.0	-1.3
ESSG	Sabana Grande	2.63	309	*e*P	Pn	13 38 39.0	+0.5
ESSG				*e*S	Sn	13 39 07.3	-2.1
APG	El Apazote	2.83	323	P	Pn	13 38 42.4	+1.0
	comp=N,4.8nm,0.4s,baz=143,slow=10.0,SNR=51						
APG				S	Sn	13 39 14.3	-0.1
	comp=N,28nm,0.5s,baz=220,slow=18,SNR=6.7						
APG	El Apazote	2.83	323	⇓*i*P	Pn	13 38 42.0	+0.6
STG5	El Palmar, Qui	3.05	303	*e*P	Pn	13 38 49.3	+5.0
JAPN	Al SSO del Vol	3.21	111	*e*P	Pn	13 38 47.0	+0.7
SOKI	Kika Raxquin	3.34	309	IAML		13 39 41.5	
	comp=N,5µm,1.2s						
LCRUZ	La Cruz	3.44	118	*e*P	Pn	13 38 48.7	-0.9
CARN	Rivas	3.48	116	*e*P	Pn	13 38 49.6	-0.6
LAPC	Finca la Perla	3.76	121	*e*P	Pn	13 38 54.7	+0.6
ALIBA	Liberia Airpor	3.76	124	*e*P	Pn	13 38 54.9	+0.9
BUAI	Buenos Aires	3.79	119	*e*P	Pn	13 38 55.1	+0.6
PEJA	Penjamo Buenos	3.80	118	*e*P	Pn	13 38 54.7	+0.2
GPS3	Bodega del ICE	3.83	120	*e*P	Pn	13 38 59.7	+4.8
GPS2	Hotel Rincn d	3.84	120	*e*P	Pn	13 38 56.4	+1.3
DELF	Filadelfia	3.84	126	*e*P	Pn	13 38 57.1	+2.1
SAJU	San Juanillo,	3.96	131	*e*P	Pn	13 38 56.5	-0.2
SIUN	Universidad Ur	3.97	75		Pn	13 38 54.6	-2.2
MESS	Mesas	3.98	119	*e*P	Pn	13 38 57.1	+0.1
COLC	Colonia	4.01	120	*e*P	Pn	13 38 58.9	+1.5
VMAR	Armenia, Volca	4.01	118	*e*P	Pn	13 38 57.1	-0.3
JUD3	Juan Diaz 3	4.03	129	Pn	Pn	13 38 56.0	-1.7
JUD3	Juan Diaz 3	4.03	129	*e*P	Pn	13 38 57.7	0.0
CUI	Cuipilapa	4.04	120	*e*P	Pn	13 38 58.4	+0.5
PLVR	Palo Verde	4.06	125	⇑*e*P	Pn	13 38 59.5	+1.2
MOTZ	Rio Naranjo	4.11	119	*e*P	Pn	13 39 00.5	+1.7
NICO	Nicoya	4.12	128	*e*P	Pn	13 38 59.0	+0.2
ACAL	Aguas Claras	4.17	120	*e*P	Pn	13 38 59.9	+0.3
TIMP	Tierras Morena	4.21	120	*e*P	Pn	13 38 59.9	-0.2
INVE	Universidad In	4.22	122	*e*P	Pn	13 39 00.1	-0.3
QUEB	Quebradon, Cot	4.29	119	*e*P	Pn	13 39 01.8	+0.5
JTS	Las Juntas de	4.42	123	P	Pn	13 39 03.7	+0.7
	comp=N,24nm,0.3s,baz=100,slow=21,SNR=22						
JTS				S	Sn	13 39 52.0	-1.1
	comp=N,116nm,0.5s,baz=1.5,slow=11,SNR=5.4						
JTS	Las Juntas de	4.42	123		Pn	13 39 01.7	-1.3
JTS	Las Juntas de	4.42	123	*i* P	Pn	13 39 04.9	+1.9

JTS	Las Juntas de	4.42	123	*e*P	Pn	13 39 03.9	+0.9
TABAC	Tabacon	4.46	119	*e*P	Pn	13 39 05.0	+1.4
ARE1	Arenal 1	4.52	119⇑	*e*P	Pn	13 39 06.3	+1.9
VARE2	V. Arenal	4.52	119	*e*P	Pn	13 39 05.6	+1.1
CASO	Castillo	4.52	120	*e*P	Pn	13 39 05.5	+1.0
CEDE	Laguna Cedeo	4.52	119	*e*P	Pn	13 39 06.2	+1.7
JCR1	Jicaral	4.55	129	*e*P	Pn	13 39 05.6	+0.7
CBL1	Cabuya	4.73	131	*e*P	Pn	13 39 05.5	-1.7
CCIG	Comitan	4.84	317		Pn	13 39 09.3	+0.4
HDC	Heredia	5.27	120	*e*P	Pn	13 39 14.4	-0.4
HDC	Heredia	5.27	120	*e*P	Pn	13 39 13.9	-0.8
ACOS	Acosta	5.33	123	*e*P	Pn	13 39 18.0	+2.3
ACOS				*e*S	Sn	13 40 15.7	-0.2
BILN	Bilwi Airport	5.37	75	*e*P	Pn	13 39 16.4	+0.4
BILN				*e*P	Pn	13 39 16.4	+0.4
PICV	PH. Pirrs	5.40	124	*e*P	Pn	13 39 18.4	+1.8
CVTR	Volcan Turrial	5.56	118	*e*P	Pn	13 39 20.0	+1.0
VTR0	Volcan Turrial	5.56	118	*e*P	Pn	13 39 19.9	+0.9
CVTQ	Turrialba Volc	5.56	119	*e*P	Pn	13 39 21.2	+2.2
REPA	Paraso	5.56	121	*e*P	Pn	13 39 21.7	+2.8
CVTV	Tajo	5.58	118	*e*P	Pn	13 39 19.7	+0.5
PIEC	Cerro El Cedra	5.60	123	*e*P	Pn	13 39 21.1	+1.6
ABRB	Las Abras (San	5.60	118	*e*P	Pn	13 39 21.2	+1.7
VTCV	VTCV, Calle Va	5.61	119	*e*P	Pn	13 39 20.4	+0.9
LCOCO	El Coco	5.70	117	*e*P	Pn	13 39 22.2	+1.6
BUS1	Rivas	5.81	122	*e*P	Pn	13 39 24.1	+1.6
SAJE	San Jernim	6.12	123	*e*P	Pn	13 39 27.8	+1.3
EDPE	Pejibaye, P	6.17	124	*e*P	Pn	13 39 28.1	+1.0
DRK0	Durika	6.38	122	*e*P	Pn	13 39 31.1	+1.0
CEUA	Cerro Uatsi, L	6.46	118	*e*P	Pn	13 39 34.0	+2.9
EDP2	Potrero Grande	6.58	124	*e*P	Pn	13 39 34.7	+2.1
PIRO	Carate, Puerto	6.82	129		Pn	13 39 34.2	-1.7
PIRO	Carate, Puerto	6.82	129	*e*P	Pn	13 39 37.5	+1.6
ALCO	Alturas Coton,	6.89	122	*e*P	Pn	13 39 38.0	+0.9
DMCAL	E. de Neily	7.08	124	*e*P	Pn	13 39 41.3	+1.7
BRU2	Volcan	7.10	123		Pn	13 39 37.9	-2.0
BRU2	Volcan	7.10	123	*e*P	Pn	13 39 41.4	+1.5
CLLRA	Cordillera,	7.19	123	*e*P	Pn	13 39 42.8	+1.7
JEFFS	S de V. Baru	7.29	123	*e*P	Pn	13 39 44.0	+1.4
CMIG	Matias Romero	7.37	307	P	Pn	13 39 45.4	+1.9
	comp=N,20nm,0.6s,baz=116,slow=9.7,SNR=23						
CMIG				S	Sn	13 41 02.2	-3.6
	comp=N,53nm,0.8s,baz=24,slow=17,SNR=4.3						
CMIG				LR	LR	13 42 59.7	
	comp=N,1µm,22.0s,baz=124,slow=40						
PBNVO	Pueblo Nuevo,	7.46	120	*e*P	Pn	13 39 43.9	-0.8
TEIG	Tepich	7.47	3	P	Pn	13 39 46.6	+1.8
	comp=N,0.1nm,0.5s,baz=131,slow=24,SNR=16						
TEIG	Tepich	7.47	3		Pn	13 39 44.4	-0.5
RBALA	Bur	7.50	120	*e*P	Pn	13 39 46.4	+1.2
KKNTU	Kakintº	7.81	119	*e*P	Pn	13 39 50.7	+1.2
TLIG	Tlapa	10.65	298		Pn	13 40 28.9	+0.4
SOR	Soroa	11.39	28		Pn	13 40 37.2	-1.3
SOR	Soroa	11.39	28	P	Pn	13 40 37.2	-1.3
GUY2C	Guyana, Caldas	15.14	118	P	P	13 41 31.9	-1.8
	comp=N,530nmcomp=N,56nm,0.7s						
BBAC	Balboa, Cauca	15.56	132	P	P	13 41 38.0	-0.1
	comp=N,649nmcomp=N,75nm,1.0s						
POPC	Popayan, Colom	15.64	129	P	P	13 41 38.4	-0.5
	comp=N,1µmcomp=N,122nm,0.8s						
ROSC	El Rosal	16.24	118	LR	LR	13 48 57.8	
	comp=N,179nm,19.3s,baz=332,slow=41						
PAMC	Pamplona, Colo	16.66	107	P	P	13 41 50.2	-0.3
	comp=N,19nm,0.8s						
RUSC	La Rusia	16.85	112		Pn	13 41 51.1	-0.1
FLOC	Florencia	17.03	129	P	P	13 41 54.1	-0.1
FLOC				IAmb	IAmb	13 42 00.3	
	comp=Z,61nm,1.0s						
SDV	Santo Domingo	18.17	100	P	P	13 42 06.2	-0.7
	comp=Z,26nm,0.7s,baz=275,slow=9.0,SNR=30						
SDV				LR	LR	13 50 33.6	
	comp=Z,142nm,18.1s,baz=267,slow=42						
SDV	Santo Domingo	18.17	100	P	P	13 42 06.0	-0.9
SDV				IAmb	IAmb	13 42 10.3	
	comp=Z,26nm,0.8s						
SDV	Santo Domingo	18.17	100	*e*P	P	13 42 04.8	-2.2
SDV	Santo Domingo	18.17	100	P	P	13 42 06.5	-0.4
HKT	Hockley	18.37	340	*i* P	Pn	13 42 10.5	+1.3
HKT				pmax	pmax		
	comp=Z,14nm,1.1s						
833A	Chaparral WMA,	18.44	329	IAmb	IAmb	13 42 13.7	
	comp=Z,55nm,1.1s						
EF04	Eagle Ford 04	18.45	334	P	Pn	13 42 10.8	+0.6
EF04				IAmb	IAmb	13 42 14.2	
	comp=Z,30nm,0.6s						
HNDO	Hondo	19.39	331	P	Pn	13 42 21.2	-0.3
HNDO				IAmb	IAmb	13 42 22.7	
	comp=Z,45nm,0.7s						
VBMS	Vicksburg	19.47	355	IAmb	IAmb	13 42 29.2	
	comp=Z,71nm,0.7s						
NATX	Nacogdoches	19.72	345	P	Pn	13 42 24.7	-0.7
NATX				IAmb	IAmb	13 42 33.0	
	comp=Z,58nm,0.7s						
435B	Jarrell	19.75	337	IAmb	IAmb	13 42 27.6	
	comp=Z,46nm,0.6s						
146A	Union	19.82	359	IAmb	IAmb	13 42 30.2	
	comp=Z,80nm,0.9s						
DRIO	Del Rio	19.96	328	IAmb	IAmb	13 42 33.8	
	comp=Z,43nm,0.6s						
152A	Waverly Hall	20.19	10	IAmb	IAmb	13 42 34.3	
	comp=Z,56nm,0.7s						
LRAL	Lakeview Retre	20.28	4		Pn	13 42 32.5	+0.5
Z47A	Carrollton	20.39	2	IAmb	IAmb	13 42 36.1	
	comp=Z,59nm,0.7s						
JCT	Junction City	20.43	332	IAmb	IAmb	13 42 37.5	
	comp=Z,24nm,0.7s						
154A	Montrose	20.46	14	IAmb	IAmb	13 42 37.3	
	comp=Z,66nm,0.7s						
BRDY	Brady	20.76	334	P	P	13 42 35.3	+0.4
BRDY				IAmb	IAmb	13 42 40.4	
	comp=Z,29nm,0.7s						
WHTX	Lake Whitney,	20.79	339	IAmb	IAmb	13 42 52.1	
	comp=Z,33nm,0.7s						
Y49A	Blount Mountai	21.14	5	IAmb	IAmb	13 42 42.9	
	comp=Z,25nm,0.8s						
GOGA	Godfrey	21.14	12		P	13 42 40.1	+1.2
GOGA				IAmb	IAmb	13 42 43.4	
	comp=Z,34nm,0.6s						
GOGA	Godfrey	21.14	12	P	P	13 42 40.1	+1.2
GOGA				pmax	pmax		
	comp=Z,34nm,0.6s						
Z38A	Mt. Pleasant	21.23	345	IAmb	IAmb	13 42 46.5	
	comp=Z,47nm,0.6s						
HPIG		21.27	314	IAmb	IAmb	13 42 43.7	
	comp=Z,22nm,0.6s						
CCAR	Cane Creek	21.28	353	IAmb	IAmb	13 42 45.4	
	comp=Z,63nm,0.7s						
OZNA	Ozona	21.43	330	IAmb	IAmb	13 42 45.9	
	comp=Z,33nm,0.8s						
Y52A	Lilburn	21.47	11	IAmb	IAmb	13 42 48.1	
	comp=Z,32nm,0.6s						
TXAR	Lajitas Array	21.59	322	P	P	13 42 46.1	+2.3
	comp=Z,16nm,0.7s,baz=146,slow=11,SNR=120						
TXAR				PcP	PcP	13 46 43.9	-0.4
	comp=Z,2.1nm,0.9s,baz=161,slow=5.3,SNR=5.6						
TXAR				LR	LR	13 52 51.6	
	comp=Z,157nm,19.2s,baz=128,slow=41						
	comp=Z,16nm,0.7s						
TXAR	Lajitas Array	21.59	322		P	13 42 45.4	+1.6
OXF	Oxford	21.70	358	IAmb	IAmb	13 43 04.9	
	comp=Z,82nm,1.3s						
FW06	Azle	21.72	340	IAmb	IAmb	13 42 49.6	
	comp=Z,30nm,0.6s						
PLPT	Palo Pinto	21.84	338	IAmb	IAmb	13 42 52.7	
	comp=Z,40nm,0.6s						
MIAR	Mount Ida	22.17	349	IAmb	IAmb	13 42 55.5	
	comp=Z,37nm,0.6s						
ABTX	Abilene, Hawle	22.19	335	IAmb	IAmb	13 42 54.6	
	comp=Z,42nm,0.6s						
UALR	University of	22.20	352	IAmb	IAmb	13 42 54.1	
	comp=Z,46nm,0.6s						
HODGE	Hodges	22.20	14	IAmb	IAmb	13 42 53.6	
	comp=Z,22nm,0.8s						
ATAH	Atahualpa	22.24	152	LR	LR	13 50 31.9	
	comp=Z,357nm,21.9s,baz=336,slow=34						
SGCY	Sterling City	22.25	331	IAmb	IAmb	13 42 55.0	
	comp=Z,57nm,0.8s						
SJG	San Juan	22.40	73	LR	LR	13 52 25.2	
	comp=Z,233nm,18.9s,baz=282,slow=39						
JSC	Jenkinsville	22.51	16	IAmb	IAmb	13 42 56.5	
	comp=Z,44nm,0.9s						
SWET	Sewanee	22.54	6	IAmb	IAmb	13 43 14.1	
	comp=Z,104nm,1.8s						
W50A	Signal Mountai	22.59	7	IAmb	IAmb	13 42 56.0	
	comp=Z,55nm,1.8s						
HUMP	Col San Antoni	22.69	73	P	P	13 42 54.1	-1.5
WHAR	Wooly Hollow	22.70	352	IAmb	IAmb	13 43 13.5	
	comp=Z,125nm,1.8s						
BG3	Lake Jocassee	22.78	12	IAmb	IAmb	13 43 14.8	
	comp=Z,113nm,1.8s						
PAULI	Pauline	22.87	15	IAmb	IAmb	13 42 59.2	
	comp=Z,23nm,0.8s						
SLBS	Sierra La Lagu	22.89	301	P	P	13 42 59.6	+1.9
V48A	Smith Brothers	22.98	4	IAmb	IAmb	13 43 00.8	
	comp=Z,18nm,0.7s						
APMT	Aspermont	23.00	335		P	13 42 58.2	-0.5
BIRD	Birdtown, Kers	23.08	18	IAmb	IAmb	13 43 02.0	
	comp=Z,46nm,0.7s						
ODSA	Odessa	23.11	329	P	P	13 42 60.0	+0.1
SN07	Snyder 07	23.13	333	IAmb	IAmb	13 43 02.6	
	comp=Z,32nm,0.7s						
PECS	Pecos	23.22	325	IAmb	IAmb	13 43 03.7	
	comp=Z,15nm,0.6s						
TKL	Tuckaleechee C	23.27	10	P	P	13 43 01.4	+0.1
	comp=Z,35nm,0.7s,baz=182,slow=11,SNR=37						
TKL				LR	LR	13 51 50.5	
	comp=Z,223nm,21.5s,baz=193,slow=36						
	comp=Z,35nm,0.7s						
TKL	Tuckaleechee C	23.27	10	IAmb	IAmb	13 43 03.1	
	comp=Z,35nm,0.8s						
KMSC	Kings Mountain	23.30	15	IAmb	IAmb	13 43 03.4	
	comp=Z,22nm,0.6s						
WVT	Waverly	23.32	2	P	P	13 43 02.0	+0.3
WVT	Waverly	23.32	2	P	P	13 43 02.0	+0.3
WVT				pmax	pmax		
	comp=Z,12nm,0.8s						
LCAR	Lake Charles	23.35	355	IAmb	IAmb	13 43 05.7	
	comp=Z,16nm,0.6s						
V53A	Saluda	23.46	12	IAmb	IAmb	13 43 06.3	
	comp=Z,26nm,0.7s						
WMOK	Wichita Mounta	23.74	339	IAmb	IAmb	13 43 07.4	
	comp=Z,20nm,0.7s						
TUL3	Leonard	23.95	346	IAmb	IAmb	13 43 12.8	
	comp=Z,27nm,0.6s						
PBMO	Poplar Bluff	24.00	357	IAmb	IAmb	13 43 13.5	
	comp=Z,28nm,0.7s						
RLO	Rose Lookout	24.02	347	IAmb	IAmb	13 43 12.4	
	comp=Z,22nm,0.7s						
DEOK	Depew	24.07	344	IAmb	IAmb	13 43 10.0	
	comp=Z,27nm,0.7s						
U38A	Gravette	24.16	349	IAmb	IAmb	13 43 13.7	
	comp=Z,16nm,0.7s						
TZTN	Tazewell	24.17	10	IAmb	IAmb	13 43 40.5	
	comp=Z,74nm,1.6s						
OK052	Battle Ridge R	24.29	344	IAmb	IAmb	13 43 12.1	
	comp=Z,48nm,0.8s						
QUOK	Quay	24.43	344	IAmb	IAmb	13 43 15.8	
	comp=Z,37nm,0.7s						
T50A	Nancy	24.44	8	IAmb	IAmb	13 43 36.7	
	comp=Z,61nm,1.9s						
CGM3	Cape Girardeau	24.49	358	IAmb	IAmb	13 43 41.1	
	comp=Z,51nm,1.6s						
MGMO	Mountain Grove	24.54	353	IAmb	IAmb	13 43 40.5	
	comp=Z,53nm,1.1s						
OK048	Pawnee Station	24.72	344	IAmb	IAmb	13 43 18.5	
	comp=Z,23nm,0.6s						
OK051	E0350 and S346	24.78	344	IAmb	IAmb	13 43 38.2	
	comp=Z,22nm,0.9s						
S44A	Carbondale	24.87	359	IAmb	IAmb	13 43 17.3	
	comp=Z,25nm,0.7s						
SIUC	Southern Illin	24.89	359	IAmb	IAmb	13 43 17.2	
	comp=Z,31nm,0.6s						
T35A	Sooner Cattle	25.08	345	IAmb	IAmb	13 43 56.1	
	comp=Z,13nm,0.6s						
CROK	Carrier	25.10	342	IAmb	IAmb	13 43 19.5	
	comp=Z,46nm,0.7s						
ELIS	Ellis County	25.16	339	IAmb	IAmb	13 43 21.6	
	comp=Z,61nm,1.0s						
S51A	Beattyville	25.23	10	IAmb	IAmb	13 43 20.2	
	comp=Z,17nm,0.7s						
CCM	Cathedral Cave	25.33	355		P	13 43 19.8	-0.3
CCM	Cathedral Cave	25.33	355	P	P	13 43 19.8	-0.3
CCM				pmax	pmax		
	comp=Z,54nm,0.7s						
WCI	Wyandotte Cave	25.49	4	P	P	13 43 21.2	-0.3
WCI				IAmb	IAmb	13 43 22.5	
	comp=Z,38nm,0.7s						
WCI	Wyandotte Cave	25.49	4	P	P	13 43 21.3	-0.3
WCI				pmax	pmax		
	comp=Z,38nm,0.7s						
PH02	Texas Public H	25.54	334	IAmb	IAmb	13 43 24.1	
	comp=Z,23nm,0.7s						
T57A	Hurt	25.62	18	IAmb	IAmb	13 43 24.9	
	comp=Z,24nm,0.8s						
KAN01	Argonia South	25.64	343	IAmb	IAmb	13 43 23.9	
	comp=Z,33nm,0.8s						
R40A	Maddies Statio	25.66	354	IAmb	IAmb	13 43 38.9	
	comp=Z,56nm,1.4s						
CZSB	Cruzeiro do Su	25.81	141	*e*P	P	13 43 27.6	+2.8
Q44A	Meyer Farm, Va	26.07	359	IAmb	IAmb	13 43 27.8	
	comp=Z,32nm,0.7s						
121A	Cookes Peak, D	26.34	322	IAmb	IAmb	13 43 33.4	
	comp=Z,13nm,0.8s						
R55A	Marlinton	26.58	15	IAmb	IAmb	13 44 03.8	
	comp=Z,31nm,1.2s						
Q51A	Peebles	26.63	9	IAmb	IAmb	13 43 32.8	
	comp=Z,32nm,0.6s						
Q52A	Bidwell	26.75	11	IAmb	IAmb	13 43 34.0	
	comp=Z,25nm,0.9s						
RTBA	Rita Blanca	26.77	334	IAmb	IAmb	13 43 38.2	
	comp=Z,25nm,0.7s						
Y22A	Socorro	26.87	325	IAmb	IAmb	13 43 38.4	
	comp=Z,19nm,0.7s						
R32A	Long Quarter,	27.09	343	IAmb	IAmb	13 43 38.1	
	comp=Z,26nm,1.1s						
P51A	Williamsport	27.12	10	IAmb	IAmb	13 43 37.2	
	comp=Z,23nm,0.7s						
P38A	Dawn	27.13	352	IAmb	IAmb	13 43 52.1	
	comp=Z,28nm,0.8s						
DUN6	Lazy B Ranch	27.16	320	IAmb	IAmb	13 43 44.8	
	comp=Z,18nm,1.0s						
ANMO	Albuquerque	27.34	327	P	P	13 43 41.1	+2.5
	comp=Z,4.4nm,0.6s,baz=136,slow=11,SNR=16						
ANMO				PcP	PcP	13 46 57.8	+0.9
	comp=Z,3.4nm,0.9s,baz=129,slow=2.0,SNR=4.5						
ANMO				LR	LR	13 56 49.7	
	comp=Z,83nm,21.6s,baz=116,slow=41						
	comp=Z,4.4nm,0.6s						
ANMO	Albuquerque	27.34	327	P	P	13 43 39.6	+1.0
ANMO	Albuquerque	27.34	327	*i* P	P	13 43 39.7	+1.1
ANMO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TASM	ASL Pad, Albuq	27.34	327	IAmb	IAmb	13 43 44.7	
	comp=Z,5.0nm,0.7s						
TASM	ASL Pad, Albuq	27.34	327	IAmb	IAmb	13 43 44.7	
	comp=Z,5.1nm,0.7s						
P52A	Corning	27.43	11	IAmb	IAmb	13 43 40.1	
	comp=Z,23nm,0.9s						
Q56A	Snyder Ridge,	27.54	16	IAmb	IAmb	13 43 42.2	
	comp=Z,17nm,0.7s						
CBKS	Cedar Bluff	27.77	341	IAmb	IAmb	13 43 44.0	
	comp=Z,35nm,0.7s						
ACSO	Alum Creek Sta	27.86	9	IAmb	IAmb	13 43 44.4	
	comp=Z,30nm,0.7s						
N41A	Harden Midland	27.94	357	IAmb	IAmb	13 43 44.5	
	comp=Z,26nm,0.6s						
O52A	Adamsville	27.95	11	IAmb	IAmb	13 43 44.5	
	comp=Z,26nm,0.7s						
T25A	Trinidad	28.08	333	IAmb	IAmb	13 43 48.8	
	comp=Z,33nm,0.7s						
TUC	Tucson	28.09	318	P	P	13 43 47.3	+2.1
P57A	Homestead Farm	28.29	18	IAmb	IAmb	13 43 48.6	
	comp=Z,25nm,0.7s						
L42A	Oliver, Polo	29.18	359	IAmb	IAmb	13 43 58.0	
	comp=Z,15nm,0.7s						
L40A	Anamosa	29.31	356	IAmb	IAmb	13 43 57.0	
	comp=Z,18nm,0.6s						
BOAV	Boa Vista	29.74	108	*e*P	P	13 43 57.2	-2.7
ISCO	Idaho Springs	30.82	334	P	P	13 44 10.9	+1.4
PV02	Paradox Valley	31.01	328	IAmb	IAmb	13 44 15.6	
	comp=Z,19nm,0.7s						
PV13	Radium Mtn., P	31.02	328	IAmb	IAmb	13 44 18.2	
	comp=Z,8.5nm,0.7s						
I42A	Draeger Farm,	31.06	360	IAmb	IAmb	13 44 11.4	
	comp=Z,20nm,0.6s						
PV05	Paradox Valley	31.10	328	IAmb	IAmb	13 44 17.3	
	comp=Z,11nm,0.7s						
PV03	Paradox Valley	31.10	328	IAmb	IAmb	13 44 16.0	
	comp=Z,14nm,0.7s						
PV11	David Mesa, Pa	31.15	328	IAmb	IAmb	13 44 16.0	
	comp=Z,26nm,0.7s						
PV16	Nyswonger Mesa	31.18	328	IAmb	IAmb	13 44 16.3	
	comp=Z,15nm,0.7s						
PV04	Paradox Valley	31.24	328	IAmb	IAmb	13 44 16.8	
	comp=Z,21nm,0.7s						
PV14	Lion Creek, Pa	31.28	328	IAmb	IAmb	13 44 17.0	
	comp=Z,12nm,0.7s						
PV22	Blue Mesa, Par	31.29	329	IAmb	IAmb	13 44 17.2	
	comp=Z,11nm,0.7s						
PV10	Paradox Valley	31.29	328	IAmb	IAmb	13 44 16.6	
	comp=Z,22nm,0.7s						
PV23	Carpenter Ridg	31.34	328	IAmb	IAmb	13 44 18.1	
	comp=Z,23nm,0.7s						
ESJX	Sierra Juarez	31.51	312	IAmb	IAmb	13 44 19.2	
	comp=Z,14nm,0.8s						
MACA	Manacapuru-AM	32.01	118	P	P	13 44 19.0	-0.9
MACA	Manacapuru-AM	32.01	118	*e*P	P	13 44 20.4	+0.5
BC3	Big Chuckawall	32.05	315	IAmb	IAmb	13 44 24.2	
	comp=Z,8.7nm,0.8s						
IRM	Iron Mountain	32.12	316	IAmb	IAmb	13 44 24.3	
	comp=Z,19nm,2.0s						
HAYD	Hayden	32.12	333	IAmb	IAmb	13 44 24.0	
	comp=Z,12nm,0.8s						
CBX	Cerro Bola	32.19	312	IAmb	IAmb	13 44 25.3	
	comp=Z,25nm,0.9s						
PKCU	Pink Cliffs	32.41	324	IAmb	IAmb	13 44 33.3	
	comp=Z,8.9nm,0.8s						
SRU	San Rafael Swe	32.61	328	IAmb	IAmb	13 44 30.1	
	comp=Z,8.9nm,0.6s						
BELC	Belle Mtn. Jos	32.62	315	IAmb	IAmb	13 44 28.6	
	comp=Z,20nm,1.6s						
PFO	Pinyon Flats O	32.72	314	*i* P	P	13 44 28.4	+2.3
PFO				pmax	pmax		
	comp=Z,48nm,4.4s						
PFO	Pinyon Flats O	32.72	314	P	P	13 44 29.2	+3.1
MTPU	Mount Pierson	32.75	324	IAmb	IAmb	13 44 30.6	
	comp=Z,9.3nm,0.7s						
M65A	Busby, Falmout	32.78	25	P	P	13 44 26.0	-0.3
	baz=214						
P18A	Preston Nutter	32.85	329	IAmb	IAmb	13 44 31.1	
	comp=Z,8.4nm,0.7s						
SADO	Sadowa	32.97	13	P	P	13 44 27.3	-0.7
	comp=Z,13nm,0.6s,baz=223,slow=9.4,SNR=15						
SADO				LR	LR	13 57 38.5	
	comp=Z,151nm,20.0s,baz=199,slow=36						
	comp=Z,13nm,0.6s						
SADO	Sadowa	32.97	13	IAmb	IAmb	13 44 28.6	
	comp=Z,14nm,0.7s						
P17A	Butcher Ranch,	32.99	328	IAmb	IAmb	13 44 32.2	
	comp=Z,16nm,0.7s						
RDMU	Red Mountain	33.24	330	IAmb	IAmb	13 44 37.6	
	comp=Z,7.1nm,0.8s						
MPU	Maple Canyon	33.86	328	IAmb	IAmb	13 44 40.0	
	comp=Z,8.1nm,0.7s						
RSSD	Black Hills	33.94	340	P	P	13 44 37.7	+1.0
RSSD	Black Hills	33.94	340	P	P	13 44 37.7	+1.0
RSSD				pmax	pmax		
	comp=Z,31nm,0.7s						
RSSD	Black Hills	33.94	340	P	P	13 44 38.1	+1.4
RSSD				PcP	PcP	13 47 14.6	+0.5
PSUT	Pine Spring	34.05	323	IAmb	IAmb	13 44 41.7	
	comp=Z,6.5nm,0.8s						
MWC	Mount Wilson	34.17	314	IAmb	IAmb	13 44 53.2	
	comp=Z,23nm,1.6s						
CTU	Camp Tracy	34.42	328	IAmb	IAmb	13 44 44.2	
	comp=Z,6.5nm,0.7s						
FURC	Furnace Creek,	34.60	318	IAmb	IAmb	13 44 48.6	
	comp=Z,24nm,1.8s						
S11A	Rachel	34.61	321	IAmb	IAmb	13 44 46.4	
	comp=Z,9.6nm,0.7s						
PDAR	Pinedale Array	34.95	333	P	P	13 44 46.4	+0.9
	comp=Z,2.7nm,0.6s,baz=130,slow=11,SNR=27						
PDAR				PcP	PcP	13 47 17.6	+0.6
	comp=Z,3.6nm,0.6s,baz=147,slow=5.6,SNR=18						
PDAR				ScP	ScP	13 50 57.9	-0.2
	comp=Z,0.3nm,0.9s,baz=172,slow=2.8,SNR=1.9						
PDAR				LR	LR	14 01 55.3	
	comp=Z,98nm,19.6s,baz=134,slow=41						
	comp=Z,2.7nm,0.6s						
PDAR	Pinedale Array	34.95	333	P	P	13 44 45.8	+0.3
HWUT	Hardware Ranch	35.00	330	IAmb	IAmb	13 44 49.0	
	comp=Z,10nm,0.8s						
LPAZ	La Paz	35.29	144	P	P	13 44 49.9	+0.8
	comp=Z,4.5nm,0.7s,baz=344,slow=8.4,SNR=16						
LPAZ				LR	LR	13 58 13.8	
	comp=Z,209nm,21.9s,baz=306,slow=34						
	comp=Z,4.5nm,0.7s						
LPAZ	La Paz	35.29	144	P	P	13 44 49.3	+0.2
LPAZ	La Paz	35.29	144	*e*P	P	13 44 50.5	+1.4
LPAZ	La Paz	35.29	144	P	P	13 44 50.1	+1.0
HVU	Hansel Valley	35.74	329	IAmb	IAmb	13 44 57.0	
	comp=Z,6.6nm,0.7s						
LOHW	Long Hollow	36.09	333	IAmb	IAmb	13 44 58.4	
	comp=Z,9.7nm,0.6s						
MOOW	Moose Ponds	36.26	333	IAmb	IAmb	13 44 59.2	
	comp=Z,7.4nm,0.7s						
ELK	Elko	36.33	325	P	P	13 44 59.3	+2.0
	comp=Z,4.6nm,0.8s,baz=138,slow=6.8,SNR=34						
ELK				PcP	PcP	13 47 23.0	+1.8
	comp=Z,4.2nm,0.9s,baz=112,slow=4.2,SNR=10						
ELK				LR	LR	14 01 45.9	
	comp=Z,104nm,21.3s,baz=139,slow=39						
	comp=Z,4.6nm,0.8s						
ELK	Elko	36.33	325		PcP	13 47 22.9	+1.7
MDP	Montagnes des	36.41	99	LR	LR	14 01 27.1	
	comp=Z,156nm,19.0s,baz=296,slow=39						
NVAR	Mina Array Bea	36.69	320	P	P	13 45 03.0	+2.6
	comp=Z,5.3nm,0.7s,baz=131,slow=7.2,SNR=52						
NVAR				PcP	PcP	13 47 24.5	+2.2
	comp=Z,6.2nm,0.7s,baz=132,slow=4.1,SNR=26						
NVAR				ScP	ScP	13 51 03.9	-0.7
	comp=Z,0.6nm,0.6s,baz=95,slow=3.6,SNR=6.2						
NVAR				LR	LR	14 01 49.0	
	comp=Z,255nm,20.4s,baz=136,slow=39						
	comp=Z,5.3nm,0.7s						
NVAR	Mina Array Bea	36.69	320	P	P	13 45 02.1	+1.7
NVAR					PcP	13 47 24.2	+1.9
H17A	Grant Village	36.70	333	IAmb	IAmb	13 45 06.3	
	comp=Z,8.0nm,0.8s						
LHV	Little Huntoon	36.71	319	IAmb	IAmb	13 45 04.1	
	comp=Z,9.8nm,0.8s						
ITTB	Itaituba	36.91	115	*e*P	P	13 44 60.0	-2.4
YNE	Yellowstone No	36.95	335	IAmb	IAmb	13 45 04.2	
	comp=Z,12nm,0.8s						
YNR	Norris Junctio	37.00	334	IAmb	IAmb	13 45 08.6	
	comp=Z,12nm,0.9s						
YHL	Hebgen Lake	37.32	333	IAmb	IAmb	13 45 11.8	
	comp=Z,11nm,0.7s						
WAKR	Walker	37.45	319	IAmb	IAmb	13 45 15.5	
	comp=Z,31nm,2.0s						
ULM	Lac du Bonnet	37.88	353	P	P	13 45 09.0	-1.1
	comp=Z,18nm,0.6s,baz=165,slow=10,SNR=22						
ULM				LR	LR	14 01 51.6	
	comp=Z,266nm,22.0s,baz=176,slow=38						
	comp=Z,18nm,0.6s						
ULM	Lac du Bonnet	37.88	353	*i* P	P	13 45 08.7	-1.3
VILB	Vilhena	38.09	131	P	P	13 45 12.3	+0.1
VILB	Vilhena	38.09	131	*e*P	P	13 45 12.5	+0.3
BOZ	Bozeman (W)	38.10	334	IAmb	IAmb	13 45 16.9	
	comp=Z,12nm,0.8s						
DLMT	Dillon	38.35	333	IAmb	IAmb	13 45 16.7	
	comp=Z,8.5nm,0.8s						
NPGB	Novo Progresso	38.54	119	*e*P	P	13 45 15.6	-0.5
BEKR	Beckworth	38.82	320		P	13 45 19.9	+1.5
WVOR	Wild Horse Val	39.35	324	IAmb	IAmb	13 45 25.4	
	comp=Z,6.8nm,0.7s						
WVOR	Wild Horse Val	39.35	324	P	P	13 45 23.1	+0.4
J08A	Circle Bar Ran	39.86	326	IAmb	IAmb	13 45 33.7	
	comp=Z,5.8nm,0.6s						
PDRB	Porto dos Gac	39.91	126	*e*P	P	13 45 26.4	-1.1
MSO	Missoula	40.07	333	P	P	13 45 28.9	+0.3
CLDB	Colider	40.23	124	*e*P	P	13 45 29.0	-1.1
PTLB	Pontes e Lacer	40.51	133	P	P	13 45 31.9	-0.5
I07A	Izee	40.90	326		P	13 45 36.3	+0.8
YBH	Yreka Blue Hor	41.35	321	LR	LR	14 04 25.7	
	comp=Z,14nm,20.0s,baz=128,slow=38						
PINE	Pine Mountain	41.52	324		P	13 45 40.9	+0.3
J04A	Umpqua Nationa	41.86	323	IAmb	IAmb	13 45 45.4	
	comp=Z,9.4nm,0.8s						
NEW	Newport	42.58	332	P	P	13 45 49.3	+0.2
	comp=Z,4.1nm,0.7s,baz=131,slow=12,SNR=8.4						
NEW				PcP	PcP	13 47 40.8	+0.2
	comp=Z,3.4nm,0.6s,baz=117,slow=3.5,SNR=5.7						
NEW				LR	LR	14 08 47.7	
	comp=Z,136nm,18.6s,baz=130,slow=43						
	comp=Z,4.1nm,0.7s						
C09A	Chrisman Ranch	42.79	331	IAmb	IAmb	13 45 55.6	
	comp=Z,7.2nm,0.6s						
I03D	Drain, OR	42.86	323	IAmb	IAmb	13 45 51.0	
	comp=Z,58nm,1.9s						

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HOOD  Mount Hood Mea  42.87 326  IAmb   IAmb   13 46 04.5
      comp=Z,23nm,1.0s
FFC   Flin Flon       43.18 349         P      13 45 53.7  0.0
FFC                              IAmb   IAmb   13 45 54.8
      comp=Z,26nm,0.7s
FFC   Flin Flon       43.18 349  P      P      13 45 53.7  0.0
FFC                              pmax   pmax
      comp=Z,26nm,0.7s
FFC   Flin Flon       43.18 349  P      P      13 45 54.0 +0.3
SALV  Santo Antonio   43.32 130  eP     P      13 45 54.3 -1.1
LTY   Liberty         43.60 328  IAmb   IAmb   13 46 06.4
      comp=Z,27nm,1.9s
G03D  McMinnville, O  43.70 325  IAmb   IAmb   13 45 59.7
      comp=Z,10nm,0.8s
RPN   Rapa Nui        44.38 207  LR     LR     13 59 58.9
      comp=Z,177nm,19.4s,baz=341,slow=30
SNDB  Serra Nova Dou  44.51 122  eP     P      13 46 04.7 -0.3
PP1B  Ponte de Pedra  44.99 131  eP     P      13 46 07.7 -1.1
SCHQ  Schefferville   45.38  18  P      P      13 46 10.2 -1.1
      comp=Z,15nm,0.7s,baz=233,slow=11,SNR=20
SCHQ                             LR     LR     14 06 26.2
      comp=Z,326nm,18.4s,baz=199,slow=38
      comp=Z,15nm,0.7s
SCHQ  Schefferville   45.38  18  IAmb   IAmb   13 46 10.9
      comp=Z,171nm,0.8s
BDQN  Bodoquena, MS   45.56 136  eP     P      13 46 12.8 -0.3
B04A  Port Angeles    45.58 328  IAmb   IAmb   13 46 15.1
      comp=Z,8.7nm,0.8s
MURT  Porto Murtinho  45.83 138  eP     P      13 46 14.9 -0.3
SMTB  Santa Maria do  46.15 116  eP     P      13 46 16.6 -1.4
ARAG  Araguaiana, MT  46.17 127  eP     P      13 46 17.3 -0.7
LLLB  Lillooet        46.44 331  IAmb   IAmb   13 46 24.0
      comp=Z,5.7nm,0.7s
H03N2 Juan Fernandez  46.84 169  T      T      14 36 23.7
      baz=347,slow=76
H03N1 Juan Fernandez  46.85 169  T      T      14 36 22.7
      baz=347,slow=76
H03N3 Juan Fernandez  46.86 169  T      T      14 36 23.3
      baz=347,slow=76
AMBA  Amambai (Brazi  48.44 137  eP     P      13 46 36.0 +0.4
BDFB  Brasilia        49.16 124  P      P      13 46 41.3 -0.1
      comp=Z,12nm,0.6s,baz=283,slow=8.5,SNR=19
BDFB                             LR     LR     14 10 27.1
      comp=Z,155nm,18.1s,baz=356,slow=40
      comp=Z,12nm,0.6s
CPUP  Villa Florida   49.39 142  P      P      13 46 42.8  0.0
      comp=Z,1.1nm,0.5s,baz=187,slow=8.6,SNR=9.6
CPUP                             LR     LR     14 08 40.0
      comp=Z,31nm,18.1s,baz=182,slow=37
      comp=Z,1.1nm,0.5s
CPUP  Villa Florida   49.39 142         P      13 46 42.4 -0.4
CPUP                             IAmb   IAmb   13 46 44.0
      comp=Z,14nm,1.7s
CPUP  Villa Florida   49.39 142  eP     P      13 46 42.6 -0.2
ITRB  Iturama         49.65 130  eP     P      13 46 45.6 +0.6
IPMB  Ipameri, GO     50.29 127  eP     P      13 46 49.3 -0.6
BBB   Bella Bella     50.45 330  LR     LR     14 11 18.5
      comp=Z,71nm,19.9s,baz=152,slow=40
BLKN  Baker Lake      51.78 356  IAmb   IAmb   13 47 00.8
      comp=Z,13nm,0.8s
BB19B Bebedouro       51.84 130  eP     P      13 47 01.3 -0.2
JANB  Januaria        51.91 121  eP     P      13 47 00.5 -1.6
PSAL  Palomas, Salto  52.82 146  eP     P      13 47 09.3 +0.8
FRB   Frobisher Bay   52.89  11  P      P      13 47 06.8 -1.8
      comp=Z,18nm,0.6s,baz=215,slow=8.6,SNR=11
      comp=Z,18nm,0.6s
YKA   Yellowknife Ar  53.03 345  P      P      13 47 09.3 -0.3
      comp=Z,23nm,0.8s,baz=144,slow=7.3,SNR=178
YKA                              PcP    PcP    13 48 17.8 +0.3
      comp=Z,1.6nm,0.6s,baz=157,slow=3.6,SNR=4.2
YKA                              LR     LR     14 12 16.5
      comp=Z,187nm,19.3s,baz=84,slow=39
      comp=Z,23nm,0.8s
YKA   Yellowknife Ar  53.03 345  eP     P      13 47 09.3 -0.3
YKA                              pmax   pmax
      comp=Z,24nm,0.8s
ITAB  Concordia       53.28 139         P      13 47 12.0  0.0
ITAB  Concordia       53.28 139  eP     P      13 47 11.9  0.0
TOAD  Toad River Com  53.51 337  P      P      13 47 13.3 -0.1
      baz=134
U35K  Hyder           53.59 333  P      P      13 47 13.6 -0.2
      baz=127
V35K  Ketchikan       53.98 331  P      P      13 47 16.4 -0.2
      baz=125
KOTAN Kotaneelee Air  53.99 339  P      P      13 47 16.9 +0.2
      baz=136
DIAM  Diamantina, MG  54.08 124  eP     P      13 47 17.9 -0.2
VAO   Valinhos        54.15 131  eP     P      13 47 18.6 +0.1
LIRD  Liard River Hi  54.22 338  P      P      13 47 18.5 +0.1
      baz=133
T35M  Bob Quinn       54.33 333  P      P      13 47 19.6 +0.3
      baz=127
CPSB  Cacapava Do Su  54.69 142  eP     P      13 47 22.3 +0.1
CRAG  Craig           54.77 331  P      P      13 47 22.6 +0.2
      baz=123
WRAK  Wrangell Islan  54.94 332  P      P      13 47 23.7 +0.1
      baz=124
U33K  Whale Pass      55.12 331  P      P      13 47 25.3 +0.3
      baz=124
DLBC  Dease Lake      55.13 335  LR     LR     14 12 37.4
      comp=Z,80nm,21.8s,baz=94,slow=38
DLBC  Dease Lake      55.13 335  P      P      13 47 25.7 +0.6
      baz=128
S34M  Telegraph Cree  55.28 334  P      P      13 47 26.6 +0.5
      baz=127
TAOE  Nuku Hiva Isla  55.40 250  eLR    LR     14 03 28.5
      comp=Z,258nm,24.2s
T33K  Petersburg      55.44 332  P      P      13 47 27.8 +0.6
      baz=124
PLTB  Pedras Altas    55.58 144  eP     P      13 47 29.1 +0.4
WTLY  Watson Lake, Y  55.71 337  P      P      13 47 29.9 +0.7
      baz=130
PLCA  Paso Flores     55.79 163  P      P      13 47 31.3 +1.3
      comp=Z,3.1nm,1.0s,baz=336,slow=11,SNR=3.5
PLCA                             LR     LR     14 06 07.2
      comp=Z,70nm,21.1s,baz=18,slow=30
      comp=Z,3.1nm,1.0s
PLCA  Paso Flores     55.79 163  IAmb   IAmb   13 48 00.3
      comp=Z,21nm,1.6s
WRGLY Wrigley         56.06 342  P      P      13 47 31.8 +0.2
      baz=138
R33M  Jennings River  56.11 336  P      P      13 47 32.5 +0.3
      baz=128
Q32M  Nakina River    56.38 335  P      P      13 47 34.4 +0.1
      baz=126
ILON  Igloolik, Nuna  56.77   3         P      13 47 35.4 -1.1
RIB01 Linhares ES     57.27 123  eP     P      13 47 40.4 -0.5
P33M  Teslin, Yukon   57.35 336  P      P      13 47 41.5 +0.6
      baz=126
P32M  Atlin           57.35 335  P      P      13 47 41.1 +0.2
      baz=125
CAM01 Campos-RJ       57.54 126  eP     P      13 47 43.0 +0.2
S31K  Pelican         57.55 332  P      P      13 47 42.7 +0.4
      baz=121
RKT   Rikitea         57.61 232  eLR    LR     14 04 37.7
      comp=Z,956nm,30.0s
SKAG  Skagway         57.96 334  P      P      13 47 45.7 +0.6
      baz=123
N32M  Quiet Lake      58.01 336  P      P      13 47 46.4 +0.9
      baz=126
O30N  Mendenhall      59.00 335  P      P      13 47 52.9 +0.5
      baz=123
P30M  Million Dollar  59.01 334  P      P      13 47 52.7 +0.2
      baz=122
P29M  Windy Craggy    59.09 333  P      P      13 47 52.8 -0.3
      baz=121
M31M  Drury Creek, Y  59.14 337  P      P      13 47 53.6 +0.3
      baz=125
N31M  Braeburn, Yuko  59.27 336  P      P      13 47 55.1 +0.8
      baz=124
HYT   Haines Junctio  59.62 335  P      P      13 47 56.9 +0.2
      baz=122
N30M  Aishikik Lake   59.78 335  P      P      13 47 58.0 +0.3
      baz=122
O29M  Mount Kennedy   59.80 334  P      P      13 47 57.9 -0.1
      baz=120
YUK6  Outpost Mounta  60.03 335  P      P      13 47 59.7 -0.1
      baz=121
M30M  Minto, Yukon    60.27 337  P      P      13 48 01.4 +0.3
      baz=123
YUK4  Talbot Arm      60.36 335  P      P      13 48 01.6 -0.4
      baz=121
PINM  Pinnacle        60.43 333  P      P      13 48 02.2  0.0
      baz=118
MAYO  Mayo, Yukon     60.51 338  P      P      13 48 02.5 -0.1
      baz=124
O28M  Mount Upton     60.73 334  P      P      13 48 03.6 -1.0
      baz=119
YUK8  Steele Glacier  60.80 335  P      P      13 48 03.6 -1.4
      baz=120
M29M  Somme Creek     60.86 336  IAmb   IAmb   13 48 07.1
      comp=Z,15nm,1.0s
M29M  Somme Creek     60.86 336  P      P      13 48 06.0 +0.9
      baz=121
C36M  Paulatuk        60.86 346  P      P      13 48 04.1 -0.7
      baz=140
L29M  L29M            61.08 337  P      P      13 48 07.4 +0.8
      baz=122
MESA  MESA            61.22 333  P      P      13 48 07.6 -0.2
      baz=117
J30M  Hart River      61.22 339  P      P      13 48 08.2 +0.5
      baz=124
K29M  Barlow Dome     61.25 338  P      P      13 48 07.9 +0.1
      baz=123
H31M  Peel River      61.27 340  P      P      13 48 07.1 -0.7
      baz=127
CTG   Chitna Glacier  61.31 334  P      P      13 48 07.4 -0.9
      baz=118
YUK3  Moose Creek     61.33 335  P      P      13 48 07.6 -0.9
      baz=119
I30M  Mount Dempster  61.61 339  IAmb   IAmb   13 48 11.1
      comp=Z,8.6nm,0.8s
I30M  Mount Dempster  61.61 339  P      P      13 48 09.8 -0.4
      baz=125
RES   Resolute Bay    62.05 358  P      P      13 48 11.9 -0.9
      comp=Z,12nm,0.7s,baz=183,slow=8.8,SNR=46
      comp=Z,12nm,0.7s
DAWY  Dawson          62.06 337  P      P      13 48 12.8 -0.4
      baz=121
F31M  Tsiigehtchic    62.09 342  P      P      13 48 12.9 -0.3
      baz=128
M27K  Edge Creek, AK  62.19 335  P      P      13 48 13.8 -0.5
      baz=118
KAIM  Kayak Island    62.22 332  P      P      13 48 13.4 -0.8
      baz=114
MCARA McCarthy VSAT   62.23 334  P      P      13 48 14.1 -0.2
      baz=116
EPYK  Eagle Plains    62.39 340  P      P      13 48 15.7 +0.4
      baz=125
L27K  Beaver Creek,   62.51 336  P      P      13 48 15.9 -0.3
      baz=118
INK   Inuvik          62.58 343  LR     LR     14 18 31.0
      comp=Z,108nm,18.5s,baz=341,slow=39
INK   Inuvik          62.58 343  P      P      13 48 15.6 -0.9
      baz=129
G30M  tAoh Zraii Nji  62.58 341  IAmb   IAmb   13 48 20.7
      comp=Z,9.3nm,1.0s
G30M  tAoh Zraii Nji  62.58 341  P      P      13 48 16.0 -0.7
      baz=126
M26K  Nabesna, AK     62.68 335  P      P      13 48 16.8 -0.6
      baz=117
BMRM  Bremner River   62.74 333  P      P      13 48 17.3 -0.5
      baz=114
F30M  Barrier River   62.82 342  P      P      13 48 17.8 -0.4
      baz=126,SNR=24
H29M  Whitestone      62.85 340  IAmb   IAmb   13 48 19.4
      comp=Z,7.8nm,0.7s
H29M  Whitestone      62.85 340  P      P      13 48 18.8 +0.4
      baz=123
Q23K  Middleton Isla  62.93 331  P      P      13 48 18.3 -0.6
      baz=112
I28M  Miner Creek     62.98 339  P      P      13 48 18.4 -1.0
      baz=121
N25K  Chitina, Valde  63.01 334  P      P      13 48 20.7 +1.1
N25K  Chitina, Valde  63.01 334  P      P      13 48 19.4 -0.2
      baz=115
K27K  Chicken         63.07 337  P      P      13 48 19.1 -0.7
      baz=118
EYAK  Cordova Ski Ar  63.08 332  P      P      13 48 19.1 -0.8
      baz=113
L26K  Log Cabin Wild  63.10 335  P      P      13 48 20.2  0.0
      baz=117
G29M  Pine Creek      63.12 340  P      P      13 48 20.0 -0.2
      baz=124,SNR=8.9
A36M  Sachs Harbour   63.13 348  P      P      13 48 19.5 -0.6
      baz=139
KLU   Klutina         63.54 333  P      P      13 48 22.7 -0.4
      baz=114
HARP  HAARP           63.58 334  P      P      13 48 23.2 -0.1
      baz=115
P23K  Montague Islan  63.63 331  P      P      13 48 23.6 -0.1
      baz=111
I27K  Kandik River    63.67 338  IAmb   IAmb   13 48 28.2
      comp=Z,7.6nm,0.8s
I27K  Kandik River    63.67 338  P      P      13 48 23.3 -0.6
      baz=120
SCRK  Sand Creek      63.79 336  P      P      13 48 24.0 -0.8
      baz=116
GLI   Glacier Island  63.82 332  P      P      13 48 24.5 -0.4
      baz=112
J26L  Joseph Creek    63.87 337  IAmb   IAmb   13 48 27.1
      comp=Z,7.7nm,1.0s
J26L  Joseph Creek    63.87 337  P      P      13 48 24.5 -0.8
      baz=117
E29M  Blow River      63.92 342  IAmb   IAmb   13 48 26.7
      comp=Z,8.4nm,0.7s
E29M  Blow River      63.92 342  P      P      13 48 25.0 -0.4
      baz=124
H27K  Steamboat Moun  63.95 339  IAmb   IAmb   13 48 27.0
      comp=Z,13nm,0.8s
H27K  Steamboat Moun  63.95 339  P      P      13 48 25.2 -0.5
      baz=120,SNR=15
PAX   Paxson          63.95 335  P      P      13 48 25.1 -0.8
      baz=115
RIDG  Independent Ri  64.03 336  IAmb   IAmb   13 48 28.4
      comp=Z,10nm,0.9s
RIDG  Independent Ri  64.03 336  P      P      13 48 25.8 -0.5
      baz=116
I26K  Coal Creek Min  64.09 338  P      P      13 48 26.2 -0.3
      baz=118
F28M  Old Crow        64.11 341  P      P      13 48 26.2 -0.5
      baz=122
G27K  Doyon Strip     64.29 339  IAmb   IAmb   13 48 28.5
      comp=Z,5.9nm,0.7s
G27K  Doyon Strip     64.29 339  P      P      13 48 26.9 -1.0
      baz=120
PWL   Port Wells      64.38 332  P      P      13 48 27.7 -0.8
      baz=111
K24K  Donnelly Dome   64.43 336  IAmb   IAmb   13 48 29.8
      comp=Z,20nm,1.1s
K24K  Donnelly Dome   64.43 336  P      P      13 48 28.2 -0.7
      baz=115
M23K  Glacier View    64.45 333  P      P      13 48 28.3 -0.7
      baz=112
E28M  Babbage River   64.54 342  IAmb   IAmb   13 48 30.2
      comp=Z,15nm,0.8s
E28M  Babbage River   64.54 342  P      P      13 48 28.7 -0.8
      baz=123,SNR=22
J25K  Salcha River,   64.61 337  IAmb   IAmb   13 48 32.0
      comp=Z,6.9nm,0.8s
J25K  Salcha River,   64.61 337  P      P      13 48 29.2 -0.9
      baz=115
KNK   Knik Glacier    64.63 333  P      P      13 48 29.3 -0.9
      baz=111
SEW   Seward          64.64 331  P      P      13 48 29.3 -0.9
      baz=110
D28M  Stokes Point    64.71 342  P      P      13 48 29.9 -0.6
      baz=124
SML   Sawmill         64.72 333  P      P      13 48 30.4 -0.4
      baz=111
WAT6  Susitna Watana  64.75 334  P      P      13 48 30.7 -0.4
      baz=112
DHY   Denali Highway  64.79 335  P      P      13 48 31.0 -0.4
      baz=113
O22K  Cooper Landing  64.89 331  P      P      13 48 32.0 +0.2
      baz=109
E27K  Coleen River    64.97 341  IAmb   IAmb   13 48 33.9
      comp=Z,11nm,0.8s
E27K  Coleen River    64.97 341  P      P      13 48 32.3  0.0
      baz=121,SNR=12
PMR   Palmer          65.00 333  P      P      13 48 32.7 +0.2
      baz=110
PRP   Porcupine Dome  65.07 337  IAmb   IAmb   13 48 34.3
      comp=Z,8.2nm,0.8s
PRP   Porcupine Dome  65.07 337  P      P      13 48 33.4 +0.3
      baz=116
G26K  Porcupine Rive  65.09 339  IAmb   IAmb   13 48 34.0
      comp=Z,8.1nm,0.8s
G26K  Porcupine Rive  65.09 339  P      P      13 48 33.3 +0.3
      baz=118
RC01  Rabbit Creek A  65.10 332  P      P      13 48 33.2  0.0
      baz=110
HDA   Harding Lake    65.15 336  IAmb   IAmb   13 48 34.6
      comp=Z,8.9nm,0.8s
HDA   Harding Lake    65.15 336  P      P      13 48 33.4 -0.1
      baz=114
WAT1  Susitna Watana  65.19 334  P      P      13 48 34.0 +0.2
      baz=112
IL31                  65.27 336  IAmb   IAmb   13 48 36.0
      comp=Z,11nm,1.1s
ILAR  Eielson Array   65.27 336  P      P      13 48 34.1 -0.2
      comp=Z,6.0nm,0.9s,baz=110,slow=5.0,SNR=50
ILAR                             LR     LR     14 19 53.3
      comp=Z,114nm,20.3s,baz=72,slow=38
      comp=Z,6.0nm,0.9s
ILAR  Eielson Array   65.27 336         P      13 48 33.7 -0.6
D27M  Malcolm River   65.33 342  IAmb   IAmb   13 48 35.8
      comp=Z,11nm,0.7s
D27M  Malcolm River   65.33 342  P      P      13 48 34.6  0.0
      baz=122,SNR=20
KDAK  Kodiak Island   65.48 328  P      P      13 48 35.3 -0.3
      baz=106
H25L  Birch Creek     65.50 338  P      P      13 48 35.6 -0.1
      baz=116
F26K  Sheenjek River  65.56 340  IAmb   IAmb   13 48 37.5
      comp=Z,9.0nm,0.8s
F26K  Sheenjek River  65.56 340  P      P      13 48 36.4 +0.2
      baz=118
Q20K  Shuyak Island   65.61 329  P      P      13 48 36.5  0.0
      baz=106
POKR  Poker Plat Res  65.62 337  P      P      13 48 37.1 +0.6
      baz=114
WRH   Wood River Hil  65.63 336  IAmb   IAmb   13 48 37.1
      comp=Z,8.9nm,1.0s
CAPN  Captain Cook N  65.65 331  P      P      13 48 37.0 +0.3
      baz=108
SUA   Susitna One     65.69 332  P      P      13 48 37.6 +0.4
      baz=109
MCK   McKinley        65.69 335  IAmb   IAmb   13 48 38.8
      comp=Z,12nm,1.1s
MCK   McKinley        65.69 335  P      P      13 48 37.2 +0.2
      baz=112
COLA  College         65.69 336 iP      P      13 48 36.9  0.0
COLA                             pmax   pmax
      comp=Z,48nm,5.8s
CUT   Chulitna        65.78 333  P      P      13 48 37.4 -0.2
      baz=110
G25K  Bearman Lake    65.82 339  P      P      13 48 38.0 +0.3
      baz=116
SII   Sitkinak Islan  66.01 327  P      P      13 48 38.9 -0.3
      baz=104
F25K  Christian Rive  66.03 339  IAmb   IAmb   13 48 40.8
      comp=Z,11nm,0.7s
F25K  Christian Rive  66.03 339  P      P      13 48 39.3 +0.2
      baz=116,SNR=13
NEA2  Nenana          66.06 336  P      P      13 48 38.8 -0.6
      baz=112
H24K  Noodor Dome     66.09 337  IAmb   IAmb   13 48 40.9
      comp=Z,5.4nm,0.8s
H24K  Noodor Dome     66.09 337  P      P      13 48 39.2 -0.4
      baz=113
O20K  Slope Mountain  66.14 331  P      P      13 48 40.0  0.0
      baz=106
TRF   Thorofare Moun  66.15 334  IAmb   IAmb   13 48 43.9
      comp=Z,17nm,1.2s
TRF   Thorofare Moun  66.15 334  P      P      13 48 40.3 +0.1
      baz=110
SKT   Skwentna        66.20 333  P      P      13 48 40.0 -0.4
      baz=108
E25K  Arctic Village  66.24 340  IAmb   IAmb   13 48 42.0
      comp=Z,9.5nm,0.7s
E25K  Arctic Village  66.24 340  P      P      13 48 40.3 -0.1
      baz=117
SPCR  Spurr Chakacha  66.27 332  P      P      13 48 41.0 +0.1
      baz=107
G24K  Hadweenzic Riv  66.29 338  P      P      13 48 40.1 -0.7
      baz=114
P19K  Oil Pt          66.31 330  P      P      13 48 41.0 -0.1
      baz=106
C27K  Jago River      66.36 342  IAmb   IAmb   13 48 42.5
      comp=Z,11nm,0.8s
C27K  Jago River      66.36 342  P      P      13 48 41.4 +0.2
      baz=119
I23K  Minto, Yukon-K  66.39 336  IAmb   IAmb   13 48 42.4
      comp=Z,8.4nm,0.8s
I23K  Minto, Yukon-K  66.39 336  P      P      13 48 41.3 -0.1
      baz=112
BPAW  Bear Paw Mtn.   66.67 335  IAmb   IAmb   13 48 44.2
      comp=Z,8.9nm,0.8s
BPAW  Bear Paw Mtn.   66.67 335  P      P      13 48 42.8 -0.5
      baz=110
H23K  Yukon River     66.71 337  P      P      13 48 43.5  0.0
      baz=112
F24K  Squaw Lake      66.77 339  IAmb   IAmb   13 48 45.9
      comp=Z,5.4nm,0.8s
F24K  Squaw Lake      66.77 339  P      P      13 48 43.9 -0.1
      baz=114
PPLA  Purkeypile      66.78 334  P      P      13 48 43.7 -0.6
      baz=108
C26K  Camden Bay      66.86 342  P      P      13 48 44.3 -0.1
      baz=118,SNR=18
M20K  Styx River      66.90 332  P      P      13 48 44.7 -0.2
      baz=107
Q18K  Katmai Hardscr  66.94 329  P      P      13 48 44.9 -0.3
      baz=104
O19K  Port Alsworth   66.98 330  P      P      13 48 45.4 +0.1
      baz=105
D25K  Kavik River     67.05 341  P      P      13 48 45.4 -0.2
      baz=116,SNR=27
CHUM  Lake Minchumin  67.15 335  P      P      13 48 46.9 +0.6
      baz=108
PPT2  Papeete2        67.20 245  eS     S      13 57 37.2 -1.3
      comp=Z,41nm,24.8s
PPT2  Papeete2        67.20 245  eLR    LR     14 09 01.6
      comp=Z,252nm,24.2s
PPT2                             eLR    LR     14 09 02.1
      comp=Z,193nm,25.8s
E24K  Your Creek      67.21 339  P      P      13 48 46.7  0.0
      baz=114
G23K  Bananza Creek   67.22 338  IAmb   IAmb   13 48 48.1
      comp=Z,6.1nm,0.8s
G23K  Bananza Creek   67.22 338  P      P      13 48 47.5 +0.7
      baz=112
N19K  Bonanza Creek   67.23 331  P      P      13 48 46.5 -0.5
      baz=105
P18K  Big Mountain,   67.23 329  P      P      13 48 46.5 -0.4
      baz=104
Q17K  Contact Creek   67.30 328  P      P      13 48 47.4 -0.1
      baz=103
O18K  Koktuh Hills    67.33 330  P      P      13 48 47.5 -0.1
      baz=104
L20K  Farewell, AK    67.40 333  IAmb   IAmb   13 48 48.3
      comp=Z,8.3nm,0.8s
L20K  Farewell, AK    67.40 333  P      P      13 48 47.7 -0.3
      baz=106
R17L  Mt. Peulik Vol  67.41 327  P      P      13 48 47.6 -0.4
      baz=102
H22K  Ishtalitna Cre  67.44 337  IAmb   IAmb   13 48 48.5
      comp=Z,6.5nm,1.0s
H22K  Ishtalitna Cre  67.44 337  P      P      13 48 47.4 -0.7
      baz=110
COLD  Coldfoot        67.48 338  IAmb   IAmb   13 48 50.3
      comp=Z,11nm,0.9s
COLD  Coldfoot        67.48 338  P      P      13 48 48.0 -0.4
      baz=112
E23K  Chandalar       67.59 339  IAmb   IAmb   13 48 50.9
      comp=Z,13nm,0.8s
E23K  Chandalar       67.59 339  P      P      13 48 48.6 -0.6
      baz=113,SNR=9.5
K20K  Telida          67.74 334  P      P      13 48 49.9 -0.2
      baz=106
L19K  White Mountain  67.76 332  P      P      13 48 49.9 -0.3
      baz=105
D24K  Happy Valley    67.76 340  P      P      13 48 49.7 -0.4
      baz=114
Q16K  King Salmon     67.78 328  P      P      13 48 50.8 +0.4
      baz=102
TOLK  Toolik Lake Re  67.81 340  IAmb   IAmb   13 48 51.4
      comp=Z,8.9nm,0.7s
TOLK  Toolik Lake Re  67.81 340  P      P      13 48 50.9 +0.5
      baz=113
G22K  Bettles         67.85 338  P      P      13 48 51.2 +0.6
      baz=110
N18K  Kilae Creek     67.86 331  P      P      13 48 50.9  0.0
      baz=104
H21K  Melozitna Rive  67.92 336  P      P      13 48 51.3 +0.2
      baz=109
C24K  Franklin Bluff  67.96 341  P      P      13 48 51.6 +0.4
      baz=114
J20K  Nowinta River   68.01 335  P      P      13 48 51.9 +0.2
      baz=107
M18K  Stony River     68.03 332  P      P      13 48 52.1 +0.2
      baz=104
O17K  Koliganek Bris  68.24 330  P      P      13 48 53.6 +0.4
```

	baz=102						
F22K	**John River**	**68.30**	**338**	P	**P**	**13 48 53.3**	**-0.2**
	baz=110,SNR=7.4						
D23K	**Nanushuk River**	**68.30**	**340**	P	**P**	**13 48 53.6**	**+0.1**
	baz=112						
I20K	**Naaghedeneel**	**68.33**	**335**	P	**P**	**13 48 53.5**	**-0.1**
	baz=107						
E22K	**Anaktuvuk Pass**	**68.39**	**339**		**P**	**13 48 54.1**	**0.0**
E22K				IAmb	IAmb	13 48 55.1	
	comp=Z,7.4nm,0.8s						
E22K	**Anaktuvuk Pass**	**68.39**	**339**	P	**P**	**13 48 53.9**	**-0.2**
	baz=110						
N17K	**Nushagak Hills**	**68.45**	**330**	P	**P**	**13 48 54.1**	**-0.4**
	baz=102						
G21K	**Allakaket**	**68.46**	**337**	P	**P**	**13 48 54.6**	**+0.1**
	baz=108						
J19K	**Poorman**	**68.58**	**334**	P	**P**	**13 48 55.1**	**-0.2**
	baz=105						
L18K	**Granite Mounta**	**68.60**	**332**	P	**P**	**13 48 56.0**	**+0.5**
	baz=104						
C23K	**Itkillik River**	**68.61**	**341**	IAmb	IAmb	13 48 56.8	
	comp=Z,17nm,0.9s						
C23K	**Itkillik River**	**68.61**	**341**	P	**P**	**13 48 55.4**	**0.0**
	baz=112						
F21K	**Alatna River**	**68.68**	**338**	IAmb	IAmb	13 48 57.5	
	comp=Z,16nm,0.8s						
F21K	**Alatna River**	**68.68**	**338**	P	**P**	**13 48 56.3**	**+0.4**
	baz=108,SNR=12						
CHNA	**Chernabura Isl**	**68.68**	**324**	P	**P**	**13 48 56.3**	**+0.3**
	baz=98						
H20K	**Anotleneega Mo**	**68.69**	**336**	P	**P**	**13 48 56.0**	**0.0**
	baz=106						
O16K	**Kokwok River B**	**68.70**	**329**	P	**P**	**13 48 55.5**	**-0.6**
	baz=101						
M17K	**Holitna River**	**68.76**	**331**	P	**P**	**13 48 56.2**	**-0.3**
	baz=103						
J18K	**Innoko River**	**68.92**	**333**	P	**P**	**13 48 57.3**	**-0.1**
	baz=104						
D22K	**Ayikyak River**	**68.95**	**340**	P	**P**	**13 48 57.8**	**+0.3**
	baz=110						
N16K	**Nishlik Lake**	**69.20**	**330**	P	**P**	**13 48 59.4**	**+0.1**
	baz=101						
E21K	**Killik River**	**69.25**	**339**	P	**P**	**13 48 59.1**	**-0.3**
	baz=108						
SDPT	**Sand Point**	**69.26**	**325**	P	**P**	**13 48 59.8**	**+0.1**
	baz=98						
GCSA	**Galena City Sc**	**69.30**	**335**	P	**P**	**13 48 59.0**	**-0.7**
	baz=104						
L17K	**Donlin**	**69.32**	**332**	P	**P**	**13 48 59.5**	**-0.4**
	baz=102						
H19K	**Roundabout Mou**	**69.33**	**336**	IAmb	IAmb	13 49 00.9	
	comp=Z,8.6nm,0.9s						
H19K	**Roundabout Mou**	**69.33**	**336**	P	**P**	**13 48 59.7**	**-0.1**
	baz=105						
TBI	**Tubuai**	**69.38**	**239**	*e*LR	LR	14 10 09.7	
	comp=Z,662nm,24.8s						
M16K	**Timber Creek**	**69.40**	**331**	P	**P**	**13 48 59.9**	**-0.6**
	baz=101						
EFI	**East Falkland**	**69.43**	**160**	*i* P	**P**	**13 49 01.9**	**+1.3**
EFI				pmax	pmax		
	comp=Z,9.0nm,1.2s						
K17K	**Iditarod**	**69.44**	**333**	P	**P**	**13 49 00.6**	**-0.1**
	baz=102						
F20K	**Avaraart Lake**	**69.46**	**337**	P	**P**	**13 49 00.3**	**-0.4**
	baz=106						
O15K	**Ungalikthiuk R**	**69.49**	**329**	P	**P**	**13 49 00.7**	**-0.3**
	baz=100						
B22K	**Teshekpuk Lake**	**69.69**	**341**	IAmb	IAmb	13 49 02.9	
	comp=Z,14nm,0.9s						
B22K	**Teshekpuk Lake**	**69.69**	**341**	P	**P**	**13 49 02.5**	**+0.4**
	baz=110						
C21K	**Knifeblade Rid**	**69.75**	**340**	P	**P**	**13 49 02.4**	**-0.1**
	baz=108						
L16K	**Owhat River**	**69.78**	**331**	P	**P**	**13 49 02.7**	**-0.1**
	baz=101						
N15K	**Kwethluk River**	**69.80**	**330**	P	**P**	**13 49 03.4**	**+0.4**
	baz=100						
B21K	**Ikpikpuk River**	**69.84**	**340**	P	**P**	**13 49 03.2**	**+0.2**
	baz=108						
E20K	**Nigu River**	**69.98**	**339**	P	**P**	**13 49 03.9**	**0.0**
	baz=106						
H18K	**Honhosa River**	**70.01**	**335**	P	**P**	**13 49 04.4**	**+0.2**
	baz=103						
E19K	**Redstone River**	**70.14**	**338**	P	**P**	**13 49 04.1**	**-0.8**
	baz=105						
M15K	**Kasigluk River**	**70.18**	**330**	P	**P**	**13 49 04.6**	**-0.5**
	baz=99						
F19K	**Shaleruckik Mo**	**70.18**	**337**	P	**P**	**13 49 05.1**	**0.0**
	baz=104						
S12K	**Black Hills**	**70.20**	**325**	P	**P**	**13 49 04.6**	**-0.8**
	baz=96						
O14K	**Tigyukauivet M**	**70.23**	**329**	P	**P**	**13 49 05.1**	**-0.4**
	baz=98						
D20K	**Etivluk River**	**70.25**	**339**	IAmb	IAmb	13 49 07.2	
	comp=Z,12nm,0.9s						
D20K	**Etivluk River**	**70.25**	**339**	P	**P**	**13 49 06.1**	**+0.5**
	baz=106						
G18K	**Tagagawik**	**70.30**	**336**	P	**P**	**13 49 06.2**	**+0.2**
	baz=103						
A22K	**Sinclair Lake**	**70.40**	**341**	P	**P**	**13 49 06.8**	**+0.4**
	baz=108						
N14K	**Kuskokwak Cree**	**70.55**	**329**	P	**P**	**13 49 07.6**	**+0.2**
	baz=98						
J16K	**Anvik River**	**70.59**	**333**	IAmb	IAmb	13 49 09.3	
	comp=Z,21nm,1.1s						
J16K	**Anvik River**	**70.59**	**333**	P	**P**	**13 49 07.9**	**+0.2**
	baz=100						
H17K	**Granite Mounta**	**70.61**	**335**	P	**P**	**13 49 07.8**	**0.0**
	baz=102						
ALE	**Alert**	**70.62**	**4**	P	**P**	**13 49 06.4**	**-1.3**
L15K	**Ungalak Mounta**	**70.72**	**331**	P	**P**	**13 49 08.6**	**+0.1**
	baz=99						
D19K	**Kuna River**	**70.73**	**339**	P	**P**	**13 49 08.8**	**+0.3**
	baz=104						
I17K	**Unalakleet**	**70.74**	**334**	P	**P**	**13 49 08.8**	**+0.3**
	baz=100						
B20K	**Meade River**	**70.80**	**340**	P	**P**	**13 49 09.1**	**+0.3**
	baz=106						
M14K	**Bethel**	**70.80**	**330**	P	**P**	**13 49 09.1**	**+0.2**
	baz=98						
K15K	**Wolf Creek Mou**	**70.84**	**332**	P	**P**	**13 49 09.7**	**+0.5**
	baz=99						
F18K	**Selawik**	**70.86**	**336**	P	**P**	**13 49 09.5**	**+0.3**
	baz=102						
FALS	**False Pass**	**70.89**	**324**	P	**P**	**13 49 10.3**	**+0.7**
	baz=95						
G17K	**Kiwalik Mounta**	**71.03**	**335**	P	**P**	**13 49 10.3**	**0.0**
	baz=101						
L14K	**Kuka Creek**	**71.23**	**331**	P	**P**	**13 49 11.8**	**+0.3**
	baz=98						
E18K	**Tukpahlearik C**	**71.39**	**337**	P	**P**	**13 49 12.3**	**-0.2**
	baz=102						
C19K	**Lookout Ridge**	**71.40**	**339**	P	**P**	**13 49 12.7**	**+0.2**
	baz=103						
M13K	**Dall Lake**	**71.44**	**330**	P	**P**	**13 49 12.8**	**0.0**
	baz=97						
F17K	**Baldwin Pennin**	**71.45**	**336**	P	**P**	**13 49 13.0**	**+0.2**
	baz=101						
H16K	**Elim**	**71.53**	**334**	P	**P**	**13 49 13.3**	**-0.1**
	baz=99						
G16K	**Koyuk River**	**71.71**	**335**	P	**P**	**13 49 15.0**	**+0.6**
	baz=99						
E17K	**Hotham Inlet**	**71.79**	**337**	P	**P**	**13 49 15.1**	**+0.2**
	baz=100						
J14K	**Nanvaranak Lak**	**71.83**	**332**	P	**P**	**13 49 15.2**	**0.0**
	baz=98						
C18K	**Utukok River**	**71.86**	**338**	P	**P**	**13 49 15.5**	**+0.1**
	baz=102						
B18K	**Kokolik River**	**72.22**	**339**	P	**P**	**13 49 17.5**	**+0.1**
	baz=101						
K13K	**Kusilvak Mount**	**72.24**	**331**	P	**P**	**13 49 17.0**	**-0.7**
	baz=96						
G15K	**Niukluk**	**72.35**	**334**	P	**P**	**13 49 18.0**	**-0.2**
	baz=98						
RDOG	**Red Dog Mine**	**72.38**	**338**	P	**P**	**13 49 17.9**	**-0.5**
	baz=100						
D17K	**Noatak River**	**72.38**	**337**	P	**P**	**13 49 18.1**	**-0.3**
	baz=100						
C17K	**DeLong Mountai**	**72.55**	**338**	P	**P**	**13 49 18.8**	**-0.6**
	baz=100						
UNV	**Unalaska Valle**	**72.62**	**323**	P	**P**	**13 49 19.6**	**-0.5**
	baz=92						
F15K	**North Star Dit**	**72.70**	**335**	P	**P**	**13 49 20.1**	**-0.3**
	baz=97						
M11K	**Mekoryuk**	**72.84**	**330**	P	**P**	**13 49 20.8**	**-0.5**
	baz=94						
ANM	**Nome**	**72.86**	**334**	P	**P**	**13 49 20.9**	**-0.4**
	baz=96						
C16K	**Lisburne Hills**	**73.31**	**338**	P	**P**	**13 49 23.4**	**-0.5**
	baz=98						
F14K	**Arctic Creek**	**73.36**	**335**	P	**P**	**13 49 24.0**	**-0.3**
	baz=96						
NIKH	**Nikolski High**	**74.01**	**322**	P	**P**	**13 49 28.1**	**-0.2**
	baz=90						
TNA	**Tin City**	**74.03**	**335**	P	**P**	**13 49 27.0**	**-1.2**
	baz=94						
SPIA	**Saint Paul Isl**	**74.82**	**326**	P	**P**	**13 49 32.1**	**-0.8**
	baz=90						
GAMB	**Gambell**	**75.58**	**333**	P	**P**	**13 49 36.8**	**-0.3**
	baz=90						
EKA	**Eskdalemuir Ar**	**77.13**	**36**	P	**P**	**13 49 44.9**	**-1.2**
	comp=Z,1.2nm,0.7s,baz=263,slow=5.8,SNR=4.4						
	comp=Z,1.2nm,0.7s						
RAR	**Rarotonga**	**77.47**	**245**	LR	LR	14 15 06.9	
	comp=Z,86nm,18.2s,baz=86,slow=29						
ESDC	**Sonseca Array**	**78.00**	**52**	P	**P**	**13 49 49.8**	**-1.5**
	comp=Z,0.8nm,0.6s,baz=288,slow=4.8,SNR=5.9						
	comp=Z,0.8nm,0.6s						
MDT	**Midelt**	**78.33**	**59**	LR	LR	14 18 04.4	
	comp=Z,111nm,20.8s,baz=2.5,slow=31						
PMSA	**Palmer Station**	**79.50**	**170**	LR	LR	14 18 00.9	
	comp=Z,132nm,18.5s,baz=240,slow=30						
SPITS	**Spitsbergen Ar**	**80.69**	**12**	P	**P**	**13 50 04.9**	**-0.4**
	comp=Z,3.1nm,0.6s,baz=121,slow=3.2,SNR=4.6						
SPITS				LR	LR	14 28 26.7	
	comp=Z,90nm,18.0s,baz=274,slow=38						
	comp=Z,3.1nm,0.6s						
SMAI	**San Martin Ant**	**82.13**	**172**	P	**P**	**13 50 14.5**	**+1.7**
DBIC	**Dimbokro**	**82.60**	**85**	LR	LR	14 24 01.3	
	comp=Z,53nm,19.6s,baz=330,slow=34						
ARCES	**ARCESS Array B**	**86.33**	**19**	P	**P**	**13 50 32.5**	**-1.8**
	comp=Z,3.0nm,0.9s,baz=309,slow=5.7,SNR=3.5						
	comp=Z,3.0nm,0.9s						
ARCES	**ARCESS Array B**	**86.33**	**19**	*e*P	**P**	**13 50 38.8**	**+4.5**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SEY	**Seymchan**	**91.21**	**336**	LR	LR	14 36 57.9	
	comp=Z,62nm,18.6s,baz=52,slow=39						
SEY	**Seymchan**	**91.21**	**336**	*i* P	**P**	**13 50 56.6**	**-0.9**
SEY				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TIXI	**Tiksi**	**92.14**	**349**	LR	LR	14 35 05.6	
	comp=Z,81nm,21.9s,baz=13,slow=37						
TIXI	**Tiksi**	**92.14**	**349**	P	**P**	**13 51 01.0**	**-0.6**
TIXI				IAmb	IAmb	13 51 01.1	
	comp=Z,3.8nm,0.6s						
TIXI	**Tiksi**	**92.14**	**349**	*i* P	**P**	**13 50 59.8**	**-1.8**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MA2	**Magadan**	**93.65**	**334**	LR	LR	14 40 07.7	
	comp=Z,50nm,18.5s,baz=124,slow=40						
BELA	**Belgrano 2**	**95.33**	**170**	P	**P**	**13 51 16.4**	**+0.4**
BELA				IAmb	IAmb	13 52 57.1	
	comp=Z,2.3nm,0.7s						
NRIK	**Noril'sk**	**98.10**	**1**	LR	LR	14 37 20.7	
	comp=Z,137nm,21.9s,baz=359,slow=36						
YAK	**Yakutsk**	**99.64**	**343**	LR	LR	14 41 29.2	
	comp=Z,51nm,22.0s,baz=1.0,slow=38						
DZM	**Mont Dzumac**	**108.27**	**251**	*e*LR	LR	14 28 15.1	
	comp=Z,78nm,23.6s						
AKT	**Akhty**	**112.77**	**34**	*e*PKIKP	**PKiKP**	**13 56 28.8**	**-0.8**
ZALV	**Zalesovo Beam**	**113.36**	**4**	PKiKP	**PKiKP**	**13 56 29.7**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=285,slow=3.0,SNR=8.4						
KURK	**Kurchatov**	**115.87**	**9**	PKIKP	**PKiKP**	**13 56 35.0**	**0.0**
KURBB	**Kurchatov Arra**	**115.94**	**9**	PKP	**PKiKP**	**13 56 35.0**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=348,slow=1.9,SNR=17						
BOSA	**Boshof**	**116.93**	**116**	PKP	**PKiKP**	**13 56 39.0**	**+1.1**
	comp=Z,4.6nm,0.8s,baz=75,slow=2.2,SNR=4.1						
SONM	**Songino Array**	**118.23**	**348**	PKP	**PKiKP**	**13 56 40.7**	**+0.8**
	comp=Z,1.7nm,0.6s,baz=335,slow=1.8,SNR=10						
KSRS	**Korea Array**	**119.37**	**327**	PKP	**PKiKP**	**13 56 42.6**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=2.1,slow=1.9,SNR=5.3						
KSRS	**Korea Array**	**119.37**	**327**	*e*PKIKP	**PKiKP**	**13 56 43.3**	**+1.1**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**120.21**	**7**	PKP	**PKPdf**	**13 56 42.8**	**-0.8**
	comp=Z,1.0nm,0.8s,baz=3.8,slow=3.6,SNR=6.1						
HHC	**Hu-ho-hao-te**	**123.48**	**342**	*e*P	**PKiKP**	**13 56 51.6**	**+1.2**
GTA	**Gaotai**	**127.53**	**352**	*e*PKP	**PKiKP**	**13 56 58.5**	**0.0**
NJ2	**Nanjing**	**128.23**	**330**	*e*P	**PKiKP**	**13 57 00.4**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
LZDM	**Lanzhou Array**	**130.18**	**347**	PKP	**PKiKP**	**13 57 05.2**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=274,slow=4.3,SNR=5.3						
CD2	**Chengdu**	**134.99**	**345**	PKP	**PKPdf**	**13 57 11.0**	**-1.2**
WRA	**Warramunga Arr**	**138.15**	**254**	PKhKP	PKPpre	13 57 16.1	
	comp=Z,2.3nm,0.6s,baz=90,slow=2.3,SNR=8.8						
WRA	**Warramunga Arr**	**138.15**	**254**	*e*PKIKP	**PKPdf**	**13 57 19.0**	**+0.7**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ASAR	**Alice Springs**	**138.21**	**249**	PKhKP	PKPpre	13 57 09.3	
	comp=Z,0.8nm,0.6s,baz=108,slow=2.9,SNR=8.5						
PZH	**PanZhiHua**	**139.70**	**345**	PKP	**PKPdf**	**13 57 20.4**	**-0.8**
CMAR	**Chiang Mai Arr**	**148.11**	**346**	PKPbc	**PKPbc**	**13 57 37.9**	**-1.2**
	comp=Z,9.9nm,0.7s,baz=338,slow=3.4,SNR=57						

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*INMG **03** 13:53:30.2±2.1, 36°.47N×5°.32W, h4^{km}±5^{km}, ML2.1, Error ellipse: s-maj=6.2km s-min=4.2km az=0.0, #DIST_RANGE: REGIONAL #IPMA_REGION: N Gibraltar*

*SFS **03** 13:53:31.3, 36°.55N×5°.33W, h0^{km}, ML2.5/6, ML2.4/9, MLv2.4/9*

*MDD **03** 13:53:31.1±0.5, 36°.51N×5°.36W, h3^{km}±3^{km}, mb_Lg2.4/8, Error ellipse: s-maj=4.5km s-min=2.8km az=170.0*

ISC 03 13:53:29.5±1.0**, 36°.45N**±0°.04×**5°.33W**±0°.02**, h14**^{km}±7^{km}**, n24, σ0^{s}.92**/46**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EJIF	**Jimena Fronter**	**0.11**	**273**	Pg	**Pg**	**13 53 32.8**	**0.0**
EJIF				Sg	**Sb**	**13 53 35.8**	**-0.1**
EMIJ	**Mijas**	**0.47**	**75**	Pg	**Pg**	**13 53 38.0**	**-0.7**
EMIJ				Sg	**Sg**	**13 53 44.8**	**-0.3**
EMIJ	**Mijas**	**0.47**	**75**	Pg	**Pg**	**13 53 38.1**	**-0.7**
EMIJ				Sg	**Sg**	**13 53 44.8**	**-0.3**
EMIJ				*i* IVmb_Lg		13 53 46.7	
ECEU	**Ceuta**	**0.55**	**184**	Pg	**Pn**	**13 53 43.7**	**+0.8**
ECEU				Sg	**Sn**	**13 53 52.6**	**+0.7**
CNIL	**Conil**	**0.59**	**263**	Pg	**Pn**	**13 53 42.0**	**-1.4**
ESPR	**Espera**	**0.60**	**315**	Pg	**Pg**	**13 53 41.2**	**0.0**
ESPR	**Espera**	**0.60**	**315**	Pg	**Pg**	**13 53 41.5**	**+0.3**
ESPR				Sg	**Sg**	**13 53 49.6**	**+0.5**
ESPR				*i* IVmb_Lg		13 53 59.0	
EGOR	**Sierra Gorda,**	**1.18**	**56**	Pg	**Pb**	**13 53 52.2**	**+0.4**
EGOR				Sg	**Sg**	**13 54 08.7**	**+0.9**
EGOR	**Sierra Gorda,**	**1.18**	**56**	Pg	**Pg**	**13 53 52.8**	**+0.5**
EGOR				Sg	**Sg**	**13 54 09.8**	**+2.0**
EGOR				*i* IVmb_Lg		13 54 14.4	
ELGU	**Los Guajares,**	**1.43**	**72**	Pn	**Pn**	**13 53 52.6**	**-2.5**
ELGU				Pg	**Pg**	**13 53 57.9**	**+0.8**
ELGU				Sn	**Sn**	**13 54 10.9**	**-2.8**
ELGU				*i* IVmb_Lg		13 54 25.6	
ECAB	**El Cabril**	**1.63**	**358**	Sn	**Sn**	**13 54 19.4**	**+0.9**
ECAB				Pn	**Pn**	**13 53 58.4**	**+0.6**
ECAB	**El Cabril**	**1.63**	**358**	Pn	**Pn**	**13 53 57.4**	**-0.4**
ECAB				Sn	**Sn**	**13 54 17.9**	**-0.6**
ECAB				*i* IVmb_Lg		13 54 21.8	
EQTA	**Presa de Quent**	**1.69**	**63**	Pg	**Pb**	**13 54 01.4**	**+0.9**
EQUE	**Quentar**	**1.70**	**63**	Pn	**Pg**	**13 54 02.1**	**+0.1**
EQUE				Sn	**Sb**	**13 54 22.9**	**+1.2**
EMIN	**Mina Concepcio**	**1.70**	**321**	Pn	**Pb**	**13 53 59.8**	**-0.7**
EMIN				Sn	**Sn**	**13 54 19.8**	**-0.4**
EMIN	**Mina Concepcio**	**1.70**	**321**	Pn	**Pn**	**13 53 58.4**	**-0.3**
EMIN				Pg	**Pb**	**13 53 60.0**	**-0.5**
EMIN				Sn	**Sn**	**13 54 20.1**	**-0.2**
EMIN				Sg	**Sg**	**13 54 23.6**	**-0.6**
EMIN				*i* IVmb_Lg		13 54 24.4	
EADA	**Adamuz**	**1.82**	**19**	Pn	**Pb**	**13 54 02.1**	**-0.5**
EADA	**Adamuz**	**1.82**	**19**	Pn	**Pb**	**13 54 02.0**	**-0.5**
EADA				Sn	**Sb**	**13 54 25.0**	**-0.3**
EADA				Sg	**Sg**	**13 54 28.8**	**+0.7**
EADA				*i* IVmb_Lg		13 54 30.2	
PVAQ	**Vaqueiros**	**2.14**	**297**	*e*Pn	**Pn**	**13 54 04.2**	**-0.5**
PVAQ				*e*Sn	**Sn**	**13 54 31.4**	**+0.4**
PVAQ				*i* IAML		13 54 44.3	
PVAQ				*i* IAML		13 54 48.4	
PVAQ				*i* IAML		13 54 55.2	
PBAR	**Barrancos**	**2.20**	**322**	*e*Pn	**Pn**	**13 54 06.1**	**+0.5**
PBAR				*e*Sn	**Sn**	**13 54 33.1**	**+0.5**
PBAR				*e*Sg	**Sg**	**13 54 39.1**	**-1.0**
PBAR				*i* IAML		13 54 42.9	
PBAR				*i* IAML		13 54 43.3	
PBAR				*i* IAML		13 54 45.2	
PCVE	**Castro Verde**	**2.47**	**299**	*e*Pn	**Pn**	**13 54 09.3**	**0.0**
PCVE				*i* IAML		13 54 53.1	
PCVE				*i* IAML		13 54 54.2	
PCVE				*i* IAML		13 55 01.3	
PARRA	**Arraiolos**	**3.20**	**319**	*e*Pn	**Pn**	**13 54 19.0**	**-0.2**
PARRA				*e*Sn	**Sn**	**13 54 57.7**	**+0.5**
PARRA				*i* IAML		13 55 17.7	
PARRA				*i* IAML		13 55 18.1	
PARRA				*i* IAML		13 55 20.2	
PMRV	**Marv??o**	**3.39**	**332**	*e*Pn	**Pn**	**13 54 23.3**	**+1.3**
PSARD	**Sardoal**	**3.86**	**325**	*e*Pn	**Pn**	**13 54 29.1**	**+0.7**

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*IDC **03** 13:56:40.8±3.2, 61°.02N×29°.23E, h0^{km}, mbtmp3.3/1, ML2.2/1, Error ellipse: s-maj=28.9km s-min=13.9km az=168.0*

*HEL **03** 13:56:40.2±0.2, 60°.98N×29°.28E, h0^{km}, ML1.7, Suspected explosion*

ISC 03 13:56:39.2±1.3**, 61°.05N**±0°.05×**29°.27E**±0°.05**, h0**^{km}**, n20, σ1^{s}.08**/26**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUF	**Ruokolahti**	**0.41**	**338**	PG	**Pb**	**13 56 49.1**	**-0.2**
RUF				SG	**Sb**	**13 56 55.0**	**-1.1**
RUF				MSG		13 56 55.8	
	comp=Z,9.7nm,0.2s						
VJF	**Virojoki**	**0.98**	**240**	PG	**Pg**	**13 56 57.4**	**-0.6**
	baz=64						
VJF				MSG		13 57 09.5	
	comp=Z,17nm,0.2s						
VJF				SB	**Sg**	**13 57 10.2**	**-0.4**
FIA0	**FINESS Array S**	**1.59**	**286**	PG	**Pg**	**13 57 09.6**	**-0.1**
FIA0				MSG		13 57 28.7	
	comp=Z,4.3nm,0.2s						
FIA0				SN	**Sg**	**13 57 30.9**	**+0.6**
FINES	**FINESS Array B**	**1.59**	**286**	Pg	**Pb**	**13 57 08.9**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=104,slow=17,SNR=12						
FINES				Lg	Lg	13 57 30.5	
	comp=Z,2.3nm,0.3s,baz=103,slow=29,SNR=30						
PVF	**Pernaja**	**1.74**	**255**	PG	**Pg**	**13 57 11.8**	**-0.7**
PVF				MSG		13 57 32.0	
	comp=Z,5.6nm,0.2s						
PVF				SN	**Sg**	**13 57 36.0**	**+0.8**
JOF	**Joensuu**	**2.11**	**26**	*e*P	**Pg**	**13 57 19.2**	**-0.3**
JOF	**Joensuu**	**2.11**	**26**	PG	**Pg**	**13 57 19.3**	**-0.3**
	baz=210						
JOF				SG	**Sg**	**13 57 46.3**	**-0.7**
SUF	**Sumiainen**	**2.24**	**320**	PG	**Pg**	**13 57 21.8**	**-0.2**
	baz=135						
SUF				MSG		13 57 48.1	
	comp=Z,1.8nm,0.2s						
SUF				SG	**Sg**	**13 57 51.9**	**+1.0**
NUR	**Nurmijarvi**	**2.33**	**259**	MSG		13 57 48.9	
	comp=Z,2.9nm,0.2s						
NUR				SB	**Sb**	**13 57 50.2**	**-1.0**
KEF	**Keuruu**	**2.38**	**300**	*e*P	**Pg**	**13 57 24.0**	**-0.8**
KEF	**Keuruu**	**2.38**	**300**	MSG		13 57 52.0	
	comp=Z,1.5nm,0.2s						
KEF				SG	**Sg**	**13 57 54.1**	**-1.6**
NIF	**Nilsia**	**2.45**	**344**	PG	**Pb**	**13 57 24.7**	**+0.7**
	baz=162						
NIF				MSG		13 57 54.6	
	comp=Z,2.7nm,0.2s						
NIF				SG	**Sg**	**13 57 57.3**	**-0.5**
MEF	**Metsahovi**	**2.54**	**253**	*e*P	**Pb**	**13 57 25.0**	**-0.5**
MEF	**Metsahovi**	**2.54**	**253**	MSG		13 57 54.8	
	comp=Z,3.8nm,0.2s						
MEF				SB	**Sb**	**13 57 55.7**	**-1.6**
RAF	**Rauma**	**3.65**	**273**	*e*P	**Pn**	**13 57 39.7**	**+2.9**
VAF	**Ylistaro**	**3.70**	**306**	SG	**Sg**	**13 58 38.6**	**+0.8**
OUL	**Oulu**	**4.33**	**341**	SG	**Sg**	**13 58 57.4**	**-0.8**
KU1	**Kurvinen**	**4.54**	**2**	PN	**Pn**	**13 57 51.0**	**+2.0**
I43RU	**DUBNA INFRASON**	**5.98**	**133**	I	I	14 32 50.0	
	baz=320,slow=320,SNR=3.8						
ARCES	**ARCESS Array B**	**8.67**	**351**	Pn	**Pn**	**13 58 45.2**	**-0.4**
	baz=168,slow=13,SNR=1.3						
	comp=Z,1.6nm,0.9s						

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*ISK **03** 14:07:39.8, 39°.55N×26°.03E, h5^{km}, ML2.5/21*

*THE **03** 14:07:40.6, 39°.6N±0°.7×2°6E±°, h2^{km}±2^{km}, M2.2/11, MLh2.2/11*

*AFAD **03** 14:07:40.0, 39°.54N×26°.05E, h12^{km}, ML2.3*

*ATH **03** 14:07:40.3, 39°.53N×26°.04E, h15^{km}±1^{km}, ML2.3/7, Manual Solution by N.Liadopoulou First location: 2019/12/03 14:09:05, This location: 2019/12/03 14:22:08 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*

ISC 03 14:07:40.3±0.8**, 39°.54N**±0°.01×**26°.03E**±0°.02**, h11**^{km}±6^{km}**, n63, σ0^{s}.67**/93**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	**Canakkale, Ayv**	**0.10**	**115**	P	**Pg**	**14 07 42.8**	**-0.1**
KOCA				S	**Sg**	**14 07 44.5**	**-0.2**
KOCA				*i* IAML		14 07 45.0	
	comp=N,843nm,0.2s						
KOCA				*i* IAML		14 07 45.0	
	comp=E,1µm,0.1s						
GPNR	**Gulpinar-Canak**	**0.12**	**136**	Pg	**Pg**	**14 07 43.2**	**0.0**
BOZC	**Bozcaada**	**0.30**	**4**	P	**Pg**	**14 07 46.4**	**0.0**
BOZC				*i* IAML		14 07 51.0	
	comp=N,1µm,0.3s						
BOZC				*i* IAML		14 07 51.0	
	comp=E,692nm,0.4s						
BOZC				S	**Sg**	**14 07 51.0**	**+0.6**
PRK	**Paraskevi**	**0.35**	**147**	P	**Pg**	**14 07 47.4**	**+0.2**
PRK				S	**Sg**	**14 07 52.5**	**+0.6**
PRK	**Paraskevi**	**0.35**	**147**	P	**Pg**	**14 07 47.3**	**+0.1**
PRK				S	**Sg**	**14 07 52.0**	**+0.1**
SIGR	**SIGRI**	**0.36**	**202**	P	**Pg**	**14 07 47.5**	**+0.1**
SIGR				S	**Sg**	**14 07 52.8**	**+0.8**
SIGR	**SIGRI**	**0.36**	**202**	Pg	**Pg**	**14 07 47.5**	**+0.1**
SIGR				Sg	**Sg**	**14 07 52.9**	**+0.8**
SIGR	**SIGRI**	**0.36**	**202**	P	**Pg**	**14 07 47.1**	**-0.2**
SIGR				S	**Sg**	**14 07 53.0**	**+0.8**
EZN	**Ezine**	**0.36**	**39**	P	**Pg**	**14 07 47.4**	**-0.2**
EZN				S	**Sg**	**14 07 52.5**	**+0.2**
EZN	**Ezine**	**0.36**	**39**	Pg	**Pg**	**14 07 47.3**	**-0.2**
EZN				Sg	**Sg**	**14 07 52.6**	**+0.2**
ECEA	**Canakkale, Ece**	**0.52**	**13**	P	**Pg**	**14 07 50.2**	**-0.1**
ECEA				*i* IAML		14 07 58.0	
	comp=N,258nm,0.4s						
ECEA				S	**Sb**	**14 07 58.5**	**-0.3**
ECEA				*i* IAML		14 07 59.0	
	comp=E,331nm,0.4s						
AYVA	**Ayvalik**	**0.56**	**114**	P	**Pg**	**14 07 51.3**	**+0.1**
AYVA				*i* IAML		14 08 04.0	
	comp=E,98nm,0.5s						
AYVA				*i* IAML		14 08 08.0	
	comp=N,197nm,0.3s						
CNKL	**anakkale-Mer**	**0.59**	**28**	P	**Pg**	**14 07 51.2**	**-0.6**
CNKL				P	**Pb**	**14 07 51.3**	**-1.3**
CNKL				*i* IAML		14 08 03.0	
	comp=N,106nm,0.2s						
CNKL				*i* IAML		14 08 03.0	
	comp=N,107nm,0.2s						
GADA	**Gvkgeada**	**0.66**	**351**	P	**Pg**	**14 07 52.8**	**-0.2**
GADA				S	**Sg**	**14 08 01.6**	**0.0**
GADA	**Gvkgeada**	**0.66**	**351**	Pg	**Pg**	**14 07 52.9**	**-0.1**
LIA	**Limnos Island**	**0.74**	**299**	P	**Pb**	**14 07 55.1**	**-0.1**
LIA				S	**Sb**	**14 08 06.2**	**+0.9**
LIA	**Limnos Island**	**0.74**	**299**	P	**Pb**	**14 07 55.0**	**-0.2**
LIA				S	**Sg**	**14 08 04.9**	**+0.6**
EFSA	**Agios Efstrati**	**0.80**	**270**	P	**Pb**	**14 07 56.5**	**+0.2**
YAYO	**Edremit-Balk**	**0.81**	**85**	Pg	**Pg**	**14 07 55.9**	**0.0**
DKL	**Dikili**	**0.83**	**124**	Pg	**Pb**	**14 07 56.6**	**0.0**
GELI	**Tayfur-Gelibol**	**0.92**	**22**	Pg	**Pg**	**14 07 57.6**	**-0.4**
KARB	**zmir-Karabur**	**0.93**	**161**	P	**Pg**	**14 07 57.9**	**-0.2**
KARB				S	**Sb**	**14 08 10.8**	**+0.1**
KARB				*i* IAML		14 08 12.0	
	comp=N,145nm,0.3s						
KARB				*i* IAML		14 08 12.0	
	comp=E,107nm,0.2s						
ZEDA	**zmir-Bergama**	**1.00**	**125**	P	**Pg**	**14 07 58.6**	**-0.8**
ZEDA				S	**Sb**	**14 08 12.6**	**0.0**
ZEDA				*i* IAML		14 08 14.0	
	comp=N,54nm,0.3s						
ZEDA				*i* IAML		14 08 15.0	

	comp=E,61nm,0.5s						
EAG2	Marmaro, Chios	1.00	176	P	Pb	14 07 59.4	-0.1
EAG2				S	Sg	14 08 12.1	-0.4
LPK	Lapseki	1.00	34	Pg	Pg	14 07 58.9	-0.7
SMTH	Samothraki Isl	1.00	338	P	Pg	14 07 59.5	0.0
SMTH				S	Sb	14 08 12.8	-0.2
SMTH	Samothraki Isl	1.00	338	P	Pg	14 07 59.6	0.0
SMTH				S	Sg	14 08 12.3	-0.3
ENZZ	Sultanice-Enez	1.07	5	Pg	Pb	14 08 00.6	-0.2
CAVK	Edirne/Enez-Ca	1.15	5	P	Pb	14 08 01.7	-0.5
CAVK				*i* IAML		14 08 20.0	
	comp=E,112nm,1.5s						
CAVK				*i* IAML		14 08 25.0	
	comp=N,127nm,0.8s						
CHOS	Chios island	1.15	179	P	Pb	14 08 01.6	-0.7
CHOS				S	Sn	14 08 18.5	+0.3
CHOS	Chios island	1.15	179	Pn	Pb	14 08 02.1	-0.2
CHOS	Chios island	1.15	179	P	Pb	14 08 01.4	-0.9
CHOS				S	Sb	14 08 17.0	-0.3
ERIK	Erikli-Kesan	1.19	18	Pn	Pb	14 08 02.0	-0.8
ENEZ	Enez	1.20	5	P	Pg	14 08 05.3	+2.0
ENEZ				S	Sn	14 08 22.4	+3.1
ENEZ	Enez	1.20	5	Pn	Pg	14 08 03.5	+0.2
SOMA	Soma-Manisa	1.23	108	Pn	Pg	14 08 03.9	0.0
URLA	Izmir	1.26	159	P	Pn	14 08 02.3	-1.6
URLA				S	Sb	14 08 19.4	-0.9
URLA				*i* IAML		14 08 22.0	
	comp=E,67nm,0.4s						
URLA				*i* IAML		14 08 23.0	
	comp=N,76nm,0.6s						
KRBG	Karabiga-Canak	1.29	49	Pn	Pn	14 08 04.2	-0.1
ALEX	Alexandroupoli	1.32	356	P	Pn	14 08 04.6	0.0
SKY	Skiros Island	1.33	240	P	Pb	14 08 05.2	0.0
SKY				S	Sb	14 08 22.3	+0.1
SKY	Skiros Island	1.33	240	P	Pn	14 08 04.5	-0.2
SKY				S	Sb	14 08 20.8	-1.3
GONE	Gonen-Balikesi	1.37	68	Pn	Pb	14 08 06.1	+0.1
BLCB	Balcova	1.40	145	P	Pg	14 08 07.0	-0.1
BLCB				S	Sg	14 08 26.6	+1.4
BLCB	Balcova	1.40	145	Pn	Pb	14 08 06.6	+0.2
BALB	Balikesir	1.44	85	Pn	Pb	14 08 06.7	-0.3
THAS	Thassos island	1.46	317	P	Pn	14 08 06.4	-0.2
THAS				S	Sn	14 08 24.9	-0.8
THAS	Thassos island	1.46	317	P	Pn	14 08 06.4	-0.2
THAS				S	Sn	14 08 24.6	-1.1
MRMT	Marmara Adasi	1.60	48	Pn	Pb	14 08 09.2	-0.8
EDC	Edincik	1.62	60	Pn	Pb	14 08 09.6	-0.7
SUSR	Susurluk-Balik	1.64	74	Pn	Pb	14 08 09.9	-0.6
RDO	Rodhopi	1.65	347	P	Pb	14 08 09.8	-0.9
RDO				S	Sn	14 08 30.3	0.0
RDO	Rodhopi	1.65	347	Pn	Pb	14 08 10.0	-0.6
RDO	Rodhopi	1.65	347	P	Pn	14 08 09.3	+0.1
SFL1	Soufli	1.66	7	P	Pn	14 08 09.6	+0.3
AOS2	Alonissos-2	1.74	258	P	Pn	14 08 10.0	-0.4
KYMI	Kymi, Euboea I	1.75	239	P	Pn	14 08 10.2	-0.4
OUR	Ouranopolis	1.76	297	P	Pn	14 08 10.4	-0.2
KAVA	Kavala	1.86	322	P	Pn	14 08 11.9	-0.1
SMG	Samos	1.94	161	P	Pb	14 08 15.9	+0.3
SMG				S	Sb	14 08 40.6	+0.8
SMG	Samos	1.94	161	P	Pn	14 08 12.5	-0.6
KARY	Karystos	1.95	220	P	Pn	14 08 12.9	-0.5
ARMT	Armutlu	2.40	64	Pn	Pn	14 08 20.7	+1.1
YLV	Yalova	2.76	67	Pn	Pn	14 08 25.6	+1.0

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*IDC **03** 14:12:27.1±1.9, 61°.20N×27°.75W, h0^{km}, mb3.7/8, mbtmp3.7/8, MS3.7/48, Error ellipse: s-maj=82.5km s-min=21.1km az=179.0*

ISC 03 14:12:28.5±1.7**, 61°.2N**±0°.5×**27°.8W**±0°.1**, h10**^{km}**, n50, σ1^{s}00**/8**, mb3.8**/8**, MS3.7**/44**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	Borgarnes	4.63	37	LR	LR	14 15 03.3	
	comp=Z,780nm,18.7s,baz=225,slow=34						
SFJD	Kangerlussuaq	11.52	310	LR	LR	14 19 02.2	
	comp=Z,530nm,18.3s,baz=124,slow=34						
EKA	Eskdalemuir Ar	14.15	103	LR	LR	14 20 20.8	
	comp=Z,319nm,19.8s,baz=356,slow=34						
FRB	Frobisher Bay	18.80	296	LR	LR	14 23 09.4	
	comp=Z,322nm,19.8s,baz=104,slow=34						
HFS	Hagfors	20.10	75	LR	LR	14 23 56.2	
	comp=Z,160nm,19.9s,baz=268,slow=34						
SCHQ	Schefferville	21.39	270	LR	LR	14 23 42.9	
	comp=Z,200nm,20.0s,baz=84,slow=32						
FINES	FINESS Array B	25.24	65	LR	LR	14 27 43.5	
	comp=Z,143nm,19.2s,baz=266,slow=36						
DAVOX	Davos/Dischmat	25.95	106	LR	LR	14 27 39.9	
	comp=Z,148nm,18.4s,baz=300,slow=35						
ESDC	Sonseca Array	26.05	135	LR	LR	14 26 36.3	
	comp=Z,87nm,19.8s,baz=314,slow=33						
GERES	GERESS Array B	26.28	99	LR	LR	14 28 12.3	
	comp=Z,239nm,18.9s,baz=300,slow=36						
RES	Resolute Bay	26.71	327	LR	LR	14 28 01.5	
	comp=Z,190nm,18.6s,baz=34,slow=35						
VRAC	Vranov	27.36	95	LR	LR	14 29 45.0	
	comp=Z,182nm,18.2s,baz=302,slow=38						
AKASG	Malin Array Be	32.54	82	P	P	14 18 58.7	-0.5
	0.2nm,0.3s,baz=327,slow=10.0,SNR=1.8						
AKASG				LR	LR	14 32 19.6	
	comp=Z,142nm,18.6s,baz=248,slow=37						
	0.2nm,0.3s						
SADO	Sadowa	33.97	265	LR	LR	14 31 30.2	
	comp=Z,193nm,19.8s,baz=64,slow=34						
MLR	Muntele Rosu	34.56	92	LR	LR	14 34 27.9	
	comp=Z,120nm,18.6s,baz=340,slow=38						
KEST	Kesra	34.61	120	LR	LR	14 32 22.3	
	comp=Z,110nm,18.8s,baz=334,slow=34						
KIRV	Kirov	36.73	59	LR	LR	14 33 08.5	
	comp=Z,118nm,20.8s,baz=324,slow=34						
YKA	Yellowknife Ar	38.08	311	P	P	14 19 46.5	-0.3
	1.0nm,0.8s,baz=50,slow=8.8,SNR=7.4						
YKA				LR	LR	14 34 46.2	
	comp=Z,146nm,18.6s,baz=96,slow=35						
	1.0nm,0.8s						
ULM	Lac du Bonnet	38.13	285	LR	LR	14 34 38.3	
	comp=Z,228nm,18.1s,baz=17,slow=35						
INK	Inuvik	40.26	326	LR	LR	14 35 33.2	
	comp=Z,88nm,21.0s,baz=332,slow=34						
ARTI	Arti	41.83	56	LR	LR	14 36 40.6	
	comp=Z,96nm,19.1s,baz=338,slow=35						
TKL	Tuckaleechee C	43.26	260	LR	LR	14 36 40.2	
	comp=Z,152nm,21.5s,baz=30,slow=34						
KBZ	Khabaz	44.04	80	LR	LR	14 39 28.9	
	comp=Z,82nm,19.0s,baz=334,slow=37						
AKTO	Aktyubinsk	45.95	63	LR	LR	14 39 46.4	
	comp=Z,105nm,18.9s,baz=314,slow=36						
DLBC	Dease Lake	46.39	315	LR	LR	14 39 17.9	
	comp=Z,90nm,18.1s,baz=88,slow=35						
ILAR	Eielson Array	46.43	329	LR	LR	14 40 04.5	
	comp=Z,57nm,21.1s,baz=288,slow=36						
GNI	Garni	47.66	81	LR	LR	14 42 44.3	
	comp=Z,61nm,18.6s,baz=340,slow=38						
BVAR	Borovoye Array	49.03	52	LR	LR	14 41 45.1	
	comp=Z,82nm,19.6s,baz=333,slow=36						
NEW	Newport	49.13	298	LR	LR	14 41 30.4	
	comp=Z,93nm,21.6s,baz=35,slow=36						
PDAR	Pinedale Array	50.01	288	P	P	14 21 22.1	-0.8
	1.0nm,0.7s,baz=29,slow=6.3,SNR=10						
PDAR				LR	LR	14 41 45.0	
	comp=Z,78nm,18.4s,baz=16,slow=35						
	1.0nm,0.7s						
ASF	Jabal al Asfar	50.25	95	LR	LR	14 44 50.1	
	comp=Z,30nm,19.3s,baz=296,slow=39						
BBB	Bella Bella	50.53	308	LR	LR	14 42 11.5	
	comp=Z,147nm,18.3s,baz=72,slow=35						
SJG	San Juan	50.84	230	LR	LR	14 40 29.4	
	comp=Z,18nm,21.0s,baz=317,slow=33						
EIL	Elat	51.38	98	LR	LR	14 45 18.5	
	comp=Z,35nm,19.7s,baz=329,slow=38						
KDAK	Kodiak Island	53.82	327	LR	LR	14 44 45.1	
	comp=Z,40nm,20.0s,baz=73,slow=36						
ELK	Elko	54.20	291	P	P	14 21 55.0	+0.9
	1.8nm,0.8s,baz=20,slow=5.8,SNR=10						
ELK				LR	LR	14 43 30.1	
	comp=Z,103nm,21.2s,baz=42,slow=34						
	1.8nm,0.8s						
ANMO	Albuquerque	54.77	280	LR	LR	14 44 15.2	
	comp=Z,135nm,20.0s,baz=27,slow=35						
YBH	Yreka Blue Hor	56.72	297	LR	LR	14 46 15.0	
	comp=Z,10nm,18.8s,baz=52,slow=36						
DBIC	Dimbokro	57.02	153	LR	LR	14 44 38.3	
	comp=Z,38nm,18.2s,baz=356,slow=34						
NVAR	Mina Array Bea	57.46	291	P	P	14 22 17.7	+0.2
	0.5nm,0.7s,baz=21,slow=7.4,SNR=5.1						
NVAR				LR	LR	14 46 15.4	
	comp=Z,100nm,18.2s,baz=15,slow=35						
	0.5nm,0.7s						
TXAR	Lajitas Array	58.04	273	P	P	14 22 21.3	-0.2
	0.2nm,0.7s,baz=25,slow=5.3,SNR=2.0						
TXAR				LR	LR	14 46 55.4	
	comp=Z,108nm,20.0s,baz=24,slow=36						
	0.2nm,0.7s						
MKAR	Makanchi Array	58.57	49	P	P	14 22 24.2	-0.8
	0.7nm,0.7s,baz=337,slow=6.3,SNR=3.8						
	0.7nm,0.7s						
PFO	Pinyon Flats O	60.59	287	LR	LR	14 48 26.4	
	comp=Z,132nm,18.7s,baz=61,slow=36						
SDV	Santo Domingo	60.98	230	LR	LR	14 49 10.3	
	comp=Z,15nm,18.1s,baz=73,slow=36						
CMIG	Matias Romero	64.17	258	LR	LR	14 51 17.7	
	comp=Z,42nm,19.4s,baz=8.0,slow=36						
LPIG	La Paz	65.63	276	LR	LR	14 51 19.8	
	comp=Z,116nm,18.7s,baz=30,slow=36						
LSZ	Lusaka	88.12	127	LR	LR	15 06 43.8	
	comp=Z,66nm,18.9s,baz=329,slow=37						
CMAR	Chiang Mai Arr	89.98	50	P	P	14 25 29.7	+1.6
	0.3nm,0.4s,baz=322,slow=4.4,SNR=4.4						
	0.3nm,0.4s						
LBTB	Lobatse	96.05	133	LR	LR	15 08 16.9	
	comp=Z,26nm,22.0s,baz=350,slow=35						
BOSA	Boshof	99.23	135	LR	LR	15 11 26.9	
	comp=Z,46nm,18.3s,baz=350,slow=36						

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*IDC **03** 14:43:04.7±2.3, 28°.69N×51°.64E, h0^{km}, mb3.8/11, mbtmp3.8/13, ML3.3/2, MS3.0/2, Error ellipse: s-maj=44.2km s-min=24.4km az=14.0*

*NEIC **03** 14:43:07.4±1.8, 28°.75N±0°.09×51°.75E±0°.10, h10^{km}±1^{km}, mb4.2/17, Error ellipse: s-maj=16.8km s-min=13.5km az=217.0*

*TEH **03** 14:43:08.2, 28°.79N×51°.57E, h18^{km}±13^{km}*

*DSN **03** 14:43:10.5±2.0, 28°.59N×51°.79E, h10^{km}, ML3.7/16, Error ellipse: s-maj=25.6km s-min=8.3km az=177.0*

*OMAN **03** 14:43:12.9±0.2, 28°.51N×51°.89E, h10^{km}, mb4.6/11, ml4.1/14, Error ellipse: s-maj=3.2km s-min=2.5km az=311.0*

ISC 03 14:43:08.2±0.5**, 28°.77N**±0°.04×**51°.69E**±0°.04**, h17**^{km}**, n123, σ1^{s}44**/157**, mb4.0**/16**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DSBU	Dashti - Bushe	0.55	223	Pg	Pg	14 43 18.3	-0.9
KAZ2	Kazeron-Fars-I	0.84	358	Pg	Pb	14 43 24.2	-0.2
SHI	Shiraz	1.13	39	Pg	Pg	14 43 30.6	+0.5
QIR1	Qir	1.23	103	Pg	Pg	14 43 33.3	+1.4
JHRM	Jahrom	1.68	99	Pg	Pg	14 43 41.9	+1.4
KLNJ	Kolanjah	2.23	358	Pn	Pn	14 43 45.8	+1.1
SHMA	Al-Shehemyia	2.97	193	P	Pn	14 43 56.5	+1.9
	SNR=34						
SHMA				S	Sn	14 44 32.1	+2.3
IRAM	Ramesheh	3.09	11	Pn	Pn	14 43 58.1	+1.7
IBRJ	Brojen	3.15	353	Pn	Pn	14 43 58.4	+1.1
ZNGN	Zangian	3.42	348	Pn	Pn	14 44 01.9	+1.0
JHBN	Jahan bin	3.56	346	Pn	Pn	14 44 04.1	+1.1
JRN	Qarnain Island	3.95	165	P	Pn	14 44 10.0	+2.0
JRN				S	Sn	14 44 55.7	+1.8
IPIR	Pirpir	3.96	350	Pn	Pn	14 44 09.2	+0.7
TRNA	Turayna	4.04	186	P	Pn	14 44 11.2	+2.0
	SNR=20						
TRNA				S	Sn	14 44 57.9	+1.8
SMRA	Abu-Samra	4.08	191	P	Pn	14 44 11.6	+1.8
	SNR=9.5						
SMRA				S	Sn	14 44 58.8	+1.6
IZEF	Zefreh	4.15	7	Pn	Pn	14 44 12.7	+1.7
ICHK	Chekchek	4.18	33	Pn	Pn	14 44 13.7	+2.2
IBAF	Bafgh	4.38	49	Pn	Pn	14 44 16.5	+2.4
KHGB	Koh Gabri	4.47	68	Pn	Pn	14 44 18.0	+2.7
NGRK	Negar Kerman	4.49	78	Pn	Pn	14 44 18.8	+3.0
IKLH	Kolahrood	4.54	359	Pn	Pn	14 44 17.2	+0.9
SLWR	Sila	4.68	180	P	Pn	14 44 19.7	+1.7
SLWR				S	Sn	14 45 13.3	+1.4
ANAR	Anarak	4.74	21	Pn	Pn	14 44 20.7	+1.6
ZRDN	Zarand Kerman	4.74	61	Pn	Pn	14 44 21.9	+2.7
SHME	Shamm	4.79	123	P	Pn	14 44 20.7	+1.1
	SNR=9.3						
SHME				S	Sn	14 45 15.0	+0.2
SHME	Shamm	4.79	123	*i* P	Pn	14 44 20.6	+1.0
	SNR=9.2						
GHWR	Ruwais	4.90	167	P	Pn	14 44 22.8	+1.7
GHWR				S	Sn	14 45 18.1	+0.7
QAMS	Qamsar	4.96	357	Pn	Pn	14 44 23.4	+1.3
BANOM	Banah	4.98	124	P	Pn	14 44 23.4	+1.2
BANOM				P	Pn	14 44 23.4	+1.2
BANOM				S	Sn	14 45 18.9	-0.7
BANOM	Banah	4.98	124	*i* P	Pn	14 44 23.4	+1.2
	SNR=55						
BANOM				S	Sn	14 45 18.2	-1.3
AJN	Ajban	5.12	144	P	Pn	14 44 26.5	+2.3
AJN				S	Sn	14 45 23.1	+0.2
NAZ	Nazwa, Dubai	5.17	136	P	Pn	14 44 26.7	+1.9
	SNR=14						
NAZ				S	Sn	14 45 24.6	+0.5
NAZ	Nazwa, Dubai	5.17	136	*i* P	Pn	14 44 26.0	+1.2
	SNR=14						
KRSH	Karshahi	5.20	4	Pn	Pn	14 44 26.4	+1.0
CHMN	Cheshme madani	5.22	77	Pn	Pn	14 44 28.6	+2.7
MASF	Masafi	5.23	129	P	Pn	14 44 26.9	+1.3
	SNR=20						
MASF				S	Sn	14 45 24.8	-0.7
MSFE	Esma-Masafi	5.24	129	*i* P	Pn	14 44 26.9	+1.1
	SNR=20						
ASUD	Al Ashush, Dub	5.25	141	P	Pn	14 44 28.2	+2.3
	SNR=12						
ASUD				S	Sn	14 45 27.2	+1.1
ASUD	Al Ashush, Dub	5.25	141	*i* P	Pn	14 44 27.7	+1.7
	SNR=12						
FAQ	Al Faqa, Dubai	5.31	138	P	Pn	14 44 28.3	+1.6
	SNR=9.4						
FAQ				S	Sn	14 45 28.5	+0.9
FAQ	Al Faqa, Dubai	5.31	138	*i* P	Pn	14 44 28.4	+1.6
	SNR=9.4						
MZWR	Madinat Zayed	5.36	158	P	Pn	14 44 29.2	+1.8
MZWR				S	Sn	14 45 28.5	-0.2
MDH	Madha	5.37	129	P	Pn	14 44 28.9	+1.4
MDH				S	Sn	14 45 29.3	+0.4
MDH	Madha	5.37	129	P	Pn	14 44 27.9	+0.3
UOSS	Minazif	5.54	132	P	Pn	14 44 30.7	+0.7
UOSS				S	Sn	14 45 31.5	-1.8
UOSS	Minazif	5.54	132	Pn	Pn	14 44 29.8	-0.1
HATD	Hatta, Dubai	5.58	134	P	Pn	14 44 31.7	+1.2
	SNR=10.0						
HATD				S	Sn	14 45 33.9	-0.4
HATD	Hatta, Dubai	5.58	134	*i* P	Pn	14 44 32.0	+1.5
	SNR=8.5						
ISFB	Sefidab	5.59	5	Pn	Pn	14 44 31.5	+0.9
ASHO	Ashiyiah	5.64	135	P	Pn	14 44 32.4	+1.1
	SNR=67						
ASHO				S	Sn	14 45 35.0	-0.7
ASHO	Ashiyiah	5.64	135	*i* P	Pn	14 44 31.9	+0.7
	SNR=67						
KBAM	BAM	5.94	85	Pn	Pn	14 44 38.6	+3.2
ALNE	Al Ain	5.94	141	P	Pn	14 44 37.2	+1.8
	SNR=22						
ALNE				S	Sn	14 45 42.7	-0.3
ALNE	Al Ain	5.94	141	*i* P	Pn	14 44 36.5	+1.2
	SNR=22						
MZR	Muzera	5.96	164	P	Pn	14 44 37.5	+1.8
	SNR=27						
MZR				S	Sn	14 45 43.7	0.0
MZR	Muzera	5.96	164	*i* P	Pn	14 44 37.0	+1.3
	SNR=27						
TPRV	Parvadeh(Tabas	6.04	44	Pn	Pn	14 44 39.2	+2.5
SOHO	SOHO	6.33	136	P	Pn	14 44 41.6	+0.8
SOHO				S	Sn	14 45 53.5	+0.8
SOHO	SOHO	6.33	136	*i* P	Pn	14 44 40.7	-0.1
	SNR=26						
HAGD	Aghdareh	6.41	341	Pn	Pn	14 44 42.1	+0.1
TNSJ	Nastanj	6.67	38	Pn	Pn	14 44 47.4	+1.9
ILAS	Lasjerd	6.68	9	Pn	Pn	14 44 46.9	+1.1
TKDS	Koohdasht(Taba	6.71	43	Pn	Pn	14 44 48.0	+2.0
UMZA	Um Al Zommool	6.79	152	P	Pn	14 44 48.3	+1.2
UMZA				S	Sn	14 46 02.4	-1.6
IDMV	Damavand	6.79	2	Pn	Pn	14 44 48.7	+1.3
ARQ	Araqi	6.94	140	P	Pn	14 44 50.0	+0.9
	SNR=38						
ARQ				P	Pn	14 44 50.1	+1.0
ARQ				S	Sn	14 46 06.7	-1.0
ARQ				S	Sn	14 46 06.7	-1.0
SNQR	Sonqor, Kerman	6.99	331	Pn	Pn	14 44 50.9	+1.0
IGHG	Ghaleghazi	7.06	323	Pn	Pn	14 44 51.6	+0.7
HGHA	Hamedan- Ghaye	7.12	341	Pn	Pn	14 44 52.5	+0.7
HOQ	Hoqain	7.22	134	P	Pn	14 44 54.0	+1.0
	SNR=8.0						
HOQ				S	Sn	14 46 11.7	-2.9
IDHR	Dehrash	7.44	324	Pn	Pn	14 44 56.1	0.0
RAYN	Ar Rayn	7.63	228		Pn	14 44 57.7	-0.9
RAYN	Ar Rayn	7.63	228	*i* P	Pn	14 44 58.2	-0.4
	SNR=6.4						
BSY	Bisya	7.79	139	P	Pn	14 45 02.0	+1.2
	SNR=9.5						
BSY				S	Sn	14 46 25.8	-2.8
SMDO	Samad	8.07	133	P	Pn	14 45 06.0	+1.3
	SNR=14						
SMDO				S	Sn	14 46 32.7	-2.9
JMDO	Jabal Madar	8.61	136	P	Pn	14 45 12.0	0.0
	SNR=11						
JMDO				S	Sn	14 46 45.8	-3.0
WBK	Wadi Bani Khal	8.98	131	P	Pn	14 45 17.0	-0.2
	SNR=12						
WBK				S	Sn	14 46 55.3	-2.7
NGCH	Negor - Chabah	9.08	110	P	Pn	14 45 17.5	-1.0
NGCH				S	Sn	14 46 56.6	-3.7
JLN	Jalan Bani Buh	9.59	132	P	Pn	14 45 26.7	+1.1
JLN				S	Sn	14 47 08.5	-4.5
MHTO	MHTO	9.62	142	P	Pn	14 45 26.5	+0.6
	SNR=17						
DOK	Doka	10.35	167	P	Pn	14 45 35.0	-0.9
	SNR=9.5						
WHFO	Wadi Hawf	10.97	170	P	Pn	14 45 43.1	-1.4
	SNR=23						
DMTO	DMTO	11.40	164	P	Pn	14 45 49.0	-1.3
	SNR=19						
ABTO	Aybut	11.46	172	P	Pn	14 45 50.5	-0.7
MARD	Mardin	12.50	316		Pn	14 46 04.0	-1.4
MMAI	Mount Meron Ar	14.61	291	Pn	Pn	14 46 36.0	+1.8
	0.7nm,0.3s,baz=107,slow=17,SNR=2.1						
MMAI	Mount Meron Ar	14.61	291		Pn	14 46 36.0	+1.8
SHAA	Shahritus	16.30	53	P	P	14 46 59.0	-0.3
SHAA				IAmb	IAmb	14 47 00.9	
	comp=Z,10nm,0.7s						
KBZ	Khabaz	16.51	337	Pn	Pn	14 46 58.9	0.0
	comp=Z,0.1nm,0.3s,baz=128,slow=12,SNR=1.3						
KBZ				LR	LR	14 54 33.0	
	comp=Z,48nm,19.9s,baz=12,slow=42						
	comp=Z,0.8nm,0.6s						
CHGR	Chuyangaron	17.54	51		Pn	14 47 11.5	-0.5
BRTR	Keskin Array B	18.46	311	P	P	14 47 23.0	-0.2
	comp=Z,0.1nm,0.3s,baz=136,slow=12,SNR=3.6						
	comp=Z,0.7nm,0.6s						
BRTR	Keskin Array B	18.46	311	P	Pn	14 47 23.2	-0.1
GAR	Garm	18.50	52	P	P	14 47 22.9	-0.7
GAR				IAmb	IAmb	14 47 27.5	
	comp=Z,14nm,1.4s						
MANEM	Manem	18.86	57	P	P	14 47 26.6	-1.2
MANEM				IAmb	IAmb	14 47 30.8	
	comp=Z,8.9nm,0.7s						
BORA	Eskisehir	20.70	308	P	P	14 47 48.1	+0.5
BORA				IAmb	IAmb	14 47 59.9	
	comp=Z,14nm,1.5s						
AB31	Akbulak array	21.41	15	P	P	14 47 55.6	+0.5
ABKAR	Akbulak array	21.41	15	P	P	14 47 55.7	+0.6
MANT	Manisa	21.52	303	P	P	14 47 57.8	+1.2
AKTO	Aktyubinsk	22.16	11	P	P	14 48 01.9	-1.3
	comp=Z,0.5nm,0.3s,baz=200,slow=9.5,SNR=4.0						
	comp=Z,0.5nm,0.3s						
AAK	Ala-Archa	23.02	47	P	P	14 48 12.6	0.0
	comp=Z,1.1nm,0.7s,baz=228,slow=12,SNR=5.0						
	comp=Z,1.1nm,0.7s						
AAK	Ala-Archa	23.02	47	P	P	14 48 11.9	-0.6
BORK	Borovoye	27.88	24	P	P	14 48 57.6	+0.7
BORK				IAmb	IAmb	14 48 58.6	
	comp=Z,6.4nm,1.4s						
BVAR	Borovoye Array	27.89	24	P	P	14 48 57.9	+0.9
	comp=Z,1.7nm,0.4s,baz=224,slow=7.7,SNR=21						
	comp=Z,1.7nm,0.4s						
KURBB	Kurchatov Arra	29.77	35	P	P	14 49 13.6	-0.1
	comp=Z,0.2nm,0.3s,baz=238,slow=8.8,SNR=1.7						
	comp=Z,0.2nm,0.3s						
KURK	Kurchatov	29.87	35	P	P	14 49 14.7	+0.1
KURK				IAmb	IAmb	14 49 35.0	
	comp=Z,5.0nm,1.4s						
MKAR	Makanchi Array	29.88	45	P	P	14 49 14.6	-0.2
	comp=Z,0.3nm,0.5s,baz=243,slow=9.3,SNR=7.1						
	comp=Z,0.3nm,0.5s						
ZALV	Zalesovo Beam	34.84	34	P	P	14 49 57.5	-0.6
	comp=Z,0.7nm,0.4s,baz=244,slow=9.4,SNR=4.4						
	comp=Z,0.7nm,0.4s						
GERES	GERESS Array B	35.26	315	LR	LR	15 06 39.9	
	comp=Z,24nm,18.4s,baz=348,slow=40						
CLL	Collm	36.59	319	*e*P	P	14 50 12.0	-1.2
CLL				*e*PP	PP	14 51 36.0	-0.5
FINES	FINESS Array B	36.84	340	P	P	14 50 14.8	-0.3
	comp=Z,2.3nm,0.8s,baz=138,slow=9.6,SNR=5.2						
	comp=Z,2.3nm,0.8s						
HFS	Hagfors	40.47	332	P	P	14 50 44.7	-0.9
	comp=Z,1.4nm,0.5s,baz=143,slow=7.3,SNR=6.6						
	comp=Z,1.4nm,0.5s						
GTA	Gaotai	40.82	62	*e*P	P	14 50 50.6	+1.6
GTA				pP	pP	14 50 55.1	+0.6
NC405	NORSAR Array S	41.82	332	P	P	14 50 56.2	-0.6
NC405				IAmb	IAmb	14 51 37.5	
	comp=Z,13nm,1.1s						
NOA	NORSAR Array B	41.99	332	P	P	14 50 57.5	-0.7
	comp=Z,0.6nm,0.6s,baz=127,slow=7.9,SNR=1.2						
	comp=Z,0.6nm,0.6s						
CEST	Esterri de Car	42.63	303	P	P	14 51 03.2	-0.5
ARCES	ARCESS Array B	43.51	347	P	P	14 51 10.1	-0.2
	comp=Z,1.8nm,0.9s,baz=151,slow=8.5,SNR=7.8						
	comp=Z,1.8nm,0.9s						
ARCES	ARCESS Array B	43.51	347	P	P	14 51 10.7	+0.3
B21K	Ikpikpuk River	80.05	9	P	P	14 55 17.1	+0.7
D22K	Ayikyak River	81.00	9	P	P	14 55 22.1	+0.5
D22K				IAmb	IAmb	14 55 55.9	
	comp=Z,7.8nm,1.4s						
TOLK	Toolik Lake Re	81.62	8	P	P	14 55 25.9	+1.0
F30M	Barrier River	83.75	3	P	P	14 55 36.2	+0.2
F30M				IAmb	IAmb	14 55 46.9	
	comp=Z,4.3nm,1.4s						
BCAR	Beaver Creek A	87.85	6	P	P	14 55 54.6	-1.9
ASAR	Alice Springs	94.71	114	P	P	14 56 27.9	-1.0
	comp=Z,0.2nm,0.9s,baz=306,slow=4.4,SNR=1.9						
	comp=Z,0.2nm,0.9s						

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*IDC **03** 14:56:47.0±0.5, 26°.50S×176°.54W, h0^{km}, mb4.5/15, mbtmp4.5/17, ML4.6/2, MS4.2/41, Error ellipse: s-maj=21.5km s-min=16.8km az=107.0*

*NOU **03** 14:56:46.3, 27°.09S×175°.13W, h57^{km}, ML5.1/13, Kermadec Islands Region*

*NEIC **03** 14:56:49.1±1.9, 26°.76S±0°.07×176°.3W±0°.1, h10^{km}±1^{km}, mb4.9/61, Error ellipse: s-maj=18.0km s-min=11.7km az=105.0*

*GCMT **03** 14:56:52.1±0.2, 26°.72S±0°.02×175°.88W±0°.01, h21^{km}, MW5.1/93, Moment Tensor Solution. s57,c74; s93,c142; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.13±.18; $M_{\theta\theta}$-0.14±.11; $M_{\phi\phi}$-3.99±.12; $M_{r\theta}$0.04±.22; $M_{\theta\phi}$-0.61±.07; $M_{\phi r}$2.58±.17; Best double couple: $M_0$4.85000×10^{16} NP1:ϕ_s193.00000°, δ29.00000°, λ97.00000°. NP2: ϕ_s5.00000°, δ61.00000°, λ86.00000°. Principal axes: T 4.8840, Plg74.0000°, Azm264.0000°; N -0.0690, Plg4.0000°, Azm7.0000°; P -4.8160, Plg16.0000°, Azm98.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 14:56:52.0±0.4**, 26°.77S**±0°.06×**176°.29W**±0°.07**, h35**^{km}**, n157, σ1^{s}84**/111**, mb4.8**/52**, MS4.3**/37**, 2C-5D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.86	210	Pn	Pn	14 57 35.1	0.0
	494nm,0.3s,baz=218,slow=0.8,SNR=12						
RAO				Sn	Sn	14 58 09.0	+0.6
	162nm,0.3s,baz=210,slow=21,SNR=4.4						
RAO				LR	LR	14 58 14.4	
	comp=Z,2μm,18.2s,baz=120,slow=29						
	1μm,0.3s						
RAO	Raoul Island	2.86	210	Pn	Pn	14 57 34.6	-0.5
RAO				Sn	Sn	14 58 09.8	+1.4
RAO	Raoul Island	2.86	210	P	Pn	14 57 35.2	0.0

RAO	Raoul Island	2.86	210	S	Sn	14 58 13.2	+4.8
NIUE	Niue	9.64	39	P	Pn	14 58 59.2	-9.1
MSVF	Nonsavu	10.41	329		Pn	14 59 20.1	+1.2
MSVF	Nonsavu	10.41	329	P	Pn	14 59 22.8	+3.9
OUZ	Omahuta	12.09	223	P	Pn	14 59 43.6	+1.9
URZ	Urewera	12.73	204	Pn	Pn	14 59 49.2	-1.3
	0.6nm,0.3s,baz=258,slow=3.5,SNR=6.3						
URZ				Sn	Sn	15 01 59.9	-11
	3.3nm,0.3s,baz=88,slow=23,SNR=10						
	5.6nm,0.6s						
URZ	Urewera	12.73	204	P	Pn	14 59 46.5	-4.0
AFI	Afiamalu	13.47	19		Pn	14 59 53.6	-7.2
AFI	Afiamalu	13.47	19	P	Pn	14 59 53.2	-7.7
BKZ	Black Stump Fm	13.76	204	P	Pn	15 00 00.9	-3.7
HIZ	Hauiti	13.87	210	P	Pn	15 00 04.4	-1.7
BFZ	Birch Farm	15.19	202	P	Pn	15 00 19.2	-4.7
PINNC	Pines Island,	15.35	282	Pn	Pn	15 00 26.6	+0.5
RAR	Rarotonga	16.07	73	Pn	Pn	15 00 25.6	-10
	1.9nm,0.3s,baz=257,slow=7.6,SNR=6.4						
RAR				LR	LR	15 04 29.6	
	comp=Z,650nm,21.3s,baz=252,slow=28						
RAR	Rarotonga	16.07	73	Pn	Pn	15 00 25.8	-10
DZM	Mont Dzumac	16.40	283	Pn	P	15 00 44.0	+1.8
	0.2nm,0.3s,baz=96,slow=8.8,SNR=9.7						
DZM				LR	LR	15 05 54.4	
	comp=Z,2µm,19.0s,baz=120,slow=34						
DZM	Mont Dzumac	16.40	283	eP	P	15 00 42.0	-0.2
	123nm,1.2s						
DZM				eLR	LR	15 04 28.2	
	3µm,23.9s						
DZM	Mont Dzumac	16.40	283	P	P	15 00 42.7	+0.5
KHZ	Kahutara	17.69	205	P	Pn	15 00 48.7	-6.8
SANVU	Saraoutou	19.06	303	P	P	15 01 10.2	-1.2
SANVU				IAmb	IAmb	15 01 15.4	
	comp=Z,80nm,1.2s						
RPZ	Rata Peaks	19.77	208	LR	LR	15 09 09.9	
	comp=Z,423nm,20.6s,baz=19,slow=37						
TBI	Tubuai	24.52	88	eP	P	15 02 05.6	-2.8
	comp=Z,458nm,27.0s						
TBI				eS	S	15 06 27.8	+1.0
	comp=Z,2µm,27.5s						
TBI				eLR	LR	15 08 00.9	
	comp=Z,5µm,25.2s						
TBI				eLR	LR	15 08 04.6	
	comp=Z,2µm,23.5s						
PPT2	Papeete2	26.32	75	eP	P	15 02 17.2	-7.6
	comp=Z,72nm,27.0s						
PPT2				eS	S	15 06 56.2	+0.6
	comp=Z,1µm,24.8s						
PPT2				eLR	LR	15 08 47.9	
	comp=Z,927nm,27.0s						
PPT2				eLR	LR	15 09 00.9	
	comp=Z,1µm,24.8s						
PPT	Papeete	26.33	75	LR	LR	15 10 13.9	
	comp=Z,409nm,19.4s,baz=244,slow=30						
CTA	Charters Tower	34.91	273	LR	LR	15 17 01.8	
	comp=Z,40nm,18.0s,baz=106,slow=35						
STKA	Stephens Creek	36.90	252	P	P	15 03 56.4	-1.1
	comp=Z,1.0nm,0.4s,baz=106,slow=12,SNR=3.1						
STKA				LR	LR	15 18 06.8	
	comp=Z,1µm,18.0s,baz=81,slow=35						
	comp=Z,1.0nm,0.4s						
RKT	Rikitea	37.52	94	eLR	LR	15 14 06.0	
	comp=Z,8µm,34.5s						
TAOE	Nuku Hiva Isla	38.55	69	eLR	LR	15 14 37.0	
	comp=Z,462nm,24.6s						
PMG	Port Moresby	38.61	290	LR	LR	15 17 52.1	
	comp=Z,860nm,18.9s,baz=146,slow=33						
PMG	Port Moresby	38.61	290	P	P	15 04 13.0	+0.9
PMG	Port Moresby	38.61	290	P	P	15 04 08.8	-3.3
	comp=Z,13nm,1.2s						
COEN	Coen	39.91	280		P	15 04 23.0	0.0
AS31	Alice Springs	44.94	263	P	P	15 05 02.5	-1.3
ASAR	Alice Springs	44.94	263	P	P	15 05 02.2	-1.7
	comp=Z,5.3nm,0.9s,baz=95,slow=7.0,SNR=66						
ASAR				LR	LR	15 23 05.0	
	comp=Z,776nm,18.4s,baz=108,slow=35						
	comp=Z,5.3nm,0.9s						
ASAR	Alice Springs	44.94	263	P	P	15 05 02.0	-1.9
WR8	Warramunga Arr	45.46	268	P	P	15 05 06.3	-1.7
WR8				IAmb	IAmb	15 05 09.0	
	comp=Z,16nm,1.0s						
WRAB	Tennant Creek	45.60	268	P	P	15 05 07.8	-1.4
WRAB				IAmb	IAmb	15 05 10.1	
	comp=Z,14nm,0.9s						
WRA	Warramunga Arr	45.61	268	P	P	15 05 07.8	-1.4
	comp=Z,8.6nm,0.7s,baz=107,slow=6.0,SNR=58						
	comp=Z,8.6nm,0.7s						
WRA	Warramunga Arr	45.61	268	P	P	15 05 07.5	-1.7
WB0	Warramunga Arr	45.62	268	P	P	15 05 07.4	-1.8
WB0				IAmb	IAmb	15 05 10.2	
	comp=Z,16nm,0.8s						
JAY	Jayapura	47.73	293	LR	LR	15 24 15.6	
	comp=Z,403nm,20.2s,baz=119,slow=35						
MTN	Manton Dam	51.04	275	P	P	15 05 51.4	+0.3
SBA	Scott Base	51.76	185	P	P	15 05 58.8	+3.2
VNDA	Vanda	51.85	186	P	P	15 05 57.5	+1.3
	comp=Z,3.3nm,1.1s,baz=351,slow=7.1,SNR=5.0						
VNDA				LR	LR	15 24 03.9	
	comp=Z,225nm,20.7s,baz=20,slow=31						
	comp=Z,3.3nm,1.1s						
VNDA	Vanda	51.85	186	P	P	15 05 57.5	+1.3
KNRA	Kununurra	52.05	271	P	P	15 05 57.9	-0.7
KNRA				IAmb	IAmb	15 06 00.5	
	comp=Z,30nm,1.3s						
FITZ	Fitzroy Crossi	53.98	266	LR	LR	15 27 38.6	
	comp=Z,367nm,19.5s,baz=109,slow=34						
GUMO	Guam	55.08	312	LR	LR	15 27 33.4	
	comp=Z,262nm,20.7s,baz=140,slow=34						
BATI	Baumata	58.78	274	LR	LR	15 32 48.2	
	comp=Z,846nm,18.3s,baz=129,slow=37						
RPN	Rapa Nui	59.00	107	LR	LR	15 27 16.6	
	comp=Z,164nm,19.3s,baz=332,slow=31						
CASY	Casey	59.04	207	P	P	15 06 48.4	+0.2
TNTI	Ternate	60.70	287	P	P	15 06 55.1	-5.2
QSPA	South Pole Qui	63.33	180	P	P	15 07 20.7	+3.3
	comp=Z,14nm,0.9s,baz=41,slow=1.9,SNR=41						
QSPA				LR	LR	15 32 05.4	
	comp=Z,429nm,19.3s,baz=42,slow=33						
	comp=Z,14nm,0.9s						
QSPA	South Pole Qui	63.33	180	P	P	15 07 20.2	+2.9
KAPI	Kappang	64.54	278	LR	LR	15 36 14.4	
	comp=Z,171nm,18.4s,baz=136,slow=37						
DAV	Davao City (W)	65.56	292	LR	LR	15 36 05.6	
	comp=Z,100nm,18.2s,baz=146,slow=36						
JCJ	Chichijima	66.81	320	LR	LR	15 32 33.0	
	comp=Z,152nm,20.7s,baz=84,slow=32						
BELA	Belgrano 2	73.16	172	P	P	15 08 17.8	-0.8
PMSA	Palmer Station	74.94	156	LR	LR	15 40 45.8	
	comp=Z,104nm,18.2s,baz=279,slow=35						
JOW	Kunigami	75.40	311	LR	LR	15 41 19.0	
	comp=Z,75nm,18.4s,baz=110,slow=36						
MJAR	Matsushiro Arr	76.17	324	P	P	15 08 35.1	-1.5
	comp=Z,11nm,1.0s,baz=155,slow=6.1,SNR=9.7						
MJAR				LR	LR	15 41 37.5	
	comp=Z,76nm,18.5s,baz=144,slow=36						
	comp=Z,11nm,1.0s						
MJAR	Matsushiro Arr	76.17	324		P	15 08 35.4	-1.1
MAW	Mawson	76.22	200	P	P	15 08 37.0	+0.6
	comp=Z,9.2nm,1.1s,baz=135,slow=7.1,SNR=3.6						
MAW				LR	LR	15 42 21.8	
	comp=Z,327nm,18.6s,baz=116,slow=36						
	comp=Z,9.2nm,1.1s						
JNU	Nakatsue	77.90	317	LR	LR	15 38 54.5	
	comp=Z,53nm,21.7s,baz=100,slow=33						
JNU	Nakatsue	77.90	317	P	P	15 08 46.2	-0.2
AMKA	Amchitka	77.90	357	P	P	15 08 45.2	-0.6
MDSI	Maura Dua	78.65	271	P	P	15 08 47.2	-3.8
	comp=Z,32nm,0.9s						
SYO	Syowa Base	80.97	192	⇓eP	P	15 09 02.2	-0.4
SYO	Syowa Base	80.97	192	⇓esP	P	15 09 07.4	+4.8
H03S2	Juan Fernandez	81.20	123	T	T	16 38 18.8	
	baz=242,slow=74,SNR=12						
H03S1	Juan Fernandez	81.22	123	T	T	16 38 19.9	
	baz=242,slow=74,SNR=17						
H03S3	Juan Fernandez	81.22	123	T	T	16 38 18.7	
	baz=242,slow=74,SNR=18						
LPIG	La Paz	81.34	58	LR	LR	15 37 06.8	
	comp=Z,138nm,19.7s,baz=218,slow=30						
H03N3	Juan Fernandez	81.37	123	T	T	16 38 30.4	
	baz=240,slow=73,SNR=6.5						
H03N2	Juan Fernandez	81.37	123	T	T	16 38 31.6	
	baz=240,slow=73,SNR=7.0						
H03N1	Juan Fernandez	81.39	123	T	T	16 38 28.7	
	baz=240,slow=73,SNR=7.1						
TROLL	Troll, Antarti	81.49	180	⇑P	P	15 09 05.1	-0.4
	comp=Z,439nm,0.8s						
SNAA	Sanae	81.72	178	P	P	15 09 05.9	-0.7
SNAA	Sanae	81.72	178	P	P	15 09 05.6	-1.0
	comp=Z,3.5nm,0.9s,baz=202,slow=3.6,SNR=7.8						
SNAA	Sanae	81.72	178	P	P	15 09 06.1	-0.5
VNA1	Neumayer--Stat	82.48	176	⇑P	P	15 09 12.3	+1.8
	comp=Z,12nm,1.2s						
KSRS	Korea Array	82.60	318	P	P	15 09 11.2	-0.4
	comp=Z,6.6nm,1.1s,baz=149,slow=6.0,SNR=9.3						
	comp=Z,6.6nm,1.1s						
KSAR	Wonju Array Be	82.62	318		P	15 09 11.5	-0.1
PFO	Pinyon Flats O	82.64	47	LR	LR	15 41 43.8	
	comp=Z,147nm,18.2s,baz=254,slow=33						
ISA	Isabella, Lake	82.66	44		P	15 09 12.8	+0.8
ISA				IAmb	IAmb	15 09 24.6	
	comp=Z,11nm,1.1s						
PETK	Petropavlovsk-	82.71	345	LR	LR	15 38 48.3	
	comp=Z,175nm,21.7s,baz=151,slow=31						
BELC	Belle Mtn. Jos	83.18	47	P	P	15 09 16.7	+1.9
BELC				IAmb	IAmb	15 09 20.4	
	comp=Z,7.5nm,1.2s						
CLC	China Lake	83.31	44	P	P	15 09 16.5	+1.2
CWC	Cottonwood Cre	83.41	44	P	P	15 09 16.1	+0.2
CWC				IAmb	IAmb	15 09 28.4	
	comp=Z,7.2nm,1.2s						
MDPB	Devils Postpil	83.57	42	P	P	15 09 18.2	+1.3
MDPB				IAmb	IAmb	15 09 29.9	
	comp=Z,7.2nm,1.0s						
O03E	Paynes Creek	83.76	39	P	P	15 09 19.1	+1.5
O03E				IAmb	IAmb	15 09 31.0	
	comp=Z,9.1nm,1.1s						
QSM	Queen of Sheba	83.86	45	IAmb	IAmb	15 09 31.0	
	comp=Z,16nm,1.4s						
PLCA	Paso Flores	83.86	133	P	P	15 09 21.9	+3.6
	comp=Z,4.3nm,1.0s,baz=214,slow=7.0,SNR=4.6						
PLCA				LR	LR	15 39 10.2	
	comp=Z,137nm,19.2s,baz=244,slow=30						
	comp=Z,4.3nm,1.0s						
PLCA	Paso Flores	83.86	133	P	P	15 09 18.9	+0.5
WAKR	Walker	83.93	41		P	15 09 19.2	+0.6
WAKR				IAmb	IAmb	15 09 31.9	
	comp=Z,16nm,1.3s						
M02C	Callahan	83.94	37	P	P	15 09 19.6	+1.2
M02C				IAmb	IAmb	15 09 31.6	
	comp=Z,13nm,1.2s						
DSP	Deep Springs	84.07	43		P	15 09 20.2	+1.1
DSP				IAmb	IAmb	15 09 37.9	
	comp=Z,6.7nm,1.1s						
GWY	Greenwater Val	84.12	45		P	15 09 19.6	-0.1
GWY				IAmb	IAmb	15 09 40.8	
	comp=Z,9.1nm,1.2s						
YBH	Yreka Blue Hor	84.25	37	IAmb	IAmb	15 09 32.9	
	comp=Z,5.8nm,0.9s						
GMN	Gold Mountain	84.46	43	P	P	15 09 21.9	+0.5
NVAR	Mina Array Bea	84.55	42	P	P	15 09 22.3	+0.5
	comp=Z,1.7nm,0.9s,baz=218,slow=8.4,SNR=7.4						
NVAR				LR	LR	15 44 03.0	
	comp=Z,122nm,18.1s,baz=221,slow=34						
	comp=Z,1.7nm,0.9s						
TPNV	Topopah Spring	84.86	44	P	P	15 09 24.2	+0.8
TPNV				IAmb	IAmb	15 09 36.7	
	comp=Z,8.3nm,1.1s						
USRK	Ussuriysk Ar.	85.00	325	P	P	15 09 22.1	-1.6
	comp=Z,6.5nm,1.0s,baz=92,slow=5.7,SNR=5.5						
	comp=Z,6.5nm,1.0s						
NJ2	Nanjing	85.07	310	⇓P	P	15 09 25.7	+1.4
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
K05A	Summer Lake	85.91	37		P	15 09 28.9	+0.4
K05A				IAmb	IAmb	15 09 48.0	
	comp=Z,9.7nm,1.1s						
J05D	Fort Rock, OR	86.11	37		P	15 09 30.6	+1.2
J05D				IAmb	IAmb	15 09 43.0	
	comp=Z,6.0nm,0.9s						
X16A	Lo Mia Camp, P	86.44	49	IAmb	IAmb	15 09 37.6	
	comp=Z,8.0nm,1.2s						
PSI	Prapat	86.59	275	LR	LR	15 50 00.4	
	comp=Z,311nm,19.6s,baz=130,slow=37						
PINE	Pine Mountain	86.61	37		P	15 09 32.7	+0.8
PINE				IAmb	IAmb	15 09 53.4	
	comp=Z,12nm,1.3s						
KNB	Kanab	87.07	46	P	P	15 09 35.6	+1.3
GSI	Gunungsitoli	87.13	273	P	P	15 09 30.8	-4.1
WHN	Wuhan	87.40	306	⇓P	P	15 09 37.2	+1.4
WHN				pmax	pmax		
	comp=Z,150nm,1.3s						
J08A	Circle Bar Ran	87.66	38	IAmb	IAmb	15 10 06.2	
	comp=Z,20nm,1.9s						
MTPU	Mount Pierson	88.09	45	P	P	15 09 40.9	+1.5
MTPU				IAmb	IAmb	15 09 52.4	
	comp=Z,7.9nm,1.2s						
CN2	Changchun	88.19	322	P	P	15 09 38.5	-0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TIA	Tai'an	88.64	312	P	P	15 09 43.0	+1.4
TIA				pmax	pmax		
	comp=Z,16nm,1.4s						
G08A	Pilot Rock	88.66	36		P	15 09 42.3	+0.7
G08A				IAmb	IAmb	15 09 54.5	
	comp=Z,7.1nm,1.0s						
TXAR	Lajitas Array	89.15	56	P	P	15 09 44.5	+0.3
	comp=Z,1.0nm,1.0s,baz=216,slow=4.4,SNR=6.8						
TXAR				LR	LR	15 41 43.6	
	comp=Z,91nm,20.7s,baz=230,slow=30						
	comp=Z,1.0nm,1.0s						
BBB	Bella Bella	89.20	27	LR	LR	15 46 55.7	
	comp=Z,86nm,18.1s,baz=240,slow=34						
E09A	Wood Farm, Sta	89.89	36	IAmb	IAmb	15 09 59.8	
	comp=Z,7.3nm,0.9s						
ANMO	Albuquerque	90.13	50	LR	LR	15 43 43.9	
	comp=Z,143nm,18.7s,baz=236,slow=31						
PLID	Pearl Lake	90.13	38	IAmb	IAmb	15 10 13.1	
	comp=Z,16nm,1.7s						
MA2	Magadan	90.22	344	LR	LR	15 44 13.5	
	comp=Z,131nm,19.6s,baz=114,slow=32						
B08A	Colville Reser	90.50	34	P	P	15 09 50.3	+0.3
HNS	HongShan	90.91	312	⇓P	P	15 09 53.6	+1.5
HNS				pmax	pmax		
	comp=Z,17nm,1.6s						
NEW	Newport	91.56	35	LR	LR	15 48 55.3	
	comp=Z,86nm,18.0s,baz=242,slow=34						
PDAR	Pinedale Array	92.47	43	P	P	15 09 59.6	+0.1
	comp=Z,0.5nm,0.8s,baz=227,slow=3.5,SNR=3.8						
PDAR				LR	LR	15 46 09.9	
	comp=Z,68nm,18.4s,baz=236,slow=32						
	comp=Z,0.5nm,0.8s						
SEY	Seymchan	92.81	346	LR	LR	15 48 19.3	
	comp=Z,164nm,18.6s,baz=155,slow=33						
NNA	Nana	92.93	105	LR	LR	15 43 48.9	
	comp=Z,83nm,19.2s,baz=214,slow=30						
KMI	Kunming	93.55	296	P	P	15 10 07.1	+2.1
KMI				pmax	pmax		
	comp=Z,18nm,0.9s						
CMAR	Chiang Mai Arr	93.65	289	P	P	15 10 05.9	+0.6
	comp=Z,3.9nm,0.9s,baz=136,slow=3.3,SNR=21						
	comp=Z,3.9nm,0.9s						
CHTO	Chiang Mai	93.81	289		P	15 10 06.1	+0.1
CHTO				IAmb	IAmb	15 10 08.4	
	comp=Z,7.2nm,0.9s						
ATAH	Atahualpa	93.82	100	LR	LR	15 43 38.0	
	comp=Z,232nm,19.7s,baz=240,slow=30						
ILAR	Eielson Array	94.07	12	P	P	15 10 05.5	-0.6
	comp=Z,1.0nm,1.0s,baz=212,slow=4.7,SNR=4.7						
	comp=Z,1.0nm,1.0s						
HHC	Hu-ho-hao-te	94.82	314	eP	P	15 10 12.3	+2.0
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
PZH	PanZhiHua	94.99	297	P	P	15 10 13.6	+2.2
LPAZ	La Paz	98.20	113	LR	LR	15 48 09.3	
	comp=Z,48nm,18.2s,baz=224,slow=31						
YAK	Yakutsk	98.48	337	LR	LR	15 52 36.3	
	comp=Z,74nm,19.4s,baz=108,slow=34						
ZALV	Zalesovo Beam	116.30	319	PKP	PKPdf	15 15 29.3	-2.1
	comp=Z,0.6nm,0.6s,baz=217,slow=0.7,SNR=4.2						
MKAR	Makanchi Array	116.56	311	PKP	PKPdf	15 15 30.0	-2.2
	comp=Z,0.7nm,0.7s,baz=38,slow=2.2,SNR=4.5						
KURBB	Kurchatov Arra	119.64	315	PKP	PKPdf	15 15 36.6	-1.2
	comp=Z,0.7nm,0.2s,baz=94,slow=2.0,SNR=7.9						
BVAR	Borovoye Array	124.81	318	PKP	PKPdf	15 15 47.2	-0.6
	comp=Z,2.6nm,0.9s,baz=64,slow=3.4,SNR=11						
FINES	FINESS Array B	142.20	343	PKhKP	PKPpre	15 16 22.2	
	comp=Z,2.7nm,0.8s,baz=247,slow=1.1,SNR=4.1						
NC303	NORSAR Array S	145.16	354		PKPdf	15 16 25.1	-0.1
NB2	NORSAR Subarra	145.36	354	PKP	PKPbc	15 16 24.9	-0.6
	comp=Z,20nm,1.4s,baz=10,slow=3.2						
NOA	NORSAR Array B	145.36	354	PKPbc	PKPbc	15 16 24.2	-1.3
	comp=Z,9.7nm,1.0s,baz=11,slow=2.4,SNR=12						
HFS	Hagfors	145.95	351	PKPbc	PKPdf	15 16 26.0	-0.6
	comp=Z,6.9nm,1.0s,baz=33,slow=3.5,SNR=4.0						
NACGM	Naroch	147.22	335	ePKiKP	PKiKP	15 16 36.9	+3.4
	comp=Z,26nm,1.0s,baz=40						
AKASG	Malin Array Be	149.19	328	PKPbc	PKPbc	15 16 35.6	-0.9
	comp=Z,4.3nm,0.9s,baz=41,slow=3.1,SNR=10						
AK21	Malin Array Si	149.22	328	PKP	PKPbc	15 16 34.8	-1.8
AK02	Malin Array Si	149.22	328	PKP	PKPbc	15 16 34.7	-1.9
MMAI	Mount Meron Ar	151.90	290	PKPbc	PKiKP	15 16 44.4	+0.4
	comp=Z,1.6nm,0.5s,baz=72,slow=2.7,SNR=7.8						
BRTR	Keskin Array B	151.97	305	PKPbc	PKPbc	15 16 43.5	-0.3
	comp=Z,2.2nm,0.9s,baz=82,slow=2.6,SNR=6.4						
CLL	Collm	154.50	346	ePKPbc	PKiKP	15 16 49.0	+0.3
CLL				i PKPab	PKPab	15 17 03.0	-0.1
CLL				ePKPlp		15 17 16.0	

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*IDC **03** 15:04:49.1±1.8, 10°.59N×122°.06E, h0^{km}, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=179.4km s-min=18.4km az=65.0*

ISC 03 15:04:51.6±1.6**, 10°.6N**±0°.3×**122°.0E**±0°.5**, h16^{km}, n7, σ1^s.28**/7**, mb3.8**/6**, Panay**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHTO	Chiang Mai	23.76	293	P	P	15 10 03.6	+0.1
FITZ	Fitzroy Crossi	28.72	173	P	P	15 10 47.3	-1.1
	1.8nm,0.9s,baz=0.0,slow=6.1,SNR=2.3						
	1.8nm,0.9s						
WRA	Warramunga Arr	32.66	158	P	P	15 11 22.4	-0.8
	0.3nm,0.3s,baz=338,slow=11,SNR=9.9						
	0.3nm,0.3s						
ASAR	Alice Springs	35.96	161	P	P	15 11 53.0	+1.1
	0.2nm,0.5s,baz=350,slow=9.7,SNR=8.4						
	0.2nm,0.5s						
MKAR	Makanchi Array	49.30	325	P	P	15 13 39.7	-0.3
	0.9nm,0.7s,baz=126,slow=7.3,SNR=6.4						
	0.9nm,0.7s						
KURBB	Kurchatov Arra	53.49	327	P	P	15 14 10.2	-1.0
	0.4nm,0.3s,baz=106,slow=6.8,SNR=5.8						
	0.4nm,0.3s						
BVAR	Borovoye Array	59.07	326	P	P	15 14 52.6	+1.6
	0.4nm,0.5s,baz=110,slow=8.0,SNR=3.7						
	0.4nm,0.5s						

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*JMA **03** 15:06:08.9±0.1, 24°.0N±0°.6×123°.6E±0°.4, h32^{km}±1^{km}, MV3.6/9, NEAR ISHIGAKIJIMA ISLAND*

ISC 03 15:06:08.5±1.2**, 23°.95N**±0°.07×**123°.59E**±0°.04**, h33^{km}**±5^{km}**, n15, σ0^s.66**/23**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.23	62	P	Pb	15 06 15.3	0.0
HATJ				eS	Sb	15 06 20.1	+0.1
IRIF	Iriomote-Funau	0.41	19	P	Pb	15 06 17.5	-0.2
IRIF				S	Sb	15 06 23.7	-0.2
JKRS	Kuro-shima	0.48	54	P	Pb	15 06 19.0	+0.2
JKRS				S	Sb	15 06 26.1	+0.3
JIJ	Ishigaki jima	0.65	51	P	Pb	15 06 21.1	-0.5
JIJ				S	Sb	15 06 29.8	-0.7
YOJ	Yonaguni jima	0.73	314	P	Pn	15 06 22.6	+0.1
YOJ	Yonaguni jima	0.73	314	P	Pn	15 06 22.6	+0.1
YOJ				eS	Sb	15 06 32.2	-0.4
JYNG	Yonagunijimaku	0.77	311	P	Pn	15 06 23.2	+0.2
JYNG				eS	Sb	15 06 33.6	-0.1
JISG	Ishigakijimahi	0.92	46	P	Pn	15 06 25.1	+0.1
JISG				eS	Sn	15 06 37.3	+0.2
JTJ	Tarama	1.23	56	P	Pb	15 06 30.7	-0.4
JTJ				eS	Sb	15 06 47.3	+0.5
NACB	Ninganchiao	1.83	277	P	Pn	15 06 37.9	+0.2
YHNB	Yeheng	2.14	290	P	Pn	15 06 43.6	+1.6
SSLB	Suanglung	2.41	267	P	Pn	15 06 46.2	+0.5
TWGBT	Beinan	2.56	244	P	Pn	15 06 47.4	-0.3
TWGBT	Beinan	2.56	244	S	Sn	15 07 16.7	-1.1
TPUB	Ta-pu	2.79	257	P	Pn	15 06 52.3	+1.5

GCG 03 15:23:56.2±0.7**, 13°.97N**×**91°.91W, h19^{km}**±9^{km}**, MD4.1, ML3.9, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG5	El Palmar, Qui	0.69	51	eP	Pn	15 24 11.1	0.0
STG5				eS	Sn	15 24 22.1	+0.7
STG8	El Palmar, Qui	0.72	48	eP	Pn	15 24 12.0	+0.4
FG16	Alotenango, Sa	1.39	77	eP	Pn	15 24 16.7	-4.1
FG16				IAML		15 24 38.5	
	comp=N,3µm,0.2s						
APG	El Apazote	1.74	53	eP	Pn	15 24 26.0	+0.4

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*IDC **03** 15:26:42.4±6.6, 32°.23S×138°.04E, h0^{km}, mbtmp2.7/3, ML2.7/3, Error ellipse: s-maj=92.3km s-min=25.9km az=31.0*

*AUST **03** 15:26:47.9±0.2, 32°S±2°×13°8E±°, h10^{km}, ML2.6/11, Error ellipse: s-maj=5.8km s-min=3.7km az=81.9*

ISC 03 15:26:46.6±0.8**, 32°.18S**±0°.03×**138°.42E**±0°.05**, h10^{km}, n20, σ2^s.06**/25**, Near coast of South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YAPP	Yappala Statio	0.33	343	P	Pb	15 26 56.8	+2.3
YAPP				S	Sb	15 27 01.8	+2.0
NAPP	Napperby	1.03	193	P	Pb	15 27 07.4	+0.9
PTPS	Port Pirie	1.05	200	P	Pg	15 27 06.9	0.0
WHYH	Whyalla	1.11	220	P	Pb	15 27 08.8	+0.9
WHYH				S	Sb	15 27 23.0	+0.5
HTT	Hallett	1.32	162	P	Pn	15 27 11.1	0.0
HTT				S	Sg	15 27 29.4	+0.4
LCRK	Leigh Creek	1.73	354	P	Pb	15 27 19.5	+1.0
BBOO	Buckleboo	2.10	252	P	Pn	15 27 23.9	+2.2
SDAN	Sedan	2.45	162	P	Pn	15 27 27.3	+0.7
STKA	Stephens Creek	2.71	84	P	Pn	15 27 31.2	+1.0
STKA	Stephens Creek	2.71	84	Pn	Pn	15 27 31.6	+1.3
	0.7nm,0.3s,baz=259,slow=15,SNR=10						
STKA				Sn	Sb	15 28 09.3	+0.8
	3.4nm,0.3s,baz=337,slow=23,SNR=9.6						
	1.5nm,0.3s						
KELC	Kelly Hill Cav	3.99	198	P	Pn	15 27 48.9	+1.0
MULG	Mulgathing	4.19	296	P	Pn	15 27 52.9	+2.3
INKA	Innaminka	4.86	25	P	Pn	15 28 01.6	+1.8
OOD	Oodnadatta	4.97	331	P	Pn	15 28 04.4	+3.1
	comp=Z,2.6nm,0.5s,comp=Z,0.0nm						
ARPS	Mount Arapiles	5.38	149	P	Pn	15 28 06.6	-0.3
	comp=Z,16nm,2.5s,comp=Z,0.1nm						
CMSA	Cobar Meteorol	6.22	86	P	Pn	15 28 18.3	-0.1
	comp=Z,15nm,2.9s,comp=Z,0.1nm						
FORT	Forrest	8.96	276	P	Pn	15 28 56.7	+0.6
	comp=Z,7.7nm,2.1s,comp=Z,0.0nm						
ASAR	Alice Springs	9.37	334	Pn	Pn	15 28 58.1	-3.7
	comp=Z,0.1nm,0.3s,baz=155,slow=12,SNR=12						
ASAR				Sn	Sn	15 30 42.6	-4.8
	comp=Z,0.1nm,0.3s,baz=160,slow=22,SNR=5.3						
	comp=Z,0.3nm,1.1s						
WRKA	Warakurna	11.39	306	P	Pn	15 29 29.9	+0.5
WRA	Warramunga Arr	12.72	342	Pn	Pn	15 29 45.0	-2.7
	baz=166,slow=14,SNR=1.9						
WRA				Sn	Sn	15 32 04.7	-4.8
	baz=168,slow=23,SNR=1.4						
	comp=Z,0.3nm,0.9s						

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*IDC **03** 16:10:56.1±2.3, 13°.47N×92°.46W, h0^{km}, mb4.1/7, mbtmp4.1/9, ML3.5/3, MS3.7/19, Error ellipse: s-maj=47.2km s-min=24.6km az=178.0*

*GCG **03** 16:11:01.5±2.0, 13°.79N×92°.46W, h14^{km}±15^{km}, MD4.5, ML4.3*

*CATAC **03** 16:11:01.1±0.8, 14°N±3°×9°3W±°, h23^{km}±7^{km}, M4.3/12, MLv4.3/12, Error ellipse: s-maj=9.5km s-min=4.5km az=48.1, confirmed*

*MEX **03** 16:11:02.7±1.0, 13°.81N×92°.71W, h16^{km}±28^{km}, MD4.4*

*NEIC **03** 16:11:05.1±1.4, 14°.19N±0°.04×92°.65W±0°.03, h10^{km}±1^{km}, mb4.6/61, Md4.4/85(MEX), Error ellipse: s-maj=7.8km s-min=3.8km az=155.0*

ISC 03 16:10:59.0±1.8**, 13°.82N**±0°.06×**92°.65W**±0°.03**, h4^{km}**±11^{km}**, n188, σ2^s.52**/221**, mb4.6**/34**, MS3.7**/19**, 1D, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.14	19		Pn	16 11 20.7	-1.1
THIG					Sn	16 11 35.9	-2.0
THIG		1.14	19	eP	Pn	16 11 20.7	-1.1

THIG				eS	Sn	16 11 35.9	-2.0
THIG		1.14	19	eP	Pn	16 11 20.7	-1.1
THIG				IAML		16 11 41.7	
	comp=N,5µm,0.4s						
RTAL	Retalhuleu	1.16	53		Pg	16 11 21.4	+0.1
RTAL	Retalhuleu	1.16	53	eP	Pg	16 11 21.3	+0.1
RTAL				eS	Sb	16 11 35.9	-1.1
RTAL	Retalhuleu	1.16	53	P	Pg	16 11 21.3	+0.1
RTAL	Retalhuleu	1.16	53	S	Sn	16 11 36.8	-1.5
SMCA	Catarina	1.17	28	eP	Pn	16 11 21.0	-1.1
PATR	El Naranjo	1.35	17		Pn	16 11 23.3	-1.5
PATR					Sb	16 11 41.3	-1.4
PATR	El Naranjo	1.35	17	eP	Pn	16 11 23.3	-1.5
PATR				eS	Sb	16 11 41.3	-1.4
CHUJ	Union Juarez	1.37	22	eP	Pn	16 11 23.9	-1.2
CHUJ				eS	Sb	16 11 42.0	-1.2
STG2	El Palmar, Qui	1.38	63	eP	Pn	16 11 23.3	-1.8
STG8	El Palmar, Qui	1.40	63	eP	Pn	16 11 23.9	-1.7
PAVE	Pavencul	1.44	18		Pn	16 11 24.8	-1.3
PAVE					Sn	16 11 40.6	-5.0
PAVE	Pavencul	1.44	18	eP	Pn	16 11 24.8	-1.3
PAVE				eS	Sn	16 11 40.6	-5.0
QUEO	Labor Ovalle	1.52	46	eP	Pb	16 11 27.2	-0.6
SOKI	Kika Raxquin	1.56	50	eP	Pn	16 11 27.4	-0.5
SOKI				IAML		16 11 57.3	
	comp=N,3µm,0.6s						
ESSG	Sabana Grande	1.85	72	eP	Pn	16 11 30.5	-1.1
HUEH	Huehuetenango	1.85	37		Pb	16 11 32.2	-1.5
HUEH	Huehuetenango	1.85	37		Sn	16 11 53.6	-2.3
HUEH	Huehuetenango	1.85	37	eP	Pn	16 11 31.6	-0.2
HUEH				eS	Sn	16 11 53.6	-2.3
HUEH	Huehuetenango	1.85	37	IAML		16 12 06.4	
	comp=N,4µm,0.6s						
HUEH	Huehuetenango	1.85	37	P	Pb	16 11 32.8	-0.9
HUEH	Huehuetenango	1.85	37	S	Sb	16 11 55.8	-1.5
PCIG		1.95	344		Pn	16 11 32.2	-0.7
PCIG					Sn	16 11 54.3	-3.6
PCIG		1.95	344	eP	Pn	16 11 32.2	-0.7
PCIG				eS	Sn	16 11 54.3	-3.6
QUIS	Sacapulas	2.10	46	eP	Pb	16 11 36.0	-1.7
QUIS				IAML		16 12 07.8	
	comp=E,2µm,0.4s						
FG16	Alotenango, Sa	2.12	78	eP	Pn	16 11 30.9	-4.6
FG16				IAML		16 12 01.7	
	comp=N,11µm,0.2s						
PCG5	San Vicente Pa	2.24	80	eP	Pn	16 11 33.2	-3.8
PCG5				iS	Sn	16 11 56.5	-8.7
APG	El Apazote	2.42	61	Pn	Pn	16 11 39.7	+0.1
	comp=N,1.4nm,0.3s,baz=203,slow=14,SNR=71						
APG				Sn	Sn	16 12 10.5	+0.7
	comp=N,4.7nm,0.3s,baz=62,slow=23,SNR=7.4						
APG	El Apazote	2.42	61	eP	Pn	16 11 39.8	+0.3
CCIG	Comitan	2.50	11		Pn	16 11 40.9	+0.3
CCIG	Comitan	2.50	11		Sn	16 12 10.4	-1.1
CCIG	Comitan	2.50	11	eP	Pb	16 11 42.8	-1.7
CCIG				eS	Sn	16 12 10.4	-1.1
CCIG	Comitan	2.50	11	eP	Pb	16 11 43.1	-1.4
CCIG	Comitan	2.50	11	S	Sn	16 12 12.1	+0.5
CCIG	Comitan	2.50	11	P	Pb	16 11 41.5	-3.0
FAME	Alcaldia de Sa	2.56	89	P	Pn	16 11 40.2	-1.1
FAME	Alcaldia de Sa	2.56	89	S	Sn	16 12 10.5	-2.3
NUBE	Las Nubes	2.79	88	eP	Pn	16 11 43.6	-0.9
NUBE	Las Nubes	2.79	88	S	Sn	16 12 15.0	-3.8
NUBE	Las Nubes	2.79	88	P	Pn	16 11 43.8	-0.7
SLOZ	Alcaldia de Sa	2.79	85	S	Sn	16 12 15.9	-2.7
TGIG		2.98	351		Pn	16 11 47.1	0.0
TGIG					Sn	16 12 18.8	-4.5
TGIG		2.98	351	eP	Pn	16 11 47.1	0.0
TGIG				eS	Sn	16 12 18.8	-4.5
TGIG		2.98	351	eP	Pn	16 11 47.5	+0.4
TGIG				eS	Sn	16 12 20.8	-2.5
TGIG				IAML		16 12 31.3	
	comp=E,550nm,0.5s						
JAYA	Jayaque - finc	3.11	93	S	Sn	16 12 23.6	-3.2
JAYA	Jayaque - finc	3.11	93	P	Pn	16 11 47.6	-1.5
MTO3	Montecristo	3.24	79	Pn	Pn	16 11 50.1	-0.7
MTO3	Montecristo	3.24	79	P	Pn	16 11 50.4	-0.5
UXUV	UXUV	3.77	338		Pn	16 11 59.0	+1.1
UXUV					Sn	16 12 38.3	-4.3
UXUV	UXUV	3.77	338	eP	Pn	16 11 59.0	+1.1
UXUV				eS	Sn	16 12 38.3	-4.3
HUIG	Huatulco	3.87	300		Pn	16 11 57.7	-1.6
HUIG					Sn	16 12 40.5	-4.7
HUIG	Huatulco	3.87	300	eP	Pn	16 11 57.7	-1.6
HUIG				eS	Sn	16 12 40.5	-4.7
CMIG	Matias Romero	3.90	327	Pn	Pn	16 12 01.7	+2.0
	comp=E,4.0nm,0.3s,baz=170,slow=13,SNR=15						
CMIG				Sn	Sn	16 12 44.4	-1.7
	comp=E,11nm,0.3s,baz=128,slow=14,SNR=6.9						
	comp=E,17nm,0.5s						
CMIG	Matias Romero	3.90	327		Pn	16 11 59.9	+0.1
CMIG					Sn	16 12 45.0	-1.1
CMIG	Matias Romero	3.90	327	eP	Pn	16 11 59.9	+0.1
CMIG				eS	Sn	16 12 45.0	-1.1
PETF	Flores	4.08	41		Pn	16 12 03.5	+1.2
PETF	Flores	4.08	41		Sn	16 12 49.8	-0.7
PETF	Flores	4.08	41	eP	Pn	16 12 03.5	+1.2
PETF				eS	Sn	16 12 49.8	-0.7
PETF	Flores	4.08	41	eP	Pn	16 12 03.7	+1.5
PEIG	Puerto Escondi	4.86	297		Pn	16 12 12.6	-0.3
PEIG					Sn	16 13 05.2	-4.6
PEIG	Puerto Escondi	4.86	297	eP	Pn	16 12 12.6	-0.3
PEIG				eS	Sn	16 13 05.2	-4.6
NEUV	Arroyo Zacate	4.92	322		Pn	16 12 13.2	-0.6
NEUV					Sn	16 13 08.2	-3.0
NEUV	Arroyo Zacate	4.92	322	eP	Pn	16 12 13.2	-0.6
NEUV				eS	Sn	16 13 08.2	-3.0
OXIG	Oaxaca	5.10	310		Pn	16 12 15.5	-0.9
OXIG					Sn	16 13 12.2	-3.7
VHO	Vista Hermosa	5.10	310	eP	Pn	16 12 15.5	-0.9
VHO				eS	Sn	16 13 12.2	-3.7
PMUV	Sontecomapan	5.26	333		Pn	16 12 18.8	+0.3
PMUV					Sn	16 13 17.5	-2.3
PMUV	Sontecomapan	5.26	333	eP	Pn	16 12 18.8	+0.3
PMUV				eS	Sn	16 13 17.5	-2.3
SCIG	Sabancuy	5.30	15		Pn	16 12 15.9	-3.1
SCIG					Sn	16 13 14.4	-6.3
SCIG	Sabancuy	5.30	15	eP	Pn	16 12 15.9	-3.1
SCIG				eS	Sn	16 13 14.4	-6.3
YOIG	Yosondua	5.61	303		Pn	16 12 21.4	-2.0
YOIG					Sn	16 13 24.8	-3.7
YOIG	Yosondua	5.61	303	eP	Pn	16 12 21.4	-2.0
YOIG				eS	Sn	16 13 24.8	-3.7
PNIG	Pinotepa	5.88	296		Pn	16 12 26.5	-0.4
PNIG					Sn	16 13 30.8	-4.1
PNIG	Pinotepa	5.88	296	eP	Pn	16 12 26.5	-0.4
PNIG				eS	Sn	16 13 30.8	-4.1
TXIG	Tlaxiaco	6.00	305		Pn	16 12 29.6	+0.7
TXIG					Sn	16 13 34.8	-3.4
TXIG	Tlaxiaco	6.00	305	eP	Pn	16 12 29.6	+0.7
TXIG				eS	Sn	16 13 34.8	-3.4
TOIG	Toxpalan	6.01	316		Pn	16 12 27.3	-1.6
TOIG					Sn	16 13 34.1	-4.2
TOIG	Toxpalan	6.01	316	eP	Pn	16 12 27.3	-1.6
TOIG				eS	Sn	16 13 34.1	-4.2
TPIG	Tehuac#an	6.44	316		Pn	16 12 33.3	-1.5
TPIG					Sn	16 13 44.4	-4.4
TPIG	Tehuac#an	6.44	316	eP	Pn	16 12 33.3	-1.5
TPIG				eS	Sn	16 13 44.4	-4.4
FTIG	Fresnillo de T	6.66	308		Pn	16 12 41.5	+3.7
FTIG					Sn	16 13 50.2	-4.1
FTIG	Fresnillo de T	6.66	308	eP	Pn	16 12 41.5	+3.7
FTIG				eS	Sn	16 13 50.2	-4.1
MGIG	Malinaltepec	6.69	301		Pn	16 12 39.1	+0.8
MGIG					Sn	16 13 53.1	-2.1
MGIG	Malinaltepec	6.69	301	eP	Pn	16 12 39.1	+0.8
MGIG				eS	Sn	16 13 53.1	-2.1
JAUV	Jalcomulco	6.80	325		Pn	16 12 39.7	0.0
JAUV					Sn	16 13 55.4	-2.3
JAUV	Jalcomulco	6.80	325	eP	Pn	16 12 39.7	0.0
JAUV				eS	Sn	16 13 55.4	-2.3
TLIG	Tlapa	6.81	304	Pn	Pn	16 12 42.0	+2.1
TLIG	Tlapa	6.81	304		Sn	16 13 54.3	-3.6
TLIG	Tlapa	6.81	304	eP	Pn	16 12 37.3	-2.6
TLIG				eS	Sn	16 13 54.3	-3.6
LVIG	Laguna Verde	6.89	329		Pn	16 12 39.1	-1.7
LVIG					Sn	16 13 55.8	-4.0
LVIG	Laguna Verde	6.89	329	eP	Pn	16 12 39.1	-1.7
LVIG				eS	Sn	16 13 55.8	-4.0
CRIG	Cruz Grande	6.90	296		Pn	16 12 41.0	+0.1
CRIG					Sn	16 13 56.3	-3.6
CRIG	Cruz Grande	6.90	296	eP	Pn	16 12 41.0	+0.1
CRIG				eS	Sn	16 13 56.3	-3.6
DAIG	Los Arroyos	7.46	296		Pn	16 12 48.8	0.0
DAIG					Sn	16 14 12.8	-1.1
DAIG	Los Arroyos	7.46	296	eP	Pn	16 12 48.8	0.0
DAIG				eS	Sn	16 14 12.8	-1.1
TEIG	Tepich	7.62	33	Pn	Pn	16 12 52.1	+1.2
	baz=130,slow=24,SNR=5.8						
TEIG				Sn	Sn	16 14 16.5	-1.2
	baz=310,slow=24,SNR=1.3						
TEIG	Tepich	7.62	33		Pn	16 12 51.3	+0.4
PPPT	Popocatepetl	7.69	313	eP	Pn	16 12 53.6	+1.2
PPPT				eS	Sn	16 14 18.2	-2.0
PBXN	Popocatepetl	7.74	313	eP	Pn	16 12 52.6	-0.3
PBXN				eS	Sn	16 14 20.5	-0.8
PPM	Popocatepetl	7.75	313	eP	Pn	16 12 53.0	-0.1
PPM				eS	Sn	16 14 17.4	-4.3
PPIG	Popocatepetl	7.75	313		Pn	16 12 53.0	-0.2
PPIG					Sn	16 14 17.4	-4.3
MEIG	Mezcala	7.85	302		Pn	16 12 53.5	-0.6
MEIG					Sn	16 14 18.7	-4.9
MEIG	Mezcala	7.85	302	eP	Pn	16 12 53.5	-0.6
MEIG				eS	Sn	16 14 18.7	-4.9
CXUV	Coxquihui	7.89	324		Pn	16 12 54.5	-0.1
CXUV					Sn	16 14 22.4	-2.0
CXUV	Coxquihui	7.89	324	eP	Pn	16 12 54.5	-0.1
CXUV				eS	Sn	16 14 22.4	-2.0
YAIG	Yautepec	7.94	310		Pn	16 12 53.8	-1.6
YAIG					Sn	16 14 23.0	-2.9
YAIG	Yautepec	7.94	310	eP	Pn	16 12 53.8	-1.6
YAIG				eS	Sn	16 14 23.0	-2.9
CAIG	El Cayaco	8.02	295		Pn	16 12 53.4	-2.9
CAIG					Sn	16 14 23.9	-3.7
CAIG	El Cayaco	8.02	295	eP	Pn	16 12 53.4	-2.9
CAIG				eS	Sn	16 14 23.9	-3.7
ARIG	Puente Sto Nin	8.63	302		Pn	16 13 06.6	+1.8
ARIG					Sn	16 14 37.4	-5.2
ARIG	Puente Sto Nin	8.63	302	eP	Pn	16 13 06.6	+1.8
ARIG				eS	Sn	16 14 37.4	-5.2
553A	Crawfordville	17.97	24		P	16 15 10.6	+0.2
SAND	Sanderson	18.29	333		P	16 15 15.9	+1.9
TX31	Lajitas Ar. Si	18.51	328		Pn	16 15 17.6	+1.0
TXAR	Lajitas Array	18.51	328	P	Pn	16 15 19.0	+2.5
	comp=E,0.1nm,0.3s,baz=147,slow=16,SNR=13						
	comp=E,2.6nm,1.0s						
TXAR	Lajitas Array	18.51	328		Pn	16 15 18.6	+2.0
MNHN	Monahans	19.76	334		Pn	16 15 32.9	+1.3
VHRN	Van Horn	20.35	328	P	Pn	16 15 39.0	+0.4
APMT	Aspermont	20.57	342	P	Pn	16 15 40.2	-1.0
SN07	Snyder 07	20.60	340	P	Pn	16 15 40.3	-1.2
MIAR	Mount Ida	20.65	358		Pn	16 15 40.6	-1.4
GDL2	Guadalupe Moun	21.20	332	P	P	16 15 48.1	+2.2
GOGA	Godfrey	21.22	22	P	P	16 15 47.2	+1.3
SMWD	Samnorwood	22.27	343	P	P	16 15 59.2	+1.9
SMWD				IAmb	IAmb	16 15 59.9	
	comp=Z,31nm,0.8s						
AMTX	Amarillo	22.50	340	IAmb	IAmb	16 16 02.1	
	comp=Z,17nm,0.7s						
PAULI	Pauline	23.09	23	P	P	16 16 06.2	+0.4
PAULI				IAmb	IAmb	16 16 10.0	
	comp=Z,23nm,0.7s						
TKL	Tuckaleechee C	23.16	19	LR	LR	16 26 44.9	
	comp=Z,242nm,18.5s,baz=208,slow=40						
W57A	Gilead	24.11	26	P	P	16 16 17.1	+1.2
W57A				IAmb	IAmb	16 16 30.7	
	comp=Z,34nm,1.1s						
RTBA	Rita Blanca	24.27	340	IAmb	IAmb	16 16 19.7	
	comp=Z,25nm,0.9s						
T25A	Trinidad	25.49	338	IAmb	IAmb	16 16 32.1	
	comp=Z,8.3nm,1.0s						
SJG	San Juan	25.82	77	LR	LR	16 27 14.3	
	comp=Z,158nm,18.2s,baz=280,slow=38						
SDCO	Great Sand Dun	26.43	337	P	P	16 16 39.8	+2.5
O48B	Farmland	27.14	13	P	P	16 16 44.7	+1.3
O48B				IAmb	IAmb	16 16 50.1	
	comp=Z,7.1nm,0.9s						
MVCO	Mesa Verde	27.25	332	IAmb	IAmb	16 16 55.9	
	comp=Z,7.9nm,1.1s						
PV01	Paradox Valley	28.04	333	IAmb	IAmb	16 17 02.1	
	comp=Z,9.8nm,1.5s						
PV13	Radium Mtn., P	28.17	332	IAmb	IAmb	16 17 03.6	
	comp=Z,18nm,1.4s						
PV03	Paradox Valley	28.26	332	IAmb	IAmb	16 17 04.4	
	comp=Z,14nm,1.3s						
PV18	Skein Mesa, Pa	28.28	332	IAmb	IAmb	16 17 05.2	
	comp=Z,26nm,1.3s						
PV16	Nyswonger Mesa	28.34	332	IAmb	IAmb	16 17 06.5	
	comp=Z,17nm,1.3s						
PV19	Morning Glory	28.37	332	IAmb	IAmb	16 17 05.1	
	comp=Z,22nm,1.3s						
PV20	West Nyswonger	28.39	332	IAmb	IAmb	16 17 05.9	
	comp=Z,21nm,1.4s						
PV04	Paradox Valley	28.40	332	IAmb	IAmb	16 17 08.9	
	comp=Z,13nm,1.2s						
PV10	Paradox Valley	28.45	332	IAmb	IAmb	16 17 00.5	
	comp=Z,22nm,1.4s						
SRU	San Rafael Swe	29.73	331	IAmb	IAmb	16 17 28.7	
	comp=Z,11nm,0.6s						
P17A	Butcher Ranch,	30.11	331	P	P	16 17 12.8	+2.8
P17A				IAmb	IAmb	16 17 24.5	
	comp=Z,5.8nm,0.7s						
PDAR	Pinedale Array	32.33	336	P	P	16 17 29.6	0.0
	comp=Z,1.0nm,1.0s,baz=151,slow=9.5,SNR=5.0						
PDAR				LR	LR	16 30 43.5	
	comp=Z,19nm,20.8s,baz=140,slow=36						
	comp=Z,1.0nm,1.0s						
SADO	Sadowa	32.92	18	LR	LR	16 32 27.6	
	comp=Z,212nm,19.5s,baz=236,slow=39						
ELK	Elko	33.30	328	LR	LR	16 33 42.3	
	comp=Z,147nm,20.3s,baz=140,slow=40						
NVAR	Mina Array Bea	33.42	322	P	P	16 17 41.0	+1.9
	comp=Z,1.2nm,0.7s,baz=138,slow=8.6,SNR=6.9						
NVAR				LR	LR	16 33 02.4	
	comp=Z,157nm,18.7s,baz=134,slow=39						
	comp=Z,1.2nm,0.7s						
LOHW	Long Hollow	33.45	336	IAmb	IAmb	16 17 49.1	
	comp=Z,7.9nm,1.2s						
BCYI	Bear Canyon	35.18	334	P	P	16 17 56.2	+1.9
ULM	Lac du Bonnet	36.42	357	LR	LR	16 34 23.0	
	comp=Z,88nm,18.3s,baz=194,slow=38						
J08A	Circle Bar Ran	36.85	328	P	P	16 18 10.2	+1.6
PLID	Pearl Lake	36.93	332	IAmb	IAmb	16 18 19.8	
	comp=Z,8.8nm,1.3s						
YBH	Yreka Blue Hor	38.12	323	LR	LR	16 35 29.9	
	comp=Z,11nm,19.6s,baz=135,slow=38						
SCHQ	Schefferville	45.61	21	LR	LR	16 39 32.5	
	comp=Z,189nm,18.5s,baz=218,slow=37						
YKAW1	Yellowknife Wh	51.02	347	P	P	16 20 01.9	-0.1
YKAW1				IAmb	IAmb	16 20 02.7	
	comp=Z,6.3nm,0.6s						
YKA	Yellowknife Ar	51.06	347	P	P	16 20 02.1	-0.1
	comp=Z,2.8nm,0.7s,baz=155,slow=7.3,SNR=27						
	comp=Z,2.8nm,0.7s						
YKAW3	Yellowknife Wh	51.12	347	P	P	16 20 02.8	+0.2
YKAW3				IAmb	IAmb	16 20 03.5	
	comp=Z,6.4nm,0.8s						
DLBC	Dease Lake	52.56	336	P	P	16 20 15.1	+1.5
	comp=Z,4.1nm,0.9s,baz=158,slow=5.4,SNR=4.6						
	comp=Z,4.1nm,0.9s						
FRB	Frobisher Bay	52.63	13	LR	LR	16 43 47.6	
	comp=Z,196nm,18.2s,baz=283,slow=37						
BDFB	Brasilia	52.96	122	LR	LR	16 41 47.6	
	comp=Z,77nm,18.4s,baz=118,slow=35						
S32K	Killisnoo	53.83	333	P	P	16 20 25.4	+2.6
N31M	Braeburn, Yuko	56.74	337	P	P	16 20 46.3	+2.5
M30M	Minto, Yukon	57.78	338	P	P	16 20 54.4	+3.2
M30M				IAmb	IAmb	16 21 05.1	
	comp=Z,5.5nm,1.4s						
SFJD	Kangerlussuaq	59.88	18	LR	LR	16 47 51.6	
	comp=Z,107nm,18.6s,baz=178,slow=37						
BCAR	Beaver Creek A	59.95	337	P	P	16 21 08.6	+2.3
INK	Inuvik	60.43	344	P	P	16 21 10.2	+0.8
INK				IAmb	IAmb	16 21 18.9	
	comp=Z,12nm,1.4s						
KLU	Klutina	60.86	334	P	P	16 21 15.7	+3.1
M24K	Tolsona, Glenn	61.25	334	P	P	16 21 18.3	+3.1
PAX	Paxson	61.36	335	P	P	16 21 18.6	+2.7
PAX				IAmb	IAmb	16 21 28.5	
	comp=Z,8.1nm,1.2s						
GHO	Glory Hole Cre	62.27	333	P	P	16 21 25.0	+2.9
ILAR	Eielson Array	62.76	337	P	P	16 21 25.4	+0.3
	comp=Z,2.4nm,1.1s,baz=130,slow=5.2,SNR=11						
	comp=Z,2.4nm,1.1s						
SUA	Susitna One	62.95	333	P	P	16 21 29.8	+3.1
SKT	Skwentna	63.49	333	P	P	16 21 33.0	+2.9
BORG	Borgarnes	69.64	26	LR	LR	16 51 36.9	
	comp=Z,25nm,20.0s,baz=240,slow=35						
SCO	Scoresbysund	70.64	20	P	P	16 22 18.2	+2.9
SCO				IAmb	IAmb	16 22 54.5	
	comp=Z,6.2nm,1.0s						
RAR	Rarotonga	74.52	243	P	P	16 22 44.8	+5.4
EKA	Eskdalemuir Ar	78.48	36	P	P	16 22 58.1	-3.1
	comp=Z,1.3nm,0.6s,baz=274,slow=5.7,SNR=6.1						
	comp=Z,1.3nm,0.6s						
SPITS	Spitsbergen Ar	80.39	11	P	P	16 23 09.9	-1.4
	comp=Z,2.5nm,0.7s,baz=292,slow=9.2,SNR=4.0						
SPITS				LR	LR	17 02 01.2	
	comp=Z,150nm,18.2s,baz=244,slow=38						
	comp=Z,2.5nm,0.7s						
BMRD	Maredsous	84.16	40	dPcP	PcP	16 23 37.7	+2.4
NOA	NORSAR Array B	84.60	28	LR	LR	17 00 04.0	
	comp=Z,12nm,20.6s,baz=295,slow=35						
HFS	Hagfors	86.06	29	LR	LR	17 01 17.0	
	comp=Z,29nm,19.1s,baz=250,slow=35						
FINES	FINESS Array B	90.92	25	LR	LR	17 04 46.3	
	comp=Z,33nm,18.1s,baz=250,slow=35						
NRIK	Noril'sk	97.06	360	LR	LR	17 13 08.4	
	comp=Z,63nm,18.4s,baz=356,slow=38						
YAK	Yakutsk	97.42	341	LR	LR	17 14 42.0	
	comp=Z,23nm,19.0s,baz=210,slow=39						
CMAR	Chiang Mai Arr	145.95	340	PKPbc	PKPab	16 30 40.8	-0.5
	comp=Z,1.5nm,0.5s,baz=335,slow=3.7,SNR=12						

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*HEL **03** 16:17:34.2±0.0, 61°.44N×28°.67E, h2^{km}, ML2.2, Confirmed Earthquake*

*IDC **03** 16:17:37.9±1.4, 61°.67N×28°.23E, h0^{km}, mbtmp3.1/4, ML2.7/4, Error ellipse: s-maj=14.5km s-min=7.8km az=144.0*

ISC 03 16:17:32.5±1.1, **61°.52N**±0°.02×**28°.60E**±0°.03, **h4**^{km}±9^{km}, **n34**, σ1^s.**28**/56, **Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUF	Ruokolahti	0.20	120	eP	Pg	16 17 36.6	+0.2
RUF				eS	Sg	16 17 38.4	-0.5
KY10	KOUVOLA	1.01	235	eP	Pb	16 17 52.2	-0.5
KY10				eS	Sg	16 18 05.2	+0.1
KY02	KOUVOLA	1.04	238	eP	Pb	16 17 52.6	-0.5
KY02				eS	Sg	16 18 06.2	+0.3
KY12	KOUVOLA	1.10	227	eP	Pg	16 17 53.2	-0.4
KY12				eS	Sg	16 18 07.7	-0.1
VJF	Virojoki	1.11	208	eP	Pg	16 17 52.7	-1.0
VJF				eS	Sg	16 18 06.6	-1.5
KY14	Pilkanmaa	1.17	239	eP	Pb	16 17 54.9	-0.4
KY14				eS	Sb	16 18 10.5	-0.3
FIA0	FINESS Array S	1.21	267	eP	Pn	16 17 56.4	+0.2
FIA0				eS	Sn	16 18 12.5	-0.6
FINES	FINESS Array B	1.21	267	Pg	Pn	16 17 56.2	0.0
	9.6nm,0.3s,baz=95,slow=17,SNR=386						
FINES				Lg	Lg	16 18 12.1	
	9.8nm,0.3s,baz=91,slow=29,SNR=14						
PVF	Pernaja	1.65	235	eP	Pb	16 18 02.9	-0.6
PVF				eS	Sb	16 18 24.4	-0.3
PVF				MSG		16 18 25.1	
	comp=Z,33nm,0.1s						
SUF	Sumiainen	1.66	317	eP	Pg	16 18 05.2	+0.8
SUF				eS	Sg	16 18 27.3	+1.4
SUF				MSG		16 18 28.4	
	comp=Z,17nm,0.1s						
KEF	Keuruu	1.88	292	eP	Pg	16 18 08.9	+0.4
KEF	Keuruu	1.88	292	ePB	Pg	16 18 08.5	-0.1
KEF				eSB	Sg	16 18 33.2	+0.4
KEF				MSG		16 18 36.0	
	comp=Z,19nm,0.1s						
JOF	Joensuu	1.89	41	eP	Pg	16 18 08.4	-0.3
JOF	Joensuu	1.89	41	ePB	Pg	16 18 08.1	-0.6
JOF				eSB	Sg	16 18 32.9	-0.3
JOF				MSG		16 18 35.4	
	comp=Z,15nm,0.1s						
NIF	Nilsia	1.91	349	ePB	Pg	16 18 09.1	0.0
NIF				eS	Sg	16 18 34.3	+0.5
NIF				MSG		16 18 36.4	
	comp=Z,14nm,0.1s						
NUR	Nurmijarvi	2.17	244	ePB	Pb	16 18 12.0	-0.4
NUR				eSB	Sb	16 18 39.8	+0.2
NUR				MSG		16 18 42.8	
	comp=Z,15nm,0.1s						
EE04	Vaivara Sinima	2.19	190	ePB	Pb	16 18 11.4	-1.2
EE04				eSG	Sb	16 18 41.2	+1.2
HEL1	Helsinki	2.27	235	ePB	Pb	16 18 13.3	-0.6
HEL1				eSB	Sb	16 18 42.0	-0.2
HEL1				MSG		16 18 45.7	
	comp=Z,14nm,0.1s						
HEL5	Espoo, Suvisaa	2.36	235	ePB	Pb	16 18 14.6	-0.9
HEL5				eSB	Sb	16 18 44.6	-0.4
HEL5				MSG		16 18 48.4	
	comp=Z,14nm,0.1s						
MEF	Metsahovi	2.44	239	eP	Pb	16 18 16.7	-0.2
ARBE	Arbavere	2.46	213	eP	Pb	16 18 15.4	-1.9
EE03	Tooma soojaam,	2.90	205	eP	Pn	16 18 20.9	+1.4
EE03				eSG	Sb	16 19 00.9	+0.3
EE02	Kiisa, Saku	3.04	221	eP	Pn	16 18 22.4	+1.1
EE02				eSG	Sb	16 19 05.6	+1.1
VAF	Ylistaro	3.16	301	eP	Pb	16 18 28.4	-0.8
VSU	Vasula	3.21	198	eP	Pn	16 18 26.2	+2.5
EE08	Sarghaua, Vand	3.33	212	eP	Pn	16 18 26.3	+1.0
EE08				eSG	Sb	16 19 15.5	+2.6
RAF	Rauma	3.34	264	eP	Pb	16 18 29.2	-3.0
EE07	Piusa Caves, O	3.74	189	eP	Pn	16 18 32.1	+1.2
EE07				eS	Sn	16 19 15.3	0.0
EE06	Soera, Palade,	3.84	231	eS	Sn	16 19 18.3	+0.4
AAL	Aland	4.42	256	eP	Pn	16 18 43.8	+3.5
HFS	Hagfors	7.42	266	Pn	Pn	16 19 22.6	+1.2
	comp=Z,0.2nm,0.3s,baz=92,slow=14,SNR=9.7						
HFS				Sn	Sn	16 20 43.9	-2.0
	comp=Z,0.5nm,0.3s,baz=68,slow=25,SNR=5.7						
HFS				Lg	Lg	16 21 22.4	
	comp=Z,1.3nm,0.3s,baz=70,slow=29,SNR=5.7						
	comp=Z,0.7nm,0.3s						
ARCES	ARCESS Array B	8.15	352	Pn	Pn	16 19 33.1	+1.8
	comp=Z,0.2nm,0.3s,baz=165,slow=14,SNR=12						
ARCES				Sn	Sn	16 21 02.0	-1.8
	comp=Z,0.3nm,0.3s,baz=173,slow=23,SNR=7.8						
ARCES				Lg	Lg	16 21 43.2	
	comp=Z,0.6nm,0.3s,baz=165,slow=32,SNR=5.4						
	comp=Z,0.4nm,0.3s						
NOA	NORSAR Array B	8.38	274	Pn	Pn	16 19 36.1	+1.4
	baz=83,slow=11,SNR=1.5						
NOA				Lg	Lg	16 21 54.1	
	comp=Z,0.1nm,0.3s,baz=8.7,slow=12,SNR=4.9						
	comp=Z,0.2nm,0.5s						
AKASG	Malin Array Be	10.86	178	Pn	Pn	16 20 12.0	+3.4
	comp=Z,0.4nm,0.3s,baz=1.4,slow=13,SNR=1.5						
	comp=Z,0.3nm,0.3s						

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*DJA **03** 16:18:37.7±0.3, 1°N±4°×12°6E±°, h10^{km}, M3.5/8, mb3.7/1, MLv3.4/8*

*IDC **03** 16:19:16.7±5.2, 0°.03N×124°.43E, h414^{km}±68^{km}, mb2.6/4, mbtmp3.4/5, Error ellipse: s-maj=75.1km s-min=15.3km az=74.0*

ISC 03 16:18:39.5±1.2, **1°.4N**±0°.1×**126°.22E**±0°.07, **h35**^{km}, **n9**, σ1^s.**11**/10, **mb3.4**/4, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.29	118	P	Pn	16 19 01.6	+0.6
MNI	Manado	1.39	273	P	Pn	16 19 02.2	-0.2
MNI				S	Sn	16 19 19.4	-0.1
GTOI	Gorontalo	3.29	257	P	Pn	16 19 30.4	+1.8
LUWI	Luwuk	4.20	235	P	Pn	16 19 41.3	+0.2
FITZ	Fitzroy Crossi	19.36	182	P	P	16 23 00.4	-1.8
	1.0nm,0.6s,baz=5.2,slow=11,SNR=2.7						
FITZ				S	S	16 26 07.2	-32
	2.0nm,1.0s,baz=90,slow=17,SNR=2.3						
WRA	Warramunga Arr	22.63	160	P	P	16 23 38.3	+0.7
	0.7nm,0.6s,baz=334,slow=11,SNR=10						
	0.7nm,0.6s						
ASAR	Alice Springs	25.99	164	P	P	16 24 09.8	+0.6
	0.3nm,0.5s,baz=346,slow=8.2,SNR=15						
	0.3nm,0.5s						
MKAR	Makanchi Array	59.21	326	P	P	16 28 37.7	+0.5
	0.3nm,0.5s,baz=120,slow=6.7,SNR=2.9						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	63.45	328	P	P	16 29 04.9	-0.9
	0.2nm,0.6s,baz=118,slow=7.5,SNR=1.7						
	0.2nm,0.6s						

*NIED **03** 16:22:47.6, 28°.23N×128°.84E, h67^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.64; $M_{\theta\theta}$1.27; $M_{\phi\phi}$0.37; $M_{r\theta}$0.29; $M_{\theta\phi}$0.07; $M_{\phi r}$-0.06; Fault plane solution: $M_0$1.49000×10^{15} NP1:ϕ_s84.00000°, δ39.00000°, λ-93.00000°. NP2:ϕ_s268.00000°, δ51.00000°, λ-87.00000°.*

*JMA **03** 16:22:47.6±0.2, 28°.2N±0°.9×12°9E±°, h67^{km}±2^{km}, MD3.8/27, MV4.2/27, NEAR AMAMI-OSHIMA ISLAND*

JMA Felt I J1 at NEAR AMAMI-OSHIMA ISLAND.

*IDC **03** 16:22:48.2±0.9, 28°.14N×128°.83E, h86^{km}±8^{km}, mb3.7/22, mbtmp4.0/25, MS3.2/2, Error ellipse: s-maj=14.9km s-min=8.1km az=95.0*

*NEIC **03** 16:22:48.9±1.1, 28°.13N±0°.06×128°.84E±0°.09, h87^{km}±7^{km}, mb4.4/39, Error ellipse: s-maj=12.4km s-min=7.6km az=109.0*

ISC 03 16:22:46.9±0.6, **28°.16N**±0°.04×**128°.91E**±0°.05, **h75**^{km}±6^{km}, **n108**, σ**1^{s}07**/113, **mb4.2**/43, **1C, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAMN	Amaminishikomi	0.25	71	P	Pn	16 22 58.4	0.0
JAMN				S	Sn	16 23 06.5	-0.3
JAMN	Amaminishikomi	0.25	71	A	A	16 22 58.4	
	comp=N,20nm,0.2s,comp=E,28nm,0.3s						
JTK	Tokunoshima	0.38	175	P	Pn	16 22 59.7	+0.5
JTK				S	Sn	16 23 08.7	+0.4
JTK	Tokunoshima	0.38	175	A	A	16 22 59.7	
	comp=N,32nm,0.6s,comp=E,16nm,0.4s						
JAM	Amami Oshima	0.66	68	P	Pn	16 23 02.1	+0.3
JAM				S	Sn	16 23 12.8	0.0
JAM	Amami Oshima	0.66	68	A	A	16 23 02.1	
	comp=N,8.0nm,0.4s,comp=E,5.0nm,0.3s						
JOKE	Okinoerabujima	0.85	201	P	Pn	16 23 04.9	+0.9
JOKE				S	Sn	16 23 17.5	+0.8
JZK	Kikaishima	0.95	81	P	Pn	16 23 07.1	+2.0
JTAJ	Takarajima	1.02	15	*i* P	Pn	16 23 05.9	0.0
JTAJ				S	Sn	16 23 19.5	-0.6
JYRO	Yoronjima	1.21	200	P	Pn	16 23 09.2	+0.9
JYRO				S	Sn	16 23 25.6	+1.3
JIH	Iheya	1.40	217	P	Pn	16 23 11.6	+0.8
JIH				S	Sn	16 23 29.4	+0.7
JOW	Kunigami	1.44	203	P	Pn	16 23 11.5	+0.1
	comp=E,479nm,0.2s,baz=82,slow=21,SNR=541						
JOW				S	Sn	16 23 30.5	+0.8
	comp=E,544nm,0.3s,baz=262,slow=28,SNR=6.8						
JOW	Kunigami	1.44	203		Pn	16 23 11.9	+0.6
JOW	Kunigami	1.44	203	P	Pn	16 23 11.9	+0.6
JOW				S	Sn	16 23 30.5	+0.8
JNTH	Nagotoyohara	1.82	206	*i* P	Pn	16 23 17.1	+0.8
JNN	Nakanoshima	1.87	27	P	Pn	16 23 17.5	+0.4
JAGN	Aguni-jima	2.16	224	P	Pn	16 23 21.6	+0.8
JAGN				S	Sn	16 23 47.7	+1.0
JJT3	Tamagusuku3	2.25	207	P	Pn	16 23 23.3	+1.3
JYAK	Yakushimahirau	2.50	34	P	Pn	16 23 26.2	+0.9
JYAK				S	Sn	16 23 55.8	+1.0
JKC	Kuchinoerabu	2.55	26	P	Pn	16 23 27.3	+1.2
JKE	Kume jima 2	2.63	226	P	Pn	16 23 27.9	+0.7
JKE				S	Sn	16 23 59.0	+0.9
JMTN	Minamitane	2.83	38	*e*P	Pn	16 23 31.2	+1.3
JKDJ	Kitadaitoujima	3.06	135	*e*P	Pn	16 23 33.1	0.0
JTN	Tanegashima 3	3.07	36	*e*P	Pn	16 23 34.3	+1.2
JMZ	Minamidaito 2	3.12	138		Pn	16 23 34.0	+0.2
JMZ	Minamidaito 2	3.12	138	*e*P	Pn	16 23 33.7	-0.1
JNU	Nakatsue	5.22	18	P	Pn	16 24 05.5	+3.0
	comp=E,63nm,0.4s,baz=273,slow=3.3,SNR=94						
JNU				S	Sn	16 25 04.1	+2.6
	comp=E,27nm,0.6s,baz=255,slow=17,SNR=1.0						
JNU	Nakatsue	5.22	18		Pn	16 24 05.1	+2.6
YOJ	Yonaguni jima	6.45	236	Pn	Pn	16 24 19.9	+0.6
JMN	Monobe	7.00	36	Pn	Pn	16 24 27.7	+1.0
NACB	Ninganchiao	7.68	240	Pn	Pn	16 24 34.2	-1.9
KSRS	Korea Array	9.30	355	P	Pn	16 25 01.1	+2.9
	comp=E,4.4nm,0.7s,baz=177,slow=13,SNR=14						
JGF	Kuroka	10.32	42	Pn	Pn	16 25 14.0	+1.9
MJAR	Matsushiro Arr	11.47	41	P	Pn	16 25 29.6	+1.9
	comp=E,1.3nm,0.4s,baz=245,slow=14,SNR=7.5						
JTM	Tenmabayashi	16.07	35	Pn	Pn	16 26 28.1	-0.1
BNX	BinXian	17.58	357	⇑P	P	16 26 42.2	-4.7
BNX				pmax	pmax		
	comp=Z,9.0nm,1.4s						
XAN	Xi'an	18.08	294	P	Pn	16 26 53.7	+0.6
XAN				pmax	pmax		
	comp=Z,33nm,0.5s						
JKA	Kamikawa-asahi	19.34	31	P	P	16 27 05.2	-0.9
JKA				IAmb	IAmb	16 27 07.0	
	comp=Z,50nm,1.2s						
LZDM	Lanzhou Array	22.70	296	P	P	16 27 43.0	+0.3
	comp=Z,1.1nm,0.3s,baz=112,slow=12,SNR=1.4						
	comp=Z,1.1nm,0.3s						
ULN	Ulaanbaatar	25.98	325	P	P	16 28 13.1	+0.4
SONM	Songino Array	26.30	324	P	P	16 28 16.1	+0.6
	comp=Z,3.3nm,0.8s,baz=146,slow=9.7,SNR=16						
	comp=Z,3.3nm,0.8s						
SONM	Songino Array	26.30	324	IAmb	IAmb	16 28 19.3	
	comp=Z,4.1nm,1.0s						
GTA	Gaotai	26.55	303	*e*P	P	16 28 19.0	+1.2
GTA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CMAR	Chiang Mai Arr	29.10	257	P	P	16 28 40.2	-0.4
	comp=Z,0.4nm,0.3s,baz=95,slow=4.6,SNR=1.3						
	comp=Z,0.4nm,0.3s						
CMAR	Chiang Mai Arr	29.10	257	P	P	16 28 39.6	-1.0
JAY	Jayapura	32.54	158	LR	LR	16 42 04.2	
	comp=Z,28nm,18.2s,baz=18,slow=36						
H11N2	WAKE ISLAND Hy	35.60	95	T	T	17 07 30.0	
	baz=290,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	35.60	95	T	T	17 07 30.8	
	baz=290,slow=75,SNR=8.3						
H11N3	WAKE ISLAND Hy	35.62	95	T	T	17 07 31.8	
	baz=290,slow=75,SNR=8.7						
MKAR	Makanchi Array	40.73	310	P	P	16 30 20.2	-0.1
	comp=Z,0.6nm,0.4s,baz=91,slow=9.8,SNR=17						
	comp=Z,0.6nm,0.4s						
MKAR	Makanchi Array	40.73	310	P	P	16 30 19.4	-0.9
MTN	Manton Dam	40.82	177	P	P	16 30 20.1	-1.1
MTN				IAmb	IAmb	16 30 21.7	
	comp=Z,4.3nm,0.8s						
MAKZ	Makanchi	40.94	310	P	P	16 30 21.5	-0.5
MAKZ				IAmb	IAmb	16 30 27.3	
	comp=Z,7.6nm,1.4s						
ZALV	Zalesovo Beam	41.10	321	P	P	16 30 22.7	-0.5
	comp=Z,1.5nm,0.4s,baz=106,slow=9.3,SNR=9.9						
	comp=Z,1.5nm,0.4s						
TIXI	Tiksi	43.53	360	P	P	16 30 41.4	-1.3
TIXI				IAmb	IAmb	16 30 49.5	
	comp=Z,3.7nm,0.8s						
KNRA	Kununurra	43.58	180	P	P	16 30 43.6	0.0
KNRA				IAmb	IAmb	16 30 45.1	
	comp=Z,20nm,1.4s						
KURK	Kurchatov	43.86	315	P	P	16 30 45.2	-0.3
KDJ	Kajisay	43.90	303	P	P	16 30 46.1	-0.2
KDJ				IAmb	IAmb	16 30 59.3	
	comp=Z,2.9nm,1.0s						
KURBB	Kurchatov Arra	43.90	315	P	P	16 30 45.7	-0.2
	comp=Z,1.2nm,0.5s,baz=100,slow=9.0,SNR=21						
	comp=Z,1.2nm,0.5s						
AAK	Ala-Archa	45.89	303	P	P	16 31 01.9	-0.2
	comp=Z,1.1nm,0.4s,baz=135,slow=8.6,SNR=4.7						
	comp=Z,1.1nm,0.4s						
AAK	Ala-Archa	45.89	303	P	P	16 31 01.6	-0.5
FITZ	Fitzroy Crossi	46.10	184	P	P	16 31 04.3	+0.7
	comp=Z,3.9nm,0.9s,baz=3.0,slow=11,SNR=12						
	comp=Z,3.9nm,0.9s						
FITZ	Fitzroy Crossi	46.10	184	P	P	16 31 04.2	+0.6
WB0	Warramunga Arr	47.94	173	P	P	16 31 18.3	+0.3
WB0				IAmb	IAmb	16 31 31.5	
	comp=Z,8.0nm,1.4s						
WRA	Warramunga Arr	48.11	173	P	P	16 31 18.1	-1.2
	comp=Z,2.8nm,0.8s,baz=353,slow=8.4,SNR=17						
	comp=Z,2.8nm,0.8s						
WRA	Warramunga Arr	48.11	173	IAmb	IAmb	16 31 26.7	
	comp=Z,0.3nm,1.1s						
WR8	Warramunga Arr	48.14	173	P	P	16 31 19.5	0.0
WR8				IAmb	IAmb	16 31 55.2	
	comp=Z,4.5nm,1.3s						
KKAR	Karatay Array	48.81	304	P	P	16 31 25.1	+0.6
BVAR	Borovoye Array	49.26	317	P	P	16 31 27.5	-0.3
	comp=Z,1.0nm,0.3s,baz=95,slow=8.9,SNR=10						
BVAR				PcP	PcP	16 32 49.0	-0.6
	comp=Z,0.5nm,0.4s,baz=67,slow=3.6,SNR=3.8						
BVAR				LR	LR	16 54 00.0	
	comp=Z,35nm,19.4s,baz=253,slow=38						
	comp=Z,1.0nm,0.3s						
BORK	Borovoye	49.30	317	P	P	16 31 28.2	+0.1
BORK				IAmb	IAmb	16 31 28.7	
	comp=Z,2.3nm,0.4s						
MBWA	Marble Bar	49.83	191	P	P	16 31 32.1	-0.3
PSA00	Pilbara Seismi	50.21	191	P	P	16 31 35.7	+0.4
PSA00				IAmb	IAmb	16 31 52.7	
	comp=Z,9.7nm,1.1s						
AS31	Alice Springs	51.75	174	P	P	16 31 47.3	+0.4
ASAR	Alice Springs	51.75	174	P	P	16 31 47.1	+0.3
	comp=Z,0.8nm,0.5s,baz=3.1,slow=6.7,SNR=42						
ASAR				PcP	PcP	16 32 59.2	0.0
	comp=Z,0.2nm,0.5s,baz=1.6,slow=3.3,SNR=4.1						
	comp=Z,0.8nm,0.5s						
ASAR	Alice Springs	51.75	174	P	P	16 31 47.0	+0.2
ANM	Nome	54.53	29	P	P	16 32 08.0	+1.2
M14K	Bethel	55.70	34	P	P	16 32 16.3	+1.0
AB31	Akbulak array	55.78	312	P	P	16 32 15.8	-0.2
AB31				IAmb	IAmb	16 32 39.4	
	comp=Z,2.3nm,1.1s						
ABKAR	Akbulak array	55.78	312	P	P	16 32 15.8	-0.3
F17K	Baldwin Pennin	56.48	27	P	P	16 32 21.7	+1.0
N15K	Kwethluk River	56.61	34	P	P	16 32 22.8	+1.0
D20K	Etivluk River	58.44	24	P	P	16 32 35.1	+0.6
D20K				IAmb	IAmb	16 33 03.2	
	comp=Z,11nm,1.4s						
J19K	Poorman	58.73	30	P	P	16 32 37.4	+0.8
J19K				IAmb	IAmb	16 32 41.0	
	comp=Z,6.4nm,1.1s						
G21K	Allakaket	59.59	27	P	P	16 32 43.5	+1.0
G21K				IAmb	IAmb	16 32 44.4	
	comp=Z,3.2nm,0.8s						
STKA	Stephens Creek	60.92	168	P	P	16 32 52.1	+0.3
	comp=Z,1.4nm,0.5s,baz=347,slow=7.8,SNR=4.6						
	comp=Z,1.4nm,0.5s						
STKA	Stephens Creek	60.92	168	P	P	16 32 51.9	0.0
E24K	Your Creek	61.45	25	P	P	16 32 56.2	+1.0
E24K				IAmb	IAmb	16 32 57.1	
	comp=Z,3.5nm,0.8s						
F24K	Squaw Lake	61.73	26	P	P	16 32 58.1	+1.0
F24K				IAmb	IAmb	16 32 58.9	
	comp=Z,3.3nm,0.6s						
ILAR	Eielson Array	62.46	29	P	P	16 33 01.4	-0.5
	comp=Z,1.0nm,0.8s,baz=285,slow=6.8,SNR=12						
	comp=Z,1.0nm,0.8s						
C27K	Jago River	63.00	23	P	P	16 33 06.5	+1.0
C27K				IAmb	IAmb	16 33 19.9	
	comp=Z,8.8nm,1.4s						
F26K	Sheenjek River	63.13	25	P	P	16 33 07.7	+1.3
F26K				IAmb	IAmb	16 33 13.3	
	comp=Z,4.7nm,1.4s						
SCRK	Sand Creek	63.83	29	P	P	16 33 11.3	+0.2
SCRK				IAmb	IAmb	16 33 14.6	
	comp=Z,4.0nm,0.8s						
M26K	Nabesna, AK	64.58	31	P	P	16 33 16.9	+0.8
F30M	Barrier River	66.27	25	P	P	16 33 27.8	+1.0
F30M				IAmb	IAmb	16 33 31.4	
	comp=Z,6.7nm,1.1s						
KBZ	Khabaz	68.41	309	P	P	16 33 40.7	+0.1
	comp=Z,2.4nm,0.8s,baz=122,slow=6.2,SNR=5.1						
	comp=Z,2.4nm,0.8s						
ARCES	ARCESS Array B	68.44	338	P	P	16 33 41.4	+1.0
	comp=Z,2.6nm,0.9s,baz=82,slow=8.3,SNR=3.8						
	comp=Z,2.6nm,0.9s						
FINES	FINESS Array B	71.49	330	P	P	16 33 58.7	-0.5
	comp=Z,3.0nm,1.0s,baz=55,slow=5.8,SNR=1.8						
	comp=Z,3.0nm,1.0s						
FINES	FINESS Array B	71.49	330	P	P	16 33 58.4	-0.8
RES	Resolute Bay	73.54	11	P	P	16 34 10.8	-0.3
RES				IAmb	IAmb	16 34 52.0	
	comp=Z,4.2nm,1.2s						
AKASG	Malin Array Be	74.46	319	P	P	16 34 16.0	-1.0
	comp=Z,0.8nm,0.5s,baz=64,slow=6.2,SNR=2.0						
	comp=Z,0.8nm,0.5s						
AKASG	Malin Array Be	74.46	319	IAmb	IAmb	16 34 22.0	
	comp=Z,2.7nm,1.1s						
BRTR	Keskin Array B	76.33	308	P	P	16 34 28.0	-0.1
	comp=Z,0.9nm,0.9s,baz=64,slow=6.6,SNR=4.0						
	comp=Z,0.9nm,0.9s						
YKA	Yellowknife Ar	76.52	25	P	P	16 34 29.1	+0.6
	comp=Z,0.4nm,0.6s,baz=298,slow=6.8,SNR=5.6						
	comp=Z,0.4nm,0.6s						
BURAR	Bucovina Array	78.21	318	P	P	16 34 38.5	+0.1
GERES	GERESS Array B	84.03	323	P	P	16 35 07.8	-1.5
	comp=Z,1.0nm,0.8s,baz=12,slow=8.9,SNR=5.2						
	comp=Z,1.0nm,0.8s						
ITM	Ithomi	85.61	310	P	P	16 35 16.4	-0.9
NVAR	Mina Array Bea	88.74	46	P	P	16 35 34.5	+1.9
	comp=Z,0.3nm,0.4s,baz=333,slow=6.1,SNR=2.8						
	comp=Z,0.3nm,0.4s						
PDAR	Pinedale Array	91.28	39	P	P	16 35 45.1	+0.6
	comp=Z,0.4nm,0.7s,baz=277,slow=5.1,SNR=3.2						
	comp=Z,0.4nm,0.7s						

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*IDC **03** 16:31:37.9±1.2, 1°.11N×125°.33E, h0^{km}, mb3.6/5, mbtmp3.6/6, ML3.0/1, Error ellipse: s-maj=118.3km s-min=18.0km az=67.0*

*DJA **03** 16:31:41.9±0.3, 1°N±4°×12°6E±°, h10^{km}, M3.6/9, mb3.8/1, MLv3.6/9*

ISC 03 16:31:42.6±1.0, **1°.45N**±0°.08×**126°.23E**±0°.07, **h35**^{km}, **n11**, σ**1^{s}76**/11, **mb3.5**/5, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.32	121	P	Pn	16 32 05.8	+1.2
MNI	Manado	1.39	270	P	Pn	16 32 05.0	-0.4
SGSI	Sangihe	2.33	343	P	Pn	16 32 19.9	+1.5
GTOI	Gorontalo	3.32	256	P	Pn	16 32 33.1	+1.1
LUWI	Luwuk	4.25	234	P	Pn	16 32 48.1	+3.2
FITZ	Fitzroy Crossi	19.44	182	P	P	16 36 03.4	-2.7
	baz=6.7,slow=14,SNR=2.0						
	1.4nm,0.9s						
WRA	Warramunga Arr	22.70	160	P	P	16 36 40.7	-0.7
	0.8nm,0.4s,baz=333,slow=11,SNR=17						
	0.8nm,0.4s						
ASAR	Alice Springs	26.06	164	P	P	16 37 12.8	-0.1
	0.4nm,0.6s,baz=347,slow=6.7,SNR=16						
ASAR				PcP	PcP	16 40 41.2	+0.8
	0.2nm,0.6s,baz=356,slow=2.3,SNR=5.2						
	0.4nm,0.6s						
MKAR	Makanchi Array	59.14	326	P	P	16 41 39.9	0.0
	0.5nm,0.5s,baz=119,slow=7.6,SNR=9.0						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	63.38	328	P	P	16 42 07.7	-0.7
	0.6nm,0.7s,baz=130,slow=6.0,SNR=6.8						
	0.6nm,0.7s						
BVAR	Borovoye Array	68.95	328	P	P	16 42 42.7	-1.5
	0.4nm,0.7s,baz=93,slow=6.2,SNR=2.6						
	0.4nm,0.7s						

IDC 03 16:33:32.3±2.8, **32°.46S**×**178°.18W**, **h0**^{km}, **mb3.9**/3, **mbtmp3.9**/4, **ML3.5**/1, **Error ellipse: s-maj=66.0km s-min=35.5km az=118.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.95	212	Pn	Pn	16 35 14.8	-0.5
	0.9nm,0.3s,baz=248,slow=4.9,SNR=9.2						
URZ				Sn	Sn	16 36 36.1	+1.1
	1.4nm,0.3s,baz=246,slow=22,SNR=6.6						
	13nm,1.1s						
ASAR	Alice Springs	42.89	269	P	P	16 41 32.9	+0.2
	0.5nm,0.3s,baz=112,slow=8.0,SNR=20						
	0.5nm,0.3s						
WRA	Warramunga Arr	44.06	274	P	P	16 41 42.0	-0.2
	0.6nm,0.3s,baz=112,slow=8.1,SNR=19						
	0.6nm,0.3s						
FITZ	Fitzroy Crossi	52.23	272	P	P	16 42 44.9	-0.4
	2.0nm,0.9s,baz=143,slow=10,SNR=2.9						
	2.0nm,0.9s						
FINES	FINESS Array B	147.01	339	PKPbc	PKPbc	16 53 15.4	-0.7
	1.2nm,0.5s,baz=45,slow=4.3,SNR=12						

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*IDC **03** 16:57:04.2±0.9, 55°.00S×129°.48W, h0^{km}, mb3.9/6, mbtmp3.9/6, MS3.4/6, Error ellipse: s-maj=38.3km s-min=25.4km az=134.0*

ISC 03 16:57:05.7±0.9, **55°.0S**±0°.2×**129°.5W**±0°.3, **h10**^{km}, **n19**, σ**0^{s}68**/8, **mb4.0**/6, **MS3.4**/6, **Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	32.53	202	P	P	17 03 36.5	+0.3
	1.4nm,0.9s,baz=66,slow=13,SNR=3.0						
VNDA				LR	LR	17 14 33.5	
	comp=Z,34nm,18.1s,baz=75,slow=32						
	1.4nm,0.9s						
PMSA	Palmer Station	32.74	134	LR	LR	17 13 36.2	
	comp=Z,102nm,19.9s,baz=290,slow=30						
TBI	Tubuai	34.93	327	*e*LR	LR	17 13 16.7	
	276nm,25.5s						
QSPA	South Pole Qui	35.20	180	P	P	17 03 59.7	0.0
	2.2nm,1.0s,baz=99,slow=8.3,SNR=4.5						
QSPA				LR	LR	17 15 46.7	
	comp=Z,67nm,19.6s,baz=83,slow=32						
	2.2nm,1.0s						
PPT2	Papeete2	40.38	330	*e*LR	LR	17 15 51.3	
	113nm,25.8s						
PPT	Papeete	40.40	330	LR	LR	17 16 36.5	
	comp=Z,62nm,21.1s,baz=132,slow=29						
H03S2	Juan Fernandez	40.72	80	T	T	17 47 15.2	
	baz=220,slow=74,SNR=12						
H03S1	Juan Fernandez	40.73	80	T	T	17 47 13.7	
	baz=220,slow=74,SNR=14						
H03S3	Juan Fernandez	40.74	80	T	T	17 47 12.7	
	baz=220,slow=74,SNR=12						
H03N3	Juan Fernandez	41.00	80	T	T	17 47 36.6	
	baz=223,slow=72,SNR=18						
H03N2	Juan Fernandez	41.01	80	T	T	17 47 35.9	
	baz=223,slow=72,SNR=22						
H03N1	Juan Fernandez	41.02	80	T	T	17 47 36.6	
	baz=223,slow=72,SNR=28						
LPAZ	La Paz	60.43	76	P	P	17 07 15.7	-0.5
	1.3nm,0.8s,baz=180,slow=6.1,SNR=4.7						
LPAZ				LR	LR	17 27 00.7	
	comp=Z,41nm,19.0s,baz=67,slow=30						
	1.3nm,0.8s						
ASAR	Alice Springs	74.63	251	P	P	17 08 44.3	-0.9
	1.0nm,1.0s,baz=147,slow=6.1,SNR=6.6						
	1.0nm,1.0s						
WRA	Warramunga Arr	77.38	253	P	P	17 09 00.5	-0.4
	1.1nm,0.7s,baz=144,slow=5.2,SNR=8.8						
	1.1nm,0.7s						
TXAR	Lajitas Array	86.85	22	P	P	17 09 50.3	+0.2
	0.8nm,0.9s,baz=187,slow=8.8,SNR=6.7						
	0.8nm,0.9s						
BOSA	Boshof	93.96	158	LR	LR	17 46 35.3	
	comp=Z,12nm,19.2s,baz=209,slow=32						
ILAR	Eielson Array	120.17	351	PKP	PKiKP	17 15 55.8	+0.4
	1.4nm,0.7s,baz=196,slow=2.1,SNR=18						
SONM	Songino Array	145.27	282	PKPbc	PKPdf	17 16 43.7	+0.9
	2.0nm,0.9s,baz=134,slow=3.0,SNR=5.6						

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*AZER **03** 17:01:40.6, 38°.41N×48°.72E, h8^{km}, ml2.8*

*TEH **03** 17:01:40.7, 38°.25N×48°.73E, h19^{km}±32^{km}*

ISC 03 17:01:41.0±1.1, **38°.31N**±0°.03×**48°.80E**±0°.05, **h27**^{km}±7^{km}, **n27**, σ**1^{s}57**/44, **Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAS1	Astara - Iran	0.09	21	Pg	Pb	17 01 45.3	-0.6
GAS1				Sg	Sb	17 01 49.0	-0.2
ASTR	Astara	0.25	358	P	Pb	17 01 47.1	-0.5
ASTR				S	Sb	17 01 52.2	+0.1
LKRN	Lenkeran, Azer	0.40	358	P	Pb	17 01 49.1	-0.7
LKRN				S	Sb	17 01 55.7	0.0
LRK	Lerik	0.49	313	P	Pb	17 01 50.8	-0.6
LRK				S	Sn	17 01 58.5	-1.8
YRD	Yardimli	0.75	324	P	Pb	17 01 55.1	-0.6
YRD				S	Sn	17 02 06.2	-0.4
CSN1	Caspian	0.78	162	Pg	Pb	17 01 55.3	-0.6
GRMI	Germi	0.87	305	Pg	Pb	17 01 56.8	-0.8
GLBA	Clilabad	0.99	341	P	Pn	17 01 58.9	-0.2
GLBA				S	Sn	17 02 12.7	+0.6
ISRB	Sarab	1.02	242	Pg	Pn	17 01 59.2	-0.5
IHRS	Heris	1.38	271	Pg	Pb	17 02 05.5	-0.9
IHSH	Hashtrud	1.58	231	Pg	Pb	17 02 08.4	-1.2
QRD	Qoradiz	1.63	315	Pn	Pb	17 02 09.0	-1.5
QRD				Sn	Sb	17 02 31.0	+0.3
ZNJK	Zanjan	1.64	183	Pg	Pn	17 02 08.5	+0.2
BLQ	Beylaqan	1.71	326	Pn	Pb	17 02 10.6	-1.2
BLQ				Sn	Sb	17 02 32.8	-0.2
ZRD	Zardab	2.15	337	Pn	Pb	17 02 17.4	-1.9
ZRD				Sn	Sb	17 02 44.2	-1.4
AGDM	Agdam	2.23	324	Pn	Pb	17 02 18.6	-2.0
AGDM				Sn	Sb	17 02 46.0	-1.8
ORD	Ordubad	2.29	287	Pn	Pb	17 02 19.6	-1.9
ORD				Sn	Sb	17 02 50.5	+1.0
IAZR	Azarshahr	2.31	255	Pn	Pn	17 02 19.2	+1.6
BRDA	Brd	2.32	328	Pn	Pn	17 02 19.2	+1.8
BRDA				Sn	Sb	17 02 49.0	-1.5
IMRD	Marand	2.46	280	Pn	Pn	17 02 21.4	+1.9
PQL	Pirkuli	2.48	356	Pn	Pb	17 02 23.3	-1.7
PQL				Sn	Sn	17 02 51.5	+2.2
NAX	Nakhchivan	2.73	290	Pn	Pb	17 02 29.8	+0.7
NAX				Sn	Sb	17 03 01.0	-1.1
QBL	Gabala	2.74	345	Sn	Sn	17 02 55.8	+0.3
SBZ	Shahbuz	2.76	294	Pg	Pb	17 02 27.6	-2.1
SBZ				Sg	Sb	17 03 04.2	+1.1
XNQ	Khinaliq	2.91	350	Pg	Pb	17 02 30.3	-2.0
XNQ				Sg	Sb	17 03 10.1	+2.6
GANJ	Ganja	3.02	321	Pg	Pb	17 02 33.2	-1.0
GANJ				Sg	Sb	17 03 09.3	-1.3
QZX	Qazax, Azerbai	3.81	317	Sg	Sb	17 03 38.7	+5.4

KRSC 03 17:08:16.8±0.9, **54°.77N**×**164°.49E**, **h41**^{km}±25^{km}, **Ml3.8**, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	0.96	62	*e*P	Pn	17 08 35.5	+1.7
BKI				*e*S	Sn	17 08 47.4	+1.2
KBTR	Krutoberegovo	1.73	327	*e*P	Pn	17 08 45.4	+1.1
KBTR				*e*S	Sn	17 09 05.2	+0.1
KBG	Krutoberegovo	1.80	326	*e*P	Pn	17 08 47.4	+2.1
KZV	Kizimen	2.44	280	*e*P	Pn	17 08 57.4	+3.1
BZGR	Bezymyannyi-Gr	2.46	300	*e*P	Pn	17 08 57.9	+3.3
BZGR				*e*S	Sn	17 09 27.7	+4.3
SMKR	Semkarok	2.50	318	*e*P	Pn	17 08 57.7	+2.7
BZWR	Bezymyannyi-We	2.58	299	*e*P	Pn	17 08 59.7	+3.6
KMNR	Kamenistaya	2.63	294	*e*P	Pn	17 09 00.5	+3.7
KIRR	Kirishev	2.65	298	*e*P	Pn	17 09 00.8	+3.7
SRKR	Sorokina	2.67	317	*e*P	Pn	17 09 00.8	+3.6
SRKR				*e*S	Sn	17 09 32.9	+4.5
KLY	Klyuchi	2.67	307	*e*P	Pn	17 08 59.1	+1.9
KLY				*e*S	Sn	17 09 29.9	+1.5
KII	Karymskiy	3.04	258	*e*P	Pn	17 09 07.1	+4.7
SPN	Mys Shipunski	3.13	239	*e*S	Sn	17 09 41.5	+2.0
ESO	Esso	3.50	292	*e*P	Pn	17 09 11.9	+3.2
SDLR	Sedlovina	3.63	248	*e*P	Pn	17 09 14.2	+3.6
KRER	Koryakskii	3.69	249	*e*P	Pn	17 09 15.5	+4.0
UGLR	Uglovaya	3.69	247	*e*P	Pn	17 09 15.3	+4.0
AVH	Avacha	3.71	248	*e*P	Pn	17 09 16.4	+4.7
KRX	Arik	3.72	250	*e*P	Pn	17 09 16.0	+4.2
KOK	Koryaka	3.76	249	*e*P	Pn	17 09 16.5	+4.2
DALK	Dalny	3.81	245	*e*P	Pn	17 09 16.8	+3.9
KRMR	Karymshinskiy	4.24	245	*e*P	Pn	17 09 21.8	+3.0
KRMR				*e*S	Sn	17 10 10.2	+3.2
MTVR	Mutnovka	4.40	241	*e*P	Pn	17 09 25.3	+4.2
GRL	Gorelyy	4.42	242	*e*P	Pn	17 09 25.9	+4.6
ASAK	Asacha	4.60	241	*e*P	Pn	17 09 28.9	+5.1

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*OSPL **03** 17:32:14.6±1.5, 18°.29N×70°.36W, h2^{km}±17^{km}, ML2.0, Presumed earthquake*

*SDD **03** 17:32:16.3±1.3, 18°.26N×70°.39W, h22^{km}±6^{km}, MD2.7, ML2.6, MW2.5, Presumed earthquake*

ISC 03 17:32:15.7±1.1, **18°.29N**±0°.06×**70°.42W**±0°.04, **h24**^{km}±7^{km}, **n10**, σ**0^{s}63**/19, **Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BANI	BANI	0.12	28	*e*Pg	Pb	17 32 20.0	-0.5
BANI				*e*Sg	Sb	17 32 24.4	+0.6
BANI				IAML		17 32 25.2	
	comp=N,2μm,0.3s						
PODR	Polo	0.83	262	*e*Pg	Pb	17 32 31.1	-0.6
PODR				*e*Sg	Sb	17 32 43.4	+0.9
PODR				IAML		17 32 45.7	
	comp=N,254nm,0.3s						
PODR	Polo	0.83	262	*i* P	Pb	17 32 31.0	-0.6
PODR				*e*S	Sn	17 32 43.8	0.0
LOVI	El Cajuil, Ovi	1.03	242	*i* P	Pb	17 32 33.8	-1.1
LOVI				*e*S	Sb	17 32 48.1	+0.1
LOVI				IAML		17 32 49.6	
	comp=Z,48nm,2.1s						

SDDR	Presa de Saban	1.08	310	*e*Pg	Pb	17 32 35.3	-0.5
SDDR				*e*Sg	Sn	17 32 50.0	+0.4
SDDR				IAML		17 32 53.4	
	comp=N,209nm,0.3s						
SDDR	Presa de Saban	1.08	310	*i* P	Pb	17 32 35.5	-0.2
SDDR				*e*S	Sb	17 32 48.8	-0.6
SDDR				IAML		17 32 51.8	
	comp=Z,3.5nm,0.3s						
HATOM	Hato Mayor del	1.10	63	*e*Pg	Pn	17 32 35.4	-0.3
HATOM				*e*Sg	Sb	17 32 50.0	0.0
HATOM				IAML		17 32 52.3	
	comp=N,154nm,0.3s						
LOBH	Bahia de las A	1.24	250	*i* P	Pn	17 32 37.7	+0.1
LOBH				*e*S	Sn	17 32 54.7	+1.2
LOBH				IAML		17 32 57.2	
	comp=Z,24nm,1.0s						
MIDR	Miches	1.47	62	*e*Pg	Pn	17 32 40.9	+0.2
MIDR				*e*Sg	Sn	17 32 59.1	-0.1
MIDR				IAML		17 33 02.8	
	comp=N,16nm,0.1s						
MIDR				IAML		17 33 03.3	
	comp=N,8.3nm,0.3s						
HIDR	Higuey Centro	1.64	79	*e*Pg	Pn	17 32 43.7	+0.7
HIDR				IAML		17 32 53.1	
	comp=N,1µm,0.2s						

TEH 03 17:43:10.3,29°.26N×51°.44E,h16^{km}±10^{km},Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAZ2	Kazeron-Fars-I	0.40	29	Pg	Pg	17 43 18.6	+0.1
DSBU	Dashti - Bushe	0.91	190	Pg	Pb	17 43 27.6	-0.1
SHI	Shiraz	1.01	67	Pg	Pb	17 43 29.7	+0.1
KLNJ	Kolanjah	1.75	4	Pg	Pb	17 43 42.1	-0.2
IRAM	Ramesheh	2.67	17	Pn	Pn	17 43 54.6	+1.7

*TAP **03** 17:43:14.8,24°.34N×122°.36E,h71^{km},ML3.4,B*
*JMA **03** 17:43:14.9±0.1,24°N±1°×122°.4E±0°.3,h61^{km}±1^{km},*
MV2.5/12,TAIWAN REGION

ISC 03 17:43:15.2±1.2,24°.34N±0°.03×122°.41E±0°.02,h65^{km}±6^{km}, n142,σ0^{s}.97/252,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS3	EOS3	0.10	236	*i* P	Pn	17 43 25.0	+0.4
EOS3				S	Sn	17 43 33.3	+1.8
EOS2	EOS2	0.18	296	*i* P	Pn	17 43 25.3	+0.4
EOS2				*i* S	Sn	17 43 33.4	+1.4
EOS4	EOS4	0.23	200	*i* P	Pn	17 43 24.9	-0.1
EOS4				*e*S	Sn	17 43 33.4	+1.4
JYNG	Yonagunijimaku	0.51	77	P	Pn	17 43 27.6	0.0
JYNG				*e*S	Sn	17 43 36.5	-0.2
ESAO	Su ao	0.56	295	*e*P	Pn	17 43 28.5	+0.3
ESAO				*i* S	Sn	17 43 37.7	0.0
YOJ	Yonaguni jima	0.56	78	*e*P	Pn	17 43 28.4	+0.1
YOJ				*e*S	Sn	17 43 38.1	+0.3
YOJ	Yonaguni jima	0.56	78	*e*P	Pn	17 43 28.2	0.0
YOJ				*e*S	Sn	17 43 37.5	-0.3
TWC	Suao	0.57	298	*i* P	Pn	17 43 27.9	-0.4
TWC				*i* S	Sn	17 43 37.3	-0.6
EWUT	Wuta	0.58	280	*e*S	Sn	17 43 37.9	-0.2
EAHA	Aohua	0.61	269	*e*P	Pn	17 43 28.5	-0.2
EAHA				*i* S	Sn	17 43 38.6	0.0
ENA	Nanau	0.61	278	*e*P	Pn	17 43 28.4	-0.3
ENA				S	Sn	17 43 38.7	0.0
NDS	Dongshan	0.69	295	P	Pn	17 43 29.7	+0.1
NDS				S	Sn	17 43 40.8	+0.5
ILA	Ilan	0.73	305	*e*P	Pn	17 43 30.0	-0.1
ILA				*e*S	Sn	17 43 41.0	-0.1
ETL	Fush Village	0.74	256	*e*P	Pn	17 43 29.6	-0.6
ETL				*e*S	Sn	17 43 40.6	-0.7
NACB	Ninganchiao	0.76	257	P	Pn	17 43 29.7	-0.7
NACB	Ninganchiao	0.76	257	*i* P	Pn	17 43 29.8	-0.7
NACB				*i* S	Sn	17 43 40.2	-1.4
TWB1	Santiao Chiao	0.77	330	P	Pn	17 43 30.0	-0.5
TWB1				S	Sn	17 43 40.9	-0.9
TWE	Neicheng	0.77	300	P	Pn	17 43 30.6	+0.1
TWE				*e*S	Sn	17 43 42.2	+0.2
TWD	Chiawan	0.78	251	*i* P	Pn	17 43 30.1	-0.6
TWD				S	Sn	17 43 41.3	-0.9
ENTT	Nioudou	0.82	291	*i* P	Pn	17 43 31.2	0.0
ENTT				*i* S	Sn	17 43 43.2	+0.2
TIPB	Shuangxi	0.82	320	P	Pn	17 43 30.6	-0.6
TIPB				S	Sn	17 43 41.8	-1.2
LATG	Datong	0.82	284	*i* P	Pn	17 43 31.1	-0.2
LATG				S	Sn	17 43 43.4	+0.1
ETLH	Xiulin Townshi	0.85	261	*e*P	Pn	17 43 31.2	-0.5
ETLH				S	Sn	17 43 43.1	-0.7
FUSB	Fushanzhiwuyua	0.85	299	*i* P	Pn	17 43 31.7	0.0
FUSB				*e*S	Sn	17 43 44.1	+0.2
TEYL	Yanliau Villag	0.88	238	P	Pn	17 43 31.3	-0.6
TEYL				S	Sn	17 43 43.7	-0.5
SXI1	Grass Mountain	0.89	327	*e*P	Pn	17 43 31.7	-0.4
SXI1				*e*S	Sn	17 43 44.1	-0.6
ETM	Tongmen	0.91	246	*i* P	Pn	17 43 31.8	-0.6
ETM				*e*S	Sn	17 43 43.8	-1.3
NWF	Wu-fen Shan	0.92	322	*e*P	Pn	17 43 32.3	-0.2
NWF				*e*S	Sn	17 43 44.7	-0.7
WFSB	Wu-fen Shan	0.92	322	*e*S	Sn	17 43 44.4	-0.8
NWLT	Wulai	0.93	298	P	Pn	17 43 32.6	0.0
NWLT				S	Sn	17 43 45.7	+0.2
NNSB	Datong	0.94	276	*i* P	Pn	17 43 32.3	-0.4
NNSB				*i* S	Sn	17 43 45.1	-0.6
NNSH	Datong	0.94	276	P	Pn	17 43 32.3	-0.5
NNSH				*e*S	Sn	17 43 45.0	-0.7
NNS	Nan Shan	0.95	276	*i* P	Pn	17 43 32.5	-0.4
NNS				S	Sn	17 43 45.2	-0.8
SHUL	Shoufeng	0.95	235	*e*P	Pn	17 43 32.6	-0.1
SHUL				*e*S	Sn	17 43 45.3	-0.5
LXIB	Xiulin Townshi	0.96	251	P	Pn	17 43 32.3	-0.8
LXIB				*e*S	Sn	17 43 45.5	-0.8
TWA	Mucha	0.98	311	*e*P	Pn	17 43 32.6	-0.6
TWA				*e*S	Sn	17 43 46.0	-0.6
YHNB	Yeheng	0.99	289	P	Pn	17 43 33.4	0.0
YHNB	Yeheng	0.99	289	*i* P	Pn	17 43 33.5	0.0
YHNB				S	Sn	17 43 46.6	-0.4
NSK	Sanguang	1.01	289	*i* P	Pn	17 43 33.6	0.0
NSK				S	Sn	17 43 47.0	-0.3
NHDH	Xindian Distri	1.01	308	*e*P	Pn	17 43 34.0	+0.4
ESL	Shilin	1.03	240	P	Pn	17 43 33.1	-0.8
ESL				S	Sn	17 43 46.8	-1.0
TATO	Taipei	1.05	307	P	Pn	17 43 34.8	+0.8
TATO	Taipei	1.05	307	*e*P	Pn	17 43 33.7	-0.3
TATO				*e*S	Sn	17 43 48.4	+0.3
WHF	Hehuan Shan	1.06	260	P	Pn	17 43 34.1	-0.5
WHF				S	Sn	17 43 48.2	-0.7
FUSS	Fushou	1.06	265	P	Pn	17 43 34.4	-0.1
FUSS				S	Sn	17 43 48.3	-0.5
TAP	Taipei	1.07	311	*e*S	Sn	17 43 48.0	-0.7
YM01	YM01	1.10	317	*e*P	Pn	17 43 34.2	-0.6
YM01				*e*S	Sn	17 43 47.8	-1.7
EGFH	Guangfu	1.12	233	*e*P	Pn	17 43 35.4	+0.5
EGFH				*e*S	Sn	17 43 48.9	-0.8
WARBT	Fenglin Townsh	1.12	237	P	Pn	17 43 34.2	-0.8
WARBT				S	Sn	17 43 48.4	-1.3
YM08	YM08	1.12	319	*e*P	Pn	17 43 35.6	+0.6
YM08				*e*S	Sn	17 43 48.0	-1.9
TWT	Tachien	1.12	266	P	Pn	17 43 35.6	+0.4
TWT				S	Sn	17 43 50.1	0.0
ZUZH	Zhuzihu	1.13	316	*e*P	Pn	17 43 34.4	-0.8
ZUZH				*e*S	Sn	17 43 48.4	-1.6
TDCB	Techi	1.14	266	*i* P	Pn	17 43 35.6	+0.2
TDCB				*i* S	Sn	17 43 50.0	-0.5
ANP	Anpu	1.16	316	*e*P	Pn	17 43 36.0	+0.3
TWS1	Kuangyinshan	1.17	310	*e*P	Pn	17 43 35.5	-0.1
TWS1				*e*S	Sn	17 43 50.6	-0.4
TWY	Chenhua	1.18	322	*e*S	Sn	17 43 51.5	+0.3
OWD	Renai	1.19	251	P	Pn	17 43 35.6	-0.4
OWD				S	Sn	17 43 50.2	-1.3
NTST	Danshui	1.20	314	*e*P	Pn	17 43 36.0	0.0
NTST				*e*S	Sn	17 43 50.6	-0.8
KSHI	Guanxi Townshi	1.20	291	*e*P	Pn	17 43 36.7	+0.7
KSHI				S	Sn	17 43 52.5	+0.9
NTY	Taoyuan	1.20	303	*e*P	Pn	17 43 37.0	+0.9
NTY				*e*S	Sn	17 43 52.2	+0.6
NFF	Wufeng Townshi	1.21	284	*i* P	Pn	17 43 36.5	+0.3
NFF				S	Sn	17 43 52.0	+0.1
IRIF	Iriomote-Funau	1.21	90	P	Pn	17 43 36.0	-0.1
IRIF				*e*S	Sn	17 43 51.5	-0.3
WUSB	Renai	1.23	254	*i* P	Pn	17 43 36.4	-0.1
WUSB				S	Sn	17 43 51.6	-0.8
HGSD	Ruisui	1.23	227	*e*P	Pn	17 43 35.8	-0.6
HGSD				*e*S	Sn	17 43 51.7	-0.7
NJD	Zhudong	1.26	288	*e*P	Pn	17 43 37.6	+0.8
NJD				*e*S	Sn	17 43 53.7	+0.7
NCUH	Zhongli	1.27	300	*e*S	Sn	17 43 53.5	+0.2
EHYH	Wanrong	1.28	229	*e*P	Pn	17 43 36.5	-0.7
EHYH				*e*S	Sn	17 43 52.4	-1.2
EHY	Hungye	1.29	230	*e*P	Pn	17 43 36.4	-0.9
EHY				*e*S	Sn	17 43 52.3	-1.5
VWDT	VWDT	1.29	243	*i* P	Pn	17 43 37.2	-0.1
VWDT				*e*S	Sn	17 43 52.8	-1.0
LIOB	Emei	1.30	284	P	Pn	17 43 37.9	+0.5
LIOB				*e*S	Sn	17 43 54.8	+0.8
NSTT	Nanjuang	1.31	283	P	Pn	17 43 37.7	+0.2
NSTT				*e*S	Sn	17 43 54.7	+0.5
PCYT	Pengchaiyu	1.32	347	*e*P	Pn	17 43 38.2	+0.6
WHP	Taichung City	1.33	268	P	Pn	17 43 38.7	+0.9
WHP				S	Sn	17 43 55.1	+0.2
ECBN	Changbin	1.34	221	*e*S	Sn	17 43 53.8	-1.1
WPL	Puli Township	1.36	256	*e*P	Pn	17 43 38.2	+0.1
WPL				*e*S	Sn	17 43 55.7	+0.3
DPDB	Guoxing	1.39	258	P	Pn	17 43 39.0	+0.4
DPDB				S	Sn	17 43 56.3	+0.2
HSN	Hsinchu	1.39	290	*e*S	Sn	17 43 55.7	-0.3
YULB	Yu-li	1.39	227	P	Pn	17 43 39.6	+1.1
YULB	Yu-li	1.39	227	S	Sn	17 43 54.6	-1.4
YULB	Yu-li	1.39	227	P	Pn	17 43 37.6	-0.9
YULB				*e*S	Sn	17 43 54.2	-1.8
EYUL	Yuli	1.40	225	*e*S	Sn	17 43 56.0	-0.4
TWF1	Yuli	1.41	226	P	Pn	17 43 38.1	-0.8
TWF1				S	Sn	17 43 55.3	-1.4
SSLB	Suanglung	1.44	248	P	Pn	17 43 38.9	-0.3
SSLB	Suanglung	1.44	248	P	Pn	17 43 39.1	-0.1
SSLB				*e*S	Sn	17 43 56.2	-1.0
SMLT	Sun Moon Lake	1.45	252	*i* P	Pn	17 43 39.6	+0.2
SMLT				S	Sn	17 43 57.4	-0.3
JKRS	Kuro-shima	1.47	94	*e*P	Pn	17 43 40.0	+0.4
JKRS				*e*S	Sn	17 43 58.3	+0.4
CHKH	Chenggong	1.47	219	*e*S	Sn	17 43 56.3	-1.7
TYC	Yuchr	1.48	253	P	Pn	17 43 39.8	+0.1
TYC				*e*S	Sn	17 43 58.2	0.0
NMLH	Miaoli	1.48	278	*e*P	Pn	17 43 40.5	+0.7
NMLH				*e*S	Sn	17 43 59.9	+1.6
TWQ1	Liyutan	1.49	271	*e*P	Pn	17 43 40.4	+0.5
TWQ1				*e*S	Sn	17 43 59.8	+1.3
NSY	Sanyi	1.50	273	*e*P	Pn	17 43 40.7	+0.7
NSY				*e*S	Sn	17 43 58.9	+0.1
FULB	Fuli	1.53	222	P	Pn	17 43 39.8	-0.6
FULB				*e*S	Sn	17 43 59.2	-0.2
WHYT	Xinyi Township	1.56	246	*e*P	Pn	17 43 41.4	+0.6
WHYT				*e*S	Sn	17 44 00.8	+0.6
CHKT	Chengkung	1.56	218	*e*S	Sn	17 43 58.0	-2.1
YUS	Yu-Shan	1.58	238	*e*P	Pn	17 43 41.6	+0.1
YUS				*e*S	Sn	17 44 00.7	-0.5
JIJ	Ishigaki jima	1.58	89	*e*P	Pn	17 43 40.8	-0.3
WWF	Wufeng	1.59	260	*e*P	Pn	17 43 42.1	+0.9
WWF				*e*S	Sn	17 44 03.0	+2.2
TCU	Taichung	1.59	263	*e*P	Pn	17 43 41.8	+0.6
EHD	Haiduan	1.62	223	*e*P	Pn	17 43 41.9	+0.3
EHD				*e*S	Sn	17 44 01.2	-0.3
WNT1	Nantou City	1.63	255	*e*P	Pn	17 43 42.7	+0.9
WNT1				*e*S	Sn	17 44 02.8	+0.8
WNT	Mingjian	1.64	254	*e*P	Pn	17 43 43.4	+1.6
WNT				*e*S	Sn	17 44 04.0	+2.0
ECS	Chishang	1.65	221	*e*P	Pn	17 43 42.5	+0.5
ECS				*e*S	Sn	17 44 02.2	-0.1
ALS	Alishan	1.68	241	*e*P	Pn	17 43 43.3	+0.6
ALS				*e*S	Sn	17 44 03.5	0.0
EDH	Donghe	1.70	217	*e*S	Sn	17 44 01.2	-2.2
WCHH	Zhanghua	1.71	262	*e*P	Pn	17 43 43.1	+0.4
WCHH				*e*S	Sn	17 44 04.4	+0.7
WYL	Yuanlin Townsh	1.71	258	*e*P	Pn	17 43 43.4	+0.6
WYL				*e*S	Sn	17 44 04.1	+0.4
ELDTW	Lidau	1.71	228	*e*P	Pn	17 43 42.4	-0.5
ELDTW				*e*S	Sn	17 44 02.1	-1.8
CHN5	Tsauling	1.75	245	*e*P	Pn	17 43 44.2	+0.9
CHN5				*e*S	Sn	17 44 06.4	+1.6
JISG	Ishigakijimahi	1.75	82	*e*P	Pn	17 43 43.2	-0.1
WGK	Gukeng	1.81	249	*e*P	Pn	17 43 45.6	+1.5
WGK				*e*S	Sn	17 44 08.4	+2.4
WDL	Douliou City	1.82	250	*e*P	Pn	17 43 45.4	+1.2
WDL				*e*S	Sn	17 44 08.7	+2.4
WDLH	Douliu	1.83	250	*e*P	Pn	17 43 45.5	+1.2
WDLH				*e*S	Sn	17 44 08.5	+2.0
LONT	Longtian	1.85	220	*e*S	Sn	17 44 05.7	-1.4
LDUT	Ludao	1.87	208	*e*S	Sn	17 44 05.1	-2.4
WCKO	Fanlu	1.88	242	*e*P	Pn	17 43 45.9	+0.8
WCKO				*e*S	Sn	17 44 09.1	+1.3
STYH	Taoyuan	1.89	232	P	Pn	17 43 45.7	+0.4
STYH				S	Sn	17 44 08.0	-0.2
STYT	Tauyuan	1.91	232	P	Pn	17 43 46.2	+0.6
STYT				S	Sn	17 44 09.2	+0.5
RLNB	Erlin	1.92	257	*e*P	Pn	17 43 46.3	+0.7
RLNB				*e*S	Sn	17 44 10.1	+1.2
TPUB	Ta-pu	1.93	238	P	Pn	17 43 46.8	+1.0
TPUB	Ta-pu	1.93	238	S	Sn	17 44 06.8	-2.3
TPUB	Ta-pu	1.93	238	*e*P	Pn	17 43 46.9	+1.2
TPUB				*e*S	Sn	17 44 10.0	+1.0
CHN4	Tsaushan	1.93	240	*e*P	Pn	17 43 47.2	+1.4
CHN4				*e*S	Sn	17 44 10.8	+1.8
TWGBT	Beinan	1.94	219	P	Pn	17 43 48.4	+2.4
TWGBT	Beinan	1.94	219	*e*S	Sn	17 44 07.6	-1.8
TWG	Pinlang	1.95	219	*e*P	Pn	17 43 45.3	-0.7
TWG				*e*S	Sn	17 44 07.8	-1.7
TTN	Taitung	1.96	216	*e*P	Pn	17 43 46.5	+0.3
WTP	Ta-pu	1.97	237	*e*P	Pn	17 43 47.4	+1.0
WTP				*e*S	Sn	17 44 12.1	+2.0
CHY	Chiayi	2.00	246	*e*P	Pn	17 43 47.9	+1.2
CHY				*e*S	Sn	17 44 12.9	+2.2
TWK	Hsinying	2.06	239	*e*P	Pn	17 43 48.9	+1.4
TWK				*e*S	Sn	17 44 14.0	+1.8
CHN1	Nanshi	2.07	237	*e*P	Pn	17 43 48.5	+0.8
CHN1				*e*S	Sn	17 44 14.0	+1.6
SNST	Tainan City	2.07	238	*e*P	Pn	17 43 49.1	+1.4
SNST				*e*S	Sn	17 44 13.4	+0.8
SGST	Jiashian	2.09	233	*e*P	Pn	17 43 48.0	0.0
SGST				*e*S	Sn	17 44 13.4	+0.5
JTJ	Tarama	2.11	81	*e*P	Pn	17 43 48.8	+0.6
WSF	Szhu	2.12	251	*e*P	Pn	17 43 48.9	+0.6
WSF				*e*S	Sn	17 44 14.1	+0.6
WSL	Shuilin Townsh	2.15	248	*e*P	Pn	17 43 49.1	+0.3
WSL				*e*S	Sn	17 44 15.6	+1.1
ECL	Taimali	2.19	218	*e*P	Pn	17 43 49.9	+0.6
ECL				*e*S	Sn	17 44 14.2	-1.1
SSD	Sandimen	2.27	226	*e*P	Pn	17 43 51.5	+1.1
SSD				*e*S	Sn	17 44 19.2	+1.8
SCST	Cishan	2.27	231	*e*P	Pn	17 43 52.7	+2.2
SCST				*e*S	Sn	17 44 19.5	+2.1
MASBT	Mashibuluo	2.37	224	*e*P	Pn	17 43 52.0	+0.2
MASBT				*e*S	Sn	17 44 20.3	+0.6
JIRB	Irabujima	2.57	79	*e*P	Pn	17 43 54.9	+0.5
PTMZ	Houxiangcun	3.07	284	*i* P	Pn	17 44 00.7	-0.6
PTMZ				*e*S	Sn	17 44 33.7	-3.1
AXDP	Jialang	4.07	279	*e*P	Pn	17 44 14.6	-0.4
AXDP				*e*S	Sn	17 44 58.7	-2.7

*IDC **03** 17:43:19.2±1.4,39°.03N×54°.40E,h0^{km},mb4.0/15,*
mbtmp4.0/20,ML3.6/5,Error ellipse: s-maj=26.2km
s-min=9.6km az=179.0
*NEIC **03** 17:43:21.0±2.5,39°.27N±0°.09×54°.68E±0°.08,h14^{km}±3^{km},*
mb4.4/26,Error ellipse: s-maj=13.0km s-min=9.3km
az=181.0
*NNC **03** 17:43:28.6±3.1,39°.77N×55°.52E,h0^{km},mb4.1,Error*
ellipse: s-maj=33.7km s-min=18.1km az=59.0

ISC 03 17:43:23.2±0.6,39°.41N±0°.07×54°.75E±0°.04,h29^{km},n133, σ1^{s}.86/144,mb4.3/30,11C-15D,Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VSHL	Vashlovani	6.64	289	P	Pn	17 45 00.1	+1.4
VSHL				S	Sn	17 46 12.3	-1.2
DGRG	David-gareji	7.44	289	P	Pn	17 45 10.6	+0.8
DGRG				S	Sn	17 46 30.6	-2.6
GNI	Garni	7.75	279	Pn	Pn	17 45 12.4	-1.7
	1.1nm,0.3s,baz=329,slow=9.2,SNR=4.8						
GNI				Sn	Sn	17 46 38.0	-2.9
	0.7nm,0.3s,baz=353,slow=23,SNR=1.4						
	11nm,0.9s						
HRA	Herat	7.82	128	Pn	Pn	17 45 14.2	-0.9
SHTL	Shatili	7.95	297	P	Pn	17 45 18.6	+1.7
CHRG	Chargali	8.00	295	P	Pn	17 45 18.3	+0.8
GARIG	Gari	9.11	294	P	Pn	17 45 36.2	+3.5
KBZ	Khabaz	9.88	300	Pn	Pn	17 45 41.7	-1.4
	0.4nm,0.3s,baz=113,slow=5.8,SNR=11						
KBZ				Sn	Sn	17 47 34.0	+1.1
	1.4nm,0.3s,baz=352,slow=9.3,SNR=5.2						
	1.7nm,0.2s						
KVAR	Kislovodsk Arr	10.10	301	Pn	Pn	17 45 46.0	-0.2
	baz=259,slow=23						
KVAR				Sn	Sn	17 47 35.4	-3.2
	baz=241,slow=17						
	2.2nm,0.4s						
KIV	Kislovodsk	10.10	301		Pn	17 45 45.7	-0.6
KIV	Kislovodsk	10.10	301	Pn	Pn	17 45 47.0	+0.7
	21nm,0.8s						
AB31	Akbulak array	10.52	19		Pn	17 45 52.9	+0.9
AB31	Akbulak array	10.52	19	⇑Pn	Pn	17 45 54.5	+2.5
	7.4nm,0.6s,baz=203,slow=14,SNR=170						
AB31				⇓Sn	Sn	17 47 47.2	-1.6
	9.4nm,0.6s,baz=206,slow=23,SNR=12						
ABKAR	Akbulak array	10.52	19		Pn	17 45 52.5	+0.6
SHAA	Shahritus	10.64	96		Pn	17 45 53.5	-0.3
CHGR	Chuyangaron	11.23	89		Pn	17 46 00.5	-1.3
AKTO	Aktyubinsk	11.27	11	Pn	Pn	17 46 04.8	+2.6
	1.7nm,0.3s,baz=207,slow=11,SNR=23						
AKTO				Sn	Sn	17 48 04.2	-2.9
	2.5nm,0.3s,baz=86,slow=17,SNR=6.1						
	5.3nm,0.4s						
AKTO	Aktyubinsk	11.27	11	⇓Pn	Pn	17 46 04.5	+2.4
	5.4nm,0.6s						
AKTO				⇑Sn	Sn	17 48 06.3	-0.7
	26nm,0.7s						
GAR	Garm	12.09	87		Pn	17 46 09.0	-4.5
KK31	Karatay Array	12.42	68		Pn	17 46 15.1	-2.9
KK31	Karatay Array	12.42	68	Pn	Pn	17 46 18.0	0.0
	6.9nm,0.8s,baz=249,slow=14,SNR=38						
KK31				⇓Sn	Sn	17 48 31.4	-4.0
	2.6nm,0.6s,baz=27,slow=49,SNR=4.8						
KK31				⇓Lg	Lg	17 49 38.4	
	13nm,0.9s						
KKAR	Karatay Array	12.42	68		Pn	17 46 14.8	-3.2
MANEM	Manem	13.40	93		Pn	17 46 28.3	-3.3
BELG	Belogornoye	13.89	342	Pn	Pn	17 46 38.5	+0.5
	1.9nm,0.3s,baz=70,slow=1.5,SNR=7.5						
BELG				Sn	Sn	17 49 03.6	-7.5
	1.8nm,0.3s,baz=208,slow=23,SNR=15						
ARSB	Arslanbob	14.04	76		Pn	17 46 37.5	-2.7
AAK	Ala-Archa	15.25	71	Sn	Sn	17 49 43.1	-1.3
	0.1nm,0.3s,baz=173,slow=14,SNR=1.2						
BRTR	Keskin Array B	16.29	278	Pn	Pn	17 47 09.8	-0.1
	0.1nm,0.3s,baz=74,slow=15,SNR=5.7						
	1.0nm,0.7s						
ARTI	Arti	17.16	7	P	Pn	17 47 20.2	-0.4
	8.0nm,0.9s,baz=200,slow=12,SNR=6.7						
ARTI				S	Sn	17 50 20.6	-10
	6.2nm,0.7s,baz=180,slow=22,SNR=6.8						
ARTI	Arti	17.16	7	P	Pn	17 47 18.7	-2.0
ARTI				IAmb	IAmb	17 47 35.5	
	comp=Z,30nm,1.2s						
BORK	Borovoye	17.33	33		Pn	17 47 20.2	-2.5
BORK				IAmb	IAmb	17 47 38.6	
	comp=Z,17nm,1.2s						
BVA0	Borovoye Array	17.34	33	⇑Pn	P	17 47 24.1	0.0
	comp=Z,5.1nm,0.7s						
BVAR	Borovoye Array	17.34	33	P	P	17 47 24.9	+0.8
	comp=Z,5.2nm,0.5s,baz=214,slow=9.3,SNR=18						
BVAR				S	Sn	17 50 29.0	-6.0
	comp=Z,4.1nm,0.8s,baz=228,slow=23,SNR=6.3						
CSS	Mathiatis	17.63	262	P	Pn	17 47 25.8	-0.8
	comp=Z,9.3nm,1.2s						
RAYN	Ar Rayn	17.67	209		Pn	17 47 24.0	-3.3
KIRV	Kirov	19.50	352	P	P	17 47 48.8	+1.1
	comp=Z,11nm,0.7s,baz=28,slow=3.6,SNR=4.9						
ELL	Elmali	19.72	270	P	P	17 47 48.0	-2.5
ELL				IAmb	IAmb	17 48 08.9	
	comp=Z,8.1nm,0.8s						
KURBB	Kurchatov Arra	20.12	48	P	Pn	17 47 59.0	+2.5
	comp=Z,2.4nm,0.9s,baz=243,slow=11,SNR=14						
	comp=Z,2.4nm,0.9s						
KURBB	Kurchatov Arra	20.12	48	⇑Pn	Pn	17 47 59.2	+2.7
	comp=Z,5.8nm,1.2s						
KURK	Kurchatov	20.21	48		P	17 47 54.5	-1.0
KURK	Kurchatov	20.21	48	⇑Pn	Pn	17 47 59.4	+1.8
	comp=Z,2.2nm,0.8s						
MILM	Milestii Mici	20.29	300	⇓P	P	17 47 55.4	-1.1
CFR	Carcaliu	20.47	295	⇓P	P	17 47 55.6	-2.8
ICOR	Ion Corvin	20.61	292	⇑P	P	17 48 00.5	+0.6
SORM	Soroca	20.89	303	⇓P	P	17 48 02.8	-0.1
GHRR		21.09	297	⇑P	P	17 48 06.5	+1.3
GHRR		21.09	297	P	P	17 48 05.5	+0.3
AK09	Malin Array Si	21.10	310	P	P	17 48 05.8	+0.6
AK10	Malin Array Si	21.11	310	P	P	17 48 05.9	+0.6
AK07	Malin Array Si	21.12	310	P	P	17 48 05.7	+0.3
AK08	Malin Array Si	21.12	310	P	P	17 48 05.8	+0.4
AK06	Malin Array Si	21.14	310	P	P	17 48 05.9	+0.3
MAKZ	Makanchi	21.14	61	P	P	17 48 03.7	-2.0
MAKZ	Makanchi	21.14	61	⇓Pn	P	17 48 08.1	+2.4
	comp=Z,7.9nm,1.4s						
AK05	Malin Array Si	21.15	310	P	P	17 48 06.0	+0.3
AK02	Malin Array Si	21.16	311	P	P	17 48 06.2	+0.4
AKASG	Malin Array Be	21.17	311	P	P	17 48 06.4	+0.5
	comp=Z,9.2nm,0.5s,baz=113,slow=9.3,SNR=22						
	comp=Z,9.2nm,0.5s						
AKASG	Malin Array Be	21.17	311	P	P	17 48 05.1	-0.8
AKASG				IAmb	IAmb	17 48 07.5	
	comp=Z,20nm,0.8s						
AKBB	Malin Array Si	21.17	311		P	17 48 04.7	-1.2
AKBB	Malin Array Si	21.17	311	P	P	17 48 06.2	+0.3
AK01	Malin Array Si	21.17	311	P	P	17 48 06.3	+0.4
KIEV	Kiev	21.17	311		P	17 48 04.7	-1.2
KIEV	Kiev	21.17	311	⇓P	P	17 48 07.1	+1.2
KIEV	Kiev	21.17	311	P	P	17 48 06.2	+0.2
	comp=Z,184nm,0.6s						
AK03	Malin Array Si	21.18	311	P	P	17 48 06.4	+0.4
AK12	Malin Array Si	21.19	310	P	P	17 48 06.4	+0.3
AK11	Malin Array Si	21.19	311	P	P	17 48 06.5	+0.3
AK04	Malin Array Si	21.21	311	P	P	17 48 06.7	+0.4
AK14	Malin Array Si	21.21	310	P	P	17 48 06.7	+0.4
AK16	Malin Array Si	21.23	310	P	P	17 48 06.9	+0.4
AK16				pP	pP	17 48 13.6	-1.0
AK17	Malin Array Si	21.26	310	P	P	17 48 07.3	+0.4
AK17				pP	pP	17 48 13.9	-1.1
MK31	Makanchi Array	21.35	61	⇓Pn	P	17 48 11.6	+3.6
	comp=Z,4.6nm,0.8s,baz=258,slow=9.1,SNR=14						
MKAR	Makanchi Array	21.35	61	P	P	17 48 11.7	+3.8
	comp=Z,3.3nm,1.1s,baz=260,slow=8.6,SNR=7.8						
	comp=Z,3.3nm,1.1s						
MKAR	Makanchi Array	21.35	61		P	17 48 07.8	-0.2
VRI	Vrincioaia	21.54	297	⇓P	P	17 48 09.7	-0.2
VRI	Vrincioaia	21.54	297	P	P	17 48 10.0	+0.1
	comp=Z,17nm,0.9s						
ISR	Istrita	21.58	295	P	P	17 48 10.8	+0.3
	comp=Z,42nm,0.8s						
PLOR	Plostina	21.59	297	⇓P	P	17 48 10.8	+0.3
LUBAR	Lubar, Ukraine	21.77	308	P	P	17 48 12.2	-0.2
MI30	MI30,Zelenitsa	21.80	310	P	P	17 48 12.3	-0.3
	comp=Z,37nm,1.0s						
MI30				pP	pP	17 48 20.3	-0.4
	comp=Z,37nm,1.0s						
COVR	Voineasa-Covas	21.90	296	⇓P	P	17 48 15.2	+1.4
MLR	Muntele Rosu	22.04	295	P	P	17 48 15.7	+0.2
	comp=Z,5.1nm,0.8s,baz=45,slow=6.3,SNR=5.2						
	comp=Z,5.1nm,0.8s						
MLR	Muntele Rosu	22.04	295	P	P	17 48 14.4	-1.0
MLR				IAmb	IAmb	17 48 31.2	
	comp=Z,15nm,0.9s						
MLR	Muntele Rosu	22.04	295	P	P	17 48 15.1	-0.4
	comp=Z,24nm,1.1s						
TURR	Turia	22.05	297	⇑P	P	17 48 17.9	+2.4
KARP	Karpathos	22.20	269		P	17 48 15.2	-1.9
KARP	Karpathos	22.20	269	P	P	17 48 16.2	-0.9
	comp=Z,38nm,0.8s						
KMPD	K-Podol'skiy	22.21	304	P	P	17 48 17.1	0.0
RDO	Rodhopi	22.31	284	P	P	17 48 17.3	-1.0
RDO				IAmb	IAmb	17 48 21.9	
	comp=Z,17nm,1.3s						
VOIR		22.66	295	P	P	17 48 22.1	0.0
	comp=Z,11nm,0.7s						
BURAR	Bucovina Array	22.83	301	P	P	17 48 23.2	-0.7
BURAR				IAmb	IAmb	17 48 35.1	
	comp=Z,7.0nm,0.7s						
BURAR	Bucovina Array	22.83	301	⇑P	P	17 48 23.7	-0.2

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BUR08 Bucovina Ar. S    22.85 301         P      17 48 22.3  -1.7
BUR08                             IAmb    IAmb   17 48 34.6
      comp=Z,10nm,1.1s
ARR   Arges             22.95 295 ⇓P      P      17 48 25.1   0.0
KSV   Kosov             23.06 302  P      P      17 48 26.2   0.0
RNPP5 Staryi Chortor    23.33 310  P      P      17 48 29.0  +0.3
RNPP9 Sopachiv          23.39 310  P      P      17 48 29.6  +0.3
STNU  Starunia          23.51 303  P      P      17 48 30.7  +0.1
LOT   Lotru             23.56 295 ⇑P      P      17 48 32.9  +1.7
IDI   Anoyia            24.04 270         P      17 48 34.4  -1.4
IDI                               IAmb    IAmb   17 48 42.1
      comp=Z,6.1nm,0.7s
MARR  Marisel-Cluj      24.12 298 ⇑P      P      17 48 38.0  +1.5
BERU  Beregovo          24.64 302  P      P      17 48 41.3  +0.3
WMQ   Urumqi            24.93  69 eP      P      17 48 45.5  +1.7
WMQ                               LR      LR
      comp=Z,100nm,12.5s
ZAA0  Zalesovo Array    25.00  44         P      17 48 43.8  -0.5
ZALV  Zalesovo Beam     25.00  44  P      P      17 48 48.1  +3.8
      comp=Z,2.1nm,0.7s,baz=260,slow=9.2,SNR=12
      comp=Z,2.1nm,0.7s
ZALV  Zalesovo Beam     25.00  44  P      P      17 48 44.1  -0.1
SIRR  Siria             25.09 297 ⇓P      P      17 48 48.0  +2.8
ITM   Ithomi            25.78 276  P      P      17 48 49.4  -2.2
ITM                               IAmb    IAmb   17 48 58.9
      comp=Z,19nm,1.0s
OJC   Ojcow             26.82 305  P      P      17 48 59.9  -0.9
FINES FINESS Array B    28.23 331  P      P      17 49 15.1  +1.9
      comp=Z,4.7nm,1.0s,baz=136,slow=9.0,SNR=5.1
      comp=Z,4.7nm,1.0s
FINES FINESS Array B    28.23 331  P      P      17 49 12.6  -0.6
GERES GERESS Array B    30.61 302  P      P      17 49 36.0  +1.3
      comp=Z,0.6nm,0.7s,baz=82,slow=11,SNR=4.5
      comp=Z,0.6nm,0.7s
LVZ   Lovozero          30.62 345  P      P      17 49 37.4  +3.0
KHC   Kasperske Hory    30.71 302  P      P      17 49 35.1  -0.3
      comp=Z,2.2nm,0.8s
HFS   Hagfors           32.88 323  P      P      17 49 56.1  +1.7
      comp=Z,4.5nm,0.6s,baz=117,slow=8.4,SNR=5.3
      comp=Z,4.5nm,0.6s
MSSA  Maissana          33.71 293  P      P      17 50 03.0  +1.1
KEV   Kevo              33.76 343  P      P      17 50 04.1  +2.2
ARCES ARCESS Array B    33.94 342  P      P      17 50 06.2  +2.8
      comp=Z,1.5nm,0.7s,baz=138,slow=8.1,SNR=13
      comp=Z,1.5nm,0.7s
ARCES ARCESS Array B    33.94 342  P      P      17 50 06.0  +2.5
NC602 NORSAR Array S    34.09 323  P      P      17 50 05.8  +0.9
NC405 NORSAR Array S    34.14 324  P      P      17 50 05.6  +0.3
NB2   NORSAR Subarra    34.34 324  P      P      17 50 08.7  +1.6
      comp=Z,2.5nm,0.7s,baz=112,slow=8.6
NOA   NORSAR Array B    34.34 324  P      P      17 50 08.4  +1.3
      comp=Z,2.8nm,0.7s,baz=114,slow=8.2,SNR=11
      comp=Z,2.8nm,0.7s
BNI   Bardonecchia      35.62 295  P      P      17 50 19.4  +1.0
SONM  Songino Array     37.71  60  P      P      17 50 39.8  +3.6
      comp=Z,0.3nm,0.6s,baz=269,slow=11,SNR=2.2
      comp=Z,0.3nm,0.6s
SONM  Songino Array     37.71  60  P      P      17 50 37.9  +1.8
PZH   PanZhiHua         41.05  94  P      P      17 51 03.7  -0.5
EKA   Eskdalemuir Ar    41.06 313  P      P      17 51 05.0  +1.1
      comp=Z,1.0nm,0.5s,baz=99,slow=8.6,SNR=5.9
      comp=Z,1.0nm,0.5s
SPITS Spitsbergen Ar    41.94 349  P      P      17 51 14.4  +3.7
      comp=Z,10nm,0.9s,baz=152,slow=13,SNR=2.4
      comp=Z,10nm,0.9s
HHC   Hu-ho-hao-te      42.81  69 eP      P      17 51 18.4   0.0
HHC                               pmax    pmax
      comp=Z,10.0nm,0.7s
ESDC  Sonseca Array     44.56 290  P      P      17 51 33.2  +0.7
      comp=Z,0.7nm,0.6s,baz=64,slow=8.2,SNR=4.3
      comp=Z,0.7nm,0.6s
A36M  Sachs Harbour     68.91 360  P      P      17 54 27.0  +2.3
A36M                              IAmb    IAmb   17 54 35.0
      comp=Z,5.7nm,0.9s
ILAR  Eielson Array     74.78   9  P      P      17 55 02.7  +2.6
      comp=Z,0.7nm,0.8s,baz=343,slow=4.7,SNR=6.7
      comp=Z,0.7nm,0.8s
ILAR  Eielson Array     74.78   9  P      P      17 55 01.8  +1.7
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*NEIC **03** 17:47:51.2±2.0, 39.˚13N±0.˚08×54.˚62E±0.˚08, h10km±1km, mb4.6/58, Error ellipse: s-maj=14.4km s-min=10.5km az=190.0*

*NNC **03** 17:47:51.1±1.6, 39.˚75N×54.˚08E, h0km, mb4.6, Error ellipse: s-maj=13.1km s-min=10.9km az=2.0*

*IDC **03** 17:47:52.1±0.7, 39.˚30N×54.˚49E, h0km, mb4.3/26, mbtmp4.3/36, ML4.0/10, MS3.6/30, Error ellipse: s-maj=15.5km s-min=7.7km az=176.0*

*MOS **03** 17:47:53.7±1.2, 39.˚49N×54.˚55E, h20km, mb4.8/18, Error ellipse: s-maj=5.7km s-min=4.3km az=125.1*

ISC 03 17:47:56.4±0.5**, 39.˚57N**±0.˚06×**54.˚55E**±0.˚03**, h31km, n307,** σ2s.42/304**, mb4.5**/67**, MS3.6**/23**, 32C-30D, Turkmenistan**

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Code  Station Name       Δ°   AZ°  Phase ID        Time       Res
                                   Op     ISC     h  m  s    ISC
LKRN  Lenkeran, Azer     4.56 261  P      Pn     17 49 02.7  -0.6
AKT   Akhty              5.53 292 eP      Pn     17 49 19.1  +2.4
AKT                               eS      Sn     17 50 22.8  +3.5
AKT                                pmax   pmax
      comp=Z,96nm,0.6s
AKT                                smax   smax
      comp=E,371nm,0.6s
AKT                                smax   smax
      comp=N,460nm,0.7s
AKT                                smax   smax
      comp=N,394nm,0.6s
AKT                                MLR    MLR
      comp=Z,384nm,14.0s
SEKA  Sheki              5.84 289  P      Pn     17 49 22.9  +2.0
MAK   Makhachkala        6.29 305d iP     Pn     17 49 25.6  -1.4
MAK                               eS      Sn     17 50 39.2  +1.4
MAK                                pmax   pmax
      comp=Z,308nm,1.3s
MAK                                MLR    MLR
      comp=Z,617nm,9.0s
GANJ  Ganja              6.40 282  P      Pn     17 49 29.0  +0.5
VSHL  Vashlovani         6.44 288  P      Pn     17 49 32.0  +3.0
NAX   Nakhchivan         7.02 270  P      Pn     17 49 38.8  +1.7
DGRG  David-gareji       7.24 288  P      Pn     17 49 41.9  +1.9
DGRG  David-gareji       7.24 288  P      Pn     17 49 41.9  +1.9
GNI   Garni              7.57 278  Pn     Pn     17 49 47.3  +2.6
      comp=Z,4.5nm,0.3s,baz=73,slow=4.1,SNR=11
GNI                                Sn     Sn     17 51 13.0  +3.6
      comp=Z,2.0nm,0.3s,baz=167,slow=21,SNR=3.2
GNI                                LR     LR     17 54 06.9
      comp=Z,244nm,18.1s,baz=96,slow=50
      comp=Z,16nm,0.5s
SHTL  Shatili            7.73 297  P      Pn     17 49 50.0  +3.1
SHTL  Shatili            7.73 297  P      Pn     17 49 50.0  +3.1
CHRG  Chargali           7.79 294  P      Pn     17 49 50.5  +2.9
HRA   Herat              8.04 128  Pn     Pn     17 49 42.8  -8.4
KBZ   Khabaz             9.66 299  Pn     Pn     17 50 12.9  -0.2
      comp=Z,0.7nm,0.3s,baz=122,slow=5.0,SNR=6.4
KBZ                                Sn     Sn     17 51 54.8  -5.7
      comp=Z,0.8nm,0.3s,baz=69,slow=19,SNR=1.9
      comp=Z,9.9nm,0.8s
KVAR  Kislovodsk Arr     9.88 300  Pn     Pn     17 50 16.8  +0.6
      baz=214,slow=15
KVAR                               Sn     Sn     17 52 00.6  -5.5
      baz=225,slow=14
      comp=Z,38nm,0.8s
KIV   Kislovodsk         9.88 300  Pn     Pn     17 50 17.5  +1.1
KIV   Kislovodsk         9.88 300 eP      Pn     17 50 15.1  -1.2
KIV                               eS      Sn     17 52 06.3  +0.1
KIV                                pmax   pmax
      comp=Z,57nm,1.1s
KIV                                MLR    MLR
      comp=Z,70nm,13.0s
AB31  Akbulak array     10.42  20  Pn     Pn     17 50 24.9  +1.3
AB31  Akbulak array     10.42  20  Pn     Pn     17 50 21.7  -1.9
      comp=Z,9.5nm,0.4s,baz=200,slow=12,SNR=84
AB31                               Sn     Sn     17 52 20.0  +0.8
      comp=Z,7.8nm,0.3s,baz=188,slow=25,SNR=13
AB31  Akbulak array     10.42  20  P      Pn     17 50 25.4  +1.8
AB31                                             17 52 19.9
ABKAR Akbulak array     10.42  20  Pn     Pn     17 50 25.1  +1.6
SHAA  Shahritus         10.82  96  Pn     Pn     17 50 24.0  -5.1
MARD  Mardin            11.03 263         Pn     17 50 25.7  -6.4
AKTO  Aktyubinsk        11.14  12  Pn     Pn     17 50 35.2  +1.9
      comp=Z,3.0nm,0.3s,baz=203,slow=11,SNR=7.5
AKTO                               Sn     Sn     17 52 36.3  -0.5
      comp=Z,5.3nm,0.3s,baz=330,slow=22,SNR=5.6
AKTO                               LR     LR     17 55 59.1
      comp=Z,420nm,18.3s,baz=252,slow=43
      comp=Z,26nm,0.8s
AKTO  Aktyubinsk        11.14  12 ⇓Pn     Pn     17 50 31.1  -2.3
      comp=Z,25nm,0.7s
AKTO                              ⇑Sn     Sn     17 52 36.1  -0.7
      comp=Z,43nm,0.9s
CHGR  Chuyangaron       11.39  90         Pn     17 50 32.2  -4.7
CHGR  Chuyangaron       11.39  90  P      Pn     17 50 32.3  -4.7
GAR   Garm              12.24  88  Pn     Pn     17 50 44.0  -4.6
KK31  Karatay Array     12.51  68  Pn     Pn     17 50 49.9  -2.3
KK31  Karatay Array     12.51  68 ⇓Pn     Pn     17 50 51.5  -0.7
      comp=Z,38nm,1.0s,baz=257,slow=15,SNR=22
KK31                              ⇓Sn     Sn     17 53 16.0  +5.6
      comp=Z,19nm,0.8s,baz=104,slow=33,SNR=4.8
KK31                              ⇓Lg     Lg     17 54 34.5
      comp=Z,54nm,1.1s
KK31  Karatay Array     12.51  68 i P     Pn     17 50 48.9  -3.3
KKAR  Karatay Array     12.51  68  Pn     Pn     17 50 49.5  -2.7
KKAR  Karatay Array     12.51  68  P      Pn     17 50 49.5  -2.7
DRK   Karamyk           13.32  85         Pn     17 51 00.0  -3.6
DRK   Karamyk           13.32  85  P      Pn     17 51 00.0  -3.6
ARK   Arkit             13.41  75  P      Pn     17 51 03.7  -0.8
BELG  Belogornoye       13.69 342  Pn     Pn     17 51 08.0  -0.2
      comp=Z,4.6nm,0.3s,baz=151,slow=20,SNR=8.0
BELG                               Sn     Sn     17 53 36.8  -2.3
      comp=Z,3.1nm,0.3s,baz=266,slow=22,SNR=12
BELG  Belogornoye       13.69 342 i P     Pn     17 51 07.2  -1.0
OHH   Osh               14.01  80  P      Pn     17 51 07.4  -5.3
ARSB  Arslanbob         14.15  77  Pn     Pn     17 51 11.3  -3.4
ARSB  Arslanbob         14.15  77  P      Pn     17 51 11.3  -3.4
VRH   Novokhopyorsk     14.69 327 eP      Pn     17 51 25.2  +3.4
VRH                                pmax   pmax
      comp=Z,29nm,0.6s
AAK   Ala-Archa         15.35  72  Pn     Pn     17 51 30.2  -0.6
      comp=Z,0.6nm,0.3s,baz=230,slow=11,SNR=7.1
AAK                                Sn     Sn     17 54 17.6  -2.1
      comp=Z,0.1nm,0.3s,baz=143,slow=15,SNR=4.1
AAK                                LR     LR     17 58 52.8
      comp=Z,92nm,18.6s,baz=278,slow=43
      comp=Z,12nm,0.9s
AAK   Ala-Archa         15.35  72         Pn     17 51 26.8  -4.0
AAK                                IAmb   IAmb   17 51 40.0
      comp=Z,16nm,0.8s
AAK   Ala-Archa         15.35  72 ⇓Pn     P      17 51 33.6  -1.6
      comp=Z,11nm,0.8s
AAK                               ⇓Sn     S      17 54 27.2  -8.2
      comp=Z,17nm,1.2s
AAK                               ⇑Lg     Lg     17 56 05.3
      comp=Z,24nm,1.1s
AAK   Ala-Archa         15.35  72ceP      Pn     17 51 29.9  -0.9
AAK                                pmax   pmax
      comp=Z,10.0nm,0.8s
VORD  Divnogorie        15.62 322 eP      P      17 51 36.9  -1.1
VORD                               pmax   pmax
      comp=Z,20nm,0.9s
VSR   Storozhevoye      15.85 322 eP      Pn     17 51 35.6  -1.4
VSR                                pmax   pmax
      comp=Z,30nm,1.0s
ASF   Jabal al Asfar    16.08 248  Pn     Pn     17 51 37.2  -3.1
      comp=Z,0.2nm,0.3s,baz=82,slow=19,SNR=1.4
ASF                                LR     LR     17 59 18.2
      comp=Z,182nm,19.0s,baz=104,slow=43
      comp=Z,0.5nm,0.3s
BR104 Keskin Array S    16.11 277  P      Pn     17 51 40.6   0.0
      comp=Z,4.8nm,0.9s
BR131 Keskin Array S    16.11 277         Pn     17 51 36.4  -4.2
BR131 Keskin Array S    16.11 277 i P     Pn     17 51 40.2  -0.4
BRTR  Keskin Array B    16.11 277  Pn     Pn     17 51 40.9  +0.3
      comp=Z,0.1nm,0.3s,baz=91,slow=11,SNR=7.2
      comp=Z,1.5nm,0.7s
BRTR  Keskin Array B    16.11 277  Pn     Pn     17 51 36.9  -3.7
BRTR  Keskin Array B    16.11 277 i P     Pn     17 51 41.7  +1.1
BRTR                               pmax   pmax
      comp=Z,2.0nm,0.7s
NIL   Nilore            16.13 106         Pn     17 51 34.4  -6.4
NIL   Nilore            16.13 106  P      Pn     17 51 34.4  -6.4
NIL                                pmax   pmax
      comp=Z,23nm,1.0s
VORR  Voronezh          16.13 324 eP      Pn     17 51 40.9  +0.2
VORR                               pmax   pmax
      comp=Z,51nm,0.4s
BOOM  Boomskoye usch    16.40  73         Pn     17 51 40.6  -3.8
BOOM  Boomskoye usch    16.40  73  P      Pn     17 51 40.6  -3.8
BOOM                               pmax   pmax
      comp=Z,12nm,1.0s
KSH   Kashi             16.53  83  P      Pn     17 51 42.8  -3.1
KSH                                pmax   pmax
      comp=Z,9.0nm,0.8s
KSH                                LR     LR
      comp=N,580nm,10.7s
KSH                                LR     LR
      comp=E,890nm,14.4s
KSH                                LR     LR
      comp=Z,740nm,12.4s
LPSR  Galich'ya Gora    16.90 326 eP      P      17 51 52.0  -0.1
LPSR                               pmax   pmax
      comp=Z,68nm,0.9s
ARTI  Arti              17.02   7  P      Pn     17 51 52.9  +1.1
      comp=Z,1.8nm,0.3s,baz=178,slow=12,SNR=8.4
ARTI                               S      Sn     17 54 51.9  -8.0
      comp=Z,10nm,0.8s,baz=17,slow=23,SNR=5.7
ARTI                               LR     LR     18 00 16.0
      comp=Z,356nm,18.8s,baz=190,slow=43
      comp=Z,35nm,0.9s
ARTI  Arti              17.02   7         Pn     17 51 50.8  -1.0
ARTI  Arti              17.02   7c iP     Pn     17 51 51.6  -0.3
ARTI                               S      Sn     17 54 56.7  -3.3
ARTI                               pmax   pmax
      comp=Z,16nm,0.6s
BORK  Borovoye          17.28  34         Pn     17 51 52.1  -3.0
BORK  Borovoye          17.28  34 i P     P      17 51 57.3  +1.0
BVA0  Borovoye Array    17.29  34 ⇓Pn     Pn     17 51 55.4   0.0
      comp=Z,26nm,0.9s
BVA0                              ⇑Sn     Sn     17 55 09.3  +2.7
      comp=Z,16nm,0.8s
BVA0                              ⇑Lg     Lg     17 57 02.6
      comp=Z,23nm,1.3s
BVA0  Borovoye Array    17.29  34  P      Pn     17 51 55.3   0.0
BVA0                                             17 55 04.0
BVAR  Borovoye Array    17.29  34  P      P      17 51 56.3  -0.2
      comp=Z,0.3nm,0.3s,baz=226,slow=10,SNR=19
BVAR                               S      Sn     17 55 02.0  -4.6
      comp=Z,4.7nm,0.6s,baz=239,slow=26,SNR=5.4
BVAR                               LR     LR     17 59 54.2
      comp=Z,322nm,18.9s,baz=227,slow=41
      comp=Z,22nm,0.7s
KDJ   Kajisay           17.31  74         Pn     17 51 50.2  -5.5
KDJ   Kajisay           17.31  74  P      Pn     17 51 50.2  -5.5
KDJ                                pmax   pmax
      comp=Z,13nm,1.1s
SVE   Sverdlovsk        17.73  11 eP      P      17 52 02.2  +0.9
SVE                               eS      Sn     17 55 12.8  -4.3
SVE                                pmax   pmax
      comp=Z,21nm,1.0s
RAYN  Ar Rayn           17.74 208  P      Pn     17 51 51.2   -10
RAYN  Ar Rayn           17.74 208  P      Pn     17 51 51.2   -10
RAYN                               pmax   pmax
      comp=Z,7.0nm,0.8s
TARG  Taragay, Kyrgy    17.77  76         Pn     17 51 58.9  -2.8
TARG  Taragay, Kyrgy    17.77  76  P      Pn     17 51 58.9  -2.8
TARG                               pmax   pmax
      comp=Z,10.0nm,0.9s
PRZ   Przheval'sk       18.22  73         Pn     17 52 02.6  -4.4
PRZ                                IAmb   IAmb   17 52 10.3
      comp=Z,19nm,0.8s
PRZ   Przheval'sk       18.22  73  P      Pn     17 52 02.6  -4.4
PRZ                                pmax   pmax
      comp=Z,19nm,0.8s
BORA  Eskisehir         18.53 279  P      P      17 52 09.4  -0.9
WUS   Wushi             18.85  77         P      17 52 10.5  -3.5
EIL   Elat              18.88 244  LR     LR     18 01 18.6
      comp=Z,242nm,18.6s,baz=348,slow=43
PDGK  Podgornoye        19.05  71 ⇑Pn     Pn     17 52 17.9  +0.9
      comp=Z,6.9nm,0.8s
PDGK                              ⇑Sn     S      17 55 58.7  +8.3
      comp=Z,6.5nm,1.0s
PDGK                              ⇑Lg     Lg     17 58 05.1
      comp=Z,15nm,1.1s
PDGK  Podgornoye        19.05  71  P      Pn     17 52 17.9  +0.9
KIRV  Kirov             19.32 352  P      Pn     17 52 21.2  +1.4
      comp=Z,1.8nm,0.3s,baz=278,slow=1.2,SNR=11
KIRV                               S      S      17 55 48.3  -7.0
      comp=Z,8.8nm,0.7s,baz=90,slow=22,SNR=2.9
KIRV                               LR     LR     18 01 30.8
      comp=Z,185nm,20.6s,baz=166,slow=42
      comp=Z,30nm,0.7s
ELL   Elmali            19.56 270  P      P      17 52 18.8  -2.9
ELL   Elmali            19.56 270  P      P      17 52 18.8  -2.9
ELL                                pmax   pmax
      comp=Z,15nm,0.9s
OBN   Obninsk           19.66 328  S      S      17 55 57.2  -5.2
      comp=Z,7.0nm,0.4s,baz=249,slow=22,SNR=1.3
OBN                                LR     LR     18 01 10.4
      comp=Z,116nm,19.4s,baz=34,slow=40
OBN   Obninsk           19.66 328⇓eP      Pn     17 52 25.1  +1.1
OBN                               eS      S      17 55 56.6  -5.8
OBN                                pmax   pmax
      comp=Z,14nm,0.5s
OBN                                MLR    MLR
      comp=Z,189nm,14.0s
OBN   Obninsk           19.66 328  P      P      17 52 23.0  +0.6
      comp=Z,40nm,0.7s
MOS   Moscow            19.70 331 eP      P      17 52 23.5  +0.6
MOS                               eS      S      17 55 57.3  -5.9
MOS                                pmax   pmax
      comp=Z,28nm,0.7s
AKAS  Kas               19.94 268  P      P      17 52 22.2  -3.6
AKAS                               IAmb   IAmb   17 52 46.1
      comp=Z,14nm,0.7s
TIRR  Tirgusor          19.99 293  P      P      17 52 24.2  -1.9
TIRR                               IAmb   IAmb   17 52 36.4
      comp=Z,39nm,1.3s
TIRR  Tirgusor          19.99 293  P      P      17 52 24.2  -1.9
TIRR                               pmax   pmax
      comp=Z,39nm,1.3s
MILM  Milestii Mici     20.08 300 ⇑P      P      17 52 27.1  +0.1
MILM  Milestii Mici     20.08 300 ⇑P      P      17 52 27.1  +0.1
KURBB Kurchatov Arra    20.13  49  P      Pn     17 52 30.1  +0.6
      comp=Z,8.3nm,0.9s,baz=244,slow=11,SNR=20
KURBB                              S      S      17 56 09.7  -2.1
      comp=Z,0.5nm,0.4s,baz=256,slow=23,SNR=1.1
      comp=Z,8.3nm,0.9s
KURBB Kurchatov Arra    20.13  49 ⇑Pn     Pn     17 52 29.9  +0.4
      comp=Z,16nm,1.1s
KURBB                             ⇑Sn     Sn     17 56 19.8  +4.8
      comp=Z,13nm,0.8s
KURBB Kurchatov Arra    20.13  49  P      Pn     17 52 29.9  +0.3
KURBB                              S      Sn     17 56 19.8  +4.8
KURK  Kurchatov         20.22  49         P      17 52 27.1  -1.4
KURK                               IAmb   IAmb   17 52 32.8
      comp=Z,19nm,0.8s
KURK  Kurchatov         20.22  49 ⇓Pn     Pn     17 52 31.1  +0.5
      comp=Z,9.6nm,0.9s
KURK                              ⇑Sn     Sn     17 56 21.2  +4.1
      comp=Z,3.0nm,0.9s
KURK  Kurchatov         20.22  49ceP      Pn     17 52 31.8  +1.2
KURK                               pmax   pmax
      comp=Z,29nm,1.0s
CFR   Carcaliu          20.25 295 ⇓P      P      17 52 29.3  +0.3
CFR   Carcaliu          20.25 295 ⇓P      P      17 52 29.3  +0.3
ICOR  Ion Corvin        20.40 292 ⇓P      Pn     17 52 32.7  -0.1
AK09  Malin Array Si    20.87 310  P      P      17 52 36.6  +1.0
GHRR                    20.88 297 ⇑P      P      17 52 36.9  +1.1
GHRR                    20.88 297  P      P      17 52 36.3  +0.5
AK10  Malin Array Si    20.89 310  P      P      17 52 36.7  +0.9
AK07  Malin Array Si    20.89 310  P      P      17 52 36.7  +0.8
AK08  Malin Array Si    20.90 310  P      P      17 52 36.7  +0.8
AK06  Malin Array Si    20.91 310  P      P      17 52 36.9  +0.8
AKASG Malin Array Be    20.94 310  P      P      17 52 37.8  +1.3
      comp=Z,25nm,0.5s,baz=101,slow=8.2,SNR=39
AKASG                              S      S      17 56 23.2  -4.7
      comp=Z,0.2nm,0.3s,baz=115,slow=22,SNR=0.9
AKASG                              LR     LR     18 02 20.7
      comp=Z,112nm,19.3s,baz=108,slow=41
      comp=Z,25nm,0.5s
AKASG Malin Array Be    20.94 310  P      P      17 52 36.8  +0.4
AKASG Malin Array Be    20.94 310 i P     P      17 52 37.7  +1.3
AKASG                              pmax   pmax
      comp=Z,29nm,0.4s
AKBB  Malin Array Si    20.94 310         P      17 52 36.9  +0.5
AKBB  Malin Array Si    20.94 310ceP      P      17 52 37.7  +1.3
AKBB                               pmax   pmax
      comp=Z,72nm,1.0s
AKBB  Malin Array Si    20.94 310  P      P      17 52 37.1  +0.7
AK01  Malin Array Si    20.94 310  P      P      17 52 37.2  +0.8
KIEV  Kiev              20.95 310         P      17 52 36.8  +0.3
KIEV  Kiev              20.95 310 ⇓P      P      17 52 38.0  +1.6
KIEV  Kiev              20.95 310 ⇓P      P      17 52 38.0  +1.6
KIEV  Kiev              20.95 310  P      P      17 52 37.1  +0.7
      comp=Z,6µmcomp=Z,499nm,0.5s
AK18  Malin Array Si    21.04 310  P      P      17 52 38.0  +0.5
AK22  Malin Array Si    21.05 310  P      P      17 52 38.1  +0.5
AK19  Malin Array Si    21.07 310  P      P      17 52 38.7  +0.9
MAKZ  Makanchi          21.20  61         P      17 52 37.8  -1.4
MAKZ                               IAmb   IAmb   17 52 42.2
      comp=Z,35nm,1.3s
MAKZ  Makanchi          21.20  61 ⇓Pn     P      17 52 44.8  +5.5
      comp=Z,30nm,1.4s
MAKZ  Makanchi          21.20  61  P      P      17 52 40.3  +1.1
VRI   Vrincioaia        21.32 296  P      P      17 52 41.0  +0.4
      comp=Z,18nm,1.2s
ISR   Istrita           21.37 294 ⇓P      P      17 52 44.5  +3.3
ISR   Istrita           21.37 294 ⇓P      P      17 52 44.5  +3.3
PLOR  Plostina          21.37 296 ⇓P      P      17 52 43.1  +1.9
PLOR  Plostina          21.37 296 ⇓P      P      17 52 43.1  +1.9
MK31  Makanchi Array    21.41  61  Pn     P      17 52 47.0  +5.5
      comp=Z,16nm,0.9s,baz=250,slow=9.2,SNR=29
MK31  Makanchi Array    21.41  61ceP      P      17 52 44.1  +2.6
MKAR  Makanchi Array    21.41  61  P      P      17 52 43.3  +1.8
      comp=Z,9.1nm,0.9s,baz=257,slow=11,SNR=21
MKAR                               LR     LR     18 01 58.9
      comp=Z,267nm,18.1s,baz=250,slow=39
      comp=Z,9.1nm,0.9s
MKAR  Makanchi Array    21.41  61         P      17 52 41.1  -0.4
MKAR  Makanchi Array    21.41  61  P      P      17 52 41.1  -0.4
TESR  Tescani           21.47 298  P      P      17 52 42.0  -0.1
      comp=Z,24nm,0.7s
LUBAR Lubar, Ukraine    21.55 308  P      P      17 52 43.3  +0.4
ONER  Baraj Valea Uz    21.61 297 ⇑P      P      17 52 46.4  +2.7
GIRR  Girov             21.64 299 ⇓P      P      17 52 45.6  +1.7
COVR  Voineasa-Covas    21.68 296 ⇓P      P      17 52 47.0  +2.5
ELND  Elena             21.77 288 ⇓P      P      17 52 47.8  +2.4
MLR   Muntele Rosu      21.83 295  P      P      17 52 48.5  +2.4
      comp=Z,8.0nm,0.7s,baz=300,slow=18,SNR=9.2
      comp=Z,8.0nm,0.7s
MLR   Muntele Rosu      21.83 295  P      P      17 52 45.8  -0.3
MLR                                IAmb   IAmb   17 52 58.6
      comp=Z,35nm,1.1s
MLR   Muntele Rosu      21.83 295 ⇓P      P      17 52 48.1  +2.0
MLR   Muntele Rosu      21.83 295 ⇓P      P      17 52 48.1  +2.0
MLR   Muntele Rosu      21.83 295  P      P      17 52 46.4  +0.3
      comp=Z,28nm,1.0s
PRAR  RASCA             21.89 300 ⇓P      P      17 52 48.4  +1.7
KMPD  K-Podol'skiy      21.99 303  P      P      17 52 48.2  +0.5
KARP  Karpathos         22.04 268         P      17 52 45.3  -3.1
KARP  Karpathos         22.04 268  P      P      17 52 48.3  -0.1
      comp=Z,759nmcomp=Z,83nm,1.0s
RDO   Rodhopi           22.12 283         P      17 52 48.6  -0.6
RDO                                IAmb   IAmb   17 53 02.3
      comp=Z,14nm,0.9s
DOPR  Dopca             22.26 296 ⇓P      P      17 52 53.2  +2.5
VOIR                    22.45 295  P      P      17 52 52.9  +0.2
      comp=Z,20nm,0.8s
BURAR Bucovina Array    22.61 300         P      17 52 54.3  -0.2
BURAR                              IAmb   IAmb   17 53 06.4
      comp=Z,13nm,0.8s
BURAR Bucovina Array    22.61 300 ⇓P      P      17 52 56.5  +2.0
BURAR Bucovina Array    22.61 300 ⇓P      P      17 52 56.5  +2.0
BUR08 Bucovina Ar. S    22.63 301         P      17 52 54.3  -0.4
BUR08                              IAmb   IAmb   17 53 34.2
      comp=Z,14nm,0.9s
ARR   Arges             22.73 295 ⇓P      P      17 52 58.5  +2.7
KSV   Kosov             22.84 302  P      P      17 52 57.1  +0.3
RNPP5 Staryi Chortor    23.10 310  P      P      17 52 59.8  +0.4
RNPP8 Varash            23.16 310  P      P      17 53 00.7  +0.8
RNPP9 Sopachiv          23.16 310  P      P      17 53 00.6  +0.6
KLMR  Klimovskoe        23.27 341 eP      P      17 52 59.4  -1.5
KLMR                               pmax   pmax
      comp=Z,24nm,0.6s
MNK   Minsk             23.33 319 i P     P      17 53 00.7  -0.9
      comp=E,28nm,1.5s
MNK                               i P     P      17 53 00.7  -0.9
      comp=N,20nm,1.0s
MNK                               i P     P      17 53 00.7  -0.9
      comp=Z,21nm,1.1s,baz=118
MNK                               i PP    PnPn   17 53 26.2  -1.8
MNK                               i PPP   PPP    17 53 35.5
MNK                               i S     S      17 57 13.3  +1.2
MNK                               i SS    SnSn   17 57 49.1  +1.2
MNK                               i SSS   SSS    17 58 02.7
MNK                               i LQ    LQ     18 00 31.0
MNK                               i LR    LR     18 01 53.3
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MNK                                i LRM   MLR    18 03 34.6
       comp=Z,149nm,15.8s
MNK                                i LRM   MLR    18 04 29.7
       comp=N,578nm,22.5s
MNK                                i LRM   MLR    18 04 31.0
       comp=E,342nm,21.1s
MNK    Minsk            23.33 319  i P     P      17 53 00.7  -0.9
MNK                                i PPP   PPP    17 53 35.4
MNK                                i S     S      17 57 13.2  +1.2
MNK                                i SSS   SSS    17 58 02.7
MNK                                  pmax  pmax
       comp=E,28nm,1.5s
MNK                                  pmax  pmax
       comp=N,20nm,1.0s
MNK                                  pmax  pmax
       comp=Z,21nm,1.1s
MNK                                  MLR   MLR
       comp=Z,149nm,16.0s
MNK                                  MLR   MLR
       comp=N,578nm,23.0s
MNK                                  MLR   MLR
       comp=E,342nm,21.0s
LOT    Lotru            23.35 295  ⇑P      P      17 53 05.2  +3.2
RAKU   Rahkiv           23.38 301    P     P      17 53 03.3  +1.1
IDI    Anoyia           23.88 269    P     P      17 53 07.9  +0.7
       comp=E,7.5nm,0.7s,baz=71,slow=9.8,SNR=10.0
       comp=E,7.5nm,0.7s
IDI    Anoyia           23.88 269          P      17 53 04.9  -2.3
IDI                                  IAmb  IAmb   17 53 24.3
       comp=Z,28nm,1.2s
MARR   Marisel-Cluj     23.90 298  ⇑P      P      17 53 09.4  +2.1
GZR    Gura Zlata       24.04 294  ⇑P      P      17 53 01.6  -7.1
GZR    Gura Zlata       24.04 294  ⇑P      P      17 53 01.6  -7.0
MESR   Meseseni         24.07 299  ⇑P      P      17 53 23.4   +15
NACGM  Naroch           24.08 319  eP      P      17 53 08.8   0.0
SHIU   Shidnytsya       24.13 304    P     P      17 53 10.0  +0.6
BRIU   Brid             24.19 302    P     P      17 53 10.3  +0.4
DRGR                    24.19 298  ⇑P      P      17 53 19.2  +9.2
DRGR                    24.19 298  ⇑P      P      17 53 19.2  +9.2
MUKU   Mukachevo        24.43 302    P     P      17 53 12.5  +0.5
KWP    Kalwaria Pacla   24.63 305    P     P      17 53 14.7  +0.8
       comp=Z,39nm,1.0s
MDVR   Moldovita        24.78 293  ⇑P      P      17 53 16.4  +1.1
BZS    Buzias           24.87 295  ⇑P      P      17 53 18.1  +2.1
BZS    Buzias           24.87 295  ⇑P      P      17 53 18.1  +2.1
ZAA0   Zalesovo Array   25.00  45          P      17 53 17.2  +0.1
ZAA0                                 IAmb  IAmb   17 53 21.3
       comp=Z,7.8nm,0.8s
ZALV   Zalesovo Beam    25.00  45    P     P      17 53 19.1  +2.0
       comp=Z,8.6nm,0.8s,baz=256,slow=9.3,SNR=22
       comp=Z,8.6nm,0.8s
ZALV   Zalesovo Beam    25.00  45          P      17 53 17.9  +0.8
WMQ    Urumqi           25.02  69  eP      P      17 53 17.4  -0.1
WMQ                                  LR    LR
       comp=Z,130nm,17.7s
DGZ    Jazzator, Alta   25.31  56  i P     P      17 53 21.1  +0.9
DGZ                                  pmax  pmax
       comp=Z,18nm,1.2s
ITM    Ithomi           25.61 275          P      17 53 21.6  -1.3
ITM                                  IAmb  IAmb   17 53 30.2
       comp=Z,11nm,0.7s
SUW    Suwalki          25.62 315    P     P      17 53 23.9  +1.2
SUW    Suwalki          25.62 315    P     P      17 53 23.9  +1.2
PABE   Paberze          25.79 318          P      17 53 25.3  +1.0
VSU    Vasula           25.96 326  i P     P      17 53 27.5  +1.7
VSU                                  pmax  pmax
       comp=Z,30nm,0.9s
NIE    Niedzica         26.14 303    P     P      17 53 28.5  +0.9
       comp=Z,3.9nm,1.5s
PSZ    Piszkesteto      26.21 300    P     P      17 53 27.5  -0.8
PSZ                                  IAmb  IAmb   17 54 01.1
       comp=Z,12nm,1.2s
PSZ    Piszkesteto      26.21 300    P     P      17 53 27.5  -0.8
PSZ                                  pmax  pmax
       comp=Z,12nm,1.2s
OJC    Ojcow            26.59 305  eP      P      17 53 33.1  +1.5
OJC    Ojcow            26.59 305          P      17 53 31.6   0.0
OJC    Ojcow            26.59 305    P     P      17 53 31.6   0.0
OJC    Ojcow            26.59 305    P     P      17 53 33.3  +1.7
       comp=Z,15nm,1.0s
LANS   Liptovska Anna   26.64 303  eP      P      17 53 35.0  +2.9
LANS                                 pmax  pmax
       comp=Z,2.0nm,0.8s
LANS   Liptovska Anna   26.64 303  eP      P      17 53 35.0  +2.9
ARBE   Arbavere         26.84 327  eP      P      17 53 37.8  +4.1
JOF    Joensuu          27.23 337  eP      P      17 53 39.9  +2.8
JAVC   Velka Javorina   27.78 302  eP      P      17 53 45.1  +2.7
MORC   Moravsky Berou   27.96 304    P     P      17 53 43.7  -0.3
MORC                                 IAmb  IAmb   17 53 59.7
       comp=Z,11nm,1.2s
MORC   Moravsky Berou   27.96 304  eP      P      17 53 44.6  +0.6
MORC   Moravsky Berou   27.96 304    P     P      17 53 43.7  -0.3
MORC                                 pmax  pmax
       comp=Z,11nm,1.2s
MODS   Modra-Piesok     28.00 301  eP      P      17 53 46.7  +2.4
MODS                                 pmax  pmax
       comp=Z,24nm,1.3s
MODS   Modra-Piesok     28.00 301  eP      P      17 53 46.7  +2.4
FINES  FINESS Array B   28.00 331    P     P      17 53 46.5  +2.4
       comp=Z,6.3nm,0.8s,baz=125,slow=10,SNR=7.8
FINES                                LR    LR     18 06 34.3
       comp=Z,109nm,18.1s,baz=162,slow=40
       comp=Z,6.3nm,0.8s
FINES  FINESS Array B   28.00 331    P     P      17 53 45.0  +0.9
VRAC   Vranov           28.53 303    LR    LR     18 07 14.4
       comp=Z,93nm,19.8s,baz=58,slow=41
KEF    Keuruu           28.90 331  eP      P      17 53 54.8  +2.6
ARSA   Arzberg          29.13 298    P     P      17 53 53.6  -0.7
ARSA                                 IAmb  IAmb   17 54 08.7
       comp=Z,6.8nm,1.1s
RAF    Rauma            29.47 328  eP      P      17 53 59.5  +2.3
GERES  GERESS Array B   30.39 301    P     P      17 54 07.2  +1.5
       comp=Z,0.8nm,0.6s,baz=80,slow=8.3,SNR=5.6
       comp=Z,0.8nm,0.6s
APA    Apatity          30.40 344  eP      P      17 54 06.3  +1.0
APA                                  MLR   MLR
       comp=Z,1µm,4.1s
LVZ    Lovozero         30.42 345    P     P      17 54 06.9  +1.3
LVZ    Lovozero         30.42 345    P     P      17 54 06.9  +1.3
LVZ                                  pmax  pmax
       comp=Z,21nm,0.8s
LVZ    Lovozero         30.42 345    P     P      17 54 07.5  +1.9
       comp=Z,33nm,1.6s
KHC    Kasperske Hory   30.49 302ceP       P      17 54 09.3  +2.9
KHC                                  pmax  pmax
       comp=Z,6.0nm,1.7s
KHC    Kasperske Hory   30.49 302  eP      P      17 54 08.8  +2.4
HSKC   Hora Svate Kat   30.68 305  eP      P      17 54 09.9  +1.9
CLL    Collm            31.02 306  eSS     SS     18 01 21.0  -5.6
LESA   Schwarzleotal    31.06 299  i pP    P      17 54 13.5  +2.0
       comp=Z,8.9nm,1.0s
WTTA   Wattenberg       31.77 298  epP     P      17 54 19.7  +1.8
       comp=Z,6.2nm,1.0s
HFS    Hagfors          32.66 323    P     P      17 54 27.0  +1.7
       comp=Z,11nm,0.7s,baz=111,slow=6.8,SNR=9.9
       comp=Z,11nm,0.7s
HFS    Hagfors          32.66 323    P     P      17 54 27.0  +1.7
DAVOX  Davos/Dischmat   33.00 297    P     P      17 54 30.0  +1.4
       comp=Z,2.8nm,0.8s,baz=79,slow=5.2,SNR=1.8
DAVOX                                LR    LR     18 09 40.4
       comp=Z,41nm,18.2s,baz=74,slow=40
       comp=Z,2.8nm,0.8s
MSSA   Maissana         33.50 293    P     P      17 54 32.9  -0.1
KEV    Kevo             33.56 343    P     P      17 54 34.9  +1.9
KEV    Kevo             33.56 343    P     P      17 54 34.9  +1.9
KEV                                  pmax  pmax
       comp=Z,58nm,1.4s
ARCES  ARCESS Array B   33.74 342    P     P      17 54 36.3  +1.7
       comp=Z,6.2nm,0.8s,baz=140,slow=9.1,SNR=26
ARCES                                LR    LR     18 09 26.6
       comp=Z,81nm,18.5s,baz=124,slow=38
       comp=Z,6.2nm,0.8s
ARCES  ARCESS Array B   33.74 342    P     P      17 54 36.4  +1.8
ARCES                                IAmb  IAmb   17 54 59.3
       comp=Z,22nm,1.4s
ARCES  ARCESS Array B   33.74 342    P     P      17 54 36.4  +1.8
ARCES                                pmax  pmax
       comp=Z,22nm,1.4s
NC405  NORSAR Array S   33.91 324          P      17 54 37.1  +0.9
NC303  NORSAR Array S   34.11 324          P      17 54 38.5  +0.6
NB2    NORSAR Subarra   34.12 323    P     P      17 54 39.4  +1.4
       comp=Z,7.3nm,0.6s,baz=112,slow=8.6
NOA    NORSAR Array B   34.12 323    P     P      17 54 39.0  +1.0
       comp=Z,11nm,0.8s,baz=111,slow=8.4,SNR=23
NOA                                  LR    LR     18 09 56.4
       comp=Z,149nm,18.8s,baz=115,slow=39
       comp=Z,11nm,0.8s
NRIK   Noril'sk         34.59  20    P     P      17 54 45.1  +3.1
       comp=Z,1.4nm,0.4s,baz=214,slow=7.3,SNR=2.5
NRIK                                 LR    LR     18 11 48.7
       comp=Z,103nm,20.4s,baz=222,slow=41
       comp=Z,1.4nm,0.4s
NRIK   Noril'sk         34.59  20    P     P      17 54 44.6  +2.6
NRIK   Noril'sk         34.59  20ceP       P      17 54 44.4  +2.4
NRIK                                 pmax  pmax
       comp=Z,14nm,2.7s
GTA    Gaotai           34.65  75  eP      P      17 54 44.6  +1.6
GTA                                  pmax  pmax
       comp=Z,4.0nm,0.7s
SENIN  Lac Senin/Sane   34.81 297    P     P      17 54 44.9  +0.5
SENIN                                IAmb  IAmb   17 54 57.9
       comp=Z,12nm,1.4s
BNI    Bardonecchia     35.40 295    P     P      17 54 50.7  +1.3
BNI                                  IAmb  IAmb   17 55 25.8
       comp=Z,24nm,1.5s
BNI    Bardonecchia     35.40 295    P     P      17 54 50.7  +1.3
BNI                                  pmax  pmax
       comp=Z,24nm,1.5s
KEST   Kesra            35.71 278    P     P      17 54 53.0  +0.9
       comp=Z,1.7nm,0.7s,baz=60,slow=14,SNR=5.0
       comp=Z,1.7nm,0.7s
KEST   Kesra            35.71 278    IAmb  IAmb   17 55 16.0
       comp=Z,8.3nm,1.1s
SONM   Songino Array    37.76  60    P     P      17 55 11.3  +1.7
       comp=Z,0.9nm,0.7s,baz=277,slow=11,SNR=6.0
       comp=Z,0.9nm,0.7s
SONM   Songino Array    37.76  60    P     P      17 55 09.7  +0.1
ULN    Ulaanbaatar      38.20  60          P      17 55 12.1  -1.1
ULN                                  IAmb  IAmb   17 55 16.8
       comp=Z,8.3nm,0.9s
ULN    Ulaanbaatar      38.20  60  i P     P      17 55 15.8  +2.6
ULN                                  pmax  pmax
       comp=Z,10.0nm,1.0s
PALK   Pallekele        39.82 137    LR    LR     18 13 49.2
       comp=Z,78nm,19.8s,baz=342,slow=39
EKA    Eskdalemuir Ar   40.83 312    P     P      17 55 36.7  +1.9
       comp=Z,2.5nm,0.5s,baz=102,slow=9.2,SNR=13
EKA                                  LR    LR     18 17 51.9
       comp=Z,64nm,19.5s,baz=73,slow=44
       comp=Z,2.5nm,0.5s
PZH    PanZhiHua        41.21  94    P     P      17 55 35.4  -3.1
SPB2   Spitsbergen Ar   41.74 349    P     P      17 55 44.4  +2.4
SPB2                                 IAmb  IAmb   17 55 47.0
       comp=Z,27nm,1.1s
SPB2                                 PcP   PcP    17 57 35.6  -2.2
SPITS  Spitsbergen Ar   41.75 349    P     P      17 55 45.4  +3.3
       comp=Z,3.5nm,0.4s,baz=144,slow=10,SNR=16
       comp=Z,3.5nm,0.4s
SPITS  Spitsbergen Ar   41.75 349    P     P      17 55 44.8  +2.7
SPITS                                             17 57 36.0
SPITS                                pmax  pmax
       comp=Z,33nm,1.1s
HHC    Hu-ho-hao-te     42.90  69  eP      P      17 55 48.9  -3.2
HHC                                  pmax  pmax
       comp=Z,6.0nm,0.6s
XAN    Xi'an            43.33  80    P     P      17 55 50.5  -5.1
XAN                                  pmax  pmax
       comp=Z,11nm,0.8s
CMAR   Chiang Mai Arr   43.62 106    P     P      17 55 57.8  -0.2
       comp=Z,0.5nm,0.4s,baz=308,slow=7.9,SNR=6.1
CMAR                                 LR    LR     18 15 43.5
       comp=Z,57nm,18.3s,baz=165,slow=38
       comp=Z,0.5nm,0.4s
CMAR   Chiang Mai Arr   43.62 106    P     P      17 55 55.3  -2.7
ESDC   Sonseca Array    44.35 290    P     P      17 56 04.2  +0.5
       comp=Z,1.5nm,0.7s,baz=76,slow=7.9,SNR=6.6
       comp=Z,1.5nm,0.7s
ESDC   Sonseca Array    44.35 290    P     P      17 56 03.8  +0.1
HILR   Hailar Array B   46.16  55    P     P      17 56 20.4  +2.4
       comp=Z,0.7nm,0.3s,baz=267,slow=7.2,SNR=1.0
       comp=Z,0.7nm,0.3s
TIXI   Tiksi            48.09  24    LR    LR     18 21 44.5
       comp=Z,77nm,18.7s,baz=202,slow=42
TIXI   Tiksi            48.09  24          P      17 56 33.5  +0.9
TIXI                                 IAmb  IAmb   17 56 36.9
       comp=Z,7.8nm,0.8s
TIXI   Tiksi            48.09  24ceP       P      17 56 35.3  +2.7
TIXI                                 pmax  pmax
       comp=Z,14nm,1.3s
WHN    Wuhan            48.99  81    P     P      17 56 35.9  -4.1
HEH    HeiHe            50.75  52  eP      P      17 56 55.8  +2.6
HEH                                  pmax  pmax
       comp=Z,25nm,0.9s
NJ2    Nanjing          51.71  77  eP      P      17 56 57.6  -3.0
NJ2                                  pmax  pmax
       comp=Z,7.0nm,0.5s
USRK   Ussuriysk Ar.    55.83  58    P     P      17 57 32.0  +1.4
       comp=Z,5.5nm,0.7s,baz=304,slow=7.4,SNR=6.9
       comp=Z,5.5nm,0.7s
USRK   Ussuriysk Ar.    55.83  58    P     P      17 57 32.0  +1.4
KSRS   Korea Array      55.93  67    P     P      17 57 33.0  +1.6
       comp=Z,3.4nm,0.7s,baz=280,slow=6.0,SNR=10
       comp=Z,3.4nm,0.7s
SEY    Seymchan         58.94  32    LR    LR     18 26 54.8
       comp=Z,129nm,19.2s,baz=309,slow=40
SFJD   Kangerlussuaq    59.74 334    LR    LR     18 23 57.5
       comp=Z,67nm,18.6s,baz=38,slow=36
LSZ    Lusaka           59.85 210    LR    LR     18 25 38.9
       comp=Z,54nm,18.0s,baz=61,slow=38
MJAR   Matsushiro Arr   63.59  63    P     P      17 58 25.3  +1.2
       comp=Z,2.5nm,0.8s,baz=297,slow=9.0,SNR=4.7
       comp=Z,2.5nm,0.8s
RES    Resolute Bay     64.23 351    LR    LR     18 29 57.6
       comp=Z,40nm,19.2s,baz=13,slow=39
A36M   Sachs Harbour    68.75 360          P      17 58 56.8  +0.2
C24K   Franklin Bluff   69.69   8    P     P      17 59 03.4  +0.9
LBTB   Lobatse          69.70 208    LR    LR     18 33 07.0
       comp=Z,62nm,18.1s,baz=16,slow=39
TOLK   Toolik Lake Re   70.62   9    P     P      17 59 09.2  +0.9
E22K   Anaktuvuk Pass   70.80  10    P     P      17 59 10.6  +1.2
E22K                                 IAmb  IAmb   17 59 13.4
       comp=Z,6.2nm,0.9s
COLD   Coldfoot         71.87  10    P     P      17 59 17.5  +1.7
COLD                                 IAmb  IAmb   17 59 20.0
       comp=Z,7.4nm,0.9s
F28M   Old Crow         72.58   6          P      17 59 21.6  +1.5
F28M                                 IAmb  IAmb   17 59 23.8
       comp=Z,3.9nm,1.0s
BOSA   Boshof           73.11 207    LR    LR     18 35 47.3
       comp=Z,59nm,18.5s,baz=0.5,slow=40
NEA2   Nenana           74.52  10    P     P      17 59 32.5  +1.0
NEA2                                 IAmb  IAmb   18 00 13.1
       comp=Z,8.2nm,1.5s
ILAR   Eielson Array    74.64   9    P     P      17 59 34.0  +1.9
       comp=Z,2.0nm,0.9s,baz=336,slow=4.5,SNR=16
       comp=Z,2.0nm,0.9s
ILAR   Eielson Array    74.64   9    P     P      17 59 33.3  +1.1
I29M   Ogilvie Camp,    74.92   6    P     P      17 59 34.7  +0.8
I29M                                 IAmb  IAmb   18 00 10.0
       comp=Z,16nm,1.4s
K24K   Donnelly Dome    75.71   9    P     P      17 59 39.1  +0.7
M27K   Edge Creek, AK   77.56   8    P     P      17 59 48.2  -0.8
YKA    Yellowknife Ar   77.91 355    P     P      17 59 51.9  +1.2
       comp=Z,1.2nm,0.9s,baz=1.3,slow=6.7,SNR=11
       comp=Z,1.2nm,0.9s
YKA    Yellowknife Ar   77.91 355    P     P      17 59 49.3  -1.4
YKA    Yellowknife Ar   77.91 355  i P     P      17 59 52.7  +2.0
YKA                                  pmax  pmax
       comp=Z,1.0nm,0.8s
DLBC   Dease Lake       82.28   2    LR    LR     18 42 25.0
       comp=Z,30nm,18.3s,baz=60,slow=40
ULM    Lac du Bonnet    86.85 341    LR    LR     18 41 20.3
       comp=Z,46nm,18.2s,baz=14,slow=37
WRA    Warramunga Arr   94.95 112    P     P      18 01 14.9  -0.9
       comp=Z,0.6nm,0.9s,baz=307,slow=5.0,SNR=3.1
       comp=Z,0.6nm,0.9s
ELK    Elko             99.53 352    LR    LR     18 51 40.7
       comp=Z,27nm,19.2s,baz=45,slow=38
NVL    N'lazarevskaya  114.23 194  i PKIKP PKPdf  18 06 30.2  -1.2
NVL                                e SS    SS     18 23 14.7  -2.0
NVL                                e SSS   SSS    18 27 28.5
NVL                                  pmax  pmax
       comp=Z,11nm,1.3s
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ROM 03 17:51:02.9±0.1, 42°.809N±0°.003×13°.125E±0°.006, h10km, ML1.4/10, 1D, Error ellipse: s-maj=0.5km s-min=0.3km az=82.0, Central Italy

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Code   Station Name       Δ°  AZ°   Phase ID        Time      Res
                                   Op    ISC     h  m  s     ISC
NRCA   Norcia            0.03 342  P     Pg     17 51 05.2  +0.2
NRCA                               S     Sg     17 51 06.4   0.0
NRCA                               AML   AML
       comp=E,692µm,1.0s
NRCA                               AML   AML
       comp=N,508µm,1.2s
NRCA                               AML   AML
       comp=N,512µm,1.2s
NRCA                               AML   AML
       comp=N,508µm,1.2s
NRCA                               AML   AML
       comp=E,690µm,1.0s
NRCA                               AML   AML
       comp=E,692µm,1.0s
NRCA                               AML   AML
       comp=N,508µm,0.8s
NRCA                               AML   AML
       comp=N,512µm,0.8s
MC2    Monte Cornacci    0.11  25  P     Pg     17 51 06.5  +0.5
MC2                                S     Sg     17 51 08.9  +0.7
MMO1   Montemonaco       0.17  59  P     Pg     17 51 07.2  +0.5
MMO1                               S     Sg     17 51 10.2  +0.8
MTRA   Matera            0.21 105  P     Pg     17 51 07.9  +0.6
LNSS   Leonessa          0.21 197  P     Pg     17 51 08.0  +0.5
LNSS                               S     Sg     17 51 12.0  +1.4
LNSS                               AML   AML
       comp=N,142µm,1.0s
LNSS                               AML   AML
       comp=E,106µm,0.1s
LNSS                               AML   AML
       comp=N,142µm,1.0s
FDMO   Fiordimonte       0.23 353  P     Pg     17 51 08.3  +0.6
FDMO                               S     Sg     17 51 12.2  +1.2
FDMO                               AML   AML
       comp=E,94µm,1.5s
FDMO                               AML   AML
       comp=N,75µm,0.3s
FDMO                               AML   AML
       comp=E,95µm,1.5s
FDMO                               AML   AML
       comp=N,75µm,0.3s
FDMO                               AML   AML
       comp=E,95µm,0.5s
SMA1   SAN MARTINO       0.24 139  P     Pb     17 51 08.7  -0.6
CESI   CESI - Serrava    0.25 320  P     Pg     17 51 08.8  +0.6
CESI                               S     Sb     17 51 13.0  -1.1
CESI                               AML   AML
       comp=N,94µm,1.0s
CESI                               AML   AML
       comp=E,93µm,0.2s
CSP1   Cessapalombo      0.29  12  P     Pg     17 51 09.4  +0.5
CSP1                               S     Sb     17 51 14.2  -0.9
MF5    Montefalcone A    0.30  54 ⇓P     Pb     17 51 10.1  -0.5
RM33   Pellescritta (    0.31 168  P     Pg     17 51 09.7  +0.6
TERO   Teramo            0.40 118  P     Pg     17 51 11.2  +0.4
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*IDC **03** 17:55:01.5±1.0, 37°.87N×29°.62E, h0km, mb4.0/6, mbtmp3.8/13, ML3.4/5, MS3.3/3, Error ellipse: s-maj=17.9km s-min=14.3km az=20.0*

*ISK **03** 17:55:02.9, 37°.85N×29°.61E, h7km, ML3.7/31*

*THE **03** 17:55:03.8, 38°N±9°×3°0E±1°9, h2km±42km, M3.3/12, MLh3.3/12*

*AFAD **03** 17:55:03.0, 37°.83N×29°.61E, h11km±1km, MW3.8*

*GII **03** 17:55:04.9±0.0, 37°.780N±0°.002×29°.670E±0°.001, h12km, Mws3.8, confirmed*

*ATH **03** 17:55:04.3±0.2, 37°.90N×29°.66E, h10km, ML3.5/16, Manual Solution by N.Liadopoulou First location: 2019/12/03 17:56:38, This location: 2020/07/03 10:22:36 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

ISC 03 17:55:03.3±0.9, **37°.86N**±0°.02×**29°.62E**±0°.02, **h11**km±6km, **n167**, σ1.02/185, **mb3.8**/6, **Turkey**

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Code   Station Name       Δ°  AZ°   Phase ID        Time      Res
                                   Op    ISC     h  m  s     ISC
INCE   Denizli-Bozkur    0.16 194  P     Pg     17 55 06.6  -0.3
INCE                               S     Sg     17 55 09.2  -0.3
INCE                             i IAML         17 55 10.0
       comp=N,2µm,0.7s
INCE                             i IAML         17 55 10.0
       comp=E,2µm,0.9s
BASM   Basmaki-Afyon     0.34  80  Pg    Pg     17 55 09.9  -0.3
BASM                               Sg    Sg     17 55 15.4  +0.6
BRDR   BURDUR-Merkez     0.39 116  P     Pg     17 55 10.4  -0.5
BRDR                               S     Sg     17 55 16.5  +0.4
BRDR                             i IAML         17 55 19.0
       comp=N,8µm,0.4s
BRDR                             i IAML         17 55 21.0
       comp=E,7µm,0.3s
KHL    Karahalli         0.47 350  Pg    Pg     17 55 12.2  -0.3
KHL                                Sg    Sb     17 55 20.3  -0.3
APMY   Acipayam-Deniz    0.47 213  Pg    Pg     17 55 11.7  -0.8
APMY                               Sg    Sg     17 55 19.0  +0.3
PASA   Karahalli, USA    0.50 348  P     Pg     17 55 12.8  -0.2
DNIZ   Denizli-Tavas-    0.52 243  P     Pg     17 55 13.4  -0.2
DNIZ                               S     Sg     17 55 20.4   0.0
DNIZ                             i IAML         17 55 23.0
       comp=N,5µm,0.4s
DNIZ                             i IAML         17 55 25.0
       comp=E,4µm,0.2s
KZIL   AFYON_Kizioren    0.57  46  P     Pb     17 55 14.8  -0.6
GOLH   Golhisar          0.63 185  P     Pg     17 55 14.8  -0.7
GOLH                               S     Sg     17 55 23.8   0.0
GOLH                             i IAML         17 55 31.0
       comp=N,4µm,0.4s
GOLH                             i IAML         17 55 32.0
       comp=E,3µm,0.6s
TAVA   DENIZLI_Tavas     0.69 235  P     Pb     17 55 17.4   0.0
TAVA                               S     Sg     17 55 25.6  -0.1
TAVA                             i IAML         17 55 28.0
       comp=E,795nm,0.6s
TAVA                             i IAML         17 55 31.0
       comp=N,911nm,0.5s
ISP    Isparta           0.71  93  Pg    Pg     17 55 16.3  -0.8
ISP                                Sg    Sb     17 55 27.8  +0.1
ISP    Isparta           0.71  93  P     Pg     17 55 16.3  -0.8
ISP                                S     Sb     17 55 28.4  +0.7
ISP    Isparta           0.71  93  P     Pg     17 55 16.4  -0.8
DNZT   Denizli-Tavas-    0.75 219  P     Pg     17 55 17.5  -0.4
CAEL   Denizli, Camel    0.78 198  P     Pb     17 55 19.2  +0.2
AFYN   Afyon-Dinar-K     0.81  59  P     Pb     17 55 19.6  +0.2
BNAZ   Uak-Banaz         0.84  14  P     Pg     17 55 19.4  -0.2
BCK    Bucak             0.86 117  Pg    Pg     17 55 19.8  -0.2
BCK                                Sg    Sb     17 55 32.9  +0.8
BUCA   Burdur, Bucak-    0.92 125  P     Pg     17 55 20.6  -0.4
BAGO   Egridir - ISPA    0.93  82  P     Pg     17 55 20.6  -0.7
CAME   Cameli-Denizli    0.95 196  Pg    Pg     17 55 20.7  -1.0
CAME                               Sg    Sb     17 55 35.2  +0.5
USAK   Uak-Merkez        0.97 331  P     Pb     17 55 22.0  -0.3
KULA   Kula-Manisa       1.00 311  Pg    Pg     17 55 22.4  -0.2
KULA                               Sg    Sn     17 55 37.4  -0.2
ESEN   Aydn-Nazilli      1.01 267  P     Pg     17 55 22.4  -0.4
KNIK   Mula-Seydike      1.02 182  P     Pb     17 55 23.4  +0.3
KIRA   zmir-Kiraz        1.02 289  P     Pg     17 55 23.0   0.0
MANT   Manisa            1.05 307  P     Pb     17 55 23.7  +0.1
NAZL   Nazilli-Aydin     1.06 276  Pg    Pg     17 55 23.2  -0.5
AFYO   Afyonkarahisar    1.06  30  P     Pb     17 55 23.9   0.0
ELL    Elmali            1.14 168  Pn    Pg     17 55 25.0  -0.2
SABU   Mula-Dalaman      1.16 207  P     Pn     17 55 26.2  +0.6
SDAG   Sultandagi-AFY    1.17  60  Pn    Pb     17 55 25.6  -0.1
GEDZ   Gediz             1.19 352  Pn    Pn     17 55 26.2  +0.1
MULA   Mugla, Merkez-    1.20 240  P     Pb     17 55 26.4  +0.3
SHAP   Saphane-Kutahy    1.20 345  Pn    Pn     17 55 26.3  +0.1
GDZ    Gediz             1.23 355  P     Pn     17 55 26.6   0.0
ANTB   Antalya           1.26 139  Pn    Pg     17 55 27.9  +0.3
ODEM   Odemis-Izmir      1.29 289  Pn    Pn     17 55 27.3  -0.1
YER    Yerkesik          1.29 236  P     Pn     17 55 27.6  +0.2
YER                                S     Sn     17 55 47.7  +3.0
YER    Yerkesik          1.29 236  Pn    Pn     17 55 27.5  +0.1
DALY   Dalyan (Mula)     1.30 217  Pn    Pn     17 55 27.8  +0.4
FETY   Fethiye           1.30 200  P     Pn     17 55 20.9  -6.6
FETY   Fethiye           1.30 200  P     Pn     17 55 19.4  -8.1
FETY                               S     Sb     17 55 40.6  -3.9
SIMA   Simav-Kutahya     1.32 338  Pn    Pg     17 55 28.4  -0.3
SMAA   Simav-Kutahya     1.33 338  Pn    Pg     17 55 29.1  +0.1
YVAC   Isparta, Yalva    1.34  72  P     Pg     17 55 28.9  -0.2
IZMR   zmir-demi         1.35 282  P     Pb     17 55 28.6   0.0
AYDB   Zeytinkoy-Aydi    1.37 274  Pn    Pn     17 55 28.3  -0.3
IZZE   Mula-Seydike      1.46 193  P     Pg     17 55 31.8  +0.4
KEMT   Kemer-ANTALYA     1.46 149  Pn    Pb     17 55 30.5   0.0
```

BLVD	**Bolvadin-AFYON**	**1.48**	**51**	Pn	**Pb**	**17 55 30.9**	**-0.1**
GORD	**Gordes-Manisa**	**1.54**	**313**	Pn	**Pn**	**17 55 31.3**	**+0.4**
TURN	**Turunc**	**1.55**	**226**	P	**Pb**	**17 55 32.1**	**+0.1**
MLSB	**Milas**	**1.57**	**249**	Pn	**Pn**	**17 55 31.3**	**0.0**
GOMA	**Golmarmara-Man**	**1.58**	**303**	Pn	**Pb**	**17 55 32.3**	**-0.4**
TVSB	**Tavsanli**	**1.59**	**355**	Pn	**Pn**	**17 55 31.9**	**+0.3**
DEMR	**Demre-Antalya**	**1.64**	**172**	Pn	**Pn**	**17 55 32.9**	**+0.8**
AKS	**Akhisar**	**1.75**	**306**	Pn	**Pb**	**17 55 34.7**	**-0.7**
RDI1	**Rhodes Town Ha**	**1.80**	**219**	P	**Pn**	**17 55 34.8**	**+0.5**
SEYD	**Seydisehir-KON**	**1.82**	**104**	Pn	**Pn**	**17 55 35.8**	**+1.1**
CIFT	**Cifteler, Eski**	**1.87**	**37**	Pn	**Pn**	**17 55 35.9**	**+0.5**
DST	**Dursunbey**	**1.91**	**336**	Pn	**Pn**	**17 55 36.1**	**+0.2**
ARG	**Arkhangelos**	**2.03**	**217**	P	**Pn**	**17 55 39.2**	**+1.6**
ARG				S	**Sg**	**17 56 09.3**	**+0.6**
ARG	**Arkhangelos**	**2.03**	**217**	P	**Pn**	**17 55 39.2**	**+1.6**
KIZT	**Kizilcal**	**2.04**	**60**	Pn	**Pn**	**17 55 37.8**	**0.0**
KONT	**Konya--Tatoy**	**2.17**	**87**	Pn	**Pn**	**17 55 40.6**	**+1.2**
SVRH	**Sivrihisar-ESK**	**2.17**	**43**	Pn	**Pn**	**17 55 40.7**	**+1.2**
LADK	**Ladik-KONYA**	**2.19**	**80**	Pn	**Pn**	**17 55 41.1**	**+1.3**
SMG	**Samos**	**2.21**	**267**	P	**Pn**	**17 55 39.9**	**-0.2**
SMG				S	**Sn**	**17 56 07.5**	**+0.1**
SMG	**Samos**	**2.21**	**267**	P	**Pn**	**17 55 40.1**	**+0.1**
RGE1	**Gennadi, Rhode**	**2.28**	**217**	P	**Pn**	**17 55 42.7**	**+1.8**
NISR	**Nisiros**	**2.35**	**239**	P	**Pb**	**17 55 45.7**	**0.0**
NISR	**Nisiros**	**2.35**	**239**	P	**Pn**	**17 55 43.6**	**+1.7**
HDMB	**Hadim**	**2.45**	**111**	Pn	**Pn**	**17 55 44.7**	**+1.2**
CHOS	**Chios island**	**2.86**	**282**	P	**Pn**	**17 55 50.4**	**+1.4**
CHOS	**Chios island**	**2.86**	**282**	P	**Pn**	**17 55 50.5**	**+1.5**
PRK	**Paraskevi**	**2.97**	**299**	P	**Pn**	**17 55 50.9**	**+0.5**
PRK	**Paraskevi**	**2.97**	**299**	P	**Pn**	**17 55 51.4**	**+1.0**
KARP	**Karpathos**	**3.04**	**221**	P	**Pn**	**17 55 52.4**	**+1.0**
KARP	**Karpathos**	**3.04**	**221**	P	**Pn**	**17 55 52.9**	**+1.4**
EZN	**Ezine**	**3.24**	**308**	P	**Pn**	**17 55 54.9**	**+0.9**
SIGR	**SIGRI**	**3.25**	**296**	P	**Pn**	**17 55 54.8**	**+0.6**
SIGR	**SIGRI**	**3.25**	**296**	P	**Pn**	**17 55 54.8**	**+0.6**
APE	**Apeiranthos**	**3.35**	**258**	P	**Pn**	**17 55 56.9**	**+1.2**
APE	**Apeiranthos**	**3.35**	**258**	P	**Pn**	**17 55 57.4**	**+1.7**
APE	**Apeiranthos**	**3.35**	**258**	S	**Sn**	**17 56 37.2**	**+1.6**
APE	**Apeiranthos**	**3.35**	**258**	P	**Pn**	**17 55 57.4**	**+1.7**
AKMS	**Akamas**	**3.58**	**142**	P	**Pn**	**17 56 00.4**	**+1.5**
ALFC	**Alefka**	**3.61**	**138**	P	**Pn**	**17 56 01.0**	**+1.7**
THERA	**Ancient Thera,**	**3.64**	**247**	P	**Pn**	**17 56 01.3**	**+1.7**
BRTR	**Keskin Array B**	**3.65**	**58**	Pn	**Pn**	**17 56 01.0**	**+1.1**
	1.4nm,0.3s,baz=237,slow=16,SNR=41						
BRTR				Sn	**Sn**	**17 56 43.8**	**+0.8**
	1.7nm,0.3s,baz=328,slow=16,SNR=8.3						
	8.6nm,0.7s						
THR3	**Thira Island,**	**3.67**	**248**	P	**Pn**	**17 56 01.7**	**+1.6**
SNT5	**Nea Kammeni, S**	**3.68**	**248**	P	**Pn**	**17 56 02.0**	**+1.9**
THR6	**Thira Island,**	**3.70**	**247**	P	**Pn**	**17 56 01.2**	**+0.8**
THR5	**Thira Island,**	**3.71**	**248**	P	**Pn**	**17 56 02.5**	**+1.9**
ZKR	**Zakros**	**3.88**	**226**	P	**Pn**	**17 56 05.0**	**+2.1**
LIA	**Limnos Island**	**4.02**	**302**	P	**Pn**	**17 56 05.9**	**+1.2**
LIA	**Limnos Island**	**4.02**	**302**	P	**Pn**	**17 56 06.0**	**+1.2**
KARY	**Karystos**	**4.10**	**274**	P	**Pn**	**17 56 07.9**	**+1.9**
SMTH	**Samothraki Isl**	**4.11**	**311**	P	**Pn**	**17 56 05.5**	**-0.6**
SMTH	**Samothraki Isl**	**4.11**	**311**	P	**Pn**	**17 56 06.9**	**+0.8**
SKY	**Skiros Island**	**4.11**	**286**	P	**Pn**	**17 56 07.7**	**+1.6**
NPS	**Neapolis**	**4.14**	**232**	P	**Pn**	**17 56 08.5**	**+1.9**
CSS	**Mathiatis**	**4.16**	**133**	P	**Pn**	**17 56 07.3**	**+0.5**
CSS	**Mathiatis**	**4.16**	**133**	P	**Pn**	**17 56 08.3**	**+1.5**
ASGA	**Asgata**	**4.24**	**135**	P	**Pn**	**17 56 09.8**	**+1.8**
MVOU	**Mavrovouni**	**4.30**	**130**	P	**Pn**	**17 56 09.8**	**+1.0**
DION	**Dionisos Attik**	**4.50**	**274**	P	**Pn**	**17 56 13.0**	**+1.5**
RDO	**Rodhopi**	**4.55**	**317**	P	**Pn**	**17 56 13.9**	**+1.7**
IDI	**Anoyia**	**4.59**	**237**	Pn	**Pn**	**17 56 14.0**	**+1.2**
	8.1nm,0.8s,baz=60,slow=5.6,SNR=12						
IDI				Sn	**Sn**	**17 57 06.3**	**0.0**
	0.9nm,0.3s,baz=150,slow=12,SNR=4.1						
IDI	**Anoyia**	**4.59**	**237**	P	**Pn**	**17 56 14.7**	**+1.9**
THAS	**Thassos island**	**4.69**	**307**	P	**Pn**	**17 56 14.8**	**+0.8**
VIL2	**Platees**	**5.03**	**276**	P	**Pn**	**17 56 19.9**	**+1.1**
OUR	**Ouranopolis**	**5.04**	**301**	P	**Pn**	**17 56 19.9**	**+1.1**
KAVA	**Kavala**	**5.04**	**310**	P	**Pn**	**17 56 19.8**	**+0.9**
IMMV	**Iera Moni Meta**	**5.13**	**244**	P	**Pn**	**17 56 22.1**	**+2.0**
GVD	**Gavdhos**	**5.39**	**238**	P	**Pn**	**17 56 25.6**	**+1.9**
KLV	**Kalavryta, Ach**	**5.91**	**274**	P	**Pn**	**17 56 32.5**	**+1.6**
MAKR	**Makrakomi, Fth**	**5.99**	**283**	P	**Pn**	**17 56 33.7**	**+1.7**
ANX	**Ano Chora**	**6.11**	**279**	P	**Pn**	**17 56 35.4**	**+1.7**
THL	**Klokotos Trika**	**6.19**	**288**	P	**Pn**	**17 56 36.1**	**+1.5**
MMC7	**Mount Meron ar**	**6.74**	**134**	P	**Pn**	**17 56 43.0**	**+0.6**
MMA0B	**Mount Meron ar**	**6.75**	**134**	P	**Pn**	**17 56 43.2**	**+0.7**
MMA0B	**Mount Meron ar**	**6.75**	**134**	S	**Sn**	**17 57 59.3**	**-0.2**
MMAI	**Mount Meron Ar**	**6.75**	**134**	Pn	**Pn**	**17 56 43.5**	**+1.0**
	20nm,0.5s,baz=313,slow=12,SNR=75						
MMAI				Sn	**Sn**	**17 57 59.1**	**-0.4**
	2.4nm,0.3s,baz=307,slow=30,SNR=5.5						
GEM	**Giv'at Ha'Em**	**6.77**	**132**	P	**Pn**	**17 56 43.2**	**+0.6**
GEM	**Giv'at Ha'Em**	**6.77**	**132**	S	**Sn**	**17 57 59.2**	**-0.5**
NATI	**Neve Ativ**	**6.77**	**131**	P	**Pn**	**17 56 43.6**	**+0.9**
NATI	**Neve Ativ**	**6.77**	**131**	S	**Sn**	**17 57 59.7**	**-0.1**
OFRI	**`Ofer**	**6.83**	**138**	P	**Pn**	**17 56 43.9**	**+0.4**
OFRI	**`Ofer**	**6.83**	**138**	S	**Sn**	**17 58 01.0**	**-0.2**
KSHT	**Keshet**	**7.01**	**132**	P	**Pn**	**17 56 46.8**	**+0.7**
KSHT	**Keshet**	**7.01**	**132**	S	**Sn**	**17 58 05.4**	**-0.5**
MMLI	**Mount Malkishu**	**7.20**	**137**	P	**Pn**	**17 56 49.1**	**+0.5**
MMLI	**Mount Malkishu**	**7.20**	**137**	S	**Sn**	**17 58 09.6**	**-0.8**
SALP	**Salfit**	**7.37**	**140**	P	**Pn**	**17 56 51.4**	**+0.5**
SALP	**Salfit**	**7.37**	**140**	S	**Sn**	**17 58 14.1**	**-0.4**
HMDT	**Nahal Hemdat**	**7.40**	**137**	P	**Pn**	**17 56 51.7**	**+0.4**
HMDT	**Nahal Hemdat**	**7.40**	**137**	S	**Sn**	**17 58 14.7**	**-0.5**
UJAP	**Al Uja**	**7.60**	**139**	P	**Pn**	**17 56 54.6**	**+0.6**
DSI	**Dead Sea**	**7.86**	**141**	P	**Pn**	**17 56 58.0**	**+0.4**
DSI	**Dead Sea**	**7.86**	**141**	S	**Sn**	**17 58 25.8**	**-0.9**
KZIT	**Kziot**	**7.98**	**149**	P	**Pn**	**17 57 00.1**	**+0.8**
KZIT	**Kziot**	**7.98**	**149**	S	**Sn**	**17 58 28.9**	**-0.7**
MSBI	**Mazada**	**8.06**	**142**	P	**Pn**	**17 57 00.7**	**+0.4**
MLR	**Muntele Rosu**	**8.10**	**341**	Pn	**Pn**	**17 57 02.7**	**+1.6**
	0.4nm,0.3s,baz=127,slow=17,SNR=4.1						
MLR				LR	LR	18 00 32.3	
	comp=Z,119nm,21.6s,baz=116,slow=41						
	2.3nm,0.7s						
GHAJ	**Ghor Haditha**	**8.17**	**141**	P	**Pn**	**17 57 03.6**	**+1.7**
GHAJ	**Ghor Haditha**	**8.17**	**141**	S	**Sn**	**17 58 33.7**	**-0.5**
ASF	**Jabal al Asfar**	**8.23**	**131**	Pn	**Pn**	**17 57 03.5**	**+0.6**
	1.3nm,0.3s,baz=299,slow=7.9,SNR=9.1						
ASF				Sn	**Sn**	**17 58 36.3**	**+0.4**
	baz=14,slow=8.9						
	1.5nm,0.4s						
PRNI	**Paran**	**8.72**	**148**	P	**Pn**	**17 57 09.7**	**+0.3**
PRNI	**Paran**	**8.72**	**148**	S	**Sn**	**17 58 46.7**	**-1.1**
HRFI	**Mount Harif**	**9.01**	**148**	P	**Pn**	**17 57 14.1**	**+0.7**
HRFI	**Mount Harif**	**9.01**	**148**	S	**Sn**	**17 58 54.2**	**-0.7**
MBRI	**Mt Berech**	**9.17**	**150**	P	**Pn**	**17 57 16.0**	**+0.3**
MBRI	**Mt Berech**	**9.17**	**150**	S	**Sn**	**17 58 58.8**	**-0.2**
EIL	**Elat**	**9.29**	**150**	Pn	**Pn**	**17 57 16.9**	**-0.4**
	0.7nm,0.3s,baz=333,slow=14,SNR=8.1						
EIL				Sn	**Sn**	**17 58 58.4**	**-3.5**
	0.3nm,0.3s,baz=62,slow=12,SNR=2.6						
	5.8nm,0.6s						
EIL	**Elat**	**9.29**	**150**	P	**Pn**	**17 57 17.6**	**+0.3**
EIL	**Elat**	**9.29**	**150**	S	**Sn**	**17 59 01.5**	**-0.4**
GERES	**GERESS Array B**	**15.92**	**319**	Pn	**Pn**	**17 58 48.9**	**+1.5**
	baz=130,slow=11,SNR=4.9						
	0.1nm,0.3s						
NOA	**NORSAR Array B**	**25.92**	**339**	P	**P**	**18 00 34.7**	**-0.6**
	0.9nm,0.8s,baz=134,slow=7.6,SNR=1.4						
	0.9nm,0.8s						
ESDC	**Sonseca Array**	**26.17**	**284**	P	**P**	**18 00 36.0**	**-1.8**
	1.4nm,0.8s,baz=77,slow=10,SNR=6.8						
	1.4nm,0.8s						
KURBB	**Kurchatov Arra**	**36.63**	**54**	P	**P**	**18 02 08.8**	**-0.7**
	4.2nm,0.2s,baz=278,slow=8.7,SNR=3.8						
	4.2nm,0.2s						
MKAR	**Makanchi Array**	**39.30**	**60**	P	**P**	**18 02 32.7**	**+0.5**
	2.5nm,0.8s,baz=283,slow=6.0,SNR=8.0						
	2.5nm,0.8s						
ZALV	**Zalesovo Beam**	**40.53**	**48**	P	**P**	**18 02 42.0**	**-0.3**
	0.5nm,0.4s,baz=262,slow=6.8,SNR=3.7						
	0.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**62.76**	**87**	P	**P**	**18 05 28.0**	**-0.9**
	0.3nm,0.3s,baz=294,slow=4.1,SNR=1.2						
	0.3nm,0.3s						
SADO	**Sadowa**	**75.66**	**316**	LR	LR	18 38 08.3	
	comp=Z,22nm,20.1s,baz=109,slow=34						
NVAR	**Mina Array Bea**	**98.53**	**335**	LR	LR	18 54 35.9	
	comp=Z,16nm,19.3s,baz=346,slow=36						

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*IDC **03** 18:15:32.3±1.6,28°.62S×112°.93W,h0^{km},mb3.3/1, mbtmp3.3/1,MS3.5/8,Error ellipse: s-maj=99.7km s-min=64.7km az=108.0*

ISC 03 18:15:32.2±1.8,**29°.0S**±0°.5×**113°.4W**±0°.7,**h10**^{km}**,n19, σ0^{s}57**/8,**MS3.5**/8,**Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03N2	**Juan Fernandez**	**29.68**	**107**	T	T	18 52 24.9	
	baz=275,slow=74,SNR=147						
H03N3	**Juan Fernandez**	**29.69**	**107**	T	T	18 52 29.4	
	baz=275,slow=74,SNR=142						
H03N1	**Juan Fernandez**	**29.70**	**107**	T	T	18 52 29.2	
	baz=275,slow=74,SNR=151						
PPT	**Papeete**	**35.03**	**281**	LR	LR	18 32 03.6	
	comp=Z,77nm,18.2s,baz=168,slow=28						
PLCA	**Paso Flores**	**36.68**	**120**	LR	LR	18 33 35.8	
	comp=Z,106nm,18.8s,baz=258,slow=30						
RAR	**Rarotonga**	**42.52**	**270**	LR	LR	18 36 03.2	
	comp=Z,67nm,21.5s,baz=148,slow=29						
LPAZ	**La Paz**	**43.37**	**83**	LR	LR	18 37 50.5	
	comp=Z,54nm,19.1s,baz=232,slow=31						
CPUP	**Villa Florida**	**49.30**	**101**	LR	LR	18 41 31.3	
	comp=Z,23nm,18.3s,baz=120,slow=32						
SIV	**San Ignacio**	**49.65**	**87**	LR	LR	18 40 55.0	
	comp=Z,99nm,21.0s,baz=295,slow=31						
VNDA	**Vanda**	**60.77**	**194**	LR	LR	18 45 59.9	
	comp=Z,24nm,21.2s,baz=256,slow=30						
QSPA	**South Pole Qui**	**61.16**	**180**	LR	LR	18 47 37.4	
	comp=Z,43nm,21.9s,baz=144,slow=31						
PDAR	**Pinedale Array**	**71.52**	**3**	P	**P**	**18 26 53.0**	**-0.4**
	0.2nm,0.6s,baz=187,slow=9.4,SNR=1.9						
	0.2nm,0.6s						
ARCES	**ARCESS Array B**	**133.14**	**18**	PKP	**PKPdf**	**18 34 47.5**	**+0.2**
	1.9nm,0.9s,baz=305,slow=3.2,SNR=1.3						
SONM	**Songino Array**	**144.13**	**313**	PKP	**PKPdf**	**18 35 08.4**	**+0.2**
	1.8nm,0.8s,baz=84,slow=2.9,SNR=6.6						
CMAR	**Chiang Mai Arr**	**148.71**	**258**	PKPbc	**PKPab**	**18 35 23.7**	**-0.4**
	0.3nm,0.4s,baz=124,slow=2.0,SNR=6.0						
BRTR	**Keskin Array B**	**150.89**	**60**	PKPbc	**PKiKP**	**18 35 26.0**	**+0.1**
	1.5nm,0.9s,baz=233,slow=0.7,SNR=5.8						
ZALV	**Zalesovo Beam**	**151.78**	**337**	PKPbc	**PKPbc**	**18 35 26.4**	**-0.3**
	1.8nm,0.6s,baz=29,slow=3.3,SNR=9.6						
BVAR	**Borovoye Array**	**155.86**	**354**	PKPab	**PKPab**	**18 35 52.9**	**0.0**
	0.9nm,0.8s,baz=22,slow=5.1,SNR=4.0						
KURBB	**Kurchatov Arra**	**156.63**	**341**	PKPab	**PKPab**	**18 35 57.4**	**+1.1**
	0.3nm,0.6s,baz=19,slow=3.1,SNR=1.4						

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*IDC **03** 18:16:44.8±5.3,21°.61N×143°.17E,h302^{km}±52^{km}, mb3.3/12,mbtmp4.0/13,Error ellipse: s-maj=22.3km s-min=12.7km az=81.0*

ISC 03 18:16:45.6±0.9,**21°.6N**±0°.1×**143°.1E**±0°.2,**h311**^{km}**,n15, σ0^{s}62**/17,**mb3.5**/12,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.53**	**352**	S	S	18 19 04.3	-13
	67nm,0.5s,baz=107,slow=23,SNR=6.5						
MJAR	**Matsushiro Arr**	**15.48**	**345**	P	**P**	**18 20 08.2**	**+0.9**
	0.8nm,0.4s,baz=165,slow=12,SNR=4.9						
SONM	**Songino Array**	**39.36**	**321**	P	**P**	**18 23 44.9**	**-0.8**
	0.3nm,0.5s,baz=115,slow=6.5,SNR=2.0						
	0.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**41.49**	**274**	P	**P**	**18 24 02.8**	**-0.5**
	0.6nm,0.8s,baz=87,slow=14,SNR=4.4						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**42.16**	**192**	P	**P**	**18 24 08.8**	**+0.3**
	1.2nm,0.3s,baz=12,slow=8.2,SNR=36						
	1.2nm,0.3s						
ASAR	**Alice Springs**	**45.87**	**192**	P	**P**	**18 24 37.9**	**+0.1**
	0.3nm,0.3s,baz=12,slow=7.4,SNR=11						
	0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**54.23**	**322**	P	**P**	**18 25 39.4**	**-0.3**
	1.2nm,0.6s,baz=109,slow=7.9,SNR=5.9						
ZALV				PcP	**PcP**	**18 26 39.6**	**-0.1**
	0.9nm,0.4s,baz=112,slow=3.9,SNR=4.7						
	1.2nm,0.6s						
MKAR	**Makanchi Array**	**54.70**	**313**	P	**P**	**18 25 43.7**	**+0.4**
	0.6nm,0.5s,baz=87,slow=8.7,SNR=12						
MKAR				PcP	**PcP**	**18 26 42.0**	**+0.3**
	0.4nm,0.4s,baz=79,slow=4.4,SNR=7.9						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**57.53**	**317**	P	**P**	**18 26 03.9**	**+0.8**
	2.1nm,0.5s,baz=94,slow=7.5,SNR=18						
	2.1nm,0.5s						
ILAR	**Eielson Array**	**62.17**	**27**	P	**P**	**18 26 33.3**	**-0.9**
	0.4nm,0.6s,baz=260,slow=6.0,SNR=8.0						
	0.4nm,0.6s						
BVAR	**Borovoye Array**	**62.69**	**320**	P	**P**	**18 26 38.7**	**+1.0**
	4.5nm,0.5s,baz=91,slow=7.4,SNR=27						
BVAR				PcP	**PcP**	**18 27 13.3**	**-0.1**
	0.7nm,0.6s,baz=90,slow=4.3,SNR=2.4						
	4.5nm,0.5s						
YKA	**Yellowknife Ar**	**76.58**	**28**	P	**P**	**18 28 02.0**	**+0.1**
	0.6nm,0.6s,baz=291,slow=6.3,SNR=7.5						
	0.6nm,0.6s						
ARCES	**ARCESS Array B**	**78.98**	**341**	P	**P**	**18 28 15.8**	**+0.8**
	3.5nm,0.7s,baz=59,slow=5.5,SNR=14						
	3.5nm,0.7s						
FINES	**FINESS Array B**	**83.23**	**334**	P	**P**	**18 28 36.8**	**-0.5**
	1.0nm,0.4s,baz=59,slow=5.6,SNR=14						
	1.0nm,0.4s						
LPAZ	**La Paz**	**150.04**	**85**	PKPbc	**PKPbc**	**18 36 01.2**	**+0.1**
	1.1nm,0.5s,baz=270,slow=2.0,SNR=3.8						

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*IDC **03** 18:26:27.5±5.1,39°.60N×54°.49E,h0^{km},mb3.6/4, mbtmp3.6/6,ML2.9/2,MS2.6/2,Error ellipse: s-maj=101.4km s-min=17.0km az=6.0*

ISC 03 18:26:34.5±2.4,**39°.8N**±0°.3×**54°.56E**±0°.09,**h42**^{km}**,n12, σ1^{s}71**/12,**mb3.3**/3,**3D,Turkmenistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VSHL	**Vashlovani**	**6.37**	**285**	P	**Pn**	**18 28 05.1**	**-0.8**
VSHL				S	**Sn**	**18 29 20.1**	**+2.7**
LGD	**Lagodekhi**	**6.62**	**290**	P	**Pn**	**18 28 10.1**	**+0.8**
GNI	**Garni**	**7.54**	**276**	LR	LR	18 32 36.1	
	comp=Z,25nm,18.3s,baz=88,slow=49						
KBZ	**Khabaz**	**9.54**	**298**	Pn	**Pn**	**18 28 46.4**	**-2.9**
	0.1nm,0.3s,baz=117,slow=6.8,SNR=2.4						
KBZ				Sn	**Sn**	**18 30 33.4**	**-1.8**
	baz=118,slow=17,SNR=1.5						
	0.5nm,0.5s						
AB31	**Akbulak array**	**10.19**	**20**	Pn	**Pn**	**18 28 58.9**	**+0.8**
	0.4nm,0.3s,baz=204,slow=13,SNR=43						
AB31				⇓Lg	Lg	18 30 49.9	
	1.2nm,0.3s,baz=196,slow=24,SNR=12						
AKTO	**Aktyubinsk**	**10.89**	**12**	⇓Pn	**Pn**	**18 29 08.9**	**+1.1**
	4.1nm,1.4s						
AKTO				⇓Lg	Lg	18 31 13.1	
	6.9nm,1.2s						
AAK	**Ala-Archa**	**15.27**	**73**	LR	LR	18 36 52.9	
	comp=Z,32nm,20.4s,baz=134,slow=41						
BVAR	**Borovoye Array**	**17.08**	**34**	P	**Pn**	**18 30 28.7**	**-1.4**
	0.1nm,0.3s,baz=222,slow=11,SNR=8.5						
	0.5nm,0.5s						
AKASG	**Malin Array Be**	**20.79**	**310**	P	**P**	**18 31 11.4**	**-0.5**
	1.2nm,0.4s,baz=106,slow=9.3,SNR=6.2						
	1.2nm,0.4s						
MKAR	**Makanchi Array**	**21.28**	**62**	P	**P**	**18 31 16.6**	**-0.7**
	0.7nm,0.9s,baz=262,slow=10.0,SNR=4.1						
	0.7nm,0.9s						
ZALV	**Zalesovo Beam**	**24.82**	**45**	P	**P**	**18 31 53.5**	**+1.0**
	0.3nm,0.3s,baz=246,slow=10,SNR=2.3						
	0.3nm,0.3s						
ARCES	**ARCESS Array B**	**33.50**	**342**	P	**P**	**18 33 10.3**	**+0.8**
	5.5nm,1.0s,baz=125,slow=8.0,SNR=4.2						
	5.5nm,1.0s						

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*NEIC **03** 18:30:39.0±2.0,7°.82S±0°.07×127°.57E±0°.06,h170^{km}±9^{km}, mb4.2/12,Error ellipse: s-maj=10.7km s-min=8.2km az=178.0*

*DJA **03** 18:30:40.1±0.3,8°S±3°×12°8E±°,h196^{km}±11^{km},M4.3/18, mB4.9/3,mb4.0/12,MLv4.5/18,Mw(mB)4.1/3*

*IDC **03** 18:30:41.6±2.6,7°.73S×127°.34E,h187^{km}±26^{km},mb3.4/7, mbtmp4.1/10,MS3.4/2,Error ellipse: s-maj=27.2km s-min=14.4km az=44.0*

ISC 03 18:30:40.6±0.5,**7°.83S**±0°.05×**127°.54E**±0°.05,**h187**^{km}**,n70, σ1^{s}67**/62,**mb3.8**/10,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**3.73**	**93**		Pn	18 31 35.5	-3.0
SAUI				Sn	**Sn**	**18 32 21.2**	**-2.7**
SAUI	**Saumlaki**	**3.73**	**93**	P	**Pn**	**18 31 38.3**	**-0.2**
SOEI	**Soe**	**3.75**	**239**		**Pn**	**18 31 39.4**	**+0.4**
SOEI				Sn	**Sn**	**18 32 22.2**	**-2.4**
SOEI	**Soe**	**3.75**	**239**	P	**Pn**	**18 31 40.1**	**+1.1**
SOEI	**Soe**	**3.75**	**239**	P	**Pn**	**18 31 39.9**	**+0.9**
AAI	**Ambon**	**4.17**	**9**	P	**Pn**	**18 31 42.6**	**-1.5**
BATI	**Baumata**	**4.50**	**238**	P	**Pn**	**18 31 49.3**	**+1.0**
	88nm,0.5s,baz=92,slow=4.6,SNR=47						
BATI				S	**Sn**	**18 32 39.6**	**-1.8**
	243nm,0.3s,baz=47,slow=19,SNR=23						
BATI	**Baumata**	**4.50**	**238**	P	**Pn**	**18 31 49.3**	**+1.0**
KRAI	**Karang Ratu**	**4.56**	**11**	P	**Pn**	**18 31 48.4**	**-0.7**
NLAI	**Namlea**	**4.58**	**355**	P	**Pn**	**18 31 49.2**	**-0.2**
MMRI	**Maumere**	**5.31**	**261**		**Pn**	**18 31 57.7**	**-1.0**
MMRI				Sn	**Sn**	**18 32 57.9**	**-2.2**
MMRI	**Maumere**	**5.31**	**261**	P	**Pn**	**18 32 00.7**	**+2.0**
MMRI	**Maumere**	**5.31**	**261**	S	**Sn**	**18 33 00.2**	**+0.1**
MMRI	**Maumere**	**5.31**	**261**	P	**Pn**	**18 31 59.4**	**+0.7**
	0.3nm26nm,0.5s						
EDFI	**Ende, Flores**	**5.86**	**261**	P	**Pn**	**18 32 07.1**	**+1.1**
SANI	**Sanana**	**5.95**	**345**	P	**Pn**	**18 32 06.2**	**-0.8**
	14nm,0.8s						
MTN	**Manton Dam**	**6.11**	**145**		**Pn**	**18 32 08.6**	**-0.5**
MTN				Sn	Sn	18 33 14.8	-4.2
FAKI	**Fak Fak**	**6.77**	**44**	Pn	Pn	18 32 13.8	-4.0
FAKI	**Fak Fak**	**6.77**	**44**	P	Pn	18 32 14.2	-3.6
FAKI	**Fak Fak**	**6.77**	**44**	S	Sn	18 33 26.9	-7.7
BASI	**Baing, Sumba**	**7.27**	**250**	P	**Pn**	**18 32 26.1**	**+1.7**
WSI	**Waingapu**	**7.38**	**255**	P	**Pn**	**18 32 25.4**	**-0.4**
LBFI	**Labuhan Bajo,**	**7.60**	**265**	P	**Pn**	**18 32 30.1**	**+1.5**
SWI	**Sorong**	**7.85**	**28**	P	**Pn**	**18 32 29.6**	**-2.4**
	0.1nm14nm,0.7s						
KNRA	**Kununurra**	**7.89**	**171**		**Pn**	**18 32 32.0**	**-0.4**
KNRA				Sn	**Sn**	**18 33 56.5**	**-4.7**
WBSI	**Waikabubak, Su**	**8.25**	**257**	P	**Pn**	**18 32 35.5**	**-1.7**
	26nm,1.2s						
DBNI	**Kabupaten Domp**	**9.16**	**265**	P	**Pn**	**18 32 49.4**	**+0.3**
PLAI	**Plampang**	**9.71**	**263**	P	**Pn**	**18 32 56.7**	**+0.4**
PLAI	**Plampang**	**9.71**	**263**	P	**Pn**	**18 32 55.3**	**-1.0**
	15nm,1.1s						
FITZ	**Fitzroy Crossi**	**10.37**	**190**	P	**Pn**	**18 33 03.5**	**-1.4**
	18nm,0.4s,baz=12,slow=18,SNR=137						
FITZ				S	Sn	18 34 53.9	-6.5
	14nm,0.4s,baz=9.5,slow=6.1,SNR=7.3						
FITZ	**Fitzroy Crossi**	**10.37**	**190**		**Pn**	**18 33 03.3**	**-1.6**
TWSI	**Taliwang, Sumb**	**10.58**	**264**	P	**Pn**	**18 33 07.7**	**0.0**
TOLI2	**Tolitoli**	**11.15**	**323**	Pn	**Pn**	**18 33 12.3**	**-2.7**
TOLI2	**Tolitoli**	**11.15**	**323**	P	**Pn**	**18 33 13.4**	**-1.6**
WB0	**Warramunga Arr**	**13.60**	**151**		Pn	18 33 44.7	-1.4
WRAB	**Tennant Creek**	**13.72**	**152**		Pn	18 33 45.6	-2.0
WRA	**Warramunga Arr**	**13.73**	**152**	P	Pn	18 33 45.8	-1.9
	8.2nm,0.6s,baz=338,slow=11,SNR=48						
WRA				S	Sn	18 36 09.5	-11
	11nm,0.7s,baz=336,slow=23,SNR=12						
WRA	**Warramunga Arr**	**13.73**	**152**		Pn	18 33 43.9	-3.8
WRA					Sn	18 36 13.6	-7.1
WR8	**Warramunga Arr**	**13.81**	**151**		Pn	18 33 46.9	-1.9
JAY	**Jayapura**	**14.13**	**69**	LR	LR	18 39 59.5	
	comp=Z,66nm,19.9s,baz=67,slow=39						
MBWA	**Marble Bar**	**15.25**	**209**		**Pn**	**18 34 06.0**	**-0.4**
MBWA				IAmb	IAmb	18 34 33.4	
	comp=Z,12nm,1.3s						
PSA00	**Pilbara Seismi**	**15.55**	**208**	P	**Pn**	**18 34 09.3**	**-0.8**
PSA00				IAmb	IAmb	18 34 13.2	
	comp=Z,12nm,0.7s						
PSA00	**Pilbara Seismi**	**15.55**	**208**		**Pn**	**18 34 09.7**	**-0.4**
PSA00				IAmb	IAmb	18 34 12.0	
	comp=Z,7.0nm,1.2s						
COEN	**Coen**	**16.51**	**113**		**P**	**18 34 20.3**	**-0.8**
COEN	**Coen**	**16.51**	**113**	P	**P**	**18 34 22.5**	**+1.4**
AS31	**Alice Springs**	**16.89**	**160**		**P**	**18 34 24.5**	**-0.7**
AS31				IAmb	IAmb	18 34 31.2	
	comp=Z,6.5nm,0.5s						
ASAR	**Alice Springs**	**16.89**	**160**	P	**P**	**18 34 26.9**	**+1.6**
	comp=Z,11nm,0.6s,baz=340,slow=12,SNR=230						
ASAR				S	**S**	**18 37 28.3**	**-3.5**
	comp=Z,1.2nm,0.5s,baz=343,slow=25,SNR=4.2						
ASAR	**Alice Springs**	**16.89**	**160**	P	**P**	**18 34 25.7**	**+0.5**
QIS	**Mount Isa**	**17.22**	**139**	P	**P**	**18 34 30.9**	**+2.1**
PMG	**Port Moresby**	**19.46**	**96**	P	**P**	**18 34 56.5**	**+3.2**
	comp=Z,11nm,0.7s,baz=273,slow=3.7,SNR=7.4						
PMG	**Port Moresby**	**19.46**	**96**		**P**	**18 34 52.2**	**-1.1**
PMG				IAmb	IAmb	18 34 59.9	
	comp=Z,15nm,0.9s						
MEEK	**Meekatharra**	**20.54**	**203**	P	**P**	**18 35 08.2**	**+3.5**
STKA	**Stephens Creek**	**27.27**	**153**	P	**P**	**18 36 10.7**	**+3.0**
	comp=Z,0.8nm,0.4s,baz=319,slow=9.3,SNR=3.8						
	comp=Z,0.8nm,0.4s						
STKA	**Stephens Creek**	**27.27**	**153**	P	**P**	**18 36 08.6**	**+0.9**
KULM	**Kulim**	**29.82**	**295**	P	**P**	**18 36 29.8**	**-0.6**
GSI	**Gunungsitoli**	**31.23**	**286**	P	**P**	**18 36 41.7**	**-1.1**
CMAR	**Chiang Mai Arr**	**38.45**	**313**	P	**P**	**18 37 45.0**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=132,slow=9.0,SNR=6.1						
	comp=Z,0.7nm,0.7s						
PZH	**PanZhiHua**	**42.33**	**325**	P	**P**	**18 38 18.2**	**+1.8**
JHJ	**Hachijo jima 2**	**42.36**	**15**	LR	LR	18 55 33.0	
	comp=Z,87nm,18.8s,baz=98,slow=35						
HHC	**Hu-ho-hao-te**	**50.62**	**344**	*e*P	**P**	**18 39 22.8**	**+2.1**
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
MKAR	**Makanchi Array**	**67.61**	**328**	P	**P**	**18 41 16.4**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=126,slow=7.0,SNR=11						
	comp=Z,0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**71.27**	**335**	P	**P**	**18 41 38.6**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=132,slow=5.4,SNR=5.5						
	comp=Z,0.8nm,0.4s						
VNDA	**Vanda**	**71.93**	**173**	P	**P**	**18 41 45.2**	**+2.2**
	comp=Z,1.0nm,0.7s,baz=321,slow=5.8,SNR=5.6						
	comp=Z,1.0nm,0.7s						
VNDA	**Vanda**	**71.93**	**173**	P	**P**	**18 41 44.5**	**+1.4**
VNDA				IAmb	IAmb	18 42 11.0	
	comp=Z,4.9nm,1.3s						
KURBB	**Kurchatov Arra**	**71.96**	**330**	P	**P**	**18 41 43.3**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=133,slow=5.1,SNR=10						
	comp=Z,0.9nm,0.6s						
KURK	**Kurchatov**	**71.97**	**330**	P	**P**	**18 41 43.3**	**-0.3**
KURK	**Kurchatov**	**71.97**	**330**	IAmb	IAmb	18 41 44.4	
	comp=Z,1.7nm,0.5s						
BVAR	**Borovoye Array**	**77.48**	**329**	P	**P**	**18 42 15.7**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=119,slow=8.9,SNR=5.9						
	comp=Z,0.3nm,0.5s						
QSPA	**South Pole Qui**	**82.15**	**180**	P	P	18 42 45.8	+5.5
	comp=Z,0.9nm,0.7s,baz=281,slow=1.7,SNR=4.8						
QSPA	**South Pole Qui**	**82.15**	**180**	IAmb	IAmb	18 43 05.2	
	comp=Z,5.0nm,1.4s						

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*NNC **03** 18:43:07.9±0.3,45°.92N×81°.48E,h0^{km},mb3.8,mpv3.5, Error ellipse: s-maj=6.5km s-min=1.4km az=127.0*

*SOME **03** 18:43:10.2,45°.82N×81°.57E,h20^{km}*

ISC 03 18:43:09.1±1.3,**45°.86N**±0°.03×**81°.79E**±0°.05,**h17**^{km}±13^{km}, **n41,σ1^{s}33**/57,**11C-7D,Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAKZ	**Makanchi**	**0.96**	**8**	⇓P	**Pb**	**18 43 26.8**	**-0.5**
	8.8nm,0.3s						
MAKZ				⇑S	**Sb**	**18 43 39.5**	**-0.2**
	28nm,0.3s						
MK31	**Makanchi Array**	**0.99**	**20**	⇓P	**Pb**	**18 43 28.3**	**+0.3**
	9.3nm,0.3s,baz=209,slow=17,SNR=555						
MK31				S	**Sg**	**18 43 41.8**	**+0.3**
	17nm,0.2s,baz=207,slow=28,SNR=52						
KAPS	**Kapalarasan**	**1.80**	**252**	P	**Pn**	**18 43 38.7**	**-0.7**
	37nm,0.1s						
KAPS				S	**Sn**	**18 43 59.2**	**-2.8**
	353nm,0.2s						
KNOS	**Konyrlen**	**2.38**	**232**	Pg	**Pb**	**18 43 50.2**	**-1.5**
	22nm,0.2s						
KNOS				Lg	Lg	18 44 18.8	
	68nm,0.5s						
TDK	**Taldyqorghan**	**2.53**	**251**	Pg	**Pn**	**18 43 51.2**	**+1.7**
	32nm,0.3s						
TDK				Lg	Lg	18 44 21.1	
	338nm,0.3s						
TDK	**Taldyqorghan**	**2.53**	**251**	*e*P	**Pn**	**18 43 51.2**	**+1.7**
	32nm,0.3s						
TDK				*e*S	**Sn**	**18 44 21.1**	**+1.3**
	338nm,0.3s						
KTMS	**Ketmen**	**2.62**	**204**	Pg	**Pb**	**18 43 55.4**	**-0.3**
	11nm,0.2s						
KTMS				Lg	Lg	18 44 28.1	
	50nm,0.2s						
KTMS	**Ketmen**	**2.62**	**204**	*e*P	**Pb**	**18 43 55.4**	**-0.3**
	11nm,0.2s						
KTMS				*e*S	**Sb**	**18 44 28.1**	**+0.4**
	50nm,0.2s						
ZSN	**Zaisan**	**2.65**	**52**	Pg	**Pg**	**18 43 59.9**	**0.0**
	8.0nm,0.2s						

ZSN	**Zaisan**	**2.65**	**52**	*e*P	**Pg**	**18 43 59.9**	**0.0**
	8.0nm,0.2s						
ZSN				*e*S	**Sg**	**18 44 35.6**	**+1.3**
	64nm,0.5s						
PDGK	**Podgornoye**	**3.02**	**214**	⇑Pg	**Pb**	**18 44 01.8**	**-0.7**
	21nm,0.7s						
PDGK				⇑Lg	Lg	18 44 40.7	
	150nm,0.9s						
SHLS	**Shalkode**	**3.17**	**212**	Pg	**Pb**	**18 44 03.2**	**-1.9**
	38nm,0.3s						
SHLS				Lg	Lg	18 44 41.3	
	117nm,0.3s						
SHLS	**Shalkode**	**3.17**	**212**	*e*P	**Pb**	**18 44 03.2**	**-1.9**
	38nm,0.3s						
SHLS				*e*S	**Sb**	**18 44 41.3**	**-2.3**
	117nm,0.3s						
ARXS	**Arharly**	**3.26**	**241**	Pg	**Pb**	**18 44 05.7**	**-0.8**
	13nm,0.3s						
ARXS				Lg	Lg	18 44 45.7	
	39nm,0.4s						
ARXS	**Arharly**	**3.26**	**241**	*e*P	**Pb**	**18 44 05.7**	**-0.8**
ARXS				*e*S	**Sb**	**18 44 45.7**	**-0.2**
KPKS	**Kokpek**	**3.26**	**224**	Pg	**Pb**	**18 44 05.9**	**-0.8**
	0.4nm,0.1s						
KPKS				Lg	Lg	18 44 46.3	
	94nm,0.3s						
UZB	**Uzynbulak**	**3.36**	**217**	Pg	**Pb**	**18 44 08.6**	**+0.3**
	10nm,0.2s						
UZB				Lg	Lg	18 44 50.5	
	69nm,0.3s						
UZB	**Uzynbulak**	**3.36**	**217**	*e*P	**Pb**	**18 44 08.6**	**+0.3**
	10nm,0.2s						
UZB				*e*S	**Sb**	**18 44 50.5**	**+1.6**
	69nm,0.3s						
KURS	**Kuram**	**3.51**	**229**	Pg	**Pb**	**18 44 09.9**	**-0.9**
	8.0nm,0.4s						
KURS				Lg	Lg	18 44 53.2	
	28nm,0.4s						
KTBS	**Karatobe**	**4.22**	**241**	Pg	**Pb**	**18 44 23.3**	**+0.3**
	6.9nm,0.4s						
KTBS				Lg	Lg	18 45 15.9	
	0.4nm,0.2s						
KOTS	**Kotyrbulak**	**4.25**	**234**	Pg	**Pb**	**18 44 23.4**	**-0.1**
	2.3nm,0.3s						
KOTS				Lg	Lg	18 45 16.0	
	37nm,0.3s						
KOTS	**Kotyrbulak**	**4.25**	**234**	*e*P	**Pb**	**18 44 23.4**	**-0.1**
	2.3nm,0.3s						
KOTS				*e*S	**Sb**	**18 45 16.0**	**+1.4**
	37nm,0.3s						
MDOK	**Medeo**	**4.33**	**233**	Pg	**Pb**	**18 44 24.4**	**-0.5**
	3.6nm,0.4s						
MDOK				Lg	Lg	18 45 18.1	
	16nm,0.8s						
KNDC	**Almaty**	**4.34**	**234**	⇑Lg	Lg	18 45 21.6	
	31nm,0.5s						
KUU	**Kurty**	**4.34**	**245**	Pg	**Pb**	**18 44 24.5**	**-0.5**
	1.8nm,0.0s						
KUU				Lg	Lg	18 45 18.3	
	22nm,0.2s						
KUU	**Kurty**	**4.34**	**245**	*e*P	**Pb**	**18 44 24.6**	**-0.5**
	1.8nm,0.0s						
KUU				*e*S	**Sb**	**18 45 18.3**	**+1.2**
	22nm,0.2s						
TNSS	**Tian-Shan**	**4.47**	**233**	Pg	**Pb**	**18 44 27.9**	**+0.5**
	1.0nm,0.3s						
TNSS				Lg	Lg	18 45 23.6	
	3.0nm,0.5s						
TNSS	**Tian-Shan**	**4.47**	**233**	*e*P	**Pb**	**18 44 27.9**	**+0.5**
	1.0nm,0.3s						
TNSS				*e*S	**Sb**	**18 45 23.6**	**+2.5**
	3.0nm,0.5s						
SEM	**Semipalatinsk**	**4.67**	**348**	Pg	**Pg**	**18 44 37.2**	**-1.2**
	1.5nm,0.1s						
SEM	**Semipalatinsk**	**4.67**	**348**	*e*P	**Pg**	**18 44 37.2**	**-1.2**
	1.5nm,0.1s						
SEM				*e*S	**Sg**	**18 45 39.5**	**+0.7**
	21nm,0.3s						
MTBS	**Maitube**	**4.71**	**236**	Pg	**Pb**	**18 44 31.2**	**0.0**
	1.2nm,0.2s						
MTBS				Lg	Lg	18 45 29.2	
	27nm,0.4s						
MTBS	**Maitube**	**4.71**	**236**	*e*P	**Pb**	**18 44 31.2**	**0.0**
	1.2nm,0.2s						
MTBS				*e*S	**Sb**	**18 45 29.2**	**+1.6**
	27nm,0.4s						
KRBS	**Karabastau**	**4.86**	**246**	Lg	Lg	18 45 35.0	
	3.5nm,0.4s						
KST	**Kastek**	**5.03**	**238**	Pg	**Pb**	**18 44 38.0**	**+1.2**
	4.3nm,0.4s						
KST				Lg	Lg	18 45 41.1	
	11nm,0.5s						
KST	**Kastek**	**5.03**	**238**	*e*P	**Pb**	**18 44 38.0**	**+1.2**
	4.3nm,0.4s						
KST				*e*S	**Sb**	**18 45 41.1**	**+4.0**
	11nm,0.5s						
DGS	**Degeres**	**5.04**	**241**	Pg	**Pb**	**18 44 37.7**	**+0.8**
	7.9nm,0.4s						
DGS				Lg	Lg	18 45 40.1	
	18nm,0.6s						
KURBB	**Kurchatov Arra**	**5.24**	**337**	⇓Pn	**Pn**	**18 44 26.8**	**+0.2**
	1.8nm,0.6s						
KURBB				⇑Pg	**Pb**	**18 44 41.8**	**+1.6**
	2.9nm,0.3s						
KURBB				⇓Lg	Lg	18 45 51.0	
	49nm,0.5s						
KURK	**Kurchatov**	**5.30**	**338**	⇑Pn	**Pn**	**18 44 27.8**	**+0.4**
	1.6nm,1.4s						
KURK				⇑Pg	**Pb**	**18 44 38.7**	**-2.5**
	1.0nm,0.6s						
KURK				⇑Lg	Lg	18 45 52.7	
	12nm,0.8s						
AAK	**Ala-Archa**	**6.15**	**241**	⇑Pg	**Pb**	**18 44 57.4**	**+1.5**
	2.3nm,0.9s						
AAK				⇓Sn	**Sn**	**18 45 47.3**	**-2.0**
	1.6nm,0.6s						
AAK				⇑Lg	Lg	18 46 17.8	
	1.8nm,0.5s						
KK31	**Karatay Array**	**8.52**	**255**	Pn	**Pn**	**18 45 10.3**	**-1.3**
	0.5nm,0.3s,baz=64,slow=13,SNR=20						
KK31				⇓Sn	**Sn**	**18 46 48.0**	**+0.6**
	0.7nm,0.4s,baz=0.0,slow=0.1,SNR=4.0						
KK31				⇓Lg	Lg	18 47 30.7	
	1.6nm,0.5s						
BVA0	**Borovoye Array**	**10.31**	**318**	⇑Lg	Lg	18 48 29.7	
	9.2nm,1.4s						

*SJA **03** 18:59:12.0±0.7, 21°.71S×70°.41W, h16^{km}±2^{km}, ML3.7, MW3.7*

*GUC **03** 18:59:15.3±0.8, 21°.72S×70°.29W, h34^{km}±3^{km}, ML3.5*

ISC 03 18:59:15.2±1.1**, 21°.72S**±0°.02×**70°.27W**±0°.04**, h31**^{km}±10^{km}**, n36, σ1^{s}.29**/63**, 3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB07	**IPOC Station P**	**0.35**	**91**	*i* P	**Pb**	**18 59 23.8**	**+0.1**
PB07				*e*S	**Sn**	**18 59 30.1**	**-0.3**
PB07				IAML		18 59 32.1	
	comp=E,5µm,0.4s						
PB07	**IPOC Station P**	**0.35**	**91**	*e*P	**Pb**	**18 59 23.5**	**-0.1**
PB07				IAML		18 59 33.0	
	comp=Z,3µm,0.3s						
PB02	**IPOC Station P**	**0.53**	**41**	*i* P	**Pn**	**18 59 25.9**	**-0.8**
PB02				*e*S	**Sb**	**18 59 33.7**	**0.0**
PB02				IAML		18 59 37.0	
	comp=E,11µm,0.4s						
PB02	**IPOC Station P**	**0.53**	**41**	*e*P	**Pn**	**18 59 25.8**	**-0.9**
PB02				IAML		18 59 38.6	
	comp=Z,7µm,0.3s						
PB03	**IPOC Station P**	**0.58**	**125**	⇓*i*P	**Pn**	**18 59 26.6**	**-0.8**
PB03				*e*S	**Sn**	**18 59 35.0**	**-1.0**
PB03				IAML		18 59 35.9	
	comp=N,3µm,0.3s						
PB03	**IPOC Station P**	**0.58**	**125**	*e*P	**Pn**	**18 59 26.5**	**-0.9**
PB03				*e*S	**Sn**	**18 59 35.3**	**-0.7**
PB03				IAML		18 59 35.5	
	comp=Z,3µm,0.2s						
PATCX	**Punta Patache**	**0.90**	**7**	⇓*i*P	**Pn**	**18 59 31.1**	**-0.8**
PATCX				*e*S	**Sn**	**18 59 43.0**	**-0.8**
PATCX				IAML		18 59 45.9	
	comp=E,4µm,0.3s						
PATCX	**Punta Patache**	**0.90**	**7**	*e*P	**Pn**	**18 59 31.0**	**-0.8**
PATCX				*e*S	**Sn**	**18 59 42.8**	**-1.0**
PATCX				IAML		18 59 46.1	
	comp=Z,2µm,0.3s						
PB09	**IPOC Station P**	**0.95**	**95**	*i* P	**Pn**	**18 59 33.1**	**+0.5**
PB09				*e*S	**Sn**	**18 59 44.2**	**-1.1**
PB09				IAML		18 59 47.5	
	comp=E,2µm,0.3s						
PB09	**IPOC Station P**	**0.95**	**95**	*e*P	**Pn**	**18 59 33.1**	**+0.5**
PB09				*e*S	**Sb**	**18 59 46.8**	**+1.0**
PB09				IAML		18 59 47.3	
	comp=Z,2µm,0.4s						
PB01	**IPOC Station P**	**0.99**	**47**	*i* P	**Pn**	**18 59 32.9**	**-0.2**
PB01				*e*S	**Sn**	**18 59 45.8**	**-0.2**
PB01				IAML		18 59 49.4	
	comp=E,4µm,0.1s						
PB01	**IPOC Station P**	**0.99**	**47**	*e*P	**Pn**	**18 59 32.8**	**-0.2**
PB01				*e*S	**Sn**	**18 59 46.1**	**+0.1**
PB01				IAML		18 59 49.8	
	comp=Z,2µm,0.2s						
PB05	**IPOC Station P**	**1.13**	**177**	*e*P	**Pn**	**18 59 34.5**	**-0.5**
PB05				*e*S	**Sn**	**18 59 49.3**	**-0.3**
PB05				IAML		18 59 52.8	
	comp=N,2µm,0.3s						
PB05	**IPOC Station P**	**1.13**	**177**	*e*P	**Pn**	**18 59 34.4**	**-0.7**
PB05				*e*S	**Sb**	**18 59 50.5**	**-0.2**
PB05				IAML		18 59 54.2	
	comp=Z,1µm,0.5s						
TA01	**Diego Aracena**	**1.15**	**4**	*e*P	**Pn**	**18 59 34.7**	**-0.5**
TA01				*e*S	**Sn**	**18 59 49.9**	**+0.1**
TA01				IAML		18 59 52.5	
	comp=E,3µm,0.4s						
TA01	**Diego Aracena**	**1.15**	**4**	*e*P	**Pn**	**18 59 34.1**	**-1.1**
TA01				*e*S	**Sn**	**18 59 50.2**	**+0.4**
TA01				IAML		18 59 52.3	
	comp=Z,1µm,0.6s						
PB06	**IPOC Station P**	**1.17**	**147**	*e*P	**Pn**	**18 59 35.5**	**-0.2**
PB06				*i* S	**Sb**	**18 59 51.8**	**-0.2**
PB06				IAML		18 59 55.5	
	comp=N,831nm,0.4s						
PB06	**IPOC Station P**	**1.17**	**147**	*e*P	**Pn**	**18 59 35.5**	**-0.2**
PB06				*e*S	**Sb**	**18 59 51.7**	**-0.2**
PB06				IAML		18 59 54.1	
	comp=Z,669nm,0.4s						
PX03	**IPOC Station P**	**1.44**	**24**	*e*P	**Pn**	**18 59 40.2**	**+1.0**
PX03				*e*S	**Sn**	**18 59 58.2**	**+1.1**
TA02	**Huaiquique**	**1.45**	**5**	*e*P	**Pn**	**18 59 39.3**	**+0.1**
TA02				IAML		19 00 02.0	
	comp=Z,785nm,0.3s						
HMBC	**Humberstone**	**1.48**	**14**	⇓*i*P	**Pn**	**18 59 39.7**	**-0.1**
HMBC				*e*S	**Sn**	**18 59 58.4**	**+0.3**
HMBC				IAML		19 00 07.9	
	comp=E,2µm,0.5s						
HMBC	**Humberstone**	**1.48**	**14**	*e*P	**Pn**	**18 59 39.7**	**-0.1**
HMBC				*e*S	**Sb**	**19 00 01.7**	**+1.1**
HMBC				IAML		19 00 05.2	
	comp=Z,1µm,0.3s						
PB10	**IPOC Station P**	**1.81**	**188**	*e*P	**Pn**	**18 59 43.0**	**-1.3**
PB10				*e*S	**Sb**	**19 00 11.2**	**+1.3**
PB10				IAML		19 00 18.1	
	comp=E,267nm,0.4s						
PB10	**IPOC Station P**	**1.81**	**188**	*e*P	**Pn**	**18 59 43.1**	**-1.1**
PB10				*e*S	**Sn**	**19 00 07.9**	**+1.8**
PB11	**IPOC Station P**	**2.03**	**16**	*e*P	**Pn**	**18 59 48.4**	**+0.9**
PB11	**IPOC Station P**	**2.03**	**16**	*e*P	**Pn**	**18 59 48.3**	**+0.9**
PB11				IAML		19 00 18.0	
	comp=Z,575nm,0.2s						
GO01	**Chusmiza**	**2.27**	**26**	*i* P	**Pn**	**18 59 53.1**	**+2.1**
GO01				*e*S	**Sb**	**19 00 22.4**	**-1.4**
GO01	**Chusmiza**	**2.27**	**26**	*e*P	**Pn**	**18 59 52.9**	**+1.8**
GO01				*e*S	**Sb**	**19 00 23.1**	**-0.7**
GO01				IAML		19 00 26.9	
	comp=Z,598nm,0.7s						
AF01	**San Pedro de A**	**2.29**	**123**	*e*P	**Pn**	**18 59 52.8**	**+1.6**
AF01				*e*S	**Sb**	**19 00 24.2**	**+0.2**
PB14	**IPOC Station P**	**2.90**	**182**	*e*P	Pn	18 59 52.7	-6.8
PB14				*e*S	**Sn**	**19 00 36.7**	**+3.3**
PB14				IAML		19 00 47.7	
	comp=Z,123nm,0.8s						
PB12	**IPOC Station P**	**3.09**	**359**	*e*P	**Pn**	**19 00 02.1**	**+0.1**
PB12	**IPOC Station P**	**3.09**	**359**	*e*P	**Pn**	**19 00 02.0**	**+0.1**
PB12				*e*S	**Sn**	**19 00 38.8**	**+1.0**
PB12				IAML		19 00 59.1	
	comp=Z,144nm,0.4s						
AP01	**Chacalluta**	**3.33**	**359**	*e*P	**Pn**	**19 00 08.2**	**+3.1**
AP01				IAML		19 01 10.0	
	comp=Z,222nm,0.4s						
PB16	**IPOC Station P**	**3.44**	**12**	*e*P	**Pn**	**19 00 08.2**	**+1.0**
PB16	**IPOC Station P**	**3.44**	**12**	*e*P	**Pn**	**19 00 08.9**	**+1.6**
PB16				*e*S	**Sb**	**19 00 53.2**	**-4.3**
PB16				IAML		19 01 15.6	
	comp=Z,115nm,0.7s						
GO02	**Mina Guanaco**	**3.48**	**170**	*e*P	**Pn**	**19 00 08.0**	**+0.4**
GO02				*e*S	**Sb**	**19 00 54.4**	**-4.0**
GO02				IAML		19 01 07.2	
	comp=Z,256nm,0.6s						

*RSNC **03** 19:06:49.5±1.2, 6°S±7°×7°4W±2°7, h0^{km}, M4.9, mb4.7, mB5.4, Mw(mB)4.9*

*IDC **03** 19:07:02.8±1.4, 5°.25S×76°.69W, h0^{km}, mb3.8/5, mbtmp3.8/7, ML3.1/2, MS2.6/1, Error ellipse: s-maj=42.6km s-min=28.3km az=59.0*

*NEIC **03** 19:07:10.4±1.0, 4°.99S±0°.08×76°.31W±0°.07, h28^{km}±8^{km}, mb4.4/19, Error ellipse: s-maj=14.9km s-min=5.0km az=222.0*

ISC 03 19:07:07.3±0.7**, 4°.92S**±0°.06×**76°.28W**±0°.09**, h10**^{km}**, n44, σ1^{s}.40**/40**, mb4.4**/9**, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**3.04**	**224**	LR	LR	19 08 19.4	
	comp=Z,125nm,19.0s,baz=35,slow=30						
CZSB	**Cruzeiro do Su**	**4.51**	**128**	Pn	**Pn**	**19 08 16.3**	**+0.5**
SLOR	**San Lorenzo -**	**4.72**	**332**		**Pn**	**19 08 19.8**	**+0.8**
PTLC	**Puerto Leguiza**	**5.27**	**16**	P	**Pn**	**19 08 26.0**	**-0.2**
	2µm146nm,0.7s						
PTLC				S	**Sn**	**19 09 25.4**	**-1.7**
	2µm146nm,0.7s						
OTAV	**Otavalo**	**5.57**	**337**	Pn	**Pn**	**19 08 31.2**	**+0.5**
GCUF	**Volcan Galeras**	**6.20**	**350**	P	**Pn**	**19 08 42.0**	**+2.6**
	14nm,0.5s						
TBTG	**Tabatinga, AM**	**6.39**	**84**	Pn	**Pn**	**19 08 43.0**	**+1.4**
CRUC	**La Cruz**	**6.48**	**354**	P	**Pn**	**19 08 46.3**	**+3.1**
	1µm,2.7s						
FLOC	**Florencia**	**6.49**	**6**	Pn	**Pn**	**19 08 44.1**	**+1.0**
FLOC	**Florencia**	**6.49**	**6**	P	**Pn**	**19 08 46.2**	**+3.2**
FLOC				S	**Sg**	**19 10 34.4**	**-1.5**
NNA	**Nana**	**7.04**	**185**		**Pn**	**19 08 50.4**	**-0.2**
GARC	**Garzon, Huila**	**7.11**	**6**	P	**Pn**	**19 08 54.6**	**+2.9**
GARC				S	Sn	19 10 26.8	+14
TUMC	**Tumaco**	**7.14**	**340**	Pn	**Pn**	**19 08 53.5**	**+1.7**
BETC	**Betania**	**7.60**	**6**	P	Pn	19 09 10.5	+12
ROSC	**El Rosal**	**9.89**	**11**	Pn	**Pn**	**19 09 32.8**	**+2.8**
	1.1nm,0.3s,baz=240,slow=20,SNR=1.3						
ROSC				Lg	Lg	19 12 30.8	
	1.0nm,0.3s,baz=126,slow=19,SNR=1.7						
	4.0nm,0.3s						
ROSC	**El Rosal**	**9.89**	**11**		**Pn**	**19 09 32.2**	**+2.1**
RUSC	**La Rusia**	**11.21**	**17**		**Pn**	**19 09 49.1**	**+1.0**
LPAZ	**La Paz**	**13.84**	**145**	Pn	Pn	19 10 20.9	-3.3
	0.1nm,0.3s,baz=334,slow=8.0,SNR=1.9						
LPAZ				Lg	Lg	19 14 16.0	
	0.1nm,0.3s,baz=0.0,slow=4.0,SNR=2.0						
	0.4nm,0.3s						
LPAZ	**La Paz**	**13.84**	**145**	Pn	**Pn**	**19 10 23.1**	**-1.1**
PB16	**IPOC Station P**	**14.88**	**154**		**Pn**	**19 10 39.7**	**+1.2**
BRU2	**Volcan**	**15.05**	**335**	Pn	**Pn**	**19 10 41.3**	**+0.8**
BRU2				IAmb	IAmb	19 10 48.8	
	comp=Z,18nm,0.7s						
PTLB	**Pontes e Lacer**	**19.83**	**123**	P	**P**	**19 11 37.5**	**-0.9**
DRIO	**Del Rio**	**41.38**	**327**	P	**P**	**19 14 53.3**	**-0.6**
DRIO				IAmb	IAmb	19 14 55.0	
	comp=Z,6.4nm,0.8s						
WHTX	**Lake Whitney,**	**41.88**	**333**	P	**P**	**19 14 58.0**	**+0.1**
TXAR	**Lajitas Array**	**43.04**	**324**	P	**P**	**19 15 06.7**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=142,slow=5.4,SNR=6.5						
	comp=Z,0.7nm,0.7s						
DKNS	**Dickens**	**44.91**	**330**	P	**P**	**19 15 22.5**	**0.0**
SMWD	**Samnorwood**	**45.76**	**332**	P	**P**	**19 15 29.3**	**+0.1**
PAOC	**Oil Creek Stat**	**46.32**	**356**	P	**P**	**19 15 34.7**	**+1.3**
ABQ	**Albuquerque**	**48.78**	**327**		**P**	**19 15 53.0**	**+0.1**
ABQ				IAmb	IAmb	19 15 54.1	
	comp=Z,3.3nm,0.7s						
ANMO	**Albuquerque**	**48.78**	**327**	P	**P**	**19 15 52.9**	**0.0**
ANMO				IAmb	IAmb	19 15 54.1	
	comp=Z,2.8nm,0.7s						
TASM	**ASL Pad, Albuq**	**48.78**	**327**	P	**P**	**19 15 53.4**	**+0.4**
TASM				IAmb	IAmb	19 15 54.1	
	comp=Z,2.9nm,0.7s						
TASM	**ASL Pad, Albuq**	**48.78**	**327**	P	**P**	**19 15 53.0**	**+0.1**
TASM				IAmb	IAmb	19 15 59.0	
	comp=Z,5.2nm,1.1s						
SDCO	**Great Sand Dun**	**50.41**	**330**	P	**P**	**19 16 05.6**	**+0.2**
X16A	**Lo Mia Camp, P**	**51.29**	**322**		**P**	**19 16 11.6**	**-0.3**
PV02	**Paradox Valley**	**52.43**	**328**	P	**P**	**19 16 20.5**	**0.0**
PV02				IAmb	IAmb	19 16 28.1	
	comp=Z,6.1nm,1.3s						
PDAR	**Pinedale Array**	**56.24**	**331**	P	P	19 16 45.8	-2.4
	comp=Z,0.5nm,0.8s,baz=131,slow=4.5,SNR=3.3						
	comp=Z,0.5nm,0.8s						
PDAR	**Pinedale Array**	**56.24**	**331**	P	**P**	**19 16 46.8**	**-1.4**
NVAR	**Mina Array Bea**	**58.09**	**322**	P	P	19 16 57.2	-4.1
	comp=Z,0.5nm,0.6s,baz=141,slow=4.5,SNR=4.4						
	comp=Z,0.5nm,0.6s						
NVAR	**Mina Array Bea**	**58.09**	**322**	P	**P**	**19 17 00.9**	**-0.5**
YHL	**Hebgen Lake**	**58.58**	**332**	P	**P**	**19 17 04.8**	**+0.1**
YKA	**Yellowknife Ar**	**73.30**	**343**	P	P	19 18 35.4	-3.3
	comp=Z,0.3nm,0.6s,baz=145,slow=5.6,SNR=2.9						
	comp=Z,0.3nm,0.6s						
YKA	**Yellowknife Ar**	**73.30**	**343**	P	**P**	**19 18 38.0**	**-0.7**
TORD	**Torodi Ar. Bea**	**79.45**	**76**	P	**P**	**19 19 14.5**	**-0.2**
	comp=Z,2.0nm,0.3s,baz=246,slow=2.5,SNR=2.9						
	comp=Z,2.0nm,0.3s						
ZALV	**Zalesovo Beam**	**128.75**	**14**	PKP	**PKPdf**	**19 26 13.5**	**-1.5**
	comp=Z,0.6nm,0.6s,baz=338,slow=1.6,SNR=2.4						

*NIED **03** 19:16:46.9, 30°.92N×142°.86E, h35^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.85; $M_{\theta\theta}$0.12; $M_{\phi\phi}$0.73; $M_{r\theta}$-0.13; $M_{\theta\phi}$-0.29; $M_{\phi r}$0.98; Fault plane solution: $M_0$1.31000×10^{15} NP1: ϕ_s328.00000°, δ21.00000°, λ-109.00000°. NP2: ϕ_s169.00000°, δ70.00000°, λ-83.00000°.*

*JMA **03** 19:16:46.9±0.3, 31°N±1°×14°3E±°, h35^{km}, MV4.1/23, FAR E OFF IZU ISLANDS*

*IDC **03** 19:16:47.6±0.6, 30°.94N×142°.83E, h0^{km}, mb4.1/21, mbtmp4.1/23, ML3.4/2, MS3.2/3, Error ellipse: s-maj=18.4km s-min=15.8km az=53.0*

*NEIC **03** 19:16:50.0±2.0, 30°.97N±0°.07×142°.6E±0°.1, h10^{km}±1^{km}, mb4.6/38, Error ellipse: s-maj=16.7km s-min=10.1km az=68.0*

ISC 03 19:16:48.6±1.5**, 30°.94N**±0°.05×**142°.60E**±0°.08**, h5**^{km}±8^{km}**, n99, σ1^{s}.39**/107**, mb4.4**/43**, 1C, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**3.21**	**313**	Pn	**Pn**	**19 17 37.0**	**-2.7**
JHJ2	**Mitsune**	**3.21**	**313**	*e*S	**Sn**	**19 18 18.7**	**+0.5**
JHJ	**Hachijo jima 2**	**3.23**	**313**	Pn	**Pn**	**19 17 37.0**	**-3.0**
	6.8nm,0.3s,baz=120,slow=20,SNR=2.0						
JHJ				Sn	**Sn**	**19 18 14.5**	**-4.4**
	24nm,0.3s,baz=108,slow=20,SNR=1.8						
CBIJ	**Chichi jima**	**3.85**	**186**	*e*P	**Pn**	**19 17 45.8**	**-2.7**
JCJ	**Chichijima**	**3.85**	**186**	Pn	Pn	19 17 35.6	-13
	18nm,0.3s,baz=336,slow=20,SNR=7.5						
JCJ				Sn	Sn	19 18 21.2	-13
	18nm,0.3s,baz=300,slow=20,SNR=2.0						
JCJ	**Chichijima**	**3.85**	**186**	Pn	**Pn**	**19 17 46.8**	**-1.7**
BSO1	**Boso 1**	**3.94**	**340**	*e*P	**Pn**	**19 17 48.4**	**-0.9**
BSO1				*e*S	**Sn**	**19 18 35.7**	**0.0**
BSO3	**Boso 3**	**4.23**	**336**	*e*P	**Pn**	**19 17 53.0**	**-0.5**
BSO3				*e*S	**Sn**	**19 18 41.4**	**-1.8**
JOD2	**Odawara 2**	**5.22**	**327**	*e*P	**Pn**	**19 18 07.8**	**+0.4**
JYT	**Yasato**	**5.64**	**340**	*e*S	**Sn**	**19 19 17.3**	**-1.0**
JHO	**Hitachi**	**5.90**	**344**	*e*P	**Pn**	**19 18 14.9**	**-1.8**
JRY	**Ryogami san**	**5.93**	**330**	*e*P	**Pn**	**19 18 17.8**	**+0.7**
JNY	**Yasuok**	**5.93**	**319**	*e*P	**Pn**	**19 18 20.9**	**+3.7**
JAG	**Ashikaga**	**6.07**	**335**	*e*P	**Pn**	**19 18 18.7**	**-0.3**
JAG				*e*S	**Sn**	**19 19 24.1**	**-4.7**
JGF	**Kuroka**	**6.39**	**318**	Pn	**Pn**	**19 18 21.5**	**-2.0**
INU	**Inuyama**	**6.42**	**315**	Pn	**Pn**	**19 18 23.1**	**-0.7**
MJAR	**Matsushiro Arr**	**6.67**	**328**	Pn	**Pn**	**19 18 27.6**	**+0.2**
	0.3nm,0.3s,baz=151,slow=11,SNR=38						
MJAR				Sn	**Sn**	**19 19 41.0**	**-2.8**
	0.3nm,0.3s,baz=146,slow=16,SNR=5.8						
	8.9nm,0.7s						
MJAR	**Matsushiro Arr**	**6.67**	**328**		**Pn**	**19 18 26.5**	**-0.9**
MAJO	**Matsushiro**	**6.68**	**328**		**Pn**	**19 18 27.3**	**-0.1**
MJB9	**Matsu-Tunnel**	**6.68**	**328**		**Pn**	**19 18 27.4**	**0.0**
JMN	**Monobe**	**7.89**	**293**	Pn	**Pn**	**19 18 44.2**	**+0.2**
JNU	**Nakatsue**	**10.19**	**285**	LR	LR	19 22 54.5	
	comp=Z,80nm,19.8s,baz=70,slow=35						
KSRS	**Korea Array**	**13.77**	**302**	Pn	**Pn**	**19 20 06.0**	**+1.5**
	0.3nm,0.3s,baz=109,slow=13,SNR=12						
KSRS				LR	LR	19 25 07.1	
	comp=Z,18µm,21.3s,baz=95,slow=36						
	0.8nm,0.7s						
BNX	**BinXian**	**18.93**	**326**	⇑P	**Pn**	**19 21 10.5**	**-0.4**
BNX				pmax	pmax		
	comp=Z,7.0nm,1.1s						
YHNB	**Yeheng**	**19.78**	**257**	P	**P**	**19 21 18.5**	**-1.3**
NACB	**Ninganchiao**	**19.79**	**255**	P	**P**	**19 21 19.1**	**-0.8**
NACB				IAmb	IAmb	19 21 24.5	
	comp=Z,25nm,0.8s						
NJ2	**Nanjing**	**20.28**	**279**	*e*P	**P**	**19 21 26.0**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
YULB	**Yu-li**	**20.37**	**254**	P	**P**	**19 21 24.9**	**-1.4**
YULB				IAmb	IAmb	19 21 49.8	
	comp=Z,53nm,1.4s						
SSLB	**Suanglung**	**20.49**	**255**	P	**P**	**19 21 26.1**	**-1.4**
HILR	**Hailar Array B**	**25.32**	**324**	P	**P**	**19 22 17.6**	**+1.3**
	comp=Z,4.1nm,0.6s,baz=125,slow=12,SNR=4.8						
	comp=Z,4.1nm,0.6s						
HHC	**Hu-ho-hao-te**	**26.90**	**300**	*e*P	**P**	**19 22 32.8**	**+2.1**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BTO	**Baotou**	**28.00**	**299**	*e*P	**P**	**19 22 43.4**	**+2.8**
BTO				pP	**pwP**	**19 22 49.0**	**-0.4**
BTO				sP	sP	19 22 52.4	+13
BTO				pmax	pmax		
	comp=Z,21nm,0.9s						
BTO				pmax	pmax		
	comp=Z,1µm,6.1s						
XAN	**Xi'an**	**28.50**	**285**	P	**P**	**19 22 45.4**	**+0.3**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SONM	**Songino Array**	**32.31**	**312**	P	**P**	**19 23 20.6**	**+2.0**
	comp=Z,3.3nm,0.7s,baz=115,slow=9.7,SNR=17						
	comp=Z,3.3nm,0.7s						
SONM	**Songino Array**	**32.31**	**312**	P	**P**	**19 23 18.3**	**-0.4**
LZH	**Lanzhou**	**32.57**	**290**	*e*P	**P**	**19 23 23.5**	**+2.4**
LZH				sP	pwP	19 23 34.2	+4.3
LZH				pmax	pmax		
	comp=Z,9.0nm,1.1s						
LZDM	**Lanzhou Array**	**32.70**	**289**	P	**P**	**19 23 23.6**	**+1.2**
	comp=Z,1.4nm,0.4s,baz=106,slow=9.4,SNR=1.7						
	comp=Z,1.4nm,0.4s						
FAKI	**Fak Fak**	**35.09**	**198**	P	**P**	**19 23 42.5**	**-0.5**
FAKI				IAmb	IAmb	19 23 55.1	
	comp=Z,9.6nm,0.8s						
GTA	**Gaotai**	**35.71**	**296**	*e*P	**P**	**19 23 50.4**	**+2.1**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PZH	**PanZhiHua**	**35.96**	**273**	P	**P**	**19 23 51.6**	**+1.0**
CMAR	**Chiang Mai Arr**	**41.32**	**263**	P	**P**	**19 24 35.9**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=65,slow=8.1,SNR=4.9						
CMAR				LR	LR	19 42 06.7	
	comp=Z,18nm,20.2s,baz=65,slow=37						
	comp=Z,0.3nm,0.5s						
COEN	**Coen**	**44.64**	**179**	P	**P**	**19 25 02.7**	**+0.4**
COEN				IAmb	IAmb	19 25 04.7	
	comp=Z,5.7nm,0.9s						
MTN	**Manton Dam**	**44.91**	**196**		**P**	**19 25 04.5**	**0.0**
MTN				IAmb	IAmb	19 25 08.3	
	comp=Z,5.9nm,0.9s						
ZAA0	**Zalesovo Array**	**46.89**	**317**	P	**P**	**19 25 20.5**	**+0.8**
ZALV	**Zalesovo Beam**	**46.89**	**317**	P	**P**	**19 25 20.7**	**+1.0**
	comp=Z,1.4nm,0.5s,baz=104,slow=6.9,SNR=9.3						
ZALV				PcP	**PcP**	**19 26 52.4**	**0.0**
	comp=Z,1.3nm,0.7s,baz=84,slow=2.8,SNR=4.4						
	comp=Z,1.4nm,0.5s						
ZALV	**Zalesovo Beam**	**46.89**	**317**	P	**P**	**19 25 20.5**	**+0.8**
ZALV					**PcP**	**19 26 51.5**	**-0.9**
MKAR	**Makanchi Array**	**48.38**	**307**	P	**P**	**19 25 33.1**	**+1.6**
	comp=Z,4.0nm,0.8s,baz=85,slow=9.5,SNR=17						
	comp=Z,4.0nm,0.8s						
MKAR	**Makanchi Array**	**48.38**	**307**	P	**P**	**19 25 32.8**	**+1.3**
KURK	**Kurchatov**	**50.61**	**312**		**P**	**19 25 49.1**	**+0.7**
KURK				IAmb	IAmb	19 25 50.6	
	comp=Z,3.3nm,0.8s						

KURK	Kurchatov	50.61	312		PcP	19 27 05.3	-0.7
KURBB	Kurchatov Arra	50.67	312	P	P	19 25 49.6	+0.8
	comp=Z,3.6nm,1.0s,baz=87,slow=7.1,SNR=20						
KURBB				PcP	PcP	19 27 05.3	-0.9
	comp=Z,0.5nm,0.7s,baz=77,slow=4.9,SNR=1.8						
	comp=Z,3.6nm,1.0s						
WB0	Warramunga Arr	51.03	190		P	19 25 51.2	-0.6
WB0				IAmb	IAmb	19 25 53.0	
	comp=Z,8.6nm,0.9s						
WR8	Warramunga Arr	51.20	190		P	19 25 52.7	-0.4
WR8				IAmb	IAmb	19 25 54.3	
	comp=Z,10nm,1.2s						
WRAB	Tennant Creek	51.20	190	P	P	19 25 52.8	-0.3
WRAB				IAmb	IAmb	19 25 54.4	
	comp=Z,5.3nm,0.8s						
WRA	Warramunga Arr	51.21	190	P	P	19 25 53.0	-0.1
	comp=Z,4.0nm,0.6s,baz=6.9,slow=7.8,SNR=4.7						
WRA				PcP	PcP	19 27 08.3	-0.2
	comp=Z,1.2nm,0.8s,baz=11,slow=3.8,SNR=2.5						
	comp=Z,4.0nm,0.6s						
WRA	Warramunga Arr	51.21	190	P	P	19 25 52.2	-1.0
WRA					PcP	19 27 07.0	-1.6
WUS	Wushi	51.23	300	P	P	19 25 55.0	+1.6
FITZ	Fitzroy Crossi	51.41	201		P	19 25 54.6	-0.1
PRZ	Przheval'sk	51.62	302		P	19 25 55.8	-0.5
PPLA	Purkeypile	51.70	32	P	P	19 25 58.4	+1.8
PPLA				IAmb	IAmb	19 25 59.3	
	comp=Z,15nm,1.2s						
STLK	Strandline Lak	51.73	34	P	P	19 25 57.9	+1.2
STLK				IAmb	IAmb	19 26 35.1	
	comp=Z,13nm,1.5s						
TARG	Taragay, Kyrgy	52.18	301		P	19 26 00.9	+0.1
TARG				IAmb	IAmb	19 26 04.3	
	comp=Z,6.2nm,1.0s						
SUA	Susitna One	52.24	34	P	P	19 26 00.6	0.0
H22K	Ishtalitna Cre	52.42	28	P	P	19 26 02.9	+1.1
ILAR	Eielson Array	54.19	30	P	P	19 26 14.6	-0.1
	comp=Z,0.8nm,0.7s,baz=276,slow=7.5,SNR=11						
	comp=Z,0.8nm,0.7s						
E25K	Arctic Village	54.92	26		P	19 26 21.5	+1.4
E25K				IAmb	IAmb	19 26 24.3	
	comp=Z,8.7nm,1.2s						
AS31	Alice Springs	54.93	190	P	P	19 26 20.6	0.0
ASAR	Alice Springs	54.94	190	P	P	19 26 20.8	+0.2
	comp=Z,1.5nm,0.6s,baz=9.6,slow=6.7,SNR=47						
ASAR				PcP	PcP	19 27 23.7	+1.2
	comp=Z,0.7nm,0.8s,baz=9.8,slow=3.6,SNR=2.6						
	comp=Z,1.5nm,0.6s						
ASAR	Alice Springs	54.94	190		PcP	19 27 23.0	+0.4
BVAR	Borovoye Array	55.51	316	P	P	19 26 25.0	+0.5
	comp=Z,1.8nm,0.6s,baz=88,slow=7.3,SNR=12						
BVAR				PcP	PcP	19 27 24.7	+0.2
	comp=Z,0.8nm,0.8s,baz=113,slow=3.7,SNR=1.7						
	comp=Z,1.8nm,0.6s						
BORK	Borovoye	55.55	316		P	19 26 25.1	+0.3
PSA00	Pilbara Seismi	56.60	206		P	19 26 32.6	0.0
PSA00				IAmb	IAmb	19 26 34.4	
	comp=Z,4.3nm,0.8s						
F28M	Old Crow	57.06	26		P	19 26 36.4	+1.0
F28M				IAmb	IAmb	19 26 38.9	
	comp=Z,12nm,1.4s						
KK31	Karatay Array	57.19	304		P	19 26 37.3	+0.6
KK31				IAmb	IAmb	19 26 41.1	
	comp=Z,3.9nm,0.7s						
KKAR	Karatay Array	57.19	304		P	19 26 37.5	+0.8
NIL	Nilore	57.66	293		P	19 26 39.8	-0.4
MANEM	Manem	57.75	297		P	19 26 40.6	-0.4
MANEM				IAmb	IAmb	19 26 44.7	
	comp=Z,11nm,0.9s						
GAR	Garm	58.37	299	P	P	19 26 45.6	+0.4
EPYK	Eagle Plains	58.38	28	P	P	19 26 46.2	+1.5
CHGR	Chuyangaron	59.34	299		P	19 26 52.5	+0.6
SHAA	Shahritus	60.44	298		P	19 27 00.9	+1.4
SHAA				IAmb	IAmb	19 27 14.4	
	comp=Z,14nm,0.6s						
AB31	Akbulak array	62.71	313		P	19 27 14.8	+0.3
AB31				IAmb	IAmb	19 27 21.0	
	comp=Z,2.9nm,0.6s						
YKA	Yellowknife Ar	68.60	29	P	P	19 27 51.5	-0.8
	comp=Z,1.2nm,0.9s,baz=292,slow=7.0,SNR=6.1						
	comp=Z,1.2nm,0.9s						
YKA	Yellowknife Ar	68.60	29	P	P	19 27 51.9	-0.4
ARCES	ARCESS Array B	70.04	341	P	P	19 28 00.9	-0.3
	comp=Z,2.3nm,0.8s,baz=58,slow=7.1,SNR=2.1						
	comp=Z,2.3nm,0.8s						
ARCES	ARCESS Array B	70.04	341	IAmb	IAmb	19 28 05.4	
	comp=Z,16nm,1.5s						
PINE	Pine Mountain	73.57	49		P	19 28 23.5	+0.5
PINE				IAmb	IAmb	19 28 26.0	
	comp=Z,2.7nm,0.7s						
FINES	FINESS Array B	74.67	334	P	P	19 28 28.5	-0.4
	comp=Z,3.0nm,1.0s,baz=52,slow=6.6,SNR=5.8						
	comp=Z,3.0nm,1.0s						
KBZ	Khabaz	75.67	312	P	P	19 28 35.7	+0.8
	comp=Z,2.7nm,1.0s,baz=67,slow=7.7,SNR=3.8						
	comp=Z,2.7nm,1.0s						
NVAR	Mina Array Bea	77.88	52	P	P	19 28 46.3	-1.5
	comp=Z,0.7nm,0.5s,baz=306,slow=6.3,SNR=6.8						
	comp=Z,0.7nm,0.5s						
AKASG	Malin Array Be	79.74	324	P	P	19 28 57.3	-0.2
	comp=Z,0.7nm,0.4s,baz=51,slow=4.9,SNR=2.6						
	comp=Z,0.7nm,0.4s						
NOA	NORSAR Array B	80.18	338	P	P	19 28 59.4	-0.4
	comp=Z,0.6nm,0.6s,baz=41,slow=5.4,SNR=2.7						
	comp=Z,0.6nm,0.6s						
PDAR	Pinedale Array	81.24	45	P	P	19 29 06.0	-0.1
	comp=Z,1.0nm,1.0s,baz=314,slow=6.8,SNR=4.2						
	comp=Z,1.0nm,1.0s						
BRTR	Keskin Array B	83.66	313	P	P	19 29 19.1	+0.4
	comp=Z,1.3nm,0.8s,baz=83,slow=3.8,SNR=5.5						
	comp=Z,1.3nm,0.8s						
BRTR	Keskin Array B	83.66	313	P	P	19 29 17.8	-0.9
MMAI	Mount Meron Ar	86.33	306	P	P	19 29 36.7	+4.6
	comp=Z,1.6nm,0.8s,baz=46,slow=8.3,SNR=3.1						
ANMO	Albuquerque	87.74	50	LR	LR	20 04 17.5	
	comp=Z,30nm,20.6s,baz=304,slow=32						
TXAR	Lajitas Array	93.01	53	P	P	19 30 03.6	-0.1
	comp=Z,1.1nm,1.0s,baz=318,slow=3.3,SNR=5.0						
	comp=Z,1.1nm,1.0s						
LPAZ	La Paz	148.42	70	PKPbc	PKPbc	19 36 34.1	-3.5
	comp=Z,1.9nm,0.8s,baz=300,slow=2.0,SNR=6.3						

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*IDC **03** 19:38:01.5±0.6, 45°.28N×79°.32E, h0^{km}, mb3.7/11,*
mbtmp3.8/18, ML3.7/7, MS3.7/2, Error ellipse:
s-maj=10.3km s-min=8.1km az=148.0
*MOS **03** 19:38:03.0±1.8, 45°.45N×79°.18E, h14^{km}, mb4.1/4, Error*
ellipse: s-maj=8.7km s-min=5.8km az=82.6
*NNC **03** 19:38:03.4±0.4, 45°.38N×79°.19E, h0^{km}, mb4.8, mpv4.6,*
Error ellipse: s-maj=3.4km s-min=2.8km az=148.0
*SOME **03** 19:38:05.1, 45°.32N×79°.22E, h25^{km}, MS3.8*
ISC 03 19:38:02.9±0.8, **45°.38N**±0°.02×**79°.39E**±0°.02, **h11**^{km}±5^{km},
n111, σ1^{s}60/133, **mb3.8**/12, **12C-10D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPS	Kapalarasan	0.10	193	P	Pb	19 38 07.9	+0.9
	9μm,0.2s						
KAPS				S	Sb	19 38 10.0	+2.3
	101μm,0.2s						
TDK	Taldyqorghan	0.79	242	P	Pg	19 38 18.2	0.0
	2μm,0.3s						
TDK				S	Sg	19 38 27.7	-0.8
	12nm,0.2s						
TDK	Taldyqorghan	0.79	242	*e*P	Pg	19 38 18.2	0.0
	2μm,0.3s						
TDK				*e*S	Sg	19 38 27.7	-0.8
	12nm,0.2s						
KNOS	Konyrlen	1.04	188	P	Pg	19 38 23.1	+0.3
	1μm,0.2s						
KNOS				S	Sb	19 38 36.2	-0.4
	795nm,0.2s						
BLB	Baldybastay	1.44	207	P	Pb	19 38 30.2	+0.4
	3μm,0.1s						
BLB				S	Sn	19 38 48.2	+0.2
	6μm,0.3s						
ARXS	Arharly	1.61	224	P	Pb	19 38 32.4	-0.3
	1μm,0.3s						
ARXS				S	Sn	19 38 52.2	0.0
	9μm,0.4s						
ARXS	Arharly	1.61	224	*e*P	Pb	19 38 32.4	-0.3
ARXS				*e*S	Sn	19 38 52.2	0.0
ARXS	Arharly	1.61	224	*e*PN	Pn	19 38 31.3	-0.1
KPKS	Kokpek	1.98	195	Pg	Pb	19 38 39.9	+0.9
	1.5nm,0.3s						
KPKS				Lg	Lg	19 39 05.0	
	2μm,0.4s						
PDGK	Podgornoye	2.06	178	⇓Pn	Pb	19 38 39.8	-0.5
	318nm,0.4s						
PDGK				⇓Sn	Sb	19 39 06.6	+0.7
	1μm,0.6s						
PDGK	Podgornoye	2.06	178	PN	Pb	19 38 39.8	-0.5
PDGK						19 39 06.5	
KTMS	Ketmen	2.06	160	Pg	Pg	19 38 41.6	-0.7
	205nm,0.2s						
KTMS				Lg	Lg	19 39 07.8	
	2μm,0.5s						
KTMS	Ketmen	2.06	160	*e*P	Pg	19 38 41.6	-0.7
	205nm,0.2s						
KTMS				*e*S	Sg	19 39 07.8	-1.2
	2μm,0.5s						
KURS	Kuram	2.09	205	Pg	Pb	19 38 40.8	+0.1
	472nm,0.3s						
KURS				Lg	Lg	19 39 06.6	
	970nm,0.5s						
SHLS	Shalkode	2.23	179	Pg	Pg	19 38 45.1	-0.5
	527nm,0.4s						
SHLS				Lg	Lg	19 39 13.6	
	1μm,0.5s						
SHLS	Shalkode	2.23	179	*e*P	Pg	19 38 45.1	-0.5
	527nm,0.4s						
SHLS				*e*S	Sg	19 39 13.6	-0.8
	1μm,0.5s						
SHLS	Shalkode	2.23	179	*e*PN	Pb	19 38 42.2	-1.0
UZB	Uzynbulak	2.25	187	Pg	Pb	19 38 44.5	+0.8
	272nm,0.2s						
UZB				Lg	Lg	19 39 12.9	
	646nm,0.2s						
UZB	Uzynbulak	2.25	187	*e*P	Pb	19 38 44.5	+0.8
	272nm,0.2s						
UZB				*e*S	Sb	19 39 12.9	+1.3
	646nm,0.2s						
UZB	Uzynbulak	2.25	187	*e*PN	Pn	19 38 40.6	+0.4
MAKZ	Makanchi	2.30	51	⇑Pn	Pb	19 38 43.7	-0.6
	24nm,0.3s						
MAKZ				⇑Lg	Lg	19 39 15.4	
	308nm,0.5s						
MAKZ	Makanchi	2.30	51	PN	Pb	19 38 43.7	-0.6
MK31	Makanchi Array	2.46	54	Pn	Pb	19 38 46.4	-0.8
	40nm,0.2s,baz=229,slow=13,SNR=3397						
MK31				⇑Lg	Lg	19 39 21.2	
	346nm,0.5s,baz=232,slow=27,SNR=19						
MK31	Makanchi Array	2.46	54	*e*PN	Pb	19 38 46.3	-0.8
MKAR	Makanchi Array	2.46	54	Pn	Pb	19 38 46.4	-0.7
	74nm,0.3s,baz=232,slow=14,SNR=3170						
MKAR				Sn	Sb	19 39 17.4	-0.1
	116nm,0.3s,baz=235,slow=27,SNR=8.3						
MKAR				Lg	Lg	19 39 22.8	
	116nm,0.3s,baz=236,slow=30,SNR=14						
	105nm,0.3s						
MKAR	Makanchi Array	2.46	54	*i* PN	Pb	19 38 46.5	-0.7
MKAR				pmax	pmax		
	comp=Z,108nm,0.3s						
KTBS	Karatobe	2.56	230	Pg	Pb	19 38 48.5	-0.3
	comp=Z,354nm,0.5s						
KTBS				Lg	Lg	19 39 19.7	
	comp=Z,925nm,0.5s						
KUU	Kurty	2.64	237	Pg	Pb	19 38 49.8	-0.4
	comp=Z,113nm,0.5s						
KUU				Lg	Lg	19 39 21.3	
	comp=Z,2μm,0.3s						
KUU	Kurty	2.64	237	*e*P	Pb	19 38 49.8	-0.4
	comp=Z,113nm,0.5s						
KUU				*e*S	Sb	19 39 21.3	-1.3
	comp=Z,2μm,0.3s						
KOTS	Kotyrbulak	2.70	218	Pg	Pb	19 38 51.1	-0.2
	comp=Z,199nm,0.3s						
KOTS				Lg	Lg	19 39 24.4	
	comp=Z,3μm,0.5s						
KOTS	Kotyrbulak	2.70	218	*e*P	Pb	19 38 51.1	-0.2
	comp=Z,199nm,0.3s						
KOTS				*e*S	Sb	19 39 24.4	-0.1
	comp=Z,3μm,0.5s						
KNDC	Almaty	2.78	220	⇑Pg	Pb	19 38 52.6	0.0
	comp=Z,274nm,0.3s						
KNDC				⇓Lg	Lg	19 39 28.7	
	comp=Z,806nm,0.7s						
KNDC	Almaty	2.78	220	PN	Pb	19 38 52.6	0.0
MDOK	Medeo	2.79	218	Pg	Pb	19 38 53.0	+0.2
	comp=Z,196nm,0.4s						
MDOK				Lg	Lg	19 39 27.6	
	comp=Z,604nm,0.5s						
AAA	Alma-Ata	2.81	220	Pg	Pb	19 38 53.0	0.0
	comp=Z,541nm,0.4s						
AAA				Lg	Lg	19 39 27.7	
	comp=Z,104nm,0.3s						
AAA	Alma-Ata	2.81	220	*e*P	Pb	19 38 53.0	0.0
	comp=Z,541nm,0.4s						
AAA				*e*S	Sb	19 39 27.7	+0.2
	comp=Z,104nm,0.3s						
TNSS	Tian-Shan	2.93	218	Pg	Pb	19 38 55.0	-0.4
	comp=Z,66nm,0.5s						
TNSS				Lg	Lg	19 39 31.0	
	comp=Z,133nm,0.4s						
TNSS	Tian-Shan	2.93	218	*e*P	Pb	19 38 55.0	-0.4
	comp=Z,66nm,0.5s						
TNSS				*e*S	Sb	19 39 31.0	-0.4
	comp=Z,133nm,0.4s						
MTBS	Maitube	3.10	224	Pg	Pb	19 38 58.2	+0.2
	comp=Z,187nm,0.4s						
MTBS				Lg	Lg	19 39 36.5	
	comp=Z,1μm,0.3s						
MTBS	Maitube	3.10	224	*e*P	Pb	19 38 58.2	+0.2
	comp=Z,187nm,0.4s						
MTBS				*e*S	Sb	19 39 36.5	+0.7
	comp=Z,1μm,0.3s						
KRBS	Karabastau	3.15	239	Pg	Pb	19 38 59.1	+0.2
	comp=Z,64nm,0.2s						
KRBS				Lg	Lg	19 39 38.0	
	comp=Z,577nm,0.3s						
DGS	Degeres	3.37	232	Pg	Pb	19 39 02.8	+0.2
	comp=Z,169nm,0.3s						
DGS				Lg	Lg	19 39 44.6	
	comp=Z,850nm,0.5s						
KST	Kastek	3.40	228	Pg	Pb	19 39 03.7	+0.6
	comp=Z,163nm,0.5s						
KST				Lg	Lg	19 39 46.0	
	comp=Z,1μm,0.6s						
KST	Kastek	3.40	228	*e*P	Pb	19 39 03.7	+0.6
	comp=Z,163nm,0.5s						
KST				*e*S	Sb	19 39 46.0	+1.5
	comp=Z,1μm,0.6s						
TKM2	Tokmak 2	3.68	229	P	Pn	19 39 01.2	+1.3
	SNR=12						
BTLS	Baital	3.79	267	Pg	Pb	19 39 10.5	+0.7
	comp=Z,112nm,0.5s						
BTLS				Lg	Lg	19 39 58.2	
	comp=Z,129nm,0.5s						
BTLS	Baital	3.79	267	*e*P	Pb	19 39 10.5	+0.7
	comp=Z,112nm,0.5s						
BTLS				*e*S	Sb	19 39 58.2	+2.5
	comp=Z,129nm,0.5s						
BTLS	Baital	3.79	267	*e*PN	Pn	19 39 03.0	+1.8
SGDS	Sogindy	3.92	242	Pg	Pb	19 39 12.8	+0.8
	comp=Z,70nm,0.5s						
SGDS				Lg	Lg	19 40 01.9	
	comp=Z,488nm,0.8s						
USP	Ospenovka	4.10	241	P	Pn	19 39 06.7	+1.2
	SNR=44						
CHMS	Chumysh	4.10	236	P	Pn	19 39 06.6	+1.1
	SNR=16						
KBK	Karagaybulak	4.21	231	P	Pn	19 39 09.0	+1.9
	SNR=17						
ZSN	Zaisan	4.32	59	Pg	Pg	19 39 25.3	-0.2
	comp=Z,26nm,0.5s						
ZSN	Zaisan	4.32	59	*e*P	Pg	19 39 25.3	-0.2
	comp=Z,26nm,0.5s						
ZSN				*e*S	Sg	19 40 23.5	+2.1
	comp=Z,236nm,0.3s						
AAK	Ala-Archa	4.47	234	P	Pn	19 39 12.3	+1.6
	SNR=35						
AAK	Ala-Archa	4.47	234	Pn	Pn	19 39 12.0	+1.2
	comp=Z,9.4nm,0.3s,baz=83,slow=5.1,SNR=130						
AAK				Lg	Lg	19 40 18.0	
	comp=Z,33nm,0.3s,baz=12,slow=20,SNR=29						
AAK				LR	LR	19 40 40.9	
	comp=Z,24nm,19.1s,baz=48,slow=36						
	comp=Z,78nm,0.3s						
AAK	Ala-Archa	4.47	234	⇓Pn	Pn	19 39 12.2	+1.4
	comp=Z,16nm,0.4s						
AAK				⇑Lg	Lg	19 40 20.8	
	comp=Z,176nm,0.7s						
AAK	Ala-Archa	4.47	234	PN	Pn	19 39 12.0	+1.2
UCH	Uchtor	4.73	230	P	Pn	19 39 16.8	+2.2
	SNR=15						
EKS2	Erkin-Say	4.88	238	P	Pn	19 39 17.7	+1.4
	SNR=18						
SEM	Semipalatinsk	5.06	6	Lg	Lg	19 40 45.2	
	comp=Z,196nm,0.2s						
SEM	Semipalatinsk	5.06	6	*e*P	Pg	19 39 38.2	-1.5
	comp=Z,47nm,0.4s						
SEM				*e*S	Sg	19 40 45.2	-0.1
	comp=Z,196nm,0.2s						
MRKS	Merke	5.17	241	Lg	Lg	19 40 42.0	
	comp=Z,173nm,0.5s						
MRKS	Merke	5.17	241	*e*P	Pb	19 39 36.1	+2.9
	comp=Z,29nm,0.5s						
MRKS				*e*S	Sb	19 40 42.0	+6.7
	comp=Z,173nm,0.5s						
KURBB	Kurchatov Arra	5.27	354	Pn	Pn	19 39 21.9	+0.4
	comp=Z,0.4nm,0.3s,baz=180,slow=12,SNR=44						
KURBB				Pg	Pb	19 39 35.6	+0.6
	comp=Z,1.8nm,0.3s,baz=183,slow=15,SNR=13						
KURBB				Sn	Sn	19 40 20.5	-1.8
	comp=Z,3.5nm,0.3s,baz=171,slow=15,SNR=5.2						
KURBB				Lg	Lg	19 40 48.9	
	comp=Z,9.3nm,0.3s,baz=176,slow=28,SNR=8.4						
	comp=Z,1.2nm,0.3s						
KURBB	Kurchatov Arra	5.27	354	⇑Pn	Pn	19 39 23.1	+1.5
	comp=Z,3.1nm,0.3s						
KURBB				⇓Pg	Pb	19 39 39.4	+4.4
	comp=Z,41nm,0.5s						
KURBB				⇓Lg	Lg	19 40 49.0	
	comp=Z,1μm,0.8s						
KURBB	Kurchatov Arra	5.27	354	PN	Pn	19 39 23.8	+2.2
KURBB				P	Pb	19 39 39.4	+4.4
KURK	Kurchatov	5.36	355	⇑Pn	Pn	19 39 23.7	+1.0
	comp=Z,1.3nm,0.3s						
KURK				⇑Pg	Pb	19 39 39.5	+3.0
	comp=Z,9.4nm,0.5s						
KURK				⇑Lg	Lg	19 40 51.2	
	comp=Z,179nm,0.7s						
KURK	Kurchatov	5.36	355	*i* PN	Pn	19 39 24.2	+1.5
DZA	Taraz	6.31	250	*e*P	Pb	19 39 58.3	+5.6
	comp=Z,15nm,0.1s						
DZA				*e*S	Sg	19 41 19.2	-6.1
	comp=Z,238nm,0.8s						
BRZS	Berezniki	6.45	318	*e*P	Pg	19 40 01.7	-4.7
	comp=Z,0.4nm,0.2s						
BRZS				*e*S	Sg	19 41 25.0	-4.9
	comp=Z,291nm,0.6s						
KK31	Karatay Array	6.77	253	⇑Pn	Pn	19 39 43.0	+0.8
	comp=Z,1.6nm,0.2s,baz=65,slow=11,SNR=143						
KK31				⇑Lg	Lg	19 41 32.7	
	comp=Z,51nm,0.5s,baz=61,slow=28,SNR=12						
KK31	Karatay Array	6.77	253	PN	Pn	19 39 42.9	+0.8
DGZ	Jazzator, Alta	6.95	49	*i* PN	Pn	19 39 48.0	+3.3
IUG	Iuzhnay	7.51	248	Pg	Pg	19 40 22.2	-4.3
	comp=Z,44nm,0.7s						
IUG	Iuzhnay	7.51	248	*e*P	Pn	19 39 53.7	+1.4
CHM	Chimkent	7.71	250	*e*P	Pg	19 40 25.5	-4.9
	comp=Z,28nm,0.1s						
CHM				*e*S	Sg	19 42 05.9	-4.2
	comp=Z,133nm,0.6s						
ZALV	Zalesovo Beam	9.26	20	Pn	Pn	19 40 18.1	+1.8
	comp=Z,3.9nm,0.3s,baz=205,slow=15,SNR=47						
ZALV				Sn	Sn	19 41 58.1	-2.3
	comp=Z,5.1nm,0.3s,baz=209,slow=23,SNR=8.0						
ZALV				Lg	Lg	19 42 57.7	
	comp=Z,3.4nm,0.3s,baz=199,slow=29,SNR=7.3						
	comp=Z,7.4nm,0.2s						
ZALV	Zalesovo Beam	9.26	20	*i* P	Pn	19 40 19.0	+2.7
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.3s						
BVA0	Borovoye Array	9.64	326	⇓Pn	Pn	19 40 21.1	-0.5
	comp=Z,3.1nm,1.4s						
BVA0				⇓Lg	Lg	19 43 05.0	
	comp=Z,106nm,0.8s						
BVA0	Borovoye Array	9.64	326	P	Pn	19 40 21.6	+0.1
BVAR	Borovoye Array	9.64	326	Pn	Pn	19 40 21.7	+0.1
	comp=Z,0.2nm,0.3s,baz=140,slow=14,SNR=28						
BVAR				Lg	Lg	19 43 03.9	
	comp=Z,0.7nm,0.3s,baz=134,slow=26,SNR=6.1						
	comp=Z,1.7nm,0.3s						
BORK	Borovoye	9.69	326	*i* P	Pn	19 40 22.8	+0.7
KNGR	Kungurtug, Tuv	13.21	60	*i* P	P	19 41 15.1	-5.3
AB31	Akbulak array	13.74	293	Pn	Pn	19 41 14.8	-2.7
	comp=Z,2.1nm,0.6s,baz=98,slow=15,SNR=67						
AB31				⇓Lg	Lg	19 45 16.2	
	comp=Z,9.9nm,0.6s						
AB31	Akbulak array	13.74	293	P	Pn	19 41 14.8	-2.7
AKTO	Aktyubinsk	15.18	297	Pn	Pn	19 41 34.4	-2.7
	comp=Z,0.6nm,0.3s,baz=101,slow=10,SNR=6.5						
AKTO				Sn	Sn	19 44 13.8	-11
	comp=Z,0.2nm,0.3s,baz=97,slow=16,SNR=1.5						
AKTO				Lg	Lg	19 46 00.7	
	comp=Z,0.3nm,0.3s,baz=35,slow=15,SNR=6.5						
	comp=Z,1.0nm,0.3s						
AKTO	Aktyubinsk	15.18	297	⇑Pn	Pn	19 41 35.1	-2.0
	comp=Z,1.4nm,0.6s						
AKTO				⇓Lg	Lg	19 46 01.3	
	comp=Z,9.4nm,0.9s						
GTA	Gaotai	16.21	104	*e*P	P	19 41 54.7	+0.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARTI	Arti	17.15	317	P	Pn	19 42 00.1	-2.2
	comp=Z,1.1nm,0.6s,baz=122,slow=19,SNR=1.9						
ARTI				S	Sn	19 45 11.2	-1.6
	comp=Z,1.1nm,0.5s,baz=90,slow=20,SNR=1.8						
ARTI				Lg	Lg	19 47 02.6	
	comp=Z,0.2nm,0.3s,baz=139,slow=20,SNR=4.7						
ARTI	Arti	17.15	317	P	P	19 42 04.5	+0.5
ARTI				S	S	19 45 18.9	-3.4
SONM	Songino Array	18.68	73	P	Pn	19 42 21.4	0.0
	comp=Z,0.1nm,0.3s,baz=283,slow=13,SNR=6.9						
SONM				Lg	Lg	19 47 55.4	
	comp=Z,0.1nm,0.3s,baz=279,slow=32,SNR=3.9						
SONM				LR	LR	19 49 29.4	
	comp=Z,77nm,18.4s,baz=292,slow=37						
	comp=Z,1.4nm,0.8s						
LZDM	Lanzhou Array	20.64	109	P	Pn	19 42 43.6	-1.3
	comp=Z,1.5nm,0.3s,baz=324,slow=7.1,SNR=2.4						
	comp=Z,1.5nm,0.3s						
BTO	Baotou	22.83	91	*e*P	P	19 43 06.2	+0.3
BTO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BTO				pmax	pmax		
	comp=Z,790nm,9.8s						
NRIK	Noril'sk	24.38	7	P	P	19 43 21.9	+1.3
	comp=Z,0.7nm,0.3s,baz=190,slow=12,SNR=1.4						
	comp=Z,0.7nm,0.3s						
NRIK	Noril'sk	24.38	7	*i* P	P	19 43 21.8	+1.2
NRIK				pmax	pmax		
	comp=Z,10.0nm,2.4s						
KBZ	Khabaz	25.92	279	P	P	19 43 34.9	+0.1
	comp=Z,0.9nm,0.6s,baz=72,slow=19,SNR=1.5						
	comp=Z,0.9nm,0.6s						
KIV	Kislovodsk	26.00	280	*e*P	P	19 43 34.4	-1.3
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CMAR	Chiang Mai Arr	31.39	142	P	P	19 44 23.4	-0.5
	comp=Z,0.6nm,0.7s,baz=337,slow=9.9,SNR=5.6						
	comp=Z,0.6nm,0.7s						
CMAR	Chiang Mai Arr	31.39	142	*i* P	P	19 44 24.7	+0.9
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	33.81	277	P	P	19 44 44.4	-0.6
	comp=Z,0.7nm,0.9s,baz=65,slow=7.0,SNR=4.0						
	comp=Z,0.7nm,0.9s						
FINES	FINESS Array B	34.46	317	P	P	19 44 50.9	+0.7
	comp=Z,1.0nm,0.5s,baz=91,slow=11,SNR=4.8						
	comp=Z,1.0nm,0.5s						
HFS	Hagfors	40.59	315	P	P	19 45 42.2	+0.1
	comp=Z,1.3nm,0.5s,baz=83,slow=12,SNR=8.0						
	comp=Z,1.3nm,0.5s						
NB2	NORSAR Subarra	41.64	317	P	P	19 45 51.3	+0.4
	comp=Z,0.8nm,0.5s,baz=80,slow=8.6						
NOA	NORSAR Array B	41.64	317	P	P	19 45 51.2	+0.4
	comp=Z,0.7nm,0.4s,baz=80,slow=8.2,SNR=7.4						
	comp=Z,0.7nm,0.4s						
EKA	Eskdalemuir Ar	50.62	313	LR	LR	20 09 51.2	
	comp=Z,174nm,19.6s,baz=176,slow=38						
ILAR	Eielson Array	64.39	20	P	P	19 48 38.6	+0.2
	comp=Z,0.2nm,0.5s,baz=335,slow=6.6,SNR=3.0						
	comp=Z,0.2nm,0.5s						
TORD	Torodi Ar. Bea	72.14	271	P	P	19 49 32.9	+5.2
	comp=Z,1.2nm,0.4s,baz=42,slow=4.5,SNR=1.8						
WRA	Warramunga Arr	81.94	129	P	P	19 50 22.7	+0.1
	comp=Z,0.8nm,0.8s,baz=336,slow=5.5,SNR=4.9						
	comp=Z,0.8nm,0.8s						
WRA	Warramunga Arr	81.94	129	*i* P	P	19 50 23.6	+1.0
WRA				pmax	pmax		

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             comp=Z,1.0nm,0.8s
ASAR  Alice Springs      84.73 131  P      P       19 50 36.3 -0.6
             comp=Z,0.6nm,0.9s,baz=320,slow=5.2,SNR=6.6
             comp=Z,0.6nm,0.9s
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*SJA **03** 19:46:57.9±0.8, 23°.00S×66°.32W, h258km±5km, ML5.1, MW4.6*

*NEIC **03** 19:46:59.1±2.5, 22°.84S±0°.06×66°.28W±0°.08, h233km±6km, mb4.6/213, Error ellipse: s-maj=11.0km s-min=9.3km az=79.0*

*IDC **03** 19:46:59.6±1.0, 22°.84S×66°.22W, h242km±8km, mb4.0/19, mbtmp4.7/26, Error ellipse: s-maj=12.6km s-min=8.0km az=67.0*

*VAO **03** 19:46:59.6±0.4, 22°.84S×66°.31W, h250km, mb4.8, Presumed earthquake*

ISC 03 19:46:58.8±0.5, **22°.89S**±0°.04×**66°.35W**±0°.04, **h241**km±5km, **n312**, σ1§**26**/284, **mb4.6**/103, **15C-1D**, **Jujuy Province**

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Code  Station Name        Δ°   AZ°   Phase ID       Time      Res
                                     Op    ISC      h  m  s   ISC
SALTA                     1.33 179⇓iP    Pn     19 47 35.8 +0.3
SALTA                     1.33 179 eP    Pn     19 47 35.8 +0.3
SALTA                              eS    S      19 48 03.6 -0.8
SALTA                               IAML        19 48 09.1
             comp=Z,304nm,0.7s
AF01  San Pedro de A      1.69 268       Pn     19 47 40.0 +1.9
AF01                                Sn   S      19 48 12.1 +3.3
AF01  San Pedro de A      1.69 268⇑iP    Pn     19 47 40.9 +2.8
AF01                               i S   S      19 48 12.9 +4.1
AF01  San Pedro de A      1.69 268 eP    Pn     19 47 38.5 +0.4
AF01                               eS    S      19 48 09.8 +1.0
PB09  IPOC Station P      2.89 292       Pn     19 47 51.1 +1.4
PB09                                Sn   S      19 48 28.9 -0.9
PB09  IPOC Station P      2.89 292⇑iP    Pn     19 47 51.9 +2.2
PB09  IPOC Station P      2.89 292 eP    Pn     19 47 51.3 +1.6
PB09                               eS    S      19 48 30.3 +0.5
PB09                                IAML        19 48 33.6
             comp=Z,3µm,0.2s
PB06  IPOC Station P      2.98 273       Pn     19 47 51.9 +1.3
PB06                                Sn   S      19 48 30.8 -0.6
PB06  IPOC Station P      2.98 273⇑iP    Pn     19 47 52.2 +1.6
PB06  IPOC Station P      2.98 273 eP    Pn     19 47 51.8 +1.1
PB06                               eS    S      19 48 31.9 +0.4
PB06                                IAML        19 48 37.4
             comp=Z,2µm,0.3s
FSA   Cafayete            3.22 174 eP    Pn     19 47 55.2 +1.8
FSA                                eS    S      19 48 33.8 -2.7
PB03  IPOC Station P      3.25 284       Pn     19 47 54.6 +0.9
PB03                                Sn   S      19 48 35.7 -1.4
PB03  IPOC Station P      3.25 284⇑iP    Pn     19 47 55.1 +1.3
PB03  IPOC Station P      3.25 284 eP    Pn     19 47 54.9 +1.2
PB03                               eS    S      19 48 36.8 -0.3
PB03                                IAML        19 48 40.8
             comp=Z,6µm,0.3s
PB01  IPOC Station P      3.44 302       Pn     19 47 56.7 +0.9
PB01                                Sn   S      19 48 39.6 -1.2
PB01  IPOC Station P      3.44 302⇑iP    Pn     19 47 57.0 +1.2
PB01  IPOC Station P      3.44 302 eP    Pn     19 47 57.1 +1.2
PB01                               eS    S      19 48 41.0 +0.2
PB01                                IAML        19 48 44.1
             comp=Z,2µm,0.2s
PB07  IPOC Station P      3.47 289       Pn     19 47 57.1 +0.9
PB07                                Sn   S      19 48 39.4 -2.1
PB07  IPOC Station P      3.47 289⇑iP    Pn     19 47 57.5 +1.2
PB07  IPOC Station P      3.47 289 eP    Pn     19 47 57.4 +1.2
PB07                               eS    S      19 48 41.2 -0.3
PB07                                IAML        19 48 42.6
             comp=Z,4µm,0.3s
PB05  IPOC Station P      3.55 270       Pn     19 47 57.9 +0.8
PB05                                Sn   S      19 48 40.9 -2.2
PB05  IPOC Station P      3.55 270 eP    Pn     19 47 58.1 +1.1
PB05  IPOC Station P      3.55 270 eP    Pn     19 47 57.7 +0.6
PB05                               eS    S      19 48 42.3 -0.8
PB05                                IAML        19 48 43.3
             comp=Z,2µm,0.6s
PB02  IPOC Station P      3.64 295       Pn     19 47 58.8 +0.7
PB02  IPOC Station P      3.64 295⇑iP    Pn     19 47 59.0 +0.9
PB02  IPOC Station P      3.64 295 eP    Pn     19 47 59.1 +0.9
PB02                               eS    S      19 48 44.4 -0.5
PB02                                IAML        19 48 47.8
             comp=Z,5µm,0.2s
GO02  Mina Guanaco        3.73 232  Pn   Pn     19 48 00.7 +1.4
GO02  Mina Guanaco        3.73 232 eP    Pn     19 48 00.9 +1.7
GO02  Mina Guanaco        3.73 232 eP    Pn     19 48 01.1 +1.8
GO02                                IAML        19 48 50.1
             comp=Z,2µm,0.3s
PB08  IPOC Station P      3.78 316       Pn     19 48 01.1 +1.1
PB10  IPOC Station P      3.92 260       Pn     19 48 00.9 -0.2
PB10  IPOC Station P      3.92 260 eP    Pn     19 48 00.9 -0.2
PB10  IPOC Station P      3.92 260 eP    Pn     19 48 01.0 -0.2
PB10                               eS    S      19 48 48.9 -1.7
PB10                                IAML        19 48 53.1
             comp=Z,2µm,0.4s
AHML  Horco Molle         3.98 167⇑iP    Pn     19 47 48.6  -13
PATCX Punta Patache       4.09 300       Pn     19 48 03.6 +0.3
PATCX Punta Patache       4.09 300⇑iP    Pn     19 48 03.7 +0.4
PB14  IPOC Station P      4.09 244  Pn   Pn     19 48 04.5 +0.9
PB14  IPOC Station P      4.09 244 eP    Pn     19 48 04.5 +0.9
PB14  IPOC Station P      4.09 244 eP    Pn     19 48 04.5 +0.9
PB14                               eS    S      19 48 51.9 -3.0
PB14                                IAML        19 48 57.3
             comp=Z,2µm,0.2s
GO01  Chusmiza            4.16 320       Pn     19 48 05.7 +1.1
GO01  Chusmiza            4.16 320⇑iP    Pn     19 48 06.0 +1.3
HMBC  Humberstone         4.19 308       Pn     19 48 04.7  0.0
HMBC  Humberstone         4.19 308⇑iP    Pn     19 48 04.8  0.0
TA01  Diego Aracena       4.25 302       Pn     19 48 04.8 -0.3
PB11  IPOC Station P      4.38 315       Pn     19 48 06.9  0.0
PB11  IPOC Station P      4.38 315 eP    Pn     19 48 07.1 +0.2
AC02  Maricunga           4.67 212  Pn   Pn     19 48 11.9 +1.2
AC01  Pan de Azucar       5.05 229       Pn     19 48 14.7 -0.2
PB16  IPOC Station P      5.41 326       Pn     19 48 20.8 +0.8
PB12  IPOC Station P      5.65 318       Pn     19 48 20.8 -1.7
AP01  Chacalluta          5.85 320       Pn     19 48 23.8 -1.1
GO03  Copiapo             5.85 216       Pn     19 48 24.7 -0.2
PB18  Visviri             6.04 330       Pn     19 48 29.7 +1.9
LPAZ  La Paz              6.78 345  P    Pn     19 48 38.3 +1.0
             comp=Z,147nm,0.5s,baz=164,slow=7.6,SNR=481
LPAZ                                S    S      19 49 55.3 -0.6
             comp=Z,212nm,0.9s,baz=233,slow=20,SNR=6.8
LPAZ  La Paz              6.78 345       Pn     19 48 38.0 +0.7
LPAZ  La Paz              6.78 345 eP    Pn     19 48 38.3 +1.0
LPAZ                               eS    S      19 49 55.9 -0.1
AC04  Llanos de Chal      6.79 218       Pn     19 48 35.6 -1.1
AC05  El Transito         6.89 210       Pn     19 48 38.0 -0.1
LCO   Las Campanas        7.24 212       Pn     19 48 41.8 -0.8
CO01  Juntas del Tor      7.81 205       Pn     19 48 50.9 +1.1
MURT  Porto Murtinho      8.19  83 eP    Pn     19 48 53.9 -0.6
GO04  Tololo Observa      8.27 208       Pn     19 48 54.6 -1.1
SIV   San Ignacio         8.48  37  P    Pn     19 48 57.9 -0.4
             comp=Z,104nm,0.7s,baz=274,slow=8.6
CFA   Coronel Fontan      8.84 191  P    Pn     19 49 01.4 -1.4
             comp=Z,17nm,0.2s,baz=12,slow=8.2,SNR=150
CFA                                 S    S      19 50 35.8 -6.9
             comp=Z,60nm,0.5s,baz=270,slow=19,SNR=26
CPUP  Villa Florida       8.89 114  P    Pn     19 49 03.3 -0.1
             comp=Z,6.0nm,1.0s,baz=223,slow=19,SNR=25
CPUP  Villa Florida       8.89 114       Pn     19 49 03.0 -0.4
CPUP  Villa Florida       8.89 114 eP    Pn     19 49 03.4 -0.1
CO06  Fray Jorge          9.07 210  Pn   Pn     19 49 04.9 -0.8
BDQN  Bodoquena, MS       9.26  77 eP    Pn     19 49 07.8 -0.3
CO02  Combarbal           9.26 206       Pn     19 49 07.2 -0.9
PTLB  Pontes e Lacer     10.06  44       Pn     19 49 17.5 -0.8
PTLB  Pontes e Lacer     10.06  44 eP    Pn     19 49 17.8 -0.5
AQDB  Aquidauana         10.19  78  Pn   Pn     19 49 19.1 -0.8
AQDB  Aquidauana         10.19  78 eP    Pn     19 49 19.9 -0.1
AMBA  Amambai (Brazi     10.47  92 eP    Pn     19 49 24.0 +0.4
VA03  San Esteban        10.51 200       Pn     19 49 24.8 +0.8
VA06  Catapilco          10.58 203  Pn   Pn     19 49 23.6 -1.1
PEL   Peldehue           10.90 200       Pn     19 49 28.5 -0.4
MT08  Bocatoma Ro        11.00 196       Pn     19 49 30.2  0.0
MT16  CCHEN              11.12 198       Pn     19 49 30.0 -1.6
MT02  Curacav            11.16 201       Pn     19 49 31.2 -0.8
MT03  Universidad Ad     11.18 198       Pn     19 49 32.1 -0.3
PSAL  Palomas, Salto     11.28 138 eP    Pn     19 49 33.9 +0.4
MT13  San Alfonso        11.35 197       Pn     19 49 35.0 +0.4
LMEL  Las Melosas        11.43 196       Pn     19 49 35.5 -0.1
VILB  Vilhena            11.48  32       Pn     19 49 35.8 -0.5
VILB  Vilhena            11.48  32 eP    Pn     19 49 37.2 +0.9
MT09  Talagante          11.59 200       Pn     19 49 36.5 -1.0
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BO04  La Punta           11.67 198       Pn     19 49 38.0 -0.4
MT01  Popeta             11.75 200  Pn   Pn     19 49 38.6 -0.8
PP1B  Ponte de Pedra     11.98  66 eP    Pn     19 49 41.3 -1.2
BO01  Tunca              12.19 199       Pn     19 49 43.7 -1.1
SALV  Santo Antonio      12.22  57 eP    Pn     19 49 44.9 -0.6
BO02  Sierra Bellavi     12.47 197  P    Pn     19 49 47.1 -1.4
PTGB  Pitanga            13.21 101 eP    P      19 49 58.9 -0.6
C2SB  Chapadao do Su     13.28  75 eP    Pn     19 49 58.5 -0.1
ML02  Panimavida         13.56 198  P    Pn     19 49 59.4 -2.4
ITAB  Concordia          13.59 111       Pn     19 50 00.8 -1.5
ITAB  Concordia          13.59 111 eP    P      19 50 02.8 -0.8
CPSB  Cacapava Do Su     13.75 126 eP    Pn     19 50 04.4 +0.2
PLTB  Pedras Altas       14.36 131       Pn     19 50 10.5 -1.1
PLTB  Pedras Altas       14.36 131 eP    Pn     19 50 11.2 -0.4
BI02  San Fabin de       14.37 196  P    Pn     19 50 08.6 -3.2
PDRB  Porto dos Gac      14.49  41 eP    P      19 50 14.2 +0.6
NNA   Nana               14.75 316  P    P      19 50 17.7 +1.2
             comp=Z,44nm,0.7s,baz=163,slow=13,SNR=18
NNA                                 S    S      19 53 00.0 +0.3
             comp=Z,6.9nm,0.3s,baz=219,slow=3.5,SNR=2.4
NNA   Nana               14.75 316  P    Pn     19 50 15.7 -0.8
ITRB  Iturama            15.24  81 eP    Pn     19 50 22.6 +0.3
CNLB  Canela             15.32 118 eP    Pn     19 50 22.8 -0.4
ARAG  Araguaiana, MT     15.47  65 eP    Pn     19 50 24.4 -0.7
TRQA  Tornquist          15.57 167  P    P      19 50 23.9 -1.6
CLDB  Colider            15.64  42 eP    Pn     19 50 26.5 -0.6
BB19B Bebedouro          16.63  87 eP    Pn     19 50 38.3 -0.6
RCLB  Rio Claro- Sao     17.38  92 eP    P      19 50 45.6 +0.2
SPB   Sao Paulo          17.41  96  P    P      19 50 45.1 -0.5
SPB   Sao Paulo          17.41  96 eP    P      19 50 45.9 +0.3
PET01 Itanhaem-SP        17.54  98 eP    P      19 50 47.7 +0.6
IPMB  Ipameri, GO        17.68  77 eP    P      19 50 49.0 +0.3
VAO   Valinhos           17.86  94       P      19 50 50.5 -0.2
VAO   Valinhos           17.86  94 eP    P      19 50 50.9 +0.3
LR05  Currie             17.94 194       P      19 50 51.5 +0.4
SNDB  Serra Nova Dou     17.99  55 eP    P      19 50 51.9 -0.1
PLCA  Paso Flores        18.14 190  P    P      19 50 54.1 +0.6
             comp=Z,18nm,0.8s,baz=16,slow=12,SNR=25
PLCA                                S    S      19 54 09.6 +1.2
             comp=Z,3.6nm,1.1s,baz=54,slow=14,SNR=1.6
PLCA  Paso Flores        18.14 190       P      19 50 53.0 -0.4
PLCA                                IAmb IAmb   19 50 55.4
             comp=Z,17nm,0.8s
PLCA  Paso Flores        18.14 190 eP    P      19 50 54.5 +1.1
BDFB  Brasilia           18.74  71  P    P      19 51 00.5 +0.3
             comp=Z,84nm,0.9s,baz=250,slow=10,SNR=86
BDFB  Brasilia           18.74  71       P      19 51 00.6 +0.3
NPGB  Novo Progresso     18.98  36 eP    P      19 51 00.8 -1.9
PARB  Paraibuna          19.07  95 eP    P      19 51 03.3 -0.4
ATAH  Atahualpa          19.49 322  P    Pn     19 51 11.3 -1.6
             comp=Z,5.4nm,0.7s,baz=151,slow=19,SNR=4.4
ATAH                                S    S      19 54 27.2 -8.7
             comp=Z,10.0nm,0.2s,baz=46,slow=7.9,SNR=63
BSCB  Bom Sucesso        20.11  89 eP    P      19 51 14.9 +0.1
MACA  Manacapuru-AM      20.37  16       P      19 51 15.2 -2.3
MACA  Manacapuru-AM      20.37  16 eP    P      19 51 16.0 -1.5
LL02  Futaleuf           20.75 191       P      19 51 20.4 -0.9
LL02                                IAmb IAmb   19 51 31.6
             comp=Z,18nm,1.1s
ITTB  Itaituba           21.09  31 eP    P      19 51 23.3 -1.7
VAS01 Vassouras-RJ       21.16  93 eP    P      19 51 26.0 +0.3
DIAM  Diamantina, MG     21.71  82 eP    P      19 51 30.8 -0.4
DUB01 Friburgo-RJ        22.17  93 eP    P      19 51 35.1 -0.1
JANB  Januaria           22.23  73 eP    P      19 51 34.9 -1.0
SMTB  Santa Maria do     22.77  55 eP    P      19 51 39.6 -1.2
CAM01 Campos-RJ          22.86  92 eP    P      19 51 40.9 -0.6
SDBA  SAO DESIDERIO      22.91  67 eP    P      19 51 41.0 -1.1
PRPB  Parauapebas        23.03  46 eP    P      19 51 42.3 -0.9
MAL2  Monte Alegre,      23.88  31       P      19 51 48.7 -2.1
SJMB  Sao Joao De Ma     23.88  85 eP    P      19 51 50.2 -0.6
RIB01 Linhares ES        24.47  87 eP    P      19 51 55.5 -0.6
GUA01 Guaratinga, BA     25.74  81 eP    P      19 52 07.3 -0.3
BOAV  Boa Vista          25.77  14  P    P      19 52 06.7 -1.2
BOAV                                IAmb IAmb   19 52 09.1
             comp=Z,16nm,1.3s
BOAV  Boa Vista          25.77  14 eP    P      19 52 07.5 -0.4
FLOC  Florencia          25.96 338  P    P      19 52 07.4 -2.2
FLOC                                IAmb IAmb   19 52 25.2
             comp=Z,11nm,0.7s
CMC01 Camacan, BA        26.41  78 eP    P      19 52 12.7 -0.8
NBIT  Itapeh - BA        26.64  77 eP    P      19 52 14.6 -1.0
RUSC  La Rusia           29.36 346  P    P      19 52 39.8 -0.4
RUSC                                IAmb IAmb   19 52 47.1
             comp=Z,12nm,1.1s
EFI   East Falkland      29.44 169  P    P      19 52 40.6 +0.6
NBPS  Pedro II - PI      30.30  56 eP    P      19 52 46.7 -1.4
NBTA  Tacaratu-PE        30.37  68 eP    P      19 52 47.4 -1.3
SDV   Santo Domingo      31.86 352  P    P      19 53 04.1 +2.3
RCBR  Riachuelo          33.91  65  P    P      19 53 18.9 -0.6
RCBR                                IAmb IAmb   19 53 43.9
             comp=Z,31nm,1.4s
NBPV  Pedro Velho        34.11  66 eP    P      19 53 20.4 -0.7
MPOM  Morne Pois Mar     37.49   9  P    P      19 53 48.1 -1.6
CXM   Morne La Croix     37.81   8  P    P      19 53 50.4 -2.2
CXM                                 IAmb IAmb   19 53 52.4
             comp=Z,43nm,0.8s
AOPR  Arecibo Observ     40.99 359  P    P      19 54 18.4 -0.1
AOPR                                IAmb IAmb   19 54 20.0
             comp=Z,14nm,0.6s
DR12  Loma Pena Alta     41.53 356  P    P      19 54 23.6 +0.6
PMSA  Palmer Station     41.90 179  P    P      19 54 26.3 +1.0
MTO3  Montecristo        43.37 327  P    P      19 54 38.8 +0.8
MTO3                                IAmb IAmb   19 54 40.4
             comp=Z,16nm,0.7s
CCIG  Comitan            46.39 325  IAmb IAmb   19 55 03.5
             comp=Z,16nm,0.7s
553A  Crawfordville      55.56 341  P    P      19 56 10.3 +1.0
BELA  Belgrano 2         57.05 172       P      19 56 20.9 +1.5
ZAIG  Zacatecas          57.46 320       P      19 56 24.5 +1.2
ZAIG                                IAmb IAmb   19 56 26.4
             comp=Z,13nm,0.8s
VNA3  Neumayer Olymp     58.01 161 ⇑P    P      19 56 27.4 +1.4
             comp=Z,20nm,0.7s
VNA1  Neumayer--Stat     58.19 161 ⇑P    P      19 56 28.4 +1.1
             comp=Z,24nm,1.0s
JSC   Jenkinsville       58.60 346  P    P      19 56 31.0 +0.4
JSC                                 IAmb IAmb   19 56 32.4
             comp=Z,23nm,1.1s
LRAL  Lakeview Retre     59.00 340  P    P      19 56 32.4 -0.9
LRAL                                IAmb IAmb   19 56 34.4
             comp=Z,12nm,0.8s
W57A  Gilead             59.16 347  P    P      19 56 33.5 -0.9
W57A                                IAmb IAmb   19 56 35.2
             comp=Z,12nm,0.7s
KMSC  Kings Mountain     59.44 346  P    P      19 56 36.2 -0.1
KMSC                                IAmb IAmb   19 56 37.8
             comp=Z,15nm,0.7s
Y49A  Blount Mountai     59.58 341  IAmb IAmb   19 56 37.9
             comp=Z,19nm,1.1s
BG3   Lake Jocassee      59.68 344  P    P      19 56 38.3 +0.4
BG3                                 IAmb IAmb   19 56 39.4
             comp=Z,16nm,0.7s
FPAL  Fort Paine         59.98 342  IAmb IAmb   19 56 40.6
             comp=Z,11nm,0.8s
V55A  Taylorsville       60.09 346  P    P      19 56 41.4 +0.7
SNAA  Sanae              60.20 161 ⇑P    P      19 56 42.4 +1.2
             comp=Z,358nm,0.9s
SNAA  Sanae              60.20 161  P    P      19 56 42.3 +1.2
             comp=Z,9.7nm,0.8s,baz=282,slow=6.9,SNR=26
             comp=Z,9.7nm,0.8s
SNAA  Sanae              60.20 161  P    P      19 56 42.4 +1.2
SNAA                                IAmb IAmb   19 56 43.5
             comp=Z,12nm,0.8s
V53A  Saluda             60.29 345  IAmb IAmb   19 56 43.5
             comp=Z,12nm,0.7s
X48A  Hartselle          60.32 340  P    P      19 56 42.2 -0.1
W50A  Signal Mountai     60.51 342  IAmb IAmb   19 56 45.1
             comp=Z,26nm,1.1s
TKL   Tuckaleechee C     60.52 344  P    P      19 56 43.1 -0.5
             comp=Z,14nm,0.8s,baz=159,slow=9.0,SNR=10
             comp=Z,14nm,0.8s
TKL   Tuckaleechee C     60.52 344  P    P      19 56 43.6 -0.1
TKL                                 IAmb IAmb   19 56 44.5
             comp=Z,17nm,0.8s
CPCT  Cooper Cave        60.52 343  IAmb IAmb   19 56 44.7
             comp=Z,13nm,0.8s
SWET  Sewanee            60.70 342  P    P      19 56 44.6 -0.3
HNDO  Hondo              60.99 327  IAmb IAmb   19 56 48.7
             comp=Z,10nm,0.8s
V48A  Smith Brothers     61.45 341  IAmb IAmb   19 56 50.6
             comp=Z,18nm,0.8s
R58B  Mineral            61.49 350  P    P      19 56 49.6 -0.5
CLTN  Cedars of Leba     61.63 342  IAmb IAmb   19 56 51.8
             comp=Z,8.8nm,0.7s
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TROLL Troll, Antarti     61.91 161 ⇑P    P      19 56 54.2 +1.5
             comp=Z,860nm,0.7s
JCT   Junction City      62.03 327  IAmb IAmb   19 56 55.3
             comp=Z,12nm,0.8s
WVT   Waverly            62.12 340  P    P      19 56 53.3 -1.0
HPIG                     62.44 320  IAmb IAmb   19 56 59.1
             comp=Z,10.0nm,0.7s
SAND  Sanderson          62.79 325  P    P      19 56 58.1 -0.8
SAND                                IAmb IAmb   19 57 00.9
             comp=Z,16nm,1.1s
OZNA  Ozona              63.05 327  IAmb IAmb   19 57 01.9
             comp=Z,10nm,0.8s
TXAR  Lajitas Array      63.13 324  P    P      19 57 01.5 +0.2
             comp=Z,2.2nm,0.6s,baz=143,slow=6.9,SNR=22
             comp=Z,2.2nm,0.6s
TXAR  Lajitas Array      63.13 324  P    P      19 57 01.2 -0.1
TX31  Lajitas Ar. Si     63.13 324  P    P      19 57 01.5 +0.2
WCI   Wyandotte Cave     63.62 343  P    P      19 57 03.1 -1.0
CGM3  Cape Girardeau     63.77 339  P    P      19 57 04.2 -0.9
CGM3                                IAmb IAmb   19 57 07.3
             comp=Z,13nm,1.1s
ALPN  Alpine             63.93 324  IAmb IAmb   19 57 08.6
             comp=Z,5.5nm,0.6s
WTFS  Witchita Falls     64.11 331  IAmb IAmb   19 57 08.8
             comp=Z,15nm,0.8s
APMT  Aspermont          64.51 329  IAmb IAmb   19 57 11.5
             comp=Z,12nm,0.8s
MGMO  Mountain Grove     64.53 337  P    P      19 57 09.6 -0.5
MGMO                                IAmb IAmb   19 57 10.7
             comp=Z,8.5nm,0.7s
SN07  Snyder 07          64.69 328  IAmb IAmb   19 57 12.4
             comp=Z,8.1nm,0.7s
RLO   Rose Lookout       64.69 335  IAmb IAmb   19 57 12.1
             comp=Z,11nm,0.7s
VHRN  Van Horn           64.98 324  IAmb IAmb   19 57 15.1
             comp=Z,14nm,0.8s
R40A  Maddies Statio     65.54 338  IAmb IAmb   19 57 17.2
             comp=Z,13nm,0.7s
SMWD  Samnorwood         66.03 330  IAmb IAmb   19 57 21.2
             comp=Z,18nm,0.9s
P40A  Paris              66.58 339  IAmb IAmb   19 57 23.8
             comp=Z,15nm,1.0s
DBIC  Dimbokro           66.89  72  P    P      19 57 25.0 -0.6
             comp=Z,9.1nm,0.6s,baz=260,slow=8.4,SNR=8.8
             comp=Z,9.1nm,0.6s
DBIC  Dimbokro           66.89  72  IAmb IAmb   19 57 27.5
             comp=Z,10nm,0.8s
QSPA  South Pole Qui     67.31 180  P    P      19 57 33.2 +5.6
             comp=Z,5.2nm,0.5s,baz=157,slow=8.9,SNR=14
QSPA  South Pole Qui     67.31 180       P      19 57 33.4 +5.8
121A  Cookes Peak, D     67.85 323  P    P      19 57 32.4 +0.9
121A                                IAmb IAmb   19 57 34.6
             comp=Z,15nm,0.9s
SADO  Sadowa             68.34 350  P    P      19 57 33.7 -0.3
             comp=Z,5.5nm,0.7s,baz=159,slow=8.6,SNR=3.1
             comp=Z,5.5nm,0.7s
SADO  Sadowa             68.34 350  IAmb IAmb   19 58 13.4
             comp=Z,18nm,1.1s
ABQ   Albuquerque        68.97 325  IAmb IAmb   19 57 41.0
             comp=Z,10nm,0.9s
ANMO  Albuquerque        68.97 325  P    P      19 57 39.8 +1.4
             comp=Z,7.0nm,0.8s,baz=145,slow=8.4,SNR=18
             comp=Z,7.0nm,0.8s
ANMO  Albuquerque        68.97 325  P    P      19 57 39.1 +0.8
ANMO                                IAmb IAmb   19 57 41.0
             comp=Z,10nm,0.9s
TASM  ASL Pad, Albuq     68.97 325  IAmb IAmb   19 57 41.0
             comp=Z,11nm,0.9s
TASM  ASL Pad, Albuq     68.97 325  IAmb IAmb   19 57 41.0
             comp=Z,10nm,0.9s
TASM  ASL Pad, Albuq     68.97 325  IAmb IAmb   19 57 41.0
             comp=Z,10nm,0.9s
TASM  ASL Pad, Albuq     68.97 325  IAmb IAmb   19 57 41.0
             comp=Z,11nm,0.9s
TUC   Tucson             69.40 321  P    P      19 57 41.6 +0.7
TUC                                 IAmb IAmb   19 57 43.8
             comp=Z,11nm,1.2s
MVCO  Mesa Verde         71.76 326  IAmb IAmb   19 57 58.0
             comp=Z,16nm,1.1s
PV15  Paradox Valley     72.61 326  IAmb IAmb   19 58 03.4
             comp=Z,12nm,1.1s
BLYC  Blythe             72.63 319  IAmb IAmb   19 58 03.4
             comp=Z,15nm,1.1s
PV22  Blue Mesa, Par     72.91 326  IAmb IAmb   19 58 04.7
             comp=Z,12nm,1.0s
BC3   Big Chuckawall     73.13 319  IAmb IAmb   19 58 06.2
             comp=Z,9.2nm,0.9s
BAR   Barrett            73.22 317  IAmb IAmb   19 58 06.5
             comp=Z,15nm,1.2s
U15A  North Rim          73.23 323  IAmb IAmb   19 58 07.4
             comp=Z,11nm,0.8s
HMU   Henry Mountain     73.49 325  P    P      19 58 06.3 +0.8
HMU                                 IAmb IAmb   19 58 08.7
             comp=Z,20nm,1.1s
PFO   Pinyon Flats O     73.71 318  P    P      19 58 08.3 +1.7
             comp=Z,4.7nm,0.7s,baz=128,slow=5.3,SNR=6.8
             comp=Z,4.7nm,0.7s
PFO   Pinyon Flats O     73.71 318  IAmb IAmb   19 58 09.7
             comp=Z,4.8nm,0.8s
ELS   Elsinore Mount     74.33 318  IAmb IAmb   19 58 13.2
             comp=Z,9.0nm,0.9s
CCUT  Cedar City         74.63 323  IAmb IAmb   19 58 15.7
             comp=Z,16nm,0.8s
BSUT  Blindstream Ca     75.42 327  IAmb IAmb   19 58 19.5
             comp=Z,13nm,0.9s
PRN   Pahroc Range       75.48 322  IAmb IAmb   19 58 20.2
             comp=Z,10nm,1.0s
MPU   Maple Canyon       75.49 326  IAmb IAmb   19 58 19.6
             comp=Z,7.7nm,0.7s
QSM   Queen of Sheba     75.55 320  P    P      19 58 17.4 +0.4
QSM                                 IAmb IAmb   19 58 19.6
             comp=Z,9.5nm,0.8s
PSUT  Pine Spring        75.60 323  IAmb IAmb   19 58 20.6
             comp=Z,9.8nm,0.8s
TORD  Torodi Ar. Bea     75.62  69  P    P      19 58 16.9 -0.9
             comp=Z,4.7nm,0.5s,baz=248,slow=6.6,SNR=4.9
             comp=Z,4.7nm,0.5s
WSHM  Spangler Hills     75.68 319  P    P      19 58 18.8 +1.0
WSHM                                IAmb IAmb   19 58 20.6
             comp=Z,11nm,0.8s
VNDA  Vanda              75.89 190  P    P      19 58 20.8 +2.5
             comp=Z,0.9nm,0.7s,baz=131,slow=11,SNR=1.8
             comp=Z,0.9nm,0.7s
WCT   Wildcat Mounta     75.97 320  IAmb IAmb   19 58 22.9
             comp=Z,15nm,1.0s
EPLO  Experimental L     76.23 342  IAmb IAmb   19 58 21.4
             comp=Z,11nm,0.7s
DUG   Dugway, Tooele     76.23 325  IAmb IAmb   19 58 23.9
             comp=Z,9.5nm,1.0s
ISA   Isabella, Lake     76.31 319  P    P      19 58 22.6 +1.3
ISA                                 IAmb IAmb   19 58 24.5
             comp=Z,12nm,0.8s
R11B  Troy Canyon, C     76.44 322  IAmb IAmb   19 58 25.5
             comp=Z,17nm,1.3s
PDAR  Pinedale Array     76.51 329  P    P      19 58 23.2 +0.7
             comp=Z,1.7nm,0.6s,baz=133,slow=4.2,SNR=12
             comp=Z,1.7nm,0.6s
ULM   Lac du Bonnet      77.37 341  P    P      19 58 26.8  0.0
             comp=Z,5.6nm,0.6s,baz=145,slow=1.7,SNR=6.9
             comp=Z,5.6nm,0.6s
TSUM  Tsumeb             77.38 106  P    P      19 58 27.3 -0.5
TSUM                                IAmb IAmb   19 58 29.6
             comp=Z,15nm,1.1s
SCHQ  Schefferville      77.41 360  P    P      19 58 26.7 -0.2
             comp=Z,3.3nm,0.7s,baz=175,slow=12,SNR=4.3
             comp=Z,3.3nm,0.7s
ELK   Elko               77.92 324  P    P      19 58 32.2 +1.8
             comp=Z,5.8nm,0.8s,baz=132,slow=8.3,SNR=25
             comp=Z,5.8nm,0.8s
NVAR  Mina Array Bea     78.05 321  P    P      19 58 32.8 +1.6
             comp=Z,6.0nm,0.9s,baz=128,slow=3.4,SNR=23
             comp=Z,6.0nm,0.9s
NVAR  Mina Array Bea     78.05 321  P    P      19 58 31.7 +0.6
RLMT  Red Lodge          78.17 330  P    P      19 58 32.2 +0.6
RLMT                                IAmb IAmb   19 58 34.0
             comp=Z,6.2nm,0.6s
YNE   Yellowstone No     78.42 330  IAmb IAmb   19 58 35.5
             comp=Z,9.5nm,0.7s
WAKR  Walker             78.77 320  IAmb IAmb   19 58 38.4
             comp=Z,8.3nm,0.9s
YHL   Hebgen Lake        78.85 329  IAmb IAmb   19 58 38.4
             comp=Z,6.1nm,0.5s
CMB   Columbia Colle     79.03 319  P    P      19 58 37.2 +1.0
HLID  Hailey             79.49 327  IAmb IAmb   19 58 42.0
             comp=Z,12nm,0.9s
DLMT  Dillon             79.90 329  IAmb IAmb   19 58 44.5
             comp=Z,18nm,1.4s
BEKR  Beckworth          80.20 321  IAmb IAmb   19 58 45.4
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	comp=Z,8.5nm,0.9s						
ORV	Oroville	80.67	320	P	P	19 58 46.2	+1.2
ORV				IAmb	IAmb	19 58 47.9	
	comp=Z,13nm,0.9s						
BOSA	Boshof	80.71	117	P	P	19 58 45.2	-0.6
	comp=Z,5.9nm,1.0s,baz=254,slow=5.1,SNR=6.0						
	comp=Z,5.9nm,1.0s						
O03E	Paynes Creek	81.32	320	IAmb	IAmb	19 58 49.9	
	comp=Z,13nm,0.9s						
PLID	Pearl Lake	81.37	327	IAmb	IAmb	19 58 50.8	
	comp=Z,7.0nm,0.7s						
J08A	Circle Bar Ran	81.47	324	P	P	19 58 50.8	+1.6
J08A				IAmb	IAmb	19 58 51.6	
	comp=Z,9.7nm,0.6s						
MAW	Mawson	82.31	163	P	P	19 58 53.8	+0.6
	comp=Z,4.4nm,0.7s,baz=230,slow=7.8,SNR=6.9						
	comp=Z,4.4nm,0.7s						
K05A	Summer Lake	82.37	323	IAmb	IAmb	19 58 57.0	
	comp=Z,18nm,0.9s						
KHBM	Hayfork Bally	82.39	320	IAmb	IAmb	19 58 56.7	
	comp=Z,13nm,0.9s						
YBH	Yreka Blue Hor	82.77	321	P	P	19 58 56.4	+0.4
	comp=Z,0.2nm,0.6s,baz=131,slow=3.6,SNR=12						
PINE	Pine Mountain	83.09	324	IAmb	IAmb	19 59 00.6	
	comp=Z,12nm,1.1s						
TAM	Tamanrasset	83.35	62		P	19 58 59.0	-0.5
TAM				IAmb	IAmb	19 59 00.2	
	comp=Z,13nm,0.9s						
J04A	Umpqua Nationa	83.39	323	IAmb	IAmb	19 59 01.4	
	comp=Z,14nm,0.9s						
BBOR	Butler Butte	83.48	322	P	P	19 58 59.6	0.0
K02D	Willamette Mer	83.92	321	IAmb	IAmb	19 59 05.0	
	comp=Z,11nm,1.0s						
NEW	Newport	84.15	329	P	P	19 59 03.5	+0.8
	comp=Z,2.7nm,0.7s,baz=83,slow=16,SNR=3.9						
	comp=Z,2.7nm,0.7s						
C09A	Chrisman Ranch	84.39	328	IAmb	IAmb	19 59 06.0	
	comp=Z,7.5nm,0.6s						
EPH	Ephrata	84.74	327	IAmb	IAmb	19 59 08.2	
	comp=Z,12nm,1.3s						
ESDC	Sonseca Array	85.19	43	P	P	19 59 08.8	+0.7
	comp=Z,2.8nm,1.0s,baz=245,slow=4.0,SNR=7.6						
	comp=Z,2.8nm,1.0s						
ESDC	Sonseca Array	85.19	43	IAmb	IAmb	19 59 10.0	
	comp=Z,5.7nm,1.3s						
LSZ	Lusaka	88.23	106	P	P	19 59 24.6	+1.1
YKA	Yellowknife Ar	93.29	340	P	P	19 59 45.7	+0.1
	comp=Z,2.5nm,0.8s,baz=137,slow=3.8,SNR=24						
	comp=Z,2.5nm,0.8s						
YKA	Yellowknife Ar	93.29	340	P	P	19 59 45.8	+0.2
ASAR	Alice Springs	129.71	204	PKP	PKPdf	20 05 40.2	+0.2
	comp=Z,2.0nm,0.7s,baz=146,slow=2.3,SNR=26						
ASAR				SKPbc	SKPab	20 08 39.7	+0.6
	comp=Z,3.1nm,0.8s,baz=152,slow=3.3,SNR=21						
WRA	Warramunga Arr	132.88	207	PKP	PKPdf	20 05 47.0	+0.9
	comp=Z,1.2nm,0.6s,baz=154,slow=1.9,SNR=23						
WRA				SKPbc	SKPbc	20 08 50.8	0.0
	comp=Z,8.1nm,1.0s,baz=152,slow=3.4,SNR=25						
WRA	Warramunga Arr	132.88	207		PKPdf	20 05 47.0	+0.9
PETK	Petropavlovsk-	135.09	324	PKP	PKiKP	20 05 50.3	-0.4
	comp=Z,4.5nm,0.9s,baz=36,slow=2.7,SNR=2.0						
BVAR	Borovoye Array	135.55	36	PKP	PKiKP	20 05 51.4	-0.2
	comp=Z,0.6nm,0.6s,baz=279,slow=2.8,SNR=4.6						
BVAR				SKP	SKPbc	20 09 00.5	+2.2
	comp=Z,0.6nm,0.6s,baz=336,slow=3.2,SNR=3.6						
FITZ	Fitzroy Crossi	137.61	197	PKP	PKPdf	20 05 55.0	+0.2
	comp=Z,1.5nm,0.7s,baz=170,slow=3.2,SNR=7.0						
FITZ				SKPbc	SKPbc	20 09 05.5	-0.1
	comp=Z,5.9nm,0.9s,baz=197,slow=1.5,SNR=11						
KURBB	Kurchatov Arra	141.14	36	PKP	PKPdf	20 05 59.7	-0.5
	comp=Z,0.6nm,0.6s,baz=303,slow=3.0,SNR=8.5						
KURBB				SKPbc	SKPbc	20 09 14.3	+0.2
	comp=Z,0.3nm,0.6s,baz=302,slow=3.1,SNR=5.8						
ZALV	Zalesovo Beam	142.14	28	PKhKP	PKPpre	20 05 58.5	
	comp=Z,2.3nm,0.5s,baz=313,slow=2.9,SNR=11						
ZALV				PKP	PKPdf	20 06 02.7	+0.8
	comp=Z,2.3nm,0.5s,baz=303,slow=1.5,SNR=8.7						
ZALV				SKPbc	SKPbc	20 09 16.0	-0.5
	comp=Z,1.0nm,0.5s,baz=299,slow=3.2,SNR=4.0						
KSH	Kashi	144.07	54	PKP	PKPbc	20 06 04.9	+0.2
MKAR	Makanchi Array	145.29	39	PKPbc	PKPab	20 06 08.6	+0.1
	comp=Z,1.7nm,0.5s,baz=301,slow=3.5,SNR=15						
MKAR				SKPbc	SKPbc	20 09 24.4	0.0
	comp=Z,0.9nm,0.6s,baz=305,slow=3.4,SNR=6.2						
MKAR				SKKPbc	SKKPab	20 17 23.4	+1.0
	comp=Z,1.0nm,0.8s,baz=126,slow=3.7,SNR=5.2						
MKAR	Makanchi Array	145.29	39		PKPab	20 06 08.6	+0.1
MKAR					SKPbc	20 09 24.7	+0.4
BATI	Baumata	145.68	198	PKPbc	PKPdf	20 06 10.1	+0.7
	comp=Z,9.4nm,0.5s,baz=124,slow=3.6,SNR=5.7						
KAPI	Kappang	151.63	193	PKPbc	PKiKP	20 06 26.7	+0.9
	comp=Z,5.7nm,0.3s,baz=188,slow=7.1,SNR=4.2						
HILR	Hailar Array B	152.96	351	PKPbc	PKPbc	20 06 27.5	+0.1
	comp=Z,2.5nm,0.6s,baz=8.5,slow=2.9,SNR=3.7						
HILR				PKPab	PKPab	20 06 39.1	-0.4
	comp=Z,4.8nm,0.6s,baz=0.0,slow=4.5,SNR=2.6						
USRK	Ussuriysk Ar.	153.93	329	PKPbc	PKiKP	20 06 30.9	+1.3
	comp=Z,1.6nm,0.5s,baz=48,slow=4.6,SNR=2.1						
SONM	Songino Array	154.44	11	PKP	PKPdf	20 06 23.0	+0.8
	comp=Z,1.1nm,0.8s,baz=336,slow=3.2,SNR=6.2						
SONM				PKPbc	PKiKP	20 06 31.8	+1.1
	comp=Z,1.8nm,0.8s,baz=316,slow=1.9,SNR=7.7						
SONM				PKPab	PKPab	20 06 46.3	+0.3
	comp=Z,0.7nm,0.7s,baz=327,slow=3.0,SNR=2.7						
MJAR	Matsushiro Arr	154.79	308	PKPbc	PKiKP	20 06 32.2	+0.5
	comp=Z,2.0nm,0.7s,baz=98,slow=2.0,SNR=4.7						
MJAR				PKPab	PKPab	20 06 48.5	+0.6
	comp=Z,3.0nm,0.8s,baz=67,slow=3.7,SNR=5.2						
HHC	Hu-ho-hao-te	162.01	5	*e*P	PKPdf	20 06 31.8	+0.3
CMAR	Chiang Mai Arr	165.55	105	PKPab	PKPab	20 07 35.2	-0.1
	comp=Z,2.5nm,0.8s,baz=251,slow=4.1,SNR=17						
PZH	PanZhiHua	168.60	69	PKP	PKPdf	20 06 35.6	-1.8
NJ2	Nanjing	169.77	334	*e*P	PKPdf	20 06 37.0	-0.8
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						

*IDC **03** 19:48:28.1±0.7, 30°.45S×178°.19W, h0^{km}, mb4.2/7, mbtmp4.2/8, ML3.6/1, Error ellipse: s-maj=26.3km s-min=23.2km az=136.0*

*NEIC **03** 19:48:40.5±1.2, 30°.84S±0°.08×178°.4W±0°.2, h90^{km}±1^{km}, mb4.4/17, Error ellipse: s-maj=22.1km s-min=9.9km az=109.0*

ISC 03 19:48:40.8±0.6**, 30°.93S**±0°.06×**178°.3W**±0°.1**, h100**^{km}**, n68,** σ**1^{s}98**/73**, mb4.3**/16**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.70	13	P	Pn	19 49 08.5	-1.2
GLKZ				S	Sn	19 49 28.6	-2.9
RAO	Raoul Island	1.71	12	LR	LR	19 48 54.8	
	comp=Z,99nm,19.0s,baz=50,slow=22						
RAO				Pn	Pn	19 49 03.1	-6.6
	47nm,0.3s,baz=270,slow=20,SNR=1.8						
RAO				Sn	Sn	19 49 30.1	-1.7
	470nm,0.3s,baz=131,slow=20,SNR=9.2						
RAO	Raoul Island	1.71	12		Pn	19 49 08.0	-1.8
RAO					Sn	19 49 28.6	-3.1
RIZ	Raoul Island	1.72	12	P	Pn	19 49 09.6	-0.2
RIZ				S	Sn	19 49 31.2	-0.7
MXZ	Matakaoa Point	7.17	202	Pn	Pn	19 50 21.6	-1.4
MXZ	Matakaoa Point	7.17	202	S	Sn	19 51 40.7	-2.2
WMGZ	Waiomatatini S	7.38	200	P	Pn	19 50 23.3	-2.5
WMGZ				S	Sn	19 51 45.5	-2.4
PKGZ	Pakihiroa	7.52	202	P	Pn	19 50 25.0	-2.8
PKGZ				S	Sn	19 51 51.4	-0.1
HAZ	Te Kaha	7.53	204	P	Pn	19 50 25.6	-2.2
HAZ				S	Sn	19 51 49.5	-2.0
PUZ	Puketiti	7.66	201	P	Pn	19 50 26.6	-3.0
PUZ				S	Sn	19 51 48.0	-6.7
RUGZ	Raukumara Rang	7.75	204	P	Pn	19 50 28.0	-3.0
RUGZ				S	Sn	19 51 56.2	-0.9
CNGZ	Carnagh Statio	8.05	200	P	Pn	19 50 32.0	-3.0
MWZ	Matawai	8.13	204	P	Pn	19 50 32.4	-3.7
MWZ				S	Sn	19 52 06.8	+0.5
URZ	Urewera	8.22	206	Pn	Pn	19 50 34.4	-2.8
	0.7nm,0.3s,baz=33,slow=17,SNR=14						
URZ				Sn	Sn	19 52 06.1	-2.1
	5.8nm,0.3s,baz=96,slow=19,SNR=10						
	2.1nm,0.3s						
URZ	Urewera	8.22	206	P	Pn	19 50 34.4	-2.8
TOZ	Tahuroa Road	8.48	215	Pn	Pn	19 50 41.7	+0.9
MUGZ	Murupara	8.54	207	P	Pn	19 50 38.7	-2.9
MUGZ				S	Sn	19 52 13.1	-3.0
BKZ	Black Stump Fm	9.24	206	Pn	Pn	19 50 50.8	-0.4
KAHZ	Kahuranaki	9.67	202	P	Pn	19 50 51.6	-5.4
PWZ	Pawanui	9.88	202	P	Pn	19 50 56.7	-3.1
TSZ	Takapari Road	10.22	205	P	Pn	19 51 01.5	-3.0
BFZ	Birch Farm	10.67	203	Pn	Pn	19 51 08.3	-2.3
EIDS	Eidsvold	27.47	274	P	P	19 54 18.6	+0.9
EIDS				IAmb	IAmb	19 54 33.5	
	comp=Z,9.6nm,1.2s						
CTAO	Charters Tower	33.60	280	P	P	19 55 11.5	-0.2
STKA	Stephens Creek	34.08	258	P	P	19 55 17.6	+1.8
	comp=Z,7.0nm,0.7s,baz=98,slow=10,SNR=10						
	comp=Z,7.0nm,0.7s						
STKA	Stephens Creek	34.08	258	P	P	19 55 17.1	+1.3
BBOO	Buckleboo	38.54	255	P	P	19 55 53.6	-0.1
COEN	Coen	39.14	287	P	P	19 55 59.5	+0.7
COEN				IAmb	IAmb	19 56 38.6	
	comp=Z,8.0nm,1.2s						
AS31	Alice Springs	42.79	268	P	P	19 56 28.5	-0.4
AS31				IAmb	IAmb	19 56 31.1	
	comp=Z,1.5nm,0.3s						
ASAR	Alice Springs	42.79	268	P	P	19 56 28.6	-0.3
	comp=Z,2.6nm,0.6s,baz=108,slow=8.1,SNR=35						
ASAR				PcP	PcP	19 58 20.4	+1.9
	comp=Z,0.2nm,0.4s,baz=105,slow=3.6,SNR=2.0						
	comp=Z,2.6nm,0.6s						
ASAR	Alice Springs	42.79	268	P	P	19 56 27.8	-1.1
WR8	Warramunga Arr	43.68	273		P	19 56 35.5	-0.5
WR8				IAmb	IAmb	19 56 37.0	
	comp=Z,5.3nm,0.9s						
WRA	Warramunga Arr	43.83	273	P	P	19 56 36.9	-0.3
	comp=Z,3.5nm,0.3s,baz=113,slow=8.2,SNR=106						
	comp=Z,3.5nm,0.3s						
WRA	Warramunga Arr	43.83	273		P	19 56 36.3	-0.8
WB0	Warramunga Arr	43.85	273		P	19 56 37.0	-0.4
WB0				IAmb	IAmb	19 56 38.3	
	comp=Z,5.4nm,0.8s						
FORT	Forrest	45.63	256	P	P	19 56 51.1	-0.2
FORT				IAmb	IAmb	19 57 11.1	
	comp=Z,9.4nm,1.1s						
VNDA	Vanda	47.54	186	P	P	19 57 10.1	+4.5
	comp=Z,1.0nm,0.7s,baz=20,slow=7.8,SNR=5.8						
	comp=Z,1.0nm,0.7s						
VNDA	Vanda	47.54	186	P	P	19 57 09.2	+3.6
KNRA	Kununurra	50.45	275	P	P	19 57 28.4	-0.2
FITZ	Fitzroy Crossi	52.07	270	P	P	19 57 39.9	-0.8
	comp=Z,1.6nm,0.7s,baz=124,slow=8.1,SNR=11						
	comp=Z,1.6nm,0.7s						
FITZ	Fitzroy Crossi	52.07	270	P	P	19 57 40.1	-0.6
CASY	Casey	54.53	208	P	P	19 57 58.0	0.0
KAE	Kaena	54.69	27	P	P	19 57 59.0	-0.6
MORW	Morawa	56.10	254	P	P	19 58 09.4	-0.5
MORW				IAmb	IAmb	19 58 51.2	
	comp=Z,6.6nm,1.1s						
QSPA	South Pole Qui	59.18	180	P	P	19 58 38.9	+7.8
	comp=Z,6.6nm,0.8s,baz=18,slow=4.8,SNR=6.3						
BELA	Belgrano 2	69.30	172	P	P	19 59 39.4	+2.5
BELA				IAmb	IAmb	19 59 40.1	
	comp=Z,2.7nm,0.7s						
SNAA	Sanae	77.64	179	P	P	20 00 27.3	+1.5
	comp=Z,0.9nm,0.3s,baz=192,slow=20,SNR=3.8						
	comp=Z,0.9nm,0.3s						
SNAA	Sanae	77.64	179	P	P	20 00 26.7	+0.9
SNAA				IAmb	IAmb	20 00 31.5	
	comp=Z,3.8nm,1.1s						
H03S2	Juan Fernandez	80.42	124	T	T	21 29 59.0	
	baz=238,slow=74,SNR=11						
H03S1	Juan Fernandez	80.43	124	T	T	21 30 00.4	
	baz=238,slow=74,SNR=12						
H03S3	Juan Fernandez	80.44	124	T	T	21 29 59.0	
	baz=238,slow=74,SNR=13						
H03N3	Juan Fernandez	80.61	123	T	T	21 30 13.5	
	baz=242,slow=72,SNR=7.2						
H03N2	Juan Fernandez	80.62	123	T	T	21 30 17.6	
	baz=242,slow=72,SNR=4.6						
H03N1	Juan Fernandez	80.63	123	T	T	21 30 10.8	
	baz=242,slow=72,SNR=9.0						
NVAR	Mina Array Bea	88.83	43	P	P	20 01 23.1	-0.7
	comp=Z,0.5nm,0.7s,baz=233,slow=4.8,SNR=3.2						
	comp=Z,0.5nm,0.7s						
KURK	Kurchatov	121.20	314		PKPdf	20 07 21.0	-0.6
KURBB	Kurchatov Arra	121.24	313	PKP	PKPdf	20 07 21.0	-0.7
	comp=Z,0.6nm,0.5s,baz=114,slow=2.0,SNR=6.3						
BVAR	Borovoye Array	126.58	315	PKP	PKPdf	20 07 31.8	0.0
	comp=Z,0.7nm,0.4s,baz=99,slow=2.2,SNR=7.1						
KBZ	Khabaz	145.16	303	PKPbc	PKPbc	20 08 05.8	-0.4
	comp=Z,4.0nm,1.2s,baz=45,slow=1.4,SNR=3.7						
FIA1	FINESS Array S	145.54	339		PKPdf	20 08 06.1	-0.4
FINES	FINESS Array B	145.54	339	PKPbc	PKPdf	20 08 06.3	-0.2
	comp=Z,4.0nm,0.4s,baz=41,slow=3.8,SNR=79						
NB2	NORSAR Subarra	149.23	351	PKP	PKPbc	20 08 16.9	-0.2
	comp=Z,0.4nm,0.4s,baz=35,slow=2.6						
NOA	NORSAR Array B	149.23	351	PKPbc	PKPbc	20 08 16.6	-0.5
	comp=Z,1.3nm,0.5s,baz=17,slow=2.6,SNR=5.4						
HFS	Hagfors	149.70	348	PKPbc	PKPbc	20 08 17.8	-0.4
	comp=Z,2.0nm,0.5s,baz=44,slow=4.6,SNR=17						
MMAI	Mount Meron Ar	151.37	283	PKPbc	PKiKP	20 08 24.3	+0.7
	comp=Z,1.4nm,0.4s,baz=98,slow=6.1,SNR=7.9						
AKASG	Malin Array Be	151.54	322	PKPbc	PKPbc	20 08 22.2	-0.6
	comp=Z,1.2nm,0.5s,baz=54,slow=2.9,SNR=6.4						
BRTR	Keskin Array B	152.59	297	PKPbc	PKPbc	20 08 26.0	+0.2
	comp=Z,0.7nm,0.5s,baz=126,slow=4.5,SNR=4.1						
BRTR				PKPab	PKPab	20 08 36.4	-0.3
	comp=Z,1.4nm,0.8s,baz=57,slow=5.3,SNR=4.4						
TORD	Torodi Ar. Bea	162.30	180	PKPab	PKPab	20 09 20.3	+1.5
	comp=Z,2.0nm,0.3s,baz=155,slow=2.3,SNR=1.9						

*IDC **03** 19:53:35.6±1.0, 1°.62S×120°.94E, h0^{km}, mb3.5/7, mbtmp3.5/8, ML3.8/1, MS3.2/2, Error ellipse: s-maj=44.0km s-min=17.4km az=71.0*

*DJA **03** 19:53:40.0±0.2, 2°S±2°×12°0E±°, h10^{km}, M3.8/14, MLv3.8/14*

ISC 03 19:53:39.5±0.8**, 1°.66S**±0°.04×**120°.61E**±0°.06**, h23**^{km}**, n24,** σ**2^{s}11**/25**, mb3.7**/7**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCI	Palu	1.07	314	P	Pn	19 53 59.8	+0.6
APSI	Ampana	1.28	54	P	Pb	19 54 05.5	+2.5
TTSI	Tana Toraja	1.58	210	P	Pn	19 54 03.0	-3.1
MMSI	Mamuju	1.98	239	P	Pn	19 54 10.8	-0.8
MMSI				S	Sn	19 54 34.0	-1.7
MPSI	Mapaga	2.11	340	P	Pb	19 54 16.2	-0.8
LUWI	Luwuk	2.25	74	P	Pb	19 54 17.6	-1.9
SPSI	Sidrap Palu	2.43	200	P	Pn	19 54 18.3	+0.5
PMSI	Majene	2.49	223	P	Pn	19 54 19.7	+1.1
MRSI	Marisa	2.51	32	P	Pb	19 54 21.3	-2.6
BNSI	Bone	2.76	190	P	Pn	19 54 23.8	+1.4
KDI	Kendari	3.04	139	P	Pb	19 54 30.6	-2.3
GTOI	Gorontalo	3.32	47	P	Pb	19 54 33.8	-3.8
KAPI	Kappang	3.44	194	Pn	Pn	19 54 33.0	+1.4
	8.0nm,0.3s,baz=21,slow=8.6,SNR=12						
KAPI				Sn	Sn	19 55 15.1	+3.4
	4.6nm,0.3s,baz=45,slow=20,SNR=4.9						
	16nm,0.3s						
KAPI	Kappang	3.44	194	P	Pn	19 54 33.7	+2.1
BKSI	Bulukumba	3.67	188	P	Pn	19 54 37.0	+2.2
BSSI	Bau Bau, Buton	4.45	181	P	Pn	19 54 47.1	+1.5
WRA	Warramunga Arr	22.59	144	P	P	19 58 35.0	-3.6
	0.9nm,0.9s,baz=323,slow=11,SNR=5.6						
	0.9nm,0.9s						
ASAR	Alice Springs	25.39	151	P	P	19 59 05.2	-0.2
	0.2nm,0.7s,baz=343,slow=13,SNR=1.7						
	0.2nm,0.7s						
CMAR	Chiang Mai Arr	29.22	314	P	P	19 59 41.7	+1.9
	1.1nm,0.7s,baz=128,slow=8.4,SNR=8.7						
CMAR				LR	LR	20 12 10.0	
	comp=Z,23nm,21.9s,baz=120,slow=38						
	1.1nm,0.7s						
SONM	Songino Array	50.84	348	P	P	20 02 39.2	+0.8
	0.9nm,0.6s,baz=164,slow=8.0,SNR=6.9						
	0.9nm,0.6s						
MKAR	Makanchi Array	58.81	330	P	P	20 03 36.8	+0.7
	0.5nm,0.6s,baz=131,slow=7.5,SNR=7.2						
	0.5nm,0.6s						
ZALV	Zalesovo Beam	62.87	337	P	P	20 04 03.7	+0.2
	0.3nm,0.3s,baz=120,slow=8.5,SNR=2.0						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	63.23	331	P	P	20 04 05.2	-0.8
	0.2nm,0.5s,baz=129,slow=5.9,SNR=4.6						
	0.2nm,0.5s						
MAW	Mawson	76.64	199	LR	LR	20 33 59.9	
	comp=Z,30nm,20.1s,baz=109,slow=32						

NOU 03 20:15:32.9, 15°.08S×166°.46E, h10^{km}, MLv4.6/16**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.81	117	P	Pb	20 15 48.9	-0.1
SANVU	Saraoutou	0.81	117	S	Sb	20 15 59.9	0.0
DVP	Devils Point	3.11	148	P	Pn	20 16 22.3	+0.3
DZM	Mont Dzumac	6.95	180	P	Pn	20 17 14.9	-0.1
YATNC	Mamie plateau,	6.95	177	P	Pn	20 17 13.7	-1.2
NGOA	Tingoa Renbel	7.14	299	P	Pn	20 17 17.5	0.0
OUENC	Ouen Island, N	7.31	177	P	Pn	20 17 20.5	+0.7

*IDC **03** 20:26:08.7±5.2, 5°.66S×103°.72E, h0^{km}, mb3.4/4, mbtmp3.5/4, Error ellipse: s-maj=223.6km s-min=69.8km az=52.0*

*DJA **03** 20:26:10.9±1.1, 6°S±7°×10°4E±°, h10^{km}, M3.2/5, MLv3.2/5*

ISC 03 20:26:10.9±1.7**, 6°.2S**±0°.1×**103°.57E**±0°.10**, h38**^{km}**, n13,** σ**1^{s}39**/13**, mb3.6**/4**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	Kota Agung	1.14	54	P	Pn	20 26 30.0	-0.4
KASI				S	Sn	20 26 42.9	-1.9
LWLI	Liwa	1.28	22	P	Pn	20 26 32.3	-0.1
LWLI				S	Sn	20 26 47.0	-1.3
MDSI	Maura Dua	1.81	19	P	Pn	20 26 39.5	-0.1
MDSI				S	Sn	20 27 03.2	+1.8
KLSI		1.90	37	P	Pn	20 26 43.3	+2.5
MNAI	Manna	1.94	341	P	Pn	20 26 41.4	+0.1
CMAR	Chiang Mai Arr	24.93	350	P	P	20 31 29.5	-1.3
	0.3nm,0.5s,baz=168,slow=9.1,SNR=1.6						
	0.3nm,0.5s						
MKAR	Makanchi Array	56.05	343	P	P	20 35 45.9	-0.2
	0.4nm,0.6s,baz=147,slow=8.1,SNR=5.4						
	0.4nm,0.6s						
H04N2	CROZET ISLANDS	59.68	219	T	T	21 40 50.3	
	baz=65,slow=75,SNR=4.6						
H04N1	CROZET ISLANDS	59.69	219	T	T	21 40 51.2	
	baz=65,slow=75,SNR=5.5						
H04N3	CROZET ISLANDS	59.70	219	T	T	21 40 42.9	
	baz=65,slow=75,SNR=4.0						
ZALV	Zalesovo Beam	61.98	348	P	P	20 36 27.2	+0.3
	0.7nm,0.7s,baz=152,slow=6.5,SNR=2.7						
	0.7nm,0.7s						
BVAR	Borovoye Array	65.35	339	P	P	20 36 49.1	-0.1
	0.2nm,0.4s,baz=134,slow=8.3,SNR=2.0						
	0.2nm,0.4s						
TXAR	Lajitas Array	145.51	45	PKPbc	PKPab	20 45 47.7	+1.5
	0.2nm,0.4s,baz=296,slow=1.5,SNR=2.2						

*IDC **03** 20:28:55.0±4.4, 35°.32N×25°.96E, h0^{km}, mb3.9/6, mbtmp3.7/9, ML2.8/3, Error ellipse: s-maj=79.3km s-min=34.0km az=32.0*

*ISK **03** 20:29:02.6, 35°.37N×26°.24E, h13^{km}, ML2.9/16*

*AFAD **03** 20:29:03.4, 35°.37N×26°.64E, h9^{km}±1^{km}, ML2.8*

*ATH **03** 20:29:03.7, 35°.36N×26°.30E, h23^{km}±2^{km}, ML3.0/12, Manual Solution by N.Liadopoulou First location: 2019/12/03 20:30:19, This location: 2019/12/03 20:54:16 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

*THE **03** 20:29:04.7, 35°N±2°×2°6E±°, h19^{km}±3^{km}, M2.9/21, MLh2.9/21*

ISC 03 20:29:03.4±0.9**, 35°.37N**±0°.03×**26°.27E**±0°.02**, h19**^{km}±2^{km}**, n107,** σ**1^{s}22**/135**, mb3.8**/6**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIT2	Siteia	0.21	219	P	Pg	20 29 10.2	+1.6
SIT2				S	Sg	20 29 13.0	+0.9
ZKR	Zakros	0.26	190	P	Pb	20 29 10.2	+0.9
ZKR				S	Sg	20 29 15.3	+1.9
ZKR	Zakros	0.26	190	P	Pb	20 29 09.9	+0.6
ZKR				S	Sb	20 29 14.5	+1.3
NPS	Neapolis	0.55	259	P	Pb	20 29 15.1	+0.8
NPS				S	Sg	20 29 23.7	+1.9
NPS	Neapolis	0.55	259	P	Pb	20 29 14.6	+0.3
NPS				S	Sg	20 29 23.4	+1.5
KARP	Karpathos	0.75	76	P	Pb	20 29 19.0	+1.2
KARP				S	Sg	20 29 30.1	+2.0
KARP	Karpathos	0.75	76	P	Pb	20 29 18.6	+0.8
KARP				S	Sb	20 29 27.4	-0.3
IACM	Heraklion	0.98	267	P	Pb	20 29 22.4	+0.6
IACM				S	Sb	20 29 35.5	+1.2
IACM	Heraklion	0.98	267	P	Pb	20 29 22.4	+0.6
IACM				S	Sg	20 29 35.7	+0.2
IDI	Anoyia	1.13	266	P	Pn	20 29 24.0	-0.2
IDI				S	Sb	20 29 39.8	+1.1
IDI	Anoyia	1.13	266	Pn	Pn	20 29 24.3	+0.1
IDI				Sn	Sn	20 29 40.3	+1.0
IDI	Anoyia	1.13	266	P	Pn	20 29 24.0	-0.2
IDI				S	Sb	20 29 39.6	+0.9
ASTA	Astypalaia	1.17	3	P	Pn	20 29 24.7	-0.1
ASTA				S	Sb	20 29 40.8	+0.9
THERA	Ancient Thera,	1.19	327	P	Pn	20 29 25.2	+0.3
THERA				S	Sn	20 29 41.8	+1.3
THERA	Ancient Thera,	1.19	327	P	Pn	20 29 25.0	+0.1
THERA				S	Sb	20 29 41.3	+1.1
THR6	Thira Island,	1.21	324	P	Pn	20 29 25.4	+0.1
THR6	Thira Island,	1.21	324	P	Pn	20 29 25.6	+0.3
THR8	Santorini-Mono	1.22	328	P	Pn	20 29 25.6	+0.3
THR8	Santorini-Mono	1.22	328	P	Pn	20 29 25.5	+0.1
THR9	Santorini-Faro	1.23	323	P	Pn	20 29 26.1	+0.6
THR9	Santorini-Faro	1.23	323	P	Pn	20 29 26.1	+0.6
THRA	Thira	1.25	327	P	Pn	20 29 26.5	+0.8
SNT5	Nea Kammeni, S	1.25	326	P	Pn	20 29 26.1	+0.3
SNT5	Nea Kammeni, S	1.25	326	P	Pn	20 29 26.2	+0.3
THR3	Thira Island,	1.25	326	P	Pn	20 29 26.2	+0.4
THR3	Thira Island,	1.25	326	P	Pn	20 29 26.2	+0.4
THR2	Thira island,	1.27	328	P	Pn	20 29 26.6	+0.4
THR2	Thira island,	1.27	328	P	Pn	20 29 26.5	+0.4
SAP3	Santorini-Thir	1.30	325	P	Pn	20 29 26.9	+0.3
SAP3				S	Sb	20 29 44.8	+1.3
SAP3	Santorini-Thir	1.30	325	P	Pn	20 29 27.0	+0.5
NISR	Nisiros	1.42	29	P	Pn	20 29 29.4	+1.2
NISR				S	Sn	20 29 48.0	+1.7
NISR	Nisiros	1.42	29	P	Pn	20 29 29.4	+1.2
YAZI	Mula-Dat§a-	1.62	36	P	Pn	20 29 31.5	+0.6
YAZI				S	Sn	20 29 50.4	-0.9
VAM	Vamos	1.69	272	P	Pn	20 29 32.0	+0.2
VAM				S	Sn	20 29 53.4	+0.4
VAM	Vamos	1.69	272	P	Pn	20 29 32.2	+0.3
DAT	Datca	1.72	38	P	Pn	20 29 33.3	+0.9
DAT				S	Sn	20 29 54.6	+0.7
DAT	Datca	1.72	38	Pn	Pn	20 29 33.3	+0.9
DAT				Sn	Sn	20 29 55.8	+1.9
ARG	Arkhangelos	1.73	60	P	Pn	20 29 33.6	+1.2
ARG				S	Sn	20 29 56.0	+2.1
ARG	Arkhangelos	1.73	60	Pn	Pn	20 29 33.4	+1.0
ARG				Sn	Sn	20 29 55.9	+2.0
ARG	Arkhangelos	1.73	60	P	Pn	20 29 33.2	+0.8
APE	Apeiranthos	1.80	341	P	Pn	20 29 33.6	+0.2
APE				S	Sn	20 29 56.8	+1.1
APE	Apeiranthos	1.80	341	P	Pn	20 29 33.6	+0.2
GVD	Gavdhos	1.87	254	P	Pn	20 29 35.2	+0.9
GVD	Gavdhos	1.87	254	Pn	Pn	20 29 34.7	+0.4
GVD	Gavdhos	1.87	254	P	Pn	20 29 35.4	+1.1
IMMV	Iera Moni Meta	1.87	273	P	Pn	20 29 35.5	+1.2
IMMV	Iera Moni Meta	1.87	273	Pn	Pn	20 29 34.7	+0.3
IMMV				Sn	Sn	20 29 58.2	+0.7
IMMV	Iera Moni Meta	1.87	273	P	Pn	20 29 34.9	+0.6
BODT	Bodrum	1.89	26	P	Pn	20 29 35.8	+1.2
BODT	Bodrum	1.89	26	Pn	Pn	20 29 35.9	+1.3
BDRM	Kayabasi	1.94	29	P	Pn	20 29 36.9	+1.6
MHLO	Agia Marina, M	2.01	312	P	Pn	20 29 37.5	+1.3
MHLO				S	Sn	20 30 02.5	+1.7
MHLO	Agia Marina, M	2.01	312	P	Pn	20 29 36.8	+0.6
TURN	Turunc	2.13	48	P	Pn	20 29 38.6	+0.7
TURN				S	Sn	20 30 02.6	-1.1
TURN	Turunc	2.13	48	Pn	Pn	20 29 38.9	+1.0
KNDR	Palaiochora Ch	2.17	267	Pn	Pn	20 29 38.8	+0.4
KNDR	Palaiochora Ch	2.17	267	P	Pn	20 29 38.8	+0.4
MLSB	Milas	2.27	32	Pn	Pn	20 29 40.8	+0.9
SMG	Samos	2.38	11	P	Pn	20 29 41.6	+0.2
SMG				S	Sn	20 30 11.8	+1.8
SMG	Samos	2.38	11	P	Pn	20 29 41.8	+0.4
YER	Yerkesik	2.40	42	P	Pn	20 29 42.0	+0.3
YER				S	Sn	20 30 12.4	+1.9
YER	Yerkesik	2.40	42	Pn	Pn	20 29 42.9	+1.2
GCAM	G?zelcaml?	2.45	18	Pn	Pn	20 29 43.4	+1.1

ANKY	Antikythira Is	2.47	282	P	Pn	20 29 42.7	+0.1
ANKY	Antikythira Is	2.47	282	P	Pn	20 29 42.4	-0.2
MULA	Mugla, Merkez-	2.51	41	P	Pn	20 29 44.4	+1.2
MULA				S	Sn	20 30 11.4	-1.9
MULA				i IAML		20 30 22.0	
	comp=E,55nm,0.7s						
FETY	Fethiye	2.61	60	P	Pn	20 29 37.9	-6.6
SABU	Mula-Dalaman	2.62	56	P	Pn	20 29 45.3	+0.6
SABU				S	Sn	20 30 17.7	+1.6
SABU				i IAML		20 30 33.0	
	comp=N,94nm,0.7s						
SABU				i IAML		20 30 35.0	
	comp=E,67nm,0.9s						
IZZE	Mula-Seydike	2.62	65	P	Pn	20 29 44.3	-0.4
KTHA	Kythira Island	2.75	290	P	Pn	20 29 46.7	+0.2
KTHA	Kythira Island	2.75	290	Pn	Pn	20 29 46.7	+0.2
KTHA	Kythira Island	2.75	290	P	Pn	20 29 46.5	0.0
AKAS	Kas	2.84	71	P	Pn	20 29 47.3	-0.6
AYDB	Zeytinkoy-Aydi	2.88	26	Pn	Pn	20 29 49.7	+1.3
DNZT	Denizli-Tavas-	2.93	49	P	Pn	20 29 50.2	+1.3
DNZT				S	Sn	20 30 25.1	+1.4
DNZT				i IAML		20 30 38.0	
	comp=N,46nm,0.8s						
ESEN	Aydn-Nazilli	2.94	34	P	Pn	20 29 50.9	+1.8
TAVA	DENIZLI_Tavas	2.99	45	P	Pn	20 29 52.1	+2.3
URLA	Izmir	3.00	5	Pn	Pn	20 29 50.7	+0.9
CHOS	Chios island	3.02	357	P	Pn	20 29 50.7	+0.5
CHOS	Chios island	3.02	357	Pn	Pn	20 29 51.4	+1.2
VLI	Veliai	3.02	297	P	Pn	20 29 50.0	-0.1
VLI				S	Sn	20 30 25.8	+0.1
CAEL	Denizli, Camel	3.02	54	P	Pn	20 29 51.8	+1.5
KARY	Karystos	3.04	332	P	Pn	20 29 51.0	+0.6
KARY	Karystos	3.04	332	P	Pn	20 29 51.0	+0.6
KNIK	Mula-Seydike	3.05	60	P	Pn	20 29 51.1	+0.4
BLCB	Balcova	3.07	11	Pn	Pn	20 29 52.2	+1.3
IZMR	zmir-demi	3.07	26	P	Pn	20 29 53.0	+2.1
DNIZ	Denizli-Tavas-	3.17	44	P	Pn	20 29 55.0	+2.7
VLY	Voula,Athens	3.18	322	P	Pn	20 29 53.2	+0.9
GOLH	Golhisar	3.25	54	P	Pn	20 29 54.2	+0.9
ATHU	Athens Univers	3.27	323	P	Pn	20 29 53.9	+0.2
DION	Dionisos Attik	3.29	326	P	Pn	20 29 54.7	+0.8
KIRA	zmir-Kiraz	3.30	31	P	Pn	20 29 55.7	+1.6
AKUM	Antalya-Kumluc	3.44	73	P	Pn	20 29 54.3	-1.6
INCE	Denizli-Bozkur	3.54	48	P	Pn	20 29 59.7	+2.3
STFN	Stefani	3.55	323	P	Pn	20 29 58.7	+1.1
MANT	Manisa	3.61	30	P	Pn	20 29 59.3	+0.8
KYMI	Kymi, Euboea I	3.69	333	P	Pn	20 29 59.7	+0.3
BRTR	Keskin Array B	7.29	51	Pn	Pn	20 30 48.5	-0.4
	0.1nm,0.3s,baz=220,slow=14,SNR=3.0						
	0.5nm,0.6s						
MMAI	Mount Meron Ar	7.92	105	Pn	Pn	20 30 53.1	-4.5
	0.4nm,0.3s,baz=279,slow=12,SNR=1.7						
MMAI				Sn	Sn	20 32 15.8	-11
	0.7nm,0.3s,baz=307,slow=27,SNR=2.1						
	0.4nm,0.4s						
KBZ	Khabaz	15.28	52	Pn	Pn	20 32 37.1	-0.8
	baz=243,slow=9.0,SNR=3.2						
	2.7nm,1.0s						
FINES	FINESS Array B	26.09	360	P	P	20 34 30.2	-5.4
	6.2nm,1.1s,baz=182,slow=10.0,SNR=2.1						
	6.2nm,1.1s						
ARCES	ARCESS Array B	34.22	360	P	P	20 35 42.1	-5.4
	2.5nm,1.0s,baz=176,slow=8.7,SNR=4.9						
	2.5nm,1.0s						
KURBB	Kurchatov Arra	40.28	51	P	P	20 36 36.0	-3.1
	0.8nm,0.3s,baz=269,slow=8.3,SNR=22						
	0.8nm,0.3s						
MKAR	Makanchi Array	42.90	57	P	P	20 36 57.5	-3.1
	0.5nm,0.4s,baz=266,slow=8.8,SNR=13						
	0.5nm,0.4s						
ZALV	Zalesovo Beam	44.20	46	P	P	20 37 07.2	-3.8
	0.5nm,0.4s,baz=273,slow=9.8,SNR=4.0						
	0.5nm,0.4s						
SONM	Songino Array	58.65	51	P	P	20 38 56.0	-3.4
	0.2nm,0.3s,baz=301,slow=6.4,SNR=2.5						
	0.2nm,0.3s						

DJA 03 20:34:00.6±0.4**, 0°S**±4°×**12°4E**±°**, h84**^{km}±16^{km}**, M3.7**/12**,**
mB4.5/1**, mb4.0**/5**, MLv3.6**/12**, Mw(mB)3.6**/1**, Minahassa**
Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	Gorontalo	1.24	309	P	Pn	20 34 25.8	+3.0
GTOI				S	Sn	20 34 44.4	+4.8
LUWI	Luwuk	1.48	234	P	Pn	20 34 27.0	+1.1
MRSI	Marisa	2.13	287	P	Pn	20 34 33.4	-0.9
APSI	Ampana	2.44	252	P	Pn	20 34 38.1	-0.4
SANI	Sanana	2.76	133	P	Pn	20 34 41.4	-1.3
KDI	Kendari	4.01	200	P	Pn	20 34 59.4	-0.3
NLAI	Namlea	4.38	134	P	Pn	20 35 04.4	-0.3
TTSI	Tana Toraja	5.04	235	P	Pn	20 35 13.4	-0.4
	0.1nm502nm17nm,0.7s						
SPSI	Sidrap Palu	5.65	228	P	Pn	20 35 22.1	0.0
	0.1nm16nm,0.6s						
BKSI	Bulukumba	6.41	217	P	Pn	20 35 33.0	+0.6
BSSI	Bau Bau, Buton	6.88	210	P	Pn	20 35 40.1	+1.2
FAKI	Fak Fak	8.72	108	P	Pn	20 36 03.4	-0.6

IDC 03 20:36:40.3±2.6**, 9°.97S**×**75°.10W, h0**^{km}**, mb3.7**/4**,**
mbtmp3.6/5**, ML3.3**/1**, Error ellipse: s-maj=129.5km**
s-min=29.5km az=39.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	9.25	134	Pn	Pn	20 38 55.6	-0.1
	0.1nm,0.3s,baz=319,slow=11,SNR=1.7						
LPAZ				Lg	Lg	20 41 24.1	
	0.1nm,0.3s,baz=204,slow=23,SNR=2.7						
	0.4nm,0.4s						
TXAR	Lajitas Array	47.80	326	P	P	20 45 20.2	+0.3
	0.4nm,0.7s,baz=142,slow=7.1,SNR=4.9						
	0.4nm,0.7s						
PDAR	Pinedale Array	61.20	332	P	P	20 46 56.7	-0.6
	0.2nm,0.6s,baz=139,slow=8.1,SNR=2.2						
	0.2nm,0.6s						
NVAR	Mina Array Bea	62.77	323	P	P	20 47 07.9	0.0
	0.2nm,0.4s,baz=146,slow=6.0,SNR=1.2						
	0.2nm,0.4s						
TORD	Torodi Ar. Bea	79.61	75	P	P	20 48 50.4	+0.1
	2.0nm,0.3s,baz=266,slow=6.3,SNR=2.0						
	2.0nm,0.3s						

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*KRNET **03** 20:41:05.6±0.1, 40°.68N×77°.63E, h17^{km}, mb3.1*
*SOME **03** 20:41:07.4, 40°.72N×77°.57E, h15^{km}*
*NNC **03** 20:41:10.3±1.2, 40°.88N×77°.60E, h0^{km}, mb3.6, mpv3.2,*
Error ellipse: s-maj=8.7km s-min=5.8km az=169.0
ISC 03 20:41:09.4±1.3**, 40°.79N**±0°.06×**77°.51E**±0°.03**, h10**^{km}**, n47,**
σ**1**^{s}**.70**/73**, 18C-20D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	0.97	13	⇓iP	Pg	20 41 25.8	-2.3
TARG				⇓iS	Sg	20 41 40.5	-0.2
KDJ	Kajisay	1.36	350	⇑iP	Pn	20 41 33.3	-1.4
KDJ				⇑iS	Sg	20 41 53.5	+0.2
JNKS	Jany-Kuch	1.43	281	⇓eP	Pn	20 41 34.3	-1.4
JNKS				⇓eS	Sg	20 41 55.7	+0.2
PRZ	Przheval'sk	1.82	21	⇑eP	Pn	20 41 40.9	-0.1
PRZ				⇑eS	Sg	20 42 06.8	-1.2
BOOM	Boomskoye usch	2.07	326	⇓iP	Pn	20 41 45.1	+0.7
BOOM				⇓iS	Sb	20 42 14.5	+1.5
TNSS	Tian-Shan	2.29	350	Pg	Pb	20 41 50.6	-0.4
	5.3nm,0.3s						
TNSS				Lg	Lg	20 42 21.7	
	14nm,0.5s						
TNSS	Tian-Shan	2.29	350	eP	Pb	20 41 50.6	-0.4
	5.3nm,0.3s						
TNSS				eS	Sg	20 42 21.7	-1.3
	14nm,0.5s						
SATY	Saty	2.37	16	Pg	Pb	20 41 51.2	-1.0
	3.6nm,0.2s						
SATY				Lg	Lg	20 42 22.9	
	39nm,0.5s						
MDOK	Medeo	2.40	352	Pg	Pb	20 41 52.4	-0.4
	15nm,0.3s						
MDOK				Lg	Lg	20 42 24.8	
	28nm,0.6s						
KOTS	Kotyrbulak	2.46	353	Pg	Pb	20 41 53.6	-0.2
	14nm,0.3s						
KOTS				Lg	Lg	20 42 27.1	
	65nm,0.4s						
KOTS	Kotyrbulak	2.46	353	eP	Pb	20 41 53.6	-0.2
	14nm,0.3s						
KOTS				eS	Sg	20 42 27.1	-1.5
	65nm,0.4s						
MTBS	Maitube	2.48	341	Pg	Pb	20 41 54.0	0.0
	23nm,0.3s						
MTBS				Lg	Lg	20 42 27.6	
	18nm,0.4s						
MTBS	Maitube	2.48	341	eP	Pb	20 41 54.0	0.0
	23nm,0.3s						
MTBS				eS	Sg	20 42 27.6	-1.3
	18nm,0.4s						
KST	Kastek	2.53	333	Pg	Pb	20 41 55.2	+0.1
	11nm,0.4s						
KST				Lg	Lg	20 42 29.7	
	16nm,0.3s						
KST	Kastek	2.53	333	eP	Pb	20 41 55.2	+0.1
	11nm,0.4s						
KST				eS	Sg	20 42 29.7	-1.1
	16nm,0.3s						
UZB	Uzynbulak	2.61	25	Pg	Pb	20 41 55.8	-0.6
	3.2nm,0.1s						
UZB				Lg	Lg	20 42 30.8	
	10nm,0.3s						
UZB	Uzynbulak	2.61	25	eP	Pb	20 41 55.8	-0.6
	3.2nm,0.1s						
UZB				eS	Sg	20 42 30.8	-2.6
	10nm,0.3s						
ARLS	Aral	2.63	295	⇓iP	Pn	20 41 52.7	+0.7
ARLS				⇓iS	Sb	20 42 27.4	-1.7
UCH	Uchtor	2.67	304	⇓iP	Pn	20 41 53.6	+0.7
UCH				⇓iS	Sb	20 42 28.5	-2.1
KBK	Karagaybulak	2.68	315	⇓iP	Pn	20 41 53.7	+1.0
KBK				⇓iS	Sb	20 42 29.1	-1.4
KURS	Kuram	2.74	10	Pg	Pb	20 41 58.4	-0.2
	8.6nm,0.7s						
KURS				Lg	Lg	20 42 35.2	
	8.8nm,0.4s						
DGS	Degeres	2.77	333	Pg	Pb	20 41 59.3	+0.2
	5.3nm,0.4s						
DGS				Lg	Lg	20 42 36.5	
	7.2nm,0.4s						
SHLS	Shalkode	2.78	31	Pg	Pg	20 42 02.2	-0.5
	3.5nm,0.2s						
SHLS				Lg	Lg	20 42 42.0	
	42nm,0.6s						
SHLS	Shalkode	2.78	31	eP	Pg	20 42 02.2	-0.5
	3.5nm,0.2s						
SHLS				eS	Sg	20 42 42.0	+3.3
	42nm,0.6s						
SALK	Salom-Alik	2.80	273	⇑iP	Pn	20 41 55.0	+0.6
SALK				⇑iS	Sn	20 42 30.7	+2.4
KPKS	Kokpek	2.82	18	Pg	Pb	20 41 59.2	-0.6
	0.4nm,0.1s						
KPKS				Lg	Lg	20 42 36.7	
	15nm,0.4s						
AAK	Ala-Archa	2.92	310	⇑iP	Pn	20 41 57.3	+1.3
AAK				⇑iS	Sn	20 42 34.6	+3.4
AAK	Ala-Archa	2.92	310	⇑Pn	Pb	20 42 01.6	0.0
	4.7nm,0.8s						
AAK				⇓Lg	Lg	20 42 41.1	
	16nm,0.7s						
PDGK	Podgornoye	2.94	30	⇑Pn	Pn	20 41 55.7	-0.6
	3.4nm,0.5s						
PDGK				⇓Lg	Lg	20 42 40.5	
	23nm,0.6s						
KTBS	Karatobe	2.99	348	Pg	Pb	20 42 03.1	+0.4
	5.2nm,0.3s						
KTBS				Lg	Lg	20 42 43.3	
	0.7nm,0.1s						
CHMS	Chumysh	3.02	318	⇑iP	Pn	20 41 58.4	+1.1
CHMS				⇑iS	Sn	20 42 37.0	+3.5
SFK	Sufi-Kurgan	3.15	257	⇑eP	Pn	20 41 59.1	-0.2
SFK				⇑eS	Sn	20 42 38.5	+1.3
KRBS	Karabastau	3.21	336	Pg	Pb	20 42 06.8	+0.3
	5.9nm,0.3s						
KRBS				Lg	Lg	20 42 49.4	
	1.9nm,0.5s						
USP	Ospenovka	3.34	319	⇓iP	Pn	20 42 02.7	+1.0
USP				⇓iS	Sn	20 42 44.9	+3.4
EKS2	Erkin-Say	3.36	305	⇑iP	Pn	20 42 03.8	+1.7
EKS2				⇑iS	Sn	20 42 45.2	+3.1
KTMS	Ketmen	3.40	38	Pg	Pb	20 42 09.2	-0.6
	0.7nm,0.1s						
KTMS				Lg	Lg	20 42 53.3	
	7.7nm,0.1s						
KTMS	Ketmen	3.40	38	eP	Pb	20 42 09.2	-0.6
	0.7nm,0.1s						
KTMS				eS	Sb	20 42 53.3	+2.2
	7.7nm,0.1s						
SGDS	Sogindy	3.42	322	Pg	Pb	20 42 10.6	+0.5
	4.2nm,0.5s						
SGDS				Lg	Lg	20 42 56.4	
	5.3nm,0.4s						
ARXS	Arharly	3.43	4	Pg	Pb	20 42 10.8	+0.5
	1.9nm,0.4s						
ARXS				Lg	Lg	20 42 56.2	
	22nm,0.5s						
ARXS	Arharly	3.43	4	eP	Pb	20 42 10.8	+0.5
ARXS				eS	Sg	20 42 56.2	-3.4
ARSB	Arslanbob	3.46	280	⇓eP	Pn	20 42 04.1	+0.6
ARSB				⇓eS	Sn	20 42 47.3	+2.6
MRKS	Merke	3.75	303	Pg	Pb	20 42 17.0	+1.2
	2.7nm,0.4s						
MRKS				Lg	Lg	20 43 06.9	
	6.7nm,0.5s						
MRKS	Merke	3.75	303	eP	Pb	20 42 17.0	+1.2
	2.7nm,0.4s						
MRKS				eS	Sg	20 43 06.9	-3.0
	6.7nm,0.5s						
MNAS	Manas	4.12	296	⇓iP	Pn	20 42 14.4	+1.9
MNAS				⇓iS	Sn	20 43 03.4	+2.6
BTLS	Baital	4.95	330	Pg	Pb	20 42 39.1	+2.9
	2.5nm,0.5s						
BTLS				Lg	Lg	20 43 44.7	
	2.0nm,0.3s						
BTLS	Baital	4.95	330	eP	Pb	20 42 39.1	+2.9
	2.5nm,0.5s						
BTLS				eS	Sg	20 43 44.7	-3.6
	2.0nm,0.3s						
KK31	Karatay Array	5.71	296	⇑Pg	Pg	20 42 55.2	-3.5
	0.5nm,0.6s,baz=101,slow=15,SNR=4.4						
KK31				⇑Lg	Lg	20 44 13.5	
	1.5nm,0.8s,baz=108,slow=29,SNR=5.6						

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*IDC **03** 21:02:51.4±1.8, 32°.23S×178°.30W, h0^{km}, mb4.0/2,*
mbtmp4.0/3, ML3.7/1, Error ellipse: s-maj=60.6km
s-min=36.5km az=143.0
ISC 03 21:02:55.8±1.8**, 32°.5S**±0°.2×**178°.2W**±0°.4**, h35**^{km}**, n7,**
σ**0**^{s}**.39**/8**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.92	212	Pn	Pn	21 04 34.9	+0.2
	1.3nm,0.3s,baz=0.0,slow=2.0,SNR=5.1						
URZ				Sn	Sn	21 05 52.0	-0.3
	2.6nm,0.3s,baz=5.0,slow=21,SNR=7.8						
	3.8nm,0.5s						
ASAR	Alice Springs	42.87	269	P	P	21 10 51.2	+0.2
	1.0nm,0.6s,baz=107,slow=7.8,SNR=14						
	1.0nm,0.6s						
WRA	Warramunga Arr	44.04	274	P	P	21 11 00.3	-0.2
	1.1nm,0.4s,baz=112,slow=8.0,SNR=17						
	1.1nm,0.4s						
BVAR	Borovoye Array	127.75	315	PKP	PKiKP	21 21 57.3	-0.3
	0.4nm,0.4s,baz=79,slow=3.6,SNR=2.4						
FINES	FINESS Array B	147.02	339	PKPbc	PKPbc	21 22 33.7	-0.3
	1.1nm,0.5s,baz=42,slow=4.1,SNR=18						
HFS	Hagfors	151.23	348	PKPbc	PKiKP	21 22 45.1	-0.1
	1.5nm,0.8s,baz=27,slow=1.6,SNR=1.3						
MMAI	Mount Meron Ar	151.80	280	PKPbc	PKiKP	21 22 48.0	+0.6
	0.4nm,0.5s,baz=72,slow=4.7,SNR=1.7						

IDC 03 21:06:50.0±2.2**, 32°.48S**×**178°.21W, h0**^{km}**, mb3.8**/2**,**
mbtmp3.7/3**, ML3.1**/1**, Error ellipse: s-maj=62.2km**
s-min=33.2km az=127.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.92	212	Pn	Pn	21 08 31.8	-0.8
	0.4nm,0.3s,baz=39,slow=13,SNR=1.1						
URZ				Sn	Sn	21 09 52.0	-0.1
	1.3nm,0.3s,baz=78,slow=20,SNR=2.2						
	1.8nm,0.4s						
ASAR	Alice Springs	42.86	269	P	P	21 14 50.6	+0.4
	0.5nm,0.5s,baz=109,slow=8.0,SNR=8.7						
	0.5nm,0.5s						
WRA	Warramunga Arr	44.04	274	P	P	21 14 59.5	-0.3
	0.9nm,0.4s,baz=113,slow=8.0,SNR=8.6						
	0.9nm,0.4s						
FINES	FINESS Array B	147.02	339	PKPbc	PKPbc	21 26 33.1	-0.9
	0.8nm,0.5s,baz=60,slow=3.7,SNR=12						
HFS	Hagfors	151.24	348	PKPbc	PKPbc	21 26 44.4	-0.3
	5.2nm,1.0s,baz=45,slow=3.7,SNR=1.9						

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*ISK **03** 21:21:08.7, 35°.34N×26°.19E, h15^{km}, ML2.7/19*
*ATH **03** 21:21:10.6, 35°.34N×26°.27E, h29^{km}±1^{km}, ML2.9/7,*
Manual Solution by S.Liakopoulos First location:
2019/12/03 21:22:19, This location: 2019/12/03 21:36:21
ML Amplitudes are expressed in micrometers, All
distances are expressed in degrees Latitude uncertainty: 1
km; Longitude uncertainty: 0 km
*THE **03** 21:21:11.0, 35°N±3°×2°6E±°, h23^{km}±4^{km}, M2.7/19,*
MLh2.7/19
*IDC **03** 21:21:19.6±9.6, 35°.35N×27°.30E, h90^{km}±47^{km}, mb3.1/2,*
mbtmp3.2/4, Error ellipse: s-maj=107.1km s-min=38.5km
az=53.0
ISC 03 21:21:09.9±0.8**, 35°.33N**±0°.03×**26°.27E**±0°.02**, h28**^{km}**, n78,**
σ**1**^{s}**.08**/105**, mb3.5**/3**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIT2	Siteia	0.18	228	P	Pb	21 21 16.6	+0.9
SIT2				S	Sb	21 21 20.9	+1.3
ZKR	Zakros	0.22	192	P	Pb	21 21 16.4	+0.3
ZKR				S	Sb	21 21 21.6	+1.3
ZKR	Zakros	0.22	192	P	Pb	21 21 16.4	+0.3
ZKR				S	Sb	21 21 21.7	+1.3
KSS1	Kassos Island	0.54	80	P	Pn	21 21 23.1	+1.4
KSS1				S	Sn	21 21 30.5	+0.7
NPS	Neapolis	0.54	263	P	Pb	21 21 21.3	+0.4
NPS				S	Sb	21 21 30.1	+1.6
NPS	Neapolis	0.54	263	P	Pb	21 21 21.3	+0.4
NPS				S	Sb	21 21 29.4	+0.9
KARP	Karpathos	0.76	73	Pg	Pb	21 21 25.3	+0.7
KARP				Sg	Sn	21 21 36.7	+1.3
KARP	Karpathos	0.76	73	P	Pb	21 21 25.4	+0.9
KARP				S	Sb	21 21 35.5	+0.9
IACM	Heraklion	0.98	269	P	Pn	21 21 28.9	+1.1
IACM	Heraklion	0.98	269	P	Pn	21 21 28.6	+0.8
IACM				S	Sb	21 21 41.8	+1.0
IDI	Anoyia	1.13	268	P	Pn	21 21 30.4	+0.6
IDI				S	Sn	21 21 45.2	+0.6
IDI	Anoyia	1.13	268	Pg	Pn	21 21 29.7	-0.2
IDI				Sg	Sn	21 21 44.6	+0.1
IDI	Anoyia	1.13	268	P	Pn	21 21 30.5	+0.6
IDI				S	Sn	21 21 45.4	+0.9
ASTA	Astypalaia	1.22	3	P	Pn	21 21 31.1	+0.1
ASTA				S	Sb	21 21 48.0	+0.4
THERA	Ancient Thera,	1.22	328	P	Pn	21 21 31.5	+0.4
THERA				S	Sb	21 21 47.9	+0.2
THERA	Ancient Thera,	1.22	328	P	Pn	21 21 31.5	+0.4
THERA				S	Sb	21 21 48.0	+0.3
THR6	Thira Island,	1.25	326	P	Pn	21 21 32.1	+0.7
THR6	Thira Island,	1.25	326	P	Pn	21 21 32.1	+0.7
THR8	Santorini-Mono	1.25	329	P	Pn	21 21 31.9	+0.4
THR8	Santorini-Mono	1.25	329	P	Pn	21 21 32.0	+0.4
THR9	Santorini-Faro	1.27	324	P	Pn	21 21 32.5	+0.8
THR9	Santorini-Faro	1.27	324	P	Pn	21 21 32.5	+0.8
THRA	Thira	1.28	328	P	Pn	21 21 33.1	+1.2
SNT5	Nea Kammeni, S	1.29	327	P	Pn	21 21 32.6	+0.6
THR3	Thira Island,	1.29	327	P	Pn	21 21 32.5	+0.5
THR3	Thira Island,	1.29	327	P	Pn	21 21 32.7	+0.7
THR2	Thira island,	1.30	329	P	Pn	21 21 32.9	+0.6
THR2	Thira island,	1.30	329	P	Pn	21 21 32.9	+0.6
SAP3	Santorini-Thir	1.34	326	P	Pn	21 21 33.4	+0.7
SAP3				S	Sn	21 21 50.8	+1.3
SAP3	Santorini-Thir	1.34	326	P	Pn	21 21 33.8	+1.1
NISR	Nisiros	1.46	28	P	Pn	21 21 35.2	+0.9
NISR	Nisiros	1.46	28	P	Pn	21 21 35.4	+1.1
RGE1	Gennadi, Rhode	1.52	62	P	Pn	21 21 35.6	+0.4
VAM	Vamos	1.69	273	P	Pn	21 21 37.7	+0.1
KLNA	Kalymnos	1.72	19	P	Pn	21 21 38.5	+0.5
ARG	Arkhangelos	1.75	59	P	Pn	21 21 39.5	+1.1
ARG				S	Sn	21 22 00.7	+1.0
ARG	Arkhangelos	1.75	59	Pn	Pn	21 21 39.7	+1.3
ARG				Sn	Sb	21 22 03.1	+0.2
ARG	Arkhangelos	1.75	59	P	Pn	21 21 39.5	+1.1
DAT	Datca	1.75	37	Pn	Pn	21 21 40.0	+1.5
DAT				Sn	Sb	21 22 02.8	-0.3
CHNB	Souda	1.81	276	P	Pn	21 21 40.2	+1.0
APE	Apeiranthos	1.84	341	P	Pn	21 21 40.2	+0.5
APE				S	Sn	21 22 04.0	+2.0
APE	Apeiranthos	1.84	341	Pn	Pn	21 21 40.3	+0.7
APE				Sn	Sn	21 22 03.5	+1.5
APE	Apeiranthos	1.84	341	P	Pn	21 21 39.9	+0.3
GVD	Gavdhos	1.86	255	P	Pn	21 21 41.0	+1.2
GVD	Gavdhos	1.86	255	Pn	Pn	21 21 40.4	+0.6
GVD	Gavdhos	1.86	255	P	Pn	21 21 40.6	+0.7
IMMV	Iera Moni Meta	1.88	275	P	Pn	21 21 41.5	+1.4
IMMV	Iera Moni Meta	1.88	275	Pn	Pn	21 21 40.1	0.0
IMMV	Iera Moni Meta	1.88	275	P	Pn	21 21 41.2	+1.1
BODT	Bodrum	1.92	26	Pn	Pn	21 21 42.1	+1.3
TURN	Turunc	2.15	47	Pn	Pn	21 21 44.5	+0.6
MLSB	Milas	2.31	31	Pn	Pn	21 21 46.9	+0.8
SMG	Samos	2.42	11	P	Pn	21 21 48.2	+0.6
SMG				S	Sn	21 22 17.2	+0.9
SMG	Samos	2.42	11	P	Pn	21 21 48.4	+0.8
YER	Yerkesik	2.43	41	P	Pn	21 21 49.1	+1.3
YER				S	Sn	21 22 18.6	+2.1
YER	Yerkesik	2.43	41	Pn	Pn	21 21 49.7	+1.9
DALY	Dalyan (Mula)	2.44	52	Pn	Pn	21 21 48.9	+1.1
ANKY	Antikythira Is	2.48	283	P	Pn	21 21 48.9	+0.5
ANKY	Antikythira Is	2.48	283	P	Pn	21 21 48.5	+0.1
GCAM	G?zelcaml?	2.49	18	Pn	Pn	21 21 50.2	+1.7
KTHA	Kythira Island	2.77	290	P	Pn	21 21 52.6	+0.2
KTHA	Kythira Island	2.77	290	Pn	Pn	21 21 52.9	+0.5
AYDB	Zeytinkoy-Aydi	2.92	26	Pn	Pn	21 21 56.3	+1.7
URLA	Izmir	3.04	5	Pn	Pn	21 21 56.9	+0.8
VLI	Veliai	3.04	298	P	Pn	21 21 56.5	+0.4
VLI				S	Sn	21 22 31.9	+0.4
CHOS	Chios island	3.06	357	P	Pn	21 21 57.0	+0.6
CHOS				S	Sn	21 22 33.2	+1.1
CHOS	Chios island	3.06	357	Pn	Pn	21 21 57.8	+1.4
KARY	Karystos	3.07	332	P	Pn	21 21 57.7	+1.1
KARY				S	Sn	21 22 33.6	+1.1
BLCB	Balcova	3.11	11	Pn	Pn	21 21 58.9	+1.8
DION	Dionisos Attik	3.33	326	P	Pn	21 22 01.7	+1.6
DION				S	Sn	21 22 39.4	+0.7
KYMI	Kymi, Euboea I	3.73	333	P	Pn	21 22 06.9	+1.3
SIGR	SIGRI	3.89	355	P	Pn	21 22 08.5	+0.8
ITM	Ithomi	3.97	299	Pn	Pn	21 22 10.2	+1.3
BRTR	Keskin Array B	7.32	51	P	Pn	21 22 55.3	+0.3
	0.4nm,0.7s,baz=222,slow=15,SNR=2.6						
MMAI	Mount Meron Ar	7.91	104	P	Pn	21 23 00.2	-2.9
	0.3nm,0.3s,baz=307,slow=14,SNR=4.1						
MMAI				S	Sn	21 24 21.4	-10
	0.9nm,0.3s,baz=297,slow=26,SNR=7.2						
KURBB	Kurchatov Arra	40.31	51	P	P	21 28 42.1	-2.5
	0.7nm,0.5s,baz=278,slow=9.2,SNR=4.1						
MKAR	Makanchi Array	42.92	57	P	P	21 29 03.7	-2.4
	0.3nm,0.3s,baz=264,slow=9.1,SNR=8.8						
	0.3nm,0.3s						
SONM	Songino Array	58.67	51	P	P	21 31 02.8	-2.0
	0.2nm,0.6s,baz=287,slow=8.9,SNR=1.8						
	0.2nm,0.6s						

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*JMA **03** 21:28:29.4±0.2, 43°.1N±0°.8×14°6E±°, h48^{km}±1^{km},*
MV3.9/34, OFF NEMURO PENINSULA
JMA Felt I J1 at OFF NEMURO PENINSULA .
*SKHL **03** 21:28:30.1±0.3, 43°.10N×146°.30E, h62^{km}±2^{km}, mb5.1/4*
*MOS **03** 21:28:32.6±1.7, 43°.53N×146°.11E, h62^{km}, mb4.3/1, Error*
ellipse: s-maj=15.9km s-min=12.6km az=107.3
*NEIC **03** 21:28:32.0±0.8, 43°.1N±0°.1×146°.3E±0°.1, h64^{km}±12^{km},*
mb4.2/14, Error ellipse: s-maj=18.0km s-min=14.5km
az=144.0
*IDC **03** 21:28:36.5±3.1, 43°.62N×146°.12E, h79^{km}±32^{km}, mb3.6/10,*
mbtmp3.8/12, Error ellipse: s-maj=48.4km s-min=25.6km
az=177.0
ISC 03 21:28:30.8±1.1**, 43°.16N**±0°.06×**146°.28E**±0°.05**, h47**^{km}±8^{km}**,**
n65, σ**1**^{s}**.54**/77**, mb4.1**/18**, 1C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.44	298	i P	Pn	21 28 40.9	-0.3
NEM2				eS	Sn	21 28 48.7	+0.2
NMR	Nemuro--Hokkai	0.45	298	⇓iPN	Pn	21 28 40.9	-0.4
NMR				i S	Sn	21 28 48.7	0.0
NMR	Nemuro--Hokkai	0.45	298	eP	Pn	21 28 40.9	-0.4
NMR				eS	Sn	21 28 48.8	0.0
GLVR	Golovnino	0.80	317	⇑iPN	Pn	21 28 45.6	-0.2
GLVR				i S	Sn	21 28 57.6	+0.9
GLVR				pmax	pmax		
	comp=N,199nm,0.1s						
GLVR				pmax	pmax		
	comp=E,70nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,2µm,0.1s						
GLVR				smax	smax		
	comp=E,3µm,0.2s						
GLVR				smax	smax		
	comp=N,5µm,0.3s						
GLVR	Golovnino	0.80	317	eP	Pn	21 28 45.6	-0.2
GLVR				AMB	AMB	21 28 45.7	
	comp=N,2µm,0.4s						
GLVR				eS	Sn	21 28 57.5	+0.9
GLVR				A	A	21 28 58.1	
	comp=N,5µm,0.3s						
GLVR				A	A	21 28 58.1	
	comp=N,3µm,0.3s						
SHO	Shikotan	0.82	29	eP	Pn	21 28 52.9	+6.9
SHO				AMB	AMB	21 28 53.7	
	comp=N,5µm,0.5s						
SHO				eS	Sn	21 29 03.9	+6.8
SHO				A	A	21 29 05.2	
	comp=N,19µm,0.5s						
SHO				A	A	21 29 05.2	
	comp=N,22µm,0.5s						
JKHN	Kushirohamanak	0.82	265	eP	Pn	21 28 45.8	-0.2
JKHN				eS	Sn	21 28 58.3	+1.2
YUK	Yuzh-Kuril'sk	0.93	341	d iPN	Pn	21 28 46.9	-0.5
YUK				i S	Sn	21 28 59.5	-0.2
YUK				pmax	pmax		
	comp=Z,1µm,0.2s						
YUK				pmax	pmax		
	comp=N,482nm,0.1s						
YUK				pmax	pmax		
	comp=E,271nm,0.1s						
YUK				smax	smax		
	comp=N,4µm,0.2s						
YUK				smax	smax		
	comp=E,3µm,0.2s						
YUK	Yuzh-Kuril'sk	0.93	341	eP	Pn	21 28 47.0	-0.5
YUK				AMB	AMB	21 28 47.1	
	comp=E,180nm,0.2s						
YUK				eS	Sn	21 28 59.4	-0.2
YUK				A	A	21 29 59.7	
	comp=E,6µm,0.4s						
YUK				A	A	21 29 59.7	
	comp=E,3µm,0.4s						
AKK	Akkeshi	1.06	263	eP	Pn	21 28 48.9	-0.4
AKK				eS	Sn	21 29 02.6	-0.3
JNSB	Nemuroshibetsu	1.11	304	P	Pn	21 28 49.8	-0.2
JNSB				S	Sn	21 29 06.2	+2.0
JRA	Rausu	1.15	313	i P	Pn	21 28 50.6	+0.2
JAK	Akkeshi	1.17	263	i P	Pn	21 28 50.4	-0.3
JAK				S	Sn	21 29 05.8	+0.3
RUSJ	Misakicho	1.21	322	⇓iPN	Pn	21 28 51.6	+0.4
JNK	Nakash	1.21	291	i P	Pn	21 28 51.0	-0.3
JNK				eS	Sn	21 29 06.7	+0.1
JOB	Onbets	1.81	263	P	Pn	21 28 59.5	0.0
JAR	Ashorobuto	1.84	275	i P	Pn	21 29 00.2	+0.3
JAR				S	Sn	21 29 23.1	+1.2
JTKR	Abashiri--Toko	1.90	296	i P	Pn	21 29 01.8	+1.0
JTKR				S	Sn	21 29 26.2	+2.6
KUR	Kuril'sk	2.37	28	PN	Pn	21 29 08.1	+0.9
KUR				eS	Sn	21 29 35.3	+0.3
KUR	Kuril'sk	2.37	28	eP	Pn	21 29 07.7	+0.5
KUR				AMB	AMB	21 29 08.6	
	comp=E,200nm,0.4s						
KUR				eS	Sn	21 29 34.7	-0.3
KUR				A	A	21 29 36.8	
	comp=E,210nm,0.3s						
KUR				A	A	21 29 36.8	
	comp=E,290nm,0.3s						
ERM	Erimo	2.57	245	Pn	Pn	21 29 11.6	+1.6
ERM				Sn	Sn	21 29 43.2	+3.2
JKA	Kamikawa-asahi	2.83	291		Pn	21 29 15.4	+1.8
JKA				Sn	Sn	21 29 52.0	+5.5
ASAJ	Asahikawa	2.84	291	P	Pn	21 29 16.1	+2.5
	comp=E,36nm,0.4s,baz=92,slow=17,SNR=13						
ASAJ				S	Sn	21 29 52.9	+6.4
	comp=E,46nm,0.6s,baz=234,slow=19,SNR=1.7						
JTM	Tenmabayashi	4.55	240	Pn	Pn	21 29 37.4	+0.3
MJAR	Matsushiro Arr	9.06	226	P	Pn	21 30 48.7	+10
	comp=E,0.6nm,0.4s,baz=28,slow=13,SNR=1.8						
SKR	Severo-Kuril's	10.09	38	eP	Pn	21 30 54.7	+1.7
SONM	Songino Array	28.12	294	P	P	21 34 17.5	-0.8
	comp=E,0.7nm,0.8s,baz=81,slow=8.9,SNR=4.0						
	comp=E,0.7nm,0.8s						
H11N2	WAKE ISLAND Hy	29.09	137	T	T	22 05 14.4	
	baz=328,slow=75,SNR=101						
H11N1	WAKE ISLAND Hy	29.10	137	T	T	22 05 15.9	
	baz=328,slow=75,SNR=76						
H11N3	WAKE ISLAND Hy	29.10	137	T	T	22 05 28.0	
	baz=328,slow=75,SNR=69						
H11S1	WAKE ISLAND Hy	30.03	139	T	T	22 06 27.1	
	baz=330,slow=76,SNR=224						
H11S3	WAKE ISLAND Hy	30.03	139	T	T	22 06 25.6	
	baz=330,slow=76,SNR=102						
H11S2	WAKE ISLAND Hy	30.05	139	T	T	22 06 25.0	
	baz=330,slow=76,SNR=88						
J14K	Nanvaranak Lak	34.83	38	P	P	21 35 16.4	-0.4
C18K	Utukok River	37.13	29	P	P	21 35 36.3	-0.3
H19K	Roundabout Mou	38.33	34	P	P	21 35 46.5	-0.2
H19K				IAmb	IAmb	21 35 48.2	
	comp=Z,6.2nm,0.8s						
D20K	Etivluk River	38.78	29	P	P	21 35 50.3	-0.1
D20K				IAmb	IAmb	21 36 08.6	
	comp=Z,4.1nm,1.1s						
ZALV	Zalesovo Beam	40.85	307	PcP	PcP	21 38 07.5	-0.2
	comp=Z,0.5nm,0.7s,baz=90,slow=3.3,SNR=3.5						
E24K	Your Creek	41.69	31	P	P	21 36 14.7	+0.1
WRH	Wood River Hil	41.84	36	P	P	21 36 15.7	0.0
WRH				IAmb	IAmb	21 36 27.7	
	comp=Z,7.5nm,1.5s						
ILAR	Eielson Array	42.34	36	P	P	21 36 19.7	-0.1
	comp=Z,0.3nm,0.5s,baz=260,slow=6.3,SNR=6.9						
	comp=Z,0.3nm,0.5s						
ILAR	Eielson Array	42.34	36	P	P	21 36 19.4	-0.5
RIDG	Independent Ri	43.30	37	P	P	21 36 27.1	-0.5
RIDG				IAmb	IAmb	21 36 38.4	
	comp=Z,8.0nm,1.3s						
SCRK	Sand Creek	43.66	37	P	P	21 36 29.9	-0.8
MK31	Makanchi Array	44.30	298	P	P	21 36 35.2	-0.6
MK31				IAmb	IAmb	21 36 51.2	
	comp=Z,3.4nm,1.3s						
MK31	Makanchi Array	44.30	298	P	P	21 36 35.3	-0.6
MK31				pmax	pmax		
	comp=Z,3.0nm,1.3s						
MKAR	Makanchi Array	44.30	298	P	P	21 36 35.7	-0.1
	comp=Z,0.8nm,1.0s,baz=80,slow=10,SNR=1.9						
	comp=Z,0.8nm,1.0s						
MKAR	Makanchi Array	44.30	298	P	P	21 36 35.5	-0.4
G27K	Doyon Strip	44.35	33	P	P	21 36 36.0	0.0
G27K				IAmb	IAmb	21 36 49.8	
	comp=Z,3.6nm,1.5s						
H29M	Whitestone	45.73	33	P	P	21 36 47.3	+0.4
H29M				IAmb	IAmb	21 36 48.7	
	comp=Z,3.2nm,1.0s						
G30M	tAoh Zraii Nji	46.45	32	P	P	21 36 52.9	+0.2
G30M				IAmb	IAmb	21 37 03.5	
	comp=Z,4.1nm,1.2s						
BVAR	Borovoye Array	49.39	309	P	P	21 37 15.2	-0.3
	comp=Z,0.2nm,0.4s,baz=90,slow=8.6,SNR=2.7						
	comp=Z,0.2nm,0.4s						
KKAR	Karatay Array	53.43	298	P	P	21 37 45.2	-0.7
KKAR	Karatay Array	53.43	298	P	P	21 37 45.2	-0.7
AB31	Akbulak array	56.94	309	P	P	21 38 10.7	-0.3
ABKAR	Akbulak array	56.94	309	P	P	21 38 10.7	-0.3
ARCES	ARCESS Array B	59.58	339	P	P	21 38 29.2	+0.1
	comp=Z,7.3nm,1.2s,baz=51,slow=6.1,SNR=1.6						
	comp=Z,7.3nm,1.2s						
FIA1	FINESS Array S	65.11	333	P	P	21 39 04.9	-1.3
FINES	FINESS Array B	65.11	333	P	P	21 39 05.5	-0.7
	comp=Z,1.5nm,0.5s,baz=47,slow=6.8,SNR=14						
	comp=Z,1.5nm,0.5s						
NVAR	Mina Array Bea	68.43	57	P	P	21 39 28.7	+0.7
	comp=Z,0.3nm,0.4s,baz=303,slow=4.1,SNR=2.3						
	comp=Z,0.3nm,0.4s						
NB2	NORSAR Subarra	69.92	339	P	P	21 39 36.0	-0.7
	comp=Z,1.2nm,0.5s,baz=32,slow=6.5						
NOA	NORSAR Array B	69.92	339	P	P	21 39 36.0	-0.7
	comp=Z,1.0nm,0.6s,baz=32,slow=6.6,SNR=6.0						
	comp=Z,1.0nm,0.6s						
NOA	NORSAR Array B	69.92	339	P	P	21 39 36.0	-0.7
HFS	Hagfors	69.99	337	P	P	21 39 36.1	-0.9
	comp=Z,1.7nm,0.4s,baz=39,slow=7.6,SNR=11						
	comp=Z,1.7nm,0.4s						
AKASG	Malin Array Be	71.68	323	P	P	21 39 46.6	-0.8
	comp=Z,0.9nm,0.4s,baz=42,slow=6.3,SNR=3.5						
	comp=Z,0.9nm,0.4s						

*IDC **03** 21:30:37.7±2.4, 6.°20S×146.°61E, h98km±20km, mb3.7/6, mbtmp4.1/9, MS2.5/1, Error ellipse: s-maj=33.9km s-min=16.2km az=67.0*

*NEIC **03** 21:30:38.3±1.4, 6.°20S±0.°07×146.°57E±0.°06, h102km±9km, mb4.0/17, Error ellipse: s-maj=10.1km s-min=9.0km az=180.0*

*DJA **03** 21:30:42.9±1.1, 6°S±9°×14°6E±1°4, h94km±10km, M4.4/12, mb4.4/12, mB5.0/1, MLv4.5/2, Mw(mB)4.3/1*

ISC 03 21:30:38.3±0.5, **6.°24S**±0.°06×**146.°47E**±0.°06, **h100**km, **n50**, σ**1.s57**/50, **mb4.0**/12, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.22	168	P	Pn	21 31 28.4	+1.4
	49nm,0.3s,baz=21,slow=8.8,SNR=39						
PMG				S	Sn	21 32 04.6	+0.1
	301nm,0.4s,baz=218,slow=20,SNR=30						
PMG				LR	LR	21 33 07.3	
	comp=Z,79nm,20.4s,baz=198,slow=46						
PMG	Port Moresby	3.22	168	P	Pn	21 31 28.4	+1.4
PMG	Port Moresby	3.22	168	S	Sn	21 32 05.1	+0.6
PMG	Port Moresby	3.22	168	P	Pn	21 31 28.6	+1.6
MANU	Manus Island	4.27	12	Pn	Pn	21 31 40.4	-0.8
RABL	Rabaul	6.03	71	Pn	Pn	21 32 01.8	-3.2
JAY	Jayapura	6.84	303	P	Pn	21 32 16.6	+0.5
	6.8nm,0.5s,baz=189,slow=7.8,SNR=2.2						
JAY	Jayapura	6.84	303	P	Pn	21 32 17.4	+1.3
	0.1nm15nm,1.1s						
COEN	Coen	8.32	203		Pn	21 32 37.2	+1.0
COEN	Coen	8.32	203	P	Pn	21 32 37.9	+1.6
TV1H	Townsville Har	12.94	179	P	Pn	21 33 41.7	+3.2
TATA	Tatamba Isabel	13.40	100	P	P	21 33 50.4	+0.1
CTA	Charters Tower	13.76	181	P	P	21 33 54.2	-0.2
CTAO	Charters Tower	13.76	181		P	21 33 53.2	-1.2
CTAO	Charters Tower	13.76	181	P	P	21 33 54.2	-0.2
FAKI	Fak Fak	14.55	282	Pn	Pn	21 34 00.4	+1.0
FAKI	Fak Fak	14.55	282	P	P	21 34 05.8	+2.6
QIS	Mount Isa	15.71	204	P	P	21 34 17.6	+1.6
SWI	Sorong	16.09	289	P	P	21 34 21.5	+1.3
	51nm,0.9s						
MTN	Manton Dam	16.48	245	Pn	Pn	21 34 21.6	-2.0
MTN				IAmb	IAmb	21 34 48.7	
	comp=Z,6.6nm,0.9s						
WB0	Warramunga Arr	17.85	220		P	21 34 38.6	-1.0
WRA	Warramunga Arr	18.01	220	P	P	21 34 40.6	-0.8
	comp=Z,5.2nm,0.6s,baz=41,slow=12,SNR=36						
WRA	Warramunga Arr	18.01	220	P	P	21 34 39.1	-2.4
AAI	Ambon	18.38	277	P	P	21 34 46.3	+0.8
	comp=Z,39nm,0.7s						
EIDS	Eidsvold	19.52	167	P	Pn	21 34 59.3	-0.8
EIDS				IAmb	IAmb	21 35 19.7	
	comp=Z,8.3nm,1.1s						
NLAI	Namlea	19.53	278	P	P	21 35 00.1	+2.0
LUES	Luesalemba Tem	19.73	104	P	Pn	21 35 06.1	+3.5
KNRA	Kununurra	19.73	240	P	P	21 34 58.1	-2.1
KNRA				IAmb	IAmb	21 35 04.0	
	comp=Z,5.3nm,0.6s						
SANI	Sanana	20.84	281	P	Pn	21 35 15.1	-0.5
	comp=Z,11nm,0.7s						
AS31	Alice Springs	21.12	214		P	21 35 14.6	-0.6
ASAR	Alice Springs	21.12	214	P	P	21 35 15.3	+0.1
	comp=Z,4.8nm,0.7s,baz=39,slow=9.7,SNR=70						
ASAR				S	S	21 39 00.1	-4.7
	comp=Z,1.2nm,0.8s,baz=26,slow=24,SNR=4.9						
	comp=Z,4.8nm,0.7s						
INKA	Innaminka	22.06	194		P	21 35 24.8	-0.3
INKA				IAmb	IAmb	21 35 27.3	
	comp=Z,7.9nm,0.6s						
FITZ	Fitzroy Crossi	23.49	238		P	21 35 37.5	-1.8
ARMA	Armidale	24.53	169	P	P	21 35 49.0	+0.2
ARMA				IAmb	IAmb	21 36 10.2	
	comp=Z,4.8nm,0.9s						
DZM	Mont Dzumac	24.90	131		P	21 35 52.6	+0.4
DZM				IAmb	IAmb	21 36 06.0	
	comp=Z,5.3nm,1.1s						
STKA	Stephens Creek	25.91	190	P	P	21 36 01.8	+0.7
	comp=Z,4.5nm,0.5s,baz=355,slow=9.1,SNR=9.6						
	comp=Z,4.5nm,0.5s						
TOLI2	Tolitoli	26.66	285	P	P	21 36 07.3	-0.8
TOLI2				IAmb	IAmb	21 36 11.9	
	comp=Z,4.5nm,0.7s						
FORT	Forrest	29.91	213	P	P	21 36 36.2	-0.5
PSA00	Pilbara Seismi	29.92	237	P	P	21 36 36.4	-0.6
MORW	Morawa	36.62	228	P	P	21 37 34.6	-0.6
KULM	Kulim	47.15	283	P	P	21 39 00.9	-0.2
CMAR	Chiang Mai Arr	52.90	299	P	P	21 39 45.4	+0.9
	comp=Z,1.0nm,0.3s,baz=123,slow=5.2,SNR=9.2						
	comp=Z,1.0nm,0.3s						
CMAR	Chiang Mai Arr	52.90	299	P	P	21 39 44.4	-0.1
EVN	Everest	66.80	304	P	P	21 41 20.1	-0.3
EVN				IAmb	IAmb	21 41 21.3	
	comp=Z,1.9nm,0.5s						
VNDA	Vanda	71.70	177	P	P	21 41 49.6	+0.6
	comp=Z,2.2nm,0.9s,baz=337,slow=6.1,SNR=6.5						
	comp=Z,2.2nm,0.9s						
VNDA	Vanda	71.70	177	P	P	21 41 49.3	+0.3
VNDA				IAmb	IAmb	21 41 50.2	
	comp=Z,2.5nm,0.8s						
MKAR	Makanchi Array	77.35	321	P	P	21 42 22.5	+0.3
	comp=Z,0.3nm,0.7s,baz=110,slow=6.9,SNR=1.7						
MKAR				pP	pP	21 42 49.6	+1.1
	comp=Z,0.4nm,0.8s,baz=89,slow=5.7,SNR=1.5						
	comp=Z,0.3nm,0.7s						
ILAR	Eielson Array	85.91	23	P	P	21 43 04.6	-2.2
	comp=Z,0.4nm,0.8s,baz=238,slow=5.2,SNR=4.5						
	comp=Z,0.4nm,0.8s						
BVAR	Borovoye Array	86.65	324	sP	sP	21 43 46.6	-2.2
	comp=Z,0.6nm,0.6s,baz=107,slow=5.0,SNR=3.1						
TORD	Torodi Ar. Bea	144.64	284	PKP	PKPbc	21 50 03.6	+0.3
	comp=Z,1.3nm,0.3s,baz=65,slow=3.3,SNR=2.0						

*IDC **03** 21:36:51.3±0.8, 30.°98N×142.°84E, h0km, mb3.9/12, mbtmp3.9/14, ML3.0/2, MS2.9/2, Error ellipse: s-maj=26.6km s-min=16.3km az=72.0*

*NEIC **03** 21:36:53.8±0.9, 31.°01N±0.°08×142.°7E±0.°1, h10km±1km, mb4.3/15, Error ellipse: s-maj=18.4km s-min=9.6km az=56.0*

ISC 03 21:36:57.2±0.7, **31.°02N**±0.°08×**142.°6E**±0.°1, **h37**km, **n39**, σ**1.s06**/43, **mb4.1**/20, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	3.15	312	Pn	Pn	21 37 44.2	0.0
	6.5nm,0.3s,baz=76,slow=19,SNR=1.3						
JHJ				Sn	Sn	21 38 18.8	-1.6
	14nm,0.3s,baz=270,slow=20,SNR=2.2						
	103nm,0.7s						
JCJ	Chichijima	3.93	185	Pn	Pn	21 37 53.0	-1.9
JGF	Kuroka	6.30	318	Pn	Pn	21 38 25.5	-2.1
MJAR	Matsushiro Arr	6.58	328	Pn	Pn	21 38 31.5	+0.1
	0.2nm,0.3s,baz=150,slow=11,SNR=12						
MJAR				Sn	Sn	21 39 44.6	-0.6
	0.2nm,0.3s,baz=138,slow=22,SNR=5.7						
	3.7nm,0.7s						
MJAR	Matsushiro Arr	6.58	328		Pn	21 38 29.9	-1.5
MJB9	Matsu-Tunnel	6.59	328	Pn	Pn	21 38 29.9	-1.6
JOW	Kunigami	13.18	255	LR	LR	21 44 36.6	
	comp=Z,58nm,19.7s,baz=124,slow=35						
HILR	Hailar Array B	25.23	324	P	P	21 42 20.3	+0.7
	2.0nm,0.6s,baz=122,slow=16,SNR=2.2						
	2.0nm,0.6s						
SONM	Songino Array	32.22	312	P	P	21 43 24.2	+2.3
	1.7nm,0.7s,baz=125,slow=8.3,SNR=10						
	1.7nm,0.7s						
SONM	Songino Array	32.22	312	P	P	21 43 22.5	+0.5
SONM				IAmb	IAmb	21 43 27.1	
	comp=Z,1.4nm,0.8s						
SEY	Seymchan	32.54	8	P	P	21 43 24.4	0.0
	comp=Z,1.5nm,0.7s,baz=281,slow=10,SNR=1.1						
	comp=Z,1.5nm,0.7s						
ZALV	Zalesovo Beam	46.80	317	P	P	21 45 23.6	+0.6
	comp=Z,0.9nm,0.6s,baz=96,slow=9.7,SNR=4.9						
ZALV				PcP	PcP	21 46 56.0	+0.4
	comp=Z,0.8nm,0.6s,baz=90,slow=4.3,SNR=2.8						
	comp=Z,0.9nm,0.6s						
ZALV	Zalesovo Beam	46.80	317	P	P	21 45 23.0	+0.1
KNRA	Kununurra	48.29	198	P	P	21 45 35.2	+0.4
MKAR	Makanchi Array	48.30	307	P	P	21 45 36.0	+1.2
	comp=Z,1.6nm,0.8s,baz=90,slow=9.0,SNR=9.3						
	comp=Z,1.6nm,0.8s						
MKAR	Makanchi Array	48.30	307	P	P	21 45 35.4	+0.6
MAKZ	Makanchi	48.52	307	P	P	21 45 37.6	+1.2
KURBB	Kurchatov Arra	50.59	312	P	P	21 45 52.9	+0.8
	comp=Z,0.8nm,0.3s,baz=90,slow=7.4,SNR=4.8						
	comp=Z,0.8nm,0.3s						
J20K	Nowinta River	50.95	30	P	P	21 45 54.6	0.0
J20K				IAmb	IAmb	21 46 06.8	
	comp=Z,8.2nm,1.5s						
WB0	Warramunga Arr	51.10	190	P	P	21 45 55.3	-0.9
WB0				IAmb	IAmb	21 45 56.2	
	comp=Z,5.4nm,0.8s						
WRA	Warramunga Arr	51.28	190	P	P	21 45 56.7	-0.9
	comp=Z,3.2nm,0.7s,baz=10,slow=7.8,SNR=17						
	comp=Z,3.2nm,0.7s						
WRA	Warramunga Arr	51.28	190	P	P	21 45 56.4	-1.2
FITZ	Fitzroy Crossi	51.47	201	P	P	21 45 59.0	0.0
E22K	Anaktuvuk Pass	52.54	25	P	P	21 46 06.2	-0.3
E22K				IAmb	IAmb	21 46 13.4	
	comp=Z,3.3nm,1.1s						
D23K	Nanushuk River	53.09	25	P	P	21 46 10.8	+0.2
D23K				IAmb	IAmb	21 46 35.9	
	comp=Z,8.1nm,1.4s						
BOOM	Boomskoye usch	53.33	302	P	P	21 46 14.1	+1.3
BOOM				IAmb	IAmb	21 46 33.6	
	comp=Z,5.0nm,1.0s						
ILAR	Eielson Array	54.14	30	P	P	21 46 15.8	-2.4
	comp=Z,0.3nm,0.8s,baz=245,slow=6.1,SNR=4.5						
	comp=Z,0.3nm,0.8s						
AS31	Alice Springs	55.01	190	P	P	21 46 24.2	-0.8
ASAR	Alice Springs	55.01	190	P	P	21 46 24.1	-0.9
	comp=Z,0.8nm,0.5s,baz=10,slow=6.7,SNR=22						
ASAR				PcP	PcP	21 47 27.6	+1.2
	comp=Z,0.5nm,0.9s,baz=4.7,slow=3.3,SNR=4.3						
	comp=Z,0.8nm,0.5s						
ASAR	Alice Springs	55.01	190	P	P	21 46 23.8	-1.2
ASAR				PcP	PcP	21 47 27.2	+0.9
BVAR	Borovoye Array	55.42	316	P	P	21 46 28.5	+0.9
	comp=Z,0.9nm,0.7s,baz=123,slow=5.5,SNR=4.9						
BVAR				LR	LR	22 10 36.3	
	comp=Z,10.0nm,21.2s,baz=50,slow=36						
	comp=Z,0.9nm,0.7s						
C27K	Jago River	55.63	24	P	P	21 46 29.1	+0.1
C27K				IAmb	IAmb	21 46 30.5	
	comp=Z,1.9nm,0.9s						
KK31	Karatay Array	57.11	304	P	P	21 46 40.7	+0.8
KK31				IAmb	IAmb	21 46 44.5	
	comp=Z,1.9nm,0.8s						
KKAR	Karatay Array	57.11	304	P	P	21 46 40.8	+0.9
NIL	Nilore	57.59	292	P	P	21 46 43.6	+0.2
NIL				IAmb	IAmb	21 46 46.7	
	comp=Z,5.7nm,0.8s						
CHGR	Chuyangaron	59.26	299	P	P	21 46 55.6	+0.5
FINES	FINESS Array B	74.58	334	P	P	21 48 32.2	+0.2
	comp=Z,2.2nm,1.0s,baz=97,slow=4.6,SNR=3.7						
	comp=Z,2.2nm,1.0s						
NVAR	Mina Array Bea	77.86	52	P	P	21 48 51.0	-0.4
	comp=Z,0.3nm,0.5s,baz=307,slow=5.6,SNR=2.9						
	comp=Z,0.3nm,0.5s						
LPAZ	La Paz	148.43	69	PKPbc	PKPbc	21 56 40.7	-0.4
	comp=Z,1.1nm,0.6s,baz=270,slow=1.0,SNR=2.4						

*NAO **03** 21:49:53.8±0.9, 78.°23N×7.°26E, h16km±9km, ML2.9*

*KOLA **03** 21:49:54.5, 78.°25N×8.°26E, h0km, ML2.7, Error ellipse: s-maj=16.1km s-min=12.2km az=80.0, Greenland sea,Knipovich ridge, middle*

*BER **03** 21:49:55.1±2.9, 78.°25N×7.°13E, h19km±20km, Mw3.7, ML2.9(NAO), Confirmed Earthquake*

*DNK **03** 21:49:56.9±3.7, 78.°74N×6.°57E, h36km±33km, ML1.5, Presumed earthquake*

*FCIAR **03** 21:49:57.0, 78.°09N×8.°10E, h10km, station ZFI2 has station magnitude of 3.50 station OMEGA has station magnitude of 3.50*

ISC 03 21:49:49.3±1.8, **78.°16N**±0.°06×**6.°82E**±0.°04, **h5**km±12km, **n30**, σ**2.s08**/54, **Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.28	51	Pb	Pg	21 50 14.9	+1.2
KBS				Sb	Sg	21 50 27.7	-2.6
KBS	Kingsbay	1.28	51	P	Pg	21 50 14.6	+0.8
KBS				S	Sg	21 50 27.6	-2.6
KBS	Kingsbay	1.28	51	eP	Pg	21 50 14.7	+0.9
KBS				eS	Sg	21 50 27.6	-2.6
KBS				IAML		21 50 30.0	
	comp=Z,274nm,0.4s						
KBS	Kingsbay	1.28	51	i P	Pg	21 50 14.5	+0.8
KBS				i S	Sg	21 50 27.7	-2.6
BRBB	Barentsburg B	1.53	89	Pb	Pn	21 50 18.9	+1.8
BRBB				Sb	Sn	21 50 35.9	-1.5
BRBB	Barentsburg B	1.53	89	P	Pn	21 50 18.7	+1.5
BRBB				S	Sn	21 50 35.7	-1.6
BRBB	Barentsburg B	1.53	89	eP	Pn	21 50 19.0	+1.8
BRBB				eS	Sn	21 50 36.0	-1.4
BRBA	Barentsburg A	1.54	90	Pb	Pn	21 50 19.0	+1.8
BRBA				Sb	Sn	21 50 35.9	-1.6
BRBA	Barentsburg A	1.54	90	eP	Pn	21 50 19.1	+1.8
BRBA				eS	Sn	21 50 36.0	-1.6
BRBA				IAML		21 50 40.3	
	comp=Z,84nm,0.2s						
SPA0	Spitsbergen Ar	1.97	85	Pn	Pn	21 50 26.2	+3.0
	baz=270,slow=14						
SPA0				Sn	Sn	21 50 48.5	+0.3
	baz=266,slow=18						
SPA0	Spitsbergen Ar	1.97	85	eP	Pn	21 50 26.0	+2.8
SPA0				eS	Sn	21 50 47.9	-0.3
SPA0	Spitsbergen Ar	1.97	85	Pn	Pn	21 50 26.2	+3.0
	baz=270,slow=14						
SPA0				Sn	Sn	21 50 48.5	+0.3
	baz=266,slow=18						
SPA0				IAML		21 50 50.3	
	comp=Z,88nm,0.2s						
SPITS	Spitsbergen Ar	1.97	85	P	Pn	21 50 25.8	+2.6
SPITS				S	Sn	21 50 47.5	-0.7
HSPB	Hornsund (broa	2.21	118	Pn	Pn	21 50 29.0	+2.4
HSPB				Sn	Sn	21 50 54.9	+0.6
HSPB	Hornsund (broa	2.21	118	P	Pn	21 50 28.6	+2.0
HSPB				S	Sn	21 50 53.2	-1.0
HSPB	Hornsund (broa	2.21	118	eP	Pn	21 50 28.6	+2.0
HSPB				eS	Sn	21 50 52.7	-1.6
HSPB	Hornsund (broa	2.21	118	eP	Pn	21 50 28.9	+2.4
HSPB				eS	Sn	21 50 53.4	-0.8
HSPB				IAML		21 50 56.0	
	comp=Z,14nm,0.1s						
HOPEN	Hopen	4.32	103	Pn	Pn	21 50 57.5	+2.1
HOPEN				Sn	Sn	21 51 43.7	-2.5
HOPEN	Hopen	4.32	103	eP	Pn	21 50 57.7	+2.2
HOPEN				eS	Sn	21 51 44.0	-2.1
HOPEN				IAML		21 51 45.4	
	comp=Z,12nm,0.1s						
NOR	Nord	5.34	321	Pn	Pn	21 51 11.7	+2.2
NOR				Sn	Sn	21 52 09.5	-1.7
NOR	Nord	5.34	321	Pn	Pn	21 51 11.7	+2.2
NOR				Sn	Sn	21 52 09.5	-1.7
NOR	Nord	5.34	321	i P	Pn	21 51 11.2	+1.8
NOR				i S	Sn	21 51 55.5	-16
NOR				IAML		21 51 56.2	
	comp=Z,3.5nm,0.6s						
DAG	Danmarks Havn	5.69	269	i P	Pn	21 51 16.0	+1.8
DAG				i S	Sn	21 52 16.5	-3.3
DAG	Danmarks Havn	5.69	269	i P	Pn	21 51 16.0	+1.8
DAG				i P		21 51 16.9	
DAG				i S	Sn	21 52 16.5	-3.3
DAG				IAML		21 52 22.3	
	comp=Z,2.8nm,0.2s						
DBG	Daneborg	7.45	253	Pn	Pn	21 51 41.5	+3.2
DBG	Daneborg	7.45	253	i P	Pn	21 51 40.5	+2.2
DBG				i S	Sn	21 53 00.8	-2.2
DBG	Daneborg	7.45	253	i P	Pn	21 51 40.5	+2.2
DBG				i S	Sn	21 53 00.8	-2.2

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	ISC
DBG				IAML		21 53 05.7	
	comp=Z,0.4nm,0.2s						
ZFI2	Zemlya Franca-	7.76	51	*e*P	Pn	21 51 44.2	+1.6
ZFI2				*e*S	Sn	21 53 03.2	-7.4
	comp=Z,13nm,1.4s						
OMEGA	Omega	7.77	51	*e*P	Pn	21 51 44.3	+1.5
OMEGA				*e*S	Sn	21 53 03.3	-7.7
	comp=Z,12nm,2.2s						
NEEM	North Greenlan	11.83	295	*i* P	Pn	21 52 37.4	-1.2
NEEM				*i* S	Sn	21 54 31.6	-19
NEEM				IAML		21 54 46.8	
	comp=Z,0.9nm,0.2s						

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*IDC **03** 21:55:37.0±4.4, 17°.71S×178°.68W, h600km±53km, mb3.4/10, mbtmp4.4/11, Error ellipse: s-maj=33.3km s-min=17.6km az=139.0*

*NEIC **03** 21:55:36.6±1.5, 18°.0S±0°.1×178°.5W±0°.1, h597km±7km, mb4.2/30, Error ellipse: s-maj=18.1km s-min=16.1km az=56.0*

ISC 03 21:55:34.9±0.6, **18°.0S**±0°.1×**178°.5W**±0°.1, **h579**km, **n52**, σ1s.**04**/54, **mb4.2**/26, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.33	273	P	P	21 56 58.1	+3.7
SANVU	Saraoutou	13.96	278	P	P	21 58 35.3	+1.7
PINNC	Pines Island,	14.01	248	P	P	21 58 34.3	+0.2
DZM	Mont Dzumac	14.77	251	P	P	21 58 41.2	-0.4
	4.2nm,0.6s,baz=92,slow=18,SNR=10						
DZM	Mont Dzumac	14.77	251	P	P	21 58 42.0	+0.4
EIDS	Eidsvold	29.21	250	P	P	22 00 50.8	-0.2
EIDS				IAmb	IAmb	22 00 51.6	
	comp=Z,5.9nm,0.7s						
ARMA	Armidale	29.88	240	P	P	22 00 57.2	+0.4
CTAO	Charters Tower	33.39	261	P	P	22 01 26.2	-0.5
CTAO				IAmb	IAmb	22 01 27.6	
	comp=Z,6.9nm,0.7s						
CAN	Canberra	33.64	233	P	P	22 01 28.7	+0.1
CAN				IAmb	IAmb	22 01 29.4	
	comp=Z,13nm,1.1s						
PMG	Port Moresby	34.42	280		P	22 01 36.2	+0.8
COEN	Coen	37.06	270		P	22 01 57.7	+0.5
STKA	Stephens Creek	38.57	241	P	P	22 02 09.5	+0.3
	comp=Z,8.5nm,0.8s,baz=64,slow=6.5,SNR=11						
	comp=Z,8.5nm,0.8s						
INKA	Innaminka	38.69	248	P	P	22 02 10.7	+0.5
INKA				IAmb	IAmb	22 02 11.9	
	comp=Z,4.4nm,0.7s						
BBOO	Buckleboo	43.34	241	P	P	22 02 46.4	-0.5
WB0	Warramunga Arr	44.55	260		P	22 02 55.4	-1.0
WB0				IAmb	IAmb	22 02 56.4	
	comp=Z,7.8nm,0.6s						
WRA	Warramunga Arr	44.58	260	P	P	22 02 55.9	-0.8
	comp=Z,6.4nm,0.7s,baz=96,slow=7.1,SNR=80						
	comp=Z,6.4nm,0.7s						
WRA	Warramunga Arr	44.58	260		P	22 02 55.3	-1.4
AS31	Alice Springs	44.73	254		P	22 02 57.4	-0.5
ASAR	Alice Springs	44.73	254	P	P	22 02 57.6	-0.3
	comp=Z,29nm,0.6s,baz=87,slow=8.6,SNR=440						
ASAR				PcP	PcP	22 04 26.4	-1.1
	comp=Z,1.1nm,0.5s,baz=96,slow=3.5,SNR=4.4						
	comp=Z,29nm,0.6s						
ASAR	Alice Springs	44.73	254		P	22 02 57.4	-0.5
ASAR					PcP	22 04 26.7	-0.8
MTN	Manton Dam	48.75	268	P	P	22 03 27.1	-1.0
MTN				IAmb	IAmb	22 03 28.5	
	comp=Z,7.5nm,0.8s						
FORT	Forrest	49.95	245	P	P	22 03 35.6	-1.1
FORT				IAmb	IAmb	22 03 36.5	
	comp=Z,5.2nm,0.7s						
FAKI	Fak Fak	50.54	281	P	P	22 03 40.9	-0.4
FAKI				IAmb	IAmb	22 03 46.2	
	comp=Z,9.4nm,1.0s						
FITZ	Fitzroy Crossi	52.98	261	P	P	22 03 58.4	-0.3
SOEI	Soe	56.02	270	P	P	22 04 21.0	+0.8
PSA00	Pilbara Seismi	57.85	255	P	P	22 04 31.4	-1.1
PSA00				IAmb	IAmb	22 04 32.4	
	comp=Z,8.4nm,0.7s						
PSA00	Pilbara Seismi	57.85	255	P	P	22 04 31.3	-1.1
PSA00				IAmb	IAmb	22 04 32.4	
	comp=Z,2.2nm,0.9s						
TOLI2	Tolitoli	62.68	281	P	P	22 05 04.9	+0.5
TOLI2				IAmb	IAmb	22 05 20.3	
	comp=Z,5.1nm,0.9s						
JAGI	Jajag, Banyuwa	65.99	269	P	P	22 05 23.5	-1.9
JAGI				IAmb	IAmb	22 05 42.3	
	comp=Z,16nm,1.0s						
UGM	Wanagama	69.60	268	P	P	22 05 46.5	-0.8
QSPA	South Pole Qui	72.10	180	P	P	22 06 03.5	+2.4
	comp=Z,2.0nm,0.8s,baz=355,slow=2.3,SNR=4.5						
	comp=Z,2.0nm,0.8s						
QSPA	South Pole Qui	72.10	180	P	P	22 06 02.7	+1.5
YBH	Yreka Blue Hor	78.59	39	P	P	22 06 38.2	+0.7
	comp=Z,0.1nm,0.5s,baz=208,slow=0.8,SNR=6.9						
YBH	Yreka Blue Hor	78.59	39	P	P	22 06 38.0	+0.5
L04D	Klamath Falls	79.12	39	P	P	22 06 40.6	+0.3
L04D				IAmb	IAmb	22 06 41.5	
	comp=Z,4.7nm,0.8s						
NVAR	Mina Array Bea	79.49	44	P	P	22 06 42.8	+0.3
	comp=Z,1.3nm,0.7s,baz=224,slow=8.8,SNR=12						
	comp=Z,1.3nm,0.7s						
J04A	Umpqua Nationa	79.84	38	P	P	22 06 44.3	+0.1
J04A				IAmb	IAmb	22 06 45.5	
	comp=Z,8.8nm,0.6s						
J05D	Fort Rock, OR	80.39	39		P	22 06 47.4	+0.5
J05D				IAmb	IAmb	22 06 48.5	
	comp=Z,7.2nm,0.9s						
U15A	North Rim	82.58	48	P	P	22 06 59.2	+0.7
U15A				IAmb	IAmb	22 07 00.2	
	comp=Z,3.2nm,0.7s						
ELK	Elko	82.72	43	P	P	22 06 58.2	-0.8
	comp=Z,1.1nm,0.7s,baz=228,slow=5.6,SNR=4.8						
	comp=Z,1.1nm,0.7s						
MAW	Mawson	83.80	200	P	P	22 07 03.1	-0.5
	comp=Z,1.7nm,0.7s,baz=113,slow=13,SNR=1.7						
	comp=Z,1.7nm,0.7s						
ILAR	Eielson Array	85.94	13	P	P	22 07 12.8	-1.1
	comp=Z,0.7nm,0.4s,baz=224,slow=4.9,SNR=18						
	comp=Z,0.7nm,0.4s						
ILAR	Eielson Array	85.94	13	P	P	22 07 12.9	-1.0
TX31	Lajitas Ar. Si	86.06	58		P	22 07 16.0	+0.6
TXAR	Lajitas Array	86.06	58	P	P	22 07 16.6	+1.1
	comp=Z,1.7nm,0.7s,baz=219,slow=5.9,SNR=19						
	comp=Z,1.7nm,0.7s						
TXAR	Lajitas Array	86.06	58	P	P	22 07 16.0	+0.6
BW06	Boulder Array	87.42	43	P	P	22 07 21.3	-0.4
PDAR	Pinedale Array	87.42	43	P	P	22 07 21.0	-0.7
	comp=Z,1.0nm,0.6s,baz=217,slow=2.6,SNR=11						
	comp=Z,1.0nm,0.6s						
PDAR	Pinedale Array	87.42	43	P	P	22 07 21.3	-0.4
BURAR	Bucovina Array	144.63	332	PKPbc	PKPab	22 14 06.7	-0.6
BRTR	Keskin Array B	144.78	315	PKP	PKPdf	22 14 04.6	-2.3
	comp=Z,0.4nm,0.5s,baz=96,slow=3.8,SNR=1.8						
MMAI	Mount Meron Ar	146.13	303	PKPbc	PKPbc	22 14 11.4	0.0
	comp=Z,1.0nm,0.6s,baz=57,slow=5.3,SNR=3.7						

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*IDC **03** 22:01:23.5±0.6, 43°.63N×89°.27E, h0km, mb4.0/15, mbtmp4.0/20, ML3.6/5, MS3.1/7, Error ellipse: s-maj=21.7km s-min=11.1km az=45.0*

*NNC **03** 22:01:24.9±3.7, 44°.20N×89°.37E, h0km, mb4.5, mpv4.5, Error ellipse: s-maj=27.6km s-min=22.1km az=104.0*

*NEIC **03** 22:01:25.4±1.4, 43°.66N±0°.05×89°.18E±0°.10, h10km±1km, mb4.4/28, Error ellipse: s-maj=14.2km s-min=3.3km az=56.0*

*BJI **03** 22:01:25.8, 43°.60N×89°.18E, h19km, mb4.1/10, ML4.2/12*

ISC 03 22:01:25.4±0.5, **43°.80N**±0°.06×**89°.21E**±0°.04, **h10**km, **n88**, σ1s.**87**/99, **mb4.2**/23, **MS3.0**/4, **15C-11D**, **Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	1.09	272	Pg	Pg	22 01 46.2	-0.2
WMQ				Sg	Sg	22 02 00.2	-0.4
WMQ				smax	smax		
	comp=N,4μm,0.9s						
WMQ				smax	smax		
	comp=E,4μm,0.9s						
MK31	Makanchi Array	5.72	304	⇑Pn	Pn	22 02 50.5	+0.1
	13nm,0.6s,baz=113,slow=14						
MK31				⇑Sn	Sn	22 03 56.0	-0.1
	baz=109,slow=22						
MK31				⇑Lg	Lg	22 04 25.2	
	56nm,0.5s,baz=108,slow=28						
MKAR	Makanchi Array	5.72	304	Pn	Pn	22 02 52.5	+2.1
	5.2nm,0.3s,baz=116,slow=14,SNR=256						
MKAR				Sn	Sn	22 03 58.3	+2.2
	19nm,0.3s,baz=130,slow=27,SNR=11						
MKAR				Lg	Lg	22 04 29.6	
	15nm,0.3s,baz=109,slow=28,SNR=4.1						
MKAR				LR	LR	22 05 37.5	
	comp=Z,158nm,20.4s,baz=148,slow=43						
	18nm,0.6s						
MKAR	Makanchi Array	5.72	304		Pn	22 02 52.2	+1.8
MAKZ	Makanchi	5.92	303		Pn	22 02 55.1	+2.0
MAKZ	Makanchi	5.92	303	⇑Pn	Pn	22 02 53.0	-0.1
	47nm,0.8s						
MAKZ				⇓Sn	Sn	22 04 01.7	+0.7
MAKZ				⇓Lg	Lg	22 04 31.8	
	156nm,0.7s						
PDGK	Podgornoye	7.07	270	⇓Pn	Pn	22 03 10.4	+1.3
	32nm,0.5s						
PDGK				⇑Sn	Sn	22 04 33.1	+3.6
	71nm,0.7s						
PDGK				⇑Lg	Lg	22 05 13.4	
	88nm,0.8s						
WUS	Wushi	7.82	254		Pn	22 03 19.3	-0.1
PRZ	Przheval'sk	8.01	264		Pn	22 03 21.4	-0.6
TARG	Taragay, Kyrgy	8.64	260		Pn	22 03 30.6	-0.2
KNDC	Almaty	8.92	270	⇓Pn	Pn	22 03 35.0	+0.7
	22nm,0.7s						
KNDC				⇓Sn	Sn	22 05 18.6	+3.8
	16nm,0.7s						
KNDC				⇑Lg	Lg	22 06 11.7	
	34nm,0.8s						
KDJ	Kajisay	8.97	263		Pn	22 03 35.1	-0.1
GTA	Gaotai	9.08	115	*e*P	Pn	22 03 39.2	+2.7
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BOOM	Boomskoye usch	9.79	267		Pn	22 03 46.6	+0.3
KURBB	Kurchatov Arra	9.96	317	Pn	Pn	22 03 48.4	0.0
	0.5nm,0.3s,baz=127,slow=13,SNR=9.9						
KURBB				Sn	Sn	22 05 37.0	-3.2
	0.7nm,0.3s,baz=121,slow=24,SNR=4.6						
KURBB				Lg	Lg	22 06 39.5	
	0.3nm,0.3s,baz=121,slow=29,SNR=4.3						
KURBB				LR	LR	22 08 09.7	
	comp=Z,119nm,19.4s,baz=184,slow=40						
	2.1nm,0.5s						
KURBB	Kurchatov Arra	9.96	317	⇑Pn	Pn	22 03 49.4	+1.0
	5.1nm,0.5s						
KURBB				⇑Sn	Sn	22 05 37.3	-2.9
	24nm,0.6s						
KURBB				⇑Lg	Lg	22 06 38.0	
	92nm,0.8s						
KURK	Kurchatov	9.97	318		Pn	22 03 49.1	+0.5
KURK	Kurchatov	9.97	318	⇓Pn	Pn	22 03 49.1	+0.5
	0.9nm,0.5s						
KURK				⇓Sn	Sn	22 05 36.5	-4.1
	4.3nm,0.5s						
KURK				⇑Lg	Lg	22 06 38.0	
	24nm,0.8s						
ZAA0	Zalesovo Array	10.55	346	Pn	Pn	22 03 58.1	+1.5
ZALV	Zalesovo Beam	10.55	346	Pn	Pn	22 03 58.2	+1.7
	0.5nm,0.3s,baz=167,slow=14,SNR=7.5						
ZALV				Sn	Sn	22 05 50.6	-4.2
	1.2nm,0.3s,baz=164,slow=22,SNR=6.0						
ZALV				Lg	Lg	22 07 02.3	
	0.6nm,0.3s,baz=156,slow=32,SNR=6.1						
ZALV				LR	LR	22 07 58.2	
	comp=Z,37nm,19.2s,baz=188,slow=37						
	1.1nm,0.3s						
ZALV	Zalesovo Beam	10.55	346	Pn	Pn	22 03 58.0	+1.4
KSH	Kashi	10.78	251	P	Pn	22 04 04.8	+4.9
KSH				S	Sn	22 06 08.0	+7.3
AAK	Ala-Archa	10.80	269	Pn	Pn	22 04 00.8	+0.6
	0.7nm,0.3s,baz=110,slow=8.0,SNR=10						
AAK				Lg	Lg	22 07 06.6	
	0.2nm,0.3s,baz=323,slow=20,SNR=2.1						
	2.0nm,0.3s						
AAK	Ala-Archa	10.80	269		Pn	22 04 00.7	+0.5
AAK	Ala-Archa	10.80	269	⇓Pn	Pn	22 03 59.4	-0.8
	3.9nm,0.9s						
AAK				⇑Lg	Lg	22 07 08.5	
	8.1nm,0.8s						
SONM	Songino Array	12.65	65	Pn	Pn	22 04 28.0	+2.6
	baz=254,slow=15,SNR=2.0						
SONM				Lg	Lg	22 07 54.8	
	0.2nm,0.3s,baz=251,slow=35,SNR=4.5						
SONM	Songino Array	12.65	65		Pn	22 04 26.9	+1.5
KK31	Karatay Array	13.60	274		Pn	22 04 38.6	+0.3
KK31	Karatay Array	13.60	274	⇑Pn	Pn	22 04 39.5	+1.2
	5.1nm,0.7s,baz=70,slow=13,SNR=50						
KK31				⇑Lg	Lg	22 08 40.2	
	6.7nm,0.8s						
KKAR	Karatay Array	13.60	274		Pn	22 04 39.0	+0.7
DRK	Karamyk	13.71	258		Pn	22 04 39.0	-1.1
MANEM	Manem	14.68	251		Pn	22 04 52.0	-1.4
GAR	Garm	14.96	258		Pn	22 04 55.8	-1.2
BVA0	Borovoye Array	15.49	313	⇑Pn	Pn	22 05 04.4	+0.6
	5.3nm,0.7s						
BVA0				⇓Sn	Sn	22 07 52.8	-2.5
	5.0nm,0.8s						
BVA0				⇓Lg	Lg	22 09 30.5	
	23nm,1.3s						
BVAR	Borovoye Array	15.49	313	Pn	Pn	22 05 03.0	-0.8
	0.1nm,0.3s,baz=118,slow=14,SNR=5.6						
BVAR				Sn	Sn	22 07 47.0	-8.3
	0.1nm,0.3s,baz=110,slow=22,SNR=5.5						
	1.0nm,0.5s						
BORK	Borovoye	15.54	313		Pn	22 05 04.2	-0.2
CHGR	Chuyangaron	15.92	258		Pn	22 05 07.0	-2.5
CHGR				IAmb	IAmb	22 05 22.0	
	comp=Z,45nm,1.0s						
EVN	Everest	15.93	188		Pn	22 05 08.7	-1.5
EVN				IAmb	IAmb	22 05 20.8	
	comp=Z,17nm,0.7s						
NIL	Nilore	16.03	236		Pn	22 05 09.6	-1.3
HHC	Hu-ho-hao-te	16.79	92	*e*P	Pn	22 05 18.8	-1.8
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SHAA	Shahritus	17.14	256		Pn	22 05 23.1	-2.0
SHAA				IAmb	IAmb	22 05 40.2	
	comp=Z,12nm,0.9s						
KBL	Kabul	18.13	246		Pn	22 05 35.4	-2.0
SHL	Shillong	18.32	172		Pn	22 05 37.6	-2.3
SHL				IAmb	IAmb	22 05 46.8	
	comp=Z,17nm,0.8s						
AB31	Akbulak array	20.78	295		P	22 06 06.4	0.0
ABKAR	Akbulak array	20.78	295		P	22 06 06.5	+0.1
AKTO	Aktyubinsk	22.12	298	LR	LR	22 16 01.7	
	comp=Z,54nm,21.3s,baz=198,slow=40						
AKTO	Aktyubinsk	22.12	298	⇓Pn	P	22 06 21.7	+0.8
	comp=Z,7.4nm,1.4s						
HRA	Herat	22.86	255	P	P	22 06 28.0	-1.1
HRA				IAmb	IAmb	22 06 45.4	
	comp=Z,6.2nm,1.1s						
ARTI	Arti	23.21	314		P	22 06 31.9	-0.4
ARTI				IAmb	IAmb	22 06 43.5	
	comp=Z,13nm,1.1s						
NRIK	Noril'sk	25.62	359	P	P	22 06 56.6	+2.1
	comp=Z,6.1nm,0.6s,baz=159,slow=5.3,SNR=11						
	comp=Z,6.1nm,0.6s						
NRIK	Noril'sk	25.62	359	P	P	22 06 55.3	+0.7
NRIK				IAmb	IAmb	22 06 57.5	
	comp=Z,6.3nm,0.6s						
CMAR	Chiang Mai Arr	26.57	159	P	P	22 07 03.5	0.0
	comp=Z,0.7nm,0.3s,baz=350,slow=9.1,SNR=8.2						
CMAR				LR	LR	22 16 55.5	
	comp=Z,13nm,19.1s,baz=175,slow=35						
	comp=Z,0.7nm,0.3s						
CMAR	Chiang Mai Arr	26.57	159	P	P	22 07 02.7	-0.9
KIRV	Kirov	28.48	315	LR	LR	22 19 42.6	
	comp=Z,49nm,18.3s,baz=22,slow=38						
KBZ	Khabaz	33.10	286	P	P	22 08 01.5	+0.2
	comp=Z,1.1nm,0.7s,baz=42,slow=2.3,SNR=4.4						
	comp=Z,1.1nm,0.7s						
AKASG	Malin Array Be	40.30	302	P	P	22 09 02.8	+0.3
	comp=Z,0.4nm,0.4s,baz=67,slow=8.2,SNR=1.3						
	comp=Z,0.4nm,0.4s						
FINES	FINESS Array B	40.35	319	P	P	22 09 04.0	+1.3
	comp=Z,4.5nm,1.0s,baz=90,slow=9.7,SNR=4.8						
	comp=Z,4.5nm,1.0s						
FINES	FINESS Array B	40.35	319	P	P	22 09 03.5	+0.7
ARCES	ARCESS Array B	40.67	331	P	P	22 09 06.6	+1.3
	comp=Z,2.9nm,1.0s,baz=78,slow=7.6,SNR=6.7						
ARCES				PcP	PcP	22 11 06.8	0.0
	comp=Z,2.7nm,0.9s,baz=90,slow=3.6,SNR=7.5						
	comp=Z,2.9nm,1.0s						
BRTR	Keskin Array B	40.99	284	P	P	22 09 09.6	+1.0
	comp=Z,0.9nm,0.9s,baz=108,slow=12,SNR=3.7						
	comp=Z,0.9nm,0.9s						
BUR08	Bucovina Ar. S	43.72	298	P	P	22 09 30.7	0.0
BUR08				IAmb	IAmb	22 09 47.1	
	comp=Z,6.3nm,1.2s						
BURAR	Bucovina Array	43.72	298	P	P	22 09 30.4	-0.3
HFS	Hagfors	46.54	318	P	P	22 09 53.7	+0.9
	comp=Z,4.2nm,0.9s,baz=71,slow=9.4,SNR=6.0						
	comp=Z,4.2nm,0.9s						
NC405	NORSAR Array S	47.23	320	P	P	22 09 58.7	+0.6
NB2	NORSAR Subarra	47.48	320	P	P	22 10 00.2	+0.1
	comp=Z,0.6nm,0.5s,baz=72,slow=7.9						
NOA	NORSAR Array B	47.48	320	P	P	22 10 00.4	+0.3
	comp=Z,0.4nm,0.5s,baz=77,slow=7.8,SNR=3.9						
	comp=Z,0.4nm,0.5s						
VRAC	Vranov	48.46	303	LR	LR	22 32 32.6	
	comp=Z,47nm,18.5s,baz=22,slow=38						
IDI	Anoyia	49.20	283	P	P	22 10 13.7	-0.1
IDI				IAmb	IAmb	22 10 21.1	
	comp=Z,9.4nm,1.3s						
CLL	Collm	49.81	307	*i* P	P	22 10 18.7	+0.6
CLL				*i* pP	pP	22 10 22.3	+0.5
CLL				*i* x	x	22 10 29.4	
EKA	Eskdalemuir Ar	56.70	317	P	P	22 11 09.1	+0.4
	comp=Z,3.4nm,1.0s,baz=57,slow=6.9,SNR=3.5						
	comp=Z,3.4nm,1.0s						
B20K	Meade River	56.78	22	P	P	22 11 10.2	+1.1
D19K	Kuna River	57.44	24	P	P	22 11 15.0	+1.1
D19K				IAmb	IAmb	22 11 39.9	
	comp=Z,8.2nm,1.4s						
B21K	Ikpikpuk River	57.72	22	P	P	22 11 17.1	+1.4
TOLK	Toolik Lake Re	59.72	21	P	P	22 11 30.5	+0.8
TOLK				IAmb	IAmb	22 11 41.1	
	comp=Z,4.3nm,0.8s						
A36M	Sachs Harbour	61.98	12		P	22 11 46.1	+1.2
ILAR	Eielson Array	63.25	23	P	P	22 11 54.4	+0.7
	comp=Z,0.5nm,0.6s,baz=320,slow=5.8,SNR=5.7						
	comp=Z,0.5nm,0.6s						
ESDC	Sonseca Array	65.94	302	P	P	22 12 12.0	+0.4
	comp=Z,0.7nm,0.7s,baz=64,slow=6.3,SNR=5.4						
	comp=Z,0.7nm,0.7s						
KNRA	Kununurra	69.36	139	P	P	22 12 31.7	-1.6
FITZ	Fitzroy Crossi	70.06	143	P	P	22 12 35.8	-1.7
PSA00	Pilbara Seismi	70.87	150	P	P	22 12 40.6	-1.8
PSA00				IAmb	IAmb	22 12 51.0	
	comp=Z,3.0nm,1.2s						
WB0	Warramunga Arr	75.60	136	P	P	22 13 08.6	-1.8
WB0				IAmb	IAmb	22 13 14.9	
	comp=Z,5.6nm,1.2s						
WRA	Warramunga Arr	75.72	137	P	P	22 13 09.6	-1.6
	comp=Z,2.8nm,0.7s,baz=340,slow=5.9,SNR=21						
	comp=Z,2.8nm,0.7s						
WRA	Warramunga Arr	75.72	137	P	P	22 13 09.5	-1.6
ASAR	Alice Springs	78.66	139	P	P	22 13 26.1	-1.5
	comp=Z,1.7nm,0.6s,baz=331,slow=5.6,SNR=28						
	comp=Z,1.7nm,0.6s						
ASAR	Alice Springs	78.66	139	P	P	22 13 25.4	-2.2
TORD	Torodi Ar. Bea	79.25	278	P	P	22 13 30.0	-1.1
	comp=Z,1.2nm,0.3s,baz=54,slow=4.0,SNR=2.5						
	comp=Z,1.2nm,0.3s						
LPAZ	La Paz	146.50	318	PKPbc	PKPdf	22 21 06.7	+0.2
	comp=Z,0.9nm,0.6s,baz=328,slow=0.7,SNR=4.7						
CPUP	Villa Florida	147.82	292	PKPbc	PKPbc	22 21 09.7	-0.8
	comp=Z,0.7nm,0.5s,baz=273,slow=2.6,SNR=7.1						

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*IDC **03** 22:06:43.0±2.5, 32°.04S×71°.79W, h0km, mb4.7/1, mbtmp4.0/2, ML3.4/1, Error ellipse: s-maj=132.3km s-min=47.1km az=94.0*

*SJA **03** 22:06:49.0±0.7, 32°.34S×71°.86W, h52km±12km, ML3.5, MW3.5*

*GUC **03** 22:06:50.7±1.0, 32°.35S×71°.75W, h52km±3km, ML3.4*

ISC 03 22:06:49.8±1.2, **32°.33S**±0°.03×**71°.89W**±0°.06, **h46**km±12km, **n69**, σ1s.**56**/89, **1C-14D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	0.55	115	⇓*e*P	Pn	22 07 01.5	+0.1
VA06				*e*S	Sn	22 07 09.0	-0.8
VA06				IAML		22 07 09.8	
	comp=N,5μm,0.3s						
VA01	Torpederas	0.72	164	*e*P	Pn	22 07 03.9	+0.2
VA01				*e*S	Sn	22 07 13.2	-0.6
VA01				IAML		22 07 13.9	
	comp=E,2μm,0.1s						
VA01	Torpederas	0.72	164	*e*P	Pn	22 07 04.2	+0.5
CO04	Los Peladeros	0.82	70	⇓*i*P	Pn	22 07 05.3	0.0
CO04				*e*S	Sn	22 07 16.2	-0.4
ROC1	El Roble	0.98	132	*e*P	Pn	22 07 01.7	-5.8
ROC1				*e*S	Sn	22 07 19.8	-0.5
ROCH	El Roble	0.98	131	⇓*e*P	Pn	22 07 07.2	-0.2
ROCH				⇓*i*P	Pn	22 07 07.2	-0.2
ROCH				*e*S	Sn	22 07 19.4	-0.9
ROCH				*e*S		22 07 19.6	
ROCH				IAML		22 07 21.1	
	comp=N,1μm,0.2s						
MT02	Curacav	1.12	146	⇓*i*P	Pn	22 07 09.3	+0.2
MT02				*e*S	Sn	22 07 22.8	-0.7
MT02	Curacav	1.12	146	*e*P	Pn	22 07 09.2	0.0
MT02				*e*S	Sn	22 07 22.6	-0.9
MT02				IAML		22 07 23.6	
	comp=Z,692nm,0.7s						
VA03	San Esteban	1.21	111	⇓*e*P	Pn	22 07 10.4	0.0
VA03				*e*S	Sn	22 07 25.3	-0.4
VA03	San Esteban	1.21	111	*e*S	Sn	22 07 25.6	-0.1
VA03				IAML		22 07 27.5	
	comp=Z,1μm,0.2s						
PEL	Peldehue	1.30	129	⇓*e*P	Pn	22 07 11.3	-0.3
PEL				*e*S	Sn	22 07 27.4	-0.4
PEL	Peldehue	1.30	129	*e*P	Pn	22 07 06.2	-5.4
PEL				*e*S	Sn	22 07 27.9	0.0
PEL				IAML		22 07 28.0	
	comp=Z,719nm,0.4s						
VA05	Santo Domingo	1.35	170	*e*P	Pn	22 07 12.3	+0.1
VA05				IAML		22 07 35.6	
	comp=E,1μm,0.3s						
CO02	Combarbal	1.35	34	⇓*e*P	Pn	22 07 13.1	+0.7
CO02				*e*S	Sn	22 07 30.4	+1.3
CO02				IAML		22 07 31.5	
	comp=N,4μm,0.2s						
CO02	Combarbal	1.35	34	*e*P	Pn	22 07 13.0	+0.7
CO02				*e*S	Sn	22 07 30.4	+1.3
CO02				IAML		22 07 31.8	
	comp=Z,1μm,0.2s						
MT05	Renca	1.44	138	*e*P	Pn	22 07 13.9	+0.4
MT05				*e*S	Sn	22 07 31.1	-0.1
MT05				IAML		22 07 33.6	
	comp=E,2μm,0.3s						
MT05	Renca	1.44	138	*e*P	Pn	22 07 14.1	+0.6
MT05				IAML	Sn	22 07 36.5	+5.3
	comp=Z,357nm,0.2s						
MT05				*e*S	Sn	22 07 36.5	+5.3
MT10	Hacienda Santa	1.48	130	⇓*i*P	Pn	22 07 14.5	+0.4
MT10				*e*S	Sn	22 07 32.2	-0.2
MT10				IAML		22 07 34.1	
	comp=N,3μm,0.4s						
MT14	Cerro Cal¡n	1.56	134	*e*P	Pn	22 07 15.0	-0.1
MT14				*e*S	Sn	22 07 32.4	-1.8
MT14				IAML		22 07 36.3	
	comp=E,1μm,0.4s						
MT16	CCHEN	1.59	134	*e*P	Pn	22 07 16.1	+0.5
MT16				*e*S	Sn	22 07 35.0	0.0
MT16				IAML		22 07 36.9	
	comp=N,520nm,0.2s						
MT01	Popeta	1.62	161	*e*P	Pn	22 07 16.3	+0.3
MT01	Popeta	1.62	161	*e*P	Pn	22 07 16.4	+0.3
MT01				*e*S	Sn	22 07 36.3	+0.6
MT01				IAML		22 07 42.3	
	comp=Z,230nm,0.1s						
MT09	Talagante	1.63	153	*e*P	Pn	22 07 17.4	+1.1
MT09				*e*S	Sn	22 07 36.5	+0.4
MT09				IAML		22 07 38.5	
	comp=N,647nm,0.2s						
MT03	Universidad Ad	1.64	136	⇓*i*P	Pn	22 07 16.9	+0.6
MT03				*e*S	Sn	22 07 36.2	-0.1
MT03				IAML		22 07 38.0	
	comp=E,2μm,0.1s						
MT03	Universidad Ad	1.64	136	*e*P	Pn	22 07 16.9	+0.6
MT03				*e*S	Sn	22 07 37.1	+0.8
MT03				IAML		22 07 37.8	
	comp=Z,787nm,0.1s						
CO06	Fray Jorge	1.66	7	⇑*e*P	Pn	22 07 16.8	+0.2
CO06				IAML		22 07 38.7	
	comp=E,347nm,0.2s						
MT15	Las Vizcachas	1.72	138	*e*P	Pn	22 07 18.0	+0.6

MT15				eS	Sn	22 07 38.0	-0.2
MT12	Pirque	1.80	142⇓	eP	Pn	22 07 19.3	+0.8
MT12				eS	Sn	22 07 40.7	+0.6
MT12				IAML		22 07 43.4	
	comp=E,1µm,0.2s						
CO03	El Pedregal	1.80	35	eP	Pn	22 07 19.6	+1.1
CO03				eS	Sn	22 07 41.0	+0.8
CO03				IAML		22 07 43.7	
	comp=E,695nm,0.2s						
CO03	El Pedregal	1.80	35	eP	Pn	22 07 19.6	+1.1
CO03				eS	Sn	22 07 41.8	+1.5
CO03				IAML		22 07 42.3	
	comp=Z,331nm,0.3s						
MT04	Ro Olivares	1.82	127⇓	eP	Pn	22 07 19.4	+0.5
MT04				eS	Sn	22 07 41.3	+0.3
MT04				IAML		22 07 42.1	
	comp=E,598nm,0.2s						
MT04	Ro Olivares	1.82	127	eP	Pn	22 07 14.1	-4.9
MT04				eP		22 07 19.6	
MT04				eS	Sn	22 07 41.8	+0.9
MT04				IAML		22 07 42.7	
	comp=Z,433nm,0.3s						
MT08	Bocatoma Ro	1.93	126⇓	eP	Pn	22 07 21.4	+1.0
MT08				eS	Sn	22 07 44.2	+0.7
MT08				IAML		22 07 48.4	
	comp=E,283nm,0.5s						
MT08	Bocatoma Ro	1.93	126	eP	Pn	22 07 20.8	+0.4
MT08				eS	Sn	22 07 46.0	+2.4
MT08				IAML		22 07 46.4	
	comp=Z,170nm,0.8s						
MT13	San Alfonso	1.95	137	i P	Pn	22 07 21.6	+1.0
MT13				eS	Sn	22 07 44.6	+0.7
MT13				IAML		22 07 46.4	
	comp=N,857nm,0.2s						
MT13	San Alfonso	1.95	137	eP	Pn	22 07 21.6	+1.0
MT13				eS	Sn	22 07 44.9	+1.0
MT13				IAML		22 07 45.2	
	comp=Z,275nm,0.2s						
LMEL	Las Melosas	2.07	138⇓	eP	Pn	22 07 23.3	+1.0
LMEL				eS	Sn	22 07 47.8	+0.8
LMEL				IAML		22 07 49.4	
	comp=N,836nm,0.2s						
LMEL	Las Melosas	2.07	138	eP	Pn	22 07 23.5	+1.2
LMEL				eS	Sn	22 07 48.4	+1.4
LMEL				IAML		22 07 49.9	
	comp=Z,478nm,0.2s						
BO01	Tunca	2.17	162	eP	Pn	22 07 24.0	+0.5
BO01				eS	Sn	22 07 55.2	+6.1
RTLS	Leoncito	2.26	77	eP	Pn	22 07 28.1	+3.1
RTLS				eS	Sn	22 07 51.5	-0.4
RTLS				IAML		22 08 01.9	
	comp=Z,668nm,1.1s						
GO04	Tololo Observa	2.34	24	eP	Pn	22 07 26.7	+0.7
GO04				IAML		22 08 11.0	
	comp=Z,349nm,0.3s						
ARCO	CERRO ARCO	2.54	102	eP	Pn	22 07 33.0	+4.2
ARCO				IAML		22 08 09.8	
	comp=Z,87nm,0.3s						
BO02	Sierra Bellavi	2.63	160	eP	Pn	22 07 30.5	+0.7
BO02				eS	Sn	22 08 05.0	+4.5
BO02				IAML		22 08 17.9	
	comp=Z,126nm,0.5s						
GO05	Hualane	2.68	181	eP	Pn	22 07 36.1	+5.6
GO05				eS	Sn	22 07 57.5	-4.2
AAGR	Agrelo	2.69	107	eP	Pn	22 07 31.6	+1.0
CO01	Juntas del Tor	2.80	34	eP	Pn	22 07 34.8	+2.4
SJA	San Juan	2.94	75	eP	Pn	22 07 47.4	+13
ACCO	Cerro Coronel	2.97	55	eP	Pn	22 07 32.8	-2.0
ACCO				eS	Sn	22 08 17.5	+8.2
AROD	Rodeo	2.98	44	eP	Pn	22 07 22.9	-12
AVIZ	Vizcacheras	3.06	113	eP	Pn	22 07 43.2	+7.5
RTLL	Cerro Villicun	3.07	72	eP	Pn	22 07 39.4	+3.6
RTLL				eS	Sn	22 08 09.4	-1.9
RTLL				IAML		22 08 14.9	
	comp=Z,85nm,0.4s						
CFA	Coronel Fontan	3.18	78	eP	Pn	22 07 40.1	+2.7
CFA				eS	Sn	22 08 17.1	+2.9
LCO	Las Campanas	3.46	17	IAML		22 08 23.4	
	comp=Z,102nm,0.2s						
AC05	El Transito	3.75	22	eP	Pn	22 07 47.0	+1.7
GO03	Copiapo	4.93	17	eP	Pn	22 08 01.9	+0.4
APLL	PUNTA DE LOS L	4.97	69	eP	Pn	22 08 03.6	+1.6
H03N1	Juan Fernandez	6.01	257	T	T	22 14 57.7	
	baz=87,slow=73						
H03N3	Juan Fernandez	6.03	257	T	T	22 14 56.9	
	baz=87,slow=73						
H03N2	Juan Fernandez	6.03	258	T	T	22 14 54.4	
	baz=87,slow=73						
H03S3	Juan Fernandez	6.08	254	T	T	22 14 42.6	
	baz=82,slow=75						
H03S1	Juan Fernandez	6.08	254	T	T	22 14 42.3	
	baz=82,slow=75						
H03S2	Juan Fernandez	6.10	254	T	T	22 14 52.8	
	baz=82,slow=75						
PLCA	Paso Flores	8.46	173	Pn	Pn	22 08 50.5	+0.7
	comp=Z,0.1nm,0.3s,baz=346,slow=12,SNR=1.3						
	comp=Z,1.1nm,0.8s						
TORD	Torodi Ar. Bea	83.52	70	P	P	22 19 12.1	-1.1
	comp=Z,1.9nm,0.3s,baz=249,slow=3.5,SNR=2.7						
	comp=Z,1.9nm,0.3s						
H11S2	WAKE ISLAND Hy	125.91	270	T	T	00 44 54.3	
	baz=118,slow=74						
H11S1	WAKE ISLAND Hy	125.92	270	T	T	00 44 54.2	
	baz=118,slow=74						
H11S3	WAKE ISLAND Hy	125.93	270	T	T	00 44 53.9	
	baz=118						
KURBB	Kurchatov Arra	151.55	41	PKPbc	PKiKP	22 26 39.0	+0.1
	comp=Z,0.5nm,1.0s,baz=290,slow=2.8,SNR=6.4						
ZALV	Zalesovo Beam	152.74	31	PKPbc	PKPbc	22 26 39.2	-1.9
	comp=Z,0.5nm,0.4s,baz=325,slow=4.0,SNR=3.5						

NEIC ***03*** *22:16:11.1±1.3, 43°.28N±0°.06×17°.98E±0°.04, h10^{km}±1^{km}, ML3.1/20, Error ellipse: s-maj=10.8km s-min=4.9km az=14.0*

RHSSO ***03*** *22:16:12.3±0.4, 43°.23N×18°.04E, h9^{km}, ML2.9/4*

PDG ***03*** *22:16:12.1±0.1, 43°.24N×18°.03E, h15^{km}, MD3.0/1, ML2.9/13, Error ellipse: s-maj=0.2km s-min=0.2km az=90.0*

BEO ***03*** *22:16:13.0±0.2, 43°.25N×18°.04E, h8^{km}±2^{km}, ML2.7/15*

PRU ***03*** *22:16:18.4, 43°.45N×17°.80E, h10^{km}*

ISC 03 22:16:12.2±1.0**, 43°.24N**±0°.02×**18°.03E**±0°.01**, h10**^{km}±8^{km}**,**
n77, σ1^{s}19/121**, 9C-6D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLINJ	Klinje	0.42	100⇑	iPg	Pg	22 16 19.7	-0.7
KLINJ				eSg	Sg	22 16 26.5	+0.6
STON	Ston	0.44	213	ePg	Pg	22 16 20.8	+0.1
STON				Sg	Sb	22 16 28.2	-0.4
STON	Ston	0.44	213	ePg	Pg	22 16 20.7	-0.1
STON				eSg	Sb	22 16 28.1	-0.4
BRY	Bratogost	0.51	132⇓	iPg	Pg	22 16 21.4	-0.7
BRY				i Sg	Sg	22 16 29.5	+0.7
TREB	Trebinje	0.58	155	ePg	Pg	22 16 22.5	-0.8
TREB				eSg	Sg	22 16 31.7	+0.8
TREB	Trebinje	0.58	155	ePg	Pg	22 16 22.6	-0.8
TREB				eSg	Sg	22 16 31.5	+0.6
DBRK	Dubrovnik	0.58	171	i Pg	Pg	22 16 23.3	-0.1
DBRK				Sg	Sg	22 16 31.9	+0.9
UPM	Unac-Piva	0.64	93⇓	iPg	Pg	22 16 24.1	-0.6
UPM				i Sg	Sb	22 16 34.2	-0.5
RICI	Ricice	0.70	291	i Pg	Pg	22 16 25.8	+0.1
RICI				Sg	Sb	22 16 36.4	+0.3
MAKA	Makarska	0.74	274	ePg	Pg	22 16 26.3	-0.1
MAKA				Sg	Sb	22 16 37.7	+0.6
NKME	Niksic	0.83	125⇑	iPg	Pg	22 16 27.2	-1.0
NKME				eSg	Sb	22 16 40.1	+0.2
HCY	Herceg Novi	0.87	156⇑	iPg	Pg	22 16 28.1	-0.7
HCY				i Sg	Sb	22 16 41.3	+0.4
CEME	Cevo	0.96	136⇑	iPg	Pg	22 16 29.4	-1.2
CEME				eSg	Sb	22 16 44.5	+1.0
LSTV	Lastovo	0.96	241	ePg	Pg	22 16 30.7	+0.2
LSTV				Sg	Sb	22 16 44.5	+1.0
PLE	Pljevlja	1.00	84⇑	iPg	Pg	22 16 31.1	-0.3
PLE				i Sg	Sn	22 16 46.5	0.0
RUDO	Rudo	1.05	69⇑	iPg	Pg	22 16 31.0	-1.3
RUDO				eSg	Sg	22 16 45.8	-0.2
RUDO	Rudo	1.05	69	ePg	Pg	22 16 31.0	-1.3
RUDO				eSg	Sg	22 16 45.2	-0.8
BUM	Brajici-Budva	1.14	146⇑	iPg	Pb	22 16 33.1	-0.8
BUM				i Sg	Sn	22 16 50.9	+1.1
HVAR	Hvar	1.15	267	ePg	Pb	22 16 34.4	+0.2
HVAR				Sg	Sn	22 16 50.7	+0.6
KOME	Kolasin	1.16	109⇑	iPg	Pb	22 16 33.9	-0.4
KOME				eSg	Sn	22 16 51.8	+1.4
BBLS	Lazi&#263i	1.18	58	ePg	Pb	22 16 34.2	-0.5
BBLS				eSg	Sn	22 16 51.7	+0.8
PDG	Podgorica	1.22	131	Pn	Pn	22 16 34.2	-0.9
PDG				Sn	Sn	22 16 52.1	+0.5
PDG	Podgorica	1.22	131	ePg	Pg	22 16 35.7	+0.2
PDG				eSg	Sn	22 16 52.6	+1.0
PDG	Podgorica	1.22	131⇓	iPg	Pn	22 16 34.0	-1.1
PDG				i Sg	Sn	22 16 53.7	+2.1
DRME	Dracevica, Mon	1.36	141⇓	iPg	Pn	22 16 37.5	+0.4
DRME				eSg	Sg	22 16 57.2	+1.4
KIJV	Kijevo	1.40	304	ePn	Pg	22 16 39.8	+0.7
KIJV				Sg	Sg	22 16 58.8	+1.5
IVA	Berane	1.42	104⇑	iPg	Pn	22 16 38.3	+0.3
IVA				i Sg	Sg	22 16 59.0	+1.2
SJES	Sjenica	1.42	89	ePg	Pg	22 16 39.2	-0.3
SJES				eSg	Sg	22 16 58.8	+0.8
PVY	Plav	1.56	114⇓	iPg	Pn	22 16 40.4	+0.4
PVY				i Sg	Sg	22 17 02.7	+0.3
ULC	Ulcinj	1.56	144⇓	iPg	Pn	22 16 40.2	+0.2
ULC				i Sg	Sg	22 17 02.4	0.0
IVAS	Ivanjica	1.59	77	ePn	Pb	22 16 41.3	-0.3
IVAS				eSn	Sb	22 17 02.0	+0.3
BLY	Banja Luka	1.62	338	ePn	Pn	22 16 41.1	+0.3
BLY				eSn	Sb	22 17 03.2	+0.5
BLY	Banja Luka	1.62	338	ePg	Pg	22 16 43.3	0.0
BLY				eSg	Sg	22 17 05.2	+0.8
TEKS	Tekeris	1.70	39	ePn	Pn	22 16 41.0	-0.9
TEKS				eSn	Sb	22 17 05.5	+0.6
MORI	Morici	1.80	291	ePn	Pb	22 16 45.2	+0.1
MORI				Sn	Sg	22 17 09.3	-0.6
TRUS	Trudelj	1.98	60	ePn	Pn	22 16 45.3	-0.5
TRUS				eSn	Sn	22 17 10.9	+0.2
GRUS	Gruza	2.06	71	ePn	Pn	22 16 47.4	+0.6
GRUS				eSn	Sn	22 17 13.2	+0.7
GOCS	Kraljevo Serbi	2.10	80	ePn	Pn	22 16 48.2	+0.8
GOCS				eSn	Sb	22 17 16.3	-0.2
SGRT	San Giovanni R	2.25	229	Pn	Pn	22 16 47.9	-1.5
SGRT				IAML		22 17 31.8	
	comp=E,61nm,1.1s						
SELS	Selova	2.26	90	ePn	Pn	22 16 50.4	+0.8
SELS				eSn	Sn	22 17 17.9	+0.4
FRGS	Fruska Gora	2.31	33	ePn	Pn	22 16 49.1	-1.1
BOVS	Bovan	2.71	80	ePn	Pn	22 16 56.4	+0.7
BARS	Barje	2.81	97	ePn	Pn	22 16 58.7	+1.6
BARS				eSn	Sn	22 17 32.2	+1.1
KUBS	Kucevo	2.89	65	ePn	Pn	22 16 58.0	-0.2
ACER	Acerenza	2.90	213	Pn	Pn	22 16 57.9	-0.5
ACER				IAML		22 17 20.1	
	comp=N,67nm,2.6s						
ACER				IAML		22 18 03.9	
	comp=E,69nm,0.8s						
MORH	Mrgy, Hungar	3.00	8	ePn	Pn	22 17 00.4	+0.6
MORH				eSn	Sn	22 17 35.8	0.0
BOJS	Bojanci	3.01	320	ePn	Pn	22 17 02.2	+2.3
VRSS	Vrsac	3.03	50	ePn	Pn	22 16 59.9	-0.2
MDVR	Moldovita	3.07	59	ePn	Pn	22 17 01.0	+0.2
ZAGS	Zajecar	3.11	78	ePn	Pn	22 17 02.8	+1.6
ZAGS				eSn	Sn	22 17 39.3	+0.8
BEHE	Becsehely	3.35	345	ePn	Pn	22 17 04.9	+0.4
BEHE				eSn	Sn	22 17 44.4	+0.1
BOSS	Bosilegrad	3.36	101	ePn	Pn	22 17 05.8	+1.1
ZAPS	Zavoj	3.37	88	ePn	Pn	22 17 07.1	+2.3
ZAPS				eSn	Sn	22 17 43.4	-1.4
PAOL	Paolisi	3.39	231	Pn	Pn	22 17 04.3	-0.8
PAOL				IAML		22 17 27.7	
	comp=N,30nm,2.3s						
PAOL				IAML		22 18 33.6	
	comp=E,33nm,2.0s						
BLKB	Belogradchik	3.41	82	ePn	Pn	22 17 07.3	+1.9
GUMA	Gualdo di Mace	3.44	269	Pn	Pn	22 17 02.2	-3.6
GUMA				IAML		22 18 51.5	
	comp=E,66nm,1.8s						
CAMP	Campotosto	3.46	260	Pn	Pn	22 17 04.2	-2.0
CAMP				IAML		22 17 33.0	
	comp=E,39nm,2.5s						
CAMP				IAML		22 18 11.6	
	comp=N,30nm,2.2s						
CEY	Cerknica	3.59	315	ePn	Pn	22 17 11.0	+3.2
SKDS	Skadanscina	3.68	310	ePn	Pn	22 17 11.9	+2.8
VTS	Vitosha	3.88	97	ePn	Pn	22 17 13.2	+1.3
SIRR	Siria	3.98	39	ePn	Pn	22 17 11.7	-1.5
MURB	Monte Urbino	4.02	272	Pn	Pn	22 17 11.3	-2.5
SOKA	Soboth	4.04	329	Pg	Pn	22 17 14.3	+0.3
	comp=N,2.2nm,0.5s						
SOKA				Sg	Sn	22 18 01.3	-0.1
	comp=N,2.5nm,0.5s						
OBKA	Obir	4.10	324	Pg	Pn	22 17 15.8	+0.9
	comp=N,1.2nm,0.4s						
SABO	M.te Sabotino	4.18	312	Pn	Pn	22 17 14.0	-1.9
ARSA	Arzberg	4.38	337		Pn	22 17 18.6	-0.1
ARSA	Arzberg	4.38	337	ePg	Pn	22 17 18.6	-0.1
	comp=N,1.6nm,0.4s						
ARSA	Arzberg	4.38	337	ePn	Pn	22 17 19.5	+0.8
RONA	Rosalia, Austr	4.62	345	Pg	Pn	22 17 22.6	+0.6
	comp=N,0.2nm,0.1s						
PSZ	Piszkesteto	4.86	15	Pn	Pn	22 17 24.0	-1.3
PSZ				IAML		22 19 09.3	
	comp=N,14nm,4.5s						
PSZ				IAML		22 20 02.3	
	comp=E,20nm,4.7s						
CONA	Conrad Observa	4.93	343	Pg	Pn	22 17 29.1	+2.8
	comp=E,0.2nm,0.2s						
ABTA	Abfaltersbach	5.25	314	ePn	Pn	22 17 24.7	-6.0
	comp=E,1.7nm,0.3s						
BIOA	Bad Ischl, Aus	5.41	327	ePn	Pn	22 17 29.5	-3.4
	comp=E,1.5nm,0.3s						
LESA	Schwarzleotal	5.63	320	ePn	Pn	22 17 36.6	+0.6
	comp=E,0.5nm,0.2s						
WTTA	Wattenberg	6.04	314	ePn	Pn	22 17 42.4	+0.8
	comp=E,0.3nm,0.2s						
FUORN	Ofenpass-Fuorn	6.46	304	Pn	Pn	22 17 45.4	-2.0
KHC	Kasperske Hory	6.65	334	eSN	Sn	22 19 01.5	-4.1

IDC ***03*** *22:23:11.4±0.4, 3°.21S×150°.70E, h0^{km}, mb4.9/27, mbtmp4.9/29, ML3.0/2, MS4.9/53, Error ellipse: s-maj=15.9km s-min=10.7km az=87.0*

MOS ***03*** *22:23:11.8±1.2, 3°.25S×150°.72E, h14^{km}, mb5.5/48, MS5.2/14, Error ellipse: s-maj=8.7km s-min=5.5km az=113.1*

BJI ***03*** *22:23:12.5, 2°.93S×150°.86E, h11^{km}, mB5.7/36, mb5.0/83, Ms5.3/62, Ms7 5.0/62*

NEIC ***03*** *22:23:12.7±1.3, 3°.22S±0°.07×150°.76E±0°.06, h10^{km}±1^{km}, mb5.4/113, Ms_20 5.3/237, Mww5.6/23, Error ellipse: s-maj=13.1km s-min=8.8km az=209.0*

NEIC ***03*** *22:23:13.1, 3°.12S×150°.68E, h18^{km}, Moment Tensor Solution. Duration: 3^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.48; $M_{\theta\theta}$2.64; $M_{\phi\phi}$-2.15; $M_{r\theta}$-0.33; $M_{\theta\phi}$-1.05; $M_{\phi r}$-0.44; Fault plane solution: $M_0$2.71000×10^{17} NP1: ϕ_s326.18000°, δ77.21000°, λ-7.11000°. NP2: ϕ_s57.76000°, δ83.07000°, λ-167.11000°. Principal axes: T 2.8732, Plg4.0000°, Azm191.0000°; N -0.3753, Plg75.0000°, Azm86.0000°; P -2.4979, Plg14.0000°, Azm282.0000°;*

NEIC ***03*** *22:23:13.1, 3°.22S×150°.78E, h18^{km}*

GCMT ***03*** *22:23:16.7±0.1, 3°.21S±0°.01×150°.69E±0°.01, h15^{km}, MW5.6/145, Moment Tensor Solution. s105, c157; s145, c275; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.37±.03; $M_{\theta\theta}$2.67±.03; $M_{\phi\phi}$-2.30±.03; $M_{r\theta}$-0.58±.10; $M_{\theta\phi}$-0.62±.03; $M_{\phi r}$-0.74±.10; Best double couple: $M_0$2.74500×10^{17} NP1: ϕ_s321.00000°, δ70.00000°, λ-8.00000°. NP2: ϕ_s54.00000°, δ83.00000°, λ-159.00000°. Principal axes: T 2.8230, Plg9.0000°, Azm186.0000°; N -0.1580, Plg68.0000°, Azm72.0000°; P -2.6680, Plg20.0000°, Azm279.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***03*** *22:23:22.9±0.5, 4°S±3°×15°0E±°, h47^{km}±5^{km}, M5.3/60, mB5.8/36, mb5.2/60, MLv5.5/1, Mw(mB)5.3/36, MwMwp5.3/19, Mwp5.5/19*

ISC 03 22:23:16.5±0.2**, 3°.26S**±0°.03×**150°.76E**±0°.04**, h35**^{km}**, n900,**
σ1^{s}71/780**, mb5.2**/213**, MS5.3**/201**, 12C-4D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAVG	Kavieng	0.68	4	P	Pn	22 23 24.9	-4.8
RABL	Rabaul	1.68	123	Pn	Pn	22 23 40.0	-3.4
MANU	Manus Island	3.60	290		Pn	22 24 04.9	-5.0
PMG	Port Moresby	7.08	210	Pn	Pn	22 24 58.4	+0.7
	5.7nm,0.3s,baz=26,slow=10,SNR=58						
PMG				Sn	Sn	22 26 20.7	+3.8
	0.2nm,0.3s,baz=63,slow=18,SNR=1.1						
	264nm,0.9s						
PMG	Port Moresby	7.08	210		Pn	22 24 57.8	+0.2
PMG	Port Moresby	7.08	210	P	Pn	22 24 58.6	+0.9
	338nm,1.3s						
PMG	Port Moresby	7.08	210	P	Pn	22 24 59.6	+1.9
	338nm,1.3s						
PMG	Port Moresby	7.08	210	P	Pn	22 24 58.2	+0.5
	1.6nm15µm6µm330nm,1.3s						
PMG	Port Moresby	7.08	210	ceP	Pn	22 24 58.2	+0.5
PMG				pmax	pmax		
	comp=Z,683nm,1.7s						
JAY	Jayapura	10.07	274	Pn	Pn	22 25 38.0	-0.8
	comp=Z,0.6nm,0.3s,baz=111,slow=11,SNR=10						
JAY				LR	LR	22 29 01.9	
	comp=Z,21µm,20.8s,baz=75,slow=35						
	comp=Z,14nm,0.8s						
JAY	Jayapura	10.07	274	P	Pn	22 25 37.3	-1.5
	comp=Z,5µmcomp=Z,127nm,1.9s						
JAY	Jayapura	10.07	274	P	Pn	22 25 38.0	-0.8
TATA	Tatamba Isabel	10.34	120	P	Pn	22 25 44.5	+2.0
	comp=Z,335nm,1.9s						
GENI	Genyem	10.60	273	P	Pn	22 25 46.6	+0.6
	comp=Z,280nm,1.8s						
GENI	Genyem	10.60	273	P	Pn	22 25 47.4	+1.4
	comp=Z,14µmcomp=Z,281nm,1.8s						
SAVO	Savo Central	10.73	123	P	Pn	22 25 52.3	+4.4
	comp=Z,133nm,1.4s						
SMPI	Sarmi	12.10	276	P	Pn	22 26 04.4	-2.2
	comp=Z,12µmcomp=Z,6µmcomp=Z,272nm,1.7s						
NGOA	Tingoa Renbel	12.37	132	P	Pn	22 26 12.8	+2.6
	comp=Z,640nm,1.3s						
PATS	Pohnpei	12.55	37	P	Pn	22 26 09.9	-2.9
PATS	Pohnpei	12.55	37	Pn	Pn	22 26 08.3	-4.4
PATS	Pohnpei	12.55	37	P	Pn	22 26 14.9	+2.2
	comp=Z,480nm,2.3s						
COEN	Coen	13.00	215	P	Pn	22 26 21.1	+2.2
COEN	Coen	13.00	215		Pn	22 26 18.7	-0.2
COEN	Coen	13.00	215	P	Pn	22 26 21.3	+2.4
	comp=Z,69nm,2.3s						
HURO	Huro Makira	13.17	123	P	P	22 26 26.2	-4.6
	comp=Z,122nm,1.6s						
BAKI	Biak	14.78	278	P	P	22 26 56.7	+8.0
MTSU	Mount Surprise	16.07	203	P	P	22 27 01.4	-1.7
	comp=Z,83nm,1.2s						
MTSU	Mount Surprise	16.07	203	P	P	22 27 01.5	-1.6
	comp=Z,83nm,1.2s						
TV1H	Townsville Har	16.37	193	P	P	22 27 05.9	-0.4
	comp=Z,104nm,1.5s						
RKPI	Ransiki, Papua	16.66	276	P	P	22 27 08.4	-1.1
	comp=Z,7µmcomp=Z,231nm,2.5s						
MWPI	Manokwari, Pap	16.86	278	P	P	22 27 17.3	+5.5
CTA	Charters Tower	17.29	194	P	P	22 27 17.0	+0.4
	comp=Z,5.9nm,1.7s						
CTA	Charters Tower	17.29	194	LR	LR	22 33 34.9	
	comp=Z,193nm,19.6s,baz=12,slow=36						
CTA	Charters Tower	17.29	194	P	P	22 27 16.8	+0.2
	comp=Z,6.6nm,1.7s						
CTAO	Charters Tower	17.29	194		P	22 27 15.5	-1.1
CTAO	Charters Tower	17.29	194	P	P	22 27 16.8	+0.2
	comp=Z,81nm,1.7s						
CTAO	Charters Tower	17.29	194	P	P	22 27 15.5	-1.1
CTAO				pmax	pmax		
	comp=Z,823nm,1.8s						
FAKI	Fak Fak	18.48	271		P	22 27 27.0	-2.8
FAKI				IAmb	IAmb	22 27 34.7	
	comp=Z,542nm,1.5s						
FAKI	Fak Fak	18.48	271	P	P	22 27 28.3	-1.5
	comp=Z,266nm,2.1s						
FAKI	Fak Fak	18.48	271	P	P	22 27 27.3	-2.5
	comp=Z,8µmcomp=Z,7µmcomp=Z,267nm,2.1s						
SWI	Sorong	19.63	277	P	Pn	22 27 43.3	-0.5
	comp=Z,8µmcomp=Z,6µmcomp=Z,166nm,0.9s						
SANVU	Saraoutou	20.22	128	P	P	22 27 48.3	-0.5
SANVU				IAmb	IAmb	22 27 59.0	
	comp=Z,266nm,1.4s						
SANVU	Saraoutou	20.22	128	P	Pn	22 27 53.3	+2.5
	comp=Z,139nm,1.4s						
QIS	Mount Isa	20.34	211	P	Pn	22 27 50.2	-2.0
	comp=Z,132nm,2.6s,comp=Z,0.0nm						
QIS	Mount Isa	20.34	211	P	P	22 27 49.9	-0.1
	comp=Z,132nm,2.6s						
KDU	Kakadu	20.37	242	P	P	22 27 49.5	-0.8
	comp=Z,52nm,1.1s						
GD1S	Gladstone Soft	20.46	179	P	Pn	22 27 54.4	+0.8
	comp=Z,244nm,0.4s						
BNDI	Bandanaira	20.84	266	P	Pn	22 27 55.7	-2.4
	comp=Z,850nm,1.5s						
BNDI	Bandanaira	20.84	266	P	Pn	22 27 57.6	-0.5
MTN	Manton Dam	21.62	243	P	P	22 28 03.7	-0.1
	comp=Z,75nm,1.3s,comp=Z,0.0nm						
MTN	Manton Dam	21.62	243		P	22 28 01.1	-2.7
MSAI	Masohi	21.79	269	P	P	22 28 14.2	+8.5
EIDS	Eidsvold	21.98	179	P	P	22 28 08.4	+0.7
	comp=Z,91nm,1.9s						
EIDS	Eidsvold	21.98	179		P	22 28 07.0	-0.6
EIDS				IAmb	IAmb	22 28 12.6	
	comp=Z,131nm,1.3s						
EIDS	Eidsvold	21.98	179	P	P	22 28 07.9	+0.3
	comp=Z,91nm,1.9s						
KRAI	Karang Ratu	22.33	269	P	P	22 28 11.4	-0.1
	comp=Z,4µmcomp=Z,62nm,1.0s						
AAI	Ambon	22.52	268	P	P	22 28 15.7	+2.1
	comp=Z,3µmcomp=Z,144nm,0.8s						
TARA	Tarawa	22.63	79	P	P	22 28 19.2	+4.5
	comp=Z,226nm,1.1s						
WB0	Warramunga Arr	22.90	223	P	P	22 28 15.9	-1.6
WRAB	Tennant Creek	23.04	223	P	P	22 28 17.4	-1.5
	comp=Z,61nm,1.0s						
WRAB	Tennant Creek	23.04	223	ceP	P	22 28 18.7	-0.2
WRAB				pmax	pmax		
	comp=Z,147nm,1.3s						
WRA	Warramunga Arr	23.06	223	P	P	22 28 17.6	-1.5
	comp=Z,70nm,1.0s,baz=50,slow=9.8,SNR=78						
WRA				PcP	PcP	22 32 08.7	+0.8
	comp=Z,4.2nm,0.9s,baz=47,slow=2.0,SNR=5.4						
WRA				LR	LR	22 38 21.3	
	comp=Z,4µm,19.4s,baz=46,slow=40						
	comp=Z,70nm,1.0s						
WRA	Warramunga Arr	23.06	223	P	P	22 28 16.4	-2.7
WRA	Warramunga Arr	23.06	223	i P	P	22 28 17.6	-1.5
WRA				pmax	pmax		
	comp=Z,75nm,1.0s						
RMQ	Roma	23.17	185	P	P	22 28 21.0	+0.8
	comp=Z,75nm,1.8s						
NLAI	Namlea	23.62	269	P	P	22 28 25.1	+0.4
	comp=Z,5µmcomp=Z,4µmcomp=Z,108nm,1.5s						
TNTI	Ternate	23.72	279	P	P	22 28 24.0	-1.7
TNTI	Ternate	23.72	279	P	P	22 28 34.6	+9.0
QLP	Quilpie	24.02	194	P	P	22 28 28.3	0.0
	comp=Z,591nm,2.0s						
QLP	Quilpie	24.02	194	P	P	22 28 28.6	+0.3
	comp=Z,592nm,2.0s						
AUWSH	Wavell State H	24.10	175	P	P	22 28 31.4	+2.4
	comp=Z,161nm,1.9s						
DZM	Mont Dzumac	24.12	142	P	P	22 28 29.5	+0.2
	comp=Z,46nm,0.9s,baz=319,slow=8.6,SNR=39						
DZM				LR	LR	22 35 23.8	
	comp=Z,4µm,20.9s,baz=327,slow=30						
	comp=Z,46nm,0.9s						
DZM	Mont Dzumac	24.12	142	eP	P	22 28 28.6	-0.7
	comp=Z,259nm,1.3s						
DZM				eS	S	22 32 41.9	-3.1
	comp=Z,10µm,30.5s						
DZM				eLR	LR	22 34 22.7	
	comp=Z,8µm,22.9s						
DZM	Mont Dzumac	24.12	142	P	P	22 28 28.4	-0.9
DZM				IAmb	IAmb	22 28 55.9	
	comp=Z,158nm,1.2s						
DZM	Mont Dzumac	24.12	142	P	P	22 28 29.9	+0.6
	comp=Z,117nm,2.2s						
TW1H	Toowoomba 1 Ha	24.18	177	P	P	22 28 33.2	+3.4
	comp=Z,78nm,1.1s						
INH	Isangel	24.27	133	P	P	22 28 35.5	+4.8
	comp=Z,327nm,0.8s						
ONTNC	Ouen Toro	24.30	142		P	22 28 30.1	-0.8
ONTNC				IAmb	IAmb	22 28 54.6	
	comp=Z,156nm,1.3s						
ONTNC	Ouen Toro	24.30	142	P	P	22 28 35.5	+4.6

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       comp=Z,87nm,1.7s
YATNC  Mamie plateau,     24.38 141    P         P         22 28 32.0 +0.3
       comp=Z,116nm,1.6s
OUENC  Ouen Island, N     24.62 142    P         P         22 28 35.2 +1.4
       comp=Z,100nm,1.9s
MARNC  Mare, Loyalty      24.70 139    P         P         22 28 34.4 -0.2
MARNC  Mare, Loyalty      24.70 139    P         P         22 28 36.6 +2.1
       comp=Z,0.6nm,1.4s
SANI   Sanana             24.77 272    P         P         22 28 35.1 -0.2
       comp=Z,169nm,2.6s
SANI   Sanana             24.77 272    P         P         22 28 34.5 -0.8
       comp=Z,4µmcomp=Z,3µmcomp=Z,170nm,2.6s
GC1S   Gold Coast 1 S     24.90 174    P         P         22 28 39.9 +3.6
       comp=Z,80nm,0.6s
KNRA   Kununurra          24.92 239    P         P         22 28 36.4 -0.2
       comp=Z,60nm,0.9s
KNRA   Kununurra          24.92 239              P         22 28 35.5 -1.1
KNRA                                   IAmb      IAmb      22 28 56.3
       comp=Z,91nm,1.1s
PINNC  Pines Island,      25.14 141    P         P         22 28 37.5 -1.0
PINNC                                  IAmb      IAmb      22 28 44.2
       comp=Z,116nm,1.2s
PINNC  Pines Island,      25.14 141    P         P         22 28 41.9 +3.4
       comp=Z,85nm,0.7s
AS31   Alice Springs      26.02 217    P         P         22 28 46.0 -0.6
ASAR   Alice Springs      26.02 217    P         P         22 28 45.6 -1.0
       comp=Z,24nm,1.0s,baz=52,slow=7.2,SNR=52
ASAR                                   PcP       PcP       22 32 15.3 +1.0
       comp=Z,3.3nm,0.8s,baz=60,slow=2.5,SNR=5.3
ASAR                                   LR        LR        22 39 42.7
       comp=Z,4µm,18.0s,baz=36,slow=38
       comp=Z,24nm,1.0s
ASAR   Alice Springs      26.02 217    P         P         22 28 45.1 -1.4
SGSI   Sangihe            26.14 285    P         P         22 28 48.2 +0.5
AULRC  Lightning Ridg     26.16 186    P         P         22 28 47.7  0.0
       comp=Z,344nm,1.4s
H11S3  WAKE ISLAND Hy     26.71  35    T         T         22 56 06.4
       baz=218,slow=75,SNR=578
H11S2  WAKE ISLAND Hy     26.72  35    T         T         22 56 14.6
       baz=218,slow=75,SNR=296
H11S1  WAKE ISLAND Hy     26.73  35    T         T         22 56 16.0
       baz=218,slow=75,SNR=243
ARMA   Armidale           27.02 178    P         P         22 28 55.3 -0.4
       comp=Z,36nm,1.2s
ARMA   Armidale           27.02 178    P         P         22 28 55.2 -0.4
ARMA                                   IAmb      IAmb      22 29 07.7
       comp=Z,72nm,1.4s
ARMA   Armidale           27.02 178    P         P         22 28 58.9 +3.3
       comp=Z,37nm,1.2s
SOEI   Soe                27.08 255    P         P         22 28 55.5 -0.9
SOEI   Soe                27.08 255    P         P         22 28 58.0 +1.7
       comp=Z,162nm,0.9s
SOEI   Soe                27.08 255    P         P         22 28 58.1 +1.7
DAV    Davao City (W)     27.14 292    LR        LR        22 39 16.2
       comp=Z,3µm,18.2s,baz=104,slow=36
AUPHS  Peel High Scho     27.69 180    P         P         22 29 05.1 +3.6
       comp=Z,31nm,2.1s
BATI   Baumata            27.76 254    P         P         22 29 03.8 +1.5
GTOI   Gorontalo          28.00 277    P         P         22 29 07.3 +2.8
       comp=Z,1µmcomp=Z,57nm,0.9s
LUWI   Luwuk              28.05 274    P         P         22 29 04.1 -0.8
LUWI   Luwuk              28.05 274    P         P         22 29 06.1 +1.2
       comp=Z,145nm,1.6s
LUWI   Luwuk              28.05 274    P         P         22 29 05.8 +0.9
       comp=Z,2µmcomp=Z,145nm,1.6s
CMSA   Cobar Meteorol     28.53 189    P         P         22 29 08.3 -0.6
       comp=Z,50nm,1.4s
CMSA   Cobar Meteorol     28.53 189    P         P         22 29 08.6 -0.3
       comp=Z,50nm,1.4s
FITZ   Fitzroy Crossi     28.68 237    P         P         22 29 09.1 -1.4
       comp=Z,21nm,1.2s
FITZ   Fitzroy Crossi     28.68 237    P         P         22 29 09.0 -1.4
       comp=Z,40nm,1.0s,baz=58,slow=7.3,SNR=19
FITZ                                   LR        LR        22 41 17.6
       comp=Z,4µm,20.3s,baz=62,slow=38
       comp=Z,40nm,1.0s
FITZ   Fitzroy Crossi     28.68 237              P         22 29 08.9 -1.6
FITZ   Fitzroy Crossi     28.68 237    P         P         22 29 09.4 -1.1
       comp=Z,207nm,1.2s
MMRI   Maumere            28.85 258    P         P         22 29 09.9 -2.1
MMRI                                   IAmb      IAmb      22 30 01.2
       comp=Z,65nm,1.0s
MMRI   Maumere            28.85 258    P         P         22 29 12.9 +0.8
       comp=Z,73nm,1.0s
MMRI   Maumere            28.85 258    P         P         22 29 11.6 -0.5
       comp=Z,73nm,0.9s
AUDCS  Dubbo College      28.89 184    P         P         22 29 14.8 +2.7
       comp=Z,45nm,1.4s
APSI   Ampana             29.18 274    P         P         22 29 15.5 +0.5
       comp=Z,1µmcomp=Z,106nm,1.6s
EDFI   Ende, Flores       29.41 258    P         P         22 29 15.5 -1.6
       comp=Z,846nmcomp=Z,60nm,1.6s
STKA   Stephens Creek     29.74 196    P         P         22 29 18.3 -1.4
       comp=Z,111nm,1.4s
STKA   Stephens Creek     29.74 196    P         P         22 29 19.4 -0.2
       comp=Z,9.6nm,1.0s,baz=357,slow=7.1,SNR=8.3
STKA                                   LR        LR        22 41 48.1
       comp=Z,6µm,19.3s,baz=8.2,slow=38
       comp=Z,9.6nm,1.0s
STKA   Stephens Creek     29.74 196    P         P         22 29 19.5 -0.2
       comp=Z,5.5nm,1.4s
TOLI2  Tolitoli           30.28 278    P         P         22 29 23.1 -1.6
TOLI2                                  IAmb      IAmb      22 30 30.8
       comp=Z,116nm,2.0s
BSSI   Bau Bau, Buton     30.30 263    P         P         22 29 24.8 -0.1
       comp=Z,1µmcomp=Z,37nm,1.2s
MSVF   Nonsavu            30.38 120    P         P         22 29 30.3 +4.7
       comp=Z,25nm,1.2s
WRKA   Warakurna          30.60 223    P         P         22 29 26.9 -0.6
       comp=Z,31nm,1.4s
BNSI   Bone               30.60 267    P         P         22 29 26.7 -0.9
       comp=Z,44nm,1.7s
BKSI   Bulukumba          30.61 265    P         P         22 29 42.1  +14
BASI   Baing, Sumba       30.74 256    P         P         22 29 29.9 +1.2
TTSI   Tana Toraja        30.89 270    P         P         22 29 44.0  +14
WSI    Waingapu           30.91 257    P         P         22 29 39.2 +8.9
SPSI   Sidrap Palu        30.93 268    P         P         22 29 32.2 +1.7
       comp=Z,2µmcomp=Z,32nm,1.6s
YNG    Young              30.96 184    P         P         22 29 33.2 +2.7
       comp=Z,33nm,2.5s
KAPI   Kappang            30.97 266    LR        LR        22 44 29.4
       comp=Z,1µm,18.0s,baz=92,slow=41
KAPI   Kappang            30.97 266    P         P         22 29 28.8 -2.0
KAPI                                   IAmb      IAmb      22 30 25.1
       comp=Z,69nm,1.7s
KAPI   Kappang            30.97 266    P         P         22 29 30.5 -0.3
       comp=Z,11nm,1.1s
KAPI   Kappang            30.97 266    P         P         22 29 30.1 -0.7
KAPI   Kappang            30.97 266    P         P         22 29 28.8 -2.0
KAPI                                   pmax      pmax
       comp=Z,69nm,1.7s
KAPI                                   MLR       MLR
       comp=Z,1µm,21.0s
PCI    Palu               30.99 274    P         P         22 29 33.4 +2.4
MPSI   Mapaga             31.05 276    P         P         22 29 29.9 -1.6
       comp=Z,1µmcomp=Z,28nm,0.9s
JCJ    Chichijima         31.29 345    LR        LR        22 42 10.6
       comp=Z,1µm,19.0s,baz=152,slow=36
WBSI   Waikabubak, Su     31.79 257    P         P         22 29 51.5  +13
CNB    Canberra Magne     31.92 182    P         P         22 29 40.8 +1.9
       comp=Z,41nm,1.7s
CAN    Canberra           31.94 183    IAMs_20   IAMs_20   22 42 24.3
       comp=Z,5µm,18.0s
HTT    Hallett            31.99 199    P         P         22 29 39.5 -0.1
       comp=Z,14nm,1.9s
HTT    Hallett            31.99 199    P         P         22 29 41.9 +2.3
       comp=Z,36nm,1.9s
BBOO   Buckleboo          32.46 203    P         P         22 29 39.6 -4.2
MYLDM  Lahad Datu         33.30 284              P         22 29 49.9 -1.3
MYLDM                                  IAmb      IAmb      22 30 33.1
       comp=Z,81nm,1.2s
MYLDM  Lahad Datu         33.30 284    P         P         22 29 52.4 +1.2
       comp=Z,52nm,1.7s
TGY    Tagaytay City      34.23 301    LR        LR        22 41 45.4
       comp=Z,1µm,19.9s,baz=139,slow=33
ARPS   Mount Arapiles     34.34 193    P         P         22 30 01.7 +1.7
       comp=Z,37nm,1.4s
TOO    Toolangi           34.49 187    P         P         22 30 03.4 +2.0
       comp=Z,28nm,1.5s
TOO    Toolangi           34.49 187    P         P         22 30 00.2 -1.1
TOO    Toolangi           34.49 187    P         P         22 30 00.2 -1.1
TOO                                    pmax      pmax
       comp=Z,34nm,1.3s
BRAT   Ballarat           34.70 190    P         P         22 30 05.9 +2.9
       comp=Z,24nm,1.1s
AUMTC  Mt Clear Colle     34.76 190    P         P         22 30 06.6 +3.0
       comp=Z,58nm,1.6s
FORT   Forrest            34.77 216    P         P         22 30 02.5 -1.3
       comp=Z,19nm,0.9s
FORT   Forrest            34.77 216    P         P         22 30 02.6 -1.2
KLNI   Mataram            34.85 260    P         P         22 30 05.7 +1.0
       comp=Z,47nm,0.8s
MBWA   Marble Bar         35.03 237    P         P         22 30 05.2 -1.0
       comp=Z,35nm,1.3s
MBWA   Marble Bar         35.03 237    P         P         22 30 04.6 -1.6
MBWA                                   IAmb      IAmb      22 30 27.1
       comp=Z,60nm,1.3s
MBWA   Marble Bar         35.03 237    P         P         22 30 05.1 -1.1
       comp=Z,20nm,1.3s
PSAC2  Pilbara Seismi     35.07 236    P         P         22 30 05.2 -1.3
       comp=Z,45nm,1.3s
PSA00  Pilbara Seismi     35.12 236    P         P         22 30 05.3 -1.7
       comp=Z,33nm,1.1s
PSA00  Pilbara Seismi     35.12 236    P         P         22 30 05.4 -1.6
PSA00  Pilbara Seismi     35.12 236    P         P         22 30 06.6 -0.4
       comp=Z,33nm,1.1s
PSAB3  Pilbara Seismi     35.12 236    P         P         22 30 06.5 -0.5
       comp=Z,31nm,1.4s
PSAC1  Pilbara Seismi     35.13 236    P         P         22 30 05.7 -1.4
       comp=Z,38nm,1.3s
KHKI   Kahang-Kahang      35.32 260    P         P         22 30 10.6 +1.8
       comp=Z,72nm,1.1s
KKM    Kota Kinabalu      35.71 285    P         P         22 30 10.5 -1.7
KKM                                    IAmb      IAmb      22 30 15.8
       comp=Z,36nm,0.9s
JOW    Kunigami           36.97 325    LR        LR        22 42 28.8
       comp=Z,2µm,22.0s,baz=142,slow=31
JHJ    Hachijo jima 2     37.64 345    LR        LR        22 43 04.1
       comp=Z,2µm,20.4s,baz=140,slow=32
MEEK   Meekatharra        38.57 230    P         P         22 30 34.8 -1.5
       comp=Z,86nm,1.0s
MEEK   Meekatharra        38.57 230    P         P         22 30 35.7 -0.6
       comp=Z,86nm,1.0s
SBUM   Sibu               38.94 278    P         P         22 30 38.1 -1.4
SBUM                                   IAmb      IAmb      22 30 42.9
       comp=Z,142nm,1.8s
SBUM   Sibu               38.94 278    P         P         22 30 39.9 +0.4
       comp=Z,27nm,2.0s
SBUM   Sibu               38.94 278    P         P         22 30 42.3 +2.8
SNJI   Sawahan-Nganju     39.06 262    P         P         22 30 42.8 +2.1
       comp=Z,32nm,1.7s
YHNB   Yeheng             39.82 316    P         P         22 30 45.3 -1.6
YHNB   Yeheng             39.82 316    P         P         22 30 48.3 +1.5
       comp=Z,74nm,0.9s
JMN    Monobe             40.09 338    P         P         22 30 47.5 -1.4
JMN                                    IAmb      IAmb      22 30 55.8
       comp=Z,150nm,1.4s
JMN    Monobe             40.09 338    P         P         22 30 49.2 +0.3
       comp=Z,93nm,1.6s
INU    Inuyama            40.51 343              P         22 30 49.5 -2.8
INU                                    IAmb      IAmb      22 30 53.0
       comp=Z,84nm,1.4s
INU    Inuyama            40.51 343    P         P         22 30 52.4 +0.1
       comp=Z,84nm,1.6s
JGF    Kuroka             40.65 343              P         22 30 51.5 -2.0
JGF                                    IAmb      IAmb      22 30 56.0
       comp=Z,74nm,1.4s
JGF    Kuroka             40.65 343    P         P         22 30 54.5 +1.1
       comp=Z,50nm,1.9s
JNU    Nakatsue           40.78 334    LR        LR        22 46 20.5
       comp=Z,1µm,21.1s,baz=152,slow=34
JNU    Nakatsue           40.78 334              P         22 30 52.5 -2.1
JNU                                    IAmb      IAmb      22 30 57.9
       comp=Z,110nm,1.0s
JNU    Nakatsue           40.78 334    P         P         22 30 55.2 +0.6
       comp=Z,113nm,1.0s
MJAR   Matsushiro Arr     41.29 345    P         P         22 30 56.3 -2.4
       comp=Z,12nm,0.9s,baz=167,slow=9.0,SNR=14
MJAR                                   LR        LR        22 47 04.0
       comp=Z,1µm,19.9s,baz=159,slow=35
       comp=Z,12nm,0.9s
MJAR   Matsushiro Arr     41.29 345              P         22 30 55.8 -2.9
MAJO   Matsushiro         41.29 345    P         P         22 30 57.0 -1.7
MAJO                                   IAmb      IAmb      22 31 01.1
       comp=Z,79nm,1.4s
MAJO   Matsushiro         41.29 345    P         P         22 30 59.3 +0.6
       comp=Z,44nm,1.6s
MAJO   Matsushiro         41.29 345    P         P         22 30 57.0 -1.7
MAJO                                   pmax      pmax
       comp=Z,79nm,1.4s
MAJO                                   MLR       MLR
       comp=Z,2µm,18.0s
MORW   Morawa             41.78 228    P         P         22 31 00.9 -2.0
MORW   Morawa             41.78 228              P         22 31 01.3 -1.5
MORW   Morawa             41.78 228    P         P         22 31 02.1 -0.7
       comp=Z,34nm,1.4s
KPJI   Karang Pucung      41.83 263    P         P         22 31 04.1 +0.7
       comp=Z,52nm,1.2s
KLBR   Kellerberrin       41.93 224    P         P         22 31 02.5 -1.5
       comp=Z,52nm,1.1s
KLBR   Kellerberrin       41.93 224    P         P         22 31 05.3 +1.3
       comp=Z,53nm,1.1s
BLDU   Ballidu            42.12 226    P         P         22 31 04.3 -1.3
       comp=Z,22nm,1.4s
BLDU   Ballidu            42.12 226    P         P         22 31 05.3 -0.3
       comp=Z,22nm,1.4s
URZ    Urewera            42.34 149    LR        LR        22 48 49.9
       comp=Z,2µm,18.1s,baz=320,slow=36
RTZ    Ruatahuna          42.54 149    P         P         22 31 09.0  0.0
NNZ    Nelson             42.92 155    IAMs_20   IAMs_20   22 46 36.5
       comp=Z,4µm,21.0s
TPI    Tanjungpandan      43.05 269    P         P         22 31 13.2 -0.2
       comp=Z,59nm,1.0s
BBJI   Bungbulang         43.10 263    P         P         22 31 14.4 +0.5
       comp=Z,36nm,0.8s
BBJI   Bungbulang         43.10 263    P         P         22 31 15.0 +1.1
       comp=Z,576nmcomp=Z,36nm,0.8s
MUN    Mundaring          43.23 225    P         P         22 31 13.8 -0.8
       comp=Z,29nm,1.4s
MUN    Mundaring          43.23 225    P         P         22 31 15.4 +0.8
       comp=Z,29nm,1.4s
INZ    Inchbonnie         43.41 158    IAMs_20   IAMs_20   22 48 20.6
       comp=Z,4µm,18.0s
MRZ    Mangatainoka R     43.45 152    IAMs_20   IAMs_20   22 46 26.5
       comp=Z,4µm,21.0s
CNJI   Cibinong           43.61 263    P         P         22 31 18.1 +0.2
       comp=Z,823nmcomp=Z,45nm,1.3s
BFZ    Birch Farm         43.77 152    IAMs_20   IAMs_20   22 46 51.1
       comp=Z,3µm,20.0s
LTZ    Lake Taylor        43.77 157    IAMs_20   IAMs_20   22 46 53.3
       comp=Z,4µm,21.0s
KHZ    Kahutara           43.98 156    IAMs_20   IAMs_20   22 46 50.6
       comp=Z,3µm,22.0s
RPZ    Rata Peaks         44.12 159    LR        LR        22 48 22.5
       comp=Z,5µm,19.7s,baz=320,slow=34
OXZ    Oxford             44.15 158    IAMs_20   IAMs_20   22 48 51.1
       comp=Z,4µm,20.0s
SSE    Sheshan            44.28 323    P         P         22 31 24.7 +1.7
SSE                                    S         S         22 37 54.6 -0.1
SSE                                    pmax      pmax
       comp=Z,25nm,1.3s
SSE                                    pmax      pmax
       comp=Z,300nm,4.4s
SSE                                    LR        LR
       comp=Z,600nm,14.4s
SSE                                    LR        LR
       comp=Z,820nm,15.8s
TJN    Taejon             45.08 333    P         P         22 31 27.3 -2.0
TJN    Taejon             45.08 333    P         P         22 31 29.7 +0.4
       comp=Z,301nm,1.8s
TJN    Taejon             45.08 333  i P         P         22 31 29.4 +0.1
KSRS   Korea Array        45.73 334    P         P         22 31 34.1 -0.3
       comp=Z,9.2nm,0.9s,baz=152,slow=8.3,SNR=18
       comp=Z,9.2nm,0.9s
KSAR   Wonju Array Be     45.73 334              P         22 31 34.0 -0.5
KSAR   Wonju Array Be     45.73 334    P         P         22 31 34.0 -0.5
QIZ    Qiongzhong         45.94 300    P         P         22 31 36.3 -0.1
QIZ                                    S         S         22 38 21.3 +2.3
QIZ                                    pmax      pmax
       comp=Z,900nm,6.9s
QIZ                                    LR        LR
       comp=Z,860nm,20.9s
QIZ                                    LR        LR
       comp=Z,1µm,16.9s
QIZ                                    LR        LR
       comp=Z,2µm,23.7s
KASI   Kota Agung         46.17 266    P         P         22 31 40.4 +2.1
       comp=Z,25nm,1.0s
INCN   Inchon             46.32 333    P         P         22 31 37.4 -1.7
INCN   Inchon             46.32 333    P         P         22 31 39.8 +0.7
       comp=Z,112nm,1.4s
INCN   Inchon             46.32 333    P         P         22 31 37.4 -1.7
INCN                                   pmax      pmax
       comp=Z,131nm,1.2s
INCN                                   MLR       MLR
       comp=Z,2µm,20.0s
NJ2    Nanjing            46.38 322   eP         P         22 31 41.4 +1.8
NJ2                                    sP        pP        22 31 46.6 -2.7
NJ2                                    S         S         22 38 31.2 +6.3
NJ2                                    pmax      pmax
       comp=Z,19nm,1.6s
NJ2                                    pmax      pmax
       comp=Z,590nm,5.2s
NJ2                                    LR        LR
       comp=Z,2µm,18.9s
NJ2                                    LR        LR
       comp=Z,2µm,18.0s
NJ2                                    LR        LR
       comp=Z,2µm,19.9s
MDSI   Maura Dua          46.48 267    P         P         22 31 40.1 -0.7
       comp=Z,23nm,1.2s
ASAJ   Asahikawa          47.73 352    LR        LR        22 50 34.4
       comp=Z,1µm,20.4s,baz=176,slow=34
CNSH   ChangSha           47.96 313    P         P         22 31 51.0 -1.1
CNSH                                   S         S         22 38 50.4 +2.7
CNSH                                   pmax      pmax
       comp=Z,28nm,1.8s
CNSH                                   LR        LR
       comp=Z,1µm,14.0s
CNSH                                   LR        LR
       comp=Z,930nm,15.7s
CNSH                                   LR        LR
       comp=Z,1µm,26.0s
WHN    Wuhan              48.34 317    P         P         22 31 54.2 -0.8
WHN                                    pP        pP        22 31 57.3 -7.4
WHN                                    S         S         22 38 56.2 +3.2
WHN                                    pmax      pmax
       comp=Z,160nm,1.3s
WHN                                    LR        LR
       comp=Z,4µm,16.8s
PSTR   Posyet             49.14 341  i P         P         22 32 01.3 +0.5
VLA    Vladivostok        49.21 342  i P         P         22 32 02.2 +0.8
VLA                                    pmax      pmax
       comp=Z,251nm,1.7s
DL2    Dalian             49.83 330    P         P         22 32 08.8 +2.7
DL2                                    S         S         22 39 17.5 +4.0
DL2                                    pmax      pmax
       comp=Z,120nm,1.0s
DL2                                    pmax      pmax
       comp=Z,850nm,6.5s
DL2                                    LR        LR
       comp=Z,2µm,19.4s
DL2                                    LR        LR
       comp=Z,2µm,17.5s
DL2                                    LR        LR
       comp=Z,2µm,22.7s
USRK   Ussuriysk Ar.      50.16 342    P         P         22 32 08.8 +0.2
       comp=Z,22nm,0.9s,baz=149,slow=9.1,SNR=26
       comp=Z,22nm,0.9s
TIA    Tai'an             50.28 324    P         P         22 32 09.2 -0.5
TIA                                    PcP       PcP       22 33 30.9 +2.6
TIA                                    PP        PP        22 34 05.6 +0.2
TIA                                    S         S         22 39 19.3 -0.7
TIA                                    pmax      pmax
       comp=Z,36nm,1.6s
TIA                                    LR        LR
       comp=Z,1µm,12.0s
TIA                                    LR        LR
       comp=Z,640nm,10.8s
TIA                                    LR        LR
       comp=Z,2µm,18.0s
PPI    Padang Panjang     50.40 272    P         P         22 32 12.1 +1.1
       comp=Z,1µmcomp=Z,39nm,1.2s
YSS    Yuzhno-Sakhali     50.50 353   eP         P         22 32 13.9 +2.8
YSS                                   eS         S         22 39 24.6 +2.0
YSS                                   ePS        pS        22 39 42.7
YSS                                   eSS        SS        22 42 56.0 -1.1
YSS                                    pmax      pmax
       comp=Z,40nm,1.1s
SNY    Shenyang           51.23 334   ⇑P         P         22 32 15.2 -1.5
SNY                                    pmax      pmax
       comp=Z,10.0nm,1.9s
RAR    Rarotonga          51.27 115    LR        LR        22 52 31.5
       comp=Z,616nm,18.1s,baz=282,slow=34
RAR    Rarotonga          51.27 115    P         P         22 32 16.1 -1.3
RAR    Rarotonga          51.27 115    P         P         22 32 21.9 +4.5
       comp=Z,59nm,1.9s
RAR    Rarotonga          51.27 115    P         P         22 32 16.1 -1.3
RAR                                    pmax      pmax
       comp=Z,188nm,1.5s
MDJ    Mudanjiang         51.29 341    P         P         22 32 15.5 -1.6
MDJ                                    IAmb      IAmb      22 32 20.7
       comp=Z,32nm,0.8s
MDJ    Mudanjiang         51.29 341    P         P         22 32 16.8 -0.3
MDJ                                    pmax      pmax
       comp=Z,51nm,2.3s
MDJ    Mudanjiang         51.29 341    P         P         22 32 18.0 +0.9
       comp=Z,44nm,1.2s
MNSI   Mandailing Nat     51.31 274    P         P         22 32 19.6 +1.7
       comp=Z,32nm,0.9s
ENH    Enshi              51.62 313              P         22 32 18.5 -1.5
ENH                                    IAmb      IAmb      22 32 26.0
       comp=Z,73nm,1.1s
ENH    Enshi              51.62 313    P         P         22 32 21.6 +1.7
       comp=Z,69nm,1.2s
SISI   Saibi              51.66 271    P         P         22 32 22.1 +1.7
       comp=Z,54nm,1.5s
GYA    Guiyang            51.85 308   ⇓P         P         22 32 24.6 +2.8
GYA                                    S         S         22 39 46.6 +4.3
GYA                                    pmax      pmax
       comp=Z,41nm,1.3s
SLVN   Son La             51.97 300    P         P         22 32 22.0 -0.7
SLVN                                   IAmb      IAmb      22 32 26.8
       comp=Z,63nm,1.6s
SLVN   Son La             51.97 300    P         P         22 32 24.3 +1.6
LYN    LuoYang            52.05 320    P         P         22 32 23.1 +0.1
LYN                                    S         S         22 39 44.5 -0.1
LYN                                    SS        SS        22 43 20.0 -2.3
LYN                                    pmax      pmax
       comp=Z,37nm,1.3s
LYN                                    pmax      pmax
       comp=Z,740nm,6.2s
LYN                                    LR        LR
       comp=Z,3µm,20.3s
LYN                                    LR        LR
       comp=Z,2µm,24.0s
LYN                                    LR        LR
       comp=Z,3µm,23.0s
CN2    Changchun          52.08 337    P         P         22 32 22.4 -0.6
CN2                                    S         S         22 39 40.4 -4.2
CN2                                    pmax      pmax
       comp=Z,20nm,0.8s
CN2                                    LR        LR
       comp=Z,1µm,18.0s
CN2                                    LR        LR
       comp=Z,1µm,18.0s
CN2                                    LR        LR
       comp=Z,2µm,19.0s
HNS    HongShan           52.51 324   ⇑P         P         22 32 27.2 +0.9
HNS                                    S         S         22 39 56.4 +5.8
HNS                                    pmax      pmax
       comp=Z,61nm,1.5s
HNS                                    LR        LR
       comp=Z,980nm,14.8s
HNS                                    LR        LR
       comp=Z,1µm,15.3s
HNS                                    LR        LR
       comp=Z,2µm,21.1s
BNX    BinXian            53.02 340   ⇓P         P         22 32 30.0 +0.1
BNX                                    pmax      pmax
       comp=Z,68nm,0.9s
GSI    Gunungsitoli       53.35 274    P         P         22 32 32.7 -0.3
GSI                                    IAmb      IAmb      22 32 38.7
       comp=Z,58nm,1.0s
GSI    Gunungsitoli       53.35 274    P         P         22 32 33.8 +0.8
       comp=Z,75nm,1.1s
GSI    Gunungsitoli       53.35 274    P         P         22 32 35.3 +2.3
       comp=Z,76nm,1.1s
KCSI   Kotacane, Aceh     53.38 277    P         P         22 32 36.7 +3.5
       comp=Z,470nmcomp=Z,15nm,1.2s
BJT    Baijiatuau         53.49 327              P         22 32 32.2 -1.3
BJT    Baijiatuau         53.49 327    P         P         22 32 33.5  0.0
       comp=Z,26nm,2.2s
BJT    Baijiatuau         53.49 327    P         P         22 32 32.2 -1.3
BJT                                    pmax      pmax
       comp=Z,23nm,1.1s
BJT                                    MLR       MLR
       comp=Z,2µm,19.0s
BJI    Beijing            53.50 327    P         P         22 32 33.2 -0.4
BJI                                    pP        pP        22 32 37.9 -5.8
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BJI                              sP       sP       22 32 39.6  -8.0
BJI                              S        S        22 40 05.6  +1.5
BJI                              pmax     pmax
      comp=Z,8.0nm,1.5s
BJI                              LR       LR
      comp=Z,780nm,18.9s
BJI                              LR       LR
      comp=Z,860nm,16.7s
BJI                              LR       LR
      comp=Z,870nm,23.3s
XAN   Xi'an            54.11 317 P        P        22 32 37.8  -0.5
XAN                              pP       pP       22 32 46.6  -1.5
XAN                              S        S        22 40 06.9  -5.8
XAN                              pmax     pmax
      comp=Z,65nm,1.2s
XAN                              pmax     pmax
      comp=Z,450nm,4.0s
XAN                              LR       LR
      comp=Z,1µm,17.7s
XAN                              LR       LR
      comp=Z,1µm,16.7s
XAN                              LR       LR
      comp=Z,2µm,18.9s
KMI   Kunming          54.44 304 ⇑P       P        22 32 43.6  +2.5
KMI                              sP       pP       22 32 47.8  -3.1
KMI                              S        S        22 40 21.4  +3.6
KMI                              SS       SS       22 44 01.2  +0.5
KMI                              pmax     pmax
      comp=Z,34nm,1.7s
KMI                              pmax     pmax
      comp=Z,460nm,3.9s
KMI                              LR       LR
      comp=Z,620nm,14.3s
KMI                              LR       LR
      comp=Z,560nm,13.3s
KMI                              LR       LR
      comp=Z,1µm,19.8s
MLSI  Meulaboh, Aceh   54.82 277 P        P        22 32 47.2  +3.5
CM31  Chiang Mai Arr   55.38 295 P        P        22 32 46.8  -0.9
CM31                             IAmb     IAmb     22 32 51.8
      comp=Z,43nm,1.2s
CMAR  Chiang Mai Arr   55.38 295 P        P        22 32 48.2  +0.5
      comp=Z,5.5nm,0.8s,baz=115,slow=5.1,SNR=24
CMAR                             LR       LR       22 55 17.8
      comp=Z,460nm,20.9s,baz=110,slow=35
      comp=Z,5.5nm,0.8s
CMAR  Chiang Mai Arr   55.38 295 P        P        22 32 47.5  -0.2
CMAR  Chiang Mai Arr   55.38 295ceP       P        22 32 49.0  +1.3
CMAR                             pmax     pmax
      comp=Z,8.0nm,0.9s
CHTO  Chiang Mai       55.49 295 P        P        22 32 47.3  -1.2
CHTO                             IAmb     IAmb     22 32 53.0
      comp=Z,83nm,1.7s
CHTO  Chiang Mai       55.49 295 P        P        22 32 50.0  +1.5
      comp=Z,11nm,1.5s
CHTO  Chiang Mai       55.49 295 P        P        22 32 47.3  -1.2
CHTO                             pmax     pmax
      comp=Z,83nm,1.7s
PZH   PanZhiHua        55.83 305 P        P        22 32 51.4  +0.5
PZH                              S        S        22 40 37.2  +1.1
PZH                              pmax     pmax
      comp=Z,20nm,2.1s
PZH                              pmax     pmax
      comp=Z,380nm,6.4s
PZH                              LR       LR
      comp=Z,870nm,21.0s
PZH                              LR       LR
      comp=Z,760nm,19.4s
PZH                              LR       LR
      comp=Z,800nm,17.5s
CD2   Chengdu          56.20 311 P        P        22 32 53.8  +0.4
CD2                              S        S        22 40 42.2  +1.4
CD2                              pmax     pmax
      comp=Z,60nm,0.9s
CD2                              LR       LR
      comp=Z,2µm,13.7s
CD2                              LR       LR
      comp=Z,1µm,12.7s
XLT   XiLinHaoTe       56.32 330 eP       P        22 32 54.2  +0.1
XLT                              pP       sP       22 33 05.9  -2.3
XLT                              pmax     pmax
      comp=Z,43nm,1.0s
XLT                              LR       LR
      comp=Z,2µm,15.1s
XLT                              LR       LR
      comp=Z,2µm,19.0s
PEA0B Petropavlovsk-   56.47   5 P        P        22 32 54.1  -0.7
PEA0B Petropavlovsk-   56.47   5 P        P        22 32 54.1  -0.7
PEA0B                            pmax     pmax
      comp=Z,133nm,1.4s
PETK  Petropavlovsk-   56.47   5 P        P        22 32 54.2  -0.6
      comp=Z,20nm,0.7s,baz=168,slow=7.6,SNR=12
PETK                             LR       LR       22 52 38.8
      comp=Z,1µm,21.2s,baz=189,slow=31
      comp=Z,20nm,0.7s
PETK  Petropavlovsk-   56.47   5 P        P        22 32 54.4  -0.4
PETK  Petropavlovsk-   56.47   5 P        P        22 32 54.4  -0.4
PET   Petropavlovsk    56.47   6 eP       P        22 32 54.3  -0.5
PET                              e                 22 35 01.9
PET                              eS       S        22 40 40.2  -3.3
PET                              MLR      MLR
      comp=Z,900nm,17.0s
HHC   Hu-ho-hao-te     56.62 325⇓iP       P        22 32 58.4  +2.1
HHC                              pP       pP       22 33 01.8  -4.7
HHC                              S        S        22 40 53.2  +7.0
HHC                              pmax     pmax
      comp=Z,29nm,1.2s
HHC                              pmax     pmax
      comp=Z,510nm,5.4s
HHC                              LR       LR
      comp=Z,900nm,12.8s
HHC                              LR       LR
      comp=Z,970nm,15.2s
HHC                              LR       LR
      comp=Z,2µm,20.5s
HEH   HeiHe            56.97 342 eP       P        22 32 58.4   0.0
HEH                              pmax     pmax
      comp=Z,69nm,0.8s
BTO   Baotou           57.36 324 eP       P        22 33 04.4  +2.9
BTO                              PP       PP       22 35 13.8  +4.6
BTO                              pmax     pmax
      comp=Z,58nm,1.3s
BTO                              pmax     pmax
      comp=Z,1µm,6.1s
BTO                              LR       LR
      comp=Z,4µm,18.8s
BTO                              LR       LR
      comp=Z,3µm,13.7s
BTO                              LR       LR
      comp=Z,5µm,20.5s
TNCH  TengChong        57.93 302 P        P        22 33 08.1  +2.1
TNCH                             S        S        22 41 06.9  +2.7
TNCH                             SS       SS       22 44 58.5  +2.8
TNCH                             pmax     pmax
      comp=Z,50nm,1.1s
TNCH                             pmax     pmax
      comp=Z,450nm,4.3s
TNCH                             LR       LR
      comp=Z,440nm,12.4s
TNCH                             LR       LR
      comp=Z,460nm,13.3s
TNCH                             LR       LR
      comp=Z,780nm,15.3s
LZH   Lanzhou          58.71 316 ⇑P       P        22 33 13.2  +2.0
LZH                              S        S        22 41 16.6  +2.7
LZH                              SS       SS       22 45 07.5  -0.1
LZH                              pmax     pmax
      comp=Z,47nm,1.3s
LZH                              LR       LR
      comp=Z,1µm,20.1s
LZH                              LR       LR
      comp=Z,640nm,19.4s
LZH                              LR       LR
      comp=Z,760nm,21.1s
LZDM  Lanzhou Array    58.75 316 P        P        22 33 12.4  +0.7
      comp=Z,32nm,1.0s,baz=108,slow=9.5,SNR=19
      comp=Z,32nm,1.0s
HIA   Hailar           58.81 337          P        22 33 10.3  -1.1
HIA                              IAmb     IAmb     22 33 15.4
      comp=Z,46nm,1.0s
HIA   Hailar           58.81 337 P        P        22 33 12.6  +1.2
      comp=Z,49nm,1.4s
HIA   Hailar           58.81 337 P        P        22 33 10.3  -1.1
HIA                              pmax     pmax
      comp=Z,46nm,1.0s
HILR  Hailar Array B   59.04 337 P        P        22 33 13.2  +0.2
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      comp=Z,11nm,0.8s,baz=173,slow=6.0,SNR=12
HILR                             LR       LR       22 58 22.0
      comp=Z,224nm,19.2s,baz=160,slow=36
      comp=Z,11nm,0.8s
SHEM  Shemya Is, Ala   59.16  16 LR       LR       22 53 33.4
      comp=Z,2µm,21.9s,baz=216,slow=31
ZEA   Zeya             60.10 344 eP       P        22 33 21.5  +1.3
ZEA                              pmax     pmax
      comp=Z,30nm,1.2s
PPT   Papeete          60.14 108 P        P        22 33 22.9  +1.8
      comp=Z,18nm,0.4s,baz=304,slow=7.3,SNR=4.2
PPT                              LR       LR       22 57 23.3
      comp=Z,457nm,18.1s,baz=268,slow=34
      comp=Z,18nm,0.4s
PPT2  Papeete2         60.14 108 eP       P        22 33 12.3  -8.9
      comp=Z,59nm,22.8s
PPT2                             eS       S        22 41 29.9  -2.8
      comp=Z,561nm,24.0s
PPT2                             eSS      SS       22 45 17.8   -12
      comp=Z,322nm,31.0s
PPT2                             eLQ      LQ       22 48 30.0
      comp=Z,866nm,24.8s
PPT2                             eLR      LR       22 50 57.2
      comp=Z,3µm,31.0s
PPT2                             eLR      LR       22 51 01.6
      comp=Z,2µm,33.2s
PPTF  Pamatai, Papee   60.15 108 P        P        22 33 25.8  +4.5
      comp=Z,60nm,1.9s
TBI   Tubuai           61.05 115 eS       S        22 41 44.6  +0.6
      comp=Z,2µm,25.2s
TBI                              eSS      SS       22 45 48.0  +3.8
      comp=Z,2µm,26.5s
TBI                              eLQ      LQ       22 48 51.4
      comp=Z,20µm,28.5s
TBI                              eLR      LR       22 51 23.1
      comp=Z,10µm,32.0s
TBI                              eLR      LR       22 51 27.6
      comp=Z,3µm,33.8s
MOKO  MOKOCHONG        61.77 302 eP       P        22 33 28.6  -3.6
MOKO                             IAmb     IAmb     22 33 34.9
      comp=Z,25nm,1.2s
IMP   Imphal           61.77 300 eP       P        22 33 27.4  -4.9
IMP                              IAmb     IAmb     22 33 34.2
      comp=Z,26nm,1.3s
KOHI  KOHIMA           61.92 301 eP       P        22 33 29.5  -3.8
MA2   Magadan          62.65   0 LR       LR       22 57 01.6
      comp=Z,2µm,21.8s,baz=158,slow=32
ZIRO  ZIRO             62.73 303 eP       P        22 33 35.0  -3.7
BRDH  Bariadhala       63.15 297 LR       LR       22 59 08.0
      comp=Z,648nm,21.9s,baz=146,slow=34
GTA   Gaotai           63.15 318 eP       P        22 33 43.1  +1.9
GTA                              S        S        22 42 15.1  +4.7
GTA                              pmax     pmax
      comp=Z,11nm,1.5s
GTA                              LR       LR
      comp=Z,690nm,18.5s
GTA                              LR       LR
      comp=Z,600nm,20.7s
GTA                              LR       LR
      comp=Z,1µm,18.2s
TEZP  TEZPUR           63.32 302 eP       P        22 33 38.7  -3.7
CIT   Chita            63.45 335 eP       P        22 33 42.8  -0.1
CIT                              e                 22 34 23.2
CIT                              pmax     pmax
      comp=Z,201nm,3.2s
ULN   Ulaanbaatar      63.63 329 P        P        22 33 43.9  -0.4
ULN   Ulaanbaatar      63.63 329 i P      P        22 33 44.6  +0.4
ULN                              pmax     pmax
      comp=Z,44nm,1.7s
SHL   Shillong         63.77 300 P        P        22 33 44.9  -0.8
SHL                              IAmb     IAmb     22 33 52.4
      comp=Z,42nm,1.2s
SHL   Shillong         63.77 300 eP       P        22 33 40.7  -5.0
SHL   Shillong         63.77 300 P        P        22 33 44.9  -0.8
SHL                              pmax     pmax
      comp=Z,42nm,1.2s
SONM  Songino Array    63.95 328 P        P        22 33 47.1  +0.7
      comp=Z,5.7nm,0.7s,baz=156,slow=6.0,SNR=20
SONM                             LR       LR       23 01 21.6
      comp=Z,1µm,20.8s,baz=124,slow=36
      comp=Z,5.7nm,0.7s
SONM  Songino Array    63.95 328 P        P        22 33 46.2  -0.1
SONM                             IAmb     IAmb     22 33 50.9
      comp=Z,59nm,1.8s
TAWA  Tawang           64.42 303 eP       P        22 33 45.9  -4.2
NIKH  Nikolski High    65.49  26 P        P        22 33 55.9  -0.1
      baz=225
DHUB  DHUBRI           65.53 300 eP       P        22 33 51.9  -5.0
DHUB                             IAmb     IAmb     22 33 59.6
      comp=Z,21nm,1.4s
LSA   Lhasa            65.69 305          P        22 33 57.8  -0.7
LSA                              IAmb     IAmb     22 34 10.9
      comp=Z,23nm,1.3s
LSA   Lhasa            65.69 305 P        P        22 33 57.8  -0.7
LSA                              pmax     pmax
      comp=Z,23nm,1.3s
SEY   Seymchan         66.03   1 LR       LR       23 03 22.8
      comp=Z,769nm,19.0s,baz=180,slow=36
SEY   Seymchan         66.03   1 i P      P        22 34 02.3  +3.0
SEY                              pmax     pmax
      comp=Z,11nm,1.1s
CAL   Calcutta         66.06 296 eP       P        22 33 55.9  -4.4
CAL                              IAmb     IAmb     22 34 06.7
      comp=Z,2µm,0.8s
COBR  COOCHBEHAR       66.07 301 eP       P        22 33 57.8  -2.6
COBR                             IAmb     IAmb     22 34 13.5
YAK   Yakutsk          67.08 349 LR       LR       23 01 24.9
      comp=Z,643nm,21.5s,baz=150,slow=34
YAK   Yakutsk          67.08 349 P        P        22 34 05.8  -0.3
YAK   Yakutsk          67.08 349 eP       P        22 34 06.9  +0.8
YAK                              e                 22 34 34.6
YAK                              e                 22 36 35.0
YAK                              ePPP     PPP      22 38 12.0
YAK                              eS       S        22 42 56.7  -0.7
YAK                              e*SS     sS       22 43 24.7   +10
YAK                              e                 22 43 58.7
YAK                              eSS      SS       22 47 17.4  +0.4
YAK                              pmax     pmax
      comp=Z,55nm,0.9s
YAK                              pmax     pmax
      comp=N,19nm,1.6s
YAK                              pmax     pmax
      comp=E,9.0nm,1.0s
YAK                              pmax     pmax
      comp=Z,907nm,4.9s
YAK                              pmax     pmax
      comp=N,701nm,3.1s
YAK                              pmax     pmax
      comp=E,529nm,2.7s
YAK                              smax     smax
      comp=N,963nm,4.3s
YAK                              smax     smax
      comp=E,549nm,3.7s
GTK   Tadong           67.10 301 eP       P        22 34 03.9  -3.2
GTK                              IAmb     IAmb     22 34 10.9
      comp=Z,24nm,1.1s
UNV   Unalaska Valle   67.11  26 P        P        22 34 06.2  -0.2
      baz=227
ZAK   Zakamensk        67.13 329 eP       P        22 34 04.7  -2.1
ZAK                              pmax     pmax
      comp=Z,44nm,1.5s
TLY   Talaya           67.74 330 P        P        22 34 09.4  -1.2
IRK   Irkutsk          67.78 331 eP       P        22 34 10.9  +0.1
IRK                              pmax     pmax
      comp=Z,64nm,2.9s
P08K  Saint George I   67.80  22 IAMs_20  IAMs_20  22 58 32.3
      comp=Z,2µm,20.0s
P08K  Saint George I   67.80  22 P        P        22 34 10.9  +0.2
      baz=224
BWNR  Bhubaneshwar     67.81 293 eP       P        22 34 07.6  -4.0
BWNR                             IAmb     IAmb     22 34 14.0
      comp=Z,81nm,0.1s
SPIA  Saint Paul Isl   67.96  22 IAMs_20  IAMs_20  22 58 46.5
      comp=Z,2µm,21.0s
SPIA  Saint Paul Isl   67.96  22 P        P        22 34 12.2  +0.4
      baz=223
EVN   Everest          68.80 302          P        22 34 17.3  -1.1
EVN                              IAmb     IAmb     22 34 40.6
      comp=Z,23nm,1.0s
TAOE  Nuku Hiva Isla   68.86  98 eS       S        22 43 17.7  -2.9
      comp=Z,188nm,24.0s
TAOE                             eSS      SS       22 47 48.7  +2.3
      comp=Z,386nm,29.2s
TAOE                             eLR      LR       22 55 08.3
      comp=Z,3µm,24.6s
CASY  Casey            68.89 196 IAMs_20  IAMs_20  23 00 54.1
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      comp=Z,2µm,22.0s
MOY   Mondy            69.06 329 eP       P        22 34 20.0  +1.1
MOY                              pmax     pmax
      comp=Z,70nm,2.2s
FALS  False Pass       69.13  26 P        P        22 34 18.9  -0.1
      baz=230
GAYA  Gaya             69.37 298 eP       P        22 34 17.5  -3.7
GAYA                             IAmb     IAmb     22 34 24.6
      comp=Z,10nm,1.0s
RAGD  RAYAGADA         69.79 292 eP       P        22 34 19.9  -4.0
S12K  Black Hills      70.27  26 P        P        22 34 25.9  -0.2
      baz=231
KNGR  Kungurtug, Tuv   70.29 327 i P      P        22 34 27.7  +1.2
KNGR                             pmax     pmax
      comp=Z,66nm,1.1s
PALK  Pallekele        70.69 279 LR       LR       23 05 28.1
      comp=Z,235nm,21.6s,baz=99,slow=36
SDPT  Sand Point       70.76  27 P        P        22 34 28.9  -0.2
      baz=233
CHNA  Chernabura Isl   70.86  28 P        P        22 34 29.9  +0.2
      baz=234
BLSP  Bilaspur         71.52 294 eP       P        22 34 30.6  -3.8
BLSP                             IAmb     IAmb     22 34 42.4
      comp=Z,13nm,0.7s
S14K  Fog Glacier      71.74  27 P        P        22 34 35.7  +0.6
      baz=233
GAMB  Gambell          72.48  16 P        P        22 34 40.1  +0.9
      baz=220
ALBI  Allahabad        72.51 298 eP       P        22 34 35.9  -4.3
ALBI                             IAmb     IAmb     22 34 46.5
      comp=Z,238nm,0.1s
M13K  Dall Lake        72.80  22 P        P        22 34 42.4  +1.2
      baz=229
O14K  Tigyukauivet M   72.85  24 IAMs_20  IAMs_20  23 01 04.7
      comp=Z,2µm,21.0s
O14K  Tigyukauivet M   72.85  24 P        P        22 34 42.8  +1.2
      baz=231
N14K  Kuskokwak Cree   73.11  23 IAMs_20  IAMs_20  23 01 13.6
      comp=Z,2µm,22.0s
N14K  Kuskokwak Cree   73.11  23 P        P        22 34 43.9  +0.8
      baz=230
WMQ   Urumqi           73.24 318 eP       P        22 34 47.8  +3.5
WMQ                              pmax     pmax
      comp=Z,17nm,1.1s
WMQ                              LR       LR
      comp=Z,530nm,23.8s
CHIR  Chirikof Islan   73.29  28 P        P        22 34 43.6  -0.6
      baz=237
K13K  Kusilvak Mount   73.35  20 IAMs_20  IAMs_20  23 00 53.0
      comp=Z,2µm,22.0s
K13K  Kusilvak Mount   73.35  20 P        P        22 34 44.4  -0.1
      baz=227
O15K  Ungalikthiuk R   73.38  24 IAMs_20  IAMs_20  23 01 22.8
      comp=Z,2µm,22.0s
O15K  Ungalikthiuk R   73.38  24 P        P        22 34 45.1  +0.4
      baz=232
L14K  Kuka Creek       73.65  21          P        22 34 46.2   0.0
L14K                             IAmb     IAmb     22 34 51.8
      comp=Z,26nm,0.9s
L14K  Kuka Creek       73.65  21 P        P        22 34 47.3  +1.1
      baz=229
N15K  Kwethluk River   73.89  23 IAMs_20  IAMs_20  23 01 38.2
      comp=Z,2µm,22.0s
N15K  Kwethluk River   73.89  23 P        P        22 34 48.5  +0.8
      baz=232
R17L  Mt. Peulik Vol   73.95  27 P        P        22 34 48.6  +0.4
      baz=236
M15K  Kasigluk River   73.98  23 P        P        22 34 49.6  +1.4
      baz=231
KOD   Kodaikanal       74.18 282 eP       P        22 34 45.2  -5.5
KOD                              IAmb     IAmb     22 35 00.4
      comp=Z,18nm,0.6s
J14K  Nanvaranak Lak   74.28  20 IAMs_20  IAMs_20  23 02 17.6
      comp=Z,2µm,22.0s
J14K  Nanvaranak Lak   74.28  20 P        P        22 34 51.0  +1.1
      baz=228
L15K  Ungalak Mounta   74.31  22 P        P        22 34 50.9  +0.8
      baz=230
O16K  Kokwok River B   74.34  24 IAMs_20  IAMs_20  23 01 18.2
      comp=Z,2µm,22.0s
O16K  Kokwok River B   74.34  24 P        P        22 34 50.7  +0.4
      baz=234
SII   Sitkinak Islan   74.36  28 P        P        22 34 50.5  -0.1
      baz=238
Q16K  King Salmon      74.41  26 P        P        22 34 50.8  +0.1
      baz=235
VNDA  Vanda            74.44 178 P        P        22 34 51.4  +0.7
      comp=Z,8.7nm,1.0s,baz=329,slow=5.2,SNR=15
VNDA                             LR       LR       23 06 28.1
      comp=Z,677nm,18.0s,baz=9.0,slow=35
      comp=Z,8.7nm,1.0s
VNDA  Vanda            74.44 178 P        P        22 34 50.5  -0.2
Q17K  Contact Creek    74.51  26 P        P        22 34 51.8  +0.3
      baz=236
N16K  Nishlik Lake     74.59  23 P        P        22 34 52.5  +0.7
      baz=233
K15K  Wolf Creek Mou   74.69  21          P        22 34 51.9  -0.4
K15K                             IAmb     IAmb     22 34 57.4
      comp=Z,27nm,0.9s
K15K  Wolf Creek Mou   74.69  21 P        P        22 34 53.2  +0.9
      baz=230
M16K  Timber Creek     74.85  23 IAMs_20  IAMs_20  23 02 52.7
      comp=Z,2µm,20.0s
M16K  Timber Creek     74.85  23 P        P        22 34 53.7  +0.4
      baz=233
O17K  Koliganek Bris   74.86  24 P        P        22 34 53.8  +0.5
      baz=235
TNA   Tin City         74.89  17 P        P        22 34 54.1  +0.7
      baz=223
ANM   Nome             74.94  18 IAMs_20  IAMs_20  23 03 29.9
      comp=Z,2µm,20.0s
ANM   Nome             74.94  18 P        P        22 34 54.5  +0.7
      baz=226
L16K  Owhat River      75.08  22 P        P        22 34 55.2  +0.7
      baz=232
Q18K  Katmai Hardscr   75.11  26 P        P        22 34 54.8  -0.2
      baz=237
OHAK  Old Harbor       75.13  28 P        P        22 34 55.8  +0.9
      baz=239
N17K  Nushagak Hills   75.26  24 IAMs_20  IAMs_20  23 02 32.4
      comp=Z,2µm,21.0s
N17K  Nushagak Hills   75.26  24 P        P        22 34 56.0  +0.4
      baz=234
F14K  Arctic Creek     75.29  17 P        P        22 34 56.2  +0.4
      baz=225
JHNI  Jhansi           75.37 297 eP       P        22 34 52.5  -4.5
JHNI                             IAmb     IAmb     22 35 00.2
      comp=Z,7.8nm,0.6s
P18K  Big Mountain,    75.42  25 IAMs_20  IAMs_20  23 01 26.1
      comp=Z,1µm,22.0s
P18K  Big Mountain,    75.42  25 P        P        22 34 56.6  -0.1
      baz=236
JOSI  Joshimath        75.58 303 eP       P        22 34 54.6  -3.9
JOSI                             IAmb     IAmb     22 35 06.9
      comp=Z,31nm,0.6s
DGZ   Jazzator, Alta   75.64 323 i P      P        22 34 58.9  +0.6
DGZ                              pmax     pmax
      comp=Z,18nm,1.1s
G15K  Niukluk          75.65  18 P        P        22 34 58.6  +0.9
      baz=227
J16K  Anvik River      75.65  20 IAMs_20  IAMs_20  23 02 36.8
      comp=Z,2µm,22.0s
J16K  Anvik River      75.65  20 P        P        22 34 59.0  +1.1
      baz=231
M17K  Holitna River    75.67  23 IAMs_20  IAMs_20  23 02 31.3
      comp=Z,2µm,22.0s
M17K  Holitna River    75.67  23 P        P        22 34 58.4  +0.4
      baz=234
O18K  Koktuh Hills     75.69  25 IAMs_20  IAMs_20  23 02 08.9
      comp=Z,2µm,22.0s
O18K  Koktuh Hills     75.69  25 P        P        22 34 58.4  +0.2
      baz=236
KDAK  Kodiak Island    75.74  28 LR       LR       23 02 55.3
      comp=Z,784nm,21.4s,baz=236,slow=32
KDAK  Kodiak Island    75.74  28 P        P        22 34 59.1  +0.7
      baz=239
L17K  Donlin           75.78  22 P        P        22 34 59.5  +0.9
      baz=233
Q19K  Cape Douglas,    75.86  26 P        P        22 34 59.6  +0.4
      baz=238
N18K  Kilae Creek      75.87  24 IAMs_20  IAMs_20  23 02 49.6
      comp=Z,2µm,21.0s
N18K  Kilae Creek      75.87  24 P        P        22 35 00.5  +1.4
      baz=236
TKRD  Thakurdwara      75.88 301 eP       P        22 34 56.6  -3.3
F15K  North Star Dit   75.95  17 IAMs_20  IAMs_20  23 03 40.8
      comp=Z,2µm,20.0s
F15K  North Star Dit   75.95  17 P        P        22 35 00.7  +1.2
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	baz=226						
H16K	Elim	75.98	19	P	P	22 35 00.1	+0.4
	baz=229						
AKL	Akola	76.01	292	eP	P	22 34 57.2	-3.5
AKL				IAML		22 35 06.2	
	comp=Z,188nm,2.4s						
I17K	Unalakleet	76.01	20	IAMs_20	IAMs_20	23 02 46.3	
	comp=Z,2μm,21.0s						
I17K	Unalakleet	76.01	20	P	P	22 35 00.9	+1.1
	baz=230						
BHPL	Bhopal	76.04	295	eP	P	22 34 54.9	-6.1
BHPL				IAmb	IAmb	22 35 08.4	
	comp=Z,40nm,1.4s						
TIXI	Tiksi	76.12	353	LR	LR	23 04 48.1	
	comp=Z,438nm,21.3s,baz=194,slow=33						
TIXI	Tiksi	76.12	353	P	P	22 35 00.1	-0.2
TIXI				IAmb	IAmb	22 35 10.7	
	comp=Z,30nm,1.4s						
TIXI	Tiksi	76.12	353	ceP	P	22 35 02.1	+1.8
TIXI				pmax	pmax		
	comp=Z,19nm,1.7s						
K17K	Iditarod	76.13	22	P	P	22 35 00.8	+0.2
	baz=233						
NRDN	NARMADA NAGAR	76.19	294	eP	P	22 34 57.3	-4.5
O19K	Port Alsworth	76.25	25	IAMs_20	IAMs_20	23 03 08.7	
	comp=Z,2μm,21.0s						
O19K	Port Alsworth	76.25	25	P	P	22 35 01.9	+0.6
	baz=237						
Q20K	Shuyak Island	76.25	27	P	P	22 35 01.7	+0.3
	baz=239						
J17K	VABM Dome	76.26	21	IAMs_20	IAMs_20	23 02 43.9	
	comp=Z,2μm,22.0s						
J17K	VABM Dome	76.26	21	P	P	22 35 02.3	+1.0
	baz=232						
M18K	Stony River	76.36	23	P	P	22 35 02.8	+1.0
	baz=236						
ZSN	Zaisan	76.39	320	eP	P	22 35 03.6	+1.2
ZSN	Zaisan	76.39	320	eP	P	22 35 03.6	+1.2
P19K	Oil Pt	76.42	26	P	P	22 35 02.4	0.0
	baz=238						
L18K	Granite Mounta	76.44	22	P	P	22 35 03.0	+0.6
	baz=235						
G16K	Koyuk River	76.44	18	IAMs_20	IAMs_20	23 05 08.7	
	comp=Z,2μm,20.0s						
G16K	Koyuk River	76.44	18	P	P	22 35 03.5	+1.2
	baz=228						
N19K	Bonanza Creek	76.52	24	IAMs_20	IAMs_20	23 03 08.8	
	comp=Z,2μm,21.0s						
N19K	Bonanza Creek	76.52	24	P	P	22 35 03.3	+0.3
	baz=237						
O20K	Slope Mountain	76.91	25	P	P	22 35 06.1	+0.9
	baz=239						
H17K	Granite Mounta	76.94	19		P	22 35 05.3	+0.2
H17K	Granite Mounta	76.94	19	P	P	22 35 05.9	+0.8
	baz=231						
MNGI	Mangalore	77.01	284	eP	P	22 35 02.7	-3.8
G17K	Kiwalik Mounta	77.06	19	P	P	22 35 06.7	+0.9
	baz=230						
L19K	White Mountain	77.12	23	IAMs_20	IAMs_20	23 04 11.8	
	comp=Z,2μm,21.0s						
L19K	White Mountain	77.12	23	P	P	22 35 07.0	+0.8
	baz=236						
J18K	Innoko River	77.15	21	P	P	22 35 07.0	+0.6
	baz=234						
NPLP	NPLP New Delhi	77.23	300	eP	P	22 35 03.8	-3.8
NPLP				IAmb	IAmb	22 35 13.0	
	comp=Z,11nm,0.5s						
CNPM	China Poot	77.23	26	P	P	22 35 06.6	-0.3
F17K	Baldwin Pennin	77.48	18	IAMs_20	IAMs_20	23 05 30.0	
	comp=Z,2μm,20.0s						
F17K	Baldwin Pennin	77.48	18	P	P	22 35 08.7	+0.6
	baz=229						
BRSE	Bradley Lake S	77.56	26	P	P	22 35 08.5	-0.2
	baz=241						
C16K	Lisburne Hills	77.56	15	IAMs_20	IAMs_20	23 04 42.2	
	comp=Z,2μm,21.0s						
C16K	Lisburne Hills	77.56	15	P	P	22 35 09.5	+1.0
	baz=225						
H18K	Honhosa River	77.59	20	IAMs_20	IAMs_20	23 03 54.9	
	comp=Z,2μm,22.0s						
H18K	Honhosa River	77.59	20	P	P	22 35 09.2	+0.4
	baz=232						
M20K	Styx River	77.64	24	IAMs_20	IAMs_20	23 03 21.4	
	comp=Z,2μm,22.0s						
M20K	Styx River	77.64	24	P	P	22 35 09.1	-0.1
	baz=238						
SPCR	Spurr Chakacha	77.66	25	P	P	22 35 09.8	+0.4
	baz=239						
L20K	Farewell, AK	77.67	23	P	P	22 35 10.4	+1.1
	baz=237						
SMLA	Simla	77.71	303	eP	P	22 35 06.5	-3.6
E17K	Hotham Inlet	77.72	17	P	P	22 35 10.2	+0.7
	baz=229						
D17K	Noatak River	77.78	16	P	P	22 35 10.4	+0.6
	baz=227						
MK31	Makanchi Array	77.83	319	i P	P	22 35 10.5	-0.1
MKAR	Makanchi Array	77.83	319	P	P	22 35 11.1	+0.5
	comp=Z,13nm,1.0s,baz=101,slow=5.6,SNR=16						
MKAR				LR	LR	23 09 54.8	
	comp=Z,219nm,21.7s,baz=98,slow=36						
	comp=Z,13nm,1.0s						
MKAR	Makanchi Array	77.83	319		P	22 35 10.0	-0.5
MKAR	Makanchi Array	77.83	319	ceP	P	22 35 11.3	+0.7
MKAR				pmax	pmax		
	comp=Z,13nm,1.0s						
GCSA	Galena City Sc	77.85	20	P	P	22 35 11.2	+1.0
	baz=234						
J19K	Poorman	77.86	21	P	P	22 35 11.1	+0.8
	baz=235						
G18K	Tagagawik	77.95	19	IAMs_20	IAMs_20	23 04 39.4	
	comp=Z,2μm,21.0s						
G18K	Tagagawik	77.95	19	P	P	22 35 11.6	+0.9
	baz=232						
MAKZ	Makanchi	78.04	319		P	22 35 11.8	+0.1
MAKZ				IAmb	IAmb	22 35 16.5	
	comp=Z,31nm,1.2s						
MAKZ	Makanchi	78.04	319	P	P	22 35 11.8	+0.1
MAKZ				pmax	pmax		
	comp=Z,31nm,1.3s						
RDOG	Red Dog Mine	78.07	16	P	P	22 35 12.4	+1.1
	baz=228						
F18K	Selawik	78.07	18	P	P	22 35 11.8	+0.4
	baz=231						
K20K	Telida	78.08	22	P	P	22 35 12.6	+1.0
	baz=237						
C17K	DeLong Mountai	78.28	16	P	P	22 35 13.3	+0.7
	baz=227						
SEW	Seward	78.30	26	IAMs_20	IAMs_20	23 02 41.8	
	comp=Z,2μm,22.0s						
SEW	Seward	78.30	26	P	P	22 35 13.3	+0.5
	baz=242						
E18K	Tukpahlearik C	78.31	17	IAMs_20	IAMs_20	23 04 22.9	
	comp=Z,2μm,21.0s						
E18K	Tukpahlearik C	78.31	17	P	P	22 35 13.8	+1.0
	baz=230						
ALCI	Alchi Leh	78.33	306	eP	P	22 35 10.2	-3.8
ALCI				IAmb	IAmb	22 35 21.8	
	comp=Z,13nm,0.8s						
SKT	Skwentna	78.34	24	P	P	22 35 13.1	+0.1
	baz=240						
O22K	Cooper Landing	78.36	26	IAMs_20	IAMs_20	23 02 35.2	
	comp=Z,2μm,22.0s						
O22K	Cooper Landing	78.36	26	P	P	22 35 13.9	+0.8
	baz=241						
WUS	Wushi	78.38	313		P	22 35 13.3	-0.6
WUS				IAmb	IAmb	22 36 40.4	
	comp=Z,46nm,1.8s						
SUA	Susitna One	78.41	25	P	P	22 35 12.8	-0.8
SUA				IAmb	IAmb	22 35 21.5	
	comp=Z,31nm,1.1s						
SUA	Susitna One	78.41	25	P	P	22 35 13.5	-0.1
	baz=240						
H19K	Roundabout Mou	78.45	20	IAMs_20	IAMs_20	23 04 56.9	
	comp=Z,2μm,21.0s						
H19K	Roundabout Mou	78.45	20	P	P	22 35 13.5	0.0
	baz=234,SNR=12						
J20K	Nowinta River	78.50	22	P	P	22 35 14.2	+0.4
	baz=237,SNR=12						
PPLA	Purkeypile	78.55	23	IAMs_20	IAMs_20	23 05 48.5	
	comp=Z,2μm,21.0s						
PPLA	Purkeypile	78.55	23	P	P	22 35 14.6	+0.3
	baz=239						
G19K	Purcell Mounta	78.61	19	IAMs_20	IAMs_20	23 05 21.9	
	comp=Z,2μm,22.0s						
G19K	Purcell Mounta	78.61	19	P	P	22 35 14.8	+0.4
	baz=234,SNR=13						
RC01	Rabbit Creek A	78.65	25		P	22 35 13.8	-0.9
RC01	Rabbit Creek A	78.65	25	P	P	22 35 15.2	+0.5
	baz=241						
DHRM	DHARAMSHALA	78.66	304	eP	P	22 35 13.0	-2.7
DHRM				IAmb	IAmb	22 35 19.8	
	comp=Z,20nm,0.8s						
SHLS	Shalkode	78.71	315	eP	P	22 35 14.9	-0.8
SHLS	Shalkode	78.71	315	eP	P	22 35 14.8	-0.8
I20K	Naaghedeneel	78.72	21	IAMs_20	IAMs_20	23 03 45.9	
	comp=Z,1μm,22.0s						
I20K	Naaghedeneel	78.72	21	P	P	22 35 15.7	+0.7
	baz=236						
ZAA0	Zalesovo Array	78.75	327		P	22 35 14.6	-0.8
ZALV	Zalesovo Beam	78.75	327	P	P	22 35 15.1	-0.3
	comp=Z,13nm,1.0s,baz=104,slow=5.4,SNR=20						
ZALV				LR	LR	23 09 29.5	
	comp=Z,608nm,21.4s,baz=102,slow=35						
	comp=Z,13nm,1.0s						
ZALV	Zalesovo Beam	78.75	327		P	22 35 14.6	-0.8
ZALV	Zalesovo Beam	78.75	327	i P	P	22 35 15.3	-0.1
ZALV				pmax	pmax		
	comp=Z,13nm,1.0s						
F19K	Shaleruckik Mo	78.80	18	IAMs_20	IAMs_20	23 06 32.1	
	comp=Z,2μm,20.0s						
F19K	Shaleruckik Mo	78.80	18	P	P	22 35 16.2	+0.8
	baz=233						
M22K	Willow	78.81	25	IAMs_20	IAMs_20	23 03 25.4	
	comp=Z,2μm,22.0s						
M22K	Willow	78.81	25	P	P	22 35 16.2	+0.7
	baz=241						
TSSA	Tissa	78.89	304	eP	P	22 35 12.9	-4.0
L22K	Petersville	78.93	24	P	P	22 35 15.0	-1.3
C18K	Utukok River	78.94	16	P	P	22 35 16.8	+0.5
	baz=229						
H20K	Anotleneega Mo	78.97	20	P	P	22 35 17.1	+0.7
	baz=236,SNR=8.3						
UZB	Uzynbulak	79.02	315	eP	P	22 35 18.4	+1.0
UZB	Uzynbulak	79.02	315	eP	P	22 35 18.3	+1.0
CHUM	Lake Minchumin	79.02	22	P	P	22 35 17.1	+0.5
	baz=238,SNR=20						
CUT	Chulitna	79.07	24	P	P	22 35 17.4	+0.5
	baz=241						
PWL	Port Wells	79.14	26	IAMs_20	IAMs_20	23 03 22.3	
	comp=Z,2μm,21.0s						
PWL	Port Wells	79.14	26	P	P	22 35 17.9	+0.5
	baz=243						
PMR	Palmer	79.15	25	P	P	22 35 17.2	-0.2
	comp=Z,38nm,2.6s						
PMR	Palmer	79.15	25	P	P	22 35 18.1	+0.7
	baz=242						
P23K	Montague Islan	79.17	27	P	P	22 35 18.4	+0.8
	baz=244						
B18K	Kokolik River	79.25	15	P	P	22 35 18.7	+0.8
	baz=228						
PRZ	Przheval'sk	79.29	314		P	22 35 18.0	-0.9
PRZ				IAmb	IAmb	22 35 24.9	
	comp=Z,40nm,1.1s						
PRZ	Przheval'sk	79.29	314	P	P	22 35 18.0	-0.9
PRZ				pmax	pmax		
	comp=Z,40nm,1.1s						
KNK	Knik Glacier	79.35	25	IAMs_20	IAMs_20	23 04 17.6	
	comp=Z,2μm,21.0s						
KNK	Knik Glacier	79.35	25	P	P	22 35 18.9	+0.3
	baz=242						
E19K	Redstone River	79.35	18	IAMs_20	IAMs_20	23 07 00.5	
	comp=Z,2μm,21.0s						
E19K	Redstone River	79.35	18	P	P	22 35 18.9	+0.4
	baz=233						
Q23K	Middleton Isla	79.40	28	P	P	22 35 19.1	+0.3
	baz=245						
SATY	Saty	79.43	315	eP	P	22 35 20.6	+1.0
SATY	Saty	79.43	315	eP	P	22 35 20.6	+1.0
TARG	Taragay, Kyrgy	79.53	313	P	P	22 35 19.1	-1.5
TARG	Taragay, Kyrgy	79.53	313	P	P	22 35 19.1	-1.5
TARG				pmax	pmax		
	comp=Z,12nm,1.1s						
TRF	Thorofare Moun	79.58	23	P	P	22 35 19.4	-0.6
TRF				IAMs_20	IAMs_20	23 07 19.6	
	comp=Z,2μm,21.0s						
TRF	Thorofare Moun	79.58	23	P	P	22 35 20.0	0.0
	baz=240						
F20K	Avaraart Lake	79.58	19	IAMs_20	IAMs_20	23 06 44.7	
	comp=Z,2μm,20.0s						
F20K	Avaraart Lake	79.58	19	P	P	22 35 20.1	+0.4
	baz=235						
SML	Sawmill	79.58	25	P	P	22 35 19.4	-0.6
SML	Sawmill	79.58	25	P	P	22 35 20.1	+0.2
	baz=242						
UDPR	Udaipur	79.61	296	eP	P	22 35 17.0	-3.9
BPAW	Bear Paw Mtn.	79.63	22	IAMs_20	IAMs_20	23 09 45.1	
	comp=Z,1μm,19.0s						
BPAW	Bear Paw Mtn.	79.63	22	P	P	22 35 19.8	-0.3
	baz=240,SNR=6.4						
IMAR	Indian Mountai	79.63	20	P	P	22 35 19.7	-0.3
C19K	Lookout Ridge	79.68	16	P	P	22 35 20.7	+0.4
	baz=231						
GLI	Glacier Island	79.69	26	P	P	22 35 21.1	+0.7
	baz=244						
D19K	Kuna River	79.72	17	P	P	22 35 21.0	+0.5
	baz=232						
H21K	Melozitna Rive	79.78	21	P	P	22 35 21.5	+0.7
	baz=238						
M23K	Glacier View	79.83	25	P	P	22 35 21.8	+0.6
	baz=243						
TDK	Taldyqorghan	79.92	317	eP	P	22 35 23.2	+1.1
	comp=Z,43nm,1.4s						
TDK	Taldyqorghan	79.92	317	eP	P	22 35 23.1	+1.1
TDK				pmax	pmax		
	comp=Z,43nm,1.4s						
WAT1	Susitna Watana	79.97	24	P	P	22 35 22.0	0.0
	baz=242						
A19K	Wainwright	80.00	15	P	P	22 35 22.9	+1.1
	baz=229						
G21K	Allakaket	80.01	20	P	P	22 35 23.0	+0.9
	baz=237						
SCM	Sheep Creek Mo	80.02	25	IAMs_20	IAMs_20	23 03 39.4	
	comp=Z,2μm,22.0s						
SCM	Sheep Creek Mo	80.02	25	P	P	22 35 22.7	+0.4
	baz=243						
RND	Reindeer	80.12	23	P	P	22 35 21.9	-0.9
RND				IAmb	IAmb	22 35 32.6	
	comp=Z,30nm,0.9s						
RND				IAMs_20	IAMs_20	23 05 01.9	
	comp=Z,2μm,20.0s						
RND	Reindeer	80.12	23	P	P	22 35 21.9	-0.9
RND				pmax	pmax		
	comp=Z,30nm,0.9s						
RND				MLR	MLR		
	comp=Z,2μm,20.0s						
E20K	Nigu River	80.14	18	P	P	22 35 23.5	+0.7
	baz=234						
WAT6	Susitna Watana	80.19	24	P	P	22 35 23.5	+0.2
	baz=243						
MCK	McKinley	80.24	23		P	22 35 22.6	-0.8
MCK				IAMs_20	IAMs_20	23 08 11.2	
	comp=Z,2μm,19.0s						
MCK	McKinley	80.24	23	P	P	22 35 22.6	-0.8
MCK				pmax	pmax		
	comp=Z,86nm,1.3s						
MCK				MLR	MLR		
	comp=Z,2μm,19.0s						
MCK	McKinley	80.24	23	P	P	22 35 23.0	-0.4
	baz=242,SNR=13						
BWN	Browne	80.25	23	IAMs_20	IAMs_20	23 10 46.1	
	comp=Z,2μm,19.0s						
D20K	Etivluk River	80.29	17	P	P	22 35 23.9	+0.4
	baz=234						
KSH	Kashi	80.39	311	P	P	22 35 28.8	+3.9
KSH				pP	pP	22 35 33.3	-2.0
KSH				S	S	22 45 34.9	+6.1
KSH				pmax	pmax		
	comp=Z,7.0nm,1.7s						
KSH				pmax	pmax		
	comp=Z,290nm,6.9s						
KSH				LR	LR		
	comp=Z,710nm,14.1s						
KSH				LR	LR		
	comp=Z,460nm,14.1s						
KSH				LR	LR		
	comp=Z,550nm,17.5s						
F21K	Alatna River	80.40	19	IAMs_20	IAMs_20	23 06 18.4	
	comp=Z,2μm,21.0s						
F21K	Alatna River	80.40	19	P	P	22 35 25.3	+1.1
	baz=237						
H22K	Ishtalitna Cre	80.41	21	P	P	22 35 24.8	+0.5
	baz=239						
MDOK	Medeo	80.42	315	eP	P	22 35 25.8	+0.8
MDOK	Medeo	80.42	315	eP	P	22 35 25.7	+0.8
TNSS	Tian-Shan	80.46	314	eP	P	22 35 26.1	+0.6
TNSS	Tian-Shan	80.46	314	eP	P	22 35 26.1	+0.6
KLU	Klutina	80.47	26	P	P	22 35 24.5	-0.3
KLU				IAmb	IAmb	22 35 42.5	
	comp=Z,42nm,1.0s						
KLU	Klutina	80.47	26	P	P	22 35 25.3	+0.6
	baz=245						
KAIM	Kayak Island	80.50	28	P	P	22 35 24.5	-0.3
	baz=246						
BKNR	BIKANER	80.50	299	eP	P	22 35 21.1	-4.5
BKNR				IAmb	IAmb	22 35 31.5	
	comp=Z,60nm,0.9s						
AAA	Alma-Ata	80.53	315	eP	P	22 35 26.5	+1.0
AAA	Alma-Ata	80.53	315	eP	P	22 35 26.4	+1.0
DHY	Denali Highway	80.56	24	IAMs_20	IAMs_20	23 05 38.6	
	comp=Z,2μm,21.0s						
DHY	Denali Highway	80.56	24	P	P	22 35 25.6	+0.3
	baz=243,SNR=7.1						
NEA2	Nenana	80.60	22	P	P	22 35 25.0	-0.3
	baz=241						
M24K	Tolsona, Glenn	80.63	25	P	P	22 35 25.8	+0.3
	baz=244						
I23K	Minto, Yukon-K	80.76	22	P	P	22 35 26.3	+0.2
	baz=241						
BMRM	Bremner River	80.83	27	P	P	22 35 26.7	0.0
	baz=246						
G22K	Bettles	80.90	20	P	P	22 35 27.6	+0.8
	baz=239						
B20K	Meade River	80.91	16	P	P	22 35 27.5	+0.7
	baz=233						
WRH	Wood River Hil	80.92	23	IAMs_20	IAMs_20	23 10 18.1	
	comp=Z,1μm,19.0s						
E21K	Killik River	80.92	18	IAMs_20	IAMs_20	23 07 51.2	
	comp=Z,2μm,21.0s						
E21K	Killik River	80.92	18	P	P	22 35 27.5	+0.6
	baz=236						
F22K	John River	80.98	19	P	P	22 35 28.3	+1.0
	baz=238						
H23K	Yukon River	81.03	21	IAMs_20	IAMs_20	23 05 17.9	
	comp=Z,1μm,22.0s						
H23K	Yukon River	81.03	21	P	P	22 35 28.5	+1.0
	baz=241						
BOOM	Boomskoye usch	81.06	314	P	P	22 35 27.3	-1.2
BOOM	Boomskoye usch	81.06	314	P	P	22 35 27.3	-1.2
BOOM				pmax	pmax		
	comp=Z,19nm,1.2s						
C21K	Knifeblade Rid	81.09	17	P	P	22 35 29.0	+1.2
	baz=235						
N25K	Chitina, Valde	81.10	26	P	P	22 35 28.6	+0.5
	baz=246						
CCB	Clear Creek Bu	81.11	23	IAMs_20	IAMs_20	23 11 30.1	
	comp=Z,1μm,20.0s						
HARP	HAARP	81.19	25	P	P	22 35 28.7	+0.2
	baz=245						
COLA	College	81.20	22	P	P	22 35 28.4	0.0
	comp=Z,17nm,1.2s						
COLA	College	81.20	22	i P	P	22 35 27.2	-1.2
COLA				pmax	pmax		
	comp=Z,37nm,1.3s						
COLA	College	81.20	22	P	P	22 35 28.1	-0.2
	baz=242						
PAX	Paxson	81.30	24	P	P	22 35 28.6	-0.5
PAX				IAmb	IAmb	22 35 42.4	
	comp=Z,36nm,1.5s						
PAX				IAMs_20	IAMs_20	23 03 52.1	
	comp=Z,2μm,22.0s						
PAX	Paxson	81.30	24	P	P	22 35 28.6	-0.5
PAX				pmax	pmax		
	comp=Z,36nm,1.5s						
PAX				MLR	MLR		
	comp=Z,2μm,22.0s						
PAX	Paxson	81.30	24	P	P	22 35 29.2	+0.1
	baz=245						
G23K	Bananza Creek	81.30	20	IAMs_20	IAMs_20	23 06 02.0	
	comp=Z,2μm,22.0s						
G23K	Bananza Creek	81.30	20	P	P	22 35 29.9	+1.0
	baz=240						
KURK	Kurchatov	81.31	322	P	P	22 35 28.6	-0.7
KURK	Kurchatov	81.31	322	ceP	P	22 35 30.1	+0.8
KURK				pmax	pmax		
	comp=Z,29nm,1.3s						
HDA	Harding Lake	81.33	23	IAMs_20	IAMs_20	23 09 04.0	
	comp=Z,1μm,20.0s						
HDA	Harding Lake	81.33	23	P	P	22 35 30.0	+0.8
	baz=243						
KURBB	Kurchatov Arra	81.34	322	P	P	22 35 29.3	-0.2
	comp=Z,9.3nm,1.1s,baz=105,slow=4.3,SNR=16						
KURBB				LR	LR	23 11 20.0	
	comp=Z,745nm,21.9s,baz=146,slow=36						
	comp=Z,9.3nm,1.1s						
B21K	Ikpikpuk River	81.40	17	P	P	22 35 29.8	+0.4
	baz=235						
CRQE	Cirque	81.43	27	P	P	22 35 30.4	+0.5
	baz=247						
NIL	Nilore	81.43	305	P	P	22 35 29.6	-0.8
NIL				IAmb	IAmb	22 35 40.1	
	comp=Z,35nm,0.9s						
NIL	Nilore	81.43	305	P	P	22 35 29.6	-0.8
NIL				pmax	pmax		
	comp=Z,35nm,1.0s						
E22K	Anaktuvuk Pass	81.43	19	P	P	22 35 30.2	+0.5
	baz=238						
POKR	Poker Plat Res	81.47	22	P	P	22 35 29.9	0.0
	baz=243						
COLD	Coldfoot	81.50	20	IAMs_20	IAMs_20	23 06 09.2	
	comp=Z,2μm,21.0s						
COLD	Coldfoot	81.50	20	P	P	22 35 30.1	+0.1
	baz=240						
ILAR	Eielson Array	81.52	23	P	P	22 35 28.9	-1.2
	comp=Z,15nm,1.1s,baz=259,slow=4.9,SNR=24						
ILAR				LR	LR	23 10 26.5	
	comp=Z,778nm,18.9s,baz=239,slow=35						
	comp=Z,15nm,1.1s						
ILAR	Eielson Array	81.52	23	P	P	22 35 28.6	-1.5
ILAR	Eielson Array	81.52	23	P	P	22 35 29.0	-1.2
K24K	Donnelly Dome	81.53	24	P	P	22 35 31.0	+0.8
	baz=244						
D22K	Ayikyak River	81.56	18	IAMs_20	IAMs_20	23 08 21.9	
	comp=Z,2μm,20.0s						
D22K	Ayikyak River	81.56	18	P	P	22 35 31.4	+1.0
	baz=237,SNR=11						
H24K	Noodor Dome	81.64	21	IAMs_20	IAMs_20	23 05 60.0	
	comp=Z,1μm,21.0s						
H24K	Noodor Dome	81.64	21	P	P	22 35 31.4	+0.6
	baz=242						
MCARA	McCarthy VSAT	81.70	26	P	P	22 35 30.8	-0.4
MCARA				IAmb	IAmb	22 35 51.2	
	comp=Z,29nm,1.0s						
MCARA	McCarthy VSAT	81.70	26	P	P	22 35 31.6	+0.4
	baz=247						
MESA	MESA	81.74	28	P	P	22 35 31.9	+0.2
	baz=248						
A21K	Barrow	81.85	15	P	P	22 35 32.4	+0.7
	baz=233						
RIDG	Independent Ri	81.88	24	P	P	22 35 32.6	+0.5
	baz=245						
MENT	Mentasta	82.01	25	P	P	22 35 36.2	+3.4
J25K	Salcha River,	82.04	23	IAMs_20	IAMs_20	23 08 05.6	
	comp=Z,1μm,19.0s						
J25K	Salcha River,	82.04	23	P	P	22 35 32.8	-0.2
	baz=245,SNR=18						
FRU1	Bishkek	82.07	314	P	P	22 35 33.6	0.0
FRU1	Bishkek	82.07	314	P	P	22 35 33.6	0.0
FRU1				pmax	pmax		
	comp=Z,15nm,1.1s						
A22K	Sinclair Lake	82.09	16	P	P	22 35 34.4	+1.4
	baz=235						
E23K	Chandalar	82.10	19	IAMs_20	IAMs_20	23 06 52.3	
	comp=Z,2μm,21.0s						
E23K	Chandalar	82.10	19	P	P	22 35 34.3	+1.0
	baz=240						
M26K	Nabesna, AK	82.11	25	P	P	22 35 34.2	+0.8
	baz=247						
AAK	Ala-Archa	82.14	314	P	P	22 35 33.3	-0.8
AAK	Ala-Archa	82.14	314	i P	P	22 35 34.5	+0.4
AAK				pmax	pmax		
	comp=Z,12nm,1.3s						
B22K	Teshekpuk Lake	82.15	16	P	P	22 35 34.1	+0.8
	baz=236						
DOT	Dot Lake	82.16	24	P	P	22 35 32.7	-0.9
DOT				IAmb	IAmb	22 35 40.1	
	comp=Z,37nm,1.1s						
DOT				IAMs_20	IAMs_20	23 06 50.8	
	comp=Z,2μm,20.0s						
G24K	Hadweenzic Riv	82.18	21	IAMs_20	IAMs_20	23 06 52.4	
	comp=Z,2μm,22.0s						
G24K	Hadweenzic Riv	82.18	21	P	P	22 35 34.7	+1.1

	baz=243						
SGDS	Sogindy	82.21	314	eP	P	22 35 35.5	+1.2
D23K	Nanushuk River	82.22	18	P	P	22 35 34.7	+0.9
	baz=239,SNR=19						
CTG	Chitna Glacier	82.31	27	P	P	22 35 34.6	+0.1
	baz=249						
CTGM	Chitina Glacie	82.31	27	P	P	22 35 34.4	-0.2
CTGM				IAmb	IAmb	22 35 55.5	
	comp=Z,46nm,1.2s						
SCRK	Sand Creek	82.32	24		P	22 35 34.0	-0.5
SCRK	Sand Creek	82.32	24	P	P	22 35 34.8	+0.3
	baz=246						
PRP	Porcupine Dome	82.36	22	P	P	22 35 35.0	+0.2
	baz=245						
TOLK	Toolik Lake Re	82.41	19	P	P	22 35 35.1	+0.3
	baz=240						
F24K	Squaw Lake	82.42	20	P	P	22 35 35.3	+0.4
	baz=242						
E24K	Your Creek	82.48	19	IAMs_20	IAMs_20	23 09 00.4	
	comp=Z,1μm,20.0s						
E24K	Your Creek	82.48	19	P	P	22 35 35.8	+0.6
	baz=242						
PINM	Pinnacle	82.50	28	P	P	22 35 35.5	0.0
	baz=250						
M27K	Edge Creek, AK	82.58	26	P	P	22 35 36.4	+0.4
	baz=248						
H25L	Birch Creek	82.58	21	P	P	22 35 36.0	+0.3
	baz=244						
C23K	Itkillik River	82.69	17	P	P	22 35 36.3	+0.2
	baz=239,SNR=8.0						
G25K	Bearman Lake	82.70	21	P	P	22 35 36.9	+0.7
	baz=244						
J26L	Joseph Creek	82.70	23	P	P	22 35 36.9	+0.4
	baz=246						
O28M	Mount Upton	82.76	28	P	P	22 35 36.4	-0.7
	baz=250						
L27K	Beaver Creek,	82.86	25	P	P	22 35 37.9	+0.7
	baz=248						
BCAR	Beaver Creek A	82.88	25		P	22 35 37.5	+0.2
D24K	Happy Valley	82.90	18	P	P	22 35 37.8	+0.6
	baz=241						
BTLS	Baital	82.94	316	eP	P	22 35 39.2	+1.1
BTLS	Baital	82.94	316	eP	P	22 35 39.1	+1.1
YUK3	Moose Creek	82.99	27	P	P	22 35 38.2	0.0
	baz=250						
BVCY	Beaver Creek	83.04	26	P	P	22 35 38.1	-0.1
	baz=249						
K27K	Chicken	83.12	24	P	P	22 35 38.7	+0.2
	baz=248						
YUK8	Steele Glacier	83.13	27	P	P	22 35 39.4	+0.4
	baz=250						
I26K	Coal Creek Min	83.18	23	P	P	22 35 38.6	-0.2
	baz=247						
C24K	Franklin Bluff	83.21	18	IAMs_20	IAMs_20	23 06 58.5	
	comp=Z,2μm,22.0s						
C24K	Franklin Bluff	83.21	18	P	P	22 35 39.6	+0.7
	baz=241						
F25K	Christian Rive	83.22	20	P	P	22 35 39.7	+0.7
	baz=244						
MANEM	Manem	83.33	308	P	P	22 35 39.8	-0.8
MANEM				IAmb	IAmb	22 36 12.9	
	comp=Z,83nm,1.6s						
O29M	Mount Kennedy	83.36	28	P	P	22 35 40.3	+0.3
	baz=252						
E25K	Arctic Village	83.48	20	IAMs_20	IAMs_20	23 08 13.7	
	comp=Z,2μm,20.0s						
E25K	Arctic Village	83.48	20	P	P	22 35 41.3	+0.9
	baz=244						
P29M	Windy Craggy	83.55	29	P	P	22 35 41.4	+0.5
	baz=252						
DRK	Karamyk	83.56	310	P	P	22 35 41.2	-0.5
DRK	Karamyk	83.56	310	P	P	22 35 41.2	-0.5
DRK				pmax	pmax		
	comp=Z,97nm,1.8s						
G26K	Porcupine Rive	83.61	21	P	P	22 35 42.0	+1.1
	baz=246,SNR=12						
YUK4	Talbot Arm	83.66	27	P	P	22 35 42.6	+0.9
	baz=251						
D25K	Kavik River	83.75	19	IAMs_20	IAMs_20	23 09 09.7	
	comp=Z,1μm,21.0s						
D25K	Kavik River	83.75	19	P	P	22 35 42.5	+0.8
	baz=243						
F26K	Sheenjek River	83.78	20	P	P	22 35 42.1	+0.2
	baz=246						
S31K	Pelican	83.82	31	P	P	22 35 43.2	+1.0
	baz=254						
NRIK	Noril'sk	83.86	341	P	P	22 35 42.0	-0.2
	comp=Z,44nm,1.2s,baz=114,slow=5.5,SNR=21						
NRIK				LR	LR	23 13 03.3	
	comp=Z,749nm,20.1s,baz=122,slow=36						
	comp=Z,44nm,1.2s						
NRIK	Noril'sk	83.86	341	P	P	22 35 41.8	-0.4
NRIK	Noril'sk	83.86	341	ceP	P	22 35 42.6	+0.4
NRIK				pmax	pmax		
	comp=Z,63nm,1.3s						
I27K	Kandik River	83.89	23	P	P	22 35 43.3	+0.7
	baz=248,SNR=9.4						
HYT	Haines Junctio	84.03	28		P	22 35 43.7	+0.3
HYT				IAmb	IAmb	22 36 01.5	
	comp=Z,27nm,1.0s						
HYT	Haines Junctio	84.03	28	P	P	22 35 43.7	+0.3
	baz=252						
P30M	Million Dollar	84.08	29	P	P	22 35 43.7	+0.1
	baz=253						
M29M	Somme Creek	84.10	26	P	P	22 35 44.3	+0.5
	baz=251						
H27K	Steamboat Moun	84.16	22	P	P	22 35 44.7	+0.8
	baz=248,SNR=7.5						
PLBC	Pleasant Camp	84.17	29	P	P	22 35 44.5	+0.5
	baz=254						
R31K	City Hall, Gus	84.19	30	P	P	22 35 44.7	+0.6
	baz=254						
DAWY	Dawson	84.23	25		P	22 35 44.4	+0.1
DAWY				IAmb	IAmb	22 35 59.0	
	comp=Z,31nm,1.3s						
DAWY	Dawson	84.23	25	P	P	22 35 45.1	+0.8
	baz=250						
G27K	Doyon Strip	84.33	22	IAMs_20	IAMs_20	23 07 45.1	
	comp=Z,1μm,22.0s						
G27K	Doyon Strip	84.33	22	P	P	22 35 45.2	+0.5
	baz=248						
N30M	Aishikik Lake	84.41	27	P	P	22 35 45.4	+0.1
	baz=253						
L29M	L29M	84.45	26	IAMs_20	IAMs_20	23 06 54.6	
	comp=Z,1μm,20.0s						
L29M	L29M	84.45	26	P	P	22 35 46.3	+0.9
	baz=252						
C26K	Camden Bay	84.47	18	P	P	22 35 46.2	+0.9
	baz=245,SNR=13						
DZA	Taraz	84.47	313	eP	P	22 35 47.1	+1.1
	comp=Z,11nm,1.0s						
DZA	Taraz	84.47	313	eP	P	22 35 47.0	+1.1
DZA				pmax	pmax		
	comp=Z,11nm,1.0s						
I28M	Miner Creek	84.49	23	P	P	22 35 46.4	+0.7
	baz=250						
S32K	Killisnoo	84.54	32	P	P	22 35 46.7	+0.8
	baz=255						
GAR	Garm	84.62	309	P	P	22 35 46.4	-0.5
O30N	Mendenhall	84.67	28	P	P	22 35 45.8	-0.8
	baz=254						
SKAG	Skagway	84.68	30	P	P	22 35 47.4	+0.9
	baz=254						
C27K	Jago River	84.73	19	P	P	22 35 47.8	+1.2
	baz=246						
R32K	Eaglecrest	84.78	31	P	P	22 35 47.8	+0.7
	baz=255						
BRZS	Berezniki	84.84	321	eP	P	22 35 49.1	+1.5
BRZS	Berezniki	84.84	321	eP	P	22 35 49.1	+1.5
CRAG	Craig	84.84	34	P	P	22 35 48.7	+1.2
	baz=257						
E27K	Coleen River	84.86	20	P	P	22 35 48.3	+0.9
	baz=248						
M30M	Minto, Yukon	84.88	26	P	P	22 35 48.3	+0.7
	baz=253						
K29M	Barlow Dome	84.94	25	P	P	22 35 48.6	+0.6
	baz=252						
U33K	Whale Pass	84.99	33	P	P	22 35 48.7	+0.6
	baz=257						
KBL	Kabul	85.02	305	P	P	22 35 48.2	-0.9
KBL				IAmb	IAmb	22 35 53.5	
	comp=Z,42nm,1.8s						
KBL	Kabul	85.02	305	P	P	22 35 48.2	-0.9
KBL				pmax	pmax		
	comp=Z,42nm,1.8s						
N31M	Braeburn, Yuko	85.02	28	P	P	22 35 49.0	+0.7
	baz=254						
I29M	Ogilvie Camp,	85.10	23	P	P	22 35 49.0	+0.3
	baz=251						
KK31	Karatay Array	85.10	314		P	22 35 48.8	-0.3
KK31	Karatay Array	85.10	314	P	P	22 35 48.8	-0.3
KK31				pmax	pmax		
	comp=Z,48nm,1.2s						
KKAR	Karatay Array	85.10	314		P	22 35 49.2	+0.1
KKAR	Karatay Array	85.10	314	P	P	22 35 49.2	+0.1
WHY	Whitehorse	85.22	28	P	P	22 35 49.9	+0.5
	baz=255						
F28M	Old Crow	85.27	21	P	P	22 35 50.1	+0.7
	baz=250						
IUG	Iuzhnay	85.30	313	eP	P	22 35 51.2	+0.9
	comp=Z,19nm,1.0s						
IUG	Iuzhnay	85.30	313	eP	P	22 35 51.1	+0.9
IUG				pmax	pmax		
	comp=Z,19nm,1.0s						
H29M	Whitestone	85.35	23	P	P	22 35 50.6	+0.7
	baz=251						
CHGR	Chuyangaron	85.47	309		P	22 35 50.3	-0.8
CHGR	Chuyangaron	85.47	309	P	P	22 35 50.3	-0.8
CHGR				pmax	pmax		
	comp=Z,103nm,1.3s						
D27M	Malcolm River	85.47	19	P	P	22 35 51.6	+1.2
	baz=248						
WRAK	Wrangell Islan	85.48	33	P	P	22 35 51.5	+0.9
	baz=257						
P32M	Atlin	85.51	30	P	P	22 35 51.7	+0.8
	baz=256						
BRLS	Borolday	85.58	313	eP	P	22 35 53.0	+1.5
BRLS	Borolday	85.58	313	eP	P	22 35 53.0	+1.5
CHM	Chimkent	85.64	313	eP	P	22 35 53.1	+1.3
	comp=Z,32nm,1.4s						
CHM	Chimkent	85.64	313	eP	P	22 35 53.1	+1.3
CHM				pmax	pmax		
	comp=Z,32nm,1.4s						
V35K	Ketchikan	85.65	34	P	P	22 35 52.4	+1.0
	baz=258						
J30M	Hart River	85.66	24	P	P	22 35 52.6	+1.1
	baz=253						
G29M	Pine Creek	85.71	22	P	P	22 35 52.7	+1.1
	baz=251						
E28M	Babbage River	85.73	20	IAMs_20	IAMs_20	23 09 09.1	
	comp=Z,1μm,21.0s						
E28M	Babbage River	85.73	20	P	P	22 35 52.7	+1.0
	baz=250						
I30M	Mount Dempster	85.83	24	P	P	22 35 53.0	+0.6
	baz=253						
M31M	Drury Creek, Y	85.85	27	P	P	22 35 52.8	+0.4
	baz=255						
EPYK	Eagle Plains	86.03	23	P	P	22 35 54.5	+1.2
	baz=253						
Q32M	Nakina River	86.08	30	P	P	22 35 54.6	+0.7
	baz=257						
P33M	Teslin, Yukon	86.10	29	P	P	22 35 54.0	+0.2
	baz=257						
SHAA	Shahritus	86.13	308	P	P	22 35 54.0	-0.4
SHAA				IAmb	IAmb	22 36 11.8	
	comp=Z,104nm,1.3s						
N32M	Quiet Lake	86.19	28	P	P	22 35 54.5	+0.3
	baz=256						
MAW	Mawson	86.20	203	P	P	22 35 56.2	+2.2
	comp=Z,2.2nm,1.5s						
MAW	Mawson	86.20	203	P	P	22 35 53.8	-0.2
	comp=Z,12nm,1.1s,baz=110,slow=7.4,SNR=5.4						
MAW				LR	LR	23 11 25.3	
	comp=Z,2μm,21.8s,baz=88,slow=34						
	comp=Z,12nm,1.1s						
E29M	Blow River	86.23	21	P	P	22 35 54.4	+0.3
	baz=251						
D28M	Stokes Point	86.25	20	P	P	22 35 55.0	+0.8
	baz=251						
G30M	tAoh Zraii Nji	86.40	22	P	P	22 35 55.9	+0.8
	baz=253						
S34M	Telegraph Cree	86.44	32	P	P	22 35 56.0	+0.6
	baz=258						
QSPA	South Pole Qui	86.69	180	P	P	22 35 59.2	+2.5
	comp=Z,11nm,1.0s,baz=352,slow=2.5,SNR=18						
QSPA				LR	LR	23 10 36.8	
	comp=Z,490nm,21.5s,baz=356,slow=33						
	comp=Z,11nm,1.0s						
QSPA	South Pole Qui	86.69	180	P	P	22 35 57.5	+0.8
QSPA				IAmb	IAmb	22 36 02.8	
	comp=Z,48nm,1.4s						
T35M	Bob Quinn	86.73	33	P	P	22 35 57.4	+0.5
	baz=259						
F30M	Barrier River	86.75	22	P	P	22 35 57.4	+0.7
	baz=253						
BVAR	Borovoye Array	86.80	323	P	P	22 35 56.9	-0.4
	comp=Z,9.7nm,0.7s,baz=104,slow=5.9,SNR=37						
BVAR				LR	LR	23 16 54.9	
	comp=Z,552nm,18.6s,baz=82,slow=37						
	comp=Z,9.7nm,0.7s						
H31M	Peel River	86.81	23	P	P	22 35 57.6	+0.5
	baz=255						
R33M	Jennings River	86.83	30	P	P	22 35 57.7	+0.2
	baz=258						
BORK	Borovoye	86.84	323		P	22 35 56.5	-1.0
BORK	Borovoye	86.84	323	IAMs_20	IAMs_20	23 16 37.3	
	comp=Z,1μm,19.0s						
BORK	Borovoye	86.84	323	i P	P	22 35 59.5	+2.0
BORK				pmax	pmax		
	comp=Z,14nm,0.8s						
DLBC	Dease Lake	87.12	31	LR	LR	23 14 28.9	
	comp=Z,715nm,18.1s,baz=264,slow=35						
DLBC	Dease Lake	87.12	31	P	P	22 35 58.5	-0.3
	baz=259						
F31M	Tsiigehtchic	87.46	22	IAMs_20	IAMs_20	23 07 31.9	
	comp=Z,2μm,21.0s						
F31M	Tsiigehtchic	87.46	22	P	P	22 35 59.9	-0.2
	baz=255						
INK	Inuvik	87.76	21	LR	LR	23 08 41.0	
	comp=Z,296nm,21.5s,baz=277,slow=31						
INK	Inuvik	87.76	21		P	22 36 01.0	-0.5
INK				IAmb	IAmb	22 36 11.3	
	comp=Z,40nm,1.5s						
INK	Inuvik	87.76	21	P	P	22 36 01.0	-0.5
INK				pmax	pmax		
	comp=Z,40nm,1.5s						
INK	Inuvik	87.76	21	P	P	22 36 01.7	+0.2
	baz=256						
WTLY	Watson Lake, Y	88.05	30	P	P	22 36 03.0	-0.1
	baz=260						
KHBM	Hayfork Bally	89.08	49	IAMs_20	IAMs_20	23 21 41.4	
	comp=Z,1μm,18.0s						
MCCM	Marconi Confer	89.13	52	IAMs_20	IAMs_20	23 15 20.8	
	comp=Z,967nm,20.0s						
COR	Corvallis	89.37	45	IAMs_20	IAMs_20	23 14 31.7	
	comp=Z,1μm,20.0s						
M02C	Callahan	89.42	49	IAMs_20	IAMs_20	23 08 42.3	
	comp=Z,1μm,21.0s						
N02D	Trinity Center	89.50	49	P	P	22 36 10.2	-0.3
N02D				IAMs_20	IAMs_20	23 08 32.4	
	comp=Z,926nm,19.0s						
YBH	Yreka Blue Hor	89.56	48	LR	LR	23 10 56.1	
	comp=Z,44nm,19.3s,baz=268,slow=32						
JRSC	Jasper Ridge	89.58	53	IAMs_20	IAMs_20	23 12 39.7	
	comp=Z,2μm,21.0s						
TOAD	Toad River Com	89.66	31	P	P	22 36 10.9	+0.1
	baz=263						
M03C	McCloud	89.96	49	P	P	22 36 12.4	-0.3
O03E	Paynes Creek	90.13	50	P	P	22 36 13.2	-0.3
O03E				IAmb	IAmb	22 36 20.6	
	comp=Z,28nm,1.1s						
KOTAN	Kotaneelee Air	90.40	30	P	P	22 36 14.9	+0.8
	baz=264						
HRA	Herat	90.59	304		P	22 36 14.9	-1.1
K05A	Summer Lake	90.97	47	P	P	22 36 16.9	-0.6
PINE	Pine Mountain	91.00	46	P	P	22 36 16.5	-1.1
PINE				IAmb	IAmb	22 36 25.3	
	comp=Z,14nm,1.1s						
CMB	Columbia Colle	91.08	52	IAMs_20	IAMs_20	23 16 38.6	
	comp=Z,1μm,19.0s						
BEKR	Beckworth	91.21	50	P	P	22 36 17.4	-1.2
A36M	Sachs Harbour	91.22	18	P	P	22 36 18.6	+0.9
	baz=263						
C36M	Paulatuk	91.32	21	P	P	22 36 18.7	+0.5
	baz=264						
WVOR	Wild Horse Val	92.62	48	IAMs_20	IAMs_20	23 18 02.0	
	comp=Z,1μm,19.0s						
NVAR	Mina Array Bea	92.74	52	LR	LR	23 14 22.3	
	comp=Z,521nm,18.4s,baz=272,slow=33						
TIN	Tinemaha, Big	92.75	53	IAMs_20	IAMs_20	23 15 39.8	
	comp=Z,1μm,18.0s						
AB31	Akbulak array	92.98	319	P	P	22 36 24.8	-1.5
ABKAR	Akbulak array	92.98	319		P	22 36 24.8	-1.5
E09A	Wood Farm, Sta	93.10	44	P	P	22 36 26.2	-0.8
BMO	Blue Mountains	93.65	45		P	22 36 28.4	-1.3
BMO				IAmb	IAmb	22 36 42.2	
	comp=Z,41nm,1.9s						
BMO	Blue Mountains	93.65	45	P	P	22 36 28.4	-1.3
BMO				pmax	pmax		
	comp=Z,41nm,2.0s						
BMO				MLR	MLR		
	comp=Z,800nm,20.0s						
NEW	Newport	93.83	42	LR	LR	23 13 34.3	
	comp=Z,543nm,19.7s,baz=270,slow=32						
ARTI	Arti	94.01	326	LR	LR	23 19 49.6	
	comp=Z,691nm,19.7s,baz=94,slow=36						
ARTI	Arti	94.01	326	IAMs_20	IAMs_20	23 17 19.7	
	comp=Z,1μm,21.0s						
ARTI	Arti	94.01	326	P	P	22 36 31.1	+0.2
ARTI						22 40 16.2	
ARTI				S	SKSac	22 47 05.5	+2.4
ARTI				SP	SP	22 48 51.2	-1.5
ARTI				SS	SS	22 53 55.9	-3.0
ARTI				MLR	MLR		
	comp=Z,1μm,22.0s						
PFO	Pinyon Flats O	94.11	57	P	P	22 36 32.5	+0.5
	comp=Z,4.4nm,0.8s,baz=278,slow=4.7,SNR=7.0						
	comp=Z,4.4nm,0.8s						
AKTO	Aktyubinsk	94.24	320	LR	LR	23 19 42.5	
	comp=Z,747nm,21.2s,baz=67,slow=36						
SYO	Syowa Base	94.43	200⇓	eP	P	22 36 32.2	-0.4
SYO	Syowa Base	94.43	200⇑	ePcP	PcP	22 36 33.4	+0.4
PLID	Pearl Lake	94.58	45	IAMs_20	IAMs_20	23 20 59.6	
	comp=Z,891nm,18.0s						
MFID	Camas Ranch	94.70	47	IAMs_20	IAMs_20	23 11 18.0	
	comp=Z,892nm,20.0s						
YKA	Yellowknife Ar	95.02	28	P	P	22 36 35.8	+0.3
	comp=Z,3.6nm,1.0s,baz=276,slow=5.1,SNR=9.8						
YKA				LR	LR	23 16 02.2	
	comp=Z,837nm,20.6s,baz=282,slow=33						
	comp=Z,3.6nm,1.0s						
YKA	Yellowknife Ar	95.02	28	P	P	22 36 35.1	-0.3
YKA	Yellowknife Ar	95.02	28	i P	P	22 36 38.5	+3.1
YKA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ELK	Elko	95.15	50	P	P	22 36 37.0	+0.2
	comp=Z,0.6nm,0.5s,baz=284,slow=5.3,SNR=2.4						
ELK				LR	LR	23 15 21.2	
	comp=Z,379nm,18.9s,baz=273,slow=33						
	comp=Z,0.6nm,0.5s						
ELK	Elko	95.15	50	P	P	22 36 36.3	-0.5
IRM	Iron Mountain	95.21	56	IAMs_20	IAMs_20	23 16 35.0	
	comp=Z,1μm,19.0s						
HLID	Hailey	95.73	47	IAMs_20	IAMs_20	23 12 01.2	
	comp=Z,1μm,19.0s						
DLMT	Dillon	96.98	45	IAMs_20	IAMs_20	23 25 49.1	
	comp=Z,788nm,18.0s						
RPN	Rapa Nui	97.33	118	LR	LR	23 13 50.3	
	comp=Z,435nm,20.2s,baz=268,slow=31						
FXWY	Fox Creek	98.19	47	IAMs_20	IAMs_20	23 14 11.2	
	comp=Z,852nm,20.0s						
LOHW	Long Hollow	98.50	47	IAMs_20	IAMs_20	23 11 10.3	
	comp=Z,857nm,21.0s						
KIRV	Kirov	98.68	329	LR	LR	23 22 35.9	
	comp=Z,412nm,21.7s,baz=87,slow=36						
BELA	Belgrano 2	98.91	179	P	Pdif	22 36 52.5	-0.3
BELA				IAmb	IAmb	22 37 17.4	
	comp=Z,14nm,1.6s						
BW06	Boulder Array	99.32	47	IAMs_20	IAMs_20	23 12 56.1	
	comp=Z,1μm,22.0s						
PDAR	Pinedale Array	99.32	47	P	Pdif	22 36 55.8	+0.2
	comp=Z,1.3nm,0.8s,baz=242,slow=1.6,SNR=8.4						
PDAR				PP	PP	22 41 01.6	+2.7
	comp=Z,0.9nm,1.0s,baz=280,slow=8.6,SNR=4.2						
PDAR				LR	LR	23 13 39.5	
	comp=Z,388nm,21.5s,baz=260,slow=30						
	comp=Z,1.3nm,0.8s						
PDAR	Pinedale Array	99.32	47	P	Pdif	22 36 54.2	-1.5
RES	Resolute Bay	99.43	14	LR	LR	23 19 06.4	
	comp=Z,465nm,21.9s,baz=339,slow=34						
LPIG	La Paz	99.48	66	LR	LR	23 15 12.9	
	comp=Z,706nm,19.6s,baz=252,slow=31						
NVL	N'lazarevskaya	101.31	193	eP	Pdif	22 37 01.6	-2.0
NVL				e		22 41 11.3	
NVL				ePPP	PPP	22 43 20.0	
NVL				eS	SKSac	22 47 35.3	-4.6
NVL				eSS	SS	22 55 39.0	-1.3
NVL				eSSS	SSS	22 59 31.2	
NVL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NVL				MLR	MLR		
	comp=Z,2μm,20.0s						
MAK	Makhachkala	101.91	313	eP	Pdif	22 36 52.8	-14
MAK				i		22 41 22.3	
MAK				ePPP	PPP	22 43 25.3	
MAK				e		22 47 36.6	
MAK				eSS	SS	22 55 48.5	-2.1
MAK				eSSS	SSS	22 59 41.7	
MAK				pmax	pmax		
	comp=Z,1μm,1.7s						
MAK				MLR	MLR		
	comp=Z,443nm,16.0s						
SDCO	Great Sand Dun	102.85	52	IAMs_20	IAMs_20	23 17 40.1	
	comp=Z,1μm,20.0s						
KLMR	Klimovskoe	103.08	332	eP	Pdif	22 37 10.7	-0.9
KLMR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
APA	Apatity	103.19	340	eP	Pdif	22 37 14.3	+2.4
APA				MLR	MLR		
	comp=Z,2μm,23.8s						
SNAA	Sanae	103.26	188	PP	PP	22 41 26.7	-0.5
	comp=Z,4.0nm,1.1s,baz=172,slow=8.9,SNR=5.4						
CBKS	Cedar Bluff	107.20	50	IAMs_20	IAMs_20	23 19 28.0	
	comp=Z,1μm,20.0s						
OK038	West end E0370	108.38	53	IAMs_20	IAMs_20	23 23 07.4	
	comp=Z,948nm,21.0s						
JCT	Junction City	108.38	59	IAMs_20	IAMs_20	23 23 00.2	
	comp=Z,740nm,18.0s						
OK051	E0350 and S346	109.88	52	IAMs_20	IAMs_20	23 17 52.2	
	comp=Z,796nm,22.0s						
SPMN	Marine on St.	110.74	43	IAMs_20	IAMs_20	23 25 14.9	
	comp=Z,870nm,18.0s						
MNK	Minsk	111.22	328	i P	Pdif	22 37 46.9	-1.1
MNK				i P	Pdif	22 37 46.9	-1.1
MNK				i P	Pdif	22 37 46.9	-1.1
	baz=64						
MNK				i PP	PP	22 42 25.0	-1.0
MNK				i PPP	PPP	22 44 47.6	
MNK				i SKS	SKSdf	22 48 59.1	+3.1
MNK				i SS	SS	22 58 00.3	+4.1
MNK				i SSS	SSS	23 02 08.5	
MNK				i LQ	LQ	23 21 50.7	
MNK				i LRM	MLR	23 28 37.3	
	comp=N,673nm,21.9s						
MNK				i LRM	MLR	23 28 46.1	
	comp=Z,636nm,19.4s						
MNK				i LRM	MLR	23 28 50.6	
	comp=E,566nm,21.9s						
MNK	Minsk	111.22	328	i P	Pdif	22 37 46.8	-1.1
MNK				i		22 42 25.0	
MNK				i PPP	PPP	22 44 47.6	
MNK				i		22 48 59.1	
MNK				i SS	SS	22 58 00.3	+4.1
MNK				i SSS	SSS	23 02 08.4	
MNK				MLR	MLR		
	comp=N,673nm,22.0s						
MNK				MLR	MLR		
	comp=Z,636nm,19.0s						
MNK				MLR	MLR		
	comp=E,566nm,22.0s						
NACGM	Naroch	111.61	329	ePKiKP	PKiKP	22 41 46.3	-1.0
	baz=63						
BRTR	Keskin Array B	112.77	312	PP	PP	22 42 39.4	+1.4
	comp=E,1.0nm,0.9s,baz=108,slow=9.3,SNR=3.9						
WVT	Waverly	117.03	51	IAMs_20	IAMs_20	23 25 46.2	
	comp=Z,860nm,21.0s						
STHS	Stebnicka Huta	117.23	325	eP	Pdif	22 38 15.3	+0.4
STHS				e		22 43 10.4	
STHS	Stebnicka Huta	117.23	325	ePDIFF	Pdif	22 38 15.3	+0.4
STHS	Stebnicka Huta	117.23	325	ePKP	PKiKP	22 42 02.7	+4.4
STHS				ePP	PP	22 43 10.4	+1.7
V48A	Smith Brothers	117.92	51	IAMs_20	IAMs_20	23 26 43.0	
	comp=Z,795nm,20.0s						
PSZ	Piszkesteto	118.76	325	IAMs_20	IAMs_20	23 34 06.5	
	comp=Z,694nm,22.0s						
TEIG	Tepich	120.12	69	IAMs_20	IAMs_20	23 29 33.9	
	comp=Z,758nm,20.0s						
152A	Waverly Hall	120.50	54	IAMs_20	IAMs_20	23 33 24.9	
	comp=Z,866nm,20.0s						
MOX	Moxa	121.62	331	eL	L	23 38 19.1	

	comp=Z,626nm,20.2s						
GERES	GERESS Array B	121.68	328	PKP	PKiKP	22 42 07.1	0.0
	comp=Z,0.9nm,0.7s,baz=98,slow=2.7,SNR=8.0						
TGUH	Tegucigalpa,Un	121.78	76	IAMs_20	IAMs_20	23 30 55.3	
	comp=Z,569nm,18.0s						
GRF	Grafenberg Arr	122.43	330	*e*L	L	23 37 51.0	
	comp=Z,704nm,20.7s						
VA01	Torpederas	126.07	136	IAMs_20	IAMs_20	23 26 48.1	
	comp=Z,937nm,22.0s						
SENIN	Lac Senin/Sane	126.60	329	IAMs_20	IAMs_20	23 41 47.3	
	comp=Z,844nm,21.0s						
AC02	Maricunga	131.24	130	IAMs_20	IAMs_20	23 30 15.4	
	comp=Z,547nm,20.0s						
ROSC	El Rosal	135.01	86	PKP	PKiKP	22 42 35.1	0.0
	comp=Z,5.7nm,0.4s,baz=221,slow=9.2,SNR=4.8						
SDDR	Presa de Saban	136.04	66	IAMs_20	IAMs_20	23 35 37.5	
	comp=Z,701nm,19.0s						
RUSC	La Rusia	136.23	85	PKPdf	PKPdf	22 42 35.4	-0.7
LPAZ	La Paz	136.94	118	PKhKP	PKPpre	22 42 34.4	
	comp=Z,3.7nm,0.9s,baz=258,slow=9.3,SNR=9.3						
LPAZ				PKP	PKiKP	22 42 38.4	-0.9
	comp=Z,6.4nm,1.0s,baz=229,slow=9.4,SNR=4.8						
LPAZ	La Paz	136.94	118		PKPdf	22 42 35.2	-2.3
LPAZ	La Paz	136.94	118	PKIKP	PKPdf	22 42 35.2	-2.3
ESDC	Sonseca Array	137.11	331	PP	PP	22 45 22.6	+2.8
	comp=Z,1.4nm,1.0s,baz=358,slow=9.0,SNR=4.5						
SDV	Santo Domingo	138.49	80	PKPdf	PKPdf	22 42 38.7	-1.2
SDV				IAMs_20	IAMs_20	23 32 00.4	
	comp=Z,634nm,21.0s						
CPUP	Villa Florida	139.96	139	PKP	PKiKP	22 42 42.1	-2.3
	comp=Z,0.3nm,0.4s,baz=197,slow=2.9,SNR=3.0						
SJG	San Juan	140.96	65	IAMs_20	IAMs_20	23 54 12.7	
	comp=Z,537nm,20.0s						
HUMP	Col San Antoni	141.22	65		PKPdf	22 42 42.5	-2.0
AQDB	Aquidauana	144.93	133	PKPdf	PKPbc	22 42 49.3	-0.9
PTLB	Pontes e Lacer	145.06	123	PKPbc	PKPbc	22 42 49.0	-1.7
VILB	Vilhena	145.29	118	PKPbc	PKPbc	22 42 50.1	-1.4
TORD	Torodi Ar. Bea	147.88	290	PKPbc	PKPbc	22 42 57.6	-1.5
	comp=Z,17nm,0.9s,baz=54,slow=2.7,SNR=7.6						
TORD	Torodi Ar. Bea	147.88	290		PKPdf	22 42 56.1	0.0
BDFB	Brasilia	153.59	136	PKPbc	PKiKP	22 43 13.5	+0.6
	comp=Z,2.9nm,0.6s,baz=91,slow=3.5,SNR=4.6						
BDFB				PKPab	sPKPbc	22 43 25.9	-1.3
	comp=Z,13nm,1.0s,baz=141,slow=2.0,SNR=4.6						
DBIC	Dimbokro	155.47	279	PKPbc	PKPdf	22 43 17.4	+10
	comp=Z,9.2nm,1.0s,baz=89,slow=2.4,SNR=4.1						
DBIC				PKPab	PKPab	22 43 31.4	-2.0
	comp=Z,8.8nm,1.1s,baz=91,slow=2.3,SNR=3.8						

NEIC ***03*** *22:27:30.2±1.4,4°.5S±0°.1×152°.3E±0°.2,h101^{km}±6^{km}, mb4.2/17,Error ellipse: s-maj=23.9km s-min=15.6km az=117.0*

IDC ***03*** *22:27:47.8±5.4,5°.14S×152°.19E,h259^{km}±42^{km},mb3.8/5, mbtmp4.4/6,Error ellipse: s-maj=52.8km s-min=23.8km az=10.0*

ISC 03 22:27:29.7±0.7**,4°.6S**±0°.1×**152°.2E**±0°.1**,h100**^{km}**,n26,** σ**0^{s}66**/27**,mb4.2**/12**,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	0.38	348		Pn	22 27 45.1	+0.4
RABL				Sn	Sn	22 27 56.2	+0.3
PMG	Port Moresby	6.97	226	P	Pn	22 29 23.9	+15
	22nm,0.8s,baz=59,slow=12,SNR=2.6						
PMG				S	Sn	22 30 26.8	-0.2
	20nm,0.5s,baz=103,slow=21,SNR=3.5						
PMG	Port Moresby	6.97	226	Pn	Pn	22 29 10.3	+1.1
DZM	Mont Dzumac	22.19	143	P	P	22 32 18.5	+0.5
	7.7nm,0.7s,baz=304,slow=7.3,SNR=7.6						
	7.7nm,0.7s						
DZM	Mont Dzumac	22.19	143	P	P	22 32 18.0	0.0
DZM				IAmb	IAmb	22 32 20.2	
	comp=Z,8.9nm,0.8s						
WB0	Warramunga Arr	23.04	228	P	P	22 32 26.2	-0.3
WB0				IAmb	IAmb	22 32 27.3	
	comp=Z,12nm,0.8s						
WRA	Warramunga Arr	23.19	227	P	P	22 32 27.9	-0.1
	comp=Z,5.6nm,0.4s,baz=52,slow=10.0,SNR=17						
	comp=Z,5.6nm,0.4s						
WRA	Warramunga Arr	23.19	227	P	P	22 32 27.8	-0.1
WRA				IAmb	IAmb	22 32 34.5	
	comp=Z,4.9nm,0.8s						
KNRA	Kununurra	25.58	243	P	P	22 32 51.4	+1.7
KNRA				IAmb	IAmb	22 32 52.6	
	comp=Z,8.6nm,0.6s						
AS31	Alice Springs	25.95	221	P	P	22 32 53.2	+0.2
ASAR	Alice Springs	25.95	221	P	P	22 32 53.2	+0.2
	comp=Z,1.0nm,0.4s,baz=54,slow=9.2,SNR=10.0						
	comp=Z,1.0nm,0.4s						
STKA	Stephens Creek	28.95	199	P	P	22 33 19.4	-0.3
	comp=Z,3.1nm,0.7s,baz=14,slow=12,SNR=3.4						
	comp=Z,3.1nm,0.7s						
STKA	Stephens Creek	28.95	199	P	P	22 33 19.6	-0.1
FITZ	Fitzroy Crossi	29.28	241	P	P	22 33 22.5	-0.3
	comp=Z,10nm,1.1s,baz=72,slow=9.6,SNR=1.8						
	comp=Z,10nm,1.1s						
FITZ	Fitzroy Crossi	29.28	241	P	P	22 33 22.1	-0.7
BBOO	Buckleboo	31.91	206	P	P	22 33 45.2	-0.6
BBOO				IAmb	IAmb	22 33 48.6	
	comp=Z,8.4nm,1.1s						
FORT	Forrest	34.62	218	P	P	22 34 08.3	-1.1
MBWA	Marble Bar	35.61	239	P	P	22 34 17.2	-0.8
MORW	Morawa	42.06	231	P	P	22 35 10.8	-1.0
MORW				IAmb	IAmb	22 35 14.4	
	comp=Z,7.4nm,1.1s						
AKUT	Akutan	68.15	25	P	P	22 38 19.1	+0.2
J20K	Nowinta River	79.17	21	P	P	22 39 22.9	-0.3
J20K				IAmb	IAmb	22 39 49.3	
	comp=Z,2.7nm,1.2s						
SML	Sawmill	80.14	25	P	P	22 39 27.8	-0.8
SML				IAmb	IAmb	22 39 30.7	
	comp=Z,9.2nm,1.2s						
D19K	Kuna River	80.53	17	P	P	22 39 30.7	+0.2
D19K				IAmb	IAmb	22 39 58.1	
	comp=Z,3.2nm,1.1s						
M27K	Edge Creek, AK	83.10	25	P	P	22 39 43.5	-0.8
M02C	Callahan	89.17	49		P	22 40 15.0	+0.6
TORD	Torodi Ar. Bea	149.70	288	PKPbc	PKPbc	22 47 08.9	0.0
	comp=Z,1.5nm,0.3s,baz=79,slow=2.3,SNR=2.0						

ISK ***03*** *22:30:29.6,36°.51N×27°.87E,h85^{km},ML2.5/14*

THE ***03*** *22:30:31.8,37°N±4°×2°8E±°,h71^{km}±11^{km},M2.5/10, MLh2.5/10*

AFAD ***03*** *22:30:31.0,36°.53N×27°.97E,h64^{km}±21^{km},ML2.5*

ATH ***03*** *22:30:31.6,36°.52N×27°.82E,h71^{km}±3^{km},ML2.8/5, Manual Solution by S.Liakopoulos First location: 2019/12/03 22:31:59, This location: 2019/12/03 23:32:27 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*

ISC 03 22:30:30.3±1.3**,36°.50N**±0°.03×**27°.90E**±0°.03**,h82**^{km}±6^{km}**, n63,**σ**0^{s}95**/88**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RODB	Rodos	0.26	102	P	Pn	22 30 43.2	+0.6
RODB				S	Sn	22 30 51.1	-0.5
RDI1	Rhodes Town Ha	0.26	101	P	Pn	22 30 43.0	+0.4
RDI1				S	Sn	22 30 51.7	0.0
DATC	Datca-Mugla	0.32	323	Pg	Pn	22 30 42.9	-0.1
DATC				Sg	Sn	22 30 52.6	+0.3
ARG	Arkhangelos	0.34	147	P	Pn	22 30 43.7	+0.6
ARG				S	Sn	22 30 52.8	+0.3
ARG	Arkhangelos	0.34	147	Pg	Pn	22 30 43.4	+0.3
ARG				Sg	Sn	22 30 53.5	+1.1
ARG	Arkhangelos	0.34	147	P	Pn	22 30 43.7	+0.6
ARG				S	Sn	22 30 52.7	+0.3
DAT	Datca	0.35	311	P	Pn	22 30 43.5	+0.2
DAT	Datca	0.35	311	Pg	Pn	22 30 43.1	-0.2
TURN	Turunc	0.39	45	P	Pn	22 30 43.7	+0.2
TURN				S	Sn	22 30 51.7	-1.3
TURN	Turunc	0.39	45	Pg	Pn	22 30 43.6	+0.2
YAZI	Mula-Dat§a-	0.40	297	P	Pn	22 30 43.6	+0.1
RGE1	Gennadi, Rhode	0.47	177	P	Pn	22 30 44.4	+0.4
RGE1				S	Sn	22 30 53.8	-0.3
NISR	Nisiros	0.63	280	P	Pn	22 30 46.2	+0.8
NISR				S	Sn	22 30 54.9	-1.7
BDRM	Kayabasi	0.67	327	P	Pn	22 30 46.1	+0.2
DALY	Dalyan (Mula)	0.68	62	Pg	Pn	22 30 46.3	+0.4
DALY				Sg	Sn	22 30 58.5	+1.0
YER	Yerkesik	0.70	26	P	Pn	22 30 46.8	+0.5
YER				S	Sn	22 30 58.0	-0.1
MLSB	Milas	0.80	353	Pg	Pn	22 30 47.3	0.0
MULA	Mugla, Merkez-	0.82	24	P	Pn	22 30 49.1	+1.5
SABU	Mula-Dalaman	0.92	69	P	Pn	22 30 49.4	+0.9
SABU				S	Sn	22 30 59.9	-2.2
FETY	Fethiye	0.96	82	P	Pn	22 30 41.1	-7.9
IZZE	Mula-Seydike	1.07	93	P	Pn	22 30 50.3	0.0
IZZE				S	Sn	22 31 02.7	-2.6
DDIM	Aydin, Didim	1.09	331	P	Pn	22 30 51.1	+0.5
KARP	Karpathos	1.12	212	P	Pn	22 30 51.1	0.0
KARP				S	Sn	22 31 06.1	-0.4
KARP	Karpathos	1.12	212	Pn	Pn	22 30 51.1	0.0
KARP	Karpathos	1.12	212	P	Pn	22 30 51.1	0.0
KARP				S	Sn	22 31 06.2	-0.4
DNZT	Denizli-Tavas-	1.19	49	P	Pn	22 30 53.0	+1.1
DNZT				S	Sn	22 31 06.8	-1.2
DNZT				*i* IAML		22 31 09.0	
	comp=N,84nm,0.5s						
DNZT				*i* IAML		22 31 09.0	
	comp=E,83nm,0.4s						
CAME	Cameli-Denizli	1.21	68	Pn	Pn	22 30 52.6	+0.4
CAME				Sn	Sn	22 31 09.4	+0.8
TAVA	DENIZLI_Tavas	1.26	40	P	Pn	22 30 54.5	+1.7
CAEL	Denizli, Camel	1.30	61	P	Pn	22 30 54.2	+0.9
CAEL				S	Sn	22 31 10.7	+0.2
CAEL				*i* IAML		22 31 21.0	
	comp=N,106nm,0.5s						
CAEL				*i* IAML		22 31 26.0	
	comp=E,70nm,0.4s						
GCAM	G?zelcaml?	1.31	336	Pn	Pn	22 30 53.7	+0.4
KSS1	Kassos Island	1.34	217	P	Pn	22 30 55.1	+1.5
KSS1				S	Sn	22 31 11.3	+0.1
ESEN	Aydn-Nazilli	1.34	15	P	Pn	22 30 54.6	+0.9
KNIK	Mula-Seydike	1.39	75	P	Pn	22 30 55.3	+1.0
KNIK				S	Sn	22 31 10.6	-1.9
AKAS	Kas	1.40	101	P	Pn	22 30 54.9	+0.3
AKAS				S	Sn	22 31 09.1	-3.7
AYDB	Zeytinkoy-Aydi	1.44	360	Pn	Pn	22 30 55.4	+0.3
DNIZ	Denizli-Tavas-	1.44	39	P	Pn	22 30 56.8	+1.7
SMG	Samos	1.48	325	P	Pn	22 30 55.4	0.0
SMG				S	Sn	22 31 13.6	-0.7
SMG	Samos	1.48	325	P	Pn	22 30 55.2	-0.2
APMY	Acipayam-Deniz	1.48	49	Pn	Pn	22 30 55.9	+0.3
NAZL	Nazilli-Aydin	1.49	12	Pn	Pn	22 30 56.3	+0.6
GOLH	Golhisar	1.52	61	P	Pn	22 30 57.6	+1.5
KIRA	zmir-Kiraz	1.74	13	P	Pn	22 30 59.5	+0.6
ODEM	Odemis-Izmir	1.78	4	Pn	Pn	22 30 59.8	+0.4
INCE	Denizli-Bozkur	1.80	47	P	Pn	22 31 00.6	+0.9
ZKR	Zakros	1.95	225	P	Pn	22 31 02.5	+0.9
THR8	Santorini-Mono	1.96	268	P	Pn	22 31 02.0	+0.3
THERA	Ancient Thera,	1.96	267	P	Pn	22 31 02.1	+0.3
THERA				S	Sn	22 31 26.3	+0.6
THERA	Ancient Thera,	1.96	267	P	Pn	22 31 02.1	+0.3
AKUM	Antalya-Kumluc	1.98	94	P	Pn	22 31 02.6	+0.6
APE	Apeiranthos	1.99	287	P	Pn	22 31 02.9	+0.7
APE	Apeiranthos	1.99	287	P	Pn	22 31 02.8	+0.7
BLCB	Balcova	2.00	340	P	Pn	22 31 02.3	0.0
BLCB				S	Sn	22 31 25.7	-1.0
THR3	Thira Island,	2.02	268	P	Pn	22 31 03.2	+0.7
SNT5	Nea Kammeni, S	2.02	268	P	Pn	22 31 02.9	+0.4
THR6	Thira Island,	2.02	267	P	Pn	22 31 03.4	+0.8
KORT	Korkueli	2.03	75	P	Pn	22 31 04.5	+1.7
THR9	Santorini-Faro	2.06	267	P	Pn	22 31 03.8	+0.8
NPS	Neapolis	2.23	237	P	Pn	22 31 05.4	0.0
NPS				S	Sn	22 31 31.2	-1.0
NPS	Neapolis	2.23	237	P	Pn	22 31 05.2	-0.2
PASA	Karahalli, USA	2.23	34	P	Pn	22 31 06.2	+0.7
IDI	Anoyia	2.73	245	P	Pn	22 31 12.0	-0.1
IDI				S	Sn	22 31 43.5	-0.7
VAM	Vamos	3.20	251	P	Pn	22 31 18.6	+0.3
IMMV	Iera Moni Meta	3.34	253	P	Pn	22 31 21.8	+1.5

NNC 03 23:11:57.2±4.0**,43°.91N**×**88°.99E,h0**^{km}**,mb3.6,mpv3.2, 4C-5D,Error ellipse: s-maj=28.4km s-min=24.8km az=94.0,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	Makanchi Array	5.53	304	⇑Pn	Pn	23 13 21.8	+1.0
	0.1nm,0.2s,baz=116,slow=14						
MK31				⇓Sn	Sn	23 14 26.8	+1.7
	1.2nm,0.4s						
MK31				⇑Lg	Lg	23 14 55.1	
	1.7nm,0.5s,baz=116,slow=27						
MAKZ	Makanchi	5.73	303	⇑Pn	Pn	23 13 24.0	+0.5
	8.3nm,1.4s						
MAKZ				⇓Sn	Sn	23 14 30.2	+0.3
	5.4nm,0.9s						
MAKZ				⇑Lg	Lg	23 15 01.3	
	6.6nm,0.8s						
PDGK	Podgornoye	6.92	268	⇓Pn	Pn	23 13 39.3	-0.6
	4.3nm,1.1s						
PDGK				⇓Sn	Sn	23 14 59.0	-0.4
	3.0nm,0.7s						
PDGK				⇓Lg	Lg	23 15 38.3	
	3.3nm,0.8s						

HEL ***03*** *23:16:15.0±0.6,67°.20N×20°.57E,h0^{km},ML0.9,Suspected explosion*

UPP 03 23:16:14.9±0.1**,67°.15N**×**20°.61E,h0**^{km}**,ML2.0, Suspected explosion,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	Dundret	0.04	206	P	Pg	23 16 14.9	-0.6
DUNU				S	Sg	23 16 15.8	-0.2
DUNU	Dundret	0.04	206	P	Pg	23 16 15.8	+0.3
	baz=13						
DUNU				S	Sg	23 16 16.8	+0.7
MASU	Masugnsbyn	0.62	60	P	Pg	23 16 25.5	-1.2
MASU	Masugnsbyn	0.62	60	P	Pg	23 16 26.6	-0.1
MASU				S	Sg	23 16 35.2	+0.4
RATU	Laukkuluspa	0.78	330	P	Pg	23 16 28.4	-1.4
RATU				S	Sg	23 16 39.0	-0.9
RATU	Laukkuluspa	0.78	330	P	Pg	23 16 29.4	-0.4
KUA	Kurravaara	0.81	353	P	Pg	23 16 29.0	-1.4
	baz=198						
KUA				S	Sg	23 16 40.1	-0.8
KUA	Kurravaara	0.81	353	P	Pg	23 16 30.1	-0.3
SALU	Saltoluokta	0.85	287	P	Pg	23 16 29.8	-1.4
SALU	Saltoluokta	0.85	287	P	Pg	23 16 30.9	-0.2
ERTU	Ertsjaerv	0.87	133	P	Pg	23 16 30.2	-1.3
ERTU	Ertsjaerv	0.87	133	P	Pg	23 16 31.4	-0.1
ERTU	Ertsjaerv	0.87	133	PG	Pg	23 16 30.2	-1.3
NIKU	Nikkaluokta	0.94	321	P	Pg	23 16 31.4	-1.4
PAJU	Pajala	0.99	96	P	Pg	23 16 32.2	-1.6
PAJU	Pajala	0.99	96	P	Pg	23 16 33.5	-0.3
HARU	Harads	1.01	171	P	Pg	23 16 32.8	-1.4
LANU	Lannavaara	1.04	30	P	Pg	23 16 32.9	-2.0
LANU	Lannavaara	1.04	30	PG	Pg	23 16 32.6	-2.2
KOVU	Salmi	1.09	351	P	Pg	23 16 34.1	-1.6
	baz=183						
KLF	Kolari	1.31	85	PG	Pg	23 16 38.4	-1.5
KLF				MSG		23 16 54.9	
	comp=Z,0.5nm,0.2s						
SJUU	Sjulsmark	1.70	166	P	Pn	23 16 45.2	-0.5
KALU	Kalix	1.70	138	PG	Pb	23 16 46.8	-0.3
KALU				SN	Sg	23 17 10.2	+0.6
HEF	Hetta	1.71	41	PG	Pn	23 16 45.1	-0.9
HEF				MSG		23 17 05.3	
	comp=Z,0.5nm,0.2s						
HEF				SN	Sb	23 17 09.1	-0.2
TOF	Tornio	1.83	124	PG	Pb	23 16 48.8	-0.4
TOF				MSG		23 17 11.0	
	comp=Z,0.4nm,0.2s						
TOF				SG	Sb	23 17 13.0	+0.3
KIF	Kilpisjarvi	1.86	2	PG	Pn	23 16 48.1	+0.2
	baz=178						
KIF				MSG		23 17 10.2	
	comp=Z,0.9nm,0.2s						
KIF				SG	Sb	23 17 13.9	+0.4
KTK1	Kautokeino	2.11	27	SG	Sb	23 17 21.1	+0.4
RNF	Rovaniemi	2.20	102	PB	Pn	23 16 53.9	+1.3
RNF				SG	Sb	23 17 23.9	+0.6
RAJF	Raja-Jooseppi	3.21	62	SG	Sg	23 17 56.0	-1.8

SKHL ***03*** *23:25:05.7±0.4,43°.10N×148°.30E,h23^{km}±9^{km},mb6.3/6, mbv6.0/3,ms5.4/6*

MOS ***03*** *23:25:05.7±1.1,43°.36N×147°.98E,h13^{km},mb5.6/59, MS5.5/25,Error ellipse: s-maj=6.3km s-min=4.0km az=124.6*

MOS Felt (III-IV) at Malokuril'skoye.

IDC ***03*** *23:25:05.3±0.5,43°.38N×147°.93E,h0^{km},mb4.9/31, mbtmp4.9/39,ML4.0/7,MS5.0/72,Error ellipse: s-maj=12.6km s-min=10.8km az=137.0*

BJI ***03*** *23:25:05.1,43°.32N×147°.91E,h11^{km},mB5.6/52,mb5.1/80, Ms5.4/85,Ms7 5.3/83*

JMA ***03*** *23:25:06.3±0.5,43°N±1°×14°8E±°,h0^{km},MD5.3/35, MV5.5/35,E OFF HOKKAIDO*

NIED ***03*** *23:25:06.3,43°.23N×147°.81E,h0^{km},MW5.2,Moment Tensor Solution. s2 Moment tensor: Scale 10^{16}Nm; M_{rr}3.20; $M_{\theta\theta}$1.68; $M_{\phi\phi}$-4.88; $M_{r\theta}$3.27; $M_{\theta\phi}$-6.38; $M_{\phi r}$3.78; Fault plane solution: $M_0$8.33000×10^{16} NP1: ϕ_s165.00000°,δ52.00000°,λ10.00000°. NP2:ϕ_s69.00000°, δ82.00000°,λ142.00000°.*

NEIC ***03*** *23:25:06.9±1.7,43°.33N±0°.08×147°.9E±0°.1,h9^{km}±3^{km}, mb5.2/437,Mww5.2/17 Error ellipse: s-maj=13.1km s-min=9.7km az=130.0*

NEIC ***03*** *23:25:07.3,43°.35N×148°.76E,h14^{km},Moment Tensor Solution. Duration: 1^{s}1.0 Moment tensor: Scale 10^{16} Nm; M_{rr}5.28; $M_{\theta\theta}$-3.73; $M_{\phi\phi}$-1.55; $M_{r\theta}$1.58; $M_{\theta\phi}$-3.72; $M_{\phi r}$5.06; Fault plane solution: $M_0$8.00000×10^{16} NP1: ϕ_s256.57000°,δ31.49000°,λ132.10000°. NP2: ϕ_s29.91000°,δ67.20000°,λ67.67000°. Principal axes: T 7.9800, Plg61.0000°, Azm266.0000°; N 0.0424, Plg20.0000°, Azm39.0000°; P -8.0224, Plg19.0000°, Azm136.0000°;*

NEIC ***03*** *23:25:07.3,43°.35N×147°.94E,h14^{km}*

GCMT ***03*** *23:25:10.9±0.2,43°.29N±0°.01×148°.22E±0°.01,h17^{km}, MW5.3/129,Moment Tensor Solution. s82,c129; s129,c211; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.76±.02; $M_{\theta\theta}$-0.29±.01; $M_{\phi\phi}$-0.46±.01; $M_{r\theta}$0.32±.04; $M_{\theta\phi}$-0.39±.01; $M_{\phi r}$0.60±.04; Best double couple: $M_0$1.02600×10^{17} NP1:ϕ_s226.00000°,δ25.00000°, λ103.00000°. NP2:ϕ_s32.00000°,δ66.00000°,λ84.00000°. Principal axes: T 1.0210, Plg69.0000°, Azm290.0000°; N 0.0090, Plg5.0000°, Azm34.0000°; P -1.0310, Plg21.0000°, Azm126.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***03*** *23:25:14.1,43°.24N×146°.44E,h33^{km},mb5.3,Ms5.4*

ISC 03 23:25:07.2±0.4**,43°.31N**±0°.03×**148°.06E**±0°.03**,h16**^{km}±1^{km}**, h15**^{km}**:pP-P,n1231,**σ**1^{s}32**/1016**,mb5.2**/430**,MS5.3**/118**, 85C-69D,East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	Shikotan	1.06	303	*e*P	Pg	23 25 34.8	+7.1
SHO				AMB	AMB	23 25 39.1	
	31μm,0.6s						
SHO				*e*S	Sn	23 25 53.9	+12
SHO				A	A	23 25 56.4	
	82μm,0.6s						
SHO				A	A	23 25 56.4	
	160μm,0.6s						
NEM2	Nemuro 2	1.69	273	P	Pn	23 25 34.5	-1.6
NEM2				*e*S	Sn	23 25 55.0	-2.4
NEM2	Nemuro 2	1.69	273	A	A	23 25 34.5	
	comp=N,59nm,3.4s,comp=E,95nm,3.9s						
NMR	Nemuro--Hokkai	1.70	273	⇑*i*PN	Pn	23 25 34.7	-1.6
NMR	Nemuro--Hokkai	1.70	273	*e*P	Pn	23 25 35.1	-1.2
NMR				*e*S	Sn	23 25 57.1	-0.6
YUK	Yuzh-Kuril'sk	1.75	295	*c i*PN	Pn	23 25 36.2	-0.8
YUK				pmax	pmax		
	comp=Z,7μm,1.3s						
YUK				pmax	pmax		
	comp=Z,5μm,0.3s						
YUK				pmax	pmax		
	comp=E,853nm,0.2s						
YUK				pmax	pmax		
	comp=N,949nm,0.3s						
YUK	Yuzh-Kuril'sk	1.75	295	*e*P	Pn	23 25 36.6	-0.4
YUK				AMB	AMB	23 25 40.6	
	comp=N,8μm,0.4s						
YUK				*e*S	Sb	23 26 00.1	-0.7
YUK				A	A	23 26 05.8	
	comp=N,66μm,0.6s						
YUK				A	A	23 26 05.8	
	comp=N,58μm,0.6s						
YUK				AMS	AMS	23 27 09.6	
	comp=N,38μm,8.0s						
YUK				AMS	AMS	23 27 09.6	
	comp=N,54μm,8.0s						
GLVR	Golovnino	1.90	284	*e*PN	Pn	23 25 39.0	0.0
GLVR				pmax	pmax		
	comp=Z,3μm,0.5s						
GLVR				pmax	pmax		
	comp=N,669nm,0.3s						
GLVR				pmax	pmax		
	comp=E,563nm,0.3s						
GLVR	Golovnino	1.90	284	*e*P	Pn	23 25 39.0	0.0
GLVR				AMB	AMB	23 25 43.7	
	comp=E,3μm,0.3s						
KUR	Kuril'sk	1.93	356	PN	Pn	23 25 38.7	-0.8
KUR				S	Sn	23 26 02.8	-0.6
KUR				pmax	pmax		
	comp=Z,2μm,0.3s						
KUR				pmax	pmax		
	comp=N,498nm,0.4s						
KUR				pmax	pmax		
	comp=E,753nm,0.3s						
KUR				smax	smax		
	comp=N,6μm,0.6s						
KUR				smax	smax		
	comp=E,9μm,0.6s						
KUR	Kuril'sk	1.93	356	*e*P	Pn	23 25 39.0	-0.5
KUR				AMB	AMB	23 25 44.9	
	comp=E,2μm,0.3s						
KUR				*e*S	Sn	23 26 03.7	+0.3
KUR				A	A	23 26 11.4	
	comp=E,10μm,0.5s						
KUR				A	A	23 26 11.4	
	comp=E,15μm,0.5s						
KUR				AMS	AMS	23 26 40.0	
	comp=E,118μm,11.0s						
KUR				AMS	AMS	23 26 40.0	
	comp=E,98μm,11.0s						
JKHN	Kushirohamanak	2.13	265	P	Pn	23 25 41.9	-0.3
JKHN	Kushirohamanak	2.13	265	A	A	23 25 41.9	
	comp=N,78nm,2.9s,comp=E,95nm,7.1s						
RUSJ	Misakicho	2.19	292	⇓*i*PN	Pn	23 25 43.7	+0.7
JRA	Rausu	2.23	288	P	Pn	23 25 43.2	-0.2
JRA	Rausu	2.23	288	A	A	23 25 43.2	
	comp=N,49nm,5.6s,comp=E,68nm,10.4s						
JNSB	Nemuroshibetsu	2.27	283	P	Pn	23 25 43.3	-0.8
JNSB	Nemuroshibetsu	2.27	283	A	A	23 25 43.3	
	comp=N,84nm,3.6s,comp=E,85nm,9.7s						
AKK	Akkeshi	2.37	264	*e*P	Pn	23 25 44.7	-0.8
JNK	Nakash	2.45	278	P	Pn	23 25 45.6	-1.0
JNK	Nakash	2.45	278	A	A	23 25 45.6	
	comp=N,29nm,3.0s,comp=E,43nm,10.0s						
JAK	Akkeshi	2.48	264	P	Pn	23 25 46.2	-0.8
JAK				*e*S	Sn	23 26 14.9	-2.0
JAK	Akkeshi	2.48	264	A	A	23 25 46.2	
	comp=N,84nm,3.0s,comp=E,62nm,2.6s						
JTKR	Abashiri--Toko	3.09	284	P	Pn	23 25 55.8	+0.5
JTKR	Abashiri--Toko	3.09	284	A	A	23 25 55.8	
	comp=N,20nm,3.0s,comp=E,14nm,4.6s						
JOB	Onbets	3.12	264	P	Pn	23 25 55.1	-0.6
JOB	Onbets	3.12	264	A	A	23 25 55.1	
	comp=N,40nm,3.9s,comp=E,43nm,8.7s						
JAR	Ashorobuto	3.13	271	*e*P	Pn	23 25 55.2	-0.8
JAR	Ashorobuto	3.13	271	A	A	23 25 55.2	
	comp=N,27nm,5.2s,comp=E,18nm,2.6s						
JMP	Maruseppu	3.48	283	A	A	23 26 01.1	
	comp=N,16nm,7.7s,comp=E,14nm,12.3s						
JCH	Churui	3.52	260	P	Pn	23 26 01.0	-0.2
JCH				*e*S	Sn	23 26 40.5	-2.0
JCH	Churui	3.52	260	A	A	23 26 01.0	
	comp=N,18nm,3.6s,comp=E,18nm,10.9s						
JTHR	Tokachihiroo	3.65	255	A	A	23 26 02.8	
	comp=N,22nm,5.3s,comp=E,25nm,3.7s						
JEM	Erimo	3.84	252	P	Pn	23 26 06.6	+1.0
JEM	Erimo	3.84	252	A	A	23 26 06.6	
	comp=N,27nm,16.5s,comp=E,36nm,4.3s						
ERM	Erimo	3.84	252		Pn	23 26 06.0	+0.4
ERM	Erimo	3.84	252	PN	Pn	23 26 06.0	+0.4
JKK2	Kamakawa 2	3.90	280	*e*P	Pn	23 26 08.7	+2.2

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JNBK  Urakawa-nobuka   4.04 257   P       Pn      23 26 08.4   0.0
JNBK  Urakawa-nobuka   4.04 257   A       A       23 26 08.4
      comp=N,17nm,3.4s,comp=E,22nm,2.8s
JKA   Kamikawa-asahi   4.04 283   Pn      Pn      23 26 09.2 +0.7
ASAJ  Asahikawa        4.04 283   Pn      Pn      23 26 09.9 +1.4
      comp=E,17nm,0.3s,baz=88,slow=8.9,SNR=24
ASAJ                              LR      LR      23 26 59.0
      comp=E,8µm,19.6s,baz=182,slow=29
ASAJ  Asahikawa        4.04 283   PN      Pn      23 26 09.2 +0.7
ASAJ  Asahikawa        4.04 283   A       A       23 26 09.0
      comp=N,14nm,3.6s,comp=E,14nm,7.8s
JBT2  Biratori 2       4.21 265   A       A       23 26 10.9
      comp=N,10.0nm,15.0s,comp=E,10.0nm,3.2s
JSHD  Hidakashinhida   4.21 260   A       A       23 26 10.8
      comp=N,31nm,4.0s,comp=E,24nm,5.9s
JAB   Ashibetsu        4.26 275   A       A       23 26 11.8
      comp=N,21nm,3.9s,comp=E,18nm,10.6s
JIAM  Iburiatsuma      4.56 263   A       A       23 26 15.8
      comp=N,30nm,4.6s,comp=E,23nm,4.0s
JSS   Shosan           4.62 286   A       A       23 26 17.3
      comp=N,23nm,5.3s,comp=E,26nm,5.0s
JHR   Hokuryu          4.63 278   A       A       23 26 17.1
      comp=N,21nm,6.5s,comp=E,18nm,3.3s
JISS  Ishikarishitsu   4.85 272   A       A       23 26 20.1
      comp=N,25nm,4.3s,comp=E,24nm,10.3s
JWK2  Keihoku          4.86 297   eP      Pn      23 26 22.3 +2.7
JWK2  Keihoku          4.86 297   A       A       23 26 22.3
      comp=N,17nm,4.7s,comp=E,17nm,5.5s
JEW   Eniwo            4.86 267   P       Pn      23 26 20.5 +0.7
JEW   Eniwo            4.86 267   A       A       23 26 20.5
      comp=N,24nm,3.7s,comp=E,16nm,3.0s
YSS   Yuzhno-Sakhali   5.23 316   Pn      Pn      23 26 25.5 +0.7
YSS   Yuzhno-Sakhali   5.23 316   ePN     Pn      23 26 25.7 +0.9
YSS                               pmax    pmax
      comp=Z,2µm,6.8s
YSS                               pmax    pmax
      comp=Z,390nm,0.6s
YSS                               MLR     MLR
      comp=Z,24µm,16.0s
YSS                               MLR     MLR
      comp=N,26µm,15.0s
YSS                               MLR     MLR
      comp=E,14µm,15.0s
YSS   Yuzhno-Sakhali   5.23 316   eP      Pn      23 26 26.6 +1.8
YSS                               AMB     AMB     23 26 36.0
      comp=E,2µm,6.8s
YSS                               AMB     AMB     23 26 36.4
      comp=E,3µm,0.9s
YSS                               eS      Sn      23 27 27.5 +2.7
YSS                               AMS     AMS     23 27 50.0
      comp=E,26µm,15.0s
YSS                               AMS     AMS     23 27 50.0
      comp=E,14µm,15.0s
JKB   Kayabe           5.38 257   A       A       23 26 27.3
      comp=N,9.0nm,2.8s,comp=E,10.0nm,5.1s
JAHD  Aomorihigashid   5.39 250   A       A       23 26 27.3
      comp=N,13nm,2.8s,comp=E,9.0nm,5.8s
JTM   Tenmabayashi     5.78 247   Pn      Pn      23 26 30.8  -1.6
JTM   Tenmabayashi     5.78 247   A       A       23 26 32.9
      comp=N,12nm,2.6s,comp=E,7.0nm,6.7s
JHHS  Hirosakihyakuz   6.32 248   A       A       23 26 40.4
      comp=N,36nm,5.4s,comp=E,25nm,3.9s
JOM   Ohasama          6.37 235   A       A       23 26 41.1
      comp=N,5.0nm,3.6s,comp=E,4.0nm,1.6s
JSZI  Iwateshizukuis   6.41 239   A       A       23 26 41.7
      comp=N,12nm,3.8s,comp=E,11nm,2.9s
UGL   Uglegorsk        7.11 326   eP      Pn      23 26 53.8 +3.2
UGL                               AMB     AMB     23 27 09.2
      comp=E,140nm,0.6s
JOFO  Osakifurukawao   7.16 231   A       A       23 26 52.3
      comp=N,29nm,2.6s,comp=E,24nm,2.7s
JYA   Atsumi           7.88 236   A       A       23 27 02.2
      comp=N,5.0nm,4.9s,comp=E,6.0nm,3.6s
TYV   Tymovskoe        8.41 336   ePN     Pn      23 27 17.7 +9.3
TYV                               eS      SnSn    23 28 55.8 +1.3
TYV                               pmax    pmax
      comp=Z,52nm,0.9s
TYV                               pmax    pmax
      comp=Z,2µm,4.6s
TYV                               smax    smax
      comp=N,55nm,1.0s
TYV                               smax    smax
      comp=E,101nm,1.0s
TYV                               smax    smax
      comp=N,5µm,4.9s
TYV                               smax    smax
      comp=E,14µm,4.9s
TYV                               MLR     MLR
      comp=E,36µm,16.0s
TYV                               MLR     MLR
      comp=Z,23µm,16.0s
TYV   Tymovskoe        8.41 336   eP      Pn      23 27 11.2 +2.8
TYV                               AMB     AMB     23 27 20.7
      comp=Z,2µm,4.6s
TYV                               eS      Sn      23 28 45.5 +2.6
TYV                               AMS     AMS     23 30 50.5
      comp=Z,36µm,15.0s
TEY   Ternei           8.42 286⇑ ePN     Pn      23 27 12.9 +4.4
TEY                               pmax    pmax
      comp=E,10.0nm,1.3s
TEY                               pmax    pmax
      comp=N,10.0nm,1.0s
TEY                               pmax    pmax
      comp=Z,20nm,1.3s
TEY                               MLR     MLR
      comp=E,400nm,15.0s
TEY                               MLR     MLR
      comp=N,400nm,12.0s
TEY                               MLR     MLR
      comp=Z,800nm,16.0s
JSD   Sado             9.11 238   Pn      Pn      23 27 17.2  -0.8
SKR   Severo-Kuril's   9.20  34   ePN     Pn      23 27 17.7  -1.5
SKR                               pmax    pmax
      comp=Z,4µm,4.8s
SKR                               MLR     MLR
      comp=Z,19µm,18.0s
SKR   Severo-Kuril's   9.20  34   eP      Pn      23 27 19.2   0.0
SKR                               AMB     AMB     23 27 26.7
      comp=Z,4µm,4.8s
SKR                               eS      Sn      23 28 59.8  -2.6
SKR                               AMS     AMS     23 31 22.0
      comp=Z,19µm,18.0s
SKR                               AMS     AMS     23 31 22.0
      comp=Z,14µm,18.0s
PAU   Pauzhetka       10.09  33   eP      Pn      23 27 32.2 +0.9
PAU                               AMB     AMB     23 27 49.3
      comp=Z,1µm,0.6s
PAU                               eS      Sn      23 29 21.1  -3.0
PAU                               A       A       23 29 23.9
      comp=Z,2µm,0.3s
PAU                               A       A       23 29 23.9
      comp=Z,2µm,0.3s
MAJO  Matsushiro      10.14 232   Pn      Pn      23 27 30.6  -1.6
MAJO  Matsushiro      10.14 232   i PN    Pn      23 27 31.5  -0.7
MJAR  Matsushiro Arr  10.14 232   Pn      Pn      23 27 30.7  -1.4
      comp=Z,0.4nm,0.3s,baz=27,slow=14,SNR=14
MJAR                              Sn      Sn      23 29 26.6 +1.1
      comp=Z,0.4nm,0.3s,baz=75,slow=24,SNR=1.8
MJAR                              LR      LR      23 32 01.1
      comp=Z,6µm,18.3s,baz=56,slow=41
      comp=Z,5.7nm,0.6s
MJAR  Matsushiro Arr  10.14 232           Pn      23 27 30.5  -1.7
MJB9  Matsu-Tunnel    10.14 232   Pn      Pn      23 27 31.1  -1.0
OKH   Okha            10.80 343 dePN     Pn      23 27 30.8   -10
OKH                               pmax    pmax
      comp=Z,600nm,6.4s
OKH                               MLR     MLR
      comp=E,21µm,14.0s
OKH                               MLR     MLR
      comp=N,5µm,15.0s
OKH                               MLR     MLR
      comp=Z,10µm,14.0s
OKH   Okha            10.80 343   eP      Pn      23 27 44.5 +3.4
GRNR  Gornyy          10.89 317⇓ iPN     Pn      23 27 45.5 +3.1
GRNR                              pmax    pmax
      comp=Z,20nm,1.3s
GRNR                              MLR     MLR
      comp=N,6µm,16.0s
GRNR                              MLR     MLR
      comp=E,5µm,16.0s
GRNR                              MLR     MLR
      comp=Z,1µm,16.0s
JGF   Kuroka          11.29 231   Pn      Pn      23 27 46.8  -1.2
USRK  Ussuriysk Ar.   11.66 280   Pn      Pn      23 27 52.7  -0.3
      comp=Z,1.5nm,0.3s,baz=88,slow=13,SNR=17
      comp=Z,42nm,1.0s
INU   Inuyama         11.66 231   Pn      Pn      23 27 51.1  -1.9
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PEA0B Petropavlovsk-  11.72  30   Pn      Pn      23 27 53.7   0.0
PEA0B Petropavlovsk-  11.72  30   i PN    Pn      23 27 53.2  -0.5
PETK  Petropavlovsk-  11.72  30   Pn      Pn      23 27 53.5  -0.2
      comp=Z,1.3nm,0.3s,baz=196,slow=11,SNR=8.7
      comp=Z,16nm,0.8s
PETK  Petropavlovsk-  11.72  30   Pn      Pn      23 27 53.6  -0.1
PETK  Petropavlovsk-  11.72  30   PN      Pn      23 27 53.6  -0.1
VLA   Vladivostok     11.81 275   i PN    Pn      23 27 56.1 +1.2
PET   Petropavlovsk   12.01  32   ePN     P       23 28 18.5 +7.9
PET                               eS      Sn      23 30 27.5  +16
PET                               MLR     MLR
      comp=Z,12µm,20.0s
PET                               MLR     MLR
      comp=Z,18µm,13.0s
JHJ   Hachijo jima 2  12.07 215   Pn      Pn      23 27 59.0 +0.5
      comp=Z,12nm,0.3s,baz=72,slow=20,SNR=2.2
      comp=Z,292nm,1.0s
MSHR  Mys Shultsa     12.41 272   i PN    Pn      23 28 02.7  -0.5
PSTR  Posyet          12.66 273   i PN    Pn      23 28 07.2 +0.6
PSTR  Posyet          12.66 273   eP      Pn      23 28 07.2 +0.6
MDJ   Mudanjiang      13.37 282   Pn      Pn      23 28 15.3  -1.0
MDJ   Mudanjiang      13.37 282   P       Pn      23 28 16.0  -0.3
MDJ                               S       Sn      23 30 42.6  -2.0
MDJ                               pmax    pmax
      comp=Z,23nm,1.5s
MDJ                               LR      LR
      comp=Z,7µm,14.4s
MDJ                               LR      LR
      comp=Z,12µm,16.4s
MDJ                               LR      LR
      comp=Z,17µm,16.9s
BNX   BinXian         14.93 287   ⇑P      Pn      23 28 35.9  -1.7
BNX                               pmax    pmax
      comp=Z,25nm,0.9s
HEH   HeiHe           15.73 303   eP      Pn      23 28 48.6 +0.6
HEH                               pmax    pmax
      comp=Z,26nm,1.2s
HEH                               pmax    pmax
      comp=Z,4µm,7.1s
HEH                               LR      LR
      comp=Z,5µm,18.6s
HEH                               LR      LR
      comp=Z,19µm,15.0s
HEH                               LR      LR
      comp=Z,25µm,14.6s
MA2   Magadan         16.38   5   Pn      Pn      23 28 57.2 +0.9
      comp=Z,53nm,0.7s,baz=174,slow=8.7,SNR=12
MA2                               LR      LR      23 35 30.5
      comp=Z,4µm,18.2s,baz=198,slow=38
MA2   Magadan         16.38   5   Pn      Pn      23 28 57.4 +1.1
MA2   Magadan         16.38   5ceP     Pn      23 28 56.6 +0.3
MA2                               pmax    pmax
      comp=Z,57nm,0.7s
MA2   Magadan         16.38   5   eP      Pn      23 28 56.6 +0.3
MA2   Magadan         16.38   5   P       Pn      23 28 57.2 +0.9
      comp=Z,109nm,1.5s
CN2   Changchun       16.40 280   P       Pn      23 28 53.1  -3.5
CN2                               pmax    pmax
      comp=Z,20nm,0.8s
CN2                               LR      LR
      comp=Z,7µm,16.0s
CN2                               LR      LR
      comp=Z,9µm,16.0s
CN2                               LR      LR
      comp=Z,12µm,16.0s
KSRS  Korea Array     16.41 256   Pn      Pn      23 28 55.5  -1.2
      comp=Z,0.3nm,0.3s,baz=60,slow=13,SNR=10
      comp=Z,6.4nm,0.9s
JCJ   Chichijima      16.86 198   LR      LR      23 34 40.0
      comp=Z,1µm,20.2s,baz=337,slow=34
JNU   Nakatsue        16.87 239   Pn      Pn      23 29 03.5 +0.7
      comp=Z,0.5nm,0.3s,baz=36,slow=10,SNR=9.6
JNU                               LR      LR      23 36 11.7
      comp=Z,4µm,19.2s,baz=46,slow=40
      comp=Z,44nm,1.0s
JNU   Nakatsue        16.87 239   P       P       23 29 06.0 +1.2
ZEA   Zeya            17.22 315   eP      P       23 29 08.2  -0.3
ZEA                               pmax    pmax
      comp=E,30nm,1.2s
ZEA                               pmax    pmax
      comp=N,30nm,1.0s
ZEA                               pmax    pmax
      comp=Z,80nm,1.0s
ZEA                               MLR     MLR
      comp=E,4µm,17.0s
ZEA                               MLR     MLR
      comp=N,4µm,15.0s
ZEA                               MLR     MLR
      comp=Z,8µm,17.0s
ZEA   Zeya            17.22 315   eP      Pn      23 29 06.6  -0.4
TJN   Taejon          17.31 253           Pn      23 29 07.7  -0.5
TJN                               IAmb    IAmb    23 29 13.1
      comp=Z,398nm,1.4s
TJN   Taejon          17.31 253   i P     Pn      23 29 08.1  -0.1
SNY   Shenyang        18.08 274   ⇑P      Pn      23 29 17.6  -0.1
SNY                               pmax    pmax
      comp=Z,34nm,1.1s
SNY                               pmax    pmax
      comp=Z,1µm,6.4s
SNY                               LR      LR
      comp=Z,2µm,12.5s
SNY                               LR      LR
      comp=Z,4µm,17.0s
SNY                               LR      LR
      comp=Z,6µm,15.5s
SEY   Seymchan        19.82   6   P       P       23 29 36.2  -0.7
      comp=Z,0.8nm,0.3s,baz=176,slow=8.3,SNR=13
SEY                               LR      LR      23 37 42.1
      comp=Z,4µm,18.2s,baz=182,slow=38
      comp=Z,62nm,1.2s
SEY   Seymchan        19.82   6ceP     P       23 29 35.9  -1.1
SEY                               pmax    pmax
      comp=Z,25nm,0.7s
DL2   Dalian          20.36 267   P       P       23 29 42.6  -0.4
DL2                               pmax    pmax
      comp=Z,180nm,1.1s
DL2                               pmax    pmax
      comp=Z,1µm,6.5s
DL2                               LR      LR
      comp=Z,3µm,15.3s
DL2                               LR      LR
      comp=Z,4µm,15.4s
DL2                               LR      LR
      comp=Z,6µm,15.9s
HIA   Hailar          20.39 297   P       P       23 29 40.2  -3.0
HIA   Hailar          20.39 297   P       P       23 29 40.2  -3.0
HIA                               pmax    pmax
      comp=Z,30nm,0.7s
HILR  Hailar Array B  20.41 298   P       P       23 29 40.7  -2.9
      comp=Z,43nm,0.6s,baz=99,slow=10,SNR=50
HILR                              LR      LR      23 38 37.1
      comp=Z,8µm,18.7s,baz=90,slow=40
      comp=Z,43nm,0.6s
YAK   Yakutsk         21.67 336   P       P       23 29 54.3  -2.6
      comp=Z,222nm,0.7s,baz=121,slow=1.6,SNR=25
YAK                               LR      LR      23 38 56.0
      comp=Z,6µm,18.5s,baz=134,slow=38
      comp=Z,222nm,0.7s
YAK   Yakutsk         21.67 336   P       P       23 29 54.0  -2.9
YAK   Yakutsk         21.67 336   eP      P       23 29 54.8  -2.1
YAK                               e*PP    pP      23 29 58.1  -1.8
YAK                               e               23 30 14.9
YAK                               eS      S       23 33 54.7  -1.3
YAK                               e*SS    sS      23 33 57.9  -2.6
YAK                               pmax    pmax
      comp=Z,39nm,0.6s
YAK                               pmax    pmax
      comp=N,16nm,0.6s
YAK                               pmax    pmax
      comp=E,16nm,0.6s
YAK                               pmax    pmax
      comp=Z,307nm,1.8s
YAK                               pmax    pmax
      comp=N,290nm,2.3s
YAK                               pmax    pmax
      comp=E,293nm,2.3s
YAK                               smax    smax
      comp=N,86nm,1.3s
YAK                               smax    smax
      comp=E,25nm,1.3s
YAK                               MLR     MLR
      comp=Z,4µm,13.0s
YAK                               MLR     MLR
      comp=N,4µm,12.0s
YAK                               MLR     MLR
      comp=E,2µm,16.0s
JOW   Kunigami        22.98 231   LR      LR      23 40 46.3
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      comp=E,3µm,18.1s,baz=56,slow=41
XLT   XiLinHaoTe      23.09 283   eP      P       23 30 11.1  -1.2
XLT                               pP      sP      23 30 15.9  -0.6
XLT                               sP      pwP     23 30 19.3  -3.4
XLT                               S       S       23 34 24.9 +2.0
XLT                               pmax    pmax
      comp=E,84nm,0.9s
XLT                               pmax    pmax
      comp=E,1µm,8.6s
XLT                               LR      LR
      comp=E,8µm,18.0s
XLT                               LR      LR
      comp=E,10µm,16.4s
BJI   Beijing         23.96 273   P       P       23 30 19.5  -1.2
BJI                               pP      pP      23 30 23.7  -0.1
BJI                               S       S       23 34 32.2  -4.5
BJI                               pmax    pmax
      comp=E,18nm,1.0s
BJI                               pmax    pmax
      comp=E,620nm,8.0s
BJI                               LR      LR
      comp=E,2µm,15.6s
BJI                               LR      LR
      comp=E,2µm,15.4s
BJI                               LR      LR
      comp=E,3µm,15.3s
BJT   Baijiatuau      23.97 273   P       P       23 30 19.0  -1.9
BJT                               IAmb    IAmb    23 30 37.5
      comp=Z,139nm,1.7s
BJT   Baijiatuau      23.97 273   P       P       23 30 19.0  -1.9
BJT                               pmax    pmax
      comp=Z,139nm,1.7s
SSE   Sheshan         24.52 249   P       P       23 30 27.1 +1.2
SSE                               S       S       23 34 46.9 +1.1
SSE                               pmax    pmax
      comp=Z,26nm,0.9s
SSE                               pmax    pmax
      comp=Z,630nm,4.0s
SSE                               LR      LR
      comp=Z,3µm,16.4s
CIT   Chita           24.62 303   eP      P       23 30 26.6  -0.2
CIT                               e               23 31 11.8
CIT                               e               23 35 40.0
TIA   Tai'an          24.72 264   P       P       23 30 27.3  -0.4
TIA                               pmax    pmax
      comp=Z,51nm,1.5s
TIA                               pmax    pmax
      comp=Z,2µm,8.4s
TIA                               LR      LR
      comp=Z,4µm,14.9s
TIA                               LR      LR
      comp=Z,1µm,14.9s
TIA                               LR      LR
      comp=Z,4µm,15.9s
NJ2   Nanjing         25.57 254   ⇓P      P       23 30 37.2 +1.7
NJ2                               pP      sP      23 30 39.6  -0.4
NJ2                               sP      pwP     23 30 44.5  -0.8
NJ2                               pmax    pmax
      comp=Z,32nm,1.2s
NJ2                               pmax    pmax
      comp=Z,960nm,4.5s
NJ2                               LR      LR
      comp=Z,7µm,15.2s
NJ2                               LR      LR
      comp=Z,9µm,15.2s
NJ2                               LR      LR
      comp=Z,6µm,18.5s
HNS   HongShan        25.98 268   ⇑P      P       23 30 39.4 +0.3
HNS                               pmax    pmax
      comp=Z,51nm,1.2s
HNS                               LR      LR
      comp=Z,3µm,13.9s
HNS                               LR      LR
      comp=Z,3µm,17.7s
HNS                               LR      LR
      comp=Z,5µm,16.2s
HHC   Hu-ho-hao-te    27.07 277⇓ iP      P       23 30 51.6 +2.5
HHC                               pP      sP      23 30 55.2 +1.7
HHC                               sP      pwP     23 31 03.4 +4.1
HHC                               pmax    pmax
      comp=Z,72nm,1.1s
HHC                               pmax    pmax
      comp=Z,910nm,8.5s
HHC                               LR      LR
      comp=Z,3µm,14.4s
HHC                               LR      LR
      comp=Z,4µm,17.1s
HHC                               LR      LR
      comp=Z,5µm,16.6s
TIY   Taiyuan         27.51 271   P       P       23 30 54.5 +1.4
TIY                               PP      PnPn    23 31 37.1  -0.8
TIY                               S       S       23 35 40.2 +6.8
TIY                               PcS     PcS     23 37 56.2 +3.4
TIY                               ScS     ScS     23 41 40.2  -2.3
TIY                               pmax    pmax
      comp=Z,49nm,1.3s
TIY                               pmax    pmax
      comp=Z,1µm,6.2s
TIY                               LR      LR
      comp=Z,2µm,16.6s
TIY                               LR      LR
      comp=Z,3µm,16.8s
TIY                               LR      LR
      comp=Z,3µm,17.0s
BTO   Baotou          28.26 278   eP      P       23 31 00.8 +1.1
BTO                               pP      sP      23 31 04.8 +0.7
BTO                               sP      pwP     23 31 07.8  -2.2
BTO                               PP      PnPn    23 31 51.5 +3.5
BTO                               S       S       23 35 49.2 +4.1
BTO                               sS      sS      23 35 52.1 +1.4
BTO                               SS      SnSn    23 37 09.0 +7.2
BTO                               pmax    pmax
      comp=Z,110nm,1.8s
BTO                               pmax    pmax
      comp=Z,2µm,11.1s
BTO                               LR      LR
      comp=Z,7µm,14.9s
BTO                               LR      LR
      comp=Z,9µm,14.2s
BTO                               LR      LR
      comp=Z,10µm,13.7s
H11N2 WAKE ISLAND Hy  28.33 140   T       T       00 02 07.7
      baz=330,slow=75,SNR=243
H11N1 WAKE ISLAND Hy  28.35 140   T       T       00 02 02.0
      baz=330,slow=75,SNR=154
H11N3 WAKE ISLAND Hy  28.35 140   T       T       00 02 02.4
      baz=330,slow=75,SNR=186
ULN   Ulaanbaatar     28.81 294   P       P       23 31 04.7 +0.1
ULN   Ulaanbaatar     28.81 294   P       P       23 31 04.5  -0.1
ULN   Ulaanbaatar     28.81 294   P       P       23 31 05.1 +0.5
ULN   Ulaanbaatar     28.81 294   eP      P       23 31 05.1 +0.5
LYN   LuoYang         28.86 264   P       P       23 31 05.6 +0.6
LYN                               S       S       23 36 01.1 +6.6
LYN                               pmax    pmax
      comp=Z,32nm,1.1s
LYN                               pmax    pmax
      comp=Z,1µm,8.6s
LYN                               LR      LR
      comp=Z,5µm,13.1s
LYN                               LR      LR
      comp=Z,3µm,15.1s
LYN                               LR      LR
      comp=Z,5µm,13.4s
SONM  Songino Array   29.25 294   P       P       23 31 09.0 +0.4
      comp=Z,129nm,1.1s,baz=86,slow=7.0,SNR=120
SONM                              LR      LR      23 44 13.5
      comp=Z,9µm,18.7s,baz=94,slow=39
      comp=Z,129nm,1.1s
SONM  Songino Array   29.25 294   P       P       23 31 08.9 +0.4
H11S1 WAKE ISLAND Hy  29.31 142   T       T       00 03 12.9
      baz=331,slow=76,SNR=318
H11S3 WAKE ISLAND Hy  29.31 142   T       T       00 03 31.8
      baz=331,slow=76,SNR=408
H11S2 WAKE ISLAND Hy  29.32 142   T       T       00 03 17.4
      baz=331,slow=76,SNR=231
SPIA  Saint Paul Isl  29.53  47   P       P       23 31 10.9 +0.2
      baz=260
WHN   Wuhan           29.60 256   P       P       23 31 11.1  -0.5
WHN                               S       S       23 36 06.8 +0.6
WHN                               pmax    pmax
      comp=Z,230nm,1.6s
WHN                               LR      LR
      comp=Z,15µm,17.1s
WHN                               LR      LR
      comp=Z,18µm,19.4s
WHN                               LR      LR
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     comp=Z,13µm,16.5s
GUMO Guam                 29.74 186  LR     LR     23 42 06.8
     comp=Z,740nm,20.3s,baz=358,slow=34
P08K Saint George I       29.82  49  P      P      23 31 14.2 +0.9
     baz=262
NIKH Nikolski High        29.92  56  P      P      23 31 15.3 +1.1
     baz=269
TIXI Tiksi                29.93 348  LR     LR     23 44 35.6
     comp=Z,3µm,18.8s,baz=179,slow=39
TIXI Tiksi                29.93 348  P      P      23 31 10.6 -3.4
TIXI Tiksi                29.93 348ceP      P      23 31 10.2 -3.9
TIXI                                 pmax   pmax
     comp=Z,8.0nm,0.7s
GAMB Gambell              30.70  34  P      P      23 31 21.4 +0.5
     baz=248
ZAK  Zakamensk            31.05 299 eP      P      23 31 24.0 -0.3
ZAK                                  pmax   pmax
     comp=Z,27nm,1.1s
UNV  Unalaska Valle       31.34  54  P      P      23 31 27.4 +0.6
     baz=269
XAN  Xi'an                31.68 266  P      P      23 31 29.4 -0.6
XAN                                  pP     sP     23 31 34.2 -0.3
XAN                                  PP     PnPn   23 32 31.7 -2.2
XAN                                  S      S      23 36 37.9 -1.0
XAN                                  pmax   pmax
     comp=Z,21nm,1.0s
XAN                                  pmax   pmax
     comp=Z,470nm,5.7s
XAN                                  LR     LR
     comp=Z,4µm,15.5s
XAN                                  LR     LR
     comp=Z,3µm,12.9s
XAN                                  LR     LR
     comp=Z,3µm,15.6s
M11K Mekoryuk             32.20  42  P      P      23 31 35.8 +1.7
     baz=259
MOY  Mondy                32.39 302 eP      P      23 31 35.8 -0.4
MOY                                  pmax   pmax
     comp=Z,37nm,1.4s
TNA  Tin City             32.87  32  P      P      23 31 42.4 +2.4
TNA                                  IAmb   IAmb   23 31 58.7
     comp=Z,38nm,0.8s
TNA  Tin City             32.87  32  P      P      23 31 41.1 +1.1
     baz=249
K13K Kusilvak Mount       33.24  39  IAmb   IAmb   23 32 09.1
     comp=Z,22nm,0.9s
K13K Kusilvak Mount       33.24  39  P      P      23 31 44.0 +0.7
     baz=258
F14K Arctic Creek         33.47  33  P      P      23 31 46.3 +1.1
     baz=251
ANM  Nome                 33.58  35  P      P      23 31 48.6 +2.4
ANM                                  IAmb   IAmb   23 32 02.1
     comp=Z,29nm,0.9s
ANM  Nome                 33.58  35  P      P      23 31 48.6 +2.4
ANM                                  pmax   pmax
     comp=Z,29nm,0.9s
ANM  Nome                 33.58  35  P      P      23 31 47.0 +0.8
     baz=254
M13K Dall Lake            33.59  42  P      P      23 31 47.5 +1.2
     baz=262
J14K Nanvaranak Lak       33.91  38  IAmb   IAmb   23 32 17.7
     comp=Z,47nm,1.4s
J14K Nanvaranak Lak       33.91  38  P      P      23 31 50.3 +1.2
     baz=258
S12K Black Hills          33.93  51  P      P      23 31 50.4 +1.0
     baz=270
L14K Kuka Creek           34.06  41  P      P      23 31 51.5 +1.1
     baz=261
F15K North Star Dit       34.20  33  IAmb   IAmb   23 32 17.9
     comp=Z,30nm,1.1s
F15K North Star Dit       34.20  33  P      P      23 31 52.4 +0.8
     baz=253
G15K Niukluk              34.24  34  P      P      23 31 52.8 +0.8
     baz=254
N14K Kuskokwak Cree       34.36  43  P      P      23 31 54.4 +1.3
     baz=264
LZH  Lanzhou              34.45 273  P      P      23 31 54.8 +0.5
LZH                                  sP     pwP    23 32 02.6 -1.9
LZH                                  S      S      23 37 24.6 +2.5
LZH                                  pmax   pmax
     comp=Z,83nm,1.1s
LZH                                  pmax   pmax
     comp=Z,710nm,4.6s
LZH                                  LR     LR
     comp=Z,4µm,16.7s
LZH                                  LR     LR
     comp=Z,3µm,16.0s
LZH                                  LR     LR
     comp=Z,5µm,17.0s
O14K Tigyukauivet M       34.51  45  P      P      23 31 55.7 +1.3
     baz=266
LZDM Lanzhou Array        34.62 273  P      P      23 31 56.0 +0.1
     comp=Z,44nm,1.0s,baz=72,slow=4.8,SNR=28
LZDM                                 LR     LR     23 46 45.3
     comp=Z,1µm,18.6s,baz=45,slow=38
     comp=Z,44nm,1.0s
L15K Ungalak Mounta       34.68  40  P      P      23 31 56.6 +0.8
     baz=262
KNGR Kungurtug, Tuv       34.68 300 iP      P      23 31 55.5 -0.6
KNGR                                 pmax   pmax
     comp=Z,19nm,0.8s
K15K Wolf Creek Mou       34.75  39  P      P      23 31 57.7 +1.3
     baz=261
C16K Lisburne Hills       34.81  28  IAmb   IAmb   23 32 13.5
     comp=Z,30nm,0.8s
C16K Lisburne Hills       34.81  28  P      P      23 31 56.8  0.0
     baz=248,SNR=6.2
SDPT Sand Point           34.84  51  P      P      23 31 57.4 +0.2
     baz=272
H16K Elim                 34.90  35  P      P      23 31 58.9 +1.3
     baz=257,SNR=6.7
M15K Kasigluk River       34.94  42  P      P      23 31 58.8 +0.8
     baz=264
G16K Koyuk River          35.03  34  P      P      23 31 59.8 +1.0
     baz=256
N15K Kwethluk River       35.18  43  P      P      23 32 01.4 +1.2
     baz=265
O15K Ungalikthiuk R       35.24  45  P      P      23 32 02.0 +1.3
     baz=267
J16K Anvik River          35.34  38  IAmb   IAmb   23 32 30.8
     comp=Z,91nm,1.9s
J16K Anvik River          35.34  38  P      P      23 32 02.7 +1.2
     baz=260
S14K Fog Glacier          35.34  50  P      P      23 32 02.1 +0.5
     baz=271
CHNA Chernabura Isl       35.37  52  P      P      23 32 02.5 +0.7
     baz=273
I17K Unalakleet           35.40  37  IAmb   IAmb   23 32 13.9
     comp=Z,20nm,0.7s
I17K Unalakleet           35.40  37  P      P      23 32 02.9 +0.9
     baz=260
D17K Noatak River         35.41  30  P      P      23 32 02.2 +0.2
     baz=252
RDOG Red Dog Mine         35.59  29  P      P      23 32 04.4 +0.8
RDOG                                 IAmb   IAmb   23 32 18.6
     comp=Z,34nm,1.0s
RDOG Red Dog Mine         35.59  29  P      P      23 32 04.4 +0.8
     baz=251
C17K DeLong Mountai       35.63  28  P      P      23 32 04.6 +0.7
     baz=251
L16K Owhat River          35.63  40  IAmb   IAmb   23 32 34.8
     comp=Z,28nm,1.1s
L16K Owhat River          35.63  40  P      P      23 32 05.2 +1.2
     baz=264
E17K Hotham Inlet         35.69  31  P      P      23 32 05.1 +0.6
     baz=254
F17K Baldwin Pennin       35.74  32  P      P      23 32 06.3 +1.5
     baz=255,SNR=16
G17K Kiwalik Mounta       35.75  34  P      P      23 32 06.6 +1.6
     baz=257,SNR=26
M16K Timber Creek         35.81  42  IAmb   IAmb   23 32 36.7
     comp=Z,80nm,1.3s
M16K Timber Creek         35.81  42  P      P      23 32 05.7 +0.2
     baz=265
N16K Nishlik Lake         35.86  43  P      P      23 32 06.1 +0.1
     baz=266
H17K Granite Mounta       35.94  35  IAmb   IAmb   23 32 16.8
     comp=Z,18nm,0.7s
H17K Granite Mounta       35.94  35  P      P      23 32 06.4 -0.2
     baz=259
GTA  Gaotai               36.02 281  P      P      23 32 08.2 +0.4
GTA                                  PcP    PcP    23 34 35.8 +1.8
GTA                                  sS     sS     23 37 57.6 +5.1
GTA                                  pmax   pmax
     comp=Z,16nm,1.1s
GTA                                  LR     LR
     comp=Z,3µm,17.1s
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GTA                                  LR     LR
     comp=Z,4µm,15.6s
GTA                                  LR     LR
     comp=Z,6µm,15.6s
J17K VABM Dome            36.03  38  IAmb   IAmb   23 32 41.3
     comp=Z,54nm,1.3s
J17K VABM Dome            36.03  38  P      P      23 32 08.1 +0.6
     baz=262
O16K Kokwok River B       36.15  44  P      P      23 32 09.0 +0.6
     baz=268
L17K Donlin               36.23  40  P      P      23 32 09.9 +0.7
     baz=264
E18K Tukpahlearik C       36.24  31  P      P      23 32 10.1 +0.9
     baz=255,SNR=5.9
K17K Iditarod             36.29  39  IAmb   IAmb   23 32 28.4
     comp=Z,32nm,1.0s
K17K Iditarod             36.29  39  P      P      23 32 10.5 +0.8
     baz=263,SNR=5.6
C18K Utukok River         36.38  29  IAmb   IAmb   23 32 20.0
     comp=Z,43nm,0.7s
C18K Utukok River         36.38  29  P      P      23 32 10.8 +0.4
     baz=252
B18K Kokolik River        36.40  27  P      P      23 32 10.6 +0.1
     baz=251
F18K Selawik              36.40  32  P      P      23 32 10.6 +0.2
     baz=257
M17K Holitna River        36.57  41  P      P      23 32 12.6 +0.5
     baz=266
H18K Honhosa River        36.62  35  IAmb   IAmb   23 32 29.6
     comp=Z,54nm,0.9s
H18K Honhosa River        36.62  35  P      P      23 32 12.7 +0.2
     baz=260,SNR=12
G18K Tagagawik            36.64  33  IAmb   IAmb   23 32 28.8
     comp=Z,69nm,1.1s
G18K Tagagawik            36.64  33  P      P      23 32 13.8 +1.1
     baz=259,SNR=22
N17K Nushagak Hills       36.64  43  P      P      23 32 13.4 +0.7
     baz=267
O17K Koliganek Bris       36.66  44  P      P      23 32 13.4 +0.5
     baz=268
Q16K King Salmon          36.87  46  P      P      23 32 15.2 +0.6
     baz=270
A19K Wainwright           36.92  26  P      P      23 32 15.3 +0.5
     baz=251
L18K Granite Mounta       36.99  40  IAmb   IAmb   23 32 47.2
     comp=Z,39nm,1.2s
L18K Granite Mounta       36.99  40  P      P      23 32 16.1 +0.5
     baz=266
CD2  Chengdu              37.02 265  P      P      23 32 16.0 -0.3
CD2                                  S      S      23 38 04.1 +2.7
CD2                                  pmax   pmax
     comp=Z,30nm,0.6s
CD2                                  pmax   pmax
     comp=Z,550nm,5.5s
CD2                                  LR     LR
     comp=Z,5µm,15.7s
CD2                                  LR     LR
     comp=Z,5µm,14.7s
R17L Mt. Peulik Vol       37.05  47  P      P      23 32 16.7 +0.5
     baz=272
C19K Lookout Ridge        37.07  28  IAmb   IAmb   23 32 31.3
     comp=Z,46nm,0.8s
C19K Lookout Ridge        37.07  28  P      P      23 32 16.0 -0.2
     baz=254
J18K Innoko River         37.09  38  IAmb   IAmb   23 32 34.5
     comp=Z,139nm,1.9s
J18K Innoko River         37.09  38  P      P      23 32 16.7 +0.2
     baz=264,SNR=8.5
F19K Shaleruckik Mo       37.18  32  P      P      23 32 17.4 +0.2
F19K                                 IAmb   IAmb   23 32 40.5
     comp=Z,30nm,0.8s
F19K Shaleruckik Mo       37.18  32  P      P      23 32 17.2 +0.1
     baz=258,SNR=27
GCSA Galena City Sc       37.18  36  P      P      23 32 17.8 +0.6
     baz=262
Q17K Contact Creek        37.28  46  P      P      23 32 18.8 +0.5
     baz=272
N18K Kilae Creek          37.29  42  IAmb   IAmb   23 32 50.7
     comp=Z,92nm,1.3s
N18K Kilae Creek          37.29  42  P      P      23 32 18.9 +0.7
     baz=268
G19K Purcell Mounta       37.32  33  P      P      23 32 19.1 +0.8
     baz=260,SNR=14
M18K Stony River          37.35  41  P      P      23 32 19.1 +0.4
     baz=267
D19K Kuna River           37.42  29  P      P      23 32 20.0 +0.7
     baz=256,SNR=48
GYA  Guiyang              37.46 257 ⇑P      P      23 32 21.5 +1.4
GYA                                  S      S      23 38 12.0 +3.8
GYA                                  pmax   pmax
     comp=Z,29nm,1.6s
GYA                                  LR     LR
     comp=Z,3µm,16.7s
GYA                                  LR     LR
     comp=Z,2µm,16.4s
GYA                                  LR     LR
     comp=Z,4µm,18.3s
H19K Roundabout Mou       37.48  34  P      P      23 32 20.6 +0.9
     baz=262,SNR=35
E19K Redstone River       37.51  31  P      P      23 32 20.5 +0.5
     baz=258,SNR=44
CHIR Chirikof Islan       37.56  50  P      P      23 32 21.3 +0.8
     baz=275
ACHA Angle Creek He       37.58  46  P      P      23 32 22.0 +1.2
P18K Big Mountain,        37.61  45  P      P      23 32 21.2 +0.3
     baz=271
O18K Koktuh Hills         37.62  44  P      P      23 32 20.8 -0.1
     baz=270
J19K Poorman              37.63  37  IAmb   IAmb   23 32 38.9
     comp=Z,27nm,0.8s
J19K Poorman              37.63  37  P      P      23 32 21.0  0.0
     baz=264
Q18K Katmai Hardscr       37.73  46  P      P      23 32 22.1  0.0
     baz=272
L19K White Mountain       37.85  40  P      P      23 32 22.7 -0.2
     baz=267
N19K Bonanza Creek        37.98  42  P      P      23 32 24.0 -0.1
     baz=270
D20K Etivluk River        38.01  29  P      P      23 32 24.3 +0.1
     baz=257
F20K Avaraart Lake        38.01  32  P      P      23 32 25.3 +1.1
     baz=260
E20K Nigu River           38.07  30  P      P      23 32 25.8 +1.1
     baz=258
R18K Karluk               38.08  47  P      P      23 32 25.7 +0.9
     baz=274
H20K Anotleneega Mo       38.12  35  P      P      23 32 26.1 +1.0
     baz=263,SNR=26
B20K Meade River          38.14  27  P      P      23 32 26.2 +1.0
     baz=255
I20K Naaghedeneel         38.21  36  IAmb   IAmb   23 32 53.4
     comp=Z,37nm,0.9s
I20K Naaghedeneel         38.21  36  P      P      23 32 26.3 +0.5
     baz=264
K20K Telida               38.27  38  P      P      23 32 27.4 +1.0
     baz=267
J20K Nowinta River        38.30  37  IAmb   IAmb   23 32 44.8
     comp=Z,27nm,0.8s
J20K Nowinta River        38.30  37  P      P      23 32 28.0 +1.3
     baz=266,SNR=14
SII  Sitkinak Islan       38.30  49  P      P      23 32 27.7 +0.9
     baz=275
L20K Farewell, AK         38.31  39  IAmb   IAmb   23 33 06.7
     comp=Z,100nm,2.0s
L20K Farewell, AK         38.31  39  P      P      23 32 28.1 +1.3
     baz=268
Q19K Cape Douglas,        38.44  45  P      P      23 32 28.5 +0.6
     baz=273
P19K Oil Pt               38.62  44  P      P      23 32 29.6 +0.2
     baz=272
IMAR Indian Mountai       38.64  34  P      P      23 32 30.4 +0.9
M20K Styx River           38.65  40  P      P      23 32 29.7  0.0
     baz=269
A21K Barrow               38.66  25  P      P      23 32 29.8 +0.2
     baz=254
OHAK Old Harbor           38.73  48  P      P      23 32 30.9 +0.6
OHAK Old Harbor           38.73  48  P      P      23 32 31.3 +1.0
     baz=275
C21K Knifeblade Rid       38.75  29  P      P      23 32 31.2 +0.8
     baz=259,SNR=23
G21K Allakaket            38.80  33  IAmb   IAmb   23 32 42.0
     comp=Z,35nm,0.8s
G21K Allakaket            38.80  33  P      P      23 32 31.8 +0.9
     baz=263,SNR=36
F21K Alatna River         38.90  32  IAmb   IAmb   23 32 47.7
     comp=Z,45nm,0.8s
F21K Alatna River         38.90  32  P      P      23 32 33.2 +1.5
     baz=262,SNR=15
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B21K Ikpikpuk River       38.91  28  P      P      23 32 33.5 +1.8
B21K Ikpikpuk River       38.91  28  P      P      23 32 32.5 +0.8
     baz=258,SNR=45
E21K Killik River         38.91  30  IAmb   IAmb   23 32 36.0
     comp=Z,46nm,0.9s
E21K Killik River         38.91  30  P      P      23 32 32.8 +1.0
     baz=260
H21K Melozitna Rive       38.99  34  P      P      23 32 34.3 +1.8
     baz=265,SNR=18
KDAK Kodiak Island        39.06  47  P      P      23 32 33.1  0.0
KDAK                                 IAmb   IAmb   23 32 50.7
     comp=Z,84nm,1.2s
KDAK Kodiak Island        39.06  47  P      P      23 32 33.1  0.0
KDAK                                 pmax   pmax
     comp=Z,84nm,1.3s
KDAK Kodiak Island        39.06  47  P      P      23 32 34.2 +1.0
     baz=275
CHUM Lake Minchumin       39.08  37  P      P      23 32 34.6 +1.4
     baz=268,SNR=7.0
SPCR Spurr Chacha         39.09  42  P      P      23 32 34.4 +1.0
     baz=271
A22K Sinclair Lake        39.10  26  P      P      23 32 34.4 +1.2
     baz=256
Q20K Shuyak Island        39.10  46  P      P      23 32 35.0 +1.6
     baz=274
PPLA Purkeypile           39.11  39  P      P      23 32 35.6 +2.0
PPLA                                 IAmb   IAmb   23 32 57.5
     comp=Z,133nm,1.6s
PPLA Purkeypile           39.11  39  P      P      23 32 34.5 +0.9
     baz=269
HOM  Homer                39.42  44  P      P      23 32 36.7 +0.6
     baz=273
F22K John River           39.44  32  P      P      23 32 37.2 +1.0
     baz=263
D22K Ayikyak River        39.45  29  IAmb   IAmb   23 32 51.7
     comp=Z,148nm,1.4s
D22K Ayikyak River        39.45  29  P      P      23 32 37.8 +1.5
     baz=261,SNR=25
B22K Teshekpuk Lake       39.45  27  IAmb   IAmb   23 32 52.6
     comp=Z,40nm,0.8s
B22K Teshekpuk Lake       39.45  27  P      P      23 32 37.3 +1.1
     baz=259,SNR=9.9
H22K Ishtalitna Cre       39.60  34  P      P      23 32 38.9 +1.3
     baz=266
G22K Bettles              39.64  33  P      P      23 32 38.6 +0.8
     baz=265
E22K Anaktuvuk Pass       39.66  31  P      P      23 32 39.1 +1.1
     baz=263
BPAW Bear Paw Mtn.        39.68  37  P      P      23 32 39.7 +1.5
BPAW Bear Paw Mtn.        39.68  37  P      P      23 32 39.7 +1.5
     baz=268
SUA  Susitna One          39.79  41  P      P      23 32 40.6 +1.3
     baz=272
BRLK Bradley Lake         39.80  44  P      P      23 32 40.0 +0.7
BRSE Bradley Lake S       39.88  44  P      P      23 32 40.5 +0.6
     baz=274
NRIK Noril'sk             39.96 331  P      P      23 32 39.4 -1.0
     comp=Z,2.8nm,0.4s,baz=127,slow=5.1,SNR=9.8
NRIK                                 LR     LR     23 50 23.8
     comp=Z,2µm,18.9s,baz=84,slow=38
     comp=Z,2.8nm,0.4s
NRIK Noril'sk             39.96 331  P      P      23 32 39.7 -0.7
NRIK Noril'sk             39.96 331ceP      P      23 32 39.2 -1.2
NRIK                                 pmax   pmax
     comp=Z,11nm,1.0s
TRF  Thorofare Moun       39.98  38  P      P      23 32 41.8 +0.9
TRF                                  IAmb   IAmb   23 33 17.9
     comp=Z,128nm,2.0s
TRF  Thorofare Moun       39.98  38  P      P      23 32 41.6 +0.7
     baz=270
CUT  Chulitna             39.99  40  P      P      23 32 41.8 +1.0
     baz=271
M22K Willow               40.08  41  P      P      23 32 42.5 +1.0
     baz=272
SLKM Skilak Lake          40.09  43  P      P      23 32 42.9 +1.2
SLKM                                 IAmb   IAmb   23 33 03.0
     comp=Z,72nm,1.4s
COLD Coldfoot             40.17  32  P      P      23 32 43.6 +1.3
COLD Coldfoot             40.17  32  P      P      23 32 43.5 +1.3
     baz=266,SNR=15
QIZ  Qiongzhong           40.17 245  P      P      23 32 43.0 +0.2
QIZ                                  PcP    PcP    23 34 46.7 -0.2
QIZ                                  S      S      23 38 50.2 +1.2
QIZ                                  LR     LR
     comp=Z,2µm,16.9s
QIZ                                  LR     LR
     comp=Z,3µm,18.8s
QIZ                                  LR     LR
     comp=Z,3µm,17.4s
D23K Nanushuk River       40.17  29  IAmb   IAmb   23 32 46.5
     comp=Z,48nm,1.0s
D23K Nanushuk River       40.17  29  P      P      23 32 42.8 +0.5
     baz=263,SNR=26
G23K Bananza Creek        40.20  33  P      P      23 32 43.4 +0.8
     baz=266
RC01 Rabbit Creek A       40.29  42  P      P      23 32 44.5 +1.2
RC01                                 IAmb   IAmb   23 33 14.3
     comp=Z,46nm,1.1s
RC01 Rabbit Creek A       40.29  42  P      P      23 32 44.0 +0.7
     baz=273
C23K Itkillik River       40.32  28  IAmb   IAmb   23 32 47.3
     comp=Z,84nm,0.8s
C23K Itkillik River       40.32  28  P      P      23 32 44.3 +0.9
     baz=262,SNR=38
H23K Yukon River          40.35  34  IAmb   IAmb   23 32 54.4
     comp=Z,31nm,0.7s
H23K Yukon River          40.35  34  P      P      23 32 45.9 +2.1
     baz=268,SNR=23
I23K Minto, Yukon-K       40.41  35  IAmb   IAmb   23 33 02.3
     comp=Z,127nm,1.8s
I23K Minto, Yukon-K       40.41  35  P      P      23 32 46.2 +2.1
     baz=269,SNR=9.1
E23K Chandalar            40.47  31  IAmb   IAmb   23 33 02.8
     comp=Z,72nm,0.8s
E23K Chandalar            40.47  31  P      P      23 32 46.6 +1.8
     baz=265,SNR=32
SEW  Seward               40.50  43  P      P      23 32 46.5 +1.6
     baz=275
NEA2 Nenana               40.52  36  P      P      23 32 45.5 +0.3
NEA2                                 IAmb   IAmb   23 33 02.4
     comp=Z,46nm,0.7s
NEA2 Nenana               40.52  36  P      P      23 32 46.5 +1.3
     baz=270,SNR=12
TOLK Toolik Lake Re       40.54  30  IAmb   IAmb   23 32 49.3
     comp=Z,43nm,0.8s
TOLK Toolik Lake Re       40.54  30  P      P      23 32 46.9 +1.6
     baz=264,SNR=28
PMR  Palmer               40.56  41  P      P      23 32 47.1 +1.6
     baz=273
MCK  McKinley             40.58  38  IAmb   IAmb   23 33 08.9
     comp=Z,35nm,1.0s
MCK  McKinley             40.58  38  P      P      23 32 47.0 +1.3
     baz=271
WAT1 Susitna Watana       40.77  39  P      P      23 32 48.4 +1.1
     baz=272
D24K Happy Valley         40.86  29  IAmb   IAmb   23 33 03.7
     comp=Z,61nm,0.8s
D24K Happy Valley         40.86  29  P      P      23 32 49.6 +1.7
     baz=265
KNK  Knik Glacier         40.89  41  IAmb   IAmb   23 33 19.6
     comp=Z,68nm,1.1s
KNK  Knik Glacier         40.89  41  P      P      23 32 49.3 +1.0
     baz=274
E24K Your Creek           40.89  31  P      P      23 32 50.0 +1.7
     baz=266
SML  Sawmill              40.93  40  P      P      23 32 49.2 +0.5
SML                                  IAmb   IAmb   23 33 11.2
     comp=Z,52nm,0.8s
SML  Sawmill              40.93  40  P      P      23 32 49.8 +1.2
     baz=274
WRH  Wood River Hil       40.94  36  IAmb   IAmb   23 33 19.2
     comp=Z,31nm,0.8s
C24K Franklin Bluff       40.96  28  P      P      23 32 50.0 +1.3
     baz=264,SNR=48
PWL  Port Wells           40.99  42  P      P      23 32 50.1 +1.0
     baz=275
H24K Noodor Dome          41.04  34  IAmb   IAmb   23 33 06.0
     comp=Z,27nm,0.8s
H24K Noodor Dome          41.04  34  P      P      23 32 50.7 +1.3
     baz=269,SNR=17
COLA College              41.04  36  P      P      23 32 49.6 +0.1
COLA                                 IAmb   IAmb   23 33 06.7
     comp=Z,77nm,0.8s
COLA College              41.04  36 iP      P      23 32 52.0 +2.6
COLA                                 pmax   pmax
     comp=Z,57nm,0.8s
COLA College              41.04  36  P      P      23 32 51.1 +1.7
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      baz=270
CCB   Clear Creek Bu   41.06  36   P      P      23 32 50.7 +1.1
KMI   Kunming          41.07 259 ⇑P      P      23 32 50.4 -0.1
KMI                              S      S      23 38 58.8 -4.0
KMI                              pmax   pmax
      comp=Z,26nm,1.3s
KMI                              pmax   pmax
      comp=Z,470nm,4.1s
KMI                              LR     LR
      comp=Z,2µm,13.3s
KMI                              LR     LR
      comp=Z,2µm,16.2s
KMI                              LR     LR
      comp=Z,4µm,15.6s
F24K  Squaw Lake       41.09  32   P      P      23 32 51.5 +1.6
      baz=267
WAT6  Susitna Watana   41.16  39   P      P      23 32 51.6 +0.9
      baz=273
DGZ   Jazzator, Alta   41.21 301 i P      P      23 32 50.7 -0.6
DGZ                            i *PP    sP     23 32 57.6 +1.0
DGZ                              pmax   pmax
      comp=Z,63nm,1.3s
M23K  Glacier View     41.21  40   P      P      23 32 51.9 +1.0
      baz=274
G24K  Hadweenzic Riv   41.22  33   IAmb   IAmb   23 33 07.0
      comp=Z,58nm,0.9s
G24K  Hadweenzic Riv   41.22  33   P      P      23 32 52.5 +1.6
      baz=269,SNR=23
POKR  Poker Plat Res   41.22  35   IAmb   IAmb   23 33 09.0
      comp=Z,74nm,0.8s
POKR  Poker Plat Res   41.22  35   P      P      23 32 52.6 +1.6
      baz=270,SNR=13
DHY   Denali Highway   41.30  39   IAmb   IAmb   23 33 22.6
      comp=Z,51nm,1.2s
DHY   Denali Highway   41.30  39   P      P      23 32 53.0 +1.1
      baz=273
SCM   Sheep Creek Mo   41.40  40   P      P      23 32 53.8 +1.2
      baz=274
HDA   Harding Lake     41.44  36   IAmb   IAmb   23 33 14.9
      comp=Z,27nm,0.8s
HDA   Harding Lake     41.44  36   P      P      23 32 54.1 +1.3
      baz=272,SNR=6.5
IL31                   41.46  36   IAmb   IAmb   23 33 11.2
      comp=Z,29nm,0.8s
ILAR  Eielson Array    41.46  36   P      P      23 32 53.5 +0.7
      comp=Z,5.7nm,0.8s,baz=258,slow=7.4,SNR=44
ILAR                             LR     LR     23 51 46.4
      comp=Z,904nm,18.7s,baz=286,slow=39
      comp=Z,5.7nm,0.8s
ILAR  Eielson Array    41.46  36   P      P      23 32 53.1 +0.2
ILAR  Eielson Array    41.46  36   P      P      23 32 53.1 +0.2
D25K  Kavik River      41.74  29   IAmb   IAmb   23 32 58.9
      comp=Z,69nm,0.8s
D25K  Kavik River      41.74  29   P      P      23 32 56.6 +1.4
      baz=267,SNR=80
G25K  Bearman Lake     41.76  33   P      P      23 32 57.0 +1.7
      baz=270,SNR=13
ZAA0  Zalesovo Array   41.79 308   P      P      23 32 54.8 -0.9
ZALV  Zalesovo Beam    41.79 308   P      P      23 32 54.8 -0.9
      comp=Z,15nm,0.7s,baz=74,slow=6.4,SNR=59
ZALV                             PcP    PcP    23 34 52.0 +0.4
      comp=Z,6.8nm,0.7s,baz=86,slow=2.7,SNR=5.0
ZALV                             LR     LR     23 50 14.8
      comp=Z,592nm,19.6s,baz=68,slow=36
      comp=Z,15nm,0.7s
ZALV  Zalesovo Beam    41.79 308   P      P      23 32 54.7 -1.0
ZALV                                    PcP    23 34 50.9 -0.7
ZALV  Zalesovo Beam    41.79 308 i P      P      23 32 55.5 -0.3
ZALV                             pmax   pmax
      comp=Z,15nm,0.7s
H25L  Birch Creek      41.88  34   P      P      23 32 57.9 +1.7
      baz=271
M24K  Tolsona, Glenn   41.92  40   P      P      23 32 58.6 +1.8
      baz=275
F25K  Christian Rive   41.95  32   P      P      23 32 59.5 +2.5
      baz=269,SNR=11
K24K  Donnelly Dome    41.98  37   IAmb   IAmb   23 33 19.0
      comp=Z,69nm,0.9s
K24K  Donnelly Dome    41.98  37   P      P      23 32 58.2 +1.0
      baz=274
E25K  Arctic Village   41.99  31   IAmb   IAmb   23 33 13.2
      comp=Z,46nm,0.9s
E25K  Arctic Village   41.99  31   P      P      23 32 59.3 +2.0
      baz=269,SNR=18
PRP   Porcupine Dome   42.01  35   P      P      23 32 58.8 +1.2
PRP                              IAmb   IAmb   23 33 15.3
      comp=Z,33nm,0.7s
PRP   Porcupine Dome   42.01  35   P      P      23 32 58.8 +1.2
      baz=272,SNR=23
KLU   Klutina          42.10  41   IAmb   IAmb   23 33 29.9
      comp=Z,42nm,1.0s
KLU   Klutina          42.10  41   P      P      23 32 59.5 +1.2
      baz=276
FYU   Fort Yukon       42.11  33   IAmb   IAmb   23 33 08.8
      comp=Z,63nm,0.7s
J25K  Salcha River,    42.11  36   P      P      23 32 59.6 +1.2
      baz=273,SNR=8.0
PAX   Paxson           42.17  39   P      P      23 33 00.4 +1.5
      baz=275
C26K  Camden Bay       42.29  28   P      P      23 33 01.3 +1.7
      baz=268,SNR=67
HARP  HAARP            42.37  39   P      P      23 33 01.9 +1.5
      baz=276
RIDG  Independent Ri   42.40  37   P      P      23 33 02.2 +1.6
      baz=274
F26K  Sheenjek River   42.52  32   IAmb   IAmb   23 33 18.6
      comp=Z,39nm,0.9s
F26K  Sheenjek River   42.52  32   P      P      23 33 03.6 +2.0
      baz=271,SNR=32
G26K  Porcupine Rive   42.68  33   IAmb   IAmb   23 33 20.7
      comp=Z,54nm,1.1s
G26K  Porcupine Rive   42.68  33   P      P      23 33 05.0 +2.2
      baz=272,SNR=15
C27K  Jago River       42.69  29   P      P      23 33 04.7 +1.8
      baz=269
SCRK  Sand Creek       42.76  37   P      P      23 33 03.4 -0.3
SCRK  Sand Creek       42.76  37   P      P      23 33 04.3 +0.7
      baz=275,SNR=11
BMRM  Bremner River    42.79  41   P      P      23 33 04.9 +1.0
BMRM                             IAmb   IAmb   23 33 28.4
      comp=Z,32nm,0.9s
BMRM  Bremner River    42.79  41   P      P      23 33 04.9 +1.0
      baz=278
WMQ   Urumqi           42.87 292 eP     P      23 33 06.6 +1.8
WMQ                              pmax   pmax
      comp=Z,77nm,1.5s
WMQ                              pmax   pmax
      comp=Z,580nm,4.1s
WMQ                              LR     LR
      comp=Z,4µm,15.5s
WMQ                              LR     LR
      comp=Z,12µm,13.9s
WMQ                              LR     LR
      comp=Z,6µm,17.3s
J26L  Joseph Creek     42.90  36   P      P      23 33 05.5 +0.7
      baz=275
I26K  Coal Creek Min   43.02  35   P      P      23 33 06.4 +0.8
      baz=274
L26K  Log Cabin Wild   43.13  38   IAmb   IAmb   23 33 29.9
      comp=Z,67nm,1.3s
M26K  Nabesna, AK      43.37  39   IAmb   IAmb   23 33 41.0
      comp=Z,44nm,1.0s
M26K  Nabesna, AK      43.37  39   P      P      23 33 10.4 +1.9
      baz=277,SNR=10
E27K  Coleen River     43.47  31   IAmb   IAmb   23 33 25.2
      comp=Z,34nm,0.9s
E27K  Coleen River     43.47  31   P      P      23 33 11.1 +1.8
      baz=272,SNR=24
MCARA McCarthy VSAT    43.49  41   P      P      23 33 12.0 +2.5
MCARA                            IAmb   IAmb   23 33 51.4
      comp=Z,44nm,1.1s
MCARA McCarthy VSAT    43.49  41   P      P      23 33 10.6 +1.2
      baz=278
ZSN   Zaisan           43.50 298 eP     P      23 33 10.2 +0.5
ZSN   Zaisan           43.50 298 eP     P      23 33 10.2 +0.5
G27K  Doyon Strip      43.52  33   P      P      23 33 11.3 +1.6
      baz=274
CRQE  Cirque           43.55  42   P      P      23 33 11.5 +1.4
      baz=279
K27K  Chicken          43.59  37   IAmb   IAmb   23 33 42.0
      comp=Z,84nm,1.1s
K27K  Chicken          43.59  37   P      P      23 33 12.1 +1.8
      baz=276
H27K  Steamboat Moun   43.62  34   IAmb   IAmb   23 33 30.2
      comp=Z,71nm,1.2s
H27K  Steamboat Moun   43.62  34   P      P      23 33 11.9 +1.4
      baz=275,SNR=18
I27K  Kandik River     43.63  35   P      P      23 33 12.2 +1.6
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      baz=275
D27M  Malcolm River    43.67  29   IAmb   IAmb   23 33 15.1
      comp=Z,39nm,0.9s
D27M  Malcolm River    43.67  29   P      P      23 33 12.4 +1.6
      baz=272
L27K  Beaver Creek,    43.82  38   IAmb   IAmb   23 33 35.6
      comp=Z,42nm,0.8s
L27K  Beaver Creek,    43.82  38   P      P      23 33 14.0 +1.9
      baz=278
BCAR  Beaver Creek A   43.84  38   P      P      23 33 13.3 +1.0
M27K  Edge Creek, AK   43.89  39   IAmb   IAmb   23 33 38.4
      comp=Z,30nm,0.9s
M27K  Edge Creek, AK   43.89  39   P      P      23 33 14.7 +1.9
      baz=278
F28M  Old Crow         44.16  32   IAmb   IAmb   23 33 33.0
      comp=Z,26nm,0.7s
F28M  Old Crow         44.16  32   P      P      23 33 16.3 +1.5
      baz=275,SNR=15
TNCH  TengChong        44.17 262   P      P      23 33 16.4 +0.8
TNCH                             S      S      23 39 48.5 +0.2
TNCH                             ScS    ScS    23 43 13.8 -0.1
TNCH                             pmax   pmax
      comp=Z,80nm,1.0s
TNCH                             pmax   pmax
      comp=Z,540nm,3.4s
TNCH                             LR     LR
      comp=Z,2µm,16.5s
TNCH                             LR     LR
      comp=Z,1µm,17.5s
TNCH                             LR     LR
      comp=Z,3µm,16.2s
BARN  Barnard Glacie   44.20  41   IAmb   IAmb   23 33 42.4
      comp=Z,25nm,0.8s
GRNC  Granite Creek    44.21  42   IAmb   IAmb   23 33 47.4
      comp=Z,48nm,0.9s
MESA  MESA             44.21  42   P      P      23 33 16.9 +1.4
      baz=280
E28M  Babbage River    44.21  30   IAmb   IAmb   23 33 31.6
      comp=Z,51nm,0.9s
E28M  Babbage River    44.21  30   P      P      23 33 17.1 +2.0
      baz=274,SNR=37
I28M  Miner Creek      44.34  35   P      P      23 33 18.1 +1.8
      baz=277,SNR=19
BVCY  Beaver Creek     44.35  39   P      P      23 33 18.2 +1.8
      baz=279
CTG   Chitna Glacier   44.37  41   P      P      23 33 18.2 +1.5
      baz=280
CTGM  Chitina Glacie   44.37  41   IAmb   IAmb   23 33 48.7
      comp=Z,41nm,1.0s
D28M  Stokes Point     44.45  29   P      P      23 33 18.6 +1.6
      baz=274,SNR=15
YUK3  Moose Creek      44.64  40   P      P      23 33 20.3 +1.3
      baz=280
DAWY  Dawson           44.76  37   P      P      23 33 20.9 +1.3
      baz=279
E29M  Blow River       44.83  30   P      P      23 33 21.8 +1.6
      baz=276,SNR=47
H29M  Whitestone       44.89  33   IAmb   IAmb   23 34 07.5
      comp=Z,53nm,1.1s
H29M  Whitestone       44.89  33   P      P      23 33 23.1 +2.4
      baz=277,SNR=7.9
G29M  Pine Creek       44.94  32   IAmb   IAmb   23 33 39.2
      comp=Z,58nm,0.9s
G29M  Pine Creek       44.94  32   P      P      23 33 23.3 +2.2
      baz=277,SNR=15
O28M  Mount Upton      44.95  41   P      P      23 33 23.2 +1.7
      baz=281
I29M  Ogilvie Camp,    45.03  35   P      P      23 33 22.6 +0.8
I29M                             IAmb   IAmb   23 33 53.2
      comp=Z,61nm,1.0s
I29M  Ogilvie Camp,    45.03  35   P      P      23 33 23.4 +1.6
      baz=278,SNR=14
PINM  Pinnacle         45.06  42   P      P      23 33 23.7 +1.6
      baz=282
YUK8  Steele Glacier   45.06  41   P      P      23 33 23.7 +1.4
      baz=281
MK31  Makanchi Array   45.38 298ceP     P      23 33 25.2 +0.4
MKAR  Makanchi Array   45.38 298   P      P      23 33 25.0 +0.2
      comp=Z,41nm,0.8s,baz=80,slow=8.7,SNR=124
MKAR                             LR     LR     23 53 03.1
      comp=Z,1µm,20.8s,baz=68,slow=37
      comp=Z,41nm,0.8s
MKAR  Makanchi Array   45.38 298   P      P      23 33 24.6 -0.1
MKAR  Makanchi Array   45.38 298   P      P      23 33 25.0 +0.2
MKAR  Makanchi Array   45.38 298 eP     P      23 33 25.0 +0.2
M29M  Somme Creek      45.45  39   P      P      23 33 26.6 +1.4
      baz=281
L29M  L29M             45.47  38   IAmb   IAmb   23 33 48.7
      comp=Z,30nm,0.8s
L29M  L29M             45.47  38   P      P      23 33 26.7 +1.4
      baz=281,SNR=7.2
EPYK  Eagle Plains     45.53  33   P      P      23 33 27.2 +1.5
      baz=279,SNR=17
MAKZ  Makanchi         45.57 298   P      P      23 33 26.1 -0.2
MAKZ  Makanchi         45.57 298   P      P      23 33 26.1 -0.2
MAKZ                             pmax   pmax
      comp=Z,71nm,1.0s
YUK4  Talbot Arm       45.58  40   P      P      23 33 27.8 +1.4
      baz=282
K29M  Barlow Dome      45.61  37   IAmb   IAmb   23 33 58.6
      comp=Z,45nm,1.2s
K29M  Barlow Dome      45.61  37   P      P      23 33 27.9 +1.4
      baz=280
G30M  tAoh Zraii Nji   45.64  32   P      P      23 33 28.4 +1.8
      baz=278,SNR=14
F30M  Barrier River    45.72  31   P      P      23 33 28.7 +1.6
      baz=278,SNR=28
YUK6  Outpost Mounta   45.80  41   P      P      23 33 30.0 +1.8
      baz=282
O29M  Mount Kennedy    45.83  42   P      P      23 33 29.6 +1.3
      baz=283
I30M  Mount Dempster   45.85  35   P      P      23 33 30.2 +1.8
      baz=280,SNR=16
J30M  Hart River       45.99  36   IAmb   IAmb   23 34 01.2
      comp=Z,58nm,1.4s
J30M  Hart River       45.99  36   P      P      23 33 31.3 +1.8
      baz=281,SNR=8.4
JAY   Jayapura         46.09 190   LR     LR     23 49 42.7
      comp=Z,350nm,21.0s,baz=4.5,slow=32
ZIRO  ZIRO             46.11 268 eP     P      23 33 25.1 -5.9
ZIRO                             IAmb   IAmb   23 33 31.7
      comp=Z,24nm,0.2s
M30M  Minto, Yukon     46.18  38   IAmb   IAmb   23 34 03.4
      comp=Z,18nm,1.0s
M30M  Minto, Yukon     46.18  38   P      P      23 33 32.8 +1.9
      baz=282
HYT   Haines Junctio   46.23  41   P      P      23 33 33.5 +2.1
      baz=283,SNR=14
N30M  Aishikik Lake    46.28  40   P      P      23 33 33.8 +2.0
      baz=283
MOKO  MOKOCHONG        46.31 267 eP     P      23 33 26.2 -6.3
MOKO                             IAmb   IAmb   23 33 36.4
      comp=Z,16nm,0.9s
KURK  Kurchatov        46.33 305   P      P      23 33 31.7 -0.5
KURK                             IAmb   IAmb   23 33 46.9
      comp=Z,29nm,0.6s
KURK  Kurchatov        46.33 305ceP     P      23 33 32.0 -0.1
KURK                           i *PP    pP     23 33 35.3 -0.7
KURK                             pmax   pmax
      comp=Z,107nm,1.7s
KURK  Kurchatov        46.33 305 eP     P      23 33 32.0 -0.1
MAYO  Mayo, Yukon      46.37  37   P      P      23 33 34.2 +1.8
      baz=282
P29M  Windy Craggy     46.40  42   P      P      23 33 34.9 +2.2
      baz=284
KURBB Kurchatov Arra   46.41 305   P      P      23 33 32.4 -0.4
      comp=Z,14nm,0.5s,baz=71,slow=8.8,SNR=64
KURBB                            LR     LR     23 54 20.2
      comp=Z,3µm,18.1s,baz=117,slow=38
      comp=Z,14nm,0.5s
INK   Inuvik           46.45  30   P      P      23 33 35.2 +2.3
      baz=280,SNR=22
F31M  Tsiigehtchic     46.52  31   IAmb   IAmb   23 33 51.5
      comp=Z,32nm,0.7s
F31M  Tsiigehtchic     46.52  31   P      P      23 33 35.7 +2.3
      baz=280,SNR=15
H31M  Peel River       46.58  34   P      P      23 33 35.9 +1.8
      baz=281,SNR=20
P30M  Million Dollar   46.66  42   P      P      23 33 37.7 +2.9
      baz=284
LSA   Lhasa            46.87 273   IAmb   IAmb   23 33 54.4
      comp=Z,36nm,0.9s
LSA   Lhasa            46.87 273   P      P      23 33 33.7 -3.6
LSA                              S      S      23 40 26.6 -1.1
LSA                              LR     LR
      comp=Z,1µm,15.9s
LSA                              LR     LR
      comp=Z,1µm,15.7s
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N31M  Braeburn, Yuko   46.89  40   P      P      23 33 38.8 +2.3
N31M                             IAmb   IAmb   23 34 04.6
      comp=Z,30nm,1.0s
N31M  Braeburn, Yuko   46.89  40   P      P      23 33 39.3 +2.8
      baz=284
O30N  Mendenhall       46.92  41   P      P      23 33 39.3 +2.6
      baz=284
KOHI  KOHIMA           46.96 266 eP     P      23 33 32.0 -5.7
KOHI                             IAmb   IAmb   23 33 38.5
      comp=Z,12nm,1.1s
PLBC  Pleasant Camp    47.12  42   P      P      23 33 40.5 +2.2
      baz=285
M31M  Drury Creek, Y   47.35  38   IAmb   IAmb   23 34 12.4
      comp=Z,41nm,1.3s
M31M  Drury Creek, Y   47.35  38   P      P      23 33 42.7 +2.6
      baz=284
TEZP  TEZPUR           47.39 268 eP     P      23 33 35.9 -4.9
TEZP                             IAmb   IAmb   23 33 42.8
      comp=Z,13nm,0.7s
TAWA  Tawang           47.52 270 eP     P      23 33 35.9 -6.3
TAWA                             IAmb   IAmb   23 34 02.4
      comp=Z,17nm,0.3s
WHY   Whitehorse       47.52  41   IAmb   IAmb   23 33 57.6
      comp=Z,34nm,1.0s
WHY   Whitehorse       47.52  41   P      P      23 33 43.8 +2.3
      baz=285
S31K  Pelican          47.60  44   P      P      23 33 44.3 +2.4
      baz=287
IMP   Imphal           47.60 265 eP     P      23 33 36.0 -6.5
IMP                              IAmb   IAmb   23 33 42.5
      comp=Z,17nm,0.9s
CHTO  Chiang Mai       47.80 255   P      P      23 33 44.1  0.0
CHTO                             IAmb   IAmb   23 33 46.8
      comp=Z,37nm,1.1s
CHTO  Chiang Mai       47.80 255   P      P      23 33 44.7 +0.6
      comp=Z,42nm,1.2s
CHTO  Chiang Mai       47.80 255   P      P      23 33 44.1  0.0
CHTO                             pmax   pmax
      comp=Z,37nm,1.1s
CMAR  Chiang Mai Arr   48.04 255   P      P      23 33 46.6 +0.7
      comp=Z,6.5nm,0.7s,baz=39,slow=7.7,SNR=30
CMAR                             LR     LR     23 55 45.1
      comp=Z,2µm,18.4s,baz=30,slow=38
      comp=Z,6.5nm,0.7s
CMAR  Chiang Mai Arr   48.04 255   P      P      23 33 46.0 +0.1
CMAR  Chiang Mai Arr   48.04 255 i P      P      23 33 47.0 +1.1
CMAR                             pmax   pmax
      comp=Z,7.0nm,0.8s
N32M  Quiet Lake       48.23  40   P      P      23 33 48.0 +1.1
      baz=286
R32K  Eaglecrest       48.38  44   P      P      23 33 49.1 +1.1
      baz=288
A36M  Sachs Harbour    48.50  25   P      P      23 33 49.6 +0.9
A36M  Sachs Harbour    48.50  25   P      P      23 33 49.7 +1.0
      baz=284,SNR=25
TDK   Taldyqorghan     48.57 297 eP     P      23 33 50.2 +0.5
TDK                              eS     S      23 40 51.9 +1.2
TDK                              LR     LR     23 55 33.7
      comp=Z,2µm,13.3s
TDK   Taldyqorghan     48.57 297 eP     P      23 33 50.2 +0.5
TDK                              eS     S      23 40 51.8 +1.2
TDK                              MLR    MLR
      comp=Z,2µm,13.0s
MRSI  Marisa           48.62 216   P      P      23 33 50.6 +0.3
      comp=Z,62nm,1.2s
P33M  Teslin, Yukon    48.63  41   IAmb   IAmb   23 34 10.6
      comp=Z,24nm,0.9s
P33M  Teslin, Yukon    48.63  41   P      P      23 33 52.6 +2.5
      baz=287,SNR=5.6
SHLS  Shalkode         48.64 295⇑iP     P      23 33 48.4 -2.0
      comp=Z,19nm,0.7s
SHLS  Shalkode         48.64 295c iP    P      23 33 48.4 -2.0
SHLS                             pmax   pmax
      comp=Z,19nm,0.7s
SHL   Shillong         48.67 268 eP     P      23 33 44.3 -6.7
SHL                              IAmb   IAmb   23 33 52.2
      comp=Z,14nm,1.2s
UZB   Uzynbulak        48.94 295⇑iP     P      23 33 52.9 +0.1
      comp=Z,18nm,0.8s
UZB                              eS     S      23 40 56.9 +0.7
UZB   Uzynbulak        48.94 295c iP    P      23 33 52.8 +0.1
UZB                              eS     S      23 40 56.9 +0.7
UZB                              pmax   pmax
      comp=Z,18nm,0.8s
Q32M  Nakina River     49.28  42   P      P      23 33 56.9 +1.7
      baz=289
SATY  Saty             49.38 295⇑iP     P      23 33 56.5 +0.4
      comp=Z,29nm,1.0s
SATY                             eS     S      23 41 03.6 +1.2
SATY  Saty             49.38 295c iP    P      23 33 56.5 +0.4
SATY                             eS     S      23 41 03.5 +1.2
SATY                             pmax   pmax
      comp=Z,29nm,1.0s
C36M  Paulatuk         49.56  28   P      P      23 33 58.1 +1.2
      baz=287,SNR=17
R33M  Jennings River   49.77  41   IAmb   IAmb   23 34 19.9
      comp=Z,25nm,1.0s
R33M  Jennings River   49.77  41   P      P      23 34 01.0 +2.1
      baz=289
DHUB  DHUBRI           49.79 269 eP     P      23 33 54.4 -4.8
DHUB                             IAmb   IAmb   23 34 00.8
      comp=Z,15nm,0.2s
APSI  Ampana           49.99 215   P      P      23 34 03.0 +2.2
      comp=Z,1µmcomp=Z,55nm,1.2s
GTK   Tadong           50.05 272 eP     P      23 33 55.1 -6.3
GTK                              IAmb   IAmb   23 34 18.0
      comp=Z,19nm,0.9s
BRZS  Berezniki        50.14 306 eP     P      23 34 01.9 +0.3
BRZS  Berezniki        50.14 306 eP     P      23 34 01.9 +0.3
S34M  Telegraph Cree   50.20  43   P      P      23 34 04.3 +2.4
      baz=290
MDOK  Medeo            50.23 296 eP     P      23 34 02.8 +0.2
MDOK                             eS     S      23 41 15.3 +0.9
MDOK                             LR     LR     23 56 38.0
MDOK  Medeo            50.23 296 eP     P      23 34 02.8 +0.2
MDOK                             eS     S      23 41 15.2 +0.9
BVAR  Borovoye Array   50.30 310   P      P      23 34 02.6 -0.2
      comp=Z,18nm,0.8s,baz=69,slow=8.1,SNR=51
BVAR                             LR     LR     23 57 06.7
      comp=Z,3µm,19.6s,baz=64,slow=38
      comp=Z,18nm,0.8s
AAA   Alma-Ata         50.30 296 eP     P      23 34 03.5 +0.4
      comp=Z,36nm,1.0s
AAA                              LR     LR     23 56 40.5
      comp=Z,2µm,15.2s
AAA   Alma-Ata         50.30 296 eP     P      23 34 03.4 +0.4
AAA                              pmax   pmax
      comp=Z,36nm,1.0s
AAA                              MLR    MLR
      comp=Z,2µm,15.0s
AAA   Alma-Ata         50.30 296 eP     P      23 34 03.4 +0.4
BORK  Borovoye         50.33 310   P      P      23 34 03.0  0.0
BORK                             IAmb   IAmb   23 34 05.9
      comp=Z,61nm,1.1s
BORK  Borovoye         50.33 310c iP    P      23 34 02.8 -0.2
BORK                           i *PP    sP     23 34 07.8 -0.1
BORK                             pmax   pmax
      comp=Z,63nm,1.1s
TNSS  Tian-Shan        50.36 296 eP     P      23 34 04.0 +0.1
TNSS  Tian-Shan        50.36 296 eP     P      23 34 04.0 +0.1
TARG  Taragay, Kyrgy   50.37 294   IAmb   IAmb   23 34 13.0
      comp=Z,42nm,1.0s
DLBC  Dease Lake       50.56  42   LR     LR     23 56 00.9
      comp=Z,531nm,21.9s,baz=289,slow=37
DLBC  Dease Lake       50.56  42   P      P      23 34 07.1 +2.4
      baz=291
WTLY  Watson Lake, Y   50.56  40   P      P      23 34 07.2 +2.4
      baz=290
KDJ   Kajisay          50.61 295   IAmb   IAmb   23 34 09.6
      comp=Z,52nm,0.9s
T35M  Bob Quinn        50.97  44   P      P      23 34 10.6 +2.8
      baz=292
EVN   Everest          50.99 274   P      P      23 34 09.1 -0.1
TKM2  Tokmak 2         51.29 296   P      P      23 34 11.4 +0.7
      SNR=74
BTLS  Baital           51.35 299 eP     P      23 34 10.8 -0.1
      comp=Z,32nm,1.0s
BTLS  Baital           51.35 299 eP     P      23 34 10.7 -0.1
BTLS                             pmax   pmax
      comp=Z,32nm,1.0s
SGDS  Sogindy          51.69 297⇑iP     P      23 34 13.9 +0.4
      comp=Z,29nm,1.0s
CHMS  Chumysh          51.81 297   P      P      23 34 14.6 +0.3
      SNR=9.7
WRGLY Wrigley          51.82  35   IAmb   IAmb   23 34 46.2
      comp=Z,29nm,0.9s
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WRGLY	Wrigley	51.82	35	P	P	23 34 16.5	+2.4
	baz=292,SNR=7.6						
KBK	Karagaybulak	51.84	296	P	P	23 34 15.3	+0.5
	SNR=96						
FRU1	Bishkek	51.98	296	IAmb	IAmb	23 34 19.7	
	comp=Z,71nm,1.2s						
LIRD	Liard River Hi	52.09	40	P	P	23 34 19.0	+2.9
	baz=293						
AAK	Ala-Archa	52.15	296	P	P	23 34 17.4	+0.3
	SNR=52						
AAK	Ala-Archa	52.15	296	LR	LR	23 58 45.3	
	comp=Z,2µm,18.3s,baz=74,slow=39						
AAK	Ala-Archa	52.15	296	P	P	23 34 16.8	-0.2
AAK	Ala-Archa	52.15	296	*ce*P	P	23 34 17.3	+0.3
AAK				pmax	pmax		
	comp=Z,52nm,1.0s						
AAK	Ala-Archa	52.15	296	*e*P	P	23 34 17.3	+0.3
UCH	Uchtor	52.32	296	P	P	23 34 19.1	+0.4
	SNR=23						
PMG	Port Moresby	52.46	181	LR	LR	23 55 03.7	
	comp=Z,268nm,20.1s,baz=348,slow=34						
EKS2	Erkin-Say	52.60	297	P	P	23 34 20.9	+0.6
	SNR=54						
KSH	Kashi	52.64	292	P	P	23 34 24.6	+3.9
KSH				sP	pwP	23 34 30.9	-0.2
KSH				S	S	23 41 58.1	+11
KSH				pmax	pmax		
	comp=Z,26nm,1.2s						
KSH				pmax	pmax		
	comp=Z,350nm,6.5s						
KSH				LR	LR		
	comp=Z,3µm,14.4s						
KSH				LR	LR		
	comp=Z,4µm,17.2s						
KSH				LR	LR		
	comp=Z,7µm,16.5s						
TOAD	Toad River Com	52.73	41	P	P	23 34 23.5	+2.6
	baz=294						
KOTAN	Kotaneelee Air	52.76	39	P	P	23 34 23.7	+2.6
	baz=294						
SVE	Sverdlovsk	53.92	317	*e*P	P	23 34 29.5	-0.1
SVE				pmax	pmax		
	comp=Z,87nm,1.0s						
BBB	Bella Bella	54.06	49	LR	LR	23 58 16.5	
	comp=Z,469nm,19.2s,baz=306,slow=37						
DZA	Taraz	54.08	298	*e*P	P	23 34 31.6	+0.5
	comp=Z,24nm,0.8s						
DZA	Taraz	54.08	298	*e*P	P	23 34 31.6	+0.5
DZA				pmax	pmax		
	comp=Z,24nm,0.8s						
BOK	Bokaro	54.10	270	*e*P	P	23 34 26.4	-5.1
BOK				IAmb	IAmb	23 34 47.9	
	comp=Z,10nm,0.8s						
ALCI	Alchi Leh	54.50	286	*e*P	P	23 34 29.4	-5.3
ALCI				IAmb	IAmb	23 34 38.9	
	comp=Z,19nm,0.6s						
KKAR	Karatay Array	54.51	299	P	P	23 34 34.0	-0.2
KKAR	Karatay Array	54.51	299	P	P	23 34 34.0	-0.2
JOSI	Joshimath	54.80	281	*e*P	P	23 34 31.2	-5.5
JOSI				IAmb	IAmb	23 34 52.8	
	comp=Z,15nm,1.0s						
BRLS	Borolday	54.97	299	*e*P	P	23 34 39.3	+1.7
	comp=Z,24nm,1.4s						
BRLS	Borolday	54.97	299	*e*P	P	23 34 39.2	+1.7
BRLS				pmax	pmax		
	comp=Z,24nm,1.4s						
LGTI	Lohaghat	55.06	279	*e*P	P	23 34 33.6	-5.0
LGTI				IAmb	IAmb	23 34 39.0	
	comp=Z,18nm,0.8s						
NOR	Nord	55.08	357	*i* P	P	23 34 36.8	-0.9
NOR				IAmb	IAmb	23 34 40.6	
	comp=Z,17nm,1.0s						
RES	Resolute Bay	55.20	17	LR	LR	00 02 12.5	
	comp=Z,2µm,18.8s,baz=312,slow=40						
ARTI	Arti	55.23	317	LR	LR	00 00 50.8	
	comp=Z,4µm,18.7s,baz=32,slow=39						
ARTI	Arti	55.23	317	P	P	23 34 38.4	-0.8
ARTI	Arti	55.23	317	*c i*P	P	23 34 38.3	-0.8
ARTI				S	S	23 42 24.0	+2.2
ARTI				SS	SS	23 46 03.0	-2.3
ARTI				pmax	pmax		
	comp=Z,133nm,1.4s						
ARTI				MLR	MLR		
	comp=Z,4µm,17.0s						
IUG	Iuzhnay	55.28	298	⇑*i*P	P	23 34 40.4	+0.5
	comp=Z,27nm,0.9s						
IUG	Iuzhnay	55.28	298	*c i*P	P	23 34 40.4	+0.5
IUG				pmax	pmax		
	comp=Z,27nm,0.9s						
KBS	Kingsbay	55.33	351	*i* P	P	23 34 38.9	-0.7
SPITS	Spitsbergen Ar	55.34	349	P	P	23 34 37.8	-1.9
	comp=Z,5.0nm,0.6s,baz=58,slow=10.0,SNR=9.3						
SPITS				LR	LR	00 01 37.6	
	comp=Z,920nm,18.1s,baz=30,slow=40						
	comp=Z,5.0nm,0.6s						
CHM	Chimkent	55.47	298	*e*P	P	23 34 41.7	+0.5
	comp=Z,21nm,0.7s						
CHM				LR	LR	23 59 14.8	
	comp=Z,2µm,12.5s						
CHM	Chimkent	55.47	298	*e*P	P	23 34 41.7	+0.5
CHM				pmax	pmax		
	comp=Z,21nm,0.7s						
CHM				MLR	MLR		
	comp=Z,2µm,13.0s						
YKAW3	Yellowknife Wh	55.77	34	IAmb	IAmb	23 34 58.0	
	comp=Z,18nm,0.9s						
YKA	Yellowknife Ar	55.80	34	P	P	23 34 44.2	+1.1
	comp=Z,9.0nm,1.0s,baz=299,slow=8.1,SNR=23						
YKA				LR	LR	00 01 04.9	
	comp=Z,599nm,18.9s,baz=303,slow=39						
	comp=Z,9.0nm,1.0s						
YKA	Yellowknife Ar	55.80	34	P	P	23 34 44.4	+1.2
YKA	Yellowknife Ar	55.80	34	*i* P	P	23 34 44.2	+1.1
YKA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YKAW1	Yellowknife Wh	55.86	34	IAmb	IAmb	23 35 15.0	
	comp=Z,20nm,1.0s						
TSSA	Tissa	55.97	285	*e*P	P	23 34 39.6	-5.5
TSSA				IAmb	IAmb	23 34 46.1	
	comp=Z,18nm,0.7s						
ALBI	Allahabad	56.17	274	*e*P	P	23 34 41.4	-5.0
ALBI				IAmb	IAmb	23 35 01.1	
	comp=Z,15nm,0.9s						
DHRM	DHARAMSHALA	56.18	284	*e*P	P	23 34 46.0	-0.6
DHRM				IAmb	IAmb	23 34 58.8	
	comp=Z,19nm,0.3s						
SMLA	Simla	56.19	283	*e*P	P	23 34 40.2	-6.2
SMLA				IAmb	IAmb	23 34 48.1	
	comp=Z,21nm,0.6s						
MANEM	Manem	56.54	292	IAmb	IAmb	23 35 05.5	
	comp=Z,53nm,0.8s						
BHK	Bhakra	56.60	283	*e*P	P	23 34 41.4	-8.0
BHK				IAmb	IAmb	23 35 04.0	
	comp=Z,18nm,1.1s						
COEN	Coen	57.16	186	P	P	23 34 53.4	+0.1
	comp=Z,13nm,0.8s						
KDU	Kakadu	57.52	198	P	P	23 34 55.5	-0.3
	comp=Z,11nm,0.9s						
NIL	Nilore	57.55	287	P	P	23 34 56.3	+0.2
NIL	Nilore	57.55	287	P	P	23 34 56.3	+0.2
NIL				pmax	pmax		
	comp=Z,84nm,1.0s						
NPLP	NPLP New Delhi	57.59	280	*e*P	P	23 34 51.0	-5.4
NPLP				IAmb	IAmb	23 34 57.9	
	comp=Z,20nm,1.0s						
AYAN	Aya Nagar	57.71	280	*e*P	P	23 34 51.6	-5.6
AYAN				IAmb	IAmb	23 35 12.3	
	comp=Z,14nm,0.8s						
BLSP	Bilaspur	57.84	271	*e*P	P	23 34 52.2	-6.0
BLSP				IAmb	IAmb	23 34 59.2	
	comp=Z,17nm,0.8s						
ABKAR	Akbulak array	57.86	309	P	P	23 34 58.1	+0.1
MTN	Manton Dam	57.98	200	P	P	23 34 59.8	+0.7
	comp=Z,25nm,0.9s						
MTN	Manton Dam	57.98	200	P	P	23 34 59.5	+0.4
MTN				IAmb	IAmb	23 35 01.5	
	comp=Z,26nm,1.1s						
TULEG	Thule	58.16	10	*i* P	P	23 34 59.0	-0.6
TULEG				IAmb	IAmb	23 35 02.0	
	comp=Z,76nm,1.3s						
AKTO	Aktyubinsk	58.33	311	LR	LR	00 02 05.3	
	comp=Z,2µm,19.2s,baz=72,slow=38						
KIRV	Kirov	58.35	323	LR	LR	00 02 44.0	
	comp=Z,4µm,18.0s,baz=47,slow=39						
KIRV	Kirov	58.35	323	*ce*P	P	23 35 01.1	-0.1
KIRV				*i* *PP	pwP	23 35 09.8	-0.9
JHNI	Jhansi	58.41	276	*e*P	P	23 34 56.4	-5.8
JHNI				IAmb	IAmb	23 35 16.1	
	comp=Z,12nm,1.2s						
VADS	Vadso	58.51	339	*e*P	P	23 35 02.0	-0.2
RAGD	RAYAGADA	58.68	267	*e*P	P	23 34 59.2	-4.9
RAGD				IAmb	IAmb	23 35 02.2	
	comp=Z,12nm,1.6s						
SHAA	Shahritus	58.92	294	P	P	23 35 05.2	-0.4
SHAA				IAmb	IAmb	23 35 44.4	
	comp=Z,180nm,1.2s						
NEEM	North Greenlan	58.94	5	*i* P	P	23 35 04.6	-0.9
NEEM				IAmb	IAmb	23 35 08.1	
	comp=Z,63nm,0.9s						
APA	Apatity	59.05	336	*e*P	P	23 35 04.2	-1.8
APA				MLR	MLR		
	comp=Z,2µm,15.5s						
KEV	Kevo	59.36	340	P	P	23 35 06.8	-1.3
KEV	Kevo	59.36	340	P	P	23 35 06.8	-1.3
KEV				pmax	pmax		
	comp=Z,47nm,1.0s						
HAMF	Hammerfest	59.54	341	*e*P	P	23 35 08.3	-1.0
GUNA	GUNA	59.82	276	*e*P	P	23 35 06.7	-5.4
GUNA				IAmb	IAmb	23 35 11.8	
	comp=Z,11nm,0.8s						
ARA0	ARCESS Array S	59.89	340	*e*P	P	23 35 11.7	-0.1
ARCES	ARCESS Array B	59.89	340	P	P	23 35 11.3	-0.5
	comp=Z,22nm,0.8s,baz=45,slow=5.6,SNR=28						
ARCES				LR	LR	00 05 13.2	
	comp=Z,2µm,19.6s,baz=39,slow=40						
	comp=Z,22nm,0.8s						
ARCES	ARCESS Array B	59.89	340	P	P	23 35 11.2	-0.7
DAG	Danmarks Havn	59.90	356	*i* P	P	23 35 10.0	-1.8
DAG				IAmb	IAmb	23 35 13.6	
	comp=Z,37nm,1.1s						
KBL	Kabul	59.96	291	P	P	23 35 11.4	-1.7
KBL	Kabul	59.96	291	P	P	23 35 11.4	-1.7
KBL				pmax	pmax		
	comp=Z,72nm,0.9s						
POIN	Pond Inlet	59.97	14	IAmb	IAmb	23 35 26.8	
	comp=Z,21nm,0.8s						
BHPL	Bhopal	60.61	275	*e*P	P	23 35 12.1	-5.4
BKNR	BIKANER	60.74	282	*e*P	P	23 35 11.5	-6.8
BKNR				IAmb	IAmb	23 35 20.4	
	comp=Z,19nm,0.3s						
KTK1	Kautokeino	60.83	340	*e*P	P	23 35 18.0	-0.2
JETT	Jettan, Norway	61.11	341	*e*P	P	23 35 20.1	-0.1
NRDN	NARMADA NAGAR	61.11	275	*e*P	P	23 35 15.1	-5.8
NRDN				IAmb	IAmb	23 35 27.1	
	comp=Z,23nm,1.2s						
KLMR	Klimovskoe	61.16	328	*e*P	P	23 35 18.7	-1.9
KLMR				*e*		23 36 00.6	
KLMR				pmax	pmax		
	comp=Z,53nm,0.9s						
KLMR				MLR	MLR		
	comp=Z,2µm,16.0s						
HOOD	Mount Hood Mea	61.20	54	P	P	23 35 22.5	+1.2
HOOD				IAmb	IAmb	23 35 41.2	
	comp=Z,28nm,0.9s						
MTSU	Mount Surprise	61.23	184	P	P	23 35 23.0	+1.5
	comp=Z,5.5nm,0.8s						
H04A	Detroit Lake	61.24	54	IAmb	IAmb	23 35 39.0	
	comp=Z,19nm,1.1s						
EDM	Edmonton	61.28	43	P	P	23 35 22.3	+0.7
EDM				IAmb	IAmb	23 35 39.6	
	comp=Z,18nm,0.8s						
EDM	Edmonton	61.28	43	P	P	23 35 22.3	+0.7
EDM				pmax	pmax		
	comp=Z,18nm,0.8s						
TRO	Tromso	61.39	342	*e*P	P	23 35 21.8	-0.1
BLKN	Baker Lake	61.57	26	P	P	23 35 23.3	0.0
WIFE	Three Sisters-	61.80	55	IAmb	IAmb	23 35 45.5	
	comp=Z,10nm,0.9s						
ILON	Igloolik, Nuna	61.81	18	P	P	23 35 24.5	-0.3
G06A	Carlson Farm,	61.84	53	IAmb	IAmb	23 35 45.5	
	comp=Z,22nm,1.4s						
F07A	Phinny Hill Vi	61.88	52	P	P	23 35 28.0	+2.3
F07A				IAmb	IAmb	23 35 45.5	
	comp=Z,22nm,0.8s						
MASI	Maura Aman, Be	61.91	234	P	P	23 35 28.5	+2.2
NEW	Newport	62.13	49	IAmb	IAmb	23 35 45.7	
	comp=Z,30nm,1.6s						
DBG	Daneborg	62.41	356	*i* P	P	23 35 28.2	-0.5
DBG				IAmb	IAmb	23 35 31.1	
	comp=Z,19nm,1.0s						
AKL	Akola	62.47	273	*e*P	P	23 35 24.1	-5.9
AKL				IAmb	IAmb	23 35 31.6	
	comp=Z,20nm,1.3s						
PINE	Pine Mountain	62.48	55	IAmb	IAmb	23 35 50.3	
	comp=Z,16nm,0.9s						
UDPR	Udaipur	62.48	279	*e*P	P	23 35 24.7	-5.4
UDPR				IAmb	IAmb	23 35 44.8	
	comp=Z,27nm,0.8s						
L04D	Klamath Falls	62.55	57	IAmb	IAmb	23 35 50.5	
	comp=Z,22nm,1.0s						
E09A	Wood Farm, Sta	62.55	51	IAmb	IAmb	23 35 49.5	
	comp=Z,13nm,0.9s						
YBH	Yreka Blue Hor	62.58	57	LR	LR	00 04 14.9	
	comp=Z,15nm,18.6s,baz=296,slow=38						
J05D	Fort Rock, OR	62.59	55	P	P	23 35 32.5	+1.8
J05D				IAmb	IAmb	23 35 51.0	
	comp=Z,15nm,1.0s						
BELG	Belogornoye	62.67	317	LR	LR	00 05 29.3	
	comp=Z,2µm,18.3s,baz=95,slow=39						
BELG	Belogornoye	62.67	317	*i* P	P	23 35 31.0	+0.2
BELG				pmax	pmax		
	comp=Z,4.0nm,0.3s						
M02C	Callahan	62.68	58	IAmb	IAmb	23 35 52.7	
	comp=Z,17nm,1.4s						
JASL	Jaisalmer	63.08	283	*e*P	P	23 35 27.7	-6.3
JASL				IAmb	IAmb	23 35 35.9	
	comp=Z,26nm,0.3s						
CTA	Charters Tower	63.10	182	LR	LR	00 03 17.0	
	comp=Z,8.7nm,18.9s,baz=9.5,slow=36						
K05A	Summer Lake	63.12	56	IAmb	IAmb	23 35 52.5	
	comp=Z,23nm,1.0s						
O02D	Mt. Diablo Mer	63.42	59	IAmb	IAmb	23 36 23.8	
	comp=Z,13nm,1.1s						
HYB	Hyderabad	63.43	269	*e*P	P	23 35 30.7	-5.7
HYB	Hyderabad	63.43	269	*e*P	P	23 35 36.3	-0.1
HYB				*e*pP	pP	23 35 39.2	-0.6
HYB				*e*PcP	PcP	23 36 13.3	+0.1
HYB				*e*S	S	23 44 10.4	+1.6
STEI	Steigen	63.56	342	*e*P	P	23 35 37.7	+1.2
FAUS	Fauske	63.99	342	*e*P	P	23 35 40.8	+1.5
WB0	Warramunga Arr	64.01	194	IAmb	IAmb	23 35 55.0	
	comp=Z,19nm,0.8s						
WR8	Warramunga Arr	64.17	194	IAmb	IAmb	23 35 55.7	
	comp=Z,14nm,0.7s						
WRA	Warramunga Arr	64.19	194	P	P	23 35 40.5	-0.7
	comp=Z,6.2nm,0.9s,baz=13,slow=6.7,SNR=22						
WRA				PKP2bc	P'P'bc	00 04 37.1	+6.7
	comp=Z,2.8nm,1.2s,baz=195,slow=2.6,SNR=6.0						
	comp=Z,6.2nm,0.9s						
WRA	Warramunga Arr	64.19	194	P	P	23 35 39.8	-1.3
WRA	Warramunga Arr	64.19	194	P	P	23 35 39.8	-1.3
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
LATR	Latur	64.27	271	*e*P	P	23 35 36.1	-5.9
LATR				IAmb	IAmb	23 35 43.3	
	comp=Z,21nm,0.8s						
SUMG	Summit	64.33	2	*i* P	P	23 35 42.0	0.0
SUMG				IAmb	IAmb	23 35 45.4	
	comp=Z,46nm,0.9s						
FITZ	Fitzroy Crossi	64.48	204	LR	LR	00 05 48.2	
	comp=Z,86nm,19.1s,baz=17,slow=38						
FITZ	Fitzroy Crossi	64.48	204	P	P	23 35 42.7	-0.3
PLID	Pearl Lake	64.60	51	IAmb	IAmb	23 36 03.2	
	comp=Z,14nm,1.0s						
HRA	Herat	64.64	294	P	P	23 35 43.5	-0.9
MSO	Missoula	64.72	49	IAmb	IAmb	23 36 03.7	
	comp=Z,20nm,1.0s						
JMIC	Jan Mayen	64.78	352	LR	LR	00 03 21.0	
	comp=Z,414nm,20.3s,baz=20,slow=36						
VAGH	Vaagaholmen	64.98	342	*e*P	P	23 35 45.2	-0.6
MDRS	Chennai	65.03	264	*e*P	P	23 35 42.1	-4.7
RAUS	Rausandaksla	65.05	341	*e*P	P	23 35 46.0	-0.3
BEKR	Beckworth	65.11	58	IAmb	IAmb	23 36 04.7	
	comp=Z,14nm,1.2s						
MOR8	Moi Rana	65.17	341	*e*P	P	23 35 45.8	-1.3
MOS	Moscow	65.20	324	*e*P	P	23 35 45.5	-1.9
MOS				*e*S	S	23 44 25.1	-4.5
MOS				pmax	pmax		
	comp=Z,148nm,1.6s						
MOS				MLR	MLR		
	comp=Z,2µm,15.0s						
MOS				MLR	MLR		
	comp=E,1µm,14.0s						
MOS				MLR	MLR		
	comp=N,2µm,15.0s						
LEIR	Leirfjorden	65.53	342	*e*P	P	23 35 49.6	+0.3
FINES	FINESS Array B	65.57	333	P	P	23 35 49.4	-0.3
	comp=N,19nm,0.8s,baz=40,slow=7.4,SNR=56						
FINES				LR	LR	00 08 42.3	
	comp=N,1µm,19.6s,baz=40,slow=40						
	comp=N,19nm,0.8s						
FINES	FINESS Array B	65.57	333	P	P	23 35 48.7	-1.0
FINES	FINESS Array B	65.57	333	*i* P	P	23 35 49.4	-0.3
FINES				pmax	pmax		
	comp=Z,20nm,0.8s						
FFC	Flin Flon	65.66	37	P	P	23 35 51.4	+1.0
FFC				IAmb	IAmb	23 36 05.4	
	comp=Z,18nm,0.9s						
FFC	Flin Flon	65.66	37	P	P	23 35 51.4	+1.0
FFC				pmax	pmax		
	comp=Z,18nm,0.9s						
OBN	Obninsk	66.06	324	LR	LR	00 06 21.1	
	comp=Z,548nm,21.2s,baz=352,slow=38						
OBN	Obninsk	66.06	324	P	P	23 35 52.3	-0.6
OBN	Obninsk	66.06	324	*c i*P	P	23 35 52.7	-0.3
OBN				*e**PP	pP	23 35 56.7	+0.1
OBN				*e**SP	sP	23 35 58.1	+0.1
OBN				*i*		23 36 19.7	
OBN						23 38 21.0	
OBN				*i* SS	SS	23 49 01.5	+6.8
OBN				pmax	pmax		
	comp=Z,28nm,0.5s						
OBN				MLR	MLR		
	comp=Z,3µm,15.0s						
OBN	Obninsk	66.06	324	*e*P	P	23 35 52.3	-0.6
OBN	Obninsk	66.06	324	P	P	23 35 52.6	-0.4
	comp=Z,75nm,1.0s						
CMB	Columbia Colle	66.19	60	IAmb	IAmb	23 36 23.6	
	comp=Z,38nm,1.9s						
SCO	Scoresbysund	66.29	356	*i* P	P	23 35 54.4	+0.2
SCO				IAmb	IAmb	23 35 57.4	
	comp=Z,23nm,0.8s						
VRH	Novokhopyorsk	66.29	319	*c i*P	P	23 35 54.0	-0.5
VRH				pmax	pmax		
	comp=Z,73nm,0.6s						
DLMT	Dillon	66.35	49	IAmb	IAmb	23 36 14.6	
	comp=Z,14nm,1.1s						
LPSR	Galich'ya Gora	66.69	321	*c i*P	P	23 35 56.7	-0.4
LPSR				pmax	pmax		
	comp=Z,65nm,0.7s						
BOZ	Bozeman (W)	66.74	49	IAmb	IAmb	23 36 17.0	
	comp=Z,15nm,0.8s						
VORR	Voronezh	67.18	320	*e*P	P	23 36 00.0	-0.2
VORR				pmax	pmax		
	comp=Z,52nm,0.5s						
DZM	Mont Dzumac	67.22	161	LR	LR	00 05 15.3	
	comp=Z,640nm,18.7s,baz=358,slow=36						
DZM	Mont Dzumac	67.22	161	*e*P	P	23 35 58.8	-1.9
	comp=Z,34nm,1.2s						
DZM				*e*S	S	23 44 48.0	-6.9
	comp=Z,260nm,24.6s						
DZM				*e*SS	SS	23 49 12.3	-2.7
	comp=Z,178nm,27.0s						
DZM				*e*LQ	LQ	23 53 10.4	
	comp=Z,1µm,28.4s						
DZM				*e*LR	LR	23 56 13.3	
	comp=Z,849nm,20.8s						
NVAR	Mina Array Bea	67.25	58	P	P	23 36 02.5	+1.3
	comp=Z,2.8nm,0.8s,baz=289,slow=6.2,SNR=16						
NVAR				LR	LR	00 07 15.5	
	comp=Z,151nm,18.6s,baz=328,slow=38						
	comp=Z,2.8nm,0.8s						
NVAR	Mina Array Bea	67.25	58	P	P	23 36 01.7	+0.5
VSR	Storozhevoye	67.50	320	*e*P	P	23 36 00.3	-1.9
VSR				pmax	pmax		
	comp=Z,60nm,0.7s						
VSR				MLR	MLR		
	comp=Z,2µm,14.0s						
VSU	Vasula	67.55	331	*ce*P	P	23 36 02.1	-0.3
VSU				pmax	pmax		
	comp=Z,121nm,1.3s						
VORD	Divnogorie	67.61	320	*e*P	P	23 36 02.8	-0.1
VORD				pmax	pmax		
	comp=Z,90nm,1.0s						
AS31	Alice Springs	67.90	194	P	P	23 36 05.5	+0.5
ASAR	Alice Springs	67.90	194	P	P	23 36 05.5	+0.6
	comp=Z,3.8nm,0.9s,baz=12,slow=6.3,SNR=28						
ASAR				PKP2bc		00 04 28.2	
	comp=Z,0.9nm,0.7s,baz=188,slow=2.1,SNR=7.6						
ASAR				LR	LR	00 07 13.6	
	comp=Z,286nm,18.9s,baz=9.0,slow=37						
	comp=Z,3.8nm,0.9s						
ASAR	Alice Springs	67.90	194	P	P	23 36 04.5	-0.5
ASAR	Alice Springs	67.90	194	P	P	23 36 04.5	-0.5
FXWY	Fox Creek	68.31	50	IAmb	IAmb	23 36 27.9	
	comp=Z,35nm,1.7s						
RLMT	Red Lodge	68.33	48	IAmb	IAmb	23 36 29.6	
	comp=Z,21nm,1.4s						
MAK	Makhachkala	68.53	309	*e*P	P	23 36 02.3	-6.6
MAK				*e*S	S	23 45 00.9	-9.4
MAK				*e*SS	SS	23 49 30.8	-2.8
MAK				pmax	pmax		
	comp=Z,903nm,1.7s						
GMN	Gold Mountain	68.60	59	IAmb	IAmb	23 36 41.1	
	comp=Z,25nm,1.8s						
PALK	Pallekele	68.61	260	LR	LR	00 08 27.4	
	comp=Z,1µm,19.4s,baz=46,slow=38						
KOD	Kodaikanal	68.94	264	*e*P	P	23 36 06.8	-5.4
KOD				IAmb	IAmb	23 36 25.5	
	comp=Z,21nm,1.0s						
SFJD	Kangerlussuaq	69.11	8	LR	LR	00 08 59.9	
	comp=Z,908nm,18.2s,baz=341,slow=38						
WCT	Wildcat Mounta	69.31	59	P	P	23 36 14.8	+0.8
WCT				IAmb	IAmb	23 36 33.7	
	comp=Z,18nm,1.5s						
CLC	China Lake	69.31	60	IAmb	IAmb	23 36 45.8	
	comp=Z,53nm,2.0s						
S11A	Rachel	69.32	58	IAmb	IAmb	23 36 55.5	
	comp=Z,39nm,1.2s						
AKT	Akhty	69.35	308	*e*P	P	23 36 14.6	+0.4
AKT				*e*		23 36 36.3	
AKT				*e*S	S	23 45 23.1	+2.8
AKT				pmax	pmax		
	comp=Z,76nm,0.9s						
AKT				MLR	MLR		
	comp=Z,4µm,16.0s						
FURC	Furnace Creek,	69.37	59	IAmb	IAmb	23 36 32.5	
	comp=Z,21nm,0.9s						
FRB	Frobisher Bay	69.42	16	LR	LR	00 08 44.4	
	comp=Z,779nm,19.9s,baz=351,slow=38						
PSAC1	Pilbara Seismi	69.56	208	P	P	23 36 16.3	+1.0
	comp=Z,18nm,1.1s						
PSA00	Pilbara Seismi	69.58	208	P	P	23 36 14.4	-1.0
GOF	Gofitskoye	69.63	313	*ce*P	P	23 36 16.2	+0.5
QSM	Queen of Sheba	69.68	60	IAmb	IAmb	23 36 34.4	
	comp=Z,12nm,0.8s						
PDAR	Pinedale Array	69.69	50	P	P	23 36 17.1	+0.7
	comp=Z,1.1nm,0.7s,baz=323,slow=2.2,SNR=9.7						
	comp=Z,1.1nm,0.7s						
PDAR	Pinedale Array	69.69	50	P	P	23 36 16.5	+0.1
KHAM	Kharkiv	69.69	320	P	P	23 36 16.2	+0.2
PRN	Pahroc Range	69.90	57	IAmb	IAmb	23 36 49.3	
	comp=Z,22nm,1.5s						
PSUT	Pine Spring	69.91	56	P	P	23 36 18.2	+0.4
DOMB	Dombas	69.93	341	*e*P	P	23 36 17.0	-0.3
MNK	Minsk	70.05	328	*i* P	P	23 36 18.5	+0.4
MNK				*i*		23 38 53.7	
MNK				*i* PPP	PPP	23 40 36.2	
MNK				*i* S	S	23 45 29.8	+1.9
MNK				*i* SS	SS	23 49 58.9	+2.5
MNK				pmax	pmax		
	comp=Z,83nm,1.0s						
MNK				pmax	pmax		
	comp=E,55nm,1.0s						
MNK				pmax	pmax		
	comp=N,28nm,1.0s						
MNK				MLR	MLR		
	comp=E,2µm,17.0s						
MNK				MLR	MLR		
	comp=Z,3µm,17.0s						
MNK				MLR	MLR		
	comp=N,1µm,15.0s						
NC303	NORSAR Array S	70.06	339	P	P	23 36 17.6	-0.4
NB2	NORSAR Subarra	70.25	339	P	P	23 36 18.9	-0.3
	comp=Z,63nm,1.1s,baz=30,slow=6.2						
NB2	NORSAR Subarra	70.25	339	P	P	23 36 18.9	-0.3
	baz=30,slow=6.2						

NOA	**NORSAR Array B**	**70.25**	**339**	P	**P**	**23 36 19.0**	**-0.3**
	comp=Z,31nm,1.0s,baz=32,slow=6.2,SNR=48						
NOA				LR	LR	00 12 00.3	
	comp=Z,549nm,19.6s,baz=25,slow=40						
	comp=Z,31nm,1.0s						
NOA	**NORSAR Array B**	**70.25**	**339**	P	**P**	**23 36 19.0**	**-0.3**
HFS	**Hagfors**	**70.35**	**338**	P	**P**	**23 36 19.5**	**-0.4**
	comp=Z,30nm,0.8s,baz=51,slow=5.9,SNR=42						
HFS				LR	LR	00 11 20.8	
	comp=Z,2µm,18.3s,baz=33,slow=40						
	comp=Z,30nm,0.8s						
WRKA	**Warakurna**	**70.39**	**199**	P	**P**	**23 36 21.0**	**+0.6**
	comp=Z,5.9nm,1.3s						
NC602	**NORSAR Array S**	**70.43**	**339**	IAmb	IAmb	23 36 35.8	
	comp=Z,34nm,1.1s						
ERBR	**Yeremizino-Bor**	**70.54**	**315**	*e*P	**P**	**23 36 21.7**	**+0.5**
ERBR				pmax	pmax		
	comp=Z,205nm,1.0s						
KVAR	**Kislovodsk Arr**	**70.55**	**312**	LR	LR	00 12 24.7	
	comp=Z,3µm,18.6s,slow=40						
KIV	**Kislovodsk**	**70.55**	**312**	P	**P**	**23 36 21.3**	**-0.1**
KIV	**Kislovodsk**	**70.55**	**312**	⇓P	**P**	**23 36 23.1**	**+1.6**
KIV	**Kislovodsk**	**70.55**	**312**	*e*P	**P**	**23 36 20.5**	**-1.0**
KIV				*e*		23 38 56.7	
KIV				*e*S	**S**	**23 45 34.4**	**+0.1**
KIV				pmax	pmax		
	comp=Z,113nm,4.0s						
KIV				pmax	pmax		
	comp=Z,126nm,1.1s						
KIV				MLR	MLR		
	comp=Z,3µm,18.0s						
KIV	**Kislovodsk**	**70.55**	**312**	*e*P	**P**	**23 36 21.3**	**-0.1**
KIV	**Kislovodsk**	**70.55**	**312**	P	**P**	**23 36 22.2**	**+0.7**
	comp=Z,1µmcomp=Z,152nm,0.8s						
KBZ	**Khabaz**	**70.59**	**312**	P	**P**	**23 36 22.4**	**+1.0**
	comp=Z,54nm,0.8s,baz=56,slow=4.4,SNR=60						
KBZ				LR	LR	00 12 14.2	
	comp=Z,3µm,18.6s,baz=41,slow=40						
KBZ	**Khabaz**	**70.59**	**312**	*ce*P	**P**	**23 36 22.5**	**+1.0**
KBZ				pmax	pmax		
	comp=Z,66nm,0.9s						
RDMU	**Red Mountain**	**71.12**	**52**	IAmb	IAmb	23 36 44.4	
	comp=Z,22nm,0.7s						
LABN	**Labinsk**	**71.14**	**314**	*e*P	**P**	**23 36 24.7**	**-0.2**
LABN				*e*S	**S**	**23 45 43.3**	**+2.4**
LABN				pmax	pmax		
	comp=Z,127nm,1.1s						
P17A	**Butcher Ranch,**	**71.16**	**53**	IAmb	IAmb	23 36 45.0	
	comp=Z,20nm,1.3s						
HYA	**Hoyanger**	**71.37**	**342**	*e*P	**P**	**23 36 26.4**	**+0.4**
PFO	**Pinyon Flats O**	**71.44**	**61**	LR	LR	00 02 20.7	
	comp=Z,450nm,21.3s,baz=298,slow=31						
K22A	**Casper**	**71.45**	**49**	P	**P**	**23 36 27.4**	**+0.4**
K22A				IAmb	IAmb	23 36 46.6	
	comp=Z,34nm,1.5s						
ULM	**Lac du Bonnet**	**71.45**	**37**	P	**P**	**23 36 26.6**	**-0.1**
	comp=Z,1.9nm,0.5s,baz=326,slow=1.8,SNR=2.2						
ULM				LR	LR	00 09 35.2	
	comp=Z,684nm,18.6s,baz=337,slow=37						
	comp=Z,1.9nm,0.5s						
KNB	**Kanab**	**71.51**	**56**	IAmb	IAmb	23 37 08.6	
	comp=Z,19nm,1.1s						
SRU	**San Rafael Swe**	**71.52**	**54**	IAmb	IAmb	23 36 50.1	
	comp=Z,13nm,0.8s						
RSSD	**Black Hills**	**71.79**	**46**	P	**P**	**23 36 29.2**	**+0.1**
RSSD				IAmb	IAmb	23 36 48.7	
	comp=Z,28nm,1.4s						
RSSD	**Black Hills**	**71.79**	**46**	P	**P**	**23 36 29.2**	**+0.1**
RSSD				pmax	pmax		
	comp=Z,28nm,1.5s						
BORG	**Borgarnes**	**71.97**	**355**	LR	LR	00 08 13.0	
	comp=Z,394nm,18.5s,baz=360,slow=36						
STRU	**Stroemstad**	**71.97**	**338**	*i* P	**P**	**23 36 29.0**	**-0.6**
SUW	**Suwalki**	**72.22**	**329**	*e*P	**P**	**23 36 33.8**	**+2.6**
AK03	**Malin Array Si**	**72.31**	**324**	P	**P**	**23 36 31.8**	**0.0**
AK23	**Malin Array Si**	**72.33**	**324**	P	**P**	**23 36 32.0**	**+0.1**
AKASG	**Malin Array Be**	**72.33**	**324**	P	**P**	**23 36 31.6**	**-0.2**
	comp=Z,33nm,0.7s,baz=39,slow=6.3,SNR=68						
AKASG				LR	LR	00 12 43.6	
	comp=Z,2µm,18.6s,baz=36,slow=40						
	comp=Z,33nm,0.7s						
AKASG	**Malin Array Be**	**72.33**	**324**	P	**P**	**23 36 31.8**	**-0.1**
AKASG	**Malin Array Be**	**72.33**	**324**	*i* P	**P**	**23 36 31.7**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,43nm,0.8s						
AKBB	**Malin Array Si**	**72.33**	**324**	*ce*P	**P**	**23 36 31.6**	**-0.3**
AKBB				pmax	pmax		
	comp=Z,95nm,0.9s						
AKBB	**Malin Array Si**	**72.33**	**324**	P	**P**	**23 36 31.9**	**0.0**
AK04	**Malin Array Si**	**72.34**	**324**	P	**P**	**23 36 32.0**	**0.0**
AK01	**Malin Array Si**	**72.34**	**324**	P	**P**	**23 36 32.1**	**+0.1**
KIEV	**Kiev**	**72.34**	**324**	P	**P**	**23 36 31.4**	**-0.5**
KIEV	**Kiev**	**72.34**	**324**	⇑P	**P**	**23 36 31.9**	**-0.1**
KIEV	**Kiev**	**72.34**	**324**	P	**P**	**23 36 31.5**	**-0.5**
KIEV				pmax	pmax		
	comp=Z,82nm,1.0s						
KIEV	**Kiev**	**72.34**	**324**	P	**P**	**23 36 31.9**	**-0.1**
	comp=Z,5µmcomp=Z,379nm,1.0s						
AK15	**Malin Array Si**	**72.38**	**324**	P	**P**	**23 36 32.2**	**0.0**
SOC	**Sochi**	**72.39**	**314**	*e*P	**P**	**23 36 30.2**	**-2.2**
SOC				*e*S	**S**	**23 45 52.4**	**-2.9**
AK06	**Malin Array Si**	**72.42**	**324**	P	**P**	**23 36 32.5**	**0.0**
TJOU	**Tjoern**	**72.70**	**337**	*i* P	**P**	**23 36 33.1**	**-0.9**
ANN	**Anapa**	**72.73**	**316**	*e*P	**P**	**23 36 34.5**	**+0.1**
ANN				*e*S	**SKiKP**	**23 46 07.5**	**0.0**
ANN				pmax	pmax		
	comp=Z,61nm,0.7s						
PV21	**Cone Mtn., Par**	**72.79**	**53**	IAmb	IAmb	23 36 59.1	
	comp=Z,9.7nm,0.7s						
EPLO	**Experimental L**	**72.82**	**37**	IAmb	IAmb	23 36 54.3	
	comp=Z,21nm,1.1s						
PV23	**Carpenter Ridg**	**72.84**	**53**	IAmb	IAmb	23 36 55.2	
	comp=Z,18nm,0.8s						
AGMN	**Agassiz Nation**	**72.88**	**39**	IAmb	IAmb	23 36 50.8	
	comp=Z,64nm,1.8s						
PV14	**Lion Creek, Pa**	**72.89**	**53**	IAmb	IAmb	23 36 55.4	
	comp=Z,42nm,1.5s						
PV22	**Blue Mesa, Par**	**72.92**	**53**	P	**P**	**23 36 36.5**	**+0.6**
PV20	**West Nyswonger**	**72.94**	**53**	IAmb	IAmb	23 36 55.6	
	comp=Z,32nm,0.9s						
PV04	**Paradox Valley**	**72.94**	**53**	IAmb	IAmb	23 36 55.2	
	comp=Z,12nm,0.8s						
PV17	**East Wray Mesa**	**72.99**	**53**	IAmb	IAmb	23 36 54.2	
	comp=Z,15nm,0.6s						
PV11	**David Mesa, Pa**	**73.03**	**53**	IAmb	IAmb	23 36 56.7	
	comp=Z,17nm,0.8s						
PV18	**Skein Mesa, Pa**	**73.04**	**53**	IAmb	IAmb	23 36 56.7	
	comp=Z,23nm,0.7s						
PV05	**Paradox Valley**	**73.04**	**54**	IAmb	IAmb	23 36 57.0	
	comp=Z,15nm,0.7s						
PV12	**Saucer Basin,**	**73.05**	**53**	IAmb	IAmb	23 36 55.8	
	comp=Z,16nm,0.8s						
PV13	**Radium Mtn., P**	**73.15**	**53**	IAmb	IAmb	23 36 57.1	
	comp=Z,46nm,1.5s						
ONAU	**Onsala**	**73.16**	**337**	*i* P	**P**	**23 36 36.7**	**0.0**
PV02	**Paradox Valley**	**73.17**	**53**	IAmb	IAmb	23 37 13.5	
	comp=Z,37nm,1.4s						
RNPP9	**Sopachiv**	**73.18**	**326**	P	**P**	**23 36 37.0**	**+0.1**
RNPP8	**Varash**	**73.25**	**326**	P	**P**	**23 36 37.5**	**+0.1**
PV01	**Paradox Valley**	**73.31**	**53**	IAmb	IAmb	23 36 58.5	
	comp=Z,30nm,1.6s						
DEL	**Delary**	**73.37**	**335**	*i* P	**P**	**23 36 39.4**	**+1.4**
LUBAR	**Lubar, Ukraine**	**73.54**	**324**	P	**P**	**23 36 39.0**	**-0.1**
SNART	**Snartemo**	**73.62**	**340**	*i* P	**P**	**23 36 39.2**	**-0.2**
ISCO	**Idaho Springs**	**73.88**	**50**	P	**P**	**23 36 43.2**	**+1.5**
ISCO	**Idaho Springs**	**73.88**	**50**	P	**P**	**23 36 43.2**	**+1.5**
ISCO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LUNU	**Lund**	**74.21**	**335**	*i* P	**P**	**23 36 41.0**	**-1.9**
BAL3X	**Bal3x, Balta**	**74.22**	**322**	P	**P**	**23 36 43.3**	**+0.2**
SIM	**Simferopol'**	**74.29**	**318**	*e*P	**P**	**23 36 45.1**	**+1.5**
SIM				*e*		23 36 59.4	
SIM				*e*S	**S**	**23 46 16.3**	**-0.5**
SIM				pmax	pmax		
	comp=Z,65nm,1.1s						
SIM				smax	smax		
	comp=N,165nm,14.9s						
SIM				MLR	MLR		
	comp=Z,3µm,18.9s						
KOPT	**Kop Dagi**	**74.42**	**311**	IAmb	IAmb	23 37 03.0	
	comp=Z,43nm,1.0s						
NE56	**Odesa**	**74.56**	**321**	P	**P**	**23 36 45.3**	**+0.2**
UOSS	**Minazif**	**74.62**	**290**	P	**P**	**23 36 45.0**	**-0.8**
UOSS				IAmb	IAmb	23 37 09.6	
	comp=Z,30nm,0.8s						
SORM	**Soroca**	**74.63**	**323**	⇑P	**P**	**23 36 46.0**	**+0.5**
SORM	**Soroca**	**74.63**	**323**	⇑P	**P**	**23 36 46.0**	**+0.5**
HORU	**Horodok**	**74.64**	**325**	P	**P**	**23 36 45.7**	**+0.1**
BEL	**Belsk**	**74.83**	**329**	*e*P	**P**	**23 36 47.4**	**+0.8**
GKP	**Gorka Klasztor**	**74.94**	**332**	*e*P	**P**	**23 36 47.4**	**+0.2**
STKA	**Stephens Creek**	**75.05**	**186**	P	**P**	**23 36 49.5**	**+1.6**
	comp=Z,3.4nm,1.0s,baz=295,slow=11,SNR=3.4						
	comp=Z,3.4nm,1.0s						
OGNE	**Ogallala**	**75.06**	**47**	IAmb	IAmb	23 37 07.3	
	comp=Z,36nm,0.9s						
KMPD	**K-Podol'skiy**	**75.12**	**324**	P	**P**	**23 36 47.4**	**-0.9**
MILM	**Milestii Mici**	**75.34**	**322**	⇓P	**P**	**23 36 48.6**	**-1.0**
MILM	**Milestii Mici**	**75.34**	**322**	⇓P	**P**	**23 36 48.6**	**-1.0**
MILM	**Milestii Mici**	**75.34**	**322**	⇑*i*P	**P**	**23 36 47.0**	**-2.6**
	comp=Z,80nm,1.5s						
IASR	**Iasi**	**75.69**	**323**	⇑P	**P**	**23 36 52.5**	**+0.8**
MORS	**Morshin**	**75.75**	**326**	P	**P**	**23 36 52.3**	**+0.3**
STNU	**Starunia**	**75.83**	**325**	P	**P**	**23 36 52.6**	**+0.1**
KWP	**Kalwaria Pacla**	**75.84**	**327**	*e*P	**P**	**23 36 53.2**	**+0.7**
KWP	**Kalwaria Pacla**	**75.84**	**327**	P	**P**	**23 36 52.6**	**+0.1**
	comp=Z,148nm,1.1s						
ECSD	**EROS Data Cent**	**75.85**	**43**	IAmb	IAmb	23 37 12.5	
	comp=Z,33nm,1.2s						
TUC	**Tucson**	**75.88**	**59**	P	**P**	**23 36 54.0**	**+0.9**
TUC	**Tucson**	**75.88**	**59**	P	**P**	**23 36 54.0**	**+0.9**
TUC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SHIU	**Shidnytsya**	**75.90**	**326**	P	**P**	**23 36 53.0**	**+0.1**
KSV	**Kosov**	**75.91**	**325**	P	**P**	**23 36 53.0**	**+0.1**
VASR	**Vaslui**	**76.01**	**322**	⇓P	**P**	**23 36 54.3**	**+0.9**
PRAR	**RASCA**	**76.14**	**323**	⇓P	**P**	**23 36 54.7**	**+0.4**
GIRR	**Girov**	**76.34**	**323**	⇑P	**P**	**23 36 55.7**	**+0.4**
BIR	**Birlad**	**76.37**	**322**	⇓P	**P**	**23 36 57.0**	**+1.5**
BIR	**Birlad**	**76.37**	**322**	⇓P	**P**	**23 36 57.0**	**+1.5**
BURAR	**Bucovina Array**	**76.38**	**324**	P	**P**	**23 36 55.7**	**-0.1**
BURAR	**Bucovina Array**	**76.38**	**324**	⇓P	**P**	**23 36 56.5**	**+0.8**
BURAR	**Bucovina Array**	**76.38**	**324**	⇓P	**P**	**23 36 56.5**	**+0.8**
MEZ	**Mezhgor'ye**	**76.40**	**326**	P	**P**	**23 36 56.2**	**+0.5**
VLDR	**Vladesti**	**76.48**	**321**	⇓P	**P**	**23 36 57.1**	**+0.9**
OJC	**Ojcow**	**76.50**	**329**	*e*P	**P**	**23 36 56.7**	**+0.4**
OJC	**Ojcow**	**76.50**	**329**	P	**P**	**23 36 56.5**	**+0.3**
	comp=Z,71nm,1.2s						
RAKU	**Rahkiv**	**76.51**	**325**	P	**P**	**23 36 55.7**	**-0.6**
STHS	**Stebnicka Huta**	**76.59**	**327**	*e*P	**P**	**23 36 58.0**	**+1.2**
STHS				pmax	pmax		
	comp=Z,15nm,0.8s						
STHS	**Stebnicka Huta**	**76.59**	**327**	*e*P	**P**	**23 36 58.0**	**+1.2**
BSEG	**Bad Segeberg**	**76.60**	**336**	*e*P	**P**	**23 36 57.3**	**+0.6**
	comp=Z,25nm,0.9s,baz=32,slow=5.5						
TESR	**Tescani**	**76.61**	**323**	⇓P	**P**	**23 36 57.7**	**+0.8**
TESR	**Tescani**	**76.61**	**323**	P	**P**	**23 36 57.3**	**+0.4**
	comp=Z,2µmcomp=Z,70nm,0.8s						
GHRR		**76.62**	**322**	⇓P	**P**	**23 36 58.4**	**+1.5**
GHRR		**76.62**	**322**	P	**P**	**23 36 57.2**	**+0.2**
SCTR	**Scanteiesti**	**76.65**	**321**	⇑P	**P**	**23 36 56.7**	**-0.4**
TATR	**Tatarca**	**76.68**	**321**	⇑P	**P**	**23 36 58.8**	**+1.6**
TASM	**ASL Pad, Albuq**	**76.72**	**54**	IAmb	IAmb	23 37 19.9	
	comp=Z,28nm,2.0s						
TASM	**ASL Pad, Albuq**	**76.72**	**54**	IAmb	IAmb	23 37 19.9	
	comp=Z,28nm,1.9s						
TASM	**ASL Pad, Albuq**	**76.72**	**54**	IAmb	IAmb	23 37 19.9	
	comp=Z,27nm,1.9s						
TASM	**ASL Pad, Albuq**	**76.72**	**54**	IAmb	IAmb	23 37 20.0	
	comp=Z,30nm,1.9s						
ANMO	**Albuquerque**	**76.72**	**54**	P	**P**	**23 36 58.7**	**+0.7**
ANMO	**Albuquerque**	**76.72**	**54**	P	**P**	**23 36 58.7**	**+0.7**
ANMO				pmax	pmax		
	comp=Z,26nm,2.0s						
ABQ	**Albuquerque**	**76.73**	**54**	IAmb	IAmb	23 37 19.9	
	comp=Z,28nm,2.0s						
BRIU	**Brid**	**76.74**	**326**	P	**P**	**23 36 57.8**	**+0.2**
RUE	**Ruedersdorf**	**76.76**	**333**	*e*P	**P**	**23 36 58.1**	**+0.5**
	comp=Z,42nm,0.9s,baz=32,slow=5.5						
MUKU	**Mukachevo**	**76.78**	**326**	P	**P**	**23 36 58.1**	**+0.3**
KORU	**Korolevo**	**76.83**	**326**	P	**P**	**23 36 58.4**	**+0.3**
ONER	**Baraj Valea Uz**	**76.86**	**323**	⇑P	**P**	**23 36 58.8**	**+0.4**
SCHLR	**Schela**	**76.88**	**321**	⇑P	**P**	**23 36 59.8**	**+1.4**
TRSU	**Trosnyk**	**76.95**	**326**	P	**P**	**23 36 59.9**	**+1.1**
NIE	**Niedzica**	**76.96**	**328**	*e*P	**P**	**23 37 01.1**	**+2.2**
NIE	**Niedzica**	**76.96**	**328**	P	**P**	**23 36 59.0**	**+0.1**
	comp=Z,32nm,1.0s						
CFR	**Carcaliu**	**76.96**	**321**	⇑P	**P**	**23 36 59.8**	**+0.9**
CFR	**Carcaliu**	**76.96**	**321**	⇑P	**P**	**23 36 59.8**	**+0.9**
BERU	**Beregovo**	**76.97**	**326**	P	**P**	**23 36 59.2**	**+0.3**
ODBI	**Odobesti**	**77.01**	**322**	⇓P	**P**	**23 37 00.5**	**+1.4**
VRI	**Vrincioaia**	**77.08**	**322**	⇑P	**P**	**23 37 00.7**	**+1.1**
VRI	**Vrincioaia**	**77.08**	**322**	⇑P	**P**	**23 37 00.7**	**+1.1**
VRI	**Vrincioaia**	**77.08**	**322**	P	**P**	**23 36 59.8**	**+0.2**
	comp=Z,46nm,1.2s						
TPGR	**Topolog**	**77.08**	**321**	⇓P	**P**	**23 37 00.5**	**+0.9**
GORT1	**Trebel**	**77.12**	**335**	*e*P	**P**	**23 37 00.3**	**+0.7**
	comp=Z,102nm,1.8s,baz=32,slow=5.5						
PLOR	**Plostina**	**77.12**	**322**	⇑P	**P**	**23 37 01.0**	**+1.2**
PLOR	**Plostina**	**77.12**	**322**	⇑P	**P**	**23 37 01.0**	**+1.2**
TURR	**Turia**	**77.25**	**323**	⇓P	**P**	**23 37 02.2**	**+1.6**
KSP	**Ksiaz**	**77.28**	**331**	*e*P	**P**	**23 37 01.8**	**+1.2**
KSP	**Ksiaz**	**77.28**	**331**	P	**P**	**23 37 00.9**	**+0.3**
	comp=Z,974nmcomp=Z,45nm,1.2s						
OZUR		**77.31**	**323**	⇓P	**P**	**23 37 02.4**	**+1.4**
COVR	**Voineasa-Covas**	**77.32**	**323**	⇓P	**P**	**23 37 02.3**	**+1.4**
BISRR	**Bisoca**	**77.33**	**322**	⇓P	**P**	**23 37 02.4**	**+1.3**
KPL	**Plockton**	**77.33**	**346**	*e*P	**P**	**23 37 01.4**	**+0.7**
KPL				IAmb	IAmb	23 37 04.1	
	comp=Z,16nm,0.8s						
TIRR	**Tirgusor**	**77.38**	**320**	⇓P	**P**	**23 37 01.9**	**+0.7**
TIRR	**Tirgusor**	**77.38**	**320**	⇓P	**P**	**23 37 01.9**	**+0.7**
BOSR	**Bodos**	**77.39**	**323**	⇓P	**P**	**23 37 02.7**	**+1.4**
OKC	**Ostrava-Krasne**	**77.43**	**329**	AMS	AMS	00 15 50.0	
	comp=Z,2µm,17.0s						
CEI	**Carei**	**77.48**	**326**	⇑P	**P**	**23 37 02.5**	**+0.7**
CEI	**Carei**	**77.48**	**326**	⇑P	**P**	**23 37 02.5**	**+0.7**
TLBR	**Topalu**	**77.49**	**321**	⇓P	**P**	**23 37 02.2**	**+0.4**
STEB	**Steborice**	**77.49**	**330**	*e*P	**P**	**23 37 02.0**	**+0.2**
STEB				*e*x	x	23 37 14.2	
OSTC	**Ostas**	**77.54**	**331**	*e*P	**P**	**23 37 04.6**	**+2.5**
OSTC				MLR	MLR		
	comp=Z,3µm,15.6s						
OSTC	**Ostas**	**77.54**	**331**	*e*P	**P**	**23 37 04.6**	**+2.5**
OSTC				AMS	AMS	00 14 50.0	
	comp=Z,3µm,15.6s						
EFOR	**EFORIE**	**77.57**	**320**	⇑P	**P**	**23 37 01.8**	**-0.5**
CHVC	**Chvalec**	**77.57**	**331**	*e*P	**P**	**23 37 03.3**	**+1.0**
CHVC				MLR	MLR		
	comp=Z,3µm,16.2s						
CHVC	**Chvalec**	**77.57**	**331**	*e*P	**P**	**23 37 03.3**	**+1.0**
CHVC				AMS	AMS	00 14 50.0	
	comp=Z,3µm,16.2s						
DOPR	**Dopca**	**77.59**	**323**	⇑P	**P**	**23 37 03.7**	**+1.2**
MFTR	**Murfatlar**	**77.59**	**320**	⇑P	**P**	**23 37 02.9**	**+0.5**
NEHR	**Nehoiu**	**77.61**	**322**	⇓P	**P**	**23 37 03.3**	**+0.8**
UPC	**Upice**	**77.66**	**331**	*e*P	**P**	**23 37 03.5**	**+0.8**
UPC				MLR	MLR		
	comp=Z,3µm,15.6s						
UPC	**Upice**	**77.66**	**331**	*e*P	**P**	**23 37 03.5**	**+0.8**
UPC				AMS	AMS	00 15 00.0	
	comp=Z,3µm,15.6s						
DPC	**Dobruska-Polom**	**77.67**	**331**	*e*P	**P**	**23 37 03.7**	**+0.8**
DPC				MLR	MLR		
	comp=Z,3µm,14.7s						
DPC	**Dobruska-Polom**	**77.67**	**331**	*e*P	**P**	**23 37 03.7**	**+0.8**
DPC				AMS	AMS	00 16 00.0	
	comp=Z,3µm,14.7s						
DPC	**Dobruska-Polom**	**77.67**	**331**	P	**P**	**23 37 03.1**	**+0.2**
	comp=Z,29nm,1.1s						
FLTG	**Flechtingen**	**77.71**	**335**	*e*P	**P**	**23 37 02.7**	**-0.2**
	comp=Z,36nm,1.0s,baz=32,slow=5.5						
MESR	**Meseseni**	**77.71**	**325**	⇓P	**P**	**23 37 03.9**	**+0.9**
MORC	**Moravsky Berou**	**77.71**	**330**	⇑P	**P**	**23 37 03.8**	**+0.7**
MORC	**Moravsky Berou**	**77.71**	**330**	*e*P	**P**	**23 37 03.3**	**+0.2**
MORC	**Moravsky Berou**	**77.71**	**330**	⇑P	**P**	**23 37 03.8**	**+0.7**
MLR	**Muntele Rosu**	**77.71**	**322**	LR	LR	00 14 41.2	
	comp=Z,2µm,18.0s,baz=38,slow=38						
MLR	**Muntele Rosu**	**77.71**	**322**	⇑P	**P**	**23 37 04.9**	**+1.6**
MLR	**Muntele Rosu**	**77.71**	**322**	⇑P	**P**	**23 37 04.9**	**+1.6**
MLR	**Muntele Rosu**	**77.71**	**322**	P	**P**	**23 37 03.4**	**+0.1**
	comp=Z,39nm,1.2s						
ISR	**Istrita**	**77.73**	**322**	⇑P	**P**	**23 37 04.2**	**+0.9**
ISR	**Istrita**	**77.73**	**322**	⇑P	**P**	**23 37 04.2**	**+0.9**
ISR	**Istrita**	**77.73**	**322**	P	**P**	**23 37 03.5**	**+0.2**
	comp=Z,76nm,0.8s						
KRLC	**Kraliky**	**77.74**	**330**	*e*P	**P**	**23 37 04.1**	**+0.9**
KRLC				MLR	MLR		
	comp=Z,3µm,14.6s						
KRLC	**Kraliky**	**77.74**	**330**	*e*P	**P**	**23 37 04.1**	**+0.9**
KRLC				AMS	AMS	00 15 50.0	
	comp=Z,3µm,14.6s						
AMRR	**Amara**	**77.76**	**321**	⇑P	**P**	**23 37 05.2**	**+1.8**
AMRR	**Amara**	**77.76**	**321**	⇑P	**P**	**23 37 05.2**	**+1.8**
CJR	**Cluj-Napoca**	**77.78**	**325**	⇓P	**P**	**23 37 04.7**	**+1.2**
CJR	**Cluj-Napoca**	**77.78**	**325**	⇓P	**P**	**23 37 04.7**	**+1.2**
BNN	**Bunyan**	**77.79**	**312**	IAmb	IAmb	23 37 18.5	
	comp=Z,55nm,1.6s						
SCHQ	**Schefferville**	**77.82**	**20**	P	**P**	**23 37 03.3**	**-0.2**
	comp=Z,5.5nm,0.8s,baz=7.9,slow=6.8,SNR=7.0						
SCHQ				LR	LR	00 15 34.6	
	comp=Z,1µm,19.6s,baz=346,slow=39						
	comp=Z,5.5nm,0.8s						
MDB	**Medias**	**77.89**	**324**	⇑P	**P**	**23 37 05.0**	**+0.9**
MDB	**Medias**	**77.89**	**324**	⇑P	**P**	**23 37 05.0**	**+0.9**
ICOR	**Ion Corvin**	**77.93**	**320**	⇓P	**P**	**23 37 05.6**	**+1.3**
RETH	**Rethem/Aller,**	**77.93**	**336**	*e*P	**P**	**23 37 05.0**	**+0.9**
	comp=Z,57nm,1.5s,baz=32,slow=5.5						
MAUC	**Maruska**	**77.94**	**329**	*e*P	**P**	**23 37 05.2**	**+0.8**
MARR	**Marisel-Cluj**	**78.01**	**325**	⇑P	**P**	**23 37 05.8**	**+0.9**
CLL	**Collm**	**78.01**	**333**	*i* P	**P**	**23 37 04.7**	**0.0**
CLL				*e**PP	**sP**	**23 37 11.0**	**+1.2**
CLL				pmax	pmax		
	comp=Z,31nm,0.8s						
CLL				MLR	MLR		
	comp=Z,2µm,18.6s						
CLL	**Collm**	**78.01**	**333**	*e*P	**P**	**23 37 04.2**	**-0.5**
	comp=Z,30nm,0.8s,baz=32,slow=5.5						
CLL	**Collm**	**78.01**	**333**	P	**P**	**23 37 05.0**	**+0.3**
	comp=Z,58nm,1.0s						
CLL	**Collm**	**78.01**	**333**	*i* P	**P**	**23 37 04.7**	**0.0**
	comp=Z,31nm,0.8s						
CLL				*e*Pmax		23 37 16.0	
	comp=Z,70nm,1.1s						
CLL				*e*S	S	23 46 48.0	-10
CLL				*e*PS	**PnS**	**23 47 36.0**	**-2.1**
CLL				*e*(SS)	SS	23 52 30.0	+33
CLL				*e*SSS	SSS	23 55 12.0	
CLL				*e*x	x	23 56 18.0	
CLL				AMS	AMS	00 15 00.0	
	comp=Z,2µm,18.6s						
ASSE	**Asse, Remlinge**	**78.06**	**335**	*e*P	**P**	**23 37 05.2**	**+0.4**
	comp=Z,17nm,1.0s,baz=32,slow=5.5						
BRG	**Berggiesshubel**	**78.07**	**332**	*e*P	**P**	**23 37 04.6**	**-0.4**
	comp=Z,11nm,0.8s,baz=32,slow=5.5						
DRGR		**78.09**	**325**	⇓P	**P**	**23 37 05.5**	**+0.2**
DRGR		**78.09**	**325**	⇓P	**P**	**23 37 05.5**	**+0.2**
PVCC	**Panska Ves**	**78.14**	**332**	*e*P	**P**	**23 37 05.9**	**+0.5**
PVCC				MLR	MLR		
	comp=Z,3µm,17.4s						
PVCC	**Panska Ves**	**78.14**	**332**	*e*P	**P**	**23 37 05.9**	**+0.5**
PVCC				AMS	AMS	00 15 20.0	
	comp=Z,3µm,17.4s						
VOIR		**78.15**	**323**	⇓P	**P**	**23 37 06.9**	**+1.2**
VOIR		**78.15**	**323**	⇓P	**P**	**23 37 06.9**	**+1.2**
VOIR		**78.15**	**323**	P	**P**	**23 37 05.8**	**+0.1**
	comp=Z,710nmcomp=Z,30nm,1.1s						
SULR		**78.20**	**322**	⇓P	**P**	**23 37 06.6**	**+0.8**
GAZ	**Gaziantep**	**78.25**	**310**	IAmb	IAmb	23 37 21.4	
	comp=Z,23nm,0.9s						
TNR	**Turnu Rosu**	**78.32**	**323**	⇓P	**P**	**23 37 07.0**	**+0.5**
TNR	**Turnu Rosu**	**78.32**	**323**	⇓P	**P**	**23 37 07.0**	**+0.5**
BR131	**Keskin Array S**	**78.33**	**314**	IAmb	IAmb	23 37 24.0	
	comp=Z,15nm,0.8s						
BRTR	**Keskin Array B**	**78.33**	**314**	P	**P**	**23 37 07.3**	**+0.5**
	comp=Z,6.1nm,0.9s,baz=88,slow=2.7,SNR=20						
BRTR				PP	**PP**	**23 40 02.6**	**-0.7**
	comp=Z,2.3nm,1.1s,baz=52,slow=8.1,SNR=3.6						
BRTR				LR	LR	00 18 17.8	
	comp=Z,2µm,18.7s,baz=43,slow=41						
	comp=Z,6.1nm,0.9s						
BRTR	**Keskin Array B**	**78.33**	**314**	P	**P**	**23 37 07.0**	**+0.1**
BRTR	**Keskin Array B**	**78.33**	**314**	*i* P	**P**	**23 37 07.5**	**+0.7**
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PSZ	**Piszkesteto**	**78.33**	**327**	IAmb	IAmb	23 37 37.0	
	comp=Z,31nm,1.1s						
PSZ	**Piszkesteto**	**78.33**	**327**	⇑P	**P**	**23 37 07.1**	**+0.5**
PSZ	**Piszkesteto**	**78.33**	**327**	⇑P	**P**	**23 37 07.1**	**+0.5**
BR106	**Keskin Array S**	**78.33**	**314**	P	**P**	**23 37 06.9**	**+0.1**
	comp=Z,99nmcomp=Z,12nm,1.0s						
BR104	**Keskin Array S**	**78.34**	**314**	P	**P**	**23 37 06.9**	**0.0**
	comp=Z,179nmcomp=Z,23nm,1.0s						
BR105	**Keskin Array S**	**78.34**	**314**	P	**P**	**23 37 06.9**	**0.0**
	comp=Z,136nmcomp=Z,19nm,0.9s						
ARR	**Arges**	**78.39**	**323**	⇓P	**P**	**23 37 07.8**	**+0.9**
CLZ	**Clausthal**	**78.40**	**335**	*e*P	**P**	**23 37 07.3**	**+0.5**
	comp=Z,18nm,0.7s,baz=32,slow=5.5						
JAVC	**Velka Javorina**	**78.42**	**329**	*e*P	**P**	**23 37 08.3**	**+1.3**
VRAC	**Vranov**	**78.44**	**330**	LR	LR	00 15 16.0	
	comp=Z,2µm,18.8s,baz=24,slow=38						
VRAC	**Vranov**	**78.44**	**330**	⇓P	**P**	**23 37 08.4**	**+1.3**
VRAC	**Vranov**	**78.44**	**330**	*e*P	**P**	**23 37 07.7**	**+0.6**
VRAC	**Vranov**	**78.44**	**330**	⇓P	**P**	**23 37 08.4**	**+1.3**
HSKC	**Hora Svate Kat**	**78.46**	**332**	AMS	AMS	00 15 20.0	
	comp=Z,2µm,16.5s						
NEUB	**Neuenburg**	**78.50**	**334**	*e*P	**P**	**23 37 07.3**	**-0.1**
	comp=Z,28nm,0.8s,baz=32,slow=5.5						
PRA	**Prague**	**78.58**	**332**	*e*P	**P**	**23 37 08.6**	**+0.8**
PRA				*e*		23 37 20.2	
PRA				MLR	MLR		
	comp=Z,3µm,17.6s						
PRA	**Prague**	**78.58**	**332**	*e*P	**P**	**23 37 08.6**	**+0.8**
PRA				*e*PCP	**pwP**	**23 37 20.2**	**+3.0**
PRA				AMS	AMS	00 15 20.0	
	comp=Z,3µm,17.6s						
PRU	**Pruhonice**	**78.61**	**331**	*e*P	**P**	**23 37 08.6**	**+0.6**
PRU				*e*		23 37 20.4	
PRU				MLR	MLR		
	comp=Z,3µm,18.2s						
PRU	**Pruhonice**	**78.61**	**331**	*e*P	**P**	**23 37 08.6**	**+0.6**
PRU				*e*PCP	**pwP**	**23 37 20.4**	**+3.0**
PRU				AMS	AMS	00 15 20.0	
	comp=Z,3µm,18.2s						
KIRS	**Kirsehir-Merke**	**78.62**	**314**	⇑P	**P**	**23 37 09.1**	**+0.8**
ANTO	**Ankara**	**78.66**	**315**	P	**P**	**23 37 08.5**	**-0.1**
ANTO	**Ankara**	**78.66**	**315**	⇑P	**P**	**23 37 09.3**	**+0.7**
ANTO	**Ankara**	**78.66**	**315**	⇑P	**P**	**23 37 09.3**	**+0.7**
ANTO	**Ankara**	**78.66**	**315**	P	**P**	**23 37 08.7**	**+0.1**
	comp=Z,25nm,0.9s						
RAO	**Raoul Island**	**78.67**	**150**	LR	LR	00 08 55.5	
	comp=Z,957nm,18.8s,baz=342,slow=33						
BSZH	**Besenyszg**	**78.68**	**327**	⇑P	**P**	**23 37 08.9**	**+0.4**
LOT	**Lotru**	**78.70**	**324**	⇓P	**P**	**23 37 09.8**	**+1.0**
KRUC	**Moravsky**	**78.72**	**330**	*e*P	**P**	**23 37 09.0**	**+0.4**
DEV	**Deva**	**78.73**	**324**	⇓P	**P**	**23 37 09.1**	**+0.4**
DEV	**Deva**	**78.73**	**324**	⇓P	**P**	**23 37 09.1**	**+0.4**
EKA	**Eskdalemuir Ar**	**78.74**	**344**	P	**P**	**23 37 09.1**	**+0.5**
	comp=Z,8.9nm,0.7s,baz=23,slow=4.7,SNR=23						
EKA				LR	LR	00 18 24.9	
	comp=Z,592nm,18.3s,baz=28,slow=41						
	comp=Z,8.9nm,0.7s						
ESK	**Eskdalemuir**	**78.76**	**344**	*e*P	**P**	**23 37 09.6**	**+0.8**
ESK				IAmb	IAmb	23 37 13.0	
	comp=Z,12nm,0.7s						
IBBN	**Ibbenburen**	**78.78**	**336**	*e*P	**P**	**23 37 09.0**	**+0.2**
	comp=Z,63nm,0.9s,baz=32,slow=5.5						
GTTG	**Gottingen**	**78.78**	**335**	*e*P	**P**	**23 37 09.1**	**+0.2**
	comp=Z,67nm,1.1s,baz=32,slow=5.5						
SMOL	**Smolenice**	**78.79**	**329**	*e*P	**P**	**23 37 11.2**	**+2.2**
SMOL				pmax	pmax		
	comp=Z,12nm,1.2s						
HUMR	**Humele**	**78.89**	**322**	⇓P	**P**	**23 37 09.8**	**+0.2**
SIRR	**Siria**	**78.95**	**325**	⇑P	**P**	**23 37 10.5**	**+0.6**
RAZG	**Razgrad**	**78.95**	**321**	⇓P	**P**	**23 37 10.8**	**+0.8**
TANN	**Tannenbergstha**	**78.95**	**333**	*e*P	**P**	**23 37 09.6**	**-0.4**
	comp=Z,25nm,1.5s,baz=32,slow=5.5						
EDMD	**Edmundbyers**	**78.95**	**343**	*e*P	**P**	**23 37 10.3**	**+0.5**
EDMD				IAmb	IAmb	23 37 13.5	
	comp=Z,5.7nm,0.7s						
MODS	**Modra-Piesok**	**78.96**	**329**	*e*P	**P**	**23 37 11.2**	**+1.2**
PLN	**Plauen**	**78.99**	**333**	*e*P	**P**	**23 37 09.9**	**-0.3**
	comp=Z,5.6nm,1.0s,baz=32,slow=5.5						
MOX	**Moxa**	**79.03**	**333**	*e*P	**P**	**23 37 10.8**	**+0.5**
	comp=Z,35nm,1.2s,baz=32,slow=5.5						
MOX				*e*L	L	00 16 40.4	
	comp=Z,1µm,19.9s						
LOZB	**Loznitsa**	**79.06**	**321**	⇑P	**P**	**23 37 11.5**	**+0.9**
COPA	**Copaceanca**	**79.09**	**322**	⇑P	**P**	**23 37 11.3**	**+0.5**
SURR	**Surduc**	**79.16**	**325**	⇑P	**P**	**23 37 11.1**	**0.0**
GZR	**Gura Zlata**	**79.17**	**324**	⇑P	**P**	**23 37 11.5**	**+0.2**
GZR	**Gura Zlata**	**79.17**	**324**	⇑P	**P**	**23 37 11.5**	**+0.2**
ZVC	**Zvikov**	**79.19**	**331**	*e*P	**P**	**23 37 11.8**	**+0.6**
ZVC				AMS	AMS	00 54 00.0	
	comp=Z,3µm,17.6s						

UBBA	Unterbreizbach	79.40	334	eP	P	23 37 13.3	+1.2
	comp=Z,9.2nm,0.6s,baz=32,slow=5.5						
MANZ	Manzenberg	79.44	333	eP	P	23 37 12.6	+0.1
	comp=Z,4.2nm,0.8s,baz=32,slow=5.5						
BZS	Buzias	79.48	325	⇓P	P	23 37 13.0	+0.1
BZS	Buzias	79.48	325	⇓P	P	23 37 13.0	+0.1
KASTN	Kahler Asten	79.56	336	eP	P	23 37 12.9	-0.3
	comp=Z,33nm,1.1s,baz=32,slow=5.5						
VLAD	Vladila	79.56	322	⇓P	P	23 37 14.5	+1.2
ROTZ	Rotzenmuhle	79.59	333	eP	P	23 37 14.1	+0.7
	comp=Z,5.4nm,1.0s,baz=32,slow=5.5						
KHC	Kasperske Hory	79.67	332	IAmb	IAmb	23 37 31.1	
	comp=Z,34nm,0.7s						
KHC	Kasperske Hory	79.67	332	ceP	P	23 37 14.6	+0.7
KHC				pmax	pmax		
	comp=Z,36nm,1.0s						
KHC	Kasperske Hory	79.67	332	eP	P	23 37 14.5	+0.7
KHC				ex	x	23 37 26.6	
KHC				AMS	AMS	00 16 00.0	
	comp=Z,4µm,16.9s						
KHC	Kasperske Hory	79.67	332	P	P	23 37 14.1	+0.2
	comp=Z,51nm,0.7s						
CKRC	Cesky Krumlov	79.67	331	eP	P	23 37 14.2	+0.3
CKRC				MLR	MLR		
	comp=Z,2µm,15.2s						
CKRC	Cesky Krumlov	79.67	331	eP	P	23 37 14.2	+0.3
CKRC				AMS	AMS	00 16 10.0	
	comp=Z,2µm,15.2s						
BUG	Bochum--Univer	79.69	336	eP	P	23 37 14.0	+0.2
	comp=Z,39nm,1.0s,baz=32,slow=5.5						
HERR	Herculane	79.73	324	⇓P	P	23 37 14.2	0.0
BORA	Eskisehir	79.85	316	IAmb	IAmb	23 37 30.2	
	comp=Z,31nm,1.2s						
MPLH	Magyarpolny	79.86	328	P	P	23 37 15.2	+0.3
	comp=Z,70nm,0.9s						
CONA	Conrad Observa	79.86	330	i pP	P	23 37 15.7	+0.7
	comp=Z,19nm,1.3s						
GEC2	GERESS Array S	79.87	331	eP	P	23 37 15.0	0.0
	comp=Z,15nm,1.2s,baz=32,slow=5.5						
GERES	GERESS Array B	79.87	331	P	P	23 37 15.2	+0.1
	comp=Z,3.7nm,0.6s,baz=34,slow=5.5,SNR=22						
GERES				LR	LR	00 16 01.0	
	comp=Z,2µm,18.2s,baz=28,slow=38						
	comp=Z,3.7nm,0.6s						
RONA	Rosalia, Austr	79.89	329	epP	P	23 37 16.3	+1.2
	comp=Z,23nm,1.1s,SNR=8.9						
WET	Wettzell	79.90	332	eP	P	23 37 15.5	+0.4
	comp=Z,25nm,0.9s,baz=32,slow=5.5						
PLVB	Pleven	79.95	322	⇑P	P	23 37 15.6	+0.2
GRA1	Grafenberg Arr	79.98	333	P	P	23 37 15.6	0.0
GRF	Grafenberg Arr	79.98	333	P	P	23 37 15.6	0.0
GRF				pmax	pmax		
	comp=Z,51nm,0.8s						
GRF	Grafenberg Arr	79.98	333	eP	P	23 37 16.0	+0.5
	comp=Z,51nm,0.8s,baz=32,slow=5.5						
GRF				eL	L	00 17 18.5	
	comp=Z,2µm,18.2s						
BAIL	Bailesti	80.02	323	⇑P	P	23 37 15.0	-0.8
RAR	Rarotonga	80.10	132	LR	LR	00 10 08.8	
	comp=Z,615nm,19.0s,baz=304,slow=34						
MDVR	Moldovita	80.11	324	⇓P	P	23 37 16.4	0.0
MORH	Mrgy, Hungar	80.21	327	⇑P	P	23 37 17.1	+0.3
MORH	Mrgy, Hungar	80.21	327	P	P	23 37 17.1	+0.3
	comp=Z,16nm,1.0s						
LBWR	Ladybower, Pea	80.23	342	eP	P	23 37 17.0	+0.2
LBWR				IAmb	IAmb	23 37 20.4	
	comp=Z,39nm,0.7s						
TNS	Taunus Mts	80.41	335	eP	P	23 37 18.0	+0.1
	comp=Z,70nm,1.5s,baz=32,slow=5.5						
P38A	Dawn	80.45	44	IAmb	IAmb	23 37 38.3	
	comp=Z,21nm,0.9s						
MOA	Molln	80.51	330	eP	P	23 37 18.5	+0.1
	comp=Z,7.7nm,1.0s						
MOA	Molln	80.51	330	eP	P	23 37 17.9	-0.6
	comp=Z,16nm,1.0s,baz=32,slow=5.5						
VLDQ	Val d'Or	80.53	29	IAmb	IAmb	23 37 41.1	
	comp=Z,18nm,0.9s						
ARSA	Arzberg	80.56	329	IAmb	IAmb	23 37 48.2	
	comp=Z,32nm,1.6s						
ARSA	Arzberg	80.56	329	i P	P	23 37 18.5	-0.2
	comp=Z,8.5nm,1.3s						
ARSA	Arzberg	80.56	329	eP	P	23 37 18.2	-0.4
	comp=Z,38nm,1.7s,baz=32,slow=5.5						
BEBN	Eben Emael	80.72	337	dP	P	23 37 20.1	+0.6
	comp=Z,59nm,0.7s						
BTNL	Ternell	80.78	337	dP	P	23 37 21.3	+1.5
	comp=Z,17nm,1.0s						
MEM	Membach	80.79	337	dP	P	23 37 20.2	+0.3
	comp=Z,21nm,0.9s						
ELMS	Elmsett, Ipswi	80.80	340	eP	P	23 37 21.4	+1.6
ELMS				IAmb	IAmb	23 37 23.8	
	comp=Z,57nm,0.6s						
BIOA	Bad Ischl, Aus	80.87	331	eP	P	23 37 20.7	+0.3
	comp=Z,22nm,1.3s,SNR=6.1						
T35A	Sooner Cattle	80.94	47	IAmb	IAmb	23 37 39.8	
	comp=Z,23nm,1.0s						
NWAO	Narrogin (SRO)	80.94	206	LR	LR	00 18 47.7	
	comp=Z,95nm,18.0s,baz=320,slow=40						
BSTI	Sart Tilman	80.94	337	dP	P	23 37 21.2	+0.5
	comp=Z,7.6nm,0.6s						
POST	Post	80.96	53	P	P	23 37 22.0	+0.8
BHOU	Houvegnez	81.02	336	dP	P	23 37 21.3	+0.2
	comp=Z,18nm,1.0s						
FOEL	Foel Wylfa	81.03	343	eP	P	23 37 21.4	+0.3
FOEL				IAmb	IAmb	23 37 24.3	
	comp=Z,21nm,0.9s						
BOVS	Bovan	81.04	324	⇑P	P	23 37 21.1	-0.1
UCC	Uccle	81.09	338	dP	P	23 37 22.1	+0.7
	comp=Z,13nm,1.1s						
BCLA	Clavier	81.17	337	dP	P	23 37 21.1	-0.7
	comp=Z,30nm,1.0s						
SOKA	Soboth	81.22	329	eP	P	23 37 22.1	-0.2
	comp=Z,18nm,1.1s,SNR=8.6						
PERS	Pernice	81.22	329	i P	P	23 37 22.3	0.0
PERS				i		23 37 35.3	
PERS				i		23 37 38.3	
BGES	Gesves	81.26	337	dP	P	23 37 22.3	0.0
	comp=Z,21nm,1.1s						
FUR	Furstenfeldbru	81.28	332	eP	P	23 37 23.1	+0.6
	comp=Z,39nm,0.9s,baz=32,slow=5.5						
HLM1	Long Mynd	81.31	343	eP	P	23 37 22.9	+0.3
HLM1				IAmb	IAmb	23 37 28.6	
	comp=Z,16nm,0.8s						
BMRD	Maredsous	81.42	337	dP	P	23 37 22.9	-0.3
	comp=Z,33nm,1.1s						
RCHB	Rochefort	81.42	337	dP	P	23 37 23.5	+0.3
	comp=Z,20nm,1.1s						
LESA	Schwarzleotal	81.44	331	eP	P	23 37 23.8	+0.4
	comp=Z,15nm,1.0s,SNR=7.1						
STU	Stuttgart	81.44	334	IAmb	IAmb	23 37 40.3	
	comp=Z,23nm,0.8s						
STU	Stuttgart	81.44	334	eP	P	23 37 24.5	+1.1
	comp=Z,54nm,0.8s,baz=32,slow=5.5						
KBA	Koelnbreinsper	81.50	331	eP	P	23 37 24.1	+0.3
	comp=Z,30nm,1.0s,SNR=8.5						
KBA	Koelnbreinsper	81.50	331	eP	P	23 37 24.1	+0.3
	comp=Z,48nm,1.0s,baz=32,slow=5.5						
OBKA	Obir	81.54	330	eP	P	23 37 23.1	-0.9
	comp=Z,17nm,1.6s						
WLF	Walferdange	81.59	336	eP	P	23 37 26.0	+1.9
	comp=Z,19nm,1.0s,baz=32,slow=5.5						
WLF	Walferdange	81.59	336	dP	P	23 37 24.3	+0.2
	comp=Z,13nm,1.0s						
DOU	Dourbes	81.66	337	dP	P	23 37 24.5	0.0
	comp=Z,14nm,1.1s						
MYKA	Terra Mystica	81.77	330	eP	P	23 37 24.5	-0.7
	comp=Z,7.4nm,0.9s						
LPIG	La Paz	81.78	65	LR	LR	00 13 07.2	
	comp=Z,277nm,19.1s,baz=344,slow=35						
MCH1	Michaelchurch	81.83	342	eP	P	23 37 26.0	+0.8
MCH1				IAmb	IAmb	23 37 30.9	
	comp=Z,19nm,0.8s						
STRD	Stroud	81.84	342	eP	P	23 37 26.0	+0.7
STRD				IAmb	IAmb	23 37 31.1	
	comp=Z,30nm,0.7s						
MANT	Manisa	81.86	316	IAmb	IAmb	23 37 40.1	
	comp=Z,30nm,0.7s						
WATA	Walderalm	81.90	332	eP	P	23 37 25.9	-0.1
	comp=Z,17nm,1.0s,SNR=8.6						
MONM	Monmouth	81.93	342	eP	P	23 37 26.1	+0.2
MONM				IAmb	IAmb	23 37 29.4	
	comp=Z,12nm,0.7s						
WTTA	Wattenberg	81.94	332	eP	P	23 37 26.6	+0.4
	comp=Z,14nm,1.0s,SNR=11						
WTTA	Wattenberg	81.94	332	eP	P	23 37 26.4	+0.2
	comp=Z,24nm,0.8s,baz=32,slow=5.5						
BLY	Banja Luka	82.00	327	⇓P	P	23 37 28.6	+2.2
CSS	Mathiatis	82.01	311	IAmb	IAmb	23 37 42.0	
	comp=Z,33nm,0.9s						
CSS	Mathiatis	82.01	311	P	P	23 37 26.9	+0.3
	comp=Z,617nmcomp=Z,41nm,0.9s						
SGCY	Sterling City	82.01	53	IAmb	IAmb	23 37 49.4	
	comp=Z,20nm,0.8s						
ASF	Jabal al Asfar	82.03	307	LR	LR	00 18 37.0	
	comp=Z,1µm,18.2s,baz=80,slow=39						
RETA	Reutte	82.05	332	i P	P	23 37 27.0	+0.4
	comp=Z,22nm,1.0s,SNR=7.3						
UBR	Ueberruh	82.10	333	eP	P	23 37 26.2	-0.7
	comp=Z,7.4nm,0.8s,baz=32,slow=5.5						
R40A	Maddies Statio	82.10	44	IAmb	IAmb	23 37 46.7	
	comp=Z,17nm,0.9s						
BFO	Black Forest	82.11	334	P	P	23 37 26.4	-0.5
BFO				IAmb	IAmb	23 37 40.6	
	comp=Z,18nm,0.8s						
BFO	Black Forest	82.11	334	P	P	23 37 26.4	-0.5
BFO				pmax	pmax		
	comp=Z,18nm,0.8s						
BFO	Black Forest	82.11	334	eP	P	23 37 28.2	+1.3
	comp=Z,16nm,0.8s,baz=32,slow=5.5						
SQTA	Sankt Quirin	82.12	332	eP	P	23 37 27.5	+0.4
	comp=Z,12nm,0.8s,SNR=10						
CEY	Cerknica	82.24	329	i P	P	23 37 28.1	+0.4
MMAI	Mount Meron Ar	82.28	309	P	P	23 37 28.1	-0.1
	comp=Z,13nm,0.7s,baz=40,slow=6.6,SNR=18						
MMAI				LR	LR	00 18 46.7	
	comp=Z,2µm,18.4s,baz=358,slow=39						
	comp=Z,13nm,0.7s						
TXAR	Lajitas Array	82.34	57	P	P	23 37 29.7	+1.2
	comp=Z,6.3nm,0.9s,baz=293,slow=3.2,SNR=36						
	comp=Z,6.3nm,0.9s						
TXAR	Lajitas Array	82.34	57	P	P	23 37 28.6	0.0
TXAR	Lajitas Array	82.34	57	P	P	23 37 28.6	0.0
STAL	STALIGIAL	82.42	331	IAmb	IAmb	23 37 41.1	
	comp=Z,16nm,0.8s						
FETA	Feichten	82.46	332	eP	P	23 37 29.0	+0.1
	comp=Z,13nm,1.2s,SNR=5.5						
ELL	Elmali	82.50	314	IAmb	IAmb	23 38 00.2	
	comp=Z,22nm,0.8s						
DAVA	Damuels	82.52	333	eP	P	23 37 28.9	-0.3
	comp=Z,18nm,0.9s						
DAVA	Damuels	82.52	333	eP	P	23 37 30.6	+1.3
	comp=Z,29nm,0.9s,baz=32,slow=5.5						
SLE	Schleitheim	82.55	334	eP	P	23 37 28.5	-0.7
	comp=Z,41nm,0.7s,baz=32,slow=5.5						
ECH	Echery	82.58	335	IAmb	IAmb	23 37 43.1	
	comp=Z,18nm,1.0s						
SADO	Sadowa	82.74	32	LR	LR	00 16 58.1	
	comp=Z,513nm,20.3s,baz=6.0,slow=38						
HHAR	Hobbs	82.78	46	IAmb	IAmb	23 37 49.0	
	comp=Z,8.3nm,0.7s						
RAYN	Ar Rayn	82.79	295	P	P	23 37 30.2	-0.6
RAYN				IAmb	IAmb	23 37 48.8	
	comp=Z,19nm,0.9s						
RAYN	Ar Rayn	82.79	295	⇓P	P	23 37 31.5	+0.6
CCM	Cathedral Cave	82.80	43	P	P	23 37 31.7	+1.1
CCM				IAmb	IAmb	23 37 51.0	
	comp=Z,16nm,0.8s						
CCM	Cathedral Cave	82.80	43	P	P	23 37 31.7	+1.1
CCM				pmax	pmax		
	comp=Z,16nm,0.8s						
SULZ	Cheisacher	82.88	334	eP	P	23 37 30.8	-0.2
	comp=Z,206nm,1.1s,baz=32,slow=5.5						
PLONS	Plons/SG	82.89	333	eP	P	23 37 30.6	-0.4
	comp=Z,19nm,0.9s,baz=32,slow=5.5						
DAVOX	Davos/Dischmat	82.96	333	LR	LR	00 19 34.1	
	comp=Z,928nm,18.3s,baz=29,slow=40						
MGMO	Mountain Grove	82.98	44	IAmb	IAmb	23 37 56.1	
	comp=Z,50nm,1.8s						
CTI	Castel Tesino	82.98	331	IAmb	IAmb	23 37 47.8	
	comp=Z,24nm,1.1s						
TAOE	Nuku Hiva Isla	83.06	109	eLR	LR	00 03 35.2	
	comp=Z,731nm,22.0s						
PDG	Podgorica	83.06	324	⇑P	P	23 37 32.4	+0.5
BALST	Balsthal	83.19	334	eP	P	23 37 32.3	-0.3
	comp=Z,49nm,0.9s,baz=32,slow=5.5						
PPT	Papeete	83.22	122	LR	LR	00 12 34.5	
	comp=Z,1µm,18.1s,baz=350,slow=34						
PPT2	Papeete2	83.24	122	eLR	LR	00 03 31.5	
	comp=Z,954nm,32.5s						
PPT2				eLR	LR	00 03 39.1	
	comp=Z,746nm,19.8s						
FVM	French Village	83.26	43	IAmb	IAmb	23 37 53.1	
	comp=Z,13nm,0.9s						
TUE	Stuetta	83.41	333	IAmb	IAmb	23 37 47.9	
	comp=Z,16nm,0.8s						
TUE	Stuetta	83.41	333	P	P	23 37 34.0	+0.1
	comp=Z,107nm,0.9s						
BRDY	Brady	83.71	52	IAmb	IAmb	23 37 52.9	
	comp=Z,46nm,1.8s						
JCT	Junction City	83.83	54	IAmb	IAmb	23 37 39.6	
	comp=Z,16nm,0.8s						
FCAR	Ozark Folk Cen	84.02	45	P	P	23 37 36.0	-1.0
FCAR				IAmb	IAmb	23 38 00.8	
	comp=Z,9.4nm,0.8s						
DRIO	Del Rio	84.12	55	IAmb	IAmb	23 37 41.1	
	comp=Z,28nm,1.0s						
SENIN	Lac Senin/Sane	84.17	334	IAmb	IAmb	23 37 52.1	
	comp=Z,15nm,0.8s						
MIAR	Mount Ida	84.29	47	IAmb	IAmb	23 37 58.0	
	comp=Z,21nm,1.1s						
LCAR	Lake Charles	84.38	44	IAmb	IAmb	23 37 57.4	
	comp=Z,15nm,1.4s						
WHAR	Wooly Hollow	84.40	46	IAmb	IAmb	23 37 57.7	
	comp=Z,23nm,1.1s						
KARP	Karpathos	84.84	315	P	P	23 37 41.2	0.0
EIL	Elat	85.00	307	LR	LR	00 20 40.0	
	comp=Z,1µm,18.0s,baz=58,slow=39						
MATE	Matera	85.61	325	⇑P	P	23 37 41.7	-3.2
T47A	Sharon Grove	85.67	41	IAmb	IAmb	23 38 04.2	
	comp=Z,19nm,1.0s						
Q51A	Peebles	85.76	38	P	P	23 37 45.9	+0.2
Q51A				IAmb	IAmb	23 38 04.2	
	comp=Z,36nm,1.1s						
SSB	Saint Sauveur	86.01	335	IAmb	IAmb	23 38 01.4	
	comp=Z,32nm,1.1s						
U49A	Red Boiling Sp	86.68	41	IAmb	IAmb	23 38 08.6	
	comp=Z,15nm,0.8s						
T50A	Nancy	86.72	40	P	P	23 37 51.4	+1.0
T50A				IAmb	IAmb	23 38 08.6	
	comp=Z,16nm,0.8s						
SWET	Sewanee	87.65	42	IAmb	IAmb	23 38 14.1	
	comp=Z,25nm,1.2s						
TBI	Tubuai	87.67	125	eS	S	23 48 31.6	-4.7
	comp=Z,962nm,26.8s						
TBI				eSS	SS	23 54 23.7	+0.4
	comp=Z,932nm,36.0s						
TBI				eLQ	LQ	00 01 56.5	
	comp=Z,1µm,38.2s						
TBI				eLR	LR	00 05 37.1	
	comp=Z,3µm,21.8s						
TBI				eLR	LR	00 05 48.1	
	comp=Z,1µm,23.8s						
TKL	Tuckaleechee C	88.32	40	LR	LR	00 19 35.1	
	comp=Z,700nm,20.3s,baz=351,slow=37						
RPZ	Rata Peaks	89.05	164	LR	LR	00 14 22.8	
	comp=Z,670nm,20.2s,baz=348,slow=33						
VAE	Valguarnera	89.24	325	LR	LR	00 23 31.9	
	comp=Z,2µm,18.2s,baz=356,slow=39						
BG3	Lake Jocassee	89.26	40	IAmb	IAmb	23 38 22.4	
	comp=Z,36nm,1.4s						
PGAV	Gavieira, Arco	92.48	343	eLQ	LQ	00 14 41.9	
PGAV				eLR	LR	00 19 14.2	
PGAV				i IAMs_20	IAMs_20	00 27 09.8	
	comp=Z,899nm,16.0s						
KEST	Kesra	92.81	327	LR	LR	00 24 28.4	
	comp=Z,2µm,18.6s,baz=41,slow=38						
MVO	Moncorvo	92.97	341	eLQ	LQ	00 15 01.1	
MVO				eLR	LR	00 21 27.6	
MVO				i IAMs_20	IAMs_20	00 26 48.0	
	comp=Z,1µm,20.0s						
ATD	Arta Tunnel	92.98	289	LR	LR	00 25 51.2	
	comp=Z,20nm,20.3s,baz=18,slow=39						
ESDC	Sonseca Array	93.61	339	P	P	23 38 22.5	-0.2
	comp=Z,2.1nm,0.9s,baz=18,slow=2.9,SNR=6.6						
ESDC				LR	LR	00 25 57.8	
	comp=Z,1µm,18.6s,baz=30,slow=39						
	comp=Z,2.1nm,0.9s						
ESDC	Sonseca Array	93.61	339	P	P	23 38 21.8	-1.0
MTE	Manteigas	93.81	342	eLQ	LQ	00 15 47.8	
MTE				eLR	LR	00 20 51.9	
MTE				i IAMs_20	IAMs_20	00 27 23.9	
	comp=Z,1µm,20.0s						
PMRV	Marv??o	94.70	341	eLQ	LQ	00 16 21.1	
PMRV				eLR	LR	00 22 07.5	
PMRV				i IAMs_20	IAMs_20	00 28 50.3	
	comp=Z,1µm,16.0s						
PVAQ	Vaqueiros	96.70	341	eLQ	LQ	00 17 47.7	
PVAQ				eLR	LR	00 20 40.9	
PVAQ				i IAMs_20	IAMs_20	00 29 31.8	
	comp=Z,2µm,18.0s						
CMIG	Matias Romero	96.77	59	LR	LR	00 24 33.4	
	comp=Z,124nm,18.8s,baz=329,slow=37						
TORD	Torodi Ar. Bea	115.95	323	PKP	PKiKP	23 43 49.1	-0.6
	comp=Z,0.9nm,0.3s,baz=1.2,slow=1.6,SNR=1.2						
DBIC	Dimbokro	124.52	327	PKP	PKPdf	23 44 06.1	-0.1
	comp=Z,5.9nm,0.9s,baz=32,slow=2.3,SNR=9.1						
DBIC	Dimbokro	124.52	327		PKPdf	23 44 05.8	-0.4
DBIC	Dimbokro	124.52	327	PKIKP	PKPdf	23 44 05.8	-0.4
TEFE	Tefe	130.90	46	eP	PKPdf	23 44 17.7	-0.7
QSPA	South Pole Qui	133.04	180	PKP	PKiKP	23 44 24.6	+2.6
	comp=Z,0.7nm,0.4s,baz=1.3,slow=0.4,SNR=3.8						
SYO	Syowa Base	136.12	210	⇓ePdiff	Pdif	23 41 32.4	+1.2
LPAZ	La Paz	139.14	60	PKP	PKiKP	23 44 35.5	-1.1
	comp=Z,1.5nm,0.8s,baz=252,slow=1.7,SNR=2.9						
H03N2	Juan Fernandez	142.30	91	T	T	02 23 59.0	
	baz=304,slow=74						
H03N3	Juan Fernandez	142.31	91	T	T	02 24 00.3	
	baz=304,slow=74						
H03N1	Juan Fernandez	142.31	91	T	T	02 24 01.8	
	baz=304						
PTLB	Pontes e Lacer	143.81	48		PKPbc	23 44 40.6	+1.1
SNDB	Serra Nova Dou	144.57	34	eP	PKPdf	23 44 43.0	-0.3
NVL	N'lazarevskaya	145.04	204	ePKIKP	PKPbc	23 44 41.9	0.0
NVL				e		23 48 00.7	
NVL				ePPP	PPP	23 51 13.1	
NVL				eSS	SS	00 06 52.0	+1.9
NVL				eSSS	SSS	00 12 18.2	
NVL				pmax	pmax		
	comp=Z,31nm,1.3s						
BELA	Belgrano 2	145.30	179		PKPbc	23 44 41.9	-0.7
NBTA	Tacaratu-PE	145.53	11	eP	PKPdf	23 44 44.6	-0.4
SALV	Santo Antonio	146.00	44	eP	PKPbc	23 44 46.7	+0.2
TROLL	Troll, Antarti	146.79	199	⇓P	PKPbc	23 44 47.5	0.0
	comp=Z,667nm,0.8s						
SDBA	SAO DESIDERIO	147.24	24	eP	PKPdf	23 44 46.7	-1.3
SNAA	Sanae	148.23	197	⇓P	PKPbc	23 44 50.0	-1.3
	comp=Z,106nm,0.8s						
SNAA	Sanae	148.23	197	PKPbc	PKPbc	23 44 51.4	+0.1
	comp=Z,6.2nm,0.9s,baz=101,slow=0.7,SNR=9.8						
SNAA	Sanae	148.23	197	PKPdf	PKPdf	23 44 48.8	+0.9
SNAA	Sanae	148.23	197	PKIKP	PKPdf	23 44 48.8	+0.9
MT13	San Alfonso	148.75	85	PKPdf	PKPdf	23 44 50.4	+0.3
BDFB	Brasilia	149.20	31	PKPbc	PKiKP	23 44 56.3	-0.4
	comp=Z,14nm,0.8s,baz=305,slow=2.4,SNR=19						
BDFB	Brasilia	149.20	31		PKPbc	23 44 56.0	+0.6
BDFB	Brasilia	149.20	31	PKP2	PKPbc	23 44 56.0	+0.6
BI02	San Fabin de	149.35	91	PKPbc	PKPbc	23 44 55.4	+0.1
MURT	Porto Murtinho	149.64	53	eP	PKPdf	23 44 51.5	-0.1
AQDB	Aquidauana	149.78	49	eP	PKPdf	23 44 50.7	-1.2
PLCA	Paso Flores	151.37	98	PKPbc	PKiKP	23 45 00.8	+0.4
	comp=Z,5.7nm,1.1s,baz=271,slow=4.5,SNR=4.5						
CPUP	Villa Florida	153.30	59	PKPbc	PKiKP	23 45 06.6	+1.9
	comp=Z,0.4nm,0.8s,baz=255,slow=4.2,SNR=4.1						
CPUP				PKPab	PKPab	23 45 17.2	+0.7
	comp=Z,3.2nm,1.2s,baz=222,slow=3.6,SNR=6.9						
CPUP	Villa Florida	153.30	59	PKPbc	PKiKP	23 45 05.9	+1.2
CPUP	Villa Florida	153.30	59	PKIKP	PKiKP	23 45 05.9	+1.2

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*IDC **03** 23:48:12.5±1.7, 3°.12N×94°.13E, h0km, mb3.8/9, mbtmp3.8/10, Error ellipse: s-maj=71.4km s-min=21.1km az=56.0*

*NEIC **03** 23:48:14.6±1.2, 3°.18N±0°.05×94°.3E±0°.1, h10km±2km, mb4.3/5, Error ellipse: s-maj=22.9km s-min=7.9km az=264.0*

ISC 03 23:48:16.0±1.0**, 3°.2N**±0°.1×**94°.3E**±0°.1**, h21**km**, n32, σ0ˢ.60**/20**, mb4.0**/12**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	3.30	52	Pn	Pn	23 49 07.1	+0.7
GSI	Gunungsitoli	3.75	120	Pn	Pn	23 49 12.6	-0.1
KULM	Kulim	6.64	72	Pn	Pn	23 49 51.9	-0.4
CMAR	Chiang Mai Arr	15.82	16	Pn	P	23 52 00.5	-0.8
	0.7nm,0.3s,baz=205,slow=12,SNR=4.0						
H08S2	Diego Garcia H	24.31	244	T	T	00 18 54.3	
	baz=64,slow=76,SNR=615						
H08S3	Diego Garcia H	24.31	244	T	T	00 18 44.3	
	baz=64,slow=76,SNR=879						
H08S1	Diego Carcia H	24.32	244	T	T	00 18 45.4	
	baz=64,slow=76,SNR=469						
H01W3	Cape Leeuwin H	42.21	156	T	T	00 41 04.7	
	baz=330,slow=76,SNR=24						
H01W2	Cape Leeuwin H	42.23	156	T	T	00 41 07.6	
	baz=330,slow=76,SNR=27						
H01W1	Cape Leeuwin H	42.23	155	T	T	00 41 03.6	
	baz=330,slow=76,SNR=22						
MKAR	Makanchi Array	44.66	348	P	P	23 56 27.7	+0.5
	0.8nm,0.4s,baz=166,slow=8.1,SNR=18						
	0.8nm,0.4s						
MAKZ	Makanchi	44.74	348	P	P	23 56 27.7	-0.2
MAKZ				IAmb	IAmb	23 56 40.1	
	comp=Z,3.9nm,1.0s						
WB0	Warramunga Arr	45.49	122	P	P	23 56 34.6	+0.4
WB0				IAmb	IAmb	23 56 59.4	
	comp=Z,7.2nm,1.3s						
WRA	Warramunga Arr	45.52	122	P	P	23 56 34.9	+0.5
	comp=Z,0.4nm,0.5s,baz=297,slow=7.8,SNR=3.8						
	comp=Z,0.4nm,0.5s						
WRA	Warramunga Arr	45.52	122	P	P	23 56 33.4	-1.1
SONM	Songino Array	45.66	11	P	P	23 56 35.4	+0.1
	comp=Z,0.3nm,0.4s,baz=188,slow=8.7,SNR=2.1						
	comp=Z,0.3nm,0.4s						
WR8	Warramunga Arr	45.67	122	P	P	23 56 36.2	+0.6
ASAR	Alice Springs	46.89	127	P	P	23 56 46.0	+0.8
	comp=Z,0.4nm,0.4s,baz=294,slow=8.2,SNR=5.5						
	comp=Z,0.4nm,0.4s						
KURBB	Kurchatov Arra	49.10	347	P	P	23 57 02.3	+0.5
	comp=Z,0.4nm,0.3s,baz=172,slow=7.1,SNR=4.1						
	comp=Z,0.4nm,0.3s						
ZALV	Zalesovo Beam	51.18	353	P	P	23 57 16.7	-0.8
	comp=Z,0.5nm,0.5s,baz=178,slow=9.0,SNR=3.9						
	comp=Z,0.5nm,0.5s						
BVAR	Borovoye Array	53.45	342	P	P	23 57 34.3	-0.2
	comp=Z,0.5nm,0.6s,baz=150,slow=6.7,SNR=2.7						
	comp=Z,0.5nm,0.6s						
AB31	Akbulak array	54.42	333	P	P	23 57 41.1	-0.4
AB31				IAmb	IAmb	23 57 43.4	
	comp=Z,3.5nm,1.4s						
ABKAR	Akbulak array	54.42	333	P	P	23 57 41.0	-0.5
H04N2	CROZET ISLANDS	61.87	212	T	T	01 05 50.1	
	baz=48,slow=75,SNR=206						
H04N1	CROZET ISLANDS	61.88	212	T	T	01 05 54.1	
	baz=48,slow=75,SNR=259						
H04N3	CROZET ISLANDS	61.89	212	T	T	01 05 49.4	
	baz=48,slow=75,SNR=275						
H04S1	CROZET ISLANDS	62.25	212	T	T	01 06 20.2	
	baz=51,slow=75,SNR=82						
H04S3	CROZET ISLANDS	62.26	212	T	T	01 06 19.9	
	baz=51,slow=75,SNR=102						
H04S2	CROZET ISLANDS	62.27	212	T	T	01 06 19.0	
	baz=51,slow=75,SNR=91						
FINES	FINESS Array B	76.91	333	P	P	00 00 06.5	0.0
	comp=Z,3.3nm,1.0s,baz=103,slow=6.3,SNR=4.6						
	comp=Z,3.3nm,1.0s						
FINES	FINESS Array B	76.91	333	P	P	00 00 06.7	+0.2
ARCES	ARCESS Array B	79.70	341	P	P	00 00 22.4	+0.6
	comp=Z,3.0nm,1.0s,baz=84,slow=4.9,SNR=4.5						
	comp=Z,3.0nm,1.0s						

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*NEIC **03** 23:55:11.8±1.8, 29°.62N±0°.07×129°.4E±0°.1, h131km±6km, mb4.1/47, Error ellipse: s-maj=14.6km s-min=9.5km az=97.0*

*IDC **03** 23:55:12.8±1.2, 29°.68N×129°.38E, h146km±11km, mb3.6/21, mbtmp4.1/24, Error ellipse: s-maj=15.4km s-min=9.6km az=82.0*

*JMA **03** 23:55:12.7±0.2, 29°.6N±0°.6×13°0E±°, h135km±1km, MD3.7/36, MV3.8/36, NEAR TOKARA ISLANDS*

ISC 03 23:55:12.2±0.6**, 29°.61N**±0°.04×**129°.49E**±0°.06**, h142**km±5km**, n108, σ1ˢ.14**/124**, mb4.0**/44**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNN	Nakanoshima	0.41	55	i P	Pn	23 55 31.8	-0.4
JNN	Nakanoshima	0.41	55	A	A	23 55 31.8	
	comp=N,11nm,1.2s,comp=E,9.0nm,0.5s						

JTAJ	Takarajima	0.51	209	*i* P	Pn	23 55 33.0	+0.3
JTAJ				S	Sn	23 55 48.4	+0.2
JKC	Kuchinoerabu	1.05	36	P	Pn	23 55 36.0	-0.6
JYAK	Yakushimahirau	1.09	54	*i* P	Pn	23 55 35.8	-1.1
JYAK				S	Sn	23 55 53.0	-2.9
JAM	Amami Oshima	1.19	175	*i* P	Pn	23 55 37.7	-0.3
JAM				S	Sn	23 55 55.9	-1.7
JAM	Amami Oshima	1.19	175	A	A	23 55 37.7	
	comp=N,4.0nm,0.3s,comp=E,4.0nm,1.1s						
JZK	Kikaishima	1.35	162	*i* P	Pn	23 55 40.3	+0.7
JZK				S	Sn	23 56 01.8	+1.3
JAMN	Amaminishikomi	1.38	192	*i* P	Pn	23 55 39.7	-0.2
JAMN				S	Sn	23 55 59.6	-1.4
JMTN	Minamitane	1.46	57	*i* P	Pn	23 55 39.7	-1.0
JMTN				S	Sn	23 56 00.3	-2.1
JMTN	Minamitane	1.46	57	A	A	23 55 39.7	
	comp=N,3.0nm,1.2s,comp=E,4.0nm,1.9s						
JTN	Tanegashima 3	1.66	51	*i* P	Pn	23 55 41.8	-1.1
JTN				S	Sn	23 56 04.6	-1.8
JTK	Tokunoshima	1.87	195	*i* P	Pn	23 55 45.5	+0.1
JTSR	Tashiro 2	1.99	38	*i* P	Pn	23 55 46.0	-0.7
JTSR				S	Sn	23 56 10.5	-2.7
JSU	Suzuyama	2.07	24	P	Pn	23 55 47.9	+0.2
JSJ	Shimokoshiki	2.08	5	P	Pn	23 55 47.7	0.0
JOKE	Okinoerabujima	2.38	200	P	Pn	23 55 51.7	+0.2
JOKE				S	Sn	23 56 21.4	-0.2
JNAR	Kushima--Naru	2.46	38	*i* P	Pn	23 55 53.0	+0.6
JOW	Kunigami	2.96	201	P	Pn	23 55 58.2	-0.6
	comp=E,42nm,0.3s,baz=30,slow=20,SNR=18						
JOW				S	Sn	23 56 32.1	-2.6
	comp=E,80nm,0.3s,baz=131,slow=26,SNR=4.6						
JOW	Kunigami	2.96	201		Pn	23 55 57.7	-1.1
JNU	Nakatsue	3.70	18	P	Pn	23 56 09.6	+1.3
	comp=E,110nm,0.4s,baz=222,slow=12,SNR=154						
JNU				S	Sn	23 56 52.3	+0.4
	comp=E,39nm,0.4s,baz=180,slow=22,SNR=7.7						
JMZ	Minamidaito 2	4.07	157	Pn	Pn	23 56 12.2	-1.0
JMN	Monobe	5.56	41	Pn	Pn	23 56 31.9	-1.0
KSRS	Korea Array	7.94	351	P	Pn	23 57 06.6	+1.9
	comp=E,2.6nm,0.6s,baz=172,slow=13,SNR=8.4						
INU	Inuyama	8.56	46	Pn	Pn	23 57 14.1	+1.1
JGF	Kuroka	8.93	46	Pn	Pn	23 57 21.6	+3.6
JHJ	Hachijo jima 2	9.47	66	P	Pn	23 57 28.7	+3.4
	comp=E,110nm,0.3s,baz=233,slow=20,SNR=8.9						
JHJ2	Mitsune	9.50	66	Pn	Pn	23 57 28.4	+2.8
ENH	Enshi	17.35	277	P	P	23 59 05.0	0.0
LZDM	Lanzhou Array	22.56	293	P	P	00 00 00.8	-0.1
	comp=E,2.4nm,0.3s,baz=133,slow=10,SNR=6.0						
	comp=E,2.4nm,0.3s						
ULN	Ulaanbaatar	25.12	323	P	P	00 00 24.5	+0.5
ULN				IAmb	IAmb	00 00 25.8	
	comp=Z,5.5nm,0.6s						
SONM	Songino Array	25.45	322	P	P	00 00 27.2	+0.2
	comp=Z,3.3nm,0.6s,baz=140,slow=10,SNR=19						
	comp=Z,3.3nm,0.6s						
SONM	Songino Array	25.45	322	P	P	00 00 27.3	+0.3
SONM				IAmb	IAmb	00 00 28.7	
	comp=Z,2.9nm,0.7s						
MKAR	Makanchi Array	40.21	309	P	P	00 02 35.3	+0.5
	comp=Z,0.6nm,0.5s,baz=92,slow=11,SNR=9.0						
MKAR				pP	pP	00 03 07.1	+1.4
	comp=Z,0.9nm,0.8s,baz=96,slow=11,SNR=3.7						
MKAR				PcP	PcP	00 04 35.9	-0.1
	comp=Z,0.9nm,0.5s,baz=80,slow=3.4,SNR=14						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	40.21	309	P	P	00 02 32.9	-1.8
ZAA0	Zalesovo Array	40.31	320	P	P	00 02 34.5	-0.9
ZAA0				IAmb	IAmb	00 02 36.7	
	comp=Z,1.8nm,0.5s						
ZALV	Zalesovo Beam	40.31	320	P	P	00 02 33.6	-1.8
	comp=Z,1.3nm,0.3s,baz=102,slow=8.6,SNR=8.6						
ZALV				PcP	PcP	00 04 35.2	-0.8
	comp=Z,1.0nm,0.4s,baz=124,slow=3.9,SNR=6.2						
	comp=Z,1.3nm,0.3s						
ZALV	Zalesovo Beam	40.31	320	P	P	00 02 34.2	-1.2
UGM	Wanagama	41.53	209	P	P	00 02 46.5	+0.7
KURK	Kurchatov	43.21	314	P	P	00 02 59.6	+0.6
KURBB	Kurchatov Arra	43.26	314	P	P	00 02 58.2	-1.1
	comp=Z,1.0nm,0.6s,baz=102,slow=8.9,SNR=7.2						
KURBB				PcP	PcP	00 04 45.1	-0.8
	comp=Z,0.4nm,0.5s,baz=113,slow=4.1,SNR=4.5						
	comp=Z,1.0nm,0.6s						
NRIK	Noril'sk	46.41	341	PcP	PcP	00 04 56.2	-0.2
	comp=Z,1.5nm,0.4s,baz=93,slow=5.3,SNR=3.9						
FITZ	Fitzroy Crossi	47.57	185	P	P	00 03 34.2	+0.6
KK31	Karatay Array	48.44	303	P	P	00 03 40.9	+0.7
KKAR	Karatay Array	48.44	303	P	P	00 03 39.9	-0.3
BVAR	Borovoye Array	48.56	316	P	P	00 03 40.1	-0.9
	comp=Z,2.6nm,0.6s,baz=93,slow=9.8,SNR=15						
BVAR				PcP	PcP	00 05 04.2	-0.3
	comp=Z,1.7nm,0.4s,baz=124,slow=3.2,SNR=16						
	comp=Z,2.6nm,0.6s						
BORK	Borovoye	48.60	316	P	P	00 03 40.6	-0.7
BORK				IAmb	IAmb	00 03 43.8	
	comp=Z,5.3nm,0.8s						
WB0	Warramunga Arr	49.31	174	P	P	00 03 47.4	+0.5
WB0				IAmb	IAmb	00 04 04.7	
	comp=Z,2.3nm,1.0s						
WRA	Warramunga Arr	49.48	174	P	P	00 03 48.5	+0.2
	comp=Z,1.6nm,0.7s,baz=353,slow=8.1,SNR=14						
WRA				PcP	PcP	00 05 08.6	+0.4
	comp=Z,0.4nm,0.5s,baz=356,slow=3.9,SNR=1.6						
	comp=Z,1.6nm,0.7s						
WRA	Warramunga Arr	49.48	174	P	P	00 03 47.1	-1.2
WR8	Warramunga Arr	49.51	174	P	P	00 03 48.5	0.0
PSA00	Pilbara Seismi	51.72	191	P	P	00 04 04.7	-0.3
PSA00				IAmb	IAmb	00 04 06.3	
	comp=Z,2.3nm,0.9s						
ASAR	Alice Springs	53.13	175	P	P	00 04 16.3	+0.9
	comp=Z,0.4nm,0.3s,baz=5.4,slow=12,SNR=19						
ASAR				pP	pP	00 04 50.3	+2.2
	comp=Z,0.4nm,0.5s,baz=8.4,slow=14,SNR=2.9						
ASAR				PcP	PcP	00 05 22.9	+1.1
	comp=Z,0.5nm,0.6s,baz=3.0,slow=3.6,SNR=7.2						
	comp=Z,0.4nm,0.3s						
ASAR	Alice Springs	53.13	175	P	P	00 04 15.1	-0.3
L14K	Kuka Creek	53.91	34	P	P	00 04 22.4	+1.8
F17K	Baldwin Pennin	54.97	27	P	P	00 04 29.9	+1.7
AB31	Akbulak array	55.20	312	P	P	00 04 29.2	-1.0
ABKAR	Akbulak array	55.20	312	P	P	00 04 29.3	-0.9
C18K	Utukok River	55.25	25	P	P	00 04 30.2	0.0
C18K				IAmb	IAmb	00 04 38.1	
	comp=Z,2.4nm,0.9s						
J17K	VABM Dome	55.69	31	P	P	00 04 34.2	+0.8
D19K	Kuna River	56.36	25	P	P	00 04 38.5	+0.3
D20K	Etivluk River	56.92	25	P	P	00 04 42.4	+0.2
B21K	Ikpikpuk River	57.68	24	P	P	00 04 47.6	+0.3
G21K	Allakaket	58.08	27	P	P	00 04 50.9	+0.7
D22K	Ayikyak River	58.36	25	P	P	00 04 52.7	+0.6
D23K	Nanushuk River	59.08	24	P	P	00 04 57.5	+0.4
D24K	Happy Valley	59.73	24	P	P	00 05 02.1	+0.5
F24K	Squaw Lake	60.22	26	P	P	00 05 05.3	+0.3
F24K				IAmb	IAmb	00 05 07.6	
	comp=Z,3.5nm,1.1s						
D25K	Kavik River	60.59	24	P	P	00 05 07.7	+0.2
D25K				IAmb	IAmb	00 05 08.8	
	comp=Z,3.4nm,0.9s						
ILAR	Eielson Array	60.95	29	P	P	00 05 09.7	-0.2
	comp=Z,0.5nm,0.7s,baz=290,slow=8.6,SNR=10						
	comp=Z,0.5nm,0.7s						
ILAR	Eielson Array	60.95	29	P	P	00 05 10.7	+0.8
F25K	Christian Rive	61.06	26	P	P	00 05 12.4	+1.7
F25K				IAmb	IAmb	00 05 22.7	
	comp=Z,2.2nm,1.1s						
C27K	Jago River	61.48	23	P	P	00 05 14.5	+1.1
C27K				IAmb	IAmb	00 05 17.2	
	comp=Z,2.8nm,0.9s						
STKA	Stephens Creek	62.22	168	P	P	00 05 19.8	+1.1
	comp=Z,0.9nm,0.5s,baz=8.1,slow=14,SNR=3.5						
	comp=Z,0.9nm,0.5s						
STKA	Stephens Creek	62.22	168	P	P	00 05 19.9	+1.1
SCRK	Sand Creek	62.33	30	P	P	00 05 19.4	0.0
SCRK				IAmb	IAmb	00 05 21.1	
	comp=Z,1.7nm,0.7s						
E27K	Coleen River	62.48	25	P	P	00 05 21.2	+1.0
E27K				IAmb	IAmb	00 05 24.2	
	comp=Z,2.2nm,1.1s						
H27K	Steamboat Moun	62.90	27	P	P	00 05 24.3	+1.3
BCAR	Beaver Creek A	63.49	31	P	P	00 05 27.9	+1.0
I28M	Miner Creek	63.71	28	P	P	00 05 29.4	+1.0
I28M				IAmb	IAmb	00 05 32.3	
	comp=Z,1.2nm,0.8s						
H29M	Whitestone	64.15	27	P	P	00 05 32.4	+1.2
G30M	tAoh Zraii Nji	64.77	26	P	P	00 05 34.7	-0.5
G30M				IAmb	IAmb	00 05 36.0	
	comp=Z,2.3nm,0.7s						
H31M	Peel River	65.84	27	P	P	00 05 42.9	+0.7
H31M				IAmb	IAmb	00 06 03.8	
	comp=Z,2.8nm,1.1s						
A36M	Sachs Harbour	66.69	19	P	P	00 05 47.1	-0.1
A36M				IAmb	IAmb	00 05 48.9	
	comp=Z,4.2nm,0.8s						
ARCES	ARCESS Array B	67.29	338	P	P	00 05 50.0	-1.2
	comp=Z,1.0nm,0.5s,baz=61,slow=8.5,SNR=9.7						
	comp=Z,1.0nm,0.5s						
ARCES	ARCESS Array B	67.29	338	P	P	00 05 49.7	-1.5
KBZ	Khabaz	67.91	309	P	P	00 05 56.0	+0.6
	comp=Z,2.6nm,0.8s,baz=61,slow=4.9,SNR=5.1						
	comp=Z,2.6nm,0.8s						
FINES	FINESS Array B	70.49	330	P	P	00 06 09.9	-1.1
	comp=Z,4.1nm,0.9s,baz=64,slow=5.6,SNR=15						
	comp=Z,4.1nm,0.9s						
RES	Resolute Bay	72.03	11	P	P	00 06 19.9	-0.2
RES				IAmb	IAmb	00 06 42.4	
	comp=Z,2.8nm,1.1s						
AKASG	Malin Array Be	73.70	319	P	P	00 06 29.7	-0.7
	comp=Z,0.6nm,0.4s,baz=58,slow=5.6,SNR=2.0						
	comp=Z,0.6nm,0.4s						
RAYN	Ar Rayn	73.81	288	P	P	00 06 31.4	-0.2
RAYN				IAmb	IAmb	00 06 32.7	
	comp=Z,4.4nm,1.1s						
YKAW3	Yellowknife Wh	74.97	26	P	P	00 06 38.1	+0.6
YKAW3				IAmb	IAmb	00 06 52.8	
	comp=Z,4.2nm,1.0s						
YKA	Yellowknife Ar	75.01	26	P	P	00 06 38.1	+0.4
	comp=Z,0.5nm,0.6s,baz=319,slow=7.6,SNR=5.6						
	comp=Z,0.5nm,0.6s						
BRTR	Keskin Array B	75.85	308	P	P	00 06 43.5	+0.3
	comp=Z,0.6nm,0.8s,baz=77,slow=4.8,SNR=2.3						
	comp=Z,0.6nm,0.8s						
HFS	Hagfors	76.36	332	P	P	00 06 44.0	-1.4
	comp=Z,4.1nm,1.0s,baz=107,slow=4.3,SNR=9.7						
	comp=Z,4.1nm,1.0s						
NC405	NORSAR Array S	76.55	334	P	P	00 06 45.1	-1.4
NC405				IAmb	IAmb	00 07 07.2	
	comp=Z,6.0nm,0.9s						
NOA	NORSAR Array B	76.78	334	P	P	00 06 46.1	-1.8
	comp=Z,1.2nm,0.7s,baz=49,slow=5.4,SNR=6.2						
	comp=Z,1.2nm,0.7s						
BUR08	Bucovina Ar. S	77.48	318	P	P	00 06 52.1	0.0
BURAR	Bucovina Array	77.49	318	P	P	00 06 51.1	-1.1
ELL	Elmali	79.84	306	P	P	00 07 05.1	-0.2
ELL				IAmb	IAmb	00 07 18.4	
	comp=Z,6.6nm,1.2s						
GEC2	GERESS Array S	83.18	323	P	P	00 07 22.8	+0.3
GEC2				IAmb	IAmb	00 07 23.5	
	comp=Z,2.1nm,0.8s						
GERES	GERESS Array B	83.18	323	P	P	00 07 22.5	-0.1
	comp=Z,0.8nm,0.6s,baz=35,slow=4.9,SNR=8.0						
	comp=Z,0.8nm,0.6s						
FCC	Fort Churchill	84.80	21	P	P	00 07 30.5	+0.1
FCC				IAmb	IAmb	00 07 32.8	
	comp=Z,3.1nm,1.0s						
EKA	Eskdalemuir Ar	86.20	335	P	P	00 07 36.2	-1.2
	comp=Z,0.9nm,0.5s,baz=40,slow=5.1,SNR=5.9						
	comp=Z,0.9nm,0.5s						
FUORN	Ofenpass-Fuorn	86.39	323	P	P	00 07 38.2	-0.7
FUORN				IAmb	IAmb	00 07 40.6	
	comp=Z,3.9nm,0.9s						
PDAR	Pinedale Array	89.85	39	P	P	00 07 55.5	+0.2
	comp=Z,0.3nm,0.7s,baz=314,slow=6.5,SNR=2.8						
	comp=Z,0.3nm,0.7s						
RAFF	Raffo Rosso	89.95	314	P	P	00 07 56.5	+0.8
BOAV	Boa Vista	146.77	18	PKPbc	PKPdf	00 14 37.8	+1.3

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*SNET **03** 23:55:35.5±1.0, 13°.68N×90°.34W, h47^{km}±9^{km}, ML2.7*
*GCG **03** 23:55:35.2±0.8, 13°.65N×90°.36W, h48^{km}±19^{km}, MD3.6, ML3.4, MW2.6*
ISC 03 23:55:35.8±2.9, **13°.6N**±0°.2×**90°.2W**±0°.1, **h69**^{km}±21^{km}, **n16, σ1^{s}40**/21, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUBE	Las Nubes	0.55	54	*e*P	Pn	23 55 48.1	-1.1
NUBE				*e*S	Sn	23 55 57.5	-1.5
NUBE	Las Nubes	0.55	54	*i* P	Pn	23 55 48.2	-1.1
NUBE				*e*S	Sn	23 55 58.5	-0.5
PCG5	San Vicente Pa	0.65	348	*e*P	Pn	23 55 50.5	+0.3
SBLS	San Blas	0.65	67	*e*P	Pn	23 55 49.6	-0.8
SBLS				*e*S	Sn	23 56 01.1	0.0
RTR	El Retiro	0.66	61	*e*P	Pn	23 55 50.0	-0.4
SNJE	San Jose	0.68	65	*e*P	Pn	23 55 50.0	-0.7
SNJE				*e*S	Sn	23 56 02.1	+0.6
FG16	Alotenango, Sa	0.74	339	*e*P	Pn	23 55 52.7	+1.4
FG16				*e*S	Sn	23 56 06.1	+3.4
FG16				IAML		23 56 07.4	
	comp=E,3µm,0.2s						
RBDL	Robledal	0.76	45	*e*P	Pn	23 55 51.2	-0.2
JAYA	Jayaque - finc	0.77	84	*e*P	Pn	23 55 51.1	-0.5
JAYA				*e*S	Sn	23 56 03.2	-0.1
JAYA				IAML		23 56 04.8	
	comp=Z,453nm,0.2s						
PMON	Piamonte	0.91	82	*e*P	Pn	23 55 53.3	+0.1
PMON				*e*S	Sn	23 56 08.1	+1.9
ESSG	Sabana Grande	0.98	324	*e*P	Pn	23 55 51.5	-2.7
LOMA	Loma Larga	1.04	86	*e*P	Pn	23 55 55.8	+0.9
MTO3	Montecristo	1.18	46	*e*P	Pn	23 55 56.2	-0.6
STG5	El Palmar, Qui	1.35	307	*e*P	Pn	23 56 01.4	+2.5
STG8	El Palmar, Qui	1.38	309	*e*P	Pn	23 56 01.8	+2.4
STG8				*e*S	Sn	23 56 22.2	+5.0
STG8				IAML		23 56 24.0	
	comp=N,236nm,0.2s						
APG	El Apazote	1.43	351	*i* P	Pn	23 55 59.0	-1.1

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*NEIC **04** 00:22:57.5±2.1, 30°.6S±0°.1×179°.9W±0°.2, h388^{km}±8^{km}, mb4.5/26, Error ellipse: s-maj=23.4km s-min=17.0km az=51.0*
*IDC **04** 00:22:57.7±1.2, 30°.56S×179°.90W, h399^{km}±10^{km}, mb3.7/6, mbtmp4.5/7, Error ellipse: s-maj=19.3km s-min=17.1km az=65.0*
*NOU **04** 00:22:57.6, 30°.71S×179°.45W, h439^{km}, mb4.8/19, Kermadec Islands Region*
*WEL **04** 00:23:03.9±0.8, 31°.7S±7°.7×17°.9W±1°.5, h327^{km}±9^{km}, M5.1/15, mB5.4/12, ML5.2/11, MLv5.5/15, Mw(mB)4.8/12, Error ellipse: s-maj=20.9km s-min=5.8km az=111.3, confirmed*
ISC 04 00:22:57.4±0.4, **30°.68S**±0°.05×**179°.76W**±0°.07, **h400**^{km}, **n110, σ2^{s}07**/128, **mb4.5**/21, **4C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.13	49	P	Pn	00 23 54.1	-0.2
GLKZ				S	S	00 24 37.1	-3.0
RIZ	Raoul Island	2.14	48	P	Pn	00 23 55.2	+0.9
RIZ				S	S	00 24 35.1	-5.1
RAO	Raoul Island	2.14	49	P	Pn	00 23 54.7	+0.4
	507nm,0.4s,baz=89,slow=17,SNR=8.4						
RAO				S	S	00 24 32.7	-7.5
	1µm,0.2s,baz=65,slow=10,SNR=7.6						
RAO	Raoul Island	2.14	49		Pn	00 23 54.3	0.0
RAO				Sn	S	00 24 36.4	-3.8
RAO	Raoul Island	2.14	49	P	Pn	00 23 56.7	+2.4
GRZ	Great Barrier	6.84	214	P	P	00 24 42.5	+2.7
MXZ	Matakaoa Point	7.05	193	Pn	Pn	00 24 41.7	+0.3
MXZ	Matakaoa Point	7.05	193	P	P	00 24 42.8	+0.7
MXZ				S	S	00 26 02.8	-3.7
KUZ	Kuaotunu	7.12	211	P	P	00 24 46.2	+3.3
KUZ	Kuaotunu	7.12	211	P	P	00 24 46.5	+3.6
WCZ	Waipu Caves	7.20	222	P	P	00 24 46.8	+3.0
WMGZ	Waiomatatini S	7.28	191	P	P	00 24 45.1	+0.5
WMGZ				S	S	00 26 07.5	-3.9
HAZ	Te Kaha	7.35	195	P	P	00 24 47.1	+1.8
HAZ				S	S	00 26 08.8	-3.9
PKGZ	Pakihiroa	7.39	193	P	P	00 24 47.1	+1.2
PKGZ				S	S	00 26 08.5	-5.1
PUZ	Puketiti	7.55	192	P	P	00 24 48.8	+1.1
PUZ				S	S	00 26 12.0	-5.0
RUGZ	Raukumara Rang	7.57	196	P	Pn	00 24 47.4	-0.1
RUGZ				S	S	00 26 12.5	-5.0
WHRZ	Whale Island	7.65	200	P	P	00 24 51.0	+2.2
TWGZ	Tauwhareparae	7.71	193	P	P	00 24 51.5	+2.1
TWGZ				S	S	00 26 18.7	-1.6
MARZ	Manawahe	7.86	201	P	P	00 24 53.9	+2.8
EDRZ	Edgecumbe	7.95	200	P	P	00 24 54.2	+2.0
MWZ	Matawai	7.96	196	P	Pn	00 24 52.0	+0.3
MWZ				S	S	00 26 22.0	-3.5
CNGZ	Carnagh Statio	7.96	192	P	P	00 24 52.9	+0.7
TKGZ	Te Karaka	7.99	194	P	Pn	00 24 52.5	+0.4
TKGZ				S	S	00 26 21.5	-4.6
URZ	Urewera	7.99	198	P	P	00 24 53.8	+1.3
	772nm,0.3s,baz=6.5,slow=3.3,SNR=227						
URZ				S	S	00 26 21.0	-5.1
	114nm,0.5s,baz=77,slow=19,SNR=12						
URZ	Urewera	7.99	198	P	P	00 24 53.3	+0.8
URZ	Urewera	7.99	198	P	Pn	00 24 51.6	-0.5
TOZ	Tahuroa Road	8.05	208		P	00 24 56.0	+2.8
TOZ	Tahuroa Road	8.05	208	P	P	00 24 57.1	+3.8
RIGZ	Rimuhau	8.26	194	P	Pn	00 24 55.8	+0.5
RIGZ				S	S	00 26 29.8	-2.1
RTZ	Ruatahuna	8.36	198		Pn	00 24 56.4	0.0
RTZ	Ruatahuna	8.36	198	P	P	00 24 57.9	+1.2
RTZ				S	S	00 26 31.6	-2.4
TLZ	Tolley Road	8.56	206	P	P	00 25 02.5	+3.6
HIZ	Hauiti	8.98	208	P	P	00 25 06.8	+3.2
BKZ	Black Stump Fm	9.01	199	P	P	00 25 04.3	+0.4
BFZ	Birch Farm	10.49	197	P	P	00 25 20.6	+0.3
SNZO	South Karori	11.51	201	P	P	00 25 29.8	-1.7
TCW	Tory Channel	11.56	203	P	P	00 25 30.2	-1.9
QRZ	Quartz Range	11.90	210	P	P	00 25 35.3	-0.5
BSWZ	Blackbirch Sta	12.15	203	P	P	00 25 36.5	-2.0
KHZ	Kahutara	12.89	203	P	P	00 25 45.2	-1.4
MSVF	Nonsavu	13.04	351	P	Pn	00 25 49.5	-1.4
CTZ	Chatham Island	13.27	170	P	Pn	00 25 54.3	+1.2
PINNC	Pines Island,	13.97	302	P	Pn	00 25 59.7	-1.8
PINNC	Pines Island,	13.97	302	P	Pn	00 26 00.3	-1.2
OUENC	Ouen Island, N	14.53	301	P	P	00 26 06.9	+2.0
YATNC	Mamie plateau,	14.72	303	P	P	00 26 07.7	+0.8
ONTNC	Ouen Toro	14.88	301	P	P	00 26 11.0	+2.3
RPZ	Rata Peaks	14.91	207	P	P	00 26 05.9	-2.8
	15nm,0.4s,baz=321,slow=3.8,SNR=5.2						
DZM	Mont Dzumac	15.04	301	P	P	00 26 11.9	+1.5
	27nm,0.9s,baz=96,slow=15,SNR=24						
DZM	Mont Dzumac	15.04	301	P	P	00 26 11.6	+1.1
DZM	Mont Dzumac	15.04	301	P	P	00 26 11.9	+1.5
ODZ	Otahua Downs	16.20	205	P	P	00 26 21.3	-1.3
ODZ				IAmb	IAmb	00 26 43.4	
	comp=Z,31nm,1.2s						
SANVU	Saraoutou	19.30	319	P	P	00 26 55.1	-0.4
SANVU	Saraoutou	19.30	319	P	P	00 26 55.5	0.0
EIDS	Eidsvold	26.24	274	P	P	00 27 56.8	-1.3
CTA	Charters Tower	32.35	281	P	P	00 28 51.7	0.0
CTAO	Charters Tower	32.35	281	P	P	00 28 52.1	+0.4
CTAO	Charters Tower	32.35	281	P	P	00 28 52.3	+0.6
STKA	Stephens Creek	32.94	258	P	P	00 28 56.9	+0.3
	comp=Z,2.9nm,0.7s,baz=92,slow=9.6,SNR=8.4						
STKA				ScP	ScP	00 34 35.1	-0.2
	comp=Z,1.6nm,0.6s,baz=333,slow=6.8,SNR=3.7						
	comp=Z,2.9nm,0.7s						
STKA	Stephens Creek	32.94	258	P	P	00 28 57.5	+1.0
STKA				IAmb	IAmb	00 29 03.1	
	comp=Z,22nm,1.1s						
STKA	Stephens Creek	32.94	258	P	P	00 28 57.0	+0.5
HTT	Hallett	34.97	254	P	P	00 29 14.3	+0.5
BBOO	Buckleboo	37.43	255	P	P	00 29 33.7	-0.7
BBOO				IAmb	IAmb	00 30 06.9	
	comp=Z,32nm,1.4s						
BBOO	Buckleboo	37.43	255	P	P	00 29 34.0	-0.4
COEN	Coen	37.90	288	P	P	00 29 38.1	-0.3
AS31	Alice Springs	41.58	268	P	P	00 30 07.2	-1.1
ASAR	Alice Springs	41.58	268	P	P	00 30 07.4	-0.9
	comp=Z,2.8nm,0.5s,baz=105,slow=7.6,SNR=45						
ASAR				ScP	ScP	00 35 07.7	-0.4
	comp=Z,2.7nm,0.8s,baz=113,slow=4.4,SNR=14						
	comp=Z,2.8nm,0.5s						
ASAR	Alice Springs	41.58	268	P	P	00 30 06.7	-1.6
MANU	Manus Island	42.17	306	P	P	00 30 13.1	0.0
MANU				IAmb	IAmb	00 30 13.4	
	comp=Z,16nm,0.7s						
WR8	Warramunga Arr	42.45	273	P	P	00 30 13.9	-1.4
WR8				IAmb	IAmb	00 30 15.3	
	comp=Z,6.9nm,0.6s						
WRA	Warramunga Arr	42.59	273	P	P	00 30 15.3	-1.1
	comp=Z,7.9nm,0.3s,baz=111,slow=8.0,SNR=100						
WRA				ScP	ScP	00 35 11.6	-0.6
	comp=Z,1.9nm,0.8s,baz=114,slow=3.8,SNR=6.8						
	comp=Z,7.9nm,0.3s						
WB0	Warramunga Arr	42.62	274	P	P	00 30 15.6	-1.0
WB0				IAmb	IAmb	00 30 16.8	
	comp=Z,14nm,0.4s						
PATS	Pohnpei	42.81	327	P	P	00 30 16.7	-1.4
SBA	Scott Base	47.65	184	P	P	00 30 58.0	+3.3
SBA				IAmb	IAmb	00 30 59.4	
	comp=Z,20nm,1.1s						
VNDA	Vanda	47.67	185	P	P	00 30 56.5	+1.6
	comp=Z,1.2nm,0.6s,baz=7.2,slow=6.5,SNR=7.9						
VNDA				ScP	ScP	00 35 33.8	+1.6
	comp=Z,1.9nm,0.5s,baz=0.0,slow=5.2,SNR=15						
	comp=Z,1.2nm,0.6s						
VNDA	Vanda	47.67	185	P	P	00 30 56.5	+1.6
MTN	Manton Dam	48.53	280	P	P	00 31 01.2	-1.1
MTN				IAmb	IAmb	00 31 02.6	
	comp=Z,18nm,1.3s						
KNRA	Kununurra	49.22	276	P	P	00 31 06.8	-0.6
KNRA				IAmb	IAmb	00 31 09.6	
	comp=Z,27nm,1.4s						
FITZ	Fitzroy Crossi	50.84	271	P	P	00 31 18.7	-0.8
FAKI	Fak Fak	53.02	292	P	P	00 31 35.2	-0.2
FAKI				IAmb	IAmb	00 31 35.4	
	comp=Z,8.8nm,0.7s						
CASY	Casey	54.18	208	P	P	00 31 42.3	-0.5
CASY				IAmb	IAmb	00 31 43.3	
	comp=Z,22nm,0.7s						
QSPA	South Pole Qui	59.43	180	P	P	00 32 25.2	+5.8
	comp=Z,42nm,0.6s,baz=29,slow=1.7,SNR=104						
QSPA	South Pole Qui	59.43	180	P	P	00 32 24.8	+5.3
BELA	Belgrano 2	69.71	173	P	P	00 33 25.6	+0.9
MAW	Mawson	71.51	201	P	P	00 33 35.8	+0.2
	comp=Z,3.9nm,0.8s,baz=153,slow=9.2,SNR=11						
	comp=Z,3.9nm,0.8s						
TROLL	Troll, Antarti	77.58	181	⇑P	P	00 34 11.2	+1.0
	comp=Z,1µm,0.6s						
SNAA	Sanae	77.91	179	⇑P	P	00 34 12.7	+0.8
	comp=Z,260nm,0.6s						
SNAA	Sanae	77.91	179	P	P	00 34 12.7	+0.8
	comp=Z,8.0nm,0.6s,baz=209,slow=4.5,SNR=28						
	comp=Z,8.0nm,0.6s						
SNAA	Sanae	77.91	179	P	P	00 34 12.7	+0.8
SNAA				IAmb	IAmb	00 34 13.6	
	comp=Z,10nm,0.7s						
VNA3	Neumayer Olymp	78.12	177	⇑P	P	00 34 13.9	+0.9
	comp=Z,41nm,0.7s						
VNA1	Neumayer--Stat	78.78	177	⇑P	P	00 34 17.2	+0.8
	comp=Z,32nm,1.0s						
EFI	East Falkland	83.37	148	P	P	00 34 41.5	+0.7
BO02	Sierra Bellavi	86.69	129	P	P	00 34 59.5	+2.0
BO02				IAmb	IAmb	00 35 00.2	
	comp=Z,8.4nm,0.7s						
CO02	Combarbal	88.61	126	P	P	00 35 08.7	+2.0
TRQA	Tornquist	90.30	136	P	P	00 35 15.8	+1.5
TRQA				IAmb	IAmb	00 35 39.0	
	comp=Z,13nm,1.5s						
PZH	PanZhiHua	94.09	298	P	P	00 35 33.5	+1.6
HHC	Hu-ho-hao-te	95.34	315	*e*P	P	00 35 39.4	+2.2
HHC				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,500nm,5.4s						
MAKGR	Makgori	119.11	205	PKPdf	PKiKP	00 41 00.7	+0.5
KGCAE	Kacgae	122.75	204	PKPdf	PKiKP	00 41 07.6	+0.2
KOOLE	Kule	123.30	202	PKPdf	PKiKP	00 41 09.1	+0.6
FIA1	FINESS Array S	144.87	339		PKPdf	00 41 46.5	-0.3
FINES	FINESS Array B	144.87	339	PKP	PKPdf	00 41 46.5	-0.2
	comp=Z,4.8nm,0.6s,baz=52,slow=3.8,SNR=24						
NB2	NORSAR Subarra	148.78	350	PKP	PKiKP	00 42 00.2	+1.3
	comp=Z,4.6nm,1.1s,baz=17,slow=2.6						
NOA	NORSAR Array B	148.78	350	PKPbc	PKPbc	00 41 57.2	-0.5
	comp=Z,0.9nm,0.7s,baz=26,slow=4.1,SNR=4.4						
HFS	Hagfors	149.19	347	PKPbc	PKPbc	00 41 58.3	-0.5
	comp=Z,1.3nm,0.4s,baz=90,slow=3.6,SNR=10.0						
MMAI	Mount Meron Ar	150.12	284	PKPbc	PKiKP	00 42 02.9	+0.3
	comp=Z,2.4nm,0.5s,baz=87,slow=6.9,SNR=16						
AKASG	Malin Array Be	150.58	321	PKPbc	PKPbc	00 42 01.6	-0.7
	comp=Z,0.4nm,0.4s,baz=84,slow=0.9,SNR=1.1						
ILGA	Ilgaz	151.12	300	PKPbc	PKPbc	00 42 03.2	-1.0
BRTR	Keskin Array B	151.39	298	PKPbc	PKPbc	00 42 03.9	-0.8
	comp=Z,0.9nm,0.6s,baz=137,slow=5.4,SNR=5.6						
BRTR	Keskin Array B	151.39	298	PKPbc	PKPbc	00 42 04.4	-0.3

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*IDC **04** 00:33:51.2±0.9, 16°.24S×173°.63W, h0^{km}, mb4.2/7,* *mbtmp4.3/8, ML3.5/1, MS3.3/1, Error ellipse: s-maj=53.9km s-min=18.4km az=151.0*

NEIC ***04*** *00:33:57.5±1.1, 16°.47S±0°.10×173°.4W±0°.1, h43^{km}±3^{km}, mb4.6/60, Error ellipse: s-maj=17.3km s-min=13.3km az=108.0*

ISC 04 00:33:57.7±0.4**, 16°.58S**±0°.06×**173°.36W**±0°.07**, h50**^{km}**, n106,** σ**1^{s}98**/95**, mb4.5**/34**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.06**	**30**	Pn	**Pn**	**00 34 42.1**	**-1.5**
NIUE	**Niue**	**4.10**	**128**	Pn	**Pn**	**00 34 59.0**	**+1.1**
NIUE	**Niue**	**4.10**	**128**	P	**Pn**	**00 34 59.1**	**+1.2**
NIUE				S	**Sn**	**00 35 41.1**	**-3.6**
GLKZ	**Green Lake**	**13.30**	**198**	P	**Pn**	**00 37 02.4**	**-1.4**
GLKZ				S	**Sn**	**00 39 24.5**	**-5.7**
RAR	**Rarotonga**	**13.65**	**112**	Pn	**Pn**	**00 37 12.2**	**+3.6**
	2.1nm,0.3s,baz=286,slow=15,SNR=3.6						
RAR				LR	LR	00 40 54.6	
	comp=Z,135nm,19.5s,baz=316,slow=30						
	11nm,0.5s						
RAR	**Rarotonga**	**13.65**	**112**		**Pn**	**00 37 08.2**	**-0.4**
DZM	**Mont Dzumac**	**19.82**	**251**	P	**Pn**	**00 38 30.1**	**+3.7**
	19nm,0.8s,baz=94,slow=19,SNR=16						
DZM	**Mont Dzumac**	**19.82**	**251**	Pn	**Pn**	**00 38 29.8**	**+3.5**
GRZ	**Great Barrier**	**21.97**	**205**	P	**P**	**00 38 49.2**	**+1.9**
WCZ	**Waipu Caves**	**22.17**	**207**	P	**P**	**00 38 51.6**	**+2.1**
KUZ	**Kuaotunu**	**22.30**	**204**	P	**P**	**00 38 54.6**	**+3.7**
HAZ	**Te Kaha**	**22.50**	**199**	P	**P**	**00 38 55.4**	**+2.5**
PUZ	**Puketiti**	**22.65**	**197**	P	**P**	**00 38 57.1**	**+2.5**
MWZ	**Matawai**	**23.10**	**199**	P	**P**	**00 39 00.6**	**+1.3**
TOZ	**Tahuroa Road**	**23.25**	**203**	P	**P**	**00 39 02.3**	**+1.7**
TOZ				IAmb	IAmb	00 39 04.9	
	comp=Z,19nm,0.7s						
RTZ	**Ruatahuna**	**23.53**	**199**	P	**P**	**00 39 04.1**	**+0.6**
SNGZ	**Shannon Statio**	**23.57**	**198**	P	**P**	**00 39 08.1**	**+4.3**
MTHZ	**Maungataniwha**	**23.79**	**199**	P	**P**	**00 39 10.3**	**+4.4**
KAHZ	**Kahuranaki**	**24.64**	**198**	P	**P**	**00 39 17.8**	**+4.2**
PXZ	**Pawanui**	**24.87**	**198**	P	**P**	**00 39 20.0**	**+4.4**
BFZ	**Birch Farm**	**25.65**	**198**	P	**P**	**00 39 24.0**	**+1.3**
TCW	**Tory Channel**	**26.77**	**201**	P	**P**	**00 39 35.7**	**+3.0**
QRZ	**Quartz Range**	**27.07**	**204**	P	**P**	**00 39 39.8**	**+4.3**
QRZ	**Quartz Range**	**27.07**	**204**	P	**P**	**00 39 38.7**	**+3.2**
NNZ	**Nelson**	**27.09**	**202**	P	**P**	**00 39 39.8**	**+4.2**
MRNZ	**Matariki Terra**	**27.48**	**203**	P	**P**	**00 39 43.1**	**+4.0**
THZ	**Tophouse**	**27.74**	**202**	P	**P**	**00 39 44.9**	**+3.3**
KHZ	**Kahutara**	**28.09**	**201**	P	**P**	**00 39 48.3**	**+3.8**
INZ	**Inchbonnie**	**29.12**	**203**	P	P	00 39 59.7	+6.0
WHZ	**Wether Hill Ro**	**33.14**	**204**	P	**P**	**00 40 31.6**	**+2.5**
EIDS	**Eidsvold**	**34.25**	**249**	P	**P**	**00 40 37.6**	**-1.5**
EIDS				IAmb	IAmb	00 41 17.7	
	comp=Z,9.2nm,1.3s						
ARMA	**Armidale**	**34.78**	**240**	P	**P**	**00 40 43.3**	**-0.4**
ARMA				IAmb	IAmb	00 41 10.0	
	comp=Z,11nm,1.2s						
TOO	**Toolangi**	**41.76**	**232**	P	**P**	**00 41 41.4**	**-0.8**
TOO				IAmb	IAmb	00 41 46.0	
	comp=Z,13nm,1.4s						
COEN	**Coen**	**41.96**	**267**	P	**P**	**00 41 43.6**	**-0.4**
COEN				IAmb	IAmb	00 41 45.4	
	comp=Z,12nm,1.4s						
STKA	**Stephens Creek**	**43.49**	**241**	P	**P**	**00 41 56.3**	**0.0**
	comp=Z,6.3nm,0.9s,baz=64,slow=11,SNR=7.3						
	comp=Z,6.3nm,0.9s						
STKA	**Stephens Creek**	**43.49**	**241**	P	**P**	**00 41 55.9**	**-0.5**
BBOO	**Buckleboo**	**48.27**	**241**	P	**P**	**00 42 33.9**	**-0.1**
WR8	**Warramunga Arr**	**49.47**	**258**	P	**P**	**00 42 42.8**	**-0.6**
WB0	**Warramunga Arr**	**49.59**	**258**	P	**P**	**00 42 43.2**	**-1.1**
WB0				IAmb	IAmb	00 43 03.3	
	comp=Z,9.6nm,1.4s						
WRA	**Warramunga Arr**	**49.62**	**258**	P	**P**	**00 42 43.1**	**-1.4**
	comp=Z,0.8nm,0.4s,baz=94,slow=7.1,SNR=12						
WRA				PcP	**PcP**	**00 44 05.2**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=94,slow=3.7,SNR=4.5						
	comp=Z,0.8nm,0.4s						
WRA	**Warramunga Arr**	**49.62**	**258**	P	**P**	**00 42 43.5**	**-1.1**
AS31	**Alice Springs**	**49.79**	**253**	P	**P**	**00 42 45.2**	**-0.7**
AS31				IAmb	IAmb	00 42 45.9	
	comp=Z,3.4nm,0.6s						
ASAR	**Alice Springs**	**49.80**	**253**	P	**P**	**00 42 44.6**	**-1.2**
	comp=Z,12nm,0.6s,baz=89,slow=8.2,SNR=178						
	comp=Z,12nm,0.6s						
FORT	**Forrest**	**54.93**	**244**	P	**P**	**00 43 22.5**	**-1.3**
FORT				IAmb	IAmb	00 43 54.2	
	comp=Z,10nm,1.2s						
FITZ	**Fitzroy Crossi**	**58.01**	**259**	P	**P**	**00 43 45.0**	**-0.8**
SOEI	**Soe**	**60.92**	**268**	P	**P**	**00 44 05.2**	**-0.9**
PSA00	**Pilbara Seismi**	**62.91**	**254**	P	**P**	**00 44 18.6**	**-0.7**
MBWA	**Marble Bar**	**63.08**	**254**	P	**P**	**00 44 18.8**	**-1.6**
CMB	**Columbia Colle**	**73.62**	**41**	P	**P**	**00 45 26.0**	**+0.1**
CWC	**Cottonwood Cre**	**74.17**	**44**	P	**P**	**00 45 30.0**	**+0.6**
YBH	**Yreka Blue Hor**	**74.51**	**37**	IAmb	IAmb	00 45 32.6	
	comp=Z,4.2nm,0.9s						
NVAR	**Mina Array Bea**	**75.17**	**42**	P	**P**	**00 45 35.9**	**+0.6**
	comp=Z,2.5nm,0.8s,baz=226,slow=9.8,SNR=16						
	comp=Z,2.5nm,0.8s						
NVAR	**Mina Array Bea**	**75.17**	**42**	P	**P**	**00 45 34.5**	**-0.8**
GMN	**Gold Mountain**	**75.20**	**43**	P	**P**	**00 45 35.7**	**+0.3**
GMN				IAmb	IAmb	00 45 36.7	
	comp=Z,4.1nm,0.8s						
K05A	**Summer Lake**	**76.18**	**37**	P	**P**	**00 45 40.9**	**+0.1**
K05A				IAmb	IAmb	00 45 42.6	
	comp=Z,8.2nm,1.0s						
J05D	**Fort Rock, OR**	**76.34**	**36**	IAmb	IAmb	00 45 43.4	
	comp=Z,7.6nm,1.0s						
PRN	**Pahroc Range**	**76.72**	**44**	IAmb	IAmb	00 45 46.5	
	comp=Z,8.7nm,1.5s						
PINE	**Pine Mountain**	**76.82**	**36**	P	**P**	**00 45 45.1**	**+0.7**
PINE				IAmb	IAmb	00 45 46.2	
	comp=Z,9.5nm,1.0s						
PSUT	**Pine Spring**	**78.13**	**44**	IAmb	IAmb	00 45 52.7	
	comp=Z,3.3nm,0.8s						
G08A	**Pilot Rock**	**78.86**	**36**	P	**P**	**00 45 55.8**	**+0.1**
MTPU	**Mount Pierson**	**78.99**	**45**	P	**P**	**00 45 58.1**	**+1.3**
MTPU				IAmb	IAmb	00 45 59.1	
	comp=Z,5.4nm,1.2s						
TMUT	**Trail Mountain**	**80.28**	**44**	IAmb	IAmb	00 46 06.3	
	comp=Z,6.1nm,1.0s						
HVU	**Hansel Valley**	**80.56**	**41**	P	**P**	**00 46 04.7**	**-0.3**
NJ2	**Nanjing**	**80.91**	**307**	*e*P	**P**	**00 46 08.2**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
TCUT	**Toone Canyon**	**81.09**	**42**	IAmb	IAmb	00 46 09.4	
	comp=Z,8.1nm,1.0s						
TXAR	**Lajitas Array**	**81.23**	**56**	P	**P**	**00 46 09.5**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=246,slow=5.8,SNR=5.1						
	comp=Z,0.5nm,0.8s						
TXAR	**Lajitas Array**	**81.23**	**56**	P	**P**	**00 46 08.9**	**+0.1**
PV19	**Morning Glory**	**81.30**	**46**	IAmb	IAmb	00 46 11.1	
	comp=Z,4.8nm,0.8s						
PV01	**Paradox Valley**	**81.50**	**46**	IAmb	IAmb	00 46 11.6	
	comp=Z,6.7nm,1.3s						
BW06	**Boulder Array**	**83.11**	**42**	IAmb	IAmb	00 46 18.9	
	comp=Z,3.0nm,0.8s						
PD31	**Pinedale Array**	**83.11**	**42**	IAmb	IAmb	00 46 18.9	
	comp=Z,2.9nm,0.8s						
PDAR	**Pinedale Array**	**83.11**	**42**	P	**P**	**00 46 18.4**	**-0.2**
	comp=Z,3.6nm,0.9s,baz=213,slow=3.5,SNR=24						
	comp=Z,3.6nm,0.9s						
PDAR	**Pinedale Array**	**83.11**	**42**	P	**P**	**00 46 17.4**	**-1.1**
ILAR	**Eielson Array**	**83.59**	**11**	P	**P**	**00 46 19.5**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=226,slow=6.0,SNR=12						
	comp=Z,0.5nm,0.6s						
ILAR	**Eielson Array**	**83.59**	**11**	P	**P**	**00 46 19.1**	**-1.1**
YNE	**Yellowstone No**	**83.96**	**40**	IAmb	IAmb	00 46 28.2	
	comp=Z,4.1nm,1.0s						
L29M	**L29M**	**84.05**	**15**	IAmb	IAmb	00 46 23.7	
	comp=Z,6.9nm,0.9s						
ABTX	**Abilene, Hawle**	**85.71**	**54**	IAmb	IAmb	00 46 32.5	
	comp=Z,5.1nm,0.8s						
HHC	**Hu-ho-hao-te**	**89.86**	**313**	*e*P	**P**	**00 46 53.6**	**+2.2**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,340nm,5.3s						
PZH	**PanZhiHua**	**92.84**	**297**	P	**P**	**00 47 06.5**	**+0.9**
LZH	**Lanzhou**	**93.95**	**306**	*e*P	**P**	**00 47 11.6**	**+1.0**
LZH				pP	pP	00 47 21.1	-3.6
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
BVAR	**Borovoye Array**	**118.83**	**322**	PKP	**PKPdf**	**00 52 38.6**	**-1.7**
	comp=Z,0.4nm,0.4s,baz=110,slow=3.1,SNR=4.0						
ARCES	**ARCESS Array B**	**125.78**	**352**	PKP	**PKiKP**	**00 52 53.2**	**-0.4**
	comp=Z,2.7nm,0.9s,baz=47,slow=1.9,SNR=4.5						
FINES	**FINESS Array B**	**133.10**	**347**	PKP	**PKPdf**	**00 53 06.8**	**-0.5**
	comp=Z,3.8nm,1.0s,baz=357,slow=7.1,SNR=3.9						
CHVC	**Chvalec**	**145.24**	**349**	*e*PKP	**PKPdf**	**00 53 30.2**	**+0.4**
OSTC	**Ostas**	**145.24**	**349**	*e*PKP	**PKPdf**	**00 53 30.4**	**+0.6**
DPC	**Dobruska-Polom**	**145.42**	**349**	*e*PKP	**PKPdf**	**00 53 31.0**	**+0.9**
STEB	**Steborice**	**145.53**	**347**	*e*PKP	**PKPab**	**00 53 30.9**	**+0.2**
PVCC	**Panska Ves**	**145.54**	**351**	*e*PKP	**PKiKP**	**00 53 32.0**	**-2.3**
KRLC	**Kraliky**	**145.60**	**348**	*e*PKP	**PKPab**	**00 53 30.7**	**-0.3**
PRU	**Pruhonice**	**146.07**	**351**	*e*PKP	**PKPab**	**00 53 32.6**	**-0.1**
KHC	**Kasperske Hory**	**147.05**	**352**	*e*PKP	**PKPab**	**00 53 35.3**	**-1.3**
BRTR	**Keskin Array B**	**147.09**	**320**	PKPbc	**PKPab**	**00 53 35.9**	**-1.3**
	comp=Z,2.3nm,0.8s,baz=101,slow=2.0,SNR=10						
GERES	**GERESS Array B**	**147.31**	**351**	PKPbc	**PKPbc**	**00 53 35.8**	**-0.1**
	comp=Z,2.5nm,0.8s,baz=9.1,slow=3.4,SNR=15						
CONA	**Conrad Observa**	**147.83**	**348**	*e*PKP	**PKPbc**	**00 53 37.7**	**+0.5**
	comp=Z,6.8nm,1.1s						
RONA	**Rosalia, Austr**	**147.96**	**348**	*e*PKP	**PKiKP**	**00 53 38.3**	**-1.2**
	comp=Z,4.0nm,1.0s						
MOA	**Molln**	**148.19**	**350**	*e*PKiKP	**PKiKP**	**00 53 39.4**	**-0.5**
	comp=Z,10.0nm,2.0s						
RETA	**Reutte**	**148.99**	**355**	*e*PKP	**PKiKP**	**00 53 40.6**	**-1.0**
	comp=Z,7.7nm,1.2s						
WATA	**Walderalm**	**149.06**	**353**	*e*PKiKP	**PKiKP**	**00 53 41.8**	**0.0**
	comp=Z,9.8nm,1.1s						
WTTA	**Wattenberg**	**149.12**	**353**	*e*PKiKP	**PKiKP**	**00 53 41.2**	**-0.8**
	comp=Z,4.7nm,0.7s						
SQTA	**Sankt Quirin**	**149.21**	**354**	*e*PKiKP	**PKiKP**	**00 53 41.4**	**-0.7**
	comp=Z,3.6nm,0.9s						
DAVA	**Damuels**	**149.26**	**356**	*e*PKiKP	**PKiKP**	**00 53 41.8**	**-0.5**
	comp=Z,7.7nm,1.1s						
MMAI	**Mount Meron Ar**	**149.33**	**308**	PKPbc	**PKPab**	**00 53 46.6**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=64,slow=6.6,SNR=4.8						
OBKA	**Obir**	**149.44**	**349**	*e*PKiKP	**PKiKP**	**00 53 42.6**	**0.0**
	comp=Z,12nm,1.9s						
FETA	**Feichten**	**149.46**	**354**	*e*PKiKP	**PKiKP**	**00 53 42.1**	**-0.5**
	comp=Z,9.1nm,1.2s						
MYKA	**Terra Mystica**	**149.48**	**350**	*e*PKP	**PKPbc**	**00 53 40.5**	**-1.0**
	comp=Z,6.6nm,1.2s						

IDC ***04*** *00:35:45.6±1.1, 39°.47N×67°.83E, h0^{km}, mb4.0/8, mbtmp3.9/15, ML3.4/7, Error ellipse: s-maj=19.2km s-min=13.0km az=2.0*

SOME ***04*** *00:35:50.2, 39°.92N×68°.82E, h5^{km}*

ISU ***04*** *00:35:50, 39°.81N×67°.76E, h21^{km}*

NNC ***04*** *00:35:53.3±4.1, 40°.11N×67°.73E, h26^{km}±19^{km}, mb4.5, mpv4.3, Error ellipse: s-maj=31.8km s-min=13.2km az=12.0*

ISC 04 00:35:49.6±0.5**, 39°.84N**±0°.03×**67°.87E**±0°.03**, h10**^{km}**, n63,** σ**2^{s}29**/86**, mb3.9**/8**, 9C-10D, Southeastern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BXML	**Bakhmal**	**0.20**	**140**	P	**Pg**	**00 35 53.5**	**-0.3**
BXML				S	**Sg**	**00 35 56.4**	**-0.3**
DZI	**Dzhizak**	**0.28**	**353**	P	**Pg**	**00 35 56.6**	**+1.3**
DZI				S	**Sb**	**00 36 01.8**	**+0.2**
KRSA	**Karasay**	**0.30**	**341**	P	**Pg**	**00 35 56.6**	**+1.0**
SAM	**Samarkand**	**0.73**	**256**	P	**Pg**	**00 36 04.0**	**+0.4**
SAM				S	**Sg**	**00 36 13.2**	**+0.1**
AGL	**Agalyk**	**0.82**	**248**	P	**Pg**	**00 36 05.7**	**+0.2**
AGL				S	**Sg**	**00 36 16.4**	**+0.1**
KTAB	**Kitab**	**1.03**	**228**	P	**Pg**	**00 36 10.0**	**+0.5**
KTAB				S	**Sg**	**00 36 23.5**	**+0.6**
BAYS	**Baysun**	**1.70**	**198**	P	**Pn**	**00 36 21.1**	**+1.6**
PKMR	**Pachkamar**	**1.73**	**222**	P	**Pn**	**00 36 21.7**	**+1.9**
NUT	**Nurota**	**1.82**	**294**	P	**Pn**	**00 36 22.2**	**+1.2**
TGS	**TashGRES**	**2.02**	**38**	P	**Pn**	**00 36 24.1**	**+0.3**
TGS				S	**Sn**	**00 36 47.6**	**-1.6**
ZRB	**Zarabog**	**2.13**	**216**	P	**Pn**	**00 36 28.5**	**+3.2**
ZRB				S	**Sn**	**00 36 53.7**	**+1.8**
TVKS	**Tavaksay**	**2.21**	**37**	P	**Pn**	**00 36 27.7**	**+1.4**
TVKS				S	**Sn**	**00 36 54.6**	**+0.9**
CHMG	**Chimgan**	**2.36**	**43**	P	**Pn**	**00 36 30.2**	**+1.6**
CHMG				S	**Sn**	**00 36 58.2**	**+0.5**
CHRV	**Charvak**	**2.40**	**41**	P	**Pn**	**00 36 29.7**	**+0.7**
CHRV				S	**Sn**	**00 36 58.4**	**-0.1**
CHDK	**Chadak**	**2.48**	**62**	P	**Pn**	**00 36 31.1**	**+1.0**
CHDK				S	**Sn**	**00 37 00.6**	**+0.1**
CHM	**Chimkent**	**2.81**	**27**	*e*P	**Pn**	**00 36 36.6**	**+2.1**
	94nm,0.3s						
CHM				*e*S	**Sn**	**00 37 10.7**	**+2.2**
	564nm,0.3s						
PSK	**Pskem**	**2.82**	**41**	P	**Pn**	**00 36 35.8**	**+0.9**
PSK				S	**Sn**	**00 37 08.1**	**-1.0**
CHMI	**Chimion**	**2.84**	**80**	P	**Pn**	**00 36 35.5**	**+0.5**
FRG	**Fergana**	**3.05**	**79**	P	**Pn**	**00 36 37.9**	**-0.1**
KSNS	**Kasansay**	**3.08**	**63**	P	**Pn**	**00 36 39.3**	**+0.9**
NAM	**Namangan**	**3.12**	**67**	P	**Pn**	**00 36 41.3**	**+2.5**
GZLY	**Gazly**	**3.41**	**276**	P	**Pb**	**00 36 52.3**	**+2.2**
BRLS	**Borolday**	**3.52**	**24**	*e*P	**Pn**	**00 36 44.2**	**-0.2**
	3.4nm,0.1s						
BRLS				*e*S	**Sn**	**00 37 22.9**	**-3.1**
	55nm,0.2s						
ANR	**Andizhan**	**3.56**	**74**	P	**Pn**	**00 36 45.0**	**+0.1**
ANR				S	**Sn**	**00 37 24.8**	**-2.2**
KK31	**Karatay Array**	**3.82**	**30**	⇑Pn	**Pn**	**00 36 49.7**	**+1.2**
	6.1nm,0.3s,baz=189,slow=6.6,SNR=41						
KK31				Pg	Pb	00 37 01.7	+4.6
	18nm,0.4s,baz=219,slow=19,SNR=13						
KK31				⇓Lg	Lg	00 37 51.8	
	69nm,0.3s,baz=210,slow=31,SNR=11						
DZA	**Taraz**	**4.01**	**39**	*e*P	**Pn**	**00 36 54.9**	**+3.7**
	12nm,0.1s						
DZA				*e*S	**Sn**	**00 37 41.5**	**+3.2**
	194nm,0.3s						
MRKS	**Merke**	**4.97**	**53**	*e*P	Pn	00 37 11.3	+6.8
	16nm,0.3s						
MRKS				*e*S	**Sn**	**00 38 09.4**	**+7.3**
	61nm,0.6s						
EKS2	**Erkin-Say**	**5.27**	**56**	P	**Pn**	**00 37 10.2**	**+1.6**
	SNR=8.5						
UCH	**Uchtor**	**5.56**	**62**	P	**Pn**	**00 37 13.1**	**+0.2**
	SNR=18						
AAK	**Ala-Archa**	**5.73**	**59**	P	**Pn**	**00 37 16.1**	**+1.3**
	SNR=14						
AAK	**Ala-Archa**	**5.73**	**59**	Pn	**Pn**	**00 37 15.6**	**+0.7**
	3.0nm,0.3s,baz=254,slow=10,SNR=38						
AAK				Sn	**Sn**	**00 38 22.2**	**+1.6**
	6.5nm,0.3s,baz=332,slow=13,SNR=5.6						
AAK				Lg	Lg	00 38 51.4	
	4.9nm,0.3s,baz=7.0,slow=11,SNR=4.1						
	5.2nm,0.3s						
AAK	**Ala-Archa**	**5.73**	**59**	⇓Pn	**Pn**	**00 37 15.5**	**+0.7**
	110nm,0.9s						
AAK				⇑Sn	**Sn**	**00 38 20.9**	**+0.3**
	99nm,0.6s						
AAK				⇓Lg	Lg	00 38 48.9	
	175nm,0.7s						
KBK	**Karagaybulak**	**6.04**	**60**	P	**Pn**	**00 37 20.2**	**+1.1**
	SNR=29						
USP	**Ospenovka**	**6.04**	**53**	P	**Pn**	**00 37 19.0**	**0.0**
	SNR=8.6						
KSH	**Kashi**	**6.26**	**90**	Pn	Pn	00 37 19.0	-3.2
KSH				Sn	**Sn**	**00 38 28.7**	**-5.1**
KSH				smax	smax		
	comp=N,86nm,1.1s						
KSH				smax	smax		
	comp=E,68nm,1.0s						
TKM2	**Tokmak 2**	**6.58**	**60**	P	**Pn**	**00 37 26.8**	**+0.2**
	SNR=6.7						
KST	**Kastek**	**6.88**	**60**	*e*P	Pb	00 37 45.6	-3.6
	comp=E,4.8nm,0.4s						
KST				*e*S	**Sb**	**00 39 08.3**	**-3.1**
	comp=E,37nm,0.9s						
BTLS	**Baital**	**6.92**	**39**	*e*P	**Pb**	**00 37 50.6**	**+0.6**
	comp=E,3.6nm,0.2s						
BTLS				*e*S	**Sb**	**00 39 17.4**	**+4.7**
	comp=E,18nm,0.8s						
MTBS	**Maitube**	**7.22**	**60**	*e*P	Pb	00 37 52.2	-2.8
	comp=E,0.9nm,0.1s						
MTBS				*e*S	**Sb**	**00 39 19.9**	**-1.4**
	comp=E,21nm,0.7s						
TNSS	**Tian-Shan**	**7.53**	**62**	*e*P	Pb	00 37 57.9	-2.7
	comp=E,3.0nm,0.3s						
TNSS				*e*S	**Sb**	**00 39 29.9**	**-0.7**
	comp=E,7.5nm,0.7s						
KNDC	**Almaty**	**7.62**	**61**	⇓Pg	**Pb**	**00 38 04.7**	**+2.9**
	comp=E,27nm,0.6s						
KNDC				⇑Lg	Lg	00 39 53.8	
	comp=E,40nm,0.9s						
KOTS	**Kotyrbulak**	**7.72**	**61**	*e*P	**Pb**	**00 38 01.6**	**-2.1**
	comp=E,8.4nm,0.2s						
KOTS				*e*S	**Sb**	**00 39 35.9**	**+0.2**
	comp=E,19nm,0.6s						
PDGK	**Podgornoye**	**9.38**	**64**	⇓Pn	**Pn**	**00 38 08.4**	**+3.4**
	comp=E,3.8nm,0.9s						
PDGK				⇑Lg	Lg	00 40 49.6	
	comp=E,23nm,0.9s						
AB31	**Akbulak array**	**10.98**	**332**	⇑Pn	**Pn**	**00 38 24.1**	**-2.5**
	comp=E,5.0nm,0.3s,baz=167,slow=12,SNR=393						
AB31				⇑Sn	**Sn**	**00 40 22.3**	**-7.1**
	comp=E,2.0nm,0.3s,baz=167,slow=23,SNR=3.5						
AB31				⇓Lg	Lg	00 41 32.4	
	comp=E,7.1nm,0.6s,baz=166,slow=27,SNR=3.6						
MK31	**Makanchi Array**	**12.59**	**52**	⇓Pn	**Pn**	**00 38 47.7**	**-1.0**
	comp=E,1.5nm,0.6s						
MK31				⇓Lg	Lg	00 42 27.1	
	comp=E,7.4nm,0.8s						
MKAR	**Makanchi Array**	**12.59**	**52**	Pn	**Pn**	**00 38 48.2**	**-0.5**
	comp=E,0.3nm,0.3s,baz=240,slow=14,SNR=14						
MKAR				Lg	Lg	00 42 28.7	
	comp=E,0.2nm,0.3s,baz=243,slow=30,SNR=2.2						
	comp=E,0.7nm,0.5s						
AKTO	**Aktyubinsk**	**12.66**	**330**	Pn	**Pn**	**00 38 48.9**	**-0.8**
	comp=E,1.1nm,0.3s,baz=144,slow=13,SNR=56						
AKTO				Sn	**Sn**	**00 41 04.1**	**-6.5**
	comp=E,0.3nm,0.3s,baz=162,slow=20,SNR=2.4						
AKTO				Lg	Lg	00 42 32.2	
	comp=E,0.3nm,0.3s,baz=237,slow=12,SNR=3.6						
	comp=E,11nm,0.6s						
AKTO	**Aktyubinsk**	**12.66**	**330**	⇑Pn	**Pn**	**00 38 47.6**	**-2.1**
	comp=E,7.6nm,0.8s						
AKTO				⇑Sn	**Sn**	**00 41 02.9**	**-7.7**
	comp=E,3.3nm,0.6s						
AKTO				⇓Lg	Lg	00 42 26.9	
	comp=E,13nm,0.9s						
KURBB	**Kurchatov Arra**	**13.13**	**31**	Pn	**Pn**	**00 38 54.9**	**-1.1**
	baz=219,slow=13,SNR=2.7						
KURBB				Sn	**Sn**	**00 41 20.6**	**-1.5**
	baz=211,slow=30,SNR=3.1						
KURBB				Lg	Lg	00 42 50.5	
	comp=E,0.1nm,0.3s,baz=217,slow=28,SNR=8.1						
	comp=E,0.4nm,0.6s						
BVA0	**Borovoye Array**	**13.31**	**7**	⇑Pn	**Pn**	**00 38 57.3**	**-1.1**
	comp=E,2.1nm,0.6s						
BVA0				⇓Lg	Lg	00 42 48.0	
	comp=E,7.4nm,0.8s						
BVAR	**Borovoye Array**	**13.31**	**7**	Pn	**Pn**	**00 38 56.4**	**-2.1**
	comp=E,0.1nm,0.3s,baz=190,slow=14,SNR=14						
	comp=E,0.7nm,0.3s						
ARTI	**Arti**	**17.70**	**342**	P	**Pn**	**00 39 54.0**	**-2.0**
	comp=E,3.1nm,0.4s,baz=150,slow=20,SNR=7.9						
ARTI				S	**Sn**	**00 43 10.6**	**-2.5**
	comp=E,1.8nm,0.7s,baz=193,slow=20,SNR=3.0						
ARTI				Lg	Lg	00 45 19.2	
	comp=E,0.2nm,0.3s,baz=139,slow=20,SNR=1.4						
ZALV	**Zalesovo Beam**	**18.19**	**34**	P	**Pn**	**00 40 01.3**	**-0.8**
	comp=E,0.3nm,0.3s,baz=219,slow=11,SNR=5.3						
	comp=E,0.7nm,0.3s						
KBZ	**Khabaz**	**19.00**	**290**	P	**P**	**00 40 09.8**	**-1.5**
	comp=E,0.1nm,0.3s,baz=191,slow=7.3,SNR=4.2						
	comp=E,3.2nm,0.9s						
SONM	**Songino Array**	**28.68**	**61**	P	**P**	**00 41 46.3**	**-0.4**
	comp=E,0.5nm,0.7s,baz=280,slow=8.6,SNR=2.6						
	comp=E,0.5nm,0.7s						
FINES	**FINESS Array B**	**33.34**	**324**	P	**P**	**00 42 27.5**	**+0.1**
	comp=E,4.0nm,0.8s,baz=110,slow=8.3,SNR=7.5						
	comp=E,4.0nm,0.8s						
ARCES	**ARCESS Array B**	**37.12**	**337**	P	**P**	**00 42 59.9**	**0.0**
	comp=E,1.5nm,0.7s,baz=116,slow=11,SNR=5.5						
	comp=E,1.5nm,0.7s						
HFS	**Hagfors**	**38.92**	**320**	P	**P**	**00 43 14.8**	**-0.4**
	comp=E,1.9nm,0.5s,baz=104,slow=11,SNR=11						
	comp=E,1.9nm,0.5s						
NB2	**NORSAR Subarra**	**40.24**	**321**	P	**P**	**00 43 25.4**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=96,slow=8.6						
NOA	**NORSAR Array B**	**40.24**	**321**	P	**P**	**00 43 25.3**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=99,slow=7.8,SNR=5.1						
	comp=Z,0.6nm,0.5s						
EKA	**Eskdalemuir Ar**	**48.19**	**314**	P	**P**	**00 44 29.1**	**-0.8**
	comp=Z,1.6nm,0.6s,baz=73,slow=7.8,SNR=2.1						
	comp=Z,1.6nm,0.6s						
WRA	**Warramunga Arr**	**85.82**	**120**	P	P	00 48 25.8	-3.7
	comp=Z,0.4nm,0.5s,baz=327,slow=4.2,SNR=5.2						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**88.16**	**123**	P	P	00 48 38.2	-2.6
	comp=Z,0.2nm,0.3s,baz=310,slow=4.4,SNR=3.4						
	comp=Z,0.2nm,0.3s						

UCR ***04*** *01:01:51.3±0.7, 6°.69N×82°.68W, h15^{km}±20^{km}, MW3.5*

UPA ***04*** *01:01:53.4±1.0, 6°.83N×82°.64W, h20^{km}±21^{km}, MW4.3*

ISC 04 01:01:51.2±2.6**, 6°.8N**±0°.1×**82°.65W**±0°.08**, h10**^{km}**, n22,** σ**0^{s}85**/36**, 1D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOCO3	**Loma Colorada,**	**1.61**	**8**	*e*P	**Pn**	**01 02 19.4**	**-0.3**
LOCO3				*e*S	**Sn**	**01 02 39.9**	**-0.6**
DVD	**David**	**1.63**	**7**	*e*P	**Pn**	**01 02 20.1**	**+0.1**
DVD				*e*S	**Sn**	**01 02 39.1**	**-2.0**
GMAL	**Guarumal, Vera**	**1.70**	**56**	*e*P	**Pn**	**01 02 21.2**	**+0.3**
GMAL				*e*S	**Sn**	**01 02 42.4**	**-0.2**
GMAL	**Guarumal, Vera**	**1.70**	**56**	*e*P	**Pn**	**01 02 21.2**	**+0.3**
GMAL				*e*S	**Sn**	**01 02 42.6**	**-0.1**
CACAO	**El Cacao, Vera**	**1.85**	**73**	*e*P	**Pn**	**01 02 22.9**	**-0.1**
CACAO				*e*S	**Sn**	**01 02 45.4**	**-1.1**
PTAR3	**Potrerillos Ar**	**1.88**	**5**	*e*P	**Pn**	**01 02 24.1**	**+0.5**
PTAR3				*e*S	**Sn**	**01 02 46.6**	**-0.8**
PSOM3	**Paja de Sombre**	**1.90**	**10**	*e*P	**Pn**	**01 02 23.9**	**+0.2**
PSOM3				*e*S	**Sn**	**01 02 46.5**	**-1.1**
BQTLY	**Boquete Panama**	**1.95**	**5**	*e*P	**Pn**	**01 02 24.8**	**+0.3**
BQTLY				*e*S	**Sb**	**01 02 50.9**	**-0.4**
BRU2	**Volcan**	**1.98**	**359**	⇓*i*P	**Pn**	**01 02 25.2**	**+0.3**
BRU2				*e*S	**Sn**	**01 02 49.7**	**-0.1**
BRU2	**Volcan**	**1.98**	**359**	*e*P	**Pn**	**01 02 25.0**	**+0.1**
BRU2				*e*S	**Sn**	**01 02 49.5**	**-0.3**
RBALA	**Bur**	**2.12**	**13**	*e*P	**Pn**	**01 02 27.3**	**+0.6**
RBALA				*e*S	**Sn**	**01 02 53.6**	**+0.5**
ALCO	**Alturas Coton,**	**2.14**	**355**	*e*P	**Pn**	**01 02 27.2**	**0.0**
KKNTU	**Kakintº**	**2.19**	**22**	*e*P	**Pn**	**01 02 28.5**	**+0.9**
CHIT3	**Chitre**	**2.49**	**63**	*e*P	**Pn**	**01 02 32.8**	**+1.0**
CHIT3				*e*S	**Sn**	**01 03 02.1**	**-0.1**
DRK0	**Durika**	**2.51**	**346**	*e*P	**Pn**	**01 02 32.8**	**+0.5**
ACHO3	**Achotines, Los**	**2.53**	**76**	*e*P	**Pn**	**01 02 32.2**	**-0.2**
ACHO3				*e*S	**Sn**	**01 03 02.5**	**-0.7**
AZU	**Azuero**	**2.55**	**67**	*e*P	**Pn**	**01 02 33.4**	**+0.8**
AZU				*e*S	**Sn**	**01 03 03.4**	**-0.4**
CEUA	**Cerro Uatsi, L**	**2.81**	**354**	*e*P	**Pn**	**01 02 38.8**	**+2.5**
BUS1	**Rivas**	**2.94**	**338**	*e*P	**Pn**	**01 02 38.6**	**+0.2**
PICV	**PH. Pirrs**	**3.19**	**331**	*e*P	**Pn**	**01 02 41.4**	**-0.2**
ABRB	**Las Abras (San**	**3.35**	**342**	*e*P	**Pn**	**01 02 45.5**	**+1.6**
BCIP	**Isla Barro Col**	**3.64**	**50**	*e*P	**Pn**	**01 02 49.1**	**+1.5**

NEIC ***04*** *01:23:51.6±2.5, 19°.15N±0°.04×67°.09W±0°.02, h10^{km}±2^{km}, ML2.1/11, Md3.1/12(RSPR), Error ellipse: s-maj=6.3km s-min=3.3km az=22.0*

SDD ***04*** *01:23:54.7±2.4, 19°.02N×67°.33W, h15^{km}±26^{km}, MD3.1, ML2.7, MW2.5, Presumed earthquake*

OSPL ***04*** *01:23:54.6±0.4, 19°.09N×67°.17W, h27^{km}±3^{km}, ML1.9, Presumed earthquake*

RSPR ***04*** *01:23:56.4, 19°.07N×67°.20W, h30^{km}±23^{km}, MD3.1/12*

ISC 04 01:23:52.4±1.5**, 19°.07N**±0°.05×**67°.22W**±0°.03**, h19**^{km}±3^{km}**, n45,** σ**0^{s}55**/64**, 17C-7D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.60**	**170**		**Pn**	**01 24 05.9**	**-0.1**
AGPR					**Sn**	**01 24 15.2**	**0.0**
AGPR	**Aguadilla, PR**	**0.60**	**170**	⇑*e*P	**Pn**	**01 24 05.9**	**-0.1**
AGPR	**Aguadilla, PR**	**0.60**	**170**	*e*S	**Sn**	**01 24 15.2**	**0.0**
AGPR	**Aguadilla, PR**	**0.60**	**170**	⇓*e*P	**Pn**	**01 24 05.8**	**-0.1**
AGPR				⇑*e*Pg	**Pn**	**01 24 05.9**	**-0.1**
AGPR				⇑*e*Sg	**Sb**	**01 24 11.8**	**-0.5**
AGPR				IAML		01 24 15.5	
	comp=N,1µm,0.3s						
AGPR	**Aguadilla, PR**	**0.60**	**170**	*i* P	**Pn**	**01 24 05.9**	**-0.1**
AGPR				*e*S	**Sn**	**01 24 14.6**	**-0.6**
AGPR				IAML		01 24 15.4	
	comp=Z,55nm,0.2s						
IDE	**Isla Desecheo**	**0.72**	**200**		**Pn**	**01 24 08.1**	**+0.6**
IDE					**Sn**	**01 24 18.5**	**+0.5**
IDE	**Isla Desecheo**	**0.72**	**200**	⇑*e*P	**Pn**	**01 24 08.1**	**+0.6**
IDE	**Isla Desecheo**	**0.72**	**200**	*e*S	**Sn**	**01 24 18.5**	**+0.5**
AOPR	**Arecibo Observ**	**0.84**	**148**		**Pg**	**01 24 08.8**	**+0.1**
AOPR					**Sg**	**01 24 20.3**	**+0.4**
AOPR	**Arecibo Observ**	**0.84**	**148**	⇑*e*P	**Pg**	**01 24 08.9**	**+0.1**
AOPR	**Arecibo Observ**	**0.84**	**148**	*e*S	**Sn**	**01 24 20.9**	**-0.2**
AOPR	**Arecibo Observ**	**0.84**	**148**	⇑*e*Pg	**Pn**	**01 24 09.1**	**-0.1**

AOPR				⇑eSg	Sg	01 24 20.1	+0.1
AOPR				IAML		01 24 32.6	
	comp=N,639nm,0.3s						
EMPR	Esperanza - Ma	0.88	132		Pn	01 24 10.4	+0.7
EMPR					Sn	01 24 23.3	+1.4
EMPR	Esperanza - Ma	0.88	132	⇑eP	Pn	01 24 10.4	+0.7
EMPR	Esperanza - Ma	0.88	132	eS	Sn	01 24 23.3	+1.4
LSP	Las Mesas	0.89	172		Pn	01 24 10.2	+0.3
LSP					Sn	01 24 23.2	+0.8
LSP	Las Mesas	0.89	172	⇓eP	Pn	01 24 10.2	+0.3
LSP	Las Mesas	0.89	172	eS	Sn	01 24 23.2	+0.8
CRPR	Cabo Rojo, PR	1.06	174	Pn	Pn	01 24 12.5	+0.3
CRPR				Sn	Sg	01 24 26.8	-0.1
CRPR				IAML		01 24 29.3	
	comp=E,40nm,1.1s						
CRPR				IAML		01 24 30.1	
	comp=N,39nm,1.0s						
CRPR	Cabo Rojo, PR	1.06	174	⇓eP	Pg	01 24 12.8	-0.2
CRPR	Cabo Rojo, PR	1.06	174	eS	Sg	01 24 27.5	+0.6
CRPR	Cabo Rojo, PR	1.06	174	ePg	Pg	01 24 12.7	-0.2
CRPR				⇑eSg	Sg	01 24 27.5	+0.6
CRPR				IAML		01 24 28.1	
	comp=N,200nm,0.3s						
CRPR	Cabo Rojo, PR	1.06	174	i P	Pg	01 24 12.7	-0.2
CRPR				eS	Sb	01 24 25.7	+0.2
CRPR				IAML		01 24 31.7	
	comp=Z,27nm,0.6s						
ECPR	Experimental S	1.10	132	⇓eP	Pb	01 24 13.1	+0.3
ECPR	Experimental S	1.10	132	eS	Sg	01 24 28.4	+0.2
MLPR	Magueyes Islan	1.10	171	⇓eP	Pg	01 24 13.3	-0.4
MLPR	Magueyes Islan	1.10	171	eS	Sg	01 24 28.5	+0.2
MLPR	Magueyes Islan	1.10	171	ePg	Pg	01 24 13.4	-0.4
MLPR				⇑eSg	Sg	01 24 27.9	-0.3
MLPR				IAML		01 24 29.0	
	comp=N,235nm,0.3s						
OBIP	Obispado Ponce	1.17	150	Pn	Pn	01 24 13.7	0.0
OBIP				Sn	Sn	01 24 29.1	-0.1
OBIP				IAML		01 24 30.8	
	comp=N,32nm,0.5s						
OBIP				IAML		01 24 35.1	
	comp=E,49nm,0.3s						
OBIP	Obispado Ponce	1.17	150	⇑eP	Pb	01 24 14.3	+0.3
OBIP	Obispado Ponce	1.17	150	eS	Sg	01 24 30.0	-0.5
PCDR	Punta Cana, DR	1.23	244	⇑ePg	Pn	01 24 13.0	-1.5
PCDR				IAML		01 24 38.0	
	comp=N,73nm,2.4s						
GCPR	Guaynabo City	1.31	125	Pn	Pb	01 24 16.1	-0.3
GCPR				Sn	Sn	01 24 32.3	-0.4
GCPR	Guaynabo City	1.31	125	⇓eP	Pb	01 24 16.1	-0.3
GCPR	Guaynabo City	1.31	125	eS	Sg	01 24 34.4	-0.6
SJG	San Juan	1.39	133	Pn	Pn	01 24 16.6	-0.1
SJG				IAML		01 24 38.5	
	comp=N,68nm,0.2s						
SJG	San Juan	1.39	133	i P	Pn	01 24 16.7	-0.1
SJG				IAML		01 24 40.1	
	comp=Z,22nm,0.6s						
HUMP	Col San Antoni	1.59	125	Pn	Pb	01 24 20.8	-0.4
HUMP				Sn	Sn	01 24 39.0	-0.5
HUMP				IAML		01 24 45.7	
	comp=N,24nm,0.7s						
HUMP				IAML		01 24 51.4	
	comp=E,32nm,0.2s						
HUMP	Col San Antoni	1.59	125	⇑eP	Pb	01 24 20.9	-0.3
HUMP	Col San Antoni	1.59	125	eS	Sb	01 24 40.6	-0.3
MIDR	Miches	1.73	268	⇓eP	Pb	01 24 23.6	0.0
MIDR	Miches	1.73	268	eS	Sb	01 24 45.0	0.0
MIDR	Miches	1.73	268	⇑eP	Pn	01 24 22.5	+1.1
MIDR				⇑ePg	Pb	01 24 22.8	-0.8
MIDR				⇑eSg	Sn	01 24 44.0	+1.0
MIDR				IAML		01 24 55.0	
	comp=N,21nm,2.2s						
DR12	Loma Pena Alta	2.06	263	Pn	Pb	01 24 28.7	-0.6
HATOM	Hato Mayor del	2.06	263	ePg	Pb	01 24 29.1	-0.1
HATOM				⇑eSg	Sn	01 24 52.1	+0.8
HATOM				IAML		01 24 52.5	
	comp=N,69nm,0.3s						

*IPEC **04** 01:24:46.9±0.2, 50°.26N×18°.73E, h1^{km}, ML2.9/5, Error ellipse: s-maj=1.8km s-min=0.9km az=170.0*

*VIE **04** 01:24:46.5±0.3, 50°.32N×18°.68E, h0^{km}±2^{km}, mb2.5/6, ml2.9/7, Error ellipse: s-maj=3.1km s-min=2.1km az=7.0 23 km WNW of Katowice Suspected Mining induced.*

*PRU **04** 01:24:47.8, 50°.27N×18°.65E, h0^{km}*

ISC 04 01:24:45.8±0.8**, 50°.33N**±0°.03×**18°.75E**±0°.03**, h0^{km}, n33, σ1^{s}38**/54**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.63	219	ePG	Pg	01 24 58.5	+0.7
OKC				eSG	Sg	01 25 06.1	+0.2
	comp=Z,122nm,0.6s						
OJC	Ojcow	0.68	99	ePg	Pb	01 25 00.3	-0.3
OJC				eSg	Sb	01 25 10.3	-0.3
STEB	Steborice	0.74	238	ePG	Pg	01 25 00.9	+0.8
STEB				eSG	Sg	01 25 10.3	+0.6
	comp=Z,251nm,0.4s						
ANAC	Anensky vrch	0.92	255	ePg	Pg	01 25 04.0	+0.6
	baz=77						
ANAC				eSg	Sg	01 25 14.9	-0.4
	388nm,0.3s,baz=77						
MORC	Moravsky Berou	0.95	235	ePg	Pg	01 25 04.1	0.0
	baz=57						
MORC				eSg	Sg	01 25 15.1	-1.4
	baz=57						
LOSC	Losov	1.14	232	ePg	Pg	01 25 07.5	-0.1
	baz=53						
LOSC				eSg	Sg	01 25 21.0	-1.3
	202nm,0.5s,baz=53						
KRLC	Kraliky	1.29	259	ePG	Pg	01 25 10.3	-0.3
KRLC				eSG	Sg	01 25 27.0	-0.3
	comp=Z,75nm,0.5s						
NIE	Niedzica	1.35	132	ePg	Pg	01 25 12.0	+0.3
NIE				eSg	Sn	01 25 33.1	+2.4
DPC	Dobruska-Polom	1.56	272	ePG	Pn	01 25 15.3	+0.5
DPC				eSG	Sb	01 25 36.2	+0.4
	comp=Z,101nm,0.6s						
JAVC	Velka Javorina	1.63	206	ePN	Pn	01 25 15.7	-0.1
JAVC	Velka Javorina	1.63	206	ePn	Pn	01 25 15.6	-0.2
	baz=26						
OSTC	Ostas	1.64	279	ePG	Pn	01 25 16.4	+0.5
OSTC				eSG	Sb	01 25 38.7	+0.6
	comp=Z,40nm,0.3s						
KSP	Ksiaz	1.65	289	ePg	Pg	01 25 18.2	+0.8
KSP				eSg	Sg	01 25 40.5	+1.7
VRAC	Vranov	1.73	235	ePn	Pn	01 25 17.4	+0.2
	baz=54						
VRAC				eSg	Sn	01 25 39.2	-0.8
	70nm,0.4s,baz=54						
CHVC	Chvalec	1.74	280	ePG	Pn	01 25 18.0	+0.6
CHVC				eSG	Sn	01 25 40.7	+0.4
	comp=Z,40nm,0.6s						
UPC	Upice	1.76	277	ePG	Pg	01 25 20.2	+0.6
UPC				eSG	Sn	01 25 41.6	+0.9
	comp=Z,43nm,0.5s						
STHS	Stebnicka Huta	1.85	119	ePG	Pb	01 25 20.9	+0.3
KRUC	Moravsky	1.99	231	ePn	Pn	01 25 20.7	0.0
	baz=51						
KRUC				eSg	Sb	01 25 47.4	-0.7
	61nm,0.5s,baz=51						
KECS	Kecovo	2.17	148	ePG	Pn	01 25 22.8	-0.3
TREC	Trest	2.35	245	eSG	Sb	01 25 58.1	-0.6
PRU	Pruhonice	2.73	264	eSG	Sb	01 26 10.5	+1.0
	comp=Z,17nm,0.4s						
PRA	Prague	2.79	266	eSG	Sg	01 26 13.7	-1.6
	comp=Z,23nm,0.6s						
CONA	Conrad Observa	3.06	219	ePn	Pn	01 25 35.8	+0.3
CONA				eSn	Sn	01 26 12.0	-0.9
	8.8nm,0.4s						
RONA	Rosalia, Austr	3.09	213	i Pn	Pn	01 25 36.1	+0.3
	3.2nm,0.4s						
CKRC	Cesky Krumlov	3.26	244	eSG	Sb	01 26 26.2	+1.4
	comp=Z,22nm,0.7s						
KHC	Kasperske Hory	3.56	252	ePN	Pn	01 25 41.9	-0.5
KHC				ePG	Pb	01 25 49.4	-0.3
KHC				eSG	Sb	01 26 36.4	+2.9
	comp=Z,22nm,0.4s						
CLL	Collm	3.78	287	ePg	Pg	01 25 58.0	-0.2
CLL				ex	x	01 26 31.0	
CLL				eSg	Sg	01 26 49.0	+1.9
	comp=Z,16nm,0.5s						
MOA	Molln	3.85	232	i Pn	Pn	01 25 47.0	+0.7
	comp=Z,0.3nm,0.2s						
KBA	Koelnbreinsper	4.84	230	i Sn	Sn	01 26 56.4	-0.4
	comp=Z,3.1nm,0.5s						
BSD	Bornholm Skovb	5.33	336	i P	Pn	01 26 08.7	+2.1
BSD				i S	Sn	01 27 05.2	-3.5
BSD				IAML		01 27 16.6	
	comp=Z,26nm,1.1s						
LUNU	Lund	6.20	331	i P	Pn	01 26 19.4	+0.8
LUNU				i S	Sn	01 27 22.2	-7.9
BJUU	Bjuv	6.71	331	i P	Pn	01 26 26.7	+1.3
BJUU				i S	Sn	01 27 34.5	-8.0
DEL	Delary	6.81	337	i P	Pn	01 26 27.7	+0.8
DEL				i S	Sn	01 27 38.8	-6.2

*IDC **04** 01:38:51.3±0.4, 36°.86N×140°.36E, h0^{km}, mb4.6/29, mbtmp4.6/32, ML4.5/3, MS3.6/36, Error ellipse: s-maj=14.2km s-min=10.7km az=82.0*

*GCMT **04** 01:38:52.8±0.5, 36°.73N±0°.03×140°.53E±0°.06, h22^{km}±1^{km}, MW4.8/71, Moment Tensor Solution. s15,c15; s71,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.01±.17; $M_{\theta\theta}$1.54±.11; $M_{\phi\phi}$0.47±.09; $M_{r\theta}$0.28±.14; $M_{\theta\phi}$-0.35±.06; $M_{\phi r}$0.12±.19; Best double couple: $M_0$1.85100×10^{16} NP1:ϕ_s111.00000°, δ41.00000°, λ-83.00000°. NP2: ϕ_s282.00000°, δ49.00000°, λ-96.00000°. Principal axes: T 1.6610, Plg4.0000°, Azm16.0000°; N 0.3820, Plg5.0000°, Azm286.0000°; P -2.0410, Plg84.0000°, Azm145.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **04** 01:38:52.8±1.0, 36°.87N×140°.47E, h23^{km}, mb5.0/62 Error ellipse: s-maj=7.3km s-min=4.8km az=110.1*

*JMA **04** 01:38:53.1±0.0, 36°.8N±0°.1×140°.5E±0°.2, h9^{km}, MD4.9/20, MW4.5/20, NORTHERN IBARAKI PREF*

JMA Felt IV J1 at NORTHERN IBARAKI PREF .

*NIED **04** 01:38:53.1, 36°.81N×140°.54E, h9^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-7.00; $M_{\theta\theta}$5.58; $M_{\phi\phi}$1.42; $M_{r\theta}$2.06; $M_{\theta\phi}$-1.47; $M_{\phi r}$0.29; Fault plane solution: $M_0$6.83000×10^{15} NP1: ϕ_s113.00000°, δ37.00000°, λ-80.00000°. NP2: ϕ_s281.00000°, δ53.00000°, λ-97.00000°.*

*BGR **04** 01:38:54.7, 38°.00N×142°.25E, h33^{km}, mb4.8*

*NEIC **04** 01:38:55.8±1.7, 36°.84N±0°.03×140°.43E±0°.04, h27^{km}±3^{km}, mb5.0/359, Error ellipse: s-maj=5.0km s-min=5.0km az=144.0*

*BJI **04** 01:38:56.1, 36°.68N×140°.41E, h55^{km}, mB5.1/10, mb4.7/46, Ms4.7/3, Ms7 4.4/6*

ISC 04 01:38:53.8±0.5**, 36°.80N**±0°.02×**140°.56E**±0°.03**, h19^{km}**±1^{km}**, n687, σ1^{s}33**/523**, mb5.0**/289**, MS3.6**/32**, 28C-20D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	Hitachi	0.19	177	P	Pg	01 38 57.3	-1.3
JHO				eS	Sg	01 39 00.3	-1.6
JHO	Hitachi	0.19	177	A	A	01 38 57.3	
	comp=N,446nm,1.4s,comp=E,262nm,2.5s						
JFFD	Fukushimafurud	0.29	1	i P	Pg	01 38 58.7	-1.6
JFFD				eS	Sg	01 39 03.0	-1.8
JFFD	Fukushimafurud	0.29	1	A	A	01 38 58.7	
	comp=N,106nm,4.3s,comp=E,126nm,1.0s						
ONAJ	Iwakimizuishiy	0.36	32	P	Pg	01 39 00.1	-1.4
ONAJ	Iwakimizuishiy	0.36	32	A	A	01 39 00.1	
	comp=N,88nm,3.0s,comp=E,129nm,0.3s						
JHYU	Hitachinakayam	0.46	177	A	A	01 39 02.3	
	comp=N,204nm,0.4s,comp=E,119nm,0.5s						
JSB	Shiboa	0.54	289	P	Pg	01 39 03.9	-0.8
JSB				eS	Sg	01 39 11.0	-0.9
JSB	Shiboa	0.54	289	A	A	01 39 03.9	
	comp=N,92nm,1.5s,comp=E,151nm,5.5s						
JFK	Kawauchi	0.62	24	eP	Pg	01 39 04.4	-1.8
JFK	Kawauchi	0.62	24	A	A	01 39 04.4	
	comp=N,44nm,4.4s,comp=E,47nm,4.3s						
JYT	Yasato	0.64	207	P	Pg	01 39 05.3	-1.1
JYT				eS	Sg	01 39 13.8	-1.2
JYT	Yasato	0.64	207	A	A	01 39 05.3	
	comp=N,342nm,0.3s,comp=E,272nm,0.2s						
JOTO	OTAMA OYAMA	0.78	347	eP	Pg	01 39 07.7	-1.4
JOTO				eS	Sg	01 39 17.9	-1.6
JOTO	OTAMA OYAMA	0.78	347	A	A	01 39 07.7	
	comp=N,115nm,0.4s,comp=E,123nm,0.7s						
JFY	Yanaizu	0.91	312	eP	Pg	01 39 09.8	-1.8
JFY	Yanaizu	0.91	312	A	A	01 39 09.8	
	comp=N,36nm,4.3s,comp=E,16nm,3.0s						
JAG	Ashikaga	0.96	248	P	Pg	01 39 10.5	-2.0
JAG	Ashikaga	0.96	248	A	A	01 39 10.5	
	comp=N,37nm,0.4s,comp=E,26nm,0.5s						
JKT	Katashina	1.05	269	A	A	01 39 12.7	
	comp=N,47nm,0.4s,comp=E,66nm,0.4s						
JMM	Marumori	1.08	10	A	A	01 39 13.3	
	comp=N,62nm,1.4s,comp=E,39nm,3.8s						
JCAJ	Choshiashikaji	1.10	167	A	A	01 39 14.0	
	comp=N,121nm,1.1s,comp=E,76nm,0.7s						
JSMT	Sammumatsuo	1.16	184	A	A	01 39 14.9	
	comp=N,227nm,0.3s,comp=E,142nm,0.6s						
JYAR	Yonezawaarcadi	1.16	344	A	A	01 39 14.5	
	comp=N,46nm,0.8s,comp=E,41nm,1.0s						
JUON	Uonuma	1.27	289	A	A	01 39 16.3	
	comp=N,9.0nm,0.4s,comp=E,20nm,1.1s						
TOK	Tokyo	1.28	210	A	A	01 39 16.9	
	comp=N,135nm,0.3s,comp=E,187nm,0.4s						
JNS	Sasagawa	1.42	316	A	A	01 39 18.8	
	comp=N,24nm,1.3s,comp=E,22nm,1.7s						
JCCN	Chibachonan	1.43	191	A	A	01 39 19.4	
	comp=N,61nm,6.3s,comp=E,72nm,2.0s						
JYS	Shirataka	1.47	345	A	A	01 39 19.7	
	comp=N,42nm,1.0s,comp=E,57nm,2.0s						
I30JP	ISUMI INFRASON	1.50	188	Pn	Pb	01 39 21.1	+0.1
	baz=13,slow=13						
I30JP				Sn	Sn	01 39 40.4	+1.7
	baz=9.2,slow=10						
I30JP				I	I	01 48 50.0	
	baz=12,slow=317,SNR=0.5						
JRY	Ryogami san	1.55	240	A	A	01 39 20.9	
	comp=N,33nm,0.4s,comp=E,38nm,0.6s						
JGK	Kuni	1.56	262	A	A	01 39 21.0	
	comp=N,33nm,0.4s,comp=E,43nm,1.3s						
JOU	Okura	1.57	3	A	A	01 39 21.2	
	comp=N,58nm,2.3s,comp=E,61nm,0.7s						
JSGW	Sagamiharawaka	1.62	223	A	A	01 39 22.1	
	comp=N,16nm,0.5s,comp=E,13nm,0.5s						
JIZZ	Izumozaki	1.65	297	A	A	01 39 22.3	
	comp=N,30nm,3.9s,comp=E,39nm,2.4s						
JKUC	kamogawauchiur	1.66	190	A	A	01 39 22.9	
	comp=N,28nm,6.6s,comp=E,20nm,4.6s						
JIKH	Ishinomakikobu	1.68	25	A	A	01 39 22.9	
	comp=N,25nm,0.7s,comp=E,29nm,2.1s						
JYO	Yokosk	1.73	205	A	A	01 39 23.8	
	comp=N,41nm,2.9s,comp=E,51nm,0.4s						
JIO	Ouri	1.77	21	A	A	01 39 24.3	
	comp=N,20nm,1.8s,comp=E,44nm,1.3s						
JOFO	Osakifurukawao	1.82	9	A	A	01 39 25.0	
	comp=N,165nm,1.3s,comp=E,129nm,2.4s						
TATJ	Tateyama 2	1.84	197	A	A	01 39 25.5	
	comp=N,48nm,4.0s,comp=E,48nm,1.8s						
MJAR	Matsushiro Arr	1.91	263	Pn	Pn	01 39 25.8	+0.5
	comp=E,57nm,0.3s,baz=88,slow=15,SNR=1402						
MJAR				Sn	Sn	01 39 49.0	+0.3
	comp=E,152nm,0.3s,baz=88,slow=31,SNR=22						
MJAR				LR	LR	01 39 52.0	
	comp=E,483nm,19.9s,baz=318,slow=34						
MJAR	Matsushiro Arr	1.91	263		Pn	01 39 26.7	+1.5
MJAR	Matsushiro Arr	1.91	263	P	Pn	01 39 26.7	+1.5
MAJO	Matsushiro	1.91	263		Pn	01 39 26.4	+1.1
MAJO					Sn	01 39 50.5	+1.7
MAJO	Matsushiro	1.91	263	P	Pn	01 39 26.5	+1.2
MAJO	Matsushiro	1.91	263	S	Sb	01 39 51.9	+0.5
MAJO	Matsushiro	1.91	263	i P	Pn	01 39 25.6	+0.3
MJB9	Matsu-Tunnel	1.91	263		Pb	01 39 27.2	-0.7
JYA	Atsumi	1.91	340	A	A	01 39 26.3	
	comp=N,31nm,1.0s,comp=E,48nm,1.9s						
JOD2	Odawara 2	1.94	218	A	A	01 39 26.9	
	comp=N,20nm,4.6s,comp=E,19nm,2.7s						
JJN	Nakama	1.94	280	A	A	01 39 26.7	
	comp=N,24nm,1.9s,comp=E,31nm,0.9s						
JNG	Nsakai	2.02	260	A	A	01 39 27.8	
	comp=N,13nm,2.4s,comp=E,9.0nm,2.4s						
JYK	Kaneyama	2.12	356	A	A	01 39 29.4	
	comp=N,27nm,1.3s,comp=E,22nm,1.1s						
JKMT	Kesennumamotoy	2.14	20	A	A	01 39 29.7	
	comp=N,11nm,1.7s,comp=E,20nm,4.3s						
JNT	Takato	2.16	245	A	A	01 39 30.0	
	comp=N,10.0nm,2.5s,comp=E,8.0nm,2.6s						
JFNN	Fujinakano	2.21	224	A	A	01 39 30.7	
	comp=N,17nm,2.4s,comp=E,16nm,6.4s						
JSD	Sado	2.21	305	Pn	Pn	01 39 29.1	-0.3
JSD	Sado	2.21	305	P	Pn	01 39 29.6	+0.2
JSD	Sado	2.21	305	S	Sb	01 39 59.4	-0.6
JMK	Ichinoseki	2.21	14	A	A	01 39 30.8	
	comp=N,9.0nm,1.2s,comp=E,15nm,2.3s						
JHTM	Izuhatsuma	2.22	215	A	A	01 39 31.0	
	comp=N,49nm,1.0s,comp=E,47nm,2.2s						
JIM2	Oshima 3	2.27	204	A	A	01 39 31.7	
	comp=N,22nm,2.1s,comp=E,32nm,1.5s						
JYYZ	Yamagatayuza	2.27	348	A	A	01 39 31.5	
	comp=N,60nm,3.8s,comp=E,49nm,1.8s						
OFUJ	Ofunato	2.44	21	A	A	01 39 34.1	
	comp=N,9.0nm,1.8s,comp=E,12nm,2.0s						
SHZ3	Shizuoka 3	2.57	228	A	A	01 39 36.0	
	comp=N,12nm,1.1s,comp=E,8.0nm,1.4s						
JRG	Rokugo	2.60	1	A	A	01 39 36.2	
	comp=N,20nm,2.2s,comp=E,14nm,2.2s						
JNY	Yasuok	2.61	237	A	A	01 39 36.5	
	comp=N,15nm,0.9s,comp=E,10.0nm,0.9s						
JOM	Ohasama	2.73	12	A	A	01 39 38.2	
	comp=N,8.0nm,2.4s,comp=E,17nm,0.8s						
JYW	Yuwa	2.75	354	A	A	01 39 38.5	
	comp=N,39nm,1.9s,comp=E,31nm,1.7s						
JGF	Kuroka	2.85	246	Pn	Pn	01 39 39.5	+1.3
JGF	Kuroka	2.85	246	P	Pn	01 39 40.2	+1.9
JGF	Kuroka	2.85	246	S	Sn	01 40 14.1	+2.0
JSG	Sagara	2.86	223		Pn	01 39 39.6	+1.2
JSZI	Iwateshizukuis	2.96	6	A	A	01 39 41.4	
	comp=N,30nm,1.2s,comp=E,22nm,3.4s						
INU	Inuyama	3.21	244	Pn	Pn	01 39 44.6	+1.4
INU	Inuyama	3.21	244	P	Pn	01 39 45.4	+2.2
INU	Inuyama	3.21	244	S	Sn	01 40 22.5	+1.6
JTH	Tanohata	3.30	18	A	A	01 39 46.3	
	comp=N,10.0nm,4.9s,comp=E,19nm,3.5s						
JICN	Ichinomiyachia	3.36	245	A	A	01 39 47.1	
	comp=N,17nm,1.8s,comp=E,12nm,1.4s						
JKEN	Kujiedanarisaw	3.52	15	A	A	01 39 49.4	
	comp=N,21nm,1.4s,comp=E,30nm,2.1s						
JHJ	Hachijo jima 2	3.72	190	Pn	Pn	01 39 51.1	+0.9
	comp=E,130nm,0.3s,baz=314,slow=23,SNR=17						
JHJ				Sn	Sn	01 40 33.2	-0.4
	comp=E,387nm,0.3s,baz=226,slow=22,SNR=8.6						
JHJ				LR	LR	01 41 07.6	
	comp=E,922nm,20.2s,baz=114,slow=36						
	comp=E,228nm,0.3s						
JHJ2	Mitsune	3.73	190		Pn	01 39 51.1	+0.8
JHJ2	Mitsune	3.73	190	P	Pn	01 39 51.0	+0.8
JHJ2	Mitsune	3.73	190	S	Sn	01 40 33.1	-0.5
JTM	Tenmabayashi	4.00	6	Pn	Pn	01 39 56.3	+2.2
JTM	Tenmabayashi	4.00	6	P	Pn	01 39 56.6	+2.5
JTM	Tenmabayashi	4.00	6	S	Sn	01 40 41.3	+0.8
ERM	Erimo	5.59	20	Pn	Pn	01 40 15.8	0.0
ERM	Erimo	5.59	20	P	Pn	01 40 15.4	-0.4
ERM	Erimo	5.59	20	S	Sn	01 41 19.3	-0.1
ERM	Erimo	5.59	20	P	Pn	01 40 15.8	0.0
JEM	Erimo	5.59	20	P	Pn	01 40 15.4	-0.4
JEM	Erimo	5.59	20	S	Sn	01 41 19.3	-0.2
JMN	Monobe	6.26	243	Pn	Pn	01 40 25.8	+0.6
JMN	Monobe	6.26	243	P	Pn	01 40 25.4	+0.2
JMN	Monobe	6.26	243	S	Sn	01 41 37.1	+0.9
ASAJ	Asahikawa	7.47	11	Pn	Pn	01 40 43.0	+1.2
	comp=E,6.1nm,0.3s,baz=236,slow=12,SNR=12						
ASAJ				Sn	Sn	01 42 10.7	+4.7
	baz=180,slow=20						
ASAJ				LR	LR	01 44 33.0	
	comp=E,211nm,18.3s,baz=39,slow=46						
	comp=E,29nm,0.7s						
ASAJ	Asahikawa	7.47	11	P	Pn	01 40 43.0	+1.2
JKA	Kamikawa-asahi	7.47	11	Pn	Pn	01 40 41.6	-0.1
NMR	Nemuro--Hokkai	7.67	30	eP	Pn	01 40 41.8	-2.6
NMR				eS	Sn	01 42 04.0	-6.7
RUSJ	Misakicho	8.13	25	eP	Pn	01 40 49.7	-1.0
RUSJ				eS	Sn	01 42 20.0	-2.0
YUK	Yuzh-Kuril'sk	8.28	28	P	Pn	01 40 52.3	-0.5
YUK				eS	Sn	01 42 23.2	-2.6
YUK				pmax	pmax		
	comp=Z,212nm,0.2s						
YUK				pmax	pmax		
	comp=N,87nm,0.1s						
YUK				pmax	pmax		
	comp=E,75nm,0.1s						
JNU	Nakatsue	8.75	248	Pn	Pn	01 41 02.3	+3.0
	comp=E,1.3nm,0.3s,baz=94,slow=6.8,SNR=14						
JNU				LR	LR	01 43 32.9	
	comp=E,80nm,21.1s,baz=64,slow=33						
JNU	Nakatsue	8.75	248		Pn	01 41 00.1	+0.8
JNU	Nakatsue	8.75	248	P	Pn	01 41 00.0	+0.7
TEY	Ternei	8.76	341	eP	Pn	01 41 08.0	+8.7
JCJ	Chichijima	9.77	171	Pn	Pn	01 40 59.0	-14
	comp=E,32nm,0.3s,baz=60,slow=11,SNR=7.9						
JCJ				Sn	Sn	01 42 43.7	-19
	comp=E,24nm,0.3s,baz=307,slow=20,SNR=2.5						
JCJ				LR	LR	01 45 13.0	
	comp=E,200nm,21.2s,baz=288,slow=39						
JCJ	Chichijima	9.77	171	Pn	Pn	01 41 09.6	-3.7
JCJ	Chichijima	9.77	171	P	Pn	01 41 10.9	-2.4
USRK	Ussuriysk Ar.	9.86	321	Pn	Pn	01 41 19.9	+5.5
	comp=E,0.8nm,0.3s,baz=134,slow=13,SNR=19						
KSRS	Korea Array	10.11	278	Pn	Pn	01 41 21.3	+3.4
	comp=E,0.8nm,0.3s,baz=90,slow=12,SNR=18						
KSAR	Wonju Array Be	10.14	277		Pn	01 41 18.9	+0.6
KSAR	Wonju Array Be	10.14	277	P	Pn	01 41 18.9	+0.6
KS19	Wonju Array Si	10.16	278	Pn	Pn	01 41 17.9	-0.6
YSS	Yuzhno-Sakhali	10.28	8	eP	Pn	01 41 19.7	-0.5
YSS				pmax	pmax		
	comp=Z,40nm,1.1s						
MDJ	Mudanjiang	11.40	317	P	Pn	01 41 40.1	+4.5
MDJ				pmax	pmax		
	comp=Z,24nm,1.3s						
BNX	BinXian	13.31	316	⇓P	Pn	01 42 05.2	+3.5
BNX				pmax	pmax		
	comp=Z,15nm,1.2s						
CN2	Changchun	13.48	306	P	Pn	01 42 07.7	+3.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
OKH	Okha	16.84	5	deP	Pn	01 42 31.7	-17
OKH				MLR	MLR		
	comp=E,900nm,7.0s						
OKH				MLR	MLR		
	comp=N,700nm,20.0s						
OKH				MLR	MLR		
	comp=Z,500nm,7.0s						
NJ2	Nanjing	18.51	262	eP	P	01 43 08.0	-0.9
NJ2				pmax	pmax		
	comp=Z,13nm,0.9s						
ZEA	Zeya	19.30	336	eP	Pn	01 43 22.8	+4.3
ZEA				pmax	pmax		
	comp=N,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BJI	Beijing	19.36	287	P	P	01 43 17.9	-0.3
BJI				pP	sP	01 43 26.0	0.0
BJI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BJT	Baijiatuau	19.37	287		P	01 43 16.4	-1.9
BJT	Baijiatuau	19.37	287	P	P	01 43 16.4	-1.9
BJT				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HILR	Hailar Array B	19.74	317	P	P	01 43 19.7	-2.6
	baz=121,slow=11						
HILR				LR	LR	01 51 11.0	
	comp=Z,244nm,19.8s,baz=100,slow=38						
	comp=Z,2.0nm,0.4s						
XLT	XiLinHaoTe	19.91	298	eP	P	01 43 22.5	-1.8
XLT				pmax	pmax		
	comp=Z,39nm,1.0s						
PEA0B	Petropavlovsk-	20.24	31	ceP	P	01 43 29.3	+1.6
PETK	Petropavlovsk-	20.24	31	P	P	01 43 27.7	0.0
	comp=Z,8.4nm,0.9s,baz=256,slow=6.0,SNR=5.7						
PETK				LR	LR	01 50 17.8	
	comp=Z,130nm,21.9s,baz=221,slow=34						
	comp=Z,8.4nm,0.9s						
NACB	Ninganchiao	20.58	238	P	P	01 43 30.1	-1.5
NACB				IAmb	IAmb	01 43 47.1	
	comp=Z,112nm,1.8s						
HNS	HongShan	20.61	279	⇑P	P	01 43 29.4	-2.4
HNS				pmax	pmax		
	comp=Z,29nm,0.9s						
YULB	Yu-li	21.30	237	P	P	01 43 37.9	-1.5
TPUB	Ta-pu	21.82	237	P	P	01 43 42.2	-2.7
TPUB				IAmb	IAmb	01 43 49.4	

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      comp=Z,59nm,1.0s
LYN   LuoYang          22.90 273   P      P      01 43 58.5 +2.1
LYN                                pmax   pmax
      comp=Z,15nm,0.7s
HHC   Hu-ho-hao-te     22.90 289  eP      P      01 43 56.0 -0.5
HHC                                pmax   pmax
      comp=Z,5.0nm,0.7s
HHC                                pmax   pmax
      comp=Z,310nm,5.7s
GUMO  Guam             23.43 169   LR     LR     01 53 29.9
      comp=Z,61nm,18.2s,baz=74,slow=37
MA2   Magadan          23.73  13   LR     LR     01 52 44.8
      comp=Z,83nm,21.0s,baz=292,slow=35
MA2   Magadan          23.73  13   P      P      01 44 02.6 -1.9
MA2   Magadan          23.73  13   P      P      01 44 02.6 -1.9
MA2                                pmax   pmax
      comp=Z,331nm,1.9s
BTO   Baotou           24.07 288  eP      P      01 44 09.0 +1.0
BTO                                S      S      01 48 24.6 +0.1
BTO                                pmax   pmax
      comp=Z,11nm,0.6s
BTO                                pmax   pmax
      comp=Z,2µm,6.9s
BTO                                LR     LR
      comp=Z,2µm,6.2s
BTO                                LR     LR
      comp=Z,1µm,6.4s
BTO                                LR     LR
      comp=Z,1µm,6.4s
XAN   Xi'an            25.87 273   P      P      01 44 21.7 -2.6
XAN                                pmax   pmax
      comp=Z,9.0nm,0.7s
YAK   Yakutsk          26.16 348   LR     LR     01 54 51.6
      comp=Z,143nm,18.6s,baz=128,slow=37
YAK   Yakutsk          26.16 348   P      P      01 44 24.6 -1.9
YAK                                IAmb   IAmb   01 44 31.2
      comp=Z,33nm,0.8s
YAK   Yakutsk          26.16 348  eP      P      01 44 25.1 -1.4
YAK                               e*PP    sP     01 44 39.1 +4.3
YAK                               eS      S      01 48 51.7 -5.4
YAK                                pmax   pmax
      comp=Z,45nm,1.0s
YAK                                pmax   pmax
      comp=N,12nm,1.0s
YAK                                pmax   pmax
      comp=E,7.0nm,1.0s
YAK                                pmax   pmax
      comp=Z,2µm,4.8s
YAK                                pmax   pmax
      comp=N,2µm,4.8s
YAK                                pmax   pmax
      comp=E,952nm,3.7s
YAK                                smax   smax
      comp=N,2µm,4.7s
YAK                                smax   smax
      comp=E,320nm,3.2s
YAK                                MLR    MLR
      comp=Z,288nm,13.0s
YAK                                MLR    MLR
      comp=N,156nm,11.0s
YAK                                MLR    MLR
      comp=E,62nm,11.0s
ENH   Enshi            26.63 265   P      P      01 44 29.1 -2.1
ENH                                IAmb   IAmb   01 44 35.5
      comp=Z,26nm,0.9s
ULN   Ulaanbaatar      26.92 305   P      P      01 44 34.2 +0.4
ULN   Ulaanbaatar      26.92 305  iP      P      01 44 32.2 -1.7
ULN                                pmax   pmax
      comp=Z,5.0nm,0.9s
SEY   Seymchan         27.16  12   LR     LR     01 56 42.3
      comp=Z,171nm,20.0s,baz=122,slow=40
SEY   Seymchan         27.16  12  eP      P      01 44 39.6 +4.0
SEY                                pmax   pmax
      comp=Z,26nm,1.2s
SONM  Songino Array    27.35 305   P      P      01 44 36.2 -1.5
      comp=Z,8.6nm,0.8s,baz=110,slow=7.9,SNR=30
SONM                               LR     LR     01 54 48.4
      comp=Z,82nm,18.3s,baz=76,slow=35
      comp=Z,8.6nm,0.8s
SONM  Songino Array    27.35 305   P      P      01 44 35.8 -1.9
GULI  GuiLin           28.18 255   P      P      01 44 41.7 -3.4
GULI                               pmax   pmax
      comp=Z,27nm,1.2s
GULI                               pmax   pmax
      comp=Z,410nm,3.8s
H11N2 WAKE ISLAND Hy   28.62 119   T      T      02 14 37.8
      baz=312,slow=75,SNR=805
H11N1 WAKE ISLAND Hy   28.63 119   T      T      02 14 38.7
      baz=312,slow=75,SNR=1178
H11N3 WAKE ISLAND Hy   28.64 119   T      T      02 14 37.5
      baz=312,slow=75,SNR=876
H11S1 WAKE ISLAND Hy   29.32 121   T      T      02 15 27.3
      baz=314,slow=76,SNR=3334
H11S3 WAKE ISLAND Hy   29.32 121   T      T      02 15 27.9
      baz=314,slow=76,SNR=1850
H11S2 WAKE ISLAND Hy   29.33 121   T      T      02 15 29.1
      baz=314,slow=76,SNR=1878
LZDM  Lanzhou Array    29.58 280   P      P      01 44 57.5 -0.3
      comp=Z,1.2nm,0.3s,baz=149,slow=6.4,SNR=3.5
      comp=Z,1.2nm,0.3s
GTA   Gaotai           31.98 287  eP      P      01 45 18.5 -0.3
GTA                                PcP    PcP    01 48 09.7 +1.2
GTA                                pmax   pmax
      comp=Z,4.0nm,0.8s
DAV   Davao City (W)   32.59 208   LR     LR     01 58 18.6
      comp=Z,98nm,19.1s,baz=2.5,slow=36
PZH   PanZhiHua        34.39 264   P      P      01 45 41.8 +1.8
TIXI  Tiksi            35.45 354   LR     LR     02 02 31.0
      comp=Z,71nm,20.1s,baz=20,slow=40
TIXI  Tiksi            35.45 354   P      P      01 45 47.3 -1.0
TIXI  Tiksi            35.45 354ceP       P      01 45 50.6 +2.3
TIXI                               pmax   pmax
      comp=Z,7.0nm,1.0s
CLES  Cleveland East   37.81  49   P      P      01 46 06.3 -2.4
JAY   Jayapura         39.11 180   LR     LR     02 01 06.7
      comp=Z,97nm,18.5s,baz=318,slow=34
GTOI  Gorontalo        39.48 208   P      P      01 46 20.8 -2.3
      comp=Z,2µmcomp=Z,40nm,0.5s
DGZ   Jazzator, Alta   39.97 306  iP      P      01 46 26.2 -0.9
DGZ                                pmax   pmax
      comp=Z,21nm,1.0s
FAKI  Fak Fak          40.26 193   P      P      01 46 28.1 -1.5
FAKI  Fak Fak          40.26 193   P      P      01 46 29.7 +0.1
      comp=Z,65nm,1.1s
WMQ   Urumqi           40.33 297  eP      P      01 46 31.9 +1.8
CMAR  Chiang Mai Arr   40.77 255   P      P      01 46 34.6 +0.8
      comp=Z,1.6nm,0.4s,baz=47,slow=7.5,SNR=6.4
CMAR                               PcP    PcP    01 48 36.0 +1.0
      comp=Z,0.8nm,0.3s,baz=15,slow=2.8,SNR=6.6
CMAR                               LR     LR     02 05 14.3
      comp=Z,50nm,19.6s,baz=305,slow=39
      comp=Z,1.6nm,0.4s
SANI  Sanana           40.96 203   P      P      01 46 32.9 -2.4
      comp=Z,57nm,0.8s
MSAI  Masohi           41.38 198   P      P      01 46 38.2 -0.6
      comp=Z,78nm,1.0s
KRAI  Karang Ratu      41.49 199   P      P      01 46 41.4 +1.7
      comp=Z,144nm,1.2s
ZAA0  Zalesovo Array   41.57 313   P      P      01 46 38.6 -1.3
ZALV  Zalesovo Beam    41.57 313   P      P      01 46 39.2 -0.8
      comp=Z,8.0nm,0.5s,baz=97,slow=7.2,SNR=43
ZALV                               PcP    PcP    01 48 36.9 -0.1
      comp=Z,4.0nm,0.5s,baz=98,slow=3.5,SNR=8.0
ZALV                               ScP    ScP    01 52 27.1 +1.0
      comp=Z,0.4nm,0.4s,baz=72,slow=4.8,SNR=6.1
      comp=Z,8.0nm,0.5s
ZALV  Zalesovo Beam    41.57 313   P      P      01 46 38.6 -1.4
NLAI  Namlea           41.76 200   P      P      01 46 41.8 -0.1
      comp=Z,22nm,0.7s
ZSN   Zaisan           41.83 303  eP      P      01 46 42.4 +0.1
ZSN   Zaisan           41.83 303  eP      P      01 46 42.4 +0.1
AAI   Ambon            41.89 199   P      P      01 46 42.9 -0.1
      comp=Z,104nm,0.9s
BNDI  Bandanaira       42.29 196   P      P      01 46 46.0 -0.3
NRIK  Noril'sk         43.20 336   P      P      01 46 52.3 -0.7
      comp=Z,2.6nm,0.5s,baz=132,slow=4.0,SNR=5.9
NRIK                               PcP    PcP    01 48 42.2 +0.2
      comp=Z,6.8nm,0.9s,baz=82,slow=2.8,SNR=5.4
NRIK                               LR     LR     02 05 48.4
      comp=Z,132nm,19.3s,baz=110,slow=38
      comp=Z,2.6nm,0.5s
NRIK  Noril'sk         43.20 336   P      P      01 46 52.2 -0.8
NRIK  Noril'sk         43.20 336  iP      P      01 46 51.7 -1.3
NRIK                               pmax   pmax
      comp=Z,2.0nm,0.4s
C16K  Lisburne Hills   43.22  26   P      P      01 46 54.0 +0.8
K15K  Wolf Creek Mou   43.40  35   P      P      01 46 57.1 +2.3
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K15K                               IAmb   IAmb   01 48 08.1
      comp=Z,68nm,1.9s
MK31  Makanchi Array   43.66 302ceP       P      01 46 57.9 +0.7
MKAR  Makanchi Array   43.66 302   P      P      01 46 57.2  0.0
      comp=Z,4.1nm,0.7s,baz=88,slow=9.9,SNR=26
MKAR                               PcP    PcP    01 48 44.0 -0.1
      comp=Z,2.9nm,0.8s,baz=76,slow=3.9,SNR=4.1
MKAR                               LR     LR     02 07 01.8
      comp=Z,57nm,20.0s,baz=146,slow=39
      comp=Z,4.1nm,0.7s
MKAR  Makanchi Array   43.66 302   P      P      01 46 56.8 -0.4
MKAR  Makanchi Array   43.66 302  iP      P      01 46 57.0 -0.2
MKAR                               pmax   pmax
      comp=Z,4.0nm,0.7s
N15K  Kwethluk River   43.85  38   P      P      01 47 00.6 +2.1
N15K                               IAmb   IAmb   01 47 34.5
      comp=Z,28nm,1.2s
MAKZ  Makanchi         43.87 302   P      P      01 46 58.2 -0.6
MAKZ  Makanchi         43.87 302   P      P      01 46 58.2 -0.6
MAKZ                               pmax   pmax
      comp=Z,6.0nm,0.9s
O15K  Ungalikthiuk R   43.92  40   P      P      01 47 00.6 +1.6
O15K                               IAmb   IAmb   01 47 53.5
      comp=Z,58nm,1.6s
M16K  Timber Creek     44.48  37   P      P      01 47 04.5 +1.0
M16K                               IAmb   IAmb   01 47 24.8
      comp=Z,27nm,1.5s
J17K  VABM Dome        44.66  34   IAmb   IAmb   01 47 21.6
      comp=Z,25nm,1.4s
E18K  Tukpahlearik C   44.72  28   P      P      01 47 06.4 +1.0
C18K  Utukok River     44.79  26   IAmb   IAmb   01 47 10.7
      comp=Z,18nm,0.9s
SPSI  Sidrap Palu      44.95 210   P      P      01 47 05.8 -1.9
BNSI  Bone             45.22 209   P      P      01 47 09.6 -0.2
      comp=Z,33nm,1.1s
M17K  Holitna River    45.24  37   P      P      01 47 11.6 +2.0
M17K                               IAmb   IAmb   01 47 12.8
      comp=Z,19nm,1.1s
KURK  Kurchatov        45.54 308   P      P      01 47 10.7 -1.3
KURK                               IAmb   IAmb   01 47 12.7
      comp=Z,17nm,0.8s
KURK  Kurchatov        45.54 308ceP       P      01 47 11.4 -0.6
KURK                               pmax   pmax
      comp=Z,48nm,1.7s
KURBB Kurchatov Arra   45.61 308   P      P      01 47 12.0 -0.5
      comp=Z,12nm,0.7s,baz=84,slow=8.0,SNR=84
      comp=Z,12nm,0.7s
F19K  Shaleruckik Mo   45.70  29   P      P      01 47 13.8 +0.7
EVN   Everest          45.73 275   P      P      01 47 14.8 +0.2
D19K  Kuna River       45.86  27   IAmb   IAmb   01 47 19.0
      comp=Z,16nm,1.0s
KAPI  Kappang          45.91 210   LR     LR     02 04 29.5
      comp=Z,44nm,20.2s,baz=22,slow=34
KAPI  Kappang          45.91 210   P      P      01 47 16.1 +0.8
KAPI  Kappang          45.91 210   P      P      01 47 15.0 -0.3
KAPI  Kappang          45.91 210   P      P      01 47 16.1 +0.8
KAPI                               pmax   pmax
      comp=Z,29nm,0.9s
BKSI  Bulukumba        46.05 209   P      P      01 47 15.4 -1.0
      comp=Z,22nm,0.8s
H19K  Roundabout Mou   46.05  31   IAmb   IAmb   01 47 21.1
      comp=Z,13nm,0.9s
MKS   Makassar         46.21 210   P      P      01 47 17.7  0.0
SHLS  Shalkode         46.34 298  eP      P      01 47 15.8 -2.8
      comp=Z,15nm,1.4s
SHLS  Shalkode         46.34 298  eP      P      01 47 15.8 -2.8
SHLS                               pmax   pmax
      comp=Z,15nm,1.4s
PMG   Port Moresby     46.37 171ceP       P      01 47 20.0 +1.1
PMG                                pmax   pmax
      comp=Z,8.0nm,0.8s
D20K  Etivluk River    46.44  27   IAmb   IAmb   01 47 23.5
      comp=Z,13nm,1.0s
B20K  Meade River      46.49  25   P      P      01 47 20.1 +0.9
B20K                               IAmb   IAmb   01 47 24.2
      comp=Z,22nm,1.0s
UZB   Uzynbulak        46.65 298  eP      P      01 47 20.4 -0.7
      comp=Z,9.9nm,1.0s
UZB   Uzynbulak        46.65 298  eP      P      01 47 20.4 -0.7
UZB                                pmax   pmax
      comp=Z,10.0nm,1.0s
TDK   Taldyqorghan     46.66 300  eP      P      01 47 20.7 -0.3
      comp=Z,11nm,0.8s
TDK   Taldyqorghan     46.66 300  eP      P      01 47 20.6 -0.3
TDK                                pmax   pmax
      comp=Z,11nm,0.8s
L20K  Farewell, AK     46.97  35   P      P      01 47 24.0 +0.9
SATY  Saty             47.11 298⇓iP       P      01 47 24.2 -0.5
      comp=Z,13nm,1.9s
SATY  Saty             47.11 298diP       P      01 47 24.2 -0.5
SATY                               pmax   pmax
      comp=Z,13nm,1.9s
B21K  Ikpikpuk River   47.30  26   IAmb   IAmb   01 47 30.4
      comp=Z,12nm,0.8s
KDAK  Kodiak Island    47.73  42   LR     LR     02 09 37.0
      comp=Z,22nm,20.3s,baz=240,slow=39
KDAK  Kodiak Island    47.73  42   P      P      01 47 29.4 +0.3
KDAK  Kodiak Island    47.73  42   P      P      01 47 29.4 +0.3
KDAK                               pmax   pmax
      comp=Z,175nm,1.7s
D22K  Ayikyak River    47.88  27   IAmb   IAmb   01 47 35.4
      comp=Z,13nm,0.9s
TARG  Taragay, Kyrgy   47.89 296   P      P      01 47 31.2 +0.1
TARG                               IAmb   IAmb   01 47 32.7
      comp=Z,15nm,0.8s
TARG  Taragay, Kyrgy   47.89 296   P      P      01 47 31.2 +0.1
TARG                               pmax   pmax
      comp=Z,15nm,0.8s
MDOK  Medeo            48.05 298  eP      P      01 47 31.5 -0.5
MDOK  Medeo            48.05 298  eP      P      01 47 31.5 -0.5
AAA   Alma-Ata         48.13 298  eP      P      01 47 32.3 -0.3
AAA   Alma-Ata         48.13 298  eP      P      01 47 32.2 -0.3
E22K  Anaktuvuk Pass   48.13  28   IAmb   IAmb   01 47 37.3
      comp=Z,11nm,0.9s
TNSS  Tian-Shan        48.15 298  eP      P      01 47 32.4 -0.7
TNSS  Tian-Shan        48.15 298  eP      P      01 47 32.4 -0.7
D23K  Nanushuk River   48.61  27   P      P      01 47 35.2 -0.6
D23K                               IAmb   IAmb   01 48 34.4
      comp=Z,28nm,1.7s
EDFI  Ende, Flores     48.65 205   P      P      01 47 35.2 -1.5
      comp=Z,30nm,1.0s
C23K  Itkillik River   48.71  25   IAmb   IAmb   01 47 41.6
      comp=Z,18nm,1.1s
SOEI  Soe              48.77 202   P      P      01 47 38.5 +0.8
E23K  Chandalar        48.95  28   IAmb   IAmb   01 47 43.9
      comp=Z,16nm,1.0s
BOOM  Boomskoye usch   49.01 298   P      P      01 47 39.6 +0.1
BOOM                               IAmb   IAmb   01 47 40.7
      comp=Z,23nm,1.4s
BOOM  Boomskoye usch   49.01 298   P      P      01 47 39.6 +0.1
BOOM                               pmax   pmax
      comp=Z,23nm,1.4s
C24K  Franklin Bluff   49.36  26   IAmb   IAmb   01 47 46.4
      comp=Z,18nm,0.9s
BATI  Baumata          49.38 202   P      P      01 47 41.7 -0.5
      comp=Z,104nm,0.9s
BRZS  Berezniki        49.41 308  eP      P      01 47 42.1 -0.1
BRZS  Berezniki        49.41 308  eP      P      01 47 42.1 -0.1
BTLS  Baital           49.65 301  eP      P      01 47 43.1 -1.0
      comp=Z,6.3nm,1.1s
BTLS  Baital           49.65 301  eP      P      01 47 43.1 -1.0
BTLS                               pmax   pmax
      comp=Z,6.0nm,1.1s
DBNI  Kabupaten Domp   49.66 209   P      P      01 47 44.9 +0.5
      comp=Z,19nm,0.8s
SGDS  Sogindy          49.67 299  eP      P      01 47 43.7 -0.6
POKR  Poker Plat Res   49.81  32   P      P      01 47 45.3 +0.3
POKR                               IAmb   IAmb   01 47 47.9
      comp=Z,22nm,1.3s
FRU1  Bishkek          49.85 298   P      P      01 47 45.7  0.0
FRU1  Bishkek          49.85 298   P      P      01 47 45.7  0.0
FRU1                               pmax   pmax
      comp=Z,32nm,1.3s
KSH   Kashi            49.88 294   P      P      01 47 49.8 +3.8
KSH                                pP     sP     01 48 00.0 +5.4
KSH                                pmax   pmax
      comp=Z,5.0nm,0.7s
AAK   Ala-Archa        50.00 298   LR     LR     02 10 05.2
      comp=Z,136nm,18.1s,baz=35,slow=38
AAK   Ala-Archa        50.00 298   P      P      01 47 45.9 -1.1
AAK   Ala-Archa        50.00 298ceP       P      01 47 47.1 +0.2
AAK                                pmax   pmax
      comp=Z,10.0nm,1.7s
HDA   Harding Lake     50.05  33   P      P      01 47 46.5 -0.4
ILAR  Eielson Array    50.06  32   P      P      01 47 47.4 +0.4
      comp=Z,3.4nm,0.8s,baz=269,slow=5.5,SNR=16
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      comp=Z,3.4nm,0.8s
ILAR  Eielson Array    50.06  32   P      P      01 47 46.8 -0.1
MTN   Manton Dam       50.17 192          P      01 47 48.1  0.0
PLAI  Plampang         50.17 210   P      P      01 47 45.4 -2.8
      comp=Z,32nm,1.0s
BVAR  Borovoye Array   50.22 312   P      P      01 47 47.9 -0.4
      comp=Z,4.4nm,0.6s,baz=70,slow=7.0,SNR=26
BVAR                               PcP    PcP    01 49 07.2 -0.1
      comp=Z,2.6nm,0.5s,baz=50,slow=3.7,SNR=5.2
BVAR                               LR     LR     02 08 24.9
      comp=Z,56nm,18.1s,baz=243,slow=35
      comp=Z,4.4nm,0.6s
BORK  Borovoye         50.26 312          P      01 47 48.0 -0.6
BORK  Borovoye         50.26 312  iP      P      01 47 48.2 -0.4
BORK                               pmax   pmax
      comp=Z,9.0nm,1.0s
TWSI  Taliwang, Sumb   50.45 211   P      P      01 47 50.1 -0.3
      comp=Z,47nm,1.0s
KLNI  Mataram          50.50 212   P      P      01 47 50.8 +0.1
COEN  Coen             50.54 177   P      P      01 47 51.5 +0.4
COEN                               IAmb   IAmb   01 47 56.8
      comp=Z,20nm,0.9s
KHKI  Kahang-Kahang    50.66 213   P      P      01 47 52.0 +0.1
      comp=Z,1µmcomp=Z,101nm,1.3s
RTBI  Rangdo, Negare   51.03 213   P      P      01 47 54.1 -0.7
      comp=Z,48nm,0.6s
PSI   Prapat           51.08 239   LR     LR     02 09 51.2
      comp=Z,85nm,18.7s,baz=85,slow=36
SCRK  Sand Creek       51.38  33   P      P      01 47 58.0 +1.0
SJI   Sawahan          51.87 217   P      P      01 48 00.8 -0.4
      comp=Z,20nm,0.5s
SNJI  Sawahan-Nganju   51.92 217   P      P      01 48 00.9 -0.7
      comp=Z,15nm,0.9s
E27K  Coleen River     51.95  28   P      P      01 48 03.2 +2.1
E27K                               IAmb   IAmb   01 48 59.3
      comp=Z,31nm,1.9s
DZA   Taraz            52.14 300  eP      P      01 48 02.6 -0.3
DZA   Taraz            52.14 300  eP      P      01 48 02.6 -0.3
K27K  Chicken          52.21  33   P      P      01 48 04.2 +1.2
K27K                               IAmb   IAmb   01 48 08.8
      comp=Z,23nm,1.6s
BCAR  Beaver Creek A   52.48  34   P      P      01 48 06.5 +1.4
KK31  Karatay Array    52.65 300   IAmb   IAmb   01 48 07.4
      comp=Z,13nm,1.0s
KKAR  Karatay Array    52.65 300   P      P      01 48 06.1 -0.5
KKAR  Karatay Array    52.65 300   P      P      01 48 06.1 -0.5
I28M  Miner Creek      52.92  31   IAmb   IAmb   01 48 13.3
      comp=Z,54nm,2.0s
KPJI  Karang Pucung    52.96 221   P      P      01 48 08.9 -0.2
      comp=Z,54nm,0.9s
GSI   Gunungsitoli     53.09 238   P      P      01 48 09.5 -0.6
GSI   Gunungsitoli     53.09 238   P      P      01 48 09.6 -0.6
      comp=Z,34nm,0.8s
KLSI                   53.11 227   P      P      01 48 09.7 -0.6
      comp=Z,29nm,1.0s
BRLS  Borolday         53.14 300⇓iP       P      01 48 11.1 +0.8
BRLS  Borolday         53.14 300diP       P      01 48 11.1 +0.8
MDSI  Maura Dua        53.28 228   P      P      01 48 10.7 -0.8
      comp=Z,23nm,1.1s
IUG   Iuzhnay          53.29 299  eP      P      01 48 11.2 -0.3
      comp=Z,13nm,0.9s
IUG   Iuzhnay          53.29 299  eP      P      01 48 11.2 -0.3
IUG                                pmax   pmax
      comp=Z,13nm,0.9s
E29M  Blow River       53.30  27   IAmb   IAmb   01 49 07.4
      comp=Z,29nm,1.8s
G29M  Pine Creek       53.47  29   IAmb   IAmb   01 48 18.9
      comp=Z,30nm,1.4s
CHM   Chimkent         53.53 299  eP      P      01 48 12.1 -1.1
      comp=Z,8.3nm,0.5s
CHM   Chimkent         53.53 299  eP      P      01 48 12.9 -0.3
CHM                                pmax   pmax
      comp=Z,8.0nm,0.5s
MANEM Manem            53.71 293   P      P      01 48 15.8 +1.0
MANEM                              IAmb   IAmb   01 48 16.4
      comp=Z,26nm,0.7s
NIL   Nilore           54.04 288   P      P      01 48 17.3 +0.3
NIL                                IAmb   IAmb   01 48 17.9
      comp=Z,16nm,1.1s
NIL   Nilore           54.04 288   P      P      01 48 17.3 +0.3
NIL                                pmax   pmax
      comp=Z,16nm,1.1s
EPYK  Eagle Plains     54.07  30   IAmb   IAmb   01 48 22.1
      comp=Z,16nm,0.9s
M29M  Somme Creek      54.09  35   IAmb   IAmb   01 48 23.2
      comp=Z,9.1nm,0.8s
G30M  tAoh Zraii Nji   54.15  29   IAmb   IAmb   01 48 23.2
      comp=Z,23nm,1.4s
GAR   Garm             54.18 295   IAmb   IAmb   01 48 18.9
      comp=Z,29nm,1.3s
F30M  Barrier River    54.21  28   IAmb   IAmb   01 48 24.0
      comp=Z,18nm,1.1s
SVE   Sverdlovsk       54.87 319  eP      P      01 48 22.6  0.0
SVE                                pmax   pmax
      comp=Z,16nm,1.0s
H31M  Peel River       55.13  30   P      P      01 48 25.9 +1.4
ARTI  Arti             56.19 318   P      P      01 48 31.4 -0.7
ARTI  Arti             56.19 318diP       P      01 48 31.5 -0.7
ARTI                                             01 49 23.8
ARTI                                             01 50 32.2
ARTI                               S      S      01 56 18.3 -2.1
ARTI                               SS     SS     02 00 01.9 -4.5
ARTI                               pmax   pmax
      comp=Z,27nm,1.2s
SHAA  Shahritus        56.32 294   IAmb   IAmb   01 48 34.6
      comp=Z,35nm,0.8s
WB0   Warramunga Arr   56.56 187          P      01 48 34.6 -0.5
WRAB  Tennant Creek    56.73 187   P      P      01 48 35.8 -0.5
WRAB  Tennant Creek    56.73 187ceP       P      01 48 36.6 +0.3
WRAB                               pmax   pmax
      comp=Z,29nm,1.0s
A36M  Sachs Harbour    56.73  22   P      P      01 48 36.7 +0.9
A36M                               IAmb   IAmb   01 48 41.3
      comp=Z,16nm,1.0s
WRA   Warramunga Arr   56.74 187   P      P      01 48 36.1 -0.3
      comp=Z,22nm,0.7s,baz=2.6,slow=7.2,SNR=120
      comp=Z,22nm,0.7s
WRA   Warramunga Arr   56.74 187   P      P      01 48 35.6 -0.8
WRA   Warramunga Arr   56.74 187  iP      P      01 48 35.9 -0.5
WRA                                pmax   pmax
      comp=Z,17nm,0.5s
CTAO  Charters Tower   56.83 174   P      P      01 48 36.8 -0.2
CTAO  Charters Tower   56.83 174   P      P      01 48 36.8 -0.2
CTAO                               pmax   pmax
      comp=Z,6.0nm,1.0s
KBL   Kabul            56.86 291   P      P      01 48 36.0 -1.5
KBL   Kabul            56.86 291   P      P      01 48 36.0 -1.5
KBL                                pmax   pmax
      comp=Z,8.0nm,0.8s
HYB   Hyderabad        57.51 268  eP      P      01 48 42.1  0.0
HYB                               esP     sP     01 48 53.8 +3.1
HYB                               ePcP    PcP    01 49 35.4 -0.2
HYB                               eS      S      01 56 37.8 -1.1
AB31  Akbulak array    57.57 310   P      P      01 48 41.1 -0.9
AB31                               IAmb   IAmb   01 48 42.4
      comp=Z,15nm,0.8s
ABKAR Akbulak array    57.57 310          P      01 48 41.3 -0.7
KIRV  Kirov            60.02 323   LR     LR     02 16 38.4
      comp=Z,72nm,18.9s,baz=15,slow=38
KIRV  Kirov            60.02 323ceP       P      01 48 58.8 -0.1
AS31  Alice Springs    60.46 187   P      P      01 49 02.1 -0.2
ASAR  Alice Springs    60.47 187   P      P      01 49 02.1 -0.2
      comp=Z,10nm,0.8s,baz=10,slow=5.9,SNR=66
      comp=Z,10nm,0.8s
ASAR  Alice Springs    60.47 187   P      P      01 49 02.5 +0.2
SPITS Spitsbergen Ar   60.62 349   P      P      01 49 02.5 -0.3
      comp=Z,10.0nm,1.0s,baz=100,slow=9.6,SNR=6.5
SPITS                              LR     LR     02 17 50.5
      comp=Z,41nm,19.0s,baz=40,slow=39
      comp=Z,10.0nm,1.0s
MBWA  Marble Bar       60.91 202   P      P      01 49 05.3  0.0
MBWA                               IAmb   IAmb   01 49 06.2
      comp=Z,14nm,0.8s
PSA00 Pilbara Seismi   61.26 202   P      P      01 49 07.4 -0.3
HRA   Herat            61.98 293   P      P      01 49 13.1 +0.2
HRA                                IAmb   IAmb   01 49 14.0
      comp=Z,9.9nm,0.8s
EIDS  Eidsvold         62.62 169   P      P      01 49 17.3 +0.5
EIDS                               IAmb   IAmb   01 49 22.2
      comp=Z,8.1nm,0.8s
BBB   Bella Bella      62.71  44   LR     LR     02 19 14.8
      comp=Z,21nm,18.8s,baz=270,slow=39
RES   Resolute Bay     63.00  14   P      P      01 49 18.9 +0.2
RES   Resolute Bay     63.00  14   P      P      01 49 19.0 +0.2
RES                                pmax   pmax
      comp=Z,9.0nm,1.3s
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DZM	Mont Dzumac	63.45	153		P	01 49 22.9	+0.5
DZM				IAmb	IAmb	01 49 29.3	
	comp=Z,16nm,1.0s						
KLMR	Klimovskoe	63.59	328	eP	P	01 49 21.0	-1.9
KLMR				e*PP	sP	01 49 32.0	+0.6
KLMR				pmax	pmax		
	comp=Z,25nm,1.6s						
ARCES	ARCESS Array B	63.98	339	P	P	01 49 25.3	-0.1
	comp=Z,8.6nm,1.0s,baz=49,slow=8.0,SNR=20						
ARCES				PcP	PcP	01 50 00.3	-0.4
	comp=Z,0.7nm,0.4s,baz=72,slow=4.5,SNR=4.6						
ARCES				LR	LR	02 19 57.8	
	comp=Z,49nm,19.0s,baz=12,slow=39						
	comp=Z,8.6nm,1.0s						
ARCES	ARCESS Array B	63.98	339	P	P	01 49 25.2	-0.1
ARCES	ARCESS Array B	63.98	339	P	P	01 49 25.2	-0.1
ARCES				pmax	pmax		
	comp=Z,99nm,1.9s						
INKA	Innaminka	64.20	180		P	01 49 27.1	-0.1
YKA	Yellowknife Ar	64.36	30	P	P	01 49 28.4	+0.5
	comp=Z,3.4nm,1.0s,baz=306,slow=7.5,SNR=6.4						
YKA				PcP	PcP	01 50 03.5	+1.2
	comp=Z,1.8nm,0.9s,baz=299,slow=4.6,SNR=5.1						
	comp=Z,3.4nm,1.0s						
YKA	Yellowknife Ar	64.36	30	P	P	01 49 27.8	-0.1
MOS	Moscow	67.03	323	eP	P	01 49 43.6	-1.6
VRH	Novokhopyorsk	67.29	318	eP	P	01 49 43.9	-3.1
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
POIN	Pond Inlet	67.59	12	P	P	01 49 48.1	-0.4
OBN	Obninsk	67.87	323	eP	P	01 49 50.6	0.0
OBN				e		01 50 18.5	
OBN				e		01 52 21.0	
OBN				ePPP	PPP	01 53 57.4	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,26nm,7.0s						
LPSR	Galich'ya Gora	68.04	320	eP	P	01 49 49.0	-2.7
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
FORT	Forrest	68.24	192		P	01 49 53.0	0.0
FORT				IAmb	IAmb	01 49 54.2	
	comp=Z,11nm,0.7s						
STKA	Stephens Creek	68.32	179	P	P	01 49 53.8	+0.2
	comp=Z,3.0nm,0.5s,baz=318,slow=6.3,SNR=7.2						
	comp=Z,3.0nm,0.5s						
VORR	Voronezh	68.39	319	eP	P	01 49 50.4	-3.5
VORR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR	Storozhevoye	68.66	319	eP	P	01 49 52.8	-2.8
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
FINES	FINESS Array B	68.70	332	P	P	01 49 55.4	-0.3
	comp=Z,7.7nm,0.8s,baz=73,slow=7.0,SNR=12						
	comp=Z,7.7nm,0.8s						
FINES	FINESS Array B	68.70	332	P	P	01 49 55.1	-0.6
VORD	Divnogorie	68.72	318	eP	P	01 49 52.4	-3.6
VORD				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LTY	Liberty	69.31	46	IAmb	IAmb	01 50 17.7	
	comp=Z,18nm,1.6s						
BBOO	Buckleboo	69.38	184	P	P	01 49 59.4	-0.7
MORW	Morawa	69.45	203	P	P	01 49 59.8	-0.8
MORW				IAmb	IAmb	01 50 01.6	
	comp=Z,14nm,1.0s						
B08A	Colville Reser	69.49	45	IAmb	IAmb	01 50 06.0	
	comp=Z,21nm,1.6s						
ILON	Igloolik, Nuna	69.66	15	P	P	01 50 00.8	-0.7
H04A	Detroit Lake	69.78	49	P	P	01 50 03.7	+0.9
EPH	Ephrata	69.88	46	IAmb	IAmb	01 50 08.8	
	comp=Z,18nm,1.3s						
MXC	Moxie City	69.89	46	IAmb	IAmb	01 50 09.0	
	comp=Z,13nm,1.1s						
WIFE	Three Sisters-	70.34	49	IAmb	IAmb	01 50 09.6	
	comp=Z,19nm,1.1s						
C09A	Chrisman Ranch	70.39	45	IAmb	IAmb	01 50 09.5	
	comp=Z,29nm,1.6s						
BBOR	Butler Butte	70.43	51	IAmb	IAmb	01 50 19.2	
	comp=Z,9.6nm,1.0s						
HAWA	Hanford	70.44	46	IAmb	IAmb	01 50 12.6	
	comp=Z,11nm,1.2s						
F07A	Phinny Hill Vi	70.48	47	IAmb	IAmb	01 50 13.0	
	comp=Z,20nm,1.0s						
KBZ	Khabaz	70.53	310	P	P	01 50 07.2	-0.1
	comp=Z,4.0nm,0.8s,baz=69,slow=5.0,SNR=7.0						
	comp=Z,4.0nm,0.8s						
KBZ	Khabaz	70.53	310	ceP	P	01 50 07.9	+0.6
KBZ				pmax	pmax		
	comp=Z,19nm,2.5s						
KIV	Kislovodsk	70.54	311	P	P	01 50 08.0	+0.5
KIV	Kislovodsk	70.54	311	eP	P	01 50 06.8	-0.7
KIV				pmax	pmax		
	comp=Z,16nm,1.1s						
KIV	Kislovodsk	70.54	311	P	P	01 50 07.0	-0.5
	comp=Z,16nm,1.0s						
SUMG	Summit	70.92	360	P	P	01 50 10.3	+0.6
SUMG				IAmb	IAmb	01 50 14.1	
	comp=Z,12nm,1.0s						
SUMG	Summit	70.92	360	P	P	01 50 10.3	+0.6
SUMG				pmax	pmax		
	comp=Z,12nm,1.0s						
UOSS	Minazif	71.22	287	P	P	01 50 10.9	-0.9
O02D	Mt. Diablo Mer	71.82	53	P	P	01 50 17.1	+1.8
O02D				IAmb	IAmb	01 50 18.6	
	comp=Z,14nm,0.9s						
MNK	Minsk	72.30	326	i P	P	01 50 17.8	0.0
MNK				i		01 53 00.4	
MNK				i PPP	PPP	01 54 41.9	
MNK				i S	S	01 59 39.8	0.0
MNK				i SS	SS	02 04 19.5	+2.6
MNK				pmax	pmax		
	comp=N,16nm,1.1s						
MNK				pmax	pmax		
	comp=Z,16nm,0.9s						
MNK				pmax	pmax		
	comp=E,23nm,1.2s						
MNK				MLR	MLR		
	comp=N,97nm,17.0s						
MNK				MLR	MLR		
	comp=E,121nm,28.0s						
MNK				MLR	MLR		
	comp=Z,55nm,18.0s						
HATC	Hat Creek Radi	72.32	52	IAmb	IAmb	01 50 28.9	
	comp=Z,26nm,1.1s						
O03E	Paynes Creek	72.39	53	IAmb	IAmb	01 50 25.0	
	comp=Z,29nm,1.4s						
GDXM	Geysers	72.56	54	P	P	01 50 21.4	+1.6
J08A	Circle Bar Ran	72.75	49	P	P	01 50 21.3	+0.4
J08A				IAmb	IAmb	01 50 27.2	
	comp=Z,19nm,1.1s						
MNRC	McLaughlin Min	72.75	54	P	P	01 50 22.3	+1.4
SUTB	Sutter Butte	72.99	54	P	P	01 50 23.3	+1.1
ORV	Oroville	72.99	53	IAmb	IAmb	01 50 27.0	
	comp=Z,13nm,1.1s						
ANN	Anapa	73.20	314	eP	P	01 50 18.4	-4.9
ANN				e*PP	pP	01 50 27.3	-2.4
ANN				eS	S	01 59 41.7	-8.6
ANN				pmax	pmax		
	comp=Z,21nm,0.8s						
PLID	Pearl Lake	73.22	46	IAmb	IAmb	01 50 26.4	
	comp=Z,24nm,1.8s						
MSO	Missoula	73.36	44	IAmb	IAmb	01 50 29.3	
	comp=Z,12nm,1.1s						
BEKR	Beckworth	73.55	52	IAmb	IAmb	01 50 28.2	
	comp=Z,15nm,0.9s						
GURO	Guroymak-BITLI	73.93	306	P	P	01 50 27.6	-0.3
HFS	Hagfors	74.02	335	P	P	01 50 27.4	-0.4
	comp=Z,2.4nm,0.3s,baz=62,slow=4.7,SNR=29						
HFS				LR	LR	02 24 36.0	
	comp=Z,54nm,18.2s,baz=66,slow=37						
	comp=Z,2.4nm,0.3s						
AK03	Malin Array Si	74.05	322	P	P	01 50 27.5	-0.7
AKASG	Malin Array Be	74.06	322	P	P	01 50 27.4	-0.8
	comp=Z,4.0nm,0.5s,baz=49,slow=5.9,SNR=16						
AKASG				LR	LR	02 23 41.5	
	comp=Z,23nm,18.0s,baz=54,slow=36						
	comp=Z,4.0nm,0.5s						
AKASG	Malin Array Be	74.06	322	P	P	01 50 27.9	-0.4
AKASG	Malin Array Be	74.06	322	i P	P	01 50 27.6	-0.6
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AKBB	Malin Array Si	74.06	322	IAmb	IAmb	01 50 28.5	
	comp=Z,19nm,1.1s						
AKBB	Malin Array Si	74.06	322	ceP	P	01 50 28.0	-0.2
AKBB	Malin Array Si	74.06	322	P	P	01 50 27.6	-0.6
AK01	Malin Array Si	74.07	322	P	P	01 50 27.7	-0.6
KIEV	Kiev	74.07	322	P	P	01 50 26.9	-1.4
KIEV				IAmb	IAmb	01 50 28.5	
	comp=Z,17nm,1.1s						
KIEV	Kiev	74.07	322	⇑P	P	01 50 27.4	-0.9
KIEV	Kiev	74.07	322	P	P	01 50 26.9	-1.4
KIEV				pmax	pmax		
	comp=Z,17nm,1.2s						
KIEV	Kiev	74.07	322	P	P	01 50 27.6	-0.7
	comp=Z,76nm,1.3s						
AK04	Malin Array Si	74.08	322	P	P	01 50 27.7	-0.6
AK09	Malin Array Si	74.09	322	P	P	01 50 27.7	-0.7
MHC	Mount Hamilton	74.13	55	IAmb	IAmb	01 50 34.0	
	comp=Z,12nm,0.9s						
NB2	NORSAR Subarra	74.14	337	P	P	01 50 28.1	-0.5
	comp=Z,13nm,1.0s,baz=41,slow=6.2						
NOA	NORSAR Array B	74.14	337	P	P	01 50 27.9	-0.7
	comp=Z,6.5nm,0.9s,baz=39,slow=5.8,SNR=12						
NOA				LR	LR	02 25 45.1	
	comp=Z,42nm,20.1s,baz=0.0,slow=38						
	comp=Z,6.5nm,0.9s						
PAHR	Pah Rah Range	74.26	52	IAmb	IAmb	01 50 32.5	
	comp=Z,15nm,0.9s						
FFC	Flin Flon	74.27	32	P	P	01 50 29.7	+0.3
FFC	Flin Flon	74.27	32	P	P	01 50 29.7	+0.3
FFC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MFID	Camas Ranch	74.29	47	IAmb	IAmb	01 50 35.4	
	comp=Z,16nm,1.2s						
PNTR	Pine Nut	74.47	53	IAmb	IAmb	01 50 42.7	
	comp=Z,12nm,0.8s						
CMB	Columbia Colle	74.56	54	P	P	01 50 32.9	+1.4
CMB				IAmb	IAmb	01 50 36.9	
	comp=Z,16nm,0.9s						
CMB	Columbia Colle	74.56	54	P	P	01 50 32.9	+1.4
CMB				pmax	pmax		
	comp=Z,16nm,0.9s						
SAO	San Andreas Ge	74.59	56	IAmb	IAmb	01 50 36.8	
	comp=Z,10nm,0.9s						
EGMT	Eagleton	74.90	41	P	P	01 50 34.2	+0.9
EGMT				IAmb	IAmb	01 50 35.7	
	comp=Z,30nm,1.2s						
WAKR	Walker	74.91	53	IAmb	IAmb	01 50 36.7	
	comp=Z,14nm,0.9s						
HLID	Hailey	75.03	47	P	P	01 50 35.9	+1.6
RNPP9	Sopachiv	75.22	324	P	P	01 50 34.8	-0.1
RNPP8	Varash	75.28	324	P	P	01 50 35.3	0.0
LUBAR	Lubar, Ukraine	75.28	322	P	P	01 50 34.2	-1.2
RNPP5	Staryi Chortor	75.34	324	P	P	01 50 35.1	-0.5
RYN	Ryan	75.42	53	IAmb	IAmb	01 50 39.5	
	comp=Z,13nm,0.9s						
PKD	Bear Valley Ra	75.66	56	IAmb	IAmb	01 50 43.2	
	comp=Z,17nm,0.8s						
NVAR	Mina Array Bea	75.68	53	P	P	01 50 40.3	+2.1
	comp=Z,12nm,0.7s,baz=288,slow=5.9,SNR=76						
	comp=Z,12nm,0.7s						
NVAR	Mina Array Bea	75.68	53	P	P	01 50 39.3	+1.2
QLMT	Earthquake Lak	75.97	44	P	P	01 50 40.0	+0.3
YHL	Hebgen Lake	76.10	44	IAmb	IAmb	01 50 43.4	
	comp=Z,12nm,1.0s						
SORM	Soroca	76.14	320	⇓P	P	01 50 39.4	-0.9
SORM	Soroca	76.14	320	⇓P	P	01 50 39.4	-0.9
SFJD	Kangerlussuaq	76.18	4	LR	LR	02 26 07.2	
	comp=Z,24nm,19.4s,baz=360,slow=37						
YHH	Holmes Hill	76.32	44	P	P	01 50 43.3	+1.5
HORU	Horodok	76.40	322	P	P	01 50 41.4	-0.4
YNR	Norris Junctio	76.46	44	P	P	01 50 44.3	+1.8
YNE	Yellowstone No	76.65	43	IAmb	IAmb	01 50 51.0	
	comp=Z,11nm,1.0s						
KMPD	K-Podol'skiy	76.81	321	P	P	01 50 43.6	-0.5
KMPD				P	P	01 50 43.3	-0.8
RLMT	Red Lodge	76.99	43	P	P	01 50 46.7	+1.2
RLMT				IAmb	IAmb	01 50 51.5	
	comp=Z,22nm,1.4s						
MOOW	Moose Ponds	77.03	45	IAmb	IAmb	01 50 51.5	
	comp=Z,13nm,1.2s						
HVU	Hansel Valley	77.08	47	IAmb	IAmb	01 50 48.9	
	comp=Z,11nm,0.9s						
SNOW	Snow King Moun	77.20	45	P	P	01 50 47.6	+0.8
SNOW				IAmb	IAmb	01 50 52.6	
	comp=Z,16nm,1.1s						
R11B	Troy Canyon, C	77.45	51	IAmb	IAmb	01 50 51.0	
	comp=Z,17nm,1.0s						
CLC	China Lake	77.67	55	IAmb	IAmb	01 50 54.4	
	comp=Z,11nm,1.0s						
KSV	Kosov	77.67	322	P	P	01 50 48.7	-0.3
BNN	Bunyan	77.67	309	P	P	01 50 49.0	-0.3
BNN				IAmb	IAmb	01 50 50.5	
	comp=Z,22nm,1.6s						
STNU	Starunia	77.69	322	P	P	01 50 48.9	-0.1
MORS	Morshin	77.69	323	P	P	01 50 48.9	-0.1
FURC	Furnace Creek,	77.76	54	P	P	01 50 50.4	+0.8
TPO	Tropico Hills	77.81	56	IAmb	IAmb	01 50 55.5	
	comp=Z,18nm,0.9s						
SPR3	Spring Creek 3	77.83	50	P	P	01 50 51.5	+1.0
SPR3				IAmb	IAmb	01 50 56.5	
	comp=Z,11nm,1.0s						
GIRR	Girov	77.86	320	⇑P	P	01 50 49.7	-0.3
SHIU	Shidnytsya	77.89	323	P	P	01 50 50.2	0.0
HWUT	Hardware Ranch	77.89	47	IAmb	IAmb	01 50 56.2	
	comp=Z,18nm,1.1s						
KWP	Kalwaria Pacla	77.92	324	P	P	01 50 50.3	0.0
	comp=Z,23nm,1.0s						
DUG	Dugway, Tooele	78.03	49	IAmb	IAmb	01 50 54.2	
	comp=Z,14nm,0.9s						
QSM	Queen of Sheba	78.06	54	P	P	01 50 52.7	+1.4
TESR	Tescani	78.07	320	⇑P	P	01 50 51.1	-0.1
TESR	Tescani	78.07	320	P	P	01 50 50.5	-0.7
	comp=Z,19nm,0.8s						
TCUT	Toone Canyon	78.29	47	IAmb	IAmb	01 50 58.2	
	comp=Z,14nm,0.9s						
MWC	Mount Wilson	78.31	56	IAmb	IAmb	01 50 55.3	
	comp=Z,13nm,1.1s						
RAKU	Rahkiv	78.31	322	P	P	01 50 51.6	-0.9
PDAR	Pinedale Array	78.32	45	P	P	01 50 54.1	+1.2
	comp=Z,4.0nm,0.8s,baz=269,slow=2.7,SNR=42						
	comp=Z,4.0nm,0.8s						
PDAR	Pinedale Array	78.32	45	P	P	01 50 53.5	+0.5
PRN	Pahroc Range	78.35	52	P	P	01 50 53.8	+0.7
PRN				IAmb	IAmb	01 50 58.8	
	comp=Z,20nm,0.9s						
CTU	Camp Tracy	78.36	48	IAmb	IAmb	01 50 58.4	
	comp=Z,10nm,0.9s						
PSUT	Pine Spring	78.41	50	IAmb	IAmb	01 50 56.2	
	comp=Z,12nm,0.9s						
VRI	Vrincioaia	78.46	319	⇑P	P	01 50 54.4	+1.0
VRI	Vrincioaia	78.46	319	⇑P	P	01 50 54.4	+1.0
VRI	Vrincioaia	78.46	319	P	P	01 50 53.3	-0.1
	comp=Z,12nm,2.6s						
SHOC	Shoshone, Teco	78.48	54	IAmb	IAmb	01 50 58.9	
	comp=Z,11nm,0.9s						
BRTR	Keskin Array B	78.49	311	P	P	01 50 53.5	-0.3
	comp=Z,2.8nm,0.9s,baz=65,slow=3.5,SNR=9.8						
	comp=Z,2.8nm,0.9s						
BRTR	Keskin Array B	78.49	311	P	P	01 50 52.6	-1.2
BRTR	Keskin Array B	78.49	311	i P	P	01 50 53.5	-0.3
BRTR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GSC	Goldstone, Bar	78.49	55	P	P	01 50 54.3	+0.5
GSC	Goldstone, Bar	78.49	55	P	P	01 50 54.3	+0.5
GSC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BR104	Keskin Array S	78.50	311	P	P	01 50 53.7	-0.2
	comp=Z,4.6nm,0.9s						
BRIU	Brid	78.66	323	P	P	01 50 54.4	0.0
TURR	Turia	78.70	320	⇓P	P	01 50 55.5	+0.7
MUKU	Mukachevo	78.74	323	P	P	01 50 54.8	0.0
STHS	Stebnicka Huta	78.75	325	eP	P	01 50 59.2	+4.3
STHS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
STHS	Stebnicka Huta	78.75	325	eP	P	01 50 59.2	+4.3
OZUR		78.80	320	⇑P	P	01 50 55.4	+0.1
SHPR	Sheep Range	78.83	53	IAmb	IAmb	01 51 01.4	
	comp=Z,10nm,1.0s						
MPU	Maple Canyon	78.85	48	IAmb	IAmb	01 51 01.3	
	comp=Z,15nm,0.9s						
BOSR	Bodos	78.88	320	⇑P	P	01 50 55.7	0.0
BERU	Beregovo	78.91	323	P	P	01 50 55.9	+0.1
ISR	Istrita	79.05	319	⇑P	P	01 50 57.1	+0.4
ISR	Istrita	79.05	319	⇑P	P	01 50 57.1	+0.4
DOPR	Dopca	79.09	320	⇓P	P	01 50 58.1	+1.2
MLR	Muntele Rosu	79.12	319	LR	LR	02 28 42.6	
	comp=Z,51nm,19.1s,baz=63,slow=38						
NIE	Niedzica	79.19	325	P	P	01 50 57.3	-0.1
	comp=Z,5.4nm,1.7s						
MTPC	Mountain Pass	79.20	54	IAmb	IAmb	01 51 01.1	
	comp=Z,12nm,0.8s						
CCUT	Cedar City	79.33	51	P	P	01 50 59.6	+1.0
CCUT				IAmb	IAmb	01 51 04.2	
	comp=Z,9.5nm,0.9s						
CBBR	Cluj-Babes-Bol	79.48	321	⇑P	P	01 50 59.6	+0.7
TMUT	Trail Mountain	79.56	49	IAmb	IAmb	01 51 05.2	
	comp=Z,23nm,1.3s						
DNR	Dunn Ranch,Anz	79.65	56	P	P	01 51 00.6	+0.3
LCMT	Little Creek M	79.73	51	IAmb	IAmb	01 51 06.4	
	comp=Z,18nm,0.9s						
PFO	Pinyon Flats O	79.74	56	LR	LR	02 20 21.6	
	comp=Z,44nm,21.1s,baz=284,slow=31						
PFO	Pinyon Flats O	79.74	56	P	P	01 51 01.1	+0.3
PFO				IAmb	IAmb	01 51 06.4	
	comp=Z,18nm,1.2s						
PFO	Pinyon Flats O	79.74	56	P	P	01 51 01.1	+0.3
PFO				pmax	pmax		
	comp=Z,18nm,1.2s						
CPE	Camp Elliot	79.75	57	IAmb	IAmb	01 51 03.4	
	comp=Z,16nm,0.9s						
MTPU	Mount Pierson	79.75	50	IAmb	IAmb	01 51 07.1	
	comp=Z,16nm,0.8s						
PMD	Palm Desert	79.77	56	IAmb	IAmb	01 51 05.7	
	comp=Z,17nm,1.1s						
DPP	Dos Picos Cty	79.79	56	IAmb	IAmb	01 51 03.1	
	comp=Z,11nm,0.9s						
BELC	Belle Mtn. Jos	79.81	55	P	P	01 51 01.6	+0.5
BELC				IAmb	IAmb	01 51 05.8	
	comp=Z,11nm,0.9s						
DRGR		79.88	322	⇑P	P	01 51 00.5	-0.7
DRGR		79.88	322	⇑P	P	01 51 00.5	-0.7
P18A	Preston Nutter	79.92	48	P	P	01 51 03.0	+1.2
P18A				IAmb	IAmb	01 51 05.4	
	comp=Z,16nm,0.9s						
KSP	Ksiaz	79.94	328	P	P	01 51 01.4	+0.1
	comp=Z,11nm,1.4s						
BORC	Borrego Spring	79.98	56	IAmb	IAmb	01 51 06.8	
	comp=Z,13nm,1.1s						
K22A	Casper	80.10	44	IAmb	IAmb	01 51 07.2	
	comp=Z,11nm,1.0s						
RAYN	Ar Rayn	80.11	292	P	P	01 51 01.8	-1.0
RAYN	Ar Rayn	80.11	292	P	P	01 51 01.8	-1.0
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BAR	Barrett	80.16	57	P	P	01 51 03.3	+0.4
BAR				IAmb	IAmb	01 51 05.2	
	comp=Z,12nm,0.9s						
MORC	Moravsky Berou	80.18	327	⇓P	P	01 51 02.2	-0.5
MORC	Moravsky Berou	80.18	327	eP	P	01 51 05.8	+3.1
MORC	Moravsky Berou	80.18	327	⇓P	P	01 51 02.2	-0.5
HUMR	Humele	80.27	319	⇓P	P	01 51 02.9	-0.4
IRM	Iron Mountain	80.27	55	IAmb	IAmb	01 51 06.1	
	comp=Z,12nm,1.0s						
DPC	Dobruska-Polom	80.29	327	eP	P	01 51 03.5	+0.2
DPC	Dobruska-Polom	80.29	327	eP	P	01 51 03.6	+0.2
DPC	Dobruska-Polom	80.29	327	P	P	01 51 03.3	0.0
	comp=Z,7.0nm,0.6s						
KRLC	Kraliky	80.29	327	eP	P	01 50 59.6	-3.7
UPC	Upice	80.31	328	eP	P	01 51 03.9	+0.5
UPC	Upice	80.31	328	eP	P	01 51 03.9	+0.5
BC3	Big Chuckawall	80.38	55	P	P	01 51 05.3	+1.1
BC3				IAmb	IAmb	01 51 09.3	
	comp=Z,12nm,0.9s						
PSZ	Piszkesteto	80.45	324	IAmb	IAmb	01 51 08.4	
	comp=Z,9.8nm,0.9s						
PSZ	Piszkesteto	80.45	324	⇑P	P	01 51 04.7	+0.5
PSZ	Piszkesteto	80.45	324	⇑P	P	01 51 04.7	+0.5
RSSD	Black Hills	80.46	41	P	P	01 51 05.0	+0.4
RSSD	Black Hills	80.46	41	P	P	01 51 05.0	+0.4
RSSD				pmax	pmax		
	comp=Z,8.0nm,1.0s						
YUH	Yuha Desert	80.68	56	P	P	01 51 06.2	+0.6
U15A	North Rim	80.69	51	IAmb	IAmb	01 51 09.2	
	comp=Z,19nm,1.0s						
O20A	White River Ci	80.77	46	P	P	01 51 07.7	+1.4
O20A				IAmb	IAmb	01 51 08.4	
	comp=Z,11nm,1.0s						
JAVC	Velka Javorina	80.79	326	eP	P	01 51 06.7	+0.6
FLTG	Flechtingen	80.86	331	eP	P	01 51 05.8	-0.5
	comp=Z,10nm,0.9s,baz=36,slow=5.2						
SURR	Surduc	80.89	321	⇓P	P	01 51 06.6	0.0
BRG	Berggiesshubel	80.90	329	eP	P	01 51 06.5	0.0
	comp=Z,4.4nm,0.8s,baz=36,slow=5.2						
PVCC	Panska Ves	80.90	328	eP	P	01 51 07.0	+0.5
PVCC	Panska Ves	80.90	328	eP	P	01 51 07.0	+0.5
BLYC	Blythe	80.93	55	IAmb	IAmb	01 51 09.6	
	comp=Z,19nm,1.0s						
VRAC	Vranov	80.94	327	LR	LR	02 30 47.0	
	comp=Z,44nm,18.0s,baz=44,slow=39						
CLL	Collm	80.96	330	IAmb	IAmb	01 51 07.4	
	comp=Z,10.0nm,0.8s						
CLL	Collm	80.96	330	i P	P	01 51 06.1	-0.7
CLL				i		01 51 15.8	
CLL				pmax	pmax		
	comp=Z,13nm,1.0s						
CLL	Collm	80.96	330	eP	P	01 51 06.4	-0.4
	comp=Z,11nm,0.9s,baz=36,slow=5.2						
CLL	Collm	80.96	330	P	P	01 51 06.1	-0.7
	comp=Z,15nm,1.1s						
CLL	Collm	80.96	330	i P	P	01 51 06.1	-0.7
	comp=Z,13nm,1.0s						
CLL				ePcP	sP	01 51 13.0	-2.5
CLL				i pP	PcP	01 51 15.8	+2.5
ESJX	Sierra Juarez	81.06	57	P	P	01 51 09.2	+1.2
GLA	Glamis	81.16	55	IAmb	IAmb	01 51 10.9	
	comp=Z,17nm,0.9s						
RETH	Rethem/Aller,	81.25	332	eP	P	01 51 07.9	-0.3
	comp=Z,9.1nm,1.0s,baz=36,slow=5.2						
PRU	Pruhonice	81.32	328	eP	P	01 51 08.9	+0.1
PRU	Pruhonice	81.32	328	eP	P	01 51 08.9	+0.1
MODS	Modra-Piesok	81.33	326	eP	P	01 51 10.0	+1.1
MODS				pmax	pmax		
	comp=Z,40nm,1.8s						
MODS	Modra-Piesok	81.33	326	eP	P	01 51 10.0	+1.1
EPLO	Experimental L	81.43	32	IAmb	IAmb	01 51 13.7	
	comp=Z,30nm,1.3s						
PV04	Paradox Valley	81.51	48	IAmb	IAmb	01 51 16.3	
	comp=Z,22nm,1.0s						
NEUB	Neuenburg	81.53	330	eP	P	01 51 09.5	-0.3
	comp=Z,10.0nm,0.7s,baz=36,slow=5.2						
MMAI	Mount Meron Ar	81.54	305	P	P	01 51 10.9	+0.6
	comp=Z,3.7nm,0.9s,baz=324,slow=8.4,SNR=4.5						
	comp=Z,3.7nm,0.9s						
VTX	Valle De La Tr	81.55	57	IAmb	IAmb	01 51 15.7	
	comp=Z,18nm,1.0s						
PV16	Nyswonger Mesa	81.56	48	P	P	01 51 11.4	+0.9
CLZ	Clausthal	81.58	331	eP	P	01 51 10.6	+0.4
	comp=Z,15nm,1.2s,baz=36,slow=5.2						
PV03	Paradox Valley	81.64	48	IAmb	IAmb	01 51 16.4	
	comp=Z,19nm,0.9s						
PV07	Paradox Valley	81.64	48	IAmb	IAmb	01 51 15.7	
	comp=Z,12nm,1.0s						
MDVR	Moldovita	81.78	321	⇑P	P	01 51 11.0	-0.4
PV15	Paradox Valley	81.80	48	IAmb	IAmb	01 51 14.4	
	comp=Z,13nm,1.1s						
Y14A	Wickenburg	81.80	54	IAmb	IAmb	01 51 17.0	
	comp=Z,14nm,0.8s						
WUAZ	Wupatki	81.85	52	P	P	01 51 12.9	+0.8
WUAZ				IAmb	IAmb	01 51 15.5	
	comp=Z,19nm,0.9s						
PV01	Paradox Valley	81.88	48	IAmb	IAmb	01 51 17.6	
	comp=Z,20nm,1.0s						
ZVC	Zvikov	81.89	328	eP	P	01 51 12.0	+0.2
MOX	Moxa	82.03	330	eP	P	01 51 12.6	+0.1
	comp=Z,10nm,1.5s,baz=36,slow=5.2						
MPLH	Magyarpolny	82.09	325	P	P	01 51 13.0	+0.1
	comp=Z,23nm,1.2s						
MORH	Mrgy, Hungar	82.27	324	P	P	01 51 14.0	+0.2
	comp=Z,4.3nm,1.6s						
RONA	Rosalia, Austr	82.27	326	eP	P	01 51 14.0	+0.2
	comp=Z,6.8nm,0.8s						
CONA	Conrad Observa	82.29	326	eP	P	01 51 14.2	+0.1
	comp=Z,5.2nm,0.9s						
CKRC	Cesky Krumlov	82.31	327	eP	P	01 51 14.1	+0.1
CKRC	Cesky Krumlov	82.31	327	eP	P	01 51 14.1	+0.1
MANZ	Manzenberg	82.34	329	eP	P	01 51 14.2	0.0
	comp=Z,1.0nm,0.8s,baz=36,slow=5.2						
KHC	Kasperske Hory	82.38	328	ceP	P	01 51 15.1	+0.7
KHC				pmax	pmax		
	comp=Z,19nm,2.5s						
KHC	Kasperske Hory	82.38	328	eP	P	01 51 14.6	+0.1
KHC	Kasperske Hory	82.38	328	P	P	01 51 14.5	+0.1
	comp=Z,8.4nm,1.1s						
ROTZ	Rotzenmuhle	82.47	329	eP	P	01 51 15.0	+0.2
	comp=Z,1.0nm,0.8s,baz=36,slow=5.2						

X16A	Lo Mia Camp, P	82.50	52	IAmb	IAmb	01 51 21.8	
	comp=Z,9.1nm,0.9s						
ISCO	Idaho Springs	82.51	45	P	P	01 51 15.9	+0.4
ISCO	Idaho Springs	82.51	45	P	P	01 51 16.0	+0.4
ISCO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MVCO	Mesa Verde	82.53	49	IAmb	IAmb	01 51 21.0	
	comp=Z,13nm,0.9s						
GEC2	GERESS Array S	82.55	328	*e*P	P	01 51 14.8	-0.6
	comp=Z,2.8nm,0.6s,baz=36,slow=5.2						
GERES	GERESS Array B	82.55	328	P	P	01 51 15.2	-0.1
	comp=Z,2.2nm,0.6s,baz=40,slow=6.3,SNR=20						
	comp=Z,2.2nm,0.6s						
WET	Wettzell	82.67	328	*e*P	P	01 51 16.0	+0.1
	comp=Z,4.2nm,0.9s,baz=36,slow=5.2						
GRF	Grafenberg Arr	82.93	330	*e*P	P	01 51 17.8	+0.5
	comp=Z,17nm,0.9s,baz=36,slow=5.2						
PIX	Pinacate	83.00	56	IAmb	IAmb	01 51 20.3	
	comp=Z,26nm,1.4s						
MOA	Molln	83.06	327	*e*P	P	01 51 18.3	+0.3
	comp=Z,5.5nm,1.0s						
MOA	Molln	83.06	327	*e*P	P	01 51 18.8	+0.8
	comp=Z,12nm,1.4s,baz=36,slow=5.2						
EKA	Eskdalemuir Ar	83.12	340	P	P	01 51 16.9	-1.2
	comp=Z,1.0nm,0.5s,baz=34,slow=6.0,SNR=5.2						
	comp=Z,1.0nm,0.5s						
F33A	5 Mile Ranch,	83.13	36	IAmb	IAmb	01 51 22.6	
	comp=Z,9.2nm,0.8s						
214A	Organ Pipe Nat	83.17	55	P	P	01 51 19.9	+1.1
214A				IAmb	IAmb	01 51 21.5	
	comp=Z,9.8nm,1.2s						
X18A	Snowflake	83.38	52	IAmb	IAmb	01 51 22.8	
	comp=Z,14nm,1.1s						
BIOA	Bad Ischl, Aus	83.46	327	*e*P	P	01 51 19.7	-0.3
	comp=Z,7.0nm,0.8s						
SOKA	Soboth	83.61	326	*i* P	P	01 51 19.8	-1.1
	comp=Z,5.4nm,0.6s,SNR=6.5						
SDCO	Great Sand Dun	83.95	47	IAmb	IAmb	01 51 25.7	
	comp=Z,8.9nm,1.1s						
KBA	Koelnbreinsper	84.05	327	*i* P	P	01 51 23.6	+0.4
	comp=Z,3.3nm,0.7s,SNR=5.6						
KBA	Koelnbreinsper	84.05	327	*e*P	P	01 51 23.9	+0.7
	comp=Z,3.5nm,0.8s,baz=36,slow=5.2						
LESA	Schwarzleotal	84.08	327	*e*P	P	01 51 23.0	-0.3
	comp=Z,2.3nm,0.6s						
FUR	Furstenfeldbru	84.10	329	*e*P	P	01 51 23.8	+0.5
	comp=Z,22nm,0.8s,baz=36,slow=5.2						
MEM	Membach	84.21	333	*d*P	P	01 51 24.2	+0.4
TUC	Tucson	84.27	54	P	P	01 51 25.2	+0.7
TUC				IAmb	IAmb	01 51 27.1	
	comp=Z,11nm,0.9s						
TUC	Tucson	84.27	54	P	P	01 51 25.2	+0.7
TUC				pmax	pmax		
	comp=Z,11nm,1.0s						
STU	Stuttgart	84.47	330	IAmb	IAmb	01 51 25.9	
	comp=Z,15nm,1.0s						
STU	Stuttgart	84.47	330	*e*P	P	01 51 25.3	+0.1
	comp=Z,36nm,1.0s,baz=36,slow=5.2						
ECSD	EROS Data Cent	84.53	38	IAmb	IAmb	01 51 29.8	
	comp=Z,7.5nm,0.9s						
RETA	Reutte	84.85	328	*e*P	P	01 51 26.3	-0.8
	comp=Z,7.7nm,1.1s						
RCHB	Rochefort	84.87	333	*d*P	P	01 51 26.9	-0.2
BMRD	Maredsous	84.91	333	*d*P	P	01 51 26.8	-0.5
BFO	Black Forest	85.17	330	P	P	01 51 26.6	-2.1
BFO	Black Forest	85.17	330	P	P	01 51 26.6	-2.1
BFO				pmax	pmax		
	comp=Z,17nm,1.1s						
BFO	Black Forest	85.17	330	*e*P	P	01 51 28.3	-0.4
	comp=Z,16nm,1.1s,baz=36,slow=5.2						
TASM	ASL Pad, Albuq	85.26	49	P	P	01 51 30.2	+0.5
TASM				IAmb	IAmb	01 51 35.7	
	comp=Z,10nm,1.0s						
TASM	ASL Pad, Albuq	85.26	49	IAmb	IAmb	01 51 35.7	
	comp=Z,12nm,1.0s						
ANMO	Albuquerque	85.26	49	P	P	01 51 30.9	+1.2
ANMO				IAmb	IAmb	01 51 35.7	
	comp=Z,10nm,0.9s						
ANMO	Albuquerque	85.26	49	*ce*P	P	01 51 31.6	+2.0
ANMO				pmax	pmax		
	comp=Z,12nm,1.0s						
ABQ	Albuquerque	85.27	49	IAmb	IAmb	01 51 35.8	
	comp=Z,12nm,1.0s						
DAVA	Damuels	85.37	329	*e*P	P	01 51 29.4	-0.5
	comp=Z,9.9nm,0.9s						
DAVA	Damuels	85.37	329	*e*P	P	01 51 29.2	-0.7
	comp=Z,11nm,0.9s,baz=36,slow=5.2						
SBM	South Baldy	85.47	50	P	P	01 51 32.4	+1.4
Y22A	Socorro	85.62	50	IAmb	IAmb	01 51 36.8	
	comp=Z,9.6nm,0.8s						
ECH	Echery	85.72	331	IAmb	IAmb	01 51 31.9	
	comp=Z,8.9nm,0.9s						
FUORN	Ofenpass-Fuorn	85.74	328	IAmb	IAmb	01 51 32.7	
	comp=Z,8.6nm,0.8s						
SCHQ	Schefferville	85.75	15	P	P	01 51 34.4	+2.9
	comp=Z,3.5nm,0.7s,baz=299,slow=2.4,SNR=3.6						
SCHQ				LR	LR	02 32 47.5	
	comp=Z,25nm,18.5s,baz=332,slow=38						
CRNM	Carthage	85.76	50	P	P	01 51 33.2	+1.1
319A	Douglas	85.85	54	P	P	01 51 33.2	+0.7
121A	Cookes Peak, D	86.05	52	IAmb	IAmb	01 51 36.4	
	comp=Z,12nm,0.9s						
RTBA	Rita Blanca	86.46	46	IAmb	IAmb	01 51 40.2	
	comp=Z,9.8nm,0.9s						
IDI	Anoyia	86.64	312	IAmb	IAmb	01 51 39.5	
	comp=Z,12nm,1.0s						
PH02	Texas Public H	87.65	46	P	P	01 51 42.0	+0.8
PH02				IAmb	IAmb	01 51 46.3	
	comp=Z,12nm,0.9s						
GDL2	Guadalupe Moun	88.41	50	P	P	01 51 45.5	+0.6
VHRN	Van Horn	88.98	52	P	P	01 51 48.6	+0.9
PECS	Pecos	89.28	50	IAmb	IAmb	01 51 53.6	
	comp=Z,5.3nm,0.8s						
SN07	Snyder 07	89.88	48	IAmb	IAmb	01 51 53.5	
	comp=Z,8.1nm,1.1s						
OK029	Liberty Lake	89.91	44	P	P	01 51 52.9	+1.1
WMOK	Wichita Mounta	89.93	45	IAmb	IAmb	01 51 56.6	
	comp=Z,7.8nm,1.1s						
APMT	Aspermont	90.17	47	IAmb	IAmb	01 51 57.6	
	comp=Z,13nm,0.9s						
DEOK	Depew	90.40	43	P	P	01 51 54.6	+0.5
TUL3	Leonard	90.73	43	IAmb	IAmb	01 51 57.1	
	comp=Z,8.2nm,0.8s						
TX31	Lajitas Ar. Si	90.81	52	IAmb	IAmb	01 52 01.1	
	comp=Z,7.0nm,0.8s						
TXAR	Lajitas Array	90.81	52	P	P	01 51 57.6	+1.4
	comp=Z,8.6nm,0.9s,baz=297,slow=3.1,SNR=68						
	comp=Z,8.6nm,0.9s						
TXAR	Lajitas Array	90.81	52	P	P	01 51 56.9	+0.7
TXAR	Lajitas Array	90.81	52	P	P	01 51 56.9	+0.7
WTFS	Witchita Falls	90.81	46	IAmb	IAmb	01 52 00.8	
	comp=Z,11nm,0.9s						
U38A	Gravette	91.09	41	IAmb	IAmb	01 52 01.0	
	comp=Z,10.0nm,1.0s						
HPIG		91.16	55	IAmb	IAmb	01 52 03.1	
	comp=Z,6.6nm,0.9s						
SADO	Sadowa	91.22	27	LR	LR	02 35 30.4	
	comp=Z,29nm,18.4s,baz=350,slow=37						
SAND	Sanderson	91.34	50	P	P	01 51 59.4	+0.9
PLPT	Palo Pinto	91.59	46	IAmb	IAmb	01 52 04.2	
	comp=Z,6.6nm,0.7s						
Z35A	Perchaven, San	91.82	45	P	P	01 52 00.8	+0.2
DRIO	Del Rio	92.64	50	P	P	01 52 04.8	+0.2
DRIO				IAmb	IAmb	01 52 09.9	
	comp=Z,7.6nm,1.0s						
FCAR	Ozark Folk Cen	92.70	40	IAmb	IAmb	01 52 05.3	
	comp=Z,6.5nm,1.1s						
ESDC	Sonseca Array	97.19	333	P	P	01 52 24.7	-0.6
	comp=Z,0.7nm,0.7s,baz=27,slow=4.2,SNR=3.4						
ESDC				LR	LR	02 40 27.9	
	comp=Z,34nm,19.5s,baz=342,slow=38						
	comp=Z,0.7nm,0.7s						
QSPA	South Pole Qui	126.54	180	PKP	PKiKP	01 57 57.6	+2.5
	comp=Z,1.7nm,0.4s,baz=308,slow=1.7,SNR=5.8						
QSPA	South Pole Qui	126.54	180		PKiKP	01 57 57.3	+2.2
SYO	Syowa Base	127.69	207	⇓*e*Pdiff	Pdif	01 54 43.5	+3.7
SYO	Syowa Base	127.69	207	⇓*e*pPdiff	pPdif	01 54 52.0	+5.6
NVL	N'lazarevskaya	136.81	202	*e*PKIKP	PKPdf	01 58 13.9	+0.1
NVL				*e*		02 00 54.8	
NVL				*e*PPP	PPP	02 03 55.3	
NVL				*e*SS	SS	02 18 59.7	-0.2
NVL				*e*SSS	SSS	02 24 05.0	
NVL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SNAA	Sanae	140.32	197	PKhKP	PKPpre	01 58 13.7	
	comp=Z,1.2nm,0.5s,baz=207,slow=6.3,SNR=6.9						
SNAA	Sanae	140.32	197		PKPpre	01 58 12.9	
SNAA	Sanae	140.32	197	PKHKP	PKPpre	01 58 13.0	
SMAI	San Martin Ant	145.02	162		PKPbc	01 58 29.1	+1.1
LPAZ	La Paz	147.40	59	PKPbc	PKPbc	01 58 38.4	+0.9
	comp=Z,4.6nm,0.6s,baz=321,slow=2.4,SNR=23						
LPAZ	La Paz	147.40	59		PKPbc	01 58 37.8	+0.3
LPAZ	La Paz	147.40	59	PKP2	PKPbc	01 58 37.8	+0.3
PB12	IPOC Station P	147.41	65	PKPbc	PKPbc	01 58 38.1	+1.3
H03N2	Juan Fernandez	147.68	96	T	T	04 43 37.1	
	baz=291,slow=76,SNR=197						
H03N3	Juan Fernandez	147.69	96	T	T	04 43 34.1	
	baz=291,slow=76,SNR=261						
H03N1	Juan Fernandez	147.70	96	T	T	04 43 38.4	
	baz=291,slow=76,SNR=231						
GO01	Chusmiza	148.90	65	PKPbc	PKPbc	01 58 42.3	+1.0
MG05	Puerto Natales	152.32	133	PKPbc	PKPbc	01 58 48.7	+0.9
AC05	El Transito	152.99	82	PKPbc	PKPbc	01 58 50.5	+0.4
PLCA	Paso Flores	155.50	109	PKPab	PKPab	01 59 13.7	+1.8
	comp=Z,4.8nm,1.0s,baz=291,slow=3.0,SNR=4.1						
PLCA	Paso Flores	155.50	109	PKPab	PKPab	01 59 13.3	+1.5
PLCA	Paso Flores	155.50	109	PKP2	PKPab	01 59 13.3	+1.5

PRU 04 01:50:37.4,50°.06N×18°.62E,h0^{km},Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.38	234	*e*PG	Pg	01 50 45.0	+0.4
OKC				*e*SG	Sg	01 50 49.8	+0.3
	comp=Z,6.6nm,0.6s						
STEB	Steborice	0.56	257	*e*PG	Pg	01 50 48.4	+0.3
STEB				*e*SG	Sg	01 50 56.0	+0.6
	comp=Z,38nm,1.1s						
MORC	Moravsky Berou	0.75	248	*e*PG	Pg	01 50 51.5	-0.3
MORC				*e*SG	Sg	01 51 01.3	-0.2
OJC	Ojcow	0.78	78	P	Pn	01 50 55.5	-0.1
	14nm,1.1s						
KRLC	Kraliky	1.19	271	*e*SG	Sg	01 51 14.2	-1.2
DPC	Dobruska-Polom	1.50	282	*e*SG	Sb	01 51 25.8	-0.1
VRAC	Vranov	1.52	241	*e*PG	Pn	01 51 05.6	-0.2
VRAC	Vranov	1.52	241	*e*P	Pg	01 51 07.2	+0.8
KRUC	Moravsky	1.76	236	*e*P	Pn	01 51 08.1	-1.0
KRUC	Moravsky	1.76	236	*e*SG	Sn	01 51 32.1	-0.1

*SOME **04** 02:17:49.1,39°.92N×77°.38E,h10^{km}*
*KRNET **04** 02:17:49.2±0.1,39°.83N×77°.65E,mb3.6*
*NNC **04** 02:17:51.0±1.4,39°.97N×77°.49E,h0^{km},mb3.9,mpv3.5,*
Error ellipse: s-maj=9.4km s-min=7.1km az=167.0
ISC 04 02:17:49.4±1.7,**39°.91N**±0°.07×**77°.38E**±0°.04,**h10^{km},n44,**
σ**1^{s}.96**/68,**19C-17D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNKS	Jany-Kuch	1.75	312	⇓*e*P	Pg	02 18 25.1	+2.2
JNKS				⇓*e*S	Sg	02 18 52.4	+6.8
TARG	Taragay, Kyrgy	1.85	10	⇓*e*P	Pg	02 18 24.8	-0.1
TARG				⇓*e*S	Sg	02 18 50.4	+1.6
KDJ	Kajisay	2.22	356	⇓*e*P	Pg	02 18 30.8	-1.3
KDJ				⇓*e*S	Sg	02 19 00.9	0.0
PRZ	Przheval'sk	2.68	16	⇑*e*P	Pb	02 18 36.7	-1.0
PRZ				⇑*e*S	Sb	02 19 11.1	+0.3
BOOM	Boomskoye usch	2.80	338	⇑*e*P	Pb	02 18 40.0	+0.4
BOOM				⇑*e*S	Sg	02 19 16.6	-2.7
SALK	Salom-Alik	2.89	291	⇑*e*P	Pb	02 18 41.7	+0.6
SALK				⇑*e*S	Sg	02 19 19.8	-2.3
SFK	Sufi-Kurgan	2.98	273	⇑*e*P	Pb	02 18 42.7	-0.1
SFK				⇑*e*S	Sg	02 19 22.4	-2.8
ARLS	Aral	3.03	311	⇓*e*P	Pb	02 18 43.1	-0.4
ARLS				⇓*e*S	Sb	02 19 23.1	+2.5
TNSS	Tian-Shan	3.14	354	Pg	Pg	02 18 47.8	-1.8
	8.6nm,0.6s						
TNSS				Lg	Lg	02 19 30.8	
	24nm,0.8s						
TNSS	Tian-Shan	3.14	354	*e*P	Pg	02 18 47.8	-1.8
	8.6nm,0.3s						
TNSS				*e*S	Sg	02 19 30.7	+0.4
	24nm,0.6s						
UCH	Uchtor	3.17	318	⇑*e*P	Pb	02 18 46.0	-0.1
UCH				⇑*e*S	Sb	02 19 27.1	+2.1
MDOK	Medeo	3.26	356	Pg	Pg	02 18 49.3	-2.6
	24nm,0.5s						
MDOK				Lg	Lg	02 19 33.8	
	47nm,1.0s						
TKM2	Tokmak 2	3.29	337	⇓*e*P	Pb	02 18 46.9	-1.2
TKM2				⇓*e*S	Sb	02 19 28.7	+0.4
MTBS	Maitube	3.30	348	Pg	Pg	02 18 50.3	-2.3
	4.9nm,0.4s						
MTBS				Lg	Lg	02 19 35.1	
	21nm,0.5s						
MTBS	Maitube	3.30	348	*e*P	Pg	02 18 50.3	-2.3
	4.8nm,0.2s						
MTBS				*e*S	Sg	02 19 35.1	-0.2
	21nm,0.4s						
KBK	Karagaybulak	3.30	327	⇓*e*P	Pb	02 18 47.3	-0.9
KBK				⇓*e*S	Sb	02 19 29.4	+1.0
KST	Kastek	3.31	342	Pg	Pg	02 18 50.6	-2.1
	4.5nm,0.5s						
KST				Lg	Lg	02 19 35.8	
	24nm,1.1s						
KST	Kastek	3.31	342	*e*P	Pg	02 18 50.6	-2.1
	2.4nm,0.3s						
KST				*e*S	Sg	02 19 35.6	0.0
	25nm,0.6s						
KOTS	Kotyrbulak	3.33	357	Pg	Pg	02 18 51.0	-2.2
	27nm,0.3s						
KOTS				Lg	Lg	02 19 36.4	
	66nm,0.7s						
KOTS	Kotyrbulak	3.33	357	*e*P	Pg	02 18 51.0	-2.2
	27nm,0.3s						
KOTS				*e*S	Sg	02 19 36.5	+0.1
	66nm,0.7s						
UZB	Uzynbulak	3.46	20	Pg	Pg	02 18 53.0	-2.8
	6.7nm,0.5s						
UZB				Lg	Lg	02 19 40.1	
	28nm,1.1s						
UZB	Uzynbulak	3.46	20	*e*P	Pg	02 18 53.0	-2.8
	1.3nm,0.1s						
UZB				*e*S	Sg	02 19 39.8	-0.8
	19nm,0.5s						
AAK	Ala-Archa	3.49	322	⇑*e*P	Pb	02 18 50.1	-1.2
AAK				⇑*e*S	Sb	02 19 34.2	+0.4
AAK	Ala-Archa	3.49	322	⇑Pg	Pg	02 18 55.9	-0.3
	1.9nm,0.4s						
AAK				⇑Lg	Lg	02 19 41.1	
	40nm,1.0s						
DGS	Degeres	3.54	341	Pg	Pb	02 18 53.4	+1.1
	7.5nm,0.8s						
DGS				Lg	Lg	02 19 40.4	
	14nm,1.0s						
FRU1	Bishkek	3.56	325	⇑*e*P	Pb	02 18 51.2	-1.3
FRU1				⇑*e*S	Sb	02 19 36.2	+0.4
SHLS	Shalkode	3.60	25	Pg	Pg	02 18 57.5	-1.0
	20nm,0.6s						
SHLS				Lg	Lg	02 19 47.8	
	37nm,1.0s						
SHLS	Shalkode	3.60	25	*e*P	Pg	02 18 57.5	-1.0
	1.8nm,0.1s						
SHLS				*e*S	Sg	02 19 47.4	+2.3
	83nm,0.8s						
KURS	Kuram	3.62	9	Pg	Pb	02 18 55.3	+1.7
	9.0nm,1.0s						
KURS				Lg	Lg	02 19 43.9	
	28nm,1.6s						
ARSB	Arslanbob	3.63	294	⇓*e*P	Pb	02 18 52.4	-1.4
ARSB				⇓*e*S	Sb	02 19 38.1	+0.1
KPKS	Kokpek	3.69	15	Pg	Pb	02 18 55.2	+0.5
	19nm,0.6s						
KPKS				Lg	Lg	02 19 43.9	
	28nm,1.1s						
PDGK	Podgornoye	3.77	24	⇓Pg	Pg	02 19 00.0	-1.5
	12nm,0.3s						
PDGK				⇓Lg	Lg	02 19 50.2	
	33nm,0.7s						
KTBS	Karatobe	3.83	352	Pg	Pg	02 19 01.1	-1.8
	12nm,0.4s						
KTBS				Lg	Lg	02 19 53.3	
	8.4nm,1.2s						
EKS2	Erkin-Say	3.86	317	⇑*e*P	Pb	02 18 55.3	-2.4
EKS2				⇑*e*S	Sb	02 19 43.4	-1.2
KRBS	Karabastau	3.99	342	Pg	Pg	02 19 04.0	-1.9
	6.5nm,1.0s						
KRBS				Lg	Lg	02 19 58.8	
	14nm,1.6s						
KUU	Kurty	4.05	349	*e*P	Pg	02 19 04.0	-3.0
	1.8nm,0.0s						
KUU				*e*S	Sg	02 19 58.7	-1.0
	6.5nm,0.1s						
SGDS	Sogindy	4.09	331	Pg	Pb	02 19 03.4	+1.8
	1.7nm,0.5s						
SGDS				Lg	Lg	02 19 57.3	
	15nm,1.3s						
MRKS	Merke	4.22	314	*e*P	Pg	02 19 07.3	-2.9
	2.6nm,0.3s						
MRKS				*e*S	Sg	02 20 04.3	-0.5
	13nm,0.6s						
BLB	Baldybastay	4.26	11	Pg	Pg	02 19 07.5	-3.6
	39nm,0.4s						
BLB				Lg	Lg	02 20 04.9	
	19nm,0.9s						
ARXS	Arharly	4.31	4	Pg	Pg	02 19 09.0	-3.1
	12nm,0.8s						
ARXS				Lg	Lg	02 20 07.3	
	19nm,1.1s						
ARXS	Arharly	4.31	4	*e*P	Pg	02 19 09.0	-3.1
ARXS				*e*S	Sg	02 20 07.0	-0.9
KNOS	Konyrlen	4.64	16	Pg	Pb	02 19 13.4	+2.4
	5.9nm,0.9s						
KNOS				Lg	Lg	02 20 14.7	
	10nm,0.7s						
KK31	Karatay Array	6.06	304	⇓Pn	Pn	02 19 25.3	+6.2
	0.4nm,0.5s,baz=141,slow=13,SNR=3.6						
KK31				⇑Pg	Pg	02 19 45.2	-0.3
	2.0nm,0.7s,baz=129,slow=16,SNR=7.8						
KK31				Lg	Lg	02 21 04.0	
	5.3nm,0.8s,baz=117,slow=27,SNR=3.7						
AB31	Akbulak array	15.51	313	P	P	02 21 35.0	+2.5
	0.5nm,0.5s,baz=122,slow=13,SNR=8.7						

*IDC **04** 02:20:17.1±2.1,34°.71N×23°.85E,h0^{km},mb4.0/8,*
mbtmp3.8/13,ML3.4/5,Error ellipse: s-maj=36.2km
s-min=19.5km az=21.0
*NEIC **04** 02:20:22.4±1.7,34°.70N±0°.08×24°.08E±0°.09,h28^{km}±10^{km},*
mb4.0/2,Error ellipse: s-maj=13.4km s-min=9.0km
az=215.0
*ISK **04** 02:20:24.3,34°.88N×24°.14E,h17^{km},ML3.4/22*
*HLW **04** 02:20:24.6,34°.63N×24°.60E,h17^{km}±4^{km},Ml3.4*
*ATH **04** 02:20:24.8±0.3,34°.91N×24°.08E,h11^{km}±2^{km},ML3.3/13,*
Manual Solution by K.Orfanogiannaki First location:
2019/12/04 02:21:29, This location: 2019/12/04 06:31:38
ML Amplitudes are expressed in micrometers, All
distances are expressed in degrees Latitude uncertainty: 2
km; Longitude uncertainty: 2 km
*THE **04** 02:20:25.1,35°N±2°×2°4E±°,h12^{km}±1^{km},M3.1/33,*
MLh3.1/33
*GII **04** 02:20:28.7±0.0,34°.494N±0°.002×24°.843E±0°.001,h14^{km},*
Mws3.4,confirmed
*AFAD **04** 02:20:42.6,35°.89N×25°.52E,h7^{km}±3^{km},ML3.3*
ISC 04 02:20:20.8±1.0,**34°.62N**±0°.06×**24°.00E**±0°.04,**h27^{km}**±6^{km},
n197,σ**2^{s}.02**/194,**mb4.1**/9,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	Gavdhos	0.23	18	P	Pb	02 20 27.6	+0.5
GVD				S	Sb	02 20 30.3	-1.0
GVD	Gavdhos	0.23	18	Pg	Pb	02 20 27.4	+0.3
GVD				Sg	Sb	02 20 30.3	-1.0
GVD	Gavdhos	0.23	18	P	Pb	02 20 27.5	+0.5
GVD				S	Sb	02 20 30.7	-0.6
KNDR	Palaiochora Ch	0.69	333	P	Pn	02 20 34.7	-0.1
KNDR				S	Sb	02 20 42.7	-0.6
KNDR	Palaiochora Ch	0.69	333	Pg	Pn	02 20 35.0	+0.2
KNDR				Sg	Sb	02 20 43.9	+0.6
KNDR	Palaiochora Ch	0.69	333	P	Pb	02 20 34.5	+0.3
KNDR				S	Sb	02 20 42.3	-1.0
IMMV	Iera Moni Meta	0.84	359	P	Pb	02 20 36.4	-0.4
IMMV				S	Sb	02 20 45.8	-1.9
IMMV	Iera Moni Meta	0.84	359	Pg	Pb	02 20 36.3	-0.5
IMMV				Sg	Sb	02 20 45.4	-2.3
CHNB	Souda	0.86	4	P	Pb	02 20 37.2	-0.1
CH01	Chania	0.89	1	P	Pb	02 20 37.7	0.0
CHAN	Chania	0.90	2	P	Pb	02 20 37.8	0.0
CHAN	Chania	0.90	2	P	Pb	02 20 37.3	-0.4
IDI	Anoyia	0.99	47	Pn	Pn	02 20 39.4	+0.4
	66nm,0.3s,baz=242,slow=12,SNR=231						
IDI				Sn	Sn	02 20 53.9	+1.7
	151nm,0.3s,baz=336,slow=20,SNR=13						
IDI	Anoyia	0.99	47	P	Pn	02 20 39.4	+0.4
IDI				S	Sn	02 20 53.3	+1.2
IDI	Anoyia	0.99	47		Pn	02 20 38.8	-0.2
IDI	Anoyia	0.99	47	Pg	Pn	02 20 39.5	+0.4
IDI	Anoyia	0.99	47	P	Pn	02 20 39.2	+0.1
IACM	Heraklion	1.11	52	P	Pb	02 20 42.2	+0.8
ANKY	Antikythira Is	1.37	335	P	Pb	02 20 47.3	+1.5
ANKY	Antikythira Is	1.37	335	P	Pb	02 20 47.1	+1.3
NPS	Neapolis	1.47	64	P	Pb	02 20 49.3	+1.7
NPS	Neapolis	1.47	64	P	Pb	02 20 49.2	+1.7
KTHA	Kythira Island	1.80	335	P	Pb	02 20 53.3	+0.1
KTHA	Kythira Island	1.80	335	Pn	Pb	02 20 53.8	+0.6
ZKR	Zakros	1.89	74	P	Pb	02 20 55.9	+1.3
ZKR	Zakros	1.89	74	Pn	Pb	02 20 54.6	0.0
ZKR	Zakros	1.89	74	P	Pb	02 20 55.1	+0.5
THR9	Santorini-Faro	2.05	32	P	Pb	02 20 56.5	-0.9
THR6	Thira Island,	2.07	33	P	Pb	02 20 56.8	-0.9
MHLO	Agia Marina, M	2.09	9	P	Pn	02 20 55.8	+1.7
SNT5	Nea Kammeni, S	2.11	32	P	Pb	02 20 57.2	-1.2
SAP3	Santorini-Thir	2.12	31	P	Pn	02 20 57.0	+2.5
THERA	Ancient Thera,	2.12	34	P	Pn	02 20 56.7	+2.2
THERA				S	Sn	02 21 21.9	+2.0
THR3	Thira Island,	2.12	32	P	Pb	02 20 57.0	-1.5
THR8	Santorini-Mono	2.15	34	P	Pn	02 20 57.3	+2.4
THR2	Thira island,	2.16	32	P	Pb	02 20 58.1	-1.2
VLI	Veliai	2.26	338	P	Pn	02 20 58.7	+2.2
VLI	Veliai	2.26	338	P	Pn	02 20 58.7	+2.2
APE	Apeiranthos	2.74	27	P	Pn	02 21 04.3	+1.2
APE				S	Sn	02 21 37.2	+1.9
APE	Apeiranthos	2.74	27	Pn	Pn	02 21 04.1	+1.0
APE	Apeiranthos	2.74	27	P	Pn	02 21 04.1	+1.0
KARP	Karpathos	2.75	70	P	Pb	02 21 07.0	-2.4
KARP				S	Sb	02 21 40.5	-2.2
KARP	Karpathos	2.75	70	Pn	Pn	02 21 05.9	+2.7
KARP	Karpathos	2.75	70	Pn	Pn	02 21 06.5	+3.3
KARP	Karpathos	2.75	70	P	Pn	02 21 06.6	+3.3
PYL	PYLOS	2.92	322	P	Pn	02 21 08.8	+3.3
MET4	Agioi Theodoro	3.03	351	P	Pn	02 21 08.7	+1.6
MET5	Makryloggos,Me	3.04	350	P	Pn	02 21 09.0	+1.8
ITM	Ithomi	3.06	327	P	Pn	02 21 10.6	+3.2
ITM	Ithomi	3.06	327	Pn	Pn	02 21 10.9	+3.5
ITM	Ithomi	3.06	327	Pn	Pb	02 21 11.2	-3.4
VLY	Voula,Athens	3.23	357	P	Pn	02 21 11.3	+1.5
VLY	Voula,Athens	3.23	357	P	Pn	02 21 11.1	+1.3
NISR	Nisiros	3.23	51	P	Pn	02 21 12.1	+2.4
SLUM	Salum	3.28	162	P	Pn	02 21 13.5	+2.9
ATHU	Athens Univers	3.34	357	P	Pn	02 21 12.0	+0.6
ATHU	Athens Univers	3.34	357	P	Pn	02 21 11.7	+0.4
ATH	Athens Observa	3.35	356	P	Pn	02 21 13.1	+1.7
ATH	Athens Observa	3.35	356	P	Pn	02 21 13.0	+1.5
KARY	Karystos	3.42	6	P	Pn	02 21 14.4	+2.0
KARY	Karystos	3.42	6	P	Pn	02 21 14.3	+1.9
PTL	Penteli	3.42	358	P	Pn	02 21 14.3	+1.8
PTL	Penteli	3.42	358	P	Pn	02 21 14.1	+1.6
DION	Dionisos Attik	3.45	359	P	Pn	02 21 14.5	+1.7
DION				S	Sn	02 21 53.2	+0.4
DION	Dionisos Attik	3.45	359	P	Pn	02 21 14.4	+1.7
LOUT	Loutraki	3.46	346	P	Pn	02 21 15.0	+2.0
MAGU	Magoula	3.47	354	P	Pn	02 21 15.0	+1.9
YAZI	Mula-Dat§a-	3.48	53	P	Pn	02 21 15.7	+2.5
LTK	Loutraki	3.50	346	P	Pn	02 21 15.7	+2.2
LTK	Loutraki	3.50	346	P	Pn	02 21 15.6	+2.2
STFN	Stefani	3.57	354	P	Pn	02 21 16.1	+1.6
STFN	Stefani	3.57	354	P	Pn	02 21 16.3	+1.8
GUR	Goura	3.57	338	P	Pn	02 21 17.7	+3.2
GUR	Goura	3.57	338	P	Pn	02 21 17.5	+2.9
VILL	Villia	3.58	351	P	Pn	02 21 16.4	+1.8
DAT	Datca	3.59	53	P	Pn	02 21 17.2	+2.3
DAT	Datca	3.59	53	Pn	Pn	02 21 17.6	+2.7
BODT	Bodrum	3.63	47	Pn	Pn	02 21 18.3	+3.0
VIL2	Platees	3.63	351	P	Pn	02 21 16.2	+0.9
BDRM	Kayabasi	3.71	48	P	Pn	02 21 18.8	+2.3
ARG	Arkhangelos	3.73	64	P	Pn	02 21 19.8	+3.2
ARG				S	Sn	02 22 01.9	+2.3
ARG	Arkhangelos	3.73	64	Pn	Pn	02 21 19.8	+3.2
ARG	Arkhangelos	3.73	64	Pn	Pn	02 21 19.8	+3.2
ARG	Arkhangelos	3.73	64	P	Pn	02 21 19.6	+3.0

KLV	Kalavryta, Ach	3.73	337	P	Pn	02 21 19.4	+2.7
KLV	Kalavryta, Ach	3.73	337	P	Pn	02 21 19.6	+2.9
DRO	Drossia	3.80	332	P	Pn	02 21 20.7	+3.0
SMG	Samos	3.84	36	P	Pn	02 21 20.7	+2.5
SMG	Samos	3.84	36	P	Pn	02 21 20.6	+2.5
KYMI	Kymi, Euboea I	4.00	1	P	Pn	02 21 21.6	+1.2
TURN	Turunc	4.07	57	P	Pn	02 21 23.8	+2.6
TURN	Turunc	4.07	57	Pn	Pn	02 21 24.2	+2.9
LKR	Lokris	4.10	349	P	Pn	02 21 23.2	+1.5
LKR	Lokris	4.10	349	P	Pn	02 21 23.3	+1.5
URLA	Izmir	4.28	29	Pn	Pn	02 21 26.4	+2.2
YER	Yerkesik	4.29	53	P	Pn	02 21 28.4	+4.1
YER				S	Sn	02 22 16.7	+3.2
YER	Yerkesik	4.29	53	Pn	Pn	02 21 27.9	+3.5
ANX	Ano Chora	4.30	338	P	Pn	02 21 27.5	+2.9
DALY	Dalyan (Mula)	4.37	59	Pn	Pn	02 21 28.6	+3.1
MULA	Mugla, Merkez-	4.38	52	P	Pn	02 21 30.0	+4.3
PVO	Paravola	4.46	334	P	Pn	02 21 30.0	+3.4
AYDB	Zeytinkoy-Aydi	4.57	42	Pn	Pn	02 21 31.4	+3.1
AGG	Agios Georgios	4.59	344	P	Pn	02 21 30.6	+2.1
SABU	Mula-Dalaman	4.60	60	P	Pn	02 21 31.7	+3.1
SABU				S	Sn	02 22 14.3	-6.9
FETY	Fethiye	4.60	63	P	Pn	02 21 25.0	-3.7
IZZE	Mula-Seydike	4.63	65	P	Pn	02 21 31.2	+2.2
IZZE				S	Sn	02 22 13.6	-8.3
IZZE				*i* IAML		02 22 25.0	
	comp=N,94nm,0.3s						
EVR	Evrytania	4.63	338	P	Pn	02 21 33.0	+3.9
ESEN	Aydn-Nazilli	4.73	47	P	Pn	02 21 33.8	+3.4
AKAS	Kas	4.85	69	P	Pn	02 21 34.2	+2.1
AKAS				S	Sn	02 22 20.2	-7.3
AKAS				*i* IAML		02 22 33.0	
	comp=N,73nm,0.5s						
AKAS	Kas	4.85	69	Pn	Pn	02 21 34.0	+1.8
AKAS	Kas	4.85	69	Pn	Pn	02 21 34.3	+2.1
DNZT	Denizli-Tavas-	4.86	56	P	Pn	02 21 35.5	+3.2
TAVA	DENIZLI_Tavas	4.89	53	P	Pn	02 21 35.9	+3.2
CAME	Cameli-Denizli	4.89	60	Pn	Pn	02 21 35.6	+2.8
CAEL	Denizli, Camel	4.99	58	P	Pn	02 21 37.3	+3.3
CAEL				S	Sn	02 22 26.3	-4.6
KIRA	zmir-Kiraz	5.03	44	P	Pn	02 21 37.9	+3.3
KNIK	Mula-Seydike	5.05	62	P	Pn	02 21 37.5	+2.7
KNIK				S	Sn	02 22 21.0	-11
DNIZ	Denizli-Tavas-	5.06	52	P	Pn	02 21 38.6	+3.6
APMY	Acipayam-Deniz	5.15	55	Pn	Pn	02 21 38.8	+2.5
GOLH	Golhisar	5.21	58	P	Pn	02 21 40.8	+3.6
ELL	Elmali	5.25	65	Pn	Pn	02 21 40.3	+2.5
ELL	Elmali	5.25	65	Pn	Pn	02 21 40.9	+3.2
MANT	Manisa	5.32	42	Pn	Pn	02 21 41.8	+3.0
KULA	Kula-Manisa	5.40	43	Pn	Pn	02 21 42.9	+3.2
AKUM	Antalya-Kumluc	5.45	70	P	Pn	02 21 42.5	+2.3
INCE	Denizli-Bozkur	5.46	54	P	Pn	02 21 43.4	+2.9
SWA2		5.50	167	P	Pn	02 21 44.4	+3.3
LIT	Litokhoron	5.60	348	Pn	Pn	02 21 43.9	+1.6
KORT	Korkueli	5.68	63	P	Pn	02 21 46.3	+2.8
BRDR	BURDUR-Merkez	5.78	56	P	Pn	02 21 46.1	+1.1
BUCA	Burdur, Bucak-	5.96	61	P	Pn	02 21 50.4	+3.0
KEK	Kerkira	6.09	328	Pn	Pn	02 21 54.1	+5.1
BORA	Eskisehir	7.35	43	Pn	Pn	02 22 06.1	-0.3
CEL	Celeste	7.47	301	Pn	Pn	02 22 09.7	+1.5
CSS	Mathiatis	7.68	85	Pn	Pn	02 22 10.6	-0.4
CSS	Mathiatis	7.68	85	P	Pn	02 22 10.8	-0.1
RAFF	Raffo Rosso	8.24	291	Pn	Pn	02 22 20.7	+2.1
HFRF	Wahat Farafira	8.32	152	P	Pn	02 22 22.1	+2.4
CUC	Castrocucco	8.44	312	Pn	Pn	02 22 23.2	+1.8
PDG	Podgorica	8.63	336	Pn	Pn	02 22 23.9	-0.1
ANTO	Ankara	8.75	51	Pn	Pn	02 22 28.4	+2.7
BR131	Keskin Array S	9.22	54	Pn	Pn	02 22 33.5	+1.3
BRTR	Keskin Array B	9.22	54	Pn	Pn	02 22 33.2	+1.1
	0.1nm,0.3s,baz=251,slow=14,SNR=5.3						
	1.1nm,0.8s						
BRTR	Keskin Array B	9.22	54	Pn	Pn	02 22 33.6	+1.4
KZIT	Kziot	9.51	110	P	Pn	02 22 36.1	+0.1
KZIT	Kziot	9.51	110	S	Sn	02 24 15.5	-6.5
MMC7	Mount Meron ar	9.61	96	P	Pn	02 22 37.4	0.0
MMC7	Mount Meron ar	9.61	96	S	Sn	02 24 17.2	-7.4
MMA0B	Mount Meron ar	9.62	96	P	Pn	02 22 37.4	-0.2
MMAI	Mount Meron Ar	9.62	96	Pn	Pn	02 22 36.7	-0.9
	2.7nm,0.3s,baz=312,slow=11,SNR=15						
MMAI				Sn	Sn	02 24 21.1	-3.7
	1.3nm,0.3s,baz=302,slow=25,SNR=2.6						
	1.1nm,0.4s						
AMAZ	Amatzia	9.66	106	P	Pn	02 22 37.9	-0.2
AMAZ	Amatzia	9.66	106	S	Sn	02 24 19.2	-6.7
MMLI	Mount Malkishu	9.78	100	P	Pn	02 22 39.7	-0.1
MMLI	Mount Malkishu	9.78	100	S	Sn	02 24 21.9	-6.8
GEM	Giv'at Ha'Em	9.79	95	P	Pn	02 22 39.4	-0.5
NATI	Neve Ativ	9.84	95	P	Pn	02 22 40.6	+0.1
NATI	Neve Ativ	9.84	95	S	Sn	02 24 24.2	-6.0
YTIR	Yattir	9.88	106	P	Pn	02 22 42.0	+0.8
YTIR	Yattir	9.88	106	S	Sn	02 24 24.7	-6.7
HMDT	Nahal Hemdat	9.92	101	P	Pn	02 22 41.1	-0.5
HMDT	Nahal Hemdat	9.92	101	S	Sn	02 24 25.2	-6.8
KSHT	Keshet	9.96	96	P	Pn	02 22 42.2	-0.1
KSHT	Keshet	9.96	96	S	Sn	02 24 26.8	-6.5
ILGA	Ilgaz	10.01	47	Pn	Pn	02 22 48.7	+5.7
DSI	Dead Sea	10.02	105	P	Pn	02 22 43.1	+0.1
DSI	Dead Sea	10.02	105	S	Sn	02 24 27.2	-7.3
MSBI	Mazada	10.09	106	P	Pn	02 22 43.6	-0.4
MSBI	Mazada	10.09	106	S	Sn	02 24 29.1	-7.2
KRMI	Paran Flat	10.12	113	P	Pn	02 22 44.4	0.0
KRMI	Paran Flat	10.12	113	S	Sn	02 24 30.8	-6.2
PRNI	Paran	10.22	112	P	Pn	02 22 46.0	+0.2
PRNI	Paran	10.22	112	S	Sn	02 24 31.8	-7.7
GHAJ	Ghor Haditha	10.26	106	Pn	Pn	02 22 47.4	+1.1
GHAJ	Ghor Haditha	10.26	106	P	Pn	02 22 46.9	+0.6
GHAJ	Ghor Haditha	10.26	106	S	Sn	02 24 33.1	-7.4
HRFI	Mount Harif	10.39	113	P	Pn	02 22 49.1	+0.9
HRFI	Mount Harif	10.39	113	S	Sn	02 24 37.8	-6.0
MBRI	Mt Berech	10.42	115	P	Pn	02 22 48.9	+0.3
MBRI	Mt Berech	10.42	115	S	Sn	02 24 37.7	-6.8
EIL	Elat	10.51	115	Pn	Pn	02 22 50.9	+1.1
	0.6nm,0.3s,baz=332,slow=4.6,SNR=14						
	1.5nm,0.3s						
EIL	Elat	10.51	115	P	Pn	02 22 49.9	+0.1
EIL	Elat	10.51	115	S	Sn	02 24 39.9	-6.7
FUORN	Ofenpass-Fuorn	15.86	323	P	P	02 24 05.9	0.0
FUORN				IAmb	IAmb	02 24 24.2	
	comp=Z,8.5nm,1.2s						
GERES	GERESS Array B	16.13	335	Pn	Pn	02 24 05.7	0.0
	baz=148,slow=14,SNR=1.6						
	comp=Z,0.2nm,0.5s						
AKASG	Malin Array Be	16.51	12	Pn	Pn	02 24 09.8	-0.7
	comp=Z,1.1nm,0.3s,baz=204,slow=10.0,SNR=5.2						
	comp=Z,0.1nm,0.3s						
HFS	Hagfors	26.40	348	P	P	02 25 53.2	-1.6
	comp=Z,0.8nm,0.4s,baz=161,slow=10.0,SNR=7.7						
	comp=Z,0.8nm,0.4s						
FINES	FINESS Array B	26.87	2	P	P	02 25 56.7	-2.4
	comp=Z,1.5nm,0.7s,baz=189,slow=10.0,SNR=1.2						
	comp=Z,1.5nm,0.7s						
NOA	NORSAR Array B	27.69	347	P	P	02 26 06.3	-0.1
	comp=Z,0.4nm,0.7s,baz=144,slow=10,SNR=1.0						
	comp=Z,0.4nm,0.7s						
ARCES	ARCESS Array B	34.98	1	P	P	02 27 09.5	-0.9
	comp=Z,3.6nm,1.1s,baz=185,slow=9.4,SNR=5.1						
	comp=Z,3.6nm,1.1s						
KURBB	Kurchatov Arra	42.20	51	P	P	02 28 12.3	+1.1
	comp=Z,1.2nm,0.3s,baz=278,slow=8.4,SNR=5.2						
	comp=Z,1.2nm,0.3s						
MKAR	Makanchi Array	44.86	56	P	P	02 28 34.1	+1.3
	comp=Z,0.7nm,0.3s,baz=270,slow=7.9,SNR=16						
	comp=Z,0.7nm,0.3s						
MKAR	Makanchi Array	44.86	56	P	P	02 28 33.1	+0.3
ZAA0	Zalesovo Array	46.06	46	P	P	02 28 42.1	0.0
ZAA0				IAmb	IAmb	02 28 43.0	
	comp=Z,1.8nm,0.5s						
ZALV	Zalesovo Beam	46.06	46	P	P	02 28 42.6	+0.5
	comp=Z,1.4nm,0.4s,baz=269,slow=9.5,SNR=10.0						
	comp=Z,1.4nm,0.4s						
ZALV	Zalesovo Beam	46.06	46	P	P	02 28 42.2	+0.1
SONM	Songino Array	60.56	50	P	P	02 30 30.1	+1.1
	comp=Z,0.4nm,0.3s,baz=290,slow=6.8,SNR=3.5						
	comp=Z,0.4nm,0.3s						
SONM	Songino Array	60.56	50	P	P	02 30 29.2	+0.3

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*IDC **04** 02:25:43.4±1.1, 34°.76N×23°.97E, h0km, mb4.1/12, mbtmp4.0/19, ML3.4/7, Error ellipse: s-maj=22.7km s-min=13.2km az=176.0*

*ISK **04** 02:25:44.1, 34°.50N×24°.04E, h13km, ML3.7/14*

*THE **04** 02:25:48.0, 35°N±16°×2°4E±°, h15km±18km, M3.5/37, MLh3.5/37*

*ATH **04** 02:25:49.4, 34°.86N×24°.04E, h16km±1km, ML3.6/13, Manual Solution by K.Orfanogiannaki First location: 2019/12/04 02:26:54, This location: 2019/12/04 06:53:15 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*GII **04** 02:25:54.4±0.0, 34°.70N±0°.03×24°.74E±0°.01, h40km, Mws3.6, confirmed*

*AFAD **04** 02:25:58.2, 35°.14N×25°.14E, h8km±4km, ML3.2*

*NAO **04** 02:26:35.1, 41°.04N×27°.15E, h10km, MB3.8*

ISC 04 02:25:46.0±1.1, 34°.58N±0°.06×24°.08E±0°.03, h26km±7km, n170, σ2.49/187, mb4.1/12, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.26	2	P	Pb	02 25 52.6	+0.1
GVD				S	Sb	02 25 56.4	-0.5
GVD	Gavdhos	0.26	2	Pg	Pb	02 25 51.9	-0.6
GVD				Sg	Sb	02 25 56.6	-0.3
GVD	Gavdhos	0.26	2	P	Pb	02 25 52.6	+0.1
KNDR	Palaiochora Ch	0.75	331	P	Pb	02 26 00.4	-0.1
KNDR				S	Sb	02 26 10.4	+0.1
KNDR	Palaiochora Ch	0.75	331	Pg	Pb	02 25 59.9	-0.6
KNDR				Sg	Sb	02 26 11.6	+1.3
KNDR	Palaiochora Ch	0.75	331	P	Pb	02 25 59.4	-1.1
KNDR				S	Sb	02 26 06.5	-3.8
VAM	Vamos	0.83	7	P	Pb	02 26 00.6	-1.2
IMMV	Iera Moni Meta	0.88	355	P	Pn	02 26 03.9	+1.1
CHNB	Souda	0.90	360	P	Pb	02 26 02.3	-0.7
CHNB				S	Sb	02 26 10.7	-4.0
CH01	Chania	0.93	357	P	Pn	02 26 02.5	-1.0
CHAN	Chania	0.94	358	P	Pb	02 26 05.6	+2.0
CHAN	Chania	0.94	358	P	Pn	02 26 02.3	-1.2
CHAN				S	Sb	02 26 11.4	-4.2
IDI	Anoyia	0.97	43	Pn	Pb	02 26 05.1	+0.8
	177nm,0.3s,baz=241,slow=14,SNR=69						
IDI				Sn	Sb	02 26 17.8	+1.1
	220nm,0.3s,baz=336,slow=20,SNR=12						
IDI	Anoyia	0.97	43	P	Pb	02 26 07.1	+2.8
IDI	Anoyia	0.97	43	Pg	Pn	02 26 04.6	+0.5
IDI				Sg	Sn	02 26 19.7	+2.6
IDI	Anoyia	0.97	43	P	Pb	02 26 05.2	+1.0
IDI				S	Sb	02 26 16.0	-0.7
IACM	Heraklion	1.09	48	P	Pb	02 26 08.1	+1.9
ANKY	Antikythira Is	1.43	334	P	Pb	02 26 12.5	+0.5
ANKY	Antikythira Is	1.43	334	P	Pn	02 26 11.9	+1.6
NPS	Neapolis	1.43	61	P	Pb	02 26 14.8	+2.7
NPS	Neapolis	1.43	61	P	Pb	02 26 14.2	+2.1
ZKR	Zakros	1.84	73	Pn	Pn	02 26 17.1	+1.1
KTHA	Kythira Island	1.86	334	P	Pn	02 26 18.7	+2.3
KTHA	Kythira Island	1.86	334	Pn	Pn	02 26 17.9	+1.6
THR9	Santorini-Faro	2.06	30	P	Pn	02 26 21.6	+2.6
THR6	Thira Island,	2.07	31	P	Pn	02 26 21.8	+2.7
SNT5	Nea Kammeni, S	2.11	30	P	Pn	02 26 22.0	+2.3
THERA	Ancient Thera,	2.12	32	P	Pn	02 26 21.7	+1.9
MHLO	Agia Marina, M	2.12	7	P	Pn	02 26 20.8	+1.0
SAP3	Santorini-Thir	2.12	29	P	Pn	02 26 21.9	+2.1
THR3	Thira Island,	2.12	30	P	Pn	02 26 22.1	+2.2
THR8	Santorini-Mono	2.15	32	P	Pn	02 26 21.8	+1.6
THR2	Thira island,	2.17	30	P	Pn	02 26 22.9	+2.4
VLI	Veliai	2.32	337	P	Pn	02 26 25.0	+2.4
VLI	Veliai	2.32	337	P	Pn	02 26 24.1	+1.5
KARP	Karpathos	2.71	68	P	Pb	02 26 31.9	-2.0
KARP	Karpathos	2.71	68	Pn	Pn	02 26 29.1	+1.1
KARP	Karpathos	2.71	68	P	Pb	02 26 31.8	-2.0
APE	Apeiranthos	2.75	25	P	Pn	02 26 29.4	+0.9
APE				S	Sn	02 27 01.9	+0.9
APE	Apeiranthos	2.75	25	P	Pn	02 26 29.1	+0.6
PYL	PYLOS	2.99	321	P	Pn	02 26 32.1	+0.3
MET4	Agioi Theodoro	3.08	350	P	Pn	02 26 33.8	+0.7
MET5	Makryloggos,Me	3.09	349	P	Pn	02 26 34.2	+1.0
VLX	Vlachokerasia	3.10	334	P	Pn	02 26 35.8	+2.3
ITM	Ithomi	3.12	327	P	Pn	02 26 35.1	+1.4
ITM	Ithomi	3.12	327	Pn	Pn	02 26 35.1	+1.4
ITM	Ithomi	3.12	327	P	Pn	02 26 34.8	+1.1
NISR	Nisiros	3.21	50	P	Pn	02 26 37.2	+2.4
NISR	Nisiros	3.21	50	P	Pn	02 26 37.0	+2.3
VLY	Voula,Athens	3.27	356	P	Pn	02 26 36.4	+0.7
VLY	Voula,Athens	3.27	356	P	Pn	02 26 35.9	+0.2
ATHU	Athens Univers	3.39	356	P	Pn	02 26 36.8	-0.4
ATH	Athens Observa	3.40	355	P	Pn	02 26 38.1	+0.8
KARY	Karystos	3.46	5	P	Pn	02 26 39.1	+0.9
YAZI	Mula-Dat§a-	3.46	52	P	Pn	02 26 40.6	+2.3
YAZI				S	Sn	02 27 11.8	-6.6
PTL	Penteli	3.46	357	P	Pn	02 26 39.1	+0.8
DION	Dionisos Attik	3.49	358	P	Pn	02 26 39.6	+0.9
MAGU	Magoula	3.52	353	P	Pn	02 26 39.7	+0.6
LTK	Loutraki	3.55	346	P	Pn	02 26 40.7	+1.2
DAT	Datca	3.57	52	P	Pn	02 26 42.7	+2.8
DAT				S	Sn	02 27 16.7	-4.5
DAT	Datca	3.57	52	Pn	Pn	02 26 42.3	+2.5
STFN	Stefani	3.61	353	P	Pn	02 26 41.4	+1.0
VILL	Villia	3.63	350	P	Pn	02 26 41.3	+0.7
GUR	Goura	3.63	338	P	Pn	02 26 42.6	+2.0
ARG	Arkhangelos	3.69	63	P	Pn	02 26 44.8	+3.4
ARG	Arkhangelos	3.69	63	Pn	Pn	02 26 43.6	+2.2
BDRM	Kayabasi	3.69	47	P	Pn	02 26 43.8	+2.3
BDRM				S	Sn	02 27 21.3	-2.9
KLV	Kalavryta, Ach	3.79	336	P	Pn	02 26 44.6	+1.8
SMG	Samos	3.84	35	P	Pn	02 26 45.1	+1.6
GCAM	G?zelcaml?	4.03	38	P	Pn	02 26 48.6	+2.6
TURN	Turunc	4.04	56	P	Pn	02 26 49.2	+3.0
TURN				S	Sn	02 27 26.8	-5.8
TURN				*i* IAML		02 27 35.0	
	comp=E,86nm,0.4s						
TURN				*i* IAML		02 27 36.0	
	comp=N,75nm,0.4s						
TURN	Turunc	4.04	56	Pn	Pn	02 26 48.3	+2.1
KYMI	Kymi, Euboea I	4.04	0	P	Pn	02 26 46.8	+0.5
CHOS	Chios island	4.12	22	P	Pn	02 26 48.5	+1.1
LKR	Lokris	4.15	348	P	Pn	02 26 48.1	+0.4
SERG	Sergoula	4.16	338	P	Pn	02 26 49.1	+1.3
EFP	Efpalio	4.22	336	P	Pn	02 26 51.0	+2.4
YER	Yerkesik	4.26	52	P	Pn	02 26 53.3	+3.9
URLA	Izmir	4.28	28	P	Pn	02 26 50.8	+1.2
MULA	Mugla, Merkez-	4.36	51	P	Pn	02 26 54.7	+4.0
ANX	Ano Chora	4.36	337	P	Pn	02 26 52.1	+1.4
BLCB	Balcova	4.49	31	Pn	Pn	02 26 54.6	+2.3
AYDB	Zeytinkoy-Aydi	4.56	41	Pn	Pn	02 26 56.0	+2.5
FETY	Fethiye	4.57	62	P	Pn	02 26 50.0	-3.5
SABU	Mula-Dalaman	4.57	59	P	Pn	02 26 56.4	+2.9
AGG	Agios Georgios	4.65	343	P	Pn	02 26 55.2	+0.6
ESEN	Aydn-Nazilli	4.72	46	P	Pn	02 26 58.9	+3.4
IZMR	zmir-demi	4.73	40	P	Pn	02 26 58.6	+2.9
NAZL	Nazilli-Aydin	4.79	44	Pn	Pn	02 26 59.5	+2.9
AKAS	Kas	4.81	68	P	Pn	02 26 59.5	+2.6
DNZT	Denizli-Tavas-	4.83	55	P	Pn	02 27 00.6	+3.3
TAVA	DENIZLI_Tavas	4.86	52	P	Pn	02 27 01.1	+3.5
ODEM	Odemis-Izmir	4.90	40	Pn	Pn	02 27 00.8	+2.7
CAEL	Denizli, Camel	4.96	58	P	Pn	02 27 02.5	+3.6
KNIK	Mula-Seydike	5.01	62	P	Pn	02 27 02.5	+2.9
KIRA	zmir-Kiraz	5.02	43	P	Pn	02 27 02.8	+3.1
DNIZ	Denizli-Tavas-	5.04	51	P	Pn	02 27 02.8	+2.8
GOLH	Golhisar	5.18	58	P	Pn	02 27 05.3	+3.3
MANT	Manisa	5.31	41	P	Pn	02 27 07.0	+3.1
INCE	Denizli-Bozkur	5.43	53	P	Pn	02 27 08.7	+3.2
CSS	Mathiatis	7.63	85	P	Pn	02 27 35.6	+0.1
CSS	Mathiatis	7.63	85	S	Sn	02 28 56.0	-5.2
VAE	Valguarnera	8.34	293	Pn	Pn	02 27 48.0	+2.6
	0.6nm,0.3s,baz=146,slow=18,SNR=1.7						
VAE				Sn	Sn	02 29 13.0	-5.8
	2.4nm,0.3s,baz=36,slow=12,SNR=3.7						
BRTR	Keskin Array B	9.20	53	Pn	Pn	02 27 59.9	+2.7
	0.2nm,0.3s,baz=223,slow=14,SNR=9.7						
	2.2nm,0.9s						
SLTI	Sal'it	9.46	101	P	Pn	02 28 01.3	+0.6
SLTI	Sal'it	9.46	101	S	Sn	02 29 41.0	-5.2
MMC7	Mount Meron ar	9.55	96	P	Pn	02 28 02.2	+0.3
MMC7	Mount Meron ar	9.55	96	S	Sn	02 29 44.0	-4.4
MMAI	Mount Meron Ar	9.56	96	Pn	Pn	02 28 02.0	-0.1
	2.9nm,0.3s,baz=313,slow=11,SNR=18						
MMAI				Sn	Sn	02 29 46.5	-2.2
	2.3nm,0.3s,baz=292,slow=23,SNR=5.1						
	0.9nm,0.3s						
AMAZ	Amatzia	9.59	105	P	Pn	02 28 03.9	+1.4
AMAZ	Amatzia	9.59	105	S	Sn	02 29 44.8	-4.7
SALP	Salfit	9.63	102	P	Pn	02 28 04.0	+1.0
MMLI	Mount Malkishu	9.71	100	P	Pn	02 28 05.4	+1.3
MMLI	Mount Malkishu	9.71	100	S	Sn	02 29 47.5	-4.9
GEM	Giv'at Ha'Em	9.73	95	P	Pn	02 28 04.6	+0.2
GEM	Giv'at Ha'Em	9.73	95	S	Sn	02 29 47.3	-5.5
NATI	Neve Ativ	9.78	94	P	Pn	02 28 06.4	+1.4
NATI	Neve Ativ	9.78	94	S	Sn	02 29 49.3	-4.7
YTIR	Yattir	9.81	106	P	Pn	02 28 06.7	+1.1
YTIR	Yattir	9.81	106	S	Sn	02 29 50.5	-4.5
HMDT	Nahal Hemdat	9.85	100	P	Pn	02 28 07.7	+1.7
HMDT	Nahal Hemdat	9.85	100	S	Sn	02 29 51.0	-4.7
DSI	Dead Sea	9.95	104	P	Pn	02 28 08.7	+1.3
DSI	Dead Sea	9.95	104	S	Sn	02 29 53.3	-4.9
MSBI	Mazada	10.03	106	P	Pn	02 28 09.9	+1.6
MSBI	Mazada	10.03	106	S	Sn	02 29 55.8	-4.2
KRMI	Paran Flat	10.05	113	P	Pn	02 28 10.4	+1.7
KRMI	Paran Flat	10.05	113	S	Sn	02 29 56.8	-3.9
PRNI	Paran	10.15	112	P	Pn	02 28 12.4	+2.3
PRNI	Paran	10.15	112	S	Sn	02 29 59.3	-3.9
ZFRI	Zfri	10.19	110	P	Pn	02 28 11.7	+1.0
ZFRI	Zfri	10.19	110	S	Sn	02 29 59.3	-4.8
GHAJ	Ghor Haditha	10.19	106	P	Pn	02 28 12.4	+1.7
GHAJ	Ghor Haditha	10.19	106	S	Sn	02 30 00.0	-4.1
HRFI	Mount Harif	10.32	113	P	Pn	02 28 13.9	+1.4
HRFI	Mount Harif	10.32	113	S	Sn	02 30 03.8	-3.6
MBRI	Mt Berech	10.35	114	P	Pn	02 28 15.1	+2.2
MBRI	Mt Berech	10.35	114	S	Sn	02 30 05.3	-2.8
EIL	Elat	10.44	115	Pn	Pn	02 28 15.8	+1.8
	0.8nm,0.3s,baz=2.0,slow=3.3,SNR=10						
EIL				Sn	Sn	02 30 06.8	-3.5
	0.7nm,0.3s,baz=34,slow=15,SNR=2.4						
	3.9nm,0.5s						
EIL	Elat	10.44	115	P	Pn	02 28 15.4	+1.3
EIL	Elat	10.44	115	S	Sn	02 30 06.8	-3.5
ASF	Jabal al Asfar	10.99	99	Pn	Pn	02 28 23.2	+1.5
	0.4nm,0.3s,baz=285,slow=12,SNR=3.0						
ASF				Sn	Sn	02 30 19.9	-3.9
	0.3nm,0.3s,baz=18,slow=20,SNR=1.8						
	1.0nm,0.3s						
KEST	Kesra	12.11	280	Pn	Pn	02 28 36.5	-0.5
	0.1nm,0.3s,baz=99,slow=19,SNR=1.8						
KEST				Sn	Sn	02 30 43.8	-7.5
	0.1nm,0.3s,baz=108,slow=20,SNR=1.2						
	5.1nm,1.1s						
ABTA	Abfaltersbach	14.97	328	Pn	P	02 29 23.0	+1.9
	3.0nm,0.6s						
LESA	Schwarzleotal	15.42	330	*e*Pn	P	02 29 27.8	+1.5
	1.9nm,0.5s						
VRAC	Vranov	15.72	342	Pn	Pn	02 29 27.8	+2.2
	0.1nm,0.3s,baz=123,slow=15,SNR=3.5						
WATA	Walderalm	15.83	327	*i* Pn	P	02 29 34.1	+3.3
CKRC	Cesky Krumlov	15.96	336	*e*P	P	02 29 35.9	+3.7
FETA	Feichten	15.99	325	Pn	P	02 29 35.5	+2.9
	2.8nm,0.7s						
MOTA	Moosalm	16.05	326	*i* Pn	P	02 29 35.3	+2.0
	1.7nm,0.5s						
GERES	GERESS Array B	16.20	335	Pn	Pn	02 29 32.3	+0.5
	baz=146,slow=11,SNR=9.3						
	0.9nm,0.6s						
DAVOX	Davos/Dischmat	16.23	323	Pn	P	02 29 36.8	+1.5
	0.2nm,0.3s,baz=180,slow=15,SNR=3.1						
KHC	Kasperske Hory	16.48	335	*e*P	P	02 29 39.2	+1.3
ZVC	Zvikov	16.54	337	*e*P	P	02 29 39.4	+0.9
AKASG	Malin Array Be	16.54	12	Pn	Pn	02 29 36.5	+0.3
	2.0nm,0.3s,baz=210,slow=10,SNR=8.9						
KBZ	Khabaz	17.19	52	P	Pn	02 29 44.0	-0.3
	0.2nm,0.3s,baz=200,slow=4.5,SNR=6.7						
	5.9nm,1.0s						
ESDC	Sonseca Array	22.88	291	P	P	02 30 46.9	-0.8
	1.9nm,0.9s,baz=94,slow=7.2,SNR=6.8						
	1.9nm,0.9s						
HFS	Hagfors	26.45	348	P	P	02 31 19.4	-1.2
	3.2nm,0.6s,baz=146,slow=9.0,SNR=15						
	3.2nm,0.6s						
FINES	FINESS Array B	26.91	2	P	P	02 31 21.4	-3.4
	1.7nm,0.6s,baz=155,slow=15,SNR=6.4						
NB2	NORSAR Subarra	27.74	347	P	P	02 31 31.5	-0.8
	comp=Z,2.9nm,0.7s,baz=147,slow=11						
NOA	NORSAR Array B	27.74	347	P	P	02 31 31.0	-1.3
	comp=Z,0.3nm,0.5s,baz=157,slow=10,SNR=5.5						
	comp=Z,0.3nm,0.5s						
TORD	Torodi Ar. Bea	29.44	229	P	P	02 31 49.9	+2.2
	comp=Z,4.9nm,0.5s,baz=33,slow=13,SNR=2.7						
	comp=Z,4.9nm,0.5s						
ARCES	ARCESS Array B	35.02	1	P	P	02 32 34.4	-1.7
	comp=Z,1.5nm,0.6s,baz=188,slow=9.7,SNR=14						
	comp=Z,1.5nm,0.6s						
BVAR	Borovoye Array	37.39	46	P	P	02 32 57.5	+0.9
	comp=Z,0.5nm,0.4s,baz=284,slow=6.0,SNR=5.7						
	comp=Z,0.5nm,0.4s						
KURBB	Kurchatov Arra	42.18	51	P	P	02 33 37.3	+0.9
	comp=Z,2.0nm,0.4s,baz=278,slow=8.6,SNR=19						
	comp=Z,2.0nm,0.4s						
SPITS	Spitsbergen Ar	43.83	358	P	P	02 33 49.7	+0.3
	comp=Z,4.4nm,0.8s,baz=171,slow=10,SNR=1.5						
	comp=Z,4.4nm,0.8s						
MKAR	Makanchi Array	44.84	56	P	P	02 33 59.0	+1.1
	comp=Z,0.8nm,0.3s,baz=271,slow=8.1,SNR=16						
	comp=Z,0.8nm,0.3s						
ZALV	Zalesovo Beam	46.05	46	P	P	02 34 07.1	-0.2
	comp=Z,2.8nm,0.4s,baz=273,slow=8.7,SNR=14						
	comp=Z,2.8nm,0.4s						
SONM	Songino Array	60.54	50	P	P	02 35 55.1	+0.9
	comp=Z,0.7nm,0.4s,baz=284,slow=7.3,SNR=8.2						
	comp=Z,0.7nm,0.4s						
SCHQ	Schefferville	63.05	320	P	P	02 36 11.4	+0.6
	comp=Z,4.4nm,0.9s,baz=68,slow=5.4,SNR=1.7						
	comp=Z,4.4nm,0.9s						

IDC 04 02:28:16.7±4.9, 17°.09S×174°.94W, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=214.3km s-min=35.5km az=138.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.92	241	P	P	02 36 09.9	+0.6
	2.0nm,0.8s,baz=79,slow=16,SNR=4.0						
	2.0nm,0.8s						
WRA	Warramunga Arr	48.04	258	P	P	02 36 57.6	-0.6
	0.8nm,0.7s,baz=97,slow=6.6,SNR=6.5						
	0.8nm,0.7s						
ASAR	Alice Springs	48.20	253	P	P	02 36 59.2	-0.2
	4.6nm,0.7s,baz=89,slow=8.6,SNR=53						
	4.6nm,0.7s						
ILAR	Eielson Array	84.38	12	P	P	02 40 50.5	0.0
	0.4nm,0.8s,baz=215,slow=5.5,SNR=4.9						
	0.4nm,0.8s						

TRN 04 02:30:25.8, 16°.13N×61°.32W, h23km, MD3.6, East of Guadeloupe., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DSDZ	La Diserade, G	0.31	53	*e*P	Pb	02 30 33.4	+0.6
DSDZ				*e*S	Sb	02 30 37.6	+0.1
MMLZ	Guadeloupe Bro	0.34	256	*e*P	Pn	02 30 36.0	+0.5
MMLZ				*e*S	Sn	02 30 41.6	-0.1
ATGZ	Broadband at L	0.39	265	*e*P	Pn	02 30 36.5	+0.4
ATGZ				*e*S	Sn	02 30 42.9	0.0
TBG	Guadaloupe-3	0.42	229	*e*P	Pn	02 30 37.1	+0.7
TBG				*e*S	Sn	02 30 43.6	+0.2
DHSZ	Broadband at M	0.45	289	*e*P	Pn	02 30 36.9	-0.1
DHSZ				*e*S	Sn	02 30 43.9	-0.4
DWS	Wesley	0.56	179	*e*P	Pn	02 30 39.1	+0.7
DWS				*e*S	Sn	02 30 47.4	+0.4
DSLB	Salisbury	0.69	188	*e*P	Pn	02 30 41.3	+1.0
DSLB				*e*S	Sn	02 30 52.6	+2.2
DLPL	La Plaine	0.80	175	*e*P	Pn	02 30 44.6	+2.9
DLPL				*e*S	Sn	02 30 54.1	+1.2
MLYT	Lee's Yard	1.02	305	*e*P	Pb	02 30 47.2	+2.4
MLYT				*e*S	Sn	02 31 01.8	+3.3
SVN	Savane Anatole	1.29	173	*e*P	Pb	02 30 50.6	+1.2
SVN				*e*S	Sb	02 31 07.3	+1.7
ILAM	Ilet Lapin Mar	1.41	162	*e*P	Pb	02 30 52.1	+0.6
ILAM				*e*S	Sb	02 31 11.1	+2.0
ANWB	Willy Bob	1.59	344	*e*P	Pb	02 30 53.8	-0.9
ANWB				*e*S	Sb	02 31 14.2	-0.1
BIM	Bigot	1.62	171	*e*P	Pb	02 30 55.2	+0.1
BIM				*e*S	Sb	02 31 15.2	+0.1
SKI	Saint Kitts	1.81	312	*e*P	Pb	02 30 57.9	-0.5
SKI				*e*S	Sb	02 31 21.0	+0.4
SLBI	Saint Lucia, B	2.12	171	*e*P	Pb	02 31 02.1	-1.5
SLBI				*e*S	Sb	02 31 27.9	-1.6
SLCP	Castries, St.	2.13	171	*e*P	Pb	02 31 03.0	-0.8
SLAC	Saint Lucia, A	2.26	169	*e*P	Pb	02 31 04.5	-1.4
SLAC				*e*S	Sb	02 31 32.0	-1.4
MCLT	Moule a Chique	2.43	171	*e*P	Pn	02 31 05.8	+1.6

MCLT				eS	Sn	02 31 35.7	+2.4

IDC ***04*** *02:33:00.9±3.7, 41°29N×19°39E, h0^{km}, mb3.7/2, mbtmp3.5/5, ML3.0/3, Error ellipse: s-maj=50.6km s-min=19.7km az=177.0*
TIR ***04*** *02:33:04.9, 41°56N×19°52E, h38^{km}±2^{km}, Ml3.2/4*
BEO ***04*** *02:33:04.5±0.5, 41°39N×19°55E, h9^{km}±2^{km}, ML3.0/23*
SKO ***04*** *02:33:04.8, 41°45N×19°38E, h13^{km}, ML3.2*
PDG ***04*** *02:33:04.4±0.3, 41°48N×19°56E, h4^{km}±1^{km}, MD3.1/1, ML3.0/12, Error ellipse: s-maj=1.1km s-min=1.4km az=0.0*
THE ***04*** *02:33:04.8, 42°N±5°×1°9E±°, h3^{km}±32^{km}, M3.2/43, MLh3.2/43*
ISC 04 02:33:04.9±1.0**, 41°48N**±0°02×**19°49E**±0°02**, h11**^{km}±8^{km}**, n146, σ1^{s}19**/195**, 11C-12D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.31	114	Pg	Pg	02 33 10.3	-0.8
TIR				Sg	Sg	02 33 16.3	+1.0
TIR				AML	AML	02 33 16.6	
	9.1nm,0.5s						
TIR				AML	AML	02 33 16.9	
	8.8nm,0.3s						
ULC	Ulcinj	0.52	339	⇑iPg	Pg	02 33 14.3	-0.8
ULC				iSg	Sg	02 33 23.2	+1.2
SDA	Shkodra	0.58	1	Pg	Pg	02 33 15.5	-0.6
SDA				Sg	Sg	02 33 23.6	-0.1
PHP	Peshkopia	0.74	73	Pg	Pg	02 33 18.2	-1.1
PHP				Sg	Sg	02 33 29.5	+0.5
PHP				AML	AML	02 33 34.8	
	4.0nm,0.6s						
PHP	Peshkopia	0.74	73	P	Pg	02 33 18.1	-1.2
PHP				S	Sg	02 33 29.7	+0.6
DRME	Dracevica, Mon	0.75	342	⇑iPg	Pg	02 33 18.4	-1.0
DRME				eSg	Sb	02 33 31.2	+1.1
BUM	Brajici-Budva	0.94	332	⇓iPg	Pg	02 33 22.3	-0.7
BUM				iSg	Sn	02 33 38.1	+0.6
PDG	Podgorica	0.97	350	Pg	Pg	02 33 22.4	-1.2
PDG				Sg	Sg	02 33 35.8	-0.4
PDG	Podgorica	0.97	350	⇑P	Pg	02 33 22.0	-1.6
PDG	Podgorica	0.97	350	ePg	Pg	02 33 22.8	-0.8
PDG				eSg	Sn	02 33 38.8	+0.6
PDG	Podgorica	0.97	350	⇑iPg	Pg	02 33 22.0	-1.6
PDG				iSg	Sb	02 33 38.0	+1.5
VLO	Vlora	1.01	180	P	Pb	02 33 24.8	+0.5
VLO				Sg	Sn	02 33 38.9	-0.2
VLO				AML	AML	02 33 44.3	
	7.1nm,0.3s						
VLO	Vlora	1.01	180	P	Pn	02 33 25.1	+0.2
VLO				S	Sn	02 33 41.1	+2.0
OHR	Ohrid	1.05	110	iPg	Pg	02 33 24.4	-0.8
OHR				iSg	Sn	02 33 41.2	+1.0
OHR				eLg	Lg	02 33 43.3	
	comp=N,683nm,0.6s						
OHR				eLg	Lg	02 33 44.5	
	comp=E,690nm,0.5s						
CEME	Cevo	1.15	338	⇓iPg	Pb	02 33 26.0	-0.9
CEME				eSg	Sn	02 33 44.4	+1.6
PVY	Plav	1.17	17	⇑iPg	Pb	02 33 25.6	-1.6
PVY				iSg	Sg	02 33 44.0	+1.3
HCY	Herceg Novi	1.22	323	⇓iPg	Pn	02 33 28.0	+0.1
HCY				iSg	Sn	02 33 46.8	+2.4
KBN	Korca	1.30	131	Pg	Pn	02 33 29.4	+0.4
KBN				Sg	Sg	02 33 47.8	+1.1
KBN				AML	AML	02 33 51.8	
	comp=E,3.3nm,0.6s						
KBN	Korca	1.30	131	P	Pb	02 33 29.8	+0.4
KBN				S	Sg	02 33 49.5	+2.8
NKME	Niksic	1.35	343	⇓iPg	Pn	02 33 29.6	-0.1
NKME				eSg	Sg	02 33 50.9	+2.5
KOME	Kolasin	1.37	1	⇓iPg	Pn	02 33 29.8	-0.3
KOME				eSg	Sg	02 33 51.2	+2.0
IVA	Berane	1.43	12	⇑iPg	Pn	02 33 30.5	-0.3
IVA				iSg	Sg	02 33 52.8	+1.9
TREB	Trebinje	1.50	326	ePn	Pn	02 33 31.5	-0.2
TREB	Trebinje	1.50	326	ePg	Pn	02 33 31.6	-0.2
TREB				eSg	Sg	02 33 55.6	+2.3
SKO	Skopje	1.54	71	iPg	Pb	02 33 33.8	+0.3
SKO				iSg	Sg	02 33 56.5	+2.0
NEST	Nestorio	1.59	131	P	Pb	02 33 34.4	+0.1
NEST				S	Sg	02 33 57.4	+1.4
BRY	Bratogost	1.59	334	⇓iPn	Pn	02 33 33.8	+0.7
BRY				iSn	Sg	02 33 58.7	+2.6
UPM	Unac-Piva	1.78	346	⇓iPn	Pn	02 33 37.3	+1.5
PENT	Pentalofos	1.79	135	P	Pb	02 33 37.5	-0.2
SJES	Sjenica	1.82	11	ePg	Pb	02 33 38.4	+0.1
SJES				eSg	Sg	02 34 04.5	+1.1
KLINJ	Klinje	1.82	339	ePn	Pn	02 33 37.4	+1.2
PLE	Pljevlja	1.85	358	⇓iPn	Pn	02 33 38.8	+2.1
PLE				iSn	Sb	02 34 03.8	+1.7
STON	Ston	1.93	317	ePn	Pn	02 33 37.8	+0.2
STON				eSn	Sb	02 34 05.1	+1.0
NOCI	Noci	1.96	250	Pn	Pn	02 33 39.5	+1.5
IGT	Igoumenitsa	2.04	161	Pn	Pn	02 33 40.4	+1.1
IGT	Igoumenitsa	2.04	161	P	Pn	02 33 39.0	-0.2
KPRO	Kipourio	2.08	136	P	Pn	02 33 41.2	+1.4
KZN	Kozani	2.09	123	P	Pn	02 33 40.6	+0.7
JAN	Janina	2.09	150	P	Pn	02 33 40.8	+0.9
SELS	Selova	2.12	34	ePn	Pn	02 33 41.3	+1.0
SELS				eSn	Sn	02 34 07.2	+0.6
RUDO	Rudo	2.14	358	ePn	Pn	02 33 41.2	+0.6
RUDO	Rudo	2.14	358	ePn	Pb	02 33 43.4	-0.3
IVAS	Ivanjica	2.16	13	ePn	Pn	02 33 41.6	+0.8
IVAS				eSn	Sn	02 34 09.4	+1.8
BARS	Barje	2.19	51	iPn	Pn	02 33 42.3	+1.1
BARS	Barje	2.19	51	ePn	Pn	02 33 42.3	+1.1
BARS				eSn	Sn	02 34 07.8	-0.5
GRG	Griva	2.26	102	P	Pn	02 33 42.9	+0.7
GRG				S	Sn	02 34 12.1	+2.1
GRG	Griva	2.26	102	iPn	Pn	02 33 43.0	+0.9
MATE	Matera	2.26	250	⇑P	Pn	02 33 41.9	-0.3
PRMD	Pramanda	2.30	147	P	Pn	02 33 43.9	+1.2
VAY	Valandovo	2.32	93	iPn	Pn	02 33 44.5	+1.5
VAY				iSn	Sn	02 34 12.4	+0.9
VAY				eLg	Lg	02 34 12.7	
	comp=E,56nm,0.8s						
VAY				eLg	Lg	02 34 13.8	
	comp=N,52nm,0.7s						
GOCS	Kraljevo Serbi	2.32	26	ePn	Pn	02 33 44.3	+1.2
GOCS				eSn	Sn	02 34 13.0	+1.3
BBLS	Lazi&#263i	2.39	359	ePn	Pn	02 33 45.5	+1.5
BOSS	Bosilegrad	2.45	64	ePn	Pn	02 33 45.6	+0.8
BOSS				eSn	Sn	02 34 13.1	-1.7
TETR	Tetrakomo, Epi	2.53	147	P	Pn	02 33 47.1	+1.2
GRUS	Gruza	2.58	20	ePn	Pn	02 33 47.5	+1.0
KNT	Kendrikon	2.59	96	P	Pn	02 33 47.6	+0.8
KNT				S	Sn	02 34 19.7	+1.6
KNT	Kendrikon	2.59	96	iPn	Pn	02 33 47.5	+0.8
BOVS	Bovan	2.71	36	⇑P	Pn	02 33 49.3	+1.0
BOVS	Bovan	2.71	36	ePn	Pn	02 33 49.1	+0.8
BOVS				eSn	Sn	02 34 21.9	+0.8
THL	Klokotos Trika	2.71	134	P	Pn	02 33 49.2	+0.9
THL				S	Sb	02 34 24.2	-2.4
TRAN	Tran	2.71	59	P	Pn	02 33 49.7	+1.2
KKB	Krupnik	2.75	81	P	Pn	02 33 50.1	+1.2
KKB	Krupnik	2.75	81	P	Pn	02 33 50.4	+1.5
KKB	Krupnik	2.75	81	iPn	Pn	02 33 50.2	+1.2
THE	Thessaloniki	2.76	107	P	Pn	02 33 49.1	+0.1
THE	Thessaloniki	2.76	107	iPn	Pn	02 33 49.4	+0.4
TSLK	Tsoukalades, L	2.79	161	P	Pn	02 33 48.9	-0.6
TRUS	Trudelj	2.83	13	ePn	Pn	02 33 51.1	+1.1
TRUS				eSn	Sg	02 34 34.4	-1.3
LKD2	Lefkada island	2.83	161	P	Pn	02 33 49.3	-0.8
HORT	Hortiatis	2.87	107	P	Pn	02 33 50.6	0.0
AMPL	Ampelaki	2.87	152	P	Pn	02 33 50.8	+0.2
DRAG	Dragano-Lefkad	2.91	163	P	Pn	02 33 49.8	-1.3
NYDR	Nydri-Lefkada	2.91	161	P	Pn	02 33 50.2	-0.9
ZAPS	Zavoj	2.94	51	ePn	Pn	02 33 53.1	+1.5
ZAPS				eSn	Sn	02 34 25.6	-1.3
EVGI	Lefkada island	2.99	162	P	Pn	02 33 51.0	-1.2
SOH	Sokhos	2.99	101	P	Pn	02 33 52.9	+0.6
SOH				S	Sn	02 34 30.1	+2.0
SOH	Sokhos	2.99	101	iPn	Pn	02 33 52.9	+0.6
VTS	Vitosha	3.01	67	P	Pn	02 33 53.3	+0.6
VTS	Vitosha	3.01	67	P	Pn	02 33 53.7	+1.0
VTS	Vitosha	3.01	67	ePn	Pn	02 33 53.7	+1.0
VTS				eSn	Sn	02 34 27.5	-1.3
TEKS	Tekeris	3.07	1	ePn	Pn	02 33 53.7	+0.3
ZAGS	Zajecar	3.09	40	ePn	Pn	02 33 54.6	+1.0
ZAGS				eSn	Sn	02 34 29.0	-1.5
PLNA	Plana	3.10	70	P	Pn	02 33 55.6	+1.8
SRS	Serrai	3.11	95	P	Pn	02 33 54.2	+0.3
SRS	Serrai	3.11	95	iPn	Pn	02 33 54.5	+0.6
EVR	Evrytania	3.11	144	P	Pn	02 33 55.3	+1.3
FSK	Fiskardo	3.12	164	P	Pn	02 33 52.1	-2.0
BLSH	Balsha	3.14	63	P	Pn	02 33 56.5	+2.2
MAKR	Makrakomi, Fth	3.18	140	P	Pn	02 33 56.2	+1.2
MMB	Musomishta	3.20	87	P	Pn	02 33 56.4	+1.2
MMB				S	Sn	02 34 34.4	+1.1
MMB	Musomishta	3.20	87	eP	Pn	02 33 56.5	+1.4
MMB	Musomishta	3.20	87	iPn	Pn	02 33 56.4	+1.2
BORS2	Bor- Borsko je	3.21	35	ePn	Pn	02 33 54.6	-0.6
BORS2				eSn	Sn	02 34 33.4	0.0
PVO	Paravola	3.25	151	P	Pn	02 33 56.1	+0.2
AGG	Agios Georgios	3.28	138	P	Pn	02 33 56.7	+0.5
AVAS	Avala Beograd	3.31	13	ePn	Pn	02 33 56.7	+0.1
KUBS	Kucevo	3.34	28	ePn	Pn	02 33 56.4	-0.7
KUBS				eSn	Sn	02 34 35.9	-0.9
VLS	Valsamata	3.40	165	P	Pn	02 33 56.1	-1.8
ANX	Ano Chora	3.43	146	P	Pn	02 33 59.7	+1.3
EFP	Efpalio	3.57	148	P	Pn	02 34 01.0	+0.9
AXAR	Agios Charalam	3.64	137	P	Pn	02 34 02.0	+0.9
SERG	Sergoula	3.64	146	P	Pn	02 34 01.9	+0.7
MPEP	Malo Peshtene	3.67	58	eP	Pn	02 34 03.5	+2.0
BLY	Banja Luka	3.68	333	ePn	Pn	02 34 01.7	0.0
BLY	Banja Luka	3.68	333	⇓P	Pn	02 34 01.8	0.0
MDVR	Moldovita	3.68	25	ePn	Pn	02 34 02.3	+0.5
MDVR				eSn	Sn	02 34 45.6	+0.4
FRGS	Fruska Gora	3.69	4	ePn	Pn	02 34 01.8	0.0
KAVA	Kavala	3.82	96	P	Pn	02 34 04.1	+0.6
ATAL	Atalanti	3.88	135	P	Pn	02 34 05.0	+0.5
VRSS	Vrsac	3.88	20	ePn	Pn	02 34 06.0	+1.5
VRSS				eSn	Sn	02 34 49.5	-0.6
LKR	Lokris	3.90	135	P	Pn	02 34 04.9	+0.2
DRO	Drossia	3.91	153	P	Pn	02 34 04.4	-0.5
PLD	Plovdiv	3.99	79	ePn	Pn	02 34 07.4	+1.5
KLV	Kalavryta, Ach	3.99	148	P	Pn	02 34 06.3	+0.3
HERR	Herculane	4.02	31	⇓P	Pn	02 34 07.2	+0.8
GUR	Goura	4.16	147	P	Pn	02 34 08.0	-0.4
KDZ	Kurdzhali	4.39	86	P	Pn	02 34 12.5	+1.1
BZS	Buzias	4.42	20	⇑P	Pn	02 34 12.2	+0.4
VILL	Villia	4.43	137	P	Pn	02 34 11.8	-0.2
STFN	Stefani	4.54	135	P	Pn	02 34 13.8	+0.2
GZR	Gura Zlata	4.59	30	⇑P	Pn	02 34 15.4	+1.1
AQU	L'Aquila	4.63	283	ePn	Pn	02 34 15.3	+0.5
ITM	Ithomi	4.69	155	P	Pn	02 34 15.0	-0.6
MORH	Mrgy, Hungar	4.78	353	ePn	Pn	02 34 16.3	-0.4
SIRR	Siria	5.04	17	⇓P	Pn	02 34 21.0	+0.7
SIRR	Siria	5.04	17	ePn	Pn	02 34 21.1	+0.7
BOJS	Bojanci	5.07	324	ePn	Pn	02 34 20.4	-0.4
BEHE	Becsehely	5.36	340	ePn	Pn	02 34 22.7	-2.1
ARR	Arges	5.40	42	⇑P	Pn	02 34 27.8	+2.4
CEY	Cerknica	5.63	321	ePn	Pn	02 34 28.9	+0.4
VOIR		5.66	44	⇓P	Pn	02 34 30.9	+1.9
SKDS	Skadanscina	5.69	317	ePn	Pn	02 34 27.8	-1.6
OBKA	Obir	6.17	326	ePn	Pn	02 34 36.6	+0.6
	comp=N,0.6nm,0.2s						
MLR	Muntele Rosu	6.18	47	Pn	Pn	02 34 38.2	+2.1
	comp=N,0.5nm,0.3s,baz=327,slow=5.5,SNR=9.1						
MLR				Sn	Sn	02 35 49.9	+3.1
	comp=N,0.3nm,0.3s,baz=72,slow=20,SNR=1.1						
	comp=N,2.2nm,0.4s						
ARSA	Arzberg	6.43	335	ePn	Pn	02 34 38.9	-0.7
	comp=N,0.6nm,0.3s						
ABTA	Abfaltersbach	7.28	319	ePn	Pn	02 34 50.7	-0.5
	comp=N,1.2nm,0.6s						
MOA	Molln	7.38	331	iPn	Pn	02 34 53.0	+0.5
	comp=N,0.4nm,0.3s						
BIOA	Bad Ischl, Aus	7.49	328	iPn	Pn	02 34 53.5	-0.5
	comp=N,1.7nm,0.4s						
LESA	Schwarzleotal	7.69	323	iPn	Pn	02 34 56.1	-0.7
	comp=N,1.4nm,0.5s						
WTTA	Wattenberg	8.07	318	iPn	Pn	02 35 01.3	-0.8
	comp=N,0.9nm,0.3s						
WATA	Walderalm	8.15	319	ePn	Pn	02 35 04.0	+0.8
	comp=N,1.6nm,0.4s						
SQTA	Sankt Quirin	8.26	317	ePn	Pn	02 35 06.3	+1.6
	comp=N,1.1nm,0.2s						
GERES	GERESS Array B	8.43	333	Pn	Pn	02 35 07.9	+1.0
	baz=154,slow=13,SNR=2.1						
	comp=N,0.2nm,0.3s						
DAVOX	Davos/Dischmat	8.71	311	Pn	Pn	02 35 09.1	-1.8
	comp=N,0.4nm,0.3s,baz=144,slow=3.5,SNR=6.5						
	comp=N,0.8nm,0.3s						
FINES	FINESS Array B	20.39	9	P	P	02 37 39.3	-2.1
	comp=N,2.8nm,0.9s,baz=170,slow=13,SNR=5.9						
	comp=N,2.8nm,0.9s						
ZALV	Zalesovo Beam	44.14	50	P	P	02 41 12.0	-1.2
	comp=N,0.5nm,0.3s,baz=290,slow=9.0,SNR=3.0						
	comp=N,0.5nm,0.3s						

IDC ***04*** *02:36:33.6±6.0, 35°18N×24°13E, h0^{km}, mb3.9/5, mbtmp3.7/7, ML3.0/2, Error ellipse: s-maj=111.7km s-min=33.3km az=30.0*
HLW ***04*** *02:36:33.9, 34°62N×24°09E, h1^{km}±1^{km}, Ml3.0*
THE ***04*** *02:36:35.7, 35°N±3°×2°4E±°, h24^{km}±2^{km}, M2.9/19, MLh2.9/19*
ATH ***04*** *02:36:36.2, 34°79N×23°93E, h20^{km}±1^{km}, ML3.0/8, Manual Solution by K.Orfanogiannaki First location: 2019/12/04 02:37:43, This location: 2019/12/04 07:37:47 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
ISK ***04*** *02:36:37.3, 34°90N×24°15E, h17^{km}, ML3.2/19*
AFAD ***04*** *02:36:54.0, 35°73N×25°50E, h4^{km}±3^{km}, ML3.0*
ISC 04 02:36:34.6±1.0**, 34°66N**±0°05×**23°98E**±0°04**, h26**^{km}±6^{km}**, n88, σ1^{s}55**/101**, mb3.7**/5**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.20	28	P	Pb	02 36 40.6	+0.1
GVD				S	Sb	02 36 44.5	+0.1
GVD	Gavdhos	0.20	28	Pg	Pb	02 36 40.3	-0.2
GVD				Sg	Sb	02 36 43.9	-0.5
GVD	Gavdhos	0.20	28	P	Pb	02 36 40.6	+0.1
GVD				S	Sb	02 36 43.7	-0.8
KNDR	Palaiochora Ch	0.64	333	P	Pb	02 36 47.6	+0.3
KNDR				S	Sn	02 36 57.5	+0.2
KNDR	Palaiochora Ch	0.64	333	Pg	Pn	02 36 48.2	+0.2
KNDR				Sg	Sb	02 36 56.6	+0.8
KNDR	Palaiochora Ch	0.64	333	P	Pb	02 36 47.1	-0.1
KNDR				S	Sb	02 36 54.4	-1.4
IMMV	Iera Moni Meta	0.80	0	P	Pb	02 36 49.6	-0.3
IMMV				S	Sb	02 37 00.9	+0.6
IMMV	Iera Moni Meta	0.80	0	Pg	Pb	02 36 49.1	-0.8
CHAN	Chania	0.86	4	P	Pb	02 36 50.7	-0.2
CHAN				S	Sb	02 37 02.3	+0.3
CHAN	Chania	0.86	4	P	Pb	02 36 50.4	-0.5
CHAN				S	Sb	02 37 00.1	-1.9
IDI	Anoyia	0.98	50	P	Pn	02 36 52.7	0.0
IDI				S	Sb	02 37 05.6	+0.1
IDI	Anoyia	0.98	50	Pg	Pn	02 36 52.2	-0.5
IDI	Anoyia	0.98	50	P	Pn	02 36 52.3	-0.5
IDI				S	Sn	02 37 06.2	+0.5
IACM	Heraklion	1.10	54	P	Pb	02 36 56.0	+0.9
IACM				S	Sb	02 37 09.7	+0.6
ANKY	Antikythira Is	1.32	336	P	Pb	02 37 00.2	+1.4
ANKY	Antikythira Is	1.32	336	P	Pb	02 36 59.2	+0.4
ANKY				S	Sn	02 37 13.4	-0.7
NPS	Neapolis	1.47	66	P	Pb	02 37 02.8	+1.5
NPS	Neapolis	1.47	66	P	Pb	02 37 02.2	+0.8
KTHA	Kythira Island	1.76	335	P	Pb	02 37 06.7	+0.4
KTHA	Kythira Island	1.76	335	Pn	Pb	02 37 05.9	-0.3
ZKR	Zakros	1.90	76	Pn	Pb	02 37 07.3	-1.3
ZKR	Zakros	1.90	76	P	Pb	02 37 07.9	-0.7
THR9	Santorini-Faro	2.03	33	P	Pb	02 37 09.4	-1.5
THR6	Thira Island,	2.05	34	P	Pn	02 37 09.6	+2.2
SAP3	Santorini-Thir	2.09	32	P	Pn	02 37 09.9	+1.9
THR3	Thira Island,	2.10	33	P	Pn	02 37 09.9	+1.9
THERA	Ancient Thera,	2.10	35	P	Pn	02 37 09.5	+1.4
THR8	Santorini-Mono	2.13	35	P	Pn	02 37 10.1	+1.6
THR2	Thira island,	2.14	33	P	Pn	02 37 10.9	+2.2
VLI	Veliai	2.22	338	P	Pb	02 37 13.2	-0.8
VLI	Veliai	2.22	338	P	Pn	02 37 10.1	+0.4
APE	Apeiranthos	2.71	27	P	Pn	02 37 17.2	+0.6
APE	Apeiranthos	2.71	27	Pn	Pn	02 37 17.2	+0.6
APE	Apeiranthos	2.71	27	P	Pn	02 37 17.2	+0.6
KARP	Karpathos	2.76	70	P	Pn	02 37 19.8	+2.7
KARP	Karpathos	2.76	70	Pn	Pn	02 37 19.3	+2.1
KARP	Karpathos	2.76	70	P	Pn	02 37 19.6	+2.4
MET4	Agioi Theodoro	2.99	351	P	Pn	02 37 21.9	+1.5
MET5	Makryloggos,Me	3.00	351	P	Pn	02 37 21.9	+1.5
ITM	Ithomi	3.01	327	Pn	Pn	02 37 24.2	+3.5
VLY	Voula,Athens	3.19	357	P	Pn	02 37 24.3	+1.3
VLY	Voula,Athens	3.19	357	P	Pn	02 37 23.9	+0.9
ATHU	Athens Univers	3.30	357	P	Pn	02 37 24.7	+0.1
ATHU	Athens Univers	3.30	357	P	Pn	02 37 24.6	0.0
SLUM	Salum	3.33	161	P	Pn	02 37 26.0	+1.0
SLUM				S	Sn	02 38 03.6	0.0
DION	Dionisos Attik	3.41	359	P	Pn	02 37 27.5	+1.4
LTK	Loutraki	3.45	347	P	Pn	02 37 28.7	+2.0
YAZI	Mula-Dat§a-	3.48	54	P	Pn	02 37 28.6	+1.6
VILL	Villia	3.54	351	P	Pn	02 37 29.2	+1.4
DAT	Datca	3.58	54	P	Pn	02 37 30.3	+1.8
DAT	Datca	3.58	54	Pn	Pn	02 37 30.4	+1.8
BODT	Bodrum	3.62	48	Pn	Pn	02 37 30.9	+2.0
KLV	Kalavryta, Ach	3.68	337	P	Pn	02 37 32.2	+2.3
ARG	Arkhangelos	3.73	64	P	Pn	02 37 32.7	+2.3
ARG	Arkhangelos	3.73	64	Pn	Pn	02 37 32.7	+2.3
TURN	Turunc	4.06	58	P	Pn	02 37 37.3	+2.2
TURN				S	Sn	02 38 13.9	-7.9
TURN	Turunc	4.06	58	Pn	Pn	02 37 37.0	+2.0
YER	Yerkesik	4.28	54	Pn	Pn	02 37 40.5	+2.4
DALY	Dalyan (Mula)	4.37	59	Pn	Pn	02 37 41.9	+2.6
MULA	Mugla, Merkez-	4.37	52	P	Pn	02 37 42.7	+3.3
SABU	Mula-Dalaman	4.60	61	P	Pn	02 37 44.5	+2.0
SABU				S	Sn	02 38 22.9	-12
FETY	Fethiye	4.60	63	P	Pn	02 37 36.5	-6.1
IZZE	Mula-Seydike	4.63	66	P	Pn	02 37 44.1	+1.2
IZZE				S	Sn	02 38 27.0	-8.8
IZZE				iIAML		02 38 38.0	
	comp=N,46nm,0.3s						
ESEN	Aydn-Nazilli	4.72	47	P	Pn	02 37 46.8	+2.7
AKAS	Kas	4.86	70	P	Pn	02 37 47.2	+1.1
AKAS				iIAML		02 38 06.0	
	comp=N,40nm,1.4s						
AKAS				S	Sn	02 38 32.3	-9.2
AKAS	Kas	4.86	70	Pn	Pn	02 37 47.1	+1.0
DNZT	Denizli-Tavas-	4.86	56	P	Pn	02 37 48.5	+2.5
DNZT				S	Sn	02 38 31.9	-10
TAVA	DENIZLI_Tavas	4.88	54	P	Pn	02 37 48.9	+2.5
CAME	Cameli-Denizli	4.89	61	Pn	Pn	02 37 48.3	+1.7
CAEL	Denizli, Camel	4.99	59	P	Pn	02 37 49.8	+1.9
KIRA	zmir-Kiraz	5.02	44	P	Pn	02 37 51.1	+2.9
KNIK	Mula-Seydike	5.05	63	P	Pn	02 37 50.3	+1.6
KNIK				S	Sn	02 38 32.0	-14
DNIZ	Denizli-Tavas-	5.05	53	P	Pn	02 37 51.6	+2.8
APMY	Acipayam-Deniz	5.14	55	Pn	Pn	02 37 51.6	+1.6
GOLH	Golhisar	5.21	59	P	Pn	02 37 53.0	+2.1
GOLH				S	Sn	02 38 38.6	-12
ELL	Elmali	5.26	65	Pn	Pn	02 37 53.6	+2.0
AKUM	Antalya-Kumluc	5.45	70	P	Pn	02 37 55.2	+1.0
INCE	Denizli-Bozkur	5.46	55	P	Pn	02 37 56.1	+1.8
SWA2		5.55	166	P	Pn	02 37 56.9	+1.4
KORT	Korkueli	5.68	64	P	Pn	02 37 58.7	+1.3
HFRF	Wahat Farafira	8.36	152	P	Pn	02 38 35.1	+0.9
BRTR	Keskin Array B	9.22	54	Pn	Pn	02 38 44.2	-1.8
	baz=248,slow=15,SNR=1.5						
	0.4nm,0.7s						
MMAI	Mount Meron Ar	9.65	97	Pn	Pn	02 38 52.2	+0.4
	1.1nm,0.3s,baz=301,slow=12,SNR=8.0						
	0.5nm,0.3s						
HFS	Hagfors	26.35	348	P	P	02 42 06.6	-1.7
	1.5nm,0.7s,baz=155,slow=7.9,SNR=1.3						
	1.5nm,0.7s						
FINES	FINESS Array B	26.83	2	P	P	02 42 10.8	-1.8
	3.2nm,0.9s,baz=187,slow=8.3,SNR=2.2						
	3.2nm,0.9s						
KURBB	Kurchatov Arra	42.19	51	P	P	02 44 24.4	-0.5
	0.4nm,0.3s,baz=280,slow=8.8,SNR=4.5						
	0.4nm,0.3s						
MKAR	Makanchi Array	44.86	56	P	P	02 44 46.9	+0.3
	0.3nm,0.3s,baz=270,slow=8.5,SNR=6.2						
	0.3nm,0.3s						
ZALV	Zalesovo Beam	46.05	46	P	P	02 44 54.9	-1.0
	0.8nm,0.4s,baz=275,slow=8.1,SNR=4.2						
	0.8nm,0.4s						

NEIC ***04*** *02:53:47.1±1.2, 19°4N±0°1×64°72W±0°08, h10^{km}±2^{km}, ML2.2/12, Md3.7/9(RSPR), Error ellipse: s-maj=21.7km s-min=5.2km az=144.0*
RSPR ***04*** *02:53:49.2, 19°63N×64°81W, h61^{km}±27^{km}, MD3.7/9*
ISC 04 02:53:45.8±3.0**, 19°5N**±0°1×**64°9W**±0°1**, h1**^{km}±14^{km}**, n26, σ1^{s}08**/32**, 3C-6D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUMP	Col San Antoni	1.59	216		Pg	02 54 15.8	-0.7
HUMP					Sb	02 54 34.9	-1.9
HUMP				IAML		02 54 50.9	
	comp=E,32nm,0.2s						
HUMP	Col San Antoni	1.59	216	⇓iP	Pg	02 54 16.5	+0.1
HUMP	Col San Antoni	1.59	216	eS	Sg	02 54 38.0	+0.9
GCPR	Guaynabo City	1.61	226	Pn	Pb	02 54 16.2	-0.3
GCPR				Sn	Sb	02 54 36.7	-0.6
GCPR	Guaynabo City	1.61	226	⇑eP	Pg	02 54 16.7	-0.1
GCPR	Guaynabo City	1.61	226	eS	Sg	02 54 38.5	+0.8
SJG	San Juan	1.80	223	Pn	Pb	02 54 18.9	-0.7
SJG				IAML		02 54 40.5	
	comp=E,18nm,0.2s						
SJG				IAML		02 54 50.4	
	comp=E,19nm,0.5s						
ECPR	Experimental S	1.80	232	⇓iP	Pb	02 54 19.8	+0.1
ECPR	Experimental S	1.80	232	eS	Sg	02 54 44.8	+1.0
AOPR	Arecibo Observ	2.09	239	Pn	Pn	02 54 23.2	+1.1
AOPR				Sn	Sb	02 54 50.5	-0.6
AOPR	Arecibo Observ	2.09	239	⇑eP	Pb	02 54 24.1	-0.6
AOPR	Arecibo Observ	2.09	239	eS	Sb	02 54 50.8	-0.3
OBIP	Obispado Ponce	2.16	230	Pn	Pn	02 54 22.9	0.0
OBIP				Sn	Sb	02 54 52.1	-0.9
OBIP				IAML		02 55 17.1	
	comp=E,16nm,1.7s						
OBIP				IAML		02 55 28.8	
	comp=N,15nm,3.1s						
OBIP	Obispado Ponce	2.16	230	⇓eP	Pb	02 54 24.5	-1.2
OBIP	Obispado Ponce	2.16	230	eS	Sb	02 54 52.7	-0.3
LSP	Las Mesas	2.45	239		Pn	02 54 28.5	+1.5
LSP					Sn	02 54 58.5	+0.8
LSP	Las Mesas	2.45	239	⇓eP	Pn	02 54 28.5	+1.5
LSP	Las Mesas	2.45	239	eS	Sn	02 54 58.5	+0.8
MLPR	Magueyes Islan	2.53	235	⇑eP	Pb	02 54 30.1	-2.0
MLPR	Magueyes Islan	2.53	235	eS	Sb	02 55 02.9	-0.9
CRPR	Cabo Rojo, PR	2.56	236	Pn	Pn	02 54 30.0	+1.5
CRPR				Sn	Sb	02 55 02.9	-1.7
CRPR				IAML		02 55 21.1	
	comp=E,20nm,1.4s						
CRPR	Cabo Rojo, PR	2.56	236	⇓eP	Pn	02 54 30.3	+1.8
CRPR	Cabo Rojo, PR	2.56	236	eS	Sb	02 55 03.8	-0.8
MIDR	Miches	3.97	264	⇓eP	Pn	02 54 47.8	-0.1
MIDR	Miches	3.97	264	eS	Sn	02 55 34.8	-0.4
DR12	Loma Pena Alta	4.31	262	Pn	Pn	02 54 54.0	+1.3

SNET ***04*** *03:38:40.5±1.2, 13°14N×89°29W, h53^{km}, ML4.1*
CATAC ***04*** *03:38:40.7±0.3, 13°N±2°×8°9W±°, h31^{km}±2^{km}, M4.2/39, MLv4.2/39, Error ellipse: s-maj=4.6km s-min=1.7km az=30.9, confirmed*
UCR ***04*** *03:38:41.5±0.6, 13°43N×89°15W, h72^{km}±64^{km}, MW3.9*
GCG ***04*** *03:38:42.3±1.1, 13°20N×89°38W, h45^{km}±8^{km}, MD4.3, ML4.0*
ISC 04 03:38:41.9±1.2**, 13°16N**±0°04×**89°28W**±0°03**, h47**^{km}±9^{km}**, n146, σ0^{s}94**/171**, 5C-13D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.33	354	⇑eP	Pn	03 38 50.8	-0.3
LALI				eS	Sn	03 38 57.1	-0.4
LALI	Alcalda de L	0.33	354	eP	Pn	03 38 50.7	-0.3
LALI				eS	Sn	03 38 57.3	-0.2
LALI				IAML		03 38 58.9	
	comp=E,8µm,0.3s						
LALI	Alcalda de L	0.33	354	P	Pn	03 38 51.0	0.0
PANCS	Alcalda de	0.46	13	eP	Pn	03 38 52.0	-0.6
PANCS	Alcalda de	0.46	13	P	Pn	03 38 52.3	-0.3
PANCS	Alcalda de	0.46	13	S	Sn	03 39 00.6	+0.4
LOMA	Loma Larga	0.50	13	P	Pn	03 38 51.7	-1.3
LOMA	Loma Larga	0.50	13	S	Sn	03 39 01.3	+0.2
LFRS	El Faro	0.51	25	⇑eP	Pn	03 38 52.7	-0.5
JAYA	Jayaque - finc	0.52	342	⇓eP	Pn	03 38 52.8	-0.6

JAYA				eS	Sn	03 39 00.8	-0.8
JAYA	**Jayaque - finc**	**0.52**	**342**	i P	**Pn**	**03 38 52.8**	**-0.6**
JAYA				eS	Sn	03 39 01.1	-0.5
JAYA	**Jayaque - finc**	**0.52**	**342**	P	**Pn**	**03 38 52.5**	**-0.8**
UTEC	**Universidad Te**	**0.55**	**8**	eP	**Pn**	**03 38 53.2**	**-0.5**
UTEC				eS	Sn	03 39 01.7	-0.3
UTEC	**Universidad Te**	**0.55**	**8**	P	**Pn**	**03 38 53.4**	**-0.3**
UTEC	**Universidad Te**	**0.55**	**8**	S	**Sn**	**03 39 02.9**	**+0.9**
PMON	**Piamonte**	**0.55**	**357**	⇓eP	**Pn**	**03 38 53.3**	**-0.5**
PMON				eS	Sn	03 39 01.8	-0.4
PMON	**Piamonte**	**0.55**	**357**	P	**Pn**	**03 38 53.1**	**-0.7**
PMON	**Piamonte**	**0.55**	**357**	S	**Sn**	**03 39 02.9**	**+0.7**
UEES	**Universidad Ev**	**0.56**	**4**	⇓eP	**Pn**	**03 38 53.3**	**-0.5**
UEES				eS	Sn	03 39 02.6	+0.4
UEES	**Universidad Ev**	**0.56**	**4**	P	**Pn**	**03 38 53.6**	**-0.2**
IGN	**Direccin Gen**	**0.56**	**11**	⇑eP	**Pn**	**03 38 53.6**	**-0.2**
IGN	**Direccin Gen**	**0.56**	**11**	P	**Pn**	**03 38 53.8**	**-0.1**
IGN	**Direccin Gen**	**0.56**	**11**	S	**Sn**	**03 39 02.9**	**+0.5**
UESS	**Universidad de**	**0.56**	**8**	⇑eP	**Pn**	**03 38 53.7**	**-0.1**
UESS				eS	Sn	03 39 02.4	0.0
UDBS	**Universidad Do**	**0.57**	**13**	eP	**Pn**	**03 38 53.5**	**-0.4**
UDBS	**Universidad Do**	**0.57**	**13**	P	**Pn**	**03 38 53.8**	**-0.1**
UDBS	**Universidad Do**	**0.57**	**13**	S	**Sn**	**03 39 03.7**	**+1.2**
BOQS	**Boqueron**	**0.57**	**0**	⇓eP	**Pn**	**03 38 53.8**	**-0.4**
PIC2	**El Picacho**	**0.58**	**3**	⇓eP	**Pn**	**03 38 54.0**	**-0.2**
LFU	**La Fuente**	**0.61**	**16**	eP	**Pn**	**03 38 54.2**	**-0.3**
TECO	**Alcaldia de Te**	**0.62**	**52**	eP	**Pn**	**03 38 53.5**	**-1.0**
TECO				eS	Sn	03 39 02.9	-0.7
TECO	**Alcaldia de Te**	**0.62**	**52**	P	**Pn**	**03 38 53.8**	**-0.7**
TECO	**Alcaldia de Te**	**0.62**	**52**	S	**Sn**	**03 39 03.2**	**-0.4**
LBRS	**Las Brisas**	**0.62**	**22**	eP	**Pn**	**03 38 54.3**	**-0.3**
SNVI	**San Vicente**	**0.63**	**44**	eP	**Pn**	**03 38 53.9**	**-0.8**
PAVA	**Las Pavas**	**0.65**	**31**	⇓eP	**Pn**	**03 38 54.3**	**-0.6**
PAVA	**Las Pavas**	**0.65**	**31**	P	**Pn**	**03 38 54.5**	**-0.5**
PAVA	**Las Pavas**	**0.65**	**31**	S	**Sn**	**03 39 04.7**	**+0.3**
CEDA	**San Andres**	**0.65**	**350**	⇓eP	**Pn**	**03 38 54.4**	**-0.6**
CEDA	**San Andres**	**0.65**	**350**	P	**Pn**	**03 38 54.0**	**-0.9**
CEDA	**San Andres**	**0.65**	**350**	S	**Sn**	**03 39 05.0**	**+0.6**
UESV	**Universidad de**	**0.68**	**45**	eP	**Pn**	**03 38 54.5**	**-0.8**
UESV				eS	Sn	03 39 03.8	-1.1
UESV	**Universidad de**	**0.68**	**45**	P	**Pn**	**03 38 54.5**	**-0.8**
UESV	**Universidad de**	**0.68**	**45**	S	**Sn**	**03 39 05.5**	**+0.6**
CEVE	**Cerro Verde**	**0.74**	**334**	eP	**Pn**	**03 38 55.8**	**-0.5**
CEVE	**Cerro Verde**	**0.74**	**334**	P	**Pn**	**03 38 56.1**	**-0.3**
CEVE	**Cerro Verde**	**0.74**	**334**	S	**Sn**	**03 39 07.8**	**+1.0**
SBLS	**San Blas**	**0.75**	**334**	eP	**Pn**	**03 38 55.9**	**-0.6**
SCLA	**Alcaldia de Sa**	**0.76**	**45**	eP	**Pn**	**03 38 56.0**	**-0.4**
SCLA	**Alcaldia de Sa**	**0.76**	**45**	P	**Pn**	**03 38 56.0**	**-0.4**
SCLA	**Alcaldia de Sa**	**0.76**	**45**	S	**Sn**	**03 39 08.4**	**+1.4**
SNJE	**San Jose**	**0.77**	**336**	eP	**Pn**	**03 38 56.1**	**-0.6**
SNJE				eP		03 38 56.2	
RTR	**El Retiro**	**0.81**	**334**	eP	**Pn**	**03 38 56.8**	**-0.4**
TECA	**Tecapa**	**0.83**	**66**	eP	**Pn**	**03 38 56.5**	**-1.0**
UNIC	**Universidad Ca**	**0.86**	**343**	eP	**Pn**	**03 38 57.2**	**-0.5**
UNIC	**Universidad Ca**	**0.86**	**343**	P	**Pn**	**03 38 57.2**	**-0.5**
UNIC	**Universidad Ca**	**0.86**	**343**	S	**Sn**	**03 39 10.4**	**+1.2**
NUBE	**Las Nubes**	**0.88**	**327**	⇓eP	**Pn**	**03 38 57.3**	**-0.8**
NUBE				eS	Sn	03 39 09.0	-1.0
NUBE	**Las Nubes**	**0.88**	**327**	i P	**Pn**	**03 38 57.4**	**-0.8**
NUBE				eS	Sn	03 39 09.2	-0.8
NUBE	**Las Nubes**	**0.88**	**327**	P	**Pn**	**03 38 57.3**	**-0.8**
PACA	**Pacayal**	**0.98**	**72**	eP	**Pn**	**03 38 59.3**	**-0.1**
PACA	**Pacayal**	**0.98**	**72**	P	**Pn**	**03 38 59.9**	**+0.5**
FAME	**Alcaldia de Sa**	**0.98**	**314**	P	**Pn**	**03 38 58.4**	**-0.9**
FAME	**Alcaldia de Sa**	**0.98**	**314**	S	**Sn**	**03 39 11.2**	**-1.0**
SLOZ	**Alcaldia de Sa**	**0.99**	**331**	S	**Sn**	**03 39 12.3**	**-0.1**
LCY	**Lacayo**	**1.00**	**75**	eP	**Pn**	**03 38 59.2**	**-0.4**
RANC	**El Ranchito**	**1.01**	**74**	eP	**Pn**	**03 38 59.4**	**-0.4**
VSM	**San Miguel**	**1.02**	**75**	eP	**Pn**	**03 38 59.5**	**-0.5**
RBDL	**Robledal**	**1.03**	**338**	eP	**Pn**	**03 38 59.6**	**-0.5**
LLGN	**La Laguna**	**1.05**	**18**	eP	**Pn**	**03 38 59.6**	**-0.7**
LLGN	**La Laguna**	**1.05**	**18**	P	**Pn**	**03 38 59.5**	**-0.9**
LLGN	**La Laguna**	**1.05**	**18**	S	**Sn**	**03 39 14.0**	**0.0**
BLLM	**Bellamira**	**1.06**	**74**	⇑eP	**Pn**	**03 38 59.8**	**-0.6**
CNRM	**Centro Naciona**	**1.13**	**74**	eP	**Pn**	**03 39 00.3**	**-0.9**
CNRM	**Centro Naciona**	**1.13**	**74**	P	**Pn**	**03 39 00.7**	**-0.6**
CNRM	**Centro Naciona**	**1.13**	**74**	S	**Sn**	**03 39 16.8**	**+1.1**
CAHU	**Cacacuatique**	**1.21**	**60**	⇓eP	**Pn**	**03 39 01.9**	**-0.6**
MTO3	**Montecristo**	**1.24**	**357**	⇓eP	**Pn**	**03 39 02.2**	**-0.7**
MTO3	**Montecristo**	**1.24**	**357**	i P	**Pn**	**03 39 02.4**	**-0.5**
MTO3	**Montecristo**	**1.24**	**357**	S	**Sn**	**03 39 18.9**	**+0.2**
MTO3	**Montecristo**	**1.24**	**357**	P	**Pn**	**03 39 02.5**	**-0.5**
JUAM	**Asuncion Mita**	**1.24**	**341**	i P	**Pn**	**03 39 02.3**	**-0.5**
JUAM				i S	**Sn**	**03 39 18.6**	**+0.1**
JUAM				IAML		03 39 19.6	
	comp=N,3µm,0.3s						
LCND	**La Caada**	**1.36**	**84**	⇓eP	**Pn**	**03 39 04.0**	**-0.5**
LCND	**La Caada**	**1.36**	**84**	P	**Pn**	**03 39 04.3**	**-0.2**
ESQI	**Esquipulas**	**1.40**	**358**	P	**Pn**	**03 39 04.8**	**-0.2**
ESQI	**Esquipulas**	**1.40**	**358**	S	**Sn**	**03 39 23.5**	**+1.1**
ZAFR2	**Estanzuela, Za**	**1.41**	**357**	i P	Pn	03 39 10.7	+5.5
CNCH	**Conchagua**	**1.42**	**85**	⇓eP	**Pn**	**03 39 04.5**	**-0.8**
CNCH				eS	**Sn**	**03 39 22.3**	**-0.6**
CNCH	**Conchagua**	**1.42**	**85**	P	**Pn**	**03 39 05.0**	**-0.4**
FG16	**Alotenango, Sa**	**1.63**	**313**	eP	Pn	03 39 13.1	+4.7
FG16				IAML		03 39 44.9	
	comp=N,6µm,0.2s						
CSGN	**Cosiguina Volc**	**1.69**	**96**	P	**Pn**	**03 39 08.5**	**-0.5**
CSGN				S	**Sn**	**03 39 29.2**	**-0.3**
CSGN	**Cosiguina Volc**	**1.69**	**96**	⇓iP	**Pn**	**03 39 08.3**	**-0.8**
CSGN				eS	**Sn**	**03 39 29.3**	**-0.3**
POTN	**Potosi Cosigui**	**1.74**	**95**	P	**Pn**	**03 39 09.6**	**0.0**
POTN				S	**Sn**	**03 39 30.3**	**-0.3**
POTN	**Potosi Cosigui**	**1.74**	**95**	eP	**Pn**	**03 39 08.7**	**-1.0**
POTN				eS	**Sn**	**03 39 29.7**	**-0.9**
ESSG	**Sabana Grande**	**1.94**	**309**	IAML		03 39 36.9	
	comp=N,942nm,0.5s						
TGUH	**Tegucigalpa,Un**	**2.15**	**65**	P	**Pn**	**03 39 14.4**	**-1.0**
TGUH				S	**Sn**	**03 39 41.5**	**+0.6**
APG	**El Apazote**	**2.16**	**328**	i P	**Pn**	**03 39 15.5**	**-0.2**
CRIN	**San Cristobal**	**2.23**	**102**	P	**Pn**	**03 39 12.6**	**-3.8**
CRIN	**San Cristobal**	**2.23**	**102**	S	**Sn**	**03 39 43.5**	**+0.8**
PKGN	**Cerro Pekin**	**2.30**	**102**	P	**Pn**	**03 39 16.8**	**-0.5**
STG8	**El Palmar, Qui**	**2.38**	**303**	eP	Pn	03 39 23.1	+4.4
STG2	**El Palmar, Qui**	**2.40**	**302**	eP	Pn	03 39 23.4	+4.6
TEL3	**Telica 3**	**2.45**	**103**	P	**Pn**	**03 39 18.6**	**-0.8**
TELN	**Telica**	**2.45**	**103**	P	**Pn**	**03 39 18.6**	**-0.9**
POLN	**Al Sur del Vol**	**2.46**	**102**	P	**Pn**	**03 39 18.6**	**-1.0**
POLN				S	**Sn**	**03 39 47.8**	**-0.7**
YUSH	**Yuscaran**	**2.50**	**71**	S	**Sn**	**03 39 49.8**	**+0.2**
YUSH	**Yuscaran**	**2.50**	**71**	P	**Pn**	**03 39 19.4**	**-0.8**
ILCN	**San Idelfonso**	**2.58**	**103**	P	**Pn**	**03 39 20.0**	**-1.3**
ILCN				S	**Sn**	**03 39 51.0**	**-0.4**
CNGA	**Al SSO del Vol**	**2.60**	**104**	P	**Pn**	**03 39 21.5**	**-0.1**
CNGA				S	**Sn**	**03 39 52.3**	**+0.3**
CNGN	**Cerro Negro**	**2.60**	**104**	S	**Sn**	**03 39 51.0**	**-1.0**
CNGN	**Cerro Negro**	**2.60**	**104**	P	**Pn**	**03 39 21.2**	**-0.4**
CNGN	**Cerro Negro**	**2.60**	**104**	eP	**Pn**	**03 39 21.1**	**-0.4**
SOKI	**Kika Raxquin**	**2.64**	**309**	eP	**Pn**	**03 39 23.6**	**+1.3**
RTAL	**Retalhuleu**	**2.71**	**300**	S	**Sn**	**03 39 54.0**	**-0.5**
OCON	**Estacion meteo**	**2.77**	**80**	P	**Pn**	**03 39 22.5**	**-1.3**
OCON				S	**Sn**	**03 39 55.5**	**-0.6**
MOM3	**MOM3**	**2.77**	**103**	P	**Pn**	**03 39 23.0**	**-0.9**
MOM3				S	**Sn**	**03 39 56.4**	**+0.3**
MOMN	**Momotombo**	**2.78**	**105**	P	**Pn**	**03 39 23.0**	**-1.0**
MOMN				S	**Sn**	**03 39 55.3**	**-1.0**
COPN	**Copaltepe**	**2.80**	**110**	P	**Pn**	**03 39 23.1**	**-1.1**
COPN	**Copaltepe**	**2.80**	**110**	eP	**Pn**	**03 39 23.0**	**-1.2**
COPN				eS	**Sn**	**03 39 53.2**	**-3.6**
MOM2	**El Cardon**	**2.82**	**104**	P	**Pn**	**03 39 23.4**	**-1.1**
LIMN	**Finca el Limon**	**2.84**	**92**	P	**Pn**	**03 39 23.8**	**-1.1**
LIMN				S	**Sn**	**03 39 57.6**	**-0.4**
AMTN	**Mateare**	**2.93**	**108**	S	**Sn**	**03 39 59.9**	**-0.1**
AMTN	**Mateare**	**2.93**	**108**	P	**Pn**	**03 39 25.3**	**-0.7**
APQ3	**Volcan Apoyequ**	**2.98**	**107**	P	**Pn**	**03 39 26.0**	**-0.7**
APQ3				S	**Sn**	**03 40 01.0**	**-0.1**
RCVN	**Varillal2**	**3.04**	**82**	P	**Pn**	**03 39 26.8**	**-0.8**
HUEH	**Huehuetenango**	**3.04**	**315**	S	**Sn**	**03 40 02.4**	**-0.6**
APQ2	**Apoyeque**	**3.04**	**108**	P	**Pn**	**03 39 26.4**	**-1.1**
APQ2				S	**Sn**	**03 40 01.0**	**-1.7**
RCON	**San Juan de Ri**	**3.06**	**84**	P	**Pn**	**03 39 27.7**	**-0.2**
RCON	**San Juan de Ri**	**3.06**	**84**	S	**Sn**	**03 40 03.5**	**0.0**
ABCN	**Banco Central**	**3.08**	**109**	S	**Sn**	**03 40 03.5**	**-0.2**
ABCN	**Banco Central**	**3.08**	**109**	P	**Pn**	**03 39 26.9**	**-1.1**
UNAN	**Cigeo UNAN**	**3.12**	**109**	P	**Pn**	**03 39 28.4**	**-0.2**
UNAN				S	**Sn**	**03 40 04.1**	**-0.5**
PETF	**Flores**	**3.78**	**351**	eP	**Pn**	**03 39 38.6**	**+1.0**
LAPC	**Finca la Perla**	**4.45**	**122**	eP	**Pn**	**03 39 47.8**	**+0.9**
SAJU	**San Juanillo,**	**4.66**	**131**	eP	**Pn**	**03 39 49.6**	**-0.1**
VMAR	**Armenia, Volca**	**4.70**	**119**	eP	**Pn**	**03 39 54.2**	**+3.9**
JUD3	**Juan Diaz 3**	**4.72**	**129**	eP	**Pn**	**03 39 50.5**	**-0.1**
CUI	**Cuipilapa**	**4.74**	**121**	eP	**Pn**	**03 39 51.8**	**+0.9**
JTS	**Las Juntas de**	**5.11**	**123**	eP	**Pn**	**03 39 56.7**	**+0.7**
VPL2	**V. Platanar**	**5.57**	**120**	eP	**Pn**	**03 40 05.3**	**+2.9**
BUS1	**Rivas**	**6.50**	**123**	eP	**Pn**	**03 40 17.0**	**+1.6**
SAJE	**San Jernim**	**6.81**	**123**	eP	**Pn**	**03 40 21.9**	**+2.4**
EDPE	**Pejibaye, P**	**6.87**	**125**	eP	**Pn**	**03 40 21.6**	**+1.4**
DRK0	**Durika**	**7.08**	**123**	eP	**Pn**	**03 40 24.3**	**+1.2**
PIRO	**Carate, Puerto**	**7.51**	**128**	eP	**Pn**	**03 40 31.4**	**+2.5**
ALCO	**Alturas Coton,**	**7.59**	**123**	eP	**Pn**	**03 40 31.7**	**+1.6**

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*MDD **04** 04:02:46.0±1.0, 37°.06N×13°.67W, h21^{km}±15^{km}, Mb4.3/12, M_mb3.7/12, Error ellipse: s-maj=16.1km s-min=5.7km az=79.0*

*IGIL **04** 04:02:47.4, 36°.95N×13°.62W, h32^{km}*

*INMG **04** 04:02:48.7±1.1, 37°.00N×13°.80W, h25^{km}, ML2.1, Error ellipse: s-maj=7.3km s-min=4.5km az=103.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Josephine*

*CNRM **04** 04:02:55.8, 36°.54N×12°.63W, h19^{km}*

ISC 04 04:02:43.1±1.1**, 36°.97N**±0°.05×**13°.43W**±0°.07**, h10^{km}, n56, σ3^{s}19**/85**, 11C, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.69**	**86**	S	**Sn**	**04 04 22.6**	**-1.1**
PFVI				P	**Pn**	**04 03 42.8**	**+2.7**
PFVI	**Vila Bisbo**	**3.69**	**86**	eP	**Pn**	**04 03 43.5**	**+3.3**
PFVI				eS	**Sn**	**04 04 23.0**	**-0.6**
PFVI				i IAML		04 04 27.0	
PFVI				i IAML		04 04 27.4	
PFVI	**Vila Bisbo**	**3.69**	**86**	P	**Pn**	**04 03 43.7**	**+3.5**
PFVI	**Vila Bisbo**	**3.69**	**86**	S	**Sn**	**04 04 21.0**	**-2.6**
PTEO	**Sao Teotonio**	**3.80**	**80**	eP	**Pn**	**04 03 45.3**	**+3.6**
PTEO				eS	**Sn**	**04 04 25.1**	**-1.2**
PMAFR	**Mafra**	**3.83**	**58**	eP	**Pn**	**04 03 45.4**	**+3.3**
PMAFR				eS	**Sn**	**04 04 27.7**	**+0.5**
PMAFR				i IAML		04 04 34.1	
MORF	**Marmelete**	**3.83**	**84**	eP	**Pn**	**04 03 45.0**	**+2.8**
MORF	**Marmelete**	**3.83**	**84**	eP	**Pn**	**04 03 45.6**	**+3.4**
MESJ	**Messejana**	**4.24**	**77**	eP	**Pn**	**04 03 50.5**	**+2.8**
MOE	**Montemor**	**4.31**	**67**	eP	**Pn**	**04 03 52.0**	**+3.3**
MOE				eS	**Sn**	**04 04 37.5**	**-1.6**
MOE				i IAML		04 04 38.5	
MOE				i IAML		04 04 39.2	
PCVE	**Castro Verde**	**4.35**	**80**	P	**Pn**	**04 03 52.3**	**+3.0**
PCVE				S	**Sn**	**04 04 39.7**	**-0.3**
PCVE	**Castro Verde**	**4.35**	**80**	eP	**Pn**	**04 03 52.7**	**+3.5**
PCVE				eS	**Sn**	**04 04 39.8**	**-0.2**
PSBE	**So Bento**	**4.45**	**54**	eP	**Pn**	**04 03 53.8**	**+3.3**
PSBE				eS	**Sn**	**04 04 42.0**	**-0.3**
PSBE				i IAML		04 04 45.0	
PVAQ	**Vaqueiros**	**4.58**	**83**	eP	**Pn**	**04 03 56.4**	**+4.0**
PVAQ				eS	**Sn**	**04 04 44.9**	**-0.8**
PVAQ				i IAML		04 04 48.7	
PVAQ				i IAML		04 04 49.0	
PVAQ				i IAML		04 04 49.4	
PVAQ	**Vaqueiros**	**4.58**	**83**	P	**Pn**	**04 03 56.1**	**+3.6**
PMTG	**Montargil**	**4.61**	**61**	eP	**Pn**	**04 03 55.8**	**+3.0**
PMTG				eS	**Sn**	**04 04 46.3**	**-0.1**
PMTG				i IAML		04 04 47.0	
PMTG				i IAML		04 04 48.5	
PMTG				i IAML		04 04 48.7	
PARRA	**Arraiolos**	**4.64**	**65**	eP	**Pn**	**04 03 56.2**	**+2.9**
PARRA				eS	**Sn**	**04 04 45.2**	**-2.1**
PARRA				i IAML		04 04 47.9	
EGRO	**El Granado**	**4.78**	**81**	Pn	**Pn**	**04 03 57.8**	**+2.7**
EGRO				⇑iIVmb_VC		04 03 59.8	
	84nm,SNR=1.1						
EGRO				Sn	**Sn**	**04 04 51.6**	**+1.0**
PSARD	**Sardoal**	**4.91**	**56**	eP	**Pn**	**04 04 00.4**	**+3.5**
PSARD				eS	**Sn**	**04 04 52.7**	**-1.0**
PSARD				i IAML		04 04 57.0	
PSARD				i IAML		04 04 57.5	
PSARD				i IAML		04 04 58.3	
PCAS	**Casmilo, Conde**	**4.94**	**50**	eP	**Pn**	**04 04 00.3**	**+2.9**
PCAS				eS	**Sn**	**04 04 53.7**	**-0.9**
PCAS				i IAML		04 04 56.7	
PCAS				i IAML		04 04 56.9	
PCAS				i IAML		04 04 57.1	
PMAR	**Madeira**	**5.12**	**215**	P	**Pb**	**04 04 12.4**	**-0.3**
PMAR	**Madeira**	**5.12**	**215**	S	**Sb**	**04 05 13.3**	**-1.1**
PBAR	**Barrancos**	**5.22**	**75**	P	**Pn**	**04 04 03.7**	**+2.6**
PBAR				S	**Sn**	**04 05 02.3**	**+0.9**
PBAR	**Barrancos**	**5.22**	**75**	eP	**Pn**	**04 04 04.4**	**+3.3**
PBAR				eS	**Sn**	**04 05 01.9**	**+0.6**
PMRV	**Marv??o**	**5.35**	**61**	eP	**Pn**	**04 04 06.2**	**+3.2**
PMRV				eS	**Sn**	**04 05 01.6**	**-3.1**
PMRV				i IAML		04 05 06.1	
EBAD	**Badajoz**	**5.38**	**69**	P	**Pn**	**04 04 05.5**	**+2.1**
EBAD				S	**Sn**	**04 05 03.4**	**-2.0**
EBAD	**Badajoz**	**5.38**	**69**	Pn	**Pn**	**04 04 06.3**	**+3.0**
EBAD				⇑iIVmb_VC		04 04 13.6	
	90nm,SNR=1.3						
EBAD				Sn	**Sn**	**04 05 05.2**	**-0.2**
PCBR	**Castelo Branco**	**5.48**	**57**	eP	**Pn**	**04 04 08.4**	**+3.7**
PCBR				eS	**Sn**	**04 05 06.6**	**-1.3**
PVIS	**Viseu**	**5.71**	**47**	eS	**Sn**	**04 05 11.1**	**-2.6**
MTE	**Manteigas**	**5.74**	**52**	eS	**Sn**	**04 05 12.5**	**-1.8**
ESPR	**Espera**	**6.07**	**89**	P	**Pn**	**04 04 16.4**	**+3.6**
POLO	**Lamas de Olo**	**6.20**	**43**	eS	**Sn**	**04 05 22.3**	**-3.5**
PCAB	**Cabril**	**6.32**	**40**	eS	**Sn**	**04 05 25.6**	**-3.0**
PGAV	**Gavieira, Arco**	**6.39**	**37**	eP	**Pn**	**04 04 20.3**	**+3.0**
PGAV				eS	**Sn**	**04 05 25.8**	**-4.5**
ELOB	**Lobios**	**6.42**	**39**	Pn	**Pn**	**04 04 18.9**	**+1.2**
ELOB				⇑iIVmb_VC		04 04 25.0	
	173nm,SNR=1.6						
ELOB				Sn	**Sn**	**04 05 27.2**	**-3.8**
ECAB	**El Cabril**	**6.46**	**78**	P	**Pn**	**04 04 21.6**	**+3.3**
ECAB				S	**Sn**	**04 05 32.3**	**+0.1**
ECAB	**El Cabril**	**6.46**	**78**	Pn	**Pn**	**04 04 21.2**	**+2.9**
ECAB				⇑iIVmb_VC		04 04 29.6	
	89nm,SNR=1.1						
ECAB				Sn	**Sn**	**04 05 31.3**	**-0.8**
MVO	**Moncorvo**	**6.51**	**48**	eP	**Pn**	**04 04 21.8**	**+2.9**
MVO				eS	**Sn**	**04 05 30.4**	**-2.8**
MVO				i IAML		04 05 31.8	
MVO				i IAML		04 05 32.8	
EPLA	**Plasencia**	**6.54**	**60**	⇑iIVmb_VC		04 04 23.3	
	109nm,SNR=1.1						
EPLA				Sn	**Sn**	**04 05 31.6**	**-2.4**
EMAZ	**Mazaricos**	**6.88**	**28**	Pn	**Pn**	**04 04 25.3**	**+1.4**
EMAZ				⇑iIVmb_VC		04 04 33.1	
	281nm,SNR=1.5						
EMAZ				Sn	**Sn**	**04 05 35.0**	**-7.3**
EAGO	**Agolada(Pontev**	**7.12**	**34**	Pn	**Pn**	**04 04 28.2**	**+0.9**
EAGO				⇑iIVmb_VC		04 04 30.5	
	258nm,SNR=1.6						
EAGO				Sn	**Sn**	**04 05 40.8**	**-7.6**
EADA	**Adamuz**	**7.13**	**78**	Pn	**Pn**	**04 04 30.0**	**+2.5**
EADA				⇑iIVmb_VC		04 04 37.1	
	158nm,SNR=1.6						
EADA				Sn	**Sn**	**04 05 47.2**	**-1.4**
ECAL	**Calabor**	**7.17**	**44**	Pn	**Pn**	**04 04 29.6**	**+1.5**
ECAL				⇑iIVmb_VC		04 04 34.7	
	161nm,SNR=1.3						
ECAL				Sn	**Sn**	**04 05 46.0**	**-3.6**
OUK	**Oukaimeden**	**7.37**	**140**	P	**Pn**	**04 04 32.5**	**+1.4**
OUK	**Oukaimeden**	**7.37**	**140**	S	**Sn**	**04 05 49.0**	**-6.0**
PAB	**San Pablo**	**7.59**	**67**	⇑iIVmb_VC		04 04 36.3	
	72nm,SNR=0.7						
PAB				Pn	**Pn**	**04 04 36.7**	**+2.9**
TISM	**Timmit**	**7.80**	**130**	P	**Pn**	**04 04 38.0**	**+1.4**
TISM	**Timmit**	**7.80**	**130**	S	**Sn**	**04 05 58.6**	**-6.4**
PSIM	**Granatula de C**	**7.87**	**74**	Pn	**Pn**	**04 04 40.4**	**+2.7**
TIO	**Tiouine**	**7.91**	**138**	P	**Pn**	**04 04 39.6**	**+1.2**
TIO	**Tiouine**	**7.91**	**138**	S	**Sn**	**04 06 02.1**	**-5.9**
EPON	**Pontenova**	**7.96**	**35**	⇑iIVmb_VC		04 04 43.4	
	273nm,SNR=1.6						
EPON				Sn	**Sn**	**04 06 03.6**	**-5.3**
MD31	**MD31**	**8.21**	**117**	P	**Pn**	**04 04 44.1**	**+1.7**
MD31	**MD31**	**8.21**	**117**	S	**Sn**	**04 06 08.0**	**-7.3**
MDT	**Midelt**	**8.35**	**117**	P	**Pn**	**04 04 45.6**	**+1.4**
MDT	**Midelt**	**8.35**	**117**	S	**Sn**	**04 06 11.5**	**-7.2**

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*IDC **04** 04:15:08.1±1.1, 24°.83N×62°.96E, h0^{km}, mb4.1/21, mbtmp4.1/21, MS3.4/10, Error ellipse: s-maj=26.0km s-min=17.1km az=24.0*

*NEIC **04** 04:15:10.7±1.4, 25°.0N±0°.1×62°.94E±0°.10, h10^{km}±1^{km}, mb4.5/53, Error ellipse: s-maj=17.6km s-min=14.5km az=151.0*

*MOS **04** 04:15:10.1±1.0, 25°.11N×62°.97E, h12^{km}, mb4.7/12, Error ellipse: s-maj=14.1km s-min=6.6km az=83.4*

*OMAN **04** 04:15:17.1±0.1, 24°.81N×62°.59E, h58^{km}±3^{km}, mb4.8/14, ml4.2/8, Error ellipse: s-maj=2.1km s-min=1.8km az=286.0*

*DSN **04** 04:15:22.8±2.8, 25°.20N×62°.09E, h15^{km}, ML3.7/11, Error ellipse: s-maj=55.2km s-min=17.3km az=23.0*

ISC 04 04:15:12.5±0.5**, 24°.90N**±0°.05×**62°.85E**±0°.05**, h28^{km}, n181, σ1^{s}47**/186**, mb4.4**/59**, MS3.2**/11**, 8C-1D, Off coast of Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NGCH	**Negor - Chabah**	**1.62**	**287**	P	**Pn**	**04 15 40.9**	**+1.7**
NGCH				S	**Sn**	**04 15 58.5**	**-0.6**
JLN	**Jalan Bani Buh**	**4.17**	**230**	P	**Pn**	**04 16 14.9**	**+0.5**
	SNR=16						
JLN				S	**Sn**	**04 17 00.3**	**-2.0**
	SNR=9.5						
WSAR	**Wadi Sarin**	**4.19**	**248**	P	**Pn**	**04 16 15.3**	**+0.6**
	SNR=10						
WSAR				S	**Sn**	**04 16 59.4**	**-3.4**
WBK	**Wadi Bani Khal**	**4.22**	**238**	P	**Pn**	**04 16 15.7**	**+0.7**
	SNR=303						
WBK				S	**Sn**	**04 17 01.1**	**-2.4**
	SNR=10.0						
BIDO	**Bidbid**	**4.52**	**253**	P	**Pn**	**04 16 20.9**	**+1.7**
	SNR=15						
BIDO				S	**Sn**	**04 17 09.0**	**-1.9**
SMDO	**Samad**	**4.75**	**248**	P	**Pn**	**04 16 23.5**	**+1.0**
	SNR=25						
SMDO				S	**Sn**	**04 17 14.6**	**-2.1**
JMDO	**Jabal Madar**	**5.03**	**241**	P	**Pn**	**04 16 27.5**	**+1.4**
	SNR=35						
JMDO				S	**Sn**	**04 17 22.4**	**-0.9**
	SNR=6.7						
HOQ	**Hoqain**	**5.22**	**257**	P	**Pn**	**04 16 29.4**	**+0.6**
	SNR=12						
HOQ				S	**Sn**	**04 17 26.7**	**-1.4**
BSY	**Bisya**	**5.60**	**249**	P	**Pn**	**04 16 36.3**	**+2.3**
	SNR=7.7						
BSY				S	**Sn**	**04 17 37.5**	**+0.1**
SOHO	**SOHO**	**5.80**	**264**	P	**Pn**	**04 16 37.5**	**+0.7**
SOHO				S	**Sn**	**04 17 39.6**	**-2.7**
SOHO	**SOHO**	**5.80**	**264**	i P	**Pn**	**04 16 37.2**	**+0.5**
	SNR=12						
MHTO	**MHTO**	**5.95**	**230**	P	**Pn**	**04 16 39.6**	**+0.8**
	SNR=11						
MHTO				S	**Sn**	**04 17 44.1**	**-2.0**
	SNR=9.4						
MDH	**Madha**	**5.95**	**275**	P	**Pn**	**04 16 39.5**	**+0.7**
	SNR=6.3						
MDH				S	**Sn**	**04 17 41.8**	**-4.3**
ARQ	**Araqi**	**5.98**	**256**	P	**Pn**	**04 16 42.2**	**+2.9**
	SNR=18						
ARQ				S	**Sn**	**04 17 46.4**	**-0.6**
BANOM	**Banah**	**6.01**	**281**	P	**Pn**	**04 16 40.3**	**+0.6**
BANOM				S	**Sn**	**04 17 44.0**	**-3.5**
BANOM	**Banah**	**6.01**	**281**	i P	**Pn**	**04 16 40.0**	**+0.4**
	SNR=14						
BANOM				S	**Sn**	**04 17 42.5**	**-5.0**
UOSS	**Minazif**	**6.03**	**272**	P	**Pn**	**04 16 40.4**	**+0.5**
UOSS				S	**Sn**	**04 17 43.9**	**-4.2**
UOSS	**Minazif**	**6.03**	**272**		**Pn**	**04 16 40.1**	**+0.2**
MASF	**Masafi**	**6.08**	**276**	P	**Pn**	**04 16 41.3**	**+0.7**
	SNR=7.5						
MSFE	**Esma-Masafi**	**6.08**	**276**	i P	**Pn**	**04 16 42.6**	**+2.0**
	SNR=7.5						
HATD	**Hatta, Dubai**	**6.10**	**271**	P	**Pn**	**04 16 41.6**	**+0.7**
	SNR=6.2						
HATD	**Hatta, Dubai**	**6.10**	**271**	i P	**Pn**	**04 16 41.2**	**+0.3**
	SNR=6.1						
SHME	**Shamm**	**6.17**	**282**	P	**Pn**	**04 16 43.0**	**+1.3**
	SNR=75						
SHME	**Shamm**	**6.17**	**282**	i P	**Pn**	**04 16 43.0**	**+1.3**
	SNR=75						
ASHO	**Ashiyiah**	**6.17**	**269**	P	**Pn**	**04 16 43.0**	**+1.1**
	SNR=64						
ASHO				S	**Sn**	**04 17 52.1**	**+0.4**
	SNR=6.0						
ASHO	**Ashiyiah**	**6.17**	**269**	i P	**Pn**	**04 16 43.6**	**+1.7**
	SNR=83						
ALNE	**Al Ain**	**6.52**	**264**	P	**Pn**	**04 16 49.3**	**+2.7**
	SNR=8.5						
ALNE				S	**Sn**	**04 17 59.8**	**-0.3**
ALNE	**Al Ain**	**6.52**	**264**	i P	**Pn**	**04 16 49.4**	**+2.8**
	SNR=10						
NAZ	**Nazwa, Dubai**	**6.52**	**272**	P	**Pn**	**04 16 50.4**	**+3.7**
	SNR=10						
NAZ	**Nazwa, Dubai**	**6.52**	**272**	i P	**Pn**	**04 16 49.8**	**+3.1**
	SNR=10						
FAQ	**Al Faqa, Dubai**	**6.59**	**270**	P	**Pn**	**04 16 51.2**	**+3.5**
	SNR=16						
FAQ				S	**Sn**	**04 18 01.8**	**-0.1**
	SNR=9.2						
FAQ	**Al Faqa, Dubai**	**6.59**	**270**	i P	**Pn**	**04 16 51.2**	**+3.5**
	SNR=16						
ASUD	**Al Ashush, Dub**	**6.84**	**269**	P	**Pn**	**04 16 54.9**	**+3.9**
ASUD	**Al Ashush, Dub**	**6.84**	**269**	P	**Pn**	**04 16 54.6**	**+3.6**
DQM	**DQM**	**6.97**	**226**	P	**Pn**	**04 16 53.3**	**+0.5**
	SNR=14						
HRA	**Herat**	**9.47**	**357**	Pn	**Pn**	**04 17 24.7**	**-2.6**
DOK	**Doka**	**10.23**	**234**	P	**Pn**	**04 17 38.3**	**+0.7**
DMTO	**DMTO**	**10.26**	**227**	P	**Pn**	**04 17 38.4**	**+0.4**
WHFO	**Wadi Hawf**	**10.94**	**232**	P	**Pn**	**04 17 47.4**	**+0.1**
	SNR=13						
KBL	**Kabul**	**11.01**	**28**		**Pn**	**04 17 46.2**	**-2.2**
KBL	**Kabul**	**11.01**	**28**	P	**Pn**	**04 17 46.2**	**-2.2**
ABTO	**Aybut**	**11.65**	**232**	P	**Pn**	**04 17 56.8**	**-0.2**
SIMJ	**Simiganj**	**14.68**	**19**	Pn	**Pn**	**04 18 37.5**	**-0.9**
MANEM	**Manem**	**14.68**	**29**		**Pn**	**04 18 36.6**	**-2.1**
CHGR	**Chuyangaron**	**14.72**	**20**		**Pn**	**04 18 36.9**	**-2.1**
CHGR	**Chuyangaron**	**14.72**	**20**	P	**Pn**	**04 18 36.9**	**-2.1**
GAR	**Garm**	**15.41**	**22**	P	**Pn**	**04 18 48.2**	**+0.1**
GAR				IAmb	IAmb	04 18 52.0	
	comp=Z,18nm,0.6s						
RAYN	**Ar Rayn**	**15.88**	**269**	P	**Pn**	**04 18 53.1**	**-1.2**
DRK	**Karamyk**	**16.38**	**25**	Pn	**Pn**	**04 18 58.6**	**-2.2**
DRK				IAmb	IAmb	04 19 03.3	
	comp=Z,20nm,0.7s						
DRK	**Karamyk**	**16.38**	**25**	P	**Pn**	**04 18 58.6**	**-2.2**
HYB	**Hyderabad**	**16.43**	**114**	eP	**Pn**	**04 19 00.7**	**-0.5**
KK31	**Karatay Array**	**19.22**	**17**		**Pn**	**04 19 33.8**	**-1.7**
KK31	**Karatay Array**	**19.22**	**17**	P	**P**	**04 19 33.4**	**-1.0**
KKAR	**Karatay Array**	**19.22**	**17**		**P**	**04 19 32.8**	**-1.6**
KKAR	**Karatay Array**	**19.22**	**17**	P	**P**	**04 19 32.8**	**-1.6**
AAK	**Ala-Archa**	**20.13**	**26**	P	Pn	04 19 45.1	-1.4
	comp=Z,5.6nm,0.6s,baz=201,slow=7.5,SNR=15						
	comp=Z,5.6nm,0.6s						
AAK	**Ala-Archa**	**20.13**	**26**	P	**P**	**04 19 43.4**	**-1.1**
AAK	**Ala-Archa**	**20.13**	**26**	ceP	Pn	04 19 45.1	-1.4
AAK				pmax	pmax		
	comp=Z,24nm,1.7s						
BOOM	**Boomskoye usch**	**20.61**	**28**	P	**P**	**04 19 48.9**	**-0.8**
BOOM				IAmb	IAmb	04 19 51.2	
	comp=Z,13nm,0.6s						
BOOM	**Boomskoye usch**	**20.61**	**28**	P	**P**	**04 19 48.9**	**-0.8**
AKT	**Akhty**	**20.77**	**326**	⇓iP	Pn	04 19 53.1	-0.8
AKT				e		04 20 11.4	
AKT				pmax	pmax		
	comp=Z,33nm,0.5s						
TARG	**Taragay, Kyrgy**	**20.88**	**33**	P	**P**	**04 19 51.8**	**-1.0**
TARG	**Taragay, Kyrgy**	**20.88**	**33**	P	**P**	**04 19 51.8**	**-1.0**
KDJ	**Kajisay**	**20.88**	**31**	P	**P**	**04 19 51.6**	**-1.1**
KDJ				IAmb	IAmb	04 19 53.0	
	comp=Z,12nm,0.7s						
WUS	**Wushi**	**21.21**	**36**		**P**	**04 19 55.3**	**-0.9**
EVN	**Everest**	**21.67**	**77**	P	**P**	**04 20 01.5**	**-0.3**
GURO	**Guroymak-BITLI**	**22.26**	**313**	P	**P**	**04 20 08.1**	**+0.5**
MARD	**Mardin**	**22.52**	**309**		**P**	**04 20 10.9**	**+0.6**
PDGK	**Podgornoye**	**22.90**	**32**	P	**P**	**04 20 14.3**	**+0.1**
ASF	**Jabal al Asfar**	**23.88**	**294**	LR	LR	04 32 41.6	
	comp=Z,68nm,18.2s,baz=93,slow=44						
AB31	**Akbulak array**	**24.42**	**355**	P	**P**	**04 20 27.3**	**-1.3**
AB31				IAmb	IAmb	04 20 48.7	
	comp=Z,10.0nm,0.8s						
AB31	**Akbulak array**	**24.42**	**355**	P	**P**	**04 20 28.5**	**-0.1**
ABKAR	**Akbulak array**	**24.42**	**355**	P	**P**	**04 20 28.6**	**0.0**
KBZ	**Khabaz**	**24.87**	**324**	P	**P**	**04 20 35.0**	**+2.3**
	comp=Z,13nm,0.8s,baz=136,slow=9.1,SNR=24						
	comp=Z,13nm,0.8s						

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KBZ   Khabaz             24.87 324 ceP    P       04 20 35.1 +2.3
KBZ                                  pmax   pmax
      comp=Z,16nm,0.8s
SHA1  Shidzhatmaz        25.01 324 i P    P       04 20 33.2 -1.1
GAZ   Gaziantep          25.06 305   P    P       04 20 36.2 +1.6
KIV   Kislovodsk         25.14 324   P    P       04 20 36.8 +1.5
KIV   Kislovodsk         25.14 324  eP    P       04 20 36.4 +1.1
KIV                                  pmax   pmax
      comp=Z,26nm,1.0s
KIV                                  MLR    MLR
      comp=Z,26nm,15.0s
EIL   Elat               25.21 287   LR     LR    04 31 11.6
      comp=Z,60nm,20.4s,baz=0.0,slow=38
MMAI  Mount Meron Ar     25.29 295   LR     LR    04 33 45.2
      comp=Z,49nm,18.4s,baz=89,slow=44
AKTO  Aktyubinsk         25.77 353   P    P       04 20 41.5 +0.7
      comp=Z,7.7nm,0.6s,baz=176,slow=7.4,SNR=28
AKTO                                 LR     LR    04 33 43.0
      comp=Z,59nm,18.1s,baz=62,slow=43
      comp=Z,7.7nm,0.6s
AKTO  Aktyubinsk         25.77 353   P    P       04 20 41.7 +0.9
MK31  Makanchi Array     26.80  30 ceP    P       04 20 49.6 -0.6
MKAR  Makanchi Array     26.80  30   P    P       04 20 50.1 -0.2
      comp=Z,3.8nm,0.6s,baz=209,slow=9.2,SNR=28
      comp=Z,3.8nm,0.6s
MKAR  Makanchi Array     26.80  30   P    P       04 20 49.4 -0.9
MKAR  Makanchi Array     26.80  30 ceP    P       04 20 50.2  0.0
MKAR                                 pmax   pmax
      comp=Z,4.0nm,0.6s
TOKA  Tokat              26.88 311   P    P       04 20 52.3 +1.3
TOKA                                 IAmb   IAmb  04 21 05.0
      comp=Z,12nm,1.1s
WMQ   Urumqi             27.70  41  eP    P       04 21 01.5 +3.1
KURBB Kurchatov Arra     28.40  21   P    P       04 21 03.9 -0.5
      comp=Z,0.7nm,0.6s,baz=219,slow=8.1,SNR=5.8
      comp=Z,0.7nm,0.6s
KURK  Kurchatov          28.50  21   P    P       04 21 04.6 -0.8
BRTR  Keskin Array B     28.61 308   P    P       04 21 09.2 +2.5
      comp=Z,0.8nm,0.8s,baz=136,slow=9.7,SNR=3.9
      comp=Z,0.8nm,0.8s
BRTR  Keskin Array B     28.61 308   P    P       04 21 07.6 +0.9
BVAR  Borovoye Array     28.66  10   P    P       04 21 07.0 +0.3
      comp=Z,2.4nm,0.7s,baz=182,slow=10,SNR=11
BVAR                                 LR     LR    04 34 15.5
      comp=Z,124nm,18.3s,baz=197,slow=40
      comp=Z,2.4nm,0.7s
BORK  Borovoye           28.67   9   P    P       04 21 08.3 +1.5
BORK                                 IAmb   IAmb  04 21 19.4
      comp=Z,3.5nm,0.8s
BORK  Borovoye           28.67   9 i P    P       04 21 06.5 -0.3
BORK                                 pmax   pmax
      comp=Z,2.0nm,0.4s
ILGA  Ilgaz              29.09 311   P    P       04 21 10.5 -0.4
ILGA                                 IAmb   IAmb  04 21 18.8
      comp=Z,20nm,1.4s
DGZ   Jazzator, Alta     31.28  31 i P    P       04 21 31.1 +0.9
DGZ                                  pmax   pmax
      comp=Z,2.0nm,0.6s
ARTI  Arti               31.62 355   LR     LR    04 35 13.3
      comp=Z,56nm,20.3s,baz=196,slow=38
ZAA0  Zalesovo Array     33.33  24   P    P       04 21 47.6 -0.3
ZAA0                                 IAmb   IAmb  04 21 48.5
      comp=Z,3.1nm,0.6s
ZALV  Zalesovo Beam      33.33  24   P    P       04 21 47.6 -0.3
      comp=Z,3.1nm,0.6s,baz=227,slow=10,SNR=17
      comp=Z,3.1nm,0.6s
ZALV  Zalesovo Beam      33.33  24   P    P       04 21 47.0 -0.9
CMAR  Chiang Mai Arr     34.08  94   LR     LR    04 37 46.3
      comp=Z,32nm,18.4s,baz=285,slow=40
IDI   Anoyia             34.25 297   P    P       04 21 58.1 +1.8
IDI                                  IAmb   IAmb  04 21 59.0
      comp=Z,6.8nm,0.9s
PZH   PanZhiHua          35.00  79   P    P       04 22 05.7 +2.8
OBN   Obninsk            35.85 334  eP    P       04 22 10.3 +0.7
OBN                                 e             04 23 31.0
OBN                                 ePPP    PPP   04 23 45.6
OBN                                 e             04 24 35.2
OBN                                  pmax   pmax
      comp=Z,9.0nm,1.1s
AKASG Malin Array Be     36.48 324   P    P       04 22 15.4 +0.3
      comp=Z,6.2nm,0.7s,baz=127,slow=8.1,SNR=20
      comp=Z,6.2nm,0.7s
AKASG Malin Array Be     36.48 324   P    P       04 22 15.2  0.0
AKASG Malin Array Be     36.48 324 ceP    P       04 22 15.6 +0.5
AKASG                                pmax   pmax
      comp=Z,7.0nm,0.7s
AKBB  Malin Array Si     36.48 324        P       04 22 15.4 +0.3
AKBB  Malin Array Si     36.48 324 ceP    P       04 22 15.3 +0.2
AKBB                                 pmax   pmax
      comp=Z,12nm,0.8s
KIEV  Kiev               36.49 324        P       04 22 15.2  0.0
KIEV                                 IAmb   IAmb  04 22 16.5
      comp=Z,10nm,0.8s
KIEV  Kiev               36.49 324   P    P       04 22 15.7 +0.5
BURAR Bucovina Array     37.35 317   P    P       04 22 22.6 -0.2
BUR08 Bucovina Ar. S     37.37 317   P    P       04 22 23.8 +0.9
BUR08                                IAmb   IAmb  04 22 24.3
      comp=Z,6.3nm,1.2s
KLMR  Klimovskoe         39.35 342  eP    P       04 22 37.7 -1.4
KLMR                                 pmax   pmax
      comp=Z,18nm,1.6s
SONM  Songino Array      41.16  45   P    P       04 22 55.4 +0.9
      comp=Z,1.8nm,0.7s,baz=246,slow=8.3,SNR=8.1
      comp=Z,1.8nm,0.7s
SONM  Songino Array      41.16  45   P    P       04 22 53.7 -0.8
ULN   Ulaanbaatar        41.59  45 i P    P       04 22 58.7 +0.6
ULN                                  pmax   pmax
      comp=Z,2.0nm,0.9s
CUC   Castrocucco        41.96 303   P    P       04 23 02.3 +1.2
MORC  Moravsky Berou     42.87 317   P    P       04 23 09.1 +0.7
HHC   Hu-ho-hao-te       43.34  56  eP    P       04 23 13.2 +0.8
HHC                                  pmax   pmax
      comp=Z,13nm,0.7s
HHC                                  pmax   pmax
      comp=Z,420nm,5.9s
FIA1  FINESS Array S     44.21 336   P    P       04 23 18.2 -0.8
FINES FINESS Array B     44.21 336   P    P       04 23 18.3 -0.6
      comp=Z,2.2nm,0.6s,baz=151,slow=8.5,SNR=10
      comp=Z,2.2nm,0.6s
FINES FINESS Array B     44.21 336   P    P       04 23 18.8 -0.1
FINES FINESS Array B     44.21 336 ceP    P       04 23 19.6 +0.7
FINES                                pmax   pmax
      comp=Z,1.0nm,0.5s
NRCA  Norcia             44.32 307   P    P       04 23 20.5 +0.3
MOA   Molln              44.43 314  eP    P       04 23 22.0 +1.1
      comp=Z,2.2nm,0.6s
BIOA  Bad Ischl, Aus     44.80 313  eP    P       04 23 25.0 +1.1
      comp=Z,7.4nm,0.7s
KBA   Koelnbreinsper     44.87 313  eP    P       04 23 24.9 +0.3
      comp=Z,0.7nm,0.4s
GEC2  GERESS Array S     45.03 315   P    P       04 23 26.3 +0.5
GEC2                                 IAmb   IAmb  04 23 27.2
      comp=Z,3.3nm,0.8s
GERES GERESS Array B     45.03 315   P    P       04 23 26.4 +0.6
      comp=Z,2.0nm,0.7s,baz=98,slow=8.2,SNR=14
      comp=Z,2.0nm,0.7s
ABTA  Abfaltersbach      45.36 312  eP    P       04 23 29.4 +0.9
      comp=Z,1.2nm,0.4s
LESA  Schwarzleotal      45.38 313  eP    P       04 23 29.4 +0.8
      comp=Z,5.0nm,0.5s
WTTA  Wattenberg         46.05 312  eP    P       04 23 34.5 +0.6
      comp=Z,4.9nm,0.6s
CLL   Collm              46.09 318 i P    P       04 23 35.2 +1.2
CLL                                  pmax   pmax
      comp=Z,5.0nm,0.8s
CLL   Collm              46.09 318 i P    P       04 23 35.2 +1.2
      comp=Z,5.0nm,0.8s
WATA  Walderalm          46.10 313  eP    P       04 23 34.8 +0.5
      comp=Z,1.3nm,0.5s
SQTA  Sankt Quirin       46.33 312  eP    P       04 23 36.1  0.0
      comp=Z,1.8nm,0.4s
FETA  Feichten           46.62 312  eP    P       04 23 38.9 +0.4
      comp=Z,2.8nm,0.6s
RETA  Reutte             46.67 313  eP    P       04 23 38.8  0.0
      comp=Z,4.1nm,0.5s
NRIK  Noril'sk           46.82  12   P    P       04 23 40.2 +0.8
      comp=Z,2.0nm,0.4s,baz=196,slow=3.0,SNR=4.2
      comp=Z,2.0nm,0.4s
NRIK  Noril'sk           46.82  12   P    P       04 23 39.5  0.0
NRIK                                 IAmb   IAmb  04 23 45.4
      comp=Z,2.6nm,0.7s
NRIK  Noril'sk           46.82  12 i P    P       04 23 39.7 +0.2
NRIK                                 pmax   pmax
      comp=Z,2.0nm,0.4s
FUORN Ofenpass-Fuorn     46.87 311   P    P       04 23 40.1 -0.4
FUORN                                IAmb   IAmb  04 24 18.1
      comp=Z,5.1nm,1.1s
DAVOX Davos/Dischmat     47.15 312   LR     LR    04 49 05.9
      comp=Z,52nm,18.4s,baz=74,slow=43
DAVA  Damuels            47.23 312  eP    P       04 23 43.5 +0.3
      comp=Z,7.1nm,0.5s
TUE   Stuetta            47.47 311   P    P       04 23 45.2  0.0
TUE                                  IAmb   IAmb  04 23 47.5
      comp=Z,3.5nm,0.8s
HFS   Hagfors            48.72 330   P    P       04 23 54.6 +0.3
      comp=Z,2.4nm,0.8s,baz=112,slow=11,SNR=2.1
      comp=Z,2.4nm,0.8s
SENIN Lac Senin/Sane     48.87 311   P    P       04 23 56.9 +1.0
SENIN                                IAmb   IAmb  04 24 38.7
      comp=Z,4.9nm,1.1s
BNI   Bardonecchia       49.18 309   P    P       04 23 58.1 -0.1
ECH   Echery             49.18 313   P    P       04 23 58.1  0.0
ECH                                  IAmb   IAmb  04 24 14.8
      comp=Z,6.9nm,1.3s
ARCES ARCESS Array B     49.77 344   P    P       04 24 02.4 +0.1
      comp=Z,2.0nm,0.7s,baz=151,slow=5.3,SNR=7.2
      comp=Z,2.0nm,0.7s
ARCES ARCESS Array B     49.77 344   P    P       04 24 02.1 -0.2
NB2   NORSAR Subarra     50.20 330   P    P       04 24 05.1 -0.6
      comp=Z,1.8nm,0.7s,baz=112,slow=7.9
NOA   NORSAR Array B     50.20 330   P    P       04 24 05.6  0.0
      comp=Z,1.0nm,0.9s,baz=270,slow=10,SNR=2.0
      comp=Z,1.0nm,0.9s
NBO00 NORSAR Array S     50.39 330   P    P       04 24 06.4 -0.7
KSRS  Korea Array        56.08  60   P    P       04 24 47.0 -2.3
      comp=Z,1.0nm,0.5s,baz=265,slow=7.9,SNR=2.0
      comp=Z,1.0nm,0.5s
EKA   Eskdalemuir Ar     56.31 321   P    P       04 24 51.0 +0.3
      comp=Z,0.6nm,0.5s,baz=79,slow=7.4,SNR=4.0
      comp=Z,0.6nm,0.5s
TIXI  Tiksi              59.07  20   LR     LR    04 52 55.4
      comp=Z,60nm,18.5s,baz=226,slow=38
H04N1 CROZET ISLANDS     71.43 188   T      T     05 44 23.4
      baz=10,slow=76,SNR=204
H04N2 CROZET ISLANDS     71.43 188   T      T     05 44 21.2
      baz=10,slow=76,SNR=202
H04N3 CROZET ISLANDS     71.45 188   T      T     05 44 21.4
      baz=10,slow=76,SNR=187
RES   Resolute Bay       79.61 354   LR     LR    05 04 48.4
      comp=Z,66nm,21.9s,baz=332,slow=37
C18K  Utukok River       81.34  15   P    P       04 27 25.9 -0.3
C19K  Lookout Ridge      81.35  14   P    P       04 27 26.4 +0.1
D19K  Kuna River         82.16  14   P    P       04 27 31.0 +0.5
D19K                                 IAmb   IAmb  04 27 46.0
      comp=Z,8.2nm,1.4s
C23K  Itkillik River     82.53  11   P    P       04 27 32.9 +0.6
C23K                                 IAmb   IAmb  04 27 57.6
      comp=Z,8.1nm,1.4s
WRA   Warramunga Arr     82.58 116   P    P       04 27 33.2 -0.2
      comp=Z,0.6nm,0.8s,baz=319,slow=4.7,SNR=5.9
      comp=Z,0.6nm,0.8s
WRA   Warramunga Arr     82.58 116   P    P       04 27 33.0 -0.4
WRA   Warramunga Arr     82.58 116 ceP    P       04 27 34.0 +0.6
WRA                                  pmax   pmax
      comp=Z,1.0nm,0.7s
D22K  Ayikyak River      82.97  12   P    P       04 27 34.6 -0.1
D22K                                 IAmb   IAmb  04 28 10.8
      comp=Z,5.1nm,1.3s
D23K  Nanushuk River     83.27  12   P    P       04 27 37.1 +0.9
D23K                                 IAmb   IAmb  04 27 55.4
      comp=Z,6.6nm,1.5s
D24K  Happy Valley       83.44  11   P    P       04 27 37.4 +0.4
D24K                                 IAmb   IAmb  04 28 17.0
      comp=Z,5.5nm,1.4s
D25K  Kavik River        83.69  10   P    P       04 27 39.0 +0.6
D25K                                 IAmb   IAmb  04 27 40.9
      comp=Z,3.2nm,0.7s
TOLK  Toolik Lake Re     83.76  11   P    P       04 27 39.1 +0.3
TOLK                                 IAmb   IAmb  04 27 53.6
      comp=Z,7.0nm,1.4s
C27K  Jago River         83.82   9   P    P       04 27 39.9 +0.9
C27K                                 IAmb   IAmb  04 28 02.6
      comp=Z,2.3nm,1.1s
ASAR  Alice Springs      84.08 119   P    P       04 27 41.1  0.0
      comp=Z,0.2nm,0.3s,baz=317,slow=5.5,SNR=3.1
      comp=Z,0.2nm,0.3s
ASAR  Alice Springs      84.08 119   P    P       04 27 40.8 -0.3
ILAR  Eielson Array      87.69  12   P    P       04 27 56.7 -1.6
      comp=Z,0.5nm,0.6s,baz=320,slow=4.9,SNR=13
      comp=Z,0.5nm,0.6s
ILAR  Eielson Array      87.69  12   P    P       04 27 57.6 -0.7
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*IDC **04** 04:23:26.0±1.9, 3°.21S×90°.28E, h0km, mb3.7/4, mbtmp4.0/6, ML4.5/2, MS3.4/6, Error ellipse: s-maj=49.5km s-min=27.2km az=60.0*

*NEIC **04** 04:23:27.5±1.1, 3°.2S±0°.1×90°.3E±0°.1, h10km±2km, mb4.3/11, Error ellipse: s-maj=20.3km s-min=17.4km az=175.0*

ISC 04 04:23:26.7±0.7, **3°.26S**±0°.08×**90°.30E**±0°.10, **h10**km, **n54**, σ**0s.80**/39, **mb4.1**/8, **MS3.5**/4, **South Indian Ocean**

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Code  Station Name          Δ°  AZ°   Phase ID          Time     Res
                                      Op     ISC      h  m  s    ISC
SNSI  Sinabang, Aceh       8.25  47   P      Pn     04 25 25.9 -0.6
GSI   Gunungsitoli         8.57  58          Pn     04 25 31.4 +0.4
GSI   Gunungsitoli         8.57  58   P      Pn     04 25 30.2 -0.8
PBSI  Pulau Batu           8.59  68   P      Pn     04 25 31.4 +0.2
SISI  Saibi                8.99  78   P      Pn     04 25 37.1 +0.4
TPTI                       9.45  47   P      Pn     04 25 42.1 -0.9
PPSI  Pulau Pagai          9.71  87   P      Pn     04 25 46.6  0.0
KCSI  Kotacane, Aceh      10.06  48   P      Pn     04 25 50.6 -0.8
      29nm,1.0s
MNSI  Mandailing Nat      10.12  67   P      Pn     04 25 52.2 +0.1
PDSI  Padang              10.42  77   P      Pn     04 25 56.3  0.0
      48nm,0.9s
RPSI  Rantau Prapat       10.46  56          Pn     04 25 57.1 +0.3
PSI   Prapat              10.52  55   Pn     Pn     04 25 57.1 -0.6
      1.2nm,0.3s,baz=209,slow=12,SNR=6.6
PSI                                   LR     LR     04 29 44.4
      comp=Z,97nm,19.0s,baz=284,slow=36
      10nm,0.8s
PSI   Prapat              10.52  55   P      Pn     04 25 57.5 -0.2
TSI   Tuntungan           10.65  51   P      Pn     04 25 58.5 -0.9
LHMI  Lhok Sumawe         10.74  38   Pn     Pn     04 26 01.1 +0.4
LHMI  Lhok Sumawe         10.74  38   P      Pn     04 26 00.6  0.0
COCO  West Island         10.98 144   P      Pn     04 26 01.7 -2.2
KRJI  Kerinci             11.21  84   P      Pn     04 26 06.7 -0.5
IPM   Ipoh                13.19  54   Pn     Pn     04 26 34.5 +0.2
PALK  Pallekele           14.19 318   Pn     Pn     04 26 47.3 -0.6
      6.1nm,0.3s,baz=130,slow=12,SNR=24
PALK                                  Sn     Sn     04 29 10.7  -15
      2.8nm,0.3s,baz=197,slow=20,SNR=5.9
PALK                                  LR     LR     04 31 30.1
      comp=Z,57nm,18.4s,baz=133,slow=34
      14nm,0.4s
PALK  Pallekele           14.19 318          Pn     04 26 47.4 -0.5
KAAM  Kaadhehdhoo         17.69 282          Pn     04 27 33.0 -0.4
KAAM                                  IAmb   IAmb   04 27 38.7
      comp=Z,61nm,1.0s
H08S2 Diego Garcia H      18.25 255   T      T      04 46 22.1
      baz=76,slow=74,SNR=140
H08S3 Diego Garcia H      18.25 256   T      T      04 46 15.9
      baz=76,slow=74,SNR=527
H08S1 Diego Carcia H      18.27 255   T      T      04 46 18.6
      baz=76,slow=74,SNR=138
CMAR  Chiang Mai Arr      23.20  21   P      P      04 28 33.8 -0.2
      comp=Z,1.5nm,0.3s,baz=204,slow=9.8,SNR=5.2
      comp=Z,1.5nm,0.3s
CMAR  Chiang Mai Arr      23.20  21   P      P      04 28 32.7 -1.2
PSA00 Pilbara Seismi      33.99 125   P      P      04 30 10.5 -0.4
PSA00                                 IAmb   IAmb   04 30 18.1
      comp=Z,1.4nm,1.0s
PSA00 Pilbara Seismi      33.99 125   P      P      04 30 11.8 +0.9
PSA00                                 IAmb   IAmb   04 30 43.6
      comp=Z,6.4nm,1.1s
MORW  Morawa              35.45 139   P      P      04 30 22.6 -0.8
MORW                                  IAmb   IAmb   04 30 25.9
      comp=Z,14nm,1.4s
FITZ  Fitzroy Crossi      37.62 116   P      P      04 30 42.6 +0.5
H01W3 Cape Leeuwin H      38.47 148   T      T      05 11 25.8
      baz=320,slow=76,SNR=16
H01W2 Cape Leeuwin H      38.48 148   T      T      05 11 28.1
      baz=320,slow=76,SNR=12
H01W1 Cape Leeuwin H      38.48 148   T      T      05 11 28.6
      baz=320,slow=76,SNR=19
FORT  Forrest             44.92 132   P      P      04 31 42.1 +0.2
FORT                                  IAmb   IAmb   04 31 54.8
      comp=Z,3.6nm,0.8s
WRA   Warramunga Arr      46.02 115   P      P      04 31 51.8 +1.0
      comp=Z,0.3nm,0.6s,baz=287,slow=8.2,SNR=2.1
      comp=Z,0.3nm,0.6s
WRA   Warramunga Arr      46.02 115   P      P      04 31 51.2 +0.3
WB0   Warramunga Arr      46.03 114   P      P      04 31 50.6 -0.3
WB0                                   IAmb   IAmb   04 31 55.5
      comp=Z,5.5nm,1.2s
ASAR  Alice Springs       46.73 120   P      P      04 31 57.7 +1.3
      comp=Z,0.3nm,0.5s,baz=305,slow=8.4,SNR=5.3
ASAR                                  LR     LR     04 50 26.8
      comp=Z,32nm,19.3s,baz=232,slow=35
      comp=Z,0.3nm,0.5s
ASAR  Alice Springs       46.73 120   P      P      04 31 56.9 +0.5
AAK   Ala-Archa           47.88 344   LR     LR     04 53 21.7
      comp=Z,37nm,19.8s,baz=118,slow=38
SONM  Songino Array       52.81  14   P      P      04 32 43.5 +1.1
      comp=Z,1.1nm,0.6s,baz=192,slow=8.7,SNR=5.0
      comp=Z,1.1nm,0.6s
SONM  Songino Array       52.81  14   P      P      04 32 42.9 +0.5
SONM                                  IAmb   IAmb   04 33 08.4
      comp=Z,1.6nm,1.1s
H04N2 CROZET ISLANDS      54.29 212   T      T      05 31 30.1
      baz=48,slow=75,SNR=13
H04N1 CROZET ISLANDS      54.30 212   T      T      05 31 19.6
      baz=48,slow=75,SNR=15
H04N3 CROZET ISLANDS      54.31 212   T      T      05 31 26.4
      baz=48,slow=75,SNR=18
H04S1 CROZET ISLANDS      54.67 212   T      T      05 32 03.7
      baz=48
H04S3 CROZET ISLANDS      54.68 212   T      T      05 32 10.2
      baz=48,SNR=4.5
H04S2 CROZET ISLANDS      54.69 212   T      T      05 31 59.1
      baz=48
JHJ2  Mitsune             59.12  48   P      P      04 33 28.1 +0.4
CASY  Casey               64.49 171   P      P      04 34 05.4 +2.1
VNDA  Vanda               82.88 168   LR     LR     05 04 49.5
      comp=Z,36nm,21.5s,baz=308,slow=30
JMIC  Jan Mayen           95.94 341   LR     LR     05 18 39.5
      comp=Z,62nm,21.9s,baz=73,slow=35
TXAR  Lajitas Array      150.88  26   PKPbc  PKPbc  04 43 20.9 +0.4
      comp=Z,0.5nm,0.5s,baz=186,slow=0.5,SNR=20
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*NIED **04** 04:27:41.0, 36°.95N×139°.68E, h7km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.25; $M_{\theta\theta}$-0.05; $M_{\phi\phi}$-0.20; $M_{r\theta}$-0.95; $M_{\theta\phi}$-3.36; $M_{\phi r}$-0.14; Fault plane solution: $M_0$3.49000×10^{14} NP1: ϕ_s359.00000°, δ74.00000°, λ0.00000°. NP2: ϕ_s89.00000°, δ90.00000°, λ-164.00000°.*

*JMA **04** 04:27:41.0±0.0, 37°.0N±0°.2×139°.7E±0°.2, h7km, MV3.9/20, NORTHERN TOCHIGI PREF*

JMA Felt III J1 at NORTHERN TOCHIGI PREF .

*IDC **04** 04:27:41.9±3.2, 36°.48N×139°.69E, h0km, mb3.6/1, mbtmp3.7/2, ML3.7/1, MS3.8/2, Error ellipse: s-maj=49.3km s-min=24.6km az=33.0*

ISC 04 04:27:41.1±1.1, **36°.95N**±0°.03×**139°.69E**±0°.04, **h9**km±10km, **n12**, σ**1s.02**/17, **2D**, **Eastern Honshu**

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Code  Station Name          Δ°  AZ°   Phase ID          Time     Res
                                      Op     ISC      h  m  s    ISC
JSB   Shiboa               0.18  83   P      Pg     04 27 45.2 +0.3
JSB                                  eS      Sg     04 27 47.7 +0.1
JKT   Katashina            0.40 243   P      Pg     04 27 48.8 -0.1
JFY   Yanaizu              0.46   1   P      Pg     04 27 49.8 -0.2
JFY                                  eS      Sg     04 27 55.6 -0.5
JAG   Ashikaga             0.55 200   P      Pg     04 27 51.5 -0.3
JAG                                  eS      Sg     04 27 58.6 -0.4
JUON  Uonuma               0.57 297  ⇓P      Pg     04 27 51.8 -0.3
JUON                                ⇓eS      Sg     04 27 59.1 -0.5
JOTO  OTAMA OYAMA          0.80  40  eP      Pg     04 27 56.1 -0.3
JOTO                                 eS      Sg     04 28 06.8 -0.1
JNS   Sasagawa             0.92 341   P      Pg     04 27 58.0 -0.8
JNS                                  eS      Sg     04 28 09.9 -0.8
JIZZ  Izumozaki            0.98 307   P      Pg     04 28 00.5 +0.7
MJAR  Matsushiro Arr       1.26 252   Pg     Pn     04 28 04.4 -0.4
      9.3nm,0.3s,baz=92,slow=16,SNR=163
MJAR                                  LR     LR     04 28 50.5
      comp=Z,71nm,18.3s,baz=352,slow=57
KSRS  Korea Array          9.40 277   Pn     Pn     04 29 59.7 +3.0
      0.8nm,0.3s,baz=86,slow=14,SNR=4.2
      1.2nm,0.3s
ARTI  Arti                55.62 318   LR     LR     05 01 49.4
      comp=Z,24nm,18.4s,baz=109,slow=37
WRA   Warramunga Arr      56.81 186   P      P      04 37 24.6 -1.1
      0.4nm,0.6s,baz=1.7,slow=7.4,SNR=4.8
WRA                                   LR     LR     04 59 09.2
      comp=Z,241nm,21.9s,baz=270,slow=34
      0.4nm,0.6s
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*NNC **04** 04:30:45.5±12.0, 36°.86N×70°.23E, h0km, mb4.4, mpv4.2, Error ellipse: s-maj=109.1km s-min=80.7km az=160.0*

*NEIC **04** 04:30:50.7±1.7, 36°.58N±0°.07×70°.99E±0°.09, h220km±5km, mb4.3/19, Error ellipse: s-maj=10.3km s-min=9.6km az=107.0*

*MOS **04** 04:30:50.0±1.1, 36°.62N×70°.90E, h219km, mb4.3/12, Error ellipse: s-maj=10.1km s-min=5.4km az=88.0*

*IDC **04** 04:30:51.5±2.8, 36°.56N×71°.05E, h219km±26km, mb3.7/17, mbtmp4.3/23, MS3.7/1, Error ellipse: s-maj=17.3km s-min=11.2km az=28.0*

ISC 04 04:30:50.5±0.4, **36°.59N**±0°.04×**71°.07E**±0°.05, **h220**km, **n137**, σ**1s.89**/152, **mb4.2**/28, **12C-3D**, **Afghanistan-Tajikistan border region**

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Code  Station Name          Δ°  AZ°   Phase ID          Time     Res
                                      Op     ISC      h  m  s    ISC
MANEM Manem                1.07  27          Pn     04 31 24.1 +1.0
MANEM                                 Sn     S      04 31 48.7 +0.1
GAR   Garm                 2.48 346          Pn     04 31 35.4 -0.2
SHAA  Shahritus            2.55 293          Pn     04 31 35.4 -0.9
CHGR  Chuyangaron          2.57 324          Pn     04 31 35.8 -0.6
CHGR  Chuyangaron          2.57 324   PN     Pn     04 31 35.8 -0.6
KBL   Kabul                2.63 220          Pn     04 31 36.8 -0.6
KBL   Kabul                2.63 220   PN     Pn     04 31 36.8 -0.6
DRK   Karamyk              2.94  11          Pn     04 31 40.8  0.0
DRK   Karamyk              2.94  11   PN     Pn     04 31 40.8  0.0
NIL   Nilore               3.43 148          Pn     04 31 47.2 +0.9
NIL   Nilore               3.43 148   PN     Pn     04 31 47.2 +0.9
SRNI  Srinagar             3.96 129  eP      Pn     04 31 52.5  0.0
SRNI                                 eS      S      04 32 40.5 -0.7
KSH   Kashi                4.85  51   Pn     Pn     04 31 59.7 -3.9
KSH                                   Sn     S      04 32 50.7  -10
KSH                                   smax   smax
      comp=N,550nm,0.7s
KSH                                   smax   smax
      comp=E,600nm,0.6s
JMU   Jammu                4.90 140  eS      S      04 33 00.3 -3.8
JMU                                   IAML          04 33 05.2
      comp=N,788nm,0.4s
JMU                                   IAML          04 33 06.0
      comp=E,646nm,0.9s
ALCI  Alchi Leh            5.52 114  eP      Pn     04 32 12.8 +0.5
ALCI                                 eS      S      04 33 13.2 -3.8
ALCI                                  IAML          04 33 17.0
      comp=E,326nm,0.7s
ALCI                                  IAML          04 33 17.8
      comp=N,324nm,1.1s
TSSA  Tissa                5.61 130  eP      Pn     04 32 14.3 +1.0
TSSA                                 eS      S      04 33 15.7 -3.1
TSSA                                  IAML          04 33 17.9
      comp=E,362nm,0.3s
TSSA                                  IAML          04 33 18.4
      comp=N,365nm,0.7s
DHRM  DHARAMSHALA          6.11 134  eP      Pn     04 32 20.8 +1.0
DHRM                                 eS      S      04 33 26.0 -4.5
DHRM                                  IAML          04 33 30.4
      comp=N,386nm,0.4s
DHRM                                  IAML          04 33 30.8
      comp=E,308nm,0.5s
UCH   Uchtor               6.23  24   P      Pn     04 32 22.2 +0.8
      SNR=38
EKS2  Erkin-Say            6.42  18   P      Pn     04 32 25.3 +1.9
      SNR=21
KK31  Karatay Array        6.52 356          Pn     04 32 24.0 -0.6
KK31  Karatay Array        6.52 356  ⇓P      Pn     04 32 23.9 -0.7
      comp=E,9.8nm,0.2s,baz=180,slow=12
KK31                                 ⇑S      S      04 33 33.8 -5.8
      comp=E,84nm,0.5s,baz=188,slow=25
KK31  Karatay Array        6.52 356   PN     Pn     04 32 24.0 -0.6
KKAR  Karatay Array        6.52 356          Pn     04 32 23.9 -0.8
KKAR  Karatay Array        6.52 356   PN     Pn     04 32 23.9 -0.8
AAK   Ala-Archa            6.59  23   P      Pn     04 32 27.2 +1.5
      SNR=20
AAK   Ala-Archa            6.59  23   P      Pn     04 32 26.6 +0.9
      comp=E,11nm,0.3s,baz=166,slow=5.3,SNR=32
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AAK				S	S	04 33 35.0	-6.5
	comp=E,17nm,0.5s,baz=172,slow=6.4,SNR=5.6						
AAK	Ala-Archa	6.59	23	⇑P	Pn	04 32 26.6	+0.9
	comp=E,4.6nm,0.4s						
AAK				⇓S	S	04 33 38.9	-2.6
	comp=E,45nm,0.9s						
AAK	Ala-Archa	6.59	23	cePN	Pn	04 32 27.0	+1.3
AAK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KBK	Karagaybulak	6.76	25	P	Pn	04 32 29.7	+1.9
	SNR=6.5						
BHK	Bhakra	6.80	138	eP	Pn	04 32 33.5	+5.1
BHK				eS	S	04 33 48.4	+2.1
BHK				IAML		04 33 49.2	
	comp=E,416nm,0.5s						
BHK				IAML		04 33 49.5	
	comp=N,329nm,0.7s						
TKM2	Tokmak 2	7.22	27	P	Pn	04 32 34.8	+1.0
	SNR=9.6						
KDJ	Kajisay	7.28	39	Pn	Pn	04 32 35.3	+0.8
KDJ	Kajisay	7.28	39	PN	Pn	04 32 35.3	+0.8
TARG	Taragay, Kyrgy	7.33	43		Pn	04 32 34.7	-0.7
TARG	Taragay, Kyrgy	7.33	43	PN	Pn	04 32 34.7	-0.7
SMLA	Simla	7.44	135	eP	Pn	04 32 36.9	+0.4
SMLA				eS	S	04 33 56.1	-5.0
SMLA				IAML		04 33 59.5	
	comp=N,261nm,0.5s						
SMLA				IAML		04 34 02.5	
	comp=E,206nm,1.0s						
HRA	Herat	7.53	256		Pn	04 32 35.9	-2.0
HNLY	HANLEY	7.53	118	eP	Pn	04 32 38.4	+0.2
HNLY				eS	S	04 33 58.5	-5.6
HNLY				IAML		04 34 05.0	
	comp=N,38nm,1.0s						
HNLY				IAML		04 34 05.5	
	comp=E,43nm,1.4s						
KLP	Kalpa	7.80	128	eP	Pn	04 32 41.9	+0.4
KLP				eS	S	04 34 04.0	-6.1
KLP				IAML		04 34 08.4	
	comp=E,266nm,0.6s						
KLP				IAML		04 34 08.9	
	comp=N,259nm,0.4s						
WUS	Wushi	7.84	52		Pn	04 32 42.5	+0.7
DDI	Dehra Dun	8.54	135	eP	Pn	04 32 50.9	+0.1
DDI				eS	S	04 34 20.2	-7.2
DDI				IAML		04 34 24.5	
	comp=E,282nm,0.4s						
DDI				IAML		04 34 26.7	
	comp=N,201nm,0.7s						
LGTI	Lohaghat	10.42	131	eP	Pn	04 33 17.0	+1.4
LGTI				eS	S	04 35 02.4	-11
LGTI				IAML		04 35 04.5	
	comp=E,46nm,0.9s						
LGTI				IAML		04 35 11.3	
	comp=N,63nm,1.5s						
AJM	Ajmer	10.57	162	eP	Pn	04 33 18.0	+1.8
MAKZ	Makanchi	13.05	35	P	Pn	04 33 48.2	+0.5
MAKZ	Makanchi	13.05	35	P	Pn	04 33 48.3	+0.5
MK31	Makanchi Array	13.19	36	⇑P	Pn	04 33 50.0	+0.5
	comp=N,2.3nm,0.5s,baz=211,slow=9.2,SNR=7.4						
MK31	Makanchi Array	13.19	36	ceP	P	04 33 52.6	+0.7
MKAR	Makanchi Array	13.19	36	P	Pn	04 33 50.4	+0.9
	comp=N,2.4nm,0.3s,baz=214,slow=14,SNR=15						
WMQ	Urumqi	14.60	55	eP	Pn	04 34 06.7	-0.2
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
KURBB	Kurchatov Arra	15.02	19	P	Pn	04 34 11.7	-0.2
	comp=Z,0.6nm,0.3s,baz=207,slow=11,SNR=14						
KURBB	Kurchatov Arra	15.02	19	⇑P	P	04 34 12.6	+0.5
	comp=Z,1.0nm,0.3s						
KURBB	Kurchatov Arra	15.02	19	P	P	04 34 12.6	+0.5
AB31	Akbulak array	15.04	331	P	Pn	04 34 10.7	-1.4
AB31				IAmb	IAmb	04 34 15.6	
	comp=Z,8.2nm,0.5s						
AB31	Akbulak array	15.04	331	⇓P	Pn	04 34 11.1	-1.0
	comp=Z,2.9nm,0.4s						
AB31	Akbulak array	15.04	331	P	Pn	04 34 11.7	-0.4
ABKAR	Akbulak array	15.04	331	P	Pn	04 34 11.1	-1.1
KURK	Kurchatov	15.13	19	P	Pn	04 34 12.8	-0.4
KURK	Kurchatov	15.13	19	i P	Pn	04 34 12.1	-1.1
EVN	Everest	15.84	118	P	Pn	04 34 23.7	+1.1
BVAR	Borovoye Array	16.44	359	P	Pn	04 34 28.9	0.0
	comp=Z,2.2nm,0.4s,baz=153,slow=9.3,SNR=14						
BORK	Borovoye	16.47	358	P	P	04 34 27.5	-0.5
BORK				IAmb	IAmb	04 34 32.2	
	comp=Z,4.6nm,0.5s						
BORK	Borovoye	16.47	358	i P	P	04 34 27.1	-0.9
AKTO	Aktyubinsk	16.73	330	P	Pn	04 34 32.3	-0.1
	comp=Z,15nm,0.5s,baz=139,slow=8.7,SNR=44						
AKTO	Aktyubinsk	16.73	330	⇑P	P	04 34 31.0	0.0
	comp=Z,8.0nm,0.6s						
UOSS	Minazif	17.24	232	P	P	04 34 36.2	-0.6
UOSS				IAmb	IAmb	04 34 52.2	
	comp=Z,24nm,0.8s						
DGZ	Jazzator, Alta	17.68	37	i P	Pn	04 34 44.1	+0.5
ZAA0	Zalesovo Array	19.81	24		P	04 35 05.2	+1.0
ZAA0				IAmb	IAmb	04 35 07.8	
	comp=Z,6.0nm,1.1s						
ZALV	Zalesovo Beam	19.81	24	P	P	04 35 05.5	+1.3
	comp=Z,3.1nm,0.3s,baz=218,slow=11,SNR=18						
ZALV	Zalesovo Beam	19.81	24	P	P	04 35 04.1	-0.1
SHL	Shillong	20.89	116	P	P	04 35 18.7	+2.5
SHL	Shillong	20.89	116	P	P	04 35 18.7	+2.5
SHL				pmax	pmax		
	comp=Z,20nm,0.6s						
ARTI	Arti	21.58	341	P	P	04 35 23.2	+0.5
	comp=Z,5.5nm,0.4s,baz=151,slow=10,SNR=9.5						
	comp=Z,5.5nm,0.4s						
ARTI	Arti	21.58	341	P	P	04 35 22.8	+0.1
ARTI	Arti	21.58	341	c iP	P	04 35 20.9	-1.8
ARTI				*PP	pP	04 35 54.9	-5.5
ARTI						04 36 03.6	
ARTI				S	S	04 39 03.9	-2.5
ARTI				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KBZ	Khabaz	22.61	297	i P	P	04 35 31.9	-0.6
KBZ				pmax	pmax		
	comp=Z,21nm,2.3s						
BELG	Belogornoye	22.86	321	i P	P	04 35 35.0	+0.5
BELG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
RAYN	Ar Rayn	25.59	247	P	P	04 35 58.7	-1.0
RAYN				IAmb	IAmb	04 36 06.1	
	comp=Z,6.0nm,0.8s						
RAYN	Ar Rayn	25.59	247	P	P	04 35 58.7	-1.0
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KIRV	Kirov	26.19	334	ceP	P	04 36 05.0	+0.5
PZH	PanZhiHua	27.90	102	P	P	04 36 23.1	+2.8
SONM	Songino Array	28.24	55	P	P	04 36 26.3	+3.2
	comp=Z,0.7nm,0.5s,baz=269,slow=7.4,SNR=4.0						
	comp=Z,0.7nm,0.5s						
SONM	Songino Array	28.24	55	P	P	04 36 23.3	+0.2
BRTR	Keskin Array B	29.46	288	P	P	04 36 35.5	+1.5
	comp=Z,1.0nm,0.7s,baz=100,slow=8.9,SNR=6.2						
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	29.46	288	P	P	04 36 32.5	-1.6
BRTR	Keskin Array B	29.46	288	ceP	P	04 36 34.7	+0.6
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
OBN	Obninsk	29.91	319	eP	P	04 36 37.3	-0.3
OBN				e*PP	pP	04 37 19.4	-2.6
OBN				e*SP	sP	04 37 43.7	-3.9
OBN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CMAR	Chiang Mai Arr	30.44	119	P	P	04 36 44.6	+1.9
	comp=Z,1.8nm,0.3s,baz=312,slow=7.9,SNR=8.1						
	comp=Z,1.8nm,0.3s						
CMAR	Chiang Mai Arr	30.44	119	P	P	04 36 43.0	+0.2
CMAR	Chiang Mai Arr	30.44	119	i P	P	04 36 40.7	-2.0
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KLMR	Klimovskoe	31.43	331	eP	P	04 36 49.3	-1.6
KLMR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC	Hu-ho-hao-te	31.68	70	eP	P	04 36 55.2	+1.8
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,590nm,5.2s						
ELL	Elmali	32.84	283	P	P	04 37 03.5	-0.1
ELL				IAmb	IAmb	04 37 05.9	
	comp=Z,11nm,0.6s						
ELL	Elmali	32.84	283	P	P	04 37 03.5	-0.1
ELL				pmax	pmax		
	comp=Z,11nm,0.6s						
AKASG	Malin Array Be	32.94	309	P	P	04 37 05.3	+1.3
	comp=Z,0.9nm,0.6s,baz=82,slow=6.9,SNR=5.2						
	comp=Z,0.9nm,0.6s						
AKASG	Malin Array Be	32.94	309	P	P	04 37 03.8	-0.3
AKASG	Malin Array Be	32.94	309	ceP	P	04 37 05.8	+1.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NRIK	Noril'sk	34.03	10	P	P	04 37 14.7	+1.4
	comp=Z,3.0nm,0.4s,baz=192,slow=6.9,SNR=5.5						
	comp=Z,3.0nm,0.4s						
NRIK	Noril'sk	34.03	10	P	P	04 37 14.1	+0.8
NRIK				IAmb	IAmb	04 37 16.6	
	comp=Z,6.1nm,1.1s						
NRIK	Noril'sk	34.03	10	ceP	P	04 37 16.3	+3.0
NRIK				pmax	pmax		
	comp=Z,18nm,3.6s						
KARP	Karpathos	35.28	282	P	P	04 37 25.0	+0.5
KARP				IAmb	IAmb	04 37 26.4	
	comp=Z,16nm,0.9s						
JOF	Joensuu	35.82	330	eP	P	04 37 30.1	+1.5
FINES	FINESS Array B	37.45	326	P	P	04 37 43.6	+1.3
	comp=Z,4.9nm,0.4s,baz=121,slow=9.5,SNR=55						
	comp=Z,4.9nm,0.4s						
FINES	FINESS Array B	37.45	326	P	P	04 37 42.9	+0.6
FINES	FINESS Array B	37.45	326	i P	P	04 37 43.5	+1.2
FINES				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KEF	Keuruu	38.23	327	eP	P	04 37 48.5	-0.4
NJ2	Nanjing	39.40	82	eP	P	04 38 00.3	+1.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VAF	Ylistaro	39.49	328	eP	P	04 37 59.5	+0.2
VADS	Vadso	40.26	339	eP	P	04 38 07.1	+1.6
ARA0	ARCESS Array S	41.09	338	eP	P	04 38 14.0	+1.7
ARCES	ARCESS Array B	41.09	338	P	P	04 38 14.2	+1.9
	comp=Z,6.2nm,0.5s,baz=114,slow=7.9,SNR=86						
	comp=Z,6.2nm,0.5s						
ARCES	ARCESS Array B	41.09	338	P	P	04 38 14.0	+1.7
ARCES				IAmb	IAmb	04 38 18.5	
	comp=Z,6.2nm,0.9s						
KTK1	Kautokeino	41.56	336	eP	P	04 38 17.5	+1.4
HAMF	Hammerfest	42.17	339	eP	P	04 38 23.4	+2.4
JETT	Jettan, Norway	42.70	336	eP	P	04 38 27.2	+1.8
HFS	Hagfors	43.03	322	P	P	04 38 29.2	+1.0
	comp=Z,5.0nm,0.6s,baz=94,slow=12,SNR=27						
	comp=Z,5.0nm,0.6s						
NC602	NORSAR Array S	44.16	323	eP	P	04 38 37.9	+0.8
NB2	NORSAR Subarra	44.35	323	P	P	04 38 39.2	+0.6
	comp=Z,1.8nm,0.6s,baz=97,slow=7.9						
NB2	NORSAR Subarra	44.35	323	P	P	04 38 39.2	+0.6
	baz=97,slow=7.9						
NOA	NORSAR Array B	44.35	323	P	P	04 38 38.9	+0.3
	comp=Z,3.6nm,0.7s,baz=104,slow=7.3,SNR=12						
	comp=Z,3.6nm,0.7s						
SPITS	Spitsbergen Ar	47.42	347	P	P	04 39 04.2	+1.8
	comp=Z,2.8nm,0.6s,baz=108,slow=14,SNR=6.5						
	comp=Z,2.8nm,0.6s						
KEST	Kesra	49.06	288	P	P	04 39 16.6	+1.1
	comp=Z,2.0nm,0.5s,baz=296,slow=2.1,SNR=8.1						
	comp=Z,2.0nm,0.5s						
KEST	Kesra	49.06	288	P	P	04 39 16.5	+0.9
KEST				IAmb	IAmb	04 39 42.0	
	comp=Z,18nm,1.4s						
MBAR	Mbarara	52.61	235	i P	P	04 39 42.6	+0.4
MBAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SEY	Seymchan	54.31	34	LR	LR	05 04 56.2	
	comp=Z,68nm,20.3s,baz=309,slow=38						
A36M	Sachs Harbour	71.11	5	P	P	04 41 45.9	+1.6
A36M				IAmb	IAmb	04 41 47.5	
	comp=Z,5.3nm,0.8s						
ILAR	Eielson Array	74.68	16	P	P	04 42 05.5	+0.1
	comp=Z,0.8nm,0.7s,baz=297,slow=5.1,SNR=9.0						
	comp=Z,0.8nm,0.7s						
ILAR	Eielson Array	74.68	16	P	P	04 42 05.8	+0.4
ILAR	Eielson Array	74.68	16	P	P	04 42 05.8	+0.4
BOSA	Boshof	77.85	220	P	P	04 42 24.1	+0.3
	comp=Z,4.5nm,1.0s,baz=349,slow=5.2,SNR=2.1						
	comp=Z,4.5nm,1.0s						
BOSA	Boshof	77.85	220	P	P	04 42 23.8	0.0
YKA	Yellowknife Ar	81.16	3	P	P	04 42 42.6	+1.5
	comp=Z,0.9nm,0.5s,baz=312,slow=1.6,SNR=15						
	comp=Z,0.9nm,0.5s						
YKA	Yellowknife Ar	81.16	3	P	P	04 42 41.9	+0.9
YKA	Yellowknife Ar	81.16	3	i P	P	04 42 42.4	+1.4
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	81.99	122	P	P	04 42 46.4	+0.4
	comp=Z,0.4nm,0.4s,baz=322,slow=4.8,SNR=8.6						
	comp=Z,0.4nm,0.4s						
WRA	Warramunga Arr	81.99	122	P	P	04 42 45.9	-0.1
ASAR	Alice Springs	84.25	125	P	P	04 42 58.2	+0.7
	comp=Z,0.7nm,0.6s,baz=312,slow=5.0,SNR=8.1						
	comp=Z,0.7nm,0.6s						
ASAR	Alice Springs	84.25	125	P	P	04 42 57.4	-0.2

MEX ***04*** *04:32:15.3±1.0, 14°.83N×92°.30W, h96^{km}±8^{km}, MD3.7*
GCG ***04*** *04:32:15.5±0.3, 14°.96N×92°.23W, h85^{km}±4^{km}, MD3.1, ML3.3*
ISC 04 04:32:11.9±2.5**, 14°.7N**±0°.1×**92°.3W**±0°.1**, h102**^{km}±13^{km}**, n12, σ1^{s}.40**/20**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.24	357	eP	Pn	04 32 27.7	+1.1
THIG				eS	Sn	04 32 37.0	-0.5
THIG		0.24	357	eS	Sn	04 32 37.1	-0.3
THIG				IAML		04 32 38.0	
	comp=N,1µm,0.4s						
SMCA	Catarina	0.26	42	eP	Pn	04 32 27.7	+1.0
SMCA				eS	Sn	04 32 37.4	-0.3
CHUJ	Union Juarez	0.45	18	eP	Pn	04 32 28.5	+0.5
CHUJ				eS	Sn	04 32 39.0	-0.8
PATR	El Naranjo	0.45	2	eP	Pn	04 32 27.8	-0.2
PATR				eS	Sn	04 32 38.1	-1.8
PAVE	Pavencul	0.53	8	eP	Pn	04 32 29.1	+0.6
PAVE				eS	Sn	04 32 40.0	-0.8
RTAL	Retalhuleu	0.56	104	eS	Sn	04 32 43.5	+2.8
STG2	El Palmar, Qui	0.88	105	eS	Sn	04 32 43.9	-2.2
STG8	El Palmar, Qui	0.90	104	eP	Pn	04 32 31.9	+0.2
STG8				eS	Sn	04 32 44.7	-1.9
STG5	El Palmar, Qui	0.91	106	eP	Pn	04 32 31.9	+0.2
PCIG		1.39	318	eP	Pn	04 32 37.6	+0.6
PCIG				eS	Sn	04 32 54.3	-1.7
CCIG	Comitan	1.61	4	eP	Pn	04 32 41.6	+1.7
CCIG				eS	Sn	04 33 00.3	-0.8

CNRM ***04*** *04:35:33.2, 38°.75N×7°.27W, h46^{km}, ML1.1*
SFS ***04*** *04:35:37.0, 38°.53N×7°.44W, h6^{km}, ML2.2/6, ML2.0/8, MLv1.9/8*
MDD ***04*** *04:35:36.5±0.3, 38°.53N×7°.42W, h10^{km}±3^{km}, mb_Lg2.5/10, Error ellipse: s-maj=2.6km s-min=2.3km az=112.0*
INMG ***04*** *04:35:37.3±1.4, 38°.54N×7°.42W, h13^{km}, ML1.8, Error ellipse: s-maj=1.9km s-min=1.2km az=87.0, #DIST_RANGE: LOCAL #IPMA_REGION: SE Redondo*
ISC 04 04:35:35.8±0.9**, 38°.53N**±0°.01×**7°.38W**±0°.02**, h14**^{km}±8^{km}**, n49, σ0^{s}.68**/90**, 2C, Portugal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EBAD	Badajoz	0.36	52	Pg	Pb	04 35 44.4	+0.4
EBAD				Sg	Sb	04 35 49.8	+0.1
EBAD	Badajoz	0.36	52	⇑Pg	Pb	04 35 44.4	+0.4
EBAD				Sg	Sb	04 35 49.7	+0.1
EBAD				i IVmb_Lg		04 35 50.2	
PESTR	Estremoz	0.37	334	Pg	Pg	04 35 43.7	+0.4
PESTR				Sg	Sg	04 35 48.3	-0.2
PESTR	Estremoz	0.37	334	ePg	Pg	04 35 43.7	+0.4
PESTR				eSg	Sg	04 35 48.6	+0.2
PESTR				i IAML		04 35 49.2	
PESTR				i IAML		04 35 50.0	
PESTR				i IAML		04 35 50.2	
PESTR	Estremoz	0.37	334	P	Pg	04 35 41.7	-1.7
PESTR	Estremoz	0.37	334	S	Sg	04 35 48.6	+0.2
PBAR	Barrancos	0.45	143	Pg	Pb	04 35 45.5	+0.2
PBAR				Sg	Sb	04 35 51.6	-0.4
PBAR	Barrancos	0.45	143	ePg	Pb	04 35 45.6	+0.2
PBAR				eSg	Sb	04 35 51.7	-0.2
PBAR				i IAML		04 35 53.9	
PBAR				i IAML		04 35 54.5	
PBAR				i IAML		04 35 55.0	
PARRA	Arraiolos	0.59	299	ePg	Pg	04 35 47.4	+0.1
PARRA				eSg	Sg	04 35 54.9	-0.3
PARRA				i IAML		04 35 56.0	
PARRA				i IAML		04 35 56.1	
PARRA				i IAML		04 35 56.4	
PBEJ	Beja	0.63	217	ePg	Pb	04 35 48.4	-0.1
PBEJ				eSg	Sg	04 35 56.6	+0.1
PBEJ				i IAML		04 35 57.5	
PBEJ				i IAML		04 35 58.8	
PBEJ				i IAML		04 36 00.3	
MOE	Montemor	0.76	270	eP	Pg	04 35 50.6	+0.1
MOE				eS	Sg	04 36 00.4	-0.1
MOE				i IAML		04 36 02.6	
MOE				i IAML		04 36 03.1	
MOE				i IAML		04 36 03.1	
PMTG	Montargil	0.85	309	eP	Pg	04 35 52.2	-0.1
PMTG				eS	Sg	04 36 03.4	0.0
PMTG				i IAML		04 36 05.0	
PMTG				i IAML		04 36 05.0	
PMTG				i IAML		04 36 05.1	
PMRV	Marv??o	0.90	360	eP	Pb	04 35 53.6	+0.5
PMRV				eS	Sg	04 36 05.2	+0.3
PMRV				i IAML		04 36 05.6	
PMRV				i IAML		04 36 05.6	
PMRV				i IAML		04 36 06.9	
EMIN	Mina Concepcio	0.95	144	Pg	Pb	04 35 54.4	+0.5
EMIN				Sg	Sn	04 36 08.3	+0.4
EMIN	Mina Concepcio	0.95	144	⇑Pg	Pb	04 35 54.4	+0.5
EMIN				Sg	Sb	04 36 07.1	+0.7
EMIN				i IVmb_Lg		04 36 10.3	
MESJ	Messejana	0.96	224	eP	Pb	04 35 54.6	+0.5
MESJ				eS	Sb	04 36 07.3	+0.7
MESJ				i IAML		04 36 08.3	
MESJ				i IAML		04 36 09.3	
MESJ				i IAML		04 36 09.7	
EGRO	El Granado	1.00	185	Pg	Pn	04 35 55.6	+0.3
EGRO				Sg	Sn	04 36 08.8	-0.4
EGRO	El Granado	1.00	185	Pg	Pg	04 35 54.8	-0.3
EGRO				Pg	Pn	04 35 55.3	0.0
EGRO				Sg	Sb	04 36 08.0	+0.2
EGRO				Sg	Sn	04 36 08.6	-0.6
EGRO				i IVmb_Lg		04 36 11.7	
PCVE	Castro Verde	1.04	210	Pg	Pb	04 35 55.8	+0.3
PCVE				Sg	Sb	04 36 09.1	+0.2
PCVE	Castro Verde	1.04	210	eP	Pn	04 35 56.3	+0.4
PCVE				eS	Sb	04 36 09.2	+0.2
PCVE				i IAML		04 36 09.8	
PCVE				i IAML		04 36 10.9	
PCVE				i IAML		04 36 11.1	
PVAQ	Vaqueiros	1.16	193	eP	Pn	04 35 57.8	+0.3
PVAQ				eS	Sn	04 36 13.2	0.0
PVAQ				i IAML		04 36 14.8	
PVAQ				i IAML		04 36 14.9	
PVAQ				i IAML		04 36 17.4	
PVAQ	Vaqueiros	1.16	193	P	Pb	04 35 56.2	-1.3
PVAQ	Vaqueiros	1.16	193	S	Sn	04 36 14.4	+1.3
PSARD	Sardoal	1.23	331	eP	Pb	04 35 59.2	+0.4
PSARD				eS	Sb	04 36 15.1	+0.6
PSARD				i IAML		04 36 15.9	
PSARD				i IAML		04 36 16.3	
PSARD				i IAML		04 36 16.3	
EXHU	Huelva	1.30	164	Sg	Sg	04 36 18.5	+0.7
EXAYA	Ayamonte	1.31	181	Sg	Sg	04 36 17.9	0.0
PCBR	Castelo Branco	1.31	357	eP	Pn	04 35 59.9	+0.2
PCBR				eS	Sb	04 36 16.9	+0.1
PCBR				i IAML		04 36 17.4	
PCBR				i IAML		04 36 18.4	
PCBR				i IAML		04 36 19.1	
PBDV	Barranco-do-Ve	1.36	199	Pn	Pn	04 36 00.5	+0.2
PBDV				Sn	Sb	04 36 18.4	+0.2
PBDV	Barranco-do-Ve	1.36	199	ePn	Pn	04 36 00.5	+0.2
PBDV				eSg	Sg	04 36 19.0	-0.5
PBDV				i IAML		04 36 21.0	
PBDV				i IAML		04 36 21.6	
PBDV				i IAML		04 36 21.9	
PTEO	Sao Teotonio	1.45	228	ePn	Pg	04 36 03.5	-0.1
PTEO				eSg	Sg	04 36 22.2	-0.2
PTEO				i IAML		04 36 23.1	
PTEO				i IAML		04 36 23.1	
PTEO				i IAML		04 36 24.2	
PSBE	So Bento	1.48	312	ePn	Pb	04 36 03.5	+0.5
PSBE				eSg	Sb	04 36 22.9	+1.3
PSBE				i IAML		04 36 23.3	
PSBE				i IAML		04 36 23.8	
PSBE				i IAML		04 36 25.3	
PMAFR	Mafra	1.55	286	ePn	Pn	04 36 02.4	-0.5
PMAFR				eSg	Sb	04 36 24.4	+0.8
PMAFR				i IAML		04 36 24.8	
PMAFR				i IAML		04 36 25.1	
PMAFR				i IAML		04 36 25.8	
MORF	Marmelete	1.58	220	ePn	Pn	04 36 03.2	-0.3
MORF				eSg	Sg	04 36 26.8	0.0
MORF				i IAML		04 36 27.5	
MORF				i IAML		04 36 28.5	
ECAB	El Cabril	1.61	106	Pn	Pb	04 36 05.4	+0.2
ECAB				Sn	Sg	04 36 26.6	-1.0
ECAB	El Cabril	1.61	106	Pg	Pb	04 36 06.0	+0.7
ECAB				Sn	Sn	04 36 24.9	+0.5
ECAB				Sg	Sg	04 36 28.6	+1.0
ECAB				i IVmb_Lg		04 36 30.2	
PCAS	Casmilo, Conde	1.75	331	ePn	Pb	04 36 08.6	+0.9
PCAS				eSg	Sg	04 36 31.8	-0.3
PCAS				i IAML		04 36 35.0	
PCAS				i IAML		04 36 35.6	
PCAS				i IAML		04 36 35.9	
PFVI	Vila Bisbo	1.81	220	eSg	Sg	04 36 32.8	-1.0
PFVI	Vila Bisbo	1.81	220	P	Pn	04 36 04.8	-1.6
PFVI	Vila Bisbo	1.81	220	S	Sn	04 36 29.6	+0.4
EPLA	Plasencia	1.83	33	Pn	Pn	04 36 06.8	-0.1
EPLA				Sn	Sn	04 36 30.4	+0.4
EPLA				i IVmb_Lg		04 36 35.4	
MTE	Manteigas	1.87	356	ePg	Pg	04 36 11.3	-0.3
MTE				eSg	Sb	04 36 34.0	+0.9
PVIS	Viseu	2.22	350	eSg	Sg	04 36 45.5	-1.5
EADA	Adamuz	2.23	98	Pg	Pb	04 36 17.3	+1.3
EADA				Sn	Sn	04 36 40.2	+0.4
EADA				Sg	Sg	04 36 47.2	-0.4
EADA				i IVmb_Lg		04 36 51.0	
PAB	San Pablo	2.57	66	Pn	Pn	04 36 16.7	-0.3
PAB				Sn	Sn	04 36 48.4	+0.2
PAB				Sg	Sg	04 36 57.2	-1.1
PAB				i IVmb_Lg		04 36 59.4	
MVO	Moncorvo	2.64	6	eSn	Sn	04 36 49.7	-0.2
MVO				eSg	Sg	04 36 59.1	-1.6
PSIM	Granatula de C	2.85	83	Sg	Sg	04 37 06.6	-0.8
ELOB	Lobios	3.37	351	Pn	Pn	04 36 27.7	-0.4
ELOB				Sn	Sn	04 37 05.8	-2.2
ELOB				i IVmb_Lg		04 37 19.0	
EQES	Quesada	3.47	101	Pn	Pn	04 36 29.8	+0.3
EQES				i IVmb_Lg		04 37 34.4	
MD31	MD31	6.04	159	P	Pn	04 37 03.2	-1.6

NEIC ***04*** *04:47:46.9±1.3, 56°.23N±0°.07×149°.41W±0°.08, h10^{km}±1^{km}, mb4.2/35, ML4.1/82, ML3.9(AEIC), Error ellipse: s-maj=11.2km s-min=7.1km az=177.0*
IDC ***04*** *04:47:46.5±1.0, 56°.15N×149°.43W, h0^{km}, mb3.7/7, mbtmp3.7/12, ML3.4/5, MS3.4/27, Error ellipse: s-maj=25.5km s-min=15.6km az=30.0*
AEIC ***04*** *04:47:51.5±2.1, 56°.21N±0°.04×149°.34W±0°.10, h11^{km}±4^{km}, Error ellipse: s-maj=8.9km s-min=3.6km az=121.0*
ISC 04 04:47:47.1±0.6**, 56°.27N**±0°.06×**149°.39W**±0°.04**, h10**^{km}**, n261, σ1^{s}.15**/238**, mb4.2**/20**, MS3.4**/23**, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.31	312	Pn	Pn	04 48 25.0	-0.2
	7.2nm,0.3s,baz=127,slow=2.8,SNR=168						
KDAK				Sn	Sn	04 48 51.2	-2.4
	20nm,0.3s,baz=3.2,slow=3.4,SNR=8.7						
KDAK				LR	LR	04 49 38.5	
	comp=Z,269nm,18.7s,baz=133,slow=47						
	19nm,0.3s						
KDAK	Kodiak Island	2.31	312	Pn	Pn	04 48 24.6	-0.6
KDAK				Sn	Sn	04 48 51.2	-2.4
OHAK	Old Harbor	2.35	296		Pn	04 48 24.7	-1.0
OHAK	Old Harbor	2.35	296		Sn	04 48 51.5	-3.0
OHAK	Old Harbor	2.35	296	P	Pn	04 48 24.9	-0.8
SII	Sitkinak Islan	2.68	278		Pn	04 48 29.2	-1.0

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SII                                   IAML          04 49 12.3
       comp=N,489nm,0.7s
SII                                   IAML          04 49 21.6
       comp=E,477nm,0.7s
SII    Sitkinak Islan       2.68 278         Sn     04 48 59.5 -3.2
SYI    Shuyak Island        2.85 327         Pn     04 48 32.4 -0.2
SYI                                          Sn     04 49 05.5 -1.4
R18K   Karluk               3.07 297         Pn     04 48 35.5 +0.1
R18K                                         Sn     04 49 09.6 -2.5
R18K   Karluk               3.07 297  IAML          04 49 11.0
       comp=N,904nm,0.5s
R18K                                  IAML          04 49 11.8
       comp=E,568nm,0.4s
CNPM   China Poot           3.41 344         Pn     04 48 40.1 -0.2
CNPM                                  IAML          04 49 30.4
       comp=E,212nm,0.6s
CNPM   China Poot           3.41 344         Sn     04 49 17.9 -2.8
Q19K   Cape Douglas,        3.52 321         Pn     04 48 42.5 +0.8
CHIR   Chirikof Islan       3.53 265         Pn     04 48 40.2 -1.6
CHIR   Chirikof Islan       3.53 265         Sn     04 49 19.1 -4.4
CHIR   Chirikof Islan       3.53 265  P      Pn     04 48 40.6 -1.2
KAPH   Katmai Pasha         3.55 313         Pn     04 48 43.3 +1.1
BRSE   Bradley Lake S       3.56 349         Sn     04 49 22.0 -2.3
BRSE                                         Lg     04 49 22.8
MID    Middleton Isla       3.56  26  Pn     Pn     04 48 42.2 -0.1
MID                                          Sn     04 49 21.3 -3.1
MID                                   IAML          04 49 54.7
       comp=N,339nm,2.8s
MID                                   IAML          04 51 02.4
       comp=E,468nm,2.8s
KAHG   Katmai Hook Gl       3.57 311         Sn     04 49 26.2 +1.3
BRLK   Bradley Lake         3.59 348         Pn     04 48 42.3 -0.5
BRLK                                  IAML          04 49 27.2
       comp=N,189nm,0.6s
BRLK                                  IAML          04 49 29.4
       comp=E,243nm,0.5s
HOM    Homer                3.60 341  Pn     Pn     04 48 43.6 +0.7
HOM                                   IAML          04 49 33.2
       comp=E,528nm,0.7s
KARR   Katmai Rainbow       3.64 310         Pn     04 48 44.5 +1.1
CAHL   Cahill               3.68 301         Pn     04 48 44.6 +0.6
AUI    Augustine Isla       3.76 327         Pn     04 48 45.8 +0.8
AUJK   Augustine Jueg       3.76 327         Pn     04 48 46.0 +0.9
ACHA   Angle Creek He       3.77 304         Pn     04 48 45.6 +0.3
KABU   Katmai Buttres       3.78 305         Pn     04 48 46.6 +1.2
KJL    Kejulik              3.81 301         Pn     04 48 46.5 +0.7
ANCK   Angle Creek          3.84 303         Pn     04 48 47.3 +1.1
SEW    Seward               3.85 360         Pn     04 48 46.0 -0.2
P23K   Montague Islan       3.88  15  Pn     Pn     04 48 46.8  0.0
P23K                                  IAML          04 49 34.2
       comp=N,281nm,0.8s
P23K                                  IAML          04 49 34.2
       comp=E,306nm,0.3s
P19K   Oil Pt               3.96 330  Pn     Pn     04 48 47.7 -0.2
P19K                                  IAML          04 49 41.8
       comp=E,408nm,0.5s
PLK3   Peulik 3             4.03 294         Pn     04 48 48.8 +0.1
PLK4   Peulik 4             4.05 293         Pn     04 48 48.8 -0.4
PLK4                                  IAML          04 49 40.3
       comp=N,271nm,0.7s
PLK4                                  IAML          04 49 51.1
       comp=E,270nm,0.8s
CNTC   Contact Creek        4.05 302         Pn     04 48 49.8 +0.6
ILS    Iliamna Low So       4.18 334         Pn     04 48 51.0 +0.1
IVE    Iliamna Volcan       4.22 334         Pn     04 48 51.2 -0.3
IVE                                          Pn     04 48 51.6 +0.1
ILSW   Iliamna Southw       4.22 333         Pn     04 48 51.7 +0.2
ILSW                                  IAML          04 49 47.4
       comp=N,194nm,0.7s
ILSW                                  IAML          04 49 47.5
       comp=E,219nm,0.7s
O22K   Cooper Landing       4.23 358         Pn     04 48 51.9 +0.4
PLK1   Peulik 1             4.23 294         Pn     04 48 52.0 +0.5
SLKM   Skilak Lake          4.27 354         Pn     04 48 52.0 -0.2
SLKM                                  IAML          04 49 41.9
       comp=E,232nm,0.3s
SLKM                                  IAML          04 49 42.3
       comp=N,252nm,0.2s
PLBL   Peulik Blue Cr       4.31 293         Pn     04 48 53.5 +0.8
HIN    Hinchinbrook I       4.41  19         Pn     04 48 54.2 +0.2
HIN                                   IAML          04 49 43.8
       comp=E,204nm,0.4s
HIN                                   IAML          04 49 44.9
       comp=N,232nm,0.6s
P18K   Big Mountain,        4.42 318  Pn     Pn     04 48 54.4 +0.2
KAIM   Kayak Island         4.52  34  Pn     Pn     04 48 56.2 +0.8
RED    Redoubt Volcan       4.53 338  Pn     Pn     04 48 55.0 -0.7
RED                                   IAML          04 49 52.7
       comp=N,141nm,0.9s
RED                                   IAML          04 49 55.3
       comp=E,138nm,0.6s
RDSO   Redoubt South        4.55 339         Pn     04 48 55.4 -0.7
RDWB   Redoubt West         4.61 338         Pn     04 48 56.0 -0.8
Q16K   King Salmon          4.61 305         Pn     04 48 57.5 +0.9
PWL    Port Wells           4.64   6         Pn     04 48 57.1  0.0
PWL                                   IAML          04 49 49.8
       comp=E,105nm,0.3s
PWL                                   IAML          04 49 51.9
       comp=N,132nm,0.6s
DFR    Drift River          4.67 340         Pn     04 48 57.2 -0.4
NCT    North Crescent       4.69 338         Pn     04 48 57.3 -0.7
EYAK   Cordova Ski Ar       4.70  23         Pn     04 48 58.2 +0.4
EYAK                                  IAML          04 49 53.3
       comp=E,119nm,0.5s
EYAK                                  IAML          04 50 03.6
       comp=N,154nm,0.7s
EYAK   Cordova Ski Ar       4.70  23  P      Pn     04 48 58.3 +0.4
O19K   Port Alsworth        4.72 329         Pn     04 48 58.0 -0.2
O18K   Koktuh Hills         4.74 322         Pn     04 48 58.8 +0.3
O18K                                  IAML          04 49 53.0
       comp=N,137nm,0.7s
O18K                                  IAML          04 50 05.8
       comp=E,87nm,0.7s
FID    Port Fidalgo         4.75  18         Pn     04 48 58.6  0.0
FID                                   IAML          04 49 51.3
       comp=E,134nm,0.6s
FID                                   IAML          04 49 52.6
       comp=N,119nm,0.3s
GLI    Glacier Island       4.78  14  Pn     Pn     04 48 59.5 +0.4
GLI                                   IAML          04 49 53.0
       comp=E,103nm,0.7s
GLI                                   IAML          04 50 06.7
       comp=N,88nm,1.5s
P17K   Kvichak River        4.78 311         Pn     04 48 60.0 +0.9
RAGM   Ragged Mountai       4.82  29         Pn     04 49 00.3 +0.7
SUCK   Suckling Hills       4.83  36         Pn     04 49 00.3 +0.5
RC01   Rabbit Creek A       4.84 358         Pn     04 49 00.0 +0.2
RC01                                  IAML          04 49 55.9
       comp=E,140nm,0.4s
RC01                                  IAML          04 49 57.0
       comp=N,112nm,0.4s
HMT    Hamilton             4.89  31         Pn     04 49 01.6 +1.0
NICHA  Nichawak Mount       4.90  33         Pn     04 49 00.8  0.0
NICHA                                        Pn     04 49 01.0 +0.3
ANPB   Aniakchak Plen       4.95 280         Pn     04 49 01.3 -0.1
GOAT   Goat Mountain        4.97  28         Pn     04 49 02.1 +0.4
BERG   Berg Lake            5.11  34         Pn     04 49 03.8 +0.3
SPU    Mount Spurr          5.12 345         Pn     04 49 03.3 -0.4
GRIN   Grindle Hills        5.14  36         Pn     04 49 04.4 +0.4
CKL    Chakachamna La       5.17 344         Pn     04 49 04.1 -0.5
KNK    Knik Glacier         5.18   5         Pn     04 49 04.8 +0.2
KNK                                   IAML          04 50 11.8
       comp=E,90nm,0.8s
KNK                                   IAML          04 50 12.7
       comp=N,65nm,0.7s
DIV    Divide               5.23  20         Pn     04 49 05.7 +0.4
DIV                                   IAML          04 50 21.1
       comp=N,65nm,1.6s
SNH    Sunshine Point       5.23  39  Pn     Pn     04 49 06.2 +0.9
SUA    Susitna One          5.26 353         Pn     04 49 05.5 -0.2
SUA                                   IAML          04 50 41.0
       comp=N,69nm,3.1s
SUA                                   IAML          04 51 21.3
       comp=E,55nm,3.9s
N19K   Bonanza Creek        5.28 332         Pn     04 49 05.5 -0.6
SPWE   Spurr West           5.28 343         Pn     04 49 05.7 -0.4
KHIT   Khitrov Hills        5.29  35         Pn     04 49 05.9 -0.2
KHIT                                         Pn     04 49 06.1 +0.1
BMRM   Bremner River        5.33  26         Pn     04 49 07.1 +0.4
BMRM                                  IAML          04 50 15.3
       comp=E,99nm,0.9s
BMRM                                  IAML          04 50 21.5
       comp=N,117nm,1.0s
PMR    Palmer               5.34   1         Pn     04 49 07.0 +0.3
PMR    Palmer               5.34   1  P      Pn     04 49 06.7  0.0
       comp=N,30nm,1.5s
P16K   Nushagak River       5.39 304         Pn     04 49 08.2 +0.9
O17K   Koliganek Bris       5.39 314         Pn     04 49 08.3 +0.8
STLK   Strandline Lak       5.40 347         Pn     04 49 07.6  0.0
VNSG   Veniaminof 6         5.42 273         Pn     04 49 07.7 -0.1
VNSG                                         Pn     04 49 07.9  0.0
WAX    Waxell Ridge         5.42  37         Pn     04 49 08.2 +0.3
BARK   Barkley Ridge        5.51  38         Pn     04 49 09.8 +0.6
M22K   Willow               5.51 356  Pn     Pn     04 49 09.7 +0.7
GHO    Glory Hole Cre       5.53   2         Pn     04 49 10.2 +0.8
KLU    Klutina              5.54  17         Pn     04 49 10.2 +0.7
MESA   MESA                 5.55  42  Pn     Pn     04 49 10.8 +1.0
CRQM   Cirque               5.56  33         Pn     04 49 10.6 +0.6
SML    Sawmill              5.58   5         Pn     04 49 10.8 +0.7
N18K   Kilae Creek          5.58 325         Pn     04 49 10.0 -0.1
VNKR   Veniaminof 5         5.58 272         Pn     04 49 10.5 +0.4
M23K   Glacier View         5.61   8         Pn     04 49 11.3 +0.9
TGL    Tana Glacier         5.66  35         Pn     04 49 11.8 +0.6
VNFG   Fog Glacier, M       5.67 274         Pn     04 49 10.7 -0.6
SCM    Sheep Creek Mo       5.68  10         Pn     04 49 12.7 +1.2
ISLE   Juniper Island       5.71  38         Pn     04 49 12.3 +0.4
O16K   Kokwok River B       5.71 309         Pn     04 49 12.2 +0.4
BAGL   Bagley Icefiel       5.71  39         Pn     04 49 12.3 +0.5
YAH    Yahtse               5.75  41         Pn     04 49 12.3 -0.3
SKT    Skwentna             5.83 350         Pn     04 49 12.8 -0.8
VRDI   Verde Repeater       5.85  29         Pn     04 49 13.3 -0.7
RKAV   Rock Avalanche       5.86  43         Pn     04 49 14.6 +0.6
N17K   Nushagak Hills       5.92 319         Pn     04 49 14.4 -0.2
KIAG   Kiagna River         5.94  35         Pn     04 49 15.4 +0.3
GLB    Gilahina Butte       5.94  27         Pn     04 49 15.4 +0.4
M20K   Styx River           5.95 343         Pn     04 49 14.8 -0.4
CHNA   Chernabura Isl       5.97 260  P      Pn     04 49 14.6 -0.7
       comp=N,74nm,0.8s
CNBA   Chernabura Isl       5.97 260         Pn     04 49 14.1 -1.3
TABL   Table Mountain       6.03  43         Pn     04 49 16.5 +0.2
M24K   Tolsona, Glenn       6.08  14         Pn     04 49 18.1 +1.1
PTPK   Patty Peak           6.11  33         Pn     04 49 18.2 +0.8
PCA    Pinnacle             6.17  48         Pn     04 49 19.1 +0.9
M18K   Stony River          6.21 330         Pn     04 49 18.2 -0.4
BARN   Barnard Glacie       6.27  37         Pn     04 49 20.4 +0.7
WACK   Wrangell Chich       6.30  22         Pn     04 49 20.5 +0.5
O15K   Ungalikthiuk R       6.30 302         Pn     04 49 20.6 +0.7
CTGM   Chitina Glacie       6.31  38         Pn     04 49 20.7 +0.5
SDPT   Sand Point           6.32 266         Pn     04 49 19.7 -0.5
SDPT   Sand Point           6.32 266  P      Pn     04 49 19.8 -0.4
       comp=N,155nm,1.0s
LOGN   Logan Glacier        6.33  40         Pn     04 49 21.0 +0.5
BCPM   Bancas Point         6.35  50         Pn     04 49 21.0 +0.4
WAT6   Susitna Watana       6.39   7         Pn     04 49 21.9 +0.7
HARP   HAARP                6.52  18         Pn     04 49 24.1 +1.2
WAT7   Susitna Watana       6.59   2         Pn     04 49 24.9 +1.0
WAT1   Susitna Watana       6.59   3         Pn     04 49 24.9 +0.9
N15K   Kwethluk River       6.87 309         Pn     04 49 26.2 -1.5
M16K   Timber Creek         6.90 318         Pn     04 49 28.6 +0.4
DHY    Denali Highway       6.90   8         Pn     04 49 29.1 +0.8
PAX    Paxson               7.01  15         Pn     04 49 30.8 +1.1
PS1A   Pavlof South-1       7.01 268         Pn     04 49 29.4 -0.3
O14K   Tigyukauivet M       7.02 300         Pn     04 49 30.5 +0.7
L18K   Granite Mounta       7.04 331         Pn     04 49 29.8 -0.3
PVV    Pavlof Volcano       7.05 268         Pn     04 49 29.8 -0.4
YUK8   Steele Glacier       7.09  41         Pn     04 49 32.9 +1.9
S12K   Black Hills          7.13 271         Pn     04 49 31.1 -0.3
PN7A   Pavlof North-7       7.15 269         Pn     04 49 31.6 -0.1
TRF    Thorofare Moun       7.22 357         Pn     04 49 32.7  0.0
DTNA   Dutton South F       7.36 267         Pn     04 49 34.0 -0.5
S31K   Pelican              7.36  71         Pn     04 49 32.1 -2.3
M15K   Kasigluk River       7.40 312         Pn     04 49 35.5 +0.6
YUK6   Outpost Mounta       7.42  46         Pn     04 49 36.9 +1.4
N14K   Kuskokwak Cree       7.47 304         Pn     04 49 37.1 +1.1
K20K   Telida               7.49 344         Pn     04 49 36.2  0.0
MCK    McKinley             7.49   2         Pn     04 49 36.7 +0.5
L16K   Owhat River          7.54 321         Pn     04 49 37.1 +0.3
BVCY   Beaver Creek         7.54  32         Pn     04 49 38.4 +1.5
HYT    Haines Junctio       7.71  49         Pn     04 49 40.4 +1.1
YUK5   Granite Creek        7.73  46         Pn     04 49 41.2 +1.6
CHUM   Lake Minchumin       7.78 350         Pn     04 49 40.4 +0.3
SIT    Sitka                7.79  78         Pn     04 49 38.2 -2.2
SIT    Sitka                7.79  78  P      Pn     04 49 37.8 -2.5
       comp=N,54nm,1.4s
BC01   Beaver Creek A       7.81  26         Pn     04 49 41.4 +0.8
K17K   Iditarod             7.89 329         Pn     04 49 41.2 -0.5
BPAW   Bear Paw Mtn.        7.90 355         Pn     04 49 41.4 -0.4
FALS   False Pass           8.08 266  P      Pn     04 49 43.8 -0.5
       comp=N,206nm,0.9s
SKAG   Skagway              8.15  61  P      Pn     04 49 45.9 +0.7
       comp=N,41nm,0.8s
BESE   Bessie Mountai       8.18  68         Pn     04 49 45.4 -0.3
WRH    Wood River Hil       8.26   4         Pn     04 49 47.1 +0.4
HDA    Harding Lake         8.26   7         Pn     04 49 47.9 +1.2
J20K   Nowinta River        8.28 345         Pn     04 49 46.6 -0.4
R32K   Eaglecrest           8.30  70         Pn     04 49 47.1 -0.3
JIS    Juneau Island        8.38  70  P      Pn     04 49 47.9 -0.4
       comp=N,31nm,1.1s
M13K   Dall Lake            8.43 305         Pn     04 49 50.1 +1.0
CCB    Clear Creek Bu       8.44   5         Pn     04 49 49.8 +0.6
IL31                        8.62   7         Pn     04 49 52.4 +0.8
ILAR   Eielson Array        8.62   7  Pn     Pn     04 49 52.5 +0.8
       comp=N,0.7nm,0.3s,baz=188,slow=13,SNR=34
ILAR                                  Sn     Sn     04 51 25.6 -3.2
       comp=N,1.0nm,0.3s,baz=188,slow=23,SNR=5.6
ILAR                                  LR     LR     04 53 21.1
       comp=N,242nm,18.2s,baz=132,slow=38
       comp=N,1.7nm,0.5s
COLA   College              8.67   4         Pn     04 49 52.9 +0.6
COLA   College              8.67   4  P      Pn     04 49 53.5 +1.2
       comp=N,8.6nm,0.9s
WHY    Whitehorse           8.78  54         Pn     04 49 56.5 +2.5
P32M   Atlin                8.97  62         Pn     04 49 57.0 +0.4
CRAG   Craig                9.18  88  P      Pn     04 49 59.1 -0.3
       comp=N,68nm,1.5s
K29M   Barlow Dome          9.62  33         Pn     04 50 06.6 +1.1
UNV    Unalaska Valle      10.12 263  P      Pn     04 50 09.9 -2.3
       comp=N,77nm,2.7s
DLBC   Dease Lake          10.68  70  Pn     Pn     04 50 20.6 +0.7
       comp=N,0.6nm,0.3s,baz=355,slow=23,SNR=6.5
DLBC                                  Sn     Sn     04 52 13.6 -5.9
       comp=N,0.1nm,0.3s,baz=68,slow=19,SNR=1.3
DLBC                                  LR     LR     04 53 44.7
       comp=N,320nm,18.0s,baz=279,slow=33
       comp=N,1.8nm,0.4s
WTLY   Watson Lake, Y      11.51  62         Pn     04 50 29.0 -2.3
E25K   Arctic Village      12.02   7         Pn     04 50 41.4 +3.1
F28M   Old Crow            12.21  17         Pn     04 50 46.2 +5.4
TOLK   Toolik Lake Re      12.42 360         Pn     04 50 48.5 +4.9
BBB    Bella Bella         13.08  99  LR     LR     04 54 44.6
       comp=N,216nm,18.1s,baz=252,slow=32
C24K   Franklin Bluff      13.51   1         Pn     04 50 58.7 +0.2
C23K   Itkillik River      13.63 358  Pn     Pn     04 50 59.5 -0.6
INK    Inuvik              14.08  25  Pn     Pn     04 51 08.4 +2.1
       comp=N,0.1nm,0.3s,baz=219,slow=11,SNR=4.4
       comp=N,3.0nm,1.0s
INK    Inuvik              14.08  25  Pn     Pn     04 51 06.7 +0.4
B22K   Teshekpuk Lake      14.24 354  Pn     Pn     04 51 08.3 -0.1
YKA    Yellowknife Ar      18.60  56  P      Pn     04 52 06.2 +1.9
       baz=281,slow=8.4,SNR=2.5
YKA                                   LR     LR     04 59 42.8
       comp=N,54nm,18.5s,baz=20,slow=38
       comp=N,0.5nm,0.8s
YKA    Yellowknife Ar      18.60  56  P      P      04 52 03.7 -0.4
A36M   Sachs Harbour       18.72  23         Pn     04 52 06.6 +1.0
A36M                                  IAmb   IAmb   04 52 10.1
       comp=Z,12nm,0.8s
LTY    Liberty             19.80 105  P      P      04 52 17.3 -0.1
LTY                                   IAmb   IAmb   04 52 30.7
       comp=Z,16nm,1.3s
B08A   Colville Reser      19.88 101         P      04 52 16.5 -1.7
MXC    Moxie City          20.43 106  P      P      04 52 23.1 -1.1
MXC                                   IAmb   IAmb   04 52 38.1
       comp=Z,21nm,1.4s
E07A   Sunnyside           20.67 106  P      Pn     04 52 29.2  0.0
E07A                                  IAmb   IAmb   04 52 40.7
       comp=Z,10.0nm,1.1s
WAH2   Wahluke Slope       20.70 105  P      P      04 52 27.4 +0.2
I03D   Drain, OR           20.79 116  P      Pn     04 52 29.7 -0.8
I03D                                  IAmb   IAmb   04 52 41.9
       comp=Z,12nm,1.1s
J01E   Myrtle Point        20.89 118  P      Pn     04 52 30.9 -0.8
J01E                                  IAmb   IAmb   04 52 43.1
       comp=Z,21nm,1.1s
F07A   Phinny Hill Vi      21.05 107  P      P      04 52 30.8 -0.2
F07A                                  IAmb   IAmb   04 52 39.4
       comp=Z,22nm,1.5s
NEW    Newport             21.15  99  LR     LR     04 59 16.6
       comp=Z,160nm,18.8s,baz=293,slow=33
I04A   Tendick Farm,       21.19 115  P      P      04 52 32.0 -0.5
I04A                                  IAmb   IAmb   04 52 38.4
       comp=Z,11nm,1.2s
WIFE   Three Sisters-      21.30 113         P      04 52 33.1 -0.8
WIFE                                  IAmb   IAmb   04 52 45.6
       comp=Z,13nm,1.0s
K02D   Willamette Mer      21.37 119  P      P      04 52 34.2 -0.3
K02D                                  IAmb   IAmb   04 52 47.0
       comp=Z,10nm,1.1s
BBOR   Butler Butte        21.71 117  P      P      04 52 37.6 -0.6
BBOR                                  IAmb   IAmb   04 52 55.8
       comp=Z,17nm,1.3s
J04A   Umpqua Nationa      21.74 115  P      P      04 52 38.6  0.0
PINE   Pine Mountain       21.94 113  P      P      04 52 40.0 -0.8
PINE                                  IAmb   IAmb   04 52 55.9
       comp=Z,23nm,1.5s
LNOR   Lincton Mounta      21.95 105  P      P      04 52 41.7 +1.1
J05D   Fort Rock, OR       22.15 114         P      04 52 43.4 +0.4
J05D                                  IAmb   IAmb   04 52 48.1
       comp=Z,13nm,1.2s
L04D   Klamath Falls       22.39 117         P      04 52 46.9 +1.4
I07A   Izee                22.49 110         P      04 52 46.3 -0.2
I07A                                  IAmb   IAmb   04 53 08.8
       comp=Z,15nm,1.4s
YBH    Yreka Blue Hor      22.56 119  LR     LR     04 59 22.0
       comp=Z,7.9nm,18.7s,baz=294,slow=31
YBH    Yreka Blue Hor      22.56 119  P      P      04 52 46.9 -0.3
K05A   Summer Lake         22.73 115         P      04 52 48.4 -0.8
O02D   Mt. Diablo Mer      23.72 121  P      P      04 52 58.5 -0.6
O02D                                  IAmb   IAmb   04 53 10.6
       comp=Z,11nm,1.5s
WVOR   Wild Horse Val      24.10 112  IAmb   IAmb   04 53 31.4
       comp=Z,9.1nm,1.4s
LYMT   Lyon Mountain       24.56  96  P      P      04 53 05.6 -1.5
BEKR   Beckworth           25.14 118  P      P      04 53 10.4 -1.8
ELK    Elko                27.08 110  LR     LR     05 02 38.9
       comp=Z,23nm,18.8s,baz=314,slow=33
ELK    Elko                27.08 110  P      P      04 53 28.4 -1.4
NVAR   Mina Array Bea      27.26 118  P      P      04 53 31.7 +0.2
       comp=Z,1.0nm,1.0s,baz=280,slow=4.4,SNR=4.7
NVAR                                  LR     LR     05 02 28.1
       comp=Z,89nm,18.3s,baz=338,slow=32
       comp=Z,1.0nm,1.0s
NVAR   Mina Array Bea      27.26 118  P      P      04 53 29.5 -2.0
RLMT   Red Lodge           27.36  97         P      04 53 31.6 -0.7
RLMT                                  IAmb   IAmb   04 53 42.8
       comp=Z,5.7nm,0.8s
PDAR   Pinedale Array      28.72 101  P      P      04 53 45.9 +1.4
       comp=Z,0.3nm,0.8s,baz=301,slow=12,SNR=2.3
PDAR                                  LR     LR     05 04 01.2
       comp=Z,23nm,18.0s,baz=320,slow=34
       comp=Z,0.3nm,0.8s
PDAR   Pinedale Array      28.72 101  P      P      04 53 43.8 -0.7
PETK   Petropavlovsk-      30.12 287  LR     LR     05 05 10.0
       comp=Z,60nm,20.8s,baz=61,slow=35
ULM    Lac du Bonnet       31.86  78  LR     LR     05 06 41.3
       comp=Z,116nm,18.6s,baz=9.0,slow=36
PFO    Pinyon Flats O      32.00 121  LR     LR     05 04 26.3
       comp=Z,43nm,19.9s,baz=2.0,slow=31
ANMO   Albuquerque         36.02 108  LR     LR     05 07 08.8
       comp=Z,60nm,19.7s,baz=328,slow=32
TXAR   Lajitas Array       41.88 111  P      P      04 55 39.0 +1.6
       comp=Z,0.2nm,0.8s,baz=315,slow=7.5,SNR=2.6
       comp=Z,0.2nm,0.8s
SCHQ   Schefferville       44.05  56  LR     LR     05 13 40.7
       comp=Z,56nm,18.7s,baz=326,slow=35
SADO   Sadowa              44.21  74  LR     LR     05 12 56.0
       comp=Z,36nm,18.5s,baz=328,slow=34
TKL    Tuckaleechee C      47.99  87  LR     LR     05 16 30.9
       comp=Z,119nm,20.8s,baz=346,slow=36
NRIK   Noril'sk            48.09 336  LR     LR     05 18 19.9
       comp=Z,52nm,18.0s,baz=14,slow=38
H11N2  WAKE ISLAND Hy      48.83 240  T      T      05 49 03.9
       baz=30,slow=76,SNR=4.3
H11N3  WAKE ISLAND Hy      48.83 240  T      T      05 49 02.5
       baz=30,slow=76,SNR=4.5
H11N1  WAKE ISLAND Hy      48.84 240  T      T      05 49 03.4
       baz=30,slow=76,SNR=4.5
H11S1  WAKE ISLAND Hy      49.97 239  T      T      05 50 32.8
       baz=29,slow=74,SNR=4.0
H11S2  WAKE ISLAND Hy      49.98 239  T      T      05 50 37.3
       baz=29
H11S3  WAKE ISLAND Hy      49.98 239  T      T      05 50 36.2
       baz=29,slow=74,SNR=3.4
MJAR   Matsushiro Arr      51.11 280  LR     LR     05 20 06.0
       comp=Z,16nm,19.9s,baz=38,slow=38
CMIG   Matias Romero       56.48 111  LR     LR     05 20 14.7
       comp=Z,26nm,18.1s,baz=332,slow=34
SONM   Songino Array       58.60 310  P      P      04 57 46.1 +2.2
       comp=Z,3.0nm,0.8s,baz=48,slow=6.8,SNR=16
       comp=Z,3.0nm,0.8s
SONM   Songino Array       58.60 310  P      P      04 57 43.0 -0.8
ZALV   Zalesovo Beam       61.54 327  P      P      04 58 05.3 +1.5
       comp=Z,0.6nm,0.4s,baz=46,slow=13,SNR=4.4
ZALV                                  LR     LR     05 27 58.7
       comp=Z,43nm,18.9s,baz=54,slow=39
       comp=Z,0.6nm,0.4s
ZALV   Zalesovo Beam       61.54 327  P      P      04 58 03.4 -0.3
NOA    NORSAR Array B      62.04  11  LR     LR     05 28 54.3
       comp=Z,12nm,18.1s,baz=275,slow=40
ARTI   Arti                65.47 343  LR     LR     05 29 42.6
       comp=Z,29nm,18.4s,baz=346,slow=38
KURK   Kurchatov           66.21 329  P      P      04 58 34.8 +0.2
KURK                                  IAmb   IAmb   04 58 48.0
       comp=Z,2.0nm,1.1s
KURBB  Kurchatov Arra      66.32 329  P      P      04 58 35.0 -0.2
       comp=Z,0.6nm,0.8s,baz=31,slow=5.9,SNR=4.3
KURBB                                 LR     LR     05 32 36.8
       comp=Z,50nm,19.6s,baz=195,slow=40
       comp=Z,0.6nm,0.8s
DSB    Dublin              66.70  23  P      P      04 58 36.4 -1.2
JUD3   Juan Diaz 3         67.19 107  P      P      04 58 41.1 -0.3
JTS    Las Juntas de       67.41 106  LR     LR     05 29 07.1
       comp=Z,18nm,18.1s,baz=330,slow=37
MKAR   Makanchi Array      68.57 325  P      P      04 58 51.2 +1.6
       comp=Z,1.9nm,0.9s,baz=46,slow=6.9,SNR=6.5
MKAR                                  LR     LR     05 31 07.7
       comp=Z,57nm,18.1s,baz=72,slow=38
       comp=Z,1.9nm,0.9s
SJG    San Juan            71.40  85  LR     LR     05 30 30.2
       comp=Z,29nm,19.9s,baz=287,slow=36
ABKAR  Akbulak array       72.04 340  P      P      04 59 12.2 +1.5
PPT2   Papeete2            73.57 180  eLR    LR     05 21 47.6
       comp=Z,52nm,26.5s
SDV    Santo Domingo       76.42  94  LR     LR     05 33 05.1
       comp=Z,20nm,21.5s,baz=54,slow=36
PZH    PanZhiHua           78.07 300  P      P      04 59 47.4 +1.3
TBI    Tubuai              79.30 180  eLR    LR     05 24 27.7
       comp=Z,678nm,41.5s
CMAR   Chiang Mai Arr      86.24 298  P      P      05 00 30.4 +1.6
       comp=Z,2.2nm,0.3s,baz=12,slow=6.0,SNR=4.5
QSPA   South Pole Qui     146.06 180  PKPbc  PKiKP  05 07 31.3 +2.3
       comp=Z,1.3nm,0.7s,baz=276,slow=0.6,SNR=5.9
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*BGR **04** 04:53:52.3, 0°.94N×98°.66E, h33^{km}, mb5.0*
*BJI **04** 04:53:57.1, 0°.24N×99°.71E, h160^{km}, mB5.3/9, mb4.8/37*
*NEIC **04** 04:54:01.9±1.2, 0°.57N±0°.07×99°.87E±0°.04, h167^{km}±6^{km}, mb4.7/54, Error ellipse: s-maj=10.7km s-min=4.3km az=197.0*
*DJA **04** 04:54:01.8±0.1, 1°N±2°×10°0E±°, h162^{km}±2^{km}, M4.9/34, mb4.6/34, mB5.5/6, MLv5.0/25, Mw(mB)5.0/6, MwMwp4.8/1, Mwp5.1/1*
*IDC **04** 04:54:02.4±1.3, 0°.63N×100°.04E, h174^{km}±11^{km}, mb4.1/24, mbtmp4.6/26, Error ellipse: s-maj=15.9km s-min=10.5km az=54.0*

ISC 04 04:54:01.7±0.6, **0°.57N**±0°.04×**99°.85E**±0°.05, **h169**^{km}±5^{km}, **n269, σ1^{s}.15**/278, **mb4.6**/98, **12C-12D, Northern Sumatera**

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Code   Station Name          Δ°   AZ°  Phase ID          Time      Res
                                      Op     ISC     h  m  s      ISC
MNSI   Mandailing Nat       0.35 311  P      Pn     04 54 24.6  0.0
MNSI                                  S      Sn     04 54 41.1 -1.1
PPI    Padang Panjang       1.15 152  P      Pn     04 54 30.1 +0.6
PDSI   Padang               1.59 157  P      Pn     04 54 34.0 +0.3
PDSI                                  S      Sn     04 54 58.3 -0.1
PBSI   Pulau Batu           1.68 249  P      Pn     04 54 35.2 +0.6
PBSI                                  S      Sn     04 54 59.3 -0.7
SISI   Saibi                2.02 202  P      Pn     04 54 38.0 -0.3
RPSI   Rantau Prapat        2.31 336         Pn     04 54 41.9 +0.4
RPSI                                         Sn     04 55 09.0 -3.4
GSI    Gunungsitoli         2.39 288  Pn     Pn     04 54 42.6 +0.2
GSI    Gunungsitoli         2.39 288  P      Pn     04 54 43.2 +0.8
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GSI	Gunungsitoli	2.39	288	P	Pn	04 54 43.1	+0.7
PSI	Prapat	2.41	337	P	Pn	04 54 41.9	-0.9
	26nm,0.3s,baz=151,slow=11,SNR=35						
PSI				S	Sn	04 55 09.0	-5.7
	38nm,0.3s,baz=31,slow=21,SNR=19						
PSI	Prapat	2.41	337	P	Pn	04 54 41.5	-1.3
KRJI	Kerinci	3.09	149	P	Pn	04 54 51.9	+0.8
TSI	Tuntungan	3.19	336	P	Pn	04 54 52.3	+0.2
PPSI	Pulau Pagai	3.31	177	P	Pn	04 54 52.7	-1.0
KCSI	Kotacane, Aceh	3.60	325	P	Pn	04 54 56.5	-0.8
TPTI		3.78	315	P	Pn	04 54 59.5	-0.1
SNSI	Sinabang, Aceh	3.97	298	P	Pn	04 55 02.2	+0.2
BTDF	Bukit Timah Da	4.00	79	P	Pn	04 55 03.3	+0.7
BTDF	Bukit Timah Da	4.00	79	P	Pn	04 55 03.2	+0.7
IPM	Ipoh	4.06	17		Pn	04 55 03.8	+0.5
IPM	Ipoh	4.06	17	P	Pn	04 55 04.0	+0.7
IPM	Ipoh	4.06	17	P	Pn	04 55 04.0	+0.7
MYKOM	Kota Tinggi	4.18	73		Pn	04 55 05.1	+0.3
MYKOM	Kota Tinggi	4.18	73	P	Pn	04 55 05.5	+0.6
MYKOM	Kota Tinggi	4.18	73	P	Pn	04 55 05.4	+0.6
MASI	Maura Aman, Be	4.39	147	P	Pn	04 55 07.9	+0.4
KULM	Kulim	4.76	10		Pn	04 55 11.9	-0.5
KULM	Kulim	4.76	10	P	Pn	04 55 11.9	-0.5
KULM	Kulim	4.76	10	S	Sn	04 56 07.5	-0.2
KULM	Kulim	4.76	10	P	Pn	04 55 12.0	-0.3
DSRI	Dabo	4.84	102	P	Pn	04 55 13.4	0.0
UBSI	University, Be	4.93	151	P	Pn	04 55 14.2	-0.4
KSI	Kapahiang	5.01	147	P	Pn	04 55 15.5	-0.1
MLSI	Meulaboh, Aceh	5.04	317	P	Pn	04 55 15.3	-0.6
LHMI	Lhok Sumawe	5.46	328	Pn	Pn	04 55 20.2	-1.3
LHMI	Lhok Sumawe	5.46	328	P	Pn	04 55 20.8	-0.7
	1.6nm5µm209nm,0.9s						
MNAI	Manna	5.79	148	Pn	Pn	04 55 25.6	-0.2
MNAI	Manna	5.79	148	P	Pn	04 55 25.7	-0.2
MNAI	Manna	5.79	148	P	Pn	04 55 25.4	-0.5
MDSI	Maura Dua	6.62	139	P	Pn	04 55 36.5	-0.4
	0.3nm105nm,0.7s						
LWLI	Liwa	6.96	143	P	Pn	04 55 40.5	-0.9
KLSI		7.14	137	P	Pn	04 55 43.6	-0.1
KLI	Kotabumi	7.36	137	P	Pn	04 55 45.8	-0.7
	0.8nm177nm,0.5s						
TPI	Tanjungpandan	8.47	113	P	Pn	04 56 01.5	+0.2
	57nm,1.3s						
CMBY	CAMPBELL BAY	8.71	317	*e*P	Pn	04 56 06.6	+2.1
CMBY				IAmb	IAmb	04 56 16.4	
	comp=Z,134nm,0.8s						
CMBY				*e*x	x	04 57 46.8	
CMBY				IAML		04 58 03.2	
	comp=E,421nm,1.0s						
CMBY				IAML		04 58 06.0	
	comp=N,433nm,0.7s						
BBJI	Bungbulang	11.14	136	P	Pn	04 56 33.1	-3.4
SBUM	Sibu	12.51	81		Pn	04 56 55.3	+1.3
SBUM	Sibu	12.51	81	P	Pn	04 56 56.4	+2.4
PBA	Port Blair	13.08	328	*e*P	Pn	04 57 03.7	+2.4
PBA				IAmb	IAmb	04 57 23.1	
	comp=Z,45nm,1.1s						
UGM	Wanagama	13.57	129	P	Pn	04 57 06.5	-1.1
	comp=Z,48nm,2.0s						
PCJI	Pacitan	14.26	128	P	Pn	04 57 13.9	-2.2
	comp=Z,27nm,1.4s						
DGPR	DIGLIPUR	14.28	332	*e*P	Pn	04 57 17.5	+1.1
DGPR				IAmb	IAmb	04 57 47.5	
	comp=Z,42nm,2.2s						
DGPR				*e*S	Sn	04 59 58.2	+2.8
SNJI	Sawahan-Nganju	14.48	125	P	Pn	04 57 20.5	+1.4
	comp=Z,18nm,0.7s						
KKM	Kota Kinabalu	17.22	71	P	P	04 57 49.6	-1.6
KKM				IAmb	IAmb	04 58 09.4	
	comp=Z,34nm,1.0s						
CMAR	Chiang Mai Arr	17.80	357	P	P	04 57 55.7	-1.9
	comp=Z,6.2nm,0.6s,baz=186,slow=9.9,SNR=24						
KHKI	Kahang-Kahang	18.04	120	P	P	04 58 01.6	+1.4
	comp=Z,71nm,1.0s						
CHTO	Chiang Mai	18.16	357		P	04 58 01.1	-0.3
CHTO	Chiang Mai	18.16	357	P	P	04 58 02.2	+0.8
CHTO	Chiang Mai	18.16	357	P	P	04 58 01.6	+0.2
MYLDM	Lahad Datu	19.18	76	P	Pn	04 58 14.8	-0.6
TWSI	Taliwang, Sumb	19.33	119	P	P	04 58 14.3	+0.2
	comp=Z,26nm,1.0s						
MMSI	Mamuju	19.33	100	P	P	04 58 15.9	+1.7
	comp=Z,52nm,1.4s						
PMSI	Majene	19.48	102	P	Pn	04 58 18.4	-0.6
	comp=Z,1µmcomp=Z,129nm,0.7s						
MPSI	Mapaga	20.05	91	P	P	04 58 23.8	+1.8
	comp=Z,1µmcomp=Z,41nm,1.0s						
PALK	Pallekele	20.22	290	P	Pn	04 58 26.8	-1.0
	comp=Z,12nm,0.7s,baz=112,slow=7.9,SNR=5.2						
	comp=Z,12nm,0.7s						
PALK	Pallekele	20.22	290	P	P	04 58 23.4	-0.4
PALK				IAmb	IAmb	04 58 29.3	
	comp=Z,30nm,1.1s						
PALK	Pallekele	20.22	290	P	Pn	04 58 26.7	-1.1
TTSI	Tana Toraja	20.28	100	P	P	04 58 26.1	+1.7
	comp=Z,31nm,1.1s						
SPSI	Sidrap Palu	20.41	103	P	P	04 58 26.4	+0.6
	comp=Z,2µmcomp=Z,18nm,1.3s						
MKS	Makassar	20.42	107	P	P	04 58 27.6	+1.7
	comp=Z,128nm,1.1s						
DBNI	Kabupaten Domp	20.49	116	P	P	04 58 24.9	-1.7
	comp=Z,13nm,0.9s						
KAPI	Kappang	20.64	106	P	P	04 58 30.7	+2.5
	comp=Z,29nm,0.9s,baz=307,slow=11,SNR=4.6						
KAPI	Kappang	20.64	106	P	P	04 58 27.7	-0.6
KAPI				IAmb	IAmb	04 58 36.8	
	comp=Z,22nm,0.9s						
KAPI	Kappang	20.64	106	P	P	04 58 30.6	+2.4
KAPI	Kappang	20.64	106	P	P	04 58 28.2	0.0
	comp=Z,15nm,1.0s						
TOLI2	Tolitoli	20.94	88		P	04 58 31.3	-0.2
TOLI2				IAmb	IAmb	04 58 33.5	
	comp=Z,87nm,1.5s						
TOLI2	Tolitoli	20.94	88	P	P	04 58 32.6	+1.1
SLVN	Son La	21.02	11	P	P	04 58 32.3	0.0
SLVN	Son La	21.02	11	P	P	04 58 34.0	+1.7
BKSI	Bulukumba	21.08	106	P	P	04 58 34.5	+1.6
	comp=Z,24nm,0.8s						
BSSI	Bau Bau, Buton	21.66	108	P	P	04 58 40.5	+1.4
	comp=Z,51nm,0.9s						
MRSI	Marisa	22.09	90	P	P	04 58 44.0	+0.5
	comp=Z,61nm,0.8s						
SAIH	SAIHA	22.79	343	*e*P	P	04 58 50.9	+0.8
SAIH				IAmb	IAmb	04 59 08.8	
	comp=Z,32nm,1.6s						
LUWI	Luwuk	22.98	94	P	P	04 58 51.4	-0.3
LUWI	Luwuk	22.98	94	P	P	04 58 53.1	+1.4
LUWI	Luwuk	22.98	94	P	P	04 58 53.4	+1.7
	comp=Z,1µmcomp=Z,139nm,1.1s						
EDFI	Ende, Flores	23.65	114	P	P	04 58 56.4	-1.6
	comp=Z,11nm,0.7s						
KMI	Kunming	24.57	6	P	P	04 59 07.6	+1.2
KMI				pmax	pmax		
	comp=Z,15nm,0.9s						
PZH	PanZhiHua	25.85	4	P	P	04 59 20.4	+2.6
BATI	Baumata	26.00	115	P	P	04 59 19.5	+0.3
	comp=Z,40nm,0.9s						
SHL	Shillong	26.02	343		P	04 59 19.1	-0.3
SHL	Shillong	26.02	343	*e*P	P	04 59 20.2	+0.8
SHL				IAmb	IAmb	04 59 22.2	
	comp=Z,15nm,0.9s						
EVN	Everest	29.96	336	P	P	04 59 54.4	-0.6
XAN	Xi'an	34.37	13	P	P	05 00 32.4	-0.2
XAN				pmax	pmax		
	comp=Z,24nm,0.7s						
LZDM	Lanzhou Array	35.39	5	P	P	05 00 41.1	-0.5
	comp=Z,3.4nm,0.4s,baz=187,slow=10,SNR=6.7						
	comp=Z,3.4nm,0.4s						
LZH	Lanzhou	35.54	6	*e*P	P	05 00 43.1	+0.4
LZH				ScP	ScP	05 06 40.0	+1.7
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
NJ2	Nanjing	36.10	28	*e*P	P	05 00 49.1	+1.7
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
SMLA	Simla	37.23	327	*e*P	P	05 00 57.3	+0.3
SMLA				IAmb	IAmb	05 00 58.1	
	comp=Z,17nm,0.6s						
SDNR	Sundarnagar	37.62	327	*e*P	P	05 01 01.2	+0.9
SDNR				IAmb	IAmb	05 01 01.8	
	comp=Z,12nm,0.6s						
DHRM	DHARAMSHALA	38.56	327	*e*P	P	05 01 08.6	+0.2
DHRM				IAmb	IAmb	05 01 09.5	
	comp=Z,12nm,0.6s						
GTA	Gaotai	38.66	360	*e*P	P	05 01 10.3	+1.3
GTA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
THN	Thein Dam	39.00	327	*e*P	P	05 01 12.5	+0.6
THN				IAmb	IAmb	05 01 13.1	
	comp=Z,12nm,0.9s						
HNS	HongShan	39.14	19	⇑P	P	05 01 14.4	+1.6
HNS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WRA	Warramunga Arr	39.46	123	P	P	05 01 14.7	-1.1
	comp=Z,2.5nm,0.5s,baz=303,slow=8.9,SNR=10						
WRA				ScP	ScP	05 06 51.6	-1.7
	comp=Z,0.7nm,0.7s,baz=316,slow=3.0,SNR=8.9						
	comp=Z,2.5nm,0.5s						
WRA	Warramunga Arr	39.46	123	P	P	05 01 13.5	-2.3
WRAB	Tennant Creek	39.47	123	P	P	05 01 18.2	+2.3
WR8	Warramunga Arr	39.60	123	P	P	05 01 15.8	-1.1
ALCI	Alchi Leh	39.63	330	*e*P	P	05 01 18.2	+0.8
ALCI				IAmb	IAmb	05 01 18.7	
	comp=Z,13nm,0.6s						
ASAR	Alice Springs	40.91	128	P	P	05 01 26.4	-1.3
	comp=Z,0.8nm,0.3s,baz=305,slow=8.0,SNR=17						
ASAR				ScP	ScP	05 06 58.2	-0.7
	comp=Z,2.4nm,0.7s,baz=303,slow=4.1,SNR=20						
	comp=Z,0.8nm,0.3s						
ASAR	Alice Springs	40.91	128	P	P	05 01 27.0	-0.8
NIL	Nilore	41.30	326		P	05 01 30.6	-0.1
HHC	Hu-ho-hao-te	41.48	13	*e*P	P	05 01 35.2	+3.0
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,450nm,6.5s						
KBL	Kabul	44.40	323		P	05 01 55.3	-0.5
WMQ	Urumqi	44.41	347	⇑P	P	05 01 57.4	+1.8
WMQ				pmax	pmax		
	comp=Z,39nm,0.9s						
KSH	Kashi	44.48	333	P	P	05 01 55.8	-0.5
KSH				pmax	pmax		
	comp=Z,14nm,0.6s						
WUS	Wushi	44.55	338	P	P	05 01 56.8	-0.1
WUS				IAmb	IAmb	05 01 58.6	
	comp=Z,22nm,0.8s						
KSRS	Korea Array	44.92	32	P	P	05 01 59.2	-0.4
	comp=Z,4.1nm,0.6s,baz=224,slow=8.5,SNR=13						
	comp=Z,4.1nm,0.6s						
MANEM	Manem	45.04	328	P	P	05 02 02.7	+1.8
MANEM				IAmb	IAmb	05 02 03.5	
	comp=Z,81nm,0.8s						
TARG	Taragay, Kyrgy	45.55	337	P	P	05 02 06.4	+1.3
TARG				IAmb	IAmb	05 02 07.4	
	comp=Z,14nm,0.8s						
KDJ	Kajisay	46.14	337		P	05 02 09.9	+0.5
KDJ				IAmb	IAmb	05 02 11.8	
	comp=Z,25nm,0.9s						
SHLS	Shalkode	46.16	339	*e*P	P	05 02 08.1	-1.4
	comp=Z,25nm,0.9s						
UZB	Uzynbulak	46.31	339	*e*P	P	05 02 10.6	-0.1
DRK	Karamyk	46.43	330	P	P	05 02 12.5	+0.6
SATY	Saty	46.46	338	*e*P	P	05 02 11.8	0.0
GAR	Garm	46.84	328	P	P	05 02 14.5	-0.3
GAR				IAmb	IAmb	05 02 17.5	
	comp=Z,26nm,1.1s						
BOOM	Boomskoye usch	46.94	336		P	05 02 15.6	0.0
TNSS	Tian-Shan	47.00	337	*e*P	P	05 02 15.9	-0.4
SHAA	Shahritus	47.01	325	P	P	05 02 15.9	-0.3
SHAA				IAmb	IAmb	05 02 16.5	
	comp=Z,87nm,1.1s						
MDOK	Medeo	47.06	337	*e*P	P	05 02 16.5	0.0
AAA	Alma-Ata	47.16	337	*e*P	P	05 02 17.2	+0.1
	comp=Z,15nm,0.4s						
CHGR	Chuyangaron	47.21	327		P	05 02 17.5	-0.2
CHGR				IAmb	IAmb	05 02 18.2	
	comp=Z,45nm,1.1s						
UCH	Uchtor	47.33	334	P	P	05 02 20.2	+1.2
	SNR=11						
SONM	Songino Array	47.42	6	P	P	05 02 19.6	+0.4
	comp=Z,6.9nm,0.5s,baz=191,slow=10,SNR=24						
SONM				ScP	ScP	05 07 23.1	-2.1
	comp=Z,3.0nm,1.0s,baz=196,slow=2.2,SNR=7.8						
	comp=Z,6.9nm,0.5s						
SONM	Songino Array	47.42	6	P	P	05 02 19.0	-0.2
TKM2	Tokmak 2	47.44	336	P	P	05 02 20.6	+1.1
	SNR=17						
KBK	Karagaybulak	47.49	335	P	P	05 02 21.4	+1.6
	SNR=13						
AAK	Ala-Archa	47.67	335	P	P	05 02 22.4	+1.1
	SNR=5.9						
AAK	Ala-Archa	47.67	335	P	P	05 02 20.8	-0.4
AAK				IAmb	IAmb	05 02 24.7	
	comp=Z,19nm,1.5s						
KUU	Kurty	47.96	337	*e*P	P	05 02 23.4	+0.2
EKS2	Erkin-Say	48.00	334	P	P	05 02 25.1	+1.4
	SNR=13						
TDK	Taldyqorghan	48.15	340	*e*P	P	05 02 24.8	+0.1
	comp=Z,12nm,0.6s						
USP	Ospenovka	48.18	335	P	P	05 02 25.9	+0.9
	SNR=14						
SGDS	Sogindy	48.28	335	*e*P	P	05 02 25.9	+0.1
ZSN	Zaisan	48.49	346	*e*P	P	05 02 27.3	+0.1
	comp=Z,13nm,0.8s						
MKAR	Makanchi Array	48.54	344	P	P	05 02 28.2	+0.6
	comp=Z,24nm,0.7s,baz=156,slow=8.7,SNR=163						
MKAR				ScP	ScP	05 07 27.8	-2.0
	comp=Z,0.8nm,0.7s,baz=126,slow=5.7,SNR=3.6						
	comp=Z,24nm,0.7s						
MKAR	Makanchi Array	48.54	344		P	05 02 28.0	+0.3
MAKZ	Makanchi	48.64	344	P	P	05 02 29.0	+0.6
MAKZ				IAmb	IAmb	05 02 29.7	
	comp=Z,14nm,0.8s						
DZA	Taraz	49.28	332	*e*P	P	05 02 33.6	+0.2
	comp=Z,6.8nm,0.5s						
IUG	Iuzhnay	49.33	331	*e*P	P	05 02 33.9	+0.1
	comp=Z,20nm,0.6s						
CHM	Chimkent	49.67	331	*e*P	P	05 02 36.5	+0.2
	comp=Z,11nm,0.8s						
BTLS	Baital	49.82	336	*e*P	P	05 02 37.5	+0.1
KK31	Karatay Array	49.83	332		P	05 02 38.1	+0.7
KKAR	Karatay Array	49.83	332		P	05 02 37.9	+0.4
BRLS	Borolday	50.09	331	⇓*i*P	P	05 02 38.8	-0.7
STKA	Stephens Creek	50.98	133	P	P	05 02 45.2	-1.1
	comp=Z,2.0nm,0.5s,baz=332,slow=6.2,SNR=4.0						
	comp=Z,2.0nm,0.5s						
STKA	Stephens Creek	50.98	133	P	P	05 02 45.9	-0.5
STKA				IAmb	IAmb	05 02 49.6	
	comp=Z,25nm,1.1s						
USRK	Ussuriysk Ar.	51.99	29	P	P	05 02 53.5	0.0
	comp=Z,4.2nm,0.8s,baz=206,slow=4.6,SNR=4.7						
	comp=Z,4.2nm,0.8s						
KURBB	Kurchatov Arra	53.06	343	P	P	05 03 01.8	+0.5
	comp=Z,13nm,0.7s,baz=162,slow=7.0,SNR=84						
KURBB				ScP	ScP	05 07 46.8	-2.4
	comp=Z,0.4nm,0.6s,baz=166,slow=1.9,SNR=4.6						
	comp=Z,13nm,0.7s						
KURK	Kurchatov	53.12	343		P	05 03 02.2	+0.5
KURK				IAmb	IAmb	05 03 03.1	
	comp=Z,26nm,0.9s						
BRZS	Berezniki	54.42	339	*e*P	P	05 03 11.6	+0.3
ZAA0	Zalesovo Array	54.64	349		P	05 03 12.9	+0.2
ZALV	Zalesovo Beam	54.64	349	P	P	05 03 13.3	+0.6
	comp=Z,69nm,0.8s,baz=175,slow=6.2,SNR=205						
ZALV	Zalesovo Beam	54.64	349		P	05 03 13.0	+0.3
RAYN	Ar Rayn	57.39	298		P	05 03 33.0	0.0
RAYN				IAmb	IAmb	05 03 34.1	
	comp=Z,4.1nm,0.7s						
BVAR	Borovoye Array	57.74	339	P	P	05 03 34.8	+0.1
	comp=Z,24nm,0.7s,baz=141,slow=9.2,SNR=100						
	comp=Z,24nm,0.7s						
BORK	Borovoye	57.78	339		P	05 03 35.0	0.0
AB31	Akbulak array	59.34	331		P	05 03 45.8	0.0
ABKAR	Akbulak array	59.34	331		P	05 03 45.7	-0.1
ARTI	Arti	64.86	336		P	05 04 22.2	-0.3
MARD	Mardin	65.44	311	P	P	05 04 26.9	+0.2
MARD				IAmb	IAmb	05 04 28.3	
	comp=Z,11nm,0.7s						
KBZ	Khabaz	66.29	318	P	P	05 04 31.8	-0.1
	comp=Z,2.8nm,0.8s,baz=104,slow=10,SNR=6.2						
	comp=Z,2.8nm,0.8s						
MMAI	Mount Meron Ar	68.42	305	P	P	05 04 47.2	+1.5
	comp=Z,1.5nm,0.4s,baz=98,slow=11,SNR=3.6						
	comp=Z,1.5nm,0.4s						
NRIK	Noril'sk	69.15	355	P	P	05 04 47.6	-1.7
	comp=Z,4.5nm,0.4s,baz=128,slow=7.0,SNR=8.1						
	comp=Z,4.5nm,0.4s						
NRIK	Noril'sk	69.15	355	P	P	05 04 48.8	-0.5
NRIK				IAmb	IAmb	05 04 49.7	
	comp=Z,7.3nm,0.6s						
BNN	Bunyan	69.61	312	P	P	05 04 53.0	+0.1
KIRS	Kirsehir-Merke	71.14	311	⇑P	P	05 05 02.2	0.0
BR131	Keskin Array S	71.50	312	P	P	05 05 04.3	-0.1
BR131				IAmb	IAmb	05 05 04.9	
	comp=Z,6.7nm,0.8s						
BRTR	Keskin Array B	71.50	312	P	P	05 05 04.2	-0.2
	comp=Z,4.4nm,0.8s,baz=129,slow=7.0,SNR=23						
	comp=Z,4.4nm,0.8s						
TIXI	Tiksi	73.37	9		P	05 05 13.8	-0.8
TIXI				IAmb	IAmb	05 05 14.3	
	comp=Z,21nm,1.5s						
KARP	Karpathos	75.62	307		P	05 05 26.6	-1.8
BOSA	Boshof	76.77	241	P	P	05 05 37.1	+2.0
	comp=Z,4.9nm,1.1s,baz=82,slow=3.9,SNR=5.5						
	comp=Z,4.9nm,1.1s						
BOSA	Boshof	76.77	241	P	P	05 05 34.3	-0.8
BOSA				IAmb	IAmb	05 06 17.3	
	comp=Z,11nm,1.2s						
SORM	Soroca	77.30	319	⇑P	P	05 05 38.0	+0.5
AKASG	Malin Array Be	77.38	322	P	P	05 05 37.5	-0.4
	comp=Z,2.4nm,0.6s,baz=92,slow=5.0,SNR=11						
	comp=Z,2.4nm,0.6s						
AKASG	Malin Array Be	77.38	322	P	P	05 05 37.8	-0.1
AKBB	Malin Array Si	77.38	322	P	P	05 05 37.5	-0.4
AKBB				IAmb	IAmb	05 05 38.3	
	comp=Z,7.3nm,0.8s						
KIEV	Kiev	77.39	322	P	P	05 05 37.5	-0.3
KIEV	Kiev	77.39	322	⇓P	P	05 05 37.6	-0.2
VRI	Vrincioaia	77.88	317	⇑P	P	05 05 41.5	+0.7
ELND	Elena	77.91	314	⇑P	P	05 05 41.7	+0.7
PLOR	Plostina	77.93	317	⇓P	P	05 05 41.2	+0.1
TESR	Tescani	78.07	317	⇑P	P	05 05 42.9	+1.1
GIRR	Girov	78.26	318	⇓P	P	05 05 43.6	+0.8
MLR	Muntele Rosu	78.35	316		P	05 05 43.4	-0.1
MLR				IAmb	IAmb	05 05 45.4	
	comp=Z,12nm,0.9s						
MLR	Muntele Rosu	78.35	316	⇓P	P	05 05 43.1	-0.5
PLVB	Pleven	78.90	314	⇓P	P	05 05 46.1	-0.3
ARR	Arges	79.23	316	⇓P	P	05 05 48.1	-0.1
BURAR	Bucovina Array	79.25	318	P	P	05 05 48.8	+0.5
BURAR				IAmb	IAmb	05 05 50.4	
	comp=Z,8.6nm,0.7s						
BURAR	Bucovina Array	79.25	318	⇓P	P	05 05 49.0	+0.6
BUR08	Bucovina Ar. S	79.27	318		P	05 05 48.7	+0.3
BUR08				IAmb	IAmb	05 05 50.6	
	comp=Z,7.1nm,0.8s						
MARR	Marisel-Cluj	80.49	317	⇑P	P	05 05 56.1	+1.0
DEV	Deva	80.52	316	⇑P	P	05 05 56.1	+1.0
HERR	Herculane	80.70	315	⇑P	P	05 05 55.4	-0.7
BOVS	Bovan	81.03	314	⇑P	P	05 05 57.4	-0.4
SURR	Surduc	81.03	316	⇓P	P	05 05 58.4	+0.6
BZS	Buzias	81.37	316	⇓P	P	05 05 59.5	-0.1
FINES	FINESS Array B	81.79	332	P	P	05 06 02.0	+0.6
	comp=Z,4.8nm,0.4s,baz=105,slow=5.5,SNR=60						
	comp=Z,4.8nm,0.4s						
FINES	FINESS Array B	81.79	332	P	P	05 06 01.8	+0.4
STHS	Stebnicka Huta	82.16	320	*e*P	P	05 06 04.6	+0.9
PSZ	Piszkesteto	82.84	318		P	05 06 07.9	+0.6
PSZ				IAmb	IAmb	05 06 08.9	
	comp=Z,7.9nm,0.9s						
PSZ	Piszkesteto	82.84	318	⇓P	P	05 06 07.9	+0.6
MORH	Mrgy, Hungar	83.50	316	⇓P	P	05 06 10.4	-0.1
ARCES	ARCESS Array B	84.03	340	P	P	05 06 13.2	+0.4
	comp=Z,1.8nm,0.4s,baz=110,slow=4.2,SNR=42						
	comp=Z,1.8nm,0.4s						
ARCES	ARCESS Array B	84.03	340	P	P	05 06 13.5	+0.7
ARCES				IAmb	IAmb	05 06 53.1	
	comp=Z,18nm,1.3s						
STEB	Steborice	84.46	320	*e*P	P	05 06 16.5	+1.1
MORC	Moravsky Berou	84.59	320	P	P	05 06 16.0	-0.1
MORC	Moravsky Berou	84.59	320	⇑P	P	05 06 16.2	+0.1
MODS	Modra-Piesok	84.63	318	*e*P	P	05 06 17.1	+0.8
KRLC	Kraliky	85.11	320	*e*P	P	05 06 20.2	+1.5
DPC	Dobruska-Polom	85.42	320	*e*P	P	05 06 21.7	+1.4
CHVC	Chvalec	85.61	321	*e*P	P	05 06 22.6	+1.4
SOKA	Soboth	86.03	317	*e*P	P	05 06 24.4	+1.0
	comp=Z,4.4nm,0.8s						
MOA	Molln	86.61	318	*e*P	P	05 06 26.8	+0.7
	comp=Z,4.8nm,1.0s						
CKRC	Cesky Krumlov	86.63	319	*e*P	P	05 06 27.4	+1.2
BRG	Berggiesshubel	86.97	321	*e*P	P	05 06 28.9	+1.2
	comp=Z,5.6nm,0.9s,baz=92,slow=4.8						
GEC2	GERESS Array S	87.03	319		P	05 06 28.9	+0.7
GEC2				IAmb	IAmb	05 06 29.7	
	comp=Z,5.4nm,0.9s						
GEC2	GERESS Array S	87.03	319	*e*P	P	05 06 28.9	+0.7
	comp=Z,5.8nm,0.9s,baz=92,slow=4.8						
GERES	GERESS Array B	87.03	319	P	P	05 06 29.4	+1.2
	comp=Z,1.8nm,0.7s,baz=74,slow=4.7,SNR=12						
	comp=Z,1.8nm,0.7s						
KHC	Kasperske Hory	87.13	319	P	P	05 06 28.1	-0.5
KHC	Kasperske Hory	87.13	319	*e*P	P	05 06 29.4	+0.8
RUE	Ruedersdorf	87.15	322	*e*P	P	05 06 30.2	+1.7
	comp=Z,47nm,1.1s,baz=92,slow=4.8						
CLL	Collm	87.58	321	*e*P	P	05 06 31.6	+1.0
	comp=Z,13nm,1.3s,baz=92,slow=4.8						
CLL	Collm	87.58	321	*i* P	P	05 06 31.7	+1.0
	comp=Z,14nm,1.3s						
WET	Wettzell	87.59	319	*e*P	P	05 06 31.8	+1.0
	comp=Z,5.0nm,0.8s,baz=92,slow=4.8						
HFS	Hagfors	87.59	330	P	P	05 06 31.1	+0.6
	comp=Z,8.3nm,0.9s,baz=108,slow=4.8,SNR=15						
	comp=Z,8.3nm,0.9s						
LESA	Schwarzleotal	87.67	317	*i* P	P	05 06 31.2	-0.1
	comp=Z,3.7nm,0.5s						
TANN	Tannenbergstha	87.90	320	*e*P	P	05 06 33.2	+1.0
	comp=Z,3.8nm,1.0s,baz=92,slow=4.8						
ROTZ	Rotzenmuhle	88.04	320	*e*P	P	05 06 34.7	+1.8
	comp=Z,1.7nm,1.0s,baz=92,slow=4.8						
PLN	Plauen	88.09	320	*e*P	P	05 06 34.4	+1.3
	comp=Z,3.4nm,1.2s,baz=92,slow=4.8						
SPITS	Spitsbergen Ar	88.11	348	P	P	05 06 32.0	-0.6
	comp=Z,2.6nm,0.6s,baz=56,slow=2.6,SNR=5.4						
	comp=Z,2.6nm,0.6s						
MANZ	Manzenberg	88.11	320	*e*P	P	05 06 34.8	+1.6
	comp=Z,2.2nm,1.0s,baz=92,slow=4.8						
NEUB	Neuenburg	88.35	321	*e*P	P	05 06 35.4	+1.1
	comp=Z,16nm,0.9s,baz=92,slow=4.8						
WTTA	Wattenberg	88.37	317	*e*P	P	05 06 34.9	+0.2
	comp=Z,2.7nm,0.5s						
MOX	Moxa	88.44	320	*e*P	P	05 06 35.8	+1.1
	comp=Z,15nm,1.4s,baz=92,slow=4.8						
SQTA	Sankt Quirin	88.66	317	*e*P	P	05 06 36.2	+0.2
	comp=Z,5.1nm,0.5s						
GRF	Grafenberg Arr	88.68	320	*e*P	P	05 06 37.2	+1.3
	comp=Z,9.0nm,0.8s,baz=92,slow=4.8						
FLTG	Flechtingen	88.70	322	*e*P	P	05 06 36.8	+1.0
	comp=Z,8.2nm,0.9s,baz=92,slow=4.8						
NOA	NORSAR Array B	88.84	331	P	P	05 06 35.2	-1.2
	comp=Z,1.3nm,1.0s,baz=98,slow=5.7,SNR=1.9						
	comp=Z,1.3nm,1.0s						
RETA	Reutte	88.97	317	*i* P	P	05 06 37.9	+0.5
	comp=Z,8.1nm,0.9s						
FETA	Feichten	88.99	317	*e*P	P	05 06 38.1	+0.5
	comp=Z,5.7nm,1.0s						
ASSE	Asse, Remlinge	89.05	322	*e*P	P	05 06 38.8	+1.4
	comp=Z,17nm,1.1s,baz=92,slow=4.8						
CLZ	Clausthal	89.23	322	*e*P	P	05 06 39.8	+1.3
	comp=Z,18nm,1.2s,baz=92,slow=4.8						
FUORN	Ofenpass-Fuorn	89.31	316	P	P	05 06 38.8	-0.4
FUORN				IAmb	IAmb	05 06 42.0	
	comp=Z,9.7nm,1.1s						
UBR	Ueberruh	89.41	317	*e*P	P	05 06 40.3	+0.9
	comp=Z,206nm,3.3s,baz=92,slow=4.8						
GTTG	Gottingen	89.49	321	*e*P	P	05 06 41.5	+1.9
	comp=Z,13nm,1.0s,baz=92,slow=4.8						
DAVA	Damuels	89.57	317	*e*P	P	05 06 41.3	+1.0
	comp=Z,17nm,1.1s						
KEST	Kesra	90.08	306	P	P	05 06 44.8	+1.9
	comp=Z,9.7nm,0.9s,baz=90,slow=2.3,SNR=7.5						
	comp=Z,9.7nm,0.9s						
KEST	Kesra	90.08	306	P	P	05 06 43.0	+0.1
KEST				IAmb	IAmb	05 06 46.4	
	comp=Z,12nm,1.1s						
KASTN	Kahler Asten	90.46	321	*e*P	P	05 06 45.5	+1.3
	comp=Z,65nm,2.7s,baz=92,slow=4.8						
TNS	Taunus Mts	90.47	320	*e*P	P	05 06 45.7	+1.4
	comp=Z,17nm,1.0s,baz=92,slow=4.8						
BFO	Black Forest	90.59	318	*e*P	P	05 06 45.3	+0.4
	comp=Z,4.4nm,0.8s,baz=92,slow=4.8						
BUG	Bochum--Univer	91.18	321	*e*P	P	05 06 49.1	+1.7
	comp=Z,14nm,1.1s,baz=92,slow=4.8						
WLF	Walferdange	91.97	320	*e*P	P	05 06 53.1	+1.9
	comp=Z,6.2nm,0.9s,baz=92,slow=4.8						
TXAR	Lajitas Array	142.74	35	PKhKP	PKPpre	05 13 11.9	
	comp=Z,0.3nm,0.5s,baz=201,slow=0.8,SNR=9.0						
TXAR				SKP	SKPdf	05 16 34.0	-0.5
	comp=Z,0.7nm,0.8s,baz=326,slow=1.9,SNR=6.9						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	142.74	35		PKPdf	05 13 11.5	-4.2
BDFB	Brasilia	144.92	243	PKPbc	PKPab	05 13 20.6	+1.1
	comp=Z,2.3nm,0.5s,baz=75,slow=5.2,SNR=5.6						
BDFB	Brasilia	144.92	243		PKPbc	05 13 19.1	-0.3
CPUP	Villa Florida	146.25	219	PKPbc	PKPbc	05 13 24.2	+1.1
	comp=Z,0.6nm,0.6s,baz=284,slow=2.6,SNR=6.0						
CPUP	Villa Florida	146.25	219		PKPdf	05 13 23.2	+1.5

IDC 04 05:32:27.7±6.6**,6°.34S**×**155°.05E,h0**^{km}**,mb3.7**/3**, mbtmp3.7**/3**,Error ellipse: s-maj=189.8km s-min=37.7km az=109.0,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.23	234	P	P	05 37 47.5	+1.0
	2.5nm,0.9s,baz=60,slow=9.6,SNR=8.4						
	2.5nm,0.9s						
ASAR	Alice Springs	26.64	228	P	P	05 38 07.6	-0.8
	0.5nm,0.6s,baz=60,slow=9.9,SNR=7.7						
	0.5nm,0.6s						
SONM	Songino Array	68.82	327	P	P	05 43 33.9	-0.1
	0.7nm,0.8s,baz=108,slow=4.7,SNR=3.1						
	0.7nm,0.8s						

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*SJA **04** 05:36:58.5±0.6,22°.56S×69°.29W,h92^{km}±5^{km},ML4.0, MW4.0*

*IDC **04** 05:36:59.8±2.6,22°.75S×68°.75W,h90^{km}±24^{km},mb3.5/1, mbtmp4.1/4,MS3.4/1,Error ellipse: s-maj=45.0km s-min=19.4km az=103.0*

*NEIC **04** 05:36:59.5±2.1,22°.56S±0°.05×69°.15W±0°.09,h88^{km}±4^{km}, mb4.2/6,ML4.1(GUC),Error ellipse: s-maj=11.7km s-min=7.5km az=105.0*

*GUC **04** 05:37:01.0±0.8,22°.54S×69°.19W,h81^{km}±4^{km},ML4.1*

*VAO **04** 05:37:04.4±1.4,22°.43S×68°.99W,h133^{km}±11^{km},mb4.1, Presumed earthquake*

ISC 04 05:36:59.0±0.7**,22°.59S**±0°.04×**69°.24W**±0°.04**,h86**^{km}±6^{km}**, n100,**σ**1^{s}.78**/108**,mb4.1**/3**,8C-6D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB06	IPOC Station P	0.33	249		Pn	05 37 13.2	+0.8
PB06	IPOC Station P	0.33	249	⇑eP	Pn	05 37 13.5	+1.1
PB06				eS	Sn	05 37 24.0	+1.7
PB06				IAML		05 37 25.2	
	comp=N,10μm,0.1s						
PB06	IPOC Station P	0.33	249	eP	Pn	05 37 12.7	+0.3
PB06				IAML		05 37 26.1	
	comp=Z,3μm,0.1s						
PB03	IPOC Station P	0.72	318		Pn	05 37 16.1	+0.6
PB03	IPOC Station P	0.72	318	⇑eP	Pn	05 37 16.6	+1.0
PB03				eS	Sn	05 37 29.2	+1.4
PB03				IAML		05 37 30.6	
	comp=E,8μm,0.1s						
PB03	IPOC Station P	0.72	318	eP	Pn	05 37 15.9	+0.3
PB03				IAML		05 37 30.3	
	comp=Z,8μm,0.3s						
PB09	IPOC Station P	0.79	360		Pn	05 37 17.3	+1.0
PB09	IPOC Station P	0.79	360	eP	Pn	05 37 17.6	+1.3
PB09				eS	Sn	05 37 29.7	+0.6
PB09				IAML		05 37 31.8	
	comp=E,6μm,0.4s						
PB09	IPOC Station P	0.79	360	eP	Pn	05 37 16.9	+0.6
PB09				IAML		05 37 31.6	
	comp=Z,6μm,0.4s						
PB05	IPOC Station P	0.93	253		Pn	05 37 18.9	+1.2
PB05	IPOC Station P	0.93	253	⇑eP	Pn	05 37 19.2	+1.4
PB05				eS	Sn	05 37 33.9	+2.1
PB05	IPOC Station P	0.93	253	eP	Pn	05 37 18.4	+0.6
PB05				IAML		05 37 35.4	
	comp=Z,2μm,0.4s						
AF01	San Pedro de A	1.04	111		Pn	05 37 20.5	+1.3
AF01	San Pedro de A	1.04	111	⇓eP	Pn	05 37 20.6	+1.4
AF01				eS	Sn	05 37 35.5	+1.1
AF01				IAML		05 37 38.6	
	comp=E,10μm,0.3s						
AF01	San Pedro de A	1.04	111	eP	Pn	05 37 20.8	+1.5
AF01				IAML		05 37 41.2	
	comp=Z,3μm,0.1s						
PB07	IPOC Station P	1.04	325		Pn	05 37 20.0	+0.8
PB07	IPOC Station P	1.04	325	⇑eP	Pn	05 37 20.3	+1.1
PB07				eS	Sn	05 37 35.1	+0.9
PB07				IAML		05 37 37.9	
	comp=N,5μm,0.4s						
PB07	IPOC Station P	1.04	325	eP	Pn	05 37 19.7	+0.5
PB07				IAML		05 37 36.7	
	comp=Z,3μm,0.4s						
PB02	IPOC Station P	1.40	334		Pn	05 37 24.3	+0.8
PB02	IPOC Station P	1.40	334	⇓eP	Pn	05 37 24.8	+1.3
PB02				eS	Sn	05 37 42.5	+0.7
PB02				IAML		05 37 44.8	
	comp=E,5μm,0.5s						
PB02	IPOC Station P	1.40	334	eP	Pn	05 37 24.0	+0.6
PB02				IAML		05 37 47.3	
	comp=Z,4μm,0.2s						
PB10	IPOC Station P	1.52	232		Pn	05 37 26.7	+1.8
PB10	IPOC Station P	1.52	232	⇑eP	Pn	05 37 26.7	+1.8
PB10				eS	Sn	05 37 45.5	+0.9
PB10				IAML		05 37 54.9	
	comp=N,2μm,0.4s						
PB10	IPOC Station P	1.52	232	eP	Pn	05 37 26.2	+1.3
PB10				IAML		05 37 53.8	
	comp=Z,775nm,0.9s						
PB01	IPOC Station P	1.55	351		Pn	05 37 26.2	+0.8
PB01	IPOC Station P	1.55	351	⇓eP	Pn	05 37 26.5	+1.2
PB01				eS	Sn	05 37 45.9	+0.6
PB01				IAML		05 37 49.0	
	comp=E,3μm,0.4s						
PB01	IPOC Station P	1.55	351	eP	Pn	05 37 25.9	+0.5
PB01				IAML		05 37 48.8	
	comp=Z,2μm,0.2s						
PATCX	Punta Patache	1.95	334		Pn	05 37 30.5	0.0
PATCX	Punta Patache	1.95	334	⇓eP	Pn	05 37 31.0	+0.4
PATCX				eS	Sn	05 37 54.2	-0.3
PATCX				IAML		05 38 02.1	
	comp=E,1μm,0.4s						
TA01	Diego Aracena	2.19	336		Pn	05 37 33.5	-0.1
TA01	Diego Aracena	2.19	336	⇓eP	Pn	05 37 33.5	-0.1
TA01				IAML		05 38 10.6	
	comp=E,2μm,0.4s						
TA01	Diego Aracena	2.19	336	eP	Pn	05 37 33.8	+0.2
TA01				eS	Sn	05 37 50.1	-10
TA01				IAML		05 38 06.9	
	comp=Z,519nm,1.2s						
PB14	IPOC Station P	2.30	208		Pn	05 37 38.4	+3.1
PB14	IPOC Station P	2.30	208	eP	Pn	05 37 36.5	+1.2
PB14				IAML		05 38 13.3	
	comp=E,601nm,0.3s						
HMBC	Humberstone	2.38	345		Pn	05 37 36.4	+0.2
HMBC	Humberstone	2.38	345	⇓eP	Pn	05 37 36.1	-0.1
HMBC				IAML		05 38 16.4	
	comp=E,1μm,0.2s						
HMBC	Humberstone	2.38	345	eP	Pn	05 37 31.2	-5.0
HMBC				IAML		05 38 13.0	
	comp=Z,1μm,0.3s						
PB08	IPOC Station P	2.43	2		Pn	05 37 37.3	0.0
PB08	IPOC Station P	2.43	2	⇑eP	Pn	05 37 38.2	+0.9
PB08	IPOC Station P	2.43	2	eP	Pn	05 37 32.7	-4.5
TA02	Huaiquique	2.45	340	eP	Pn	05 37 36.8	-0.3
TA02				IAML		05 38 16.7	
	comp=E,2μm,0.6s						
TA02	Huaiquique	2.45	340	eP	Pn	05 37 31.4	-5.7
TA02				IAML		05 38 12.3	
	comp=Z,437nm,0.3s						
GO02	Mina Guanaco	2.59	187		Pn	05 37 40.1	+1.0
GO02	Mina Guanaco	2.59	187	eP	Pn	05 37 40.2	+1.0
GO02				IAML		05 38 20.9	
	comp=E,1μm,0.4s						
GO02	Mina Guanaco	2.59	187	eP	Pn	05 37 40.4	+1.2
GO02				eS	Sn	05 38 28.9	+19
GO02				IAML		05 38 39.3	
	comp=Z,672nm,0.5s						
PB11	IPOC Station P	2.84	352		Pn	05 37 42.4	0.0
PB11	IPOC Station P	2.84	352	⇑eP	Pn	05 37 42.3	-0.1
PB11				IAML		05 38 24.1	
	comp=E,647nm,0.3s						
PB11	IPOC Station P	2.84	352	eP	Pn	05 37 37.0	-5.5
PB11				IAML		05 38 34.3	
	comp=Z,351nm,1.0s						
GO01	Chusmiza	2.90	1		Pn	05 37 43.8	+0.2
GO01	Chusmiza	2.90	1	⇑eP	Pn	05 37 44.1	+0.5
GO01				eS	Sn	05 38 17.4	-0.5
GO01				IAML		05 38 26.6	
	comp=N,642nm,0.2s						
GO01	Chusmiza	2.90	1	eP	Pn	05 37 44.1	+0.5
GO01				eS	Sn	05 38 10.4	-7.5
GO01				IAML		05 38 13.9	
	comp=Z,343nm,0.5s						
PSGCX	Pisagua	3.09	344		Pn	05 37 45.9	+0.1
SALTA		3.12	122	eP	Pn	05 37 50.3	+3.7
YJA	Yavi	3.47	84	eP	Pn	05 37 53.8	+2.6
AC01	Pan de Azucar	3.76	199		Pn	05 37 54.7	-0.1
AC01	Pan de Azucar	3.76	199	eP	Pn	05 37 54.0	-0.7
AC01	Pan de Azucar	3.76	199	eP	Pn	05 37 54.3	-0.5
AC01				eS	Sn	05 38 18.8	-19
AC01				IAML		05 38 52.8	
	comp=Z,353nm,0.8s						
SLA	San Lorenzo	4.03	123	eP	Pn	05 38 02.6	+4.0
PB12	IPOC Station P	4.08	345	eP	Pn	05 37 57.1	-2.1
PB12	IPOC Station P	4.08	345	eP	Pn	05 37 58.0	-1.2
PB12				eS	Sn	05 38 53.7	+7.8
PB12				IAML		05 38 59.1	
	comp=Z,186nm,0.5s						
AC02	Maricunga	4.23	179		Pn	05 38 03.1	+1.4
AC02	Maricunga	4.23	179	eP	Pn	05 38 03.2	+1.5
AC02				eS	Sn	05 39 07.0	+17
AC02				IAML		05 39 19.6	
	comp=Z,208nm,0.6s						
PB16	IPOC Station P	4.24	357		Pn	05 38 03.0	+1.2
FSA	Cafayete	4.60	140	eP	Pn	05 38 04.2	-2.1
AC06	Mina Casimiro	4.86	192		Pn	05 38 08.8	-0.9
GO03	Copiapo	5.07	190		Pn	05 38 11.7	-0.9
AC04	Llanos de Chal	5.84	196		Pn	05 38 19.8	-3.2
AC05	El Transito	6.29	188		Pn	05 38 27.7	-1.7
LPAZ	La Paz	6.35	10	P	Pn	05 38 32.8	+2.2
	comp=Z,5.1nm,0.6s,baz=204,slow=6.1,SNR=27						
LPAZ	La Paz	6.35	10		Pn	05 38 32.0	+1.4
LPAZ	La Paz	6.35	10	eP	Pn	05 38 32.6	+2.0
LCO	Las Campanas	6.53	191		Pn	05 38 30.6	-2.2
CO01	Juntas del Tor	7.40	186		Pn	05 38 45.4	+0.8
CO02	Combarbal	8.73	190	Pn	Pn	05 39 00.3	-2.2
CFA	Coronel Fontan	9.03	175	P	Pn	05 39 04.9	-1.6
	comp=Z,2.6nm,0.3s,baz=12,slow=14,SNR=20						
CFA				S	Sn	05 40 42.6	-3.9
	comp=Z,2.6nm,0.6s,baz=307,slow=20,SNR=1.5						
SIV	San Ignacio	10.12	51	P	Pn	05 39 18.7	-2.8
	comp=Z,12nm,0.6s,baz=274,slow=8.8						
PTLB	Pontes e Lacer	11.90	55		Pn	05 39 44.8	-0.8
VILB	Vilhena	12.87	43		Pn	05 39 58.1	-0.6
VILB	Vilhena	12.87	43	eP	Pn	05 39 57.7	-1.1
AMBA	Amambai (Brazi	13.15	94	eP	Pn	05 40 04.3	+1.9
SALV	Santo Antonio	14.41	65	eP	Pn	05 40 19.7	+0.8
PDRB	Porto dos Gac	16.17	50	eP	P	05 40 41.8	-1.0
ITAB	Concordia	16.19	110		Pn	05 40 41.0	-0.4
ITAB				IAmb	IAmb	05 41 14.9	
	comp=Z,18nm,1.2s						
PLTB	Pedras Altas	16.63	127	eP	P	05 40 48.8	+1.0
TRQA	Tornquist	16.63	160		P	05 40 49.0	+1.2
CLDB	Colider	17.34	50	eP	P	05 40 55.8	+0.1
TEFE	Tefe	19.48	14	eP	P	05 41 19.3	+0.1
SNDB	Serra Nova Dou	20.10	61	eP	P	05 41 23.4	-2.6
IPMB	Ipameri, GO	20.24	81	eP	P	05 41 26.1	-1.4
NPGB	Novo Progresso	20.43	43	eP	P	05 41 29.6	0.0
MACA	Manacapuru-AM	21.02	24		P	05 41 36.2	+0.4
MACA				IAmb	IAmb	05 41 37.9	
	comp=Z,13nm,0.7s						
MACA	Manacapuru-AM	21.02	24	eP	P	05 41 35.4	-0.4
BDFB	Brasilia	21.20	75	P	P	05 41 34.2	-3.7
	comp=Z,3.2nm,0.8s,baz=246,slow=10.0,SNR=4.4						
	comp=Z,3.2nm,0.8s						
BDFB	Brasilia	21.20	75	IAmb	IAmb	05 41 56.0	
	comp=Z,17nm,1.5s						
ITTB	Itaituba	22.33	38	eP	P	05 41 48.2	-1.7
BOAV	Boa Vista	26.25	20	P	P	05 42 26.1	-0.1
BOAV				IAmb	IAmb	05 42 33.7	
	comp=Z,8.6nm,1.4s						
MDP	Montagnes des	31.95	33	LR	LR	05 58 31.1	
	comp=Z,56nm,18.1s,baz=164,slow=41						
SNAA	Sanae	61.36	161	P	P	05 47 06.3	+0.9
ASAR	Alice Springs	128.81	208	PKP	PKPdf	05 55 56.7	-0.5
	comp=Z,0.5nm,0.9s,baz=157,slow=5.0,SNR=3.1						
WRA	Warramunga Arr	131.87	210	PKP	PKiKP	05 56 04.3	+0.2
	comp=Z,0.4nm,0.8s,baz=156,slow=1.4,SNR=2.0						

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*IDC **04** 05:52:02.8±2.8,6°.76S×156°.53E,h0^{km},mb4.0/6, mbtmp4.0/6,MS3.4/3,Error ellipse: s-maj=90.7km s-min=27.5km az=107.0*

ISC 04 05:52:08.6±2.5**,6°.8S**±0°.2×**156°.4E**±0°.6**,h35**^{km}**,n12,** σ**1^{s}.04**/6**,mb4.1**/6**,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	9.54	253	LR	LR	05 58 22.8	
	comp=Z,93nm,18.0s,baz=48,slow=39						
WRA	Warramunga Arr	25.12	236	P	P	05 57 30.5	0.0
	4.0nm,0.6s,baz=59,slow=10.0,SNR=33						
	4.0nm,0.6s						
H11S3	WAKE ISLAND Hy	27.05	22	T	T	06 26 06.4	
	baz=202,slow=75,SNR=54						
H11S2	WAKE ISLAND Hy	27.06	22	T	T	06 26 06.6	
	baz=202,slow=75,SNR=48						
H11S1	WAKE ISLAND Hy	27.07	22	T	T	06 26 08.3	
	baz=202,slow=75,SNR=28						
ASAR	Alice Springs	27.40	230	P	P	05 57 50.8	-0.3
	0.7nm,0.4s,baz=62,slow=8.2,SNR=11						
	0.7nm,0.4s						
FITZ	Fitzroy Crossi	32.05	247	LR	LR	06 12 16.3	
	comp=Z,170nm,20.5s,baz=17,slow=38						
BRDH	Bariadhala	69.75	297	LR	LR	06 35 02.5	
	comp=Z,23nm,18.2s,baz=176,slow=37						
SONM	Songino Array	69.91	327	P	P	06 03 17.2	+1.0
	2.4nm,0.8s,baz=141,slow=5.6,SNR=12						
	2.4nm,0.8s						
MKAR	Makanchi Array	84.16	318	P	P	06 04 36.1	-0.2
	0.2nm,0.5s,baz=124,slow=7.2,SNR=1.4						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	84.77	326	P	P	06 04 37.7	-1.4
	0.7nm,0.6s,baz=90,slow=7.2,SNR=4.2						
	0.7nm,0.6s						
MAW	Mawson	85.16	203	P	P	06 04 41.2	+0.3
	1.1nm,0.6s,baz=81,slow=9.7,SNR=1.5						
	1.1nm,0.6s						

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*BJI **04** 06:04:11.1,6°.84S×130°.18E,h173^{km},mB5.2/11,mb5.5/62*

*IDC **04** 06:04:13.9±1.2,6°.70S×130°.03E,h165^{km}±10^{km},mb4.8/27, mbtmp5.2/31,MS3.6/10,Error ellipse: s-maj=12.9km s-min=7.8km az=85.0*

*MOS **04** 06:04:13.5±0.9,6°.64S×130°.02E,h173^{km},mb5.3/34,Error ellipse: s-maj=10.5km s-min=5.6km az=118.1*

*DJA **04** 06:04:13.5±0.1,7°S±1°×13°0E±°,h162^{km}±2^{km},M5.1/103, mb5.2/103,mB5.6/59,MLv5.7/22,Mw(mB)5.1/59, MwMwp4.8/2,Mwp5.2/2*

*NEIC **04** 06:04:14.6±1.8,6°.69S±0°.07×130°.03E±0°.08,h167^{km}±5^{km}, mb5.1/134,Mww4.9/18,Error ellipse: s-maj=10.9km s-min=9.5km az=77.0*

*NEIC **04** 06:04:14,6°.99S×130°.32E,h180^{km},Moment Tensor Solution. Duration: 1^{s}.5 Moment tensor: Scale 10^{16}Nm; M_{rr}2.43; $M_{\theta\theta}$0.26; $M_{\phi\phi}$-2.70; $M_{r\theta}$0.33; $M_{\theta\phi}$0.24; $M_{\phi r}$1.46; Fault plane solution: $M_0$2.99000×10^{16} NP1: ϕ_s165.15000°,δ31.28000°,λ73.22000°. NP2:ϕ_s4.58000°, δ60.19000°,λ99.95000°. Principal axes: T 2.8728, Plg73.0000°, Azm299.0000°; N 0.2170, Plg9.0000°, Azm180.0000°; P -3.0898, Plg15.0000°, Azm87.0000°;*

*NEIC **04** 06:04:14,6°.69S×130°.02E,h180^{km}*

*GCMT **04** 06:04:16.0±0.3,6°.78S±0°.02×130°.02E±0°.02,h180^{km}±3^{km}, MW5.0/91,Moment Tensor Solution. s32,c35; s91,c122; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.86±.16; $M_{\theta\theta}$0.11±.17; $M_{\phi\phi}$-2.97±.18; $M_{r\theta}$0.46±.12; $M_{\theta\phi}$0.97±.19; $M_{\phi r}$3.12±.15; Best double couple: $M_0$4.40400×10^{16} NP1:ϕ_s146.00000°,δ26.00000°,λ57.00000°. NP2: ϕ_s1.00000°,δ69.00000°,λ105.00000°. Principal axes: T 4.3710, Plg63.0000°, Azm295.0000°; N 0.0680, Plg14.0000°, Azm176.0000°; P -4.4370, Plg22.0000°, Azm80.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 06:04:13.6±0.4**,6°.76S**±0°.03×**130°.03E**±0°.04**,h168**^{km}±3^{km}**, h169**^{km}**:pP-P,n799,**σ**1^{s}.17**/788**,mb5.2**/161**,22C-10D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.75	134		Pn	06 04 47.5	+0.3
SAUI	Saumlaki	1.75	134	P	Pn	06 04 48.0	+0.8
SAUI	Saumlaki	1.75	134	P	Pn	06 04 47.6	+0.4
BNDI	Bandanaira	2.23	357	P	Pn	06 04 53.2	+0.7
BNDI	Bandanaira	2.23	357	P	Pn	06 04 53.0	+0.5
AAI	Ambon	3.56	329	P	Pn	06 05 09.8	+1.1
MSAI	Masohi	3.56	342	P	Pn	06 05 09.9	+1.1
KRAI	Karang Ratu	3.79	334	P	Pn	06 05 13.8	+2.1
FAKI	Fak Fak	4.41	30		Pn	06 05 17.9	-1.9
FAKI	Fak Fak	4.41	30	P	Pn	06 05 18.3	-1.4
FAKI	Fak Fak	4.41	30	P	Pn	06 05 17.6	-2.1
NLAI	Namlea	4.55	320	P	Pn	06 05 23.1	+1.5
KMPI	Kaimana, Papua	4.78	50	P	Pn	06 05 23.4	-1.1
SWI	Sorong	5.99	12	P	Pn	06 05 38.5	-1.9
	12nm15μm352nm,0.7s						
MTN	Manton Dam	6.14	170	P	Pn	06 05 41.7	-0.7
MTN	Manton Dam	6.14	170		Pn	06 05 41.8	-0.6
SANI	Sanana	6.17	319	S	Sn	06 06 52.9	0.0
SANI	Sanana	6.17	319	P	Pn	06 05 43.6	+0.8
SANI	Sanana	6.17	319	P	Pn	06 05 43.8	+1.0
	1.3nm4μm333nm,1.4s						
KDU	Kakadu	6.36	158	P	Pn	06 05 44.3	-1.0
SOEI	Soe	6.43	242		Pn	06 05 46.5	+0.2
SOEI	Soe	6.43	242	P	Pn	06 05 46.8	+0.5
SOEI	Soe	6.43	242	S	Sn	06 06 59.6	+0.4
SOEI	Soe	6.43	242	P	Pn	06 05 46.5	+0.2
RKPI	Ransiki, Papua	6.66	39	P	Pn	06 05 48.7	-0.5
MWPI	Manokwari, Pap	7.04	35	P	Pn	06 05 54.6	+0.3
BATI	Baumata	7.17	241	P	Pn	06 05 56.2	+0.2
	4μm,0.4s,baz=103,slow=3.6,SNR=246						
BATI				S	Sn	06 07 13.6	-3.0
	3μm,0.4s,baz=10,slow=22,SNR=11						
BATI	Baumata	7.17	241	P	Pn	06 05 55.7	-0.3
BBSI	Bau Bau	7.52	279	P	Pn	06 06 03.2	+2.5
	1.8nm5μm617nm,1.0s						
SRPI	Serui, Papua	7.87	52	P	Pn	06 06 04.2	-1.1
	2.1nm6μm578nm,0.9s						
KDI	Kendari	7.88	290	P	Pn	06 06 07.3	+1.8
TNTI	Ternate	7.94	340	P	Pn	06 06 05.8	-0.4
MMRI	Maumere	7.94	256		Pn	06 06 06.3	+0.1
MMRI	Maumere	7.94	256	P	Pn	06 06 07.4	+1.2
MMRI	Maumere	7.94	256	S	Sn	06 07 35.6	+0.5
MMRI	Maumere	7.94	256	P	Pn	06 06 06.3	+0.1
	2.8nm10μm549nm,0.4s						
BAKI	Biak	8.21	48	P	Pn	06 06 10.7	+0.9
EDFI	Ende, Flores	8.49	256	P	Pn	06 06 13.6	0.0
	6μm235nm,0.9s						
GAMI	Galela, Maluku	8.83	345	P	Pn	06 06 18.4	+0.4
	6μm93nm,0.9s						
KNRA	Kununurra	8.95	188	P	Pn	06 06 17.9	-1.6
	comp=Z,240nm,0.6s						
KNRA	Kununurra	8.95	188		Pn	06 06 17.6	-1.9
LUWI	Luwuk	9.20	308		Pn	06 06 23.3	+0.5
LUWI	Luwuk	9.20	308	P	Pn	06 06 25.2	+2.3
	comp=Z,4μmcomp=Z,207nm,1.2s						
KMSI	Cibinong	9.46	320	P	Pn	06 06 28.2	+1.9
	comp=Z,437nm,0.9s						
BSSI	Bau Bau, Buton	9.50	273	P	Pn	06 06 27.4	+0.6
	comp=Z,2μmcomp=Z,169nm,0.8s						
SMPI	Sarmi	9.87	62	P	Pn	06 06 30.8	-0.9
	comp=Z,289nm,1.1s						
BKSI	Bulukumba	9.95	278	P	Pn	06 06 33.1	+0.3
	comp=Z,80nm,0.8s						
BASI	Baing, Sumba	9.96	249	P	Pn	06 06 31.6	-1.2
WSI	Waingapu	10.05	253	P	Pn	06 06 32.4	-1.7
BNSI	Bone	10.15	283	P	Pn	06 06 37.0	+1.7
	comp=Z,2μmcomp=Z,178nm,0.7s						
APSI	Ampana	10.18	304	P	Pn	06 06 38.3	+2.5
	comp=Z,2μmcomp=Z,220nm,1.3s						
LBFI	Labuhan Bajo,	10.19	260	P	Pn	06 06 35.5	-0.4
KAPI	Kappang	10.37	279	P	Pn	06 06 40.1	+1.8
	comp=Z,21nm,0.8s,baz=96,slow=9.0,SNR=10						
KAPI	Kappang	10.37	279		Pn	06 06 39.5	+1.2
KAPI	Kappang	10.37	279	P	Pn	06 06 39.9	+1.7
KAPI	Kappang	10.37	279	eP	Pn	06 06 39.4	+1.2
MMPI	Merauke	10.40	100	P	Pn	06 06 37.7	-1.0
SPSI	Sidrap Palu	10.58	285	P	Pn	06 06 44.2	+3.1
	comp=Z,279nm,0.7s						
MKS	Makassar	10.61	278	P	Pn	06 06 41.9	+0.5
	comp=Z,166nm,1.1s						
MRSI	Marisa	10.81	311	P	Pn	06 06 45.3	+1.3
	comp=Z,4μmcomp=Z,438nm,1.0s						
WBSI	Waikabubak, Su	10.91	254	P	Pn	06 06 44.0	-1.4
	comp=Z,9μmcomp=Z,243nm,0.6s						
GENI	Genyem	10.92	68	P	Pn	06 06 45.3	-0.2
	comp=Z,265nm,0.8s						
TABU	Tabubil	11.23	83	P	Pn	06 06 50.7	+1.1
JAY	Jayapura	11.45	69	P	Pn	06 06 51.8	-0.5
	comp=Z,62nm,0.9s,baz=249,slow=6.4,SNR=8.3						
JAY				S	Sn	06 08 57.7	-1.7
	comp=Z,57nm,0.9s,baz=66,slow=24,SNR=4.2						
JAY				LR	LR	06 13 15.5	
	comp=Z,149nm,19.0s,baz=206,slow=47						
JAY	Jayapura	11.45	69	P	Pn	06 06 51.7	-0.6
	comp=Z,68nm,0.9s						
PMSI	Majene	11.53	286	P	Pn	06 06 55.4	+2.0
	comp=Z,3μmcomp=Z,253nm,1.1s						
PCI	Palu	11.71	299	P	Pn	06 06 57.6	+1.9
	comp=Z,178nm,1.1s						
DBNI	Kabupaten Domp	11.74	261	P	Pn	06 06 54.6	-1.5
MMSI	Mamuju	11.79	290	P	Pn	06 06 58.4	+1.6
	comp=Z,2μmcomp=Z,145nm,0.6s						
FITZ	Fitzroy Crossi	12.05	200	P	Pn	06 06 57.2	-2.9
	comp=Z,54nm,0.3s,baz=25,slow=11,SNR=432						
FITZ				S	Sn	06 09 02.2	-12
	comp=Z,310nm,0.6s,baz=164,slow=23,SNR=12						
FITZ	Fitzroy Crossi	12.05	200	P	Pn	06 06 57.6	-2.5
TOLI2	Tolitoli	12.10	310		Pn	06 07 01.4	+0.7
TOLI2	Tolitoli	12.10	310	P	Pn	06 07 02.1	+1.4
PLAI	Plampang	12.31	260	P	Pn	06 07 00.4	-3.1
	comp=Z,5μmcomp=Z,315nm,0.7s						
MPSI	Mapaga	12.32	305	P	Pn	06 07 05.2	+1.6
TWSI	Taliwang, Sumb	13.17	261	P	Pn	06 07 11.9	-2.6
	comp=Z,3μmcomp=Z,94nm,0.5s						
WRA	Warramunga Arr	13.76	163	P	Pn	06 07 18.9	-2.9
	comp=Z,31nm,0.5s,baz=334,slow=13,SNR=124						
WRA				S	Sn	06 09 42.4	-12
	comp=Z,107nm,0.9s,baz=345,slow=22,SNR=12						
WRA				PKiKP	PKiKP	06 20 28.4	-0.9
	comp=Z,0.7nm,0.4s,baz=314,slow=1.3,SNR=5.7						
WRA	Warramunga Arr	13.76	163		Pn	06 07 18.4	-3.4
WRA	Warramunga Arr	13.76	163	P	Pn	06 07 18.4	-3.4
WR8	Warramunga Arr	13.82	162		Pn	06 07 20.2	-2.3
KLNI	Mataram	13.91	262	P	Pn	06 07 23.0	-0.8
	comp=Z,67nm,0.4s						
KHKI	Kahang-Kahang	14.38	263	P	Pn	06 07 29.1	-0.6
SRBI	Singaraja	14.75	264	P	Pn	06 07 33.5	-0.7
COEN	Coen	14.77	120	P	Pn	06 07 32.8	-1.8
	comp=Z,424nm,0.8s						
COEN	Coen	14.77	120	P	Pn	06 07 32.4	-2.1
RTBI	Rangdo, Negare	15.05	263	P	Pn	06 07 38.0	+0.1
BBKI	Banjar Baru	15.47	281	P	P	06 07 46.8	+2.8
	comp=Z,451nm,0.6s						
ABJI	Asem Bagus	15.70	265	P	P	06 07 46.7	+0.3
JAGI	Jajag, Banyuwa	15.83	263	P	Pn	06 07 46.5	-1.0
KMMI	Kalianget	15.95	268	P	P	06 07 52.1	+2.9
	comp=Z,278nm,1.2s						
MTKI	Muara Teweh, K	16.16	290	P	Pn	06 07 54.2	+2.7
	comp=Z,19μmcomp=Z,453nm,1.0s						
BLJI	Banyuglugur	16.33	266	P	Pn	06 07 54.1	+0.5
	comp=Z,4μmcomp=Z,190nm,0.7s						
GMJI	Gumukmas	16.51	264	P	P	06 07 55.7	+0.3
MYLDM	Lahad Datu	16.52	316	P	Pn	06 07 55.7	-0.3
MYLDM	Lahad Datu	16.52	316	P	Pn	06 07 56.0	+0.1
MYLDM	Lahad Datu	16.52	316	P	Pn	06 07 57.7	+1.8
	comp=Z,86nm,1.0s						
QIS	Mount Isa	16.56	147	P	P	06 07 55.7	-0.2
	comp=Z,144nm,0.7s						
QIS	Mount Isa	16.56	147	P	P	06 07 56.3	+0.4
PMG	Port Moresby	17.16	100	P	P	06 08 03.1	+0.5
	comp=Z,327nm,0.9s,baz=289,slow=6.6,SNR=105						
PMG				LR	LR	06 16 09.4	
	comp=Z,327nm,18.4s,baz=266,slow=42						
PMG	Port Moresby	17.16	100	P	P	06 08 02.8	+0.2
PMG	Port Moresby	17.16	100	P	P	06 08 02.8	+0.2
PMG	Port Moresby	17.16	100	P	P	06 08 03.0	+0.5
PMG	Port Moresby	17.16	100	P	P	06 08 03.0	+0.5
	comp=Z,5μmcomp=Z,507nm,1.3s						
PMG	Port Moresby	17.16	100	⇓iP	Pn	06 08 04.3	+0.7
PMG				pmax	pmax		
	comp=Z,376nm,1.2s						

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AS31  Alice Springs     17.22 168    P      P      06 08 03.7 +0.6
ASAR  Alice Springs     17.22 168    P      Pn     06 08 04.6 +0.4
      comp=Z,33nm,0.6s,baz=345,slow=10,SNR=280
ASAR                                 S      S      06 11 05.0 -9.0
      comp=Z,37nm,0.8s,baz=352,slow=27,SNR=7.8
ASAR                                 LR     LR     06 15 50.8
      comp=Z,243nm,18.1s,baz=330,slow=40
ASAR                                 PKiKP  PKiKP  06 20 29.3 -1.1
      comp=Z,0.7nm,0.4s,baz=350,slow=1.2,SNR=4.4
ASAR  Alice Springs     17.22 168    P      P      06 08 03.8 +0.7
GRJI  Gresik            17.43 268    P      P      06 08 05.7 +0.3
      comp=Z,223nm,0.8s
MBWA  Marble Bar        17.44 214    P      P      06 08 06.4 +0.9
      comp=Z,91nm,0.6s
MBWA  Marble Bar        17.44 214    P      P      06 08 06.8 +1.2
MBWA                                 S      S      06 11 07.7  -11
MBWA  Marble Bar        17.44 214    P      P      06 08 05.8 +0.2
MBWA  Marble Bar        17.44 214    P      P      06 08 06.4 +0.9
PSAC2 Pilbara Seismi    17.67 213    P      P      06 08 09.2 +1.0
      comp=Z,127nm,0.6s
PSAC1 Pilbara Seismi    17.70 213    P      P      06 08 09.4 +1.1
      comp=Z,204nm,0.8s
PSA00 Pilbara Seismi    17.71 213    P      P      06 08 09.5 +1.0
      comp=Z,181nm,0.5s
PSA00 Pilbara Seismi    17.71 213    P      P      06 08 09.2 +0.6
PSA00 Pilbara Seismi    17.71 213    P      P      06 08 09.5 +1.0
PSAB3 Pilbara Seismi    17.72 213    P      P      06 08 09.9 +1.2
      comp=Z,183nm,0.5s
MANU  Manus Island      17.91  76    P      Pn     06 08 11.8 -0.6
MTSU  Mount Surprise    17.94 130    P      P      06 08 12.3 +1.2
      comp=Z,93nm,0.8s
MTSU  Mount Surprise    17.94 130    P      P      06 08 12.3 +1.2
TBJI  Tambak Boyo       18.05 269    P      Pn     06 08 15.6 +1.5
      comp=Z,257nm,1.1s
SJI   Sawahan           18.14 266    P      P      06 08 14.3 +0.9
      comp=Z,4µmcomp=Z,125nm,0.6s
SNJI  Sawahan-Nganju    18.15 266    P      P      06 08 13.5 -0.1
      comp=Z,2µmcomp=Z,149nm,0.6s
WRKA  Warakurna         18.25 185    P      P      06 08 15.5 +1.1
      comp=Z,40nm,0.7s
NGJI  Ngawi             18.44 267    P      P      06 08 16.9 +0.4
      comp=Z,87nm,0.7s
PCJI  Pacitan           18.74 264    P      P      06 08 18.0 -1.8
      comp=Z,2µmcomp=Z,99nm,0.7s
KKM   Kota Kinabalu     18.76 312    P      P      06 08 19.7 -0.4
KKM   Kota Kinabalu     18.76 312    P      P      06 08 19.5 -0.6
KKM   Kota Kinabalu     18.76 312    P      P      06 08 19.7 -0.4
      comp=Z,136nm,0.8s
UGM   Wanagama          19.38 265    P      P      06 08 27.1 +0.3
UGM   Wanagama          19.38 265    P      P      06 08 27.2 +0.4
      comp=Z,125nm,1.2s
STKI  Sintang           19.71 289    P      Pn     06 08 33.4 -0.3
      comp=Z,55nm,0.6s
SBUM  Sibu              19.99 297    P      P      06 08 34.4 +1.1
SBUM  Sibu              19.99 297    P      P      06 08 34.5 +1.1
SBUM  Sibu              19.99 297    P      Pn     06 08 35.3 -1.7
TV1H  Townsville Har    20.50 129    P      P      06 08 40.1 +1.4
CTAO  Charters Tower    20.58 132    P      P      06 08 40.4 +0.9
CTAO  Charters Tower    20.58 132    P      P      06 08 40.9 +1.4
CTAO  Charters Tower    20.58 132    P      P      06 08 40.4 +0.9
KPJI  Karang Pucung     20.95 267    P      P      06 08 42.6 -0.9
      comp=Z,79nm,1.0s
GIRL  Giralia           21.93 222    P      P      06 08 54.5 +0.8
      comp=Z,72nm,0.8s
GIRL  Giralia           21.93 222    P      P      06 08 54.2 +0.4
GIRL                                 IAmb   IAmb   06 08 57.0
      comp=Z,65nm,1.0s
BBJI  Bungbulang        22.22 267    P      P      06 08 55.3 -1.5
BBJI  Bungbulang        22.22 267    P      P      06 08 54.8 -2.0
      comp=Z,101nm,0.7s
MEEK  Meekatharra       22.56 207    P      P      06 08 60.0 +0.1
      comp=Z,38nm,0.7s
MEEK  Meekatharra       22.56 207    P      P      06 08 59.9 +0.1
TPI   Tanjungpandan     22.64 279    P      P      06 09 02.3 +1.6
      comp=Z,80nm,1.4s
CNJI  Cibinong          22.73 267    P      P      06 09 00.2 -1.3
      comp=Z,2µmcomp=Z,172nm,0.9s
INKA  Innaminka         23.21 155    P      P      06 09 07.0 +1.3
FORT  Forrest           23.96 184    P      P      06 09 13.4 +0.8
      comp=Z,34nm,0.6s
FORT  Forrest           23.96 184    P      P      06 09 12.9 +0.3
FORT                                 IAmb   IAmb   06 09 47.1
      comp=Z,40nm,0.6s
KLSI                    25.25 273    P      P      06 09 26.8 +2.4
KASI  Kota Agung        25.41 271    P      P      06 09 24.4 -1.5
      comp=Z,48nm,0.8s
KMBL  Kambalda          25.64 196    P      P      06 09 28.7 +1.0
      comp=Z,46nm,0.5s
MORW  Morawa            25.82 209    P      P      06 09 29.7 +0.3
      comp=Z,41nm,0.7s
MORW  Morawa            25.82 209    P      P      06 09 29.0 -0.3
MORW                                 IAmb   IAmb   06 09 32.1
      comp=Z,28nm,0.7s
MORW  Morawa            25.82 209    P      P      06 09 29.6 +0.3
MDSI  Maura Dua         25.82 274    P      P      06 09 30.3 +0.7
DSRI  Dabo              26.14 283    P      P      06 09 34.7 +2.3
      comp=Z,4µmcomp=Z,84nm,1.1s
BBOO  Buckleboo         26.52 169    P      P      06 09 36.5 +0.8
      comp=Z,27nm,0.8s
BBOO  Buckleboo         26.52 169    P      P      06 09 36.3 +0.7
BBOO                                 IAmb   IAmb   06 10 29.1
      comp=Z,28nm,0.7s
BBOO  Buckleboo         26.52 169    P      P      06 09 36.2 +0.6
BLDU  Ballidu           26.82 206    P      P      06 09 39.1 +0.7
      comp=Z,34nm,0.9s
BLDU  Ballidu           26.82 206    P      P      06 09 38.9 +0.6
STKA  Stephens Creek    27.22 158    P      P      06 09 42.7 +0.8
      comp=Z,100nm,1.8s
STKA  Stephens Creek    27.22 158    P      P      06 09 42.5 +0.6
      comp=Z,5.5nm,0.4s,baz=345,slow=7.7,SNR=12
STKA                                 LR     LR     06 22 24.9
      comp=Z,190nm,19.1s,baz=358,slow=40
      comp=Z,5.5nm,0.4s
STKA  Stephens Creek    27.22 158    P      P      06 09 41.8 -0.1
STKA  Stephens Creek    27.22 158    P      P      06 09 42.9 +1.0
KLBR  Kellerberrin      27.24 203    P      P      06 09 42.9 +0.9
      comp=Z,200nm,0.7s
KLBR  Kellerberrin      27.24 203    P      P      06 09 42.9 +0.9
BTDF  Bukit Timah Da    27.42 286    P      P      06 09 45.4 +1.6
      comp=Z,76nm,0.8s
MYKOM Kota Tinggi       27.47 287    P      P      06 09 46.2 +1.9
MYKOM Kota Tinggi       27.47 287    P      P      06 09 46.8 +2.5
      comp=Z,2µmcomp=Z,170nm,0.8s
HTT   Hallett           27.79 164    P      P      06 09 47.9 +0.9
MUN   Mundaring         28.21 205    P      P      06 09 51.3 +0.6
      comp=Z,39nm,0.9s
MUN   Mundaring         28.21 205    P      P      06 09 51.2 +0.6
NWAO  Narrogin (SRO)    28.62 203    P      P      06 09 55.4 +1.1
      comp=Z,40nm,0.7s
NWAO  Narrogin (SRO)    28.62 203    P      P      06 09 55.1 +0.8
      comp=Z,66nm,0.9s
NWAO  Narrogin (SRO)    28.62 203    P      P      06 09 55.2 +0.9
      comp=Z,15nm,0.3s,baz=35,slow=7.8,SNR=22
NWAO                                 PcP    PcP    06 13 00.6 -0.6
      comp=Z,14nm,0.6s,baz=76,slow=4.2,SNR=3.0
NWAO                                 LR     LR     06 22 52.2
      comp=Z,214nm,18.2s,baz=58,slow=39
      comp=Z,15nm,0.3s
NWAO  Narrogin (SRO)    28.62 203    P      P      06 09 55.0 +0.6
NWAO                                 IAmb   IAmb   06 09 55.6
      comp=Z,23nm,0.7s
NWAO  Narrogin (SRO)    28.62 203    P      P      06 09 54.7 +0.4
CMSA  Cobar Meteorol    28.67 151    P      P      06 09 56.3 +1.5
      comp=Z,31nm,0.8s
CMSA  Cobar Meteorol    28.67 151    P      P      06 09 55.8 +1.0
BKNI  Bangkinang        29.77 283    P      P      06 10 05.6 +0.9
NGOA  Tingoa Renbel     30.02 101    P      P      06 10 07.1 +0.2
PPI   Padang Panjang    30.21 281    P      P      06 10 09.6 +1.0
      comp=Z,69nm,0.7s
RKGY  Rocky Gully       30.22 202    P      P      06 10 10.8 +2.4
      comp=Z,93nm,0.8s
IPM   Ipoh              31.03 290    P      P      06 10 16.1 +0.2
IPM                                  IAmb   IAmb   06 10 18.6
      comp=Z,39nm,0.8s
IPM   Ipoh              31.03 290    P      P      06 10 16.4 +0.6
IPM   Ipoh              31.03 290    P      P      06 10 17.2 +1.4
      comp=Z,66nm,0.8s
ARMA  Armidale          31.07 142    P      P      06 10 18.2 +2.1
      comp=Z,19nm,1.0s
ARMA  Armidale          31.07 142    P      P      06 10 17.3 +1.2
YULB  Yu-li             31.16 344    P      P      06 10 15.8 -1.0
MNSI  Mandailing Nat    31.30 283    P      P      06 10 19.0 +0.8
      comp=Z,56nm,0.7s
SSLB  Suanglung         31.63 344    P      P      06 10 19.6 -1.3
KULM  Kulim             31.67 292    P      P      06 10 20.5 -0.9
KULM                                 IAmb   IAmb   06 10 24.3
      comp=Z,54nm,0.8s
KULM  Kulim             31.67 292    P      P      06 10 21.1 -0.3
KULM  Kulim             31.67 292    P      P      06 10 21.9 +0.5
      comp=Z,69nm,1.1s
ARPS  Mount Arapiles    31.76 162    P      P      06 10 23.7 +1.8
      comp=Z,14nm,1.7s
NACB  Ninganchiao       31.83 345    P      P      06 10 22.8 +0.2
YNG   Young             32.23 151    P      P      06 10 28.5 +2.4
      comp=Z,27nm,0.7s
YHNB  Yeheng            32.36 345    P      P      06 10 26.4 -0.9
QIZ   Qiongzhong        32.44 323    P      P      06 10 27.9 -0.2
PSI   Prapat            32.47 286    P      P      06 10 27.6 -0.9
      comp=Z,679nmcomp=Z,79nm,0.9s
CAN   Canberra          33.35 151    P      P      06 10 37.9 +2.1
GSI   Gunungsitoli      33.36 283    P      P      06 10 34.0 -2.2
GSI   Gunungsitoli      33.36 283    P      P      06 10 35.4 -0.8
GSI   Gunungsitoli      33.36 283    P      P      06 10 35.1 -1.1
      comp=Z,115nm,0.8s
JOW   Kunigami          33.44 357    P      P      06 10 36.9 +0.3
      comp=Z,130nm,0.6s,baz=194,slow=7.5,SNR=26
      comp=Z,130nm,0.6s
JOW   Kunigami          33.44 357    P      P      06 10 36.5 -0.1
CNB   Canberra Magne    33.52 151    P      P      06 10 39.0 +1.7
KCSI  Kotacane, Aceh    33.78 287    P      P      06 10 40.5 +0.7
      comp=Z,23nm,0.6s
TPTI                    34.27 286    P      P      06 10 44.2 +0.2
      comp=Z,51nm,0.6s
SNSI  Sinabang, Aceh    34.85 284    P      P      06 10 50.4 +1.4
      comp=Z,59nm,0.8s
LHMI  Lhok Sumawe       35.10 289    P      P      06 10 51.8 +0.7
MLSI  Meulaboh, Aceh    35.31 287    P      P      06 10 53.3 +0.4
LUES  Luesalemba Tem    35.67  99    P      P      06 10 56.5 +0.5
SANVU Saraoutou         37.44 107    P      P      06 11 11.2 +0.3
SANVU Saraoutou         37.44 107    P      P      06 11 11.8 +0.9
SANVU Saraoutou         37.44 107    P      P      06 11 12.1 +1.2
SLVN  Son La            37.91 318    IAmb   IAmb   06 11 16.4
      comp=Z,41nm,0.9s
SLVN  Son La            37.91 318    P      P      06 11 15.3 +0.5
DZM   Mont Dzumac       38.28 117    P      P      06 11 19.0 +1.0
DZM   Mont Dzumac       38.28 117    P      P      06 11 19.2 +1.2
MOO   Moorlands         38.64 160    P      P      06 11 21.0 +0.3
YATNC Mamie plateau,    38.67 117    P      P      06 11 21.7 +0.5
OUENC Ouen Island, N    38.73 118    P      P      06 11 22.8 +1.1
PINNC Pines Island,     39.33 118    P      P      06 11 27.2 +0.5
PINNC                                IAmb   IAmb   06 11 29.3
      comp=Z,50nm,1.1s
MARNC Mare, Loyalty     39.52 116    P      P      06 11 29.1 +0.9
MARNC                                IAmb   IAmb   06 11 31.8
      comp=Z,51nm,0.9s
CM31  Chiang Mai Arr    39.60 310    P      P      06 11 29.5 +0.6
      SNR=13
CM31  Chiang Mai Arr    39.60 310    P      P      06 11 28.6 -0.3
CMAR  Chiang Mai Arr    39.60 310    P      P      06 11 29.1 +0.2
      comp=Z,32nm,0.5s,baz=134,slow=6.9,SNR=97
CMAR                                 PcP    PcP    06 13 34.0 +1.2
      comp=Z,5.2nm,0.5s,baz=160,slow=2.7,SNR=7.8
CMAR                                 ScP    ScP    06 17 06.6 +0.7
      comp=Z,0.7nm,0.4s,baz=128,slow=4.5,SNR=4.1
      comp=Z,32nm,0.5s
CMAR  Chiang Mai Arr    39.60 310   iP      P      06 11 29.3 +0.4
CMAR                                 pmax   pmax
      comp=Z,43nm,0.5s
JNU   Nakatsue          39.67   1    P      P      06 11 28.9 -0.4
      comp=Z,38nm,0.7s,baz=183,slow=2.2,SNR=17
      comp=Z,38nm,0.7s
JNU   Nakatsue          39.67   1    P      P      06 11 29.0 -0.4
JNU                                  IAmb   IAmb   06 11 30.1
      comp=Z,57nm,0.9s
JNU   Nakatsue          39.67   1    P      P      06 11 28.9 -0.4
CHTO  Chiang Mai        39.81 310    P      P      06 11 31.2 +0.5
CHTO  Chiang Mai        39.81 310    P      P      06 11 30.5 -0.2
CHTO  Chiang Mai        39.81 310    P      P      06 11 30.8 +0.1
CHTO  Chiang Mai        39.81 310    P      P      06 11 30.8 +0.1
      comp=Z,964nmcomp=Z,96nm,0.6s
CHTO  Chiang Mai        39.81 310    P      P      06 11 30.5 -0.2
CHTO                                 pmax   pmax
      comp=Z,65nm,0.7s
CHTO  Chiang Mai        39.81 310    P      P      06 11 30.7  0.0
CHTO                                 x      x      06 12 06.1
CHTO                                 pP     pP     06 12 07.8 +2.1
CHTO                                 PcP    PcP    06 13 35.1 +1.6
NJ2   Nanjing           40.04 345 ⇑ iP      P      06 11 33.0 +0.7
NJ2                                  pP     pP     06 12 08.4 +0.9
NJ2                                  pmax   pmax
      comp=Z,58nm,0.7s
GYA   Guiyang           40.05 326  ⇑ P      P      06 11 32.7  0.0
GYA                                  pmax   pmax
      comp=Z,91nm,0.6s
JMN   Monobe            40.43   5    P      P      06 11 35.9 +0.3
JMN                                  IAmb   IAmb   06 11 37.2
      comp=Z,60nm,0.9s
JMN   Monobe            40.43   5    P      P      06 11 35.9 +0.3
JTU   Tsushima          41.06 359    P      P      06 11 41.3 +0.6
KMI   Kunming           41.35 321  ⇑ P      P      06 11 44.4 +0.9
KMI                                  pmax   pmax
      comp=Z,91nm,0.7s
ENH   Enshi             41.76 333    IAmb   IAmb   06 11 47.0
      comp=Z,75nm,0.8s
ENH   Enshi             41.76 333    P      P      06 11 45.8 -0.7
ENH   Enshi             41.76 333    P      P      06 11 45.9 -0.6
ENH                                  pP     pP     06 12 24.5 +2.6
JWT   Wachi             42.12   7    P      P      06 11 49.7 +0.4
PZH   PanZhiHua         42.96 321    P      P      06 11 56.2 -0.2
PZH                                  pmax   pmax
      comp=Z,120nm,0.7s
TJN   Taejon            42.98 357           P      06 11 56.6 +0.4
TJN   Taejon            42.98 357    P      P      06 11 56.6 +0.4
TJN                                  pmax   pmax
      comp=Z,549nm,1.4s
MAJO  Matsushiro        43.75  10    P      P      06 12 01.5 -0.9
MAJO                                 IAmb   IAmb   06 12 01.9
      comp=Z,22nm,0.6s
MAJO  Matsushiro        43.75  10 ⇓ iP      P      06 12 01.7 -0.7
MAJO                                 pmax   pmax
      comp=Z,25nm,0.9s
MJAR  Matsushiro Arr    43.75  10    P      P      06 12 01.6 -0.9
      comp=Z,20nm,0.9s,baz=188,slow=9.6,SNR=20
      comp=Z,20nm,0.9s
MJAR  Matsushiro Arr    43.75  10           P      06 12 01.7 -0.7
MJAR  Matsushiro Arr    43.75  10    P      P      06 12 01.7 -0.7
MJAR                                 pmax   pmax
      comp=Z,12nm,1.0s
MJB9  Matsu-Tunnel      43.76  10    P      P      06 12 02.0 -0.4
KSAR  Wonju Array Be    44.02 358    P      P      06 12 04.5  0.0
KSAR  Wonju Array Be    44.02 358    P      P      06 12 04.5  0.0
KSRS  Korea Array       44.03 358    P      P      06 12 05.2 +0.7
      comp=Z,16nm,0.6s,baz=176,slow=9.3,SNR=54
      comp=Z,16nm,0.6s
KS19  Wonju Array Si    44.08 358    P      P      06 12 04.9 -0.1
LYN   LuoYang           44.31 339    P      P      06 12 06.9  0.0
LYN                                  pmax   pmax
      comp=Z,53nm,0.9s
CD2   Chengdu           45.12 328    P      P      06 12 12.8 -0.6
CD2                                  pmax   pmax
      comp=Z,110nm,0.5s
XAN   Xi'an             45.23 335  ⇑ P      P      06 12 13.5 -0.7
XAN                                  PcP    PcP    06 13 52.5 +1.1
XAN                                  pmax   pmax
      comp=Z,140nm,0.7s
XAN   Xi'an             45.23 335    P      P      06 12 13.3 -0.9
XAN                                  pP     pP     06 12 51.5 +1.3
XAN                                  PcP    PcP    06 13 52.3 +0.9
DL2   Dalian            46.10 351    P      P      06 12 20.9 +0.1
DL2                                  pmax   pmax
      comp=Z,46nm,0.9s
HNS   HongShan          46.20 343  ⇑ P      P      06 12 21.4 -0.3
HNS                                  PcP    PcP    06 13 55.8 +1.2
HNS                                  pmax   pmax
      comp=Z,100nm,0.9s
BJT   Baijiatuau        48.27 346    P      P      06 12 37.7  0.0
BJT   Baijiatuau        48.27 346    P      P      06 12 37.7  0.0
SHL   Shillong          49.06 312    P      P      06 12 43.6 -0.5
SHL   Shillong          49.06 312    P      P      06 12 42.9 -1.3
SHL                                  IAmb   IAmb   06 12 44.4
      comp=Z,53nm,0.9s
SHL                                  PcP    PcP    06 14 05.4  0.0
LZDM  Lanzhou Array     49.17 332    P      P      06 12 45.3 +0.3
      comp=Z,18nm,0.4s,baz=171,slow=10,SNR=41
      comp=Z,18nm,0.4s
LZH   Lanzhou           49.21 332   eP      P      06 12 45.7 +0.6
LZH                                  pP     pP     06 13 24.1 +2.6
LZH                                  pmax   pmax
      comp=Z,90nm,1.0s
HHC   Hu-ho-hao-te      50.33 342 ⇑ iP      P      06 12 53.8 +0.4
HHC                                  pmax   pmax
      comp=Z,37nm,1.0s
HHC                                  pmax   pmax
      comp=Z,380nm,6.0s
CN2   Changchun         50.50 356    P      P      06 12 54.2 -0.2
CN2                                  pmax   pmax
      comp=Z,40nm,0.5s
USRK  Ussuriysk Ar.     50.76   2    P      P      06 12 56.5 +0.2
      comp=Z,32nm,0.8s,baz=183,slow=7.2,SNR=30
      comp=Z,32nm,0.8s
MDJ   Mudanjiang        51.14 360    IAmb   IAmb   06 13 00.8
      comp=Z,43nm,0.6s
MDJ   Mudanjiang        51.14 360    P      P      06 12 59.9 +0.7
MDJ                                  pmax   pmax
      comp=Z,69nm,0.7s
MDJ   Mudanjiang        51.14 360    P      P      06 12 59.6 +0.4
MDJ   Mudanjiang        51.14 360    P      P      06 12 59.7 +0.4
MDJ                                  pP     pwP    06 13 38.9 -1.9
ASAJ  Asahikawa         51.90  11    P      P      06 13 05.7 +0.8
      comp=Z,8.9nm,0.3s,baz=229,slow=11,SNR=6.7
      comp=Z,8.9nm,0.3s
XLT   XiLinHaoTe        51.98 347   eP      P      06 13 05.8 +0.2
XLT                                  pmax   pmax
      comp=Z,46nm,1.0s
LSA   Lhasa             52.05 316    P      P      06 13 07.8 +0.9
LSA   Lhasa             52.05 316    P      P      06 13 03.4 -3.4
LSA                                  pmax   pmax
      comp=Z,84nm,0.7s
LSA   Lhasa             52.05 316    P      P      06 13 07.7 +0.9
BNX   BinXian           52.32 358  ⇓ P      P      06 13 07.7 -0.2
BNX                                  pmax   pmax
      comp=Z,21nm,0.8s
BKZ   Black Stump Fm    52.75 135    P      P      06 13 12.3 +0.9
GTA   Gaotai            53.78 331    P      P      06 13 20.3 +1.4
GTA                                  pmax   pmax
      comp=Z,85nm,0.6s
EVN   Everest           54.14 312           P      06 13 22.6 +0.2
YSS   Yuzhno-Sakhali    54.66  11   eP      P      06 13 25.8 +0.9
YSS                                  pmax   pmax
      comp=Z,20nm,0.8s
HILR  Hailar Array B    56.80 352    P      P      06 13 40.9 +0.7
      comp=Z,8.2nm,0.4s,baz=160,slow=9.7,SNR=4.9
      comp=Z,8.2nm,0.4s
ULN   Ulaanbaatar       58.05 342    P      P      06 13 50.3 +1.2
ULN   Ulaanbaatar       58.05 342    P      P      06 13 50.2 +1.0
ULN   Ulaanbaatar       58.05 342    P      P      06 13 50.1 +1.0
ULN   Ulaanbaatar       58.05 342    P      P      06 13 50.2 +1.0
ULN                                  pmax   pmax
      comp=Z,49nm,0.7s
ULN   Ulaanbaatar       58.05 342    P      P      06 13 50.1 +1.0
ULN                                  pP     pP     06 14 29.2 +2.3
SONM  Songino Array     58.23 341    P      P      06 13 51.2 +0.9
      comp=Z,17nm,0.5s,baz=162,slow=7.2,SNR=109
      comp=Z,17nm,0.5s
SONM  Songino Array     58.23 341           P      06 13 51.0 +0.7
SONM                                 IAmb   IAmb   06 13 52.4
      comp=Z,42nm,1.2s
ZEA   Zeya              60.32 358   eP      P      06 14 04.9 +0.5
ZEA                                 e              06 14 49.8
ZEA                                  pmax   pmax
      comp=N,20nm,0.9s
ZEA                                  pmax   pmax
      comp=Z,50nm,0.7s
CASY  Casey             60.94 189    P      P      06 14 09.2 +0.8
CASY                                 pP     pwP    06 14 50.9 +1.4
ZAK   Zakamensk         61.45 341   eP      P      06 14 10.8 -1.4
ZAK                                  pmax   pmax
      comp=Z,20nm,1.4s
WMQ   Urumqi            63.21 327  ⇓ P      P      06 14 25.5 +1.5
WMQ                                  pmax   pmax
      comp=Z,100nm,1.1s
WMQ   Urumqi            63.21 327    P      P      06 14 25.0 +1.0
MOY   Mondy             63.30 340   eP      P      06 14 26.0 +1.5
MOY                                  pmax   pmax
      comp=Z,71nm,1.4s
PEA0B Petropavlovsk-    64.09  18 ⇓ iP      P      06 14 30.4 +0.9
PETK  Petropavlovsk-    64.09  18    P      P      06 14 30.5 +1.0
      comp=Z,26nm,0.7s,baz=178,slow=3.1,SNR=22
      comp=Z,26nm,0.7s
NIL   Nilore            67.08 311    P      P      06 14 49.4 +0.3
NIL   Nilore            67.08 311           P      06 14 49.5 +0.3
NIL   Nilore            67.08 311    P      P      06 14 49.5 +0.3
NIL                                  pmax   pmax
      comp=Z,44nm,0.6s
ZSN   Zaisan            67.08 328   eP      P      06 14 49.7 +0.8
ZSN   Zaisan            67.08 328   eP      P      06 14 49.6 +0.8
SHLS  Shalkode          67.55 322 ⇑ iP      P      06 14 51.4 -0.7
      comp=Z,46nm,0.7s
SHLS                                eS      S      06 23 33.4 -1.9
SHLS  Shalkode          67.55 322 c iP      P      06 14 51.3 -0.7
SHLS                                eS      S      06 23 33.3 -1.9
SHLS                                 pmax   pmax
      comp=Z,46nm,0.7s
PDGK  Podgornoye        67.63 322    P      P      06 14 52.9 +0.4
TARG  Taragay, Kyrgy    67.80 320    IAmb   IAmb   06 14 56.5
      comp=Z,41nm,1.2s
UZB   Uzynbulak         67.81 322 ⇑ iP      P      06 14 54.6 +0.8
      comp=Z,43nm,1.0s
UZB   Uzynbulak         67.81 322 c iP      P      06 14 54.5 +0.8
UZB                                  pmax   pmax
      comp=Z,43nm,1.0s
KSH   Kashi             67.86 317    P      P      06 14 55.3 +1.2
KSH                                  pmax   pmax
      comp=Z,47nm,0.8s
MK31  Makanchi Array    68.04 327   eP      P      06 14 55.6 +0.7
MKAR  Makanchi Array    68.04 327    P      P      06 14 55.9 +1.0
      comp=Z,71nm,0.4s,baz=118,slow=7.9,SNR=671
      comp=Z,71nm,0.4s
SATY  Saty              68.14 322 ⇑ iP      P      06 14 56.6 +0.9
SATY  Saty              68.14 322 c iP      P      06 14 56.6 +0.9
MAKZ  Makanchi          68.22 327           P      06 14 56.9 +0.9
MAKZ  Makanchi          68.22 327    P      P      06 14 56.9 +0.9
MAKZ                                 pmax   pmax
      comp=Z,110nm,1.0s
MAKZ  Makanchi          68.22 327    P      P      06 14 56.6 +0.6
YAK   Yakutsk           68.59 360           P      06 14 58.2 +0.3
YAK   Yakutsk           68.59 360   eP      P      06 14 57.7 -0.2
YAK                                 e*PP    pP     06 15 35.0 -1.9
YAK                                 eS      S      06 23 47.1 +0.6
YAK                                  pmax   pmax
      comp=Z,138nm,0.9s
YAK                                  pmax   pmax
      comp=E,10.0nm,0.9s
YAK                                  pmax   pmax
      comp=N,47nm,1.1s
YAK                                  pmax   pmax
      comp=Z,2µm,4.6s
YAK                                  pmax   pmax
      comp=N,2µm,3.9s
YAK                                  pmax   pmax
      comp=E,1µm,3.9s
YAK                                  smax   smax
      comp=E,570nm,3.3s
YAK                                  smax   smax
      comp=N,3µm,5.3s
TNSS  Tian-Shan         69.03 321   eP      P      06 15 02.1 +0.5
TNSS  Tian-Shan         69.03 321   eP      P      06 15 02.1 +0.5
MDOK  Medeo             69.03 321   eP      P      06 15 02.3 +0.9
MDOK  Medeo             69.03 321   eP      P      06 15 02.2 +0.9
AAA   Alma-Ata          69.14 321   eP      P      06 15 02.9 +1.1
      comp=N,41nm,0.7s
AAA   Alma-Ata          69.14 321   eP      P      06 15 02.9 +1.1
AAA                                  pmax   pmax
      comp=Z,41nm,0.7s
TDK   Taldyqorghan      69.20 323   eP      P      06 15 03.2 +1.0
      comp=Z,68nm,1.3s
TDK   Taldyqorghan      69.20 323   eP      P      06 15 03.1 +1.0
TDK                                  pmax   pmax
      comp=Z,68nm,1.3s
TKM2  Tokmak 2          69.82 320    P      P      06 15 07.4 +1.2
      SNR=72
KUU   Kurty             69.86 322   eP      P      06 15 07.2 +1.1
      comp=Z,49nm,1.0s
KUU   Kurty             69.86 322   eP      P      06 15 07.2 +1.1
KUU                                  pmax   pmax
      comp=Z,49nm,1.0s
MANEM Manem             69.92 314    IAmb   IAmb   06 15 09.2
      comp=Z,81nm,0.9s
KBK   Karagaybulak      70.10 320    P      P      06 15 09.3 +1.5
      SNR=30
UCH   Uchtor            70.16 319    P      P      06 15 10.1 +1.5
      SNR=95
AAK   Ala-Archa         70.38 320    P      P      06 15 11.0 +1.5
      SNR=58
AAK   Ala-Archa         70.38 320    P      P      06 15 11.2 +1.6
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AAK	Ala-Archa	70.38	320		P	06 15 10.9	+1.3
AAK	Ala-Archa	70.38	320	iP	P	06 15 10.7	+1.2
	SNR=65						
AAK	Ala-Archa	70.38	320	P	P	06 15 10.9	+1.3
AAK	Ala-Archa	70.38	320	P	P	06 15 10.8	+1.3
AAK				PcP	PcP	06 15 30.8	+0.8
CHMS	Chumysh	70.39	320	P	P	06 15 10.3	+0.9
	SNR=8.6						
KBL	Kabul	70.63	310	P	P	06 15 11.2	-0.1
	SNR=17						
KBL	Kabul	70.63	310		P	06 15 11.5	+0.2
KBL				IAmb	IAmb	06 15 12.9	
	comp=Z,35nm,0.8s						
KBL	Kabul	70.63	310	P	P	06 15 11.5	+0.2
KBL				pmax	pmax		
	comp=Z,35nm,0.9s						
USP	Ospenovka	70.69	320	P	P	06 15 12.4	+1.1
	SNR=87						
SGDS	Sogindy	70.70	321	eP	P	06 15 12.2	+0.9
	comp=Z,22nm,0.8s						
EKS2	Erkin-Say	70.85	320	P	P	06 15 14.0	+1.6
	SNR=8.5						
ZAA0	Zalesovo Array	71.38	334	IAmb	IAmb	06 15 15.9	
	comp=Z,68nm,1.4s						
ZALV	Zalesovo Beam	71.38	334	P	P	06 15 14.8	-0.4
	comp=Z,18nm,0.5s,baz=125,slow=5.3,SNR=76						
	comp=Z,18nm,0.5s						
GAR	Garm	71.52	315	P	P	06 15 16.9	+0.4
SEY	Seymchan	71.57	11⇓	iP	P	06 15 17.5	+1.5
SEY				pmax	pmax		
	comp=Z,48nm,0.9s						
BTLS	Baital	71.85	322	eP	P	06 15 18.8	+0.6
	comp=Z,38nm,1.1s						
BTLS	Baital	71.85	322	eP	P	06 15 18.7	+0.6
BTLS				pmax	pmax		
	comp=Z,38nm,1.1s						
CHGR	Chuyangaron	72.20	314	P	P	06 15 20.7	+0.3
CHGR	Chuyangaron	72.20	314	P	P	06 15 20.7	+0.3
CHGR				pmax	pmax		
	comp=Z,161nm,0.8s						
KURBB	Kurchatov Arra	72.32	328	P	P	06 15 21.2	+0.4
	comp=Z,28nm,0.6s,baz=126,slow=4.9,SNR=172						
KURBB				PP	PP	06 17 56.3	-7.7
	comp=Z,4.0nm,0.9s,baz=130,slow=8.6,SNR=4.2						
	comp=Z,28nm,0.6s						
KURBB	Kurchatov Arra	72.32	328	P	P	06 15 20.9	+0.1
KURK	Kurchatov	72.33	329	P	P	06 15 21.5	+0.7
KURK	Kurchatov	72.33	329	P	P	06 15 21.2	+0.4
KURK				IAmb	IAmb	06 15 22.1	
	comp=Z,53nm,1.0s						
KURK	Kurchatov	72.33	329	P	P	06 15 21.2	+0.4
KURK				pmax	pmax		
	comp=Z,53nm,1.0s						
SHAA	Shahritus	72.50	313	IAmb	IAmb	06 15 50.1	
	comp=Z,44nm,0.7s						
DZA	Taraz	72.55	319	eP	P	06 15 23.3	+0.9
	comp=Z,21nm,0.6s						
DZA	Taraz	72.55	319	eP	P	06 15 23.3	+0.9
DZA				pmax	pmax		
	comp=Z,21nm,0.6s						
VNDA	Vanda	72.68	173	P	P	06 15 23.5	+1.0
	comp=Z,7.3nm,0.6s,baz=321,slow=6.9,SNR=32						
VNDA				LR	LR	06 48 03.5	
	comp=Z,29nm,18.0s,baz=357,slow=36						
	comp=Z,7.3nm,0.6s						
VNDA	Vanda	72.68	173	P	P	06 15 23.5	+1.0
VNDA	Vanda	72.68	173	P	P	06 15 23.5	+1.0
VNDA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
VNDA	Vanda	72.68	173	P	P	06 15 23.6	+1.1
IUG	Iuzhnay	73.07	318⇑	iP	P	06 15 26.6	+1.0
	comp=Z,63nm,0.9s						
IUG	Iuzhnay	73.07	318c	iP	P	06 15 26.6	+1.0
IUG				pmax	pmax		
	comp=Z,63nm,0.9s						
KK31	Karatay Array	73.18	319		P	06 15 26.7	+0.6
KK31				IAmb	IAmb	06 15 28.0	
	comp=Z,71nm,1.1s						
KK31	Karatay Array	73.18	319	P	P	06 15 26.7	+0.6
KK31				pmax	pmax		
	comp=Z,71nm,1.2s						
KKAR	Karatay Array	73.18	319		P	06 15 26.6	+0.5
KKAR	Karatay Array	73.18	319	P	P	06 15 26.6	+0.5
CHM	Chimkent	73.44	318	eP	P	06 15 28.8	+1.1
	comp=Z,47nm,0.8s						
CHM	Chimkent	73.44	318	eP	P	06 15 28.7	+1.1
CHM				pmax	pmax		
	comp=Z,47nm,0.8s						
BRLS	Borolday	73.59	318⇑	iP	P	06 15 29.4	+0.8
	comp=Z,22nm,0.5s						
BRLS	Borolday	73.59	318c	iP	P	06 15 29.3	+0.8
BRLS				pmax	pmax		
	comp=Z,22nm,0.5s						
NGCH	Negor - Chabah	74.11	299	P	P	06 15 33.5	+1.7
JLN	Jalan Bani Buh	74.83	295	P	P	06 15 36.5	+0.5
BRZS	Berezniki	75.13	326	eP	P	06 15 37.9	+0.6
BRZS	Berezniki	75.13	326	eP	P	06 15 37.8	+0.6
MAW	Mawson	75.18	201	P	P	06 15 38.6	+1.5
	comp=Z,5.5nm,0.9s						
MAW	Mawson	75.18	201	P	P	06 15 38.6	+1.5
	comp=Z,12nm,0.5s,baz=83,slow=5.1,SNR=39						
MAW				LR	LR	06 46 59.3	
	comp=Z,32nm,18.8s,baz=62,slow=34						
	comp=Z,12nm,0.5s						
WBK	Wadi Bani Khal	75.33	295	P	P	06 15 40.1	+1.1
WSAR	Wadi Sarin	75.79	296	P	P	06 15 42.5	+1.0
HRA	Herat	75.83	308	IAmb	IAmb	06 15 43.5	
	comp=Z,38nm,1.2s						
MHTO	MHTO	75.86	294	P	P	06 15 42.5	+0.5
DQM	DQM	76.02	292	P	P	06 15 42.5	-0.4
JMDO	Jabal Madar	76.06	295	P	P	06 15 43.5	+0.4
SMDO	Samad	76.26	296	P	P	06 15 45.2	+0.8
BIDO	Bidbid	76.30	296	P	P	06 15 46.1	+1.7
	SNR=11						
BSY	Bisya	76.95	295	P	P	06 15 48.6	+0.5
HOQ	Hoqain	77.05	296	P	P	06 15 49.6	+1.0
SHAO	Shalim	77.40	290	P	P	06 15 51.3	+0.7
SHAO	Shalim	77.40	290	P	P	06 15 51.1	+0.4
ARQ	Araqi	77.69	296	P	P	06 15 53.1	+0.8
SOHO	SOHO	77.86	296	P	P	06 15 53.6	+0.5
SOHO	SOHO	77.86	296	iP	P	06 15 53.6	+0.5
	SNR=15						
BVA0	Borovoye Array	77.88	328	P	P	06 15 52.5	-0.1
BVAR	Borovoye Array	77.88	328	P	P	06 15 52.8	+0.2
	comp=Z,17nm,0.6s,baz=133,slow=6.3,SNR=90						
	comp=Z,17nm,0.6s						
BORK	Borovoye	77.92	328		P	06 15 53.1	+0.2
BORK				IAmb	IAmb	06 15 54.0	
	comp=Z,24nm,0.7s						
BORK	Borovoye	77.92	328c	iP	P	06 15 53.0	+0.2
BORK				pmax	pmax		
	comp=Z,28nm,0.9s						
BORK	Borovoye	77.92	328	P	P	06 15 53.0	+0.2
BORK				x	x	06 16 52.5	
DMTO	DMTO	77.97	290	P	P	06 15 54.4	+0.6
TIXI	Tiksi	78.25	360		P	06 15 53.5	-0.6
TIXI	Tiksi	78.25	360	P	P	06 15 53.6	-0.6
TIXI				pmax	pmax		
	comp=Z,65nm,0.5s						
MDH	Madha	78.34	297	P	P	06 15 55.6	-0.1
UOSS	Minazif	78.34	297	P	P	06 15 56.5	+0.8
UOSS	Minazif	78.34	297		P	06 15 55.8	0.0
HATD	Hatta, Dubai	78.38	297	P	P	06 15 56.5	+0.6
HATD	Hatta, Dubai	78.38	297	P	P	06 15 56.4	+0.4
ASHO	Ashiyiah	78.41	297	P	P	06 15 58.0	+1.9
	SNR=5.8						
ASHO	Ashiyiah	78.41	297	iP	P	06 15 56.6	+0.5
	SNR=14						
MSFE	Esma-Masafi	78.47	298	iP	P	06 15 57.5	+1.0
	SNR=14						
MASF	Masafi	78.47	298	P	P	06 15 57.9	+1.4
BANOM	Banah	78.48	298	P	P	06 15 57.6	+1.1
BANOM	Banah	78.48	298	iP	P	06 15 57.3	+0.8
	SNR=9.0						
ALNE	Al Ain	78.54	296	P	P	06 15 57.6	+0.8
	SNR=6.4						
RBK	Rabkut	78.63	289	P	P	06 15 58.1	+0.6
NIKH	Nikolski High	78.64	33	P	P	06 15 57.8	+1.1
	baz=242						
SHME	Shamm	78.64	298	P	P	06 15 58.6	+1.3
	SNR=7.5						
SHME	Shamm	78.64	298	iP	P	06 15 58.3	+0.9
	SNR=18						
UMZA	Um Al Zommool	78.78	295	P	P	06 15 58.5	+0.3
NAZ	Nazwa, Dubai	78.83	297	P	P	06 15 59.3	+0.9
	SNR=6.2						
NAZ	Nazwa, Dubai	78.83	297	P	P	06 15 58.9	+0.5
FAQ	Al Faqa, Dubai	78.84	297	P	P	06 15 59.4	+1.0
	SNR=7.5						
FAQ	Al Faqa, Dubai	78.84	297	P	P	06 15 59.2	+0.8
DOK	Doka	78.91	290	P	P	06 15 59.1	+0.1
ASUD	Al Ashush, Dub	79.04	297	P	P	06 16 00.5	+1.0
	SNR=7.2						
ASUD	Al Ashush, Dub	79.04	297	iP	P	06 16 00.5	+1.0
	SNR=11						
WHFO	Wadi Hawf	79.11	290	P	P	06 16 00.1	0.0
ABTO	Aybut	79.45	289	P	P	06 16 02.7	+0.7
SPIA	Saint Paul Isl	79.94	29	P	P	06 16 05.2	+1.5
	baz=241						
P08K	Saint George I	80.00	29	P	P	06 16 05.6	+1.6
	baz=241						
MZWR	Madinat Zayed	80.15	295	P	P	06 16 06.0	+0.5
UNV	Unalaska Valle	80.29	33	P	P	06 16 06.9	+1.3
	baz=244						
MZR	Muzera	80.36	295	P	P	06 16 08.4	+1.7
	SNR=7.5						
MZR	Muzera	80.36	295	iP	P	06 16 07.3	+0.6
	SNR=10						
VOI	Vohitsoka	81.25	249	P	P	06 16 12.6	+0.9
VOI	Vohitsoka	81.25	249		P	06 16 11.7	0.0
JRN	Qarnain Island	81.31	296	P	P	06 16 12.1	+0.4
NRIK	Noril'sk	81.34	346	P	P	06 16 11.5	+0.6
	comp=Z,14nm,0.8s,baz=122,slow=5.5,SNR=19						
	comp=Z,14nm,0.8s						
NRIK	Noril'sk	81.34	346	IAmb	IAmb	06 16 12.6	
	comp=Z,28nm,1.1s						
AB31	Akbulak array	82.34	322	IAmb	IAmb	06 16 18.9	
	comp=Z,18nm,0.6s						
AB31	Akbulak array	82.34	322	P	P	06 16 16.2	-0.3
ABKAR	Akbulak array	82.34	322		P	06 16 16.4	-0.1
FALS	False Pass	82.35	32	P	P	06 16 17.5	+1.0
	baz=247						
GAMB	Gambell	82.69	22	P	P	06 16 19.1	+1.1
	baz=238						
TRNA	Turayna	82.73	296	P	P	06 16 19.4	+0.3
SMRA	Abu-Samra	83.08	296	P	P	06 16 21.3	+0.4
SHMA	Al-Shehemyia	83.16	297	P	P	06 16 21.6	+0.3
QSPA	South Pole Qui	83.21	180	P	P	06 16 24.9	+4.0
	comp=Z,10nm,0.6s,baz=314,slow=1.8,SNR=34						
QSPA	South Pole Qui	83.21	180		P	06 16 24.5	+3.6
QSPA	South Pole Qui	83.21	180	P	P	06 16 25.2	+4.2
QSPA				x	x	06 17 01.0	
M11K	Mekoryuk	83.31	27	P	P	06 16 22.2	+0.9
	baz=244						
S12K	Black Hills	83.40	32	P	P	06 16 22.4	+0.5
	baz=248						
SYO	Syowa Base	83.89	201⇑	eP	P	06 16 25.2	+1.1
SYO	Syowa Base	83.89	201⇑	ePcP	PcP	06 16 28.8	+1.0
AKTO	Aktyubinsk	83.90	322	P	P	06 16 24.9	+0.4
	comp=Z,18nm,0.6s,baz=108,slow=5.7,SNR=42						
	comp=Z,18nm,0.6s						
SDPT	Sand Point	84.11	33	P	P	06 16 26.0	+0.6
	baz=249						
CHNA	Chernabura Isl	84.40	33	P	P	06 16 27.3	+0.4
	baz=250						
SVE	Sverdlovsk	84.58	329d	eP	P	06 16 28.3	+0.5
SVE				pmax	pmax		
	comp=Z,39nm,0.8s						
M13K	Dall Lake	84.61	27	P	P	06 16 29.1	+1.4
	baz=246						
K13K	Kusilvak Mount	84.66	26	IAmb	IAmb	06 16 30.5	
	comp=Z,26nm,1.1s						
K13K	Kusilvak Mount	84.66	26	P	P	06 16 29.3	+1.2
	baz=245						
S14K	Fog Glacier	84.92	32	P	P	06 16 30.5	+0.8
	baz=250						
TNA	Tin City	84.99	22	P	P	06 16 30.8	+1.2
	baz=242						
O14K	Tigyukauivet M	85.13	29	P	P	06 16 31.6	+1.1
	baz=248						
N14K	Kuskokwak Cree	85.18	28	P	P	06 16 31.7	+1.0
	baz=248						
L14K	Kuka Creek	85.28	27	IAmb	IAmb	06 16 32.8	
	comp=Z,17nm,0.8s						
L14K	Kuka Creek	85.28	27	P	P	06 16 32.2	+1.1
	baz=247						
M14K	Bethel	85.37	27	IAmb	IAmb	06 16 33.7	
	comp=Z,29nm,0.7s						
M14K	Bethel	85.37	27	P	P	06 16 32.8	+1.2
	baz=248						
J14K	Nanvaranak Lak	85.47	25	P	P	06 16 33.3	+1.3
	baz=246						
ANM	Nome	85.50	23	P	P	06 16 33.4	+1.2
	baz=244						
F14K	Arctic Creek	85.54	22	P	P	06 16 33.5	+1.2
	baz=243						
ARTI	Arti	85.60	328	P	P	06 16 31.8	-1.0
	comp=Z,32nm,0.7s,baz=120,slow=2.1,SNR=44						
	comp=Z,32nm,0.7s						
ARTI	Arti	85.60	328	P	P	06 16 32.0	-0.9
ARTI	Arti	85.60	328c	iP	P	06 16 31.9	-1.0
ARTI				S	SKSac	06 26 41.1	-1.1
ARTI				SS	SS	06 32 26.3	-4.3
ARTI				pmax	pmax		
	comp=Z,40nm,0.8s						
O15K	Ungalikthiuk R	85.79	29	P	P	06 16 34.6	+0.9
	baz=250						
M15K	Kasigluk River	85.93	27	P	P	06 16 35.3	+0.9
	baz=249						
L15K	Ungalak Mounta	85.94	26	P	P	06 16 35.4	+1.0
	baz=248						
N15K	Kwethluk River	86.01	28	IAmb	IAmb	06 16 36.9	
	comp=Z,23nm,0.9s						
N15K	Kwethluk River	86.01	28	P	P	06 16 36.1	+1.2
	baz=249						
K15K	Wolf Creek Mou	86.15	26	IAmb	IAmb	06 16 37.9	
	comp=Z,16nm,0.8s						
K15K	Wolf Creek Mou	86.15	26	P	P	06 16 36.9	+1.4
	baz=248						
G15K	Niukluk	86.20	23	P	P	06 16 36.8	+1.1
	baz=245						
F15K	North Star Dit	86.27	22	P	P	06 16 37.3	+1.4
	baz=245						
N16K	Nishlik Lake	86.74	28	P	P	06 16 39.4	+1.0
	baz=250						
H16K	Elim	86.76	24	P	P	06 16 38.8	+0.4
	baz=247						
O16K	Kokwok River B	86.77	29	P	P	06 16 39.0	+0.5
	baz=251						
M16K	Timber Creek	86.84	27	IAmb	IAmb	06 16 40.9	
	comp=Z,17nm,0.8s						
M16K	Timber Creek	86.84	27	P	P	06 16 39.7	+0.9
	baz=250,SNR=6.4						
L16K	Owhat River	86.84	27	IAmb	IAmb	06 16 40.7	
	comp=Z,15nm,0.8s						
L16K	Owhat River	86.84	27	P	P	06 16 39.6	+0.8
	baz=250						
CHIR	Chirikof Islan	86.87	33	P	P	06 16 39.7	+0.7
	baz=253						
J16K	Anvik River	86.92	25	P	P	06 16 40.0	+0.8
	baz=248,SNR=6.0						
G16K	Koyuk River	87.01	23	P	P	06 16 40.2	+0.7
	baz=247						
R17L	Mt. Peulik Vol	87.01	31	P	P	06 16 40.1	+0.3
	baz=253						
I17K	Unalakleet	87.10	24	P	P	06 16 40.6	+0.6
	baz=248						
C16K	Lisburne Hills	87.14	20	P	P	06 16 40.4	+0.3
	baz=244						
Q16K	King Salmon	87.18	30	P	P	06 16 41.3	+0.9
	baz=252						
O17K	Koliganek Bris	87.30	29	P	P	06 16 41.8	+0.7
	baz=252						
Q17K	Contact Creek	87.44	31	P	P	06 16 42.4	+0.5
	baz=253						
N17K	Nushagak Hills	87.50	28	P	P	06 16 43.0	+1.0
	baz=252						
L17K	Donlin	87.51	27	P	P	06 16 43.3	+1.2
	baz=251						
J17K	VABM Dome	87.60	25	IAmb	IAmb	06 16 45.0	
	comp=Z,15nm,0.7s						
J17K	VABM Dome	87.60	25	P	P	06 16 43.4	+1.0
	baz=250						
M17K	Holitna River	87.66	27	P	P	06 16 44.1	+1.4
	baz=251						
D17K	Noatak River	87.67	21	P	P	06 16 43.2	+0.6
	baz=246						
RAYN	Ar Rayn	87.67	294		P	06 16 44.2	+0.4
RAYN				IAmb	IAmb	06 16 45.1	
	comp=Z,26nm,0.7s						
RAYN	Ar Rayn	87.67	294	iP	P	06 16 44.1	+0.4
	SNR=28						
RAYN	Ar Rayn	87.67	294	P	P	06 16 44.2	+0.4
RAYN				pmax	pmax		
	comp=Z,27nm,0.7s						
RAYN	Ar Rayn	87.67	294	P	P	06 16 44.0	+0.3
K17K	Iditarod	87.70	26	P	P	06 16 43.9	+1.0
	baz=251						
G17K	Kiwalik Mounta	87.71	23	P	P	06 16 43.5	+0.6
	baz=248,SNR=6.3						
H17K	Granite Mounta	87.80	24	P	P	06 16 44.0	+0.7
	baz=249,SNR=11						
F17K	Baldwin Pennin	87.84	22	P	P	06 16 44.0	+0.6
	baz=248						
SII	Sitkinak Islan	87.84	32	P	P	06 16 44.8	+1.0
	baz=254						
E17K	Hotham Inlet	87.87	21	P	P	06 16 44.0	+0.3
	baz=247						
RDOG	Red Dog Mine	87.87	20	P	P	06 16 44.0	+0.4
	baz=246						
C17K	DeLong Mountai	87.95	20	P	P	06 16 44.4	+0.3
	baz=246						
Q18K	Katmai Hardscr	87.99	30	P	P	06 16 45.0	+0.4
	baz=254						
P18K	Big Mountain,	88.09	30	P	P	06 16 45.7	+0.8
	baz=254						
N18K	Kilae Creek	88.15	28	P	P	06 16 45.8	+0.7
	baz=253						
O18K	Koktuh Hills	88.24	29	P	P	06 16 46.1	+0.5
	baz=254						
L18K	Granite Mounta	88.25	27	P	P	06 16 46.2	+0.6
	baz=252						
M18K	Stony River	88.42	27	P	P	06 16 47.2	+0.8
	baz=253						
E18K	Tukpahlearik C	88.44	21	P	P	06 16 46.9	+0.5
	baz=248						
H18K	Honhosa River	88.49	24	P	P	06 16 46.8	+0.1
	baz=250						
F18K	Selawik	88.49	22	P	P	06 16 46.6	+0.1
	baz=249						
OHAK	Old Harbor	88.49	32	P	P	06 16 46.9	+0.2
	baz=255						
G18K	Tagagawik	88.62	23	IAmb	IAmb	06 16 50.6	
	comp=Z,28nm,1.9s						
G18K	Tagagawik	88.62	23	P	P	06 16 47.3	0.0
	baz=250						
J18K	Innoko River	88.62	25	P	P	06 16 47.4	+0.1
	baz=252						
AKT	Akhty	88.69	312	eP	P	06 16 48.5	+0.3
AKT				pmax	pmax		
	comp=Z,35nm,1.1s						
C18K	Utukok River	88.69	20	P	P	06 16 47.7	+0.1
	baz=248						
Q19K	Cape Douglas,	88.75	30	P	P	06 16 48.3	+0.3
	baz=255						
O19K	Port Alsworth	88.76	29	P	P	06 16 48.3	+0.4
	baz=254						
B18K	Kokolik River	88.77	19	P	P	06 16 48.6	+0.9
	baz=247						
N19K	Bonanza Creek	88.85	28	P	P	06 16 49.6	+1.0
	baz=254						
GCSA	Galena City Sc	88.95	24	P	P	06 16 49.3	+0.6
	baz=252						
KDAK	Kodiak Island	89.00	32	LR	LR	07 03 14.4	
	comp=Z,15nm,18.1s,baz=218,slow=40						
KDAK	Kodiak Island	89.00	32	P	P	06 16 50.2	+1.1
	baz=256						
L19K	White Mountain	89.06	27	P	P	06 16 50.2	+0.8
	baz=254						
P19K	Oil Pt	89.15	30	P	P	06 16 50.4	+0.6
	baz=255						
J19K	Poorman	89.25	25	P	P	06 16 50.9	+0.7
	baz=253						
F19K	Shaleruckik Mo	89.27	22	P	P	06 16 50.8	+0.6
	baz=251						
Q20K	Shuyak Island	89.30	31	P	P	06 16 51.2	+0.6
	baz=256						
G19K	Purcell Mounta	89.31	23	P	P	06 16 51.0	+0.5
	baz=252,SNR=7.2						
A19K	Wainwright	89.32	19	P	P	06 16 51.2	+0.8
	baz=248						
H19K	Roundabout Mou	89.37	24	P	P	06 16 51.4	+0.7
	baz=252						
C19K	Lookout Ridge	89.40	20	IAmb	IAmb	06 16 52.5	
	comp=Z,28nm,1.0s						
C19K	Lookout Ridge	89.40	20	P	P	06 16 51.7	+0.8
	baz=249						
O20K	Slope Mountain	89.55	29	P	P	06 16 52.5	+0.8
	baz=256						
L20K	Farewell, AK	89.58	27	P	P	06 16 52.6	+0.8
	baz=255						
E19K	Redstone River	89.67	22	P	P	06 16 52.5	+0.4
	baz=252						
D19K	Kuna River	89.70	21	P	P	06 16 52.2	0.0
	baz=251						
K20K	Telida	89.73	26	P	P	06 16 53.0	+0.5
	baz=254						
M20K	Styx River	89.76	27	P	P	06 16 53.6	+0.8
	baz=255						
J20K	Nowinta River	89.92	25	P	P	06 16 54.0	+0.7
	baz=254						
HOM	Homer	89.93	30	P	P	06 16 54.0	+0.6
	baz=256						
I20K	Naaghedeneel	89.95	24	P	P	06 16 53.9	+0.5
	baz=254						
H20K	Anotleneega Mo	89.98	24	P	P	06 16 53.9	+0.3
	baz=254						
F20K	Avaraart Lake	90.11	22	P	P	06 16 54.1	0.0
	baz=253,SNR=5.1						
D20K	Etivluk River	90.29	20	P	P	06 16 55.0	0.0
	baz=252						
E20K	Nigu River	90.30	21	P	P	06 16 55.1	0.0
	baz=252						
BRSE	Bradley Lake S	90.39	30	P	P	06 16 56.1	+0.4
	baz=257						
PPLA	Purkeypile	90.44	27	P	P	06 16 55.9	-0.1
	baz=256						
B20K	Meade River	90.51	19	P	P	06 16 56.1	+0.1
	baz=252						
SKT	Skwentna	90.52	28	P	P	06 16 56.7	+0.5
	baz=257						
CHUM	Lake Minchumin	90.63	26	P	P	06 16 57.2	+0.6
	baz=256						
BELG	Belogornoye	90.69	323	P	P	06 16 55.6	-1.4
	comp=Z,12nm,0.7s,baz=180,slow=5.1,SNR=2.7						
	comp=Z,12nm,0.7s						
SUA	Susitna One	90.77	28	P	P	06 16 57.8	+0.4
	baz=257						
G21K	Allakaket	90.80	23	P	P	06 16 57.6	+0.2
	baz=255						
KIRV	Kirov	90.85	329⇓	iP	P	06 16 56.5	-1.2
H21K	Melozitna Rive	90.86	24	P	P	06 16 57.9	+0.2
	baz=256						
F21K	Alatna River	91.00	22	P	P	06 16 58.7	+0.4
	baz=255						
C21K	Knifeblade Rid	91.05	20	P	P	06 16 59.2	+0.7
	baz=254						
SEW	Seward	91.11	30	P	P	06 16 59.2	+0.3
	baz=258						
M22K	Willow	91.12	28	P	P	06 16 58.8	-0.1
	baz=258						
E21K	Killik River	91.14	21	P	P	06 16 59.2	+0.2
	baz=254						
CUT	Chulitna	91.19	27	P	P	06 16 59.5	+0.2
	baz=258						
B21K	Ikpikpuk River	91.24	20	P	P	06 16 59.3	0.0
	baz=254						
BPAW	Bear Paw Mtn.	91.25	26	P	P	06 16 59.5	0.0
	baz=257						
TRF	Thorofare Moun	91.41	26	P	P	06 17 00.8	+0.3
	baz=258						
H22K	Ishtalitna Cre	91.49	24	P	P	06 17 00.8	+0.2
	baz=257						
A22K	Sinclair Lake	91.51	18	P	P	06 17 00.9	+0.3
	baz=254						
PMR	Palmer	91.55	28	P	P	06 17 01.1	+0.2
	baz=259						
F22K	John River	91.56	22	P	P	06 17 01.0	+0.2
	baz=256						
G22K	Bettles	91.67	23	P	P	06 17 01.3	-0.1
	baz=257						
KIBK	Kibwezi	91.69	267		P	06 17 03.4	+0.6
D22K	Ayikyak River	91.71	21	P	P	06 17 02.0	+0.4
	baz=256						
PWL	Port Wells	91.79	29	P	P	06 17 02.2	+0.1
	baz=259						
B22K	Teshekpuk Lake	91.83	19	P	P	06 17 01.9	-0.1
	baz=255						
KNK	Knik Glacier	91.84	28	P	P	06 17 02.4	+0.1
	baz=259						

E22K	Anaktuvuk Pass	91.84	22	P	P	06 17 02.4	+0.1
	baz=256						
SML	Sawmill	91.97	28	P	P	06 17 03.0	+0.1
	baz=260						
MCK	McKinley	92.06	26	P	P	06 17 02.8	-0.4
	baz=259						
WAT1	Susitna Watana	92.06	27	P	P	06 17 03.2	-0.1
	baz=259						
I23K	Minto, Yukon-K	92.15	25	IAmb	IAmb	06 17 04.7	
	comp=Z,13nm,0.9s						
I23K	Minto, Yukon-K	92.15	25	P	P	06 17 04.0	+0.4
	baz=259						
NEA2	Nenana	92.17	25	P	P	06 17 03.9	+0.2
	baz=259						
G23K	Bananza Creek	92.20	23	P	P	06 17 04.3	+0.4
	baz=258						
H23K	Yukon River	92.21	24	P	P	06 17 04.1	+0.1
	baz=258						
COLD	Coldfoot	92.24	23	P	P	06 17 04.2	+0.2
	baz=258,SNR=5.5						
M23K	Glacier View	92.25	28	P	P	06 17 04.4	+0.2
	baz=260						
WAT6	Susitna Watana	92.38	27	P	P	06 17 05.0	0.0
	baz=260						
D23K	Nanushuk River	92.43	21	IAmb	IAmb	06 17 07.3	
	comp=Z,17nm,1.2s						
D23K	Nanushuk River	92.43	21	P	P	06 17 05.6	+0.7
	baz=258						
SCM	Sheep Creek Mo	92.44	28	P	P	06 17 05.8	+0.6
	baz=260						
KBZ	Khabaz	92.55	314	P	P	06 17 05.2	-0.7
	comp=Z,3.2nm,0.7s,baz=78,slow=1.7,SNR=5.9						
	comp=Z,3.2nm,0.7s						
WRH	Wood River Hil	92.56	25	IAmb	IAmb	06 17 05.0	
	comp=Z,11nm,1.0s						
GURO	Guroymak-BITLI	92.60	308	IAmb	IAmb	06 17 08.5	
	comp=Z,14nm,0.7s						
KMBO	Kilima Mbogo	92.62	269	LR	LR	06 57 06.9	
	comp=Z,11µm,20.1s,baz=120,slow=34						
E23K	Chandalar	92.63	22	IAmb	IAmb	06 17 07.4	
	comp=Z,10nm,0.9s						
E23K	Chandalar	92.63	22	P	P	06 17 06.2	+0.3
	baz=259,SNR=6.4						
DHY	Denali Highway	92.63	27	IAmb	IAmb	06 19 27.1	
	comp=Z,39nm,2.0s						
DHY	Denali Highway	92.63	27	P	P	06 17 06.0	-0.1
	baz=260						
C23K	Itkillik River	92.64	20	IAmb	IAmb	06 17 06.5	
	comp=Z,11nm,1.1s						
C23K	Itkillik River	92.64	20	P	P	06 17 06.0	+0.2
	baz=258						
CCB	Clear Creek Bu	92.71	25	IAmb	IAmb	06 17 06.0	
	comp=Z,10nm,0.8s						
KIV	Kislovodsk	92.73	314	*e*P	P	06 17 06.2	-0.7
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TOLK	Toolik Lake Re	92.76	21	P	P	06 17 06.5	0.0
	baz=259						
H24K	Noodor Dome	92.89	24	P	P	06 17 07.0	-0.1
	baz=260						
EYAK	Cordova Ski Ar	93.00	29	P	P	06 17 07.6	0.0
	baz=262						
M24K	Tolsona, Glenn	93.02	28	P	P	06 17 07.8	0.0
	baz=261						
HDA	Harding Lake	93.04	26	P	P	06 17 06.6	-1.2
	baz=261						
E24K	Your Creek	93.05	22	P	P	06 17 07.5	-0.3
	baz=260						
KLU	Klutina	93.05	29	P	P	06 17 08.0	0.0
	baz=262						
IL31		93.12	25		P	06 17 06.2	-1.8
IL31				IAmb	IAmb	06 18 07.9	
	comp=Z,40nm,2.0s						
ILAR	Eielson Array	93.12	25	P	P	06 17 06.5	-1.6
	comp=Z,3.5nm,0.8s,baz=265,slow=4.4,SNR=33						
ILAR				PKKP	PKKPdf	06 34 15.3	-1.8
	comp=Z,0.8nm,0.6s,baz=321,slow=1.4,SNR=16						
	comp=Z,3.5nm,0.8s						
D24K	Happy Valley	93.12	21	P	P	06 17 08.2	+0.2
	baz=259						
F24K	Squaw Lake	93.17	22	IAmb	IAmb	06 17 10.0	
	comp=Z,11nm,0.9s						
F24K	Squaw Lake	93.17	22	P	P	06 17 08.7	+0.3
	baz=260,SNR=10						
G24K	Hadweenzic Riv	93.19	23	P	P	06 17 08.6	+0.2
	baz=260						
C24K	Franklin Bluff	93.27	20	P	P	06 17 08.8	+0.1
	baz=260						
K24K	Donnelly Dome	93.45	26	P	P	06 17 09.8	+0.1
	baz=262						
PAX	Paxson	93.47	27	P	P	06 17 09.9	0.0
	baz=262						
HARP	HAARP	93.54	28	P	P	06 17 10.3	+0.2
	baz=262						
J25K	Salcha River,	93.74	25	P	P	06 17 11.2	+0.1
	baz=262						
G25K	Bearman Lake	93.74	23	P	P	06 17 11.5	+0.5
	baz=262						
RIDG	Independent Ri	93.85	26	IAmb	IAmb	06 17 12.2	
	comp=Z,9.5nm,1.0s						
RIDG	Independent Ri	93.85	26	P	P	06 17 11.0	-0.6
	baz=263						
D25K	Kavik River	94.01	21	P	P	06 17 11.8	-0.5
	baz=262						
F25K	Christian Rive	94.04	22	P	P	06 17 12.5	+0.1
	baz=262,SNR=6.7						
E25K	Arctic Village	94.14	22	IAmb	IAmb	06 17 14.3	
	comp=Z,10nm,1.1s						
E25K	Arctic Village	94.14	22	P	P	06 17 13.0	+0.2
	baz=262,SNR=6.2						
DOT	Dot Lake	94.19	27	P	P	06 17 12.9	-0.2
SCRK	Sand Creek	94.26	26	P	P	06 17 13.2	-0.3
	baz=263						
CRQE	Cirque	94.32	29	P	P	06 17 13.9	+0.1
	baz=264						
TROLL	Troll, Antarti	94.40	194	⇑P	P	06 17 15.5	+1.4
	comp=Z,329nm,0.6s						
MCARA	McCarthy VSAT	94.42	29	P	P	06 17 15.0	+0.8
	baz=264						
L26K	Log Cabin Wild	94.44	27	P	P	06 17 14.3	0.0
	baz=264						
J26L	Joseph Creek	94.50	26	IAmb	IAmb	06 17 15.4	
	comp=Z,9.9nm,0.9s						
J26L	Joseph Creek	94.50	26	P	P	06 17 14.9	+0.3
	baz=264						
C26K	Camden Bay	94.60	20	P	P	06 17 15.2	+0.4
	baz=263						
F26K	Sheenjek River	94.62	22	P	P	06 17 15.4	+0.4
	baz=264,SNR=5.7						
G26K	Porcupine Rive	94.67	23	IAmb	IAmb	06 17 17.0	
	comp=Z,9.8nm,0.9s						
G26K	Porcupine Rive	94.67	23	P	P	06 17 15.8	+0.6
	baz=264,SNR=8.1						
I26K	Coal Creek Min	94.76	25	IAmb	IAmb	06 18 39.2	
	comp=Z,35nm,2.0s						
I26K	Coal Creek Min	94.76	25	P	P	06 17 15.5	-0.1
	baz=264						
MESA	MESA	94.83	30	P	P	06 17 15.9	-0.4
	baz=265						
C27K	Jago River	94.98	21	P	P	06 17 17.0	+0.4
	baz=264						
BELA	Belgrano 2	95.06	183		P	06 17 16.9	+0.1
BELA				IAmb	IAmb	06 17 17.9	
	comp=Z,5.0nm,0.6s						
K27K	Chicken	95.10	26	IAmb	IAmb	06 17 19.3	
	comp=Z,13nm,1.1s						
K27K	Chicken	95.10	26	P	P	06 17 17.9	+0.6
	baz=265						
L27K	Beaver Creek,	95.13	27	IAmb	IAmb	06 19 33.1	
	comp=Z,34nm,1.9s						
L27K	Beaver Creek,	95.13	27	P	P	06 17 17.8	+0.3
	baz=265						
CTG	Chitna Glacier	95.19	29	P	P	06 17 17.9	0.0
	baz=266						
I27K	Kandik River	95.43	25	IAmb	IAmb	06 17 20.2	
	comp=Z,13nm,0.9s						
I27K	Kandik River	95.43	25	P	P	06 17 19.2	+0.5
	baz=266						
G27K	Doyon Strip	95.50	23	P	P	06 17 19.9	+0.8
	baz=266						
H27K	Steamboat Moun	95.51	24	IAmb	IAmb	06 17 21.0	
	comp=Z,26nm,1.5s						
H27K	Steamboat Moun	95.51	24	P	P	06 17 19.7	+0.6
	baz=266						
BVCY	Beaver Creek	95.53	28	P	P	06 17 19.4	+0.1
	baz=266						
E27K	Coleen River	95.62	22	IAmb	IAmb	06 17 20.8	
	comp=Z,9.3nm,1.1s						
E27K	Coleen River	95.62	22	P	P	06 17 20.1	+0.5
	baz=266						
PINM	Pinnacle	95.67	30	P	P	06 17 19.8	-0.2
	baz=266						
YUK3	Moose Creek	95.67	29	P	P	06 17 20.2	0.0
	baz=266						
O28M	Mount Upton	95.74	30	P	P	06 17 20.0	-0.6
	baz=266						
SNAA	Sanae	95.90	193	⇑P	P	06 17 21.8	+1.0
	comp=Z,99nm,0.5s						
SNAA	Sanae	95.90	193	P	P	06 17 21.7	+0.8
	comp=Z,5.0nm,0.6s,baz=181,slow=5.4,SNR=25						
SNAA				LR	LR	07 01 47.8	
	comp=Z,28nm,18.1s,baz=14,slow=36						
	comp=Z,5.0nm,0.6s						
SNAA	Sanae	95.90	193		P	06 17 21.9	+1.0
SNAA				IAmb	IAmb	06 17 22.8	
	comp=Z,6.3nm,0.7s						
SNAA	Sanae	95.90	193	⇓*i*P	P	06 17 22.1	+1.2
SNAA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
D27M	Malcolm River	95.92	21	P	P	06 17 21.1	+0.1
	baz=267						
YUK8	Steele Glacier	95.98	29	P	P	06 17 20.9	-0.7
	baz=267						
KLMR	Klimovskoe	96.10	331	*e*P	P	06 17 18.3	-3.5
KLMR				pmax	pmax		
	comp=Z,24nm,1.4s						
I28M	Miner Creek	96.11	25	IAmb	IAmb	06 17 23.4	
	comp=Z,12nm,0.9s						
I28M	Miner Creek	96.11	25	P	P	06 17 21.7	-0.2
	baz=267,SNR=9.6						
F28M	Old Crow	96.24	23		P	06 17 22.4	+0.1
F28M				IAmb	IAmb	06 17 23.4	
	comp=Z,12nm,1.2s						
F28M	Old Crow	96.24	23	P	P	06 17 22.4	+0.1
	baz=268						
DAWY	Dawson	96.28	26		P	06 17 23.0	+0.3
DAWY				IAmb	IAmb	06 17 24.1	
	comp=Z,9.8nm,1.0s						
DAWY	Dawson	96.28	26	P	P	06 17 22.9	+0.3
	baz=268,SNR=5.7						
E28M	Babbage River	96.41	22	IAmb	IAmb	06 17 24.3	
	comp=Z,10nm,1.4s						
E28M	Babbage River	96.41	22	P	P	06 17 23.1	0.0
	baz=268						
O29M	Mount Kennedy	96.52	30	P	P	06 17 24.0	+0.1
	baz=268						
M29M	Somme Creek	96.64	28	P	P	06 17 24.4	0.0
	baz=268						
D28M	Stokes Point	96.72	21	P	P	06 17 24.5	+0.1
	baz=269						
H29M	Whitestone	96.79	24	P	P	06 17 24.8	0.0
	baz=269						
I29M	Ogilvie Camp,	96.79	25	P	P	06 17 24.5	-0.4
I29M				IAmb	IAmb	06 17 26.0	
	comp=Z,8.4nm,0.9s						
I29M	Ogilvie Camp,	96.79	25	P	P	06 17 25.1	+0.2
	baz=269						
L29M	L29M	96.82	27	P	P	06 17 24.9	-0.2
	baz=269						
G29M	Pine Creek	96.94	23	IAmb	IAmb	06 17 26.0	
	comp=Z,8.2nm,0.9s						
G29M	Pine Creek	96.94	23	P	P	06 17 25.3	-0.3
	baz=269						
E29M	Blow River	97.00	22	P	P	06 17 26.0	+0.2
	baz=269						
HYT	Haines Junctio	97.06	30	P	Pdif	06 17 26.2	-0.2
	baz=269						
K29M	Barlow Dome	97.10	27	P	Pdif	06 17 26.5	0.0
	baz=269						
P30M	Million Dollar	97.32	30	P	Pdif	06 17 27.2	-0.3
	baz=269						
EPYK	Eagle Plains	97.45	24	P	Pdif	06 17 28.0	+0.1
	baz=270						
OBN	Obninsk	97.48	325	*e*P	P	06 17 26.9	-1.2
OBN				*e**PP	pP	06 18 08.0	-1.9
OBN				*e**SP	sP	06 18 26.6	-0.7
OBN				pmax	pmax		
	comp=Z,13nm,0.9s						
MMAI	Mount Meron Ar	97.51	302	LR	LR	07 05 01.4	
	comp=Z,13nm,21.6s,baz=224,slow=37						
I30M	Mount Dempster	97.60	25	P	Pdif	06 17 28.8	+0.1
	baz=270						
PLBC	Pleasant Camp	97.61	31	P	Pdif	06 17 29.1	+0.4
	baz=270						
J30M	Hart River	97.63	26	P	Pdif	06 17 29.1	+0.2
	baz=270						
G30M	tAoh Zraii Nji	97.65	23	IAmb	IAmb	06 17 29.0	
	comp=Z,8.7nm,1.1s						
G30M	tAoh Zraii Nji	97.65	23	P	P	06 17 28.3	-0.5
	baz=271						
F30M	Barrier River	97.81	23	P	Pdif	06 17 29.0	-0.4
	baz=271						
S32K	Killisnoo	98.56	33	P	Pdif	06 17 33.0	+0.1
	baz=271						
F31M	Tsiigehtchic	98.60	23	P	Pdif	06 17 33.2	+0.3
	baz=273						
INK	Inuvik	98.63	22	IAmb	IAmb	06 18 22.1	
	comp=Z,20nm,1.6s						
INK	Inuvik	98.63	22	P	Pdif	06 17 33.5	+0.5
	baz=274						
BRTR	Keskin Array B	99.19	309	P	Pdif	06 17 35.4	-1.1
	comp=Z,1.4nm,0.8s,baz=122,slow=5.7,SNR=6.0						
	comp=Z,1.4nm,0.8s						
BRTR	Keskin Array B	99.19	309	*i* P	Pdif	06 17 34.7	-1.7
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	ARCESS Array B	101.36	340	P	Pdif	06 17 44.1	-1.1
	comp=Z,1.4nm,0.5s,baz=74,slow=4.3,SNR=13						
ARCES				PKiKP	PKiKP	06 22 08.1	-0.5
	comp=Z,2.0nm,0.8s,baz=68,slow=2.3,SNR=13						
FINES	FINESS Array B	102.57	331	P	Pdif	06 17 49.1	-1.6
	comp=Z,2.1nm,0.7s,baz=232,slow=2.2,SNR=4.6						
FINES				PKiKP	PKiKP	06 22 10.9	-0.1
	comp=Z,2.8nm,0.8s,baz=98,slow=2.8,SNR=4.3						
KOTAN	Kotaneelee Air	103.75	30	P	Pdif	06 17 56.2	+0.2
	baz=281						
STHS	Stebnicka Huta	107.30	320	*e*P	Pdif	06 18 09.4	-2.7
STHS				*e*		06 22 39.5	
STHS	Stebnicka Huta	107.30	320	*e*PDIFF	Pdif	06 18 09.4	-2.7
STHS				*e*PP	PP	06 22 39.5	-1.7
YKA	Yellowknife Ar	107.53	26	PKiKP	PKiKP	06 22 20.4	+0.3
	comp=Z,1.4nm,0.5s,baz=285,slow=2.4,SNR=20						
YKA				PKKPbc	PKKPbc	06 33 34.6	-3.2
	comp=Z,1.1nm,0.7s,baz=116,slow=2.4,SNR=5.3						
HFS	Hagfors	108.77	332	Pdiff	Pdif	06 18 16.9	-1.5
	comp=Z,0.9nm,0.4s,baz=111,slow=7.9,SNR=7.3						
NOA	NORSAR Array B	109.58	333	Pdiff	Pdif	06 18 21.2	-0.8
	comp=Z,1.2nm,0.8s,baz=58,slow=5.9,SNR=3.5						
MODS	Modra-Piesok	110.07	319	*e*PDIFF	Pdif	06 18 21.0	-3.5
NVAR	Mina Array Bea	111.12	51	PKiKP	PKiKP	06 22 29.4	+1.6
	comp=Z,0.6nm,0.5s,baz=312,slow=2.5,SNR=6.5						
NVAR				PKKPbc	PKKPbc	06 33 25.3	-0.5
	comp=Z,0.9nm,0.6s,baz=83,slow=4.5,SNR=12						
NVAR				PKKPab	PKKPab	06 33 36.6	+1.6
	comp=Z,1.3nm,0.7s,baz=103,slow=5.6,SNR=9.4						
GERES	GERESS Array B	112.26	320	PKiKP	PKiKP	06 22 29.8	+0.3
	comp=Z,2.2nm,0.6s,baz=48,slow=2.0,SNR=14						
KHC	Kasperske Hory	112.26	321	⇓*i*PKIKP	PKiKP	06 22 30.1	+0.6
WTTA	Wattenberg	114.03	319	*i* PKP	PKiKP	06 22 33.3	+0.2
	comp=Z,6.4nm,0.3s						
FETA	Feichten	114.70	319	*i* PKP	PKiKP	06 22 34.5	+0.2
	comp=Z,0.7nm,0.2s						
DAVA	Damuels	115.17	319	*i* PKP	PKPdf	06 22 35.4	+0.2
	comp=Z,3.3nm,0.2s						
MOOW	Moose Ponds	115.60	45		PKiKP	06 22 37.0	+0.7
PDAR	Pinedale Array	116.70	45	PKP	PKiKP	06 22 38.8	+0.3
	comp=Z,1.9nm,0.6s,baz=267,slow=0.9,SNR=21						
PDAR				SKP	SKPdf	06 25 58.8	+0.5
	comp=Z,0.5nm,0.7s,baz=350,slow=0.7,SNR=3.9						
PDAR				PKKPbc	PKKPbc	06 33 06.0	-1.2
	comp=Z,1.1nm,0.7s,baz=115,slow=5.4,SNR=11						
EKA	Eskdalemuir Ar	118.97	332	PKP	PKiKP	06 22 41.8	-0.3
	comp=Z,1.8nm,0.5s,baz=12,slow=2.6,SNR=7.5						
RSSD	Black Hills	120.06	42		PKiKP	06 22 44.9	0.0
RSSD	Black Hills	120.06	42	PKIKP	PKiKP	06 22 44.9	0.0
ANMO	Albuquerque	121.14	53		PKiKP	06 22 47.1	-0.2
ANMO	Albuquerque	121.14	53	PKIKP	PKiKP	06 22 47.1	-0.2
ULM	Lac du Bonnet	122.23	33	PKP	PKiKP	06 22 48.4	-0.3
	comp=Z,10nm,0.6s,baz=298,slow=1.8,SNR=12						
ULM				PKKPab	PKKPab	06 32 44.6	-1.1
	comp=Z,1.1nm,0.3s,baz=90,slow=3.5,SNR=3.7						
EPLO	Experimental L	123.71	33		PKiKP	06 22 51.5	-0.1
TXAR	Lajitas Array	124.78	59	PKP	PKiKP	06 22 55.2	+0.7
	comp=Z,1.1nm,0.4s,baz=175,slow=2.5,SNR=34						
TXAR				PKKPbc	PKKPbc	06 32 36.5	+0.1
	comp=Z,0.3nm,0.5s,baz=115,slow=4.5,SNR=10						
ECSD	EROS Data Cent	125.09	40		PKiKP	06 22 54.3	-0.3
ESDC	Sonseca Array	127.35	316	PKP	PKPdf	06 22 58.6	-0.1
	comp=Z,1.3nm,1.0s,baz=95,slow=3.8,SNR=6.2						
ESDC				PP	PP	06 24 59.1	-1.3
	comp=Z,1.5nm,0.8s,baz=52,slow=7.2,SNR=6.8						
PBRG	Braganca	128.22	319	*e*PKPdf	PKiKP	06 23 01.3	+0.3
TORD	Torodi Ar. Bea	128.79	281	PKP	PKiKP	06 23 02.8	0.0
	comp=Z,4.8nm,0.6s,baz=37,slow=5.4,SNR=5.0						
PLCA	Paso Flores	129.09	160	PKP	PKiKP	06 23 03.8	+0.9
	comp=Z,3.5nm,0.6s,baz=247,slow=2.1,SNR=19						
PLCA				SKPab	SKPbc	06 26 07.7	0.0
	comp=Z,4.0nm,1.0s,baz=242,slow=2.4,SNR=4.8						
PLCA	Paso Flores	129.09	160	*e*P	PKPdf	06 23 00.3	-1.8
PGAV	Gavieira, Arco	129.12	320	*e*PKPdf	PKiKP	06 23 03.1	+0.3
POLO	Lamas de Olo	129.12	319	*e*PKPdf	PKiKP	06 23 03.8	+1.0
PVRL	Vila Real	129.12	319	*e*PKPdf	PKiKP	06 23 03.9	+1.1
MTE	Manteigas	129.44	318	*e*PKPdf	PKiKP	06 23 04.4	+0.9
PCBR	Castelo Branco	129.68	317	*e*PKPdf	PKiKP	06 23 04.6	+0.8
PBAR	Barrancos	130.17	315	*e*PKPdf	PKiKP	06 23 06.0	+1.1
SCHQ	Schefferville	130.19	13	PKP	PKiKP	06 23 04.5	0.0
	comp=Z,3.5nm,0.6s,baz=327,slow=3.3,SNR=6.4						
SCHQ				SKPab	SKPbc	06 26 10.8	-0.3
	comp=Z,32nm,0.7s,baz=344,slow=3.8,SNR=29						
PCAS	Casmilo, Conde	130.25	318	*e*PKPdf	PKiKP	06 23 05.8	+0.7
PARRA	Arraiolos	130.56	317	*e*PKPdf	PKiKP	06 23 06.5	+0.8
MOE	Montemor	130.91	316	*e*PKPdf	PKiKP	06 23 07.2	+0.8
CCM	Cathedral Cave	131.38	44		PKiKP	06 23 06.6	-0.8
CCM	Cathedral Cave	131.38	44	PKIKP	PKiKP	06 23 06.6	-0.8
TRQA	Tornquist	134.03	167	*e*P	PKPdf	06 23 10.3	-1.1
WVT	Waverly	134.71	44		PKPdf	06 23 12.6	-0.1
WVT	Waverly	134.71	44	PKIKP	PKPdf	06 23 12.6	-0.1
DBIC	Dimbokro	135.21	273	PKhKP	PKPpre	06 23 05.2	
	comp=Z,2.2nm,0.6s,baz=118,slow=5.0,SNR=5.0						
DBIC				PKP	PKPdf	06 23 14.5	+0.3
	comp=Z,7.2nm,0.5s,baz=85,slow=2.9,SNR=13						
DBIC				SKPbc	SKPbc	06 26 29.4	-0.1
	comp=Z,7.7nm,0.9s,baz=120,slow=1.6,SNR=5.7						
PLTB	Pedras Altas	141.54	175	*e*P	PKPdf	06 23 21.6	-3.9
PSAL	Palomas, Salto	141.67	169	*e*P	PKPdf	06 23 21.1	-4.5
CPSB	Cacapava Do Su	142.90	175	*e*P	PKPdf	06 23 25.8	-2.1
CNLB	Canela	144.12	179	*e*P	PKPdf	06 23 29.6	-0.5
HDC	Heredia	146.08	82	*e*P	PKPdf	06 23 31.6	-2.3
CPUP	Villa Florida	146.34	168	PKPbc	PKPbc	06 23 34.9	-0.5
	comp=Z,7.7nm,0.8s,baz=58,slow=1.7,SNR=50						
CPUP				SKP	SKPbc	06 26 57.2	-1.3
	comp=Z,0.6nm,0.9s,baz=116,slow=3.1,SNR=4.0						
CPUP	Villa Florida	146.34	168		PKPbc	06 23 35.2	-0.1
CPUP	Villa Florida	146.34	168	PKP2	PKPbc	06 23 35.2	-0.1
CPUP	Villa Florida	146.34	168	*e*P	PKPdf	06 23 30.9	-3.0
NNA	Nana	147.43	125	*i* PKP2	PKPbc	06 23 38.0	-0.8
MURT	Porto Murtinho	150.78	165	*e*P	PKPdf	06 23 40.5	-0.7
LPAZ	La Paz	150.89	142	PKP	PKPdf	06 23 43.8	+1.5
	comp=Z,3.3nm,0.8s,baz=323,slow=1.6,SNR=17						
LPAZ				PKPbc	PKiKP	06 23 49.6	+0.9
	comp=Z,15nm,0.4s,baz=47,slow=2.5,SNR=71						
LPAZ	La Paz	150.89	142		PKPdf	06 23 44.0	+1.7
LPAZ	La Paz	150.89	142	*e*P	PKPdf	06 23 38.4	-3.9
BDFB	Brasilia	157.66	185	PKP	PKPdf	06 23 51.7	+0.6
	comp=Z,3.4nm,0.6s,baz=135,slow=3.8,SNR=8.5						
BDFB				PKPab	PKPab	06 24 25.9	+2.1
	comp=Z,1.9nm,0.5s,baz=164,slow=6.2,SNR=4.8						
BOAV	Boa Vista	168.63	112	*e*P	PKPdf	06 23 59.3	-2.2

CATAC **04** *06:09:02.5±0.4, 13°N±2°×9°1W±°, h12^{km}±2^{km}, M3.4/25, MLv3.4/25, Error ellipse: s-maj=5.6km s-min=2.1km az=21.1, confirmed*

SNET **04** *06:09:03.3±1.2, 13°.39N×90°.50W, h21^{km}, ML3.4*

GCG **04** *06:09:03.8±2.0, 13°.42N×90°.58W, h53^{km}±39^{km}, MD4.0, ML3.8*

ISC 04 06:09:02.9±1.6**, 13°.33N**±0°.07×**90°.50W**±0°.03**, h15**^{km}±9^{km}**,** **n80, σ0^{s}87**/91**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESSJ	San Jos, E	0.23	359	*e*P	Pb	06 09 17.3	+8.6
FAME	Alcaldia de Sa	0.69	43	P	Pb	06 09 17.0	+0.3
PCG5	San Vicente Pa	0.89	8	*e*P	Pn	06 09 21.1	+0.1
NUBE	Las Nubes	0.90	51	*e*P	Pg	06 09 19.7	-0.7
NUBE				*e*S	Sb	06 09 32.4	+0.2
NUBE	Las Nubes	0.90	51	*e*P	Pg	06 09 19.9	-0.5
NUBE	Las Nubes	0.90	51	P	Pg	06 09 19.9	-0.5
FG16	Alotenango, Sa	0.93	359	*e*P	Pn	06 09 23.1	+1.4
FG16				IAML		06 09 46.2	
	comp=N,4µm,0.2s						
SLOZ	Alcaldia de Sa	0.98	45	S	Sg	06 09 34.1	-0.7
CEVE	Cerro Verde	0.98	60	*e*P	Pg	06 09 21.5	-0.5
CEVE				*e*S	Sb	06 09 35.4	+0.7
CEVE	Cerro Verde	0.98	60	P	Pg	06 09 21.6	-0.3
SBLS	San Blas	0.99	59	*e*P	Pg	06 09 21.4	-0.7
RTR	El Retiro	1.00	56	*e*P	Pg	06 09 21.9	-0.5
SNJE	San Jose	1.02	58	*e*P	Pb	06 09 21.9	-0.5
SNJE				*e*S	Sb	06 09 36.5	+0.8
JAYA	Jayaque - finc	1.07	73	*e*P	Pb	06 09 22.1	-1.1
JAYA				*e*S	Sb	06 09 36.7	-0.4
JAYA	Jayaque - finc	1.07	73	*e*P	Pb	06 09 22.1	-1.1
JAYA	Jayaque - finc	1.07	73	S	Sb	06 09 37.3	+0.2
JAYA	Jayaque - finc	1.07	73	P	Pb	06 09 22.4	-0.9
RBDL	Robledal	1.10	45	*e*P	Pb	06 09 23.4	-0.5
UNIC	Universidad Ca	1.12	55	*e*P	Pb	06 09 23.3	-0.9
UNIC	Universidad Ca	1.12	55	P	Pb	06 09 23.2	-0.9
UNIC	Universidad Ca	1.12	55	S	Sg	06 09 39.4	0.0
LALI	Alcalda de L	1.16	82	*e*P	Pn	06 09 23.9	-0.7
LALI				*e*S	Sb	06 09 39.6	+0.2
LALI	Alcalda de L	1.16	82	S	Sb	06 09 40.2	+0.8
LALI	Alcalda de L	1.16	82	P	Pn	06 09 23.9	-0.7
CEDA	San Andres	1.17	66	S	Sb	06 09 40.2	+0.3
CEDA	San Andres	1.17	66	P	Pn	06 09 24.7	-0.1
PMON	Piamonte	1.21	72	*e*P	Pn	06 09 24.4	-1.0
PMON				*e*S	Sb	06 09 41.4	+0.3
PMON	Piamonte	1.21	72	P	Pn	06 09 24.6	-0.8
BOQS	Boqueron	1.25	71	*e*P	Pn	06 09 25.3	-0.8
JUAM	Asuncion Mita	1.26	38	*i* P	Pn	06 09 25.5	-0.5
JUAM				*e*S	Sb	06 09 41.7	-0.7
UEES	Universidad Ev	1.28	73	*e*P	Pn	06 09 25.4	-1.0
UEES	Universidad Ev	1.28	73	P	Pn	06 09 26.0	-0.4
UEES	Universidad Ev	1.28	73	S	Sn	06 09 44.1	+0.7
UTEC	Universidad Te	1.31	74	S	Sn	06 09 45.0	+0.9
UTEC	Universidad Te	1.31	74	P	Pn	06 09 26.2	-0.6
UESS	Universidad de	1.32	73	*e*P	Pn	06 09 26.2	-0.6
LOMA	Loma Larga	1.33	76	*e*P	Pn	06 09 25.7	-1.3
LOMA				*e*S	Sb	06 09 44.5	0.0
LOMA	Loma Larga	1.33	76	P	Pn	06 09 26.1	-0.9
IGN	Direccin Gen	1.35	74	P	Pn	06 09 27.8	+0.6
IGN	Direccin Gen	1.35	74	S	Sn	06 09 45.2	+0.3
STG5	El Palmar, Qui	1.35	322	*e*P	Pg	06 09 29.4	+0.5
UDBS	Universidad Do	1.36	74	P	Pn	06 09 28.0	+0.5
UDBS	Universidad Do	1.36	74	S	Sn	06 09 45.9	+0.7
STG8	El Palmar, Qui	1.39	323	*e*P	Pg	06 09 30.7	+1.1
STG8				*e*S	Sg	06 09 50.7	+2.9
STG2	El Palmar, Qui	1.39	322	*e*P	Pg	06 09 31.5	+1.8
LFU	La Fuente	1.41	73	*e*P	Pn	06 09 28.2	+0.1
LFRS	El Faro	1.43	78	*e*P	Pn	06 09 28.0	-0.4
MTO3	Montecristo	1.53	46	*e*P	Pn	06 09 29.7	-0.2
MTO3	Montecristo	1.53	46	*i* P	Pn	06 09 29.8	-0.2
MTO3	Montecristo	1.53	46	S	Sn	06 09 49.7	0.0
MTO3	Montecristo	1.53	46	P	Pn	06 09 29.7	-0.2
PAVA	Las Pavas	1.56	76	*e*P	Pn	06 09 30.3	0.0
PAVA				*e*S	Sn	06 09 50.6	+0.2
PAVA	Las Pavas	1.56	76	P	Pn	06 09 30.7	+0.4
ESQI	Esquipulas	1.66	43	*e*P	Pn	06 09 31.5	-0.1
ESQI	Esquipulas	1.66	43	P	Pn	06 09 31.8	+0.2
RTAL	Retalhuleu	1.66	316	S	Sn	06 09 51.3	-1.2
RTAL	Retalhuleu	1.66	316	P	Pn	06 09 29.4	-2.1
APG	El Apazote	1.66	1	*i* P	Pb	06 09 31.9	-1.5
TECO	Alcaldia de Te	1.68	83	P	Pn	06 09 31.9	+0.1
TECO	Alcaldia de Te	1.68	83	S	Sn	06 09 54.7	+1.5
UESV	Universidad de	1.69	80	S	Sn	06 09 55.0	+1.6
UESV	Universidad de	1.69	80	P	Pn	06 09 32.9	+0.9
LLGN	La Laguna	1.72	61	P	Pn	06 09 33.0	+0.6
LLGN	La Laguna	1.72	61	S	Sb	06 09 55.5	-0.3
SCLA	Alcaldia de Sa	1.76	78	*e*P	Pn	06 09 32.6	-0.3
SCLA	Alcaldia de Sa	1.76	78	P	Pn	06 09 34.0	+1.1
SCLA	Alcaldia de Sa	1.76	78	S	Sn	06 09 56.7	+1.6
TECA	Tecapa	1.95	85	*e*P	Pn	06 09 35.9	+0.3
PACA	Pacayal	2.12	86	*e*P	Pn	06 09 38.1	+0.1
PACA				*e*S	Sn	06 10 03.8	-0.3
PACA	Pacayal	2.12	86	S	Sn	06 10 06.1	+2.0
PACA	Pacayal	2.12	86	P	Pn	06 09 38.2	+0.3
RANC	El Ranchito	2.15	87	*e*P	Pn	06 09 38.1	-0.3

SMCA	**Catarina**	**2.15**	**315**	*e*P	**Pn**	**06 09 36.7**	**-1.6**
HUEH	**Huehuetenango**	**2.20**	**334**	S	**Sn**	**06 10 05.2**	**-1.0**
HUEH	**Huehuetenango**	**2.20**	**334**	P	**Pn**	**06 09 38.7**	**-0.5**
LCND	**La Caada**	**2.54**	**90**	*e*P	**Pn**	**06 09 43.1**	**-0.5**
LCND	**La Caada**	**2.54**	**90**	P	**Pn**	**06 09 43.4**	**-0.2**
CNCH	**Conchagua**	**2.59**	**91**	*e*P	**Pn**	**06 09 44.5**	**0.0**
CNCH				*e*S	**Sn**	**06 10 16.1**	**+0.2**
CNCH	**Conchagua**	**2.59**	**91**	P	**Pn**	**06 09 44.9**	**+0.4**
CNCH	**Conchagua**	**2.59**	**91**	S	**Sn**	**06 10 17.4**	**+1.6**

IDC 04 06:25:56.6±7.8**,6°.46S×156°.07E,h0^{km},mb3.8**/3,
mbtmp3.8/3**,Error ellipse: s-maj=223.1km**
s-min=37.3km az=108.0,Bougainville-Solomon Islands
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.00**	**236**	P	P	06 31 22.9	+0.5
	1.7nm,0.6s,baz=60,slow=9.7,SNR=14						
	1.7nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**26.92**	**23**	T	T	06 59 57.6	
	baz=202,slow=75,SNR=42						
H11S2	**WAKE ISLAND Hy**	**26.92**	**23**	T	T	06 59 58.2	
	baz=202,slow=75,SNR=31						
H11S1	**WAKE ISLAND Hy**	**26.93**	**23**	T	T	07 00 00.1	
	baz=202,slow=75,SNR=14						
ASAR	**Alice Springs**	**27.32**	**229**	P	P	06 31 42.7	-0.7
	0.4nm,0.4s,baz=62,slow=9.5,SNR=6.6						
	0.4nm,0.4s						
SONM	**Songino Array**	**69.47**	**327**	P	P	06 37 07.1	+0.1
	0.9nm,0.8s,baz=113,slow=6.7,SNR=3.9						
	0.9nm,0.8s						

NOU 04 06:28:37.5,16°.10S×167°.67E,h34^{km},MLv3.9/10,
Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.79**	**325**	P	Pb	06 28 52.8	-0.1
DVP	**Devils Point**	**1.69**	**163**	P	Pn	06 29 04.7	+0.1
DVP	**Devils Point**	**1.69**	**163**	S	Sn	06 29 26.0	+0.9
YATNC	**Mamie plateau,**	**5.97**	**187**	P	Pn	06 30 03.1	-0.5
DZM	**Mont Dzumac**	**6.05**	**191**	P	Pn	06 30 04.6	-0.1

IDC ***04*** *06:49:15.8±1.4, 34°.80N×24°.00E, h0^{km}, mb4.0/9,*
mbtmp3.9/11, ML2.7/2, MS3.1/6, Error ellipse:
s-maj=31.7km s-min=16.0km az=162.0
ISK ***04*** *06:49:20.6, 34°.86N×24°.21E, h13^{km}, ML3.5/21*
THE ***04*** *06:49:20.1, 35°N±5°×2°4E±°, h14^{km}±4^{km}, M3.4/12,*
MLh3.4/12
ATH ***04*** *06:49:21.5, 34°.87N×24°.08E, h14^{km}±1^{km}, ML3.4/12,*
Manual Solution by E.Daskalaki First location: 2019/12/04
06:50:25, This location: 2019/12/04 07:33:36 ML
Amplitudes are expressed in micrometers, All distances
are expressed in degrees Latitude uncertainty: 2 km;
Longitude uncertainty: 1 km
ISC 04 06:49:19.5±1.0**,34°.72N**±0°.06×**24°.01E**±0°.04**,h24**^{km}±5^{km}**,**
n92,σ**1^{s}30**/101**,mb3.9**/8**,Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.14**	**29**	P	**Pb**	**06 49 24.3**	**-0.1**
GVD				S	**Sb**	**06 49 27.9**	**+0.3**
GVD	**Gavdhos**	**0.14**	**29**	Pg	**Pb**	**06 49 23.9**	**-0.4**
GVD	**Gavdhos**	**0.14**	**29**	P	**Pb**	**06 49 24.2**	**-0.1**
GVD				S	**Sb**	**06 49 26.6**	**-1.0**
KNDR	**Palaiochora Ch**	**0.60**	**329**	P	**Pn**	**06 49 32.1**	**-0.5**
KNDR				S	**Sn**	**06 49 43.4**	**+1.8**
KNDR	**Palaiochora Ch**	**0.60**	**329**	Pg	**Pn**	**06 49 32.4**	**-0.2**
KNDR				Sg	**Sn**	**06 49 42.2**	**+0.6**
KNDR	**Palaiochora Ch**	**0.60**	**329**	P	**Pb**	**06 49 31.5**	**+0.1**
KNDR				S	**Sb**	**06 49 39.1**	**-0.4**
VAM	**Vamos**	**0.71**	**13**	P	**Pb**	**06 49 33.0**	**-0.1**
VAM	**Vamos**	**0.71**	**13**	P	**Pb**	**06 49 32.5**	**-0.7**
VAM				S	**Sb**	**06 49 40.1**	**-2.4**
IMMV	**Iera Moni Meta**	**0.74**	**358**	P	**Pb**	**06 49 33.5**	**-0.2**
IMMV				S	**Sn**	**06 49 46.7**	**+1.6**
IMMV	**Iera Moni Meta**	**0.74**	**358**	Pg	**Pb**	**06 49 33.6**	**-0.2**
IMMV	**Iera Moni Meta**	**0.74**	**358**	P	**Pb**	**06 49 33.0**	**-0.8**
IMMV				S	**Sb**	**06 49 42.3**	**-1.2**
CH01	**Chania**	**0.80**	**1**	P	**Pb**	**06 49 33.8**	**-0.9**
CHAN	**Chania**	**0.80**	**2**	S	**Sn**	**06 49 49.1**	**+2.6**
CHAN	**Chania**	**0.80**	**2**	P	**Pb**	**06 49 34.8**	**+0.1**
IDI	**Anoyia**	**0.92**	**52**	Pn	**Pb**	**06 49 36.5**	**-0.4**
	100nm,0.3s,baz=233,slow=15,SNR=79						
IDI				Sn	**Sb**	**06 49 49.7**	**+1.0**
	202nm,0.3s,baz=280,slow=12,SNR=16						
IDI	**Anoyia**	**0.92**	**52**	P	**Pb**	**06 49 36.6**	**-0.2**
IDI				S	**Sn**	**06 49 50.9**	**+1.3**
IDI	**Anoyia**	**0.92**	**52**	Pg	**Pb**	**06 49 34.6**	**-2.3**
IDI	**Anoyia**	**0.92**	**52**	P	**Pb**	**06 49 36.3**	**-0.6**
IACM	**Heraklion**	**1.05**	**56**	P	**Pn**	**06 49 39.0**	**+0.2**
ANKY	**Antikythira Is**	**1.28**	**334**	P	**Pb**	**06 49 44.1**	**+1.1**
ANKY	**Antikythira Is**	**1.28**	**334**	P	**Pb**	**06 49 43.9**	**+0.9**
ANKY				S	**Sn**	**06 49 59.0**	**+0.5**
NPS	**Neapolis**	**1.43**	**67**	P	**Pb**	**06 49 46.5**	**+1.0**
NPS	**Neapolis**	**1.43**	**67**	P	**Pb**	**06 49 45.1**	**-0.3**
KTHA	**Kythira Island**	**1.72**	**334**	P	**Pb**	**06 49 51.0**	**+0.6**
KTHA	**Kythira Island**	**1.72**	**334**	Pn	**Pb**	**06 49 50.0**	**-0.4**
KTHA	**Kythira Island**	**1.72**	**334**	P	**Pb**	**06 49 50.6**	**+0.2**
ZKR	**Zakros**	**1.86**	**77**	Pn	**Pn**	**06 49 50.2**	**+0.3**
ZKR	**Zakros**	**1.86**	**77**	P	**Pb**	**06 49 52.4**	**-0.4**
THR6	**Thira Island,**	**1.99**	**34**	P	**Pn**	**06 49 53.4**	**+1.7**
MHLO	**Agia Marina, M**	**2.00**	**9**	P	**Pn**	**06 49 53.7**	**+1.9**
SNT5	**Nea Kammeni, S**	**2.03**	**34**	P	**Pn**	**06 49 53.7**	**+1.5**
SAP3	**Santorini-Thir**	**2.03**	**32**	P	**Pn**	**06 49 53.6**	**+1.4**
THERA	**Ancient Thera,**	**2.04**	**36**	P	**Pn**	**06 49 53.7**	**+1.4**
THERA				S	**Sn**	**06 50 19.0**	**+2.0**
THERA	**Ancient Thera,**	**2.04**	**36**	P	**Pn**	**06 49 53.6**	**+1.3**
THR3	**Thira Island,**	**2.04**	**34**	P	**Pn**	**06 49 53.6**	**+1.3**
THR3	**Thira Island,**	**2.04**	**34**	P	**Pn**	**06 49 53.6**	**+1.3**
THR8	**Santorini-Mono**	**2.07**	**35**	P	**Pn**	**06 49 53.8**	**+1.1**
VLI	**Veliai**	**2.18**	**337**	P	**Pb**	**06 49 57.4**	**-0.8**
APE	**Apeiranthos**	**2.65**	**27**	P	**Pn**	**06 50 01.3**	**+0.4**
APE	**Apeiranthos**	**2.65**	**27**	Pn	**Pn**	**06 50 00.9**	**+0.1**
APE	**Apeiranthos**	**2.65**	**27**	P	**Pn**	**06 50 01.2**	**+0.4**
KARP	**Karpathos**	**2.72**	**71**	P	**Pn**	**06 50 03.3**	**+1.6**
KARP	**Karpathos**	**2.72**	**71**	Pn	**Pn**	**06 50 02.6**	**+0.9**
KARP	**Karpathos**	**2.72**	**71**	P	**Pn**	**06 50 03.7**	**+2.1**
MET2	**Kameni Chora,**	**2.94**	**349**	P	**Pn**	**06 50 05.7**	**+1.0**
MET5	**Makryloggos,Me**	**2.95**	**350**	P	**Pn**	**06 50 06.0**	**+1.1**
VLX	**Vlachokerasia**	**2.96**	**334**	P	**Pn**	**06 50 08.0**	**+3.0**
VLY	**Voula,Athens**	**3.13**	**357**	P	**Pn**	**06 50 08.6**	**+1.2**
NISR	**Nisiros**	**3.17**	**52**	P	**Pn**	**06 50 08.3**	**+0.4**
ATHU	**Athens Univers**	**3.25**	**357**	P	**Pn**	**06 50 08.7**	**-0.3**
PTL	**Penteli**	**3.33**	**358**	P	**Pn**	**06 50 10.9**	**+0.8**
DION	**Dionisos Attik**	**3.35**	**359**	P	**Pn**	**06 50 11.3**	**+0.8**
LTK	**Loutraki**	**3.40**	**346**	P	**Pn**	**06 50 12.5**	**+1.4**
STFN	**Stefani**	**3.47**	**354**	P	**Pn**	**06 50 13.3**	**+1.2**
GUR	**Goura**	**3.48**	**338**	P	**Pn**	**06 50 14.4**	**+2.1**
DAT	**Datca**	**3.53**	**54**	Pn	**Pn**	**06 50 14.2**	**+1.2**
VIL2	**Platees**	**3.54**	**351**	P	**Pn**	**06 50 13.0**	**0.0**
BODT	**Bodrum**	**3.56**	**48**	Pn	**Pn**	**06 50 14.6**	**+1.3**
KLV	**Kalavryta, Ach**	**3.64**	**336**	P	**Pn**	**06 50 16.0**	**+1.6**
ARG	**Arkhangelos**	**3.68**	**65**	Pn	**Pn**	**06 50 16.1**	**+1.2**
ARG	**Arkhangelos**	**3.68**	**65**	P	**Pn**	**06 50 16.4**	**+1.5**
DRO	**Drossia**	**3.72**	**331**	P	**Pn**	**06 50 17.9**	**+2.4**
TURN	**Turunc**	**4.01**	**58**	Pn	**Pn**	**06 50 20.8**	**+1.3**
CHOS	**Chios island**	**4.02**	**24**	P	**Pn**	**06 50 20.0**	**+0.4**
ATAL	**Atalanti**	**4.05**	**349**	P	**Pn**	**06 50 20.6**	**+0.7**
AXS	**Araxos**	**4.07**	**329**	P	**Pn**	**06 50 22.0**	**+1.8**
EFP	**Efpalio**	**4.07**	**336**	P	**Pn**	**06 50 23.1**	**+2.8**
AXAR	**Agios Charalam**	**4.18**	**345**	P	**Pn**	**06 50 23.6**	**+1.7**
URLA	**Izmir**	**4.19**	**29**	Pn	**Pn**	**06 50 24.0**	**+2.0**
YER	**Yerkesik**	**4.23**	**54**	Pn	**Pn**	**06 50 23.9**	**+1.4**
DALY	**Dalyan (Mula)**	**4.32**	**60**	Pn	**Pn**	**06 50 25.2**	**+1.5**
AYDB	**Zeytinkoy-Aydi**	**4.50**	**43**	Pn	**Pn**	**06 50 27.8**	**+1.6**
AKAS	**Kas**	**4.81**	**70**	Pn	**Pn**	**06 50 31.6**	**+1.0**
CAME	**Cameli-Denizli**	**4.84**	**61**	Pn	**Pn**	**06 50 32.4**	**+1.4**
APMY	**Acipayam-Deniz**	**5.09**	**56**	Pn	**Pn**	**06 50 36.0**	**+1.6**
ELL	**Elmali**	**5.21**	**65**	Pn	**Pn**	**06 50 37.5**	**+1.4**
KORT	**Korkueli**	**5.63**	**64**	Pn	**Pn**	**06 50 43.6**	**+1.7**
BRTR	**Keskin Array B**	**9.16**	**54**	Pn	**Pn**	**06 51 32.1**	**+1.8**
	0.1nm,0.3s,baz=232,slow=14,SNR=4.7						
BRTR				LR	LR	06 55 46.5	
	comp=Z,87nm,18.8s,baz=238,slow=43						
	1.3nm,0.8s						
VRAC	**Vranov**	**15.57**	**342**	LR	LR	06 59 54.0	
	comp=Z,50nm,18.5s,baz=172,slow=41						
GERES	**GERESS Array B**	**16.05**	**335**	Pn	**Pn**	**06 53 04.1**	**+0.5**
	baz=149,slow=12,SNR=2.4						
GERES				LR	LR	07 00 57.0	
	comp=Z,69nm,19.4s,baz=258,slow=44						
	0.3nm,0.2s						
AKASG	**Malin Array Be**	**16.42**	**12**	Pn	**Pn**	**06 53 09.0**	**+0.8**
	0.8nm,0.3s,baz=211,slow=9.7,SNR=5.1						
GNI	**Garni**	**17.33**	**66**	LR	LR	07 01 14.0	
	comp=Z,65nm,18.5s,baz=256,slow=42						
ESDC	**Sonseca Array**	**22.78**	**291**	P	**P**	**06 54 21.4**	**+1.2**
	1.4nm,0.9s,baz=90,slow=9.6,SNR=4.6						
	1.4nm,0.9s						
MDT	**Midelt**	**23.83**	**274**	LR	LR	07 06 11.3	
	comp=Z,49nm,18.7s,baz=38,slow=43						
HFS	**Hagfors**	**26.30**	**348**	P	**P**	**06 54 52.1**	**-0.9**
	1.4nm,0.5s,baz=142,slow=12,SNR=5.9						
	1.4nm,0.5s						
FINES	**FINESS Array B**	**26.78**	**2**	P	**P**	**06 54 55.2**	**-2.1**
	3.0nm,0.9s,baz=194,slow=11,SNR=1.3						
FINES				LR	LR	07 07 06.1	
	comp=Z,56nm,18.8s,baz=163,slow=40						
	3.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**29.48**	**229**	P	**P**	**06 55 21.7**	**-0.2**
	1.4nm,0.4s,baz=31,slow=12,SNR=2.9						
	1.4nm,0.4s						
ARCES	**ARCESS Array B**	**34.88**	**1**	P	**P**	**06 56 06.1**	**-2.5**
	3.0nm,1.0s,baz=193,slow=5.0,SNR=3.5						
	3.0nm,1.0s						
KURBB	**Kurchatov Arra**	**42.13**	**51**	P	**P**	**06 57 09.4**	**-0.3**
	1.2nm,0.2s,baz=280,slow=8.7,SNR=5.5						
	1.2nm,0.2s						
MKAR	**Makanchi Array**	**44.81**	**56**	P	**P**	**06 57 30.5**	**-0.9**
	0.6nm,0.4s,baz=271,slow=8.5,SNR=7.7						
	0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**45.99**	**46**	P	**P**	**06 57 39.5**	**-1.2**
	1.0nm,0.4s,baz=268,slow=9.5,SNR=4.4						
	1.0nm,0.4s						
SONM	**Songino Array**	**60.50**	**50**	P	**P**	**06 59 27.3**	**-0.3**
	0.4nm,0.5s,baz=291,slow=5.5,SNR=2.0						
	0.4nm,0.5s						

JMA ***04*** *06:52:13.8±0.2, 30°N±2°×13°9E±°, h457^{km}, MV3.4/20,*
NEAR TORISHIMA IS
IDC ***04*** *06:52:15.1±1.3, 29°.90N×138°.73E, h443^{km}±15^{km},*
mb3.2/12, mbtmp4.1/17, Error ellipse: s-maj=16.1km
s-min=11.4km az=97.0
NEIC ***04*** *06:52:15.1±1.5, 29°.86N±0°.09×138°.75E±0°.10,*
h438^{km}±8^{km}, mb4.0/48, Error ellipse: s-maj=16.1km
s-min=8.3km az=136.0
ISC 04 06:52:15.2±0.5**,29°.87N**±0°.06×**138°.85E**±0°.07**,h450**^{km}**,n92,**
σ**1^{s}57**/97**,mb3.9**/36**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**3.33**	**14**	P	**P**	**06 53 23.4**	**-1.2**
JHJ2	**Mitsune**	**3.33**	**14**	*e*P	**P**	**06 53 23.9**	**-0.8**
JHJ2				*e*S	**S**	**06 54 18.5**	**-2.7**
JHJ	**Hachijo jima 2**	**3.33**	**14**	P	**P**	**06 53 24.3**	**-0.4**
	78nm,0.3s,baz=279,slow=22,SNR=14						
JHJ				S	**S**	**06 54 18.6**	**-2.7**
	161nm,0.3s,baz=238,slow=23,SNR=5.9						
CBIJ	**Chichi jima**	**4.04**	**132**	*e*P	**P**	**06 53 28.9**	**-1.9**
CBIJ				*e*S	**S**	**06 54 27.6**	**-4.4**
JCJ	**Chichijima**	**4.04**	**132**	S	S	06 54 17.5	-15
	220nm,0.5s,baz=288,slow=23,SNR=19						
JCJ	**Chichijima**	**4.04**	**132**	P	**P**	**06 53 28.4**	**-2.3**
JIE	**Ise**	**4.86**	**339**	*e*P	**P**	**06 53 38.7**	**+0.7**
JIE				*e*S	**S**	**06 54 45.6**	**-0.1**
BSO1	**Boso 1**	**5.10**	**20**	*e*P	**P**	**06 53 39.1**	**-0.6**
BSO1				*e*S	**S**	**06 54 46.2**	**-2.7**
JOD2	**Odawara 2**	**5.38**	**2**	*e*P	**P**	**06 53 40.9**	**-2.3**
JOD2				*e*S	**S**	**06 54 50.9**	**-4.1**
JNY	**Yasuok**	**5.53**	**352**	*e*P	**P**	**06 53 45.0**	**+0.3**
INU	**Inuyama**	**5.67**	**345**	P	**P**	**06 53 45.8**	**-0.2**
JMN	**Monobe**	**5.71**	**314**	P	**P**	**06 53 46.3**	**-0.2**
JGF	**Kuroka**	**5.85**	**348**	P	**P**	**06 53 47.9**	**+0.1**
JRY	**Ryogami san**	**6.13**	**0**	*e*P	**P**	**06 53 49.5**	**-1.2**
JRY				*e*S	**S**	**06 55 04.7**	**-4.2**
MJAR	**Matsushiro Arr**	**6.67**	**356**	P	**P**	**06 53 54.3**	**-2.0**
	4.6nm,0.4s,baz=170,slow=12,SNR=14						
MJAR	**Matsushiro Arr**	**6.67**	**356**	P	**P**	**06 53 55.4**	**-1.0**
MAJO	**Matsushiro**	**6.67**	**356**	P	**P**	**06 53 55.3**	**-1.1**
MJB9	**Matsu-Tunnel**	**6.68**	**356**	P	**P**	**06 53 56.1**	**-0.3**
JHS	**Saijyo**	**7.04**	**318**	*e*P	**P**	**06 54 00.9**	**+0.7**
JNU	**Nakatsue**	**7.54**	**297**	P	**P**	**06 54 04.5**	**-1.0**
JSJ	**Shimokoshiki**	**8.06**	**285**	*e*P	**P**	**06 54 11.2**	**0.0**
JMK	**Ichinoseki**	**9.27**	**12**	*e*P	**P**	**06 54 24.0**	**-0.2**
JMK				*e*S	**S**	**06 56 06.9**	**-3.4**
JOW	**Kunigami**	**9.79**	**255**	P	**P**	**06 54 31.2**	**+1.1**
	24nm,0.5s,baz=102,slow=10,SNR=11						
JOW	**Kunigami**	**9.79**	**255**	P	**P**	**06 54 30.8**	**+0.7**
JTM	**Tenmabayashi**	**11.04**	**9**	P	**P**	**06 54 44.1**	**+0.7**
KSRS	**Korea Array**	**11.82**	**313**	P	**P**	**06 54 51.8**	**-0.2**
	1.7nm,0.5s,baz=124,slow=10.0,SNR=5.0						
USRK	**Ussuriysk Ar.**	**15.30**	**341**	P	**P**	**06 55 29.1**	**-0.2**
	15nm,0.5s,baz=142,slow=10,SNR=27						
YULB	**Yu-li**	**16.96**	**252**	P	**P**	**06 55 44.5**	**-2.7**
SSLB	**Suanglung**	**17.07**	**253**	P	**P**	**06 55 47.1**	**-1.3**
TPUB	**Ta-pu**	**17.55**	**252**	P	**P**	**06 55 54.1**	**+0.7**
LZDM	**Lanzhou Array**	**30.02**	**291**	P	**P**	**06 57 45.3**	**-0.8**
	1.4nm,0.3s,baz=132,slow=8.2,SNR=4.4						
	1.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**37.96**	**262**	P	**P**	**06 58 52.5**	**-0.7**
	1.4nm,0.3s,baz=59,slow=8.2,SNR=4.4						
	1.4nm,0.3s						
EVN	**Everest**	**45.27**	**281**	P	**P**	**06 59 51.4**	**-0.6**
EVN				IAmb	IAmb	06 59 52.5	
	comp=Z,5.2nm,0.6s						
KNRA	**Kununurra**	**46.32**	**193**	P	**P**	**06 59 59.0**	**-0.2**
KNRA				IAmb	IAmb	07 00 15.9	
	comp=Z,9.5nm,1.2s						
MKAR	**Makanchi Array**	**46.45**	**308**	P	**P**	**06 59 59.5**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=87,slow=10.0,SNR=6.2						
	comp=Z,0.3nm,0.3s						
GSI	**Gunungsitoli**	**48.41**	**242**	P	**P**	**07 00 14.4**	**-0.8**
KURK	**Kurchatov**	**48.95**	**313**	P	**P**	**07 00 18.6**	**-0.1**
KURK	**Kurchatov**	**48.95**	**313**	IAmb	IAmb	07 00 20.5	
	comp=Z,1.9nm,1.0s						
KURBB	**Kurchatov Arra**	**49.00**	**313**	P	**P**	**07 00 18.6**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=92,slow=8.4,SNR=2.1						
	comp=Z,0.4nm,0.3s						
FITZ	**Fitzroy Crossi**	**49.36**	**197**	P	**P**	**07 00 22.7**	**+0.5**
F15K	**North Star Dit**	**49.50**	**27**	P	**P**	**07 00 24.9**	**+2.3**
F15K				IAmb	IAmb	07 01 04.5	
	comp=Z,8.2nm,1.1s						
WB0	**Warramunga Arr**	**49.54**	**186**	P	**P**	**07 00 23.8**	**+0.3**
WB0				IAmb	IAmb	07 00 24.2	
	comp=Z,2.8nm,0.6s						
WR8	**Warramunga Arr**	**49.72**	**185**	P	**P**	**07 00 25.1**	**+0.3**
WRA	**Warramunga Arr**	**49.72**	**186**	P	**P**	**07 00 24.9**	**+0.1**
	comp=Z,2.3nm,0.5s,baz=1.3,slow=7.7,SNR=20						
	comp=Z,2.3nm,0.5s						
WRA	**Warramunga Arr**	**49.72**	**186**	IAmb	IAmb	07 00 25.9	
	comp=Z,0.2nm,0.9s						
K15K	**Wolf Creek Mou**	**49.95**	**32**	P	**P**	**07 00 27.4**	**+1.3**
K15K				IAmb	IAmb	07 00 58.3	
	comp=Z,14nm,1.4s						
N15K	**Kwethluk River**	**50.26**	**35**	P	**P**	**07 00 30.0**	**+1.7**
N15K				IAmb	IAmb	07 01 03.6	
	comp=Z,23nm,1.5s						
H18K	**Honhosa River**	**51.91**	**29**	P	**P**	**07 00 41.8**	**+1.5**
F19K	**Shaleruckik Mo**	**52.48**	**26**	P	**P**	**07 00 45.5**	**+1.2**
E19K	**Redstone River**	**52.81**	**26**	P	**P**	**07 00 48.7**	**+1.9**
E19K				IAmb	IAmb	07 00 49.6	
	comp=Z,5.0nm,0.7s						
D20K	**Etivluk River**	**53.30**	**24**	P	**P**	**07 00 52.0**	**+1.7**
D20K				IAmb	IAmb	07 00 52.7	
	comp=Z,7.1nm,1.1s						
AS31	**Alice Springs**	**53.44**	**186**	P	**P**	**07 00 51.6**	**-0.3**
ASAR	**Alice Springs**	**53.44**	**186**	P	**P**	**07 00 52.2**	**+0.4**
	comp=Z,1.2nm,0.5s,baz=4.1,slow=6.4,SNR=25						
	comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**53.44**	**186**	P	**P**	**07 00 52.0**	**+0.2**
K20K	**Telida**	**53.50**	**31**	P	**P**	**07 00 54.2**	**+2.4**
K20K				IAmb	IAmb	07 00 55.0	
	comp=Z,5.1nm,0.7s						
M20K	**Styx River**	**53.81**	**33**	P	**P**	**07 00 56.5**	**+2.3**
M20K				IAmb	IAmb	07 00 59.8	
	comp=Z,5.1nm,1.0s						
IMAR	**Indian Mountai**	**53.93**	**28**	P	**P**	**07 00 56.3**	**+1.5**
BVAR	**Borovoye Array**	**54.01**	**316**	P	**P**	**07 00 55.4**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=85,slow=7.4,SNR=6.7						
	comp=Z,1.0nm,0.4s						
SKT	**Skwentna**	**54.57**	**33**	P	**P**	**07 01 01.2**	**+1.8**
SKT				IAmb	IAmb	07 01 18.3	
	comp=Z,7.0nm,1.4s						
CNPM	**China Poot**	**54.66**	**36**	P	**P**	**07 01 01.3**	**+1.2**
D22K	**Ayikyak River**	**54.73**	**24**	P	**P**	**07 01 02.5**	**+2.1**
D22K				IAmb	IAmb	07 01 03.5	
	comp=Z,10nm,1.4s						
BPAW	**Bear Paw Mtn.**	**54.92**	**30**	P	**P**	**07 01 03.4**	**+1.5**
SUA	**Susitna One**	**54.93**	**34**	P	**P**	**07 01 03.3**	**+1.2**
E22K	**Anaktuvuk Pass**	**54.95**	**25**	P	**P**	**07 01 04.0**	**+2.0**
E22K				IAmb	IAmb	07 01 04.8	
	comp=Z,7.5nm,1.2s						
KKAR	**Karatay Array**	**55.09**	**304**	P	**P**	**07 01 02.9**	**-0.5**
TRF	**Thorofare Moun**	**55.20**	**31**	P	**P**	**07 01 05.7**	**+1.6**
TRF				IAmb	IAmb	07 01 27.8	
	comp=Z,12nm,1.5s						
H24K	**Noodor Dome**	**56.32**	**28**	P	**P**	**07 01 13.8**	**+2.2**
F24K	**Squaw Lake**	**56.38**	**26**	P	**P**	**07 01 13.9**	**+1.9**
IL31		**56.72**	**30**	P	**P**	**07 01 15.0**	**+0.7**
IL31				IAmb	IAmb	07 01 46.9	
	comp=Z,7.2nm,1.5s						
ILAR	**Eielson Array**	**56.72**	**30**	P	**P**	**07 01 14.7**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=259,slow=4.9,SNR=18						
	comp=Z,0.9nm,0.7s						
RIDG	**Independent Ri**	**57.64**	**31**	P	**P**	**07 01 21.9**	**+1.2**
RIDG				IAmb	IAmb	07 01 29.1	
	comp=Z,9.7nm,1.4s						
DOT	**Dot Lake**	**57.99**	**31**	P	**P**	**07 01 24.2**	**+1.1**
DOT				IAmb	IAmb	07 01 24.9	
	comp=Z,4.8nm,1.0s						
J26L	**Joseph Creek**	**58.16**	**30**	P	**P**	**07 01 25.3**	**+0.9**
J26L				IAmb	IAmb	07 01 25.7	
	comp=Z,3.5nm,0.7s						
VRDI	**Verde Repeater**	**58.45**	**34**	P	**P**	**07 01 26.3**	**-0.2**
MCARA	**McCarthy VSAT**	**58.64**	**33**	P	**P**	**07 01 29.4**	**+1.8**
CRQM	**Cirque**	**58.65**	**34**	P	**P**	**07 01 27.7**	**-0.1**
I27K	**Kandik River**	**58.91**	**28**	P	**P**	**07 01 31.1**	**+1.7**
I27K				IAmb	IAmb	07 01 43.1	
	comp=Z,7.1nm,1.4s						
ISLE	**Juniper Island**	**59.06**	**34**	P	**P**	**07 01 31.8**	**+1.2**
BCAR	**Beaver Creek A**	**59.06**	**31**	P	**P**	**07 01 31.1**	**+0.7**
DAWY	**Dawson**	**60.01**	**30**	P	**P**	**07 01 38.0**	**+1.1**
AB31	**Akbulak array**	**61.06**	**313**	P	**P**	**07 01 43.7**	**-0.2**
ABKAR	**Akbulak array**	**61.06**	**313**	P	**P**	**07 01 43.5**	**-0.5**
FORT	**Forrest**	**61.19**	**191**	P	**P**	**07 01 45.6**	**+0.7**
FORT				IAmb	IAmb	07 02 27.5	
	comp=Z,9.3nm,1.3s						
G31M	**Satah River**	**61.70**	**27**	P	**P**	**07 01 49.0**	**+1.2**
G31M				IAmb	IAmb	07 01 49.3	
	comp=Z,3.5nm,0.6s						
INK	**Inuvik**	**61.74**	**25**	P	**P**	**07 01 49.2**	**+1.2**
INK				IAmb	IAmb	07 02 26.5	
	comp=Z,7.7nm,1.5s						
BBOO	**Buckleboo**	**62.40**	**183**	P	**P**	**07 01 53.7**	**+0.9**
A36M	**Sachs Harbour**	**63.69**	**20**	P	**P**	**07 02 02.2**	**+1.5**
A36M				IAmb	IAmb	07 02 03.4	
	comp=Z,4.7nm,0.8s						
ARCES	**ARCESS Array B**	**69.95**	**340**	P	**P**	**07 02 39.9**	**+0.3**
	comp=Z,3.2nm,0.8s,baz=54,slow=6.2,SNR=5.3						
	comp=Z,3.2nm,0.8s						
YKA	**Yellowknife Ar**	**71.09**	**28**	P	**P**	**07 02 47.2**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=293,slow=6.7,SNR=6.8						
	comp=Z,0.6nm,0.6s						
FINES	**FINESS Array B**	**74.15**	**333**	P	**P**	**07 03 04.0**	**-0.2**
	comp=Z,2.7nm,0.8s,baz=349,slow=3.9,SNR=3.6						
	comp=Z,2.7nm,0.8s						
NVAR	**Mina Array Bea**	**81.08**	**51**	P	**P**	**07 03 45.3**	**+2.6**
	comp=Z,0.3nm,0.6s,baz=284,slow=4.3,SNR=3.9						
	comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	**96.23**	**51**	P	**P**	**07 04 58.3**	**+3.7**
	comp=Z,0.2nm,0.6s,baz=331,slow=6.5,SNR=2.4						

NOU ***04*** *07:11:47.4, 37°.18S×179°.61E, h0^{km}, MLv3.8/7, Off E.*
Coast of N. Island, N.Z.
WEL ***04*** *07:11:56.6±0.7, 37°S±3°×17°9E±°, h12^{km}, M3.1/18,*
ML3.1/22, MLv3.1/18, Error ellipse: s-maj=6.6km
s-min=4.0km az=91.2, confirmed
ISC 04 07:11:53.1±2.6**,37°.19S**±0°.06×**179°.1E**±0°.1**,h17**^{km}±10^{km}**,**
n49,σ**1^{s}54**/78**,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**0.73**	**239**	P	**Pb**	**07 12 07.8**	**+0.5**
MXZ	**Matakaoa Point**	**0.73**	**239**	P	**Pb**	**07 12 07.9**	**+0.5**
MXZ				S	**Sg**	**07 12 16.4**	**-0.7**
WMGZ	**Waiomatatini S**	**0.83**	**221**	P	**Pn**	**07 12 11.2**	**+1.2**
WMGZ				S	**Sn**	**07 12 23.3**	**+1.5**
PKGZ	**Pakihiroa**	**1.05**	**230**	P	**Pn**	**07 12 14.4**	**+1.4**
PKGZ				S	**Sb**	**07 12 27.9**	**+1.6**
PUZ	**Puketiti**	**1.10**	**217**	P	**Pn**	**07 12 14.9**	**+1.1**
PUZ				S	**Sb**	**07 12 29.0**	**+1.2**
HAZ	**Te Kaha**	**1.19**	**241**	P	**Pg**	**07 12 15.0**	**-1.1**
HAZ				S	**Sg**	**07 12 31.4**	**-0.2**
TWGZ	**Tauwhareparae**	**1.32**	**222**	P	**Pg**	**07 12 18.4**	**-0.2**
TWGZ				S	**Sb**	**07 12 35.6**	**+1.4**
RUGZ	**Raukumara Rang**	**1.37**	**235**	P	**Pg**	**07 12 19.2**	**-0.2**
RUGZ				S	**Sb**	**07 12 35.7**	**+0.2**
CNGZ	**Carnagh Statio**	**1.47**	**208**	P	**Pg**	**07 12 20.8**	**-0.6**
TKGZ	**Te Karaka**	**1.59**	**218**	P	**Pn**	**07 12 21.5**	**+1.1**
TKGZ				S	**Sn**	**07 12 41.4**	**+0.8**
MWZ	**Matawai**	**1.69**	**227**	P	**Pn**	**07 12 23.2**	**+1.3**
MWZ				S	**Sn**	**07 12 43.1**	**+0.1**
RIGZ	**Rimuhau**	**1.84**	**215**	P	**Pn**	**07 12 25.0**	**+1.1**
RIGZ				S	**Sn**	**07 12 47.9**	**+1.0**
RAGZ	**Rawiri**	**1.86**	**225**	P	**Pn**	**07 12 25.9**	**+1.6**
URZ	**Urewera**	**1.90**	**235**	P	**Pn**	**07 12 26.1**	**+1.4**
URZ	**Urewera**	**1.90**	**235**	P	**Pn**	**07 12 26.1**	**+1.4**
URZ				S	**Sn**	**07 12 48.1**	**-0.1**
SNGZ	**Shannon Statio**	**2.11**	**221**	P	**Pn**	**07 12 29.1**	**+1.5**
SNGZ				S	**Sn**	**07 12 54.4**	**+1.0**
KNZ	**Kokohu**	**2.14**	**211**	P	**Pn**	**07 12 28.3**	**+0.3**
KNZ				S	**Sn**	**07 12 53.1**	**-1.2**
MHGZ	**Mahia Peninsul**	**2.17**	**205**	P	**Pn**	**07 12 29.2**	**+0.7**
RTZ	**Ruatahuna**	**2.19**	**229**	P	**Pn**	**07 12 30.6**	**+1.8**
RTZ				S	**Sn**	**07 12 55.5**	**-0.1**
WHHZ	**Waihua**	**2.39**	**217**	P	**Pn**	**07 12 32.5**	**+1.1**
WHHZ				S	**Sn**	**07 13 00.2**	**-0.1**
MTHZ	**Maungataniwha**	**2.43**	**226**	P	**Pn**	**07 12 33.2**	**+1.1**
MTHZ				S	**Sn**	**07 13 00.9**	**-0.6**
KMRZ	**Kaimai**	**2.59**	**254**	P	**Pn**	**07 12 35.1**	**+0.8**
NMHZ	**Naumai**	**2.62**	**223**	P	**Pn**	**07 12 36.2**	**+1.4**
NMHZ				S	**Sn**	**07 13 05.4**	**-0.8**
ARHZ	**Aropaoanui**	**2.65**	**218**	P	**Pn**	**07 12 35.6**	**+0.6**
ARHZ				S	**Sn**	**07 13 05.7**	**-1.0**
KUZ	**Kuaotunu**	**2.74**	**278**	P	**Pn**	**07 12 37.2**	**+1.0**
KUZ	**Kuaotunu**	**2.74**	**278**	P	**Pn**	**07 12 36.1**	**-0.2**
KUZ				S	**Sn**	**07 13 04.5**	**-4.4**
BKZ	**Black Stump Fm**	**2.84**	**225**	P	**Pn**	**07 12 39.0**	**+1.2**
BKZ	**Black Stump Fm**	**2.84**	**225**	P	**Pn**	**07 12 38.4**	**+0.7**
BKZ				S	**Sn**	**07 13 09.5**	**-2.2**
TOZ	**Tahuroa Road**	**2.91**	**258**	P	**Pn**	**07 12 39.5**	**+0.9**
MCHZ	**McNeill Hill**	**2.94**	**219**	P	**Pn**	**07 12 39.4**	**+0.4**
MCHZ				S	**Sn**	**07 13 13.6**	**-0.2**
KWHZ	**Kaweka Forest**	**3.06**	**223**	P	**Pn**	**07 12 40.9**	**+0.1**
KWHZ				S	**Sn**	**07 13 15.5**	**-1.6**
GRZ	**Great Barrier**	**3.07**	**287**	P	**Pn**	**07 12 42.7**	**+1.9**
KAHZ	**Kahuranaki**	**3.13**	**213**	P	**Pn**	**07 12 41.3**	**-0.3**
KAHZ				S	**Sn**	**07 13 16.9**	**-1.7**
MKAZ	**Moumakai**	**3.15**	**270**	P	**Pn**	**07 12 42.1**	**+0.3**
MKAZ				S	**Sn**	**07 13 15.1**	**-3.9**
KRHZ	**Kereru**	**3.25**	**220**	P	**Pn**	**07 12 43.1**	**-0.2**
KRHZ				S	**Sn**	**07 13 19.0**	**-2.6**
TMVZ	**Te Maari**	**3.29**	**233**	P	**Pn**	**07 12 44.6**	**+0.7**
TMVZ				S	**Sn**	**07 13 19.8**	**-3.0**
ETVZ	**East Tongariro**	**3.30**	**233**	P	**Pn**	**07 12 44.9**	**+0.8**
ETVZ				S	**Sn**	**07 13 20.6**	**-2.4**
NTVZ	**North Tongarir**	**3.30**	**234**	P	**Pn**	**07 12 45.0**	**+0.9**
KRVZ	**Karewarewa**	**3.32**	**234**	P	**Pn**	**07 12 45.3**	**+0.9**
ETAZ	**East Tamaki Re**	**3.34**	**273**	P	**Pn**	**07 12 46.9**	**+2.4**
NNVZ	**North Ngauruho**	**3.36**	**234**	P	**Pn**	**07 12 46.1**	**+1.2**
PNHZ	**Pukenui**	**3.54**	**219**	P	**Pn**	**07 12 46.7**	**-0.6**
PNHZ				S	**Sn**	**07 13 26.2**	**-2.6**
HIZ	**Hauiti**	**3.61**	**247**	P	**Pn**	**07 12 50.4**	**+2.2**
HIZ	**Hauiti**	**3.61**	**247**	P	**Pn**	**07 12 50.1**	**+2.0**
PRHZ	**Porangahau**	**3.62**	**211**	P	**Pn**	**07 12 47.2**	**-1.2**
DVHZ	**Dannevirke**	**3.86**	**216**	P	**Pn**	**07 12 50.4**	**-1.2**
DVHZ				S	**Sn**	**07 13 32.1**	**-4.4**
BFZ	**Birch Farm**	**4.13**	**212**	P	**Pn**	**07 12 54.0**	**-1.4**
OUZ	**Omahuta**	**4.86**	**292**	P	**Pn**	**07 13 07.3**	**+1.9**
OUZ	**Omahuta**	**4.86**	**292**	P	**Pn**	**07 13 07.4**	**+1.9**

IDC 04 07:29:07.4±5.4, 19.°12S×176.°28W, h0km, mb3.6/3, mbtmp3.6/3, MS3.4/6, Error ellipse: s-maj=396.9km s-min=33.2km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	16.44	257	LR	LR	07 37 59.6	
	comp=Z,65nm,18.6s,baz=166,slow=32						
PPT	Papeete	25.39	91	LR	LR	07 43 14.3	
	comp=Z,42nm,18.4s,baz=255,slow=33						
WRA	Warramunga Arr	46.41	260	P	P	07 37 37.1	+0.9
	0.5nm,0.7s,baz=94,slow=8.1,SNR=2.4						
	0.5nm,0.7s						
ASAR	Alice Springs	46.42	255	P	P	07 37 35.5	-0.8
	1.2nm,0.8s,baz=89,slow=8.3,SNR=13						
ASAR				LR	LR	07 57 22.2	
	comp=Z,88nm,18.5s,baz=106,slow=36						
	1.2nm,0.8s						
QSPA	South Pole Qui	70.94	180	LR	LR	08 10 07.8	
	comp=Z,24nm,18.0s,baz=44,slow=35						
NVAR	Mina Array Bea	78.92	43	P	P	07 41 13.3	+0.1
	0.3nm,0.6s,baz=240,slow=4.2,SNR=3.7						
	0.3nm,0.6s						
TXAR	Lajitas Array	84.95	57	LR	LR	08 16 33.9	
	comp=Z,27nm,18.4s,baz=86,slow=34						
PLCA	Paso Flores	89.03	133	LR	LR	08 17 40.3	
	comp=Z,21nm,18.1s,baz=260,slow=33						
AKASG	Malin Array Be	142.56	333	PKP	PKPdf	07 48 41.2	-1.1
	0.2nm,0.3s,baz=42,slow=3.2,SNR=4.2						

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*TIR **04** 07:47:44.3, 41.°50N×19.°61E, h12km±2km, Md3.1/1, Ml3.1/3*
*SKO **04** 07:47:44.0, 41.°43N×19.°51E, h14km, ML2.7*
*PDG **04** 07:47:45.1±0.2, 41.°53N×19.°59E, h5km, MD3.3/2, ML3.3/13, Error ellipse: s-maj=0.9km s-min=1.4km az=0.0*
ISC 04 07:47:43.7±1.0, 41.°48N±0.°02×19.°60E±0.°02, h18km±6km, n41, σ1.73/61, 19C-11D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.24	124	Pg	Pg	07 47 48.7	-0.5
TIR				AML	AML	07 47 52.7	
	41nm,0.2s						
TIR				Sg	Sg	07 47 52.9	-0.1
ULC	Ulcinj	0.55	331	⇑ iPg	Pg	07 47 54.4	-0.4
ULC				i Sg	Sb	07 48 02.6	+0.1
SDA	Shkodra	0.57	352	Pg	Pg	07 47 54.9	-0.3
SDA				Sg	Sb	07 48 04.9	+1.8
SDA				AMd		07 49 04.8	
PHP	Peshkopia	0.66	72	Pg	Pg	07 47 56.0	-0.8
PHP				Sg	Sb	07 48 07.0	+1.3
PHP				AML	AML	07 48 10.0	
	3.9nm,0.3s						
DRME	Dracevica, Mon	0.77	336	⇑ iPg	Pb	07 47 58.0	-0.6
DRME				eSg	Sn	07 48 10.5	-0.4
BUM	Brajici-Budva	0.97	327	⇑ iPg	Pn	07 48 03.0	+0.4
BUM				i Sg	Sn	07 48 17.5	+1.4
OHR	Ohrid	0.97	112	i Pg	Pb	07 48 01.7	-0.5
OHR				i Sg	Sn	07 48 17.3	+1.3
OHR				eLg	Lg	07 48 17.8	
	comp=N,123nm,0.4s						
OHR				eLg	Lg	07 48 20.1	
	comp=E,220nm,0.4s						
PDG	Podgorica	0.98	345	Pn	Pg	07 48 03.2	+0.4
PDG				Sn	Sn	07 48 17.4	+1.2
PDG	Podgorica	0.98	345	⇑P	Pb	07 48 01.9	-0.3
PDG				⇓S	Sn	07 48 17.2	+1.1
PDG	Podgorica	0.98	345	⇑ iPg	Pb	07 48 02.4	+0.2
PDG				i Sg	Sn	07 48 17.0	+0.9
VLO	Vlora	1.02	185	Pn	Pg	07 48 03.8	+0.4
VLO				Sn	Sn	07 48 17.9	+1.0
PVY	Plav	1.14	13	⇑ iPg	Pn	07 48 04.7	-0.3
PVY				i Sg	Sg	07 48 22.5	+1.6
CEME	Cevo	1.18	335	⇓ iPg	Pb	07 48 06.0	+0.3
CEME				eSg	Sg	07 48 23.9	+1.9
KBN	Korca	1.24	133	Pn	Pg	07 48 07.7	0.0
KBN				Sn	Sg	07 48 25.1	+1.1
HCY	Herceg Novi	1.27	320	⇓ iPg	Pg	07 48 08.0	-0.3
HCY				i Sg	Sg	07 48 26.6	+1.7
KOME	Kolasin	1.37	357	⇓ iPg	Pb	07 48 09.7	+0.8
KOME				eSg	Sg	07 48 30.1	+2.0
NKME	Niksic	1.37	340	⇑ iPg	Pb	07 48 09.6	+0.7
NKME				eSg	Sg	07 48 30.2	+2.1
IVA	Berane	1.41	9	⇓ iPg	Pb	07 48 09.6	+0.1
IVA				i Sg	Sg	07 48 31.2	+2.0
SKO	Skopje	1.46	70	i Pg	Pb	07 48 11.5	+1.1
SKO				i Sg	Sg	07 48 33.2	+2.3
BRY	Bratogost	1.62	331	⇓ iPn	Pb	07 48 13.7	+0.4
BRY				i Sn	Sg	07 48 37.7	+1.5
UPM	Unac-Piva	1.80	343	⇑ iPn	Pb	07 48 17.1	+0.9
UPM				i Sn	Sg	07 48 42.6	+0.9
PLE	Pljevlja	1.85	355	⇑ iPn	Pb	07 48 18.2	+1.0
PLE				i Sn	Sg	07 48 43.9	+0.4
NOCI	Noci	2.04	251	Pn	Pn	07 48 16.4	-0.9
NOCI				S	Sg	07 48 48.6	-0.8
BARS	Barje	2.12	50	i Pn	Pb	07 48 20.5	-1.1
GRG	Griva	2.17	103	i Pn	Pn	07 48 21.2	+2.1
VAY	Valandovo	2.24	93	i Pn	Pb	07 48 23.1	-0.5
VAY				i Sn	Sn	07 48 48.8	+1.7
VAY				eLg	Lg	07 48 50.1	
	comp=E,27nm,0.8s						
VAY				eLg	Lg	07 48 50.5	
	comp=N,13nm,0.7s						
MATE	Matera	2.34	250	⇓P	Pn	07 48 19.5	-1.9
BOVS	Bovan	2.65	35	⇓P	Pn	07 48 21.3	-4.3
SRS	Serrai	3.03	96	i Pn	Pn	07 48 32.2	+1.4
BLKB	Belogradchik	3.12	46	⇑S	Sn	07 49 04.6	-4.3
TIP	Timpagrande	3.17	224	⇑P	Pn	07 48 29.7	-3.0
MDVR	Moldovita	3.64	24	⇑P	Pn	07 48 35.7	-3.6
MDVR				⇓S	Sn	07 49 21.3	-0.5
HERR	Herculane	3.97	30	⇓P	Pn	07 48 40.0	-3.8
SRE	Strehaia	4.13	38	⇑P	Pn	07 48 40.9	-5.1
BZS	Buzias	4.38	19	⇑P	Pn	07 48 46.6	-2.9
GZR	Gura Zlata	4.54	30	⇑P	Pn	07 48 47.4	-4.2
MORH	Mrgy, Hungar	4.78	352	⇑P	Pn	07 48 53.2	-1.7
ARR	Arges	5.34	42	⇓P	Pn	07 48 57.6	-5.0
VOIR		5.60	43	⇑P	Pn	07 49 01.0	-5.2
DRGR		5.76	22	⇑P	Pn	07 49 03.3	-5.1
MLR	Muntele Rosu	6.11	47	⇑P	Pn	07 49 08.0	-5.2

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*IDC **04** 07:52:53.9±0.8, 32.°93N×104.°66E, h0km, mb3.9/10, mbtmp3.9/13, ML3.6/3, Error ellipse: s-maj=36.5km s-min=12.6km az=66.0*
*NEIC **04** 07:52:55.9±1.9, 32.°9N±0.°1×104.°6E±0.°2, h10km±1km, mb4.3/6, Error ellipse: s-maj=31.4km s-min=5.5km az=237.0*
ISC 04 07:52:59.1±0.8, 33.°0N±0.°1×104.°7E±0.°2, h35km, n19, σ0.72/18, mb4.0/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZDM	Lanzhou Array	3.11	345	Pn	Pn	07 53 46.0	0.0
	baz=162,slow=15						
LZDM				Sn	Sn	07 54 23.8	+1.7
	baz=62,slow=19						
LZDM				Lg	Lg	07 54 32.1	
	baz=150,slow=18						
	15nm,0.3s						
ENH	Enshi	4.87	122	Pn	Pn	07 54 10.2	+0.3
SONM	Songino Array	14.92	4	Pn	Pn	07 56 26.4	-1.0
	0.1nm,0.3s,baz=182,slow=14,SNR=3.8						
	0.7nm,0.7s						
KSRS	Korea Array	19.47	70	P	P	07 57 23.1	+0.2
	0.2nm,0.3s,baz=264,slow=9.9,SNR=5.7						
	2.1nm,0.8s						
MKAR	Makanchi Array	21.97	316	P	P	07 57 50.6	+0.7
	1.2nm,0.7s,baz=111,slow=12,SNR=6.5						
	1.2nm,0.7s						
ZALV	Zalesovo Beam	25.31	332	P	P	07 58 22.3	0.0
	1.1nm,0.6s,baz=128,slow=9.6,SNR=3.9						
	1.1nm,0.6s						
KURBB	Kurchatov Arra	26.11	320	P	P	07 58 29.1	-0.5
	1.6nm,0.9s,baz=137,slow=8.9,SNR=4.6						
	1.6nm,0.9s						
KURK	Kurchatov	26.11	321	P	P	07 58 29.1	-0.5
KURK	Kurchatov	26.11	321	IAmb	IAmb	07 58 43.2	
	comp=Z,1.8nm,0.7s						
NRIK	Noril'sk	37.70	350	P	P	08 00 11.2	+0.4
	comp=Z,2.0nm,0.5s,baz=156,slow=6.4,SNR=4.9						
	comp=Z,2.0nm,0.5s						
NRIK	Noril'sk	37.70	350	IAmb	IAmb	08 00 13.2	
	comp=Z,2.3nm,0.8s						
ARCES	ARCESS Array B	55.79	335	P	P	08 02 31.6	-0.7
	comp=Z,2.7nm,0.8s,baz=84,slow=8.3,SNR=4.8						
	comp=Z,2.7nm,0.8s						
FINES	FINESS Array B	56.33	326	P	P	08 02 35.6	-0.6
	comp=Z,3.7nm,1.0s,baz=161,slow=31,SNR=1.6						
	comp=Z,3.7nm,1.0s						
WB0	Warramunga Arr	59.61	147	P	P	08 02 59.4	-0.3
WB0				IAmb	IAmb	08 03 41.1	
	comp=Z,7.5nm,1.4s						
WRAB	Tennant Creek	59.73	147	P	P	08 02 59.9	-0.6
WRAB				IAmb	IAmb	08 03 01.3	
	comp=Z,3.8nm,0.6s						
WRA	Warramunga Arr	59.73	147	P	P	08 03 00.2	-0.3
	comp=Z,0.8nm,0.6s,baz=341,slow=7.2,SNR=7.7						
	comp=Z,0.8nm,0.6s						
ASAR	Alice Springs	62.81	150	P	P	08 03 21.2	-0.1
	comp=Z,0.9nm,0.8s,baz=336,slow=7.1,SNR=13						
	comp=Z,0.9nm,0.8s						
NOA	NORSAR Array B	63.39	327	P	P	08 03 24.1	-0.6
	comp=Z,0.4nm,0.6s,baz=74,slow=6.4,SNR=1.4						
	comp=Z,0.4nm,0.6s						
NWAO	Narrogin (SRO)	66.58	169	P	P	08 03 46.5	+0.9
	comp=Z,2.4nm,0.6s,baz=0.0,slow=7.1,SNR=1.6						
	comp=Z,2.4nm,0.6s						

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*TRN **04** 07:59:36.6, 18.°51N×64.°51W, h21km, MD0.0, Virgin Islands Region.*
*NEIC **04** 07:59:39.6±1.0, 19.°0N±0.°1×64.°56W±0.°06, h35km±2km, ML2.8/24, Md3.5/8(RSPR), Error ellipse: s-maj=23.2km s-min=8.7km az=3.0*
*RSPR **04** 07:59:40.1, 18.°95N×64.°52W, h33km±17km, MD3.5/8*
ISC 04 07:59:38.8±1.8, 18.°8N±0.°2×64.°48W±0.°05, h64km±45km, n44, σ0.98/52, 9C-2D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUMP	Col San Antoni	1.45	244		Pn	08 00 02.3	-0.6
HUMP					Sn	08 00 21.5	+0.4
HUMP	Col San Antoni	1.45	244	IAML		08 00 24.7	
	100nm,0.2s						
HUMP				IAML		08 00 25.3	
	101nm,0.2s						
HUMP	Col San Antoni	1.45	244	⇓eP	Pn	08 00 02.3	-0.6
HUMP	Col San Antoni	1.45	244	eS	Sn	08 00 21.5	+0.4
GCPR	Guaynabo City	1.59	253		Pn	08 00 04.5	-0.4
GCPR					Sn	08 00 24.0	-0.6
GCPR	Guaynabo City	1.59	253	⇓eP	Pn	08 00 04.5	-0.4
GCPR	Guaynabo City	1.59	253	eS	Sn	08 00 24.0	-0.6
SABA	Saba	1.65	134	Pn	Pn	08 00 09.7	+4.1
SABA				IAML		08 00 38.0	
	comp=N,132nm,0.6s						
SJG	San Juan	1.72	247	Pn	Pn	08 00 06.3	-0.3
SJG	San Juan	1.72	247	eP	Pn	08 00 04.5	-2.0
SJG				eS	Sn	08 00 27.0	-0.6
ECPR	Experimental S	1.85	256	Pn	Pn	08 00 08.1	-0.1
ECPR				IAML		08 00 32.3	
	comp=N,116nm,0.2s						
ECPR				IAML		08 00 43.9	
	comp=N,116nm,0.2s						
ECPR	Experimental S	1.85	256	⇑eP	Pn	08 00 08.2	-0.1
ECPR	Experimental S	1.85	256	eS	Sn	08 00 30.3	-0.4
EMPR	Esperanza - Ma	1.97	261		Pn	08 00 09.5	-0.4
EMPR					Sn	08 00 33.0	-0.6
EMPR	Esperanza - Ma	1.97	261	IAML		08 00 51.0	
	comp=N,84nm,0.5s						
EMPR				IAML		08 00 57.4	
	comp=N,75nm,1.4s						
EMPR	Esperanza - Ma	1.97	261	⇑eP	Pn	08 00 09.5	-0.4
EMPR	Esperanza - Ma	1.97	261	eS	Sn	08 00 33.0	-0.6
OBIP	Obispado Ponce	2.15	250		Pn	08 00 12.8	+0.5
OBIP					Sn	08 00 38.6	+0.6
OBIP	Obispado Ponce	2.15	250	IAML		08 00 39.5	
	comp=N,43nm,0.4s						
OBIP				IAML		08 00 39.5	
	comp=E,46nm,0.3s						
OBIP	Obispado Ponce	2.15	250	⇑eP	Pn	08 00 12.8	+0.5
OBIP	Obispado Ponce	2.15	250	eS	Sn	08 00 38.6	+0.6
UUPR	Utuado, UPR, P	2.19	256	Pn	Pn	08 00 13.2	+0.2
SKI	Saint Kitts	2.19	131	eP	Pn	08 00 12.1	-1.0
SKI				eS	Sn	08 00 37.0	-2.1
AOPR	Arecibo Observ	2.20	259		Sn	08 00 38.7	-0.6
AOPR	Arecibo Observ	2.20	259		Pn	08 00 12.9	-0.3
AOPR				IAML		08 00 45.0	
	comp=N,72nm,0.4s						
AOPR	Arecibo Observ	2.20	259	⇑eP	Pn	08 00 13.7	+0.5
AOPR	Arecibo Observ	2.20	259	eS	Sn	08 00 38.7	-0.6
AOPR	Arecibo Observ	2.20	259	eP	Pn	08 00 14.2	+1.1
AOPR				eS	Sn	08 00 39.4	+0.1
AGPR	Aguadilla, PR	2.52	263	Pn	Pn	08 00 17.6	+0.2
AGPR				IAML		08 01 02.3	
	comp=N,35nm,0.8s						
AGPR				IAML		08 01 02.4	
	comp=N,40nm,1.5s						
AGPR	Aguadilla, PR	2.52	263	⇑eP	Pn	08 00 17.5	+0.1
AGPR	Aguadilla, PR	2.52	263	eS	Sn	08 00 46.8	-0.2
LSP	Las Mesas	2.55	257		Pn	08 00 18.3	+0.4
LSP					Sn	08 00 47.8	0.0
LSP	Las Mesas	2.55	257	⇑eP	Pn	08 00 18.3	+0.4
LSP	Las Mesas	2.55	257	eS	Sn	08 00 47.8	0.0
MLPR	Magueyes Islan	2.57	252	⇑eP	Pn	08 00 18.8	+0.7
MLPR	Magueyes Islan	2.57	252	eS	Sn	08 00 49.0	+0.8
CRPR	Cabo Rojo, PR	2.62	253		Pn	08 00 19.3	+0.6
CRPR					Sn	08 00 50.0	+0.7
CRPR	Cabo Rojo, PR	2.62	253	⇑eP	Pn	08 00 19.3	+0.6
CRPR	Cabo Rojo, PR	2.62	253	eS	Sn	08 00 50.0	+0.7
ANWB	Willy Bob	2.79	113	eP	Pn	08 00 20.8	-0.3
ANWB				eS	Sn	08 00 54.1	+0.5
IDE	Isla Desecheo	2.87	263		Pn	08 00 22.7	+0.6
IDE	Isla Desecheo	2.87	263	⇑eP	Pn	08 00 22.7	+0.6
GDHS	Morne Mazeau,	3.60	134	Pn	Pn	08 00 33.8	+1.7
ATGZ	Broadband at L	3.75	135	eP	Pn	08 00 33.1	-1.1
ATGZ				eS	Sn	08 01 14.9	-2.2

NOU 04 08:00:38.0, 17.°51S×169.°26E, h133km, MLv4.2/6, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	0.84	250	P	Pn	08 01 01.0	+1.2
DVP	Devils Point	1.04	258	P	Pn	08 01 01.7	+0.1
DZM	Mont Dzumac	5.25	210	P	Pn	08 01 55.4	+0.8

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*MDD **04** 08:06:49.0±1.8, 37.°00N×11.°22W, h0km, mb_Lg2.7/6, Error ellipse: s-maj=14.6km s-min=12.2km az=139.0*
*INMG **04** 08:06:53.2±1.3, 36.°61N×11.°04W, h23km, ML1.6, Error ellipse: s-maj=11.3km s-min=7.2km az=98.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*
*CNRM **04** 08:06:53.2, 36.°33N×10.°62W, h32km, ML2.4*
ISC 04 08:06:43.1±2.3, 36.°50N±0.°05×11.°2W±0.°1, h13km±13km, n38, σ2.22/44, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.00	71	P	Pg	08 07 21.1	-0.4
PFVI				S	Sb	08 07 42.9	-1.4
PFVI	Vila Bisbo	2.00	71	eP	Pg	08 07 21.5	0.0
PFVI				eS	Sb	08 07 42.9	-1.4
PFVI				i IAML		08 07 43.9	
PFVI				i IAML		08 07 44.6	
PFVI				i IAML		08 07 44.8	
PFVI	Vila Bisbo	2.00	71	P	Pb	08 07 20.0	+0.6
PFVI	Vila Bisbo	2.00	71	S	Sn	08 07 40.3	-1.3
MORF	Marmelete	2.19	68	eS	Sb	08 07 47.8	-1.9
MORF				i IAML		08 07 49.3	
MORF				i IAML		08 07 50.0	
MORF				i IAML		08 07 51.1	
PTEO	Sao Teotonio	2.23	61	eS	Sb	08 07 48.9	-2.1
PTEO				i IAML		08 07 49.8	
PTEO				i IAML		08 07 49.9	
PBDV	Barranco-do-Ve	2.72	73	S	Sn	08 08 01.1	+1.8
PBDV	Barranco-do-Ve	2.72	73	eS	Sn	08 08 01.2	+1.8
PBDV				i IAML		08 08 08.7	
PBDV				i IAML		08 08 09.2	
MESJ	Messejana	2.73	60	eS	Sn	08 08 00.6	+1.1
PCVE	Castro Verde	2.77	65	P	Pn	08 07 29.9	+2.7
PCVE				S	Sn	08 08 01.4	+1.0
PCVE	Castro Verde	2.77	65	eP	Pb	08 07 32.3	-0.1
PCVE				eS	Sn	08 08 01.5	+1.0
PCVE				i IAML		08 08 05.5	
PCVE				i IAML		08 08 09.8	
PMAFR	Mafra	2.88	31	S	Sn	08 07 57.3	-6.0
PVAQ	Vaqueiros	2.93	71	eP	Pb	08 07 35.0	-0.2
PVAQ				eS	Sn	08 08 05.5	+1.0
PVAQ				i IAML		08 08 10.1	
MOE	Montemor	3.03	47	eS	Sn	08 08 07.3	+0.3
MOE				i IAML		08 08 13.2	
EGRO	El Granado	3.14	70	P	Pn	08 07 35.4	+3.0
EGRO				S	Sn	08 08 10.8	+1.0
EGRO	El Granado	3.14	70	Sn	Sb	08 08 12.5	-4.6
EGRO				i IVmb_Lg		08 08 15.2	
PARRA	Arraiolos	3.41	46	eP	Pb	08 07 40.6	-2.8
PARRA				eS	Sn	08 08 16.2	-0.1
PARRA				i IAML		08 08 18.7	
PARRA				i IAML		08 08 19.8	
PMTG	Montargil	3.48	42	eS	Sn	08 08 18.5	+0.5
PMTG				i IAML		08 08 21.9	
EXHU	Huelva	3.50	76	Pn	Pn	08 07 41.8	+4.5
PBAR	Barrancos	3.71	62	S	Sn	08 08 23.5	-0.2
PBAR	Barrancos	3.71	62	eS	Sn	08 08 24.0	+0.2
PBAR				i IAML		08 08 27.3	
PBAR				i IAML		08 08 27.4	
EMIN	Mina Concepcio	3.83	69	Sn	Sn	08 08 29.7	+3.0
EMIN				i IVmb_Lg		08 08 33.2	
PSARD	Sardoal	3.91	37	eS	Sn	08 08 29.1	+0.3
PSARD				i IAML		08 08 29.9	
PSARD				i IAML		08 08 31.9	
EBAD	Badajoz	4.01	55	Sn	Sn	08 08 31.2	0.0
EBAD				i IVmb_Lg		08 08 34.7	
PMRV	Marv??o	4.19	45	eS	Sn	08 08 35.5	-0.2
ESPR	Espera	4.31	84	Pn	Pn	08 07 54.1	+5.8
ECAB	El Cabril	4.87	69	S	Sn	08 08 51.8	-0.6
ECAB	El Cabril	4.87	69	Sn	Sn	08 08 52.7	+0.4
ECAB				i IVmb_Lg		08 08 55.3	
EADA	Adamuz	5.53	71	S	Sn	08 09 08.2	-0.4
EADA	Adamuz	5.53	71	Sn	Sn	08 09 09.9	+1.2
EADA				i IVmb_Lg		08 09 11.2	
OUK	Oukaimeden	5.96	151	P	Pn	08 08 15.4	+4.0
OUK	Oukaimeden	5.96	151	S	Sn	08 09 19.2	-0.5
MD31	MD31	6.42	122	P	Pn	08 08 18.1	+0.6
MD31	MD31	6.42	122	S	Sn	08 09 26.6	-4.1
MDT	Midelt	6.55	122	P	Pn	08 08 21.1	+1.7
MDT	Midelt	6.55	122	S	Sn	08 09 30.5	-3.5
OUZM	OUZ	6.69	145	P	Pn	08 08 24.0	+2.8
OUZM	OUZ	6.69	145	S	Sn	08 09 35.8	-1.6

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*UPA **04** 08:08:33.3±4.4, 9.°14N×84.°52W, h0km±92km, MW4.7*
*IDC **04** 08:08:38.0±2.2, 9.°61N×83.°68W, h0km, mb3.6/3, mbtmp3.6/3, MS3.5/9, Error ellipse: s-maj=93.9km s-min=18.8km az=45.0*
*UCR **04** 08:08:38.4±0.8, 9.°00N×84.°10W, h2km±5km, MW4.7*
*CATAC **04** 08:08:40.5±0.3, 9°N±2°×8°4W±°, h6km±1km, M4.6/19, MLv4.6/19, Error ellipse: s-maj=5.5km s-min=2.4km az=41.4, confirmed*
ISC 04 08:08:38.8±1.2, 9.°06N±0.°03×84.°01W±0.°03, h3km±9km, n150, σ1.52/155, mb3.6/3, MS3.5/7, 9C-41D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCHAL	Ojochal	0.36	84	P	Pb	08 08 48.1	+0.1
OCHAL				S	Sb	08 08 53.9	-0.2
QUEP	Quepos	0.40	338	S	Sb	08 08 55.8	+0.6
QUEP	Quepos	0.40	338	⇓P	Pb	08 08 47.9	-0.7
QUEP	Quepos	0.40	338	⇓eP	Pb	08 08 47.8	-0.7
SVQ2	Quepos	0.40	338	⇓eP	Pb	08 08 47.8	-0.8
ZEDO	Perez Zeledon	0.44	48	⇓eP	Pb	08 08 49.6	+0.3
ZEDO				eS	Sb	08 08 58.1	+1.7
EDPE	Pejibaye, P	0.45	77	⇓eP	Pb	08 08 49.5	+0.1
PANP	Palmar Norte	0.55	100	eP	Pb	08 08 51.1	-0.2
PANP				eS	Sn	08 09 00.7	-2.7
BUS1	Rivas	0.56	28	⇓eP	Pb	08 08 51.5	-0.1
BUS1				eS	Sn	08 09 01.4	-2.8
PIEC	Cerro El Cedra	0.56	5	⇓eP	Pb	08 08 51.3	-0.3
SAJE	San Jernim	0.57	60	⇓eP	Pb	08 08 51.6	0.0
SAJE				eS	Sn	08 09 02.1	-2.0
PICV	PH. Pirrs	0.59	342	eP	Pb	08 08 51.4	-0.6
RAZU	San Marcos de	0.60	359	⇓eP	Pb	08 08 51.9	-0.2
PITB	Pirrs, San	0.60	359	eP	Pb	08 08 51.7	-0.5
BURE	Buenos Aires	0.67	80	⇓eP	Pb	08 08 53.4	+0.1
LCR2	La Lucha 2	0.68	0	eP	Pb	08 08 53.1	-0.4
ACOS	Acosta	0.75	348	⇓eP	Pb	08 08 54.0	-0.7
REPA	Paraso	0.78	10	eP	Pn	08 08 54.9	-2.0
DRK0	Durika	0.78	75	eP	Pn	08 08 55.4	-1.6
DRK0	Durika	0.78	75	S	Sn	08 09 06.9	-2.5
DRK0	Durika	0.78	75	⇓P	Pn	08 08 55.8	-1.2
DRK0	Durika	0.78	75	⇓eP	Pb	08 08 55.2	0.0
TAGO	Cartago	0.81	6	⇓eP	Pn	08 08 55.5	-1.8
BITO	Garabito Jaco	0.82	313	eP	Pb	08 08 54.7	-1.0
EDP2	Potrero Grande	0.82	93	eP	Pn	08 08 56.1	-1.4
AMPA	Desamparados	0.83	357	eP	Pb	08 08 55.3	-0.8
TRIO	Tres Rios	0.84	1	⇓eP	Pn	08 08 55.7	-2.1
JIME	Puerto Jimenez	0.85	127	eP	Pb	08 08 56.3	0.0
LUJA	Lujan	0.86	356	⇓eP	Pn	08 08 56.2	-1.9
CENT	San Jose	0.87	356	eP	Pn	08 08 57.1	-1.1
PTJ1	Puerto Jimnez	0.87	126	eP	Pn	08 08 57.0	-1.0
PTJ1	Puerto Jimnez	0.87	126	P	Pb	08 08 56.5	-0.2
PTJ1	Puerto Jimnez	0.87	126	S	Sn	08 09 10.8	-0.4
PTJ1	Puerto Jimnez	0.87	126	eP	Pb	08 08 56.7	0.0
VINA	Juan Vinas	0.87	17	⇓eP	Pn	08 08 56.7	-1.5
ECI	Escuela Centro	0.88	357	⇓eP	Pn	08 08 56.5	-1.8
SJS3	Mercedes San J	0.88	357	⇓eP	Pn	08 08 56.6	-1.6
PCAYA	Pacayas	0.88	13	⇓eP	Pn	08 08 56.9	-1.4
LUPE	Guadalupe	0.89	357	⇓eP	Pb	08 08 56.3	-0.7
SANTA	Santa Ana	0.89	349	⇓eP	Pb	08 08 56.1	-0.8
RAFA	San Farael, Vo	0.92	12	⇓eP	Pn	08 08 57.6	-1.4
BELE	Belen	0.93	349	⇓eP	Pn	08 08 57.0	-1.9
EDAD	Golfito	0.93	116	eP	Pg	08 08 56.9	+0.3
PIRO	Carate, Puerto	0.93	134	eP	Pg	08 08 57.1	+0.4
PIRO	Carate, Puerto	0.93	134	S	Sn	08 09 11.5	-1.2
PIRO	Carate, Puerto	0.93	134	⇓P	Pg	08 08 57.0	+0.4
PIRO	Carate, Puerto	0.93	134	⇓eP	Pg	08 08 56.9	+0.1
VICA	Volcano Irazu	0.94	10	⇓eP	Pn	08 08 57.9	-1.4
HEME	Heredia, Merce	0.94	352	eP	Pn	08 08 58.4	-0.8
HDC	Heredia	0.94	354	⇓eP	Pn	08 08 57.6	-1.6
FITO	Golfito	0.95	117	eP	Pg	08 08 57.1	0.0
VTCV	VTCV, Calle Va	0.96	17	⇓eP	Pn	08 08 58.5	-0.9
CVIMO	Finca Echandi	0.96	4	⇓eP	Pn	08 08 58.3	-1.2
CVTQ	Turrialba Volc	0.97	14	⇓eP	Pn	08 08 58.9	-0.9
CVTV	Tajo	0.97	15	⇓eP	Pn	08 08 59.0	-0.8
VTR0	Volcan Turrial	0.98	15	⇓eP	Pn	08 08 59.1	-0.9
ABRB	Las Abras (San	0.98	17	⇓eP	Pn	08 08 59.1	-0.7
CVTR	Volcan Turrial	0.99	15	⇓eP	Pn	08 08 59.0	-1.0
OROT	Orotina	0.99	329	⇑eP	Pb	08 08 57.5	-1.2
TCS1	Tacares	1.02	344	⇓P	Pn	08 08 59.0	-1.2
TCS1	Tacares	1.02	344	⇓eP	Pn	08 08 58.7	-1.5
RESJ	San Isidro (Tu	1.03	21	⇓eP	Pn	08 08 59.7	-0.6
VITO	San Vito	1.06	103	eP	Pn	08 09 00.2	-0.5
NARAN	Naranjo de Ala	1.09	341	eP	Pn	08 09 00.4	-0.9
LCOCO	El Coco	1.11	24	eP	Pn	08 09 01.2	-0.2
RAMO	San Ramon	1.12	336	eP	Pn	08 08 60.0	-1.6
SRA1	San Ramn	1.12	336	eP	Pn	08 09 00.1	-1.5
RVLA	Villa Bonita	1.12	22	⇓eP	Pn	08 09 01.2	-0.3
NELY	Ciudad Neily	1.13	111	eP	Pb	08 09 00.6	-0.5
ARZA	Esparza	1.13	325	⇑eP	Pb	08 08 59.7	-1.4
VPS8	V Poas	1.14	348	eP	Pn	08 09 01.1	-0.9
RSRNO	Rio Sereno	1.16	102	eP	Pn	08 09 02.0	-0.1
ALCO	Alturas Coton,	1.17	95	⇑eP	Pn	08 09 01.7	-0.7
PILE	Guapiles	1.17	11	⇓eP	Pn	08 09 02.0	-0.2
ZARE	Zarcero	1.18	342	eP	Pn	08 09 01.7	-0.8
CEUA	Cerro Uatsi, L	1.20	62	eP	Pg	08 09 04.0	+2.2
MLIR3	Monte Lirio, C	1.20	103	eP	Pg	08 09 03.2	+1.3
EGUB	Earth Gu¡pi	1.22	20	⇓eP	Pg	08 09 02.9	+0.6
CDITO	Canoas	1.22	113	S	Sn	08 09 19.8	-0.2
CDITO	Canoas	1.22	113	⇑P	Pn	08 09 02.0	-0.9
SCLRA	Santa Clara, W	1.23	100	eP	Pg	08 09 03.0	+0.4
DMCAL	E. de Neily	1.26	108	eP	Pn	08 09 02.8	-0.8
LPPC	Paso Canoas	1.27	114	eP	Pn	08 09 02.7	-0.9
VPL2	V. Platanar	1.29	344	eP	Pg	08 09 03.0	-0.7
BRIBI	Bribri	1.30	65	eP	Pg	08 09 05.5	+1.7
BRU2	Volcan	1.33	101	eP	Pb	08 09 04.2	-0.4
BRU2	Volcan	1.33	101	S	Sg	08 09 22.1	+0.4
BRU2	Volcan	1.33	101	⇑P	Pg	08 09 04.4	0.0
BRU2	Volcan	1.33	101	⇑eP	Pb	08 09 04.0	-0.6
LESP3	La Esperanza,	1.37	118	eP	Pb	08 09 04.7	-0.5
CLLRA	Cordillera,	1.42	103	eP	Pn	08 09 05.2	-0.5
SOCE	Pocosol	1.45	336	P	Pb	08 09 05.4	-1.0
SOCE	Pocosol	1.45	336	S	Sg	08 09 27.0	+1.6
JEFFS	S de V. Baru	1.51	105	eP	Pn	08 09 06.3	-0.6

JTS	Las Juntas de	1.54	323	Pn	Pn	08 09 05.5	-1.7
	19nm,0.3s,baz=134,slow=16,SNR=247						
JTS				Sn	Sn	08 09 25.4	-2.4
	61nm,0.3s,baz=248,slow=19,SNR=4.6						
JTS				LR	LR	08 09 33.6	
	comp=Z,276nm,18.3s,baz=116,slow=39						
PTAR3	Potrerillos Ar	1.54	104	*e*P	Pb	08 09 07.6	-0.5
CNI2	El Empalme, Bo	1.56	76	*e*P	Pg	08 09 08.4	-0.4
LNBQ3	Los Naranjos,	1.57	100	*e*P	Pb	08 09 07.7	-1.0
BAGA3	Bagala, Chiriq	1.58	112	*e*P	Pb	08 09 08.4	-0.3
BAGA3				*e*S	Sg	08 09 31.4	+1.8
BQSF3	Alto Boquete,	1.59	101	*e*P	Pb	08 09 08.1	-0.9
DVD	David	1.66	112	*e*P	Pb	08 09 09.4	-0.7
COVE	Coope Vega, Sa	1.69	347	S	Sg	08 09 33.0	-0.3
COVE	Coope Vega, Sa	1.69	347	⇑P	Pb	08 09 09.3	-1.4
LOCO3	Loma Colorada,	1.70	112	*e*P	Pb	08 09 10.5	-0.4
PSOM3	Paja de Sombre	1.71	102	*e*P	Pb	08 09 09.8	-1.2
LOMA3	Las Lomas, Chi	1.72	111	*e*P	Pb	08 09 10.6	-0.5
CHIR3	Chiriqui UPA,	1.79	112	*e*P	Pb	08 09 11.5	-0.8
PBNVO	Pueblo Nuevo,	1.81	95	*e*P	Pn	08 09 10.5	-0.4
RBALA	Bur	1.84	95	*e*P	Pn	08 09 11.2	-0.3
CHGR2	Aguacate	1.85	94	*e*P	Pb	08 09 12.1	-1.3
UPAL	Upala	2.08	332	S	Sg	08 09 43.5	-2.2
UPAL	Upala	2.08	332	⇑P	Pb	08 09 17.0	-0.2
ELI1	Hacienda Flor	2.19	316	P	Pb	08 09 18.9	-0.2
ELI1	Hacienda Flor	2.19	316	S	Sb	08 09 45.9	-0.9
REME3	Remedios, Chir	2.31	111	*e*P	Pb	08 09 19.2	-1.9
NANC3	Nancito, Chiri	2.40	110	*e*P	Pn	08 09 20.2	+1.1
MESA3	La Mesa, Verag	2.94	108	*e*P	Pn	08 09 28.4	+1.9
CONN	Concepcion	2.95	328	⇑P	Pn	08 09 27.8	+1.0
CONN				S	Sb	08 10 04.9	-3.9
GMAL	Guarumal, Vera	3.04	115	*e*P	Pn	08 09 28.9	+1.1
STIA3	Santiago, Vera	3.15	107	*e*P	Pb	08 09 34.2	-1.4
MARI3	Mariato, Verag	3.30	115	*e*P	Pb	08 09 37.5	-0.6
CRIS3	El Cristo, Coc	3.45	103	*e*P	Pb	08 09 37.7	-2.9
CACAO	El Cacao, Vera	3.55	118	*e*P	Pb	08 09 38.4	-4.0
CACAO				*e*S	Sb	08 10 25.0	-1.0
CHIT3	Chitre	3.72	107	*e*P	Pb	08 09 41.4	-3.9
WILN	Americas 2	3.75	325	P	Pn	08 09 39.3	+1.6
WILN				S	Sn	08 10 25.1	+2.6
UNAN	Cigeo UNAN	3.76	324	S	Sn	08 10 24.5	+1.8
AZU	Azuero	3.91	109	*e*P	Pb	08 09 44.7	-3.8
AZU				*e*S	Sb	08 10 33.1	-3.0
ZANG	Zanguenga, Cho	4.09	91	*e*P	Pn	08 09 44.5	+2.1
BCIP	Isla Barro Col	4.12	88	*e*P	Pn	08 09 44.1	+1.3
BCIP				*e*S	Sb	08 10 43.3	+0.9
FRIJ	El Hiral	4.23	87	*e*S	Sb	08 10 40.2	-5.4
GAMB1	Gamboa	4.25	89	*e*P	Pn	08 09 45.7	+1.2
MATN	Matagalpa	4.28	334	P	Pn	08 09 45.3	+0.2
MATN	Matagalpa	4.28	334	S	Sn	08 10 37.1	+1.4
FLAM	Flamenco Islan	4.42	92	*e*P	Pn	08 09 48.8	+1.9
TEL3	Telica 3	4.47	322	P	Pn	08 09 49.4	+1.8
SIUN	Universidad Ur	4.69	351	P	Pn	08 09 52.2	+1.6
SIUN				S	Sn	08 10 48.9	+3.3
RCON	San Juan de Ri	4.88	335	P	Pn	08 09 55.9	+2.6
RCVN	Varillal2	4.98	335	P	Pn	08 09 56.8	+2.1
ATAH	Atahualpa	17.03	161	LR	LR	08 18 26.9	
	comp=Z,189nm,20.1s,baz=345,slow=34						
SJG	San Juan	19.54	61	LR	LR	08 19 48.4	
	comp=Z,86nm,20.6s,baz=249,slow=35						
TKL	Tuckaleechee C	26.48	0	LR	LR	08 24 28.4	
	comp=Z,66nm,20.6s,baz=168,slow=37						
TXAR	Lajitas Array	27.33	320	P	P	08 14 23.1	-2.2
	0.1nm,0.5s,baz=152,slow=7.2,SNR=1.9						
	0.1nm,0.5s						
LPAZ	La Paz	29.69	148	P	P	08 14 49.5	+2.6
	0.5nm,0.5s,baz=329,slow=9.2,SNR=2.4						
LPAZ				LR	LR	08 27 29.5	
	comp=Z,102nm,18.7s,baz=342,slow=38						
	0.5nm,0.5s						
SADO	Sadowa	35.83	6	LR	LR	08 31 00.7	
	comp=Z,88nm,19.3s,baz=214,slow=38						
RPN	Rapa Nui	43.55	214	LR	LR	08 31 06.1	
	comp=Z,81nm,18.7s,baz=340,slow=30						
SCHQ	Schefferville	47.66	13	LR	LR	08 38 27.6	
	comp=Z,62nm,18.1s,baz=175,slow=38						
PLCA	Paso Flores	51.08	167	P	P	08 17 45.7	+2.9
	2.8nm,0.9s,baz=330,slow=8.1,SNR=5.6						
	2.8nm,0.9s						
FRB	Frobisher Bay	55.70	8	LR	LR	08 40 34.3	
	comp=Z,96nm,18.5s,baz=130,slow=35						
ILAR	Eielson Array	70.47	336	LR	LR	08 53 52.6	
	comp=Z,24nm,19.4s,baz=98,slow=39						
ASAR	Alice Springs	140.98	243	PKP	PKPdf	08 28 09.5	-2.0
	0.2nm,0.7s,baz=102,slow=2.2,SNR=2.9						

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*ASRS **04** 08:14:38.0±1.5, 53°.75N×91°.10E, h0^{km}, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 04 08:14:44.4±5.1**, 53°.73N×90°.89E, h0**^{km}**, mbtmp2.7**/3**, ML2.1**/3**, Error ellipse: s-maj=54.3km s-min=30.1km az=33.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	3.60	276	Pn	Pn	08 15 43.0	+1.5
	0.2nm,0.3s,baz=89,slow=14,SNR=2.9						
ZALV				Sn	Sn	08 16 22.4	-2.2
	0.8nm,0.3s,baz=86,slow=27,SNR=6.4						
ZALV				Lg	Lg	08 16 38.9	
	0.8nm,0.3s,baz=95,slow=28,SNR=9.1						
	0.6nm,0.4s						
KURBB	Kurchatov Arra	8.21	253	Pn	Pn	08 16 43.2	-1.4
	baz=67,slow=14,SNR=3.0						
KURBB				Lg	Lg	08 19 06.7	
	baz=73,slow=33,SNR=5.8						
	0.6nm,0.8s						
MKAR	Makanchi Array	8.86	222	Pn	Pn	08 16 54.9	+1.3
	0.1nm,0.3s,baz=48,slow=16,SNR=1.7						
	0.1nm,0.4s						
I34MN	SONGINO INFRAS	11.47	115	I	I	09 23 40.0	
	baz=308,slow=322,SNR=0.7						

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*IDC **04** 08:18:12.6±0.9, 35°.35N×27°.19E, h0^{km}, mb4.0/11, mbtmp3.9/16, ML3.4/5, MS3.3/4, Error ellipse: s-maj=20.9km s-min=14.2km az=175.0*

*HLW **04** 08:18:14.4, 35°.27N×27°.18E, h4^{km}±1^{km}, Ml3.6*

*THE **04** 08:18:14.8, 35°N±6°×2°7E±°, h4^{km}±13^{km}, M3.6/13, MLh3.6/13*

*ATH **04** 08:18:14.3, 35°.28N×27°.21E, h10^{km}±1^{km}, ML3.8/12, Manual Solution by E.Daskalaki First location: 2019/12/04 08:19:31, This location: 2019/12/04 08:47:15 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*AFAD **04** 08:18:15.0, 35°.39N×27°.17E, h15^{km}±2^{km}, ML3.3*

*ISK **04** 08:18:15.5, 35°.37N×27°.10E, h9^{km}, ML3.6/33*

ISC 04 08:18:15.0±0.9**, 35°.30N**±0°.03×**27°.19E**±0°.02**, h16**^{km}±5^{km}**, n136, σ1**^{s}**65**/172**, mb4.0**/10**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.25	354	P	Pg	08 18 19.9	-0.7
KARP				S	Sg	08 18 24.0	-0.5
KARP	Karpathos	0.25	354	Pg	Pg	08 18 19.9	-0.7
KARP				Sg	Sg	08 18 24.1	-0.3
KARP	Karpathos	0.25	354	P	Pg	08 18 19.9	-0.7
KARP				S	Sg	08 18 23.7	-0.8
KSS1	Kassos Island	0.26	299	P	Pg	08 18 21.4	+0.8
KSS1				S	Sg	08 18 25.5	+1.0
ZKR	Zakros	0.82	258	P	Pb	08 18 29.9	-1.0
ZKR	Zakros	0.82	258	Pg	Pb	08 18 29.9	-1.0
ZKR				Sg	Sb	08 18 42.3	+0.6
ZKR	Zakros	0.82	258	P	Pb	08 18 29.7	-1.1
ZKR				S	Sb	08 18 41.5	-0.1
SIT2	Siteia	0.89	265	P	Pb	08 18 31.7	-0.4
ARG	Arkhangelos	1.19	39	P	Pb	08 18 37.3	+0.2
ARG				S	Sg	08 18 53.9	+0.4
ARG	Arkhangelos	1.19	39	Pn	Pb	08 18 37.7	+0.5
ARG				Sn	Sg	08 18 56.0	+2.5
ARG	Arkhangelos	1.19	39	P	Pb	08 18 37.4	+0.2
ARG				S	Sg	08 18 53.8	+0.2
NPS	Neapolis	1.29	269	P	Pn	08 18 39.1	+0.8
NPS	Neapolis	1.29	269	P	Pn	08 18 38.7	+0.3
NISR	Nisiros	1.31	358	P	Pn	08 18 38.5	-0.2
NISR	Nisiros	1.31	358	P	Pn	08 18 39.0	+0.4
YAZI	Mula-Dat§a-	1.40	9	P	Pn	08 18 40.4	+0.6
YAZI				S	Sn	08 18 56.9	-1.1
YAZI				*i* IAML		08 19 06.0	
	comp=E,275nm,0.7s						
ASTA	Astypalaia	1.42	332	P	Pn	08 18 40.1	0.0
DAT	Datca	1.46	12	Pn	Pn	08 18 41.4	+0.6
DAT				Sn	Sg	08 19 01.4	-0.8
DATC	Datca-Mugla	1.51	14	Pn	Pb	08 18 42.4	-0.2
TURN	Turunc	1.70	30	P	Pb	08 18 45.3	-0.6
TURN				S	Sg	08 19 09.3	-0.6
TURN				*i* IAML		08 19 14.0	
	comp=E,414nm,0.4s						
TURN	Turunc	1.70	30	Pn	Pb	08 18 45.3	-0.6
TURN				Sn	Sg	08 19 08.1	-1.8
IACM	Heraklion	1.74	271	P	Pn	08 18 44.6	+0.2
THERA	Ancient Thera,	1.76	308	P	Pn	08 18 45.4	+0.6
THERA	Ancient Thera,	1.76	308	P	Pn	08 18 45.0	+0.2
BODT	Bodrum	1.77	3	Pn	Pb	08 18 46.8	-0.2
BDRM	Kayabasi	1.78	6	P	Pb	08 18 47.4	+0.2
BDRM				S	Sb	08 19 09.0	-0.2
BDRM				*i* IAML		08 19 12.0	
	comp=E,420nm,0.5s						
THR8	Santorini-Mono	1.78	309	P	Pn	08 18 45.8	+0.8
THR8	Santorini-Mono	1.78	309	P	Pn	08 18 45.1	+0.1
THR6	Thira Island,	1.80	306	P	Pn	08 18 46.3	+1.0
THR6	Thira Island,	1.80	306	P	Pn	08 18 46.1	+0.8
YKAV	Yalikavak-Bodr	1.83	2	Pn	Pb	08 18 47.2	-0.8
THR9	Santorini-Faro	1.83	306	P	Pn	08 18 46.6	+0.8
THR9	Santorini-Faro	1.83	306	P	Pn	08 18 46.5	+0.8
SNT5	Nea Kammeni, S	1.83	308	P	Pn	08 18 46.4	+0.6
SNT5	Nea Kammeni, S	1.83	308	P	Pn	08 18 46.3	+0.6
THR3	Thira Island,	1.83	308	P	Pn	08 18 46.2	+0.5
THR3	Thira Island,	1.83	308	P	Pn	08 18 45.7	0.0
THR5	Thira Island,	1.87	307	P	Pn	08 18 46.4	+0.1
THR5	Thira Island,	1.87	307	P	Pn	08 18 46.5	+0.2
SAP3	Santorini-Thir	1.88	308	P	Pn	08 18 47.3	+0.9
SAP3	Santorini-Thir	1.88	308	P	Pn	08 18 47.3	+0.9
IDI	Anoyia	1.89	270	Pn	Pn	08 18 47.9	+1.3
	25nm,0.3s,baz=80,slow=15,SNR=48						
IDI				Sn	Sg	08 19 15.7	0.0
	55nm,0.3s,baz=5.3,slow=23,SNR=8.0						
IDI				LR	LR	08 19 32.2	
	comp=Z,115nm,19.6s,baz=122,slow=42						
IDI	Anoyia	1.89	270	P	Pn	08 18 47.7	+1.1
IDI	Anoyia	1.89	270	Pn	Pn	08 18 47.6	+1.1
IDI	Anoyia	1.89	270	P	Pn	08 18 47.7	+1.1
DALY	Dalyan (Mula)	1.92	37	Pn	Pb	08 18 49.7	+0.1
IZZE	Mula-Seydike	2.00	55	P	Pn	08 18 49.8	+1.7
IZZE				S	Sn	08 19 11.7	-1.2
IZZE				*i* IAML		08 19 32.0	
	comp=N,516nm,0.6s						
FETY	Fethiye	2.03	48	P	Pn	08 18 44.6	-4.0
FETY				S	Sn	08 19 11.2	-2.4
YER	Yerkesik	2.04	25	P	Pn	08 18 50.2	+1.6
YER	Yerkesik	2.04	25	Pn	Pb	08 18 50.6	-1.0
MLSB	Milas	2.05	13	Pn	Pb	08 18 50.6	-1.2
SABU	Mula-Dalaman	2.10	43	P	Pb	08 18 52.2	-0.4
SABU				S	Sb	08 19 19.9	+1.5
SABU				*i* IAML		08 19 35.0	
	comp=E,316nm,0.8s						
MULA	Mugla, Merkez-	2.16	25	P	Pb	08 18 52.9	-0.8
MULA				S	Sb	08 19 21.0	+0.8
MULA				*i* IAML		08 19 36.0	
	comp=E,332nm,0.9s						
AKAS	Kas	2.17	64	P	Pn	08 18 52.1	+1.5
AKAS				S	Sn	08 19 15.9	-1.3
AKAS				*i* IAML		08 19 46.0	
	comp=E,247nm,1.0s						
AKAS	Kas	2.17	64	Pn	Pn	08 18 52.5	+1.9
APE	Apeiranthos	2.22	323	P	Pn	08 18 51.6	+0.3
APE				S	Sn	08 19 20.0	+1.7
APE	Apeiranthos	2.22	323	Pn	Pn	08 18 51.5	+0.3
APE	Apeiranthos	2.22	323	P	Pn	08 18 51.2	0.0
CAME	Cameli-Denizli	2.37	45	Pn	Pb	08 18 55.8	-1.6
GCAM	G?zelcaml?	2.40	1	P	Pn	08 18 55.6	+2.1
GCAM				S	Sb	08 19 28.5	+1.4
GCAM				*i* IAML		08 20 53.0	
	comp=N,146nm,4.1s						
GCAM	G?zelcaml?	2.40	1	Pn	Pn	08 18 55.4	+1.8
SMG	Samos	2.42	353	P	Pn	08 18 54.0	+0.1
SMG	Samos	2.42	353	P	Pn	08 18 53.8	-0.2
KNIK	Mula-Seydike	2.47	51	P	Pn	08 18 56.7	+2.0
KNIK				S	Sb	08 19 27.5	-1.8
KNIK				*i* IAML		08 19 51.0	
	comp=N,96nm,0.7s						
CAEL	Denizli, Camel	2.51	43	P	Pb	08 18 59.5	-0.1
CAEL				S	Sb	08 19 30.1	-0.2
CAEL				*i* IAML		08 20 02.0	
	comp=E,599nm,0.7s						
TAVA	DENIZLI_Tavas	2.57	32	P	Pn	08 18 58.4	+2.3
TAVA				S	Sb	08 19 31.3	-0.9
TAVA				*i* IAML		08 19 45.0	
	comp=E,192nm,0.6s						
GVD	Gavdhos	2.59	261	Pn	Pn	08 18 58.2	+2.0
IMMV	Iera Moni Meta	2.63	274	Pn	Pn	08 18 58.2	+1.4
IMMV	Iera Moni Meta	2.63	274	P	Pn	08 18 58.4	+1.7
ELL	Elmali	2.63	56	Pn	Pb	08 19 00.3	-1.6
ESEN	Aydn-Nazilli	2.66	20	P	Pn	08 18 59.0	+1.8
ESEN				S	Sn	08 19 29.1	-0.1
ESEN				*i* IAML		08 19 46.0	
	comp=E,101nm,0.6s						
AYDB	Zeytinkoy-Aydi	2.70	12	Pn	Pn	08 18 59.7	+1.8
GOLH	Golhisar	2.72	44	P	Pn	08 19 00.9	+2.7
GOLH				S	Sg	08 19 41.7	-0.8
GOLH				*i* IAML		08 19 55.0	
	comp=E,209nm,0.5s						
APMY	Acipayam-Deniz	2.76	37	Pn	Pn	08 19 00.7	+2.1
DNIZ	Denizli-Tavas-	2.76	32	P	Pn	08 19 01.2	+2.5
DNIZ				S	Sn	08 19 34.1	+2.4
DNIZ				*i* IAML		08 19 46.0	
	comp=E,396nm,0.3s						
NAZL	Nazilli-Aydin	2.81	18	Pn	Pn	08 19 01.4	+2.2
IZMR	zmir-demi	2.90	12	P	Pn	08 19 01.3	+0.8
IZMR				S	Sn	08 19 35.3	+0.3
IZMR				*i* IAML		08 19 54.0	
	comp=E,81nm,1.7s						
KNDR	Palaiochora Ch	2.92	270	Pn	Pn	08 19 02.7	+2.0
ZEYE	Izmir, Urla-Ze	2.99	350	P	Pn	08 19 00.1	-1.6
ZEYE				S	Sb	08 19 44.0	0.0
ZEYE				*i* IAML		08 19 56.0	
	comp=N,106nm,0.6s						
KIRA	zmir-Kiraz	3.05	18	P	Pn	08 19 04.6	+2.0
KIRA				S	Sn	08 19 32.6	-6.3
KIRA				*i* IAML		08 20 09.0	
	comp=E,60nm,0.8s						
ODEM	Odemis-Izmir	3.06	13	Pn	Pn	08 19 05.1	+2.4
KORT	Korkueli	3.07	55	Pn	Pn	08 19 06.5	+3.6
INCE	Denizli-Bozkur	3.08	38	P	Pn	08 19 04.3	+1.3
INCE				S	Sb	08 19 48.2	+1.4
INCE				*i* IAML		08 20 01.0	
	comp=E,118nm,0.7s						
URLA	Izmir	3.10	351	P	Pn	08 18 59.2	-3.9
URLA				S	Sn	08 19 37.0	-2.8
URLA	Izmir	3.10	351	Pn	Pn	08 19 04.8	+1.6
CHOS	Chios island	3.22	344	P	Pn	08 19 05.6	+0.7
CHOS	Chios island	3.22	344	Pn	Pn	08 19 06.7	+1.8
CHOS	Chios island	3.22	344	P	Pn	08 19 04.8	-0.1
ANKY	Antikythira Is	3.22	281	P	Pn	08 19 04.7	-0.2
MANT	Manisa	3.37	19	P	Pn	08 19 08.2	+1.1
MANT				S	Sn	08 19 48.3	+1.4
MANT				*i* IAML		08 20 24.0	
	comp=N,31nm,1.3s						
KULA	Kula-Manisa	3.42	20	Pn	Pn	08 19 10.4	+2.7
KTHA	Kythira Island	3.49	287	P	Pn	08 19 09.1	+0.5
KTHA	Kythira Island	3.49	287	Pn	Pn	08 19 10.4	+1.8
GORD	Gordes-Manisa	3.69	12	Pn	Pn	08 19 13.9	+2.5
VLI	Veliai	3.73	294	P	Pn	08 19 12.8	+0.9
VLI	Veliai	3.73	294	P	Pn	08 19 12.5	+0.6
SIMA	Simav-Kutahya	4.04	20	Pn	Pn	08 19 18.7	+2.5
SIGR	SIGRI	4.05	345	Pn	Pn	08 19 18.2	+1.9
SLUM	Salum	4.14	204	P	Pn	08 19 18.1	+0.6
AKMS	Akamas	4.22	92	P	Pn	08 19 18.4	-0.2
SEYD	Seydisehir-KON	4.30	59	Pn	Pn	08 19 24.1	+4.3
ALFC	Alefka	4.43	90	P	Pn	08 19 21.1	-0.4
ITM	Ithomi	4.65	295	Pn	Pn	08 19 26.9	+2.3
BLVD	Bolvadin-AFYON	4.68	41	Pn	Pn	08 19 28.7	+3.6
GUR	Goura	4.71	305	P	Pn	08 19 28.3	+2.9
KLV	Kalavryta, Ach	4.89	306	P	Pn	08 19 31.2	+3.2
AXAR	Agios Charalam	5.02	315	P	Pn	08 19 32.1	+2.6
SWA2		6.21	194	P	Pn	08 19 46.9	+1.0
RYAN	Fayoum	6.72	156	P	Pn	08 19 53.5	+0.5
BRTR	Keskin Array B	6.76	47	Pn	Pn	08 19 55.5	+1.9
	0.4nm,0.3s,baz=212,slow=15,SNR=10.0						
BRTR				Sn	Sn	08 21 12.7	+2.2
	0.3nm,0.3s,baz=212,slow=25,SNR=4.5						
BRTR				LR	LR	08 23 19.1	
	comp=Z,117nm,18.2s,baz=240,slow=46						
	1.3nm,0.6s						
MMAI	Mount Meron Ar	7.17	106	Pn	Pn	08 19 58.5	-0.8
	3.4nm,0.3s,baz=313,slow=14,SNR=6.0						
MMAI				Sn	Sn	08 21 18.5	-2.0
	5.3nm,0.3s,baz=308,slow=20,SNR=4.0						
	1.5nm,0.3s						
HFRF	Wahat Farafira	8.18	173	P	Pn	08 20 13.5	+0.5
EIL	Elat	8.62	128	Pn	Pn	08 20 17.8	-1.3
	1.1nm,0.3s,baz=261,slow=1.5,SNR=7.9						
EIL				Sn	Sn	08 21 50.6	-5.4
	1.3nm,0.3s,baz=302,slow=19,SNR=2.7						
	3.2nm,0.4s						
ASF	Jabal al Asfar	8.66	108	Pn	Pn	08 20 20.3	+0.6
	0.7nm,0.3s,baz=340,slow=22,SNR=3.7						
ASF				Sn	Sn	08 21 59.8	+2.8
	0.3nm,0.3s,baz=35,slow=19,SNR=1.7						
	3.3nm,0.5s						
KBZ	Khabaz	14.74	50	Pn	P	08 21 49.8	+1.1
	0.1nm,0.3s,baz=234,slow=7.0,SNR=6.7						
AKASG	Malin Array Be	15.47	5	Pn	P	08 21 55.7	-1.0
	1.2nm,0.3s,baz=196,slow=11,SNR=5.9						
MAUC	Maruska	15.65	337	*e*P	P	08 22 03.1	+4.2
KRUC	Moravsky	15.89	333	*e*P	P	08 22 04.0	+2.6
VRAC	Vranov	16.02	334	*e*P	P	08 22 05.1	+2.2
MORC	Moravsky Berou	16.10	337	*e*P	P	08 22 06.7	+2.8
GERES	GERESS Array B	16.80	328	Pn	P	08 22 11.2	-0.5
	baz=144,slow=12,SNR=6.0						
GERES				LR	LR	08 28 51.4	
	comp=Z,70nm,18.6s,baz=70,slow=38						
	1.0nm,0.7s						
DPC	Dobruska-Polom	17.00	336	*e*P	Pn	08 22 13.2	+1.2
KHC	Kasperske Hory	17.07	328	*e*P	P	08 22 14.8	+0.2
ESDC	Sonseca Array	25.04	289	P	P	08 23 38.4	0.0
	1.8nm,0.7s,baz=78,slow=9.7,SNR=11						
	1.8nm,0.7s						
FINES	FINESS Array B	26.18	359	P	P	08 23 47.1	-1.2
	3.2nm,0.8s,baz=168,slow=11,SNR=4.7						
	3.2nm,0.8s						
MDT	Midelt	26.41	274	LR	LR	08 35 00.4	
	comp=Z,42nm,18.1s,baz=46,slow=38						
TORD	Torodi Ar. Bea	31.87	233	P	P	08 24 40.0	+0.5
	1.6nm,0.8s,baz=38,slow=12,SNR=10						
	1.6nm,0.8s						
ARCES	ARCESS Array B	34.31	359	P	P	08 24 58.7	-1.5
	1.9nm,0.8s,baz=178,slow=5.4,SNR=4.9						
	1.9nm,0.8s						
MKAR	Makanchi Array	42.31	57	P	P	08 26 08.7	+0.8
	0.9nm,0.6s,baz=274,slow=7.6,SNR=5.6						
	0.9nm,0.6s						
NRIK	Noril'sk	47.05	25	P	P	08 26 46.3	+1.0
	1.2nm,0.4s,baz=199,slow=7.1,SNR=4.2						
	1.2nm,0.4s						
SONM	Songino Array	58.11	51	P	P	08 28 09.2	+1.5
	0.9nm,0.7s,baz=301,slow=9.3,SNR=5.6						
	0.9nm,0.7s						
SCHQ	Schefferville	64.16	320	P	P	08 28 47.2	-1.2
	2.8nm,0.8s,baz=27,slow=4.5,SNR=2.1						
	2.8nm,0.8s						
HILR	Hailar Array B	65.62	46	LR	LR	09 04 12.4	
	comp=Z,97nm,18.2s,baz=220,slow=42						
USRK	Ussuriysk Ar.	75.56	46	P	P	08 29 57.8	-0.9
	2.3nm,0.6s,baz=298,slow=9.2,SNR=5.0						
	2.3nm,0.6s						
KSRS	Korea Array	76.87	53	P	P	08 30 05.9	-0.4
	1.1nm,0.5s,baz=295,slow=5.8,SNR=3.1						
	1.1nm,0.5s						
ILAR	Eielson Array	80.15	357	P	P	08 30 22.8	-1.1
	0.4nm,0.9s,baz=5.7,slow=2.7,SNR=3.5						
	0.4nm,0.9s						

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*SNET **04** 08:20:25.7±0.8, 11°.87N×87°.38W, h27^{km}, ML3.5*

*CATAC **04** 08:20:25.6±0.6, 12°N±2°×8°7W±°, h20^{km}±4^{km}, M3.3/19, MLv3.3/19, Error ellipse: s-maj=6.1km s-min=3.1km az=38.1, confirmed*

*UCR **04** 08:20:25.9±1.1, 11°.86N×87°.42W, h38^{km}±5^{km}, MW3.6*

ISC 04 08:20:26.0±1.4**, 11°.89N**±0°.04×**87°.38W**±0°.04**, h26**^{km}±13^{km}**, n58, σ0**^{s}**69**/80**, 1C-3D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	0.83	69	P	Pn	08 20 41.6	-0.4
COPN	Copaltepe	0.83	69	⇑*e*P	Pn	08 20 41.7	-0.4
COPN				*e*S	Sn	08 20 53.7	+0.3
TEL3	Telica 3	0.86	38	P	Pn	08 20 42.2	-0.3
CRIN	San Cristobal	0.87	22	P	Pb	08 20 42.7	+0.1
CRIN	San Cristobal	0.87	22	*e*P	Pn	08 20 42.1	-0.6
CRIN				*e*S	Sb	08 20 54.2	+0.3
QUEN	Al S del Volca	0.87	36	P	Pb	08 20 42.6	0.0
PKGN	Cerro Pekin	0.87	27	P	Pn	08 20 42.1	-0.6
PKGN				S	Sb	08 20 53.4	-0.4
CNGA	Al SSO del Vol	0.90	48	P	Pb	08 20 42.9	-0.1
CNGA				S	Sn	08 20 55.0	-0.2
CNGN	Cerro Negro	0.91	48	P	Pn	08 20 42.6	-0.6
CNGN	Cerro Negro	0.91	48	S	Sn	08 20 55.4	-0.1
CNGN	Cerro Negro	0.91	48	*e*P	Pn	08 20 42.8	-0.4
CNGN				*e*S	Sn	08 20 56.4	+1.0
POLN	Al Sur del Vol	0.94	36	P	Pn	08 20 43.0	-0.6
POLN				S	Sb	08 20 55.7	-0.1
MOMN	Momotombo	0.97	58	P	Pn	08 20 43.8	-0.3
MOM2	El Cardon	1.03	58	P	Pn	08 20 44.5	-0.4
MOM2				S	Sb	08 20 59.1	+0.7
MOM3	MOM3	1.05	54	P	Pn	08 20 44.7	-0.3
MOM3				S	Sb	08 21 00.1	+1.2
CRUN	El Crucero	1.06	85	P	Pb	08 20 45.5	-0.3
CSGN	Cosiguina Volc	1.10	351	P	Pn	08 20 45.6	-0.3
CSGN				S	Sn	08 20 60.0	-0.3
CSGN	Cosiguina Volc	1.10	351	⇓*e*P	Pn	08 20 45.5	-0.3
CSGN				*e*S	Sb	08 21 00.9	+0.6
UNAN	Cigeo UNAN	1.11	78	P	Pn	08 20 45.8	-0.1
UNAN				S	Sb	08 21 01.3	+0.6
POTN	Potosi Cosigui	1.11	354	P	Pn	08 20 45.4	-0.6
POTN				S	Sn	08 21 00.6	+0.1
POTN	Potosi Cosigui	1.11	354	⇓*i*P	Pn	08 20 45.6	-0.3
POTN				*e*S	Sn	08 20 59.7	-0.8
MGAN	Managua	1.14	77	P	Pn	08 20 45.9	-0.4
MGAN	Managua	1.14	77	S	Sb	08 21 02.1	+0.6
MGAN	Managua	1.14	77	*e*P	Pn	08 20 46.0	-0.4
MAS3	Al N del Volca	1.19	83	P	Pn	08 20 46.8	-0.2
MAS3				S	Sb	08 21 02.5	-0.3
SABN	Sabanita	1.20	87	P	Pn	08 20 46.4	-0.8
WILN	Americas 2	1.20	77	P	Pn	08 20 46.8	-0.4
WILN				S	Sb	08 21 03.5	+0.3
NADN	Granada	1.33	96	⇓*e*P	Pn	08 20 48.7	-0.2
NADN				*e*S	Sb	08 21 06.1	-0.8
CNCH	Conchagua	1.45	342	*e*P	Pn	08 20 50.4	-0.3
CNCH				*e*S	Sn	08 21 09.7	+0.7
CNCH	Conchagua	1.45	342	P	Pn	08 20 50.8	0.0
CNCH	Conchagua	1.45	342	S	Sn	08 21 08.8	-0.2
LCND	La Caada	1.50	341	*e*P	Pn	08 20 51.1	-0.1
LCND				*e*S	Sn	08 21 10.2	+0.2
LCND	La Caada	1.50	341	P	Pn	08 20 51.2	-0.1
LIMN	Finca el Limon	1.53	40	P	Pn	08 20 52.4	+0.5
LIMN				S	Sn	08 21 11.3	+0.3
CONN	Concepcion	1.75	100	P	Pn	08 20 54.0	-0.8
CONN				S	Sb	08 21 17.8	-1.2
BLLM	Bellamira	1.76	332	*e*P	Pn	08 20 54.6	-0.3
VSM	San Miguel	1.76	330	*e*P	Pn	08 20 55.4	+0.2
LCY	Lacayo	1.77	330	*e*P	Pn	08 20 55.2	+0.1
RANC	El Ranchito	1.77	330	*e*P	Pn	08 20 55.0	-0.2
PACA	Pacayal	1.82	330	*e*P	Pn	08 20 56.0	+0.2
PACA				*e*S	Sb	08 21 19.8	-1.4
LCRUZ	La Cruz	1.90	115	*e*P	Pn	08 20 56.4	-0.4
TECA	Tecapa	1.94	326	*e*P	Pn	08 20 57.4	-0.1
LAPC	Finca la Perla	2.21	120	*e*P	Pn	08 20 59.5	-1.6
UESV	Universidad de	2.21	322	*e*P	Pn	08 21 01.5	+0.3
SCLA	Alcaldia de Sa	2.23	324	*e*P	Pn	08 21 01.8	+0.4
VRLE	La Escondida,	2.26	119	*e*P	Pn	08 21 02.6	+0.8
PAVA	Las Pavas	2.37	320	*e*P	Pn	08 21 04.0	+0.6
LFRS	El Faro	2.38	317	*e*P	Pn	08 21 03.4	-0.1
SAJU	San Juanillo,	2.44	138	*e*P	Pn	08 21 02.9	-1.3
VMAR	Armenia, Volca	2.47	115	*e*P	Pn	08 21 03.8	-0.9
JUD3	Juan Diaz 3	2.49	133	*e*P	Pn	08 21 04.3	-0.6
CUI	Cuipilapa	2.50	119	*e*P	Pn	08 21 05.8	+0.8
PMON	Piamonte	2.62	314	*e*P	Pn	08 21 07.2	+0.4
JAYA	Jayaque - finc	2.67	311	*e*P	Pn	08 21 07.5	-0.1
JAYA				*e*S	Sn	08 21 39.4	+0.1
TILA	Tilaran	2.75	121	*e*P	Pn	08 21 10.8	+2.2
NYURE	Nandayure	2.81	132	*e*P	Pn	08 21 11.2	+1.8
JTS	Las Juntas de	2.86	123	*e*P	Pn	08 21 09.6	-0.5
MTEVE	Monteverde	2.95	122	*e*P	Pn	08 21 13.6	+2.1

IDC 04 08:36:39.0±443.0**, 53°.57N×47°.89E, h0^{km}, Error ellipse: s-maj=192.9km s-min=135.5km az=76.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	7.02	113	I	I	09 20 20.0	
	0.1nm,0.6s,baz=298,slow=309,SNR=2.0						
I46RU	ZALESOVO INFRA	21.68	74	I	I	10 47 30.0	
	baz=287,slow=323,SNR=2.2						
I34MN	SONGINO INFRAS	36.60	75	I	I	12 17 30.0	
	baz=303,slow=328,SNR=0.9						
I18DK	QAANAAQ INFRAS	43.62	344	I	I	13 04 00.0	
	baz=46,slow=342,SNR=1.5						

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*IDC **04** 08:43:10.1±10.0, 20°.66N×122°.20E, h0^{km}, mb4.0/4, mbtmp4.1/4, MS3.4/1, Error ellipse: s-maj=274.5km s-min=30.9km az=28.0*

*NEIC **04** 08:43:17.3±1.0, 20°.64N±0°.08×121°.68E±0°.08, h58^{km}±9^{km}, mb4.4/20, Error ellipse: s-maj=13.0km s-min=9.8km az=45.0*

ISC 04 08:43:15.6±0.7**, 20°.60N**±0°.07×**121°.71E**±0°.09**, h43^{km}, n34, σ1^{s}43**/34**, mb4.4**/14**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWG	Pinlang	2.29	345		Pn	08 43 51.5	+0.6
YULB	Yu-li	2.81	352		Pn	08 44 00.2	+2.2
TPUB	Ta-pu	2.87	340		Pn	08 44 00.2	+1.3
SSLB	Suanglung	3.25	348		Pn	08 44 05.5	+1.4
NACB	Ninganchiao	3.56	358		Pn	08 44 09.7	+1.3
NACB				Sn	Sn	08 44 48.8	-0.4
YHNB	Yeheng	4.07	356		Pn	08 44 16.1	+0.7
KNMB	Chin-men Tao	4.92	322	Pn	Pn	08 44 27.8	+0.7
KNMB				Sn	Sn	08 45 18.9	-3.8
HKPS	Hong Kong Po S	7.24	285	Pn	Pn	08 45 00.5	+1.5
JOW	Kunigami	8.64	43	Pn	Pn	08 45 19.4	+1.3
CMAR	Chiang Mai Arr	21.56	268	P	P	08 48 06.2	+4.6
	1.9nm,0.3s,baz=76,slow=10,SNR=12						
	1.9nm,0.3s						
CMAR	Chiang Mai Arr	21.56	268	P	P	08 48 00.2	-1.3
FAKI	Fak Fak	25.56	155	P	P	08 48 38.8	-1.9
FAKI				IAmb	IAmb	08 49 11.0	
	comp=Z,18nm,1.2s						
MTN	Manton Dam	34.50	164	P	P	08 49 58.4	-1.4
KNRA	Kununurra	36.71	169	P	P	08 50 18.5	-0.2
KNRA				IAmb	IAmb	08 50 37.8	
	comp=Z,12nm,1.5s						
FITZ	Fitzroy Crossi	38.65	174	P	P	08 50 35.2	+0.2
COEN	Coen	40.30	147	P	P	08 50 48.8	-0.2
COEN				IAmb	IAmb	08 50 52.4	
	comp=Z,10.0nm,1.3s						
WB0	Warramunga Arr	41.99	162	P	P	08 51 02.3	-0.5
WRA	Warramunga Arr	42.15	162	P	P	08 51 03.4	-0.7
	comp=Z,0.9nm,0.4s,baz=345,slow=9.0,SNR=12						
	comp=Z,0.9nm,0.4s						
WR8	Warramunga Arr	42.20	162	P	P	08 51 03.9	-0.6
WR8				IAmb	IAmb	08 51 04.4	
	comp=Z,2.3nm,0.5s						
AS31	Alice Springs	45.57	164	P	P	08 51 31.2	-0.3
ASAR	Alice Springs	45.57	164	P	P	08 51 31.4	-0.1
	comp=Z,0.6nm,0.4s,baz=350,slow=9.0,SNR=17						
	comp=Z,0.6nm,0.4s						
CTAO	Charters Tower	47.03	148	P	P	08 51 43.9	+0.8
CTAO				IAmb	IAmb	08 51 44.9	
	comp=Z,6.3nm,1.0s						
BBOO	Buckleboo	54.85	165	P	P	08 52 41.8	+0.2
STKA	Stephens Creek	55.55	159	P	P	08 52 46.9	+0.2
	comp=Z,3.4nm,0.6s,baz=325,slow=6.1,SNR=10						
	comp=Z,3.4nm,0.6s						
STKA	Stephens Creek	55.55	159	IAmb	IAmb	08 52 47.7	
	comp=Z,14nm,0.7s						
AKTO	Aktyubinsk	57.70	317	LR	LR	09 20 08.3	
	comp=Z,34nm,20.2s,baz=316,slow=38						
F17K	Baldwin Pennin	66.13	25	P	P	08 53 58.7	+0.6
D19K	Kuna River	67.42	23	P	P	08 54 05.9	-0.5
G19K	Purcell Mounta	67.81	26	P	P	08 54 08.8	0.0
G19K				IAmb	IAmb	08 54 44.1	
	comp=Z,4.4nm,1.2s						
D20K	Etivluk River	67.97	23	P	P	08 54 09.7	-0.1
D20K				IAmb	IAmb	08 54 28.0	
	comp=Z,3.4nm,1.1s						
J20K	Nowinta River	69.13	28	P	P	08 54 17.2	+0.1
J20K				IAmb	IAmb	08 54 56.6	
	comp=Z,5.8nm,1.4s						
F25K	Christian Rive	72.16	24	P	P	08 54 35.4	-0.2
SCRK	Sand Creek	73.57	27	P	P	08 54 43.3	-0.8
SCRK				IAmb	IAmb	08 55 25.0	
	comp=Z,7.6nm,1.4s						
VRDI	Verde Repeater	74.47	30	P	P	08 54 48.5	-0.9
VRDI				IAmb	IAmb	08 54 59.0	
	comp=Z,8.1nm,1.0s						

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*BJI **04** 08:46:14.2, 36°.49N×70°.93E, h128^{km}, mB5.2/12, mb4.9/55*

*MOS **04** 08:46:14.2±1.0, 36°.48N×70°.91E, h136^{km}, mb5.1/51, Error ellipse: s-maj=4.9km s-min=3.2km az=90.3*

*IDC **04** 08:46:15.6±0.5, 36°.25N×70°.81E, h144^{km}±3^{km}, mb4.6/36, mbtmp5.0/37, MS3.7/23, Error ellipse: s-maj=10.1km s-min=7.0km az=19.0*

*NEIC **04** 08:46:16.6±1.8, 36°.48N±0°.02×70°.79E±0°.07, h142^{km}±5^{km}, mb5.0/262, Error ellipse: s-maj=8.5km s-min=1.0km az=68.0*

*GCMT **04** 08:46:17.6±0.3, 36°.50N±0°.02×70°.87E±0°.03, h156^{km}±3^{km}, MW4.9/102, Moment Tensor Solution. s20,c20; s102,c147; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.07±.09; $M_{\theta\theta}$-2.51±.10; $M_{\phi\phi}$0.44±.09; $M_{r\theta}$-1.10±.09; $M_{\theta\phi}$0.77±.11; $M_{\phi r}$-0.66±.07; Best double couple: $M_0$2.75400×10^{16} NP1:ϕ_s127.00000°, δ40.00000°, λ128.00000°. NP2:ϕ_s262.00000°, δ60.00000°, λ63.00000°. Principal axes: T 2.6320, Plg64.0000°, Azm125.0000°; N 0.2450, Plg23.0000°, Azm276.0000°; P -2.8760, Plg11.0000°, Azm11.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NNC **04** 08:46:19.3±7.7, 36°.88N×70°.59E, h180^{km}±87^{km}, mb5.1, mpv6.2 Error ellipse: s-maj=70.4km s-min=41.1km az=27.0*

*BGR **04** 08:46:24.6, 37°.38N×70°.19E, h146^{km}±2^{km}, mb4.9*

ISC 04 08:46:15.3±0.2**, 36°.38N**±0°.03×**70°.86E**±0°.03**, h137^{km}**±2^{km}**, h136^{km}:pP-P, n1079, σ1^{s}44**/1090**, mb5.0**/321**, 47C-43D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANEM	Manem	1.33	29		Pn	08 46 43.3	+0.9
KBL	Kabul	2.36	219	P	Pn	08 46 55.7	+1.3
	SNR=347						
KBL				S	Sn	08 47 26.4	+2.2
KBL	Kabul	2.36	219		Pn	08 46 55.5	+1.2
KBL	Kabul	2.36	219	PN	Pn	08 46 55.5	+1.2
SHAA	Shahritus	2.49	299		Pn	08 46 55.0	-0.7
CHGR	Chuyangaron	2.64	330		Pn	08 46 56.2	-1.5
CHGR	Chuyangaron	2.64	330	PN	Pn	08 46 56.2	-1.5
GAR	Garm	2.65	351		Pn	08 46 57.4	-0.3
DRK	Karamyk	3.18	13		Pn	08 47 05.3	+0.5
DRK	Karamyk	3.18	13	PN	Pn	08 47 05.3	+0.5
NIL	Nilore	3.36	144		Pn	08 47 09.0	+2.1
NIL	Nilore	3.36	144	PN	Pn	08 47 09.0	+2.1
SRNI	Srinagar	3.98	125	*e*P	Pn	08 47 13.2	-1.9
SRNI				*e*S	Sn	08 47 58.8	-2.7
SRNI				IAML		08 48 59.8	
	comp=N,7µm,1.1s						
SRNI				IAML		08 49 07.8	
	comp=E,9µm,1.7s						
JMU	Jammu	4.86	137	*e*P	Pn	08 47 26.1	-0.6
JMU				*e*S	Sn	08 48 20.0	-2.2
JMU				IAML		08 48 24.1	
	comp=E,2µm,0.5s						
JMU				IAML		08 48 25.7	
	comp=N,3µm,0.7s						
KSH	Kashi	5.11	51	P	Pn	08 47 25.9	-4.1
KSH				S	Sn	08 48 17.5	-11
KSH				smax	smax		
	comp=N,7µm,0.7s						
KSH				smax	smax		
	comp=N,4µm,0.9s						
ARSB	Arslanbob	5.20	18		Pn	08 47 29.9	-1.4
ARSB	Arslanbob	5.20	18	PN	Pn	08 47 29.9	-1.4
TSSA	Tissa	5.62	128	*e*P	Pn	08 47 37.1	+0.2
TSSA				*e*S	Sn	08 48 37.7	-2.8
TSSA				IAML		08 48 42.3	
	comp=E,4µm,0.3s						
TSSA				IAML		08 48 42.7	
	comp=N,4µm,0.7s						
IUG	Iuzhnay	5.79	354	*e*P	Pn	08 47 37.9	-1.2
IUG	Iuzhnay	5.79	354	*e*PN	Pn	08 47 37.9	-1.2
CHM	Chimkent	6.01	351	*e*P	Pn	08 47 40.9	-1.1
CHM	Chimkent	6.01	351	*e*PN	Pn	08 47 40.8	-1.1
DHRM	DHARAMSHALA	6.10	131	*e*P	Pn	08 47 42.9	-0.6
DHRM				*e*S	Sn	08 48 49.1	-3.2
DHRM				IAML		08 48 53.4	
	comp=E,4µm,0.6s						
DHRM				IAML		08 48 53.7	
	comp=N,4µm,0.3s						
TLWR	Talawar	6.11	135	*e*P	Pn	08 47 43.5	+0.1
TLWR				*e*S	Sn	08 48 49.9	-2.3
TLWR				IAML		08 48 53.9	
	comp=N,732nm,0.6s						
TLWR				IAML		08 48 55.1	
	comp=E,566nm,0.5s						
UCH	Uchtor	6.49	25	P	Pn	08 47 47.8	-1.0
	SNR=548						
DZA	Taraz	6.51	3	*e*P	Pn	08 47 47.3	-1.5
DZA				*e*S	Sn	08 48 59.8	-2.0
DZA	Taraz	6.51	3	*e*PN	Pn	08 47 47.2	-1.5
DZA				*e*S	Sn	08 48 59.7	-2.0
EKS2	Erkin-Say	6.66	19	P	Pn	08 47 50.1	-0.8
	SNR=878						
BRLS	Borolday	6.69	354	⇓*i*P	Pn	08 47 46.5	-4.6
BRLS	Borolday	6.69	354	*d i*PN	Pn	08 47 46.4	-4.6
KK31	Karatay Array	6.72	358		Pn	08 47 50.3	-1.2
KK31	Karatay Array	6.72	358	⇑P	Pn	08 47 50.2	-1.2
	comp=E,1µm,0.8s,baz=181,slow=13						
KK31				⇓S	Sn	08 49 00.5	-6.2
	comp=E,854nm,0.5s,baz=185,slow=22						
KK31	Karatay Array	6.72	358	PN	Pn	08 47 50.3	-1.2
KKAR	Karatay Array	6.72	358		Pn	08 47 50.3	-1.2
KKAR	Karatay Array	6.72	358	PN	Pn	08 47 50.3	-1.2
BHK	Bhakra	6.77	136	*e*P	Pn	08 47 55.7	+3.4
BHK				*e*S	Sn	08 49 12.0	+4.0
BHK				IAML		08 49 13.9	
	comp=E,564nm,0.7s						
BHK				IAML		08 49 14.9	
	comp=N,965nm,0.3s						
AAK	Ala-Archa	6.85	23	P	Pn	08 47 52.5	-0.8
	SNR=537						
AAK	Ala-Archa	6.85	23	P	Pn	08 47 52.6	-0.8
	comp=N,495nm,0.7s,baz=209,slow=8.4,SNR=848						
AAK				S	Sn	08 49 06.6	-3.4
	comp=N,550nm,0.8s,baz=314,slow=19,SNR=9.3						
AAK	Ala-Archa	6.85	23	P	Pn	08 47 53.2	-0.2
AAK				S	Sn	08 49 08.6	-1.5
AAK	Ala-Archa	6.85	23		Pn	08 47 52.2	-1.2
AAK	Ala-Archa	6.85	23	⇓P	Pn	08 47 52.5	-0.8
	comp=N,2µm,0.6s						
AAK				⇓S	Sn	08 49 06.9	-3.2
	comp=N,6µm,0.7s						
AAK	Ala-Archa	6.85	23	P	Pn	08 47 52.6	-0.8
AAK	Ala-Archa	6.85	23	*d i*PN	Pn	08 47 52.5	-0.8
KBK	Karagaybulak	7.02	25	P	Pn	08 47 55.1	-0.6
	SNR=134						
FRU1	Bishkek	7.05	23		Pn	08 47 55.7	-0.2
FRU1	Bishkek	7.05	23	PN	Pn	08 47 55.7	-0.2
BOOM	Boomskoye usch	7.25	31		Pn	08 47 57.6	-1.2
BOOM	Boomskoye usch	7.25	31	PN	Pn	08 47 57.6	-1.2
CHMS	Chumysh	7.25	23	P	Pn	08 47 57.7	-1.0
	SNR=138						
HRA	Herat	7.31	257		Pn	08 47 59.3	-0.4
SMLA	Simla	7.42	133	*e*P	Pn	08 48 00.7	-0.3
SMLA				*e*S	Sn	08 49 20.3	-3.3
SMLA				IAML		08 49 28.4	
	comp=E,626nm,0.3s						
SMLA				IAML		08 49 28.9	
	comp=N,892nm,0.4s						
USP	Ospenovka	7.42	21	P	Pn	08 47 59.4	-1.6
	SNR=280						
TKM2	Tokmak 2	7.48	28	P	Pn	08 48 00.9	-1.0
	SNR=74						
TARG	Taragay, Kyrgy	7.59	43		Pn	08 48 02.1	-1.5
TARG	Taragay, Kyrgy	7.59	43	PN	Pn	08 48 02.1	-1.5
SGDS	Sogindy	7.63	21	⇓*i*P	Pn	08 48 01.1	-2.7
TNSS	Tian-Shan	8.13	33	*e*P	Pn	08 48 08.5	-2.3
TNSS	Tian-Shan	8.13	33	*e*PN	Pn	08 48 08.5	-2.3
AAA	Alma-Ata	8.26	32	*e*P	Pn	08 48 10.6	-1.6
AAA	Alma-Ata	8.26	32	*e*PN	Pn	08 48 10.5	-1.6
MDOK	Medeo	8.28	33	*e*P	Pn	08 48 10.8	-1.8
MDOK	Medeo	8.28	33	*e*PN	Pn	08 48 10.7	-1.8
KNDC	Almaty	8.28	33	⇑P	Pn	08 48 11.9	-0.7
	comp=N,758nm,0.8s						
KNDC	Almaty	8.28	33	PN	Pn	08 48 11.8	-0.7
PRZ	Przheval'sk	8.43	41		Pn	08 48 14.4	-0.2
PRZ	Przheval'sk	8.43	41	PN	Pn	08 48 14.4	-0.2
DDI	Dehra Dun	8.53	133	*e*P	Pn	08 48 14.7	-1.2
DDI				*e*S	Sn	08 49 47.4	-3.2
DDI				IAML		08 49 55.5	
	comp=E,803nm,0.3s						
DDI				IAML		08 49 56.4	
	comp=N,884nm,0.3s						
BKNR	BIKANER	8.59	166	*e*P	Pn	08 48 13.6	-3.1
BKNR				*e*S	Sn	08 49 43.6	-8.4
BKNR				IAML		08 49 49.0	
	comp=N,892nm,0.7s						
BKNR				IAML		08 49 49.8	
	comp=E,614nm,0.6s						
KUU	Kurty	8.59	28	*e*P	Pn	08 48 14.2	-2.4
KUU	Kurty	8.59	28	*e*PN	Pn	08 48 14.2	-2.4
SATY	Saty	8.84	39	⇓*i*P	Pn	08 48 18.1	-2.0
SATY				*e*S	Sn	08 49 55.5	-2.6
SATY	Saty	8.84	39	*d i*PN	Pn	08 48 18.1	-2.0
BTLS	Baital	8.98	15	*e*P	Pn	08 48 19.6	-2.2
BTLS	Baital	8.98	15	*e*PN	Pn	08 48 19.6	-2.2
UZB	Uzynbulak	9.22	40	⇓*i*P	Pn	08 48 23.4	-1.8
UZB	Uzynbulak	9.22	40	*d i*P	Pn	08 48 23.3	-1.8
ARXS	Arharly	9.46	32	*e*P	Pn	08 48 25.7	-2.5
SHLS	Shalkode	9.46	42	*e*P	Pn	08 48 29.7	+1.3
SHLS				*e*S	Sn	08 50 16.2	+3.1
SHLS	Shalkode	9.46	42	*e*P	Pn	08 48 29.7	+1.3
SHLS				*e*S	Sn	08 50 16.2	+3.1
PDGK	Podgornoye	9.60	41	⇑P	Pn	08 48 27.9	-2.2
	comp=E,127nm,0.8s						
PDGK	Podgornoye	9.60	41	P	Pn	08 48 27.9	-2.2
TKRD	Thakurdwara	9.86	135	*e*P	Pn	08 48 31.4	-2.3
TKRD				*e*S	Sn	08 50 16.6	-6.1
UGON	Onchagaon	10.01	142	*e*P	Pn	08 48 35.5	-0.2
UGON				*e*S	Sn	08 50 21.1	-5.3
UGON				IAML		08 50 23.1	
	comp=N,267nm,0.8s						
UGON				IAML		08 50 24.4	
	comp=E,292nm,0.7s						
TDK	Taldyqorghan	10.34	31	*e*P	Pn	08 48 37.5	-2.5
TDK	Taldyqorghan	10.34	31	*e*P	Pn	08 48 37.4	-2.5
UDPR	Udaipur	12.02	167	*e*P	Pn	08 49 01.4	-0.9
UDPR				*e*S	Sn	08 51 05.3	-10
UDPR				IAML		08 51 11.9	
	comp=E,296nm,1.1s						
UDPR				IAML		08 51 13.1	
	comp=N,159nm,0.6s						
MAKZ	Makanchi	13.31	35		Pn	08 49 16.3	-2.6
MAKZ	Makanchi	13.31	35	P	Pn	08 49 16.3	-2.6
MK31	Makanchi Array	13.45	36	*c i*P	Pn	08 49 18.5	-2.1
MKAR	Makanchi Array	13.45	36	P	Pn	08 49 18.3	-2.3
	comp=N,55nm,0.8s,baz=227,slow=12,SNR=78						
MKAR	Makanchi Array	13.45	36	Pn	Pn	08 49 18.1	-2.5
MKAR	Makanchi Array	13.45	36	*i* P	Pn	08 49 18.7	-1.9
MKAR				pmax	pmax		
	comp=Z,55nm,0.8s						
BRZS	Berezniki	13.66	5	*e*P	Pn	08 49 21.6	-1.6
BRZS	Berezniki	13.66	5	*e*P	Pn	08 49 21.6	-1.6
NGCH	Negor - Chabah	13.79	220	P	Pn	08 49 26.9	+1.8
WMQ	Urumqi	14.86	55	*e*P	Pn	08 49 37.6	-0.9
WMQ				S	Sn	08 52 15.6	-7.5
WMQ				pmax	pmax		
	comp=Z,34nm,1.7s						
WMQ				LR	LR		
	comp=Z,180nm,24.0s						
AB31	Akbulak array	15.13	332	Pn	Pn	08 49 38.4	-3.4
AB31	Akbulak array	15.13	332	⇑P	Pn	08 49 39.3	-2.5
	comp=Z,111nm,0.8s						
AB31	Akbulak array	15.13	332	P	Pn	08 49 39.3	-2.5
ABKAR	Akbulak array	15.13	332		Pn	08 49 39.0	-2.8
ZSN	Zaisan	15.17	39	*e*P	Pn	08 49 41.0	-1.4
ZSN	Zaisan	15.17	39	*e*P	Pn	08 49 40.9	-1.4
KURBB	Kurchatov Arra	15.27	19	P	Pn	08 49 40.1	-3.4
	comp=Z,29nm,0.7s,baz=211,slow=12,SNR=106						
KURBB				LR	LR	08 55 01.0	
	comp=Z,136nm,21.5s,baz=112,slow=34						
KURBB	Kurchatov Arra	15.27	19	⇓P	Pn	08 49 40.0	-3.5
	comp=Z,305nm,0.7s						
KURBB	Kurchatov Arra	15.27	19	P	Pn	08 49 39.9	-3.5
KURK	Kurchatov	15.38	19	P	Pn	08 49 42.2	-2.6
KURK	Kurchatov	15.38	19		Pn	08 49 41.1	-3.7
KURK	Kurchatov	15.38	19	*d i*P	Pn	08 49 40.9	-3.9
KURK				pmax	pmax		
	comp=Z,148nm,2.5s						
EVN	Everest	15.89	117	Pn	Pn	08 49 50.3	-1.8
BANOM	Banah	16.23	234	P	P	08 49 56.4	+0.3
BANOM				S	S	08 52 57.2	-0.1
BANOM	Banah	16.23	234	*i* P	Pn	08 49 55.2	-0.3
	SNR=14						
SHME	Shamm	16.25	235	P	P	08 49 57.5	+1.3
SHME	Shamm	16.25	235	*i* P	P	08 49 56.7	+0.5
	SNR=6.6						
BVA0	Borovoye Array	16.64	359	P	Pn	08 49 58.0	-2.4
BVAR	Borovoye Array	16.64	359	P	Pn	08 49 58.4	-2.0
	comp=Z,112nm,0.7s,baz=168,slow=12,SNR=116						
BVAR				S	Sn	08 52 56.2	-10
	comp=Z,34nm,0.7s,baz=169,slow=22,SNR=5.1						
BVAR				LR	LR	08 56 44.9	
	comp=Z,285nm,19.3s,baz=181,slow=38						
MDH	Madha	16.66	233	P	Pn	08 50 00.4	-0.5
MDH	Madha	16.66	233	P	Pn	08 50 00.6	-0.3
BORK	Borovoye	16.67	359	P	Pn	08 49 58.0	-2.7
BORK	Borovoye	16.67	359	*ce*P	Pn	08 49 58.7	-1.9
BORK				pmax	pmax		
	comp=Z,88nm,0.6s						
MASF	Masafi	16.70	233	P	P	08 50 00.6	-0.7
MSFE	Esma-Masafi	16.71	233	P	Pn	08 50 02.0	+0.5
AKTO	Aktyubinsk	16.83	331	P	P	08 50 02.0	-0.4
	comp=Z,214nm,0.7s,baz=141,slow=7.1,SNR=107						
AKTO				S	Sn	08 53 01.2	-8.9
	comp=Z,158nm,1.0s,baz=344,slow=23,SNR=10						
AKTO				LR	LR	08 56 51.8	
	comp=Z,134nm,19.2s,baz=284,slow=38						
AKTO	Aktyubinsk	16.83	331	⇓P	P	08 50 01.5	-0.9
	comp=Z,154nm,0.8s						
AKTO				⇑S	Sn	08 52 55.6	-15
	comp=Z,159nm,0.8s						
UOSS	Minazif	16.98	232	P	P	08 50 03.5	-0.7
HATD	Hatta, Dubai	17.11	232	P	Pn	08 50 07.8	+1.6
HATD	Hatta, Dubai	17.11	232	P	Pn	08 50 06.8	+0.6
WBK	Wadi Bani Khal	17.17	220	P	Pn	08 50 08.2	+1.2
ASHO	Ashiyiah	17.25	232	P	Pn	08 50 09.2	+1.2
	SNR=10						
ASHO	Ashiyiah	17.25	232	*i* P	P	08 50 07.7	+0.3
	SNR=16						
NAZ	Nazwa, Dubai	17.29	233	P	Pn	08 50 10.9	+2.4
	SNR=8.6						
SMDO	Samad	17.30	223	P	Pn	08 50 11.0	+2.4
HOQ	Hoqain	17.31	226	P	Pn	08 50 11.3	+2.6
JLN	Jalan Bani Buh	17.32	218	P	Pn	08 50 10.2	+1.4
SOHO	SOHO	17.36	229	P	Pn	08 50 13.0	+3.8
FAQ	Al Faqa, Dubai	17.51	233	P	P	08 50 10.2	0.0
JMDO	Jabal Madar	17.82	222	P	Pn	08 50 16.4	+1.6
ALNE	Al Ain	17.90	231	P	Pn	08 50 16.3	+0.5
	SNR=6.8						
ALNE				S	S	08 53 33.1	-0.1
ALNE	Al Ain	17.90	231	*i* P	Pn	08 50 15.7	-0.1
	SNR=13						
ARQ	Araqi	17.96	228	P	Pn	08 50 18.0	+1.5
BSY	Bisya	18.02	225	P	Pn	08 50 18.7	+1.5
AJN	Ajban	18.03	234	P	Pn	08 50 17.4	+0.2
	SNR=7.6						
AJN	Ajban	18.03	234	*i* P	Pn	08 50 17.0	-0.2
	SNR=5.2						
LSA	Lhasa	18.25	106	P	Pn	08 50 21.3	+0.9
LSA	Lhasa	18.25	106	P	P	08 50 18.1	-0.7
LSA				pmax	pmax		
	comp=Z,76nm,0.9s						
LSA	Lhasa	18.25	106	P	Pn	08 50 21.3	+0.9
AKT	Akhty	18.68	293	⇑*e*P	Pn	08 50 24.6	-0.3
MHTO	MHTO	19.03	220	P	Pn	08 50 29.6	+0.6
JRN	Qarnain Island	19.20	239	P	P	08 50 28.3	-0.3
UMZA	Um Al Zommool	19.25	229	P	P	08 50 30.2	+1.0
UMZA				S	S	08 53 58.4	-1.6
GHWR	Ruwais	19.83	236	P	P	08 50 35.5	+0.1
GHWR				S	S	08 54 05.3	-6.0
SHMA	Al-Shehemyia	19.97	244	P	P	08 50 36.4	-0.4
SHMA				S	S	08 54 08.1	-5.9
BTLR	Botlikh	19.98	296	*d i*P	P	08 50 38.3	+1.4
BTLR				pmax	pmax		
	comp=Z,79nm,0.6s						
ZAA0	Zalesovo Array	20.07	25	P	P	08 50 36.8	-0.9
ZALV	Zalesovo Beam	20.07	25	P	P	08 50 37.7	0.0
	comp=Z,337nm,0.6s,baz=220,slow=11,SNR=851						
ZALV				S	S	08 54 14.2	-1.3
	comp=Z,8.1nm,0.7s,baz=217,slow=18,SNR=3.2						
	comp=Z,337nm,0.6s						
ZALV	Zalesovo Beam	20.07	25	P	P	08 50 37.1	-0.6
ZALV	Zalesovo Beam	20.07	25	*i* P	P	08 50 37.7	0.0
ZALV				pmax	pmax		
	comp=Z,338nm,0.6s						
HYB	Hyderabad	20.08	158	*e*P	Pn	08 50 39.9	-1.5
MZR	Muzera	20.10	233	P	P	08 50 37.4	-1.0
	SNR=7.5						
MZR				S	S	08 54 11.6	-5.2
MZR	Muzera	20.10	233	*i* P	P	08 50 37.8	-0.5
	SNR=13						
DQM	DQM	20.13	219	P	P	08 50 40.2	+1.6
TRNA	Turayna	20.48	241	P	P	08 50 41.6	-0.7
TRNA				S	S	08 54 18.6	-5.5
SLWR	Sila	20.57	239	P	P	08 50 43.2	-0.1
SLWR				S	S	08 54 19.6	-6.3
SMRA	Abu-Samra	20.75	242	P	P	08 50 44.4	-0.8
SMRA				S	S	08 54 23.4	-5.9
GNI	Garni	20.82	288	P	Pn	08 50 49.0	-1.1
	comp=Z,109nm,1.0s,baz=180,slow=1.8,SNR=27						
GNI	Garni	20.82	288	P	P	08 50 46.1	0.0
GNI	Garni	20.82	288	P	P	08 50 48.1	+2.0
GNI	Garni	20.82	288	*c i*P	Pn	08 50 48.7	-1.4
GNI				pmax	pmax		
	comp=Z,172nm,1.0s						
SHL	Shillong	20.96	115	P	P	08 50 47.4	-0.3
SHL	Shillong	20.96	115	P	P	08 50 47.4	-0.3
SVE	Sverdlovsk	21.58	345	*e*P	P	08 50 54.2	+0.4
SVE				*e*S	S	08 54 50.0	+5.8
SVE				pmax	pmax		
	comp=Z,127nm,1.1s						
ARTI	Arti	21.72	341	P	P	08 50 55.5	+0.2
	comp=Z,36nm,0.6s,baz=164,slow=6.2,SNR=37						
ARTI				S	S	08 54 49.6	+2.9
	comp=Z,12nm,0.8s,baz=342,slow=20,SNR=2.1						
ARTI				LR	LR	09 00 09.2	
	comp=Z,321nm,18.5s,baz=180,slow=38						
	comp=Z,36nm,0.6s						
ARTI	Arti	21.72	341	P	P	08 50 55.2	-0.1
ARTI	Arti	21.72	341	*c i*P	P	08 50 55.5	+0.2
ARTI				*PP	pP	08 51 20.5	-0.3
ARTI						08 51 34.3	
ARTI				S	S	08 54 48.7	+2.0
ARTI				pmax	pmax		
	comp=Z,58nm,0.9s						
KBZ	Khabaz	22.55	298	P	P	08 51 03.4	-0.5
	comp=Z,24nm,0.9s,baz=152,slow=7.0,SNR=20						
	comp=Z,24nm,0.9s						
KBZ	Khabaz	22.55	298	*c i*P	P	08 51 03.1	-0.8
KBZ				pmax	pmax		
	comp=Z,28nm,1.0s						
NEUR	Neytrino	22.62	296	⇑*e*P	P	08 51 07.6	+2.8
NEUR				pmax	pmax		
	comp=Z,35nm,1.2s						
SHAO	Shalim	22.71	220	P	P	08 51 07.5	+2.0
GOF	Gofitskoye	22.71	301	*ce*P	P	08 51 06.2	+0.9
SHA1	Shidzhatmaz	22.73	298	*c i*P	P	08 51 05.7	-0.1
KVAR	Kislovodsk Arr	22.74	298	P	P	08 51 06.6	+0.8
	baz=148,slow=19						
KIV	Kislovodsk	22.74	298	P	P	08 51 03.5	-2.3
KIV				IAmb	IAmb	08 51 23.6	
	comp=Z,50nm,0.7s						
KIV	Kislovodsk	22.74	298	*e*P	P	08 51 05.4	-0.4
KIV				*e*S	S	08 55 04.5	+0.4
KIV				pmax	pmax		
	comp=Z,26nm,1.0s						
KIV				MLR	MLR		
	comp=Z,43nm,14.0s						
KIV	Kislovodsk	22.74	298	P	P	08 51 06.0	+0.2

	comp=Z,39nm,0.7s						
BELG	Belogornoye	22.91	322	P	P	08 51 07.2	0.0
	comp=Z,90nm,0.6s,baz=341,slow=1.5,SNR=72						
	comp=Z,90nm,0.6s						
BELG	Belogornoye	22.91	322	deP	P	08 51 06.7	-0.4
BELG				pmax	pmax		
	comp=Z,17nm,0.7s						
GTA	Gaotai	23.00	74	eP	P	08 51 09.2	+0.8
GTA				pmax	pmax		
	comp=Z,18nm,1.2s						
DOK	Doka	23.03	224	P	P	08 51 09.3	+0.7
DOK				S	S	08 55 08.3	-0.6
DMTO	DMTO	23.32	221	P	P	08 51 11.3	+0.1
WHFO	Wadi Hawf	23.80	224	P	P	08 51 15.9	+0.3
RBK	Rabkut	23.89	222	P	P	08 51 16.9	+0.4
MARD	Mardin	24.05	281	P	P	08 51 18.7	+0.8
KOPT	Kop Dagi	24.08	288	P	P	08 51 19.2	+0.9
LABN	Labinsk	24.25	299	eP	P	08 51 21.3	+1.9
LABN				e*PP	pP	08 51 53.2	+5.6
LABN				eS	S	08 55 32.6	+4.5
LABN				pmax	pmax		
	comp=Z,43nm,0.6s						
ABTO	Aybut	24.52	224	P	P	08 51 22.2	0.0
VSLR	Vesyoloye	24.58	296	⇓eP	P	08 51 22.8	+0.3
VSLR				pmax	pmax		
	comp=Z,70nm,1.0s						
ERBR	Yeremizino-Bor	24.61	302	eP	P	08 51 23.2	+0.5
ERBR				e*PP	pP	08 51 55.1	+3.6
ERBR				eS	S	08 55 36.2	+2.4
ERBR				pmax	pmax		
	comp=Z,34nm,0.7s						
RAYN	Ar Rayn	25.35	247	P	P	08 51 29.8	+0.1
RAYN	Ar Rayn	25.35	247	P	P	08 51 29.0	-0.7
RAYN	Ar Rayn	25.35	247	P	P	08 51 29.8	+0.1
RAYN	Ar Rayn	25.35	247	P	P	08 51 29.0	-0.7
RAYN				pmax	pmax		
	comp=Z,15nm,0.7s						
VRH	Novokhopyorsk	25.51	315	eP	P	08 51 30.9	+0.1
VRH				pmax	pmax		
	comp=Z,53nm,1.2s						
MOY	Mondy	26.27	45	eP	P	08 51 38.9	+1.1
MOY				pmax	pmax		
	comp=Z,24nm,1.3s						
KIRV	Kirov	26.30	334	P	P	08 51 38.4	+0.6
	comp=Z,56nm,0.6s,baz=105,slow=0.9,SNR=14						
	comp=Z,56nm,0.6s						
LZDM	Lanzhou Array	26.44	81	P	P	08 51 41.1	+1.3
	comp=Z,2.6nm,0.5s,baz=280,slow=8.9,SNR=4.4						
LZDM				PcP	PcP	08 55 00.7	-0.8
	comp=Z,5.5nm,0.5s,baz=276,slow=4.3,SNR=4.7						
	comp=Z,2.6nm,0.5s						
LZH	Lanzhou	26.54	81	eP	P	08 51 42.2	+1.8
LZH				PcP	PcP	08 55 01.4	-0.1
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
ANN	Anapa	26.59	299	eP	P	08 51 41.0	+0.4
ANN				e*PP	pP	08 52 10.2	+0.4
ANN				e		08 52 29.6	
ANN				eS	S	08 56 06.9	+1.8
ANN				pmax	pmax		
	comp=Z,48nm,0.9s						
VORD	Divnogorie	26.84	313	eP	P	08 51 41.2	-1.5
VORD				pmax	pmax		
	comp=Z,20nm,1.0s						
GAZ	Gaziantep	26.89	282	P	P	08 51 44.8	+1.4
VSR	Storozhevoye	27.00	313	eP	P	08 51 42.0	-2.2
VSR				pmax	pmax		
	comp=Z,40nm,0.9s						
VORR	Voronezh	27.14	314	eP	P	08 51 43.7	-1.7
VORR				pmax	pmax		
	comp=Z,60nm,0.9s						
ZAK	Zakamensk	27.15	49	eP	P	08 51 45.6	-0.1
ZAK				pmax	pmax		
	comp=Z,16nm,2.0s						
LPSR	Galich'ya Gora	27.66	316	eP	P	08 51 50.2	+0.2
LPSR				pmax	pmax		
	comp=Z,93nm,0.9s						
LPSR				pmax	pmax		
	comp=Z,118nm,2.2s						
TLY	Talaya	27.80	46	ceP	P	08 51 52.7	+1.3
TLY				pmax	pmax		
	comp=Z,15nm,2.0s						
PZH	PanZhiHua	28.02	102	P	P	08 51 55.0	+1.3
SONM	Songino Array	28.49	55	P	P	08 51 58.8	+1.1
	comp=Z,6.2nm,0.8s,baz=263,slow=8.9,SNR=28						
SONM				PcP	PcP	08 55 05.7	-0.3
	comp=Z,3.4nm,0.9s,baz=250,slow=4.2,SNR=2.7						
	comp=Z,6.2nm,0.8s						
SONM	Songino Array	28.49	55	P	P	08 51 58.8	+1.1
SONM				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ULN	Ulaanbaatar	28.94	55	P	P	08 52 02.0	+0.4
ULN	Ulaanbaatar	28.94	55	P	P	08 52 04.0	+2.4
ULN	Ulaanbaatar	28.94	55	deP	P	08 52 02.8	+1.2
ULN				pmax	pmax		
	comp=Z,15nm,1.5s						
KIRS	Kirsehir-Merke	29.21	287	⇑P	P	08 52 04.9	+0.8
BR104	Keskin Array S	29.36	288	P	P	08 52 06.2	+0.7
	comp=Z,5.8nm,1.3s						
BR131	Keskin Array S	29.36	288	P	P	08 52 05.3	-0.2
BR131	Keskin Array S	29.36	288	d iP	P	08 52 06.6	+1.1
BRTR	Keskin Array B	29.36	288	P	P	08 52 06.9	+1.4
	comp=Z,3.6nm,0.7s,baz=104,slow=9.3,SNR=18						
BRTR				pP	pP	08 52 36.0	+0.9
	comp=Z,4.3nm,0.7s,baz=101,slow=8.7,SNR=5.7						
	comp=Z,3.6nm,0.7s						
BRTR	Keskin Array B	29.36	288	P	P	08 52 05.2	-0.3
BRTR	Keskin Array B	29.36	288	i P	P	08 52 06.6	+1.1
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BR106	Keskin Array S	29.38	288	P	P	08 52 05.4	-0.2
	comp=Z,6.0nm,0.7s						
BR105	Keskin Array S	29.38	288	P	P	08 52 05.4	-0.3
	comp=Z,7.1nm,1.0s						
MOS	Moscow	29.68	321	eP	P	08 52 07.2	-0.7
MOS				e*PP	pP	08 52 37.6	+0.1
MOS				eS	S	08 56 53.2	-0.2
MOS				pmax	pmax		
	comp=Z,55nm,0.7s						
OBN	Obninsk	29.95	320	P	P	08 52 10.8	+0.5
	comp=Z,58nm,0.6s,baz=218,slow=6.3,SNR=8.4						
OBN				LR	LR	09 06 44.2	
	comp=Z,111nm,19.0s,baz=167,slow=41						
	comp=Z,58nm,0.6s						
OBN	Obninsk	29.95	320	P	P	08 52 10.1	-0.2
OBN	Obninsk	29.95	320	ceP	P	08 52 10.9	+0.6
OBN				e*PP	pP	08 52 40.7	+0.6
OBN				e*SP	sP	08 52 52.9	-3.3
OBN				e		08 53 13.3	
OBN				e		08 55 09.3	
OBN				pmax	pmax		
	comp=Z,55nm,0.6s						
CHTO	Chiang Mai	30.27	118	P	P	08 52 14.8	+1.3
CHTO				IAmb	IAmb	08 52 16.2	
	comp=Z,19nm,0.6s						
CHTO	Chiang Mai	30.27	118	P	P	08 52 15.4	+1.9
CHTO	Chiang Mai	30.27	118	P	P	08 52 15.2	+1.7
	comp=Z,27nm,0.6s						
CHTO	Chiang Mai	30.27	118	P	P	08 52 14.8	+1.3
CHTO				pmax	pmax		
	comp=Z,19nm,0.6s						
CHTO	Chiang Mai	30.27	118	P	P	08 52 14.8	+1.3
CHTO				pP	pP	08 52 45.0	+1.4
CM31	Chiang Mai Arr	30.50	118	P	P	08 52 16.6	+1.0
CM31				IAmb	IAmb	08 52 18.6	
	comp=Z,50nm,1.1s						
CMAR	Chiang Mai Arr	30.50	118	P	P	08 52 16.3	+0.8
	comp=Z,22nm,0.7s,baz=297,slow=8.2,SNR=73						
CMAR				PcP	PcP	08 55 10.9	-0.5
	comp=Z,1.8nm,0.3s,baz=295,slow=3.7,SNR=5.0						
	comp=Z,22nm,0.7s						
CMAR	Chiang Mai Arr	30.50	118	P	P	08 52 16.7	+1.2
CMAR	Chiang Mai Arr	30.50	118	i P	P	08 52 16.6	+1.1
CMAR				pmax	pmax		
	comp=Z,23nm,0.7s						
BTO	Baotou	30.76	70	eP	P	08 52 16.3	-1.5
BTO				pP	pP	08 52 45.2	-3.0
BTO				PP	PnPn	08 53 24.0	+0.2
BTO				S	S	08 57 09.3	-1.6
BTO				pmax	pmax		
	comp=Z,11nm,0.5s						
BTO				pmax	pmax		
	comp=Z,650nm,6.5s						
BTO				LR	LR		
	comp=Z,1µm,6.3s						
BTO				LR	LR		
	comp=Z,2µm,6.0s						
BTO				LR	LR		
	comp=Z,1µm,6.3s						
XAN	Xi'an	31.05	83	P	P	08 52 20.0	-0.4
XAN				pP	pP	08 52 51.8	+0.7
XAN				pmax	pmax		
	comp=Z,33nm,0.8s						
KLMR	Klimovskoe	31.53	331	eP	P	08 52 22.7	-1.4
KLMR				e*PP	pP	08 52 52.6	-1.4
KLMR				e*SP	sP	08 53 08.1	-1.9
KLMR				pmax	pmax		
	comp=Z,28nm,0.7s						
HHC	Hu-ho-hao-te	31.91	69	eP	P	08 52 30.3	+2.4
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,450nm,5.3s						
SLVN	Son La	32.41	108	P	P	08 52 34.2	+1.9
ENH	Enshi	32.69	89	P	P	08 52 36.7	+2.0
ELL	Elmali	32.72	283	P	P	08 52 35.1	+0.1
ELL				IAmb	IAmb	08 52 37.2	
	comp=Z,28nm,0.8s						
ELL	Elmali	32.72	283	P	P	08 52 35.1	+0.1
ELL				pmax	pmax		
	comp=Z,28nm,0.8s						
AK09	Malin Array Si	32.88	309	P	P	08 52 36.1	+0.1
AK10	Malin Array Si	32.90	309	P	P	08 52 36.3	+0.1
AK08	Malin Array Si	32.90	309	P	P	08 52 35.9	-0.3
AK07	Malin Array Si	32.92	309	P	P	08 52 36.5	+0.1
AK06	Malin Array Si	32.93	309	P	P	08 52 36.5	0.0
AK05	Malin Array Si	32.93	309	P	P	08 52 36.6	+0.1
AKASG	Malin Array Be	32.93	309	P	P	08 52 36.5	0.0
	comp=Z,15nm,0.6s,baz=84,slow=7.0,SNR=88						
AKASG				pP	pP	08 53 07.6	+1.3
	comp=Z,11nm,0.7s,baz=90,slow=7.5,SNR=5.3						
AKASG				LR	LR	09 08 59.0	
	comp=Z,54nm,18.5s,baz=43,slow=41						
	comp=Z,15nm,0.6s						
AKASG	Malin Array Be	32.93	309	P	P	08 52 36.0	-0.5
AKASG	Malin Array Be	32.93	309	i P	P	08 52 36.5	0.0
AKASG				pmax	pmax		
	comp=Z,28nm,0.6s						
AKBB	Malin Array Si	32.93	309	P	P	08 52 35.7	-0.8
AKBB	Malin Array Si	32.93	309	c iP	P	08 52 36.4	-0.1
AKBB				pmax	pmax		
	comp=Z,83nm,1.8s						
AKBB	Malin Array Si	32.93	309	P	P	08 52 36.2	-0.3
AK02	Malin Array Si	32.94	309	P	P	08 52 36.2	-0.3
AK01	Malin Array Si	32.94	309	P	P	08 52 36.2	-0.3
AK03	Malin Array Si	32.94	309	P	P	08 52 36.2	-0.3
KIEV	Kiev	32.94	309	P	P	08 52 35.3	-1.3
KIEV				IAmb	IAmb	08 52 37.4	
	comp=Z,28nm,0.7s						
KIEV	Kiev	32.94	309	⇑P	P	08 52 36.9	+0.3
KIEV	Kiev	32.94	309	P	P	08 52 35.3	-1.3
KIEV				pmax	pmax		
	comp=Z,28nm,0.7s						
KIEV	Kiev	32.94	309	P	P	08 52 36.2	-0.4
KIEV	Kiev	32.94	309	P	P	08 52 36.5	0.0
KIEV				pP	pP	08 53 07.7	+1.3
KIEV				sP	sP	08 53 24.3	+2.0
AK11	Malin Array Si	32.96	309	P	P	08 52 36.4	-0.4
AK12	Malin Array Si	32.97	309	P	P	08 52 36.5	-0.3
AK04	Malin Array Si	32.97	309	P	P	08 52 36.5	-0.3
AK14	Malin Array Si	32.99	309	P	P	08 52 36.7	-0.3
AK15	Malin Array Si	32.99	309	P	P	08 52 36.7	-0.3
TPGR	Topolog	32.99	298	⇑P	P	08 52 38.1	+1.0
AK16	Malin Array Si	33.00	309	P	P	08 52 36.8	-0.3
AK23	Malin Array Si	33.00	309	P	P	08 52 36.8	-0.3
AK13	Malin Array Si	33.02	309	P	P	08 52 36.9	-0.4
AK17	Malin Array Si	33.03	309	P	P	08 52 36.8	-0.6
AK18	Malin Array Si	33.03	309	P	P	08 52 37.0	-0.4
AK22	Malin Array Si	33.04	309	P	P	08 52 36.9	-0.5
AK21	Malin Array Si	33.06	309	P	P	08 52 37.1	-0.5
AK19	Malin Array Si	33.07	309	P	P	08 52 37.1	-0.6
AK20	Malin Array Si	33.07	309	P	P	08 52 37.2	-0.5
SORM	Soroca	33.18	304	⇓P	P	08 52 39.0	+0.3
CFR	Carcaliu	33.20	299	⇑P	P	08 52 39.6	+0.7
ICOR	Ion Corvin	33.45	297	⇑P	P	08 52 42.2	+1.1
LUBAR	Lubar, Ukraine	33.75	307	P	P	08 52 43.3	-0.3
LYN	LuoYang	33.75	81	P	P	08 52 45.4	+1.6
LYN				pmax	pmax		
	comp=Z,44nm,1.0s						
VRI	Vrincioaia	34.19	300	⇑P	P	08 52 48.9	+1.4
PLOR	Plostina	34.24	300	⇑P	P	08 52 49.6	+1.6
TESR	Tescani	34.25	301	⇑P	P	08 52 48.6	+0.6
NRIK	Noril'sk	34.26	10	P	P	08 52 49.0	+1.3
	comp=Z,24nm,0.5s,baz=200,slow=6.1,SNR=82						
NRIK				pP	pP	08 53 19.8	+1.5
	comp=Z,31nm,1.0s,baz=186,slow=4.9,SNR=4.4						
NRIK				PcP	PcP	08 55 20.9	+0.1
	comp=Z,6.9nm,0.8s,baz=146,slow=3.6,SNR=2.2						
NRIK				LR	LR	09 08 16.9	
	comp=Z,127nm,19.6s,baz=222,slow=38						
	comp=Z,24nm,0.5s						
NRIK	Noril'sk	34.26	10	P	P	08 52 48.0	+0.2
NRIK	Noril'sk	34.26	10	d iP	P	08 52 49.2	+1.4
NRIK				pmax	pmax		
	comp=Z,60nm,1.1s						
ISR	Istrita	34.32	299	⇑P	P	08 52 49.4	+0.7
MNK	Minsk	34.50	315	i P	P	08 52 50.3	+0.2
	comp=E,18nm,0.7s						
MNK				i P	P	08 52 50.3	+0.2
	comp=N,68nm,0.9s						
MNK				i P	P	08 52 50.3	+0.2
	comp=Z,64nm,0.9s,baz=103						
MNK				i pP	pP	08 53 20.9	+0.8
MNK				i sP	sP	08 53 36.5	+0.5
MNK				i PP	PP	08 54 09.9	-0.9
MNK				i S	S	08 58 08.3	0.0
MNK				i sS	sS	08 59 01.9	-0.5
MNK				i SS	SnSn	09 00 35.0	-0.3
MNK				i LR	LR	09 07 01.7	
MNK	Minsk	34.50	315	i P	P	08 52 50.2	+0.2
MNK				i *PP	pP	08 53 20.9	+0.8
MNK				i *SP	sP	08 53 36.4	+0.5
MNK				i		08 54 09.9	
MNK				i S	S	08 58 08.3	0.0
MNK				i *SS	sS	08 59 01.8	-0.5
MNK				i SS	SnSn	09 00 34.9	-0.3
MNK				pmax	pmax		
	comp=E,18nm,0.7s						
MNK				pmax	pmax		
	comp=Z,64nm,0.9s						
MNK				pmax	pmax		
	comp=N,68nm,0.9s						
COVR	Voineasa-Covas	34.55	300	⇑P	P	08 52 51.9	+1.2
MLR	Muntele Rosu	34.74	299	P	P	08 52 54.8	+2.5
	comp=N,26nm,0.8s,baz=96,slow=2.7,SNR=31						
MLR				PcP	PcP	08 55 21.9	-1.0
	comp=N,9.8nm,0.9s,baz=135,slow=4.3,SNR=2.0						
MLR	Muntele Rosu	34.74	299	⇑P	P	08 52 53.7	+1.3
HNS	HongShan	34.85	75	⇓P	P	08 52 55.0	+1.8
HNS				PcP	PcP	08 55 22.6	-0.6
HNS				pmax	pmax		
	comp=N,15nm,1.1s						
RNPP5	Staryi Chortor	35.10	309	P	P	08 52 54.9	-0.3
RNPP9	Sopachiv	35.12	310	P	P	08 52 55.2	-0.1
DOPR	Dopca	35.12	300	⇓P	P	08 52 56.6	+1.1
RNPP8	Varash	35.13	310	P	P	08 52 55.3	-0.1
KARP	Karpathos	35.16	282	P	P	08 52 55.4	-0.5
KARP	Karpathos	35.16	282	eP	P	08 52 56.2	+0.3
NACGM	Naroch	35.22	316	⇑iP	P	08 52 56.7	+0.6
	comp=Z,115nm,0.8s,baz=103						
BURAR	Bucovina Array	35.25	303	P	P	08 52 56.6	-0.1
BURAR	Bucovina Array	35.25	303	⇑P	P	08 52 57.7	+1.0
BUR08	Bucovina Ar. S	35.27	303	P	P	08 52 56.5	-0.3
VOIR		35.37	299	⇑P	P	08 52 58.5	+0.7
ARR	Arges	35.67	299	⇑P	P	08 53 00.7	+0.5
ISAL	Salakas	35.74	317	eP	P	08 53 01.4	+0.8
JOF	Joensuu	35.91	330	eP	P	08 53 02.5	+0.5
VSU	Vasula	36.21	322	eP	P	08 53 03.8	-0.7
VSU	Vasula	36.21	322	d iP	P	08 53 04.2	-0.3
VSU				pmax	pmax		
	comp=Z,82nm,1.0s						
LOT	Lotru	36.27	299	⇑P	P	08 53 06.1	+0.7
WHN	Wuhan	36.51	86	⇓P	P	08 53 09.0	+1.5
WHN				PcP	PcP	08 55 27.6	-0.6
WHN				pmax	pmax		
	comp=Z,90nm,0.9s						
MARR	Marisel-Cluj	36.68	301	⇑P	P	08 53 10.1	+1.2
PABE	Paberze	36.92	316	P	P	08 53 10.3	-0.3
PABE	Paberze	36.92	316	eP	P	08 53 11.4	+0.7
GZR	Gura Zlata	36.97	299	⇑P	P	08 53 12.3	+1.0
TIA	Tai'an	37.01	76	P	P	08 53 12.6	+0.9
TIA				pmax	pmax		
	comp=Z,25nm,1.3s						
VSVD	Vaisvydziai	37.04	317	eP	P	08 53 12.7	+1.1
SUW	Suwalki	37.12	314	eP	P	08 53 12.3	+0.1
SUW	Suwalki	37.12	314	P	P	08 53 11.6	-0.7
SUW	Suwalki	37.12	314	eP	P	08 53 12.4	+0.1
SUW	Suwalki	37.12	314	P	P	08 53 11.6	-0.7
SURR	Surduc	37.41	300	⇑P	P	08 53 16.0	+1.1
HILR	Hailar Array B	37.47	54	P	P	08 53 16.9	+1.5
	comp=Z,1.7nm,0.4s,baz=282,slow=7.2,SNR=3.8						
HILR				PcP	PcP	08 55 30.8	-0.1
	comp=Z,7.7nm,0.7s,baz=222,slow=2.0,SNR=7.7						
	comp=Z,1.7nm,0.4s						
FIA1	FINESS Array S	37.52	326	P	P	08 53 15.4	-0.2
FINES	FINESS Array B	37.52	326	P	P	08 53 16.1	+0.5
	comp=Z,18nm,0.4s,baz=114,slow=9.3,SNR=110						
FINES				pP	pP	08 53 47.0	+1.0
	comp=Z,25nm,0.8s,baz=111,slow=11,SNR=5.7						
FINES				LR	LR	09 08 59.0	
	comp=Z,92nm,19.1s,baz=44,slow=36						
	comp=Z,18nm,0.4s						
FINES	FINESS Array B	37.52	326	P	P	08 53 15.9	+0.4
LVZ	Lovozero	37.53	338		P	08 53 16.1	+0.4
LVZ	Lovozero	37.53	338	c iP	P	08 53 15.5	-0.1
LVZ				pmax	pmax		
	comp=Z,34nm,0.9s						
LVZ	Lovozero	37.53	338	P	P	08 53 15.7	+0.1
LVZ				sP	sP	08 54 04.0	+2.0
APA	Apatity	37.70	338	eP	P	08 53 15.7	-1.4
APA				e*PP	pP	08 53 42.3	-5.2
APA				MLR	MLR		
	comp=Z,1µm,4.6s						
SIRR	Siria	37.71	301	⇓P	P	08 53 18.6	+1.2
MDVR	Moldovita	37.77	298	⇓P	P	08 53 18.8	+0.8
BZS	Buzias	37.77	300	⇑P	P	08 53 17.9	0.0
MEF	Metsahovi	37.89	324	eP	P	08 53 19.2	+0.5
STHS	Stebnicka Huta	37.94	306	eP	P	08 53 19.7	+0.4
STHS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
STHS	Stebnicka Huta	37.94	306	eP	P	08 53 19.7	+0.4
R9F13	Warsaw-Wawer	38.13	311	eP	P	08 53 21.9	+1.0
R9F13				eS	S	08 59 07.5	+3.9
SLIT	Slitere, Latvi	38.27	319	eP	P	08 53 21.7	-0.2
KEF	Keuruu	38.31	327	eP	P	08 53 22.7	+0.5
NIE	Niedzica	38.55	306	eP	P	08 53 26.1	+1.6
PSZ	Piszkesteto	38.84	304	P	P	08 53 27.2	+0.2
PSZ				IAmb	IAmb	08 53 29.1	
	comp=Z,62nm,1.9s						
PSZ	Piszkesteto	38.84	304	⇑P	P	08 53 27.1	+0.1
PSZ	Piszkesteto	38.84	304	P	P	08 53 27.2	+0.2
PSZ				pmax	pmax		
	comp=Z,62nm,1.9s						
OJC	Ojcow	38.88	307	eP	P	08 53 27.7	+0.5
OJC	Ojcow	38.88	307	P	P	08 53 27.2	+0.1
OJC	Ojcow	38.88	307	P	P	08 53 27.3	+0.1
RAF	Rauma	39.36	325	eP	P	08 53 31.0	0.0
VAF	Ylistaro	39.57	328	eP	P	08 53 33.2	+0.5
NJ2	Nanjing	39.60	82	⇑iP	P	08 53 34.7	+1.3
NJ2				pmax	pmax		
	comp=Z,47nm,0.8s						
MORH	Mrgy, Hungar	39.80	301	⇑P	P	08 53 35.3	+0.5
DL2	Dalian	39.86	71	P	P	08 53 37.5	+2.1
DL2				pmax	pmax		
	comp=Z,52nm,0.6s						
AAL	Aland	40.00	323	eP	P	08 53 36.1	-0.2
MAUC	Maruska	40.17	306	eP	P	08 53 39.6	+1.7
STEB	Steborice	40.19	307	eP	P	08 53 39.5	+1.5
JAVC	Velka Javorina	40.29	305	eP	P	08 53 39.6	+0.7
MORC	Moravsky Berou	40.34	307	P	P	08 53 40.3	+1.0
MORC				IAmb	IAmb	08 53 41.3	
	comp=Z,17nm,0.8s						
MORC	Moravsky Berou	40.34	307	⇑P	P	08 53 40.1	+0.8
MORC	Moravsky Berou	40.34	307	eP	P	08 53 40.1	+0.8
MORC				e		08 54 12.0	
MORC	Moravsky Berou	40.34	307	P	P	08 53 40.3	+1.0
MORC				pmax	pmax		
	comp=Z,17nm,0.8s						
VADS	Vadso	40.38	340	eP	P	08 53 39.9	+0.6
GKP	Gorka Klasztor	40.57	312	eP	P	08 53 41.7	+0.7
MODS	Modra-Piesok	40.57	304	eP	P	08 53 41.6	+0.4
KRLC	Kraliky	40.83	307	eP	P	08 53 44.3	+1.0
KRLC	Kraliky	40.83	307	eP	P	08 53 44.3	+1.0
KEV	Kevo	40.87	338		P	08 53 43.9	+0.6
KEV	Kevo	40.87	338	P	P	08 53 43.9	+0.6
KEV				pmax	pmax		
	comp=Z,166nm,1.9s						
KEV	Kevo	40.87	338	P	P	08 53 43.8	+0.6
KEV				pP	pP	08 54 14.8	+0.6
TPTI		40.93	137	P	P	08 53 44.9	+0.5
	comp=Z,20nm,0.8s						
VRAC	Vranov	40.98	306	P	P	08 53 45.5	+1.0
	comp=Z,15nm,0.8s,baz=97,slow=8.2,SNR=12						
VRAC				pP	pP	08 54 17.6	+2.3
	comp=Z,10nm,0.9s,baz=96,slow=10.0,SNR=3.3						
VRAC				LR	LR	09 13 35.2	
	comp=Z,33nm,19.0s,baz=48,slow=40						
	comp=Z,15nm,0.8s						
VRAC	Vranov	40.98	306	⇓P	P	08 53 45.7	+1.2
VRAC	Vranov	40.98	306	eP	P	08 53 45.4	+0.9
VRAC				e		08 54 17.4	
KCSI	Kotacane, Aceh	41.04	137	P	P	08 53 44.6	-0.7
DPC	Dobruska-Polom	41.11	307	eP	P	08 53 47.1	+1.4
DPC	Dobruska-Polom	41.11	307	eP	P	08 53 47.1	+1.4
KRUC	Moravsky	41.12	306	eP	P	08 53 46.3	+0.6
KRUC				e		08 54 19.0	
ARA0	ARCESS Array S	41.21	338	eP	P	08 53 46.9	+0.7
ARCES	ARCESS Array B	41.21	338	P	P	08 53 46.9	+0.7
	comp=Z,19nm,0.5s,baz=109,slow=8.6,SNR=169						
ARCES				LR	LR	09 11 56.8	
	comp=Z,177nm,18.8s,baz=123,slow=37						
	comp=Z,19nm,0.5s						
ARCES	ARCESS Array B	41.21	338		P	08 53 46.3	+0.2
CHVC	Chvalec	41.28	308	eP	P	08 53 48.1	+1.1
CHVC	Chvalec	41.28	308	eP	P	08 53 48.1	+1.1
RONA	Rosalia, Austr	41.28	303	i P	P	08 53 47.8	+0.8
	comp=Z,10nm,1.1s						
RONA				epP	pP	08 54 20.4	+2.6
	comp=Z,11nm,1.1s						
KULM	Kulim	41.28	131	P	P	08 53 47.6	+0.2
KULM				IAmb	IAmb	08 53 49.3	
	comp=Z,98nm,1.9s						
UPC	Upice	41.31	308	eP	P	08 53 48.6	+1.4
UPC	Upice	41.31	308	eP	P	08 53 48.6	+1.4
CONA	Conrad Observa	41.55	304	i P	P	08 53 50.3	+1.0
	comp=Z,24nm,1.0s						
CONA				epP	pP	08 54 22.7	+2.6
	comp=Z,14nm,1.0s						
KTK1	Kautokeino	41.68	336	eP	P	08 53 50.2	+0.3
ARSA	Arzberg	41.84	303	i P	P	08 53 52.3	+0.7
	comp=Z,6.0nm,0.9s						
BSD	Bornholm Skovb	42.01	315	eP	P	08 53 52.2	-0.6
BSD	Bornholm Skovb	42.01	315	i P	P	08 53 52.6	-0.2
BSD				IAmb	IAmb	08 53 53.1	
	comp=Z,79nm,1.1s						
IPM	Ipoh	42.15	132	P	P	08 53 55.2	+0.8
IPM	Ipoh	42.15	132	P	P	08 53 54.9	+0.5
IPM	Ipoh	42.15	132	P	P	08 53 55.0	+0.5
	comp=Z,77nm,0.8s						
ZEA	Zeya	42.23	47	eP	P	08 53 55.9	+1.3
ZEA				e		08 54 29.4	
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
SOKA	Soboth	42.24	302	eP	P	08 53 55.9	+1.0
	comp=Z,11nm,0.8s						
SOKA				epP	pP	08 54 27.8	+2.0
	comp=Z,11nm,1.2s						
PRU	Pruhonice	42.27	307	eP	P	08 53 56.4	+1.4
PRU	Pruhonice	42.27	307	eP	P	08 53 56.4	+1.4
PSI	Prapat	42.27	136	LR	LR	09 14 53.8	
	comp=Z,80nm,18.5s,baz=3.0,slow=41						
PSI	Prapat	42.27	136	P	P	08 53 55.6	+0.1
	comp=Z,21nm,0.7s						
HAMF	Hammerfest	42.29	339	eP	P	08 53 56.0	+1.1
HEH	HeiHe	42.41	53	eP	pP	08 54 29.8	+1.7
HEH	HeiHe	42.41	53	eP	P	08 53 56.7	+0.6
HEH				pP	pP	08 54 29.9	+1.8
HEH				pmax	pmax		
	comp=Z,31nm,1.2s						
CKRC	Cesky Krumlov	42.51	305	eP	P	08 53 58.6	+1.6
CKRC	Cesky Krumlov	42.51	305	eP	P	08 53 58.6	+1.6
ZVC	Zvikov	42.54	306	eP	P	08 53 58.6	+1.4

BRG	Berggiesshubel	42.61	308	eP	P	08 53 58.5	+0.8
	comp=Z,21nm,0.8s,baz=85,slow=8.0						
MOA	Molln	42.63	304	iP	P	08 53 58.6	+0.6
	comp=Z,10nm,0.8s						
MOA				epP	pP	08 54 30.3	+1.4
	comp=Z,8.2nm,1.0s						
RUE	Ruedersdorf	42.65	311	eP	P	08 53 58.4	+0.4
	comp=Z,44nm,0.8s,baz=85,slow=8.0						
DEL	Delary	42.67	317	iP	P	08 53 58.3	+0.2
GSI	Gunungsitoli	42.78	139	P	P	08 54 00.7	+1.2
GSI	Gunungsitoli	42.78	139	P	P	08 54 00.9	+1.4
GSI	Gunungsitoli	42.78	139	P	P	08 54 00.9	+1.4
	comp=Z,100nm,0.8s						
JETT	Jettan, Norway	42.82	337	eP	P	08 53 59.7	+0.5
BNX	BinXian	42.85	59	⇓P	P	08 54 01.6	+1.9
BNX				pmax	pmax		
	comp=Z,6.0nm,1.4s						
LUNU	Lund	42.87	315	iP	P	08 54 00.1	+0.4
GEC2	GERESS Array S	42.91	305	eP	P	08 54 00.5	+0.3
	comp=Z,8.1nm,1.1s,baz=85,slow=8.0						
GERES	GERESS Array B	42.91	305	P	P	08 54 01.2	+1.0
	comp=Z,2.7nm,0.9s,baz=80,slow=8.3,SNR=10						
GERES				pP	pP	08 54 32.8	+1.5
	comp=Z,0.7nm,0.6s,baz=83,slow=11,SNR=2.6						
	comp=Z,2.7nm,0.9s						
RGN	Rugen	42.92	314	eP	P	08 54 01.8	+1.7
	comp=Z,259nm,1.1s,baz=85,slow=8.0						
KHC	Kasperske Hory	42.96	306	ceP	P	08 54 01.0	+0.4
KHC				pmax	pmax		
	comp=Z,13nm,1.8s						
KHC	Kasperske Hory	42.96	306	eP	P	08 54 00.0	-0.6
KHC				ex	x	08 54 05.9	
HFS	Hagfors	43.09	322	P	P	08 54 01.6	+0.2
	comp=Z,75nm,0.7s,baz=96,slow=11,SNR=87						
HFS				LR	LR	09 13 34.4	
	comp=Z,101nm,19.6s,baz=72,slow=38						
	comp=Z,75nm,0.7s						
BJUU	Bjuv	43.12	316	iP	P	08 54 01.9	+0.2
CLL	Collm	43.18	309		P	08 54 02.5	+0.3
CLL	Collm	43.18	309	iP	P	08 54 02.1	-0.2
CLL				e*PP	pP	08 54 31.0	-2.3
CLL				eS	S	09 00 22.0	+3.6
CLL				pmax	pmax		
	comp=Z,42nm,1.7s						
CLL	Collm	43.18	309	eP	P	08 54 02.7	+0.4
	comp=Z,12nm,0.8s,baz=85,slow=8.0						
CLL				epP	pP	08 54 35.0	+1.7
	baz=82,slow=8.1						
CLL	Collm	43.18	309	iP	P	08 54 02.1	-0.2
	comp=Z,42nm,1.7s						
CLL				ex	x	08 54 31.0	
CLL				ipP	pP	08 54 34.7	+1.4
CLL				ePP	PP	08 55 46.0	+0.9
CLL				eS	S	09 00 22.0	+3.6
CLL				e(SS)	SS	09 02 54.0	-42
TRO	Tromso	43.33	336	eP	P	08 54 03.8	+0.6
BORU	Boraas	43.34	318	iP	P	08 54 03.6	+0.2
TANN	Tannenbergstha	43.58	308	eP	P	08 54 05.9	+0.3
	comp=Z,8.0nm,0.9s,baz=85,slow=8.0						
TANN				epP	pP	08 54 38.8	+2.1
	baz=82,slow=8.1						
LESA	Schwarzleotal	43.74	303	iP	P	08 54 07.4	+0.4
	comp=Z,7.5nm,0.5s						
LESA				epP	pP	08 54 40.7	+2.7
	comp=Z,20nm,1.4s						
PLN	Plauen	43.77	308	eP	P	08 54 07.6	+0.5
	comp=Z,5.1nm,1.1s,baz=85,slow=8.0						
ONAU	Onsala	43.78	318	iP	P	08 54 06.7	-0.3
ROTZ	Rotzenmuhle	43.80	307	eP	P	08 54 08.3	+1.1
	comp=Z,4.3nm,1.1s,baz=85,slow=8.0						
ROTZ				epP	pP	08 54 40.9	+2.5
	baz=82,slow=8.1						
MANZ	Manzenberg	43.84	307	eP	P	08 54 08.8	+1.1
	comp=Z,3.3nm,1.0s,baz=85,slow=8.0						
FAUS	Fauske	43.85	333	eP	P	08 54 07.9	+0.4
MOR8	Moi Rana	43.86	331	eP	P	08 54 07.3	-0.3
NEUB	Neuenburg	43.95	309	eP	P	08 54 09.3	+0.8
	comp=Z,39nm,1.0s,baz=85,slow=8.0						
TJOU	Tjoern	43.97	319	iP	P	08 54 07.9	-0.6
STEI	Steigen	44.03	333	eP	P	08 54 09.3	+0.5
MOX	Moxa	44.10	308	eP	P	08 54 09.9	+0.2
	comp=Z,11nm,1.0s,baz=85,slow=8.0						
MOX				epP	pP	08 54 42.9	+2.1
	baz=82,slow=8.1						
YAK	Yakutsk	44.13	35	P	P	08 54 09.2	-0.5
	comp=Z,28nm,0.4s,baz=33,slow=1.3,SNR=8.1						
	comp=Z,28nm,0.4s						
YAK	Yakutsk	44.13	35	IAmb	IAmb	08 54 10.5	
	comp=Z,34nm,0.7s						
YAK	Yakutsk	44.13	35	eP	P	08 54 09.4	-0.3
YAK				e*PP	pP	08 54 43.2	+1.7
YAK				e		08 55 54.5	
YAK				eS	S	09 00 32.0	+0.1
YAK				pmax	pmax		
	comp=Z,26nm,0.7s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,11nm,1.3s						
YAK				pmax	pmax		
	comp=Z,2µm,5.4s						
YAK				pmax	pmax		
	comp=N,1µm,4.8s						
YAK				pmax	pmax		
	comp=E,847nm,4.2s						
YAK				smax	smax		
	comp=N,369nm,3.4s						
YAK				smax	smax		
	comp=E,717nm,4.2s						
GORT1	Trebel	44.14	312	eP	P	08 54 10.8	+0.9
	comp=E,42nm,1.0s,baz=85,slow=8.0						
NC405	NORSAR Array S	44.17	323	P	P	08 54 10.0	-0.2
FLTG	Flechtingen	44.22	311	eP	P	08 54 10.8	+0.2
	comp=E,53nm,0.8s,baz=85,slow=8.0						
FLTG				epP	pP	08 54 43.2	+1.5
	baz=82,slow=8.1						
NC602	NORSAR Array S	44.22	323	eP	P	08 54 10.1	-0.4
STRU	Stroemstad	44.26	320	iP	P	08 54 10.2	-0.5
MNSI	Mandailing Nat	44.29	137	P	P	08 54 12.4	+0.8
	comp=E,166nm,0.9s						
LEIR	Leirfjorden	44.37	330	eP	P	08 54 11.9	+0.3
NB2	NORSAR Subarra	44.41	323	P	P	08 54 11.8	-0.2
	comp=Z,56nm,0.7s,baz=96,slow=7.9						
NB2	NORSAR Subarra	44.41	323	P	P	08 54 11.8	-0.2
	baz=96,slow=7.9						
NOA	NORSAR Array B	44.41	323	P	P	08 54 11.8	-0.2
	comp=Z,51nm,0.7s,baz=96,slow=7.8,SNR=197						
NOA				LR	LR	09 14 15.9	
	comp=Z,36nm,19.1s,baz=295,slow=38						
	comp=Z,51nm,0.7s						
GRF	Grafenberg Arr	44.44	307	eP	P	08 54 13.7	+1.3
	comp=Z,38nm,1.4s,baz=85,slow=8.0						
GRF				epP	pP	08 54 46.1	+2.6
	baz=82,slow=8.1						
VAGH	Vaagaholmen	44.45	331	eP	P	08 54 13.0	+0.8
WTTA	Wattenberg	44.47	303	eP	P	08 54 12.9	0.0
	comp=Z,8.9nm,0.8s						
WATA	Walderalm	44.50	303	eP	P	08 54 13.5	+0.4
	comp=Z,4.8nm,0.6s						
NSS	Namsos	44.54	328	eP	P	08 54 13.5	+0.6
OSL	Oslo	44.55	322	eP	P	08 54 13.5	+0.4
SSLB	Suanglung	44.67	92	P	P	08 54 17.3	+2.7
BSEG	Bad Segeberg	44.69	313	eP	P	08 54 15.1	+0.8
	comp=Z,24nm,0.8s,baz=85,slow=8.0						
OVD	Ostervraa, Den	44.71	318	iP	P	08 54 15.4	+1.1
OVD				IAmb	IAmb	08 54 15.5	
	comp=Z,160nm,0.7s						
SQTA	Sankt Quirin	44.76	303	epP	pP	08 54 48.3	+1.9
	comp=Z,10nm,0.9s						
CLZ	Clausthal	44.78	310	eP	P	08 54 15.8	+0.7
	comp=Z,26nm,0.9s,baz=85,slow=8.0						
CLZ				epP	pP	08 54 48.1	+1.8
	baz=82,slow=8.1						
KSAR	Wonju Array Be	45.00	71		P	08 54 16.9	-0.1
KSAR	Wonju Array Be	45.00	71	P	P	08 54 16.9	-0.1
KSRS	Korea Array	45.02	71	P	P	08 54 17.7	+0.5
	comp=Z,12nm,1.1s,baz=279,slow=6.3,SNR=16						
KSRS				PcP	PcP	08 55 53.5	-2.3
	comp=Z,6.9nm,0.8s,baz=284,slow=3.5,SNR=10						
KSRS				LR	LR	09 16 01.8	
	comp=Z,22µm,18.5s,baz=25,slow=40						
	comp=Z,12nm,1.1s						
GTTG	Gottingen	45.06	310	eP	P	08 54 18.3	+1.0
	comp=Z,41nm,1.0s,baz=85,slow=8.0						
UBBA	Unterbreizbach	45.10	309	eP	P	08 54 18.3	+0.8
	comp=Z,54nm,1.8s,baz=85,slow=8.0						
UBBA				epP	pP	08 54 50.4	+1.6
	baz=82,slow=8.1						
KONO	Kongsberg	45.10	321		P	08 54 17.5	+0.1
KONO	Kongsberg	45.10	321	eP	P	08 54 17.6	+0.1
KONO	Kongsberg	45.10	321	d iP	P	08 54 17.7	+0.2
KONO				pmax	pmax		
	comp=Z,49nm,0.8s						
KONO	Kongsberg	45.10	321	P	P	08 54 17.6	+0.2
KONO				pP	pP	08 54 49.4	+0.6
TWGBT	Beinan	45.24	93	P	P	08 54 21.9	+2.8
MUD	Monsted U'grnd	45.27	317	iP	P	08 54 18.9	+0.1
MUD				IAmb	IAmb	08 54 21.0	
	comp=Z,50nm,1.2s						
RETH	Rethem/Aller,	45.33	311	eP	P	08 54 19.8	+0.5
	comp=Z,23nm,1.4s,baz=85,slow=8.0						
DOMB	Dombas	45.52	324	eP	P	08 54 21.1	+0.3
HOMB	Homborsund	45.63	319	eP	P	08 54 22.0	+0.3
HOMB	Homborsund	45.63	319	iP	P	08 54 21.8	+0.2
DAVA	Damuels	45.65	304	eP	P	08 54 22.3	+0.1
	comp=Z,38nm,1.2s						
DAVA				epP	pP	08 54 54.9	+1.4
	comp=Z,24nm,1.0s						
PPI	Padang Panjang	45.78	137	P	P	08 54 23.6	+0.3
	comp=Z,1µmcomp=Z,159nm,0.8s						
SISI	Saibi	45.80	139	P	P	08 54 24.6	+1.2
	comp=Z,136nm,0.9s						
SKAR	Skarslia	45.80	322	eP	P	08 54 23.6	+0.6
PSTR	Posyet	45.82	63	⇓eP	P	08 54 25.1	+1.7
STU	Stuttgart	45.87	306	eP	P	08 54 24.7	+1.0
	comp=Z,36nm,0.4s,baz=85,slow=8.0						
TIXI	Tiksi	45.92	22	P	P	08 54 23.3	-0.4
TIXI				IAmb	IAmb	08 54 25.2	
	comp=Z,29nm,0.8s						
TIXI	Tiksi	45.92	22	⇑iP	P	08 54 23.8	0.0
TIXI				pmax	pmax		
	comp=Z,29nm,0.8s						
MYKOM	Kota Tinggi	45.98	131	P	P	08 54 26.5	+1.6
TNS	Taunus Mts	46.16	308	eP	P	08 54 26.7	+0.7
	comp=Z,11nm,1.0s,baz=85,slow=8.0						
PDSI	Padang	46.19	137	P	P	08 54 26.5	-0.1
MOL	Molde	46.27	325	eP	P	08 54 27.2	+0.6
LODK	Lodwar	46.30	233	P	P	08 54 28.4	+0.8
SNART	Snartemo	46.32	319	eP	P	08 54 27.7	+0.7
SNART	Snartemo	46.32	319	iP	P	08 54 26.6	-0.4
USRK	Ussuriysk Ar.	46.33	61	P	P	08 54 28.1	+0.8
	comp=Z,4.2nm,0.9s,baz=52,slow=3.0,SNR=4.1						
	comp=Z,4.2nm,0.9s						
IBBN	Ibbenburen	46.35	311	eP	P	08 54 28.3	+1.0
	comp=Z,33nm,0.7s,baz=85,slow=8.0						
ODD1	Odda	46.61	321	eP	P	08 54 30.1	+0.7
BLS5	Blasjo	46.70	321	eP	P	08 54 31.0	+1.0
BUG	Bochum--Univer	46.74	310	eP	P	08 54 31.3	+0.8
	comp=Z,27nm,1.1s,baz=85,slow=8.0						
HYA	Hoyanger	46.85	323	eP	P	08 54 31.6	+0.5
BER	Bergen	47.26	322	eP	P	08 54 34.8	+0.5
FOO	Floro	47.41	324	eP	P	08 54 36.1	+0.7
SENIN	Lac Senin/Sane	47.55	303		P	08 54 37.2	+0.1
BTNL	Ternell	47.58	309	dP	P	08 54 38.0	+1.1
	comp=Z,9.2nm,0.9s						
SPB2	Spitsbergen Ar	47.58	347	P	P	08 54 37.4	+0.8
SPB2				IAmb	IAmb	08 54 39.3	
	comp=Z,36nm,0.8s						
SPA0	Spitsbergen Ar	47.58	347	eP	P	08 54 38.6	+2.0
SPITS	Spitsbergen Ar	47.58	347	P	P	08 54 38.2	+1.5
	comp=Z,9.5nm,0.4s,baz=119,slow=12,SNR=30						
SPITS				LR	LR	09 17 07.2	
	comp=Z,104nm,19.7s,baz=135,slow=39						
	comp=Z,9.5nm,0.4s						
MEM	Membach	47.65	309	dP	P	08 54 38.3	+0.8
	comp=Z,13nm,0.9s						
WLF	Walferdange	47.70	307	P	P	08 54 38.4	+0.4
WLF				IAmb	IAmb	08 55 13.9	
	comp=Z,48nm,1.3s						
WLF	Walferdange	47.70	307	P	P	08 54 38.4	+0.4
WLF				pmax	pmax		
	comp=Z,48nm,1.3s						
WLF	Walferdange	47.70	307	eP	P	08 54 39.3	+1.4
	comp=Z,21nm,1.0s,baz=85,slow=8.0						
WLF				epP	pP	08 55 12.4	+2.8
	baz=82,slow=8.1						
WLF	Walferdange	47.70	307	dP	P	08 54 39.4	+1.4
	comp=Z,17nm,1.0s						
WLF				dpP	pP	08 55 12.3	+2.8
KRJI	Kerinci	47.72	137	P	P	08 54 39.4	+0.8
RCHB	Rochefort	48.21	308	dP	P	08 54 42.5	+0.7
	comp=Z,7.1nm,0.7s						
DSRI	Dabo	48.22	132	P	P	08 54 43.5	+1.2
BMRD	Maredsous	48.48	308	dP	P	08 54 44.4	+0.5
	comp=Z,10nm,1.0s						
BMRD				dpP	pP	08 55 17.8	+2.2
KBS	Kingsbay	48.70	347	P	P	08 54 45.8	+0.6
KBS	Kingsbay	48.70	347	eP	P	08 54 46.6	+1.4
KBS	Kingsbay	48.70	347	c iP	P	08 54 46.3	+1.1
KBS				pmax	pmax		
	comp=Z,70nm,0.9s						
KBS	Kingsbay	48.70	347	P	P	08 54 46.3	+1.1
KBS	Kingsbay	48.70	347	iP	P	08 54 46.5	+1.3
JNU	Nakatsue	48.73	75	P	P	08 54 47.1	+1.0
	comp=Z,41nm,0.9s,baz=304,slow=1.7,SNR=18						
	comp=Z,41nm,0.9s						
JNU	Nakatsue	48.73	75	P	P	08 54 46.9	+0.8
JNU	Nakatsue	48.73	75	P	P	08 54 46.8	+0.7
MASI	Maura Aman, Be	49.02	136	P	P	08 54 48.1	-0.3
KIBK	Kibwezi	49.18	226	P	P	08 54 50.6	+0.9
KSI	Kapahiang	49.64	136	P	P	08 54 52.5	-0.7
PPBI	Pangkal Pinang	50.49	132	P	P	08 55 01.6	+2.1
LRW	Lerwick	50.52	322	eP	P	08 54 58.8	-0.3
LRW				IAmb	IAmb	08 55 00.3	
	comp=Z,48nm,0.7s						
SBUM	Sibu	50.93	122	P	P	08 55 04.7	+1.9
SBUM	Sibu	50.93	122	P	P	08 55 04.8	+1.9
MDSI	Maura Dua	51.21	135	P	P	08 55 02.0	-2.9
	comp=Z,33nm,0.9s						
LWLI	Liwa	51.58	136	P	P	08 55 07.6	-0.2
DRUM	Mains of Drumt	51.63	318	eP	P	08 55 07.3	-0.2
DRUM				IAmb	IAmb	08 55 08.3	
	comp=Z,19nm,0.7s						
HPK	Haverah Park	51.69	314	eP	P	08 55 07.7	-0.2
HPK				IAmb	IAmb	08 55 09.1	
	comp=Z,37nm,0.6s						
KLSI		51.70	135	P	P	08 55 05.7	-2.8
	comp=Z,122nm,0.8s						
EDMD	Edmundbyers	51.71	315	eP	P	08 55 08.1	-0.1
EDMD				IAmb	IAmb	08 55 08.9	
	comp=Z,24nm,0.6s						
MCD	Coleburn Disti	51.93	319	eP	P	08 55 10.0	+0.2
MCD				IAmb	IAmb	08 55 10.7	
	comp=Z,64nm,0.6s						
BIGH	Upper Bighouse	52.13	320	eP	P	08 55 11.2	+0.1
BIGH				IAmb	IAmb	08 55 12.6	
	comp=Z,18nm,0.7s						
EDI	Edinburgh	52.19	317	eP	P	08 55 11.8	+0.2
EDI				IAmb	IAmb	08 55 12.7	
	comp=Z,22nm,0.7s						
KASI	Kota Agung	52.24	136	P	P	08 55 09.9	-2.6
	comp=Z,968nmcomp=Z,80nm,0.6s						
EKA	Eskdalemuir Ar	52.29	316	P	P	08 55 12.2	-0.2
	comp=Z,18nm,0.8s,baz=89,slow=7.7,SNR=23						
EKA				LR	LR	09 22 19.6	
	comp=Z,196nm,18.2s,baz=4.0,slow=41						
	comp=Z,18nm,0.8s						
ESK	Eskdalemuir	52.32	316	eP	P	08 55 11.9	-0.7
ESK				IAmb	IAmb	08 55 13.6	
	comp=Z,13nm,0.8s						
MBAR	Mbarara	52.35	234	P	P	08 55 14.2	+0.6
MBAR	Mbarara	52.35	234	P	P	08 55 13.8	+0.3
MBAR	Mbarara	52.35	234	c iP	P	08 55 14.0	+0.4
MBAR				pmax	pmax		
	comp=Z,32nm,0.7s						
MBAR	Mbarara	52.35	234	P	P	08 55 13.9	+0.3
MBAR				sP	sP	08 56 02.1	-0.2
INVG	Invergeldie, C	52.57	318	eP	P	08 55 14.0	-0.4
INVG				IAmb	IAmb	08 55 15.3	
	comp=Z,14nm,1.0s						
MCH1	Michaelchurch	52.92	312	eP	P	08 55 16.9	-0.2
MCH1				IAmb	IAmb	08 55 18.4	
	comp=Z,24nm,0.7s						
NEWG	New Galloway	52.94	316	eP	P	08 55 17.4	+0.2
NEWG				IAmb	IAmb	08 55 18.4	
	comp=Z,29nm,0.7s						
YSS	Yuzhno-Sakhali	52.98	55	eP	P	08 55 18.2	+0.6
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
MAJO	Matsushiro	53.10	68	⇓eP	P	08 55 18.6	-0.1
MAJO				pmax	pmax		
	comp=Z,63nm,2.8s						
MJAR	Matsushiro Arr	53.10	68	P	P	08 55 18.2	-0.5
	comp=Z,8.5nm,1.0s,baz=282,slow=9.1,SNR=9.2						
MJAR				pP	pP	08 55 52.1	+0.3
	comp=Z,1.8nm,0.4s,baz=311,slow=8.1,SNR=2.9						
	comp=Z,8.5nm,1.0s						
MJAR	Matsushiro Arr	53.10	68	P	P	08 55 18.2	-0.5
MJAR				pmax	pmax		
	comp=Z,21nm,1.6s						
KPL	Plockton	53.25	319	eP	P	08 55 19.2	-0.2
KPL				IAmb	IAmb	08 55 20.1	
	comp=Z,22nm,0.6s						
IOMK	Kirk Michael	53.32	315	eP	P	08 55 20.2	+0.2
IOMK				IAmb	IAmb	08 55 21.2	
	comp=Z,12nm,0.8s						
LAWE	Loch Awe, Argy	53.34	317	eP	P	08 55 20.1	0.0
LAWE				IAmb	IAmb	08 55 21.3	
	comp=Z,21nm,0.9s						
NOR	Nord	53.90	350	iP	P	08 55 24.8	+0.9
NOR				IAmb	IAmb	08 55 25.4	
	comp=Z,15nm,0.9s						
ILTH	Belurgan, Co L	54.38	315	P	P	08 55 27.3	-0.4
DSB	Dublin	54.61	314	P	P	08 55 29.5	+0.1
IDGL	Inch Island, C	54.78	316	P	P	08 55 31.1	+0.5
DAG	Danmarks Havn	54.81	344	iP	P	08 55 31.0	+0.5
DAG				IAmb	IAmb	08 55 31.9	
	comp=Z,94nm,0.8s						
IWEX	Carrickbyrne,	55.07	313	P	P	08 55 32.5	-0.2
DBG	Daneborg	55.66	341	iP	P	08 55 37.9	+1.3
DBG				IAmb	IAmb	08 55 38.5	
	comp=Z,26nm,1.0s						
KPJI	Karang Pucung	56.27	133	P	P	08 55 43.3	+1.6
	comp=Z,33nm,0.7s						
IGLA	Glengowla, Co	56.29	315	P	P	08 55 44.7	+3.4
SCO	Scoresbysund	57.12	336	iP	P	08 55 48.4	+1.5
SCO				IAmb	IAmb	08 55 49.6	
	comp=Z,20nm,0.9s						
ESDC	Sonseca Array	57.41	298	P	P	08 55 48.5	-1.1
	comp=Z,1.8nm,0.6s,baz=56,slow=7.6,SNR=13						
ESDC				pP	pP	08 56 23.4	+1.0
	comp=Z,6.6nm,0.9s,baz=58,slow=6.6,SNR=8.4						
	comp=Z,1.8nm,0.6s						
ESDC	Sonseca Array	57.41	298		P	08 55 49.5	-0.1
MPSI	Mapaga	57.83	117	P	P	08 55 53.9	+1.2
	comp=Z,1µmcomp=Z,39nm,1.0s						
TOLI2	Tolitoli	57.94	115	P	P	08 55 53.8	+0.3
TOLI2				IAmb	IAmb	08 55 54.5	
	comp=Z,10.0nm,0.6s						
SNJI	Sawahan-Nganju	58.33	130	P	P	08 56 00.3	+3.9
	comp=Z,18nm,0.8s						
MVO	Moncorvo	59.00	301	ipP	pP	08 56 35.8	+2.2
ALE	Alert	59.14	354	P	P	08 56 01.9	+0.9
MRSI	Marisa	59.21	115	P	P	08 56 03.2	+0.9
	comp=Z,80nm,0.9s						
MMSI	Mamuju	59.25	120	P	P	08 56 03.9	+1.3
	comp=Z,76nm,1.0s						
ABPO	Ambohimpanom	59.46	206		P	08 56 04.9	+0.9
ABPO				IAmb	IAmb	08 56 06.0	
	comp=Z,17nm,0.8s						
ABPO	Ambohimpanom	59.46	206	P	P	08 56 04.9	+0.9
ABPO				pmax	pmax		
	comp=Z,17nm,0.8s						
ABPO	Ambohimpanom	59.46	206	P	P	08 56 04.7	+0.6
PCAB	Cabril	59.47	301	ipP	pP	08 56 38.8	+1.8
PGAV	Gavieira, Arco	59.54	302	eP	P	08 56 06.8	+2.4
PGAV				iIAmb	IAmb	08 56 11.0	
	comp=Z,22nm,2.0s						
PGAV				ipP	pP	08 56 39.3	+1.8
MTE	Manteigas	59.66	300	eP	P	08 56 06.2	+1.0
MTE				iIAmb	IAmb	08 56 07.4	
	comp=Z,27nm,1.6s						
MTE				ipP	pP	08 56 39.9	+1.7
PVIS	Viseu	59.78	300	eP	P	08 56 06.2	+0.2
PVIS				ipP	pP	08 56 40.8	+1.8
PCBR	Castelo Branco	59.84	299	ipP	pP	08 56 41.8	+2.5
PMRV	Marv??o	59.94	299	ipP	pP	08 56 42.4	+2.3
TTSI	Tana Toraja	60.13	120	P	P	08 56 10.3	+1.7
	comp=Z,19nm,0.7s						
PBAR	Barrancos	60.21	297	eP	P	08 56 05.6	-3.3
PBAR				iIAmb	IAmb	08 56 07.2	
	comp=Z,26nm,1.8s						
PBAR				ipP	pP	08 56 42.6	+0.7
PESTR	Estremoz	60.31	298	ipP	pP	08 56 45.0	+2.3
PMTG	Montargil	60.68	299	eP	P	08 56 08.7	-3.4
PMTG				iIAmb	IAmb	08 56 11.5	
	comp=Z,26nm,1.8s						
PMTG				epP	PcP	08 56 53.9	-0.9
MOE	Montemor	61.00	298	eP	P	08 56 14.7	+0.4
MOE				iIAmb	IAmb	08 56 27.3	
	comp=Z,20nm,2.3s						
MOE				ipP	pP	08 56 49.5	+2.1
NEEM	North Greenlan	61.12	348	iP	P	08 56 15.4	+0.6
NEEM				IAmb	IAmb	08 56 16.2	
	comp=Z,74nm,0.7s						
SUMG	Summit	61.13	341		P	08 56 16.2	+1.1
SUMG	Summit	61.13	341	iP	P	08 56 16.4	+1.3
SUMG				IAmb	IAmb	08 56 17.0	
	comp=Z,82nm,0.7s						
MESJ	Messejana	61.20	297	ipP	pP	08 56 49.8	+1.1
KHKI	Kahang-Kahang	61.20	127	P	P	08 56 14.7	-1.1
	comp=Z,106nm,0.7s						
PBDV	Barranco-do-Ve	61.24	297	ipP	pP	08 56 52.0	+2.9
KAPI	Kappang	61.49	121	P	P	08 56 17.7	-0.1
KAPI	Kappang	61.49	121	P	P	08 56 18.5	+0.7
BKSI	Bulukumba	61.97	121	P	P	08 56 24.1	+3.1
	comp=Z,11nm,0.8s						
VOI	Vohitsoka	62.28	205		P	08 56 24.0	+1.0
SANI	Sanana	63.89	114	P	P	08 56 33.5	-0.2
SANI	Sanana	63.89	114	P	P	08 56 35.3	+1.6
	comp=Z,24nm,0.9s						
LBFI	Labuhan Bajo,	64.09	124	P	P	08 56 34.1	-0.9
	comp=Z,70nm,0.7s						
EDA	Edea	64.36	255	P	P	08 56 35.7	-1.1
EDA				sP	sP	08 57 25.1	-0.9
TULEG	Thule	64.53	350	iP	P	08 56 37.0	0.0
TULEG				IAmb	IAmb	08 56 37.9	
	comp=Z,40nm,1.0s						
FOMA	Nahampoana Res	65.06	204		P	08 56 41.5	+0.5
FOMA	Nahampoana Res	65.06	204	P	P	08 56 41.7	+0.8
UPNV	Upernavik	65.22	345	iP	P	08 56 42.0	+0.5
UPNV				IAmb	IAmb	08 56 42.7	
	comp=Z,46nm,0.8s						
EDFI	Ende, Flores	65.51	123	P	P	08 56 41.7	-2.6
	comp=Z,12nm,0.8s						
NLAI	Namlea	65.51	114	P	P	08 56 47.3	+3.1
	comp=Z,27nm,0.9s						
TORD	Torodi Ar. Bea	65.60	269	P	P	08 56 42.8	-2.0
	comp=Z,7.1nm,0.5s,baz=47,slow=8.0,SNR=40						
TORD				pP	pP	08 57 17.4	-1.6
	comp=Z,5.8nm,0.9s,baz=49,slow=7.9,SNR=2.8						
	comp=Z,7.1nm,0.5s						
SAQQ	Saqqaq	66.16	342	iP	P	08 56 48.0	+0.4
SAQQ				IAmb	IAmb	08 56 48.7	
	comp=Z,29nm,0.7s						
ILULI	Ilulissat	66.47	341	iP	P	08 56 50.1	+0.6
ILULI				IAmb	IAmb	08 56 50.8	
	comp=Z,62nm,0.7s						
KRAI	Karang Ratu	66.52	113	P	P	08 56 51.7	+1.0
	comp=Z,6µmcomp=Z,7.4nm,0.5s						
SWI	Sorong	67.06	109	P	P	08 56 54.5	+0.4
	comp=Z,44nm,0.9s						
A19K	Wainwright	67.31	17	P	P	08 56 55.0	+0.2
	baz=317						
A21K	Barrow	67.46	15	P	P	08 56 56.1	+0.3
	baz=320						
C16K	Lisburne Hills	67.60	20	IAmb	IAmb	08 56 57.8	
	comp=Z,27nm,0.8s						
C16K	Lisburne Hills	67.60	20	P	P	08 56 56.9	+0.2
	baz=314,SNR=5.1						
B18K	Kokolik River	67.75	18	P	P	08 56 58.2	+0.6
	baz=316						
SFJD	Kangerlussuaq	67.83	339	LR	LR	09 26 41.6	
	comp=Z,77nm,18.3s,baz=5.0,slow=36						
SFJD	Kangerlussuaq	67.83	339	iP	P	08 56 58.0	-0.1
SFJD				IAmb	IAmb	08 56 59.8	
	comp=Z,25nm,0.9s						
SOEI	Soe	67.99	121	P	P	08 56 59.2	-0.8
SOEI	Soe	67.99	121	P	P	08 57 05.8	+5.8
C17K	DeLong Mountai	68.04	19	P	P	08 56 60.0	+0.5
	baz=315,SNR=8.9						
A22K	Sinclair Lake	68.04	15	P	P	08 57 00.2	+0.8
	baz=322,SNR=19						
B20K	Meade River	68.35	16	P	P	08 57 01.9	+0.6
	baz=320						
RDOG	Red Dog Mine	68.41	19	P	P	08 57 02.5	+0.7

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      baz=316
C18K  Utukok River     68.42  18  IAmb  IAmb  08 57 03.1
      comp=Z,30nm,0.8s
C18K  Utukok River     68.42  18  P     P     08 57 02.3 +0.4
      baz=317
C19K  Lookout Ridge    68.47  17  P     P     08 57 02.8 +0.6
      baz=318
D17K  Noatak River     68.62  19  P     P     08 57 03.4 +0.4
      baz=316,SNR=16
RES   Resolute Bay     68.81 356  LR    LR    09 30 03.7
      comp=Z,29nm,19.0s,baz=4.0,slow=38
RES   Resolute Bay     68.81 356  P     P     08 57 04.3 +0.2
RES   Resolute Bay     68.81 356  P     P     08 57 04.3 +0.2
RES                               pmax  pmax
      comp=Z,7.0nm,0.8s
B22K  Teshekpuk Lake   68.89  15  P     P     08 57 05.4 +0.8
      baz=323,SNR=17
KSANE Kasane           69.05 227  IAmb  IAmb  08 57 08.3
      comp=Z,18nm,1.1s
POIN  Pond Inlet       69.08 350  P     P     08 57 06.4 +0.5
POIN                              IAmb  IAmb  08 57 07.4
      comp=Z,18nm,0.7s
FAKI  Fak Fak          69.14 110        P     08 57 06.6  -0.5
FAKI  Fak Fak          69.14 110  P     P     08 57 06.8  -0.3
FAKI  Fak Fak          69.14 110  P     P     08 57 07.2 +0.1
      comp=Z,43nm,1.1s
B21K  Ikpikpuk River   69.21  15  P     P     08 57 07.4 +0.8
      baz=322,SNR=18
F14K  Arctic Creek     69.26  22  P     P     08 57 07.6 +0.6
      baz=314
D19K  Kuna River       69.29  17  P     P     08 57 07.6 +0.4
      baz=320
E17K  Hotham Inlet     69.40  19  P     P     08 57 07.9   0.0
      baz=317
E18K  Tukpahlearik C   69.47  19  P     P     08 57 08.5 +0.2
      baz=318
D20K  Etivluk River    69.47  17  IAmb  IAmb  08 57 09.7
      comp=Z,33nm,0.9s
D20K  Etivluk River    69.47  17  P     P     08 57 08.7 +0.3
      baz=321
C21K  Knifeblade Rid   69.54  16  P     P     08 57 09.5 +0.7
      baz=322
F15K  North Star Dit   69.60  21  IAmb  IAmb  08 57 10.8
      comp=Z,35nm,1.0s
F15K  North Star Dit   69.60  21  P     P     08 57 09.7 +0.6
      baz=315,SNR=9.0
C23K  Itkillik River   69.86  14  P     P     08 57 11.7 +1.0
      baz=325,SNR=34
NRS   Narsarsuaq       69.92 332 i P    P     08 57 11.6 +0.5
NRS                               IAmb  IAmb  08 57 12.6
      comp=Z,29nm,0.9s
E20K  Nigu River       69.93  17  P     P     08 57 11.4 +0.2
      baz=321
F17K  Baldwin Pennin   70.03  20  P     P     08 57 12.2 +0.5
      baz=317
ANM   Nome             70.19  22  IAmb  IAmb  08 57 14.7
      comp=Z,29nm,1.1s
ANM   Nome             70.19  22  P     P     08 57 13.3 +0.5
      baz=315
D22K  Ayikyak River    70.22  15  IAmb  IAmb  08 57 14.5
      comp=Z,26nm,1.0s
D22K  Ayikyak River    70.22  15  P     P     08 57 13.4 +0.5
      baz=324
G15K  Niukluk          70.28  22  P     P     08 57 13.7 +0.4
      baz=316
E21K  Killik River     70.29  16  IAmb  IAmb  08 57 14.4
      comp=Z,34nm,0.9s
E21K  Killik River     70.29  16  P     P     08 57 13.4   0.0
      baz=323,SNR=18
E19K  Redstone River   70.30  18  IAmb  IAmb  08 57 14.4
      comp=Z,15nm,0.8s
E19K  Redstone River   70.30  18  P     P     08 57 13.4   0.0
      baz=320
C24K  Franklin Bluff   70.33  14  P     P     08 57 14.2 +0.8
      baz=327,SNR=20
F18K  Selawik          70.34  19  P     P     08 57 13.6   0.0
      baz=319,SNR=16
G16K  Koyuk River      70.49  21  IAmb  IAmb  08 57 16.3
      comp=Z,21nm,1.1s
G16K  Koyuk River      70.49  21  P     P     08 57 14.6 +0.1
      baz=317,SNR=5.7
D23K  Nanushuk River   70.57  15  IAmb  IAmb  08 57 16.7
      comp=Z,31nm,1.0s
D23K  Nanushuk River   70.57  15  P     P     08 57 15.4 +0.4
      baz=326,SNR=18
F19K  Shaleruckik Mo   70.65  18  P     P     08 57 16.0 +0.5
      baz=320
D24K  Happy Valley     70.78  14  IAmb  IAmb  08 57 17.8
      comp=Z,16nm,0.8s
D24K  Happy Valley     70.78  14  P     P     08 57 16.8 +0.5
      baz=327
C26K  Camden Bay       70.85  12  P     P     08 57 17.9 +1.3
      baz=330,SNR=12
G17K  Kiwalik Mounta   70.89  20  P     P     08 57 17.2 +0.2
      baz=318,SNR=8.6
F20K  Avaraart Lake    70.99  18  P     P     08 57 17.0  -0.5
      baz=322,SNR=14
TOLK  Toolik Lake Re   71.06  15        P     08 57 18.4 +0.3
TOLK  Toolik Lake Re   71.06  15  P     P     08 57 18.7 +0.6
      baz=326,SNR=32
H16K  Elim             71.08  21  P     P     08 57 18.6 +0.5
      baz=317,SNR=6.5
D25K  Kavik River      71.10  13  P     P     08 57 19.0 +0.7
      baz=329,SNR=30
G18K  Tagagawik        71.14  19  IAmb  IAmb  08 57 19.3
      comp=Z,33nm,1.6s
G18K  Tagagawik        71.14  19  P     P     08 57 19.3 +0.8
      baz=320,SNR=6.0
C27K  Jago River       71.31  12  P     P     08 57 20.8 +1.3
      baz=331,SNR=39
A36M  Sachs Harbour    71.33   5  P     P     08 57 20.1 +0.6
      baz=346
G19K  Purcell Mounta   71.36  19  IAmb  IAmb  08 57 20.9
      comp=Z,30nm,0.8s
G19K  Purcell Mounta   71.36  19  P     P     08 57 20.0 +0.2
      baz=321,SNR=24
F21K  Alatna River     71.38  17  IAmb  IAmb  08 57 23.7
      comp=Z,22nm,0.8s
F21K  Alatna River     71.38  17  P     P     08 57 20.3 +0.3
      baz=324,SNR=20
F22K  John River       71.45  16  P     P     08 57 21.0 +0.6
      baz=325
H17K  Granite Mounta   71.52  20  IAmb  IAmb  08 57 22.2
      comp=Z,25nm,1.1s
H17K  Granite Mounta   71.52  20  P     P     08 57 21.2 +0.4
      baz=319,SNR=10
E23K  Chandalar        71.54  15  IAmb  IAmb  08 57 22.4
      comp=Z,27nm,1.1s
E23K  Chandalar        71.54  15  P     P     08 57 21.4 +0.4
      baz=327,SNR=15
E24K  Your Creek       71.76  15  IAmb  IAmb  08 57 23.8
      comp=Z,17nm,0.8s
E24K  Your Creek       71.76  15  P     P     08 57 22.9 +0.7
      baz=328,SNR=19
H18K  Honhosa River    71.78  20  P     P     08 57 22.4   0.0
      baz=320
G21K  Allakaket        71.95  17  IAmb  IAmb  08 57 24.0
      comp=Z,19nm,0.9s
G21K  Allakaket        71.95  17  P     P     08 57 23.0  -0.4
      baz=324
H19K  Roundabout Mou   72.00  19  IAmb  IAmb  08 57 25.0
      comp=Z,24nm,0.9s
H19K  Roundabout Mou   72.00  19  P     P     08 57 23.9 +0.3
      baz=322,SNR=11
J14K  Nanvaranak Lak   72.05  23  P     P     08 57 24.7 +0.7
      baz=316
G22K  Bettles          72.08  16  P     P     08 57 24.2 +0.1
      baz=325,SNR=18
I17K  Unalakleet       72.09  21        P     08 57 25.1 +0.9
I17K  Unalakleet       72.09  21  P     P     08 57 24.9 +0.7
      baz=318,SNR=5.6
D27M  Malcolm River    72.10  11  P     P     08 57 25.2 +0.9
      baz=334,SNR=8.8
COLD  Coldfoot         72.11  16        P     08 57 24.8 +0.4
COLD                              IAmb  IAmb  08 57 25.8
      comp=Z,32nm,0.9s
COLD  Coldfoot         72.11  16  P     P     08 57 24.7 +0.4
      baz=326,SNR=29
K13K  Kusilvak Mount   72.29  24  P     P     08 57 25.9 +0.6
      baz=316
E25K  Arctic Village   72.29  14  P     P     08 57 25.8 +0.4
      baz=330,SNR=16
IMAR  Indian Mountai   72.32  18  P     P     08 57 25.4  -0.2
F24K  Squaw Lake       72.35  15  P     P     08 57 26.2 +0.4
      baz=328,SNR=9.1
D28M  Stokes Point     72.36  11  P     P     08 57 27.1 +1.3
      baz=335,SNR=30
H20K  Anotleneega Mo   72.43  18  P     P     08 57 26.4 +0.1
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      baz=323,SNR=27
GCSA  Galena City Sc   72.50  19  P     P     08 57 26.8 +0.2
      baz=321,SNR=10.0
J16K  Anvik River      72.57  22  IAmb  IAmb  08 57 28.8
      comp=Z,23nm,0.8s
J16K  Anvik River      72.57  22  P     P     08 57 27.7 +0.7
      baz=319,SNR=11
G23K  Bananza Creek    72.58  16  P     P     08 57 27.6 +0.4
      baz=326,SNR=15
ILON  Igloolik, Nuna   72.65 350  IAmb  IAmb  08 57 28.2
      comp=Z,26nm,1.0s
F25K  Christian Rive   72.73  14  IAmb  IAmb  08 57 30.1
      comp=Z,25nm,0.9s
F25K  Christian Rive   72.73  14  P     P     08 57 29.0 +1.0
      baz=330,SNR=27
H21K  Melozitna Rive   72.81  17  IAmb  IAmb  08 57 30.3
      comp=Z,32nm,1.2s
H21K  Melozitna Rive   72.81  17  P     P     08 57 28.8 +0.3
      baz=324
M11K  Mekoryuk         72.86  26  P     P     08 57 29.1 +0.3
      baz=315
E28M  Babbage River    72.90  11  IAmb  IAmb  08 57 31.0
      comp=Z,33nm,1.2s
E28M  Babbage River    72.90  11  P     P     08 57 30.0 +1.0
      baz=335
F26K  Sheenjek River   72.93  13  P     P     08 57 30.0 +0.8
      baz=331,SNR=13
J17K  VABM Dome        72.93  21  P     P     08 57 29.7 +0.5
      baz=320
E27K  Coleen River     72.94  12  IAmb  IAmb  08 57 31.1
      comp=Z,30nm,1.0s
E27K  Coleen River     72.94  12  P     P     08 57 30.2 +1.0
      baz=333
H22K  Ishtalitna Cre   72.96  17  P     P     08 57 29.8 +0.5
      baz=326,SNR=9.8
K15K  Wolf Creek Mou   73.03  23  P     P     08 57 30.8 +1.0
      baz=318
I20K  Naaghedeneel     73.09  19  IAmb  IAmb  08 57 31.7
      comp=Z,42nm,0.9s
I20K  Naaghedeneel     73.09  19  P     P     08 57 30.7 +0.6
      baz=323,SNR=10.0
G24K  Hadweenzic Riv   73.14  15  IAmb  IAmb  08 57 32.1
      comp=Z,20nm,0.8s
G24K  Hadweenzic Riv   73.14  15  P     P     08 57 31.2 +0.8
      baz=329,SNR=17
E29M  Blow River       73.35  11  IAmb  IAmb  08 57 33.6
      comp=Z,38nm,1.1s
E29M  Blow River       73.35  11  P     P     08 57 32.7 +1.1
      baz=336,SNR=40
G25K  Bearman Lake     73.36  14  P     P     08 57 32.9 +1.3
      baz=330,SNR=12
L14K  Kuka Creek       73.36  24  IAmb  IAmb  08 57 33.7
      comp=Z,22nm,0.9s
L14K  Kuka Creek       73.36  24  P     P     08 57 32.7 +0.9
      baz=318,SNR=6.7
J19K  Poorman          73.43  19  IAmb  IAmb  08 57 34.3
      comp=Z,48nm,1.2s
J19K  Poorman          73.43  19  P     P     08 57 32.8 +0.7
      baz=322
H23K  Yukon River      73.43  16  IAmb  IAmb  08 57 34.1
      comp=Z,24nm,0.9s
H23K  Yukon River      73.43  16  P     P     08 57 33.1 +0.9
      baz=327
L15K  Ungalak Mounta   73.50  23  P     P     08 57 33.4 +0.8
      baz=318
MBWA  Marble Bar       73.53 133  P     P     08 57 32.7  -0.5
      comp=Z,21nm,1.0s
MBWA  Marble Bar       73.53 133        P     08 57 33.1  -0.2
MBWA  Marble Bar       73.53 133  P     P     08 57 33.3 +0.1
J18K  Innoko River     73.55  20  IAmb  IAmb  08 57 34.2
      comp=Z,20nm,0.8s
J18K  Innoko River     73.55  20  P     P     08 57 33.2 +0.3
      baz=322,SNR=13
G26K  Porcupine Rive   73.65  13  P     P     08 57 34.1 +0.7
      baz=332,SNR=6.9
J20K  Nowinta River    73.68  19  IAmb  IAmb  08 57 35.1
      comp=Z,26nm,0.9s
J20K  Nowinta River    73.68  19  P     P     08 57 34.1 +0.6
      baz=324
K17K  Iditarod         73.68  21  IAmb  IAmb  08 57 35.3
      comp=Z,37nm,0.9s
K17K  Iditarod         73.68  21  P     P     08 57 34.3 +0.7
      baz=321,SNR=13
FYU   Fort Yukon       73.71  14  IAmb  IAmb  08 57 35.9
      comp=Z,52nm,1.2s
F28M  Old Crow         73.75  12  P     P     08 57 34.9 +0.9
      baz=335,SNR=14
H24K  Noodor Dome      73.79  16  P     P     08 57 34.9 +0.6
      baz=328,SNR=12
M13K  Dall Lake        73.83  25  P     P     08 57 36.0 +1.6
      baz=317
PSAC1 Pilbara Seismi   73.86 133  P     P     08 57 34.3  -0.9
      comp=Z,18nm,0.9s
PSA00 Pilbara Seismi   73.92 133  P     P     08 57 35.1  -0.4
      comp=Z,20nm,1.1s
PSA00 Pilbara Seismi   73.92 133  P     P     08 57 35.5   0.0
PSA00                             IAmb  IAmb  08 57 36.2
      comp=Z,24nm,1.1s
PSA00 Pilbara Seismi   73.92 133        P     08 57 35.1  -0.4
PSA00                             IAmb  IAmb  08 57 36.2
      comp=Z,15nm,1.2s
PSA00 Pilbara Seismi   73.92 133  P     P     08 57 35.5   0.0
PSAB3 Pilbara Seismi   73.94 133  P     P     08 57 35.1  -0.6
      comp=Z,18nm,1.1s
PSAC2 Pilbara Seismi   73.94 133  P     P     08 57 35.2  -0.4
      comp=Z,29nm,1.0s
C36M  Paulatuk         74.00   5  P     P     08 57 35.4   0.0
      baz=348
INK   Inuvik           74.04   9  P     P     08 57 36.2 +0.7
      baz=340,SNR=44
M14K  Bethel           74.04  24  P     P     08 57 36.6 +0.9
      baz=318,SNR=6.4
I23K  Minto, Yukon-K   74.05  16  IAmb  IAmb  08 57 37.3
      comp=Z,29nm,1.0s
I23K  Minto, Yukon-K   74.05  16  P     P     08 57 36.3 +0.6
      baz=327,SNR=20
L16K  Owhat River      74.11  22  IAmb  IAmb  08 57 38.1
      comp=Z,22nm,0.8s
L16K  Owhat River      74.11  22  P     P     08 57 37.1 +1.0
      baz=320
L17K  Donlin           74.13  22  P     P     08 57 37.2 +0.9
      baz=321,SNR=5.7
G27K  Doyon Strip      74.17  13  IAmb  IAmb  08 57 38.4
      comp=Z,22nm,0.8s
G27K  Doyon Strip      74.17  13  P     P     08 57 37.5 +1.1
      baz=333,SNR=26
P08K  Saint George I   74.24  30  P     P     08 57 37.5 +0.6
      baz=313
K20K  Telida           74.36  19  IAmb  IAmb  08 57 39.1
      comp=Z,30nm,0.9s
K20K  Telida           74.36  19  P     P     08 57 38.1 +0.5
      baz=324
F30M  Barrier River    74.38  10  IAmb  IAmb  08 57 39.3
      comp=Z,36nm,0.8s
F30M  Barrier River    74.38  10  P     P     08 57 38.4 +0.7
      baz=338,SNR=18
CHUM  Lake Minchumin   74.39  18  P     P     08 57 38.0 +0.3
      baz=325,SNR=11
M15K  Kasigluk River   74.50  24  P     P     08 57 39.2 +0.9
      baz=319,SNR=6.9
POKR  Poker Plat Res   74.50  16  IAmb  IAmb  08 57 40.0
      comp=Z,41nm,1.0s
POKR  Poker Plat Res   74.50  16  P     P     08 57 38.9 +0.6
      baz=329,SNR=10.0
LBTB  Lobatse          74.52 222  IAmb  IAmb  08 57 40.6
      comp=Z,25nm,0.7s
LBTB  Lobatse          74.52 222  P     P     08 57 39.7 +0.6
LBTB                              pP    pP    08 58 15.8 +1.6
BPAW  Bear Paw Mtn.    74.54  18  IAmb  IAmb  08 57 39.5
      comp=Z,23nm,1.0s
BPAW  Bear Paw Mtn.    74.54  18  P     P     08 57 38.4  -0.2
      baz=326,SNR=13
L18K  Granite Mounta   74.54  21  P     P     08 57 39.2 +0.6
      baz=322,SNR=7.0
PRP   Porcupine Dome   74.56  15  P     P     08 57 39.5 +0.7
      baz=330,SNR=8.2
DBIC  Dimbokro         74.58 267  P     P     08 57 37.7  -1.9
      comp=Z,4.9nm,0.5s,baz=56,slow=5.3,SNR=8.5
      comp=Z,4.9nm,0.5s
DBIC  Dimbokro         74.58 267        P     08 57 39.5  -0.1
DBIC  Dimbokro         74.58 267  P     P     08 57 39.5  -0.1
DBIC                              pmax  pmax
      comp=Z,7.0nm,0.7s
NEA2  Nenana           74.58  17  IAmb  IAmb  08 57 39.8
      comp=Z,37nm,0.9s
NEA2  Nenana           74.58  17  P     P     08 57 38.9 +0.1
      baz=328,SNR=30
COLA  College          74.62  16  P     P     08 57 39.3 +0.4
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COLA  College          74.62  16  P     P     08 57 39.2 +0.2
COLA  College          74.62  16c iP    P     08 57 39.1 +0.1
COLA                              pmax  pmax
      comp=Z,48nm,0.9s
COLA  College          74.62  16  P     P     08 57 39.3 +0.4
      baz=328
G29M  Pine Creek       74.69  11  IAmb  IAmb  08 57 41.2
      comp=Z,20nm,0.9s
G29M  Pine Creek       74.69  11  P     P     08 57 40.1 +0.7
      baz=336,SNR=11
H27K  Steamboat Moun   74.71  13  IAmb  IAmb  08 57 41.5
      comp=Z,28nm,0.8s
H27K  Steamboat Moun   74.71  13  P     P     08 57 40.4 +0.8
      baz=334,SNR=22
N14K  Kuskokwak Cree   74.75  24  P     P     08 57 40.6 +0.8
      baz=318
TSUM  Tsumeb           74.76 232        P     08 57 40.7 +0.1
TSUM                              IAmb  IAmb  08 57 55.2
      comp=Z,58nm,1.8s
M16K  Timber Creek     74.79  23  P     P     08 57 41.2 +1.1
      baz=320
F31M  Tsiigehtchic     74.83  10  P     P     08 57 40.6 +0.5
      baz=340,SNR=39
G30M  tAoh Zraii Nji   74.90  11  P     P     08 57 40.9 +0.2
      baz=338,SNR=35
ILAR  Eielson Array    74.92  16  P     P     08 57 40.1  -0.7
      comp=Z,13nm,1.0s,baz=318,slow=4.3,SNR=76
ILAR                              pP    pP    08 58 15.0  -0.5
      comp=Z,4.4nm,1.0s,baz=316,slow=5.2,SNR=4.7
ILAR                              PP    PP    09 00 31.0 +1.5
      comp=Z,2.8nm,0.9s,baz=320,slow=7.3,SNR=4.6
      comp=Z,13nm,1.0s
MTN   Manton Dam       74.94 119  P     P     08 57 38.4  -3.1
MTN   Manton Dam       74.94 119  P     P     08 57 40.6  -0.9
M17K  Holitna River    74.96  22  IAmb  IAmb  08 57 43.8
      comp=Z,35nm,0.9s
M17K  Holitna River    74.96  22  P     P     08 57 42.0 +1.0
      baz=322,SNR=9.0
GENI  Genyem           75.03 105  P     P     08 57 42.8 +0.6
GENI  Genyem           75.03 105  P     P     08 57 43.9 +1.7
      comp=Z,3µmcomp=Z,86nm,0.8s
N15K  Kwethluk River   75.09  24  P     P     08 57 43.0 +1.2
      baz=320
L19K  White Mountain   75.09  20  P     P     08 57 42.3 +0.5
      baz=323
L20K  Farewell, AK     75.12  20  IAmb  IAmb  08 57 43.4
      comp=Z,22nm,0.9s
L20K  Farewell, AK     75.12  20  P     P     08 57 42.3 +0.3
      baz=324
HDA   Harding Lake     75.22  16  P     P     08 57 42.3  -0.2
      baz=329,SNR=7.0
I26K  Coal Creek Min   75.23  14  IAmb  IAmb  08 57 44.0
      comp=Z,18nm,0.8s
I26K  Coal Creek Min   75.23  14  P     P     08 57 43.0 +0.5
      baz=332
PPLA  Purkeypile       75.23  19  P     P     08 57 42.2  -0.5
      baz=325
G31M  Satah River      75.24  10  IAmb  IAmb  08 57 43.8
      comp=Z,34nm,0.8s
G31M  Satah River      75.24  10  P     P     08 57 42.8 +0.3
      baz=339
TRF   Thorofare Moun   75.25  18  P     P     08 57 43.2 +0.3
      baz=327
I27K  Kandik River     75.26  13  IAmb  IAmb  08 57 44.3
      comp=Z,22nm,0.9s
I27K  Kandik River     75.26  13  P     P     08 57 43.3 +0.5
      baz=334
KNRA  Kununurra        75.26 122  P     P     08 57 43.1  -0.2
      comp=Z,71nm,0.8s
KNRA  Kununurra        75.26 122        P     08 57 43.4 +0.1
H29M  Whitestone       75.27  12  IAmb  IAmb  08 57 44.4
      comp=Z,31nm,0.7s
H29M  Whitestone       75.27  12  P     P     08 57 43.3 +0.5
      baz=336,SNR=23
N16K  Nishlik Lake     75.28  23  P     P     08 57 44.2 +1.3
      baz=321
MCK   McKinley         75.34  17  P     P     08 57 43.0  -0.2
      baz=328
M18K  Stony River      75.37  21  P     P     08 57 43.0  -0.3
      baz=323
J25K  Salcha River,    75.39  15  P     P     08 57 42.9  -0.6
      baz=331
EPYK  Eagle Plains     75.39  11  IAmb  IAmb  08 57 45.2
      comp=Z,24nm,1.1s
EPYK  Eagle Plains     75.39  11  P     P     08 57 43.4  -0.1
      baz=337,SNR=14
O14K  Tigyukauivet M   75.40  25  P     P     08 57 44.4 +0.9
      baz=319
I28M  Miner Creek      75.70  13  IAmb  IAmb  08 57 46.4
      comp=Z,21nm,0.8s
I28M  Miner Creek      75.70  13  P     P     08 57 45.3  -0.1
      baz=335,SNR=20
N17K  Nushagak Hills   75.73  22  P     P     08 57 46.5 +1.1
      baz=322
KDU   Kakadu           75.79 118  P     P     08 57 45.2  -1.2
      comp=Z,11nm,1.1s
M20K  Styx River       75.81  20  IAmb  IAmb  08 58 17.2
      comp=Z,47nm,1.9s
M20K  Styx River       75.81  20  P     P     08 57 45.9  -0.1
      baz=325
J26L  Joseph Creek     75.86  15  IAmb  IAmb  08 57 47.3
      comp=Z,21nm,0.8s
J26L  Joseph Creek     75.86  15  P     P     08 57 46.2   0.0
      baz=332,SNR=26
L22K  Petersville      75.91  19  IAmb  IAmb  08 57 47.5
      comp=Z,39nm,1.3s
O15K  Ungalikthiuk R   75.94  24  P     P     08 57 47.1 +0.5
      baz=320
N18K  Kilae Creek      76.00  22  P     P     08 57 47.6 +0.7
      baz=323
K24K  Donnelly Dome    76.00  16  P     P     08 57 46.5  -0.5
      baz=330,SNR=16
I29M  Ogilvie Camp,    76.07  12  IAmb  IAmb  08 57 48.3
      comp=Z,27nm,1.0s
I29M  Ogilvie Camp,    76.07  12  P     P     08 57 47.1  -0.2
      baz=336,SNR=26
CUT   Chulitna         76.14  18  IAmb  IAmb  08 58 12.2
      comp=Z,63nm,1.4s
CUT   Chulitna         76.14  18  P     P     08 57 46.9  -0.8
      baz=327
SKT   Skwentna         76.16  19  IAmb  IAmb  08 57 48.8
      comp=Z,38nm,1.0s
SKT   Skwentna         76.16  19  P     P     08 57 47.4  -0.6
      baz=326,SNR=15
O16K  Kokwok River B   76.18  23  IAmb  IAmb  08 57 50.2
      comp=Z,27nm,0.9s
O16K  Kokwok River B   76.18  23  P     P     08 57 49.1 +1.1
      baz=321,SNR=8.5
WAT1  Susitna Watana   76.20  17  P     P     08 57 47.7  -0.4
      baz=328
SCRK  Sand Creek       76.24  15  P     P     08 57 48.5 +0.1
      baz=332,SNR=14
RIDG  Independent Ri   76.26  16  IAmb  IAmb  08 57 49.7
      comp=Z,24nm,1.0s
RIDG  Independent Ri   76.26  16  P     P     08 57 48.0  -0.5
      baz=331,SNR=8.4
DHY   Denali Highway   76.27  17  P     P     08 57 48.4  -0.3
DHY                               IAmb  IAmb  08 57 49.8
      comp=Z,17nm,0.8s
DHY   Denali Highway   76.27  17  P     P     08 57 48.0  -0.7
      baz=329,SNR=11
H31M  Peel River       76.28  10  IAmb  IAmb  08 57 49.6
      comp=Z,25nm,0.8s
H31M  Peel River       76.28  10  P     P     08 57 48.7 +0.2
      baz=339,SNR=17
N19K  Bonanza Creek    76.30  21  P     P     08 57 49.1 +0.3
      baz=324
O17K  Koliganek Bris   76.35  23  P     P     08 57 49.5 +0.5
      baz=322
DOT   Dot Lake         76.51  15  P     P     08 57 49.6  -0.3
I30M  Mount Dempster   76.51  11  IAmb  IAmb  08 57 51.1
      comp=Z,29nm,0.9s
I30M  Mount Dempster   76.51  11  P     P     08 57 49.9  -0.1
      baz=338,SNR=29
K27K  Chicken          76.58  14  IAmb  IAmb  08 57 52.0
      comp=Z,32nm,1.1s
K27K  Chicken          76.58  14  P     P     08 57 50.8 +0.6
      baz=333
WAT6  Susitna Watana   76.61  17  P     P     08 57 49.7  -0.9
      baz=329
SPCR  Spurr Chakacha   76.63  20  P     P     08 57 50.5  -0.1
      baz=326
M22K  Willow           76.72  19  P     P     08 57 51.1 +0.1
      baz=327
PAX   Paxson           76.80  16  P     P     08 57 51.1  -0.5
PAX                               IAmb  IAmb  08 57 52.4
      comp=Z,23nm,0.9s
PAX   Paxson           76.80  16  P     P     08 57 51.1  -0.5
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PAX				pmax	pmax		
	comp=Z,23nm,0.9s						
PAX	Paxson	76.80	16	P	P	08 57 50.7	-0.9
	baz=331,SNR=12						
SUA	Susitna One	76.80	19	IAmb	IAmb	08 57 55.1	
	comp=Z,25nm,0.9s						
SUA	Susitna One	76.80	19	P	P	08 57 51.9	+0.2
	baz=327						
O19K	Port Alsworth	76.85	21	P	P	08 57 52.1	+0.4
	baz=324						
O18K	Koktuh Hills	76.86	22	P	P	08 57 52.5	+0.6
	baz=324						
J29N	Klondike Camp	76.92	12	P	P	08 57 52.3	+0.2
	baz=336						
GHO	Glory Hole Cre	77.01	18	IAmb	IAmb	08 58 38.2	
	comp=Z,33nm,1.2s						
DAWY	Dawson	77.06	13	IAmb	IAmb	08 57 54.1	
	comp=Z,30nm,1.1s						
DAWY	Dawson	77.06	13	P	P	08 57 52.8	-0.1
	baz=335,SNR=22						
PMR	Palmer	77.11	18	P	P	08 57 52.7	-0.5
PMR	Palmer	77.11	18	P	P	08 57 53.0	-0.1
	baz=328						
J30M	Hart River	77.12	12	IAmb	IAmb	08 57 54.9	
	comp=Z,23nm,1.0s						
J30M	Hart River	77.12	12	P	P	08 57 53.6	+0.2
	baz=338,SNR=15						
SML	Sawmill	77.13	18	IAmb	IAmb	08 57 54.2	
	comp=Z,35nm,0.8s						
SML	Sawmill	77.13	18	P	P	08 57 53.0	-0.4
	baz=329,SNR=7.6						
MEEK	Meekatharra	77.16	137	P	P	08 57 53.1	-0.9
MEEK	Meekatharra	77.16	137	P	P	08 57 53.5	-0.4
L26K	Log Cabin Wild	77.22	15	P	P	08 57 54.1	+0.3
	baz=332,SNR=6.5						
P18K	Big Mountain,	77.23	22	P	P	08 57 53.9	-0.1
	baz=324						
M23K	Glacier View	77.29	18	P	P	08 57 53.6	-0.6
	baz=329,SNR=9.0						
SCM	Sheep Creek Mo	77.36	17	IAmb	IAmb	08 57 55.5	
	comp=Z,22nm,0.8s						
SCM	Sheep Creek Mo	77.36	17	P	P	08 57 54.3	-0.4
	baz=329						
Q16K	King Salmon	77.36	23	P	P	08 57 55.3	+0.7
	baz=322						
HARP	HAARP	77.37	16	P	P	08 57 54.8	+0.1
	baz=331,SNR=15						
RC01	Rabbit Creek A	77.38	19	IAmb	IAmb	08 57 55.3	
	comp=Z,46nm,1.3s						
RC01	Rabbit Creek A	77.38	19	P	P	08 57 54.1	-0.7
	baz=328						
M24K	Tolsona, Glenn	77.39	17	P	P	08 57 54.7	-0.2
	baz=330,SNR=9.9						
KNK	Knik Glacier	77.44	18	IAmb	IAmb	08 57 56.2	
	comp=Z,32nm,1.0s						
KNK	Knik Glacier	77.44	18	P	P	08 57 55.1	0.0
	baz=328,SNR=5.5						
L27K	Beaver Creek,	77.50	15	IAmb	IAmb	08 57 57.2	
	comp=Z,21nm,0.9s						
L27K	Beaver Creek,	77.50	15	P	P	08 57 55.5	+0.1
	baz=334						
BCAR	Beaver Creek A	77.50	15		P	08 57 56.1	+0.7
BOSA	Boshof	77.58	220	P	P	08 57 56.5	+0.2
	comp=Z,29nm,0.8s,baz=34,slow=5.4,SNR=30						
BOSA				pP	pP	08 58 32.0	+0.3
	comp=Z,15nm,1.0s,baz=40,slow=7.6,SNR=3.1						
	comp=Z,29nm,0.8s						
BOSA	Boshof	77.58	220	IAmb	IAmb	08 57 57.4	
	comp=Z,31nm,0.8s						
BOSA	Boshof	77.58	220	P	P	08 57 56.3	0.0
BOSA				pP	pP	08 58 32.2	+0.5
K29M	Barlow Dome	77.60	12	IAmb	IAmb	08 57 57.6	
	comp=Z,24nm,0.9s						
K29M	Barlow Dome	77.60	12	P	P	08 57 56.1	+0.1
	baz=337,SNR=17						
MORW	Morawa	77.73	141	P	P	08 57 56.1	-0.9
	comp=Z,16nm,0.9s						
MORW	Morawa	77.73	141	P	P	08 57 57.0	0.0
M26K	Nabesna, AK	77.85	15	P	P	08 57 57.6	+0.3
	baz=333						
Q18K	Katmai Hardscr	77.90	23	P	P	08 57 57.7	-0.1
	baz=324						
FALS	False Pass	77.91	29	P	P	08 57 58.0	+0.3
	baz=318						
Q17K	Contact Creek	77.93	23	P	P	08 57 57.9	-0.1
	baz=323						
PWL	Port Wells	77.94	18	P	P	08 57 57.5	-0.4
	baz=329						
KLU	Klutina	77.99	17	IAmb	IAmb	08 57 59.6	
	comp=Z,27nm,1.0s						
KLU	Klutina	77.99	17	P	P	08 57 59.1	+1.0
	baz=330,SNR=5.9						
Q19K	Cape Douglas,	78.08	22	P	P	08 57 58.4	-0.3
	baz=325						
MAYO	Mayo, Yukon	78.11	12	IAmb	IAmb	08 58 00.8	
	comp=Z,49nm,1.1s						
MAYO	Mayo, Yukon	78.11	12	P	P	08 57 59.8	+1.1
	baz=338,SNR=6.4						
M27K	Edge Creek, AK	78.12	15	P	P	08 57 59.2	+0.2
	baz=334						
L29M	L29M	78.17	13	IAmb	IAmb	08 58 01.5	
	comp=Z,31nm,1.1s						
L29M	L29M	78.17	13	P	P	08 57 59.4	+0.3
	baz=336,SNR=12						
N25K	Chitina, Valde	78.20	16	P	P	08 57 59.3	-0.1
	baz=332						
GLI	Glacier Island	78.24	18	P	P	08 57 58.9	-0.5
	baz=330						
BRSE	Bradley Lake S	78.25	20	P	P	08 57 59.9	+0.3
	baz=327						
S14K	Fog Glacier	78.26	26	P	P	08 57 59.3	-0.5
	baz=321						
BVCY	Beaver Creek	78.28	14	P	P	08 58 00.1	+0.4
	baz=334,SNR=18						
R17L	Mt. Peulik Vol	78.29	24	P	P	08 57 59.6	-0.2
	baz=323						
SEW	Seward	78.29	19	P	P	08 57 59.6	-0.1
	baz=328						
DIV	Divide	78.34	17	IAmb	IAmb	08 58 01.2	
	comp=Z,18nm,0.9s						
SDPT	Sand Point	78.65	27	P	P	08 58 01.3	-0.4
	baz=320						
M29M	Somme Creek	78.72	13	P	P	08 58 02.3	0.0
	baz=336,SNR=11						
Q20K	Shuyak Island	78.72	21	P	P	08 58 01.5	-0.6
	baz=326						
MCARA	McCarthy VSAT	78.75	16	IAmb	IAmb	08 58 49.1	
	comp=Z,90nm,2.0s						
MCARA	McCarthy VSAT	78.75	16	P	P	08 58 02.0	-0.3
	baz=333						
BMRM	Bremner River	78.76	17	IAmb	IAmb	08 58 04.4	
	comp=Z,33nm,1.1s						
BMRM	Bremner River	78.76	17	P	P	08 58 02.5	+0.1
	baz=332,SNR=6.5						
EYAK	Cordova Ski Ar	78.85	17	IAmb	IAmb	08 58 04.8	
	comp=Z,35nm,1.0s						
EYAK	Cordova Ski Ar	78.85	17	P	P	08 58 03.1	+0.3
	baz=331						
M30M	Minto, Yukon	78.90	13	P	P	08 58 02.9	-0.2
	baz=338,SNR=5.9						
YUK3	Moose Creek	78.94	15	P	P	08 58 03.9	+0.3
	baz=335,SNR=11						
CRQE	Cirque	79.30	16	P	P	08 58 05.1	-0.3
	baz=333						
BARN	Barnard Glacie	79.33	15	IAmb	IAmb	08 58 07.9	
	comp=Z,20nm,1.0s						
KDAK	Kodiak Island	79.35	22	⇓eP	P	08 58 06.0	+0.4
KDAK				pmax	pmax		
	comp=Z,161nm,2.5s						
KDAK	Kodiak Island	79.35	22	P	P	08 58 05.4	-0.2
	baz=326						
TGL	Tana Glacier	79.35	16	IAmb	IAmb	08 58 07.9	
	comp=Z,25nm,1.0s						
CHNA	Chernabura Isl	79.37	27	P	P	08 58 05.7	0.0
	baz=321						
CTG	Chitna Glacier	79.49	15	P	P	08 58 06.2	-0.3
	baz=334						
CTGM	Chitina Glacie	79.49	15	IAmb	IAmb	08 58 08.1	
	comp=Z,20nm,0.8s						
YUK8	Steele Glacier	79.53	14	P	P	08 58 06.7	-0.2
	baz=335						
OHAK	Old Harbor	79.59	23	P	P	08 58 07.4	+0.6
	baz=325						
GRNC	Granite Creek	79.61	16	IAmb	IAmb	08 58 09.2	
	comp=Z,28nm,1.1s						
M31M	Drury Creek, Y	79.66	12	IAmb	IAmb	08 58 09.2	
	comp=Z,26nm,1.1s						
M31M	Drury Creek, Y	79.66	12	P	P	08 58 07.6	+0.4
	baz=340,SNR=11						
Q23K	Middleton Isla	79.68	18	P	P	08 58 07.8	+0.5
	baz=330						
LOGN	Logan Glacier	79.69	15	IAmb	IAmb	08 58 09.7	
	comp=Z,30nm,1.0s						
YUK4	Talbot Arm	79.69	14	P	P	08 58 07.8	+0.1
	baz=336,SNR=10.0						
KAIM	Kayak Island	79.72	17	P	P	08 58 07.6	0.0
	baz=332						
SII	Sitkinak Islan	79.86	23	P	P	08 58 08.5	+0.1
	baz=325						
KUQ	Kuujjuuaa	79.87	339	IAmb	IAmb	08 58 09.2	
	comp=Z,29nm,0.8s						
N30M	Aishikik Lake	79.88	13	P	P	08 58 09.2	+0.7
	baz=338						
O28M	Mount Upton	79.91	15	P	P	08 58 08.7	-0.2
	baz=335						
WRGLY	Wrigley	80.07	7	P	P	08 58 10.4	+1.1
	baz=348,SNR=21						
N31M	Braeburn, Yuko	80.09	13	IAmb	IAmb	08 58 11.5	
	comp=Z,36nm,1.0s						
N31M	Braeburn, Yuko	80.09	13	P	P	08 58 09.9	+0.3
	baz=338,SNR=8.5						
YUK6	Outpost Mounta	80.12	14	P	P	08 58 10.0	0.0
	baz=336						
HYT	Haines Junctio	80.39	14	IAmb	IAmb	08 58 13.6	
	comp=Z,26nm,1.0s						
HYT	Haines Junctio	80.39	14	P	P	08 58 11.5	+0.2
	baz=337,SNR=12						
PINM	Pinnacle	80.51	15	P	P	08 58 12.4	+0.5
	baz=335						
KLBR	Kellerberrin	80.64	141	P	P	08 58 11.3	-1.4
	comp=Z,39nm,0.8s						
O29M	Mount Kennedy	80.66	14	P	P	08 58 12.4	-0.4
	baz=336						
O30N	Mendenhall	80.70	13	IAmb	IAmb	08 58 14.8	
	comp=Z,22nm,1.0s						
O30N	Mendenhall	80.70	13	P	P	08 58 13.2	+0.3
	baz=338,SNR=6.0						
N32M	Quiet Lake	80.86	11	P	P	08 58 13.5	-0.2
	baz=341						
WHY	Whitehorse	81.03	13	IAmb	IAmb	08 58 15.8	
	comp=Z,31nm,1.1s						
WHY	Whitehorse	81.03	13	P	P	08 58 14.2	-0.5
	baz=339,SNR=5.0						
P30M	Million Dollar	81.15	14	P	P	08 58 14.4	-0.8
	baz=338						
YKAW3	Yellowknife Wh	81.30	3	IAmb	IAmb	08 58 17.1	
	comp=Z,28nm,0.9s						
YKA	Yellowknife Ar	81.37	3	P	P	08 58 16.1	-0.2
	comp=Z,16nm,0.8s,baz=345,slow=5.6,SNR=78						
YKA				pP	pP	08 58 52.3	+1.1
	comp=Z,4.6nm,0.8s,baz=344,slow=5.7,SNR=3.1						
YKA				LR	LR	09 38 39.7	
	comp=Z,49nm,18.5s,baz=280,slow=39						
	comp=Z,16nm,0.8s						
YKA	Yellowknife Ar	81.37	3	P	P	08 58 16.8	+0.5
YKA	Yellowknife Ar	81.37	3	i P	P	08 58 16.5	+0.2
YKA				pmax	pmax		
	comp=Z,18nm,0.8s						
YKAW1	Yellowknife Wh	81.38	3	IAmb	IAmb	08 58 18.1	
	comp=Z,39nm,0.9s						
P29M	Windy Craggy	81.45	14	P	P	08 58 17.0	+0.2
	baz=337						
WRKA	Warakurna	81.64	129	P	P	08 58 17.4	-0.9
	comp=Z,6.4nm,1.0s						
P33M	Teslin, Yukon	81.80	12	IAmb	IAmb	08 58 20.2	
	comp=Z,44nm,0.9s						
P33M	Teslin, Yukon	81.80	12	P	P	08 58 19.0	+0.3
	baz=341,SNR=19						
PLBC	Pleasant Camp	81.88	14	P	P	08 58 19.5	+0.5
	baz=338,SNR=6.9						
WB0	Warramunga Arr	81.94	122	IAmb	IAmb	08 58 19.6	
	comp=Z,20nm,0.8s						
WRA	Warramunga Arr	82.03	122	P	P	08 58 19.1	-1.2
	comp=Z,21nm,0.7s,baz=323,slow=5.0,SNR=191						
	comp=Z,21nm,0.7s						
WRA	Warramunga Arr	82.03	122		P	08 58 19.3	-1.1
WRA	Warramunga Arr	82.03	122	i P	P	08 58 19.2	-1.1
WRA				pmax	pmax		
	comp=Z,25nm,0.8s						
WRAB	Tennant Creek	82.03	122	P	P	08 58 19.3	-1.1
WRAB				IAmb	IAmb	08 58 20.1	
	comp=Z,30nm,0.8s						
WRAB	Tennant Creek	82.03	122	P	P	08 58 18.9	-1.5
WRAB	Tennant Creek	82.03	122	d iP	P	08 58 18.9	-1.5
WRAB				pmax	pmax		
	comp=Z,37nm,0.9s						
WRAB	Tennant Creek	82.03	122	P	P	08 58 19.2	-1.1
WRAB				pP	pP	08 58 54.4	-1.7
SKAG	Skagway	82.07	13	P	P	08 58 19.4	-0.6
SKAG	Skagway	82.07	13	P	P	08 58 19.9	-0.1
	baz=339						
WR8	Warramunga Arr	82.14	122	IAmb	IAmb	08 58 20.6	
	comp=Z,23nm,0.8s						
SCHQ	Schefferville	82.16	337	P	P	08 58 20.0	-0.6
	comp=Z,6.7nm,1.0s,baz=294,slow=1.4,SNR=5.5						
SCHQ				pP	pP	08 58 55.9	-0.2
	comp=Z,4.3nm,0.7s,baz=76,slow=2.5,SNR=2.7						
SCHQ				LR	LR	09 34 03.5	
	comp=Z,35nm,19.6s,baz=27,slow=35						
	comp=Z,6.7nm,1.0s						
P32M	Atlin	82.23	12	IAmb	IAmb	08 58 21.5	
	comp=Z,30nm,1.2s						
P32M	Atlin	82.23	12	P	P	08 58 20.6	-0.4
	baz=340						
WTLY	Watson Lake, Y	82.50	10	IAmb	IAmb	08 58 23.6	
	comp=Z,23nm,0.9s						
WTLY	Watson Lake, Y	82.50	10	P	P	08 58 22.7	+0.4
	baz=344,SNR=12						
R33M	Jennings River	82.87	11	IAmb	IAmb	08 58 26.2	
	comp=Z,20nm,0.9s						
R33M	Jennings River	82.87	11	P	P	08 58 24.6	+0.2
	baz=342						
KOTAN	Kotaneelee Air	83.05	7	P	P	08 58 25.3	+0.2
	baz=348						
Q32M	Nakina River	83.08	12	IAmb	IAmb	08 58 27.0	
	comp=Z,17nm,0.8s						
Q32M	Nakina River	83.08	12	P	P	08 58 25.7	+0.2
	baz=342						
S31K	Pelican	83.30	14	P	P	08 58 25.6	-0.7
	baz=338						
R32K	Eaglecrest	83.33	13	P	P	08 58 27.2	+0.6
	baz=340						
LIRD	Liard River Hi	83.53	9	P	P	08 58 27.9	+0.3
	baz=346,SNR=10.0						
DLBC	Dease Lake	83.93	11	LR	LR	09 39 52.3	
	comp=Z,28nm,18.1s,baz=298,slow=38						
DLBC	Dease Lake	83.93	11	P	P	08 58 30.1	+0.4
	baz=343,SNR=5.2						
TOAD	Toad River Com	84.18	8	P	P	08 58 31.4	+0.5
	baz=347,SNR=12						
S34M	Telegraph Cree	84.26	12	P	P	08 58 31.9	+0.6
	baz=342,SNR=14						
AS31	Alice Springs	84.28	125	P	P	08 58 30.7	-1.2
ASAR	Alice Springs	84.28	125	P	P	08 58 30.7	-1.2
	comp=Z,21nm,0.7s,baz=310,slow=5.1,SNR=285						
	comp=Z,21nm,0.7s						
AUALC	St Philip's Co	84.28	125	P	P	08 58 30.7	-1.2
COEN	Coen	84.47	112	P	P	08 58 31.5	-1.4
	comp=Z,39nm,0.9s						
COEN	Coen	84.47	112	P	P	08 58 31.9	-1.0
COEN				IAmb	IAmb	08 58 32.8	
	comp=Z,26nm,0.8s						
COEN	Coen	84.47	112	P	P	08 58 32.0	-1.0
PMG	Port Moresby	84.68	106		P	08 58 33.7	-0.3
PMG				IAmb	IAmb	08 58 34.3	
	comp=Z,23nm,0.9s						
PMG	Port Moresby	84.68	106	P	P	08 58 33.9	-0.2
PMG	Port Moresby	84.68	106	P	P	08 58 33.6	-0.5
	comp=Z,26nm,1.0s						
PMG	Port Moresby	84.68	106	d iP	P	08 58 33.5	-0.5
PMG				pmax	pmax		
	comp=Z,23nm,0.9s						
T35M	Bob Quinn	85.29	11	IAmb	IAmb	08 58 38.4	
	comp=Z,19nm,1.0s						
T35M	Bob Quinn	85.29	11	P	P	08 58 37.2	+0.6
	baz=343						
WRAK	Wrangell Islan	85.48	13	P	P	08 58 36.9	-0.4
	baz=342						
FORT	Forrest	85.67	133	P	P	08 58 37.7	-0.9
	comp=Z,26nm,0.7s						
FORT	Forrest	85.67	133	IAmb	IAmb	08 58 39.1	
	comp=Z,18nm,0.7s						
QIS	Mount Isa	86.10	119	P	P	08 58 39.5	-1.6
	comp=Z,28nm,1.0s						
QIS	Mount Isa	86.10	119	P	P	08 58 39.6	-1.4
MTSU	Mount Surprise	87.95	114	P	P	08 58 49.5	-0.5
MTSU	Mount Surprise	87.95	114	P	P	08 58 49.4	-0.5
FFC	Flin Flon	89.05	356		P	08 58 54.3	-0.3
FFC				IAmb	IAmb	08 58 56.1	
	comp=Z,17nm,1.1s						
FFC	Flin Flon	89.05	356	P	P	08 58 54.3	-0.3
FFC				pmax	pmax		
	comp=Z,17nm,1.2s						
FFC	Flin Flon	89.05	356	P	P	08 58 54.8	+0.2
FFC				pP	pP	08 59 31.4	+1.0
CTA	Charters Tower	90.59	115	P	P	08 59 01.0	-1.3
CTA	Charters Tower	90.59	115	P	P	08 59 01.5	-0.8
CTAO	Charters Tower	90.59	115	P	P	08 59 01.2	-1.1
CTAO	Charters Tower	90.59	115	P	P	08 59 01.5	-0.8
CTAO	Charters Tower	90.59	115	P	P	08 59 01.2	-1.1
CTAO				pmax	pmax		
	comp=Z,26nm,0.9s						
INKA	Innaminka	91.58	124	P	P	08 59 05.6	-1.0
ULM	Lac du Bonnet	92.95	352	LR	LR	09 44 20.3	
	comp=Z,45nm,18.8s,baz=5.0,slow=37						
SADO	Sadowa	94.78	339	LR	LR	09 41 48.6	
	comp=Z,32nm,19.7s,baz=328,slow=35						
STKA	Stephens Creek	94.81	126	P	P	08 59 19.3	-2.2
	comp=Z,2.0nm,0.8s,baz=321,slow=5.4,SNR=4.1						
STKA				PP	PP	09 03 13.6	+1.2
	comp=Z,1.6nm,0.7s,baz=342,slow=7.7,SNR=3.1						
	comp=Z,2.0nm,0.8s						
NEW	Newport	95.43	5	LR	LR	09 48 16.2	
	comp=Z,28nm,18.5s,baz=8.5,slow=39						
PDAR	Pinedale Array	101.22	0	P	Pdif	08 59 51.6	+1.0
	comp=Z,0.4nm,0.7s,baz=72,slow=4.8,SNR=3.9						
NVAR	Mina Array Bea	105.08	7	Pdiff	Pdif	09 00 08.8	+1.0
	comp=Z,0.5nm,0.8s,baz=354,slow=5.1,SNR=3.8						
SYO	Syowa Base	107.60	191	⇓epPdiff	pPdif	09 00 54.4	+0.2
TXAR	Lajitas Array	114.43	355	PP	PP	09 05 34.4	-1.6
	comp=Z,1.4nm,1.0s,baz=1.4,slow=5.0,SNR=5.5						
TXAR				PKKPbc	PKKPbc	09 15 17.6	-0.6
	comp=Z,0.6nm,1.0s,baz=192,slow=6.0,SNR=4.5						
VNDA	Vanda	125.42	165	PKP	PKPdf	09 04 56.2	-2.5
	comp=Z,1.2nm,0.8s,baz=287,slow=5.4,SNR=5.9						
QSPA	South Pole Qui	126.18	180	PKP	PKiKP	09 05 02.6	+1.6
	comp=Z,6.3nm,0.7s,baz=274,slow=1.4,SNR=16						
QSPA	South Pole Qui	126.18	180		PKiKP	09 05 02.1	+1.2
CPUP	Villa Florida	135.10	268	PKP	PKPdf	09 05 16.2	-2.3
	comp=Z,0.9nm,0.7s,baz=298,slow=3.2,SNR=9.0						
CPUP	Villa Florida	135.10	268		PKPdf	09 05 17.2	-1.4
CPUP	Villa Florida	135.10	268	PKIKP	PKPdf	09 05 17.2	-1.4
LPAZ	La Paz	138.54	288	PKP	PKPdf	09 05 24.7	-1.3
	comp=Z,0.9nm,0.6s,baz=190,slow=6.1,SNR=3.6						
PLCA	Paso Flores	149.68	250	PKPbc	PKPbc	09 05 47.8	-0.9
	comp=Z,9.8nm,0.9s,baz=69,slow=5.2,SNR=8.0						
PLCA	Paso Flores	149.68	250		PKPbc	09 05 47.9	-0.8
PLCA	Paso Flores	149.68	250	eP	PKPdf	09 05 44.5	+0.5

IDC 04 08:46:40.0±46.0, 18°.33S×172°.34W, h0^{km}, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=881.5km s-min=193.3km az=82.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
STKA	Stephens Creek	43.54	243	P	P	08 54 45.5	-0.2
	0.8nm,0.3s,baz=86,slow=6.7,SNR=4.2						
	0.8nm,0.3s						
WRA	Warramunga Arr	50.23	259	P	P	08 55 37.7	-0.6
	0.4nm,0.5s,baz=98,slow=6.6,SNR=6.2						
	0.4nm,0.5s						
ASAR	Alice Springs	50.24	254	P	P	08 55 38.5	+0.3
	3.2nm,0.5s,baz=90,slow=8.5,SNR=86						
	3.2nm,0.5s						

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*IDC **04** 09:00:57.5±9.0, 1°.66N×125°.27E, h0^{km}, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=177.3km s-min=139.4km az=66.0*

*DJA **04** 09:01:00.2±1.5, 2°N±4°×12°6E±°, h18^{km}±17^{km}, M3.8/7, mB5.0/1, mb4.0/1, MLv3.8/7, Mw(mB)4.3/1*

ISC 04 09:00:59.8±1.3, 2°.46N±0°.08×126°.2E±0°.1, h35^{km}, n8, σ2^{s}.04/8, mb3.7/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SGSI	Sangihe	1.37	333	P	Pn	09 01 24.0	+1.6
MNI	Manado	1.66	232	P	Pn	09 01 27.9	+1.4
TNTI	Ternate	2.07	144	P	Pn	09 01 34.2	+2.1
SANI	Sanana	4.49	182	P	Pn	09 02 06.9	+1.6
NLAI	Namlea	5.74	171	P	Pn	09 02 24.3	+1.7
WRA	Warramunga Arr	23.67	161	P	P	09 06 06.5	-1.9
	1.2nm,0.4s,baz=335,slow=11,SNR=13						
	1.2nm,0.4s						
ASAR	Alice Springs	27.05	164	P	P	09 06 37.7	-1.4
	0.6nm,0.5s,baz=345,slow=7.8,SNR=22						
	0.6nm,0.5s						
STKA	Stephens Creek	37.17	158	P	P	09 08 06.5	-1.1
	0.7nm,0.3s,baz=345,slow=7.1,SNR=3.7						
	0.7nm,0.3s						

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*ATH **04** 09:11:44.0, 40°.50N×20°.71E, h5^{km}±1^{km}, ML2.5/4, Manual Solution by E.Daskalaki First location: 2019/12/04 09:12:59, This location: 2019/12/04 10:01:38 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*TIR **04** 09:11:44.9, 40°.63N×21°.01E, h5^{km}, Md2.3/3, Ml2.4/1*

*THE **04** 09:11:45.3, 40°N±2°×2°1E±°, h0^{km}±3^{km}, M2.4/7, MLh2.4/7*

ISC 04 09:11:46.0±1.1, 40°.52N±0°.03×20°.85E±0°.03, h3^{km}±9^{km}, n26, σ1^{s}.60/42, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KBN	Korca	0.12	334	Pg	Pg	09 11 48.1	-0.2
KBN				Sg	Sg	09 11 50.5	+0.6
KBN				AMd		09 12 13.6	
KBN	Korca	0.12	334	P	Pg	09 11 48.1	-0.2
KBN				S	Sg	09 11 50.3	+0.5
NEST	Nestorio	0.18	125	Pg	Pg	09 11 50.3	+0.7
NEST				Sg	Sg	09 11 53.1	+1.1
NEST				AML	AML	09 11 54.6	
	2.9nm,0.2s						
NEST	Nestorio	0.18	125	P	Pg	09 11 50.4	+0.7
NEST				S	Sg	09 11 53.9	+1.9
NEST	Nestorio	0.18	125	P	Pg	09 11 50.2	+0.7
PENT	Pentalofos	0.39	146	P	Pg	09 11 53.4	-0.1
PENT				S	Sb	09 12 00.1	-2.0
PENT	Pentalofos	0.39	146	P	Pg	09 11 53.3	-0.3
PENT				S	Sg	09 11 58.7	+0.1
KPRO	Kipourio	0.69	145	P	Pg	09 11 58.5	-0.7
KPRO				S	Sb	09 12 09.9	-0.6
KPRO	Kipourio	0.69	145	P	Pg	09 11 58.3	-0.9
KPRO				S	Sg	09 12 08.3	+0.2
KZN	Kozani	0.73	107	P	Pg	09 12 00.1	0.0
KZN				S	Sb	09 12 13.5	+1.6
KZN	Kozani	0.73	107	P	Pg	09 12 00.0	0.0
KZN				S	Sb	09 12 11.7	-0.3
JAN	Janina	0.86	180	P	Pg	09 12 00.4	-2.1
IGT	Igoumenitsa	1.06	202	Pg	Pn	09 12 05.8	-2.1
IGT				Sg	Sn	09 12 26.4	+3.3
IGT				AMd		09 13 00.4	
IGT	Igoumenitsa	1.06	202	P	Pb	09 12 05.5	-1.6
IGT	Igoumenitsa	1.06	202	P	Pg	09 12 03.9	-2.5
KEK	Kerkira	1.14	225	Pg	Pn	09 12 10.3	+1.4
KEK				Sg	Sn	09 12 29.4	+4.3
TETR	Tetrakomo, Epi	1.22	164	P	Pb	09 12 08.5	-1.3
GRG	Griva	1.25	69	P	Pn	09 12 09.7	-0.7
GRG				S	Sn	09 12 28.4	+0.4
THL	Klokotos Trika	1.31	137	P	Pn	09 12 09.9	-1.3
THL				S	Sn	09 12 29.8	+0.7
THL	Klokotos Trika	1.31	137	P	Pn	09 12 09.6	-1.5
THL				S	Sn	09 12 28.5	-0.6
LIT	Litokhoron	1.32	108	P	Pg	09 12 11.6	+0.3
LIT	Litokhoron	1.32	108	P	Pn	09 12 10.7	-0.6
KNT	Kendrikon	1.68	67	P	Pn	09 12 15.7	-0.6
LKD2	Lefkada island	1.74	185	Pg	Pg	09 12 20.1	+0.9
LKD2				Sg	Sg	09 12 46.6	+4.8
LKD2				AMd		09 13 19.9	
AGG	Agios Georgios	1.88	142	P	Pn	09 12 17.9	-1.2
PLG	Polygyros	1.98	93	P	Pn	09 12 20.3	-0.2

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*NIED **04** 09:12:56.1, 36°.14N×139°.80E, h51^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.07; $M_{\theta\theta}$-1.33; $M_{\phi\phi}$0.26; $M_{r\theta}$-0.12; $M_{\theta\phi}$0.29; $M_{\phi r}$-0.44;*

Fault plane solution: M$_0$1.33000×10^{15} NP1: φ$_s$123.00000°, δ49.00000°, λ124.00000°. NP2: φ$_s$257.00000°, δ51.00000°, λ57.00000°.

*NEIC **04** 09:12:56.6±1.2, 36°.16N±0°.06×139°.82E±0°.09, h62^{km}±8^{km}, mb4.3/18 Error ellipse: s-maj=10.6km s-min=8.2km az=100.0*

*JMA **04** 09:12:56.1±0.1, 36°.1N±0°.3×139°.8E±0°.3, h51^{km}, MD4.0/36, MV3.9/36, SW IBARAKI PREF*

JMA Felt III J1 at SW IBARAKI PREF .

*IDC **04** 09:12:57.1±1.7, 36°.11N×139°.69E, h68^{km}±15^{km}, mb3.4/9, mbtmp3.8/11, Error ellipse: s-maj=20.9km s-min=14.5km az=65.0*

ISC 04 09:12:55.7±0.8**, 36°.14N**±0°.04×**139°.81E**±0°.05**, h54**^{km}±7^{km}**, n72, σ0^s.89**/60**, mb4.2**/19**, 5D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	Yasato	0.32	74	⇓P	Pn	09 13 05.6	+0.2
JYT				⇓S	Sn	09 13 12.4	+0.1
JYT	Yasato	0.32	74	A	A	09 13 05.6	
	comp=N,62nm,0.3s,comp=E,41nm,0.3s						
JAG	Ashikaga	0.41	315	*i* P	Pn	09 13 06.4	+0.1
JAG				S	Sn	09 13 13.5	-0.3
JAG	Ashikaga	0.41	315	A	A	09 13 06.4	
	comp=N,15nm,1.0s,comp=E,5.0nm,0.4s						
TOK	Tokyo	0.45	186	A	A	09 13 06.8	
	comp=N,21nm,0.3s,comp=E,30nm,0.3s						
JIHU	Itakohorinouch	0.60	106	A	A	09 13 08.8	
	comp=N,14nm,0.7s,comp=E,13nm,2.7s						
JHYU	Hitachinakayam	0.66	72	A	A	09 13 09.5	
	comp=N,26nm,0.3s,comp=E,10.0nm,0.2s						
JSGW	Sagamiharawaka	0.73	223	A	A	09 13 10.2	
	comp=N,8.0nm,0.4s,comp=E,7.0nm,1.5s						
JRY	Ryogami san	0.75	261	*i* P	Pn	09 13 10.4	+0.1
JRY				S	Sn	09 13 20.7	-0.2
JHO	Hitachi	0.77	52	A	A	09 13 11.0	
	comp=N,7.0nm,0.3s,comp=E,8.0nm,0.2s						
JKT	Katashina	0.77	324	P	Pn	09 13 10.5	-0.2
JKT				S	Sn	09 13 21.3	-0.3
JKT	Katashina	0.77	324	A	A	09 13 10.5	
	comp=N,11nm,0.3s,comp=E,9.0nm,0.4s						
JSB	Shiboa	0.83	6	A	A	09 13 11.8	
	comp=N,12nm,0.4s,comp=E,10.0nm,0.7s						
JOD2	Odawara 2	1.05	214	⇓*i*P	Pn	09 13 14.7	+0.4
JOD2				⇓*e*S	Sn	09 13 29.0	+1.0
JOD2	Odawara 2	1.05	214	A	A	09 13 14.7	
	comp=N,6.0nm,1.1s,comp=E,5.0nm,1.2s						
JYN	Shimob	1.21	239	A	A	09 13 17.0	
	comp=N,9.0nm,1.4s,comp=E,9.0nm,2.0s						
JUON	Uonuma	1.23	331	P	Pn	09 13 16.7	+0.1
ONAJ	Iwakimizuishiy	1.25	39	A	A	09 13 17.7	
	comp=N,9.0nm,0.3s,comp=E,16nm,0.3s						
JFY	Yanaizu	1.27	356	⇓*i*P	Pn	09 13 17.4	+0.2
JHTM	Izuhatsuma	1.35	209	A	A	09 13 18.9	
	comp=N,15nm,0.9s,comp=E,12nm,1.2s						
MJAR	Matsushiro Arr	1.36	288	P	Pn	09 13 18.7	+0.3
	comp=E,74nm,0.5s,baz=157,slow=15,SNR=96						
MJAR				S	Sn	09 13 34.6	-0.6
	comp=E,67nm,0.5s,baz=154,slow=16,SNR=7.5						
MJAR				LR	LR	09 13 43.6	
	comp=E,77nm,18.2s,baz=136,slow=36						
MJAR	Matsushiro Arr	1.36	288		Pn	09 13 18.9	+0.5
MAJO	Matsushiro	1.36	288		Pn	09 13 19.2	+0.8
MJB9	Matsu-Tunnel	1.36	288		Pn	09 13 20.0	+1.6
JSG	Sagara	1.97	223		Pn	09 13 28.9	+2.1
JGF	Kuroka	2.06	256		Pn	09 13 30.5	+2.4
JSD	Sado	2.27	327		Pn	09 13 30.9	+0.2
INU	Inuyama	2.41	252		Pn	09 13 34.9	+2.3
JHJ	Hachijo jima 2	3.01	180	P	Pn	09 13 41.2	+0.3
	comp=E,203nm,0.3s,baz=325,slow=20,SNR=32						
JHJ				S	Sn	09 14 15.2	-0.6
	comp=E,302nm,0.3s,baz=245,slow=22,SNR=11						
JHJ2	Mitsune	3.02	180	Pn	Pn	09 13 41.0	-0.1
JTM	Tenmabayashi	4.75	12		Pn	09 14 06.6	+1.9
JMN	Monobe	5.43	245	Pn	Pn	09 14 14.9	+0.7
ERM	Erimo	6.42	23	Pn	Pn	09 14 27.8	+0.2
ASAJ	Asahikawa	8.25	14	P	Pn	09 14 53.6	+1.0
	comp=E,10nm,0.8s,baz=232,slow=14,SNR=8.2						
JKA	Kamikawa-asahi	8.25	14		Pn	09 14 52.6	-0.1
PEA0B	Petropavlovsk-	21.11	31	P	P	09 17 36.3	+0.6
MA2	Magadan	24.51	13	P	P	09 18 10.0	+0.3
MA2				IAmb	IAmb	09 18 24.7	
	comp=Z,8.4nm,0.9s						
H11N2	WAKE ISLAND Hy	28.84	117	T	T	09 48 57.9	
	baz=312,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	28.85	117	T	T	09 49 02.8	
	baz=312,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	28.86	117	T	T	09 49 05.2	
	baz=312,slow=75,SNR=10						
H11S1	WAKE ISLAND Hy	29.50	119	T	T	09 49 49.5	
	baz=314,slow=76,SNR=23						
H11S3	WAKE ISLAND Hy	29.50	119	T	T	09 49 49.6	
	baz=314,slow=76,SNR=14						
H11S2	WAKE ISLAND Hy	29.52	119	T	T	09 49 50.0	
	baz=314,slow=76,SNR=5.8						
ZALV	Zalesovo Beam	41.58	313	P	P	09 20 37.2	-0.7
	comp=Z,0.9nm,0.5s,baz=109,slow=7.0,SNR=6.1						
	comp=Z,0.9nm,0.5s						
MKAR	Makanchi Array	43.51	303	P	P	09 20 54.2	+0.4
	comp=Z,0.3nm,0.5s,baz=83,slow=11,SNR=3.4						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	43.51	303	P	P	09 20 53.3	-0.4
L16K	Owhat River	45.18	36	P	P	09 21 06.4	-0.4
L16K				IAmb	IAmb	09 21 23.6	
	comp=Z,4.9nm,1.1s						
KURK	Kurchatov	45.48	309	P	P	09 21 08.8	-0.6
KURK				IAmb	IAmb	09 21 11.4	
	comp=Z,2.2nm,0.7s						
KURBB	Kurchatov Arra	45.54	308	P	P	09 21 08.7	-1.1
	comp=Z,1.3nm,0.5s,baz=86,slow=8.2,SNR=6.9						
	comp=Z,1.3nm,0.5s						
C18K	Utukok River	45.65	26	P	P	09 21 10.8	+0.2
C18K				IAmb	IAmb	09 21 17.1	
	comp=Z,6.7nm,1.1s						
K17K	Iditarod	45.82	35	P	P	09 21 12.7	+0.8
K17K				IAmb	IAmb	09 21 15.1	
	comp=Z,5.0nm,1.1s						
G18K	Tagagawik	46.07	30	P	P	09 21 14.0	+0.1
D20K	Etivluk River	47.30	26	P	P	09 21 23.9	+0.4
D20K				IAmb	IAmb	09 21 26.4	
	comp=Z,2.7nm,1.1s						
D22K	Ayikyak River	48.74	26	P	P	09 21 35.0	+0.4
GHO	Glory Hole Cre	50.20	36	P	P	09 21 45.4	-0.4
WR8	Warramunga Arr	56.01	186	P	P	09 22 28.2	-0.7
WR8				IAmb	IAmb	09 22 46.0	
	comp=Z,3.0nm,0.9s						
WRA	Warramunga Arr	56.02	186	P	P	09 22 27.9	-1.0
	comp=Z,1.2nm,0.4s,baz=1.3,slow=7.5,SNR=33						
	comp=Z,1.2nm,0.4s						
WRA	Warramunga Arr	56.02	186	P	P	09 22 28.3	-0.6
AB31	Akbulak array	57.53	310	P	P	09 22 38.6	-0.8
AB31				IAmb	IAmb	09 22 39.1	
	comp=Z,1.3nm,0.5s						
A36M	Sachs Harbour	57.57	22	P	P	09 22 40.8	+1.5
ASAR	Alice Springs	59.74	186	P	P	09 22 55.1	+0.1
	comp=Z,0.3nm,0.4s,baz=18,slow=11,SNR=14						
	comp=Z,0.3nm,0.4s						
ASAR	Alice Springs	59.74	186	P	P	09 22 55.9	+0.9
MBWA	Marble Bar	60.07	202	P	P	09 22 56.5	-0.8
RES	Resolute Bay	63.78	14	P	P	09 23 21.2	-0.4
RES				IAmb	IAmb	09 23 23.5	
	comp=Z,2.1nm,0.9s						
FINES	FINESS Array B	69.00	332	P	P	09 23 52.9	-2.1
	comp=Z,1.5nm,0.9s,baz=87,slow=7.1,SNR=1.1						
	comp=Z,1.5nm,0.9s						
FINES	FINESS Array B	69.00	332	P	P	09 23 54.5	-0.6
ILON	Igloolik, Nuna	70.45	14	P	P	09 24 03.6	-0.3
BLKN	Baker Lake	70.71	22	P	P	09 24 05.6	+0.1
BLKN				IAmb	IAmb	09 24 07.6	
	comp=Z,5.8nm,1.2s						
NVAR	Mina Array Bea	76.56	52	P	P	09 24 41.1	+0.5
	comp=Z,0.4nm,0.8s,baz=324,slow=9.1,SNR=1.9						
	comp=Z,0.4nm,0.8s						
PDAR	Pinedale Array	79.21	45	P	P	09 24 56.6	+1.3
	comp=Z,0.2nm,0.5s,baz=305,slow=7.4,SNR=2.7						
	comp=Z,0.2nm,0.5s						
TXAR	Lajitas Array	91.69	51	P	P	09 25 57.7	+0.1
	comp=Z,0.1nm,0.5s,baz=301,slow=2.6,SNR=6.7						
	comp=Z,0.1nm,0.5s						
TXAR	Lajitas Array	91.69	51	P	P	09 25 58.0	+0.4

TIR 04 09:16:12.9, 41°.47N×19°.55E, h7^{km}±1^{km}**, Md2.2**/2**, Ml2.5**/2**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.27	118	Pg	Pg	09 16 18.1	-0.1
TIR				AML	AML	09 16 22.3	
	8.0nm,0.2s						
TIR				Sg	Sg	09 16 23.0	+1.3
TIR	Tirane	0.27	118	Pg	Pg	09 16 18.0	-0.2
TIR				AML	AML	09 16 22.3	
	8.0nm,0.2s						
TIR				AML	AML	09 16 22.4	
	3.3nm,0.2s						
TIR				Sg	Sg	09 16 22.5	+0.7
TIR				Sg	Sg	09 16 22.5	+0.7
TIR	Tirane	0.27	118	Pg	Pg	09 16 18.0	-0.2
TIR				AML	AML	09 16 22.3	
	8.0nm,0.2s						
TIR				Sg	Sg	09 16 22.4	+0.7
TIR				Sg	Sg	09 16 22.4	+0.7
SDA	Shkodra	0.58	356	Pg	Pg	09 16 23.7	-0.4
SDA				Sg	Sb	09 16 32.8	-1.0
SDA	Shkodra	0.58	356	Pg	Pg	09 16 24.3	+0.3
SDA				Sg	Sb	09 16 32.8	-1.0
SDA				AMd		09 16 55.9	
SDA	Shkodra	0.58	356	Pg	Pg	09 16 23.9	-0.2
SDA				Sg	Sb	09 16 32.9	-0.9
PHP	Peshkopia	0.70	72	Pg	Pg	09 16 25.1	-1.3
PHP				Sg	Sb	09 16 36.6	-0.7
PHP				AML	AML	09 16 39.3	
	0.2nm,0.2s						
PHP	Peshkopia	0.70	72	Pg	Pg	09 16 25.0	-1.3
PHP				Sg	Sg	09 16 36.4	+0.9
PHP				AML	AML	09 16 39.3	
	0.2nm,0.2s						
PHP				AMd		09 16 50.9	
PHP	Peshkopia	0.70	72	Pg	Pg	09 16 25.0	-1.4
PHP				Sg	Sg	09 16 36.3	+0.8
PHP				AML	AML	09 16 39.3	
	0.2nm,0.2s						
PDG	Podgorica	0.98	347	S	Sb	09 16 46.0	+0.6
PDG	Podgorica	0.98	347	S	Sn	09 16 46.3	-0.9

RSNC 04 09:18:47.6±1.2**, 3°S**±7°×**7°6W**±°**, h0**^{km}**, M2.8, mB4.8, mb4.0, ML2.8, Mw(mB)4.0, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CASC	Dorado de Casc	3.63	345	P	Pn	09 19 44.4	-0.8
CASC				S	Sn	09 20 28.2	-0.6
PTLC	Puerto Leguiza	3.88	24	P	Pn	09 19 46.7	-1.9
PTLC				S	Sn	09 20 34.3	-0.7
FLOC	Florencia	5.00	9	P	Pn	09 20 04.3	+0.4
	12nm,0.6s						
FLOC				S	Sn	09 21 03.4	+0.9
	12nm,0.6s						
GARC	Garzon, Huila	5.61	9	P	Pn	09 20 13.3	+0.7
GARC				S	Sn	09 21 19.7	+1.7
MACC	Macarena, Meta	6.06	25	P	Pn	09 20 19.7	+1.1

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*SOME **04** 09:35:54.7, 40°.85N×69°.52E, h10^{km}*

*NNC **04** 09:35:54.9±4.5, 40°.81N×69°.51E, h0^{km}, mb3.0, mpv2.9, Error ellipse: s-maj=31.6km s-min=25.9km az=63.0, Suspected Mining explosion.*

*KRNET **04** 09:35:57.3±0.1, 40°.35N×70°.82E, h15^{km}, mb2.2*

ISC 04 09:35:53.3±3.0**, 40°.9N**±0°.1×**69°.58E**±0°.10**, h0**^{km}**, n9, σ2^s.51**/14**, 3C-5D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	1.34	15	P	Pb	09 36 21.6	+2.2
	9.3nm,0.2s						
IUG				S	Sn	09 36 41.0	+3.1
	20nm,0.6s						
TRKS	Terek-Say	1.36	60	⇓*e*P	Pg	09 36 18.7	-0.7
TRKS				⇓*e*S	Sg	09 36 34.8	-2.3
ARK	Arkit	2.03	61	⇑*e*P	Pn	09 36 28.6	-0.3
ARK				⇑*e*S	Sn	09 36 51.4	-3.7
BRLS	Borolday	2.19	5	Pg	Pn	09 36 30.0	-1.0
	2.9nm,0.6s						
BRLS				Lg	Lg	09 36 55.3	
	11nm,0.4s						
BRLS	Borolday	2.19	5	*e*P	Pn	09 36 29.6	-1.3
	0.1nm,0.1s						
BRLS				*e*S	Sn	09 36 55.3	-3.5
	4.7nm,0.5s						
KK31	Karatay Array	2.36	17	⇑Pn	Pb	09 36 37.5	+0.8
	0.9nm,0.5s,baz=199,slow=16,SNR=5.8						
KK31				⇓Sn	Sb	09 37 07.1	+0.8
	2.4nm,0.6s,baz=200,slow=36,SNR=8.1						
OHH	Osh	2.46	97	⇓*e*P	Pn	09 36 25.6	-9.2
OHH				⇓*e*S	Sn	09 36 45.9	-20
MRKS	Merke	3.32	54	Pg	Pb	09 36 55.7	+2.6
	2.4nm,0.4s						
MRKS				Lg	Lg	09 37 39.8	
	4.1nm,0.6s						
MRKS	Merke	3.32	54	*e*P	Pb	09 36 56.5	+3.3
	0.2nm,0.1s						
MRKS				*e*S	Sg	09 37 41.1	+1.1
	1.8nm,0.1s						

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*KRNET **04** 09:38:50.1±0.1, 40°.87N×79°.89E, mb2.8*

*SOME **04** 09:38:51.7, 41°.02N×79°.83E, h5^{km}*

*NNC **04** 09:38:53.1±2.2, 41°.03N×79°.83E, h0^{km}, mb3.2, mpv2.7, Error ellipse: s-maj=20.6km s-min=13.9km az=72.0*

ISC 04 09:38:51.9±2.2**, 40°.93N**±0°.09×**79°.92E**±0°.08**, h10**^{km}**, n17, σ1^s.33**/30**, 17C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.78	297	⇑*i*P	Pb	09 39 23.5	-1.5
TARG				⇑*i*S	Sb	09 39 47.7	+0.2
PRZ	Przheval'sk	1.93	324	⇓*i*P	Pb	09 39 26.4	-0.9
PRZ				⇓*i*S	Sg	09 39 53.2	-0.7
SHLS	Shalkode	2.25	351	Pg	Pb	09 39 31.3	-1.5
	11nm,0.3s						
SHLS				Lg	Lg	09 39 59.8	
	17nm,1.0s						
SHLS	Shalkode	2.25	351	*e*P	Pb	09 39 31.3	-1.5
	9.6nm,0.2s						
SHLS				*e*S	Sb	09 39 59.8	-1.0
	12nm,0.4s						
UZB	Uzynbulak	2.32	344	Pg	Pb	09 39 33.4	-0.5
	4.0nm,0.4s						
UZB				Lg	Lg	09 40 03.4	
	5.7nm,0.5s						
UZB	Uzynbulak	2.32	344	*e*P	Pb	09 39 33.4	-0.5
	2.7nm,0.1s						
UZB				*e*S	Sb	09 40 03.4	+0.7
	5.7nm,0.5s						
KDJ	Kajisay	2.38	301	⇑*i*P	Pb	09 39 32.3	-2.7
KDJ				⇑*i*S	Sb	09 40 02.9	-1.7
SATY	Saty	2.41	333	Pg	Pb	09 39 34.3	-1.2
	3.6nm,0.7s						
SATY				Lg	Lg	09 40 04.9	
	6.7nm,0.5s						
PDGK	Podgornoye	2.42	353	⇑P	Pb	09 39 33.4	-2.3
	1.3nm,0.3s						
PDGK				⇑S	Sb	09 40 05.1	-0.6
	2.8nm,0.5s						
KPKS	Kokpek	2.70	341	Pg	Pb	09 39 39.6	-0.8
	4.1nm,0.9s						
KPKS				Lg	Lg	09 40 14.2	
	5.7nm,0.3s						
JNKS	Jany-Kuch	3.23	274	⇑*e*P	Pn	09 39 43.4	+0.4
JNKS				⇑*e*S	Sn	09 40 23.1	+1.5
BOOM	Boomskoye usch	3.36	299	⇑*i*P	Pn	09 39 46.0	+1.3
BOOM				⇑*i*S	Sn	09 40 26.7	+1.9
TKM2	Tokmak 2	3.79	303	⇓*i*P	Pn	09 39 52.0	+1.4
TKM2				⇓*i*S	Sn	09 40 37.1	+1.7
UCH	Uchtor	4.26	290	⇑*i*P	Pn	09 39 58.4	+1.1
UCH				⇑*i*S	Sn	09 40 48.3	+1.1
ARLS	Aral	4.31	284	⇑*i*P	Pn	09 39 58.9	+1.2
ARLS				⇑*i*S	Sn	09 40 49.0	+0.8
SALK	Salom-Alik	4.62	271	⇑*i*P	Pn	09 40 02.9	+0.9
SALK				⇑*i*S	Sn	09 40 56.1	+0.3
MK31	Makanchi Array	6.11	15	Pn	Pn	09 40 23.2	+0.9
	0.1nm,0.2s,baz=198,slow=13,SNR=9.6						
MK31				⇑Sn	Sn	09 41 33.0	+0.8
	0.3nm,0.5s						

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*THE **04** 09:42:21.8, 37°N±2°×2°1E±°, h6^{km}±2^{km}, M3.3/22, MLh3.3/22*

ATH 04 09:42:21.4, 37°.50N×20°.64E, h13^{km}±3^{km}**, ML3.4**/22**, Manual Solution by E.Daskalaki First location: 2019/12/04 09:43:17, This location: 2019/12/04 10:18:29 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTHK	Lithakia	0.26	37	P	Pg	09 42 27.3	+0.4
LTHK				S	Sg	09 42 31.2	+0.5
LTHK	Lithakia	0.26	37	P	Pg	09 42 27.0	+0.1
LTHK				S	Sg	09 42 30.4	-0.3
KYPS	Kipseli, Zakin	0.35	25	P	Pg	09 42 28.9	+0.4
KYPS				S	Sg	09 42 33.9	+0.5
ORTH	Orthonies,Zaky	0.35	8	P	Pb	09 42 29.5	0.0
ORTH				S	Sb	09 42 34.3	-0.8
CLEM	Kyllini,Ilia,G	0.55	45	P	Pb	09 42 32.6	-0.3
CLEM				S	Sg	09 42 39.5	-0.2
RTZL	Ratzakli, Kefa	0.58	11	P	Pg	09 42 33.2	+0.3
RTZL				S	Sb	09 42 42.3	+0.7
RTZL	Ratzakli, Kefa	0.58	11	P	Pg	09 42 32.8	0.0
RTZL				S	Sg	09 42 40.9	+0.3
LCHA	Lechaina	0.66	49	P	Pg	09 42 34.0	-0.3
LCHA				S	Sg	09 42 43.3	+0.2
KFL1	Kefalonia,Entr	0.67	351	P	Pg	09 42 34.6	+0.1
KFL1				S	Sb	09 42 44.0	-0.2
VLS	Valsamata	0.68	357	P	Pg	09 42 34.6	0.0
VLS				S	Sb	09 42 44.9	+0.6
VLS	Valsamata	0.68	357	P	Pg	09 42 34.4	-0.2
VLS				S	Sg	09 42 43.6	0.0
ARG2	Argostoli	0.69	350	P	Pg	09 42 34.9	+0.1
ARG2				S	Sb	09 42 44.4	-0.2
SMHA	Samh	0.75	1	P	Pg	09 42 34.2	-1.8
SMHA				S	Sg	09 42 45.6	-0.2
DMLN	Damoulianata-K	0.77	344	P	Pb	09 42 36.7	+0.2
DMLN				S	Sn	09 42 48.6	-0.7
DMLN	Damoulianata-K	0.77	344	P	Pb	09 42 36.6	+0.1
DMLN				S	Sb	09 42 46.9	0.0
ZARO	Zacharo	0.81	91	P	Pb	09 42 37.8	+0.5
AMT	Artemida-Makis	0.85	88	P	Pb	09 42 38.1	0.0
RLS	Riolos of Patr	0.86	50	P	Pg	09 42 38.1	0.0
RLS				S	Sn	09 42 51.4	-0.2
RLS	Riolos of Patr	0.86	50	P	Pg	09 42 37.7	-0.4
RLS				S	Sb	09 42 49.7	0.0
AXS	Araxos	0.91	40	P	Pg	09 42 38.6	-0.4
AXS				S	Sn	09 42 52.1	-0.6
FSK	Fiskardo	0.96	357	P	Pb	09 42 38.9	-0.9
FSK				S	Sn	09 42 53.3	-0.8
DRO	Drossia	0.96	62	P	Pg	09 42 40.1	0.0
DRO				S	Sn	09 42 54.9	+0.7
DRO	Drossia	0.96	62	P	Pb	09 42 39.8	-0.2
DRO				S	Sg	09 42 52.9	+0.2
PYL1	Pylos	1.03	124	P	Pn	09 42 41.5	0.0
PYL1				S	Sb	09 42 54.3	-0.1
PYL	PYLOS	1.07	124	P	Pg	09 42 42.0	0.0
PYL				S	Sg	09 42 56.3	+0.3
ITM	Ithomi	1.08	107	P	Pn	09 42 42.3	+0.1
ITM				S	Sn	09 42 58.9	+1.9
ITM	Ithomi	1.08	107	P	Pb	09 42 42.0	+0.1
MTHA	Methoni	1.09	128	P	Pb	09 42 40.5	-1.6
EVGI	Lefkada island	1.12	1	P	Pb	09 42 42.1	-0.5
EVGI				S	Sn	09 42 59.5	+1.5
EVGI	Lefkada island	1.12	1	P	Pb	09 42 42.0	-0.6
EVGI				S	Sg	09 42 57.6	+0.1
PATG	Patra B	1.14	49	P	Pg	09 42 44.7	+1.4
DRAG	Dragano-Lefkad	1.18	358	P	Pn	09 42 43.2	-0.5
DRAG	Dragano-Lefkad	1.18	358	P	Pn	09 42 42.9	-0.7
DRAG				S	Sb	09 42 59.2	+0.3
UPR	University Cam	1.20	49	P	Pg	09 42 45.8	+1.3
NYDR	Nydri-Lefkada	1.21	2	P	Pn	09 42 43.6	-0.3
NYDR				S	Sg	09 43 02.6	+2.0
NYDR	Nydri-Lefkada	1.21	2	P	Pn	09 42 43.8	-0.2
LKD2	Lefkada island	1.29	1	P	Pn	09 42 45.1	0.0
LKD2				S	Sg	09 43 05.2	+2.3
LKD2	Lefkada island	1.29	1	P	Pn	09 42 45.0	-0.1
LKD2				S	Sg	09 43 03.9	+0.9
KLV	Kalavryta, Ach	1.32	65	P	Pb	09 42 45.8	-0.2
KLV	Kalavryta, Ach	1.32	65	P	Pn	09 42 45.4	-0.2
PVO	Paravola	1.32	32	P	Pb	09 42 46.2	+0.2
PVO	Paravola	1.32	32	P	Pb	09 42 45.8	-0.1
PVO				S	Sn	09 43 03.2	+0.3
TSLK	Tsoukalades, L	1.32	1	P	Pb	09 42 46.1	+0.1
TSLK	Tsoukalades, L	1.32	1	P	Pb	09 42 45.9	-0.1
TSLK				S	Sb	09 43 02.4	-0.5
EFP	Efpalio	1.36	47	P	Pb	09 42 46.5	-0.2
EFP	Efpalio	1.36	47	P	Pn	09 42 46.4	+0.2
GUR	Goura	1.42	72	P	Pn	09 42 47.3	+0.3
SERG	Sergoula	1.45	51	P	Pb	09 42 48.0	-0.2
SERG	Sergoula	1.45	51	P	Pn	09 42 47.4	+0.2
KALE	Kalithea	1.48	53	P	Pn	09 42 47.5	-0.3
ANX	Ano Chora	1.49	43	P	Pb	09 42 48.8	-0.2
ANX	Ano Chora	1.49	43	P	Pb	09 42 48.5	-0.5
AMPL	Ampelaki	1.49	18	P	Pb	09 42 48.7	-0.3
EVR	Evrytania	1.69	33	P	Pb	09 42 52.2	-0.2
TETR	Tetrakomo, Epi	1.91	15	P	Pb	09 42 55.3	-0.8
MAKR	Makrakomi, Fth	1.92	38	P	Pb	09 42 56.6	+0.4
LTK	Loutraki	1.92	74	P	Pb	09 42 55.7	-0.5
VLI	Veliai	2.00	112	P	Pb	09 42 57.5	-0.1
AGG	Agios Georgios	2.02	41	P	Pb	09 42 58.5	+0.5
AGG	Agios Georgios	2.02	41	P	Pb	09 42 57.2	-0.8
AXAR	Agios Charalam	2.04	51	P	Pb	09 42 57.5	-0.7
AXAR	Agios Charalam	2.04	51	P	Pb	09 42 57.4	-0.8
IGT	Igoumenitsa	2.04	353	P	Pb	09 42 57.3	-1.0
LKR	Lokris	2.19	58	P	Pb	09 42 59.4	-1.5
VIL2	Platees	2.20	70	P	Pb	09 42 59.6	-1.5
VILL	Villia	2.22	72	P	Pb	09 42 59.9	-1.5
THL	Klokotos Trika	2.33	27	P	Pb	09 43 02.5	-0.7
THL	Klokotos Trika	2.33	27	P	Pn	09 43 00.8	+1.5
ATHU	Athens Univers	2.54	78	P	Pn	09 43 03.8	+1.5
DION	Dionisos Attik	2.67	77	P	Pn	09 43 06.0	+1.8
NEO	Neokhori	2.72	48	P	Pn	09 43 06.0	+1.2

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*IDC **04** 09:43:23.7±0.6, 44°.06N×30°.43E, h0^{km}, mb4.0/12, mbtmp3.9/19, ML3.4/7, MS3.1/8, Error ellipse: s-maj=12.0km s-min=9.1km az=33.0*

*MOS **04** 09:43:23.2±1.1, 44°.11N×30°.51E, h10^{km}, mb4.5/1, Error ellipse: s-maj=5.6km s-min=4.6km az=29.3*

*NEIC **04** 09:43:25.0±1.3, 44°.12N±0°.06×30°.46E±0°.07, h15^{km}±5^{km}, mb4.4/6, Error ellipse: s-maj=9.6km s-min=6.5km az=211.0*

*MCSM **04** 09:43:28.2±0.3, 44°N±3°×3°0E±°, h82^{km}±84^{km}, mb4.1, mB3.8, MLv4.1, Mw(mB)2.8*

*CFUSG **04** 09:43:29.3, 44°.06N×30°.32E, h46^{km}, MD3.4/6, MSH3.7/6*

ISC 04 09:43:23.0±0.4**, 44°.11N**±0°.03×**30°.51E**±0°.02**, h10**^{km}**, n226, σ2^s.33**/267**, mb4.3**/12**, 46C-41D, Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSSL	Sulina	1.19	332	⇓P	Pg	09 43 48.0	+2.1
TSSL				⇑S	Sn	09 44 02.6	+0.5
TSCT	Constanta Port	1.34	273	⇑P	Pg	09 43 48.8	+0.1
TSCT				⇑S	Sb	09 44 04.2	-1.2
JURR	Jurilovca	1.34	300	⇑P	Pg	09 43 49.1	+0.3
EFOR	EFORIE	1.36	269	⇓P	Pg	09 43 49.2	+0.2
EFOR				⇑S	Sb	09 44 04.6	-1.3
TSMN	Mangalia Port-	1.42	258	⇓P	Pg	09 43 50.5	+0.2
TSMN				⇑S	Sb	09 44 06.7	-1.0
MANR	Mangalia	1.42	259	⇓P	Pg	09 43 50.3	0.0
MFTR	Murfatlar	1.51	273	⇓P	Pg	09 43 51.6	-0.4
MFTR				⇑S	Sn	09 44 08.5	-1.3
TIRR	Tirgusor	1.55	284		Pg	09 43 51.6	-1.2
TIRR	Tirgusor	1.55	284	P	Pg	09 43 51.6	-1.2
TLCR		1.62	312	⇑P	Pg	09 43 53.2	-0.9
TLCR		1.62	312	*e*P	Pg	09 43 53.2	-0.9
KALB	Balgarevo	1.68	246	⇓P	Pg	09 43 54.2	-1.0
TPGR	Topolog	1.68	297	⇑P	Pg	09 43 54.4	-0.8
PSN	Preselentsi	1.78	255	P	Pb	09 43 55.3	-0.5
PSN				S	Sn	09 44 16.1	-0.5
PSN	Preselentsi	1.78	255	*e*P	Pb	09 43 55.2	-0.5
PSN				*e*		09 44 16.1	
CVDA	Cernavoda	1.79	278	⇓P	Pg	09 43 56.0	-1.5
CVDA				⇑S	Sn	09 44 16.0	-0.8
TLBR	Topalu	1.82	285	⇑P	Pg	09 43 56.2	-1.7
TLBR				⇑S	Sn	09 44 16.7	-0.9
TARU	Tarkhankut	1.92	48	⇓*e*P	Pg	09 44 00.1	+0.3

TARU				P	Pb	09 44 00.4	+2.3
	comp=Z,297nm,0.2s						
TARU				eS	Sg	09 44 23.5	-1.1
TARU				S	Sb	09 44 24.8	+2.8
	comp=N,516nm,0.3s						
TARU				S	Sn	09 44 25.8	+5.9
	comp=E,287nm,0.4s						
ICOR	Ion Corvin	1.95	271	⇑P	Pb	09 43 58.2	-0.5
CFR	Carcaliu	2.00	303	⇑P	Pb	09 43 58.8	-0.8
CFR	Carcaliu	2.00	303	P	Pb	09 43 58.4	-1.2
GIUM	Giurgiulesti	2.14	311	⇑P	Pb	09 44 00.6	-1.3
GISR	Galati	2.20	308	⇓P	Pb	09 44 01.1	-1.8
AVR	AVREN	2.29	245	P	Pb	09 44 02.8	-1.7
TATR	Tatarca	2.30	311	⇓P	Pb	09 44 03.0	-1.6
SEV	Sevastopol'	2.31	78	⇓eP	Pb	09 44 05.1	+0.4
SEV				e		09 44 32.8	
SEV				pmax	pmax		
	comp=Z,61nm,0.3s						
SEV				smax	smax		
	comp=N,242nm,0.5s						
SEV				smax	smax		
	comp=E,195nm,0.4s						
SEV	Sevastopol'	2.31	78	⇓eP	Pb	09 44 05.1	+0.4
SEV				P	Pg	09 44 05.5	-1.7
	comp=Z,61nm,0.3s						
SEV				eS	Sb	09 44 32.8	-0.4
SEV				S	Sg	09 44 34.6	-2.5
	comp=N,242nm,0.5s						
SEV				S	Sn	09 44 34.8	+5.4
	comp=E,195nm,0.4s						
AMRR	Amara	2.33	283	⇑P	Pb	09 44 03.4	-1.8
AMRR	Amara	2.33	283	P	Pb	09 44 03.3	-1.8
SCHLR	Schela	2.34	306	⇓P	Pb	09 44 03.5	-1.9
NEGRR	Negrea	2.36	308	⇑P	Pb	09 44 03.7	-1.9
SCTR	Scanteiesti	2.38	312	⇑P	Pb	09 44 04.2	-1.8
IZVR	Izvoarele	2.42	307	⇑P	Pb	09 44 04.9	-1.8
IZVR				⇓S	Sn	09 44 32.4	+0.1
PRD	Provadia	2.44	248	P	Pb	09 44 04.6	-2.5
PRD				S	Sn	09 44 31.0	-1.9
VLDR	Vladesti	2.45	316	⇑P	Pb	09 44 05.3	-1.8
ROIA	ROIAK	2.49	247	P	Pb	09 44 05.6	-2.3
NEF	NEVSHA	2.50	251	P	Pb	09 44 05.5	-2.5
NEF				S	Sn	09 44 32.9	-1.3
TUDR		2.51	307	⇓P	Pb	09 44 06.2	-2.0
TUDR				⇑S	Sn	09 44 34.9	+0.4
CICN	Ciocanesti	2.51	273	⇑P	Pb	09 44 05.4	-2.8
VARL	Varlezi	2.60	314	⇓P	Pb	09 44 07.4	-2.4
YAL	Yalta	2.64	81	⇓eP	Pb	09 44 09.3	-1.1
YAL				e		09 44 39.8	
YAL				pmax	pmax		
	comp=Z,27nm,0.3s						
YAL				smax	smax		
	comp=N,184nm,0.7s						
YAL				smax	smax		
	comp=E,134nm,0.5s						
YAL	Yalta	2.64	81	⇓eP	Pb	09 44 09.3	-1.1
YAL				P	Pg	09 44 09.6	-4.0
	comp=Z,27nm,0.3s						
YAL				eS	Sb	09 44 39.8	-3.1
YAL				S	Sg	09 44 43.4	-4.5
	comp=N,184nm,0.7s						
YAL				S	Sn	09 44 43.9	+6.2
	comp=E,134nm,0.5s						
LEHL	Lehliu	2.68	279	⇓P	Pb	09 44 08.2	-2.8
SIM	Simferopol'	2.71	71	⇓iP	Pb	09 44 11.4	-0.2
SIM				e		09 44 43.6	
SIM				pmax	pmax		
	comp=Z,63nm,0.1s						
SIM				smax	smax		
	comp=N,150nm,0.5s						
SIM				smax	smax		
	comp=E,133nm,0.5s						
SIM	Simferopol'	2.71	71	⇓iP	Pb	09 44 11.4	-0.2
SIM				P	Pg	09 44 11.7	-3.2
	comp=Z,63nm,0.1s						
SIM				ex	x	09 44 43.6	
SIM				S	Sb	09 44 44.1	-0.8
	comp=N,150nm,0.5s						
SIM				S	Sn	09 44 44.2	+4.7
	comp=E,133nm,0.5s						
ALU	Alushta	2.85	77	eP	Pb	09 44 12.4	-1.5
ALU				e		09 44 45.4	
ALU				pmax	pmax		
	comp=Z,27nm,0.3s						
ALU				smax	smax		
	comp=N,127nm,0.5s						
ALU				smax	smax		
	comp=E,86nm,0.5s						
ALU	Alushta	2.85	77	eP	Pb	09 44 12.4	-1.5
ALU				P	Pg	09 44 12.9	-4.7
	comp=Z,27nm,0.3s						
ALU				eS	Sb	09 44 45.4	-3.4
ALU				S	Sn	09 44 47.7	+4.9
	comp=N,127nm,0.5s						
ALU				S	Sg	09 44 49.0	-5.4
	comp=E,86nm,0.5s						
LEOM	Leova	2.85	327	P	Pb	09 44 11.2	-2.8
LOZB	Loznitsa	2.94	257	⇑P	Pn	09 44 11.1	+1.4
GHRR		2.94	313	⇑P	Pb	09 44 12.8	-2.7
GHRR		2.94	313	Pn	Pb	09 44 12.2	-3.3
PANC	Panciu	2.97	308	⇑P	Pb	09 44 13.0	-3.0
ISR	Istrita	3.01	291	⇓P	Pb	09 44 13.8	-2.9
ISR	Istrita	3.01	291	P	Pb	09 44 13.8	-2.9
ISR	Istrita	3.01	291	Pn	Pb	09 44 13.3	-3.4
MILM	Milestii Mici	3.05	338	eP	Pn	09 44 12.0	+0.7
	comp=E,60nm,0.1s						
MILM				eS	Sn	09 44 45.0	-2.9
	comp=E,100nm,0.1s						
SULR		3.10	282	⇓P	Pb	09 44 14.6	-3.7
KIS	Kishinev	3.12	338	eP	Pn	09 44 12.0	-0.3
KIS				eS	Sn	09 44 45.0	-4.7
	comp=E,220nm,0.5s						
KIS				LRM	MLR	09 45 42.0	
	comp=E,330nm,4.7s						
VASR	Vaslui	3.18	324	⇓P	Pb	09 44 16.0	-3.6
VRI	Vrincioaia	3.21	304	⇑P	Pb	09 44 16.0	-4.1
VRI	Vrincioaia	3.21	304	P	Pb	09 44 16.0	-4.1
VRI	Vrincioaia	3.21	304	Pn	Pb	09 44 16.0	-4.1
ISK	Istanbul-Kandi	3.23	200	eP	Pn	09 44 14.3	+0.6
ISK	Istanbul-Kandi	3.23	200	eP	Pn	09 44 14.3	+0.6
BUC1	Bucharest	3.23	276	⇑P	Pn	09 44 15.9	+2.1
BUC1	Bucharest	3.23	276	P	Pn	09 44 15.9	+2.1
PLOR	Plostina	3.25	304	⇓P	Pn	09 44 16.4	+2.3
PLOR	Plostina	3.25	304	P	Pn	09 44 16.3	+2.3
SGRR	Singureni	3.27	274	⇑P	Pn	09 44 16.2	+1.9
SUDU	Sudak	3.30	75	eP	Pb	09 44 18.9	-2.8
SUDU				e		09 44 58.1	
SUDU				pmax	pmax		
	comp=Z,77nm,0.4s						
SUDU				smax	smax		
	comp=N,296nm,0.6s						
SUDU				smax	smax		
	comp=E,102nm,0.3s						
SUDU	Sudak	3.30	75	eP	Pb	09 44 18.9	-2.8
SUDU				P	Pg	09 44 20.1	-6.2
	comp=Z,77nm,0.4s						
SUDU				eS	Sb	09 44 58.1	-3.8
SUDU				S	Sn	09 45 00.0	+5.9
	comp=E,102nm,0.3s						
SUDU				S	Sg	09 45 02.5	-6.6
	comp=N,296nm,0.6s						
JMB	Yambol	3.33	242	P	Pn	09 44 17.2	+2.1
BZK	Bozkurt	3.34	129		Pn	09 44 17.3	+2.0
COVR	Voineasa-Covas	3.52	301	⇓P	Pb	09 44 20.9	-4.5
MLR	Muntele Rosu	3.53	295	Pn	Pb	09 44 21.0	-4.7
	comp=N,7.6nm,0.3s,baz=305,slow=5.2,SNR=39						
MLR				Sn	Sn	09 44 58.3	-1.7
	comp=N,12nm,0.3s,baz=153,slow=16,SNR=5.6						
	comp=N,16nm,0.3s						
MLR	Muntele Rosu	3.53	295		Pn	09 44 19.0	+0.9
MLR	Muntele Rosu	3.53	295	⇓P	Pn	09 44 20.8	+2.7
MLR	Muntele Rosu	3.53	295	P	Pn	09 44 19.0	+0.9
MLR	Muntele Rosu	3.53	295	Pn	Pn	09 44 20.2	+2.1
ELND	Elena	3.57	252	⇑P	Pn	09 44 19.6	+1.1
TESR	Tescani	3.63	313	⇑P	Pn	09 44 21.4	+2.1
TESR	Tescani	3.63	313	Pn	Pn	09 44 21.0	+1.7
MDUB	Mudurnu	3.67	172	Pn	Pn	09 44 21.6	+1.6
MDUB				Sn	Sn	09 45 03.8	+0.4
TURR	Turia	3.73	303	⇓P	Pn	09 44 23.6	+2.8
ZIMR		3.75	265	⇓P	Pn	09 44 22.7	+1.8
ZIMR		3.75	265	P	Pn	09 44 22.7	+1.8
COPA	Copaceanca	3.81	272	⇓P	Pn	09 44 23.2	+1.4
ILGA	Ilgaz	3.86	141		Pn	09 44 24.8	+2.1
OZUR		3.89	302	⇓P	Pn	09 44 25.6	+2.7
BOSR	Bodos	3.96	301	⇑P	Pn	09 44 26.2	+2.4
HUMR	Humele	3.99	278	⇑P	Pn	09 44 25.3	+1.0
MTUR	Matau	4.04	288	⇑P	Pn	09 44 27.0	+1.9
MTUR	Matau	4.04	288	P	Pn	09 44 26.9	+1.9
DOPR	Dopca	4.08	299	⇓P	Pn	09 44 28.0	+2.5
VOIR		4.11	291	⇓P	Pn	09 44 28.4	+2.4
VOIR		4.11	291	P	Pn	09 44 28.4	+2.4
VOIR		4.11	291	Pn	Pn	09 44 27.7	+1.7
BORA	Eskisehir	4.23	181		Pn	09 44 29.5	+1.9
ARR	Arges	4.37	289	⇓P	Pn	09 44 31.6	+2.1
PRAR	RASCA	4.42	319	⇓P	Pn	09 44 32.0	+1.8
ANTO	Ankara	4.56	157	Pn	Pn	09 44 33.3	+1.1
ANTO	Ankara	4.56	157	P	Pn	09 44 33.3	+1.1
RDO	Rodhopi	4.72	233		Pn	09 44 34.8	+0.6
BALB	Balikesir	4.88	205	Pn	Pn	09 44 37.8	+1.3
BR106	Keskin Array S	4.95	151	Pn	Pn	09 44 39.9	+2.4
BR105	Keskin Array S	4.96	151	Pn	Pn	09 44 40.1	+2.4
	comp=N,0.0nmcomp=N,136nmcomp=N,9.8nm,0.7s						
BR131	Keskin Array S	4.96	151		Pn	09 44 39.4	+1.6
BR131	Keskin Array S	4.96	151	c iP	Pn	09 44 40.6	+2.8
BRTR	Keskin Array B	4.96	151	Pn	Pn	09 44 40.5	+2.8
	comp=N,0.4nm,0.3s,baz=334,slow=13,SNR=15						
BRTR				Sn	Sn	09 45 33.5	-1.8
	comp=N,1.3nm,0.3s,baz=323,slow=18,SNR=8.0						
	comp=N,1.5nm,0.4s						
BRTR	Keskin Array B	4.96	151	Pn	Pn	09 44 39.2	+1.5
MPEP	Malo Peshtene	4.97	264	P	Pn	09 44 39.2	+1.5
BR104	Keskin Array S	4.98	151	P	Pn	09 44 41.5	+3.5
	comp=N,0.0nmcomp=N,91nmcomp=N,7.2nm,0.6s						
LOT	Lotru	4.98	288	⇑P	Pn	09 44 40.3	+2.3
ANN	Anapa	5.00	80	eP	Pn	09 44 38.0	-0.1
ANN				eS	Sn	09 45 36.6	+0.7
ANN				eS	Sb	09 45 37.5	-13
ANN				pmax	pmax		
	comp=Z,18nm,1.0s						
ANN				smax	smax		
	comp=E,84nm,0.8s						
BURAR	Bucovina Array	5.10	315		Pn	09 44 40.5	+1.0
BURAR	Bucovina Array	5.10	315	⇓P	Pn	09 44 41.9	+2.4
BURAR	Bucovina Array	5.10	315	P	Pn	09 44 41.9	+2.4
BUR08	Bucovina Ar. S	5.12	315		Pn	09 44 40.3	+0.4
KMPD	K-Podol'skiy	5.26	329	P	Pn	09 44 43.2	+1.5
SRE	Strehaia	5.27	279	⇑P	Pn	09 44 43.2	+1.4
SRE	Strehaia	5.27	279	P	Pn	09 44 43.2	+1.4
SPGR	Shapsug	5.45	81	eP	Pn	09 44 45.1	+0.8
SPGR				eS	Sn	09 45 49.2	+2.2
SPGR				eS	Sb	09 45 50.6	-13
SPGR				pmax	pmax		
	comp=Z,15nm,0.6s						
SPGR				smax	smax		
	comp=E,63nm,0.5s						
VTS	Vitosha	5.51	257	P	Pn	09 44 47.3	+2.0
KSV	Kosov	5.65	320	P	Pn	09 44 48.6	+1.5
GZR	Gura Zlata	5.66	286	⇑P	Pn	09 44 49.1	+1.8
GZR	Gura Zlata	5.66	286	P	Pn	09 44 49.0	+1.8
MANT	Manisa	5.80	195	Pn	Pn	09 44 50.1	+0.7
MARR	Marisel-Cluj	5.80	299	⇓P	Pn	09 44 51.4	+2.1
HERR	Herculane	5.84	280	⇑P	Pn	09 44 50.4	+0.7
KKB	Krupnik	5.87	250	P	Pn	09 44 51.9	+1.8
LUBAR	Lubar, Ukraine	6.11	343	P	Pn	09 44 54.9	+1.6
MDVR	Moldovita	6.34	279	⇑P	Pn	09 44 58.7	+2.2
BOVS	Bovan	6.38	269	⇑P	Pn	09 44 57.8	+0.7
BZS	Buzias	6.50	287	⇑P	Pn	09 45 00.4	+1.7
BZS	Buzias	6.50	287	P	Pn	09 45 00.4	+1.7
AK06	Malin Array Si	6.54	353	P	Pn	09 45 00.6	+1.4
AK10	Malin Array Si	6.55	353	P	Pn	09 45 00.6	+1.3
MEZ	Mezhgor'ye	6.55	315	P	Pn	09 45 00.9	+1.5
AK09	Malin Array Si	6.56	353	P	Pn	09 45 00.7	+1.2
AK05	Malin Array Si	6.57	353	P	Pn	09 45 01.4	+1.7
AK08	Malin Array Si	6.58	353	P	Pn	09 45 01.5	+1.7
KIEV	Kiev	6.65	353		Pn	09 45 02.6	+1.9
KIEV	Kiev	6.65	353	P	Pn	09 45 02.6	+1.9
AKASG	Malin Array Be	6.65	353	Pn	Pn	09 45 02.2	+1.4
	comp=E,6.2nm,0.3s,baz=177,slow=12,SNR=19						
AKASG				Sn	Sn	09 46 12.0	-4.6
	comp=E,16nm,0.3s,baz=193,slow=22,SNR=5.7						
AKASG				LR	LR	09 47 58.3	
	comp=E,122nm,18.2s,baz=226,slow=41						
	comp=E,1.4nm,0.3s						
AKASG	Malin Array Be	6.65	353	Pn	Pn	09 45 01.0	+0.2
AKASG	Malin Array Be	6.65	353	i P	Pn	09 45 02.2	+1.4
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKBB	Malin Array Si	6.65	353		Pn	09 45 02.5	+1.7
AKBB	Malin Array Si	6.65	353	⇑eP	Pn	09 45 01.9	+1.1
SOC	Sochi	6.68	91	eP	Pn	09 45 01.6	+0.5
SOC				eS	Sn	09 46 18.6	+1.4
SOC				eS	Sn	09 46 19.0	+1.8
SOC				pmax	pmax		
	comp=Z,45nm,0.7s						
SOC				smax	smax		
	comp=N,142nm,0.6s						
AK18	Malin Array Si	6.69	352	P	Pn	09 45 03.6	+2.3
AK19	Malin Array Si	6.69	352	P	Pn	09 45 03.5	+2.2
AK21	Malin Array Si	6.74	352	P	Pn	09 45 04.0	+2.0
VSLR	Vesyoloye	6.92	92	⇓eP	Pn	09 45 06.4	+1.9
GUZR	Guzeripl'	6.92	88	eP	Pn	09 45 04.8	+0.2
GUZR				eS	Sn	09 46 23.7	+0.3
GUZR				eS	Sn	09 46 24.7	+1.3
GUZR				pmax	pmax		
	comp=Z,63nm,0.7s						
GUZR				smax	smax		
	comp=E,79nm,0.3s						
ERBR	Yeremizino-Bor	7.26	74	eP	Pn	09 45 08.9	-0.2
ERBR				eS	Sn	09 46 32.2	+0.7
ERBR				pmax	pmax		
	comp=Z,23nm,0.8s						
LABN	Labinsk	7.34	82	eP	Pn	09 45 11.3	+1.1
LABN				eS	Sn	09 46 35.8	+2.3
LABN				pmax	pmax		
	comp=Z,25nm,0.6s						
RNPP5	Staryi Chortor	7.78	338	P	Pn	09 45 17.4	+1.2
ARXR	Arkhyz	7.80	90	eP	Pn	09 45 17.7	+1.0
ARXR				eS	Sn	09 46 47.7	+2.6
ARXR				pmax	pmax		
	comp=Z,35nm,0.9s						
RNPP8	Varash	7.88	338	P	Pn	09 45 19.2	+1.6
RNPP9	Sopachiv	7.94	339	P	Pn	09 45 19.7	+1.3
PSZ	Piszkesteto	8.31	301	Pn	Pn	09 45 25.5	+1.8
PSZ	Piszkesteto	8.31	301	P	Pn	09 45 25.5	+1.8
KIV	Kislovodsk	8.77	87		Pn	09 45 30.3	+0.3
KIV	Kislovodsk	8.77	87	eP	Pn	09 45 32.9	+2.9
KIV				eS	Sn	09 47 13.1	+4.2
KIV				pmax	pmax		
	comp=Z,16nm,1.1s						
SHA1	Shidzhatmaz	8.78	88	deP	Pn	09 45 33.8	+3.7
NEUR	Neytrino	8.87	91	⇑eP	Pn	09 45 35.6	+4.1
KBZ	Khabaz	8.95	88	Pn	Pn	09 45 34.9	+2.6
	comp=Z,0.7nm,0.3s,baz=278,slow=9.6,SNR=14						
KBZ				Sn	Sn	09 47 20.8	+7.7
	comp=Z,0.8nm,0.3s,baz=95,slow=23,SNR=5.5						
	comp=Z,3.7nm,0.3s						
KBZ	Khabaz	8.95	88	⇓eP	Pn	09 45 35.2	+2.9
OJC	Ojcow	9.51	314	Pn	Pn	09 45 39.3	-0.7
OJC	Ojcow	9.51	314	P	Pn	09 45 39.3	-0.7
MARD	Mardin	10.33	128		Pn	09 45 53.1	+1.7
VRAC	Vranov	10.88	303	LR	LR	09 51 32.2	
	comp=Z,83nm,19.2s,baz=70,slow=45						
NACGM	Naroch	11.07	349	eP	Pn	09 46 03.8	+2.5
	comp=Z,9.0nm,0.7s,baz=166						
OBN	Obninsk	11.69	17	eP	Pn	09 46 12.8	+3.1
OBN				pmax	pmax		
	comp=Z,9.0nm,0.3s						
OBN				MLR	MLR		
	comp=Z,280nm,6.0s						
MAK	Makhachkala	12.39	89	c iP	Pn	09 46 15.9	-3.4
MAK				eS	Sn	09 48 32.6	-4.8
MAK				pmax	pmax		
	comp=Z,210nm,1.3s						
MAK				MLR	MLR		
	comp=Z,208nm,10.0s						
GERES	GERESS Array B	12.51	298	Pn	Pn	09 46 23.0	+1.8
	baz=106,slow=14,SNR=4.0						
	comp=Z,0.4nm,0.4s						
GERES	GERESS Array B	12.51	298	P	Pn	09 46 23.0	+1.8
KHC	Kasperske Hory	12.67	299	⇓eP	Pn	09 46 25.0	+1.7
AKT	Akhty	12.92	96	eP	Pn	09 46 26.7	0.0
AKT				pmax	pmax		
	comp=Z,11nm,0.7s						
DAVOX	Davos/Dischmat	14.72	288	Pn	P	09 46 54.6	-3.0
	comp=Z,0.5nm,0.3s,baz=90,slow=9.1,SNR=2.5						
DAVOX				LR	LR	09 53 52.9	
	comp=Z,73nm,18.5s,baz=254,slow=43						
	comp=Z,1.4nm,0.4s						
EIL	Elat	14.84	165	LR	LR	09 53 57.3	
	comp=Z,22nm,20.6s,baz=344,slow=43						
MEF	Metsahovi	16.55	349	eP	Pn	09 47 12.4	-2.6
AAL	Aland	17.30	342	eP	Pn	09 47 21.4	-3.0
FINES	FINESS Array B	17.56	353	P	Pn	09 47 25.8	-1.9
	comp=Z,2.7nm,0.6s,baz=164,slow=12,SNR=15						
FINES				S	Sn	09 50 26.6	-16
	comp=Z,1.6nm,0.4s,baz=176,slow=22,SNR=1.3						
FINES	FINESS Array B	17.56	353	P	Pn	09 47 25.6	-2.0
FIA1	FINESS Array S	17.56	353	P	Pn	09 47 26.2	-1.5
FIA1				IAmb	IAmb	09 47 50.2	
	comp=Z,29nm,1.1s						
KLMR	Klimovskoe	17.61	15	eP	Pn	09 47 27.7	-0.6
KLMR				pmax	pmax		
	comp=Z,34nm,1.8s						
RAF	Rauma	17.73	346	eP	Pn	09 47 26.5	-3.2
KEF	Keuruu	18.39	352	eP	P	09 47 36.2	-1.6
KIRV	Kirov	18.59	32	⇑eP	Pn	09 47 42.3	+2.0
JOF	Joensuu	18.85	1	eP	P	09 47 41.5	-1.3
HFS	Hagfors	18.99	334	P	P	09 47 43.1	-1.4
	comp=Z,1.5nm,0.3s,baz=142,slow=14,SNR=11						
HFS				S	Sn	09 51 01.7	-16
	comp=Z,3.8nm,0.6s,baz=137,slow=24,SNR=7.3						
HFS				LR	LR	09 54 36.9	
	comp=Z,86nm,19.6s,baz=100,slow=35						
VAF	Ylistaro	19.50	349	eP	P	09 47 48.7	-1.3
AKTO	Aktyubinsk	19.64	61	P	Pn	09 47 54.4	+1.4
	comp=Z,0.3nm,0.3s,baz=265,slow=14,SNR=3.7						
AKTO				LR	LR	09 57 30.5	
	comp=Z,33nm,21.6s,baz=224,slow=43						
	comp=Z,1.1nm,0.3s						
NOA	NORSAR Array B	20.48	333	P	Pn	09 48 02.9	0.0
	comp=Z,0.7nm,0.6s,baz=144,slow=12,SNR=2.9						
	comp=Z,0.7nm,0.6s						
AB31	Akbulak array	20.76	65	P	Pn	09 48 04.5	-1.8
ABKAR	Akbulak array	20.76	65	P	Pn	09 48 05.2	-1.1
ARTI	Arti	21.47	45	P	P	09 48 14.4	+2.9
	comp=Z,6.9nm,0.6s,baz=246,slow=5.0,SNR=9.1						
ARTI				LR	LR	09 58 07.9	
	comp=Z,40nm,19.0s,baz=338,slow=41						
	comp=Z,6.9nm,0.6s						
ARTI	Arti	21.47	45	P	P	09 48 11.3	-0.2
ARTI				IAmb	IAmb	09 48 28.2	
	comp=Z,12nm,0.7s						
ARTI	Arti	21.47	45	P	P	09 48 14.1	+2.7
ARTI						09 48 33.2	
ARTI				S	Sn	09 52 14.1	-3.3
ARTI				SS	SnSn	09 52 38.7	+6.4
ARCES	ARCESS Array B	25.62	356	P	P	09 48 54.5	+2.2
	comp=Z,2.2nm,0.6s,baz=172,slow=9.1,SNR=15						
	comp=Z,2.2nm,0.6s						
ARCES	ARCESS Array B	25.62	356	P	P	09 48 52.6	+0.4
KEV	Kevo	25.77	357	P	P	09 48 53.3	-0.3
KEV	Kevo	25.77	357	P	P	09 48 53.3	-0.3
KURBB	Kurchatov Arra	32.69	61	P	P	09 49 59.4	+4.1
	comp=Z,0.3nm,0.3s,baz=292,slow=10,SNR=1.3						
	comp=Z,0.3nm,0.3s						
KURK	Kurchatov	32.73	61	P	P	09 49 59.4	+3.8
SPITS	Spitsbergen Ar	34.64	355	P	P	09 50 14.6	+2.6
	comp=Z,2.8nm,0.7s,baz=142,slow=12,SNR=5.2						
	comp=Z,2.8nm,0.7s						
MKAR	Makanchi Array	35.88	67	P	P	09 50 27.2	+4.1
	comp=Z,1.2nm,0.6s,baz=277,slow=8.6,SNR=9.1						
	comp=Z,1.2nm,0.6s						
MKAR	Makanchi Array	35.88	67	P	P	09 50 24.7	+1.7
MKAR	Makanchi Array	35.88	67	P	P	09 50 24.7	+1.7
ZAA0	Zalesovo Array	36.11	55	P	P	09 50 26.1	+1.3
ZAA0				IAmb	IAmb	09 50 29.4	
	comp=Z,3.3nm,0.6s						
ZALV	Zalesovo Beam	36.11	55	P	P	09 50 28.7	+3.9
	comp=Z,3.2nm,0.5s,baz=269,slow=9.5,SNR=15						
	comp=Z,3.2nm,0.5s						
ZALV	Zalesovo Beam	36.11	55	P	P	09 50 25.5	+0.7
NRIK	Noril'sk	38.04	29	⇑eP	P	09 50 46.2	+5.1
NRIK				pmax	pmax		
	comp=Z,12nm,3.3s						
TORD	Torodi Ar. Bea	39.51	228	P	P	09 50 55.3	+1.4
	comp=Z,0.9nm,0.7s,baz=33,slow=12,SNR=6.9						
	comp=Z,0.9nm,0.7s						
DBIC	Dimbokro	48.43	230	P	P	09 52 06.7	+1.1
	comp=Z,1.2nm,0.4s,baz=46,slow=4.0,SNR=1.6						
	comp=Z,1.2nm,0.4s						
DBIC	Dimbokro	48.43	230	P	P	09 52 04.8	-0.8
DBIC				IAmb	IAmb	09 52 23.8	
	comp=Z,3.9nm,1.1s						
SONM	Songino Array	50.88	57	P	P	09 52 28.1	+4.0
	comp=Z,0.9nm,0.6s,baz=292,slow=8.5,SNR=3.9						
	comp=Z,0.9nm,0.6s						
SONM	Songino Array	50.88	57	P	P	09 52 25.4	+1.3
HHC	Hu-ho-hao-te	57.52	63	eP	P	09 53 14.8	+2.2
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,520nm,6.5s						
PZH	PanZhiHua	58.96	82	P	P	09 53 25.1	+2.2
KSRS	Korea Array	69.75	57	P	P	09 54 35.7	+2.5
	comp=Z,1.4nm,0.7s,baz=318,slow=8.9,SNR=2.6						
	comp=Z,1.4nm,0.7s						
BOSA	Boshof	72.53	185	P	P	09 54 52.5	+2.5
	comp=Z,4.9nm,1.0s,baz=342,slow=9.6,SNR=3.7						
	comp=Z,4.9nm,1.0s						
BOSA	Boshof	72.53	185	P	P	09 54 50.7	+0.6
PCRV	Puerto La Cruz	86.67	281	LR	LR	10 31 32.0	
	comp=Z,28nm,21.4s,slow=33						
NVL	N'lazarevskaya	115.36	187	eP	Pdif	09 58 15.1	-0.4
NVL				pmax	pmax		
	comp=Z,13nm,1.2s						

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*AFAD **04** 09:45:33.5, 38.°40N×40.°83E, h7km±5km, ML2.5*
*ISK **04** 09:45:35.9, 38.°23N×41.°00E, h8km, ML2.2/6*
ISC 04 09:45:35.7±1.4**, 38.°30N**±0.°04×**40.°94E**±0.°04**, h7**km±12km**,**
n12,σ**1**§**11**/19**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTMN	Batman	0.48	147	P	Pg	09 45 44.7	-0.3
BTMN				S	Sb	09 45 54.5	+0.7
BTMN				i IAML		09 45 57.0	
	comp=E,317nm,0.6s						
BTMN				i IAML		09 46 00.0	
	comp=N,329nm,0.6s						
DYBB	Diyarbakir	0.72	242	Pg	Pn	09 45 50.7	-1.7
BNGB	Bingl	0.72	343	Pg	Pn	09 45 50.9	-1.6
BNGB				Sg	Sn	09 46 03.4	-0.6
SRTM	Siirt_Merkez	0.83	111	P	Pb	09 45 52.1	-0.5
SRTM				S	Sn	09 46 06.4	-0.1
SRTM				i IAML		09 46 09.0	
	comp=N,133nm,0.5s						
SRTM				i IAML		09 46 11.0	
	comp=E,147nm,0.5s						
GURO	Guroymak-BITLI	0.89	73	Pg	Pb	09 45 52.9	-0.7
GURO				Sg	Sb	09 46 05.7	-0.1
BLIS	Bitlis-Merkez	0.93	82	P	Pg	09 45 52.8	-0.8
BLIS				S	Sn	09 46 10.1	+1.1
BLIS				i IAML		09 46 18.0	
	comp=E,69nm,0.6s						
VRTB	Varto-Mus	0.95	25	Pg	Pn	09 45 55.6	-0.1
MIDY	Mardin/Midyat-	0.96	158	P	Pn	09 45 55.2	-0.5
MIDY				S	Sn	09 46 10.6	+0.9
MIDY				i IAML		09 46 13.0	
	comp=N,88nm,0.3s						
MIDY				i IAML		09 46 16.0	
	comp=E,79nm,0.6s						
YEDI	Yedisu-Bingol	1.18	345	Pn	Pn	09 46 00.5	+1.6
SVRC	Sivrice-ELAZID	1.29	274	Pn	Pg	09 46 01.4	+0.9
PERV	Siirt/Pervari-	1.31	105	P	Pb	09 45 60.0	-0.8
PERV				S	Sn	09 46 19.8	+1.4
PERV				i IAML		09 46 21.0	
	comp=N,329nm,0.5s						
PERV				i IAML		09 46 21.0	
	comp=E,612nm,0.4s						
SIRN	Sırnak	1.41	124	P	Pn	09 45 56.8	-5.1
SIRN				i IAML		09 46 22.0	
	comp=E,96nm,0.5s						
SIRN				S	Sg	09 46 22.6	+1.5
SIRN				i IAML		09 46 27.0	
	comp=N,115nm,0.4s						

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*SOME **04** 09:57:44.7, 43.°65N×69.°77E*
*KRNET **04** 09:57:44.8±0.1, 43.°77N×69.°39E, mb3.1*
*NNC **04** 09:57:45.6±2.0, 43.°67N×69.°73E, h0km, mb3.5, mpv2.9,*
Error ellipse: s-maj=14.4km s-min=6.7km az=127.0,

Suspected Mining explosion.

ISC 04 09:57:47.7±2.1**, 43°.63N**±0°.06×**69°.71E**±0°.09**, h0^{km}, n27,** σ**1^{s}91**/44**, 28C-9D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRLS	**Borolday**	0.61	171	P	Pb	09 58 01.2	0.0
	3.2nm,0.6s						
BRLS				S	Sn	09 58 13.3	-0.9
	8.0nm,0.4s						
KK31	**Karatay Array**	0.79	132	⇑P	Pg	09 58 00.8	-2.0
	1.5nm,0.3s,baz=319,slow=16,SNR=84						
KK31				⇑S	Sg	09 58 12.4	-0.7
	22nm,0.5s,baz=332,slow=35,SNR=182						
IUG	**Iuzhnay**	1.50	171	P	Pn	09 58 15.1	-0.9
	20nm,1.1s						
IUG				S	Sn	09 58 36.9	+0.5
	83nm,0.4s						
MNAS	**Manas**	2.35	118	⇑*i*P	Pn	09 58 28.6	+1.0
MNAS				⇑*i*S	Sb	09 59 00.6	+0.1
TRKS	**Terek-Say**	2.35	153	⇑*i*P	Pb	09 58 29.2	-1.8
TRKS				⇑*i*S	Sb	09 59 01.5	+0.8
ARK	**Arkit**	2.48	137	⇑*i*P	Pn	09 58 30.3	+0.9
ARK				⇑*i*S	Sb	09 59 03.5	-0.7
MRKS	**Merke**	2.72	108	Pg	Pb	09 58 36.5	-0.8
	2.1nm,0.4s						
MRKS				Lg	Lg	09 59 13.8	
	13nm,0.8s						
EKS2	**Erkin-Say**	3.13	107	⇑*i*P	Pn	09 58 39.5	+1.1
EKS2				⇑*i*S	Sn	09 59 19.5	+2.9
BTLS	**Baital**	3.42	64	Pg	Pb	09 58 50.2	+1.2
	16nm,0.6s						
BTLS				Lg	Lg	09 59 36.8	
	5.9nm,0.8s						
USP	**Ospenovka**	3.51	94	⇓*i*P	Pn	09 58 44.4	+0.9
USP				⇓*i*S	Sn	09 59 27.9	+2.2
SGDS	**Sogindy**	3.58	91	Pg	Pb	09 58 51.1	-0.9
	1.7nm,0.7s						
SGDS				Lg	Lg	09 59 38.5	
	5.6nm,0.5s						
AAK	**Ala-Archa**	3.64	104	⇓*i*P	Pn	09 58 46.7	+1.3
AAK				⇓*i*S	Sn	09 59 31.7	+2.5
AAK	**Ala-Archa**	3.64	104	⇑Pg	Pb	09 58 51.6	-1.4
	1.4nm,0.5s						
AAK				⇑Lg	Lg	09 59 40.9	
	2.0nm,0.4s						
CHMS	**Chumysh**	3.73	98	⇓*i*P	Pn	09 58 47.5	+0.9
CHMS				⇓*i*S	Sn	09 59 33.4	+2.1
UCH	**Uchtor**	3.80	110	⇑*e*P	Pn	09 58 49.0	+1.1
UCH				⇑*i*S	Sn	09 59 35.9	+2.4
ARLS	**Aral**	3.83	116	⇑*i*P	Pn	09 58 49.3	+1.2
ARLS				⇑*i*S	Sn	09 59 36.4	+2.5
OHH	**Osh**	3.86	143	⇑*i*P	Pn	09 58 49.2	+0.8
OHH				⇑*i*S	Sn	09 59 36.5	+2.0
KBK	**Karagaybulak**	3.96	102	⇓*i*P	Pn	09 58 51.1	+1.3
KBK				⇓*i*S	Sn	09 59 39.3	+2.3
SALK	**Salom-Alik**	4.11	131	⇑*i*P	Pn	09 58 53.2	+1.3
SALK				⇑*i*S	Sn	09 59 43.0	+2.3
KRBS	**Karabastau**	4.33	87	Pg	Pb	09 59 04.9	+0.2
	2.4nm,0.7s						
KRBS				Lg	Lg	10 00 02.4	
	1.2nm,0.9s						
TKM2	**Tokmak 2**	4.36	97	⇑*i*P	Pn	09 58 56.4	+1.1
TKM2				⇑*i*S	Sn	09 59 48.7	+1.8
DGS	**Degeres**	4.43	93	Pg	Pb	09 59 05.5	-0.9
	2.6nm,0.5s						
DGS				Lg	Lg	10 00 03.3	
	10nm,0.6s						
SFK	**Sufi-Kurgan**	4.60	141	⇑*i*P	Pn	09 58 59.8	+1.2
SFK				⇑*i*S	Sn	09 59 54.2	+1.4
BOOM	**Boomskoye usch**	4.71	102	⇑*i*P	Pn	09 59 01.2	+1.1
BOOM				⇑*i*S	Sn	09 59 57.1	+1.6
KURBB	**Kurchatov Arra**	9.22	38	⇑Lg	Lg	10 02 36.9	
	6.9nm,0.8s						
KURK	**Kurchatov**	9.32	37	⇓Lg	Lg	10 02 35.0	
	1.7nm,0.9s						
MK31	**Makanchi Array**	9.43	66	Pn	Pn	10 00 01.9	-2.8
	1.0nm,0.4s,baz=247,slow=14,SNR=19						
MK31				⇑Sn	Sn	10 01 44.4	-7.0
	2.3nm,0.8s						

IDC 04 09:57:49.3±438.0**, 53°.45N**×**48°.15E, h0^{km}, Error ellipse: s-maj=190.8km s-min=131.6km az=78.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	6.83	112	I	I	10 40 10.0	
	0.3nm,0.7s,baz=297,slow=309,SNR=3.9						
I46RU	**ZALESOVO INFRA**	21.57	74	I	I	12 07 20.0	
	baz=288,slow=327,SNR=1.8						
I34MN	**SONGINO INFRAS**	36.48	75	I	I	13 38 20.0	
	baz=302,slow=335,SNR=0.5						
I18DK	**QAANAAQ INFRAS**	43.79	344	I	I	14 26 10.0	
	baz=44,slow=340,SNR=1.2						

IDC ***04*** *10:02:36.6±6.6, 26°.04N×94°.72E, h0^{km}, mb3.7/2, mbtmp3.6/3, ML4.2/1, Error ellipse: s-maj=191.7km s-min=94.8km az=80.0*

ISC 04 10:03:01.1±3.5**, 24°.4N**±0°.6×**94°.8E**±0°.5**, h35^{km}, n9,** σ**1^{s}26**/11**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAPN	**Taplejung**	7.04	296	Pn	Pn	10 04 42.3	+0.3
	baz=290,slow=0.0						
TAPN				Sn	Sn	10 06 01.0	+0.1
	27nm,0.4s,baz=290,slow=0.0						
CMAR	**Chiang Mai Arr**	7.06	146	Pn	Pn	10 04 41.6	-0.4
	0.8nm,0.3s,baz=330,slow=14,SNR=4.9						
	1.1nm,0.6s						
RAMN	**Ramite**	7.83	291	Pn	Pn	10 04 54.5	+1.7
	baz=285,slow=0.0						
RAMN				Sn	Sn	10 06 20.6	+0.2
	24nm,0.4s,baz=285,slow=0.0						
JIRN	**Jiri**	8.40	295	Pn	Pn	10 05 01.6	+0.8
	baz=290,slow=0.0						
JIRN				Sn	Sn	10 06 32.7	-2.0
	20nm,0.3s,baz=290,slow=0.0						
GUN	**Gumba**	8.75	295	Pn	Pn	10 05 06.5	+1.0
	baz=291,slow=0.0						
GUN				Sn	Sn	10 06 41.4	-1.8
	baz=291,slow=0.0						
PKI	**Pulchoki**	9.03	292	Pn	Pn	10 05 09.7	+0.4
	baz=288,slow=0.0						
PKIN	**Phulchoki**	9.04	292	Pn	Pn	10 05 10.3	+0.9
	baz=288,slow=0.0						
WRA	**Warramunga Arr**	58.52	135	P	P	10 12 43.6	-11
	0.6nm,0.5s,baz=322,slow=7.4,SNR=14						
	0.6nm,0.5s						
ASAR	**Alice Springs**	61.00	139	P	P	10 13 00.5	-11
	0.4nm,0.6s,baz=323,slow=6.9,SNR=8.6						
	0.4nm,0.6s						

IDC ***04*** *10:10:57.5±7.0, 6°.64S×128°.83E, h150^{km}±66^{km}, mb3.8/3, mbtmp4.6/7, Error ellipse: s-maj=70.2km s-min=21.3km az=45.0*

NEIC ***04*** *10:11:01.8±1.1, 6°.90S±0°.04×128°.62E±0°.08, h198^{km}±18^{km}, mb4.2/4, Error ellipse: s-maj=12.8km s-min=4.3km az=67.0*

DJA ***04*** *10:11:03.2±0.2, 7°S±2°×12°9E±°, h208^{km}±5^{km}, M4.5/17, mB5.0/6, mb4.4/17, MLv4.8/16, Mw(mB)4.2/6*

ISC 04 10:11:02.0±0.7**, 6°.99S**±0°.07×**128°.60E**±0°.05**, h200^{km}, n43,** σ**1^{s}45**/46**, mb3.9**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	2.85	110	Pn	Pn	10 11 49.2	-0.7
SAUI				Sn	Sn	10 12 26.9	-0.5
SAUI	**Saumlaki**	2.85	110	P	Pn	10 11 52.8	+2.9
SAUI				S	Sn	10 12 26.8	-0.6
AAI	**Ambon**	3.31	353	P	Pn	10 11 56.7	+1.4
MSAI	**Masohi**	3.64	5	P	Pn	10 12 01.3	+2.0
NLAI	**Namlea**	4.01	338	P	Pn	10 12 07.3	+3.3
SOEI	**Soe**	5.09	237	Pn	Pn	10 12 18.2	+0.5
SOEI	**Soe**	5.09	237	P	Pn	10 12 20.9	+3.3
	1.2nm37nm,0.7s						
FAKI	**Fak Fak**	5.44	42	Pn	Pn	10 12 20.8	-1.3
FAKI	**Fak Fak**	5.44	42	P	Pn	10 12 21.5	-0.6
SANI	**Sanana**	5.55	332	P	Pn	10 12 24.2	+0.7
	1.3nm3µm80nm,1.2s						
BATI	**Baumata**	5.83	236	P	Pn	10 12 28.1	+0.9
	57nm,0.4s,baz=98,slow=4.6,SNR=6.9						
BATI				S	Sn	10 13 31.4	-3.0
	146nm,0.4s,baz=256,slow=21,SNR=15						
BATI	**Baumata**	5.83	236	P	Pn	10 12 29.0	+1.9
	1.0nm70nm,0.5s						
KMPI	**Kaimana, Papua**	6.07	57	P	Pn	10 12 30.0	-0.1
MTN	**Manton Dam**	6.33	157		Pn	10 12 34.8	+1.3
SWI	**Sorong**	6.64	24	P	Pn	10 12 37.0	-0.6
EDFI	**Ende, Flores**	7.06	255	P	Pn	10 12 45.5	+2.3
RKPI	**Ransiki, Papua**	7.78	46	P	Pn	10 12 51.0	-1.5
	40nm,0.7s						
TNTI	**Ternate**	7.81	351	Pn	Pn	10 12 50.4	-2.4
LUWI	**Luwuk**	8.29	315		Pn	10 12 53.0	-6.0
BASI	**Baing, Sumba**	8.55	247	P	Pn	10 13 03.8	+1.3
	71nm,1.0s						
KNRA	**Kununurra**	8.63	179		Pn	10 13 04.7	+1.2
DBNI	**Kabupaten Domp**	10.30	261	P	Pn	10 13 26.8	+1.6
PLAI	**Plampang**	10.87	260	P	Pn	10 13 32.0	-0.5
	639nm29nm,0.7s						
FITZ	**Fitzroy Crossi**	11.41	194	P	Pn	10 13 39.8	+0.4
	37nm,0.5s,baz=30,slow=11,SNR=148						
FITZ				S	Sn	10 15 37.8	-8.9
	7.5nm,0.5s,baz=280,slow=8.5,SNR=3.7						
FITZ	**Fitzroy Crossi**	11.41	194		Pn	10 13 40.0	+0.6
BKB	**Balikpapan**	12.98	295	Pn	Pn	10 13 59.2	-0.2
WB0	**Warramunga Arr**	13.89	157		Pn	10 14 10.4	-0.2
WRAB	**Tennant Creek**	14.02	157		Pn	10 14 12.5	+0.2
WRA	**Warramunga Arr**	14.03	157	P	Pn	10 14 12.3	0.0
	8.4nm,0.4s,baz=340,slow=12,SNR=26						
WRA				S	S	10 16 39.8	-8.8
	6.0nm,0.6s,baz=330,slow=22,SNR=5.7						
WRA	**Warramunga Arr**	14.03	157		Pn	10 14 11.7	-0.7
WR8	**Warramunga Arr**	14.10	157	Pn	Pn	10 14 12.5	-0.7
JAGI	**Jajag, Banyuwa**	14.39	263	P	Pn	10 14 16.8	-0.1
JAGI	**Jajag, Banyuwa**	14.39	263	P	Pn	10 14 16.8	-0.1
	27nm,0.5s						
COEN	**Coen**	15.91	117	P	Pn	10 14 35.4	0.0
COEN				IAmb	IAmb	10 14 39.6	
	comp=Z,6.8nm,0.5s						
SNJI	**Sawahan-Nganju**	16.72	266	P	Pn	10 14 46.4	+1.2
	comp=Z,31nm,1.0s						
PCJI	**Pacitan**	17.31	265	P	P	10 14 50.6	+0.2
AS31	**Alice Springs**	17.34	163		Pn	10 14 51.9	-0.5
ASAR	**Alice Springs**	17.35	163	P	Pn	10 14 54.2	+1.8
	comp=Z,19nm,0.5s,baz=341,slow=10,SNR=412						
ASAR				S	S	10 17 58.6	-2.3
	comp=Z,5.0nm,0.8s,baz=349,slow=24,SNR=10						
FORT	**Forrest**	23.67	181	P	P	10 15 55.6	+0.2
FORT				IAmb	IAmb	10 16 12.4	
	comp=Z,3.7nm,0.8s						
BBOO	**Buckleboo**	26.61	166	P	P	10 16 22.0	+0.1
STKA	**Stephens Creek**	27.57	156	P	P	10 16 32.5	+2.0
	comp=Z,1.9nm,0.9s,baz=330,slow=14,SNR=3.9						
	comp=Z,1.9nm,0.9s						
PSI	**Prapat**	31.17	287	P	P	10 17 02.8	+0.1
	comp=Z,5.8nm,0.6s,baz=143,slow=10.0,SNR=4.9						
	comp=Z,5.8nm,0.6s						
ZALV	**Zalesovo Beam**	70.97	334	P	P	10 21 58.0	+0.5
	comp=Z,0.8nm,0.6s,baz=141,slow=7.4,SNR=3.6						
	comp=Z,0.8nm,0.6s						

DJA 04 10:12:27.1±0.2**, 0°S**±3°×**12°4E**±°**, h86^{km}**±7^{km}**, M4.4**/23**, mB5.0**/6**, mb4.7**/8**, MLv4.3**/23**, Mw(mB)4.3**/6**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	**Cibinong**	0.72	0	P	Pn	10 12 44.9	+1.4
GTOI	**Gorontalo**	1.25	309	P	Pn	10 12 53.1	+3.6
LUWI	**Luwuk**	1.50	234	P	Pn	10 12 52.3	-0.3
LUWI				S	Sn	10 13 11.5	-0.5
MNI	**Manado**	1.80	29	P	Pn	10 12 58.9	+2.3
MRSI	**Marisa**	2.13	287	P	Pn	10 13 00.1	-0.8
MRSI				S	Sn	10 13 24.4	-2.4
APSI	**Ampana**	2.45	252	P	Pn	10 13 05.5	+0.3
SANI	**Sanana**	2.75	133	P	Pn	10 13 07.7	-1.6
TNTI	**Ternate**	3.51	75	P	Pn	10 13 17.9	-1.5
KDI	**Kendari**	4.02	200	P	Pn	10 13 26.0	-0.4
MPSI	**Mapaga**	4.11	277	P	Pn	10 13 28.5	+0.9
PCI	**Palu**	4.21	260	P	Pn	10 13 28.8	-0.2
GAMI	**Galela, Maluku**	4.29	63	P	Pn	10 13 30.1	0.0
NLAI	**Namlea**	4.38	135	P	Pn	10 13 31.5	+0.3
KKSI	**Kolaka, Sulawe**	4.62	210	P	Pn	10 13 34.6	0.0
TTSI	**Tana Toraja**	5.06	235	P	Pn	10 13 40.7	+0.2
	2µm174nm,0.8s						
KRAI	**Karang Ratu**	5.42	126	P	Pn	10 13 47.1	+1.6
MMSI	**Mamuju**	5.66	243	P	Pn	10 13 48.9	+0.1
	0.2nm28nm,0.7s						
SPSI	**Sidrap Palu**	5.66	228	P	Pn	10 13 49.8	+1.0
BNSI	**Bone**	5.73	222	P	Pn	10 13 50.1	+0.5
	0.3nm936nm54nm,0.6s						
KAPI	**Kappang**	6.42	221	P	Pn	10 13 59.4	+0.3
BKSI	**Bulukumba**	6.42	217	P	Pn	10 14 00.2	+1.1
	0.1nm18nm,0.5s						
BSSI	**Bau Bau, Buton**	6.90	210	P	Pn	10 14 06.7	+1.1
	1µm82nm,0.6s						
WBSI	**Waikabubak, Su**	10.48	206	P	Pn	10 14 52.8	-1.7
	48nm,0.5s						

SOME ***04*** *10:15:36.4, 39°.43N×73°.45E, h15^{km}*

IDC ***04*** *10:15:37.0±1.0, 39°.37N×73°.42E, h0^{km}, mb3.7/8, mbtmp3.7/13, ML3.2/5, MS3.5/5, Error ellipse: s-maj=20.6km s-min=15.3km az=91.0*

KRNET ***04*** *10:15:37.1±0.1, 39°.48N×73°.31E, h21^{km}, mb4.2*

MOS ***04*** *10:15:37.0±0.9, 39°.46N×73°.32E, h10^{km}, mb4.3/4, Error ellipse: s-maj=8.9km s-min=4.3km az=86.3*

NNC ***04*** *10:15:40.4±1.3, 39°.61N×73°.43E, h0^{km}, mb4.2, mpv3.8, Error ellipse: s-maj=10.5km s-min=5.0km az=171.0*

ISC 04 10:15:37.7±0.6**, 39°.53N**±0°.03×**73°.35E**±0°.02**, h10^{km}, n119,** σ**2^{s}20**/163**, mb3.8**/9**, MS3.3**/5**, 29C-30D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	0.49	14	⇑*e*P	Pg	10 15 47.9	+0.5
SFK				⇑*e*S	Sg	10 15 56.0	+2.0
SFK	**Sufi-Kurgan**	0.49	14	*e*PG	Pg	10 15 47.9	+0.5
SFK				*e*S	Sg	10 15 56.0	+2.0
OHH	**Osh**	1.08	336	⇑*e*P	Pb	10 15 57.8	-0.8
OHH				⇑*e*S	Sb	10 16 13.1	+0.3
OHH	**Osh**	1.08	336	*e*PG	Pb	10 15 57.8	-0.8
OHH				*e*S	Sb	10 16 13.1	+0.3
DRK	**Karamyk**	1.20	268	⇑*e*P	Pb	10 15 58.6	-2.2
DRK				⇑*e*S	Sb	10 16 14.5	-2.0
DRK	**Karamyk**	1.20	268	*e*PG	Pb	10 15 58.6	-2.2
DRK				*e*S	Sb	10 16 14.5	-2.0
SALK	**Salom-Alik**	1.40	15	⇑*e*P	Pn	10 16 03.9	+0.5
SALK				⇑*e*S	Sb	10 16 23.4	+1.4
SALK	**Salom-Alik**	1.40	15	*e*PG	Pn	10 16 03.9	+0.5
SALK				*e*S	Sb	10 16 23.4	+1.4
ARSB	**Arslanbob**	1.81	351	⇓*e*P	Pb	10 16 10.6	-0.5
ARSB				⇓*e*S	Sb	10 16 35.2	+1.3
ARSB	**Arslanbob**	1.81	351	*e*PN	Pb	10 16 10.6	-0.5
ARSB				*e*S	Sb	10 16 35.2	+1.3
KSH	**Kashi**	2.03	90	Pn	Pn	10 16 08.8	-3.3
KSH				Sn	Sn	10 16 36.2	-1.3
KSH				smax	smax		
	comp=N,1µm,0.6s						
KSH				smax	smax		
	comp=E,780nm,0.8s						
JNKS	**Jany-Kuch**	2.33	48	⇑*e*P	Pb	10 16 18.3	-1.6
JNKS				⇑*e*S	Sb	10 16 48.0	-0.9
GAR	**Garm**	2.42	258	⇑*e*P	Pn	10 16 17.7	+0.3
GAR				⇑*e*S	Sn	10 16 47.4	+0.3
GAR	**Garm**	2.42	258	*e*PN	Pn	10 16 17.7	+0.3
GAR				*e*S	Sn	10 16 47.4	+0.3
ARLS	**Aral**	2.44	17	⇑*e*P	Pn	10 16 19.6	+1.8
ARLS				⇑*e*S	Sn	10 16 50.6	+2.8
ARLS	**Aral**	2.44	17	*e*PN	Pn	10 16 19.6	+1.8
ARLS				*e*S	Sn	10 16 50.6	+2.8
ARK	**Arkit**	2.50	335	⇓*e*P	Pn	10 16 20.1	+1.6
ARK				⇓*e*S	Sn	10 16 51.5	+2.4
ARK	**Arkit**	2.50	335	*e*PN	Pn	10 16 20.1	+1.6
ARK				*e*S	Sn	10 16 51.5	+2.4
TRKS	**Terek-Say**	2.61	321	⇓*e*P	Pn	10 16 20.5	+0.4
TRKS				⇓*e*S	Sn	10 16 52.2	+0.2
TRKS	**Terek-Say**	2.61	321	*e*PN	Pn	10 16 20.5	+0.4
TRKS				*e*S	Sb	10 16 57.7	+0.8
UCH	**Uchtor**	2.83	18	P	Pb	10 16 28.1	-0.5
	SNR=54						
UCH	**Uchtor**	2.83	18	⇓*e*P	Pn	10 16 25.3	+1.9
UCH				⇓*e*S	Sn	10 17 00.5	+2.6
UCH	**Uchtor**	2.83	18	*e*PN	Pn	10 16 25.3	+1.9
MNAS	**Manas**	3.02	348	⇓*e*P	Pn	10 16 27.6	+1.9
MNAS				⇓*e*S	Sn	10 17 04.4	+2.3
MNAS	**Manas**	3.02	348	*e*PN	Pn	10 16 27.6	+1.9
EKS2	**Erkin-Say**	3.14	6	P	Pb	10 16 32.5	-1.3
	SNR=10						
EKS2	**Erkin-Say**	3.14	6	⇓*e*P	Pn	10 16 29.3	+1.9
EKS2				⇓*e*S	Sn	10 17 07.4	+2.4
EKS2	**Erkin-Say**	3.14	6	*e*PN	Pn	10 16 29.3	+1.9
MRKS	**Merke**	3.21	358	*e*P	Pb	10 16 34.1	-0.8
	comp=E,13nm,0.3s						
MRKS				*e*S	Sb	10 17 16.1	+2.0
	comp=E,177nm,0.4s						
AAK	**Ala-Archa**	3.22	15	P	Pb	10 16 33.6	-1.5
	SNR=61						
AAK	**Ala-Archa**	3.22	15	Pn	Pb	10 16 34.0	-1.1
	comp=E,13nm,0.3s,baz=178,slow=6.2,SNR=43						
AAK				Sn	Sb	10 17 14.8	+0.4
	comp=E,14nm,0.3s,baz=356,slow=17,SNR=20						
AAK				LR	LR	10 17 47.7	
	comp=E,60nm,18.2s,baz=14,slow=39						
	comp=E,44nm,0.5s						
AAK	**Ala-Archa**	3.22	15	⇓*e*P	Pn	10 16 30.5	+2.0
AAK				⇓*e*S	Sn	10 17 09.5	+2.5
AAK	**Ala-Archa**	3.22	15	⇑Pg	Pb	10 16 36.4	+1.3
	comp=E,13nm,0.5s						
AAK				⇓Lg	Lg	10 17 17.9	
	comp=E,165nm,0.9s						
AAK	**Ala-Archa**	3.22	15	*i* PN	Pb	10 16 33.1	-2.0
KBK	**Karagaybulak**	3.35	21	P	Pb	10 16 36.1	-1.2
	SNR=15						
KBK	**Karagaybulak**	3.35	21	⇑*e*P	Pn	10 16 32.2	+2.0
KBK				⇑*e*S	Sn	10 17 12.5	+2.4
KBK	**Karagaybulak**	3.35	21	*e*PN	Pn	10 16 32.2	+2.0
CHGR	**Chuyangaron**	3.38	256	⇑*e*P	Pn	10 16 31.0	+0.4
CHGR				⇑*e*S	Sn	10 17 10.3	-0.5
CHGR	**Chuyangaron**	3.38	256	*e*PN	Pn	10 16 31.0	+0.4
CHGR				*e*S	Sn	10 17 10.3	-0.5
FRU1	**Bishkek**	3.41	16	⇓*e*P	Pn	10 16 33.2	+2.1
FRU1				⇓*e*S	Sn	10 17 14.4	+2.8
FRU1	**Bishkek**	3.41	16	*e*PN	Pn	10 16 33.2	+2.1
FRU1				*e*S	Sn	10 17 14.4	+2.8
BOOM	**Boomskoye usch**	3.54	33	⇓*e*P	Pn	10 16 35.1	+2.1
BOOM				⇓*e*S	Sn	10 17 17.4	+2.4
BOOM	**Boomskoye usch**	3.54	33	*e*PN	Pn	10 16 35.1	+2.1
BOOM				*e*S	Sn	10 17 17.4	+2.4
CHMS	**Chumysh**	3.62	16	P	Pb	10 16 38.9	-2.9
	SNR=8.0						
CHMS	**Chumysh**	3.62	16	⇓*e*P	Pn	10 16 35.9	+2.0
CHMS				⇓*e*S	Sn	10 17 18.9	+2.2
CHMS	**Chumysh**	3.62	16	*e*PN	Pn	10 16 35.9	+2.0
IUG	**Iuzhnay**	3.63	317	Pg	Pg	10 16 45.1	-2.1
	comp=E,168nm,0.8s						
IUG				Lg	Lg	10 17 35.3	
	comp=E,187nm,1.2s						
TKM2	**Tokmak 2**	3.79	26	⇓*e*P	Pn	10 16 38.4	+2.1
TKM2				⇓*e*S	Sn	10 17 23.1	+2.1
TKM2	**Tokmak 2**	3.79	26	*e*PN	Pn	10 16 38.4	+2.1
USP	**Ospenovka**	3.83	13	P	Pb	10 16 41.8	-3.6
	SNR=20						
USP	**Ospenovka**	3.83	13	⇓*e*P	Pn	10 16 38.9	+2.1
USP				⇓*e*S	Sn	10 17 23.8	+1.9
USP	**Ospenovka**	3.83	13	*e*PN	Pn	10 16 38.9	+2.1
KDJ	**Kajisay**	3.89	47	⇑*e*P	Pn	10 16 39.8	+2.0
KDJ				⇑*e*S	Sn	10 17 25.8	+2.1
KDJ	**Kajisay**	3.89	47	*e*PN	Pn	10 16 39.8	+2.0
KDJ				*e*S	Sn	10 17 25.8	+2.1
CHM	**Chimkent**	3.98	316	*e*P	Pg	10 16 53.1	-0.7
	comp=E,55nm,0.1s						
CHM				*e*S	Sg	10 17 48.6	+3.2
	comp=E,268nm,0.2s						
SGDS	**Sogindy**	4.03	13	Pg	Pb	10 16 50.5	+1.7
	comp=E,6.4nm,0.9s						
SGDS				Lg	Lg	10 17 43.8	
	comp=E,29nm,0.9s						
TARG	**Taragay, Kyrgy**	4.04	56	⇑*e*P	Pn	10 16 41.8	+1.8
TARG				⇑*e*S	Sn	10 17 29.1	+1.6
TARG	**Taragay, Kyrgy**	4.04	56	*e*PN	Pn	10 16 41.8	+1.8
TARG				*e*S	Sn	10 17 29.1	+1.6
DGS	**Degeres**	4.13	25	Pg	Pg	10 16 54.7	-2.1
	comp=E,20nm,0.8s						
DGS				Lg	Lg	10 17 50.9	
	comp=E,130nm,1.0s						
KK31	**Karatay Array**	4.16	330	Pn	Pn	10 16 45.6	+4.3
	comp=E,3.3nm,0.3s,baz=140,slow=11,SNR=95						
KK31				⇑Pg	Pg	10 16 57.0	-0.3
	comp=E,6.0nm,0.3s,baz=160,slow=15,SNR=23						
KK31				⇑Sn	Sb	10 17 39.1	-2.2
	comp=E,11nm,0.4s,baz=145,slow=27,SNR=3.6						
KK31				⇑Lg	Lg	10 17 52.7	
	comp=E,29nm,0.5s						
KK31	**Karatay Array**	4.16	330	PN	Pn	10 16 45.6	+4.3
KK31				P	Pg	10 16 57.4	0.0
KK31				S	Sb	10 17 39.5	-1.8
MTBS	**Maitube**	4.28	32	Pg	Pb	10 16 56.4	+3.4
	comp=E,22nm,0.4s						
MTBS				Lg	Lg	10 17 54.0	
	comp=E,54nm,0.5s						
MTBS	**Maitube**	4.28	32	*e*P	Pb	10 16 56.4	+3.4
	comp=E,22nm,0.4s						
MTBS				*e*S	Sg	10 17 54.0	-1.0
	comp=E,94nm,0.4s						
BRLS	**Borolday**	4.38	324	Pg	Pb	10 16 58.3	+3.5
	comp=E,25nm,0.7s						
BRLS	**Borolday**	4.38	324	*e*P	Pb	10 16 58.3	+3.5
	comp=E,25nm,0.7s						
BRLS				*e*S	Sg	10 17 57.8	-0.7
	comp=E,41nm,0.4s						
TNSS	**Tian-Shan**	4.43	37	Pg	Pg	10 16 59.5	-3.0
	comp=E,5.5nm,0.6s						
TNSS				Lg	Lg	10 17 59.2	
	comp=E,13nm,0.8s						
TNSS	**Tian-Shan**	4.43	37	*e*P	Pg	10 16 59.5	-3.0
	comp=E,5.5nm,0.6s						
TNSS				*e*S	Sg	10 17 59.2	-0.6
	comp=E,13nm,0.8s						
KRBS	**Karabastau**	4.51	22	Pg	Pg	10 17 01.8	-2.3
	comp=E,10nm,0.6s						
KRBS				Lg	Lg	10 18 03.0	
	comp=E,77nm,0.7s						
MDOK	**Medeo**	4.57	36	Pg	Pb	10 17 01.2	+3.1
	comp=E,8.0nm,0.7s						
MDOK				Lg	Lg	10 18 02.5	
	comp=E,53nm,0.7s						
KOTS	**Kotyrbulak**	4.66	36	Pg	Pg	10 17 03.4	-3.5
	comp=E,16nm,0.6s						
KOTS				Lg	Lg	10 18 06.7	
	comp=E,141nm,1.1s						
KOTS	**Kotyrbulak**	4.66	36	*e*P	Pg	10 17 03.4	-3.5
	comp=E,16nm,0.6s						
KOTS				*e*S	Sg	10 18 06.7	-0.5
	comp=E,141nm,1.1s						
PRZ	**Przheval'sk**	4.82	51	⇓*e*P	Pn	10 16 52.8	+2.2
PRZ				⇓*e*S	Sn	10 17 48.1	+1.5
PRZ	**Przheval'sk**	4.82	51	*e*PN	Pn	10 16 52.8	+2.2
PRZ				*e*S	Sn	10 17 48.1	+1.5
KTBS	**Karatobe**	4.86	30	Pg	Pb	10 17 06.9	+3.9
	comp=E,8.7nm,0.5s						
KTBS				Lg	Lg	10 18 11.8	
	comp=E,34nm,0.8s						
KUU	**Kurty**	4.90	26	Pg	Pg	10 17 08.0	-3.5
	comp=E,3.4nm,0.1s						
KUU				Lg	Lg	10 18 14.0	
	comp=E,27nm,0.6s						
KUU	**Kurty**	4.90	26	*e*P	Pg	10 17 08.0	-3.5
	comp=E,3.4nm,0.1s						
KUU				*e*S	Sg	10 18 14.0	-0.9
	comp=E,27nm,0.6s						
SATY	**Saty**	5.19	46	Pg	Pb	10 17 11.8	+3.2
	comp=E,14nm,1.2s						
SATY				Lg	Lg	10 18 21.1	
	comp=E,41nm,1.2s						
KURS	**Kuram**	5.36	41	Pg	Pg	10 17 16.5	-3.8
	comp=E,14nm,1.0s						
KURS				Lg	Lg	10 18 29.1	
	comp=E,31nm,1.6s						
BTLS	**Baital**	5.53	5	Pg	Pb	10 17 18.9	+4.6
	comp=E,7.5nm,0.6s						
BTLS				Lg	Lg	10 18 32.7	
	comp=E,9.1nm,1.0s						
BTLS	**Baital**	5.53	5	*e*P	Pb	10 17 18.9	+4.6
	comp=E,7.5nm,0.6s						
BTLS				*e*S	Sg	10 18 32.7	-2.5
	comp=E,9.1nm,1.0s						

UZB	Uzynbulak	5.59	48	Pg	Pg	10 17 20.3	-4.4
	comp=E,8.6nm,0.5s						
UZB				Lg	Lg	10 18 34.9	
	comp=E,17nm,1.3s						
UZB	Uzynbulak	5.59	48	eP	Pg	10 17 20.3	-4.4
	comp=E,8.6nm,0.5s						
UZB				eS	Sg	10 18 34.9	-2.3
	comp=E,17nm,1.3s						
KPKS	Kokpek	5.61	44	Pg	Pb	10 17 19.5	+3.8
	comp=E,0.3nm,0.4s						
KPKS				Lg	Lg	10 18 33.9	
	comp=E,8.0nm,1.0s						
ARXS	Arharly	5.75	34	Pg	Pb	10 17 22.4	+4.3
	comp=E,5.4nm,0.8s						
ARXS				Lg	Lg	10 18 39.1	
	comp=E,56nm,0.7s						
ARXS	Arharly	5.75	34	eP	Pb	10 17 22.4	+4.3
ARXS				eS	Sg	10 18 39.1	-3.1
SHLS	Shalkode	5.85	50	Pg	Pg	10 17 32.1	+2.3
	comp=E,17nm,0.8s						
SHLS				Lg	Lg	10 18 54.9	
	comp=E,47nm,0.9s						
SHLS	Shalkode	5.85	50	eP	Pg	10 17 32.1	+2.3
	comp=E,2.4nm,0.1s						
SHLS				eS	Sg	10 18 55.4	+10
	comp=E,46nm,0.4s						
BLB	Baldybastay	5.95	38	Pg	Pb	10 17 26.4	+4.8
	comp=E,23nm,0.4s						
BLB				Lg	Lg	10 18 46.0	
	comp=E,26nm,1.5s						
PDGK	Podgornoye	5.97	49	⇑Pg	Pg	10 17 29.3	-2.8
	comp=E,12nm,0.7s						
PDGK				⇑Lg	Lg	10 18 45.2	
	comp=E,56nm,0.9s						
KNOS	Konyrlen	6.49	40	Pg	Pg	10 17 36.7	-5.3
	comp=E,5.8nm,0.8s						
KNOS				Lg	Lg	10 19 03.3	
	comp=E,13nm,0.7s						
WMQ	Urumqi	11.55	64	eP	Pn	10 18 25.4	+2.7
KURBB	Kurchatov Arra	11.67	17	Pn	Pn	10 18 26.8	+2.5
	baz=214,slow=13,SNR=1.9						
KURBB				Lg	Lg	10 21 47.1	
	comp=E,0.1nm,0.3s,baz=196,slow=27,SNR=5.4						
	comp=E,0.2nm,0.2s						
KURK	Kurchatov	11.78	17	P	Pn	10 18 26.8	+1.1
AB31	Akbulak array	13.63	320	P	Pn	10 18 50.9	-0.1
	comp=E,1.5nm,0.6s,baz=133,slow=12,SNR=16						
AB31	Akbulak array	13.63	320	P	Pn	10 18 50.9	-0.1
BVAR	Borovoye Array	13.65	352	Pn	Pn	10 18 52.6	+1.4
	baz=159,slow=13,SNR=8.5						
	comp=E,1.3nm,0.6s						
BORK	Borovoye	13.68	352	⇓iP	Pn	10 18 52.9	+1.3
AKTO	Aktyubinsk	15.35	320	Pn	Pn	10 19 15.2	+0.9
	comp=E,0.3nm,0.3s,baz=95,slow=10,SNR=4.3						
	comp=E,1.4nm,0.5s						
AKTO	Aktyubinsk	15.35	320	⇓P	P	10 19 20.2	+1.2
	comp=E,5.4nm,0.9s						
ZALV	Zalesovo Beam	16.39	25	Pn	Pn	10 19 28.4	+0.7
	comp=E,0.2nm,0.3s,baz=212,slow=12,SNR=6.2						
	comp=E,1.3nm,0.5s						
ZALV	Zalesovo Beam	16.39	25	eP	P	10 19 32.5	+2.0
ARTI	Arti	19.54	335	P	Pn	10 20 08.7	+2.2
ARTI				S	Sn	10 23 52.4	+6.7
GTA	Gaotai	20.41	82	eP	Pn	10 20 16.0	-1.1
GTA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BELG	Belogornoye	21.89	314	⇓iP	P	10 20 31.8	+1.2
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GNI	Garni	21.94	281	LR	LR	10 31 04.7	
	comp=Z,20nm,18.9s,baz=16,slow=42						
SONM	Songino Array	25.14	60	P	P	10 21 04.7	+1.7
	comp=Z,1.1nm,0.7s,baz=261,slow=9.6,SNR=6.1						
SONM				LR	LR	10 31 07.2	
	comp=Z,82nm,18.6s,baz=291,slow=37						
	comp=Z,1.1nm,0.7s						
ULN	Ulaanbaatar	25.59	60	⇑iP	P	10 21 06.5	-0.6
ULN				pmax	pmax		
	comp=Z,46nm,4.2s						
OBN	Obninsk	28.98	315	eP	P	10 21 40.2	+3.0
OBN				e		10 22 30.4	
OBN				ePPP	PPP	10 22 39.8	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ASF	Jabal al Asfar	30.29	267	LR	LR	10 36 28.6	
	comp=Z,26nm,21.1s,baz=42,slow=41						
FINES	FINESS Array B	36.09	323	P	P	10 22 41.4	+2.1
	comp=Z,2.4nm,0.9s,baz=102,slow=8.2,SNR=6.1						
	comp=Z,2.4nm,0.9s						
ARCES	ARCESS Array B	39.10	336	P	P	10 23 06.7	+1.9
	comp=Z,1.9nm,0.9s,baz=97,slow=9.0,SNR=4.8						
	comp=Z,1.9nm,0.9s						
ARCES	ARCESS Array B	39.10	336	eP	P	10 23 06.5	+1.8
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HFS	Hagfors	41.89	320	P	P	10 23 29.7	+1.8
	comp=Z,1.5nm,0.5s,baz=105,slow=9.7,SNR=6.9						
	comp=Z,1.5nm,0.5s						
JOW	Kunigami	47.02	88	LR	LR	10 46 32.8	
	comp=Z,362nm,18.3s,baz=118,slow=40						
TORD	Torodi Ar. Bea	67.64	269	P	P	10 26 35.4	+0.2
	comp=Z,0.3nm,0.5s,baz=56,slow=7.7,SNR=1.4						
	comp=Z,0.3nm,0.5s						
ILAR	Eielson Array	71.35	17	P	P	10 26 59.4	+2.1
	comp=Z,0.3nm,0.8s,baz=318,slow=1.2,SNR=3.0						
	comp=Z,0.3nm,0.8s						
WRA	Warramunga Arr	82.07	124	P	P	10 27 59.6	+1.2
	comp=Z,0.6nm,0.7s,baz=313,slow=5.0,SNR=2.7						
	comp=Z,0.6nm,0.7s						
ASAR	Alice Springs	84.52	127	P	P	10 28 10.4	-0.6
	comp=Z,0.2nm,0.6s,baz=302,slow=3.8,SNR=2.9						
	comp=Z,0.2nm,0.6s						
STKA	Stephens Creek	95.12	128	LR	LR	11 19 20.7	
	comp=Z,46nm,18.8s,baz=22,slow=40						

BER ***04*** *10:31:04.1±2.5, 81°.76N×3°.93W, h10^{km}, Mw3.6, ML3.3(NAO), Confirmed Earthquake*

DNK ***04*** *10:31:04.6±3.1, 81°.83N×3°.40W, h36^{km}±26^{km}, ML2.5, Presumed earthquake*

KOLA ***04*** *10:31:06.5, 82°.10N×0°.05E, h0^{km}, ML2.6, Error ellipse: s-maj=114.3km s-min=28.5km az=50.0, Arctic Ocean*

FCIAR ***04*** *10:31:06.0, 81°.77N×2°.60W, h10^{km}, station ZFI2 has station magnitude of 3.60 station OMEGA has station magnitude of 3.60*

ISC 04 10:30:59.0±1.1**, 81°.76N**±0°.07×**4°.08W**±0°.05**, h10**^{km}**, n34, σ3**^{s}**.13**/57**, 3C, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOR	Nord	1.84	271	Pn	Pn	10 31 34.0	+3.4
NOR				Sn	Sn	10 31 55.7	+2.0
NOR	Nord	1.84	271	⇑iP	Pn	10 31 33.9	+3.4
NOR				i S	Sn	10 31 55.5	+1.8
NOR	Nord	1.84	271	⇑iP	Pn	10 31 33.9	+3.4
NOR				i S	Sn	10 31 55.5	+1.8
NOR				IAML		10 31 57.9	
	comp=Z,72nm,0.4s						
KBS	Kingsbay	3.90	128	Pn	Pn	10 32 01.8	+3.0
KBS				Sn	Sn	10 32 42.7	-2.0
KBS	Kingsbay	3.90	128	P	Pn	10 32 01.8	+3.0
KBS				S	Sn	10 32 43.4	-1.3
KBS	Kingsbay	3.90	128	eP	Pn	10 32 01.9	+3.0
KBS				IAML		10 32 02.1	
	comp=Z,12nm,0.2s						
KBS	Kingsbay	3.90	128	⇑iP	Pn	10 32 01.9	+3.0
KBS				i S	Sn	10 32 42.0	-2.6
BRBB	Barentsburg B	4.85	130	Pn	Pn	10 32 16.4	+4.5
BRBB				Sn	Sn	10 33 06.4	-1.5
BRBB	Barentsburg B	4.85	130	P	Pn	10 32 15.9	+4.1
BRBB				S	Sn	10 33 07.1	-0.8
BRBB	Barentsburg B	4.85	130	Pn	Pn	10 32 16.4	+4.5
BRBB				Sn	Sn	10 33 06.4	-1.5
SPA0	Spitsbergen Ar	5.03	125	Pn	Pn	10 32 17.1	+2.7
	baz=339,slow=9.3						
SPA0				Sn	Sn	10 33 10.5	-1.9
	baz=328,slow=12						
SPA0	Spitsbergen Ar	5.03	125	eP	Pn	10 32 16.9	+2.6
SPA0				eS	Sn	10 33 10.5	-1.9
SPA0	Spitsbergen Ar	5.03	125	Pn	Pn	10 32 17.1	+2.7
	baz=339,slow=9.3						
SPA0				IAML		10 32 18.9	
	comp=Z,5.0nm,0.3s						
SPA0				Sn	Sn	10 33 10.5	-1.9
	baz=328,slow=12						
SPITS	Spitsbergen Ar	5.03	125	P	Pn	10 32 17.1	+2.7
SPITS				S	Sn	10 33 10.7	-1.7
DAG	Danmarks Havn	5.67	216	i P	Pn	10 32 26.6	+3.5
DAG				i S	Sn	10 33 25.9	-2.2
DAG	Danmarks Havn	5.67	216	i P	Pn	10 32 26.6	+3.5
DAG				i S	Sn	10 33 25.9	-2.2
DAG				IAML		10 33 32.9	
	comp=Z,28nm,0.2s						
HSPB	Hornsund (broa	5.95	133	Pn	Pn	10 32 30.5	+3.6
HSPB	Hornsund (broa	5.95	133	P	Pn	10 32 30.8	+3.9
HSPB	Hornsund (broa	5.95	133	eP	Pn	10 32 30.5	+3.6
HSPB				eS	Sn	10 33 32.5	-2.4
HSPB	Hornsund (broa	5.95	133	eP	Pn	10 32 30.8	+3.9
HSPB				IAML		10 32 40.3	
	comp=Z,7.3nm,0.4s						
HOPEN	Hopen	7.48	119	Pn	Pn	10 32 50.5	+2.7
HOPEN				Sn	Sn	10 34 08.2	-4.4
HOPEN	Hopen	7.48	119	eP	Pn	10 32 50.6	+2.7
HOPEN				eS	Sn	10 34 08.2	-4.4
ZFI2	Zemlya Franca-	7.68	71	eP	Pn	10 32 51.3	+0.7
ZFI2				eS	Sn	10 34 09.0	-8.5
	comp=Z,17nm,1.9s						
OMEGA	Omega	7.71	71	eP	Pn	10 32 51.4	+0.5
OMEGA				eS	Sn	10 34 09.7	-8.3
	comp=Z,16nm,0.3s						
DBG	Daneborg	8.15	212	Pn	Pn	10 32 59.6	+2.6
DBG				Sn	Sn	10 34 25.7	-3.3
DBG	Daneborg	8.15	212	eP	Pn	10 32 59.4	+2.4
DBG				i S	Sn	10 34 24.3	-4.6
DBG	Daneborg	8.15	212	eP	Pn	10 32 59.4	+2.4
DBG				i S	Sn	10 34 24.3	-4.6
DBG				IAML		10 34 33.8	
	comp=Z,7.5nm,0.3s						
BEAR	Bear Island, N	8.59	135	Pn	Pn	10 33 07.5	+4.4
	baz=338,slow=22						
NEEM	North Greenlan	9.21	268	i P	Pn	10 33 11.8	-0.1
NEEM				i S	Sn	10 34 50.1	-5.4
NEEM	North Greenlan	9.21	268	i P	Pn	10 33 11.8	-0.1
NEEM				i S	Sn	10 34 50.1	-5.4
NEEM				IAML		10 34 54.8	
	comp=Z,6.9nm,0.3s						
SUMG	Summit	11.64	237	i P	Pn	10 33 47.2	+2.1
SUMG				i S	Sn	10 35 45.5	-10
SUMG	Summit	11.64	237	i P	Pn	10 33 47.2	+2.1
SUMG				i S	Sn	10 35 45.5	-10
ARA0	ARCESS Array S	13.96	134	Pn	Pn	10 34 19.8	+3.3
	baz=346,slow=11						
ARA0				Sn	Sn	10 36 41.3	-10
	baz=350,slow=28						
ARA0	ARCESS Array S	13.96	134	Pn	Pn	10 34 19.8	+3.3
	baz=346,slow=11						
ARA0				Sn	Sn	10 36 41.3	-10
	baz=350,slow=28						

NOU 04 10:34:11.9, 15°.00S×167°.29E, h76^{km}**, MLv4.7**/18**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.45	191	P	Pn	10 34 26.4	+1.5
DVP	Devils Point	2.84	162	P	Pn	10 34 55.6	+0.5
RTV	Rentapao	2.98	159	P	Pn	10 34 57.4	+0.4
INH	Isangel	4.90	158	P	Pn	10 35 23.1	0.0
MARNC	Mare, Loyalty	6.48	174	P	Pn	10 35 43.0	-1.7
DZM	Mont Dzumac	7.08	186	P	Pn	10 35 53.0	0.0
ONTNC	Ouen Toro	7.31	186	P	Pn	10 35 57.3	+1.3
OUENC	Ouen Island, N	7.39	183	P	Pn	10 35 57.7	+0.6
PINNC	Pines Island,	7.57	179	P	Pn	10 35 59.9	+0.3
NGOA	Tingoa Renbel	7.83	295	P	Pn	10 36 02.5	-0.6
SAVO	Savo Central	9.34	308	P	Pn	10 36 25.0	+1.2
TATA	Tatamba Isabel	9.84	311	P	Pn	10 36 29.8	-0.9

JMA 04 10:34:36.0±0.1**, 35°.6N**±0°.3×**139°.5E**±0°.3**, h24**^{km}±1^{km}**, MV1.1**/22**, TOKYO PREF, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSGW	Sagamiharawaka	0.23	274	P	Pb	10 34 41.7	-0.3
JSGW				eS	Sb	10 34 46.0	0.0
JOD2	Odawara 2	0.46	226	eP	Pb	10 34 45.3	-0.2
JNT	Takato	1.14	285	eP	Pb	10 34 57.1	+0.1
JNT				eS	Sb	10 35 12.1	+0.6

MOS ***04*** *10:35:04.4±1.5, 36°.79N×139°.84E, h16^{km}, mb4.7/20, Error ellipse: s-maj=10.9km s-min=7.3km az=98.8*

NIED ***04*** *10:35:05.3, 36°.95N×139°.68E, h7^{km}, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.10; M$_{\theta\theta}$-0.01; M$_{\phi\phi}$-0.09; M$_{r\theta}$-0.23; M$_{\theta\phi}$-0.99; M$_{\phi r}$-0.02; Fault plane solution: M$_0$1.01000×10^{16} NP1: φ$_s$359.00000°, δ77.00000°, λ1.00000°. NP2: φ$_s$269.00000°, δ89.00000°, λ167.00000°.*

JMA ***04*** *10:35:05.3±0.0, 37°.0N±0°.2×139°.7E±0°.2, h7^{km}, MD4.8/20, MW4.6/20, NORTHERN TOCHIGI PREF*

JMA Felt IV J1 at NORTHERN TOCHIGI PREF .

GCMT ***04*** *10:35:06.1±0.4, 37°.01N±0°.02×139°.78E±0°.03, h26^{km}±1^{km}, MW4.8/76, Moment Tensor Solution. s13,c14; s76,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.24±.12; M$_{\theta\theta}$0.75±.12; M$_{\phi\phi}$-0.50±.10; M$_{r\theta}$-0.20±.17; M$_{\theta\phi}$-1.96±.09; M$_{\phi r}$-0.37±.17; Best double couple: M$_0$2.10600×10^{16} NP1: φ$_s$82.00000°, δ80.00000°, λ-172.00000°. NP2: φ$_s$350.00000°, δ82.00000°, λ-10.00000°. Principal axes: T 2.1790, Plg1.0000°, Azm36.0000°; N -0.1440, Plg77.0000°, Azm132.0000°; P -2.0330, Plg13.0000°, Azm306.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***04*** *10:35:06.1±1.6, 36°.84N±0°.04×139°.70E±0°.05, h10^{km}±1^{km}, mb4.7/126 Error ellipse: s-maj=7.7km s-min=5.5km az=50.0*

IDC ***04*** *10:35:08.6±2.4, 36°.90N×139°.44E, h33^{km}±18^{km}, mb3.9/21, mbtmp4.1/23, ML4.1/2, MS3.8/49, Error ellipse: s-maj=17.8km s-min=12.7km az=71.0*

ISC 04 10:35:06.0±0.8**, 36°.91N**±0°.03×**139°.72E**±0°.03**, h10**^{km}±5^{km}**, n311, σ1**^{s}**.64**/174**, mb4.7**/89**, MS3.9**/45**, 6C-15D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSB	Shiboa	0.17	70	i P	Pg	10 35 09.6	-0.3
JSB	Shiboa	0.17	70	A	A	10 35 09.6	
	comp=N,686nm,1.1s,comp=E,344nm,1.9s						
JKT	Katashina	0.40	249	P	Pg	10 35 13.0	-1.0
JKT				S	Sg	10 35 18.1	-1.2
JKT	Katashina	0.40	249	A	A	10 35 13.0	
	comp=N,92nm,2.6s,comp=E,78nm,0.9s						
JFY	Yanaizu	0.50	359	⇓iP	Pg	10 35 14.2	-1.6
JFY				⇓S	Sg	10 35 20.1	-2.2
JFY	Yanaizu	0.50	359	A	A	10 35 14.2	
	comp=N,61nm,3.8s,comp=E,164nm,1.2s						
JAG	Ashikaga	0.53	204	i P	Pg	10 35 15.8	-0.5
JAG				S	Sg	10 35 22.5	-0.7
JAG	Ashikaga	0.53	204	A	A	10 35 15.8	
	comp=N,80nm,1.5s,comp=E,97nm,1.6s						
JUON	Uonuma	0.61	300	⇓iP	Pg	10 35 16.2	-1.6
JUON				⇓S	Sg	10 35 23.7	-2.1
JUON	Uonuma	0.61	300	A	A	10 35 16.2	
	comp=N,89nm,3.5s,comp=E,44nm,3.0s						
JFFD	Fukushimafurud	0.70	75	A	A	10 35 19.1	
	comp=N,30nm,3.0s,comp=E,32nm,4.0s						
JHO	Hitachi	0.75	113	A	A	10 35 20.4	
	comp=N,25nm,1.7s,comp=E,27nm,4.8s						
JYT	Yasato	0.78	150	Pg	Pg	10 35 19.9	-1.2
JYT					Pb	10 35 20.3	-1.4
JYT	Yasato	0.78	150	A	A	10 35 21.1	
	comp=N,37nm,0.4s,comp=E,45nm,0.5s						
JOTO	OTAMA OYAMA	0.82	37	i P	Pg	10 35 20.5	-1.3
JOTO	OTAMA OYAMA	0.82	37	A	A	10 35 20.5	
	comp=N,58nm,0.9s,comp=E,55nm,4.0s						
ONAJ	Iwakimizuishiy	0.89	77	A	A	10 35 22.6	
	comp=N,35nm,4.8s,comp=E,35nm,3.7s						
JHYU	Hitachinakayam	0.90	129	A	A	10 35 23.4	
	comp=N,32nm,6.5s,comp=E,40nm,3.0s						
JGK	Kuni	0.93	248	A	A	10 35 22.9	
	comp=N,50nm,4.2s,comp=E,55nm,3.8s						
JNS	Sasagawa	0.96	341	⇓iP	Pg	10 35 22.4	-2.2
JNS				⇓S	Sg	10 35 34.7	-2.4
JNS	Sasagawa	0.96	341	A	A	10 35 22.4	
	comp=N,26nm,2.7s,comp=E,56nm,5.1s						
JIZZ	Izumozaki	1.01	308	⇓iP	Pg	10 35 24.8	-0.8
JIZZ				⇓S	Sb	10 35 39.5	+0.5
JIZZ	Izumozaki	1.01	308	A	A	10 35 24.8	
	comp=N,100nm,0.6s,comp=E,81nm,2.5s						
JFK	Kawauchi	1.03	63	A	A	10 35 24.9	
	comp=N,30nm,8.6s,comp=E,19nm,4.9s						
JYAR	Yonezawaarcadi	1.06	19	A	A	10 35 24.6	
	comp=N,42nm,1.3s,comp=E,75nm,1.4s						
JRY	Ryogami san	1.11	217	A	A	10 35 26.4	
	comp=N,28nm,0.9s,comp=E,37nm,1.1s						
JIHU	Itakohorinouch	1.15	145	A	A	10 35 27.6	
	comp=N,179nm,4.6s,comp=E,216nm,3.9s						
TOK	Tokyo	1.22	178	A	A	10 35 28.8	
	comp=N,145nm,1.2s,comp=E,261nm,1.2s						
JMST	Minamisoumatoc	1.24	49	A	A	10 35 28.3	
	comp=N,16nm,3.1s,comp=E,14nm,4.3s						
JJN	Nakama	1.26	279	A	A	10 35 28.1	
	comp=N,74nm,0.9s,comp=E,57nm,1.1s						
MJAR	Matsushiro Arr	1.27	254	Pg	Pn	10 35 28.6	-1.2
	comp=E,50nm,0.3s,baz=92,slow=17,SNR=849						
MJAR				LR	LR	10 35 46.1	
	comp=E,599nm,18.3s,baz=280,slow=36						
MAJO	Matsushiro	1.27	254		Pn	10 35 28.7	-1.1
MAJO	Matsushiro	1.27	254	P	Pn	10 35 29.2	-0.6
MAJO	Matsushiro	1.27	254	c iP	Pn	10 35 28.5	-1.2
MJB9	Matsu-Tunnel	1.27	254		Pn	10 35 29.8	0.0
MJB9				Sn	Sg	10 35 46.5	-0.3
JMM	Marumori	1.28	42	A	A	10 35 28.9	
	comp=N,20nm,2.3s,comp=E,18nm,1.6s						
JYS	Shirataka	1.34	12	A	A	10 35 29.5	
	comp=N,29nm,1.4s,comp=E,60nm,2.0s						
JSGW	Sagamiharawaka	1.37	198	A	A	10 35 31.0	
	comp=N,66nm,0.6s,comp=E,140nm,0.9s						
JNG	Nsakai	1.39	249	A	A	10 35 30.8	
	comp=N,12nm,2.1s,comp=E,18nm,4.7s						
JSMT	Sammumatsuo	1.40	155	A	A	10 35 31.8	
	comp=N,78nm,6.0s,comp=E,93nm,4.6s						
JCAJ	Choshiashikaji	1.50	142	A	A	10 35 33.4	
	comp=N,16nm,2.7s,comp=E,17nm,1.3s						
JCCN	Chibachonan	1.58	164	A	A	10 35 34.5	
	comp=N,87nm,4.6s,comp=E,121nm,2.2s						
JSD	Sado	1.61	315		Pn	10 35 33.0	-1.5
JSD	Sado	1.61	315	P	Pn	10 35 33.5	-1.0
JSD	Sado	1.61	315	A	A	10 35 33.5	
	comp=N,15nm,1.1s,comp=E,18nm,2.1s						
JOU	Okura	1.64	27	A	A	10 35 34.3	
	comp=N,21nm,2.4s,comp=E,24nm,3.4s						
JNT	Takato	1.64	231	A	A	10 35 34.9	
	comp=N,12nm,1.8s,comp=E,10.0nm,2.4s						
I30JP	ISUMI INFRASON	1.67	163	I	I	10 42 40.0	
	baz=348,slow=320,SNR=0.5						
JYA	Atsumi	1.68	360	A	A	10 35 34.6	
	comp=N,47nm,1.4s,comp=E,82nm,1.5s						
JYO	Yokosk	1.68	181	A	A	10 35 36.0	
	comp=N,59nm,1.5s,comp=E,74nm,3.1s						
JYN	Shimob	1.70	214	A	A	10 35 35.9	
	comp=N,32nm,1.6s,comp=E,22nm,5.4s						
JOD2	Odawara 2	1.72	197	A	A	10 35 36.4	
	comp=N,40nm,1.9s,comp=E,55nm,1.5s						
JKUC	kamogawauchiur	1.79	167	A	A	10 35 37.7	
	comp=N,27nm,0.9s,comp=E,30nm,2.6s						
TATJ	Tateyama 2	1.88	176	A	A	10 35 38.9	
	comp=N,53nm,2.8s,comp=E,68nm,2.6s						
JFNN	Fujinakano	1.90	206	A	A	10 35 39.0	
	comp=N,28nm,3.1s,comp=E,43nm,6.4s						
JTT	Ttatey	1.94	262	A	A	10 35 38.9	
	comp=N,52nm,1.6s,comp=E,35nm,1.6s						
JOFO	Osakifurukawao	1.94	29	A	A	10 35 38.8	
	comp=N,84nm,3.8s,comp=E,117nm,4.7s						
JSZ	Suzu	1.95	287	A	A	10 35 38.9	
	comp=N,26nm,1.9s,comp=E,18nm,1.6s						
JIKH	Ishinomakikobu	1.97	44	A	A	10 35 39.5	
	comp=N,7.0nm,3.1s,comp=E,13nm,2.6s						
JIO	Ouri	2.02	40	A	A	10 35 40.0	
	comp=N,13nm,3.2s,comp=E,12nm,2.8s						
JHTM	Izuhatsuma	2.03	197	A	A	10 35 41.0	
	comp=N,79nm,0.9s,comp=E,83nm,1.3s						
JGN	Niukaw	2.05	251	A	A	10 35 40.7	
	comp=N,6.0nm,1.8s,comp=E,5.0nm,3.5s						
JYK	Kaneyama	2.07	14	A	A	10 35 40.5	
	comp=N,11nm,2.5s,comp=E,15nm,3.7s						
JYYZ	Yamagatayuza	2.11	5	A	A	10 35 41.0	
	comp=N,96nm,6.3s,comp=E,44nm,6.4s						
JNY	Yasuok	2.16	225	A	A	10 35 42.5	
	comp=N,14nm,1.8s,comp=E,14nm,2.4s						
JIM2	Oshima 3	2.20	186	A	A	10 35 43.5	
	comp=N,23nm,0.8s,comp=E,34nm,1.8s						
SHZ3	Shizuoka 3	2.21	214	A	A	10 35 43.4	
	comp=N,22nm,0.8s,comp=E,18nm,1.4s						
JIZS	Izushimoda	2.29	198	A	A	10 35 44.7	
	comp=N,18nm,2.7s,comp=E,28nm,2.4s						
JGF	Kuroka	2.31	236		Pn	10 35 44.7	+0.6
JGF	Kuroka	2.31	236	P	Pn	10 35 45.6	+1.5
JGF	Kuroka	2.31	236	A	A	10 35 44.5	
	comp=N,10.0nm,2.9s,comp=E,6.0nm,4.6s						
JKMT	Kesennumamotoy	2.35	36	A	A	10 35 44.9	
	comp=N,6.0nm,3.0s,comp=E,10.0nm,3.7s						
JMK	Ichinoseki	2.36	30	A	A	10 35 45.0	
	comp=N,6.0nm,5.1s,comp=E,12nm,3.0s						
JHG	Hegura jima	2.42	294	A	A	10 35 45.5	
	comp=N,12nm,2.6s,comp=E,11nm,1.1s						
JSG	Sagara	2.55	210		Pn	10 35 46.6	-0.8
JSG	Sagara	2.55	210	P	Pb	10 35 51.7	-0.2
JSG	Sagara	2.55	210	A	A	10 35 48.4	
	comp=N,30nm,2.9s,comp=E,45nm,2.6s						
JKKS	Kakegawashinom	2.57	214	A	A	10 35 48.7	
	comp=N,27nm,1.4s,comp=E,28nm,7.1s						
JAO	Obara	2.58	231	A	A	10 35 48.5	
	comp=N,9.0nm,3.5s,comp=E,8.0nm,1.5s						
JRG	Rokugo	2.59	16	A	A	10 35 48.0	
	comp=N,9.0nm,4.7s,comp=E,11nm,4.3s						
HMMJ	Hamamatsu 2	2.61	219	A	A	10 35 49.0	
	comp=N,5.0nm,6.4s,comp=E,5.0nm,5.0s						
OFUJ	Ofunato	2.66	35	A	A	10 35 49.3	
	comp=N,6.0nm,7.9s,comp=E,6.0nm,3.7s						
JSSY	Shinshiroyabe	2.68	223	A	A	10 35 50.0	
	comp=N,6.0nm,1.7s,comp=E,8.0nm,1.6s						
INU	Inuyama	2.68	235		Pn	10 35 49.7	+0.5
INU	Inuyama	2.68	235	P	Pn	10 35 50.9	+1.7
JICN	Ichinomiyachia	2.83	236	A	A	10 35 52.0	
	comp=N,14nm,2.5s,comp=E,12nm,3.2s						
JOM	Ohasama	2.84	25	A	A	10 35 51.9	
	comp=N,5.0nm,8.3s,comp=E,12nm,1.4s						
JSZI	Iwateshizukuis	2.99	19	A	A	10 35 53.9	
	comp=N,12nm,3.4s,comp=E,26nm,4.4s						
JAA	Atsumi	3.09	223	A	A	10 35 55.9	
	comp=N,4.0nm,4.0s,comp=E,6.0nm,5.5s						
JEG	Eigenji	3.22	238	A	A	10 35 57.7	
	comp=N,4.0nm,6.3s,comp=E,4.0nm,5.6s						
JIE	Ise	3.51	225	A	A	10 36 01.9	
	comp=N,7.0nm,4.3s,comp=E,5.0nm,3.6s						
JKEN	Kujiedanarisaw	3.64	25	A	A	10 36 03.2	
	comp=N,6.0nm,5.4s,comp=E,7.0nm,8.3s						
JHJ	Hachijo jima 2	3.78	179	Pn	Pn	10 36 03.8	-0.5
	comp=E,85nm,0.3s,baz=84,slow=21,SNR=18						
JHJ				Sn	Sn	10 36 46.7	-2.1
	comp=E,144nm,0.3s,baz=64,slow=23,SNR=14						
JHJ				LR	LR	10 37 36.5	
	comp=E,850nm,19.5s,baz=74,slow=39						
	comp=E,331nm,0.5s						
JHJ2	Mitsune	3.79	179		Pn	10 36 03.9	-0.6
JTM	Tenmabayashi	4.01	15		Pn	10 36 11.1	+3.6
JTM	Tenmabayashi	4.01	15	P	Pn	10 36 10.8	+3.3
JAHD	Aomorihigashid	4.53	16	A	A	10 36 15.6	
	comp=N,10.0nm,1.6s,comp=E,7.0nm,2.0s						
JMN	Monobe	5.73	238		Pn	10 36 32.2	+1.1
JMN	Monobe	5.73	238	P	Pn	10 36 33.2	+2.0
ERM	Erimo	5.75	27	Pn	Pn	10 36 32.6	+1.2
ERM	Erimo	5.75	27	P	Pn	10 36 32.6	+1.2
ASAJ	Asahikawa	7.53	16	Pn	Pn	10 36 57.0	+1.2
	comp=E,1.8nm,0.3s,baz=240,slow=6.9,SNR=9.9						
ASAJ				LR	LR	10 40 10.8	
	comp=E,698nm,19.0s,baz=296,slow=40						
	comp=E,20nm,0.8s						
ASAJ	Asahikawa	7.53	16	P	Pn	10 36 57.0	+1.2
JKA	Kamikawa-asahi	7.53	16	Pn	Pn	10 36 56.8	+1.0
JNU	Nakatsue	8.17	245	Pn	Pn	10 37 05.5	+0.8
	comp=E,0.8nm,0.3s,baz=55,slow=8.3,SNR=14						
JNU				LR	LR	10 40 42.8	
	comp=E,666nm,19.8s,baz=55,slow=42						
JNU	Nakatsue	8.17	245		Pn	10 37 04.0	-0.7
JNU	Nakatsue	8.17	245	P	Pn	10 37 06.4	+1.7
TEY	Ternei	8.45	345	eP	Pn	10 37 18.7	+10
USRK	Ussuriysk Ar.	9.36	323	Pn	Pn	10 37 22.1	+1.3
	comp=E,0.5nm,0.3s,baz=139,slow=13,SNR=7.6						
KSRS	Korea Array	9.43	277	Pn	Pn	10 37 24.2	+2.4

	comp=E,4.2nm,0.3s,baz=89,slow=14,SNR=39						
KS19	**Wonju Array Si**	**9.47**	**277**		**Pn**	**10 37 22.9**	**+0.4**
JCJ	**Chichijima**	**10.01**	**167**	LR	LR	10 41 19.7	
	comp=E,447nm,19.5s,baz=57,slow=37						
YSS	**Yuzhno-Sakhali**	**10.29**	**12**	Pn	**Pn**	**10 37 36.9**	**+3.4**
YSS	**Yuzhno-Sakhali**	**10.29**	**12**	*e*P	**Pn**	**10 37 36.6**	**+3.0**
YSS				pmax	pmax		
	comp=Z,40nm,1.3s						
MDJ	**Mudanjiang**	**10.87**	**318**	P	**Pn**	**10 37 44.8**	**+3.3**
MDJ				pmax	pmax		
	comp=Z,26nm,2.5s						
BNX	**BinXian**	**12.77**	**318**	⇓P	**Pn**	**10 38 07.2**	**-0.3**
BNX				pmax	pmax		
	comp=Z,31nm,1.3s						
CN2	**Changchun**	**12.87**	**307**	P	**Pn**	**10 38 12.4**	**+3.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SSE	**Sheshan**	**16.41**	**255**	P	**Pn**	**10 38 55.8**	**-0.6**
SSE				S	**Sn**	**10 41 57.0**	**-1.6**
SSE				pmax	pmax		
	comp=Z,12nm,0.7s						
SSE				pmax	pmax		
	comp=Z,170nm,4.7s						
SSE				LR	LR		
	comp=N,670nm,21.3s						
SSE				LR	LR		
	comp=E,500nm,21.2s						
NJ2	**Nanjing**	**17.86**	**260**	*e*P	**Pn**	**10 39 13.9**	**-0.6**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				LR	LR		
	comp=N,1µm,19.9s						
NJ2				LR	LR		
	comp=E,730nm,17.5s						
NJ2				LR	LR		
	comp=Z,780nm,16.1s						
TIA	**Tai'an**	**18.16**	**275**	P	**P**	**10 39 19.6**	**+1.1**
TIA				pmax	pmax		
	comp=Z,21nm,1.2s						
TIA				LR	LR		
	comp=N,1µm,13.0s						
TIA				LR	LR		
	comp=E,1µm,13.8s						
TIA				LR	LR		
	comp=Z,1µm,15.3s						
ZEA	**Zeya**	**18.93**	**337**	*e*P	**Pn**	**10 39 30.8**	**+3.4**
HILR	**Hailar Array B**	**19.20**	**317**	P	**Pn**	**10 39 32.1**	**+1.3**
	comp=Z,4.9nm,0.7s,baz=116,slow=10,SNR=3.8						
HILR				LR	LR	10 46 27.7	
	comp=Z,161nm,18.8s,baz=120,slow=36						
XLT	**XiLinHaoTe**	**19.27**	**299**	*e*P	**Pn**	**10 39 35.9**	**+4.2**
XLT				pP	sP	10 39 39.3	+3.8
XLT				pmax	pmax		
	comp=Z,18nm,1.1s						
HNS	**HongShan**	**19.93**	**279**	⇓P	**Pn**	**10 39 40.8**	**+1.3**
HNS				pmax	pmax		
	comp=Z,18nm,1.1s						
HNS				LR	LR		
	comp=N,1µm,14.9s						
HNS				LR	LR		
	comp=Z,690nm,8.1s						
PETK	**Petropavlovsk-**	**20.50**	**32**	P	Pn	10 39 49.7	+3.6
	comp=Z,6.0nm,0.9s,baz=230,slow=8.8,SNR=3.0						
PETK	**Petropavlovsk-**	**20.50**	**32**	P	**P**	**10 39 43.3**	**-0.6**
PETK	**Petropavlovsk-**	**20.50**	**32**	P	**P**	**10 39 43.3**	**-0.6**
HHC	**Hu-ho-hao-te**	**22.22**	**289**	*e*P	**P**	**10 40 04.0**	**+1.2**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,470nm,6.7s						
YAK	**Yakutsk**	**25.91**	**349**	*e*P	**P**	**10 40 39.7**	**+1.8**
YAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ULN	**Ulaanbaatar**	**26.30**	**305**	P	**P**	**10 40 41.6**	**-0.3**
ULN	**Ulaanbaatar**	**26.30**	**305**	⇑*i*P	**P**	**10 40 43.0**	**+1.2**
ULN				pmax	pmax		
	comp=Z,41nm,5.0s						
SONM	**Songino Array**	**26.73**	**305**	P	**P**	**10 40 41.7**	**-4.0**
	comp=Z,1.4nm,0.8s,baz=107,slow=8.1,SNR=6.2						
SONM				LR	LR	10 51 22.9	
	comp=Z,127nm,18.8s,baz=100,slow=37						
	comp=Z,1.4nm,0.8s						
SONM	**Songino Array**	**26.73**	**305**	P	**P**	**10 40 44.2**	**-1.5**
SONM	**Songino Array**	**26.73**	**305**	P	**P**	**10 40 44.2**	**-1.5**
SONM				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SHEM	**Shemya Is, Ala**	**28.72**	**46**	LR	LR	10 51 32.1	
	comp=Z,21nm,21.2s,baz=286,slow=34						
LZH	**Lanzhou**	**28.75**	**279**	*e*P	**P**	**10 41 04.0**	**+0.2**
LZH				sP	sP	10 41 10.8	+1.9
LZH				pmax	pmax		
	comp=Z,11nm,1.0s						
LZDM	**Lanzhou Array**	**28.89**	**279**	LR	LR	10 53 15.8	
	comp=Z,366nm,18.2s,baz=75,slow=38						
H11N2	**WAKE ISLAND Hy**	**29.27**	**118**	T	T	11 11 12.0	
	baz=312,slow=74,SNR=62						
H11N1	**WAKE ISLAND Hy**	**29.28**	**118**	T	T	11 11 13.2	
	baz=312,slow=74,SNR=53						
H11N3	**WAKE ISLAND Hy**	**29.29**	**118**	T	T	11 11 13.3	
	baz=312,slow=74,SNR=50						
H11S1	**WAKE ISLAND Hy**	**29.95**	**120**	T	T	11 11 59.5	
	baz=314,slow=75,SNR=75						
H11S3	**WAKE ISLAND Hy**	**29.95**	**120**	T	T	11 11 59.6	
	baz=314,slow=75,SNR=38						
H11S2	**WAKE ISLAND Hy**	**29.97**	**120**	T	T	11 12 02.7	
	baz=314,slow=75,SNR=53						
DAV	**Davao City (W)**	**32.38**	**207**	LR	LR	10 55 56.5	
	comp=Z,109nm,18.1s,baz=26,slow=39						
PZH	**PanZhiHua**	**33.74**	**263**	P	**P**	**10 41 49.8**	**+2.0**
WMQ	**Urumqi**	**39.68**	**297**	*e*P	**P**	**10 42 41.1**	**+2.9**
CMAR	**Chiang Mai Arr**	**40.15**	**254**	LR	LR	11 00 25.2	
	comp=Z,178nm,18.4s,baz=55,slow=38						
ZAA0	**Zalesovo Array**	**40.99**	**313**		**P**	**10 42 48.4**	**-0.5**
ZALV	**Zalesovo Beam**	**40.99**	**313**	P	**P**	**10 42 46.6**	**-2.2**
	comp=Z,3.1nm,0.9s,baz=90,slow=7.4,SNR=10						
ZALV				LR	LR	10 58 41.7	
	comp=Z,71nm,18.8s,baz=74,slow=35						
	comp=Z,3.1nm,0.9s						
ZALV	**Zalesovo Beam**	**40.99**	**313**		**P**	**10 42 48.0**	**-0.9**
ZALV	**Zalesovo Beam**	**40.99**	**313**	*i* P	**P**	**10 42 50.0**	**+1.1**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NRIK	**Noril'sk**	**42.81**	**336**	P	**P**	**10 43 02.1**	**-1.4**
	comp=Z,1.3nm,0.6s,baz=139,slow=14,SNR=3.9						
NRIK				LR	LR	11 02 09.4	
	comp=Z,203nm,18.3s,baz=110,slow=38						
	comp=Z,1.3nm,0.6s						
NRIK	**Noril'sk**	**42.81**	**336**	P	**P**	**10 43 04.8**	**+1.2**
NRIK	**Noril'sk**	**42.81**	**336**	⇓*i*P	**P**	**10 43 07.1**	**+3.5**
MKAR	**Makanchi Array**	**43.03**	**302**	P	**P**	**10 43 03.4**	**-2.3**
	comp=Z,0.4nm,0.7s,baz=92,slow=8.7,SNR=2.4						
MKAR				LR	LR	11 01 40.6	
	comp=Z,189nm,18.9s,baz=86,slow=37						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**43.03**	**302**	P	**P**	**10 43 04.7**	**-1.0**
MKAR	**Makanchi Array**	**43.03**	**302**	*ce*P	**P**	**10 43 09.3**	**+3.6**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRDH	**Bariadhala**	**43.62**	**265**	LR	LR	11 02 11.1	
	comp=Z,171nm,18.9s,baz=148,slow=37						
F17K	**Baldwin Pennin**	**44.50**	**29**	IAmb	IAmb	10 43 26.1	
	comp=Z,8.3nm,0.8s						
KURK	**Kurchatov**	**44.94**	**308**		**P**	**10 43 19.5**	**-1.3**
KURK				IAmb	IAmb	10 43 25.8	
	comp=Z,13nm,0.9s						
KURK	**Kurchatov**	**44.94**	**308**	P	**P**	**10 43 19.7**	**-1.1**
E18K	**Tukpahlearik C**	**44.94**	**28**	IAmb	IAmb	10 43 29.8	
	comp=Z,9.8nm,0.9s						
J17K	**VABM Dome**	**44.95**	**34**	IAmb	IAmb	10 43 30.1	
	comp=Z,14nm,1.2s						
C18K	**Utukok River**	**44.99**	**26**	IAmb	IAmb	10 43 30.6	
	comp=Z,9.4nm,0.9s						
KURBB	**Kurchatov Arra**	**45.01**	**308**	P	**P**	**10 43 19.7**	**-1.7**
	comp=Z,2.5nm,0.6s,baz=84,slow=8.5,SNR=14						
	comp=Z,2.5nm,0.6s						
EVN	**Everest**	**45.04**	**274**	P	**P**	**10 43 22.1**	**-0.6**
EVN				IAmb	IAmb	10 43 45.4	
	comp=Z,15nm,1.4s						
G18K	**Tagagawik**	**45.44**	**30**	IAmb	IAmb	10 43 33.0	
	comp=Z,8.4nm,1.0s						
F19K	**Shaleruckik Mo**	**45.93**	**29**	IAmb	IAmb	10 43 58.4	
	comp=Z,9.3nm,1.4s						
D19K	**Kuna River**	**46.07**	**27**	IAmb	IAmb	10 43 37.9	
	comp=Z,13nm,0.9s						
E19K	**Redstone River**	**46.23**	**28**	IAmb	IAmb	10 43 39.7	
	comp=Z,8.6nm,0.8s						
J19K	**Poorman**	**46.53**	**33**	P	**P**	**10 43 33.8**	**+0.5**
J19K				IAmb	IAmb	10 43 41.9	
	comp=Z,8.2nm,1.1s						
TARG	**Taragay, Kyrgy**	**47.23**	**296**	P	**P**	**10 43 40.5**	**+0.9**
TARG				IAmb	IAmb	10 43 46.2	
	comp=Z,5.6nm,0.8s						
TARG	**Taragay, Kyrgy**	**47.23**	**296**	P	**P**	**10 43 40.5**	**+0.9**
TARG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
G21K	**Allakaket**	**47.59**	**30**	IAmb	IAmb	10 43 52.3	
	comp=Z,6.7nm,1.0s						
RED	**Redoubt Volcan**	**47.83**	**38**	P	**P**	**10 43 45.5**	**+1.9**
CNPM	**China Poot**	**48.66**	**39**	P	**P**	**10 43 51.7**	**+1.8**
L22K	**Petersville**	**48.71**	**35**	P	**P**	**10 43 50.6**	**+0.4**
L22K				IAmb	IAmb	10 44 12.4	
	comp=Z,11nm,1.4s						
SUA	**Susitna One**	**48.77**	**37**	P	**P**	**10 43 52.5**	**+1.6**
SUA				IAmb	IAmb	10 44 00.7	
	comp=Z,8.7nm,1.0s						
D23K	**Nanushuk River**	**48.81**	**27**	IAmb	IAmb	10 43 59.6	
	comp=Z,11nm,1.2s						
TRF	**Thorofare Moun**	**48.90**	**34**	P	**P**	**10 43 53.3**	**+1.4**
H23K	**Yukon River**	**49.17**	**31**	IAmb	IAmb	10 44 02.7	
	comp=Z,7.6nm,0.9s						
AAK	**Ala-Archa**	**49.35**	**298**	P	**P**	**10 43 54.4**	**-1.2**
	comp=Z,1.1nm,0.4s,baz=17,slow=19,SNR=1.8						
AAK				LR	LR	11 04 27.2	
	comp=Z,146nm,19.7s,baz=76,slow=36						
	comp=Z,1.1nm,0.4s						
AAK	**Ala-Archa**	**49.35**	**298**	P	**P**	**10 43 55.6**	**0.0**
AAK				IAmb	IAmb	10 44 03.5	
	comp=Z,13nm,1.5s						
AAK	**Ala-Archa**	**49.35**	**298**	⇑*i*P	**P**	**10 43 58.4**	**+2.8**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NEA2	**Nenana**	**49.40**	**33**	IAmb	IAmb	10 44 03.8	
	comp=Z,7.2nm,1.1s						
D24K	**Happy Valley**	**49.49**	**27**	IAmb	IAmb	10 44 04.4	
	comp=Z,10nm,0.9s						
E24K	**Your Creek**	**49.59**	**28**	IAmb	IAmb	10 44 05.5	
	comp=Z,14nm,1.1s						
BVAR	**Borovoye Array**	**49.65**	**312**	P	**P**	**10 43 56.3**	**-1.2**
	comp=Z,1.7nm,0.6s,baz=79,slow=7.7,SNR=6.8						
BVAR				LR	LR	11 05 57.9	
	comp=Z,78nm,18.4s,baz=84,slow=37						
	comp=Z,1.7nm,0.6s						
BORK	**Borovoye**	**49.69**	**312**	P	**P**	**10 43 58.5**	**+0.7**
BORK	**Borovoye**	**49.69**	**312**	⇓*i*P	**P**	**10 43 59.6**	**+1.8**
BORK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
F24K	**Squaw Lake**	**49.82**	**29**		**P**	**10 43 59.5**	**+0.8**
WRH	**Wood River Hil**	**49.83**	**33**	P	**P**	**10 43 59.7**	**+1.0**
WRH				IAmb	IAmb	10 44 28.1	
	comp=Z,8.9nm,1.4s						
H24K	**Noodor Dome**	**49.86**	**31**	P	**P**	**10 43 58.6**	**-0.4**
H24K				IAmb	IAmb	10 44 16.6	
	comp=Z,7.8nm,1.2s						
MTN	**Manton Dam**	**50.14**	**191**	P	**P**	**10 44 00.5**	**-1.1**
HDA	**Harding Lake**	**50.32**	**33**	IAmb	IAmb	10 44 10.3	
	comp=Z,11nm,1.1s						
ILAR	**Eielson Array**	**50.33**	**32**	P	**P**	**10 44 02.0**	**-0.5**
	comp=Z,2.3nm,0.8s,baz=276,slow=6.6,SNR=14						
ILAR				LR	LR	11 06 20.0	
	comp=Z,40nm,20.4s,baz=274,slow=37						
	comp=Z,2.3nm,0.8s						
D25K	**Kavik River**	**50.37**	**26**	P	**P**	**10 44 03.0**	**+0.2**
D25K				IAmb	IAmb	10 44 13.5	
	comp=Z,8.0nm,0.8s						
PSI	**Prapat**	**50.57**	**238**	LR	LR	11 08 25.3	
	comp=Z,58nm,18.8s,baz=30,slow=40						
E25K	**Arctic Village**	**50.69**	**28**		**P**	**10 44 06.2**	**+0.9**
E25K				IAmb	IAmb	10 44 14.1	
	comp=Z,8.3nm,1.1s						
PRP	**Porcupine Dome**	**50.85**	**31**		**P**	**10 44 07.4**	**+0.8**
F26K	**Sheenjek River**	**51.24**	**28**	IAmb	IAmb	10 44 18.6	
	comp=Z,12nm,1.0s						
C27K	**Jago River**	**51.30**	**26**	IAmb	IAmb	10 44 14.6	
	comp=Z,17nm,1.4s						
SCRK	**Sand Creek**	**51.66**	**33**		**P**	**10 44 12.9**	**+0.3**
SCRK				IAmb	IAmb	10 44 20.2	
	comp=Z,19nm,1.3s						
DOT	**Dot Lake**	**51.66**	**34**	P	**P**	**10 44 12.8**	**+0.2**
DOT				IAmb	IAmb	10 44 20.7	
	comp=Z,11nm,1.3s						
MENT	**Mentasta**	**51.91**	**34**	IAmb	IAmb	10 44 35.8	
	comp=Z,20nm,1.4s						
L27K	**Beaver Creek,**	**52.74**	**34**	IAmb	IAmb	10 44 29.9	
	comp=Z,10.0nm,1.1s						
BCAR	**Beaver Creek A**	**52.76**	**34**	P	**P**	**10 44 21.6**	**+0.8**
M27K	**Edge Creek, AK**	**52.84**	**35**	IAmb	IAmb	10 44 31.5	
	comp=Z,13nm,1.0s						
I28M	**Miner Creek**	**53.17**	**31**	P	**P**	**10 44 24.6**	**+0.7**
KNRA	**Kununurra**	**53.31**	**193**		**P**	**10 44 24.5**	**-0.7**
E29M	**Blow River**	**53.51**	**27**	IAmb	IAmb	10 44 35.1	
	comp=Z,8.6nm,1.1s						
I29M	**Ogilvie Camp,**	**53.86**	**31**	IAmb	IAmb	10 44 37.8	
	comp=Z,12nm,1.1s						
K29M	**Barlow Dome**	**54.49**	**33**	IAmb	IAmb	10 44 42.3	
	comp=Z,16nm,1.3s						
INK	**Inuvik**	**55.11**	**27**		**P**	**10 44 37.7**	**-0.1**
INK				IAmb	IAmb	10 44 45.8	
	comp=Z,8.4nm,1.1s						
INK	**Inuvik**	**55.11**	**27**	P	**P**	**10 44 37.7**	**-0.1**
INK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
F31M	**Tsiigehtchic**	**55.23**	**28**	P	**P**	**10 44 38.6**	**-0.1**
F31M				IAmb	IAmb	10 44 46.5	
	comp=Z,13nm,1.2s						
ARTI	**Arti**	**55.66**	**318**	P	**P**	**10 44 40.4**	**-1.5**
	comp=Z,1.8nm,0.4s,baz=158,slow=3.2,SNR=3.4						
	comp=Z,1.8nm,0.4s						
ARTI	**Arti**	**55.66**	**318**	P	**P**	**10 44 40.6**	**-1.3**
ARTI				IAmb	IAmb	10 44 50.5	
	comp=Z,13nm,1.1s						
ARTI	**Arti**	**55.66**	**318**	*d i*P	**P**	**10 44 40.7**	**-1.3**
ARTI						10 45 36.8	
ARTI				S	**S**	**10 52 27.5**	**-0.3**
ARTI				SS	**SS**	**10 56 07.2**	**-5.2**
ARTI				pmax	pmax		
	comp=Z,10.0nm,1.6s						
WB0	**Warramunga Arr**	**56.59**	**186**	IAmb	IAmb	10 45 01.1	
	comp=Z,9.3nm,0.8s						
WRAB	**Tennant Creek**	**56.76**	**186**	P	**P**	**10 44 49.3**	**-0.9**
WRAB				IAmb	IAmb	10 45 02.3	
	comp=Z,10nm,0.9s						
WRAB	**Tennant Creek**	**56.76**	**186**	⇓*i*P	**P**	**10 44 49.0**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WR8	**Warramunga Arr**	**56.77**	**186**		**P**	**10 44 49.1**	**-1.1**
WRA	**Warramunga Arr**	**56.77**	**186**	P	**P**	**10 44 49.1**	**-1.1**
	comp=Z,4.4nm,0.6s,baz=4.6,slow=7.4,SNR=28						
	comp=Z,4.4nm,0.6s						
WRA	**Warramunga Arr**	**56.77**	**186**	P	**P**	**10 44 48.8**	**-1.4**
AB31	**Akbulak array**	**56.98**	**310**		**P**	**10 44 50.4**	**-1.0**
AB31				IAmb	IAmb	10 45 01.3	
	comp=Z,5.2nm,0.8s						
ABKAR	**Akbulak array**	**56.98**	**310**		**P**	**10 44 49.9**	**-1.5**
AKTO	**Aktyubinsk**	**57.74**	**312**	P	**P**	**10 44 54.8**	**-2.1**
	comp=Z,2.6nm,0.7s,baz=70,slow=11,SNR=9.4						
AKTO				LR	LR	11 10 55.7	
	comp=Z,95nm,18.2s,baz=50,slow=37						
	comp=Z,2.6nm,0.7s						
KIRV	**Kirov**	**59.52**	**323**	LR	LR	11 11 40.7	
	comp=Z,113nm,18.2s,baz=55,slow=37						
KIRV	**Kirov**	**59.52**	**323**	⇓*i*P	**P**	**10 45 09.9**	**+0.8**
SPITS	**Spitsbergen Ar**	**60.38**	**349**	LR	LR	11 14 37.9	
	comp=Z,71nm,19.6s,baz=35,slow=39						
AS31	**Alice Springs**	**60.50**	**186**		**P**	**10 45 15.6**	**-0.6**
ASAR	**Alice Springs**	**60.50**	**186**	P	**P**	**10 45 15.8**	**-0.4**
	comp=Z,4.4nm,0.9s,baz=9.3,slow=6.6,SNR=20						
	comp=Z,4.4nm,0.9s						
PALK	**Pallekele**	**61.02**	**256**	LR	LR	11 13 00.7	
	comp=Z,117nm,20.7s,baz=48,slow=37						
PSA00	**Pilbara Seismi**	**61.12**	**201**		**P**	**10 45 19.2**	**-1.2**
PSA00				IAmb	IAmb	10 45 20.1	
	comp=Z,5.7nm,0.9s						
RES	**Resolute Bay**	**63.06**	**14**	LR	LR	11 17 43.8	
	comp=Z,61nm,18.1s,baz=8.0,slow=40						
RES	**Resolute Bay**	**63.06**	**14**		**P**	**10 45 32.1**	**-0.7**
RES				IAmb	IAmb	10 45 39.3	
	comp=Z,8.8nm,1.1s						
RES	**Resolute Bay**	**63.06**	**14**	P	**P**	**10 45 32.1**	**-0.7**
RES				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BBB	**Bella Bella**	**63.10**	**44**	LR	LR	11 10 59.6	
	comp=Z,25nm,21.2s,baz=258,slow=34						
KLMR	**Klimovskoe**	**63.13**	**327**	*e*P	**P**	**10 45 34.2**	**+0.7**
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ARCES	**ARCESS Array B**	**63.63**	**339**	LR	LR	11 16 26.9	
	comp=Z,134nm,19.4s,baz=50,slow=39						
DZM	**Mont Dzumac**	**63.85**	**152**	*e*LR	LR	11 04 34.2	
	comp=Z,154nm,21.7s						
INKA	**Innaminka**	**64.31**	**179**	IAmb	IAmb	10 45 48.0	
	comp=Z,4.1nm,0.8s						
YKA	**Yellowknife Ar**	**64.59**	**30**	P	**P**	**10 45 43.4**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=302,slow=7.7,SNR=3.1						
YKA				LR	LR	11 15 35.4	
	comp=Z,46nm,18.3s,baz=16,slow=38						
	comp=Z,0.5nm,0.7s						
TULEG	**Thule**	**65.40**	**7**	P	**P**	**10 45 49.5**	**+1.4**
TULEG				IAmb	IAmb	10 45 54.9	
	comp=Z,5.4nm,0.9s						
OBN	**Obninsk**	**67.38**	**323**	LR	LR	11 15 38.8	
	comp=Z,49nm,21.4s,baz=360,slow=36						
OBN	**Obninsk**	**67.38**	**323**	*e*P	**P**	**10 46 01.3**	**+0.2**
OBN				*e*		10 46 29.4	
OBN				*e*		10 48 30.8	
OBN				*e*PPP	PPP	10 50 11.1	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FORT	**Forrest**	**68.22**	**191**	P	**P**	**10 46 06.6**	**+0.1**
FORT				IAmb	IAmb	10 46 16.2	
	comp=Z,4.9nm,0.8s						
FINES	**FINESS Array B**	**68.28**	**332**	P	**P**	**10 46 05.3**	**-1.4**
	comp=Z,1.5nm,0.8s,baz=105,slow=2.2,SNR=4.4						
FINES				LR	LR	11 19 38.8	
	comp=Z,121nm,18.7s,baz=40,slow=39						
	comp=Z,1.5nm,0.8s						
FINES	**FINESS Array B**	**68.28**	**332**	P	**P**	**10 46 06.2**	**-0.6**
FINES	**FINESS Array B**	**68.28**	**332**	*i* P	**P**	**10 46 11.3**	**+4.6**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
STKA	**Stephens Creek**	**68.45**	**178**	P	**P**	**10 46 05.8**	**-2.2**
	comp=Z,1.6nm,0.9s,baz=343,slow=8.2,SNR=4.6						
	comp=Z,1.6nm,0.9s						
STKA	**Stephens Creek**	**68.45**	**178**	P	**P**	**10 46 07.1**	**-0.9**
STKA	**Stephens Creek**	**68.45**	**178**	P	**P**	**10 46 07.1**	**-0.9**
STKA				pmax	pmax		
	comp=Z,62nm,1.4s						
KBZ	**Khabaz**	**69.95**	**310**	LR	LR	11 20 41.6	
	comp=Z,77nm,18.4s,baz=52,slow=39						
KIV	**Kislovodsk**	**69.95**	**310**	*e*P	**P**	**10 46 17.3**	**-0.3**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,75nm,17.0s						
GNI	**Garni**	**70.68**	**306**	LR	LR	11 20 03.7	
	comp=Z,77nm,18.7s,baz=65,slow=38						
C09A	**Chrisman Ranch**	**70.78**	**44**	IAmb	IAmb	10 46 30.6	
	comp=Z,8.7nm,1.2s						
PINE	**Pine Mountain**	**71.45**	**49**		**P**	**10 46 27.1**	**+0.3**
AKASG	**Malin Array Be**	**73.56**	**322**	P	**P**	**10 46 36.8**	**-2.2**
	comp=Z,1.7nm,0.6s,baz=45,slow=6.3,SNR=6.0						
AKASG				LR	LR	11 21 32.5	
	comp=Z,139nm,19.2s,baz=54,slow=38						
	comp=Z,1.7nm,0.6s						
AKASG	**Malin Array Be**	**73.56**	**322**	P	**P**	**10 46 39.0**	**0.0**
AKASG	**Malin Array Be**	**73.56**	**322**	*ce*P	**P**	**10 46 41.0**	**+2.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKBB	**Malin Array Si**	**73.56**	**322**	P	**P**	**10 46 38.2**	**-0.7**
AKBB				IAmb	IAmb	10 46 42.6	
	comp=Z,5.6nm,0.8s						
AKBB	**Malin Array Si**	**73.56**	**322**	*ce*P	**P**	**10 46 41.3**	**+2.4**
KIEV	**Kiev**	**73.57**	**322**	P	**P**	**10 46 38.3**	**-0.7**
KIEV				IAmb	IAmb	10 46 42.6	
	comp=Z,5.3nm,0.8s						
KIEV	**Kiev**	**73.57**	**322**	P	**P**	**10 46 38.3**	**-0.7**
KIEV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PLID	**Pearl Lake**	**73.62**	**46**	P	**P**	**10 46 40.2**	**+0.4**
HFS	**Hagfors**	**73.63**	**335**	LR	LR	11 21 52.2	
	comp=Z,89nm,19.7s,baz=34,slow=38						
NC204	**NORSAR Array S**	**73.73**	**337**	P	**P**	**10 46 39.5**	**-0.4**
NB2	**NORSAR Subarra**	**73.77**	**337**	P	**P**	**10 46 39.5**	**-0.6**
	comp=Z,4.0nm,0.7s,baz=41,slow=5.9						
NOA	**NORSAR Array B**	**73.77**	**337**	P	**P**	**10 46 38.2**	**-1.9**
	comp=Z,1.7nm,0.8s,baz=40,slow=5.8,SNR=5.1						
NOA				LR	LR	11 24 00.1	
	comp=Z,63nm,19.1s,baz=20,slow=40						
	comp=Z,1.7nm,0.8s						
BEKR	**Beckworth**	**74.01**	**52**	IAmb	IAmb	10 46 50.1	
	comp=Z,9.2nm,1.3s						
CMB	**Columbia Colle**	**75.04**	**54**	IAmb	IAmb	10 46 56.6	
	comp=Z,6.4nm,1.1s						
EGMT	**Eagleton**	**75.25**	**41**	IAmb	IAmb	10 46 56.2	
	comp=Z,8.3nm,0.8s						
SFJD	**Kangerlussuaq**	**76.12**	**4**	LR	LR	11 20 36.6	
	comp=Z,49nm,21.8s,baz=346,slow=36						
NVAR	**Mina Array Bea**	**76.14**	**52**	P	**P**	**10 46 54.7**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=295,slow=5.2,SNR=9.1						
NVAR				LR	LR	11 22 53.9	
	comp=Z,24nm,18.0s,baz=322,slow=38						
	comp=Z,1.8nm,0.8s						
FRB	**Frobisher Bay**	**77.20**	**12**	LR	LR	11 24 14.0	
	comp=Z,99nm,18.9s,baz=6.0,slow=38						
BORG	**Borgarnes**	**77.58**	**352**	LR	LR	11 22 18.3	
	comp=Z,43nm,18.1s,baz=15,slow=36						
GRAC	**Grapevine Rang**	**77.59**	**53**	IAmb	IAmb	10 47 09.7	
	comp=Z,6.0nm,0.8s						
R11B	**Troy Canyon, C**	**77.90**	**51**	IAmb	IAmb	10 47 12.1	
	comp=Z,7.6nm,1.2s						
STHS	**Stebnicka Huta**	**78.27**	**324**	*e*P	**P**	**10 47 03.2**	**-2.7**
STHS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
STHS	**Stebnicka Huta**	**78.27**	**324**	*e*P	**P**	**10 47 03.2**	**-2.7**
QSM	**Queen of Sheba**	**78.53**	**54**	IAmb	IAmb	10 47 16.4	
	comp=Z,8.3nm,0.9s						
PDAR	**Pinedale Array**	**78.72**	**45**	P	**P**	**10 47 08.7**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=220,slow=1.6,SNR=5.5						
	comp=Z,0.5nm,0.7s						
MTPU	**Mount Pierson**	**80.19**	**50**		**P**	**10 47 16.8**	**-0.3**
ULM	**Lac du Bonnet**	**80.35**	**32**	LR	LR	11 24 18.6	
	comp=Z,42nm,21.0s,baz=356,slow=37						
VRAC	**Vranov**	**80.48**	**326**	LR	LR	11 26 09.6	
	comp=Z,65nm,18.0s,baz=28,slow=38						
CLL	**Collm**	**80.52**	**329**	*i* P	**P**	**10 47 22.7**	**+4.6**
CLL				pmax	pmax		
	comp=Z,15nm,1.4s						
CLL	**Collm**	**80.52**	**329**	*i* Px	Px	10 47 22.7	
	comp=Z,15nm,1.4s						
CLL				*e*PP	**PP**	**10 50 24.0**	**+3.3**
MMAI	**Mount Meron Ar**	**80.92**	**304**	LR	LR	11 27 14.9	
	comp=Z,80nm,18.6s,baz=30,slow=39						
U15A	**North Rim**	**81.15**	**51**	IAmb	IAmb	10 47 30.8	
	comp=Z,8.2nm,1.1s						
PV16	**Nyswonger Mesa**	**81.99**	**48**	IAmb	IAmb	10 47 44.9	
	comp=Z,13nm,1.5s						
PV18	**Skein Mesa, Pa**	**82.03**	**48**	IAmb	IAmb	10 47 38.1	
	comp=Z,10nm,0.9s						
GERES	**GERESS Array B**	**82.09**	**327**	P	**P**	**10 47 25.2**	**-1.5**
	comp=Z,0.6nm,0.6s,baz=31,slow=8.0,SNR=4.2						
GERES				LR	LR	11 27 14.8	
	comp=Z,57nm,18.2s,baz=56,slow=38						
	comp=Z,0.6nm,0.6s						
PV13	**Radium Mtn., P**	**82.14**	**48**	P	**P**	**10 47 26.7**	**-0.6**
PV13				IAmb	IAmb	10 47 35.6	
	comp=Z,7.7nm,1.0s						
EKA	**Eskdalemuir Ar**	**82.79**	**340**	LR	LR	11 30 56.1	
	comp=Z,40nm,19.6s,baz=12,slow=40						
DAVOX	**Davos/Dischmat**	**85.32**	**328**	LR	LR	11 28 04.6	
	comp=Z,78nm,18.5s,baz=83,slow=37						
TASM	**ASL Pad, Albuq**	**85.70**	**49**	IAmb	IAmb	10 47 52.8	
	comp=Z,6.1nm,1.4s						
TASM	**ASL Pad, Albuq**	**85.70**	**49**	IAmb	IAmb	10 47 52.8	
	comp=Z,5.3nm,1.3s						
TASM	**ASL Pad, Albuq**	**85.70**	**49**	IAmb	IAmb	10 47 52.8	
	comp=Z,5.5nm,1.3s						
ANMO	**Albuquerque**	**85.70**	**49**	LR	LR	11 22 39.0	
	comp=Z,20nm,20.7s,baz=336,slow=33						
PPT2	**Papeete2**	**85.81**	**115**	*e*LR	LR	11 14 55.6	
	comp=Z,107nm,25.0s						
SCHQ	**Schefferville**	**85.82**	**15**	LR	LR	11 29 46.6	
	comp=Z,44nm,18.4s,baz=347,slow=38						
LPIG	**La Paz**	**90.42**	**59**	LR	LR	11 25 59.2	
	comp=Z,31nm,19.0s,baz=310,slow=34						
TXAR	**Lajitas Array**	**91.27**	**51**	P	**P**	**10 48 11.4**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=300,slow=3.0,SNR=7.6						
	comp=Z,0.6nm,0.7s						
TXAR	**Lajitas Array**	**91.27**	**51**	P	**P**	**10 48 11.7**	**-0.3**
KEST	**Kesra**	**94.29**	**322**	LR	LR	11 35 16.9	
	comp=Z,80nm,18.7s,baz=11,slow=38						
ESDC	**Sonseca Array**	**96.79**	**333**	LR	LR	11 37 29.7	

	comp=Z,59nm,18.9s,baz=3.0,slow=39						
TKL	**Tuckaleechee C**	**97.27**	**34**	LR	LR	11 36 22.4	
	comp=Z,28nm,18.0s,baz=354,slow=38						
NVL	**N'lazarevskaya**	**136.66**	**202**	*e*PKIKP	**PKPdf**	**10 54 27.2**	**-0.1**
NVL				*e*		10 57 09.3	
NVL				*e*PPP	PPP	11 00 07.3	
NVL				*e*SS	SS	11 15 13.6	+1.0
NVL				*e*SSS	SSS	11 20 17.7	
NVL				pmax	pmax		
	comp=Z,15nm,1.5s						
LPAZ	**La Paz**	**147.92**	**58**	PKP	**PKPdf**	**10 54 48.4**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=32,slow=1.1,SNR=1.8						
LPAZ				PKPbc	**pPKPdf**	**10 54 53.8**	**+0.4**
	comp=Z,1.3nm,0.4s,baz=350,slow=6.7,SNR=6.4						

NOU 04 10:41:00.5, 14°.74S×167°.27E, h94^{km}, MLv4.9/18, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.71**	**185**	P	Pn	10 41 18.6	+1.2
SANVU	**Saraoutou**	**0.71**	**185**	S	Sn	10 41 32.2	+2.1
DVP	**Devils Point**	**3.10**	**164**	P	Pn	10 41 47.7	+0.3
RTV	**Rentapao**	**3.23**	**160**	P	Pn	10 41 50.4	+1.2
RTV	**Rentapao**	**3.23**	**160**	S	Sn	10 42 27.4	+0.6
MARNC	**Mare, Loyalty**	**6.74**	**174**	P	Pn	10 42 34.9	-2.0
DZM	**Mont Dzumac**	**7.33**	**186**	P	Pn	10 42 44.6	-0.4
ONTNC	**Ouen Toro**	**7.57**	**186**	P	Pn	10 42 49.6	+1.5
OUENC	**Ouen Island, N**	**7.65**	**183**	P	Pn	10 42 49.1	-0.1
PINNC	**Pines Island,**	**7.83**	**179**	P	Pn	10 42 51.9	+0.2

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*IDC **04** 10:43:10.9±4.8, 36°.30N×70°.66E, h177^{km}±41^{km}, mb3.5/10, mbtmp4.0/15, Error ellipse: s-maj=36.8km s-min=16.0km az=35.0*

*NNC **04** 10:43:18.2±3.5, 36°.90N×70°.51E, h206^{km}±41^{km}, mb3.0, mpv4.1, Error ellipse: s-maj=35.0km s-min=22.8km az=5.0*

ISC 04 10:43:14.0±1.0, **36°.53N**±0°.09×**70°.7E**±0°.1, **h204**^{km}, **n28**, σ1^{s}.**42**/31, **mb3.6**/9, **5C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.11**	**53**	Pn	**Pn**	**10 44 26.7**	**-3.3**
KSH				Sn	S	10 45 21.1	-8.5
KSH				smax	smax		
	comp=N,130nm,0.7s						
KSH				smax	smax		
	comp=E,100nm,0.7s						
UCH	**Uchtor**	**6.40**	**26**	P	**Pn**	**10 44 47.7**	**+0.8**
	SNR=56						
EKS2	**Erkin-Say**	**6.56**	**20**	P	**Pn**	**10 44 49.5**	**+0.9**
	SNR=29						
KK31	**Karatay Array**	**6.56**	**359**	⇑P	**Pn**	**10 44 48.4**	**-0.2**
	comp=E,20nm,0.3s,baz=168,slow=7.8,SNR=115						
KK31				⇓S	**S**	**10 45 59.4**	**-4.0**
	comp=E,5.4nm,0.3s,baz=190,slow=22,SNR=7.9						
AAK	**Ala-Archa**	**6.76**	**24**	P	**Pn**	**10 44 52.2**	**+1.0**
	SNR=20						
AAK	**Ala-Archa**	**6.76**	**24**	P	**Pn**	**10 44 52.2**	**+1.0**
	comp=E,17nm,0.3s,baz=169,slow=5.2,SNR=40						
AAK				S	**S**	**10 46 08.0**	**-0.2**
	comp=E,7.9nm,0.6s,baz=322,slow=22,SNR=6.1						
AAK	**Ala-Archa**	**6.76**	**24**	⇑P	**Pn**	**10 44 51.8**	**+0.6**
	comp=E,2.4nm,0.5s						
AAK				⇓S	**S**	**10 46 07.2**	**-1.1**
	comp=E,4.1nm,0.6s						
KBK	**Karagaybulak**	**6.94**	**27**	P	**Pn**	**10 44 54.6**	**+1.1**
	SNR=12						
CHMS	**Chumysh**	**7.17**	**24**	P	**Pn**	**10 44 57.3**	**+0.9**
	SNR=7.3						
USP	**Ospenovka**	**7.33**	**22**	P	**Pn**	**10 44 58.8**	**+0.3**
	SNR=6.4						
TKM2	**Tokmak 2**	**7.41**	**29**	P	**Pn**	**10 45 00.6**	**+0.9**
	SNR=35						
MK31	**Makanchi Array**	**13.40**	**37**	⇑P	**Pn**	**10 46 17.6**	**+1.4**
	comp=E,1.8nm,0.6s,baz=218,slow=14,SNR=14						
MKAR	**Makanchi Array**	**13.40**	**37**	P	**Pn**	**10 46 16.8**	**+0.5**
	comp=E,4.3nm,0.8s,baz=220,slow=12,SNR=12						
AB31	**Akbulak array**	**14.94**	**332**	⇑P	**Pn**	**10 46 33.1**	**-2.1**
	comp=E,1.0nm,0.5s,baz=145,slow=13,SNR=13						
KURBB	**Kurchatov Arra**	**15.17**	**19**	P	**Pn**	**10 46 37.9**	**+0.1**
	comp=E,1.2nm,0.8s,baz=214,slow=11,SNR=2.2						
BVAR	**Borovoye Array**	**16.49**	**359**	P	**Pn**	**10 46 54.8**	**+1.0**
	comp=E,1.8nm,0.6s,baz=160,slow=9.7,SNR=6.2						
AKTO	**Aktyubinsk**	**16.64**	**331**	P	**Pn**	**10 46 55.8**	**+0.2**
	comp=E,2.2nm,0.3s,baz=132,slow=9.8,SNR=6.5						
AKTO	**Aktyubinsk**	**16.64**	**331**	⇑P	**P**	**10 46 55.2**	**+0.7**
	comp=E,4.1nm,0.9s						
ZALV	**Zalesovo Beam**	**19.98**	**25**	P	**P**	**10 47 32.7**	**+2.0**
	comp=E,2.1nm,0.4s,baz=212,slow=11,SNR=9.6						
	comp=E,2.1nm,0.4s						
AKASG	**Malin Array Be**	**32.74**	**309**	P	**P**	**10 49 26.8**	**-0.5**
	comp=E,0.1nm,0.3s,baz=83,slow=8.1,SNR=3.2						
	comp=E,0.1nm,0.3s						
FINES	**FINESS Array B**	**37.33**	**326**	P	**P**	**10 50 06.7**	**+0.4**
	comp=E,4.5nm,0.8s,baz=128,slow=12,SNR=5.3						
	comp=E,4.5nm,0.8s						
ARCES	**ARCESS Array B**	**41.03**	**338**	P	**P**	**10 50 38.6**	**+1.7**
	comp=E,3.1nm,0.9s,baz=121,slow=6.9,SNR=3.6						
	comp=E,3.1nm,0.9s						
HFS	**Hagfors**	**42.90**	**322**	P	**P**	**10 50 52.7**	**+0.7**
	comp=E,1.0nm,0.5s,baz=125,slow=12,SNR=5.0						
	comp=E,1.0nm,0.5s						
NOA	**NORSAR Array B**	**44.21**	**323**	P	**P**	**10 51 03.6**	**+1.0**
	comp=E,0.6nm,0.5s,baz=106,slow=5.7,SNR=1.9						
	comp=E,0.6nm,0.5s						
ILAR	**Eielson Array**	**74.81**	**16**	P	**P**	**10 54 32.5**	**+1.1**
	comp=E,0.2nm,0.6s,baz=302,slow=5.0,SNR=8.8						
	comp=E,0.2nm,0.6s						
WRA	**Warramunga Arr**	**82.21**	**122**	P	**P**	**10 55 12.1**	**-0.3**
	comp=E,0.9nm,0.7s,baz=325,slow=5.0,SNR=16						
	comp=E,0.9nm,0.7s						
ASAR	**Alice Springs**	**84.46**	**125**	P	**P**	**10 55 23.4**	**-0.5**
	comp=E,0.7nm,0.6s,baz=313,slow=5.1,SNR=15						
	comp=E,0.7nm,0.6s						
STKA	**Stephens Creek**	**95.00**	**126**	P	**P**	**10 56 11.5**	**-1.8**
	comp=E,2.4nm,1.0s,baz=209,slow=7.2,SNR=3.2						
	comp=E,2.4nm,1.0s						

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*ISK **04** 10:44:57.6, 34°.44N×32°.16E, h5^{km}, ML3.0/19*

*NIC **04** 10:44:59.5, 34°.47N×32°.03E, h52^{km}±4^{km}, Ml3.1/10*

*GII **04** 10:45:00.0±0.0, 34°.36N±0°.03×32°.17E±0°.01, h20^{km}, Mws2.9, confirmed*

*HLW **04** 10:45:00.5, 34°.42N×32°.11E, h29^{km}±4^{km}, Ml3.1*

*AFAD **04** 10:45:01.9, 34°.67N×32°.05E, h6^{km}±4^{km}, ML3.0*

ISC 04 10:44:58.4±1.2, **34°.37N**±0°.02×**32°.11E**±0°.03, **h11**^{km}±9^{km}, **n101**, σ1^{s}.**24**/127, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NATA	**Nata**	**0.56**	**43**	P	**Pb**	**10 45 10.8**	**+0.5**
NATA				S	**Sb**	**10 45 20.9**	**+2.6**
NATA				AML	AML	10 45 25.8	
	4.4nm,0.3s						
NATA				AML	AML	10 45 27.4	
	4.8nm,0.6s						
AKMS	**Akamas**	**0.68**	**16**	P	**Pb**	**10 45 12.0**	**-0.2**
AKMS				S	**Sb**	**10 45 22.4**	**+0.8**
AKMS				AML	AML	10 45 22.6	
	7.2nm,0.5s						
AKMS				AML	AML	10 45 23.0	
	4.8nm,0.5s						
APOL	**The Sanctuary**	**0.69**	**64**	P	**Pb**	**10 45 12.8**	**+0.3**
APOL				S	**Sb**	**10 45 24.1**	**+2.0**
APOL				AML	AML	10 45 25.2	
	3.5nm,0.2s						
APOL				AML	AML	10 45 25.3	
	1.9nm,0.2s						
TROD	**Troodos**	**0.85**	**47**	P	**Pg**	**10 45 14.7**	**-0.3**
TROD				S	**Sb**	**10 45 27.6**	**+0.8**
TROD				AML	AML	10 45 32.5	
	1.0nm,0.5s						
TROD				AML	AML	10 45 35.3	
	1.5nm,0.5s						
ALFC	**Alefka**	**0.88**	**27**	P	**Pg**	**10 45 15.2**	**-0.3**
ALFC				S	**Sg**	**10 45 27.4**	**+0.3**
ALFC				AML	AML	10 45 28.5	
	2.6nm,0.5s						
ALFC				AML	AML	10 45 31.7	
	2.3nm,0.4s						
XYLS	**Xyliatos**	**1.01**	**50**	P	**Pg**	**10 45 16.9**	**-1.0**
XYLS				S	**Sb**	**10 45 32.2**	**+1.0**
XYLS				AML	AML	10 45 32.7	
	3.9nm,0.2s						
XYLS				AML	AML	10 45 32.7	
	5.8nm,0.3s						
ASGA	**Asgata**	**1.03**	**66**	P	**Pg**	**10 45 17.9**	**-0.3**
ASGA				S	**Sg**	**10 45 32.4**	**+0.7**
ASGA				AML	AML	10 45 33.3	
	2.5nm,0.5s						
ASGA				AML	AML	10 45 35.3	
	2.1nm,0.3s						
OSC1	**CSNet OBS 1**	**1.11**	**219**	P	**Pb**	**10 45 19.5**	**0.0**
OSC1				S	**Sb**	**10 45 34.9**	**+0.9**
CSS	**Mathiatis**	**1.17**	**59**	Pn	**Pg**	**10 45 19.6**	**-1.3**
CSS				Sn	**Sg**	**10 45 35.8**	**-0.3**
CSS	**Mathiatis**	**1.17**	**59**	P	**Pg**	**10 45 19.6**	**-1.3**
CSS				S	**Sg**	**10 45 35.9**	**-0.3**
CSS	**Mathiatis**	**1.17**	**59**	P	**Pg**	**10 45 19.7**	**-1.2**
CSS				S	**Sg**	**10 45 35.8**	**-0.3**
CSS				AML	AML	10 45 40.3	
	1.2nm,0.4s						
CSS				AML	AML	10 45 41.2	
	0.9nm,0.3s						
OSC2	**CSNet OBS 4**	**1.30**	**174**	P	**Pb**	**10 45 23.4**	**+0.7**
OSC2				S	**Sn**	**10 45 41.6**	**+1.9**
MVOU	**Mavrovouni**	**1.41**	**62**	P	**Pn**	**10 45 23.9**	**-0.1**
MVOU				AML	AML	10 45 46.8	
	0.6nm,0.5s						
MVOU				AML	AML	10 45 48.8	
	0.5nm,0.7s						
LFK	**Lefkose**	**1.48**	**52**	Pn	**Pn**	**10 45 25.4**	**+0.3**
LFK				Sn	**Sb**	**10 45 46.0**	**+1.1**
PARAL	**Paralimni**	**1.71**	**68**	P	**Pb**	**10 45 29.8**	**-0.1**
PARAL				AML	AML	10 46 01.1	
	0.3nm,0.5s						
PARAL				AML	AML	10 46 04.3	
	0.4nm,1.0s						
GAZI	**Gazipasa**	**1.87**	**5**	P	**Pn**	**10 45 29.1**	**-1.3**
GAZI				S	**Sn**	**10 45 50.8**	**-3.2**
GAZI	**Gazipasa**	**1.87**	**5**	Pn	**Pn**	**10 45 29.7**	**-0.7**
TEKE	**Tekeli-Mersin**	**1.95**	**25**	Pn	**Pn**	**10 45 31.9**	**+0.4**
BERE	**Bereket-Mersin**	**2.17**	**24**	Pn	**Pn**	**10 45 35.0**	**+0.3**
TISA	**Tisan-Mersin**	**2.20**	**35**	Pn	**Pn**	**10 45 35.5**	**+0.6**
YESI	**Yesilovacik-Me**	**2.21**	**34**	Pn	**Pn**	**10 45 35.7**	**+0.6**
IKL	**Isikli**	**2.27**	**34**	Pn	**Pn**	**10 45 36.4**	**+0.6**
TEVE	**Tevekalti-Mers**	**2.33**	**27**	Pn	**Pn**	**10 45 37.3**	**+0.5**
KEBE	**Keben-Mersin**	**2.45**	**32**	Pn	**Pn**	**10 45 39.2**	**+0.7**
SILI	**Silifke-Mersin**	**2.49**	**36**	Pn	**Pn**	**10 45 39.9**	**+1.1**
SLFK	**Silifke-Mersin**	**2.52**	**36**	Pn	**Pn**	**10 45 40.1**	**+0.9**
HDMB	**Hadim**	**2.61**	**7**	Pn	**Pn**	**10 45 41.4**	**+0.7**
KIZK	**Mersin**	**2.68**	**38**	Pn	**Pn**	**10 45 42.6**	**+1.0**
AKAS	**Kas**	**2.77**	**313**	P	**Pn**	**10 45 43.5**	**+0.6**
AKAS				S	**Sn**	**10 46 19.0**	**+2.7**
OFRI	**`Ofer**	**2.97**	**125**	P	**Pn**	**10 45 45.5**	**-0.1**
OFRI	**`Ofer**	**2.97**	**125**	S	**Sn**	**10 46 20.3**	**-0.8**
KORT	**Korkueli**	**2.99**	**332**	Pn	**Pn**	**10 45 46.9**	**+1.0**
SEYD	**Seydisehir-KON**	**3.04**	**356**	Pn	**Pn**	**10 45 47.9**	**+1.3**
BLGI	**Bet Lehem HaGe**	**3.05**	**121**	P	**Pn**	**10 45 46.0**	**-0.5**
BLGI	**Bet Lehem HaGe**	**3.05**	**121**	S	**Sn**	**10 46 21.7**	**-1.3**
MMC7	**Mount Meron ar**	**3.05**	**115**	P	**Pn**	**10 45 45.7**	**-1.0**
MMC7	**Mount Meron ar**	**3.05**	**115**	S	**Sn**	**10 46 21.9**	**-1.2**
MMA0B	**Mount Meron ar**	**3.06**	**115**	S	**Sn**	**10 46 22.4**	**-1.1**
MERS	**Mersin**	**3.18**	**38**	Pn	**Pn**	**10 45 49.4**	**+1.0**
GEM	**Giv'at Ha'Em**	**3.18**	**110**	P	**Pn**	**10 45 48.7**	**+0.4**
GEM	**Giv'at Ha'Em**	**3.18**	**110**	P	**Pn**	**10 45 48.1**	**-0.3**
GEM	**Giv'at Ha'Em**	**3.18**	**110**	S	**Sn**	**10 46 24.9**	**-1.4**
HWQ	**Hawqa**	**3.18**	**91**	*e*P	**Pn**	**10 45 50.4**	**+1.9**
SHBL	**Chebaa**	**3.19**	**108**	*e*P	**Pn**	**10 45 49.5**	**+0.8**
NATI	**Neve Ativ**	**3.21**	**109**	P	**Pn**	**10 45 48.6**	**-0.2**
NATI	**Neve Ativ**	**3.21**	**109**	S	**Sn**	**10 46 25.5**	**-1.6**
RCY	**Rachaya**	**3.22**	**105**	*e*P	**Pn**	**10 45 48.7**	**-0.4**
SLTI	**Sal'it**	**3.25**	**130**	P	**Pn**	**10 45 48.8**	**-0.5**
SLTI	**Sal'it**	**3.25**	**130**	S	**Sn**	**10 46 26.3**	**-1.6**
BEIL	**Beino**	**3.37**	**86**	*e*P	**Pn**	**10 45 51.1**	**+0.1**
MMLI	**Mount Malkishu**	**3.37**	**124**	P	**Pn**	**10 45 50.7**	**-0.4**
MMLI	**Mount Malkishu**	**3.37**	**124**	S	**Sn**	**10 46 30.7**	**-0.4**
KSHT	**Keshet**	**3.38**	**113**	P	**Pn**	**10 45 50.9**	**-0.3**
KSHT	**Keshet**	**3.38**	**113**	S	**Sn**	**10 46 30.7**	**-0.7**
SALP	**Salfit**	**3.46**	**131**	P	**Pn**	**10 45 52.6**	**+0.4**
SALP				S	**Sn**	**10 46 34.1**	**+1.0**
SALP	**Salfit**	**3.46**	**131**	P	**Pn**	**10 45 51.9**	**-0.3**
SALP	**Salfit**	**3.46**	**131**	S	**Sn**	**10 46 32.4**	**-0.7**
GOLH	**Golhisar**	**3.53**	**325**	P	**Pn**	**10 45 55.1**	**+1.7**
GOLH				S	**Sn**	**10 46 36.3**	**+1.1**
GOLH				*i* IAML		10 46 44.0	
	comp=E,29nm,0.3s						
SABU	**Mula-Dalaman**	**3.54**	**315**	P	**Pn**	**10 45 54.5**	**+1.1**
SABU				S	**Sn**	**10 46 33.6**	**-1.7**
SABU				*i* IAML		10 46 36.0	
	comp=E,38nm,0.4s						
SABU				*i* IAML		10 46 41.0	
	comp=N,32nm,0.3s						
HMDT	**Nahal Hemdat**	**3.56**	**125**	P	**Pn**	**10 45 53.5**	**0.0**
HMDT	**Nahal Hemdat**	**3.56**	**125**	P	**Pn**	**10 45 54.5**	**+0.9**
HMDT	**Nahal Hemdat**	**3.56**	**125**	S	**Sn**	**10 46 35.1**	**-0.4**
YESY	**Yesilyurt**	**3.66**	**21**	Pn	**Pn**	**10 45 56.3**	**+1.3**
KARA	**Karaisali**	**3.75**	**39**	Pn	**Pn**	**10 45 57.3**	**+1.1**
DNZT	**Denizli-Tavas-**	**3.84**	**320**	P	**Pn**	**10 45 58.7**	**+1.2**
DNZT				S	**Sn**	**10 46 40.8**	**-1.8**
TAHT	**Tahtakopru-Hat**	**3.89**	**58**	Pn	**Pn**	**10 45 59.6**	**+1.5**
DSI	**Dead Sea**	**3.92**	**135**	P	**Pn**	**10 45 59.5**	**+1.0**
DSI	**Dead Sea**	**3.92**	**135**	P	**Pn**	**10 45 59.0**	**+0.5**
DSI	**Dead Sea**	**3.92**	**135**	S	**Sn**	**10 46 44.0**	**-0.4**
YTIR	**Yattir**	**3.92**	**139**	P	**Pn**	**10 45 58.7**	**0.0**
YTIR	**Yattir**	**3.92**	**139**	S	**Sn**	**10 46 43.8**	**-0.9**
KZIT	**Kziot**	**3.96**	**150**	P	**Pn**	**10 45 59.2**	**+0.2**
KZIT	**Kziot**	**3.96**	**150**	S	**Sn**	**10 46 44.7**	**-0.7**
TURN	**Turunc**	**3.96**	**308**	P	**Pn**	**10 45 59.9**	**+0.8**
TURN				S	**Sn**	**10 46 44.1**	**-1.4**
CMRD	**Camardi-Nigde**	**4.03**	**35**	Pn	**Pn**	**10 46 01.6**	**+1.4**
TAVA	**DENIZLI_Tavas**	**4.04**	**321**	P	**Pn**	**10 46 01.0**	**+0.8**
TAVA				S	**Sn**	**10 46 45.0**	**-2.5**
DNIZ	**Denizli-Tavas-**	**4.09**	**323**	P	**Pn**	**10 46 02.4**	**+1.4**
DNIZ				S	**Sn**	**10 46 46.0**	**-2.9**
DNIZ				*i* IAML		10 46 51.0	
	comp=N,58nm,0.3s						
DNIZ				*i* IAML		10 46 51.0	
	comp=E,73nm,0.2s						
MSBI	**Mazada**	**4.09**	**137**	P	**Pn**	**10 46 00.7**	**-0.2**
MSBI	**Mazada**	**4.09**	**137**	S	**Sn**	**10 46 48.4**	**-0.3**
MULA	**Mugla, Merkez-**	**4.22**	**314**	P	**Pn**	**10 46 04.3**	**+1.6**
MULA				S	**Sn**	**10 46 48.5**	**-3.5**
MULA				*i* IAML		10 46 52.0	
	comp=N,24nm,0.3s						
MULA				*i* IAML		10 46 58.0	
	comp=E,36nm,0.6s						
GHAJ	**Ghor Haditha**	**4.22**	**135**	P	**Pn**	**10 46 03.7**	**+1.0**
GHAJ	**Ghor Haditha**	**4.22**	**135**	P	**Pn**	**10 46 03.6**	**+0.9**
GHAJ	**Ghor Haditha**	**4.22**	**135**	S	**Sn**	**10 46 51.3**	**-0.6**
DAT	**Datca**	**4.38**	**304**	P	**Pn**	**10 46 05.9**	**+0.9**
DAT				S	**Sn**	**10 46 53.8**	**-2.3**
DAT				*i* IAML		10 46 55.0	
	comp=E,31nm,0.6s						
DAT				*i* IAML		10 46 56.0	
	comp=N,38nm,0.4s						
IDAN	**Idan**	**4.42**	**142**	P	**Pn**	**10 46 05.6**	**+0.1**
IDAN	**Idan**	**4.42**	**142**	S	**Sn**	**10 46 55.9**	**-1.0**
YAZI	**Mula-Dat§a-**	**4.44**	**303**	P	**Pn**	**10 46 06.2**	**+0.5**
YAZI				S	**Sn**	**10 46 52.9**	**-4.5**
YAZI				*i* IAML		10 46 57.0	
	comp=E,22nm,0.5s						
YAZI				*i* IAML		10 46 58.0	
	comp=N,21nm,0.3s						
SUZ	**Suez**	**4.55**	**172**	P	**Pn**	**10 46 08.0**	**+0.7**
PRNI	**Paran**	**4.69**	**148**	P	**Pn**	**10 46 09.3**	**+0.1**
PRNI	**Paran**	**4.69**	**148**	P	**Pn**	**10 46 09.4**	**+0.2**
PRNI	**Paran**	**4.69**	**148**	S	**Sn**	**10 47 03.2**	**-0.5**
KRMI	**Paran Flat**	**4.78**	**152**	P	**Pn**	**10 46 10.9**	**+0.4**
KRMI	**Paran Flat**	**4.78**	**152**	S	**Sn**	**10 47 04.7**	**-1.2**
MBRI	**Mt Berech**	**5.14**	**152**	P	**Pn**	**10 46 17.3**	**+1.8**
MBRI	**Mt Berech**	**5.14**	**152**	P	**Pn**	**10 46 16.5**	**+1.1**
MBRI	**Mt Berech**	**5.14**	**152**	S	**Sn**	**10 47 14.7**	**-0.2**
EIL	**Elat**	**5.27**	**152**	P	**Pn**	**10 46 17.6**	**+0.5**
EIL	**Elat**	**5.27**	**152**	S	**Sn**	**10 47 16.6**	**-1.2**
RYAN	**Fayoum**	**5.50**	**197**	P	**Pn**	**10 46 21.0**	**+0.8**
RYAN				S	**Sn**	**10 47 19.7**	**-3.7**
HKAT	**Jabal Katrina**	**6.04**	**164**	P	**Pn**	**10 46 28.0**	**+0.1**
SLUM	**Salum**	**6.47**	**246**	P	**Pn**	**10 46 34.5**	**+0.9**

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*NEIC **04** 10:50:14.5±1.3, 43°.38N±0°.08×148°.0E±0°.1, h10^{km}±1^{km}, mb4.5/47, Error ellipse: s-maj=16.6km s-min=11.2km az=128.0*

*SKHL **04** 10:50:14.2±0.1, 43°.10N×148°.30E, h45^{km}±4^{km}, mb5.2/4*

*JMA **04** 10:50:14.8±0.4, 43°N±1°×14°8E±°, h17^{km}, MV4.3/25, E OFF HOKKAIDO*

*MOS **04** 10:50:15.3±1.2, 43°.35N×148°.13E, h37^{km}, mb4.8/25, MS3.9/4, Error ellipse: s-maj=9.7km s-min=6.7km az=127.5*

*IDC **04** 10:50:18.2±0.6, 43°.32N×148°.07E, h39^{km}±3^{km}, mb3.9/21, mbtmp4.1/23, ML3.4/2, MS4.0/2, Error ellipse: s-maj=14.7km s-min=14.0km az=77.0*

ISC 04 10:50:17.6±0.5, **43°.29N**±0°.05×**148°.01E**±0°.05, **h34**^{km}, **n188**, σ1^{s}.**32**/207, **mb4.5**/61, **MS4.0**/7, **8C-8D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	**Shikotan**	**1.04**	**304**	*e*P	Pb	10 50 42.4	+5.3
SHO				AMB	AMB	10 50 45.8	
	3µm,0.6s						
SHO				*e*S	Sb	10 51 01.8	+11
SHO				A	A	10 51 03.5	
	5µm,0.5s						
SHO				A	A	10 51 03.5	
	10µm,0.5s						
NEM2	**Nemuro 2**	**1.66**	**273**	*e*P	**Pn**	**10 50 42.7**	**-1.5**
NMR	**Nemuro--Hokkai**	**1.67**	**274**	*e*PN	**Pn**	**10 50 42.7**	**-1.7**
NMR				*i* S	**Sn**	**10 51 04.7**	**+0.1**
NMR	**Nemuro--Hokkai**	**1.67**	**274**	*e*P	**Pn**	**10 50 42.7**	**-1.7**
NMR				*e*S	**Sn**	**10 51 04.6**	**0.0**
YUK	**Yuzh-Kuril'sk**	**1.73**	**296**	*e*PN	**Pn**	**10 50 43.6**	**-1.6**
YUK				*i* S	**Sn**	**10 51 08.6**	**+2.5**
YUK				pmax	pmax		
	comp=N,262nm,0.3s						
YUK				pmax	pmax		
	comp=Z,902nm,0.3s						
YUK				pmax	pmax		
	comp=E,484nm,0.4s						
YUK				smax	smax		
	comp=N,2µm,0.7s						
YUK				smax	smax		
	comp=E,2µm,0.7s						
YUK	**Yuzh-Kuril'sk**	**1.73**	**296**	*e*P	**Pn**	**10 50 44.5**	**-0.7**
YUK				AMB	AMB	10 50 49.1	
	comp=E,1µm,0.5s						
YUK				*i* S	**Sn**	**10 51 07.3**	**+1.2**
YUK				A	A	10 51 15.8	
	comp=E,4µm,0.6s						
YUK				A	A	10 51 15.8	
	comp=E,3µm,0.6s						
KUR	**Kuril'sk**	**1.95**	**357**	PN	**Pn**	**10 50 47.6**	**-0.6**
KUR				S	**Sn**	**10 51 11.2**	**-0.3**
KUR				pmax	pmax		
	comp=Z,385nm,0.5s						
KUR				pmax	pmax		
	comp=N,116nm,0.4s						
KUR				pmax	pmax		
	comp=E,150nm,0.3s						
KUR				smax	smax		
	comp=E,212nm,0.4s						
KUR	**Kuril'sk**	**1.95**	**357**	*e*P	**Pn**	**10 50 47.3**	**-0.9**
KUR				AMB	AMB	10 50 58.5	
	comp=E,390nm,0.5s						
KUR				*e*S	**Sn**	**10 51 11.7**	**+0.2**
KUR				A	A	10 51 20.8	
	comp=E,960nm,0.4s						
KUR				A	A	10 51 20.8	
	comp=E,960nm,0.4s						
RUSJ	**Misakicho**	**2.16**	**293**	*e*PN	**Pn**	**10 50 50.5**	**-0.7**
RUSJ				*i* S	**Sn**	**10 51 18.7**	**+1.9**
JRA	**Rausu**	**2.20**	**288**	*e*P	**Pn**	**10 50 50.8**	**-0.9**
JNSB	**Nemuroshibetsu**	**2.24**	**284**	*e*P	**Pn**	**10 50 51.3**	**-0.9**
AKK	**Akkeshi**	**2.33**	**264**	*e*P	**Pn**	**10 50 52.9**	**-0.7**
JNK	**Nakash**	**2.42**	**278**	*e*P	**Pn**	**10 50 53.2**	**-1.5**
JNK				*e*S	**Sn**	**10 51 21.8**	**-1.3**
JAK	**Akkeshi**	**2.44**	**264**	*e*P	**Pn**	**10 50 53.8**	**-1.2**
JAK				*e*S	**Sn**	**10 51 21.6**	**-2.1**
JTKR	**Abashiri--Toko**	**3.06**	**284**	*e*P	**Pn**	**10 51 03.4**	**-0.1**
JAR	**Ashorobuto**	**3.10**	**272**	*e*P	**Pn**	**10 51 03.8**	**-0.3**
JAR				*e*S	**Sn**	**10 51 39.8**	**-0.1**
JCH	**Churui**	**3.48**	**260**	*e*P	**Pn**	**10 51 08.5**	**-0.8**
JCH				*e*S	**Sn**	**10 51 47.9**	**-1.3**
JEM	**Erimo**	**3.80**	**252**	*e*P	**Pn**	**10 51 14.0**	**+0.3**
ERM	**Erimo**	**3.80**	**252**		**Pn**	**10 51 13.2**	**-0.5**
ERM	**Erimo**	**3.80**	**252**	PN	**Pn**	**10 51 13.2**	**-0.5**
JNBK	**Urakawa-nobuka**	**4.00**	**257**	*e*P	**Pn**	**10 51 15.8**	**-0.7**
JKA	**Kamikawa-asahi**	**4.01**	**284**		**Pn**	**10 51 15.8**	**-0.8**
JKA	**Kamikawa-asahi**	**4.01**	**284**	*e*P	**Pn**	**10 51 18.3**	**+1.7**
ASAJ	**Asahikawa**	**4.01**	**284**	Pn	**Pn**	**10 51 18.2**	**+1.6**
	comp=E,3.6nm,0.3s,baz=138,slow=11,SNR=9.8						
	comp=E,13nm,0.5s						
JEW	**Eniwo**	**4.83**	**267**	*e*P	**Pn**	**10 51 28.3**	**+0.4**
YSS	**Yuzhno-Sakhali**	**5.22**	**316**	*e*PN	Pn	10 51 40.2	+7.0
YSS				*e*S	**Sb**	**10 52 44.2**	**-6.1**
YSS				pmax	pmax		
	comp=Z,50nm,1.0s						
YSS				smax	smax		
	comp=N,40nm,1.2s						
YSS				smax	smax		
	comp=E,40nm,1.0s						
YSS	**Yuzhno-Sakhali**	**5.22**	**316**	*e*P	**Pn**	**10 51 35.6**	**+2.4**
YSS				*e*S	**Sn**	**10 52 34.7**	**+2.5**
JTM	**Tenmabayashi**	**5.74**	**247**	Pn	**Pn**	**10 51 39.6**	**-0.9**
TEY	**Ternei**	**8.39**	**286**	*e*PN	Pb	10 52 35.5	-6.4
JGF	**Kuroka**	**11.25**	**231**	Pn	**Pn**	**10 52 55.1**	**-0.9**
PEA0B	**Petropavlovsk-**	**11.75**	**30**	Pn	**Pn**	**10 53 00.0**	**-2.7**
PEA0B	**Petropavlovsk-**	**11.75**	**30**	PN	**Pn**	**10 53 00.0**	**-2.7**
PETK	**Petropavlovsk-**	**11.75**	**30**	Pn	**Pn**	**10 53 00.9**	**-1.8**
	comp=E,0.2nm,0.3s,baz=221,slow=13,SNR=5.9						
	comp=E,1.6nm,0.6s						
PETK	**Petropavlovsk-**	**11.75**	**30**	Pn	**Pn**	**10 52 59.1**	**-3.6**
JWT	**Wachi**	**12.61**	**235**	Pn	**Pn**	**10 53 11.8**	**-2.8**
BNX	**BinXian**	**14.90**	**287**	⇑P	**Pn**	**10 53 46.4**	**+0.7**
BNX				pmax	pmax		
	comp=Z,13nm,1.1s						
JNU	**Nakatsue**	**16.83**	**239**		**P**	**10 54 12.7**	**+0.2**
ZEA	**Zeya**	**17.21**	**315**	*e*P	Pn	10 54 03.1	-12
INCN	**Inchon**	**17.27**	**258**	P	**Pn**	**10 54 16.9**	**+0.8**
INCN	**Inchon**	**17.27**	**258**	P	**Pn**	**10 54 16.9**	**+0.8**
INCN				pmax	pmax		
	comp=Z,13nm,0.6s						
HIA	**Hailar**	**20.36**	**297**	P	**P**	**10 54 48.9**	**-2.2**
HIA	**Hailar**	**20.36**	**297**	P	**P**	**10 54 48.9**	**-2.2**
HIA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HILR	**Hailar Array B**	**20.39**	**298**	P	**P**	**10 54 49.8**	**-1.6**
	comp=Z,3.5nm,0.4s,baz=94,slow=9.4,SNR=10						
	comp=Z,3.5nm,0.4s						
YAK	**Yakutsk**	**21.67**	**336**	P	**P**	**10 55 01.4**	**-3.5**
	comp=Z,25nm,0.7s,baz=123,slow=2.3,SNR=6.1						
YAK	**Yakutsk**	**21.67**	**336**	P	**P**	**10 55 03.1**	**-1.9**
YAK	**Yakutsk**	**21.67**	**336**	*e*P	**P**	**10 55 02.2**	**-2.8**
YAK				*e*		10 55 23.5	
YAK				*e*S	**S**	**10 59 01.8**	**-1.0**
YAK				*e**SS	Sn	10 59 08.9	-3.8
YAK				*e*SSS	SSS	10 59 38.7	
YAK				pmax	pmax		
	comp=Z,21nm,0.8s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,12nm,1.5s						
YAK				pmax	pmax		
	comp=Z,1µm,5.0s						
YAK				pmax	pmax		
	comp=N,626nm,3.5s						
YAK				pmax	pmax		
	comp=E,128nm,3.5s						
YAK				smax	smax		
	comp=E,792nm,4.9s						
YAK				smax	smax		
	comp=N,1µm,3.3s						
YAK	**Yakutsk**	**21.67**	**336**	*e*P	**P**	**10 55 02.2**	**-2.8**
KIWB	**Kanaga Island**	**24.82**	**58**	P	**P**	**10 55 35.6**	**-0.8**
NJ2	**Nanjing**	**25.53**	**254**	*e*P	**P**	**10 55 43.1**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**27.03**	**277**	*e*P	**P**	**10 55 58.3**	**+1.6**
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,660nm,6.4s						
H11N2	**WAKE ISLAND Hy**	**28.34**	**140**	T	T	11 26 59.0	
	baz=330,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	**28.36**	**140**	T	T	11 26 59.6	
	baz=330,slow=75,SNR=13						
H11N3	**WAKE ISLAND Hy**	**28.36**	**140**	T	T	11 27 01.3	

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             baz=330,slow=75,SNR=13
ULN   Ulaanbaatar       28.78 294    P      P       10 56 12.2 -0.1
ULN                                  IAmb   IAmb    10 56 13.6
             comp=Z,9.1nm,0.9s
ULN   Ulaanbaatar       28.78 294deP     P       10 56 12.8 +0.5
ULN                                  pmax   pmax
             comp=Z,67nm,5.1s
ULN   Ulaanbaatar       28.78 294  eP     P       10 56 12.8 +0.5
SONM  Songino Array     29.23 294    P      P       10 56 16.8 +0.6
             comp=Z,6.1nm,0.8s,baz=86,slow=8.2,SNR=21
SONM                                 LR     LR      11 09 30.4
             comp=Z,234nm,18.5s,baz=171,slow=39
             comp=Z,6.1nm,0.8s
SONM  Songino Array     29.23 294    P      P       10 56 16.2 +0.1
SONM                                 IAmb   IAmb    10 56 17.5
             comp=Z,6.4nm,1.0s
SONM  Songino Array     29.23 294    P      P       10 56 16.3 +0.1
SONM                                 pmax   pmax
             comp=Z,6.0nm,1.0s
H11S1 WAKE ISLAND Hy    29.32 142    T      T       11 28 23.4
             baz=331,slow=76,SNR=15
H11S3 WAKE ISLAND Hy    29.32 142    T      T       11 28 19.8
             baz=331,slow=76,SNR=12
CLES  Cleveland East    29.32  56    P      P       10 56 15.7 -1.1
H11S2 WAKE ISLAND Hy    29.33 142    T      T       11 28 19.3
             baz=331,slow=76,SNR=14
LZH   Lanzhou           34.42 273  eP     P       10 57 02.2 +0.3
LZH                                  sP     pP      10 57 08.6 -1.7
LZH                                  pmax   pmax
             comp=Z,16nm,1.1s
LZDM  Lanzhou Array     34.58 273    P      P       10 57 03.5 -0.1
             comp=Z,1.1nm,0.3s,baz=101,slow=6.2,SNR=3.9
LZDM                                 pP     sP      10 57 15.4 +1.0
             comp=Z,1.8nm,0.4s,baz=84,slow=6.1,SNR=2.1
             comp=Z,1.1nm,0.3s
KNGR  Kungurtug, Tuv    34.66 300d iP     P       10 57 04.1 +0.3
KNGR                                 pmax   pmax
             comp=Z,7.0nm,1.1s
D19K  Kuna River        37.45  29           P       10 57 28.2 +0.8
D19K                                 IAmb   IAmb    10 57 45.0
             comp=Z,6.7nm,0.8s
H19K  Roundabout Mou    37.51  34    P      P       10 57 30.3 +2.5
H19K                                 IAmb   IAmb    10 57 36.3
             comp=Z,8.4nm,0.7s
E19K  Redstone River    37.55  31    P      P       10 57 29.6 +1.5
E19K                                 IAmb   IAmb    10 57 44.6
             comp=Z,6.1nm,0.8s
D20K  Etivluk River     38.04  29    P      P       10 57 33.1 +0.8
D20K                                 IAmb   IAmb    10 57 45.3
             comp=Z,7.9nm,0.8s
B20K  Meade River       38.17  27    P      P       10 57 34.0 +0.7
B20K                                 IAmb   IAmb    10 57 47.0
             comp=Z,9.6nm,0.8s
B21K  Ikpikpuk River    38.94  28           P       10 57 40.8 +1.1
B21K                                 IAmb   IAmb    10 57 54.1
             comp=Z,10.0nm,0.8s
D22K  Ayikyak River     39.48  29    P      P       10 57 45.3 +1.0
C23K  Itkillik River    40.35  28           P       10 57 52.5 +1.0
C23K                                 IAmb   IAmb    10 57 53.1
             comp=Z,7.2nm,0.9s
D24K  Happy Valley      40.89  29    P      P       10 57 57.0 +1.1
D24K                                 IAmb   IAmb    10 58 09.0
             comp=Z,6.2nm,0.7s
E24K  Your Creek        40.92  31    P      P       10 57 56.3 -0.1
E24K                                 IAmb   IAmb    10 58 10.4
             comp=Z,7.3nm,1.0s
GOMU  GeErMu            40.92 279    P      P       10 57 57.6 +0.5
GOMU                                 pmax   pmax
             comp=Z,8.0nm,0.9s
PZH   PanZhiHua         40.92 261    P      P       10 57 59.7 +2.8
C24K  Franklin Bluff    40.99  28    P      P       10 57 57.6 +0.8
DGZ   Jazzator, Alta    41.19 301⇑eP     P       10 58 00.7 +1.8
DGZ                                  pmax   pmax
             comp=Z,8.0nm,1.6s
DGZ                                  MLR    MLR
             comp=Z,115nm,14.0s
ILAR  Eielson Array     41.49  36    P      P       10 58 00.8 -0.2
             comp=Z,0.5nm,0.8s,baz=274,slow=8.9,SNR=4.9
             comp=Z,0.5nm,0.8s
ILAR  Eielson Array     41.49  36    P      P       10 57 59.7 -1.3
ILAR  Eielson Array     41.49  36    P      P       10 57 59.7 -1.3
D25K  Kavik River       41.77  29    P      P       10 58 03.6 +0.3
D25K                                 IAmb   IAmb    10 58 16.3
             comp=Z,5.7nm,0.7s
ZALV  Zalesovo Beam     41.78 308    P      P       10 58 02.3 -1.1
             comp=Z,0.8nm,0.4s,baz=70,slow=5.0,SNR=5.9
ZALV                                 PcP    PcP     10 59 59.8 +0.7
             comp=Z,0.6nm,0.4s,baz=85,slow=3.6,SNR=4.9
ZALV                                 pPcP           11 00 11.8
             comp=Z,1.1nm,0.6s,baz=98,slow=4.5,SNR=4.5
             comp=Z,0.8nm,0.4s
ZALV  Zalesovo Beam     41.78 308    P      P       10 58 02.6 -0.9
ZALV  Zalesovo Beam     41.78 308  i P      P       10 58 03.0 -0.4
ZALV                                 pmax   pmax
             comp=Z,1.0nm,0.6s
WMQ   Urumqi            42.85 292  eP     P       10 58 15.9 +3.5
WMQ                                  pmax   pmax
             comp=Z,22nm,1.1s
E28M  Babbage River     44.25  30    P      P       10 58 25.1 +1.9
E29M  Blow River        44.87  30    IAmb   IAmb    10 58 48.7
             comp=Z,4.0nm,0.8s
MK31  Makanchi Array    45.35 298c iP     P       10 58 32.5 +0.1
MKAR  Makanchi Array    45.35 298    P      P       10 58 32.6 +0.2
             comp=Z,7.5nm,0.9s,baz=78,slow=8.5,SNR=24
MKAR                                 pP     sP      10 58 44.7 +1.3
             comp=Z,2.6nm,0.5s,baz=79,slow=9.1,SNR=8.8
             comp=Z,7.5nm,0.9s
MKAR  Makanchi Array    45.35 298           P       10 58 32.4  0.0
I30M  Mount Dempster    45.89  35    IAmb   IAmb    10 58 56.6
             comp=Z,5.8nm,0.9s
KURK  Kurchatov         46.31 305           P       10 58 39.1 -0.7
KURK                                 IAmb   IAmb    10 58 42.1
             comp=Z,7.1nm,0.9s
KURK  Kurchatov         46.31 305⇓iP     P       10 58 39.0 -0.8
KURK                                 pmax   pmax
             comp=Z,7.0nm,0.9s
KURK                                 MLR    MLR
             comp=Z,72nm,17.0s
KURK  Kurchatov         46.31 305  eP     P       10 58 39.0 -0.8
KURBB Kurchatov Arra    46.39 305    P      P       10 58 40.1 -0.3
             comp=Z,2.5nm,0.5s,baz=82,slow=8.6,SNR=16
KURBB                                pP     sP      10 58 52.0 +0.3
             comp=Z,3.6nm,0.6s,baz=76,slow=8.9,SNR=9.4
             comp=Z,2.5nm,0.5s
G31M  Satah River       46.44  32    P      P       10 58 41.1 +0.6
G31M                                 IAmb   IAmb    10 58 49.0
             comp=Z,2.9nm,0.7s
INK   Inuvik            46.48  30           P       10 58 41.3 +0.4
INK   Inuvik            46.48  30    P      P       10 58 41.3 +0.4
INK                                  pmax   pmax
             comp=Z,2.0nm,0.9s
CMAR  Chiang Mai Arr    48.00 255    P      P       10 58 54.5 +1.1
             comp=Z,0.9nm,0.5s,baz=40,slow=5.5,SNR=2.7
CMAR                                 pP     sP      10 59 06.3 +1.4
             comp=Z,0.6nm,0.4s,baz=37,slow=6.8,SNR=2.0
             comp=Z,0.9nm,0.5s
CMAR  Chiang Mai Arr    48.00 255    P      P       10 58 52.6 -0.8
CMAR  Chiang Mai Arr    48.00 255    P      P       10 58 52.6 -0.8
A36M  Sachs Harbour     48.53  24    P      P       10 58 57.5 +0.8
A36M                                 IAmb   IAmb    10 59 11.2
             comp=Z,3.7nm,0.8s
WUS   Wushi             49.64 293           P       10 59 03.6 -2.3
BVAR  Borovoye Array    50.28 310    P      P       10 59 10.6 +0.2
             comp=Z,1.1nm,0.5s,baz=63,slow=10,SNR=8.1
BVAR                                 pP     sP      10 59 23.0 +1.6
             comp=Z,1.2nm,0.6s,baz=76,slow=10.0,SNR=4.4
BVAR                                 LR     LR      11 22 31.9
             comp=Z,158nm,18.8s,baz=73,slow=38
             comp=Z,1.1nm,0.5s
BORK  Borovoye          50.31 310           P       10 59 10.4 -0.3
BORK                                 IAmb   IAmb    10 59 12.0
             comp=Z,5.1nm,0.9s
BORK  Borovoye          50.31 310⇑eP     P       10 59 09.6 -1.0
BORK                                 pmax   pmax
             comp=Z,8.0nm,1.0s
BORK                                 MLR    MLR
             comp=Z,160nm,19.0s
TARG  Taragay, Kyrgy    50.35 294           P       10 59 12.1 +0.5
TARG  Taragay, Kyrgy    50.35 294    P      P       10 59 12.1 +0.5
TARG                                 pmax   pmax
             comp=Z,3.0nm,0.7s
KDJ   Kajisay           50.58 295    P      P       10 59 13.1  0.0
KDJ                                  IAmb   IAmb    10 59 15.0
             comp=Z,9.3nm,1.1s
KDJ   Kajisay           50.58 295    P      P       10 59 13.1  0.0
KDJ                                  pmax   pmax
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             comp=Z,9.0nm,1.1s
EVN   Everest           50.96 274    P      P       10 59 16.4 -0.3
EVN                                  IAmb   IAmb    10 59 46.3
             comp=Z,5.3nm,0.9s
BOOM  Boomskoye usch    51.24 296           P       10 59 18.4 +0.4
BOOM  Boomskoye usch    51.24 296    P      P       10 59 18.4 +0.4
BOOM                                 pmax   pmax
             comp=Z,14nm,0.9s
AAK   Ala-Archa         52.12 296           P       10 59 24.4 -0.1
AAK   Ala-Archa         52.12 296⇓eP     P       10 59 24.6  0.0
AAK                                  pmax   pmax
             comp=Z,6.0nm,1.3s
AAK   Ala-Archa         52.12 296  eP     P       10 59 24.6  0.0
ARSB  Arslanbob         53.73 296           P       10 59 37.0 +0.5
ARSB  Arslanbob         53.73 296    P      P       10 59 37.0 +0.5
ARSB                                 pmax   pmax
             comp=Z,14nm,0.6s
KK31  Karatay Array     54.48 299           P       10 59 41.4 -0.3
KK31  Karatay Array     54.48 299    P      P       10 59 41.4 -0.3
KK31                                 pmax   pmax
             comp=Z,6.0nm,0.7s
KKAR  Karatay Array     54.48 299           P       10 59 41.7 -0.1
KKAR  Karatay Array     54.48 299    P      P       10 59 41.7 -0.1
ARTI  Arti              55.22 317    P      P       10 59 46.4 -0.4
             comp=Z,7.3nm,0.6s,baz=88,slow=3.9,SNR=12
ARTI                                 pP     sP      10 59 58.1 +0.4
             comp=Z,5.4nm,0.8s,baz=118,slow=3.9,SNR=4.2
             comp=Z,7.3nm,0.6s
ARTI  Arti              55.22 317           P       10 59 46.0 -0.8
ARTI  Arti              55.22 317d iP     P       10 59 46.2 -0.6
ARTI                                                11 00 43.8
ARTI                                 S      S       11 07 32.0 +4.4
ARTI                                 SS     SS      11 11 12.6 +1.2
ARTI                                 pmax   pmax
             comp=Z,12nm,1.0s
RES   Resolute Bay      55.23  17    P      P       10 59 46.3 -0.3
RES                                  IAmb   IAmb    10 59 59.0
             comp=Z,3.5nm,0.8s
RES   Resolute Bay      55.23  17    P      P       10 59 46.3 -0.3
RES                                  pmax   pmax
             comp=Z,3.0nm,0.8s
GAR   Garm              56.67 294    P      P       10 59 57.1 -0.5
CHGR  Chuyangaron       57.62 295    P      P       11 00 04.1 -0.2
CHGR  Chuyangaron       57.62 295    P      P       11 00 04.1 -0.2
CHGR                                 pmax   pmax
             comp=Z,22nm,0.7s
AB31  Akbulak array     57.84 309           P       11 00 05.7 +0.2
ABKAR Akbulak array     57.84 309           P       11 00 05.5 -0.1
KIRV  Kirov             58.34 323d iP     P       11 00 08.7 -0.2
ARCES ARCESS Array B    59.90 340    P      P       11 00 18.6 -0.9
             comp=Z,1.3nm,0.6s,baz=44,slow=7.2,SNR=8.0
             comp=Z,1.3nm,0.6s
KLMR  Klimovskoe        61.16 328  eP     P       11 00 25.3 -2.9
KLMR                                 pmax   pmax
             comp=Z,10.0nm,1.0s
WRA   Warramunga Arr    64.16 194    P      P       11 00 48.1 -0.6
             comp=Z,0.5nm,0.7s,baz=14,slow=6.6,SNR=5.0
WRA                                  pP     pP      11 00 58.7 +1.4
             comp=Z,0.9nm,0.8s,baz=16,slow=7.1,SNR=4.3
             comp=Z,0.5nm,0.7s
WRA   Warramunga Arr    64.16 194ceP     P       11 00 48.9 +0.2
WRA                                  pmax   pmax
             comp=Z,1.0nm,0.7s
FINES FINESS Array B    65.57 333    P      P       11 00 56.8 -0.6
             comp=Z,3.4nm,0.5s,baz=42,slow=6.9,SNR=33
FINES                                pP     pP      11 01 07.7 +1.3
             comp=Z,3.2nm,0.7s,baz=116,slow=8.7,SNR=2.6
             comp=Z,3.4nm,0.5s
FINES FINESS Array B    65.57 333  i P      P       11 00 57.0 -0.4
FINES                                pmax   pmax
             comp=Z,4.0nm,0.5s
OBN   Obninsk           66.06 324  eP     P       11 01 00.6  0.0
OBN                                e                11 01 32.1
OBN                                e                11 03 25.0
OBN                                ePPP   PPP       11 04 59.3
OBN                                  MLR    MLR
             comp=Z,65nm,14.0s
OBN   Obninsk           66.06 324  eP     P       11 01 00.6  0.0
VRH   Novokhopyorsk     66.28 319  eP     P       11 01 00.0 -2.1
VRH                                  pmax   pmax
             comp=Z,8.0nm,0.9s
LPSR  Galich'ya Gora    66.68 321  eP     P       11 01 02.6 -2.1
LPSR                                 pmax   pmax
             comp=Z,10.0nm,0.8s
NVAR  Mina Array Bea    67.29  58    P      P       11 01 09.8 +0.6
             comp=Z,0.3nm,0.6s,baz=337,slow=4.5,SNR=2.7
             comp=Z,0.3nm,0.6s
VSR   Storozhevoye      67.49 320  eP     P       11 01 08.0 -1.8
VSR                                  pmax   pmax
             comp=Z,8.0nm,0.9s
VORD  Divnogorie        67.60 320  eP     P       11 01 08.5 -2.0
VORD                                 pmax   pmax
             comp=Z,9.0nm,0.9s
ASAR  Alice Springs     67.88 194    P      P       11 01 12.8 +0.2
             comp=Z,0.5nm,0.8s,baz=13,slow=5.5,SNR=7.0
ASAR                                 pP     sP      11 01 24.0 -1.4
             comp=Z,0.5nm,0.8s,baz=12,slow=5.5,SNR=4.6
             comp=Z,0.5nm,0.8s
NB2   NORSAR Subarra    70.26 339    P      P       11 01 26.6 -0.4
             comp=Z,1.4nm,0.7s,baz=32,slow=6.5
NOA   NORSAR Array B    70.26 339    P      P       11 01 27.0  0.0
             comp=Z,2.1nm,0.6s,baz=32,slow=6.1,SNR=6.0
NOA                                  pP     sP      11 01 38.2 -0.4
             comp=Z,2.5nm,0.6s,baz=31,slow=6.2,SNR=5.1
             comp=Z,2.1nm,0.6s
HFS   Hagfors           70.36 338    P      P       11 01 26.7 -0.8
             comp=Z,2.9nm,0.6s,baz=65,slow=8.4,SNR=8.2
HFS                                  pP     sP      11 01 38.6 -0.1
             comp=Z,4.4nm,0.5s,baz=55,slow=7.8,SNR=4.7
             comp=Z,2.9nm,0.6s
KIV   Kislovodsk        70.54 312  eP     P       11 01 27.6 -1.4
KIV                                  pmax   pmax
             comp=Z,7.0nm,1.0s
KIV                                  MLR    MLR
             comp=Z,72nm,18.0s
KIV   Kislovodsk        70.54 312  eP     P       11 01 27.6 -1.4
KBZ   Khabaz            70.57 312    P      P       11 01 30.0 +0.9
             comp=Z,5.5nm,0.8s,baz=69,slow=9.7,SNR=8.3
KBZ                                  pP     sP      11 01 41.9 +1.2
             comp=Z,6.1nm,0.8s,baz=57,slow=3.7,SNR=5.1
             comp=Z,5.5nm,0.8s
KBZ   Khabaz            70.57 312⇓eP     P       11 01 30.2 +1.1
KBZ                                  pmax   pmax
             comp=Z,7.0nm,0.8s
KBZ   Khabaz            70.57 312  eP     P       11 01 30.2 +1.1
SHA1  Shidzhatmaz       70.70 312⇑eP     P       11 01 31.8 +1.6
AK03  Malin Array Si    72.30 324    P      P       11 01 38.4 -1.0
AKASG Malin Array Be    72.32 324    P      P       11 01 39.1 -0.4
             comp=Z,1.0nm,0.4s,baz=39,slow=6.0,SNR=8.3
AKASG                                pP     sP      11 01 50.8 -0.4
             comp=Z,1.6nm,0.4s,baz=39,slow=5.9,SNR=5.9
             comp=Z,1.0nm,0.4s
AKASG Malin Array Be    72.32 324    IAmb   IAmb    11 01 52.0
             comp=Z,3.6nm,1.1s
AKASG Malin Array Be    72.32 324ceP     P       11 01 38.7 -0.8
AKASG                                pmax   pmax
             comp=Z,1.0nm,0.4s
AKBB  Malin Array Si    72.32 324ceP     P       11 01 39.3 -0.2
AKBB                                 pmax   pmax
             comp=Z,24nm,3.2s
AK01  Malin Array Si    72.33 324    P      P       11 01 39.0 -0.6
AK22  Malin Array Si    72.34 324    P      P       11 01 38.8 -0.8
AK21  Malin Array Si    72.34 324    P      P       11 01 38.8 -0.8
AK09  Malin Array Si    72.36 324    P      P       11 01 38.9 -0.9
AK02  Malin Array Si    72.36 324    P      P       11 01 38.9 -0.9
AK11  Malin Array Si    72.36 324    P      P       11 01 38.9 -0.9
AK18  Malin Array Si    72.37 324    P      P       11 01 38.9 -0.9
AK20  Malin Array Si    72.38 324    P      P       11 01 39.0 -0.9
AK10  Malin Array Si    72.39 324    P      P       11 01 39.0 -0.9
AK05  Malin Array Si    72.39 324    P      P       11 01 39.1 -0.8
AK12  Malin Array Si    72.39 324    P      P       11 01 39.1 -0.9
AK16  Malin Array Si    72.39 324    P      P       11 01 39.1 -0.9
AK17  Malin Array Si    72.40 324    P      P       11 01 38.7 -1.3
AK06  Malin Array Si    72.42 324    P      P       11 01 38.8 -1.3
AK14  Malin Array Si    72.42 324    P      P       11 01 39.6 -0.5
AK07  Malin Array Si    72.44 324    P      P       11 01 39.7 -0.5
AK13  Malin Array Si    72.46 324    P      P       11 01 39.8 -0.5
LUBAR Lubar, Ukraine    73.53 324    P      P       11 01 46.0 -0.7
KMPD  K-Podol'skiy      75.11 324    P      P       11 01 55.3 -0.6
BUR08 Bucovina Ar. S    76.36 324           P       11 02 03.1 -0.1
BUR08                                IAmb   IAmb    11 02 06.1
             comp=Z,4.0nm,0.7s
CRNM  Carthage          77.28  55    P      P       11 02 07.9 -0.9
MEM   Membach           80.80 337  dP     P       11 02 30.5 +3.0
MMAI  Mount Meron Ar    82.26 308    P      P       11 02 36.9 +1.3
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             comp=Z,0.9nm,0.3s,baz=46,slow=10,SNR=1.8
MMAI                                 pP     sP      11 02 48.4 +1.1
             comp=Z,2.1nm,0.4s,baz=36,slow=7.5,SNR=3.5
             comp=Z,0.9nm,0.3s
TXAR  Lajitas Array     82.38  57    P      P       11 02 37.2 +0.9
             comp=Z,0.3nm,0.8s,baz=301,slow=3.2,SNR=4.7
TXAR                                 pP     sP      11 02 48.5 +0.1
             comp=Z,0.6nm,0.7s,baz=293,slow=4.0,SNR=6.4
             comp=Z,0.3nm,0.8s
```

UCR ***04*** *11:00:53.7±1.4, 9°.01N×84°.08W, h0^{km}±1^{km}, MW3.8*
CATAC ***04*** *11:00:54.3±0.4, 9°N±2°×8°4W±°, h5^{km}±2^{km}, M3.7/13,*
MLv3.7/13, Error ellipse: s-maj=6.7km s-min=2.5km
az=50.2, confirmed
ISC 04 11:00:54.2±1.2**, 8°.99N**±0°.03×**84°.09W**±0°.03**, h8**^{km}±9^{km}**,**
n121, σ**0**^{s}**.70**/167**, 20C-29D, Off coast of Costa Rica**

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Code  Station Name       Δ°  AZ°     Phase ID           Time     Res
                                 Op       ISC        h  m  s    ISC
QUEP  Quepos            0.45 351   P        Pg       11 01 03.4 +0.5
QUEP  Quepos            0.45 351   S        Sb       11 01 10.5 -0.7
EDPE  Pejibaye, P       0.54  72⇓iP        Pg       11 01 04.8 +0.1
EDPE                             eS        Sg       11 01 12.9 +1.0
ZEDO  Perez Zeledon     0.55  48⇓iP        Pg       11 01 04.9 +0.1
ZEDO                             eS        Sb       11 01 13.2 -0.9
PANP  Palmar Norte      0.63  92 eP        Pg       11 01 06.3  0.0
PANP                             eS        Sb       11 01 16.6 +0.2
PICV  PH. Pirrs         0.65 351⇓eP        Pg       11 01 06.9 +0.2
PICV                             eS        Sb       11 01 16.6 -0.3
PIEC  Cerro El Cedra    0.65  12⇓eP        Pg       11 01 06.6 -0.2
PIEC                             eS        Sg       11 01 15.9 +0.7
BUS1  Rivas             0.66  31⇓iP        Pg       11 01 06.8 -0.3
BUS1                             eS        Sg       11 01 15.8 +0.1
RAZU  San Marcos de     0.67   6⇓iP        Pg       11 01 07.1 -0.1
PITB  Pirrs, San        0.68   6⇓eP        Pg       11 01 07.2  0.0
SAJE  San Jernim        0.68  58⇓iP        Pg       11 01 07.0 -0.4
SAJE                             eS        Sg       11 01 17.1 +0.8
LCR2  La Lucha 2        0.76   7   S        Sb       11 01 19.7 -0.6
LCR2  La Lucha 2        0.76   7   P        Pg       11 01 08.9 +0.1
BURE  Buenos Aires      0.77  76⇑eP        Pg       11 01 09.2 +0.1
BURE                             eS        Sb       11 01 20.9 +0.4
ACOS  Acosta            0.81 355⇓iP        Pg       11 01 09.3 -0.5
ACOS                             eS        Sg       11 01 20.9 +0.5
REPA  Paraso            0.86  15⇓iP        Pg       11 01 10.3 -0.6
REPA                             eS        Sb       11 01 22.7 -0.7
JIME  Puerto Jimenez    0.88 120⇑eP        Pb       11 01 11.6 -0.1
DRK0  Durika            0.88  72   P        Pg       11 01 10.5 -0.7
DRK0  Durika            0.88  72⇓eP        Pg       11 01 10.5 -0.7
DRK0                             eS        Sb       11 01 24.2 +0.3
PTJ1  Puerto Jimnez     0.90 120   P        Pb       11 01 12.3 +0.2
PTJ1  Puerto Jimnez     0.90 120   S        Sb       11 01 25.9 +1.6
AMPA  Desamparados      0.91   2 eP        Pg       11 01 10.9 -0.7
AMPA                             eS        Sg       11 01 23.4  0.0
EDP2  Potrero Grande    0.91  88⇑eP        Pg       11 01 11.6 -0.1
EDP2                             eS        Sb       11 01 25.8 +1.4
TRIO  Tres Rios         0.92   6 eP        Pg       11 01 10.6 -1.3
TRIO                             eS        Sb       11 01 24.3 -0.6
LUJA  Lujan             0.93   1 eP        Pg       11 01 11.6 -0.6
PIRO  Carate, Puerto    0.95 128   P        Pg       11 01 12.4  0.0
PIRO  Carate, Puerto    0.95 128⇓eP        Pg       11 01 12.2 -0.2
PIRO                             eS        Sb       11 01 26.2 +0.6
ECI   Escuela Centro    0.95   2 eP        Pg       11 01 11.9 -0.5
SJS3  Mercedes San J    0.95   2⇑eP        Pg       11 01 12.1 -0.4
SJS   Escuela Geolog    0.95   2 eP        Pg       11 01 11.9 -0.5
LUPE  Guadalupe         0.96   2 eP        Pg       11 01 11.7 -0.9
PCAYA Pacayas           0.97  17 eP        Pg       11 01 12.2 -0.6
PCAYA                            eS        Sb       11 01 25.9 -0.5
VINA  Juan Vinas        0.97  21⇑eP        Pg       11 01 12.2 -0.6
CORON Coronado          0.98   5 eP        Pg       11 01 12.9 -0.3
BELE  Belen             0.99 355⇓eP        Pg       11 01 12.3 -0.9
BELE                             eS        Sg       11 01 26.2 +0.1
HEME  Heredia, Merce    1.00 358⇓eP        Pb       11 01 13.9  0.0
HEME                             eS        Sb       11 01 28.3 +0.9
RAFA  San Farael, Vo    1.01  16⇓iP        Pg       11 01 12.9 -0.7
HDC   Heredia           1.01 359 eP        Pg       11 01 13.1 -0.6
HDC                              eS        Sb       11 01 27.5  0.0
VICA  Volcano Irazu     1.02  14⇓iP        Pg       11 01 13.2 -0.7
VICA                             eS        Sb       11 01 28.8 +0.6
ATEO  Atenas            1.03 344 eP        Pg       11 01 13.3 -0.7
CVIMO Finca Echandi     1.04   8⇓iP        Pg       11 01 13.6 -0.7
CVIMO                            eS        Sb       11 01 29.1 +0.5
VTCV  VTCV, Calle Va    1.05  20⇓iP        Pg       11 01 13.9 -0.6
VTCV                             eS        Sb       11 01 28.6 -0.3
CVTQ  Turrialba Volc    1.06  18⇓iP        Pg       11 01 14.1 -0.6
CVTV  Tajo              1.07  19⇓iP        Pg       11 01 14.2 -0.5
CVTV                             eS        Sb       11 01 29.4  0.0
TCS1  Tacares           1.07 349   P        Pb       11 01 15.1 +0.1
TCS1  Tacares           1.07 349⇓iP        Pb       11 01 14.8 -0.2
TCS1                             eS        Sb       11 01 29.9 +0.7
VTR0  Volcan Turrial    1.08  18⇓iP        Pg       11 01 14.3 -0.6
ABRB  Las Abras (San    1.08  20⇓iP        Pg       11 01 14.5 -0.5
ABRB                             eS        Sb       11 01 29.4 -0.3
CVTR  Volcan Turrial    1.08  18⇓iP        Pg       11 01 14.3 -0.6
CVTR                             eS        Sg       11 01 29.1 +0.1
PALD  Palmares          1.11 342⇓eP        Pg       11 01 14.9 -0.7
PALD                             eS        Sb       11 01 30.3 -0.2
RESJ  San Isidro (Tu    1.13  23⇓eP        Pg       11 01 15.2 -0.7
RESJ                             eS        Sb       11 01 31.1 +0.2
NARAN Naranjo de Ala    1.14 346 eP        Pg       11 01 16.0 -0.1
NARAN                            eS        Sb       11 01 32.0 +0.7
ARZA  Esparza           1.15 330 eP        Pg       11 01 15.1 -1.2
RAMO  San Ramon         1.15 341 eP        Pg       11 01 15.6 -0.8
SRA1  San Ramn          1.16 341 eP        Pg       11 01 15.5 -1.0
SRA1                             eS        Sb       11 01 32.4 +0.7
ROBF  Roble, Puntare    1.17 327 eP        Pg       11 01 16.3 -0.4
ROBF                             eS        Sb       11 01 33.0 +0.9
NELY  Ciudad Neily      1.18 106 eP        Pg       11 01 16.0 -0.9
NELY                             eS        Sb       11 01 32.8 +0.5
VPS8  V Poas            1.19 353 eP        Pg       11 01 16.5 -0.7
VPS8                             eS        Sb       11 01 33.9 +0.8
CVTG  V. Turrialba,     1.20  15⇑eP        Pg       11 01 16.5 -0.7
VPS5  V. Poas           1.21 354 eP        Pg       11 01 16.3 -1.1
LCOCO El Coco           1.21  26 eP        Pg       11 01 16.1 -1.4
LCOCO                            eS        Sg       11 01 33.0 -0.3
RVLA  Villa Bonita      1.22  24 i P        Pg       11 01 16.8 -0.9
RVLA                             eS        Sb       11 01 33.7 +0.2
ZARE  Zarcero           1.23 346 eP        Pg       11 01 17.0 -0.7
ALCO  Alturas Coton,    1.25  92⇑eP        Pg       11 01 16.7 -1.4
ALCO                             eS        Sg       11 01 34.5 +0.1
PILE  Guapiles          1.26  14⇑eP        Pg       11 01 17.7 -0.7
PILE                             eS        Sb       11 01 35.4 +0.7
CDITO Canoas            1.27 109   S        Sn       11 01 36.4 +0.7
CDITO Canoas            1.27 109   P        Pg       11 01 18.0 -0.7
VPL1  V. Platanar       1.29 348⇑eP        Pg       11 01 17.7 -1.3
VPL1                             eS        Sg       11 01 35.4 -0.4
CEUA  Cerro Uatsi, L    1.30  61⇑iP        Pn       11 01 19.5 +0.8
EGUB  Earth Gu¡pi       1.32  22 eP        Pg       11 01 18.4 -1.1
EGUB                             eS        Sn       11 01 37.1 +0.4
DMCAL E. de Neily       1.32 104⇑eP        Pg       11 01 18.1 -1.5
DMCAL                            eS        Sg       11 01 36.8  0.0
VPL2  V. Platanar       1.34 348⇑eP        Pg       11 01 18.7 -1.3
VPL2                             eS        Sg       11 01 36.8 -0.6
ARTO  Ro Cuarto         1.35 355⇑eP        Pn       11 01 19.0 -0.4
QUEU  Ciudad Quesada    1.37 346⇑iP        Pn       11 01 20.0 +0.3
BRU2  Volcan            1.40  98   P        Pn       11 01 19.7 -0.4
BRU2  Volcan            1.40  98   S        Sg       11 01 39.0 -0.3
BRU2  Volcan            1.40  98⇑eP        Pn       11 01 19.2 -1.0
BRIBI Bribri            1.41  63 eP        Pb       11 01 20.9 +0.2
ITAL  Pital             1.47 353 eP        Pn       11 01 20.9 -0.1
SOCE  Pocosol           1.48 340   P        Pn       11 01 20.9 -0.3
SOCE  Pocosol           1.48 340   S        Sn       11 01 41.8 +1.0
SOCE  Pocosol           1.48 340 eP        Pn       11 01 20.8 -0.4
SOCE                             eS        Sn       11 01 42.0 +1.2
CLLRA Cordillera,       1.48  99⇑eP        Pn       11 01 20.6 -0.7
LMNES Limones           1.50 126 eP        Pn       11 01 20.1 -1.4
NYURE Nandayure         1.52 311 eP        Pb       11 01 22.6 -0.1
JUNT  Juntas            1.54 327 eP        Pn       11 01 20.8 -1.3
JTS   Las Juntas de     1.55 327   P        Pn       11 01 21.9 -0.2
JTS                                S        Sn       11 01 41.4 -1.1
CASO  Castillo          1.57 336 eP        Pn       11 01 22.4 -0.1
JEFFS S de V. Baru      1.57 101⇑iP        Pn       11 01 21.7 -0.8
FORC  Fortuna           1.58 339⇓eP        Pn       11 01 22.2 -0.3
VACR  Volcan Arenal     1.59 339 eP        Pn       11 01 23.1 +0.5
VACR                             eS        Sg       11 01 44.8 -0.5
ARE1  Arenal 1          1.59 337⇑eP        Pn       11 01 23.2 +0.5
VARE2 V. Arenal         1.59 337 eP        Pn       11 01 23.2 +0.4
TRT2  Tortugero         1.60  13   P        Pn       11 01 22.7 -0.1
TRT2  Tortugero         1.60  13⇑iP        Pn       11 01 22.7 -0.1
TRT2                             eS        Sn       11 01 44.3 +0.6
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CEDE	Laguna Cedeo	1.61	338	eP	Pn	11 01 23.7	+0.8
BQTLY	Boquete Panama	1.63	98	eP	Pn	11 01 22.8	-0.5
TABAC	Tabacon	1.64	336	⇓eP	Pn	11 01 23.7	+0.2
REZ	Monterrey de S	1.64	339	eP	Pn	11 01 24.3	+0.8
TILA	Tilaran	1.71	330	eP	Pn	11 01 24.9	+0.6
COVE	Coope Vega, Sa	1.75	350	P	Pn	11 01 24.9	0.0
COVE	Coope Vega, Sa	1.75	350	S	Sb	11 01 48.8	+0.1
NICO	Nicoya	1.76	311	eP	Pg	11 01 27.5	-0.4
QUEB	Quebradon, Cot	1.81	334	eP	Pb	11 01 27.5	-0.1
TIMP	Tierras Morena	1.83	330	eP	Pn	11 01 27.1	+1.1
JUD3	Juan Diaz 3	1.84	310	eP	Pb	11 01 28.6	+0.4
PBNVO	Pueblo Nuevo,	1.88	93	⇓eP	Pn	11 01 25.8	-0.8
TENO	El Achiote	1.92	333	eP	Pn	11 01 28.3	+1.0
RBALA	Bur	1.92	93	eP	Pn	11 01 26.5	-0.7
MOTZ	Rio Naranjo	1.94	330	eP	Pb	11 01 29.2	-0.7
CUI	Cuipilapa	1.97	328	eP	Pn	11 01 27.6	-0.3
COLC	Colonia	2.00	327	eP	Pn	11 01 28.2	-0.1
MESS	Mesas	2.05	328	eP	Pn	11 01 30.4	+1.3
VMAR	Armenia, Volca	2.08	331	⇑eP	Pn	11 01 30.9	+1.5
UPAL	Upala	2.10	335	P	Pn	11 01 30.1	+0.4
UPAL	Upala	2.10	335	S	Sb	11 01 58.5	-0.4
ELI1	Hacienda Flor	2.19	319	eP	Pn	11 01 32.4	+1.5
LAPC	Finca la Perla	2.21	323	eP	Pn	11 01 32.0	+0.8
COPN	Copaltepe	4.01	322	eP	Pn	11 01 56.5	+0.5
CNGN	Cerro Negro	4.33	324	eP	Pn	11 01 59.3	-1.1
SIUN	Universidad Ur	4.75	352	P	Pn	11 02 06.8	+0.6
SIUN				S	Sn	11 03 02.6	+1.2

IDC ***04*** *11:01:28.0±6.0, 41°.94N×19°.99E, h0^{km}, mb3.9/2, mbtmp3.7/5, ML2.9/3, MS3.1/6, Error ellipse: s-maj=112.1km s-min=19.1km az=37.0*

TIR ***04*** *11:01:27.4, 41°.61N×19°.59E, h37^{km}±2^{km}, Ml3.1/3*

BEO ***04*** *11:01:27.3±0.4, 41°.52N×19°.50E, h13^{km}±2^{km}, ML3.4/18*

SKO ***04*** *11:01:27.8, 41°.61N×19°.44E, h17^{km}, ML3.3*

PDG ***04*** *11:01:29.2±0.1, 41°.68N×19°.53E, h10^{km}, MD3.5/11, ML3.5/13, Error ellipse: s-maj=0.6km s-min=0.2km az=90.0*

THE ***04*** *11:01:30.3, 41°N±18°×1°9E±1°9, h36^{km}±27^{km}, M3.3/13, MLh3.3/13*

ISC 04 11:01:26.9±0.9**, 41°.54N**±0°.02×**19°.47E**±0°.02**, h16**^{km}±7^{km}**, n111,** σ**1^{s}.14**/154**, MS3.3**/5**, 13C-12D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.35	122	P	Pg	11 01 33.6	-0.5
TIR				S	Sg	11 01 39.2	+0.1
TIR				AML	AML	11 01 39.7	
	7.3nm,0.5s						
ULC	Ulcinj	0.46	338	ePg	Pg	11 01 35.9	-0.2
ULC				i Sg	Sg	11 01 42.4	0.0
SDA	Shkodra	0.52	2	Pg	Pg	11 01 36.7	-0.4
SDA				Sg	Sb	11 01 45.6	+0.8
DRME	Dracevica, Mon	0.68	342	ePg	Pg	11 01 39.9	-0.4
DRME				eSg	Sg	11 01 49.6	+0.2
PHP	Peshkopia	0.74	78	Pg	Pg	11 01 39.7	-1.7
PHP				Sg	Sg	11 01 50.3	-1.0
PHP				AML	AML	11 01 55.9	
	9.3nm,0.6s						
BUM	Brajici-Budva	0.88	331	ePg	Pb	11 01 43.6	-0.1
BUM				i Sg	Sn	11 01 56.7	-0.3
PDG	Podgorica	0.91	350	P	Pb	11 01 44.0	-0.1
PDG				S	Sg	11 01 56.8	+0.4
PDG	Podgorica	0.91	350	⇓P	Pb	11 01 43.8	-0.5
PDG				⇓S	Sb	11 01 55.2	-0.8
PDG	Podgorica	0.91	350	ePg	Pb	11 01 43.3	-0.9
PDG				eSg	Sn	11 01 57.8	+0.2
PDG	Podgorica	0.91	350	ePg	Pb	11 01 43.7	-0.5
PDG				i Sg	Sb	11 01 56.6	+0.6
VLO	Vlora	1.07	179	Pn	Pg	11 01 48.4	+0.9
VLO				Sn	Sn	11 02 03.6	+2.1
OHR	Ohrid	1.09	113	i Pg	Pb	11 01 47.3	0.0
OHR				i Sg	Sn	11 02 04.7	+2.5
OHR				eLg	Lg	11 02 04.9	
	comp=N,576nm,0.6s						
OHR				eLg	Lg	11 02 05.8	
	comp=E,426nm,0.6s						
CEME	Cevo	1.09	338	ePg	Pb	11 01 47.3	-0.1
CEME				eSg	Sn	11 02 03.4	+1.1
PVY	Plav	1.12	19	⇑iPg	Pb	11 01 47.1	-0.8
PVY				i Sg	Sb	11 02 03.0	+0.8
HCY	Herceg Novi	1.17	322	ePg	Pb	11 01 49.2	+0.6
HCY				i Sg	Sg	11 02 06.8	+2.2
NKME	Niksic	1.29	343	⇓iPg	Pn	11 01 50.8	+0.6
NKME				eSg	Sg	11 02 09.9	+1.4
KOME	Kolasin	1.31	1	⇑iPg	Pn	11 01 50.8	+0.2
KOME				eSg	Sg	11 02 09.9	+0.6
KBN	Korca	1.35	132	P	Pb	11 01 52.6	+0.8
IVA	Berane	1.37	13	⇓iPg	Pn	11 01 51.7	+0.3
IVA				i Sg	Sg	11 02 11.7	+0.5
TREB	Trebinje	1.44	325	ePn	Pn	11 01 53.0	+0.7
TREB	Trebinje	1.44	325	ePg	Pb	11 01 53.5	+0.1
TREB				eSg	Sg	11 02 13.6	+0.1
BRY	Bratogost	1.53	333	⇓iPg	Pb	11 01 55.4	+0.5
BRY				i Sg	Sg	11 02 17.3	+1.1
SKO	Skopje	1.54	73	i Pg	Pb	11 01 55.6	+0.6
SKO				i Sg	Sg	11 02 16.4	0.0
NEST	Nestorio	1.64	133	P	Pb	11 01 56.7	-0.1
UPM	Unac-Piva	1.72	346	⇓iPn	Pb	11 01 57.9	-0.2
UPM				i Sn	Sg	11 02 21.4	-0.8
KLINJ	Klinje	1.76	338	ePn	Pb	11 01 58.3	-0.5
SJES	Sjenica	1.76	12	ePn	Pb	11 01 59.0	+0.1
SJES				eSn	Sb	11 02 21.7	+0.9
PLE	Pljevlja	1.79	358	ePn	Pb	11 01 58.8	-0.6
PLE				i Sn	Sb	11 02 22.9	+1.3
STON	Ston	1.87	316	ePn	Pb	11 02 00.0	-0.6
STON				eSn	Sb	11 02 23.8	0.0
NOCI	Noci	1.96	248	P	Pn	11 01 59.1	-0.4
SELS	Selova	2.08	35	ePn	Pn	11 02 02.1	+1.0
SELS				eSn	Sn	11 02 27.5	+0.9
RUDO	Rudo	2.08	358	ePn	Pn	11 02 02.6	+1.5
RUDO	Rudo	2.08	358	ePn	Pb	11 02 03.1	-1.1
RUDO				eSn	Sn	11 02 27.9	+1.2
IVAS	Ivanjica	2.10	14	ePn	Pn	11 02 02.4	+1.0
IVAS				eSn	Sn	11 02 27.9	+0.7
BARS	Barje	2.16	53	i Pn	Pn	11 02 03.3	+1.1
BARS	Barje	2.16	53	ePn	Pn	11 02 03.2	+1.0
BARS				eSn	Sn	11 02 29.3	+0.7
MATE	Matera	2.27	248	⇑P	Pn	11 02 03.7	+0.1
GOCS	Kraljevo Serbi	2.27	27	ePn	Pn	11 02 05.0	+1.2
GOCS				eSn	Sn	11 02 33.0	+1.5
BBLS	Lazi&#263i	2.33	359	ePn	Pn	11 02 06.5	+2.0
BBLS				eSn	Sb	11 02 35.5	-1.5
VAY	Valandovo	2.34	94	i Pn	Pn	11 02 05.9	+1.3
VAY				i Sn	Sn	11 02 34.3	+1.3
VAY				eLg	Lg	11 02 35.6	
	comp=N,162nm,0.7s						
VAY				eLg	Lg	11 02 36.2	
	comp=E,71nm,0.7s						
BOSS	Bosilegrad	2.44	66	ePn	Pn	11 02 07.1	+1.1
BOSS				eSn	Sn	11 02 34.9	-0.6
GRUS	Gruza	2.52	21	ePn	Pn	11 02 08.5	+1.4
GRUS				eSn	Sn	11 02 39.2	+1.7
DIVS	Divibare	2.59	8	ePn	Pn	11 02 09.0	+0.9
KNT	Kendrikon	2.61	97	i Pn	Pn	11 02 09.5	+1.2
BOVS	Bovan	2.67	37	⇑P	Pn	11 02 10.4	+1.2
BOVS	Bovan	2.67	37	ePn	Pn	11 02 09.7	+0.6
BOVS				eSn	Sn	11 02 41.9	+0.8
KKB	Krupnik	2.76	82	i Pn	Pn	11 02 12.8	+2.4
TRUS	Trudelj	2.77	14	ePn	Pn	11 02 12.0	+1.4
TRUS				eSn	Sn	11 02 43.6	-0.1
TSLK	Tsoukalades, L	2.86	161	P	Pn	11 02 12.4	+0.6
LKD2	Lefkada island	2.89	161	P	Pn	11 02 12.2	0.0
LKD2				S	Sn	11 02 45.6	-1.1
ZAPS	Zavoj	2.92	52	ePn	Pn	11 02 13.8	+1.2
ZAPS				eSn	Sn	11 02 47.8	+0.5
AMPL	Ampelaki	2.93	152	P	Pn	11 02 13.9	+1.1
DRAG	Dragano-Lefkad	2.97	163	P	Pn	11 02 13.1	-0.2
VTS	Vitosha	3.00	68	ePn	Pn	11 02 14.3	+0.4
VTS				eSn	Sn	11 02 48.7	-0.9
TEKS	Tekeris	3.01	1	ePn	Pn	11 02 14.6	+0.7
EVGI	Lefkada island	3.05	162	P	Pn	11 02 14.1	-0.3
EVGI				S	Sn	11 02 49.1	-1.5
ZAGS	Zajecar	3.05	41	ePn	Pn	11 02 15.9	+1.5
ZAGS				eSn	Sn	11 02 51.2	+0.6
SRS	Serrai	3.13	96	i Pn	Pn	11 02 16.6	+1.0
TIP	Timpagrande	3.14	222	⇑P	Pn	11 02 15.9	+0.2
BLKB	Belogradchik	3.15	48	ePn	Pn	11 02 17.7	+1.8
BLKB				eSn	Sn	11 02 53.9	+0.8
BORS2	Bor- Borsko je	3.17	35	ePn	Pn	11 02 15.6	-0.4
BORS2				eSn	Sn	11 02 52.6	-0.8
FSK	Fiskardo	3.19	164	P	Pn	11 02 15.7	-0.5
FSK				S	Sn	11 02 51.5	-2.4
AVAS	Avala Beograd	3.25	13	eSn	Sn	11 02 55.4	0.0
KUBS	Kucevo	3.30	29	ePn	Pn	11 02 16.9	-0.9
AGG	Agios Georgios	3.33	138	P	Pn	11 02 19.8	+1.5
DMLN	Damoulianata-K	3.37	168	P	Pn	11 02 18.4	-0.4
VLS	Valsamata	3.46	165	P	Pn	11 02 19.3	-0.8
VLS				S	Sn	11 02 58.6	-2.2
ANX	Ano Chora	3.49	147	P	Pn	11 02 22.2	+1.6
BLY	Banja Luka	3.62	333	ePn	Pn	11 02 23.2	+1.0
FRGS	Fruska Gora	3.63	4	ePn	Pn	11 02 23.0	+0.7
MDVR	Moldovita	3.63	26	⇑P	Pn	11 02 23.1	+0.6
MDVR	Moldovita	3.63	26	ePn	Pn	11 02 23.0	+0.6
MDVR				eSn	Sn	11 03 05.4	+0.4
VRSS	Vrsac	3.83	20	ePn	Pn	11 02 26.3	+1.2
DJES	Djerdap	3.84	35	⇑P	Pn	11 02 26.8	+1.5
HERR	Herculane	3.98	32	⇑P	Pn	11 02 28.1	+1.0
PLD	Plovdiv	3.99	79	ePn	Pn	11 02 28.3	+1.0
GUR	Goura	4.22	147	P	Pn	11 02 31.1	+0.5
GZR	Gura Zlata	4.54	31	⇓P	Pn	11 02 36.1	+1.1
AQU	L'Aquila	4.60	282	ePn	Pn	11 02 35.7	0.0
MORH	Mrgy, Hungar	4.71	353	ePn	Pn	11 02 39.8	+2.6
MORH	Mrgy, Hungar	4.71	353	⇑P	Pn	11 02 36.9	-0.3
SIRR	Siria	4.99	18	⇓P	Pn	11 02 40.9	-0.1
SIRR	Siria	4.99	18	ePn	Pn	11 02 41.2	+0.2
SIRR				eSn	Sn	11 03 36.9	-1.4
LOT	Lotru	5.01	37	⇑P	Pn	11 02 43.0	+1.7
BOJS	Bojanci	5.01	324	ePn	Pn	11 02 41.8	+0.5
ARR	Arges	5.36	43	⇓P	Pn	11 02 48.8	+2.5
CEY	Cerknica	5.57	321	ePn	Pn	11 02 49.7	+0.7
VOIR		5.63	44	⇓P	Pn	11 02 51.5	+1.7
SKDS	Skadanscina	5.64	317	ePn	Pn	11 02 49.7	-0.2
MARR	Marisel-Cluj	5.77	26	⇓P	Pn	11 02 52.0	+0.1
SOKA	Soboth	6.05	330	ePn	Pn	11 02 56.8	+1.2
	comp=E,0.5nm,0.2s						
SOKA				eSn	Sn	11 04 02.7	-1.9
	comp=E,2.4nm,0.4s						
OBKA	Obir	6.11	326	i Pn	Pn	11 02 59.1	+2.7
	comp=E,1.9nm,0.3s						
MLR	Muntele Rosu	6.14	48	⇑P	Pn	11 02 58.4	+1.4
DOPR	Dopca	6.16	42	⇓P	Pn	11 02 58.9	+1.8
TURR	Turia	6.54	44	⇑P	Pn	11 03 04.4	+2.0
MYKA	Terra Mystica	6.60	322	eSn	Sn	11 04 16.9	-1.1
	comp=E,1.7nm,0.3s						
PLOR	Plostina	6.76	48	⇑P	Pn	11 03 07.5	+2.2
KBA	Koelnbreinsper	7.07	324	ePn	Pn	11 03 11.5	+1.7
	comp=E,2.2nm,0.7s						
MOA	Molln	7.32	331	ePn	Pn	11 03 15.5	+2.5
	comp=E,0.3nm,0.2s						
LESA	Schwarzleotal	7.63	323	ePn	Pn	11 03 19.9	+2.6
GERES	GERESS Array B	8.36	333	Pn	Pn	11 03 29.5	+2.0
	baz=151,slow=12,SNR=1.8						
GERES				Sn	Sn	11 05 01.0	-0.5
	comp=E,0.1nm,0.3s,baz=167,slow=34,SNR=4.8						
	comp=E,0.3nm,0.4s						
BRTR	Keskin Array B	10.92	95	LR	LR	11 08 56.2	
	comp=E,46nm,19.6s,baz=266,slow=42						
HFS	Hagfors	18.96	351	P	Pn	11 05 48.0	+0.2
	comp=E,0.2nm,0.3s,baz=143,slow=9.9,SNR=1.6						
	comp=E,1.3nm,0.6s						
FINES	FINESS Array B	20.33	9	P	P	11 06 00.8	-1.3
	comp=E,0.2nm,0.3s,baz=177,slow=10,SNR=6.8						
	comp=E,1.9nm,0.5s						
TORD	Torodi Ar. Bea	32.25	214	LR	LR	11 22 00.9	
	comp=E,17nm,18.9s,baz=317,slow=38						
ZALV	Zalesovo Beam	44.12	51	P	P	11 09 33.1	-1.0
	comp=E,0.7nm,0.3s,baz=276,slow=9.0,SNR=4.2						
	comp=E,0.7nm,0.3s						
MKAR	Makanchi Array	44.31	61	P	P	11 09 34.9	-0.9
	comp=E,0.9nm,0.6s,baz=285,slow=6.8,SNR=5.0						
	comp=E,0.9nm,0.6s						
LBTB	Lobatse	66.46	174	LR	LR	11 46 45.8	
	comp=E,39nm,20.4s,baz=58,slow=41						
BOSA	Boshof	70.00	175	LR	LR	11 44 53.1	
	comp=E,36nm,18.8s,baz=32,slow=37						
CMAR	Chiang Mai Arr	70.24	83	LR	LR	11 48 19.7	
	comp=E,3.4nm,20.3s,baz=100,slow=40						
SJG	San Juan	75.01	281	LR	LR	11 44 13.8	
	comp=E,14nm,19.5s,baz=350,slow=34						

IDC ***04*** *11:32:17.1±2.8, 50°.58N×173°.16W, h0^{km}, mb3.6/4, mbtmp3.5/5, ML3.5/1, Error ellipse: s-maj=73.1km s-min=33.2km az=18.0*

NEIC ***04*** *11:32:18.0±1.3, 50°.6N±0°.1×173°.2W±0°.1, h10^{km}±2^{km}, mb3.8/19, ML3.5/10, ML3.2(AEIC), Error ellipse: s-maj=21.6km s-min=11.1km az=183.0*

AEIC ***04*** *11:32:19.5±2.0, 50°.5N±0°.2×173°.2W±0°.1, h11^{km}±7^{km}, Error ellipse: s-maj=23.7km s-min=9.9km az=180.0*

ISC 04 11:32:18.2±1.3**, 50°.6N**±0°.2×**173°.16W**±0°.09**, h10**^{km}**, n34,** σ**0^{s}.84**/34**, mb3.8**/5**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	Atka Island	1.72	338	Pn	Pn	11 32 48.5	+0.3
ADK	Adak	2.56	301	Pn	Pn	11 32 59.5	-0.2
ADK				IAML		11 33 31.2	
	191nm,0.3s						
ADK				IAML		11 33 32.1	
	176nm,0.3s						
KIWB	Kanaga Island	2.80	298	Pn	Pn	11 33 03.1	+0.1
KIWB				IAML		11 33 36.5	
	comp=E,212nm,0.7s						
KIWB				IAML		11 33 37.9	
	comp=N,187nm,0.4s						
NIKH	Nikolski High	3.57	47	Pn	Pn	11 33 14.2	+0.6
NIKH				IAML		11 34 18.5	
	comp=E,126nm,4.0s						
NIKH				IAML		11 35 06.5	
	comp=N,108nm,3.7s						
UNV	Unalaska Valle	5.22	49	Pn	Pn	11 33 37.6	+1.5
CHIR	Chirikof Islan	11.72	57	Pn	Pn	11 35 05.2	-0.1
KDAK	Kodiak Island	13.98	51	Pn	Pn	11 35 34.3	-1.9
	comp=N,0.2nm,0.3s,baz=11,slow=5.2,SNR=1.9						
SLKM	Skilak Lake	16.24	44		Pn	11 36 05.5	-0.7
SLKM				IAmb	IAmb	11 36 43.5	
	comp=Z,26nm,1.3s						
J19K	Poorman	16.34	28	Pn	Pn	11 36 07.8	+0.5
J19K				IAmb	IAmb	11 36 42.4	
	comp=Z,6.6nm,1.4s						
SEW	Seward	16.40	45	Pn	Pn	11 36 07.4	-0.8
J20K	Nowinta River	16.92	29	Pn	Pn	11 36 14.0	-0.7
J20K				IAmb	IAmb	11 36 29.7	
	comp=Z,6.4nm,1.4s						
BPAW	Bear Paw Mtn.	17.91	33	P	Pn	11 36 25.8	-1.2
H21K	Melozitna Rive	18.37	27	P	P	11 36 32.4	-0.4
E19K	Redstone River	18.67	19	P	P	11 36 36.4	+0.4
E19K				IAmb	IAmb	11 37 15.8	
	comp=Z,7.1nm,1.5s						
WRH	Wood River Hil	19.14	34	P	P	11 36 40.3	-0.9
ILAR	Eielson Array	19.74	34	P	P	11 36 47.9	+0.1
	comp=Z,0.1nm,0.3s,baz=230,slow=9.5,SNR=13						
	comp=Z,0.5nm,0.5s						
ILAR	Eielson Array	19.74	34	P	P	11 36 47.4	-0.4
D20K	Etivluk River	19.86	18	P	P	11 36 47.5	-1.5
D20K				IAmb	IAmb	11 37 20.6	
	comp=Z,6.2nm,1.3s						
RIDG	Independent Ri	19.98	38	P	P	11 36 50.9	+0.5
H24K	Noodor Dome	20.02	31	P	P	11 36 51.0	+0.1
H24K				IAmb	IAmb	11 37 27.1	
	comp=Z,3.9nm,1.3s						
J25K	Salcha River,	20.21	36	P	P	11 36 53.4	+0.5
J25K				IAmb	IAmb	11 36 56.5	
	comp=Z,6.5nm,0.8s						
DOT	Dot Lake	20.25	39	P	P	11 36 53.0	-0.3
DOT				IAmb	IAmb	11 36 59.8	
	comp=Z,5.0nm,1.4s						
SCRK	Sand Creek	20.43	38	P	P	11 36 56.3	+1.0
LOGN	Logan Glacier	20.58	48	P	P	11 36 56.1	-1.0
D22K	Ayikyak River	20.82	21	P	P	11 36 59.9	+0.4
D22K				IAmb	IAmb	11 37 04.1	
	comp=Z,14nm,1.4s						
J26L	Joseph Creek	20.84	37	P	P	11 36 59.5	-0.2
J26L				IAmb	IAmb	11 37 03.4	
	comp=Z,4.2nm,0.8s						
F24K	Squaw Lake	21.09	27	P	P	11 37 03.3	+0.9
F24K				IAmb	IAmb	11 37 26.3	
	comp=Z,5.8nm,1.4s						
PDAR	Pinedale Array	43.11	75	P	P	11 40 18.3	-0.3
	comp=Z,0.3nm,0.6s,baz=305,slow=5.2,SNR=3.8						
	comp=Z,0.3nm,0.6s						
PDAR	Pinedale Array	43.11	75	P	P	11 40 17.6	-1.0
TXAR	Lajitas Array	55.21	85	P	P	11 41 52.2	+1.0
	comp=Z,0.2nm,0.9s,baz=306,slow=8.1,SNR=2.1						
	comp=Z,0.2nm,0.9s						
TXAR	Lajitas Array	55.21	85	P	P	11 41 51.0	-0.2
KURK	Kurchatov	62.08	317	P	P	11 42 38.4	-0.2
KURBB	Kurchatov Arra	62.19	317	P	P	11 42 39.1	-0.2
	comp=Z,0.3nm,0.4s,baz=45,slow=6.6,SNR=1.5						
	comp=Z,0.3nm,0.4s						
HFS	Hagfors	69.47	356	P	P	11 43 27.9	+1.8
	comp=Z,2.0nm,0.6s,baz=16,slow=7.5,SNR=5.4						
	comp=Z,2.0nm,0.6s						

IDC ***04*** *11:35:49.8±2.2, 50°.59N×173°.17W, h0^{km}, mb3.8/6, mbtmp3.7/7, ML3.7/1, Error ellipse: s-maj=65.5km s-min=24.2km az=14.0*

NEIC ***04*** *11:35:50.2±1.2, 50°.48N±0°.08×173°.33W±0°.09, h10^{km}±2^{km}, mb3.9/34, ML3.7/10, ML3.3(AEIC), Error ellipse: s-maj=12.9km s-min=10.1km az=171.0*

AEIC ***04*** *11:35:52.4±1.7, 50°.47N±0°.09×173°.23W±0°.10, h25^{km}±7^{km}, Error ellipse: s-maj=13.0km s-min=8.9km az=177.0*

ISC 04 11:35:50.9±1.0**, 50°.63N**±0°.09×**173°.23W**±0°.07**, h10**^{km}**, n71,** σ**0^{s}.94**/67**, mb3.9**/17**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	Atka Island	1.69	339		Pb	11 36 21.0	-1.0
ATKA					Sb	11 36 43.6	+0.4
KOFP	Korovin Flat P	1.73	342		Pb	11 36 22.4	-0.4
KOFP					Sb	11 36 45.7	+1.0
KOSE	Korovin Southe	1.79	344		Pb	11 36 23.9	+0.1
KOSE					Sb	11 36 46.8	+0.5
KOKL	Mount Kliuchef	1.80	341		Pb	11 36 22.9	-1.1
KOKL					Sb	11 36 47.1	+0.5
KOKV	Korovin Volcan	1.83	342		Pb	11 36 23.7	-0.8
KOWE	Korovin West	1.85	340		Pb	11 36 23.2	-1.6
KOWE					Sb	11 36 48.6	+0.6
GSIG	Igitkin Island	2.17	310		Pn	11 36 26.6	-0.5
GSMY	Great Sitkin M	2.27	310		Pn	11 36 27.3	-1.2
GSCK	Great Sitkin C	2.30	308		Pn	11 36 28.9	-0.1
GSCK					Sn	11 36 55.8	-1.5
GSTD	Great Sitkin T	2.32	309		Pn	11 36 29.2	0.0
ETKA	Kagalaska Isla	2.35	303		Pn	11 36 29.4	-0.1
ADK	Adak	2.51	301		Pn	11 36 31.1	-0.6
ADK				IAML		11 37 03.2	
	290nm,0.2s						
ADK				IAML		11 37 03.3	
	327nm,0.2s						
ADAG	Mount Adagdak	2.51	304		Pn	11 36 32.3	+0.5
ADAG					Sn	11 37 02.7	+0.3
KIWB	Kanaga Island	2.75	298	Pn	Pn	11 36 35.1	0.0
KIWB				IAML		11 37 07.9	
	comp=E,265nm,0.3s						
KIWB				IAML		11 37 08.4	
	comp=N,266nm,0.3s						
KIKV	Kanaga Island	2.77	298		Pn	11 36 35.6	+0.1
CLCO	Concord Point,	3.06	44		Pn	11 36 40.4	+1.0
TASE	Tanaga Southea	3.25	294		Pn	11 36 42.7	+0.7
NIKH	Nikolski High	3.58	47		Pn	11 36 46.6	+0.1
NIKH				IAML		11 37 30.0	
	comp=N,115nm,2.2s						
NIKH				IAML		11 38 24.8	
	comp=E,89nm,1.9s						
GANE	Gareloi Northe	3.69	291		Pn	11 36 48.3	+0.4
UNV	Unalaska Valle	5.23	49	Pn	Pn	11 37 10.1	+0.9
SDPT	Sand Point	9.02	54	Pn	Pn	11 38 01.8	+0.7
CHIR	Chirikof Islan	11.75	57	Pn	Pn	11 38 37.7	-0.7
OHAK	Old Harbor	13.44	53	Pn	Pn	11 38 58.7	-2.8
KDAK	Kodiak Island	14.00	51	Pn	Pn	11 39 06.0	-3.1
	comp=E,0.2nm,0.3s,baz=84,slow=2.7,SNR=7.4						
ILAR	Eielson Array	19.75	34	P	Pn	11 40 20.8	-1.3
	comp=E,0.2nm,0.3s,baz=228,slow=9.6,SNR=16						
	comp=E,0.8nm,0.5s						
D20K	Etivluk River	19.85	18	P	Pn	11 40 23.5	+0.3
D20K				IAmb	IAmb	11 40 50.7	
	comp=Z,8.4nm,1.4s						
G23K	Bananza Creek	19.92	27	P	Pn	11 40 23.4	-0.8
RIDG	Independent Ri	19.99	38	P	Pn	11 40 24.2	-0.8
RIDG				IAmb	IAmb	11 40 58.8	
	comp=Z,8.7nm,1.4s						
H24K	Noodor Dome	20.02	31	P	Pn	11 40 24.2	-1.1
H24K				IAmb	IAmb	11 40 40.9	
	comp=Z,6.5nm,1.2s						
E21K	Killik River	20.18	21	P	Pn	11 40 26.6	-0.6
J25K	Salcha River,	20.21	36	P	P	11 40 25.5	-0.3
DOT	Dot Lake	20.26	39	P	P	11 40 25.6	-0.5
SCRK	Sand Creek	20.44	38		Pn	11 40 28.5	-1.8
SCRK				IAmb	IAmb	11 40 35.2	
	comp=Z,6.7nm,1.1s						
PRP	Porcupine Dome	20.64	33	P	P	11 40 30.2	-0.2
PRP				IAmb	IAmb	11 40 34.8	
	comp=Z,7.1nm,1.3s						
M27K	Edge Creek, AK	20.66	43	P	P	11 40 30.7	0.0
M27K				IAmb	IAmb	11 41 08.5	
	comp=Z,8.7nm,1.4s						
D22K	Ayikyak River	20.82	21	P	Pn	11 40 33.9	-0.7
D22K				IAmb	IAmb	11 40 39.2	
	comp=Z,5.6nm,1.2s						
J26L	Joseph Creek	20.84	37		Pn	11 40 32.8	-2.2
B20K	Meade River	20.86	16	P	Pn	11 40 34.0	-1.1
BCAR	Beaver Creek A	20.96	42	P	P	11 40 34.9	+1.1
B21K	Ikpikpuk River	21.00	18	P	P	11 40 35.4	+1.2
D23K	Nanushuk River	21.35	22	P	P	11 40 38.1	+0.1
I26K	Coal Creek Min	21.38	35	P	P	11 40 38.4	+0.1
I26K				IAmb	IAmb	11 41 00.7	
	comp=Z,4.6nm,1.1s						
TOLK	Toolik Lake Re	21.39	24	P	P	11 40 40.0	+1.6
B22K	Teshekpuk Lake	21.83	18	P	P	11 40 43.7	+0.7
C23K	Itkillik River	22.03	21	P	P	11 40 46.4	+1.2
C23K				IAmb	IAmb	11 41 00.7	
	comp=Z,4.7nm,1.1s						
I27K	Kandik River	22.09	35	P	P	11 40 46.2	+0.3
I27K				IAmb	IAmb	11 40 51.4	
	comp=Z,4.5nm,0.8s						
C24K	Franklin Bluff	22.39	22	P	P	11 40 49.9	+0.9
L29M	L29M	22.54	43	P	P	11 40 51.4	+0.6
L29M				IAmb	IAmb	11 41 34.9	
	comp=Z,6.2nm,1.4s						
I28M	Miner Creek	22.65	37	P	P	11 40 52.7	+0.7
I28M				IAmb	IAmb	11 40 55.7	
	comp=Z,2.6nm,0.7s						
D25K	Kavik River	22.70	25	P	P	11 40 53.7	+1.3
D25K				IAmb	IAmb	11 40 59.6	
	comp=Z,5.6nm,1.4s						
K29M	Barlow Dome	23.02	41	P	P	11 40 56.9	+1.0
K29M				IAmb	IAmb	11 41 33.5	
	comp=Z,4.6nm,1.5s						
H29M	Whitestone	23.55	35	P	P	11 41 01.9	+0.8
C27K	Jago River	23.61	26	P	P	11 41 02.8	+1.1
J30M	Hart River	23.75	40	P	P	11 41 03.7	+0.5
J30M				IAmb	IAmb	11 41 06.6	
	comp=Z,4.4nm,1.3s						
I30M	Mount Dempster	23.94	39	P	P	11 41 05.6	+0.6
I30M				IAmb	IAmb	11 41 07.0	
	comp=Z,2.8nm,0.8s						
G29M	Pine Creek	23.97	34	P	P	11 41 04.8	-0.4
G30M	tAoh Zraii Nji	24.65	35	P	P	11 41 11.4	0.0
G30M				IAmb	IAmb	11 41 14.7	
	comp=Z,5.3nm,1.2s						
H31M	Peel River	24.93	38	P	P	11 41 14.4	+0.4
INK	Inuvik	26.12	33	P	P	11 41 25.8	+1.2
INK				IAmb	IAmb	11 41 28.9	
	comp=Z,3.0nm,1.1s						
H11N2	WAKE ISLAND Hy	34.62	214	T	T	12 18 56.5	
	baz=24,SNR=12						
H11N3	WAKE ISLAND Hy	34.63	214	T	T	12 18 58.8	
	baz=24,SNR=5.7						
H11N1	WAKE ISLAND Hy	34.64	214	T	T	12 18 59.4	
	baz=24,SNR=24						
PDAR	Pinedale Array	43.14	75	P	P	11 43 52.2	+0.5
	comp=Z,1.1nm,0.8s,baz=302,slow=3.7,SNR=8.6						
	comp=Z,1.1nm,0.8s						
PDAR	Pinedale Array	43.14	75	P	P	11 43 51.0	-0.7
TXAR	Lajitas Array	55.25	85	P	P	11 45 24.1	-0.2
	comp=Z,0.5nm,0.7s,baz=294,slow=6.4,SNR=5.2						
	comp=Z,0.5nm,0.7s						
TXAR	Lajitas Array	55.25	85	P	P	11 45 23.7	-0.6
ARCES	ARCESS Array B	59.36	352	P	P	11 45 53.4	+0.8
	comp=Z,2.6nm,0.8s,baz=13,slow=8.3,SNR=4.5						
	comp=Z,2.6nm,0.8s						
ARCES	ARCESS Array B	59.36	352	P	P	11 45 53.0	+0.4
KURBB	Kurchatov Arra	62.14	317	P	P	11 46 12.8	+1.0
	comp=Z,0.5nm,0.6s,baz=45,slow=6.6,SNR=3.1						
	comp=Z,0.5nm,0.6s						

MKAR	Makanchi Array	63.21	312	P	P	11 46 19.3	+0.3
	comp=Z,0.4nm,0.8s,baz=61,slow=6.8,SNR=1.6						
	comp=Z,0.4nm,0.8s						
BVAR	Borovoye Array	63.67	323	P	P	11 46 23.1	+1.1
	comp=Z,1.3nm,0.6s,baz=52,slow=9.7,SNR=6.3						
	comp=Z,1.3nm,0.6s						

NNC ***04*** *11:41:18.2±0.2, 43.°33N×78.°09E, h0^{km}, mb2.4, mpv2.6, Error ellipse: s-maj=2.2km s-min=1.5km az=176.0*
SOME ***04*** *11:41:19.1, 43.°35N×78.°03E, h10^{km}*
KRNET ***04*** *11:41:20.6±0.1, 43.°31N×77.°99E, h35^{km}, mb2.3*
ISC 04 11:41:17.5±1.0**, 43.°35N**±0.°02×**78.°07E**±0.°02**, h16**^{km}±9^{km}**, n33, σ0^{s}76**/65**, 15C-3D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURS	Kuram	0.16	28	P	Pb	11 41 22.4	+0.3
	9.8nm,0.1s						
KURS				S	Sb	11 41 25.1	-0.2
	66nm,0.3s						
SATY	Saty	0.38	139	P	Pb	11 41 25.7	-0.3
	7.9nm,0.1s						
SATY				S	Sg	11 41 30.7	0.0
	167nm,0.2s						
KPKS	Kokpek	0.47	75	P	Pb	11 41 27.4	0.0
	0.1nm,0.1s						
KPKS				S	Sb	11 41 33.6	-0.5
	25nm,0.2s						
KPKS	Kokpek	0.47	75	*e*P	Pb	11 41 27.4	0.0
	5.4nm,0.1s						
KPKS				*e*S	Sb	11 41 33.6	-0.5
	9.5nm,0.1s						
KOTS	Kotyrbulak	0.71	261	P	Pn	11 41 32.6	-0.4
	5.4nm,0.2s						
KOTS				S	Sn	11 41 42.8	-0.9
	13nm,0.2s						
KOTS	Kotyrbulak	0.71	261	*e*P	Pn	11 41 32.6	-0.4
	2.7nm,0.1s						
KOTS				*e*S	Sn	11 41 42.8	-0.9
	13nm,0.2s						
UZB	Uzynbulak	0.73	106	P	Pb	11 41 31.7	-0.2
	1.3nm,0.1s						
UZB				S	Sg	11 41 41.0	-0.4
	5.2nm,0.1s						
UZB	Uzynbulak	0.73	106	*e*P	Pb	11 41 31.7	-0.2
	1.6nm,0.1s						
UZB				*e*S	Sg	11 41 41.0	-0.4
	14nm,0.1s						
MDOK	Medeo	0.77	256	Pg	Pn	11 41 33.3	-0.5
	2.1nm,0.2s						
MDOK				Lg	Lg	11 41 43.0	
	2.2nm,0.2s						
BLB	Baldybastay	0.81	22	P	Pn	11 41 34.0	-0.4
	13nm,0.1s						
BLB				S	Sb	11 41 44.8	+0.9
	3.5nm,0.2s						
TNSS	Tian-Shan	0.88	250	P	Pn	11 41 35.2	-0.3
	1.1nm,0.2s						
TNSS				S	Sb	11 41 47.1	+0.9
	2.5nm,0.4s						
TNSS	Tian-Shan	0.88	250	*e*P	Pn	11 41 35.2	-0.3
	1.1nm,0.2s						
TNSS				*e*S	Sb	11 41 47.1	+0.9
	2.5nm,0.4s						
ARXS	Arharly	0.88	349	P	Pn	11 41 35.5	+0.1
	2.1nm,0.1s						
ARXS				S	Sn	11 41 47.5	-0.4
	3.1nm,0.1s						
ARXS	Arharly	0.88	349	*e*P	Pn	11 41 35.5	+0.1
	2.1nm,0.1s						
ARXS				*e*S	Sn	11 41 47.5	-0.4
	3.1nm,0.1s						
PRZ	Przheval'sk	0.90	164	⇑*i*P	Pn	11 41 37.1	+1.4
PRZ				⇑*i*S	Sn	11 41 49.0	+0.6
PDGK	Podgornoye	1.04	91	⇓P	Pn	11 41 37.4	-0.2
	0.3nm,0.2s						
PDGK				⇑S	Sb	11 41 50.5	-0.2
	1.7nm,0.4s						
KTBS	Karatobe	1.07	290	P	Pg	11 41 39.0	+0.8
	2.0nm,0.2s						
KTBS				S	Sn	11 41 53.5	+1.0
	0.2nm,0.1s						
MTBS	Maitube	1.22	260	P	Pg	11 41 41.7	+0.7
	10.0nm,0.1s						
MTBS				S	Sg	11 41 58.1	+1.2
	3.3nm,0.2s						
MTBS	Maitube	1.22	260	*e*P	Pg	11 41 41.7	+0.7
	10.0nm,0.1s						
MTBS				*e*S	Sg	11 41 58.1	+1.2
	3.3nm,0.2s						
KNOS	Konyrlen	1.29	38	P	Pg	11 41 42.6	+0.2
	0.9nm,0.2s						
KNOS				S	Sg	11 41 59.9	+0.6
	2.7nm,0.3s						
KDJ	Kajisay	1.38	209	⇑*i*P	Pg	11 41 44.4	+0.3
KDJ				⇑*i*S	Sg	11 42 01.9	-0.2
KST	Kastek	1.57	260	P	Pg	11 41 47.7	+0.1
	1.9nm,0.2s						
KST				S	Sg	11 42 08.7	+0.7
	2.7nm,0.4s						
KST	Kastek	1.57	260	*e*P	Pg	11 41 47.7	+0.1
	1.4nm,0.1s						
KST				*e*S	Sg	11 42 08.7	+0.7
	2.2nm,0.2s						
TARG	Taragay, Kyrgy	1.63	187	⇑*i*P	Pg	11 41 48.6	-0.3
TARG				⇑*i*S	Sg	11 42 08.9	-1.2
DGS	Degeres	1.68	267	P	Pg	11 41 49.5	-0.3
	3.0nm,0.2s						
DGS				S	Sg	11 42 11.5	-0.1
	2.9nm,0.2s						
DGS	Degeres	1.68	267	*e*P	Pg	11 41 49.5	-0.3
	3.0nm,0.2s						
DGS				*e*S	Sg	11 42 11.5	-0.1
	5.0nm,0.2s						
KRBS	Karabastau	1.77	282	P	Pg	11 41 51.1	-0.5
	1.8nm,0.4s						
KRBS				S	Sg	11 42 14.6	0.0
	1.4nm,0.3s						
KRBS	Karabastau	1.77	282	*e*P	Pg	11 41 51.1	-0.5
	1.3nm,0.1s						
KRBS				*e*S	Sg	11 42 14.6	0.0
	4.3nm,0.1s						
BOOM	Boomskoye usch	1.78	242	⇑*i*P	Pb	11 41 50.4	+0.5
BOOM				⇑*i*S	Sb	11 42 12.0	-0.1
TKM2	Tokmak 2	1.86	258	⇑*i*P	Pb	11 41 51.5	+0.3
TKM2				⇑*i*S	Sb	11 42 13.9	-0.4
KBK	Karagaybulak	2.39	254	⇑*i*P	Pb	11 41 58.9	-1.4
KBK				⇑*i*S	Sn	11 42 26.7	+1.5
USP	Ospenovka	2.60	269	⇑*i*P	Pb	11 42 01.8	-2.0
USP				⇑*i*S	Sn	11 42 31.7	+1.3
AAK	Ala-Archa	2.71	256	⇓*i*P	Pb	11 42 03.4	-2.4
AAK				⇓*i*S	Sn	11 42 34.6	+1.4

SJA ***04*** *11:50:47.6±1.8, 23.°44S×68.°68W, h130^{km}, ML3.3, MW3.6*
GUC ***04*** *11:50:49.5±0.8, 23.°45S×68.°61W, h105^{km}±5^{km}, ML3.6*
ISC 04 11:50:49.3±1.6**, 23.°41S**±0.°04×**68.°65W**±0.°04**, h111**^{km}±13^{km}**, n24, σ1^{s}11**/39**, 7C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AF01	San Pedro de A	0.63	44	*e*P	Pn	11 51 06.5	-1.0
AF01				*i*S	Sn	11 51 19.7	-1.6
PB06	IPOC Station P	1.10	309	⇑*i*P	Pn	11 51 12.4	+0.5
PB06				*i*S	Sn	11 51 29.1	+0.2
PB06				IAML		11 51 33.6	
	comp=N,1µm,0.3s						
PB06	IPOC Station P	1.10	309	*i*P	Pn	11 51 11.7	-0.1
PB06				*e*S	Sn	11 51 30.1	+1.3
PB06				IAML		11 51 34.5	
	comp=Z,998nm,0.3s						
PB05	IPOC Station P	1.53	291	⇑*i*P	Pn	11 51 16.9	+0.2
PB05				*i*S	Sn	11 51 37.6	+0.2
PB05	IPOC Station P	1.53	291	*i*P	Pn	11 51 16.4	-0.3
PB05				*e*S	Sn	11 51 40.1	+2.6
PB05				IAML		11 51 46.9	
	comp=Z,172nm,0.3s						
PB03	IPOC Station P	1.70	323	⇑*i*P	Pn	11 51 19.2	+0.4
PB03				*i*S	Sn	11 51 41.0	-0.1
PB03				IAML		11 51 48.4	
	comp=E,511nm,0.4s						
PB03	IPOC Station P	1.70	323	*i*P	Pn	11 51 18.6	-0.1
PB03				*e*S	Sn	11 51 42.6	+1.5
PB03				IAML		11 51 46.0	
	comp=Z,529nm,0.3s						
PB09	IPOC Station P	1.70	341	⇑*i*P	Pn	11 51 19.9	+1.1
PB09				*i*S	Sn	11 51 41.8	+0.6
PB09				IAML		11 51 44.2	
	comp=N,440nm,0.6s						
PB09	IPOC Station P	1.70	341	*i*P	Pn	11 51 19.3	+0.5
PB09				*e*S	Sn	11 51 42.8	+1.7
PB09				IAML		11 51 45.4	
	comp=Z,467nm,0.5s						
PB10	IPOC Station P	1.75	266	⇑*i*P	Pn	11 51 19.6	+0.4
PB10				*i*S	Sn	11 51 42.2	+0.2
PB10				IAML		11 51 48.1	
	comp=E,343nm,0.2s						
PB10	IPOC Station P	1.75	266	*i*P	Pn	11 51 19.4	+0.2
PB10				IAML		11 51 51.4	
	comp=Z,258nm,0.5s						
GO02	Mina Guanaco	1.94	206	*e*P	Pn	11 51 22.0	+0.1
GO02				*i*S	Sn	11 51 47.0	+0.2
GO02				IAML		11 51 47.8	
	comp=N,1µm,0.4s						
GO02	Mina Guanaco	1.94	206	*i*P	Pn	11 51 21.5	-0.4
GO02				IAML		11 51 49.6	
	comp=Z,584nm,0.1s						
PB14	IPOC Station P	2.01	233	*e*P	Pn	11 51 22.5	-0.2
PB14				*i*S	Sn	11 51 47.5	-0.7
PB14				IAML		11 51 49.2	
	comp=N,300nm,0.3s						
PB14	IPOC Station P	2.01	233	*i*P	Pn	11 51 23.0	+0.3
PB14				IAML		11 51 50.3	
	comp=Z,427nm,0.2s						
PB07	IPOC Station P	2.03	326	⇑*i*P	Pn	11 51 23.3	+0.4
PB07				*i*S	Sn	11 51 47.0	-1.5
PB07				IAML		11 51 52.2	
	comp=E,402nm,0.3s						
SALTA		2.27	111	*i*P	Pn	11 51 26.1	-0.1
SALTA				IAML		11 51 56.4	
	comp=Z,55nm,0.9s						
PB02	IPOC Station P	2.38	331	⇑*i*P	Pn	11 51 27.5	+0.2
PB02				*i*S	Sn	11 51 55.6	-0.9
PB02				IAML		11 52 01.5	
	comp=N,581nm,0.4s						
PB01	IPOC Station P	2.48	342	*e*P	Pn	11 51 28.8	+0.2
PB01				*i*S	Sn	11 51 55.6	-3.2
PB01				IAML		11 52 02.5	
	comp=E,328nm,0.2s						
PATCX	Punta Patache	2.93	331	*e*P	Pn	11 51 33.4	-1.1
HJA	Humahuaca	2.99	87	*i*P	Pn	11 51 36.2	+0.6
HJA				IAML		11 52 14.7	
	comp=Z,8.2nm,0.6s						
SLA	San Lorenzo	3.16	115	*i*P	Pn	11 51 39.6	+2.0
SLA				IAML		11 52 47.8	
	comp=Z,2.8nm,1.7s						
AC01	Pan de Azucar	3.25	213	*i*P	Pn	11 51 37.0	-1.7
AC01				IAML		11 52 22.4	
	comp=Z,106nm,0.3s						
PB08	IPOC Station P	3.29	352	*e*P	Pn	11 51 39.3	-0.2

HEL 04 12:00:20.7±0.1**, 64.°11N×28.°15E, h0**^{km}**, ML1.3, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIF	Nilsia	0.74	192	PG	Pg	12 00 34.0	-0.9
NIF				SB	Sg	12 00 43.8	-0.6
NIF				MSG		12 00 44.0	
	comp=Z,2.4nm,0.2s						
RMF	Romuvaara	0.79	82	PB	Pg	12 00 35.9	+0.1
RMF				MSG		12 00 45.3	
	comp=Z,2.3nm,0.2s						
RMF				SB	Sg	12 00 46.0	0.0
OUL	Oulu	1.38	316	PG	Pg	12 00 45.8	-1.3
	baz=139						
OBF4	Vikkela, Lumij	1.50	299	PG	Pn	12 00 47.9	-0.8
	baz=116						
OBF4				MSG		12 01 05.5	
	comp=Z,1.2nm,0.2s						
OBF4				SN	Sn	12 01 10.0	+1.1
OUF	Merijarvi	1.52	281	PG	Pn	12 00 47.6	-1.4
	baz=98						
OUF				MSG		12 01 06.1	
	comp=Z,2.9nm,0.2s						
OUF				SG	Sg	12 01 07.0	-2.2
KU1	Kurvinen	1.58	22	PN	Pn	12 00 49.3	-0.6
KU1				SN	Sn	12 01 09.9	-1.1
KU2	Taivalkoski	1.60	1	PN	Pn	12 00 50.1	-0.2
SUF	Sumiainen	1.66	214	PG	Pn	12 00 50.5	-0.6
SUF				MSG		12 01 10.5	
	comp=Z,1.1nm,0.2s						
SUF				SG	Sn	12 01 12.7	-0.4
OBF0	Syolatti, Pyha	1.75	284	PG	Pn	12 00 51.9	-0.3
OBF0				MSG		12 01 12.8	
	comp=Z,1.9nm,0.2s						
OBF0				SN	Sn	12 01 14.4	-0.7
MSF	Maaselka	1.84	11	SG	Sn	12 01 17.6	0.0
JOF	Joensuu	1.86	129	PG	Pn	12 00 54.2	+0.5
	baz=307						
JOF				SN	Sn	12 01 18.3	+0.5
RANF	Ranua	1.99	344	PG	Pn	12 00 56.5	+0.9
RANF				SG	Sb	12 01 22.4	-0.7
KU6	Riekki	2.06	20	PG	Pn	12 00 57.4	+0.9
KU6				MSG		12 01 21.6	
	comp=Z,0.8nm,0.2s						
KU6				SG	Sn	12 01 23.7	+0.9
OLKF	Oulanka, Finla	2.28	13	PG	Pb	12 01 01.3	-1.4
OLKF				MSG		12 01 28.1	
	comp=Z,1.1nm,0.2s						
OLKF				SG	Sb	12 01 30.3	-1.0
KEF	Keuruu	2.46	219	PG	Pn	12 01 03.5	+1.5
KEF				MSG		12 01 33.3	
	comp=Z,1.8nm,0.2s						
KEF				SG	Sb	12 01 35.4	-1.1
TOF	Tornio	2.55	322	MSG		12 01 35.9	
	comp=Z,0.5nm,0.2s						
TOF				SG	Sb	12 01 37.4	-1.8
RNF	Rovaniemi	2.66	341	PG	Pb	12 01 08.1	-1.1
RNF				SG	Sb	12 01 41.0	-1.3
VAF	Ylistaro	2.67	249	PB	Pn	12 01 06.7	+1.7
VAF				MSG		12 01 39.5	
	comp=Z,1.0nm,0.2s						
VAF				SG	Sb	12 01 41.9	-0.8
RUF	Ruokolahti	2.73	172	PG	Pb	12 01 08.4	-1.8
HEL1	Helsinki	4.24	203	SG	Sb	12 02 29.9	+2.2
HEMU	Hemsoen	4.77	257	PN	Pn	12 01 34.2	+0.4

NOU 04 12:13:48.6, 15.°89S×167.°37E, h5^{km}**, MLv4.4**/12**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.99	157	P	Pb	12 14 24.1	-1.1
RTV	Rentapao	2.15	152	P	Pn	12 14 25.7	+0.6
YATNC	Mamie plateau,	6.15	184	P	Pn	12 15 20.5	+0.3
PINNC	Pines Island,	6.69	179	P	Pn	12 15 28.5	+1.0

HEL 04 12:23:49.0±0.1**, 68.°02N×23.°67E, h0**^{km}**, ML0.8, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HEF	Hetta	0.39	359	PG	Pg	12 23 55.6	-0.8
	baz=181						
HEF				SG	Sg	12 24 00.5	-1.0
LANU	Lannavaara	0.63	273	PG	Pg	12 24 00.0	-1.1
LANU				SG	Sg	12 24 08.7	-0.5
KLF	Kolari	0.80	172	PG	Pg	12 24 03.2	-1.0
	baz=355						
KLF				MSG		12 24 13.9	
	comp=Z,1.0nm,0.2s						
KLF				SB	Sg	12 24 14.3	-0.3
KTK1	Kautokeino	1.01	351	SB	Sg	12 24 21.7	+0.3
PAJU	Pajala	1.03	192	PB	Pg	12 24 07.8	-0.8
	baz=13						
KIF	Kilpisjarvi	1.45	314	MSG		12 24 33.3	
	comp=Z,0.6nm,0.2s						
KIF				SG	Sg	12 24 34.5	-0.9
ARA0	ARCESS Array S	1.66	23	SG	Sn	12 24 40.5	-0.8
RAJF	Raja-Jooseppi	1.79	73	SG	Sb	12 24 45.1	-0.3
TOF	Tornio	1.97	172	MSG		12 24 47.6	
	comp=Z,0.3nm,0.2s						
TOF				SG	Sb	12 24 50.5	-0.1
KEV	Kevo	2.12	33	SG	Sb	12 24 54.0	-1.0
MSF	Maaselka	2.99	133	PG	Pb	12 24 43.1	0.0
UMAU	Umeaa	4.33	198	SN	Sn	12 25 45.1	-2.1

KOLA ***04*** *12:24:40.8, 67.°61N×33.°87E, h0^{km}, ML1.6, Error ellipse: s-maj=3.2km s-min=1.6km az=140.0, Khibiny, mines Rasvumchorr, Central*
HEL 04 12:24:41.4±0.2**, 67.°59N×33.°95E, h0**^{km}**, ML1.5, Suspected explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA	Apatity	0.21	266	P	Pg	12 24 44.4	-1.0
APA				S	Sg	12 24 46.9	-1.3
APA0	Apatity Array	0.37	274	P	Pg	12 24 47.0	-1.5
APA0				S	Sg	12 24 51.5	-1.7
LVZ	Lovozero	0.41	40	P	Pg	12 24 48.5	-0.8
LVZ				S	Sg	12 24 54.0	-0.5
LVZ	Lovozero	0.41	40	PG	Pg	12 24 48.8	-0.5
	baz=225						
LVZ				SG	Sg	12 24 54.0	-0.5
KVDA	Kovda	0.99	206	P	Pg	12 24 59.0	-1.4
KVDA				S	Sg	12 25 11.3	-1.9
VRF	Varrio	1.67	278	PB	Pn	12 25 10.6	-1.3
VRF				MSG		12 25 31.2	
	comp=Z,4.1nm,0.2s						
TERR	Teriberka	1.68	14	P	Pn	12 25 10.7	-1.3
TERR				S	Sn	12 25 31.6	-2.6
OLKF	Oulanka, Finla	2.20	237	PG	Pb	12 25 20.8	-1.1
OLKF				MSG		12 25 46.5	
	comp=Z,1.9nm,0.2s						
OLKF				SG	Sb	12 25 48.8	-0.8
KU6	Riekki	2.25	228	PG	Pn	12 25 21.0	+1.3
KU6				MSG		12 25 48.0	
	comp=Z,1.1nm,0.2s						
KU6				SG	Sb	12 25 50.2	-0.9
RAJF	Raja-Jooseppi	2.30	295	PN	Pn	12 25 20.7	+0.1
MSF	Maaselka	2.58	231	PG	Pb	12 25 27.0	-1.4
MSF				SG	Sb	12 26 00.2	-0.3
VADS	Vadso	3.04	329	S	Sn	12 26 03.6	-4.1
RANF	Ranua	3.25	244	PB	Pb	12 25 37.3	-2.5
	baz=59						
RANF				SG	Sb	12 26 19.4	-0.4
RNF	Rovaniemi	3.26	256	PN	Pn	12 25 33.2	-0.4
RNF				SN	Sn	12 26 13.2	+0.1
KEV	Kevo	3.34	314	PN	Pn	12 25 34.4	-0.4
ARCES	ARCESS Array B	3.67	306	P	Pn	12 25 37.9	-1.4
ARCES				S	Sn	12 26 18.9	-4.3
KLF	Kolari	3.87	269	PG	Pb	12 25 50.8	+0.4
HEF	Hetta	3.96	287	SN	Sn	12 26 29.1	-1.3
KTK1	Kautokeino	4.23	295	SB	Sb	12 26 49.6	+1.5

DNK ***04*** *12:25:11.7±0.8, 64.°72N×20.°92E, h0^{km}, ML2.5(UPP), Explosion*
HEL ***04*** *12:25:11.7±0.2, 64.°70N×20.°88E, h0^{km}, ML1.3, Explosion*
UPP 04 12:25:11.1±0.1**, 64.°71N×20.°94E, h0**^{km}**, ML2.5, Suspected explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BURU	Burvik	0.22	123	P	Pg	12 25 15.5	+0.1
BURU				S	Sg	12 25 18.8	+0.5
BURU	Burvik	0.22	123	P	Pg	12 25 15.5	+0.1
BURU				S	Sg	12 25 18.8	+0.5
BURU	Burvik	0.22	123	PG	Pg	12 25 15.3	0.0
BURU				SG	Sg	12 25 18.8	+0.6
ODEU	Stanfors	0.31	198	P	Pg	12 25 17.3	+0.2
ODEU				S	Sg	12 25 21.8	+0.6
ODEU	Stanfors	0.31	198	P	Pg	12 25 17.3	+0.2
ODEU				S	Sg	12 25 21.8	+0.6
UMAU	Umeaa	0.83	188	P	Pg	12 25 26.8	-0.2
UMAU				S	Sg	12 25 38.5	+0.7
UMAU	Umeaa	0.83	188	P	Pg	12 25 26.8	-0.2
UMAU				S	Sg	12 25 38.5	+0.7
UMAU	Umeaa	0.83	188	PB	Pg	12 25 27.2	+0.1
	baz=5.0						
UMAU				SB	Sg	12 25 38.4	+0.5
SJUU	Sjulsmark	0.85	19	P	Pg	12 25 27.4	0.0
SJUU	Sjulsmark	0.85	19	P	Pg	12 25 27.4	0.0
BREU	Bredtraesk	1.32	233	P	Pg	12 25 35.4	-0.9
BREU	Bredtraesk	1.32	233	P	Pg	12 25 35.4	-0.9
OBF0	Syolatti, Pyha	1.44	97	PG	Pn	12 25 38.0	-0.3
	baz=276						
OBF0				MSG		12 25 55.5	
	comp=Z,1.8nm,0.2s						
OBF0				SG	Sg	12 25 56.7	-0.5
HARU	Harads	1.46	1	P	Pn	12 25 38.1	-0.6
HARU	Harads	1.46	1	P	Pn	12 25 38.1	-0.6
KALU	Kalix	1.54	40	P	Pn	12 25 39.6	-0.2
KALU	Kalix	1.54	40	P	Pn	12 25 39.6	-0.2
KALU	Kalix	1.54	40	PN	Pg	12 25 40.6	0.0
KALU				SN	Sg	12 26 02.7	+2.2
HUSU	Husum	1.57	210	P	Pn	12 25 39.9	-0.2
HUSU	Husum	1.57	210	P	Pn	12 25 39.9	-0.2
HUSU	Husum	1.57	210	SN	Sg	12 26 01.7	+0.4
OUF	Merijarvi	1.67	100	PG	Pn	12 25 42.0	+0.4
OUF				MSG		12 26 02.5	
	comp=Z,1.6nm,0.2s						
OUF				SN	Sg	12 26 04.5	-0.2
OBF4	Vikkela, Lumij	1.79	85	PG	Pb	12 25 44.1	-0.6
	baz=268						
OBF4				MSG		12 26 05.6	
	comp=Z,2.4nm,0.2s						
OBF4				SN	Sb	12 26 07.9	+0.4
VAF	Ylistaro	1.84	155	PG	Pb	12 25 45.1	-0.4
VAF				MSG		12 26 06.4	
	comp=Z,2.2nm,0.2s						
VAF				SN	Sb	12 26 09.4	+0.5
ERTU	Ertsjaerv	1.93	15	PG	Pn	12 25 45.8	+0.8
	baz=199						
ERTU				SG	Sb	12 26 11.7	+0.1
TOF	Tornio	1.98	44	PG	Pb	12 25 47.8	-0.1
TOF				MSG		12 26 11.1	
	comp=Z,1.4nm,0.2s						
TOF				SG	Sb	12 26 13.6	+0.6
OUL	Oulu	2.15	78	SG	Sb	12 26 18.6	+0.7
HEMU	Hemsoen	2.41	214	PG	Pb	12 25 53.9	-1.4
HEMU				SG	Sb	12 26 25.6	0.0
PAJU	Pajala	2.49	20	PB	Pb	12 25 55.0	-1.7
PAJU				SB	Sb	12 26 27.5	-0.4
KLF	Kolari	2.83	25	MSG		12 26 35.1	
	comp=Z,0.7nm,0.2s						
KLF				SG	Sg	12 26 41.6	-0.1
SUF	Sumiainen	3.06	128	PN	Pn	12 26 01.4	+0.8
SUF				MSG		12 26 42.1	
	comp=Z,0.4nm,0.2s						
MEF	Metsahovi	4.78	159	PB	Pb	12 26 30.4	-5.2
MEF				SN	Sn	12 27 17.5	-2.8

DJA ***04*** *12:25:55.5±0.2, 9°S±3°×12°3E±°, h108^{km}±2^{km}, M4.4/25, mb4.3/25, mB5.1/6, MLv4.3/18, Mw(mB)4.5/6*
IDC ***04*** *12:25:56.5±1.6, 8.°75S×123.°23E, h116^{km}±14^{km}, mb3.9/8, mbtmp4.2/9, MS3.7/1, Error ellipse: s-maj=47.4km s-min=13.7km az=73.0*
NEIC ***04*** *12:25:57.1±1.4, 8.°78S±0.°09×123.°26E±0.°07, h119^{km}±7^{km}, mb4.2/29, Error ellipse: s-maj=14.8km s-min=8.3km az=210.0*
ISC 04 12:25:55.1±0.4**, 8.°78S**±0.°05×**123.°30E**±0.°05**, h100**^{km}**, n105, σ1^{s}74**/107**, mb4.2**/18**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	1.06	277		Pn	12 26 18.1	+1.9
MMRI	Maumere	1.06	277	P	Pn	12 26 18.0	+1.8
MMRI	Maumere	1.06	277	P	Pn	12 26 18.2	+1.9
MMRI				S	Sn	12 26 35.5	+3.3
SOEI	Soe	1.36	136		Pn	12 26 22.2	+2.3
SOEI	Soe	1.36	136	P	Pn	12 26 22.4	+2.5
SOEI	Soe	1.36	136	P	Pn	12 26 22.3	+2.4
BATI	Baumata	1.47	166	P	Pn	12 26 23.9	+2.8
	296nm,0.3s,baz=95,slow=2.1,SNR=82						
BATI				LR	LR	12 26 41.0	
	comp=Z,45nm,18.2s,baz=338,slow=29						
BATI				S	Sn	12 26 42.1	+1.5
	369nm,0.4s,baz=68,slow=3.7,SNR=8.3						
BATI	Baumata	1.47	166	P	Pn	12 26 23.8	+2.8
EDFI	Ende, Flores	1.59	271	P	Pn	12 26 24.4	+1.7
BASI	Baing, Sumba	3.04	242	P	Pn	12 26 44.0	+2.5
LBFI	Labuhan Bajo,	3.39	275	P	Pn	12 26 48.6	+2.5
WBSI	Waikabubak, Su	3.96	257	P	Pn	12 26 55.1	+1.3
BKSI	Bulukumba	4.66	317	P	Pn	12 27 03.9	+0.6

DBNI	Kabupaten Domp	4.94	273	P	Pn	12 27 09.6	+2.5
	0.3nm42nm,0.5s						
BNSI	Bone	5.38	324	P	Pn	12 27 16.3	+3.2
	0.1nm20nm,1.0s						
PLAI	Plampang	5.46	269	P	Pn	12 27 17.4	+3.2
PLAI	Plampang	5.46	269	S	Sn	12 28 18.6	+2.8
PLAI	Plampang	5.46	269	P	Pn	12 27 17.0	+2.8
TWSI	Taliwang, Sumb	6.35	270	P	Pn	12 27 28.5	+2.3
	2µm46nm,0.5s						
NLAI	Namlea	6.67	35	P	Pn	12 27 31.0	+0.4
	0.1nm30nm,0.8s						
KLNI	Mataram	7.13	272	P	Pn	12 27 37.8	+0.9
SANI	Sanana	7.20	22	P	Pn	12 27 36.2	-1.6
KHKI	Kahang-Kahang	7.62	273	P	Pn	12 27 45.6	+2.1
	0.2nm20nm,1.3s						
SAUI	Saumlaki	7.95	85	Pn	Pn	12 27 46.7	-1.4
SAUI	Saumlaki	7.95	85	P	Pn	12 27 47.6	-0.5
IGBI	Denpasar	8.06	269	P	Pn	12 27 50.4	+0.9
RTBI	Rangdo, Negare	8.27	272	P	Pn	12 27 53.6	+1.2
	30nm,0.6s						
KNRA	Kununurra	8.69	143		Pn	12 27 56.0	-2.1
MTN	Manton Dam	8.69	118		Pn	12 27 56.9	-1.2
JAGI	Jajag, Banyuwa	9.05	271		Pn	12 28 02.2	-0.8
JAGI	Jajag, Banyuwa	9.05	271	P	Pn	12 28 02.2	-0.8
JAGI	Jajag, Banyuwa	9.05	271	P	Pn	12 28 02.1	-0.9
	20nm,0.6s						
FITZ	Fitzroy Crossi	9.54	166	P	Pn	12 28 07.6	-2.0
	4.8nm,0.3s,baz=359,slow=9.8,SNR=41						
FITZ				S	Sn	12 29 47.1	-7.9
	74nm,0.5s,baz=112,slow=16,SNR=26						
FITZ	Fitzroy Crossi	9.54	166		Pn	12 28 07.5	-2.2
FITZ	Fitzroy Crossi	9.54	166	P	Pn	12 28 07.4	-2.2
BKB	Balikpapan	9.82	319	Pn	Pn	12 28 14.9	+1.5
FAKI	Fak Fak	10.63	57	P	Pn	12 28 27.2	+2.7
FAKI	Fak Fak	10.63	57	S	Sn	12 30 25.7	+4.0
FAKI	Fak Fak	10.63	57	P	Pn	12 28 24.4	-0.1
	19nm,1.2s						
SNJI	Sawahan-Nganju	11.47	274	P	Pn	12 28 37.3	+1.3
	23nm,1.6s						
PCJI	Pacitan	12.01	272	P	Pn	12 28 42.1	-0.9
UGM	Wanagama	12.67	273	P	Pn	12 28 51.7	-0.2
	48nm,2.6s						
WB0	Warramunga Arr	15.32	137		Pn	12 29 23.2	-2.8
WRA	Warramunga Arr	15.40	137	P	Pn	12 29 23.3	-3.8
	1.3nm,0.3s,baz=317,slow=15,SNR=43						
WRA				S	Sn	12 32 04.1	-13
	6.2nm,0.5s,baz=319,slow=24,SNR=12						
WRA	Warramunga Arr	15.40	137		Pn	12 29 23.8	-3.3
WB2	Warramunga Arr	15.41	137		Pn	12 29 23.6	-3.5
WB2				IAmb	IAmb	12 29 43.3	
	comp=Z,4.6nm,0.8s						
WR8	Warramunga Arr	15.52	137		Pn	12 29 25.2	-3.3
WR8				IAmb	IAmb	12 29 48.2	
	comp=Z,6.4nm,0.6s						
WR0	Warramunga Arr	15.55	137	Pn	Pn	12 29 26.1	-2.8
WR0				IAmb	IAmb	12 29 45.5	
	comp=Z,5.4nm,0.8s						
BBJI	Bungbulang	15.55	274	P	Pn	12 29 30.6	+1.6
BBJI	Bungbulang	15.55	274	P	Pn	12 29 28.4	-0.6
	comp=Z,11nm,0.8s						
CNJI	Cibinong	16.08	274	P	Pn	12 29 37.0	+1.5
	comp=Z,16nm,0.6s						
GIRL	Giralia	16.31	211	Pn	Pn	12 29 37.1	-1.1
GIRL				IAmb	IAmb	12 29 47.1	
	comp=Z,18nm,0.9s						
AS31	Alice Springs	17.95	147	P	P	12 29 57.8	+0.1
ASAR	Alice Springs	17.95	147	P	P	12 29 57.4	-0.3
	comp=Z,2.5nm,0.5s,baz=326,slow=12,SNR=48						
ASAR				S	S	12 33 06.8	-12
	comp=Z,5.0nm,0.7s,baz=318,slow=23,SNR=14						
ASAR				ScP	ScP	12 37 52.9	-2.3
	comp=Z,1.0nm,0.8s,baz=332,slow=1.5,SNR=4.6						
ASAR	Alice Springs	17.95	147	P	P	12 29 58.3	+0.7
MEEK	Meekatharra	18.31	193	P	P	12 30 02.0	+0.4
KASI	Kota Agung	18.93	279	P	P	12 30 08.2	-0.2
	comp=Z,19nm,0.4s						
QIS	Mount Isa	19.62	128	P	P	12 30 16.7	+0.8
COEN	Coen	20.15	107	P	P	12 30 21.4	-0.2
COEN				IAmb	IAmb	12 30 27.9	
	comp=Z,9.8nm,0.7s						
COEN	Coen	20.15	107	P	P	12 30 21.6	0.0
MORW	Morawa	21.31	198	P	P	12 30 33.4	-0.6
MORW				IAmb	IAmb	12 30 36.8	
	comp=Z,6.2nm,0.6s						
MORW	Morawa	21.31	198	P	P	12 30 34.0	0.0
FORT	Forrest	22.34	169	P	P	12 30 43.6	-1.2
MTSU	Mount Surprise	22.43	117	P	P	12 30 46.9	+0.9
BLDU	Ballidu	22.58	195	P	P	12 30 47.4	0.0
NWAO	Narrogin (SRO)	24.68	192	P	P	12 31 06.8	0.0
	comp=Z,5.7nm,0.4s,baz=32,slow=7.3,SNR=12						
	comp=Z,5.7nm,0.4s						
NWAO	Narrogin (SRO)	24.68	192		P	12 31 06.2	-0.6
NWAO				IAmb	IAmb	12 31 17.9	
	comp=Z,12nm,1.1s						
NWAO	Narrogin (SRO)	24.68	192	P	P	12 31 08.2	+1.4
CTAO	Charters Tower	24.87	119	P	P	12 31 08.1	-0.6
CTAO				IAmb	IAmb	12 31 36.3	
	comp=Z,5.6nm,1.1s						
INKA	Innaminka	25.04	141	P	P	12 31 10.3	+0.2
BBOO	Buckleboo	26.67	156	P	P	12 31 24.6	-0.3
BBOO				IAmb	IAmb	12 31 25.5	
	comp=Z,14nm,1.1s						
BBOO	Buckleboo	26.67	156	P	P	12 31 24.8	0.0
HTT	Hallett	28.46	152	P	P	12 31 41.5	+0.7
STKA	Stephens Creek	28.59	146	P	P	12 31 42.0	+0.1
	comp=Z,0.9nm,0.4s,baz=312,slow=13,SNR=6.6						
	comp=Z,0.9nm,0.4s						
STKA	Stephens Creek	28.59	146	P	P	12 31 41.5	-0.4
STKA				IAmb	IAmb	12 31 51.0	
	comp=Z,8.9nm,1.1s						
STKA	Stephens Creek	28.59	146	P	P	12 31 42.2	+0.3
	comp=Z,2.1nm,3.0s						
CMSA	Cobar Meteorol	30.77	141	P	P	12 32 02.3	+1.1
EVN	Everest	50.78	317	P	P	12 34 45.8	-0.4
CASY	Casey	58.09	186	P	P	12 35 37.8	+0.1
HILR	Hailar Array B	58.17	357	P	P	12 35 38.5	0.0
	comp=Z,1.8nm,0.4s,baz=180,slow=10,SNR=3.6						
	comp=Z,1.8nm,0.4s						
SONM	Songino Array	58.32	347	P	P	12 35 39.5	-0.3
	comp=Z,0.9nm,0.5s,baz=165,slow=7.6,SNR=6.7						
	comp=Z,0.9nm,0.5s						
KSH	Kashi	65.03	321	P	P	12 36 24.4	-0.6
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TARG	Taragay, Kyrgy	65.29	324	P	P	12 36 26.8	-0.2
TARG				IAmb	IAmb	12 36 28.4	
	comp=Z,2.3nm,0.5s						
KDJ	Kajisay	65.90	324	P	P	12 36 30.3	-0.4
KDJ				IAmb	IAmb	12 36 54.3	
	comp=Z,4.4nm,1.2s						
MKAR	Makanchi Array	66.28	330	P	P	12 36 32.1	-0.6
	comp=Z,1.1nm,0.4s,baz=135,slow=7.7,SNR=23						
	comp=Z,1.1nm,0.4s						
MAKZ	Makanchi	66.44	330	P	P	12 36 33.2	-0.6
MAKZ				IAmb	IAmb	12 36 56.1	
	comp=Z,6.4nm,1.1s						
BOOM	Boomskoye usch	66.84	324	P	P	12 36 36.2	-0.4
AAK	Ala-Archa	67.79	323	P	P	12 36 42.3	-0.3
ARSB	Arslanbob	67.94	321	P	P	12 36 43.0	-0.5
ZAA0	Zalesovo Array	70.42	337	P	P	12 36 56.0	-2.4
ZAA0				IAmb	IAmb	12 36 57.4	
	comp=Z,1.5nm,0.4s						
ZALV	Zalesovo Beam	70.42	337	P	P	12 36 56.4	-2.0
	comp=Z,2.1nm,0.4s,baz=136,slow=4.4,SNR=12						
	comp=Z,2.1nm,0.4s						
ZALV	Zalesovo Beam	70.42	337	P	P	12 36 56.5	-1.9
KKAR	Karatay Array	70.45	322	P	P	12 36 58.1	-0.7
KURBB	Kurchatov Arra	70.72	332	P	P	12 37 00.0	-0.3
	comp=Z,1.1nm,0.2s,baz=146,slow=5.2,SNR=6.4						
	comp=Z,1.1nm,0.2s						
KURK	Kurchatov	70.74	332	P	P	12 36 59.6	-0.8
KURK				IAmb	IAmb	12 37 00.7	
	comp=Z,2.4nm,0.8s						
YAK	Yakutsk	70.77	3	P	P	12 36 58.9	-1.4
VNDA	Vanda	71.57	172	P	P	12 37 05.2	+0.2
	comp=Z,0.6nm,0.4s,baz=313,slow=8.2,SNR=7.4						
	comp=Z,0.6nm,0.4s						
VNDA	Vanda	71.57	172	P	P	12 37 05.2	+0.2
AB31	Akbulak array	79.87	323	P	P	12 37 51.2	-1.5
ABKAR	Akbulak array	79.87	323	P	P	12 37 51.1	-1.7
QSPA	South Pole Qui	81.21	180	P	P	12 38 04.3	+4.4
	comp=Z,0.9nm,0.3s,baz=269,slow=2.8,SNR=8.2						
SNAA	Sanae	92.33	195	LR	LR	13 19 43.3	
	comp=Z,32nm,18.1s,baz=21,slow=35						
BELA	Belgrano 2	92.61	185	P	P	12 38 55.5	+0.4
TORD	Torodi Ar. Bea	122.61	280	PKP	PKPdf	12 44 39.0	-1.2
	comp=Z,1.0nm,0.5s,baz=63,slow=3.8,SNR=7.1						
LPAZ	La Paz	152.65	156	PKPbc	PKPbc	12 45 42.3	+0.4
	comp=Z,0.5nm,0.4s,baz=243,slow=2.3,SNR=3.5						

IDC ***04*** *12:48:29.3±0.6, 41°.69N×81°.62E, h0^{km}, mb4.3/19, mbtmp4.2/27, ML3.6/8, MS3.2/7, Error ellipse: s-maj=12.9km s-min=10.0km az=42.0*
SOME ***04*** *12:48:29.2, 41°.97N×81°.72E, h5^{km}, MS4.0*
MOS ***04*** *12:48:29.5±1.1, 41°.65N×81°.69E, h12^{km}, mb4.7/17, Error ellipse: s-maj=6.7km s-min=4.7km az=121.2*
NEIC ***04*** *12:48:31.0±1.7, 41°.72N±0°.06×81°.71E±0°.06, h10^{km}±1^{km}, mb4.6/30, Error ellipse: s-maj=11.0km s-min=7.8km az=11.0*
BJI ***04*** *12:48:30.4, 41°.69N×81°.67E, h7^{km}, mb4.3/10, ML4.2/11, Ms3.9/3, Ms7 3.8/2*
NNC ***04*** *12:48:32.4±2.2, 41°.80N×81°.49E, h0^{km}, mb4.8, mpv4.5, Error ellipse: s-maj=16.1km s-min=13.8km az=175.0*
ISC 04 12:48:30.2±0.4, **41°.67N**±0°.03×**81°.63E**±0°.03, **h10^{km}, n191,** σ**2s07**/208, **mb4.5**/38, **MS3.2**/6, **15C-16D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WUS	Wushi	1.87	256		Pg	12 49 05.2	-0.9
WUS				Sn	Sg	12 49 28.5	-1.9
KTMS	Ketmen	2.01	333	Pg	Pn	12 49 03.9	-0.5
	570nm,0.6s						
KTMS				Lg	Lg	12 49 29.8	
	996nm,0.4s						
KTMS	Ketmen	2.01	333	*e*P	Pn	12 49 03.9	-0.5
	566nm,0.3s						
KTMS				*e*S	Sn	12 49 29.8	+0.2
	996nm,0.4s						
SHLS	Shalkode	2.19	314	Pg	Pn	12 49 07.0	+0.2
	514nm,0.6s						
SHLS				Lg	Lg	12 49 34.5	
	2µm,0.8s						
SHLS	Shalkode	2.19	314	*e*P	Pn	12 49 07.0	+0.2
	716nm,0.2s						
SHLS				*e*S	Sn	12 49 34.5	+0.5
	7µm,0.3s						
SHLS	Shalkode	2.19	314	*e*PN	Pn	12 49 06.7	-0.1
PDGK	Podgornoye	2.29	317	⇑Pn	Pb	12 49 11.1	-0.7
	688nm,0.6s						
PDGK				⇑Sn	Sg	12 49 42.0	-1.8
	2µm,0.6s						
PDGK	Podgornoye	2.29	317	PN	Pb	12 49 11.5	-0.3
PDGK				S	Sg	12 49 42.2	-1.7
UZB	Uzynbulak	2.43	308	Pg	Pb	12 49 13.1	-1.0
	304nm,0.6s						
UZB				Lg	Lg	12 49 45.2	
	3µm,0.8s						
UZB	Uzynbulak	2.43	308	*e*P	Pb	12 49 13.1	-1.0
	312nm,0.5s						
UZB				*e*S	Sb	12 49 45.2	+1.0
	2µm,0.3s						
UZB	Uzynbulak	2.43	308	*e*PN	Pb	12 49 12.9	-1.2
PRZ	Przheval'sk	2.54	290		Pb	12 49 15.4	-0.6
PRZ	Przheval'sk	2.54	290	PN	Pb	12 49 15.4	-0.6
SATY	Saty	2.76	301	Pg	Pg	12 49 20.6	-2.5
	756nm,0.6s						
SATY				Lg	Lg	12 49 57.5	
	1µm,0.6s						
KPKS	Kokpek	2.82	311	Pg	Pb	12 49 18.4	-2.4
	0.4nm,0.5s						
KPKS				Lg	Lg	12 49 54.0	
	1µm,0.5s						
TARG	Taragay, Kyrgy	2.86	272		Pb	12 49 18.3	-3.4
TARG	Taragay, Kyrgy	2.86	272	PN	Pb	12 49 18.3	-3.4
KURS	Kuram	3.13	307	Pg	Pb	12 49 26.3	+0.3
	286nm,0.8s						
KURS				Lg	Lg	12 50 07.7	
	818nm,0.9s						
KNOS	Konyrlen	3.23	327	Pg	Pb	12 49 23.9	-3.9
	166nm,0.6s						
KNOS				Lg	Lg	12 50 03.4	
	482nm,0.7s						
KDJ	Kajisay	3.35	279		Pn	12 49 24.3	+1.5
KDJ	Kajisay	3.35	279	PN	Pn	12 49 24.3	+1.5
BLB	Baldybastay	3.35	317	Pg	Pb	12 49 30.2	+0.4
	253nm,0.7s						
BLB				Lg	Lg	12 50 14.8	
	509nm,0.5s						
KOTS	Kotyrbulak	3.69	297	Pg	Pb	12 49 34.2	-1.4
	135nm,0.7s						
KOTS				Lg	Lg	12 50 20.7	
	1µm,0.8s						
KOTS	Kotyrbulak	3.69	297	*e*P	Pb	12 49 35.5	-0.1
	102nm,0.4s						
KOTS				*e*S	Sb	12 50 23.1	+2.7
	950nm,0.4s						
MDOK	Medeo	3.70	295	Pg	Pb	12 49 36.0	+0.2
	146nm,0.9s						
MDOK				Lg	Lg	12 50 23.9	
	408nm,1.1s						
TNSS	Tian-Shan	3.73	293	Pg	Pb	12 49 36.9	+0.5
	31nm,0.8s						
TNSS				Lg	Lg	12 50 25.5	
	161nm,0.7s						
TNSS	Tian-Shan	3.73	293	*e*P	Pb	12 49 36.9	+0.5
	31nm,0.8s						
TNSS				*e*S	Sg	12 50 25.5	-4.5
	161nm,0.7s						
ARXS	Arharly	3.77	314	Pg	Pb	12 49 36.2	-0.8
	96nm,0.4s						
ARXS				Lg	Lg	12 50 25.4	
	446nm,0.5s						
ARXS	Arharly	3.77	314	*e*P	Pb	12 49 36.2	-0.8
ARXS				*e*S	Sb	12 50 25.1	+2.3
ARXS	Arharly	3.77	314	*e*PN	Pn	12 49 30.7	+2.1
AAA	Alma-Ata	3.81	295	Pg	Pg	12 49 39.8	-3.4
	392nm,0.7s						
AAA				Lg	Lg	12 50 31.2	
	46nm,0.6s						
AAA	Alma-Ata	3.81	295	*e*P	Pg	12 49 39.8	-3.4
	392nm,0.7s						
AAA				*e*S	Sg	12 50 31.2	-1.4
	46nm,0.6s						
AAA	Alma-Ata	3.81	295	*e*PN	Pb	12 49 32.7	-4.9
TDK	Taldyqorghan	4.08	326	Pg	Pb	12 49 43.0	+0.9
	570nm,0.7s						
TDK				Lg	Lg	12 50 35.9	
	757nm,0.9s						
TDK	Taldyqorghan	4.08	326	*e*P	Pb	12 49 41.3	-0.8
	244nm,0.3s						
TDK				*e*S	Sb	12 50 32.9	+1.5
	757nm,0.9s						
MTBS	Maitube	4.12	293	Pg	Pb	12 49 43.5	+0.7
	63nm,0.7s						
MTBS				Lg	Lg	12 50 37.9	
	298nm,0.4s						
MTBS	Maitube	4.12	293	*e*P	Pb	12 49 43.5	+0.7
	63nm,0.7s						
MTBS				*e*S	Sg	12 50 37.9	-4.5
	298nm,0.4s						
KTBS	Karatobe	4.18	301	Pg	Pb	12 49 45.7	+1.9
	103nm,0.7s						
KTBS				Lg	Lg	12 50 41.4	
	0.4nm,0.5s						
BOOM	Boomskoye usch	4.31	283		Pn	12 49 38.4	+2.4
BOOM	Boomskoye usch	4.31	283	PN	Pn	12 49 38.4	+2.4
KST	Kastek	4.42	290	Pg	Pb	12 49 49.9	+1.9
	175nm,0.8s						
KST				Lg	Lg	12 50 47.4	
	359nm,1.2s						
KST	Kastek	4.42	290	*e*P	Pb	12 49 49.9	+1.9
	175nm,0.8s						
KST				*e*S	Sg	12 50 47.4	-4.6
	359nm,1.2s						
KUU	Kurty	4.48	302	Pg	Pg	12 49 52.5	-3.6
	127nm,0.9s						
KUU				Lg	Lg	12 50 52.6	
	470nm,1.5s						
KUU	Kurty	4.48	302	*e*P	Pb	12 49 50.2	+1.2
	3.9nm,0.1s						
KUU				*e*S	Sg	12 50 48.5	-5.6
	462nm,0.5s						
DGS	Degeres	4.61	292	Pg	Pg	12 49 54.1	-4.4
	126nm,0.8s						
DGS				Lg	Lg	12 50 55.0	
	353nm,0.7s						
KSH	Kashi	4.81	245	Pn	Pb	12 49 52.8	-1.9
KSH				Sn	Sg	12 50 58.6	-6.1
KSH				smax	smax		
	comp=N,420nm,0.9s						
KSH				smax	smax		
	comp=E,600nm,0.9s						
KRBS	Karabastau	4.83	297	Pg	Pb	12 49 56.3	+1.3
	76nm,1.1s						
KRBS				Lg	Lg	12 50 60.0	
	52nm,0.7s						
WMQ	Urumqi	4.96	62	Pn	Pn	12 49 48.6	+3.7
WMQ				Sn	Sb	12 50 50.8	-6.1
WMQ				smax	smax		
	comp=N,260nm,1.3s						
WMQ				smax	smax		
	comp=E,330nm,1.3s						
MAKZ	Makanchi	5.14	3		Pn	12 49 49.6	+2.3
MAKZ	Makanchi	5.14	3	PN	Pn	12 49 49.6	+2.3
MK31	Makanchi Array	5.15	5	Pn	Pn	12 49 49.4	+2.0
	4.6nm,0.3s,baz=190,slow=13,SNR=262						
MK31				⇓Pg	Pg	12 50 05.6	-3.2
	95nm,0.9s,baz=184,slow=13,SNR=14						
MK31				⇓Lg	Lg	12 51 11.0	
	116nm,0.7s,baz=182,slow=31,SNR=5.1						
MK31	Makanchi Array	5.15	5	*ce*PN	Pn	12 49 49.4	+2.0
MKAR	Makanchi Array	5.15	5	Pn	Pn	12 49 49.5	+2.2
	7.3nm,0.3s,baz=189,slow=13,SNR=106						
MKAR				Sn	Sn	12 50 50.3	+3.5
	10nm,0.3s,baz=186,slow=24,SNR=4.5						
MKAR				Lg	Lg	12 51 10.1	
	9.5nm,0.3s,baz=184,slow=33,SNR=6.6						
	10nm,0.4s						
MKAR	Makanchi Array	5.15	5		Pn	12 49 48.9	+1.5
MKAR	Makanchi Array	5.15	5	*e*PN	Pn	12 49 49.7	+2.3
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
FRU1	Bishkek	5.32	285	Pn	Pn	12 49 53.5	+3.8
FRU1	Bishkek	5.32	285	PN	Pn	12 49 53.5	+3.8
AAK	Ala-Archa	5.39	283	Pn	Pn	12 49 53.8	+3.0
	comp=Z,3.3nm,0.3s,baz=118,slow=9.0,SNR=37						
AAK				Pg	Pb	12 50 07.5	+3.0
	comp=Z,6.4nm,0.3s,baz=118,slow=15,SNR=14						
AAK				Lg	Lg	12 51 19.0	
	comp=Z,14nm,0.3s,baz=319,slow=21,SNR=8.0						
	comp=Z,8.1nm,0.4s						
AAK	Ala-Archa	5.39	283		Pn	12 49 54.0	+3.2
AAK	Ala-Archa	5.39	283	⇓Pn	Pb	12 49 58.9	-5.6
	comp=Z,7.0nm,0.5s						
AAK				⇑Pg	Pg	12 50 16.0	+2.6
	comp=Z,104nm,0.7s						
AAK				⇓Lg	Lg	12 51 21.3	
	comp=Z,197nm,0.7s						
AAK	Ala-Archa	5.39	283	⇑*i*PN	Pn	12 49 53.5	+2.7
SGDS	Sogindy	5.46	291	Pg	Pb	12 50 08.6	+2.8
	comp=Z,80nm,0.7s						
SGDS				Lg	Lg	12 51 21.0	
	comp=Z,221nm,1.2s						
MRKS	Merke	6.33	283	Pg	Pg	12 50 25.5	-6.0
	comp=Z,53nm,0.8s						
MRKS				Lg	Lg	12 51 48.7	
	comp=Z,90nm,1.4s						
MRKS	Merke	6.33	283	*e*P	Pg	12 50 25.1	-6.3
	comp=Z,53nm,0.8s						
MRKS				*e*S	Sg	12 51 48.1	-5.3
	comp=Z,90nm,1.4s						
BTLS	Baital	6.47	304	Pg	Pb	12 50 24.7	+1.8
	comp=Z,56nm,0.8s						
BTLS				Lg	Lg	12 51 47.6	
	comp=Z,66nm,1.2s						
BTLS	Baital	6.47	304	*e*P	Pb	12 50 24.7	+1.8
	comp=Z,19nm,0.9s						
BTLS				*e*S	Sb	12 51 47.6	+7.3
	comp=Z,105nm,1.0s						
BTLS	Baital	6.47	304	*e*PN	Pn	12 50 07.8	+2.3
DRK	Karamyk	7.79	257	Pn	Pn	12 50 26.0	+2.1
DRK	Karamyk	7.79	257	P	Pn	12 50 26.0	+2.1
KK31	Karatay Array	8.35	284	Pn	Pn	12 50 31.5	+0.2
KK31	Karatay Array	8.35	284	Pg	Pg	12 51 05.5	-4.5
	comp=Z,21nm,0.7s,baz=95,slow=16,SNR=14						
KK31				Lg	Lg	12 52 56.3	
	comp=Z,72nm,0.8s,baz=92,slow=27,SNR=4.0						
KK31	Karatay Array	8.35	284	P	Pn	12 50 31.5	+0.2
KKAR	Karatay Array	8.35	284	Pn	Pn	12 50 33.4	+2.0
KKAR	Karatay Array	8.35	284	P	Pn	12 50 33.4	+2.0
IUG	Iuzhnay	8.66	277	Pg	Pg	12 51 12.5	-3.5
	comp=Z,57nm,1.2s						
MANEM	Manem	8.71	245		Pn	12 50 38.0	+1.5
BRLS	Borolday	8.84	283	Pg	Pg	12 51 13.4	-5.9
	comp=Z,9.1nm,3.0s						
DGZ	Jazzator, Alta	9.00	25	⇑*e*P	Pn	12 50 41.8	+1.5
GAR	Garm	9.04	257		Pn	12 50 42.9	+2.0
KURBB	Kurchatov Arra	9.21	348	Pn	Pn	12 50 44.0	+1.0
	comp=Z,0.2nm,0.3s,baz=171,slow=12,SNR=4.9						
KURBB				Sn	Sn	12 52 27.6	+1.0
	comp=Z,0.3nm,0.3s,baz=42,slow=14,SNR=5.2						
	comp=Z,0.9nm,0.3s						
KURBB	Kurchatov Arra	9.21	348	⇑Pn	Pn	12 50 43.1	+0.1
	comp=Z,9.8nm,0.5s						
KURBB				⇑Sn	Sn	12 52 27.4	+0.8
	comp=Z,48nm,0.6s						
KURBB				⇓Lg	Lg	12 53 20.9	
	comp=Z,134nm,0.7s						
KURBB	Kurchatov Arra	9.21	348	P	Pn	12 50 43.1	+0.1
KURBB				S	Sn	12 52 27.4	+0.8
KURK	Kurchatov	9.29	348		Pn	12 50 43.9	-0.2
KURK	Kurchatov	9.29	348	⇓Pn	Pn	12 50 47.8	+3.8
	comp=Z,12nm,0.8s						
KURK				⇓Sn	Sn	12 52 38.2	+10
	comp=Z,12nm,0.8s						
KURK				⇓Lg	Lg	12 53 26.3	
	comp=Z,53nm,1.1s						
KURK	Kurchatov	9.29	348	⇑*e*P	Pn	12 50 47.1	+3.0
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CHGR	Chuyangaron	10.01	257		Pn	12 50 55.4	+1.3
CHGR	Chuyangaron	10.01	257	P	Pn	12 50 55.4	+1.3
BRZS	Berezniki	10.39	326	Pg	Pn	12 51 38.9	+40
	comp=Z,0.5nm,0.5s						
NIL	Nilore	10.39	222		Pn	12 51 01.7	+2.3
NIL	Nilore	10.39	222	P	Pn	12 51 01.7	+2.3
SHAA	Shahritus	11.19	253		Pn	12 51 10.0	-0.3
GOMU	GeErMu	11.63	114	P	Pn	12 51 16.3	-0.3
KBL	Kabul	12.19	238		Pn	12 51 24.9	+0.8
KBL	Kabul	12.19	238	P	Pn	12 51 25.0	+0.8
ZAA0	Zalesovo Array	12.47	9		Pn	12 51 26.6	-1.0
ZALV	Zalesovo Beam	12.47	9	Pn	Pn	12 51 26.5	-1.1
	comp=Z,0.3nm,0.3s,baz=194,slow=12,SNR=11						
ZALV				Sn	Sn	12 53 50.2	+3.7
	comp=Z,0.4nm,0.3s,baz=183,slow=20,SNR=2.2						
ZALV				Lg	Lg	12 55 08.2	
	comp=Z,0.2nm,0.3s,baz=200,slow=25,SNR=4.2						
ZALV				LR	LR	12 55 43.1	
	comp=Z,50nm,20.4s,baz=226,slow=35						
	comp=Z,1.7nm,0.5s						
ZALV	Zalesovo Beam	12.47	9		Pn	12 51 26.8	-0.9
BVAR	Borovoye Array	13.66	330	Pn	Pn	12 51 43.3	-0.6
	baz=146,slow=11,SNR=6.8						
BVAR				Lg	Lg	12 55 44.2	
	comp=Z,0.1nm,0.3s,baz=145,slow=28,SNR=4.4						
BVAR				LR	LR	12 57 04.6	
	comp=Z,78nm,19.5s,baz=159,slow=38						
	comp=Z,1.1nm,0.6s						
BORK	Borovoye	13.70	330		Pn	12 51 45.3	+0.9
BORK	Borovoye	13.70	330	⇑*e*P	Pn	12 51 45.6	+1.2
BORK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA	Gaotai	14.02	93	*e*P	Pn	12 51 47.1	-1.9
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KNGR	Kungurtug, Tuv	14.16	45	⇑*e*P	P	12 51 53.9	-4.6
EVN	Everest	14.32	161		Pn	12 51 55.1	+1.4
AB31	Akbulak array	16.96	304		Pn	12 52 25.3	-2.1
AB31	Akbulak array	16.96	304	P	Pn	12 52 25.4	-2.0
	comp=Z,7.0nm,0.7s,baz=111,slow=12,SNR=56						
ABKAR	Akbulak array	16.96	304		Pn	12 52 25.3	-2.1
LZDM	Lanzhou Array	18.10	101	P	P	12 52 41.9	-0.6
	baz=294,slow=12						
	comp=Z,1.1nm,0.3s						
SHL	Shillong	18.17	149	P	P	12 52 42.4	-0.7
SHL				IAmb	IAmb	12 52 52.5	
	comp=Z,11nm,0.6s						
SHL	Shillong	18.17	149	P	P	12 52 42.4	-0.7
SHL				pmax	pmax		
	comp=Z,11nm,0.6s						
AKTO	Aktyubinsk	18.52	306	P	Pn	12 52 47.1	+0.4
	comp=Z,0.5nm,0.3s,baz=114,slow=11,SNR=13						
AKTO				Lg	Lg	12 58 09.8	
	comp=Z,0.1nm,0.3s,baz=52,slow=19,SNR=1.6						

	comp=Z,5.2nm,0.7s						
AKTO	**Aktyubinsk**	**18.52**	**306**	⇑P	**Pn**	**12 52 48.5**	**+1.7**
	comp=Z,4.1nm,0.7s						
SONM	**Songino Array**	**18.60**	**62**	P	**Pn**	**12 52 47.3**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=259,slow=11,SNR=16						
SONM				LR	LR	13 01 01.1	
	comp=Z,124nm,18.1s,baz=206,slow=40						
	comp=Z,3.1nm,0.7s						
SONM	**Songino Array**	**18.60**	**62**	P	**Pn**	**12 52 47.9**	**0.0**
SONM	**Songino Array**	**18.60**	**62**	*e*P	**Pn**	**12 52 49.1**	**+1.2**
ULN	**Ulaanbaatar**	**19.04**	**62**	P	**P**	**12 52 50.8**	**-1.7**
ULN	**Ulaanbaatar**	**19.04**	**62**	⇑*e*P	**Pn**	**12 52 53.2**	**-0.1**
ULN				pmax	pmax		
	comp=Z,30nm,2.5s						
SVE	**Sverdlovsk**	**20.31**	**325**	*e*P	Pn	12 53 08.8	+0.6
ARTI	**Arti**	**21.04**	**322**	P	**P**	**12 53 13.9**	**-0.1**
	comp=Z,24nm,0.8s,baz=126,slow=5.5,SNR=12						
ARTI				LR	LR	13 01 41.4	
	comp=Z,77nm,20.8s,baz=151,slow=38						
	comp=Z,24nm,0.8s						
ARTI	**Arti**	**21.04**	**322**	P	**P**	**12 53 14.1**	**+0.1**
ARTI	**Arti**	**21.04**	**322**	*d i*P	**P**	**12 53 14.3**	**+0.2**
ARTI						12 53 34.3	
ARTI				S	**S**	**12 57 08.9**	**+0.8**
ARTI				pmax	pmax		
	comp=Z,37nm,0.9s						
BTO	**Baotou**	**21.38**	**83**	*e*P	**P**	**12 53 18.7**	**+0.8**
BTO				S	**S**	**12 57 17.0**	**+1.8**
MAK	**Makhachkala**	**25.17**	**284**	*d i*P	**P**	**12 53 52.2**	**-3.4**
MAK				*e*S	**S**	**12 58 13.8**	**-6.7**
MAK				pmax	pmax		
	comp=Z,335nm,1.4s						
MAK				MLR	MLR		
	comp=Z,151nm,11.0s						
BELG	**Belogornoye**	**25.31**	**307**	⇓*e*P	**P**	**12 53 56.7**	**0.0**
BELG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**27.46**	**142**	P	**P**	**12 54 18.1**	**+1.6**
	comp=Z,0.6nm,0.5s,baz=320,slow=8.2,SNR=7.6						
CMAR				LR	LR	13 06 50.8	
	comp=Z,15nm,19.1s,baz=115,slow=40						
	comp=Z,0.6nm,0.5s						
CMAR	**Chiang Mai Arr**	**27.46**	**142**	P	**P**	**12 54 16.5**	**0.0**
CMAR	**Chiang Mai Arr**	**27.46**	**142**	*e*P	**P**	**12 54 17.5**	**+1.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NRIK	**Noril'sk**	**27.91**	**4**	P	**P**	**12 54 20.2**	**+0.1**
	comp=Z,1.8nm,0.3s,baz=174,slow=8.5,SNR=7.4						
	comp=Z,1.8nm,0.3s						
NRIK	**Noril'sk**	**27.91**	**4**	P	**P**	**12 54 19.4**	**-0.6**
NRIK				IAmb	IAmb	12 54 38.6	
	comp=Z,12nm,1.1s						
NRIK	**Noril'sk**	**27.91**	**4**	⇓*e*P	**P**	**12 54 20.6**	**+0.5**
NRIK				pmax	pmax		
	comp=Z,55nm,5.7s						
KIV	**Kislovodsk**	**28.48**	**288**	*e*P	**P**	**12 54 28.4**	**+2.9**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,28nm,15.0s						
KLMR	**Klimovskoe**	**31.83**	**322**	*e*P	**P**	**12 54 54.1**	**-0.7**
KLMR				pmax	pmax		
	comp=Z,12nm,1.2s						
OBN	**Obninsk**	**32.20**	**310**	*e*P	**P**	**12 54 58.6**	**+0.5**
OBN				*e*		12 56 05.2	
OBN				*e*PPP	PPP	12 56 16.1	
OBN				*e*		12 57 47.3	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZEA	**Zeya**	**32.43**	**52**	*e*P	**P**	**12 55 02.2**	**+2.0**
YAK	**Yakutsk**	**34.90**	**38**	⇑*e*P	**P**	**12 55 21.0**	**-0.5**
YAK				pmax	pmax		
	comp=Z,92nm,4.0s						
RAYN	**Ar Rayn**	**35.08**	**250**	P	**P**	**12 55 24.4**	**+0.7**
RAYN				IAmb	IAmb	12 55 25.4	
	comp=Z,7.5nm,0.8s						
RAYN	**Ar Rayn**	**35.08**	**250**	P	**P**	**12 55 24.4**	**+0.7**
RAYN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KSRS	**Korea Array**	**35.61**	**81**	P	**P**	**12 55 28.6**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=292,slow=8.5,SNR=4.8						
	comp=Z,1.1nm,0.6s						
KSRS	**Korea Array**	**35.61**	**81**	*e*P	**P**	**12 55 27.9**	**-0.1**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BR131	**Keskin Array S**	**36.06**	**283**	P	**P**	**12 55 32.5**	**+0.4**
BR131				IAmb	IAmb	12 55 34.2	
	comp=Z,7.3nm,0.7s						
BR131	**Keskin Array S**	**36.06**	**283**	*d i*P	**P**	**12 55 33.5**	**+1.5**
BRTR	**Keskin Array B**	**36.06**	**283**	P	**P**	**12 55 33.6**	**+1.5**
	comp=Z,5.4nm,0.7s,baz=92,slow=9.3,SNR=26						
	comp=Z,5.4nm,0.7s						
BRTR	**Keskin Array B**	**36.06**	**283**	P	**P**	**12 55 33.1**	**+1.0**
BRTR	**Keskin Array B**	**36.06**	**283**	*e*P	**P**	**12 55 33.6**	**+1.5**
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AKASG	**Malin Array Be**	**36.69**	**303**	P	**P**	**12 55 37.0**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=72,slow=8.3,SNR=5.9						
	comp=Z,1.2nm,0.5s						
AKASG	**Malin Array Be**	**36.69**	**303**	P	**P**	**12 55 36.4**	**-0.7**
AKASG	**Malin Array Be**	**36.69**	**303**	*e*P	**P**	**12 55 37.5**	**+0.4**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKBB	**Malin Array Si**	**36.69**	**303**	P	**P**	**12 55 37.6**	**+0.4**
AKBB				IAmb	IAmb	12 55 38.1	
	comp=Z,6.9nm,0.8s						
AKBB	**Malin Array Si**	**36.69**	**303**	⇓*i*P	**P**	**12 55 37.5**	**+0.4**
KIEV	**Kiev**	**36.70**	**303**	P	**P**	**12 55 37.4**	**+0.2**
KIEV				IAmb	IAmb	12 55 38.1	
	comp=Z,6.0nm,0.8s						
KIEV	**Kiev**	**36.70**	**303**	P	**P**	**12 55 37.4**	**+0.2**
KIEV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TIXI	**Tiksi**	**37.88**	**22**	⇓*i*P	**P**	**12 55 46.7**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
FINES	**FINESS Array B**	**38.33**	**320**	P	**P**	**12 55 51.0**	**+0.2**
	comp=Z,2.9nm,0.7s,baz=111,slow=10,SNR=5.3						
	comp=Z,2.9nm,0.7s						
FINES	**FINESS Array B**	**38.33**	**320**	*e*P	**P**	**12 55 49.4**	**-1.4**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BURAR	**Bucovina Array**	**39.81**	**298**	P	**P**	**12 56 04.2**	**+0.7**
BUR08	**Bucovina Ar. S**	**39.81**	**298**	P	**P**	**12 56 04.6**	**+1.0**
ARCES	**ARCESS Array B**	**39.92**	**333**	P	**P**	**12 56 04.5**	**+0.4**
	comp=Z,3.6nm,0.8s,baz=90,slow=7.6,SNR=14						
	comp=Z,3.6nm,0.8s						
ARCES	**ARCESS Array B**	**39.92**	**333**	P	**P**	**12 56 04.3**	**+0.2**
ARCES	**ARCESS Array B**	**39.92**	**333**	*e*P	**P**	**12 56 05.1**	**+1.0**
ARCES				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HFS	**Hagfors**	**44.41**	**318**	P	**P**	**12 56 41.4**	**+0.6**
	comp=Z,3.6nm,0.6s,baz=86,slow=9.1,SNR=8.8						
	comp=Z,3.6nm,0.6s						
NORES	**NORESS Array B**	**45.39**	**320**	P	**P**	**12 56 50.8**	**+2.2**
NB2	**NORSAR Subarra**	**45.51**	**320**	P	**P**	**12 56 49.9**	**+0.4**
	comp=Z,2.0nm,0.5s,baz=81,slow=7.9						
NOA	**NORSAR Array B**	**45.51**	**320**	P	**P**	**12 56 50.0**	**+0.4**
	comp=Z,3.1nm,0.6s,baz=82,slow=7.9,SNR=12						
	comp=Z,3.1nm,0.6s						
CLL	**Collm**	**46.61**	**306**	*i* P	**P**	**12 56 59.2**	**+0.9**
CLL	**Collm**	**46.61**	**306**	*i* P	**P**	**12 56 59.2**	**+0.9**
GERES	**GERESS Array B**	**46.90**	**303**	P	**P**	**12 57 02.3**	**+1.5**
	comp=Z,0.5nm,0.4s,baz=92,slow=8.2,SNR=1.8						
	comp=Z,0.5nm,0.4s						
ESDC	**Sonseca Array**	**62.25**	**300**	P	**P**	**12 58 52.6**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=52,slow=6.6,SNR=6.4						
	comp=Z,1.4nm,0.8s						
E23K	**Chandalar**	**64.06**	**19**	IAmb	IAmb	12 59 15.9	
	comp=Z,5.2nm,1.1s						
E24K	**Your Creek**	**64.32**	**19**	IAmb	IAmb	12 59 06.9	
	comp=Z,3.7nm,0.9s						
COLD	**Coldfoot**	**64.54**	**20**	P	**P**	**12 59 07.5**	**+0.5**
COLD				IAmb	IAmb	12 59 08.5	
	comp=Z,5.7nm,0.8s						
E25K	**Arctic Village**	**64.96**	**18**	P	**P**	**12 59 10.6**	**+0.9**
E25K				IAmb	IAmb	12 59 18.8	
	comp=Z,4.3nm,1.4s						
F25K	**Christian Rive**	**65.37**	**18**	IAmb	IAmb	12 59 14.8	
	comp=Z,3.9nm,0.9s						
E27K	**Coleen River**	**65.78**	**16**	P	**P**	**12 59 14.8**	**-0.2**
E27K				IAmb	IAmb	12 59 16.4	
	comp=Z,3.4nm,0.9s						
E28M	**Babbage River**	**65.85**	**15**	P	**P**	**12 59 16.3**	**+0.9**
E28M				IAmb	IAmb	12 59 23.9	
	comp=Z,1.8nm,0.8s						
COLA	**College**	**66.98**	**21**	⇑*e*P	**P**	**12 59 23.1**	**+0.5**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ILAR	**Eielson Array**	**67.31**	**20**	P	**P**	**12 59 24.6**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=317,slow=5.2,SNR=18						
ILAR				LR	LR	13 34 22.8	
	comp=Z,32nm,18.9s,baz=308,slow=41						
	comp=Z,1.7nm,0.8s						
ILAR	**Eielson Array**	**67.31**	**20**	P	**P**	**12 59 24.8**	**0.0**
TRF	**Thorofare Moun**	**67.42**	**23**	P	**P**	**12 59 26.0**	**+0.3**
I30M	**Mount Dempster**	**69.40**	**16**	IAmb	IAmb	12 59 38.9	
	comp=Z,4.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.90**	**273**	P	**P**	**13 00 05.6**	**-0.2**
	comp=Z,3.1nm,0.8s,baz=45,slow=7.3,SNR=15						
	comp=Z,3.1nm,0.8s						
YKA	**Yellowknife Ar**	**75.37**	**8**	P	**P**	**13 00 13.3**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=339,slow=6.0,SNR=5.0						
	comp=Z,0.8nm,0.7s						
WRAB	**Tennant Creek**	**78.32**	**130**	⇓*i*P	**P**	**13 00 32.0**	**+1.3**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WRA	**Warramunga Arr**	**78.32**	**130**	P	**P**	**13 00 31.8**	**+1.1**
	comp=Z,3.8nm,0.7s,baz=327,slow=5.4,SNR=26						
	comp=Z,3.8nm,0.7s						
WRA	**Warramunga Arr**	**78.32**	**130**	P	**P**	**13 00 31.3**	**+0.6**
WR8	**Warramunga Arr**	**78.42**	**130**		**P**	**13 00 32.4**	**+1.2**
WR8				IAmb	IAmb	13 00 33.1	
	comp=Z,4.7nm,0.8s						
ASAR	**Alice Springs**	**81.03**	**133**	P	**P**	**13 00 46.4**	**+1.0**
	comp=Z,3.2nm,0.8s,baz=324,slow=5.0,SNR=52						
	comp=Z,3.2nm,0.8s						
DBIC	**Dimbokro**	**82.99**	**273**	P	**P**	**13 00 56.1**	**+0.2**
	comp=Z,3.6nm,0.7s,baz=54,slow=5.5,SNR=4.9						
	comp=Z,3.6nm,0.7s						
DBIC	**Dimbokro**	**82.99**	**273**	P	**P**	**13 00 55.8**	**-0.1**
FORT	**Forrest**	**83.85**	**141**	P	**P**	**13 01 00.3**	**+0.5**
LBTB	**Lobatse**	**84.19**	**229**	LR	LR	13 40 56.4	
	comp=Z,14nm,18.7s,baz=152,slow=37						
ULM	**Lac du Bonnet**	**88.44**	**358**	P	**P**	**13 01 22.7**	**+0.3**
	comp=Z,2.1nm,0.6s,baz=349,slow=5.2,SNR=2.9						
	comp=Z,2.1nm,0.6s						
NVL	**N'lazarevskaya**	**122.62**	**202**	*i* PKIKP	**PKiKP**	**13 07 27.4**	**+2.4**
NVL				*e*		13 09 06.5	
NVL				*e*SS	SS	13 25 48.2	+3.8
NVL				*e*SSS	SSS	13 30 19.9	
NVL				pmax	pmax		
	comp=Z,7.0nm,0.7s						

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*IDC **04** 12:53:55.4±1.1, 37°.29S×176°.65E, h177^{km}±6^{km}, mb3.9/7, mbtmp4.4/7, Error ellipse: s-maj=29.0km s-min=14.4km az=30.0*

*NEIC **04** 12:53:57.5±1.1, 37°.70S±0°.04×176°.53E±0°.07, h188^{km}±5^{km}, mb4.2/24, Error ellipse: s-maj=8.8km s-min=5.1km az=60.0*

*NOU **04** 12:53:57.2, 37°.80S×176°.45E, h182^{km}, mb4.3/37, North Island, New Zealand*

*WEL **04** 12:53:58.4±0.6, 38°S±3°×17°7E±°, h175^{km}±4^{km}, M4.6/120, ML3.3/6, MLv4.6/120, Error ellipse: s-maj=5.0km s-min=3.1km az=32.7, confirmed*

*WEL **04** 12:53:58.4, 37°.60S×176°.54E, h186^{km}, ML4.6, Mw4.2, Moment Tensor Solution. s8 Moment tensor: Scale 10^{15} Nm; M_{rr}1.26; $M_{\theta\theta}$0.89; $M_{\phi\phi}$-2.16; $M_{r\theta}$1.36; $M_{\theta\phi}$-0.83; $M_{\phi r}$1.39; Fault plane solution: $M_0$2.79000×10^{15} NP1: ϕ_s42.00000°, δ73.00000°, λ120.00000°. NP2: ϕ_s159.00000°, δ34.00000°, λ31.00000°. Principal axes: T -3.0598, Plg52.0000°, Azm348.0000°; N 0.5457, Plg29.0000°, Azm212.0000°; P 2.5141, Plg22.0000°, Azm110.0000°; Stations used: URZ TOZ HAZ KUZ MKAZ PUZ HIZ WCZ REVERSE FAULTING*

ISC 04 12:53:57.9±0.6, **37°.75S**±0°.04×**176°.45E**±0°.04, **h197**^{km}±4^{km}, **n284**, σ1^{s}**78**/313, **mb4.3**/21, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	**0.13**	**139**	P	**Pn**	**12 54 21.9**	**-1.8**
OPRZ				S	**Sn**	**12 54 41.5**	**-2.3**
TGRZ	**Tauranga**	**0.15**	**277**	P	**Pn**	**12 54 22.1**	**-1.7**
TGRZ				S	**Sn**	**12 54 41.6**	**-2.0**
MWFS	**Matata Watchor**	**0.20**	**123**	P	**Pn**	**12 54 22.4**	**-1.4**
TBCS	**Tauranga Boys**	**0.24**	**281**	P	**Pn**	**12 54 22.4**	**-1.5**
LIRZ	**Lichensteins R**	**0.26**	**192**	P	**Pn**	**12 54 22.7**	**-1.3**
MARZ	**Manawahe**	**0.30**	**143**	P	**Pn**	**12 54 22.6**	**-1.4**
KARZ	**Kaharoa**	**0.32**	**211**	P	**Pn**	**12 54 22.8**	**-1.3**
OMRZ	**Omania**	**0.36**	**190**	P	**Pn**	**12 54 23.0**	**-1.2**
MKRZ	**Makatiti**	**0.39**	**178**	P	**Pn**	**12 54 23.7**	**-0.6**
NGRZ	**Ngongotaha**	**0.41**	**210**	P	**Pn**	**12 54 23.5**	**-0.9**
KMRZ	**Kaimai**	**0.41**	**256**	P	**Pn**	**12 54 23.1**	**-1.3**
KMRZ				S	**Sn**	**12 54 43.4**	**-1.5**
EDRZ	**Edgecumbe**	**0.42**	**148**	P	**Pn**	**12 54 22.9**	**-1.5**
WHRZ	**Whale Island**	**0.43**	**105**	P	**Pn**	**12 54 23.3**	**-1.1**
UTU	**Utuhina**	**0.47**	**205**	P	**Pn**	**12 54 23.8**	**-0.7**
WKHS	**Whakatane High**	**0.47**	**117**	P	**Pn**	**12 54 22.8**	**-1.7**
TARZ	**Mount Tarawera**	**0.49**	**175**	P	**Pn**	**12 54 23.9**	**-0.8**
MYRZ	**Mayor Island**	**0.50**	**340**	P	**Pn**	**12 54 23.0**	**-1.7**
HLRZ	**Highlands Stat**	**0.51**	**189**	P	**Pn**	**12 54 23.9**	**-0.8**
HSRZ	**Hossack Road**	**0.58**	**196**	P	**Pn**	**12 54 24.4**	**-0.6**
RRRZ	**Republican Roa**	**0.59**	**175**	P	**Pn**	**12 54 23.9**	**-1.1**
WIZ	**White Island**	**0.63**	**70**	P	**Pn**	**12 54 22.9**	**-2.3**
HRRZ	**Handcock Road**	**0.66**	**192**	P	**Pn**	**12 54 24.7**	**-0.6**
OPCS	**Opotiki Colleg**	**0.71**	**112**	P	**Pn**	**12 54 23.8**	**-1.7**
URZ	**Urewera**	**0.73**	**135**	P	**Pn**	**12 54 24.2**	**-1.5**
	1µm,0.3s,baz=265,slow=2.8,SNR=3420						
URZ				LR	LR	12 54 40.4	
	comp=Z,199nm,19.4s,baz=166,slow=44						
URZ				S	**Sn**	**12 54 44.1**	**-3.1**
	2µm,0.4s,baz=356,slow=7.8,SNR=9.0						
URZ	**Urewera**	**0.73**	**135**	P	**Pn**	**12 54 23.7**	**-1.9**
URZ	**Urewera**	**0.73**	**135**	S	**Sn**	**12 54 44.3**	**-2.9**
URZ	**Urewera**	**0.73**	**135**	P	**Pn**	**12 54 24.0**	**-1.7**
URZ				S	**Sn**	**12 54 44.0**	**-3.3**
PRRZ	**Plateau Road**	**0.75**	**183**	P	**Pn**	**12 54 25.1**	**-0.6**
TOZ	**Tahuroa Road**	**0.75**	**271**		**Pn**	**12 54 24.5**	**-1.3**
TOZ				Sn	**Sn**	**12 54 45.6**	**-1.7**
TOZ	**Tahuroa Road**	**0.75**	**271**	P	**Pn**	**12 54 24.7**	**-1.1**
TOZ				S	**Sn**	**12 54 45.9**	**-1.4**
MUGZ	**Murupara**	**0.77**	**161**	P	**Pn**	**12 54 24.7**	**-1.2**
WPRZ	**Whakapapatarin**	**0.80**	**196**	P	**Pn**	**12 54 25.6**	**-0.5**
ALRZ	**Allen Road**	**0.82**	**186**	P	**Pn**	**12 54 25.4**	**-0.8**
KUTZ	**Kaahu Road**	**0.89**	**214**	P	**Pn**	**12 54 26.2**	**-0.4**
HBHS	**Hamilton Boys**	**0.92**	**267**	P	**Pn**	**12 54 25.9**	**-0.9**
TLZ	**Tolley Road**	**0.93**	**231**	P	**Pn**	**12 54 26.4**	**-0.5**
TLZ				S	**Sn**	**12 54 49.4**	**0.0**
HUTZ	**Huka**	**0.93**	**198**	P	**Pn**	**12 54 26.9**	**0.0**
RTZ	**Ruatahuna**	**0.96**	**154**		**Pn**	**12 54 26.2**	**-0.9**
RTZ				Sn	**Sn**	**12 54 47.7**	**-2.3**
RTZ	**Ruatahuna**	**0.96**	**154**	P	**Pn**	**12 54 26.2**	**-0.9**
RTZ				S	**Sn**	**12 54 47.9**	**-2.1**
TPPS	**Taupo Police S**	**0.98**	**198**	P	**Pn**	**12 54 27.3**	**+0.1**
RUGZ	**Raukumara Rang**	**0.99**	**103**	P	**Pn**	**12 54 24.8**	**-2.6**
WHTZ	**Whakaora**	**0.99**	**203**	P	**Pn**	**12 54 27.5**	**+0.1**
MWZ	**Matawai**	**1.03**	**125**	P	**Pn**	**12 54 26.0**	**-1.6**
MWZ				S	**Sn**	**12 54 47.5**	**-3.1**
HAZ	**Te Kaha**	**1.06**	**91**	P	**Pn**	**12 54 25.4**	**-2.3**
HAZ				S	**Sn**	**12 54 46.8**	**-3.9**
RAGZ	**Rawiri**	**1.07**	**135**	P	**Pn**	**12 54 26.9**	**-1.0**
RAGZ				S	**Sn**	**12 54 49.3**	**-1.9**
MRHZ	**Matea Rd**	**1.08**	**181**	P	**Pn**	**12 54 27.4**	**-0.5**
WATZ	**Wairara**	**1.11**	**210**	P	**Pn**	**12 54 28.1**	**0.0**
MTHZ	**Maungataniwha**	**1.15**	**165**	P	**Pn**	**12 54 27.7**	**-0.7**
MTHZ				S	**Sn**	**12 54 50.7**	**-1.5**
KUZ	**Kuaotunu**	**1.16**	**330**	P	**Pn**	**12 54 25.8**	**-2.7**
KUZ	**Kuaotunu**	**1.16**	**330**	P	**Pn**	**12 54 26.1**	**-2.4**
KUZ				S	**Sn**	**12 54 48.6**	**-3.5**
MKAZ	**Moumakai**	**1.21**	**302**	P	**Pn**	**12 54 27.3**	**-1.6**
MKAZ				S	**Sn**	**12 54 50.8**	**-2.0**
RATZ	**Rangitukua**	**1.24**	**205**	P	**Pn**	**12 54 29.1**	**-0.1**
SNGZ	**Shannon Statio**	**1.25**	**146**	P	**Pn**	**12 54 28.7**	**-0.5**
SNGZ				S	**Sn**	**12 54 51.8**	**-1.8**
RAHZ	**Arahi**	**1.27**	**157**	P	**Pn**	**12 54 29.2**	**-0.2**
TWGZ	**Tauwhareparae**	**1.28**	**110**	P	**Pn**	**12 54 28.4**	**-1.1**
TWGZ				S	**Sn**	**12 54 52.7**	**-1.3**
PKGZ	**Pakihiroa**	**1.30**	**96**	P	**Pn**	**12 54 28.1**	**-1.5**
TKGZ	**Te Karaka**	**1.30**	**122**	P	**Pn**	**12 54 28.5**	**-1.1**
TKGZ				S	**Sn**	**12 54 51.6**	**-2.6**
RITZ	**Rihia Road**	**1.31**	**201**	P	**Pn**	**12 54 30.0**	**+0.2**
KATZ	**Kakaramea**	**1.36**	**206**	P	**Pn**	**12 54 30.2**	**-0.1**
NMHZ	**Naumai**	**1.38**	**168**	P	**Pn**	**12 54 30.4**	**+0.1**
KBAZ	**Karaka Road Bo**	**1.40**	**297**	P	**Pn**	**12 54 29.2**	**-1.3**
RIGZ	**Rimuhau**	**1.41**	**133**	P	**Pn**	**12 54 30.1**	**-0.5**
RIGZ				S	**Sn**	**12 54 54.3**	**-1.6**
BKZ	**Black Stump Fm**	**1.42**	**179**		**Pn**	**12 54 29.9**	**-0.7**
BKZ				Sn	**Sn**	**12 54 54.2**	**-2.0**
BKZ	**Black Stump Fm**	**1.42**	**179**	P	**Pn**	**12 54 29.6**	**-1.0**
BKZ	**Black Stump Fm**	**1.42**	**179**	P	**Sn**	**12 54 53.7**	**-2.5**
BKZ	**Black Stump Fm**	**1.42**	**179**	P	**Pn**	**12 54 29.9**	**-0.7**
BKZ				S	**Sn**	**12 54 54.2**	**-2.0**
WIAZ	**Waiheke Island**	**1.42**	**312**	P	**Pn**	**12 54 28.8**	**-1.8**
ETAZ	**East Tamaki Re**	**1.45**	**303**	P	**Pn**	**12 54 29.3**	**-1.6**
GWTS	**Gisborne Waipa**	**1.45**	**128**	P	**Pn**	**12 54 30.8**	**0.0**
TUHS	**Taumarunui Hig**	**1.46**	**220**	P	**Pn**	**12 54 31.3**	**+0.4**
WHHZ	**Waihua**	**1.46**	**155**	P	**Pn**	**12 54 30.8**	**-0.2**
PUZ	**Puketiti**	**1.47**	**103**	P	**Pn**	**12 54 29.1**	**-1.9**
HIZ	**Hauiti**	**1.47**	**238**		**Pn**	**12 54 30.9**	**-0.1**
HIZ	**Hauiti**	**1.47**	**238**	P	**Pn**	**12 54 30.9**	**-0.1**
HIZ	**Hauiti**	**1.47**	**238**	P	**Pn**	**12 54 31.0**	**0.0**
HIZ				S	**Sn**	**12 54 57.3**	**+0.5**
NTVZ	**North Tongarir**	**1.48**	**204**	P	**Pn**	**12 54 31.2**	**0.0**
MXZ	**Matakaoa Point**	**1.48**	**83**		**Pn**	**12 54 29.5**	**-1.7**
MXZ				Sn	**Sn**	**12 54 52.9**	**-4.0**
MXZ	**Matakaoa Point**	**1.48**	**83**	P	**Pn**	**12 54 29.5**	**-1.7**
MXZ	**Matakaoa Point**	**1.48**	**83**	S	**Sn**	**12 54 54.1**	**-2.8**
MXZ	**Matakaoa Point**	**1.48**	**83**	P	**Pn**	**12 54 29.3**	**-1.9**
MXZ				S	**Sn**	**12 54 52.9**	**-4.0**
TMVZ	**Te Maari**	**1.49**	**203**	P	**Pn**	**12 54 31.2**	**-0.1**
KRVZ	**Karewarewa**	**1.49**	**205**	P	**Pn**	**12 54 31.2**	**-0.1**
WFSS	**Wairoa Fire St**	**1.50**	**150**	P	**Pn**	**12 54 31.3**	**+0.1**
WFSS				S	**Sn**	**12 54 56.8**	**-0.4**
ETVZ	**East Tongariro**	**1.50**	**203**	P	**Pn**	**12 54 31.4**	**-0.1**
GHHS	**Gisborne Hospi**	**1.52**	**126**	P	**Pn**	**12 54 31.1**	**-0.3**
GHHS				S	**Sn**	**12 54 56.0**	**-1.6**
WTVZ	**West Tongariro**	**1.52**	**206**	P	**Pn**	**12 54 31.6**	**-0.1**
NNVZ	**North Ngauruho**	**1.53**	**205**	P	**Pn**	**12 54 31.7**	**-0.1**
OTVZ	**Oturere**	**1.54**	**203**	P	**Pn**	**12 54 32.1**	**+0.2**
TWVZ	**Taurewa**	**1.54**	**211**	P	**Pn**	**12 54 31.8**	**0.0**
GKBS	**Kaiti Beach**	**1.56**	**127**	P	**Pn**	**12 54 31.5**	**-0.3**
WMGZ	**Waiomatatini S**	**1.56**	**93**	P	**Pn**	**12 54 30.2**	**-1.6**
WMGZ				S	**Sn**	**12 54 54.7**	**-3.4**
CNGZ	**Carnagh Statio**	**1.57**	**118**	P	**Pn**	**12 54 31.5**	**-0.4**
SNVZ	**South Ngauruho**	**1.57**	**204**	P	**Pn**	**12 54 32.2**	**+0.1**
ARHZ	**Aropaoanui**	**1.57**	**164**	P	**Pn**	**12 54 31.9**	**0.0**
NGZ	**Ngauruhoe**	**1.57**	**205**	P	**Pn**	**12 54 32.1**	**-0.1**
MBAZ	**Motutapu North**	**1.58**	**308**	P	**Pn**	**12 54 30.5**	**-1.6**
TBAS	**Tolaga Bay Are**	**1.59**	**114**	P	**Pn**	**12 54 31.8**	**-0.3**
AWAZ	**Awhitu Peninsu**	**1.59**	**295**	P	**Pn**	**12 54 30.6**	**-1.6**
KNZ	**Kokohu**	**1.59**	**143**	P	**Pn**	**12 54 31.6**	**-0.5**
COVZ	**Chateau Observ**	**1.62**	**206**	P	**Pn**	**12 54 32.2**	**-0.3**
EPAZ	**Eden Park BICE**	**1.62**	**302**	P	**Pn**	**12 54 30.7**	**-1.7**
PRGZ	**Paritu Road**	**1.63**	**137**	P	**Pn**	**12 54 31.9**	**-0.6**
HBAZ	**Herne Bay Bore**	**1.64**	**303**	P	**Pn**	**12 54 30.9**	**-1.7**
TUVZ	**Tukino**	**1.64**	**202**	P	**Pn**	**12 54 32.8**	**0.0**
FWVZ	**Far West T-bar**	**1.66**	**205**	P	**Pn**	**12 54 32.8**	**-0.3**
ECLS	**East Cape Ligh**	**1.66**	**89**	P	**Pn**	**12 54 32.3**	**-0.6**
MAVZ	**Matarangi**	**1.67**	**204**	P	**Pn**	**12 54 32.9**	**-0.3**
KAAZ	**Kauri Point**	**1.67**	**303**	P	**Pn**	**12 54 31.4**	**-1.5**
KWHZ	**Kaweka Forest**	**1.67**	**181**	P	**Pn**	**12 54 32.7**	**-0.2**
WHVZ	**Whangaehu Hut**	**1.68**	**204**	P	**Pn**	**12 54 33.0**	**-0.2**
GRZ	**Great Barrier**	**1.69**	**332**	P	**Pn**	**12 54 30.8**	**-2.4**
GRZ				S	**Sn**	**12 54 57.0**	**-3.5**
TRVZ	**Turoa**	**1.70**	**204**	P	**Pn**	**12 54 33.2**	**-0.2**
WTAZ	**Waiatarua**	**1.70**	**298**	P	**Pn**	**12 54 31.8**	**-1.5**
MCHZ	**McNeill Hill**	**1.71**	**174**	P	**Pn**	**12 54 33.4**	**+0.2**
WNVZ	**Wahianoa**	**1.71**	**203**	P	**Pn**	**12 54 33.3**	**-0.2**
ABAZ	**Army Bay**	**1.73**	**311**	P	**Pn**	**12 54 31.9**	**-1.5**
MOVZ	**Moawhango**	**1.74**	**198**	P	**Pn**	**12 54 33.0**	**-0.6**
PKVZ	**Pokaka**	**1.77**	**209**	P	**Pn**	**12 54 33.8**	**-0.1**
RVAZ	**Riverhead Bore**	**1.78**	**303**	P	**Pn**	**12 54 32.2**	**-1.8**
MTVZ	**Mangateitei**	**1.81**	**205**	P	**Pn**	**12 54 34.2**	**0.0**
MHGZ	**Mahia Peninsul**	**1.81**	**141**	P	**Pn**	**12 54 34.1**	**-0.1**
KRHZ	**Kereru**	**1.89**	**182**	P	**Pn**	**12 54 34.6**	**-0.5**
VRZ	**Vera Road**	**1.91**	**224**	P	**Pn**	**12 54 35.9**	**+0.7**
CKHZ	**Cape Kidnapper**	**1.97**	**166**	P	**Pn**	**12 54 35.8**	**0.0**
KAHZ	**Kahuranaki**	**2.07**	**171**	P	**Pn**	**12 54 36.9**	**0.0**
MHEZ	**Mangahewa**	**2.13**	**231**	P	**Pn**	**12 54 39.6**	**+2.0**
PNHZ	**Pukenui**	**2.17**	**185**	P	**Pn**	**12 54 37.2**	**-0.8**
DREZ	**Durham Road**	**2.28**	**230**	P	**Pn**	**12 54 40.1**	**+1.0**
PXZ	**Pawanui**	**2.30**	**172**	P	**Pn**	**12 54 38.9**	**-0.4**
WAZ	**Wanganui**	**2.31**	**209**	P	**Pn**	**12 54 39.3**	**-0.1**
WPHZ	**Waipukurau**	**2.31**	**180**	P	**Pn**	**12 54 38.9**	**-0.6**
TSZ	**Takapari Road**	**2.34**	**189**	P	**Pn**	**12 54 39.1**	**-0.7**
LREZ	**Lake Rotokare**	**2.34**	**223**	P	**Pn**	**12 54 40.7**	**+0.9**
PREZ	**Palmer Road**	**2.40**	**228**	P	**Pn**	**12 54 41.8**	**+1.3**
PKE	**Pukeiti**	**2.41**	**233**	P	**Pn**	**12 54 41.7**	**+1.0**
KHEZ	**Kahui Hut**	**2.46**	**230**	P	**Pn**	**12 54 41.7**	**+0.5**
KHEZ	**Kahui Hut**	**2.46**	**230**	P	**Pn**	**12 54 42.1**	**+1.0**
WCZ	**Waipu Caves**	**2.47**	**316**	P	**Pn**	**12 54 39.6**	**-1.7**
PRHZ	**Porangahau**	**2.52**	**177**	P	**Pn**	**12 54 41.1**	**-0.6**
NBEZ	**Newall Road No**	**2.53**	**232**	P	**Pn**	**12 54 42.9**	**+1.0**
DVHZ	**Dannevirke**	**2.56**	**185**	P	**Pn**	**12 54 41.2**	**-1.0**
OHWZ	**Ohakea**	**2.61**	**199**	P	**Pn**	**12 54 42.5**	**-0.2**
NMEZ	**Namu Road**	**2.61**	**230**	P	**Pn**	**12 54 43.7**	**+0.9**
POWZ	**Post Office Ro**	**2.69**	**191**	P	**Pn**	**12 54 42.9**	**-0.9**
ANWZ	**Angora Road**	**2.71**	**180**	P	**Pn**	**12 54 43.4**	**-0.5**
PRWZ	**Pori Road**	**2.83**	**187**	P	**Pn**	**12 54 44.6**	**-0.7**
BFZ	**Birch Farm**	**2.93**	**183**	P	**Pn**	**12 54 45.2**	**-1.3**
BFZ	**Birch Farm**	**2.93**	**183**	S	**Sn**	**12 55 21.8**	**-2.9**
BFZ	**Birch Farm**	**2.93**	**183**	P	**Pn**	**12 54 45.7**	**-0.9**
MRZ	**Mangatainoka R**	**2.99**	**193**		**Pn**	**12 54 45.7**	**-1.4**
MRZ	**Mangatainoka R**	**2.99**	**193**	P	**Pn**	**12 54 45.9**	**-1.3**
TIWZ	**Tintock**	**3.06**	**188**	P	**Pn**	**12 54 47.0**	**-1.1**
CPWZ	**Castlepoint**	**3.16**	**183**	P	**Pn**	**12 54 48.7**	**-0.5**
OGWZ	**Otaki Gorge**	**3.22**	**198**	P	**Pn**	**12 54 48.5**	**-1.4**
HOWZ	**Holdsworth Sta**	**3.23**	**193**	P	**Pn**	**12 54 48.5**	**-1.6**
KIW	**Kapiti Island**	**3.33**	**201**	P	**Pn**	**12 54 49.5**	**-1.8**
TMWZ	**Te Maipa**	**3.38**	**187**	P	**Pn**	**12 54 50.2**	**-1.7**
OUZ	**Omahuta**	**3.41**	**317**	P	**Pn**	**12 54 50.1**	**-2.3**
OUZ	**Omahuta**	**3.41**	**317**	P	**Pn**	**12 54 50.6**	**-1.8**
MTW	**Mount Morrison**	**3.48**	**192**	P	**Pn**	**12 54 51.2**	**-2.0**
CAW	**Cannon Point**	**3.52**	**197**	P	**Pn**	**12 54 51.8**	**-1.8**
DUWZ	**D’Urville Isla**	**3.63**	**212**	P	**Pn**	**12 54 53.0**	**-1.9**
TRWZ	**Traveller**	**3.69**	**189**	P	**Pn**	**12 54 53.9**	**-1.9**
PAWZ	**Paruwai Farm**	**3.71**	**192**	P	**Pn**	**12 54 53.9**	**-2.1**
WEL	**Wellington**	**3.76**	**200**	P	**Pn**	**12 54 55.0**	**-1.5**
MSWZ	**Moikau Station**	**3.78**	**194**		**Pn**	**12 54 54.5**	**-2.2**
MSWZ	**Moikau Station**	**3.78**	**194**	P	**Pn**	**12 54 54.5**	**-2.2**
SNZO	**South Karori**	**3.81**	**200**		**Pn**	**12 54 54.9**	**-2.2**
SNZO	**South Karori**	**3.81**	**200**	P	**Pn**	**12 54 54.5**	**-2.5**
SNZO	**South Karori**	**3.81**	**200**	S	**Sn**	**12 55 41.1**	**-2.5**
TCW	**Tory Channel**	**3.84**	**205**		**Pn**	**12 54 55.7**	**-1.9**
TCW	**Tory Channel**	**3.84**	**205**	P	**Pn**	**12 54 55.5**	**-2.0**
BHW	**Baring Head**	**3.85**	**198**		**Pn**	**12 54 55.3**	**-2.3**
BHW	**Baring Head**	**3.85**	**198**	P	**Pn**	**12 54 55.4**	**-2.3**
PLWZ	**Palliser**	**3.93**	**193**		**Pn**	**12 54 56.1**	**-2.6**
PLWZ	**Palliser**	**3.93**	**193**	P	**Pn**	**12 54 56.2**	**-2.4**
TUWZ	**Tuamarina**	**4.16**	**207**		**Pn**	**12 54 59.3**	**-2.1**
TUWZ	**Tuamarina**	**4.16**	**207**	P	**Pn**	**12 54 59.4**	**-2.1**
NNZ	**Nelson**	**4.20**	**213**		**Pn**	**12 55 00.0**	**-2.0**
NNZ	**Nelson**	**4.20**	**213**	P	**Pn**	**12 54 59.4**	**-2.6**
TKNZ	**Takaka Hill**	**4.25**	**218**		**Pn**	**12 55 00.3**	**-2.4**
TKNZ	**Takaka Hill**	**4.25**	**218**	P	**Pn**	**12 55 00.1**	**-2.6**
QRZ	**Quartz Range**	**4.32**	**223**	P	**Pn**	**12 55 00.9**	**-2.7**
QRZ	**Quartz Range**	**4.32**	**223**	S	**Sn**	**12 55 53.1**	**-2.2**
QRZ	**Quartz Range**	**4.32**	**223**	P	**Pn**	**12 55 01.0**	**-2.6**
CMWZ	**Cape Campbell**	**4.35**	**203**		**Pn**	**12 55 02.3**	**-1.6**
CMWZ	**Cape Campbell**	**4.35**	**203**	P	**Pn**	**12 55 02.4**	**-1.5**
BSWZ	**Blackbirch Sta**	**4.43**	**206**		**Pn**	**12 55 02.9**	**-2.0**
BSWZ	**Blackbirch Sta**	**4.43**	**206**	P	**Pn**	**12 55 02.8**	**-2.1**
MRNZ	**Matariki Terra**	**4.63**	**217**		**Pn**	**12 55 05.8**	**-1.7**
MRNZ	**Matariki Terra**	**4.63**	**217**	P	**Pn**	**12 55 04.8**	**-2.7**
THZ	**Tophouse**	**4.85**	**213**		**Pn**	**12 55 07.8**	**-2.5**
THZ	**Tophouse**	**4.85**	**213**	P	**Pn**	**12 55 07.6**	**-2.7**
KHZ	**Kahutara**	**5.17**	**205**		**Pn**	**12 55 12.0**	**-2.3**
KHZ	**Kahutara**	**5.17**	**205**	P	**Pn**	**12 55 11.9**	**-2.4**
KHZ	**Kahutara**	**5.17**	**205**	S	**Sn**	**12 56 12.1**	**-2.5**
KHZ	**Kahutara**	**5.17**	**205**	P	**Pn**	**12 55 11.8**	**-2.5**
DSZ	**Denniston Nort**	**5.36**	**220**	P	**Pn**	**12 55 14.1**	**-2.8**
GVZ	**Greta Valley S**	**5.83**	**206**	P	**Pn**	**12 55 20.0**	**-2.8**
LTZ	**Lake Taylor**	**5.96**	**211**	P	**Pn**	**12 55 21.3**	**-3.2**
AMCZ	**Amberley**	**6.15**	**207**	P	**Pn**	**12 55 23.7**	**-3.2**
INZ	**Inchbonnie**	**6.27**	**216**	P	**Pn**	**12 55 25.3**	**-3.3**
OKCZ	**Okains Bay**	**6.50**	**202**	P	**Pn**	**12 55 28.5**	**-3.1**
OXZ	**Oxford**	**6.51**	**210**	P	**Pn**	**12 55 27.7**	**-3.9**
MQZ	**McQueen’s Vall**	**6.61**	**205**	P	**Pn**	**12 55 28.7**	**-4.2**
AKCZ	**Akaroa Harbour**	**6.68**	**203**	P	**Pn**	**12 55 30.5**	**-3.4**
RACZ	**Rakaia**	**6.81**	**207**	P	**Pn**	**12 55 31.6**	**-3.9**
MHCZ	**Mount Hutt**	**6.87**	**211**	P	**Pn**	**12 55 33.2**	**-3.1**
WVZ	**Waitaha Valley**	**6.88**	**218**	P	**Pn**	**12 55 34.8**	**-1.6**
WACZ	**Wakanui South**	**7.11**	**208**	P	**Pn**	**12 55 35.8**	**-3.5**
RPZ	**Rata Peaks**	**7.23**	**213**	P	**Pn**	**12 55 38.1**	**-2.9**

	13nm,0.3s,baz=294,slow=1.8,SNR=21						
RPZ				S	Sn	12 56 55.9	-7.0
	151nm,0.4s,baz=132,slow=23,SNR=20						
RPZ	Rata Peaks	7.23	213	P	Pn	12 55 39.0	-2.1
RPZ	Rata Peaks	7.23	213	P	Pn	12 55 38.2	-2.8
ARCZ	Arundel	7.37	211	P	Pn	12 55 39.8	-3.0
FOZ	Fox Glacier	7.67	219	P	Pn	12 55 44.0	-2.7
TMZ	Timaru	7.80	210	P	Pn	12 55 44.6	-3.8
CTZ	Chatham Island	7.96	141	P	Pn	12 55 50.2	-0.4
LBZ	Lake Benmore	8.14	214	P	Pn	12 55 49.8	-3.2
ODZ	Otahua Downs	8.49	209	P	Pn	12 55 54.8	-2.7
ODZ	Otahua Downs	8.49	209	P	Pn	12 55 54.4	-3.1
JCZ	Jackson Bay	8.58	220	P	Pn	12 55 56.7	-2.0
JCZ	Jackson Bay	8.58	220	P	Pn	12 55 56.0	-2.7
HHSZ	Highcliff Hill	9.23	206	P	Pn	12 56 04.8	-2.3
TUZ	Tuapeka	9.64	210	P	Pn	12 56 11.1	-1.4
MLZ	Mavora Lakes	9.84	217	P	Pn	12 56 13.2	-1.9
WHZ	Wether Hill Ro	10.31	215	P	Pn	12 56 18.6	-2.5
SYZ	Scrubby Hill	10.32	209	P	Pn	12 56 20.1	-1.1
SYZ	Scrubby Hill	10.32	209	P	Pn	12 56 20.1	-1.1
DZM	Mont Dzumac	17.85	328	P	P	12 57 52.4	-0.1
	4.1nm,0.5s,baz=141,slow=14,SNR=13						
DZM	Mont Dzumac	17.85	328		P	12 57 51.9	-0.6
DZM				IAmb	IAmb	12 57 58.5	
	comp=Z,6.1nm,0.9s						
DZM	Mont Dzumac	17.85	328	P	P	12 57 53.1	+0.6
MSVF	Nonsavu	19.99	4	P	P	12 58 15.9	+0.3
CMSA	Cobar Meteorol	25.98	275	P	P	12 59 14.4	+1.9
STKA	Stephens Creek	29.10	271	P	P	12 59 42.1	+1.9
	comp=Z,6.0nm,0.7s,baz=100,slow=10,SNR=13						
	comp=Z,6.0nm,0.7s						
HTT	Hallett	30.68	267	P	P	12 59 55.5	+1.3
INKA	Innaminka	31.48	278		P	13 00 01.4	+0.2
INKA				IAmb	IAmb	13 00 03.7	
	comp=Z,2.6nm,0.6s						
CTAO	Charters Tower	31.56	295	P	P	13 00 03.0	+1.0
CTAO				IAmb	IAmb	13 00 03.4	
	comp=Z,4.1nm,0.8s						
CTAO	Charters Tower	31.56	295	P	P	13 00 02.7	+0.7
TATA	Tatamba Isabel	32.88	329	P	P	13 00 15.2	+1.7
BBOO	Buckleboo	33.16	266	P	P	13 00 16.7	+0.9
BBOO				IAmb	IAmb	13 00 16.9	
	comp=Z,4.3nm,0.6s						
BBOO	Buckleboo	33.16	266	P	P	13 00 16.8	+1.0
MTSU	Mount Surprise	34.22	296	P	P	13 00 25.9	+0.9
QIS	Mount Isa	36.17	288	P	P	13 00 43.2	+1.5
COEN	Coen	37.86	300	P	P	13 00 56.4	+0.4
COEN				IAmb	IAmb	13 00 57.7	
	comp=Z,11nm,1.1s						
AS31	Alice Springs	38.85	279		P	13 01 04.5	+0.4
ASAR	Alice Springs	38.85	279	P	P	13 01 04.2	+0.1
	comp=Z,4.6nm,0.5s,baz=130,slow=9.0,SNR=27						
ASAR				ScP	ScP	13 06 36.8	-3.7
	comp=Z,0.3nm,0.6s,baz=113,slow=3.7,SNR=6.3						
ASAR				S	S	13 06 47.9	+0.5
	comp=Z,0.5nm,0.8s,baz=127,slow=14,SNR=5.9						
	comp=Z,4.6nm,0.5s						
RABL	Rabaul	40.10	320	P	P	13 01 14.7	+0.2
FORT	Forrest	40.23	265	P	P	13 01 15.8	+0.4
FORT				IAmb	IAmb	13 01 27.6	
	comp=Z,4.6nm,0.8s						
VNDA	Vanda	40.37	185	P	P	13 01 20.3	+4.3
	comp=Z,1.1nm,0.7s,baz=14,slow=6.9,SNR=8.3						
	comp=Z,1.1nm,0.7s						
VNDA	Vanda	40.37	185	P	P	13 01 17.5	+1.5
WR8	Warramunga Arr	40.41	284		P	13 01 17.3	+0.2
WR8				IAmb	IAmb	13 01 17.7	
	comp=Z,8.4nm,0.9s						
WRAB	Tennant Creek	40.54	284	P	P	13 01 18.4	+0.3
WRAB	Tennant Creek	40.54	284	P	P	13 01 17.9	-0.2
WRA	Warramunga Arr	40.54	284	P	P	13 01 17.9	-0.2
	comp=Z,5.3nm,0.4s,baz=122,slow=8.6,SNR=131						
	comp=Z,5.3nm,0.4s						
WRA	Warramunga Arr	40.54	284	P	P	13 01 17.2	-0.9
WB0	Warramunga Arr	40.60	284		P	13 01 18.6	0.0
MTN	Manton Dam	47.29	289	P	P	13 02 11.4	-0.3
MTN				IAmb	IAmb	13 02 12.0	
	comp=Z,6.6nm,0.7s						
KNRA	Kununurra	47.33	284		P	13 02 12.3	+0.2
KNRA				IAmb	IAmb	13 02 14.7	
	comp=Z,8.6nm,1.1s						
FITZ	Fitzroy Crossi	48.34	279		P	13 02 20.2	+0.4
MEEK	Meekatharra	49.49	265	P	P	13 02 28.0	-0.6
PSA00	Pilbara Seismi	51.03	272	P	P	13 02 38.2	-1.9
PSA00				IAmb	IAmb	13 02 42.4	
	comp=Z,4.2nm,1.1s						
PSA00	Pilbara Seismi	51.03	272	P	P	13 02 39.5	-0.6
PSA00				IAmb	IAmb	13 02 52.8	
	comp=Z,7.3nm,0.9s						
MBWA	Marble Bar	51.33	272	P	P	13 02 41.4	-1.0
MBWA				IAmb	IAmb	13 02 42.1	
	comp=Z,6.8nm,0.6s						
MBWA	Marble Bar	51.33	272	P	P	13 02 41.7	-0.7
QSPA	South Pole Qui	52.38	180	P	P	13 02 56.5	+6.9
	comp=Z,8.5nm,0.8s,baz=359,slow=0.8,SNR=21						
GIRL	Giralia	54.92	267	P	P	13 03 08.7	+0.2
PLAI	Plampang	59.98	283	P	P	13 03 44.0	+0.1
BELA	Belgrano 2	63.11	173	P	P	13 04 05.0	+1.1
BELA				IAmb	IAmb	13 04 06.4	
	comp=Z,4.5nm,0.8s						
KKM	Kota Kinabalu	70.88	294	P	P	13 04 53.7	-0.1
SNAA	Sanae	70.88	180	P	P	13 04 54.2	+1.2
	comp=Z,2.5nm,0.8s,baz=203,slow=9.6,SNR=7.6						
	comp=Z,2.5nm,0.8s						
SNAA	Sanae	70.88	180	P	P	13 04 54.3	+1.2
PLCA	Paso Flores	80.74	135	P	P	13 05 51.0	+1.6
	comp=Z,1.6nm,0.7s,baz=208,slow=7.3,SNR=6.9						
	comp=Z,1.6nm,0.7s						
CMAR	Chiang Mai Arr	91.67	292	P	P	13 06 43.0	-0.1
	comp=Z,0.7nm,0.6s,baz=149,slow=3.2,SNR=5.5						
	comp=Z,0.7nm,0.6s						
PZH	PanZhiHua	94.78	300	P	P	13 06 59.3	+2.0
XLT	XiLinHaoTe	97.93	321	*e*P	Pdif	13 07 16.1	+5.0
XLT				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC	Hu-ho-hao-te	98.16	316	*e*P	Pdif	13 07 14.1	+1.8
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,210nm,5.6s						
KURBB	Kurchatov Arra	122.65	311	PKP	PKPdf	13 12 27.5	-2.0
	comp=Z,0.5nm,0.3s,baz=122,slow=1.8,SNR=4.3						
BVAR	Borovoye Array	128.19	312	PKP	PKPdf	13 12 39.2	-0.8
	comp=Z,0.7nm,0.6s,baz=93,slow=3.0,SNR=4.4						
ARCES	ARCESS Array B	144.53	343	PKP	PKPab	13 13 07.5	-1.2
	comp=Z,1.6nm,0.4s,baz=61,slow=2.3,SNR=20						
ARCES	ARCESS Array B	144.53	343	PKPdf	PKPab	13 13 07.7	-1.0
DBIC	Dimbokro	149.04	177	PKPbc	PKPbc	13 13 22.8	-0.4
	comp=Z,1.2nm,0.4s,baz=188,slow=2.6,SNR=4.5						
DBIC	Dimbokro	149.04	177		PKPbc	13 13 23.5	+0.3
FINES	FINESS Array B	149.97	332	PKPbc	PKPbc	13 13 22.2	-1.8
	comp=Z,3.1nm,0.9s,baz=56,slow=3.4,SNR=13						
FINES	FINESS Array B	149.97	332		PKPbc	13 13 22.5	-1.5

GCG 04 12:59:39.9±0.8, 13°38N×90°35W, h41^{km}±70^{km}, MD3.5, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUBE	Las Nubes	0.76	47	*e*P	Pn	12 59 54.5	+0.2
NUBE				*e*S	Sn	13 00 06.0	+1.4
PCG5	San Vicente Pa	0.83	358	*e*P	Pn	12 59 58.1	+2.8
FG16	Alotenango, Sa	0.90	350	*e*P	Pn	13 00 00.7	+4.4
JAYA	Jayaque - finc	0.91	73	*e*P	Pn	12 59 56.0	-0.4
JAYA				*e*S	Sn	13 00 08.4	-0.2
MTO3	Montecristo	1.39	43	*i* P	Pn	13 00 04.0	+0.9
STG8	El Palmar, Qui	1.44	318	*e*P	Pn	13 00 09.5	+5.7
STG8				*e*S	Sn	13 00 32.1	+10
APG	El Apazote	1.62	356	*e*P	Pn	13 00 08.7	+2.5

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*IDC **04** 13:03:04.0±0.8, 6°85N×73°05W, h157^{km}±10^{km}, mb2.7/2, mbtmp3.4/4, Error ellipse: s-maj=34.3km s-min=7.7km az=131.0*

*RSNC **04** 13:03:04.3±0.0, 7°N±1°×7°3W±°, h148^{km}±2^{km}, M3.3, mb3.9, mB4.9, ML3.1, Mw(mB)4.2*

ISC 04 13:03:03.2±0.9, 6°84N±0°03×73°09W±0°04, h152^{km}±6^{km}, n38, σ1§21/65, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.26	202	P	Pn	13 03 24.5	+0.3
BARC				S	Sn	13 03 39.0	-1.1
PAMC	Pamplona, Colo	0.63	37	P	Pn	13 03 27.3	+1.2
PAMC				S	Sn	13 03 44.3	+0.8
BRJC	Barrancabermej	0.67	282	P	Pn	13 03 26.3	+0.6
BRJC				S	Sn	13 03 42.7	-0.1
RUSC	La Rusia	0.94	180	P	Pn	13 03 28.5	+0.2
RUSC				S	Sn	13 03 46.3	-1.0
PTBC	PUERTO BERRIO,	1.39	258	P	Pn	13 03 31.4	-0.4
PTBC				S	Sn	13 03 51.7	-2.0
OCAC	Ocana	1.41	351	P	Pn	13 03 32.9	+0.7
OCAC				S	Sn	13 03 54.6	+0.1
SPBC	San Pablo de B	1.53	220	P	Pn	13 03 33.4	0.0
SPBC				S	Sn	13 03 55.1	-1.4
NORC	Norcasia	2.18	235	P	Pn	13 03 40.4	-0.2
NORC				S	Sn	13 04 08.3	-1.1
CHIC	Chingaza	2.28	196	P	Pn	13 03 42.3	0.0
CHIC				S	Sn	13 04 12.4	+0.1
ROSC	El Rosal	2.33	212	P	Pn	13 03 44.8	+2.0
	134nm,0.3s,baz=313,slow=6.5,SNR=90						
ROSC				S	Sn	13 04 15.4	+2.2
	130nm,0.4s,baz=357,slow=22,SNR=11						
ROSC	El Rosal	2.33	212	P	Pn	13 03 44.2	+1.4
ROSC				S	Sn	13 04 16.1	+2.8
CVER	Cruz Verde, Cu	2.50	203	P	Pn	13 03 45.7	+0.8
CVER				S	Sn	13 04 20.2	+3.2
HELC	Santa Helena	2.51	255	P	Pn	13 03 46.1	+1.2
HELC				S	Sn	13 04 16.5	-0.5
UREC	San Jos de Ur	2.59	291	P	Pn	13 03 44.8	-0.8
UREC				S	Sn	13 04 17.1	-1.2
VILC	Villavicencio,	2.77	193	P	Pn	13 03 47.5	-0.5
VILC				S	Sn	13 04 24.5	+1.9
GUY2C	Guyana, Caldas	2.77	235	P	Pn	13 03 49.2	+0.9
GUY2C				S	Sn	13 04 23.9	+0.8
PTGC	Puerto Gaitan,	2.79	160	P	Pn	13 03 47.6	-0.4
PTGC				S	Sn	13 04 20.8	-1.8
NIZA	Niza - Manizal	2.96	233	P	Pn	13 03 51.9	+1.5
NIZA				S	Sn	13 04 28.1	+1.2
CBOC	Ciudad Bolivar	3.06	252	P	Pn	13 03 52.5	+0.8
CBOC				S	Sn	13 04 28.9	-0.2
DBBC	Dabeiba	3.11	274	P	Pn	13 03 52.6	+0.5
DBBC				S	Sn	13 04 28.1	-1.8
SDV	Santo Domingo	3.17	50	P	Pn	13 03 54.7	+1.7
	13nm,0.3s,baz=201,slow=2.2,SNR=15						
SDV				S	Sn	13 04 32.0	+0.4
	52nm,0.4s,baz=9.5,slow=13,SNR=50						
SDV	Santo Domingo	3.17	50	P	Pn	13 03 53.9	+0.8
SDV				S	Sn	13 04 30.6	-1.0
ARGC	Ariguani, Magd	3.21	339	P	Pn	13 03 55.4	+2.0
ARGC				S	Sn	13 04 33.6	+1.2
PRAC	Prado	3.58	210	P	Pn	13 03 57.8	-0.4
PRAC				S	Sn	13 04 40.9	+0.1
ORTC	Ortega, Tolima	3.62	217	P	Pn	13 03 58.7	+0.1
ORTC				S	Sn	13 04 42.7	+1.1
PLMC	San Jos del P	3.71	239	P	Pn	13 04 00.2	+0.3
PLMC				S	Sn	13 04 44.2	+0.3
URMC	La Uribe, Meta	3.79	200	P	Pn	13 04 01.1	+0.2
URMC				S	Sn	13 04 46.9	+1.2
YOTC	Yotoco, Valle	4.31	229	P	Pn	13 04 07.1	-0.6
URIC	Uribia, Colomb	4.96	13	P	Pn	13 04 15.1	-1.0
GARC	Garzon, Huila	5.20	208	P	Pn	13 04 18.5	-1.2
POPC	Popayan, Colom	5.57	220	P	Pn	13 04 24.5	0.0
	9.2nm,0.8s						
FLOC	Florencia	5.81	206	P	Pn	13 04 26.5	-1.0
	9.2nm,1.0s						
BBAC	Balboa, Cauca	6.33	221	P	Pn	13 04 35.2	+0.6
CRUC	La Cruz	6.50	217	P	Pn	13 04 39.4	+2.4
TXAR	Lajitas Array	36.48	312	P	P	13 09 53.8	-0.2
	0.2nm,0.6s,baz=119,slow=6.8,SNR=1.9						
	0.2nm,0.6s						
PDAR	Pinedale Array	48.09	324	P	P	13 11 28.3	+0.5
	0.2nm,0.5s,baz=134,slow=7.9,SNR=2.5						
	0.2nm,0.5s						
ASAR	Alice Springs	149.15	234	PKPbc	PKiKP	13 22 34.1	-1.7
	0.3nm,0.5s,baz=116,slow=3.3,SNR=12						
WRA	Warramunga Arr	150.37	241	PKPbc	PKiKP	13 22 37.5	-0.9
	0.3nm,0.4s,baz=108,slow=2.9,SNR=12						

DJA 04 13:05:34.2±0.8, 2°S±4°×12°3E±°, h12^{km}±7^{km}, M3.6/13, mb3.8/1, MLv3.5/13, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	0.77	3	P	Pb	13 05 49.8	+0.2
LUWI				S	Sb	13 06 00.7	+0.6
APSI	Ampana	1.41	310	P	Pn	13 05 58.2	-1.5
GTOI	Gorontalo	2.46	7	P	Pn	13 06 16.1	+2.0
PCI	Palu	3.03	287	P	Pb	13 06 29.3	+1.1
TTSI	Tana Toraja	3.15	247	P	Pn	13 06 23.8	+0.1
SANI	Sanana	3.26	94	P	Pn	13 06 25.6	+0.4
MPSI	Mapaga	3.55	307	P	Pn	13 06 29.5	+0.3
SPSI	Sidrap Palu	3.64	234	P	Pn	13 06 31.2	+0.7
BNSI	Bone	3.67	226	P	Pn	13 06 30.7	-0.1
MMSI	Mamuju	3.91	257	P	Pn	13 06 33.0	-1.2
BKSI	Bulukumba	4.34	217	P	Pn	13 06 40.6	+0.5
KAPI	Kappang	4.35	223	P	Pn	13 06 40.2	0.0
AAI	Ambon	5.76	109	P	Pn	13 06 58.0	-1.6

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*IDC **04** 13:13:36.2±1.2, 34°93N×23°86E, h0^{km}, mb4.0/7, mbtmp3.9/8, ML2.7/1, MS2.7/3, Error ellipse: s-maj=63.7km s-min=21.7km az=140.0*

*THE **04** 13:13:40.5, 35°N±8°×2°4E±°, h16^{km}±4^{km}, M3.2/9, MLh3.2/9*

*ISK **04** 13:13:41.8, 34°87N×24°16E, h15^{km}, ML3.2/15*

*ATH **04** 13:13:42.6, 34°88N×24°11E, h14^{km}, ML3.2/10, Manual Solution by N.Liadopoulou First location: 2019/12/04 13:14:54, This location: 2019/12/04 13:39:16 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 04 13:13:40.8±0.9, 34°77N±0°06×24°04E±0°03, h25^{km}±5^{km}, n93, σ1§61/102, mb3.9/6, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.08	31	P	Pb	13 13 45.4	0.0
GVD				S	Sb	13 13 49.1	+0.6
GVD	Gavdhos	0.08	31	Pg	Pb	13 13 44.9	-0.5
GVD	Gavdhos	0.08	31	P	Pb	13 13 45.3	-0.1
GVD				S	Sb	13 13 47.5	-1.0
KNDR	Palaiochora Ch	0.58	324	P	Pb	13 13 52.3	0.0
KNDR				S	Sn	13 14 02.5	+0.5
KNDR	Palaiochora Ch	0.58	324	Pg	Pn	13 13 53.1	-0.2
KNDR				Sg	Sn	13 14 02.3	+0.3
KNDR	Palaiochora Ch	0.58	324	P	Pb	13 13 52.9	+0.6
KNDR				S	Sb	13 14 00.6	+0.5
VAM	Vamos	0.65	12	P	Pb	13 13 53.2	-0.3
VAM				S	Sn	13 14 06.8	+2.8
VAM	Vamos	0.65	12	P	Pb	13 13 53.4	-0.2
VAM				S	Sb	13 14 00.6	-1.7
IMMV	Iera Moni Meta	0.69	356	Pg	Pb	13 13 54.1	-0.2
IMMV	Iera Moni Meta	0.69	356	P	Pb	13 13 54.2	0.0
IMMV				S	Sb	13 14 02.5	-0.9
CHNB	Souda	0.72	2	P	Pb	13 13 54.5	-0.2
CHAN	Chania	0.75	0	P	Pb	13 13 55.4	+0.2
CHAN				S	Sn	13 14 09.3	+3.0
CHAN	Chania	0.75	0	P	Pb	13 13 55.2	0.0
IDI	Anoyia	0.87	53	P	Pb	13 13 57.2	-0.1
IDI				S	Sn	13 14 12.3	+2.8
IDI	Anoyia	0.87	53	Pg	Pb	13 13 56.7	-0.6
IDI	Anoyia	0.87	53	P	Pb	13 13 57.0	-0.4
IACM	Heraklion	1.01	57	P	Pb	13 13 59.9	+0.4
ANKY	Antikythira Is	1.25	332	P	Pb	13 14 05.0	+1.3
ANKY				S	Sb	13 14 20.7	+1.3
ANKY	Antikythira Is	1.25	332	P	Pb	13 14 05.1	+1.4
NPS	Neapolis	1.39	69	S	Sb	13 14 26.5	+3.2
NPS	Neapolis	1.39	69	P	Pb	13 14 07.1	+1.1
KTHA	Kythira Island	1.69	332	P	Pb	13 14 12.1	+1.0
KTHA	Kythira Island	1.69	332	Pn	Pb	13 14 11.5	+0.4
KTHA	Kythira Island	1.69	332	P	Pb	13 14 11.1	0.0
ZKR	Zakros	1.83	78	Pn	Pb	13 14 12.0	-1.5
ZKR	Zakros	1.83	78	P	Pb	13 14 12.7	-0.8
MHLO	Agia Marina, M	1.94	9	P	Pb	13 14 14.0	-1.5
SNT5	Nea Kammeni, S	1.97	34	P	Pn	13 14 14.1	+1.5
SAP3	Santorini-Thir	1.98	32	P	Pn	13 14 14.2	+1.6
THR3	Thira Island,	1.98	34	P	Pb	13 14 14.4	-1.7
THERA	Ancient Thera,	1.98	36	P	Pb	13 14 14.3	-1.9
THERA	Ancient Thera,	1.98	36	P	Pb	13 14 14.4	-1.8
THR8	Santorini-Mono	2.02	35	P	Pn	13 14 14.6	+1.4
VLI	Veliai	2.14	336	P	Pb	13 14 19.0	+0.1
VLI	Veliai	2.14	336	P	Pb	13 14 17.6	-1.3
APE	Apeiranthos	2.60	27	P	Pn	13 14 22.2	+1.0
APE	Apeiranthos	2.60	27	Pn	Pn	13 14 22.2	+1.0
APE	Apeiranthos	2.60	27	P	Pn	13 14 22.0	+0.8
KARP	Karpathos	2.68	72	P	Pn	13 14 24.6	+2.3
KARP	Karpathos	2.68	72	Pn	Pn	13 14 24.2	+1.9
KARP	Karpathos	2.68	72	P	Pn	13 14 24.4	+2.2
PYL	PYLOS	2.83	319	P	Pn	13 14 25.9	+1.7
MET4	Agioi Theodoro	2.90	350	P	Pn	13 14 26.9	+1.7
MET2	Kameni Chora,	2.90	349	P	Pn	13 14 27.2	+1.9
MET5	Makryloggos,Me	2.90	349	P	Pn	13 14 27.0	+1.7
ITM	Ithomi	2.95	325	P	Pn	13 14 29.0	+2.9
VLY	Voula,Athens	3.09	356	P	Pn	13 14 29.4	+1.5
VLY	Voula,Athens	3.09	356	P	Pn	13 14 29.3	+1.5
NISR	Nisiros	3.12	53	P	Pn	13 14 29.8	+1.5
ATHU	Athens Univers	3.20	356	P	Pn	13 14 29.5	0.0
PTL	Penteli	3.28	358	P	Pn	13 14 31.6	+1.1
DION	Dionisos Attik	3.31	359	P	Pn	13 14 32.2	+1.3
DION	Dionisos Attik	3.31	359	P	Pn	13 14 32.2	+1.3
LTK	Loutraki	3.36	345	P	Pn	13 14 33.4	+1.7
VILL	Villia	3.44	350	P	Pn	13 14 34.1	+1.4
GUR	Goura	3.45	337	P	Pn	13 14 35.6	+2.7
GUR	Goura	3.45	337	P	Pn	13 14 35.7	+2.7
DAT	Datca	3.48	55	Pn	Pn	13 14 35.3	+1.9
VIL2	Platees	3.49	350	P	Pn	13 14 34.0	+0.5
KLV	Kalavryta, Ach	3.61	336	P	Pn	13 14 37.2	+2.1
KLV	Kalavryta, Ach	3.61	336	P	Pn	13 14 37.4	+2.3
ARG	Arkhangelos	3.64	65	P	Pn	13 14 37.4	+2.0
ARG	Arkhangelos	3.64	65	Pn	Pn	13 14 37.4	+2.0
ARG	Arkhangelos	3.64	65	P	Pn	13 14 37.2	+1.7
DRO	Drossia	3.69	330	P	Pn	13 14 39.0	+2.8
SMG	Samos	3.71	37	P	Pn	13 14 37.8	+1.3
KALE	Kalithea	3.93	338	P	Pn	13 14 41.4	+1.9
LKR	Lokris	3.96	348	P	Pn	13 14 41.1	+1.1
LKR	Lokris	3.96	348	P	Pn	13 14 41.0	+1.1
AXAR	Agios Charalam	4.14	345	P	Pn	13 14 44.5	+2.1
AXAR	Agios Charalam	4.14	345	P	Pn	13 14 44.7	+2.3
YER	Yerkesik	4.18	54	Pn	Pn	13 14 45.1	+2.2
ANX	Ano Chora	4.18	337	P	Pn	13 14 45.0	+2.0
ANX	Ano Chora	4.18	337	P	Pn	13 14 45.4	+2.4
DALY	Dalyan (Mula)	4.28	60	Pn	Pn	13 14 46.5	+2.3
PVO	Paravola	4.34	333	P	Pn	13 14 48.1	+3.0
VLS	Valsamata	4.39	322	P	Pn	13 14 47.8	+1.9
AGG	Agios Georgios	4.46	343	P	Pn	13 14 48.1	+1.3
MAKR	Makrakomi, Fth	4.50	341	P	Pn	13 14 49.6	+2.2
CAME	Cameli-Denizli	4.80	62	Pn	Pn	13 14 53.5	+2.0
APMY	Acipayam-Deniz	5.05	56	Pn	Pn	13 14 56.8	+1.9
TETR	Tetrakomo, Epi	5.07	335	P	Pn	13 14 57.2	+1.9
ELL	Elmali	5.17	66	Pn	Pn	13 14 58.3	+1.7
BRTR	Keskin Array B	9.12	54	Pn	Pn	13 15 52.2	+1.4
	0.1nm,0.3s,baz=233,slow=14,SNR=2.9						
BRTR				LR	LR	13 20 28.4	
	comp=Z,18nm,20.4s,baz=261,slow=45						
	0.9nm,0.8s						
GNI	Garni	17.28	66	LR	LR	13 25 50.8	
	comp=Z,36nm,19.7s,baz=276,slow=42						
MDT	Midelt	23.85	273	LR	LR	13 28 48.5	
	comp=Z,36nm,18.0s,baz=40,slow=38						
AKTO	Aktyubinsk	29.19	47	P	P	13 19 39.1	-0.9
	0.6nm,0.3s,baz=244,slow=2.7,SNR=3.9						
	0.6nm,0.3s						
TORD	Torodi Ar. Bea	29.53	229	P	P	13 19 42.5	-0.8
	1.3nm,0.5s,baz=36,slow=11,SNR=10						
	1.3nm,0.5s						
ARCES	ARCESS Array B	34.83	1	P	P	13 20 27.0	-2.2
	2.8nm,1.0s,baz=183,slow=8.5,SNR=1.6						
	2.8nm,1.0s						
KURBB	Kurchatov Arra	42.09	51	P	P	13 21 29.9	-0.5
	0.7nm,0.3s,baz=275,slow=8.7,SNR=9.6						
	0.7nm,0.3s						
MKAR	Makanchi Array	44.76	56	P	P	13 21 51.0	-1.1
	0.4nm,0.4s,baz=276,slow=7.6,SNR=6.5						
	0.4nm,0.4s						
ZALV	Zalesovo Beam	45.94	46	P	P	13 21 59.8	-1.5
	1.2nm,0.4s,baz=269,slow=9.5,SNR=7.6						
	1.2nm,0.4s						
SONM	Songino Array	60.45	50	P	P	13 23 48.3	0.0
	0.5nm,0.5s,baz=285,slow=8.7,SNR=2.7						
	0.5nm,0.5s						

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*TAP **04** 13:36:27.2, 24°66N×122°43E, h96^{km}, ML3.2, C*

*JMA **04** 13:36:27.5±0.3, 25°N±2°×122°4E±0°6, h94^{km}±2^{km}, MV2.1/11, NW OFF ISHIGAKIJIMA IS*

ISC 04 13:36:27.5±1.4, 24°65N±0°04×122°44E±0°03, h94^{km}±7^{km}, n102, σ1§03/179, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS2	EOS2	0.30	220	*e*P	Pn	13 36 41.8	+0.6
EOS2				*e*S	Sn	13 36 53.4	+2.1
EOS3	EOS3	0.38	198	*e*P	Pn	13 36 42.5	+0.9
EOS3				*e*S	Sn	13 36 53.8	+1.7
JYNG	Yonagunijimaku	0.50	113	P	Pn	13 36 42.9	+0.3
JYNG				*e*S	Sn	13 36 54.1	+0.3
EOS4	EOS4	0.54	192	*e*P	Pn	13 36 42.7	+0.2
TWC	Suao	0.54	266	*i* P	Pn	13 36 42.7	-0.3
TWC				S	Sn	13 36 53.2	-1.2
TWB1	Santiao Chiao	0.55	311	*i* P	Pn	13 36 43.0	0.0
ESAO	Su ao	0.55	263	*e*P	Pn	13 36 43.0	0.0
ESAO				*e*S	Sn	13 36 53.7	-0.9
YOJ	Yonaguni jima	0.55	109	P	Pn	13 36 43.1	+0.1
YOJ				*e*S	Sn	13 36 53.9	-0.7
YOJ	Yonaguni jima	0.55	109	P	Pn	13 36 43.2	+0.1
YOJ				*e*S	Sn	13 36 54.8	+0.3
EWUT	Wuta	0.64	252	P	Pn	13 36 43.8	+0.1
EWUT				*e*S	Sn	13 36 55.6	-0.3
TIPB	Shuangxi	0.65	300	*i* P	Pn	13 36 43.9	0.0
TIPB				S	Sn	13 36 55.4	-0.7
NDS	Dongshan	0.66	269	*i* P	Pn	13 36 44.2	+0.3
NDS				*e*S	Sn	13 36 56.0	-0.3
ENA	Nanau	0.68	251	P	Pn	13 36 44.3	+0.2
ENA				S	Sn	13 36 56.8	+0.3
SXI1	Grass Mountain	0.68	311	*i* P	Pn	13 36 44.3	+0.1
SXI1				S	Sn	13 36 56.8	0.0
TWE	Neicheng	0.71	276	*i* P	Pn	13 36 44.5	+0.2
TWE				*e*S	Sn	13 36 56.4	-0.6
EAHA	Aohua	0.71	244	P	Pn	13 36 44.5	+0.1
EAHA				S	Sn	13 36 57.6	+0.4
WFSB	Wu-fen Shan	0.73	305	P	Pn	13 36 45.0	+0.3
WFSB				*e*S	Sn	13 36 56.7	-0.8
FUSB	Fushanzhiwuyua	0.79	278	*i* P	Pn	13 36 45.3	0.0
FUSB				S	Sn	13 36 58.0	-0.6
ENTT	Nioudou	0.80	270	P	Pn	13 36 45.8	+0.5
ENTT				S	Sn	13 36 59.2	+0.5
LATG	Datong	0.84	263	P	Pn	13 36 46.2	+0.4
LATG				*i* S	Sn	13 37 00.4	+0.8
TWA	Mucha	0.85	293	P	Pn	13 36 45.7	-0.1
TWA				*e*S	Sn	13 36 58.9	-0.7
NWLT	Wulai	0.86	279	P	Pn	13 36 45.9	-0.1
NWLT				*e*S	Sn	13 36 59.1	-0.9
ETL	Fush Village	0.89	237	P	Pn	13 36 46.0	-0.3
ETL				*e*S	Sn	13 36 60.0	-0.4
NHDH	Xindian Distri	0.89	291	P	Pn	13 36 46.2	0.0
NACB	Ninganchiao	0.91	239	P	Pn	13 36 46.0	-0.4
NACB				*e*S	Sn	13 36 58.2	-2.4
YM01	YM01	0.94	302	*i* P	Pn	13 36 46.8	0.0
YM01				S	Sn	13 37 00.6	-0.7
YM08	YM08	0.94	305	P	Pn	13 36 46.6	-0.2
YM08				S	Sn	13 37 00.0	-1.4
TWD	Chiawan	0.96	234	P	Pn	13 36 46.6	-0.3
TWD				S	Sn	13 37 00.8	-0.7
ZUZH	Zhuzihu	0.96	302	P	Pn	13 36 47.0	-0.1
ZUZH				S	Sn	13 37 00.8	-1.0
YHNB	Yeheng	0.97	272	*i* P	Pn	13 36 47.6	+0.4
YHNB				*i* S	Sn	13 37 02.0	0.0
ETLH	Xiulin Townshi	0.98	244	P	Pn	13 36 47.0	-0.3
ETLH				S	Sn	13 37 01.2	-1.0
NSK	Sanguang	0.99	272	*i* P	Pn	13 36 47.7	+0.3
NSK				S	Sn	13 37 02.3	-0.1
NNSB	Datong	0.99	258	*i* P	Pn	13 36 47.6	+0.1
NNSB				*e*S	Sn	13 37 02.4	0.0
ANP	Anpu	0.99	303	*e*P	Pn	13 36 49.5	+2.0
NNS	Nan Shan	0.99	258	P	Pn	13 36 47.7	+0.2
NNS				*i* S	Sn	13 37 02.7	+0.1
HWA	Hwalien	1.01	229	*e*P	Pn	13 36 45.7	-1.9
HWA				S	Sn	13 37 03.4	+0.7
TWS1	Kuangyinshan	1.03	296	*i* P	Pn	13 36 47.9	0.0
TWS1				*i* S	Sn	13 37 03.2	0.0
NTST	Danshui	1.04	300	*i* P	Pn	13 36 48.0	+0.1
NTST				*e*S	Sn	13 37 02.8	-0.4

ETM	**Tongmen**	**1.10**	**232**	*i* P	**Pn**	**13 36 48.2**	**-0.4**
ETM				*i* S	**Sn**	**13 37 03.4**	**-1.1**
LXIB	**Xiulin Townshi**	**1.13**	**237**	*i* P	**Pn**	**13 36 48.5**	**-0.5**
LXIB				S	**Sn**	**13 37 04.0**	**-1.3**
KSHI	**Guanxi Townshi**	**1.16**	**277**	P	**Pn**	**13 36 49.9**	**+0.6**
KSHI				S	**Sn**	**13 37 06.4**	**+0.7**
SHUL	**Shoufeng**	**1.17**	**223**	*e*P	**Pn**	**13 36 48.9**	**-0.5**
SHUL				*e*S	**Sn**	**13 37 05.7**	**-0.3**
WHF	**Hehuan Shan**	**1.18**	**245**	P	**Pn**	**13 36 50.0**	**0.0**
WHF				*i* S	**Sn**	**13 37 06.3**	**-0.6**
NCUH	**Zhongli**	**1.19**	**286**	S	**Sn**	**13 37 06.7**	**+0.4**
NFF	**Wufeng Townshi**	**1.21**	**270**	P	**Pn**	**13 36 50.1**	**+0.2**
NFF				S	**Sn**	**13 37 06.5**	**-0.3**
IRIF	**Iriomote-Funau**	**1.21**	**105**	*e*P	**Pn**	**13 36 50.5**	**+0.6**
TWT	**Tachien**	**1.22**	**252**	P	**Pn**	**13 36 51.0**	**+0.8**
TWT				S	**Sn**	**13 37 07.8**	**+0.5**
TDCB	**Techi**	**1.23**	**252**	P	**Pn**	**13 36 51.0**	**+0.7**
TDCB				*i* S	**Sn**	**13 37 07.4**	**-0.2**
ESL	**Shilin**	**1.24**	**228**	P	**Pn**	**13 36 49.7**	**-0.5**
ESL				*e*S	**Sn**	**13 37 05.8**	**-1.6**
LIOB	**Emei**	**1.30**	**270**	P	**Pn**	**13 36 51.3**	**+0.3**
LIOB				S	**Sn**	**13 37 08.7**	**0.0**
NSTT	**Nanjuang**	**1.31**	**270**	*i* P	**Pn**	**13 36 51.3**	**+0.2**
NSTT				S	**Sn**	**13 37 08.9**	**0.0**
SBCB	**Hsinchu**	**1.33**	**277**	S	**Sn**	**13 37 09.3**	**-0.1**
WARBT	**Fenglin Townsh**	**1.34**	**226**	P	**Pn**	**13 36 50.6**	**-0.8**
WARBT				S	**Sn**	**13 37 07.6**	**-1.9**
EGFH	**Guangfu**	**1.34**	**224**	*e*P	**Pn**	**13 36 51.0**	**-0.5**
EGFH				*e*S	**Sn**	**13 37 08.3**	**-1.4**
OWD	**Renai**	**1.34**	**239**	P	**Pn**	**13 36 51.7**	**0.0**
OWD				*e*S	**Sn**	**13 37 08.8**	**-1.1**
HSN	**Hsinchu**	**1.35**	**277**	P	**Pn**	**13 36 51.0**	**-0.5**
HSN				*e*S	**Sn**	**13 37 07.8**	**-1.9**
WHP	**Taichung City**	**1.41**	**255**	P	**Pn**	**13 36 53.5**	**+1.0**
WHP				S	**Sn**	**13 37 12.0**	**+0.7**
HGSD	**Ruisui**	**1.48**	**219**	*e*P	**Pn**	**13 36 52.7**	**-0.4**
HGSD				*e*S	**Sn**	**13 37 11.8**	**-0.8**
VWDT	**VWDT**	**1.48**	**233**	*e*P	**Pn**	**13 36 53.5**	**+0.2**
VWDT				*e*S	**Sn**	**13 37 12.1**	**-0.6**
JKRS	**Kuro-shima**	**1.48**	**106**	P	**Pn**	**13 36 54.0**	**+0.7**
NMLH	**Miaoli**	**1.51**	**266**	P	**Pn**	**13 36 53.8**	**+0.3**
NMLH				S	**Sn**	**13 37 13.1**	**-0.1**
WCS	**Beigang Elemen**	**1.51**	**248**	*i* P	**Pn**	**13 36 54.8**	**+1.2**
EHY	**Hungye**	**1.53**	**222**	S	**Sn**	**13 37 11.5**	**-2.3**
NSY	**Sanyi**	**1.55**	**262**	*e*S	**Sn**	**13 37 14.6**	**+0.4**
TWQ1	**Liyutan**	**1.55**	**259**	*e*S	**Sn**	**13 37 13.1**	**-1.1**
JIJ	**Ishigaki jima**	**1.57**	**100**	P	**Pn**	**13 36 54.5**	**+0.2**
JIJ				*e*S	**Sn**	**13 37 14.3**	**-0.5**
SMLT	**Sun Moon Lake**	**1.60**	**242**	*i* P	**Pn**	**13 36 56.1**	**+1.4**
SMLT				S	**Sn**	**13 37 17.5**	**+2.0**
SSLB	**Suanglung**	**1.60**	**238**	P	**Pn**	**13 36 56.0**	**+1.2**
SSLB				*e*S	**Sn**	**13 37 16.1**	**+0.6**
TYC	**Yuchr**	**1.62**	**243**	*i* P	**Pn**	**13 36 56.3**	**+1.3**
TYC				*e*S	**Sn**	**13 37 16.3**	**+0.4**
YULB	**Yu-li**	**1.63**	**220**	P	**Pn**	**13 36 54.0**	**-1.1**
YULB				*e*S	**Sn**	**13 37 13.6**	**-2.5**
TWF1	**Yuli**	**1.66**	**219**	P	**Pn**	**13 36 54.8**	**-0.7**
JISG	**Ishigakijimahi**	**1.70**	**92**	P	**Pn**	**13 36 56.3**	**+0.3**
WHYT	**Xinyi Township**	**1.73**	**237**	P	**Pn**	**13 36 57.6**	**+1.2**
WHYT				*e*S	**Sn**	**13 37 19.9**	**+1.5**
CHKH	**Chenggong**	**1.74**	**214**	*e*S	**Sn**	**13 37 16.8**	**-1.6**
WJS	**Zhushan**	**1.77**	**243**	*e*P	**Pn**	**13 36 58.2**	**+1.3**
WJS				*e*S	**Sn**	**13 37 20.5**	**+1.3**
WNT	**Mingjian**	**1.78**	**245**	*i* S	**Sn**	**13 37 20.6**	**+1.2**
WCHH	**Zhanghua**	**1.81**	**252**	S	**Sn**	**13 37 19.8**	**-0.3**
EHD	**Haiduan**	**1.87**	**217**	*e*P	**Pn**	**13 36 57.7**	**-0.5**
ALS	**Alishan**	**1.88**	**233**	*e*P	**Pn**	**13 36 59.7**	**+1.2**
ALS				*e*S	**Sn**	**13 37 22.8**	**+0.7**
CHN5	**Tsauling**	**1.92**	**237**	P	**Pn**	**13 37 00.0**	**+1.1**
CHN5				S	**Sn**	**13 37 24.6**	**+1.7**
ELDTW	**Lidau**	**1.95**	**222**	*e*P	**Pn**	**13 36 58.9**	**-0.4**
ELDTW				*e*S	**Sn**	**13 37 21.9**	**-1.6**
EDH	**Donghe**	**1.97**	**212**	*e*S	**Sn**	**13 37 22.2**	**-1.5**
WGK	**Gukeng**	**1.97**	**241**	*e*S	**Sn**	**13 37 25.7**	**+2.0**
WDLH	**Douliu**	**1.98**	**242**	*e*S	**Sn**	**13 37 25.2**	**+1.1**
WCKO	**Fanlu**	**2.07**	**235**	*e*P	**Pn**	**13 37 01.9**	**+1.2**
WCKO				S	**Sn**	**13 37 27.9**	**+1.8**
STYH	**Taoyuan**	**2.12**	**226**	*e*P	**Pn**	**13 37 02.5**	**+1.1**
STYH				*e*S	**Sn**	**13 37 28.4**	**+1.2**
TPUB	**Ta-pu**	**2.13**	**231**	*e*P	**Pn**	**13 37 02.5**	**+0.9**
TPUB				*e*S	**Sn**	**13 37 29.0**	**+1.4**
WTP	**Ta-pu**	**2.18**	**231**	*e*P	**Pn**	**13 37 03.2**	**+1.0**
WTP				*e*S	**Sn**	**13 37 31.1**	**+2.3**
TWGBT	**Beinan**	**2.21**	**215**	*e*P	**Pn**	**13 37 02.1**	**-0.5**
TWK	**Hsinying**	**2.25**	**233**	*i* P	**Pn**	**13 37 04.3**	**+1.1**
TWK				*e*S	**Sn**	**13 37 31.7**	**+1.2**
WSF	**Szhu**	**2.26**	**244**	*e*S	**Sn**	**13 37 31.1**	**+0.4**
CHN1	**Nanshi**	**2.28**	**231**	P	**Pn**	**13 37 04.6**	**+1.1**
CHN1				S	**Sn**	**13 37 31.9**	**+0.8**
SNST	**Tainan City**	**2.28**	**232**	P	**Pn**	**13 37 04.5**	**+1.0**
SNST				*i* S	**Sn**	**13 37 32.3**	**+1.3**
SGST	**Jiashian**	**2.31**	**228**	*e*P	**Pn**	**13 37 04.8**	**+0.9**
SGST				*e*S	**Sn**	**13 37 32.0**	**+0.3**
WSL	**Shuilin Townsh**	**2.31**	**242**	*e*S	**Sn**	**13 37 31.7**	**-0.1**
SSD	**Sandimen**	**2.52**	**222**	P	**Pn**	**13 37 08.3**	**+1.7**
SSD				*e*S	**Sn**	**13 37 37.9**	**+1.2**
MASBT	**Mashibuluo**	**2.62**	**220**	P	**Pn**	**13 37 08.7**	**+0.7**
MASBT				S	**Sn**	**13 37 39.8**	**+0.7**
TSCK	**Chigu Township**	**2.62**	**236**	P	**Pn**	**13 37 08.2**	**+0.1**
TSCK				S	**Sn**	**13 37 39.0**	**-0.2**
LYUB	**Lan-yu**	**2.75**	**197**	P	**Pn**	**13 37 08.3**	**-1.4**
LYUB				*e*S	**Sn**	**13 37 39.1**	**-3.2**
SCZT	**Fangliau**	**2.81**	**217**	*e*P	**Pn**	**13 37 11.6**	**+1.0**
SCZT				*e*S	**Sn**	**13 37 46.6**	**+2.8**
PHUB	**P'eng-hu**	**2.85**	**247**	P	**Pn**	**13 37 10.1**	**-1.1**
PHUB				*e*S	**Sn**	**13 37 41.8**	**-3.0**
PTMZ	**Houxiangcun**	**3.04**	**278**	S	**Sn**	**13 37 46.2**	**-3.0**

DJA 04 13:48:07.1±0.2**,3˚S**±2˚×**12˚8E**±˚**,h10**^{km}**,M4.1**/13**,mb4.3**/2**,**
MLv3.9/13**,Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRAI	**Karang Ratu**	**0.16**	**20**	P	Pg	13 48 10.8	+0.2
KRAI				S	Sg	13 48 13.0	-0.1
AAI	**Ambon**	**0.26**	**214**	P	Pg	13 48 13.1	+0.7
AAI				S	Sb	13 48 17.3	-1.2
MSAI	**Masohi**	**0.60**	**78**	P	Pg	13 48 19.0	+0.2
MSAI				S	Sg	13 48 27.2	+0.5
NLAI	**Namlea**	**1.26**	**280**	P	Pn	13 48 29.0	-1.8
BNDI	**Bandanaira**	**1.88**	**124**	P	Pn	13 48 40.4	+1.1
SANI	**Sanana**	**2.74**	**301**	P	Pn	13 48 51.3	+0.1
SWI	**Sorong**	**3.90**	**48**	P	Pn	13 49 08.6	+1.5
FAKI	**Fak Fak**	**3.94**	**82**	P	Pn	13 49 08.1	+0.4
LUWI	**Luwuk**	**6.06**	**293**	P	Pn	13 49 35.1	-1.8
	38nm,0.8s						

UPA ***04*** *14:19:40.7±2.0, 7˚.34N×82˚.43W, h27^{km}±22^{km}, MW4.3*
CATAC ***04*** *14:19:40.7±0.7, 7˚N±5˚×8˚3W±˚, h7^{km}, M3.7/11,*
MLv3.7/11, Error ellipse: s-maj=11.7km s-min=3.7km
az=16.9, confirmed
UCR ***04*** *14:19:40.3±1.6, 7˚.46N×82˚.37W, h8^{km}±9^{km}, MW4.3*
ISC 04 14:19:38.8±1.4**,7˚.36N**±0˚.05×**82˚.41W**±0˚.03**,h16**^{km}±9^{km}**,**
n109,σ**1§19**/151**,13C-3D,South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMNES	**Limones**	**0.86**	**329**	⇑*i*P	**Pn**	**14 19 56.0**	**-0.2**
CHIR3	**Chiriqui UPA,**	**1.03**	**5**	*e*P	**Pg**	**14 19 58.8**	**0.0**
REME3	**Remedios, Chir**	**1.04**	**34**	*e*P	**Pg**	**14 19 58.8**	**0.0**
LOCO3	**Loma Colorada,**	**1.04**	**360**	*e*P	**Pg**	**14 19 58.9**	**-0.1**
LOCO3				*e*S	**Sn**	**14 20 12.8**	**-0.3**
LOCO3	**Loma Colorada,**	**1.04**	**360**	*e*P	**Pn**	**14 19 58.6**	**-0.2**
LOCO3				*e*S	**Sn**	**14 20 12.9**	**-0.2**
PVID3	**Puerto Vidal,**	**1.05**	**49**	*e*P	**Pb**	**14 19 58.3**	**-0.4**
LOMA3	**Las Lomas, Chi**	**1.06**	**1**	*e*P	**Pg**	**14 19 59.4**	**0.0**
LOMA3				*e*S	**Sn**	**14 20 15.6**	**+2.0**
LOMA3	**Las Lomas, Chi**	**1.06**	**1**	*e*P	**Pg**	**14 19 59.8**	**+0.4**
DVD	**David**	**1.07**	**358**	*e*P	**Pb**	**14 19 56.5**	**-2.5**
DVD				*e*S	**Sn**	**14 20 14.3**	**+0.6**
LESP3	**La Esperanza,**	**1.10**	**340**	*e*P	**Pb**	**14 19 58.1**	**-1.4**
NANC3	**Nancito, Chiri**	**1.11**	**38**	*e*P	**Pb**	**14 19 59.4**	**-0.2**
BAGA3	**Bagala, Chiriq**	**1.11**	**354**	*e*P	**Pg**	**14 20 00.1**	**-0.1**
BAGA3	**Bagala, Chiriq**	**1.11**	**354**	*e*P	**Pb**	**14 19 59.5**	**-0.1**
BAGA3				*e*S	**Sg**	**14 20 14.3**	**-0.4**
PDCAN	**Manzana , Fuen**	**1.17**	**37**	*e*P	**Pn**	**14 19 59.9**	**-0.6**
GMAL	**Guarumal, Vera**	**1.24**	**71**	*e*P	**Pb**	**14 20 01.9**	**+0.1**
GMAL				*e*S	**Sg**	**14 20 20.0**	**+1.1**
GMAL	**Guarumal, Vera**	**1.24**	**71**	*e*P	**Pn**	**14 20 01.5**	**0.0**
GMAL				*e*S	**Sb**	**14 20 16.4**	**-1.1**
GMAL	**Guarumal, Vera**	**1.24**	**71**	*e*P	**Pb**	**14 20 01.6**	**-0.2**
GMAL				*e*S	**Sb**	**14 20 16.5**	**-1.1**
JEFFS	**S de V. Baru**	**1.31**	**355**	⇑*i*P	**Pn**	**14 20 02.7**	**+0.2**
PSOM3	**Paja de Sombre**	**1.32**	**4**	*e*P	**Pb**	**14 20 03.2**	**0.0**
PSOM3	**Paja de Sombre**	**1.32**	**4**	*e*P	**Pb**	**14 20 03.1**	**-0.2**
PSOM3				*e*S	**Sg**	**14 20 21.5**	**0.0**
PTAR3	**Potrerillos Ar**	**1.33**	**357**	*e*P	**Pb**	**14 20 03.2**	**-0.2**
BQSF3	**Alto Boquete,**	**1.38**	**359**	*e*P	**Pn**	**14 20 03.6**	**+0.1**
BQSF3	**Alto Boquete,**	**1.38**	**359**	*e*P	**Pn**	**14 20 03.5**	**+0.1**
BQSF3				*e*S	**Sn**	**14 20 21.1**	**-0.3**
PIRO	**Carate, Puerto**	**1.38**	**319**	*e*P	**Pn**	**14 20 03.4**	**0.0**
PIRO	**Carate, Puerto**	**1.38**	**319**	*e*P	**Pn**	**14 20 03.1**	**-0.3**
PIRO				*e*S	**Sn**	**14 20 20.4**	**-1.1**
PIRO	**Carate, Puerto**	**1.38**	**319**	P	**Pn**	**14 20 03.4**	**0.0**
PIRO	**Carate, Puerto**	**1.38**	**319**	⇑*e*P	**Pn**	**14 20 03.2**	**-0.2**
NELY	**Ciudad Neily**	**1.39**	**338**	*e*P	**Pn**	**14 20 03.3**	**-0.2**
CLLRA	**Cordillera,**	**1.39**	**352**	⇑*i*P	**Pn**	**14 20 03.7**	**0.0**
BQTLY	**Boquete Panama**	**1.39**	**358**	*e*P	**Pn**	**14 20 03.7**	**0.0**
LNBQ3	**Los Naranjos,**	**1.42**	**359**	*e*P	**Pn**	**14 20 03.9**	**-0.2**
LNBQ3				*e*S	**Sn**	**14 20 21.7**	**-1.0**
MARI3	**Mariato, Verag**	**1.44**	**78**	*e*P	**Pn**	**14 20 04.7**	**+0.4**
MARI3				*e*S	**Sg**	**14 20 26.6**	**+1.2**
MARI3	**Mariato, Verag**	**1.44**	**78**	*e*P	**Pg**	**14 20 06.1**	**-0.4**
MARI3				*e*S	**Sn**	**14 20 22.4**	**-0.5**
MESA3	**La Mesa, Verag**	**1.45**	**57**	*e*P	**Pb**	**14 20 05.9**	**+0.5**
MESA3				*e*S	**Sg**	**14 20 27.1**	**+1.5**
MESA3	**La Mesa, Verag**	**1.45**	**57**	*e*P	**Pn**	**14 20 04.8**	**+0.4**
MESA3				*e*S	**Sb**	**14 20 24.4**	**+0.8**
BRU2	**Volcan**	**1.45**	**349**	*e*P	**Pn**	**14 20 04.9**	**+0.3**
BRU2				*e*S	**Sg**	**14 20 27.2**	**+1.4**
BRU2	**Volcan**	**1.45**	**349**	*e*P	**Pb**	**14 20 05.8**	**+0.2**
BRU2				*e*S	**Sb**	**14 20 24.4**	**+0.5**
BRU2	**Volcan**	**1.45**	**349**	P	**Pn**	**14 20 04.7**	**+0.1**
BRU2	**Volcan**	**1.45**	**349**	⇓*e*P	**Pn**	**14 20 04.7**	**+0.1**
BRU2				*e*S	**Sg**	**14 20 26.1**	**+0.3**
PTJ1	**Puerto Jimnez**	**1.46**	**323**	*e*P	**Pb**	**14 20 05.5**	**-0.2**
PTJ1	**Puerto Jimnez**	**1.46**	**323**	*e*P	**Pb**	**14 20 05.5**	**-0.2**
PTJ1				*e*S	**Sb**	**14 20 23.8**	**-0.3**
PTJ1	**Puerto Jimnez**	**1.46**	**323**	S	**Sg**	**14 20 25.2**	**-0.9**
PTJ1	**Puerto Jimnez**	**1.46**	**323**	P	**Pb**	**14 20 05.4**	**-0.2**
JIME	**Puerto Jimenez**	**1.48**	**322**	⇓*i*P	**Pn**	**14 20 05.3**	**+0.5**
EDAD	**Golfito**	**1.48**	**330**	⇑*e*P	**Pn**	**14 20 04.6**	**-0.4**
RBALA	**Bur**	**1.53**	**10**	*e*P	**Pn**	**14 20 06.1**	**+0.5**
PBNVO	**Pueblo Nuevo,**	**1.54**	**8**	*e*P	**Pn**	**14 20 05.9**	**+0.3**
CACAO	**El Cacao, Vera**	**1.54**	**90**	*e*P	**Pn**	**14 20 05.5**	**-0.2**
CACAO				*e*S	**Sn**	**14 20 24.5**	**-0.8**
CACAO	**El Cacao, Vera**	**1.54**	**90**	*e*P	**Pn**	**14 20 05.4**	**-0.2**
CACAO				*e*S	**Sn**	**14 20 24.5**	**-0.8**
KKNTU	**Kakintº**	**1.59**	**22**	⇑*e*P	**Pn**	**14 20 06.9**	**+0.6**
KKNTU				*e*S	**Sn**	**14 20 26.5**	**-0.1**
CHGR2	**Aguacate**	**1.59**	**10**	*e*P	**Pb**	**14 20 07.6**	**-0.3**
CHGR2				*e*S	**Sb**	**14 20 27.4**	**-0.3**
CHGR2	**Aguacate**	**1.59**	**10**	*e*P	**Pn**	**14 20 06.1**	**-0.3**
CHGR2				*e*S	**Sn**	**14 20 26.3**	**-0.3**
STIA3	**Santiago, Vera**	**1.61**	**63**	*e*P	**Pb**	**14 20 08.4**	**+0.3**
ALCO	**Alturas Coton,**	**1.63**	**345**	⇑*e*P	**Pn**	**14 20 07.0**	**-0.1**
ALCO				*e*S	**Sg**	**14 20 30.3**	**-1.2**
SFRA3	**San Francisco,**	**1.68**	**58**	*e*P	**Pb**	**14 20 08.5**	**-0.9**
SFRA3				*e*S	**Sb**	**14 20 30.6**	**+0.3**
SFRA3	**San Francisco,**	**1.68**	**58**	*e*P	**Pb**	**14 20 09.2**	**-0.1**
SFRA3				*e*S	**Sn**	**14 20 28.1**	**-0.7**
EDP2	**Potrero Grande**	**1.81**	**335**	⇓*i*P	**Pb**	**14 20 10.9**	**-0.7**
PESE3	**Pese, Herrera**	**1.87**	**73**	*e*P	**Pb**	**14 20 11.7**	**-0.8**
CNI2	**El Empalme, Bo**	**2.05**	**358**	*e*P	**Pb**	**14 20 14.3**	**-1.4**
CNI2				*e*S	**Sb**	**14 20 40.5**	**-0.5**
CNI2	**El Empalme, Bo**	**2.05**	**358**	*e*P	**Pn**	**14 20 13.1**	**+0.5**
CNI2				*e*S	**Sb**	**14 20 39.8**	**-1.2**
DRK0	**Durika**	**2.06**	**337**	*e*P	**Pn**	**14 20 13.5**	**+0.5**
DRK0	**Durika**	**2.06**	**337**	*e*P	**Pb**	**14 20 14.5**	**-1.5**
DRK0				*e*S	**Sn**	**14 20 38.6**	**+0.1**
CHIT3	**Chitre**	**2.07**	**73**	*e*P	**Pb**	**14 20 14.5**	**-1.5**
CHIT3				*e*S	**Sn**	**14 20 39.3**	**+1.0**
CHIT3	**Chitre**	**2.07**	**73**	*e*P	**Pn**	**14 20 14.1**	**+1.2**
CHIT3				*e*S	**Sn**	**14 20 38.7**	**+0.4**
OCHAL	**Ojochal**	**2.11**	**325**	S	**Sn**	**14 20 39.5**	**0.0**
OCHAL	**Ojochal**	**2.11**	**325**	P	**Pn**	**14 20 14.6**	**+1.0**
EDPE	**Pejibaye, P**	**2.12**	**327**	*e*P	**Pn**	**14 20 14.9**	**+1.2**
EDPE				*e*S	**Sb**	**14 20 42.0**	**-1.1**
AZU	**Azuero**	**2.17**	**78**	*e*P	**Pb**	**14 20 16.2**	**-1.4**
AZU				*e*S	**Sn**	**14 20 42.2**	**+1.4**
AZU	**Azuero**	**2.17**	**78**	*e*P	**Pb**	**14 20 16.1**	**-1.5**
AZU				*e*S	**Sn**	**14 20 42.0**	**+1.3**
AZU	**Azuero**	**2.17**	**78**	*e*P	**Pn**	**14 20 15.5**	**+1.3**
AZU				*e*S	**Sn**	**14 20 42.0**	**+1.3**
ACHO3	**Achotines, Los**	**2.22**	**88**	*e*P	**Pn**	**14 20 14.8**	**-0.3**
CEUA	**Cerro Uatsi, L**	**2.31**	**347**	⇑*e*P	**Pb**	**14 20 19.5**	**-0.6**
BUS1	**Rivas**	**2.55**	**329**	⇑*i*P	**Pn**	**14 20 21.1**	**+1.1**
BUS1				*e*S	**Sn**	**14 20 52.5**	**+1.7**
PIEC	**Cerro El Cedra**	**2.72**	**326**	*e*P	**Pn**	**14 20 23.1**	**+1.0**
LCR2	**La Lucha 2**	**2.84**	**326**	P	**Pn**	**14 20 25.8**	**+2.0**
LCR2	**La Lucha 2**	**2.84**	**326**	S	**Sn**	**14 20 57.3**	**-0.5**
PICV	**PH. Pirrs**	**2.86**	**322**	*e*P	**Pn**	**14 20 25.0**	**+1.1**
VTCV	**VTCV, Calle Va**	**2.91**	**334**	⇑*i*P	**Pn**	**14 20 26.4**	**+1.6**
RESJ	**San Isidro (Tu**	**2.92**	**335**	*e*P	**Pn**	**14 20 26.9**	**+2.2**
ABRB	**Las Abras (San**	**2.93**	**334**	*e*P	**Pn**	**14 20 27.3**	**+2.3**
CVTV	**Tajo**	**2.94**	**333**	⇑*i*P	**Pn**	**14 20 27.4**	**+2.1**
CVTQ	**Turrialba Volc**	**2.95**	**333**	*e*P	**Pn**	**14 20 26.8**	**+1.5**
VTR0	**Volcan Turrial**	**2.96**	**333**	*e*P	**Pn**	**14 20 27.6**	**+2.0**
CVTR	**Volcan Turrial**	**2.96**	**333**	⇑*i*P	**Pn**	**14 20 27.2**	**+1.6**
VICA	**Volcano Irazu**	**2.97**	**332**	*e*P	**Pn**	**14 20 26.9**	**+1.2**
ZANG	**Zanguenga, Cho**	**2.98**	**58**	*e*P	**Pn**	**14 20 26.2**	**+0.8**
ZANG				*e*S	**Sn**	**14 21 02.8**	**+1.9**
ZANG	**Zanguenga, Cho**	**2.98**	**58**	*e*P	**Pb**	**14 20 31.3**	**-0.3**
CVIMO	**Finca Echandi**	**3.05**	**330**	*e*P	**Pn**	**14 20 29.1**	**+2.5**
EGUB	**Earth Gu¡pi**	**3.06**	**338**	⇑*i*P	**Pn**	**14 20 28.9**	**+2.3**
CVTG	**V. Turrialba,**	**3.08**	**334**	*e*P	**Pn**	**14 20 28.7**	**+1.8**
BCIP	**Isla Barro Col**	**3.12**	**55**	*e*P	**Pb**	**14 20 32.6**	**-1.3**
BCIP	**Isla Barro Col**	**3.12**	**55**	P	**Pb**	**14 20 31.2**	**-2.8**
BCIP				S	**Sb**	**14 21 09.5**	**-2.3**
BCIP	**Isla Barro Col**	**3.12**	**55**	*e*P	**Pb**	**14 20 32.4**	**-1.6**
GAMB1	**Gamboa**	**3.20**	**57**	*e*P	**Pn**	**14 20 29.7**	**+1.2**
GAMB1				*e*S	**Sn**	**14 21 04.4**	**-1.9**
VBV1	**V. Barva**	**3.20**	**329**	*e*P	**Pn**	**14 20 30.7**	**+1.9**
FLAM	**Flamenco Islan**	**3.24**	**61**	*e*P	**Pn**	**14 20 30.1**	**+1.0**
FRIJ	**El Hiral**	**3.24**	**55**	*e*P	**Pn**	**14 20 30.0**	**+0.9**
UPA	**Univ. de Panam**	**3.27**	**60**	*e*P	**Pn**	**14 20 30.5**	**+1.0**
UPA				*e*S	**Sn**	**14 21 07.9**	**-0.3**
TRT2	**Tortugero**	**3.44**	**338**	P	**Pn**	**14 20 33.7**	**+2.0**
TRT2	**Tortugero**	**3.44**	**338**	*e*P	**Pn**	**14 20 32.8**	**+1.1**
CAZU	**Cerro Azul, Pa**	**3.51**	**58**	*e*P	**Pb**	**14 20 39.9**	**-0.8**
JCR1	**Jicaral**	**3.64**	**313**	*e*P	**Pn**	**14 20 35.4**	**+0.9**
SOCE	**Pocosol**	**3.71**	**324**	*e*P	**Pn**	**14 20 37.7**	**+2.2**
ARE1	**Arenal 1**	**3.83**	**324**	*e*P	**Pn**	**14 20 41.4**	**+4.2**
VARE2	**V. Arenal**	**3.83**	**324**	*e*P	**Pn**	**14 20 41.5**	**+4.2**
JTS	**Las Juntas de**	**3.84**	**319**	*e*P	**Pn**	**14 20 38.0**	**+0.7**
JUD3	**Juan Diaz 3**	**4.16**	**312**	*e*P	**Pn**	**14 20 43.2**	**+1.5**
SAJU	**San Juanillo,**	**4.23**	**310**	*e*P	**Pn**	**14 20 43.4**	**+0.8**
CUI	**Cuipilapa**	**4.26**	**321**	*e*P	**Pn**	**14 20 45.7**	**+2.6**

IDC ***04*** *14:39:57.2±1.3, 32˚.54N×139˚.36E, h0^{km}, mb3.6/2,*
mbtmp3.4/3, ML2.2/1, Error ellipse: s-maj=58.4km
s-min=14.0km az=113.0
JMA ***04*** *14:39:59.0±0.1, 33˚.2N±0˚.4×14˚1E±˚, h53^{km}±4^{km},*
MV3.1/36, E OFF HACHIJOJIMA ISLAND
ISC 04 14:39:58.7±1.7**,33˚.16N**±0˚.05×**140˚.8E**±0˚.1**,h48**^{km}±20^{km}**,**
n17,σ**1§13**/27**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.85**	**267**	P	**Pn**	**14 40 14.7**	**+0.3**
JHJ2				*e*S	**Sn**	**14 40 25.8**	**0.0**
JHCJ	**Hachijojimakas**	**0.87**	**265**	*e*P	**Pn**	**14 40 14.9**	**+0.2**
JHCJ				*e*S	**Sn**	**14 40 25.5**	**-0.8**
JHJ	**Hachijo jima 2**	**0.88**	**268**	Pn	**Pn**	**14 40 14.8**	**0.0**
	74nm,0.3s,baz=238,slow=19,SNR=40						
JHJ				Sn	**Sn**	**14 40 25.6**	**-0.9**
	80nm,0.3s,baz=143,slow=23,SNR=23						
JAOM	**Aogashimamukai**	**1.13**	**233**	*e*P	**Pn**	**14 40 19.1**	**+0.8**
JAOM				*e*S	**Sn**	**14 40 33.2**	**+0.6**
JMKN	**Mikurajimanish**	**1.27**	**306**	*e*P	**Pn**	**14 40 20.0**	**-0.1**
JMYK	**Miyake Tsubota**	**1.40**	**310**	*e*S	**Sn**	**14 40 38.9**	**-0.2**
BSO1	**Boso 1**	**1.50**	**5**	*e*P	**Pn**	**14 40 22.6**	**-0.1**
BSO3	**Boso 3**	**1.66**	**351**	*e*P	**Pn**	**14 40 25.3**	**+0.1**
BSO3				*e*S	**Sn**	**14 40 45.3**	**+0.1**
BSO4	**Boso 4**	**1.87**	**348**	*e*S	**Sn**	**14 40 51.8**	**+1.1**
JIM2	**Oshima 3**	**1.94**	**324**	*e*P	**Pn**	**14 40 29.6**	**+0.3**
JIM2				*e*S	**Sn**	**14 40 51.6**	**-1.0**
JIZS	**Izushimoda**	**2.25**	**314**	*e*P	**Pn**	**14 40 34.1**	**+0.6**
JIZS				*e*S	**Sn**	**14 40 59.4**	**-0.6**
KTJ3	**Kamata3**	**2.30**	**321**	*e*S	**Sn**	**14 40 60.0**	**-1.2**
JOD2	**Odawara 2**	**2.55**	**326**	*e*P	**Pn**	**14 40 37.9**	**+0.2**
JOD2				*e*S	**Sn**	**14 41 05.1**	**-2.3**
JHO	**Hitachi**	**3.45**	**357**	*e*P	**Pn**	**14 40 50.4**	**+0.4**
JHO				*e*S	**Sn**	**14 41 28.5**	**-1.1**
MJAR	**Matsushiro Arr**	**4.01**	**328**	Pn	**Pn**	**14 41 00.6**	**+3.0**
	0.1nm,0.3s,baz=168,slow=13,SNR=7.5						
MJAR				Sn	**Sn**	**14 41 45.7**	**+2.4**
	0.1nm,0.3s,baz=150,slow=11,SNR=2.0						
	1.1nm,0.3s						
WRA	**Warramunga Arr**	**53.16**	**188**	P	**P**	**14 49 11.4**	**-0.5**
	0.5nm,0.4s,baz=5.4,slow=7.5,SNR=16						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**56.89**	**188**	P	**P**	**14 49 38.2**	**-0.6**
	0.2nm,0.4s,baz=4.7,slow=6.5,SNR=11						
	0.2nm,0.4s						

IDC ***04*** *14:42:14.6±7.9, 37˚.03N×71˚.83E, h98^{km}±64^{km}, mb3.6/7,*
mbtmp4.0/11, ML3.2/3, MS3.4/1, Error ellipse:
s-maj=55.3km s-min=22.8km az=24.0
NEIC ***04*** *14:42:20.4±1.6, 37˚.37N±0˚.07×71˚.85E±0˚.08, h142^{km}±8^{km},*
mb4.2/13, Error ellipse: s-maj=9.7km s-min=9.4km
az=47.0
NNC ***04*** *14:42:25.4±2.4, 37˚.76N×71˚.80E, h155^{km}±30^{km}, mb3.7,*
mpv4.5, Error ellipse: s-maj=22.3km s-min=15.9km
az=10.0
ISC 04 14:42:19.7±0.6**,37˚.30N**±0˚.05×**71˚.90E**±0˚.06**,h150**^{km}**,n67,**
σ**1§94**/77**,mb4.1**/12**,3C-3D,Afghanistan-Tajikistan**
border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANEM	**Manem**	**0.30**	**324**		**Pn**	**14 42 40.2**	**-0.4**
MANEM				Sn	**Sn**	**14 42 55.9**	**-0.6**
GAR	**Garm**	**2.10**	**324**		**Pn**	**14 42 55.4**	**-0.8**
GAR				Sn	**Sn**	**14 43 21.3**	**-3.0**
DRK	**Karamyk**	**2.17**	**358**		**Pn**	**14 42 57.2**	**0.0**
DRK				Sn	**Sn**	**14 43 24.1**	**-2.0**
CHGR	**Chuyangaron**	**2.55**	**303**		**Pn**	**14 43 00.7**	**-0.8**
CHGR				Sn	**Sn**	**14 43 29.9**	**-3.9**
SHAA	**Shahritus**	**3.02**	**276**		**Pn**	**14 43 06.4**	**-0.9**
KBL	**Kabul**	**3.60**	**221**		**Pn**	**14 43 16.0**	**+1.0**
NIL	**Nilore**	**3.81**	**163**		**Pn**	**14 43 18.7**	**+1.2**
ARSB	**Arslanbob**	**4.10**	**11**		**Pn**	**14 43 20.5**	**-1.0**
JMU	**Jammu**	**5.11**	**151**	*e*P	**Pn**	**14 43 33.6**	**-2.1**
JMU				*e*S	Sn	14 44 28.3	-6.7
JMU				IAML		14 44 34.0	
	comp=N,236nm,0.8s						
JMU				IAML		14 44 34.7	
	comp=E,220nm,0.4s						
ALCI	**Alchi Leh**	**5.29**	**124**	*e*P	**Pn**	**14 43 36.5**	**-0.8**
ALCI				*e*S	**Sn**	**14 44 32.3**	**-5.5**
ALCI				IAML		14 44 40.4	
	comp=N,140nm,0.4s						
ALCI				IAML		14 44 40.5	
	comp=E,101nm,0.3s						
UCH	**Uchtor**	**5.32**	**21**	P	**Pn**	**14 43 37.8**	**+0.1**
	SNR=94						
EKS2	**Erkin-Say**	**5.54**	**14**	P	**Pn**	**14 43 40.8**	**+0.4**
	SNR=32						
AAK	**Ala-Archa**	**5.69**	**20**	P	**Pn**	**14 43 43.0**	**+0.6**
	SNR=76						
AAK	**Ala-Archa**	**5.69**	**20**	P	**Pn**	**14 43 42.9**	**+0.5**
	comp=E,36nm,0.3s,baz=190,slow=6.3,SNR=207						
AAK				S	**Sn**	**14 44 43.7**	**-3.3**
	comp=E,39nm,0.6s,baz=341,slow=22,SNR=16						
AAK	**Ala-Archa**	**5.69**	**20**		**Pn**	**14 43 42.4**	**+0.1**
AAK	**Ala-Archa**	**5.69**	**20**	⇓P	**Pn**	**14 43 42.6**	**+0.2**
	comp=E,8.7nm,0.4s						
AAK				⇑S	**Sn**	**14 44 43.9**	**-3.1**
	comp=E,24nm,0.6s						
KBK	**Karagaybulak**	**5.84**	**23**	P	**Pn**	**14 43 46.2**	**+1.8**
	SNR=11						
FRU1	**Bishkek**	**5.89**	**20**		**Pn**	**14 43 45.4**	**+0.5**
KK31	**Karatay Array**	**5.89**	**350**		**Pn**	**14 43 44.5**	**-0.5**
KK31	**Karatay Array**	**5.89**	**350**	P	**Pn**	**14 43 44.5**	**-0.5**
	comp=E,64nm,0.4s,baz=185,slow=19,SNR=796						
KK31				⇑S	**Sn**	**14 44 46.6**	**-4.9**
	comp=E,57nm,0.5s,baz=174,slow=23,SNR=13						
KKAR	**Karatay Array**	**5.89**	**350**		**Pn**	**14 43 44.5**	**-0.4**
BOOM	**Boomskoye usch**	**6.04**	**30**		**Pn**	**14 43 47.1**	**0.0**
CHMS	**Chumysh**	**6.09**	**20**	P	**Pn**	**14 43 47.8**	**+0.2**
	SNR=25						
DHRM	**DHARAMSHALA**	**6.21**	**143**	*e*P	**Pn**	**14 43 48.5**	**-1.0**
DHRM				*e*S	**Sn**	**14 44 53.8**	**-5.7**
DHRM				IAML		14 45 00.1	
	comp=N,344nm,0.4s						
DHRM				IAML		14 45 00.6	
	comp=E,521nm,0.3s						
USP	**Ospenovka**	**6.28**	**18**	P	**Pn**	**14 43 49.8**	**-0.4**
	SNR=15						
TKM2	**Tokmak 2**	**6.29**	**26**	P	**Pn**	**14 43 50.5**	**+0.1**
	SNR=31						
KDJ	**Kajisay**	**6.31**	**39**	Pn	**Pn**	**14 43 50.8**	**+0.2**
TARG	**Taragay, Kyrgy**	**6.35**	**44**		**Pn**	**14 43 51.3**	**-0.2**
WUS	**Wushi**	**6.88**	**53**		**Pn**	**14 43 58.3**	**0.0**
BHK	**Bhakra**	**6.96**	**147**	*e*P	**Pn**	**14 44 01.7**	**+2.4**
BHK				IAML		14 45 16.4	
	comp=N,124nm,0.3s						
BHK				*e*S	**Sn**	**14 45 17.1**	**-0.2**
BHK				IAML		14 45 19.0	
	comp=E,137nm,0.6s						
PRZ	**Przheval'sk**	**7.19**	**42**	Pn	**Pn**	**14 44 02.7**	**+0.3**
SMLA	**Simla**	**7.55**	**143**	*e*P	**Pn**	**14 44 06.0**	**-1.1**
SMLA				*e*S	Sn	14 45 24.8	-6.5
SMLA				IAML		14 45 29.0	
	comp=E,238nm,0.6s						
SMLA				IAML		14 45 29.3	
	comp=N,218nm,0.4s						
DDI	**Dehra Dun**	**8.64**	**142**	*e*P	**Pn**	**14 44 19.9**	**-1.8**
DDI				*e*S	Sn	14 45 50.4	-7.4
DDI				IAML		14 45 55.4	
	comp=E,230nm,0.4s						
DDI				IAML		14 45 55.4	
	comp=N,169nm,0.4s						
MAKZ	**Makanchi**	**12.09**	**35**	Pn	**Pn**	**14 45 07.7**	**+0.7**
MKAR	**Makanchi Array**	**12.22**	**36**	P	**Pn**	**14 45 09.3**	**+0.6**
	comp=N,0.1nm,0.3s,baz=228,slow=15,SNR=1.9						
	comp=N,0.6nm,0.8s						
KURBB	**Kurchatov Arra**	**14.14**	**18**	P	**P**	**14 45 36.5**	**+0.4**
	comp=N,1.1nm,0.2s,baz=206,slow=11,SNR=4.2						
KURK	**Kurchatov**	**14.24**	**18**	P	**P**	**14 45 36.5**	**-0.8**
AB31	**Akbulak array**	**14.76**	**328**		**Pn**	**14 45 40.5**	**-0.4**
AB31	**Akbulak array**	**14.76**	**328**	⇑P	**Pn**	**14 45 40.8**	**-0.1**
	comp=N,3.4nm,0.3s,baz=133,slow=13,SNR=261						
ABKAR	**Akbulak array**	**14.76**	**328**		**Pn**	**14 45 39.8**	**-1.1**
EVN	**Everest**	**15.63**	**122**	P	**Pn**	**14 45 51.1**	**-1.4**
BVA0	**Borovoye Array**	**15.76**	**357**	⇓P	**Pn**	**14 45 52.1**	**-1.2**
	comp=N,6.0nm,0.9s,baz=156,slow=12,SNR=24						
BVAR	**Borovoye Array**	**15.76**	**357**	P	**Pn**	**14 45 52.4**	**-0.9**
	comp=N,0.1nm,0.3s,baz=155,slow=12,SNR=22						
	comp=N,4.4nm,0.6s						
BORK	**Borovoye**	**15.78**	**356**		**Pn**	**14 45 52.1**	**-1.5**
BORK				IAmb	IAmb	14 45 56.6	
	comp=Z,6.1nm,0.7s						
AKTO	**Aktyubinsk**	**16.47**	**327**	P	**P**	**14 46 02.0**	**+0.1**
	comp=Z,10nm,0.4s,baz=140,slow=11,SNR=28						
AKTO				S	**S**	**14 48 57.1**	**-7.7**
	comp=Z,4.4nm,0.6s,baz=16,slow=10,SNR=7.5						
AKTO	**Aktyubinsk**	**16.47**	**327**	⇓P	**P**	**14 46 03.2**	**+1.2**
	comp=Z,10nm,0.7s						
ZAA0	**Zalesovo Array**	**18.89**	**24**	P	**P**	**14 46 27.8**	**-0.6**
ZALV	**Zalesovo Beam**	**18.89**	**24**	P	**Pn**	**14 46 30.1**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=212,slow=12,SNR=12						
	comp=Z,2.0nm,0.4s						
ZALV	**Zalesovo Beam**	**18.89**	**24**	P	**P**	**14 46 28.2**	**-0.2**
ARTI	**Arti**	**21.14**	**339**	P	**P**	**14 46 53.7**	**+1.1**
	comp=Z,1.1nm,0.3s,baz=145,slow=10,SNR=4.6						
ARTI				LR	LR	14 55 39.3	
	comp=Z,85nm,18.1s,baz=28,slow=38						
	comp=Z,1.1nm,0.3s						
ARTI	**Arti**	**21.14**	**339**	IAmb	IAmb	14 47 07.0	
	comp=Z,13nm,1.3s						
GTA	**Gaotai**	**21.96**	**76**	*e*P	**P**	**14 47 04.5**	**+2.9**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SONM	**Songino Array**	**27.29**	**56**	P	**P**	**14 47 52.0**	**+1.8**
	comp=Z,0.8nm,0.9s,baz=260,slow=8.6,SNR=4.2						
	comp=Z,0.8nm,0.9s						
BNN	**Bunyan**	**28.31**	**284**	P	**P**	**14 48 00.5**	**+1.1**

BNN				IAmb	IAmb	14 48 34.0	
	comp=Z,3.4nm,0.9s						
FINES	**FINESS Array B**	**37.23**	**325**	P	**P**	**14 49 17.6**	**+1.3**
	comp=Z,8.3nm,1.2s,baz=117,slow=6.6,SNR=3.9						
	comp=Z,8.3nm,1.2s						
ARCES	**ARCESS Array B**	**40.68**	**337**	P	**P**	**14 49 47.2**	**+2.3**
	comp=Z,6.8nm,1.1s,baz=59,slow=4.7,SNR=6.3						
	comp=Z,6.8nm,1.1s						
ARCES	**ARCESS Array B**	**40.68**	**337**	P	**P**	**14 49 46.5**	**+1.6**
HFS	**Hagfors**	**42.89**	**321**	P	**P**	**14 50 04.7**	**+1.7**
	comp=Z,1.7nm,0.8s,baz=141,slow=7.4,SNR=6.1						
	comp=Z,1.7nm,0.8s						
C19K	**Lookout Ridge**	**67.35**	**18**	P	**P**	**14 52 59.8**	**+1.7**
B21K	**Ikpikpuk River**	**68.10**	**16**	P	**P**	**14 53 04.0**	**+1.2**
B21K				IAmb	IAmb	14 53 29.7	
	comp=Z,7.1nm,1.4s						
D19K	**Kuna River**	**68.16**	**18**	P	**P**	**14 53 04.5**	**+1.3**
D20K	**Etivluk River**	**68.35**	**17**	P	**P**	**14 53 05.0**	**+0.6**
D20K				IAmb	IAmb	14 53 34.6	
	comp=Z,7.7nm,1.4s						
C23K	**Itkillik River**	**68.77**	**15**	P	**P**	**14 53 09.4**	**+2.6**
C23K				IAmb	IAmb	14 53 17.9	
	comp=Z,3.8nm,1.2s						
YKA	**Yellowknife Ar**	**80.41**	**3**	P	**P**	**14 54 15.8**	**+1.7**
	comp=Z,0.3nm,0.5s,baz=353,slow=5.5,SNR=4.9						
	comp=Z,0.3nm,0.5s						
YKA	**Yellowknife Ar**	**80.41**	**3**	P	**P**	**14 54 14.7**	**+0.6**
WRA	**Warramunga Arr**	**81.81**	**123**	P	**P**	**14 54 22.3**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=325,slow=5.2,SNR=4.7						
	comp=Z,0.4nm,0.6s						
WRA	**Warramunga Arr**	**81.81**	**123**	P	**P**	**14 54 22.8**	**+0.7**

RSNC 04 15:04:14.6±0.0,7˚N±1˚×7˚3W±˚,h142^{km}±1^{km},M2.7,mb3.4, mB4.7,ML2.4,MLv3.1,Mw(mB)3.9,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.21**	**189**	P	Pn	15 04 34.0	-0.3
BARC				S	Sn	15 04 48.1	-1.1
BRJC	**Barrancabermej**	**0.61**	**286**	P	Pn	15 04 35.7	0.0
BRJC				S	Sn	15 04 52.7	+1.0
PAMC	**Pamplona, Colo**	**0.70**	**40**	P	Pn	15 04 36.8	0.0
PAMC				S	Sn	15 04 53.4	-0.3
RUSC	**La Rusia**	**0.90**	**176**	P	Pn	15 04 37.9	-0.5
RUSC				S	Sn	15 04 55.7	-0.7
PTBC	**PUERTO BERRIO,**	**1.32**	**259**	P	Pn	15 04 40.7	-1.0
PTBC				S	Sn	15 05 01.7	-0.7
OCAC	**Ocana**	**1.44**	**353**	P	Pn	15 04 42.2	-0.9
OCAC				S	Sn	15 05 04.1	-0.8
SPBC	**San Pablo de B**	**1.46**	**219**	P	Pn	15 04 43.0	-0.3
SPBC				S	Sn	15 05 04.1	-1.1
NORC	**Norcasia**	**2.10**	**234**	P	Pn	15 04 50.4	-0.2
NORC				S	Sn	15 05 17.6	-0.6
CHIC	**Chingaza**	**2.23**	**195**	P	Pn	15 04 52.1	-0.4
CHIC				S	Sn	15 05 20.9	-0.7
ROSC	**El Rosal**	**2.27**	**211**	P	Pn	15 04 53.7	+0.8
ROSC				S	Sn	15 05 21.8	-0.5
BOG	**Bogota**	**2.35**	**203**	P	Pn	15 04 53.7	-0.1
HELC	**Santa Helena**	**2.44**	**256**	P	Pn	15 04 54.8	-0.2
HELC				S	Sn	15 05 26.4	+0.5
CVER	**Cruz Verde, Cu**	**2.44**	**202**	P	Pn	15 04 55.5	+0.4
CVER				S	Sn	15 05 25.3	-1.0
UREC	**San Jos de Ur**	**2.55**	**292**	P	Pn	15 04 54.4	-1.5
UREC				S	Sn	15 05 25.5	-2.3
GUY2C	**Guyana, Caldas**	**2.70**	**235**	P	Pn	15 04 57.8	-0.6
GUY2C				S	Sn	15 05 33.3	+1.3
VILC	**Villavicencio,**	**2.73**	**191**	P	Pn	15 04 55.7	-2.6
VILC				S	Sn	15 05 30.9	-1.1
PTGC	**Puerto Gaitan,**	**2.77**	**159**	P	Pn	15 04 56.7	-2.1
PTGC				S	Sn	15 05 30.2	-2.8
CBOC	**Ciudad Bolivar**	**2.99**	**252**	P	Pn	15 05 01.6	-0.1
CBOC				S	Sn	15 05 37.5	-0.6
DBBC	**Dabeiba**	**3.04**	**274**	P	Pn	15 05 02.1	-0.2
DBBC				S	Sn	15 05 38.2	-1.0
ARGC	**Ariguani, Magd**	**3.23**	**340**	P	Pn	15 05 04.7	+0.1
SDV	**Santo Domingo**	**3.24**	**50**	P	Pn	15 05 03.4	-1.6
SDV				S	Sn	15 05 39.9	-4.0
PRAC	**Prado**	**3.52**	**210**	P	Pn	15 05 07.3	-1.2
PRAC				S	Sn	15 05 50.3	+0.1
ORTC	**Ortega, Tolima**	**3.55**	**216**	P	Pn	15 05 08.4	-0.4
ORTC				S	Sn	15 05 51.3	+0.4
PLMC	**San Jos del P**	**3.64**	**239**	P	Pn	15 05 09.9	-0.1
URMC	**La Uribe, Meta**	**3.74**	**199**	P	Pn	15 05 10.8	-0.5
URMC				S	Sn	15 05 54.8	-0.5
LCBC	**Los crdobas,**	**3.79**	**303**	P	Pn	15 05 10.3	-1.6
LCBC				S	Sn	15 05 56.4	+0.1
YOTC	**Yotoco, Valle**	**4.24**	**229**	P	Pn	15 05 17.6	-0.3
YOTC				S	Sn	15 06 05.5	-1.6
SMRC	**Santa Marta, M**	**4.46**	**346**	P	Pn	15 05 20.0	-0.8
SMRC				S	Sn	15 06 08.0	-4.3
URIC	**Uribia, Colomb**	**5.00**	**13**	P	Pn	15 05 24.5	-3.4
GARC	**Garzon, Huila**	**5.14**	**207**	P	Pn	15 05 29.1	-1.0
FLOC	**Florencia**	**5.75**	**206**	P	Pn	15 05 37.3	-0.7
	8.0nm,1.5s						
BBAC	**Balboa, Cauca**	**6.26**	**221**	P	Pn	15 05 45.5	+0.5

JMA ***04*** *15:04:44.6±0.3,44˚N±1˚×14˚8E±˚,h0^{km},MV3.9/23,SE OFF ETOROFU*

SKHL ***04*** *15:04:46.7±0.2,44˚.30N×148˚.10E,h45^{km}±9^{km},mb4.6/4*

ISC 04 15:04:43.2±3.1,44˚.2N±0˚.1×148˚.4E±0˚.2,h34^{km}±5^{km},n15, σ1^{s}.34/26,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.07**	**338**	*e*P	**Pb**	**15 05 02.5**	**-0.7**
KUR				AMB	AMB	15 05 02.8	
	390nm,0.3s						
KUR				*e*S	**Sn**	**15 05 14.2**	**-1.1**
KUR				A	A	15 05 15.2	
	810nm,0.5s						
KUR				A	A	15 05 15.2	
	1µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.86**	**264**	*e*P	**Pn**	**15 05 13.6**	**+1.1**
YUK				AMB	AMB	15 05 15.3	
	320nm,0.3s						
YUK				*e*S	**Sn**	**15 05 33.7**	**-1.1**
YUK				A	A	15 05 35.7	
	570nm,0.6s						
YUK				A	A	15 05 35.7	
	530nm,0.6s						
NEM2	**Nemuro 2**	**2.13**	**247**	P	**Pn**	**15 05 16.4**	**+0.1**
NEM2				*e*S	**Sn**	**15 05 39.4**	**-2.2**
NMR	**Nemuro--Hokkai**	**2.14**	**247**	*e*P	**Pn**	**15 05 16.5**	**+0.1**
NMR				*i* S	**Sn**	**15 05 39.5**	**-2.2**
GLVR	**Golovnino**	**2.16**	**257**	*e*P	**Pn**	**15 05 17.6**	**+0.9**
GLVR				AMB	AMB	15 05 20.1	
	120nm,0.2s						
GLVR				*e*S	**Sn**	**15 05 41.8**	**-0.4**
GLVR				A	A	15 05 48.8	
	330nm,0.3s						
GLVR				A	A	15 05 48.8	
	630nm,0.3s						
JRA	**Rausu**	**2.40**	**264**	*e*P	**Pn**	**15 05 21.5**	**+1.5**
JRA				*e*S	**Sn**	**15 05 48.4**	**+0.2**
JNSB	**Nemuroshibetsu**	**2.51**	**260**	*e*P	**Pn**	**15 05 22.7**	**+1.1**
JKHN	**Kushirohamanak**	**2.64**	**245**	*e*P	**Pn**	**15 05 23.8**	**+0.5**
JNK	**Nakash**	**2.76**	**257**	P	**Pn**	**15 05 26.1**	**+1.1**
JNK				*e*S	**Sn**	**15 05 55.7**	**-1.4**
AKK	**Akkeshi**	**2.88**	**246**	*e*P	**Pn**	**15 05 27.2**	**+0.6**
JAK	**Akkeshi**	**2.98**	**247**	*e*P	**Pn**	**15 05 28.8**	**+0.8**
JAK				*e*S	**Sn**	**15 06 00.8**	**-1.7**
JAR	**Ashorobuto**	**3.50**	**256**	P	**Pn**	**15 05 37.1**	**+1.9**
JAR				*e*S	**Sn**	**15 06 15.5**	**+0.1**
JOB	**Onbets**	**3.59**	**250**	*e*P	**Pn**	**15 05 38.1**	**+1.7**
JOB				*e*S	**Sn**	**15 06 17.9**	**+0.3**
JCH	**Churui**	**4.03**	**248**	*e*P	**Pn**	**15 05 44.1**	**+1.7**
JCH				S	**Sn**	**15 06 27.5**	**-0.9**
JNBK	**Urakawa-nobuka**	**4.58**	**247**	*e*P	**Pn**	**15 05 52.0**	**+1.9**

MOS ***04*** *15:06:50.9±1.0,43˚.07N×148˚.09E,h26^{km},mb4.8/21,Error ellipse: s-maj=10.6km s-min=7.2km az=128.6*

NEIC ***04*** *15:06:52.3±1.7,43˚.33N±0˚.09×147˚.96E±0˚.08,h10^{km}±1^{km}, mb4.5/43,Error ellipse: s-maj=17.6km s-min=3.5km az=150.0*

JMA ***04*** *15:06:52.5±0.5,43˚N±2˚×14˚8E±˚,h0^{km},MV4.0/27,E OFF HOKKAIDO*

SKHL ***04*** *15:06:52.8±0.3,43˚.10N×148˚.10E,h45^{km}±4^{km},mb5.0/4*

IDC ***04*** *15:06:58.2±1.2,43˚.68N×147˚.85E,h41^{km}±3^{km},mb4.0/24, mbtmp4.2/26,ML3.2/2,MS3.1/3,Error ellipse: s-maj=30.0km s-min=13.5km az=163.0*

ISC 04 15:06:53.4±0.6,43˚.25N±0˚.05×148˚.01E±0˚.05,h23^{km}±2^{km}, h25^{km}:pP-P,n161,σ1^{s}.42/182,mb4.5/50,3C-10D,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SHO	**Shikotan**	**1.06**	**306**	*e*P	Pb	15 07 19.8	+6.8
SHO				AMB	AMB	15 07 23.3	
	2µm,0.6s						
SHO				*e*S	Sn	15 07 38.7	+12
SHO				A	A	15 07 40.7	
	2µm,0.5s						
SHO				A	A	15 07 40.7	
	5µm,0.5s						
NEM2	**Nemuro 2**	**1.66**	**275**	*e*P	**Pn**	**15 07 19.9**	**-1.2**
NEM2				*e*S	**Sn**	**15 07 39.3**	**-2.3**
NMR	**Nemuro--Hokkai**	**1.67**	**275**	*e*PN	**Pn**	**15 07 20.2**	**-1.0**
NMR				*i* S	**Sb**	**15 07 48.9**	**+4.9**
NMR	**Nemuro--Hokkai**	**1.67**	**275**	*e*P	**Pn**	**15 07 20.2**	**-1.0**
NMR				*e*S	**Sn**	**15 07 40.6**	**-1.3**
YUK	**Yuzh-Kuril'sk**	**1.74**	**297**	PN	**Pn**	**15 07 21.3**	**-0.9**
YUK				*i* S	**Sb**	**15 07 49.2**	**+3.1**
YUK				pmax	pmax		
	comp=Z,351nm,0.3s						
YUK				pmax	pmax		
	comp=N,79nm,0.1s						
YUK				pmax	pmax		
	comp=E,98nm,0.2s						
YUK				pmax	pmax		
	comp=Z,1µm,0.9s						
YUK				smax	smax		
	comp=N,2µm,0.7s						
YUK				smax	smax		
	comp=E,2µm,0.7s						
YUK				smax	smax		
	comp=N,2µm,1.0s						
YUK				smax	smax		
	comp=E,4µm,1.5s						
YUK	**Yuzh-Kuril'sk**	**1.74**	**297**	*e*P	**Pn**	**15 07 21.9**	**-0.3**
YUK				AMB	AMB	15 07 24.6	
	comp=E,590nm,0.5s						
YUK				*e*S	**Sn**	**15 07 43.6**	**-0.1**
YUK				A	A	15 07 52.9	
	comp=E,4µm,0.6s						
YUK				A	A	15 07 52.9	
	comp=E,3µm,0.6s						
KUR	**Kuril'sk**	**1.98**	**357**	PN	**Pb**	**15 07 28.1**	**-0.7**
KUR				S	**Sb**	**15 07 55.0**	**+2.0**
KUR				pmax	pmax		
	comp=Z,397nm,0.7s						
KUR				smax	smax		
	comp=E,500nm,0.6s						
KUR				smax	smax		
	comp=N,361nm,0.5s						
KUR	**Kuril'sk**	**1.98**	**357**	*e*P	**Pn**	**15 07 25.9**	**+0.4**
KUR				AMB	AMB	15 07 31.5	
	comp=N,480nm,0.5s						
KUR				*e*S	**Sn**	**15 07 51.0**	**+1.4**
KUR				A	A	15 08 00.2	
	comp=N,450nm,0.5s						
KUR				A	A	15 08 00.2	
	comp=N,660nm,0.5s						
RUSJ	**Misakicho**	**2.18**	**294**	*e*PN	**Pn**	**15 07 28.2**	**0.0**
RUSJ				S	**Sb**	**15 08 02.4**	**+3.8**
JRA	**Rausu**	**2.21**	**289**	*e*P	**Pn**	**15 07 28.4**	**-0.2**
JNSB	**Nemuroshibetsu**	**2.25**	**284**	*e*P	**Pn**	**15 07 28.7**	**-0.5**
AKK	**Akkeshi**	**2.33**	**265**	*e*P	**Pn**	**15 07 28.7**	**-1.6**
JNK	**Nakash**	**2.42**	**279**	*e*P	**Pn**	**15 07 31.1**	**-0.5**
JAK	**Akkeshi**	**2.44**	**265**	*e*P	**Pn**	**15 07 31.4**	**-0.4**
JTKR	**Abashiri--Toko**	**3.06**	**285**	*e*P	**Pn**	**15 07 40.8**	**+0.4**
JAR	**Ashorobuto**	**3.10**	**272**	*e*P	**Pn**	**15 07 41.2**	**+0.4**
JAR				*e*S	**Sn**	**15 08 17.9**	**+0.8**
JCH	**Churui**	**3.47**	**261**	*e*P	**Pn**	**15 07 46.4**	**+0.4**
ERM	**Erimo**	**3.79**	**253**	Pn	**Pn**	**15 07 51.1**	**+0.7**
ERM	**Erimo**	**3.79**	**253**	PN	**Pn**	**15 07 51.1**	**+0.7**
JEM	**Erimo**	**3.79**	**253**	*e*P	**Pn**	**15 07 51.6**	**+1.3**
JFR	**Furan**	**3.96**	**271**	*e*P	**Pn**	**15 07 53.4**	**+0.7**
JNBK	**Urakawa-nobuka**	**3.99**	**258**	*e*P	**Pn**	**15 07 53.7**	**+0.5**
JKA	**Kamikawa-asahi**	**4.02**	**284**		**Pn**	**15 07 53.5**	**0.0**
ASAJ	**Asahikawa**	**4.02**	**284**	P	**Pn**	**15 07 55.7**	**+2.1**
	comp=N,2.5nm,0.3s,baz=119,slow=8.3,SNR=7.0						
ASAJ				LR	LR	15 09 19.8	
	comp=N,114nm,18.0s,baz=126,slow=37						
	comp=N,12nm,0.6s						
YSS	**Yuzhno-Sakhali**	**5.25**	**317**	Pn	**Pn**	**15 08 08.9**	**-1.5**
YSS	**Yuzhno-Sakhali**	**5.25**	**317**	*e*PN	Pb	15 08 18.9	-5.4
YSS				*e*S	**Sb**	**15 09 23.3**	**-3.5**
YSS				pmax	pmax		
	comp=Z,50nm,1.1s						
YSS				smax	smax		
	comp=N,20nm,1.2s						
YSS				smax	smax		
	comp=E,30nm,0.9s						
YSS	**Yuzhno-Sakhali**	**5.25**	**317**	*e*P	**Pn**	**15 08 12.1**	**+1.7**
YSS				*e*S	**Sn**	**15 09 11.8**	**+1.7**
JTM	**Tenmabayashi**	**5.73**	**247**	Pn	**Pn**	**15 08 15.7**	**-1.3**
TYV	**Tymovskoe**	**8.44**	**336**	*e*P	**Pn**	**15 08 57.7**	**+3.5**
MJAR	**Matsushiro Arr**	**10.08**	**232**	Pn	**Pn**	**15 09 16.1**	**-0.6**
MJAR	**Matsushiro Arr**	**10.08**	**232**	PN	**Pn**	**15 09 16.1**	**-0.6**
MJB9	**Matsu-Tunnel**	**10.08**	**232**	Pn	**Pn**	**15 09 16.1**	**-0.6**
MAJO	**Matsushiro**	**10.08**	**232**	Pn	**Pn**	**15 09 14.4**	**-2.3**
MAJO	**Matsushiro**	**10.08**	**232**	PN	**Pn**	**15 09 14.4**	**-2.3**
JGF	**Kuroka**	**11.23**	**231**	Pn	**Pn**	**15 09 31.7**	**-0.8**
PETK	**Petropavlovsk-**	**11.78**	**30**	P	**Pn**	**15 09 38.3**	**-1.6**
	comp=E,0.2nm,0.3s,baz=213,slow=16,SNR=5.7						
	comp=E,1.7nm,0.6s						
PETK	**Petropavlovsk-**	**11.78**	**30**	Pn	**Pn**	**15 09 38.5**	**-1.4**
PETK	**Petropavlovsk-**	**11.78**	**30**	PN	**Pn**	**15 09 38.5**	**-1.4**
MA2	**Magadan**	**16.43**	**5**		**Pn**	**15 10 43.5**	**+1.2**
MA2				IAmb	IAmb	15 10 47.6	
	comp=Z,52nm,1.2s						
MA2	**Magadan**	**16.43**	**5**	P	**Pn**	**15 10 43.5**	**+1.2**
MA2				pmax	pmax		
	comp=Z,52nm,1.2s						
SEY	**Seymchan**	**19.88**	**6**	LR	LR	15 18 37.2	
	comp=Z,53nm,18.5s,baz=93,slow=36						
HILR	**Hailar Array B**	**20.41**	**298**	P	**P**	**15 11 26.6**	**-2.0**
	comp=Z,2.3nm,0.4s,baz=94,slow=9.0,SNR=7.3						
	comp=Z,2.3nm,0.4s						
YAK	**Yakutsk**	**21.70**	**336**	P	**P**	**15 11 38.8**	**-3.6**
	comp=Z,22nm,0.8s,baz=170,slow=2.4,SNR=11						
YAK				LR	LR	15 20 40.4	
	comp=Z,95nm,18.4s,baz=92,slow=39						
	comp=Z,22nm,0.8s						
YAK	**Yakutsk**	**21.70**	**336**	P	**P**	**15 11 39.2**	**-3.2**
YAK				IAmb	IAmb	15 11 39.7	
	comp=Z,22nm,0.8s						
YAK	**Yakutsk**	**21.70**	**336**	*e*P	**P**	**15 11 39.0**	**-3.4**
YAK				*e**PP	**sP**	**15 11 50.0**	**+0.5**
YAK				*e**SS	**S**	**15 15 45.1**	**+3.8**
YAK				*e*		15 23 03.3	
YAK				pmax	pmax		
	comp=Z,17nm,0.8s						
YAK				pmax	pmax		
	comp=N,12nm,1.5s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,1µm,3.8s						
YAK				pmax	pmax		
	comp=E,948nm,3.5s						
YAK				pmax	pmax		
	comp=N,1µm,4.1s						
H11N2	**WAKE ISLAND Hy**	**28.32**	**140**	T	T	15 41 29.5	
	baz=332,slow=76,SNR=19						
H11N1	**WAKE ISLAND Hy**	**28.33**	**140**	T	T	15 41 29.6	
	baz=332,slow=76,SNR=16						
H11N3	**WAKE ISLAND Hy**	**28.34**	**140**	T	T	15 41 29.4	
	baz=332,slow=76,SNR=19						
ULN	**Ulaanbaatar**	**28.80**	**294**	⇓*i*P	**P**	**15 12 50.3**	**+0.7**
ULN				pmax	pmax		
	comp=Z,59nm,4.7s						
ULN	**Ulaanbaatar**	**28.80**	**294**	*e*P	**P**	**15 12 50.3**	**+0.7**
SONM	**Songino Array**	**29.24**	**294**	P	**P**	**15 12 54.4**	**+0.8**
	comp=Z,5.9nm,1.0s,baz=91,slow=8.9,SNR=18						
SONM				pP	**pwP**	**15 13 06.7**	**+1.4**
	comp=Z,1.9nm,0.6s,baz=91,slow=7.9,SNR=4.9						
	comp=Z,5.9nm,1.0s						
SONM	**Songino Array**	**29.24**	**294**	P	**P**	**15 12 53.4**	**-0.2**
SONM				IAmb	IAmb	15 12 55.1	
	comp=Z,7.0nm,1.1s						
H11S1	**WAKE ISLAND Hy**	**29.29**	**142**	T	T	15 42 42.4	
	baz=337						
H11S3	**WAKE ISLAND Hy**	**29.29**	**142**	T	T	15 42 43.2	
	baz=337						
H11S2	**WAKE ISLAND Hy**	**29.31**	**142**	T	T	15 42 43.7	
	baz=337						
TIXI	**Tiksi**	**29.97**	**348**	⇓*e*P	**P**	**15 12 56.1**	**-3.5**
TIXI				pmax	pmax		
	comp=Z,79nm,6.3s						
TIXI				MLR	MLR		
	comp=Z,58nm,7.0s						
LZDM	**Lanzhou Array**	**34.59**	**273**	P	**P**	**15 13 42.1**	**+1.3**
	comp=Z,1.1nm,0.3s,baz=66,slow=4.9,SNR=1.7						
	comp=Z,1.1nm,0.3s						
F17K	**Baldwin Pennin**	**35.80**	**32**	P	**P**	**15 13 51.8**	**+1.3**
H17K	**Granite Mounta**	**36.00**	**35**	P	**P**	**15 13 52.8**	**+0.6**
C18K	**Utukok River**	**36.44**	**29**	P	**P**	**15 13 56.0**	**0.0**
C18K				IAmb	IAmb	15 13 57.0	
	comp=Z,6.7nm,0.9s						
L18K	**Granite Mounta**	**37.05**	**40**	P	**P**	**15 14 02.4**	**+1.2**
L18K				IAmb	IAmb	15 14 08.0	
	comp=Z,15nm,1.5s						
C19K	**Lookout Ridge**	**37.13**	**28**	P	**P**	**15 14 02.3**	**+0.4**
D19K	**Kuna River**	**37.49**	**29**	P	**P**	**15 14 05.2**	**+0.3**
D19K				IAmb	IAmb	15 14 08.6	
	comp=Z,9.0nm,0.9s						
D20K	**Etivluk River**	**38.07**	**29**	P	**P**	**15 14 10.5**	**+0.7**
D20K				IAmb	IAmb	15 14 11.2	
	comp=Z,8.1nm,0.9s						
B20K	**Meade River**	**38.20**	**27**	P	**P**	**15 14 11.3**	**+0.5**
B20K				IAmb	IAmb	15 14 27.5	
	comp=Z,7.4nm,0.9s						
J20K	**Nowinta River**	**38.36**	**37**	P	**P**	**15 14 12.8**	**+0.5**
B21K	**Ikpikpuk River**	**38.97**	**28**	P	**P**	**15 14 17.6**	**+0.3**
B21K				IAmb	IAmb	15 14 31.9	
	comp=Z,9.2nm,0.9s						
D22K	**Ayikyak River**	**39.51**	**29**	P	**P**	**15 14 22.5**	**+0.6**
D22K				IAmb	IAmb	15 14 34.8	
	comp=Z,4.7nm,0.6s						
B22K	**Teshekpuk Lake**	**39.52**	**27**	P	**P**	**15 14 21.6**	**-0.2**
C23K	**Itkillik River**	**40.38**	**28**	P	**P**	**15 14 29.5**	**+0.5**
C23K				IAmb	IAmb	15 14 30.5	
	comp=Z,11nm,0.9s						
E24K	**Your Creek**	**40.95**	**31**	P	**P**	**15 14 35.0**	**+1.1**
DGZ	**Jazzator, Alta**	**41.21**	**301**	⇓*e*P	**P**	**15 14 37.6**	**+1.3**
DGZ				pmax	pmax		
	comp=Z,27nm,5.4s						
DGZ				MLR	MLR		
	comp=Z,111nm,15.0s						
ILAR	**Eielson Array**	**41.52**	**36**	P	**P**	**15 14 38.4**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=273,slow=7.9,SNR=6.6						
ILAR				pP	**pwP**	**15 14 50.9**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=276,slow=9.6,SNR=11						
	comp=Z,0.5nm,0.8s						
ILAR	**Eielson Array**	**41.52**	**36**	P	**P**	**15 14 38.7**	**+0.2**
ILAR	**Eielson Array**	**41.52**	**36**	*e*P	**P**	**15 14 38.5**	**0.0**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ZALV	**Zalesovo Beam**	**41.80**	**308**	P	**P**	**15 14 39.9**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=90,slow=10,SNR=4.3						
ZALV				PcP	**PcP**	**15 16 37.0**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=90,slow=4.4,SNR=5.2						
ZALV				pPcP		15 16 49.9	
	comp=Z,0.4nm,0.5s,baz=119,slow=1.9,SNR=3.8						
	comp=Z,0.9nm,0.7s						
ZALV	**Zalesovo Beam**	**41.80**	**308**	P	**P**	**15 14 40.1**	**-0.7**
ZALV	**Zalesovo Beam**	**41.80**	**308**	*e*P	**P**	**15 14 39.5**	**-1.4**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s						
D25K	**Kavik River**	**41.81**	**29**	P	**P**	**15 14 40.9**	**+0.1**
D25K				IAmb	IAmb	15 14 42.2	
	comp=Z,6.4nm,0.8s						
M24K	**Tolsona, Glenn**	**41.98**	**40**	P	**P**	**15 14 42.9**	**+0.5**
F26K	**Sheenjek River**	**42.59**	**31**	P	**P**	**15 14 48.2**	**+1.0**
C27K	**Jago River**	**42.76**	**29**	P	**P**	**15 14 49.2**	**+0.7**
C27K				IAmb	IAmb	15 15 01.8	
	comp=Z,10nm,1.2s						
K27K	**Chicken**	**43.66**	**37**	P	**P**	**15 14 56.2**	**+0.4**
F28M	**Old Crow**	**44.22**	**32**	P	**P**	**15 15 01.3**	**+0.9**
I28M	**Miner Creek**	**44.41**	**35**	P	**P**	**15 15 02.5**	**+0.6**
I28M				IAmb	IAmb	15 15 17.8	
	comp=Z,4.5nm,0.8s						
E29M	**Blow River**	**44.90**	**30**	P	**P**	**15 15 07.1**	**+1.4**
E29M				IAmb	IAmb	15 15 19.7	
	comp=Z,4.4nm,0.9s						
MK31	**Makanchi Array**	**45.37**	**298**	*ce*P	**P**	**15 15 10.1**	**+0.3**
MKAR	**Makanchi Array**	**45.37**	**298**	P	**P**	**15 15 10.0**	**+0.2**
	comp=Z,4.0nm,0.8s,baz=77,slow=8.6,SNR=20						
MKAR				pP	**pwP**	**15 15 22.3**	**+0.7**
	comp=Z,1.4nm,0.6s,baz=82,slow=7.8,SNR=4.9						
	comp=Z,4.0nm,0.8s						
MKAR	**Makanchi Array**	**45.37**	**298**	P	**P**	**15 15 09.6**	**-0.2**
G30M	**tAoh Zraii Nji**	**45.70**	**32**	P	**P**	**15 15 12.5**	**+0.3**
G30M				IAmb	IAmb	15 15 21.4	
	comp=Z,9.9nm,1.4s						
F30M	**Barrier River**	**45.78**	**31**	P	**P**	**15 15 14.3**	**+1.6**
F30M				IAmb	IAmb	15 15 23.1	
	comp=Z,8.2nm,0.8s						
KURK	**Kurchatov**	**46.33**	**305**	P	**P**	**15 15 16.6**	**-0.6**
KURK				IAmb	IAmb	15 15 17.9	
	comp=Z,3.9nm,0.8s						
KURK	**Kurchatov**	**46.33**	**305**	⇑*i*P	**P**	**15 15 16.8**	**-0.4**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KURK	**Kurchatov**	**46.33**	**305**	*e*P	**P**	**15 15 16.8**	**-0.4**
KURBB	**Kurchatov Arra**	**46.41**	**305**	P	**P**	**15 15 17.7**	**-0.2**
	comp=Z,1.6nm,0.5s,baz=73,slow=8.5,SNR=14						
KURBB				pP	**pwP**	**15 15 30.0**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=75,slow=8.9,SNR=5.6						
	comp=Z,1.6nm,0.5s						
CMAR	**Chiang Mai Arr**	**47.99**	**255**	P	**P**	**15 15 31.6**	**+1.0**
	comp=Z,1.0nm,0.6s,baz=48,slow=7.9,SNR=8.1						
CMAR				pP	**pwP**	**15 15 43.8**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=358,slow=8.7,SNR=2.2						
	comp=Z,1.0nm,0.6s						
A36M	**Sachs Harbour**	**48.56**	**24**	P	**P**	**15 15 35.5**	**+1.1**
A36M				IAmb	IAmb	15 15 41.6	
	comp=Z,4.2nm,0.8s						
BVAR	**Borovoye Array**	**50.30**	**310**	P	**P**	**15 15 47.0**	**-0.9**
	comp=Z,1.5nm,0.7s,baz=68,slow=9.6,SNR=9.7						
BVAR				pP	**pwP**	**15 15 59.4**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=83,slow=8.5,SNR=3.9						
	comp=Z,1.5nm,0.7s						
BORK	**Borovoye**	**50.33**	**310**	⇓*i*P	**P**	**15 15 47.3**	**-0.8**
BORK				pmax	pmax		
	comp=Z,19nm,4.3s						
TARG	**Taragay, Kyrgy**	**50.36**	**294**	P	**P**	**15 15 48.4**	**-0.6**
TARG	**Taragay, Kyrgy**	**50.36**	**294**	P	**P**	**15 15 48.4**	**-0.6**
TARG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KDJ	**Kajisay**	**50.59**	**295**	P	**P**	**15 15 51.1**	**+0.6**
KDJ				IAmb	IAmb	15 15 51.9	
	comp=Z,4.4nm,0.8s						
KDJ	**Kajisay**	**50.59**	**295**	P	**P**	**15 15 51.1**	**+0.6**
KDJ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BOOM	**Boomskoye usch**	**51.25**	**296**	P	**P**	**15 15 55.5**	**+0.1**
BOOM	**Boomskoye usch**	**51.25**	**296**	P	**P**	**15 15 55.6**	**+0.1**
BOOM				pmax	pmax		
	comp=Z,12nm,1.0s						
AAK	**Ala-Archa**	**52.14**	**296**	P	**P**	**15 16 02.0**	**0.0**
AAK	**Ala-Archa**	**52.14**	**296**	⇑*e*P	**P**	**15 16 02.2**	**+0.2**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
AAK	**Ala-Archa**	**52.14**	**296**	*e*P	**P**	**15 16 02.2**	**+0.2**
ARSB	**Arslanbob**	**53.75**	**296**	P	**P**	**15 16 14.7**	**+0.8**
ARSB	**Arslanbob**	**53.75**	**296**	P	**P**	**15 16 14.7**	**+0.8**
ARSB				pmax	pmax		
	comp=Z,13nm,1.0s						
KKAR	**Karatay Array**	**54.50**	**299**	P	**P**	**15 16 18.7**	**-0.5**
KKAR	**Karatay Array**	**54.50**	**299**	P	**P**	**15 16 18.7**	**-0.5**
ARTI	**Arti**	**55.24**	**317**	P	**P**	**15 16 23.6**	**-0.7**
	comp=Z,5.6nm,0.6s,baz=93,slow=6.4,SNR=9.0						
ARTI				pP	**pwP**	**15 16 35.2**	**-1.9**
	comp=Z,3.3nm,0.7s,baz=64,slow=8.0,SNR=3.4						
	comp=Z,5.6nm,0.6s						
ARTI	**Arti**	**55.24**	**317**	P	**P**	**15 16 23.5**	**-0.7**
ARTI	**Arti**	**55.24**	**317**	*d i*P	**P**	**15 16 23.4**	**-0.9**
ARTI				*PP	**pwP**	**15 16 35.7**	**-1.4**
ARTI						15 17 25.2	
ARTI				S	**S**	**15 23 59.6**	**-6.7**
ARTI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YKA	**Yellowknife Ar**	**55.87**	**34**	P	**P**	**15 16 29.3**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=299,slow=7.6,SNR=3.6						
	comp=Z,0.6nm,0.7s						
CHGR	**Chuyangaron**	**57.63**	**295**	P	**P**	**15 16 42.0**	**+0.3**
CHGR	**Chuyangaron**	**57.63**	**295**	P	**P**	**15 16 42.0**	**+0.3**

CHGR				pmax	pmax		
	comp=Z,13nm,0.7s						
AB31	Akbulak array	57.86	309	P	P	15 16 43.1	+0.1
ABKAR	Akbulak array	57.86	309	P	P	15 16 43.0	0.0
KIRV	Kirov	58.37	323	P	P	15 16 46.3	-0.1
	comp=Z,8.6nm,0.6s,baz=37,slow=7.9,SNR=2.9						
	comp=Z,8.6nm,0.6s						
KIRV	Kirov	58.37	323	⇓*i*P	P	15 16 46.4	0.0
ARCES	ARCESS Array B	59.93	340	P	P	15 16 56.6	-0.5
	comp=Z,4.4nm,0.8s,baz=40,slow=7.4,SNR=2.4						
	comp=Z,4.4nm,0.8s						
ARCES	ARCESS Array B	59.93	340	P	P	15 16 55.3	-1.8
KLMR	Klimovskoe	61.19	328	*e*P	P	15 17 02.2	-3.6
KLMR				pmax	pmax		
	comp=Z,14nm,1.2s						
BELG	Belogornoye	62.69	317	P	P	15 17 15.8	-0.2
	comp=Z,22nm,0.9s,baz=90,slow=4.0,SNR=4.7						
	comp=Z,22nm,0.9s						
BELG	Belogornoye	62.69	317	⇓*e*P	P	15 17 15.2	-0.8
BELG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SUMG	Summit	64.38	2	P	P	15 17 28.1	+0.7
SUMG	Summit	64.38	2	P	P	15 17 28.1	+0.7
FIA1	FINESS Array S	65.60	333	P	P	15 17 34.5	-0.4
FINES	FINESS Array B	65.60	333	P	P	15 17 34.2	-0.7
	comp=Z,2.0nm,0.5s,baz=39,slow=7.4,SNR=22						
	comp=Z,2.0nm,0.5s						
FINES	FINESS Array B	65.60	333	P	P	15 17 34.4	-0.5
FINES	FINESS Array B	65.60	333	*i* P	P	15 17 34.5	-0.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
OBN	Obninsk	66.08	324	*e*P	P	15 17 37.4	-0.7
OBN				*e**PP	pwP	15 17 52.5	+1.6
OBN				*e*		15 18 08.8	
OBN				*e*		15 19 59.8	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PDAR	Pinedale Array	69.75	50	P	P	15 18 04.7	+2.9
	comp=Z,0.6nm,1.1s,baz=282,slow=7.9,SNR=2.4						
	comp=Z,0.6nm,1.1s						
NC405	NORSAR Array S	70.10	339	P	P	15 18 02.8	-0.5
NB2	NORSAR Subarra	70.29	339	P	P	15 18 04.1	-0.4
	comp=Z,2.8nm,0.6s,baz=32,slow=6.9						
NOA	NORSAR Array B	70.29	339	P	P	15 18 04.3	-0.2
	comp=Z,1.6nm,0.6s,baz=32,slow=6.1,SNR=4.8						
NOA				pP	pwP	15 18 15.8	-1.4
	comp=Z,1.6nm,0.6s,baz=32,slow=6.2,SNR=4.5						
	comp=Z,1.6nm,0.6s						
NOA	NORSAR Array B	70.29	339	*e*P	P	15 18 05.3	+0.8
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
HFS	Hagfors	70.39	338	P	P	15 18 04.8	-0.3
	comp=Z,2.9nm,0.6s,baz=46,slow=8.5,SNR=7.9						
HFS				pP	pwP	15 18 16.3	-1.5
	comp=Z,3.5nm,0.5s,baz=46,slow=4.3,SNR=3.7						
	comp=Z,2.9nm,0.6s						
KIV	Kislovodsk	70.56	312	*e*P	P	15 18 05.8	-0.7
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KIV	Kislovodsk	70.56	312	*e*P	P	15 18 07.5	+1.0
KBZ	Khabaz	70.60	312	P	P	15 18 07.3	+0.8
	comp=Z,3.2nm,0.8s,baz=115,slow=1.0,SNR=7.5						
KBZ				pP	pwP	15 18 19.7	+0.4
	comp=Z,3.3nm,0.7s,baz=74,slow=2.4,SNR=4.5						
	comp=Z,3.2nm,0.8s						
KBZ	Khabaz	70.60	312	⇓*e*P	P	15 18 07.1	+0.5
KBZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KBZ	Khabaz	70.60	312	*e*P	P	15 18 07.1	+0.5
AKASG	Malin Array Be	72.35	324	P	P	15 18 17.1	0.0
	comp=Z,0.7nm,0.4s,baz=40,slow=5.8,SNR=10						
AKASG				pP	pwP	15 18 28.1	-1.7
	comp=Z,2.2nm,0.5s,baz=41,slow=6.1,SNR=4.6						
	comp=Z,0.7nm,0.4s						
AKASG	Malin Array Be	72.35	324	P	P	15 18 16.3	-0.8
AKASG				IAmb	IAmb	15 18 27.3	
	comp=Z,3.7nm,1.1s						
AKBB	Malin Array Si	72.35	324	⇓*e*P	P	15 18 16.0	-1.1
AKBB				pmax	pmax		
	comp=Z,38nm,3.2s						
BUR08	Bucovina Ar. S	76.39	324	P	P	15 18 43.1	+2.3
BUR08				IAmb	IAmb	15 18 44.0	
	comp=Z,3.2nm,0.8s						
BURAR	Bucovina Array	76.41	324	P	P	15 18 41.0	+0.1
CLL	Collm	78.04	333	*e*P	P	15 18 51.0	+1.2
KHC	Kasperske Hory	79.69	332	P	P	15 19 00.7	+1.7
KHC				IAmb	IAmb	15 19 02.3	
	comp=Z,2.8nm,0.7s						
KHC	Kasperske Hory	79.69	332	P	P	15 19 00.7	+1.7
KHC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GERES	GERESS Array B	79.89	331	P	P	15 18 59.8	-0.4
	comp=Z,0.6nm,0.6s,baz=38,slow=6.8,SNR=4.0						
GERES				pP	pwP	15 19 11.4	-1.5
	comp=Z,0.4nm,0.3s,baz=347,slow=4.1,SNR=3.4						
	comp=Z,0.6nm,0.6s						
GERES	GERESS Array B	79.89	331	*e*P	P	15 19 02.7	+2.5
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BMRD	Maredsous	81.46	337	*d*P	P	15 19 10.6	+2.2
MMAI	Mount Meron Ar	82.28	308	P	P	15 19 14.6	+1.4
	comp=Z,0.8nm,0.4s,baz=30,slow=10.0,SNR=1.1						
MMAI				pP	pwP	15 19 26.3	+0.5
	comp=Z,3.0nm,0.8s,baz=33,slow=6.3,SNR=2.7						
	comp=Z,0.8nm,0.4s						
TXAR	Lajitas Array	82.40	57	P	P	15 19 14.6	+0.7
	comp=Z,0.6nm,0.7s,baz=329,slow=8.7,SNR=4.2						
	comp=Z,0.6nm,0.7s						
TXAR	Lajitas Array	82.40	57	P	P	15 19 13.8	-0.1
TXAR	Lajitas Array	82.40	57	P	P	15 19 13.8	-0.1
BELA	Belgrano 2	145.25	179		PKPbc	15 26 27.7	+0.3

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*IDC **04** 15:10:49.0±0.6, 9°.06S×160°.81E, h30km±3km, mb4.6/24, mbtmp4.7/24, MS3.9/37, Error ellipse: s-maj=17.6km s-min=13.4km az=93.0*

*NEIC **04** 15:10:50.6±1.3, 9°.05S±0°.04×160°.8E±0°.1, h39km±6km, mb4.8/95, Error ellipse: s-maj=14.8km s-min=4.9km az=79.0*

*BJI **04** 15:10:53.0, 9°.20S×161°.10E, h100km, mB5.0/6, mb4.9/33*

ISC 04 15:10:50.0±0.3**, 8°.95S**±0°.05×**160°.88E**±0°.05**, h39**km±2km**,**
h39km:pP-P, n271, σ1ˢ31/252**, mb4.9**/98**, MS4.0**/37**, 1C,**
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALEG	Aligegeo Malai	0.26	317	P	Pn	15 10 57.5	-0.5
ALEG	Aligegeo Malai	0.26	317	S	Sn	15 11 03.3	-1.0
SAVO	Savo Central	1.07	259	P	Pn	15 11 09.8	+1.3
TATA	Tatamba Isabel	1.20	298	P	Pn	15 11 11.1	+0.9
HURO	Huro Makira	1.82	146	P	Pn	15 11 20.0	+1.3
HURO	Huro Makira	1.82	146	S	Sn	15 11 43.7	+3.2
NGOA	Tingoa Renbel	2.71	197	P	Pn	15 11 31.6	+0.5
NGOA	Tingoa Renbel	2.71	197	S	Sn	15 12 04.2	+1.5
SANVU	Saraoutou	8.94	137		Pn	15 12 56.4	-0.2
SANVU	Saraoutou	8.94	137	P	Pn	15 12 57.5	+0.9
RABL	Rabaul	9.86	298	Pn	Pn	15 13 11.3	+2.0
PMG	Port Moresby	13.55	267	Pn	Pn	15 14 03.3	+3.5
	0.1nm,0.3s,baz=127,slow=5.1,SNR=3.5						
PMG				LR	LR	15 19 08.0	
	comp=Z,922nm,18.6s,baz=114,slow=37						
PMG	Port Moresby	13.55	267	Pn	Pn	15 13 59.2	-0.5
PMG	Port Moresby	13.55	267	P	P	15 14 09.6	+1.5
DZM	Mont Dzumac	14.11	158	Pn	Pn	15 14 10.1	+2.8
	0.4nm,0.3s,baz=129,slow=21,SNR=19						
DZM				LR	LR	15 19 09.0	
	comp=Z,623nm,19.7s,baz=337,slow=36						
DZM	Mont Dzumac	14.11	158	*e*P	Pn	15 14 08.9	+1.6
	90nm,1.4s						
DZM				*e*LR	LR	15 16 54.3	
	1µm,22.9s						
DZM	Mont Dzumac	14.11	158	Pn	Pn	15 14 06.7	-0.6
DZM	Mont Dzumac	14.11	158	P	Pn	15 14 08.3	+1.0
MARNC	Mare, Loyalty	14.24	152	P	Pn	15 14 10.7	+1.6
YATNC	Mamie plateau,	14.26	157	P	Pn	15 14 10.7	+1.3
ONTNC	Ouen Toro	14.32	159	P	P	15 14 15.4	-1.3
OUENC	Ouen Island, N	14.57	158	P	Pn	15 14 15.4	+1.9
PINNC	Pines Island,	14.98	156	P	P	15 14 23.4	-0.6
TARA	Tarawa	15.77	50	P	Pn	15 14 28.6	-0.8
PATS	Pohnpei	15.89	351	Pn	Pn	15 14 29.7	-1.1
PATS	Pohnpei	15.89	351	P	Pn	15 14 29.3	-1.5
TV1H	Townsville Har	17.07	232	P	P	15 14 46.5	-0.6
CTA	Charters Tower	17.96	230	LR	LR	15 21 21.8	
	comp=Z,21nm,20.9s,baz=51,slow=36						
CTA	Charters Tower	17.96	230	P	P	15 14 57.6	+0.6
CTAO	Charters Tower	17.96	230	P	P	15 14 58.6	+1.6
CTAO	Charters Tower	17.96	230	P	P	15 14 57.4	+0.4
COEN	Coen	18.05	252	P	P	15 14 59.7	+1.7
COEN	Coen	18.05	252	P	P	15 14 58.2	+0.2
MTSU	Mount Surprise	18.50	239	P	Pn	15 15 04.2	+0.8
EIDS	Eidsvold	18.81	209		Pn	15 15 07.7	+0.6
JAY	Jayapura	21.05	286	P	P	15 15 30.3	-0.6
	56nm,1.0s,baz=266,slow=5.8,SNR=5.0						
	56nm,1.0s						
JAY	Jayapura	21.05	286	P	P	15 15 34.4	+3.5
	68nm,1.1s						
ARMA	Armidale	23.05	201	P	P	15 15 51.6	-0.5
ARMA	Armidale	23.05	201	P	P	15 15 51.5	-0.5
QIS	Mount Isa	23.55	238	P	P	15 15 56.8	-0.3
QLP	Quilpie	23.59	220	P	P	15 15 57.7	+0.4
CMSA	Cobar Meteorol	26.55	210	P	P	15 16 23.9	-0.3
INKA	Innaminka	26.66	223	P	P	15 16 24.9	-0.3
GUMO	Guam	27.46	324	LR	LR	15 26 46.2	
	comp=Z,176nm,20.8s,baz=140,slow=35						
WR8	Warramunga Arr	27.74	244	P	P	15 16 34.1	-1.1
WB0	Warramunga Arr	27.78	244	P	P	15 16 34.5	-0.9
H11S2	WAKE ISLAND Hy	27.86	12	T	T	15 45 17.6	
	baz=193,slow=76,SNR=99						
H11S3	WAKE ISLAND Hy	27.86	12	T	T	15 45 41.2	
	baz=193,slow=76,SNR=322						
WRAB	Tennant Creek	27.87	244	P	P	15 16 35.0	-1.3
WRAB	Tennant Creek	27.87	244	P	P	15 16 35.2	-1.1
H11S1	WAKE ISLAND Hy	27.88	12	T	T	15 45 43.1	
	baz=193,slow=76,SNR=265						
WB1	Warramunga Ar.	27.88	244	P	P	15 16 36.0	-0.4
WRA	Warramunga Arr	27.88	244	P	P	15 16 35.8	-0.6
	11nm,0.8s,baz=70,slow=11,SNR=112						
WRA				PcP	PcP	15 19 51.5	-0.2
	1.6nm,0.8s,baz=62,slow=2.4,SNR=4.5						
	11nm,0.8s						
WRA	Warramunga Arr	27.88	244	P	P	15 16 34.3	-2.1
RAO	Raoul Island	28.35	138	LR	LR	15 26 29.2	
	comp=Z,219nm,19.7s,baz=20,slow=33						
CAN	Canberra	28.41	201	P	P	15 16 41.0	+0.1
STKA	Stephens Creek	29.00	215	P	P	15 16 45.6	-0.6
	9.6nm,0.7s,baz=61,slow=14,SNR=22						
STKA				LR	LR	15 28 15.7	
	comp=Z,288nm,19.9s,baz=34,slow=36						
	9.6nm,0.7s						
STKA	Stephens Creek	29.00	215	P	P	15 16 45.7	-0.5
STKA	Stephens Creek	29.00	215	P	P	15 16 46.1	-0.1
H11N1	WAKE ISLAND Hy	29.09	12	T	T	15 47 11.2	
	baz=192,slow=76,SNR=177						
H11N3	WAKE ISLAND Hy	29.10	12	T	T	15 47 13.6	
	baz=192,slow=76,SNR=98						
H11N2	WAKE ISLAND Hy	29.11	12	T	T	15 47 13.1	
	baz=192,slow=76,SNR=159						
MTN	Manton Dam	29.45	260	P	P	15 16 49.5	-0.9
AS31	Alice Springs	29.66	237	P	P	15 16 50.9	-1.3
ASAR	Alice Springs	29.66	237	P	P	15 16 50.7	-1.5
	8.2nm,0.9s,baz=62,slow=10,SNR=129						
ASAR				LR	LR	15 28 16.7	
	comp=Z,297nm,21.1s,baz=50,slow=36						
	8.2nm,0.9s						
ASAR	Alice Springs	29.66	237	P	P	15 16 50.3	-1.9
HTT	Hallett	31.68	217	P	P	15 17 09.9	0.0
TOO	Toolangi	31.71	204	P	P	15 17 10.1	0.0
KNRA	Kununurra	32.05	255	P	P	15 17 12.0	-1.3
URZ	Urewera	32.64	156	LR	LR	15 29 17.5	
	comp=Z,247nm,19.4s,baz=320,slow=34						
KRAI	Karang Ratu	32.76	278	P	P	15 17 19.8	+0.2
BBOO	Buckleboo	33.02	220	P	P	15 17 20.9	-0.8
BBOO	Buckleboo	33.02	220	P	P	15 17 20.7	-0.9
BKZ	Black Stump Fm	33.19	158	P	P	15 17 23.2	+0.2
KHZ	Kahutara	35.15	164	P	P	15 17 39.9	0.0
SANI	Sanana	35.38	279	P	P	15 17 40.7	-1.6
FITZ	Fitzroy Crossi	35.39	251	LR	LR	15 32 36.6	
	comp=Z,226nm,18.2s,baz=58,slow=37						
FITZ	Fitzroy Crossi	35.39	251	P	P	15 17 40.3	-2.0
FITZ	Fitzroy Crossi	35.39	251	P	P	15 17 42.0	-0.3
SOEI	Soe	36.12	266	P	P	15 17 48.3	-0.5
BATI	Baumata	36.70	265	LR	LR	15 34 55.9	
	comp=Z,271nm,18.3s,baz=116,slow=40						
BATI	Baumata	36.70	265	P	P	15 17 53.9	+0.2
MLZ	Mavora Lakes	36.82	171	P	P	15 17 53.6	-0.7
FORT	Forrest	37.51	230	P	P	15 17 58.9	-1.4
FORT				IAmb	IAmb	15 18 00.4	
	comp=Z,9.5nm,0.8s						
MMRI	Maumere	38.18	267	P	P	15 18 04.2	-1.9
MMRI	Maumere	38.18	267	P	P	15 18 04.9	-1.2
	comp=Z,108nm,1.3s						
DAV	Davao City (W)	38.61	293	LR	LR	15 32 22.5	
	comp=Z,60nm,21.5s,baz=100,slow=34						
EDFI	Ende, Flores	38.71	267	P	P	15 18 08.3	-2.4
	comp=Z,35nm,1.2s						
LUWI	Luwuk	38.73	280	P	P	15 18 09.7	-1.1
LUWI	Luwuk	38.73	280	P	P	15 18 12.3	+1.5
	comp=Z,38nm,1.6s						
RAR	Rarotonga	39.78	112	LR	LR	15 33 28.2	
	comp=Z,41nm,20.4s,baz=266,slow=34						
APSI	Ampana	39.86	279	P	P	15 18 21.8	+1.6
	comp=Z,31nm,1.4s						
JCJ	Chichijima	40.15	334	LR	LR	15 34 13.9	
	comp=Z,70nm,19.8s,baz=100,slow=35						
LBFI	Labuhan Bajo,	40.50	267	P	P	15 18 23.3	-2.2
	comp=Z,50nm,0.9s						
BKSI	Bulukumba	40.58	272	P	P	15 18 25.3	-0.9
	comp=Z,8.2nm,0.7s						
BNSI	Bone	40.73	274	P	P	15 18 26.8	-0.6
	comp=Z,40nm,1.0s						
WBSI	Waikabubak, Su	40.93	266	P	P	15 18 27.2	-1.9
	comp=Z,70nm,1.0s						
KAPI	Kappang	40.99	273	LR	LR	15 36 45.5	
	comp=Z,49nm,20.4s,baz=88,slow=38						
KAPI	Kappang	40.99	273	P	P	15 18 27.6	-1.9
KAPI				IAmb	IAmb	15 18 30.9	
	comp=Z,26nm,1.1s						
KAPI	Kappang	40.99	273	P	P	15 18 29.6	0.0
	comp=Z,13nm,1.3s						
KAPI	Kappang	40.99	273	P	P	15 18 28.8	-0.8
KAPI				pP	pP	15 18 39.7	-0.4
SPSI	Sidrap Palu	41.13	274	P	P	15 18 39.4	+8.7
TOLI2	Tolitoli	41.18	282	P	P	15 18 30.5	-0.6
PSA00	Pilbara Seismi	41.39	248	P	P	15 18 31.1	-1.7
PSA00				IAmb	IAmb	15 18 32.6	
	comp=Z,24nm,0.8s						
PSA00	Pilbara Seismi	41.39	248	P	P	15 18 32.0	-0.8
MBWA	Marble Bar	41.42	248	P	P	15 18 31.6	-1.5
MBWA				IAmb	IAmb	15 18 32.8	
	comp=Z,27nm,1.0s						
MBWA	Marble Bar	41.42	248	P	P	15 18 31.9	-1.1
PCI	Palu	41.62	279	P	P	15 18 36.5	+1.7
	comp=Z,33nm,1.2s						
DBNI	Kabupaten Domp	42.06	267	P	P	15 18 35.4	-2.9
	comp=Z,15nm,1.0s						
PLAI	Plampang	42.57	267	P	P	15 18 40.6	-1.9
PLAI	Plampang	42.57	267	P	P	15 18 40.0	-2.5
	comp=Z,598nmcomp=Z,77nm,1.2s						
MEEK	Meekatharra	43.67	241	P	P	15 18 50.8	-0.5
KLNI	Mataram	44.25	267	P	P	15 18 50.5	-5.6
MYLDM	Lahad Datu	44.52	287	P	P	15 18 57.9	-0.2
MYLDM				IAmb	IAmb	15 19 09.7	
	comp=Z,18nm,1.0s						
MYLDM	Lahad Datu	44.52	287	P	P	15 18 59.8	+1.6
	comp=Z,20nm,1.0s						
JAGI	Jajag, Banyuwa	46.17	267	P	P	15 19 07.9	-3.4
JAGI	Jajag, Banyuwa	46.17	267	P	P	15 19 09.7	-1.6
JAGI	Jajag, Banyuwa	46.17	267	P	P	15 19 08.5	-2.8
	comp=Z,69nm,1.0s						
BLDU	Ballidu	46.43	236	P	P	15 19 12.8	-0.3
MORW	Morawa	46.53	238	P	P	15 19 12.3	-1.6
MORW	Morawa	46.53	238	P	P	15 19 13.8	-0.1
NWAO	Narrogin (SRO)	46.77	233	LR	LR	15 39 01.5	
	comp=Z,351nm,20.1s,baz=62,slow=36						
NWAO	Narrogin (SRO)	46.77	233	P	P	15 19 15.0	-0.8
	comp=Z,11nm,1.1s						
NWAO	Narrogin (SRO)	46.77	233	P	P	15 19 15.2	-0.6
	comp=Z,11nm,1.1s						
MUN	Mundaring	47.27	234	P	P	15 19 19.7	0.0
SJI	Sawahan	48.58	268	P	P	15 19 29.7	-0.5
	comp=Z,27nm,1.4s						
SNJI	Sawahan-Nganju	48.58	268	P	P	15 19 29.9	-0.4
	comp=Z,46nm,1.5s						
PPT	Papeete	48.86	105	LR	LR	15 35 19.8	
	comp=Z,56nm,21.7s,baz=258,slow=30						
PCJI	Pacitan	49.12	267	P	P	15 19 32.9	-1.3
JGF	Kuroka	49.55	335	P	P	15 19 38.0	+0.8
JGF				IAmb	IAmb	15 19 51.9	
	comp=Z,11nm,0.9s						
JMN	Monobe	49.59	330	P	P	15 19 38.3	+0.9
MJAR	Matsushiro Arr	50.01	336	P	P	15 19 40.6	0.0
	comp=Z,4.8nm,0.8s,baz=168,slow=9.0,SNR=10						
MJAR				LR	LR	15 40 17.4	
	comp=Z,49nm,20.4s,baz=138,slow=35						
	comp=Z,4.8nm,0.8s						
MJAR	Matsushiro Arr	50.01	336	P	P	15 19 40.8	+0.1
MAJO	Matsushiro	50.02	336	P	P	15 19 40.3	-0.3
MAJO				IAmb	IAmb	15 19 49.0	
	comp=Z,13nm,0.9s						
MJB9	Matsu-Tunnel	50.02	336	P	P	15 19 41.2	+0.6
MJB9				IAmb	IAmb	15 19 49.9	
	comp=Z,12nm,0.9s						
JNU	Nakatsue	50.65	327	P	P	15 19 44.0	-1.5
	comp=Z,12nm,0.9s,baz=98,slow=7.2,SNR=5.0						
	comp=Z,12nm,0.9s						
ASAJ	Asahikawa	55.35	344	LR	LR	15 41 25.9	
	comp=Z,168nm,22.0s,baz=156,slow=33						
KSRS	Korea Array	55.52	328	P	P	15 20 22.2	+1.1
	comp=Z,4.6nm,0.9s,baz=147,slow=7.6,SNR=11						
KSRS				LR	LR	15 42 23.7	
	comp=Z,28µm,20.3s,baz=115,slow=34						
	comp=Z,4.6nm,0.9s						
KSAR	Wonju Array Be	55.53	328	P	P	15 20 21.7	+0.4
MDSI	Maura Dua	56.44	271	P	P	15 20 26.2	-2.1
	comp=Z,16nm,1.3s						
USRK	Ussuriysk Ar.	59.01	336	P	P	15 20 47.0	+1.2
	comp=Z,19nm,0.8s,baz=145,slow=6.0,SNR=18						
	comp=Z,19nm,0.8s						
CN2	Changchun	61.55	331	P	P	15 21 03.8	+0.6
CN2				PcP	PcP	15 21 45.2	+0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PETK	Petropavlovsk-	61.87	358	P	P	15 21 06.4	+1.3
	comp=Z,5.2nm,0.8s,baz=183,slow=6.8,SNR=3.6						
PETK				LR	LR	15 43 39.7	
	comp=Z,115nm,21.5s,baz=194,slow=32						
	comp=Z,5.2nm,0.8s						
PETK	Petropavlovsk-	61.87	358	P	P	15 21 06.0	+0.9
BNX	BinXian	62.17	334	⇑P	P	15 21 07.7	+0.4
BNX				pmax	pmax		
	comp=Z,14nm,0.9s						
SHEM	Shemya Is, Ala	62.47	9	LR	LR	15 45 39.1	
	comp=Z,83nm,18.7s,baz=270,slow=33						
ENH	Enshi	62.88	311	P	P	15 21 12.2	-0.2
ENH				IAmb	IAmb	15 21 14.2	
	comp=Z,12nm,1.0s						
XAN	Xi'an	65.20	314	P	P	15 21 27.8	+0.2
XAN				pmax	pmax		
	comp=Z,14nm,1.3s						
HEH	HeiHe	65.76	337	*e*P	P	15 21 31.2	+0.4
HEH				pmax	pmax		
	comp=Z,18nm,0.9s						
XLT	XiLinHaoTe	66.42	326	*e*P	P	15 21 37.1	+1.8
XLT				pmax	pmax		
	comp=Z,48nm,1.1s						
CM31	Chiang Mai Arr	66.88	294	P	P	15 21 39.0	+0.3
CM31				IAmb	IAmb	15 21 40.2	
	comp=Z,12nm,0.8s						
CMAR	Chiang Mai Arr	66.88	294	P	P	15 21 39.0	+0.4
	comp=Z,8.2nm,0.8s,baz=120,slow=4.8,SNR=47						
CMAR				pP	pP	15 21 48.1	-2.4
	comp=Z,3.2nm,0.8s,baz=119,slow=4.7,SNR=5.5						
	comp=Z,8.2nm,0.8s						
CMAR	Chiang Mai Arr	66.88	294	P	P	15 21 38.5	-0.2
CHTO	Chiang Mai	67.00	295	P	P	15 21 38.9	-0.5
CHTO	Chiang Mai	67.00	295	P	P	15 21 39.1	-0.3
BTO	Baotou	68.00	320	*e*P	P	15 21 50.8	+5.4
BTO				pmax	pmax		
	comp=Z,16nm,0.5s						
HIA	Hailar	68.24	332	P	P	15 21 47.4	+0.7
HIA				IAmb	IAmb	15 21 48.8	
	comp=Z,8.6nm,0.8s						
HILR	Hailar Array B	68.44	333	P	P	15 21 48.8	+0.9
	comp=Z,3.7nm,0.6s,baz=139,slow=6.7,SNR=6.3						
	comp=Z,3.7nm,0.6s						
VNDA	Vanda	68.55	180	P	P	15 21 47.7	-0.5
	comp=Z,1.7nm,0.7s,baz=339,slow=7.1,SNR=9.3						
VNDA				pP	pP	15 21 57.3	-2.7
	comp=Z,2.0nm,0.7s,baz=354,slow=4.8,SNR=5.2						
VNDA				LR	LR	15 47 00.7	
	comp=Z,97nm,20.2s,baz=357,slow=32						
	comp=Z,1.7nm,0.7s						
VNDA	Vanda	68.55	180	P	P	15 21 47.2	-0.9
MA2	Magadan	68.78	354	LR	LR	15 47 42.9	
	comp=Z,58nm,21.3s,baz=131,slow=32						
LZH	Lanzhou	69.83	314	*e*P	P	15 21 58.3	+1.4
LZH				pmax	pmax		
	comp=Z,21nm,1.6s						
LZDM	Lanzhou Array	69.87	313	P	P	15 21 59.0	+1.5
	comp=Z,3.3nm,0.5s,baz=126,slow=6.6,SNR=7.3						
	comp=Z,3.3nm,0.5s						
SEY	Seymchan	71.96	356	LR	LR	15 51 09.1	
	comp=Z,88nm,20.7s,baz=138,slow=34						
ULN	Ulaanbaatar	73.83	326	P	P	15 22 22.0	+1.3
ULN	Ulaanbaatar	73.83	326	P	P	15 22 22.4	+1.7
ULN	Ulaanbaatar	73.83	326	P	P	15 22 22.4	+1.7
ULN				sP	PcP	15 22 38.8	+2.6
GTA	Gaotai	74.18	315	*e*P	P	15 22 24.8	+1.9
GTA				pmax	pmax		
	comp=Z,32nm,1.0s						
SONM	Songino Array	74.18	325	P	P	15 22 24.5	+1.8
	comp=Z,25nm,0.9s,baz=143,slow=5.9,SNR=112						
SONM				pP	pP	15 22 33.7	-1.0
	comp=Z,6.5nm,0.7s,baz=140,slow=5.8,SNR=7.3						
SONM				LR	LR	15 55 56.8	
	comp=Z,19nm,18.2s,baz=110,slow=36						
	comp=Z,25nm,0.9s						
SONM	Songino Array	74.18	325	P	P	15 22 24.0	+1.2
YAK	Yakutsk	74.80	345	P	P	15 22 26.8	+1.0
	comp=Z,55nm,0.7s,baz=337,slow=0.6,SNR=33						
YAK				LR	LR	15 52 28.5	
	comp=Z,91nm,21.8s,baz=103,slow=33						
	comp=Z,55nm,0.7s						
YAK	Yakutsk	74.80	345	P	P	15 22 26.2	+0.4
YAK	Yakutsk	74.80	345	P	P	15 22 26.7	+0.9
YAK				sP	sP	15 22 43.0	+0.8
SHL	Shillong	75.31	299	P	P	15 22 29.6	-0.2
KDAK	Kodiak Island	76.49	24	LR	LR	15 52 57.6	
	comp=Z,94nm,20.3s,baz=219,slow=33						
GOMU	GeErMu	76.50	311	P	P	15 22 37.3	+0.6
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
K15K	Wolf Creek Mou	76.74	17	P	P	15 22 38.6	+1.6
LSA	Lhasa	77.19	303	P	P	15 22 41.0	+0.2
LSA				IAmb	IAmb	15 22 42.9	
	comp=Z,14nm,1.2s						
L19K	White Mountain	78.73	20	P	P	15 22 49.4	+1.3
L19K				IAmb	IAmb	15 23 00.5	
	comp=Z,14nm,1.1s						
EVN	Everest	80.33	300	P	P	15 22 57.9	-0.5
EVN				IAmb	IAmb	15 22 59.8	
	comp=Z,14nm,0.8s						
RDOG	Red Dog Mine	81.00	13	P	P	15 23 01.0	+0.8
RDOG				IAmb	IAmb	15 23 07.0	
	comp=Z,11nm,0.6s						
QSPA	South Pole Qui	81.04	180	P	P	15 23 02.8	+2.0
	comp=Z,3.2nm,0.7s,baz=338,slow=0.9,SNR=22						
QSPA				LR	LR	15 56 15.1	
	comp=Z,75nm,18.8s,baz=18,slow=34						
TRF	Thorofare Moun	81.13	20	P	P	15 23 00.4	-0.8
TRF				IAmb	IAmb	15 23 03.9	
	comp=Z,6.8nm,0.9s						
DIV	Divide	81.31	23	P	P	15 23 02.8	+0.7
DIV				IAmb	IAmb	15 23 12.2	
	comp=Z,17nm,1.2s						
MCK	McKinley	81.77	20	P	P	15 23 05.2	+0.8
MCK				IAmb	IAmb	15 23 06.4	
	comp=Z,16nm,1.0s						
DHY	Denali Highway	81.90	21	P	P	15 23 06.4	+1.1
DHY				IAmb	IAmb	15 23 11.1	
	comp=Z,9.8nm,1.4s						
WRH	Wood River Hil	82.53	20	P	P	15 23 08.2	-0.1
WRH				IAmb	IAmb	15 23 18.8	
	comp=Z,8.6nm,1.2s						
CCB	Clear Creek Bu	82.74	20	P	P	15 23 09.1	-0.2
COLA	College	82.86	20	P	P	15 23 10.1	+0.1
COLA	College	82.86	20	P	P	15 23 10.4	+0.4
HDA	Harding Lake	82.88	20	P	P	15 23 10.6	+0.4
HDA				IAmb	IAmb	15 23 11.8	
	comp=Z,8.7nm,1.0s						
H23K	Yukon River	82.93	18	P	P	15 23 11.8	+1.3
H23K				IAmb	IAmb	15 23 12.7	
	comp=Z,7.6nm,0.9s						
IL31		83.12	20	P	P	15 23 11.6	+0.3
IL31				IAmb	IAmb	15 23 33.8	
	comp=Z,6.7nm,1.1s						

ILAR	Eielson Array	83.12	20	P	P	15 23 11.7	+0.2
	comp=Z,2.1nm,0.6s,baz=250,slow=5.1,SNR=31						
ILAR				LR	LR	15 56 28.1	
	comp=Z,60nm,21.0s,baz=254,slow=33						
	comp=Z,2.1nm,0.6s						
ILAR	Eielson Array	83.12	20	P	P	15 23 11.5	+0.1
TIXI	Tiksi	83.18	350	LR	LR	16 01 37.9	
	comp=Z,60nm,18.9s,baz=191,slow=37						
TIXI	Tiksi	83.18	350	P	P	15 23 12.2	+0.7
TIXI				IAmb	IAmb	15 23 13.7	
	comp=Z,7.0nm,0.8s						
G23K	Bananza Creek	83.37	18	P	P	15 23 14.5	+1.8
G23K				IAmb	IAmb	15 23 14.8	
	comp=Z,8.3nm,1.2s						
DOT	Dot Lake	83.44	22	P	P	15 23 13.7	+0.6
DOT				IAmb	IAmb	15 23 26.5	
	comp=Z,14nm,1.4s						
J25K	Salcha River,	83.54	20	P	P	15 23 14.3	+0.7
J25K				IAmb	IAmb	15 23 24.9	
	comp=Z,13nm,1.4s						
SCRK	Sand Creek	83.66	21	P	P	15 23 15.2	+0.9
B20K	Meade River	83.82	13	P	P	15 23 16.4	+1.5
B20K				IAmb	IAmb	15 23 17.1	
	comp=Z,9.1nm,0.9s						
D22K	Ayikyak River	84.10	15	P	P	15 23 17.8	+1.4
D22K				IAmb	IAmb	15 23 19.3	
	comp=Z,5.8nm,0.8s						
G24K	Hadweenzic Riv	84.14	18	P	P	15 23 17.0	+0.4
G24K				IAmb	IAmb	15 23 19.1	
	comp=Z,8.6nm,0.9s						
B21K	Ikpikpuk River	84.14	14	P	P	15 23 18.1	+1.6
B21K				IAmb	IAmb	15 23 19.0	
	comp=Z,7.2nm,0.8s						
F24K	Squaw Lake	84.53	18	P	P	15 23 20.6	+2.0
D23K	Nanushuk River	84.69	16	P	P	15 23 20.6	+1.3
D23K				IAmb	IAmb	15 23 22.4	
	comp=Z,7.6nm,0.8s						
I26K	Coal Creek Min	84.72	20	P	P	15 23 20.6	+1.1
I26K				IAmb	IAmb	15 23 46.7	
	comp=Z,9.1nm,1.3s						
MAW	Mawson	84.84	202	LR	LR	15 56 24.6	
	comp=Z,74nm,22.0s,baz=98,slow=32						
B22K	Teshekpuk Lake	84.94	14	P	P	15 23 21.1	+0.6
B22K				IAmb	IAmb	15 23 23.1	
	comp=Z,6.3nm,0.9s						
C23K	Itkillik River	85.29	15	P	P	15 23 23.8	+1.5
C23K				IAmb	IAmb	15 23 50.2	
	comp=Z,15nm,1.4s						
I27K	Kandik River	85.42	21	P	P	15 23 24.8	+1.7
I27K				IAmb	IAmb	15 23 25.3	
	comp=Z,5.9nm,1.1s						
M30M	Minto, Yukon	85.67	24	P	P	15 23 26.1	+1.6
M30M				IAmb	IAmb	15 23 27.4	
	comp=Z,8.5nm,0.9s						
F26K	Sheenjek River	85.78	18	P	P	15 23 26.7	+1.9
K29M	Barlow Dome	86.00	23	P	P	15 23 27.9	+1.8
K29M				IAmb	IAmb	15 23 29.4	
	comp=Z,9.3nm,1.1s						
D25K	Kavik River	86.10	16	P	P	15 23 27.9	+1.5
J30M	Hart River	86.81	23	P	P	15 23 32.5	+2.4
J30M				IAmb	IAmb	15 23 43.3	
	comp=Z,15nm,1.5s						
E27K	Coleen River	86.85	18	P	P	15 23 30.1	+0.1
E27K				IAmb	IAmb	15 23 33.4	
	comp=Z,8.3nm,1.1s						
DLBC	Dease Lake	86.90	29	LR	LR	15 53 30.3	
	comp=Z,53nm,21.4s,baz=277,slow=29						
C27K	Jago River	87.03	17	P	P	15 23 32.3	+1.4
C27K				IAmb	IAmb	15 23 34.0	
	comp=Z,7.8nm,1.0s						
I30M	Mount Dempster	87.10	22	P	P	15 23 31.6	+0.1
I30M				IAmb	IAmb	15 23 34.1	
	comp=Z,6.3nm,0.9s						
G29M	Pine Creek	87.34	20	P	P	15 23 31.7	-0.8
E28M	Babbage River	87.72	18	P	P	15 23 36.1	+1.8
E28M				IAmb	IAmb	15 23 36.8	
	comp=Z,3.9nm,1.0s						
H31M	Peel River	88.12	22	P	P	15 23 37.6	+1.4
NVAR	Mina Array Bea	88.38	51	P	P	15 23 40.8	+2.4
	comp=Z,1.9nm,0.8s,baz=238,slow=5.6,SNR=9.4						
	comp=Z,1.9nm,0.8s						
F30M	Barrier River	88.44	20	P	P	15 23 38.7	+1.0
F30M				IAmb	IAmb	15 23 46.7	
	comp=Z,7.1nm,1.2s						
MKAR	Makanchi Array	88.74	318	P	P	15 23 39.8	+0.2
	comp=Z,8.5nm,0.8s,baz=103,slow=5.5,SNR=44						
	comp=Z,8.5nm,0.8s						
PFO	Pinyon Flats O	88.84	56	LR	LR	15 58 59.0	
	comp=Z,135nm,18.0s,baz=265,slow=32						
MAKZ	Makanchi	88.95	318	P	P	15 23 40.8	+0.2
MAKZ				pP	pP	15 23 53.1	+0.4
ZALV	Zalesovo Beam	89.08	325	P	P	15 23 40.5	-0.4
	comp=Z,2.7nm,0.7s,baz=113,slow=4.7,SNR=11						
ZALV				LR	LR	16 04 04.0	
	comp=Z,25nm,19.9s,baz=82,slow=36						
	comp=Z,2.7nm,0.7s						
ZALV	Zalesovo Beam	89.08	325	P	P	15 23 39.9	-1.1
TARG	Taragay, Kyrgy	90.76	312	P	P	15 23 49.6	-0.1
F10A	Beach Ranch, E	90.78	44	P	P	15 23 50.0	+0.8
F10A				IAmb	IAmb	15 23 52.0	
	comp=Z,4.1nm,0.9s						
W13A	Hualapai Mount	91.21	55	P	P	15 23 53.2	+1.5
W13A				IAmb	IAmb	15 23 54.8	
	comp=Z,5.4nm,0.9s						
KDJ	Kajisay	91.29	312	P	P	15 23 51.8	-0.1
NEW	Newport	91.32	41	LR	LR	15 55 12.7	
	comp=Z,73nm,21.9s,baz=255,slow=29						
KSH	Kashi	91.72	310	P	P	15 23 56.0	+2.2
KSH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURBB	Kurchatov Arra	92.02	321	P	P	15 23 54.1	-0.7
	comp=Z,2.6nm,0.8s,baz=30,slow=5.3,SNR=4.8						
KURBB				pP	pP	15 24 03.9	-3.0
	comp=Z,0.6nm,0.5s,baz=108,slow=3.9,SNR=3.1						
	comp=Z,2.6nm,0.8s						
BOOM	Boomskoye usch	92.26	312	P	P	15 23 56.1	-0.2
BOOM				IAmb	IAmb	15 23 57.6	
	comp=Z,5.9nm,0.9s						
NRIK	Noril'sk	92.51	340	P	P	15 23 56.1	-0.5
	comp=Z,3.4nm,0.9s,baz=124,slow=4.8,SNR=5.3						
NRIK				LR	LR	16 03 20.7	
	comp=Z,83nm,21.8s,baz=116,slow=34						
	comp=Z,3.4nm,0.9s						
LPIG	La Paz	92.52	66	LR	LR	15 58 58.8	
	comp=Z,69nm,19.1s,baz=260,slow=31						
YKA	Yellowknife Ar	95.34	28	P	P	15 24 10.0	+0.3
	comp=Z,1.6nm,0.9s,baz=266,slow=5.2,SNR=9.2						
YKA				pP	pP	15 24 19.8	-2.2
	comp=Z,0.9nm,0.9s,baz=245,slow=5.2,SNR=3.7						
	comp=Z,1.6nm,0.9s						
YKA	Yellowknife Ar	95.34	28	P	P	15 24 09.5	-0.2
PD31	Pinedale Array	95.68	48	P	P	15 24 12.3	+0.2
PD31				IAmb	IAmb	15 24 14.7	
	comp=Z,2.4nm,1.0s						
PDAR	Pinedale Array	95.68	48	P	P	15 24 13.2	+1.1
	comp=Z,1.5nm,0.9s,baz=234,slow=1.9,SNR=10						
	comp=Z,1.5nm,0.9s						
PDAR	Pinedale Array	95.68	48	P	P	15 24 12.3	+0.2
ANMO	Albuquerque	97.23	56	LR	LR	16 00 24.8	
	comp=Z,56nm,20.8s,baz=278,slow=31						
BVAR	Borovoye Array	97.37	322	P	P	15 24 18.8	-0.4
	comp=Z,4.1nm,0.7s,baz=93,slow=5.4,SNR=21						
BVAR				LR	LR	16 07 21.0	
	comp=Z,38nm,21.5s,baz=68,slow=35						
	comp=Z,4.1nm,0.7s						
AKASG	Malin Array Be	122.47	326	PKP	PKPdf	15 29 40.5	-0.6
	comp=Z,1.8nm,0.8s,baz=69,slow=1.7,SNR=4.2						
AK02	Malin Array Si	122.50	326	PKP	PKPdf	15 29 39.6	-1.6
AK10	Malin Array Si	122.50	326	PKP	PKPdf	15 29 39.7	-1.5
AK11	Malin Array Si	122.51	326	PKP	PKPdf	15 29 39.7	-1.5
AK21	Malin Array Si	122.53	326	PKP	PKPdf	15 29 39.7	-1.5
AK12	Malin Array Si	122.53	326	PKP	PKPdf	15 29 39.7	-1.6
AK18	Malin Array Si	122.54	326	PKP	PKPdf	15 29 39.8	-1.5
AK20	Malin Array Si	122.56	326	PKP	PKPdf	15 29 40.0	-1.3
AK19	Malin Array Si	122.57	326	PKP	PKPdf	15 29 40.0	-1.3
AK13	Malin Array Si	122.60	326	PKP	PKPdf	15 29 40.1	-1.3
BOSA	Boshof	123.18	227	PKP	PKPdf	15 29 42.7	-0.7
	comp=Z,2.7nm,0.6s,baz=289,slow=2.4,SNR=5.1						
LUBAR	Lubar, Ukraine	123.67	325	PKP	PKPdf	15 29 40.7	-2.8
LPAZ	La Paz	125.40	117	PKP	PKiKP	15 29 48.8	-0.2
	comp=Z,2.6nm,0.7s,baz=279,slow=0.2,SNR=8.7						
LPAZ				pPKP	pPKPdf	15 29 57.9	-3.2
	comp=Z,5.6nm,0.9s,baz=310,slow=2.8,SNR=8.3						
LPAZ	La Paz	125.40	117	PKPdf	PKPdf	15 29 48.4	-0.1
STHS	Stebnicka Huta	127.49	328	*e*PKP	PKPdf	15 29 48.8	-2.0
CPUP	Villa Florida	128.94	134	PKP	PKPdf	15 29 53.9	-0.4
	comp=Z,1.8nm,0.9s,baz=163,slow=0.3,SNR=11						
CPUP				pPKP	pPKPdf	15 30 04.2	-2.7
	comp=Z,1.7nm,0.9s,baz=99,slow=1.6,SNR=6.2						
CPUP	Villa Florida	128.94	134	PKPdf	PKPdf	15 29 54.0	-0.3
MODS	Modra-Piesok	130.19	329	*e*PDIFF	Pdif	15 26 45.4	0.0
CLL	Collm	130.20	334	*e*PKPdf	PKiKP	15 29 57.0	+0.3
CLL				AMS	AMS	18 58 00.0	
	comp=Z,200nm,19.6s						
GERES	GERESS Array B	131.64	331	PKP	PKPdf	15 29 59.4	+0.5
	comp=Z,1.1nm,0.8s,baz=69,slow=7.3,SNR=6.7						
GERES				pPKP	pPKPdf	15 30 08.9	-2.6
	comp=Z,0.4nm,0.3s,baz=333,slow=1.5,SNR=2.6						
BDFB	Brasilia	142.37	130	PKP	PKPdf	15 30 20.1	+0.5
	comp=Z,3.3nm,0.6s,baz=7.0,slow=0.5,SNR=5.6						
ESDC	Sonseca Array	146.53	339	PKPbc	PKPdf	15 30 25.2	-1.0
	comp=Z,2.2nm,0.9s,baz=29,slow=2.7,SNR=8.0						
ESDC	Sonseca Array	146.53	339	PKPbc	PKPbc	15 30 27.2	-0.4

ISK ***04*** *15:16:05.5, 35°.79N×31°.05E, h10^{km}, ML3.2/23*

AFAD ***04*** *15:16:09.2, 35°.87N×30°.98E, h34^{km}, ML3.2*

NIC ***04*** *15:16:09.3, 35°.64N×30°.80E, h29^{km}±8^{km}, Ml3.2/6*

ISC 04 15:16:07.4±1.1**, 35°.78N**±0°.03×**30°.97E**±0°.02**, h33**^{km}±3^{km}**,**
n66, σ1^{s}48/103**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUM	Antalya-Kumluc	0.74	317	P	Pb	15 16 21.5	-0.4
AKUM				S	Sn	15 16 32.4	+0.7
AKUM				*i* IAML		15 16 36.0	
	comp=N,708nm,0.3s						
AKUM				*i* IAML		15 16 38.0	
	comp=E,631nm,0.3s						
KEMT	Kemer-ANTALYA	0.89	338	Pg	Pb	15 16 23.5	-0.8
KEMT				Sg	Sn	15 16 36.6	+1.3
DEMR	Demre-Antalya	0.97	298	Pg	Pb	15 16 25.8	0.0
DEMR				Sg	Sn	15 16 40.7	+3.2
ANTB	Antalya	1.15	347	Pn	Pb	15 16 28.1	-0.6
ANTB				Sn	Sb	15 16 44.4	+1.2
ALAN	Alanya-ANTALYA	1.16	48	Pn	Pn	15 16 26.9	-0.4
GAZI	Gazipasa	1.18	67	P	Pn	15 16 26.2	-1.5
AKAS	Kas	1.19	293	P	Pb	15 16 29.3	-0.3
AKAS				S	Sb	15 16 45.5	+0.8
AKAS				*i* IAML		15 16 53.0	
	comp=N,571nm,0.7s						
AKAS				*i* IAML		15 16 54.0	
	comp=E,443nm,0.4s						
ELL	Elmali	1.29	319	Pn	Pb	15 16 30.9	-0.3
ELL				Sn	Sb	15 16 49.2	+1.7
ELL	Elmali	1.29	319	P	Pb	15 16 31.1	-0.1
ELL				S	Sb	15 16 50.3	+2.8
KORT	Korkueli	1.31	338	P	Pb	15 16 31.2	-0.4
KORT				*i* IAML		15 16 57.0	
	comp=E,360nm,0.6s						
AKMS	Akamas	1.35	124	P	Pb	15 16 31.5	-0.7
AKMS				S	Sb	15 16 49.5	+0.4
AKMS				AML	AML	15 16 58.5	
	1.3nm,0.4s						
AKMS				AML	AML	15 17 03.9	
	1.2nm,0.6s						
ALFC	Alefka	1.47	115	P	Pb	15 16 32.9	-1.3
ALFC				S	Sb	15 16 53.2	+0.6
ALFC				AML	AML	15 17 00.3	
	1.5nm,0.5s						
ALFC				AML	AML	15 17 00.5	
	0.8nm,0.3s						
KNIK	Mula-Seydike	1.55	314	P	Pb	15 16 34.8	-0.8
KNIK				S	Sn	15 16 51.7	-0.2
IZZE	Mula-Seydike	1.56	295	P	Pb	15 16 34.3	-1.3
IZZE				S	Sn	15 16 52.7	+0.8
IZZE				*i* IAML		15 17 11.0	
	comp=N,283nm,0.6s						
BUCA	Burdur, Bucak-	1.58	348	P	Pb	15 16 36.7	+0.7
BUCA				S	Sn	15 16 51.9	-0.6
BOZY	Bozyazi-Mersin	1.66	78	Pn	Pn	15 16 34.7	+0.5
BOZY				Sn	Sn	15 16 54.8	+0.4
HDMB	Hadim	1.70	46	Pn	Pn	15 16 35.1	+0.1
HDMB				Sn	Sn	15 16 56.9	+1.1
BCK	Bucak	1.70	350	Pn	Pn	15 16 36.3	+1.4
FETY	Fethiye	1.75	300	P	Pn	15 16 30.0	-5.5
TROD	Troodos	1.76	118	P	Pb	15 16 40.8	+1.6
TROD				S	Sb	15 17 03.2	+2.2
TROD				AML	AML	15 17 14.5	
	0.4nm,0.9s						
TROD				AML	AML	15 17 18.7	
	0.6nm,0.6s						
SEYD	Seydisehir-KON	1.77	23	Pn	Pn	15 16 36.6	+0.8
SEYD				Sn	Sn	15 16 59.2	+2.0
CAME	Cameli-Denizli	1.78	311	Pn	Pb	15 16 37.7	-1.7
TEKE	Tekeli-Mersin	1.78	78	Pn	Pn	15 16 36.2	+0.4
TEKE				Sn	Sn	15 16 58.6	+1.3
SEDI	Konya, Seydise	1.78	21	P	Pn	15 16 37.4	+1.4
SEDI				S	Sn	15 16 57.5	-0.1
SEDI				*i* IAML		15 17 02.0	
	comp=N,256nm,0.5s						
SEDI				*i* IAML		15 17 02.0	
	comp=E,319nm,0.5s						
ERMK	Ermenek	1.79	61	P	Pn	15 16 36.9	+0.7
ERMK				S	Sb	15 17 00.6	-1.3
GOLH	Golhisar	1.84	322	P	Pb	15 16 39.0	-1.6
GOLH				S	Sn	15 16 59.2	+0.1
GOLH				*i* IAML		15 17 26.0	
	comp=E,195nm,0.9s						
XYLS	Xyliatos	1.86	114	P	Pn	15 16 37.4	+0.3
XYLS				S	Sb	15 17 02.7	-1.1
XYLS				AML	AML	15 17 09.5	
	0.7nm,0.5s						
XYLS				AML	AML	15 17 14.5	
	0.4nm,0.7s						
CAEL	Denizli, Camel	1.89	316	P	Pb	15 16 41.5	+0.2
BERE	Bereket-Mersin	1.91	72	Pn	Pn	15 16 38.3	+0.5
SABU	Mula-Dalaman	1.92	303	P	Pn	15 16 39.1	+1.2
BRDR	BURDUR-Merkez	2.04	339	P	Pb	15 16 43.6	-0.4
ISP	Isparta	2.07	350	Pn	Pn	15 16 41.9	+1.9
CSS	Mathiatis	2.10	112	P	Pb	15 16 44.9	+0.1
CSS				S	Sb	15 17 12.6	+2.2
CSS				AML	AML	15 17 18.8	
	0.4nm,0.6s						
CSS				AML	AML	15 17 24.1	
	0.3nm,0.7s						
ASGA	Asgata	2.11	117	P	Pb	15 16 43.8	-1.2
ASGA				S	Sb	15 17 11.7	+0.9
ASGA				AML	AML	15 17 22.8	
	0.6nm,0.9s						
ASGA				AML	AML	15 17 25.4	
	0.6nm,0.7s						
DALY	Dalyan (Mula)	2.14	300	Pn	Pn	15 16 42.3	+1.5
KKBE	Karaman, Kazim	2.14	47	P	Pn	15 16 42.9	+1.9
KKBE				S	Sn	15 17 06.9	+0.5
KKBE				*i* IAML		15 17 14.0	
	comp=N,162nm,0.4s						
KKBE				*i* IAML		15 17 15.0	
	comp=E,157nm,0.4s						
APMY	Acipayam-Deniz	2.15	322	Pn	Pn	15 16 43.1	+2.0
DNZT	Denizli-Tavas-	2.16	314	P	Pn	15 16 42.7	+1.4
BAGO	Egridir - ISPA	2.21	356	P	Pb	15 16 44.5	-2.2
BAGO				S	Sn	15 17 07.8	-0.3
INCE	Denizli-Bozkur	2.23	330	P	Pn	15 16 44.1	+1.9
INCE				S	Sn	15 17 09.8	+1.2
BASM	Basmaki-Afyon	2.26	341	Pn	Pn	15 16 43.9	+1.4
OSC1	CSNet OBS 1	2.29	174	P	Pb	15 16 47.0	-1.0
OSC1				S	Sn	15 17 10.5	+0.6
MVOU	Mavrovouni	2.31	109	P	Pn	15 16 42.6	-0.5
MVOU				S	Sn	15 17 11.8	+1.4
KRMN	Karaman	2.31	52	Pn	Pn	15 16 43.9	+0.6
ARG	Arkhangelos	2.34	281	Pn	Pn	15 16 44.8	+1.1
ARG	Arkhangelos	2.34	281	P	Pn	15 16 44.9	+1.2
ARG				S	Sn	15 17 11.1	-0.2
TAVA	DENIZLI_Tavas	2.36	316	P	Pn	15 16 44.9	+1.0
DOGA	KONYA_Doganhis	2.39	13	P	Pn	15 16 46.5	+2.1
DOGA				S	Sn	15 17 13.2	+0.6
DOGA				*i* IAML		15 17 18.0	
	comp=N,214nm,0.5s						
DOGA				*i* IAML		15 17 18.0	
	comp=E,163nm,0.5s						
DNIZ	Denizli-Tavas-	2.41	320	P	Pb	15 16 47.6	-2.5
DNIZ				S	Sn	15 17 14.0	+1.0
DNIZ				*i* IAML		15 17 32.0	
	comp=E,249nm,0.5s						
DNIZ				*i* IAML		15 17 34.0	
	comp=N,210nm,0.4s						
TURN	Turunc	2.41	295	P	Pn	15 16 46.0	+1.4
KONT	Konya--Tatoy	2.43	27	Pn	Pn	15 16 46.4	+1.5
YVAC	Isparta, Yalva	2.49	5	P	Pn	15 16 48.3	+2.4
YVAC				S	Sn	15 17 14.0	-1.2
AFYN	Afyon-Dinar-K	2.51	352	P	Pn	15 16 47.9	+1.8
AFYN				S	Sn	15 17 12.7	-3.0
YER	Yerkesik	2.55	303	Pn	Pn	15 16 49.4	+2.8
KZIL	AFYON_Kizioren	2.56	345	P	Pn	15 16 47.7	+1.0
KZIL				S	Sn	15 17 17.2	+0.4
MULA	Mugla, Merkez-	2.59	305	P	Pb	15 16 51.8	-1.5
SDAG	Sultandagi-AFY	2.65	359	Pn	Pn	15 16 49.4	+1.4
LADK	Ladik-KONYA	2.66	24	Pn	Pn	15 16 49.6	+1.5
SHUT	Suhut-Afyon	2.79	353	Pn	Pn	15 16 51.4	+1.6
PASA	Karahalli, USA	2.82	336	P	Pn	15 16 50.8	+0.5
ESEN	Aydn-Nazilli	2.91	315	P	Pn	15 16 52.7	+1.2
ESEN				S	Sb	15 17 31.0	-2.8
YAZI	Mula-Dat§a-	2.98	289	P	Pn	15 16 53.3	+1.0
YAZI				S	Sn	15 17 22.2	-4.8
BLVD	Bolvadin-AFYON	3.01	2	Pn	Pn	15 16 54.0	+1.1
BNAZ	Uak-Banaz	3.02	344	P	Pn	15 16 54.6	+1.6
BNAZ				S	Sn	15 17 24.5	-3.6
BNAZ				*i* IAML		15 17 37.0	
	comp=N,126nm,0.6s						
BNAZ				*i* IAML		15 17 38.0	
	comp=E,97nm,0.5s						
KARP	Karpathos	3.11	267	P	Pn	15 16 55.8	+1.6
KARP				S	Sn	15 17 28.7	-1.5
KIRA	zmir-Kiraz	3.17	320	P	Pn	15 16 55.1	0.0

IDC ***04*** *15:22:39.5±6.2, 8°.84S×118°.83E, h133^{km}±57^{km}, mb2.9/2, mbtmp3.3/5, Error ellipse: s-maj=122.0km s-min=19.7km az=62.0*

DJA ***04*** *15:22:43.5±0.3, 9°S±4°×11°9E±°, h118^{km}±4^{km}, M3.5/13, mB5.0/1, mb3.7/4, MLv3.4/13, Mw(mB)4.2/1*

ISC 04 15:22:40.9±0.9**, 8°.65S**±0°.07×**119°.40E**±0°.06**, h170**^{km}**, n21,**
σ2^{s}52/24**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBFI	Labuhan Bajo,	0.52	71	P	Pn	15 23 02.7	-1.9
LBFI				S	Sn	15 23 16.9	-5.9
WBSI	Waikabubak, Su	0.99	180	P	Pn	15 23 05.8	-1.8
WBSI				S	Sn	15 23 22.9	-5.4
DBNI	Kabupaten Domp	1.08	278	P	Pn	15 23 06.9	-1.4
DBNI				S	Sn	15 23 23.8	-5.5
PLAI	Plampang	1.61	263	P	Pn	15 23 12.5	-0.7
BASI	Baing, Sumba	1.95	143	P	Pn	15 23 17.2	+0.4
EDFI	Ende, Flores	2.27	93	P	Pn	15 23 20.7	+0.2
TWSI	Taliwang, Sumb	2.49	268	P	Pn	15 23 22.8	-0.1
MMRI	Maumere	2.81	90	P	Pn	15 23 27.9	+1.1
KLNI	Mataram	3.27	274	P	Pn	15 23 32.6	+0.1
BKSI	Bulukumba	3.38	12	P	Pn	15 23 33.6	-0.3
KAPI	Kappang	3.63	6	P	Pn	15 23 38.3	+1.3
	5.1nm,0.4s,baz=150,slow=16,SNR=2.2						
IGBI	Denpasar	4.20	267	P	Pn	15 23 44.6	+0.2
BATI	Baumata	4.49	111	P	Pn	15 23 50.2	+2.1
SOEI	Soe	4.94	103	P	Pn	15 23 56.4	+2.4
JAGI	Jajag, Banyuwa	5.19	272	P	Pn	15 23 58.2	+1.0
	0.1nm2µm8.6nm,1.2s						
GMJI	Gumukmas	5.90	273	P	Pn	15 24 08.1	+1.6
	15nm,1.9s						
PCJI	Pacitan	8.14	273	P	Pn	15 24 37.3	+1.1
FITZ	Fitzroy Crossi	11.19	148	P	Pn	15 25 17.6	+1.4
	0.9nm,0.9s,baz=336,slow=12,SNR=1.4						
FITZ				S	Sn	15 27 10.7	-10
	0.4nm,0.4s,baz=288,slow=3.2,SNR=1.6						
WRA	Warramunga Arr	18.31	129	P	Pn	15 26 46.2	+1.9
	0.2nm,0.4s,baz=302,slow=12,SNR=7.7						
WRA				S	S	15 30 04.2	+1.4
	0.3nm,0.9s,baz=305,slow=24,SNR=1.7						
ASAR	Alice Springs	20.40	139	P	Pn	15 27 09.2	+0.1
	0.3nm,0.3s,baz=311,slow=9.2,SNR=15						
	0.3nm,0.3s						
MKAR	Makanchi Array	64.32	333	P	P	15 33 00.4	+2.0
	0.3nm,0.5s,baz=155,slow=7.9,SNR=4.5						
	0.3nm,0.5s						

GUC 04 15:24:13.2±0.4**, 24°.13S**×**67°.28W, h248**^{km}±8^{km}**, ML3.6,**
Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO02	Mina Guanaco	2.34	243	*e*P	Pn	15 24 59.2	+0.2
GO02				*i* S	S	15 25 34.0	-1.0
PB06	IPOC Station P	2.54	304	*e*P	Pn	15 25 01.2	+0.3
PB06				*i* S	S	15 25 37.1	-1.4
PB06				IAML		15 25 41.8	
	comp=N,119nm,0.2s						
PB09	IPOC Station P	2.94	322	*e*P	Pn	15 25 05.5	+0.3
PB09				*i* S	S	15 25 45.2	-1.0
PB05	IPOC Station P	2.97	295	*e*P	Pn	15 25 06.3	+1.0
PB05				*i* S	S	15 25 45.1	-1.4
PB10	IPOC Station P	3.06	281	*e*P	Pn	15 25 07.5	+1.3
PB10				*i* S	S	15 25 46.9	-1.2
PB07	IPOC Station P	3.39	314	*e*P	Pn	15 25 10.4	+0.3
PB07				*i* S	S	15 25 53.3	-1.8
PB01	IPOC Station P	3.69	326	*e*P	Pn	15 25 13.2	-0.2
PB01				*i* S	S	15 25 59.5	-1.6
PB02	IPOC Station P	3.69	319	*e*P	Pn	15 25 13.6	+0.1
PB02				*i* S	S	15 25 59.7	-1.6
PATCX	Punta Patache	4.23	321	*e*P	Pn	15 25 20.5	+0.7
PATCX				*i* S	S	15 26 10.2	-2.5
HMBC	Humberstone	4.53	327	*e*P	Pn	15 25 22.5	-0.9
HMBC				*i* S	S	15 26 16.5	-2.7
PB11	IPOC Station P	4.88	333	*e*P	Pn	15 25 28.3	+0.7
PB11				*i* S	S	15 26 24.1	-2.7

IDC ***04*** *15:36:53.5±3.0, 34°.58N×23°.84E, h0^{km}, mb4.0/5, mbtmp3.8/9, ML3.8/4, MS3.3/2, Error ellipse: s-maj=49.9km s-min=24.6km az=37.0*

NEIC ***04*** *15:36:59.6±2.5, 34°.51N±0°.06×23°.99E±0°.08, h35^{km}±14^{km}, mb4.1/3, Error ellipse: s-maj=12.7km s-min=2.7km az=225.0*

THE ***04*** *15:37:01.7, 35°N±6°×2°4E±°, h15^{km}±3^{km}, M3.3/12, mb3.7/1, MLh3.3/12*

ISK ***04*** *15:37:01.2, 34°.85N×24°.10E, h15^{km}, ML3.3/13*

ATH ***04*** *15:37:02.1±0.2, 34°.89N×24°.12E, h11^{km}±1^{km}, ML3.4/12, Manual Solution by N.Liadopoulou First location: 2019/12/04 15:38:15, This location: 2020/07/03 10:19:22 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

AFAD ***04*** *15:37:08.0, 34°.85N×24°.64E, h35^{km}, ML3.2*

ISC 04 15:36:59.6±0.9**, 34°.74N**±0°.06×**24°.14E**±0°.03**, h26**^{km}±5^{km}**,**
n145, σ2^{s}14/169**, mb4.0**/8**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.10	336	P	Pb	15 37 04.4	-0.1
GVD				S	Sb	15 37 07.9	+0.2
GVD	Gavdhos	0.10	336	Pg	Pb	15 37 04.0	-0.4
GVD	Gavdhos	0.10	336	P	Pb	15 37 04.3	-0.1
GVD				S	Sb	15 37 07.6	-0.1
KNDR	Palaiochora Ch	0.65	319	P	Pb	15 37 12.4	+0.1
KNDR				S	Sn	15 37 22.1	-0.3
KNDR	Palaiochora Ch	0.65	319	Pg	Pb	15 37 12.5	+0.2
KNDR				Sg	Sb	15 37 20.6	-0.3
KNDR	Palaiochora Ch	0.65	319	P	Pn	15 37 13.1	+0.1
KNDR				S	Sb	15 37 21.4	+0.5
VAM	Vamos	0.66	4	P	Pb	15 37 12.6	+0.1
VAM	Vamos	0.66	4	P	Pb	15 37 12.6	+0.1
VAM				S	Sb	15 37 20.9	-0.6
IMMV	Iera Moni Meta	0.73	350	P	Pb	15 37 12.9	-0.8
IMMV				S	Sn	15 37 24.7	+0.3
IMMV	Iera Moni Meta	0.73	350	Pg	Pb	15 37 13.3	-0.3
IMMV				Sg	Sb	15 37 22.9	-0.3
IMMV	Iera Moni Meta	0.73	350	P	Pb	15 37 13.4	-0.2
IMMV				S	Sb	15 37 23.1	-0.2
CHNB	Souda	0.74	355	P	Pb	15 37 14.3	+0.4
CHAN	Chania	0.78	354	P	Pb	15 37 14.6	+0.2
CHAN				S	Sn	15 37 26.5	+0.9
CHAN	Chania	0.78	354	P	Pn	15 37 15.2	+0.4
CHAN				S	Sb	15 37 24.4	-0.2
IDI	Anoyia	0.82	48	Pn	Pn	15 37 16.5	+1.0
	52nm,0.3s,baz=228,slow=17,SNR=122						
IDI				Sn	Sn	15 37 30.1	+3.2
	184nm,0.3s,baz=336,slow=18,SNR=20						
IDI	Anoyia	0.82	48	P	Pn	15 37 16.1	+0.6
IDI				S	Sn	15 37 28.4	+1.6

IDI	Anoyia	0.82	48		Pn	15 37 16.1	+0.6
IDI				Sn	Sn	15 37 30.6	+3.8
IDI	Anoyia	0.82	48	Pg	Pn	15 37 16.9	+1.4
IDI				Sg	Sn	15 37 28.2	+1.4
IDI	Anoyia	0.82	48	P	Pn	15 37 17.1	+1.6
IDI				S	Sn	15 37 27.3	+0.5
IACM	Heraklion	0.95	54	P	Pb	15 37 19.2	+1.9
ANKY	Antikythira Is	1.31	329	P	Pb	15 37 24.9	+1.4
ANKY	Antikythira Is	1.31	329	P	Pb	15 37 24.7	+1.2
NPS	Neapolis	1.32	66	P	Pb	15 37 26.6	+3.0
NPS	Neapolis	1.32	66	P	Pb	15 37 26.0	+2.4
KTHA	Kythira Island	1.75	330	P	Pb	15 37 31.9	+1.0
KTHA	Kythira Island	1.75	330	Pn	Pb	15 37 30.9	0.0
KTHA	Kythira Island	1.75	330	P	Pb	15 37 31.0	0.0
ZKR	Zakros	1.75	77	Pn	Pb	15 37 32.2	+1.2
ZKR	Zakros	1.75	77	P	Pb	15 37 32.3	+1.4
THR9	Santorini-Faro	1.89	31	P	Pb	15 37 33.4	0.0
THR6	Thira Island,	1.91	32	P	Pb	15 37 33.6	0.0
THR6	Thira Island,	1.91	32	P	Pb	15 37 33.7	0.0
SNT5	Nea Kammeni, S	1.95	31	P	Pb	15 37 34.1	-0.2
THERA	Ancient Thera,	1.95	34	P	Pb	15 37 33.5	-1.0
THERA	Ancient Thera,	1.95	34	P	Pb	15 37 33.4	-1.0
MHLO	Agia Marina, M	1.95	6	P	Pb	15 37 33.9	-0.6
SAP3	Santorini-Thir	1.95	30	P	Pb	15 37 34.1	-0.4
THR3	Thira Island,	1.95	31	P	Pb	15 37 34.0	-0.4
THR8	Santorini-Mono	1.99	33	P	Pn	15 37 33.5	+2.1
THR8	Santorini-Mono	1.99	33	P	Pn	15 37 33.6	+2.1
VLI	Veliai	2.20	334	P	Pb	15 37 37.5	-1.1
VLI	Veliai	2.20	334	P	Pb	15 37 37.6	-1.1
KSS1	Kassos Island	2.38	73	P	Pb	15 37 40.9	-0.8
APE	Apeiranthos	2.58	26	P	Pn	15 37 41.1	+1.4
APE	Apeiranthos	2.58	26	Pn	Pn	15 37 42.5	+2.8
APE	Apeiranthos	2.58	26	P	Pn	15 37 41.1	+1.4
KARP	Karpathos	2.60	71	P	Pn	15 37 43.4	+3.5
KARP	Karpathos	2.60	71	Pn	Pn	15 37 43.2	+3.3
KARP	Karpathos	2.60	71	Pn	Pb	15 37 43.9	-1.7
KARP	Karpathos	2.60	71	P	Pb	15 37 43.6	-1.9
PYL	PYLOS	2.90	318	P	Pn	15 37 45.7	+1.7
MET4	Agioi Theodoro	2.93	348	P	Pn	15 37 46.2	+1.7
MET2	Kameni Chora,	2.94	347	P	Pn	15 37 46.5	+2.0
MET5	Makryloggos,Me	2.94	348	P	Pn	15 37 47.5	+2.9
ITM	Ithomi	3.02	324	Pn	Pn	15 37 48.2	+2.5
ITM	Ithomi	3.02	324	Pn	Pn	15 37 48.5	+2.8
VLY	Voula,Athens	3.11	355	P	Pn	15 37 48.3	+1.3
VLY	Voula,Athens	3.11	355	P	Pn	15 37 48.6	+1.6
ATH	Athens Observa	3.24	354	P	Pn	15 37 50.6	+2.0
KARY	Karystos	3.29	4	P	Pn	15 37 51.8	+2.4
PTL	Penteli	3.31	356	P	Pn	15 37 50.8	+1.2
YAZI	Mula-Dat§a-	3.32	53	P	Pn	15 37 51.7	+2.0
YAZI				S	Sn	15 38 26.4	-1.9
DION	Dionisos Attik	3.33	357	P	Pn	15 37 51.3	+1.3
DION	Dionisos Attik	3.33	357	P	Pn	15 37 51.5	+1.5
MAGU	Magoula	3.37	352	P	Pn	15 37 52.5	+2.1
LTK	Loutraki	3.41	344	P	Pn	15 37 52.9	+1.9
LTK	Loutraki	3.41	344	P	Pn	15 37 53.0	+2.0
DAT	Datca	3.43	54	P	Pn	15 37 53.6	+2.2
DAT				S	Sn	15 38 28.9	-2.3
DAT	Datca	3.43	54	P	Pn	15 37 54.2	+2.8
DAT	Datca	3.43	54	Pn	Pn	15 37 54.5	+3.1
STFN	Stefani	3.46	352	P	Pn	15 37 52.9	+1.2
BODT	Bodrum	3.46	47	Pn	Pn	15 37 55.7	+3.9
VILL	Villia	3.48	349	P	Pn	15 37 53.2	+1.2
GUR	Goura	3.50	336	P	Pn	15 37 54.2	+1.8
GUR	Goura	3.50	336	P	Pn	15 37 54.6	+2.2
VIL2	Platees	3.53	349	P	Pn	15 37 53.2	+0.5
ARG	Arkhangelos	3.57	65	P	Pn	15 37 56.7	+3.4
ARG	Arkhangelos	3.57	65	Pn	Pn	15 37 56.3	+3.1
ARG	Arkhangelos	3.57	65	Pn	Pn	15 37 56.2	+3.0
ARG	Arkhangelos	3.57	65	P	Pn	15 37 56.3	+3.1
KLV	Kalavryta, Ach	3.66	335	P	Pn	15 37 56.7	+2.2
KLV	Kalavryta, Ach	3.66	335	P	Pn	15 37 57.0	+2.4
SMG	Samos	3.67	36	P	Pn	15 37 57.7	+3.0
DRO	Drossia	3.75	329	P	Pn	15 37 59.0	+3.2
DRO	Drossia	3.75	329	P	Pn	15 37 59.0	+3.2
TURN	Turunc	3.91	58	P	Pn	15 38 00.8	+3.0
TURN				S	Sn	15 38 40.4	-2.4
TURN				*i* IAML		15 38 46.0	
	comp=E,43nm,0.4s						
LKR	Lokris	4.00	347	P	Pn	15 38 00.5	+1.3
LKR	Lokris	4.00	347	P	Pn	15 38 00.9	+1.7
ATAL	Atalanti	4.04	347	P	Pn	15 38 01.2	+1.5
EFP	Efpalio	4.09	335	P	Pn	15 38 03.5	+3.1
YER	Yerkesik	4.12	53	P	Pn	15 38 04.9	+4.0
YER	Yerkesik	4.12	53	Pn	Pn	15 38 04.9	+4.0
AXAR	Agios Charalam	4.19	344	P	Pn	15 38 04.0	+2.3
DALY	Dalyan (Mula)	4.21	59	Pn	Pn	15 38 05.8	+3.8
MULA	Mugla, Merkez-	4.22	52	P	Pn	15 38 05.0	+2.8
MULA				S	Sn	15 38 40.6	-10
MULA				*i* IAML		15 39 38.0	
	comp=E,34nm,0.7s						
ANX	Ano Chora	4.24	336	P	Pn	15 38 03.9	+1.4
SABU	Mula-Dalaman	4.44	61	P	Pn	15 38 08.4	+3.1
SABU				S	Sn	15 38 52.7	-3.4
SABU				*i* IAML		15 39 00.0	
	comp=E,23nm,0.3s						
SABU				*i* IAML		15 39 07.0	
	comp=N,27nm,0.6s						
FETY	Fethiye	4.45	63	P	Pn	15 37 59.8	-5.4
FETY				S	Sn	15 38 46.2	-10
VLS	Valsamata	4.46	321	P	Pn	15 38 07.8	+2.3
IZZE	Mula-Seydike	4.48	66	P	Pn	15 38 07.9	+2.2
IZZE				S	Sn	15 38 52.2	-4.7
IZZE				*i* IAML		15 39 00.0	
	comp=E,55nm,0.3s						
AGG	Agios Georgios	4.51	342	P	Pn	15 38 07.9	+1.7
MAKR	Makrakomi, Fth	4.55	340	P	Pn	15 38 09.2	+2.4
ESEN	Aydn-Nazilli	4.57	47	P	Pn	15 38 10.3	+3.4
ESEN				S	Sn	15 38 53.0	-6.2
IZMR	zmir-demi	4.57	41	P	Pn	15 38 09.3	+2.3
IZMR				*i* IAML		15 39 07.0	
	comp=N,20nm,2.5s						
DNZT	Denizli-Tavas-	4.70	56	P	Pn	15 38 11.9	+3.0
DNZT				S	Sn	15 38 58.0	-4.6
AKAS	Kas	4.70	70	P	Pn	15 38 11.0	+2.1
AKAS				S	Sn	15 38 58.4	-4.3
AKAS				*i* IAML		15 39 08.0	
	comp=E,44nm,0.3s						
AKAS	Kas	4.70	70	Pn	Pn	15 38 11.4	+2.5
TAVA	DENIZLI_Tavas	4.72	54	P	Pn	15 38 11.7	+2.5
TAVA				S	Sn	15 39 02.9	-0.3
CAEL	Denizli, Camel	4.83	59	P	Pn	15 38 13.8	+3.2
CAEL				S	Sn	15 39 03.8	-1.9
CAEL				*i* IAML		15 39 19.0	
	comp=E,48nm,0.6s						
CAEL				*i* IAML		15 39 48.0	
	comp=N,41nm,1.7s						
KIRA	zmir-Kiraz	4.86	44	P	Pn	15 38 14.7	+3.5
KNIK	Mula-Seydike	4.89	63	P	Pn	15 38 14.0	+2.5
KNIK				*i* IAML		15 39 12.0	
	comp=E,28nm,0.3s						
DNIZ	Denizli-Tavas-	4.90	53	P	Pn	15 38 14.5	+3.0
DNIZ				*i* IAML		15 39 13.0	
	comp=E,37nm,0.3s						
DNIZ				*i* IAML		15 39 15.0	
	comp=N,19nm,0.3s						
GOLH	Golhisar	5.05	59	P	Pn	15 38 16.8	+3.1
GOLH				S	Sn	15 39 06.6	-4.6
GOLH				*i* IAML		15 39 24.0	
	comp=E,24nm,0.5s						
GOLH				*i* IAML		15 40 15.0	
	comp=N,30nm,3.4s						
ELL	Elmali	5.10	65	Pn	Pn	15 38 16.8	+2.4
TETR	Tetrakomo, Epi	5.13	334	P	Pn	15 38 17.0	+2.2
MANT	Manisa	5.16	42	P	Pn	15 38 18.1	+2.9
MANT				*i* IAML		15 40 07.0	
	comp=N,20nm,3.6s						
MANT	Manisa	5.16	42	Pn	Pn	15 38 18.6	+3.4
INCE	Denizli-Bozkur	5.30	54	P	Pn	15 38 19.8	+2.8
INCE				S	Sn	15 39 16.9	-0.4
AKUM	Antalya-Kumluc	5.30	71	P	Pn	15 38 18.9	+1.9
AKUM				S	Sn	15 39 10.3	-6.8
AKUM				*i* IAML		15 39 36.0	
	comp=N,34nm,2.2s						
LIT	Litokhoron	5.50	347	Pn	Pn	15 38 20.3	+0.5
KORT	Korkueli	5.52	64	P	Pn	15 38 22.7	+2.5
KORT				*i* IAML		15 39 29.0	
	comp=E,27nm,0.6s						
KORT				*i* IAML		15 39 38.0	
	comp=N,15nm,0.4s						
PASA	Karahalli, USA	5.61	49	P	Pn	15 38 24.3	+2.9
KEK	Kerkira	6.05	326	Pn	Pn	15 38 31.5	+4.2
NEST	Nestorio	6.17	337	P	Pn	15 38 30.3	+1.3
TIP	Timpagrande	7.38	309	Pn	Pn	15 38 44.8	-0.8
CSS	Mathiatis	7.56	86	Pn	Pn	15 38 47.2	-0.8
BRTR	Keskin Array B	9.06	54	Pn	Pn	15 39 09.9	+1.2
	0.1nm,0.3s,baz=243,slow=11,SNR=2.3						
BRTR				LR	LR	15 43 25.9	
	comp=Z,48nm,18.4s,baz=268,slow=42						
	0.5nm,0.6s						
MMAI	Mount Meron Ar	9.52	97	Pn	Pn	15 39 15.2	+0.2
	2.3nm,0.3s,baz=308,slow=11,SNR=7.3						
	1.2nm,0.4s						
ILGA	Ilgaz	9.84	47	Pn	Pn	15 39 26.0	+6.5
GHAJ	Ghor Haditha	10.19	106	Pn	Pn	15 39 24.0	-0.1
EIL	Elat	10.46	116	Pn	Pn	15 39 27.4	-0.4
	0.9nm,0.3s,baz=322,slow=5.2,SNR=6.3						
	1.5nm,0.4s						
AKASG	Malin Array Be	16.37	12	Pn	Pn	15 40 48.3	+0.9
	1.0nm,0.3s,baz=210,slow=10.0,SNR=5.5						
	0.2nm,0.3s						
HFS	Hagfors	26.30	348	P	P	15 42 31.7	-1.0
	4.2nm,1.0s,baz=152,slow=9.8,SNR=5.8						
	4.2nm,1.0s						
ABKAR	Akbulak array	29.98	50	P	P	15 43 04.8	-0.9
ARCES	ARCESS Array B	34.85	1	P	P	15 43 46.0	-2.1
	2.8nm,0.9s,baz=182,slow=9.7,SNR=1.8						
	2.8nm,0.9s						
KK31	Karatay Array	36.64	63	P	P	15 44 03.6	-0.2
KK31				IAmb	IAmb	15 44 24.5	
	comp=Z,5.0nm,1.4s						
KKAR	Karatay Array	36.64	63	P	P	15 44 04.2	+0.4
KURBB	Kurchatov Arra	42.03	51	P	P	15 44 48.8	+0.1
	comp=Z,0.7nm,0.3s,baz=277,slow=8.5,SNR=9.4						
	comp=Z,0.7nm,0.3s						
KURK	Kurchatov	42.09	51	P	P	15 44 49.5	+0.4
KURK				IAmb	IAmb	15 45 05.1	
	comp=Z,5.1nm,1.5s						
MKAR	Makanchi Array	44.70	56	P	P	15 45 10.9	+0.6
	comp=Z,0.5nm,0.3s,baz=270,slow=7.7,SNR=13						
	comp=Z,0.5nm,0.3s						
MKAR	Makanchi Array	44.70	56	P	P	15 45 10.4	+0.1
ZAA0	Zalesovo Array	45.90	46	P	P	15 45 19.3	-0.3
ZAA0				IAmb	IAmb	15 45 43.8	
	comp=Z,3.1nm,1.4s						
ZALV	Zalesovo Beam	45.90	46	P	P	15 45 19.5	-0.1
	comp=Z,1.2nm,0.4s,baz=265,slow=8.8,SNR=7.3						
	comp=Z,1.2nm,0.4s						
ZALV	Zalesovo Beam	45.90	46	P	P	15 45 19.2	-0.4
BOSA	Boshof	63.02	179	LR	LR	16 16 13.9	
	comp=Z,74nm,20.1s,baz=188,slow=38						

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*NIED **04** 16:03:57.9, 25°.02N×125°.61E, h53^{km}, MW4.3, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}1.02; $M_{\theta\theta}$-1.09; $M_{\phi\phi}$0.06; $M_{r\theta}$-2.22; $M_{\theta\phi}$-0.38; $M_{\phi r}$-0.96; Fault plane solution: $M_0$2.67000×10^{15} NP1:ϕ_s82.00000°, δ13.00000°, λ105.00000°. NP2:ϕ_s247.00000°, δ78.00000°, λ87.00000°.*

*JMA **04** 16:03:57.9±0.1, 25°.0N±0°.8×125°.6E±0°.7, h53^{km}±1^{km}, MD4.2/16, MV4.0/16, NEAR MIYAKOJIMA ISLAND*

JMA Felt I J1 at NEAR MIYAKOJIMA ISLAND .

*IDC **04** 16:03:58.7±3.2, 25°.07N×125°.56E, h54^{km}±30^{km}, mb3.7/19, mbtmp3.9/21, ML3.3/2, MS3.3/5, Error ellipse: s-maj=21.8km s-min=15.9km az=65.0*

*NEIC **04** 16:03:59.0±1.9, 24°.99N±0°.10×125°.60E±0°.09, h52^{km}±8^{km}, mb4.6/49, Error ellipse: s-maj=15.3km s-min=9.6km az=150.0*

ISC 04 16:03:58.0±0.7**, 24°.95N**±0°.07×**125°.64E**±0°.05**, h52**^{km}±6^{km}**, n121, σ0^{s}98**/124**, mb4.4**/44**, MS3.3**/5**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	Gusukube	0.28	228	*i* P	Pn	16 04 07.3	+0.1
JOGS				S	Sn	16 04 14.1	+0.3
JOGS	Gusukube	0.28	228	A	A	16 04 07.3	
	comp=N,56nm,0.4s,comp=E,93nm,1.6s						
JMJ	Miyako jima 2	0.34	246	P	Pn	16 04 07.9	+0.2
JMJ2	Miyako jima3	0.35	233	*i* P	Pn	16 04 08.0	+0.2
JMJ2				S	Sn	16 04 15.5	+0.6
JMJ2	Miyako jima3	0.35	233	A	A	16 04 08.0	
	comp=N,47nm,0.6s,comp=E,60nm,2.0s						
JIKM	Ikemajima	0.35	266	*i* P	Pn	16 04 07.7	-0.1
JIKM				S	Sn	16 04 14.6	-0.3
JIKM	Ikemajima	0.35	266	A	A	16 04 07.7	
	comp=N,83nm,0.7s,comp=E,102nm,0.7s						
JIRB	Irabujima	0.44	254	*i* P	Pn	16 04 08.5	-0.3
JIRB				S	Sn	16 04 16.3	-0.2
JIRB	Irabujima	0.44	254	A	A	16 04 08.5	
	comp=N,32nm,0.5s,comp=E,23nm,0.6s						
JTJ	Tarama	0.90	250	*e*P	Pn	16 04 14.7	+0.1
JTJ				S	Sn	16 04 27.1	+0.5
JTJ	Tarama	0.90	250	A	A	16 04 14.7	
	comp=N,8.0nm,0.6s,comp=E,9.0nm,0.5s						
JISG	Ishigakijimahi	1.26	254	P	Pn	16 04 19.2	-0.1
JISG				S	Sn	16 04 35.1	0.0
JIJ	Ishigaki jima	1.48	247	P	Pn	16 04 22.6	+0.3
JIJ				S	Sn	16 04 40.4	-0.1
JKRS	Kuro-shima	1.64	245	P	Pn	16 04 25.4	+0.9
JKE	Kume jima 2	1.72	37	P	Pn	16 04 25.0	-0.5
IRIF	Iriomote-Funau	1.84	251	*e*P	Pn	16 04 27.5	+0.3
IRIF				*e*S	Sn	16 04 49.8	+0.5
JAGN	Aguni-jima	2.18	41	P	Pn	16 04 32.2	+0.4
JAGN				*e*S	Sn	16 04 58.0	+0.4
JJT3	Tamagusuku3	2.27	58	*e*P	Pn	16 04 33.3	+0.2
YOJ	Yonaguni jima	2.44	259		Pn	16 04 34.8	-0.6
YOJ	Yonaguni jima	2.44	259	P	Pn	16 04 36.5	+1.1
YOJ	Yonaguni jima	2.44	259	*e*P	Pn	16 04 35.6	+0.2
YOJ				*e*S	Sn	16 05 03.3	-0.7
JYNG	Yonagunijimaku	2.50	259	*e*P	Pn	16 04 36.9	+0.7
JYNG				*e*S	Sn	16 05 06.4	+0.9
JOW	Kunigami	3.02	51	P	Pn	16 04 43.6	+0.2
	comp=E,6.0nm,0.3s,baz=152,slow=22,SNR=23						
JOW				S	Sn	16 05 19.5	+1.0
	comp=E,55nm,0.4s,baz=147,slow=18,SNR=3.8						
	comp=E,18nm,0.3s						
JOW	Kunigami	3.02	51	Pn	Pn	16 04 43.4	-0.1
NACB	Ninganchiao	3.76	259	Pn	Pn	16 04 53.0	-0.6
NACB	Ninganchiao	3.76	259	P	Pn	16 04 53.8	+0.3
TATO	Taipei	3.77	271	Pn	Pn	16 04 55.2	+1.6
TATO	Taipei	3.77	271	P	Pn	16 04 56.4	+2.8
YHNB	Yeheng	3.88	267	Pn	Pn	16 04 57.4	+2.1
YHNB	Yeheng	3.88	267	P	Pn	16 04 57.7	+2.4
YULB	Yu-li	4.26	250	Pn	Pn	16 04 58.9	-1.5
YULB	Yu-li	4.26	250	P	Pn	16 04 58.8	-1.5
SSLB	Suanglung	4.42	256	Pn	Pn	16 05 02.8	+0.1
SSLB	Suanglung	4.42	256	P	Pn	16 05 03.0	+0.3
TWGBT	Beinan	4.68	244	P	Pn	16 05 04.2	-2.0
TWG	Pinlang	4.69	244	Pn	Pn	16 05 04.0	-2.3
TPUB	Ta-pu	4.86	251	Pn	Pn	16 05 08.5	-0.1
TPUB	Ta-pu	4.86	251	P	Pn	16 05 09.2	+0.5
JNU	Nakatsue	9.34	28	P	Pn	16 06 01.6	-8.5
	comp=E,4.7nm,0.8s,baz=51,slow=18,SNR=2.2						
KSRS	Korea Array	12.62	8	P	Pn	16 06 54.7	-0.1
	comp=E,0.2nm,0.3s,baz=189,slow=14,SNR=1.4						
	comp=E,1.1nm,0.9s						
GUMO	Guam	21.35	118	LR	LR	16 15 36.6	
	comp=E,22nm,21.6s,baz=32,slow=32						
JKA	Kamikawa-asahi	23.60	32	P	P	16 09 03.6	-0.5
HILR	Hailar Array B	24.99	351	P	P	16 09 15.5	-1.3
	comp=E,1.4nm,0.5s,baz=166,slow=13,SNR=4.2						
	comp=E,1.4nm,0.5s						
GTA	Gaotai	26.07	310	*e*P	P	16 09 26.5	-0.3
GTA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SONM	Songino Array	27.45	331	P	P	16 09 38.0	-1.1
	comp=Z,0.5nm,0.5s,baz=149,slow=9.5,SNR=4.1						
SONM				LR	LR	16 22 15.8	
	comp=Z,87nm,21.6s,baz=87,slow=40						
	comp=Z,0.5nm,0.5s						
SONM	Songino Array	27.45	331	P	P	16 09 38.4	-0.8
JAY	Jayapura	30.97	150	LR	LR	16 24 28.5	
	comp=Z,13nm,18.2s,baz=4.5,slow=40						
SOEI	Soe	34.52	182	P	P	16 10 43.5	+1.9
EVN	Everest	34.79	284	P	P	16 10 44.9	+0.4
PETK	Petropavlovsk-	37.01	32	P	P	16 11 02.1	-0.5
	comp=Z,6.0nm,0.9s,baz=202,slow=7.4,SNR=2.6						
	comp=Z,6.0nm,0.9s						
MKAR	Makanchi Array	40.68	314	P	P	16 11 32.7	-0.6
	comp=Z,0.8nm,0.6s,baz=103,slow=9.8,SNR=7.4						
	comp=Z,0.8nm,0.6s						
ZAA0	Zalesovo Array	41.89	325	P	P	16 11 41.6	-1.4
ZALV	Zalesovo Beam	41.89	325	P	P	16 11 41.6	-1.5
	comp=Z,2.2nm,0.6s,baz=110,slow=8.1,SNR=13						
ZALV				LR	LR	16 30 23.5	
	comp=Z,69nm,19.4s,baz=88,slow=38						
	comp=Z,2.2nm,0.6s						
KDJ	Kajisay	43.27	306	P	P	16 11 54.4	-0.3
KURK	Kurchatov	44.17	318	P	P	16 12 00.5	-1.0
KURBB	Kurchatov Arra	44.20	318	P	P	16 12 00.9	-0.8
	comp=Z,1.0nm,0.6s,baz=109,slow=9.4,SNR=9.4						
	comp=Z,1.0nm,0.6s						
WB0	Warramunga Arr	45.26	168	P	P	16 12 11.5	+1.0
WRA	Warramunga Arr	45.42	168	P	P	16 12 12.9	+1.1
	comp=Z,0.6nm,0.6s,baz=349,slow=8.8,SNR=5.5						
	comp=Z,0.6nm,0.6s						
WRA	Warramunga Arr	45.42	168	P	P	16 12 12.0	+0.2
WR8	Warramunga Arr	45.46	168	P	P	16 12 12.9	+0.8
WR8				IAmb	IAmb	16 12 27.9	
	comp=Z,5.0nm,1.0s						
ASAR	Alice Springs	48.99	170	P	P	16 12 41.2	+1.7
	comp=Z,0.2nm,0.5s,baz=356,slow=6.9,SNR=12						
	comp=Z,0.2nm,0.5s						
ASAR	Alice Springs	48.99	170	P	P	16 12 39.4	-0.2
BVAR	Borovoye Array	49.69	319	P	P	16 12 44.0	-0.6
	comp=Z,1.0nm,0.6s,baz=105,slow=8.2,SNR=4.4						
	comp=Z,1.0nm,0.6s						
NRIK	Noril'sk	49.77	343	P	P	16 12 45.4	+0.4
	comp=Z,0.7nm,0.3s,baz=122,slow=5.1,SNR=3.8						
	comp=Z,0.7nm,0.3s						
NRIK	Noril'sk	49.77	343	P	P	16 12 44.4	-0.6
AB31	Akbulak array	55.82	314	P	P	16 13 29.8	-0.2
AB31				IAmb	IAmb	16 13 37.7	
	comp=Z,6.0nm,1.5s						
ABKAR	Akbulak array	55.82	314	P	P	16 13 29.9	-0.1
ARTI	Arti	57.05	322	P	P	16 13 38.3	-0.2
F17K	Baldwin Pennin	60.65	26	P	P	16 14 04.6	+1.3
C18K	Utukok River	60.88	24	P	P	16 14 05.8	+0.8
C18K				IAmb	IAmb	16 14 49.7	
	comp=Z,8.4nm,1.2s						
N15K	Kwethluk River	60.90	33	P	P	16 14 06.1	+0.9
H17K	Granite Mounta	61.10	28	P	P	16 14 06.6	+0.1
H17K				IAmb	IAmb	16 14 08.7	
	comp=Z,6.8nm,1.2s						
L16K	Owhat River	61.21	32	P	P	16 14 08.3	+1.0
L16K				IAmb	IAmb	16 14 12.7	
	comp=Z,6.8nm,1.1s						
J17K	VABM Dome	61.42	30	P	P	16 14 08.0	-0.7
J17K				IAmb	IAmb	16 14 11.1	
	comp=Z,4.0nm,1.0s						
M16K	Timber Creek	61.46	32	P	P	16 14 09.9	+1.0
C19K	Lookout Ridge	61.50	23	P	P	16 14 10.1	+0.9
C19K				IAmb	IAmb	16 14 36.3	
	comp=Z,10.0nm,1.4s						
K17K	Iditarod	61.77	31	P	P	16 14 12.5	+1.5
K17K				IAmb	IAmb	16 14 53.6	
	comp=Z,8.0nm,1.4s						
KIRV	Kirov	61.93	325	LR	LR	16 43 01.6	
	comp=Z,106nm,18.9s,baz=15,slow=38						
E19K	Redstone River	62.29	25	P	P	16 14 15.4	+1.0
B20K	Meade River	62.41	22	P	P	16 14 16.7	+1.6
D20K	Etivluk River	62.56	24	P	P	16 14 16.8	+0.6
D20K				IAmb	IAmb	16 14 35.7	
	comp=Z,6.7nm,1.1s						
E21K	Killik River	63.52	24	P	P	16 14 23.6	+0.9
E21K				IAmb	IAmb	16 14 25.8	
	comp=Z,4.7nm,0.8s						
IMAR	Indian Mountai	63.68	27	P	P	16 14 24.2	+0.5
G21K	Allakaket	63.76	26	P	P	16 14 25.6	+1.4
G21K				IAmb	IAmb	16 14 26.3	
	comp=Z,9.9nm,1.3s						
D22K	Ayikyak River	63.99	24	P	P	16 14 27.3	+1.6
D22K				IAmb	IAmb	16 14 31.8	
	comp=Z,5.7nm,0.8s						
D23K	Nanushuk River	64.70	23	P	P	16 14 31.9	+1.6
L22K	Petersville	65.25	30	P	P	16 14 34.4	+0.4
L22K				IAmb	IAmb	16 14 37.7	
	comp=Z,8.4nm,1.3s						
D24K	Happy Valley	65.36	23	P	P	16 14 36.0	+1.5
D24K				IAmb	IAmb	16 14 40.7	
	comp=Z,5.0nm,0.8s						
H23K	Yukon River	65.42	27	P	P	16 14 36.6	+1.6
H23K				IAmb	IAmb	16 14 41.1	
	comp=Z,5.0nm,1.0s						
F24K	Squaw Lake	65.88	25	P	P	16 14 39.5	+1.5
F24K				IAmb	IAmb	16 14 42.1	
	comp=Z,3.4nm,0.8s						
ILAR	Eielson Array	66.66	28	P	P	16 14 42.6	-0.4
	comp=Z,0.5nm,0.8s,baz=260,slow=5.2,SNR=9.1						
	comp=Z,0.5nm,0.8s						
ILAR	Eielson Array	66.66	28	P	P	16 14 42.9	-0.1
F25K	Christian Rive	66.72	25	P	P	16 14 44.4	+1.0
F25K				IAmb	IAmb	16 14 50.5	
	comp=Z,3.6nm,0.9s						
RIDG	Independent Ri	67.72	29	P	P	16 14 49.1	-0.7
RIDG				IAmb	IAmb	16 15 13.9	
	comp=Z,6.7nm,1.2s						
SCRK	Sand Creek	68.05	28	P	P	16 14 51.5	-0.5
E27K	Coleen River	68.12	24	P	P	16 14 53.0	+0.8
E27K				IAmb	IAmb	16 14 59.0	
	comp=Z,6.8nm,1.4s						
KBZ	Khabaz	68.15	309	P	P	16 14 52.2	-0.6
	comp=Z,2.0nm,0.7s,baz=131,slow=5.9,SNR=4.1						
	comp=Z,2.0nm,0.7s						
E28M	Babbage River	68.76	23	P	P	16 14 57.6	+1.4
E28M				IAmb	IAmb	16 15 02.8	
	comp=Z,5.9nm,1.3s						
I28M	Miner Creek	69.40	26	P	P	16 15 01.1	+0.8
I28M				IAmb	IAmb	16 15 14.6	
	comp=Z,13nm,1.4s						
H29M	Whitestone	69.82	25	P	P	16 15 03.7	+1.0
ARCES	ARCESS Array B	70.33	338	P	P	16 15 05.6	-0.3
	comp=Z,0.8nm,0.5s,baz=58,slow=5.0,SNR=5.0						
	comp=Z,0.8nm,0.5s						
ARCES	ARCESS Array B	70.33	338	P	P	16 15 05.8	0.0
F30M	Barrier River	70.39	24	P	P	16 15 07.5	+1.2
F30M				IAmb	IAmb	16 15 35.6	
	comp=Z,18nm,1.5s						
G31M	Satah River	71.17	24	P	P	16 15 11.1	+0.2
MARD	Mardin	71.45	303	P	P	16 15 14.6	+1.2
M30M	Minto, Yukon	71.55	29	P	P	16 15 14.8	+1.4
M30M				IAmb	IAmb	16 15 45.5	
	comp=Z,5.8nm,1.2s						
M31M	Drury Creek, Y	72.73	29	P	P	16 15 21.0	+0.6
M31M				IAmb	IAmb	16 16 05.8	
	comp=Z,6.0nm,1.2s						
FIA1	FINESS Array S	72.81	330	P	P	16 15 21.3	+0.5
FINES	FINESS Array B	72.81	330	P	P	16 15 20.8	-0.1
	comp=Z,1.0nm,0.4s,baz=56,slow=6.3,SNR=9.6						
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	72.81	330	P	P	16 15 20.5	-0.3
BR131	Keskin Array S	75.96	307	P	P	16 15 39.9	+0.2
BR131				IAmb	IAmb	16 15 48.1	
	comp=Z,13nm,1.5s						
BRTR	Keskin Array B	75.96	307	P	P	16 15 39.7	-0.1
	comp=Z,1.8nm,0.8s,baz=105,slow=4.7,SNR=10						
	comp=Z,1.8nm,0.8s						
BRTR	Keskin Array B	75.96	307	P	P	16 15 38.5	-1.2
BUR08	Bucovina Ar. S	78.59	317	P	P	16 15 54.9	+0.6
BURAR	Bucovina Array	78.59	317	P	P	16 15 54.5	+0.3
HFS	Hagfors	78.85	332	P	P	16 15 55.9	+0.6
	comp=Z,1.3nm,0.6s,baz=85,slow=6.4,SNR=4.7						
	comp=Z,1.3nm,0.6s						
NOA	NORSAR Array B	79.41	333	P	P	16 15 57.9	-0.6
	comp=Z,1.1nm,0.7s,baz=56,slow=5.2,SNR=2.3						
	comp=Z,1.1nm,0.7s						
YKA	Yellowknife Ar	80.66	24	P	P	16 16 05.0	0.0
	comp=Z,0.6nm,0.9s,baz=277,slow=4.5,SNR=2.4						
	comp=Z,0.6nm,0.9s						
YKA	Yellowknife Ar	80.66	24	P	P	16 16 05.5	+0.5
GERES	GERESS Array B	84.78	322	P	P	16 16 27.2	+0.3
	comp=Z,1.2nm,0.8s,baz=54,slow=6.8,SNR=7.5						
	comp=Z,1.2nm,0.8s						
W57A	Gilead	115.48	23	PKPdf	PKiKP	16 22 31.7	-2.8

DJA 04 16:09:15.2±0.3**, 4°S**±2°×**12°7E**±°**, h10**^{km}**, M3.7**/13**, mB5.5**/2**, mb3.9**/5**, MLv3.6**/13**, Mw(mB)4.9**/2**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	Namlea	1.21	9	P	Pn	16 09 37.7	-0.5
NLAI				S	Sb	16 09 53.2	-0.7
AAI	Ambon	1.49	60	P	Pn	16 09 41.8	-0.3
KRAI	Karang Ratu	1.86	53	P	Pn	16 09 47.4	+0.2
MSAI	Masohi	2.30	62	P	Pn	16 09 53.7	+0.5
SANI	Sanana	2.54	339	P	Pn	16 09 56.4	-0.2
SANI				S	Sn	16 10 28.3	+0.7
BNDI	Bandanaira	3.00	92	P	Pn	16 10 00.6	-2.2
LUWI	Luwuk	5.33	309	P	Pn	16 10 33.5	-1.4

FAKI	Fak Fak	5.55	74	P	Pn	16 10 27.7	-10
SOEI	Soe	5.89	206	P	Pn	16 10 42.7	0.0
	0.1nm12nm,0.9s						
EDFI	Ende, Flores	6.72	230	P	Pn	16 10 53.8	-0.3
BKSI	Bulukumba	6.81	262	P	Pn	16 10 55.2	0.0

DJA 04 16:10:49.9±0.3,4°S±3°×12°7E±°,h10km,M3.8/11,mb4.0/6, MLv3.7/11,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NLAI	Namlea	1.20	14	P	Pb	16 11 11.8	-0.9
NLAI				S	Sb	16 11 27.2	-1.0
AAI	Ambon	1.55	62	P	Pn	16 11 13.2	-4.4
KRAI	Karang Ratu	1.91	55	P	Pn	16 11 21.8	-0.7
MSAI	Masohi	2.35	63	P	Pb	16 11 30.7	-1.7
SANI	Sanana	2.49	340	P	Pn	16 11 30.6	+0.1
SANI				S	Sn	16 12 01.4	+0.5
BNDI	Bandanaira	3.08	92	P	Pn	16 11 38.8	+0.2
FAKI	Fak Fak	5.62	75	P	Pn	16 12 13.3	-0.3
	0.1nm16nm,1.3s						
SWI	Sorong	5.66	52	P	Pn	16 12 14.3	+0.1
APSI	Ampana	6.23	304	P	Pn	16 12 23.3	+1.4
	12nm,0.4s						
EDFI	Ende, Flores	6.67	230	P	Pn	16 12 27.7	-0.5
BKSI	Bulukumba	6.74	262	P	Pn	16 12 30.3	+1.4

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*IDC **04** 16:21:19.9±1.5,2°.45S×120°.39E,h0km,mb3.7/3, mbtmp3.7/3,MS2.8/1,Error ellipse: s-maj=229.8km s-min=27.1km az=58.0*

*DJA **04** 16:21:20.5±0.2,3°S±2°×11°9E±°,h10km,M4.1/20, mb4.1/10,MLv4.1/20*

ISC 04 16:21:20.4±0.8,2°.91S±0°.04×119°.44E±0°.04,h10km,n26, σ0s.90/29,mb3.8/3,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTSI	Tana Toraja	0.41	110	P	Pg	16 21 27.5	-1.0
TTSI				S	Sg	16 21 33.8	-0.1
MMSI	Mamuju	0.57	292	P	Pg	16 21 31.0	-0.5
MMSI				S	Sb	16 21 39.4	-1.2
PMSI	Majene	0.79	221	P	Pb	16 21 36.1	-0.1
SPSI	Sidrap Palu	1.10	162	P	Pb	16 21 40.5	-1.1
BNSI	Bone	1.63	156	P	Pn	16 21 49.7	+0.5
BNSI				S	Sb	16 22 11.8	+0.6
PCI	Palu	2.03	11	P	Pb	16 21 56.4	-1.0
KAPI	Kappang	2.12	171	P	Pn	16 21 56.4	+0.5
MKS	Makassar	2.29	179	P	Pn	16 21 59.1	+0.7
BKSI	Bulukumba	2.49	164	P	Pn	16 22 02.0	+0.9
APSI	Ampana	2.97	48	P	Pn	16 22 07.7	0.0
MPSI	Mapaga	3.26	8	P	Pn	16 22 12.4	+0.8
KDI	Kendari	3.34	108	P	Pn	16 22 15.3	+2.5
LUWI	Luwuk	3.81	61	P	Pn	16 22 18.2	-1.1
GTOI	Gorontalo	5.02	45	P	Pn	16 22 35.7	-0.1
	0.2nm47nm,0.7s						
LBFI	Labuhan Bajo,	5.55	175	P	Pn	16 22 42.7	-0.5
	0.1nm17nm,1.0s						
DBNI	Kabupaten Domp	5.67	191	P	Pn	16 22 45.1	+0.3
	0.1nm8.9nm,0.8s						
PLAI	Plampang	6.11	196	P	Pn	16 22 50.9	+0.1
	0.1nm13nm,1.2s						
EDFI	Ende, Flores	6.22	159	P	Pn	16 22 53.1	+0.6
TWSI	Taliwang, Sumb	6.32	204	P	Pn	16 22 54.0	+0.2
	0.1nm11nm,0.7s						
KLNI	Mataram	6.41	211	P	Pn	16 22 55.3	+0.4
	0.1nm14nm,1.3s						
SANI	Sanana	6.60	83	P	Pn	16 22 57.7	+0.1
	0.1nm6.1nm,0.9s						
WBSI	Waikabubak, Su	6.69	180	P	Pn	16 22 59.8	+0.9
	37nm,0.8s						
DAV	Davao City (W)	11.65	32	LR	LR	16 29 05.0	
	comp=Z,51nm,19.5s,baz=237,slow=43						
WRA	Warramunga Arr	22.32	140	P	P	16 26 17.4	-1.1
	2.0nm,0.9s,baz=325,slow=9.8,SNR=8.4						
	2.0nm,0.9s						
ASAR	Alice Springs	24.93	147	P	P	16 26 43.7	-0.4
	2.0nm,0.9s,baz=326,slow=8.3,SNR=20						
ASAR				PcP	PcP	16 30 20.3	+0.5
	0.5nm,1.0s,baz=331,slow=2.6,SNR=4.7						
	2.0nm,0.9s						
MKAR	Makanchi Array	59.31	331	P	P	16 31 24.1	+1.6
	0.7nm,0.8s,baz=138,slow=8.0,SNR=3.5						
	0.7nm,0.8s						

RSNC 04 16:21:25.6±0.0,10°N±1°×7°3W±°,h160km±4km,M2.8, mB4.5,mb3.7,ML2.6,MLv3.2,Mw(mB)3.7,Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARGC	Ariguani, Magd	1.66	273	P	Pn	16 21 57.3	-0.3
ARGC				S	Sn	16 22 22.4	+0.1
OCAC	Ocana	1.70	206	P	Pn	16 21 57.1	-1.1
OCAC				S	Sn	16 22 21.2	-2.1
URIC	Uribia, Colomb	2.00	16	P	Pn	16 22 00.9	-0.4
URIC				S	Sn	16 22 27.9	-1.1
SDV	Santo Domingo	2.10	115	P	Pn	16 22 03.1	+0.5
SDV				S	Sn	16 22 30.8	-0.4
SMRC	Santa Marta, M	2.14	310	P	Pn	16 22 02.4	-0.6
SMRC				S	Sn	16 22 30.8	-1.1
PAMC	Pamplona, Colo	2.42	183	P	Pn	16 22 06.0	-0.8
PAMC				S	Sn	16 22 36.1	-2.4
BARC	Barichara	3.22	191	P	Pn	16 22 15.0	-1.4
BARC				S	Sn	16 22 53.7	-2.1
UREC	San Jos de Ur	3.56	236	P	Pn	16 22 18.9	-1.6
UREC				S	Sn	16 22 57.2	-5.9
PTBC	PUERTO BERRIO,	3.72	210	P	Pn	16 22 20.5	-2.1
PTBC				S	Sn	16 23 00.5	-6.4
LCBC	Los crdobas,	3.87	257	P	Pn	16 22 24.1	-0.3
LCBC				S	Sn	16 23 06.5	-3.7
RUSC	La Rusia	3.89	188	P	Pn	16 22 23.3	-1.9
RUSC				S	Sn	16 23 07.2	-4.3
SPBC	San Pablo de B	4.36	200	P	Pn	16 22 29.0	-1.9
SPBC				S	Sn	16 23 18.1	-3.7
HELC	Santa Helena	4.61	220	P	Pn	16 22 30.8	-3.7
HELC				S	Sn	16 23 21.9	-6.3
CBOC	Ciudad Bolivar	5.17	222	P	Pn	16 22 40.4	-1.3
	0.0nm425nm2.0nm,0.5s						
CHIC	Chingaza	5.24	193	P	Pn	16 22 42.2	-0.6
CHIC				S	Sn	16 23 39.3	-3.7
GUY2C	Guyana, Caldas	5.30	212	P	Pn	16 22 42.1	-1.6
	0.0nm4.1nm,0.5s						
GUY2C				S	Sn	16 23 44.0	-0.7
	0.0nm4.1nm,0.5s						
BOG	Bogota	5.33	196	P	Pn	16 22 43.1	-0.8
CVER	Cruz Verde, Cu	5.43	196	P	Pn	16 22 44.7	-0.6
PTGC	Puerto Gaitan,	5.55	176	P	Pn	16 22 44.8	-1.7
	21nm,0.5s						
VILC	Villavicencio,	5.73	191	P	Pn	16 22 48.2	-0.9
	16nm,0.4s						
ORTC	Ortega, Tolima	6.40	205	P	Pn	16 22 56.7	-1.2
PRAC	Prado	6.45	201	P	Pn	16 22 58.3	-0.1
	4.7nm,2.1s						
URMC	La Uribe, Meta	6.73	196	P	Pn	16 23 00.1	-2.1
PIZC	Pizarro, Choco	6.74	225	P	Pn	16 23 03.5	+1.2
	55nm,0.6s						
YOTC	Yotoco, Valle	6.87	213	P	Pn	16 23 01.2	-2.9
BCIP	Isla Barro Col	7.20	266	P	Pn	16 23 08.1	-0.3
	32nm,1.8s						
MACC	Macarena, Meta	7.68	190	P	Pn	16 23 14.7	-0.1

IDC 04 16:36:00.6±50.0,15°.44S×175°.88W,h0km,mb4.1/3, mbtmp4.1/3,Error ellipse: s-maj=949.8km s-min=171.5km az=77.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	41.96	239	P	P	16 43 53.2	-0.2
	0.8nm,0.5s,baz=100,slow=6.1,SNR=3.8						
	0.8nm,0.5s						
WRA	Warramunga Arr	47.51	257	P	P	16 44 37.7	-0.2
	0.9nm,0.6s,baz=92,slow=7.4,SNR=15						
	0.9nm,0.6s						
ASAR	Alice Springs	47.83	252	P	P	16 44 40.4	0.0
	2.8nm,0.4s,baz=86,slow=8.2,SNR=46						
	2.8nm,0.4s						

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*ISK **04** 16:36:57.2,42°.52N×42°.50E,h13km,ML2.6/5*

*MOS **04** 16:36:57.7,42°.70N×42°.53E,h12km,MPVA3.5*

*AFAD **04** 16:36:57.4,42°.60N×42°.24E,h7km±3km,ML2.5*

*NORS **04** 16:36:57.0,42°.65N×42°.52E,h11km,MPVA3.6*

ISC 04 16:36:56.6±1.1,42°.62N±0°.02×42°.51E±0°.03,h14km±9km, n33,σ0s.84/62,Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEUR	Neytrino	0.66	12	*e*Pg	Pg	16 37 08.8	-0.7
NEUR				*i* Sg	Sg	16 37 17.1	-1.1
DIGR	Digorskoe uzhe	0.84	70	*e*Pg	Pg	16 37 12.3	-0.6
DIGR				*e*Sg	Sg	16 37 23.5	-0.4
DOMR	Dombai	0.94	316	*e*Pg	Pg	16 37 15.4	+0.7
DOMR				*i* Sg	Sb	16 37 27.4	+0.3
SHA1	Shidzhatmaz	1.12	5	*i* Pg	Pb	16 37 17.3	-0.7
SHA1				*e*Pg	Pn	16 37 17.4	-0.7
SHA1				*i* Sg	Sb	16 37 31.7	-0.8
SHA1				*e*Sg	Sg	16 37 32.2	-0.8
EPOS	Posof	1.13	172	P	Pb	16 37 17.9	-0.1
EPOS				S	Sg	16 37 33.2	+0.2
EPOS				*i* IAML		16 37 36.0	
	comp=E,135nm,0.5s						
EPOS				*i* IAML		16 37 42.0	
	comp=N,130nm,0.7s						
KBZ	Khabaz	1.15	14	*i* Pg	Pn	16 37 17.7	-0.5
KBZ				*i* Sg	Sb	16 37 32.8	0.0
LSNR	Lesken	1.17	55	*e*Pg	Pb	16 37 18.8	+0.2
LSNR				*e*Sg	Sg	16 37 34.9	+0.5
KORR	Kora	1.24	67	*e*Pg	Pg	16 37 20.3	-0.1
KORR				*e*Sg	Sg	16 37 37.6	+1.1
ARXR	Arkhyz	1.31	317	*e*Pg	Pb	16 37 21.7	+0.7
ARXR				*i* Sg	Sn	16 37 38.7	+0.7
LACR	Lac	1.33	80	*e*Pg	Pb	16 37 21.6	+0.2
LACR				*e*Sg	Sg	16 37 39.3	-0.3
KIV	Kislovodsk	1.34	5	*e*Pg	Pn	16 37 21.1	+0.1
KIV				*i* Sg	Sn	16 37 38.3	-0.4
KIV0	Kislovodsk Arr	1.34	6	*i* Pg	Pn	16 37 21.2	+0.1
KIV0				*i* Sg	Sn	16 37 38.6	-0.1
STDR	Stavd-Durt	1.36	56	*e*Pg	Pg	16 37 22.7	-0.1
STDR				*e*Sg	Sg	16 37 40.9	+0.3
KBTC	Kuba-Taba	1.37	28	*e*Pg	Pg	16 37 23.0	+0.2
KBTC				*e*Sg	Sg	16 37 41.9	+1.3
BEYR	Belyy Ugol+	1.41	9	*e*Pg	Pb	16 37 22.6	-0.1
BEYR				*i* Sg	Sb	16 37 40.9	+0.3
ARNR	Ardon	1.42	66	*e*Pg	Pb	16 37 23.0	+0.2
ARNR				*e*Sg	Sg	16 37 43.0	+0.7
DBOC	Borcka	1.42	207	P	Pn	16 37 21.3	-0.7
DBOC				S	Sn	16 37 39.7	-0.8
AHAN	Ardahan-Merkez	1.46	177	P	Pb	16 37 23.8	+0.2
AHAN				S	Sb	16 37 42.8	+0.8
AHAN				*i* IAML		16 37 46.0	
	comp=E,110nm,0.7s						
AHAN				*i* IAML		16 37 52.0	
	comp=N,55nm,0.7s						
HOPA	Hopa-Artvin	1.46	213	Pn	Pn	16 37 22.8	+0.2
HOPA				Sn	Sn	16 37 41.6	+0.1
PYA1	Pyatigorsk	1.50	16	*i* Pg	Pb	16 37 24.8	+0.4
PYA1				*i* Sg	Sb	16 37 43.8	+0.5
DBAD	Bademkaya	1.71	201	P	Pn	16 37 25.6	-0.4
DBAD				S	Sn	16 37 47.2	-0.7
DBAD				*i* IAML		16 37 51.0	
	comp=N,103nm,0.3s						
DBAD				*i* IAML		16 37 52.0	
	comp=E,107nm,0.2s						
GOLE	Ardahan-G¶lle	1.78	178	P	Pb	16 37 29.2	+0.1
GOLE				S	Sb	16 37 52.5	+1.0
DDEM	Demirkent	1.82	198	P	Pn	16 37 27.3	-0.3
GRYR	Gornoye	1.82	326	*e*Pg	Pn	16 37 28.7	+1.2
GRYR				*i* Sg	Sb	16 37 52.6	+0.3
TBLG	Delisi	1.88	117	Pn	Pn	16 37 29.4	+1.1
TBLG				Sn	Sb	16 37 52.9	-1.1
BOZK	Kars-Merkez-Bo	2.06	170	P	Pb	16 37 33.2	-0.6
SENK	Senkaya-Erzuru	2.06	183	Pn	Pn	16 37 31.1	+0.1
EAK	Akyaka	2.10	157	P	Pb	16 37 34.1	-0.4
GUZR	Guzeripl'	2.22	309	*e*Pg	Pb	16 37 35.6	-1.0
GUZR				*i* Sg	Sb	16 38 04.3	+0.3
IZDR	Rize	2.34	219	P	Pn	16 37 33.6	-1.1
IZDR				S	Sn	16 37 59.5	-3.8
IZDR				*i* IAML		16 38 12.0	
	comp=E,27nm,0.3s						
KRIK	Erzurum-spir	2.57	208	P	Pn	16 37 39.3	+1.2
KRIK				*i* IAML		16 38 10.0	
	comp=N,21nm,1.0s						
KRIK				S	Sn	16 38 10.7	+1.5
KOPR	Koprukoy-ERZUR	2.67	191	Pn	Pn	16 37 40.0	+0.7
BAYT	Aydıntepe-Bayb	2.85	219	Pn	Pn	16 37 42.8	+1.0

AFAD 04 16:49:07.4,36°.76N×28°.85E,h7km±4km,ML1.2, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SABU	Mula-Dalaman	0.11	57	P	Pg	16 49 16.5	+6.6
SABU				S	Sg	16 49 23.1	+11
IZZE	Mula-Seydike	0.44	137	P	Pg	16 49 16.1	+0.1
IZZE				S	Sg	16 49 22.9	+1.1
IZZE				*i* IAML		16 49 28.0	
	comp=N,20nm,0.4s						
TURN	Turunc	0.49	272	P	Pb	16 49 18.0	-0.3
TURN				S	Sg	16 49 24.1	+1.0
TAVA	DENIZLI_Tavas	0.70	4	P	Pn	16 49 25.2	+1.3
TAVA				*i* IAML		16 49 54.0	
	comp=N,11nm,2.1s						
GOLH	Golhisar	0.74	50	P	Pb	16 49 22.4	-0.3
GOLH				S	Sg	16 49 31.8	+0.5
GOLH				*i* IAML		16 49 35.0	
	comp=N,8.1nm,0.8s						
GOLH				*i* IAML		16 49 42.0	
	comp=E,15nm,1.7s						
GOLH	Golhisar	0.74	50	P	Pb	16 49 22.8	+0.1
GOLH				S	Sg	16 49 31.1	-0.3
GOLH				*i* IAML		16 49 32.0	
	comp=N,19nm,2.1s						

AFAD 04 16:49:10.7,37°.84N×29°.65E,h7km±3km,ML1.4,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INCE	Denizli-Bozkur	0.14	204	P	Pg	16 49 14.3	+0.7
INCE				S	Sg	16 49 17.1	+1.5
BRDR	BURDUR-Merkez	0.36	113	P	Pg	16 49 18.4	+0.7
BRDR				S	Sg	16 49 22.9	+0.4
DNIZ	Denizli-Tavas-	0.52	247	P	Pg	16 49 21.1	+0.3
DNIZ				S	Sg	16 49 28.6	+1.0
DNIZ				*i* IAML		16 49 32.0	
	comp=N,16nm,0.3s						
DNIZ	Denizli-Tavas-	0.52	247	P	Pg	16 49 21.1	+0.3
DNIZ				S	Sg	16 49 28.8	+1.1
DNIZ				*i* IAML		16 49 30.0	
	comp=N,31nm,0.3s						
DNIZ				*i* IAML		16 49 30.0	
	comp=E,27nm,0.4s						
PASA	Karahalli, USA	0.53	346	P	Pb	16 49 22.0	-0.3
PASA				S	Sg	16 49 28.1	+0.3
KZIL	AFYON_Kizioren	0.58	43	P	Pg	16 49 22.1	+0.3
TAVA	DENIZLI_Tavas	0.69	238	P	Pb	16 49 25.9	+0.8
TAVA				*i* IAML		16 49 44.0	
	comp=E,13nm,2.2s						
DNZT	Denizli-Tavas-	0.74	222	P	Pb	16 49 26.2	+0.2

DJA 04 17:04:23.9±0.3,3°S±2°×11°9E±°,h10km,M3.3/10, MLv3.3/10,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTSI	Tana Toraja	0.39	119	P	Pg	17 04 30.9	-0.6
TTSI				S	Sg	17 04 37.1	+0.5
MMSI	Mamuju	0.59	287	P	Pg	17 04 34.6	-0.9
PMSI	Majene	0.85	222	P	Pg	17 04 40.0	-0.3
SPSI	Sidrap Palu	1.14	165	P	Pb	17 04 44.1	-1.5
BNSI	Bone	1.65	158	P	Pn	17 04 53.3	+0.3
PCI	Palu	1.97	10	P	Pb	17 05 00.0	0.0
KAPI	Kappang	2.16	173	P	Pn	17 05 00.2	+0.3
MKS	Makassar	2.34	180	P	Pn	17 05 03.9	+1.4
BKSI	Bulukumba	2.53	165	P	Pn	17 05 06.3	+1.3
APSI	Ampana	2.91	48	P	Pb	17 05 13.9	-2.0
MPSI	Mapaga	3.20	8	P	Pn	17 05 15.0	+0.7
LUWI	Luwuk	3.75	61	P	Pn	17 05 23.5	+1.6
DAV	Davao City (W)	11.59	32	Pg	Pn	17 07 00.6	-9.0
	45nm,0.3s,baz=91,slow=5.7,SNR=5.8						

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*IDC **04** 17:05:13.6±2.9,6°.79N×72°.97W,h168km±40km, mbtmp3.9/2,Error ellipse: s-maj=392.0km s-min=7.6km az=132.0*

*RSNC **04** 17:05:15.3±0.0,7°N±1°×7°3W±°,h148km±1km,M3.2,mb3.4, mB4.8,ML2.8,MLv3.5,Mw(mB)4.0*

ISC 04 17:05:14.4±1.1,6°.83N±0°.03×73°.13W±0°.04,h151km±6km, n34,σ1s.36/66,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.24	193	P	Pn	17 05 35.4	+0.1
BARC				S	Sn	17 05 50.9	-0.3
BRJC	Barrancabermej	0.63	283	P	Pn	17 05 37.0	+0.4
BRJC				S	Sn	17 05 54.0	+0.5
PAMC	Pamplona, Colo	0.66	40	P	Pn	17 05 38.2	+0.8
PAMC				S	Sn	17 05 55.6	+0.8
RUSC	La Rusia	0.94	177	P	Pn	17 05 39.3	0.0
RUSC				S	Sn	17 05 56.8	-1.6
PTBC	PUERTO BERRIO,	1.35	258	P	Pn	17 05 42.1	-0.5
PTBC				S	Sn	17 06 02.5	-1.6
OCAC	Ocana	1.41	352	P	Pn	17 05 43.4	+0.1
OCAC				S	Sn	17 06 05.3	-0.2
SPBC	San Pablo de B	1.50	219	P	Pn	17 05 44.2	0.0
SPBC				S	Sn	17 06 05.9	-1.1
NORC	Norcasia	2.14	234	P	Pn	17 05 51.4	+0.1
NORC				S	Sn	17 06 17.6	-2.2
CHIC	Chingaza	2.27	195	P	Pn	17 05 53.2	0.0
CHIC				S	Sn	17 06 22.7	-0.4
ROSC	El Rosal	2.31	211	P	Pn	17 05 55.1	+1.4
	56nm,0.4s,baz=315,slow=20,SNR=23						
ROSC				S	Sn	17 06 26.0	+2.1
	216nm,0.4s,baz=42,slow=19,SNR=22						
ROSC	El Rosal	2.31	211	P	Pn	17 05 55.0	+1.4
ROSC				S	Sn	17 06 25.1	+1.2
HELC	Santa Helena	2.47	255	P	Pn	17 05 56.9	+1.3
HELC				S	Sn	17 06 26.9	-0.4
CVER	Cruz Verde, Cu	2.48	202	P	Pn	17 05 56.7	+0.9
CVER				S	Sn	17 06 26.3	-1.5
UREC	San Jos de Ur	2.56	291	P	Pn	17 05 55.8	-0.5
UREC				S	Sn	17 06 26.5	-2.1
GUY2C	Guyana, Caldas	2.74	234	P	Pn	17 06 00.3	+1.3
GUY2C				S	Sn	17 06 32.5	-0.9
VILC	Villavicencio,	2.76	192	P	Pn	17 05 58.8	-0.2
VILC				S	Sn	17 06 30.8	-2.6
PTGC	Puerto Gaitan,	2.80	159	P	Pn	17 05 58.5	-0.8
PTGC				S	Sn	17 06 31.3	-2.7
CBOC	Ciudad Bolivar	3.02	252	P	Pn	17 06 03.0	+0.7
CBOC				S	Sn	17 06 38.4	-0.9
DBBC	Dabeiba	3.07	274	P	Pn	17 06 03.1	+0.4
DBBC				S	Sn	17 06 38.7	-1.4
ARGC	Ariguani, Magd	3.20	340	P	Pn	17 06 05.2	+0.8
ARGC				S	Sn	17 06 43.0	-0.2
SDV	Santo Domingo	3.20	50	P	Pn	17 06 05.0	+0.4
	23nm,0.3s,baz=238,slow=13,SNR=28						
SDV				S	Sn	17 06 41.8	-1.6
	22nm,0.5s,baz=254,slow=22,SNR=14						
SDV	Santo Domingo	3.20	50	P	Pn	17 06 05.0	+0.4
SDV				S	Sn	17 06 42.3	-1.2
PRAC	Prado	3.56	210	P	Pn	17 06 08.6	-0.4
PRAC				S	Sn	17 06 51.6	+0.2
ORTC	Ortega, Tolima	3.59	216	P	Pn	17 06 09.7	+0.3
ORTC				S	Sn	17 06 52.1	0.0
PLMC	San Jos del P	3.68	239	P	Pn	17 06 10.2	-0.4
PLMC				S	Sn	17 06 51.7	-2.5
URMC	La Uribe, Meta	3.77	199	P	Pn	17 06 12.1	+0.2
URMC				S	Sn	17 06 55.2	-1.3
SMRC	Santa Marta, M	4.44	346	P	Pn	17 06 20.7	+0.3
SMRC				S	Sn	17 07 09.6	-2.3
CAPC	Capurgana	4.55	293	P	Pn	17 06 22.6	+0.6
CAPC				S	Sn	17 07 10.9	-3.7
URIC	Uribia, Colomb	4.97	13	P	Pn	17 06 26.2	-1.2
URIC				S	Sn	17 07 22.0	-2.4
JAMC	Jamundi, Valle	5.04	225	P	Pn	17 06 29.2	+0.6
JAMC				S	Sn	17 07 26.0	-0.5
GARC	Garzon, Huila	5.18	207	P	Pn	17 06 29.5	-1.0
GARC				S	Sn	17 07 26.9	-3.0
FLOC	Florencia	5.79	206	P	Pn	17 06 38.4	0.0
FLOC				S	Sn	17 07 45.0	+0.9
ASAR	Alice Springs	149.11	234	PKPbc	PKPdf	17 24 42.0	+0.6
	0.2nm,0.6s,baz=96,slow=3.6,SNR=5.6						
WRA	Warramunga Arr	150.34	241	PKPbc	PKPdf	17 24 46.4	+3.0
	0.2nm,0.4s,baz=108,slow=2.6,SNR=1.8						

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*IDC **04** 17:06:31.8±1.4,5°.59N×124°.98E,h0km,mb3.5/4, mbtmp3.5/4,Error ellipse: s-maj=44.2km s-min=12.5km az=101.0*

*DJA **04** 17:07:15.1±0.3,2°N±4°×12°6E±°,h10km,M3.8/11,mb4.0/2, MLv3.6/11*

ISC 04 17:07:15.1±1.3,1°.62N±0°.08×126°.45E±0°.07,h10km,n11, σ3s.85/13,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.24	133	P	Pn	17 07 37.5	-1.0
TNTI				S	Sb	17 07 55.6	+0.9
MNI	Manado	1.62	264	P	Pn	17 07 41.5	-2.3
SGSI	Sangihe	2.25	336	P	Pn	17 07 52.5	0.0
GTOI	Gorontalo	3.58	254	P	Pn	17 08 09.0	-1.7
SANI	Sanana	3.67	187	P	Pn	17 08 10.4	-1.6
LUWI	Luwuk	4.53	234	P	Pn	17 08 23.1	-0.7
MRSI	Marisa	4.65	256	P	Pn	17 08 26.0	+0.5
APSI	Ampana	5.42	242	P	Pn	17 08 38.9	+2.8
FITZ	Fitzroy Crossi	19.61	182	P	Pn	17 11 45.0	-0.1
	0.8nm,0.7s,baz=356,slow=13,SNR=1.7						
	0.8nm,0.7s						
WRA	Warramunga Arr	22.78	161	P	P	17 12 14.5	-3.5
	0.5nm,0.4s,baz=340,slow=11,SNR=23						
	0.5nm,0.4s						
ASAR	Alice Springs	26.16	164	P	P	17 12 46.2	-3.6
	0.3nm,0.4s,baz=348,slow=8.5,SNR=11						
ASAR				PP	PnPn	17 13 38.5	+10
	0.6nm,0.5s,baz=358,slow=8.9,SNR=7.0						
	0.3nm,0.4s						

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*KRSC **04** 17:29:53.2±0.7,55°.96N×161°.27E,h104km±7km,Ml3.9*

*IDC **04** 17:29:54.8±2.5,55°.96N×161°.00E,h113km±25km,mb3.1/6, mbtmp3.5/7,MS3.5/3,Error ellipse: s-maj=28.3km s-min=20.0km az=125.0*

ISC 04 17:29:54.2±0.8,55°.99N±0°.05×161°.24E±0°.04,h107km±6km, n44,σ0s.81/54,mb3.3/7,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZLN	Zelenaya	0.24	276	*e*P	Pn	17 30 10.1	+0.6
ZLN				*e*S	Sn	17 30 21.8	+0.8
CIRR	Tsirk	0.30	294	*e*P	Pn	17 30 10.2	+0.4
CIRR				*e*S	Sn	17 30 21.8	+0.4
BZWR	Bezymyannyi-We	0.42	266	*e*P	Pn	17 30 10.5	+0.1
BZWR				*e*S	Sn	17 30 22.6	+0.1
KLY	Klyuchi	0.46	315	*e*P	Pn	17 30 09.8	-0.5
KLY				*e*S	Sn	17 30 21.3	-1.3
KIRR	Kirishev	0.51	266	*e*P	Pn	17 30 10.8	-0.1
KIRR				*e*S	Sn	17 30 23.2	-0.2
KPT	Kopyto	0.57	268	*e*P	Pn	17 30 11.0	-0.3
KPT				*e*S	Sn	17 30 23.4	-0.7
SMKR	Semkarok	0.60	12	*e*P	Pn	17 30 11.8	+0.3
SMKR				*e*S	Sn	17 30 25.2	+0.6
KMNR	Kamenistaya	0.61	248	*e*P	Pn	17 30 11.8	+0.2
SRKR	Sorokina	0.67	357	*e*P	Pn	17 30 12.3	+0.3
SRKR				*e*S	Sn	17 30 26.0	+0.5
KOZ	Kozyrevsk	0.77	275	*e*P	Pn	17 30 12.9	0.0
KBG	Krutoberegovo	0.86	72	*e*P	Pn	17 30 13.9	+0.2
KBG				*e*S	Sn	17 30 28.6	+0.3
SRDR	Sredinnyy	0.91	292	*e*S	Sn	17 30 29.4	0.0
KBTR	Krutoberegovo	0.91	76	*e*P	Pn	17 30 14.2	0.0
KBTR				*e*S	Sn	17 30 28.8	-0.5
KZV	Kizimen	1.03	212	*e*P	Pn	17 30 15.4	-0.2
KZV				*e*S	Sn	17 30 30.9	-0.9
ESO	Esso	1.43	268	*e*P	Pn	17 30 19.9	0.0
ESO				*e*S	Sn	17 30 39.3	-0.2
BKI	Bering	2.80	104	*e*P	Pn	17 30 37.2	-0.1
BKI				*e*S	Sn	17 31 09.3	-1.2
SPN	Mys Shipunski	2.98	194	*e*P	Pn	17 30 39.9	0.0
SPN				*e*S	Sn	17 31 14.2	-0.8
KRX	Arik	3.04	211	*e*P	Pn	17 30 41.5	+0.9
SDLR	Sedlovina	3.04	208	*e*P	Pn	17 30 41.5	+0.7
KRER	Koryakskii	3.06	209	*e*P	Pn	17 30 42.6	+1.6
AVH	Avacha	3.10	209	*e*P	Pn	17 30 43.3	+1.9

KOK	Koryaka	3.10	210	eP	Pn	17 30 42.8	+1.3
UGLR	Uglovaya	3.12	208	eP	Pn	17 30 43.3	+1.5
DALK	Dalny	3.30	207	eP	Pn	17 30 44.8	+0.7
DALK				eS	Sn	17 31 22.8	+0.3
PET	Petropavlovsk	3.33	208	eP	Pn	17 30 45.5	+1.0
PETK	Petropavlovsk-	3.55	217	P	Pn	17 30 47.2	-0.2
	6.9nm,0.6s,baz=37,slow=15,SNR=40						
PETK				S	Sn	17 31 27.0	-1.5
	5.2nm,0.5s,baz=87,slow=19,SNR=1.3						
KRMR	Karymshinskiy	3.65	211	eP	Pn	17 30 49.3	+0.6
APC	Apacha	3.89	219	eP	Pn	17 30 52.8	+1.0
GRL	Gorelyy	3.91	210	eP	Pn	17 30 53.8	+1.4
MTVR	Mutnovka	3.95	208	eP	Pn	17 30 53.7	+0.9
ASAK	Asacha	4.11	210	eP	Pn	17 30 56.0	+1.0
ILAR	Eielson Array	26.36	49	P	P	17 35 21.1	+1.4
	0.2nm,0.6s,baz=273,slow=7.8,SNR=4.5						
	0.2nm,0.6s						
SONM	Songino Array	33.98	280	LR	LR	17 52 42.1	
	comp=Z,22nm,18.2s,baz=154,slow=40						
H11N2	WAKE ISLAND Hy	36.45	171	T	T	18 14 28.6	
	baz=355,slow=76,SNR=5.6						
H11N3	WAKE ISLAND Hy	36.47	171	T	T	18 14 32.7	
	baz=355,slow=76,SNR=3.6						
H11N1	WAKE ISLAND Hy	36.47	171	T	T	18 14 30.4	
	baz=355,slow=76,SNR=6.5						
SPITS	Spitsbergen Ar	44.38	350	P	P	17 37 52.9	-0.3
	2.4nm,0.5s,baz=29,slow=7.1,SNR=5.9						
	2.4nm,0.5s						
KURBB	Kurchatov Arra	46.91	300	P	P	17 38 12.8	-0.7
	0.7nm,0.2s,baz=63,slow=7.4,SNR=0.9						
MKAR	Makanchi Array	47.54	294	P	P	17 38 17.7	-0.8
	0.1nm,0.4s,baz=58,slow=8.7,SNR=1.7						
	0.1nm,0.4s						
ARTI	Arti	51.83	316	LR	LR	18 02 52.5	
	comp=Z,68nm,20.1s,baz=268,slow=38						
OBN	Obninsk	60.43	327	LR	LR	18 10 21.4	
	comp=Z,71nm,18.0s,baz=29,slow=40						
TXAR	Lajitas Array	68.92	69	P	P	17 40 48.4	+0.8
	0.2nm,0.7s,baz=317,slow=6.7,SNR=2.5						
	0.2nm,0.7s						
WRA	Warramunga Arr	78.99	206	P	P	17 41 45.4	-0.6
	0.4nm,0.8s,baz=14,slow=5.7,SNR=2.7						
	0.4nm,0.8s						
ASAR	Alice Springs	82.68	205	P	P	17 42 05.0	-0.4
	0.4nm,1.0s,baz=15,slow=4.8,SNR=4.4						
	0.4nm,1.0s						

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*FUNV **04** 17:30:01.3, 10°.01N×61°.95W, h27^{km}, MW3.8*

*TRN **04** 17:30:01.9, 10°.34N×62°.28W, h3^{km}, MD3.7, Gulf of Paria.*

ISC 04 17:30:00.7±3.6, **10°.14N**±0°.07×**62°.19W**±0°.05, **h16**^{km}±25^{km}, **n26**, σ1^{s}.**26**/40, **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPP	Pointe-a-Pierr	0.74	76	eP	Pn	17 30 18.6	+2.0
DMDM	Guralp CMG5TDE	0.83	48	eP	Pn	17 30 17.7	-0.1
DMDM				eS	Sn	17 30 29.6	-0.2
PSKH	Kent House, Po	0.84	50	eP	Pn	17 30 17.9	-0.1
PSKH				eS	Sn	17 30 29.3	-0.8
TRN	Trinidad (W)	0.92	57	eP	Pn	17 30 19.0	0.0
TRN				eS	Sn	17 30 31.7	-0.2
GRFF	Grenada Fort F	1.95	13	eP	Pb	17 30 34.8	-1.0
GRFF				eS	Sn	17 30 57.3	-0.1
GRGR	Grenville	2.05	15	eP	Pn	17 30 34.7	+0.1
GRGR				eS	Sn	17 31 00.4	+0.6
GRW	Mount Saint Ca	2.07	14	eP	Pn	17 30 35.7	+0.8
GRW				eS	Sb	17 31 02.8	-0.8
GRHS	Sauteurs	2.14	14	eP	Pn	17 30 36.0	+0.2
GRHS				eS	Sn	17 31 02.5	+0.4
GRSS	Sisters	2.22	15	eP	Pn	17 30 38.0	+1.2
GRSS				eS	Sn	17 31 04.5	+0.5
PCRV	Puerto La Cruz	2.41	271	eP	Pn	17 30 41.6	+2.0
PCRV				eS	Sn	17 31 10.8	+2.0
GCMP	Grenada, Carri	2.45	18	eP	Pn	17 30 40.4	+0.4
GCMP				eS	Sn	17 31 09.7	+0.1
SVB	Belmont	3.25	16	eP	Pn	17 30 51.5	+0.5
SVB				eS	Sn	17 31 30.7	+1.3
MCLT	Moule a Chique	3.75	19	eP	Pn	17 30 59.7	+1.8
MCLT				eS	Sn	17 31 41.3	-0.6
SLBI	Saint Lucia, B	4.04	17	eP	Pn	17 31 02.9	+1.0
BIM	Bigot	4.49	14	eP	Pn	17 31 09.0	+0.9
TACV	Tcata	4.77	270	eP	Pn	17 31 12.1	+0.2
ILAM	Ilet Lapin Mar	4.78	15	eP	Pn	17 31 13.6	+1.5
CACV	CAICARA DEL OR	5.00	240	eP	Pn	17 31 09.4	-5.8
CACV				eS	Sn	17 31 59.2	-14
DSLB	Salisbury	5.32	8	eP	Pn	17 31 20.5	+0.9
BENV	Beln	5.33	269	eP	Pn	17 31 21.2	+1.4
BENV				eS	Sn	17 32 19.2	-1.8
TURV	Turiamo	5.57	274	eP	Pn	17 31 23.8	+0.8
TURV				eS	Sn	17 32 24.8	-2.0
ATGZ	Broadband at L	5.94	4	eP	Pn	17 31 29.8	+1.8
DHSZ	Broadband at M	6.11	4	eP	Pn	17 31 32.6	+2.2
MAPV	Macapo	6.18	268	eP	Pn	17 31 31.6	+0.1
MAPV				eS	Sn	17 32 39.2	-2.7
DSDZ	La Diserade, G	6.23	10	eP	Pn	17 31 31.6	-0.5
ANWB	Willy Bob	7.50	3	eP	Pn	17 31 51.5	+2.1

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*IDC **04** 18:09:31.1±4.6, 19°.00S×177°.59W, h500^{km}±48^{km}, mb3.5/12, mbtmp4.3/14, Error ellipse: s-maj=27.9km s-min=15.4km az=65.0*

*NEIC **04** 18:09:32.4±1.9, 19°.0S±0°.1×177°.62W±0°.08, h511^{km}±8^{km}, mb4.4/30, Error ellipse: s-maj=19.7km s-min=10.6km az=174.0*

ISC 04 18:09:31.6±0.6, **19°.0S**±0°.1×**177°.71W**±0°.09, **h500**^{km}, **n48**, σ1^{s}.**43**/49, **mb4.3**/25, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.22	287	P	P	18 10 53.7	+1.7
NIUE	Niue	7.37	92	P	P	18 11 21.1	-0.4
SANVU	Saraoutou	14.84	281	P	P	18 12 40.2	0.0
DZM	Mont Dzumac	15.15	256	P	P	18 12 45.9	+2.3
	2.2nm,0.6s,baz=115,slow=12,SNR=6.7						
TOZ	Tahuroa Road	19.57	196	P	P	18 13 26.4	+0.2
TOZ				IAmb	IAmb	18 14 02.8	
	comp=Z,21nm,1.4s						
URZ	Urewera	19.70	192	P	P	18 13 25.9	-1.5
	comp=Z,4.9nm,0.3s,baz=268,slow=1.6,SNR=10						
RTZ	Ruatahuna	20.07	192	P	P	18 13 28.5	-2.4
BKZ	Black Stump Fm	20.70	193	P	P	18 13 34.7	-1.9
BKZ				IAmb	IAmb	18 14 00.2	
	comp=Z,26nm,1.5s						
BFZ	Birch Farm	22.21	192	P	P	18 13 47.9	-2.2
MRZ	Mangatainoka R	22.33	194	P	P	18 13 49.5	-1.7
TCW	Tory Channel	23.16	196	P	P	18 13 56.3	-2.3
QRZ	Quartz Range	23.30	199	P	P	18 13 59.5	-0.4
THZ	Tophouse	24.05	197	P	P	18 14 05.2	-1.4
ARMA	Armidale	29.98	242	P	P	18 15 00.0	+1.0
ARMA				IAmb	IAmb	18 15 16.8	
	comp=Z,15nm,1.4s						
CTAO	Charters Tower	33.93	262	P	P	18 15 32.7	-0.1
CTAO				IAmb	IAmb	18 15 33.8	
	comp=Z,7.4nm,0.7s						
PMG	Port Moresby	35.30	281	P	P	18 15 44.6	+0.3
PMG				IAmb	IAmb	18 15 45.5	
	comp=Z,11nm,0.8s						
COEN	Coen	37.78	272	P	P	18 16 05.1	+0.2
COEN				IAmb	IAmb	18 16 06.1	
	comp=Z,11nm,1.0s						
STKA	Stephens Creek	38.70	243	P	P	18 16 12.9	+0.9
	comp=Z,1.9nm,0.5s,baz=75,slow=9.4,SNR=8.9						
	comp=Z,1.9nm,0.5s						
STKA	Stephens Creek	38.70	243	IAmb	IAmb	18 16 17.8	
	comp=Z,49nm,1.4s						
INKA	Innaminka	38.96	249	P	P	18 16 15.3	+1.1
BBOO	Buckleboo	43.47	242	P	P	18 16 50.2	+0.2
BBOO				IAmb	IAmb	18 16 56.4	
	comp=Z,18nm,1.4s						
JAY	Jayapura	43.85	287	P	P	18 16 54.0	+0.7
	comp=Z,15nm,0.6s,baz=146,slow=2.8,SNR=7.1						
	comp=Z,15nm,0.6s						
WB0	Warramunga Arr	45.06	261	P	P	18 17 01.8	-0.8
WB0				IAmb	IAmb	18 17 02.7	
	comp=Z,7.2nm,0.5s						
WRA	Warramunga Arr	45.09	261	P	P	18 17 02.2	-0.6
	comp=Z,4.9nm,0.5s,baz=98,slow=6.2,SNR=89						
WRA				PcP	PcP	18 18 34.1	+0.9
	comp=Z,0.6nm,0.7s,baz=99,slow=5.7,SNR=2.8						
WRA				S	S	18 23 02.1	-3.2
	comp=Z,0.2nm,0.6s,baz=101,slow=14,SNR=1.6						
	comp=Z,4.9nm,0.5s						
WRA	Warramunga Arr	45.09	261	P	P	18 17 02.0	-0.8
AS31	Alice Springs	45.14	255		P	18 17 02.9	-0.3
AS31				IAmb	IAmb	18 17 04.3	
	comp=Z,3.7nm,0.6s						
ASAR	Alice Springs	45.14	255	P	P	18 17 03.2	+0.1
	comp=Z,10nm,0.6s,baz=88,slow=8.6,SNR=268						
ASAR				S	S	18 23 04.0	-2.0
	comp=Z,0.4nm,0.7s,baz=97,slow=14,SNR=6.8						
	comp=Z,10nm,0.6s						
ASAR	Alice Springs	45.14	255		P	18 17 03.1	-0.1
MTN	Manton Dam	49.44	269	P	P	18 17 34.9	-0.7
MTN				IAmb	IAmb	18 17 36.1	
	comp=Z,8.1nm,0.8s						
FORT	Forrest	50.14	245	P	P	18 17 40.0	-0.7
KNRA	Kununurra	51.04	265	P	P	18 17 46.8	-0.6
KNRA				IAmb	IAmb	18 17 47.9	
	comp=Z,5.9nm,0.6s						
FITZ	Fitzroy Crossi	53.51	261	P	P	18 18 05.3	+0.2
	comp=Z,1.1nm,0.4s,baz=55,slow=6.1,SNR=18						
	comp=Z,1.1nm,0.4s						
PSA00	Pilbara Seismi	58.28	256	P	P	18 18 36.9	-1.4
PSA00				IAmb	IAmb	18 19 00.9	
	comp=Z,18nm,1.4s						
MBWA	Marble Bar	58.45	256	P	P	18 18 38.4	-1.0
MBWA				IAmb	IAmb	18 18 42.0	
	comp=Z,22nm,1.4s						
SBA	Scott Base	59.37	184	P	P	18 18 45.1	+0.6
SBA				IAmb	IAmb	18 18 59.1	
	comp=Z,22nm,1.4s						
VNDA	Vanda	59.41	185	P	P	18 18 45.5	+0.7
	comp=Z,1.2nm,0.6s,baz=6.2,slow=8.1,SNR=13						
	comp=Z,1.2nm,0.6s						
MJAR	Matsushiro Arr	69.18	323	P	P	18 19 47.0	-0.6
	comp=Z,1.4nm,0.5s,baz=154,slow=6.5,SNR=8.9						
	comp=Z,1.4nm,0.5s						
QSPA	South Pole Qui	71.05	180	P	P	18 20 02.8	+4.3
	comp=Z,9.8nm,0.7s,baz=341,slow=20,SNR=6.0						
QSPA	South Pole Qui	71.05	180	P	P	18 20 01.3	+2.8
QSPA				IAmb	IAmb	18 20 03.9	
	comp=Z,10.0nm,0.8s						
PETK	Petropavlovsk-	74.91	345	P	P	18 20 20.4	-0.2
	comp=Z,10nm,1.1s,baz=117,slow=7.7,SNR=5.8						
	comp=Z,10nm,1.1s						
BELA	Belgrano 2	80.99	173	P	P	18 20 52.5	-0.7
MAW	Mawson	83.05	200	P	P	18 21 03.2	-0.5
	comp=Z,0.9nm,0.6s,baz=260,slow=21,SNR=1.8						
	comp=Z,0.9nm,0.6s						
ILAR	Eielson Array	86.81	13	P	P	18 21 21.4	-0.5
	comp=Z,0.4nm,0.9s,baz=238,slow=5.2,SNR=1.6						
	comp=Z,0.4nm,0.9s						
SNAA	Sanae	89.48	178	P	P	18 21 33.0	-1.6
	comp=Z,2.6nm,0.8s,baz=191,slow=9.0,SNR=5.5						
	comp=Z,2.6nm,0.8s						
SNAA	Sanae	89.48	178	IAmb	IAmb	18 21 35.3	
	comp=Z,5.4nm,1.2s						
CMAR	Chiang Mai Arr	89.87	289	P	P	18 21 37.0	-0.3
	comp=Z,0.5nm,0.5s,baz=120,slow=3.5,SNR=4.3						
	comp=Z,0.5nm,0.5s						
ARCES	ARCESS Array B	127.51	350	PKP	PKPdf	18 27 38.0	-0.8
	comp=Z,7.4nm,1.2s,baz=26,slow=3.5,SNR=1.9						
MMAI	Mount Meron Ar	147.29	302	PKPbc	PKPdf	18 28 17.4	+1.5
	comp=Z,0.6nm,0.4s,baz=73,slow=4.8,SNR=2.0						

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*IDC **04** 18:13:04.5±14.0, 23°.48S×179°.22W, h435^{km}±113^{km}, mb3.3/3, mbtmp4.1/4, Error ellipse: s-maj=191.3km s-min=49.7km az=142.0*

ISC 04 18:13:00.2±1.6, **24°.2S**±0°.8×**178°.9W**±0°.2, **h400**^{km}, **n12**, σ1^{s}.**87**/13, **mb3.6**/3, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	13.69	276	P	P	18 15 59.3	+0.7
	2.5nm,0.6s,baz=114,slow=12,SNR=8.4						
ASAR	Alice Springs	43.02	261	P	P	18 20 21.8	-0.8
	0.9nm,0.4s,baz=96,slow=7.1,SNR=15						
ASAR				PcP	PcP	18 22 03.9	-0.7
	0.1nm,0.5s,baz=98,slow=3.4,SNR=1.3						
	0.9nm,0.4s						
WRA	Warramunga Arr	43.43	266	P	P	18 20 24.8	-1.1
	1.8nm,0.4s,baz=97,slow=8.4,SNR=27						
	1.8nm,0.4s						
FITZ	Fitzroy Crossi	51.85	265	P	P	18 21 29.6	0.0
	1.7nm,0.6s,baz=116,slow=9.7,SNR=8.6						
	1.7nm,0.6s						
BVAR	Borovoye Array	121.36	319	PKP	PKPdf	18 31 06.1	-0.2
	0.4nm,0.4s,baz=93,slow=1.1,SNR=4.9						
ARCES	ARCESS Array B	132.40	349	PKP	PKPdf	18 31 25.5	-1.4
	4.4nm,1.0s,baz=345,slow=2.8,SNR=1.9						
FINES	FINESS Array B	139.06	342	PKP	PKPdf	18 31 38.4	-1.0
	2.0nm,0.9s,baz=104,slow=5.9,SNR=3.4						
HFS	Hagfors	143.04	350	PKhKP	PKPpre	18 31 41.2	
	1.3nm,0.3s,baz=69,slow=4.9,SNR=8.5						
HFS				PKP	PKPdf	18 31 45.4	-1.2
	1.3nm,0.3s,baz=48,slow=3.8,SNR=7.4						
AKASG	Malin Array Be	145.79	328	PKPbc	PKPdf	18 31 49.7	-1.9
	0.6nm,0.3s,baz=46,slow=3.8,SNR=7.1						
BRTR	Keskin Array B	148.60	307	PKPbc	PKPdf	18 31 58.6	+1.8
	0.7nm,0.6s,baz=72,slow=4.7,SNR=2.6						
EKA	Eskdalemuir Ar	148.75	5	PKPbc	PKPdf	18 31 58.1	+1.7
	1.4nm,0.8s,baz=349,slow=3.6,SNR=2.0						
MMAI	Mount Meron Ar	148.78	294	PKPbc	PKPdf	18 32 01.5	+4.2
	1.6nm,0.5s,baz=74,slow=6.2,SNR=7.6						

IDC 04 18:15:29.1±4.2, **31°.24N**×**70°.24E**, **h0**^{km}, **mb3.3**/4, **mbtmp3.3**/5, **ML3.1**/1, **Error ellipse: s-maj=134.7km s-min=33.9km az=81.0**, **Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	18.10	28	P	Pn	18 19 41.9	0.0
	0.1nm,0.3s,baz=219,slow=11,SNR=2.1						
	0.6nm,0.8s						
KURBB	Kurchatov Arra	20.32	15	P	P	18 20 06.4	-0.2
	0.3nm,0.5s,baz=210,slow=9.7,SNR=8.0						
	0.3nm,0.5s						
BVAR	Borovoye Array	21.77	0	P	P	18 20 22.4	+0.1
	1.6nm,0.7s,baz=168,slow=11,SNR=9.7						
	1.6nm,0.7s						
ZALV	Zalesovo Beam	25.00	21	P	P	18 20 54.5	0.0
	0.4nm,0.4s,baz=212,slow=9.4,SNR=2.9						
	0.4nm,0.4s						
ASAR	Alice Springs	81.82	124	P	P	18 27 50.4	+0.1
	0.2nm,1.0s,baz=304,slow=5.3,SNR=1.8						
	0.2nm,1.0s						

WEL 04 18:22:13.1±1.0, **38°S**±4°×**17°7E**±°, **h124**^{km}±10^{km}, **M2.8**/29, **ML2.0**/8, **MLv2.8**/29, **Error ellipse: s-maj=5.4km s-min=5.0km az=9.8**, **confirmed**, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPRZ	Ohinepanea	0.08	10	P	Pn	18 22 30.9	+0.9
MARZ	Manawahe	0.12	119	P	Pn	18 22 31.2	+1.2
KARZ	Kaharoa	0.25	248	P	Pn	18 22 31.3	+1.0
TGRZ	Tauranga	0.29	312	P	Pn	18 22 31.6	+1.2
TARZ	Mount Tarawera	0.31	184	P	Pn	18 22 31.8	+1.1
UTU	Utuhina	0.37	227	P	Pn	18 22 32.1	+1.3
RRRZ	Republican Roa	0.41	182	P	Pn	18 22 31.8	+0.7
KMRZ	Kaimai	0.48	279	P	Pn	18 22 32.5	+1.1
HRRZ	Handcock Road	0.51	203	P	Pn	18 22 32.3	+0.8
URZ	Urewera	0.56	127	P	Pn	18 22 31.8	0.0
URZ	Urewera	0.56	127	P	Pn	18 22 32.1	+0.3
URZ				S	Sn	18 22 47.8	+1.8
MUGZ	Murupara	0.58	162	P	Pn	18 22 32.3	+0.3
ALRZ	Allen Road	0.65	193	P	Pn	18 22 33.0	+0.5
WPRZ	Whakapapatarin	0.66	206	P	Pn	18 22 33.2	+0.6
MYRZ	Mayor Island	0.69	340	P	Pn	18 22 34.1	+1.4
RTZ	Ruatahuna	0.77	153	P	Pn	18 22 33.8	+0.3
TOZ	Tahuroa Road	0.84	283	P	Pn	18 22 34.9	+0.9
MWZ	Matawai	0.88	118	P	Pn	18 22 34.5	+0.1
TLZ	Tolley Road	0.89	243	P	Pn	18 22 35.1	+0.7
RAGZ	Rawiri	0.90	130	P	Pn	18 22 35.0	+0.4
RUGZ	Raukumara Rang	0.90	93	P	Pn	18 22 34.0	-0.6
MRHZ	Matea Rd	0.91	186	P	Pn	18 22 34.7	0.0
MTHZ	Maungataniwha	0.96	166	P	Pn	18 22 35.2	+0.1
HAZ	Te Kaha	1.00	81	P	Pn	18 22 35.1	-0.3
WATZ	Wairara	1.00	219	P	Pn	18 22 35.9	+0.4
SNGZ	Shannon Statio	1.06	144	P	Pn	18 22 36.4	+0.3
RAHZ	Arahi	1.08	157	P	Pn	18 22 36.6	+0.3
RATZ	Rangitukua	1.12	212	P	Pn	18 22 36.7	0.0
TKGZ	Te Karaka	1.15	117	P	Pn	18 22 37.3	+0.4
TWGZ	Tauwhareparae	1.17	103	P	Pn	18 22 37.6	+0.5
RITZ	Rihia Road	1.18	207	P	Pn	18 22 37.5	+0.3
NMHZ	Naumai	1.19	170	P	Pn	18 22 37.9	+0.5
PKGZ	Pakihiroa	1.22	88	P	Pn	18 22 37.8	+0.1
PKGZ				S	Sn	18 22 57.2	+0.8
BKZ	Black Stump Fm	1.24	182	P	Pn	18 22 37.0	-0.9
BKZ	Black Stump Fm	1.24	182	P	Pn	18 22 37.3	-0.6
BKZ				S	Sn	18 22 56.5	-0.3
RIGZ	Rimuhau	1.24	129	P	Pn	18 22 38.2	+0.3
RIGZ				S	Sn	18 22 58.8	+2.1
WHHZ	Waihua	1.27	155	P	Pn	18 22 38.3	+0.1
WHHZ				S	Sn	18 22 59.2	+1.8
KUZ	Kuaotunu	1.34	331	P	Pn	18 22 39.4	+0.4
NTVZ	North Tongarir	1.35	210	P	Pn	18 22 39.2	0.0
TMVZ	Te Maari	1.36	209	P	Pn	18 22 39.1	-0.1
MKAZ	Moumakai	1.37	306	P	Pn	18 22 39.9	+0.6
PUZ	Puketiti	1.37	97	P	Pn	18 22 39.0	-0.3
PUZ				S	Sn	18 22 59.2	0.0
ETVZ	East Tongariro	1.37	208	P	Pn	18 22 39.2	-0.2
ETVZ				S	Sn	18 23 00.3	+0.8
ARHZ	Aropaoanui	1.38	165	P	Pn	18 22 39.3	-0.1
ARHZ				S	Sn	18 22 60.0	+0.5
WTVZ	West Tongariro	1.40	212	P	Pn	18 22 39.5	-0.2
NNVZ	North Ngauruho	1.41	211	P	Pn	18 22 39.6	-0.2
KNZ	Kokohu	1.41	141	P	Pn	18 22 39.4	-0.3
OTVZ	Oturere	1.41	209	P	Pn	18 22 39.9	0.0
CNGZ	Carnagh Statio	1.43	113	P	Pn	18 22 40.4	+0.5
TWVZ	Taurewa	1.43	217	P	Pn	18 22 39.8	-0.3
HIZ	Hauiti	1.45	246	P	Pn	18 22 40.5	+0.4
NGZ	Ngauruhoe	1.45	210	P	Pn	18 22 40.5	+0.2
MXZ	Matakaoa Point	1.45	76	P	Pn	18 22 40.4	+0.2
PRGZ	Paritu Road	1.45	134	P	Pn	18 22 40.0	-0.2
WMGZ	Waiomatatini S	1.49	87	P	Pn	18 22 40.7	+0.1
KWHZ	Kaweka Forest	1.50	183	P	Pn	18 22 40.3	-0.5
TUVZ	Tukino	1.51	207	P	Pn	18 22 39.7	-1.3
MCHZ	McNeill Hill	1.52	175	P	Pn	18 22 40.8	-0.2
FWVZ	Far West T-bar	1.54	210	P	Pn	18 22 41.1	-0.3
MAVZ	Matarangi	1.54	209	P	Pn	18 22 41.0	-0.6
WNVZ	Wahianoa	1.58	207	P	Pn	18 22 41.1	-0.7
WIAZ	Waiheke Island	1.59	315	P	Pn	18 22 42.3	+0.5
MOVZ	Moawhango	1.60	202	P	Pn	18 22 40.8	-1.2
ETAZ	East Tamaki Re	1.61	307	P	Pn	18 22 42.6	+0.6
MHGZ	Mahia Peninsul	1.63	139	P	Pn	18 22 42.1	-0.2
KRHZ	Kereru	1.72	184	P	Pn	18 22 42.0	-1.3
AWAZ	Awhitu Peninsu	1.73	299	P	Pn	18 22 43.7	+0.2
MBAZ	Motutapu North	1.74	311	P	Pn	18 22 44.2	+0.6
CKHZ	Cape Kidnapper	1.78	166	P	Pn	18 22 43.3	-0.7
VRZ	Vera Road	1.84	229	P	Pn	18 22 44.4	-0.3
WTAZ	Waiatarua	1.85	302	P	Pn	18 22 45.2	+0.3
GRZ	Great Barrier	1.88	332	P	Pn	18 22 45.5	+0.2
KAHZ	Kahuranaki	1.89	172	P	Pn	18 22 44.4	-0.9
ABAZ	Army Bay	1.90	314	P	Pn	18 22 46.0	+0.6
PNHZ	Pukenui	2.00	187	P	Pn	18 22 44.9	-1.9
PXZ	Pawanui	2.12	173	P	Pn	18 22 46.5	-1.6
WPHZ	Waipukurau	2.14	182	P	Pn	18 22 46.6	-1.8
TSZ	Takapari Road	2.18	192	P	Pn	18 22 46.7	-2.3
PRHZ	Porangahau	2.34	178	P	Pn	18 22 48.8	-2.1
DVHZ	Dannevirke	2.39	187	P	Pn	18 22 48.9	-2.6
WCZ	Waipu Caves	2.65	318	P	Pn	18 22 54.9	0.0
PRWZ	Pori Road	2.66	189	P	Pn	18 22 52.6	-2.4
BFZ	Birch Farm	2.76	185	P	Pn	18 22 52.3	-4.0
BFZ	Birch Farm	2.76	185	P	Pn	18 22 53.3	-3.1
MRZ	Mangatainoka R	2.83	195	P	Pn	18 22 54.0	-3.3
TIWZ	Tintock	2.89	190	P	Pn	18 22 54.9	-3.1
CPWZ	Castlepoint	2.99	185	P	Pn	18 22 56.8	-2.5
HOWZ	Holdsworth Sta	3.07	195	P	Pn	18 22 56.6	-3.8
OGWZ	Otaki Gorge	3.08	200	P	Pn	18 22 57.0	-3.5
KIW	Kapiti Island	3.19	203	P	Pn	18 22 58.0	-4.0
TMWZ	Te Maipa	3.22	189	P	Pn	18 22 58.6	-3.7
MTW	Mount Morrison	3.33	194	P	Pn	18 22 59.4	-4.3
CAW	Cannon Point	3.38	199	P	Pn	18 23 00.2	-4.2
TRWZ	Traveller	3.53	190	P	Pn	18 23 02.2	-4.2
PAWZ	Paruwai Farm	3.56	194	P	Pn	18 23 02.2	-4.6
OUZ	Omahuta	3.59	318	P	Pn	18 23 07.2	0.0
MSWZ	Moikau Station	3.62	196	P	Pn	18 23 02.9	-4.8
TCW	Tory Channel	3.72	207	P	Pn	18 23 04.3	-4.6
PLWZ	Palliser	3.77	195	P	Pn	18 23 04.7	-5.0
TUWZ	Tuamarina	4.03	209	P	Pn	18 23 08.5	-4.5
KHZ	Kahutara	5.04	206	P	Pn	18 23 20.9	-5.5
GVZ	Greta Valley S	5.70	207	P	Pn	18 23 29.9	-5.5

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*NEIC **04** 18:36:05.0±2.4, 32°.6N±0°.2×40°.1W±0°.1, h10^{km}±1^{km}, mb4.4/13, Error ellipse: s-maj=31.9km s-min=9.2km az=205.0*

*IDC **04** 18:36:05.4±1.5, 32°.74N×39°.90W, h0^{km}, mb3.9/10, mbtmp3.9/10, MS3.8/53, Error ellipse: s-maj=52.1km s-min=20.2km az=3.0*

*GCMT **04** 18:36:10.0±0.4, 32°.67N±0°.05×39°.84W±0°.03, h14^{km}±1^{km}, MW4.7/76, Moment Tensor Solution. s9,c9; s76,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.47±.15; M$_{\theta\theta}$0.20±.09; M$_{\phi\phi}$1.26±.10; M$_{r\theta}$-0.70±.32; M$_{\theta\phi}$0.18±.05; M$_{\phi r}$0.27±.22; Best double couple: M$_0$1.52700×10^{16} NP1: ϕ_s27.00000°, δ45.00000°, λ-60.00000°. NP2: ϕ_s168.00000°, δ52.00000°, λ-116.00000°. Principal axes: T 1.2990, Plg4.0000°, Azm277.0000°; N 0.4480, Plg21.0000°, Azm185.0000°; P -1.7540, Plg69.0000°, Azm17.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 18:36:06.1±0.7, **32°.6N**±0°.2×**40°.06W**±0°.10, **h13**^{km}, **n75**, σ1^{s}.**92**/22, **mb4.2**/14, **MS3.9**/54, **Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SACV	Santiago Islan	23.08	136	P	P	18 41 09.2	-2.4
SJG	San Juan	27.55	245	LR	LR	18 50 45.2	
	comp=Z,77nm,21.9s,baz=62,slow=32						
SCHQ	Schefferville	29.14	328	LR	LR	18 53 42.2	
	comp=Z,118nm,18.2s,baz=130,slow=36						
MDT	Midelt	29.75	80	LR	LR	18 51 21.8	
	comp=Z,316nm,20.6s,baz=262,slow=31						
MDP	Montagnes des	29.79	206	LR	LR	18 51 39.3	
	comp=Z,69nm,21.9s,baz=316,slow=31						
ESDC	Sonseca Array	29.84	66	LR	LR	18 51 01.7	
	comp=Z,99nm,20.0s,baz=272,slow=30						
SADO	Sadowa	32.52	303	LR	LR	18 54 32.9	
	comp=Z,130nm,19.6s,baz=148,slow=34						
EKA	Eskdalemuir Ar	34.32	37	LR	LR	18 53 45.4	
	comp=Z,180nm,19.0s,baz=200,slow=31						
FRB	Frobisher Bay	35.87	339	LR	LR	18 55 18.3	
	comp=Z,71nm,20.8s,baz=213,slow=32						
TKL	Tuckaleechee C	36.09	287	LR	LR	18 55 29.9	
	comp=Z,372nm,20.4s,baz=88,slow=32						
T50A	Nancy	36.77	290	P	P	18 43 10.8	-2.6
T50A				IAmb	IAmb	18 43 11.9	
	comp=Z,13nm,0.8s						
SDV	Santo Domingo	36.84	237	LR	LR	18 56 14.8	
	comp=Z,71nm,21.8s,baz=66,slow=33						
SDV	Santo Domingo	36.84	237	P	P	18 43 16.5	+2.1
SDV				IAmb	IAmb	18 43 31.2	
	comp=Z,5.6nm,0.9s						
R49A	Shelbyville	36.90	292	P	P	18 43 14.9	+0.4
R49A				IAmb	IAmb	18 43 18.5	
	comp=Z,16nm,1.1s						
DAVOX	Davos/Dischmat	40.27	54	LR	LR	18 57 24.3	
	comp=Z,106nm,18.7s,baz=263,slow=32						
DBIC	Dimbokro	41.68	121	LR	LR	18 59 06.1	
	comp=Z,141nm,19.0s,baz=360,slow=33						
ROSC	El Rosal	42.27	237	LR	LR	19 00 22.8	
	comp=Z,141nm,19.3s,baz=55,slow=34						
TORD	Torodi Ar. Bea	42.73	107	P	P	18 44 04.1	+0.8
	comp=Z,3.1nm,0.4s,baz=300,slow=6.4,SNR=2.1						
TORD				LR	LR	19 00 21.2	
	comp=Z,193nm,19.5s,baz=307,slow=34						
	comp=Z,3.1nm,0.4s						
GERES	GERESS Array B	42.92	51	LR	LR	18 58 49.7	
	comp=Z,88nm,18.9s,baz=260,slow=32						
NOA	NORSAR Array B	43.48	33	LR	LR	18 58 20.6	
	comp=Z,78nm,20.4s,baz=240,slow=31						
ULM	Lac du Bonnet	44.30	310	LR	LR	19 02 49.5	
	comp=Z,118nm,19.2s,baz=11,slow=36						
HFS	Hagfors	44.43	35	LR	LR	18 59 00.5	
	comp=Z,188nm,20.0s,baz=262,slow=31						
VRAC	Vranov	44.83	51	LR	LR	19 01 07.1	
	comp=Z,49nm,18.6s,baz=264,slow=34						
OK048	Pawnee Station	46.45	291	P	P	18 44 31.2	-1.5
JTS	Las Juntas de	46.87	252	LR	LR	19 01 33.7	
	comp=Z,111nm,21.8s,baz=58,slow=32						
H10N2	ASCENSION HYDR	47.03	144	T	T	19 34 53.9	
	baz=330,slow=75,SNR=502						
H10N3	ASCENSION HYDR	47.03	144	T	T	19 34 51.1	
	baz=330,slow=75,SNR=424						
H10N1	ASCENSION HYDR	47.05	144	T	T	19 34 54.6	

	baz=330,slow=75,SNR=517						
H10S3	ASCENSION HYDR	47.91	145	T	T	19 35 57.2	
	baz=330,slow=74,SNR=109						
H10S2	ASCENSION HYDR	47.93	145	T	T	19 35 59.5	
	baz=250,slow=74,SNR=110						
BDFB	Brasilia	48.58	190	LR	LR	19 03 07.9	
	comp=Z,52nm,18.8s,baz=36,slow=33						
FINES	FINESS Array B	50.62	35	P	P	18 45 04.1	-0.3
	comp=Z,4.4nm,1.1s,baz=252,slow=8.2,SNR=5.4						
	comp=Z,4.4nm,1.1s						
MLR	Muntele Rosu	51.49	55	LR	LR	19 04 07.9	
	comp=Z,68nm,18.8s,baz=282,slow=33						
CMIG	Matias Romero	51.56	266	LR	LR	19 04 29.3	
	comp=Z,86nm,21.6s,baz=4.0,slow=33						
AKASG	Malin Array Be	52.85	48	P	P	18 45 20.8	-0.5
	comp=Z,2.0nm,0.6s,baz=281,slow=6.3,SNR=6.1						
AKASG				LR	LR	19 05 04.8	
	comp=Z,107nm,20.3s,baz=240,slow=33						
	comp=Z,2.0nm,0.6s						
AKASG	Malin Array Be	52.85	48	IAmb	IAmb	18 45 27.0	
	comp=Z,2.5nm,1.1s						
TXAR	Lajitas Array	53.91	285	P	P	18 45 31.0	+1.5
	comp=Z,0.6nm,0.8s,baz=98,slow=7.7,SNR=6.1						
TXAR				LR	LR	19 06 47.5	
	comp=Z,192nm,20.6s,baz=58,slow=34						
	comp=Z,0.6nm,0.8s						
TXAR	Lajitas Array	53.91	285	P	P	18 45 27.5	-2.0
TX31	Lajitas Ar. Si	53.91	285	P	P	18 45 28.3	-1.3
ANMO	Albuquerque	54.30	292	LR	LR	19 06 27.2	
	comp=Z,199nm,21.4s,baz=76,slow=34						
BW06	Boulder Array	54.51	302	P	P	18 45 33.9	0.0
BW06				IAmb	IAmb	18 45 47.6	
	comp=Z,2.9nm,1.1s						
PD31	Pinedale Array	54.51	302	P	P	18 45 30.6	-3.3
PD31				IAmb	IAmb	18 45 47.6	
	comp=Z,3.2nm,1.1s						
PDAR	Pinedale Array	54.51	302	P	P	18 45 36.1	+2.2
	comp=Z,1.0nm,0.9s,baz=21,slow=5.1,SNR=6.7						
PDAR				LR	LR	19 08 09.8	
	comp=Z,50nm,18.9s,baz=90,slow=35						
	comp=Z,1.0nm,0.9s						
PDAR	Pinedale Array	54.51	302	P	P	18 45 31.4	-2.5
YKA	Yellowknife Ar	54.58	327	P	P	18 45 36.1	+2.3
	comp=Z,0.5nm,0.9s,baz=91,slow=6.1,SNR=3.5						
YKA				LR	LR	19 08 00.8	
	comp=Z,118nm,19.6s,baz=50,slow=35						
	comp=Z,0.5nm,0.9s						
YKA	Yellowknife Ar	54.58	327	P	P	18 45 31.6	-2.2
LPAZ	La Paz	55.55	213	LR	LR	19 08 14.6	
	comp=Z,78nm,19.7s,baz=40,slow=35						
NEW	Newport	58.31	310	P	P	18 46 00.6	-0.1
	comp=Z,2.2nm,0.9s,baz=67,slow=11,SNR=2.4						
NEW				LR	LR	19 10 03.9	
	comp=Z,153nm,20.6s,baz=64,slow=35						
	comp=Z,2.2nm,0.9s						
NEW	Newport	58.31	310	IAmb	IAmb	18 46 04.2	
	comp=Z,3.6nm,1.1s						
BRTR	Keskin Array B	58.39	60	P	P	18 46 01.2	-0.2
	comp=Z,0.5nm,0.7s,baz=265,slow=6.8,SNR=2.3						
BRTR				LR	LR	19 10 21.4	
	comp=Z,22nm,18.9s,baz=274,slow=35						
	comp=Z,0.5nm,0.7s						
CPUP	Villa Florida	60.88	198	LR	LR	19 10 04.5	
	comp=Z,5.6nm,21.0s,baz=214,slow=33						
INK	Inuvik	61.38	335	LR	LR	19 10 38.2	
	comp=Z,89nm,21.4s,baz=300,slow=34						
LPIG	La Paz	61.41	282	LR	LR	19 13 10.9	
	comp=Z,67nm,18.6s,baz=44,slow=36						
NVAR	Mina Array Bea	62.15	300	P	P	18 46 29.8	+2.5
	comp=Z,0.4nm,0.7s,baz=35,slow=3.2,SNR=1.6						
NVAR				LR	LR	19 12 39.8	
	comp=Z,194nm,19.6s,baz=78,slow=35						
	comp=Z,0.4nm,0.7s						
PFO	Pinyon Flats O	62.53	294	LR	LR	19 12 42.4	
	comp=Z,137nm,19.3s,baz=66,slow=35						
DLBC	Dease Lake	62.84	324	LR	LR	19 13 24.1	
	comp=Z,231nm,20.2s,baz=93,slow=36						
BBB	Bella Bella	63.87	317	LR	LR	19 14 44.9	
	comp=Z,119nm,18.6s,baz=75,slow=36						
GNI	Garni	66.23	57	LR	LR	19 15 57.3	
	comp=Z,16nm,21.0s,baz=287,slow=36						
ILAR	Eielson Array	67.67	334	LR	LR	19 17 11.4	
	comp=Z,55nm,18.2s,baz=38,slow=36						
ARTI	Arti	67.86	36	LR	LR	19 16 12.5	
	comp=Z,109nm,18.0s,baz=298,slow=36						
AKTO	Aktyubinsk	70.33	42	LR	LR	19 17 14.2	
	comp=Z,140nm,18.3s,baz=90,slow=35						
NRIK	Noril'sk	71.42	17	LR	LR	19 17 32.6	
	comp=Z,54nm,18.0s,baz=292,slow=35						
KDAK	Kodiak Island	73.75	329	LR	LR	19 21 20.7	
	comp=Z,74nm,18.1s,baz=70,slow=37						
MBAR	Mbarara	74.22	101	LR	LR	19 19 42.3	
	comp=Z,75nm,18.2s,baz=320,slow=35						
TSUM	Tsumeb	75.44	124	LR	LR	19 15 18.2	
	comp=Z,60nm,21.4s,baz=329,slow=31						
BVAR	Borovoye Array	75.56	36	LR	LR	19 20 57.8	
	comp=Z,70nm,18.1s,baz=281,slow=36						
KURK	Kurchatov	80.99	34	P	P	18 48 21.8	+1.4
KURK	Kurchatov	80.99	34	IAmb	IAmb	18 48 29.1	
	comp=Z,7.6nm,1.5s						
KURBB	Kurchatov Arra	81.01	34	P	P	18 48 21.8	+1.3
	comp=Z,0.5nm,0.8s,baz=309,slow=5.9,SNR=2.0						
KURBB				LR	LR	19 21 50.4	
	comp=Z,30nm,21.9s,baz=170,slow=34						
	comp=Z,0.5nm,0.8s						
ZALV	Zalesovo Beam	81.52	29	LR	LR	19 21 33.4	
	comp=Z,16nm,20.2s,baz=346,slow=34						
AAK	Ala-Archa	84.07	42	LR	LR	19 25 01.6	
	comp=Z,77nm,18.4s,baz=314,slow=35						
LBTB	Lobatse	84.84	124	LR	LR	19 21 02.9	
	comp=Z,68nm,19.9s,baz=326,slow=32						
MKAR	Makanchi Array	85.44	36	LR	LR	19 26 22.4	
	comp=Z,94nm,18.5s,baz=320,slow=35						
BOSA	Boshof	86.89	127	LR	LR	19 22 11.8	
	comp=Z,58nm,20.5s,baz=16,slow=32						
OPO	Ambohidratompo	97.55	107	LR	LR	19 33 16.2	
	comp=Z,42nm,18.7s,baz=171,slow=35						

IDC 04 18:44:44.4±5.3, 12°.83S×167°.40E, h0^{km}, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=267.5km s-min=33.8km az=141.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.45	253	P	P	18 51 16.4	-0.3
	0.2nm,0.4s,baz=84,slow=9.0,SNR=1.3						
	0.2nm,0.4s						
ASAR	Alice Springs	33.50	246	P	P	18 51 26.0	+0.1
	0.2nm,0.7s,baz=75,slow=9.5,SNR=7.7						
	0.2nm,0.7s						
ILAR	Eielson Array	84.69	18	P	P	18 57 19.8	0.0
	0.3nm,0.5s,baz=232,slow=5.2,SNR=7.5						
	0.3nm,0.5s						

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*IDC **04** 18:47:06.5±1.1, 27°.27N×57°.35E, h0^{km}, mb3.9/17, mbtmp3.9/21, ML3.9/4, MS3.4/5, Error ellipse: s-maj=25.3km s-min=16.0km az=169.0*

*DSN **04** 18:47:09.3±1.8, 27°.96N×57°.27E, h15^{km}, ML4.0/10, Error ellipse: s-maj=25.0km s-min=16.8km az=108.0*

*NEIC **04** 18:47:10.4±2.3, 27°.58N±0°.07×57°.16E±0°.09, h10^{km}±1^{km}, mb4.1/22, Error ellipse: s-maj=14.5km s-min=11.5km az=116.0*

*TEH **04** 18:47:11.0, 27°.68N×57°.39E, h12^{km}±12^{km}*

*THR **04** 18:47:12.6±0.0, 27°.58N×57°.44E, h14^{km}±14^{km}, ML4.2*

*OMAN **04** 18:47:18.8±0.9, 27°.13N×57°.71E, h18^{km}, ml4.0/21, Error ellipse: s-maj=8.1km s-min=5.7km az=178.0*

ISC 04 18:47:10.5±1.6, 27°.64N±0°.03×57°.42E±0°.04, h14^{km}±10^{km}, n124, σ2^{s}.39/119, mb4.1/22, MS3.6/5, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHNJ	Kahnooj	0.40	40	Pg	Pb	18 47 19.9	+0.6
IBND	Bandar-abas	0.81	256	Pg	Pb	18 47 26.7	+0.4
GENO	Geno	1.13	258	Pg	Pn	18 47 33.5	+1.4
GENO				Sg	Sn	18 47 50.1	+2.5
BNDS	Bandar-Abbas	1.14	258	Pg	Pn	18 47 33.6	+1.5
BNDS	Bandar-Abbas	1.14	258	*e*Pg	Pn	18 47 33.9	+1.8
BNDS				*e*Sg	Sn	18 47 49.6	+2.1
BNDS				IAML		18 48 00.7	
	comp=Z,2µm,1.0s						
KBAM	BAM	1.74	31	Pg	Pg	18 47 43.6	-0.4
SHME	Shamm	1.96	216	P	Pb	18 47 47.0	+1.1
SHME				S	Sb	18 48 12.5	+2.4
SHME	Shamm	1.96	216	*e*P	Pn	18 47 45.4	+2.2
	SNR=356						
SHME				S	Sb	18 48 11.8	+1.7
BANOM	Banah	1.98	211	P	Pb	18 47 47.5	+1.1
BANOM				S	Sb	18 48 12.0	+1.0
BANOM	Banah	1.98	211	*e*P	Pn	18 47 45.7	+2.0
	SNR=1078						
NGRK	Negar Kerman	2.08	343	Pn	Pb	18 47 48.3	0.0
CHMN	Cheshme madani	2.21	3	Pn	Pb	18 47 50.5	0.0
KRBR	Kerman	2.40	346	*e*Pn	Pg	18 47 55.1	-1.5
KRBR				IAML		18 48 38.3	
	comp=Z,1µm,1.0s						
MASF	Masafi	2.53	207	P	Pn	18 47 54.4	+3.2
	SNR=15						
MSFE	Esma-Masafi	2.54	207	*e*P	Pn	18 47 52.9	+1.6
	SNR=15						
MDH	Madha	2.54	204	P	Pn	18 47 53.0	+1.7
	SNR=12						
MDH				S	Sn	18 48 22.8	+0.8
MDH	Madha	2.54	204	*e*P	Pn	18 47 51.8	+0.5
	SNR=12						
UMQ	Umm Al-Quwin	2.63	217	P	Pb	18 47 58.6	+1.2
KHGB	Koh Gabri	2.84	343	Pn	Pb	18 47 60.0	-1.2
UOSS	Minazif	2.90	202	P	Pn	18 47 58.8	+2.6
UOSS				S	Sn	18 48 31.0	+0.1
UOSS	Minazif	2.90	202		Pn	18 47 55.3	-0.9
HATD	Hatta, Dubai	3.04	203	P	Pn	18 48 01.0	+2.9
HATD				S	Sn	18 48 34.7	+0.4
HATD	Hatta, Dubai	3.04	203	P	Pn	18 47 59.0	+0.9
NAZ	Nazwa, Dubai	3.08	211	P	Pb	18 48 04.5	-0.6
NAZ	Nazwa, Dubai	3.08	211	P	Pn	18 48 01.9	+3.2
ASHO	Ashiyiah	3.19	203	P	Pn	18 48 04.0	+3.7
	SNR=27						
FAQ	Al Faqa, Dubai	3.32	210	P	Pn	18 48 05.9	+4.0
FAQ	Al Faqa, Dubai	3.32	210	P	Pn	18 48 04.7	+2.7
ZRDN	Zarand Kerman	3.40	347	Pn	Pb	18 48 07.2	-3.5
CHBR	Chabahar	3.42	126	*e*Pn	Pn	18 48 06.5	+3.2
CHBR				IAML		18 49 18.2	
	comp=Z,50nm,1.0s						
ASUD	Al Ashush, Dub	3.54	212	P	Pn	18 48 09.2	+4.1
	SNR=6.5						
SOHO	SOHO	3.58	193	P	Pn	18 48 06.2	+0.6
AJN	Ajban	3.77	216	P	Pn	18 48 10.8	+2.7
	SNR=9.0						
AJN				S	Sn	18 48 54.5	+2.2
AJN	Ajban	3.77	216	*i* P	Pn	18 48 10.2	+2.1
	SNR=9.0						
ALNE	Al Ain	3.88	203	P	Pn	18 48 13.8	+4.1
	SNR=8.4						
ALNE	Al Ain	3.88	203	P	Pn	18 48 12.6	+3.0
HOQ	Hoqain	4.04	181	P	Pn	18 48 12.2	+0.2
	SNR=26						
HOQ				S	Sn	18 48 55.2	-3.9
BIDO	Bidbid	4.15	171	P	Pn	18 48 13.8	+0.3
IBAF	Bafgh	4.25	338	Pn	Pn	18 48 18.1	+3.2
ARQ	Araqi	4.36	191	P	Pn	18 48 19.6	+3.2
	SNR=64						
NHDN	Nehbandan	4.38	31	Pn	Pn	18 48 20.8	+4.1
SRVN	Saravan	4.43	92	Pn	Pn	18 48 21.5	+4.1
SRVN	Saravan	4.43	92	*e*Pn	Pn	18 48 22.1	+4.7
SRVN				IAML		18 49 56.4	
	comp=Z,36nm,1.0s						
IMEH	Mehriz	4.46	327	Pn	Pn	18 48 21.2	+3.2
BSRN	Basiran	4.55	19	Pn	Pn	18 48 23.4	+4.3
BSRN	Basiran	4.55	19	*e*Pn	Pn	18 48 23.6	+4.5
BSRN				IAML		18 49 43.0	
	comp=Z,140nm,1.0s						
SMDO	Samad	4.60	173	P	Pn	18 48 20.9	+1.2
	SNR=10						
SMDO				S	Sn	18 49 08.4	-4.5
BSY	Bisya	4.88	182	P	Pn	18 48 26.4	+2.9
WBK	Wadi Bani Khal	5.20	164	P	Pn	18 48 29.5	+1.5
ICHK	Chekchek	5.28	331	Pn	Pn	18 48 32.3	+3.2
JMDO	Jabal Madar	5.29	173	P	Pn	18 48 30.5	+1.4
UMZA	Um Al Zommool	5.32	203	P	Pn	18 48 31.7	+2.2
YZKH	Yazd	5.33	333	IAML		18 50 11.6	
	comp=Z,41nm,1.0s						
ITEG	Tejag	5.36	12	Pn	Pn	18 48 34.4	+4.2
TPRV	Parvadeh(Tabas	5.41	353	Pn	Pn	18 48 34.4	+3.6
AFRZ	Afriz	5.92	13	Pn	Pn	18 48 41.9	+4.0
TKDS	Koohdasht(Taba	5.96	358	Pn	Pn	18 48 42.1	+3.8
TABS	Tabas	5.99	358	*e*Pn	Pn	18 48 44.9	+6.1
TABS				IAML		18 50 39.9	
	comp=Z,56nm,1.0s						
IRAM	Ramesheh	6.04	315	Pn	Pn	18 48 42.1	+2.6
KLNJ	Kolanjah	6.09	305	IAML		18 49 54.8	
	comp=Z,65nm,1.0s						
ANAR	Anarak	6.38	331	Pn	Pn	18 48 47.1	+2.9
SHRT	Shahrakht	6.47	22	*e*Pn	Pn	18 48 51.5	+6.1
SHRT				IAML		18 51 02.3	
	comp=Z,36nm,1.0s						
NASN	Na'in	6.50	323	*e*Pn	Pn	18 48 49.2	+3.1
NASN				IAML		18 51 05.8	
	comp=Z,17nm,1.0s						
MHTO	MHTO	6.65	176	P	Pn	18 48 49.6	+1.8
ZNGN	Zangian	7.24	310	Pn	Pn	18 48 59.1	+3.0
IKLH	Kolahrood	7.58	320	Pn	Pn	18 49 04.0	+3.3
HRA	Herat	7.89	30		Pn	18 49 07.2	+2.2
ISFB	Sefidab	8.03	328	Pn	Pn	18 49 09.8	+3.1
KHMZ	Khomeyn	8.84	315	*e*Pn	Pn	18 49 21.6	+3.6
RAYN	Ar Rayn	11.51	252		Pn	18 49 51.4	-3.1
RAYN	Ar Rayn	11.51	252	*i* P	Pn	18 49 51.9	-2.6
	SNR=10						
MANEM	Manem	15.54	47		P	18 50 53.4	-0.3
MANEM				IAmb	IAmb	18 51 14.9	
	comp=Z,33nm,1.4s						
GAR	Garm	15.62	40	Pn	P	18 50 54.2	-0.2
GNI	Garni	16.30	323	Pn	P	18 51 02.2	+0.1
	comp=Z,0.4nm,0.3s,baz=204,slow=8.7,SNR=4.4						
GNI				Sn	Sn	18 53 47.7	-12
	comp=Z,0.2nm,0.3s,baz=244,slow=8.2,SNR=3.5						
GNI				LR	LR	18 57 43.9	
	comp=Z,39nm,18.1s,baz=75,slow=38						
	comp=Z,5.7nm,0.6s						
GNI	Garni	16.30	323	IAmb	IAmb	18 51 08.2	
	comp=Z,12nm,0.9s						
DRK	Karamyk	16.80	42		Pn	18 51 06.8	+1.3
DRK				IAmb	IAmb	18 51 17.3	
	comp=Z,7.5nm,0.9s						
GURO	Guroymak-BITLI	16.84	314		Pn	18 51 03.8	-2.2
GURO				IAmb	IAmb	18 51 11.4	
	comp=Z,10.0nm,0.9s						
MARD	Mardin	17.01	309		Pn	18 51 05.2	-2.9
ASF	Jabal al Asfar	18.35	289	P	Pn	18 51 22.1	-2.6
	comp=Z,0.5nm,0.3s,baz=78,slow=11,SNR=4.9						
	comp=Z,0.9nm,0.4s						
KK31	Karatay Array	18.72	31	P	P	18 51 29.4	+0.8
KKAR	Karatay Array	18.72	31	P	Pn	18 51 30.4	+1.3
MMAI	Mount Meron Ar	19.73	291	P	P	18 51 39.5	-0.3
	comp=Z,0.4nm,0.3s,baz=114,slow=13,SNR=4.3						
	comp=Z,1.0nm,0.5s						
EIL	Elat	19.82	281	P	P	18 51 39.0	-1.7
	comp=Z,0.2nm,0.3s,baz=34,slow=21,SNR=1.8						
	comp=Z,2.2nm,0.6s						
AAK	Ala-Archa	20.41	38	P	P	18 51 48.4	+1.3
	comp=Z,0.9nm,0.5s,baz=194,slow=7.6,SNR=4.8						
	comp=Z,0.9nm,0.5s						
AAK	Ala-Archa	20.41	38	P	P	18 51 48.4	+1.3
BOOM	Boomskoye usch	21.13	41	P	P	18 51 55.9	+0.9
BOOM				IAmb	IAmb	18 52 05.9	
	comp=Z,5.1nm,0.7s						
BNN	Bunyan	21.17	307	P	P	18 51 54.2	-1.3
BNN				IAmb	IAmb	18 52 02.5	
	comp=Z,10nm,1.1s						
AB31	Akbulak array	21.67	4		P	18 52 01.4	+0.9
AB31				IAmb	IAmb	18 52 05.1	
	comp=Z,7.6nm,0.8s						
ABKAR	Akbulak array	21.67	4		P	18 52 01.4	+0.9
TARG	Taragay, Kyrgy	21.80	45		P	18 52 05.7	+3.2
TARG				IAmb	IAmb	18 52 15.8	
	comp=Z,6.7nm,0.8s						
AKTO	Aktyubinsk	22.77	1	LR	LR	19 02 57.9	
	comp=Z,84nm,18.8s,baz=75,slow=41						
BR131	Keskin Array S	23.09	308	P	P	18 52 14.6	-1.4
BR131				IAmb	IAmb	18 52 24.1	
	comp=Z,10nm,1.2s						
BRTR	Keskin Array B	23.09	308	P	P	18 52 15.7	-0.3
	comp=Z,3.0nm,0.7s,baz=123,slow=10,SNR=16						
	comp=Z,3.0nm,0.7s						
BRTR	Keskin Array B	23.09	308	P	P	18 52 14.4	-1.6
ELL	Elmali	24.92	298	P	P	18 52 31.7	-1.6
EVN	Everest	25.98	82		P	18 52 47.0	+3.4
EVN				IAmb	IAmb	18 52 58.4	
	comp=Z,3.2nm,0.7s						
BVAR	Borovoye Array	27.13	17	P	P	18 52 54.7	+1.8
	comp=Z,2.4nm,0.5s,baz=197,slow=6.9,SNR=16						
	comp=Z,2.4nm,0.5s						
BORK	Borovoye	27.13	17	P	P	18 52 54.2	+1.3
BORK				IAmb	IAmb	18 52 56.0	
	comp=Z,4.6nm,1.2s						
MKAR	Makanchi Array	27.34	39	P	P	18 52 56.3	+1.4
	comp=Z,0.8nm,0.7s,baz=219,slow=7.5,SNR=3.9						
	comp=Z,0.8nm,0.7s						
KURBB	Kurchatov Arra	28.00	29	P	P	18 53 02.9	+2.2
	comp=Z,0.3nm,0.4s,baz=226,slow=8.3,SNR=4.8						
	comp=Z,0.3nm,0.4s						
KURK	Kurchatov	28.11	29	P	P	18 53 02.9	+1.2
OBN	Obninsk	31.34	337	LR	LR	19 08 21.0	
	comp=Z,142nm,19.3s,baz=182,slow=40						
AKASG	Malin Array Be	31.42	325	P	P	18 53 31.8	+0.7
	comp=Z,0.4nm,0.5s,baz=127,slow=8.6,SNR=1.8						
	comp=Z,0.4nm,0.5s						
AKASG	Malin Array Be	31.42	325	IAmb	IAmb	18 54 07.4	
	comp=Z,3.5nm,1.2s						
ZALV	Zalesovo Beam	33.09	30	P	P	18 53 47.1	+1.4
	comp=Z,0.9nm,0.3s,baz=230,slow=9.4,SNR=7.8						
	comp=Z,0.9nm,0.3s						
KMBO	Kilima Mbogo	34.56	217	LR	LR	19 09 18.2	
	comp=Z,2µm,19.4s,baz=120,slow=39						
GTA	Gaotai	36.93	60	*e*P	P	18 54 28.8	+10
GTA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CMAR	Chiang Mai Arr	39.13	94	LR	LR	19 14 44.5	
	comp=Z,42nm,19.3s,baz=110,slow=42						
GERES	GERESS Array B	39.64	314	P	P	18 54 41.5	-0.4
	comp=Z,0.6nm,0.6s,baz=133,slow=9.3,SNR=5.8						
	comp=Z,0.6nm,0.6s						
FINES	FINESS Array B	39.75	337	P	P	18 54 42.6	+0.2
	comp=Z,1.8nm,0.8s,baz=160,slow=6.1,SNR=5.9						
	comp=Z,1.8nm,0.8s						
FINES	FINESS Array B	39.75	337	P	P	18 54 43.1	+0.7
HFS	Hagfors	43.91	330	P	P	18 55 17.1	+0.6
	comp=Z,3.6nm,1.0s,baz=223,slow=5.9,SNR=1.7						
	comp=Z,3.6nm,1.0s						
ARCES	ARCESS Array B	45.82	345	P	P	18 55 32.5	+1.0
	comp=Z,4.5nm,1.1s,baz=139,slow=9.1,SNR=1.9						
	comp=Z,4.5nm,1.1s						
ARCES	ARCESS Array B	45.82	345	IAmb	IAmb	18 55 48.7	
	comp=Z,5.2nm,1.3s						
ESDC	Sonseca Array	51.58	300	P	P	18 56 15.2	-1.1
	comp=Z,0.5nm,0.7s,baz=81,slow=7.4,SNR=1.9						
	comp=Z,0.5nm,0.7s						
TORD	Torodi Ar. Bea	53.77	266	P	P	18 56 31.9	-0.9
	comp=Z,6.2nm,0.4s,baz=55,slow=7.8,SNR=2.0						
	comp=Z,6.2nm,0.4s						
TORD	Torodi Ar. Bea	53.77	266	IAmb	IAmb	18 56 33.5	
	comp=Z,5.8nm,0.6s						
DBIC	Dimbokro	62.41	263	P	P	18 57 30.7	-2.6
	comp=Z,6.2nm,1.0s,baz=192,slow=1.4,SNR=4.3						
	comp=Z,6.2nm,1.0s						
DBIC	Dimbokro	62.41	263	IAmb	IAmb	18 57 34.5	
	comp=Z,9.2nm,1.1s						
SEY	Seymchan	67.96	29	P	P	18 58 09.2	+0.6
	comp=Z,2.1nm,0.8s,baz=184,slow=18,SNR=1.6						
	comp=Z,2.1nm,0.8s						
WRA	Warramunga Arr	88.14	114	P	P	18 59 59.0	-2.2
	comp=Z,0.4nm,0.9s,baz=305,slow=4.6,SNR=2.4						
	comp=Z,0.4nm,0.9s						
WRA	Warramunga Arr	88.14	114	IAmb	IAmb	18 59 60.0	
	comp=Z,0.7nm,1.5s						
ASAR	Alice Springs	89.66	117	P	P	19 00 05.7	-2.7
	comp=Z,0.1nm,0.7s,baz=306,slow=4.4,SNR=1.1						
	comp=Z,0.1nm,0.7s						
MAW	Mawson	95.04	178	LR	LR	19 38 46.4	
	comp=Z,36nm,18.5s,baz=272,slow=33						

KRSC 04 18:47:44.9±1.6, 48°.32N×156°.23E, h9^{km}±31^{km}, Ml4.2, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.36	358	*e*P	Pn	18 48 24.0	+0.2
SKR				*e*S	Sn	18 48 54.4	+1.5
PAU	Pauzhetka	3.17	7	*e*S	Sb	18 49 17.5	-2.5
KDTR	Khodutka, Kamc	3.69	18	*e*P	Pb	18 48 46.1	-4.0
ASAK	Asacha	4.20	14	*e*P	Pn	18 48 53.6	+4.4
MTVR	Mutnovka	4.35	16	*e*P	Pn	18 48 55.1	+3.9
RUS	Russkaya	4.37	19	*e*S	Sn	18 49 47.2	+5.0
GRL	Gorelyy	4.39	15	*e*P	Pn	18 48 55.8	+3.9
KOK	Koryaka	5.20	16	*e*P	Pn	18 49 07.9	+5.0
SDLR	Sedlovina	5.24	18	*e*P	Pn	18 49 08.0	+4.6
KRX	Arik	5.27	16	*e*P	Pn	18 49 09.0	+5.1

GUC 04 18:54:22.8±0.5, 29°.45S×71°.75W, h34^{km}±2^{km}, ML3.5, 5C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	1.02	65	*e*P	Pn	18 54 40.7	-0.2
LCO				*e*S	Sb	18 54 54.9	-0.4
GO04	Tololo Observa	1.09	131⇑	*e*P	Pb	18 54 43.6	+0.1
GO04				*i* S	Sb	18 54 58.7	+1.2
GO04				IAML		18 55 01.8	
	comp=E,3µm,0.1s						
CO06	Fray Jorge	1.22	175⇑	*e*P	Pn	18 54 44.2	+0.7
CO06				*e*S	Sb	18 55 00.3	-0.6
AC04	Llanos de Chal	1.38	26	*e*P	Pn	18 54 45.0	-0.6
AC04				*i* S	Sn	18 55 01.1	-1.5
AC05	El Transito	1.43	65⇑	*e*P	Pb	18 54 47.8	-1.2
AC05				*i* S	Sb	18 55 06.4	-0.6
CO01	Juntas del Tor	1.53	110	*e*P	Pb	18 54 50.5	-0.3
CO01				*i* S	Sb	18 55 10.8	+0.8
CO02	Combarbal	1.86	160⇑	*e*P	Pb	18 54 54.5	-1.9
CO02				*i* S	Sb	18 55 18.0	-1.3
CO02				IAML		18 55 19.8	
	comp=E,681nm,0.2s						
GO03	Copiapo	2.28	36	*e*P	Pb	18 55 01.3	-2.1
GO03				*i* S	Sb	18 55 28.6	-2.7
CO04	Los Peladeros	2.67	166⇑	*e*P	Pn	18 55 05.9	+2.3
CO04				*e*S	Sn	18 55 38.3	+3.4
CO04				IAML		18 55 41.0	
	comp=N,288nm,0.5s						
VA06	Catapilco	3.12	173	*e*P	Pn	18 55 11.1	+1.5
VA06				*e*S	Sn	18 55 47.1	+1.4
VA06				IAML		18 56 02.7	
	comp=E,68nm,0.6s						
VCA	Vinchina	3.18	78	*e*P	Pb	18 55 17.0	-1.8
AC01	Pan de Azucar	3.45	17	*e*P	Pn	18 55 12.6	-1.5
VA03	San Esteban	3.46	163	*e*P	Pn	18 55 17.2	+2.9
VA03				*e*S	Sn	18 55 59.0	+4.9
VA03				IAML		18 56 06.5	
	comp=E,83nm,0.1s						
AC02	Maricunga	3.48	42	*e*P	Pn	18 55 16.5	+1.5
AC02				IAML		18 56 15.2	
	comp=E,52nm,0.3s						
ROCH	El Roble	3.56	170	*e*P	Pn	18 55 17.6	+1.7
ROCH				*e*S	Sn	18 55 59.5	+2.5

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*NNC **04** 19:03:08.6±0.8, 42°.89N×77°.87E, h0^{km}, mb2.2, mpv3.1, Error ellipse: s-maj=7.6km s-min=3.2km az=177.0*

*SOME **04** 19:03:09.6, 42°.90N×77°.83E, h15^{km}*

*KRNET **04** 19:03:10.2±0.1, 42°.82N×77°.83E, h30^{km}, mb2.3*

ISC 04 19:03:08.6±1.1, 42°.90N±0°.02×77°.84E±0°.02, h5^{km}±9^{km}, n42, σ1^{s}.73/81, 24C-6D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	0.44	69	P	Pg	19 03 17.7	+0.6
	18nm,0.1s						
SATY				S	Sg	19 03 23.6	+0.7
	356nm,0.1s						
PRZ	Przheval'sk	0.58	135	⇑*i*P	Pb	19 03 21.1	-0.3
PRZ				⇑*i*S	Sb	19 03 29.2	-0.8
KOTS	Kotyrbulak	0.63	302	P	Pb	19 03 21.6	-0.5
	42nm,0.1s						
KOTS				S	Sb	19 03 30.3	-1.1
	82nm,0.2s						
KOTS	Kotyrbulak	0.63	302	*e*P	Pb	19 03 21.6	-0.5
	42nm,0.1s						
KOTS				*e*S	Sb	19 03 30.3	-1.1
	82nm,0.2s						
KURS	Kuram	0.64	22	P	Pb	19 03 21.6	-0.6
	7.1nm,0.1s						
KURS				S	Sb	19 03 30.1	-1.3
	9.2nm,0.2s						
MDOK	Medeo	0.64	295	Pg	Pg	19 03 21.6	+0.7
	14nm,0.2s						
MDOK				Lg	Lg	19 03 30.2	
	14nm,0.2s						
TNSS	Tian-Shan	0.67	282	P	Pg	19 03 22.2	+0.7

	1.7nm,0.1s						
TNSS				S	Sg	19 03 31.2	+0.9
	1.7nm,0.2s						
TNSS	Tian-Shan	0.67	282	*e*P	Pg	19 03 22.2	+0.7
	1.7nm,0.0s						
TNSS				*e*S	Sg	19 03 31.2	+0.9
	2.1nm,0.1s						
KPKS	Kokpek	0.84	47	P	Pb	19 03 25.0	-0.6
	0.3nm,0.1s						
KPKS				S	Sb	19 03 36.0	-1.2
	37nm,0.2s						
KPKS	Kokpek	0.84	47	*e*P	Pb	19 03 25.0	-0.6
	0.3nm,0.1s						
KPKS				*e*S	Sb	19 03 36.0	-1.2
	37nm,0.2s						
UZB	Uzynbulak	0.90	74	P	Pg	19 03 25.7	-0.1
	4.7nm,0.1s						
UZB				S	Sg	19 03 37.2	-0.3
	23nm,0.1s						
UZB	Uzynbulak	0.90	74	*e*P	Pg	19 03 25.7	-0.1
	4.7nm,0.1s						
UZB				*e*S	Sg	19 03 37.2	-0.3
	23nm,0.1s						
KDJ	Kajisay	0.91	213	⇑*i*P	Pg	19 03 26.1	+0.1
KDJ				⇑*i*S	Sg	19 03 37.9	0.0
MTBS	Maitube	1.06	283	P	Pg	19 03 29.2	+0.3
	2.9nm,0.1s						
MTBS				S	Sg	19 03 43.2	+0.5
	11nm,0.2s						
MTBS	Maitube	1.06	283	*e*P	Pg	19 03 29.2	+0.3
	2.9nm,0.1s						
MTBS				*e*S	Sg	19 03 43.2	+0.5
	11nm,0.2s						
TARG	Taragay, Kyrgy	1.17	181	⇑*e*P	Pg	19 03 30.5	-0.5
TARG				⇑*i*S	Sg	19 03 45.0	-1.2
KTBS	Karatobe	1.17	314	P	Pb	19 03 31.4	+0.1
	2.6nm,0.2s						
KTBS				S	Sb	19 03 47.0	+0.2
	0.5nm,0.2s						
SHLS	Shalkode	1.22	77	P	Pn	19 03 37.1	+4.8
	3.9nm,0.1s						
SHLS				S	Sn	19 03 57.5	+8.3
	10nm,0.2s						
SHLS	Shalkode	1.22	77	*e*P	Pn	19 03 37.6	+5.2
	4.3nm,0.1s						
SHLS				*e*S	Sn	19 03 57.5	+8.3
	10nm,0.2s						
PDGK	Podgornoye	1.28	70	⇓Pn	Pn	19 03 32.0	-1.2
	1.2nm,0.3s						
PDGK				⇑Sn	Sg	19 03 48.6	-1.1
	7.1nm,0.5s						
BLB	Baldybastay	1.28	21	P	Pg	19 03 33.2	0.0
	7.2nm,0.1s						
BLB				S	Sn	19 03 50.2	-0.8
	8.6nm,0.2s						
ARXS	Arharly	1.31	360	P	Pg	19 03 33.9	+0.2
	1.5nm,0.1s						
ARXS				S	Sn	19 03 51.4	-0.1
	13nm,0.1s						
ARXS	Arharly	1.31	360	*e*P	Pg	19 03 33.9	+0.2
	1.5nm,0.1s						
ARXS				*e*S	Sn	19 03 51.4	-0.1
	13nm,0.1s						
KST	Kastek	1.39	277	P	Pn	19 03 34.9	+0.2
	10nm,0.2s						
KST				S	Sb	19 03 53.0	-0.1
	7.8nm,0.2s						
KST	Kastek	1.39	277	*e*P	Pn	19 03 34.9	+0.2
	10nm,0.2s						
KST				*e*S	Sb	19 03 53.0	-0.1
	7.8nm,0.2s						
BOOM	Boomskoye usch	1.46	254	⇑*i*P	Pn	19 03 35.9	+0.2
BOOM				⇑*i*S	Sn	19 03 54.5	-0.8
DGS	Degeres	1.56	283	P	Pb	19 03 37.9	0.0
	2.2nm,0.1s						
DGS				S	Sb	19 03 58.1	+0.2
	3.3nm,0.1s						
DGS	Degeres	1.56	283	*e*P	Pb	19 03 37.9	0.0
	2.2nm,0.1s						
DGS				*e*S	Sb	19 03 58.1	+0.2
	3.3nm,0.1s						
TKM2	Tokmak 2	1.65	271	⇑*i*P	Pb	19 03 39.3	-0.3
TKM2				⇑*i*S	Sn	19 04 00.1	0.0
KNOS	Konyrlen	1.75	33	P	Pg	19 03 41.8	-0.3
	1.0nm,0.1s						
KNOS				S	Sg	19 04 04.9	0.0
	3.2nm,0.1s						
KRBS	Karabastau	1.77	297	P	Pb	19 03 41.6	+0.1
	2.9nm,0.2s						
KRBS				S	Sb	19 04 04.8	+0.7
	1.6nm,0.2s						
KRBS	Karabastau	1.77	297	*e*P	Pb	19 03 41.6	+0.1
	2.9nm,0.2s						
KRBS				*e*S	Sb	19 04 04.8	+0.7
	5.8nm,0.1s						
KBK	Karagaybulak	2.15	264	⇑*i*P	Pn	19 03 45.9	+0.8
KBK				⇑*i*S	Sn	19 04 11.7	-0.5
CHMS	Chumysh	2.27	274	⇓*i*P	Pn	19 03 47.6	+0.8
CHMS				⇓*i*S	Sn	19 04 14.7	-0.4
JNKS	Jany-Kuch	2.46	222	⇑*e*P	Pn	19 03 49.8	+0.3
JNKS				⇑*e*S	Sn	19 04 18.7	-1.4
USP	Ospenovka	2.48	280	⇓*i*P	Pn	19 03 50.5	+0.9
USP				⇓*i*S	Sn	19 04 20.0	-0.2
AAK	Ala-Archa	2.48	265	⇑*i*P	Pn	19 03 50.3	+0.6
AAK				⇑*i*S	Sn	19 04 19.7	-0.8
AAK	Ala-Archa	2.48	265	⇓Pn	Pb	19 03 53.9	+0.2
	0.3nm,0.4s						
AAK				⇑Sn	Sg	19 04 27.3	-0.9
	1.7nm,0.5s						
UCH	Uchtor	2.55	256	⇑*i*P	Pn	19 03 51.6	+0.6
UCH				⇑*i*S	Sn	19 04 21.3	-1.3
EKS2	Erkin-Say	3.00	267	⇑*e*P	Pn	19 03 57.7	+0.8
EKS2				⇑*i*S	Sn	19 04 32.1	-1.2
MRKS	Merke	3.40	269	*e*P	Pb	19 04 11.3	+2.0
	0.3nm,0.0s						
MRKS				*e*S	Sg	19 04 55.4	-2.4
	2.9nm,0.2s						
MK31	Makanchi Array	5.02	38	⇑Pn	Pn	19 04 25.9	+1.5
	baz=208,slow=16,SNR=3.6						
MK31				⇑Sn	Sb	19 05 30.3	-7.0
	0.3nm,0.2s,baz=212,slow=30,SNR=11						

IDC ***04*** *19:08:28.8±1.9, 20°.39S×178°.81W, h591km±20km, mb3.4/12, mbtmp4.4/13, Error ellipse: s-maj=17.8km s-min=14.7km az=127.0*

NOU ***04*** *19:08:29.1, 20°.55S×178°.67W, h595km, mb4.1/17, Fiji Islands Region*

NEIC ***04*** *19:08:30.7±1.8, 20°.4S±0°.1×178°.9W±0°.1, h602km±7km, mb4.4/53, Error ellipse: s-maj=21.8km s-min=17.6km az=151.0*

ISC 04 19:08:29.3±0.5, **20°.49S**±0°.09×**178°.78W**±0°.09, **h600**km, **n137**, σ1s.**81**/122, **mb4.2**/34, **7C-7D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.06	312		P	19 09 57.3	+1.8
MARNC	Mare, Loyalty	12.36	263	P	P	19 11 11.3	-0.4
MARNC	Mare, Loyalty	12.36	263	P	P	19 11 11.5	-0.2
PINNC	Pines Island,	12.99	258	P	P	19 11 18.5	+0.5
YATNC	Mamie plateau,	13.45	261	P	P	19 11 21.6	-1.2
OUENC	Ouen Island, N	13.52	259	P	P	19 11 24.7	+1.2
DZM	Mont Dzumac	13.86	261	P	P	19 11 27.0	0.0
	10nm,0.9s,baz=133,slow=22,SNR=19						
DZM	Mont Dzumac	13.86	261		P	19 11 26.4	-0.6
DZM	Mont Dzumac	13.86	261	P	P	19 11 27.3	+0.3
SANVU	Saraoutou	14.24	288	P	P	19 11 31.4	+0.7
OUZ	Omahuta	16.14	203	P	P	19 11 49.8	+2.1
KUZ	Kuaotunu	16.89	195	P	P	19 11 55.8	+1.2
URZ	Urewera	18.06	190	P	P	19 12 02.7	-2.6
	6.5nm,0.3s,baz=272,slow=2.6,SNR=13						
URZ	Urewera	18.06	190	P	P	19 12 03.3	-2.0
RTZ	Ruatahuna	18.43	191	P	P	19 12 06.1	-2.7
RTZ				IAmb	IAmb	19 12 50.0	
	comp=Z,12nm,1.1s						
BKZ	Black Stump Fm	19.05	191	P	P	19 12 12.5	-1.9
BKZ				IAmb	IAmb	19 12 43.3	
	comp=Z,17nm,1.3s						
BFZ	Birch Farm	20.57	191	P	P	19 12 26.5	-1.5
QRZ	Quartz Range	21.58	198	P	P	19 12 36.6	-0.4
TATA	Tatamba Isabel	23.94	297	P	P	19 12 59.2	+0.8
JCZ	Jackson Bay	25.70	201	P	P	19 13 12.9	-0.7
CTA	Charters Tower	32.76	264	P	P	19 14 15.6	+0.9
CTAO	Charters Tower	32.76	264	P	P	19 14 15.6	+0.9
PMG	Port Moresby	34.63	283		P	19 14 30.9	+0.5
STKA	Stephens Creek	37.13	244	P	P	19 14 50.5	-0.2
	comp=Z,2.9nm,0.7s,baz=74,slow=4.9,SNR=5.1						
	comp=Z,2.9nm,0.7s						
STKA	Stephens Creek	37.13	244	IAmb	IAmb	19 14 52.2	
	comp=Z,17nm,0.9s						
MANU	Manus Island	37.78	295	P	P	19 14 57.1	+0.9
BBOO	Buckleboo	41.89	243	P	P	19 15 28.7	-0.1
WR8	Warramunga Arr	43.72	262		P	19 15 41.6	-1.6
ASAR	Alice Springs	43.81	257	P	P	19 15 43.9	0.0
	comp=Z,5.2nm,0.7s,baz=91,slow=7.7,SNR=77						
ASAR				ScP	ScP	19 20 13.4	+1.3
	comp=Z,0.5nm,0.9s,baz=100,slow=4.5,SNR=2.8						
ASAR				S	S	19 21 30.6	-1.8
	comp=Z,1.1nm,0.8s,baz=97,slow=14,SNR=9.7						
	comp=Z,5.2nm,0.7s						
WB0	Warramunga Arr	43.85	262		P	19 15 43.5	-0.7
WB0				IAmb	IAmb	19 15 44.8	
	comp=Z,16nm,1.3s						
WRAB	Tennant Creek	43.87	262	P	P	19 15 44.0	-0.3
WRA	Warramunga Arr	43.88	262	P	P	19 15 44.0	-0.3
	comp=Z,2.2nm,0.3s,baz=96,slow=7.6,SNR=98						
WRA				S	S	19 21 29.8	-3.6
	comp=Z,1.2nm,1.0s,baz=97,slow=13,SNR=4.5						
	comp=Z,2.2nm,0.3s						
SOEI	Soe	55.77	272		P	19 17 11.6	+0.3
SOEI				IAmb	IAmb	19 17 13.9	
	comp=Z,24nm,0.9s						
VNDA	Vanda	57.85	185	P	P	19 17 24.9	+0.5
	comp=Z,1.6nm,0.8s,baz=20,slow=6.7,SNR=10						
	comp=Z,1.6nm,0.8s						
VNDA	Vanda	57.85	185	P	P	19 17 25.4	+1.0
QSPA	South Pole Qui	69.58	180	P	P	19 18 40.4	+1.3
	comp=Z,5.8nm,0.8s,baz=52,slow=1.8,SNR=12						
	comp=Z,5.8nm,0.8s						
QSPA	South Pole Qui	69.58	180	P	P	19 18 42.5	+3.4
QSPA				IAmb	IAmb	19 18 44.0	
	comp=Z,13nm,1.1s						
MJAR	Matsushiro Arr	69.77	324	P	P	19 18 40.7	+0.2
	comp=Z,1.9nm,0.6s,baz=164,slow=6.1,SNR=4.6						
	comp=Z,1.9nm,0.6s						
PETK	Petropavlovsk-	76.08	346	P	P	19 19 15.9	-0.2
	comp=Z,6.6nm,0.8s,baz=120,slow=7.4,SNR=4.0						
	comp=Z,6.6nm,0.8s						
KMRM	Mail Ridge	79.22	40	P	P	19 19 35.1	+1.6
KMRM				IAmb	IAmb	19 19 36.3	
	comp=Z,17nm,1.0s						
O02D	Mt. Diablo Mer	79.74	40	P	P	19 19 36.9	+0.7
N02D	Trinity Center	80.28	40	P	P	19 19 40.0	+1.0
M02C	Callahan	80.45	39	P	P	19 19 40.6	+0.8
YBH	Yreka Blue Hor	80.74	39	P	P	19 19 43.1	+1.7
WAKR	Walker	80.84	43	P	P	19 19 43.5	+1.4
WAKR				IAmb	IAmb	19 19 44.6	
	comp=Z,12nm,1.3s						
BEKR	Beckworth	81.05	42	P	P	19 19 44.2	+1.1
PNTR	Pine Nut	81.07	43	P	P	19 19 44.1	+0.8
PNTR				IAmb	IAmb	19 19 45.5	
	comp=Z,12nm,1.0s						
NVAR	Mina Array Bea	81.53	44	P	P	19 19 46.3	+0.7
	comp=Z,2.1nm,0.9s,baz=220,slow=8.6,SNR=9.9						
	comp=Z,2.1nm,0.9s						
PAHR	Pah Rah Range	81.56	42	P	P	19 19 46.6	+0.9
PAHR				IAmb	IAmb	19 19 48.4	
	comp=Z,11nm,1.4s						
NV11	Mina Array Sit	81.62	44		P	19 19 45.7	-0.4
J04A	Umpqua Nationa	82.02	38	P	P	19 19 49.2	+1.2
J04A				IAmb	IAmb	19 19 50.9	
	comp=Z,16nm,1.1s						
K05A	Summer Lake	82.42	39		P	19 19 51.2	+1.2
K05A				IAmb	IAmb	19 19 52.5	
	comp=Z,13nm,1.1s						
J05D	Fort Rock, OR	82.55	38		P	19 19 51.6	+0.9
J05D				IAmb	IAmb	19 19 53.1	
	comp=Z,16nm,1.1s						
WIFE	Three Sisters-	82.69	38	IAmb	IAmb	19 20 13.5	
	comp=Z,11nm,1.5s						
PINE	Pine Mountain	83.03	38	IAmb	IAmb	19 19 55.6	
	comp=Z,11nm,1.0s						
WVOR	Wild Horse Val	83.60	40	IAmb	IAmb	19 19 57.9	
	comp=Z,7.8nm,1.1s						
G08A	Pilot Rock	85.06	38	IAmb	IAmb	19 20 04.9	
	comp=Z,6.2nm,1.0s						
ENH	Enshi	85.43	304	P	P	19 20 05.7	+0.8
E09A	Wood Farm, Sta	86.23	37	IAmb	IAmb	19 20 09.9	
	comp=Z,5.7nm,1.1s						
F10A	Beach Ranch, E	86.45	38	IAmb	IAmb	19 20 10.8	
	comp=Z,9.4nm,0.9s						
PLID	Pearl Lake	86.67	39	IAmb	IAmb	19 20 12.3	
	comp=Z,10nm,1.4s						
HLID	Hailey	86.80	41	IAmb	IAmb	19 20 13.5	
	comp=Z,5.9nm,1.1s						
TXAR	Lajitas Array	87.67	58	P	P	19 20 16.3	+0.7
	comp=Z,1.2nm,0.8s,baz=224,slow=5.2,SNR=8.1						
	comp=Z,1.2nm,0.8s						
L27K	Beaver Creek,	88.20	16	IAmb	IAmb	19 20 19.5	
	comp=Z,9.9nm,1.4s						
ILAR	Eielson Array	88.47	13	P	P	19 20 17.3	-1.0
	comp=Z,2.5nm,1.0s,baz=232,slow=4.9,SNR=14						
	comp=Z,2.5nm,1.0s						
H22K	Ishtalitna Cre	88.59	11	IAmb	IAmb	19 20 19.9	
	comp=Z,6.8nm,1.0s						
K27K	Chicken	88.94	15	IAmb	IAmb	19 20 22.2	
	comp=Z,6.2nm,1.1s						
CMAR	Chiang Mai Arr	89.42	290	P	P	19 20 24.0	+0.2
	comp=Z,2.8nm,0.9s,baz=109,slow=3.1,SNR=14						
	comp=Z,2.8nm,0.9s						
CMAR	Chiang Mai Arr	89.42	290		P	19 20 24.5	+0.7
PD31	Pinedale Array	89.46	44	IAmb	IAmb	19 20 26.4	
	comp=Z,3.9nm,1.2s						
PDAR	Pinedale Array	89.46	44	P	P	19 20 23.4	-0.4
	comp=Z,1.5nm,0.9s,baz=199,slow=4.1,SNR=8.7						
	comp=Z,1.5nm,0.9s						
CHTO	Chiang Mai	89.55	290	P	P	19 20 25.5	+1.1
CHTO				IAmb	IAmb	19 20 40.6	
	comp=Z,9.0nm,1.5s						
E22K	Anaktuvuk Pass	90.56	10	IAmb	IAmb	19 20 29.1	
	comp=Z,5.7nm,1.1s						
MKAR	Makanchi Array	110.66	313	PKiKP	PKiKP	19 25 53.5	-1.3
	comp=Z,0.8nm,0.8s,baz=77,slow=5.2,SNR=4.8						
KURBB	Kurchatov Arra	113.54	317	PKiKP	PKiKP	19 25 58.9	-1.2
	comp=Z,0.6nm,0.7s,baz=93,slow=2.2,SNR=5.7						
BVAR	Borovoye Array	118.60	320	PKP	PKPdf	19 26 08.7	-1.1
	comp=Z,1.2nm,0.5s,baz=116,slow=2.2,SNR=12						
ARCES	ARCESS Array B	128.78	349	PKP	PKPdf	19 26 28.2	-0.6
	comp=Z,7.7nm,1.0s,baz=17,slow=2.0,SNR=7.0						
FINES	FINESS Array B	135.56	343	PKP	PKPdf	19 26 40.1	-1.7
	comp=Z,2.4nm,0.9s,baz=122,slow=2.5,SNR=4.6						
FINES				SKPbc	SKPbc	19 29 17.4	-0.1
	comp=Z,5.8nm,0.9s,baz=82,slow=10.0,SNR=5.8						
HFS	Hagfors	139.41	350	PKhKP	PKPpre	19 26 40.4	
	comp=Z,1.0nm,0.4s,baz=56,slow=2.7,SNR=9.1						
AK03	Malin Array Si	142.63	331	PKP	PKPdf	19 26 50.5	-4.4
AKASG	Malin Array Be	142.65	331	PKhKP	PKPpre	19 26 51.2	
	comp=Z,1.8nm,0.3s,baz=44,slow=4.5,SNR=19						
AKASG	Malin Array Be	142.65	331		PKPpre	19 26 51.6	
AKBB	Malin Array Si	142.65	331		PKPpre	19 26 51.6	
AKBB	Malin Array Si	142.65	331	PKP	PKPdf	19 26 50.9	-4.0
AK01	Malin Array Si	142.66	331	PKP	PKPdf	19 26 50.5	-4.5
AK04	Malin Array Si	142.66	331	PKP	PKPdf	19 26 50.5	-4.5
KIEV	Kiev	142.66	331		PKPpre	19 26 51.6	
KIEV	Kiev	142.66	331	PKP	PKPdf	19 26 50.7	-4.2
LODK	Lodwar	142.67	248		PKPdf	19 26 54.0	-2.2
AK22	Malin Array Si	142.68	331	PKP	PKPdf	19 26 50.6	-4.4
AK09	Malin Array Si	142.68	330	PKP	PKPdf	19 26 50.6	-4.4
AK21	Malin Array Si	142.68	331	PKP	PKPdf	19 26 50.6	-4.4
AK08	Malin Array Si	142.68	330	PKP	PKPdf	19 26 50.6	-4.4
AK02	Malin Array Si	142.69	330	PKP	PKPdf	19 26 50.6	-4.4
AK11	Malin Array Si	142.69	331	PKP	PKPdf	19 26 50.6	-4.4
AK15	Malin Array Si	142.70	331	PKP	PKPdf	19 26 50.6	-4.4
GAZ	Gaziantep	144.61	306		PKPdf	19 26 58.2	-0.7
EKA	Eskdalemuir Ar	145.06	4	PKP	PKPdf	19 26 58.5	-0.5
	comp=Z,6.5nm,1.0s,baz=274,slow=2.1,SNR=4.9						
BNN	Bunyan	145.06	309		PKPdf	19 27 00.2	+0.5
BRTR	Keskin Array B	146.29	312	PKPbc	PKPdf	19 27 03.8	+2.0
	comp=Z,2.3nm,0.8s,baz=136,slow=3.6,SNR=7.7						
BUR08	Bucovina Ar. S	146.68	330		PKPbc	19 27 05.6	+0.7
BURAR	Bucovina Array	146.69	330	⇑P	PKPbc	19 27 06.0	+1.1
CFR	Carcaliu	146.85	324	⇑P	PKPbc	19 27 05.0	-0.2
TPGR	Topolog	146.90	323	⇑P	PKPbc	19 27 05.7	+0.2
VRI	Vrincioaia	147.16	326	⇓P	PKPdf	19 27 05.0	+2.2
MMAI	Mount Meron Ar	147.17	299	PKPbc	PKPbc	19 27 07.2	+0.5
	comp=Z,3.8nm,0.6s,baz=57,slow=3.1,SNR=12						
DOPR	Dopca	147.77	328	⇓P	PKPbc	19 27 07.9	+0.2
MLR	Muntele Rosu	147.82	326		PKPdf	19 26 59.9	-4.2
MLR	Muntele Rosu	147.82	326	⇓P	PKPdf	19 27 07.0	+2.9
CLL	Collm	147.88	346		PKPbc	19 27 07.5	-0.2
CLL	Collm	147.88	346	*e*PKPbc	PKPbc	19 27 08.0	+0.3
	comp=Z,11nm,0.9s						
MORC	Moravsky Berou	148.02	340	*e*PKP	PKPbc	19 27 08.4	+0.2
MARR	Marisel-Cluj	148.35	331	⇑P	PKPdf	19 27 06.2	+1.3
ARR	Arges	148.57	328	⇑P	PKPbc	19 27 10.7	+0.9
VRAC	Vranov	148.73	340	*e*PKP	PKPbc	19 27 10.0	+0.1
JAVC	Velka Javorina	148.77	339	*e*PKP	PKPbc	19 27 11.3	+1.2
KRUC	Moravsky	149.01	340	*e*PKP	PKPbc	19 27 10.5	-0.1
SIRR	Siria	149.32	332	⇑P	PKPbc	19 27 11.0	-0.4
GZR	Gura Zlata	149.47	329	⇑P	PKPbc	19 27 11.2	-0.7
SURR	Surduc	149.50	331	⇓P	PKPbc	19 27 11.4	-0.4
KHC	Kasperske Hory	149.76	344		PKPbc	19 27 11.9	-0.5
BZS	Buzias	149.84	331	⇓P	PKPbc	19 27 12.0	-0.7
GEC2	GERESS Array S	149.99	343		PKPbc	19 27 13.0	-0.1
GERES	GERESS Array B	149.99	343	PKPbc	PKPbc	19 27 12.6	-0.4
	comp=Z,2.1nm,0.8s,baz=29,slow=3.0,SNR=11						
HERR	Herculane	150.01	329	⇓P	PKPbc	19 27 11.9	-1.2
CONA	Conrad Observa	150.18	340	*e*PKiKP	PKPbc	19 27 13.8	+0.3
	comp=Z,0.8nm,0.4s						
RONA	Rosalia, Austr	150.24	339	*e*PKP	PKPbc	19 27 13.7	+0.1
	comp=Z,2.7nm,0.5s						
MORH	Mrgy, Hungar	150.64	335	⇓P	PKPbc	19 27 13.8	-0.7
ARSA	Arzberg	150.88	340	*e*PKP	PKPbc	19 27 15.0	-0.1
	comp=Z,0.8nm,0.3s						
SOKA	Soboth	151.55	340	*e*PKP	PKPbc	19 27 15.1	-1.5
	comp=Z,0.9nm,0.3s						
LESA	Schwarzleotal	151.57	344	*e*PKP	PKPbc	19 27 16.4	-0.3
	comp=Z,1.4nm,0.3s						
WATA	Walderalm	151.93	345	*i* PKiKP	PKPbc	19 27 17.8	+0.2
	comp=Z,0.9nm,0.2s						
WTTA	Wattenberg	151.98	345	*i* PKP	PKPbc	19 27 17.1	-0.7
	comp=Z,1.8nm,0.3s						
MOTA	Moosalm	152.03	346	*i* PKP	PKPbc	19 27 17.7	-0.2
	comp=Z,0.8nm,0.3s						
SQTA	Sankt Quirin	152.13	345	*e*PKiKP	PKPbc	19 27 18.2	+0.2
	comp=Z,1.3nm,0.4s						
ABTA	Abfaltersbach	152.24	343	*e*PKP	PKPbc	19 27 17.4	-0.8
	comp=Z,3.1nm,0.8s						
ESDC	Sonseca Array	160.37	12	PKPab	PKPab	19 28 06.0	-0.3
	comp=Z,1.4nm,1.0s,baz=337,slow=4.6,SNR=5.0						

NEIC ***04*** *19:09:52.4±2.2, 18°.0S±0°.2×178°.8W±0°.1, h541km±7km, mb4.4/20, Error ellipse: s-maj=24.5km s-min=13.4km az=164.0*

IDC ***04*** *19:09:53.9±2.7, 18°.17S×178°.67W, h573km±29km, mb3.3/7, mbtmp4.2/8, Error ellipse: s-maj=25.3km s-min=17.4km az=157.0*

ISC 04 19:09:54.0±0.5, **18°.1S**±0°.1×**178°.67W**±0°.09, **h579**km, **n55**, σ1s.**14**/56, **mb4.2**/17, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	8.36	98		P	19 11 53.0	-3.1
PINNC	Pines Island,	13.79	249	P	P	19 12 52.7	+1.8
DZM	Mont Dzumac	14.54	252	P	P	19 12 59.0	+0.5
	4.2nm,0.5s,baz=128,slow=21,SNR=7.8						
URZ	Urewera	20.46	190	P	P	19 13 50.8	-1.8
	6.9nm,0.6s,baz=310,slow=1.6,SNR=6.3						
	6.9nm,0.6s						
CTAO	Charters Tower	33.17	261		P	19 15 43.3	-0.7
CTAO				IAmb	IAmb	19 15 44.9	
	comp=Z,5.9nm,0.7s						
COEN	Coen	36.86	271		P	19 16 14.5	-0.1
COEN				IAmb	IAmb	19 16 15.8	
	comp=Z,9.2nm,0.8s						
STKA	Stephens Creek	38.34	241	P	P	19 16 26.9	+0.5
	comp=Z,3.5nm,0.5s,baz=96,slow=6.1,SNR=11						
	comp=Z,3.5nm,0.5s						
STKA	Stephens Creek	38.34	241	IAmb	IAmb	19 16 27.8	
	comp=Z,20nm,0.7s						
INKA	Innaminka	38.46	248	P	P	19 16 27.8	+0.3
BBOO	Buckleboo	43.12	241	P	P	19 17 04.6	+0.3
WR8	Warramunga Arr	44.21	260		P	19 17 11.5	-1.4
WR8				IAmb	IAmb	19 17 13.7	
	comp=Z,5.1nm,0.5s						
WB0	Warramunga Arr	44.33	260		P	19 17 12.2	-1.6
WB0				IAmb	IAmb	19 17 14.1	
	comp=Z,6.5nm,0.9s						
WB2	Warramunga Arr	44.35	260	P	P	19 17 13.3	-0.7
WB2				IAmb	IAmb	19 17 14.4	
	comp=Z,7.4nm,0.5s						
WRA	Warramunga Arr	44.36	260	P	P	19 17 13.5	-0.6
	comp=Z,5.0nm,0.5s,baz=95,slow=7.0,SNR=40						
WRA				PcP	PcP	19 18 46.1	+0.8
	comp=Z,0.7nm,0.5s,baz=95,slow=2.9,SNR=3.3						
WRA				S	S	19 23 04.3	-3.1
	comp=Z,0.3nm,0.9s,baz=121,slow=11,SNR=1.7						
	comp=Z,5.0nm,0.5s						
KHLH	Kahului Airpor	44.43	30	P	P	19 17 15.5	+1.0
AS31	Alice Springs	44.51	254		P	19 17 15.0	-0.2
ASAR	Alice Springs	44.51	254	P	P	19 17 15.5	+0.2
	comp=Z,40nm,0.6s,baz=88,slow=8.2,SNR=167						
ASAR				PcP	PcP	19 18 46.4	+0.5
	comp=Z,0.9nm,0.5s,baz=101,slow=4.0,SNR=4.1						
ASAR				S	S	19 23 09.5	+0.1
	comp=Z,0.6nm,0.8s,baz=94,slow=15,SNR=5.9						
MTN	Manton Dam	48.55	269	P	P	19 17 44.0	-1.7
SAUI	Saumlaki	49.62	275	P	P	19 17 51.8	-1.9
FORT	Forrest	49.72	245	P	P	19 17 53.5	-0.7
FORT				IAmb	IAmb	19 17 54.7	
	comp=Z,5.1nm,0.6s						
KNRA	Kununurra	50.23	264	P	P	19 17 57.8	-0.2
KNRA				IAmb	IAmb	19 17 58.8	
	comp=Z,12nm,0.7s						
FITZ	Fitzroy Crossi	52.76	261	P	P	19 18 16.7	+0.4
SOEI	Soe	55.82	270	P	P	19 18 39.8	+1.9
SOEI				IAmb	IAmb	19 18 40.5	
	comp=Z,16nm,0.8s						
PSA00	Pilbara Seismi	57.63	256	P	P	19 18 50.0	0.0
PSA00				IAmb	IAmb	19 18 50.9	
	comp=Z,12nm,0.8s						
MJAR	Matsushiro Arr	67.88	324	P	P	19 19 55.5	0.0
	comp=Z,0.8nm,0.4s,baz=225,slow=50,SNR=4.7						
	comp=Z,0.8nm,0.4s						
QSPA	South Pole Qui	72.00	180	P	P	19 20 23.5	+3.8
	comp=Z,0.8nm,0.4s,baz=287,slow=1.6,SNR=4.3						
TXAR	Lajitas Array	86.29	58	P	P	19 21 37.3	+1.7
	comp=Z,0.3nm,0.6s,baz=248,slow=5.8,SNR=2.3						
	comp=Z,0.3nm,0.6s						
CMAR	Chiang Mai Arr	88.70	290	P	P	19 21 47.8	+0.8
	comp=Z,0.9nm,0.9s,baz=104,slow=5.5,SNR=4.5						
	comp=Z,0.9nm,0.9s						
SNAA	Sanae	90.45	179	P	P	19 21 54.1	-0.1
	comp=Z,0.6nm,0.6s,baz=228,slow=21,SNR=1.4						
	comp=Z,0.6nm,0.6s						
SNAA	Sanae	90.45	179	IAmb	IAmb	19 22 30.5	
	comp=Z,7.7nm,1.4s						
MKAR	Makanchi Array	109.06	314	PKiKP	PKiKP	19 27 18.0	-0.5
	comp=Z,0.4nm,0.5s,baz=123,slow=1.5,SNR=7.3						
KURK	Kurchatov	111.77	318		PKiKP	19 27 23.0	-0.4
KURBB	Kurchatov Arra	111.82	318	PKiKP	PKiKP	19 27 23.0	-0.5
	comp=Z,0.3nm,0.6s,baz=57,slow=2.2,SNR=2.2						
BVAR	Borovoye Array	116.80	321	PKP	PKPdf	19 27 32.9	-0.2
	comp=Z,0.8nm,0.4s,baz=124,slow=1.7,SNR=9.4						
ARCES	ARCESS Array B	126.42	350	PKP	PKiKP	19 27 51.3	-0.3
	comp=Z,4.8nm,0.9s,baz=26,slow=3.5,SNR=3.5						
FINES	FINESS Array B	133.26	344	PKP	PKPdf	19 28 03.9	-0.3
	comp=Z,2.8nm,0.9s,baz=174,slow=1.4,SNR=3.9						
BNN	Bunyan	143.57	312		PKPdf	19 28 23.7	-0.2
LODK	Lodwar	143.64	250		PKPdf	19 28 24.6	-0.1
BUR08	Bucovina Ar. S	144.61	332	PKPdf	PKPab	19 28 27.2	+0.8
BURAR	Bucovina Array	144.63	332	PKPdf	PKPab	19 28 27.5	+1.0
BR131	Keskin Array S	144.71	314	PKPdf	PKPdf	19 28 25.1	-0.8
BRTR	Keskin Array B	144.71	314	PKP	PKPbc	19 28 26.3	0.0
	comp=Z,1.1nm,0.6s,baz=117,slow=3.4,SNR=5.8						
CLL	Collm	145.55	347	*i* PKPbc	PKPbc	19 28 28.6	+0.4
	comp=Z,8.0nm,1.1s						
STEB	Steborice	145.56	341	*e*PKP	PKPab	19 28 29.4	-0.5
MMAI	Mount Meron Ar	146.01	303	PKPbc	PKPab	19 28 31.3	-1.1
	comp=Z,2.6nm,0.5s,baz=65,slow=5.9,SNR=9.9						
KHC	Kasperske Hory	147.46	345	*e*PKP	PKiKP	19 28 34.6	-0.5
CKRC	Cesky Krumlov	147.56	344	*e*PKP	PKiKP	19 28 34.8	-0.5
GERES	GERESS Array B	147.69	345	PKPbc	PKPbc	19 28 33.8	-0.4
	comp=Z,1.5nm,0.5s,baz=20,slow=3.7,SNR=12						
CONA	Conrad Observa	147.93	341	*e*P	PKiKP	19 28 36.1	0.0
	comp=Z,1.9nm,0.6s						
LESA	Schwarzleotal	149.27	345	*e*P	PKiKP	19 28 38.9	-0.1
	comp=Z,0.9nm,0.3s						
KBA	Koelnbreinsper	149.41	344	*e*P	PKPbc	19 28 39.0	+0.4
	comp=Z,1.1nm,0.4s						
WATA	Walderalm	149.61	346	*e*P	PKiKP	19 28 39.6	-0.1
	comp=Z,0.7nm,0.2s						
WTTA	Wattenberg	149.66	346	P	PKiKP	19 28 39.9	0.0
	comp=Z,2.5nm,0.4s						
MYKA	Terra Mystica	149.75	343	*e*P	PKPbc	19 28 39.2	0.0
	comp=Z,1.8nm,0.4s						

ABTA	**Abfaltersbach**	149.94	345	*e*P	PKPbc	19 28 39.9	+0.2
	comp=Z,2.5nm,0.6s						

GUC 04 19:40:15.1±0.6, 45°.46S×76°.55W, h7^{km}±8^{km}, ML3.7, 1D, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUEV	**Cuervo**	2.46	84	*e*P	Pn	19 40 56.8	+1.1
CUEV				*e*S	Sb	19 41 28.8	-1.4
CUEV				IAML		19 41 34.9	
	comp=E,363nm,0.6s						
AY01	**Puyuhuapi**	2.96	71	*e*P	Pn	19 41 03.3	+0.8
AY01				*e*S	Sb	19 41 41.4	-3.1
AY01				IAML		19 41 45.1	
	comp=N,222nm,0.4s						
GO07	**Milladeo Hill,**	3.13	43	*e*P	Pn	19 41 05.5	+0.7
GO07				*e*S	Sn	19 41 44.5	+2.1
GO07				IAML		19 41 59.4	
	comp=E,314nm,0.5s						
COYC	**Coyhaique**	3.15	94	*e*P	Pn	19 41 07.9	+2.8
AY03	**Cochrane**	3.28	125	*e*P	Pn	19 41 08.8	+1.9
AY03				IAML		19 42 21.5	
	comp=N,106nm,0.2s						
LL07	**Hotel Espejo d**	3.43	41	*e*P	Pn	19 41 10.1	+1.1
LL07				*e*S	Sn	19 41 51.9	+2.0
LL07				IAML		19 41 53.6	
	comp=E,137nm,0.3s						
LL06	**Loncomilla**	3.87	34	*e*P	Pn	19 41 16.1	+1.0
LL02	**Futaleuf**	4.07	58	*e*P	Pn	19 41 19.1	+1.4
GO08	**Villa O'Higgin**	4.07	139	⇓*e*P	Pn	19 41 16.9	-0.9
LL01	**San Ignacio de**	4.29	46	*e*P	Pn	19 41 22.8	+1.9
LL05	**Los Muermos**	4.63	30	*e*P	Pn	19 41 26.9	+1.4
LL03	**Petrohue**	5.27	36	*e*P	Pn	19 41 35.5	+1.2

IDC 04 19:44:06.7±2.2, 5°.25S×149°.40E, h320^{km}±21^{km}, mb3.5/5, mbtmp4.1/6, Error ellipse: s-maj=30.6km s-min=18.7km az=151.0

ISC 04 19:44:04.4±1.4, 5°.1S±0°.2×149°.3E±0°.2, h300^{km}, n6, σ3^{s}31/9, mb3.8/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	4.79	206	P	Pn	19 45 23.6	+4.1
	6.5nm,0.5s,baz=27,slow=9.8,SNR=5.1						
PMG				S	S	19 46 17.8	-1.9
	7.5nm,0.5s,baz=219,slow=6.8,SNR=5.9						
WRA	**Warramunga Arr**	20.73	223	P	P	19 48 23.4	+0.6
	5.0nm,0.5s,baz=51,slow=11,SNR=75						
WRA				S	S	19 51 49.0	-5.9
	0.3nm,0.8s,baz=47,slow=16,SNR=1.5						
	5.0nm,0.5s						
ASAR	**Alice Springs**	23.69	217	P	P	19 48 50.9	+1.0
	2.5nm,0.6s,baz=55,slow=8.4,SNR=36						
ASAR				S	S	19 52 40.4	-2.0
	0.3nm,0.9s,baz=36,slow=15,SNR=4.2						
	2.5nm,0.6s						
DZM	**Mont Dzumac**	23.70	137	P	P	19 48 48.8	-1.2
	1.5nm,0.5s,baz=258,slow=5.6,SNR=6.2						
	1.5nm,0.5s						
FITZ	**Fitzroy Crossi**	26.48	239	P	P	19 49 16.1	+1.1
	7.3nm,0.4s,baz=55,slow=9.7,SNR=106						
	7.3nm,0.4s						
ILAR	**Eielson Array**	83.75	23	P	P	19 55 58.7	-1.1
	0.4nm,0.8s,baz=238,slow=5.2,SNR=2.8						
	0.4nm,0.8s						

FUNV 04 19:57:08.3, 10°.64N×72°.11W, h8^{km}, MW3.7

RSNC 04 19:57:09.4±0.0, 11°N±1°×7°2W±°, h64^{km}±8^{km}, M3.2, mb3.6, mB5.1, ML3.0, MLv3.8, Mw(mB)4.4

ISC 04 19:57:08.1±1.5, 10°.66N±0°.04×72°.13W±0°.03, h23^{km}±16^{km}, n26, σ1^{s}55/44, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCQV	**Machiques**	0.72	214	*e*P	Pb	19 57 21.4	-0.7
MCQV				*e*S	Sb	19 57 31.7	+0.1
URIC	**Uribia, Colomb**	1.05	7	P	Pn	19 57 27.5	+0.1
URIC				S	Sb	19 57 42.1	+1.2
SMRC	**Santa Marta, M**	2.12	284	P	Pn	19 57 42.7	+0.5
SMRC				S	Sn	19 58 07.1	-0.7
ARGC	**Ariguani, Magd**	2.23	249	P	Pn	19 57 44.2	+0.5
ARGC				S	Sn	19 58 10.9	+0.3
SDV	**Santo Domingo**	2.30	140	P	Pn	19 57 44.7	-0.1
SDV				S	Sn	19 58 10.2	-2.3
SOCV	**Socops**	2.67	152	*e*P	Pn	19 57 50.3	+0.4
SOCV				*e*S	Sn	19 58 21.7	+0.1
OCAC	**Ocana**	2.67	206	P	Pn	19 57 49.4	-0.6
OCAC				S	Sn	19 58 21.5	-0.3
CAPV	**Capacho**	2.78	184	*e*P	Pn	19 57 52.9	+1.4
CAPV				*e*S	Sn	19 58 25.3	+0.8
TEPV	**Terepaima**	2.97	103	*e*P	Pn	19 57 54.8	+0.8
TEPV				*e*S	Sn	19 58 29.5	+0.5
JACV	**Jacura**	3.27	82	*e*P	Pn	19 57 58.5	+0.4
JACV				*e*S	Sn	19 58 35.6	-0.7
PAMC	**Pamplona, Colo**	3.34	190	P	Pn	19 58 00.7	+1.2
PAMC				S	Sn	19 58 38.8	0.0
MAPV	**Macapo**	3.71	102	*e*P	Pn	19 58 05.0	+1.0
MAPV				*e*S	Sn	19 58 46.1	-1.0
BRJC	**Barrancabermej**	3.99	204	P	Pn	19 58 06.9	-1.1
BRJC				S	Sn	19 58 53.3	-0.8
TURV	**Turiamo**	4.22	92	*e*P	Pn	19 58 11.1	-0.1
TURV				*e*S	Sn	19 58 57.9	-1.9
BENV	**Beln**	4.51	98	*e*P	Pn	19 58 15.6	+0.4
BENV				*e*S	Sn	19 59 05.0	-2.0
PTBC	**PUERTO BERRIO,**	4.69	210	P	Pn	19 58 16.4	-1.3
PTBC				S	Sn	19 59 09.9	-1.6
RUSC	**La Rusia**	4.83	191	P	Pn	19 58 20.2	+0.3
RUSC				S	Sn	19 59 15.5	+0.1
TACV	**Tcata**	5.05	95	*e*P	Pn	19 58 22.4	-0.1
TACV				*e*S	Sn	19 59 16.8	-3.4
SPBC	**San Pablo de B**	5.33	201	P	Pn	19 58 25.9	-0.6
HELC	**Santa Helena**	5.57	217	P	Pn	19 58 31.5	+1.5
	3.9nm,0.5s						
NORC	**Norcasia**	5.74	208	P	Pn	19 58 31.2	-0.9
	5.7nm,1.0s						
CBOC	**Ciudad Bolivar**	6.12	219	P	Pn	19 58 38.3	+0.9
CHIC	**Chingaza**	6.20	195	P	Pn	19 58 38.4	-0.3
	4.1nm,0.7s						
GUY2C	**Guyana, Caldas**	6.28	211	P	Pn	19 58 41.2	+1.4
	6.6nm,0.7s						
CACV	**CAICARA DEL OR**	6.32	119	*e*P	Pn	19 58 46.0	+6.0
CACV				*e*S	Sn	19 59 58.4	+6.9
PCRV	**Puerto La Cruz**	7.39	93	*e*P	Pn	19 58 54.5	-0.2

JMA 04 20:01:37.7±0.2, 28°N±1°×12°7E±°, h161^{km}±4^{km}, MV4.3/35, NW OFF OKINAWAJIMA IS

IDC 04 20:01:53.8±7.8, 28°.71N×127°.30E, h358^{km}±97^{km}, mb3.0/7, mbtmp3.8/8, Error ellipse: s-maj=60.5km s-min=22.2km az=58.0

ISC 04 20:01:35.5±0.9, 28°.20N±0°.08×126°.83E±0°.08, h151^{km}±14^{km}, n31, σ1^{s}58/41, mb3.6/7, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIH	**Iheya**	1.54	139	*i* P	Pn	20 02 06.5	+0.9
JAGN	**Aguni-jima**	1.65	167	*i* P	Pn	20 02 08.1	+1.3
JAGN				S	Sn	20 02 31.4	+0.7
JOKE	**Okinoerabujima**	1.76	118	*i* P	Pn	20 02 08.1	+0.2
JOKE				S	Sn	20 02 31.1	-1.7
JYRO	**Yoronjima**	1.86	129	*i* P	Pn	20 02 09.1	0.0
JYRO				S	Sn	20 02 32.4	-2.4
JKE	**Kume jima 2**	1.86	181	*i* P	Pn	20 02 10.6	+1.4
JKE				*e*S	Sn	20 02 36.2	+1.1
JOW	**Kunigami**	1.87	136	*i* P	Pn	20 02 09.4	+0.1
JTK	**Tokunoshima**	1.92	102	*i* P	Pn	20 02 09.9	0.0
JTK				S	Sn	20 02 34.3	-1.9
JNTH	**Nagotoyohara**	1.98	147	*i* P	Pn	20 02 10.8	+0.3
JAMN	**Amaminishikomi**	2.07	88	*i* P	Pn	20 02 11.8	+0.2
JAMN				S	Sn	20 02 38.0	-1.2
JJT3	**Tamagusuku3**	2.22	157	*i* P	Pn	20 02 14.1	+0.8
JJT3				S	Sn	20 02 41.1	-1.2
JAM	**Amami Oshima**	2.46	84	P	Pn	20 02 16.4	+0.2
JAM				S	Sn	20 02 45.7	-1.8
JZK	**Kikaishima**	2.78	87	P	Pn	20 02 21.1	+0.9
JZK				S	Sn	20 02 53.1	-1.5
JIRB	**Irabujima**	3.67	204	S	Sn	20 03 13.6	-1.3
JMJ2	**Miyako jima3**	3.70	202	P	Pn	20 02 31.7	-0.2
JMJ2				S	Sn	20 03 16.7	+1.0
JYAK	**Yakushimahirau**	3.81	57	P	Pn	20 02 34.9	+1.6
JYAK				*e*S	Sn	20 03 16.1	-2.1
JTJ	**Tarama**	4.02	209	S	Sn	20 03 21.2	-2.0
JMTN	**Minamitane**	4.18	57	P	Pn	20 02 38.9	+0.7
JMTN				S	Sn	20 03 24.7	-2.2
JISG	**Ishigakijimahi**	4.25	213	P	Pn	20 02 38.6	-0.4
JISG				*e*S	Sn	20 03 26.6	-1.8
JSJ	**Shimokoshiki**	4.28	35	*e*P	Pn	20 02 42.4	+2.9
JTN	**Tanegashima 3**	4.37	55	P	Pn	20 02 41.4	+0.8
JIJ	**Ishigaki jima**	4.51	213	P	Pn	20 02 41.5	-1.1
JSU	**Suzuyama**	4.56	43	P	Pn	20 02 47.5	+4.3
JKDJ	**Kitadaitoujima**	4.57	118	P	Pn	20 02 40.0	-3.4
JKDJ				S	Sn	20 03 28.2	-7.9
MJAR	**Matsushiro Arr**	12.71	46	P	Pn	20 04 34.6	+3.7
	2.1nm,0.5s,baz=231,slow=10,SNR=9.3						
SONM	**Songino Array**	25.23	327	P	P	20 06 48.0	+0.6
	1.6nm,0.5s,baz=150,slow=10,SNR=13						
	1.6nm,0.5s						
MKAR	**Makanchi Array**	39.30	310	P	P	20 08 48.6	-1.1
	0.7nm,0.5s,baz=90,slow=9.8,SNR=9.3						
	0.7nm,0.5s						
ZALV	**Zalesovo Beam**	39.93	322	P	P	20 08 52.6	-2.1
	0.4nm,0.3s,baz=99,slow=9.1,SNR=2.4						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	42.57	315	P	P	20 09 14.6	-1.7
	0.3nm,0.5s,baz=103,slow=8.7,SNR=4.1						
	0.3nm,0.5s						
BVAR	**Borovoye Array**	47.98	317	P	P	20 09 56.9	-2.0
	0.5nm,0.5s,baz=79,slow=11,SNR=2.4						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	48.41	171	P	P	20 10 04.6	+2.2
	0.4nm,0.9s,baz=356,slow=7.9,SNR=1.8						
	0.4nm,0.9s						
FINES	**FINESS Array B**	70.54	330	P	P	20 12 29.2	-4.4
	4.9nm,1.1s,baz=197,slow=4.4,SNR=2.2						
	4.9nm,1.1s						

IDC 04 20:02:44.3±3.5, 5°.71S×146°.89E, h216^{km}±50^{km}, mb3.2/3, mbtmp3.6/5, Error ellipse: s-maj=83.8km s-min=30.2km az=115.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	3.68	176	P	Pn	20 03 43.3	+0.4
	5.0nm,0.3s,baz=355,slow=11,SNR=5.5						
PMG				S	S	20 04 29.2	+0.5
	5.5nm,0.3s,baz=250,slow=13,SNR=3.3						
WRA	**Warramunga Arr**	18.68	220	P	P	20 06 46.7	+0.1
	1.0nm,0.5s,baz=45,slow=9.5,SNR=15						
ASAR	**Alice Springs**	21.79	214	P	P	20 07 19.4	+0.1
	1.0nm,0.6s,baz=40,slow=7.6,SNR=21						
ASAR				S	S	20 11 01.0	-4.2
	0.6nm,1.1s,baz=32,slow=25,SNR=2.7						
	1.0nm,0.6s						
FITZ	**Fitzroy Crossi**	24.12	237	P	P	20 07 40.6	0.0
	0.6nm,0.4s,baz=36,slow=6.7,SNR=9.4						
	0.6nm,0.4s						
ZALV	**Zalesovo Beam**	78.71	328	P	P	20 14 22.5	-0.1
	0.6nm,0.5s,baz=99,slow=4.7,SNR=3.6						
	0.6nm,0.5s						

MOS 04 20:09:58.6±1.1, 19°.07S×169°.60E, h233^{km}, mb5.6/24, Error ellipse: s-maj=8.1km s-min=7.1km az=133.6

BJI 04 20:10:01.8, 18°.86S×169°.60E, h256^{km}, mB5.5/43, mb5.3/77

IDC 04 20:10:02.5±0.4, 19°.07S×169°.58E, h255^{km}±2^{km}, mb5.2/28, mbtmp5.7/30, Error ellipse: s-maj=7.1km s-min=6.6km az=60.0

NEIC 04 20:10:03.3, 19°.03S×169°.56E, h260^{km}

NEIC 04 20:10:03, 19°.04S×169°.57E, h270^{km}

NEIC 04 20:10:03, 19°.04S×169°.57E, h270^{km}, Moment Tensor Solution. Duration: 5^{s}2 Moment tensor: Scale 10^{18}Nm; M_{rr}0.48; $M_{\theta\theta}$-0.39; $M_{\phi\phi}$-0.08; $M_{r\theta}$0.09; $M_{\theta\phi}$-0.89; $M_{\phi r}$-0.85; Fault plane solution: $M_0$1.31000×10^{18} NP1:ϕ_s86.96000°, δ46.52000°, λ158.29000°. NP2:ϕ_s192.28000°, δ74.43000°, λ45.59000°. Principal axes: T 1.3257, Plg43.0000°, Azm60.0000°; N -0.0370, Plg42.0000°, Azm207.0000°; P -1.2887, Plg17.0000°, Azm313.0000°;

NOU 04 20:10:03.6, 19°.04S×169°.59E, h260^{km}, ML5.5/183, Vanuatu Islands

IPGP 04 20:10:03.0, 19°.06S×169°.58E, h270^{km}, Mw6.1, Fault plane solution: NP1:ϕ_s81.00000°, δ45.00000°, λ160.00000°. NP2:ϕ_s186.00000°, δ76.00000°, λ47.00000°.

NEIC 04 20:10:03.6±1.5, 19°.07S±0°.06×169°.58E±0°.07, h266^{km}±1^{km}, mb5.7/669, Mwb6.0/115, Mww6.0/71, Error ellipse: s-maj=11.6km s-min=10.5km az=275.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.49; $M_{\theta\theta}$-0.43; $M_{\phi\phi}$-0.06; $M_{r\theta}$-0.00; $M_{\theta\phi}$-0.73; $M_{\phi r}$-0.87; Fault plane solution: $M_0$1.23000×10^{18} NP1:ϕ_s87.18000°, δ40.67000°, λ156.10000°. NP2:ϕ_s195.76000°, δ74.69000°, λ51.85000°. Principal axes: T 1.2508, Plg46.0000°, Azm67.0000°; N -0.0471, Plg37.0000°, Azm207.0000°; P -1.2037, Plg20.0000°, Azm314.0000°;

GCMT 04 20:10:06.6±0.1, 19°.07S×169°.48E, h271^{km}, MW6.0/165, Moment Tensor Solution. s157,c331; s165,c541; Duration: 2^{s}5 Moment tensor: Scale 10^{18}Nm; M_{rr}0.49±.01; $M_{\theta\theta}$-0.42±.01; $M_{\phi\phi}$-0.06±.01; $M_{r\theta}$0.14±.01; $M_{\theta\phi}$-0.93±.01; $M_{\phi r}$-0.95±.01; Best double couple: $M_0$1.40800×10^{18} NP1:ϕ_s87.00000°, δ46.00000°, λ159.00000°. NP2:ϕ_s192.00000°, δ75.00000°, λ46.00000°. Principal axes: T 1.4640, Plg42.0000°, Azm60.0000°; N -0.1120, Plg42.0000°, Azm206.0000°; P -1.3520, Plg18.0000°, Azm313.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function

ISC 04 20:10:02.9±0.2, 19°.12S±0°.03×169°.66E±0°.03, h263^{km}±1^{km}, h264^{km}:pP-P, n1551, σ1^{s}45/1664, mb5.7/411, 101C-119D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INH	**Isangel**	0.56	221	P	Pn	20 10 38.0	+0.6
INH	**Isangel**	0.56	221	S	S	20 11 05.8	+1.1
RTV	**Rentapao**	1.77	318	P	Pn	20 10 44.8	+0.3
RTV	**Rentapao**	1.77	318	S	S	20 11 17.7	+0.3
DVP	**Devils Point**	1.97	315	P	Pn	20 10 46.3	+0.1
DVP	**Devils Point**	1.97	315	S	S	20 11 19.5	-1.0
MARNC	**Mare, Loyalty**	2.80	213		Pn	20 10 53.6	-0.4
MARNC				Sn	S	20 11 32.1	-2.6
MARNC	**Mare, Loyalty**	2.80	213	P	Pn	20 10 54.1	+0.1
MARNC	**Mare, Loyalty**	2.80	213	⇑P	Pn	20 10 53.1	-0.9
YATNC	**Mamie plateau,**	3.91	221	P	Pn	20 11 05.2	-0.9
PINNC	**Pines Island,**	4.04	210		Pn	20 11 07.4	-0.3
PINNC				Sn	S	20 11 58.6	-0.7
PINNC	**Pines Island,**	4.04	210	P	Pn	20 11 08.4	+0.7
PINNC	**Pines Island,**	4.04	210	S	S	20 11 59.9	+0.5
DZM	**Mont Dzumac**	4.20	225	P	Pn	20 11 10.4	+0.7
	3μm,0.6s,baz=57,slow=12,SNR=2455						
DZM				S	S	20 12 00.1	-2.9
	baz=311,slow=20						
DZM	**Mont Dzumac**	4.20	225	*e*Pn	Pn	20 11 08.1	-1.6
	16μm,1.3s						
DZM				*e*Sn	S	20 12 00.5	-2.5
	10μm,1.5s						
DZM	**Mont Dzumac**	4.20	225		Pn	20 11 09.4	-0.3
DZM	**Mont Dzumac**	4.20	225	P	Pn	20 11 10.7	+1.0
DZM	**Mont Dzumac**	4.20	225	⇑P	Pn	20 11 10.2	+0.5
OUENC	**Ouen Island, N**	4.21	218	P	Pn	20 11 10.7	+1.1
OUENC	**Ouen Island, N**	4.21	218	S	S	20 12 03.0	+0.1
SANVU	**Saraoutou**	4.34	327		Pn	20 11 09.8	-1.5
SANVU	**Saraoutou**	4.34	327	P	Pn	20 11 10.9	-0.4
SANVU	**Saraoutou**	4.34	327	⇓P	Pn	20 11 10.1	-1.3
ONTNC	**Ouen Toro**	4.36	223		Pn	20 11 12.1	+0.7
ONTNC	**Ouen Toro**	4.36	223	P	Pn	20 11 12.8	+1.4
ONTNC	**Ouen Toro**	4.36	223	⇑P	Pn	20 11 12.1	+0.7
KOUNC	**Koumac, New Ca**	5.25	253	P	Pn	20 11 23.9	+1.8
KOUNC	**Koumac, New Ca**	5.25	253	⇑P	Pn	20 11 23.4	+1.3
MSVF	**Nonsavu**	8.08	81		Pn	20 12 00.3	+2.9
MSVF	**Nonsavu**	8.08	81	P	Pn	20 11 59.9	+2.5
MSVF	**Nonsavu**	8.08	81	*c i*P	Pn	20 12 00.6	+3.2
MSVF	**Nonsavu**	8.08	81	⇑P	Pn	20 12 00.6	+3.2
NFK	**Norfolk Island**	10.00	189	⇑P	P	20 12 27.4	+1.0
HURO	**Huro Makira**	11.41	318	P	Pn	20 12 38.5	-0.5
NGOA	**Tingoa Renbel**	11.93	308	P	Pn	20 12 44.7	-0.6
ALEG	**Aligegeo Malai**	13.48	319	P	Pn	20 13 04.4	0.0
SAVO	**Savo Central**	13.76	315	P	Pn	20 13 07.9	+0.1
FUNA	**Funafuti**	14.02	43		Pn	20 13 10.4	-0.5
FUNA	**Funafuti**	14.02	43	P	P	20 13 11.9	+0.7
FUNA	**Funafuti**	14.02	43	⇑P	P	20 13 11.2	0.0
TATA	**Tatamba Isabel**	14.33	317	P	Pn	20 13 14.8	+0.1
RAO	**Raoul Island**	15.16	134	P	Pn	20 13 25.0	+0.5
	196nm,0.4s,baz=156,slow=3.8,SNR=11						
RAO				S	S	20 16 15.2	+4.6
	98nm,0.3s,baz=83,slow=20,SNR=1.3						
RAO	**Raoul Island**	15.16	134	P	Pn	20 13 27.3	+2.9
GLKZ	**Green Lake**	15.16	134	P	Pn	20 13 26.7	+2.2
LHI	**Lord Howe Isla**	15.61	216	P	Pn	20 13 31.1	+1.4
	comp=Z,343nm,1.0s,comp=Z,0.0nm						
LHI	**Lord Howe Isla**	15.61	216		Pn	20 13 29.6	-0.2
LHI	**Lord Howe Isla**	15.61	216	P	Pn	20 13 30.1	+0.4
LHI	**Lord Howe Isla**	15.61	216	⇓P	Pn	20 13 30.7	+0.9
OUZ	**Omahuta**	16.41	169	P	Pn	20 13 40.0	+0.9
OUZ	**Omahuta**	16.41	169	⇑P	Pn	20 13 39.9	+0.8
WCZ	**Waipu Caves**	17.25	167	P	Pn	20 13 50.0	+1.0
GC1S	**Gold Coast 1 S**	17.30	236	P	P	20 13 48.1	+1.0
AUWSH	**Wavell State H**	17.34	239	P	Pn	20 13 50.4	+0.3
GRZ	**Great Barrier**	17.81	165	P	Pn	20 13 55.5	-0.1
GD1S	**Gladstone Soft**	17.83	251	P	Pn	20 13 55.4	-0.5
ABAZ	**Army Bay**	18.00	166	P	Pn	20 13 57.4	-0.3
MBAZ	**Motutapu North**	18.17	166	P	Pn	20 13 59.3	-0.4
WIAZ	**Waiheke Island**	18.25	166	P	Pn	20 13 59.7	-0.9
WTAZ	**Waiatarua**	18.26	167	P	Pn	20 14 00.3	-0.5
TW1H	**Toowoomba 1 Ha**	18.26	239	P	Pn	20 13 59.5	-1.5
EIDS	**Eidsvold**	18.28	247	P	P	20 13 58.7	+1.0
	comp=Z,337nm,0.8s						
EIDS	**Eidsvold**	18.28	247		P	20 13 57.9	+0.2
EIDS	**Eidsvold**	18.28	247	P	P	20 13 59.2	+1.5
EIDS	**Eidsvold**	18.28	247	⇑P	P	20 13 58.1	+0.4
AUNRC	**North Rockhamp**	18.32	253	P	P	20 13 58.4	+0.2
KUZ	**Kuaotunu**	18.34	164	P	Pn	20 14 00.5	-1.3
KUZ	**Kuaotunu**	18.34	164	P	Pn	20 14 00.7	-1.0
AWAZ	**Awhitu Peninsu**	18.40	167	P	Pn	20 14 01.6	-0.8
AFI	**Afiamalu**	18.53	77	P	P	20 13 58.5	-2.2
AFI	**Afiamalu**	18.53	77	P	P	20 14 00.6	0.0
AFI	**Afiamalu**	18.53	77	P	Pn	20 14 03.2	-1.1
AFI	**Afiamalu**	18.53	77	P	P	20 13 58.5	-2.2
AFI	**Afiamalu**	18.53	77	⇑P	P	20 13 57.2	-3.5
MKAZ	**Moumakai**	18.55	166	P	Pn	20 14 02.9	-1.3
TOZ	**Tahuroa Road**	19.23	166	P	P	20 14 08.4	+0.7
TOZ	**Tahuroa Road**	19.23	166	P	Pn	20 14 10.9	-1.2
NIUE	**Niue**	19.29	93	P	P	20 14 07.4	-1.3
NIUE	**Niue**	19.29	93		P	20 14 06.7	-2.0
NIUE	**Niue**	19.29	93	P	P	20 14 08.6	0.0
NIUE	**Niue**	19.29	93	⇓P	P	20 14 07.9	-0.7
TLZ	**Tolley Road**	19.81	166	P	P	20 14 15.9	+1.9
ARMA	**Armidale**	19.83	232	P	P	20 14 15.9	+1.5
	comp=Z,440nm,1.1s,comp=Z,0.0nm						
ARMA	**Armidale**	19.83	232		P	20 14 14.3	-0.1
ARMA	**Armidale**	19.83	232	P	P	20 14 15.7	+1.3
HIZ	**Hauiti**	19.84	168	P	P	20 14 14.3	0.0
HIZ	**Hauiti**	19.84	168	P	P	20 14 16.5	+2.2
MXZ	**Matakaoa Point**	19.86	159	P	P	20 14 14.3	-0.2
MXZ	**Matakaoa Point**	19.86	159	P	Pn	20 14 17.2	-2.3
MXZ	**Matakaoa Point**	19.86	159	P	P	20 14 16.6	+2.1
HAZ	**Te Kaha**	19.87	161	P	P	20 14 17.0	+2.4
URZ	**Urewera**	20.14	163	P	P	20 14 19.1	+1.6
	comp=Z,81nm,0.5s,baz=270,slow=3.5,SNR=40						
URZ				S	S	20 17 52.4	+4.0
	comp=Z,67nm,0.8s,baz=50,slow=22,SNR=11						
	comp=Z,81nm,0.5s						
URZ	**Urewera**	20.14	163	P	P	20 14 19.6	+2.2
URZ	**Urewera**	20.14	163	P	P	20 14 19.7	+2.2
PUZ	**Puketiti**	20.31	160	P	P	20 14 20.3	+1.0
MWZ	**Matawai**	20.33	162	P	P	20 14 21.5	+2.0
VRZ	**Vera Road**	20.41	169	P	Pn	20 14 24.7	-1.2
RTZ	**Ruatahuna**	20.44	163	P	P	20 14 21.2	+0.5
RTZ	**Ruatahuna**	20.44	163	P	Pn	20 14 23.7	-2.5
KHEZ	**Kahui Hut**	20.45	170	P	P	20 14 22.9	+2.1
RMQ	**Roma**	20.60	245	P	P	20 14 24.2	+1.7
	comp=Z,328nm,1.4s						
RMQ	**Roma**	20.60	245	P	P	20 14 23.6	+1.1
TARA	**Tarawa**	20.60	9	P	P	20 14 22.1	-0.5
AUPHS	**Peel High Scho**	20.73	231	P	P	20 14 24.8	+1.1
BKZ	**Black Stump Fm**	20.83	165	P	P	20 14 25.0	+0.3
BKZ	**Black Stump Fm**	20.83	165	P	P	20 14 25.8	+1.1
BKZ	**Black Stump Fm**	20.83	165	P	P	20 14 26.7	+1.9
KNZ	**Kokohu**	21.01	162	P	P	20 14 28.0	+1.6
TSZ	**Takapari Road**	21.56	167	P	P	20 14 33.8	+2.1
TV1H	**Townsville Har**	21.59	266	P	P	20 14 32.2	0.0
AUKHS	**Kincumber High**	21.68	225	P	P	20 14 34.7	+1.8
PXZ	**Pawanui**	21.74	165	P	P	20 14 34.2	+0.9
QRZ	**Quartz Range**	21.77	174	P	P	20 14 34.7	+1.1
QRZ	**Quartz Range**	21.77	174	P	P	20 14 36.3	+2.7
QRZ	**Quartz Range**	21.77	174	P	P	20 14 36.6	+3.0
TKNZ	**Takaka Hill**	22.02	173	P	P	20 14 36.9	+1.0
RIV	**Riverview**	22.05	225	P	P	20 14 37.9	+1.7
	comp=Z,460nm,1.2s						
RIV	**Riverview**	22.05	225	P	P	20 14 38.5	+2.3
RIV	**Riverview**	22.05	225	⇑P	P	20 14 38.7	+2.5
MRZ	**Mangatainoka R**	22.06	168	P	P	20 14 35.7	-0.5
MRZ	**Mangatainoka R**	22.06	168	P	P	20 14 37.5	+1.3
CTAO	**Charters Tower**	22.07	264		P	20 14 35.8	-0.8
CTAO	**Charters Tower**	22.07	264	P	P	20 14 36.9	+0.3
CTAO	**Charters Tower**	22.07	264	P	P	20 14 35.8	-0.8
BFZ	**Birch Farm**	22.22	167	P	P	20 14 37.9	+0.3
BFZ	**Birch Farm**	22.22	167	P	P	20 14 39.2	+1.6
BFZ	**Birch Farm**	22.22	167	P	P	20 14 38.6	+0.9
AULRC	**Lightning Ridg**	22.23	238	P	P	20 14 38.9	+1.0
NNZ	**Nelson**	22.25	173	P	P	20 14 38.9	+1.0
NNZ	**Nelson**	22.25	173	P	P	20 14 41.0	+3.1
SYDH	**Sydney Hard Ro**	22.29	225	P	P	20 14 40.9	+2.5
MRNZ	**Matariki Terra**	22.36	174	P	P	20 14 39.3	+0.3
TCW	**Tory Channel**	22.36	171	P	P	20 14 38.5	-0.5
SNZO	**South Karori**	22.53	170	P	P	20 14 40.6	+0.2
SNZO	**South Karori**	22.53	170	P	P	20 14 41.5	+1.0
SNZO	**South Karori**	22.53	170	⇑P	P	20 14 41.6	+1.2
TUWZ	**Tuamarina**	22.53	172	P	P	20 14 41.2	+0.7
DSZ	**Denniston Nort**	22.62	176	P	P	20 14 43.1	+1.7
DSZ	**Denniston Nort**	22.62	176	P	P	20 14 44.0	+2.6
RABL	**Rabaul**	22.63	309	P	P	20 14 39.1	-2.6
RABL	**Rabaul**	22.63	309	⇓P	P	20 14 39.2	-2.5
MSWZ	**Moikau Station**	22.73	169	P	P	20 14 42.5	+0.2
THZ	**Tophouse**	22.73	174	P	P	20 14 42.7	+0.3
THZ	**Tophouse**	22.73	174	P	P	20 14 44.3	+1.8
BSWZ	**Blackbirch Sta**	22.80	172	P	P	20 14 42.9	-0.1
PLWZ	**Palliser**	22.88	169	P	P	20 14 43.5	-0.2
AUDCS	**Dubbo College**	22.96	231	P	P	20 14 45.4	+0.9
BULU	**Kimbe**	23.19	303	P	P	20 14 47.1	+0.3
AUUHS	**Ulladulla High**	23.44	222	P	P	20 14 50.2	+1.4
KHZ	**Kahutara**	23.45	173	P	P	20 14 49.6	+0.8
KHZ	**Kahutara**	23.45	173	⇑P	P	20 14 50.0	+1.2
LTZ	**Lake Taylor**	23.69	175	P	P	20 14 52.3	+1.2
LTZ	**Lake Taylor**	23.69	175	P	P	20 14 52.8	+1.7
PMG	**Port Moresby**	23.82	291	P	P	20 14 52.5	0.0
	comp=Z,755nm,0.8s,baz=99,slow=6.0,SNR=148						
PMG				ScP	ScP	20 21 42.4	+1.2
	comp=Z,44nm,0.9s,baz=101,slow=4.7,SNR=13						
	comp=Z,755nm,0.8s						
PMG	**Port Moresby**	23.82	291	P	P	20 14 52.0	-0.5
PMG					ScP	20 21 41.7	+0.4
PMG	**Port Moresby**	23.82	291	P	P	20 14 52.7	+0.1
PMG	**Port Moresby**	23.82	291	P	P	20 14 52.2	-0.3
	comp=Z,9μmcomp=Z,1μm,0.9s						
PMG	**Port Moresby**	23.82	291	*d i*P	P	20 14 52.4	-0.1
PMG				pmax	pmax		
	comp=Z,1μm,1.0s						
PMG	**Port Moresby**	23.82	291	⇓P	P	20 14 52.4	-0.1
WVZ	**Waitaha Valley**	23.89	178	P	P	20 14 54.2	+1.4
GVZ	**Greta Valley S**	23.94	174	P	P	20 14 54.5	+1.2
GVZ	**Greta Valley S**	23.94	174	P	P	20 14 55.3	+1.9
MTSU	**Mount Surprise**	24.03	268	P	P	20 14 55.1	+0.6
CNB	**Canberra Magne**	24.13	224	P	P	20 14 56.9	+1.7
	comp=Z,371nm,1.0s,comp=Z,0.0nm						
CNB	**Canberra Magne**	24.13	224	P	P	20 14 56.7	+1.5
YNG	**Young**	24.20	227	P	P	20 14 57.1	+1.3
	comp=Z,124nm,1.4s,comp=Z,0.0nm						
OXZ	**Oxford**	24.21	176	P	P	20 14 57.9	+2.1
AUDAR	**Daramalan Coll**	24.24	224	P	P	20 14 57.9	+1.8
AUSIS	**Research Schoo**	24.27	224	P	P	20 14 58.5	+2.0
AUMHS	**Melrose High S**	24.33	224	P	P	20 14 59.0	+2.0
FOZ	**Fox Glacier**	24.34	180	P	P	20 14 58.6	+1.7
FOZ	**Fox Glacier**	24.34	180	P	P	20 14 58.9	+2.1
AUMTS	**Mt Stromlo**	24.37	224	P	P	20 14 58.8	+1.4
CAN	**Canberra**	24.37	224	P	P	20 14 58.7	+1.3
	comp=Z,134nm,1.3s,comp=Z,0.0nm						
CAN	**Canberra**	24.37	224		P	20 14 57.9	+0.5

CAN	Canberra	24.37	224	P	P	20 14 58.8	+1.4
CAN	Canberra	24.37	224	P	P	20 14 57.9	+0.5
CAN	Canberra	24.37	224	⇑P	P	20 14 59.0	+1.6
RPZ	Rata Peaks	24.55	178	P	P	20 14 59.4	+0.6
QLP	Quilpie	24.55	248	P	P	20 14 59.3	+0.3
QLP	Quilpie	24.55	248	⇓P	P	20 14 58.0	-1.0
CMSA	Cobar Meteorol	24.88	236	P	P	20 15 01.9	0.0
	comp=Z,355nm,1.1s,comp=Z,0.0nm						
CMSA	Cobar Meteorol	24.88	236	P	P	20 15 02.4	+0.5
JCZ	Jackson Bay	24.89	181	P	P	20 15 04.8	+2.9
MILA	Mila	25.33	221	P	P	20 15 07.7	+1.7
	comp=Z,42nm,1.6s						
MILA	Mila	25.33	221	⇑P	P	20 15 07.5	+1.5
WKZ	Wanaka	25.64	181	IAmb	IAmb	20 16 06.9	
	comp=Z,185nm,1.3s						
ODZ	Otahua Downs	25.86	178	⇓P	P	20 15 11.9	+1.4
COEN	Coen	25.89	277	P	P	20 15 10.7	-0.5
	comp=Z,344nm,1.3s,comp=Z,0.0nm						
COEN	Coen	25.89	277	P	P	20 15 10.5	-0.7
COEN				IAmb	IAmb	20 15 13.4	
	comp=Z,325nm,1.1s						
COEN	Coen	25.89	277	P	P	20 15 10.9	-0.3
COEN	Coen	25.89	277	⇑P	P	20 15 10.9	-0.3
MLZ	Mavora Lakes	26.20	182	IAmb	IAmb	20 16 15.6	
	comp=Z,379nm,1.8s						
WHZ	Wether Hill Ro	26.73	183	IAmb	IAmb	20 16 25.0	
	comp=Z,219nm,1.5s						
CTZ	Chatham Island	27.11	158	P	P	20 15 22.8	+1.1
CTZ	Chatham Island	27.11	158	P	P	20 15 24.1	+2.4
CTZ	Chatham Island	27.11	158	P	P	20 15 23.8	+2.1
SYZ	Scrubby Hill	27.34	181	P	P	20 15 25.9	+2.2
MANU	Manus Island	27.65	305		P	20 15 25.6	-1.3
MANU				IAmb	IAmb	20 15 28.6	
	comp=Z,301nm,1.4s						
MANU	Manus Island	27.65	305	⇑P	P	20 15 26.8	0.0
AUMAG	Moama Anglican	27.68	227	P	P	20 15 29.0	+2.1
INKA	Innaminka	27.83	247	P	P	20 15 28.4	+0.1
INKA				IAmb	IAmb	20 15 30.7	
	comp=Z,208nm,1.2s						
TOO	Toolangi	27.98	224	P	P	20 15 30.5	+0.9
	comp=Z,24nm,1.8s,comp=Z,0.0nm						
TOO	Toolangi	27.98	224	P	P	20 15 29.6	+0.1
TOO	Toolangi	27.98	224	P	P	20 15 29.6	+0.1
TOO				pmax	pmax		
	comp=Z,155nm,1.8s						
TOO	Toolangi	27.98	224	⇑P	P	20 15 30.4	+0.9
PATS	Pohnpei	28.12	336	P	P	20 15 30.7	-0.2
PATS				IAmb	IAmb	20 15 44.7	
	comp=Z,238nm,0.8s						
PATS	Pohnpei	28.12	336	P	P	20 15 31.1	+0.2
STKA	Stephens Creek	28.24	238	P	P	20 15 32.9	+0.9
	comp=Z,1µm,0.9s,comp=Z,0.0nm						
STKA	Stephens Creek	28.24	238	P	P	20 15 32.8	+0.9
	comp=Z,187nm,0.7s,baz=63,slow=8.4,SNR=244						
STKA				pP	pP	20 16 22.0	-0.1
	comp=Z,32nm,0.7s,baz=85,slow=9.7,SNR=2.5						
STKA				ScP	ScP	20 21 54.9	+0.9
	comp=Z,20nm,0.8s,baz=29,slow=3.9,SNR=8.5						
	comp=Z,187nm,0.7s						
STKA	Stephens Creek	28.24	238	P	P	20 15 32.7	+0.8
QIS	Mount Isa	28.29	262	P	P	20 15 32.6	+0.1
	comp=Z,169nm,1.2s,comp=Z,0.0nm						
QIS	Mount Isa	28.29	262	P	P	20 15 32.2	-0.3
GLAD	Gladstone	28.59	216	P	P	20 15 36.7	+1.9
RAR	Rarotonga	28.75	99	P	P	20 15 36.8	+0.4
	comp=Z,30nm,0.5s,baz=255,slow=4.8,SNR=14						
	comp=Z,30nm,0.5s						
RAR	Rarotonga	28.75	99	P	P	20 15 36.2	-0.3
RAR				IAmb	IAmb	20 15 38.9	
	comp=Z,592nm,1.8s						
RAR	Rarotonga	28.75	99	P	P	20 15 37.5	+1.0
RAR	Rarotonga	28.75	99	⇑P	P	20 15 36.9	+0.4
BRAT	Ballarat	29.00	225	P	P	20 15 40.6	+2.1
AUMTC	Mt Clear Colle	29.07	225	P	P	20 15 41.2	+2.1
ARPS	Mount Arapiles	30.06	228	P	P	20 15 48.9	+1.1
	comp=Z,122nm,1.1s						
HTT	Hallett	30.89	236	P	P	20 15 55.4	+0.1
HTT	Hallett	30.89	236	⇓P	P	20 15 55.4	+0.1
AUJCS	Jamestown Cent	31.06	237	P	P	20 15 57.6	+0.9
AUMBR	Murray Bridge	31.22	233	P	P	20 15 58.8	+0.7
AUMAR	Marden Senior	31.62	234	P	P	20 16 02.9	+1.3
WHYH	Whyalla	31.83	238	P	P	20 16 04.0	+0.6
JAY	Jayapura	32.78	297	P	P	20 16 11.2	-0.7
	comp=Z,89nm,0.5s,baz=138,slow=4.2,SNR=34						
JAY				S	S	20 21 10.1	+0.7
	comp=Z,15nm,0.9s,baz=87,slow=19,SNR=4.0						
JAY				ScP	ScP	20 22 10.0	+0.6
	comp=Z,19nm,1.0s,baz=169,slow=9.9,SNR=4.9						
	comp=Z,89nm,0.5s						
JAY	Jayapura	32.78	297	P	P	20 16 10.6	-1.4
	comp=Z,4µmcomp=Z,169nm,0.9s						
BBOO	Buckleboo	32.99	239	P	P	20 16 14.0	+0.5
	comp=Z,245nm,1.3s,comp=Z,0.0nm						
BBOO	Buckleboo	32.99	239	P	P	20 16 12.2	-1.2
BBOO				IAmb	IAmb	20 16 15.4	
	comp=Z,281nm,1.1s						
BBOO	Buckleboo	32.99	239	P	P	20 16 13.7	+0.2
GENI	Genyem	33.20	296	P	P	20 16 15.7	+0.2
GENI	Genyem	33.20	296	P	P	20 16 14.9	-0.6
GENI	Genyem	33.20	296	⇓P	P	20 16 15.3	-0.2
WB0	Warramunga Arr	33.23	263	IAmb	IAmb	20 16 16.4	
	comp=Z,377nm,0.8s						
WRAB	Tennant Creek	33.25	263	P	P	20 16 13.8	-2.1
WRAB				IAmb	IAmb	20 16 16.6	
	comp=Z,512nm,1.2s						
WRAB	Tennant Creek	33.25	263	P	P	20 16 14.6	-1.3
WRAB	Tennant Creek	33.25	263	*d i*P	P	20 16 13.9	-2.0
WRAB				pmax	pmax		
	comp=Z,721nm,1.7s						
WRAB	Tennant Creek	33.25	263	P	P	20 16 14.4	-1.5
WRA	Warramunga Arr	33.26	263	P	P	20 16 14.4	-1.6
	comp=Z,158nm,0.6s,baz=81,slow=6.0,SNR=273						
WRA				sP	sP	20 17 35.3	-1.2
	comp=Z,22nm,1.0s,baz=96,slow=8.4,SNR=1.6						
WRA				PcP	PcP	20 18 52.7	+0.8
	comp=Z,19nm,1.0s,baz=96,slow=2.0,SNR=3.1						
WRA				S	S	20 21 13.3	-3.2
	comp=Z,37nm,1.1s,baz=90,slow=15,SNR=13						
WRA				ScP	ScP	20 22 11.4	+0.5
	comp=Z,31nm,1.0s,baz=90,slow=3.7,SNR=10						
WRA				PKiKP	PKiKP	20 26 15.7	-1.5
	comp=Z,4.5nm,0.8s,baz=60,slow=0.4,SNR=12						
WRA				P3KPbc		20 47 23.6	
	comp=Z,10nm,1.1s,baz=286,slow=2.7,SNR=23						
	comp=Z,158nm,0.6s						
WRA	Warramunga Arr	33.26	263		P	20 16 14.0	-2.0
ASAR	Alice Springs	33.54	256	P	P	20 16 18.0	-0.4
	comp=Z,828nm,0.6s,baz=83,slow=9.1,SNR=1790						
ASAR				pP	pP	20 17 08.2	-1.1
	comp=Z,149nm,0.7s,baz=85,slow=8.9,SNR=4.5						
ASAR				PcP	PcP	20 18 53.3	+0.7
	comp=Z,13nm,0.8s,baz=88,slow=5.2,SNR=2.0						
ASAR				S	S	20 21 18.4	-2.4
	comp=Z,14nm,0.7s,baz=89,slow=17,SNR=7.4						
ASAR				ScP	ScP	20 22 12.4	+0.5
	comp=Z,20nm,0.9s,baz=94,slow=3.6,SNR=8.5						
ASAR				PKiKP	PKiKP	20 26 15.3	-2.0
	comp=Z,3.0nm,0.8s,baz=75,slow=1.1,SNR=7.1						
ASAR				P3KPbc		20 47 22.9	
	comp=Z,7.7nm,1.0s,baz=274,slow=4.2,SNR=37						
ASAR	Alice Springs	33.54	256	P	P	20 16 17.1	-1.3
AUALC	St Philip’s Co	33.56	256	P	P	20 16 18.1	-0.5
AUCAS	Cummins Area S	33.68	237	P	P	20 16 20.5	+1.1
SMPI	Sarmi	34.75	296	P	P	20 16 27.8	-1.0
	comp=Z,7µmcomp=Z,7µmcomp=Z,358nm,1.1s						
KDU	Kakadu	36.28	275	P	P	20 16 40.9	-0.9
	comp=Z,134nm,1.5s,comp=Z,0.0nm						
SRPI	Serui, Papua	36.94	294	P	P	20 16 47.1	-0.2
	comp=Z,4µmcomp=Z,5µmcomp=Z,444nm,1.0s						
BAKI	Biak	37.39	294	P	P	20 16 52.0	+0.9
MTN	Manton Dam	37.50	274	P	P	20 16 50.8	-1.2
	comp=Z,488nm,0.7s,comp=Z,0.0nm						
MTN	Manton Dam	37.50	274	IAmb	IAmb	20 16 53.2	
	comp=Z,342nm,0.7s						
TBI	Tubuai	38.25	104	*e*P	P	20 16 57.7	-0.4
	comp=Z,343nm,1.2s						
TBI				*e*S	S	20 22 26.1	-6.0
	comp=Z,4µm,27.2s						
TBI				*e*sS	sS	20 24 00.2	-6.9
	comp=Z,4µm,23.8s						
TBI				*e*SS	SS	20 25 29.1	-3.4
	comp=Z,31µm,22.5s						
KMPI	Kaimana, Papua	38.33	289	P	P	20 16 58.2	-0.7
	comp=Z,5µmcomp=Z,6µmcomp=Z,407nm,1.6s						
XMAS	Kiritimati	38.57	61	P	P	20 17 01.3	+0.4
XMAS	Kiritimati	38.57	61	P	P	20 17 02.0	+1.1
XMAS	Kiritimati	38.57	61	⇓P	P	20 17 01.8	+0.8
XMAS	Kiritimati	38.57	61	P	P	20 17 01.4	+0.4
XMAS				PcP	PcP	20 19 07.0	-0.7
PAE	Paea	38.65	95	*e*P	P	20 17 01.7	+0.2
	comp=Z,42nm,1.3s						
PPT2	Papeete2	38.66	94	*e*P	P	20 17 00.7	-1.0
	comp=Z,125nm,1.3s						
PPT2				*e*S	S	20 22 24.6	-14
	comp=Z,834nm,36.2s						
PPT2				*e*sS	sS	20 24 14.4	+0.7
	comp=Z,894nm,25.2s						
PPT2				*e*SS	SS	20 25 41.5	+0.5
	comp=Z,8µm,23.0s						
PPT	Papeete	38.66	94	P	P	20 17 01.9	+0.2
	comp=Z,82nm,0.6s,baz=62,slow=6.5,SNR=11						
	comp=Z,82nm,0.6s						
WRKA	Warakurna	38.67	254	P	P	20 17 00.7	-1.0
	comp=Z,191nm,1.2s,comp=Z,0.0nm						
PPTF	Pamatai, Papee	38.67	94	P	P	20 17 01.2	-0.6
PPTF	Pamatai, Papee	38.67	94	P	P	20 17 03.3	+1.5
SAUI	Saumlaki	38.81	281	IAmb	IAmb	20 17 04.9	
	comp=Z,171nm,0.7s						
SAUI	Saumlaki	38.81	281	P	P	20 17 03.0	+0.1
SAUI	Saumlaki	38.81	281	P	P	20 17 02.1	-0.8
	comp=Z,6µmcomp=Z,6µmcomp=Z,308nm,1.1s						
SAUI	Saumlaki	38.81	281	⇓P	P	20 17 02.4	-0.5
TIAR	Tiarei	38.88	94	*e*P	P	20 17 03.2	-0.3
	comp=Z,111nm,0.7s						
TIAR				*e*pP	pP	20 17 55.8	-0.3
	comp=Z,66nm,0.8s						
RKPI	Ransiki, Papua	38.91	292	P	P	20 17 03.7	0.0
	comp=Z,7µmcomp=Z,10µmcomp=Z,601nm,1.3s						
TVO	Taravao	38.94	95	*e*P	P	20 17 03.2	-0.8
	comp=Z,24nm,0.8s						
KNRA	Kununurra	39.12	268	P	P	20 17 04.3	-1.1
	comp=Z,650nm,0.7s,comp=Z,0.0nm						
KNRA	Kununurra	39.12	268	IAmb	IAmb	20 17 06.5	
	comp=Z,362nm,0.7s						
FORT	Forrest	39.26	245	P	P	20 17 05.5	-0.9
	comp=Z,107nm,1.1s						
MWPI	Manokwari, Pap	39.31	293	P	P	20 17 06.7	-0.3
	comp=Z,9µmcomp=Z,701nm,1.7s						
FAKI	Fak Fak	39.96	289	IAmb	IAmb	20 17 13.4	
	comp=Z,409nm,1.2s						
FAKI	Fak Fak	39.96	289	P	P	20 17 11.2	-1.2
FAKI	Fak Fak	39.96	289	P	P	20 17 10.3	-2.1
	comp=Z,6µmcomp=Z,6µmcomp=Z,361nm,1.2s						
FAKI	Fak Fak	39.96	289	⇓P	P	20 17 10.9	-1.5
GUMO	Guam	40.66	321	P	P	20 17 17.2	-0.8
	comp=Z,191nm,0.5s,baz=178,slow=15,SNR=14						
	comp=Z,191nm,0.5s						
PMOR	Pomariorio Ree	40.71	91	*e*P	P	20 17 18.0	-0.5
	comp=Z,390nm,1.3s						
VAH	Vaihoa	40.92	91	*e*P	P	20 17 19.6	-0.6
	comp=Z,1.3nm,0.8s						
JOHN	Johnston Islan	41.09	31	P	P	20 17 21.0	-0.4
JOHN	Johnston Islan	41.09	31	P	P	20 17 22.1	+0.7
JOHN	Johnston Islan	41.09	31	⇓P	P	20 17 21.9	+0.5
JOHN	Johnston Islan	41.09	31	P	P	20 17 21.4	0.0
JOHN				pP	pP	20 18 16.0	+1.3
BNDI	Bandanaira	41.40	285	P	P	20 17 23.6	-0.5
BNDI	Bandanaira	41.40	285	P	P	20 17 22.5	-1.6
	comp=Z,5µmcomp=Z,7µmcomp=Z,331nm,1.3s						
BNDI	Bandanaira	41.40	285	⇓P	P	20 17 22.6	-1.5
FITZ	Fitzroy Crossi	41.65	264	P	P	20 17 26.1	0.0
	comp=Z,393nm,0.6s,baz=84,slow=7.2,SNR=541						
FITZ				pP	pP	20 18 17.5	-1.0
	comp=Z,87nm,0.8s,baz=151,slow=10,SNR=3.4						
FITZ				PP	PP	20 19 08.5	+0.1
	comp=Z,64nm,1.0s,baz=98,slow=11,SNR=4.1						
FITZ				S	S	20 23 22.0	-0.6
	comp=Z,19nm,1.2s,baz=95,slow=19,SNR=5.1						
	comp=Z,393nm,0.6s						
FITZ	Fitzroy Crossi	41.65	264	P	P	20 17 25.3	-0.8
FITZ	Fitzroy Crossi	41.65	264	⇑P	P	20 17 26.3	+0.2
SWI	Sorong	41.77	291	P	P	20 17 26.0	-1.1
	comp=Z,5µmcomp=Z,5µmcomp=Z,447nm,0.9s						
MSAI	Masohi	42.76	286	P	P	20 17 34.3	-0.8
	comp=Z,4µmcomp=Z,78nm,0.5s						
KRAI	Karang Ratu	43.26	286	P	P	20 17 35.0	-4.1
AAI	Ambon	43.29	285	P	P	20 17 38.3	-1.0
KMBL	Kambalda	44.59	244	P	P	20 17 48.8	-0.6
	comp=Z,90nm,1.4s						
SOEI	Soe	44.82	275		P	20 17 49.9	-1.7
SOEI				IAmb	IAmb	20 17 54.1	
	comp=Z,375nm,1.2s						
SOEI	Soe	44.82	275	P	P	20 17 51.8	+0.2
SOEI	Soe	44.82	275	⇓P	P	20 17 51.8	+0.2
BATI	Baumata	45.26	275	ScP	ScP	20 22 58.4	+1.0
	comp=Z,13nm,0.7s,baz=210,slow=3.7,SNR=3.6						
SANI	Sanana	45.97	286	P	P	20 17 59.7	-0.7
SANI	Sanana	45.97	286	⇓P	P	20 17 59.4	-1.0
TNTI	Ternate	45.98	291		P	20 17 59.1	-1.3
TNTI	Ternate	45.98	291	P	P	20 18 01.1	+0.7
PSA00	Pilbara Seismi	46.61	258	P	P	20 18 04.4	-0.9
PSA00				IAmb	IAmb	20 18 07.1	
	comp=Z,316nm,0.8s						
PSA00	Pilbara Seismi	46.61	258	P	P	20 18 04.5	-0.8
PSA00				IAmb	IAmb	20 18 07.1	
	comp=Z,304nm,0.9s						
PSA00	Pilbara Seismi	46.61	258	P	P	20 18 05.4	+0.1
MBWA	Marble Bar	46.77	259	P	P	20 18 05.9	-0.6
MBWA				IAmb	IAmb	20 18 08.3	
	comp=Z,413nm,0.9s						
MBWA	Marble Bar	46.77	259	P	P	20 18 06.2	-0.3
MBWA	Marble Bar	46.77	259	⇑P	P	20 18 05.0	-1.5
MBWA	Marble Bar	46.77	259	P	P	20 18 06.3	-0.3
MBWA				pP	pP	20 19 01.4	+1.3
MBWA				PcP	PcP	20 19 34.3	-0.9
MMRI	Maumere	47.07	276		P	20 18 07.9	-1.1
MMRI				IAmb	IAmb	20 18 10.2	
	comp=Z,311nm,1.1s						
MMRI	Maumere	47.07	276	P	P	20 18 08.5	-0.4
MMRI	Maumere	47.07	276	⇓P	P	20 18 07.8	-1.1
MEEK	Meekatharra	47.37	251	P	P	20 18 10.7	-0.4
KLBR	Kellerberrin	48.12	244	P	P	20 18 16.1	-0.7
AUALB	St Joseph’s Co	48.21	240	P	P	20 18 18.0	+0.6
NWAO	Narrogin (SRO)	48.62	243	P	P	20 18 20.0	-0.5
	comp=Z,111nm,0.9s,baz=97,slow=5.4,SNR=41						
NWAO				pP	pP	20 19 13.2	-1.6
	comp=Z,22nm,0.7s,baz=67,slow=5.0,SNR=3.1						
NWAO				PP	PP	20 20 15.7	-0.5
	comp=Z,25nm,0.9s,baz=80,slow=9.3,SNR=4.3						
	comp=Z,111nm,0.9s						
NWAO	Narrogin (SRO)	48.62	243	P	P	20 18 19.7	-0.8
NWAO				IAmb	IAmb	20 18 21.8	
	comp=Z,248nm,1.1s						
NWAO	Narrogin (SRO)	48.62	243	P	P	20 18 20.3	-0.2
NWAO	Narrogin (SRO)	48.62	243	P	P	20 18 20.0	-0.5
NWAO	Narrogin (SRO)	48.62	243	P	P	20 18 19.7	-0.8
NWAO				*PP	pP	20 19 13.2	-1.6
NWAO				pmax	pmax		
	comp=Z,248nm,1.2s						
NWAO	Narrogin (SRO)	48.62	243	P	P	20 18 20.0	-0.5
NWAO				pP	pP	20 19 17.7	+2.9
BLDU	Ballidu	48.99	246	P	P	20 18 22.8	-0.6
LUWI	Luwuk	49.31	286	P	P	20 18 24.7	-1.3
LUWI	Luwuk	49.31	286	P	P	20 18 26.0	0.0
LUWI	Luwuk	49.31	286	⇓P	P	20 18 25.7	-0.3
MUN	Mundaring	49.45	244	P	P	20 18 26.9	+0.1
MORW	Morawa	49.58	248	P	P	20 18 27.2	-0.7
MORW	Morawa	49.58	248	⇑P	P	20 18 26.8	-1.1
TAOE	Nuku Hiva Isla	49.61	85	*e*P	P	20 18 27.1	-1.2
	comp=Z,753nm,1.1s						
TAOE	Nuku Hiva Isla	49.61	85	*e*LQ	LQ	20 30 45.7	
	comp=Z,2µm,28.7s						
TAOE	Nuku Hiva Isla	49.61	85	P	P	20 18 28.9	+0.5
TAOE				IAmb	IAmb	20 18 32.0	
	comp=Z,248nm,0.9s						
TAOE	Nuku Hiva Isla	49.61	85	P	P	20 18 29.6	+1.2
TAOE	Nuku Hiva Isla	49.61	85	⇑P	P	20 18 29.6	+1.2
AUHAR	St Anne’s Scho	49.75	243	P	P	20 18 29.6	+0.6
KAPI	Kappang	50.59	279	P	P	20 18 35.3	-0.2
KAPI				IAmb	IAmb	20 18 37.8	
	comp=Z,292nm,1.0s						
KAPI	Kappang	50.59	279	P	P	20 18 35.8	+0.2
KAPI	Kappang	50.59	279	*d i*P	P	20 18 35.5	0.0
KAPI				pmax	pmax		
	comp=Z,398nm,1.1s						
KAPI	Kappang	50.59	279	⇓P	P	20 18 35.6	0.0
OVEH	Oceanview Est	50.97	44	IAmb	IAmb	20 18 41.1	
	comp=Z,936nm,1.0s						
HON	Honolulu	51.17	40	P	P	20 18 39.5	-0.1
HON				IAmb	IAmb	20 18 43.9	
	comp=Z,265nm,0.9s						
HON	Honolulu	51.17	40	P	P	20 18 39.5	-0.1
HON				pmax	pmax		
	comp=Z,265nm,0.9s						
PLAI	Plampang	51.21	274	P	P	20 18 40.1	-0.1
DRV	Dumont d’Urvil	51.24	195	P	P	20 18 39.6	+0.1
HUH	Hualalai	51.31	43	P	P	20 18 41.0	0.0
HUH				IAmb	IAmb	20 18 44.0	
	comp=Z,396nm,0.9s						
HLP	Hilina Pali	51.37	44	IAmb	IAmb	20 19 05.9	
	comp=Z,335nm,0.9s						
PWH	Poliokeawe Pal	51.42	44	P	P	20 18 41.7	+0.2
MLH	Mauna Loa	51.46	44	IAmb	IAmb	20 18 44.6	
	comp=Z,526nm,1.0s						
UWE	Uwekahuna	51.47	44	IAmb	IAmb	20 19 14.2	
	comp=Z,418nm,1.0s						
BYL	Byron's Ledge	51.49	44	P	P	20 18 41.6	-0.6
BYL				IAmb	IAmb	20 18 44.5	
	comp=Z,359nm,1.0s						
PUH	Pauahi	51.49	44	IAmb	IAmb	20 18 46.1	
	comp=Z,405nm,0.9s						
HATHI	Halema‘uma‘u T	51.49	44	IAmb	IAmb	20 18 44.6	
	comp=Z,366nm,1.1s						
STCH	Steam Cracks	51.56	44	IAmb	IAmb	20 18 45.1	
	comp=Z,550nm,0.9s						
POHA	Pohakuloa	51.56	43	P	P	20 18 44.0	+1.2
POHA	Pohakuloa	51.56	43	⇓P	P	20 18 43.3	+0.5
GIRL	Giralia	51.66	256	IAmb	IAmb	20 18 46.2	
	comp=Z,450nm,1.4s						
JOKA	Jonika Flow	51.67	44	P	P	20 18 43.6	+0.1
KPA	Kalaupapa	51.69	41	P	P	20 18 43.7	+0.2
KPA	Kalaupapa	51.69	41	P	P	20 18 43.7	+0.2
HIL	Hilo	51.82	44	P	P	20 18 44.5	+0.1
HIL				IAmb	IAmb	20 18 47.3	
	comp=Z,930nm,1.0s						
TOLI2	Tolitoli	52.02	287	P	P	20 18 44.6	-1.5
TOLI2				IAmb	IAmb	20 18 47.8	
	comp=Z,313nm,0.8s						
TOLI2	Tolitoli	52.02	287	P	P	20 18 45.1	-1.0
JCJ	Chichijima	53.11	329	P	P	20 18 53.1	-0.7
JCJ				IAmb	IAmb	20 18 55.4	
	comp=Z,291nm,0.8s						
JCJ	Chichijima	53.11	329	P	P	20 18 53.7	-0.1
JCJ	Chichijima	53.11	329	⇓P	P	20 18 53.6	-0.1
JAGI	Jajag, Banyuwa	54.74	273	IAmb	IAmb	20 19 06.5	
	comp=Z,184nm,0.8s						
JAGI	Jajag, Banyuwa	54.74	273	P	P	20 19 04.1	-1.8
JAGI	Jajag, Banyuwa	54.74	273	⇓P	P	20 19 04.2	-1.6
MYLDM	Lahad Datu	55.85	290	IAmb	IAmb	20 19 26.0	
	comp=Z,283nm,1.4s						
MYLDM	Lahad Datu	55.85	290	P	P	20 19 14.9	+1.2
MYLDM	Lahad Datu	55.85	290	⇑P	P	20 19 15.1	+1.4
TGY	Tagaytay City	58.24	301	S	S	20 27 14.0	+2.4
	comp=Z,314nm,0.3s,baz=32,slow=23,SNR=3.2						
KKM	Kota Kinabalu	58.27	290	P	P	20 19 30.7	0.0
KKM	Kota Kinabalu	58.27	290	⇑P	P	20 19 30.8	0.0
UGM	Wanagama	58.33	272	IAmb	IAmb	20 19 32.9	
	comp=Z,239nm,0.7s						
UGM	Wanagama	58.33	272	P	P	20 19 30.6	-0.5
VNDA	Vanda	58.56	182	P	P	20 19 32.2	+0.5
	comp=Z,34nm,0.9s,baz=356,slow=7.9,SNR=76						
VNDA				S	S	20 27 16.9	+3.0
	comp=Z,1.1nm,1.1s,baz=112,slow=23,SNR=1.2						
	comp=Z,34nm,0.9s						
VNDA	Vanda	58.56	182	P	P	20 19 31.7	+0.1
VNDA	Vanda	58.56	182	P	P	20 19 32.3	+0.7
VNDA				sP	sP	20 21 00.7	+2.5
SMRI	Semarang	58.67	273	IAmb	IAmb	20 19 35.9	
	comp=Z,196nm,0.9s						
SMRI	Semarang	58.67	273	P	P	20 19 34.0	+0.5
SBA	Scott Base	58.78	181	P	P	20 19 34.7	+1.5
SBA				IAmb	IAmb	20 19 36.7	
	comp=Z,266nm,0.9s						
SBA	Scott Base	58.78	181	P	P	20 19 34.7	+1.5
SBA				pmax	pmax		
	comp=Z,266nm,1.0s						
SBUM	Sibu	60.36	284	P	P	20 19 43.7	-1.2
SBUM	Sibu	60.36	284	P	P	20 19 45.5	+0.6
SBUM	Sibu	60.36	284	⇓P	P	20 19 45.7	+0.8
CASY	Casey	60.39	204	P	P	20 19 44.8	+0.5
JOW	Kunigami	60.81	317	IAmb	IAmb	20 19 51.0	
	comp=Z,121nm,0.8s						
JOW	Kunigami	60.81	317	P	P	20 19 48.6	+0.9
JOW	Kunigami	60.81	317	⇑P	P	20 19 48.8	+1.1
BBJI	Bungbulang	61.18	272	P	P	20 19 49.4	-1.1
JSG	Sagara	61.30	331	IAmb	IAmb	20 19 55.0	
	comp=Z,289nm,1.2s						
JSG	Sagara	61.30	331	P	P	20 19 51.2	+0.4
JOD2	Odawara 2	61.38	332	P	P	20 19 50.6	-0.7
JYT	Yasato	61.71	333	P	P	20 19 54.4	+1.0
KSM	Kuching	61.74	282	P	P	20 19 54.8	+0.6
JRY	Ryogami san	62.09	332	P	P	20 19 56.0	-0.1
XMI	Christmas Isla	62.17	268	P	P	20 19 57.8	+0.7
XMI	Christmas Isla	62.17	268	⇓P	P	20 19 57.0	-0.1
INU	Inuyama	62.40	330	IAmb	IAmb	20 20 01.1	
	comp=Z,162nm,1.4s						
INU	Inuyama	62.40	330	P	P	20 19 58.7	+0.6
INU	Inuyama	62.40	330	⇓P	P	20 19 58.9	+0.8
INU	Inuyama	62.40	330	P	P	20 19 58.7	+0.6
INU				PcP	PcP	20 20 34.3	-0.6
JGF	Kuroka	62.45	331	P	P	20 19 57.4	-1.0
JGF	Kuroka	62.45	331	P	P	20 19 58.8	+0.4
JGF	Kuroka	62.45	331	⇑P	P	20 19 58.1	-0.3
JGF	Kuroka	62.45	331	P	P	20 19 57.9	-0.5
JMN	Monobe	62.66	327	P	P	20 20 00.6	+0.7
JMN	Monobe	62.66	327	⇓P	P	20 20 01.0	+1.1
MJAR	Matsushiro Arr	62.84	332	P	P	20 20 00.2	-0.7
	comp=Z,93nm,0.9s,baz=169,slow=7.6,SNR=116						
MJAR				PKPPKP	P'P'df	20 49 00.4	+0.7
	comp=Z,3.6nm,1.0s,baz=316,slow=2.9,SNR=5.4						
	comp=Z,93nm,0.9s						
MJAR	Matsushiro Arr	62.84	332	IAmb	IAmb	20 20 03.5	
	comp=Z,105nm,0.9s						
MJAR	Matsushiro Arr	62.84	332	P	P	20 20 00.2	-0.7
MJAR				pmax	pmax		
	comp=Z,105nm,1.0s						
MAJO	Matsushiro	62.84	332	P	P	20 20 00.2	-0.7
MAJO				IAmb	IAmb	20 20 03.1	
	comp=Z,96nm,0.7s						
MAJO	Matsushiro	62.84	332	P	P	20 20 00.8	-0.2
MAJO	Matsushiro	62.84	332	*c i*P	P	20 20 01.0	0.0
MAJO				pmax	pmax		
	comp=Z,78nm,0.6s						
MAJO	Matsushiro	62.84	332	⇑P	P	20 20 00.8	-0.2
MAT	Matsushiro	62.84	332	P	P	20 20 00.5	-0.5
JSU	Suzuyama	62.84	323	P	P	20 20 01.0	-0.1
MJB9	Matsu-Tunnel	62.84	332	IAmb	IAmb	20 20 04.1	
	comp=Z,93nm,0.7s						
JGN	Niukaw	62.98	331	P	P	20 20 01.7	-0.3
JWT	Wachi	63.12	329	P	P	20 20 03.8	+1.0
YULB	Yu-li	63.34	310	P	P	20 20 04.8	+0.3
NACB	Ninganchiao	63.61	311	IAmb	IAmb	20 20 07.7	
	comp=Z,116nm,0.9s						
NACB	Ninganchiao	63.61	311	P	P	20 20 06.2	0.0
TPUB	Ta-pu	63.78	309	IAmb	IAmb	20 20 09.0	
	comp=Z,171nm,0.7s						
TPUB	Ta-pu	63.78	309	P	P	20 20 06.8	-0.6
JNU	Nakatsue	63.81	324	IAmb	IAmb	20 20 09.8	
	comp=Z,96nm,0.9s						
JNU	Nakatsue	63.81	324	P	P	20 20 07.7	+0.3
JNU	Nakatsue	63.81	324	⇓P	P	20 20 07.4	0.0
SSLB	Suanglung	63.84	310	IAmb	IAmb	20 20 09.3	
	comp=Z,119nm,0.8s						
SSLB	Suanglung	63.84	310	P	P	20 20 07.1	-0.7
JHS	Saijyo	64.04	327	P	P	20 20 09.6	+0.7
JSD	Sado	64.06	333	IAmb	IAmb	20 20 12.1	
	comp=Z,88nm,0.7s						
JSD	Sado	64.06	333	P	P	20 20 10.0	+1.1
JSD	Sado	64.06	333	⇑P	P	20 20 10.2	+1.4
YHNB	Yeheng	64.07	311	IAmb	IAmb	20 20 11.0	
	comp=Z,272nm,1.3s						
YHNB	Yeheng	64.07	311	P	P	20 20 09.9	+0.6
TATO	Taipei	64.18	311	P	P	20 20 10.3	+0.4
TATO				PcP	PcP	20 20 41.5	-0.9
TATO				pP	pP	20 21 08.8	-0.1
PMBI	Palembang	65.34	276	P	P	20 20 18.7	+1.0
QZH	Quanzhou	66.25	310	P	P	20 20 23.9	+0.8
QZH				S	S	20 28 52.8	+1.9
MNAI	Manna	66.58	274	P	P	20 20 24.2	-1.4
MNAI	Manna	66.58	274	P	P	20 20 25.5	-0.1
MNAI	Manna	66.58	274	⇓P	P	20 20 24.5	-1.1
JKA	Kamikawa-asahi	67.63	339	IAmb	IAmb	20 20 36.0	
	comp=Z,224nm,1.6s						
BTDF	Bukit Timah Da	67.76	280	P	P	20 20 33.5	+0.6

MYKOM	**Kota Tinggi**	**67.84**	**280**	P	**P**	**20 20 33.8**	**+0.4**
HKPS	**Hong Kong Po S**	**68.09**	**305**	P	**P**	**20 20 32.7**	**-2.1**
HKPS				IAmb	IAmb	20 20 38.8	
	comp=Z,113nm,0.9s						
HKPS	**Hong Kong Po S**	**68.09**	**305**	P	**P**	**20 20 35.8**	**+1.0**
TJN	**Taejon**	**68.16**	**324**	IAmb	IAmb	20 20 37.9	
	comp=Z,315nm,1.0s						
TJN	**Taejon**	**68.16**	**324**	P	**P**	**20 20 35.7**	**+0.8**
TJN	**Taejon**	**68.16**	**324**	*de*P	**P**	**20 20 35.6**	**+0.7**
SSE	**Sheshan**	**68.26**	**316**	P	**P**	**20 20 37.6**	**+2.0**
SSE				S	**S**	**20 29 18.2**	**+3.5**
SSE				pmax	pmax		
	comp=Z,22nm,0.7s						
SSE				pmax	pmax		
	comp=Z,190nm,4.3s						
SSE				LR	LR		
	comp=Z,420nm,18.2s						
SSE				LR	LR		
	comp=Z,310nm,18.0s						
KSRS	**Korea Array**	**68.64**	**325**	P	**P**	**20 20 38.8**	**+1.0**
	comp=Z,28nm,1.0s,baz=140,slow=5.6,SNR=32						
KSRS				PKPPKP	**P'P'df**	**20 48 48.5**	**-1.5**
	comp=Z,6.5nm,1.0s,baz=312,slow=2.5,SNR=11						
	comp=Z,28nm,1.0s						
KSAR	**Wonju Array Be**	**68.65**	**325**	P	**P**	**20 20 36.8**	**-1.1**
KSAR	**Wonju Array Be**	**68.65**	**325**	P	**P**	**20 20 36.8**	**-1.1**
INCN	**Inchon**	**69.36**	**325**	P	**P**	**20 20 41.4**	**-0.9**
INCN				IAmb	IAmb	20 20 45.7	
	comp=Z,94nm,0.8s						
INCN	**Inchon**	**69.36**	**325**	P	**P**	**20 20 43.1**	**+0.8**
INCN	**Inchon**	**69.36**	**325**	P	**P**	**20 20 41.4**	**-0.9**
INCN				pmax	pmax		
	comp=Z,94nm,0.9s						
QIZ	**Qiongzhong**	**69.87**	**299**	P	**P**	**20 20 47.3**	**+1.5**
QIZ				S	**S**	**20 29 36.2**	**+2.2**
QIZ				sS	**sS**	**20 31 18.9**	**+1.1**
QIZ				pmax	pmax		
	comp=Z,65nm,1.0s						
QIZ				pmax	pmax		
	comp=Z,1µm,4.4s						
QIZ	**Qiongzhong**	**69.87**	**299**	P	**P**	**20 20 46.9**	**+1.2**
COCO	**West Island**	**70.04**	**264**	P	**P**	**20 20 45.1**	**-1.8**
COCO	**West Island**	**70.04**	**264**	P	**P**	**20 20 49.1**	**+2.2**
COCO	**West Island**	**70.04**	**264**	P	**P**	**20 20 45.1**	**-1.8**
COCO				pmax	pmax		
	comp=Z,917nm,2.0s						
YSS	**Yuzhno-Sakhali**	**70.10**	**341**	P	**P**	**20 20 45.8**	**-0.7**
YSS	**Yuzhno-Sakhali**	**70.10**	**341**	*e*P	**P**	**20 20 47.5**	**+1.0**
YSS				*e*		20 23 21.4	
YSS				*e*S	**S**	**20 29 36.6**	**+1.1**
YSS				*e*SS	**SS**	**20 34 14.4**	**+2.8**
YSS				pmax	pmax		
	comp=Z,70nm,1.0s						
YSS				pmax	pmax		
	comp=Z,2µm,4.3s						
YSS				smax	smax		
	comp=N,5µm,6.1s						
YSS				smax	smax		
	comp=E,3µm,4.6s						
NJ2	**Nanjing**	**70.40**	**316**	⇓*i*P	**P**	**20 20 49.5**	**+0.8**
NJ2				S	**S**	**20 29 40.2**	**+0.5**
NJ2				pmax	pmax		
	comp=E,56nm,1.0s						
NJ2				pmax	pmax		
	comp=E,600nm,11.3s						
SKR	**Severo-Kuril’s**	**70.52**	**351**	*e*P	**P**	**20 20 44.8**	**-4.1**
SKR				pmax	pmax		
	comp=Z,2µm,6.3s						
SKR				MLR	MLR		
	comp=Z,2µm,22.0s						
MSHR	**Mys Shultsa**	**70.92**	**331**	⇑*i*P	**P**	**20 20 52.5**	**+1.0**
MSHR				pmax	pmax		
	comp=Z,183nm,1.2s						
QSPA	**South Pole Qui**	**70.93**	**180**	P	**P**	**20 20 54.9**	**+3.4**
	comp=Z,212nm,1.0s,baz=13,slow=2.0,SNR=219						
QSPA				pP	**pP**	**20 21 52.4**	**+0.7**
	comp=Z,41nm,0.9s,baz=313,slow=1.2,SNR=2.6						
QSPA				S	**S**	**20 29 47.9**	**+2.8**
	comp=Z,1.2nm,0.3s,baz=152,slow=24,SNR=13						
QSPA				PKPPKP	P'P'df	20 48 44.2	-7.9
	comp=Z,1.6nm,0.2s,baz=174,slow=3.8,SNR=4.3						
QSPA	**South Pole Qui**	**70.93**	**180**	P	**P**	**20 20 53.6**	**+2.1**
QSPA				IAmb	IAmb	20 20 57.2	
	comp=Z,238nm,0.9s						
VLA	**Vladivostok**	**71.01**	**332**	⇑*e*P	**P**	**20 20 53.5**	**+1.4**
VLA				pmax	pmax		
	comp=Z,90nm,0.8s						
PSTR	**Posyet**	**71.13**	**331**	*de*P	**P**	**20 20 54.3**	**+1.5**
IPM	**Ipoh**	**71.45**	**282**	P	**P**	**20 20 55.5**	**+0.1**
ADK	**Adak**	**71.70**	**9**	P	**P**	**20 20 55.3**	**-0.7**
ADK				IAmb	IAmb	20 20 58.1	
	comp=Z,248nm,1.1s						
ADK	**Adak**	**71.70**	**9**	P	**P**	**20 20 56.6**	**+0.6**
ADK	**Adak**	**71.70**	**9**	P	**P**	**20 20 55.3**	**-0.7**
ADK				pmax	pmax		
	comp=Z,248nm,1.2s						
USRK	**Ussuriysk Ar.**	**71.82**	**332**	P	**P**	**20 20 57.4**	**+0.6**
	comp=Z,86nm,1.1s,baz=191,slow=4.0,SNR=36						
USRK				pP	**pP**	**20 21 57.6**	**+0.5**
	comp=Z,9.4nm,0.8s,baz=108,slow=6.1,SNR=2.6						
	comp=Z,86nm,1.1s						
KULM	**Kulim**	**72.09**	**282**	P	**P**	**20 20 59.3**	**+0.1**
ATKA	**Atka Island**	**72.41**	**10**	IAmb	IAmb	20 21 01.9	
	comp=Z,389nm,1.2s						
ATKA	**Atka Island**	**72.41**	**10**	P	**P**	**20 20 59.9**	**-0.3**
PET	**Petropavlovsk**	**72.48**	**353**	P	**P**	**20 21 00.5**	**0.0**
PET				IAmb	IAmb	20 21 02.5	
	comp=Z,165nm,1.3s						
PET	**Petropavlovsk**	**72.48**	**353**	P	**P**	**20 21 01.6**	**+1.1**
PET	**Petropavlovsk**	**72.48**	**353**	*e*P	**P**	**20 21 00.5**	**0.0**
PET				*e*S	**S**	**20 30 04.4**	**+2.0**
PET				pmax	pmax		
	comp=Z,103nm,1.3s						
PET	**Petropavlovsk**	**72.48**	**353**	P	**P**	**20 21 00.5**	**0.0**
	comp=Z,124nm,1.5s						
WHN	**Wuhan**	**72.57**	**312**	⇓P	**P**	**20 21 02.0**	**+0.4**
WHN				pP	**pP**	**20 22 03.8**	**+1.7**
WHN				sP	**sP**	**20 22 32.2**	**+2.1**
WHN				S	**S**	**20 30 04.7**	**+0.3**
WHN				pmax	pmax		
	comp=Z,120nm,0.9s						
PEA0B	**Petropavlovsk-**	**72.67**	**352**	IAmb	IAmb	20 21 04.8	
	comp=Z,224nm,1.1s						
PEA0B	**Petropavlovsk-**	**72.67**	**352**	⇑*e*P	**P**	**20 21 03.4**	**+1.6**
PETK	**Petropavlovsk-**	**72.67**	**352**	P	**P**	**20 21 01.9**	**+0.1**
	comp=Z,95nm,0.9s,baz=133,slow=4.3,SNR=38						
	comp=Z,95nm,0.9s						
PETK	**Petropavlovsk-**	**72.67**	**352**	P	**P**	**20 21 01.6**	**-0.1**
DL2	**Dalian**	**73.17**	**323**	P	**P**	**20 21 05.6**	**+0.7**
DL2				pP	**pP**	**20 22 08.9**	**+3.4**
DL2				S	**S**	**20 30 12.3**	**+1.5**
DL2				pmax	pmax		
	comp=Z,640nm,3.8s						
MDJ	**Mudanjiang**	**73.21**	**331**	P	**P**	**20 21 06.7**	**+1.6**
MDJ				PP	**PP**	**20 23 50.1**	**-2.3**
MDJ				S	**S**	**20 30 14.9**	**+3.8**
MDJ				pmax	pmax		
	comp=Z,68nm,0.9s						
MDJ	**Mudanjiang**	**73.21**	**331**	P	**P**	**20 21 06.7**	**+1.6**
MDJ	**Mudanjiang**	**73.21**	**331**	P	**P**	**20 21 06.2**	**+1.1**
MDJ				pP	**pP**	**20 22 06.5**	**+0.8**
MDJ				sP	**sP**	**20 22 36.4**	**+2.8**
GSI	**Gunungsitoli**	**73.53**	**277**	P	**P**	**20 21 07.0**	**-0.8**
GSI				IAmb	IAmb	20 21 09.8	
	comp=Z,85nm,0.9s						
GSI	**Gunungsitoli**	**73.53**	**277**	P	**P**	**20 21 07.9**	**+0.2**
GSI	**Gunungsitoli**	**73.53**	**277**	⇑P	**P**	**20 21 07.9**	**+0.2**
RPN	**Rapa Nui**	**73.77**	**114**	P	**P**	**20 21 09.4**	**+0.6**
RPN	**Rapa Nui**	**73.77**	**114**	P	**P**	**20 21 09.5**	**+0.6**
RPN				pmax	pmax		
	comp=Z,556nm,1.4s						
SNY	**Shenyang**	**74.11**	**326**	⇑P	**P**	**20 21 11.3**	**+1.0**
SNY				sP	**sP**	**20 22 40.2**	**+1.2**
SNY				S	**S**	**20 30 23.9**	**+2.7**
SNY				pmax	pmax		
	comp=Z,24nm,1.1s						
TIA	**Tai'an**	**74.12**	**318**	P	**P**	**20 21 10.3**	**-0.3**
TIA				pP	**pP**	**20 22 10.1**	**-1.2**
TIA				S	**S**	**20 30 17.9**	**-3.8**
TIA				pmax	pmax		
	comp=Z,130nm,0.9s						
TIA				pmax	pmax		
	comp=Z,930nm,4.9s						
TIA				LR	LR		
	comp=Z,1µm,18.1s						
TIA				LR	LR		
	comp=Z,710nm,20.1s						
TIA				LR	LR		
	comp=Z,1µm,23.0s						
NIKH	**Nikolski High**	**74.17**	**13**	P	**P**	**20 21 10.0**	**-0.4**
	baz=201,SNR=12						
NIKH				S	**S**	**20 30 19.9**	**-1.6**
	baz=201						
CN2	**Changchun**	**74.57**	**328**	P	**P**	**20 21 10.2**	**-2.8**
CN2				PcP	**PcP**	**20 21 23.0**	**-3.0**
CN2				S	**S**	**20 30 25.8**	**-0.5**
CN2				SS	**SS**	**20 35 19.6**	**-0.3**
CN2				pmax	pmax		
	comp=Z,110nm,0.7s						
BNX	**BinXian**	**75.07**	**331**	⇑P	**P**	**20 21 16.3**	**+0.5**
BNX				PcP	**PcP**	**20 21 28.7**	**+0.6**
BNX				pP	**pP**	**20 22 17.3**	**+0.6**
BNX				S	**S**	**20 30 34.1**	**+2.4**
BNX				SS	**SS**	**20 35 30.8**	**+3.4**
BNX				pmax	pmax		
	comp=Z,54nm,0.7s						
UNV	**Unalaska Valle**	**75.51**	**14**	P	**P**	**20 21 17.1**	**-1.0**
UNV				IAmb	IAmb	20 21 19.4	
	comp=Z,143nm,1.0s						
UNV	**Unalaska Valle**	**75.51**	**14**	P	**P**	**20 21 17.9**	**-0.2**
UNV	**Unalaska Valle**	**75.51**	**14**	P	**P**	**20 21 17.2**	**-0.8**
	baz=203,SNR=8.7						
UNV				S	**S**	**20 30 33.8**	**-2.4**
	baz=203						
SLVN	**Son La**	**75.87**	**299**	P	**P**	**20 21 22.1**	**+1.2**
ENH	**Enshi**	**75.91**	**309**	P	**P**	**20 21 20.6**	**-0.3**
AKUT	**Akutan**	**75.95**	**15**	⇓P	**P**	**20 21 20.6**	**+0.1**
GYA	**Guiyang**	**76.08**	**305**	⇑P	**P**	**20 21 22.3**	**+0.2**
GYA				S	**S**	**20 30 44.3**	**+0.5**
GYA				pmax	pmax		
	comp=Z,46nm,1.2s						
LYN	**LuoYang**	**76.17**	**314**	P	**P**	**20 21 23.5**	**+1.2**
LYN				pP	pP	20 22 24.3	+1.0
LYN				PP	**PP**	**20 24 21.1**	**+3.5**
LYN				S	**S**	**20 30 45.6**	**+1.4**
LYN				pmax	pmax		
	comp=Z,250nm,0.7s						
LYN				pmax	pmax		
	comp=Z,460nm,7.6s						
HNS	**HongShan**	**76.38**	**318**	⇑P	**P**	**20 21 24.0**	**+0.6**
HNS				S	**S**	**20 30 48.3**	**+1.9**
HNS				ScS	**SKSac**	**20 31 08.0**	**-1.3**
HNS				pmax	pmax		
	comp=Z,37nm,0.9s						
HNS				LR	LR		
	comp=Z,980nm,16.1s						
HNS				LR	LR		
	comp=Z,1µm,15.9s						
HNS				LR	LR		
	comp=Z,1µm,18.2s						
BJT	**Baijiatuau**	**77.09**	**321**	P	**P**	**20 21 28.1**	**+0.8**
BJI	**Beijing**	**77.10**	**321**	P	**P**	**20 21 27.9**	**+0.6**
BJI				PcP	**PcP**	**20 21 38.0**	**+1.0**
BJI				pP	**pP**	**20 22 28.8**	**+0.3**
BJI				sP	**sP**	**20 22 54.8**	**-1.5**
BJI				S	**S**	**20 30 54.9**	**+0.9**
BJI				ScS	**ScS**	**20 31 21.2**	**+1.5**
BJI				pmax	pmax		
	comp=Z,46nm,0.8s						
BJI				pmax	pmax		
	comp=Z,450nm,5.1s						
BJI				LR	LR		
	comp=Z,440nm,16.5s						
BJI				LR	LR		
	comp=Z,450nm,13.9s						
BJI				LR	LR		
	comp=Z,440nm,19.0s						
FALS	**False Pass**	**77.19**	**16**	P	**P**	**20 21 26.7**	**-0.7**
	baz=206						
P08K	**Saint George I**	**77.44**	**12**	P	**P**	**20 21 28.6**	**-0.1**
	baz=200						
SPIA	**Saint Paul Isl**	**77.85**	**11**	P	**P**	**20 21 31.7**	**+0.7**
	baz=200						
TIY	**Taiyuan**	**78.02**	**317**	*e*P	**P**	**20 21 34.0**	**+1.4**
TIY				pP	**pP**	**20 22 31.6**	**-2.3**
TIY				sP	**sP**	**20 23 02.9**	**+1.2**
TIY				S	**S**	**20 31 07.1**	**+2.9**
TIY				pmax	pmax		
	comp=Z,50nm,0.8s						
CNBA	**Chernabura Isl**	**78.19**	**18**	IAmb	IAmb	20 21 34.1	
	comp=Z,194nm,1.3s						
CHNA	**Chernabura Isl**	**78.20**	**18**	P	**P**	**20 21 33.0**	**0.0**
CHNA	**Chernabura Isl**	**78.20**	**18**	P	**P**	**20 21 33.4**	**+0.4**
	baz=210						
CHNA				S	**S**	**20 31 03.5**	**-1.6**
	baz=210						
S12K	**Black Hills**	**78.30**	**16**	IAmb	IAmb	20 21 35.1	
	comp=Z,236nm,1.1s						
S12K	**Black Hills**	**78.30**	**16**	P	**P**	**20 21 33.7**	**+0.1**
	baz=207						
S12K				S	**S**	**20 31 08.5**	**+2.4**
	baz=207						
S12K				S	**S**	**20 31 08.5**	**+2.4**
	baz=207						
XAN	**Xi'an**	**78.33**	**312**	P	**P**	**20 21 34.8**	**+0.5**
XAN				pP	pP	20 22 35.6	-0.1
XAN				sP	sP	20 23 07.4	+4.0
XAN				S	**S**	**20 31 07.3**	**-0.2**
XAN				ScS	**SKKSac**	**20 31 24.8**	**-0.1**
XAN				SS	**SS**	**20 36 18.1**	**+1.1**
XAN				pmax	pmax		
	comp=Z,160nm,0.8s						
XAN				pmax	pmax		
	comp=Z,960nm,5.7s						
XAN				LR	LR		
	comp=Z,880nm,20.8s						
XAN				LR	LR		
	comp=Z,830nm,19.8s						
XAN				LR	LR		
	comp=Z,1µm,20.4s						
XAN	**Xi'an**	**78.33**	**312**	P	**P**	**20 21 34.7**	**+0.4**
XAN				PcP	**PcP**	**20 21 41.3**	**-1.2**
XAN				pP	**pP**	**20 22 37.9**	**+2.2**
SDPT	**Sand Point**	**78.41**	**17**	P	**P**	**20 21 33.3**	**-0.8**
SDPT				IAmb	IAmb	20 21 40.2	
	comp=Z,199nm,1.2s						
SDPT	**Sand Point**	**78.41**	**17**	P	**P**	**20 21 35.2**	**+1.1**
SDPT	**Sand Point**	**78.41**	**17**	P	**P**	**20 21 34.3**	**+0.3**
	baz=209						
HEH	**HeiHe**	**78.49**	**334**	*e*P	**P**	**20 21 34.7**	**0.0**
HEH				pmax	pmax		
	comp=Z,32nm,1.2s						
KMI	**Kunming**	**78.55**	**302**	P	**P**	**20 21 36.6**	**+0.7**
KMI				pP	pP	20 22 37.4	0.0
KMI				S	**S**	**20 31 08.5**	**-2.1**
KMI				SS	**SS**	**20 36 19.5**	**-1.4**
KMI				pmax	pmax		
	comp=Z,110nm,1.2s						
KMI				pmax	pmax		
	comp=Z,770nm,4.5s						
KMI				LR	LR		
	comp=Z,530nm,26.2s						
MAW	**Mawson**	**78.69**	**202**	P	**P**	**20 21 36.9**	**+1.3**
	comp=Z,29nm,0.8s,baz=108,slow=6.7,SNR=14						
MAW				pP	**pP**	**20 22 37.4**	**+0.2**
	comp=Z,16nm,0.9s,baz=99,slow=4.6,SNR=3.6						
	comp=Z,29nm,0.8s						
CMAR	**Chiang Mai Arr**	**78.82**	**294**	P	**P**	**20 21 38.1**	**+0.9**
	comp=Z,32nm,0.8s,baz=134,slow=4.4,SNR=88						
CMAR				pP	**pP**	**20 22 38.4**	**-0.4**
	comp=Z,14nm,0.8s,baz=112,slow=5.4,SNR=5.5						
CMAR				PKKPbc	**PKKPbc**	**20 40 29.9**	**+0.6**
	comp=Z,2.6nm,0.8s,baz=283,slow=4.1,SNR=10						
CMAR				PKPPKP	**P'P'df**	**20 48 33.1**	**+0.3**
	comp=Z,3.8nm,1.1s,baz=282,slow=3.6,SNR=5.2						
	comp=Z,32nm,0.8s						
CMAR	**Chiang Mai Arr**	**78.82**	**294**	P	**P**	**20 21 37.3**	**+0.1**
CMAR	**Chiang Mai Arr**	**78.82**	**294**	*i* P	**P**	**20 21 38.2**	**+0.9**
CMAR				pmax	pmax		
	comp=Z,35nm,0.8s						
CHTO	**Chiang Mai**	**78.97**	**294**	P	**P**	**20 21 37.9**	**-0.2**
CHTO	**Chiang Mai**	**78.97**	**294**	P	**P**	**20 21 38.5**	**+0.5**
CHTO	**Chiang Mai**	**78.97**	**294**	P	**P**	**20 21 37.9**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,46nm,0.7s						
S14K	**Fog Glacier**	**79.48**	**17**	P	**P**	**20 21 39.9**	**-0.2**
	baz=210						
XLT	**XiLinHaoTe**	**79.59**	**324**	*e*P	**P**	**20 21 41.3**	**+0.4**
XLT				pP	pP	20 22 43.6	+1.1
XLT				S	**S**	**20 31 23.3**	**+2.8**
XLT				ScS	**SKKSac**	**20 31 36.0**	**+1.9**
XLT				pmax	pmax		
	comp=Z,63nm,0.8s						
MA2	**Magadan**	**79.92**	**350**	⇑*e*P	**P**	**20 21 41.3**	**-0.9**
MA2				pmax	pmax		
	comp=Z,384nm,5.1s						
PZH	**PanZhiHua**	**79.98**	**303**	P	**P**	**20 21 43.2**	**-0.3**
PZH				pP	**pP**	**20 22 45.4**	**+0.2**
PZH				sP	**sP**	**20 23 12.4**	**-0.4**
PZH				S	**S**	**20 31 24.8**	**-0.6**
PZH				pmax	pmax		
	comp=Z,50nm,0.9s						
PZH				pmax	pmax		
	comp=Z,650nm,8.4s						
CHIR	**Chirikof Islan**	**80.23**	**19**	P	**P**	**20 21 45.2**	**+1.3**
	baz=213						
CHIR				S	**S**	**20 31 27.0**	**+0.6**
	baz=213						
HHC	**Hu-ho-hao-te**	**80.39**	**319**	⇑*i*P	**P**	**20 21 46.1**	**+0.8**
HHC				pP	pP	20 22 49.8	+2.7
HHC				sP	sP	20 23 15.7	+1.0
HHC				S	**SKSac**	**20 31 32.9**	**-4.9**
HHC				sS	sS	20 33 19.0	+1.9
HHC				pmax	pmax		
	comp=Z,50nm,0.8s						
HHC				pmax	pmax		
	comp=Z,270nm,6.6s						
CD2	**Chengdu**	**80.48**	**307**	P	**P**	**20 21 46.7**	**+0.7**
CD2				pP	pP	20 22 48.8	+1.1
CD2				S	**S**	**20 31 31.9**	**+1.6**
CD2				pmax	pmax		
	comp=Z,40nm,0.4s						
CD2				pmax	pmax		
	comp=Z,480nm,6.2s						
ZEA	**Zeya**	**81.21**	**336**	*e*P	**P**	**20 21 50.8**	**+1.6**
ZEA				*e*S	**SKSac**	**20 31 40.7**	**-1.8**
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
ZEA				smax	smax		
	comp=E,700nm,5.4s						
ZEA				smax	smax		
	comp=N,1µm,8.6s						
BTO	**Baotou**	**81.22**	**318**	*e*P	**P**	**20 21 50.8**	**+1.1**
BTO				PP	**PP**	**20 24 57.2**	**-2.2**
BTO				S	**S**	**20 31 34.5**	**-3.0**
BTO				pmax	pmax		
	comp=N,16nm,0.6s						
BTO				pmax	pmax		
	comp=N,1µm,7.6s						
BTO				LR	LR		
	comp=N,1µm,6.1s						
BTO				LR	LR		
	comp=N,1µm,5.4s						
BTO				LR	LR		
	comp=N,2µm,6.9s						
HIA	**Hailar**	**81.22**	**330**	P	**P**	**20 21 50.0**	**+0.6**
SII	**Sitkinak Islan**	**81.29**	**19**	IAmb	IAmb	20 21 53.1	
	comp=Z,194nm,0.8s						
SII	**Sitkinak Islan**	**81.29**	**19**	P	**P**	**20 21 49.9**	**+0.4**
	baz=214						
HILR	**Hailar Array B**	**81.41**	**330**	P	**P**	**20 21 50.8**	**+0.4**
	comp=Z,5.6nm,0.7s,baz=127,slow=6.6,SNR=10						
HILR				pP	**pP**	**20 22 50.2**	**-2.0**
	comp=Z,5.3nm,0.8s,baz=128,slow=9.7,SNR=2.5						
HILR				PKKPbc	**PKKPbc**	**20 40 24.9**	**-0.6**
	comp=Z,2.5nm,0.6s,baz=288,slow=1.4,SNR=6.0						
R17L	**Mt. Peulik Vol**	**81.53**	**18**	P	**P**	**20 21 51.0**	**+0.2**
	baz=212						
R17L				S	**S**	**20 31 37.0**	**-2.9**
	baz=212						
R17L				S	**S**	**20 31 37.0**	**-2.9**
	baz=212						
PLK4	**Peulik 4**	**81.53**	**18**	IAmb	IAmb	20 21 54.0	
	comp=Z,176nm,0.8s						
M11K	**Mekoryuk**	**81.61**	**12**	IAmb	IAmb	20 21 54.5	
	comp=Z,214nm,1.1s						
M11K	**Mekoryuk**	**81.61**	**12**	P	**P**	**20 21 52.2**	**+1.1**
	baz=203						
O14K	**Tigyukauivet M**	**81.65**	**15**	IAmb	IAmb	20 21 54.9	
	comp=Z,125nm,0.9s						
O14K	**Tigyukauivet M**	**81.65**	**15**	P	**P**	**20 21 52.3**	**+0.9**
	baz=208,SNR=19						
O14K				S	**S**	**20 31 40.6**	**-0.3**
	baz=208						
O14K				S	**S**	**20 31 40.6**	**-0.3**
	baz=208						
PAF	**Port-aux-Franc**	**81.67**	**221**	P	**P**	**20 21 51.7**	**-0.2**
PAF				IAmb	IAmb	20 21 56.0	
	comp=Z,369nm,1.3s						
PAF	**Port-aux-Franc**	**81.67**	**221**	P	**P**	**20 21 51.7**	**-0.2**
PAF				pmax	pmax		
	comp=Z,369nm,1.3s						
O15K	**Ungalikthiuk R**	**81.94**	**15**	P	**P**	**20 21 53.3**	**+0.5**
	baz=209,SNR=7.9						
O15K				S	**S**	**20 31 42.3**	**-1.6**
	baz=209						
TNCH	**TengChong**	**81.94**	**300**	P	**P**	**20 21 54.2**	**+0.3**
TNCH				pP	pP	20 22 55.9	0.0
TNCH				sP	sP	20 23 22.8	-0.7
TNCH				PP	**PP**	**20 25 09.6**	**+3.9**
TNCH				S	**S**	**20 31 45.7**	**0.0**
TNCH				SS	**SS**	**20 37 12.8**	**+1.5**
TNCH				pmax	pmax		
	comp=Z,55nm,0.8s						
TNCH				pmax	pmax		
	comp=Z,610nm,3.5s						
R18K	**Karluk**	**82.04**	**19**	P	**P**	**20 21 53.4**	**0.0**
	baz=214						
R18K				S	**S**	**20 31 42.2**	**-2.8**
	baz=214						
R18K				S	**S**	**20 31 42.2**	**-2.8**
	baz=214						
OHAK	**Old Harbor**	**82.11**	**19**	P	**P**	**20 21 55.0**	**+1.2**
OHAK	**Old Harbor**	**82.11**	**19**	P	**P**	**20 21 54.5**	**+0.7**
	baz=215						
OHAK				S	**SKSac**	**20 31 47.0**	**-1.3**
	baz=215						
N14K	**Kuskokwak Cree**	**82.15**	**14**	P	**P**	**20 21 54.4**	**+0.6**
	baz=207						
N14K				S	**SKSac**	**20 31 47.4**	**-1.0**
	baz=207						
BELA	**Belgrano 2**	**82.18**	**175**	IAmb	IAmb	20 21 55.1	
	comp=Z,188nm,0.7s						
Q17K	**Contact Creek**	**82.20**	**18**	P	**P**	**20 21 54.3**	**-0.1**
	baz=213						
Q17K				S	**S**	**20 31 45.6**	**-1.3**
	baz=213						
Q17K				S	**S**	**20 31 45.6**	**-1.3**
	baz=213						
M13K	**Dall Lake**	**82.22**	**13**	IAmb	IAmb	20 21 59.3	
	comp=Z,110nm,1.0s						
M13K	**Dall Lake**	**82.22**	**13**	P	**P**	**20 21 55.1**	**+0.9**
	baz=206,SNR=8.7						
Q16K	**King Salmon**	**82.34**	**17**	P	**P**	**20 21 54.9**	**0.0**
	baz=212						
Q16K				S	**S**	**20 31 46.6**	**-1.3**
	baz=212						
O16K	**Kokwok River B**	**82.74**	**16**	IAmb	IAmb	20 21 58.6	
	comp=Z,190nm,1.4s						
O16K	**Kokwok River B**	**82.74**	**16**	P	**P**	**20 21 57.1**	**+0.2**
	baz=211						
O16K				S	**S**	**20 31 51.1**	**-0.9**
	baz=211						
N15K	**Kwethluk River**	**82.74**	**15**	P	**P**	**20 21 58.2**	**+1.2**
	baz=209,SNR=47						
N15K				S	**SKSac**	**20 31 54.5**	**+2.0**
	baz=209						
N15K				S	**SKSac**	**20 31 54.5**	**+2.0**
	baz=209						
Q18K	**Katmai Hardscr**	**82.78**	**18**	P	**P**	**20 21 57.3**	**-0.1**
	baz=214,SNR=70						
Q18K				S	**S**	**20 31 52.3**	**-0.4**
	baz=214						
Q18K				S	**S**	**20 31 52.3**	**-0.4**
	baz=214						
KDAK	**Kodiak Island**	**82.79**	**19**	P	**P**	**20 21 57.6**	**+0.3**
KDAK				IAmb	IAmb	20 22 00.1	
	comp=Z,266nm,1.0s						
KDAK	**Kodiak Island**	**82.79**	**19**	*d i*P	**P**	**20 21 58.2**	**+0.9**
KDAK				pmax	pmax		
	comp=Z,395nm,1.0s						
KDAK	**Kodiak Island**	**82.79**	**19**	P	**P**	**20 21 57.5**	**+0.2**
	baz=216						
KDAK				S	**SKSac**	**20 31 53.8**	**+0.9**
	baz=216						
KDAK	**Kodiak Island**	**82.79**	**19**	P	**P**	**20 21 58.1**	**+0.9**
M14K	**Bethel**	**82.83**	**14**	IAmb	IAmb	20 22 00.2	

	comp=Z,111nm,0.8s						
M14K	Bethel	82.83	14	P	P	20 21 57.7	+0.4
	baz=207						
M14K				S	SKSac	20 31 53.5	+0.6
	baz=207						
M14K				S	SKSac	20 31 53.5	+0.6
	baz=207						
SEY	Seymchan	82.91	352	⇓eP	P	20 21 57.5	-0.3
SEY				pmax	pmax		
	comp=Z,162nm,2.9s						
LZH	Lanzhou	82.95	312	eP	P	20 22 00.0	+1.2
LZH				pP	pP	20 23 02.6	+1.7
LZH				sP	sP	20 23 29.3	+0.8
LZH				S	S	20 31 54.4	-1.1
LZH				sS	sS	20 33 46.6	+4.0
LZH				pmax	pmax		
	comp=Z,110nm,1.1s						
LZH				pmax	pmax		
	comp=Z,460nm,5.8s						
LZDM	Lanzhou Array	82.99	312	P	P	20 21 59.6	+0.4
	comp=Z,18nm,0.6s,baz=141,slow=5.4,SNR=16						
LZDM				pP	pP	20 23 00.4	-0.9
	comp=Z,11nm,0.8s,baz=152,slow=9.6,SNR=1.5						
LZDM				PKKPbc	PKKPbc	20 40 21.1	-0.2
	comp=Z,2.0nm,0.5s,baz=222,slow=2.0,SNR=3.6						
	comp=Z,18nm,0.6s						
M15K	Kasigluk River	83.07	14	P	P	20 21 59.1	+0.5
	baz=208						
M15K				S	S	20 31 57.2	+2.0
	baz=208						
O17K	Koliganek Bris	83.16	16	P	P	20 21 58.8	-0.3
	baz=212						
O17K				S	SKSac	20 31 54.2	-0.9
	baz=212						
L14K	Kuka Creek	83.20	13	IAmb	IAmb	20 22 02.3	
	comp=Z,138nm,0.8s						
L14K	Kuka Creek	83.20	13	P	P	20 22 00.1	+0.9
	baz=206						
L14K				S	S	20 31 59.3	+2.8
	baz=206						
L14K				S	S	20 31 59.3	+2.8
	baz=206						
N16K	Nishlik Lake	83.33	15	P	P	20 22 01.3	+1.3
	baz=210,SNR=74						
N16K				S	S	20 32 01.0	+3.0
	baz=210						
K13K	Kusilvak Mount	83.33	12	IAmb	IAmb	20 22 03.1	
	comp=Z,129nm,0.9s						
K13K	Kusilvak Mount	83.33	12	P	P	20 22 00.8	+0.8
	baz=204						
K13K				S	S	20 32 00.6	+2.8
	baz=204						
K13K				S	S	20 32 00.6	+2.8
	baz=204						
P18K	Big Mountain,	83.34	17	P	P	20 21 59.9	-0.2
	baz=213,SNR=51						
P18K				S	S	20 31 57.8	-0.3
	baz=213						
P18K				S	S	20 31 57.8	-0.3
	baz=213						
Q19K	Cape Douglas,	83.41	18	P	P	20 22 00.4	0.0
	baz=215,SNR=20						
Q19K				S	S	20 32 00.4	+1.5
	baz=215						
Q19K				S	S	20 32 00.4	+1.5
	baz=215						
Q20K	Shuyak Island	83.53	19	P	P	20 22 01.5	+0.5
	baz=216,SNR=15						
Q20K				S	S	20 32 01.3	+1.5
	baz=216						
Q20K				S	S	20 32 01.3	+1.5
	baz=216						
O18K	Koktuh Hills	83.73	17	P	P	20 22 02.0	0.0
	baz=213,SNR=21						
O18K				S	S	20 32 03.2	+1.2
	baz=213						
O18K				S	S	20 32 03.2	+1.2
	baz=213						
L15K	Ungalak Mounta	83.76	13	P	P	20 22 02.5	+0.4
	baz=207						
L15K				S	S	20 32 03.7	+1.7
	baz=207						
M16K	Timber Creek	83.76	15	P	P	20 22 03.5	+1.3
	baz=210,SNR=121						
M16K				S	S	20 32 06.4	+4.2
	baz=210						
M16K				S	S	20 32 06.4	+4.2
	baz=210						
N17K	Nushagak Hills	83.78	16	P	P	20 22 02.9	+0.7
	baz=211						
N17K				S	S	20 32 03.8	+1.5
	baz=211						
GAMB	Gambell	83.90	8	IAmb	IAmb	20 22 05.7	
	comp=Z,167nm,0.9s						
GAMB	Gambell	83.90	8	P	P	20 22 03.5	+0.8
	baz=198,SNR=6.8						
GAMB				S	S	20 32 05.6	+2.3
	baz=198						
P19K	Oil Pt	84.13	18	P	P	20 22 04.2	+0.2
	baz=215,SNR=23						
P19K				S	S	20 32 07.4	+1.5
	baz=215						
P19K				S	S	20 32 07.4	+1.5
	baz=215						
L16K	Owhat River	84.24	14	P	P	20 22 05.2	+0.7
	baz=209						
L16K				S	S	20 32 08.0	+1.2
	baz=209						
L16K				S	S	20 32 08.0	+1.2
	baz=209						
N18K	Kilae Creek	84.25	16	IAmb	IAmb	20 22 07.2	
	comp=Z,120nm,1.0s						
N18K	Kilae Creek	84.25	16	P	P	20 22 04.9	+0.3
	baz=213,SNR=25						
N18K				S	S	20 32 08.4	+1.4
	baz=213						
N18K				S	S	20 32 08.4	+1.4
	baz=213						
O19K	Port Alsworth	84.27	17	P	P	20 22 04.7	0.0
	baz=214,SNR=33						
O19K				S	S	20 32 07.9	+0.8
	baz=214						
O19K				S	S	20 32 07.9	+0.8
	baz=214						
J14K	Nanvaranak Lak	84.29	12	IAmb	IAmb	20 22 08.0	
	comp=Z,274nm,1.1s						
J14K	Nanvaranak Lak	84.29	12	P	P	20 22 05.6	+0.9
	baz=205						
J14K				S	S	20 32 10.5	+3.2
	baz=205						
K15K	Wolf Creek Mou	84.30	13	P	P	20 22 06.0	+1.1
	baz=207,SNR=166						
K15K				S	S	20 32 11.5	+4.1
	baz=207						
K15K				S	S	20 32 11.5	+4.1
	baz=207						
M17K	Holitna River	84.46	15	IAmb	IAmb	20 22 09.9	
	comp=Z,200nm,0.8s						
M17K	Holitna River	84.46	15	P	P	20 22 07.2	+1.5
	baz=211						
M17K				S	S	20 32 13.6	+4.5
	baz=211						
HOM	Homer	84.60	19	P	P	20 22 07.1	+0.8
	baz=216,SNR=7.2						
HOM				S	S	20 32 13.4	+2.9
	baz=216						
O20K	Slope Mountain	84.66	18	P	P	20 22 06.7	-0.1
	baz=216,SNR=11						
O20K				S	S	20 32 12.9	+1.7
	baz=216						
O20K				S	S	20 32 12.9	+1.7
	baz=216						
N19K	Bonanza Creek	84.73	17	IAmb	IAmb	20 22 09.1	
	comp=Z,71nm,0.9s						
N19K	Bonanza Creek	84.73	17	P	P	20 22 06.9	-0.3
	baz=214,SNR=19						
N19K				S	S	20 32 11.8	-0.2
	baz=214						
N19K				S	S	20 32 11.8	-0.2
	baz=214						
FARB	Farallon Islan	84.80	47	IAmb	IAmb	20 22 11.2	
	comp=Z,185nm,0.8s						
L17K	Donlin	84.89	14	P	P	20 22 09.3	+1.5
	baz=210,SNR=51						
L17K				S	S	20 32 18.7	+5.5
	baz=210						
L17K				S	S	20 32 18.7	+5.5
	baz=210						
RED	Redoubt Volcan	84.89	18	IAmb	IAmb	20 22 09.6	
	comp=Z,147nm,1.0s						
BRLK	Bradley Lake	84.92	19	IAmb	IAmb	20 22 10.4	
	comp=Z,277nm,1.4s						
BRSE	Bradley Lake S	84.94	19	P	P	20 22 08.4	+0.3
	baz=217,SNR=15						
BRSE				S	S	20 32 15.9	+2.0
	baz=217						
M18K	Stony River	84.95	16	P	P	20 22 09.3	+1.2
	baz=213						
M18K				S	S	20 32 17.2	+3.3
	baz=213						
SYO	Syowa Base	85.15	196	⇑iP	P	20 22 09.4	+0.3
SYO	Syowa Base	85.15	196	⇓iPcP	PcP	20 22 11.6	-0.2
SYO	Syowa Base	85.15	196	⇑epP	pP	20 23 14.0	+2.5
L18K	Granite Mounta	85.35	15	IAmb	IAmb	20 22 14.7	
	comp=Z,123nm,1.1s						
L18K	Granite Mounta	85.35	15	P	P	20 22 11.4	+1.4
	baz=212,SNR=40						
L18K				S	S	20 32 21.0	+3.2
	baz=212						
L18K				S	S	20 32 21.0	+3.2
	baz=212						
J16K	Anvik River	85.38	13	P	P	20 22 11.2	+1.1
	baz=208						
J16K				S	S	20 32 22.1	+4.2
	baz=208						
K17K	Iditarod	85.39	14	IAmb	IAmb	20 22 14.3	
	comp=Z,136nm,0.9s						
K17K	Iditarod	85.39	14	P	P	20 22 11.3	+1.0
	baz=210						
K17K				S	S	20 32 22.6	+4.5
	baz=210						
DCMP	DeCamp, Califo	85.43	46	IAmb	IAmb	20 22 14.5	
	comp=Z,121nm,0.9s						
SAO	San Andreas Ge	85.45	49	IAmb	IAmb	20 22 15.2	
	comp=Z,227nm,0.9s						
GDXM	Geysers	85.48	46	IAmb	IAmb	20 22 15.2	
	comp=Z,229nm,1.2s						
ANM	Nome	85.62	11	IAmb	IAmb	20 22 14.5	
	comp=Z,86nm,0.9s						
ANM	Nome	85.62	11	P	P	20 22 11.9	+0.6
	baz=204,SNR=20						
ANM				S	S	20 32 23.5	+3.2
	baz=204						
JCC	Jacoby Creek,	85.63	44	IAmb	IAmb	20 22 15.7	
	comp=Z,232nm,0.9s						
SEW	Seward	85.63	19	P	P	20 22 10.5	-0.9
	baz=218						
SEW				S	S	20 32 22.3	+1.9
	baz=218						
CAPN	Captain Cook N	85.64	18	S	S	20 32 22.9	+2.4
	baz=217						
SPCR	Spurr Chakacha	85.69	17	P	P	20 22 11.3	-0.6
	baz=216						
SPCR				S	S	20 32 20.6	-0.7
	baz=216						
SLKM	Skilak Lake	85.71	19	IAmb	IAmb	20 22 15.3	
	comp=Z,125nm,1.1s						
L19K	White Mountain	85.78	16	IAmb	IAmb	20 22 16.8	
	comp=Z,146nm,0.9s						
L19K	White Mountain	85.78	16	P	P	20 22 12.1	-0.1
	baz=214,SNR=66						
L19K				S	S	20 32 25.3	+3.3
	baz=214						
L19K				S	S	20 32 25.3	+3.3
	baz=214						
J17K	VABM Dome	85.81	14	IAmb	IAmb	20 22 15.7	
	comp=Z,124nm,0.9s						
J17K	VABM Dome	85.81	14	P	P	20 22 12.8	+0.5
	baz=210						
J17K				S	S	20 32 25.6	+3.5
	baz=210						
J17K				S	S	20 32 25.6	+3.5
	baz=210						
O22K	Cooper Landing	85.84	19	IAmb	IAmb	20 22 22.5	
	comp=Z,153nm,0.8s						
O22K	Cooper Landing	85.84	19	P	P	20 22 11.5	-1.0
	baz=218						
O22K				S	S	20 32 23.4	+0.8
	baz=218						
I17K	Unalakleet	85.89	13	IAmb	IAmb	20 22 16.2	
	comp=Z,151nm,1.5s						
I17K	Unalakleet	85.89	13	P	P	20 22 13.0	+0.4
	baz=208						
I17K				S	S	20 32 25.7	+2.9
	baz=208						
M20K	Styx River	85.99	17	P	P	20 22 12.7	-0.6
	baz=215						
M20K				S	S	20 32 24.6	+0.4
	baz=215						
M20K				S	S	20 32 24.6	+0.4
	baz=215						
Q23K	Middleton Isla	86.11	21	P	P	20 22 13.5	-0.3
	baz=221						
TNA	Tin City	86.13	9	IAmb	IAmb	20 22 17.4	
	comp=Z,85nm,0.8s						
TNA	Tin City	86.13	9	P	P	20 22 13.9	+0.1
	baz=201,SNR=6.7						
TNA				S	S	20 32 28.6	+3.5
	baz=201						
KBO	Bosley Butte	86.19	43	IAmb	IAmb	20 22 18.7	
	comp=Z,278nm,1.2s						
P23K	Montague Islan	86.20	20	P	P	20 22 13.5	-0.7
	baz=220						
P23K				S	S	20 32 29.4	+3.3
	baz=220						
P23K				S	S	20 32 29.4	+3.3
	baz=220						
G15K	Niukluk	86.25	11	P	P	20 22 15.0	+0.6
	baz=205,SNR=23						
G15K				S	S	20 32 29.6	+3.3
	baz=205						
H16K	Elim	86.26	12	P	P	20 22 14.6	+0.2
	baz=207,SNR=46						
H16K				S	S	20 32 29.8	+3.4
	baz=207						
H16K				S	S	20 32 29.8	+3.4
	baz=207						
L20K	Farewell, AK	86.28	16	IAmb	IAmb	20 22 19.1	
	comp=Z,158nm,0.8s						
L20K	Farewell, AK	86.28	16	P	P	20 22 14.4	-0.3
	baz=214						
L20K				S	S	20 32 29.6	+2.7
	baz=214						
L20K				S	S	20 32 29.6	+2.7
	baz=214						
F14K	Arctic Creek	86.30	10	P	P	20 22 14.2	-0.4
	baz=203						
F14K				S	S	20 32 30.4	+3.7
	baz=203						
RC01	Rabbit Creek A	86.32	18	IAmb	IAmb	20 22 18.3	
	comp=Z,71nm,1.0s						
RC01	Rabbit Creek A	86.32	18	P	P	20 22 13.7	-1.2
	baz=218,SNR=11						
RC01				S	S	20 32 28.5	+1.3
	baz=218						
SUA	Susitna One	86.32	18	IAmb	IAmb	20 22 19.0	
	comp=Z,142nm,1.4s						
SUA	Susitna One	86.32	18	P	P	20 22 14.5	-0.4
	baz=217,SNR=13						
SUA				S	S	20 32 27.5	+0.1
	baz=217						
J18K	Innoko River	86.41	14	IAmb	IAmb	20 22 19.3	
	comp=Z,85nm,0.8s						
J18K	Innoko River	86.41	14	P	P	20 22 15.1	-0.1
	baz=212,SNR=90						
J18K				S	S	20 32 31.0	+3.0
	baz=212						
KEBM	Edson Butte	86.45	42	IAmb	IAmb	20 22 19.5	
	comp=Z,212nm,1.0s						
OSI	Osito Audit: C	86.46	52	IAmb	IAmb	20 22 19.7	
	comp=Z,222nm,1.1s						
SKT	Skwentna	86.51	17	P	P	20 22 14.5	-1.3
	baz=216						
SKT				S	S	20 32 28.2	-0.8
	baz=216						
PWL	Port Wells	86.57	19	IAmb	IAmb	20 22 21.5	
	comp=Z,75nm,0.9s						
PWL	Port Wells	86.57	19	P	P	20 22 15.0	-1.1
	baz=219,SNR=5.4						
PWL				S	S	20 32 30.5	+0.9
	baz=219						
L02F	Cave Junction	86.57	43	IAmb	IAmb	20 22 20.3	
	comp=Z,116nm,1.0s						
PASC	Pasadena Art C	86.67	52	IAmb	IAmb	20 22 20.0	
	comp=Z,213nm,0.9s						
ORV	Oroville	86.72	46	IAmb	IAmb	20 22 20.5	
	comp=Z,234nm,1.0s						
M22K	Willow	86.73	18	IAmb	IAmb	20 22 20.1	
	comp=Z,155nm,0.8s						
M22K	Willow	86.73	18	P	P	20 22 16.0	-0.7
	baz=218,SNR=8.1						
M22K				S	S	20 32 31.3	+0.3
	baz=218						
F15K	North Star Dit	86.79	10	P	P	20 22 16.6	-0.4
	baz=204,SNR=7.8						
F15K				S	S	20 32 34.4	+2.9
	baz=204						
F15K				S	S	20 32 34.4	+2.9
	baz=204						
K02D	Willamette Mer	86.79	43	IAmb	IAmb	20 22 21.2	
	comp=Z,191nm,1.0s						
HIN	Hinchinbrook I	86.79	20	IAmb	IAmb	20 22 19.3	
	comp=Z,114nm,1.1s						
PMSA	Palmer Station	86.88	160	P	P	20 22 17.0	-0.6
PMSA				IAmb	IAmb	20 22 19.6	
	comp=Z,198nm,1.0s						
PMSA	Palmer Station	86.88	160	eP	P	20 22 19.0	+1.3
YAK	Yakutsk	86.88	342	P	P	20 22 17.3	-0.1
	comp=Z,39nm,0.9s,baz=331,slow=2.8,SNR=9.1						
YAK				pP	pP	20 23 18.4	-1.6
	comp=Z,28nm,1.0s,baz=319,slow=1.2,SNR=2.1						
YAK				S	SKSac	20 32 14.4	-4.1
	comp=Z,2.3nm,0.4s,baz=155,slow=23,SNR=1.4						
	comp=Z,39nm,0.9s						
YAK	Yakutsk	86.88	342	P	P	20 22 17.0	-0.5
YAK	Yakutsk	86.88	342	eP	P	20 22 16.3	-1.2
YAK				eS	SKSac	20 32 16.3	-2.2
YAK				e		20 32 36.2	
YAK				e*SS	sS	20 34 13.6	-8.6
YAK				eSS	SS	20 38 21.4	-0.6
YAK				pmax	pmax		
	comp=Z,59nm,1.1s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,1µm,5.1s						
YAK				pmax	pmax		
	comp=N,885nm,4.2s						
YAK				pmax	pmax		
	comp=E,1µm,4.1s						
YAK				smax	smax		
	comp=E,694nm,3.3s						
YAK				smax	smax		
	comp=N,908nm,3.8s						
PMR	Palmer	86.90	18	P	P	20 22 17.7	+0.2
PMR	Palmer	86.90	18	P	P	20 22 16.3	-1.2
	baz=219,SNR=10						
PMR				S	S	20 32 32.9	+0.3
	baz=219						
G16K	Koyuk River	86.91	11	IAmb	IAmb	20 22 21.4	
	comp=Z,88nm,0.8s						
G16K	Koyuk River	86.91	11	P	P	20 22 18.0	+0.4
	baz=206						
G16K				S	S	20 32 34.1	+1.5
	baz=206						
CPE	Camp Elliot	86.94	54	IAmb	IAmb	20 22 21.6	
	comp=Z,231nm,1.0s						
YBH	Yreka Blue Hor	86.94	44	P	P	20 22 19.8	+1.4
	comp=Z,14nm,1.0s,baz=183,slow=1.1,SNR=140						
YBH				PP	PP	20 25 46.2	+0.4
	comp=Z,1.3nm,1.1s,baz=192,slow=5.6,SNR=8.8						
	comp=Z,14nm,1.0s						
KNK	Knik Glacier	86.96	19	P	P	20 22 17.0	-0.9
	baz=219,SNR=13						
KNK				S	S	20 32 33.6	+0.2
	baz=219						
K20K	Telida	86.96	15	P	P	20 22 17.2	-0.7
	baz=214						
K20K				S	S	20 32 35.4	+2.1
	baz=214						
K20K				S	S	20 32 35.4	+2.1
	baz=214						
GLI	Glacier Island	86.97	20	IAmb	IAmb	20 22 20.1	
	comp=Z,104nm,1.2s						
GLI	Glacier Island	86.97	20	P	P	20 22 17.5	-0.5
	baz=220						
GLI				S	S	20 32 33.4	0.0
	baz=220						
H17K	Granite Mounta	86.98	12	IAmb	IAmb	20 22 21.5	
	comp=Z,87nm,0.8s						
H17K	Granite Mounta	86.98	12	P	P	20 22 17.8	-0.1
	baz=209,SNR=69						
H17K				S	S	20 32 35.5	+2.1
	baz=209						
H17K				S	S	20 32 35.5	+2.1
	baz=209						
ULN	Ulaanbaatar	87.01	323	P	P	20 22 18.3	-0.4
ULN				IAmb	IAmb	20 22 21.7	
	comp=Z,81nm,1.2s						
ULN	Ulaanbaatar	87.01	323	d iP	P	20 22 19.5	+0.8
ULN	Ulaanbaatar	87.01	323	P	P	20 22 19.0	+0.3
ULN				pP	pP	20 23 21.4	0.0
ELS	Elsinore Mount	87.01	53	IAmb	IAmb	20 22 22.1	
	comp=Z,153nm,1.1s						
FID	Port Fidalgo	87.07	20	IAmb	IAmb	20 22 20.4	
	comp=Z,105nm,1.1s						
PPLA	Purkeypile	87.07	16	P	P	20 22 18.2	-0.4
	baz=216						
PPLA				S	S	20 32 33.5	-1.1
	baz=216						
J19K	Poorman	87.12	15	P	P	20 22 18.4	-0.2
	baz=213,SNR=25						
J19K				S	S	20 32 38.4	+3.7
	baz=213						
J19K				S	S	20 32 38.4	+3.7
	baz=213						
KAIM	Kayak Island	87.14	21	IAmb	IAmb	20 22 21.5	
	comp=Z,128nm,1.0s						
KAIM	Kayak Island	87.14	21	P	P	20 22 19.1	+0.4
	baz=223						
EYAK	Cordova Ski Ar	87.16	20	P	P	20 22 18.9	+0.1
EYAK	Cordova Ski Ar	87.16	20	P	P	20 22 18.6	-0.2
	baz=222,SNR=6.4						
EYAK				S	S	20 32 35.1	0.0
	baz=222						
BAR	Barrett	87.18	54	IAmb	IAmb	20 22 22.7	
	comp=Z,135nm,1.0s						
CUT	Chulitna	87.21	17	IAmb	IAmb	20 22 20.2	
	comp=Z,79nm,0.9s						
CUT	Chulitna	87.21	17	P	P	20 22 17.6	-1.4
	baz=218,SNR=12						
CUT				S	S	20 32 34.6	-1.0
	baz=218						
SML	Sawmill	87.30	19	P	P	20 22 18.4	-1.2
	baz=219,SNR=7.1						
SML				S	S	20 32 38.1	+1.4
	baz=219						
G17K	Kiwalik Mounta	87.33	12	P	P	20 22 19.8	+0.2
	baz=208,SNR=52						
G17K				S	S	20 32 39.6	+2.9
	baz=208						
G17K				S	S	20 32 39.6	+2.9
	baz=208						
GTA	Gaotai	87.34	313	eP	P	20 22 21.3	+0.9
GTA				pP	pP	20 23 23.9	+0.7
GTA				SKS	SKSac	20 32 21.0	-1.7
GTA				S	S	20 32 39.2	+1.0
GTA				SS	SS	20 38 31.4	+1.5
GTA				pmax	pmax		
	comp=Z,26nm,1.1s						
SONM	Songino Array	87.37	323	P	P	20 22 20.5	+0.1
	comp=Z,28nm,0.9s,baz=135,slow=4.1,SNR=70						
SONM				pP	pP	20 23 23.0	-0.1
	comp=Z,8.3nm,0.8s,baz=145,slow=4.9,SNR=3.0						
SONM				S	SKSac	20 32 21.0	-1.4
	comp=Z,0.9nm,1.0s,baz=174,slow=7.1,SNR=4.2						
SONM				PKKP	PKKPdf	20 40 06.0	+0.9
	comp=Z,3.3nm,0.9s,baz=266,slow=2.5,SNR=10						
SONM				PKPPKP	P'P'df	20 48 17.7	+1.1
	comp=Z,3.7nm,1.2s,baz=223,slow=1.0,SNR=4.6						
	comp=Z,28nm,0.9s						
SONM	Songino Array	87.37	323	P	P	20 22 20.1	-0.3
I02E	Swisshome, OR	87.38	41	IAmb	IAmb	20 22 24.0	
	comp=Z,157nm,0.9s						
ESJX	Sierra Juarez	87.46	55	IAmb	IAmb	20 22 24.9	
	comp=Z,125nm,1.0s						
GCSA	Galena City Sc	87.47	14	P	P	20 22 20.2	0.0
	baz=212,SNR=25						
GCSA				S	S	20 32 41.3	+3.4
	baz=212						
M23K	Glacier View	87.47	19	P	P	20 22 19.0	-1.4
	baz=220						

M23K				S	**S**	**20 32 39.1**	**+0.8**
	baz=220						
M23K				S	**S**	**20 32 39.1**	**+0.8**
	baz=220						
I03D	**Drain, OR**	**87.49**	**42**	IAmb	IAmb	20 22 24.2	
	comp=Z,162nm,0.9s						
H18K	**Honhosa River**	**87.49**	**13**	P	**P**	**20 22 20.7**	**+0.4**
	baz=210,SNR=13						
H18K				S	**S**	**20 32 41.0**	**+2.7**
	baz=210						
BBOR	**Butler Butte**	**87.52**	**43**	IAmb	IAmb	20 22 26.0	
	comp=Z,81nm,1.0s						
MDPB	**Devils Postpil**	**87.53**	**49**	IAmb	IAmb	20 22 24.9	
	comp=Z,232nm,1.1s						
DIB	**Dawson Inlet,**	**87.57**	**31**	IAmb	IAmb	20 22 24.0	
	comp=Z,140nm,1.0s						
DNR	**Dunn Ranch,Anz**	**87.58**	**53**	IAmb	IAmb	20 22 25.1	
	comp=Z,233nm,1.1s						
J20K	**Nowinta River**	**87.63**	**15**	P	**P**	**20 22 20.6**	**-0.4**
	baz=214						
J20K				S	**S**	**20 32 41.8**	**+2.3**
	baz=214						
J20K				S	**S**	**20 32 41.8**	**+2.3**
	baz=214						
SCM	**Sheep Creek Mo**	**87.63**	**19**	P	**P**	**20 22 20.3**	**-0.9**
	baz=220,SNR=8.2						
SCM				S	**S**	**20 32 40.8**	**+1.0**
	baz=220						
BEKR	**Beckworth**	**87.64**	**46**	IAmb	IAmb	20 22 25.2	
	comp=Z,209nm,1.1s						
HG4B	**Hotspring**	**87.66**	**32**	IAmb	IAmb	20 22 24.8	
	comp=Z,183nm,1.1s						
CWC	**Cottonwood Cre**	**87.72**	**50**	IAmb	IAmb	20 22 25.7	
	comp=Z,126nm,1.0s						
BERG	**Berg Lake**	**87.73**	**21**	IAmb	IAmb	20 22 23.6	
	comp=Z,112nm,0.8s						
PFO	**Pinyon Flats O**	**87.73**	**53**	P	**P**	**20 22 23.3**	**+0.9**
	comp=Z,94nm,0.9s,baz=256,slow=3.3,SNR=53						
PFO				PP	**PP**	**20 25 53.0**	**+0.6**
	comp=Z,7.5nm,0.9s,baz=276,slow=4.8,SNR=3.8						
	comp=Z,94nm,0.9s						
PFO	**Pinyon Flats O**	**87.73**	**53**	P	**P**	**20 22 22.4**	**0.0**
PFO				IAmb	IAmb	20 22 25.7	
	comp=Z,161nm,1.1s						
PFO	**Pinyon Flats O**	**87.73**	**53** *c*	*i*P	**P**	**20 22 23.2**	**+0.9**
PFO				pmax	pmax		
	comp=Z,274nm,1.1s						
YUH	**Yuha Desert**	**87.74**	**54**	IAmb	IAmb	20 22 25.8	
	comp=Z,166nm,1.1s						
MOBC	**Moresby Island**	**87.78**	**31**	IAmb	IAmb	20 22 25.3	
	comp=Z,163nm,1.2s						
WSHM	**Spangler Hills**	**87.79**	**51**	IAmb	IAmb	20 22 25.9	
	comp=Z,178nm,1.0s						
PMD	**Palm Desert**	**87.81**	**53**	IAmb	IAmb	20 22 25.8	
	comp=Z,204nm,1.1s						
KLU	**Klutina**	**87.81**	**20**	P	**P**	**20 22 21.0**	**-1.0**
	baz=222,SNR=11						
KLU				S	**S**	**20 32 41.2**	**-0.3**
	baz=222						
BMRM	**Bremner River**	**87.84**	**20**	P	**P**	**20 22 20.6**	**-1.6**
	baz=223,SNR=7.9						
BMRM				S	**S**	**20 32 42.4**	**+0.6**
	baz=223						
CHUM	**Lake Minchumin**	**87.84**	**16**	P	**P**	**20 22 20.8**	**-1.2**
	baz=216,SNR=33						
CHUM				S	**S**	**20 32 41.4**	**-0.1**
	baz=216						
SNH	**Sunshine Point**	**87.87**	**22**	IAmb	IAmb	20 22 25.2	
	comp=Z,70nm,0.9s						
SFX	**San Felipe**	**87.92**	**56**	IAmb	IAmb	20 22 26.4	
	comp=Z,374nm,1.8s						
COR	**Corvallis**	**87.95**	**41**	P	**P**	**20 22 23.5**	**+0.5**
COR				IAmb	IAmb	20 22 26.7	
	comp=Z,213nm,1.1s						
COR	**Corvallis**	**87.95**	**41**	P	**P**	**20 22 23.5**	**+0.5**
COR				pmax	pmax		
	comp=Z,213nm,1.1s						
TRF	**Thorofare Moun**	**88.03**	**17**	P	**P**	**20 22 21.7**	**-1.4**
	baz=218,SNR=14						
TRF				S	**S**	**20 32 42.1**	**-1.7**
	baz=218						
WAT1	**Susitna Watana**	**88.03**	**18**	P	**P**	**20 22 21.7**	**-1.3**
	baz=219						
WAT1				S	**S**	**20 32 43.7**	**+0.2**
	baz=219						
F17K	**Baldwin Pennin**	**88.06**	**11**	IAmb	IAmb	20 22 27.0	
	comp=Z,169nm,0.9s						
F17K	**Baldwin Pennin**	**88.06**	**11**	P	**P**	**20 22 23.3**	**+0.4**
	baz=208,SNR=66						
F17K				S	**S**	**20 32 46.1**	**+2.6**
	baz=208						
WAX	**Waxell Ridge**	**88.06**	**21**	IAmb	IAmb	20 22 25.0	
	comp=Z,72nm,0.8s						
I20K	**Naaghedeneel**	**88.06**	**15**	IAmb	IAmb	20 22 27.1	
	comp=Z,102nm,0.9s						
I20K	**Naaghedeneel**	**88.06**	**15**	P	**P**	**20 22 23.1**	**+0.1**
	baz=214						
I20K				S	**S**	**20 32 47.5**	**+4.0**
	baz=214						
WAT6	**Susitna Watana**	**88.08**	**18**	P	**P**	**20 22 22.1**	**-1.3**
	baz=220,SNR=15						
WAT6				S	**S**	**20 32 44.3**	**+0.1**
	baz=220						
G18K	**Tagagawik**	**88.08**	**12**	IAmb	IAmb	20 22 26.8	
	comp=Z,108nm,1.0s						
G18K	**Tagagawik**	**88.08**	**12**	P	**P**	**20 22 22.7**	**-0.4**
	baz=210,SNR=80						
G18K				S	**S**	**20 32 45.2**	**+1.4**
	baz=210						
I04A	**Tendick Farm,**	**88.13**	**42**	IAmb	IAmb	20 22 26.9	
	comp=Z,196nm,1.0s						
GSC	**Goldstone, Bar**	**88.17**	**52**	IAmb	IAmb	20 22 27.8	
	comp=Z,228nm,1.4s						
MESA	**MESA**	**88.18**	**22**	IAmb	IAmb	20 22 26.2	
	comp=Z,61nm,0.7s						
MESA	**MESA**	**88.18**	**22**	P	**P**	**20 22 23.5**	**-0.5**
	baz=225,SNR=8.6						
MESA				S	**S**	**20 32 45.4**	**+0.1**
	baz=225						
CRQM	**Cirque**	**88.18**	**21**	IAmb	IAmb	20 22 27.4	
	comp=Z,48nm,0.8s						
M24K	**Tolsona, Glenn**	**88.19**	**19**	P	**P**	**20 22 23.8**	**+0.1**
	baz=221,SNR=7.6						
M24K				S	**S**	**20 32 47.3**	**+2.2**
	baz=221						
CRQE	**Cirque**	**88.19**	**21**	P	**P**	**20 22 22.5**	**-1.4**
	baz=224,SNR=8.4						
CRQE				S	**S**	**20 32 45.5**	**+0.2**
	baz=224						
H19K	**Roundabout Mou**	**88.23**	**13**	IAmb	IAmb	20 22 26.1	
	comp=Z,61nm,0.9s						
H19K	**Roundabout Mou**	**88.23**	**13**	P	**P**	**20 22 23.8**	**0.0**
	baz=212						
H19K				S	**S**	**20 32 48.7**	**+3.6**
	baz=212						
HOLB	**Holberg**	**88.31**	**34**	IAmb	IAmb	20 22 27.9	
	comp=Z,200nm,1.0s						
N25K	**Chitina, Valde**	**88.32**	**20**	P	**P**	**20 22 23.2**	**-1.2**
	baz=223,SNR=18						
N25K				S	**S**	**20 32 47.7**	**+1.4**
	baz=223						
N25K				S	**S**	**20 32 47.7**	**+1.4**
	baz=223						
RYN	**Ryan**	**88.36**	**48**	IAmb	IAmb	20 22 28.6	
	comp=Z,203nm,1.1s						
BPAW	**Bear Paw Mtn.**	**88.37**	**16**	P	**P**	**20 22 23.5**	**-1.0**
	baz=217,SNR=9.6						
BPAW				S	**S**	**20 32 45.9**	**-0.7**
	baz=217						
NVAR	**Mina Array Bea**	**88.43**	**48**	P	**P**	**20 22 26.6**	**+0.9**
	comp=Z,138nm,1.0s,baz=230,slow=5.2,SNR=192						
NVAR				PP	**PP**	**20 25 59.9**	**+1.9**
	comp=Z,4.8nm,1.0s,baz=241,slow=9.3,SNR=3.2						
	comp=Z,138nm,1.0s						
NVAR	**Mina Array Bea**	**88.43**	**48**	P	**P**	**20 22 25.8**	**+0.1**
F18K	**Selawik**	**88.50**	**12**	P	**P**	**20 22 24.7**	**-0.3**
	baz=209						
F18K				S	**S**	**20 32 49.9**	**+2.4**
	baz=209						
F18K				S	**S**	**20 32 49.9**	**+2.4**
	baz=209						
BC3	**Big Chuckawall**	**88.51**	**54**	IAmb	IAmb	20 22 29.8	
	comp=Z,241nm,1.2s						
E17K	**Hotham Inlet**	**88.53**	**11**	P	**P**	**20 22 25.4**	**+0.3**
	baz=207						
E17K				S	**S**	**20 32 50.4**	**+2.5**
	baz=207						
H20K	**Anotleneega Mo**	**88.55**	**14**	P	**P**	**20 22 25.1**	**-0.2**
	baz=213						
H20K				S	**S**	**20 32 51.2**	**+3.0**
	baz=213						
H20K				S	**S**	**20 32 51.2**	**+3.0**
	baz=213						
DHY	**Denali Highway**	**88.57**	**18**	P	**P**	**20 22 24.7**	**-1.0**
	baz=220,SNR=11						
DHY				S	**S**	**20 32 49.7**	**+0.9**
	baz=220						
G19K	**Purcell Mounta**	**88.62**	**13**	IAmb	IAmb	20 22 28.4	
	comp=Z,62nm,0.8s						
G19K	**Purcell Mounta**	**88.62**	**13**	P	**P**	**20 22 23.9**	**-1.7**
	baz=211						
G19K				S	**S**	**20 32 50.3**	**+1.5**
	baz=211						
G19K				S	**S**	**20 32 50.3**	**+1.5**
	baz=211						
MCK	**McKinley**	**88.63**	**17**	P	**P**	**20 22 24.5**	**-1.3**
	baz=219,SNR=12						
MCK				S	**S**	**20 32 48.5**	**-0.5**
	baz=219						
CRAG	**Craig**	**88.64**	**29**	P	**P**	**20 22 23.8**	**-2.1**
	baz=233						
TABL	**Table Mountain**	**88.65**	**22**	IAmb	IAmb	20 22 27.8	
	comp=Z,70nm,0.8s						
SIT	**Sitka**	**88.66**	**27**	P	**P**	**20 22 24.2**	**-1.8**
	baz=231						
SIT				S	**S**	**20 32 51.3**	**+1.9**
	baz=231						
MCARA	**McCarthy VSAT**	**88.67**	**21**	P	**P**	**20 22 25.4**	**-0.6**
	baz=224,SNR=9.7						
MCARA				S	**S**	**20 32 49.6**	**+0.1**
	baz=224						
TROLL	**Troll, Antarti**	**88.68**	**184**	⇑P	**P**	**20 22 25.7**	**-0.5**
	comp=Z,9µm,0.7s						
TROLL				⇑pP	**pP**	**20 23 29.4**	**+0.1**
	comp=Z,2µm,0.7s						
TROLL				⇑S	**S**	**20 32 48.0**	**-1.9**
	comp=N,276nm,0.8s						
GMN	**Gold Mountain**	**88.69**	**50**	IAmb	IAmb	20 22 30.0	
	comp=Z,89nm,0.9s						
HARP	**HAARP**	**88.73**	**19**	P	**P**	**20 22 25.0**	**-1.3**
	baz=222,SNR=8.7						
PCA	**Pinnacle**	**88.73**	**23**	IAmb	IAmb	20 22 27.9	
	comp=Z,55nm,0.8s						
PINM	**Pinnacle**	**88.73**	**23**	P	**P**	**20 22 25.4**	**-0.9**
	baz=227						
BWN	**Browne**	**88.83**	**17**	IAmb	IAmb	20 22 31.9	
	comp=Z,119nm,0.8s						
OZB	**Mount Ozzard**	**88.86**	**37**	IAmb	IAmb	20 22 30.4	
	comp=Z,182nm,1.1s						
S31K	**Pelican**	**88.86**	**26**	IAmb	IAmb	20 22 30.0	
	comp=Z,109nm,1.0s						
S31K	**Pelican**	**88.86**	**26**	P	**P**	**20 22 25.5**	**-1.4**
	baz=230,SNR=8.4						
BCPM	**Bancas Point**	**88.86**	**23**	IAmb	IAmb	20 22 39.6	
	comp=Z,153nm,1.3s						
D17K	**Noatak River**	**88.87**	**10**	P	**P**	**20 22 26.1**	**-0.6**
	baz=206						
D17K				S	**S**	**20 32 53.5**	**+2.6**
	baz=206						
D17K				S	**S**	**20 32 53.5**	**+2.6**
	baz=206						
BARN	**Barnard Glacie**	**88.91**	**21**	IAmb	IAmb	20 22 29.1	
	comp=Z,62nm,0.8s						
CTG	**Chitna Glacier**	**88.95**	**22**	P	**P**	**20 22 25.5**	**-2.0**
	baz=226,SNR=16						
CTG				S	**S**	**20 32 53.1**	**+0.7**
	baz=226						
CTGM	**Chitina Glacie**	**88.95**	**22**	IAmb	IAmb	20 22 29.1	
	comp=Z,53nm,0.8s						
LOGN	**Logan Glacier**	**88.97**	**22**	IAmb	IAmb	20 22 29.2	
	comp=Z,41nm,0.7s						
NVL	**N'lazarevskaya**	**89.02**	**187**	*e*P	**P**	**20 22 27.0**	**-0.6**
NVL				*e*		20 25 57.7	
NVL				*e*PPP	PPP	20 27 59.0	
NVL				*e*S	**SKSac**	**20 32 30.8**	**-0.7**
NVL				*e*SS	**SS**	**20 38 54.5**	**+3.4**
NVL				*e*SSS	SSS	20 42 32.2	
NVL				pmax	pmax		
	comp=Z,213nm,0.9s						
U33K	**Whale Pass**	**89.03**	**28**	IAmb	IAmb	20 22 30.7	
	comp=Z,102nm,1.0s						
U33K	**Whale Pass**	**89.03**	**28**	P	**P**	**20 22 25.6**	**-2.1**
	baz=233,SNR=6.6						
C16K	**Lisburne Hills**	**89.04**	**9**	IAmb	IAmb	20 22 30.8	
	comp=Z,70nm,1.1s						
C16K	**Lisburne Hills**	**89.04**	**9**	P	**P**	**20 22 26.2**	**-1.3**
	baz=204,SNR=8.2						
C16K				S	**S**	**20 32 55.7**	**+3.2**
	baz=204						
C16K				S	**S**	**20 32 55.7**	**+3.2**
	baz=204						
E18K	**Tukpahlearik C**	**89.05**	**11**	IAmb	IAmb	20 22 31.1	
	comp=Z,68nm,1.1s						
E18K	**Tukpahlearik C**	**89.05**	**11**	P	**P**	**20 22 25.9**	**-1.7**
	baz=208,SNR=27						
E18K				S	**S**	**20 32 55.0**	**+2.3**
	baz=208						
E18K				S	**S**	**20 32 55.0**	**+2.3**
	baz=208						
PAX	**Paxson**	**89.06**	**19**	P	**P**	**20 22 25.9**	**-1.9**
	baz=222,SNR=9.2						
PAX				S	**S**	**20 32 53.4**	**+0.2**
	baz=222						
F19K	**Shaleruckik Mo**	**89.07**	**12**	P	**P**	**20 22 26.3**	**-1.4**
	baz=211,SNR=27						
F19K				S	**S**	**20 32 53.2**	**+0.3**
	baz=211						
BBB	**Bella Bella**	**89.16**	**33**	IAmb	IAmb	20 22 31.7	
	comp=Z,130nm,0.9s						
SLBS	**Sierra La Lagu**	**89.17**	**65**	P	**P**	**20 22 30.7**	**+1.4**
SLBS				IAmb	IAmb	20 22 33.7	
	comp=Z,207nm,1.0s						
H21K	**Melozitna Rive**	**89.17**	**15**	P	**P**	**20 22 27.2**	**-1.0**
	baz=215,SNR=28						
H21K				S	**S**	**20 32 54.7**	**+0.7**
	baz=215						
H21K				S	**S**	**20 32 54.7**	**+0.7**
	baz=215						
MTPC	**Mountain Pass**	**89.18**	**52**	IAmb	IAmb	20 22 32.6	
	comp=Z,210nm,1.1s						
RDOG	**Red Dog Mine**	**89.22**	**10**	IAmb	IAmb	20 22 31.8	
	comp=Z,81nm,1.0s						
RDOG	**Red Dog Mine**	**89.22**	**10**	P	**P**	**20 22 28.3**	**-0.1**
	baz=206,SNR=13						
RDOG				S	**S**	**20 32 55.3**	**+1.1**
	baz=206						
O28M	**Mount Upton**	**89.22**	**22**	IAmb	IAmb	20 22 29.9	
	comp=Z,111nm,1.4s						
O28M	**Mount Upton**	**89.22**	**22**	P	**P**	**20 22 28.3**	**-0.6**
	baz=227						
O28M				S	**S**	**20 32 57.0**	**+1.8**
	baz=227						
IMAR	**Indian Mountai**	**89.22**	**14**	P	**P**	**20 22 27.8**	**-0.7**
PIX	**Pinacate**	**89.22**	**56**	IAmb	IAmb	20 22 32.4	
	comp=Z,220nm,1.1s						
S32K	**Killisnoo**	**89.23**	**27**	IAmb	IAmb	20 22 31.3	
	comp=Z,59nm,1.0s						
S32K	**Killisnoo**	**89.23**	**27**	P	**P**	**20 22 28.8**	**+0.1**
	baz=232						
V35K	**Ketchikan**	**89.24**	**29**	IAmb	IAmb	20 22 31.9	
	comp=Z,153nm,1.0s						
V35K	**Ketchikan**	**89.24**	**29**	P	**P**	**20 22 28.4**	**-0.3**
	baz=234,SNR=14						
V35K				S	**S**	**20 32 57.5**	**+2.6**
	baz=234						
V35K				S	**S**	**20 32 57.5**	**+2.6**
	baz=234						
NEA2	**Nenana**	**89.27**	**17**	P	**P**	**20 22 26.9**	**-1.8**
	baz=219,SNR=12						
NEA2				S	**S**	**20 32 54.6**	**-0.3**
	baz=219						
SNAA	**Sanae**	**89.29**	**182**	⇑P	**P**	**20 22 28.1**	**-0.9**
	comp=Z,2µm,0.7s						
SNAA				⇑S	**S**	**20 32 53.5**	**-1.9**
	comp=N,415nm,1.7s						
SNAA	**Sanae**	**89.29**	**182**	P	**P**	**20 22 28.2**	**-0.9**
	comp=N,126nm,0.9s,baz=205,slow=6.5,SNR=192						
SNAA				pP	**pP**	**20 23 30.5**	**-1.6**
	comp=N,14nm,0.7s,baz=177,slow=5.4,SNR=2.1						
	comp=N,126nm,0.9s						
SNAA	**Sanae**	**89.29**	**182**	P	**P**	**20 22 27.5**	**-1.5**
SNAA				IAmb	IAmb	20 22 30.2	
	comp=Z,136nm,0.8s						
SNAA	**Sanae**	**89.29**	**182** *c*	*i*P	**P**	**20 22 28.0**	**-1.0**
SNAA				pmax	pmax		
	comp=Z,171nm,0.9s						
RUBB	**Prince Rupert**	**89.30**	**31**	IAmb	IAmb	20 22 32.4	
	comp=Z,133nm,1.1s						
P29M	**Windy Craggy**	**89.35**	**24**	IAmb	IAmb	20 22 31.4	
	comp=Z,151nm,1.1s						
P29M	**Windy Craggy**	**89.35**	**24**	P	**P**	**20 22 29.0**	**-0.2**
	baz=229						
P29M				S	**S**	**20 32 57.0**	**+1.1**
	baz=229						
M26K	**Nabesna, AK**	**89.42**	**20**	P	**P**	**20 22 28.6**	**-0.9**
	baz=224,SNR=18						
M26K				S	**S**	**20 32 57.5**	**+1.1**
	baz=224						
M26K				S	**S**	**20 32 57.5**	**+1.1**
	baz=224						
113A	**Mohawk Valley,**	**89.45**	**55**	IAmb	IAmb	20 22 33.9	
	comp=Z,187nm,1.1s						
O29M	**Mount Kennedy**	**89.49**	**23**	P	**P**	**20 22 29.4**	**-0.6**
	baz=228						
O29M				S	**S**	**20 32 58.0**	**+0.7**
	baz=228						
G05A	**Wamic**	**89.50**	**41**	IAmb	IAmb	20 22 33.5	
	comp=Z,163nm,1.0s						
GOMU	**GeErMu**	**89.52**	**309**	P	**P**	**20 22 31.7**	**+0.7**
GOMU				pmax	pmax		
	comp=Z,11nm,0.9s						
C17K	**DeLong Mountai**	**89.56**	**10**	P	**P**	**20 22 30.2**	**+0.2**
	baz=206						
C17K				S	**S**	**20 32 59.5**	**+2.1**
	baz=206						
WRAK	**Wrangell Islan**	**89.56**	**28**	IAmb	IAmb	20 22 33.0	
	comp=Z,141nm,0.9s						
WRAK	**Wrangell Islan**	**89.56**	**28**	P	**P**	**20 22 30.4**	**+0.2**
	baz=233,SNR=16						
WRAK				S	**S**	**20 32 60.0**	**+2.2**
	baz=233						
CLRS	**Cowichan Lake**	**89.56**	**37**	IAmb	IAmb	20 22 33.7	
	comp=Z,217nm,1.1s						
MENT	**Mentasta**	**89.58**	**19**	P	**P**	**20 22 29.8**	**-0.4**
K24K	**Donnelly Dome**	**89.59**	**18**	IAmb	IAmb	20 22 33.3	
	comp=Z,98nm,0.9s						
K24K	**Donnelly Dome**	**89.59**	**18**	P	**P**	**20 22 29.4**	**-0.9**
	baz=222						
K24K				S	**S**	**20 32 59.7**	**+1.8**
	baz=222						
K24K				S	**S**	**20 32 59.7**	**+1.8**
	baz=222						
I23K	**Minto, Yukon-K**	**89.63**	**16**	P	**P**	**20 22 29.3**	**-1.0**
	baz=218,SNR=8.5						
I23K				S	**S**	**20 32 59.5**	**+1.4**
	baz=218						
I23K				S	**S**	**20 32 59.5**	**+1.4**
	baz=218						
F20K	**Avaraart Lake**	**89.68**	**13**	P	**P**	**20 22 29.8**	**-0.7**
	baz=213						
F20K				S	**S**	**20 32 59.2**	**+0.7**
	baz=213						
F20K				S	**S**	**20 32 59.2**	**+0.7**
	baz=213						
HDA	**Harding Lake**	**89.71**	**17**	IAmb	IAmb	20 22 33.6	
	comp=Z,78nm,0.9s						
HDA	**Harding Lake**	**89.71**	**17**	P	**P**	**20 22 29.6**	**-1.2**
	baz=221,SNR=51						
HDA				S	**S**	**20 33 00.1**	**+1.1**
	baz=221						
H22K	**Ishtalitna Cre**	**89.71**	**15**	P	**P**	**20 22 30.3**	**-0.4**
	baz=217,SNR=21						
H22K				S	**S**	**20 33 00.5**	**+1.5**
	baz=217						
H22K				S	**S**	**20 33 00.5**	**+1.5**
	baz=217						
G21K	**Allakaket**	**89.72**	**14**	P	**P**	**20 22 30.5**	**-0.2**
	baz=215,SNR=32						
G21K				S	**S**	**20 33 01.3**	**+2.4**
	baz=215						
E19K	**Redstone River**	**89.72**	**12**	IAmb	IAmb	20 22 35.4	
	comp=Z,57nm,0.9s						
E19K	**Redstone River**	**89.72**	**12**	P	**P**	**20 22 29.9**	**-0.9**
	baz=211,SNR=44						
E19K				S	**S**	**20 33 00.5**	**+1.6**
	baz=211						
E19K				S	**S**	**20 33 00.5**	**+1.6**
	baz=211						
YUK8	**Steele Glacier**	**89.72**	**22**	P	**P**	**20 22 30.7**	**-0.5**
	baz=227,SNR=31						
YUK8				S	**S**	**20 32 59.1**	**-0.6**
	baz=227						
M27K	**Edge Creek, AK**	**89.75**	**20**	P	**P**	**20 22 30.5**	**-0.7**
	baz=225						
M27K				S	**S**	**20 33 01.8**	**+2.1**
	baz=225						
M27K				S	**S**	**20 33 01.8**	**+2.1**
	baz=225						
L26K	**Log Cabin Wild**	**89.76**	**19**	P	**P**	**20 22 30.6**	**-0.4**
	baz=224,SNR=14						
PLBC	**Pleasant Camp**	**89.77**	**24**	P	**P**	**20 22 30.8**	**-0.4**
	baz=230,SNR=21						
LSA	**Lhasa**	**89.81**	**302**	P	**P**	**20 22 28.4**	**-4.2**
LSA				pmax	pmax		
	comp=Z,14nm,0.7s						
BESE	**Bessie Mountai**	**89.81**	**26**	IAmb	IAmb	20 22 34.1	
	comp=Z,203nm,1.0s						
COLA	**College**	**89.82**	**17**	P	**P**	**20 22 29.4**	**-1.8**
COLA	**College**	**89.82**	**17**	P	**P**	**20 22 29.8**	**-1.4**
COLA	**College**	**89.82**	**17** *d*	*i*P	**P**	**20 22 29.9**	**-1.3**
COLA				pmax	pmax		
	comp=Z,118nm,0.9s						
COLA	**College**	**89.82**	**17**	P	**P**	**20 22 30.5**	**-0.6**
	baz=220						
COLA	**College**	**89.82**	**17**	P	**P**	**20 22 29.8**	**-1.4**
JIS	**Juneau Island**	**89.82**	**26**	P	**P**	**20 22 32.4**	**+1.1**
RIDG	**Independent Ri**	**89.82**	**18**	IAmb	IAmb	20 22 33.9	
	comp=Z,70nm,0.8s						
RIDG	**Independent Ri**	**89.82**	**18**	P	**P**	**20 22 30.3**	**-1.1**
	baz=222,SNR=30						
RIDG				S	**S**	**20 33 02.2**	**+2.1**
	baz=222						
YUK3	**Moose Creek**	**89.82**	**21**	P	**P**	**20 22 30.8**	**-0.8**
	baz=226,SNR=18						
YUK3				S	**S**	**20 33 02.4**	**+1.9**
	baz=226						
VNA3	**Neumayer Olymp**	**89.87**	**180**	⇑P	**P**	**20 22 30.7**	**-0.9**
	comp=Z,303nm,0.7s						
VNA3				⇑pP	**pP**	**20 23 34.4**	**-0.2**
	comp=Z,72nm,0.7s						
VNA3				⇑S	**S**	**20 32 56.7**	**-3.9**
	comp=E,64nm,1.0s						
SHPR	**Sheep Range**	**89.89**	**51**	IAmb	IAmb	20 22 36.1	
	comp=Z,111nm,1.1s						
LON	**Longmire**	**89.91**	**40**	IAmb	IAmb	20 22 35.0	
	comp=Z,88nm,1.0s						
G06A	**Carlson Farm,**	**89.93**	**42**	IAmb	IAmb	20 22 35.4	
	comp=Z,143nm,1.1s						
P30M	**Million Dollar**	**89.97**	**24**	P	**P**	**20 22 31.1**	**-1.1**
	baz=229						
DOT	**Dot Lake**	**89.99**	**19**	IAmb	IAmb	20 22 34.1	
	comp=Z,53nm,0.8s						
YUK6	**Outpost Mounta**	**90.00**	**23**	P	**P**	**20 22 30.7**	**-1.8**
	baz=228,SNR=7.2						
IL31		**90.00**	**17**	IAmb	IAmb	20 22 33.5	
	comp=Z,52nm,0.8s						
ILAR	**Eielson Array**	**90.00**	**17**	P	**P**	**20 22 30.8**	**-1.3**
	comp=Z,43nm,0.8s,baz=236,slow=5.4,SNR=111						
ILAR				pP	**pP**	**20 23 33.9**	**-1.2**
	comp=Z,4.1nm,0.7s,baz=239,slow=4.9,SNR=1.3						
ILAR				S	**SKSac**	**20 32 35.9**	**-1.1**
	comp=Z,0.9nm,0.7s,baz=238,slow=5.2,SNR=8.9						
ILAR				PKKP	**PKKPdf**	**20 40 01.6**	**+0.7**
	comp=Z,0.8nm,0.9s,baz=222,slow=1.2,SNR=4.3						
	comp=Z,43nm,0.8s						
ILAR	**Eielson Array**	**90.00**	**17**	P	**P**	**20 22 29.7**	**-2.4**
C18K	**Utukok River**	**90.04**	**10**	P	**P**	**20 22 31.1**	**-1.1**
	baz=208,SNR=15						
C18K				S	**S**	**20 33 02.0**	**+0.1**
	baz=208						
C18K				S	**S**	**20 33 02.0**	**+0.1**
	baz=208						
H23K	**Yukon River**	**90.11**	**16**	P	**P**	**20 22 30.7**	**-2.0**
	baz=218						
H23K				S	**S**	**20 33 03.2**	**+0.5**
	baz=218						
H23K				S	**S**	**20 33 03.2**	**+0.5**
	baz=218						
POKR	**Poker Plat Res**	**90.12**	**17**	P	**P**	**20 22 30.2**	**-2.5**
	baz=220,SNR=18						
POKR				S	**S**	**20 33 02.4**	**-0.3**
	baz=220						
POKR				S	**S**	**20 33 02.4**	**-0.3**
	baz=220						

BVCY	**Beaver Creek** baz=226,SNR=14	**90.13**	**21**	P	**P**	**20 22 30.1**	**-2.7**
BVCY	baz=226			S	**S**	**20 33 03.2**	**+0.3**
YUK4	**Talbot Arm** baz=228,SNR=20	**90.16**	**22**	P	**P**	**20 22 32.7**	**-0.5**
VNA2	**Neumayer--Watz** comp=Z,152nm,0.6s,baz=172,slow=4.1	**90.17**	**181**	⇑P	**P**	**20 22 32.7**	**-0.3**
VNA2	comp=E,42nm,1.0s,baz=190,slow=30			⇑S	**S**	**20 32 56.7**	**-6.5**
SKAG	**Skagway** comp=Z,116nm,0.9s	**90.18**	**25**	IAmb	IAmb	20 22 36.2	
SKAG	**Skagway**	**90.18**	**25**	P	**P**	**20 22 33.9**	**+0.9**
SKAG	**Skagway** baz=231,SNR=26	**90.18**	**25**	P	**P**	**20 22 29.9**	**-3.1**
HYT	**Haines Junctio** comp=Z,73nm,1.0s	**90.23**	**23**	IAmb	IAmb	20 22 35.3	
HYT	**Haines Junctio** baz=229,SNR=21	**90.23**	**23**	P	**P**	**20 22 32.8**	**-0.7**
SCRK	**Sand Creek** comp=Z,48nm,0.8s	**90.25**	**19**	IAmb	IAmb	20 22 36.1	
SCRK	**Sand Creek** baz=223,SNR=46	**90.25**	**19**	P	**P**	**20 22 32.6**	**-0.9**
L27K	**Beaver Creek,** baz=225	**90.27**	**20**	P	**P**	**20 22 32.1**	**-1.3**
L27K	baz=225			S	**S**	**20 33 05.3**	**+1.1**
W13A	**Hualapai Mount** comp=Z,200nm,1.1s	**90.28**	**53**	IAmb	IAmb	20 22 37.9	
BCAR	**Beaver Creek A**	**90.28**	**20**	P	**P**	**20 22 31.9**	**-1.6**
F21K	**Alatna River** baz=215	**90.31**	**14**	P	**P**	**20 22 33.1**	**-0.4**
F21K	baz=215			S	**S**	**20 33 05.1**	**+0.7**
F21K	baz=215			S	**S**	**20 33 05.1**	**+0.7**
J25K	**Salcha River,** baz=222,SNR=29	**90.31**	**18**	P	**P**	**20 22 32.3**	**-1.4**
J25K	baz=222			S	**S**	**20 33 04.9**	**+0.3**
J25K	baz=222			S	**S**	**20 33 04.9**	**+0.3**
U35K	**Hyder** baz=235	**90.32**	**29**	P	**P**	**20 22 33.1**	**-0.6**
ZAK	**Zakamensk**	**90.44**	**324**	*e*P	**P**	**20 22 34.0**	**-0.6**
ZAK	comp=Z,35nm,1.4s			pmax	pmax		
D19K	**Kuna River** baz=210	**90.45**	**11**	P	**P**	**20 22 34.1**	**0.0**
D19K	baz=210			S	**S**	**20 33 06.9**	**+1.3**
VNA1	**Neumayer--Stat** comp=Z,180nm,1.0s	**90.45**	**181**	⇑P	**P**	**20 22 33.6**	**-0.6**
Y14A	**Wickenburg** comp=Z,109nm,1.1s	**90.50**	**54**	IAmb	IAmb	20 22 38.6	
G22K	**Bettles** baz=216	**90.51**	**14**	P	**P**	**20 22 34.1**	**-0.3**
G22K	baz=216			S	**S**	**20 33 08.7**	**+2.5**
H24K	**Noodor Dome** baz=220	**90.56**	**16**	P	**P**	**20 22 35.0**	**+0.3**
H24K	baz=220			S	**S**	**20 33 08.5**	**+1.7**
H24K	baz=220			S	**S**	**20 33 08.5**	**+1.7**
B18K	**Kokolik River** baz=207	**90.58**	**10**	P	**P**	**20 22 35.3**	**+0.6**
B18K	baz=207			S	**S**	**20 33 08.5**	**+1.9**
B18K	baz=207			S	**S**	**20 33 08.5**	**+1.9**
E20K	**Nigu River** baz=212,SNR=57	**90.61**	**12**	P	**P**	**20 22 35.1**	**+0.2**
E20K	baz=212			S	**S**	**20 33 07.9**	**+0.7**
F07A	**Phinny Hill Vi** comp=Z,191nm,1.1s	**90.67**	**41**	IAmb	IAmb	20 22 38.9	
G23K	**Bananza Creek** baz=218	**90.70**	**15**	P	**P**	**20 22 34.9**	**-0.5**
G23K	baz=218			S	**S**	**20 33 09.1**	**+1.2**
G23K	baz=218			S	**S**	**20 33 09.1**	**+1.2**
C19K	**Lookout Ridge** comp=Z,67nm,0.9s	**90.72**	**11**	IAmb	IAmb	20 22 39.2	
C19K	**Lookout Ridge** baz=209,SNR=34	**90.72**	**11**	P	**P**	**20 22 35.6**	**+0.2**
C19K	baz=209			S	**S**	**20 33 09.2**	**+1.1**
C19K	baz=209			S	**S**	**20 33 09.2**	**+1.1**
O30N	**Mendenhall** comp=Z,78nm,0.9s	**90.72**	**23**	IAmb	IAmb	20 22 37.4	
O30N	**Mendenhall** baz=230,SNR=39	**90.72**	**23**	P	**P**	**20 22 35.4**	**-0.2**
MXC	**Moxie City** comp=Z,187nm,1.2s	**90.76**	**40**	IAmb	IAmb	20 22 39.3	
J26L	**Joseph Creek** comp=Z,50nm,0.8s	**90.76**	**18**	IAmb	IAmb	20 22 38.8	
J26L	**Joseph Creek** baz=224,SNR=44	**90.76**	**18**	P	**P**	**20 22 34.9**	**-0.8**
N30M	**Aishikik Lake** baz=229,SNR=20	**90.80**	**23**	P	**P**	**20 22 35.5**	**-0.5**
T35M	**Bob Quinn** comp=Z,75nm,1.1s	**90.83**	**28**	IAmb	IAmb	20 22 39.3	
T35M	**Bob Quinn** baz=235,SNR=15	**90.83**	**28**	P	**P**	**20 22 36.6**	**+0.4**
F22K	**John River** baz=216	**90.83**	**14**	P	**P**	**20 22 36.0**	**0.0**
F22K	baz=216			S	**S**	**20 33 11.9**	**+2.8**
LTY	**Liberty** comp=Z,222nm,1.3s	**90.84**	**40**	IAmb	IAmb	20 22 39.4	
K27K	**Chicken** baz=225	**90.88**	**19**	P	**P**	**20 22 36.2**	**0.0**
TLY	**Talaya**	**90.89**	**325**	⇓*e*P	**P**	**20 22 37.6**	**+1.0**
TLY	comp=Z,25nm,1.1s			pmax	pmax		
P32M	**Atlin** comp=Z,101nm,0.9s	**90.90**	**25**	IAmb	IAmb	20 22 38.9	
P32M	**Atlin** baz=232,SNR=24	**90.90**	**25**	P	**P**	**20 22 36.5**	**+0.1**
P32M	baz=232			S	**S**	**20 33 11.1**	**+1.0**
D20K	**Etivluk River** comp=Z,74nm,0.9s	**90.92**	**12**	IAmb	IAmb	20 22 39.0	
D20K	**Etivluk River** baz=212,SNR=44	**90.92**	**12**	P	**P**	**20 22 35.8**	**-0.5**
D20K	baz=212			S	**S**	**20 33 10.9**	**+1.1**
D20K	baz=212			S	**S**	**20 33 10.9**	**+1.1**
PRP	**Porcupine Dome** baz=222,SNR=17	**90.95**	**17**	P	**P**	**20 22 35.7**	**-1.0**
PRP	baz=222			S	**S**	**20 33 09.9**	**-0.6**
M29M	**Somme Creek** baz=228,SNR=19	**90.97**	**21**	P	**P**	**20 22 36.3**	**-0.5**
M29M	baz=228			S	**S**	**20 33 12.2**	**+1.5**
S34M	**Telegraph Cree** comp=Z,142nm,1.0s	**90.98**	**27**	IAmb	IAmb	20 22 39.8	
S34M	**Telegraph Cree** baz=234,SNR=31	**90.98**	**27**	P	**P**	**20 22 37.1**	**+0.4**
G08A	**Pilot Rock** comp=Z,207nm,1.2s	**91.01**	**42**	IAmb	IAmb	20 22 40.5	
COLD	**Coldfoot** comp=Z,53nm,1.0s	**91.06**	**15**	IAmb	IAmb	20 22 39.6	
COLD	**Coldfoot** baz=218,SNR=46	**91.06**	**15**	P	**P**	**20 22 37.4**	**+0.4**
COLD	baz=218			S	**S**	**20 33 13.2**	**+2.1**
WHY	**Whitehorse** comp=Z,145nm,0.9s	**91.11**	**24**	IAmb	IAmb	20 22 39.3	
WHY	**Whitehorse** baz=231,SNR=30	**91.11**	**24**	P	**P**	**20 22 36.4**	**-1.1**
WHY	baz=231			S	**S**	**20 33 15.5**	**+3.4**
Q32M	**Nakina River** comp=Z,107nm,0.9s	**91.11**	**26**	IAmb	IAmb	20 22 40.4	
Q32M	**Nakina River** baz=233	**91.11**	**26**	P	**P**	**20 22 36.6**	**-1.1**
Q32M	baz=233			S	**S**	**20 33 16.1**	**+3.8**
MG05	**Puerto Natales**	**91.15**	**147**	P	**P**	**20 22 38.8**	**+0.9**
MG05	comp=Z,171nm,1.1s			IAmb	IAmb	20 22 40.4	
E21K	**Killik River**	**91.22**	**13**	IAmb	IAmb	20 22 40.0	
	comp=Z,79nm,0.9s						
E21K	**Killik River** baz=214	**91.22**	**13**	P	**P**	**20 22 37.3**	**-0.4**
E21K	baz=214			S	**S**	**20 33 12.4**	**-0.1**
E21K	baz=214			S	**S**	**20 33 12.4**	**-0.1**
WAH2	**Wahluke Slope** comp=Z,269nm,1.4s	**91.28**	**40**	IAmb	IAmb	20 22 41.8	
N31M	**Braeburn, Yuko** baz=230,SNR=25	**91.30**	**23**	P	**P**	**20 22 37.0**	**-1.2**
N31M	baz=230			S	**S**	**20 33 15.1**	**+1.6**
G24K	**Hadweenzic Riv** baz=220,SNR=22	**91.33**	**16**	P	**P**	**20 22 38.0**	**-0.2**
E22K	**Anaktuvuk Pass** comp=Z,66nm,0.9s	**91.42**	**13**	IAmb	IAmb	20 22 41.2	
E22K	**Anaktuvuk Pass** baz=216	**91.42**	**13**	P	**P**	**20 22 38.3**	**-0.4**
E22K	baz=216			S	**S**	**20 33 14.3**	**-0.1**
E22K	baz=216			S	**S**	**20 33 14.3**	**-0.1**
A19K	**Wainwright** baz=208	**91.44**	**10**	P	**P**	**20 22 38.0**	**-0.6**
A19K	baz=208			S	**S**	**20 33 15.4**	**+1.0**
A19K	baz=208			S	**S**	**20 33 15.4**	**+1.0**
I26K	**Coal Creek Min** comp=Z,57nm,0.9s	**91.47**	**18**	IAmb	IAmb	20 22 41.7	
I26K	**Coal Creek Min** baz=224	**91.47**	**18**	P	**P**	**20 22 37.2**	**-1.6**
SPR3	**Spring Creek 3** comp=Z,105nm,1.3s	**91.49**	**49**	IAmb	IAmb	20 22 43.0	
L29M	**L29M** comp=Z,159nm,1.6s	**91.53**	**21**	IAmb	IAmb	20 22 41.3	
L29M	**L29M** baz=228,SNR=27	**91.53**	**21**	P	**P**	**20 22 37.8**	**-1.5**
EPH	**Ephrata** comp=Z,311nm,1.6s	**91.53**	**40**	IAmb	IAmb	20 22 42.8	
ELK	**Elko** comp=Z,69nm,1.1s	**91.55**	**47**	IAmb	IAmb	20 22 43.3	
TUC	**Tucson**	**91.61**	**56**	P	**P**	**20 22 41.5**	**+1.0**
TUC	**Tucson**	**91.61**	**56**	P	**P**	**20 22 41.5**	**+1.0**
TUC	comp=Z,233nm,1.3s			pmax	pmax		
CCUT	**Cedar City** comp=Z,204nm,1.3s	**91.62**	**51**	IAmb	IAmb	20 22 44.3	
M30M	**Minto, Yukon** comp=Z,105nm,0.9s	**91.64**	**22**	IAmb	IAmb	20 22 41.6	
M30M	**Minto, Yukon** baz=230,SNR=45	**91.64**	**22**	P	**P**	**20 22 38.6**	**-1.2**
M30M	baz=230			S	**S**	**20 33 17.7**	**+1.2**
P33M	**Teslin, Yukon** comp=Z,71nm,1.1s	**91.64**	**25**	IAmb	IAmb	20 22 41.9	
P33M	**Teslin, Yukon** baz=233,SNR=19	**91.64**	**25**	P	**P**	**20 22 39.4**	**-0.5**
P33M	baz=233			S	**S**	**20 33 18.3**	**+1.6**
C21K	**Knifeblade Rid** baz=213	**91.65**	**12**	P	**P**	**20 22 39.4**	**-0.3**
C21K	baz=213			S	**S**	**20 33 19.2**	**+2.8**
C21K	baz=213			S	**S**	**20 33 19.2**	**+2.8**
LLLB	**Lillooet** comp=Z,102nm,1.1s	**91.71**	**36**	IAmb	IAmb	20 22 43.4	
G25K	**Bearman Lake** baz=221,SNR=15	**91.73**	**16**	P	**P**	**20 22 40.3**	**+0.3**
DAWY	**Dawson** comp=Z,84nm,1.6s	**91.75**	**20**	IAmb	IAmb	20 22 42.1	
DAWY	**Dawson** baz=227,SNR=15	**91.75**	**20**	P	**P**	**20 22 40.1**	**-0.2**
DLBC	**Dease Lake** baz=235,SNR=42	**91.76**	**27**	P	**P**	**20 22 39.5**	**-1.0**
KNB	**Kanab** comp=Z,197nm,1.2s	**91.81**	**51**	IAmb	IAmb	20 22 45.1	
SZCU	**Shurtz Canyon** comp=Z,175nm,1.3s	**91.84**	**51**	IAmb	IAmb	20 22 45.2	
D22K	**Ayikyak River** comp=Z,92nm,0.8s	**91.85**	**13**	IAmb	IAmb	20 22 43.5	
D22K	**Ayikyak River** baz=215,SNR=53	**91.85**	**13**	P	**P**	**20 22 39.6**	**-1.0**
D22K	baz=215			S	**S**	**20 33 20.1**	**+1.9**
D22K	baz=215			S	**S**	**20 33 20.1**	**+1.9**
F24K	**Squaw Lake** baz=220	**91.85**	**15**	P	**P**	**20 22 39.8**	**-0.9**
F24K	baz=220			S	**S**	**20 33 19.1**	**+0.8**
E23K	**Chandalar** comp=Z,65nm,1.0s	**91.86**	**14**	IAmb	IAmb	20 22 43.2	
E23K	**Chandalar** baz=218	**91.86**	**14**	P	**P**	**20 22 40.4**	**-0.4**
E23K	baz=218			S	**S**	**20 33 18.7**	**+0.3**
R33M	**Jennings River** comp=Z,129nm,1.0s	**91.91**	**26**	IAmb	IAmb	20 22 44.0	
R33M	**Jennings River** baz=235	**91.91**	**26**	P	**P**	**20 22 40.1**	**-1.1**
B20K	**Meade River** baz=211	**91.93**	**11**	P	**P**	**20 22 39.6**	**-1.3**
E09A	**Wood Farm, Sta** comp=Z,141nm,1.5s	**92.06**	**41**	IAmb	IAmb	20 22 45.0	
B21K	**Ikpikpuk River** comp=Z,70nm,0.9s	**92.07**	**12**	IAmb	IAmb	20 22 44.3	
B21K	**Ikpikpuk River** baz=214	**92.07**	**12**	P	**P**	**20 22 40.7**	**-0.9**
B21K	baz=214			S	**S**	**20 33 20.2**	**+0.2**
N32M	**Quiet Lake** comp=Z,120nm,0.8s	**92.11**	**24**	IAmb	IAmb	20 22 44.1	
N32M	**Quiet Lake** baz=233	**92.11**	**24**	P	**P**	**20 22 40.9**	**-1.1**
I27K	**Kandik River** baz=225,SNR=25	**92.13**	**18**	P	**P**	**20 22 41.5**	**-0.5**
E24K	**Your Creek** baz=219	**92.14**	**15**	P	**P**	**20 22 40.9**	**-1.2**
E24K	baz=219			S	**S**	**20 33 21.1**	**+0.3**
E24K	baz=219			S	**S**	**20 33 21.1**	**+0.3**
MG02	**Cerro Sombrero**	**92.18**	**149**	P	**P**	**20 22 44.2**	**+1.6**
K29M	**Barlow Dome** comp=Z,66nm,1.4s	**92.22**	**21**	IAmb	IAmb	20 22 44.5	
K29M	**Barlow Dome** baz=229	**92.22**	**21**	P	**P**	**20 22 41.1**	**-1.5**
MFID	**Camas Ranch** comp=Z,70nm,1.1s	**92.24**	**45**	IAmb	IAmb	20 22 46.0	
M31M	**Drury Creek, Y** comp=Z,50nm,0.8s	**92.26**	**23**	IAmb	IAmb	20 22 43.8	
M31M	**Drury Creek, Y** baz=232,SNR=29	**92.26**	**23**	P	**P**	**20 22 41.0**	**-1.6**
TOLK	**Toolik Lake Re** baz=218,SNR=25	**92.33**	**14**	P	**P**	**20 22 41.6**	**-1.3**
TOLK	baz=218			S	**S**	**20 33 23.3**	**+0.8**
TOLK	baz=218			S	**S**	**20 33 23.3**	**+0.8**
D23K	**Nanushuk River** comp=Z,111nm,0.9s	**92.34**	**13**	IAmb	IAmb	20 22 45.9	
D23K	**Nanushuk River** baz=217,SNR=104	**92.34**	**13**	P	**P**	**20 22 43.0**	**+0.1**
D23K	baz=217			S	**S**	**20 33 23.2**	**+0.7**
J29N	**Klondike Camp** comp=Z,165nm,1.6s	**92.39**	**20**	IAmb	IAmb	20 22 45.4	
J29N	**Klondike Camp** baz=228,SNR=10	**92.39**	**20**	P	**P**	**20 22 42.6**	**-0.7**
F10A	**Beach Ranch, E** comp=Z,81nm,1.1s	**92.40**	**42**	IAmb	IAmb	20 22 48.9	
F25K	**Christian Rive** comp=Z,90nm,1.8s	**92.47**	**16**	IAmb	IAmb	20 22 46.5	
F25K	**Christian Rive** baz=222	**92.47**	**16**	P	**P**	**20 22 42.2**	**-1.3**
G26K	**Porcupine Rive** comp=Z,68nm,0.8s	**92.48**	**17**	IAmb	IAmb	20 22 46.8	
G26K	**Porcupine Rive** baz=224,SNR=51	**92.48**	**17**	P	**P**	**20 22 42.7**	**-0.8**
I28M	**Miner Creek** baz=227	**92.53**	**19**	P	**P**	**20 22 43.2**	**-0.8**
H27K	**Steamboat Moun** comp=Z,83nm,1.5s	**92.60**	**18**	IAmb	IAmb	20 22 46.5	
H27K	**Steamboat Moun** baz=226,SNR=21	**92.60**	**18**	P	**P**	**20 22 43.8**	**-0.4**
MAYO	**Mayo, Yukon** baz=230,SNR=5.9	**92.61**	**21**	P	**P**	**20 22 44.7**	**+0.5**
MTPU	**Mount Pierson** comp=Z,82nm,1.1s	**92.67**	**51**	IAmb	IAmb	20 22 49.6	
E25K	**Arctic Village** comp=Z,71nm,1.5s	**92.89**	**15**	IAmb	IAmb	20 22 48.0	
E25K	**Arctic Village** baz=222,SNR=20	**92.89**	**15**	P	**P**	**20 22 45.6**	**+0.2**
B22K	**Teshekpuk Lake** comp=Z,62nm,0.9s	**92.90**	**12**	IAmb	IAmb	20 22 47.9	
B22K	**Teshekpuk Lake** baz=215	**92.90**	**12**	P	**P**	**20 22 45.5**	**+0.1**
D24K	**Happy Valley** comp=Z,56nm,0.9s	**92.90**	**14**	IAmb	IAmb	20 22 48.1	
D24K	**Happy Valley** baz=219	**92.90**	**14**	P	**P**	**20 22 45.4**	**0.0**
F26K	**Sheenjek River** comp=Z,101nm,1.9s	**92.93**	**16**	IAmb	IAmb	20 22 48.6	
F26K	**Sheenjek River** baz=223	**92.93**	**16**	P	**P**	**20 22 46.2**	**+0.6**
G27K	**Doyon Strip** baz=225,SNR=20	**92.97**	**17**	P	**P**	**20 22 45.7**	**-0.1**
I29M	**Ogilvie Camp,** comp=Z,130nm,1.5s	**92.97**	**19**	IAmb	IAmb	20 22 47.4	
I29M	**Ogilvie Camp,** baz=228,SNR=36	**92.97**	**19**	P	**P**	**20 22 45.3**	**-0.5**
DUG	**Dugway, Tooele** comp=Z,60nm,1.3s	**93.03**	**48**	IAmb	IAmb	20 22 49.8	
C23K	**Itkillik River** comp=Z,105nm,0.9s	**93.06**	**13**	IAmb	IAmb	20 22 49.0	
C23K	**Itkillik River** baz=217	**93.06**	**13**	P	**P**	**20 22 46.5**	**+0.4**
C23K	baz=217			S	**S**	**20 33 31.3**	**+2.6**
C23K	baz=217			S	**S**	**20 33 31.3**	**+2.6**
X18A	**Snowflake** comp=Z,135nm,1.3s	**93.06**	**55**	IAmb	IAmb	20 22 50.8	
J30M	**Hart River** baz=230,SNR=17	**93.09**	**20**	P	**P**	**20 22 46.9**	**+0.4**
A21K	**Barrow** baz=212	**93.15**	**10**	P	**P**	**20 22 46.1**	**-0.4**
A21K	baz=212			S	**S**	**20 33 30.5**	**+1.1**
A21K	baz=212			S	**S**	**20 33 30.5**	**+1.1**
A22K	**Sinclair Lake** baz=213	**93.17**	**11**	P	**P**	**20 22 46.6**	**+0.1**
WTLY	**Watson Lake, Y** comp=Z,73nm,1.0s	**93.22**	**26**	IAmb	IAmb	20 22 49.7	
WTLY	**Watson Lake, Y** baz=236	**93.22**	**26**	P	**P**	**20 22 47.7**	**+0.5**
C24K	**Franklin Bluff** comp=Z,126nm,0.9s	**93.37**	**13**	IAmb	IAmb	20 22 50.3	
C24K	**Franklin Bluff** baz=219,SNR=59	**93.37**	**13**	P	**P**	**20 22 47.7**	**+0.1**
C24K	baz=219			S	**S**	**20 33 33.4**	**+1.9**
NEW	**Newport** comp=Z,41nm,0.9s	**93.43**	**40**	IAmb	IAmb	20 22 52.3	
W18A	**Petrified Fore** comp=Z,122nm,1.3s	**93.44**	**54**	IAmb	IAmb	20 22 52.2	
I30M	**Mount Dempster** comp=Z,71nm,1.2s	**93.49**	**20**	IAmb	IAmb	20 22 49.8	
I30M	**Mount Dempster** baz=230	**93.49**	**20**	P	**P**	**20 22 47.7**	**-0.7**
AY03	**Cochrane** comp=Z,46nm,0.5s	**93.53**	**143**	IAmb	IAmb	20 25 41.2	
H29M	**Whitestone** comp=Z,74nm,1.3s	**93.53**	**19**	IAmb	IAmb	20 22 50.3	
H29M	**Whitestone** baz=228	**93.53**	**19**	P	**P**	**20 22 47.8**	**-0.5**
D25K	**Kavik River** baz=221	**93.59**	**14**	P	**P**	**20 22 48.0**	**-0.7**
HVU	**Hansel Valley** comp=Z,56nm,1.0s	**93.66**	**47**	IAmb	IAmb	20 22 53.9	
Q16A	**Castle Valley** comp=Z,100nm,1.2s	**93.73**	**50**	IAmb	IAmb	20 22 53.9	
KNGR	**Kungurtug, Tuv**	**93.80**	**323**	⇓*e*P	**P**	**20 22 50.4**	**+0.3**
KNGR	comp=Z,12nm,1.0s			pmax	pmax		
MPU	**Maple Canyon** comp=Z,64nm,1.2s	**93.81**	**49**	IAmb	IAmb	20 22 53.6	
TMUT	**Trail Mountain** comp=Z,46nm,1.0s	**93.85**	**50**	IAmb	IAmb	20 22 59.1	
E27K	**Coleen River** comp=Z,139nm,1.6s	**93.96**	**16**	IAmb	IAmb	20 22 53.0	
E27K	**Coleen River** baz=226,SNR=42	**93.96**	**16**	P	**P**	**20 22 50.5**	**+0.2**
LIRD	**Liard River Hi** baz=239,SNR=33	**94.00**	**27**	P	**P**	**20 22 50.1**	**-0.6**
F28M	**Old Crow** comp=Z,52nm,1.4s	**94.03**	**17**	IAmb	IAmb	20 22 52.8	
F28M	**Old Crow** baz=227,SNR=22	**94.03**	**17**	P	**P**	**20 22 50.0**	**-0.7**
121A	**Cookes Peak, D** comp=Z,100nm,1.3s	**94.06**	**57**	IAmb	IAmb	20 22 55.5	
G29M	**Pine Creek** comp=Z,104nm,1.4s	**94.09**	**18**	IAmb	IAmb	20 22 52.8	
G29M	**Pine Creek** baz=229	**94.09**	**18**	P	**P**	**20 22 50.7**	**-0.3**
TOAD	**Toad River Com** baz=239,SNR=44	**94.09**	**28**	P	**P**	**20 22 50.8**	**-0.4**
EPYK	**Eagle Plains** comp=Z,80nm,1.0s	**94.13**	**19**	IAmb	IAmb	20 22 53.0	
EPYK	**Eagle Plains** baz=230,SNR=33	**94.13**	**19**	P	**P**	**20 22 50.4**	**-0.7**
EPYK	baz=230			S	**S**	**20 33 37.4**	**-0.9**
BCYI	**Bear Canyon** comp=Z,61nm,1.6s	**94.20**	**45**	IAmb	IAmb	20 22 55.3	
SRU	**San Rafael Swe** comp=Z,51nm,1.1s	**94.28**	**50**	IAmb	IAmb	20 22 55.5	
TCUT	**Toone Canyon** comp=Z,72nm,0.9s	**94.37**	**48**	IAmb	IAmb	20 22 57.6	
C26K	**Camden Bay** baz=223	**94.38**	**14**	P	**P**	**20 22 53.1**	**+0.9**
C26K	baz=223			S	**S**	**20 33 41.2**	**+1.0**
C26K	baz=223			S	**S**	**20 33 41.2**	**+1.0**
C27K	**Jago River** comp=Z,92nm,1.0s	**94.45**	**15**	IAmb	IAmb	20 22 55.8	
C27K	**Jago River** baz=224	**94.45**	**15**	P	**P**	**20 22 52.7**	**+0.1**
H31M	**Peel River** comp=Z,57nm,1.2s	**94.52**	**20**	IAmb	IAmb	20 22 54.1	
H31M	**Peel River** baz=232	**94.52**	**20**	P	**P**	**20 22 51.6**	**-1.4**
BSUT	**Blindstream Ca** comp=Z,41nm,1.0s	**94.62**	**49**	IAmb	IAmb	20 22 57.3	
G30M	**tAoh Zraii Nji** baz=230	**94.67**	**19**	P	**P**	**20 22 52.8**	**-0.9**
TIXI	**Tiksi**	**94.71**	**348**	P	**P**	**20 22 52.9**	**-0.8**
TIXI	**Tiksi**	**94.71**	**348**	⇓*i*P	**P**	**20 22 53.3**	**-0.3**
TIXI	comp=Z,9.0nm,1.1s			pmax	pmax		
COYC	**Coyhaique** comp=Z,71nm,1.1s	**94.74**	**142**	IAmb	IAmb	20 22 57.1	
E28M	**Babbage River** baz=227,SNR=92	**94.80**	**17**	P	**P**	**20 22 53.5**	**-0.7**
EPT	**El Paso** comp=Z,110nm,1.2s	**94.83**	**58**	IAmb	IAmb	20 22 58.4	
D27M	**Malcolm River** comp=Z,111nm,1.2s	**94.86**	**16**	IAmb	IAmb	20 22 57.3	
D27M	**Malcolm River** baz=226	**94.86**	**16**	P	**P**	**20 22 54.2**	**-0.3**
PV05	**Paradox Valley** comp=Z,38nm,0.9s	**94.96**	**52**	IAmb	IAmb	20 23 00.7	
AY01	**Puyuhuapi** comp=Z,55nm,1.1s	**95.03**	**140**	IAmb	IAmb	20 22 57.9	
PV10	**Paradox Valley** comp=Z,77nm,1.0s	**95.10**	**51**	IAmb	IAmb	20 23 00.8	
E29M	**Blow River** comp=Z,38nm,1.1s	**95.11**	**17**	IAmb	IAmb	20 22 57.2	
E29M	**Blow River** baz=229	**95.11**	**17**	P	**P**	**20 22 54.5**	**-1.1**
PV19	**Morning Glory** comp=Z,54nm,0.9s	**95.12**	**51**	IAmb	IAmb	20 23 01.0	
PV17	**East Wray Mesa** comp=Z,30nm,1.0s	**95.13**	**51**	IAmb	IAmb	20 23 00.9	
DLMT	**Dillon** comp=Z,57nm,1.2s	**95.13**	**44**	IAmb	IAmb	20 22 59.0	
PV20	**West Nyswonger** comp=Z,61nm,0.9s	**95.14**	**51**	IAmb	IAmb	20 23 01.9	
PV23	**Carpenter Ridg** comp=Z,112nm,1.3s	**95.15**	**51**	IAmb	IAmb	20 22 59.8	
PV18	**Skein Mesa, Pa**	**95.16**	**51**	IAmb	IAmb	20 23 01.1	

	comp=Z,43nm,0.9s						
Y22A	**Socorro**	**95.18**	**56**	IAmb	IAmb	20 23 04.4	
	comp=Z,33nm,1.1s						
PV11	**David Mesa, Pa**	**95.20**	**51**	IAmb	IAmb	20 22 59.8	
	comp=Z,48nm,1.3s						
F30M	**Barrier River**	**95.21**	**18**	IAmb	IAmb	20 22 57.8	
	comp=Z,78nm,1.1s						
F30M	**Barrier River**	**95.21**	**18**	P	**P**	**20 22 55.4**	**-0.6**
	baz=231						
PV04	**Paradox Valley**	**95.21**	**51**	IAmb	IAmb	20 23 02.2	
	comp=Z,26nm,0.8s						
G31M	**Satah River**	**95.23**	**19**	IAmb	IAmb	20 22 57.8	
	comp=Z,123nm,1.2s						
G31M	**Satah River**	**95.23**	**19**	P	**P**	**20 22 55.7**	**-0.4**
	baz=232,SNR=39						
KOTAN	**Kotaneelee Air**	**95.26**	**27**	P	**P**	**20 22 56.5**	**+0.1**
	baz=240,SNR=15						
PV12	**Saucer Basin,**	**95.26**	**51**	IAmb	IAmb	20 23 01.8	
	comp=Z,49nm,0.9s						
PV02	**Paradox Valley**	**95.27**	**52**	IAmb	IAmb	20 23 00.1	
	comp=Z,67nm,1.3s						
PV22	**Blue Mesa, Par**	**95.34**	**51**	IAmb	IAmb	20 23 00.4	
	comp=Z,62nm,1.4s						
PV07	**Paradox Valley**	**95.41**	**51**	IAmb	IAmb	20 23 00.7	
	comp=Z,60nm,1.4s						
D28M	**Stokes Point**	**95.50**	**16**	P	**P**	**20 22 56.5**	**-0.8**
	baz=228						
PV15	**Paradox Valley**	**95.50**	**51**	IAmb	IAmb	20 23 01.1	
	comp=Z,50nm,1.3s						
SNOW	**Snow King Moun**	**95.67**	**46**	IAmb	IAmb	20 23 04.4	
	comp=Z,30nm,1.0s						
MNTX	**Cornudas Mount**	**95.71**	**59**	IAmb	IAmb	20 23 02.3	
	comp=Z,82nm,1.6s						
F31M	**Tsiigehtchic**	**95.72**	**19**	P	**P**	**20 22 56.9**	**-1.4**
	baz=233,SNR=57						
VHRN	**Van Horn**	**95.74**	**60**	IAmb	IAmb	20 23 02.8	
	comp=Z,165nm,1.7s						
TASM	**ASL Pad, Albuq**	**95.91**	**55**	IAmb	IAmb	20 23 04.6	
	comp=Z,27nm,1.0s						
TASM	**ASL Pad, Albuq**	**95.91**	**55**	IAmb	IAmb	20 23 04.6	
	comp=Z,26nm,1.0s						
TASM	**ASL Pad, Albuq**	**95.91**	**55**	IAmb	IAmb	20 23 04.6	
	comp=Z,26nm,1.0s						
ANMO	**Albuquerque**	**95.91**	**55**	P	**P**	**20 23 00.3**	**+0.1**
ANMO	**Albuquerque**	**95.91**	**55**	*c i*P	**P**	**20 23 01.4**	**+1.1**
ANMO				pmax	pmax		
	comp=Z,29nm,1.0s						
H03S2	**Juan Fernandez**	**96.13**	**129**	T	T	22 09 57.5	
	baz=238,slow=74,SNR=2.2						
H03S1	**Juan Fernandez**	**96.14**	**129**	T	T	22 09 57.1	
	baz=238,slow=74,SNR=2.9						
H03S3	**Juan Fernandez**	**96.15**	**129**	T	T	22 09 55.6	
	baz=238,slow=74,SNR=6.4						
LL02	**Futaleuf**	**96.19**	**140**	IAmb	IAmb	20 23 03.4	
	comp=Z,98nm,1.3s						
PDAR	**Pinedale Array**	**96.25**	**47**	P	**P**	**20 23 01.9**	**+0.3**
	comp=Z,18nm,1.1s,baz=222,slow=2.0,SNR=42						
PDAR				PP	**PP**	**20 26 58.8**	**-0.2**
	comp=Z,15nm,1.0s,baz=241,slow=6.1,SNR=16						
PDAR				PKKPbc	**PKKPbc**	**20 39 46.8**	**-1.5**
	comp=Z,1.4nm,0.9s,baz=101,slow=4.7,SNR=7.0						
PDAR				PKPPKP	**P'P'df**	**20 48 01.0**	**+0.7**
	comp=Z,0.5nm,0.9s,baz=147,slow=3.0,SNR=4.4						
	comp=Z,18nm,1.1s						
PDAR	**Pinedale Array**	**96.25**	**47**	P	**P**	**20 23 00.7**	**-1.0**
LL01	**San Ignacio de**	**96.28**	**139**	IAmb	IAmb	20 23 04.3	
	comp=Z,41nm,1.1s						
O20A	**White River Ci**	**96.28**	**50**	IAmb	IAmb	20 23 07.8	
	comp=Z,28nm,1.0s						
INK	**Inuvik**	**96.31**	**18**	IAmb	IAmb	20 23 02.4	
	comp=Z,69nm,1.1s						
INK	**Inuvik**	**96.31**	**18**	P	**P**	**20 22 59.6**	**-1.4**
	baz=233,SNR=39						
TX31	**Lajitas Ar. Si**	**96.36**	**61**	IAmb	IAmb	20 23 06.9	
	comp=Z,125nm,1.9s						
TXAR	**Lajitas Array**	**96.36**	**61**	P	**P**	**20 23 03.5**	**+1.1**
	comp=Z,8.9nm,0.7s,baz=221,slow=5.1,SNR=59						
TXAR				PP	**PP**	**20 27 02.4**	**+2.3**
	comp=Z,4.5nm,1.1s,baz=238,slow=7.2,SNR=3.6						
TXAR				PKKP	**PKKPbc**	**20 39 47.1**	**0.0**
	comp=Z,1.6nm,0.8s,baz=105,slow=4.0,SNR=10						
	comp=Z,8.9nm,0.7s						
TXAR	**Lajitas Array**	**96.36**	**61**	P	**P**	**20 23 02.4**	**0.0**
HYB	**Hyderabad**	**96.56**	**286**	*e*P	**P**	**20 23 02.5**	**-0.9**
HYB				*e*sP	**sP**	**20 24 35.0**	**+1.1**
HYB				*e*SKSac	**SKSac**	**20 33 13.3**	**-1.7**
HYB				*e*SKKSac	**SKKSac**	**20 33 38.8**	**-3.1**
HYB				*e*ScS	**S**	**20 33 59.5**	**-1.8**
ALPN	**Alpine**	**96.71**	**60**	IAmb	IAmb	20 23 26.5	
	comp=Z,30nm,1.0s						
YNE	**Yellowstone No**	**96.71**	**45**	IAmb	IAmb	20 23 12.1	
	comp=Z,24nm,0.9s						
WRGLY	**Wrigley**	**97.02**	**25**	IAmb	IAmb	20 23 06.3	
	comp=Z,30nm,1.0s						
WRGLY	**Wrigley**	**97.02**	**25**	P	**P**	**20 23 03.8**	**-0.5**
	baz=241,SNR=6.4						
WMQ	**Urumqi**	**97.41**	**314**	*e*P	Pdif	20 23 07.0	+0.3
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				LR	LR		
	comp=Z,300nm,22.9s						
EDM	**Edmonton**	**97.60**	**36**	IAmb	IAmb	20 23 10.5	
	comp=Z,43nm,1.4s						
LR05	**Currie**	**97.70**	**137**	IAmb	IAmb	20 23 10.4	
	comp=Z,43nm,1.0s						
MNHN	**Monahans**	**97.72**	**60**	IAmb	IAmb	20 23 10.8	
	comp=Z,96nm,2.0s						
ODSA	**Odessa**	**98.13**	**59**	IAmb	IAmb	20 23 12.7	
	comp=Z,96nm,1.7s						
PLCA	**Paso Flores**	**98.35**	**138**	P	Pdif	20 23 11.6	+0.5
	comp=Z,14nm,1.0s,baz=220,slow=4.8,SNR=13						
PLCA				PP	**PP**	**20 27 13.9**	**-0.3**
	comp=Z,11nm,1.1s,baz=227,slow=7.4,SNR=6.6						
	comp=Z,14nm,1.0s						
PLCA	**Paso Flores**	**98.35**	**138**	IAmb	IAmb	20 23 13.4	
	comp=Z,42nm,1.3s						
PLCA	**Paso Flores**	**98.35**	**138**	*e*P	Pdif	20 23 12.2	+1.1
MSTX	**Muleshoe**	**98.50**	**57**	IAmb	IAmb	20 23 14.0	
	comp=Z,29nm,1.0s						
DGZ	**Jazzator, Alta**	**99.48**	**319**	⇑*e*P	**Pdif**	**20 23 15.5**	**-0.3**
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
C36M	**Paulatuk**	**99.76**	**19**	P	**Pdif**	**20 23 15.5**	**-0.9**
	baz=242						
YKA	**Yellowknife Ar**	**100.39**	**27**	P	**Pdif**	**20 23 20.1**	**+0.8**
	comp=Z,14nm,0.7s,baz=260,slow=5.3,SNR=75						
YKA				pP	pP	20 24 22.6	+0.1
	comp=Z,5.1nm,1.0s,baz=259,slow=5.4,SNR=1.5						
YKA				PP	**PP**	**20 27 29.9**	**+0.3**
	comp=Z,6.7nm,1.1s,baz=252,slow=8.1,SNR=6.4						
YKA				PKPPKP	**P'P'df**	**20 47 52.4**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=114,slow=26,SNR=4.2						
YKA	**Yellowknife Ar**	**100.39**	**27**		**Pdif**	**20 23 19.7**	**+0.4**
ZSN	**Zaisan**	**100.42**	**317**	*e*Pdif	**Pdif**	**20 23 19.6**	**-0.4**
ZSN				*e*PKiKP	**PKiKP**	**20 27 45.2**	**-0.1**
ZSN	**Zaisan**	**100.42**	**317**	*i* P	**Pdif**	**20 23 19.5**	**-0.4**
A36M	**Sachs Harbour**	**100.70**	**17**	P	**Pdif**	**20 23 20.1**	**-0.4**
	baz=241						
MK31	**Makanchi Array**	**101.94**	**315**	⇑*e*P	**Pdif**	**20 23 28.7**	**+2.0**
MKAR	**Makanchi Array**	**101.94**	**315**	P	**Pdif**	**20 23 27.1**	**+0.4**
	comp=Z,6.6nm,0.7s,baz=96,slow=5.8,SNR=34						
MKAR				PP	**PP**	**20 27 41.3**	**-0.4**
	comp=Z,5.1nm,0.9s,baz=105,slow=8.0,SNR=3.8						
MKAR				S	**SKSac**	**20 33 39.7**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=98,slow=7.5,SNR=5.8						
MKAR				PKKPbc	**PKKPbc**	**20 39 29.9**	**-2.2**
	comp=Z,1.8nm,0.5s,baz=266,slow=3.7,SNR=26						
MKAR	**Makanchi Array**	**101.94**	**315**		**Pdif**	**20 23 28.6**	**+1.9**
MKAR	**Makanchi Array**	**101.94**	**315**	*i* P	**Pdif**	**20 23 28.8**	**+2.1**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ZALV	**Zalesovo Beam**	**102.26**	**323**	P	**Pdif**	**20 23 27.8**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=112,slow=5.8,SNR=8.8						
ZALV				PP	**PP**	**20 27 44.0**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=116,slow=6.9,SNR=3.8						
ZALV				S	**SKSac**	**20 33 39.6**	**-1.8**
	comp=Z,1.8nm,0.8s,baz=129,slow=5.7,SNR=6.9						
ZALV				PKKPbc	**PKKPbc**	**20 39 29.6**	**-1.8**
	comp=Z,1.4nm,0.5s,baz=286,slow=3.7,SNR=6.9						
ZALV				PKPPKP	**P'P'df**	**20 47 49.4**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=282,slow=1.4,SNR=3.6						
ZALV	**Zalesovo Beam**	**102.26**	**323**		**Pdif**	**20 23 28.8**	**+0.8**
ZALV	**Zalesovo Beam**	**102.26**	**323**	*i* P	**Pdif**	**20 23 28.7**	**+0.8**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SHLS	**Shalkode**	**102.96**	**311**	*e*Pdif	**Pdif**	**20 23 29.3**	**-2.2**
SHLS				*e*PKiKP	**PP**	**20 27 49.2**	**-0.4**
SHLS	**Shalkode**	**102.96**	**311**	*i* P	**Pdif**	**20 23 29.2**	**-2.2**
SHLS				*i*		20 27 49.2	
UZB	**Uzynbulak**	**103.27**	**311**	*e*PKiKP	**PKiKP**	**20 27 50.3**	**-0.5**
SATY	**Saty**	**103.69**	**311**	*e*PKiKP	**PKiKP**	**20 27 51.3**	**-0.2**
MDOK	**Medeo**	**104.68**	**311**	*e*PKiKP	**PKiKP**	**20 27 53.0**	**-0.3**
TNSS	**Tian-Shan**	**104.73**	**311**	*e*PKiKP	**PKiKP**	**20 27 53.0**	**-0.8**
NRIK	**Noril'sk**	**104.97**	**339**	PKiKP	**PKiKP**	**20 27 54.5**	**+1.7**
	comp=Z,1.5nm,0.4s,baz=93,slow=2.4,SNR=2.5						
KURBB	**Kurchatov Arra**	**105.24**	**319**	Pdiff	**Pdif**	**20 23 42.7**	**+1.5**
	comp=Z,1.2nm,0.7s,baz=113,slow=3.7,SNR=11						
KURBB				PKiKP	**PKiKP**	**20 27 53.7**	**-0.2**
	comp=Z,4.1nm,1.1s,baz=87,slow=1.6,SNR=6.3						
KURBB				PKKPbc	**PKKPbc**	**20 39 21.2**	**-1.1**
	comp=Z,4.4nm,0.9s,baz=284,slow=3.6,SNR=14						
KURBB				PKKPab	**PKKPab**	**20 39 38.5**	**+0.8**
	comp=Z,7.8nm,1.0s,baz=284,slow=5.3,SNR=16						
SGDS	**Sogindy**	**106.47**	**311**	*e*PKiKP	**PKiKP**	**20 27 56.5**	**-0.1**
SGDS				*e*PP	**PP**	**20 28 14.0**	**-1.4**
BTLS	**Baital**	**107.17**	**312**	*e*PKiKP	**PKiKP**	**20 27 57.5**	**-0.2**
ULM	**Lac du Bonnet**	**107.27**	**42**	Pdiff	**Pdif**	**20 23 51.0**	**+0.7**
	comp=Z,1.6nm,0.3s,baz=72,slow=2.5,SNR=3.2						
ULM				PKiKP	**PKiKP**	**20 27 57.0**	**-0.7**
	comp=Z,9.1nm,0.8s,baz=256,slow=1.3,SNR=6.2						
IUG	**Iuzhnay**	**109.59**	**309**	*e*PKiKP	**PKiKP**	**20 28 02.4**	**-0.1**
IUG				*e*PP	**PP**	**20 28 36.5**	**-1.6**
BRLS	**Borolday**	**109.86**	**310**	*e*PKiKP	**PKiKP**	**20 28 03.1**	**+0.2**
BRLS				*e*PP	**PP**	**20 28 39.2**	**-0.7**
BVAR	**Borovoye Array**	**110.58**	**320**	Pdiff	**Pdif**	**20 24 05.2**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=67,slow=3.9,SNR=7.4						
BVAR				PKiKP	**PKiKP**	**20 28 02.9**	**-1.0**
	comp=Z,3.0nm,0.5s,baz=156,slow=2.1,SNR=16						
BVAR				PP	**PP**	**20 28 45.6**	**+0.9**
	comp=Z,3.1nm,0.8s,baz=107,slow=8.1,SNR=4.0						
BVAR				PKKPbc	**PKKPbc**	**20 39 04.2**	**-1.5**
	comp=Z,2.0nm,0.6s,baz=280,slow=4.4,SNR=9.0						
BVAR				PKKPab	**PKKPab**	**20 39 15.1**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=240,slow=7.9,SNR=4.2						
BORK	**Borovoye**	**110.62**	**320**	⇓*i*PKIKP	**PKiKP**	**20 28 03.8**	**-0.1**
LPAZ	**La Paz**	**113.16**	**118**	PKiKP	**PKiKP**	**20 28 11.4**	**+0.8**
	comp=Z,3.4nm,0.8s,baz=7.7,slow=2.1,SNR=8.2						
LPAZ				PP	**PP**	**20 28 57.9**	**-6.3**
	comp=Z,4.6nm,1.1s,baz=230,slow=5.8,SNR=6.4						
LPAZ				PKKPbc	**PKKPbc**	**20 38 56.5**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=32,slow=5.9,SNR=4.5						
CPUP	**Villa Florida**	**115.79**	**133**	PKP	**PKiKP**	**20 28 15.1**	**+0.4**
	comp=Z,1.5nm,0.9s,baz=66,slow=2.9,SNR=6.2						
CPUP				PP	**PP**	**20 29 15.0**	**-6.4**
	comp=Z,0.7nm,0.3s,baz=13,slow=2.2,SNR=4.4						
CPUP				PKKPab	**PKKPab**	**20 38 53.8**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=254,slow=5.0,SNR=3.0						
CPUP	**Villa Florida**	**115.79**	**133**		**PKPdf**	**20 28 12.1**	**-2.6**
SVE	**Sverdlovsk**	**116.20**	**325**	*e*PKIKP	**PKPdf**	**20 28 14.1**	**-0.4**
SVE				pmax	pmax		
	comp=Z,19nm,1.1s						
ABKAR	**Akbulak array**	**117.07**	**316**		**PKPdf**	**20 28 15.3**	**-1.1**
ARTI	**Arti**	**117.48**	**324**		**PKPdf**	**20 28 15.4**	**-1.5**
ARTI	**Arti**	**117.48**	**324**	*i* PKIKP	**PKPdf**	**20 28 16.7**	**-0.2**
ARTI						20 29 30.4	
ARTI						20 35 03.2	
UOSS	**Minazif**	**118.57**	**289**		**PKPdf**	**20 28 18.8**	**-1.2**
SSPA	**Standing Stone**	**119.08**	**54**		**PKPdf**	**20 28 19.0**	**-1.6**
SPITS	**Spitsbergen Ar**	**119.53**	**354**	PKP	**PKPdf**	**20 28 19.3**	**-1.1**
	comp=Z,11nm,0.7s,baz=101,slow=4.3,SNR=8.8						
PTGB	**Pitanga**	**120.42**	**135**	*e*P	**PKPdf**	**20 28 22.1**	**-1.7**
SDV	**Santo Domingo**	**120.86**	**91**		**PKPdf**	**20 28 23.5**	**-1.4**
SDV	**Santo Domingo**	**120.86**	**91**	*e*P	**PKPdf**	**20 28 24.1**	**-0.9**
PTLB	**Pontes e Lacer**	**120.96**	**122**	*e*P	**PKiKP**	**20 28 25.3**	**+0.3**
BOSA	**Boshof**	**121.39**	**217**	PKP	**PKPdf**	**20 28 25.4**	**-0.3**
	comp=Z,15nm,1.0s,baz=138,slow=1.4,SNR=31						
BOSA				PKKPbc	**PKKPbc**	**20 38 27.1**	**-0.6**
	comp=Z,4.0nm,0.7s,baz=336,slow=2.9,SNR=8.5						
VILB	**Vilhena**	**121.44**	**119**	*e*P	**PKPdf**	**20 28 24.9**	**-1.0**
KIRV	**Kirov**	**121.79**	**328**	*d i*PKIKP	**PKiKP**	**20 28 25.4**	**+0.1**
TEFE	**Tefe**	**122.07**	**107**	*e*P	**PKPdf**	**20 28 26.4**	**-0.7**
KUQ	**Kuujjuuaa**	**122.78**	**32**		**PKPdf**	**20 28 25.8**	**-1.2**
PP1B	**Ponte de Pedra**	**123.02**	**127**	*e*P	**PKiKP**	**20 28 29.1**	**0.0**
FRTB	**Fartura**	**123.02**	**136**	*e*P	**PKiKP**	**20 28 29.2**	**+0.3**
SALV	**Santo Antonio**	**123.41**	**125**	*e*P	**PKiKP**	**20 28 30.3**	**+0.4**
HRV	**Adam Dziewonsk**	**123.77**	**51**		**PKPdf**	**20 28 28.9**	**-0.6**
HRV	**Adam Dziewonsk**	**123.77**	**51**	⇑PKIKP	**PKPdf**	**20 28 29.1**	**-0.4**
MAKGR	**Makgori**	**123.77**	**219**	*i* P	**PKPdf**	**20 28 30.4**	**+0.1**
C2SB	**Chapadao do Su**	**123.80**	**130**	*e*P	**PKPdf**	**20 28 29.4**	**-0.8**
PET01	**Itanhaem-SP**	**123.81**	**139**	*e*P	**PKPdf**	**20 28 30.1**	**-0.1**
APA	**Apatity**	**124.25**	**341**	⇓*e*PKIKP	**PKiKP**	**20 28 36.6**	**+6.7**
APA				*e*		20 39 48.3	
APA				*e*PS	**PS**	**20 40 19.0**	**-1.8**
APA				MLR	MLR		
	comp=Z,2µm,4.7s						
BELG	**Belogornoye**	**124.38**	**321**	*ce*PKIKP	**PKPdf**	**20 28 29.0**	**-1.3**
SCHQ	**Schefferville**	**124.58**	**36**	PKP	**PKPdf**	**20 28 30.4**	**-0.3**
	comp=Z,24nm,0.9s,baz=291,slow=1.7,SNR=12						
LPHEP	**Lephephe**	**124.94**	**221**	*i* P	**PKiKP**	**20 28 33.5**	**+0.6**
PDRB	**Porto dos Gac**	**125.02**	**120**	*e*P	**PKPdf**	**20 28 32.9**	**+0.1**
ARCES	**ARCESS Array B**	**125.06**	**345**	PKP	**PKPdf**	**20 28 30.3**	**-0.9**
	comp=Z,14nm,0.7s,baz=48,slow=2.0,SNR=58						
ARCES				pPKP	**pPKPdf**	**20 29 35.5**	**-2.0**
	comp=Z,8.5nm,0.6s,baz=70,slow=1.0,SNR=1.7						
ARCES				PKKPbc	**PKKPbc**	**20 38 12.3**	**-2.0**
	comp=Z,3.0nm,0.7s,baz=226,slow=1.1,SNR=8.0						
ARCES	**ARCESS Array B**	**125.06**	**345**		**PKPdf**	**20 28 30.8**	**-0.3**
PHPEN	**Phepeng**	**125.16**	**217**	*i* P	**PKiKP**	**20 28 34.0**	**+0.7**
SKOMA	**Sekoma**	**125.26**	**219**	*i* P	**PKiKP**	**20 28 33.9**	**+0.4**
PARB	**Paraibuna**	**125.53**	**139**	*e*P	**PKPdf**	**20 28 33.5**	**-0.1**
BROLN	**Tlhalogang**	**125.61**	**225**	*i* P	**PKPdf**	**20 28 33.3**	**-0.6**
KLMR	**Klimovskoe**	**125.62**	**333**	*e*PKIKP	**PKPdf**	**20 28 31.3**	**-1.1**
KLMR				SP	SP	20 40 00.8	-0.6
KLMR				PS	**PS**	**20 40 27.6**	**-5.4**
KLMR				pmax	pmax		
	comp=Z,48nm,1.1s						
MACA	**Manacapuru-AM**	**125.78**	**109**	*e*P	**PKPdf**	**20 28 34.1**	**-0.1**
CLDB	**Colider**	**126.19**	**120**	*e*P	**PKPdf**	**20 28 35.1**	**+0.1**
MAK	**Makhachkala**	**126.19**	**310**	*e*P	**Pdif**	**20 25 07.3**	**-7.3**
MAK				*i*		20 28 32.1	
MAK				*e*		20 30 31.5	
MAK				*e*		20 35 11.5	
MAK				pmax	pmax		
	comp=Z,338nm,1.5s						
AKT	**Akhty**	**126.20**	**308**	*i* PKIKP	**PKPdf**	**20 28 33.4**	**-0.9**
AKT				*e*		20 35 11.3	
AKT				pmax	pmax		
	comp=Z,51nm,1.1s						
ARAG	**Araguaiana, MT**	**126.49**	**127**	*e*P	**PKPdf**	**20 28 34.9**	**-0.6**
LKGWB	**Lokgwabe**	**127.15**	**217**		**PKPdf**	**20 28 35.2**	**-1.5**
SJG	**San Juan**	**127.30**	**81**		**PKPdf**	**20 28 35.0**	**-1.8**
SJG	**San Juan**	**127.30**	**81**	PKIKP	**PKPdf**	**20 28 35.1**	**-1.8**
KGCAE	**Kacgae**	**127.55**	**219**	*i* P	**PKiKP**	**20 28 38.5**	**+0.4**
IPMB	**Ipameri, GO**	**127.62**	**132**	*e*P	**PKPdf**	**20 28 37.9**	**+0.2**
RAYN	**Ar Rayn**	**128.06**	**285**		**PKPdf**	**20 28 38.4**	**0.0**
RAYN	**Ar Rayn**	**128.06**	**285**	⇑PKIKP	**PKiKP**	**20 28 39.4**	**+0.4**
BOAV	**Boa Vista**	**128.20**	**102**	*e*P	**PKPdf**	**20 28 38.3**	**-0.5**
VRH	**Novokhopyorsk**	**128.23**	**321**	*e*PKIKP	**PKPdf**	**20 28 36.8**	**-0.9**
VRH				pmax	pmax		
	comp=Z,36nm,0.8s						
PMNB	**Patos De Minas**	**128.46**	**134**	*e*P	**PKPdf**	**20 28 39.3**	**0.0**
NPGB	**Novo Progresso**	**128.59**	**116**	*e*P	**PKPdf**	**20 28 38.7**	**-0.9**
MOS	**Moscow**	**128.80**	**327**	*e*PKIKP	**PKPdf**	**20 28 37.9**	**-0.7**
NCK	**Nalchik**	**128.93**	**311**	⇑*e*PKIKP	**PKPdf**	**20 28 39.7**	**+0.3**
GOF	**Gofitskoye**	**129.01**	**313**	*ce*PKIKP	**PKiKP**	**20 28 40.7**	**+0.6**
SNDB	**Serra Nova Dou**	**129.17**	**124**	*e*P	**PKPdf**	**20 28 39.9**	**-0.7**
GRTLG	**Ghanzi**	**129.28**	**219**	*i* P	**PKiKP**	**20 28 41.6**	**0.0**
BDFB	**Brasilia**	**129.33**	**130**	PKP	**PKPdf**	**20 28 40.7**	**-0.4**
	comp=Z,27nm,1.0s,baz=357,slow=0.6,SNR=20						
BDFB				PP	**PP**	**20 30 54.4**	**+1.7**
	comp=Z,1.6nm,0.4s,baz=219,slow=12,SNR=1.8						
BDFB				SKPbc	SKPbc	20 31 39.6	+2.2
	comp=Z,9.9nm,0.9s,baz=149,slow=2.1,SNR=6.5						
LPSR	**Galich'ya Gora**	**129.37**	**323**	*e*PKIKP	**PKiKP**	**20 28 40.7**	**+0.1**
LPSR				pmax	pmax		
	comp=Z,41nm,0.6s						
KSANE	**Kasane**	**129.37**	**226**	*i* P	**PKiKP**	**20 28 42.0**	**+0.1**
KBZ	**Khabaz**	**129.38**	**311**	PKP	**PKPdf**	**20 28 40.5**	**+0.4**
	comp=Z,3.8nm,1.0s,baz=143,slow=11,SNR=3.6						
KBZ				PP	**PP**	**20 30 55.0**	**+1.9**
	comp=Z,5.6nm,0.9s,baz=173,slow=1.8,SNR=4.0						
KBZ				SKPbc	SKPbc	20 31 38.0	+1.4
	comp=Z,4.7nm,0.8s,baz=44,slow=3.1,SNR=5.3						
KBZ	**Khabaz**	**129.38**	**311**	⇓*e*PKIKP	**PKiKP**	**20 28 41.0**	**+0.1**
KIV	**Kislovodsk**	**129.49**	**312**		**PKPdf**	**20 28 40.1**	**-0.4**
KIV	**Kislovodsk**	**129.49**	**312**	*i* PKIKP	**PKPdf**	**20 28 40.0**	**-0.5**
KIV				*e*		20 30 52.1	
KIV				*e*PS	**PS**	**20 41 00.5**	**-7.1**
KIV				*e*SS	SS	20 47 52.4	-2.5
KIV				pmax	pmax		
	comp=Z,21nm,1.0s						
KIV				MLR	MLR		
	comp=Z,297nm,23.0s						
SHA1	**Shidzhatmaz**	**129.55**	**311**	*de*PKIKP	**PKPdf**	**20 28 40.5**	**-0.3**
VORR	**Voronezh**	**129.55**	**322**	*e*PKIKP	**PKiKP**	**20 28 40.7**	**-0.3**
VORR				pmax	pmax		
	comp=Z,114nm,1.2s						
ITTB	**Itaituba**	**129.60**	**113**	*e*P	**PKPdf**	**20 28 41.1**	**-0.3**
OBN	**Obninsk**	**129.62**	**327**	*ce*PKIKP	**PKPdf**	**20 28 40.3**	**+0.1**
OBN				*e*		20 30 54.4	
OBN				*e*PPP	PPP	20 33 42.8	
OBN				pmax	pmax		
	comp=Z,22nm,1.0s						
NEUR	**Neytrino**	**129.62**	**311**	*e*PKIKP	**PKiKP**	**20 28 42.5**	**+0.8**
VSR	**Storozhevoye**	**129.74**	**322**	*e*PKIKP	**PKPdf**	**20 28 37.2**	**-3.4**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
DIAM	**Diamantina, MG**	**130.46**	**137**	*e*P	**PKPdf**	**20 28 43.4**	**+0.2**
FINES	**FINESS Array B**	**130.63**	**338**	PKhKP	PKPpre	20 28 29.0	
	comp=Z,1.6nm,0.9s,baz=56,slow=6.1,SNR=4.1						
FINES				PKP	**PKPdf**	**20 28 41.9**	**0.0**
	comp=Z,7.3nm,0.8s,baz=96,slow=3.8,SNR=10						
FINES				pPKP	pPKPdf	20 29 47.5	-0.8
	comp=Z,3.9nm,0.8s,baz=101,slow=2.8,SNR=1.8						
FINES				SKPbc	**SKPbc**	**20 31 39.6**	**-1.1**
	comp=Z,51nm,0.7s,baz=66,slow=4.8,SNR=38						
SOC	**Sochi**	**131.67**	**312**	*i* PKIKP	**PKPdf**	**20 28 42.1**	**-2.4**
SOC				*e*		20 31 05.7	
SOC				*i*		20 42 32.8	
SJMB	**Sao Joao De Ma**	**131.73**	**139**	*e*P	**PKPdf**	**20 28 45.6**	**+0.2**
RIB01	**Linhares ES**	**131.75**	**141**	*e*P	**PKPdf**	**20 28 45.0**	**-0.4**
BSFB	**Barra de Sao F**	**131.84**	**140**	*e*P	**PKPdf**	**20 28 45.4**	**-0.2**
JANB	**Januaria**	**132.34**	**133**	*e*P	**PKPdf**	**20 28 46.2**	**-0.5**
VSU	**Vasula**	**132.34**	**335**	⇑*e*PKIKP	**PKPdf**	**20 28 45.7**	**+0.4**
ANN	**Anapa**	**132.93**	**314**	*i* PKIKP	**PKPdf**	**20 28 47.2**	**+0.4**
ANN				*e*		20 35 32.1	
ANN				*e*SS	SS	20 48 35.4	-0.9
ANN				pmax	pmax		
	comp=Z,27nm,1.0s						
TSUM	**Tsumeb**	**133.08**	**217**		**PKiKP**	**20 28 49.1**	**-0.2**
PRPB	**Parauapebas**	**133.70**	**119**	*e*P	**PKPdf**	**20 28 48.3**	**-1.0**
SMTB	**Santa Maria do**	**133.94**	**124**	*e*P	**PKPdf**	**20 28 49.1**	**-0.6**
MNK	**Minsk**	**134.25**	**330**	*i* PKIKP	**PKiKP**	**20 28 50.2**	**-0.2**
MNK				*i*		20 31 26.5	
MNK				*i* PPP	PPP	20 34 24.4	
MNK				*i*		20 35 37.3	
MNK				*i* SS	SS	20 48 54.4	+3.3
MNK				*i* SSS	SSS	20 53 59.5	
MNK				pmax	pmax		
	comp=Z,18nm,0.9s						
MNK				pmax	pmax		
	comp=E,7.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,18nm,1.1s						
CMC01	**Camacan, BA**	**135.29**	**138**	*e*P	**PKPdf**	**20 28 52.0**	**-0.1**
NB2	**NORSAR Subarra**	**135.44**	**345**	PKPdf	**PKPdf**	**20 28 47.4**	**-3.7**
	comp=Z,28nm,1.7s,baz=27,slow=1.8						
NB2				pPKP	**SKPbc**	**20 31 56.2**	**-0.9**
	comp=Z,35nm,1.4s,baz=29,slow=2.6						
NB2	**NORSAR Subarra**	**135.44**	**345**	PKPdf	**PKPdf**	**20 28 47.4**	**-3.7**
	baz=27,slow=1.8						
NOA	**NORSAR Array B**	**135.44**	**345**	PKP	**PKPdf**	**20 28 51.0**	**-0.1**
	comp=Z,2.6nm,0.7s,baz=28,slow=2.0,SNR=8.1						
NOA				SKPbc	**SKPbc**	**20 31 58.5**	**+1.4**
	comp=Z,4.6nm,0.8s,baz=17,slow=4.4,SNR=9.0						
NOA	**NORSAR Array B**	**135.44**	**345**	PKIKP	**PKPdf**	**20 28 51.0**	**-0.1**
HFS	**Hagfors**	**135.57**	**343**	PKhKP	PKPpre	20 28 36.6	
	comp=Z,1.9nm,0.4s,baz=64,slow=3.4,SNR=5.7						
HFS				PKP	**PKPdf**	**20 28 51.1**	**-0.2**
	comp=Z,2.3nm,0.4s,baz=64,slow=10,SNR=7.0						
HFS				SKPbc	**SKPbc**	**20 31 57.0**	**-0.5**
	comp=Z,14nm,0.8s,baz=52,slow=2.4,SNR=8.7						
AK03	**Malin Array Si**	**135.62**	**325**	PKP	**PKPdf**	**20 28 51.2**	**-0.5**
AKASG	**Malin Array Be**	**135.63**	**325**	PKP	**PKPdf**	**20 28 51.8**	**+0.1**
	comp=Z,8.0nm,0.9s,baz=63,slow=2.0,SNR=13						
AKASG				SKPbc	**SKPbc**	**20 31 57.0**	**-0.9**
	comp=Z,18nm,0.7s,baz=47,slow=4.0,SNR=31						
AKASG				SKKPbc	**SKKPbc**	**20 41 03.5**	**+1.4**
	comp=Z,1.0nm,0.7s,baz=238,slow=5.3,SNR=4.1						
AKBB	**Malin Array Si**	**135.63**	**325**	⇑*e*PKIKP	**PKPdf**	**20 28 50.9**	**-0.8**
AKBB	**Malin Array Si**	**135.63**	**325**	PKP	**PKPdf**	**20 28 51.2**	**-0.5**
AK09	**Malin Array Si**	**135.64**	**324**	PKP	**PKPdf**	**20 28 51.3**	**-0.4**
AK01	**Malin Array Si**	**135.64**	**325**	PKP	**PKPdf**	**20 28 51.3**	**-0.4**
KIEV	**Kiev**	**135.64**	**325**		**PKPdf**	**20 28 50.0**	**-1.7**
KIEV	**Kiev**	**135.64**	**325**	⇑P	**PKPdf**	**20 28 49.0**	**-2.7**
KIEV	**Kiev**	**135.64**	**325**	⇑PKIKP	**PKPdf**	**20 28 49.0**	**-2.7**
KIEV	**Kiev**	**135.64**	**325**	PKP	**PKPdf**	**20 28 51.2**	**-0.5**
AK08	**Malin Array Si**	**135.65**	**325**	PKP	**PKPdf**	**20 28 51.4**	**-0.3**
AK04	**Malin Array Si**	**135.65**	**325**	PKP	**PKPdf**	**20 28 51.4**	**-0.3**
AK02	**Malin Array Si**	**135.66**	**325**	PKP	**PKPdf**	**20 28 51.4**	**-0.4**
AK10	**Malin Array Si**	**135.67**	**324**	PKP	**PKPdf**	**20 28 51.4**	**-0.4**
AK11	**Malin Array Si**	**135.67**	**325**	PKP	**PKPdf**	**20 28 51.4**	**-0.4**
AK05	**Malin Array Si**	**135.68**	**325**	PKP	**PKPdf**	**20 28 51.4**	**-0.4**
AK22	**Malin Array Si**	**135.68**	**325**	PKP	**PKPdf**	**20 28 51.4**	**-0.4**
AK15	**Malin Array Si**	**135.69**	**325**	PKP	**PKPdf**	**20 28 51.4**	**-0.4**
AK21	**Malin Array Si**	**135.69**	**325**	PKP	**PKPdf**	**20 28 51.4**	**-0.4**
BEIL	**Beino**	**136.12**	**300**	*e*P	**PKiKP**	**20 28 54.1**	**-0.8**
HWQ	**Hawqa**	**136.35**	**300**	*e*P	**PKPdf**	**20 28 53.9**	**+0.1**
SHBL	**Chebaa**	**136.64**	**299**	*e*P	**PKPdf**	**20 28 54.8**	**+0.4**
BHL	**Bhannes**	**136.65**	**299**	*e*P	**PKPdf**	**20 28 54.9**	**+0.6**
DQRL	**Deir Qamar**	**136.74**	**299**	*e*P	**PKiKP**	**20 28 55.4**	**-0.9**
LUBAR	**Lubar, Ukraine**	**136.84**	**324**	PKP	**PKPdf**	**20 28 53.7**	**-0.3**
MMAI	**Mount Meron Ar**	**136.97**	**298**	PKP	**PKPdf**	**20 28 55.3**	**+0.5**
	comp=Z,29nm,1.0s,baz=54,slow=2.2,SNR=18						
MMAI				SKPbc	**SKPbc**	**20 32 04.8**	**+2.1**
	comp=Z,34nm,0.9s,baz=66,slow=4.1,SNR=20						
KIRS	**Kirsehir-Merke**	**137.00**	**307**	⇓P	**PKiKP**	**20 28 57.2**	**+0.6**
BR131	**Keskin Array S**	**137.06**	**308**	⇓*e*PKIKP	**PKPdf**	**20 28 54.0**	**-0.9**
BRTR	**Keskin Array B**	**137.06**	**308**	PKP	**PKPdf**	**20 28 54.0**	**-0.9**
	comp=Z,5.2nm,0.8s,baz=138,slow=2.7,SNR=6.7						
BRTR				PP	**PP**	**20 31 45.4**	**+3.3**
	comp=Z,6.0nm,1.2s,baz=84,slow=5.1,SNR=4.5						
BRTR				SKPbc	**SKPbc**	**20 32 03.7**	**+0.8**
	comp=Z,9.7nm,0.9s,baz=120,slow=3.7,SNR=13						
BRTR	**Keskin Array B**	**137.06**	**308**		**PKPdf**	**20 28 52.2**	**-2.7**
BR106	**Keskin Array S**	**137.07**	**308**	PKP	**PKPdf**	**20 28 54.4**	**-0.5**
BR105	**Keskin Array S**	**137.07**	**308**	PKP	**PKPdf**	**20 28 54.4**	**-0.6**
RNPP8	**Varash**	**137.08**	**327**	PKP	**PKPdf**	**20 28 54.1**	**-0.3**
RNPP5	**Staryi Chortor**	**137.12**	**327**	PKP	**PKPdf**	**20 28 54.2**	**-0.2**
TMAB	**Tom-Au,PA,Br**	**137.18**	**116**	*e*P	**PKiKP**	**20 28 57.1**	**-0.6**
SORM	**Soroca**	**137.40**	**322**	⇓P	**PKPdf**	**20 28 52.8**	**-2.2**
SORM	**Soroca**	**137.40**	**322**	⇓PKIKP	**PKPdf**	**20 28 52.8**	**-2.2**
MILM	**Milestii Mici**	**137.71**	**320**	⇓P	**PKPdf**	**20 28 53.2**	**-2.4**
MILM	**Milestii Mici**	**137.71**	**320**	⇓PKIKP	**PKPdf**	**20 28 53.2**	**-2.4**
KMPD	**K-Podol'skiy**	**138.27**	**323**	PKP	**PKPdf**	**20 28 56.3**	**-0.3**
CSS	**Mathiatis**	**138.37**	**301**	PKP	**PKPdf**	**20 28 57.0**	**-0.3**
TLCR		**138.48**	**318**	⇓P	**PKPdf**	**20 28 58.0**	**+0.9**
TLCR		**138.48**	**318**	⇓PKIKP	**PKPdf**	**20 28 58.0**	**+0.9**
VLDR	**Vladesti**	**138.65**	**319**	⇓P	**PKPdf**	**20 28 56.3**	**-1.1**
BIR	**Birlad**	**138.73**	**320**	⇓P	**PKPdf**	**20 28 56.3**	**-1.3**
BIR	**Birlad**	**138.73**	**320**	⇓PKIKP	**PKPdf**	**20 28 56.3**	**-1.3**
R9F13	**Warsaw-Wawer**	**138.83**	**331**	*e*PKP	PKiKP	20 29 43.8	+44
CFR	**Carcaliu**	**138.91**	**318**	⇓P	**PKPdf**	**20 28 57.3**	**-0.6**
CFR	**Carcaliu**	**138.91**	**318**	⇓PKIKP	**PKPdf**	**20 28 57.3**	**-0.6**
GHRR		**138.96**	**320**	⇑P	**PKPdf**	**20 28 56.7**	**-1.3**
TLBR	**Topalu**	**139.25**	**317**	⇑P	PKPpre	20 28 55.4	
VRI	**Vrincioaia**	**139.47**	**320**	⇑P	PKPpre	20 28 53.9	
VRI	**Vrincioaia**	**139.47**	**320**	⇑PKIKP	PKPpre	20 28 53.9	
BURAR	**Bucovina Array**	**139.48**	**323**	⇑P	PKPpre	20 28 54.4	
BURAR	**Bucovina Array**	**139.48**	**323**	⇑PKIKP	PKPpre	20 28 54.4	
TURR	**Turia**	**139.81**	**320**	⇓P	**PKPdf**	**20 28 58.6**	**-1.1**
NEHR	**Nehoiu**	**139.95**	**319**	⇓P	PKPpre	20 28 55.8	
MLR	**Muntele Rosu**	**140.14**	**319**	PKhKP	PKPpre	20 28 52.4	
	comp=Z,5.2nm,0.8s,baz=288,slow=7.6,SNR=6.3						
MLR				PKP	**PKPdf**	**20 28 59.8**	**-0.5**
	comp=Z,4.1nm,0.7s,baz=51,slow=7.6,SNR=5.5						
MLR				SKPbc	**SKPbc**	**20 32 11.3**	**0.0**
	baz=54,slow=3.1						
MLR	**Muntele Rosu**	**140.14**	**319**		PKPpre	20 28 56.8	
MLR	**Muntele Rosu**	**140.14**	**319**	⇓P	PKPpre	20 28 57.3	
MLR	**Muntele Rosu**	**140.14**	**319**	⇓PKIKP	PKPpre	20 28 57.3	
DOPR	**Dopca**	**140.24**	**320**	⇓P	PKPpre	20 28 56.8	
STHS	**Stebnicka Huta**	**140.59**	**327**	*e*PKIKP	**PKiKP**	**20 29 04.5**	**+0.9**
STHS				*e*		20 32 12.4	
STHS	**Stebnicka Huta**	**140.59**	**327**	*e*PKP	**PKiKP**	**20 29 04.5**	**+0.9**
STHS				*e*PP	PP	20 32 12.4	+9.4
VOIR		**140.71**	**320**	⇓P	**PKPdf**	**20 29 00.7**	**-0.6**
VOIR		**140.71**	**320**	⇓PKIKP	**PKPdf**	**20 29 00.7**	**-0.6**
LOZB	**Loznitsa**	**140.71**	**316**	⇓P	**PKPdf**	**20 29 01.9**	**+0.6**
ARR	**Arges**	**141.00**	**320**	⇑P	PKPpre	20 28 57.4	
MESR	**Meseseni**	**141.03**	**323**	⇓P	PKPpre	20 28 58.4	
TNR	**Turnu Rosu**	**141.07**	**321**	⇓P	PKPpre	20 28 58.7	
TNR	**Turnu Rosu**	**141.07**	**321**	⇓PKIKP	PKPpre	20 28 58.7	

MARR	Marisel-Cluj	141.20	323	⇓P	PKPpre	20 28 57.4	
HUMR	Humele	141.20	319	⇓P	PKPpre	20 28 56.9	
DRGR		141.36	323	⇓P	PKPpre	20 28 58.0	
DRGR		141.36	323	⇓PKHKP	PKPpre	20 28 58.0	
ELND	Elena	141.38	316	⇓P	PKPpre	20 28 60.0	
LOT	Lotru	141.48	321	⇓P	PKPpre	20 28 59.0	
DEV	Deva	141.76	322	⇓P	PKPpre	20 28 58.9	
DEV	Deva	141.76	322	⇓PKIKP	PKPpre	20 28 58.9	
RUE	Ruedersdorf	141.76	336	*e*PKPbc	PKPpre	20 28 58.3	
	baz=35,slow=3.1						
BSEG	Bad Segeberg	141.79	340	*e*PKPbc	PKPpre	20 28 57.1	
	baz=35,slow=3.1						
STEB	Steborice	141.94	330	*e*PKP	PKPpre	20 28 59.5	
STEB				*e*SKP	SKPbc	20 32 15.2	-0.4
GZR	Gura Zlata	142.10	321	⇓P	PKPpre	20 28 59.9	
GZR	Gura Zlata	142.10	321	⇓PKIKP	PKPpre	20 28 59.9	
MORC	Moravsky Berou	142.16	330	⇓P	PKPpre	20 29 00.1	
MORC	Moravsky Berou	142.16	330	*e*PKP	PKPpre	20 28 59.9	
MORC				*e*		20 32 17.0	
MORC	Moravsky Berou	142.16	330	⇓PKIKP	PKPpre	20 29 00.1	
OSTC	Ostas	142.21	332	*e*PKIKP	PKPdf	20 29 02.5	-1.3
OSTC				*e*		20 32 17.1	
OSTC	Ostas	142.21	332	*e*PKP	PKPdf	20 29 02.5	-1.3
OSTC				*e*SKP	SKPbc	20 32 17.1	+0.9
PSZ	Piszkesteto	142.23	326	⇓P	PKPdf	20 29 02.2	-1.7
PSZ	Piszkesteto	142.23	326	⇓PKIKP	PKPdf	20 29 02.2	-1.7
CHVC	Chvalec	142.26	332	*e*PKIKP	PKPpre	20 29 00.5	
CHVC	Chvalec	142.26	332	*e*PKP	PKPpre	20 29 00.5	
SIRR	Siria	142.26	323	⇑P	PKPpre	20 28 59.7	
SURR	Surduc	142.28	322	⇑P	PKPpre	20 29 00.2	
KRLC	Kraliky	142.30	331	*e*PKIKP	PKPpre	20 29 00.7	
KRLC	Kraliky	142.30	331	*e*PKP	PKPpre	20 29 00.7	
MAUC	Maruska	142.31	330	*e*PKP	PKPpre	20 29 01.3	
MAUC				*e*SKP	SKPbc	20 32 17.2	+0.7
DPC	Dobruska-Polom	142.31	332	*e*PKIKP	PKPpre	20 29 00.2	
DPC				*e*		20 32 16.6	
DPC	Dobruska-Polom	142.31	332	*e*PKP	PKPpre	20 29 00.2	
DPC				*e*SKP	SKPbc	20 32 16.6	+0.1
UPC	Upice	142.34	332	*e*PKIKP	PKPpre	20 29 01.0	
UPC				*e*		20 32 17.2	
UPC	Upice	142.34	332	*e*PKP	PKPpre	20 29 01.0	
UPC				*e*SKP	SKPbc	20 32 17.2	+0.7
BAIL	Bailesti	142.47	319	⇑P	PKPdf	20 29 02.9	-1.5
HERR	Herculane	142.59	321	⇓P	PKPpre	20 29 00.8	
BZS	Buzias	142.66	322	⇑P	PKPpre	20 29 00.7	
BZS	Buzias	142.66	322	⇑PKHKP	PKPpre	20 29 00.7	
RZN	Rozhen	142.68	315	P	PKPpre	20 29 01.7	
RZN	Rozhen	142.68	315	P	PKPpre	20 29 02.6	
PGB	Panagyurishte	142.68	316	P	PKPpre	20 29 02.5	
JAVC	Velka Javorina	142.73	329	*e*PKP	PKPdf	20 29 02.9	-1.9
JAVC				*e*		20 32 20.7	
FLTG	Flechtingen	142.81	338	*e*PKPbc	PKPdf	20 29 02.7	-2.0
	baz=35,slow=3.1						
VRAC	Vranov	142.93	331	PKhKP	PKPpre	20 29 01.9	
	comp=Z,10nm,1.0s,baz=66,slow=4.6,SNR=8.7						
VRAC	Vranov	142.93	331	⇓P	PKPpre	20 29 01.4	
VRAC	Vranov	142.93	331	*e*PKP	PKPpre	20 29 01.3	
VRAC				*e*		20 32 19.8	
VRAC	Vranov	142.93	331	⇓PKIKP	PKPpre	20 29 01.4	
BRG	Berggiesshubel	142.94	334	*e*PKPbc	PKPpre	20 29 01.3	
	baz=35,slow=3.1						
PVCC	Panska Ves	142.94	334	*e*SKP	SKPbc	20 32 18.7	+0.7
CLL	Collm	142.98	336	⇓*i*PKIKP	PKPdf	20 29 02.6	-2.5
CLL				pmax	pmax		
	comp=Z,26nm,1.0s						
CLL				pmax	pmax		
	comp=Z,30nm,1.0s						
CLL	Collm	142.98	336	*e*PKPbc	PKPdf	20 29 02.5	-2.5
	baz=35,slow=3.1						
MDVR	Moldovita	143.06	321	⇓P	PKPbc	20 29 02.7	-0.5
BANR	Banloc	143.07	322	⇑P	PKPbc	20 29 03.4	+0.3
SMOL	Smolenice	143.08	329	*e*PKIKP	PKPdf	20 29 05.1	-0.3
BLSH	Balsha	143.10	317	P	PKPbc	20 29 02.9	-0.4
RETH	Rethem/Aller,	143.11	340	*e*PKPbc	PKPab	20 29 01.8	+0.5
	baz=35,slow=3.1						
SRO	Srobarova	143.11	327	*e*PKIKP	PKPdf	20 29 04.9	-0.5
SRO	Srobarova	143.11	327	*e*PKP	PKPdf	20 29 04.9	-0.5
KARP	Karpathos	143.15	304	P	PKPab	20 29 02.6	+0.5
ASSE	Asse, Remlinge	143.18	338	*e*PKPbc	PKPab	20 29 02.2	+0.6
	baz=35,slow=3.1						
KRUC	Moravsky	143.20	330	*e*PKP	PKPab	20 29 02.3	+0.4
KRUC				*e*		20 32 19.4	
VTS	Vitosha	143.24	317	P	PKPbc	20 29 03.3	-0.5
VTS	Vitosha	143.24	317	P	PKPbc	20 29 04.2	+0.4
MODS	Modra-Piesok	143.25	329	*e*PKIKP	PKPdf	20 29 05.3	-0.4
MODS				*e*		20 32 19.9	
MODS	Modra-Piesok	143.25	329	*e*PKP	PKPdf	20 29 05.3	-0.4
MODS				*e*PP	PP	20 32 19.9	+0.9
HSKC	Hora Svate Kat	143.35	335	*e*PKP	PKPab	20 29 00.1	-2.4
PRU	Pruhonice	143.36	333	*e*PKIKP	PKPab	20 29 02.4	-0.1
PRU	Pruhonice	143.36	333	*e*PKP	PKPab	20 29 02.4	-0.1
PRU				*e*SS	SS	20 50 51.6	+14
MMB	Musomishta	143.41	315	P	PKPab	20 29 03.2	+0.2
MMB	Musomishta	143.41	315	P	PKPbc	20 29 03.8	-0.4
EKA	Eskdalemuir Ar	143.44	353	PKhKP	PKPpre	20 29 02.6	
	comp=Z,4.8nm,0.5s,baz=358,slow=2.6,SNR=15						
TREC	Trest	143.45	331	*e*PKIKP	PKPab	20 29 03.3	+0.4
TREC	Trest	143.45	331	*e*PKP	PKPab	20 29 03.3	+0.4
TREC				*e*x	x	20 30 19.4	
CLZ	Clausthal	143.52	338	*e*PKPbc	PKPbc	20 29 04.5	+0.4
	baz=35,slow=3.1						
NEUB	Neuenburg	143.53	337	*e*PKPbc	PKPab	20 29 03.4	+0.3
	baz=35,slow=3.1						
KKB	Krupnik	143.68	316	P	PKPbc	20 29 04.5	-0.4
KKB	Krupnik	143.68	316	P	PKPbc	20 29 05.5	+0.6
BOVS	Bovan	143.69	319	⇑P	PKPab	20 29 04.1	+0.1
SRS	Serrai	143.71	315	P	PKPab	20 29 03.8	-0.4
OUR	Ouranopolis	143.79	313	P	PKPab	20 29 04.0	-0.5
TANN	Tannenbergstha	143.89	335	*e*PKPbc	PKPab	20 29 04.8	+0.2
	baz=35,slow=3.1						
GTTG	Gottingen	143.91	338	*e*PKPbc	PKPab	20 29 04.9	+0.3
	baz=35,slow=3.1						
ZVC	Zvikov	143.92	333	*e*PKP	PKPab	20 29 04.8	+0.1
APE	Apeiranthos	143.93	307	⇓P	PKPab	20 29 04.8	-0.4
APE	Apeiranthos	143.93	307	⇓PKIKP	PKPab	20 29 04.8	-0.4
PLN	Plauen	143.96	335	*e*PKPbc	PKPab	20 29 05.0	+0.1
	baz=35,slow=3.1						
MORH	Mrgy, Hungar	143.96	325	⇑*i*P	PKPab	20 29 04.7	-0.3
MORH	Mrgy, Hungar	143.96	325	⇑P	PKPab	20 29 05.2	+0.2
IBBN	Ibbenburen	143.98	341	*e*PKPbc	PKPab	20 29 04.7	-0.1
	baz=35,slow=3.1						
SOH	Sokhos	144.00	314	P	PKPab	20 29 04.7	-0.7
MOX	Moxa	144.04	336	*e*PKPbc	PKPab	20 29 05.1	0.0
	baz=35,slow=3.1						
IDGL	Inch Island, C	144.05	357	PKPdf	PKPdf	20 29 06.4	-0.4
PLG	Polygyros	144.14	314	P	PKPab	20 29 05.1	-0.9
KNT	Kendrikon	144.16	315	P	PKPab	20 29 05.3	-0.6
THR8	Santorini-Mono	144.19	306	P	PKPab	20 29 04.9	-1.2
RONA	Rosalia, Austr	144.19	329	*i* PKP	PKPbc	20 29 06.4	+0.1
	comp=Z,290nm,1.3s,SNR=39						
RONA				*e*PP	PP	20 32 21.7	-2.9
	comp=Z,6.2nm,0.7s						
THERA	Ancient Thera,	144.20	306	P	PKPab	20 29 05.0	-1.2
CONA	Conrad Observa	144.25	329	*e*PKP	PKPbc	20 29 06.6	+0.1
	comp=Z,374nm,2.1s,SNR=34						
CONA				*e*pPKP	pPKPdf	20 30 12.4	-1.7
	comp=Z,229nm,3.8s						
CONA				*e*PP	PP	20 32 21.9	-3.0
	comp=Z,5.5nm,0.6s						
SNT5	Nea Kammeni, S	144.25	306	P	PKPab	20 29 05.3	-1.1
THR6	Thira Island,	144.26	306	P	PKPab	20 29 04.9	-1.5
HORT	Hortiatis	144.28	314	P	PKPab	20 29 05.5	-1.0
VAY	Valandovo	144.30	315	*i* P	PKPab	20 29 06.2	-0.2
CKRC	Cesky Krumlov	144.33	332	*e*PKIKP	PKPbc	20 29 06.5	-0.1
CKRC				*e*		20 32 21.6	
CKRC				*e*SS	SS	20 50 58.3	+9.4
CKRC	Cesky Krumlov	144.33	332	*e*PKP	PKPbc	20 29 06.5	-0.1
CKRC				*e*x	x	20 30 19.3	
CKRC				*e*SKP	SKPbc	20 32 21.6	+0.2
CKRC				*e*SS	SS	20 50 58.3	+9.4
THE	Thessaloniki	144.35	314	P	PKPab	20 29 05.3	-1.4
MANZ	Manzenberg	144.37	335	*e*PKPbc	PKPab	20 29 06.5	0.0
	baz=35,slow=3.1						
KHC	Kasperske Hory	144.41	333	*e*PKIKP	PKPab	20 29 06.7	0.0
KHC				*e*		20 32 22.1	
KHC	Kasperske Hory	144.41	333	*e*PKP	PKPab	20 29 06.7	0.0
KHC				*e*SKP	SKPbc	20 32 22.1	+0.5
KHC				*e*SS	SS	20 51 01.7	+12
NPS	Neapolis	144.44	304	P	PKPab	20 29 07.1	-0.1
UBBA	Unterbreizbach	144.50	338	*e*PKPbc	PKPab	20 29 06.8	0.0
	baz=35,slow=3.1						
UBBA				*e*pPKPbc	pPKPdf	20 30 12.7	-1.2
	baz=36,slow=3.5						
ROTZ	Rotzenmuhle	144.50	335	*e*PKPbc	PKPab	20 29 07.0	+0.1
	baz=35,slow=3.1						
ROTZ				*e*pPKPbc	pPKPdf	20 30 13.0	-1.1
	baz=36,slow=3.5						
GEC2	GERESS Array S	144.58	332	*e*PKPbc	PKPab	20 29 07.0	-0.4
	baz=35,slow=3.1						
GERES	GERESS Array B	144.58	332	PKP	PKPab	20 29 06.8	-0.6
	comp=Z,41nm,0.9s,baz=40,slow=4.4,SNR=108						
GERES				pPKP	pPKPdf	20 30 12.0	-2.4
	comp=Z,5.7nm,0.8s,baz=29,slow=3.0,SNR=1.8						
GERES				SKPbc	SKPbc	20 32 22.0	0.0
	comp=Z,5.0nm,0.8s,baz=46,slow=2.8,SNR=3.5						
GERES				SKKPbc	SKKPab	20 40 26.1	+0.9
	comp=Z,0.6nm,0.8s,baz=190,slow=3.0,SNR=3.6						
HPK	Haverah Park	144.59	351	*e*P	PKPab	20 29 06.5	-0.6
RCBR	Riachuelo	144.66	132		PKPab	20 29 07.1	-1.5
RCBR	Riachuelo	144.66	132	PKIKP	PKPab	20 29 07.1	-1.5
RCBR	Riachuelo	144.66	132	*e*P	PKPab	20 29 08.2	-0.5
NBPV	Pedro Velho	144.67	134	*e*P	PKPab	20 29 08.6	0.0
WET	Wettzell	144.71	333	*e*PKPbc	PKPbc	20 29 07.6	-0.1
	baz=35,slow=3.1						
KASTN	Kahler Asten	144.72	339	*e*PKPbc	PKPbc	20 29 07.4	-0.4
	baz=35,slow=3.1						
KASTN				*e*pPKPbc	pPKPdf	20 30 13.8	-0.7
	baz=36,slow=3.5						
KASTN				*e*PP	PP	20 32 22.0	-5.4
WIM	Isle of Man	144.77	354	*e*P	PKPbc	20 29 07.2	-0.5
BEHE	Becsehely	144.79	327	⇑*i*P	PKPdf	20 29 08.6	+0.2
ARSA	Arzberg	144.88	329	*e*PKP	PKPbc	20 29 07.4	-1.0
	comp=Z,208nm,2.3s,SNR=22						
ARSA				*e*pPKP	pPKPdf	20 30 14.4	-0.7
	comp=Z,212nm,2.4s						
BUG	Bochum--Univer	144.89	341	*e*PKPbc	PKPbc	20 29 07.5	-0.6
	baz=35,slow=3.1						
BUG				*e*pPKPbc	pPKPdf	20 30 13.7	-1.0
	baz=36,slow=3.5						
GRF	Grafenberg Arr	144.95	335	*e*PKPbc	PKPdf	20 29 08.6	0.0
	baz=35,slow=3.1						
GRF				*e*pPKPbc	pPKPdf	20 30 15.0	+0.1
	baz=36,slow=3.5						
STFN	Stefani	144.99	310	P	PKPbc	20 29 07.5	-1.5
IDI	Anoyia	145.00	305	PKP	PKPdf	20 29 09.3	+0.1
	comp=Z,123nm,1.0s,baz=32,slow=3.8,SNR=22						
ILTH	Belurgan, Co L	145.02	356	PKPdf	PKPbc	20 29 07.6	-0.9
ILTH	Belurgan, Co L	145.02	356	*e*P	PKPbc	20 29 07.5	-0.9
MOA	Molln	145.06	331	*i* PKP	PKPdf	20 29 08.8	0.0
	comp=Z,278nm,1.2s,SNR=51						
MOA				*i* pPKP	pPKPdf	20 30 15.3	+0.2
	comp=Z,100nm,1.3s						
RUDO	Rudo	145.11	321	*e*P	PKPdf	20 29 08.6	-0.4
LBWR	Ladybower, Pea	145.14	351	*e*P	PKPdf	20 29 08.2	-0.6
VILL	Villia	145.16	310	P	PKPdf	20 29 07.9	-1.4
IVA	Berane	145.22	320	⇑*i*PKP	PKPdf	20 29 09.3	0.0
PLE	Pljevlja	145.26	321	⇑*i*PKP	PKPbc	20 29 09.7	-0.1
PVY	Plav	145.33	319	⇑*i*PKP	PKPbc	20 29 10.2	+0.2
WACR	West Acre	145.39	348	*e*P	PKPdf	20 29 08.5	-0.7
KOME	Kolasin	145.46	320	⇑*i*PKP	PKPab	20 29 10.8	-0.1
BIOA	Bad Ischl, Aus	145.46	331	*e*PKP	PKPdf	20 29 09.6	+0.1
	comp=Z,432nm,2.9s,SNR=15						
BIOA				*i* pPKP	pPKPdf	20 30 16.2	+0.3
	comp=Z,106nm,1.5s						
LTK	Loutraki	145.47	310	P	PKPdf	20 29 08.8	-1.1
PHP	Peshkopia	145.51	317	P	PKPdf	20 29 09.4	-0.4
STNC	Stoke	145.51	351	*e*P	PKPab	20 29 10.4	-0.3
SOKA	Soboth	145.53	329	*e*PKP	PKPdf	20 29 09.0	-0.7
	comp=Z,306nm,2.1s,SNR=17						
TNS	Taunus Mts	145.54	339	*e*PKPbc	PKPbc	20 29 10.4	0.0
	baz=35,slow=3.1						
TNS				*e*pPKPbc	pPKPdf	20 30 16.8	+0.8
	baz=36,slow=3.5						
TNS				*e*PP	PP	20 32 29.1	-3.2
OHR	Ohrid	145.57	316	*i* P	PKPbc	20 29 11.0	+0.3
WLF1	Llynfaes	145.59	354	*e*P	PKPdf	20 29 09.4	-0.1
BLY	Banja Luka	145.68	324	⇑*i*P	PKPbc	20 29 10.7	-0.1
BLY	Banja Luka	145.68	324	⇓P	PKPbc	20 29 11.2	+0.3
CWF	Charnwood Fore	145.72	350	*e*P	PKPdf	20 29 09.7	0.0
IGLA	Glengowla, Co	145.76	359	PKP	PKPab	20 29 10.9	-0.6
IGLA				PKPdf	PKPbc	20 29 10.4	-0.3
IGLA	Glengowla, Co	145.76	359	*e*P	PKPdf	20 29 10.1	+0.4
DSB	Dublin	145.81	356	PKP	PKPab	20 29 11.7	-0.1
DSB				PKPdf	PKPdf	20 29 10.2	+0.3
KLINJ	Klinje	145.84	321	⇑*i*P	PKPbc	20 29 11.3	-0.2
FOEL	Foel Wylfa	145.84	352	*e*P	PKPdf	20 29 10.4	+0.4
NKME	Niksic	145.85	320	⇑*i*PKP	PKPbc	20 29 11.5	0.0
PDG	Podgorica	145.85	319	⇑P	PKPbc	20 29 10.9	-0.5
PDG	Podgorica	145.85	319	⇑*i*PKP	PKPbc	20 29 11.6	+0.2
OBKA	Obir	145.88	329	PKP	PKPbc	20 29 11.6	+0.1
	comp=Z,244nm,2.8s						
BEBN	Eben Emael	145.94	342	*d*PKP	PKPbc	20 29 11.8	+0.4
BEBN				*d*pPKP	pPKPab	20 30 16.9	+0.2
SERG	Sergoula	145.96	311	P	PKPbc	20 29 11.5	-0.5
ANX	Ano Chora	145.98	312	P	PKPbc	20 29 11.5	-0.6
BTNL	Ternell	145.99	341	*d*PKP	PKPbc	20 29 11.7	+0.1
BTNL				*d*pPKP	pPKPab	20 30 18.0	+1.0
CEME	Cevo	145.99	320	⇑*i*PKP	PKPbc	20 29 12.0	+0.1
MEM	Membach	146.00	341	*d*PKP	PKPbc	20 29 11.9	+0.3
MEM				*d*pPKP	pPKPab	20 30 18.1	+1.1
BRY	Bratogost	146.02	321	⇑*i*PKP	PKPdf	20 29 11.2	+0.4
DRME	Dracevica, Mon	146.03	319	⇑*i*PKP	PKPbc	20 29 11.5	-0.5
KBA	Koelnbreinsper	146.05	331	*e*PKP	PKPdf	20 29 10.1	-0.7
	comp=Z,92nm,1.2s,SNR=27						
KBA				*i* pPKP	pPKPdf	20 30 17.1	+0.1
	comp=Z,458nm,3.2s						
LESA	Schwarzleotal	146.09	332	*i* PKP	PKPdf	20 29 11.3	+0.6
	comp=Z,93nm,1.2s,SNR=29						
LESA				*e*pPKP	pPKPab	20 30 18.1	+0.3
	comp=Z,228nm,1.6s						
TETR	Tetrakomo, Epi	146.10	313	P	PKPbc	20 29 12.3	-0.1
PRMD	Pramanda	146.13	314	P	PKPbc	20 29 12.5	0.0
FUR	Furstenfeldbru	146.14	334	*e*PKPbc	PKPbc	20 29 12.0	-0.1
	baz=35,slow=3.1						
FUR				*e*pPKPbc	pPKPab	20 30 18.6	+0.8
	baz=36,slow=3.5						
BUM	Brajici-Budva	146.15	319	⇑*i*PKP	PKPbc	20 29 12.0	-0.4
VLX	Vlachokerasia	146.16	309	P	PKPdf	20 29 11.6	+0.4
BSTI	Sart Tilman	146.16	342	*d*PKP	PKPbc	20 29 11.7	-0.3
BSTI				*d*pPKP	pPKPab	20 30 18.6	+1.0
HLM1	Long Mynd	146.17	352	*e*P	PKPdf	20 29 11.1	+0.5
LJU	Ljubljana	146.22	328	*i* PKPdf	PKPdf	20 29 10.8	0.0
LJU				*e*PKPbc	PKPbc	20 29 12.8	+0.4
LJU				*i* pPKPdf	pPKPdf	20 30 17.6	+0.2
LJU				*i* pPKPbc	pPKPab	20 30 18.7	+0.5
LJU				*i*		20 30 30.4	
BHOU	Houvegnez	146.23	341	*d*PKP	PKPab	20 29 13.0	-0.6
BHOU				*d*pPKP	pPKPab	20 30 19.0	+1.1
MYKA	Terra Mystica	146.23	330	*i* PKP	PKPdf	20 29 11.4	+0.5
	comp=Z,117nm,1.5s,SNR=10						
TREB	Trebinje	146.24	320	*e*P	PKPdf	20 29 11.6	+0.6
HCY	Herceg Novi	146.31	320	⇑*i*PKP	PKPdf	20 29 11.8	+0.7
UCC	Uccle	146.31	343	*d*PKP	PKPbc	20 29 12.7	+0.2
UCC				*d*pPKP	pPKPab	20 30 18.9	+0.8
CRNS	Crni Vrh	146.32	328	*e*PKPdf	PKPdf	20 29 10.2	-0.9
CRNS				*i* PKPbc	PKPbc	20 29 12.8	0.0
CRNS				*i* pPKPdf	pPKPab	20 30 18.5	-0.2
CRNS				*e*		20 30 30.4	
AMPL	Ampelaki	146.33	313	P	PKPdf	20 29 11.0	-0.2
BCLA	Clavier	146.38	342	*d*pPKP	pPKPdf	20 30 18.8	+1.5
BGES	Gesves	146.47	342	*d*PKP	PKPbc	20 29 13.4	+0.4
BGES				*d*pPKP	pPKPab	20 30 18.8	0.0
STU	Stuttgart	146.48	336	*e*PKPbc	PKPbc	20 29 12.9	-0.2
	baz=35,slow=3.1						
STU				*e*pPKPbc	pPKPab	20 30 20.0	+1.1
	baz=36,slow=3.5						
RCHB	Rochefort	146.64	342	*d*PKP	PKPbc	20 29 13.6	+0.2
RCHB				*d*pPKP	pPKPbc	20 30 18.7	-0.2
BMRD	Maredsous	146.64	342	*d*PKP	PKPbc	20 29 13.8	+0.4
BMRD				*d*pPKP	pPKPab	20 30 20.1	+0.8
WATA	Walderalm	146.65	332	*i* PKP	PKPbc	20 29 13.4	-0.4
	comp=Z,112nm,1.2s,SNR=21						
WATA				*e*pPKP	pPKPbc	20 30 19.7	+0.3
	comp=Z,327nm,2.4s						
ABTA	Abfaltersbach	146.68	331	*i* PKP	PKPdf	20 29 12.4	+0.7
	comp=Z,110nm,1.3s,SNR=23						
ABTA				*e*pPKP	pPKPdf	20 30 18.1	+0.1
	comp=Z,144nm,1.4s						
WTTA	Wattenberg	146.68	332	*i* PKP	PKPdf	20 29 11.7	-0.1
	comp=Z,194nm,1.3s,SNR=26						
WTTA				*e*pPKP	pPKPdf	20 30 18.6	+0.4
	comp=Z,214nm,1.5s						
MCH1	Michaelchurch	146.69	352	*e*P	PKPbc	20 29 12.7	-0.8
IWEX	Carrickbyrne,	146.70	356	PKP	PKPab	20 29 14.5	-0.8
IWEX				PKPdf	PKPbc	20 29 14.2	+0.7
IWEX	Carrickbyrne,	146.70	356	*e*P	PKPbc	20 29 12.6	-0.9
LKD2	Lefkada island	146.78	313	P	PKPbc	20 29 13.7	-0.5
WLF	Walferdange	146.78	340	*e*PKPbc	PKPbc	20 29 14.2	+0.3
	baz=35,slow=3.1						
WLF				*e*pPKPbc	pPKPab	20 30 21.4	+1.3
	baz=36,slow=3.5						
WLF	Walferdange	146.78	340	*d*PKP	PKPab	20 29 14.9	-0.8
WLF				*d*pPKP	pPKPab	20 30 21.1	+1.0
STRD	Stroud	146.79	351	*e*P	PKPbc	20 29 12.8	-0.9
MONM	Monmouth	146.82	351	*e*P	PKPbc	20 29 12.9	-1.0
MOTA	Moosalm	146.85	333	*i* PKP	PKPbc	20 29 13.5	-0.8
	comp=Z,138nm,1.0s,SNR=26						
MOTA				*i* pPKP	pPKPab	20 30 20.6	0.0
	comp=Z,179nm,2.1s						
DOU	Dourbes	146.88	342	*d*PKP	PKPbc	20 29 13.4	-0.6
DOU				*d*pPKP	pPKPab	20 30 20.3	0.0
RETA	Reutte	146.88	333	*e*PKP	PKPbc	20 29 14.1	-0.2
	comp=Z,62nm,0.9s,SNR=10						
RETA				*i* pPKP	pPKPab	20 30 20.7	0.0
	comp=Z,996nm,5.0s						
SQTA	Sankt Quirin	146.90	333	*i* PKP	PKPbc	20 29 13.9	-0.5
	comp=Z,123nm,0.8s,SNR=27						
SQTA				*i* pPKP	pPKPab	20 30 20.8	0.0
	comp=Z,244nm,2.2s						
UBR	Ueberruh	147.00	334	*e*PKPbc	PKPbc	20 29 14.1	-0.6
	baz=35,slow=3.1						
UBR				*e*pPKPbc	pPKPab	20 30 21.3	+0.2
	baz=36,slow=3.5						
BFO	Black Forest	147.17	337		PKPbc	20 29 14.0	-1.0
BFO	Black Forest	147.17	337	PKP2	PKPbc	20 29 14.0	-1.0
BFO	Black Forest	147.17	337	*e*PKPbc	PKPbc	20 29 14.5	-0.5
	baz=35,slow=3.1						
BFO				*e*pPKPbc	pPKPab	20 30 21.8	+0.2
	baz=36,slow=3.5						
FETA	Feichten	147.26	333	*e*PKP	PKPbc	20 29 14.9	-0.5
	comp=Z,173nm,1.1s,SNR=19						
FETA				*i* pPKiKP	pPKPab	20 30 22.2	-0.1
	comp=Z,611nm,3.6s						
DAVA	Damuels	147.41	334	*e*PKP	PKPbc	20 29 15.3	-0.6
	comp=Z,229nm,1.5s,SNR=16						
DAVA				*i* pPKiKP	pPKPab	20 30 22.4	-0.4
	comp=Z,827nm,3.2s						
DAVOX	Davos/Dischmat	147.81	334	PKPbc	PKPbc	20 29 16.1	-0.9
	comp=Z,98nm,0.9s,baz=356,slow=2.0,SNR=74						
DAVOX				pPKPbc	pPKPbc	20 30 22.7	-0.1
	comp=Z,28nm,0.7s,baz=222,slow=2.3,SNR=2.6						
MATE	Matera	148.44	319	⇑P	PKPbc	20 29 19.1	+0.7
TIP	Timpagrande	149.22	316	⇓P	PKiKP	20 29 21.2	-0.5
AQU	L'Aquila	149.33	324	*e*P	PKPbc	20 29 19.7	-1.1
KEST	Kesra	156.01	318	PKP	PKPdf	20 29 26.1	0.0
	comp=Z,11nm,1.0s,baz=254,slow=16,SNR=3.5						
KEST				PKPab	PKPab	20 29 54.4	-0.4
	comp=Z,20nm,0.9s,baz=41,slow=4.0,SNR=7.2						
PBRG	Braganca	157.19	353	*e*PKPab	PKPab	20 30 00.3	+0.9
POLO	Lamas de Olo	157.72	355	*e*PKPab	PKPab	20 30 02.1	+0.2
PVRL	Vila Real	157.81	355	*e*PKPab	PKPab	20 30 02.1	-0.1
MVO	Moncorvo	157.85	353	*e*PKPdf	PKPdf	20 29 29.2	+0.9
MVO				*e*PKPab	PKPab	20 30 03.1	+0.7
PVIS	Viseu	158.38	355	*e*PKPab	PKPab	20 30 05.8	+1.2
MTE	Manteigas	158.66	354	*e*PKPab	PKPab	20 30 07.0	+1.1
ESDC	Sonseca Array	158.79	346	PKP	PKPdf	20 29 29.9	+0.5
	comp=Z,1.0nm,0.9s,baz=350,slow=3.6,SNR=4.9						
ESDC				PKPab	PKPab	20 30 06.2	-0.4
	comp=Z,6.2nm,1.1s,baz=3.7,slow=2.7,SNR=7.7						
ESDC				PP	PP	20 33 49.8	+2.7
	comp=Z,0.9nm,0.5s,baz=18,slow=3.1,SNR=3.3						
ESDC	Sonseca Array	158.79	346		PKPdf	20 29 27.8	-1.7
PCAS	Casmilo, Conde	159.08	356	*e*PKPab	PKPab	20 30 08.7	+1.0
PCBR	Castelo Branco	159.21	354	*e*PKPdf	PKPdf	20 29 30.9	+1.0
PCBR				*e*PKPab	PKPab	20 30 08.2	0.0
PSARD	Sardoal	159.51	355	*e*PKPdf	PKPdf	20 29 32.3	+2.1
PMRV	Marv??o	159.61	353	*e*PKPdf	PKPdf	20 29 31.4	+1.1
PMRV				*e*PKPab	PKPab	20 30 10.7	+0.7
PMTG	Montargil	160.04	355	*e*PKPab	PKPab	20 30 12.5	+0.7
PARRA	Arraiolos	160.28	355	*e*PKPab	PKPab	20 30 13.3	+0.4
PBAR	Barrancos	160.80	352	*e*PKPdf	PKPdf	20 29 31.8	+0.1
PBAR				*e*PKPab	PKPab	20 30 16.4	+1.2
PBEJ	Beja	161.04	354	*e*PKPab	PKPab	20 30 17.8	+1.5
PCVE	Castro Verde	161.45	354	*e*PKPdf	PKPdf	20 29 33.4	+1.0
PCVE				*e*PKPab	PKPab	20 30 18.4	+0.3
PTEO	Sao Teotonio	161.59	356	*e*PKPdf	PKPdf	20 29 35.0	+2.5
PVAQ	Vaqueiros	161.64	353	*e*PKPdf	PKPdf	20 29 32.7	+0.1
PVAQ				*e*PKPab	PKPab	20 30 20.2	+1.3
PBDV	Barranco-do-Ve	161.82	354	*e*PKPdf	PKPdf	20 29 34.2	+1.4
PBDV				*e*PKPab	PKPab	20 30 21.1	+1.3
MORF	Marmelete	161.83	356	*e*PKPdf	PKPdf	20 29 33.1	+0.3
MORF				*e*PKPab	PKPab	20 30 20.6	+0.8
MORF	Marmelete	161.83	356	*e*PKPdf	PKPdf	20 29 34.1	+1.3
MORF				*e*PKPab	PKPab	20 30 21.1	+1.4
PFVI	Vila Bisbo	162.01	356	*e*PKPdf	PKPdf	20 29 34.2	+1.2
PMOZ	Porto Moniz, M	165.04	23	*e*PKPdf	PKPdf	20 29 34.6	-1.5
MDT	Midelt	165.43	340	PKP	PKPdf	20 29 36.6	+0.3
	comp=Z,12nm,1.0s,baz=290,slow=1.4,SNR=9.2						
DBIC	Dimbokro	166.52	204	PKP	PKPdf	20 29 37.5	-0.2
	comp=Z,16nm,1.0s,baz=251,slow=2.0,SNR=9.5						
DBIC				PKPab	PKPab	20 30 41.9	+1.0
	comp=Z,10.0nm,0.7s,baz=174,slow=5.6,SNR=8.9						
DBIC	Dimbokro	166.52	204		PKPdf	20 29 35.2	-2.4
TORD	Torodi Ar. Bea	167.00	245	PKP	PKPdf	20 29 38.0	+0.1
	comp=Z,20nm,0.9s,baz=21,slow=5.6,SNR=12						
TORD				PKPab	PKPab	20 30 43.2	-0.1
	comp=Z,3.8nm,0.3s,baz=64,slow=6.7,SNR=2.6						
TORD	Torodi Ar. Bea	167.00	245		PKPdf	20 29 37.8	-0.1
BBTS	Babate	172.60	126	PKP	PKPdf	20 29 41.5	+0.4
	baz=80,slow=0.0						
BBTS				PKPab	PKPab	20 31 09.2	+1.2
	baz=260,slow=0.0						

JMA 04 20:14:14.0±1.4,**45°N**±8°×**15°0E**±1°0,**h30^{km},MV3.5**/12,**SE OFF ETOROFU,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	3.23	245	P	Pn	20 15 01.2	-1.3
NEM2				S	Sn	20 15 36.3	-3.6
JRA	Rausu	3.43	257	P	Pn	20 15 06.8	+1.4
JNK	Nakash	3.82	253	P	Pn	20 15 10.9	+0.2
JAK	Akkeshi	4.07	245	P	Pn	20 15 13.2	-1.1
JAK				*e*S	Sn	20 15 56.9	-3.9
JAR	Ashorobuto	4.57	253	P	Pn	20 15 22.0	+1.0
JAR				S	Sn	20 16 13.3	+0.3
JOB	Onbets	4.68	248	*e*P	Pn	20 15 23.8	+1.3
JOB				*e*S	Sn	20 16 13.2	-2.6
JCH	Churui	5.12	247	P	Pn	20 15 28.0	-0.6
JCH				S	Sn	20 16 23.9	-2.8
JNBK	Urakawa-nobuka	5.68	246	P	Pn	20 15 35.3	-0.9
JANG	Nango	7.51	237	S	Sn	20 17 15.3	-10
JTH	Tanohata	7.59	233	S	Sn	20 17 17.1	-11

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*IDC **04** 20:29:08.8±4.5, 18°.41S×168°.95E, h237^{km}±32^{km}, mb3.3/6, mbtmp3.9/7, Error ellipse: s-maj=47.9km s-min=26.5km az=39.0*

*NOU **04** 20:29:10.7, 19°.13S×169°.51E, h244^{km}, MLv3.9/16, Vanuatu Islands*

ISC 04 20:29:11.5±1.3,**19°.10S**±0°.06×**169°.2E**±0°.2,**h250^{km},n19,** σ1^{s}89/20,**mb3.5**/6,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INH	Isangel	0.46	167	P	Pn	20 29 43.8	-0.5
RTV	Rentapao	1.48	331	P	Pn	20 29 50.7	+1.0
RTV	Rentapao	1.48	331	P	S	20 30 22.0	+2.2
DVP	Devils Point	1.65	326	P	Pn	20 29 51.4	+0.3
DVP	Devils Point	1.65	326	S	S	20 30 24.6	+2.4
MARNC	Mare, Loyalty	2.60	204	P	Pn	20 29 59.4	-0.4
MARNC	Mare, Loyalty	2.60	204	S	S	20 30 38.6	+0.6
YATNC	Mamie plateau,	3.64	216	P	Pn	20 30 11.0	-0.1
DZM	Mont Dzumac	3.91	220	P	Pn	20 30 16.0	+1.6
	18nm,0.7s,baz=58,slow=18,SNR=41						
DZM				S	S	20 31 05.6	+1.4
	5.2nm,0.4s,baz=162,slow=21,SNR=1.3						
DZM	Mont Dzumac	3.91	220	P	Pn	20 30 16.0	+1.6
OUENC	Ouen Island, N	3.96	213	P	Pn	20 30 16.2	+1.4
ONTNC	Ouen Toro	4.08	218	P	Pn	20 30 18.1	+1.8
SANVU	Saraoutou	4.09	332	P	Pn	20 30 17.2	+0.8
STKA	Stephens Creek	27.86	237	P	P	20 34 37.2	-1.2
	1.2nm,0.8s,baz=110,slow=12,SNR=1.7						
	1.2nm,0.8s						
WRA	Warramunga Arr	32.80	263	P	P	20 35 19.2	-2.7
	0.5nm,0.4s,baz=96,slow=8.0,SNR=16						
WRA				PcP	PcP	20 37 58.2	-2.6
	0.8nm,0.9s,baz=82,slow=2.5,SNR=4.5						
	0.5nm,0.4s						

ASAR	Alice Springs	33.10	256	P	P	20 35 22.4	-2.1
	4.1nm,0.6s,baz=88,slow=8.5,SNR=83						
	4.1nm,0.6s						
FITZ	Fitzroy Crossi	41.19	264	P	P	20 36 30.6	-1.7
	1.8nm,0.6s,baz=113,slow=7.7,SNR=8.3						
	1.8nm,0.6s						
VNDA	Vanda	58.57	182	P	P	20 38 45.3	+3.6
	1.1nm,1.0s,baz=341,slow=4.3,SNR=6.8						
	1.1nm,1.0s						
SONM	Songino Array	87.07	323	P	P	20 41 24.4	-4.7
	0.3nm,0.7s,baz=112,slow=3.4,SNR=3.8						
	0.3nm,0.7s						

IDC 04 20:53:48.1±6.1,18°.64S×176°.17W,h0^{km},mb4.1/2, mbtmp4.1/2,Error ellipse: s-maj=313.5km s-min=52.6km az=148.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.59	260	P	P	21 02 17.5	-0.9
	0.4nm,0.3s,baz=98,slow=6.8,SNR=13						
	0.4nm,0.3s						
ASAR	Alice Springs	46.65	255	P	P	21 02 19.2	+0.5
	3.8nm,0.6s,baz=88,slow=8.2,SNR=72						
	3.8nm,0.6s						
GERES	GERESS Array B	148.83	347	PKPbc	PKPbc	21 13 37.3	-0.5
	0.2nm,0.6s,baz=20,slow=3.3,SNR=4.0						

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*IDC **04** 20:58:01.4±4.9,34°.96N×140°.32E,h0^{km},mb3.5/2, mbtmp3.3/3,ML1.9/1,Error ellipse: s-maj=183.1km s-min=26.9km az=61.0*

*JMA **04** 20:58:01.9±0.2,36°.0N±0°.5×14°1E±°,h38^{km}±2^{km}, MV2.8/30,E OFF IBARAKI PREF*

ISC 04 20:57:58.0±2.8,36°.0N±0°.1×141°.3E±0°.1,h24^{km}±21^{km},n15, σ1^{s}.24/13,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIHU	Itakohorinouch	0.66	271	P	Pn	20 58 13.1	+1.2
JHYU	Hitachinakayam	0.72	303	P	Pn	20 58 13.4	+0.7
JHYU				S	Sb	20 58 21.6	+0.1
JHO	Hitachi	0.91	317	*i* P	Pn	20 58 15.8	+0.6
JHO				S	Sb	20 58 25.9	-0.9
JYT	Yasato	0.97	287	*i* P	Pn	20 58 16.6	+0.5
JYT				S	Sb	20 58 26.8	-1.7
ONAJ	Iwakimizuishiy	1.23	339	P	Pb	20 58 20.9	+0.3
JAG	Ashikaga	1.60	288	P	Pn	20 58 25.7	+0.9
JAG				S	Sn	20 58 43.2	-1.5
MJAR	Matsushiro Arr	2.60	284	Pn	Pn	20 58 40.1	+1.5
	0.3nm,0.3s,baz=118,slow=6.6,SNR=16						
MJAR				Sn	Sn	20 59 10.7	+1.3
	0.2nm,0.3s,baz=47,slow=18,SNR=4.2						
	1.7nm,0.4s						
H11N2	WAKE ISLAND Hy	27.66	119	T	T	21 32 55.9	
	baz=311,slow=75,SNR=6.2						
H11N1	WAKE ISLAND Hy	27.67	119	T	T	21 32 47.3	
	baz=311,slow=75,SNR=5.6						
H11N3	WAKE ISLAND Hy	27.68	119	T	T	21 32 58.6	
	baz=311,slow=75,SNR=6.9						
H11S1	WAKE ISLAND Hy	28.34	121	T	T	21 33 46.5	
	baz=313,slow=76,SNR=4.1						
H11S3	WAKE ISLAND Hy	28.34	121	T	T	21 33 43.1	
	baz=313,slow=76,SNR=4.3						
H11S2	WAKE ISLAND Hy	28.35	121	T	T	21 33 51.9	
	baz=313,slow=76,SNR=4.6						
ZALV	Zalesovo Beam	42.61	313	P	P	21 05 60.0	+8.0
	0.6nm,0.5s,baz=107,slow=7.7,SNR=4.3						
	0.6nm,0.5s						
WRA	Warramunga Arr	55.98	188	P	P	21 07 33.6	-0.9
	0.2nm,0.7s,baz=7.5,slow=6.8,SNR=1.0						
	0.2nm,0.7s						

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*IDC **04** 21:08:41.5±2.0,36°.01N×74°.90E,h0^{km},mb3.7/3, mbtmp3.6/7,ML2.7/3,MS3.9/13,Error ellipse: s-maj=46.5km s-min=22.7km az=64.0*

*NNC **04** 21:09:04.8±47.0,36°.66N×75°.06E,h68^{km}±378^{km},mb3.6, mpv3.6,Error ellipse: s-maj=402.0km s-min=234.5km az=165.0*

ISC 04 21:08:48.3±1.5,36°.0N±0°.1×75°.5E±0°.2,h35^{km},n23, σ3^{s}.03/13,mb3.3/3,MS4.0/9,4D,Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	6.69	354	Pn	Pn	21 10 24.9	+0.7
	0.1nm,0.3s,baz=183,slow=12,SNR=4.0						
AAK				Sn	Sn	21 11 41.7	+2.5
	baz=95,slow=20						
AAK				LR	LR	21 12 44.2	
	comp=Z,359nm,19.8s,baz=173,slow=37						
	0.9nm,0.5s						
KK31	Karatay Array	8.09	333	P	Pn	21 10 46.3	+3.1
	2.9nm,0.7s,baz=154,slow=13,SNR=9.5						
KK31				⇓S	Sn	21 12 13.0	-0.3
	17nm,1.1s,baz=143,slow=23,SNR=3.8						
MKAR	Makanchi Array	11.93	23	LR	LR	21 17 14.8	
	comp=Z,594nm,20.5s,baz=160,slow=42						
KURBB	Kurchatov Arra	14.79	8	Pn	Pn	21 12 13.0	-1.8
	0.1nm,0.3s,baz=199,slow=10,SNR=4.4						
KURBB				LR	LR	21 18 49.2	
	comp=Z,557nm,21.0s,baz=177,slow=41						
	0.9nm,0.2s						
KURBB	Kurchatov Arra	14.79	8	⇓P	P	21 12 28.2	+8.0
	4.8nm,0.7s						
BVAR	Borovoye Array	17.41	350	P	Pn	21 12 43.9	-4.4
	1.5nm,1.0s,baz=168,slow=7.4,SNR=4.3						
AB31	Akbulak array	17.47	324	⇓P	P	21 12 50.5	+0.4
	0.7nm,0.6s,baz=139,slow=12,SNR=9.9						
I46RU	ZALESOVO INFRA	19.10	17	I	I	23 05 40.0	
	baz=200,slow=327,SNR=1.6						
ZALV	Zalesovo Beam	19.10	17	P	P	21 13 05.2	-2.6
	0.1nm,0.3s,baz=216,slow=7.1,SNR=5.1						
ZALV				LR	LR	21 21 40.6	
	comp=Z,369nm,19.2s,baz=208,slow=40						
	0.6nm,0.4s						
AKTO	Aktyubinsk	19.19	324	⇓P	Pn	21 13 14.1	+4.1
	5.0nm,1.1s						
SONM	Songino Array	25.68	53	P	P	21 14 17.6	+2.5
	0.3nm,0.7s,baz=235,slow=5.1,SNR=1.8						
SONM				LR	LR	21 26 33.2	
	comp=Z,424nm,20.1s,baz=264,slow=41						
	0.3nm,0.7s						
I34MN	SONGINO INFRAS	25.68	53	I	I	23 46 40.0	
	baz=252,slow=323,SNR=1.1						
CMAR	Chiang Mai Arr	27.07	124	P	P	21 14 29.4	+1.7
	0.7nm,0.8s,baz=315,slow=10.0,SNR=5.5						
	0.7nm,0.8s						
PALK	Pallekele	28.97	169	LR	LR	21 26 34.8	
	comp=Z,313nm,18.5s,baz=8.5,slow=37						
PSI	Prapat	39.49	141	LR	LR	21 34 00.1	
	comp=Z,117nm,19.9s,baz=268,slow=38						
TIXI	Tiksi	44.91	21	LR	LR	21 37 30.7	
	comp=Z,418nm,18.9s,baz=15,slow=38						
HFS	Hagfors	45.72	322	P	P	21 17 01.8	-3.8
	3.4nm,0.9s,baz=104,slow=12,SNR=2.2						
	3.4nm,0.9s						
SPITS	Spitsbergen Ar	48.83	346	LR	LR	21 41 06.8	
	comp=Z,93nm,19.5s,baz=122,slow=40						
ASAJ	Asahikawa	50.71	59	LR	LR	21 41 09.2	
	comp=Z,112nm,19.7s,baz=136,slow=38						
SEY	Seymchan	52.81	34	LR	LR	21 43 32.1	
	comp=Z,168nm,19.3s,baz=302,slow=39						
PETK	Petropavlovsk-	57.78	45	LR	LR	21 43 35.9	
	comp=Z,107nm,21.7s,baz=248,slow=36						
ILAR	Eielson Array	74.22	17	LR	LR	21 55 57.4	
	comp=Z,122nm,19.6s,baz=350,slow=38						
PDAR	Pinedale Array	101.48	4	P	Pdif	21 22 34.6	-2.2
	0.2nm,0.7s,baz=10,slow=7.0,SNR=2.2						

RSNC 04 21:10:03.4±0.0,7°N±1°×7°3W±°,h141^{km}±2^{km},M3.2,mB4.7, mb3.6,ML2.9,MLv3.5,Mw(mB)4.0,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.21	189	P	Pn	21 10 23.0	+0.1
BARC				S	Sn	21 10 36.4	-1.3
BRJC	Barrancabermej	0.61	286	P	Pn	21 10 24.4	0.0
BRJC				S	Sn	21 10 40.3	0.0
PAMC	Pamplona, Colo	0.70	40	P	Pn	21 10 25.6	+0.1
PAMC				S	Sn	21 10 42.5	+0.2
RUSC	La Rusia	0.90	176	P	Pn	21 10 26.6	-0.5
RUSC				S	Sn	21 10 45.4	+0.3
PTBC	PUERTO BERRIO,	1.32	259	P	Pn	21 10 29.5	-0.9
PTBC				S	Sn	21 10 50.6	-0.4
OCAC	Ocana	1.44	353	P	Pn	21 10 31.3	-0.5
OCAC				S	Sn	21 10 52.2	-1.4
SPBC	San Pablo de B	1.46	219	P	Pn	21 10 31.7	-0.3
SPBC				S	Sn	21 10 52.5	-1.3
NORC	Norcasia	2.10	234	P	Pn	21 10 38.6	-0.7
NORC				S	Sn	21 11 06.2	-0.7
CHIC	Chingaza	2.23	195	P	Pn	21 10 40.6	-0.6
CHIC				S	Sn	21 11 10.3	0.0
ROSC	El Rosal	2.27	211	P	Pn	21 10 42.2	+0.6
ROSC				S	Sn	21 11 11.9	+0.9
HELC	Santa Helena	2.44	256	P	Pn	21 10 44.1	+0.4
HELC				S	Sn	21 11 13.7	-0.9
CVER	Cruz Verde, Cu	2.44	202	P	Pn	21 10 44.2	+0.3
CVER				S	Sn	21 11 15.6	+0.6
UREC	San Jos de Ur	2.55	292	P	Pn	21 10 43.5	-1.2
UREC				S	Sn	21 11 16.3	-0.2
GUY2C	Guyana, Caldas	2.70	235	P	Pn	21 10 47.0	-0.1
GUY2C				S	Sn	21 11 18.6	-2.1
VILC	Villavicencio,	2.73	191	P	Pn	21 10 46.1	-1.0
VILC				S	Sn	21 11 20.8	0.0
PTGC	Puerto Gaitan,	2.77	159	P	Pn	21 10 45.9	-1.7
PTGC				S	Sn	21 11 19.3	-2.4
CBOC	Ciudad Bolivar	2.99	252	P	Pn	21 10 50.7	+0.2
CBOC				S	Sn	21 11 24.6	-2.2
DBBC	Dabeiba	3.04	274	P	Pn	21 10 50.3	-0.8
DBBC				S	Sn	21 11 25.0	-2.9
ARGC	Ariguani, Magd	3.23	340	P	Pn	21 10 52.7	-0.7
ARGC				S	Sn	21 11 31.7	-0.3
SDV	Santo Domingo	3.24	50	P	Pn	21 10 52.5	-1.2
SDV				S	Sn	21 11 29.0	-3.6
PRAC	Prado	3.52	210	P	Pn	21 10 56.4	-0.8
PRAC				S	Sn	21 11 37.2	-1.7
ORTC	Ortega, Tolima	3.55	216	P	Pn	21 10 57.1	-0.5
ORTC				S	Sn	21 11 39.5	-0.1
PLMC	San Jos del P	3.64	239	P	Pn	21 10 58.4	-0.4
PLMC				S	Sn	21 11 39.6	-2.1
URMC	La Uribe, Meta	3.74	199	P	Pn	21 10 59.4	-0.7
URMC				S	Sn	21 11 43.1	-0.9
JAMC	Jamundi, Valle	5.00	225	P	Pn	21 11 15.5	-1.4
URIC	Uribia, Colomb	5.00	13	P	Pn	21 11 13.9	-2.8
URIC				S	Sn	21 12 09.1	-4.8
GARC	Garzon, Huila	5.14	207	P	Pn	21 11 17.5	-1.4
GARC				S	Sn	21 12 14.4	-3.2
POPC	Popayan, Colom	5.50	220	P	Pn	21 11 23.2	-0.4
	5.3nm,0.6s						
FLOC	Florencia	5.75	206	P	Pn	21 11 25.1	-1.7
	11nm,0.9s						
FLOC				S	Sn	21 12 32.4	+0.5
	11nm,0.9s						
BBAC	Balboa, Cauca	6.26	221	P	Pn	21 11 32.8	-1.0

DJA 04 21:36:02.6±1.2,5°S±5°×10°3E±°,h29^{km}±11^{km},M3.7/12, mb4.0/4,MLv3.5/12,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	Manna	0.71	8	P	Pn	21 36 17.6	+0.9
MNAI				S	Sn	21 36 27.0	+0.3
LWLI	Liwa	1.20	88	P	Pn	21 36 23.4	-0.1
UBSI	University, Be	1.43	336	P	Pn	21 36 25.5	-1.1
KSI	Kapahiang	1.43	349	P	Pn	21 36 27.4	+0.7
MDSI	Maura Dua	1.44	66	P	Pn	21 36 26.5	-0.2
KASI	Kota Agung	1.69	106	P	Pn	21 36 30.6	+0.4
KLSI		1.90	79	P	Pn	21 36 33.0	-0.1
KLI	Kotabumi	2.00	84	P	Pn	21 36 34.8	+0.3
MASI	Maura Aman, Be	2.01	342	P	Pn	21 36 35.3	+0.6
CNJI	Cibinong	4.79	118	P	Pn	21 37 13.1	+0.2
BBJI	Bungbulang	5.32	117	P	Pn	21 37 20.1	-0.1
	0.0nm6.0nm,1.2s						

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*IDC **04** 21:36:32.3±16.0,28°.19N×51°.55E,h0^{km},mb3.8/6, mbtmp3.8/6,MS4.0/2,Error ellipse: s-maj=310.9km s-min=40.3km az=4.0*

*OMAN **04** 21:37:09.1±0.1,26°.78N×54°.04E,h12^{km},ml3.2/14,Error ellipse: s-maj=2.4km s-min=0.9km az=15.0*

ISC 04 21:36:35.0±1.2,28°.3N±0°.1×51°.8E±0°.2,h10^{km},n30, σ0^{s}.86/28,mb3.7/6,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHME	Shamm	4.50	119	P	Pn	21 37 43.1	-0.1
	SNR=5.2						
BANOM	Banah	4.68	120	P	Pn	21 37 45.7	-0.1
AJN	Ajban	4.72	142	P	Pn	21 37 48.3	+2.1
	SNR=5.9						
NAZ	Nazwa, Dubai	4.80	133	P	Pn	21 37 47.6	+0.1
	SNR=23						
ASUD	Al Ashush, Dub	4.86	138	P	Pn	21 37 48.2	0.0
	SNR=7.9						
MASF	Masafi	4.89	126	P	Pn	21 37 48.7	0.0
	SNR=12						
MDH	Madha	5.04	126	P	Pn	21 37 50.3	-0.3
	SNR=11						
UOSS	Minazif	5.19	129	P	Pn	21 37 54.0	+1.2
HATD	Hatta, Dubai	5.22	131	P	Pn	21 37 52.7	-0.5
ASHO	Ashiyiah	5.27	132	P	Pn	21 37 53.8	-0.1
	SNR=7.1						
ALNE	Al Ain	5.54	139	P	Pn	21 37 58.2	+0.5
	SNR=24						
SOHO	SOHO	5.96	133	P	Pn	21 38 02.5	-0.9
ARQ	Araqi	6.55	138	P	Pn	21 38 11.2	-0.2
HOQ	Hoqain	6.86	132	P	Pn	21 38 15.2	-0.5
BSY	Bisya	7.40	137	P	Pn	21 38 23.1	-0.1
SMDO	Samad	7.71	131	P	Pn	21 38 27.3	-0.1
	SNR=27						
WSAR	Wadi Sarin	7.98	128	P	Pn	21 38 29.9	-1.2
	SNR=22						
JMDO	Jabal Madar	8.23	135	P	Pn	21 38 34.0	-0.6
	SNR=10						
WBK	Wadi Bani Khal	8.63	130	P	Pn	21 38 39.1	-1.0
	SNR=6.5						
NGCH	Negor - Chabah	8.86	107	P	Pn	21 38 43.0	-0.2
	SNR=6.8						
MHTO	MHTO	9.21	141	P	Pn	21 38 47.0	-1.0
	SNR=22						
JLN	Jalan Bani Buh	9.24	130	P	Pn	21 38 46.8	-1.6
	SNR=6.2						
BVAR	Borovoye Array	28.27	24	P	P	21 42 28.9	+0.6
	0.5nm,0.6s,baz=212,slow=7.8,SNR=3.8						
	0.5nm,0.6s						
MKAR	Makanchi Array	30.15	44	P	P	21 42 46.1	+1.0
	0.3nm,0.6s,baz=234,slow=8.3,SNR=1.6						
	0.3nm,0.6s						
ZALV	Zalesovo Beam	35.17	34	P	P	21 43 29.2	+0.3
	0.3nm,0.4s,baz=238,slow=8.3,SNR=2.6						
	0.3nm,0.4s						
FINES	FINESS Array B	37.29	340	P	P	21 43 45.5	-1.5
	1.8nm,0.8s,baz=149,slow=8.9,SNR=6.3						
	1.8nm,0.8s						
HFS	Hagfors	40.90	332	P	P	21 44 16.1	-1.0
	2.9nm,0.9s,baz=132,slow=4.3,SNR=4.2						
	2.9nm,0.9s						
ARCES	ARCESS Array B	43.97	347	P	P	21 44 42.1	+0.1
	1.7nm,0.8s,baz=146,slow=7.5,SNR=1.4						
	1.7nm,0.8s						
TSUM	Tsumeb	57.66	219	LR	LR	22 10 49.4	
	comp=Z,163nm,19.6s,baz=325,slow=36						
ASAJ	Asahikawa	71.44	49	LR	LR	22 25 23.5	
	comp=Z,65nm,19.4s,baz=182,slow=41						

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*THR **04** 21:37:02.6±0.0,28°.12N×51°.54E,h10^{km}±21^{km},ML4.3*

*MOS **04** 21:37:03.3±0.9,28°.15N×51°.66E,h11^{km},mb4.7/34,Error ellipse: s-maj=6.3km s-min=4.3km az=98.8*

*IDC **04** 21:37:03.0±0.6,28°.13N×51°.67E,h0^{km},mb4.3/27, mbtmp4.2/34,ML3.7/7,MS3.5/4,Error ellipse: s-maj=15.9km s-min=12.0km az=19.0*

*NEIC **04** 21:37:05.4±0.9,28°.23N±0°.07×51°.66E±0°.08,h10^{km}±1^{km}, mb4.6/56,Error ellipse: s-maj=12.0km s-min=11.0km az=210.0*

*TEH **04** 21:37:06.0,28°.27N×51°.60E,h18^{km}±20^{km}*

*DSN **04** 21:37:06.6±0.7,28°.17N×51°.65E,h15^{km},mb4.7/1, ML4.0/15,Error ellipse: s-maj=8.4km s-min=6.8km az=161.0*

*SGS **04** 21:37:16.6,27°.78N×51°.75E,h10^{km},Ml4.3*

*NAO **04** 21:37:43.6,31°.85N×48°.97E,h33^{km},MB4.1*

ISC 04 21:37:06.2±0.8,28°.25N±0°.03×51°.63E±0°.03,h17^{km}±5^{km}, n314,σ1^{s}.28/328,mb4.5/80,MS3.4/3,16C-30D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSBU	Dashti - Bushe	0.34	289	Pg	Pg	21 37 12.8	-0.6
QIR1	Qir	1.27	79	Pg	Pn	21 37 29.4	+0.2
QIR1				Sg	Sg	21 37 48.7	+1.5
SHI	Shiraz	1.59	29	Pg	Pb	21 37 34.9	-0.3
LMD1	Lamerd	1.64	123	Sg	Sg	21 38 01.4	+2.5
LMD1	Lamerd	1.64	123	*e*Pn	Pn	21 37 32.1	-2.1
LMD1				IAML		21 38 08.9	
	comp=Z,4μm,1.0s						
LMD1	Lamerd	1.64	123	*e*Pn	Pn	21 37 30.7	-3.5
LMD1				IAML		21 38 08.9	
	comp=Z,4μm,1.0s						
SHMA	Al-Shehemyia	2.46	194	S	Sg	21 38 28.3	+3.1
SHMA	Al-Shehemyia	2.46	194	P	Pg	21 37 55.1	+1.7
LAR1	LAR	2.50	103	Pn	Pn	21 37 47.7	+1.5
KLNJ	Kolanjah	2.75	359	Pn	Pn	21 37 50.8	+0.9
KFJS2	Khafji	2.85	273	P	Pg	21 38 03.2	+2.3
WANAN	Al Wanan	3.11	245	P	Pg	21 38 07.1	+1.4
BOQSS		3.11	221	S	Sg	21 38 55.8	+10
BOQSS		3.11	221	P	Pg	21 38 08.4	+2.6
ARIRA	AirJ	3.16	231	P	Pg	21 38 08.4	+1.6
KFJS1	Al Wafrah	3.25	270	P	Pg	21 38 10.4	+1.8
TRNA	Turayna	3.52	186	P	Pn	21 38 00.5	+0.3
	SNR=8.6						
SMRA	Abu-Samra	3.57	192	P	Pn	21 38 02.9	+2.1
IRAM	Ramesheh	3.60	10	Pn	Pn	21 38 02.3	+0.8
IBRJ	Brojen	3.66	355	Pn	Pn	21 38 03.4	+1.1
ZNGN	Zangian	3.91	350	Pn	Pn	21 38 06.7	+0.9
JHBN	Jahan bin	4.05	348	Pn	Pn	21 38 09.0	+1.2
BNDS	Bandar-Abbas	4.11	101	*e*Pn	Pn	21 38 09.2	+0.8
BNDS				IAML		21 39 45.2	
	comp=Z,160nm,1.0s						
GENO	Geno	4.11	101	Pn	Pn	21 38 09.5	+1.1
IPIR	Pirpir	4.46	352	Pn	Pn	21 38 14.1	+0.7
SHME	Shamm	4.58	118	*i* P	Pn	21 38 14.3	-0.4
	SNR=19						
NASN	Na'in	4.64	12	*e*Pn	Pn	21 38 15.9	0.0
NASN				IAML		21 39 54.1	
	comp=Z,93nm,1.0s						
ICHK	Chekchek	4.65	30	Pn	Pn	21 38 17.4	+1.6
IZEF	Zefreh	4.67	7	Pn	Pn	21 38 17.3	+1.1
NGRK	Negar Kerman	4.68	72	Pn	Pn	21 38 17.7	+1.3
KHGB	Koh Gabri	4.73	62	Pn	Pn	21 38 18.3	+1.3
GTMR	Gotvand	4.73	333	*e*Pn	Pn	21 38 18.3	+1.4
GTMR				IAML		21 40 31.2	
	comp=Z,230nm,1.0s						
AJN	Ajban	4.75	140	*i* P	Pn	21 38 17.1	+0.1
	SNR=5.9						
AJN	Ajban	4.75	140	S	Pn	21 38 18.6	+1.6
BANOM	Banah	4.76	118	*i* P	Pn	21 38 16.4	-0.8
	SNR=49						
BANOM	Banah	4.76	118	S	Pn	21 38 17.1	-0.2
IBAF	Bafgh	4.77	45	Pn	Pn	21 38 18.9	+1.5
KRBR	Kerman	4.81	68	*e*Pn	Pn	21 38 20.7	+2.6
KRBR				IAML		21 40 05.8	
	comp=Z,160nm,1.0s						
KRBR	Kerman	4.81	68	IAML		21 40 05.8	
	comp=Z,160nm,1.0s						
YZKH	Yazd	4.85	31	*e*Pn	Pn	21 38 20.3	+1.7
YZKH				IAML		21 40 05.5	
	comp=Z,79nm,1.0s						
NAZ	Nazwa, Dubai	4.86	131	*i* P	Pn	21 38 18.3	-0.2
	SNR=23						
NAZ	Nazwa, Dubai	4.86	131	S	Pn	21 38 18.8	+0.3
ASUD	Al Ashush, Dub	4.90	137	*i* P	Pn	21 38 18.9	-0.3
	SNR=16						
ASUD	Al Ashush, Dub	4.90	137	S	Pn	21 38 19.8	+0.7
MASF	Masafi	4.96	124	S	Pn	21 38 19.1	-0.9
MSFE	Esma-Masafi	4.97	124	*i* P	Pn	21 38 19.4	-0.6
	SNR=20						
IKLH	Kolahrood	5.05	360	Pn	Pn	21 38 22.5	+1.1
ZRDN	Zarand Kerman	5.06	56	Pn	Pn	21 38 22.5	+1.1
MDH	Madha	5.11	124	*i* P	Pn	21 38 21.5	-0.4
	SNR=29						
MDH	Madha	5.11	124	S	Pn	21 38 22.2	+0.2
ANAR	Anarak	5.24	20	Pn	Pn	21 38 25.6	+1.7
UOSS	Minazif	5.25	128		Pn	21 38 23.0	-1.0
UOSS	Minazif	5.25	128	S	Pn	21 38 23.4	-0.6
HATD	Hatta, Dubai	5.28	129	*i* P	Pn	21 38 24.2	-0.2
	SNR=22						
HATD	Hatta, Dubai	5.28	129	S	Pn	21 38 24.5	+0.1
ASHO	Ashiyiah	5.33	131	*i* P	Pn	21 38 24.4	-0.6
	SNR=21						
ASHO	Ashiyiah	5.33	131	S	Pn	21 38 25.1	+0.1
KRM1	Kerman Provinc	5.41	64	Pn	Pn	21 38 27.5	+1.2
CHMN	Cheshme madani	5.42	71	Pn	Pn	21 38 27.8	+1.3
MZR	Muzera	5.49	162	*i* P	Pn	21 38 27.0	-0.2
	SNR=25						
ALNE	Al Ain	5.58	138	*i* P	Pn	21 38 28.3	-0.2
	SNR=24						
KHMZ	Khomeyn	5.66	346	*e*Pn	Pn	21 38 31.3	+1.6
KHMZ				IAML		21 40 14.4	
	comp=Z,69nm,1.0s						
KRSH	Karshahi	5.72	4	Pn	Pn	21 38 31.3	+0.8
SOHO	SOHO	6.02	132	*i* P	Pn	21 38 33.5	-1.0
	SNR=22						
KBAM	BAM	6.06	80	Pn	Pn	21 38 36.3	+1.2
ISFB	Sefidab	6.10	5	Pn	Pn	21 38 36.6	+0.9
GHVR	GHOM	6.22	357	*e*Pn	Pn	21 38 37.7	+0.4
GHVR				IAML		21 39 43.5	
	comp=Z,280nm,1.0s						
ASAO	Ashtian	6.42	348	*e*Pn	Pn	21 38 41.5	+1.2
ASAO				IAML		21 40 30.1	
	comp=Z,71nm,1.0s						
TPRV	Parvadeh(Tabas	6.45	41	Pn	Pn	21 38 41.7	+1.2
IQOM	Qom	6.59	356	Pn	Pn	21 38 42.5	0.0
IVRN	Varamin	6.72	1	Pn	Pn	21 38 44.3	+0.1
HAGD	Aghdareh	6.89	343	Pn	Pn	21 38 46.8	+0.2
TNSJ	Nastanj	7.12	36	Pn	Pn	21 38 50.9	+1.2
TKDS	Koohdasht(Taba	7.13	40	Pn	Pn	21 38 50.7	+0.9
TABS	Tabas	7.15	40	*e*Pn	Pn	21 38 50.7	+0.6
TABS				IAML		21 41 14.1	
	comp=Z,37nm,1.0s						
RAYN	Ar Rayn	7.25	231	Pn	Pn	21 38 50.8	-0.7
RAYN	Ar Rayn	7.25	231	*i* P	Pn	21 38 51.2	-0.4
	SNR=13						
RAYN	Ar Rayn	7.25	231	P	Pn	21 38 50.8	-0.7
IDMV	Damavand	7.31	3	Pn	Pn	21 38 52.7	+0.2
DAMV	Damavand	7.36	2	*e*Pn	Pn	21 38 53.1	-0.1
DAMV				IAML		21 39 55.5	
	comp=Z,4.1nm,1.0s						
DAMV	Damavand	7.36	2	*e*Pn	Pn	21 38 53.0	-0.1
DAMV				IAML		21 39 55.5	
	comp=Z,4.1nm,1.0s						
SNQR	Sonqor, Kerman	7.42	334	Pn	Pn	21 38 55.1	+1.1
BSRN	Basiran	7.47	58	*e*Pn	Pn	21 38 54.5	-0.1
BSRN				IAML		21 41 18.2	
	comp=Z,18nm,1.0s						
HGHA	Hamedan- Ghaye	7.59	343	Pn	Pn	21 38 57.5	+1.2
CHTH	Charan	7.65	357	*e*Pn	Pn	21 38 57.5	+0.5
CHTH				IAML		21 39 30.0	
	comp=Z,2.7nm,1.0s						
ITEG	Tejag	7.69	51	Pn	Pn	21 38 59.0	+1.5
SNGE	Sanandaj	7.73	333	*e*Pn	Pn	21 38 59.0	+0.8
SNGE				IAML		21 40 49.1	
	comp=Z,13nm,1.0s						
IDHR	Dehrash	7.83	326	Pn	Pn	21 39 00.5	+0.9
IALA	Alasht	7.87	7	Pn	Pn	21 39 01.5	+1.3
IPRN	Peran	7.99	4	Pn	Pn	21 39 02.8	+1.2
TAPT	Tabas- Tapeh t	8.12	34	Pn	Pn	21 39 05.4	+2.0
CHBR	Chabahar	8.33	106	*e*Pn	Pn	21 39 04.8	-1.5
CHBR	Chabahar	8.33	106	*e*Pn	Pn	21 39 04.7	-1.5
SHRO	Shahrood	8.56	25	*e*Pn	Pn	21 39 10.0	+0.5
SHRT	Shahrakht	9.17	52	*e*Pn	Pn	21 39 19.6	+1.7
SRSL	SARDASHT	9.51	328	*e*Pn	Pn	21 39 22.8	+0.2
SRVN	Saravan	9.57	93	*e*Pn	Pn	21 39 23.0	-0.4
SRVN				IAML_BB		21 39 25.1	
	comp=Z,300nm,1.0s						
MRVT	Maraveh tapeh	10.10	21	*i* P	Pn	21 39 32.4	+1.9
BJRD	Bojnurd	10.60	26	*i* P	Pn	21 39 38.2	+0.8
HRA	Herat	10.94	53		Pn	21 39 41.9	-0.3
MARD	Mardin	12.84	317	Pn	Pn	21 40 04.7	-3.4
GURO	Guroymak-BITLI	13.02	325	Pn	Pn	21 40 07.1	-3.4
GNI	Garni	13.16	336	Pn	Pn	21 40 16.1	+3.6
	comp=Z,0.2nm,0.3s,baz=147,slow=3.9,SNR=4.0						
GNI				LR	LR	21 45 59.9	
	comp=Z,215nm,20.8s,baz=220,slow=40						
	comp=Z,4.2nm,0.9s						
GNI	Garni	13.16	336	Pn	Pn	21 40 12.1	-0.3
GNI	Garni	13.16	336	P	Pn	21 40 12.1	-0.3
ASF	Jabal al Asfar	13.32	291	Pn	Pn	21 40 15.3	+0.7
	comp=Z,0.4nm,0.3s,baz=117,slow=23,SNR=5.2						

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ASF                                  Sn     Sn       21 42 38.2  -4.3
          comp=Z,0.1nm,0.3s,baz=41,slow=19,SNR=1.4
ASF                                  Lg     Lg       21 44 06.7
          comp=Z,0.1nm,0.3s,baz=98,slow=11,SNR=3.3
          comp=Z,1.5nm,0.6s
AKT   Akhty            13.58 347   eP     P        21 40 24.2  -2.9
AKT                                  pmax   pmax
          comp=Z,6.0nm,0.9s
KARS  Kars             14.21 333   Pn     Pn       21 40 27.2 +0.4
KARS  Kars             14.21 333   P      Pn       21 40 27.2 +0.4
GHAJ  Ghor Haditha     14.28 286   Pn     Pn       21 40 25.1  -2.5
EIL   Elat             14.67 280   Pn     Pn       21 40 33.0  -0.1
          comp=Z,0.5nm,0.3s,baz=68,slow=4.0,SNR=6.4
EIL                                  Lg     Lg       21 44 53.2
          comp=Z,0.1nm,0.3s,baz=200,slow=9.9,SNR=3.6
          comp=Z,1.4nm,0.5s
MMAI  Mount Meron Ar   14.75 293   Pn     Pn       21 40 33.9  -0.3
          comp=Z,0.3nm,0.3s,baz=227,slow=37,SNR=1.7
          comp=Z,0.4nm,0.4s
KOPT  Kop Dagi         14.91 325   Pn     Pn       21 40 34.4  -2.0
GAZ   Gaziantep        15.03 310   Pn     Pn       21 40 37.1  -0.8
KBL   Kabul            16.13  63   Pn     Pn       21 40 51.0  -1.3
KBL   Kabul            16.13  63   P      Pn       21 40 51.0  -1.3
KBL                                  pmax   pmax
          comp=Z,7.0nm,1.1s
NCK   Nalchik          16.53 339⇑eP     P        21 40 59.7  -0.1
NEUR  Neytrino         16.62 337⇑eP     P        21 40 59.9  -1.1
NEUR                                 pmax   pmax
          comp=Z,10.0nm,1.1s
SHAA  Shahritus        16.65  52   Pn     Pn       21 40 57.6  -1.3
SHAA                                 IAmb   IAmb     21 41 07.9
          comp=Z,58nm,0.9s
BNN   Bunyan           16.85 313   Pn     Pn       21 41 00.6  -0.8
CSS   Mathiatis        16.95 298   Pn     Pn       21 41 00.8  -1.8
KBZ   Khabaz           16.97 338   P      Pn       21 41 03.4 +0.8
          comp=Z,0.3nm,0.3s,baz=163,slow=7.3,SNR=13
KBZ                                  LR     LR       21 48 26.5
          comp=Z,238nm,20.2s,baz=154,slow=40
          comp=Z,17nm,1.0s
KBZ   Khabaz           16.97 338d iP     P        21 41 04.0  -0.5
KBZ                                  pmax   pmax
          comp=Z,29nm,1.0s
SHA1  Shidzhatmaz      17.06 337ceP     Pn       21 41 04.8 +0.7
KVAR  Kislovodsk Arr   17.24 338   P      P        21 41 07.6  -0.1
          baz=279,slow=21
          comp=Z,1.6nm,0.4s
KIV   Kislovodsk       17.24 338          Pn       21 41 05.8  -0.4
KIV                                  IAmb   IAmb     21 41 12.2
          comp=Z,56nm,1.3s
KIV   Kislovodsk       17.24 338 ⇓P     Pn       21 41 04.9  -1.3
KIV   Kislovodsk       17.24 338 eP     P        21 41 07.5  -0.2
KIV                                  pmax   pmax
          comp=Z,31nm,1.1s
CHGR  Chuyangaron      17.90  50   Pn     Pn       21 41 12.5  -2.0
CHGR  Chuyangaron      17.90  50   P      Pn       21 41 12.5  -2.0
CHGR                                 pmax   pmax
          comp=Z,23nm,0.9s
KIRS  Kirsehir-Merke   18.27 311 ⇓P     Pn       21 41 12.8  -6.2
BR131 Keskin Array S   18.76 312   P      P        21 41 24.8 +0.2
BR131 Keskin Array S   18.76 312deP     Pn       21 41 26.1 +1.0
BRTR  Keskin Array B   18.76 312   P      Pn       21 41 25.2 +0.2
          comp=Z,0.2nm,0.3s,baz=138,slow=13,SNR=15
BRTR                                 PcP    PcP      21 45 52.6 +0.8
          comp=Z,1.0nm,0.8s,baz=157,slow=4.7,SNR=4.4
BRTR                                 ScP    ScP      21 49 27.3 +0.5
          comp=Z,1.0nm,0.8s,baz=115,slow=5.5,SNR=4.9
          comp=Z,7.2nm,0.8s
BRTR  Keskin Array B   18.76 312          P        21 41 24.1  -0.5
GAR   Garm             18.86  51   P      P        21 41 24.7  -0.9
GAR                                  IAmb   IAmb     21 41 27.9
          comp=Z,18nm,0.7s
MANEM Manem            19.19  56   P      P        21 41 29.1  -0.2
MANEM                                IAmb   IAmb     21 41 36.6
          comp=Z,46nm,1.1s
NIL   Nilore           19.30  68   P      P        21 41 29.2  -1.2
NIL                                  IAmb   IAmb     21 41 34.1
          comp=Z,22nm,0.9s
NIL   Nilore           19.30  68   P      P        21 41 29.2  -1.2
NIL                                  pmax   pmax
          comp=Z,22nm,0.9s
ANTO  Ankara           19.39 312   P      Pn       21 41 32.6   0.0
ANTO  Ankara           19.39 312   P      Pn       21 41 32.6   0.0
ANTO                                 pmax   pmax
          comp=Z,11nm,0.9s
ANN   Anapa            20.02 329   eP     P        21 41 39.0 +0.9
ANN                                e*PP   pP       21 41 42.2  -0.7
ANN                                eS     Sn       21 45 29.8 +5.1
ANN                                  pmax   pmax
          comp=Z,15nm,0.8s
DRK   Karamyk          20.10  51   P      P        21 41 39.1  -0.3
DRK                                  IAmb   IAmb     21 41 47.0
          comp=Z,22nm,0.8s
DRK   Karamyk          20.10  51   P      P        21 41 39.1  -0.3
DRK                                  pmax   pmax
          comp=Z,22nm,0.8s
TRKS  Terek-Say        20.71  45   P      P        21 41 46.4 +0.5
KK31  Karatay Array    21.26  41   P      P        21 41 51.0  -0.5
KK31                                 IAmb   IAmb     21 41 52.6
          comp=Z,12nm,0.8s
KK31  Karatay Array    21.26  41   P      P        21 41 51.0  -0.5
KK31                                 pmax   pmax
          comp=Z,12nm,0.8s
KKAR  Karatay Array    21.26  41   P      P        21 41 51.2  -0.4
KKAR  Karatay Array    21.26  41   P      P        21 41 51.2  -0.4
ARK   Arkit            21.38  45   P      P        21 41 53.6 +0.6
AB31  Akbulak array    21.93  15   P      P        21 41 57.8  -0.8
ABKAR Akbulak array    21.93  15   P      P        21 41 58.4  -0.2
ARLS  Aral             22.92  48   P      P        21 42 11.9 +2.4
KSH   Kashi            23.05  55   P      P        21 42 06.0  -4.8
KSH                                  pmax   pmax
          comp=Z,9.0nm,0.8s
AAK   Ala-Archa        23.42  46          P        21 42 15.6 +1.0
AAK   Ala-Archa        23.42  46 i P      P        21 42 16.2 +1.7
          SNR=6.8
AAK   Ala-Archa        23.42  46⇓eP     P        21 42 16.8 +2.2
AAK                                  pmax   pmax
          comp=Z,5.0nm,0.7s
VRH   Novokhopyorsk    24.11 345   eP     P        21 42 21.6 +0.7
VRH                                  pmax   pmax
          comp=Z,57nm,0.6s
BOOM  Boomskoye usch   24.28  48   P      P        21 42 22.9 +0.1
BOOM                                 IAmb   IAmb     21 42 26.8
          comp=Z,14nm,0.6s
BOOM  Boomskoye usch   24.28  48   P      P        21 42 22.9 +0.1
BOOM                                 pmax   pmax
          comp=Z,14nm,0.6s
BELG  Belogornoye      24.30 354⇓eP     P        21 42 23.5 +0.9
BELG                                 pmax   pmax
          comp=Z,9.0nm,1.0s
JURR  Jurilovca        24.49 318 ⇓P     P        21 42 22.7  -1.7
VORD  Divnogorie       24.53 341 eP     P        21 42 22.9  -1.8
VORD                                 pmax   pmax
          comp=Z,20nm,1.1s
VSR   Storozhevoye     24.79 341 eP     P        21 42 22.7  -4.4
VSR                                  pmax   pmax
          comp=Z,20nm,1.0s
TPGR  Topolog          24.81 318 ⇑P     P        21 42 26.3  -1.1
KDJ   Kajisay          24.94  50   P      P        21 42 29.0 +0.2
KDJ                                  IAmb   IAmb     21 42 36.5
          comp=Z,22nm,1.2s
KDJ   Kajisay          24.94  50   P      P        21 42 29.0 +0.2
KDJ                                  pmax   pmax
          comp=Z,21nm,1.2s
VORR  Voronezh         25.18 342 eP     P        21 42 30.8 +0.2
VORR                                 pmax   pmax
          comp=Z,62nm,0.5s
TARG  Taragay, Kyrgy   25.19  51   P      P        21 42 31.4   0.0
TARG                                 IAmb   IAmb     21 42 36.2
          comp=Z,9.1nm,0.9s
TARG  Taragay, Kyrgy   25.19  51   P      P        21 42 31.4   0.0
TARG                                 pmax   pmax
          comp=Z,9.0nm,0.9s
ELND  Elena            25.43 312 ⇑P     P        21 42 35.2 +2.2
MILM  Milestii Mici    25.81 322 ⇓P     P        21 42 37.1 +0.8
MILM  Milestii Mici    25.81 322 ⇓P     P        21 42 37.1 +0.8
PRZ   Przheval'sk      25.91  50   P      P        21 42 37.9 +0.3
PRZ                                  IAmb   IAmb     21 42 40.8
          comp=Z,20nm,1.1s
PRZ   Przheval'sk      25.91  50   P      P        21 42 37.9 +0.3
PRZ                                  pmax   pmax
          comp=Z,20nm,1.1s
LPSR  Galich'ya Gora   26.09 342 eP     P        21 42 38.4  -0.5
LPSR                                 pmax   pmax
          comp=Z,51nm,0.8s
VRI   Vrincioaia       26.37 319 ⇓P     P        21 42 42.9 +1.4
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VRI   Vrincioaia       26.37 319 ⇓P     P        21 42 42.9 +1.4
NEHR  Nehoiu           26.39 317 ⇓P     P        21 42 44.1 +2.4
PLOR  Plostina         26.40 318 ⇓P     P        21 42 43.0 +1.1
PLOR  Plostina         26.40 318 ⇓P     P        21 42 43.0 +1.1
MLR   Muntele Rosu     26.63 317 ⇓P     P        21 42 44.9 +0.9
MLR   Muntele Rosu     26.63 317 ⇓P     P        21 42 44.9 +0.9
COVR  Voineasa-Covas   26.66 318 ⇓P     P        21 42 45.5 +1.3
TESR  Tescani          26.77 320 ⇓P     P        21 42 46.2 +1.1
SORM  Soroca           26.82 324 ⇓P     P        21 42 46.7 +1.2
SORM  Soroca           26.82 324 ⇓P     P        21 42 46.7 +1.2
TURR  Turia            26.89 318 ⇑P     P        21 42 47.5 +1.3
VOIR                   27.14 316 ⇓P     P        21 42 49.4 +0.9
VOIR                   27.14 316 ⇓P     P        21 42 49.4 +0.9
DOPR  Dopca            27.21 318 ⇑P     P        21 42 50.5 +1.4
AKASG Malin Array Be   28.11 329   P      P        21 42 56.6  -0.4
          comp=Z,1.2nm,0.6s,baz=135,slow=7.8,SNR=6.2
          comp=Z,1.2nm,0.6s
AKASG Malin Array Be   28.11 329 i P      P        21 42 59.2 +2.2
AKASG                                pmax   pmax
          comp=Z,1.0nm,0.5s
AKBB  Malin Array Si   28.11 329   P      P        21 42 57.1 +0.1
AKBB                                 IAmb   IAmb     21 43 05.8
          comp=Z,9.0nm,1.2s
AKBB  Malin Array Si   28.11 329⇓eP     P        21 42 57.5 +0.5
AKBB                                 pmax   pmax
          comp=Z,39nm,3.0s
BURAR Bucovina Array   28.20 320   P      P        21 42 58.9 +0.9
BURAR Bucovina Array   28.20 320 ⇑P     P        21 42 59.1 +1.1
BURAR Bucovina Array   28.20 320 ⇑P     P        21 42 59.1 +1.1
BUR08 Bucovina Ar. S   28.23 320   P      P        21 42 59.0 +0.8
BUR08                                IAmb   IAmb     21 43 39.7
          comp=Z,7.7nm,1.4s
BORK  Borovoye         28.37  24   P      P        21 42 59.5 +0.2
BORK  Borovoye         28.37  24⇓eP     P        21 42 59.6 +0.3
BORK                                 pmax   pmax
          comp=Z,3.0nm,0.8s
BVAR  Borovoye Array   28.38  24   P      P        21 42 59.7 +0.3
          comp=Z,4.1nm,0.7s,baz=226,slow=7.2,SNR=24
BVAR                                 PcP    PcP      21 46 11.6   0.0
          comp=Z,3.3nm,0.8s,baz=240,slow=2.3,SNR=9.3
          comp=Z,4.1nm,0.7s
ARTI  Arti             28.53   8   LR     LR       21 58 14.5
          comp=Z,67nm,18.4s,baz=230,slow=44
ARTI  Arti             28.53   8   P      P        21 43 00.6  -0.1
ARTI                                 IAmb   IAmb     21 43 26.9
          comp=Z,6.9nm,0.7s
ARTI  Arti             28.53   8c iP     P        21 43 03.5 +2.8
ARTI                                                 21 43 49.8
ARTI                                 S      S        21 47 52.8 +5.1
ARTI                                 SS     SnSn     21 49 11.2 +4.1
ARTI                                 pmax   pmax
          comp=Z,5.0nm,1.0s
OBN   Obninsk          28.97 342 eP     P        21 43 05.6 +1.0
OBN                                e                 21 43 57.2
OBN                                e                 21 46 15.3
OBN                                  pmax   pmax
          comp=Z,6.0nm,0.5s
DRGR                   29.23 317 ⇓P     P        21 43 08.9 +1.8
DRGR                   29.23 317 ⇓P     P        21 43 08.9 +1.8
MAKZ  Makanchi         30.10  44   P      P        21 43 14.6  -0.2
MAKZ                                 IAmb   IAmb     21 43 16.6
          comp=Z,15nm,1.2s
MAKZ  Makanchi         30.10  44   P      P        21 43 14.6  -0.2
MAKZ                                 pmax   pmax
          comp=Z,15nm,1.2s
KURBB Kurchatov Arra   30.22  35   P      P        21 43 15.9 +0.2
          comp=Z,1.1nm,0.3s,baz=235,slow=8.9,SNR=5.0
          comp=Z,1.1nm,0.3s
MK31  Makanchi Array   30.28  44⇓iP     P        21 43 18.3 +1.9
MKAR  Makanchi Array   30.28  44   P      P        21 43 16.3  -0.1
          comp=Z,4.2nm,1.0s,baz=231,slow=6.7,SNR=11
MKAR                                 PcP    PcP      21 46 16.0  -0.6
          comp=Z,0.6nm,0.6s,baz=248,slow=2.5,SNR=3.3
          comp=Z,4.2nm,1.0s
MKAR  Makanchi Array   30.28  44 i P      P        21 43 17.0 +0.6
MKAR                                 pmax   pmax
          comp=Z,4.0nm,1.0s
KURK  Kurchatov        30.32  35   P      P        21 43 16.0  -0.6
KURK  Kurchatov        30.32  35⇑eP     P        21 43 17.8 +1.2
KURK                                 pmax   pmax
          comp=Z,6.0nm,1.6s
KIRV  Kirov            30.36 358c iP     P        21 43 18.0 +1.1
EVN   Everest          30.98  82   P      P        21 43 22.7  -0.7
EVN                                  IAmb   IAmb     21 43 53.5
          comp=Z,10nm,1.4s
WMQ   Urumqi           32.75  52 eP     P        21 43 39.5 +1.3
WMQ                                  pmax   pmax
          comp=Z,13nm,0.9s
KLMR  Klimovskoe       33.61 349 eP     P        21 43 43.6  -1.8
KLMR                               e                 21 46 23.5
KLMR                                 pmax   pmax
          comp=Z,15nm,0.6s
NRCA  Norcia           34.23 305   P      P        21 43 52.0 +0.9
NRCA                                 IAmb   IAmb     21 44 26.3
          comp=Z,12nm,1.2s
FDMO  Fiordimonte      34.30 306   P      P        21 43 51.5  -0.1
LSA   Lhasa            34.49  78   P      P        21 43 53.1  -0.9
LSA                                  IAmb   IAmb     21 43 55.4
          comp=Z,5.9nm,1.0s
LSA   Lhasa            34.49  78   P      P        21 43 53.1  -0.9
LSA                                  pmax   pmax
          comp=Z,6.0nm,1.0s
PALK  Pallekele        34.50 122   P      P        21 43 52.8  -0.9
PALK  Pallekele        34.50 122   P      P        21 43 52.8  -0.9
PALK                                 pmax   pmax
          comp=Z,57nm,1.5s
DGZ   Jazzator, Alta   34.64  42⇑eP     P        21 43 55.6 +0.9
DGZ                                  pmax   pmax
          comp=Z,6.0nm,1.6s
VSU   Vasula           34.80 337⇓eP     P        21 43 55.3  -0.4
VSU                                  pmax   pmax
          comp=Z,36nm,1.4s
MBAR  Mbarara          34.99 218ceP     P        21 43 59.0 +0.9
MBAR                                 pmax   pmax
          comp=Z,2.0nm,0.6s
KBA   Koelnbreinsper   35.21 313 eP     P        21 44 00.5 +0.8
          comp=Z,2.9nm,0.7s
ZAA0  Zalesovo Array   35.29  34   P      P        21 43 59.9  -0.2
ZAA0                                 IAmb   IAmb     21 44 04.0
          comp=Z,4.1nm,0.6s
ZALV  Zalesovo Beam    35.29  34   P      P        21 43 59.6  -0.4
          comp=Z,4.1nm,0.6s,baz=243,slow=9.3,SNR=15
          comp=Z,4.1nm,0.6s
ZALV  Zalesovo Beam    35.29  34   P      P        21 44 00.1   0.0
ZALV  Zalesovo Beam    35.29  34 i P      P        21 44 01.0 +0.9
ZALV                                 pmax   pmax
          comp=Z,4.0nm,0.6s
GERES GERESS Array B   35.59 316   P      P        21 44 02.7  -0.2
          comp=Z,0.3nm,0.5s,baz=96,slow=8.1,SNR=3.5
GERES                                PcP    PcP      21 46 31.5   0.0
          comp=Z,1.0nm,0.8s,baz=106,slow=2.9,SNR=7.0
          comp=Z,0.3nm,0.5s
LESA  Schwarzleotal    35.76 313 eP     P        21 44 04.7 +0.4
          comp=Z,1.0nm,0.4s
KHC   Kasperske Hory   35.77 316ceP     P        21 44 05.0 +0.7
KHC                                  pmax   pmax
          comp=Z,13nm,2.1s
WTTA  Wattenberg       36.38 312 ePcP   PcP      21 46 34.5 +0.5
          comp=Z,1.0nm,0.4s
WATA  Walderalm        36.44 313 eP     P        21 44 10.3 +0.1
          comp=Z,2.2nm,0.5s
SQTA  Sankt Quirin     36.65 312 eP     P        21 44 11.6  -0.3
          comp=Z,3.2nm,0.5s
SQTA                               ePcP   PcP      21 46 35.0 +0.3
          comp=Z,0.9nm,0.3s
MOTA  Moosalm          36.75 312 eP     P        21 44 12.1  -0.7
          comp=Z,4.2nm,0.9s
MOTA                               ePcP   PcP      21 46 35.6 +0.6
          comp=Z,2.8nm,0.7s
FETA  Feichten         36.91 312 eP     P        21 44 13.6  -0.6
          comp=Z,4.2nm,0.7s
FETA                               ePcP   PcP      21 46 36.2 +0.7
          comp=Z,2.8nm,0.8s
CLL   Collm            36.95 319 eP     P        21 44 15.0 +0.7
CLL   Collm            36.95 319 eP     P        21 44 15.0 +0.7
CLL                                ePP    PnPn     21 45 40.0 +1.4
FINES FINESS Array B   37.31 340   P      P        21 44 17.4 +0.3
          comp=Z,6.0nm,0.5s,baz=143,slow=9.7,SNR=52
          comp=Z,6.0nm,0.5s
FINES FINESS Array B   37.31 340   P      P        21 44 16.6  -0.6
FIA1  FINESS Array S   37.31 340   P      P        21 44 17.2 +0.1
DAVA  Damuels          37.53 312 eP     P        21 44 19.7 +0.2
          comp=Z,7.1nm,0.6s
BNI   Bardonecchia     39.22 308   P      P        21 44 32.4  -1.3
BNI                                  IAmb   IAmb     21 44 36.7
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          comp=Z,8.4nm,0.9s
BNI   Bardonecchia     39.22 308   P      P        21 44 32.4  -1.3
BNI                                  pmax   pmax
          comp=Z,8.0nm,1.0s
HFS   Hagfors          40.90 332   P      P        21 44 46.9  -0.3
          comp=Z,5.8nm,0.5s,baz=125,slow=9.3,SNR=38
          comp=Z,5.8nm,0.5s
LVZ   Lovozero         40.96 350   P      P        21 44 47.6  -0.1
LVZ   Lovozero         40.96 350   P      P        21 44 47.6  -0.1
LVZ                                  pmax   pmax
          comp=Z,45nm,1.4s
KNGR  Kungurtug, Tuv   41.05  44⇓eP     P        21 44 50.3 +1.6
KNGR                                 pmax   pmax
          comp=Z,9.0nm,1.1s
GTA   Gaotai           41.11  61 eP     P        21 44 50.1 +0.6
GTA                                  pmax   pmax
          comp=Z,13nm,0.9s
NC405 NORSAR Array S   42.25 332   P      P        21 44 57.9  -0.4
NB2   NORSAR Subarra   42.42 332   P      P        21 44 59.4  -0.3
          comp=Z,1.8nm,0.6s,baz=122,slow=8.6
NOA   NORSAR Array B   42.42 332   P      P        21 44 59.8 +0.1
          comp=Z,3.3nm,0.7s,baz=122,slow=8.4,SNR=9.2
          comp=Z,3.3nm,0.7s
KEV   Kevo             43.90 348   P      P        21 45 12.7 +1.2
KEV   Kevo             43.90 348   P      P        21 45 12.7 +1.2
KEV                                  pmax   pmax
          comp=Z,109nm,1.5s
ARCES ARCESS Array B   44.00 347   P      P        21 45 13.3 +1.0
          comp=Z,1.2nm,0.5s,baz=142,slow=6.1,SNR=17
          comp=Z,1.2nm,0.5s
ARCES ARCESS Array B   44.00 347   P      P        21 45 12.5 +0.2
PZH   PanZhiHua        44.28  80   P      P        21 45 16.3 +1.0
CMAR  Chiang Mai Arr   44.28  92   P      P        21 45 14.0  -1.3
          comp=Z,1.2nm,0.8s,baz=283,slow=7.7,SNR=8.9
CMAR                                 PcP    PcP      21 46 59.9 +0.3
          comp=Z,2.6nm,0.7s,baz=286,slow=4.9,SNR=14
          comp=Z,1.2nm,0.8s
CMAR  Chiang Mai Arr   44.28  92 i P      P        21 45 15.1  -0.2
CMAR                                 pmax   pmax
          comp=Z,1.0nm,0.7s
LZDM  Lanzhou Array    44.33  66   P      P        21 45 15.5  -0.4
          comp=Z,1.1nm,0.3s,baz=240,slow=7.9,SNR=4.9
          comp=Z,1.1nm,0.3s
LZH   Lanzhou          44.44  66 eP     P        21 45 17.0 +0.4
LZH                                  pP     pP       21 45 21.6  -0.3
LZH                                  pmax   pmax
          comp=Z,15nm,1.1s
NRIK  Noril'sk         46.07  17   P      P        21 45 29.2 +0.4
          comp=Z,2.1nm,0.6s,baz=214,slow=7.7,SNR=5.8
          comp=Z,2.1nm,0.6s
NRIK  Noril'sk         46.07  17⇑iP     P        21 45 29.9 +1.1
NRIK                                 pmax   pmax
          comp=Z,5.0nm,1.0s
SONM  Songino Array    46.30  50   P      P        21 45 31.6 +0.5
          comp=Z,1.4nm,0.7s,baz=260,slow=8.7,SNR=9.2
SONM                                 PcP    PcP      21 47 06.1  -0.1
          comp=Z,0.8nm,0.9s,baz=236,slow=4.0,SNR=4.0
          comp=Z,1.4nm,0.7s
SONM  Songino Array    46.30  50   P      P        21 45 30.6  -0.5
ULN   Ulaanbaatar      46.74  50   P      P        21 45 34.5  -0.1
ULN                                  IAmb   IAmb     21 45 37.1
          comp=Z,5.3nm,1.1s
ULN   Ulaanbaatar      46.74  50⇓eP     P        21 45 35.1 +0.5
ULN                                  pmax   pmax
          comp=Z,22nm,2.9s
ESDC  Sonseca Array    46.83 299   P      P        21 45 35.4 +0.2
          comp=Z,1.4nm,1.0s,baz=61,slow=7.6,SNR=5.6
          comp=Z,1.4nm,1.0s
ABPO  Ambohimpanom     47.18 186   P      P        21 45 37.8  -0.4
ABPO                                 IAmb   IAmb     21 45 40.4
          comp=Z,5.3nm,0.8s
ABPO  Ambohimpanom     47.18 186   P      P        21 45 37.8  -0.4
ABPO                                 pmax   pmax
          comp=Z,5.0nm,0.8s
EKA   Eskdalemuir Ar   47.38 321   P      P        21 45 39.6 +0.4
          comp=Z,3.0nm,0.8s,baz=102,slow=7.8,SNR=7.8
          comp=Z,3.0nm,0.8s
TORD  Torodi Ar. Bea   48.73 263   P      P        21 45 49.8  -0.5
TORD                                 IAmb   IAmb     21 45 52.3
          comp=Z,4.9nm,1.1s
DSB   Dublin           48.91 317   P      P        21 45 51.2 +0.1
HHC   Hu-ho-hao-te     50.05  59 eP     P        21 46 00.0  -0.2
HHC                                  pmax   pmax
          comp=Z,11nm,0.6s
HHC                                  pmax   pmax
          comp=Z,120nm,4.7s
VOI   Vohitsoka        50.08 186   P      P        21 45 59.9  -0.5
KULM  Kulim            51.74 107   P      P        21 46 12.4  -0.6
SPITS Spitsbergen Ar   52.46 351   P      P        21 46 18.1 +0.5
          comp=Z,5.3nm,0.8s,baz=132,slow=12,SNR=7.4
          comp=Z,5.3nm,0.8s
HILR  Hailar Array B   55.15  47   P      P        21 46 37.8 +0.1
          comp=Z,1.6nm,0.6s,baz=267,slow=7.2,SNR=2.7
          comp=Z,1.6nm,0.6s
NJ2   Nanjing          57.41  68 eP     P        21 46 53.1  -0.9
NJ2                                  pmax   pmax
          comp=Z,6.0nm,0.5s
DBIC  Dimbokro         57.44 259   P      P        21 46 54.5   0.0
          comp=Z,11nm,1.0s,baz=79,slow=7.8,SNR=13
          comp=Z,11nm,1.0s
DBIC  Dimbokro         57.44 259   P      P        21 46 54.0  -0.5
LBTB  Lobatse          58.59 208   P      P        21 47 01.9  -0.4
LBTB  Lobatse          58.59 208   P      P        21 47 01.9  -0.4
LBTB                                 pmax   pmax
          comp=Z,8.0nm,1.0s
LKGWB Lokgwabe         59.74 212   P      P        21 47 08.3  -2.1
BOSA  Boshof           61.93 206   P      P        21 47 23.6  -1.6
          comp=Z,3.0nm,0.8s,baz=199,slow=18,SNR=2.2
          comp=Z,3.0nm,0.8s
BOSA  Boshof           61.93 206   P      P        21 47 24.2  -1.0
BOSA                                 IAmb   IAmb     21 47 43.9
          comp=Z,7.4nm,1.2s
BOSA  Boshof           61.93 206   P      P        21 47 24.2  -1.0
BOSA                                 pmax   pmax
          comp=Z,7.0nm,1.3s
KSAR  Wonju Array Be   63.13  60   P      P        21 47 32.7  -0.5
KSAR  Wonju Array Be   63.13  60   P      P        21 47 32.7  -0.5
KSRS  Korea Array      63.16  60   P      P        21 47 32.9  -0.4
          comp=Z,3.1nm,0.7s,baz=280,slow=6.3,SNR=8.5
          comp=Z,3.1nm,0.7s
JNU   Nakatsue         66.78  64   LR     LR       22 19 09.4
          comp=Z,23nm,19.1s,baz=320,slow=38
B22K  Teshekpuk Lake   80.06   8   P      P        21 49 15.1 +0.6
B22K                                 IAmb   IAmb     21 49 17.2
          comp=Z,5.6nm,0.8s
C18K  Utukok River     80.41  12   P      P        21 49 17.0 +0.5
C18K                                 IAmb   IAmb     21 49 48.1
          comp=Z,12nm,1.4s
SCHQ  Schefferville    81.91 329   P      P        21 49 25.0 +0.3
          comp=Z,7.1nm,0.6s,baz=51,slow=5.9,SNR=12
          comp=Z,7.1nm,0.6s
SCHQ  Schefferville    81.91 329   P      P        21 49 24.9 +0.2
E25K  Arctic Village   83.07   6   P      P        21 49 31.3 +0.7
E25K                                 IAmb   IAmb     21 49 32.7
          comp=Z,4.1nm,0.9s
FITZ  Fitzroy Crossi   85.08 113   P      P        21 49 39.9  -1.6
          comp=Z,3.4nm,0.7s,baz=252,slow=7.7,SNR=5.3
          comp=Z,3.4nm,0.7s
ILAR  Eielson Array    86.16   8   P      P        21 49 45.4  -0.8
          comp=Z,0.7nm,0.7s,baz=315,slow=4.2,SNR=9.2
          comp=Z,0.7nm,0.7s
ILAR  Eielson Array    86.16   8   P      P        21 49 46.7 +0.5
ILAR  Eielson Array    86.16   8   P      P        21 49 46.7 +0.5
YKA   Yellowknife Ar   88.90 354   P      P        21 49 59.4 +0.1
          comp=Z,3.1nm,0.8s,baz=359,slow=5.1,SNR=30
          comp=Z,3.1nm,0.8s
YKA   Yellowknife Ar   88.90 354 i P      P        21 50 00.7 +1.4
YKA                                  pmax   pmax
          comp=Z,3.0nm,0.8s
WRA   Warramunga Arr   93.11 111   P      P        21 50 18.4  -1.3
          comp=Z,0.7nm,0.8s,baz=315,slow=3.6,SNR=5.1
          comp=Z,0.7nm,0.8s
WRA   Warramunga Arr   93.11 111 i P      P        21 50 18.3  -1.4
WRA                                  pmax   pmax
          comp=Z,1.0nm,0.7s
ASAR  Alice Springs    94.54 114   P      P        21 50 25.2  -1.0
          comp=Z,1.5nm,0.7s,baz=302,slow=4.8,SNR=15
          comp=Z,1.5nm,0.7s
ASAR  Alice Springs    94.54 114   P      P        21 50 25.4  -0.9
NVL   N'lazarevskaya  102.69 193 eP     Pdif     21 51 01.2  -0.4
NVL                                e                 21 55 14.6
NVL                                ePPP   PPP      21 57 24.6
NVL                                eS     SKSac    22 01 40.9 +1.0
NVL                                eSS    SS       22 09 55.7 +1.5
NVL                                eSSS   SSS      22 13 49.6
NVL                                  pmax   pmax
          comp=Z,11nm,0.9s
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NVL				MLR	MLR		
	comp=Z,428nm,22.0s						
QSPA	South Pole Qui	118.10	180	PKP	PKPdf	21 55 50.9	-0.6
	comp=Z,1.0nm,0.2s,baz=208,slow=1.7,SNR=4.9						

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*DJA **04** 21:45:30.3±0.2, 8°S±4°×12°0E±°, h192km±5km, M3.9/17, mB4.5/1, mb3.9/7, MLv4.0/17, Mw(mB)3.6/1*
*IDC **04** 21:45:31.9±1.6, 7°.82S×120°.52E, h210km±13km, mb3.1/5, mbtmp3.7/8, MS3.6/1, Error ellipse: s-maj=57.6km s-min=8.8km az=52.0*
ISC 04 21:45:30.1±0.7**, 8°.25S**±0°.07×**120°.01E**±0°.06**, h200**km**, n37, σ1s.18**/41**, mb3.6**/4**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBFI	Labuhan Bajo,	0.26	207	P	Pn	21 45 56.1	-0.5
WBSI	Waikabubak, Su	1.51	204	P	Pn	21 46 03.3	-0.7
DBNI	Kabupaten Domp	1.69	261	P	Pn	21 46 05.2	-0.4
EDFI	Ende, Flores	1.74	107	P	Pn	21 46 06.0	-0.2
BASI	Baing, Sumba	2.04	164	P	Pn	21 46 08.8	-0.2
MMRI	Maumere	2.24	100	P	Pn	21 46 11.9	+0.7
MMRI	Maumere	2.24	100	P	Pn	21 46 10.7	-0.5
PLAI	Plampang	2.28	255	P	Pn	21 46 11.6	0.0
PLAI	Plampang	2.28	255	P	Pn	21 46 11.5	0.0
BKSI	Bulukumba	2.91	2	P	Pn	21 46 17.6	-1.2
TWSI	Taliwang, Sumb	3.13	261	P	Pn	21 46 20.9	-0.4
KLNI	Mataram	3.87	267	P	Pn	21 46 29.6	-0.8
BATI	Baumata	4.10	119	P	Pn	21 46 33.5	+0.2
	24nm,0.4s,baz=240,slow=0.9,SNR=15						
BATI				S	Sn	21 47 20.4	-2.4
	50nm,0.3s,baz=197,slow=11,SNR=4.4						
BATI	Baumata	4.10	119	P	Pn	21 46 34.6	+1.4
KHKI	Kahang-Kahang	4.35	268	P	Pn	21 46 37.0	+0.6
SOEI	Soe	4.47	110	P	Pn	21 46 39.8	+1.9
SOEI	Soe	4.47	110	P	Pn	21 46 38.8	+0.9
IGBI	Denpasar	4.84	263	P	Pn	21 46 41.3	-1.2
JAGI	Jajag, Banyuwa	5.80	267	P	Pn	21 46 54.9	+0.1
JAGI	Jajag, Banyuwa	5.80	267	P	Pn	21 46 53.1	-1.7
KMMI	Kalianget	6.10	281	P	Pn	21 47 00.8	+2.0
	61nm,1.9s						
GMJI	Gumukmas	6.50	269	P	Pn	21 47 02.6	-1.2
	0.1nm8.2nm,0.7s						
SNJI	Sawahan-Nganju	8.18	273	P	Pn	21 47 27.3	+1.3
	27nm,1.3s						
PCJI	Pacitan	8.74	270	P	Pn	21 47 32.5	-0.6
UGM	Wanagama	9.40	271	P	Pn	21 47 42.1	+0.5
UGM	Wanagama	9.40	271	P	Pn	21 47 41.5	-0.1
	22nm,1.4s						
FITZ	Fitzroy Crossi	11.22	151	P	Pn	21 48 07.9	+2.8
	0.8nm,0.3s,baz=328,slow=12,SNR=14						
FITZ				S	Sn	21 50 08.0	-2.3
	4.0nm,0.5s,baz=192,slow=14,SNR=7.9						
BBJI	Bungbulang	12.27	273	P	Pn	21 48 18.8	+0.2
	7.6nm,1.2s						
FAKI	Fak Fak	13.28	67	P	Pn	21 48 31.9	+0.6
FAKI	Fak Fak	13.28	67	P	Pn	21 48 30.0	-1.3
WRA	Warramunga Arr	18.10	131	P	P	21 49 27.9	+0.7
	0.3nm,0.3s,baz=304,slow=12,SNR=10						
WRA				S	S	21 52 44.0	-0.2
	0.9nm,0.8s,baz=310,slow=25,SNR=7.4						
ASAR	Alice Springs	20.31	141	P	P	21 49 53.2	+2.3
	0.4nm,0.3s,baz=321,slow=8.8,SNR=13						
ASAR				S	S	21 53 27.9	+0.3
	0.6nm,0.7s,baz=326,slow=24,SNR=5.4						
ASAR				ScP	ScP	21 57 12.4	-1.0
	0.5nm,0.5s,baz=319,slow=2.1,SNR=5.6						
	0.4nm,0.3s						
STKA	Stephens Creek	30.92	142	LR	LR	22 07 10.4	
	comp=Z,103nm,18.9s,baz=62,slow=42						
CMAR	Chiang Mai Arr	33.71	322	P	P	21 51 52.7	0.0
	0.4nm,0.5s,baz=145,slow=8.6,SNR=2.9						
	0.4nm,0.5s						
SONM	Songino Array	57.13	349	P	P	21 54 54.9	-1.0
	0.3nm,0.6s,baz=167,slow=7.0,SNR=2.7						
	0.3nm,0.6s						
MKAR	Makanchi Array	64.25	332	P	P	21 55 43.8	-0.1
	0.9nm,0.5s,baz=152,slow=7.3,SNR=12						
	0.9nm,0.5s						
ZALV	Zalesovo Beam	68.70	339	P	P	21 56 10.8	-1.0
	1.4nm,0.5s,baz=139,slow=5.7,SNR=7.4						
	1.4nm,0.5s						

GCG 04 21:53:59.4±0.8**, 13°.33N**×**90°.73W, h35**km±28km**, MD3.5, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FG16	Alotenango, Sa	0.96	13	eP	Pb	21 54 19.5	+1.6
ESSG	Sabana Grande	1.05	355	eP	Pn	21 54 18.0	+0.2
STG8	El Palmar, Qui	1.27	332	eP	Pb	21 54 26.2	+3.2
JAYA	Jayaque - finc	1.29	75	eP	Pn	21 54 21.1	0.0
JAYA				i S	Sn	21 54 36.9	-0.3
APG	El Apazote	1.68	9	eP	Pb	21 54 28.6	-1.4
MTO3	Montecristo	1.70	51	eP	Pn	21 54 28.0	+1.1

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*IDC **04** 22:02:04.1±12.0, 34°.51N×70°.80E, h0km, mb3.9/2, mbtmp3.6/5, ML2.8/2, MS3.3/1, Error ellipse: s-maj=198.0km s-min=59.7km az=159.0*
*NNC **04** 22:02:31.0±4.3, 36°.51N×70°.30E, h117km±71km, mb3.1, mpv3.3, Error ellipse: s-maj=43.6km s-min=33.9km az=130.0*
ISC 04 22:02:31.0±2.6**, 36°.5N**±0°.2×**70°.4E**±0°.2**, h100**km**, n10, σ1s.89**/11**, 3C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.63	1	⇓P	Pn	22 04 05.6	-0.3
	1.5nm,0.3s,baz=179,slow=13,SNR=54						
KK31				S	Sn	22 05 19.3	-0.6
	3.7nm,0.3s,baz=188,slow=27,SNR=4.9						
AAK	Ala-Archa	6.93	26	⇑P	Pn	22 04 09.5	-0.5
	0.4nm,0.4s						
AAK				⇑S	Sn	22 05 27.8	+0.4
	1.4nm,0.5s						
MKAR	Makanchi Array	13.61	37	Pn	Pn	22 05 38.3	-1.5
	baz=214,slow=12,SNR=2.1						
	0.4nm,0.7s						
AB31	Akbulak array	14.89	332	P	Pn	22 05 55.2	-1.0
	2.0nm,0.3s,baz=159,slow=12,SNR=113						
KURBB	Kurchatov Arra	15.32	20	P	Pn	22 06 02.7	+1.2
	0.4nm,0.7s,baz=208,slow=9.4,SNR=2.1						
BVAR	Borovoye Array	16.56	360	P	P	22 06 21.9	+4.0
	baz=169,slow=9.9,SNR=4.3						
	0.4nm,0.4s						
AKTO	Aktyubinsk	16.58	331	⇑P	Pn	22 06 14.7	-2.5
	1.6nm,0.8s						
ZALV	Zalesovo Beam	20.15	25	P	P	22 06 57.7	+0.6
	2.1nm,0.6s,baz=215,slow=11,SNR=11						
	2.1nm,0.6s						
KVAR	Kislovodsk Arr	22.37	298	LR	LR	22 20 01.7	
	comp=Z,63nm,18.8s,baz=83,slow=46						
ARCES	ARCESS Array B	40.99	338	P	P	22 10 04.0	+0.3
	3.3nm,1.0s,baz=119,slow=7.5,SNR=1.6						
	3.3nm,1.0s						

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*NDI **04** 22:22:10.3±1.9, 23°.40N×94°.59E, h41km±999km, ML3.5, MW3.4*
ISC 04 22:22:11.6±2.5**, 23°.51N**±0°.10×**94°.3E**±0°.1**, h99**km**, n21, σ1s.55**/40**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMP	Imphal	1.36	346	eP	Pn	22 22 35.2	-0.9
IMP				eS	Sn	22 22 53.9	-0.8
SAIH	SAIHA	1.58	230	eP	Pn	22 22 37.8	-1.1
SAIH				eS	Sn	22 22 58.6	-1.0
SAIH				IAML		22 23 00.8	
	comp=E,252nm,0.3s						
SAIH				IAML		22 23 02.7	
	comp=N,275nm,0.2s						
KOHI	KOHIMA	2.21	356	eP	Pn	22 22 46.3	-0.7
KOHI				eS	Sn	22 23 12.8	-1.2
KOHI				IAML		22 23 26.0	
	comp=N,252nm,0.6s						
KOHI				IAML		22 23 27.4	
	comp=E,257nm,0.8s						
MOKO	MOKOCHONG	2.81	4	eP	Pn	22 22 53.8	-1.1
MOKO				eS	Sn	22 23 25.2	-2.9
SHL	Shillong	3.01	313	eP	Pn	22 22 59.8	+2.2
SHL				eS	Sn	22 23 33.3	+0.3
SHL				IAML		22 23 35.3	
	comp=N,346nm,0.2s						
SHL				IAML		22 23 37.0	
	comp=E,370nm,0.2s						
TEZP	TEZPUR	3.38	337	eP	Pn	22 23 03.5	+1.1
TEZP				eS	Sn	22 23 41.8	+0.1
TEZP				IAML		22 23 45.4	
	comp=E,158nm,0.2s						
TEZP				IAML		22 23 45.9	
	comp=N,137nm,0.1s						
ZIRO	ZIRO	4.02	354	eP	Pn	22 23 11.1	-0.1
ZIRO				eS	Sn	22 23 55.5	-1.9
ZIRO				IAML		22 24 02.4	
	comp=E,189nm,0.2s						
ZIRO				IAML		22 24 02.7	
	comp=N,163nm,0.5s						
TAWA	Tawang	4.62	332	eP	Pn	22 23 21.6	+2.0
TAWA				eS	Sn	22 24 11.7	-0.6
TAWA				IAML		22 24 16.0	
	comp=E,164nm,0.3s						
TAWA				IAML		22 24 16.3	
	comp=N,164nm,0.4s						
DHUB	DHUBRI	4.64	303	eP	Pn	22 23 19.9	+0.4
DHUB				eS	Sn	22 24 12.2	0.0
DHUB				IAML		22 24 13.3	
	comp=N,122nm,0.3s						
DHUB				IAML		22 24 13.4	
	comp=E,170nm,0.4s						
TAPN	Taplejung	7.08	304	Pn	Pn	22 23 55.1	+2.3
	baz=305,slow=0.0						
TAPN				Sn	Sn	22 25 11.3	-0.6
	baz=305,slow=0.0						
ODAN	Odare	7.09	299	Pn	Pn	22 23 54.1	+1.2
	baz=301,slow=0.0						
ODAN				Sn	Sn	22 25 11.5	-0.7
	comp=E,37nm,0.3s,baz=301,slow=0.0						
RAMN	Ramite	7.77	298	Pn	Pn	22 24 03.7	+1.6
	baz=299,slow=0.0						
JIRN	Jiri	8.41	301	Pn	Pn	22 24 11.7	+0.8
	baz=302,slow=0.0						
JIRN				Sn	Sn	22 25 42.7	-1.7
	comp=E,23nm,0.3s,baz=302,slow=0.0						
GUN	Gumba	8.77	302	Pn	Pn	22 24 17.8	+2.0
	baz=303,slow=0.0						
GUN				Sn	Sn	22 25 51.5	-1.6
	comp=E,36nm,0.4s,baz=303,slow=0.0						
PKI	Pulchoki	8.99	299	Pn	Pn	22 24 19.9	+1.1
	baz=300,slow=0.0						
PKI				Sn	Sn	22 25 57.5	-1.0
	comp=E,9.3nm,0.3s,baz=300,slow=0.0						
PKIN	Phulchoki	9.00	299	Pn	Pn	22 24 20.3	+1.3
	baz=300,slow=0.0						
PKIN				Sn	Sn	22 25 57.4	-1.3
	comp=E,23nm,0.4s,baz=300,slow=0.0						
KKN	Kakani	9.19	300	Pn	Pn	22 24 22.9	+1.5
	baz=300,slow=0.0						
KKN				Sn	Sn	22 26 01.9	-1.2
	baz=300,slow=0.0						
DMN	Daman	9.25	298	Pn	Pn	22 24 23.6	+1.3
	baz=299,slow=0.0						
GKN	Gorkha	9.79	299	Pn	Pn	22 24 31.4	+1.8
	baz=300,slow=0.0						
GKN				Sn	Sn	22 26 16.9	-0.9
	comp=E,21nm,0.2s,baz=300,slow=0.0						
KOLN	Koldanda	10.54	296	Pn	Pn	22 24 41.5	+1.6
	baz=297,slow=0.0						
KOLN				Sn	Sn	22 26 32.4	-3.7
	comp=E,20nm,0.5s,baz=297,slow=0.0						
DANN	Dangsing	10.64	299	Pn	Pn	22 24 43.3	+2.0
	baz=300,slow=0.0						
DANN				Sn	Sn	22 26 36.6	-2.0
	comp=E,7.8nm,0.3s,baz=300,slow=0.0						

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*THE **04** 22:23:54.7, 36°N±15°×2°9E±1°8, h9km±20km, M2.7/4, MLh2.7/4*
*AFAD **04** 22:23:54.9, 36°.41N×29°.12E, h26km, ML2.7*
*ISK **04** 22:23:55.4, 36°.45N×29°.11E, h13km, ML2.9/10*
ISC 04 22:23:56.4±1.2**, 36°.43N**±0°.03×**29°.12E**±0°.02**, h22**km±5km**, n42, σ0s.92**/66**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IZZE	Mula-Seydike	0.08	85	P	Pb	22 23 59.5	-0.9
IZZE				S	Sb	22 24 03.5	+0.3
SABU	Mula-Dalaman	0.41	342	P	Pb	22 24 04.4	-0.5
AKAS	Kas	0.44	117	P	Pb	22 24 04.3	-1.1
AKAS				S	Sb	22 24 11.4	-0.1
AKAS				i IAML		22 24 13.0	
	comp=E,864nm,0.6s						
CAME	Cameli-Denizli	0.53	16	Pg	Pb	22 24 05.8	-1.4
CAME				Sg	Sb	22 24 13.7	-0.8
DALY	Dalyan (Mula)	0.54	316	Pg	Pb	22 24 06.1	-1.1
DALY				Sg	Sb	22 24 13.9	-0.7
KNIK	Mula-Seydike	0.55	41	P	Pb	22 24 06.4	-1.1
KNIK				S	Sb	22 24 14.6	-0.4
KNIK				i IAML		22 24 17.0	
	comp=E,502nm,0.6s						
ELL	Elmali	0.71	63	Pg	Pb	22 24 09.7	-0.4
CAEL	Denizli, Camel	0.71	13	P	Pb	22 24 09.4	-0.7
CAEL				S	Sb	22 24 20.3	+0.8
TURN	Turunc	0.79	296	P	Pn	22 24 12.0	-0.2
TURN				S	Sn	22 24 22.1	-1.1
ARG	Arkhangelos	0.83	255	P	Pb	22 24 11.5	-0.7
ARG				S	Sn	22 24 24.3	-0.1
ARG	Arkhangelos	0.83	255	Pg	Pb	22 24 11.7	-0.4
ARG				Sg	Sn	22 24 23.9	-0.5
DNZT	Denizli-Tavas-	0.85	355	P	Pb	22 24 11.6	-0.9
DNZT				S	Sb	22 24 23.8	+0.3
GOLH	Golhisar	0.88	23	P	Pb	22 24 12.3	-0.7
GOLH				S	Sn	22 24 26.0	+0.3
YER	Yerkesik	0.97	316	P	Pb	22 24 14.0	-0.5
YER				S	Sn	22 24 28.7	+0.7
YER	Yerkesik	0.97	316	Pg	Pn	22 24 14.3	-0.5
AKUM	Antalya-Kumluc	0.99	96	P	Pn	22 24 14.9	0.0
MULA	Mugla, Merkez-	1.05	322	P	Pn	22 24 15.6	-0.3
MULA				S	Sn	22 24 29.9	+0.1
MULA				i IAML		22 24 36.0	
	comp=E,238nm,0.6s						
TAVA	DENIZLI_Tavas	1.05	351	P	Pb	22 24 15.1	-0.8
TAVA				S	Sb	22 24 28.9	-0.3
TAVA				i IAML		22 24 35.0	
	comp=E,131nm,0.8s						
APMY	Acipayam-Deniz	1.05	8	Pg	Pb	22 24 15.5	-0.4
KORT	Korkueli	1.14	60	P	Pb	22 24 17.6	+0.2
KORT				S	Sn	22 24 34.6	+2.5
KORT				i IAML		22 24 40.0	
	comp=N,188nm,0.6s						
KORT				i IAML		22 24 42.0	
	comp=E,271nm,1.4s						
DNIZ	Denizli-Tavas-	1.20	357	P	Pb	22 24 17.8	-0.5
DAT	Datca	1.28	284	P	Pn	22 24 18.9	-0.2
DAT				S	Sb	22 24 37.4	+1.5
DAT				i IAML		22 24 42.0	
	comp=N,152nm,0.3s						
DAT				i IAML		22 24 43.0	
	comp=E,126nm,0.2s						
DAT	Datca	1.28	284	P	Pn	22 24 18.9	-0.2
DAT				S	Sb	22 24 38.7	+2.8
DAT	Datca	1.28	284	Pn	Pb	22 24 19.0	-0.8
ANTB	Antalya	1.32	69	Pn	Pb	22 24 20.4	+0.1
INCE	Denizli-Bozkur	1.33	16	P	Pn	22 24 19.6	-0.1
INCE				S	Sb	22 24 37.1	-0.1
INCE				i IAML		22 24 39.0	
	comp=E,138nm,1.0s						
INCE				i IAML		22 24 41.0	
	comp=N,154nm,0.4s						
YAZI	Mula-Dat§a-	1.37	281	P	Pn	22 24 19.8	-0.4
YAZI				S	Sb	22 24 38.0	-0.3
MLSB	Milas	1.38	309	Pn	Pb	22 24 20.9	-0.6
BUCA	Burdur, Bucak-	1.46	52	P	Pb	22 24 22.2	-0.6
BRDR	BURDUR-Merkez	1.47	30	P	Pn	22 24 21.8	+0.2
BRDR				S	Sb	22 24 42.2	+0.9
BRDR				i IAML		22 24 45.0	
	comp=E,84nm,0.5s						
BDRM	Kayabasi	1.49	296	P	Pn	22 24 21.7	-0.2
BDRM				S	Sb	22 24 42.1	+0.3
ESEN	Aydn-Nazilli	1.50	336	P	Pb	22 24 22.9	-0.6
ESEN				S	Sb	22 24 42.1	0.0
ESEN				i IAML		22 24 44.0	
	comp=N,115nm,0.2s						
ESEN				i IAML		22 24 44.0	
	comp=E,213nm,0.3s						
BODT	Bodrum	1.59	294	P	Pb	22 24 26.1	+1.1
BODT				S	Sb	22 24 47.8	+3.2
BASM	Basmaki-Afyon	1.66	26	Pn	Pn	22 24 23.8	-0.5
NAZL	Nazilli-Aydin	1.67	337	Pn	Pn	22 24 24.7	+0.4
ISP	Isparta	1.78	38	Pn	Pn	22 24 26.5	+0.5
AYDB	Zeytinkoy-Aydi	1.81	327	Pn	Pn	22 24 26.6	+0.3
KARP	Karpathos	1.82	242	P	Pn	22 24 25.8	-0.6
DDIM	Aydin, Didim	1.82	305	P	Pb	22 24 27.4	-1.7
DDIM				i IAML		22 24 59.0	
	comp=E,153nm,0.9s						
DDIM				i IAML		22 25 04.0	
	comp=N,153nm,1.8s						
KIRA	zmir-Kiraz	1.85	342	P	Pn	22 24 26.4	-0.6
KIRA				i IAML		22 24 56.0	
	comp=E,59nm,0.3s						
SMG	Samos	2.23	306	P	Pn	22 24 31.5	-0.5
SMG				S	Sn	22 25 00.2	+1.3
BLCB	Balcova	2.56	320	P	Pn	22 24 36.3	-0.2

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*NEIC **04** 23:04:60.0±1.5, 19°.18N±0°.04×67°.21W±0°.03, h10km±2km, ML2.8/20, Md3.2/10(RSPR), Error ellipse: s-maj=6.5km s-min=4.7km az=6.0*
*SDD **04** 23:05:00.9±2.1, 19°.33N×67°.08W, h32km±913km, MD3.3, ML3.6, MW3.2, Presumed earthquake*
*OSPL **04** 23:05:02.0±0.6, 19°.11N×67°.35W, h5km±4km, ML2.4, Presumed earthquake*
*RSPR **04** 23:05:03.5, 19°.15N×67°.20W, h10km±31km, MD3.2/10*
ISC 04 23:05:01.5±1.4**, 19°.12N**±0°.05×**67°.25W**±0°.03**, h15**km±9km**, n59, σ0s.98**/74**, 28C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	0.66	168	Pg	Pg	23 05 14.1	-0.2
AGPR				IAML		23 05 28.2	
	323nm,0.3s						
AGPR				IAML		23 05 29.2	
	417nm,0.3s						
AGPR	Aguadilla, PR	0.66	168	⇓eP	Pb	23 05 15.2	+0.6
AGPR	Aguadilla, PR	0.66	168	eS	Sn	23 05 25.7	-0.6
AGPR	Aguadilla, PR	0.66	168	eP	Pb	23 05 14.6	-0.1
AGPR				⇑eSg	Sn	23 05 25.9	-0.4
AGPR				IAML		23 05 30.2	
	comp=N,4µm,0.3s						
AGPR	Aguadilla, PR	0.66	168	i P	Pg	23 05 14.4	+0.1
AGPR				eS	Sg	23 05 23.2	+0.1
AGPR				IAML		23 05 27.8	
	comp=Z,160nm,0.1s						
IDE	Isla Desecheo	0.76	196		Pg	23 05 15.9	-0.3
IDE					Sb	23 05 27.6	+1.2
IDE	Isla Desecheo	0.76	196	⇓eP	Pg	23 05 15.9	-0.3
IDE	Isla Desecheo	0.76	196	eS	Sb	23 05 27.6	+1.2
AOPR	Arecibo Observ	0.90	148		Pb	23 05 18.1	-0.6
AOPR					Sg	23 05 29.5	-1.2
AOPR				IAML		23 05 40.0	
	comp=N,367nm,0.3s						
AOPR	Arecibo Observ	0.90	148	⇑eP	Pb	23 05 18.3	-0.4
AOPR	Arecibo Observ	0.90	148	eS	Sb	23 05 31.2	+0.7
AOPR	Arecibo Observ	0.90	148	⇑eP	Pb	23 05 18.4	-0.3
AOPR				IAML		23 05 40.4	
	comp=N,3µm,0.3s						
EMPR	Esperanza - Ma	0.93	133		Pg	23 05 19.3	-0.2
EMPR					Sn	23 05 35.0	+2.0
EMPR	Esperanza - Ma	0.93	133		Pb	23 05 18.9	-0.4
EMPR				IAML		23 05 46.6	
	comp=N,254nm,0.7s						
EMPR				IAML		23 05 46.7	
	comp=N,281nm,0.5s						
EMPR	Esperanza - Ma	0.93	133	⇑eP	Pg	23 05 19.3	-0.2
EMPR	Esperanza - Ma	0.93	133	eS	Sn	23 05 35.0	+2.0
LSP	Las Mesas	0.95	171		Pb	23 05 19.4	-0.2
LSP	Las Mesas	0.95	171	⇑eP	Pb	23 05 19.4	-0.2
UUPR	Utuado, UPR, P	0.99	150	Pg	Pb	23 05 19.0	-1.4
CRPR	Cabo Rojo, PR	1.11	173		Pb	23 05 21.0	-1.4
CRPR					Sb	23 05 36.6	0.0
CRPR	Cabo Rojo, PR	1.11	173	IAML		23 05 45.8	
	comp=N,153nm,0.4s						
CRPR				IAML		23 05 46.1	
	comp=N,144nm,0.4s						
CRPR	Cabo Rojo, PR	1.11	173	⇑eP	Pb	23 05 21.7	-0.7
CRPR	Cabo Rojo, PR	1.11	173	eS	Sb	23 05 37.2	+0.6
CRPR	Cabo Rojo, PR	1.11	173	⇑ePg	Pb	23 05 21.2	-1.2
CRPR				⇑eSg	Sg	23 05 37.8	+0.3
CRPR				IAML		23 05 43.7	
	comp=N,1µm,0.3s						
CRPR	Cabo Rojo, PR	1.11	173	i P	Pb	23 05 21.6	-0.7
CRPR				eS	Sb	23 05 37.0	+0.4
CRPR				IAML		23 05 41.6	
	comp=Z,146nm,0.3s						
ECPR	Experimental S	1.16	133		Pn	23 05 22.2	-0.9
ECPR				IAML		23 05 43.9	
	comp=Z,412nm,0.2s						
ECPR				IAML		23 05 45.4	
	comp=Z,414nm,0.2s						
ECPR	Experimental S	1.16	133	⇑eP	Pn	23 05 22.6	-0.5
ECPR	Experimental S	1.16	133	eS	Sg	23 05 39.3	+0.4
MLPR	Magueyes Islan	1.16	170	⇑eP	Pn	23 05 22.7	-0.4
MLPR	Magueyes Islan	1.16	170	eS	Sb	23 05 38.1	+0.2
MLPR	Magueyes Islan	1.16	170	⇑ePg	Pn	23 05 22.1	-1.0
MLPR				⇑eSg	Sg	23 05 39.6	+0.7
MLPR				IAML		23 05 45.9	
	comp=N,583nm,0.3s						
GBPR	Guanica, Bosqu	1.19	163		Pg	23 05 25.6	+1.2
GBPR	Guanica, Bosqu	1.19	163	⇑eP	Pg	23 05 25.6	+1.2
PCDR	Punta Cana, DR	1.23	241	⇑ePg	Pn	23 05 22.8	-1.3
PCDR				⇑eSg	Sb	23 05 40.0	0.0
PCDR				IAML		23 05 44.3	
	comp=N,304nm,0.4s						
OBIP	Obispado Ponce	1.23	150		Pn	23 05 23.3	-0.8
OBIP					Sb	23 05 40.4	+0.4
OBIP				IAML		23 05 46.1	
	comp=E,187nm,0.3s						
OBIP	Obispado Ponce	1.23	150	⇑eP	Pn	23 05 23.6	-0.5
OBIP	Obispado Ponce	1.23	150	eS	Sn	23 05 40.8	+0.4
GCPR	Guaynabo City	1.36	126		Pn	23 05 24.9	-1.1
GCPR					Sg	23 05 45.0	-0.6
GCPR	Guaynabo City	1.36	126	⇑eP	Pn	23 05 25.6	-0.3
GCPR	Guaynabo City	1.36	126	eS	Sg	23 05 45.7	+0.1
SJG	San Juan	1.44	134	⇑eP	Pn	23 05 19.1	-7.9
SJG	San Juan	1.44	134	eS	Sg	23 05 49.0	+0.9
SJG	San Juan	1.44	134	i P	Pb	23 05 28.1	0.0
SJG				eS	Sb	23 05 47.0	+0.8
SJG				IAML		23 05 53.6	
	comp=Z,56nm,0.3s						
HIDR	Higuey Centro	1.48	250	⇑eP	Pb	23 05 28.4	-0.3
HIDR	Higuey Centro	1.48	250	eS	Sn	23 05 47.1	+0.4
HIDR	Higuey Centro	1.48	250	⇑ePg	Pn	23 05 26.1	-1.5
HIDR				⇑eSg	Sn	23 05 47.0	+0.4
HIDR				IAML		23 05 51.0	
	comp=N,235nm,0.3s						
HUMP	Col San Antoni	1.64	126		Pn	23 05 29.5	-0.3
HUMP	Col San Antoni	1.64	126	⇑eP	Pn	23 05 30.2	+0.4
HUMP	Col San Antoni	1.64	126	eS	Sn	23 05 47.3	-3.3
MIDR	Miches	1.71	266	⇓eP	Pn	23 05 30.5	-0.2
MIDR	Miches	1.71	266	eS	Sn	23 05 52.4	+0.2
MIDR	Miches	1.71	266	⇑ePg	Pn	23 05 30.3	-0.4
MIDR				⇓eSg	Sn	23 05 52.4	+0.2
MIDR				IAML		23 05 57.2	
	comp=N,94nm,1.0s						
SMDR	Samana, DR	1.84	276	⇓eP	Pn	23 05 32.3	-0.2
SMDR	Samana, DR	1.84	276	⇑ePg	Pn	23 05 30.7	-1.8
SMDR				⇑eSg	Sn	23 05 53.9	-1.6
SMDR				IAML		23 06 15.5	
	comp=N,2µm,0.3s						
DR12	Loma Pena Alta	2.04	261		Pn	23 05 34.5	-0.8
HATOM	Hato Mayor del	2.04	261	⇑ePg	Pn	23 05 35.3	0.0
HATOM				⇑eSg	Sn	23 05 59.5	-1.1
HATOM				IAML		23 06 04.5	
	comp=N,780nm,0.3s						
BANI	BANI	3.03	257	Pn	Pn	23 05 49.2	+0.2
SDDR	Presa de Saban	3.82	269		Pn	23 06 00.7	+0.8
REDR	Restauracion	3.92	271	⇑ePg	Pn	23 06 04.5	+3.4
REDR				IAML		23 06 57.9	
	comp=N,33nm,0.2s						

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*NEIC **04** 23:10:29.6±1.5, 19°.06N±0°.03×67°.11W±0°.02, h10km±2km, ML2.3/20, Md3.0/9(RSPR), Error ellipse: s-maj=5.9km s-min=3.0km az=203.0*
*RSPR **04** 23:10:30.8, 19°.09N×67°.19W, h10km±3km, MD3.0/9*
*SDD **04** 23:10:31.0±1.5, 19°.06N×67°.07W, h21km±84km, MD3.1, ML2.7, MW2.8, Presumed earthquake*
*OSPL **04** 23:10:31.1±0.4, 19°.06N×67°.17W, h21km±2km, ML2.1,*

Presumed earthquake

ISC 04 23:10:29.2±1.3**, 19°.07N**±0°.05×**67°.11W**±0°.03**, h17**^{km}±9^{km}**,**
n46, σ0^{s}.39/61**, 19C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	0.60	180	Pg	Pb	23 10 41.8	+0.6
AGPR				IAML		23 10 51.0	
	200nm,0.3s						
AGPR				IAML		23 10 51.1	
	211nm,0.5s						
AGPR	Aguadilla, PR	0.60	180	⇓eP	Pn	23 10 42.3	-0.6
AGPR	Aguadilla, PR	0.60	180	eS	Sb	23 10 50.2	+0.7
AGPR	Aguadilla, PR	0.60	180	⇑ePg	Pb	23 10 41.9	+0.6
AGPR				⇑eSg	Sb	23 10 49.9	+0.5
AGPR				IAML		23 10 51.3	
	comp=N,2µm,0.3s						
AGPR	Aguadilla, PR	0.60	180	iP	Pb	23 10 41.9	+0.6
AGPR				eS	Sb	23 10 49.9	+0.5
AGPR				IAML		23 10 55.0	
	comp=Z,105nm,0.1s						
IDE	Isla Desecheo	0.77	207		Pg	23 10 44.3	+0.1
IDE					Sg	23 10 54.4	+0.1
IDE	Isla Desecheo	0.77	207	⇑eP	Pg	23 10 44.3	+0.1
IDE	Isla Desecheo	0.77	207	eS	Sg	23 10 54.4	+0.1
AOPR	Arecibo Observ	0.80	155		Pg	23 10 45.0	+0.2
AOPR					Sg	23 10 55.5	+0.2
AOPR				IAML		23 11 04.9	
	comp=N,148nm,0.3s						
AOPR	Arecibo Observ	0.80	155	⇓eP	Pg	23 10 45.0	+0.2
AOPR	Arecibo Observ	0.80	155	eS	Sn	23 10 56.6	-0.6
AOPR	Arecibo Observ	0.80	155	⇑ePg	Pg	23 10 45.0	+0.2
AOPR				⇑eSg	Sb	23 10 55.0	-0.1
AOPR				IAML		23 11 05.2	
	comp=N,1µm,0.3s						
EMPR	Esperanza - Ma	0.81	137		Pn	23 10 45.5	-0.2
EMPR					Sn	23 10 58.0	+0.7
EMPR	Esperanza - Ma	0.81	137		Pn	23 10 45.9	+0.1
EMPR				IAML		23 11 05.8	
	comp=N,101nm,0.7s						
EMPR				IAML		23 11 05.9	
	comp=N,108nm,0.7s						
EMPR	Esperanza - Ma	0.81	137	⇑eP	Pn	23 10 45.5	-0.2
EMPR	Esperanza - Ma	0.81	137	eS	Sn	23 10 58.0	+0.7
PRSN	Puerto Rico Se	0.85	182	Pg	Pb	23 10 45.5	0.0
LSP	Las Mesas	0.89	179		Pg	23 10 46.5	-0.1
LSP					Sn	23 10 58.9	-0.6
LSP	Las Mesas	0.89	179	⇑eP	Pg	23 10 46.5	-0.1
LSP	Las Mesas	0.89	179	eS	Sn	23 10 58.9	-0.6
ECPR	Experimental S	1.03	137	Pg	Pg	23 10 49.1	-0.1
ECPR	Experimental S	1.03	137	⇓eP	Pg	23 10 49.2	0.0
ECPR	Experimental S	1.03	137	eS	Sn	23 11 03.3	+0.4
CRPR	Cabo Rojo, PR	1.06	180		Pb	23 10 48.8	-0.2
CRPR					Sb	23 11 02.6	0.0
CRPR	Cabo Rojo, PR	1.06	180	IAML		23 11 04.0	
	comp=N,53nm,0.3s						
CRPR				IAML		23 11 04.1	
	comp=N,54nm,0.2s						
CRPR	Cabo Rojo, PR	1.06	180	⇓eP	Pb	23 10 48.9	-0.2
CRPR	Cabo Rojo, PR	1.06	180	eS	Sb	23 11 02.7	0.0
CRPR	Cabo Rojo, PR	1.06	180	⇑ePg	Pb	23 10 48.9	-0.2
CRPR				⇑eSg	Sb	23 11 02.6	0.0
CRPR				IAML		23 11 05.6	
	comp=N,364nm,0.3s						
CRPR	Cabo Rojo, PR	1.06	180	iP	Pb	23 10 48.9	-0.2
CRPR				eS	Sb	23 11 02.5	-0.2
CRPR				IAML		23 11 04.0	
	comp=Z,50nm,0.3s						
MLPR	Magueyes Islan	1.10	177	⇑eP	Pb	23 10 49.5	-0.3
MLPR	Magueyes Islan	1.10	177	eS	Sb	23 11 03.7	-0.1
MLPR	Magueyes Islan	1.10	177	⇑ePg	Pb	23 10 49.5	-0.3
MLPR				⇑eSg	Sb	23 11 03.6	-0.2
MLPR				IAML		23 11 04.3	
	comp=N,20nm,0.4s						
OBIP	Obispado Ponce	1.13	155		Pb	23 10 50.3	0.0
OBIP					Sn	23 11 05.1	-0.3
OBIP				IAML		23 11 07.6	
	comp=E,64nm,0.3s						
OBIP	Obispado Ponce	1.13	155	⇓eP	Pb	23 10 50.3	0.0
OBIP	Obispado Ponce	1.13	155	eS	Sn	23 11 05.3	0.0
GCPR	Guaynabo City	1.23	128	Pn	Pg	23 10 53.4	+0.4
GCPR					Sg	23 11 08.9	-0.2
GCPR	Guaynabo City	1.23	128	eS	Sg	23 11 08.7	-0.4
SJG	San Juan	1.32	136	Pn	Pg	23 10 54.3	-0.4
SJG	San Juan	1.32	136	iP	Pb	23 10 53.5	0.0
SJG				eS	Sn	23 11 09.5	-0.5
SJG				IAML		23 11 13.2	
	comp=Z,12nm,1.0s						
PCDR	Punta Cana, DR	1.33	245	⇑ePg	Pb	23 10 53.9	+0.3
PCDR				⇑eSg	Sb	23 11 10.8	+0.4
PCDR				IAML		23 11 11.5	
	comp=N,68nm,3.9s						
HUMP	Col San Antoni	1.51	128	Pn	Pb	23 10 56.8	+0.1
HUMP	Col San Antoni	1.51	128	IAML		23 11 20.5	
	comp=N,35nm,0.2s						
HUMP				IAML		23 11 24.2	
	comp=N,28nm,0.3s						
MIDR	Miches	1.84	267	⇑eP	Pb	23 11 01.6	-0.7
MIDR	Miches	1.84	267	⇑ePg	Pb	23 11 02.2	-0.2
MIDR				⇑eSg	Sg	23 11 27.7	-0.7
MIDR				IAML		23 11 35.8	
	comp=N,16nm,0.6s						
DR12	Loma Pena Alta	2.17	263	Pn	Pn	23 11 05.6	+1.0
HATOM	Hato Mayor del	2.17	263	⇑ePg	Pb	23 11 07.9	-0.1
HATOM				⇑eSg	Sb	23 11 34.6	0.0
HATOM				IAML		23 11 42.8	
	comp=N,132nm,0.3s						

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*SJA **04** 23:19:28.2±0.6, 32°.38S×71°.85W, h7^{km}, ML3.5, MW3.5*
*GUC **04** 23:19:30.1±0.9, 32°.26S×71°.75W, h33^{km}±12^{km}, ML3.5*
ISC 04 23:19:26.5±1.7**, 32°.27S**±0°.03×**71°.86W**±0°.07**, h4**^{km}±11^{km}**,**
n19, σ0^{s}.88/39**, 2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	Catapilco	0.56	122	eP	Pn	23 19 40.2	-1.1
VA06				eS	Sb	23 19 47.5	+0.3
VA06				IAML		23 19 48.2	
	comp=E,8µm,0.3s						
VA01	Torpederas	0.77	167	eP	Pn	23 19 43.9	-0.3
VA01				eS	Sn	23 19 55.4	-0.9
VA01				IAML		23 19 57.4	
	comp=N,3µm,0.1s						
CO04	Los Peladeros	0.79	74	⇓iP	Pb	23 19 43.7	+0.7
CO04				eS	Sg	23 19 52.5	+0.7
CO04				IAML		23 19 57.9	
	comp=N,3µm,0.2s						
ROCH	El Roble	1.00	135	eP	Pn	23 19 47.4	-0.2
ROCH				eS	Sb	23 20 00.1	-0.2
ROCH				IAML		23 20 03.3	
	comp=E,2µm,0.5s						
MT02	Curacav	1.16	149	eP	Pn	23 19 49.7	+0.1
MT02				eS	Sn	23 20 04.7	-1.2
VA03	San Esteban	1.21	114	⇓iP	Pn	23 19 50.3	-0.1
VA03				eS	Sb	23 20 05.7	-0.5
VA03				IAML		23 20 09.5	
	comp=N,3µm,0.4s						
VA03	San Esteban	1.21	114	eP	Pn	23 19 50.3	-0.1
VA03				eS	Sn	23 20 07.3	0.0
VA03				IAML		23 20 08.5	
	comp=Z,1µm,0.2s						
CO02	Combarbal	1.29	35	eP	Pn	23 19 51.9	+0.4
CO02				eS	Sg	23 20 07.9	-0.1
CO02				IAML		23 20 09.4	
	comp=E,3µm,0.6s						
PEL	Peldehue	1.32	132	eP	Pb	23 19 52.3	+0.3
PEL				eS	Sn	23 20 09.1	-0.9
PEL				IAML		23 20 12.6	
	comp=N,1µm,0.3s						
VA05	Santo Domingo	1.40	172	eP	Pg	23 19 54.0	+0.6
VA05				eS	Sn	23 20 12.1	+0.3
VA05				IAML		23 20 18.4	
	comp=E,2µm,0.7s						
MT05	Renca	1.47	140	eP	Pg	23 19 55.0	+0.4
MT05				eS	Sg	23 20 13.2	-0.5
MT05				IAML		23 20 18.2	
	comp=E,1µm,0.2s						
MT10	Hacienda Santa	1.50	132	eP	Pg	23 19 55.1	-0.1
MT10				eS	Sg	23 20 14.2	-0.6
MT10				IAML		23 20 16.9	
	comp=E,2µm,0.6s						
AUSP	Uspallata	2.10	89	eP	Pg	23 20 06.5	-0.3
AUSP				eS	Sg	23 20 34.9	+0.9
RTLS	Leoncito	2.23	79	eP	Pg	23 20 08.8	-0.5
RTLS				eS	Sg	23 20 38.8	+0.7
RTLS				IAML		23 20 46.0	
	comp=Z,332nm,0.8s						
ARCO	CERRO ARCO	2.54	104	eP	Pb	23 20 12.6	-0.1
ARCO				eS	Sb	23 20 45.7	+1.3
ASAL	Salagasta	2.58	98	eP	Pb	23 20 13.2	-0.2
ASAL				eS	Sb	23 20 45.2	-0.3
AAGR	Agrelo	2.68	108	eP	Pb	23 20 16.2	+1.0
AAGR				eS	Sb	23 20 49.0	+0.5
AAGR				IAML		23 21 08.5	
	comp=Z,134nm,1.2s						
ACCO	Cerro Coronel	2.92	56	eP	Pb	23 20 19.5	+0.1
ACCO				eS	Sb	23 20 57.6	+2.1
AROD	Rodeo	2.93	45	eP	Pb	23 20 19.5	0.0
AROD				eP	Pg	23 20 20.1	-2.6
AROD				eS	Sb	23 20 57.8	+2.0

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*SOME **04** 23:25:10.5, 44°.15N×81°.38E, h15^{km}*
*NNC **04** 23:25:11.6±0.7, 44°.15N×81°.28E, h0^{km}, mb3.6, mpv3.4,*
Error ellipse: s-maj=6.1km s-min=3.9km az=120.0
ISC 04 23:25:11.1±1.3**, 44°.14N**±0°.04×**81°.29E**±0°.05**, h11**^{km}±11^{km}**,**
n36, σ1^{s}.82/47**, 6C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	0.97	225	P	Pg	23 25 29.1	-0.7
	18nm,0.2s						
KTMS				S	Sg	23 25 43.2	+0.7
	257nm,0.2s						
KTMS	Ketmen	0.97	225	eP	Pg	23 25 29.1	-0.7
	9.7nm,0.1s						
KTMS				eS	Sg	23 25 43.1	+0.7
	257nm,0.2s						
KNOS	Konyrlen	1.53	279	P	Pb	23 25 40.1	+0.5
	33nm,0.2s						
KNOS				S	Sg	23 26 02.0	+1.6
	60nm,0.2s						
PDGK	Podgornoye	1.53	239	⇑Pn	Pb	23 25 40.6	+0.9
	2.9nm,0.2s						
PDGK				⇑Sn	Sg	23 26 01.7	+1.2
	58nm,0.5s						
SHLS	Shalkode	1.65	234	P	Pn	23 25 39.0	-1.2
	42nm,0.2s						
SHLS				S	Sn	23 25 59.3	-2.2
	326nm,0.3s						
SHLS	Shalkode	1.65	234	eP	Pn	23 25 39.0	-1.2
	42nm,0.2s						
SHLS				eS	Sn	23 25 59.3	-2.2
	326nm,0.3s						
UZB	Uzynbulak	1.92	240	Pg	Pb	23 25 46.6	+0.3
	18nm,0.3s						
UZB				Lg	Lg	23 26 12.4	
	67nm,0.2s						
UZB	Uzynbulak	1.92	240	eP	Pb	23 25 46.8	+0.5
	6.2nm,0.1s						
UZB				eS	Sb	23 26 12.7	+2.3
	50nm,0.2s						
KPKS	Kokpek	2.00	251	Pg	Pb	23 25 47.9	+0.3
	0.3nm,0.1s						
KPKS				Lg	Lg	23 26 15.4	
	138nm,0.3s						
BLB	Baldybastay	2.02	270	Pg	Pb	23 25 48.5	+0.5
	36nm,0.1s						
BLB				Lg	Lg	23 26 16.0	
	88nm,0.2s						
TDK	Taldyqorghan	2.23	294	Pg	Pb	23 25 52.3	+0.8
	15nm,0.3s						
TDK				Lg	Lg	23 26 22.4	
	59nm,0.3s						
TDK	Taldyqorghan	2.23	294	eP	Pb	23 25 52.3	+0.8
	15nm,0.3s						
TDK				eS	Sg	23 26 22.4	-0.4
	59nm,0.3s						
KURS	Kuram	2.35	255	Pg	Pb	23 25 54.2	+0.6
	2.2nm,0.3s						
KURS				Lg	Lg	23 26 25.6	
	15nm,0.4s						
SATY	Saty	2.35	244	Pg	Pb	23 25 54.7	+1.0
	11nm,0.1s						
SATY				Lg	Lg	23 26 26.4	
	138nm,0.1s						
ARXS	Arharly	2.49	273	Pg	Pb	23 25 56.4	+0.5
	5.7nm,0.3s						
ARXS				Lg	Lg	23 26 29.4	
	36nm,0.2s						
ARXS	Arharly	2.49	273	eP	Pb	23 25 56.5	+0.5
ARXS				eS	Sb	23 26 29.4	+2.7
MK31	Makanchi Array	2.75	15	⇑Pg	Pg	23 26 02.6	-1.2
	3.4nm,0.3s,baz=199,slow=14,SNR=103						
MK31				⇑Lg	Lg	23 26 33.6	
	1.7nm,0.2s,baz=186,slow=31,SNR=8.2						
KOTS	Kotyrbulak	3.16	255	Pg	Pb	23 26 09.1	+1.7
	2.5nm,0.1s						
KOTS				Lg	Lg	23 26 51.1	
	19nm,0.3s						
KOTS	Kotyrbulak	3.16	255	eP	Pb	23 26 09.1	+1.7
	2.5nm,0.1s						
KOTS				eS	Sg	23 26 51.1	-1.5
	19nm,0.3s						
MDOK	Medeo	3.23	254	Pg	Pb	23 26 10.3	+1.7
	9.3nm,0.4s						
MDOK				Lg	Lg	23 26 53.0	
	7.2nm,0.2s						
KNDC	Almaty	3.27	255	⇓Pg	Pb	23 26 10.4	+1.2
	8.4nm,0.5s						
KNDC				⇑Lg	Lg	23 27 00.4	
	4.6nm,0.3s						
TNSS	Tian-Shan	3.34	252	Pg	Pb	23 26 13.1	+2.4
	1.6nm,0.3s						
TNSS				Lg	Lg	23 26 57.7	
	1.6nm,0.3s						
TNSS	Tian-Shan	3.34	252	eP	Pb	23 26 13.1	+2.4
	1.6nm,0.3s						
TNSS				eS	Sg	23 26 57.8	-0.7
	1.6nm,0.3s						
KTBS	Karatobe	3.35	264	Pg	Pb	23 26 13.0	+2.3
	2.0nm,0.2s						
KTBS				Lg	Lg	23 26 57.8	
	0.2nm,0.1s						
MTBS	Maitube	3.67	256	Pg	Pb	23 26 18.2	+2.2
	3.6nm,0.3s						
MTBS				Lg	Lg	23 27 06.4	
	11nm,0.3s						
MTBS	Maitube	3.67	256	eP	Pb	23 26 18.2	+2.2
	3.6nm,0.3s						
MTBS				eS	Sg	23 27 06.4	-2.5
	11nm,0.3s						
KST	Kastek	4.02	256	Pg	Pb	23 26 25.6	+3.5
	1.1nm,0.2s						
KST				Lg	Lg	23 27 19.5	
	7.7nm,0.3s						
KST	Kastek	4.02	256	eP	Pb	23 26 25.6	+3.5
	1.3nm,0.1s						
KST				eS	Sg	23 27 19.5	-0.7
	15nm,0.5s						
KRBS	Karabastau	4.08	266	Pg	Pb	23 26 25.7	+2.7
	1.4nm,0.2s						
KRBS				Lg	Lg	23 27 19.7	
	7.0nm,0.3s						
DGS	Degeres	4.10	259	Pg	Pb	23 26 26.1	+2.7
	3.0nm,0.4s						
DGS				Lg	Lg	23 27 20.4	
	14nm,0.4s						
ZSN	Zaisan	4.15	36	Pg	Pb	23 26 24.6	+0.4
	1.7nm,0.2s						
ZSN				Lg	Lg	23 27 18.0	
	19nm,0.6s						
ZSN	Zaisan	4.15	36	eP	Pb	23 26 24.6	+0.4
	0.5nm,0.2s						
ZSN				eS	Sb	23 27 18.0	+3.7
	10nm,0.3s						
AAK	Ala-Archa	5.17	255	⇓Pg	Pg	23 26 48.1	-2.0
	2.3nm,0.8s						
AAK				⇓Lg	Lg	23 27 56.9	
	0.8nm,0.5s						
KURBB	Kurchatov Arra	6.75	345	⇑Lg	Lg	23 28 45.1	
	7.1nm,0.6s						
KURK	Kurchatov	6.82	346	⇓Lg	Lg	23 28 48.0	
	1.3nm,0.7s						
KK31	Karatay Array	7.89	266	Lg	Lg	23 29 20.6	
	0.4nm,0.4s,baz=77,slow=30,SNR=4.9						

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*NIED **04** 23:38:26.8, 36°.81N×140°.54E, h7^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-3.07; M$_{\theta\theta}$-0.10; M$_{\phi\phi}$3.17; M$_{r\theta}$0.14; M$_{\theta\phi}$-1.18; M$_{\phi r}$2.21; Fault plane solution: M$_{0}$4.00000×10^{14} NP1: ϕ_{s}328.00000°, δ31.00000°, λ-114.00000°. NP2: ϕ_{s}175.00000°, δ62.00000°, λ-77.00000°.*
*JMA **04** 23:38:26.8±0.0, 36°.8N±0°.1×140°.5E±0°.2, h7^{km}, MD3.8/20, MV4.0/20, NORTHERN IBARAKI PREF*
JMA Felt II J1 at NORTHERN IBARAKI PREF .
*IDC **04** 23:38:27.4±3.9, 36°.63N×140°.49E, h17^{km}±24^{km}, mb3.7/9, mbtmp3.8/13, ML3.6/4, Error ellipse: s-maj=22.6km s-min=15.6km az=94.0*
*NEIC **04** 23:38:30.5±1.2, 36°.73N±0°.06×140°.57E±0°.07, h39^{km}±8^{km}, mb4.1/6, Error ellipse: s-maj=9.3km s-min=7.2km az=51.0*
ISC 04 23:38:26.2±1.2**, 36°.71N**±0°.04×**140°.49E**±0°.04**, h10**^{km}±8^{km}**,**
n65, σ1^{s}.41/53**, mb3.9**/13**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	Hitachi	0.12	148	P	Pb	23 38 30.8	+0.3
JHO	Hitachi	0.12	148	A	A	23 38 30.8	
	comp=N,17nm,0.4s,comp=E,10.0nm,0.3s						
JHYU	Hitachinakayam	0.38	168	A	A	23 38 35.9	
	comp=N,8.0nm,3.2s,comp=E,15nm,0.4s						
JFFD	Fukushimafurud	0.39	8	iP	Pg	23 38 32.4	-1.4
JFFD				eS	Sg	23 38 36.4	-2.5
JFFD	Fukushimafurud	0.39	8	A	A	23 38 32.4	
	comp=N,7.0nm,0.4s,comp=E,12nm,5.1s						
ONAJ	Iwakimizuishiy	0.46	32	P	Pg	23 38 33.7	-1.5
ONAJ	Iwakimizuishiy	0.46	32	A	A	23 38 33.7	
	comp=N,12nm,0.3s,comp=E,19nm,0.3s						
JSB	Shiboa	0.53	300	P	Pb	23 38 37.5	0.0
JSB	Shiboa	0.53	300	A	A	23 38 37.5	
	comp=N,16nm,3.0s,comp=E,13nm,4.4s						
JYT	Yasato	0.54	207	P	Pn	23 38 38.9	-0.9
JYT				S	Sn	23 38 47.6	-1.3
JYT	Yasato	0.54	207	A	A	23 38 38.9	
	comp=N,7.0nm,0.5s,comp=E,17nm,0.4s						
JFK	Kawauchi	0.72	25	P	Pg	23 38 38.4	-1.8
JFK				S	Sg	23 38 46.7	-2.9
JFK	Kawauchi	0.72	25	A	A	23 38 38.4	
	comp=N,4.0nm,3.4s,comp=E,2.0nm,2.9s						
JOTO	OTAMA OYAMA	0.86	352	P	Pg	23 38 41.5	-1.2
JOTO				S	Sg	23 38 51.8	-2.1
JOTO	OTAMA OYAMA	0.86	352	A	A	23 38 41.5	
	comp=N,9.0nm,0.5s,comp=E,8.0nm,1.5s						
JAG	Ashikaga	0.88	252	P	Pn	23 38 44.2	-0.4
JFY	Yanaizu	0.94	318	P	Pg	23 38 43.8	-0.5
JOU	Okura	1.66	5	A	A	23 38 55.0	
	comp=N,7.0nm,0.6s,comp=E,6.0nm,0.6s						
MJAR	Matsushiro Arr	1.84	265	Pg	Pb	23 38 59.6	-0.4
	comp=E,13nm,0.3s,baz=87,slow=15,SNR=87						
MJAR				Lg	Lg	23 39 25.6	
	comp=E,9.2nm,0.3s,baz=85,slow=28,SNR=15						
MJAR	Matsushiro Arr	1.84	265		Pb	23 39 00.1	+0.1
MAJO	Matsushiro	1.85	266		Pb	23 39 00.1	+0.1
MAJO				Sn	Sb	23 39 24.5	+1.3
MJB9	Matsu-Tunnel	1.85	266		Pg	23 39 00.9	-0.7
JSD	Sado	2.22	307		Pn	23 39 03.9	+0.9
JSD				Sn	Sb	23 39 34.1	+0.3
JGF	Kuroka	2.77	247		Pb	23 39 13.8	-2.0
INU	Inuyama	3.13	245		Pn	23 39 17.8	+2.3
JHJ	Hachijo jima 2	3.63	189	Pn	Pn	23 39 21.2	-1.1
	comp=E,19nm,0.3s,baz=87,slow=18,SNR=1.4						
JHJ				Sn	Sn	23 40 02.3	-3.0
	comp=E,20nm,0.3s,baz=74,slow=23,SNR=1.1						
	comp=E,60nm,0.7s						
JHJ2	Mitsune	3.63	189	Pn	Pn	23 39 24.4	+2.0
JTM	Tenmabayashi	4.10	6		Pn	23 39 30.1	+1.3
ERM	Erimo	5.69	20	Pn	Pn	23 39 51.2	+0.6
ASAJ	Asahikawa	7.57	12	Pn	Pn	23 40 18.9	+2.4
	comp=E,1.2nm,0.3s,baz=202,slow=15,SNR=4.1						
ASAJ				Sn	Sn	23 41 45.1	+2.8
	comp=E,0.7nm,0.3s,baz=30,slow=33,SNR=1.8						
	comp=E,5.4nm,0.4s						
USRK	Ussuriysk Ar.	9.89	322	Pn	Pn	23 40 50.9	+2.6
	comp=E,0.2nm,0.3s,baz=139,slow=11,SNR=2.4						
	comp=E,1.5nm,0.5s						
KSRS	Korea Array	10.07	278	Pn	Pn	23 40 53.6	+2.8
	comp=E,0.3nm,0.3s,baz=95,slow=14,SNR=4.8						
	comp=E,0.9nm,0.3s						
SONM	Songino Array	27.36	305	P	P	23 44 11.9	+0.4
	comp=E,1.2nm,0.9s,baz=98,slow=10.0,SNR=5.4						
	comp=E,1.2nm,0.9s						
H11N2	WAKE ISLAND Hy	28.63	119	T	T	00 14 10.3	
	baz=312,slow=75,SNR=74						
H11N1	WAKE ISLAND Hy	28.63	119	T	T	00 14 10.1	
	baz=312,slow=75,SNR=89						
H11N3	WAKE ISLAND Hy	28.64	119	T	T	00 14 11.5	
	baz=312,slow=75,SNR=83						
H11S1	WAKE ISLAND Hy	29.31	121	T	T	00 15 00.6	
	baz=314,slow=75,SNR=259						
H11S3	WAKE ISLAND Hy	29.31	121	T	T	00 14 59.7	
	baz=314,slow=75,SNR=126						
H11S2	WAKE ISLAND Hy	29.33	121	T	T	00 15 01.8	
	baz=314,slow=75,SNR=138						
ZALV	Zalesovo Beam	41.59	313	P	P	23 46 13.6	-0.3
	comp=E,1.2nm,0.6s,baz=108,slow=5.8,SNR=5.8						
ZALV				PcP	PcP	23 48 11.4	+0.4
	comp=E,0.4nm,0.4s,baz=115,slow=2.6,SNR=2.2						
	comp=E,1.2nm,0.6s						
ZALV	Zalesovo Beam	41.59	313	P	P	23 46 13.8	-0.2
MKAR	Makanchi Array	43.67	302	P	P	23 46 31.3	+0.4
KURBB	Kurchatov Arra	45.62	308	P	P	23 46 46.3	-0.2
	comp=E,1.2nm,0.7s,baz=84,slow=7.9,SNR=8.5						
	comp=E,1.2nm,0.7s						
ILAR	Eielson Array	50.16	32	P	P	23 47 22.5	+1.0
	comp=E,0.3nm,0.7s,baz=264,slow=5.7,SNR=5.1						
	comp=E,0.3nm,0.7s						
D25K	Kavik River	50.27	26	P	P	23 47 22.9	+0.7
D25K				IAmb	IAmb	23 47 25.2	
	comp=Z,1.3nm,1.0s						
ARTI	Arti	56.22	318	P	P	23 48 05.5	-0.6
ARTI				IAmb	IAmb	23 48 08.0	
	comp=Z,3.8nm,0.7s						
FITZ	Fitzroy Crossi	56.29	197	P	P	23 48 06.6	-0.3
FITZ				IAmb	IAmb	23 48 18.6	
	comp=Z,1.8nm,1.4s						
WB0	Warramunga Arr	56.47	187	P	P	23 48 08.3	+0.1
WRA	Warramunga Arr	56.64	187	P	P	23 48 08.3	-1.2
	comp=Z,1.1nm,0.4s,baz=4.5,slow=7.3,SNR=20						
	comp=Z,1.1nm,0.4s						
WRA	Warramunga Arr	56.64	187	P	P	23 48 08.0	-1.5
AB31	Akbulak array	57.58	310	P	P	23 48 15.6	-0.3
AB31				IAmb	IAmb	23 48 18.6	
	comp=Z,4.3nm,1.4s						
ABKAR	Akbulak array	57.58	310	P	P	23 48 15.9	-0.1
ASAR	Alice Springs	60.37	187	P	P	23 48 36.8	+1.3
	comp=Z,0.4nm,0.5s,baz=10,slow=6.6,SNR=6.5						
	comp=Z,0.4nm,0.5s						
ASAR	Alice Springs	60.37	187	P	P	23 48 35.3	-0.2
NVAR	Mina Array Bea	75.77	53	P	P	23 50 12.8	+0.2
	comp=Z,1.3nm,0.7s,baz=294,slow=5.2,SNR=7.0						
	comp=Z,1.3nm,0.7s						
PDAR	Pinedale Array	78.42	45	P	P	23 50 28.1	+0.8
	comp=Z,0.4nm,0.7s,baz=333,slow=1.7,SNR=4.2						
	comp=Z,0.4nm,0.7s						
PDAR	Pinedale Array	78.42	45	P	P	23 50 27.0	-0.3
TXAR	Lajitas Array	90.90	52	P	P	23 51 29.9	-0.6
	comp=Z,0.4nm,0.6s,baz=311,slow=2.7,SNR=6.0						
	comp=Z,0.4nm,0.6s						
TXAR	Lajitas Array	90.90	52	P	P	23 51 29.8	-0.7
H03N2	Juan Fernandez	147.72	96	T	T	02 43 03.6	
	baz=291,slow=76,SNR=13						
H03N3	Juan Fernandez	147.74	96	T	T	02 43 05.5	
	baz=291,slow=76,SNR=13						
H03N1	Juan Fernandez	147.74	96	T	T	02 43 09.9	
	baz=291,slow=76,SNR=14						
H03S2	Juan Fernandez	147.84	97	T	T	02 43 27.7	
	baz=284,slow=76,SNR=10						
H03S3	Juan Fernandez	147.85	97	T	T	02 43 26.8	
	baz=284,slow=76,SNR=13						
H03S1	Juan Fernandez	147.86	97	T	T	02 43 28.5	
	baz=284,slow=76,SNR=8.1						

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*IDC **04** 23:38:52.4±5.0, 43°.18S×73°.72W, h0^{km}, mb3.6/2, mbtmp3.6/3, ML3.6/1, MS2.6/1, Error ellipse: s-maj=120.6km s-min=33.9km az=148.0*
*NEIC **04** 23:38:52.9±2.1, 43°.12S±0°.04×74°.21W±0°.09, h21^{km}±6^{km}, mb4.1/7, ML3.8(GUC), Error ellipse: s-maj=10.1km s-min=4.7km az=78.0*
*GUC **04** 23:38:52.7±0.8, 43°.13S×74°.22W, h26^{km}±5^{km}, ML3.9*
ISC 04 23:38:53.5±1.6**, 43°.10S**±0°.04×**74°.16W**±0°.09**, h28**^{km}±10^{km}**,**

n40,σ1^{s}19/49**,mb4.1**/5**,2D,Southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO07	**Milladeo Hill,**	**0.37**	**92**		**Pb**	**23 39 01.5**	**-0.2**
GO07				Sg	**Sb**	**23 39 07.3**	**0.0**
GO07	**Milladeo Hill,**	**0.37**	**92**	⇓*e*P	**Pb**	**23 39 01.5**	**-0.2**
GO07				*e*S	**Sb**	**23 39 07.7**	**+0.4**
GO07				IAML		23 39 13.8	
	comp=E,17µm,0.4s						
LL07	**Hotel Espejo d**	**0.57**	**62**		**Pb**	**23 39 05.1**	**+0.1**
LL07					**Sb**	**23 39 12.9**	**+0.2**
LL06	**Loncomilla**	**0.97**	**24**	*e*P	**Pb**	**23 39 11.3**	**-0.3**
LL06				*e*S	**Sn**	**23 39 24.9**	**+0.8**
LL06				IAML		23 39 26.9	
	comp=E,6µm,0.7s						
LL01	**San Ignacio de**	**1.48**	**61**		**Pb**	**23 39 19.5**	**-0.8**
LL01	**San Ignacio de**	**1.48**	**61**	*e*P	**Pn**	**23 39 18.9**	**+0.6**
LL01				*e*S	**Sb**	**23 39 38.7**	**+0.1**
LL02	**Futaleuf**	**1.70**	**94**		**Pn**	**23 39 21.9**	**+0.6**
LL02	**Futaleuf**	**1.70**	**94**	⇓*e*P	**Pn**	**23 39 22.0**	**+0.7**
LL02				*e*S	**Sb**	**23 39 44.5**	**-0.5**
AY01	**Puyuhuapi**	**1.72**	**141**		**Pn**	**23 39 21.6**	**+0.1**
AY01	**Puyuhuapi**	**1.72**	**141**	*e*P	**Pn**	**23 39 21.5**	**-0.1**
AY01				*e*S	**Sb**	**23 39 44.2**	**-1.3**
LL05	**Los Muermos**	**1.77**	**17**		**Pn**	**23 39 22.5**	**+0.2**
LL05	**Los Muermos**	**1.77**	**17**	*e*P	**Pn**	**23 39 22.5**	**+0.2**
LL05				IAML		23 39 55.6	
	comp=E,1µm,0.3s						
CUEV	**Cuervo**	**2.21**	**160**	*e*P	**Pn**	**23 39 28.7**	**+0.3**
CUEV				*e*S	**Sn**	**23 39 56.5**	**+1.6**
CUEV				IAML		23 40 04.3	
	comp=E,1µm,0.2s						
LL03	**Petrohue**	**2.36**	**34**		**Pn**	**23 39 30.9**	**+0.5**
LL03	**Petrohue**	**2.36**	**34**	*e*P	**Pn**	**23 39 31.2**	**+0.9**
LL03				IAML		23 40 06.0	
	comp=E,894nm,0.6s						
COYC	**Coyhaique**	**2.89**	**150**		**Pn**	**23 39 38.5**	**+0.8**
COYC	**Coyhaique**	**2.89**	**150**	*e*P	**Pn**	**23 39 38.5**	**+0.8**
COYC				IAML		23 40 23.8	
	comp=N,217nm,0.5s						
LR04	**Corral**	**3.26**	**10**		**Pn**	**23 39 44.5**	**+1.7**
LR04	**Corral**	**3.26**	**10**	*e*P	**Pn**	**23 39 44.7**	**+1.9**
LR04				IAML		23 40 37.8	
	comp=E,403nm,0.1s						
LR05	**Currie**	**3.29**	**30**		**Pn**	**23 39 44.2**	**+1.0**
LR05	**Currie**	**3.29**	**30**	*e*P	**Pn**	**23 39 44.5**	**+1.2**
LR05				IAML		23 40 34.0	
	comp=E,116nm,0.6s						
PLCA	**Paso Flores**	**3.59**	**50**	Pn	**Pn**	**23 39 47.7**	**+0.4**
	comp=E,1.3nm,0.3s,baz=226,slow=14,SNR=32						
PLCA				Pg	**Pb**	**23 39 55.7**	**-0.6**
	comp=E,2.2nm,0.3s,baz=210,slow=15,SNR=7.6						
PLCA				Lg	Lg	23 40 39.5	
	comp=E,2.1nm,0.3s,baz=274,slow=19,SNR=4.2						
PLCA				LR	LR	23 41 14.0	
	comp=E,95nm,19.2s,baz=248,slow=42						
	comp=E,9.8nm,0.6s						
PLCA	**Paso Flores**	**3.59**	**50**		**Pn**	**23 39 49.1**	**+1.8**
LR03	**Panguipulli**	**3.73**	**22**		**Pn**	**23 39 50.8**	**+1.7**
LR03	**Panguipulli**	**3.73**	**22**	*e*P	**Pn**	**23 39 52.9**	**+3.7**
BO02	**Sierra Bellavi**	**8.70**	**19**	Pn	**Pn**	**23 40 58.3**	**+0.7**
MT09	**Talagante**	**9.63**	**16**	Pn	**Pn**	**23 41 09.2**	**-1.3**
VA04	**Juan Fernndez**	**10.12**	**337**	Pn	**Pn**	**23 41 16.0**	**-1.0**
USHA	**Ushuaia**	**12.32**	**164**	Sn	**Sn**	**23 44 03.3**	**+0.1**
	comp=E,0.9nm,0.3s,baz=240,slow=18,SNR=2.1						
CO03	**El Pedregal**	**12.55**	**14**	Pn	**Pn**	**23 41 48.3**	**-1.9**
CO06	**Fray Jorge**	**12.56**	**10**	Pn	**Pn**	**23 41 48.4**	**-2.1**
AC02	**Maricunga**	**16.74**	**16**		**Pn**	**23 42 47.2**	**+0.8**
PLTB	**Pedras Altas**	**19.81**	**62**	P	**P**	**23 43 20.5**	**-1.3**
PLTB				IAmb	IAmb	23 43 29.6	
	comp=Z,19nm,1.4s						
PB03	**IPOC Station P**	**21.31**	**11**		**P**	**23 43 38.1**	**-0.1**
PB03				IAmb	IAmb	23 43 53.6	
	comp=Z,10nm,1.3s						
PB09	**IPOC Station P**	**21.64**	**12**	P	**P**	**23 43 41.0**	**-0.8**
PB09				IAmb	IAmb	23 43 47.1	
	comp=Z,18nm,1.4s						
CPUP	**Villa Florida**	**21.64**	**45**	P	**P**	**23 43 41.5**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=268,slow=11,SNR=14						
	comp=Z,1.8nm,0.7s						
CPUP	**Villa Florida**	**21.64**	**45**	P	**P**	**23 43 41.1**	**-0.5**
CPUP				IAmb	IAmb	23 43 43.6	
	comp=Z,1.5nm,0.8s						
PB16	**IPOC Station P**	**25.00**	**11**	P	**P**	**23 44 15.6**	**0.0**
PB16				IAmb	IAmb	23 44 22.3	
	comp=Z,6.9nm,1.2s						
LPAZ	**La Paz**	**27.21**	**13**	P	**P**	**23 44 38.8**	**+3.1**
	comp=Z,0.8nm,0.7s,baz=201,slow=8.6,SNR=4.2						
	comp=Z,0.8nm,0.7s						
DBIC	**Dimbokro**	**79.72**	**71**	P	**P**	**23 50 58.1**	**-0.8**

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*KEA **05** 00:02:24.9, 39°.37N×118°.17E, h16^{km}, ML4.4/1*

*IDC **05** 00:02:27.4±0.5, 39°.34N×118°.17E, h0^{km}, mb4.2/21, mbtmp4.2/26, ML4.3/5, MS3.9/53, Error ellipse: s-maj=15.9km s-min=11.6km az=48.0*

*MOS **05** 00:02:27.5±1.4, 39°.21N×118°.16E, h12^{km}, mb4.7/27, MS4.1/6, Error ellipse: s-maj=11.0km s-min=6.0km az=127.1*

*BJI **05** 00:02:28.4, 39°.31N×118°.04E, h10^{km}, mB4.9/4, mb4.3/36, ML4.7/24, Ms4.5/34, Ms7 4.4/31*

*NEIC **05** 00:02:29.7±1.0, 39°.33N±0°.06×117°.98E±0°.07, h10^{km}±1^{km}, mb4.6/51, Error ellipse: s-maj=11.0km s-min=8.9km az=202.0*

*BGR **05** 00:02:39.1, 39°.09N×116°.68E, h33^{km}, mb4.9, Ms4.3*

ISC 05 00:02:29.5±0.3**, 39°.29N**±0°.03×**118°.02E**±0°.02**, h10^{km}, n260, σ1^{s}99**/254**, mb4.6**/88**, MS3.9**/52**, 11C-10D, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJT	**Baijiatuau**	**1.60**	**298**		**Pn**	**00 02 56.6**	**-1.3**
BJT				Sn	**Sn**	**00 03 16.1**	**-2.4**
BJI	**Beijing**	**1.60**	**298**	Pg	**Pn**	**00 02 56.6**	**-1.3**
BJI				Sg	**Sn**	**00 03 16.8**	**-1.8**
BJI				smax	smax		
	comp=N,5µm,0.8s						
BJI				smax	smax		
	comp=E,3µm,0.7s						
DL2	**Dalian**	**2.84**	**97**	Pn	**Pn**	**00 03 14.9**	**0.0**
DL2				Pg	**Pb**	**00 03 19.1**	**-1.1**
DL2				Sn	**Sn**	**00 03 49.1**	**0.0**
DL2				Sg	**Sb**	**00 03 55.0**	**0.0**
DL2				smax	smax		
	comp=N,2µm,0.8s						
DL2				smax	smax		
	comp=E,760nm,0.8s						
TIA	**Tai'an**	**3.16**	**193**	Pn	**Pn**	**00 03 18.8**	**-0.5**
TIA				Pg	**Pb**	**00 03 27.1**	**+1.4**
TIA				Sg	**Sg**	**00 04 08.1**	**-2.8**
TIA				smax	smax		
	comp=N,1µm,0.9s						
TIA				smax	smax		
	comp=E,2µm,0.7s						
HNS	**HongShan**	**3.21**	**235**	⇓Pn	**Pn**	**00 03 19.6**	**-0.4**
HNS				Pg	**Pb**	**00 03 27.9**	**+1.2**
HNS				Sn	**Sn**	**00 03 58.2**	**-0.2**
HNS				Sg	**Sg**	**00 04 09.4**	**-3.4**
HNS				smax	smax		
	comp=N,22µm,0.6s						
HNS				smax	smax		
	comp=E,18µm,0.6s						
TIY	**Taiyuan**	**4.65**	**252**	Pn	**Pn**	**00 03 40.4**	**+0.5**
TIY				Pg	**Pb**	**00 03 52.9**	**+1.7**
TIY				Sg	**Sb**	**00 04 50.0**	**+2.6**
TIY				smax	smax		
	comp=N,2µm,0.8s						
TIY				smax	smax		
	comp=E,1µm,0.6s						
XLT	**XiLinHaoTe**	**4.83**	**343**	*e*Pn	**Pn**	**00 03 41.1**	**-1.2**
XLT				Pg	**Pb**	**00 03 57.2**	**+3.0**
XLT				Sg	**Sb**	**00 04 56.7**	**+4.4**
XLT				smax	smax		
	comp=E,1µm,0.9s						
SNY	**Shenyang**	**4.94**	**57**	Pn	**Pn**	**00 03 43.8**	**+0.1**
SNY				⇑Pg	**Pb**	**00 03 59.6**	**+3.6**
SNY				Sn	**Sn**	**00 04 37.2**	**-3.6**
SNY				Sg	**Sg**	**00 05 04.2**	**-3.8**
SNY				smax	smax		
	comp=N,730nm,0.8s						
SNY				smax	smax		
	comp=E,510nm,0.9s						
HHC	**Hu-ho-hao-te**	**5.19**	**289**	*e*Pn	**Pn**	**00 03 49.9**	**+2.6**
HHC				Pg	**Pb**	**00 04 01.1**	**+0.7**
HHC				Sn	**Sb**	**00 04 58.2**	**-4.6**
HHC				Sg	**Sg**	**00 05 09.3**	**-6.7**
HHC				smax	smax		
	comp=N,540nm,0.5s						
HHC				smax	smax		
	comp=E,650nm,0.9s						
PYS	**Pyongsong**	**6.08**	**88**	Sg	**Sg**	**00 05 43.4**	**-1.4**
PYS				AML	AML		
	comp=N,458nm,0.8s						
PYS				AML	AML		
	comp=E,484nm,1.4s						
PYS				AML	AML		
	comp=Z,150nm,0.7s						
BTO	**Baotou**	**6.28**	**285**	*e*Pg	Pn	00 04 09.8	+7.5
BTO				Sg	**Sn**	**00 05 20.4**	**+6.2**
BTO				smax	smax		
	comp=N,1µm,0.5s						
BTO				smax	smax		
	comp=E,450nm,0.6s						
LYN	**LuoYang**	**6.49**	**225**	Pn	**Pn**	**00 04 08.9**	**+3.8**
LYN				Sn	**Sn**	**00 05 19.3**	**+0.1**
LYN				smax	smax		
	comp=E,120nm,0.8s						
LYN				smax	smax		
	comp=E,180nm,0.9s						
LYN				LR	LR		
	comp=E,1µm,5.3s						
LYN				LR	LR		
	comp=E,2µm,9.6s						
CN2	**Changchun**	**7.17**	**49**	Pg	Pb	00 04 39.4	+5.4
CN2				Sg	**Sg**	**00 06 13.5**	**-5.9**
CN2				smax	smax		
	comp=E,300nm,1.0s						
CN2				smax	smax		
	comp=E,500nm,1.0s						
NJ2	**Nanjing**	**7.26**	**174**	*e*Pn	**Pn**	**00 04 16.6**	**+1.0**
NJ2				smax	smax		
	comp=E,260nm,0.9s						
NJ2				smax	smax		
	comp=E,350nm,1.3s						
NJ2				LR	LR		
	comp=E,880nm,6.2s						
NJ2				LR	LR		
	comp=E,1µm,8.5s						
NJ2				LR	LR		
	comp=E,2µm,13.3s						
KS19	**Wonju Array Si**	**7.94**	**100**		**Pn**	**00 04 25.7**	**+0.7**
KSAR	**Wonju Array Be**	**7.97**	**100**		**Pn**	**00 04 25.4**	**0.0**
KSAR	**Wonju Array Be**	**7.97**	**100**	P	**Pn**	**00 04 25.4**	**0.0**
KSRS	**Korea Array**	**8.00**	**100**	Pn	**Pn**	**00 04 24.8**	**-0.9**
	comp=E,4.5nm,0.3s,baz=286,slow=14,SNR=30						
KSRS				Sn	**Sn**	**00 05 53.2**	**-3.0**
	comp=E,1.3nm,0.3s,baz=286,slow=24,SNR=4.8						
KSRS				Lg	Lg	00 06 38.7	
	comp=E,1.5nm,0.3s,baz=291,slow=29,SNR=6.3						
	comp=E,12nm,0.3s						
SSE	**Sheshan**	**8.58**	**161**	P	**Pn**	**00 04 34.5**	**+0.8**
SSE				S	**Sn**	**00 06 11.5**	**+0.9**
SSE				pmax	pmax		
	comp=E,11nm,0.5s						
SSE				pmax	pmax		
	comp=E,180nm,4.5s						
SSE				LR	LR		
	comp=E,870nm,13.6s						
SSE				LR	LR		
	comp=E,430nm,13.7s						
XAN	**Xi'an**	**8.99**	**237**	Pn	Pn	00 04 47.3	+7.9
XAN				Pg	**Pg**	**00 05 20.1**	**-1.5**
XAN				Sn	Sn	00 06 33.7	+13
XAN				Sg	**Sg**	**00 07 17.8**	**-0.1**
XAN				smax	smax		
	comp=N,140nm,1.0s						
XAN				smax	smax		
	comp=E,130nm,1.2s						
XAN				LR	LR		
	comp=N,2µm,7.0s						
XAN				LR	LR		
	comp=E,2µm,7.2s						
XAN				LR	LR		
	comp=Z,2µm,8.4s						
WHN	**Wuhan**	**9.23**	**200**	*e*P	**Pn**	**00 04 44.5**	**+1.8**
WHN				S	**Sn**	**00 06 28.0**	**+1.4**
WHN				LR	LR		
	comp=Z,5µm,12.2s						
WHN				LR	LR		
	comp=Z,3µm,8.5s						
BNX	**BinXian**	**9.46**	**44**	⇑P	**Pn**	**00 04 46.2**	**+0.4**
HIA	**Hailar**	**10.05**	**6**		**Pn**	**00 04 53.3**	**-0.5**
HIA	**Hailar**	**10.05**	**6**	*ce*P	**Pn**	**00 04 53.7**	**-0.2**
HILR	**Hailar Array B**	**10.34**	**6**	Pn	**Pn**	**00 04 57.1**	**-0.7**
	baz=191,slow=13						
HILR				Sn	**Sn**	**00 06 52.2**	**-1.5**
	baz=184,slow=20						
HILR				Lg	Lg	00 07 55.1	
	baz=182,slow=30						
HILR				LR	LR	00 09 25.8	
	comp=Z,777nm,18.2s,baz=105,slow=41						
	comp=Z,7.3nm,0.4s						
USRK	**Ussuriysk Ar.**	**11.53**	**60**	Pn	**Pn**	**00 05 10.3**	**-3.8**
	comp=Z,0.3nm,0.3s,baz=244,slow=18,SNR=2.5						
USRK				Sn	**Sn**	**00 07 22.7**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=262,slow=31,SNR=5.3						
USRK				Lg	Lg	00 08 38.3	
	comp=Z,0.9nm,0.3s,baz=251,slow=30,SNR=8.6						
	comp=Z,1.7nm,0.6s						
LZH	**Lanzhou**	**11.67**	**259**	*e*P	Pn	00 05 21.8	+5.5
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
LZH				LR	LR		
	comp=Z,2µm,11.7s						
LZH				LR	LR		
	comp=Z,2µm,11.7s						
ULN	**Ulaanbaatar**	**11.68**	**321**		**Pn**	**00 05 14.4**	**-1.9**
ULN	**Ulaanbaatar**	**11.68**	**321**	⇑*e*P	**Pn**	**00 05 14.7**	**-1.6**
LZDM	**Lanzhou Array**	**11.83**	**258**	Pn	**Pn**	**00 05 18.8**	**+0.2**
	baz=75,slow=13						
LZDM				Lg	Lg	00 08 38.8	
	baz=61,slow=30						
	comp=Z,1.0nm,0.3s						
SONM	**Songino Array**	**11.98**	**319**	Pn	**Pn**	**00 05 18.8**	**-1.7**
	comp=Z,3.7nm,0.3s,baz=131,slow=14,SNR=51						
SONM				Sn	Sn	00 07 24.6	-10
	comp=Z,1.1nm,0.3s,baz=132,slow=23,SNR=5.7						
SONM				Lg	Lg	00 08 44.2	
	comp=Z,2.3nm,0.3s,baz=130,slow=29,SNR=4.5						
SONM				LR	LR	00 10 34.1	
	comp=Z,765nm,18.3s,baz=136,slow=40						
	comp=Z,9.4nm,0.5s						
JNU	**Nakatsue**	**12.07**	**117**	LR	LR	00 10 26.2	
	comp=Z,243nm,18.6s,baz=308,slow=40						
HEH	**HeiHe**	**12.82**	**28**	*e*P	**Pn**	**00 05 34.0**	**+2.3**
HEH				S	**Sn**	**00 07 59.1**	**+4.7**
GTA	**Gaotai**	**14.09**	**276**	*e*P	**P**	**00 05 55.0**	**-2.0**
GTA				sP	Pn	00 06 03.7	+14
GTA				pmax	pmax		
	comp=Z,11nm,1.7s						
GTA				LR	LR		
	comp=Z,960nm,9.8s						
GTA				LR	LR		
	comp=Z,1µm,12.0s						
JOW	**Kunigami**	**15.10**	**142**	LR	LR	00 12 26.3	
	comp=Z,278nm,18.5s,baz=319,slow=40						
ZEA	**Zeya**	**15.76**	**21**	*e*P	**Pn**	**00 06 11.9**	**+0.4**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=N,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.7s						
ZEA				MLR	MLR		
	comp=Z,1µm,9.0s						
JGF	**Kuroka**	**15.80**	**97**		**P**	**00 06 14.6**	**-1.3**
JGF				IAmb	IAmb	00 06 20.1	
	comp=Z,78nm,1.3s						
TLY	**Talaya**	**15.93**	**326**	Pn	**Pn**	**00 06 13.3**	**-0.3**
IRK	**Irkutsk**	**16.08**	**328**	*e*P	**P**	**00 06 18.9**	**0.0**
IRK				pmax	pmax		
	comp=Z,82nm,1.7s						
MJB9	**Matsu-Tunnel**	**16.17**	**93**	P	**P**	**00 06 19.8**	**-0.2**
MAJO	**Matsushiro**	**16.17**	**93**	⇑*e*P	**P**	**00 06 23.1**	**+3.1**
MJAR	**Matsushiro Arr**	**16.17**	**93**	Pn	**P**	**00 06 23.2**	**+3.2**
	comp=Z,0.1nm,0.3s,baz=286,slow=9.3,SNR=22						
MJAR				LR	LR	00 11 21.9	
	comp=Z,69nm,21.3s,baz=301,slow=33						
MJAR	**Matsushiro Arr**	**16.17**	**93**		**P**	**00 06 20.0**	**-0.1**
MJAR	**Matsushiro Arr**	**16.17**	**93**	P	**P**	**00 06 20.0**	**-0.1**
MJAR				pmax	pmax		
	comp=Z,18nm,1.1s						
MOY	**Mondy**	**17.14**	**322**	*e*P	**P**	**00 06 30.8**	**0.0**
MOY				pmax	pmax		
	comp=Z,36nm,1.7s						
KNGR	**Kungurtug, Tuv**	**18.33**	**315**	*i* P	**P**	**00 06 44.8**	**+0.9**
KNGR				pmax	pmax		
	comp=Z,12nm,0.9s						
GOMU	**GeErMu**	**18.60**	**268**	P	**P**	**00 06 46.4**	**-0.8**
GOMU				pmax	pmax		
	comp=Z,11nm,1.1s						
GOMU				LR	LR		
	comp=Z,380nm,8.7s						
GOMU				LR	LR		
	comp=Z,660nm,11.7s						
GOMU				LR	LR		
	comp=Z,840nm,11.2s						
PZH	**PanZhiHua**	**18.65**	**232**	P	**Pn**	**00 06 48.8**	**+0.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ASAJ	**Asahikawa**	**18.95**	**67**	LR	LR	00 14 58.9	
	comp=Z,28nm,20.7s,baz=138,slow=40						
KMI	**Kunming**	**19.11**	**227**	P	**Pn**	**00 06 55.8**	**+2.2**
KMI				pmax	pmax		
	comp=Z,14nm,1.2s						
KMI				LR	LR		
	comp=Z,520nm,11.0s						
KMI				LR	LR		
	comp=Z,610nm,9.5s						
KMI				LR	LR		
	comp=Z,710nm,11.9s						
YSS	**Yuzhno-Sakhali**	**19.56**	**59**	*e*P	**Pn**	**00 07 01.5**	**+2.9**
YSS				*e*S	**Sn**	**00 10 40.2**	**+2.2**
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
YSS				MLR	MLR		
	comp=Z,2µm,17.0s						
QIZ	**Qiongzhong**	**21.40**	**202**	P	**P**	**00 07 17.0**	**-0.4**
QIZ				S	**S**	**00 11 15.9**	**+1.0**
QIZ				LR	LR		
	comp=Z,670nm,13.6s						
QIZ				LR	LR		
	comp=Z,1µm,10.5s						
QIZ				LR	LR		
	comp=Z,1µm,8.7s						
WMQ	**Urumqi**	**23.07**	**291**	*e*P	**P**	**00 07 35.7**	**+0.6**
WMQ				sP	sP	00 07 43.5	+4.2
WMQ				PP	**PnPn**	**00 08 05.8**	**+5.8**
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
YAK	**Yakutsk**	**23.86**	**14**	LR	LR	00 17 44.0	
	comp=Z,338nm,18.9s,baz=216,slow=38						
YAK	**Yakutsk**	**23.86**	**14**	P	**P**	**00 07 42.5**	**-0.2**
YAK				IAmb	IAmb	00 07 44.7	
	comp=Z,23nm,0.8s						
YAK	**Yakutsk**	**23.86**	**14**	*e*P	**P**	**00 07 42.2**	**-0.5**
YAK				pmax	pmax		
	comp=Z,12nm,0.9s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.0s						
YAK				MLR	MLR		
	comp=Z,261nm,14.0s						
LSA	**Lhasa**	**24.05**	**255**		**P**	**00 07 45.3**	**0.0**
LSA				IAmb	IAmb	00 07 51.9	
	comp=Z,13nm,0.9s						
LSA	**Lhasa**	**24.05**	**255**	P	**P**	**00 07 42.6**	**-2.7**
LSA	**Lhasa**	**24.05**	**255**	P	**P**	**00 07 45.3**	**0.0**
LSA				pmax	pmax		
	comp=Z,13nm,0.9s						
CMAR	**Chiang Mai Arr**	**26.54**	**224**	P	**P**	**00 08 08.0**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=31,slow=8.0,SNR=6.1						
CMAR				LR	LR	00 19 38.0	
	comp=Z,179nm,18.9s,baz=80,slow=39						
	comp=Z,1.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**26.54**	**224**	P	**P**	**00 08 08.0**	**+0.5**
ZAA0	**Zalesovo Array**	**26.80**	**314**		**P**	**00 08 08.3**	**-1.2**
ZALV	**Zalesovo Beam**	**26.80**	**314**	P	**P**	**00 08 09.5**	**0.0**
	comp=Z,3.3nm,0.9s,baz=111,slow=8.3,SNR=12						
ZALV				LR	LR	00 19 17.4	
	comp=Z,251nm,19.0s,baz=112,slow=38						
	comp=Z,3.3nm,0.9s						
ZALV	**Zalesovo Beam**	**26.80**	**314**	P	**P**	**00 08 08.6**	**-0.9**
ZALV	**Zalesovo Beam**	**26.80**	**314**	*i* P	**P**	**00 08 12.6**	**+3.0**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MKAR	**Makanchi Array**	**26.98**	**298**	P	**P**	**00 08 12.2**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=94,slow=9.8,SNR=6.5						
MKAR				PcP	**PcP**	**00 11 32.2**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=105,slow=0.6,SNR=7.0						
MKAR				LR	LR	00 19 25.7	
	comp=Z,250nm,20.2s,baz=92,slow=38						
	comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**26.98**	**298**		**P**	**00 08 11.2**	**-0.1**
MKAR	**Makanchi Array**	**26.98**	**298**	*ce*P	**P**	**00 08 15.8**	**+4.4**
MKAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
EVN	**Everest**	**28.20**	**256**		**P**	**00 08 22.7**	**-0.4**
EVN				IAmb	IAmb	00 08 29.7	
	comp=Z,4.8nm,0.8s						
MA2	**Magadan**	**28.95**	**35**	LR	LR	00 21 51.1	
	comp=Z,500nm,20.0s,baz=269,slow=40						
WUS	**Wushi**	**29.51**	**286**	P	**P**	**00 08 34.0**	**-0.1**
WUS				IAmb	IAmb	00 08 44.7	
	comp=Z,7.2nm,1.2s						
KURK	**Kurchatov**	**29.76**	**306**		**P**	**00 08 36.1**	**+0.2**
KURK				IAmb	IAmb	00 08 41.2	
	comp=Z,11nm,1.4s						
KURK	**Kurchatov**	**29.76**	**306**	⇓*e*P	**P**	**00 08 36.7**	**+0.7**
KURK				pmax	pmax		
	comp=Z,21nm,3.3s						
KURBB	**Kurchatov Arra**	**29.81**	**305**	P	**P**	**00 08 36.5**	**+0.1**
	comp=Z,3.1nm,0.9s,baz=96,slow=9.3,SNR=14						
KURBB				PcP	**PcP**	**00 11 39.5**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=101,slow=2.3,SNR=9.7						
	comp=Z,3.1nm,0.9s						
TARG	**Taragay, Kyrgy**	**30.48**	**288**		**P**	**00 08 42.4**	**-0.5**
TARG				IAmb	IAmb	00 08 49.3	
	comp=Z,4.7nm,0.9s						
TARG	**Taragay, Kyrgy**	**30.48**	**288**	P	**P**	**00 08 42.4**	**-0.5**
TARG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SEY	**Seymchan**	**31.36**	**30**	LR	LR	00 21 43.3	
	comp=Z,147nm,20.5s,baz=272,slow=37						
KSH	**Kashi**	**32.27**	**284**	P	P	00 09 03.6	+5.2
KSH				pP	sP	00 09 06.8	+4.1
KSH				pmax	pmax		
	comp=Z,3.0nm,1.1s						
AAK	**Ala-Archa**	**32.76**	**290**	LR	LR	00 23 37.5	
	comp=Z,82nm,21.6s,baz=46,slow=39						
AAK	**Ala-Archa**	**32.76**	**290**		**P**	**00 09 01.9**	**-0.8**
AAK	**Ala-Archa**	**32.76**	**290**	⇓*e*P	**P**	**00 09 03.3**	**+0.5**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DAV	**Davao City (W)**	**32.80**	**166**	LR	LR	00 22 38.2	
	comp=Z,130nm,19.5s,baz=354,slow=37						
TIXI	**Tiksi**	**32.90**	**6**	LR	LR	00 24 10.4	
	comp=Z,238nm,20.7s,baz=196,slow=40						
TIXI	**Tiksi**	**32.90**	**6**	⇓*e*P	**P**	**00 09 04.1**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,71nm,6.7s						
ARLS	**Aral**	**33.02**	**289**	P	**P**	**00 09 07.1**	**+2.1**
ARSB	**Arslanbob**	**34.11**	**288**		**P**	**00 09 13.4**	**-1.1**
ARSB				IAmb	IAmb	00 09 20.4	
	comp=Z,6.1nm,1.0s						
ARSB	**Arslanbob**	**34.11**	**288**	P	**P**	**00 09 13.4**	**-1.1**
ARSB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NRIK	**Noril'sk**	**34.20**	**341**	P	**P**	**00 09 14.8**	**0.0**
	comp=Z,8.0nm,0.8s,baz=111,slow=10,SNR=11						
NRIK				LR	LR	00 24 20.0	
	comp=Z,357nm,18.9s,baz=144,slow=38						
	comp=Z,8.0nm,0.8s						
NRIK	**Noril'sk**	**34.20**	**341**	P	**P**	**00 09 14.4**	**-0.4**
NRIK	**Noril'sk**	**34.20**	**341**	⇑*e*P	**P**	**00 09 15.3**	**+0.6**
NRIK				pmax	pmax		
	comp=Z,37nm,3.7s						
ARK	**Arkit**	**34.77**	**289**	P	**P**	**00 09 22.0**	**+1.9**
BVAR	**Borovoye Array**	**35.06**	**309**	P	**P**	**00 09 22.9**	**+0.5**
	comp=Z,3.2nm,0.8s,baz=97,slow=9.8,SNR=10						
BVAR				PcP	**PcP**	**00 11 54.1**	**+0.1**
	comp=Z,2.3nm,0.8s,baz=119,slow=3.8,SNR=5.7						
BVAR				LR	LR	00 24 45.5	

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             comp=Z,412nm,18.3s,baz=93,slow=38
             comp=Z,3.2nm,0.8s
BORK  Borovoye          35.10 309          P        00 09 22.1 -0.7
BORK  Borovoye          35.10 309⇓eP       P        00 09 24.0 +1.3
BORK                              pmax     pmax
             comp=Z,4.0nm,0.8s
TRKS  Terek-Say         35.42 289  P       P        00 09 26.6 +0.7
KK31  Karatay Array     35.57 292  P       P        00 09 26.2 -0.7
KK31                               IAmb    IAmb     00 09 32.2
             comp=Z,10.0nm,1.1s
KK31  Karatay Array     35.57 292  P       P        00 09 26.2 -0.7
KK31                               pmax    pmax
             comp=Z,10.0nm,1.1s
KKAR  Karatay Array     35.57 292          P        00 09 26.6 -0.3
KKAR  Karatay Array     35.57 292  P       P        00 09 26.6 -0.3
MANEM Manem             36.04 282  P       P        00 09 30.6 -0.8
MANEM                              IAmb    IAmb     00 09 37.0
             comp=Z,7.0nm,0.9s
NIL   Nilore            36.15 275  P       P        00 09 31.4 -0.6
NIL   Nilore            36.15 275  P       P        00 09 31.4 -0.6
NIL                                pmax    pmax
             comp=Z,16nm,1.0s
GAR   Garm              36.65 285          P        00 09 35.4 -1.0
GAR                                IAmb    IAmb     00 09 41.2
             comp=Z,13nm,1.0s
CHGR  Chuyangaron       37.62 285          P        00 09 44.1 -0.4
CHGR  Chuyangaron       37.62 285  P       P        00 09 44.1 -0.4
CHGR                               pmax    pmax
             comp=Z,37nm,0.9s
SHAA  Shahritus         38.72 284          P        00 09 53.1 -0.7
SHAA                               IAmb    IAmb     00 09 59.5
             comp=Z,18nm,0.9s
KBL   Kabul             39.06 279  P       P        00 09 55.9 -1.0
KBL   Kabul             39.06 279  P       P        00 09 55.9 -1.0
KBL                                pmax    pmax
             comp=Z,7.0nm,1.2s
SHEM  Shemya Is, Ala    40.18  51  LR      LR       00 27 03.5
             comp=Z,107nm,19.6s,baz=286,slow=37
PSI   Prapat            40.26 210  LR      LR       00 28 09.5
             comp=Z,220nm,18.1s,baz=356,slow=38
SVE   Sverdlovsk        40.81 315 eP       P        00 10 14.4 +3.5
SVE                                pmax    pmax
             comp=Z,9.0nm,1.2s
AB31  Akbulak array     41.81 303          P        00 10 19.0 -0.1
ABKAR Akbulak array     41.81 303  P       P        00 10 19.1 -0.1
ARTI  Arti              42.06 314  LR      LR       00 27 38.7
             comp=Z,153nm,18.2s,baz=86,slow=36
ARTI  Arti              42.06 314  P       P        00 10 21.2  0.0
ARTI                               IAmb    IAmb     00 10 25.6
             comp=Z,14nm,1.3s
ARTI  Arti              42.06 314c iP      P        00 10 22.2 +1.1
ARTI                               S       S        00 16 39.7 -0.5
ARTI                               SS      SS       00 19 41.6 -5.5
ARTI                               pmax    pmax
             comp=Z,9.0nm,1.1s
AKTO  Aktyubinsk        42.86 305  LR      LR       00 29 17.7
             comp=Z,365nm,18.3s,baz=43,slow=38
KAPI  Kappang           44.11 178  LR      LR       00 30 54.5
             comp=Z,45nm,18.7s,baz=334,slow=39
HRA   Herat             44.31 282          P        00 10 39.2 -0.7
PALK  Pallekele         46.24 236  LR      LR       00 32 26.2
             comp=Z,70nm,18.9s,baz=52,slow=39
KIRV  Kirov             46.72 318  LR      LR       00 32 40.0
             comp=Z,261nm,21.1s,baz=81,slow=39
KIRV  Kirov             46.72 318⇓eP       P        00 11 01.4 +3.1
BELG  Belogornoye       48.85 310  LR      LR       00 34 46.7
             comp=Z,1μm,20.6s,baz=96,slow=40
BELG  Belogornoye       48.85 310⇓eP       P        00 11 16.9 +2.0
BELG                               pmax    pmax
             comp=Z,3.0nm,1.0s
BATI  Baumata           49.52 173  LR      LR       00 35 19.4
             comp=Z,84nm,18.0s,baz=308,slow=40
C18K  Utukok River      50.77  28  P       P        00 11 30.0 +0.5
C18K                               IAmb    IAmb     00 11 49.9
             comp=Z,16nm,1.4s
KLMR  Klimovskoe        51.26 322 eP       P        00 11 31.9 -1.2
KLMR                               pmax    pmax
             comp=Z,16nm,1.3s
H19K  Roundabout Mou    53.23  31  P       P        00 11 47.3 -0.4
H19K                               IAmb    IAmb     00 11 55.7
             comp=Z,9.9nm,1.1s
MTN   Manton Dam        53.29 164          P        00 11 47.5 -1.2
MTN                                IAmb    IAmb     00 11 48.9
             comp=Z,16nm,1.3s
MOS   Moscow            53.60 316 eP       P        00 11 53.1 +2.6
MOS                                pmax    pmax
             comp=Z,30nm,0.9s
IMAR  Indian Mountai    54.18  30  P       P        00 11 54.9 +0.2
SPITS Spitsbergen Ar    54.20 346  LR      LR       00 38 33.2
             comp=Z,147nm,18.1s,baz=64,slow=40
E22K  Anaktuvuk Pass    54.27  27  P       P        00 11 55.3  0.0
E22K                               IAmb    IAmb     00 12 07.1
             comp=Z,3.6nm,0.9s
OBN   Obninsk           54.37 316⇑eP       P        00 11 58.9 +2.8
OBN                               e                 00 12 59.8
OBN                               e                 00 13 58.0
OBN                                pmax    pmax
             comp=Z,39nm,2.5s
OBN                                MLR     MLR
             comp=Z,177nm,15.0s
KBZ   Khabaz            54.62 301  P       P        00 11 58.8 +0.6
             comp=Z,3.5nm,0.8s,baz=90,slow=6.1,SNR=4.8
             comp=Z,3.5nm,0.8s
KBZ   Khabaz            54.62 301⇓eP       P        00 11 58.6 +0.4
KBZ                                pmax    pmax
             comp=Z,5.0nm,0.9s
ARCES ARCESS Array B    54.66 334  LR      LR       00 37 51.9
             comp=Z,104nm,20.6s,baz=97,slow=39
KIV   Kislovodsk        54.67 301          P        00 11 58.5 -0.2
KIV   Kislovodsk        54.67 301 eP       P        00 11 59.8 +1.1
KIV                                pmax    pmax
             comp=Z,21nm,1.0s
KIV                                MLR     MLR
             comp=Z,64nm,17.0s
COLA  College           56.88  31⇑eP       P        00 12 15.3 +1.3
COLA                               pmax    pmax
             comp=Z,6.0nm,0.8s
FINES FINESS Array B    57.28 325  P       P        00 12 15.8 -1.1
             comp=Z,1.8nm,0.5s,baz=72,slow=6.2,SNR=16
FINES                              LR      LR       00 41 11.7
             comp=Z,178nm,18.8s,baz=126,slow=41
             comp=Z,1.8nm,0.5s
ILAR  Eielson Array     57.30  30  LR      LR       00 39 37.0
             comp=Z,68nm,18.7s,baz=288,slow=39
GURO  Guroymak-BITLI    57.40 295          P        00 12 17.9 -0.5
KDAK  Kodiak Island     57.52  39  LR      LR       00 38 07.1
             comp=Z,73nm,20.8s,baz=302,slow=37
FITZ  Fitzroy Crossi    57.53 171  P       P        00 12 18.7 -0.4
H27K  Steamboat Moun    58.70  28  P       P        00 12 27.6 +0.6
H27K                               IAmb    IAmb     00 12 35.1
             comp=Z,5.2nm,1.1s
MARD  Mardin            58.84 295  P       P        00 12 28.0 -0.5
MNK   Minsk             59.25 317 i P      P        00 12 30.4 -0.4
MNK                               i                 00 13 18.6
MNK                               i                 00 14 41.1
MNK                               i S      S        00 20 38.7 +0.1
MNK                               i                 00 22 20.5
MNK                               i SS     SS       00 24 34.4 +2.0
MNK                                pmax    pmax
             comp=E,18nm,1.1s
MNK                                pmax    pmax
             comp=Z,13nm,1.1s
MNK                                pmax    pmax
             comp=N,16nm,1.1s
MNK                                MLR     MLR
             comp=Z,102nm,12.0s
MNK                                MLR     MLR
             comp=N,190nm,17.0s
MNK                                MLR     MLR
             comp=E,61nm,8.0s
AKASG Malin Array Be    60.19 313  P       P        00 12 36.6 -0.7
             comp=E,2.8nm,0.7s,baz=51,slow=7.1,SNR=9.7
AKASG                              LR      LR       00 40 08.6
             comp=E,237nm,19.4s,baz=58,slow=38
             comp=E,2.8nm,0.7s
AKASG Malin Array Be    60.19 313  IAmb    IAmb     00 12 42.2
             comp=Z,6.9nm,1.3s
AKASG Malin Array Be    60.19 313 i P      P        00 12 40.2 +2.9
AKASG                              pmax    pmax
             comp=Z,4.0nm,0.8s
AKBB  Malin Array Si    60.19 313⇑eP       P        00 12 36.8 -0.5
AKBB                               pmax    pmax
             comp=Z,41nm,3.3s
AK01  Malin Array Si    60.20 313  P       P        00 12 37.0 -0.4
AK01                               pP      pP       00 12 40.2 -0.4
AK04  Malin Array Si    60.21 313  P       P        00 12 36.7 -0.8
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AK22  Malin Array Si    60.25 313  P       P        00 12 36.7 -1.0
AK22                               pP      pP       00 12 40.8 -0.1
AK21  Malin Array Si    60.26 313  P       P        00 12 37.2 -0.6
AK07  Malin Array Si    60.26 313  P       P        00 12 37.3 -0.6
AK18  Malin Array Si    60.27 313  P       P        00 12 37.0 -0.9
AK16  Malin Array Si    60.27 313  P       P        00 12 37.0 -0.9
AK20  Malin Array Si    60.29 313  P       P        00 12 36.8 -1.2
AK19  Malin Array Si    60.30 313  P       P        00 12 36.9 -1.2
INK   Inuvik            60.38  24  LR      LR       00 40 57.1
             comp=Z,84nm,18.7s,baz=8.0,slow=38
WRA   Warramunga Arr    60.87 162  P       P        00 12 41.7 -0.6
             comp=Z,4.1nm,0.9s,baz=350,slow=7.5,SNR=21
             comp=Z,4.1nm,0.9s
WRA   Warramunga Arr    60.87 162  IAmb    IAmb     00 12 43.1
             comp=Z,0.8nm,1.2s
WRA   Warramunga Arr    60.87 162  P       P        00 12 41.7 -0.6
WRA                                pmax    pmax
             comp=Z,1.0nm,1.2s
WR8   Warramunga Arr    60.92 162          P        00 12 42.0 -0.7
WR8                                IAmb    IAmb     00 12 43.3
             comp=Z,8.3nm,1.0s
NE56  Odesa             61.03 308  P       P        00 12 43.1 -0.1
I30M  Mount Dempster    61.05  28          P        00 12 43.7 +0.5
I30M                               IAmb    IAmb     00 12 50.2
             comp=Z,5.7nm,1.1s
LUBAR Lubar, Ukraine    61.38 313  P       P        00 12 45.1 -0.4
RNPP9 Sopachiv          61.73 315  P       P        00 12 48.0 +0.2
RNPP8 Varash            61.78 315  P       P        00 12 48.2 +0.1
HORU  Horodok           62.48 312  P       P        00 12 51.7 -1.2
BR131 Keskin Array S    62.60 300          P        00 12 53.5 -0.6
BR131                              IAmb    IAmb     00 12 58.6
             comp=Z,6.1nm,0.9s
BR131 Keskin Array S    62.60 300⇓eP       P        00 12 54.7 +0.6
BRTR  Keskin Array B    62.60 300  P       P        00 12 53.5 -0.6
             comp=Z,3.7nm,0.9s,baz=66,slow=5.1,SNR=11
BRTR                               LR      LR       00 42 24.2
             comp=Z,47nm,18.7s,baz=60,slow=38
             comp=Z,3.7nm,0.9s
BRTR  Keskin Array B    62.60 300  P       P        00 12 53.6 -0.4
BRTR  Keskin Array B    62.60 300 i P      P        00 12 57.7 +3.6
BRTR                               pmax    pmax
             comp=Z,4.0nm,0.9s
BR104 Keskin Array S    62.61 300  P       P        00 12 53.9 -0.2
HFS   Hagfors           63.26 327  P       P        00 12 56.9 -1.0
             comp=Z,1.8nm,0.6s,baz=84,slow=7.6,SNR=7.4
HFS                                LR      LR       00 42 54.4
             comp=Z,404nm,18.7s,baz=28,slow=38
             comp=Z,1.8nm,0.6s
NB201 NORSAR Array S    63.74 329  P       P        00 13 00.7 -0.4
NB2   NORSAR Subarra    63.78 329  P       P        00 13 00.9 -0.5
             comp=Z,3.6nm,0.8s,baz=56,slow=6.9
NOA   NORSAR Array B    63.78 329  P       P        00 13 01.3  0.0
             comp=Z,0.8nm,0.5s,baz=56,slow=6.7,SNR=3.3
NOA                                LR      LR       00 43 07.4
             comp=Z,159nm,18.7s,baz=40,slow=38
             comp=Z,0.8nm,0.5s
BUR08 Bucovina Ar. S    63.97 311          P        00 13 03.1 +0.2
BURAR Bucovina Array    63.97 311  P       P        00 13 02.6 -0.4
BURAR                              IAmb    IAmb     00 13 07.6
             comp=Z,5.4nm,0.9s
RES   Resolute Bay      64.22   9  LR      LR       00 42 09.5
             comp=Z,48nm,20.8s,baz=7.0,slow=37
AS31  Alice Springs     64.37 164          P        00 13 05.1 -0.4
ASAR  Alice Springs     64.37 164  P       P        00 13 05.3 -0.2
             comp=Z,3.6nm,0.9s,baz=350,slow=5.9,SNR=28
ASAR                               LR      LR       00 44 39.2
             comp=Z,18nm,18.3s,baz=2.5,slow=39
             comp=Z,3.6nm,0.9s
ASAR  Alice Springs     64.37 164          P        00 13 05.0 -0.6
MMAI  Mount Meron Ar    64.79 293  P       P        00 13 09.1 +0.5
             comp=Z,2.8nm,0.8s,baz=32,slow=5.6,SNR=3.7
MMAI                               LR      LR       00 44 56.1
             comp=Z,33nm,18.3s,baz=14,slow=39
             comp=Z,2.8nm,0.8s
STHS  Stebnicka Huta    65.30 314 eP       P        00 13 16.7 +5.2
STHS  Stebnicka Huta    65.30 314 eP       P        00 13 16.7 +5.2
OJC   Ojcow             65.66 316          P        00 13 13.7 -0.1
OJC   Ojcow             65.66 316  P       P        00 13 13.7 -0.1
KECS  Kecovo            66.22 314 eP       P        00 13 21.3 +3.9
KECS  Kecovo            66.22 314 eP       P        00 13 21.3 +3.9
EIL   Elat              66.91 290  LR      LR       00 46 55.7
             comp=Z,49nm,18.3s,baz=332,slow=40
MORC  Moravsky Berou    67.12 316 eP       P        00 13 26.7 +3.5
DLBC  Dease Lake        67.43  32  LR      LR       00 45 01.9
             comp=Z,120nm,18.3s,baz=275,slow=38
JAVC  Velka Javorina    67.57 315 eP       P        00 13 31.3 +5.2
VRAC  Vranov            67.89 316  LR      LR       00 44 53.4
             comp=Z,138nm,19.1s,baz=50,slow=38
VRAC  Vranov            67.89 316 eP       P        00 13 30.4 +2.3
KRUC  Moravsky          68.14 316 eP       P        00 13 33.1 +3.5
BSEG  Bad Segeberg      68.33 323 eP       P        00 13 35.1 +4.5
             comp=Z,6.4nm,1.1s,baz=53,slow=6.1
BRG   Berggiesshubel    68.38 319 eP       P        00 13 34.8 +3.7
             comp=Z,9.7nm,1.4s,baz=53,slow=6.1
GORT1 Trebel            68.43 321 eP       P        00 13 35.6 +4.4
             comp=Z,12nm,1.0s,baz=53,slow=6.1
CLL   Collm             68.60 319 i P      P        00 13 31.6 -0.8
CLL                                pmax    pmax
             comp=Z,11nm,1.3s
CLL   Collm             68.60 319 eP       P        00 13 36.0 +3.6
             comp=Z,9.0nm,1.2s,baz=53,slow=6.1
CLL   Collm             68.60 319 i P      P        00 13 31.6 -0.8
             comp=Z,11nm,1.3s
FLTG  Flechtingen       68.87 321 eP       P        00 13 37.7 +3.7
             comp=Z,28nm,1.5s,baz=53,slow=6.1
RONA  Rosalia, Austr    68.98 315 epP      P        00 13 39.3 +4.4
             comp=Z,17nm,1.6s
CONA  Conrad Observa    69.09 315 eP       P        00 13 36.7 +1.0
             comp=Z,12nm,1.0s
NEUB  Neuenburg         69.28 320 eP       P        00 13 40.4 +3.7
             comp=Z,12nm,0.8s,baz=53,slow=6.1
RETH  Rethem/Aller,     69.52 322 eP       P        00 13 42.1 +4.0
             comp=Z,21nm,1.6s,baz=53,slow=6.1
CLZ   Clausthal         69.59 321 eP       P        00 13 43.1 +4.5
             comp=Z,13nm,1.1s,baz=53,slow=6.1
KHC   Kasperske Hory    69.60 317⇓eP       P        00 13 39.5 +0.8
KHC                                pmax    pmax
             comp=Z,45nm,6.8s
ARSA  Arzberg           69.67 315 eP       P        00 13 40.7 +1.5
             comp=Z,4.0nm,1.1s
MOX   Moxa              69.70 319 eL       L        00 47 19.6
             comp=Z,258nm,20.6s
GERES GERESS Array B    69.71 317  P       P        00 13 39.2 -0.3
             comp=Z,0.6nm,0.7s,baz=58,slow=8.0,SNR=5.3
             comp=Z,0.6nm,0.7s
MANZ  Manzenberg        69.85 319 eP       P        00 13 44.0 +3.8
             comp=Z,13nm,2.5s,baz=53,slow=6.1
ROTZ  Rotzenmuhle       69.94 318 eP       P        00 13 44.8 +4.0
             comp=Z,2.5nm,1.4s,baz=53,slow=6.1
GTTG  Gottingen         69.97 321 eP       P        00 13 45.8 +4.9
             comp=Z,8.7nm,1.0s,baz=53,slow=6.1
MOA   Molln             70.00 316 eP       P        00 13 42.2 +1.0
             comp=Z,4.4nm,1.1s
YKA   Yellowknife Ar    70.13  23  P       P        00 13 40.3 -1.3
             comp=Z,1.4nm,0.6s,baz=319,slow=6.3,SNR=15
YKA                                LR      LR       00 47 26.5
             comp=Z,62nm,18.9s,baz=58,slow=38
             comp=Z,1.4nm,0.6s
YKA   Yellowknife Ar    70.13  23 i P      P        00 13 41.4 -0.3
YKA                                pmax    pmax
             comp=Z,2.0nm,0.7s
YKAW1 Yellowknife Wh    70.17  23  P       P        00 13 41.6 -0.3
YKAW1                              IAmb    IAmb     00 13 46.0
             comp=Z,4.1nm,0.8s
SOKA  Soboth            70.28 315 eP       P        00 13 44.6 +1.6
             comp=Z,10nm,1.8s
FORT  Forrest           70.34 171  P       P        00 13 43.0 -0.2
BIOA  Bad Ischl, Aus    70.44 316 eP       P        00 13 45.1 +1.2
             comp=Z,9.5nm,1.2s
GRF   Grafenberg Arr    70.49 319 eP       P        00 13 48.3 +4.2
             comp=Z,12nm,0.9s,baz=53,slow=6.1
GRF                               eL       L        00 47 12.1
             comp=Z,142nm,19.2s
OBKA  Obir              70.65 315 epP      P        00 13 49.6 +4.3
             comp=Z,7.3nm,1.2s
KBA   Koelnbreinsper    70.97 316 eP       P        00 13 48.2 +0.9
             comp=Z,7.9nm,1.0s
LESA  Schwarzleotal     71.12 316 eP       P        00 13 49.5 +1.4
             comp=Z,9.0nm,0.9s
FUR   Furstenfeldbru    71.40 317 eP       P        00 13 53.4 +3.7
             comp=Z,13nm,1.0s,baz=53,slow=6.1
BORG  Borgarnes         71.50 343  LR      LR       00 47 40.7
             comp=Z,91nm,18.0s,baz=37,slow=38
WTTA  Wattenberg        71.77 317 epP      P        00 13 55.9 +3.7
             comp=Z,12nm,1.4s
MOTA  Moosalm           72.00 317 epP      P        00 13 57.5 +3.9
             comp=Z,4.9nm,0.8s
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SQTA  Sankt Quirin      72.03 317 epP      P        00 13 57.8 +4.2
             comp=Z,5.7nm,1.2s
RETA  Reutte            72.10 317 eP       P        00 13 55.2 +1.2
             comp=Z,2.7nm,0.9s
FETA  Feichten          72.41 317 eP       P        00 13 56.8 +0.8
             comp=Z,10.0nm,1.3s
BFO   Black Forest      72.82 319 eP       P        00 14 01.9 +3.6
             comp=Z,25nm,1.7s,baz=53,slow=6.1
FUORN Ofenpass-Fuorn    72.91 317  P       P        00 13 58.5 -0.5
FUORN                              IAmb    IAmb     00 14 09.2
             comp=Z,12nm,1.2s
DAVOX Davos/Dischmat    73.01 317  LR      LR       00 49 41.2
             comp=Z,143nm,18.8s,baz=54,slow=39
TUE   Stuetta           73.49 317  P       P        00 14 02.0 -0.5
TUE                                IAmb    IAmb     00 14 11.5
             comp=Z,6.3nm,1.0s
SFJD  Kangerlussuaq     73.68 355  LR      LR       00 46 04.1
             comp=Z,61nm,18.6s,baz=356,slow=36
NRCA  Norcia            73.71 312  P       P        00 14 03.3 -0.4
STKA  Stephens Creek    74.12 159  P       P        00 14 04.3 -1.5
             comp=Z,3.2nm,1.0s,baz=331,slow=10,SNR=4.1
             comp=Z,3.2nm,1.0s
NEW   Newport           80.05  34  LR      LR       00 51 10.0
             comp=Z,75nm,19.5s,baz=304,slow=37
KEST  Kesra             80.53 309  LR      LR       00 55 33.0
             comp=Z,70nm,20.1s,baz=358,slow=40
HLID  Hailey            84.88  35          P        00 15 05.4 +0.6
HLID                               IAmb    IAmb     00 15 07.2
             comp=Z,5.1nm,1.1s
ESDC  Sonseca Array     85.19 319  P       P        00 15 06.1  0.0
             comp=Z,1.2nm,0.7s,baz=21,slow=4.9,SNR=4.9
ESDC                               LR      LR       00 55 22.7
             comp=Z,71nm,21.2s,baz=40,slow=37
             comp=Z,1.2nm,0.7s
ULM   Lac du Bonnet     85.98  21  LR      LR       00 57 05.9
             comp=Z,63nm,21.1s,baz=352,slow=38
SCHQ  Schefferville     86.15   3  LR      LR       00 55 18.7
             comp=Z,38nm,19.6s,baz=0.0,slow=37
NVAR  Mina Array Bea    87.00  41  P       P        00 15 13.3 -2.1
             comp=Z,1.5nm,0.8s,baz=268,slow=3.9,SNR=7.4
             comp=Z,1.5nm,0.8s
PDAR  Pinedale Array    87.64  33  P       P        00 15 18.1 -0.3
             comp=Z,0.5nm,0.7s,baz=298,slow=3.2,SNR=4.7
             comp=Z,0.5nm,0.7s
PDAR  Pinedale Array    87.64  33  P       P        00 15 17.7 -0.7
TCUT  Toone Canyon      88.18  35  P       P        00 15 21.1  0.0
MBAR  Mbarara           88.26 268  LR      LR       00 56 07.9
             comp=Z,30nm,19.9s,baz=50,slow=36
O20A  White River Ci    90.37  34  P       P        00 15 31.3 +0.1
SADO  Sadowa            94.90  12  LR      LR       01 02 23.7
             comp=Z,38nm,18.4s,baz=336,slow=38
ANMO  Albuquerque       95.47  35  LR      LR       01 05 57.1
             comp=Z,23nm,18.5s,baz=348,slow=40
```

BGR ***05*** *00:07:22.9±0.4, 50.°98N×5.°59E, h10^{km}, ML1.6/9, Error ellipse: s-maj=4.4km s-min=3.3km az=145.0*

LDG ***05*** *00:07:22.3±0.1, 50.°99N×5.°53E, h6^{km}, Ml2.5/15, Error ellipse: s-maj=2.5km s-min=2.3km az=60.0*

UCC ***05*** *00:07:22.2±0.8, 50.°99N×5.°54E, h6^{km}±1^{km}, ML1.6*

BNS ***05*** *00:07:22.4±0.9, 50.°98N×5.°57E, h7^{km}±3^{km}, ML1.5*

ISC 05 00:07:21.4±0.9**, 50.°99N**±0.°02×**5.°45E**±0.°02**, h11**^{km}±7^{km}**, n62,** σ1.^{s}**29**/115**, 5C-46D, Belgium**

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Code  Station Name       Δ°   AZ°   Phase ID          Time        Res
                                   Op      ISC       h  m  s     ISC
BOPT  Opiter            0.17  45  bP       Pg       00 07 24.7 -0.4
BOPT                              bP                00 07 24.9
BOPT                              dS       Sg       00 07 27.5 -0.1
BOPT                              dS                00 07 27.6
BEBN  Eben Emael        0.24 144  κP       Pg       00 07 26.1 -0.3
BEBN                              dS       Sg       00 07 29.3 -0.5
             comp=E,96nm,0.3s
VKB   Valkenburg        0.25 121⇓iPg       Pg       00 07 25.8 -0.7
VKB                               eSg      Sg       00 07 28.9 -0.9
BMOL  Mol               0.32 314  bP       Pb       00 07 29.4 +0.3
BMOL                              dS       Sb       00 07 34.2 -0.1
             comp=E,25nm,0.2s
BDSL  Dessel            0.33 313  dP       Pb       00 07 29.7 +0.4
BDSL                              dS       Sb       00 07 34.9 +0.3
BLCH  La Chartreuse     0.37 165  κP       Pg       00 07 28.9 +0.2
BLCH                              dS       Sg       00 07 33.8 +0.3
             comp=N,55nm,0.2s
HGN   Heimansgroeve     0.38 127⇓iPg       Pg       00 07 28.4 -0.5
HGN                               eSg      Sg       00 07 33.1 -0.9
BSTI  Sart Tilman       0.42 170  bP       Pg       00 07 30.0 +0.4
MEM   Membach           0.53 137  ePg      Pg       00 07 31.2 -0.4
MEM                               eSg      Sg       00 07 37.8 -0.7
MEM   Membach           0.53 137  dP       Pg       00 07 31.1 -0.4
MEM                               dP       Pg       00 07 31.3 -0.4
MEM                               dS       Sg       00 07 38.0 -0.5
             comp=Z,9.8nm,0.3s
BCLA  Clavier           0.58 189  bP       Pb       00 07 33.7 +0.1
BCLA                              dS       Sb       00 07 41.6 -0.3
             comp=E,15nm,0.2s
DREG  Dreilaegerbach    0.60 123  ePg      Pg       00 07 32.5 -0.5
DREG                              eSg      Sg       00 07 39.7 -1.1
             comp=E,10nm,0.2s
GSH   Grosshau          0.64 113  ePg      Pg       00 07 33.3 -0.6
GSH                               eSg      Sg       00 07 41.2 -1.1
             comp=E,18nm,0.3s
KLL   Kalltalsperre     0.65 122  ePg      Pg       00 07 33.4 -0.6
KLL                               eSg      Sg       00 07 41.0 -1.5
             comp=E,10nm,0.2s
TGA   Tangissart        0.70 237  dP       Pb       00 07 36.1 +0.4
TGA                               dS       Sb       00 07 45.9 +0.4
UCC   Uccle             0.72 255  ePg      Pb       00 07 37.0 +1.0
UCC                               eSg      Sb       00 07 48.1 +2.4
UCC   Uccle             0.72 255  dP       Pb       00 07 36.2 +0.3
BHOU  Houvegnez         0.73 151  κP       Pg       00 07 35.7 +0.1
BHOU                              dS       Sb       00 07 48.3 +2.0
OLFT  Oleftalsperre     0.80 129  ePg      Pg       00 07 36.1 -0.6
OLFT                              eSg      Sg       00 07 45.9 -1.2
BMRD  Maredsous         0.82 212  dP       Pb       00 07 38.1 +0.5
BMRD                              dS       Sb       00 07 49.9 +1.3
             comp=N,10nm,0.2s
RCHB  Rochefort         0.85 190  ePg      Pb       00 07 38.8 +0.6
RCHB                              eSg      Sb       00 07 51.1 +1.5
RCHB  Rochefort         0.85 190  dP       Pb       00 07 38.9 +0.7
RCHB                              dS       Sb       00 07 49.9 +0.3
             comp=E,13nm,0.2s
PLH   Pulheim           0.87  89  ePg      Pg       00 07 37.5 -0.6
PLH                               eSg      Sg       00 07 48.1 -1.3
BRQR  Ronquire          0.87 244  dP       Pb       00 07 38.9 +0.5
BSKQ  Steenkerk         0.94 249  dP       Pb       00 07 40.4 +0.8
BSKQ                              dS       Sb       00 07 53.8 +1.8
             comp=N,14nm,0.2s
STB   Steinbach         0.97 114  ePg      Pg       00 07 39.2 -0.8
STB                               eSg      Sg       00 07 50.8 -1.8
             comp=N,38nm,0.2s
GIVF  Givet             0.98 204  ePg      Pn       00 07 41.7 +0.6
GIVF                              eSg      Sg       00 07 53.3 +0.4
             comp=N,15nm,0.2s
LKLB  Kalborn           0.99 155  dP       Pg       00 07 40.2 -0.2
LKLB                              dS       Sb       00 07 54.0 +0.4
             comp=E,16nm,0.2s
TDN   Todenfeld         1.04 113  ePg      Pg       00 07 40.5 -0.9
TDN                               eSg      Sg       00 07 53.8 -1.0
             comp=E,28nm,0.6s
DOU   Dourbes           1.05 212  dP       Pn       00 07 42.8 +0.8
DOU                               dS       Sb       00 07 56.2 +0.8
             comp=N,10nm,0.2s
HILG  Hillesheim        1.05 131  ePg      Pg       00 07 41.1 -0.5
HILG                              eSg      Sg       00 07 55.0 -0.3
             comp=N,15nm,0.2s
LOH   Wallersheim-Lo    1.07 139  ePg      Pg       00 07 41.7 -0.2
LOH                               eSg      Sg       00 07 54.8 -0.9
             comp=N,19nm,0.2s
HES   Velbert-Hesper    1.07  69  ePg      Pg       00 07 41.3 -0.7
HES                               eSg      Sg       00 07 54.9 -1.0
             comp=N,40nm,0.3s
BBOU  Bougnies          1.13 238  dP       Pn       00 07 44.7 +1.5
LVIA  Vianden           1.16 155  dP       Pg       00 07 43.8 +0.1
LVIA                              dS       Sg       00 07 58.8 -0.1
WBS   Wahnbachtalspe    1.18  98  eSg      Sg       00 07 57.3 -2.0
             comp=N,20nm,0.2s
HOBG  Hohbusch          1.19  90  ePg      Pg       00 07 42.6 -1.7
HOBG                              eSg      Sg       00 07 58.3 -1.5
             comp=N,42nm,0.4s
BAIF  Baives            1.23 221  ePg      Pn       00 07 46.1 +1.6
BAIF                              eSg      Sb       00 08 01.4 +1.0
             comp=N,7.1nm,0.2s
BUG   Bochum--Univer    1.23  68  ePg      Pg       00 07 44.1 -0.9
BUG                               eSg      Sg       00 08 00.6 -0.3
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ENTS	Ennepetalsperr	1.26	78	ePg	Pg	00 07 44.2	-1.4
ENTS				eSg	Sg	00 08 00.1	-1.9
BHE	Schloss Buerre	1.27	120	ePg	Pg	00 07 44.8	-1.1
BHE				eSg	Sg	00 08 00.7	-1.7
	comp=N,22nm,0.3s						
WTSB	Winterswijk	1.29	40	eSg	Sb	00 08 03.6	+1.4
WLF	Walferdange	1.41	161	ePg	Pb	00 07 48.7	+1.0
WLF				eSg	Sb	00 08 06.7	+1.1
WLF	Walferdange	1.41	161	dP	Pg	00 07 48.1	-0.3
WLF				dS	Sb	00 08 06.5	+0.9
BOST	Ostende	1.60	280	dP	Pg	00 07 52.4	+0.3
BOST				dS	Sg	00 08 12.8	-0.1
	comp=N,5.3nm,0.2s						
SORT	Sorpetalsperre	1.63	76	eSg	Sn	00 08 09.0	-2.0
	comp=N,8.3nm,0.4s						
KASTN	Kahler Asten	1.88	82	eSg	Sn	00 08 18.7	+1.3
TNS	Taunus Mts	2.06	111	eSg	Sn	00 08 24.1	+2.4
SAVF	Savonnieres en	2.39	185	ePg	Pg	00 08 06.7	-0.5
SAVF				eSg	Sb	00 08 35.1	+1.2
	comp=N,3.3nm,0.2s						
PAGF	Fort de Pagny	2.45	176	ePg	Pg	00 08 08.0	-0.3
PAGF				eSg	Sb	00 08 37.0	+1.4
	comp=N,5.3nm,0.4s						
MEZF	Maizieres J’vi	2.51	186	eSg	Sb	00 08 39.1	+1.8
	comp=N,4.6nm,0.3s						
CDF	Champ du Feu	2.84	155	ePg	Pb	00 08 13.3	+1.1
CDF				eSg	Sb	00 08 49.5	+2.4
	comp=N,1.5nm,0.2s						
HAU	Haudompre	3.05	169	ePg	Pg	00 08 18.4	-1.4
HAU				eSg	Sb	00 08 55.0	+2.1
	comp=N,3.5nm,0.3s						
HINF	Hinteralfeld	3.31	163	ePn	Pn	00 08 14.2	+1.0
LOR	Lormes	3.87	196	ePn	Pn	00 08 21.8	+0.9
LOR				eSn	Sn	00 09 04.9	-1.5
LOR				eSg	Sg	00 09 22.8	-2.9
	comp=N,1.9nm,0.3s						
SSF	Saint Saulge	4.14	199	ePn	Pn	00 08 25.0	+0.5
SSF				eSn	Sn	00 09 10.4	-2.5
SSF				eSg	Sg	00 09 31.0	-3.2
	comp=N,1.5nm,0.3s						
LDF	La Druitiere	4.33	239	ePn	Pn	00 08 27.7	+0.5
LDF				eSg	Sg	00 09 39.3	-1.2
	comp=N,0.3nm,0.2s						
AVF	Avril sur Loir	4.43	199	ePg	Pg	00 08 45.5	-0.7
AVF				eSg	Sg	00 09 39.2	-4.3
	comp=N,0.7nm,0.2s						
SMF	Signal de Mont	4.48	194	ePn	Pn	00 08 30.0	+0.8
SMF				eSg	Sg	00 09 41.8	-3.3
	comp=N,1.9nm,0.3s						
BGF	Bois d'Agland	4.76	202	ePn	Pn	00 08 32.8	-0.3
BGF				eSg	Sg	00 09 51.0	-3.2
	comp=N,3.6nm,0.5s						
GRR	Gorron	4.85	240	ePn	Pn	00 08 35.9	+1.6
GRR				eSn	Sn	00 09 28.6	-1.9
	comp=N,1.0nm,0.2s						
MFF	Saint Martin d	5.74	222	ePn	Pn	00 08 46.9	+0.4

NOU 05 00:19:09.2, 15°.12S×166°.37E, h17^{km}, MLv4.7/17, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.87	112	P	Pg	00 19 26.0	-0.1
SANVU	Saraoutou	0.87	112	S	Sg	00 19 38.0	+0.4
DVP	Devils Point	3.12	146	P	Pn	00 19 58.1	+0.4
DVP	Devils Point	3.12	146	S	Sn	00 20 34.5	-0.1
MARNC	Mare, Loyalty	6.52	166	P	Pn	00 20 44.6	+0.2
DZM	Mont Dzumac	6.91	179	P	Pn	00 20 49.7	-0.2
YATNC	Mamie plateau,	6.92	176	P	Pn	00 20 49.3	-0.6
ONTNC	Ouen Toro	7.15	179	P	Pn	00 20 54.0	+1.0
OUENC	Ouen Island, N	7.27	177	P	Pn	00 20 55.3	+0.6

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*IDC **05** 00:45:31.7±2.4, 8°.92S×160°.64E, h0^{km}, mb3.9/6, mbtmp3.9/6, MS3.1/1, Error ellipse: s-maj=81.4km s-min=26.0km az=119.0*

ISC 05 00:45:40.8±2.0, 9°.0S±0°.3×160°.6E±0°.5, h69^{km}, n13, σ1^{s}.00/6, mb3.7/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.21	157	LR	LR	00 53 56.7	
	comp=Z,66nm,19.0s,baz=280,slow=36						
WRA	Warramunga Arr	27.61	244	P	P	00 51 21.5	-0.5
	0.5nm,0.3s,baz=69,slow=8.5,SNR=8.3						
	0.5nm,0.3s						
H11S2	WAKE ISLAND Hy	27.94	12	T	T	01 20 28.2	
	baz=193,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	27.94	12	T	T	01 20 27.2	
	baz=193,slow=76,SNR=8.5						
H11S1	WAKE ISLAND Hy	27.95	12	T	T	01 20 28.9	
	baz=193,slow=76,SNR=8.0						
STKA	Stephens Creek	28.82	215	P	P	00 51 33.3	+0.7
	0.9nm,0.4s,baz=62,slow=14,SNR=2.8						
	0.9nm,0.4s						
H11N1	WAKE ISLAND Hy	29.16	12	T	T	01 21 59.0	
	baz=192,slow=76,SNR=21						
H11N3	WAKE ISLAND Hy	29.17	12	T	T	01 21 59.5	
	baz=192,slow=76,SNR=20						
H11N2	WAKE ISLAND Hy	29.18	12	T	T	01 22 00.5	
	baz=192,slow=76,SNR=29						
ASAR	Alice Springs	29.40	237	P	P	00 51 37.1	-0.8
	0.5nm,0.5s,baz=60,slow=11,SNR=13						
	0.5nm,0.5s						
SONM	Songino Array	74.03	325	P	P	00 57 10.4	+1.1
	1.7nm,0.7s,baz=146,slow=6.8,SNR=9.5						
	1.7nm,0.7s						
ILAR	Eielson Array	83.24	20	P	P	00 57 59.0	-0.4
	0.6nm,1.0s,baz=265,slow=6.2,SNR=2.5						
	0.6nm,1.0s						
MKAR	Makanchi Array	88.55	318	P	P	00 58 25.5	-0.5
	0.7nm,0.8s,baz=99,slow=6.3,SNR=4.2						
	0.7nm,0.8s						

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*UPA **05** 01:03:08.9±1.3, 8°.33N×82°.64W, h10^{km}±3^{km}, MW4.0, Fault plane solution: NP1:ϕ_s63.00000°, δ54.00000°, λ38.00000°.*

*CATAC **05** 01:03:08.5±0.5, 8°N±3°×8°3W±°, h18^{km}±1^{km}, M4.7/12, MLv4.7/12, Error ellipse: s-maj=6.9km s-min=4.0km az=8.9, confirmed*

*UCR **05** 01:03:08.8±1.4, 8°.30N×82°.76W, h32^{km}±1^{km}, MW4.4*

*NEIC **05** 01:03:09.5±1.7, 8°.31N±0°.06×82°.74W±0°.04, h33^{km}±9^{km}, mb4.4/4, Error ellipse: s-maj=9.0km s-min=4.6km az=159.0*

ISC 05 01:03:09.1±0.9, 8°.30N±0°.03×82°.76W±0°.02, h33^{km}±6^{km}, n195, σ1^{s}.02/220, 32C-24D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTPA	Petro Terminal	0.15	228	⇓iP	Pn	01 03 15.1	+1.5
PTPA				eS	Sb	01 03 21.5	+2.0
LMNES	Limones	0.23	207	⇓iP	Pn	01 03 15.8	+0.3
LMNES				eS	Sn	01 03 21.0	+2.5
LMNES	Limones	0.23	207	⇓iP	Pn	01 03 15.9	+0.3
LPPC	Paso Canoas	0.24	340	⇓iP	Pn	01 03 15.6	-0.4
LPPC				eS	Sn	01 03 21.1	+1.8
CDITO	Canoas	0.29	337	P	Pn	01 03 16.0	-0.9
CDITO	Canoas	0.29	337	S	Sn	01 03 22.0	+0.4
DMCAL	E. de Neily	0.37	354	⇓eP	Pb	01 03 17.3	-0.6
DMCAL				eS	Sn	01 03 24.6	+0.6
NELY	Ciudad Neily	0.39	331	⇑iP	Pb	01 03 17.2	-1.0
NELY				eS	Sb	01 03 24.3	-0.1
JEFFS	S de V. Baru	0.42	31	⇓iP	Pb	01 03 18.2	-0.5
JEFFS				eS	Sn	01 03 26.4	+0.7
CLLRA	Cordillera,	0.46	18	⇓iP	Pb	01 03 18.6	-0.8
CLLRA				eS	Sb	01 03 26.0	-0.3
CLLRA	Cordillera,	0.46	18	⇓iP	Pb	01 03 18.5	-0.8
BRU2	Volcan	0.49	8		Pb	01 03 18.6	-1.1
BRU2					Sb	01 03 27.0	0.0
BRU2	Volcan	0.49	8	⇓iP	Pb	01 03 18.9	-0.9
BRU2				eS	Sb	01 03 27.0	0.0
BRU2	Volcan	0.49	8	P	Pb	01 03 18.8	-0.9
BRU2	Volcan	0.49	8	⇓iP	Pb	01 03 18.9	-0.9
BRU2				eS	Sb	01 03 27.1	0.0
TBS2		0.50	11	⇓iP	Pb	01 03 19.8	-0.1
FITO	Golfito	0.51	309	⇑iP	Pn	01 03 18.0	-2.0
FITO				eS	Sb	01 03 25.6	-1.6
RSRNO	Rio Sereno	0.52	349	⇓iP	Pn	01 03 19.5	-0.8
RSRNO	Rio Sereno	0.52	349	⇓eP	Pn	01 03 19.5	-0.8
SCLRA	Santa Clara, W	0.53	357	iP	Pn	01 03 19.4	-1.0
SCLRA	Santa Clara, W	0.53	357	⇓eP	Pn	01 03 19.4	-1.0
EDAD	Golfito	0.53	311	⇑iP	Pn	01 03 18.5	-2.0
EDAD				eS	Sb	01 03 26.6	-1.4
BQTLY	Boquete Panama	0.54	33	⇓iP	Pb	01 03 19.5	-1.0
BQTLY	Boquete Panama	0.54	33	⇓iP	Pb	01 03 19.5	-1.0
BQTLY				eS	Sb	01 03 27.2	-1.0
VITO	San Vito	0.55	338	⇑iP	Pn	01 03 20.0	-0.8
VITO				eS	Sb	01 03 29.2	+0.5
PIRO	Carate, Puerto	0.58	280		Pn	01 03 19.5	-1.6
PIRO					Sn	01 03 29.3	-0.1
PIRO	Carate, Puerto	0.58	280	P	Pn	01 03 19.2	-1.8
PIRO	Carate, Puerto	0.58	280	S	Sn	01 03 28.9	-0.5
PIRO	Carate, Puerto	0.58	280	⇑eP	Pn	01 03 19.3	-1.7
PTJ1	Puerto Jimnez	0.59	293	S	Sn	01 03 29.8	+0.3
PTJ1	Puerto Jimnez	0.59	293	P	Pn	01 03 19.7	-1.4
JIME	Puerto Jimenez	0.61	293	⇑iP	Pn	01 03 19.8	-1.6
JIME				eS	Sn	01 03 30.4	+0.3
ALCO	Alturas Coton,	0.65	353	⇓iP	Pn	01 03 20.7	-1.4
ALCO				eS	Sn	01 03 30.6	-0.7
PBNVO	Pueblo Nuevo,	0.81	44	⇓iP	Pn	01 03 22.9	-1.2
PBNVO				eS	Sn	01 03 34.3	-0.7
EDP2	Potrero Grande	0.82	330	⇑iP	Pn	01 03 23.5	-0.9
EDP2				eS	Sn	01 03 35.5	+0.2
RBALA	Bur	0.83	46	⇓iP	Pn	01 03 23.5	-0.9
RBALA	Bur	0.83	46	⇓eP	Pn	01 03 23.6	-0.8
FIMO	Fila Mora	0.90	319	⇑eP	Pn	01 03 24.7	-0.9
FIMO				eS	Sn	01 03 38.0	+0.5
RMDIO	Remedios, Chir	0.92	95	iP	Pn	01 03 25.4	-0.3
PANP	Palmar Norte	0.95	313	⇑iP	Pn	01 03 25.0	-1.2
PANP				eS	Sn	01 03 38.1	-0.5
BURE	Buenos Aires	1.04	326	⇑eP	Pn	01 03 26.4	-1.0
BURE				eS	Sn	01 03 41.1	+0.3
PDCAN	Manzana , Fuen	1.05	91	iP	Pn	01 03 26.7	-0.9
PDCAN	Manzana , Fuen	1.05	91	⇑eP	Pn	01 03 26.7	-0.9
DRK0	Durika	1.07	333	P	Pn	01 03 26.6	-1.3
DRK0	Durika	1.07	333	S	Sn	01 03 41.3	-0.5
DRK0	Durika	1.07	333	eP	Pn	01 03 26.3	-1.6
KKNTU	Kakintº	1.08	60	⇓iP	Pn	01 03 26.9	-1.0
KKNTU				eS	Sn	01 03 41.0	-0.8
KKNTU	Kakintº	1.08	60	⇓iP	Pn	01 03 26.9	-1.0
KKNTU				eS	Sn	01 03 41.0	-0.8
EDPE	Pejibaye, P	1.17	317	⇑eP	Pn	01 03 28.3	-0.9
OCHAL	Ojochal	1.18	312	S	Sn	01 03 44.9	+0.6
OCHAL	Ojochal	1.18	312	P	Pn	01 03 28.3	-1.0
SAJE	San Jernim	1.27	324	⇑iP	Pn	01 03 29.4	-1.4
BRIBI	Bribri	1.31	357	⇓iP	Pn	01 03 32.2	+1.1
CEUA	Cerro Uatsi, L	1.32	352	eP	Pn	01 03 32.5	+1.1
ZEDO	Perez Zeledon	1.39	319	eP	Pn	01 03 31.5	-0.8
BUS1	Rivas	1.58	322	⇑iP	Pn	01 03 34.5	-0.8
BUS1				eS	Sn	01 03 54.8	0.0
GMAL	Guarumal, Vera	1.60	109	eP	Pn	01 03 34.3	-0.8
PIEC	Cerro El Cedra	1.77	318	eP	Pn	01 03 37.1	-0.5
QUEP	Quepos	1.79	309	P	Pn	01 03 36.9	-0.7
QUEP	Quepos	1.79	309	S	Sn	01 04 01.3	+2.1
QUEP	Quepos	1.79	309	eP	Pn	01 03 37.6	-0.1
SVQ2	Quepos	1.79	309	eP	Pn	01 03 37.0	-0.7
RAZU	San Marcos de	1.84	317	eP	Pn	01 03 39.1	+0.6
PITB	Pirrs, San	1.84	317	eP	Pn	01 03 38.8	+0.2
VINA	Juan Vinas	1.86	328	eP	Pn	01 03 38.6	-0.2
REPA	Paraso	1.87	324	eP	Pn	01 03 38.5	-0.5
LCR2	La Lucha 2	1.89	319	S	Sn	01 04 03.3	+1.2
PCAYA	Pacayas	1.91	327	⇑iP	Pn	01 03 39.7	+0.1
VTCV	VTCV, Calle Va	1.93	330	⇑iP	Pn	01 03 40.2	+0.4
RESJ	San Isidro (Tu	1.93	333	⇑iP	Pn	01 03 40.3	+0.6
IRES	Siquirres	1.93	338	eP	Pn	01 03 40.5	+0.9
TAGO	Cartago	1.93	323	eP	Pn	01 03 40.5	+0.7
PICV	PH. Pirrs	1.94	313	eP	Pn	01 03 39.7	-0.1
ABRB	Las Abras (San	1.94	331	⇑iP	Pn	01 03 40.2	+0.2
ABRB				eS	Sn	01 04 06.1	+2.7
RAFA	San Farael, Vo	1.95	328	Pn	Pn	01 03 40.0	-0.1
RAFA				Sn	Sn	01 04 04.9	+1.3
RAFA	San Farael, Vo	1.95	328	⇑eP	Pn	01 03 40.3	+0.1
CVTV	Tajo	1.95	330	⇑iP	Pn	01 03 40.8	+0.5
CVTQ	Turrialba Volc	1.96	330	⇑iP	Pn	01 03 40.9	+0.4
VTR0	Volcan Turrial	1.97	330	⇑eP	Pn	01 03 41.0	+0.4
CVTR	Volcan Turrial	1.97	330	⇑iP	Pn	01 03 40.8	+0.2
RVLA	Villa Bonita	1.97	335	⇑iP	Pn	01 03 40.6	+0.4
VICA	Volcano Irazu	1.99	327	eP	Pn	01 03 40.6	-0.2
TRIO	Tres Rios	2.01	323	eP	Pn	01 03 40.8	-0.1
ACOS	Acosta	2.03	317	eP	Pn	01 03 41.6	+0.4
AMPA	Desamparados	2.04	321	eP	Pn	01 03 41.2	-0.1
CORON	Coronado	2.07	324	eP	Pn	01 03 41.7	0.0
EGUB	Earth Gu¡pi	2.07	337	Pn	Pn	01 03 42.3	+0.8
EGUB	Earth Gu¡pi	2.07	337	⇑iP	Pn	01 03 42.5	+1.0
ECI	Escuela Centro	2.07	322	eP	Pn	01 03 41.6	-0.1
SJS3	Mercedes San J	2.07	322	eP	Pn	01 03 42.0	+0.4
SJS	Escuela Geolog	2.07	322	eP	Pn	01 03 41.7	0.0
LUJA	Lujan	2.07	321	eP	Pn	01 03 42.0	+0.3
CVIMO	Finca Echandi	2.07	326	eP	Pn	01 03 41.8	0.0
LUPE	Guadalupe	2.08	322	eP	Pn	01 03 41.5	-0.3
CENT	San Jose	2.08	321	eP	Pn	01 03 43.3	+1.5
MEXI	Barrio Mexico	2.09	321	eP	Pn	01 03 42.3	+0.3
SANTA	Santa Ana	2.15	319	eP	Pn	01 03 42.6	-0.1
HDC	Heredia	2.15	322	Pn	Pn	01 03 42.6	-0.3
PILE	Guapiles	2.16	332	⇑iP	Pn	01 03 43.5	+0.7
HEME	Heredia, Merce	2.16	321	eP	Pn	01 03 44.3	+1.3
PURI	Puriscal	2.17	315	eP	Pn	01 03 43.1	0.0
BELE	Belen	2.18	320	eP	Pn	01 03 43.1	-0.1
CARI	Cariari	2.26	335	⇑iP	Pn	01 03 45.0	+0.8
POAS	San Pedro de P	2.29	320	eP	Pn	01 03 46.3	+1.5
TCS1	Tacares	2.30	319	P	Pn	01 03 45.3	+0.4
TCS1	Tacares	2.30	319	eP	Pn	01 03 45.6	+0.7
ATEO	Atenas	2.31	316	eP	Pn	01 03 44.9	-0.1
GREC	Grecia	2.33	319	eP	Pn	01 03 45.6	+0.3
OROT	Orotina	2.37	313	eP	Pn	01 03 45.5	-0.2
VPS8	V Poas	2.37	322	eP	Pn	01 03 46.5	+0.5
VPS5	V. Poas	2.37	322	eP	Pn	01 03 46.2	+0.1
NARAN	Naranjo de Ala	2.40	318	eP	Pn	01 03 46.9	+0.7
PALD	Palmares	2.40	317	eP	Pn	01 03 47.0	+0.7
RAMO	San Ramon	2.45	317	eP	Pn	01 03 46.9	0.0
SRA1	San Ramn	2.46	316	eP	Pn	01 03 47.1	+0.1
ZARE	Zarcero	2.47	319	eP	Pn	01 03 48.1	+0.9
SARA	Sarapiqu	2.47	330	eP	Pn	01 03 47.6	+0.5
ARTO	Ro Cuarto	2.49	325	eP	Pn	01 03 47.8	+0.5
VPL1	V. Platanar	2.51	321	eP	Pn	01 03 48.0	+0.2
AZU	Azuero	2.51	102	⇑eP	Pn	01 03 48.0	+0.4
VPL2	V. Platanar	2.56	321	eP	Pn	01 03 33.2	-15
ITAL	Pital	2.61	325	eP	Pn	01 03 49.6	+0.6
PAQE	Paquera	2.63	305	eP	Pn	01 03 43.1	-6.1
SOCE	Pocosol	2.77	319	Pn	Pn	01 03 51.7	+0.5
SOCE	Pocosol	2.77	319	P	Pn	01 03 52.3	+1.1
SOCE	Pocosol	2.77	319	S	Sn	01 04 26.1	+2.6
SOCE	Pocosol	2.77	319	eP	Pn	01 03 51.8	+0.6
JCR1	Jicaral	2.79	304	eP	Pn	01 03 50.0	-1.5
FORC	Fortuna	2.86	319	eP	Pn	01 03 53.7	+1.2
MTEVE	Monteverde	2.86	315	eP	Pn	01 03 53.2	+0.6
VACR	Volcan Arenal	2.87	319	eP	Pn	01 03 53.4	+0.8
CASO	Castillo	2.88	317	eP	Pn	01 03 53.4	+0.7
ARE1	Arenal 1	2.89	318	eP	Pn	01 03 54.0	+1.2
VARE2	V. Arenal	2.89	318	eP	Pn	01 03 53.5	+0.6
CEDE	Laguna Cedeo	2.90	319	eP	Pn	01 03 54.0	+1.0
COVE	Coope Vega, Sa	2.90	326	P	Pn	01 03 53.2	+0.2
COVE	Coope Vega, Sa	2.90	326	S	Sn	01 04 29.1	+2.4
REZ	Monterrey de S	2.92	319	eP	Pn	01 03 55.0	+1.6
ZANG	Zanguenga, Cho	2.93	77	eP	Pn	01 03 55.0	+1.6
JTS	Las Juntas de	2.93	313	Pn	Pn	01 03 52.5	-0.9
JTS	Las Juntas de	2.93	313	P	Pn	01 03 53.0	-0.5
JTS	Las Juntas de	2.93	313	eP	Pn	01 03 52.6	-0.9
TABAC	Tabacon	2.95	318	eP	Pn	01 03 55.7	+1.9
CHIK	Chiripa	3.00	315	eP	Pn	01 03 56.5	+1.9
BCIP	Isla Barro Col	3.01	73	Pn	Pn	01 03 54.9	+0.4
BCIP	Isla Barro Col	3.01	73	eP	Pn	01 03 55.2	+0.7
TILA	Tilaran	3.07	315	eP	Pn	01 03 57.2	+1.9
QUEB	Quebradon, Cot	3.12	318	eP	Pn	01 03 57.3	+1.2
INVE	Universidad In	3.14	314	eP	Pn	01 03 57.4	+1.2
TIMP	Tierras Morena	3.18	316	eP	Pn	01 03 57.3	+0.4
NICO	Nicoya	3.22	305	eP	Pn	01 03 57.3	-0.1
TENO	El Achiote	3.24	318	eP	Pn	01 03 59.2	+1.5
PLVR	Palo Verde	3.27	309	eP	Pn	01 03 58.5	+0.3
MOTZ	Rio Naranjo	3.29	316	eP	Pn	01 04 00.5	+2.1
JUD3	Juan Diaz 3	3.31	304	Pn	Pn	01 03 58.0	-0.7
JUD3	Juan Diaz 3	3.31	304	eP	Pn	01 03 57.9	-0.8
ELVJ	El Viejo (Barb	3.31	310	eP	Pb	01 04 06.8	-0.4
CUI	Cuipilapa	3.33	315	eP	Pn	01 04 00.1	+1.1
COLC	Colonia	3.37	314	eP	Pn	01 04 00.8	+1.4
SAJU	San Juanillo,	3.40	301	⇑iP	Pn	01 03 58.7	-1.2
VMAR	Armenia, Volca	3.41	317	⇑eP	Pn	01 04 01.3	+1.3
MESS	Mesas	3.41	315	eP	Pn	01 04 00.8	+0.7
CAZU	Cerro Azul, Pa	3.44	74	eP	Pn	01 04 01.7	+1.2
DELF	Filadelfia	3.49	308	eP	Pn	01 04 01.3	+0.2
GPS2	Hotel Rincn d	3.53	314	⇑eP	Pn	01 04 02.7	+1.0
GPS3	Bodega del ICE	3.54	314	⇓iP	Pn	01 04 04.5	+2.6
GPS1	Guardaparques	3.55	314	eP	Pn	01 04 02.4	+0.4
VRLE	La Escondida,	3.57	314	eP	Pn	01 04 02.7	+0.5
VORI	VORI	3.57	315	eP	Pn	01 04 03.5	+1.1
LAPC	Finca la Perla	3.60	313	eP	Pn	01 04 03.5	+0.9
BUAI	Buenos Aires	3.60	315	⇑iP	Pn	01 04 03.8	+1.1
PEJA	Penjamo Buenos	3.60	316	eP	Pn	01 04 04.0	+1.3
ELI1	Hacienda Flor	3.61	310	eP	Pn	01 04 04.0	+1.3
CORNA	Casa Canada	3.85	356	eP	Pn	01 04 05.7	-0.5
CARN	Rivas	3.96	317	eP	Pn	01 04 07.3	-0.2
ESPN	Las Esperanzas	4.16	339	Pn	Pn	01 04 08.4	-1.8
BOAB	BOACO BROADBAN	5.02	325	Pn	Pn	01 04 21.6	-0.5
MGAN	Managua	5.14	318	Pn	Pn	01 04 25.2	+1.5
PRVC	Isla de Provid	5.22	15	Pn	Pn	01 04 24.7	-0.2
COPN	Copaltepe	5.39	316	eP	Pn	01 04 28.1	+0.8
CNGN	Cerro Negro	5.69	317	Pn	Pn	01 04 32.2	+0.7
SIUN	Universidad Ur	5.73	340	Pn	Pn	01 04 32.1	+0.2
HERN	Volcan Telica	5.86	317	Pn	Pn	01 04 34.7	+0.9
CRIN	San Cristobal	6.08	316	Pn	Pn	01 04 37.7	+1.0
MTO3	Montecristo	8.87	314	Pn	Pn	01 05 15.9	+0.7
MTDJ	Mount Denham	11.09	27	Pn	Pn	01 05 45.9	+0.3
CHIV	Chivirico	13.13	27	Pn	Pn	01 06 13.1	-0.3
NMDO	Nuevo Mundo	14.31	31	P	Pn	01 06 33.5	+3.9
SOR	Soroa	14.41	359		Pn	01 06 32.5	+1.7
BANI	BANI	15.68	49	Pn	Pn	01 06 47.4	-0.4
DR12	Loma Pena Alta	16.65	50	Pn	Pn	01 06 59.6	-0.6
X34A	Smith Ranch, M	29.61	334	P	P	01 09 10.6	-0.8
RLO	Rose Lookout	29.91	340	P	P	01 09 13.5	-0.5
RLO				IAmb	IAmb	01 09 25.3	
	comp=Z,8.0nm,1.1s						
PV16	Nyswonger Mesa	38.06	326	P	P	01 10 24.8	-0.1
PV16				IAmb	IAmb	01 10 56.2	
	comp=Z,8.2nm,1.5s						
PV04	Paradox Valley	38.11	326	P	P	01 10 25.0	-0.3

SJA 05 01:12:39.9±0.6, 22°.54S×66°.18W, h285^{km}±5^{km}, ML3.9, MW3.7, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	0.71	59	eP	Pn	01 13 18.2	+0.2
YJA				eS	S	01 13 44.3	-3.8
SALTA		1.68	185	eP	Pn	01 13 23.6	+0.2
SALTA				eS	S	01 13 55.7	-2.2
SLA	San Lorenzo	2.26	164	eP	Pn	01 13 28.2	+0.5
PB06	IPOC Station P	3.14	266	eP	Pn	01 13 36.7	+0.4
PB06				eS	S	01 14 18.9	-2.3
PB06				IAML		01 14 23.5	
	comp=Z,80nm,0.1s						
PB03	IPOC Station P	3.35	278	eP	Pn	01 13 38.2	-0.2
PB03				eS	S	01 14 21.0	-4.1
PB03				IAML		01 14 22.1	
	comp=Z,160nm,0.2s						
PB01	IPOC Station P	3.42	295	eP	Pn	01 13 39.7	+0.5
PB01				eS	S	01 14 23.5	-2.9
PB01				IAML		01 14 24.9	
	comp=Z,141nm,0.2s						
FSA	Cafayete	3.56	177	eP	Pn	01 13 41.5	+0.9
FSA				eP		01 13 41.7	
PB08	IPOC Station P	3.66	310	eP	Pn	01 13 43.2	+1.2
PB08				eS	S	01 14 30.7	-0.9
PB05	IPOC Station P	3.73	264	eP	Pn	01 13 42.6	+0.1
PB05				eS	S	01 14 28.7	-3.8
PB05				IAML		01 14 29.9	
	comp=Z,50nm,0.4s						
GO02	Mina Guanaco	4.07	229	eP	Pn	01 13 46.3	-0.2
GO02				eS	S	01 14 36.6	-3.0
GO02				IAML		01 14 37.7	
	comp=Z,180nm,0.3s						
PATCX	Punta Patache	4.08	294	eP	Pn	01 13 46.7	+0.4
PATCX				eP		01 13 47.2	
PATCX				eS	S	01 14 35.9	-3.5
PATCX				IAML		01 14 37.8	
	comp=Z,154nm,0.4s						
HMBC	Humberstone	4.13	302	eP	Pn	01 13 47.3	+0.3
HMBC				eS	S	01 14 37.3	-3.2
HMBC				IAML		01 14 39.6	
	comp=Z,141nm,0.7s						
PB10	IPOC Station P	4.15	256	eP	Pn	01 13 47.2	+0.2
PB10				eS	S	01 14 36.4	-4.3
PB10				IAML		01 14 39.3	
	comp=Z,40nm,0.4s						
TA01	Diego Aracena	4.21	297	eP	Pn	01 13 48.4	+0.6
TA01				eS	S	01 14 38.2	-3.9
TA01				IAML		01 14 40.0	
	comp=Z,82nm,0.8s						
PB11	IPOC Station P	4.26	310	eP	Pn	01 13 49.1	+0.5
PB11				eS	S	01 14 40.0	-3.5
PB11				IAML		01 14 43.9	
	comp=Z,64nm,0.2s						
PB14	IPOC Station P	4.40	241	eP	Pn	01 13 50.3	+0.1
PB14				eS	S	01 14 41.7	-4.7
PB14				IAML		01 14 45.7	
	comp=Z,101nm,0.3s						
PB16	IPOC Station P	5.22	323	eP	Pn	01 14 02.1	+2.0
PB16				eS	S	01 14 59.7	-4.7
AC01	Pan de Azucar	5.40	227	eP	Pn	01 14 00.3	-1.3
AC01				eS	S	01 15 02.4	-4.8
AC01				IAML		01 15 03.9	
	comp=Z,24nm,0.5s						

IDC 05 01:21:29.0±2.7, 5°.70S×154°.13E, h0^{km}, mb3.3/3, mbtmp3.3/3, MS2.4/1, Error ellipse: s-maj=195.3km s-min=32.8km az=129.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.83	242	LR	LR	01 25 47.0	
	comp=Z,29nm,21.4s,baz=126,slow=33						
WRA	Warramunga Arr	23.89	232	P	P	01 26 45.7	+1.1
	0.4nm,0.5s,baz=57,slow=9.8,SNR=5.0						
	0.4nm,0.5s						
ASAR	Alice Springs	26.42	225	P	P	01 27 06.7	-1.0
	0.2nm,0.5s,baz=49,slow=9.2,SNR=4.3						
	0.2nm,0.5s						
ILAR	Eielson Array	82.50	22	P	P	01 33 53.2	0.0
	0.3nm,0.9s,baz=231,slow=4.3,SNR=1.8						
	0.3nm,0.9s						

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*BJI **05** 01:29:05.9, 43°.37N×147°.95E, h17^{km}, mB5.4/26, mb4.7/67, Ms4.9/54, Ms7 4.7/53*

*IDC **05** 01:29:06.0±0.6, 43°.36N×147°.88E, h0^{km}, mb4.6/28, mbtmp4.5/36, ML3.7/7, MS4.3/19, Error ellipse: s-maj=14.6km s-min=11.8km az=150.0*

*SKHL **05** 01:29:07.9±0.6, 43°.20N×148°.10E, h34^{km}±4^{km}, mb5.4/4, ms5.0/3*

*JMA **05** 01:29:07.0±0.5, 43°N±2°×14°8E±°, h6^{km}, MD4.8/36, MV4.8/36, E OFF HOKKAIDO*

*NIED **05** 01:29:07.0, 43°.25N×147°.81E, h6^{km}, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}1.55; $M_{\theta\theta}$-0.13; $M_{\phi\phi}$-1.42; $M_{r\theta}$0.98; $M_{\theta\phi}$-1.27; $M_{\phi r}$0.82; Fault plane solution: $M_0$2.29000×10^{16} NP1: ϕ_s193.00000°, δ31.00000°, λ61.00000°. NP2:ϕ_s46.00000°, δ63.00000°, λ106.00000°.*

*NEIC **05** 01:29:08.2±1.0, 43°.36N±0°.09×147°.77E±0°.09, h10^{km}±1^{km}, mb5.0/284 Error ellipse: s-maj=15.8km s-min=11.3km az=7.0*

*MOS **05** 01:29:08.7±1.0, 43°.44N×147°.85E, h27^{km}, mb5.2/58, MS4.7/14, Error ellipse: s-maj=7.1km s-min=4.5km az=121.6*

*GCMT **05** 01:29:13.2±0.5, 43°.26N±0°.04×148°.10E±0°.05, h25^{km}±1^{km}, MW4.9/63, Moment Tensor Solution. s23,c27; s63,c83; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.79±.18; $M_{\theta\theta}$-0.77±.11; $M_{\phi\phi}$-1.02±.11; $M_{r\theta}$0.85±.24; $M_{\theta\phi}$-1.04±.07; $M_{\phi r}$1.64±.24; Best double couple: $M_0$2.62900×10^{16} NP1:ϕ_s233.00000°, δ24.00000°, λ110.00000°. NP2: ϕ_s31.00000°, δ68.00000°, λ82.00000°. Principal axes: T 2.5840, Plg66.0000°, Azm287.0000°; N 0.0910, Plg8.0000°, Azm35.0000°; P -2.6740, Plg22.0000°, Azm128.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **05** 01:29:18.0, 45°.53N×151°.60E, h44^{km}±3^{km}, mb5.1, Ms4.7*
ISC 05 01:29:09.8±0.6, **43°.40N**±0°.04×**147°.79E**±0°.04, **h24**^{km}±3^{km},
h23^{km}**:pP-P, n725,** σ**1^{s}.22**/651, **mb5.0**/263, **MS4.7**/44,
32C-33D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.84**	**304**	*e*P	Pn	01 29 34.3	+8.1
SHO				AMB	AMB	01 29 37.7	
	9µm,0.5s						
SHO				*e*S	Sn	01 29 49.9	+12
SHO				A	A	01 29 52.5	
	16µm,0.5s						
SHO				A	A	01 29 52.5	
	35µm,0.5s						
NEM2	**Nemuro 2**	**1.49**	**269**	P	**Pn**	**01 29 34.6**	**-0.6**
NEM2				*e*S	**Sb**	**01 29 55.2**	**-0.1**
NEM2	**Nemuro 2**	**1.49**	**269**	A	A	01 29 34.6	
	comp=N,21nm,4.1s,comp=E,25nm,2.5s						
NMR	**Nemuro--Hokkai**	**1.50**	**270**	*e*P	**Pn**	**01 29 34.5**	**-0.8**
NMR				*e*S	**Sn**	**01 29 54.0**	**-0.1**
YUK	**Yuzh-Kuril'sk**	**1.53**	**295**	*e*PN	**Pn**	**01 29 35.9**	**+0.2**
YUK				S	**Sb**	**01 29 58.0**	**+1.5**
YUK				pmax	pmax		
	comp=N,522nm,0.5s						
YUK				pmax	pmax		
	comp=E,819nm,0.5s						
YUK				pmax	pmax		
	comp=Z,1µm,0.5s						
YUK				smax	smax		
	comp=E,7µm,0.4s						
YUK				smax	smax		
	comp=N,3µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.53**	**295**	*e*P	**Pn**	**01 29 35.9**	**+0.2**
YUK				AMB	AMB	01 29 38.9	
	comp=N,2µm,0.6s						
YUK				*e*S	**Sb**	**01 29 57.2**	**+0.7**
YUK				A	A	01 30 04.0	
	comp=N,3µm,0.8s						
YUK				A	A	01 30 04.0	
	comp=N,7µm,0.8s						
YUK				AMS	AMS	01 30 30.5	
	comp=N,57µm,11.0s						
YUK				AMS	AMS	01 30 30.5	
	comp=N,36µm,11.0s						
GLVR	**Golovnino**	**1.68**	**282**	*e*PN	**Pn**	**01 29 37.7**	**-0.1**
GLVR				S	**Sn**	**01 29 59.6**	**+1.1**
GLVR				pmax	pmax		
	comp=Z,757nm,0.5s						
GLVR				pmax	pmax		
	comp=N,435nm,0.3s						
GLVR				pmax	pmax		
	comp=E,284nm,0.3s						
GLVR				smax	smax		
	comp=N,2µm,0.5s						
GLVR				smax	smax		
	comp=E,4µm,0.6s						
GLVR	**Golovnino**	**1.68**	**282**	*e*P	**Pn**	**01 29 37.7**	**-0.1**
GLVR				AMB	AMB	01 29 42.9	
	comp=E,760nm,0.5s						
GLVR				*e*S	**Sn**	**01 29 59.6**	**+1.1**
GLVR				A	A	01 30 07.9	
	comp=E,2µm,0.5s						
GLVR				A	A	01 30 07.9	
	comp=E,4µm,0.5s						
KUR	**Kuril'sk**	**1.83**	**2**	*e*PN	**Pn**	**01 29 39.1**	**-0.8**
KUR				*i* S	**Sn**	**01 30 03.6**	**+1.3**
KUR				pmax	pmax		
	comp=Z,599nm,1.0s						
KUR				smax	smax		
	comp=N,1µm,0.4s						
KUR				smax	smax		
	comp=E,2µm,0.4s						
KUR	**Kuril'sk**	**1.83**	**2**	*e*P	**Pn**	**01 29 39.2**	**-0.7**
KUR				AMB	AMB	01 29 40.4	
	comp=E,600nm,0.7s						
KUR				*e*S	**Sn**	**01 30 02.9**	**+0.6**
KUR				A	A	01 30 05.3	
	comp=E,3µm,0.8s						
KUR				A	A	01 30 05.3	
	comp=E,3µm,0.8s						
KUR				AMS	AMS	01 30 42.7	
	comp=E,28µm,10.0s						
KUR				AMS	AMS	01 30 42.7	
	comp=E,33µm,10.0s						
JKHN	**Kushirohamanak**	**1.94**	**262**	*e*P	**Pn**	**01 29 41.5**	**+0.2**
JKHN	**Kushirohamanak**	**1.94**	**262**	A	A	01 29 41.5	
	comp=N,27nm,2.1s,comp=E,40nm,2.2s						
JRA	**Rausu**	**2.01**	**286**	P	**Pn**	**01 29 42.7**	**+0.5**
JRA	**Rausu**	**2.01**	**286**	A	A	01 29 42.7	
	comp=N,14nm,2.5s,comp=E,15nm,3.9s						
JNSB	**Nemuroshibetsu**	**2.06**	**282**	*e*P	**Pn**	**01 29 43.3**	**+0.4**
JNSB	**Nemuroshibetsu**	**2.06**	**282**	A	A	01 29 43.3	
	comp=N,24nm,4.0s,comp=E,22nm,1.9s						
AKK	**Akkeshi**	**2.19**	**261**	*e*P	**Pn**	**01 29 44.7**	**0.0**
JNK	**Nakash**	**2.24**	**276**	P	**Pn**	**01 29 45.1**	**-0.4**
JNK				*e*S	**Sn**	**01 30 13.3**	**+1.0**
JAK	**Akkeshi**	**2.29**	**261**	P	**Pn**	**01 29 46.1**	**-0.1**
JAK				*e*S	**Sn**	**01 30 14.8**	**+1.1**
JAK	**Akkeshi**	**2.29**	**261**	A	A	01 29 46.1	
	comp=N,17nm,2.6s,comp=E,17nm,2.2s						
JTKR	**Abashiri--Toko**	**2.87**	**283**	*e*P	**Pn**	**01 29 55.4**	**+1.3**
JAR	**Ashorobuto**	**2.93**	**269**	*e*P	**Pn**	**01 29 55.5**	**+0.5**
JOB	**Onbets**	**2.93**	**262**	*e*P	**Pn**	**01 29 55.0**	**0.0**
JOB	**Onbets**	**2.93**	**262**	A	A	01 29 55.0	
	comp=N,10.0nm,3.7s,comp=E,9.0nm,3.6s						
JMP	**Maruseppu**	**3.27**	**282**	P	**Pn**	**01 30 01.2**	**+1.6**
JCH	**Churui**	**3.34**	**258**	P	**Pn**	**01 30 00.9**	**+0.4**
JCH	**Churui**	**3.34**	**258**	A	A	01 30 00.9	
	comp=N,5.0nm,2.7s,comp=E,5.0nm,2.9s						
ERM	**Erimo**	**3.68**	**250**		**Pn**	**01 30 05.2**	**-0.1**
ERM	**Erimo**	**3.68**	**250**	PN	**Pn**	**01 30 05.2**	**-0.1**
JEM	**Erimo**	**3.68**	**250**	P	**Pn**	**01 30 06.5**	**+1.2**
JKK2	**Kamakawa 2**	**3.69**	**279**	*e*P	**Pn**	**01 30 08.0**	**+2.6**
JFR	**Furan**	**3.80**	**268**	*e*P	**Pn**	**01 30 08.4**	**+1.5**
JKA	**Kamikawa-asahi**	**3.83**	**283**		**Pn**	**01 30 07.2**	**-0.1**
ASAJ	**Asahikawa**	**3.83**	**283**	Pn	**Pn**	**01 30 08.8**	**+1.5**
	comp=E,4.5nm,0.3s,baz=98,slow=7.6,SNR=16						
ASAJ				LR	LR	01 30 58.1	
	comp=E,2µm,18.6s,baz=158,slow=29						
	comp=E,102nm,1.0s						
ASAJ	**Asahikawa**	**3.83**	**283**	*e*P	**Pn**	**01 30 10.2**	**+2.9**
JNBK	**Urakawa-nobuka**	**3.87**	**255**	P	**Pn**	**01 30 07.7**	**-0.1**
YSS	**Yuzhno-Sakhali**	**5.03**	**317**	*e*PN	**Pn**	**01 30 25.6**	**+1.9**
YSS				pmax	pmax		
	comp=Z,70nm,1.1s						
YSS				MLR	MLR		
	comp=Z,6µm,13.0s						
YSS				MLR	MLR		
	comp=N,6µm,15.0s						
YSS				MLR	MLR		
	comp=E,4µm,13.0s						
YSS	**Yuzhno-Sakhali**	**5.03**	**317**	*e*P	**Pn**	**01 30 26.1**	**+2.4**
YSS				*e*S	**Sn**	**01 31 23.5**	**+2.5**
YSS				AMS	AMS	01 32 45.0	
	comp=E,6µm,14.0s						
YSS				AMS	AMS	01 32 45.0	
	comp=E,6µm,14.0s						
JTM	**Tenmabayashi**	**5.64**	**245**		**Pn**	**01 30 31.3**	**-0.9**
TYV	**Tymovskoe**	**8.24**	**337**	*e*PN	Pb	01 31 22.3	-9.5
TYV				pmax	pmax		
	comp=Z,41nm,1.3s						
TYV				pmax	pmax		
	comp=Z,600nm,4.2s						
TYV	**Tymovskoe**	**8.24**	**337**	*e*P	**Pn**	**01 31 09.9**	**+2.1**
TYV				*e*S	**Sn**	**01 32 42.0**	**+1.9**
SKR	**Severo-Kuril's**	**9.24**	**35**	*e*PN	**Pn**	**01 31 20.1**	**-1.4**
SKR				pmax	pmax		
	comp=Z,4µm,6.9s						
SKR				pmax	pmax		
	comp=Z,150nm,0.8s						
SKR				MLR	MLR		
	comp=Z,3µm,17.0s						
SKR	**Severo-Kuril's**	**9.24**	**35**	*e*P	**Pn**	**01 31 21.4**	**-0.1**
SKR				AMB	AMB	01 31 24.2	
	comp=Z,150nm,0.7s						
SKR				*e*S	**Sn**	**01 33 01.2**	**-3.4**
MJAR	**Matsushiro Arr**	**10.04**	**230**	Pn	**Pn**	**01 31 31.4**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=30,slow=15,SNR=5.3						
MJAR				Sn	**Sn**	**01 33 21.1**	**-3.4**
	comp=Z,0.3nm,0.3s,baz=31,slow=19,SNR=4.9						
MJAR				LR	LR	01 36 01.7	
	comp=Z,1µm,19.3s,baz=54,slow=41						
	comp=Z,1.4nm,0.4s						
MJB9	**Matsu-Tunnel**	**10.04**	**230**		**Pn**	**01 31 32.3**	**-0.3**
MAJO	**Matsushiro**	**10.04**	**230**		**Pn**	**01 31 31.6**	**-1.0**
MAJO	**Matsushiro**	**10.04**	**230**	⇓*e*PN	**Pn**	**01 31 36.1**	**+3.5**
PAU	**Pauzhetka**	**10.12**	**34**	*e*P	**Pn**	**01 31 32.6**	**-0.9**
OKH	**Okha**	**10.65**	**344**	*de*PN	Pn	01 31 28.2	-13
OKH				MLR	MLR		
	comp=Z,2µm,12.0s						
OKH				MLR	MLR		
	comp=E,4µm,15.0s						
OKH				MLR	MLR		
	comp=N,1µm,5.0s						
USRK	**Ussuriysk Ar.**	**11.45**	**279**	Pn	**Pn**	**01 31 53.2**	**+1.4**
	comp=N,0.4nm,0.3s,baz=82,slow=14,SNR=7.9						
	comp=N,11nm,0.9s						
PEA0B	**Petropavlovsk-**	**11.74**	**31**	⇓*e*PN	**Pn**	**01 31 55.0**	**-0.7**
PETK	**Petropavlovsk-**	**11.74**	**31**	Pn	**Pn**	**01 31 54.8**	**-0.9**
	comp=N,1.0nm,0.3s,baz=192,slow=8.5,SNR=15						
PETK				LR	LR	01 37 11.1	
	comp=N,1µm,18.9s,baz=189,slow=41						
	comp=N,5.1nm,0.6s						
MDJ	**Mudanjiang**	**13.16**	**282**	P	**Pn**	**01 32 15.7**	**+0.6**
MDJ				pmax	pmax		
	comp=N,17nm,1.3s						
BNX	**BinXian**	**14.71**	**286**	⇑P	**Pn**	**01 32 35.4**	**-0.9**
BNX				pmax	pmax		
	comp=N,26nm,1.2s						
CN2	**Changchun**	**16.18**	**279**	*e*P	**Pn**	**01 32 55.6**	**0.0**
CN2				*e*sP	pP	01 33 02.0	-2.3
CN2				*e*S	**Sn**	**01 35 54.0**	**-0.3**
CN2				pmax	pmax		
	comp=N,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=N,700nm,4.0s						
CN2				LR	LR		
	comp=N,1µm,14.0s						
CN2				LR	LR		
	comp=N,1µm,14.0s						
CN2				LR	LR		
	comp=N,1µm,15.0s						
KSRS	**Korea Array**	**16.23**	**255**	Pn	**Pn**	**01 32 57.5**	**+1.2**
	comp=N,0.1nm,0.3s,baz=54,slow=13,SNR=4.4						
	comp=N,2.2nm,0.8s						
MA2	**Magadan**	**16.30**	**5**	Pn	**P**	**01 32 58.8**	**-1.1**
	comp=N,13nm,0.7s,baz=149,slow=11,SNR=4.4						
MA2				LR	LR	01 39 30.4	
	comp=N,905nm,18.0s,baz=198,slow=38						
JNU	**Nakatsue**	**16.75**	**238**	Pn	**P**	**01 33 04.3**	**-0.7**
	comp=N,0.7nm,0.3s,baz=41,slow=9.4,SNR=3.6						
JNU				LR	LR	01 40 19.5	
	comp=N,1µm,18.4s,baz=41,slow=40						
	comp=N,24nm,1.1s						
ZEA	**Zeya**	**17.02**	**315**	*e*P	**Pn**	**01 33 05.7**	**-0.4**
ZEA				*e*		01 36 21.6	
ZEA				pmax	pmax		
	comp=Z,30nm,1.7s						
ZEA				MLR	MLR		
	comp=E,1µm,17.0s						
ZEA				MLR	MLR		
	comp=N,800nm,13.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,16.0s						
SEY	**Seymchan**	**19.75**	**6**	P	**P**	**01 33 37.0**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=216,slow=8.8,SNR=7.1						
SEY				LR	LR	01 41 33.2	
	comp=Z,893nm,18.7s,baz=180,slow=38						
	comp=Z,10nm,0.9s						
SEY	**Seymchan**	**19.75**	**6**	⇑*e*P	**P**	**01 33 38.3**	**+0.6**
SEY				pmax	pmax		
	comp=Z,277nm,6.3s						
SEY				MLR	MLR		
	comp=Z,1µm,16.0s						
SHEM	**Shemya Is, Ala**	**19.81**	**53**	LR	LR	01 41 34.0	
	comp=Z,251nm,20.3s,baz=310,slow=38						
DL2	**Dalian**	**20.17**	**266**	P	**P**	**01 33 43.1**	**+0.7**
DL2				*e*S	Sn	01 37 32.0	+1.3
DL2				pmax	pmax		
	comp=Z,110nm,1.1s						
DL2				pmax	pmax		
	comp=Z,890nm,5.2s						
DL2				LR	LR		
	comp=Z,1µm,16.5s						
DL2				LR	LR		
	comp=Z,1µm,16.9s						
DL2				LR	LR		
	comp=Z,1µm,13.6s						
HILR	**Hailar Array B**	**20.19**	**298**	P	**P**	**01 33 42.4**	**-0.3**
	comp=Z,9.5nm,0.4s,baz=105,slow=11,SNR=25						
HILR				LR	LR	01 42 26.0	
	comp=Z,1µm,19.0s,baz=90,slow=40						
	comp=Z,9.5nm,0.4s						
YAK	**Yakutsk**	**21.50**	**336**	P	**P**	**01 33 53.2**	**-3.5**
	comp=Z,22nm,0.5s,baz=319,slow=2.5,SNR=4.9						
YAK				LR	LR	01 42 45.5	
	comp=Z,1µm,18.5s,baz=134,slow=38						
YAK	**Yakutsk**	**21.50**	**336**	*e*P	**P**	**01 33 52.7**	**-3.9**
YAK				*e**PP	**pP**	**01 33 59.7**	**-2.8**
YAK				*e*S	**S**	**01 37 51.2**	**-2.5**
YAK				*e**SS	**pS**	**01 38 05.6**	**+2.1**
YAK				*e*SSS	SSS	01 38 33.3	
YAK				*e*		01 45 12.3	
YAK				pmax	pmax		
	comp=Z,50nm,1.0s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,11nm,1.1s						
YAK				smax	smax		
	comp=E,2µm,5.0s						
YAK				smax	smax		
	comp=N,2µm,5.0s						
YAK				MLR	MLR		
	comp=Z,2µm,22.0s						
YAK				MLR	MLR		
	comp=N,2µm,20.0s						
YAK				MLR	MLR		
	comp=E,1µm,19.0s						
XLT	**XiLinHaoTe**	**22.88**	**282**	*e*P	**P**	**01 34 11.2**	**-0.5**
XLT				sP	pP	01 34 18.4	+0.9
XLT				PP	**PnPn**	**01 34 45.0**	**+8.8**
XLT				pmax	pmax		
	comp=E,20nm,1.0s						
XLT				LR	LR		
	comp=E,140nm,14.9s						
XLT				LR	LR		
	comp=E,1µm,14.9s						
XLT				LR	LR		
	comp=E,2µm,16.6s						
JOW	**Kunigami**	**22.89**	**230**	LR	LR	01 44 54.1	
	comp=E,973nm,18.4s,baz=68,slow=41						
BJI	**Beijing**	**23.76**	**273**	P	**P**	**01 34 19.5**	**-0.8**
BJI				pP	**pP**	**01 34 24.2**	**-2.0**
BJI				sP	**sP**	**01 34 26.8**	**-2.1**
BJI				S	**S**	**01 38 30.2**	**-4.0**
BJI				pmax	pmax		
	comp=E,11nm,1.4s						
BJI				pmax	pmax		
	comp=E,290nm,6.0s						
BJI				LR	LR		
	comp=E,400nm,15.8s						
BJI				LR	LR		
	comp=E,480nm,17.6s						
BJI				LR	LR		
	comp=E,720nm,13.8s						
BJT	**Baijiatuau**	**23.77**	**273**	P	**P**	**01 34 19.7**	**-0.7**
BJT	**Baijiatuau**	**23.77**	**273**	P	**P**	**01 34 19.7**	**-0.7**
BJT				pmax	pmax		
	comp=Z,42nm,1.4s						
SSE	**Sheshan**	**24.36**	**249**	P	**P**	**01 34 25.5**	**-0.5**
SSE				S	**S**	**01 38 45.4**	**+1.3**
SSE				pmax	pmax		
	comp=Z,16nm,1.2s						
SSE				pmax	pmax		
	comp=Z,250nm,4.5s						
SSE				LR	LR		
	comp=Z,690nm,18.8s						
SSE				LR	LR		
	comp=Z,480nm,18.9s						
TIA	**Tai'an**	**24.53**	**263**	P	**P**	**01 34 27.5**	**0.0**
TIA				pmax	pmax		
	comp=Z,22nm,1.0s						
NJ2	**Nanjing**	**25.41**	**253**	*e*P	**P**	**01 34 35.2**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,27nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,410nm,6.0s						
NJ2				LR	LR		
	comp=Z,2µm,17.1s						
NJ2				LR	LR		
	comp=Z,2µm,18.9s						
NJ2				LR	LR		
	comp=Z,1µm,18.5s						
HNS	**HongShan**	**25.78**	**268**	⇑P	**P**	**01 34 39.1**	**+0.3**
HNS				pmax	pmax		
	comp=Z,15nm,1.2s						
HNS				LR	LR		
	comp=Z,880nm,14.3s						
HNS				LR	LR		
	comp=Z,610nm,14.3s						
HNS				LR	LR		
	comp=Z,1µm,16.7s						
HHC	**Hu-ho-hao-te**	**26.86**	**277**	*e*P	**P**	**01 34 49.7**	**+1.1**
HHC				S	**S**	**01 39 24.5**	**+0.7**
HHC				pmax	pmax		
	comp=Z,33nm,1.3s						
HHC				pmax	pmax		
	comp=Z,230nm,5.5s						
HHC				LR	LR		
	comp=Z,930nm,14.0s						
HHC				LR	LR		
	comp=Z,970nm,15.7s						
HHC				LR	LR		
	comp=Z,1µm,15.6s						
TIY	**Taiyuan**	**27.31**	**270**	*e*P	**P**	**01 34 56.2**	**+3.5**
TIY				pmax	pmax		
	comp=Z,25nm,0.6s						
TIY				LR	LR		
	comp=Z,510nm,12.4s						
TIY				LR	LR		
	comp=Z,590nm,13.7s						
TIY				LR	LR		
	comp=Z,720nm,14.4s						
BTO	**Baotou**	**28.05**	**277**	*e*P	**P**	**01 35 00.1**	**+0.8**
BTO				pP	**pP**	**01 35 04.0**	**-1.4**
BTO				S	**S**	**01 39 45.8**	**+3.3**
BTO				pmax	pmax		
	comp=Z,32nm,0.9s						
BTO				pmax	pmax		
	comp=Z,810nm,4.1s						
BTO				LR	LR		
	comp=Z,2µm,6.7s						
BTO				LR	LR		
	comp=Z,2µm,5.9s						
BTO				LR	LR		
	comp=Z,2µm,13.3s						
H11N2	**WAKE ISLAND Hy**	**28.53**	**140**	T	T	02 06 03.8	
	baz=330,slow=76						
H11N1	**WAKE ISLAND Hy**	**28.55**	**140**	T	T	02 05 58.6	
	baz=330,slow=76						
H11N3	**WAKE ISLAND Hy**	**28.55**	**140**	T	T	02 06 00.7	
	baz=330,slow=76						
ULN	**Ulaanbaatar**	**28.59**	**293**		**P**	**01 35 04.3**	**+0.2**
ULN	**Ulaanbaatar**	**28.59**	**293**	P	**P**	**01 35 02.7**	**-1.4**
ULN	**Ulaanbaatar**	**28.59**	**293**	*ce*P	**P**	**01 35 04.7**	**+0.6**
ULN				pmax	pmax		
	comp=Z,59nm,1.2s						
ULN	**Ulaanbaatar**	**28.59**	**293**	*e*P	**P**	**01 35 04.7**	**+0.6**
LYN	**LuoYang**	**28.67**	**264**	P	**P**	**01 35 06.6**	**+1.8**
LYN				pmax	pmax		
	comp=Z,24nm,1.3s						
LYN				pmax	pmax		
	comp=Z,480nm,6.3s						
LYN				LR	LR		
	comp=Z,880nm,11.3s						
LYN				LR	LR		
	comp=Z,1µm,12.0s						
LYN				LR	LR		
	comp=Z,1µm,14.4s						
SONM	**Songino Array**	**29.03**	**293**	P	**P**	**01 35 08.9**	**+0.8**
	comp=Z,40nm,1.1s,baz=88,slow=7.9,SNR=84						
SONM				LR	LR	01 48 02.3	
	comp=Z,2µm,20.3s,baz=96,slow=39						
	comp=Z,40nm,1.1s						
SONM	**Songino Array**	**29.03**	**293**	P	**P**	**01 35 08.3**	**+0.3**
WHN	**Wuhan**	**29.43**	**255**	P	**P**	**01 35 11.6**	**+0.1**
WHN				LR	LR		
	comp=Z,3µm,13.5s						
WHN				LR	LR		
	comp=Z,3µm,15.1s						
H11S1	**WAKE ISLAND Hy**	**29.50**	**141**	T	T	02 07 11.0	
	baz=352,slow=76						
H11S3	**WAKE ISLAND Hy**	**29.51**	**141**	T	T	02 07 12.7	
	baz=352,slow=76						
H11S2	**WAKE ISLAND Hy**	**29.52**	**141**	T	T	02 07 11.1	
	baz=352,slow=76						
TIXI	**Tiksi**	**29.80**	**348**	⇑*e*P	**P**	**01 35 10.2**	**-4.2**
TIXI				pmax	pmax		
	comp=Z,47nm,4.7s						
TIXI				MLR	MLR		
	comp=Z,987nm,16.0s						
GAMB	**Gambell**	**30.73**	**34**	P	**P**	**01 35 22.9**	**+0.2**
	baz=248						
ZAK	**Zakamensk**	**30.82**	**299**	*e*P	**P**	**01 35 23.7**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,17nm,1.3s						
XAN	**Xi'an**	**31.49**	**266**	P	**P**	**01 35 29.8**	**0.0**
XAN				pP	pP	01 35 33.9	-2.0
XAN				pmax	pmax		
	comp=Z,13nm,1.1s						
XAN				LR	LR		
	comp=Z,890nm,14.8s						
XAN				LR	LR		
	comp=Z,690nm,13.6s						
XAN				LR	LR		
	comp=Z,1µm,16.5s						
MOY	**Mondy**	**32.17**	**302**	*e*P	**P**	**01 35 36.7**	**+1.0**
MOY				pmax	pmax		
	comp=Z,40nm,2.7s						
K13K	**Kusilvak Mount**	**33.29**	**39**	P	**P**	**01 35 46.6**	**+1.4**
	baz=258						
ANM	**Nome**	**33.61**	**35**	P	**P**	**01 35 49.4**	**+1.4**
	baz=254						
J14K	**Nanvaranak Lak**	**33.96**	**38**	P	**P**	**01 35 51.5**	**+0.5**
	baz=258						
F15K	**North Star Dit**	**34.23**	**33**	P	**P**	**01 35 54.2**	**+0.8**
	baz=253						
LZH	**Lanzhou**	**34.25**	**273**	*e*P	**P**	**01 35 55.3**	**+1.3**
LZH				pP	pP	01 36 00.6	+0.4
LZH				pmax	pmax		
	comp=Z,43nm,1.2s						
LZH				LR	LR		
	comp=Z,1µm,14.8s						
LZH				LR	LR		
	comp=Z,780nm,13.7s						
LZH				LR	LR		
	comp=Z,1µm,14.8s						
G15K	**Niukluk**	**34.28**	**34**	P	**P**	**01 35 54.9**	**+1.2**
	baz=255						
LZDM	**Lanzhou Array**	**34.41**	**273**	P	**P**	**01 35 56.9**	**+1.2**
	comp=Z,20nm,1.0s,baz=72,slow=6.4,SNR=11						
	comp=Z,20nm,1.0s						
KNGR	**Kungurtug, Tuv**	**34.46**	**300**	⇓*i*P	**P**	**01 35 56.3**	**+0.6**
KNGR				pmax	pmax		
	comp=Z,14nm,1.0s						
O14K	**Tigyukauivet M**	**34.59**	**45**	P	**P**	**01 35 57.1**	**+0.7**
	baz=266						
L15K	**Ungalak Mounta**	**34.73**	**40**	P	**P**	**01 35 57.6**	**-0.1**
	baz=262						
K15K	**Wolf Creek Mou**	**34.80**	**39**	P	**P**	**01 35 58.6**	**+0.3**
	baz=261						
C16K	**Lisburne Hills**	**34.82**	**28**	P	**P**	**01 35 58.8**	**+0.4**
	baz=249						
H16K	**Elim**	**34.94**	**35**	P	**P**	**01 36 00.0**	**+0.6**
	baz=257						
M15K	**Kasigluk River**	**35.00**	**42**	P	**P**	**01 36 00.4**	**+0.4**
	baz=264						
G16K	**Koyuk River**	**35.07**	**34**	P	**P**	**01 36 00.8**	**+0.2**
	baz=256						
O15K	**Ungalikthiuk R**	**35.32**	**45**	P	**P**	**01 36 02.4**	**-0.4**
	baz=267						
D17K	**Noatak River**	**35.43**	**30**	P	**P**	**01 36 04.5**	**+0.9**
	baz=252						
I17K	**Unalakleet**	**35.45**	**37**	P	**P**	**01 36 05.2**	**+1.4**
	baz=260						
RDOG	**Red Dog Mine**	**35.60**	**29**	P	**P**	**01 36 06.4**	**+1.2**
	baz=252						
C17K	**DeLong Mountai**	**35.64**	**29**	P	**P**	**01 36 06.0**	**+0.4**
	baz=251						
L16K	**Owhat River**	**35.69**	**41**	P	**P**	**01 36 07.5**	**+1.5**
	baz=264						
E17K	**Hotham Inlet**	**35.71**	**31**	P	**P**	**01 36 07.3**	**+1.2**
	baz=254						
F17K	**Baldwin Pennin**	**35.77**	**32**	P	**P**	**01 36 06.7**	**+0.2**
F17K				IAmb	IAmb	01 36 20.4	
	comp=Z,26nm,1.0s						
F17K	**Baldwin Pennin**	**35.77**	**32**	P	**P**	**01 36 07.7**	**+1.2**
	baz=256						

G17K	**Kiwalik Mounta**	**35.78**	**34**	P	**P**	**01 36 08.3 +1.5**
	baz=258					
GTA	**Gaotai**	**35.81**	**280**	*e*P	**P**	**01 36 08.1 +0.7**
GTA				pmax	pmax	
	comp=Z,18nm,1.2s					
GTA				LR	LR	
	comp=Z,340nm,14.5s					
GTA				LR	LR	
	comp=Z,750nm,13.8s					
GTA				LR	LR	
	comp=Z,840nm,13.8s					
M16K	**Timber Creek**	**35.87**	**42**	P	**P**	**01 36 08.8 +1.3**
	baz=265					
N16K	**Nishlik Lake**	**35.93**	**43**	P	**P**	**01 36 09.1 +1.1**
	baz=266					
H17K	**Granite Mounta**	**35.98**	**35**	P	**P**	**01 36 09.7 +1.3**
H17K	**Granite Mounta**	**35.98**	**35**	P	**P**	**01 36 09.5 +1.2**
	baz=259					
J17K	**VABM Dome**	**36.08**	**38**	P	**P**	**01 36 10.8 +1.5**
	baz=262					
O16K	**Kokwok River B**	**36.22**	**44**	P	**P**	**01 36 11.6 +1.1**
	baz=268					
E18K	**Tukpahlearik C**	**36.26**	**31**	P	**P**	**01 36 12.2 +1.4**
E18K				IAmb	IAmb	01 36 35.5
	comp=Z,40nm,1.8s					
E18K	**Tukpahlearik C**	**36.26**	**31**	P	**P**	**01 36 12.0 +1.2**
	baz=255					
L17K	**Donlin**	**36.29**	**40**	P	**P**	**01 36 12.6 +1.5**
	baz=264					
K17K	**Iditarod**	**36.35**	**39**	P	**P**	**01 36 12.9 +1.4**
K17K				IAmb	IAmb	01 36 29.1
	comp=Z,26nm,0.9s					
K17K	**Iditarod**	**36.35**	**39**	P	**P**	**01 36 13.2 +1.6**
	baz=264					
C18K	**Utukok River**	**36.39**	**29**		**P**	**01 36 12.3 +0.3**
C18K	**Utukok River**	**36.39**	**29**	P	**P**	**01 36 12.3 +0.3**
	baz=253					
B18K	**Kokolik River**	**36.41**	**27**	P	**P**	**01 36 13.2 +1.2**
	baz=251					
F18K	**Selawik**	**36.43**	**32**	P	**P**	**01 36 13.0 +0.8**
	baz=257					
M17K	**Holitna River**	**36.63**	**41**	P	**P**	**01 36 15.4 +1.4**
M17K				IAmb	IAmb	01 36 31.6
	comp=Z,36nm,0.9s					
M17K	**Holitna River**	**36.63**	**41**	P	**P**	**01 36 15.5 +1.4**
	baz=266					
H18K	**Honhosa River**	**36.66**	**35**	P	**P**	**01 36 15.3 +1.0**
H18K				IAmb	IAmb	01 36 35.8
	comp=Z,22nm,0.9s					
H18K	**Honhosa River**	**36.66**	**35**	P	**P**	**01 36 15.5 +1.2**
	baz=260					
G18K	**Tagagawik**	**36.67**	**34**	P	**P**	**01 36 15.0 +0.6**
G18K				IAmb	IAmb	01 36 36.8
	comp=Z,32nm,1.1s					
G18K	**Tagagawik**	**36.67**	**34**	P	**P**	**01 36 15.5 +1.1**
	baz=259					
CD2	**Chengdu**	**36.83**	**265**	P	**P**	**01 36 15.0 -1.1**
CD2				pmax	pmax	
	comp=Z,20nm,0.4s					
L18K	**Granite Mounta**	**37.05**	**40**	P	**P**	**01 36 18.6 +1.1**
	baz=266					
C19K	**Lookout Ridge**	**37.08**	**28**	P	**P**	**01 36 18.4 +0.6**
C19K				IAmb	IAmb	01 36 24.0
	comp=Z,19nm,0.9s					
C19K	**Lookout Ridge**	**37.08**	**28**	P	**P**	**01 36 18.9 +1.1**
	baz=254					
J18K	**Innoko River**	**37.14**	**38**		**P**	**01 36 19.1 +0.8**
J18K	**Innoko River**	**37.14**	**38**	P	**P**	**01 36 19.2 +0.9**
	baz=264					
F19K	**Shaleruckik Mo**	**37.20**	**32**		**P**	**01 36 19.1 +0.3**
F19K				IAmb	IAmb	01 36 33.8
	comp=Z,26nm,1.1s					
F19K	**Shaleruckik Mo**	**37.20**	**32**	P	**P**	**01 36 20.3 +1.5**
	baz=259					
GCSA	**Galena City Sc**	**37.22**	**36**	P	**P**	**01 36 20.0 +1.1**
	baz=262					
GYA	**Guiyang**	**37.29**	**257**	⇓P	**P**	**01 36 20.1 0.0**
GYA				pmax	pmax	
	comp=Z,15nm,1.1s					
G19K	**Purcell Mounta**	**37.35**	**33**	P	**P**	**01 36 20.3 +0.2**
G19K	**Purcell Mounta**	**37.35**	**33**	P	**P**	**01 36 21.2 +1.1**
	baz=260					
N18K	**Kilae Creek**	**37.35**	**42**	P	**P**	**01 36 20.9 +0.7**
	baz=269					
Q17K	**Contact Creek**	**37.37**	**46**	P	**P**	**01 36 20.8 +0.4**
	baz=272					
D19K	**Kuna River**	**37.44**	**29**	P	**P**	**01 36 21.0 +0.2**
D19K				IAmb	IAmb	01 36 29.4
	comp=Z,43nm,0.9s					
D19K	**Kuna River**	**37.44**	**29**	P	**P**	**01 36 21.9 +1.1**
	baz=256					
H19K	**Roundabout Mou**	**37.51**	**34**	P	**P**	**01 36 22.1 +0.7**
H19K				IAmb	IAmb	01 36 37.7
	comp=Z,47nm,1.1s					
H19K	**Roundabout Mou**	**37.51**	**34**	P	**P**	**01 36 21.8 +0.4**
	baz=262					
E19K	**Redstone River**	**37.54**	**31**	P	**P**	**01 36 22.2 +0.5**
E19K				IAmb	IAmb	01 36 38.8
	comp=Z,28nm,0.9s					
E19K	**Redstone River**	**37.54**	**31**	P	**P**	**01 36 21.7 +0.1**
	baz=258					
J19K	**Poorman**	**37.68**	**37**	P	**P**	**01 36 23.4 +0.5**
J19K				IAmb	IAmb	01 36 38.4
	comp=Z,37nm,1.1s					
J19K	**Poorman**	**37.68**	**37**	P	**P**	**01 36 23.6 +0.8**
	baz=264					
P18K	**Big Mountain,**	**37.68**	**45**	P	**P**	**01 36 23.7 +0.7**
	baz=271					
D20K	**Etivluk River**	**38.03**	**29**	P	**P**	**01 36 26.4 +0.7**
D20K	**Etivluk River**	**38.03**	**29**	P	**P**	**01 36 26.5 +0.7**
	baz=258					
F20K	**Avaraart Lake**	**38.04**	**32**	P	**P**	**01 36 26.1 +0.3**
F20K	**Avaraart Lake**	**38.04**	**32**	P	**P**	**01 36 26.5 +0.7**
	baz=260					
E20K	**Nigu River**	**38.08**	**30**	P	**P**	**01 36 26.8 +0.5**
	baz=258					
B20K	**Meade River**	**38.14**	**27**		**P**	**01 36 27.0 +0.3**
B20K				IAmb	IAmb	01 37 01.5
	comp=Z,19nm,0.8s					
B20K	**Meade River**	**38.14**	**27**	P	**P**	**01 36 27.2 +0.5**
	baz=255					
H20K	**Anotleneega Mo**	**38.16**	**35**	P	**P**	**01 36 27.2 +0.3**
	baz=263					
K20K	**Telida**	**38.32**	**38**	P	**P**	**01 36 27.0 -1.3**
	baz=267					
J20K	**Nowinta River**	**38.34**	**37**		**P**	**01 36 29.3 +0.9**
J20K	**Nowinta River**	**38.34**	**37**	P	**P**	**01 36 28.4 -0.1**
	baz=266					
IMAR	**Indian Mountai**	**38.68**	**34**	P	**P**	**01 36 32.1 +0.8**
M20K	**Styx River**	**38.71**	**41**	P	**P**	**01 36 32.3 +0.7**
	baz=270					
C21K	**Knifeblade Rid**	**38.77**	**29**	P	**P**	**01 36 32.7 +0.8**
	baz=259					
G21K	**Allakaket**	**38.83**	**33**	P	**P**	**01 36 32.8 +0.3**
G21K				IAmb	IAmb	01 36 55.1
	comp=Z,24nm,1.0s					
G21K	**Allakaket**	**38.83**	**33**	P	**P**	**01 36 33.2 +0.6**
	baz=263,SNR=16					
B21K	**Ikpikpuk River**	**38.92**	**28**		**P**	**01 36 33.7 +0.5**
B21K				IAmb	IAmb	01 36 41.4
	comp=Z,49nm,1.1s					
B21K	**Ikpikpuk River**	**38.92**	**28**	P	**P**	**01 36 33.5 +0.3**
	baz=258,SNR=29					
E21K	**Killik River**	**38.93**	**30**	P	**P**	**01 36 33.5 +0.1**
E21K	**Killik River**	**38.93**	**30**	P	**P**	**01 36 33.8 +0.5**
	baz=261					
F21K	**Alatna River**	**38.93**	**32**		**P**	**01 36 34.5 +1.1**
F21K	**Alatna River**	**38.93**	**32**	P	**P**	**01 36 34.4 +1.0**
	baz=262					
H21K	**Melozitna Rive**	**39.03**	**35**	P	**P**	**01 36 34.9 +0.6**
H21K	**Melozitna Rive**	**39.03**	**35**	P	**P**	**01 36 34.3 0.0**
	baz=265					
A22K	**Sinclair Lake**	**39.10**	**26**	P	**P**	**01 36 35.0 +0.4**
	baz=256					
CHUM	**Lake Minchumin**	**39.13**	**37**	P	**P**	**01 36 35.8 +0.8**
	baz=268					
KDAK	**Kodiak Island**	**39.15**	**47**	P	**P**	**01 36 36.5 +1.3**
	baz=275					
PPLA	**Purkeypile**	**39.16**	**39**	P	**P**	**01 36 36.4 +0.9**
	baz=269,SNR=5.6					
STLK	**Strandline Lak**	**39.33**	**41**	P	**P**	**01 36 37.0 +0.2**
B22K	**Teshekpuk Lake**	**39.46**	**27**		**P**	**01 36 38.0 +0.3**
B22K				IAmb	IAmb	01 37 12.5
	comp=Z,69nm,1.8s					
B22K	**Teshekpuk Lake**	**39.46**	**27**	P	**P**	**01 36 38.4 +0.7**
	baz=259					
D22K	**Ayikyak River**	**39.46**	**29**	P	**P**	**01 36 38.5 +0.7**
D22K				IAmb	IAmb	01 36 51.4
	comp=Z,52nm,1.4s					
D22K	**Ayikyak River**	**39.46**	**29**	P	**P**	**01 36 38.6 +0.8**
	baz=261					
F22K	**John River**	**39.47**	**32**	P	**P**	**01 36 38.3 +0.5**
	baz=264					
H22K	**Ishtalitna Cre**	**39.64**	**34**	P	**P**	**01 36 40.2 +1.0**
H22K	**Ishtalitna Cre**	**39.64**	**34**	P	**P**	**01 36 40.3 +1.0**
	baz=266					
G22K	**Bettles**	**39.67**	**33**	P	**P**	**01 36 39.8 +0.3**
	baz=265					
E22K	**Anaktuvuk Pass**	**39.68**	**31**	P	**P**	**01 36 40.6 +1.0**
E22K				IAmb	IAmb	01 36 53.3
	comp=Z,27nm,0.8s					
E22K	**Anaktuvuk Pass**	**39.68**	**31**	P	**P**	**01 36 39.1 -0.5**
	baz=263					
BPAW	**Bear Paw Mtn.**	**39.72**	**37**	P	**P**	**01 36 41.1 +1.1**
BPAW	**Bear Paw Mtn.**	**39.72**	**37**	P	**P**	**01 36 40.6 +0.5**
	baz=269					
NRIK	**Noril'sk**	**39.78**	**331**	LR	LR	01 54 22.7
	comp=Z,418nm,18.3s,baz=88,slow=38					
NRIK	**Noril'sk**	**39.78**	**331**	⇑*e*P	**P**	**01 36 42.3 +1.9**
NRIK				pmax	pmax	
	comp=Z,8.0nm,1.4s					
SUA	**Susitna One**	**39.85**	**41**	P	**P**	**01 36 41.6 +0.3**
	baz=272					
QIZ	**Qiongzhong**	**40.03**	**245**	P	**P**	**01 36 42.7 -0.4**
QIZ				S	**S**	**01 42 48.7 +1.1**
QIZ				LR	LR	
	comp=Z,1μm,19.9s					
QIZ				LR	LR	
	comp=Z,1μm,17.7s					
QIZ				LR	LR	
	comp=Z,940nm,18.4s					
D23K	**Nanushuk River**	**40.19**	**29**	P	**P**	**01 36 44.8 +0.9**
D23K				IAmb	IAmb	01 36 58.5
	comp=Z,44nm,1.4s					
D23K	**Nanushuk River**	**40.19**	**29**	P	**P**	**01 36 44.2 +0.4**
	baz=263,SNR=9.6					
COLD	**Coldfoot**	**40.20**	**32**	P	**P**	**01 36 44.6 +0.7**
COLD	**Coldfoot**	**40.20**	**32**	P	**P**	**01 36 44.6 +0.7**
	baz=266,SNR=5.8					
G23K	**Bananza Creek**	**40.23**	**33**		**P**	**01 36 44.9 +0.6**
G23K	**Bananza Creek**	**40.23**	**33**	P	**P**	**01 36 44.9 +0.6**
	baz=266					
C23K	**Itkillik River**	**40.33**	**28**		**P**	**01 36 45.5 +0.6**
C23K				IAmb	IAmb	01 36 59.1
	comp=Z,60nm,1.4s					
C23K	**Itkillik River**	**40.33**	**28**	P	**P**	**01 36 45.6 +0.6**
	baz=262					
H23K	**Yukon River**	**40.39**	**34**	P	**P**	**01 36 46.9 +1.4**
H23K	**Yukon River**	**40.39**	**34**	P	**P**	**01 36 46.6 +1.1**
	baz=268					
BWN	**Browne**	**40.39**	**37**	P	**P**	**01 36 47.1 +1.5**
I23K	**Minto, Yukon-K**	**40.44**	**35**	P	**P**	**01 36 47.5 +1.6**
I23K				IAmb	IAmb	01 37 01.5
	comp=Z,35nm,1.5s					
I23K	**Minto, Yukon-K**	**40.44**	**35**	P	**P**	**01 36 46.5 +0.5**
	baz=269					
E23K	**Chandalar**	**40.49**	**31**	P	**P**	**01 36 47.3 +0.9**
E23K				IAmb	IAmb	01 37 01.1
	comp=Z,73nm,1.5s					
E23K	**Chandalar**	**40.49**	**31**	P	**P**	**01 36 47.1 +0.7**
	baz=265					
TOLK	**Toolik Lake Re**	**40.56**	**30**		**P**	**01 36 47.9 +1.0**
TOLK				IAmb	IAmb	01 37 00.6
	comp=Z,34nm,1.2s					
TOLK	**Toolik Lake Re**	**40.56**	**30**	P	**P**	**01 36 47.6 +0.7**
	baz=265,SNR=12					
NEA2	**Nenana**	**40.56**	**36**	P	**P**	**01 36 47.6 +0.6**
NEA2	**Nenana**	**40.56**	**36**	P	**P**	**01 36 47.9 +1.0**
	baz=270					
MCK	**McKinley**	**40.63**	**38**	P	**P**	**01 36 48.3 +0.7**
	baz=271,SNR=7.4					
GOMU	**GeErMu**	**40.75**	**278**	P	**P**	**01 36 48.9 -0.4**
GOMU				pmax	pmax	
	comp=Z,18nm,1.2s					
GOMU				LR	LR	
	comp=Z,560nm,13.7s					
GOMU				LR	LR	
	comp=Z,920nm,14.7s					
GOMU				LR	LR	
	comp=Z,1μm,14.5s					
PZH	**PanZhiHua**	**40.78**	**261**	P	**P**	**01 36 49.8 +0.5**
PZH				pmax	pmax	
	comp=Z,10.0nm,0.8s					
WAT1	**Susitna Watana**	**40.83**	**39**	P	**P**	**01 36 49.4 +0.1**
	baz=272					
D24K	**Happy Valley**	**40.88**	**29**	IAmb	IAmb	01 36 56.2
	comp=Z,30nm,1.0s					
D24K	**Happy Valley**	**40.88**	**29**	P	**P**	**01 36 50.3 +0.8**
	baz=265,SNR=18					
KMI	**Kunming**	**40.90**	**258**	P	**P**	**01 36 51.2 +0.8**
KMI				pmax	pmax	
	comp=Z,11nm,1.2s					
KMI				LR	LR	
	comp=Z,730nm,17.3s					
KMI				LR	LR	
	comp=Z,570nm,12.1s					
KMI				LR	LR	
	comp=Z,770nm,17.2s					
E24K	**Your Creek**	**40.91**	**31**	IAmb	IAmb	01 36 58.5
	comp=Z,28nm,0.9s					
E24K	**Your Creek**	**40.91**	**31**	P	**P**	**01 36 50.4 +0.5**
	baz=266					
KNK	**Knik Glacier**	**40.95**	**41**	IAmb	IAmb	01 37 05.4
	comp=Z,36nm,1.2s					
KNK	**Knik Glacier**	**40.95**	**41**	P	**P**	**01 36 50.6 +0.4**
	baz=274					
C24K	**Franklin Bluff**	**40.97**	**28**	P	**P**	**01 36 50.5 +0.3**
	baz=264,SNR=16					
SML	**Sawmill**	**40.98**	**41**	P	**P**	**01 36 50.4 -0.1**
SML	**Sawmill**	**40.98**	**41**	P	**P**	**01 36 50.6 +0.1**
	baz=274					
WRH	**Wood River Hil**	**40.99**	**36**	P	**P**	**01 36 50.9 +0.4**
DGZ	**Jazzator, Alta**	**40.99**	**301**	⇓*i*P	**P**	**01 36 52.4 +1.5**
DGZ				pmax	pmax	
	comp=Z,25nm,1.4s					
H24K	**Noodor Dome**	**41.07**	**34**	P	**P**	**01 36 51.5 +0.3**
H24K	**Noodor Dome**	**41.07**	**34**	P	**P**	**01 36 51.3 +0.1**
	baz=270					
COLA	**College**	**41.08**	**36**	⇓*e*P	**P**	**01 36 53.2 +2.0**
COLA				pmax	pmax	
	comp=Z,33nm,1.1s					
CCB	**Clear Creek Bu**	**41.11**	**36**		**P**	**01 36 51.9 +0.5**
F24K	**Squaw Lake**	**41.11**	**32**	P	**P**	**01 36 52.0 +0.5**
F24K	**Squaw Lake**	**41.11**	**32**	P	**P**	**01 36 51.7 +0.1**
	baz=268					
WAT6	**Susitna Watana**	**41.21**	**39**	P	**P**	**01 36 52.9 +0.4**
	baz=273					
G24K	**Hadweenzic Riv**	**41.25**	**33**	P	**P**	**01 36 53.6 +1.0**
G24K				IAmb	IAmb	01 36 59.9
	comp=Z,28nm,1.0s					
G24K	**Hadweenzic Riv**	**41.25**	**33**	P	**P**	**01 36 53.5 +0.9**
	baz=269					
POKR	**Poker Plat Res**	**41.26**	**35**	P	**P**	**01 36 53.1 +0.4**
POKR				IAmb	IAmb	01 37 08.4
	comp=Z,40nm,1.1s					
POKR	**Poker Plat Res**	**41.26**	**35**	P	**P**	**01 36 53.3 +0.6**
	baz=271					
M23K	**Glacier View**	**41.27**	**41**	P	**P**	**01 36 53.0 +0.2**
	baz=274					
DHY	**Denali Highway**	**41.35**	**39**	P	**P**	**01 36 53.7 0.0**
DHY				IAmb	IAmb	01 37 08.5
	comp=Z,57nm,1.3s					
DHY	**Denali Highway**	**41.35**	**39**	P	**P**	**01 36 53.8 0.0**
	baz=273,SNR=6.2					
SCM	**Sheep Creek Mo**	**41.46**	**40**	P	**P**	**01 36 54.5 +0.1**
	baz=275					
HDA	**Harding Lake**	**41.48**	**37**	IAmb	IAmb	01 37 09.0
	comp=Z,28nm,1.2s					
HDA	**Harding Lake**	**41.48**	**37**	P	**P**	**01 36 54.5 -0.1**
	baz=272					
IL31		**41.50**	**36**		**P**	**01 36 55.0 +0.4**
IL31				IAmb	IAmb	01 37 10.6
	comp=Z,23nm,1.1s					
ILAR	**Eielson Array**	**41.50**	**36**	P	**P**	**01 36 54.5 -0.1**
	comp=Z,3.0nm,0.9s,baz=266,slow=7.0,SNR=16					
ILAR				LR	LR	01 54 21.5
	comp=Z,189nm,18.9s,baz=298,slow=36					
	comp=Z,3.0nm,0.9s					
ILAR	**Eielson Array**	**41.50**	**36**	P	**P**	**01 36 55.8 +1.1**
ZAA0	**Zalesovo Array**	**41.58**	**307**		**P**	**01 36 55.7 +0.2**
ZALV	**Zalesovo Beam**	**41.58**	**307**	P	**P**	**01 36 55.2 -0.2**
	comp=Z,7.9nm,1.0s,baz=79,slow=7.7,SNR=25					
ZALV				PcP	**PcP**	**01 38 52.4 +0.2**
	comp=Z,2.9nm,0.8s,baz=84,slow=4.6,SNR=4.2					
ZALV				LR	LR	01 54 49.2
	comp=Z,220nm,19.4s,baz=57,slow=37					
	comp=Z,7.9nm,1.0s					
ZALV	**Zalesovo Beam**	**41.58**	**307**		**P**	**01 36 54.3 -1.1**
D25K	**Kavik River**	**41.76**	**29**	P	**P**	**01 36 57.2 +0.4**
D25K				IAmb	IAmb	01 37 10.1
	comp=Z,46nm,1.4s					
D25K	**Kavik River**	**41.76**	**29**	P	**P**	**01 36 57.0 +0.2**
	baz=267					
G25K	**Bearman Lake**	**41.79**	**33**	P	**P**	**01 36 58.1 +1.1**
	baz=270					
F25K	**Christian Rive**	**41.98**	**32**	P	**P**	**01 36 58.8 +0.2**
F25K	**Christian Rive**	**41.98**	**32**	P	**P**	**01 36 59.2 +0.6**
	baz=270					
E25K	**Arctic Village**	**42.01**	**31**	P	**P**	**01 36 59.9 +1.0**
E25K	**Arctic Village**	**42.01**	**31**	P	**P**	**01 36 59.8 +1.0**
	baz=269					
K24K	**Donnelly Dome**	**42.03**	**37**	P	**P**	**01 36 59.6 +0.6**
K24K				IAmb	IAmb	01 37 13.5
	comp=Z,57nm,1.2s					
K24K	**Donnelly Dome**	**42.03**	**37**	P	**P**	**01 36 59.7 +0.6**
	baz=274					
PRP	**Porcupine Dome**	**42.05**	**35**		**P**	**01 37 00.1 +0.8**
PRP				IAmb	IAmb	01 37 19.8
	comp=Z,58nm,1.8s					
PRP	**Porcupine Dome**	**42.05**	**35**	P	**P**	**01 36 59.7 +0.4**
	baz=272					
FYU	**Fort Yukon**	**42.14**	**33**		**P**	**01 37 00.6 +0.8**
FYU				IAmb	IAmb	01 37 34.0
	comp=Z,63nm,1.5s					
J25K	**Salcha River,**	**42.16**	**36**	P	**P**	**01 37 00.9 +0.8**
J25K	**Salcha River,**	**42.16**	**36**	P	**P**	**01 37 01.0 +0.8**
	baz=273					
KLU	**Klutina**	**42.16**	**41**	P	**P**	**01 37 00.7 +0.5**
KLU				IAmb	IAmb	01 37 21.4
	comp=Z,29nm,1.1s					
KLU	**Klutina**	**42.16**	**41**	P	**P**	**01 37 00.7 +0.5**
	baz=276					
PAX	**Paxson**	**42.23**	**39**	P	**P**	**01 37 01.3 +0.6**
	baz=275,SNR=5.9					
C26K	**Camden Bay**	**42.30**	**28**	P	**P**	**01 37 02.2 +1.1**
	baz=268,SNR=9.1					
F26K	**Sheenjek River**	**42.55**	**32**	P	**P**	**01 37 04.6 +1.4**
F26K	**Sheenjek River**	**42.55**	**32**	P	**P**	**01 37 04.1 +0.9**
	baz=271					
WMQ	**Urumqi**	**42.65**	**292**	*e*P	**P**	**01 37 05.6 +1.2**
WMQ				sP	pwP	01 37 17.3 +2.9
WMQ				pmax	pmax	
	comp=Z,35nm,1.1s					
WMQ				LR	LR	
	comp=Z,1μm,12.7s					
WMQ				LR	LR	
	comp=Z,3μm,16.1s					
WMQ				LR	LR	
	comp=Z,2μm,16.9s					
G26K	**Porcupine Rive**	**42.71**	**33**	P	**P**	**01 37 05.3 +0.8**
G26K	**Porcupine Rive**	**42.71**	**33**	P	**P**	**01 37 05.0 +0.6**
	baz=272					
C27K	**Jago River**	**42.71**	**29**	P	**P**	**01 37 05.0 +0.5**
C27K				IAmb	IAmb	01 37 21.5
	comp=Z,23nm,1.0s					
C27K	**Jago River**	**42.71**	**29**	P	**P**	**01 37 05.0 +0.5**
	baz=269					
DOT	**Dot Lake**	**42.80**	**38**	P	**P**	**01 37 05.4 +0.1**
SCRK	**Sand Creek**	**42.80**	**37**		**P**	**01 37 05.1 -0.3**
SCRK	**Sand Creek**	**42.80**	**37**	P	**P**	**01 37 06.2 +0.7**
	baz=275					
BMRM	**Bremner River**	**42.85**	**42**	P	**P**	**01 37 06.6 +0.8**
	baz=278					
J26L	**Joseph Creek**	**42.94**	**36**		**P**	**01 37 06.6 +0.1**
J26L	**Joseph Creek**	**42.94**	**36**	P	**P**	**01 37 07.3 +0.8**
	baz=275					
I26K	**Coal Creek Min**	**43.05**	**35**	P	**P**	**01 37 08.0 +0.7**
	baz=274					
L26K	**Log Cabin Wild**	**43.19**	**38**	P	**P**	**01 37 09.5 +1.0**
L26K				IAmb	IAmb	01 37 25.1
	comp=Z,43nm,1.2s					
L26K	**Log Cabin Wild**	**43.19**	**38**	P	**P**	**01 37 09.4 +1.0**
	baz=277					
ZSN	**Zaisan**	**43.28**	**298**	*e*P	**P**	**01 37 09.8 +0.4**
	comp=Z,20nm,1.3s					
ZSN	**Zaisan**	**43.28**	**298**	*e*P	**P**	**01 37 09.8 +0.4**
ZSN				pmax	pmax	
	comp=Z,20nm,1.3s					
M26K	**Nabesna, AK**	**43.42**	**39**		**P**	**01 37 11.8 +1.3**
M26K				IAmb	IAmb	01 37 27.4
	comp=Z,50nm,1.2s					
M26K	**Nabesna, AK**	**43.42**	**39**	P	**P**	**01 37 11.0 +0.6**
	baz=278					
E27K	**Coleen River**	**43.50**	**31**		**P**	**01 37 11.8 +0.9**
E27K				IAmb	IAmb	01 37 26.6
	comp=Z,39nm,1.6s					
E27K	**Coleen River**	**43.50**	**31**	P	**P**	**01 37 11.5 +0.7**
	baz=273					
G27K	**Doyon Strip**	**43.55**	**33**	P	**P**	**01 37 12.4 +1.0**
G27K	**Doyon Strip**	**43.55**	**33**	P	**P**	**01 37 12.1 +0.8**
	baz=274					
MCARA	**McCarthy VSAT**	**43.55**	**41**	P	**P**	**01 37 12.6 +1.2**
	baz=279					
CRQM	**Cirque**	**43.59**	**42**	P	**P**	**01 37 12.6 +0.6**
CRQE	**Cirque**	**43.62**	**42**	P	**P**	**01 37 12.4 +0.3**
	baz=279					
K27K	**Chicken**	**43.64**	**37**	P	**P**	**01 37 12.6 +0.5**
K27K	**Chicken**	**43.64**	**37**	P	**P**	**01 37 12.5 +0.5**
	baz=277					
H27K	**Steamboat Moun**	**43.65**	**34**		**P**	**01 37 13.4 +1.3**
H27K				IAmb	IAmb	01 37 29.1
	comp=Z,29nm,1.4s					
H27K	**Steamboat Moun**	**43.65**	**34**	P	**P**	**01 37 13.0 +0.8**
	baz=275					
D27M	**Malcolm River**	**43.68**	**29**	P	**P**	**01 37 13.4 +1.0**
	baz=272,SNR=11					
L27K	**Beaver Creek,**	**43.87**	**38**	P	**P**	**01 37 14.6 +0.7**
L27K	**Beaver Creek,**	**43.87**	**38**	P	**P**	**01 37 14.7 +0.7**
	baz=278					
BCAR	**Beaver Creek A**	**43.89**	**38**		**P**	**01 37 14.8 +0.7**
M27K	**Edge Creek, AK**	**43.95**	**39**	P	**P**	**01 37 15.7 +1.0**
M27K				IAmb	IAmb	01 37 31.5
	comp=Z,46nm,1.3s					
M27K	**Edge Creek, AK**	**43.95**	**39**	P	**P**	**01 37 14.8 +0.1**
	baz=278					
F28M	**Old Crow**	**44.18**	**32**		**P**	**01 37 17.3 +0.9**
F28M	**Old Crow**	**44.18**	**32**	P	**P**	**01 37 17.1 +0.6**
	baz=275,SNR=12					
E28M	**Babbage River**	**44.23**	**30**		**P**	**01 37 17.6 +0.8**
E28M	**Babbage River**	**44.23**	**30**	P	**P**	**01 37 17.3 +0.5**
	baz=274					
GRNC	**Granite Creek**	**44.27**	**42**	IAmb	IAmb	01 37 24.2
	comp=Z,30nm,1.1s					
I28M	**Miner Creek**	**44.38**	**35**	IAmb	IAmb	01 37 40.9
	comp=Z,18nm,0.9s					
I28M	**Miner Creek**	**44.38**	**35**	P	**P**	**01 37 18.9 +0.8**
	baz=277					
BVCY	**Beaver Creek**	**44.41**	**39**	P	**P**	**01 37 19.3 +1.0**
	baz=279					
CTG	**Chitna Glacier**	**44.43**	**41**	P	**P**	**01 37 19.6 +1.0**
	baz=280					
CTGM	**Chitina Glacie**	**44.43**	**41**	IAmb	IAmb	01 37 35.1
	comp=Z,35nm,1.2s					
D28M	**Stokes Point**	**44.47**	**29**	P	**P**	**01 37 19.2 +0.6**
	baz=274					
YUK3	**Moose Creek**	**44.70**	**40**	P	**P**	**01 37 21.5 +0.7**
	baz=280					
DAWY	**Dawson**	**44.80**	**37**	IAmb	IAmb	01 38 47.7
	comp=Z,39nm,1.8s					
DAWY	**Dawson**	**44.80**	**37**	P	**P**	**01 37 22.2 +0.8**
	baz=279					
E29M	**Blow River**	**44.85**	**30**	IAmb	IAmb	01 37 29.2
	comp=Z,24nm,0.9s					
E29M	**Blow River**	**44.85**	**30**	P	**P**	**01 37 23.0 +1.2**
	baz=276					
H29M	**Whitestone**	**44.92**	**33**	P	**P**	**01 37 23.1 +0.8**
	baz=278					
G29M	**Pine Creek**	**44.97**	**32**	P	**P**	**01 37 23.9 +1.2**
	baz=277					
MK31	**Makanchi Array**	**45.16**	**298**	*c* *i*P	**P**	**01 37 24.9 +0.4**
MKAR	**Makanchi Array**	**45.16**	**298**	P	**P**	**01 37 24.9 +0.5**
	comp=Z,36nm,1.1s,baz=74,slow=9.1,SNR=65					
	comp=Z,36nm,1.1s					
MKAR	**Makanchi Array**	**45.16**	**298**	P	**P**	**01 37 25.0 +0.5**
MAKZ	**Makanchi**	**45.35**	**298**		**P**	**01 37 26.6 +0.6**
MAKZ	**Makanchi**	**45.35**	**298**	P	**P**	**01 37 26.8 +0.8**
L29M	**L29M**	**45.52**	**38**	P	**P**	**01 37 28.0 +0.9**
	baz=281					
EPYK	**Eagle Plains**	**45.56**	**33**	P	**P**	**01 37 28.3 +0.9**
	baz=279					
K29M	**Barlow Dome**	**45.65**	**37**	P	**P**	**01 37 28.6 +0.3**

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       baz=281
G30M   tAoh Zraii Nji    45.66  32   IAmb     IAmb   01 38 10.1
       comp=Z,42nm,1.4s
G30M   tAoh Zraii Nji    45.66  32   P        P      01 37 29.4 +1.1
       baz=279
F30M   Barrier River     45.74  31   P        P      01 37 29.7 +1.0
       baz=278
YUK6   Outpost Mounta    45.85  41   P        P      01 37 30.6 +0.5
       baz=283
I30M   Mount Dempster    45.89  35   P        P      01 37 31.7 +1.6
       baz=280
O29M   Mount Kennedy     45.90  42   P        P      01 37 31.2 +1.0
       baz=283
J30M   Hart River        46.03  36   IAmb     IAmb   01 37 46.9
       comp=Z,33nm,1.4s
J30M   Hart River        46.03  36   P        P      01 37 31.8 +0.6
       baz=281
KURK   Kurchatov         46.11 304            P      01 37 31.8 -0.1
KURK   Kurchatov         46.11 304c iP        P      01 37 31.9  0.0
KURK                                 pmax     pmax
       comp=Z,34nm,1.2s
KURK                                 MLR      MLR
       comp=Z,617nm,18.0s
KURK   Kurchatov         46.11 304  eP        P      01 37 31.9  0.0
KURBB  Kurchatov Arra    46.19 304   P        P      01 37 32.7 +0.2
       comp=Z,7.0nm,0.5s,baz=73,slow=8.3,SNR=36
       comp=Z,7.0nm,0.5s
M30M   Minto, Yukon      46.23  38   IAmb     IAmb   01 37 49.3
       comp=Z,36nm,1.4s
M30M   Minto, Yukon      46.23  38   P        P      01 37 33.7 +1.0
       baz=282
HYT    Haines Junctio    46.29  41   P        P      01 37 33.7 +0.4
       baz=284
G31M   Satah River       46.43  32   P        P      01 37 35.4 +1.2
       baz=280
P29M   Windy Craggy      46.47  42   P        P      01 37 35.3 +0.7
       baz=284
INK    Inuvik            46.47  30   P        P      01 37 35.3 +0.9
       baz=280
F31M   Tsiigehtchic      46.54  31   IAmb     IAmb   01 37 52.9
       comp=Z,15nm,1.1s
F31M   Tsiigehtchic      46.54  31   P        P      01 37 35.5 +0.5
       baz=280
H31M   Peel River        46.61  34   P        P      01 37 36.0 +0.3
       baz=281
LSA    Lhasa             46.66 272   IAmb     IAmb   01 37 52.9
       comp=Z,26nm,1.3s
P30M   Million Dollar    46.72  42   P        P      01 37 37.3 +0.7
       baz=284
N31M   Braeburn, Yuko    46.95  40   IAmb     IAmb   01 37 58.2
       comp=Z,23nm,1.1s
N31M   Braeburn, Yuko    46.95  40   P        P      01 37 38.9 +0.5
       baz=284
M31M   Drury Creek, Y    47.41  38   P        P      01 37 42.4 +0.5
       baz=285
CHTO   Chiang Mai        47.63 255            P      01 37 44.1 -0.1
CHTO                                 IAmb     IAmb   01 37 45.9
       comp=Z,16nm,1.1s
CHTO   Chiang Mai        47.63 255   P        P      01 37 44.4 +0.2
       comp=Z,12nm,1.5s
CHTO   Chiang Mai        47.63 255   P        P      01 37 44.1 -0.1
CHTO                                 pmax     pmax
       comp=Z,16nm,1.2s
CMAR   Chiang Mai Arr    47.87 254   P        P      01 37 47.6 +1.6
       comp=Z,3.1nm,1.0s,baz=38,slow=8.5,SNR=13
       comp=Z,3.1nm,1.0s
PDGK   Podgornoye        48.33 295   P        P      01 37 49.7 +0.2
TDK    Taldyqorghan      48.35 297  eP        P      01 37 49.9 +0.4
TDK    Taldyqorghan      48.35 297  eP        P      01 37 49.8 +0.4
SHLS   Shalkode          48.42 295  eP        P      01 37 48.2 -2.0
       comp=Z,16nm,1.0s
SHLS   Shalkode          48.42 295  eP        P      01 37 48.2 -2.0
SHLS                                 pmax     pmax
       comp=Z,16nm,1.0s
SHL    Shillong          48.48 267            P      01 37 50.3 -0.5
SHL    Shillong          48.48 267   P        P      01 37 50.3 -0.5
SHL                                  pmax     pmax
       comp=Z,64nm,1.5s
A36M   Sachs Harbour     48.50  25   IAmb     IAmb   01 38 09.7
       comp=Z,12nm,0.9s
A36M   Sachs Harbour     48.50  25   P        P      01 37 51.0 +0.9
       baz=284,SNR=10
P33M   Teslin, Yukon     48.69  41            P      01 37 53.1 +1.2
P33M                                 IAmb     IAmb   01 38 08.5
       comp=Z,27nm,1.4s
P33M   Teslin, Yukon     48.69  41   P        P      01 37 52.8 +0.9
       baz=288
UZB    Uzynbulak         48.72 295  eP        P      01 37 52.7 +0.2
       comp=Z,12nm,1.2s
UZB    Uzynbulak         48.72 295  eP        P      01 37 52.6 +0.2
UZB                                  pmax     pmax
       comp=Z,12nm,1.2s
SATY   Saty              49.16 295⇑iP        P      01 37 56.2 +0.3
       comp=Z,8.1nm,0.7s
SATY   Saty              49.16 295c iP        P      01 37 56.2 +0.3
SATY                                 pmax     pmax
       comp=Z,8.0nm,0.7s
C36M   Paulatuk          49.57  28   P        P      01 37 59.2 +0.8
       baz=287
MPSI   Mapaga            49.59 218   P        P      01 37 59.7 +0.5
BRZS   Berezniki         49.92 305  eP        P      01 38 01.7 +0.2
BRZS   Berezniki         49.92 305  eP        P      01 38 01.6 +0.2
MDOK   Medeo             50.01 296  eP        P      01 38 03.0 +0.5
MDOK   Medeo             50.01 296  eP        P      01 38 02.9 +0.5
AAA    Alma-Ata          50.08 296  eP        P      01 38 03.1 +0.3
       comp=Z,11nm,0.6s
AAA    Alma-Ata          50.08 296  eP        P      01 38 03.0 +0.3
AAA                                  pmax     pmax
       comp=Z,11nm,0.6s
BVA0   Borovoye Array    50.08 310  i P       P      01 38 02.6  0.0
BVAR   Borovoye Array    50.08 310   P        P      01 38 02.9 +0.3
       comp=Z,6.9nm,0.9s,baz=79,slow=7.7,SNR=29
BVAR                                 LR       LR     02 01 30.6
       comp=Z,1µm,18.1s,baz=67,slow=39
       comp=Z,6.9nm,0.9s
BORK   Borovoye          50.11 310            P      01 38 02.9 +0.1
BORK                                 IAmb     IAmb   01 38 04.7
       comp=Z,24nm,1.2s
BORK   Borovoye          50.11 310   P        P      01 38 02.9 +0.1
BORK                                 pmax     pmax
       comp=Z,24nm,1.2s
TNSS   Tian-Shan         50.14 296  eP        P      01 38 03.8 +0.1
TNSS   Tian-Shan         50.14 296  eP        P      01 38 03.7 +0.1
TARG   Taragay, Kyrgy    50.15 294   IAmb     IAmb   01 38 07.3
       comp=Z,14nm,1.0s
KDJ    Kajisay           50.39 294   IAmb     IAmb   01 38 08.5
       comp=Z,21nm,1.1s
WTLY   Watson Lake, Y    50.62  40   P        P      01 38 07.0 +0.4
       baz=290
EVN    Everest           50.79 273            P      01 38 08.6 -0.4
T35M   Bob Quinn         51.05  44   P        P      01 38 10.5 +0.7
       baz=292
BTLS   Baital            51.13 299  eP        P      01 38 10.8 +0.1
BTLS   Baital            51.13 299  eP        P      01 38 10.7 +0.1
SGDS   Sogindy           51.47 297  eP        P      01 38 13.7 +0.5
       comp=Z,27nm,1.4s
WRGLY  Wrigley           51.86  35   IAmb     IAmb   01 38 32.6
       comp=Z,14nm,0.9s
AAK    Ala-Archa         51.92 296   P        P      01 38 17.3 +0.6
       comp=Z,9.2nm,0.8s,baz=90,slow=7.6,SNR=12
       comp=Z,9.2nm,0.8s
AAK    Ala-Archa         51.92 296            P      01 38 16.9 +0.1
AAK                                  IAmb     IAmb   01 38 19.9
       comp=Z,18nm,1.1s
AAK    Ala-Archa         51.92 296⇑iP        P      01 38 17.1 +0.3
AAK                                  pmax     pmax
       comp=Z,16nm,1.1s
AAK                                  MLR      MLR
       comp=Z,440nm,15.0s
AAK    Ala-Archa         51.92 296  eP        P      01 38 17.1 +0.3
KSH    Kashi             52.42 292   P        P      01 38 23.9 +3.5
KSH                                  sP       pwP    01 38 31.9 +1.4
KSH                                  pmax     pmax
       comp=Z,7.0nm,1.2s
KSH                                  pmax     pmax
       comp=Z,250nm,6.9s
KSH                                  LR       LR
       comp=Z,710nm,13.1s
KSH                                  LR       LR
       comp=Z,990nm,15.5s
KSH                                  LR       LR
       comp=Z,1µm,16.5s
PMG    Port Moresby      52.55 181   LR       LR     01 59 03.3
       comp=Z,41nm,20.6s,baz=331,slow=34
TOAD   Toad River Com    52.78  41   P        P      01 38 23.3 +0.6
       baz=294
SVE    Sverdlovsk        53.71 317  eP        P      01 38 29.7 +0.2
SVE                                  pmax     pmax
       comp=Z,37nm,1.2s
SVE                                  MLR      MLR
       comp=Z,1µm,20.0s
DZA    Taraz             53.86 298  eP        P      01 38 31.4 +0.5
       comp=Z,12nm,1.0s
DZA    Taraz             53.86 298  eP        P      01 38 31.4 +0.5
DZA                                  pmax     pmax
       comp=Z,12nm,1.0s
KK31   Karatay Array     54.29 298   IAmb     IAmb   01 38 36.7
       comp=Z,16nm,0.8s
KK31   Karatay Array     54.29 298  i P       P      01 38 33.9 -0.1
KKAR   Karatay Array     54.29 298            P      01 38 33.8 -0.2
KKAR   Karatay Array     54.29 298   P        P      01 38 33.8 -0.2
BRLS   Borolday          54.75 299⇑iP        P      01 38 39.2 +1.8
BRLS   Borolday          54.75 299c iP        P      01 38 39.2 +1.8
ARTI   Arti              55.02 317            P      01 38 38.0 -1.1
ARTI   Arti              55.02 317d iP        P      01 38 39.1  0.0
ARTI                                                 01 39 34.5
ARTI                                 S        S      01 46 20.6 +1.0
ARTI                                 SS       SS     01 49 57.9 -4.9
ARTI                                 pmax     pmax
       comp=Z,43nm,1.2s
ARTI                                 MLR      MLR
       comp=Z,827nm,17.0s
IUG    Iuzhnay           55.06 298  eP        P      01 38 40.1 +0.3
       comp=Z,12nm,1.0s
IUG    Iuzhnay           55.06 298  eP        P      01 38 40.0 +0.3
IUG                                  pmax     pmax
       comp=Z,12nm,1.0s
RES    Resolute Bay      55.17  17   LR       LR     02 06 03.4
       comp=Z,298nm,18.9s,baz=294,slow=40
RES    Resolute Bay      55.17  17   IAmb     IAmb   01 38 40.9
       comp=Z,16nm,0.9s
SPITS  Spitsbergen Ar    55.22 349   P        P      01 38 39.6 -0.5
       comp=Z,1.6nm,0.5s,baz=61,slow=8.7,SNR=4.3
       comp=Z,1.6nm,0.5s
CHM    Chimkent          55.25 298  eP        P      01 38 41.5 +0.5
       comp=Z,20nm,1.0s
CHM    Chimkent          55.25 298  eP        P      01 38 41.5 +0.5
CHM                                  pmax     pmax
       comp=Z,19nm,1.0s
YKAW3  Yellowknife Wh    55.80  34   IAmb     IAmb   01 39 00.1
       comp=Z,33nm,1.5s
YKA    Yellowknife Ar    55.84  34   P        P      01 38 45.2 +0.4
       comp=Z,3.0nm,0.9s,baz=298,slow=7.4,SNR=12
YKA                                  LR       LR     02 05 05.4
       comp=Z,142nm,18.6s,baz=288,slow=39
       comp=Z,3.0nm,0.9s
YKAW1  Yellowknife Wh    55.89  34   IAmb     IAmb   01 39 00.9
       comp=Z,27nm,1.4s
MANEM  Manem             56.32 292   IAmb     IAmb   01 39 05.0
       comp=Z,27nm,1.1s
NIL    Nilore            57.34 287            P      01 38 56.2 +0.2
NIL    Nilore            57.34 287   P        P      01 38 56.2 +0.2
NIL                                  pmax     pmax
       comp=Z,27nm,0.9s
AB31   Akbulak array     57.64 309  eP        P      01 38 58.2 +0.3
ABKAR  Akbulak array     57.64 309            P      01 38 58.0 +0.2
MTN    Manton Dam        58.01 199   P        P      01 38 59.8 -0.9
MTN                                  IAmb     IAmb   01 39 14.5
       comp=Z,18nm,1.1s
TULEG  Thule             58.10   9   IAmb     IAmb   01 39 13.2
       comp=Z,20nm,1.1s
AKTO   Aktyubinsk        58.12 311   LR       LR     02 06 02.9
       comp=Z,619nm,18.8s,baz=104,slow=38
AKTO   Aktyubinsk        58.12 311   P        P      01 39 01.2  0.0
KIRV   Kirov             58.15 322d iP        P      01 39 01.5 +0.3
SHAA   Shahritus         58.70 294   IAmb     IAmb   01 39 32.5
       comp=Z,49nm,1.1s
APA    Apatity           58.89 336⇓eP        P      01 39 05.0 -1.2
APA                                  MLR      MLR
       comp=Z,1µm,5.7s
ARCES  ARCESS Array B    59.74 340   P        P      01 39 10.9 -1.1
       comp=Z,15nm,1.1s,baz=44,slow=6.5,SNR=18
       comp=Z,15nm,1.1s
ARCES  ARCESS Array B    59.74 340   P        P      01 39 11.0 -1.1
KBL    Kabul             59.74 290            P      01 39 11.9 -1.1
KBL                                  IAmb     IAmb   01 39 26.7
       comp=Z,15nm,0.9s
KBL    Kabul             59.74 290   P        P      01 39 11.9 -1.1
KBL                                  pmax     pmax
       comp=Z,15nm,1.0s
B08A   Colville Reser    60.94  50            P      01 39 21.7 +1.0
B08A                                 IAmb     IAmb   01 39 41.9
       comp=Z,12nm,1.3s
KLMR   Klimovskoe        60.98 328  eP        P      01 39 19.3 -1.4
KLMR                                 pmax     pmax
       comp=Z,43nm,1.2s
EDM    Edmonton          61.35  43            P      01 39 23.4  0.0
EDM    Edmonton          61.35  43   P        P      01 39 23.4  0.0
EDM                                  pmax     pmax
       comp=Z,55nm,1.9s
MXC    Moxie City        61.39  52   IAmb     IAmb   01 39 38.0
       comp=Z,17nm,1.4s
BLKN   Baker Lake        61.58  26            P      01 39 25.2 +0.5
ILON   Igloolik, Nuna    61.78  18   IAmb     IAmb   01 39 41.2
       comp=Z,11nm,1.0s
WIFE   Three Sisters-    61.91  55   IAmb     IAmb   01 40 40.7
       comp=Z,17nm,1.4s
HAWA   Hanford           61.93  52   IAmb     IAmb   01 39 41.5
       comp=Z,21nm,1.4s
G06A   Carlson Farm,     61.95  53   IAmb     IAmb   01 39 41.2
       comp=Z,18nm,1.4s
NEW    Newport           62.22  49   IAmb     IAmb   01 39 43.7
       comp=Z,12nm,1.2s
BELG   Belogornoye       62.47 317ceP         P      01 39 30.9  0.0
BELG                                 pmax     pmax
       comp=Z,16nm,1.1s
E09A   Wood Farm, Sta    62.65  51   IAmb     IAmb   01 39 46.1
       comp=Z,24nm,1.3s
J05D   Fort Rock, OR     62.70  55   IAmb     IAmb   01 39 47.5
       comp=Z,14nm,1.2s
N02D   Trinity Center    63.13  58   IAmb     IAmb   01 39 49.7
       comp=Z,26nm,1.5s
HYB    Hyderabad         63.23 269  eP        P      01 39 37.1 +0.7
WB0    Warramunga Arr    64.05 194            P      01 39 40.9 -0.7
WB0                                  IAmb     IAmb   01 40 01.7
       comp=Z,12nm,1.1s
WR8    Warramunga Arr    64.21 194   P        P      01 39 40.8 -1.9
WR8                                  IAmb     IAmb   01 39 56.0
       comp=Z,22nm,1.4s
WRA    Warramunga Arr    64.23 194   P        P      01 39 41.0 -1.9
       comp=Z,3.6nm,0.8s,baz=15,slow=6.7,SNR=16
       comp=Z,3.6nm,0.8s
WRA    Warramunga Arr    64.23 194            P      01 39 40.9 -1.9
WRA    Warramunga Arr    64.23 194   P        P      01 39 41.0 -1.9
SUMG   Summit            64.24   2            P      01 39 43.4 +0.6
SUMG   Summit            64.24   2   P        P      01 39 43.4 +0.6
SUMG                                 pmax     pmax
       comp=Z,50nm,1.3s
HRA    Herat             64.42 294            P      01 39 44.3 -0.1
HRA                                  IAmb     IAmb   01 39 46.2
       comp=Z,20nm,1.2s
FITZ   Fitzroy Crossi    64.49 203            P      01 39 43.9 -0.6
WVOR   Wild Horse Val    64.75  55   IAmb     IAmb   01 40 00.5
       comp=Z,9.7nm,1.2s
MSO    Missoula          64.80  49   IAmb     IAmb   01 40 07.9
       comp=Z,15nm,1.2s
MOS    Moscow            65.00 324  eP        P      01 39 46.6 -0.9
MOS                                 e                01 40 21.2
MOS                                  pmax     pmax
       comp=Z,58nm,1.3s
BEKR   Beckworth         65.23  58   IAmb     IAmb   01 40 03.3
       comp=Z,11nm,1.1s
FINES  FINESS Array B    65.40 333   P        P      01 39 49.8 -0.2
       comp=Z,9.2nm,0.9s,baz=66,slow=4.8,SNR=15
       comp=Z,9.2nm,0.9s
FFC    Flin Flon         65.70  37            P      01 39 52.4 +0.3
FFC    Flin Flon         65.70  37   P        P      01 39 52.4 +0.3
FFC                                  pmax     pmax
       comp=Z,63nm,2.0s
MPK    Martis Peak       65.78  58   IAmb     IAmb   01 40 07.2
       comp=Z,19nm,1.1s
OBN    Obninsk           65.87 324   P        P      01 39 53.0 -0.1
OBN    Obninsk           65.87 324⇓eP        P      01 39 53.4 +0.3
OBN                                 e                01 40 26.4
OBN                                 ePPP      PPP    01 43 52.0
OBN                                 eS        S      01 48 35.3 -3.1
OBN                                  pmax     pmax
       comp=Z,85nm,1.4s
OBN                                  MLR      MLR
       comp=Z,515nm,16.0s
OBN    Obninsk           65.87 324  eP        P      01 39 53.2 +0.1
PAHR   Pah Rah Range     65.93  58   IAmb     IAmb   01 40 07.9
       comp=Z,14nm,1.2s
VRH    Novokhopyorsk     66.09 319  eP        P      01 39 53.3 -1.3
VRH                                  pmax     pmax
       comp=Z,24nm,0.8s
PNTR   Pine Nut          66.17  58   IAmb     IAmb   01 40 09.8
       comp=Z,12nm,1.0s
EGMT   Eagleton          66.30  46   IAmb     IAmb   01 40 18.2
       comp=Z,11nm,1.0s
LPSR   Galich'ya Gora    66.49 321  eP        P      01 39 56.3 -0.9
LPSR                                 pmax     pmax
       comp=Z,50nm,1.3s
WAKR   Walker            66.62  59   IAmb     IAmb   01 41 13.5
       comp=Z,19nm,1.6s
BOZ    Bozeman (W)       66.83  49   IAmb     IAmb   01 40 21.8
       comp=Z,7.6nm,1.0s
VORR   Voronezh          66.98 320  eP        P      01 40 00.2 -0.1
VORR                                 pmax     pmax
       comp=Z,10.0nm,1.0s
VSR    Storozhevoye      67.30 320  i P       P      01 39 57.9 -4.4
VSR                                  pmax     pmax
       comp=Z,10.0nm,1.0s
VSU    Vasula            67.37 331⇓eP        P      01 40 00.9 -1.7
VSU                                  pmax     pmax
       comp=Z,127nm,3.6s
DZM    Mont Dzumac       67.37 161  eLR       LR     02 00 17.1
       comp=Z,191nm,21.1s
NVAR   Mina Array Bea    67.37  58   P        P      01 40 04.3 +0.9
       comp=Z,2.7nm,0.8s,baz=281,slow=6.5,SNR=24
       comp=Z,2.7nm,0.8s
NVAR   Mina Array Bea    67.37  58   P        P      01 40 03.7 +0.3
VORD   Divnogorie        67.41 319  eP        P      01 40 01.8 -1.2
VORD                                 pmax     pmax
       comp=Z,20nm,1.0s
YHL    Hebgen Lake       67.54  49   IAmb     IAmb   01 40 26.2
       comp=Z,12nm,1.3s
YMR    Madison River     67.78  49   IAmb     IAmb   01 40 21.3
       comp=Z,17nm,1.4s
ASAR   Alice Springs     67.94 194   P        P      01 40 06.2 -0.4
       comp=Z,1.8nm,0.8s,baz=15,slow=6.2,SNR=19
       comp=Z,1.8nm,0.8s
H17A   Grant Village     68.17  49   IAmb     IAmb   01 40 32.1
       comp=Z,9.7nm,1.0s
MAK    Makhachkala       68.32 309d iP        P      01 40 03.4 -5.5
MAK                                 eS        S      01 49 00.6 -7.7
MAK                                  pmax     pmax
       comp=Z,235nm,1.4s
FXWY   Fox Creek         68.40  50   IAmb     IAmb   01 40 32.5
       comp=Z,11nm,1.1s
RLMT   Red Lodge         68.41  48   IAmb     IAmb   01 40 32.3
       comp=Z,14nm,1.4s
LOHW   Long Hollow       68.65  50   IAmb     IAmb   01 40 25.9
       comp=Z,26nm,1.6s
GRAC   Grapevine Rang    68.84  59   IAmb     IAmb   01 40 27.2
       comp=Z,12nm,0.9s
AKT    Akhty             69.14 308  eP        P      01 40 13.9 -0.3
AKT                                 e                01 40 36.8
AKT                                  pmax     pmax
       comp=Z,41nm,1.2s
AKT                                  MLR      MLR
       comp=Z,1µm,21.0s
GOF    Gofitskoye        69.42 313ceP         P      01 40 16.4 +0.7
WCT    Wildcat Mounta    69.43  59   IAmb     IAmb   01 42 45.8
       comp=Z,10.0nm,0.6s
S11A   Rachel            69.44  57   IAmb     IAmb   01 40 52.4
       comp=Z,17nm,1.0s
SPR3   Spring Creek 3    69.44  56   IAmb     IAmb   01 40 30.3
       comp=Z,23nm,1.7s
PDAR   Pinedale Array    69.78  50   P        P      01 40 18.1 -0.3
       comp=Z,0.4nm,0.6s,baz=298,slow=3.2,SNR=6.5
       comp=Z,0.4nm,0.6s
PDAR   Pinedale Array    69.78  50   P        P      01 40 18.5 +0.1
MNK    Minsk             69.87 327  i P       P      01 40 17.6 -0.7
MNK                                 i                01 40 39.7
MNK                                 i                01 42 52.1
MNK                                 i PPP     PPP    01 44 33.7
MNK                                 i S       S      01 49 27.2 +0.9
MNK                                 i                01 50 18.5
MNK                                 i SS      SS     01 53 57.3 +3.1
MNK                                  pmax     pmax
       comp=N,8.0nm,0.9s
MNK                                  pmax     pmax
       comp=Z,42nm,1.0s
MNK                                  pmax     pmax
       comp=E,28nm,1.0s
MNK                                  MLR      MLR
       comp=Z,659nm,17.0s
MNK                                  MLR      MLR
       comp=E,445nm,19.0s
MNK                                  MLR      MLR
       comp=N,244nm,11.0s
NACGM  Naroch            70.00 328  eP        P      01 40 19.3 +0.2
       comp=Z,36nm,0.9s,baz=42
NB2    NORSAR Subarra    70.10 339   P        P      01 40 19.4 -0.3
       comp=Z,58nm,1.2s,baz=32,slow=6.5
NB2    NORSAR Subarra    70.10 339   P        P      01 40 19.4 -0.3
       baz=32,slow=6.5
NOA    NORSAR Array B    70.10 339   P        P      01 40 19.4 -0.3
       comp=Z,16nm,1.0s,baz=27,slow=3.4,SNR=16
       comp=Z,16nm,1.0s
NCK    Nalchik           70.15 311⇓iP        P      01 40 21.3 +1.0
NCK                                  pmax     pmax
       comp=Z,21nm,0.9s
HFS    Hagfors           70.19 338   P        P      01 40 20.0 -0.2
       comp=Z,6.5nm,0.6s,baz=31,slow=3.6,SNR=27
       comp=Z,6.5nm,0.6s
KIV    Kislovodsk        70.34 312            P      01 40 22.2 +0.7
KIV    Kislovodsk        70.34 312  ⇑P        P      01 40 22.3 +0.7
KIV    Kislovodsk        70.34 312  eP        P      01 40 20.4 -1.1
KIV                                  pmax     pmax
       comp=Z,42nm,1.1s
KIV                                  MLR      MLR
       comp=Z,654nm,18.0s
KIV    Kislovodsk        70.34 312  eP        P      01 40 22.2 +0.7
KBZ    Khabaz            70.38 312   P        P      01 40 22.5 +0.9
       comp=Z,20nm,1.0s,baz=54,slow=6.0,SNR=21
       comp=Z,20nm,1.0s
KBZ    Khabaz            70.38 312c iP        P      01 40 22.8 +1.2
KBZ                                  pmax     pmax
       comp=Z,29nm,1.0s
KBZ    Khabaz            70.38 312  eP        P      01 40 22.8 +1.2
SHA1   Shidzhatmaz       70.50 312d iP        P      01 40 24.0 +1.3
PABE   Paberze           70.59 330            P      01 40 22.6 -0.1
NEUR   Neytrino          70.79 312⇓eP        P      01 40 26.3 +1.9
NEUR                                 pmax     pmax
       comp=Z,15nm,1.4s
CCUT   Cedar City        70.95  56   IAmb     IAmb   01 40 40.4
       comp=Z,10nm,1.2s
LCMT   Little Creek M    71.37  57   IAmb     IAmb   01 40 43.0
       comp=Z,9.6nm,1.0s
K22A   Casper            71.53  48   IAmb     IAmb   01 40 50.7
       comp=Z,26nm,1.4s
KNB    Kanab             71.63  56   IAmb     IAmb   01 40 44.7
       comp=Z,11nm,1.1s
GNI    Garni             71.72 308            P      01 40 29.9 -0.1
GNI    Garni             71.72 308c iP        P      01 40 31.8 +1.7
GNI                                  pmax     pmax
       comp=Z,20nm,1.3s
RSSD   Black Hills       71.87  46   P        P      01 40 31.0 +0.1
RSSD   Black Hills       71.87  46   P        P      01 40 31.0 +0.1
RSSD                                 pmax     pmax
       comp=Z,7.0nm,0.9s
AKASG  Malin Array Be    72.14 324   P        P      01 40 31.9 -0.2
       comp=Z,24nm,0.9s,baz=40,slow=6.4,SNR=42
       comp=Z,24nm,0.9s
AKASG  Malin Array Be    72.14 324   P        P      01 40 31.7 -0.5
AKASG                                IAmb     IAmb   01 40 35.0
       comp=Z,26nm,1.2s
AKBB   Malin Array Si    72.14 324ceP         P      01 40 31.7 -0.4
AKBB                                 pmax     pmax
       comp=Z,56nm,1.1s
KIEV   Kiev              72.15 324            P      01 40 32.1 -0.1
KIEV   Kiev              72.15 324  ⇓P        P      01 40 32.3 +0.1
KIEV   Kiev              72.15 324   P        P      01 40 32.1 -0.1
KIEV                                 pmax     pmax
       comp=Z,55nm,1.2s
SOC    Sochi             72.18 313  eP        P      01 40 29.3 -3.2
SOC                                 eS        S      01 49 51.2 -2.3
SOC                                  MLR      MLR
       comp=Z,865nm,19.0s
U15A   North Rim         72.33  56   IAmb     IAmb   01 40 48.4
       comp=Z,14nm,1.2s
BLYC   Blythe            72.70  60   IAmb     IAmb   01 40 50.4
       comp=Z,12nm,1.1s
PV10   Paradox Valley    72.98  53   IAmb     IAmb   01 40 53.0
       comp=Z,18nm,0.8s
PV16   Nyswonger Mesa    73.09  53   IAmb     IAmb   01 41 03.3
       comp=Z,14nm,1.1s
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PV11	David Mesa, Pa	73.13	53	IAmb	IAmb	01 40 52.4	
	comp=Z,34nm,1.6s						
PV18	Skein Mesa, Pa	73.14	53	IAmb	IAmb	01 40 51.8	
	comp=Z,14nm,1.0s						
PV05	Paradox Valley	73.14	53	IAmb	IAmb	01 40 52.8	
	comp=Z,25nm,1.4s						
PV03	Paradox Valley	73.17	53	IAmb	IAmb	01 40 51.9	
	comp=Z,14nm,1.3s						
PV13	Radium Mtn., P	73.25	53	IAmb	IAmb	01 40 53.2	
	comp=Z,36nm,1.7s						
SIM	Simferopol'	74.08	317	*e*P	P	01 40 45.0	+1.2
SIM				pmax	pmax		
	comp=Z,18nm,0.9s						
GURO	Guroymak-BITLI	74.35	308	IAmb	IAmb	01 41 02.7	
	comp=Z,19nm,0.9s						
SORM	Soroca	74.43	323	⇓P	P	01 40 46.0	+0.2
SORM	Soroca	74.43	323	P	P	01 40 45.9	+0.2
PURM	Purcari	74.95	321	⇓P	P	01 40 49.0	+0.3
KIS	Kishinev	75.08	322	*e*P	P	01 40 49.9	+0.4
	comp=Z,11nm,0.4s						
MILM	Milestii Mici	75.14	322	⇑P	P	01 40 50.9	+1.1
MILM	Milestii Mici	75.14	322	P	P	01 40 50.9	+1.1
MILM	Milestii Mici	75.14	322	*e*P	P	01 40 49.8	0.0
OGNE	Ogallala	75.14	47	IAmb	IAmb	01 41 12.0	
	comp=Z,18nm,0.9s						
KWP	Kalwaria Pacla	75.65	327	*e*P	P	01 40 55.6	+2.8
ECSD	EROS Data Cent	75.92	42	IAmb	IAmb	01 41 07.6	
	comp=Z,19nm,1.4s						
PRAR	RASCA	75.95	323	⇑P	P	01 40 56.1	+1.6
ARPR	Arapgir-MALATY	76.05	311	IAmb	IAmb	01 41 11.9	
	comp=Z,24nm,1.1s						
BIR	Birlad	76.17	322	⇓P	P	01 40 56.9	+1.2
BIR	Birlad	76.17	322	P	P	01 40 56.9	+1.2
BURAR	Bucovina Array	76.19	324		P	01 40 56.1	+0.2
BURAR				IAmb	IAmb	01 41 12.7	
	comp=Z,13nm,0.8s						
BURAR	Bucovina Array	76.19	324	⇓P	P	01 40 56.3	+0.3
BURAR	Bucovina Array	76.19	324	P	P	01 40 56.2	+0.2
OJC	Ojcow	76.32	329	*e*P	P	01 40 56.9	+0.3
STHS	Stebnicka Huta	76.41	327	*e*P	P	01 40 58.3	+1.2
STHS				*e*		01 41 11.0	
STHS				pmax	pmax		
	comp=Z,13nm,1.1s						
STHS	Stebnicka Huta	76.41	327	*e*P	P	01 40 58.3	+1.2
STHS				*e*		01 41 11.0	
GHRR		76.42	322	⇑P	P	01 40 59.0	+1.8
BSEG	Bad Segeberg	76.44	336	*e*P	P	01 40 57.1	0.0
	comp=Z,20nm,1.4s,baz=27,slow=5.5						
TATR	Tatarca	76.48	321	⇑P	P	01 40 58.8	+1.3
PANC	Panciu	76.69	322	⇓P	P	01 41 00.0	+1.3
CFR	Carcaliu	76.76	321	⇓P	P	01 40 59.8	+0.7
CFR	Carcaliu	76.76	321	P	P	01 40 59.8	+0.7
NIE	Niedzica	76.77	328	*e*P	P	01 41 01.0	+1.8
ODBI	Odobesti	76.81	322	⇑P	P	01 40 59.8	+0.4
TASM	ASL Pad, Albuq	76.83	54	IAmb	IAmb	01 41 17.1	
	comp=Z,6.8nm,1.4s						
TASM	ASL Pad, Albuq	76.83	54	IAmb	IAmb	01 41 17.1	
	comp=Z,11nm,1.6s						
ANMO	Albuquerque	76.83	54	P	P	01 40 59.9	-0.1
ANMO				IAmb	IAmb	01 42 12.1	
	comp=Z,19nm,1.9s						
ANMO	Albuquerque	76.83	54	P	P	01 40 59.9	-0.1
ANMO				pmax	pmax		
	comp=Z,19nm,2.0s						
ABQ	Albuquerque	76.83	54	IAmb	IAmb	01 42 12.2	
	comp=Z,19nm,2.0s						
OZUR		77.12	323	⇓P	P	01 41 02.7	+1.5
COVR	Voineasa-Covas	77.13	322	⇓P	P	01 41 02.4	+1.1
STEB	Steborice	77.31	330	*e*P	P	01 41 03.1	+1.0
STEB				*e*x	x	01 41 15.0	
DOPR	Dopca	77.39	323	⇑P	P	01 41 04.5	+1.8
DPC	Dobruska-Polom	77.50	331	*e*P	P	01 41 03.6	+0.4
DPC				*e*		01 41 16.6	
DPC	Dobruska-Polom	77.50	331	*e*P	P	01 41 03.6	+0.4
DPC				*e*PCP	pwP	01 41 16.6	+3.0
MLR	Muntele Rosu	77.52	322	IAmb	IAmb	01 41 19.3	
	comp=Z,18nm,1.2s						
MLR	Muntele Rosu	77.52	322	⇑P	P	01 41 05.0	+1.5
MLR	Muntele Rosu	77.52	322	P	P	01 41 05.0	+1.5
MORC	Moravsky Berou	77.53	330	IAmb	IAmb	01 41 20.0	
	comp=Z,17nm,1.0s						
MORC	Moravsky Berou	77.53	330	*e*P	P	01 41 03.5	+0.1
FLTG	Flechtingen	77.53	334	*e*P	P	01 41 03.0	-0.3
	comp=Z,15nm,1.0s,baz=27,slow=5.5						
FLTG				*e*pP	pwP	01 41 15.5	+1.8
ISR	Istrita	77.54	322	⇓P	P	01 41 05.2	+1.6
ISR	Istrita	77.54	322	P	P	01 41 05.1	+1.6
BNN	Bunyan	77.58	312	IAmb	IAmb	01 41 06.2	
	comp=Z,12nm,1.2s						
ICOR	Ion Corvin	77.73	320	⇑P	P	01 41 05.2	+0.7
RETH	Rethem/Aller,	77.76	336	*e*P	P	01 41 04.7	+0.2
	comp=Z,37nm,1.5s,baz=27,slow=5.5						
MARR	Marisel-Cluj	77.82	325	⇑P	P	01 41 05.7	+0.5
CLL	Collm	77.84	333	IAmb	IAmb	01 41 19.3	
	comp=Z,19nm,1.0s						
CLL	Collm	77.84	333	*i* P	P	01 41 04.7	-0.3
CLL				*e*		01 41 17.0	
CLL				pmax	pmax		
	comp=Z,18nm,1.2s						
CLL	Collm	77.84	333	*e*P	P	01 41 04.8	-0.3
	comp=Z,21nm,1.1s,baz=27,slow=5.5						
CLL				*e*pP	pwP	01 41 17.1	+1.6
CLL	Collm	77.84	333	*i* P	P	01 41 04.7	-0.3
	comp=Z,18nm,1.2s						
CLL				*e*PcP	pwP	01 41 17.0	+1.6
CLL				AMS	AMS	02 12 00.0	
	comp=N,300nm,20.9s						
CLL				AMS	AMS	02 12 00.0	
	comp=E,500nm,21.8s						
ASSE	Asse, Remlinge	77.89	335	*e*P	P	01 41 05.4	+0.2
	comp=E,10nm,1.0s,baz=27,slow=5.5						
DRGR		77.90	325	⇑P	P	01 41 06.6	+1.0
DRGR		77.90	325	P	P	01 41 06.6	+1.0
BR131	Keskin Array S	78.12	314	⇓*e*P	P	01 41 07.7	+0.7
BRTR	Keskin Array B	78.12	314	P	P	01 41 07.2	+0.2
	comp=E,2.7nm,1.0s,baz=64,slow=2.9,SNR=8.8						
	comp=E,2.7nm,1.0s						
BRTR	Keskin Array B	78.12	314		P	01 41 07.1	+0.1
BRTR	Keskin Array B	78.12	314	P	P	01 41 07.1	+0.1
PSZ	Piszkesteto	78.14	327	IAmb	IAmb	01 41 25.2	
	comp=Z,16nm,1.2s						
PSZ	Piszkesteto	78.14	327	⇑P	P	01 41 08.2	+1.2
PSZ	Piszkesteto	78.14	327	P	P	01 41 08.1	+1.2
ARR	Arges	78.19	323	⇓P	P	01 41 08.7	+1.5
CLZ	Clausthal	78.23	335	*e*P	P	01 41 07.7	+0.4
	comp=Z,15nm,0.9s,baz=27,slow=5.5						
CLZ				*e*pP	pwP	01 41 20.0	+2.3
JAVC	Velka Javorina	78.23	329	*e*P	P	01 41 08.8	+1.4
VRAC	Vranov	78.26	330	*e*P	P	01 41 07.6	+0.1
NEUB	Neuenburg	78.33	334	*e*P	P	01 41 08.2	+0.5
	comp=Z,21nm,1.0s,baz=27,slow=5.5						
PRU	Pruhonice	78.43	331	*e*P	P	01 41 09.4	+1.0
PRU				MLR	MLR		
	comp=Z,700nm,16.4s						
PRU	Pruhonice	78.43	331	*e*P	P	01 41 09.4	+1.0
PRU				AMS	AMS	02 19 00.0	
	comp=Z,700nm,16.4s						
ANTO	Ankara	78.46	315	P	P	01 41 08.8	0.0
ANTO				IAmb	IAmb	01 41 23.8	
	comp=Z,27nm,1.4s						
ANTO	Ankara	78.46	315	P	P	01 41 08.8	0.0
ANTO				pmax	pmax		
	comp=Z,27nm,1.4s						
KRUC	Moravsky	78.54	330	*e*P	P	01 41 09.3	+0.3
EKA	Eskdalemuir Ar	78.59	344	P	P	01 41 08.6	-0.6
	comp=Z,2.8nm,0.8s,baz=23,slow=6.7,SNR=3.9						
	comp=Z,2.8nm,0.8s						
SMOL	Smolenice	78.61	329	*e*P	P	01 41 11.3	+1.9
SMOL				*e*		01 41 23.4	
SMOL				pmax	pmax		
	comp=Z,6.0nm,1.2s						
IBBN	Ibbenburen	78.61	336	*e*P	P	01 41 09.6	+0.3
	comp=Z,39nm,1.3s,baz=27,slow=5.5						
SIRR	Siria	78.75	325	⇓P	P	01 41 10.6	+0.4
MODS	Modra-Piesok	78.78	329	*e*P	P	01 41 11.3	+0.9
MODS				*e*		01 41 25.2	
MODS				pmax	pmax		
	comp=Z,24nm,1.2s						
MODS	Modra-Piesok	78.78	329	*e*P	P	01 41 11.2	+0.9
MODS				*e*		01 41 25.2	
SRO	Srobarova	78.85	328	*e*P	P	01 41 11.9	+1.2
SRO				*e*		01 41 25.1	
SRO				pmax	pmax		
	comp=Z,15nm,1.3s						
SRO	Srobarova	78.85	328	*e*P	P	01 41 11.9	+1.2
SRO				*e*		01 41 25.1	
MOX	Moxa	78.86	333	*e*L	L	02 20 39.0	
	comp=Z,269nm,19.6s						
SURR	Surduc	78.97	325	⇓P	P	01 41 12.0	+0.6
ZVC	Zvikov	79.01	331	*e*P	P	01 41 11.9	+0.3
BZS	Buzias	79.29	325	⇓P	P	01 41 13.6	+0.3
BZS	Buzias	79.29	325	P	P	01 41 13.5	+0.3
KASTN	Kahler Asten	79.39	335	*e*P	P	01 41 13.8	+0.2
	comp=Z,16nm,1.3s,baz=27,slow=5.5						
KASTN				*e*pP	pwP	01 41 26.3	+2.2
ROTZ	Rotzenmuhle	79.42	333	*e*P	P	01 41 14.4	+0.6
	comp=Z,3.4nm,1.2s,baz=27,slow=5.5						
KHC	Kasperske Hory	79.49	331	IAmb	IAmb	01 41 28.8	
	comp=Z,16nm,1.1s						
KHC	Kasperske Hory	79.49	331	⇓*i*P	P	01 41 15.0	+0.8
KHC				pmax	pmax		
	comp=Z,12nm,1.2s						
KHC	Kasperske Hory	79.49	331	*e*P	P	01 41 14.5	+0.2
KHC				*e*x	x	01 41 27.1	
KHC				AMS	AMS	02 19 50.0	
	comp=Z,900nm,17.3s						
CKRC	Cesky Krumlov	79.50	331	*e*P	P	01 41 15.4	+1.1
CKRC	Cesky Krumlov	79.50	331	*e*P	P	01 41 15.4	+1.1
CONA	Conrad Observa	79.68	329	*e*P	P	01 41 15.4	0.0
	comp=Z,7.8nm,1.1s						
GEC2	GERESS Array S	79.69	331	*e*P	P	01 41 15.1	-0.3
	comp=Z,5.6nm,1.1s,baz=27,slow=5.5						
GERES	GERESS Array B	79.69	331	P	P	01 41 15.3	-0.1
	comp=Z,0.6nm,0.4s,baz=38,slow=6.8,SNR=8.8						
	comp=Z,0.6nm,0.4s						
RONA	Rosalia, Austr	79.71	329	*e*P	P	01 41 15.6	+0.1
	comp=Z,8.3nm,1.3s						
WET	Wettzell	79.72	332	*e*P	P	01 41 15.6	+0.1
	comp=Z,14nm,1.2s,baz=27,slow=5.5						
WET				*e*pP	pwP	01 41 29.3	+3.3
PLVB	Pleven	79.75	322	⇓P	P	01 41 16.1	+0.4
GRA1	Grafenberg Arr	79.81	333	IAmb	IAmb	01 41 33.1	
	comp=Z,19nm,1.0s						
GRF	Grafenberg Arr	79.81	333	*e*P	P	01 41 16.1	+0.2
	comp=Z,22nm,1.1s,baz=27,slow=5.5						
GRF				*e*L	L	02 20 50.7	
	comp=Z,413nm,19.0s						
MORH	Mrgy, Hungar	80.03	327	⇑P	P	01 41 18.8	+1.6
TNS	Taunus Mts	80.24	335	*e*P	P	01 41 19.0	+0.7
	comp=Z,10nm,1.2s,baz=27,slow=5.5						
MOA	Molln	80.33	330	*e*pP	P	01 41 21.5	+2.6
	comp=Z,8.3nm,1.4s						
ARSA	Arzberg	80.37	329	*e*P	P	01 41 19.0	-0.1
	comp=Z,9.3nm,1.5s						
ARSA	Arzberg	80.37	329	*e*P	P	01 41 22.3	+3.2
	comp=Z,24nm,1.8s,baz=27,slow=5.5						
BIOA	Bad Ischl, Aus	80.69	331	*e*P	P	01 41 20.7	0.0
	comp=Z,9.0nm,1.2s						
BOVS	Bovan	80.84	324	⇑P	P	01 41 21.9	+0.3
T35A	Sooner Cattle	81.02	47	IAmb	IAmb	01 41 44.8	
	comp=Z,11nm,0.9s						
SOKA	Soboth	81.04	329	*e*P	P	01 41 21.9	-0.8
	comp=Z,9.3nm,1.1s						
FUR	Furstenfeldbru	81.11	332	*e*P	P	01 41 23.9	+0.9
	comp=Z,31nm,1.4s,baz=27,slow=5.5						
LESA	Schwarzleotal	81.26	331	*e*P	P	01 41 23.3	-0.6
	comp=Z,11nm,1.3s						
KBA	Koelnbreinsper	81.32	330	*e*P	P	01 41 25.6	+1.4
	comp=Z,27nm,1.2s,baz=27,slow=5.5						
MYKA	Terra Mystica	81.59	330	*e*P	P	01 41 24.7	-0.9
	comp=Z,5.7nm,1.1s						
WATA	Walderalm	81.72	332	*e*P	P	01 41 26.3	-0.1
	comp=Z,15nm,1.2s						
WTTA	Wattenberg	81.76	332	*e*P	P	01 41 25.9	-0.7
	comp=Z,18nm,1.2s						
WTTA	Wattenberg	81.76	332	*e*P	P	01 41 29.4	+2.8
	comp=Z,19nm,1.2s,baz=27,slow=5.5						
RETA	Reutte	81.87	332	*e*P	P	01 41 27.2	+0.2
	comp=Z,15nm,1.3s						
MOTA	Moosalm	81.88	332	*e*P	P	01 41 27.4	+0.2
	comp=Z,15nm,1.3s						
BFO	Black Forest	81.94	334		P	01 41 27.4	0.0
BFO	Black Forest	81.94	334	P	P	01 41 27.4	0.0
BFO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BFO	Black Forest	81.94	334	*e*P	P	01 41 29.7	+2.3
	comp=Z,226nm,3.2s,baz=27,slow=5.5						
SQTA	Sankt Quirin	81.95	332	*e*P	P	01 41 27.5	0.0
	comp=Z,11nm,1.3s						
MMAI	Mount Meron Ar	82.06	308	P	P	01 41 29.0	+0.7
	comp=Z,8.4nm,1.0s,baz=289,slow=7.8,SNR=6.6						
	comp=Z,8.4nm,1.0s						
FETA	Feichten	82.28	332	*e*P	P	01 41 29.5	+0.1
	comp=Z,3.3nm,1.2s						
DAVA	Damuels	82.34	333	*e*P	P	01 41 29.1	-0.6
	comp=Z,13nm,1.5s						
TX31	Lajitas Ar. Si	82.46	57	IAmb	IAmb	01 41 47.3	
	comp=Z,10.0nm,1.1s						
TXAR	Lajitas Array	82.46	57	P	P	01 41 30.8	+0.3
	comp=Z,1.7nm,0.7s,baz=303,slow=3.9,SNR=23						
	comp=Z,1.7nm,0.7s						
TXAR	Lajitas Array	82.46	57	P	P	01 41 30.0	-0.5
TXAR	Lajitas Array	82.46	57	P	P	01 41 30.0	-0.5
RAYN	Ar Rayn	82.57	295	P	P	01 41 30.5	-0.6
RAYN	Ar Rayn	82.57	295	P	P	01 41 30.5	-0.6
RAYN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SULZ	Cheisacher	82.71	334	*e*P	P	01 41 31.3	-0.1
	comp=Z,145nm,1.3s,baz=27,slow=5.5						
FUORN	Ofenpass-Fuorn	82.79	332	IAmb	IAmb	01 41 36.4	
	comp=Z,14nm,1.1s						
OZNA	Ozona	82.84	54	IAmb	IAmb	01 41 48.7	
	comp=Z,22nm,1.5s						
SAND	Sanderson	82.94	55	IAmb	IAmb	01 41 50.4	
	comp=Z,21nm,1.5s						
BALST	Balsthal	83.02	334	*e*P	P	01 41 31.6	-1.5
	comp=Z,38nm,1.3s,baz=27,slow=5.5						
TAOE	Nuku Hiva Isla	83.28	109	*e*LR	LR	02 07 34.5	
	comp=Z,218nm,23.4s						
PPT2	Papeete2	83.46	121	*e*LR	LR	02 07 42.0	
	comp=Z,262nm,24.0s						
PPT2				*e*LR	LR	02 07 42.5	
	comp=Z,256nm,22.2s						
FCAR	Ozark Folk Cen	84.10	45	IAmb	IAmb	01 41 59.0	
	comp=Z,7.9nm,1.0s						
PBMO	Poplar Bluff	84.27	43	IAmb	IAmb	01 41 52.4	
	comp=Z,22nm,1.4s						
TBI	Tubuai	87.89	125	*e*S	S	01 52 45.8	+6.9
	comp=Z,909nm,33.0s						
TBI	Tubuai	87.89	125	*e*LR	LR	02 09 43.4	
	comp=Z,1µm,24.0s						
ESDC	Sonseca Array	93.45	339	P	P	01 42 23.3	-0.1
	comp=Z,0.8nm,0.9s,baz=52,slow=8.3,SNR=2.6						
	comp=Z,0.8nm,0.9s						
LPAZ	La Paz	139.26	60	PKP	PKiKP	01 48 36.9	-1.2
	comp=Z,1.5nm,1.0s,baz=354,slow=5.9,SNR=3.7						
NVL	N'lazarevskaya	145.04	204	*i* PKIKP	PKiKP	01 48 50.5	+2.9
NVL				*e*		01 52 04.0	
NVL				*i* PPP	PPP	01 55 16.0	
NVL				*e*SS	SS	02 10 55.8	+5.0
NVL				*e*SSS	SSS	02 16 22.0	
NVL				pmax	pmax		
	comp=Z,21nm,0.9s						
SNAA	Sanae	148.26	197	P	PKPbc	01 48 52.3	-0.4
SNAA	Sanae	148.26	197	PKPbc	PKPbc	01 48 51.9	-0.7
	comp=Z,2.9nm,1.0s,baz=155,slow=2.1,SNR=5.6						
BDFB	Brasilia	149.22	31	PKPbc	PKPbc	01 48 56.9	+0.1
	comp=Z,4.3nm,0.8s,baz=159,slow=1.4,SNR=6.2						
VNA2	Neumayer--Watz	149.78	196	P	PKPab	01 49 01.1	-0.8
	baz=120,slow=31						
VNA1	Neumayer--Stat	150.17	196	P	PKPab	01 49 07.1	+3.6

IDC 05 01:31:06.4±1.6, 5°.07N×123°.82E, h0^{km}, mb4.1/5, mbtmp4.1/5, Error ellipse: s-maj=244.9km s-min=19.7km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.92	158	P	P	01 36 50.0	+0.5
	2.5nm,0.3s,baz=336,slow=9.6,SNR=38						
	2.5nm,0.3s						
ASAR	Alice Springs	30.21	161	P	P	01 37 18.4	-0.4
	1.4nm,0.5s,baz=344,slow=7.3,SNR=22						
	1.4nm,0.5s						
MKAR	Makanchi Array	54.82	326	P	P	01 40 39.3	+1.0
	1.1nm,0.4s,baz=122,slow=7.2,SNR=9.8						
	1.1nm,0.4s						
ZALV	Zalesovo Beam	58.10	334	P	P	01 41 01.9	+0.4
	0.3nm,0.3s,baz=141,slow=6.4,SNR=1.6						
	0.3nm,0.3s						
BVAR	Borovoye Array	64.63	328	P	P	01 41 43.8	-2.0
	0.3nm,0.3s,baz=120,slow=8.5,SNR=2.1						
	0.3nm,0.3s						

NNC ***05*** *01:42:06.0±4.2, 36°.89N×69°.80E, h0^{km}, mb4.2, mpv4.0, Error ellipse: s-maj=33.7km s-min=27.8km az=168.0*

IDC ***05*** *01:42:10.9±8.9, 36°.67N×70°.45E, h196^{km}±60^{km}, mb3.4/1, mbtmp4.0/7, Error ellipse: s-maj=86.6km s-min=45.0km az=174.0*

ISC 05 01:42:08.1±2.5**, 36°.6N**±0°.2×**70°.0E**±0°.1**, h150^{km}, n19, σ1^s.78**/22**, 4C, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRLS	Borolday	6.38	359	Pg	Pn	01 43 39.2	-0.7
	5.0nm,0.1s						
BRLS				Lg	Lg	01 44 47.8	
	20nm,0.2s						
KK31	Karatay Array	6.46	3	P	Pn	01 43 39.8	-1.2
	1.8nm,0.2s,baz=187,slow=14,SNR=73						
KK31				⇑S	Sn	01 44 53.0	-0.7
	30nm,0.5s,baz=188,slow=25						
MRKS	Merke	6.57	21	Pg	Pn	01 43 43.5	+1.0
	12nm,0.4s						
MRKS				Lg	Lg	01 44 56.4	
	41nm,0.4s						
EKS2	Erkin-Say	6.67	24	P	Pn	01 43 44.9	+1.1
	SNR=15						
AAK	Ala-Archa	6.90	28	P	Pn	01 43 47.8	+0.8
	4.9nm,0.3s,baz=191,slow=6.5,SNR=31						
AAK				S	Sn	01 45 04.4	-0.1
	8.0nm,0.7s,baz=40,slow=22,SNR=5.9						
AAK	Ala-Archa	6.90	28	⇑P	Pn	01 43 46.4	-0.5
	1.5nm,0.5s						
AAK				⇑S	Sn	01 45 05.1	+0.7
	9.5nm,0.6s						
KBK	Karagaybulak	7.10	31	P	Pn	01 43 50.4	+0.8
	SNR=6.3						
CHMS	Chumysh	7.31	28	P	Pn	01 43 53.1	+0.8
	SNR=5.1						
USP	Ospenovka	7.45	26	P	Pn	01 43 54.7	+0.6
	SNR=5.0						
TKM2	Tokmak 2	7.59	33	P	Pn	01 43 56.6	+0.4
	SNR=8.2						
MK31	Makanchi Array	13.64	38	P	Pn	01 45 19.0	+3.5
	2.6nm,0.7s,baz=203,slow=8.3,SNR=15						
MKAR	Makanchi Array	13.64	38	P	Pn	01 45 13.6	-1.8
	2.9nm,0.8s,baz=215,slow=11,SNR=14						
AB31	Akbulak array	14.60	333	P	Pn	01 45 30.6	+3.3
	3.4nm,1.3s,baz=145,slow=12,SNR=22						
KURBB	Kurchatov Arra	15.25	21	P	Pn	01 45 33.6	-1.8
	0.8nm,0.2s,baz=206,slow=10.0,SNR=1.5						
AKTO	Aktyubinsk	16.28	332	P	Pn	01 45 49.7	+1.6
	3.3nm,0.7s,baz=147,slow=9.1,SNR=11						
AKTO	Aktyubinsk	16.28	332	⇑P	Pn	01 45 44.4	-3.8
	28nm,4.4s						
BVAR	Borovoye Array	16.39	1	P	Pn	01 45 49.1	-0.2
	0.8nm,0.3s,baz=183,slow=9.8,SNR=9.9						
ZALV	Zalesovo Beam	20.12	26	P	P	01 46 27.9	-2.2
	2.4nm,0.5s,baz=217,slow=11,SNR=13						
FINES	FINESS Array B	36.94	326	P	P	01 49 01.6	-0.6
	1.9nm,0.9s,baz=111,slow=9.1,SNR=3.5						
	1.9nm,0.9s						

INMG ***05*** *01:59:04.8±1.2, 37°.42N×8°.50W, h11^{km}±2^{km}, ML2.1, Error ellipse: s-maj=1.6km s-min=1.3km az=93.0, #DIST_RANGE: LOCAL #IPMA_REGION: NE Monchique*

MDD ***05*** *01:59:04.0±0.3, 37°.46N×8°.50W, h8^{km}±2^{km}, mb_Lg2.7/10, Error ellipse: s-maj=2.8km s-min=2.4km az=2.0*

SFS ***05*** *01:59:04.8, 37°.40N×8°.46W, h8^{km}, ML2.7/10, ML2.6/11, MLv2.6/11*

IGIL ***05*** *01:59:04.8, 37°.41N×8°.49W, h11^{km}, ML1.9*

CNRM ***05*** *01:59:04.8, 37°.27N×8°.45W, h25^{km}, ML1.6*

ISC 05 01:59:03.4±0.8**, 37°.39N**±0°.02×**8°.49W**±0°.02**, h17^{km}**±6^{km}**, n61, σ1^s.25**/118**, 1C-5D, Portugal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORF	Marmelete	0.16	236	*e*P	Pb	01 59 08.5	+0.6
MORF				*e*S	Sg	01 59 10.8	+0.2
MORF				IAML		01 59 12.1	
	comp=E,306nm,0.1s						
MORF	Marmelete	0.16	236	⇓*i*P	Pb	01 59 08.5	+0.6
MORF				*e*Sg	Sg	01 59 11.0	+0.4
MORF				*i* IAML		01 59 11.8	
MORF				*i* IAML		01 59 12.1	
MORF				*i* IAML		01 59 12.3	
PTEO	Sao Teotonio	0.24	309	⇑*i*Pg	Pg	01 59 09.3	+0.3
PTEO				*e*Sg	Sg	01 59 12.4	-0.3
PTEO				*i* IAML		01 59 13.4	
PTEO				*i* IAML		01 59 13.5	
PTEO				*i* IAML		01 59 13.6	
PFVI	Vila Bisbo	0.37	226	P	Pb	01 59 11.9	+0.4
PFVI				S	Sb	01 59 17.6	+0.5
PFVI	Vila Bisbo	0.37	226	⇓*i*Pg	Pb	01 59 12.0	+0.4
PFVI				*e*Sg	Sb	01 59 17.4	+0.3
PFVI				*i* IAML		01 59 18.6	
PFVI				*i* IAML		01 59 18.9	
PFVI				*i* IAML		01 59 19.0	
PFVI	Vila Bisbo	0.37	226	P	Pb	01 59 12.0	+0.4
PCVE	Castro Verde	0.43	56	S	Sg	01 59 17.8	-0.4
PCVE				P	Pg	01 59 12.7	+0.4
PCVE	Castro Verde	0.43	56	⇓*i*Pg	Pg	01 59 12.8	+0.6
PCVE				*e*Sg	Sg	01 59 18.2	0.0
PCVE				*i* IAML		01 59 18.9	
PCVE				*i* IAML		01 59 19.0	
PCVE				*i* IAML		01 59 19.3	
PBDV	Barranco-do-Ve	0.47	108	P	Pg	01 59 13.3	+0.4
PBDV				S	Sg	01 59 19.9	+0.6
PBDV	Barranco-do-Ve	0.47	108	*e*P	Pg	01 59 13.7	+0.7
PBDV				*e*S	Sb	01 59 20.3	+0.4
PBDV				*i* IAML		01 59 21.9	
PBDV				*i* IAML		01 59 22.2	
PBDV				*i* IAML		01 59 22.8	
MESJ	Messejana	0.49	26	*e*P	Pg	01 59 13.7	+0.3
MESJ				*e*S	Sg	01 59 20.0	-0.2
MESJ				IAML		01 59 20.6	
	comp=N,58nm,0.1s						
MESJ	Messejana	0.49	26	*e*P	Pg	01 59 13.7	+0.3
MESJ				*e*S	Sg	01 59 20.3	+0.2
MESJ				*i* IAML		01 59 20.5	
MESJ				*i* IAML		01 59 20.7	
MESJ				*i* IAML		01 59 20.9	
PVAQ	Vaqueiros	0.62	89	P	Pg	01 59 15.9	+0.3
PVAQ	Vaqueiros	0.62	89	⇓*e*P	Pg	01 59 16.0	+0.4
PVAQ				*e*S	Sg	01 59 24.4	+0.6
PVAQ				*i* IAML		01 59 26.9	
PVAQ				*i* IAML		01 59 27.0	
PVAQ				*i* IAML		01 59 27.5	
PVAQ	Vaqueiros	0.62	89	P	Pn	01 59 17.6	+0.2
PBEJ	Beja	0.80	38	*e*P	Pb	01 59 19.3	+0.3
PBEJ				*e*S	Sb	01 59 29.8	+0.2
PBEJ				*i* IAML		01 59 30.4	
PBEJ				*i* IAML		01 59 31.6	
PBEJ				*i* IAML		01 59 31.8	
EGRO	El Granado	0.81	80	P	Pb	01 59 19.6	+0.4
EGRO				S	Sb	01 59 30.1	+0.3
EGRO	El Granado	0.81	80	Pg	Pb	01 59 19.5	+0.4
EGRO				⇓Pg	Pb	01 59 19.5	+0.4
EGRO				Sg	Sb	01 59 29.6	-0.2
EGRO				Sg	Sb	01 59 30.2	+0.3
EGRO				*i* IVmb_Lg		01 59 35.1	
EXAYA	Ayamonte	0.88	101	Pg	Pb	01 59 20.6	+0.3
EXAYA				Sg	Sg	01 59 32.9	+0.6
MOE	Montemor	1.13	6	*e*P	Pb	01 59 25.3	+0.7
MOE				*e*S	Sb	01 59 39.4	+0.3
MOE				*i* IAML		01 59 39.7	
MOE				*i* IAML		01 59 40.1	
MOE				*i* IAML		01 59 40.9	
EXHU	Huelva	1.25	95	Sg	Sg	01 59 44.3	+0.4
PBAR	Barrancos	1.39	55	P	Pn	01 59 27.9	-0.2
PBAR				S	Sb	01 59 47.3	+0.9
PBAR	Barrancos	1.39	55	*e*Pn	Pn	01 59 28.1	0.0
PBAR				*e*Sg	Sb	01 59 48.0	+1.6
PBAR				*i* IAML		01 59 49.1	
PBAR				*i* IAML		01 59 49.2	
PBAR				*i* IAML		01 59 49.9	
PARRA	Arraiolos	1.46	14	*e*Pn	Pn	01 59 28.6	-0.4
PARRA				*e*Sg	Sn	01 59 48.8	+0.9
PARRA				*i* IAML		01 59 49.2	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PARRA				i IAML		01 59 50.3	
PARRA				i IAML		01 59 50.7	
EMIN	Mina Concepcio	1.49	75	P	Pn	01 59 29.1	-0.3
EMIN	Mina Concepcio	1.49	75	Pn	Pn	01 59 29.3	-0.2
EMIN				Pg	Pb	01 59 30.7	0.0
EMIN				Sn	Sn	01 59 47.8	-0.7
EMIN				Sg	Sb	01 59 50.9	+1.5
EMIN				i IVmb_Lg		01 59 53.9	
PESTR	Estremoz	1.63	25	ePg	Pb	01 59 33.9	+0.8
PESTR				eSg	Sb	01 59 54.7	+1.3
PESTR				i IAML		01 59 56.2	
PESTR				i IAML		02 00 00.3	
PESTR				i IAML		02 00 02.1	
PESTR	Estremoz	1.63	25	P	Pb	01 59 34.3	+1.1
PESTR	Estremoz	1.63	25	S	Sb	01 59 54.9	+1.5
PMAFR	Mafra	1.68	338	P	Pb	01 59 33.9	0.0
PMAFR				S	Sb	01 59 55.3	+0.5
PMAFR	Mafra	1.68	338	ePg	Pb	01 59 34.8	+0.9
PMAFR				eSg	Sb	01 59 56.3	+1.5
PMAFR				i IAML		01 59 59.5	
PMAFR				i IAML		01 59 59.5	
PMAFR				i IAML		02 00 00.5	
PMTG	Montargil	1.69	7	ePn	Pn	01 59 32.2	+0.1
PMTG				eSg	Sb	01 59 55.7	+0.8
PMTG				i IAML		01 59 58.1	
PMTG				i IAML		01 59 58.1	
PMTG				i IAML		02 00 00.1	
EBAD	Badajoz	1.79	40	P	Pn	01 59 33.0	-0.6
EBAD	Badajoz	1.79	40	Pn	Pn	01 59 33.0	-0.6
EBAD				Pg	Pb	01 59 35.7	-0.1
EBAD				Sn	Sn	01 59 54.6	-1.3
EBAD				Sg	Sb	01 59 59.7	+1.7
EBAD				i IVmb_Lg		02 00 05.0	
PSBE	So Bento	2.13	354	eSg	Sb	02 00 09.7	+1.9
PSBE				i IAML		02 00 11.8	
PSBE				i IAML		02 00 12.0	
PSBE				i IAML		02 00 15.3	
ESPR	Espera	2.17	103	P	Pn	01 59 40.5	+1.8
ESPR				S	Sn	02 00 07.4	+2.2
ESPR	Espera	2.17	103	Pn	Pn	01 59 39.0	+0.3
ESPR				Sn	Sn	02 00 05.7	+0.5
ESPR				Sg	Sg	02 00 14.7	+1.4
ESPR				i IVmb_Lg		02 00 20.1	
PMRV	Marv??o	2.21	23	ePn	Pn	01 59 38.9	-0.4
PMRV				ePg	Pb	01 59 44.8	+1.9
PMRV				eSn	Sn	02 00 05.5	-0.8
PMRV				eSg	Sb	02 00 11.3	+1.3
PMRV				i IAML		02 00 13.4	
PMRV				i IAML		02 00 13.7	
PMRV				i IAML		02 00 17.5	
PSARD	Sardoal	2.22	7	ePn	Pn	01 59 39.4	-0.1
PSARD				eSn	Sn	02 00 06.2	-0.3
PSARD				eSg	Sb	02 00 13.2	+2.9
PSARD				i IAML		02 00 14.4	
PSARD				i IAML		02 00 15.0	
PSARD				i IAML		02 00 15.7	
ECAB	El Cabril	2.53	73	P	Pn	01 59 44.1	+0.3
ECAB				S	Sn	02 00 13.6	-0.6
ECAB	El Cabril	2.53	73	Pn	Pn	01 59 43.9	+0.2
ECAB				Sn	Sn	02 00 13.9	-0.3
ECAB				i IVmb_Lg		02 00 26.8	
EXCBR	El Cabril	2.53	73	Pn	Pn	01 59 43.9	+0.1
PCBR	Castelo Branco	2.57	18	eSn	Sn	02 00 13.9	-1.2
PCBR				eSg	Sb	02 00 23.0	+2.7
PCBR				i IAML		02 00 24.1	
PCBR				i IAML		02 00 24.7	
PCBR				i IAML		02 00 25.9	
PCAS	Casmilo, Conde	2.66	360	eSn	Sn	02 00 16.3	-1.0
PCAS				eSg	Sb	02 00 26.4	+3.6
PCAS				i IAML		02 00 29.8	
PCAS				i IAML		02 00 30.4	
PCAS				i IAML		02 00 30.9	
MTE	Manteigas	3.09	14	ePn	Pn	01 59 51.1	-0.4
MTE				eSn	Sn	02 00 26.4	-1.7
MTE				eSg	Sb	02 00 37.8	+2.3
MTE				i IAML		02 00 41.7	
MTE				i IAML		02 00 42.5	
MTE				i IAML		02 00 45.2	
EADA	Adamuz	3.20	75	P	Pn	01 59 52.4	-0.5
EADA				S	Sn	02 00 29.5	-1.1
EADA	Adamuz	3.20	75	Pn	Pn	01 59 53.0	+0.1
EADA				Sn	Sn	02 00 29.9	-0.8
EADA				i IVmb_Lg		02 00 43.2	
EADA				Sg	Sg	02 00 44.6	-1.5
EPLA	Plasencia	3.27	35	Pn	Pn	01 59 53.7	-0.2
EPLA				Sn	Sn	02 00 30.4	-2.0
PVIS	Viseu	3.35	8	eSn	Sn	02 00 32.3	-2.1
PVIS				eSg	Sb	02 00 45.7	+2.8
PAB	San Pablo	3.90	55	Pn	Pn	02 00 02.6	0.0
PAB				Sn	Sn	02 00 45.6	-2.4
PAB				Sg	Sg	02 01 06.7	-1.9
PAB				i IVmb_Lg		02 01 09.0	
MVO	Moncorvo	3.93	16	ePn	Pn	02 00 02.5	-0.6
MVO				eSn	Sn	02 00 46.2	-2.7
MVO				i IAML		02 01 11.5	
MVO				i IAML		02 01 12.7	
MVO				i IAML		02 01 14.9	
PSIM	Granatula de C	4.00	68	Pn	Pn	02 00 04.5	+0.6
PSIM				Sn	Sn	02 00 48.1	-2.3
POLO	Lamas de Olo	4.01	8	ePn	Pn	02 00 04.1	-0.1
POLO				eSn	Sn	02 00 48.6	-2.2
EQES	Quesada	4.32	83	Pn	Pn	02 00 08.3	-0.2
EQES				Sn	Sn	02 00 56.5	-2.0
EQES				i IVmb_Lg		02 01 18.0	
ELOB	Lobios	4.48	4	Pn	Pn	02 00 10.2	-0.4
ELOB				Sn	Sn	02 00 58.3	-4.1
ELOB				i IVmb_Lg		02 01 06.1	
GUD	Guadarrama	4.68	45	Pn	Pn	02 00 13.1	-0.3
GUD				Sn	Sn	02 01 04.1	-3.3
IFR	Ifrane	4.74	144	P	Pn	02 00 15.2	+0.9
IFR				S	Sn	02 01 06.3	-2.6
MD31	MD31	5.45	145	P	Pn	02 00 23.2	-0.8
MD31	MD31	5.45	145	S	Sn	02 01 24.0	-2.4
MDT	Midelt	5.57	144	P	Pn	02 00 25.1	-0.5
MDT	Midelt	5.57	144	S	Sn	02 01 27.6	-1.6

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*IDC **05** 02:03:08.4±9.5, 36°.69N×71°.27E, h85^{km}±87^{km}, mb3.7/6, mbtmp3.9/8, ML3.1/2, MS3.4/1, Error ellipse: s-maj=57.6km s-min=29.6km az=172.0*

*NNC **05** 02:03:08.8±5.8, 37°.15N×70°.30E, h0^{km}, mb4.5, mpv4.2, Error ellipse: s-maj=46.9km s-min=35.5km az=163.0*

ISC 05 02:03:09.7±1.4**, 36°.8N**±0°.1×**71°.0E**±0°.1**, h88^{km}, n13, σ2^{s}.12**/15**, mb3.7**/5**, 2C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRKS	Merke	6.15	16	Pg	Pn	02 04 38.5	+0.5
	25nm,0.4s						
MRKS				Lg	Lg	02 05 45.9	
	17nm,0.4s						
BRLS	Borolday	6.24	352	Pg	Pn	02 04 36.6	-2.6
	7.0nm,0.4s						
BRLS				Lg	Lg	02 05 41.8	
	5.5nm,0.5s						
KK31	Karatay Array	6.26	357	⇑P	Pn	02 04 38.8	-0.8
	12nm,0.5s,baz=181,slow=13,SNR=78						
KK31				⇑S	Sn	02 05 48.8	-0.8
	5.3nm,0.5s,baz=185,slow=24						
AAK	Ala-Archa	6.40	24	⇓P	Pn	02 04 43.3	+1.9
	9.5nm,0.8s						
AAK				⇓S	Sn	02 05 57.4	+4.3
	19nm,1.2s						
MKAR	Makanchi Array	13.03	37	P	Pn	02 06 09.3	-2.1
	0.1nm,0.3s,baz=223,slow=15,SNR=1.5						
	0.4nm,0.7s						
AB31	Akbulak array	14.77	331	P	Pn	02 06 32.3	-1.6
	1.1nm,0.4s,baz=136,slow=12,SNR=84						
ZALV	Zalesovo Beam	19.62	25	P	P	02 07 29.5	-1.4
	0.5nm,0.3s,baz=222,slow=11,SNR=7.3						
	1.4nm,0.4s						
SONM	Songino Array	28.17	56	P	P	02 08 52.3	-1.5
	0.8nm,0.4s,baz=244,slow=6.3,SNR=5.0						
	0.8nm,0.4s						
BRTR	Keskin Array B	29.30	287	P	P	02 09 07.0	+3.0
	0.6nm,0.8s,baz=71,slow=11,SNR=2.2						
	0.6nm,0.8s						
FINES	FINESS Array B	37.18	326	P	P	02 10 13.4	+1.5
	3.1nm,0.9s,baz=101,slow=9.5,SNR=1.5						
	3.1nm,0.9s						
ARCES	ARCESS Array B	40.82	337	P	P	02 10 42.9	+0.7
	5.5nm,1.0s,baz=121,slow=9.0,SNR=3.8						
	5.5nm,1.0s						
NOA	NORSAR Array B	44.09	323	P	P	02 11 09.0	+0.2
	0.5nm,0.6s,baz=96,slow=7.8,SNR=1.6						
	0.5nm,0.6s						
TORD	Torodi Ar. Bea	65.70	268	P	P	02 13 44.6	-0.6
	2.8nm,0.4s,baz=38,slow=7.9,SNR=1.9						
	2.8nm,0.4s						

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*BJI **05** 02:03:15.6, 45°.24N×150°.33E, h36^{km}, mB5.7/57, mb5.6/89, Ms5.2/92, Ms7 5.2/91*

*SKHL **05** 02:03:16.1±0.3, 45°.20N×150°.70E, h49^{km}±7^{km}, mb6.4/5, mbv6.5/4, ms5.5/2, msh6.2/2*

*NIED **05** 02:03:16.9, 45°.32N×150°.50E, h30^{km}, MW5.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}0.35; $M_{\theta\theta}$0.74; $M_{\phi\phi}$-1.09; $M_{r\theta}$0.23; $M_{\theta\phi}$-0.72; $M_{\phi r}$1.80; Fault plane solution: $M_0$2.05000×10^{17} NP1: ϕ_s245.00000°, δ23.00000°, λ155.00000°. NP2: ϕ_s358.00000°, δ81.00000°, λ69.00000°.*

*JMA **05** 02:03:16.9±0.8, 45°N±3°×15°1E±°, h30^{km}, MD5.8/19, MW5.6/19, KURILE ISLANDS REGION*

JMA Felt I J1 at KURILE ISLANDS REGION .

*ISC-PP **05** 02:03:18, 45°.34N×150°.14E, h48^{km}, Mwppsm6.0, Moment Tensor Solution. s48 Moment tensor: Scale 10^{18}Nm; M_{rr}0.56±.17; $M_{\theta\theta}$0.08±.20; $M_{\phi\phi}$-0.71±.20; $M_{r\theta}$0.28±.23; $M_{\theta\phi}$0.08±.30; $M_{\phi r}$0.02±.18; Fault plane solution: $M_0$1.16000×10^{18} NP1:ϕ_s155.90000°, δ46.80000°, λ55.00000°. NP2:ϕ_s21.50000°, δ53.30000°, λ121.40000°.*

*MOS **05** 02:03:18.1±1.0, 45°.33N×150°.14E, h48^{km}, mb5.7/75, MS5.1/53 Error ellipse: s-maj=5.4km s-min=4.0km az=109.9*

MOS Felt (II) at Kuril'sk.

*IPGP **05** 02:03:18.0, 45°.43N×150°.06E, h49^{km}, Mw5.6, Fault plane solution: NP1:ϕ_s245.00000°, δ34.00000°, λ123.00000°. NP2:ϕ_s27.00000°, δ62.00000°, λ70.00000°.*

*NEIC **05** 02:03:19.0±1.2, 45°.34N±0°.06×150°.1E±0°.1, h36^{km}±1^{km}, mb5.6/933, Ms_20 4.9/313, Mwb5.5/116, Mww5.5/11, Error ellipse: s-maj=13.0km s-min=9.6km az=294.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.51; $M_{\theta\theta}$-0.81; $M_{\phi\phi}$-0.71; $M_{r\theta}$0.25; $M_{\theta\phi}$-0.75; $M_{\phi r}$1.25; Fault plane solution: $M_0$1.98000×10^{17} NP1:ϕ_s26.22000°, δ65.32000°, λ72.52000°. NP2:ϕ_s243.24000°, δ29.92000°, λ123.16000°. Principal axes: T 2.0796, Plg65.0000°, Azm266.0000°; N -0.2179, Plg16.0000°, Azm34.0000°; P -1.8617, Plg19.0000°, Azm129.0000°;*

*IDC **05** 02:03:19.0±0.5, 45°.42N×150°.15E, h40^{km}±3^{km}, mb4.9/32, mbtmp5.2/37, ML4.5/5, MS4.9/87 Error ellipse: s-maj=10.7km s-min=7.8km az=153.0*

*NEIC **05** 02:03:19, 45°.35N×150°.14E, h50^{km}*

*NEIC **05** 02:03:19, 45°.25N×151°.00E, h50^{km}, Moment Tensor Solution. Duration: 2^{s}.7 Moment tensor: Scale 10^{17}Nm; M_{rr}1.87; $M_{\theta\theta}$-0.32; $M_{\phi\phi}$-1.55; $M_{r\theta}$0.45; $M_{\theta\phi}$-1.22; $M_{\phi r}$0.92; Fault plane solution: $M_0$2.35000×10^{17} NP1: ϕ_s215.66000°, δ32.09000°, λ96.16000°. NP2:ϕ_s28.41000°, δ58.12000°, λ86.15000°. Principal axes: T 2.1105, Plg77.0000°, Azm287.0000°; N 0.4265, Plg3.0000°, Azm30.0000°; P -2.5371, Plg13.0000°, Azm121.0000°;*

*NEIC **05** 02:03:19, 45°.35N×150°.14E, h35^{km}*

*GCMT **05** 02:03:21.0±0.1, 45°.26N±0°.01×150°.45E±0°.01, h47^{km}, MW5.6/151, Moment Tensor Solution. s127,c247; s151,c299; Duration: 1^{s}.5 Moment tensor: Scale 10^{17} Nm; M_{rr}2.09±.04; $M_{\theta\theta}$-0.42±.03; $M_{\phi\phi}$-1.67±.03; $M_{r\theta}$0.02±.03; $M_{\theta\phi}$-1.52±.02; $M_{\phi r}$1.64±.03; Best double couple: $M_0$2.93500×10^{17} NP1:ϕ_s236.00000°, δ34.00000°, λ127.00000°. NP2:ϕ_s14.00000°, δ63.00000°, λ68.00000°. Principal axes: T 2.7990, Plg64.0000°, Azm245.0000°; N 0.2700, Plg20.0000°, Azm24.0000°; P -3.0710, Plg15.0000°, Azm120.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **05** 02:03:22.1, 46°.10N×149°.53E, h33^{km}, mb5.6, Ms5.4*

ISC 05 02:03:20.1±0.4**, 45°.29N**±0°.03×**150°.24E**±0°.03**, h53^{km}**±2^{km}**, h53^{km}:pP-P, n1895, σ1^{s}.30**/1536**, mb5.5**/659**, MS4.9**/294**, 93C-86D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.68	269	d iPN	Pn	02 03 45.5	-1.4
KUR				i S	Sn	02 04 07.7	+0.4
KUR				pmax	pmax		
	comp=Z,40µm,2.1s						
KUR				pmax	pmax		
	comp=Z,15µm,0.4s						
KUR				pmax	pmax		
	comp=E,3µm,0.2s						
KUR				pmax	pmax		
	comp=N,6µm,0.4s						
KUR				smax	smax		
	comp=N,36µm,0.5s						
KUR				smax	smax		
	comp=E,24µm,0.4s						
KUR				smax	smax		
	comp=N,147µm,2.0s						
KUR				smax	smax		
	comp=E,124µm,2.0s						
KUR	Kuril'sk	1.68	269	i P	Pn	02 03 45.5	-1.4
KUR				AMB	AMB	02 03 46.7	
	comp=E,40µm,2.1s						
KUR				AMB	AMB	02 03 46.9	
KUR				i S	Sn	02 04 07.7	+0.4
KUR				A	A	02 04 08.3	
	comp=E,36µm,0.5s						
KUR				A	A	02 04 08.3	
	comp=E,24µm,0.5s						
KUR				A	A	02 04 08.4	
	comp=E,147µm,2.0s						
KUR				A	A	02 04 08.4	
	comp=E,124µm,2.0s						
YUK	Yuzh-Kuril'sk	3.36	250	ePN	Pn	02 04 10.3	+0.3
YUK				i S	Sn	02 04 50.0	+1.3
YUK				pmax	pmax		
	comp=E,3µm,0.3s						
YUK				pmax	pmax		
	comp=Z,8µm,0.3s						
YUK				pmax	pmax		
	comp=N,2µm,0.2s						
YUK				smax	smax		
	comp=E,34µm,0.4s						
YUK				smax	smax		
	comp=N,19µm,0.3s						
YUK	Yuzh-Kuril'sk	3.36	250	eP	Pn	02 04 10.0	0.0
YUK				AMB	AMB	02 04 15.5	
	comp=N,8µm,0.3s						
YUK				eS	Sn	02 04 50.2	+1.5
YUK				A	A	02 04 59.9	
	comp=N,34µm,0.4s						
YUK				A	A	02 04 59.9	
	comp=N,19µm,0.4s						
GLVR	Golovnino	3.71	247	ePN	Pn	02 04 15.8	+1.0
GLVR				i S	Sn	02 04 58.8	+1.5
GLVR				pmax	pmax		
	comp=Z,2µm,0.4s						
GLVR				pmax	pmax		
	comp=N,2µm,0.3s						
GLVR				pmax	pmax		
	comp=E,913nm,0.2s						
GLVR				smax	smax		
	comp=E,25µm,0.5s						
GLVR				smax	smax		
	comp=N,31µm,0.4s						
GLVR	Golovnino	3.71	247	eP	Pn	02 04 15.8	+1.0
GLVR				AMB	AMB	02 04 22.1	
	comp=N,2µm,0.4s						
GLVR				i S	Sn	02 04 58.8	+1.5
GLVR				A	A	02 05 11.5	
	comp=N,25µm,0.5s						
GLVR				A	A	02 05 11.5	
	comp=N,31µm,0.5s						
NEM2	Nemuro 2	3.75	241	eP	Pn	02 04 14.0	-1.4
NEM2				eS	Sn	02 04 56.8	-1.4
NEM2	Nemuro 2	3.75	241	A	A	02 04 14.0	
	comp=N,25nm,7.2s,comp=E,25nm,2.5s						
JRA	Rausu	3.89	252	eP	Pn	02 04 18.9	+1.6
JRA				eS	Sn	02 05 01.8	+0.1
JRA	Rausu	3.89	252	A	A	02 04 18.9	
	comp=N,78nm,2.8s,comp=E,63nm,2.0s						
JNSB	Nemuroshibetsu	4.03	250	A	A	02 04 18.3	
	comp=N,104nm,2.5s,comp=E,90nm,2.4s						
JKHN	Kushirohamanak	4.26	241	A	A	02 04 21.4	
	comp=N,39nm,1.4s,comp=E,52nm,1.9s						
JNK	Nakash	4.30	249	eP	Pn	02 04 24.1	+1.1
JNK				eS	Sn	02 05 11.7	-0.1
JNK	Nakash	4.30	249	A	A	02 04 24.1	
	comp=N,21nm,4.7s,comp=E,24nm,0.9s						
JAK	Akkeshi	4.60	242	eP	Pn	02 04 26.3	-0.7
JAK				eS	Sn	02 05 18.6	-0.5
JAK	Akkeshi	4.60	242	A	A	02 04 26.3	
	comp=N,62nm,2.5s,comp=E,45nm,1.3s						
JTKR	Abashiri--Toko	4.71	256	eP	Pn	02 04 30.1	+1.6
JTKR				eS	Sn	02 05 26.6	+4.9
JTKR	Abashiri--Toko	4.71	256	A	A	02 04 30.1	
	comp=N,13nm,7.2s,comp=E,13nm,5.6s						
JAR	Ashorobuto	5.05	249	eP	Pn	02 04 35.0	+1.8
JAR				eS	Sn	02 05 32.3	+2.1
JAR	Ashorobuto	5.05	249	A	A	02 04 35.0	
	comp=N,28nm,1.7s,comp=E,30nm,1.6s						
JMP	Maruseppu	5.07	258	A	A	02 04 32.7	
	comp=N,12nm,2.0s,comp=E,12nm,2.6s						
JOB	Onbets	5.19	245	eP	Pn	02 04 35.8	+0.7
JOB				eS	Sn	02 05 34.8	+1.2
JOB	Onbets	5.19	245	A	A	02 04 35.8	
	comp=N,41nm,4.4s,comp=E,56nm,1.3s						
YSS	Yuzhno-Sakhali	5.46	290		Pn	02 04 39.3	+0.5
YSS	Yuzhno-Sakhali	5.46	290	P	Pn	02 04 41.4	+2.6
YSS	Yuzhno-Sakhali	5.46	290	κ ePN	Pn	02 04 40.5	+1.7
YSS				eS	Sn	02 05 40.8	+0.5
YSS				pmax	pmax		
	comp=Z,410nm,1.0s						
YSS				pmax	pmax		
	comp=Z,4µm,4.8s						
YSS				pmax	pmax		
	comp=N,1µm,4.0s						
YSS				pmax	pmax		
	comp=E,2µm,4.2s						
YSS				smax	smax		
	comp=N,400nm,1.1s						
YSS				smax	smax		
	comp=E,450nm,1.1s						
YSS				MLR	MLR		
	comp=N,9µm,16.0s						
YSS				MLR	MLR		
	comp=E,21µm,16.0s						
YSS				MLR	MLR		
	comp=Z,24µm,16.0s						
YSS	Yuzhno-Sakhali	5.46	290	eP	Pn	02 04 40.5	+1.7
YSS				AMB	AMB	02 04 43.7	
	comp=Z,4µm,4.8s						
YSS				eS	Sn	02 05 44.6	+4.3
YSS				AMS	AMS	02 06 44.0	
	comp=Z,9µm,16.0s						
YSS				AMS	AMS	02 06 44.0	
	comp=Z,21µm,16.0s						
JKK2	Kamakawa 2	5.53	258	eP	Pn	02 04 42.0	+2.2
JKK2				eS	Sn	02 05 46.8	+4.7
JKA	Kamikawa-asahi	5.57	261	Pn	Pn	02 04 39.5	-0.8
ASAJ	Asahikawa	5.57	261	P	Pn	02 04 43.0	+2.7
	comp=Z,1µm,1.1s,baz=91,slow=13,SNR=94						
ASAJ				S	Sn	02 05 43.6	+0.7
	comp=Z,732nm,0.7s,baz=70,slow=14,SNR=3.6						
ASAJ				LR	LR	02 07 00.7	
	comp=Z,28µm,19.4s,baz=88,slow=40						
ASAJ	Asahikawa	5.57	261	PN	Pn	02 04 39.5	-0.8
JCH	Churui	5.63	244	eP	Pn	02 04 41.9	+0.7
JCH				eS	Sn	02 05 44.7	+0.2
JCH	Churui	5.63	244	A	A	02 04 41.9	
	comp=N,66nm,2.3s,comp=E,31nm,1.7s						
JTHR	Tokachihiroo	5.85	242	A	A	02 04 43.1	
	comp=N,55nm,3.1s,comp=E,57nm,1.9s						
JWK2	Keihoku	5.88	273	eP	Pn	02 04 48.4	+3.8
JFR	Furan	5.89	252	A	A	02 04 43.8	
	comp=N,16nm,1.1s,comp=E,19nm,1.5s						
JAB	Ashibetsu	6.01	256	eP	Pn	02 04 49.7	+3.3
JAB	Ashibetsu	6.01	256	A	A	02 04 49.7	
	comp=N,25nm,2.4s,comp=E,30nm,4.4s						
JSS	Shosan	6.03	265	A	A	02 04 45.8	
	comp=N,9.0nm,4.8s,comp=E,16nm,4.5s						
ERM	Erimo	6.09	240		Pn	02 04 47.0	-0.4
ERM	Erimo	6.09	240	P	Pn	02 04 49.4	+2.0
ERM	Erimo	6.09	240	PN	Pn	02 04 47.0	-0.4
JEM	Erimo	6.09	240	P	Pn	02 04 49.4	+2.0
JEM	Erimo	6.09	240	A	A	02 04 46.4	
	comp=N,105nm,1.6s,comp=E,113nm,2.6s						
JNBK	Urakawa-nobuka	6.19	244	eP	Pn	02 04 47.4	-1.5
JNBK				eS	Sn	02 05 56.3	-2.0
JNBK	Urakawa-nobuka	6.19	244	A	A	02 04 47.4	
	comp=N,98nm,1.8s,comp=E,94nm,1.2s						
JBT2	Biratori 2	6.20	249	A	A	02 04 48.2	
	comp=N,18nm,4.5s,comp=E,14nm,2.6s						
JHR	Hokuryu	6.28	259	A	A	02 04 49.2	
	comp=N,16nm,2.9s,comp=E,21nm,4.5s						
JSHD	Hidakashinhida	6.31	246	A	A	02 04 49.6	
	comp=N,66nm,2.7s,comp=E,76nm,2.0s						
JRBN	Rebuntou	6.46	274	eP	Pn	02 04 55.3	+2.7
JIAM	Iburiatsuma	6.57	249	A	A	02 04 53.1	
	comp=N,75nm,1.0s,comp=E,59nm,1.0s						
JISS	Ishikarishitsu	6.64	256	A	A	02 04 54.2	
	comp=N,41nm,3.1s,comp=E,100nm,3.3s						
SKR	Severo-Kuril’s	6.69	34	ePN	Pn	02 04 55.4	-0.1
SKR				pmax	pmax		
	comp=Z,489nm,0.7s						
SKR				pmax	pmax		
	comp=Z,5µm,3.7s						
SKR				MLR	MLR		
	comp=Z,12µm,12.0s						
SKR	Severo-Kuril’s	6.69	34	eP	Pn	02 04 55.4	-0.1
SKR				AMB	AMB	02 04 58.2	
	comp=Z,490nm,0.7s						
SKR				AMB	AMB	02 05 05.8	
	comp=Z,5µm,3.7s						
SKR				eS	Sn	02 06 10.3	0.0
SKR				A	A	02 06 29.4	
	comp=Z,2µm,0.9s						
SKR				A	A	02 06 29.4	
	comp=Z,2µm,0.9s						
UGL	Uglegorsk	6.74	307	⇓ePN	Pn	02 04 59.2	+3.0
UGL				pmax	pmax		
	comp=Z,762nm,1.2s						
UGL				MLR	MLR		
	comp=Z,21µm,14.0s						
UGL				MLR	MLR		
	comp=N,24µm,20.0s						
UGL				MLR	MLR		
	comp=E,10µm,18.0s						
JEW	Eniwo	6.79	252	A	A	02 04 56.1	
	comp=N,36nm,3.3s,comp=E,42nm,3.1s						
JNB	Noboribetsu	7.22	250	A	A	02 05 01.9	
	comp=N,7.0nm,5.4s,comp=E,10.0nm,2.2s						
JKB	Kayabe	7.50	246	A	A	02 05 05.6	
	comp=N,29nm,3.1s,comp=E,28nm,1.8s						
TYV	Tymovskoe	7.54	320	ePN	Pn	02 05 09.6	+2.3
TYV				eS	Sn	02 06 33.4	+2.1
TYV				pmax	pmax		
	comp=Z,2µm,3.0s						
TYV				pmax	pmax		
	comp=Z,502nm,0.8s						
TYV				smax	smax		
	comp=N,3µm,3.9s						
TYV				smax	smax		
	comp=E,2µm,3.9s						
TYV				smax	smax		
	comp=N,248nm,1.3s						
TYV				smax	smax		
	comp=E,279nm,1.3s						
TYV				MLR	MLR		
	comp=N,14µm,18.0s						
TYV				MLR	MLR		
	comp=Z,20µm,18.0s						
TYV	Tymovskoe	7.54	320	eP	Pn	02 05 09.6	+2.3
TYV				AMB	AMB	02 05 10.2	
	comp=Z,2µm,3.0s						
TYV				AMB	AMB	02 05 13.7	
	comp=Z,5µm,0.8s						
TYV				eS	Sn	02 06 33.4	+2.1
TYV				A	A	02 06 41.8	
	comp=Z,2µm,3.9s						
TYV				A	A	02 06 41.8	
	comp=Z,3µm,3.9s						
TYV				AMS	AMS	02 07 39.6	
	comp=Z,14µm,17.0s						
TYV				AMS	AMS	02 07 39.6	
	comp=Z,20µm,17.0s						
JAHD	Aomorihigashid	7.63	241	A	A	02 05 07.4	

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      comp=N,41nm,1.7s,comp=E,35nm,2.7s
JOT   Ohata             7.75 243  A         A         02 05 09.0
      comp=N,22nm,3.0s,comp=E,15nm,2.2s
JARK  Aomorirokkasho    7.77 240  A         A         02 05 09.2
      comp=N,18nm,2.3s,comp=E,14nm,2.3s
JSH   Shimam            7.81 254  A         A         02 05 09.9
      comp=N,7.0nm,8.9s,comp=E,6.0nm,3.3s
JHST  Hiyamasetana      8.02 253  A         A         02 05 12.6
      comp=N,13nm,3.3s,comp=E,11nm,1.7s
JKEN  Kujiedanarisaw    8.07 234  A         A         02 05 13.1
      comp=N,12nm,2.3s,comp=E,16nm,1.5s
JANG  Nango             8.07 236  eP        Pn        02 05 11.6  -3.0
JANG                              eS        Sn        02 06 35.9  -8.5
JANG  Nango             8.07 236  A         A         02 05 11.6
      comp=N,7.0nm,2.4s,comp=E,6.0nm,2.4s
JSR   Shiriuchi         8.07 246  A         A         02 05 13.3
      comp=N,9.0nm,4.3s,comp=E,12nm,2.8s
JTM   Tenmabayashi      8.08 239            Pn        02 05 13.2  -1.5
JTM   Tenmabayashi      8.08 239  P         Pn        02 05 14.4  -0.3
JTM   Tenmabayashi      8.08 239  A         A         02 05 13.3
      comp=N,20nm,2.8s,comp=E,16nm,1.6s
JTH   Tanohata          8.16 232  eP        Pn        02 05 12.8  -3.1
JTH                               eS        Sn        02 06 35.5   -11
JHHS  Hirosakihyakuz    8.59 241  A         A         02 05 20.2
      comp=N,40nm,2.1s,comp=E,34nm,4.1s
JOM   Ohasama           8.80 232  A         A         02 05 22.8
      comp=N,6.0nm,1.1s,comp=E,6.0nm,2.8s
JSZI  Iwateshizukuis    8.81 234  A         A         02 05 23.0
      comp=N,20nm,1.9s,comp=E,19nm,2.8s
JIW   Iwasaki           8.85 242  A         A         02 05 23.6
      comp=N,8.0nm,4.2s,comp=E,12nm,4.2s
JNTW  Noshirotokiwa     8.94 239  A         A         02 05 24.8
      comp=N,33nm,3.1s,comp=E,39nm,3.5s
PETK  Petropavlovsk-    9.22  29  P         Pn        02 05 30.5  +0.2
      comp=E,65nm,0.8s,baz=178,slow=12,SNR=30
PETK                              S         Sn        02 07 12.5   0.0
      comp=E,51nm,0.8s,baz=163,slow=11,SNR=1.5
PETK                              LR        LR        02 09 02.3
      comp=E,9µm,18.9s,baz=218,slow=38
JRG   Rokugo            9.23 234  A         A         02 05 28.5
      comp=N,9.0nm,2.6s,comp=E,8.0nm,3.6s
JYW   Yuwa              9.38 236  A         A         02 05 30.6
      comp=N,18nm,4.3s,comp=E,20nm,2.6s
PET   Petropavlovsk     9.50  32            Pn        02 05 34.7  +0.7
PET   Petropavlovsk     9.50  32  ePN       Pn        02 05 37.1  +3.1
PET                               pmax      pmax
      comp=Z,112nm,0.8s
PET                               MLR       MLR
      comp=Z,13µm,17.0s
PET                               MLR       MLR
      comp=Z,8µm,20.0s
JOFO  Osakifurukawao    9.63 229  A         A         02 05 33.8
      comp=N,21nm,2.4s,comp=E,29nm,2.7s
TEY   Ternei            9.64 273⇑ePN        Pn        02 05 40.8  +4.8
TEY                               eS        Sn        02 07 27.3  +4.6
TEY                               pmax      pmax
      comp=Z,500nm,1.3s
TEY                               pmax      pmax
      comp=E,240nm,1.4s
TEY                               smax      smax
      comp=E,500nm,8.1s
TEY                               smax      smax
      comp=N,2µm,5.9s
TEY                               MLR       MLR
      comp=N,3µm,18.0s
TEY                               MLR       MLR
      comp=E,2µm,18.0s
TEY                               MLR       MLR
      comp=Z,8µm,15.0s
JYK   Kaneyama          9.71 233  A         A         02 05 34.9
      comp=N,5.0nm,2.0s,comp=E,7.0nm,2.2s
JOU   Okura             9.94 229  A         A         02 05 37.9
      comp=N,6.0nm,3.0s,comp=E,7.0nm,3.0s
JYA   Atsumi           10.30 233  A         A         02 05 42.8
      comp=N,7.0nm,2.1s,comp=E,6.0nm,2.0s
JYAR  Yonezawaarcadi   10.55 229  A         A         02 05 46.0
      comp=N,9.0nm,1.2s,comp=E,7.0nm,1.1s
GRNR  Gornyy           10.75 306⇓iPN        Pn        02 05 55.0  +3.8
GRNR                              pmax      pmax
      comp=E,160nm,1.2s
GRNR                              pmax      pmax
      comp=Z,170nm,1.3s
GRNR                              MLR       MLR
      comp=E,5µm,21.0s
GRNR                              MLR       MLR
      comp=N,3µm,16.0s
GRNR                              MLR       MLR
      comp=Z,7µm,20.0s
JSD   Sado             11.51 235            Pn        02 06 00.2  -1.4
JSD   Sado             11.51 235  P         Pn        02 06 00.8  -0.8
MJAR  Matsushiro Arr   12.60 230  P         Pn        02 06 14.5  -2.0
      comp=Z,0.4nm,0.3s,baz=28,slow=13,SNR=77
MJAR                              S         Sn        02 08 34.8  -0.5
      comp=Z,14nm,0.7s,baz=41,slow=8.4,SNR=4.1
      comp=Z,47nm,0.8s
MJAR  Matsushiro Arr   12.60 230            Pn        02 06 13.6  -3.0
MJB9  Matsu-Tunnel     12.60 230            Pn        02 06 15.1  -1.4
MAJO  Matsushiro       12.60 230            Pn        02 06 13.7  -2.8
MAJO  Matsushiro       12.60 230  P         Pn        02 06 14.8  -1.7
MAJO  Matsushiro       12.60 230  PN        Pn        02 06 13.7  -2.8
USRK  Ussuriysk Ar.    13.02 272  P         Pn        02 06 23.1  +0.9
      comp=Z,83nm,0.8s,baz=90,slow=9.5,SNR=62
VLA   Vladivostok      13.35 267⇓ePN        Pn        02 06 26.4  -0.2
JGF   Kuroka           13.76 230            Pn        02 06 30.6  -1.7
JGF   Kuroka           13.76 230  P         Pn        02 06 31.1  -1.3
MSHR  Mys Shultsa      14.01 266⇓eP         Pn        02 06 34.8  -0.9
MSHR                              pmax      pmax
      comp=Z,179nm,1.3s
JSG   Sagara           14.04 225            Pn        02 06 35.0  -1.1
INU   Inuyama          14.13 230            Pn        02 06 35.8  -1.5
INU   Inuyama          14.13 230  P         Pn        02 06 36.8  -0.5
PSTR  Posyet           14.24 266d iP        Pn        02 06 37.7  -1.0
PSTR  Posyet           14.24 266  eP        Pn        02 06 37.7  -1.0
MA2   Magadan          14.32   1  P         Pn        02 06 39.3  -0.3
      comp=Z,72nm,0.8s,baz=178,slow=10,SNR=15
MA2                               LR        LR        02 12 24.8
      comp=Z,5µm,18.2s,baz=184,slow=38
MA2   Magadan          14.32   1  Pn        Pn        02 06 38.7  -0.9
MA2   Magadan          14.32   1⇑eP         Pn        02 06 40.1  +0.5
MA2                               pmax      pmax
      comp=Z,127nm,1.3s
MA2   Magadan          14.32   1  P         Pn        02 06 38.4  -1.2
      comp=Z,136nm,2.0s
JHJ   Hachijo jima 2   14.59 217  P         Pn        02 06 46.6  +3.3
      comp=Z,322nm,1.0s,baz=66,slow=20,SNR=3.8
JHJ                               S         Sn        02 09 11.6   -12
      comp=Z,178nm,0.3s,baz=82,slow=23,SNR=6.5
MDJ   Mudanjiang       14.63 275  Pn        Pn        02 06 40.7  -3.2
MDJ   Mudanjiang       14.63 275  P         Pn        02 06 42.2  -1.7
MDJ                               S         Sn        02 09 17.2  -7.4
MDJ                               pmax      pmax
      comp=Z,22nm,1.3s
MDJ                               pmax      pmax
      comp=Z,1µm,7.6s
MDJ                               LR        LR
      comp=Z,4µm,14.2s
MDJ                               LR        LR
      comp=Z,11µm,19.3s
MDJ                               LR        LR
      comp=Z,18µm,18.9s
MDJ   Mudanjiang       14.63 275  P         Pn        02 06 46.0  +2.1
BNX   BinXian          16.01 280 ⇓P         Pn        02 07 01.2  -0.3
BNX                               S         Sn        02 09 56.2  -1.7
BNX                               PcP       PcP       02 11 56.7  +1.1
BNX                               pmax      pmax
      comp=Z,82nm,1.1s
BNX                               pmax      pmax
      comp=Z,2µm,7.1s
BNX                               LR        LR
      comp=Z,5µm,16.3s
BNX                               LR        LR
      comp=Z,9µm,17.3s
BNX                               LR        LR
      comp=Z,11µm,17.3s
HEH   HeiHe            16.11 296  eP        Pn        02 07 02.6  -0.1
HEH                               pP        P         02 07 08.7  +3.5
HEH                               S         Sn        02 10 02.3  +2.1
HEH                               sS        S         02 10 12.6  +1.4
HEH                               pmax      pmax
      comp=Z,160nm,0.9s
HEH                               pmax      pmax
      comp=Z,2µm,7.4s
HEH                               LR        LR
      comp=Z,2µm,18.8s
HEH                               LR        LR
      comp=Z,10µm,16.8s
HEH                               LR        LR
      comp=Z,12µm,17.9s
JMN   Monobe           17.07 233  Pn        Pn        02 07 14.1  -0.9
JMN                               IAmb      IAmb      02 07 19.0
      comp=Z,530nm,1.5s
JMN   Monobe           17.07 233  P         Pn        02 07 16.9  +1.9
ZEA   Zeya             17.10 308  eP        P         02 07 16.3  +0.1
ZEA                               eS        Sn        02 10 17.1  -7.0
ZEA                               pmax      pmax
      comp=E,90nm,1.0s
ZEA                               pmax      pmax
      comp=N,130nm,0.9s
ZEA                               pmax      pmax
      comp=Z,280nm,1.0s
ZEA                               pmax      pmax
      comp=Z,2µm,10.2s
ZEA                               smax      smax
      comp=N,900nm,7.3s
ZEA                               smax      smax
      comp=E,400nm,7.3s
ZEA                               MLR       MLR
      comp=E,2µm,18.0s
ZEA                               MLR       MLR
      comp=Z,4µm,17.0s
ZEA   Zeya             17.10 308  eP        Pn        02 07 15.5  +0.4
SHEM  Shemya Is, Ala   17.28  56  P         Pn        02 07 17.9  +0.5
      comp=Z,8.0nm,0.3s,baz=288,slow=9.6,SNR=6.5
SHEM                              S         Sn        02 10 17.9   -11
      comp=Z,57nm,0.7s,baz=285,slow=18,SNR=1.6
SHEM                              LR        LR        02 12 49.4
      comp=Z,4µm,21.9s,baz=294,slow=33
      comp=Z,148nm,0.8s
SMY   Shemya           17.28  56            Pn        02 07 17.9  +0.5
SMY                               IAmb      IAmb      02 07 21.4
      comp=Z,379nm,1.1s
SMY   Shemya           17.28  56  P         Pn        02 07 17.9  +0.5
SMY                               pmax      pmax
      comp=Z,379nm,1.1s
CN2   Changchun        17.72 274 ⇓P         Pn        02 07 22.1  -0.8
CN2                               epP       P         02 07 29.0  +5.9
CN2                               eS        Sn        02 10 34.8  -4.5
CN2                               pmax      pmax
      comp=Z,60nm,0.8s
CN2                               pmax      pmax
      comp=Z,2µm,6.0s
CN2                               LR        LR
      comp=Z,2µm,14.0s
CN2                               LR        LR
      comp=Z,4µm,14.0s
CN2                               LR        LR
      comp=Z,4µm,15.0s
SEY   Seymchan         17.73   3  P         Pn        02 07 21.7  -1.1
      comp=Z,0.3nm,0.3s,baz=169,slow=8.7,SNR=19
SEY                               LR        LR        02 14 43.1
      comp=Z,6µm,18.1s,baz=182,slow=39
      comp=Z,27nm,0.7s
SEY   Seymchan         17.73   3⇓eP         Pn        02 07 22.4  -0.4
SEY                               pmax      pmax
      comp=Z,141nm,1.4s
SEY                               MLR       MLR
      comp=Z,5µm,18.0s
SEY   Seymchan         17.73   3  eP        Pn        02 07 22.4  -0.4
KSRS  Korea Array      18.45 253  P         P         02 07 30.2  -0.9
      comp=Z,3.2nm,0.3s,baz=61,slow=11,SNR=70
KSRS                              S         Sn        02 10 56.9   0.0
      comp=Z,0.7nm,0.4s,baz=69,slow=24,SNR=1.4
KSRS                              PcP       PcP       02 12 00.8  +1.2
      comp=Z,12nm,0.8s,baz=26,slow=0.8,SNR=11
KSRS                              ScP       ScP       02 15 31.2  +0.7
      comp=Z,0.8nm,0.3s,baz=348,slow=5.1,SNR=4.9
      comp=Z,80nm,0.9s
KS19  Wonju Array Si   18.46 253            P         02 07 30.1  -1.2
KSAR  Wonju Array Be   18.48 253  P         P         02 07 30.1  -1.4
KSAR  Wonju Array Be   18.48 253  P         P         02 07 30.1  -1.4
JTU   Tsushima         19.21 243  P         Pn        02 07 41.7  +0.8
JNU   Nakatsue         19.25 238  P         P         02 07 41.0  +1.0
      comp=Z,1.8nm,0.3s,baz=30,slow=6.6,SNR=31
JNU                               LR        LR        02 15 20.8
      comp=Z,3µm,21.1s,baz=42,slow=38
      comp=Z,274nm,1.1s
JNU   Nakatsue         19.25 238  P         P         02 07 39.1  -1.0
JNU                               IAmb      IAmb      02 07 44.9
      comp=Z,403nm,1.1s
JNU   Nakatsue         19.25 238  P         P         02 07 41.6  +1.6
JCJ   Chichijima       19.26 202  P         P         02 07 31.0  -9.2
      comp=Z,98nm,0.8s,baz=86,slow=11,SNR=4.0
JCJ                               S         S         02 10 49.0   -26
      comp=Z,126nm,0.6s,baz=303,slow=23,SNR=8.0
JCJ                               LR        LR        02 16 43.6
      comp=Z,1µm,18.9s,baz=335,slow=42
JCJ   Chichijima       19.26 202  IAmb      IAmb      02 07 45.1
      comp=Z,318nm,1.1s
INCN  Inchon           19.30 254  P         P         02 07 41.4  +0.8
INCN                              S         Sn        02 11 18.3  +0.6
INCN  Inchon           19.30 254  P         P         02 07 39.0  -1.6
INCN  Inchon           19.30 254  P         P         02 07 39.0  -1.6
INCN                              pmax      pmax
      comp=Z,177nm,1.1s
TJN   Taejon           19.41 251  P         P         02 07 40.0  -1.7
TJN   Taejon           19.41 251c iP        P         02 07 42.4  +0.7
SNY   Shenyang         19.59 269 ⇑P         P         02 07 43.4  -0.3
SNY                               S         S         02 11 13.8  -8.1
SNY                               pmax      pmax
      comp=Z,150nm,1.3s
SNY                               pmax      pmax
      comp=Z,2µm,3.6s
SNY                               LR        LR
      comp=Z,3µm,16.5s
SNY                               LR        LR
      comp=Z,4µm,16.9s
SNY                               LR        LR
      comp=Z,7µm,17.6s
YAK   Yakutsk          20.57 332  P         P         02 07 53.5  -0.6
      comp=Z,113nm,0.6s,baz=108,slow=1.7,SNR=14
YAK                               S         S         02 11 36.2  -4.7
      comp=Z,19nm,0.6s,baz=230,slow=18,SNR=1.2
YAK                               LR        LR        02 16 16.8
      comp=Z,7µm,19.1s,baz=134,slow=38
      comp=Z,113nm,0.6s
YAK   Yakutsk          20.57 332  P         P         02 07 52.0  -2.1
YAK   Yakutsk          20.57 332  IAMs_20   IAMs_20   02 15 48.7
      comp=Z,7µm,21.0s
YAK   Yakutsk          20.57 332  eP        P         02 07 54.4  +0.3
YAK                               e                   02 08 09.7
YAK                               eS        Sn        02 11 45.1  -2.6
YAK                               eSS       SnSn      02 12 11.0  +8.1
YAK                               pmax      pmax
      comp=Z,2µm,0.9s
YAK                               pmax      pmax
      comp=E,563nm,1.1s
YAK                               pmax      pmax
      comp=N,721nm,1.1s
YAK                               pmax      pmax
      comp=Z,2µm,1.5s
YAK                               pmax      pmax
      comp=N,2µm,1.8s
YAK                               pmax      pmax
      comp=E,1µm,1.8s
YAK                               smax      smax
      comp=N,2µm,4.0s
YAK                               smax      smax
      comp=E,538nm,2.2s
YAK                               MLR       MLR
      comp=Z,9µm,25.0s
YAK                               MLR       MLR
      comp=N,4µm,22.0s
YAK                               MLR       MLR
      comp=E,4µm,24.0s
HILR  Hailar Array B   20.99 293  P         P         02 07 56.9  -1.9
      comp=E,20nm,0.8s,baz=98,slow=11,SNR=23
HILR                              PcP       PcP       02 12 04.8  +0.7
      comp=E,9.7nm,0.7s,baz=92,slow=4.5,SNR=3.6
HILR                              ScP       ScP       02 15 37.0  +0.8
      comp=E,7.8nm,1.0s,baz=134,slow=4.2,SNR=6.0
HILR                              LR        LR        02 16 44.0
      comp=E,6µm,18.9s,baz=80,slow=39
      comp=E,20nm,0.8s
HIA   Hailar           20.99 292  P         P         02 07 56.5  -2.4
HIA   Hailar           20.99 292  P         P         02 07 56.5  -2.4
HIA                               pmax      pmax
      comp=Z,46nm,1.0s
HIA                               MLR       MLR
      comp=Z,8µm,18.0s
DL2   Dalian           22.09 263  P         P         02 08 10.2  -0.5
DL2                               S         S         02 12 09.1  -1.9
DL2                               pmax      pmax
      comp=Z,310nm,1.0s
DL2                               pmax      pmax
      comp=Z,3µm,6.2s
DL2                               LR        LR
      comp=Z,2µm,17.6s
DL2                               LR        LR
      comp=Z,3µm,18.0s
DL2                               LR        LR
      comp=Z,5µm,17.8s
ADK   Adak             22.71  61  IAMs_20   IAMs_20   02 15 27.9
      comp=Z,3µm,20.0s
XLT   XiLinHaoTe       24.26 279  eP        P         02 08 31.9  -0.2
XLT                               pP        pP        02 08 41.4  -4.0
XLT                               sP        sP        02 08 44.8  -6.8
XLT                               PP        PnPn      02 09 07.6  +3.6
XLT                               S         S         02 12 45.1  -2.1
XLT                               SS        SnSn      02 13 37.4  +3.8
XLT                               pmax      pmax
      comp=Z,120nm,1.1s
XLT                               pmax      pmax
      comp=Z,1µm,4.9s
XLT                               LR        LR
      comp=Z,5µm,15.7s
XLT                               LR        LR
      comp=Z,6µm,16.2s
ATKA  Atka Island      24.27  61  IAMs_20   IAMs_20   02 16 14.9
      comp=Z,5µm,22.0s
BILL  Bilibino         24.29  15  IAMs_20   IAMs_20   02 18 58.1
      comp=Z,6µm,20.0s
CIT   Chita            24.95 299  eP        P         02 08 37.0  -1.3
CIT                               e                   02 08 48.6
CIT                               e                   02 08 54.6
CIT                               e                   02 09 21.0
CIT                               e                   02 09 27.2
CIT                               e                   02 12 13.4
CIT                               e                   02 12 58.0
CIT                               e                   02 14 08.4
JOW   Kunigami         25.44 231  LR        LR        02 18 15.4
      comp=Z,903nm,20.8s,baz=44,slow=35
JOW   Kunigami         25.44 231  P         P         02 08 41.7  -1.2
JOW   Kunigami         25.44 231  P         P         02 08 43.7  +0.8
BJI   Beijing          25.47 270  P         P         02 08 43.1  +0.1
BJI                               sP        pP        02 08 56.7  +0.5
BJI                               PP        PnPn      02 09 20.6  +0.2
BJI                               S         S         02 13 03.0  -3.3
BJI                               pmax      pmax
      comp=Z,43nm,1.4s
BJI                               pmax      pmax
      comp=Z,800nm,7.0s
BJI                               LR        LR
      comp=Z,1µm,17.5s
BJI                               LR        LR
      comp=Z,2µm,19.6s
BJI                               LR        LR
      comp=Z,3µm,18.0s
BJT   Baijiatuau       25.48 270  P         P         02 08 42.7  -0.4
BJT                               IAmb      IAmb      02 08 45.2
      comp=Z,211nm,1.6s
BJT   Baijiatuau       25.48 270  IAMs_20   IAMs_20   02 19 06.6
      comp=Z,5µm,19.0s
BJT   Baijiatuau       25.48 270  P         P         02 08 42.7  -0.4
BJT                               pmax      pmax
      comp=Z,211nm,1.6s
BJT                               MLR       MLR
      comp=Z,6µm,19.0s
TIA   Tai'an           26.52 262  P         P         02 08 52.5  -0.1
TIA                               PcP       PcP       02 12 17.8  +1.7
TIA                               S         S         02 13 21.8  -1.2
TIA                               ScP       ScP       02 15 52.9  +1.5
TIA                               ScS       ScS       02 19 42.4  +0.6
TIA                               pmax      pmax
      comp=Z,170nm,1.5s
TIA                               LR        LR
      comp=Z,2µm,17.9s
TIA                               LR        LR
      comp=Z,480nm,16.8s
TIA                               LR        LR
      comp=Z,3µm,17.9s
SSE   Sheshan          26.70 248  P         P         02 08 53.0  -1.2
SSE                               S         S         02 13 27.7  +1.9
SSE                               pmax      pmax
      comp=Z,130nm,1.1s
SSE                               pmax      pmax
      comp=Z,530nm,3.5s
SSE                               LR        LR
      comp=Z,660nm,17.5s
SSE                               LR        LR
      comp=Z,2µm,17.5s
P08K  Saint George I   27.35  51  IAMs_20   IAMs_20   02 18 22.9
      comp=Z,2µm,20.0s
P08K  Saint George I   27.35  51  P         P         02 09 00.5  +0.8
      baz=263
NIKH  Nikolski High    27.54  59  P         P         02 09 02.4  +0.9
      baz=271
HNS   HongShan         27.64 266 ⇑P         P         02 09 02.9  +0.3
HNS                               S         S         02 13 44.4  +3.8
HNS                               pmax      pmax
      comp=Z,140nm,1.4s
HNS                               LR        LR
      comp=Z,3µm,16.7s
HNS                               LR        LR
      comp=Z,2µm,16.7s
HNS                               LR        LR
      comp=Z,3µm,15.9s
NJ2   Nanjing          27.65 252 ⇑P         P         02 09 03.0  +0.3
NJ2                               S         S         02 13 40.9  +0.1
NJ2                               sS        sS        02 14 01.3  -1.9
NJ2                               pmax      pmax
      comp=Z,93nm,1.2s
NJ2                               pmax      pmax
      comp=Z,600nm,5.1s
NJ2                               LR        LR
      comp=Z,1µm,14.2s
NJ2                               LR        LR
      comp=Z,5µm,20.4s
NJ2                               LR        LR
      comp=Z,6µm,19.4s
TIXI  Tiksi            28.36 346  LR        LR        02 20 46.5
      comp=Z,3µm,20.1s,baz=174,slow=37
TIXI  Tiksi            28.36 346            P         02 09 06.8  -1.8
TIXI                              PcP       PcP       02 12 19.4  -0.4
TIXI                              IAMs_20   IAMs_20   02 20 35.3
      comp=Z,3µm,20.0s
TIXI  Tiksi            28.36 346⇑eP         P         02 09 06.6  -2.0
TIXI                              pmax      pmax
      comp=Z,20nm,0.8s
TIXI                              MLR       MLR
      comp=Z,3µm,19.0s
HHC   Hu-ho-hao-te     28.41 275  eP        P         02 09 10.2  +0.6
HHC                               pP        pP        02 09 19.8  -3.1
HHC                               S         S         02 13 51.9  -1.0
HHC                               sS        sS        02 14 07.5  -7.8
HHC                               pmax      pmax
      comp=Z,180nm,1.1s
HHC                               pmax      pmax
      comp=Z,740nm,4.8s
HHC                               LR        LR
      comp=Z,3µm,16.2s
HHC                               LR        LR
      comp=Z,7µm,17.9s
HHC                               LR        LR
      comp=Z,8µm,17.9s
UNV   Unalaska Valle   28.93  57  P         P         02 09 14.9  +1.0
      baz=271
H11N2 WAKE ISLAND Hy   28.98 146  T         T         02 39 56.9
      baz=336,slow=76,SNR=8355
H11N1 WAKE ISLAND Hy   28.99 146  T         T         02 39 58.8
      baz=336,slow=76,SNR=7133
H11N3 WAKE ISLAND Hy   29.00 146  T         T         02 39 58.2
      baz=336,slow=76,SNR=6742
TIY   Taiyuan          29.10 268  eP        P         02 09 17.1  +1.4
TIY                               sP        pP        02 09 31.3  +2.3
TIY                               S         S         02 14 03.8  +0.1
TIY                               pmax      pmax
      comp=Z,130nm,1.0s
TIY                               pmax      pmax
      comp=Z,480nm,5.3s
TIY                               LR        LR
      comp=Z,2µm,16.5s
TIY                               LR        LR
      comp=Z,2µm,15.1s
TIY                               LR        LR
      comp=Z,3µm,19.9s
ULN   Ulaanbaatar      29.51 291  P         P         02 09 19.9  +0.6
ULN   Ulaanbaatar      29.51 291            P         02 09 18.2  -1.2
ULN                               PcP       PcP       02 12 24.2  +0.8
ULN   Ulaanbaatar      29.51 291  IAMs_20   IAMs_20   02 21 58.5
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      comp=Z,4µm,19.0s
ULN   Ulaanbaatar       29.51 291  P        P        02 09 19.6 +0.2
      comp=Z,13µmcomp=Z,137nm,1.1s
ULN   Ulaanbaatar       29.51 291deP        P        02 09 20.0 +0.6
ULN                                pmax     pmax
      comp=Z,31nm,1.0s
ULN   Ulaanbaatar       29.51 291 eP        P        02 09 20.0 +0.6
BTO   Baotou            29.59 275 eP        P        02 09 20.6 +0.6
BTO                                sP       pP       02 09 33.7 +0.3
BTO                                PP       PnPn     02 10 17.9 +1.4
BTO                                S        S        02 14 03.8 -7.6
BTO                                pmax     pmax
      comp=Z,130nm,1.1s
BTO                                pmax     pmax
      comp=Z,2µm,4.6s
BTO                                LR       LR
      comp=Z,11µm,15.3s
BTO                                LR       LR
      comp=Z,10µm,18.4s
BTO                                LR       LR
      comp=Z,15µm,17.1s
M11K  Mekoryuk          29.68  44  P        P        02 09 20.5 +0.1
      baz=259
SONM  Songino Array     29.95 291  P        P        02 09 22.9 -0.4
      comp=Z,13nm,0.9s,baz=79,slow=8.6,SNR=43
SONM                               PcP      PcP      02 12 24.8 +0.3
      comp=Z,15nm,0.9s,baz=132,slow=1.6,SNR=6.3
SONM                               S        S        02 14 12.1 -5.0
      comp=Z,0.7nm,0.4s,baz=101,slow=7.5,SNR=1.4
SONM                               ScP      ScP      02 16 02.6 +0.5
      comp=Z,3.0nm,1.0s,baz=46,slow=4.2,SNR=4.3
SONM                               LR       LR       02 22 23.8
      comp=Z,5µm,18.8s,baz=92,slow=38
      comp=Z,13nm,0.9s
SONM  Songino Array     29.95 291  P        P        02 09 23.0 -0.2
SONM                               PcP      PcP      02 12 25.2 +0.7
SONM  Songino Array     29.95 291  P        P        02 09 23.0 -0.2
SONM                                                 02 12 25.3
SONM                               pmax     pmax
      comp=Z,27nm,1.2s
H11S1 WAKE ISLAND Hy    30.01 147  T        T        02 41 12.0
      baz=337,slow=76,SNR=5204
H11S3 WAKE ISLAND Hy    30.02 148  T        T        02 41 14.0
      baz=337,slow=76,SNR=4292
H11S2 WAKE ISLAND Hy    30.03 147  T        T        02 41 13.3
      baz=337,slow=76,SNR=5148
TNA   Tin City          30.36  33  P        P        02 09 26.3 -0.1
      baz=249
LYN   LuoYang           30.63 263⇑iP        P        02 09 29.5 +0.3
LYN                                sP       pP       02 09 42.7 +0.2
LYN                                PcP      PcP      02 12 28.2 +1.9
LYN                                S        S        02 14 27.2 -0.5
LYN                                sS       sS       02 14 48.4 -1.7
LYN                                PcS      PcS      02 16 11.6 +1.4
LYN                                pmax     pmax
      comp=Z,200nm,1.2s
LYN                                pmax     pmax
      comp=Z,2µm,4.4s
LYN                                LR       LR
      comp=Z,2µm,19.2s
LYN                                LR       LR
      comp=Z,3µm,18.9s
LYN                                LR       LR
      comp=Z,5µm,16.8s
K13K  Kusilvak Mount    30.72  41  P        P        02 09 30.0 +0.4
K13K  Kusilvak Mount    30.72  41  P        P        02 09 30.3 +0.6
      baz=258
FALS  False Pass        30.72  55  IAMs_20  IAMs_20  02 18 13.5
      comp=Z,2µm,20.0s
FALS  False Pass        30.72  55  P        P        02 09 30.7 +1.0
      baz=272
TATO  Taipei            30.78 239  IAMs_20  IAMs_20  02 21 48.6
      comp=Z,4µm,20.0s
F14K  Arctic Creek      30.95  34  P        P        02 09 32.1 +0.5
      baz=251
ANM   Nome              31.06  36           P        02 09 33.2 +0.6
ANM   Nome              31.06  36  P        P        02 09 33.2 +0.6
ANM                                pmax     pmax
      comp=Z,45nm,1.3s
ANM                                MLR      MLR
      comp=Z,1µm,19.0s
ANM   Nome              31.06  36  P        P        02 09 33.0 +0.4
      baz=253
YHNB  Yeheng            31.08 238  IAMs_20  IAMs_20  02 22 29.7
      comp=Z,4µm,20.0s
M13K  Dall Lake         31.08  44  P        P        02 09 33.7 +0.8
      baz=262
J14K  Nanvaranak Lak    31.39  40  P        P        02 09 35.7 +0.2
J14K  Nanvaranak Lak    31.39  40  P        P        02 09 36.2 +0.7
      baz=258
S12K  Black Hills       31.48  53  P        P        02 09 37.4 +1.0
      baz=271
ZAK   Zakamensk         31.51 296 eP        P        02 09 36.0 -0.9
ZAK                                pmax     pmax
      comp=Z,23nm,1.3s
L14K  Kuka Creek        31.54  42  P        P        02 09 37.9 +1.0
L14K                               IAMs_20  IAMs_20  02 20 11.0
      comp=Z,2µm,22.0s
L14K  Kuka Creek        31.54  42  P        P        02 09 37.4 +0.6
      baz=261
WHN   Wuhan             31.62 255 ⇑P        P        02 09 37.7 -0.1
WHN                                pP       pP       02 09 46.7 -4.5
WHN                                sP       sP       02 09 49.7 -7.7
WHN                                S        S        02 14 50.2 +7.1
WHN                                pmax     pmax
      comp=Z,340nm,0.9s
WHN                                LR       LR
      comp=Z,8µm,18.2s
F15K  North Star Dit    31.69  34  P        P        02 09 38.6 +0.4
F15K  North Star Dit    31.69  34  P        P        02 09 38.1  0.0
      baz=252
G15K  Niukluk           31.73  35  P        P        02 09 38.8 +0.4
      baz=254,SNR=7.0
M14K  Bethel            31.81  44  P        P        02 09 39.4 +0.2
M14K                               PcP      PcP      02 12 29.9 +0.9
M14K  Bethel            31.81  44  P        P        02 09 39.7 +0.6
      baz=263
N14K  Kuskokwak Cree    31.85  45  P        P        02 09 40.3 +0.7
      baz=265
GUMO  Guam              31.92 190  LR       LR       02 23 01.8
      comp=Z,1µm,19.0s,baz=17,slow=37
SSLB  Suanglung         31.99 238  P        P        02 09 40.8 -0.5
SSLB                               IAmb     IAmb     02 09 48.6
      comp=Z,76nm,1.0s
SSLB                               IAMs_20  IAMs_20  02 23 31.0
      comp=Z,3µm,20.0s
O14K  Tigyukauivet M    32.01  47  P        P        02 09 41.8 +0.8
      baz=266
YULB  Yu-li             32.09 237  P        P        02 09 42.3 +0.2
YULB                               IAmb     IAmb     02 10 06.6
      comp=Z,59nm,0.9s
YULB                               IAMs_20  IAMs_20  02 22 47.6
      comp=Z,4µm,22.0s
YULB  Yu-li             32.09 237  P        P        02 09 44.0 +1.9
L15K  Ungalak Mounta    32.16  42  P        P        02 09 42.9 +0.6
      baz=262
K15K  Wolf Creek Mou    32.23  41  P        P        02 09 43.4 +0.4
      baz=261
C16K  Lisburne Hills    32.32  29  P        P        02 09 43.0 -0.6
C16K                               IAmb     IAmb     02 09 45.1
      comp=Z,74nm,0.9s
C16K  Lisburne Hills    32.32  29  P        P        02 09 43.5 -0.1
      baz=248,SNR=18
H16K  Elim              32.38  36  P        P        02 09 44.4 +0.2
      baz=257,SNR=11
SDPT  Sand Point        32.40  54  P        P        02 09 44.8 +0.4
      baz=273
M15K  Kasigluk River    32.42  44  P        P        02 09 44.8 +0.2
      baz=264
G16K  Koyuk River       32.52  35  IAMs_20  IAMs_20  02 23 11.1
      comp=Z,2µm,20.0s
G16K  Koyuk River       32.52  35  P        P        02 09 45.4  0.0
      baz=255
TPUB  Ta-pu             32.55 238  P        P        02 09 46.9 +0.7
TPUB  Ta-pu             32.55 238  P        P        02 09 47.0 +0.8
QZH   Quanzhou          32.58 242  P        P        02 09 47.2 +0.8
QZH                                S        S        02 15 00.1 +1.9
QZH                                pmax     pmax
      comp=Z,170nm,1.4s
QZH                                LR       LR
      comp=Z,2µm,18.4s
QZH                                LR       LR
      comp=Z,2µm,15.3s
QZH                                LR       LR
      comp=Z,3µm,23.0s
TWG   Pinlang           32.66 236  P        P        02 09 46.8 -0.2
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TWG                                IAMs_20  IAMs_20  02 23 16.5
      comp=Z,3µm,22.0s
N15K  Kwethluk River    32.67  45  P        P        02 09 47.4 +0.6
N15K  Kwethluk River    32.67  45  P        P        02 09 47.1 +0.3
      baz=266
MOY   Mondy             32.74 299 eP        P        02 09 49.2 +1.6
MOY                                pmax     pmax
      comp=Z,23nm,1.5s
O15K  Ungalikthiuk R    32.74  47  P        P        02 09 48.7 +1.2
O15K  Ungalikthiuk R    32.74  47  P        P        02 09 48.0 +0.5
      baz=268
J16K  Anvik River       32.81  39  P        P        02 09 48.4 +0.4
J16K  Anvik River       32.81  39  P        P        02 09 48.3 +0.3
      baz=260
I17K  Unalakleet        32.88  38  P        P        02 09 48.6  0.0
I17K  Unalakleet        32.88  38  P        P        02 09 48.8 +0.3
      baz=259
D17K  Noatak River      32.91  31  P        P        02 09 48.8  0.0
      baz=251,SNR=27
CHNA  Chernabura Isl    32.94  55  P        P        02 09 50.3 +1.1
      baz=274
KNMB  Chin-men Tao      33.06 242  P        P        02 09 51.0 +0.5
KNMB                               IAMs_20  IAMs_20  02 24 52.7
      comp=Z,2µm,18.0s
RDOG  Red Dog Mine      33.09  30           P        02 09 50.0 -0.4
RDOG                               IAmb     IAmb     02 09 51.8
      comp=Z,51nm,0.8s
RDOG  Red Dog Mine      33.09  30  P        P        02 09 50.5 +0.1
      baz=251,SNR=9.0
L16K  Owhat River       33.11  42  P        P        02 09 50.8 +0.2
L16K                               PcP      PcP      02 12 33.5 +1.0
L16K  Owhat River       33.11  42  P        P        02 09 51.0 +0.3
      baz=264
C17K  DeLong Mountai    33.14  29  P        P        02 09 51.1 +0.3
      baz=250
E17K  Hotham Inlet      33.19  32  P        P        02 09 51.3 +0.1
      baz=253,SNR=36
F17K  Baldwin Pennin    33.23  33  P        P        02 09 51.7 +0.2
F17K                               IAmb     IAmb     02 09 53.4
      comp=Z,65nm,0.8s
F17K                               PP       PP       02 11 06.2 -1.0
F17K  Baldwin Pennin    33.23  33  P        P        02 09 51.5 -0.1
      baz=255
G17K  Kiwalik Mounta    33.23  35  P        P        02 09 51.8 +0.2
      baz=257
M16K  Timber Creek      33.29  43  P        P        02 09 52.1 -0.1
M16K  Timber Creek      33.29  43  P        P        02 09 52.6 +0.3
      baz=266
N16K  Nishlik Lake      33.35  44  P        P        02 09 53.3 +0.5
      baz=266,SNR=7.6
XAN   Xi'an             33.39 265  P        P        02 09 53.2 -0.2
XAN                                pP       pP       02 10 03.6 -3.3
XAN                                S        S        02 15 14.2 +3.4
XAN                                sS       sS       02 15 27.7 -5.6
XAN                                pmax     pmax
      comp=Z,200nm,1.1s
XAN                                pmax     pmax
      comp=Z,1µm,4.3s
XAN                                LR       LR
      comp=Z,3µm,15.1s
XAN                                LR       LR
      comp=Z,3µm,15.1s
XAN                                LR       LR
      comp=Z,5µm,17.0s
XAN   Xi'an             33.39 265  P        P        02 09 53.2 -0.2
H17K  Granite Mounta    33.42  36  P        P        02 09 53.4 +0.1
H17K  Granite Mounta    33.42  36  P        P        02 09 53.4 +0.1
      baz=259,SNR=7.3
J17K  VABM Dome         33.51  39  P        P        02 09 54.0 -0.1
J17K                               PcP      PcP      02 12 34.9 +1.2
J17K  VABM Dome         33.51  39  P        P        02 09 54.3 +0.2
      baz=262,SNR=8.0
O16K  Kokwok River B    33.64  46  P        P        02 09 56.6 +1.3
      baz=268
L17K  Donlin            33.71  41  P        P        02 09 56.6 +0.7
      baz=264
E18K  Tukpahlearik C    33.74  32  P        P        02 09 56.8 +0.7
E18K  Tukpahlearik C    33.74  32  P        P        02 09 56.7 +0.7
      baz=254,SNR=7.3
K17K  Iditarod          33.77  40  P        P        02 09 56.9 +0.5
K17K                               IAmb     IAmb     02 10 09.8
      comp=Z,56nm,1.0s
K17K  Iditarod          33.77  40  P        P        02 09 57.2 +0.8
      baz=264,SNR=7.6
C18K  Utukok River      33.89  30  P        P        02 09 57.3 -0.1
C18K                               IAmb     IAmb     02 09 59.2
      comp=Z,85nm,0.9s
C18K                               PcP      PcP      02 12 35.7 +1.0
C18K  Utukok River      33.89  30  P        P        02 09 57.3 -0.1
      baz=252,SNR=29
F18K  Selawik           33.89  33  P        P        02 09 58.1 +0.8
      baz=256,SNR=30
B18K  Kokolik River     33.92  28  P        P        02 09 58.1 +0.6
      baz=250
M17K  Holitna River     34.06  43  P        P        02 09 59.2 +0.3
M17K                               IAmb     IAmb     02 10 13.1
      comp=Z,66nm,1.1s
M17K  Holitna River     34.06  43  P        P        02 09 59.9 +1.1
      baz=266
CNSH  ChangSha          34.06 253  P        P        02 09 59.5 +0.3
CNSH                               S        S        02 15 23.1 +2.0
CNSH                               pmax     pmax
      comp=Z,120nm,0.8s
CNSH                               LR       LR
      comp=Z,2µm,15.5s
CNSH                               LR       LR
      comp=Z,3µm,16.5s
CNSH                               LR       LR
      comp=Z,4µm,18.8s
H18K  Honhosa River     34.10  36  P        P        02 09 59.4 +0.2
H18K                               IAmb     IAmb     02 10 17.5
      comp=Z,75nm,1.2s
H18K  Honhosa River     34.10  36  P        P        02 10 00.1 +0.8
      baz=260
G18K  Tagagawik         34.13  35  P        P        02 09 59.5 +0.1
G18K                               IAmb     IAmb     02 10 01.6
      comp=Z,85nm,1.2s
G18K  Tagagawik         34.13  35  P        P        02 10 00.1 +0.7
      baz=258
N17K  Nushagak Hills    34.13  44  P        P        02 09 59.9 +0.4
N17K                               IAmb     IAmb     02 10 22.4
      comp=Z,115nm,1.9s
N17K                               IAMs_20  IAMs_20  02 21 14.8
      comp=Z,2µm,22.0s
N17K  Nushagak Hills    34.13  44  P        P        02 10 00.5 +1.0
      baz=268
O17K  Koliganek Bris    34.16  46  P        P        02 10 00.6 +0.9
      baz=269
Q16K  King Salmon       34.38  48  P        P        02 10 02.7 +1.1
      baz=271
A19K  Wainwright        34.45  27  P        P        02 10 02.9 +0.8
      baz=250
L18K  Granite Mounta    34.47  41  P        P        02 10 03.2 +0.8
L18K                               IAMs_20  IAMs_20  02 21 40.2
      comp=Z,2µm,20.0s
L18K  Granite Mounta    34.47  41  P        P        02 10 03.5 +1.0
      baz=266
R17L  Mt. Peulik Vol    34.57  50  P        P        02 10 04.2 +0.8
      baz=273
J18K  Innoko River      34.57  39  P        P        02 10 03.4  0.0
J18K                               IAMs_20  IAMs_20  02 24 54.0
      comp=Z,2µm,21.0s
J18K  Innoko River      34.57  39  P        P        02 10 03.8 +0.4
      baz=264,SNR=12
C19K  Lookout Ridge     34.58  29  P        P        02 10 03.2 -0.2
C19K                               PcP      PcP      02 12 37.6 +0.9
C19K                               IAMs_20  IAMs_20  02 25 16.7
      comp=Z,2µm,19.0s
C19K  Lookout Ridge     34.58  29  P        P        02 10 03.6 +0.2
      baz=253,SNR=48
GCSA  Galena City Sc    34.66  37  P        P        02 10 04.2 +0.2
      baz=262
F19K  Shaleruckik Mo    34.67  33  P        P        02 10 03.7 -0.4
F19K  Shaleruckik Mo    34.67  33  P        P        02 10 04.1 +0.1
      baz=258
N18K  Kilae Creek       34.78  44  P        P        02 10 05.4 +0.3
N18K                               IAMs_20  IAMs_20  02 24 09.8
      comp=Z,2µm,21.0s
N18K  Kilae Creek       34.78  44  P        P        02 10 06.3 +1.2
      baz=269,SNR=6.9
Q17K  Contact Creek     34.79  48  P        P        02 10 06.2 +0.8
      baz=272
G19K  Purcell Mounta    34.80  35  P        P        02 10 05.1 -0.2
G19K                               PcP      PcP      02 12 38.6 +1.2
G19K  Purcell Mounta    34.80  35  P        P        02 10 05.6 +0.3
      baz=260
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M18K  Stony River       34.84  43  P        P        02 10 06.7 +1.2
      baz=268,SNR=7.6
D19K  Kuna River        34.93  30  P        P        02 10 06.2 -0.2
D19K  Kuna River        34.93  30  P        P        02 10 06.8 +0.4
      baz=255
H19K  Roundabout Mou    34.96  36  P        P        02 10 06.6  0.0
H19K  Roundabout Mou    34.96  36  P        P        02 10 07.3 +0.7
      baz=261
E19K  Redstone River    35.01  32  IAmb     IAmb     02 10 09.3
      comp=Z,61nm,0.9s
E19K  Redstone River    35.01  32  P        P        02 10 07.4 +0.4
      baz=258
KNGR  Kungurtug, Tuv    35.08 298⇓eP        P        02 10 07.2 -0.8
P18K  Big Mountain,     35.10  46  P        P        02 10 08.6 +0.6
      baz=271
O18K  Koktuh Hills      35.11  46  P        P        02 10 09.1 +1.1
O18K  Koktuh Hills      35.11  46  P        P        02 10 08.6 +0.6
      baz=271
J19K  Poorman           35.11  38  IAmb     IAmb     02 10 20.7
      comp=Z,60nm,0.9s
J19K  Poorman           35.11  38  P        P        02 10 08.2 +0.3
      baz=264,SNR=19
ENH   Enshi             35.12 259  IAMs_20  IAMs_20  02 24 20.1
      comp=Z,2µm,21.0s
Q18K  Katmai Hardscr    35.24  48  P        P        02 10 09.7 +0.4
      baz=272
L19K  White Mountain    35.33  42  P        P        02 10 10.4 +0.6
L19K                               PcP      PcP      02 12 40.5 +1.5
L19K                               IAMs_20  IAMs_20  02 26 26.1
      comp=Z,1µm,20.0s
L19K  White Mountain    35.33  42  P        P        02 10 10.1 +0.3
      baz=268
N19K  Bonanza Creek     35.47  44  P        P        02 10 11.7 +0.5
N19K                               PcP      PcP      02 12 40.4 +0.9
N19K                               IAMs_20  IAMs_20  02 21 57.1
      comp=Z,2µm,21.0s
N19K  Bonanza Creek     35.47  44  P        P        02 10 12.0 +0.8
      baz=270
F20K  Avaraart Lake     35.50  33  P        P        02 10 11.3  0.0
F20K                               PcP      PcP      02 12 40.2 +0.8
F20K  Avaraart Lake     35.50  33  P        P        02 10 11.2  0.0
      baz=260,SNR=23
D20K  Etivluk River     35.52  30  P        P        02 10 11.5 +0.2
D20K  Etivluk River     35.52  30  P        P        02 10 11.6 +0.2
      baz=257
O19K  Port Alsworth     35.55  45  IAMs_20  IAMs_20  02 21 46.3
      comp=Z,2µm,20.0s
O19K  Port Alsworth     35.55  45  P        P        02 10 12.3 +0.5
      baz=271
E20K  Nigu River        35.57  31  P        P        02 10 12.1 +0.3
      baz=258
H20K  Anotleneega Mo    35.60  36  P        P        02 10 12.7 +0.5
      baz=263
B20K  Meade River       35.66  28  P        P        02 10 12.5  0.0
B20K                               IAMs_20  IAMs_20  02 25 31.8
      comp=Z,2µm,20.0s
B20K  Meade River       35.66  28  P        P        02 10 12.7 +0.2
      baz=254
I20K  Naaghedeneel      35.69  37  IAmb     IAmb     02 10 30.7
      comp=Z,66nm,1.1s
I20K  Naaghedeneel      35.69  37  P        P        02 10 13.4 +0.6
      baz=264
K20K  Telida            35.75  40  P        P        02 10 13.2 -0.3
K20K                               PcP      PcP      02 12 41.0 +0.8
K20K  Telida            35.75  40  P        P        02 10 13.8 +0.4
      baz=267
J20K  Nowinta River     35.77  38  P        P        02 10 14.0 +0.4
J20K                               IAmb     IAmb     02 10 26.3
      comp=Z,53nm,0.8s
J20K                               PcP      PcP      02 12 41.6 +1.4
J20K  Nowinta River     35.77  38  P        P        02 10 13.6  0.0
      baz=265,SNR=17
LZH   Lanzhou           35.93 272 ⇑P        P        02 10 16.2 +0.7
LZH                                S        S        02 15 50.1  0.0
LZH                                pmax     pmax
      comp=Z,370nm,1.3s
LZH                                pmax     pmax
      comp=Z,570nm,5.4s
LZH                                LR       LR
      comp=Z,2µm,14.8s
LZH                                LR       LR
      comp=Z,3µm,15.5s
LZH                                LR       LR
      comp=Z,4µm,15.5s
LZDM  Lanzhou Array     36.10 272  P        P        02 10 17.9 +0.8
      comp=Z,186nm,1.0s,baz=59,slow=5.7,SNR=90
LZDM                               PcP      PcP      02 12 43.4 +1.2
      comp=Z,12nm,0.6s,baz=54,slow=2.6,SNR=2.7
LZDM                               S        S        02 15 51.6 -1.4
      comp=Z,0.8nm,0.3s,baz=76,slow=18,SNR=1.1
LZDM                               ScP      ScP      02 16 23.7 -0.1
      comp=Z,1.3nm,0.4s,baz=90,slow=2.9,SNR=1.7
LZDM                               LR       LR       02 25 35.9
      comp=Z,3µm,20.0s,baz=55,slow=37
      comp=Z,186nm,1.0s
P19K  Oil Pt            36.11  46  P        P        02 10 17.3 +0.7
      baz=272
IMAR  Indian Mountai    36.12  35  P        P        02 10 16.7 +0.1
IMAR                               PcP      PcP      02 12 42.0 +0.8
M20K  Styx River        36.13  42  P        P        02 10 17.1 +0.3
      baz=270,SNR=10
A21K  Barrow            36.20  26  P        P        02 10 17.2 +0.1
      baz=253,SNR=14
OHAK  Old Harbor        36.26  50  P        P        02 10 17.7 -0.1
OHAK                               IAmb     IAmb     02 10 37.0
      comp=Z,61nm,1.1s
OHAK  Old Harbor        36.26  50  P        P        02 10 17.0 -0.8
OHAK  Old Harbor        36.26  50  P        P        02 10 18.6 +0.9
      baz=276
C21K  Knifeblade Rid    36.26  30  P        P        02 10 18.4 +0.7
      baz=258,SNR=74
G21K  Allakaket         36.29  34  IAmb     IAmb     02 10 31.2
      comp=Z,80nm,0.9s
G21K  Allakaket         36.29  34  P        P        02 10 18.5 +0.5
      baz=263
RED   Redoubt Volcan    36.32  45  P        P        02 10 18.8 +0.4
F21K  Alatna River      36.39  33  P        P        02 10 20.1 +1.2
F21K  Alatna River      36.39  33  P        P        02 10 19.2 +0.3
      baz=262
O20K  Slope Mountain    36.40  45  P        P        02 10 19.6 +0.5
      baz=272
E21K  Killik River      36.41  31  P        P        02 10 18.9 -0.1
E21K                               IAmb     IAmb     02 10 21.1
      comp=Z,97nm,0.9s
E21K                               PcP      PcP      02 12 42.6 +0.6
E21K  Killik River      36.41  31  P        P        02 10 19.4 +0.4
      baz=260
B21K  Ikpikpuk River    36.42  29  P        P        02 10 19.4 +0.4
B21K  Ikpikpuk River    36.42  29  P        P        02 10 19.1 +0.1
      baz=258,SNR=304
H21K  Melozitna Rive    36.48  36  P        P        02 10 19.9 +0.3
H21K                               IAmb     IAmb     02 10 32.8
      comp=Z,62nm,1.0s
H21K  Melozitna Rive    36.48  36  P        P        02 10 20.2 +0.6
      baz=265,SNR=34
CHUM  Lake Minchumin    36.56  39  P        P        02 10 20.8 +0.5
      baz=268,SNR=8.6
SPCR  Spurr Chakacha    36.57  43  P        P        02 10 21.3 +0.7
      baz=271
KDAK  Kodiak Island     36.58  49  P        P        02 10 20.0 -0.5
KDAK                               IAmb     IAmb     02 10 31.6
      comp=Z,80nm,1.1s
KDAK  Kodiak Island     36.58  49  IAMs_20  IAMs_20  02 25 51.8
      comp=Z,2µm,22.0s
KDAK  Kodiak Island     36.58  49  P        P        02 10 20.0 -0.5
KDAK                               pmax     pmax
      comp=Z,80nm,1.1s
KDAK                               MLR      MLR
      comp=Z,2µm,22.0s
KDAK  Kodiak Island     36.58  49  P        P        02 10 20.9 +0.4
      baz=276
PPLA  Purkeypile        36.58  40  P        P        02 10 21.2 +0.5
PPLA                               IAmb     IAmb     02 10 31.4
      comp=Z,88nm,1.2s
PPLA                               PcP      PcP      02 12 43.0 +0.2
PPLA                               IAMs_20  IAMs_20  02 25 06.2
      comp=Z,1µm,21.0s
PPLA  Purkeypile        36.58  40  P        P        02 10 21.3 +0.5
      baz=269,SNR=13
Q20K  Shuyak Island     36.61  48  P        P        02 10 20.9 +0.1
      baz=275
SYI   Shuyak Island     36.61  48  IAMs_20  IAMs_20  02 25 37.5
      comp=Z,2µm,21.0s
A22K  Sinclair Lake     36.63  27  P        P        02 10 21.1 +0.3
      baz=255
SKT   Skwentna          36.89  42  P        P        02 10 24.1 +0.9
SKT                                PcP      PcP      02 12 43.7 +0.1
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SKT					IAMs_20	IAMs_20	02 24 07.4	
	comp=Z,1µm,22.0s							
SKT	**Skwentna**	**36.89**	**42**		P	**P**	**02 10 23.5**	**+0.4**
	baz=271							
F22K	**John River**	**36.93**	**33**		P	**P**	**02 10 23.9**	**+0.4**
	baz=263							
D22K	**Ayikyak River**	**36.95**	**30**		P	**P**	**02 10 23.9**	**+0.3**
D22K					IAmb	IAmb	02 10 25.5	
	comp=Z,97nm,1.0s							
D22K					PcP	**PcP**	**02 12 44.8**	**+1.0**
D22K	**Ayikyak River**	**36.95**	**30**		P	**P**	**02 10 23.9**	**+0.3**
	baz=260,SNR=49							
B22K	**Teshekpuk Lake**	**36.98**	**28**		P	**P**	**02 10 23.3**	**-0.5**
B22K					IAMs_20	IAMs_20	02 27 15.8	
	comp=Z,2µm,18.0s							
B22K	**Teshekpuk Lake**	**36.98**	**28**		P	**P**	**02 10 23.9**	**+0.2**
	baz=258							
H22K	**Ishtalitna Cre**	**37.08**	**35**		P	**P**	**02 10 25.3**	**+0.5**
H22K					PcP	**PcP**	**02 12 45.2**	**+1.0**
H22K	**Ishtalitna Cre**	**37.08**	**35**		P	**P**	**02 10 25.5**	**+0.7**
	baz=266,SNR=22							
G22K	**Bettles**	**37.12**	**34**		P	**P**	**02 10 25.2**	**+0.1**
	baz=264							
BPAW	**Bear Paw Mtn.**	**37.15**	**38**		P	**P**	**02 10 25.9**	**+0.5**
BPAW	**Bear Paw Mtn.**	**37.15**	**38**		P	**P**	**02 10 26.5**	**+1.1**
	baz=268,SNR=12							
E22K	**Anaktuvuk Pass**	**37.15**	**32**		P	**P**	**02 10 25.8**	**+0.4**
E22K	**Anaktuvuk Pass**	**37.15**	**32**		P	**P**	**02 10 25.5**	**+0.1**
	baz=262							
GTA	**Gaotai**	**37.22**	**279**		P	**P**	**02 10 26.7**	**+0.3**
GTA					sP	pP	02 10 43.4	+3.4
GTA					PcP	**PcP**	**02 12 46.9**	**+1.7**
GTA					S	**S**	**02 16 10.2**	**+0.5**
GTA					ScP	**ScP**	**02 16 28.4**	**+0.7**
GTA					PcS	**PcS**	**02 16 35.7**	**+2.0**
GTA					ScS	**ScS**	**02 20 36.5**	**+0.9**
GTA					pmax	pmax		
	comp=Z,140nm,1.0s							
GTA					pmax	pmax		
	comp=Z,710nm,5.8s							
GTA					LR	LR		
	comp=Z,2µm,20.7s							
GTA					LR	LR		
	comp=Z,2µm,18.9s							
GTA					LR	LR		
	comp=Z,4µm,17.1s							
L22K	**Petersville**	**37.24**	**41**		P	**P**	**02 10 26.0**	**-0.1**
L22K					PcP	**PcP**	**02 12 44.8**	**+0.1**
L22K					IAMs_20	IAMs_20	02 23 02.5	
	comp=Z,2µm,22.0s							
SUA	**Susitna One**	**37.27**	**43**		P	**P**	**02 10 25.9**	**-0.6**
SUA					PcP	**PcP**	**02 12 44.8**	**-0.1**
SUA					IAMs_20	IAMs_20	02 23 16.6	
	comp=Z,2µm,21.0s							
SUA	**Susitna One**	**37.27**	**43**		P	**P**	**02 10 26.8**	**+0.2**
	baz=272,SNR=8.1							
HKPS	**Hong Kong Po S**	**37.31**	**244**		P	**P**	**02 10 27.4**	**+0.2**
BRSE	**Bradley Lake S**	**37.37**	**46**		P	**P**	**02 10 28.0**	**+0.8**
	baz=274							
TRF	**Thorofare Moun**	**37.45**	**40**		P	**P**	**02 10 27.9**	**-0.2**
TRF					IAMs_20	IAMs_20	02 26 34.1	
	comp=Z,2µm,21.0s							
TRF	**Thorofare Moun**	**37.45**	**40**		P	**P**	**02 10 28.5**	**+0.4**
	baz=270,SNR=8.7							
CUT	**Chulitna**	**37.47**	**41**		P	**P**	**02 10 27.9**	**-0.2**
CUT					IAmb	IAmb	02 11 14.6	
	comp=Z,89nm,1.2s							
CUT					PcP	**PcP**	**02 12 45.2**	**-0.2**
CUT	**Chulitna**	**37.47**	**41**		P	**P**	**02 10 27.9**	**-0.2**
	baz=271							
M22K	**Willow**	**37.56**	**42**		P	**P**	**02 10 28.6**	**-0.2**
M22K					IAmb	IAmb	02 10 44.4	
	comp=Z,60nm,0.9s							
M22K					PcP	**PcP**	**02 12 46.1**	**+0.5**
M22K	**Willow**	**37.56**	**42**		P	**P**	**02 10 29.0**	**+0.2**
	baz=272							
SLKM	**Skilak Lake**	**37.58**	**44**		P	**P**	**02 10 29.6**	**+0.6**
COLD	**Coldfoot**	**37.66**	**33**		P	**P**	**02 10 29.5**	**-0.2**
COLD					PcP	**PcP**	**02 12 46.5**	**+0.6**
COLD	**Coldfoot**	**37.66**	**33**		P	**P**	**02 10 30.0**	**+0.4**
	baz=265,SNR=52							
D23K	**Nanushuk River**	**37.68**	**30**		P	**P**	**02 10 30.1**	**+0.3**
D23K					IAmb	IAmb	02 10 32.4	
	comp=Z,137nm,1.1s							
D23K	**Nanushuk River**	**37.68**	**30**		P	**P**	**02 10 30.3**	**+0.5**
	baz=262,SNR=79							
GULI	**GuiLin**	**37.68**	**252**		P	**P**	**02 10 31.7**	**+1.4**
GULI					S	**S**	**02 16 22.6**	**+6.0**
GULI					pmax	pmax		
	comp=Z,67nm,1.1s							
GULI					LR	LR		
	comp=Z,2µm,15.7s							
GULI					LR	LR		
	comp=Z,2µm,14.6s							
GULI					LR	LR		
	comp=Z,4µm,19.2s							
G23K	**Bananza Creek**	**37.69**	**34**		P	**P**	**02 10 30.1**	**+0.2**
G23K					PcP	**PcP**	**02 12 46.8**	**+0.8**
G23K	**Bananza Creek**	**37.69**	**34**		P	**P**	**02 10 30.3**	**+0.4**
	baz=266							
RC01	**Rabbit Creek A**	**37.78**	**43**		P	**P**	**02 10 30.9**	**+0.2**
RC01					PcP	**PcP**	**02 12 46.3**	**0.0**
RC01	**Rabbit Creek A**	**37.78**	**43**		P	**P**	**02 10 31.4**	**+0.7**
	baz=274,SNR=7.4							
BWN	**Browne**	**37.82**	**38**		P	**P**	**02 10 32.1**	**+1.1**
BWN					IAMs_20	IAMs_20	02 26 50.7	
	comp=Z,1µm,20.0s							
O22K	**Cooper Landing**	**37.82**	**44**		IAMs_20	IAMs_20	02 23 33.3	
	comp=Z,1µm,21.0s							
C23K	**Itkillik River**	**37.83**	**29**		P	**P**	**02 10 31.4**	**+0.4**
C23K	**Itkillik River**	**37.83**	**29**		P	**P**	**02 10 31.4**	**+0.4**
	baz=261,SNR=157							
H23K	**Yukon River**	**37.83**	**36**		P	**P**	**02 10 31.9**	**+0.8**
H23K					IAmb	IAmb	02 10 44.8	
	comp=Z,65nm,0.8s							
H23K	**Yukon River**	**37.83**	**36**		P	**P**	**02 10 31.9**	**+0.8**
	baz=268							
I23K	**Minto, Yukon-K**	**37.88**	**37**		P	**P**	**02 10 32.2**	**+0.8**
I23K					IAmb	IAmb	02 10 50.1	
	comp=Z,124nm,1.6s							
I23K					PcP	**PcP**	**02 12 47.4**	**+0.9**
I23K	**Minto, Yukon-K**	**37.88**	**37**		P	**P**	**02 10 32.1**	**+0.6**
	baz=269,SNR=15							
E23K	**Chandalar**	**37.96**	**32**		P	**P**	**02 10 32.6**	**+0.3**
E23K					PcP	**PcP**	**02 12 47.9**	**+1.0**
E23K	**Chandalar**	**37.96**	**32**		P	**P**	**02 10 32.9**	**+0.7**
	baz=265,SNR=105							
SEW	**Seward**	**37.99**	**45**		P	**P**	**02 10 32.8**	**+0.4**
SEW					IAMs_20	IAMs_20	02 28 28.7	
	comp=Z,2µm,20.0s							
SEW	**Seward**	**37.99**	**45**		P	**P**	**02 10 32.8**	**+0.4**
	baz=275							
NEA2	**Nenana**	**38.00**	**38**		P	**P**	**02 10 33.1**	**+0.6**
NEA2					IAmb	IAmb	02 10 49.8	
	comp=Z,63nm,0.7s							
NEA2	**Nenana**	**38.00**	**38**		P	**P**	**02 10 32.9**	**+0.4**
	baz=270,SNR=20							
PMR	**Palmer**	**38.04**	**43**		P	**P**	**02 10 33.0**	**+0.2**
PMR	**Palmer**	**38.04**	**43**		P	**P**	**02 10 33.0**	**+0.2**
PMR					pmax	pmax		
	comp=Z,36nm,1.0s							
PMR	**Palmer**	**38.04**	**43**		P	**P**	**02 10 33.8**	**+1.0**
	baz=273,SNR=6.2							
TOLK	**Toolik Lake Re**	**38.04**	**31**		P	**P**	**02 10 33.0**	**+0.1**
TOLK					IAmb	IAmb	02 10 34.6	
	comp=Z,112nm,1.0s							
TOLK	**Toolik Lake Re**	**38.04**	**31**		P	**P**	**02 10 33.2**	**+0.4**
	baz=264,SNR=83							
MCK	**McKinley**	**38.06**	**39**		IAmb	IAmb	02 10 50.1	
	comp=Z,58nm,0.9s							
MCK					IAMs_20	IAMs_20	02 29 05.0	
	comp=Z,1µm,19.0s							
MCK	**McKinley**	**38.06**	**39**		P	**P**	**02 10 33.3**	**+0.3**
	baz=271,SNR=11							
RND	**Reindeer**	**38.10**	**40**		P	**P**	**02 10 33.1**	**-0.4**
RND					IAmb	IAmb	02 10 49.8	
	comp=Z,68nm,1.0s							
RND					IAMs_20	IAMs_20	02 27 25.1	
	comp=Z,1µm,20.0s							
RND	**Reindeer**	**38.10**	**40**		P	**P**	**02 10 33.1**	**-0.4**
RND					pmax	pmax		
	comp=Z,68nm,1.0s							
RND					MLR	MLR		
	comp=Z,2µm,20.0s							
GHO	**Glory Hole Cre**	**38.13**	**42**		P	**P**	**02 10 34.3**	**+0.6**
GHO					IAMs_20	IAMs_20	02 28 20.2	
	comp=Z,2µm,22.0s							
WAT1	**Susitna Watana**	**38.25**	**41**		P	**P**	**02 10 34.8**	**0.0**
	baz=272							
D24K	**Happy Valley**	**38.37**	**30**		P	**P**	**02 10 35.8**	**+0.2**
D24K	**Happy Valley**	**38.37**	**30**		P	**P**	**02 10 35.9**	**+0.4**
	baz=264,SNR=122							
KNK	**Knik Glacier**	**38.37**	**43**		P	**P**	**02 10 35.5**	**-0.2**
KNK					IAmb	IAmb	02 10 46.3	
	comp=Z,87nm,1.0s							
KNK					IAMs_20	IAMs_20	02 28 25.7	
	comp=Z,1µm,22.0s							
KNK	**Knik Glacier**	**38.37**	**43**		P	**P**	**02 10 36.8**	**+1.1**
	baz=274,SNR=8.9							
E24K	**Your Creek**	**38.39**	**32**		P	**P**	**02 10 36.4**	**+0.7**
E24K	**Your Creek**	**38.39**	**32**		P	**P**	**02 10 36.5**	**+0.7**
	baz=266,SNR=193							
SML	**Sawmill**	**38.41**	**42**		P	**P**	**02 10 35.8**	**-0.3**
SML					IAMs_20	IAMs_20	02 26 18.6	
	comp=Z,2µm,22.0s							
SML	**Sawmill**	**38.41**	**42**		P	**P**	**02 10 36.4**	**+0.4**
	baz=274,SNR=35							
WRH	**Wood River Hil**	**38.42**	**38**		P	**P**	**02 10 36.1**	**0.0**
WRH					PcP	**PcP**	**02 12 47.7**	**-0.5**
C24K	**Franklin Bluff**	**38.47**	**29**		P	**P**	**02 10 36.6**	**+0.2**
C24K	**Franklin Bluff**	**38.47**	**29**		P	**P**	**02 10 36.6**	**+0.2**
	baz=263,SNR=97							
PWL	**Port Wells**	**38.48**	**44**		P	**P**	**02 10 36.4**	**-0.1**
PWL					PcP	**PcP**	**02 12 49.1**	**+0.5**
PWL					IAMs_20	IAMs_20	02 28 56.5	
	comp=Z,2µm,20.0s							
PWL	**Port Wells**	**38.48**	**44**		P	**P**	**02 10 37.3**	**+0.7**
	baz=275,SNR=5.5							
H24K	**Noodor Dome**	**38.52**	**36**		P	**P**	**02 10 37.1**	**+0.2**
H24K	**Noodor Dome**	**38.52**	**36**		P	**P**	**02 10 37.4**	**+0.5**
	baz=269,SNR=24							
COLA	**College**	**38.52**	**37**		P	**P**	**02 10 37.3**	**+0.5**
COLA					IAmb	IAmb	02 10 54.3	
	comp=Z,104nm,0.8s							
COLA	**College**	**38.52**	**37**		P	**P**	**02 10 37.1**	**+0.3**
COLA	**College**	**38.52**	**37**	*c i*	P	**P**	**02 10 37.2**	**+0.4**
COLA					pmax	pmax		
	comp=Z,77nm,1.0s							
COLA	**College**	**38.52**	**37**		P	**P**	**02 10 36.9**	**0.0**
	baz=270							
COLA	**College**	**38.52**	**37**		P	**P**	**02 10 37.6**	**+0.8**
F24K	**Squaw Lake**	**38.58**	**33**		P	**P**	**02 10 37.7**	**+0.3**
F24K					PcP	**PcP**	**02 12 50.0**	**+1.2**
F24K	**Squaw Lake**	**38.58**	**33**		P	**P**	**02 10 37.8**	**+0.5**
	baz=267							
WAT6	**Susitna Watana**	**38.64**	**41**		P	**P**	**02 10 38.3**	**+0.2**
	baz=273,SNR=13							
M23K	**Glacier View**	**38.70**	**42**		P	**P**	**02 10 39.0**	**+0.5**
	baz=274,SNR=7.8							
POKR	**Poker Plat Res**	**38.70**	**37**		IAmb	IAmb	02 10 56.3	
	comp=Z,95nm,0.8s							
POKR	**Poker Plat Res**	**38.70**	**37**		P	**P**	**02 10 39.2**	**+0.8**
	baz=270,SNR=29							
G24K	**Hadweenzic Riv**	**38.70**	**34**		IAmb	IAmb	02 10 52.7	
	comp=Z,96nm,0.8s							
G24K	**Hadweenzic Riv**	**38.70**	**34**		P	**P**	**02 10 39.3**	**+0.9**
	baz=268							
CD2	**Chengdu**	**38.75**	**265**		P	**P**	**02 10 37.3**	**-2.0**
CD2					S	**S**	**02 16 30.0**	**-2.8**
CD2					pmax	pmax		
	comp=Z,380nm,0.7s							
CD2					pmax	pmax		
	comp=Z,1µm,4.7s							
CD2					LR	LR		
	comp=Z,2µm,13.7s							
CD2					LR	LR		
	comp=Z,3µm,14.9s							
DHY	**Denali Highway**	**38.78**	**40**		IAMs_20	IAMs_20	02 27 37.2	
	comp=Z,2µm,20.0s							
DHY	**Denali Highway**	**38.78**	**40**		P	**P**	**02 10 39.1**	**-0.1**
	baz=273,SNR=12							
SCM	**Sheep Creek Mo**	**38.88**	**42**		IAmb	IAmb	02 11 10.3	
	comp=Z,61nm,0.8s							
SCM	**Sheep Creek Mo**	**38.88**	**42**		P	**P**	**02 10 40.7**	**+0.7**
	baz=275,SNR=5.8							
HDA	**Harding Lake**	**38.92**	**38**		IAMs_20	IAMs_20	02 25 56.7	
	comp=Z,1µm,21.0s							
HDA	**Harding Lake**	**38.92**	**38**		P	**P**	**02 10 40.3**	**+0.1**
	baz=272,SNR=16							
ILAR	**Eielson Array**	**38.94**	**37**		P	**P**	**02 10 40.1**	**-0.3**
	comp=Z,32nm,1.0s,baz=256,slow=5.8,SNR=89							
ILAR					ScP	**S**	**02 16 32.8**	**-1.9**
	comp=Z,0.8nm,0.8s,baz=305,slow=3.2,SNR=2.3							
ILAR					LR	LR	02 27 04.7	
	comp=Z,540nm,21.1s,baz=255,slow=37							
	comp=Z,32nm,1.0s							
NRIK	**Noril'sk**	**39.00**	**330**		P	**P**	**02 10 38.4**	**-2.5**
	comp=Z,7.6nm,0.9s,baz=116,slow=7.1,SNR=11							
NRIK					PcP	**PcP**	**02 12 50.3**	**+0.3**
	comp=Z,28nm,0.9s,baz=154,slow=2.5,SNR=5.4							
NRIK					ScP	**S**	**02 16 33.5**	**-2.1**
	comp=Z,5.8nm,0.9s,baz=93,slow=5.5,SNR=4.8							
NRIK					LR	LR	02 27 13.1	
	comp=Z,2µm,20.6s,baz=94,slow=37							
	comp=Z,7.6nm,0.9s							
NRIK	**Noril'sk**	**39.00**	**330**		P	**P**	**02 10 38.3**	**-2.5**
NRIK	**Noril'sk**	**39.00**	**330**	⇓ *i*	P	**P**	**02 10 38.1**	**-2.7**
NRIK					pmax	pmax		
	comp=Z,30nm,1.4s							
NRIK					MLR	MLR		
	comp=Z,2µm,21.0s							
P23K	**Montague Islan**	**39.02**	**45**		P	**P**	**02 10 41.0**	**-0.2**
	baz=277							
GLI	**Glacier Island**	**39.08**	**44**		P	**P**	**02 10 42.0**	**+0.4**
	baz=276							
D25K	**Kavik River**	**39.25**	**30**		IAmb	IAmb	02 10 44.6	
	comp=Z,112nm,0.8s							
D25K	**Kavik River**	**39.25**	**30**		P	**P**	**02 10 43.1**	**+0.1**
	baz=266,SNR=135							
G25K	**Bearman Lake**	**39.25**	**34**		P	**P**	**02 10 43.6**	**+0.7**
	baz=270							
FID	**Port Fidalgo**	**39.39**	**44**		P	**P**	**02 10 43.7**	**-0.5**
FID					PcP	**PcP**	**02 12 52.1**	**+0.7**
M24K	**Tolsona, Glenn**	**39.40**	**42**		P	**P**	**02 10 44.9**	**+0.6**
	baz=275,SNR=8.7							
GYA	**Guiyang**	**39.43**	**257**	⇓	P	**P**	**02 10 45.4**	**+0.3**
GYA					PcP	**PcP**	**02 12 53.8**	**+1.5**
GYA					S	**S**	**02 16 44.3**	**+1.1**
GYA					pmax	pmax		
	comp=Z,160nm,1.2s							
GYA					pmax	pmax		
	comp=Z,1µm,3.1s							
GYA					LR	LR		
	comp=Z,2µm,20.5s							
GYA					LR	LR		
	comp=Z,730nm,13.8s							
GYA					LR	LR		
	comp=Z,2µm,20.2s							
F25K	**Christian Rive**	**39.44**	**33**		P	**P**	**02 10 45.3**	**+0.6**
	baz=269							
K24K	**Donnelly Dome**	**39.46**	**39**		IAmb	IAmb	02 11 01.4	
	comp=Z,121nm,0.8s							
K24K	**Donnelly Dome**	**39.46**	**39**		P	**P**	**02 10 44.7**	**0.0**
	baz=274,SNR=16							
E25K	**Arctic Village**	**39.48**	**32**		IAmb	IAmb	02 10 47.4	
	comp=Z,91nm,1.1s							
E25K	**Arctic Village**	**39.48**	**32**		P	**P**	**02 10 45.9**	**+1.0**
	baz=268,SNR=95							
PRP	**Porcupine Dome**	**39.49**	**36**		IAmb	IAmb	02 10 58.6	
	comp=Z,78nm,0.8s							
PRP	**Porcupine Dome**	**39.49**	**36**		P	**P**	**02 10 45.7**	**+0.5**
	baz=272,SNR=34							
KLU	**Klutina**	**39.58**	**43**		IAMs_20	IAMs_20	02 25 30.6	
	comp=Z,2µm,22.0s							
KLU	**Klutina**	**39.58**	**43**		P	**P**	**02 10 46.2**	**+0.3**
	baz=276,SNR=19							
J25K	**Salcha River,**	**39.59**	**38**		P	**P**	**02 10 45.3**	**-0.6**
	baz=273,SNR=9.8							
FYU	**Fort Yukon**	**39.60**	**35**		P	**P**	**02 10 46.7**	**+0.9**
FYU					IAmb	IAmb	02 10 49.1	
	comp=Z,156nm,1.1s							
Q23K	**Middleton Isla**	**39.62**	**46**		P	**P**	**02 10 46.7**	**+0.6**
	baz=278							
PAX	**Paxson**	**39.65**	**40**		P	**P**	**02 10 46.9**	**+0.4**
PAX					IAMs_20	IAMs_20	02 30 17.3	
	comp=Z,1µm,20.0s							
PAX	**Paxson**	**39.65**	**40**		P	**P**	**02 10 46.9**	**+0.4**
PAX					pmax	pmax		
	comp=Z,27nm,1.0s							
PAX					MLR	MLR		
	comp=Z,1µm,20.0s							
PAX	**Paxson**	**39.65**	**40**		P	**P**	**02 10 47.2**	**+0.7**
	baz=275,SNR=9.9							
DIV	**Divide**	**39.69**	**43**		IAMs_20	IAMs_20	02 24 46.6	
	comp=Z,2µm,22.0s							
EYAK	**Cordova Ski Ar**	**39.77**	**44**		IAMs_20	IAMs_20	02 27 59.8	
	comp=Z,2µm,22.0s							
EYAK	**Cordova Ski Ar**	**39.77**	**44**		P	**P**	**02 10 48.3**	**+1.0**
	baz=277							
C26K	**Camden Bay**	**39.80**	**29**		P	**P**	**02 10 48.5**	**+1.0**
	baz=267,SNR=79							
HARP	**HAARP**	**39.85**	**41**		P	**P**	**02 10 49.1**	**+1.1**
	baz=276,SNR=9.1							
RIDG	**Independent Ri**	**39.87**	**39**		IAmb	IAmb	02 11 04.4	
	comp=Z,98nm,1.2s							
RIDG					IAMs_20	IAMs_20	02 30 19.1	
	comp=Z,1µm,21.0s							
RIDG	**Independent Ri**	**39.87**	**39**		P	**P**	**02 10 49.1**	**+0.9**
	baz=274,SNR=11							
F26K	**Sheenjek River**	**40.02**	**33**		IAmb	IAmb	02 10 52.0	
	comp=Z,66nm,0.8s							
F26K	**Sheenjek River**	**40.02**	**33**		P	**P**	**02 10 50.3**	**+1.0**
	baz=270							
G26K	**Porcupine Rive**	**40.16**	**34**		IAmb	IAmb	02 10 53.9	
	comp=Z,124nm,1.1s							
G26K	**Porcupine Rive**	**40.16**	**34**		P	**P**	**02 10 51.5**	**+1.0**
	baz=271							
N25K	**Chitina, Valde**	**40.20**	**42**		IAMs_20	IAMs_20	02 26 01.9	
	comp=Z,1µm,21.0s							
N25K	**Chitina, Valde**	**40.20**	**42**		P	**P**	**02 10 51.6**	**+0.7**
	baz=277,SNR=7.6							
C27K	**Jago River**	**40.20**	**30**		P	**P**	**02 10 51.4**	**+0.5**
C27K					IAmb	IAmb	02 10 53.5	
	comp=Z,112nm,0.8s							
C27K					IAMs_20	IAMs_20	02 29 12.3	
	comp=Z,1µm,20.0s							
C27K	**Jago River**	**40.20**	**30**		P	**P**	**02 10 51.6**	**+0.7**
	baz=268							
DOT	**Dot Lake**	**40.23**	**39**		IAMs_20	IAMs_20	02 29 45.4	
	comp=Z,1µm,19.0s							
SCRK	**Sand Creek**	**40.24**	**39**		P	**P**	**02 10 51.0**	**-0.4**
SCRK	**Sand Creek**	**40.24**	**39**		P	**P**	**02 10 51.5**	**+0.2**
	baz=275,SNR=20							
BMRM	**Bremner River**	**40.27**	**43**		P	**P**	**02 10 52.2**	**+0.6**
BMRM					IAmb	IAmb	02 11 31.5	
	comp=Z,93nm,1.0s							
BMRM					PcP	**PcP**	**02 12 55.0**	**+0.7**
BMRM	**Bremner River**	**40.27**	**43**		P	**P**	**02 10 52.5**	**+0.9**
	baz=278,SNR=12							
RAGM	**Ragged Mountai**	**40.32**	**44**		IAmb	IAmb	02 11 24.7	
	comp=Z,117nm,1.2s							
RAGM					IAMs_20	IAMs_20	02 27 33.3	
	comp=Z,2µm,20.0s							
J26L	**Joseph Creek**	**40.38**	**38**		P	**P**	**02 10 53.2**	**+0.7**
	baz=275,SNR=7.9							
I26K	**Coal Creek Min**	**40.49**	**36**		P	**P**	**02 10 54.3**	**+1.0**
	baz=274							
GLB	**Gilahina Butte**	**40.59**	**42**		IAMs_20	IAMs_20	02 25 38.3	
	comp=Z,1µm,22.0s							
L26K	**Log Cabin Wild**	**40.61**	**40**		IAMs_20	IAMs_20	02 29 30.7	
	comp=Z,2µm,21.0s							
L26K	**Log Cabin Wild**	**40.61**	**40**		P	**P**	**02 10 55.3**	**+1.0**
	baz=276,SNR=20							
VRDI	**Verde Repeater**	**40.79**	**43**		IAMs_20	IAMs_20	02 26 54.7	
	comp=Z,1µm,22.0s							
M26K	**Nabesna, AK**	**40.85**	**41**		IAmb	IAmb	02 11 16.7	
	comp=Z,94nm,0.8s							
M26K					IAMs_20	IAMs_20	02 29 02.8	
	comp=Z,1µm,19.0s							
M26K	**Nabesna, AK**	**40.85**	**41**		P	**P**	**02 10 57.2**	**+0.9**
	baz=278,SNR=58							
E27K	**Coleen River**	**40.97**	**32**		P	**P**	**02 10 58.0**	**+0.8**
	baz=272,SNR=57							
MCARA	**McCarthy VSAT**	**40.98**	**42**		IAMs_20	IAMs_20	02 29 01.5	
	comp=Z,1µm,22.0s							
MCARA	**McCarthy VSAT**	**40.98**	**42**		P	**P**	**02 10 58.5**	**+1.2**
	baz=279							
G27K	**Doyon Strip**	**41.01**	**34**		P	**P**	**02 10 58.6**	**+1.0**
	baz=274							
CRQM	**Cirque**	**41.02**	**43**		IAmb	IAmb	02 11 00.9	
	comp=Z,109nm,0.9s							
CRQM					IAMs_20	IAMs_20	02 28 59.3	
	comp=Z,2µm,22.0s							
CRQE	**Cirque**	**41.04**	**43**		P	**P**	**02 10 59.1**	**+1.1**
	baz=279,SNR=17							
K27K	**Chicken**	**41.07**	**38**		IAmb	IAmb	02 11 15.9	
	comp=Z,88nm,0.9s							
K27K	**Chicken**	**41.07**	**38**		P	**P**	**02 10 59.0**	**+1.0**
	baz=276							
H27K	**Steamboat Moun**	**41.10**	**35**		IAmb	IAmb	02 11 16.4	
	comp=Z,77nm,0.9s							
H27K	**Steamboat Moun**	**41.10**	**35**		P	**P**	**02 10 59.5**	**+1.2**
	baz=274							
I27K	**Kandik River**	**41.11**	**36**		P	**P**	**02 10 59.2**	**+0.8**
	baz=275,SNR=6.3							
TGL	**Tana Glacier**	**41.17**	**43**		IAmb	IAmb	02 11 17.9	
	comp=Z,127nm,1.3s							
TGL					IAMs_20	IAMs_20	02 29 13.6	
	comp=Z,2µm,21.0s							
D27M	**Malcolm River**	**41.17**	**30**		IAmb	IAmb	02 11 01.0	
	comp=Z,86nm,0.9s							
D27M	**Malcolm River**	**41.17**	**30**		P	**P**	**02 10 59.5**	**+0.7**
	baz=271,SNR=62							
WAX	**Waxell Ridge**	**41.21**	**44**		IAmb	IAmb	02 11 08.6	
	comp=Z,70nm,0.8s							
WAX					IAMs_20	IAMs_20	02 29 34.7	
	comp=Z,1µm,19.0s							
L27K	**Beaver Creek,**	**41.30**	**40**		IAMs_20	IAMs_20	02 30 01.6	
	comp=Z,1µm,18.0s							
L27K	**Beaver Creek,**	**41.30**	**40**		P	**P**	**02 11 01.2**	**+1.2**
	baz=278,SNR=42							
BCAR	**Beaver Creek A**	**41.31**	**40**		P	**P**	**02 11 01.4**	**+1.3**
M27K	**Edge Creek, AK**	**41.37**	**41**		IAMs_20	IAMs_20	02 30 20.6	
	comp=Z,2µm,20.0s							
M27K	**Edge Creek, AK**	**41.37**	**41**		P	**P**	**02 11 01.7**	**+1.0**
	baz=278,SNR=23							
ISLE	**Juniper Island**	**41.43**	**44**		IAmb	IAmb	02 11 40.9	
	comp=Z,142nm,1.3s							
ISLE					IAMs_20	IAMs_20	02 29 29.6	
	comp=Z,1µm,21.0s							
DGZ	**Jazzator, Alta**	**41.57**	**299**	⇓ *i*	P	**P**	**02 11 04.2**	**+1.7**
DGZ					pmax	pmax		
	comp=Z,12nm,0.9s							
F28M	**Old Crow**	**41.65**	**33**		IAmb	IAmb	02 11 05.4	
	comp=Z,73nm,0.8s							
F28M	**Old Crow**	**41.65**	**33**		P	**P**	**02 11 03.9**	**+1.1**
	baz=274,SNR=67							
GRNC	**Granite Creek**	**41.69**	**43**		IAmb	IAmb	02 11 06.2	
	comp=Z,89nm,0.9s							
GRNC					IAMs_20	IAMs_20	02 30 01.4	
	comp=Z,1µm,20.0s							
MESA	**MESA**	**41.70**	**44**		IAmb	IAmb	02 11 44.0	
	comp=Z,182nm,1.4s							
MESA	**MESA**	**41.70**	**44**		P	**P**	**02 11 04.3**	**+0.9**
	baz=281							
E28M	**Babbage River**	**41.71**	**31**		IAMs_20	IAMs_20	02 29 16.8	
	comp=Z,1µm,21.0s							
E28M	**Babbage River**	**41.71**	**31**		P	**P**	**02 11 04.3**	**+1.1**
	baz=273							
YAH	**Yahtse**	**41.76**	**44**		IAmb	IAmb	02 11 26.5	
	comp=Z,102nm,1.1s							
I28M	**Miner Creek**	**41.83**	**36**		IAmb	IAmb	02 11 18.5	
	comp=Z,71nm,0.8s							
I28M	**Miner Creek**	**41.83**	**36**		P	**P**	**02 11 05.3**	**+0.9**
	baz=277							
BVCY	**Beaver Creek**	**41.83**	**41**		P	**P**	**02 11 05.3**	**+1.0**
	baz=279,SNR=27							
CTG	**Chitna Glacier**	**41.85**	**43**		P	**P**	**02 11 05.7**	**+1.1**
	baz=280,SNR=23							
CTGM	**Chitina Glacie**	**41.85**	**43**		P	**P**	**02 11 05.5**	**+0.8**
CTGM					IAmb	IAmb	02 11 07.5	
	comp=Z,83nm,0.8s							
CTGM					IAMs_20	IAMs_20	02 29 12.6	
	comp=Z,1µm,22.0s							
ZAA0	**Zalesovo Array**	**41.85**	**306**		P	**P**	**02 11 03.6**	**-1.0**
ZAA0					PcP	**PcP**	**02 12 59.6**	**+0.2**
ZALV	**Zalesovo Beam**	**41.85**	**306**		P	**P**	**02 11 03.2**	**-1.3**
	comp=Z,3.8nm,0.6s,baz=64,slow=6.5,SNR=12							
ZALV					PcP	**PcP**	**02 12 59.5**	**0.0**
	comp=Z,30nm,0.8s,baz=73,slow=3.2,SNR=19							
ZALV					ScP	**ScP**	**02 16 44.4**	**-0.7**
	comp=Z,4.4nm,1.0s,baz=76,slow=6.3,SNR=4.3							
ZALV					LR	LR	02 29 40.5	
	comp=Z,5µm,18.9s,baz=76,slow=38							
	comp=Z,3.8nm,0.6s							
ZALV	**Zalesovo Beam**	**41.85**	**306**		P	**P**	**02 11 03.4**	**-1.2**
ZALV					PcP	**PcP**	**02 12 59.6**	**+0.2**
ZALV	**Zalesovo Beam**	**41.85**	**306**	*i*	P	**P**	**02 11 03.7**	**-0.8**
ZALV					pmax	pmax		
	comp=Z,4.0nm,0.6s							
D28M	**Stokes Point**	**41.96**	**30**		P	**P**	**02 11 06.1**	**+0.9**

	baz=273						
LOGN	**Logan Glacier**	**42.04**	**43**	IAMs_20	IAMs_20	02 29 28.6	
	comp=Z,1µm,21.0s						
TABL	**Table Mountain**	**42.04**	**44**	P	**P**	**02 11 07.0**	**+0.7**
TABL				IAMs_20	IAMs_20	02 26 30.7	
	comp=Z,1µm,22.0s						
YUK3	**Moose Creek**	**42.12**	**42**	P	**P**	**02 11 07.7**	**+0.8**
	baz=280,SNR=20						
GOMU	**GeErMu**	**42.22**	**278**	P	**P**	**02 11 07.3**	**-1.0**
GOMU				PcP	**PcP**	**02 13 02.7**	**+1.2**
GOMU				S	**S**	**02 17 22.3**	**-2.8**
GOMU				pmax	pmax		
	comp=Z,100nm,1.0s						
GOMU				LR	LR		
	comp=Z,5µm,18.5s						
GOMU				LR	LR		
	comp=Z,6µm,17.2s						
GOMU				LR	LR		
	comp=Z,9µm,15.5s						
DAWY	**Dawson**	**42.24**	**38**	P	**P**	**02 11 07.6**	**0.0**
DAWY	**Dawson**	**42.24**	**38**	P	**P**	**02 11 08.5**	**+0.8**
	baz=279,SNR=10						
E29M	**Blow River**	**42.33**	**32**	P	**P**	**02 11 09.4**	**+1.1**
E29M				IAmb	IAmb	02 11 22.5	
	comp=Z,117nm,0.9s						
E29M	**Blow River**	**42.33**	**32**	P	**P**	**02 11 09.6**	**+1.3**
	baz=275						
H29M	**Whitestone**	**42.38**	**35**	P	**P**	**02 11 09.3**	**+0.6**
H29M	**Whitestone**	**42.38**	**35**	P	**P**	**02 11 09.9**	**+1.2**
	baz=277						
QIZ	**Qiongzhong**	**42.42**	**245**	P	**P**	**02 11 09.5**	**-0.1**
QIZ				S	**S**	**02 17 29.8**	**+2.3**
QIZ				sS	sS	02 17 43.7	-6.8
QIZ				LR	LR		
	comp=Z,2µm,23.7s						
QIZ				LR	LR		
	comp=Z,2µm,24.5s						
QIZ				LR	LR		
	comp=Z,3µm,18.8s						
G29M	**Pine Creek**	**42.43**	**34**	P	**P**	**02 11 10.5**	**+1.3**
G29M				IAmb	IAmb	02 11 24.1	
	comp=Z,115nm,0.8s						
G29M	**Pine Creek**	**42.43**	**34**	P	**P**	**02 11 10.6**	**+1.4**
	baz=277						
O28M	**Mount Upton**	**42.44**	**43**	P	**P**	**02 11 10.1**	**+0.5**
O28M				IAMs_20	IAMs_20	02 26 23.2	
	comp=Z,1µm,22.0s						
O28M	**Mount Upton**	**42.44**	**43**	P	**P**	**02 11 10.4**	**+0.8**
	baz=282						
I29M	**Ogilvie Camp,**	**42.51**	**36**	IAmb	IAmb	02 11 24.0	
	comp=Z,85nm,1.0s						
I29M	**Ogilvie Camp,**	**42.51**	**36**	P	**P**	**02 11 10.8**	**+1.0**
	baz=278,SNR=26						
YUK8	**Steele Glacier**	**42.54**	**42**	P	**P**	**02 11 11.0**	**+0.6**
	baz=281						
PCA	**Pinnacle**	**42.54**	**44**	P	**P**	**02 11 10.8**	**+0.7**
PINM	**Pinnacle**	**42.55**	**44**	P	**P**	**02 11 10.9**	**+0.6**
	baz=282						
J29N	**Klondike Camp**	**42.68**	**37**	P	**P**	**02 11 12.2**	**+0.9**
	baz=279						
PZH	**PanZhiHua**	**42.81**	**261**	P	**P**	**02 11 12.5**	**-0.3**
PZH				PP	**PP**	**02 12 50.3**	**-2.5**
PZH				S	**S**	**02 17 31.3**	**-2.1**
PZH				pmax	pmax		
	comp=Z,90nm,1.2s						
PZH				pmax	pmax		
	comp=Z,860nm,6.9s						
PZH				LR	LR		
	comp=Z,710nm,16.1s						
PZH				LR	LR		
	comp=Z,1µm,18.1s						
PZH				LR	LR		
	comp=Z,1µm,21.1s						
BCPM	**Bancas Point**	**42.88**	**44**	IAMs_20	IAMs_20	02 30 48.9	
	comp=Z,1µm,20.0s						
M29M	**Somme Creek**	**42.92**	**40**	P	**P**	**02 11 13.9**	**+0.6**
M29M				IAMs_20	IAMs_20	02 29 35.9	
	comp=Z,2µm,22.0s						
M29M	**Somme Creek**	**42.92**	**40**	P	**P**	**02 11 14.3**	**+1.0**
	baz=281						
L29M	**L29M**	**42.95**	**39**	P	**P**	**02 11 14.6**	**+1.2**
L29M				IAMs_20	IAMs_20	02 31 17.5	
	comp=Z,1µm,21.0s						
L29M	**L29M**	**42.95**	**39**	P	**P**	**02 11 14.7**	**+1.2**
	baz=281						
KMI	**Kunming**	**42.99**	**259**	⇑P	**P**	**02 11 14.7**	**+0.2**
KMI				pP	pP	02 11 27.0	-1.2
KMI				S	**S**	**02 17 35.0**	**-1.3**
KMI				SS	**SS**	**02 20 46.4**	**-3.2**
KMI				pmax	pmax		
	comp=Z,100nm,1.3s						
KMI				pmax	pmax		
	comp=Z,1µm,6.9s						
KMI				LR	LR		
	comp=Z,2µm,19.7s						
KMI				LR	LR		
	comp=Z,1µm,19.3s						
KMI				LR	LR		
	comp=Z,2µm,21.0s						
KMI	**Kunming**	**42.99**	**259**	P	**P**	**02 11 14.8**	**+0.4**
EPYK	**Eagle Plains**	**43.02**	**34**	P	**P**	**02 11 14.6**	**+0.7**
EPYK				IAmb	IAmb	02 11 28.4	
	comp=Z,140nm,1.1s						
EPYK				IAMs_20	IAMs_20	02 29 55.7	
	comp=Z,996nm,19.0s						
EPYK	**Eagle Plains**	**43.02**	**34**	P	**P**	**02 11 14.8**	**+0.9**
	baz=278,SNR=48						
YUK4	**Talbot Arm**	**43.06**	**42**	P	**P**	**02 11 15.8**	**+1.3**
	baz=282,SNR=8.8						
K29M	**Barlow Dome**	**43.09**	**38**	IAMs_20	IAMs_20	02 29 22.7	
	comp=Z,1µm,22.0s						
K29M	**Barlow Dome**	**43.09**	**38**	P	**P**	**02 11 15.9**	**+1.3**
	baz=280,SNR=31						
G30M	**tAoh Zraii Nji**	**43.13**	**33**	IAmb	IAmb	02 11 36.1	
	comp=Z,96nm,1.1s						
G30M	**tAoh Zraii Nji**	**43.13**	**33**	P	**P**	**02 11 15.5**	**+0.7**
	baz=278,SNR=62						
F30M	**Barrier River**	**43.21**	**33**	P	**P**	**02 11 16.9**	**+1.5**
	baz=278,SNR=123						
YUK6	**Outpost Mounta**	**43.28**	**42**	P	**P**	**02 11 17.4**	**+1.1**
	baz=283						
O29M	**Mount Kennedy**	**43.32**	**43**	IAMs_20	IAMs_20	02 28 18.4	
	comp=Z,1µm,22.0s						
O29M	**Mount Kennedy**	**43.32**	**43**	P	**P**	**02 11 17.6**	**+1.0**
	baz=283						
I30M	**Mount Dempster**	**43.34**	**36**	P	**P**	**02 11 17.4**	**+0.8**
I30M				IAmb	IAmb	02 11 34.5	
	comp=Z,142nm,0.8s						
I30M				IAMs_20	IAMs_20	02 31 00.1	
	comp=Z,1µm,20.0s						
I30M	**Mount Dempster**	**43.34**	**36**	P	**P**	**02 11 17.1**	**+0.5**
	baz=280						
J30M	**Hart River**	**43.47**	**37**	P	**P**	**02 11 18.8**	**+1.1**
	baz=281						
WMQ	**Urumqi**	**43.59**	**291**	*e*P	**P**	**02 11 21.2**	**+2.3**
WMQ				sP	pP	02 11 34.9	+2.2
WMQ				PcP	**PcP**	**02 13 08.0**	**+2.4**
WMQ				pmax	pmax		
	comp=Z,49nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,910nm,4.5s						
WMQ				LR	LR		
	comp=Z,3µm,19.7s						
WMQ				LR	LR		
	comp=Z,2µm,17.1s						
WMQ				LR	LR		
	comp=Z,3µm,19.7s						
M30M	**Minto, Yukon**	**43.66**	**40**	P	**P**	**02 11 20.0**	**+0.9**
M30M				IAMs_20	IAMs_20	02 31 35.1	
	comp=Z,1µm,20.0s						
M30M	**Minto, Yukon**	**43.66**	**40**	P	**P**	**02 11 20.3**	**+1.2**
	baz=282,SNR=15						
DAV	**Davao City (W)**	**43.67**	**217**	LR	LR	02 30 59.5	
	comp=Z,732nm,18.6s,baz=12,slow=38						
HYT	**Haines Junctio**	**43.71**	**42**	P	**P**	**02 11 20.9**	**+1.2**
HYT				IAmb	IAmb	02 11 23.4	
	comp=Z,78nm,1.0s						
HYT	**Haines Junctio**	**43.71**	**42**	P	**P**	**02 11 20.8**	**+1.1**
	baz=284,SNR=30						
N30M	**Aishikik Lake**	**43.76**	**42**	P	**P**	**02 11 20.8**	**+0.8**
N30M	**Aishikik Lake**	**43.76**	**42**	P	**P**	**02 11 21.3**	**+1.3**
	baz=283						
MAYO	**Mayo, Yukon**	**43.85**	**38**	IAmb	IAmb	02 11 34.8	
	comp=Z,91nm,0.7s						
P29M	**Windy Craggy**	**43.89**	**44**	IAmb	IAmb	02 11 35.7	
	comp=Z,71nm,0.8s						
P29M				IAMs_20	IAMs_20	02 30 43.4	
	comp=Z,1µm,20.0s						
P29M	**Windy Craggy**	**43.89**	**44**	P	**P**	**02 11 22.7**	**+1.7**
	baz=284,SNR=16						
G31M	**Satah River**	**43.89**	**33**	IAmb	IAmb	02 11 35.0	
	comp=Z,73nm,0.8s						
G31M	**Satah River**	**43.89**	**33**	P	**P**	**02 11 21.2**	**+0.4**
	baz=280,SNR=52						
INK	**Inuvik**	**43.95**	**31**	IAmb	IAmb	02 11 35.1	
	comp=Z,90nm,0.8s						
INK	**Inuvik**	**43.95**	**31**	P	**P**	**02 11 21.9**	**+0.6**
	baz=279,SNR=76						
ZSN	**Zaisan**	**43.96**	**297**	*e*P	**P**	**02 11 21.7**	**-0.1**
ZSN	**Zaisan**	**43.96**	**297**	*e*P	**P**	**02 11 21.6**	**-0.1**
F31M	**Tsiigehtchic**	**44.01**	**33**	IAmb	IAmb	02 11 35.5	
	comp=Z,111nm,0.9s						
F31M	**Tsiigehtchic**	**44.01**	**33**	P	**P**	**02 11 22.3**	**+0.5**
	baz=280,SNR=74						
H31M	**Peel River**	**44.06**	**35**	P	**P**	**02 11 23.0**	**+0.6**
	baz=281						
P30M	**Million Dollar**	**44.14**	**43**	P	**P**	**02 11 24.7**	**+1.7**
	baz=285						
N31M	**Braeburn, Yuko**	**44.37**	**41**	IAmb	IAmb	02 11 39.8	
	comp=Z,62nm,0.9s						
N31M	**Braeburn, Yuko**	**44.37**	**41**	P	**P**	**02 11 26.3**	**+1.4**
	baz=284,SNR=17						
O30N	**Mendenhall**	**44.40**	**42**	IAMs_20	IAMs_20	02 28 60.0	
	comp=Z,2µm,21.0s						
O30N	**Mendenhall**	**44.40**	**42**	P	**P**	**02 11 26.6**	**+1.6**
	baz=285,SNR=14						
PLBC	**Pleasant Camp**	**44.61**	**44**	P	**P**	**02 11 28.6**	**+1.9**
	baz=286,SNR=7.7						
SLVN	**Son La**	**44.72**	**253**	P	**P**	**02 11 27.7**	**-0.4**
SLVN				IAmb	IAmb	02 11 31.2	
	comp=Z,71nm,1.1s						
M31M	**Drury Creek, Y**	**44.83**	**40**	P	**P**	**02 11 29.6**	**+1.1**
	baz=284,SNR=19						
WHY	**Whitehorse**	**45.00**	**42**	IAmb	IAmb	02 11 45.1	
	comp=Z,131nm,1.2s						
WHY	**Whitehorse**	**45.00**	**42**	P	**P**	**02 11 31.5**	**+1.6**
	baz=286,SNR=8.8						
S31K	**Pelican**	**45.10**	**46**	P	**P**	**02 11 31.9**	**+1.4**
	baz=287						
SKAG	**Skagway**	**45.12**	**44**	P	**P**	**02 11 31.9**	**+1.2**
	baz=286						
N32M	**Quiet Lake**	**45.71**	**41**	P	**P**	**02 11 36.7**	**+1.1**
	baz=286						
MK31	**Makanchi Array**	**45.83**	**297**	*ce*P	**P**	**02 11 36.4**	**-0.2**
MKAR	**Makanchi Array**	**45.83**	**297**	P	**P**	**02 11 35.7**	**-1.0**
	comp=Z,23nm,0.8s,baz=74,slow=6.4,SNR=90						
MKAR				PcP	**PcP**	**02 13 13.1**	**0.0**
	comp=Z,22nm,0.9s,baz=58,slow=4.1,SNR=5.8						
MKAR				ScP	**ScP**	**02 17 01.3**	**-0.3**
	comp=Z,3.7nm,1.1s,baz=64,slow=3.4,SNR=3.9						
MKAR				LR	LR	02 32 05.4	
	comp=Z,8µm,18.8s,baz=56,slow=38						
	comp=Z,23nm,0.8s						
MKAR	**Makanchi Array**	**45.83**	**297**	P	**P**	**02 11 36.1**	**-0.5**
MKAR					**ScP**	**02 17 01.7**	**+0.1**
MKAR	**Makanchi Array**	**45.83**	**297**	*i* P	**P**	**02 11 36.7**	**0.0**
MKAR				pmax	pmax		
	comp=Z,22nm,0.8s						
P32M	**Atlin**	**45.87**	**43**	P	**P**	**02 11 37.8**	**+1.1**
	baz=288						
R32K	**Eaglecrest**	**45.87**	**45**	IAmb	IAmb	02 11 51.5	
	comp=Z,60nm,1.0s						
R32K	**Eaglecrest**	**45.87**	**45**	P	**P**	**02 11 38.0**	**+1.3**
	baz=288,SNR=5.2						
TNCH	**TengChong**	**45.99**	**262**	P	**P**	**02 11 39.2**	**+0.9**
TNCH				sP	pP	02 11 52.0	-0.1
TNCH				S	**S**	**02 18 20.8**	**+1.1**
TNCH				pmax	pmax		
	comp=Z,340nm,1.0s						
TNCH				pmax	pmax		
	comp=Z,1µm,4.0s						
TNCH				LR	LR		
	comp=Z,920nm,14.1s						
TNCH				LR	LR		
	comp=Z,1µm,13.3s						
TNCH				LR	LR		
	comp=Z,2µm,17.6s						
MAKZ	**Makanchi**	**46.02**	**298**	P	**P**	**02 11 38.1**	**0.0**
MAKZ	**Makanchi**	**46.02**	**298**	P	**P**	**02 11 38.7**	**+0.5**
MAKZ	**Makanchi**	**46.02**	**298**	P	**P**	**02 11 38.7**	**+0.5**
MAKZ				PcP	**PcP**	**02 13 14.1**	**+0.2**
A36M	**Sachs Harbour**	**46.05**	**25**	IAMs_20	IAMs_20	02 34 15.0	
	comp=Z,1µm,20.0s						
A36M	**Sachs Harbour**	**46.05**	**25**	P	**P**	**02 11 38.4**	**+0.5**
	baz=283,SNR=94						
P33M	**Teslin, Yukon**	**46.11**	**42**	IAmb	IAmb	02 11 53.9	
	comp=Z,91nm,1.0s						
P33M				IAMs_20	IAMs_20	02 29 07.3	
	comp=Z,2µm,22.0s						
P33M	**Teslin, Yukon**	**46.11**	**42**	P	**P**	**02 11 40.2**	**+1.5**
	baz=288,SNR=13						
KURK	**Kurchatov**	**46.51**	**304**	P	**P**	**02 11 40.5**	**-1.3**
KURK	**Kurchatov**	**46.51**	**304**	P	**P**	**02 11 41.3**	**-0.5**
KURK	**Kurchatov**	**46.51**	**304**	IAMs_20	IAMs_20	02 31 48.7	
	comp=Z,1µm,21.0s						
KURK	**Kurchatov**	**46.51**	**304**	⇓*e*P	**P**	**02 11 39.9**	**-1.9**
KURK				pmax	pmax		
	comp=Z,55nm,1.0s						
KURK				MLR	MLR		
	comp=Z,1µm,16.0s						
KURBB	**Kurchatov Arra**	**46.60**	**304**	P	**P**	**02 11 40.7**	**-1.8**
	comp=Z,38nm,1.0s,baz=68,slow=8.4,SNR=66						
KURBB				PcP	**PcP**	**02 13 15.8**	**+0.1**
	comp=Z,17nm,0.8s,baz=71,slow=3.0,SNR=9.8						
KURBB				ScP	**ScP**	**02 17 04.0**	**-0.7**
	comp=Z,3.9nm,1.1s,baz=60,slow=3.5,SNR=4.9						
KURBB				S	**S**	**02 18 21.8**	**-5.7**
	comp=Z,6.2nm,1.2s,baz=68,slow=14,SNR=6.2						
KURBB				LR	LR	02 32 14.8	
	comp=Z,1µm,22.0s,baz=64,slow=37						
	comp=Z,38nm,1.0s						
KURBB	**Kurchatov Arra**	**46.60**	**304**	P	**P**	**02 11 40.9**	**-1.6**
Q32M	**Nakina River**	**46.77**	**44**	IAmb	IAmb	02 12 27.6	
	comp=Z,115nm,1.8s						
Q32M	**Nakina River**	**46.77**	**44**	P	**P**	**02 11 45.0**	**+1.0**
	baz=289						
C36M	**Paulatuk**	**47.08**	**29**	P	**P**	**02 11 46.3**	**+0.3**
	baz=286,SNR=56						
MANU	**Manus Island**	**47.19**	**184**	P	**P**	**02 11 47.9**	**+0.4**
MANU				IAmb	IAmb	02 11 49.4	
	comp=Z,64nm,1.4s						
R33M	**Jennings River**	**47.26**	**43**	IAmb	IAmb	02 12 03.4	
	comp=Z,59nm,1.0s						
R33M				IAMs_20	IAMs_20	02 29 12.6	
	comp=Z,1µm,22.0s						
R33M	**Jennings River**	**47.26**	**43**	P	**P**	**02 11 48.8**	**+1.1**
	baz=290						
S34M	**Telegraph Cree**	**47.69**	**45**	IAmb	IAmb	02 12 06.0	
	comp=Z,44nm,1.0s						
S34M	**Telegraph Cree**	**47.69**	**45**	P	**P**	**02 11 52.5**	**+1.6**
	baz=291,SNR=6.5						
WTLY	**Watson Lake, Y**	**48.05**	**42**	P	**P**	**02 11 55.0**	**+1.3**
	baz=290,SNR=8.6						
DLBC	**Dease Lake**	**48.05**	**44**	LR	LR	02 35 32.1	
	comp=Z,476nm,18.2s,baz=268,slow=40						
DLBC	**Dease Lake**	**48.05**	**44**	P	**P**	**02 11 55.9**	**+2.1**
	baz=291,SNR=12						
SMPI	**Sarmi**	**48.17**	**196**	P	**P**	**02 11 56.8**	**+1.7**
	comp=Z,4µmcomp=Z,236nm,1.1s						
JAY	**Jayapura**	**48.34**	**193**	LR	LR	02 34 56.8	
	comp=Z,487nm,18.2s,baz=360,slow=39						
LSA	**Lhasa**	**48.34**	**272**	P	**P**	**02 11 53.6**	**-3.3**
LSA				pmax	pmax		
	comp=Z,100nm,1.2s						
LSA				LR	LR		
	comp=Z,1µm,16.5s						
LSA				LR	LR		
	comp=Z,1µm,16.3s						
LSA				LR	LR		
	comp=Z,2µm,18.2s						
LSA	**Lhasa**	**48.34**	**272**	P	**P**	**02 11 58.2**	**+1.3**
LSA	**Lhasa**	**48.34**	**272**	P	**P**	**02 11 58.2**	**+1.3**
T35M	**Bob Quinn**	**48.47**	**46**	IAmb	IAmb	02 12 01.3	
	comp=Z,58nm,0.9s						
T35M	**Bob Quinn**	**48.47**	**46**	P	**P**	**02 11 58.7**	**+1.7**
	baz=292,SNR=17						
GENI	**Genyem**	**48.51**	**193**	P	**P**	**02 12 00.0**	**+2.4**
	comp=Z,144nm,1.0s						
MYLDM	**Lahad Datu**	**48.59**	**224**	P	**P**	**02 11 58.8**	**+0.5**
MYLDM				IAmb	IAmb	02 12 16.3	
	comp=Z,109nm,1.4s						
MYLDM	**Lahad Datu**	**48.59**	**224**	P	**P**	**02 11 58.8**	**+0.5**
	comp=Z,54nm,1.3s						
SWI	**Sorong**	**48.94**	**206**	P	**P**	**02 12 01.7**	**+0.8**
	comp=Z,2µmcomp=Z,124nm,1.8s						
U35K	**Hyder**	**48.99**	**47**	IAmb	IAmb	02 12 35.5	
	comp=Z,79nm,0.9s						
U35K	**Hyder**	**48.99**	**47**	P	**P**	**02 12 02.7**	**+1.7**
	baz=293						
KKM	**Kota Kinabalu**	**49.01**	**227**	IAMs_20	IAMs_20	02 33 34.4	
	comp=Z,1µm,19.0s						
TDK	**Taldyqorghan**	**49.06**	**297**	*e*P	**P**	**02 12 01.7**	**0.0**
	comp=Z,78nm,1.1s						
TDK				LR	LR	02 33 11.2	
	comp=Z,4µm,15.4s						
TDK	**Taldyqorghan**	**49.06**	**297**	*e*P	**P**	**02 12 01.7**	**0.0**
TDK				pmax	pmax		
	comp=Z,78nm,1.1s						
TDK				MLR	MLR		
	comp=Z,4µm,15.0s						
PDGK	**Podgornoye**	**49.15**	**294**	P	**P**	**02 12 02.4**	**-0.1**
SHLS	**Shalkode**	**49.25**	**294**	*e*P	**P**	**02 12 01.0**	**-2.3**
	comp=Z,44nm,1.5s						
SHLS	**Shalkode**	**49.25**	**294**	*e*P	**P**	**02 12 01.0**	**-2.3**
SHLS				pmax	pmax		
	comp=Z,44nm,1.5s						
WRGLY	**Wrigley**	**49.30**	**37**	P	**P**	**02 12 04.7**	**+1.5**
	baz=292,SNR=28						
UZB	**Uzynbulak**	**49.53**	**294**	*e*P	**P**	**02 12 05.4**	**-0.2**
UZB	**Uzynbulak**	**49.53**	**294**	*e*P	**P**	**02 12 05.3**	**-0.2**
ARXS	**Arharly**	**49.79**	**296**	*e*P	**P**	**02 12 07.2**	**-0.2**
CHTO	**Chiang Mai**	**49.82**	**255**	P	**P**	**02 12 08.3**	**+0.6**
CHTO	**Chiang Mai**	**49.82**	**255**	P	**P**	**02 12 07.5**	**-0.3**
CHTO	**Chiang Mai**	**49.82**	**255**	P	**P**	**02 12 07.8**	**0.0**
	comp=Z,2µmcomp=Z,108nm,1.2s						
CHTO	**Chiang Mai**	**49.82**	**255**	P	**P**	**02 12 07.5**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,116nm,1.2s						
CHTO				MLR	MLR		
	comp=Z,3µm,19.0s						
SATY	**Saty**	**49.97**	**295**	*e*P	**P**	**02 12 08.7**	**-0.1**
	comp=Z,59nm,1.8s						
SATY	**Saty**	**49.97**	**295**	*e*P	**P**	**02 12 08.7**	**-0.1**
SATY				pmax	pmax		
	comp=Z,59nm,1.8s						
CM31	**Chiang Mai Arr**	**50.07**	**255**	P	**P**	**02 12 10.8**	**+1.2**
	SNR=15						
CM31	**Chiang Mai Arr**	**50.07**	**255**	IAmb	IAmb	02 12 12.0	
	comp=Z,93nm,1.2s						
CMAR	**Chiang Mai Arr**	**50.07**	**255**	P	**P**	**02 12 10.3**	**+0.7**
	comp=Z,28nm,1.0s,baz=36,slow=7.8,SNR=90						
CMAR				pP	**pP**	**02 12 22.1**	**-1.5**
	comp=Z,17nm,0.8s,baz=39,slow=7.5,SNR=8.2						
CMAR				PcP	**PcP**	**02 13 30.2**	**+1.5**
	comp=Z,13nm,0.8s,baz=25,slow=3.5,SNR=7.4						
CMAR				ScP	**ScP**	**02 17 21.3**	**+1.5**
	comp=Z,0.8nm,0.3s,baz=20,slow=4.2,SNR=5.2						
CMAR				LR	LR	02 35 03.6	
	comp=Z,2µm,19.6s,baz=55,slow=38						
	comp=Z,28nm,1.0s						
CMAR	**Chiang Mai Arr**	**50.07**	**255**	P	**P**	**02 12 09.9**	**+0.3**
CMAR				PcP	**PcP**	**02 13 29.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**50.07**	**255**	*i* P	**P**	**02 12 11.0**	**+1.4**
CMAR				pmax	pmax		
	comp=Z,21nm,0.9s						
TOAD	**Toad River Com**	**50.21**	**42**	P	**P**	**02 12 11.5**	**+1.3**
	baz=294,SNR=27						
BVAR	**Borovoye Array**	**50.24**	**309**	P	**P**	**02 12 09.2**	**-1.4**
	comp=Z,8.3nm,0.6s,baz=62,slow=9.3,SNR=35						
BVAR				PcP	**PcP**	**02 13 29.1**	**+0.3**
	comp=Z,29nm,0.8s,baz=66,slow=3.7,SNR=12						
BVAR				LR	LR	02 35 01.3	
	comp=Z,3µm,18.7s,baz=62,slow=38						
	comp=Z,8.3nm,0.6s						
KOTAN	**Kotaneelee Air**	**50.24**	**40**	P	**P**	**02 12 12.1**	**+1.7**
	baz=294						
PRZ	**Przheval'sk**	**50.26**	**294**	IAmb	IAmb	02 13 31.9	
	comp=Z,60nm,1.1s						
BORK	**Borovoye**	**50.27**	**309**	P	**P**	**02 12 08.9**	**-1.9**
BORK				PcP	**PcP**	**02 13 29.3**	**+0.4**
BORK	**Borovoye**	**50.27**	**309**	⇓*e*P	**P**	**02 12 08.7**	**-2.0**
BORK				pmax	pmax		
	comp=Z,23nm,1.0s						
SHL	**Shillong**	**50.32**	**268**	P	**P**	**02 12 11.6**	**-0.1**
	SNR=42						
WUS	**Wushi**	**50.36**	**292**	P	**P**	**02 12 11.4**	**-0.3**
WUS				PcP	**PcP**	**02 13 30.3**	**+0.6**
WUS				IAmb	IAmb	02 13 31.9	
	comp=Z,64nm,1.0s						
WUS	**Wushi**	**50.36**	**292**	P	**P**	**02 12 12.3**	**+0.6**
WUS				PcP	**PcP**	**02 13 30.9**	**+1.2**
GTOI	**Gorontalo**	**50.54**	**216**	P	**P**	**02 12 12.9**	**-0.3**
	comp=Z,927nmcomp=Z,29nm,0.9s						
FAKI	**Fak Fak**	**50.60**	**204**	IAMs_20	IAMs_20	02 33 03.5	
	comp=Z,1µm,20.0s						
FAKI	**Fak Fak**	**50.60**	**204**	P	**P**	**02 12 13.2**	**-0.4**
FAKI	**Fak Fak**	**50.60**	**204**	P	**P**	**02 12 13.9**	**+0.3**
	comp=Z,1µmcomp=Z,108nm,1.1s						
MDOK	**Medeo**	**50.79**	**295**	*e*P	**P**	**02 12 14.9**	**-0.1**
MDOK				LR	LR	02 34 14.5	
MDOK	**Medeo**	**50.79**	**295**	*e*P	**P**	**02 12 14.9**	**-0.1**
AAA	**Alma-Ata**	**50.85**	**295**	*e*P	**P**	**02 12 15.3**	**-0.1**
	comp=Z,57nm,0.9s						
AAA	**Alma-Ata**	**50.85**	**295**	*e*P	**P**	**02 12 15.2**	**-0.1**
AAA				pmax	pmax		
	comp=Z,57nm,0.9s						
TNSS	**Tian-Shan**	**50.92**	**295**	*e*P	**P**	**02 12 15.9**	**-0.4**
TNSS	**Tian-Shan**	**50.92**	**295**	*e*P	**P**	**02 12 15.9**	**-0.4**
TARG	**Taragay, Kyrgy**	**51.01**	**293**	IAmb	IAmb	02 13 35.0	
	comp=Z,53nm,1.0s						
MRSI	**Marisa**	**51.14**	**217**	P	**P**	**02 12 17.8**	**+0.1**
	comp=Z,2µmcomp=Z,130nm,1.5s						
BBB	**Bella Bella**	**51.59**	**51**	LR	LR	02 31 00.3	
	comp=Z,267nm,21.4s,baz=288,slow=32						
BTLS	**Baital**	**51.76**	**299**	*e*P	**P**	**02 12 21.6**	**-0.4**
BTLS	**Baital**	**51.76**	**299**	*e*P	**P**	**02 12 21.6**	**-0.4**
SANI	**Sanana**	**51.82**	**211**	P	**P**	**02 12 21.8**	**-1.0**
	comp=Z,2µmcomp=Z,110nm,1.2s						
BOOM	**Boomskoye usch**	**51.83**	**295**	IAmb	IAmb	02 12 27.2	
	comp=Z,78nm,1.0s						
TKM2	**Tokmak 2**	**51.84**	**296**	P	**P**	**02 12 23.4**	**+0.5**
	SNR=49						
MSAI	**Masohi**	**52.01**	**207**	P	**P**	**02 12 25.0**	**+0.8**
	comp=Z,63nm,1.2s						
KRAI	**Karang Ratu**	**52.16**	**208**	P	**P**	**02 12 26.9**	**+1.6**
	comp=Z,3µmcomp=Z,50nm,1.3s						
MPSI	**Mapaga**	**52.16**	**220**	P	**P**	**02 12 25.0**	**-0.3**
	comp=Z,2µmcomp=Z,32nm,1.4s						
SGDS	**Sogindy**	**52.18**	**297**	*e*P	**P**	**02 12 25.3**	**0.0**
	comp=Z,37nm,1.1s						
BRDH	**Bariadhala**	**52.32**	**265**	LR	LR	02 37 20.7	
	comp=Z,551nm,18.7s,baz=67,slow=39						
CHMS	**Chumysh**	**52.33**	**296**	P	**P**	**02 12 27.1**	**+0.7**
	SNR=11						
USP	**Ospenovka**	**52.36**	**297**	P	**P**	**02 12 26.5**	**-0.1**
	SNR=104						
KBK	**Karagaybulak**	**52.38**	**296**	P	**P**	**02 12 27.5**	**+0.6**
	SNR=53						
FRU1	**Bishkek**	**52.50**	**296**	IAmb	IAmb	02 12 29.7	
	comp=Z,47nm,0.9s						
APSI	**Ampana**	**52.51**	**217**	P	**P**	**02 12 27.8**	**-0.1**
	comp=Z,83nm,1.1s						
NLAI	**Namlea**	**52.53**	**210**	P	**P**	**02 12 29.2**	**+1.2**
	comp=Z,20nm,0.8s						
AAK	**Ala-Archa**	**52.68**	**296**	P	**P**	**02 12 29.4**	**+0.3**
	SNR=43						
AAK	**Ala-Archa**	**52.68**	**296**	LR	LR	02 36 26.7	
	comp=Z,3µm,19.2s,baz=80,slow=38						
AAK	**Ala-Archa**	**52.68**	**296**	P	**P**	**02 12 29.8**	**+0.7**
AAK	**Ala-Archa**	**52.68**	**296**	P	**P**	**02 12 28.5**	**-0.6**
AAK	**Ala-Archa**	**52.68**	**296**	*i* P	**P**	**02 12 29.0**	**-0.1**
	SNR=7.4						
AAK	**Ala-Archa**	**52.68**	**296**	*c i*P	**P**	**02 12 29.3**	**+0.2**
AAK				pmax	pmax		
	comp=Z,44nm,1.0s						
AAK				MLR	MLR		
	comp=Z,3µm,19.0s						
AAK	**Ala-Archa**	**52.68**	**296**	*e*P	**P**	**02 12 29.3**	**+0.2**
AAK	**Ala-Archa**	**52.68**	**296**	P	**P**	**02 12 29.4**	**+0.3**
RES	**Resolute Bay**	**52.85**	**18**	LR	LR	02 38 15.3	
	comp=Z,736nm,20.8s,baz=306,slow=40						
UCH	**Uchtor**	**52.88**	**295**	P	**P**	**02 12 31.9**	**+1.0**
	SNR=9.1						
EKS2	**Erkin-Say**	**53.12**	**296**	P	**P**	**02 12 32.4**	**+0.1**
	SNR=38						
YKAW3	**Yellowknife Wh**	**53.25**	**35**	IAmb	IAmb	02 12 35.1	
	comp=Z,65nm,0.9s						
YKA	**Yellowknife Ar**	**53.29**	**35**	P	**P**	**02 12 33.1**	**+0.1**
	comp=Z,40nm,0.8s,baz=299,slow=7.6,SNR=182						
YKA				pP	**pP**	**02 12 44.9**	**-2.2**
	comp=Z,35nm,0.9s,baz=302,slow=7.6,SNR=12						

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YKA                                S        S         02 19 58.9  -1.4
         comp=Z,0.2nm,0.4s,baz=305,slow=13,SNR=3.0
YKA                                LR       LR        02 37 13.4
         comp=Z,612nm,21.2s,baz=273,slow=38
         comp=Z,40nm,0.8s
YKA      Yellowknife Ar   53.29  35  P        P         02 12 33.5 +0.5
YKAW1    Yellowknife Wh   53.34  35  IAmb     IAmb      02 12 35.3
         comp=Z,51nm,0.8s
KSH      Kashi            53.35 292  P        P         02 12 37.7 +3.7
KSH                                pP       pP        02 12 45.7  -2.5
KSH                                sP       sP        02 12 53.8  -0.4
KSH                                S        S         02 20 08.2 +6.2
KSH                                pmax     pmax
         comp=Z,43nm,1.6s
KSH                                pmax     pmax
         comp=Z,680nm,6.7s
KSH                                LR       LR
         comp=Z,4µm,17.2s
KSH                                LR       LR
         comp=Z,2µm,18.2s
KSH                                LR       LR
         comp=Z,5µm,19.6s
SVE      Sverdlovsk       53.53 317 eP       P         02 12 33.1  -1.9
SVE                                pmax     pmax
         comp=Z,57nm,0.8s
SVE                                MLR      MLR
         comp=Z,2µm,18.0s
SPITS    Spitsbergen Ar   53.69 349  P        P         02 12 34.4  -1.5
         comp=Z,10nm,0.9s,baz=57,slow=9.2,SNR=6.0
SPITS                              PcP      PcP       02 13 41.0  -0.4
         comp=Z,21nm,0.9s,baz=323,slow=2.2,SNR=4.3
SPITS                              LR       LR        02 35 54.8
         comp=Z,1µm,20.4s,baz=40,slow=36
         comp=Z,10nm,0.9s
SBUM     Sibu             54.14 229  P        P         02 12 40.3 +0.4
SBUM     Sibu             54.14 229  P        P         02 12 40.4 +0.5
PMG      Port Moresby     54.51 184  LR       LR        02 32 12.0
         comp=Z,426nm,21.9s,baz=348,slow=32
PMG      Port Moresby     54.51 184  P        P         02 12 42.9 +0.5
PMG                                PcP      PcP       02 13 45.4 +0.1
PMG      Port Moresby     54.51 184  P        P         02 12 42.5 +0.1
PMG      Port Moresby     54.51 184  P        P         02 12 43.3 +0.9
         comp=Z,31nm,1.4s
PMG      Port Moresby     54.51 184c iP       P         02 12 43.1 +0.7
PMG                                pmax     pmax
         comp=Z,36nm,1.2s
DZA      Taraz            54.54 298 eP       P         02 12 42.4  -0.2
         comp=Z,46nm,1.3s
DZA      Taraz            54.54 298 eP       P         02 12 42.4  -0.2
DZA                                pmax     pmax
         comp=Z,46nm,1.3s
ARTI     Arti             54.84 317  LR       LR        02 38 02.1
         comp=Z,3µm,21.1s,baz=56,slow=38
ARTI     Arti             54.84 317  P        P         02 12 42.5  -2.0
ARTI                               IAmb     IAmb      02 12 46.1
         comp=Z,83nm,1.0s
ARTI     Arti             54.84 317d iP       P         02 12 42.4  -2.0
ARTI                               *PP      pP        02 12 51.6  -7.0
ARTI                                                  02 13 44.6
ARTI                               S        S         02 20 19.9  -1.4
ARTI                               SS       SS        02 23 59.4  -5.0
ARTI                               pmax     pmax
         comp=Z,82nm,1.0s
ARTI                               MLR      MLR
         comp=Z,3µm,20.0s
ARTI     Arti             54.84 317  P        P         02 12 42.4  -2.0
ARTI                               PcP      PcP       02 13 46.1   0.0
KK31     Karatay Array    54.94 298  IAmb     IAmb      02 12 46.7
         comp=Z,43nm,0.8s
KK31     Karatay Array    54.94 298 i P       P         02 12 45.0  -0.4
KKAR     Karatay Array    54.94 298  P        P         02 12 44.9  -0.5
KKAR     Karatay Array    54.94 298  P        P         02 12 44.9  -0.5
BRLS     Borolday         55.40 299 eP       P         02 12 50.4 +1.6
BRLS     Borolday         55.40 299 eP       P         02 12 50.3 +1.6
MTKI     Muara Teweh, K   55.65 224  P        P         02 12 51.4 +0.6
SAUI     Saumlaki         55.69 203  P        P         02 12 52.1 +1.1
SAUI     Saumlaki         55.69 203  P        P         02 12 53.6 +2.6
IUG      Iuzhnay          55.75 298 eP       P         02 12 51.4  -0.1
         comp=Z,49nm,1.0s
IUG      Iuzhnay          55.75 298 eP       P         02 12 51.3  -0.1
IUG                                pmax     pmax
         comp=Z,49nm,1.0s
CHM      Chimkent         55.92 298 eP       P         02 12 52.5   0.0
         comp=Z,40nm,0.9s
CHM                                LR       LR        02 37 17.5
         comp=Z,1µm,16.4s
CHM      Chimkent         55.92 298 eP       P         02 12 52.5   0.0
CHM                                pmax     pmax
         comp=Z,40nm,0.9s
CHM                                MLR      MLR
         comp=Z,1µm,16.0s
TULEG    Thule            55.94  10  IAmb     IAmb      02 12 51.8
         comp=Z,62nm,1.1s
TULEG                              IAMs_20  IAMs_20   02 38 57.3
         comp=Z,2µm,21.0s
SPSI     Sidrap Palu      56.05 218  P        P         02 12 54.7 +1.1
         comp=Z,3µmcomp=Z,33nm,1.5s
DRK      Karamyk          56.08 294  IAmb     IAmb      02 12 55.7
         comp=Z,68nm,1.1s
BNSI     Bone             56.30 217  P        P         02 12 57.8 +2.4
         comp=Z,1µmcomp=Z,29nm,1.0s
WISH     Wishkah          56.56  55  IAmb     IAmb      02 14 08.6
         comp=Z,76nm,1.3s
KAPI     Kappang          57.00 217  LR       LR        02 41 03.1
         comp=Z,137nm,18.1s,baz=24,slow=40
KAPI     Kappang          57.00 217  P        P         02 13 01.2 +0.8
KAPI     Kappang          57.00 217  P        P         02 13 00.8 +0.4
KAPI                               IAmb     IAmb      02 13 02.2
         comp=Z,70nm,1.3s
KAPI     Kappang          57.00 217  P        P         02 13 01.2 +0.8
KAPI     Kappang          57.00 217  P        P         02 13 00.8 +0.4
KAPI                               pmax     pmax
         comp=Z,70nm,1.3s
BKSI     Bulukumba        57.12 217  P        P         02 13 01.4 +0.2
         comp=Z,805nmcomp=Z,40nm,1.3s
MANEM    Manem            57.24 292  IAmb     IAmb      02 13 04.5
         comp=Z,372nm,1.6s
MKS      Makassar         57.31 217  P        P         02 13 04.5 +2.0
         comp=Z,1µmcomp=Z,54nm,0.8s
D05A     Enumclaw         57.54  54  IAmb     IAmb      02 13 33.1
         comp=Z,65nm,1.2s
POIN     Pond Inlet       57.65  15  P        P         02 13 03.0  -1.2
KIRV     Kirov            57.73 323  LR       LR        02 40 15.8
         comp=Z,4µm,19.5s,baz=43,slow=38
KIRV     Kirov            57.73 323c iP       P         02 13 03.7  -1.3
AB31     Akbulak array    57.81 309  IAmb     IAmb      02 13 07.2
         comp=Z,47nm,0.8s
AB31     Akbulak array    57.81 309 i P       P         02 13 05.0  -0.7
ABKAR    Akbulak array    57.81 309  P        P         02 13 04.9  -0.9
BBKI     Banjar Baru      57.86 223  P        P         02 13 06.8 +0.3
         comp=Z,143nm,1.4s
APA      Apatity          57.88 336 eP       P         02 13 02.5  -3.4
APA                                e                  02 15 11.8
APA                                eS       S         02 20 52.1  -9.2
APA                                e                  02 22 48.8
APA                                eSS      SS        02 24 52.6 +0.8
APA                                MLR      MLR
         comp=Z,3µm,20.0s
G03D     McMinnville, O   57.90  56  IAmb     IAmb      02 13 30.0
         comp=Z,75nm,1.2s
AKTO     Aktyubinsk       58.20 311  LR       LR        02 40 16.9
         comp=Z,6µm,19.8s,baz=47,slow=38
AKTO     Aktyubinsk       58.20 311  P        P         02 13 07.9  -0.5
COR      Corvallis        58.22  57  P        P         02 13 10.3 +1.6
COR      Corvallis        58.22  57  P        P         02 13 10.3 +1.6
COR                                pmax     pmax
         comp=Z,232nm,1.6s
G04A     Mulino           58.36  56  IAmb     IAmb      02 13 37.9
         comp=Z,60nm,0.9s
B08A     Colville Reser   58.39  52  IAmb     IAmb      02 13 17.7
         comp=Z,41nm,1.1s
NIL      Nilore           58.45 288  P        P         02 13 11.2 +0.7
NIL      Nilore           58.45 288  P        P         02 13 10.7 +0.2
NIL      Nilore           58.45 288  IAMs_20  IAMs_20   02 41 55.2
         comp=Z,2µm,22.0s
NIL      Nilore           58.45 288  P        P         02 13 10.7 +0.2
NIL                                pmax     pmax
         comp=Z,355nm,1.1s
NIL                                MLR      MLR
         comp=Z,2µm,22.0s
ARCES    ARCESS Array B   58.56 340  P        P         02 13 08.7  -2.0
         comp=Z,19nm,0.9s,baz=40,slow=6.4,SNR=7.9
ARCES                              PcP      PcP       02 14 00.3  -0.1
         comp=Z,18nm,0.8s,baz=62,slow=4.4,SNR=8.6
ARCES                              LR       LR        02 44 44.6
         comp=Z,1µm,18.2s,baz=42,slow=42
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         comp=Z,19nm,0.9s
ARCES    ARCESS Array B   58.56 340  P        P         02 13 11.1 +0.4
ARCES                              PcP      PcP       02 14 00.7 +0.3
ARCES                              IAmb     IAmb      02 14 01.9
         comp=Z,40nm,1.0s
ARCES    ARCESS Array B   58.56 340  P        P         02 13 11.1 +0.4
ARCES                                                 02 14 00.7
H04D     Lebanon          58.59  57  IAmb     IAmb      02 13 27.1
         comp=Z,90nm,1.3s
KULM     Kulim            58.63 243  IAMs_20  IAMs_20   02 37 20.1
         comp=Z,1µm,22.0s
KULM     Kulim            58.63 243  P        P         02 13 13.3 +1.5
KULM     Kulim            58.63 243  P        P         02 13 13.1 +1.3
         comp=Z,2µmcomp=Z,164nm,1.3s
BUCK     Buck Mountain    58.63  57  IAmb     IAmb      02 14 04.0
         comp=Z,59nm,1.1s
J01E     Myrtle Point     58.65  59  IAmb     IAmb      02 13 27.1
         comp=Z,34nm,0.9s
EDM      Edmonton         58.77  44  P        P         02 13 12.3  -0.1
EDM      Edmonton         58.77  44  P        P         02 13 12.3  -0.1
EDM                                pmax     pmax
         comp=Z,88nm,0.9s
EPH      Ephrata          58.80  53  IAmb     IAmb      02 13 27.3
         comp=Z,38nm,1.3s
MXC      Moxie City       58.85  54  IAmb     IAmb      02 13 28.4
         comp=Z,85nm,1.7s
IPM      Ipoh             59.02 242  IAmb     IAmb      02 13 16.3
         comp=Z,81nm,1.2s
IPM      Ipoh             59.02 242  P        P         02 13 15.4 +0.8
         comp=Z,1µmcomp=Z,80nm,1.6s
K02D     Willamette Mer   59.07  59  IAmb     IAmb      02 13 30.6
         comp=Z,46nm,1.2s
E07A     Sunnyside        59.11  54  IAmb     IAmb      02 13 30.3
         comp=Z,100nm,1.5s
I04A     Tendick Farm,    59.20  57  IAmb     IAmb      02 13 31.2
         comp=Z,70nm,1.3s
MMRI     Maumere          59.29 213  P        P         02 13 17.0 +0.7
         comp=Z,39nm,0.7s
COEN     Coen             59.31 188  P        P         02 13 17.1 +0.7
COEN                               IAmb     IAmb      02 13 20.0
         comp=Z,49nm,1.2s
COEN     Coen             59.31 188  P        P         02 13 14.9  -1.5
D08A     Wollman Farm,    59.35  53  IAmb     IAmb      02 13 31.4
         comp=Z,101nm,1.8s
HAWA     Hanford          59.39  54  IAmb     IAmb      02 13 32.1
         comp=Z,47nm,1.2s
MYKOM    Kota Tinggi      59.42 237  P        P         02 13 19.5 +2.2
         comp=Z,183nm,1.1s
ILON     Igloolik, Nuna   59.44  19  IAmb     IAmb      02 13 20.3
         comp=Z,46nm,0.8s
KSXB     Camp Six Broad   59.44  60  IAmb     IAmb      02 13 33.4
         comp=Z,96nm,1.7s
F07A     Phinny Hill Vi   59.45  54  IAmb     IAmb      02 13 26.2
         comp=Z,56nm,1.0s
L02F     Cave Junction    59.46  60  IAmb     IAmb      02 13 48.2
         comp=Z,61nm,1.7s
I05D     Terrebonne, OR   59.52  56  IAmb     IAmb      02 13 34.3
         comp=Z,90nm,1.4s
BBOR     Butler Butte     59.56  58  IAmb     IAmb      02 13 34.0
         comp=Z,105nm,1.9s
EDFI     Ende, Flores     59.60 213  P        P         02 13 17.5  -1.1
         comp=Z,43nm,1.4s
NEW      Newport          59.66  51  LR       LR        02 35 45.5
         comp=Z,337nm,21.9s,baz=299,slow=33
NEW      Newport          59.66  51  IAmb     IAmb      02 13 31.3
         comp=Z,39nm,1.2s
BTDF     Bukit Timah Da   59.81 237  P        P         02 13 22.0 +2.0
         comp=Z,2µmcomp=Z,117nm,1.3s
KDU      Kakadu           59.90 200  P        P         02 13 20.5   0.0
         comp=Z,35nm,1.2s
YPT      Yellepit         59.91  54  IAmb     IAmb      02 13 35.6
         comp=Z,85nm,1.6s
PINE     Pine Mountain    60.07  57  IAmb     IAmb      02 13 37.8
         comp=Z,80nm,1.2s
L04D     Klamath Falls    60.17  59  IAmb     IAmb      02 13 37.1
         comp=Z,38nm,0.8s
J05D     Fort Rock, OR    60.19  57  IAmb     IAmb      02 13 38.5
         comp=Z,74nm,1.2s
YBH      Yreka Blue Hor   60.21  59  LR       LR        02 34 13.7
         comp=Z,33nm,22.0s,baz=288,slow=31
YBH      Yreka Blue Hor   60.21  59  IAmb     IAmb      02 13 38.6
         comp=Z,60nm,1.4s
BATI     Baumata          60.21 210  LR       LR        02 37 39.5
         comp=Z,265nm,21.7s,baz=20,slow=34
KLMR     Klimovskoe       60.31 328 eP       P         02 13 20.4  -2.4
KLMR                               e*PP     pP        02 13 32.4  -4.8
KLMR                               pmax     pmax
         comp=Z,34nm,0.8s
KLMR                               MLR      MLR
         comp=Z,2µm,19.0s
G08A     Pilot Rock       60.35  54  P        P         02 13 24.5 +0.9
MTN      Manton Dam       60.38 202  P        P         02 13 23.6  -0.2
         comp=Z,86nm,1.3s
MTN      Manton Dam       60.38 202  P        P         02 13 24.0 +0.2
N02D     Trinity Center   60.66  60  P        P         02 13 26.6 +1.0
N02D                               IAmb     IAmb      02 13 41.7
         comp=Z,89nm,1.4s
KBL      Kabul            60.73 291  P        P         02 13 25.6  -0.8
         SNR=91
KBL                                S        S         02 21 41.2 +1.7
KBL      Kabul            60.73 291  P        P         02 13 25.2  -1.2
KBL      Kabul            60.73 291  P        P         02 13 25.2  -1.2
KBL                                pmax     pmax
         comp=Z,252nm,1.1s
I07A     Izee             60.74  56  IAmb     IAmb      02 13 41.8
         comp=Z,55nm,1.6s
DBNI     Kabupaten Domp   60.75 217  P        P         02 13 26.2  -0.1
DSRI     Dabo             60.82 235  P        P         02 13 29.3 +2.4
         comp=Z,144nm,1.3s
M03C     McCloud          60.83  60  IAmb     IAmb      02 13 42.5
         comp=Z,72nm,1.1s
KCPM     Cahto Peak       60.87  62  IAmb     IAmb      02 13 43.6
         comp=Z,37nm,0.9s
F10A     Beach Ranch, E   60.93  53  IAmb     IAmb      02 13 42.6
         comp=Z,31nm,1.0s
O02D     Mt. Diablo Mer   61.07  61  P        P         02 13 28.8 +0.3
O02D                               IAmb     IAmb      02 13 44.5
         comp=Z,51nm,1.1s
DCMP     DeCamp, Califo   61.15  62  IAmb     IAmb      02 13 42.0
         comp=Z,96nm,1.9s
PLAI     Plampang         61.27 217  P        P         02 13 28.6  -1.3
PPBI     Pangkal Pinang   61.31 232  P        P         02 13 30.7 +0.5
WBSI     Waikabubak, Su   61.33 215  P        P         02 13 28.8  -1.5
         comp=Z,1µmcomp=Z,66nm,0.9s
BASI     Baing, Sumba     61.38 214  P        P         02 13 30.7 +0.1
         comp=Z,3µmcomp=Z,103nm,0.8s
BMO      Blue Mountains   61.56  54  IAmb     IAmb      02 13 48.0
         comp=Z,55nm,1.6s
BMO                                IAMs_20  IAMs_20   02 35 60.0
         comp=Z,587nm,21.0s
TWSI     Taliwang, Sumb   61.57 218  P        P         02 13 30.4  -1.5
PSI      Prapat           61.63 242  LR       LR        02 40 11.8
         comp=Z,614nm,21.5s,baz=28,slow=36
SRBI     Singaraja        61.74 220  P        P         02 13 33.8 +0.8
         comp=Z,2µmcomp=Z,147nm,1.2s
J08A     Circle Bar Ran   61.77  56  IAmb     IAmb      02 13 48.9
         comp=Z,56nm,1.1s
KHKI     Kahang-Kahang    61.81 220  P        P         02 13 31.8  -1.7
         comp=Z,62nm,1.0s
GDXM     Geysers          61.89  62  IAmb     IAmb      02 13 49.9
         comp=Z,54nm,1.2s
ABJI     Asem Bagus       61.94 221  P        P         02 13 35.2 +0.9
         comp=Z,2µmcomp=Z,158nm,1.3s
MNRC     McLaughlin Min   62.06  62  IAmb     IAmb      02 13 51.1
         comp=Z,81nm,1.2s
MLSI     Meulaboh, Aceh   62.11 246  P        P         02 13 35.7 +0.1
         comp=Z,104nm,1.0s
PLID     Pearl Lake       62.16  53  IAmb     IAmb      02 13 50.9
         comp=Z,70nm,1.1s
PLID                               IAMs_20  IAMs_20   02 33 09.8
         comp=Z,856nm,22.0s
RTBI     Rangdo, Negare   62.19 220  P        P         02 13 35.4  -0.7
         comp=Z,86nm,1.2s
MSO      Missoula         62.24  51  IAmb     IAmb      02 13 49.7
         comp=Z,51nm,0.8s
SUTB     Sutter Butte     62.26  61  IAmb     IAmb      02 13 51.1
         comp=Z,51nm,1.4s
BELG     Belogornoye      62.27 318  LR       LR        02 42 30.8
         comp=Z,2µm,20.3s,baz=88,slow=38
BELG     Belogornoye      62.27 318c iP       P         02 13 35.4  -0.8
BELG                               pmax     pmax
         comp=Z,9.0nm,1.0s
BELG                               MLR      MLR
         comp=Z,429nm,21.0s
SUMG     Summit           62.28   3  P        P         02 13 36.1  -0.3
SUMG     Summit           62.28   3  P        P         02 13 36.2  -0.3
SUMG                               pmax     pmax
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         comp=Z,140nm,1.0s
JMBI     JAMBI            62.30 235  P        P         02 13 37.9 +1.1
PMBI     Palembang        62.71 233  IAMs_20  IAMs_20   02 41 04.5
         comp=Z,706nm,20.0s
GMJI     Gumukmas         62.72 222  P        P         02 13 40.9 +1.3
BEKR     Beckworth        62.75  60  IAmb     IAmb      02 13 55.0
         comp=Z,63nm,1.1s
MNSI     Mandailing Nat   62.79 240  P        P         02 13 41.1 +1.0
         comp=Z,38nm,0.7s
JMIC     Jan Mayen        63.03 352  LR       LR        02 40 45.1
         comp=Z,406nm,19.4s,baz=326,slow=36
SJI      Sawahan          63.06 224  P        P         02 13 42.1 +0.1
SNJI     Sawahan-Nganju   63.10 224  P        P         02 13 42.9 +0.5
         comp=Z,2µmcomp=Z,43nm,1.7s
SMRI     Semarang         63.13 225  P        P         02 13 43.4 +1.1
         comp=Z,7µmcomp=Z,210nm,1.2s
FFC      Flin Flon        63.14  38  P        P         02 13 42.2 +0.2
FFC      Flin Flon        63.14  38  P        P         02 13 42.2 +0.2
FFC                                pmax     pmax
         comp=Z,84nm,1.0s
FFC      Flin Flon        63.14  38  P        P         02 13 42.3 +0.4
MFID     Camas Ranch      63.27  54  IAmb     IAmb      02 13 58.5
         comp=Z,107nm,1.9s
PPI      Padang Panjang   63.28 239  P        P         02 13 43.9 +0.5
         comp=Z,54nm,1.0s
PAHR     Pah Rah Range    63.44  60  IAmb     IAmb      02 13 59.7
         comp=Z,66nm,1.1s
FCC      Fort Churchill   63.57  32  P        P         02 13 44.5  -0.2
FCC      Fort Churchill   63.57  32  P        P         02 13 44.5  -0.2
FCC                                pmax     pmax
         comp=Z,97nm,0.9s
PDSI     Padang           63.60 238  P        P         02 13 45.6 +0.1
         comp=Z,59nm,1.2s
GSI      Gunungsitoli     63.64 243  P        P         02 13 46.1 +0.4
GSI                                IAmb     IAmb      02 14 04.6
         comp=Z,42nm,0.9s
GSI      Gunungsitoli     63.64 243  P        P         02 13 47.1 +1.3
         comp=Z,5µmcomp=Z,52nm,0.9s
PNTR     Pine Nut         63.69  60  IAmb     IAmb      02 14 02.4
         comp=Z,49nm,0.8s
KNRA     Kununurra        63.73 203  P        P         02 13 46.5 +0.3
KNRA                               IAmb     IAmb      02 13 47.9
         comp=Z,66nm,1.3s
CTJI     Waduk Cacaban    63.73 227  P        P         02 13 47.2 +0.9
         comp=Z,3µmcomp=Z,128nm,1.2s
EGMT     Eagleton         63.73  47  IAmb     IAmb      02 13 48.5
         comp=Z,64nm,1.0s
EGMT                               IAMs_20  IAMs_20   02 37 40.5
         comp=Z,898nm,21.0s
UGM      Wanagama         63.83 225  IAMs_20  IAMs_20   02 37 50.7
         comp=Z,1µm,22.0s
UGM      Wanagama         63.83 225  P        P         02 13 47.1 +0.1
         comp=Z,113nm,1.3s
CMB      Columbia Colle   63.86  62  IAmb     IAmb      02 14 02.4
         comp=Z,52nm,1.2s
DLMT     Dillon           63.88  51  IAmb     IAmb      02 14 04.2
         comp=Z,73nm,1.4s
KRJI     Kerinci          63.94 237  P        P         02 13 49.4 +1.5
HLID     Hailey           63.99  54  IAMs_20  IAMs_20   02 37 40.1
         comp=Z,779nm,20.0s
KPJI     Karang Pucung    64.14 227  P        P         02 13 49.1 +0.1
         comp=Z,52nm,1.1s
WAKR     Walker           64.15  61  IAmb     IAmb      02 14 04.8
         comp=Z,67nm,1.3s
KLSI                      64.18 232  P        P         02 13 49.6 +0.3
         comp=Z,2µmcomp=Z,144nm,1.5s
BOZ      Bozeman (W)      64.27  50  IAmb     IAmb      02 14 03.0
         comp=Z,35nm,0.8s
MDSI     Maura Dua        64.32 233  P        P         02 13 50.1  -0.1
         comp=Z,2µmcomp=Z,59nm,1.6s
MASI     Maura Aman, Be   64.33 235  P        P         02 13 51.0 +0.7
SCO      Scoresbysund     64.41 357  IAmb     IAmb      02 13 50.9
         comp=Z,39nm,0.9s
FINES    FINESS Array B   64.49 334  P        P         02 13 49.0  -1.7
         comp=Z,20nm,0.7s,baz=33,slow=5.0,SNR=33
FINES                              LR       LR        02 44 39.4
         comp=Z,3µm,19.7s,baz=45,slow=39
         comp=Z,20nm,0.7s
FINES    FINESS Array B   64.49 334  P        P         02 13 49.9  -0.8
FINES    FINESS Array B   64.49 334 i P       P         02 13 49.4  -1.3
FINES                              pmax     pmax
         comp=Z,20nm,0.6s
MOS      Moscow           64.50 325 eP       P         02 13 54.4 +3.6
MOS                                e                  02 14 24.1
MOS                                e                  02 16 21.3
MOS                                pmax     pmax
         comp=Z,69nm,1.6s
MOS                                MLR      MLR
         comp=Z,1µm,17.0s
MOS                                MLR      MLR
         comp=N,1µm,18.0s
KSI      Kapahiang        64.54 235  P        P         02 13 53.8 +2.1
RYN      Ryan             64.64  60  IAmb     IAmb      02 14 07.1
         comp=Z,39nm,0.9s
ILULI    Ilulissat        64.73   8  IAmb     IAmb      02 13 52.9
         comp=Z,110nm,1.1s
SISI     Saibi            64.76 239  P        P         02 13 54.3 +1.2
         comp=Z,2µmcomp=Z,151nm,1.0s
LWLI     Liwa             64.82 233  P        P         02 13 53.5  -0.1
NVAR     Mina Array Bea   64.89  60  P        P         02 13 54.7 +0.6
         comp=Z,12nm,0.8s,baz=290,slow=6.7,SNR=94
NVAR                               pP       pP        02 14 06.8  -1.6
         comp=Z,39nm,0.8s,baz=283,slow=4.3,SNR=24
NVAR                               LR       LR        02 38 43.5
         comp=Z,223nm,21.8s,baz=298,slow=33
NVAR                               PKPPKP   P'P'df    02 42 28.1   -14
         comp=Z,0.3nm,0.7s,baz=176,slow=2.4,SNR=3.5
         comp=Z,12nm,0.8s
MDPB     Devils Postpil   64.92  61  IAmb     IAmb      02 14 09.7
         comp=Z,56nm,1.3s
YHL      Hebgen Lake      64.98  51  IAmb     IAmb      02 14 11.0
         comp=Z,43nm,1.2s
NV11     Mina Array Sit   64.98  60  IAmb     IAmb      02 14 10.0
         comp=Z,64nm,1.2s
KASI     Kota Agung       64.99 232  P        P         02 13 53.9  -0.7
         comp=Z,43nm,1.4s
HYB      Hyderabad        65.01 270 eP       P         02 13 54.4  -0.3
HYB                                esP      pP        02 14 10.4 +1.0
HYB                                ePcP     PcP       02 14 27.8 +0.4
YHB      Horse Butte      65.04  51  IAmb     IAmb      02 14 10.3
         comp=Z,49nm,1.1s
CNJI     Cibinong         65.05 228  P        P         02 13 53.7  -1.3
         comp=Z,33nm,1.1s
CTA      Charters Tower   65.16 184  LR       LR        02 42 56.0
         comp=Z,8.6nm,19.0s,baz=354,slow=36
CTAO     Charters Tower   65.16 184  P        P         02 13 55.5   0.0
CTAO     Charters Tower   65.16 184  P        P         02 13 55.5   0.0
CTAO                               pmax     pmax
         comp=Z,23nm,1.2s
ELK      Elko             65.28  56  LR       LR        02 37 49.3
         comp=Z,471nm,21.9s,baz=315,slow=32
ELK      Elko             65.28  56  IAMs_20  IAMs_20   02 37 38.6
         comp=Z,563nm,18.0s
PPSI     Pulau Pagai      65.34 238  P        P         02 13 58.0 +1.1
YNR      Norris Junctio   65.34  51  IAmb     IAmb      02 14 13.0
         comp=Z,54nm,1.3s
OBN      Obninsk          65.36 325  LR       LR        02 45 10.8
         comp=Z,2µm,18.0s,baz=350,slow=38
OBN      Obninsk          65.36 325  P        P         02 13 55.8  -0.7
OBN                                IAmb     IAmb      02 14 09.0
         comp=Z,57nm,1.0s
OBN      Obninsk          65.36 325 ⇑P       P         02 13 56.0  -0.5
OBN      Obninsk          65.36 325⇓eP       P         02 13 54.9  -1.5
OBN                                e                  02 14 27.1
OBN                                e                  02 16 20.1
OBN                                ePPP     PPP       02 17 52.7
OBN                                pmax     pmax
         comp=Z,101nm,3.1s
OBN                                MLR      MLR
         comp=Z,2µm,17.0s
OBN      Obninsk          65.36 325 eP       P         02 13 54.9  -1.5
YFT      Old Faithful     65.43  51  IAmb     IAmb      02 14 18.0
         comp=Z,66nm,1.1s
H17A     Grant Village    65.61  51  IAmb     IAmb      02 14 13.4
         comp=Z,72nm,1.1s
YMP      Mirror Lake Pl   65.61  50  IAmb     IAmb      02 14 19.5
         comp=Z,47nm,1.3s
VRH      Novokhopyorsk    65.83 319 eP       P         02 13 54.3  -5.2
VRH                                eS       S         02 22 35.7  -6.4
VRH                                pmax     pmax
         comp=Z,56nm,0.8s
VRH                                smax     smax
         comp=N,3µm,14.8s
RLMT     Red Lodge        65.85  50  IAmb     IAmb      02 14 13.5
         comp=Z,34nm,0.8s
MOOW     Moose Ponds      65.93  52  IAmb     IAmb      02 14 14.4
         comp=Z,41nm,1.0s
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VES    Vestal, Richgr     66.04  63    IAmb      IAmb      02 14 14.2
       comp=Z,49nm,1.0s
HVU    Hansel Valley      66.05  54    IAmb      IAmb      02 14 16.8
       comp=Z,48nm,1.0s
LOHW   Long Hollow        66.10  52    IAmb      IAmb      02 14 15.5
       comp=Z,42nm,1.0s
SNOW   Snow King Moun     66.11  52    IAmb      IAmb      02 14 17.9
       comp=Z,82nm,1.1s
LPSR   Galich'ya Gora     66.12 322   eP         P         02 13 59.2  -2.2
LPSR                                   pmax      pmax
       comp=Z,60nm,0.9s
LPSR                                   MLR       MLR
       comp=Z,2µm,16.0s
WR8    Warramunga Arr     66.49 196    IAmb      IAmb      02 14 05.3
       comp=Z,87nm,1.2s
WRAB   Tennant Creek      66.50 196    P         P         02 14 03.6  -0.5
WRAB   Tennant Creek      66.50 196c  iP         P         02 14 03.8  -0.3
WRAB                                   pmax      pmax
       comp=Z,90nm,1.2s
WRAB   Tennant Creek      66.50 196    P         P         02 14 03.8  -0.3
WRA    Warramunga Arr     66.51 196    P         P         02 14 03.8  -0.4
       comp=Z,44nm,1.0s,baz=15,slow=6.7,SNR=85
WRA                                    PKP2bc    P'P'bc    02 42 38.5  +4.3
       comp=Z,6.1nm,1.1s,baz=202,slow=2.6,SNR=14
WRA                                    LR        LR        02 45 24.5
       comp=Z,232nm,18.9s,baz=19,slow=38
       comp=Z,44nm,1.0s
WRA    Warramunga Arr     66.51 196    P         P         02 14 03.4  -0.8
WRA    Warramunga Arr     66.51 196   i P        P         02 14 03.7  -0.5
WRA                                    pmax      pmax
       comp=Z,44nm,1.0s
WB1    Warramunga Ar.     66.53 196    P         P         02 14 03.6  -0.7
VSU    Vasula             66.56 331⇑  eP         P         02 14 04.1   0.0
VSU                                    pmax      pmax
       comp=Z,22nm,0.7s
VORR   Voronezh           66.65 321   eP         P         02 14 02.3  -2.5
VORR                                   pmax      pmax
       comp=Z,39nm,0.5s
HWUT   Hardware Ranch     66.86  54    IAmb      IAmb      02 14 22.0
       comp=Z,66nm,1.1s
HWUT                                   IAMs_20   IAMs_20   02 43 02.0
       comp=Z,586nm,19.0s
SFJD   Kangerlussuaq      66.92   9    LR        LR        02 47 11.7
       comp=Z,1µm,18.2s,baz=346,slow=39
SFJD   Kangerlussuaq      66.92   9    P         P         02 14 06.0  -0.2
SFJD                                   IAmb      IAmb      02 14 06.7
       comp=Z,75nm,1.1s
SFJD   Kangerlussuaq      66.92   9    P         P         02 14 06.0  -0.2
SFJD                                   pmax      pmax
       comp=Z,75nm,1.1s
FITZ   Fitzroy Crossi     66.93 205    LR        LR        02 42 48.7
       comp=Z,117nm,21.6s,baz=16,slow=35
SPR3   Spring Creek 3     66.93  57    IAmb      IAmb      02 14 23.1
       comp=Z,83nm,1.4s
WCT    Wildcat Mounta     66.96  61    IAmb      IAmb      02 14 22.4
       comp=Z,52nm,1.0s
VSR    Storozhevoye       66.98 320   eP         P         02 14 04.3  -2.6
VSR                                    pmax      pmax
       comp=Z,30nm,0.7s
VSR                                    MLR       MLR
       comp=Z,2µm,23.0s
CLC    China Lake         66.99  62    IAmb      IAmb      02 14 21.4
       comp=Z,40nm,0.9s
DUG    Dugway, Tooele     67.05  56    IAmb      IAmb      02 14 23.2
       comp=Z,78nm,1.1s
FRB    Frobisher Bay      67.07  18    LR        LR        02 46 22.0
       comp=Z,1µm,19.9s,baz=315,slow=39
VORD   Divnogorie         67.10 320   eP         P         02 14 05.2  -2.5
VORD                                   pmax      pmax
       comp=Z,30nm,0.9s
WSHM   Spangler Hills     67.19  62    IAmb      IAmb      02 14 23.6
       comp=Z,46nm,1.1s
TPO    Tropico Hills      67.19  63    IAmb      IAmb      02 14 24.1
       comp=Z,79nm,1.2s
PDAR   Pinedale Array     67.23  52    P         P         02 14 08.9   0.0
       comp=Z,13nm,0.8s,baz=282,slow=1.4,SNR=104
PDAR                                   pP        pP        02 14 20.6  -2.8
       comp=Z,24nm,0.8s,baz=310,slow=0.4,SNR=16
PDAR                                   PKP2bc    P'P'bc    02 42 34.0  -7.4
       comp=Z,1.1nm,0.9s,baz=113,slow=3.9,SNR=6.5
PDAR                                   LR        LR        02 44 22.4
       comp=Z,126nm,20.3s,baz=315,slow=37
       comp=Z,13nm,0.8s
PDAR   Pinedale Array     67.23  52    P         P         02 14 09.3  +0.3
TCUT   Toone Canyon       67.26  54    IAmb      IAmb      02 14 23.1
       comp=Z,36nm,0.8s
CTU    Camp Tracy         67.35  55    IAmb      IAmb      02 14 24.8
       comp=Z,65nm,1.3s
SHOC   Shoshone, Teco     67.75  61    IAmb      IAmb      02 14 27.2
       comp=Z,57nm,1.0s
GSC    Goldstone, Bar     67.81  62    IAmb      IAmb      02 14 27.5
       comp=Z,47nm,1.2s
MPU    Maple Canyon       67.86  55    IAmb      IAmb      02 14 26.7
       comp=Z,38nm,1.0s
BSUT   Blindstream Ca     68.02  54    IAmb      IAmb      02 14 29.5
       comp=Z,66nm,1.1s
SHPR   Sheep Range        68.05  60    IAmb      IAmb      02 14 30.3
       comp=Z,42nm,1.1s
TCRU   Three Creeks R     68.30  57    IAmb      IAmb      02 14 32.6
       comp=Z,38nm,1.0s
CCUT   Cedar City         68.45  58    IAmb      IAmb      02 14 32.3
       comp=Z,60nm,1.1s
MTPC   Mountain Pass      68.47  61    IAmb      IAmb      02 14 32.1
       comp=Z,51nm,1.1s
MAK    Makhachkala        68.49 310d  iP         P         02 14 12.9  -3.6
MAK                                   e                    02 16 45.5
MAK                                   eS         S         02 23 10.9  -3.4
MAK                                   eSS        SS        02 27 42.9  +4.8
MAK                                    pmax      pmax
       comp=Z,149nm,1.0s
MAK                                    MLR       MLR
       comp=Z,2µm,20.0s
TMUT   Trail Mountain     68.58  56    IAmb      IAmb      02 14 32.8
       comp=Z,56nm,1.1s
DZM    Mont Dzumac        68.64 164   eP         P         02 14 19.3  +1.6
       comp=Z,137nm,1.4s
DZM    Mont Dzumac        68.64 164   ePP        PP        02 16 47.1  -3.0
       comp=Z,152nm,22.2s
DZM                                   eS         S         02 23 11.2  -5.3
       comp=Z,235nm,24.8s
DZM                                   eSS        SS        02 27 45.4  +3.0
       comp=Z,590nm,31.2s
DZM                                   eLQ        LQ        02 32 03.5
       comp=Z,2µm,32.5s
DZM                                   eLR        LR        02 35 15.8
       comp=Z,1µm,24.2s
DZM    Mont Dzumac        68.64 164    IAmb      IAmb      02 14 35.0
       comp=Z,77nm,1.3s
P17A   Butcher Ranch,     68.73  55    IAmb      IAmb      02 14 33.7
       comp=Z,85nm,1.1s
V12A   Nelson             68.74  60    IAmb      IAmb      02 14 34.0
       comp=Z,58nm,1.3s
NC405  NORSAR Array S     68.76 340    IAmb      IAmb      02 14 31.4
       comp=Z,39nm,1.0s
NC204  NORSAR Array S     68.84 340    IAmb      IAmb      02 14 32.1
       comp=Z,47nm,1.1s
Q16A   Castle Valley      68.85  56    IAmb      IAmb      02 14 34.5
       comp=Z,66nm,1.2s
LCMT   Little Creek M     68.88  58    IAmb      IAmb      02 14 34.3
       comp=Z,71nm,0.9s
NB201  NORSAR Array S     68.91 340    IAmb      IAmb      02 14 19.4
       comp=Z,37nm,0.9s
MDND   Maddock            68.92  43    IAMs_20   IAMs_20   02 46 01.4
       comp=Z,920nm,20.0s
ULM    Lac du Bonnet      68.93  39    P         P         02 14 18.6  -0.6
       comp=Z,19nm,0.6s,baz=312,slow=6.1,SNR=24
ULM                                    LR        LR        02 46 48.6
       comp=Z,361nm,19.8s,baz=324,slow=38
       comp=Z,19nm,0.6s
NB2    NORSAR Subarra     68.94 340    P         P         02 14 18.1  -1.0
       comp=Z,7.6nm,0.7s,baz=29,slow=6.5
NOA    NORSAR Array B     68.94 340    P         P         02 14 18.6  -0.6
       comp=Z,16nm,0.8s,baz=30,slow=6.3,SNR=34
       comp=Z,16nm,0.8s
K22A   Casper             68.97  50    IAmb      IAmb      02 14 32.4
       comp=Z,76nm,1.2s
SRU    San Rafael Swe     69.10  55    IAmb      IAmb      02 14 34.2
       comp=Z,69nm,0.9s
HFS    Hagfors            69.10 338    P         P         02 14 19.3  -0.7
       comp=Z,21nm,0.8s,baz=60,slow=7.0,SNR=18
HFS                                    LR        LR        02 48 47.7
       comp=Z,1µm,18.1s,baz=28,slow=40
       comp=Z,21nm,0.8s
PFO    Pinyon Flats O     69.13  63    LR        LR        02 42 59.7
       comp=Z,219nm,18.1s,baz=288,slow=34
PFO    Pinyon Flats O     69.13  63    P         P         02 14 21.5  +0.6
PFO    Pinyon Flats O     69.13  63    P         P         02 14 21.5  +0.6
PFO                                    pmax      pmax
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       comp=Z,44nm,1.4s
DANC   Danby, Needles     69.13  62    IAmb      IAmb      02 14 36.2
       comp=Z,73nm,1.1s
PKCU   Pink Cliffs        69.15  58    IAmb      IAmb      02 14 36.5
       comp=Z,48nm,1.0s
NAO01  NORSAR Array S     69.19 340    IAmb      IAmb      02 14 33.9
       comp=Z,54nm,1.1s
MNK    Minsk              69.21 328   i P        P         02 14 19.6  -1.2
MNK                                   i *PP      pP        02 14 31.6  -3.8
MNK                                   i                    02 14 42.8
MNK                                   i                    02 16 52.9
MNK                                   i PPP      PPP       02 18 33.9
MNK                                   i S        S         02 23 23.8  +1.3
MNK                                   i *SS      pS        02 23 44.3  +3.8
MNK                                   i                    02 24 17.2
MNK                                   i SS       SS        02 27 52.1  +3.5
MNK                                    pmax      pmax
       comp=E,29nm,0.8s
MNK                                    pmax      pmax
       comp=Z,68nm,0.8s
MNK                                    pmax      pmax
       comp=N,15nm,0.9s
MNK                                    MLR       MLR
       comp=N,1µm,18.0s
MNK                                    MLR       MLR
       comp=Z,3µm,17.0s
MNK                                    MLR       MLR
       comp=E,2µm,18.0s
E28A   Huff               69.29  44    IAmb      IAmb      02 14 23.0
       comp=Z,55nm,0.9s
E28A                                   IAMs_20   IAMs_20   02 42 51.2
       comp=Z,800nm,20.0s
RSSD   Black Hills        69.30  48    P         P         02 14 21.9  +0.1
RSSD   Black Hills        69.30  48    P         P         02 14 22.0  +0.1
RSSD                                   pmax      pmax
       comp=Z,25nm,0.9s
RSSD   Black Hills        69.30  48    P         P         02 14 21.8  -0.1
RSSD                                   PcP       PcP       02 14 45.3  +0.1
NACGM  Naroch             69.30 329   eP         P         02 14 21.2  -0.1
       comp=Z,82nm,0.8s,baz=39
AKT    Akhty              69.36 308   eP         P         02 14 21.1  -1.1
AKT                                   e*PP       pP        02 14 36.2  -0.6
AKT                                   e                    02 14 42.8
AKT                                   e                    02 16 53.0
AKT                                   ePPP       PPP       02 18 33.1
AKT                                   eS         S         02 23 22.9  -2.1
AKT                                   e                    02 23 44.2
AKT                                    pmax      pmax
       comp=Z,203nm,1.0s
AKT                                    MLR       MLR
       comp=Z,2µm,18.0s
GOF    Gofitskoye         69.41 314c  iP         P         02 14 22.7  +0.5
GOF                                   eS         S         02 23 30.3  +5.1
NEE2   Needles Airpor     69.52  61    IAmb      IAmb      02 14 38.1
       comp=Z,46nm,1.0s
IRM    Iron Mountain      69.59  62    IAmb      IAmb      02 14 38.9
       comp=Z,52nm,1.1s
O20A   White River Ci     69.72  53    IAmb      IAmb      02 14 39.2
       comp=Z,49nm,1.0s
PABE   Paberze            69.83 331    IAmb      IAmb      02 14 38.5
       comp=Z,81nm,1.1s
U15A   North Rim          69.84  58    IAmb      IAmb      02 14 41.0
       comp=Z,77nm,1.0s
BORG   Borgarnes          70.11 356    LR        LR        02 45 11.6
       comp=Z,420nm,20.4s,baz=356,slow=36
NCK    Nalchik            70.21 312⇓  iP         P         02 14 28.4  +1.2
NCK                                    pmax      pmax
       comp=Z,146nm,1.0s
ASAR   Alice Springs      70.22 196    P         P         02 14 28.1  +0.8
       comp=Z,34nm,1.0s,baz=8.5,slow=5.1,SNR=120
ASAR                                   PKP2bc    P'P'bc    02 42 28.7  +5.9
       comp=Z,3.7nm,1.1s,baz=187,slow=3.2,SNR=14
ASAR                                   LR        LR        02 46 12.7
       comp=Z,317nm,19.2s,baz=16,slow=37
       comp=Z,34nm,1.0s
ASAR   Alice Springs      70.22 196    P         P         02 14 27.9  +0.6
ASAR   Alice Springs      70.22 196    P         P         02 14 27.9  +0.6
ERBR   Yeremizino-Bor     70.23 316   eP         P         02 14 26.1  -1.2
ERBR                                  e*PP       pP        02 14 36.7  -5.2
ERBR                                  e                    02 17 01.9
ERBR                                  eS         S         02 23 34.4  -0.4
ERBR                                   pmax      pmax
       comp=Z,176nm,1.0s
ERBR                                   MLR       MLR
       comp=Z,2µm,17.0s
BLYC   Blythe             70.25  62    IAmb      IAmb      02 14 42.9
       comp=Z,54nm,1.1s
EPLO   Experimental L     70.30  38    IAmb      IAmb      02 14 28.9
       comp=Z,66nm,0.9s
AGMN   Agassiz Nation     70.35  40    IAmb      IAmb      02 14 28.9
       comp=Z,61nm,1.1s
KVAR   Kislovodsk Arr     70.35 313    LR        LR        02 49 07.4
       comp=Z,3µm,20.0s,baz=296,slow=39
KIV    Kislovodsk         70.36 313    P         P         02 14 29.4  +1.2
KIV    Kislovodsk         70.36 313    P         P         02 14 28.6  +0.3
KIV    Kislovodsk         70.36 313   i P        P         02 14 28.0  -0.2
       SNR=61
KIV    Kislovodsk         70.36 313   eP         P         02 14 27.9  -0.3
KIV                                   eS         S         02 23 37.6  +1.0
KIV                                    pmax      pmax
       comp=Z,260nm,4.3s
KIV                                    pmax      pmax
       comp=Z,186nm,1.1s
KIV                                    MLR       MLR
       comp=Z,3µm,18.0s
KIV    Kislovodsk         70.36 313   eP         P         02 14 28.2   0.0
KIV    Kislovodsk         70.36 313    P         P         02 14 29.4  +1.2
PV21   Cone Mtn., Par     70.36  55    IAmb      IAmb      02 14 43.5
       comp=Z,62nm,1.0s
KBZ    Khabaz             70.41 313    P         P         02 14 29.2  +0.9
       comp=Z,146nm,0.9s,baz=54,slow=4.8,SNR=172
KBZ                                    LR        LR        02 49 05.8
       comp=Z,6µm,20.8s,baz=54,slow=39
KBZ    Khabaz             70.41 313ce P          P         02 14 28.2  -0.1
KBZ                                    pmax      pmax
       comp=Z,213nm,1.0s
KBZ    Khabaz             70.41 313   eP         P         02 14 28.2  -0.1
PV14   Lion Creek, Pa     70.46  55    IAmb      IAmb      02 14 42.6
       comp=Z,61nm,1.0s
PALK   Pallekele          70.49 260    LR        LR        02 47 04.5
       comp=Z,807nm,21.4s,baz=36,slow=37
PALK   Pallekele          70.49 260    P         P         02 14 29.0  -0.3
PALK   Pallekele          70.49 260    P         P         02 14 29.1  -0.3
PALK   Pallekele          70.49 260    IAMs_20   IAMs_20   02 46 42.2
       comp=Z,1µm,20.0s
PALK   Pallekele          70.49 260    P         P         02 14 30.2  +0.9
       comp=Z,1µmcomp=Z,52nm,1.9s
PALK   Pallekele          70.49 260    P         P         02 14 29.1  -0.3
PALK                                   pmax      pmax
       comp=Z,115nm,1.2s
PALK                                   MLR       MLR
       comp=Z,1µm,20.0s
PV04   Paradox Valley     70.52  55    IAmb      IAmb      02 14 43.0
       comp=Z,62nm,1.0s
GLA    Glamis             70.52  63    IAmb      IAmb      02 14 43.1
       comp=Z,47nm,1.0s
SHA1   Shidzhatmaz        70.53 313ce P          P         02 14 29.6  +0.2
PV16   Nyswonger Mesa     70.56  55    IAmb      IAmb      02 14 43.3
       comp=Z,74nm,1.0s
PV07   Paradox Valley     70.63  55    IAmb      IAmb      02 14 45.2
       comp=Z,77nm,1.0s
PV03   Paradox Valley     70.64  55    IAmb      IAmb      02 14 45.2
       comp=Z,86nm,1.2s
PV13   Radium Mtn., P     70.72  55    IAmb      IAmb      02 14 44.3
       comp=Z,71nm,0.9s
PV02   Paradox Valley     70.74  55    IAmb      IAmb      02 14 44.4
       comp=Z,60nm,1.0s
PV15   Paradox Valley     70.80  55    IAmb      IAmb      02 14 46.1
       comp=Z,90nm,1.1s
NEUR   Neytrino           70.83 312   i P        P         02 14 31.8  +0.6
NEUR                                   pmax      pmax
       comp=Z,53nm,1.3s
LABN   Labinsk            70.88 315   eP         P         02 14 28.7  -2.5
LABN                                  e*PP       pP        02 14 43.4  -2.5
LABN                                  eS         S         02 23 42.2  -0.1
LABN                                   MLR       MLR
       comp=Z,2µm,22.0s
PV01   Paradox Valley     70.89  55    IAmb      IAmb      02 14 46.8
       comp=Z,52nm,1.0s
WUAZ   Wupatki            71.00  59    IAMs_20   IAMs_20   02 39 19.2
       comp=Z,587nm,22.0s
Y14A   Wickenburg         71.06  61    IAmb      IAmb      02 14 47.9
       comp=Z,70nm,1.1s
ISCO   Idaho Springs      71.42  52    IAmb      IAmb      02 14 50.4
       comp=Z,48nm,0.9s
ISCO                                   IAMs_20   IAMs_20   02 48 16.6
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       comp=Z,746nm,22.0s
MVCO   Mesa Verde         71.56  56    IAmb      IAmb      02 14 49.4
       comp=Z,55nm,0.9s
AK03   Malin Array Si     71.60 325    P         P         02 14 34.4  -1.1
AK23   Malin Array Si     71.61 325    P         P         02 14 34.5  -1.0
AKASG  Malin Array Be     71.62 325    P         P         02 14 34.2  -1.4
       comp=Z,20nm,0.6s,baz=37,slow=6.0,SNR=60
AKASG                                  LR        LR        02 49 41.7
       comp=Z,2µm,18.7s,baz=38,slow=39
       comp=Z,20nm,0.6s
AKASG  Malin Array Be     71.62 325    P         P         02 14 34.9  -0.7
AKASG  Malin Array Be     71.62 325   i P        P         02 14 34.5  -1.1
AKASG                                  pmax      pmax
       comp=Z,20nm,0.6s
AKBB   Malin Array Si     71.62 325    IAmb      IAmb      02 14 36.6
       comp=Z,44nm,0.8s
AKBB   Malin Array Si     71.62 325c  iP         P         02 14 34.6  -1.0
AKBB                                   pmax      pmax
       comp=Z,53nm,0.8s
AKBB   Malin Array Si     71.62 325    P         P         02 14 34.5  -1.0
AK04   Malin Array Si     71.63 325    P         P         02 14 34.6  -1.0
KIEV   Kiev               71.63 325    P         P         02 14 34.7  -1.0
KIEV                                   IAmb      IAmb      02 14 36.6
       comp=Z,41nm,0.8s
KIEV   Kiev               71.63 325   ⇑P         P         02 14 35.0  -0.7
KIEV   Kiev               71.63 325   i P        P         02 14 34.9  -0.7
       SNR=30
KIEV   Kiev               71.63 325    P         P         02 14 34.9  -0.7
KIEV   Kiev               71.63 325    P         P         02 14 34.5  -1.2
       comp=Z,226nm,1.0s
AK01   Malin Array Si     71.63 325    P         P         02 14 34.6  -1.1
AK21   Malin Array Si     71.64 325    P         P         02 14 34.6  -1.1
AK22   Malin Array Si     71.64 325    P         P         02 14 34.6  -1.1
AK08   Malin Array Si     71.66 325    P         P         02 14 34.8  -1.0
AK11   Malin Array Si     71.66 325    P         P         02 14 34.8  -1.0
AK02   Malin Array Si     71.66 325    P         P         02 14 34.8  -1.0
AK09   Malin Array Si     71.66 325    P         P         02 14 34.8  -1.0
SUSD   Miller             71.66  45    IAmb      IAmb      02 14 48.6
       comp=Z,50nm,0.8s
SUSD                                   IAMs_20   IAMs_20   02 42 51.1
       comp=Z,944nm,21.0s
AK15   Malin Array Si     71.67 325    P         P         02 14 34.8  -1.1
AK18   Malin Array Si     71.67 325    P         P         02 14 34.8  -1.1
X16A   Lo Mia Camp, P     71.70  59    IAmb      IAmb      02 14 51.4
       comp=Z,59nm,0.9s
MBWA   Marble Bar         71.73 210    P         P         02 14 37.3  +0.9
MBWA   Marble Bar         71.73 210    P         P         02 14 36.5  +0.1
MBWA                                   IAmb      IAmb      02 14 37.9
       comp=Z,58nm,1.1s
NGCH   Negor - Chabah     71.84 288    P         P         02 14 39.8  +2.5
       SNR=7.2
GNI    Garni              71.92 309    LR        LR        02 50 13.2
       comp=Z,788nm,20.8s,baz=44,slow=39
GNI    Garni              71.92 309    P         P         02 14 39.5  +1.7
GNI    Garni              71.92 309    P         P         02 14 38.5  +0.7
GNI    Garni              71.92 309    P         P         02 14 39.1  +1.2
GNI    Garni              71.92 309c  iP         P         02 14 39.2  +1.4
GNI                                    pmax      pmax
       comp=Z,199nm,1.3s
F33A   5 Mile Ranch,      71.95  42    IAmb      IAmb      02 14 38.8
       comp=Z,58nm,0.9s
VSLR   Vesyoloye          72.07 314ce P          P         02 14 39.0  +0.6
VSLR                                   pmax      pmax
       comp=Z,181nm,1.1s
PSA00  Pilbara Seismi     72.07 210    P         P         02 14 37.9  -0.6
PSA00  Pilbara Seismi     72.07 210    IAmb      IAmb      02 14 40.0
       comp=Z,47nm,1.1s
KUQ    Kuujjuuaa          72.09  20    IAmb      IAmb      02 14 38.9
       comp=Z,82nm,1.1s
SOC    Sochi              72.14 314   eP         P         02 14 38.0  -0.8
SOC                                   eS         S         02 23 56.1  -0.8
SOC                                    MLR       MLR
       comp=Z,2µm,19.0s
RNPP9  Sopachiv           72.38 327    P         P         02 14 39.6  -0.5
ANN    Anapa              72.39 316   eP         P         02 14 38.7  -1.6
ANN                                   e*PP       PcP       02 14 49.7  -8.2
ANN                                   eS         S         02 23 56.8  -2.9
ANN                                    pmax      pmax
       comp=Z,65nm,0.9s
RNPP8  Varash             72.45 327    P         P         02 14 39.7  -0.9
RNPP5  Staryi Chortor     72.53 327    P         P         02 14 40.0  -1.0
EYMN   Ely                72.57  38    IAmb      IAmb      02 14 42.9
       comp=Z,82nm,1.0s
K30B   Basset             72.60  47    IAMs_20   IAMs_20   02 46 30.2
       comp=Z,718nm,22.0s
IVI    Ivigtut            72.82   9    IAmb      IAmb      02 14 44.0
       comp=Z,71nm,1.0s
IVI    Ivigtut            72.82   9    P         P         02 14 42.5   0.0
SDCO   Great Sand Dun     72.91  53    IAMs_20   IAMs_20   02 46 50.2
       comp=Z,654nm,22.0s
ECSD   EROS Data Cent     73.34  44    IAMs_20   IAMs_20   02 44 19.3
       comp=Z,831nm,21.0s
TUC    Tucson             73.53  61    P         P         02 14 47.6  +0.2
TUC    Tucson             73.53  61    P         P         02 14 47.6  +0.2
TUC                                    pmax      pmax
       comp=Z,37nm,1.0s
KSCO   Kaye Shedlock’     73.62  51    IAmb      IAmb      02 15 03.4
       comp=Z,116nm,1.2s
KSCO                                   IAMs_20   IAMs_20   02 43 16.7
       comp=Z,622nm,22.0s
SIM    Simferopol'        73.86 318κ  iP         P         02 14 49.5  +0.5
SIM                                    pmax      pmax
       comp=Z,110nm,1.0s
SIM                                    MLR       MLR
       comp=Z,320nm,19.0s
BEL    Belsk              73.91 330   eP         P         02 14 49.4  +0.2
GKP    Gorka Klasztor     73.91 333   eP         P         02 14 48.7  -0.5
T25A   Trinidad           73.95  53    IAmb      IAmb      02 15 03.5
       comp=Z,59nm,1.0s
T25A                                   IAMs_20   IAMs_20   02 43 16.8
       comp=Z,574nm,21.0s
SORM   Soroca             73.97 324   ⇓P         P         02 14 49.4  -0.2
SORM   Soroca             73.97 324    P         P         02 14 49.3  -0.2
SPMN   Marine on St.      74.04  41    IAmb      IAmb      02 14 51.5
       comp=Z,42nm,0.9s
SPMN                                   IAMs_20   IAMs_20   02 45 59.6
       comp=Z,597nm,19.0s
BGNE   Belgrade           74.27  47    IAmb      IAmb      02 15 03.9
       comp=Z,78nm,1.0s
BGNE                                   IAMs_20   IAMs_20   02 44 15.3
       comp=Z,728nm,21.0s
KOPT   Kop Dagi           74.31 311    IAmb      IAmb      02 14 55.5
       comp=Z,104nm,1.1s
TASM   ASL Pad, Albuq     74.31  56    IAmb      IAmb      02 15 06.0
       comp=Z,24nm,0.9s
TASM   ASL Pad, Albuq     74.31  56    IAmb      IAmb      02 15 06.0
       comp=Z,26nm,0.9s
ANMO   Albuquerque        74.31  56    LR        LR        02 43 41.8
       comp=Z,369nm,22.0s,baz=324,slow=33
ANMO   Albuquerque        74.31  56    P         P         02 14 52.4  +0.3
ANMO   Albuquerque        74.31  56    IAMs_20   IAMs_20   02 43 20.3
       comp=Z,623nm,22.0s
ANMO   Albuquerque        74.31  56c  iP         P         02 14 52.6  +0.5
ANMO                                   pmax      pmax
       comp=Z,10.0nm,0.9s
PURM   Purcari            74.58 322   ⇓P         P         02 14 53.1   0.0
KIS    Kishinev           74.67 323   ⇓P         P         02 14 53.0  -0.7
KIS    Kishinev           74.67 323    P         P         02 14 52.9  -0.7
KIS    Kishinev           74.67 323   eP         P         02 14 52.0  -1.6
       comp=Z,90nm,0.8s
KIS                                   eL         L         02 48 05.0
KIS                                    LRM       MLR       02 50 05.0
       comp=Z,1µm,21.0s
BANOM  Banah              74.67 291    P         P         02 14 55.1  +1.0
BANOM  Banah              74.67 291   i P        P         02 14 54.1  +0.1
       SNR=65
SHME   Shamm              74.69 292    P         P         02 14 55.1  +0.9
       SNR=13
SHME   Shamm              74.69 292   i P        P         02 14 54.0  -0.1
       SNR=22
MILM   Milestii Mici      74.73 323⇑  iP         P         02 14 52.0  -2.0
       comp=Z,190nm,1.2s
MILM                                  eL         L         02 48 08.0
MILM                                   LRM       MLR       02 50 08.0
       comp=Z,3µm,20.0s
COCO   West Island        74.76 234    P         P         02 14 55.2  +0.7
L34A   Svendsen Farm,     74.76  45    IAMs_20   IAMs_20   02 51 53.1
       comp=Z,816nm,19.0s
WSAR   Wadi Sarin         74.95 288    LR        LR        02 52 09.4
       comp=Z,5.7nm,20.2s,baz=69,slow=39
WSAR   Wadi Sarin         74.95 288    P         P         02 14 57.0  +1.3
       SNR=10.0
KWP    Kalwaria Pacla     75.02 328   eP         P         02 14 56.0  +0.4
IASR   Iasi               75.05 324   ⇓P         P         02 14 55.6  -0.2
BIDO   Bidbid             75.10 288    P         P         02 14 58.0  +1.5
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       SNR=21
MDH    Madha              75.10 291   P         P          02 14 56.8 +0.3
       SNR=9.3
MDH    Madha              75.10 291 i P         P          02 14 55.7 -0.8
       SNR=15
MASF   Masafi             75.14 291   P         P          02 14 57.3 +0.5
       SNR=12
WBK    Wadi Bani Khal     75.15 287   P         P          02 14 58.5 +1.6
       SNR=16
MSFE   Esma-Masafi        75.15 291 i P         P          02 14 56.8 -0.1
       SNR=7.6
JLN    Jalan Bani Buh     75.16 286   P         P          02 14 58.2 +1.3
       SNR=13
121A   Cookes Peak, D     75.21  59   IAmb      IAmb       02 15 13.2
       comp=Z,67nm,1.1s
CBKS   Cedar Bluff        75.33  49   IAmb      IAmb       02 15 12.5
       comp=Z,93nm,1.2s
CBKS                                  IAMs_20   IAMs_20    02 50 58.7
       comp=Z,617nm,20.0s
UOSS   Minazif            75.40 291   P         P          02 14 59.0 +0.7
UOSS   Minazif            75.40 291   P         P          02 14 57.8 -0.4
UOSS   Minazif            75.40 291   IAMs_20   IAMs_20    02 51 54.3
       comp=Z,1µm,21.0s
UOSS   Minazif            75.40 291   P         P          02 14 58.2  0.0
BSEG   Bad Segeberg       75.42 337 eP          P          02 14 57.4 -0.4
       comp=Z,17nm,1.1s,baz=28,slow=5.6
SCHQ   Schefferville      75.42  21   P         P          02 14 57.8 -0.1
       comp=Z,53nm,1.0s,baz=2.0,slow=6.7,SNR=24
SCHQ                                  LR        LR         02 53 42.9
       comp=Z,580nm,18.2s,baz=335,slow=40
       comp=Z,53nm,1.0s
SMDO   Samad              75.46 288   P         P          02 14 60.0 +1.2
       SNR=12
PRAR   RASCA              75.46 324 ⇑P          P          02 14 57.8 -0.5
HATD   Hatta, Dubai       75.53 291   P         P          02 14 60.0 +0.9
       SNR=44
HATD                                  S         S          02 24 35.4 -0.3
HATD   Hatta, Dubai       75.53 291 i P         P          02 14 59.2 +0.2
       SNR=75
HOQ    Hoqain             75.60 289   P         P          02 15 00.0 +0.6
       SNR=31
OJC    Ojcow              75.60 330 eP          P          02 14 59.2 +0.2
BUR08  Bucovina Ar. S     75.66 325   IAmb      IAmb       02 15 00.6
       comp=Z,62nm,0.8s
BURAR  Bucovina Array     75.67 325   P         P          02 14 59.4 -0.2
BURAR                                 IAmb      IAmb       02 15 01.0
       comp=Z,70nm,0.8s
BURAR  Bucovina Array     75.67 325 ⇑P          P          02 14 59.1 -0.5
BURAR  Bucovina Array     75.67 325   P         P          02 14 59.0 -0.5
GIRR   Girov              75.67 324 ⇓P          P          02 14 59.8 +0.4
RUE    Ruedersdorf        75.68 334 eP          P          02 14 58.8 -0.6
       comp=Z,88nm,1.1s,baz=28,slow=5.6
ASHO   Ashiyiah           75.68 291   P         P          02 15 01.1 +1.2
       SNR=31
ASHO   Ashiyiah           75.68 291 i P         P          02 15 00.2 +0.3
       SNR=51
F42A   Maple Grove Fa     75.73  38   IAmb      IAmb       02 15 01.2
       comp=Z,56nm,0.9s
NAZ    Nazwa, Dubai       75.73 291   P         P          02 15 01.1 +0.9
       SNR=12
NAZ    Nazwa, Dubai       75.73 291 i P         P          02 15 00.1 -0.1
       SNR=25
SOHO   SOHO               75.74 290   P         P          02 15 01.1 +0.9
SOHO   SOHO               75.74 290 i P         P          02 14 59.9 -0.3
       SNR=24
STHS   Stebnicka Huta     75.74 328 eP          P          02 15 00.4 +0.6
STHS                                  pmax      pmax
       comp=Z,56nm,1.0s
STHS   Stebnicka Huta     75.74 328 eP          P          02 15 00.3 +0.5
BIR    Birlad             75.75 323 ⇓P          P          02 15 00.9 +1.0
BIR    Birlad             75.75 323   P         P          02 15 00.9 +1.0
KPL    Plockton           75.78 347 eP          P          02 14 59.2 -0.6
KPL                                   IAmb      IAmb       02 15 01.4
       comp=Z,52nm,0.9s
VLDR   Vladesti           75.89 322 ⇓P          P          02 15 00.7  0.0
JMDO   Jabal Madar        75.90 287   P         P          02 15 01.7 +0.6
       SNR=19
VARL   Varlezi            75.94 323 ⇑P          P          02 15 01.0  0.0
FAQ    Al Faqa, Dubai     75.94 291   P         P          02 15 02.1 +0.8
       SNR=13
FAQ    Al Faqa, Dubai     75.94 291 i P         P          02 15 01.1 -0.2
       SNR=6.1
N35A   Tabor              75.95  46   IAmb      IAmb       02 15 14.2
       comp=Z,58nm,0.9s
TESR   Tescani            75.97 324 ⇓P          P          02 15 00.7 -0.5
GORT1  Trebel             75.97 336 eP          P          02 15 00.9  0.0
       comp=Z,62nm,1.2s,baz=28,slow=5.6
GHRR                      76.00 323 ⇓P          P          02 15 01.9 +0.6
SCTR   Scanteiesti        76.06 322 ⇑P          P          02 15 01.9 +0.3
I40A   Norwalk            76.07  41   IAmb      IAmb       02 15 03.0
       comp=Z,46nm,1.0s
TLCR                      76.08 322 ⇑P          P          02 15 01.5 -0.3
TLCR                      76.08 322   P         P          02 15 01.5 -0.3
NIE    Niedzica           76.09 329 eP          P          02 15 02.5 +0.7
TATR   Tatarca            76.09 322 ⇑P          P          02 15 02.2 +0.3
TOKA   Tokat              76.17 314   IAmb      IAmb       02 15 04.6
       comp=Z,67nm,1.0s
BZK    Bozkurt            76.17 316 ⇓P          P          02 15 02.9 +0.6
ASUD   Al Ashush, Dub     76.20 291   P         P          02 15 03.9 +1.1
       SNR=12
ASUD   Al Ashush, Dub     76.20 291 i P         P          02 15 03.2 +0.4
       SNR=22
COSR   Cosmesti PH        76.21 323 ⇓P          P          02 15 03.4 +0.9
ONER   Baraj Valea Uz     76.21 324 ⇑P          P          02 15 03.5 +1.0
NEGRR  Negrea             76.22 322 ⇓P          P          02 15 02.7 +0.2
BSY    Bisya              76.25 288   P         P          02 15 04.2 +1.1
       SNR=22
IZVR   Izvoarele          76.26 322 ⇑P          P          02 15 02.8 +0.1
PANC   Panciu             76.26 323 ⇑P          P          02 15 03.3 +0.5
SCHL   Schela             76.27 322 ⇑P          P          02 15 03.3 +0.5
KSP    Ksiaz              76.28 332 eP          P          02 15 02.7 -0.1
SCHLR  Schela             76.29 322 ⇑P          P          02 15 03.0  0.0
ARQ    Araqi              76.29 289   P         P          02 15 04.6 +1.2
       SNR=19
ALNE   Al Ain             76.31 290   P         P          02 15 04.4 +0.9
       SNR=24
ALNE   Al Ain             76.31 290 i P         P          02 15 03.6 +0.1
       SNR=20
INVG   Invergeldie, C     76.38 346 eP          P          02 15 02.0 -1.3
INVG                                  IAmb      IAmb       02 15 04.1
       comp=Z,21nm,0.8s
JURR   Jurilovca          76.39 321 ⇑P          P          02 15 03.7 +0.2
CFR    Carcaliu           76.39 322 ⇑P          P          02 15 02.9 -0.7
CFR    Carcaliu           76.39 322   P         P          02 15 02.8 -0.7
ODBI   Odobesti           76.39 323 ⇑P          P          02 15 04.5 +1.0
VRI    Vrincioaia         76.45 323 ⇓P          P          02 15 03.6 -0.3
VRI    Vrincioaia         76.45 323   P         P          02 15 03.6 -0.3
AJN    Ajban              76.47 291   P         P          02 15 05.0 +0.6
       SNR=8.0
AJN    Ajban              76.47 291 i P         P          02 15 04.0 -0.3
       SNR=6.4
PLOR   Plostina           76.49 323 ⇓P          P          02 15 04.9 +0.7
PLOR   Plostina           76.49 323   P         P          02 15 04.9 +0.7
OKC    Ostrava-Krasne     76.50 330 eP          P          02 15 04.2 +0.1
OKC                                   MLR       MLR
       comp=Z,1µm,20.6s
OKC    Ostrava-Krasne     76.50 330 eP          P          02 15 04.2 +0.1
OKC                                   AMS       AMS        02 51 10.0
       comp=Z,1µm,20.6s
TPGR   Topolog            76.52 322 ⇓P          P          02 15 04.7 +0.4
OSTC   Ostas              76.55 332 eP          P          02 15 04.2 -0.2
OSTC                                  MLR       MLR
       comp=Z,2µm,20.2s
OSTC   Ostas              76.55 332 eP          P          02 15 04.2 -0.2
OSTC                                  AMS       AMS        02 52 00.0
       comp=Z,2µm,20.2s
STEB   Steborice          76.55 331 eP          P          02 15 04.1 -0.3
FLTG   Flechtingen        76.57 336 eP          P          02 15 03.4 -1.0
       comp=Z,71nm,1.2s,baz=28,slow=5.6
CHVC   Chvalec            76.58 332 eP          P          02 15 04.5 -0.1
CHVC                                  MLR       MLR
       comp=Z,2µm,22.0s
CHVC   Chvalec            76.58 332 eP          P          02 15 04.5 -0.1
CHVC                                  AMS       AMS        02 52 00.0
       comp=Z,2µm,22.0s
PH02   Texas Public H     76.59  53   IAmb      IAmb       02 15 20.1
       comp=Z,93nm,1.0s
TURR   Turia              76.60 324 ⇓P          P          02 15 05.6 +0.9
OZUR                      76.66 324 ⇑P          P          02 15 05.3 +0.2
UPC    Upice              76.66 332 eP          P          02 15 05.1 +0.1
UPC                                   MLR       MLR
       comp=Z,2µm,22.2s
UPC    Upice              76.66 332 eP          P          02 15 05.1 +0.1
UPC                                   AMS       AMS        02 52 10.0
       comp=Z,2µm,22.2s

COVR   Voineasa-Covas     76.68 323 ⇓P          P          02 15 05.8 +0.6
DPC    Dobruska-Polom     76.69 332 eP          P          02 15 05.1 -0.1
DPC                                   MLR       MLR
       comp=Z,1µm,18.6s
DPC    Dobruska-Polom     76.69 332 eP          P          02 15 05.1 -0.1
DPC                                   AMS       AMS        02 52 00.0
       comp=Z,1µm,18.6s
BOSR   Bodos              76.73 324 ⇓P          P          02 15 06.4 +0.9
GRER                      76.73 323 ⇓P          P          02 15 06.4 +0.9
RETH   Rethem/Aller,      76.75 337 eP          P          02 15 05.0 -0.4
       comp=Z,59nm,1.2s,baz=28,slow=5.6
MORC   Moravsky Berou     76.77 331   IAmb      IAmb       02 15 07.6
       comp=Z,84nm,1.0s
MORC   Moravsky Berou     76.77 331 eP          P          02 15 05.4 -0.3
MORC   Moravsky Berou     76.77 331   P         P          02 15 06.3 +0.6
KSU1   Kansas State U     76.77  47   IAmb      IAmb       02 15 17.1
       comp=Z,60nm,1.1s
KSU1   Kansas State U     76.77  47   IAMs_20   IAMs_20    02 49 38.5
       comp=Z,834nm,20.0s
LAWE   Loch Awe, Argy     76.77 346 eP          P          02 15 04.6 -0.9
LAWE                                  IAmb      IAmb       02 15 07.0
       comp=Z,44nm,0.9s
KRLC   Kraliky            76.77 331 eP          P          02 15 05.9 +0.2
KRLC                                  MLR       MLR
       comp=Z,2µm,18.7s
KRLC   Kraliky            76.77 331 eP          P          02 15 05.9 +0.2
KRLC                                  AMS       AMS        02 56 30.0
       comp=Z,2µm,18.7s
KECS   Kecovo             76.80 328 eP          P          02 15 06.5 +0.7
KECS                                  pmax      pmax
       comp=Z,33nm,0.8s
KECS   Kecovo             76.80 328 eP          P          02 15 06.5 +0.7
TGMR   Targu Mures        76.83 325 ⇑P          P          02 15 06.8 +0.8
TIRR   Tirgusor           76.83 321   IAmb      IAmb       02 15 07.3
       comp=Z,70nm,1.0s
TIRR   Tirgusor           76.83 321 ⇑P          P          02 15 05.5 -0.6
TIRR   Tirgusor           76.83 321   P         P          02 15 05.4 -0.6
I42A   Draeger Farm,      76.84  40   IAmb      IAmb       02 15 06.9
       comp=Z,54nm,0.9s
E46A   Sault Ste Mari     76.86  35   IAmb      IAmb       02 15 06.6
       comp=Z,60nm,0.9s
ASSE   Asse, Remlinge     76.91 336 eP          P          02 15 06.4 +0.1
       comp=Z,47nm,1.2s,baz=28,slow=5.6
DOPR   Dopca              76.93 324 ⇑P          P          02 15 07.5 +0.9
TLBR   Topalu             76.93 322 ⇓P          P          02 15 06.8 +0.2
MHTO   MHTO               76.94 287   P         P          02 15 08.1 +1.1
       SNR=24
CLL    Collm              76.94 334 i P         P          02 15 05.5 -1.0
CLL                                 eS          S          02 24 49.0 -1.2
CLL                                   pmax      pmax
       comp=Z,105nm,1.1s
CLL                                   MLR       MLR
       comp=Z,2µm,19.1s
CLL    Collm              76.94 334 eP          P          02 15 05.5 -1.0
       comp=Z,85nm,1.0s,baz=28,slow=5.6
CLL    Collm              76.94 334 i P         P          02 15 05.5 -1.0
       comp=Z,105nm,1.1s
CLL                                 i x         x          02 15 37.6
CLL                                 eS          S          02 24 49.0 -1.2
CLL                                 ePS         PnS        02 25 43.0 +8.8
CLL                                 eSS         SS         02 30 00.0  +14
CLL                                 ex          x          02 34 18.0
CLL                                   AMS       AMS        02 53 00.0
       comp=Z,2µm,19.1s
MESR   Meseseni           76.95 326 ⇓P          P          02 15 07.3 +0.6
NEHR   Nehoiu             76.98 323 ⇓P          P          02 15 07.8 +0.8
MAUC   Maruska            77.02 330 eP          P          02 15 07.2 +0.1
BRG    Berggiesshubel     77.02 333 eP          P          02 15 06.2 -0.8
       comp=Z,57nm,1.3s,baz=28,slow=5.6
EFOR   EFORIE             77.03 321 ⇑P          P          02 15 06.5 -0.7
PGBU   Glenifferbraes     77.04 346 eP          P          02 15 06.6 -0.4
PGBU                                  IAmb      IAmb       02 15 08.9
       comp=Z,119nm,1.0s
MFTR   Murfatlar          77.05 321 ⇑P          P          02 15 07.8 +0.5
CJR    Cluj-Napoca        77.05 325 ⇓P          P          02 15 08.0 +0.7
CJR    Cluj-Napoca        77.05 325   P         P          02 15 08.0 +0.7
MLR    Muntele Rosu       77.08 323   LR        LR         02 52 30.5
       comp=Z,2µm,18.9s,baz=48,slow=38
MLR    Muntele Rosu       77.08 323   IAmb      IAmb       02 15 09.7
       comp=Z,75nm,1.0s
MLR    Muntele Rosu       77.08 323 ⇓P          P          02 15 07.8 +0.1
MLR    Muntele Rosu       77.08 323   P         P          02 15 07.7 +0.1
PGOR   Pogoanele          77.10 322 ⇓P          P          02 15 08.3 +0.7
AMTX   Amarillo           77.11  53   IAmb      IAmb       02 15 22.5
       comp=Z,76nm,0.9s
PVCC   Panska Ves         77.12 333 eP          P          02 15 07.5 -0.1
PVCC                                  MLR       MLR
       comp=Z,2µm,17.9s
PVCC   Panska Ves         77.12 333 eP          P          02 15 07.5 -0.1
PVCC                                  AMS       AMS        02 52 10.0
       comp=Z,2µm,17.9s
ISR    Istrita            77.12 323 ⇑P          P          02 15 08.2 +0.5
ISR    Istrita            77.12 323   P         P          02 15 08.2 +0.5
MSTX   Muleshoe           77.15  55   IAmb      IAmb       02 15 22.0
       comp=Z,49nm,1.0s
LTVH   Ltavrtes, Hu       77.17 327 ⇓P          P          02 15 09.0 +1.1
AMRR   Amara              77.19 322 ⇑P          P          02 15 08.8 +0.7
AMRR   Amara              77.19 322   P         P          02 15 08.7 +0.7
L40A   Anamosa            77.20  42   IAmb      IAmb       02 15 08.7
       comp=Z,47nm,0.9s
STKA   Stephens Creek     77.20 188   P         P          02 15 08.9 +1.0
       comp=Z,22nm,1.1s,baz=344,slow=7.4,SNR=16
STKA                                  LR        LR         02 50 56.6
       comp=Z,115nm,20.4s,baz=8.7,slow=37
       comp=Z,22nm,1.1s
STKA   Stephens Creek     77.20 188   P         P          02 15 09.0 +1.0
N38A   Joes South For     77.20  44   IAmb      IAmb       02 15 09.0
       comp=Z,56nm,0.9s
N38A                                  IAMs_20   IAMs_20    02 51 08.5
       comp=Z,687nm,20.0s
MDB    Medias             77.20 325 ⇓P          P          02 15 09.3 +1.1
MDB    Medias             77.20 325   P         P          02 15 09.2 +1.1
CLZ    Clausthal          77.25 336 eP          P          02 15 08.2 -0.1
       comp=Z,107nm,1.2s,baz=28,slow=5.6
EKA    Eskdalemuir Ar     77.26 345   P         P          02 15 07.5 -0.8
       comp=Z,16nm,0.6s,baz=21,slow=5.6,SNR=33
EKA                                   LR        LR         02 54 25.5
       comp=Z,477nm,19.4s,baz=24,slow=40
       comp=Z,16nm,0.6s
MANR   Mangalia           77.26 321 ⇑P          P          02 15 08.5  0.0
MARR   Marisel-Cluj       77.28 326 ⇑P          P          02 15 08.4 -0.3
ESK    Eskdalemuir        77.28 345   P         P          02 15 08.3 -0.1
ESK                                   IAmb      IAmb       02 15 09.3
       comp=Z,70nm,1.1s
ESK    Eskdalemuir        77.28 345 eP          P          02 15 07.3 -1.0
ESK                                   IAmb      IAmb       02 15 09.6
       comp=Z,25nm,0.9s
ESK    Eskdalemuir        77.28 345   P         P          02 15 08.3 -0.1
ESK                                   pmax      pmax
       comp=Z,70nm,1.1s
DRGR                      77.34 326 ⇑P          P          02 15 08.9 -0.2
DRGR                      77.34 326   P         P          02 15 08.8 -0.2
ICOR   Ion Corvin         77.37 321 ⇑P          P          02 15 10.0 +0.9
NEUB   Neuenburg          77.40 335 eP          P          02 15 08.4 -0.7
       comp=Z,70nm,0.9s,baz=28,slow=5.6
HSKC   Hora Svate Kat     77.41 333 eP          P          02 15 08.8 -0.4
HSKC                                  AMS       AMS        02 51 30.0
       comp=Z,2µm,20.8s
BORR   Bors               77.46 327 ⇓P          P          02 15 10.1 +0.6
PSZ    Piszkesteto        77.49 328   IAmb      IAmb       02 15 11.4
       comp=Z,77nm,1.0s
PSZ    Piszkesteto        77.49 328 ⇑P          P          02 15 09.6 -0.2
PSZ    Piszkesteto        77.49 328   P         P          02 15 09.6 -0.2
VRAC   Vranov             77.49 331   LR        LR         02 52 46.0
       comp=Z,2µm,21.5s,baz=35,slow=38
VRAC   Vranov             77.49 331 ⇑P          P          02 15 09.6 -0.1
VRAC   Vranov             77.49 331 eP          P          02 15 09.6 -0.1
VRAC   Vranov             77.49 331   P         P          02 15 09.6 -0.1
VOIR                      77.50 324 ⇓P          P          02 15 10.4 +0.5
VOIR                      77.50 324   P         P          02 15 10.4 +0.5
JAVC   Velka Javorina     77.50 330 eP          P          02 15 10.4 +0.6
EDMD   Edmundbyers        77.50 344 eP          P          02 15 09.2 -0.4
EDMD                                  IAmb      IAmb       02 15 12.9
       comp=Z,22nm,0.8s
ELIS   Ellis County       77.51  51   IAmb      IAmb       02 15 23.6
       comp=Z,58nm,0.9s
LEHL   Lehliu             77.52 322 ⇓P          P          02 15 10.5 +0.7
PRA    Prague             77.56 333 eP          P          02 15 10.0  0.0
PRA                                   MLR       MLR
       comp=Z,2µm,19.4s
PRA    Prague             77.56 333 eP          P          02 15 10.0  0.0
PRA                                   AMS       AMS        02 52 10.0
       comp=Z,2µm,19.4s
IBBN   Ibbenburen         77.57 337 eP          P          02 15 09.4 -0.7
       comp=Z,64nm,1.0s,baz=28,slow=5.6

OK038  West end E0370     77.58  50   IAmb      IAmb       02 15 25.1
       comp=Z,93nm,1.1s
OK038                                 IAMs_20   IAMs_20    02 53 59.3
       comp=Z,687nm,22.0s
PRU    Pruhonice          77.59 333 eP          P          02 15 10.0 -0.2
PRU                                   MLR       MLR
       comp=Z,1µm,18.9s
PRU    Pruhonice          77.59 333 eP          P          02 15 10.0 -0.2
PRU                                   AMS       AMS        02 53 20.0
       comp=Z,1µm,18.9s
SULR                      77.60 323 ⇑P          P          02 15 10.5 +0.2
JRN    Qarnain Island     77.61 293   P         P          02 15 11.2 +0.5
KAN01  Argonia South      77.61  49   IAmb      IAmb       02 15 26.3
       comp=Z,60nm,1.0s
UMZA   Um Al Zommool      77.63 290   P         P          02 15 11.4 +0.5
GTTG   Gottingen          77.64 336 eP          P          02 15 10.1 -0.3
       comp=Z,57nm,1.0s,baz=28,slow=5.6
TNR    Turnu Rosu         77.64 324 ⇓P          P          02 15 11.6 +0.9
TNR    Turnu Rosu         77.64 324   P         P          02 15 11.5 +0.9
MTUR   Matau              77.66 324 ⇓P          P          02 15 11.2 +0.4
MTUR   Matau              77.66 324   P         P          02 15 11.2 +0.4
ARR    Arges              77.72 324 ⇑P          P          02 15 12.3 +1.1
MZWR   Madinat Zayed      77.75 291   P         P          02 15 12.0 +0.5
SMWD   Samnorwood         77.76  52   IAmb      IAmb       02 15 26.7
       comp=Z,67nm,1.0s
KRUC   Moravsky           77.77 331 eP          P          02 15 10.7 -0.5
BSZH   Besenyszg          77.86 328 ⇑P          P          02 15 12.8 +1.1
SMOL   Smolenice          77.88 330 eP          P          02 15 12.3 +0.5
TANN   Tannenbergstha     77.88 334 eP          P          02 15 11.8 -0.1
       comp=Z,33nm,1.2s,baz=28,slow=5.6
PLN    Plauen             77.92 334 eP          P          02 15 11.5 -0.5
       comp=Z,16nm,1.1s,baz=28,slow=5.6
MOX    Moxa               77.94 335 eP          P          02 15 11.6 -0.6
       comp=Z,63nm,1.2s,baz=28,slow=5.6
MOX                                 eL          L          02 52 23.8
       comp=Z,2µm,20.7s
P38A   Dawn               77.94  45   IAmb      IAmb       02 15 25.1
       comp=Z,48nm,0.9s
P38A                                  IAMs_20   IAMs_20    02 54 20.3
       comp=Z,710nm,18.0s
KESW   Keswick, Cumbr     77.95 345 eP          P          02 15 12.1  0.0
KESW                                  IAmb      IAmb       02 15 13.7
       comp=Z,67nm,0.9s
CROK   Carrier            77.97  50   IAmb      IAmb       02 15 27.1
       comp=Z,94nm,1.1s
L42A   Oliver, Polo       77.97  41   IAmb      IAmb       02 15 12.8
       comp=Z,54nm,1.0s
GAL1   Galloway           77.98 346 eP          P          02 15 11.9 -0.4
GAL1                                  IAmb      IAmb       02 15 13.4
       comp=Z,40nm,0.8s
STFAR  Stefanesti-Arg     78.00 324 ⇓P          P          02 15 13.7 +1.1
DEV    Deva               78.01 325 ⇓P          P          02 15 13.0 +0.3
DEV    Deva               78.01 325   P         P          02 15 12.9 +0.3
CLGH   Cloghs, Cushen     78.01 346 eP          P          02 15 11.9 -0.5
CLGH                                  IAmb      IAmb       02 15 14.2
       comp=Z,56nm,0.9s
LOT    Lotru              78.01 325 ⇑P          P          02 15 12.6 -0.2
VLDQ   Val d'Or           78.04  30   IAmb      IAmb       02 15 12.5
       comp=Z,87nm,1.0s
BR131  Keskin Array S     78.05 315   P         P          02 15 13.8 +0.7
       SNR=15
BR131  Keskin Array S     78.05 315   IAmb      IAmb       02 15 14.8
       comp=Z,65nm,1.0s
BR131  Keskin Array S     78.05 315c iP         P          02 15 13.0 -0.1
BRTR   Keskin Array B     78.05 315   P         P          02 15 13.2  0.0
       comp=Z,32nm,0.9s,baz=77,slow=4.0,SNR=109
BRTR                                  LR        LR         02 55 55.6
       comp=Z,824nm,18.6s,baz=59,slow=40
       comp=Z,32nm,0.9s
BRTR   Keskin Array B     78.05 315   P         P          02 15 12.8 -0.4
MODS   Modra-Piesok       78.05 330 eP          P          02 15 13.8 +1.0
MODS                                  pmax      pmax
       comp=Z,216nm,1.1s
MODS   Modra-Piesok       78.05 330 eP          P          02 15 13.8 +1.0
SGRR   Singureni          78.08 323 ⇑P          P          02 15 12.8 -0.2
SRO    Srobarova          78.15 329 eP          P          02 15 14.4 +1.0
SRO                                   pmax      pmax
       comp=Z,118nm,1.2s
SRO    Srobarova          78.15 329 eP          P          02 15 14.4 +1.0
ZVC    Zvikov             78.18 332 eP          P          02 15 13.5  0.0
ZVC                                 ex          x          02 15 24.4
SIRR   Siria              78.19 326 ⇑P          P          02 15 13.3 -0.3
SHMA   Al-Shehemyia       78.19 295   P         P          02 15 14.7 +0.8
       SNR=5.2
IDGL   Inch Island, C     78.25 347   P         P          02 15 13.2 -0.5
IDGL   Inch Island, C     78.25 347 eP          P          02 15 13.5 -0.2
HUMR   Humele             78.26 323 ⇓P          P          02 15 13.5 -0.5
HPK    Haverah Park       78.26 343 eP          P          02 15 13.5 -0.4
HPK                                   IAmb      IAmb       02 15 15.3
       comp=Z,80nm,0.8s
UBBA   Unterbreizbach     78.27 336 eP          P          02 15 13.5 -0.3
       comp=Z,108nm,1.7s,baz=28,slow=5.6
GHWR   Ruwais             78.27 292   P         P          02 15 15.1 +0.7
ANTO   Ankara             78.36 316   P         P          02 15 14.9 +0.2
ANTO   Ankara             78.36 316   P         P          02 15 14.9 +0.2
ANTO                                  pmax      pmax
       comp=Z,101nm,0.9s
KIRS   Kirsehir-Merke     78.36 315 ⇑P          P          02 15 15.1 +0.2
MANZ   Manzenberg         78.37 334 eP          P          02 15 14.0 -0.6
       comp=Z,11nm,1.1s,baz=28,slow=5.6
PECS   Pecos              78.38  57   IAmb      IAmb       02 15 29.6
       comp=Z,45nm,1.0s
RAZG   Razgrad            78.38 322 ⇑P          P          02 15 15.0 +0.3
KASTN  Kahler Asten       78.38 337 eP          P          02 15 14.2 -0.5
       comp=Z,59nm,1.1s,baz=28,slow=5.6
N41A   Harden Midland     78.42  43   IAMs_20   IAMs_20    02 48 07.7
       comp=Z,821nm,20.0s
DKNS   Dickens            78.42  54   IAmb      IAmb       02 15 30.2
       comp=Z,75nm,1.0s
SURR   Surduc             78.43 326 ⇑P          P          02 15 14.5 -0.4
GZR    Gura Zlata         78.46 325 ⇑P          P          02 15 15.0 -0.2
GZR    Gura Zlata         78.46 325   P         P          02 15 15.0 -0.2
COPA   Copaceanca         78.48 323 ⇓P          P          02 15 15.0 -0.2
BUG    Bochum--Univer     78.48 337 eP          P          02 15 14.4 -0.7
       comp=Z,91nm,1.1s,baz=28,slow=5.6
LOZB   Loznitsa           78.50 322 ⇓P          P          02 15 15.8 +0.4
POST   Post               78.53  54   IAmb      IAmb       02 15 30.7
       comp=Z,74nm,1.1s
ROTZ   Rotzenmuhle        78.53 334 eP          P          02 15 15.2 -0.3
       comp=Z,13nm,1.0s,baz=28,slow=5.6
MZR    Muzera             78.54 291   P         P          02 15 15.9  0.0
       SNR=24
MZR    Muzera             78.54 291 i P         P          02 15 16.1 +0.1
       SNR=63
OK051  E0350 and S346     78.58  49   IAmb      IAmb       02 15 30.5
       comp=Z,88nm,1.2s
OK048  Pawnee Station     78.59  49   IAMs_20   IAMs_20    02 53 23.1
       comp=Z,662nm,20.0s
ODSA   Odessa             78.61  56   IAmb      IAmb       02 15 31.3
       comp=Z,73nm,1.0s
KHC    Kasperske Hory     78.65 333c iP         P          02 15 16.4 +0.2
KHC                                   pmax      pmax
       comp=Z,103nm,0.9s
KHC    Kasperske Hory     78.65 333 eP          P          02 15 16.0 -0.2
KHC                                 ex          x          02 15 32.5
KHC                                   AMS       AMS        02 52 10.0
       comp=Z,2µm,19.8s
CKRC   Cesky Krumlov      78.68 332 eP          P          02 15 16.0 -0.3
CKRC                                  MLR       MLR
       comp=Z,2µm,20.2s
CKRC   Cesky Krumlov      78.68 332 eP          P          02 15 16.0 -0.3
CKRC                                  AMS       AMS        02 53 40.0
       comp=Z,2µm,20.2s
BZS    Buzias             78.74 326 ⇑P          P          02 15 16.7  0.0
BZS    Buzias             78.74 326   P         P          02 15 16.6  0.0
P40A   Paris              78.75  44   IAmb      IAmb       02 15 30.7
       comp=Z,83nm,1.1s
OK029  Liberty Lake       78.78  50   IAmb      IAmb       02 15 31.9
       comp=Z,105nm,1.3s
ZIMR                      78.80 323 ⇑P          P          02 15 16.8 -0.2
ZIMR                      78.80 323   P         P          02 15 16.8 -0.2
LBWR   Ladybower, Pea     78.81 343 eP          P          02 15 16.7 -0.2
LBWR                                  IAmb      IAmb       02 15 18.8
       comp=Z,107nm,0.9s
WMOK   Wichita Mounta     78.84  52   IAmb      IAmb       02 15 31.6
       comp=Z,44nm,1.0s
GEC2   GERESS Array S     78.86 332 eP          P          02 15 16.7 -0.7
       comp=Z,44nm,1.0s,baz=28,slow=5.6
GERES  GERESS Array B     78.86 332   P         P          02 15 16.7 -0.7
       comp=Z,16nm,0.7s,baz=30,slow=6.2,SNR=107
GERES                                 LR        LR         02 54 37.4
       comp=Z,2µm,18.5s,baz=25,slow=39
       comp=Z,16nm,0.7s
WET    Wettzell           78.86 333 eP          P          02 15 17.2 -0.2
       comp=Z,95nm,1.0s,baz=28,slow=5.6
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PTPS	Port Pirie	78.88	190	P	P	02 15 17.1	-0.1
SRE	Strehaia	78.89	325	⇓P	P	02 15 17.7	+0.2
SRE	Strehaia	78.89	325	P	P	02 15 17.6	+0.2
GRF	Grafenberg Arr	78.90	334	eP	P	02 15 17.4	-0.1
	comp=Z,115nm,1.0s,baz=28,slow=5.6						
GRF				eL	L	02 52 53.4	
	comp=Z,2µm,20.5s						
QUOK	Quay	78.90	49	IAmb	IAmb	02 15 32.5	
	comp=Z,121nm,1.3s						
GRFO	Grafenberg	78.90	334	P	P	02 15 17.8	+0.3
CRAR	CRAIOVA	78.92	324	⇓P	P	02 15 17.8	+0.2
CRAR	CRAIOVA	78.92	324	P	P	02 15 17.8	+0.2
CONA	Conrad Observa	78.92	331	eP	P	02 15 17.7	0.0
	comp=Z,152nm,1.2s,SNR=39						
VLAD	Vladila	78.93	323	⇑P	P	02 15 17.5	-0.2
RONA	Rosalia, Austr	78.97	330	eP	P	02 15 18.0	+0.1
	comp=Z,206nm,1.3s,SNR=26						
SLWR	Sila	78.97	293	P	P	02 15 19.2	+1.0
OK052	Battle Ridge R	78.98	50	IAmb	IAmb	02 15 46.6	
	comp=Z,89nm,1.1s						
HTT	Hallett	79.02	190	P	P	02 15 18.0	-0.1
HERR	Herculane	79.03	325	⇓P	P	02 15 17.7	-0.5
MNHN	Monahans	79.05	56	IAmb	IAmb	02 15 33.8	
	comp=Z,45nm,1.0s						
SMRA	Abu-Samra	79.06	294	P	P	02 15 19.4	+0.7
	SNR=7.8						
ILTH	Belurgan, Co L	79.06	346	P	P	02 15 20.1	+1.9
BANR	Banloc	79.12	326	⇑P	P	02 15 19.6	+0.8
APMT	Aspermont	79.13	53	IAmb	IAmb	02 15 32.7	
	comp=Z,64nm,0.8s						
DJES	Djerdap	79.16	325	⇓P	P	02 15 18.4	-0.6
ELND	Elena	79.16	322	⇓P	P	02 15 19.4	+0.4
M44A	Midewin, Midew	79.21	41	IAmb	IAmb	02 15 20.6	
	comp=Z,81nm,1.0s						
TNS	Taunus Mts	79.25	336	eP	P	02 15 18.9	-0.5
	comp=Z,56nm,1.0s,baz=28,slow=5.6						
DEOK	Depew	79.26	49	IAmb	IAmb	02 15 34.5	
	comp=Z,84nm,1.2s						
PUNG	Punghina	79.31	324	⇓P	P	02 15 19.5	-0.3
PLVB	Pleven	79.33	323	⇑P	P	02 15 20.0	+0.1
CWF	Charnwood Fore	79.34	343	eP	P	02 15 19.4	-0.4
CWF				IAmb	IAmb	02 15 20.6	
	comp=Z,17nm,0.7s						
MORH	Mrgy, Hungar	79.38	328	eP	P	02 15 18.8	-1.3
MORH	Mrgy, Hungar	79.38	328	⇓P	P	02 15 19.4	-0.7
MDVR	Moldovita	79.39	325	⇑P	P	02 15 20.0	-0.3
ELMS	Elmsett, Ipswi	79.45	341	eP	P	02 15 19.8	-0.6
ELMS				IAmb	IAmb	02 15 21.9	
	comp=Z,127nm,0.7s						
X34A	Smith Ranch, M	79.46	51	IAmb	IAmb	02 15 35.1	
	comp=Z,50nm,1.0s						
BEBN	Eben Emael	79.49	338	dP	P	02 15 20.3	-0.3
	comp=Z,92nm,1.0s						
L46A	Eue Claire	79.50	39	IAmb	IAmb	02 15 21.8	
	comp=Z,92nm,1.0s						
LPIG	La Paz	79.53	66	LR	LR	02 42 15.2	
	comp=Z,344nm,21.4s,baz=322,slow=29						
MOA	Molln	79.54	332	eP	P	02 15 20.6	-0.4
	comp=Z,54nm,1.0s,SNR=11						
BTNL	Ternell	79.56	338	dP	P	02 15 20.7	-0.4
	comp=Z,40nm,1.1s						
BUKO	Buck Lake	79.56	33	IAmb	IAmb	02 15 22.2	
	comp=Z,63nm,1.2s						
MEM	Membach	79.58	338	dP	P	02 15 21.2	+0.1
	comp=Z,68nm,1.1s						
FOEL	Foel Wylfa	79.58	344	eP	P	02 15 20.7	-0.4
FOEL				IAmb	IAmb	02 15 22.7	
	comp=Z,42nm,0.9s						
SGCY	Sterling City	79.59	55	IAmb	IAmb	02 15 36.5	
	comp=Z,104nm,1.3s						
TUL3	Leonard	79.59	49	IAmb	IAmb	02 15 36.2	
	comp=Z,81nm,1.2s						
R40A	Maddies Statio	79.59	45	IAmb	IAmb	02 15 34.4	
	comp=Z,59nm,1.1s						
R40A				IAMs_20	IAMs_20	02 52 36.1	
	comp=Z,610nm,20.0s						
ARSA	Arzberg	79.62	331	IAmb	IAmb	02 15 23.0	
	comp=Z,54nm,1.2s						
ARSA	Arzberg	79.62	331	eP	P	02 15 21.1	-0.4
	comp=Z,144nm,1.7s,SNR=12						
RAO	Raoul Island	79.65	152	LR	LR	02 44 41.3	
	comp=Z,741nm,21.7s,baz=3.5,slow=31						
BSTI	Sart Tilman	79.72	338	dP	P	02 15 21.9	+0.1
	comp=Z,12nm,1.0s						
MPEP	Malo Peshtene	79.73	323	P	P	02 15 22.7	+0.6
WTFS	Witchita Falls	79.73	52	IAmb	IAmb	02 15 35.9	
	comp=Z,58nm,1.0s						
BHOU	Houvegnez	79.81	338	dP	P	02 15 22.1	-0.3
	comp=Z,33nm,1.2s						
DSB	Dublin	79.82	346	P	P	02 15 21.9	-0.5
DSB	Dublin	79.82	346	IAmb	IAmb	02 15 23.9	
	comp=Z,59nm,0.9s						
UCC	Uccle	79.83	339	dP	P	02 15 22.4	-0.1
	comp=Z,18nm,1.1s						
BEHE	Becsehely	79.85	329	eP	P	02 15 22.3	-0.4
HLM1	Long Mynd	79.87	344	eP	P	02 15 21.6	-1.1
HLM1				IAmb	IAmb	02 15 24.2	
	comp=Z,38nm,0.9s						
BIOA	Bad Ischl, Aus	79.88	332	eP	P	02 15 22.4	-0.4
	comp=Z,168nm,1.3s,SNR=28						
P43A	Skaggs, Pawnee	79.89	43	IAmb	IAmb	02 15 23.9	
	comp=Z,48nm,0.9s						
ABTX	Abilene, Hawle	79.92	54	IAmb	IAmb	02 15 36.7	
	comp=Z,54nm,1.0s						
ABTX				IAMs_20	IAMs_20	02 54 47.7	
	comp=Z,450nm,19.0s						
BCLA	Clavier	79.94	338	dP	P	02 15 22.6	-0.5
	comp=Z,40nm,1.0s						
TX31	Lajitas Ar. Si	79.96	58	IAmb	IAmb	02 15 37.5	
	comp=Z,45nm,1.0s						
TXAR	Lajitas Array	79.96	58	P	P	02 15 23.7	0.0
	comp=Z,12nm,0.6s,baz=299,slow=4.1,SNR=231						
TXAR				pP	PcP	02 15 36.2	+5.1
	comp=Z,30nm,0.9s,baz=300,slow=3.9,SNR=15						
TXAR				PKKPbc	PKKPbc	02 34 08.2	+1.9
	comp=Z,1.3nm,0.8s,baz=135,slow=4.5,SNR=12						
TXAR				PKPPKP	P'P'df	02 42 09.3	-6.5
	comp=Z,0.4nm,0.8s,baz=157,slow=4.1,SNR=3.8						
	comp=Z,12nm,0.6s						
TXAR	Lajitas Array	79.96	58	P	P	02 15 23.6	-0.1
TXAR	Lajitas Array	79.96	58	P	P	02 15 23.6	-0.1
DIM	Dimitrovgrad	80.01	322	P	P	02 15 25.1	+1.5
BGES	Gesves	80.02	338	dP	P	02 15 22.7	-0.8
	comp=Z,45nm,1.0s						
BGES				dPP	PP	02 18 23.1	-2.1
KOGS	Kog	80.06	330	iP	P	02 15 22.8	-1.0
SLBS	Sierra La Lagu	80.06	67	P	P	02 15 24.8	+0.5
IGLA	Glengowla, Co	80.14	348	P	P	02 15 23.8	-0.2
IGLA	Glengowla, Co	80.14	348	eP	P	02 15 23.1	-0.9
BMRD	Maredsous	80.18	338	dP	P	02 15 23.8	-0.6
	comp=Z,70nm,1.0s						
RCHB	Rochefort	80.20	338	dP	P	02 15 24.2	-0.2
	comp=Z,43nm,1.1s						
BAND	Balkesir-Ban	80.22	319	⇑P	P	02 15 25.2	+0.4
SADO	Sadowa	80.23	33	LR	LR	02 52 59.4	
	comp=Z,419nm,21.1s,baz=354,slow=37						
FUR	Furstenfeldbru	80.23	334	eP	P	02 15 24.5	-0.3
	comp=Z,105nm,1.0s,baz=28,slow=5.6						
PGB	Panagyurishte	80.24	323	P	P	02 15 25.5	+0.6
LDAQ	Lac Daran	80.27	27	IAmb	IAmb	02 15 25.9	
	comp=Z,52nm,1.0s						
HHAR	Hobbs	80.28	48	IAmb	IAmb	02 15 38.7	
	comp=Z,49nm,1.1s						
MORW	Morawa	80.28	210	IAmb	IAmb	02 15 26.6	
	comp=Z,76nm,1.2s						
PLD	Plovdiv	80.29	322	P	P	02 15 25.8	+0.7
RAR	Rarotonga	80.29	134	LR	LR	02 44 51.9	
	comp=Z,771nm,20.2s,baz=292,slow=31						
CCM	Cathedral Cave	80.29	45	P	P	02 15 24.8	-0.4
CCM				IAmb	IAmb	02 15 38.9	
	comp=Z,72nm,1.1s						
CCM	Cathedral Cave	80.29	45	IAMs_20	IAMs_20	02 52 55.4	
	comp=Z,789nm,22.0s						
CCM	Cathedral Cave	80.29	45	P	P	02 15 24.8	-0.4
CCM				pmax	pmax		
	comp=Z,72nm,1.1s						
CCM				MLR	MLR		
	comp=Z,800nm,22.0s						
SOKA	Soboth	80.29	331	eP	P	02 15 24.6	-0.5
	comp=Z,164nm,1.1s,SNR=38						
PERS	Pernice	80.30	330	iP	P	02 15 24.5	-0.7
STU	Stuttgart	80.33	335	IAmb	IAmb	02 15 26.2	
	comp=Z,71nm,1.1s						
STU	Stuttgart	80.33	335	eP	P	02 15 24.7	-0.5
	comp=Z,188nm,1.1s,baz=28,slow=5.6						
BLSH	Balsha	80.33	323	P	P	02 15 26.4	+1.0
BOVS	Bovan	80.34	325	⇓P	P	02 15 24.8	-0.5
MCH1	Michaelchurch	80.39	344	eP	P	02 15 25.0	-0.4
MCH1				IAmb	IAmb	02 15 26.9	
	comp=Z,63nm,0.9s						
WLF	Walferdange	80.39	337	eP	P	02 15 25.6	0.0
	comp=Z,33nm,1.0s,baz=28,slow=5.6						
WLF	Walferdange	80.39	337	dP	P	02 15 25.6	0.0
	comp=Z,24nm,1.3s						
DOU	Dourbes	80.42	338	dP	P	02 15 24.6	-1.1
	comp=Z,25nm,1.2s						
AAM	Ann Arbor	80.43	37	IAmb	IAmb	02 15 27.6	
	comp=Z,66nm,1.1s						
LESA	Schwarzleotal	80.43	332	iP	P	02 15 25.8	-0.2
	comp=Z,152nm,1.1s,SNR=32						
KDZ	Kurdzhali	80.45	321	P	P	02 15 26.9	+0.9
SFIN	Lafayette	80.45	41	IAmb	IAmb	02 15 26.9	
	comp=Z,64nm,1.1s						
MGMO	Mountain Grove	80.47	46	IAmb	IAmb	02 15 40.2	
	comp=Z,69nm,1.2s						
K50A	Casco	80.48	37	IAmb	IAmb	02 16 14.1	
	comp=Z,83nm,1.3s						
MONM	Monmouth	80.50	343	eP	P	02 15 25.7	-0.4
MONM				IAmb	IAmb	02 15 27.6	
	comp=Z,91nm,0.9s						
KBA	Koelnbreinsper	80.52	332	eP	P	02 15 26.1	-0.4
	comp=Z,181nm,1.1s,SNR=44						
PLPT	Palo Pinto	80.53	53	IAmb	IAmb	02 15 39.9	
	comp=Z,62nm,1.1s						
VTS	Vitosha	80.55	323	P	P	02 15 27.6	+0.9
SHAO	Shalim	80.57	286	P	P	02 15 28.0	+1.0
PLNA	Plana	80.58	323	P	P	02 15 28.1	+1.2
OBKA	Obir	80.60	331	eP	P	02 15 25.9	-1.0
	comp=Z,246nm,2.4s,SNR=7.7						
SWN1	Swindon	80.60	343	eP	P	02 15 26.6	0.0
SWN1				IAmb	IAmb	02 15 27.9	
	comp=Z,118nm,0.7s						
RZN	Rozhen	80.66	322	P	P	02 15 28.3	+0.9
BEIL	Beino	80.66	310	eP	P	02 15 28.5	+1.2
TRQ	Mont Tremblant	80.68	30	IAmb	IAmb	02 15 27.8	
	comp=Z,82nm,1.0s						
N47A	Urbana	80.68	40	IAmb	IAmb	02 15 28.4	
	comp=Z,84nm,1.0s						
Q44A	Meyer Farm, Va	80.71	43	IAmb	IAmb	02 15 41.3	
	comp=Z,114nm,1.2s						
IWEX	Carrickbyrne,	80.73	346	P	P	02 15 26.9	-0.4
IWEX	Carrickbyrne,	80.73	346	eP	P	02 15 27.0	-0.2
IWEX				IAmb	IAmb	02 15 28.3	
	comp=Z,102nm,0.9s						
Z35A	Perchaven, San	80.73	52	IAmb	IAmb	02 15 40.5	
	comp=Z,93nm,1.2s						
Z35A				IAMs_20	IAMs_20	02 54 36.0	
	comp=Z,706nm,22.0s						
FKH	Fakeheh	80.77	310	eP	P	02 15 29.2	+1.2
RSBS	Rosebush, Pemb	80.77	345	eP	P	02 15 26.8	-0.7
RSBS				IAmb	IAmb	02 15 30.8	
	comp=Z,44nm,0.9s						
MYKA	Terra Mystica	80.81	331	eP	P	02 15 26.9	-1.0
	comp=Z,83nm,1.3s,SNR=7.9						
FW06	Azle	80.83	52	IAmb	IAmb	02 15 42.8	
	comp=Z,53nm,1.0s						
CAVK	Edirne/Enez-Ca	80.83	320	⇑P	P	02 15 28.7	+0.6
WATA	Walderalm	80.87	333	iP	P	02 15 27.8	-0.6
	comp=Z,217nm,1.2s,SNR=27						
WTTA	Wattenberg	80.91	333	iP	P	02 15 28.4	-0.3
	comp=Z,209nm,1.1s,SNR=37						
LMQ	La Malbaie	80.93	26	IAmb	IAmb	02 15 29.3	
	comp=Z,90nm,1.2s						
BFO	Black Forest	80.98	335	P	P	02 15 28.4	-0.4
BFO				IAmb	IAmb	02 15 29.6	
	comp=Z,55nm,1.0s						
BFO	Black Forest	80.98	335	P	P	02 15 28.4	-0.4
BFO				pmax	pmax		
	comp=Z,55nm,1.0s						
BFO				MLR	MLR		
	comp=Z,1µm,19.0s						
BFO	Black Forest	80.98	335	eP	P	02 15 28.2	-0.6
	comp=Z,57nm,1.0s,baz=28,slow=5.6						
HWQ	Hawqa	80.99	310	eP	P	02 15 29.0	-0.2
RETA	Reutte	80.99	334	eP	P	02 15 28.8	-0.2
	comp=Z,166nm,1.4s,SNR=18						
LJU	Ljubljana	81.01	330	iP	P	02 15 27.8	-1.2
MOTA	Moosalm	81.01	333	iP	P	02 15 28.5	-0.6
	comp=Z,246nm,1.2s,SNR=41						
UBR	Ueberruh	81.03	334	eP	P	02 15 28.9	-0.2
	comp=Z,179nm,2.0s,baz=28,slow=5.6						
ABTA	Abfaltersbach	81.08	332	iP	P	02 15 28.4	-1.0
	comp=Z,88nm,1.5s,SNR=14						
SQTA	Sankt Quirin	81.09	333	iP	P	02 15 29.0	-0.5
	comp=Z,184nm,1.1s,SNR=31						
BLY	Banja Luka	81.17	328	eP	P	02 15 28.6	-1.2
BLY	Banja Luka	81.17	328	⇑P	P	02 15 29.6	-0.2
DOK	Doka	81.17	287	P	P	02 15 31.1	+0.9
MMB	Musomishta	81.21	322	P	P	02 15 30.8	+0.7
KKB	Krupnik	81.23	323	P	P	02 15 31.0	+0.8
DMTO	DMTO	81.25	286	P	P	02 15 30.8	+0.2
RUDO	Rudo	81.29	326	eP	P	02 15 29.6	-0.9
N49A	Columbus Grove	81.32	39	IAmb	IAmb	02 15 31.6	
	comp=Z,73nm,1.0s						
ZAHL	Zahle	81.34	310	eP	P	02 15 32.0	+0.9
FW13	Cleburne	81.36	52	IAmb	IAmb	02 15 44.5	
	comp=Z,51nm,1.0s						
JCT	Junction City	81.41	55	IAmb	IAmb	02 15 46.3	
	comp=Z,60nm,0.9s						
JCT				IAMs_20	IAMs_20	02 47 06.4	
	comp=Z,481nm,21.0s						
FETA	Feichten	81.42	333	eP	P	02 15 30.8	-0.5
	comp=Z,91nm,1.2s,SNR=14						
M50A	Fremont	81.42	38	IAmb	IAmb	02 15 32.0	
	comp=Z,52nm,0.9s						
M50A				IAMs_20	IAMs_20	02 55 28.5	
	comp=Z,680nm,20.0s						
ECH	Echery	81.43	336	IAmb	IAmb	02 15 34.9	
	comp=Z,72nm,1.0s						
ECH	Echery	81.43	336	P	P	02 15 31.2	+0.1
BHL	Bhannes	81.43	310	eP	P	02 15 31.2	-0.3
STAL	STALIGIAL	81.44	332	IAmb	IAmb	02 15 31.4	
	comp=Z,46nm,0.9s						
DAVA	Damuels	81.45	334	iP	P	02 15 31.1	-0.3
	comp=Z,30nm,0.8s,SNR=13						
BLDU	Ballidu	81.46	209	P	P	02 15 32.0	+0.7
WBO	Williamsburg	81.48	31	IAmb	IAmb	02 15 32.1	
	comp=Z,46nm,0.9s						
FCAR	Ozark Folk Cen	81.52	47	IAmb	IAmb	02 15 46.0	
	comp=Z,89nm,1.5s						
PLE	Pljevlja	81.53	326	⇑iP	P	02 15 31.7	-0.2
S44A	Carbondale	81.55	44	IAmb	IAmb	02 15 33.7	
	comp=Z,74nm,0.9s						
SIUC	Southern Illin	81.55	44	IAmb	IAmb	02 15 33.7	
	comp=Z,80nm,0.9s						
WHTX	Lake Whitney,	81.62	53	IAMs_20	IAMs_20	02 47 58.7	
	comp=Z,650nm,22.0s						
DQRL	Deir Qamar	81.63	310	eP	P	02 15 33.6	+1.0
MNTQ	Montreal, Queb	81.63	30	IAmb	IAmb	02 15 32.8	
	comp=Z,38nm,0.9s						
RCY	Rachaya	81.64	310	eP	P	02 15 33.6	+0.9
CGM3	Cape Girardeau	81.66	44	IAmb	IAmb	02 15 47.2	
	comp=Z,93nm,1.5s						
QRWL	Qaraoun	81.69	310	eP	P	02 15 33.6	+0.7
VAL	Valentia	81.70	348	P	P	02 15 32.9	+0.5
IVA	Berane	81.71	326	⇑iP	P	02 15 32.4	-0.4
PECO	Prince Edward	81.76	32	IAmb	IAmb	02 15 33.3	
	comp=Z,61nm,0.9s						
MIAR	Mount Ida	81.80	48	IAmb	IAmb	02 15 48.2	
	comp=Z,94nm,1.1s						
SHBL	Chebaa	81.81	310	eP	P	02 15 34.3	+0.7
UPM	Unac-Piva	81.82	326	⇑iP	P	02 15 32.1	-1.4
MEDO	Medina	81.85	34	IAmb	IAmb	02 15 34.8	
	comp=Z,81nm,1.0s						
O49A	Covington	81.85	39	IAmb	IAmb	02 15 34.4	
	comp=Z,47nm,0.9s						
LCAR	Lake Charles	81.88	46	IAmb	IAmb	02 15 48.1	
	comp=Z,111nm,1.8s						
KOME	Kolasin	81.88	326	⇑iP	P	02 15 32.5	-1.2
VAY	Valandovo	81.90	323	iP	P	02 15 34.3	+0.6
DAVOX	Davos/Dischmat	81.90	334	LR	LR	02 55 29.6	
	comp=Z,2µm,20.7s,baz=22,slow=38						
RBK	Rabkut	81.90	287	P	P	02 15 34.5	+0.4
WHFO	Wadi Hawf	81.90	287	P	P	02 15 34.5	+0.3
PVY	Plav	81.92	325	⇑iP	P	02 15 33.1	-0.9
FUORN	Ofenpass-Fuorn	81.92	333	IAmb	IAmb	02 15 35.6	
	comp=Z,85nm,1.1s						
P48A	Milroy	81.95	40	IAmb	IAmb	02 15 34.8	
	comp=Z,56nm,1.0s						
KLINJ	Klinje	81.98	326	eP	P	02 15 32.1	-2.1
CTI	Castel Tesino	81.98	332	IAmb	IAmb	02 15 34.1	
	comp=Z,50nm,1.0s						
E62A	Clayton Lake	82.00	26	IAmb	IAmb	02 15 34.9	
	comp=Z,58nm,0.9s						
ASF	Jabal al Asfar	82.06	308	LR	LR	02 57 12.8	
	comp=Z,1µm,20.2s,baz=21,slow=40						
N51A	Ashland	82.11	37	IAmb	IAmb	02 15 36.3	
	comp=Z,88nm,1.1s						
NKME	Niksic	82.17	326	⇑iP	P	02 15 34.3	-0.9
ELL	Elmali	82.21	316	IAmb	IAmb	02 15 36.7	
	comp=Z,73nm,1.0s						
BRY	Bratogost	82.22	326	⇑iP	P	02 15 33.9	-1.7
X40A	Basin Creek Fa	82.23	48	IAmb	IAmb	02 15 50.4	
	comp=Z,79nm,1.4s						
MMAI	Mount Meron Ar	82.24	310	P	P	02 15 36.5	+0.7
	comp=Z,85nm,0.9s,baz=34,slow=6.2,SNR=66						
MMAI				LR	LR	02 56 17.8	
	comp=Z,2µm,21.0s,baz=17,slow=39						
	comp=Z,85nm,0.9s						
PDG	Podgorica	82.34	326	⇓P	P	02 15 35.3	-0.6
PDG	Podgorica	82.34	326	⇑iP	P	02 15 35.5	-0.5
TUE	Stuetta	82.34	334	IAmb	IAmb	02 15 37.4	
	comp=Z,60nm,0.9s						
CEME	Cevo	82.37	326	⇑iP	P	02 15 35.5	-0.8
T45A	Paducah	82.38	44	IAMs_20	IAMs_20	02 50 44.7	
	comp=Z,452nm,21.0s						
ACSO	Alum Creek Sta	82.41	38	IAmb	IAmb	02 15 37.5	
	comp=Z,68nm,0.9s						
MMNY	Mt. Morris Dam	82.43	34	IAmb	IAmb	02 15 37.6	
	comp=Z,71nm,0.9s						
TREB	Trebinje	82.45	326	eP	P	02 15 33.2	-3.4
BATG	Bathurst New B	82.46	24	IAmb	IAmb	02 15 37.8	
	comp=Z,65nm,1.0s						
237A	Washetta, Mont	82.53	52	IAmb	IAmb	02 15 51.4	
	comp=Z,65nm,0.9s						
WCI	Wyandotte Cave	82.54	41	P	P	02 15 37.1	0.0
WCI				IAmb	IAmb	02 15 38.4	
	comp=Z,66nm,0.9s						
WCI	Wyandotte Cave	82.54	41	P	P	02 15 37.1	0.0
WCI				pmax	pmax		
	comp=Z,66nm,1.0s						
CCA1	Carnmenellis	82.55	344	eP	P	02 15 36.4	-0.6
CCA1				IAmb	IAmb	02 15 38.8	
	comp=Z,69nm,0.9s						
DRME	Dracevica, Mon	82.57	326	⇑iP	P	02 15 36.4	-0.8
J57A	Williamstown	82.58	32	IAmb	IAmb	02 15 39.1	
	comp=Z,47nm,1.1s						
BUM	Brajici-Budva	82.59	326	⇑iP	P	02 15 35.9	-1.5
ABTO	Aybut	82.62	287	P	P	02 15 38.5	+0.6
	SNR=5.4						
HCY	Herceg Novi	82.62	326	⇑iP	P	02 15 36.6	-0.9
PAOC	Oil Creek Stat	82.74	35	IAmb	IAmb	02 15 39.8	
	comp=Z,50nm,1.0s						
AKAS	Kas	82.76	315	IAmb	IAmb	02 15 40.0	
	comp=Z,80nm,1.0s						
OHR	Ohrid	82.82	324	iP	P	02 15 39.0	+0.5
H06E1	SOCORRO T-PHAS	82.88	71	T	T	03 47 18.0	
	SNR=7.3						
G62A	West of Eustis	82.93	28	IAmb	IAmb	02 15 40.5	
	comp=Z,60nm,1.0s						
LIT	Litokhoron	82.94	322	IAmb	IAmb	02 15 40.0	
	comp=Z,77nm,1.0s						
VT1	Waterbury	82.95	30	IAmb	IAmb	02 15 40.1	
	comp=Z,36nm,0.9s						
PPT	Papeete	82.97	123	LR	LR	02 45 07.6	
	comp=Z,1µm,20.6s,baz=9.5,slow=30						
PPT2	Papeete2	82.99	124	eP	P	02 15 38.0	-1.6
	comp=Z,189nm,21.0s						
PPT2	Papeete2	82.99	124	eS	SKSac	02 25 59.8	+2.8
	comp=Z,281nm,29.2s						
PPT2				eSS	SS	02 31 17.2	-2.6
	comp=Z,314nm,26.0s						
PPT2	Papeete2	82.99	124	eLR	LR	02 41 42.2	
	comp=Z,2µm,22.5s						
PPT2				eLR	LR	02 41 44.0	
	comp=Z,2µm,24.2s						
P51A	Williamsport	82.99	39	IAmb	IAmb	02 15 40.1	
	comp=Z,56nm,0.9s						
O52A	Adamsville	83.00	38	IAmb	IAmb	02 15 40.4	
	comp=Z,64nm,0.9s						
F64A	Sherman	83.05	26	IAmb	IAmb	02 15 40.9	
	comp=Z,46nm,0.9s						
SENIN	Lac Senin/Sane	83.06	335	IAmb	IAmb	02 15 42.9	
	comp=Z,45nm,1.1s						
L56A	Greenwood	83.07	34	IAmb	IAmb	02 15 40.6	
	comp=Z,54nm,1.0s						
J59A	Piesco	83.08	31	IAmb	IAmb	02 15 40.3	
	comp=Z,34nm,0.9s						
T47A	Sharon Grove	83.15	43	IAmb	IAmb	02 15 41.8	
	comp=Z,70nm,0.9s						
T47A				IAMs_20	IAMs_20	02 52 56.8	
	comp=Z,690nm,21.0s						
O53A	New Philadelph	83.16	37	IAmb	IAmb	02 15 41.3	
	comp=Z,49nm,0.9s						
PKME	Peaks-Kenny Pk	83.29	27	IAmb	IAmb	02 15 42.1	
	comp=Z,62nm,1.1s						
RAYN	Ar Rayn	83.32	297	P	P	02 15 42.7	+1.2
RAYN	Ar Rayn	83.32	297	P	P	02 15 41.0	-0.5
RAYN	Ar Rayn	83.32	297	iP	P	02 15 41.7	+0.2
	SNR=55						
RAYN	Ar Rayn	83.32	297	P	P	02 15 41.0	-0.5
RAYN				pmax	pmax		
	comp=Z,115nm,1.3s						
RAYN				MLR	MLR		
	comp=Z,1µm,19.0s						
TVO	Taravao	83.33	123	eP	P	02 15 46.8	+5.4
	comp=Z,37nm,1.1s						
R50A	Paris	83.41	40	IAmb	IAmb	02 15 42.9	
	comp=Z,43nm,1.0s						
NWAO	Narrogin (SRO)	83.41	207	LR	LR	02 57 41.5	
	comp=Z,74nm,18.5s,baz=356,slow=39						
NWAO	Narrogin (SRO)	83.41	207	P	P	02 15 42.0	+0.7
NWAO	Narrogin (SRO)	83.41	207	P	P	02 15 42.3	+0.9
NWAO	Narrogin (SRO)	83.41	207	P	P	02 15 42.1	+0.7
NWAO				pmax	pmax		
	comp=Z,70nm,1.0s						
NWAO	Narrogin (SRO)	83.41	207	P	P	02 15 42.0	+0.7
WVT	Waverly	83.48	44	P	P	02 15 42.0	0.0
WVT				IAmb	IAmb	02 15 43.9	
	comp=Z,29nm,0.8s						
WVT	Waverly	83.48	44	IAMs_20	IAMs_20	02 56 36.8	
	comp=Z,486nm,20.0s						
WVT	Waverly	83.48	44	P	P	02 15 42.0	0.0
WVT				pmax	pmax		
	comp=Z,29nm,0.9s						
WVT				MLR	MLR		
	comp=Z,500nm,20.0s						
O54A	Avella	83.57	37	IAmb	IAmb	02 15 43.6	
	comp=Z,62nm,1.0s						
P53A	Whipple	83.72	38	IAmb	IAmb	02 15 58.0	
	comp=Z,87nm,1.4s						
Q52A	Bidwell	83.77	38	IAmb	IAmb	02 15 44.3	
	comp=Z,38nm,1.0s						
WVL	Waterville	83.79	27	IAmb	IAmb	02 15 44.6	
	comp=Z,62nm,1.0s						
G65A	Princeton	83.89	26	IAmb	IAmb	02 15 45.0	
	comp=Z,68nm,1.1s						
J61A	Chester	83.89	30	IAmb	IAmb	02 15 45.2	
	comp=Z,32nm,0.9s						
M57A	Sunshine Farm,	83.92	34	IAmb	IAmb	02 15 45.8	
	comp=Z,56nm,0.9s						
HKT	Hockley	84.07	53	P	P	02 15 46.1	+1.1
HKT	Hockley	84.07	53	IAMs_20	IAMs_20	02 56 58.2	
	comp=Z,785nm,20.0s						
HKT	Hockley	84.07	53	P	P	02 15 46.1	+1.1
HKT				pmax	pmax		
	comp=Z,39nm,1.5s						
HKT				MLR	MLR		
	comp=Z,800nm,20.0s						
LMN	Caledonia Moun	84.11	24	IAmb	IAmb	02 15 46.2	
	comp=Z,59nm,0.9s						
U49A	Red Boiling Sp	84.16	42	IAmb	IAmb	02 15 47.3	
	comp=Z,52nm,0.9s						
U49A				IAMs_20	IAMs_20	02 51 48.6	
	comp=Z,685nm,19.0s						
GGN	Saint George	84.18	25	IAmb	IAmb	02 15 46.3	
	comp=Z,42nm,0.9s						
SSPA	Standing Stone	84.21	35	P	P	02 15 45.6	-0.1
SSPA				IAmb	IAmb	02 15 46.9	
	comp=Z,51nm,1.1s						
MCWV	Mont Chateau	84.23	37	IAmb	IAmb	02 15 47.4	
	comp=Z,68nm,1.1s						
S51A	Beattyville	84.26	40	IAmb	IAmb	02 15 47.0	
	comp=Z,43nm,0.8s						
V48A	Smith Brothers	84.29	43	IAmb	IAmb	02 16 00.9	
	comp=Z,45nm,1.0s						
V48A				IAMs_20	IAMs_20	02 52 52.0	
	comp=Z,608nm,19.0s						
OSSC	Osservatorio P	84.35	331	IAmb	IAmb	02 15 47.4	

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              comp=Z,55nm,1.0s
EMMW   East Machias      84.36  26  IAmb      IAmb      02 15 48.0
              comp=Z,67nm,1.1s
143A   Socs Landing,     84.37  48  IAmb      IAmb      02 16 02.1
              comp=Z,58nm,1.0s
143A                                IAMs_20   IAMs_20   02 56 20.9
              comp=Z,662nm,19.0s
Q54A   Coxs Mills        84.38  38  IAmb      IAmb      02 15 48.0
              comp=Z,71nm,1.1s
BNI    Bardonecchia      84.43 335  IAmb      IAmb      02 15 49.3
              comp=Z,47nm,1.0s
AQU    L'Aquila          84.62 329 eP         P         02 15 47.5 -0.3
SSB    Saint Sauveur     84.84 336  IAmb      IAmb      02 15 50.5
              comp=Z,49nm,1.0s
SSB    Saint Sauveur     84.84 336  P         P         02 15 49.3 +0.5
MATE   Matera            84.86 326 ⇑P         P         02 15 48.3 -0.6
HRV    Adam Dziewonsk    84.97  30  P         P         02 15 49.1 -0.3
HRV                                 IAmb      IAmb      02 15 50.9
              comp=Z,39nm,0.9s
HRV    Adam Dziewonsk    84.97  30  P         P         02 15 49.2 -0.3
HRV                                 pmax      pmax
              comp=Z,39nm,0.9s
Q56A   Snyder Ridge,     85.03  36  IAmb      IAmb      02 15 51.6
              comp=Z,48nm,1.1s
EIL    Elat              85.05 308  LR        LR        03 00 03.2
              comp=Z,1µm,18.3s,baz=8.0,slow=40
P57A   Homestead Farm    85.14  35  IAmb      IAmb      02 15 51.6
              comp=Z,38nm,1.1s
S54A   Dingess, Beckl    85.15  39  IAmb      IAmb      02 15 52.1
              comp=Z,45nm,0.8s
WES    Weston            85.16  30  IAmb      IAmb      02 15 51.8
              comp=Z,56nm,0.9s
TZTN   Tazewell          85.18  41  IAmb      IAmb      02 16 05.7
              comp=Z,60nm,1.1s
TZTN                                IAMs_20   IAMs_20   02 52 37.3
              comp=Z,782nm,20.0s
X48A   Hartselle         85.21  44  IAMs_20   IAMs_20   02 50 53.6
              comp=Z,792nm,22.0s
BCX    Boston College    85.26  29  IAmb      IAmb      02 15 52.5
              comp=Z,35nm,0.9s
PAOL   Paolisi           85.35 328  IAmb      IAmb      02 15 51.6
              comp=Z,64nm,1.1s
MVL    Millersville      85.37  34  IAmb      IAmb      02 15 53.2
              comp=Z,53nm,1.1s
ZAIG   Zacatecas         85.42  62  IAmb      IAmb      02 16 06.5
              comp=Z,30nm,1.0s
PAL    Palisades         85.44  32  IAmb      IAmb      02 15 52.9
              comp=Z,52nm,1.0s
W50A   Signal Mountai    85.45  43  IAmb      IAmb      02 16 08.7
              comp=Z,36nm,0.9s
W50A                                IAMs_20   IAMs_20   02 52 13.7
              comp=Z,685nm,22.0s
BRNJ   Basking Ridge     85.47  33  IAmb      IAmb      02 16 17.2
              comp=Z,62nm,1.2s
Z47A   Carrollton        85.70  46  IAMs_20   IAMs_20   02 56 11.7
              comp=Z,499nm,20.0s
CUC    Castrocucco       85.77 327  IAmb      IAmb      02 16 08.1
              comp=Z,38nm,1.0s
M63A   Gales Ferry       85.77  30  IAmb      IAmb      02 15 54.7
              comp=Z,39nm,0.9s
TKL    Tuckaleechee C    85.80  41  LR        LR        02 53 38.0
              comp=Z,577nm,21.9s,baz=337,slow=35
IDI    Anoyia            85.80 318  LR        LR        03 00 35.6
              comp=Z,366nm,18.5s,baz=41,slow=40
U54A   Nelsons Funny     85.99  40  IAmb      IAmb      02 15 55.9
              comp=Z,47nm,0.9s
Y49A   Blount Mountai    86.00  44  IAmb      IAmb      02 16 08.6
              comp=Z,34nm,1.0s
Y49A                                IAMs_20   IAMs_20   03 00 39.4
              comp=Z,617nm,20.0s
TIP    Timpagrande       86.10 326 ⇑P         P         02 15 54.6 -0.6
X51A   Calhoun           86.18  43  IAmb      IAmb      02 16 09.9
              comp=Z,51nm,1.2s
X51A                                IAMs_20   IAMs_20   02 52 23.1
              comp=Z,766nm,22.0s
W52A   Murphy            86.19  42  IAmb      IAmb      02 16 10.0
              comp=Z,29nm,1.1s
S57A   Dark Hollow, R    86.20  37  IAmb      IAmb      02 15 57.1
              comp=Z,32nm,0.9s
V53A   Saluda            86.24  41  IAmb      IAmb      02 16 10.2
              comp=Z,40nm,1.2s
R58B   Mineral           86.48  36  IAmb      IAmb      02 15 58.3
              comp=Z,25nm,1.0s
URZ    Urewera           86.62 159  LR        LR        02 49 39.4
              comp=Z,611nm,20.8s,baz=352,slow=32
DGAR   Diego Garcia      86.71 256  P         P         02 15 58.8 +0.4
DGAR   Diego Garcia      86.71 256  P         P         02 15 58.8 +0.4
DGAR                                pmax      pmax
              comp=Z,268nm,1.2s
T57A   Hurt              86.72  38  IAmb      IAmb      02 15 59.4
              comp=Z,32nm,0.9s
Y52A   Lilburn           87.13  43  IAmb      IAmb      02 16 02.3
              comp=Z,38nm,0.9s
Y52A                                IAMs_20   IAMs_20   02 59 40.2
              comp=Z,741nm,21.0s
KMSC   Kings Mountain    87.35  40  IAmb      IAmb      02 16 02.5
              comp=Z,43nm,1.0s
PAULI  Pauline           87.40  40  IAmb      IAmb      02 16 02.7
              comp=Z,40nm,1.0s
T59A   Double "B" Far    87.46  36  IAmb      IAmb      02 16 16.9
              comp=Z,58nm,1.2s
TBI    Tubuai            87.57 127 eS         S         02 26 37.5 -2.1
              comp=Z,2µm,26.2s
TBI    Tubuai            87.57 127 eLR        LR        02 43 45.1
              comp=Z,10µm,31.2s
TBI                                eLR        LR        02 43 48.1
              comp=Z,2µm,26.5s
250A   Grady             87.58  45  IAMs_20   IAMs_20   02 57 39.5
              comp=Z,492nm,20.0s
GOGA   Godfrey           87.79  42  IAmb      IAmb      02 16 18.6
              comp=Z,62nm,1.3s
152A   Waverly Hall      87.79  44  IAmb      IAmb      02 16 04.5
              comp=Z,37nm,1.0s
152A                                IAMs_20   IAMs_20   02 54 37.8
              comp=Z,453nm,19.0s
V58A   Windy Hill, Pi    87.79  38  IAmb      IAmb      02 16 04.8
              comp=Z,46nm,1.0s
W57A   Gilead            87.94  39  IAmb      IAmb      02 16 05.4
              comp=Z,43nm,1.0s
JSC    Jenkinsville      88.10  40  IAmb      IAmb      02 16 06.2
              comp=Z,36nm,1.0s
BIRD   Birdtown, Kers    88.16  40  IAmb      IAmb      02 16 19.5
              comp=Z,48nm,1.1s
VAE    Valguarnera       88.49 326  LR        LR        02 59 51.4
              comp=Z,1µm,18.1s,baz=32,slow=38
154A   Montrose          88.61  43  IAMs_20   IAMs_20   03 03 20.5
              comp=Z,438nm,20.0s
TIGA   Tifton            89.34  44  IAMs_20   IAMs_20   02 57 02.0
              comp=Z,568nm,20.0s
RPZ    Rata Peaks        90.53 165  LR        LR        02 53 18.3
              comp=Z,494nm,20.3s,baz=320,slow=33
PBRG   Braganca          90.88 343 eP         P         02 16 16.9 -0.9
PGAV   Gavieira, Arco    91.03 344 i IAMs_20  IAMs_20   03 02 45.1
              comp=Z,698nm,20.0s
POLO   Lamas de Olo      91.51 344 eP         P         02 16 19.6 -1.2
MVO    Moncorvo          91.56 343 eP         P         02 16 19.6 -1.4
MVO                                i IAmb     IAmb      02 16 20.7
              comp=Z,46nm,1.8s
MVO                                eLR        LR        02 56 45.8
MVO                                i IAMs_20  IAMs_20   03 02 50.2
              comp=Z,1µm,20.0s
PVRL   Vila Real         91.59 344 eP         P         02 16 20.4 -0.8
PVRL                               i IAmb     IAmb      02 16 21.0
              comp=Z,44nm,1.4s
KEST   Kesra             91.94 329  P         P         02 16 22.3 -0.7
              comp=Z,32nm,1.0s,baz=344,slow=4.8,SNR=11
KEST                                LR        LR        03 02 33.0
              comp=Z,2µm,18.8s,baz=34,slow=39
              comp=Z,32nm,1.0s
KEST   Kesra             91.94 329  P         P         02 16 23.2 +0.3
KEST   Kesra             91.94 329  IAmb      IAmb      02 16 24.4
              comp=Z,34nm,1.0s
PVIS   Viseu             92.17 344 eP         P         02 16 23.0 -0.8
ESDC   Sonseca Array     92.30 340  P         P         02 16 23.5 -1.0
              comp=Z,5.0nm,1.0s,baz=20,slow=3.8,SNR=15
ESDC                                LR        LR        03 02 03.1
              comp=Z,795nm,20.4s,baz=32,slow=38
              comp=Z,5.0nm,1.0s
ESDC   Sonseca Array     92.30 340  P         P         02 16 23.8 -0.7
MTE    Manteigas         92.40 343 eP         P         02 16 24.2 -0.8
MTE                                i IAmb     IAmb      02 16 27.4
              comp=Z,49nm,1.8s
MTE                                eLR        LR        02 49 38.0
MTE                                i IAMs_20  IAMs_20   03 03 34.0
              comp=Z,1µm,20.0s
PCBR   Castelo Branco    92.92 343 eP         P         02 16 27.1 -0.2
PCAS   Casmilo, Conde    92.92 344 eP         P         02 16 26.8 -0.5
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CJSR   Ain Djasser       93.01 332  P         P         02 16 28.2 +0.3
CTGD   Timgad            93.11 331  P         P         02 16 29.7 +1.3
DWPF   Disney Wildern    93.14  44  IAMs_20   IAMs_20   02 55 13.6
              comp=Z,587nm,22.0s
CBBAR  Babar             93.24 330  P         P         02 16 29.0  0.0
PMRV   Marv??o           93.30 343 eP         P         02 16 29.9 +0.9
PMRV                               eLR        LR        02 50 38.9
PMRV                               i IAMs_20  IAMs_20   03 05 20.4
              comp=Z,1µm,18.0s
PSBE   So Bento          93.50 344 eP         P         02 16 29.9 -0.1
ADJB   Djebel Djouab     93.56 334  P         P         02 16 30.5 +0.1
CKTS   El Kantara        93.67 332  P         P         02 16 32.3 +1.4
ATD    Arta Tunnel       93.79 290  LR        LR        03 04 38.6
              comp=Z,25nm,18.6s,baz=22,slow=39
ATD    Arta Tunnel       93.79 290  P         P         02 16 33.9 +2.1
ATD    Arta Tunnel       93.79 290  IAMs_20   IAMs_20   03 04 27.5
              comp=Z,616nm,19.0s
PMTG   Montargil         93.82 343 eP         P         02 16 30.6 -0.8
PESTR  Estremoz          93.88 343 eP         P         02 16 30.6 -1.2
EHRZ   Djelida           93.93 335  P         P         02 16 32.1 +0.1
ABSD   Ouled Sidi Bra    93.98 333  P         P         02 16 32.0 -0.2
PARRA  Arraiolos         94.03 343 eP         P         02 16 31.1 -1.2
ABRIN  Birine            94.14 334  P         P         02 16 32.9 -0.1
CMIG   Matias Romero     94.43  60  LR        LR        02 55 34.6
              comp=Z,217nm,21.2s,baz=305,slow=33
PBAR   Barrancos         94.43 342 eP         P         02 16 33.5 -0.7
EBGR   Bougara           94.57 335  P         P         02 16 32.6 -2.4
ADCK   Dar Chioukh       94.70 333  P         P         02 16 36.2 +0.5
PBEJ   Beja              94.75 343 eP         P         02 16 35.5 -0.2
MESJ   Messejana         95.00 343 eP         P         02 16 36.0 -0.9
MESJ                                IAmb      IAmb      02 16 37.0
              comp=Z,18nm,1.0s
MESJ   Messejana         95.00 343 eP         P         02 16 36.3 -0.6
EZEK   Zmalet El Emir    95.10 334  P         P         02 16 37.5  0.0
PCVE   Castro Verde      95.17 343 eP         P         02 16 37.1 -0.5
PVAQ   Vaqueiros         95.32 343 eLR        LR        02 51 32.8
PVAQ                               i IAMs_20  IAMs_20   03 06 01.8
              comp=Z,747nm,18.0s
TEIG   Tepich            95.90  54  IAMs_20   IAMs_20   03 07 14.1
              comp=Z,371nm,19.0s
EASA   Ain Sidi Ali      95.99 334  P         P         02 16 41.7 +0.1
RKT    Rikitea           96.08 117 eP         P         02 16 41.8  0.0
              comp=Z,829nm,27.0s
RKT    Rikitea           96.08 117 eS         S         02 27 49.8 -6.7
              comp=Z,2µm,33.0s
RKT                                eSS        SS        02 34 18.1  -11
              comp=Z,2µm,29.0s
RKT    Rikitea           96.08 117 eLR        LR        02 47 41.1
              comp=Z,6µm,29.0s
MDT    Midelt            98.98 339  LR        LR        03 07 56.3
              comp=Z,586nm,19.7s,baz=34,slow=39
TGUH   Tegucigalpa,Un   101.36  57  IAMs_20   IAMs_20   02 56 16.3
              comp=Z,325nm,21.0s
GTBY   Guantanamo Bay   103.11  43  IAMs_20   IAMs_20   03 02 13.7
              comp=Z,466nm,21.0s
SDDR   Presa de Saban   105.73  41  IAMs_20   IAMs_20   03 10 00.6
              comp=Z,472nm,20.0s
KIBK   Kibwezi          107.17 284  IAMs_20   IAMs_20   03 10 52.9
              comp=Z,435nm,19.0s
SDV    Santo Domingo    114.76  45  IAMs_20   IAMs_20   03 14 58.7
              comp=Z,378nm,22.0s
TORD   Torodi Ar. Bea   115.25 326  PKP       PKiKP     02 21 54.6 -1.3
              comp=Z,4.5nm,0.6s,baz=30,slow=4.6,SNR=2.9
VNDA   Vanda            122.74 177  PKP       PKPdf     02 22 08.2 -0.1
              comp=Z,6.4nm,0.8s,baz=318,slow=4.1,SNR=17
VNDA                                PKKPbc    PKKPbc    02 32 02.1 -0.5
              comp=Z,3.9nm,0.9s,baz=187,slow=2.6,SNR=8.5
VNDA   Vanda            122.74 177            PKPdf     02 22 08.9 +0.6
DBIC   Dimbokro         123.66 330  PKP       PKPdf     02 22 11.4 -0.7
              comp=Z,17nm,0.9s,baz=54,slow=2.2,SNR=13
DBIC   Dimbokro         123.66 330            PKPdf     02 22 11.9 -0.2
BROLN  Tlhalogang       127.70 278 i P        PKiKP     02 22 20.4 +0.2
TEFE   Tefe             128.40  47 eP         PKPdf     02 22 21.7 +0.5
KHWEE  KHWEE            129.58 278 i P        PKiKP     02 22 24.2 +0.2
MAW    Mawson           129.92 210  PKP       PKPdf     02 22 22.6 +0.3
              comp=Z,5.2nm,0.8s,baz=87,slow=4.0,SNR=5.6
MAW                                 SKPbc     SKPbc     02 25 41.6 +1.4
              comp=Z,6.2nm,1.1s,baz=146,slow=2.1,SNR=3.7
XAUDM  Khaudum          130.12 285            PKPdf     02 22 24.9 +0.5
XAUDM  Khaudum          130.12 285 i P        PKiKP     02 22 26.4 +1.2
LPHEP  Lephephe         130.21 277 i P        PKiKP     02 22 25.1 -0.1
GRTLG  Ghanzi           132.13 282 i P        PKiKP     02 22 29.3 +0.1
SKOMA  Sekoma           132.30 277 i P        PKiKP     02 22 29.6 +0.2
KGCAE  Kacgae           132.43 280 i P        PKiKP     02 22 29.4 -0.3
MAKGR  Makgori          132.50 275 i P        PKPdf     02 22 29.4 +0.7
ITTB   Itaituba         133.35  37 eP         PKPdf     02 22 30.9 +0.4
BOSA   Boshof           133.89 272  PKP       PKPdf     02 22 31.2  0.0
              comp=Z,10nm,1.1s,baz=136,slow=3.6,SNR=4.3
BOSA                                SKPbc     SKPab     02 25 56.2 -2.1
              comp=Z,15nm,1.1s,baz=93,slow=3.9,SNR=5.1
LKGWB  Lokgwabe         133.94 280            PKPdf     02 22 31.6 +0.1
QSPA   South Pole Qui   135.02 180  PKP       PKPdf     02 22 32.4 +0.3
              comp=Z,16nm,0.9s,baz=13,slow=1.1,SNR=11
QSPA                                SKPab     SKPab     02 26 02.2 +0.2
              comp=Z,6.6nm,0.8s,baz=96,slow=4.9,SNR=5.2
QSPA   South Pole Qui   135.02 180            PKiKP     02 22 33.7 +0.1
NPGB   Novo Progresso   135.91  38 eP         PKPdf     02 22 35.8 +0.4
LPAZ   La Paz           136.80  61  PKP       PKPdf     02 22 38.1 +0.5
              comp=Z,4.3nm,0.8s,baz=21,slow=9.7,SNR=14
LPAZ                                SKPbc     SKPbc     02 26 06.4 +0.7
              comp=Z,4.3nm,1.0s,baz=337,slow=7.4,SNR=4.1
LPAZ   La Paz           136.80  61 eP         PKPdf     02 22 38.0 +0.4
PRPB   Parauapebas      137.31  30 eP         PKPdf     02 22 38.0 +0.1
SYO    Syowa Base       138.62 211⇓ePdiff     Pdif      02 19 52.8 +2.8
SYO    Syowa Base       138.62 211⇓epPdiff    pPdif     02 20 02.2 -3.0
SYO    Syowa Base       138.62 211⇓iPKPdf     PKPdf     02 22 39.1 +0.6
VILB   Vilhena          138.69  48            PKPdf     02 22 41.3 +0.9
VILB   Vilhena          138.69  48 eP         PKPdf     02 22 40.7 +0.3
CLDB   Colider          139.10  41 eP         PKPdf     02 22 41.6 +0.4
PDRB   Porto dos Gac    139.30  43 eP         PKPdf     02 22 42.0 +0.5
SMTB   Santa Maria do   140.58  28 eP         PKPdf     02 22 44.1 +0.2
H03N2  Juan Fernandez   140.75  90  T         T         04 59 28.8
              baz=305,slow=77,SNR=906
H03N3  Juan Fernandez   140.77  90  T         T         04 59 39.3
              baz=305,slow=77,SNR=196
H03N1  Juan Fernandez   140.77  90  T         T         04 59 31.8
              baz=305,slow=77,SNR=1334
H03S2  Juan Fernandez   140.97  91  T         T         05 00 02.8
              baz=305,slow=76,SNR=6.7
H03S3  Juan Fernandez   140.97  90  T         T         05 00 09.8
              baz=305,slow=76,SNR=3.7
NBPV   Pedro Velho      140.98   9 eP         PKPdf     02 22 45.8 +1.2
H03S1  Juan Fernandez   140.99  91  T         T         05 00 02.4
              baz=305,slow=76,SNR=5.1
SNDB   Serra Nova Dou   142.05  36 eP         PKPdf     02 22 47.2 +0.7
LCO    Las Campanas     143.98  77            PKPab     02 22 47.8 +0.5
LCO    Las Campanas     143.98  77  PKIKP     PKPab     02 22 47.8 +0.5
SHEL   Horse Pasture    144.47 318            PKPbc     02 22 49.4 +0.1
SHEL   Horse Pasture    144.47 318  PKIKP     PKPbc     02 22 49.4 +0.1
SDBA   SAO DESIDERIO    144.78  26 eP         PKPbc     02 22 50.6 +0.2
ARAG   Araguaiana, MT   145.16  39 eP         PKPab     02 22 52.0 +0.4
PP1B   Ponte de Pedra   145.34  45 eP         PKPab     02 22 53.2 +1.0
BDFB   Brasilia         146.69  33  PKPbc     PKPdf     02 22 54.9 +0.3
              comp=Z,58nm,0.8s,baz=286,slow=2.4,SNR=57
BDFB                                pPKPbc    pPKPdf    02 23 07.2 -2.9
              comp=Z,51nm,0.8s,baz=59,slow=5.9,SNR=11
BDFB   Brasilia         146.69  33  PKPdf     PKPdf     02 22 55.0 +0.4
BDQN   Bodoquena, MS    146.71  51 eP         PKPdf     02 22 54.8 +0.4
MURT   Porto Murtinho   147.20  53 eP         PKPdf     02 22 56.4 +1.3
JANB   Januaria         147.46  27 eP         PKPdf     02 22 56.2 +0.4
NVL    N'lazarevskaya   147.48 204 ePKHKP     PKPpre    02 22 51.3
NVL                                e                    02 26 20.8
NVL                                eSS        SS        02 45 25.6 +3.2
NVL                                eSSS       SSS       02 50 58.7
NVL                                 pmax      pmax
              comp=Z,127nm,1.1s
IPMB   Ipameri, GO      148.73  35 eP         PKPdf     02 22 58.2 +0.4
CMC01  Camacan, BA      149.05  19 eP         PKPdf     02 22 59.0 +0.6
TROLL  Troll, Antarti   149.16 199 ⇑P         PKPdf     02 22 57.6 +0.6
              comp=Z,241nm,0.7s
ITRB   Iturama          149.32  41 eP         PKPdf     02 23 00.8 +2.1
PMNB   Patos De Minas   149.93  33 eP         PKPdf     02 23 00.6 +0.8
PLCA   Paso Flores      150.06  96  PKP       PKPdf     02 22 59.3  0.0
              comp=Z,9.4nm,1.0s,baz=322,slow=1.2,SNR=10
PLCA                                PKPbc     PKPbc     02 23 04.6 +0.2
              comp=Z,42nm,0.9s,baz=290,slow=2.6,SNR=43
PLCA   Paso Flores      150.06  96            PKPdf     02 22 59.1 -0.2
PLCA   Paso Flores      150.06  96  PKIKP     PKPdf     02 22 59.1 -0.2
PLCA   Paso Flores      150.06  96 eP         PKPdf     02 23 00.6 +1.2
SMAI   San Martin Ant   150.11 153            PKPbc     02 23 04.1 +0.7
GUA01  Guaratinga, BA   150.17  20 eP         PKPdf     02 23 00.6 +0.5
SNAA   Sanae            150.58 197  P         PKPbc     02 23 04.5 -0.1
SNAA   Sanae            150.58 197  PKP       PKPdf     02 22 59.4 +0.2
              comp=Z,24nm,1.3s,baz=239,slow=7.9,SNR=4.2
SNAA                                PKPbc     PKPbc     02 23 04.5 -0.1
              comp=Z,52nm,0.9s,baz=167,slow=2.4,SNR=82
CPUP   Villa Florida    150.94  59  PKP       PKPdf     02 23 00.7 -0.4
              comp=Z,1.6nm,0.9s,baz=105,slow=1.5,SNR=8.0
CPUP                                PKPbc     PKPbc     02 23 06.8 +0.1
              comp=Z,8.8nm,0.9s,baz=162,slow=1.7,SNR=30
SJMB   Sao Joao De Ma   151.84  23 eP         PKPdf     02 23 03.0 +0.4
VNA2   Neumayer--Watz   152.07 195  P         PKPbc     02 23 08.0  0.0
              baz=92,slow=3.6
VNA3   Neumayer Olymp   152.21 194  P         PKPbc     02 23 08.2 -0.1
VNA1   Neumayer--Stat   152.46 195  P         PKPbc     02 23 09.1 +0.2
PTGB   Pitanga          152.69  49 eP         PKPdf     02 23 03.4 -0.4
FRTB   Fartura          152.82  43 eP         PKPdf     02 23 05.0 +1.0
CPSB   Cacapava Do Su   156.24  59 eP         PKPdf     02 23 09.1 +0.6
```

CATAC ***05*** *02:28:00.8±0.4, 13°N±3°×8°8W±°, h38^{km}±6^{km}, M3.7/27, MLv3.7/27, Error ellipse: s-maj=6.3km s-min=1.8km az=26.7, confirmed*

UCR ***05*** *02:28:01.6±1.2, 12°.43N×88°.17W, h20^{km}±12^{km}, MW3.6*

SNET ***05*** *02:28:04.1±2.2, 12°.94N×88°.33W, h60^{km}, ML3.4*

ISC 05 02:27:59.8±1.4**, 12°.58N**±0°.04×**88°.33W**±0°.03**, h26**^{km}±13^{km}**,**
n73, σ1^{s}.04/90**, 1D, Off coast of central America**

```
Code   Station Name       Δ°   AZ°   Phase ID            Time      Res
                                   Op        ISC       h  m  s    ISC
CNCH   Conchagua         0.85  35 eP         Pb        02 28 16.1 +0.1
CNCH                              eS         Sn        02 28 29.8 +1.9
CNCH   Conchagua         0.85  35  P         Pb        02 28 16.0 -0.1
CNCH   Conchagua         0.85  35  S         Sb        02 28 27.4 +0.3
CSGN   Cosiguina Volc    0.85  62  P         Pn        02 28 16.2  0.0
CSGN                               S         Sn        02 28 27.5 -0.4
CSGN   Cosiguina Volc    0.85  62 eP         Pb        02 28 16.0  0.0
CSGN                              eS         Sn        02 28 28.4 +0.4
BLLM   Bellamira         0.87   6 eP         Pb        02 28 16.4 +0.1
PACA   Pacayal           0.89   0  S         Sn        02 28 29.1 +0.2
PACA   Pacayal           0.89   0  P         Pn        02 28 16.8  0.0
CNRM   Centro Naciona    0.91  10  S         Sn        02 28 29.6 +0.4
CNRM   Centro Naciona    0.91  10  P         Pn        02 28 16.8 -0.1
POTN   Potosi Cosigui    0.91  62  P         Pb        02 28 16.9 -0.1
POTN                               S         Sn        02 28 29.1 -0.1
POTN   Potosi Cosigui    0.91  62⇓eP         Pn        02 28 16.6 -0.3
POTN                              eS         Sn        02 28 29.4 +0.3
TECO   Alcaldia de Te    1.05 335  S         Sn        02 28 31.7 -1.1
TECO   Alcaldia de Te    1.05 335  P         Pn        02 28 18.3 -0.7
UESV   Universidad de    1.15 337  P         Pn        02 28 20.0 -0.2
UESV   Universidad de    1.15 337  S         Sn        02 28 34.4 -0.7
SCLA   Alcaldia de Sa    1.19 341  S         Sn        02 28 36.3 +0.2
SCLA   Alcaldia de Sa    1.19 341  P         Pn        02 28 21.2 +0.4
CRIN   San Cristobal     1.26  84  P         Pn        02 28 22.0 +0.2
CRIN   San Cristobal     1.26  84 eP         Pb        02 28 22.3 -0.6
CRIN                              eS         Sb        02 28 38.7  0.0
PAVA   Las Pavas         1.28 332  S         Sn        02 28 38.4  0.0
PAVA   Las Pavas         1.28 332  P         Pn        02 28 22.1  0.0
PANCS  Alcalda de        1.32 321  S         Sn        02 28 39.0 -0.5
PKGN   Cerro Pekin       1.32  86  P         Pn        02 28 22.7 +0.1
PKGN                               S         Sb        02 28 39.8 -0.8
LOMA   Loma Larga        1.34 322  P         Pn        02 28 23.1 +0.1
LOMA   Loma Larga        1.34 322  S         Sn        02 28 38.5 -1.6
LBRS   Las Brisas        1.35 329 eP         Pn        02 28 23.5 +0.4
UDBS   Universidad Do    1.39 325  S         Sn        02 28 40.9 -0.3
IGN    Direccin Gen      1.40 324  S         Sn        02 28 40.9 -0.5
UTEC   Universidad Te    1.40 323  S         Sn        02 28 41.1 -0.4
UTEC   Universidad Te    1.40 323  P         Pn        02 28 23.6 -0.2
ALEN   Leon              1.43  95  P         Pn        02 28 24.1  0.0
ALEN   Leon              1.43  95  S         Sn        02 28 41.5 -0.6
UEES   Universidad Ev    1.44 322  S         Sn        02 28 42.0 -0.4
UEES   Universidad Ev    1.44 322  P         Pn        02 28 24.1 -0.2
QUEN   Al S del Volca    1.44  89  P         Pn        02 28 24.4 +0.1
QUEN                               S         Sn        02 28 42.5  0.0
TEL3   Telica 3          1.45  90  P         Pn        02 28 24.2 -0.2
BOQS   Boqueron          1.48 321 eP         Pn        02 28 25.1 +0.2
PMON   Piamonte          1.48 320  P         Pn        02 28 24.9  0.0
PMON   Piamonte          1.48 320  S         Sn        02 28 43.3 -0.3
POLN   Al Sur del Vol    1.48  87  P         Pn        02 28 24.8 -0.1
POLN                               S         Sn        02 28 42.9 -0.5
JAYA   Jayaque - finc    1.53 315  S         Sn        02 28 43.3 -1.5
JAYA   Jayaque - finc    1.53 315  P         Pn        02 28 26.7 +1.0
CNGA   Al SSO del Vol    1.59  93  P         Pn        02 28 26.1 -0.3
CNGA                               S         Sn        02 28 46.2  0.0
CNGN   Cerro Negro       1.59  93  S         Sn        02 28 46.9 +0.6
CNGN   Cerro Negro       1.59  93  P         Pn        02 28 26.2 -0.2
CNGN   Cerro Negro       1.59  93 eP         Pn        02 28 26.0 -0.5
CNGN                              eS         Sb        02 28 47.0 -1.4
COPN   Copaltepe         1.74 103  P         Pn        02 28 28.2 -0.2
COPN   Copaltepe         1.74 103 eP         Pn        02 28 28.3 -0.1
COPN                              eS         Sn        02 28 48.3 -1.5
MOMN   Momotombo         1.76  95  P         Pn        02 28 28.3 -0.3
CEVE   Cerro Verde       1.77 315  S         Sn        02 28 51.0 +0.2
MOM3   MOM3              1.77  92  P         Pn        02 28 28.6 -0.2
MOM3                               S         Sn        02 28 50.1 -0.4
TGUH   Tegucigalpa,Un    1.80  35  P         Pn        02 28 29.9 +0.6
MOM2   El Cardon         1.81  94  P         Pn        02 28 29.4 +0.1
MOM2                               S         Sn        02 28 51.5 +0.1
NUBE   Las Nubes         1.93 313  S         Sn        02 28 53.8 -0.9
NUBE   Las Nubes         1.93 313  P         Pn        02 28 31.8 +0.6
LIMN   Finca el Limon    1.98  76  P         Pn        02 28 31.4 -0.3
LIMN                               S         Sn        02 28 55.4 -0.3
YUSH   Yuscaran          1.99  46  P         Pn        02 28 32.4 +0.4
YUSH   Yuscaran          1.99  46  S         Sn        02 28 54.6 -1.5
FAME   Alcaldia de Sa    2.07 308  S         Sn        02 28 57.3 -0.6
MTO3   Montecristo       2.07 331  S         Sn        02 28 58.5 +0.3
MTO3   Montecristo       2.07 331  P         Pn        02 28 33.6 +0.5
RCON   San Juan de Ri    2.30  67  P         Pn        02 28 36.6 +0.3
RCVN   Varillal2         2.31  64  P         Pn        02 28 36.7 +0.3
MATN   Matagalpa         2.37  81  P         Pn        02 28 36.3 -0.9
SAJU   San Juanillo,     3.58 134 eP         Pn        02 28 54.7 +1.0
SAJU                              eS         Sn        02 29 31.0 -4.2
JUD3   Juan Diaz 3       3.64 131 eP         Pn        02 28 56.7 +2.2
CUI    Cuipilapa         3.64 121 eP         Pn        02 28 56.1 +1.5
JCR1   Jicaral           4.16 130 eP         Pn        02 29 03.6 +1.9
JCR1                              eS         Sn        02 29 47.1 -2.5
PIEC   Cerro El Cedra    5.20 124 eP         Pn        02 29 19.4 +3.2
DRK0   Durika            5.98 123 eP         Pn        02 29 29.9 +3.0
PIRO   Carate, Puerto    6.43 130 eP         Pn        02 29 34.5 +1.7
ALCO   Alturas Coton,    6.49 123 eP         Pn        02 29 36.8 +2.8
```

NEIC 05 02:42:06.8±1.6**, 27°.40S**±0°.07×**67°.7W**±0°.1**, h185**^{km}±13^{km}**,**
mb4.2/5**, Error ellipse: s-maj=16.2km s-min=10.2km**
az=104.0, Catamarca Province

```
Code   Station Name       Δ°   AZ°   Phase ID            Time      Res
                                   Op        ISC       h  m  s    ISC
AC02   Maricunga         1.38 294              Pn      02 42 38.3 -0.4
AC02                               Sn          Sn      02 43 02.4 -0.8
GO03   Copiapo           2.24 264              Pn      02 42 47.5 +0.6
GO03                               Sn          Sn      02 43 18.0 -0.1
AC06   Mina Casimiro     2.34 270              Pn      02 42 48.5 +0.4
AC05   El Transito       2.67 237              Pn      02 42 52.8 +0.9
GO02   Mina Guanaco      2.79 323              Pn      02 42 54.3 +0.8
AC01   Pan de Azucar     2.86 295      Pn      Pn      02 42 54.9 +0.8
AC04   Llanos de Chal    3.08 254              Pn      02 42 57.2 +0.6
LCO    Las Campanas      3.08 238              Pn      02 42 57.5 +0.6
CO01   Juntas del Tor    3.31 219              Pn      02 43 00.9 +1.2
PB14   IPOC Station P    3.67 318              Pn      02 43 04.4 +0.2
GO04   Tololo Observa    3.87 224              Pn      02 43 06.9 +0.3
CO05   La Serena         3.98 230      Pn      Pn      02 43 07.7 -0.2
CO03   El Pedregal       4.30 216              Pn      02 43 12.2 +0.3
CO06   Fray Jorge        4.73 225      Pn      Pn      02 43 16.2 -1.2
CO02   Combarbal         4.75 216      Pn      Pn      02 43 17.7 -0.1
PB06   IPOC Station P    4.97 340              Pn      02 43 20.9 +0.2
PB05   IPOC Station P    5.06 333              Pn      02 43 21.6 -0.1
PB03   IPOC Station P    5.64 340              Pn      02 43 29.1 -0.3
PB09   IPOC Station P    5.75 346              Pn      02 43 30.9 +0.1
PB07   IPOC Station P    5.98 340              Pn      02 43 33.4 -0.5
PB02   IPOC Station P    6.37 341              Pn      02 43 38.2 -0.7
PB01   IPOC Station P    6.53 345              Pn      02 43 40.1 -0.8
MT02   Curacav           6.54 206      Pn      Pn      02 43 39.6 -1.4
MT01   Popeta            7.13 204      Pn      Pn      02 43 47.0 -1.6
HMBC   Humberstone       7.36 344      Pn      Pn      02 43 50.9 -1.0
PB11   IPOC Station P    7.81 346      Pn      Pn      02 43 56.1 -1.7
TRQA   Tornquist        11.67 157      Pn      Pn      02 44 45.8 -2.0
ITAB   Concordia        13.86  93              P       02 45 17.4 -0.6
VILB   Vilhena          16.00  28              P       02 45 40.7 -1.1
VILB                               IAmb        IAmb    02 45 53.0
              comp=Z,6.7nm,1.0s
LL02   Futaleuf         16.11 191      P       P       02 45 40.5 -2.2
LL02                               IAmb        IAmb    02 45 57.3
              comp=Z,7.9nm,1.0s
```

EFI	**East Falkland**	**25.32**	**166**	P	P	02 47 15.6	-0.6
DBIC	**Dimbokro**	**69.51**	**71**	P	P	02 52 55.3	-0.4
DBIC				IAmb	IAmb	02 53 04.3	
	comp=Z,15nm,1.4s						
TORD	**Torodi Ar. Bea**	**78.40**	**69**	P	P	02 53 45.5	-1.7

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*SOME **05** 02:46:26.2, 41°.63N×81°.67E, h10^{km}, MS4.5*

*IDC **05** 02:46:26.7±0.5, 41°.71N×81°.70E, h0^{km}, mb4.7/37, mbtmp4.6/45, ML3.8/8, MS4.2/29, Error ellipse: s-maj=11.2km s-min=8.6km az=28.0*

*MOS **05** 02:46:27.9±0.9, 41°.69N×81°.75E, h19^{km}, mb5.2/48, MS4.6/12, Error ellipse: s-maj=5.2km s-min=3.3km az=39.8*

*NNC **05** 02:46:28.9±1.1, 41°.70N×81°.61E, h0^{km}, mb5.4, mpv5.2, Error ellipse: s-maj=8.3km s-min=6.4km az=166.0*

*BJI **05** 02:46:28.3, 41°.69N×81°.67E, h8^{km}, mB5.3/17, mb4.6/41, ML4.9/11, Ms4.9/48, Ms7 4.7/47*

*NEIC **05** 02:46:30.4±1.1, 41°.76N±0°.08×81°.7E±0°.1, h19^{km}±4^{km}, mb5.2/214, Mww4.8/11, Error ellipse: s-maj=12.3km s-min=9.4km az=133.0*

*GCMT **05** 02:46:31.4±0.3, 41°.68N±0°.02×81°.65E±0°.04, h23^{km}±1^{km}, MW4.9/83, Moment Tensor Solution. s33,c36; s83,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.79±.18; $M_{\theta\theta}$-2.28±.11; $M_{\phi\phi}$-0.50±.10; $M_{r\theta}$1.12±.15; $M_{\theta\phi}$-0.57±.06; $M_{\phi r}$0.55±.18; Best double couple: $M_0$2.90000×10^{16} NP1:ϕ_s257.00000°, δ32.00000°, λ96.00000°. NP2: ϕ_s70.00000°, δ58.00000°, λ86.00000°. Principal axes: T 3.0780, Plg77.0000°, Azm328.0000°; N -0.3500, Plg3.0000°, Azm72.0000°; P -2.7220, Plg13.0000°, Azm163.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **05** 02:46:35.4, 41°.19N×80°.88E, h33^{km}, mb5.1*

ISC 05 02:46:29.1±0.5, **41°.74N**±0°.03×**81°.67E**±0°.02, **h15**^{km}±3^{km}, **h16**^{km}**:pP-P, n827,** σ**1.**^{s}**57**/811, **mb5.1**/229, **MS4.5**/55, **41C-36D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WUS	**Wushi**	**1.92**	**254**		**Pn**	**02 47 02.3**	**+1.0**
KTMS	**Ketmen**	**1.96**	**331**	Pg	**Pb**	**02 47 04.9**	**+0.3**
	582nm,0.5s						
KTMS				Lg	Lg	02 47 32.9	
	2µm,0.4s						
KTMS	**Ketmen**	**1.96**	**331**	*e*P	**Pb**	**02 47 04.9**	**+0.3**
	363nm,0.2s						
KTMS				*e*S	**Sg**	**02 47 32.9**	**+0.7**
	2µm,0.5s						
SHLS	**Shalkode**	**2.16**	**312**	Pg	**Pn**	**02 47 04.5**	**-0.1**
	5µm,0.5s						
SHLS				Lg	Lg	02 47 33.3	
	13µm,0.4s						
SHLS	**Shalkode**	**2.16**	**312**	*e*P	**Pn**	**02 47 04.2**	**-0.5**
	5µm,0.5s						
SHLS				*e*S	**Sn**	**02 47 31.4**	**+0.2**
	13µm,0.4s						
SHLS	**Shalkode**	**2.16**	**312**	*e*Pn	**Pn**	**02 47 04.3**	**-0.5**
SHLS				*e*Sn	**Sn**	**02 47 30.1**	**-1.1**
SHLS	**Shalkode**	**2.16**	**312**	*e*PN	**Pn**	**02 47 04.2**	**-0.5**
SHLS				*e*		02 47 30.0	
PDGK	**Podgornoye**	**2.26**	**315**	⇑Pn	**Pb**	**02 47 08.4**	**-1.4**
	3µm,0.7s						
PDGK				⇑Sn	**Sb**	**02 47 37.8**	**+0.3**
	13µm,1.1s						
PDGK	**Podgornoye**	**2.26**	**315**	PN	**Pb**	**02 47 08.3**	**-1.4**
PDGK						02 47 39.1	
UZB	**Uzynbulak**	**2.41**	**307**	Pg	**Pb**	**02 47 12.2**	**0.0**
	2µm,0.6s						
UZB				Lg	Lg	02 47 45.3	
	2.2nm,0.7s						
UZB	**Uzynbulak**	**2.41**	**307**	*e*P	**Pb**	**02 47 12.2**	**0.0**
	2µm,0.6s						
UZB				*e*S	**Sg**	**02 47 45.3**	**-1.3**
	2.2nm,0.7s						
UZB	**Uzynbulak**	**2.41**	**307**	*e*Pn	**Pb**	**02 47 10.6**	**-1.7**
UZB				*e*Pg	**Pg**	**02 47 13.3**	**-2.0**
UZB				*e*Sn	**Sb**	**02 47 41.7**	**-0.1**
UZB	**Uzynbulak**	**2.41**	**307**	*e*PN	**Pb**	**02 47 10.5**	**-1.7**
UZB				*e*		02 47 41.6	
PRZ	**Przheval'sk**	**2.54**	**288**		**Pn**	**02 47 12.5**	**+2.5**
PRZ	**Przheval'sk**	**2.54**	**288**	PN	**Pn**	**02 47 12.5**	**+2.5**
SATY	**Saty**	**2.75**	**300**	Pg	**Pb**	**02 47 18.4**	**+0.3**
	1µm,0.7s						
SATY				Lg	Lg	02 47 55.8	
	7µm,0.8s						
SATY	**Saty**	**2.75**	**300**	*e*Pn	**Pn**	**02 47 15.2**	**+2.4**
SATY				*e*Pg	**Pb**	**02 47 19.2**	**+1.2**
SATY				*e*Sn	**Sb**	**02 47 49.9**	**-1.7**
SATY	**Saty**	**2.75**	**300**	*e*PN	**Pn**	**02 47 15.2**	**+2.4**
SATY				*e*		02 47 19.2	
SATY				*e*		02 47 49.8	
KPKS	**Kokpek**	**2.79**	**309**	Pg	**Pb**	**02 47 19.0**	**+0.2**
	1.5nm,0.5s						
KPKS				Lg	Lg	02 47 57.3	
	2µm,0.7s						
TARG	**Taragay, Kyrgy**	**2.89**	**271**		**Pn**	**02 47 16.8**	**+1.8**
TARG	**Taragay, Kyrgy**	**2.89**	**271**	PN	**Pn**	**02 47 16.8**	**+1.8**
KURS	**Kuram**	**3.12**	**305**	Pg	**Pb**	**02 47 24.9**	**+0.7**
	1µm,0.9s						
KURS				Lg	Lg	02 48 07.0	
	4µm,1.0s						
KNOS	**Konyrlen**	**3.19**	**326**	Pg	**Pb**	**02 47 27.1**	**+1.6**
	821nm,0.7s						
KNOS				Lg	Lg	02 48 11.2	
	3µm,0.5s						
BLB	**Baldybastay**	**3.32**	**316**	Pg	**Pb**	**02 47 29.4**	**+1.6**
	599nm,0.4s						
BLB				Lg	Lg	02 48 15.7	
	2µm,0.7s						
KDJ	**Kajisay**	**3.37**	**278**		**Pn**	**02 47 23.4**	**+2.0**
KDJ	**Kajisay**	**3.37**	**278**	PN	**Pn**	**02 47 23.4**	**+2.0**
KOTS	**Kotyrbulak**	**3.68**	**295**	Pg	**Pb**	**02 47 35.1**	**+1.2**
	560nm,0.5s						
KOTS				Lg	Lg	02 48 25.1	
	5µm,0.6s						
KOTS	**Kotyrbulak**	**3.68**	**295**	*e*P	**Pb**	**02 47 35.1**	**+1.2**
	560nm,0.5s						
KOTS				*e*S	**Sg**	**02 48 25.1**	**-2.3**
	5µm,0.6s						
MDOK	**Medeo**	**3.70**	**294**	Pg	**Pb**	**02 47 35.8**	**+1.6**
	586nm,0.8s						
MDOK				Lg	Lg	02 48 25.8	
	1µm,0.7s						
MDOK	**Medeo**	**3.70**	**294**	*e*Pn	**Pn**	**02 47 28.3**	**+2.4**
MDOK				*e*Pg	**Pb**	**02 47 36.5**	**+2.2**
MDOK				*e*Sn	**Sn**	**02 48 13.4**	**+4.1**
MDOK				*e*Lg	Lg	02 48 28.5	
MDOK	**Medeo**	**3.70**	**294**	*e*PN	**Pn**	**02 47 28.2**	**+2.4**
MDOK				*e*		02 47 36.5	
MDOK				*e*		02 48 13.3	
MDOK				*e*		02 48 28.5	
TNSS	**Tian-Shan**	**3.73**	**292**	Pg	**Pb**	**02 47 35.5**	**+0.6**
	139nm,0.5s						
TNSS				Lg	Lg	02 48 25.1	
	942nm,0.6s						
TNSS	**Tian-Shan**	**3.73**	**292**	*e*P	**Pb**	**02 47 35.5**	**+0.6**
	139nm,0.5s						
TNSS				*e*S	**Sg**	**02 48 25.1**	**-3.8**
	942nm,0.6s						
TNSS	**Tian-Shan**	**3.73**	**292**	*e*Pn	**Pn**	**02 47 28.4**	**+1.9**
TNSS				*e*Pg	**Pb**	**02 47 36.9**	**+2.0**
TNSS				*e*Lg	Lg	02 48 29.2	
TNSS	**Tian-Shan**	**3.73**	**292**	*e*PN	**Pn**	**02 47 28.4**	**+1.9**
TNSS				*e*		02 47 36.8	
TNSS				*e*		02 48 29.2	
ARXS	**Arharly**	**3.75**	**313**	Pg	**Pb**	**02 47 35.3**	**+0.3**
	205nm,0.4s						
ARXS	**Arharly**	**3.75**	**313**	*e*P	**Pb**	**02 47 35.3**	**+0.3**
ARXS				*e*S	**Sg**	**02 48 25.8**	**-3.6**
KNDC	**Almaty**	**3.78**	**295**	⇑Pn	**Pn**	**02 47 28.9**	**+2.1**
	3µm,1.0s						
KNDC				⇑Lg	Lg	02 48 29.2	
	7µm,0.7s						
KNDC	**Almaty**	**3.78**	**295**	PN	**Pn**	**02 47 30.1**	**+3.2**
AAA	**Alma-Ata**	**3.81**	**294**	Pg	**Pb**	**02 47 37.8**	**+1.7**
AAA				Lg	Lg	02 48 29.0	
AAA	**Alma-Ata**	**3.81**	**294**	*e*P	**Pb**	**02 47 37.8**	**+1.7**
	1µm,0.6s						
AAA				*e*S	**Sg**	**02 48 29.0**	**-2.4**
	134nm,0.9s						
AAA	**Alma-Ata**	**3.81**	**294**	*e*Pn	**Pn**	**02 47 29.9**	**+2.6**
AAA				*e*Pg	**Pb**	**02 47 38.5**	**+2.4**
AAA				*e*Lg	Lg	02 48 32.1	
AAA	**Alma-Ata**	**3.81**	**294**	*e*PN	**Pn**	**02 47 29.9**	**+2.6**
AAA				*e*		02 47 38.4	
TDK	**Taldyqorghan**	**4.03**	**325**	Pg	**Pb**	**02 47 42.4**	**+2.5**
	3µm,0.9s						
TDK				Lg	Lg	02 48 37.4	
	11nm,1.1s						
TDK	**Taldyqorghan**	**4.03**	**325**	*e*P	**Pb**	**02 47 42.4**	**+2.5**
	3µm,0.9s						
TDK				*e*S	**Sg**	**02 48 37.4**	**-1.2**
	11nm,1.1s						
TDK	**Taldyqorghan**	**4.03**	**325**	*e*Pn	**Pn**	**02 47 32.8**	**+2.4**
TDK				*e*Pg	**Pb**	**02 47 42.7**	**+2.9**
TDK				*e*Lg	Lg	02 48 39.4	
TDK	**Taldyqorghan**	**4.03**	**325**	*e*PN	**Pn**	**02 47 32.7**	**+2.4**
TDK				*e*		02 47 42.7	
MTBS	**Maitube**	**4.12**	**291**	Pg	**Pb**	**02 47 42.9**	**+1.6**
	313nm,0.5s						
MTBS				Lg	Lg	02 48 37.8	
	2µm,0.8s						
MTBS	**Maitube**	**4.12**	**291**	*e*P	**Pb**	**02 47 42.9**	**+1.6**
	313nm,0.5s						
MTBS				*e*S	**Sg**	**02 48 37.8**	**-3.5**
	2µm,0.8s						
KTBS	**Karatobe**	**4.17**	**300**	Pg	**Pb**	**02 47 45.4**	**+3.3**
	570nm,0.8s						
KTBS				Lg	Lg	02 48 42.3	
	0.4nm,0.3s						
BOOM	**Boomskoye usch**	**4.33**	**282**		**Pn**	**02 47 35.6**	**+1.1**
BOOM	**Boomskoye usch**	**4.33**	**282**	PN	**Pn**	**02 47 35.6**	**+1.1**
KST	**Kastek**	**4.42**	**289**	Pg	**Pb**	**02 47 48.7**	**+2.2**
	1µm,0.8s						
KST				Lg	Lg	02 48 48.0	
	3µm,0.8s						
KST	**Kastek**	**4.42**	**289**	*e*P	**Pb**	**02 47 48.7**	**+2.2**
	1µm,0.8s						
KST				*e*S	**Sg**	**02 48 48.0**	**-3.0**
	3µm,0.8s						
KUU	**Kurty**	**4.47**	**301**	Pg	**Pb**	**02 47 50.5**	**+3.2**
	519nm,0.8s						
KUU				Lg	Lg	02 48 51.0	
	2µm,1.0s						
KUU	**Kurty**	**4.47**	**301**	*e*P	**Pb**	**02 47 50.5**	**+3.2**
	519nm,0.8s						
KUU				*e*S	**Sg**	**02 48 51.0**	**-1.6**
	2µm,1.0s						
DGS	**Degeres**	**4.61**	**291**	Pg	**Pb**	**02 47 50.9**	**+1.2**
	792nm,0.6s						
DGS				Lg	Lg	02 48 52.1	
	2µm,0.6s						
TKM2	**Tokmak 2**	**4.65**	**287**	P	**Pn**	**02 47 41.0**	**+2.0**
	SNR=93						
KRBS	**Karabastau**	**4.83**	**296**	Pg	**Pb**	**02 47 57.2**	**+3.8**
	319nm,0.7s						
KRBS				Lg	Lg	02 49 02.6	
	689nm,0.8s						
KSH	**Kashi**	**4.87**	**245**	Pn	Pb	02 47 50.2	-4.0
KSH				Sn	**Sb**	**02 49 00.2**	**+7.6**
KSH				smax	smax		
	comp=N,3µm,0.8s						
KSH				smax	smax		
	comp=E,4µm,1.0s						
WMQ	**Urumqi**	**4.90**	**63**	Pn	**Pn**	**02 47 47.0**	**+4.7**
WMQ				Sn	**Sn**	**02 48 45.7**	**+7.0**
WMQ				smax	smax		
	comp=N,840nm,1.1s						
WMQ				smax	smax		
	comp=E,810nm,1.3s						
MAKZ	**Makanchi**	**5.07**	**2**		**Pn**	**02 47 46.2**	**+1.7**
MAKZ	**Makanchi**	**5.07**	**2**	⇓Pn	**Pn**	**02 47 46.6**	**+2.0**
	271nm,1.1s						
MAKZ				Sn	**Sn**	**02 48 47.0**	**+4.1**
MAKZ				⇓Lg	Lg	02 49 11.0	
	3µm,1.8s						
MAKZ	**Makanchi**	**5.07**	**2**	PN	**Pn**	**02 47 46.3**	**+1.7**
MK31	**Makanchi Array**	**5.07**	**5**	⇑Pn	**Pn**	**02 47 46.9**	**+2.3**
	94nm,0.6s,baz=190,slow=13,SNR=1601						
MK31				Sn	**Sn**	**02 48 47.6**	**+4.8**
	baz=188,slow=22						
MK31				⇓Lg	Lg	02 49 10.5	
	323nm,0.5s,baz=187,slow=30						
MK31	**Makanchi Array**	**5.07**	**5**	*c i*PN	**Pn**	**02 47 46.9**	**+2.3**
MKAR	**Makanchi Array**	**5.07**	**5**	Pn	**Pn**	**02 47 47.0**	**+2.4**
	9.5nm,0.3s,baz=190,slow=13,SNR=179						
MKAR				Sn	**Sn**	**02 48 46.5**	**+3.6**
	38nm,0.3s,baz=187,slow=22,SNR=5.7						
MKAR				Lg	Lg	02 49 08.0	
	83nm,0.3s,baz=185,slow=31,SNR=12						
	28nm,0.4s						
MKAR	**Makanchi Array**	**5.07**	**5**		**Pn**	**02 47 46.6**	**+2.1**
KBK	**Karagaybulak**	**5.07**	**283**	P	**Pn**	**02 47 47.0**	**+2.2**
	SNR=152						
CHMS	**Chumysh**	**5.27**	**286**	P	**Pn**	**02 47 49.3**	**+1.9**
	SNR=16						
FRU1	**Bishkek**	**5.33**	**284**		**Pn**	**02 47 49.8**	**+1.6**
FRU1	**Bishkek**	**5.33**	**284**	PN	**Pn**	**02 47 49.8**	**+1.6**
UCH	**Uchtor**	**5.35**	**278**	P	**Pn**	**02 47 50.4**	**+1.5**
	SNR=27						
AAK	**Ala-Archa**	**5.40**	**282**	P	**Pn**	**02 47 51.6**	**+2.3**
	SNR=42						
AAK	**Ala-Archa**	**5.40**	**282**	Pn	**Pn**	**02 47 51.7**	**+2.3**
	6.3nm,0.3s,baz=113,slow=8.4,SNR=71						
AAK				Pg	**Pb**	**02 48 06.3**	**+3.0**
	19nm,0.3s,baz=113,slow=11,SNR=37						
AAK				Lg	Lg	02 49 18.2	
	74nm,0.3s,baz=360,slow=19,SNR=6.7						
	20nm,0.4s						
AAK	**Ala-Archa**	**5.40**	**282**		**Pn**	**02 47 50.6**	**+1.3**
AAK	**Ala-Archa**	**5.40**	**282**	⇑Pn	**Pn**	**02 47 51.4**	**+2.1**
	17nm,0.7s						
AAK				⇓Pg	**Pb**	**02 48 06.7**	**+3.4**
	1µm,1.2s						
AAK				⇑Lg	Lg	02 49 20.0	
	3µm,1.2s						
AAK	**Ala-Archa**	**5.40**	**282**	*c i*PN	**Pn**	**02 47 51.1**	**+1.8**
AAK				pmax	pmax		
	comp=Z,50nm,1.3s						
SGDS	**Sogindy**	**5.47**	**291**	*e*P	**Pn**	**02 47 51.8**	**+1.7**
SGDS				*e*Pg	**Pb**	**02 48 08.8**	**+4.4**
ARLS	**Aral**	**5.49**	**274**	PN	**Pn**	**02 47 52.6**	**+2.1**
USP	**Ospenovka**	**5.51**	**288**	P	**Pn**	**02 47 52.3**	**+1.6**
	SNR=18						
EKS2	**Erkin-Say**	**5.93**	**282**	P	**Pn**	**02 47 59.7**	**+3.2**
	SNR=6.2						
ZSN	**Zaisan**	**6.15**	**21**	*e*P	**Pg**	**02 48 23.0**	**-3.7**
	comp=Z,95nm,0.8s						
ZSN				*e*S	**Sg**	**02 49 46.6**	**+0.3**
	comp=Z,914nm,1.8s						
ZSN	**Zaisan**	**6.15**	**21**	*e*P	**Pn**	**02 48 00.2**	**+0.9**
ZSN				*e*S	**Sn**	**02 49 11.3**	**+1.9**
ZSN				*e*LQ	LQ	02 49 47.6	
ZSN	**Zaisan**	**6.15**	**21**	*e*PN	**Pn**	**02 48 00.2**	**+0.9**
ZSN				*e*S	**Sn**	**02 49 11.2**	**+1.9**
BTLS	**Baital**	**6.46**	**303**	Lg	Lg	02 49 51.8	
	comp=Z,177nm,0.9s						
BTLS	**Baital**	**6.46**	**303**	*e*P	**Pb**	**02 48 25.6**	**+4.5**
	comp=Z,212nm,0.8s						
BTLS				*e*S	**Sg**	**02 49 51.8**	**-4.4**
	comp=Z,177nm,0.9s						
BTLS	**Baital**	**6.46**	**303**	*e*P	**Pn**	**02 48 04.5**	**+0.9**
BTLS	**Baital**	**6.46**	**303**	*e*PN	**Pn**	**02 48 04.4**	**+0.9**
ARSB	**Arslanbob**	**6.53**	**269**		**Pn**	**02 48 05.5**	**+0.7**
ARSB	**Arslanbob**	**6.53**	**269**	PN	**Pn**	**02 48 05.5**	**+0.7**
OHH	**Osh**	**6.81**	**263**	PN	**Pn**	**02 48 12.6**	**+4.0**
ARK	**Arkit**	**7.25**	**274**	P	**Pn**	**02 48 16.6**	**+1.9**
DZA	**Taraz**	**7.75**	**282**	*e*P	**Pn**	**02 48 22.8**	**+1.5**
DZA	**Taraz**	**7.75**	**282**	*e*P	**Pn**	**02 48 22.8**	**+1.5**
DRK	**Karamyk**	**7.84**	**256**		**Pn**	**02 48 25.2**	**+2.4**
DRK	**Karamyk**	**7.84**	**256**	P	**Pn**	**02 48 25.2**	**+2.4**
TRKS	**Terek-Say**	**7.89**	**272**	P	**Pn**	**02 48 25.6**	**+2.2**
ALCI	**Alchi Leh**	**8.31**	**207**	*e*P	**Pn**	**02 48 30.7**	**+1.3**
KK31	**Karatay Array**	**8.36**	**283**		**Pn**	**02 48 31.1**	**+1.3**
KK31	**Karatay Array**	**8.36**	**283**	Pn	**Pn**	**02 48 31.0**	**+1.3**
	comp=Z,5.5nm,0.8s,baz=100,slow=12,SNR=33						
KK31				Pg	Pb	02 49 01.2	+7.6
	comp=Z,96nm,0.7s,baz=92,slow=15,SNR=4.1						
KK31				⇓Lg	Lg	02 50 53.4	
	comp=Z,765nm,0.9s,baz=91,slow=29						
KK31	**Karatay Array**	**8.36**	**283**	*i* P	**Pn**	**02 48 31.0**	**+1.3**
KKAR	**Karatay Array**	**8.36**	**283**		**Pn**	**02 48 31.0**	**+1.2**
KKAR	**Karatay Array**	**8.36**	**283**	P	**Pn**	**02 48 31.0**	**+1.2**
IUG	**Iuzhnay**	**8.68**	**277**	*e*P	**Pn**	**02 48 35.7**	**+1.4**
IUG				*e*LQ	LQ	02 51 09.8	
IUG	**Iuzhnay**	**8.68**	**277**	*e*P	**Pn**	**02 48 35.6**	**+1.4**
MANEM	**Manem**	**8.77**	**245**		**Pn**	**02 48 38.3**	**+2.7**
BRLS	**Borolday**	**8.85**	**282**	*e*P	**Pn**	**02 48 39.4**	**+2.9**
BRLS				*e*S	**Sn**	**02 50 21.2**	**+5.3**
BRLS				*e*LQ	LQ	02 51 18.3	
BRLS	**Borolday**	**8.85**	**282**	*e*P	**Pn**	**02 48 39.4**	**+2.9**
BRLS				*e*S	**Sn**	**02 50 21.2**	**+5.3**
DGZ	**Jazzator, Alta**	**8.92**	**25**	⇑*e*P	**Pn**	**02 48 39.4**	**+1.9**
CHM	**Chimkent**	**9.00**	**278**	*e*P	**Pn**	**02 48 39.9**	**+1.4**
CHM	**Chimkent**	**9.00**	**278**	*e*P	**Pn**	**02 48 39.9**	**+1.4**
GAR	**Garm**	**9.09**	**256**		**Pn**	**02 48 40.3**	**+0.5**
KURBB	**Kurchatov Arra**	**9.14**	**347**	Pn	**Pn**	**02 48 42.0**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=174,slow=12,SNR=24						
KURBB				Sn	**Sn**	**02 50 20.5**	**-2.5**
	comp=Z,0.8nm,0.3s,baz=164,slow=29,SNR=4.0						
KURBB				Lg	Lg	02 51 17.5	
	comp=Z,1.7nm,0.3s,baz=174,slow=27,SNR=6.4						
	comp=Z,11nm,1.1s						
KURBB	**Kurchatov Arra**	**9.14**	**347**	⇑Pn	**Pn**	**02 48 42.7**	**+2.3**
	comp=Z,16nm,1.3s,baz=186,slow=13						
KURBB				⇑Lg	Lg	02 51 20.5	
	comp=Z,1µm,1.6s						
KURBB	**Kurchatov Arra**	**9.14**	**347**	P	**Pn**	**02 48 41.6**	**+1.2**
HNLY	**HANLEY**	**9.20**	**194**	*e*P	**Pn**	**02 48 43.1**	**+1.3**
HNLY				*e*S	**Sn**	**02 50 28.8**	**+3.4**
HNLY				IAML		02 50 34.7	
	comp=N,60nm,0.8s						
HNLY				IAML		02 50 38.2	
	comp=E,58nm,1.1s						
KURK	**Kurchatov**	**9.22**	**348**		**Pn**	**02 48 42.4**	**+1.0**
KURK	**Kurchatov**	**9.22**	**348**	⇓Pn	**Pn**	**02 48 43.5**	**+2.1**
	comp=E,8.7nm,1.3s						
KURK				⇓Lg	Lg	02 51 21.6	
	comp=E,395nm,1.6s						
KURK	**Kurchatov**	**9.22**	**348**	*ce*P	**Pn**	**02 48 43.1**	**+1.7**
SRNI	**Srinagar**	**9.40**	**217**	*e*P	**Pn**	**02 48 46.0**	**+3.0**
TSSA	**Tissa**	**9.91**	**208**	*e*P	**Pn**	**02 48 52.0**	**+0.8**
TSSA				*e*S	**Sn**	**02 50 37.0**	**-5.3**
TSSA				IAML		02 50 45.8	
	comp=N,2µm,0.7s						
TSSA				IAML		02 50 46.2	
	comp=E,2µm,0.6s						
CHGR	**Chuyangaron**	**10.05**	**256**		**Pn**	**02 48 52.9**	**-0.1**
CHGR	**Chuyangaron**	**10.05**	**256**	P	**Pn**	**02 48 52.9**	**-0.1**
DHRM	**DHARAMSHALA**	**10.40**	**206**	*e*P	**Pn**	**02 48 59.2**	**+1.3**
DHRM				*e*S	**Sn**	**02 50 47.0**	**-7.2**
DHRM				IAML		02 50 53.8	
	comp=N,1µm,0.8s						
DHRM				IAML		02 50 54.0	
	comp=E,2µm,0.8s						
JMU	**Jammu**	**10.47**	**213**	*e*P	**Pn**	**02 49 00.3**	**+1.3**
JMU				*e*S	**Sn**	**02 50 48.8**	**-7.4**
JMU				IAML		02 50 55.3	
	comp=E,2µm,1.2s						
JMU				IAML		02 50 59.0	
	comp=N,2µm,1.2s						
NIL	**Nilore**	**10.47**	**222**		**Pn**	**02 48 59.7**	**+1.0**
NIL	**Nilore**	**10.47**	**222**	P	**Pn**	**02 48 59.7**	**+1.0**
BHK	**Bhakra**	**11.16**	**204**	*e*P	**Pn**	**02 49 07.9**	**+0.1**
BHK				*e*S	**Sn**	**02 51 12.0**	**0.0**
BHK				IAML		02 51 12.1	
	comp=N,720nm,0.5s						
BHK				IAML		02 51 12.4	
	comp=E,758nm,0.7s						
SMLA	**Simla**	**11.19**	**200**	*e*P	**Pn**	**02 49 09.7**	**+1.2**
SMLA				*e*S	Sn	02 51 05.6	-7.8
SMLA				IAML		02 51 11.9	
	comp=E,725nm,1.2s						
SMLA				IAML		02 51 13.0	
	comp=N,455nm,0.5s						
SHAA	**Shahritus**	**11.24**	**253**		**Pn**	**02 49 07.8**	**-1.5**
GOMU	**GeErMu**	**11.63**	**114**	P	**Pn**	**02 49 13.4**	**-1.5**
GOMU				pmax	pmax		
	comp=N,42nm,0.7s						
GOMU				LR	LR		
	comp=N,2µm,6.9s						
GOMU				LR	LR		
	comp=N,2µm,7.7s						
GOMU				LR	LR		
	comp=N,1µm,8.8s						
DDI	**Dehra Dun**	**11.76**	**195**	*e*P	**Pn**	**02 49 17.5**	**+1.0**
DDI				*e*S	Sn	02 51 18.8	-8.7
DDI				IAML		02 51 31.0	
	comp=N,482nm,1.2s						
DDI				IAML		02 51 32.5	
	comp=E,437nm,1.8s						
KBL	**Kabul**	**12.26**	**238**		**Pn**	**02 49 23.8**	**+0.5**
KBL	**Kabul**	**12.26**	**238**	P	**Pn**	**02 49 23.8**	**+0.5**
LGTI	**Lohaghat**	**12.38**	**186**	*e*P	**Pn**	**02 49 25.5**	**+1.5**
LGTI				*e*S	**Sn**	**02 51 33.5**	**-7.5**
LGTI				IAML		02 51 42.1	
	comp=N,394nm,1.3s						
LGTI				IAML		02 51 42.3	
	comp=E,376nm,1.3s						
ZAA0	**Zalesovo Array**	**12.39**	**9**		**Pn**	**02 49 23.8**	**-1.0**
ZALV	**Zalesovo Beam**	**12.39**	**9**	Pn	**Pn**	**02 49 23.9**	**-1.0**
	comp=E,1.0nm,0.3s,baz=190,slow=12,SNR=25						
ZALV				Sn	**Sn**	**02 51 42.3**	**-0.2**
	comp=E,1.3nm,0.3s,baz=215,slow=27,SNR=1.1						
ZALV				Lg	Lg	02 52 56.8	
	comp=E,0.7nm,0.3s,baz=200,slow=25,SNR=4.1						
ZALV				LR	LR	02 53 42.3	
	comp=E,457nm,20.0s,baz=208,slow=35						
	comp=E,8.0nm,0.8s						
BVA0	**Borovoye Array**	**13.61**	**330**	⇓P	**Pn**	**02 49 44.3**	**+2.9**
	comp=E,42nm,1.3s						
BVA0	**Borovoye Array**	**13.61**	**330**	P	**Pn**	**02 49 41.3**	**-0.2**
BVAR	**Borovoye Array**	**13.61**	**330**	Pn	**Pn**	**02 49 41.1**	**-0.4**
	comp=E,0.1nm,0.3s,baz=142,slow=12,SNR=21						
BVAR				Sn	**Sn**	**02 52 06.7**	**-5.6**
	comp=E,0.1nm,0.3s,baz=148,slow=17,SNR=2.0						
BVAR				Lg	Lg	02 53 32.6	
	comp=E,0.2nm,0.3s,baz=123,slow=28,SNR=4.5						
BVAR				LR	LR	02 55 03.9	
	comp=E,2µm,18.1s,baz=139,slow=38						
	comp=E,3.5nm,0.5s						
BORK	**Borovoye**	**13.65**	**330**		**Pn**	**02 49 41.7**	**-0.3**
BORK	**Borovoye**	**13.65**	**330**	⇑*e*P	**Pn**	**02 49 42.6**	**+0.6**
BORK				pmax	pmax		
	comp=Z,31nm,1.7s						
GTA	**Gaotai**	**13.99**	**94**	*e*P	**Pn**	**02 49 44.2**	**-2.7**
GTA				pmax	pmax		
	comp=Z,11nm,0.9s						
GTA				LR	LR		
	comp=Z,2µm,12.0s						
GTA				LR	LR		
	comp=Z,3µm,11.6s						
GTA				LR	LR		
	comp=Z,3µm,13.1s						
KNGR	**Kungurtug, Tuv**	**14.09**	**46**	⇓*e*P	**Pn**	**02 49 48.5**	**+0.4**
GTK	**Tadong**	**15.47**	**156**	*e*P	**Pn**	**02 50 08.3**	**+1.3**
GTK				*e*S	**Sn**	**02 53 00.6**	**+2.5**
MOY	**Mondy**	**16.51**	**46**	*e*P	**P**	**02 50 24.0**	**+1.3**
MOY				pmax	pmax		
	comp=Z,59nm,3.0s						
AB31	**Akbulak array**	**16.94**	**304**	Pn	**Pn**	**02 50 23.1**	**-2.4**
AB31	**Akbulak array**	**16.94**	**304**	P	**P**	**02 50 27.1**	**-0.3**
	comp=Z,41nm,0.8s,baz=106,slow=10,SNR=315						
AB31	**Akbulak array**	**16.94**	**304**	*i* P	**Pn**	**02 50 22.7**	**-2.8**
ABKAR	**Akbulak array**	**16.94**	**304**		**Pn**	**02 50 22.8**	**-2.6**
HRA	**Herat**	**16.95**	**251**	Pn	**Pn**	**02 50 23.6**	**-2.3**
ZAK	**Zakamensk**	**17.26**	**53**	*e*P	**Pn**	**02 50 29.0**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,44nm,1.9s						
TEZP	**TEZPUR**	**17.65**	**145**	*e*P	**P**	**02 50 36.2**	**+0.9**
TEZP				*e*S	**Sn**	**02 53 52.8**	**+2.0**
TEZP				IAML		02 53 55.9	
	comp=E,17nm,0.1s						
TEZP				IAML		02 53 56.9	
	comp=N,18nm,0.1s						
LZDM	**Lanzhou Array**	**18.09**	**101**	P	**Pn**	**02 50 39.2**	**-0.9**
	baz=289,slow=11						
	comp=N,7.0nm,0.8s						
LZH	**Lanzhou**	**18.14**	**101**	*e*P	**Pn**	**02 50 36.0**	**-4.6**
LZH				pP	sP	02 50 49.1	+1.5
LZH				S	Sn	02 53 46.9	-16
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
LZH				LR	LR		
	comp=N,3µm,13.1s						
LZH				LR	LR		
	comp=E,2µm,13.1s						
LZH				LR	LR		
	comp=Z,2µm,13.1s						
SHL	**Shillong**	**18.21**	**149**	P	**Pn**	**02 50 39.6**	**-1.9**
SHL	**Shillong**	**18.21**	**149**	*e*P	**P**	**02 50 44.0**	**+2.2**

SHL				eS	**S**	**02 54 08.5**	**-1.5**
SHL	**Shillong**	**18.21**	**149**	P	**Pn**	**02 50 39.7**	**-1.9**
SHL				pmax	pmax		
	comp=Z,53nm,1.3s						
AKTO	**Aktyubinsk**	**18.50**	**306**	P	**P**	**02 50 43.9**	**-0.7**
	comp=Z,1.4nm,0.3s,baz=108,slow=9.4,SNR=25						
AKTO				Lg	Lg	02 56 04.0	
	comp=Z,0.2nm,0.3s,baz=23,slow=15,SNR=4.0						
	comp=Z,23nm,0.8s						
AKTO	**Aktyubinsk**	**18.50**	**306**	⇑P	**Pn**	**02 50 46.4**	**+1.6**
	comp=Z,24nm,1.0s						
SONM	**Songino Array**	**18.54**	**62**	P	**P**	**02 50 44.7**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=260,slow=11,SNR=27						
SONM				Lg	Lg	02 56 10.8	
	baz=242,slow=13,SNR=1.2						
SONM				LR	LR	02 57 43.3	
	comp=Z,227nm,20.4s,baz=274,slow=36						
	comp=Z,6.2nm,0.7s						
IRK	**Irkutsk**	**18.58**	**48**	eP	**Pn**	**02 50 48.8**	**+3.1**
IRK				pmax	pmax		
	comp=Z,81nm,2.2s						
ULN	**Ulaanbaatar**	**18.98**	**63**	P	**P**	**02 50 50.3**	**+0.3**
ULN	**Ulaanbaatar**	**18.98**	**63**	P	**Pn**	**02 50 51.4**	**+0.7**
	comp=Z,82nm,0.9s						
ULN	**Ulaanbaatar**	**18.98**	**63**	⇓eP	**Pn**	**02 50 51.5**	**+0.7**
ULN				pmax	pmax		
	comp=Z,48nm,2.7s						
SVE	**Sverdlovsk**	**20.27**	**325**	eP	**P**	**02 51 04.5**	**+0.7**
SVE				pmax	pmax		
	comp=Z,95nm,1.4s						
CD2	**Chengdu**	**20.77**	**114**	P	**P**	**02 51 06.9**	**-2.6**
CD2				S	Sn	02 55 04.6	-1.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CD2				LR	LR		
	comp=E,2µm,9.2s						
CD2				LR	LR		
	comp=Z,2µm,7.6s						
BRDH	**Bariadhala**	**20.77**	**153**	P	**P**	**02 51 08.6**	**-0.9**
	comp=Z,84nm,0.3s,baz=243,slow=20,SNR=1.6						
BRDH				LR	LR	03 01 20.8	
	comp=Z,517nm,18.0s,baz=312,slow=43						
	comp=Z,84nm,0.3s						
ARTI	**Arti**	**21.00**	**322**	P	**P**	**02 51 11.7**	**-0.1**
	comp=Z,213nm,1.0s,baz=130,slow=7.2,SNR=66						
ARTI				Lg	Lg	02 57 23.1	
	comp=Z,0.2nm,0.3s,baz=189,slow=18,SNR=4.9						
ARTI				LR	LR	02 59 47.0	
	comp=Z,1µm,19.6s,baz=120,slow=38						
	comp=Z,213nm,1.0s						
ARTI	**Arti**	**21.00**	**322**	P	**P**	**02 51 10.9**	**-0.9**
ARTI	**Arti**	**21.00**	**322**	c iP	**P**	**02 51 11.7**	**-0.1**
ARTI						02 51 32.0	
ARTI				S	**S**	**02 55 06.8**	**+1.7**
ARTI				SS	**SnSn**	**02 55 29.0**	**+3.0**
ARTI				pmax	pmax		
	comp=Z,279nm,1.2s						
ARTI				MLR	MLR		
	comp=Z,2µm,14.0s						
BTO	**Baotou**	**21.34**	**84**	eP	**P**	**02 51 14.5**	**-1.2**
BTO				PP	**PnPn**	**02 51 38.2**	**+2.8**
BTO				S	**S**	**02 55 08.5**	**-3.7**
BTO				pmax	pmax		
	comp=Z,13nm,0.6s						
BTO				pmax	pmax		
	comp=Z,470nm,4.5s						
BTO				LR	LR		
	comp=Z,3µm,9.0s						
BTO				LR	LR		
	comp=Z,4µm,10.0s						
BTO				LR	LR		
	comp=Z,5µm,10.1s						
TNCH	**TengChong**	**21.75**	**135**	eP	**P**	**02 51 23.9**	**+3.7**
TNCH				S	**S**	**02 55 13.9**	**-6.6**
TNCH				pmax	pmax		
	comp=Z,470nm,3.2s						
TNCH				LR	LR		
	comp=Z,1µm,8.4s						
TNCH				LR	LR		
	comp=Z,830nm,10.9s						
TNCH				LR	LR		
	comp=Z,760nm,12.1s						
HHC	**Hu-ho-hao-te**	**22.43**	**82**	eP	**P**	**02 51 29.7**	**+2.3**
HHC				sP	sP	02 51 41.1	+6.9
HHC				S	**S**	**02 55 33.8**	**+0.5**
HHC				sS	sS	02 55 40.7	-0.4
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				LR	LR		
	comp=Z,990nm,11.9s						
HHC				LR	LR		
	comp=Z,1µm,11.2s						
HHC				LR	LR		
	comp=Z,2µm,9.6s						
PZH	**PanZhiHua**	**22.44**	**126**	P	**P**	**02 51 25.2**	**-2.4**
PZH				S	**S**	**02 55 28.7**	**-4.9**
PZH				LR	LR		
	comp=Z,570nm,11.2s						
PZH				LR	LR		
	comp=Z,880nm,12.4s						
PZH				LR	LR		
	comp=Z,1µm,11.6s						
XAN	**Xi'an**	**22.78**	**101**	P	**P**	**02 51 31.7**	**+0.6**
XAN				S	**S**	**02 55 40.7**	**+1.2**
XAN				pmax	pmax		
	comp=Z,15nm,1.0s						
XAN				pmax	pmax		
	comp=Z,570nm,6.4s						
XAN				LR	LR		
	comp=Z,1µm,10.1s						
XAN				LR	LR		
	comp=Z,3µm,12.4s						
XAN				LR	LR		
	comp=Z,3µm,12.2s						
KMI	**Kunming**	**24.07**	**127**	P	**P**	**02 51 45.1**	**+1.0**
KMI				pmax	pmax		
	comp=Z,25nm,2.0s						
KMI				LR	LR		
	comp=Z,830nm,15.7s						
KMI				LR	LR		
	comp=Z,1µm,15.7s						
KMI				LR	LR		
	comp=Z,930nm,11.9s						
LYN	**LuoYang**	**25.17**	**96**	P	**P**	**02 51 57.3**	**+3.5**
LYN				sS	sS	02 56 31.4	+4.8
LYN				pmax	pmax		
	comp=Z,15nm,1.0s						
LYN				LR	LR		
	comp=Z,2µm,11.3s						
LYN				LR	LR		
	comp=Z,2µm,10.3s						
LYN				LR	LR		
	comp=Z,2µm,11.3s						
MAK	**Makhachkala**	**25.18**	**284**	eP	**P**	**02 51 50.3**	**-3.5**
MAK				eS	**S**	**02 56 13.5**	**-4.8**
MAK				pmax	pmax		
	comp=Z,135nm,1.4s						
MAK				MLR	MLR		
	comp=Z,1µm,12.0s						
LKRN	**Lenkeran, Azer**	**25.21**	**274**	P	**P**	**02 51 55.1**	**+1.0**
XLT	**XiLinHaoTe**	**25.23**	**73**	eP	**P**	**02 51 49.8**	**-4.6**
XLT				pP	pP	02 51 58.5	-0.8
XLT				sP	sP	02 52 04.1	+2.7
XLT				PP	**PnPn**	**02 52 32.6**	**+4.0**
XLT				pmax	pmax		
	comp=Z,9.0nm,0.7s						
XLT				AMB	AMB		
	comp=Z,410nm,7.1s						
XLT				LR	LR		
	comp=N,65nm,5.5s						
XLT				LR	LR		
	comp=E,2µm,12.3s						
XLT				LR	LR		
	comp=Z,2µm,11.9s						
AKT	**Akhty**	**25.28**	**281**	eP	**P**	**02 51 53.7**	**-1.2**
AKT				ePPP	PPP	02 52 36.1	
AKT				pmax	pmax		
	comp=Z,56nm,1.0s						
AKT				MLR	MLR		
	comp=Z,2µm,17.0s						
BELG	**Belogornoye**	**25.29**	**307**	P	**P**	**02 51 54.7**	**0.0**
	comp=Z,44nm,0.9s,baz=180,slow=1.0,SNR=18						
	comp=Z,44nm,0.9s						
BELG	**Belogornoye**	**25.29**	**307**	d iP	**P**	**02 51 55.2**	**+0.5**
BELG				pmax	pmax		
	comp=Z,11nm,0.9s						
GYA	**Guiyang**	**25.58**	**119**	⇓P	**P**	**02 51 59.9**	**+2.1**
GYA				S	**S**	**02 56 22.6**	**-2.6**
GYA				pmax	pmax		
	comp=Z,18nm,1.1s						
GYA				pmax	pmax		
	comp=Z,690nm,5.4s						
GYA				LR	LR		
	comp=Z,720nm,9.0s						
GYA				LR	LR		
	comp=Z,1µm,8.1s						
GYA				LR	LR		
	comp=Z,550nm,5.3s						
SEKA	**Sheki**	**25.73**	**280**	P	**P**	**02 52 00.0**	**+1.0**
HNS	**HongShan**	**25.74**	**89**	⇑P	**P**	**02 52 01.9**	**+2.9**
HNS				pmax	pmax		
	comp=Z,27nm,1.0s						
HNS				LR	LR		
	comp=Z,1µm,13.5s						
HNS				LR	LR		
	comp=Z,2µm,13.5s						
HNS				LR	LR		
	comp=Z,2µm,13.5s						
MNGR	**Mingechevir, A**	**25.91**	**279**	P	**P**	**02 52 02.2**	**+1.7**
KIRV	**Kirov**	**26.29**	**321**	P	**P**	**02 52 04.3**	**+0.6**
	comp=Z,27nm,0.9s,baz=101,slow=5.4,SNR=9.1						
	comp=Z,27nm,0.9s						
KIRV	**Kirov**	**26.29**	**321**	ceP	**P**	**02 52 03.7**	**0.0**
GANJ	**Ganja**	**26.51**	**280**	P	**P**	**02 52 07.6**	**+1.6**
CMAR	**Chiang Mai Arr**	**27.50**	**142**	P	**P**	**02 52 16.1**	**+1.2**
	comp=Z,1.4nm,0.3s,baz=323,slow=9.4,SNR=12						
CMAR				LR	LR	03 05 59.4	
	comp=Z,360nm,18.3s,baz=325,slow=43						
	comp=Z,1.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**27.50**	**142**	P	**P**	**02 52 15.4**	**+0.4**
CMAR	**Chiang Mai Arr**	**27.50**	**142**	P	**P**	**02 52 15.4**	**+0.4**
HILR	**Hailar Array B**	**27.51**	**60**	P	**P**	**02 52 13.1**	**-1.8**
	comp=Z,0.7nm,0.4s,baz=214,slow=12,SNR=2.2						
HILR				LR	LR	03 03 19.0	
	comp=Z,454nm,18.0s,baz=110,slow=37						
	comp=Z,0.7nm,0.4s						
NAX	**Nakhchivan**	**27.52**	**277**	P	**P**	**02 52 16.3**	**+1.2**
NRIK	**Noril'sk**	**27.83**	**4**	P	**P**	**02 52 17.1**	**-0.4**
	comp=Z,17nm,1.1s,baz=175,slow=5.2,SNR=11						
NRIK				LR	LR	03 03 12.3	
	comp=Z,181nm,21.3s,baz=182,slow=36						
	comp=Z,17nm,1.1s						
NRIK	**Noril'sk**	**27.83**	**4**	P	**P**	**02 52 16.3**	**-1.2**
NRIK				IAmb	IAmb	02 52 31.3	
	comp=Z,52nm,1.4s						
NRIK	**Noril'sk**	**27.83**	**4**	⇑eP	**P**	**02 52 17.4**	**-0.1**
NRIK				pmax	pmax		
	comp=Z,44nm,1.5s						
NCK	**Nalchik**	**27.91**	**287**	⇓eP	**P**	**02 52 19.0**	**+0.5**
NCK				pmax	pmax		
	comp=Z,11nm,0.6s						
KBZ	**Khabaz**	**28.37**	**287**	P	**P**	**02 52 22.8**	**+0.3**
	comp=Z,3.4nm,0.8s,baz=128,slow=4.5,SNR=5.9						
	comp=Z,3.4nm,0.8s						
KBZ	**Khabaz**	**28.37**	**287**	ceP	**P**	**02 52 23.2**	**+0.7**
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV	**Kislovodsk**	**28.49**	**288**	eP	**P**	**02 52 21.4**	**-2.3**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,297nm,15.0s						
SHA1	**Shidzhatmaz**	**28.54**	**287**	deP	**P**	**02 52 25.4**	**+1.0**
NEUR	**Neytrino**	**28.59**	**286**	⇓iP	**P**	**02 52 26.4**	**+1.6**
NEUR				pmax	pmax		
	comp=Z,12nm,1.4s						
VRH	**Novokhopyorsk**	**28.77**	**303**	eP	**P**	**02 52 24.2**	**-1.8**
VRH				pmax	pmax		
	comp=Z,34nm,1.0s						
KARS	**Kars**	**28.90**	**281**	P	**P**	**02 52 26.9**	**-0.6**
KARS	**Kars**	**28.90**	**281**	P	**P**	**02 52 26.9**	**-0.6**
KARS				pmax	pmax		
	comp=Z,26nm,1.1s						
LABN	**Labinsk**	**29.77**	**290**	eP	**P**	**02 52 33.8**	**-1.2**
LABN				e*PP	**pP**	**02 52 39.3**	**-0.8**
LABN				e		02 53 28.6	
LABN				eS	**S**	**02 57 31.2**	**+0.5**
LABN				pmax	pmax		
	comp=Z,27nm,1.0s						
ERBR	**Yeremizino-Bor**	**29.79**	**292**	eP	**P**	**02 52 35.2**	**+0.1**
ERBR				e*PP	**pP**	**02 52 40.5**	**+0.3**
ERBR				e		02 53 28.0	
ERBR				eS	**S**	**02 57 29.8**	**-1.1**
ERBR				pmax	pmax		
	comp=Z,27nm,1.1s						
ERBR				MLR	MLR		
	comp=Z,977nm,14.0s						
GURO	**Guroymak-BITLI**	**30.28**	**277**	P	**P**	**02 52 39.9**	**+0.2**
VORD	**Divnogorie**	**30.29**	**302**	eP	**P**	**02 52 36.7**	**-2.8**
VORD				pmax	pmax		
	comp=Z,20nm,1.0s						
VORR	**Voronezh**	**30.37**	**304**	eP	**P**	**02 52 37.5**	**-2.7**
VORR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR	**Storozhevoye**	**30.38**	**303**	eP	**P**	**02 52 36.7**	**-3.6**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DL2	**Dalian**	**30.41**	**82**	eP	**P**	**02 52 42.4**	**+1.7**
DL2				S	**S**	**02 57 41.8**	**+1.0**
DL2				pmax	pmax		
	comp=Z,37nm,1.0s						
DL2				pmax	pmax		
	comp=Z,760nm,6.5s						
DL2				LR	LR		
	comp=Z,2µm,16.9s						
DL2				LR	LR		
	comp=Z,1µm,16.8s						
DL2				LR	LR		
	comp=Z,1µm,13.1s						
VSLR	**Vesyoloye**	**30.47**	**287**	⇓eP	**P**	**02 52 41.3**	**+0.1**
LPSR	**Galich'ya Gora**	**30.59**	**306**	eP	**P**	**02 52 40.4**	**-1.7**
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
SOC	**Sochi**	**30.67**	**288**	eP	**P**	**02 52 40.8**	**-2.1**
SOC				MLR	MLR		
	comp=Z,601nm,13.0s						
KOPT	**Kop Dagi**	**30.97**	**281**	P	**P**	**02 52 46.4**	**+0.5**
NJ2	**Nanjing**	**31.07**	**96**	eP	**P**	**02 52 47.6**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,17nm,0.6s						
NJ2				LR	LR		
	comp=Z,1µm,13.3s						
NJ2				LR	LR		
	comp=Z,1µm,11.8s						
NJ2				LR	LR		
	comp=Z,1µm,15.2s						
MARD	**Mardin**	**31.63**	**276**	P	**P**	**02 52 51.6**	**0.0**
MARD				IAmb	IAmb	02 52 54.2	
	comp=Z,30nm,1.1s						
MOS	**Moscow**	**31.65**	**311**	eP	**P**	**02 52 50.9**	**-0.5**
MOS				e		02 53 55.3	
MOS				ePPP	PPP	02 54 08.3	
MOS				pmax	pmax		
	comp=Z,73nm,1.1s						
MOS				MLR	MLR		
	comp=Z,2µm,10.0s						
MOS				MLR	MLR		
	comp=E,2µm,11.0s						
KLMR	**Klimovskoe**	**31.79**	**321**	eP	**P**	**02 52 50.0**	**-2.6**
KLMR				pmax	pmax		
	comp=Z,51nm,1.1s						
KLMR				MLR	MLR		
	comp=Z,2µm,12.0s						
CN2	**Changchun**	**31.93**	**71**	eP	**P**	**02 52 55.0**	**+1.0**
CN2				epP	sP	02 53 04.0	+2.9
CN2				eS	**S**	**02 58 01.8**	**-2.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,700nm,5.0s						
CN2				LR	LR		
	comp=Z,1µm,11.0s						
CN2				LR	LR		
	comp=Z,2µm,11.0s						
CN2				LR	LR		
	comp=Z,1µm,13.0s						
ANN	**Anapa**	**32.05**	**291**	eP	**P**	**02 52 53.4**	**-1.7**
ANN				eS	**S**	**02 58 08.8**	**+2.4**
ANN				eSS	**SnSn**	**03 00 01.7**	**+5.7**
ANN				pmax	pmax		
	comp=Z,29nm,0.9s						
ANN				MLR	MLR		
	comp=Z,902nm,16.0s						
OBN	**Obninsk**	**32.18**	**310**	P	**P**	**02 52 56.1**	**+0.1**
	comp=Z,13nm,0.4s,baz=180,slow=2.0,SNR=2.0						
	comp=Z,13nm,0.4s						
OBN	**Obninsk**	**32.18**	**310**	ceP	**P**	**02 52 56.6**	**+0.6**
OBN				e		02 54 08.2	
OBN				ePPP	PPP	02 54 14.3	
OBN				eS	S	02 57 58.8	-9.3
OBN				eSS	**SS**	**03 00 21.6**	**-4.4**
OBN				pmax	pmax		
	comp=Z,34nm,1.3s						
OBN				MLR	MLR		
	comp=Z,588nm,14.0s						
ZEA	**Zeya**	**32.36**	**52**	eP	**P**	**02 52 59.5**	**+1.8**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA				MLR	MLR		
	comp=E,600nm,17.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,17.0s						
ARPR	**Arapgir-MALATY**	**32.84**	**280**	P	**P**	**02 53 03.2**	**+0.9**
QIZ	**Qiongzhong**	**32.96**	**125**	P	**P**	**02 53 04.0**	**+0.7**
QIZ				S	**S**	**02 58 21.8**	**+0.9**
QIZ				LR	LR		
	comp=Z,780nm,11.1s						
QIZ				LR	LR		
	comp=Z,1µm,13.6s						
QIZ				LR	LR		
	comp=Z,1µm,17.4s						
SSE	**Sheshan**	**33.27**	**96**	P	**P**	**02 53 02.9**	**-3.0**
SSE				S	**S**	**02 58 22.1**	**-3.4**
SSE				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SSE				pmax	pmax		
	comp=Z,190nm,5.1s						
SSE				LR	LR		
	comp=N,400nm,12.9s						
SSE				LR	LR		
	comp=E,480nm,13.4s						
GAZ	**Gaziantep**	**34.34**	**277**		**P**	**02 53 13.6**	**-1.6**
GAZ				IAmb	IAmb	02 53 17.9	
	comp=Z,22nm,0.9s						
PALK	**Pallekele**	**34.34**	**182**	LR	LR	03 08 43.2	
	comp=Z,499nm,19.3s,baz=350,slow=39						
SIM	**Simferopol'**	**34.34**	**292**	eP	**P**	**02 53 16.0**	**+0.9**
SIM				pmax	pmax		
	comp=Z,23nm,1.0s						
BNN	**Bunyan**	**34.75**	**281**		**P**	**02 53 18.6**	**-0.2**
YAK	**Yakutsk**	**34.82**	**38**	P	**P**	**02 53 18.5**	**-0.5**
	comp=Z,13nm,0.4s,baz=201,slow=0.4,SNR=1.7						
YAK				LR	LR	03 10 00.5	
	comp=Z,100nm,19.8s,baz=263,slow=41						
	comp=Z,13nm,0.4s						
YAK	**Yakutsk**	**34.82**	**38**	eP	**P**	**02 53 18.7**	**-0.3**
YAK				pmax	pmax		
	comp=Z,14nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.7s						
YAK				pmax	pmax		
	comp=E,11nm,1.2s						
RAYN	**Ar Rayn**	**35.13**	**250**		**P**	**02 53 21.9**	**-0.3**
RAYN				IAmb	IAmb	02 53 23.9	
	comp=Z,27nm,0.8s						
RAYN	**Ar Rayn**	**35.13**	**250**	P	**P**	**02 53 22.1**	**-0.1**
KSRS	**Korea Array**	**35.57**	**81**	P	**P**	**02 53 25.9**	**+0.2**
	comp=Z,1.8nm,0.6s,baz=287,slow=8.8,SNR=4.6						
	comp=Z,1.8nm,0.6s						
ILGA	**Ilgaz**	**35.61**	**285**		**P**	**02 53 26.1**	**-0.2**
ILGA				IAmb	IAmb	02 53 28.9	
	comp=Z,33nm,1.1s						
PUL	**Pulkovo**	**36.04**	**318**	⇑iP	**P**	**02 53 31.1**	**+1.6**
PUL				pmax	pmax		
	comp=Z,36nm,0.4s						
KIRS	**Kirsehir-Merke**	**36.07**	**282**	⇑P	**P**	**02 53 30.9**	**+0.7**
BR131	**Keskin Array S**	**36.08**	**283**		**P**	**02 53 30.4**	**+0.2**
BR131				IAmb	IAmb	02 53 32.6	
	comp=Z,22nm,0.7s						
BR131	**Keskin Array S**	**36.08**	**283**	c iP	**P**	**02 53 31.0**	**+0.7**
BRTR	**Keskin Array B**	**36.08**	**283**	P	**P**	**02 53 31.3**	**+1.0**
	comp=Z,16nm,0.7s,baz=95,slow=8.5,SNR=97						
	comp=Z,16nm,0.7s						
BRTR	**Keskin Array B**	**36.08**	**283**		**P**	**02 53 30.4**	**+0.2**
BRTR	**Keskin Array B**	**36.08**	**283**	i P	**P**	**02 53 31.2**	**+1.0**
BRTR				pmax	pmax		
	comp=Z,17nm,0.7s						
BR104	**Keskin Array S**	**36.08**	**283**	P	**P**	**02 53 31.0**	**+0.7**
	comp=Z,203nmcomp=Z,29nm,0.8s						
BR106	**Keskin Array S**	**36.09**	**283**	P	**P**	**02 53 31.1**	**+0.7**
	comp=Z,194nmcomp=Z,27nm,0.8s						
BR105	**Keskin Array S**	**36.10**	**283**	P	**P**	**02 53 31.1**	**+0.7**
	comp=Z,226nmcomp=Z,32nm,0.8s						
LVZ	**Lovozero**	**36.19**	**332**	⇓eP	**P**	**02 53 31.1**	**+0.3**
LVZ				pmax	pmax		
	comp=Z,78nm,1.7s						
MSHR	**Mys Shultsa**	**36.27**	**72**	⇓iP	**P**	**02 53 27.3**	**-4.4**
MSHR				pmax	pmax		
	comp=Z,76nm,0.8s						
USRK	**Ussuriysk Ar.**	**36.44**	**69**	P	**P**	**02 53 33.7**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=236,slow=5.2,SNR=2.4						
	comp=Z,2.0nm,0.8s						
APA	**Apatity**	**36.52**	**331**	⇓eP	**P**	**02 53 29.1**	**-4.4**
APA				MLR	MLR		
	comp=Z,2µm,4.6s						
ANTO	**Ankara**	**36.65**	**284**	P	**P**	**02 53 34.4**	**-0.7**
ANTO	**Ankara**	**36.65**	**284**	P	**P**	**02 53 34.4**	**-0.7**
ANTO				pmax	pmax		
	comp=Z,13nm,0.7s						
AK09	**Malin Array Si**	**36.65**	**302**	P	**P**	**02 53 34.8**	**0.0**
AK08	**Malin Array Si**	**36.67**	**302**	P	**P**	**02 53 34.8**	**-0.2**
AK10	**Malin Array Si**	**36.67**	**302**	P	**P**	**02 53 34.8**	**-0.2**
AK03	**Malin Array Si**	**36.68**	**302**	P	**P**	**02 53 34.9**	**-0.2**
AKASG	**Malin Array Be**	**36.68**	**302**	P	**P**	**02 53 35.4**	**+0.3**
	comp=Z,13nm,0.9s,baz=72,slow=8.4,SNR=26						
	comp=Z,13nm,0.9s						
AKASG	**Malin Array Be**	**36.68**	**302**	P	**P**	**02 53 35.0**	**-0.1**
AKBB	**Malin Array Si**	**36.68**	**302**		**P**	**02 53 34.3**	**-0.8**
AKBB				IAmb	IAmb	02 53 36.2	
	comp=Z,37nm,1.1s						
AKBB	**Malin Array Si**	**36.68**	**302**	⇓iP	**P**	**02 53 35.1**	**0.0**
AKBB				pmax	pmax		
	comp=Z,37nm,0.9s						
AKBB	**Malin Array Si**	**36.68**	**302**	P	**P**	**02 53 34.9**	**-0.2**
AK01	**Malin Array Si**	**36.69**	**302**	P	**P**	**02 53 34.9**	**-0.2**
KIEV	**Kiev**	**36.69**	**302**		**P**	**02 53 34.3**	**-0.8**
KIEV				IAmb	IAmb	02 53 36.1	
	comp=Z,31nm,1.0s						
KIEV	**Kiev**	**36.69**	**302**	⇑P	**P**	**02 53 35.8**	**+0.6**
KIEV	**Kiev**	**36.69**	**302**	P	**P**	**02 53 35.7**	**+0.6**
KIEV	**Kiev**	**36.69**	**302**	P	**P**	**02 53 34.9**	**-0.3**
	comp=Z,132nm,0.6s						
AK02	**Malin Array Si**	**36.70**	**302**	P	**P**	**02 53 35.0**	**-0.2**
AK05	**Malin Array Si**	**36.70**	**302**	P	**P**	**02 53 35.0**	**-0.3**
AK06	**Malin Array Si**	**36.71**	**302**	P	**P**	**02 53 35.1**	**-0.2**
AK07	**Malin Array Si**	**36.71**	**302**	P	**P**	**02 53 35.1**	**-0.2**
AK04	**Malin Array Si**	**36.71**	**302**	P	**P**	**02 53 35.1**	**-0.3**
MNK	**Minsk**	**37.19**	**309**	i P	**P**	**02 53 38.4**	**-1.0**
	comp=E,15nm,0.9s						
MNK				i P	**P**	**02 53 38.4**	**-1.0**
	comp=N,17nm,0.9s						
MNK				i P	**P**	**02 53 38.4**	**-1.0**
	comp=Z,34nm,0.9s,baz=87						
MNK				i pP	**sP**	**02 53 45.8**	**-0.7**
MNK				i PP	**PP**	**02 55 04.0**	**0.0**
MNK				i PPP	PPP	02 55 20.9	
MNK				i S	**S**	**02 59 25.8**	**+0.5**
MNK				i SS	**SS**	**03 02 04.8**	**-3.2**
MNK				i SSS	SSS	03 02 21.8	
MNK				i LQ	LQ	03 06 15.6	
MNK				i LR	LR	03 08 39.4	
MNK				i LRM	MLR	03 10 20.7	
	comp=N,253nm,15.1s						
MNK				i LRM	MLR	03 10 37.6	
	comp=Z,283nm,15.8s						
MNK				i LRM	MLR	03 11 13.3	
	comp=E,221nm,14.0s						
MNK	**Minsk**	**37.19**	**309**	i P	**P**	**02 53 38.3**	**-1.0**
MNK				i *PP	**sP**	**02 53 45.8**	**-0.7**
MNK				i		02 55 03.9	
MNK				i PPP	PPP	02 55 20.9	
MNK				i		02 55 56.7	
MNK				i S	**S**	**02 59 25.8**	**+0.5**
MNK				i SS	**SS**	**03 02 04.7**	**-3.2**
MNK				i SSS	SSS	03 02 21.8	
MNK				i		03 03 50.3	
MNK				pmax	pmax		

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      comp=N,17nm,0.9s
MNK                              pmax     pmax
      comp=E,15nm,0.9s
MNK                              pmax     pmax
      comp=Z,34nm,0.9s
MNK                              MLR      MLR
      comp=N,253nm,15.0s
MNK                              MLR      MLR
      comp=Z,283nm,16.0s
MNK                              MLR      MLR
      comp=E,221nm,14.0s
MMAI  Mount Meron Ar  37.40 272  P        P        02 53 42.0 +0.5
      comp=E,0.7nm,0.4s,baz=84,slow=12,SNR=4.2
      comp=E,0.7nm,0.4s
SORM  Soroca          37.63 298 ⇑P        P        02 53 43.5 +0.3
SORM  Soroca          37.63 298  P        P        02 53 43.5 +0.3
LUBAR Lubar, Ukraine  37.72 301  P        P        02 53 44.1 +0.2
VSU   Vasula          37.79 315⇓iP        P        02 53 44.1 -0.3
VSU                              pmax     pmax
      comp=Z,67nm,1.1s
TIXI  Tiksi           37.80  22           P        02 53 43.0 -1.3
TIXI  Tiksi           37.80  22⇑iP        P        02 53 44.0 -0.3
TIXI                             pmax     pmax
      comp=Z,16nm,1.0s
NACGM Naroch          37.80 310 eP        P        02 53 45.8 +1.2
      comp=Z,40nm,1.0s,baz=87
FINES FINESS Array B  38.29 320  P        P        02 53 48.7 +0.2
      comp=Z,5.3nm,0.7s,baz=98,slow=7.9,SNR=12
      comp=Z,5.3nm,0.7s
FINES FINESS Array B  38.29 320 i P       P        02 53 49.5 +1.0
FINES                            pmax     pmax
      comp=Z,5.0nm,0.7s
VLDR  Vladesti        38.29 295 ⇓P        P        02 53 49.1 +0.3
TPGR  Topolog         38.30 293 ⇑P        P        02 53 49.5 +0.6
CFR   Carcaliu        38.42 294 ⇑P        P        02 53 50.5 +0.6
CFR   Carcaliu        38.42 294  P        P        02 53 50.4 +0.6
RNPP9 Sopachiv        38.67 304  P        P        02 53 52.5 +0.6
HORU  Horodok         38.69 300  P        P        02 53 52.9 +0.8
GHRR                  38.70 295  P        P        02 53 52.4 +0.2
RNPP5 Staryi Chortor  38.70 304  P        P        02 53 53.0 +0.8
RNPP8 Varash          38.71 304  P        P        02 53 52.4 +0.2
KMPD  K-Podol'skiy    38.79 299  P        P        02 53 53.0 +0.1
ISP   Isparta         39.03 282c iP       P        02 53 55.6 +0.4
ISP                              pmax     pmax
      comp=Z,35nm,0.8s
TESR  Tescani         39.10 296 ⇑P        P        02 53 56.2 +0.6
PRAR  RASCA           39.19 298 ⇓P        P        02 53 57.1 +0.7
VRI   Vrincioaia      39.20 295 ⇓P        P        02 53 57.7 +1.2
VRI   Vrincioaia      39.20 295  P        P        02 53 57.7 +1.2
PLOR  Plostina        39.26 295 ⇓P        P        02 53 58.8 +1.8
PLOR  Plostina        39.26 295  P        P        02 53 58.8 +1.8
PABE  Paberze         39.38 311           P        02 53 57.7  0.0
PABE                             IAmb     IAmb     02 54 00.2
      comp=Z,88nm,1.4s
JNU   Nakatsue        39.56  86  LR       LR       03 12 27.5
      comp=Z,426nm,18.9s,baz=292,slow=40
COVR  Voineasa-Covas  39.56 295 ⇓P        P        02 54 01.1 +1.6
NEHR  Nehoiu          39.61 295 ⇑P        P        02 54 01.6 +1.7
TURR  Turia           39.64 296 ⇑P        P        02 54 01.7 +1.5
BURAR Bucovina Array  39.80 298           P        02 54 01.4 -0.2
BURAR Bucovina Array  39.80 298 ⇑P        P        02 54 02.0 +0.5
BURAR Bucovina Array  39.80 298  P        P        02 54 02.0 +0.5
BUR08 Bucovina Ar. S  39.81 298           P        02 54 01.3 -0.3
MLR   Muntele Rosu    39.83 295  P        P        02 54 03.2 +1.4
      comp=Z,12nm,0.7s,baz=360,slow=5.4,SNR=22
      comp=Z,12nm,0.7s
MLR   Muntele Rosu    39.83 295           P        02 54 01.8 -0.1
MLR   Muntele Rosu    39.83 295 ⇑P        P        02 54 03.3 +1.4
MLR   Muntele Rosu    39.83 295  P        P        02 54 01.8 -0.1
MLR                              pmax     pmax
      comp=Z,44nm,1.4s
MLR   Muntele Rosu    39.83 295  P        P        02 54 03.3 +1.4
MLR                              pP       sP       02 54 10.4 +1.4
ARCES ARCESS Array B  39.87 333  P        P        02 54 01.5 -0.3
      comp=Z,14nm,0.8s,baz=91,slow=8.5,SNR=35
ARCES                            LR       LR       03 11 25.1
      comp=Z,276nm,21.1s,baz=110,slow=38
      comp=Z,14nm,0.8s
ARCES ARCESS Array B  39.87 333           P        02 54 01.1 -0.7
ELL   Elmali          39.90 280  P        P        02 54 02.4 -0.1
ELL   Elmali          39.90 280  P        P        02 54 02.4 -0.1
ELL                              pmax     pmax
      comp=Z,14nm,0.9s
SUW   Suwalki         39.98 308           P        02 54 02.1 -0.6
SUW   Suwalki         39.98 308  P        P        02 54 02.2 -0.6
STNU  Starunia        40.03 300  P        P        02 54 03.5 +0.2
STNU                             pP       sP       02 54 11.2 +0.7
DOPR  Dopca           40.08 296 ⇓P        P        02 54 04.7 +0.9
VOIR                  40.45 295 ⇓P        P        02 54 08.1 +1.1
VOIR                  40.45 295  P        P        02 54 08.0 +1.1
ARR   Arges           40.75 295 ⇓P        P        02 54 10.8 +1.4
TNR   Turnu Rosu      40.92 296 ⇑P        P        02 54 12.5 +1.7
TNR   Turnu Rosu      40.92 296  P        P        02 54 12.4 +1.7
KWP   Kalwaria Pacla  40.99 302 eP        P        02 54 12.0 +0.8
MARR  Marisel-Cluj    41.42 297 ⇓P        P        02 54 16.4 +1.5
DRGR                  41.66 298 ⇓P        P        02 54 18.0 +1.1
DRGR                  41.66 298  P        P        02 54 18.0 +1.1
BEL   Belsk           41.74 305 eP        P        02 54 18.1 +0.8
PSI   Prapat          41.75 154  LR       LR       03 13 49.7
      comp=Z,114nm,21.9s,baz=318,slow=39
STHS  Stebnicka Huta  41.97 302 eP        P        02 54 19.9 +0.6
STHS                             pmax     pmax
      comp=Z,12nm,0.9s
STHS  Stebnicka Huta  41.97 302 eP        P        02 54 19.9 +0.6
GZR   Gura Zlata      42.00 296 ⇓P        P        02 54 20.7 +1.0
GZR   Gura Zlata      42.00 296  P        P        02 54 20.6 +1.0
SURR  Surduc          42.34 296 ⇓P        P        02 54 23.8 +1.5
HERR  Herculane       42.40 295 ⇓P        P        02 54 23.3 +0.5
SIRR  Siria           42.50 297 ⇓P        P        02 54 25.0 +1.3
KECS  Kecovo          42.68 301 eP        P        02 54 26.2 +1.2
KECS                             pmax     pmax
      comp=Z,21nm,0.8s
KECS  Kecovo          42.68 301 eP        P        02 54 26.2 +1.2
OJC   Ojcow           42.69 303 eP        P        02 54 25.4 +0.3
OJC   Ojcow           42.69 303           P        02 54 25.5 +0.3
OJC   Ojcow           42.69 303  P        P        02 54 25.5 +0.3
BZS   Buzias          42.72 296 ⇓P        P        02 54 26.0 +0.6
BZS   Buzias          42.72 296  P        P        02 54 26.0 +0.6
PSZ   Piszkesteto     43.21 300           P        02 54 29.8 +0.4
PSZ   Piszkesteto     43.21 300 ⇑P        P        02 54 30.2 +0.8
PSZ   Piszkesteto     43.21 300  P        P        02 54 29.8 +0.4
PSZ                              pmax     pmax
      comp=Z,15nm,1.0s
BOVS  Bovan           43.27 294 ⇑P        P        02 54 30.6 +0.7
ASAJ  Asahikawa       43.78  65  LR       LR       03 14 18.2
      comp=Z,218nm,22.0s,baz=146,slow=38
MNSI  Mandailing Nat  43.85 154  P        P        02 54 35.2 +0.4
      comp=Z,27nm,0.5s
STEB  Steborice       44.03 303 eP        P        02 54 37.3 +1.4
STEB                            ex        x        02 54 47.9
MORC  Moravsky Berou  44.21 303           P        02 54 37.7 +0.2
MORC                             IAmb     IAmb     02 54 39.6
      comp=Z,29nm,1.2s
MORC  Moravsky Berou  44.21 303 ⇑P        P        02 54 37.9 +0.5
MORC  Moravsky Berou  44.21 303 eP        P        02 54 38.3 +0.8
MORC  Moravsky Berou  44.21 303  P        P        02 54 37.9 +0.5
SRO   Srobarova       44.26 300 eP        P        02 54 39.4 +1.6
SRO                              pmax     pmax
      comp=Z,27nm,1.1s
SRO   Srobarova       44.26 300 eP        P        02 54 39.4 +1.6
JAVC  Velka Javorina  44.38 302 eP        P        02 54 41.1 +2.3
HFS   Hagfors         44.38 318  P        P        02 54 38.9 +0.3
      comp=Z,15nm,0.8s,baz=108,slow=9.5,SNR=38
      comp=Z,15nm,0.8s
SPITS Spitsbergen Ar  44.48 344  P        P        02 54 40.3 +1.1
      comp=Z,6.6nm,0.9s,baz=20,slow=11,SNR=0.9
SPITS                            LR       LR       03 18 19.4
      comp=Z,213nm,18.7s,baz=119,slow=43
      comp=Z,6.6nm,0.9s
MORH  Mrgy, Hungar    44.52 298 ⇑P        P        02 54 40.3 +0.5
KRLC  Kraliky         44.61 304  AMS      AMS      03 13 50.0
      comp=Z,900nm,11.9s
SMOL  Smolenice       44.63 302 eP        P        02 54 42.0 +1.3
SMOL                             pmax     pmax
      comp=Z,10.0nm,0.9s
MODS  Modra-Piesok    44.76 301 eP        P        02 54 43.2 +1.3
MODS                             pmax     pmax
      comp=Z,35nm,1.2s
MODS  Modra-Piesok    44.76 301 eP        P        02 54 43.2 +1.3
DPC   Dobruska-Polom  44.82 304 eP        P        02 54 43.5 +1.2
DPC   Dobruska-Polom  44.82 304 eP        P        02 54 43.5 +1.2
OSTC  Ostas           44.83 305 eP        P        02 54 43.9 +1.5
OSTC  Ostas           44.83 305 eP        P        02 54 43.9 +1.5
CHVC  Chvalec         44.92 305 eP        P        02 54 44.7 +1.6
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CHVC  Chvalec         44.92 305 eP        P        02 54 44.7 +1.6
VRAC  Vranov          44.93 303 eP        P        02 54 43.8 +0.6
UPC   Upice           44.97 305 eP        P        02 54 44.5 +1.0
UPC                              MLR      MLR
      comp=Z,1µm,15.4s
UPC   Upice           44.97 305 eP        P        02 54 44.5 +1.0
UPC                              AMS      AMS      03 14 00.0
      comp=Z,1µm,15.4s
KRUC  Moravsky        45.13 303 eP        P        02 54 45.7 +1.0
NC405 NORSAR Array S  45.22 320           P        02 54 46.1 +0.8
SEY   Seymchan        45.34  37  LR       LR       03 16 00.9
      comp=Z,401nm,20.3s,baz=288,slow=39
NC602 NORSAR Array S  45.35 319  P        P        02 54 46.8 +0.5
NC303 NORSAR Array S  45.37 320           P        02 54 46.9 +0.5
NC303                            IAmb     IAmb     02 54 48.6
      comp=Z,43nm,1.1s
PDG   Podgorica       45.37 293 ⇑P        P        02 54 46.8  0.0
NB2   NORSAR Subarra  45.47 320  P        P        02 54 47.3  0.0
      comp=Z,6.4nm,0.6s,baz=81,slow=7.9
NOA   NORSAR Array B  45.47 320  P        P        02 54 47.2 -0.1
      comp=Z,9.0nm,0.6s,baz=81,slow=7.9,SNR=29
NOA                              LR       LR       03 14 45.0
      comp=Z,631nm,18.4s,baz=85,slow=37
      comp=Z,9.0nm,0.6s
RONA  Rosalia, Austr  45.59 301 eP        P        02 54 50.0 +1.5
      comp=Z,22nm,1.2s,SNR=5.4
NC204 NORSAR Array S  45.65 320  P        P        02 54 49.2 +0.4
NC204                            IAmb     IAmb     02 54 50.1
      comp=Z,26nm,0.8s
NAO01 NORSAR Array S  45.66 320  P        P        02 54 48.9 +0.2
CONA  Conrad Observa  45.80 301 eP        P        02 54 51.6 +1.5
      comp=Z,32nm,1.2s,SNR=12
RUE   Ruedersdorf     45.81 308 eP        P        02 54 51.3 +1.3
      comp=Z,34nm,1.1s,baz=72,slow=7.8
PVCC  Panska Ves      45.85 305 eP        P        02 54 51.8 +1.4
PVCC                             MLR      MLR
      comp=Z,1µm,10.3s
PVCC  Panska Ves      45.85 305 eP        P        02 54 51.8 +1.4
PVCC                             AMS      AMS      03 14 40.0
      comp=Z,1µm,10.3s
PRU   Pruhonice       46.02 304 eP        P        02 54 53.1 +1.3
PRU                              MLR      MLR
      comp=Z,1µm,14.9s
PRU   Pruhonice       46.02 304 eP        P        02 54 53.1 +1.3
PRU                              AMS      AMS      03 14 40.0
      comp=Z,1µm,14.9s
PRA   Prague          46.06 304 eP        P        02 54 54.0 +1.9
PRA   Prague          46.06 304 eP        P        02 54 54.0 +1.9
BRG   Berggiesshubel  46.14 306 eP        P        02 54 53.3 +0.6
      comp=Z,31nm,1.5s,baz=72,slow=7.8
ARSA  Arzberg         46.23 300 eP        P        02 54 54.5 +1.0
      comp=Z,15nm,1.1s
ARSA  Arzberg         46.23 300 eP        P        02 54 54.1 +0.6
      comp=Z,17nm,1.1s,baz=72,slow=7.8
ZVC   Zvikov          46.40 304 eP        P        02 54 55.9 +1.1
CKRC  Cesky Krumlov   46.51 303 eP        P        02 54 57.1 +1.4
CKRC  Cesky Krumlov   46.51 303 eP        P        02 54 57.1 +1.4
HSKC  Hora Svate Kat  46.53 305  AMS      AMS      03 15 10.0
      comp=Z,1µm,9.0s
CLL   Collm           46.59 306           P        02 54 56.8 +0.6
CLL                              IAmb     IAmb     02 54 57.8
      comp=Z,16nm,0.8s
CLL   Collm           46.59 306  P        P        02 54 56.8 +0.6
CLL                              pmax     pmax
      comp=Z,16nm,0.8s
CLL   Collm           46.59 306 eP        P        02 54 56.4 +0.2
      comp=Z,16nm,0.8s,baz=72,slow=7.8
CLL   Collm           46.59 306 i P       P        02 54 56.4 +0.2
      comp=Z,24nm,1.0s
CLL                             ex        x        02 55 11.0
SOKA  Soboth          46.73 300 i P       P        02 54 58.3 +0.7
      comp=Z,30nm,1.3s,SNR=6.9
MOA   Molln           46.84 302 eP        P        02 54 59.6 +1.3
      comp=Z,10nm,1.4s
KHC   Kasperske Hory  46.88 303           P        02 54 59.2 +0.6
KHC   Kasperske Hory  46.88 303 eP        P        02 54 59.9 +1.3
KHC   Kasperske Hory  46.88 303 eP        P        02 54 59.9 +1.3
KHC                             ex        x        02 55 13.4
GEC2  GERESS Array S  46.89 303           P        02 54 59.1 +0.3
GEC2                             IAmb     IAmb     02 55 00.9
      comp=Z,24nm,1.4s
GEC2  GERESS Array S  46.89 303 eP        P        02 54 59.2 +0.4
      comp=Z,27nm,1.4s,baz=72,slow=7.8
GERES GERESS Array B  46.89 303  P        P        02 54 59.4 +0.7
      comp=Z,1.8nm,0.6s,baz=61,slow=9.3,SNR=19
      comp=Z,1.8nm,0.6s
OBKA  Obir            47.10 300 eP        P        02 55 01.6 +1.1
      comp=Z,19nm,1.0s
GORT1 Trebel          47.12 309 eP        P        02 55 01.8 +1.6
      comp=Z,44nm,1.2s,baz=72,slow=7.8
TANN  Tannenbergstha  47.17 305 eP        P        02 55 01.7 +0.8
      comp=Z,19nm,1.2s,baz=72,slow=7.8
BIOA  Bad Ischl, Aus  47.30 302 eP        P        02 55 03.1 +1.3
      comp=Z,14nm,1.4s
WET   Wettzell        47.31 304 eP        P        02 55 02.8 +0.9
      comp=Z,25nm,1.3s,baz=72,slow=7.8
PLN   Plauen          47.34 306 eP        P        02 55 03.2 +1.1
      comp=Z,6.6nm,1.2s,baz=72,slow=7.8
FLTG  Flechtingen     47.35 308 eP        P        02 55 02.4 +0.3
      comp=Z,12nm,1.0s,baz=72,slow=7.8
NEUB  Neuenburg       47.35 307 eP        P        02 55 03.2 +1.0
      comp=Z,18nm,0.8s,baz=72,slow=7.8
BSEG  Bad Segeberg    47.44 310 eP        P        02 55 04.4 +1.7
      comp=Z,26nm,1.4s,baz=72,slow=7.8
MANZ  Manzenberg      47.52 305 eP        P        02 55 04.1 +0.5
      comp=Z,3.8nm,1.4s,baz=72,slow=7.8
ROTZ  Rotzenmuhle     47.53 305 eP        P        02 55 04.9 +1.3
      comp=Z,9.1nm,1.6s,baz=72,slow=7.8
MOX   Moxa            47.62 306 eP        P        02 55 05.3 +1.0
      comp=Z,16nm,1.3s,baz=72,slow=7.8
MYKA  Terra Mystica   47.65 300 eP        P        02 55 06.3 +1.7
      comp=Z,8.8nm,1.1s
KBA   Koelnbreinsper  47.69 301 eP        P        02 55 06.0 +0.9
      comp=Z,13nm,1.3s
KBA   Koelnbreinsper  47.69 301 eP        P        02 55 05.7 +0.6
      comp=Z,18nm,1.3s,baz=72,slow=7.8
LESA  Schwarzleotal   48.00 301 eP        P        02 55 08.4 +1.0
      comp=Z,24nm,1.4s,SNR=7.1
CLZ   Clausthal       48.00 308 eP        P        02 55 08.0 +0.8
      comp=Z,13nm,1.1s,baz=72,slow=7.8
GRA1  Grafenberg Arr  48.16 305  P        P        02 55 08.9 +0.4
GRA1                             IAmb     IAmb     02 55 11.1
      comp=Z,27nm,1.0s
GRF   Grafenberg Arr  48.16 305  P        P        02 55 08.9 +0.4
GRF                              pmax     pmax
      comp=Z,27nm,1.0s
GRF   Grafenberg Arr  48.16 305 eP        P        02 55 10.1 +1.6
      comp=Z,30nm,1.1s,baz=72,slow=7.8
GTTG  Gottingen       48.33 307 eP        P        02 55 10.8 +1.0
      comp=Z,30nm,1.0s,baz=72,slow=7.8
ABTA  Abfaltersbach   48.34 301  P        P        02 55 09.5 -0.5
      comp=Z,6.3nm,0.9s
STAL  STALIGIAL       48.38 300  IAmb     IAmb     02 55 10.7
      comp=Z,24nm,1.2s
UBBA  Unterbreizbach  48.54 307 eP        P        02 55 12.5 +1.2
      comp=Z,6.1nm,1.0s,baz=72,slow=7.8
FUR   Furstenfeldbru  48.63 303 eP        P        02 55 13.3 +1.1
      comp=Z,55nm,1.3s,baz=72,slow=7.8
WTTA  Wattenberg      48.72 302 eP        P        02 55 13.8 +0.7
      comp=Z,41nm,1.1s,SNR=11
WTTA  Wattenberg      48.72 302 eP        P        02 55 13.3 +0.2
      comp=Z,37nm,1.1s,baz=72,slow=7.8
WATA  Walderalm       48.73 302 eP        P        02 55 13.9 +0.8
      comp=Z,5.5nm,0.5s,SNR=8.1
SQTA  Sankt Quirin    49.01 302 i P       P        02 55 15.7 +0.6
      comp=Z,9.3nm,0.7s,SNR=7.7
MOTA  Moosalm         49.03 302 eP        P        02 55 15.6 +0.2
      comp=Z,13nm,0.9s,SNR=9.7
RETA  Reutte          49.20 302 eP        P        02 55 17.1 +0.5
      comp=Z,9.3nm,0.7s,SNR=6.6
FETA  Feichten        49.38 302 eP        P        02 55 18.2 +0.1
      comp=Z,6.3nm,0.9s,SNR=6.1
TEOL  Teolo           49.39 299  P        P        02 55 18.1 +0.1
TEOL                             IAmb     IAmb     02 55 19.1
      comp=Z,29nm,1.0s
NRCA  Norcia          49.41 296           P        02 55 18.7 +0.4
NRCA                             IAmb     IAmb     02 55 51.6
      comp=Z,26nm,1.4s
UBR   Ueberruh        49.54 303 eP        P        02 55 19.7 +0.5
      comp=Z,19nm,0.9s,baz=72,slow=7.8
MURB  Monte Urbino    49.64 296  P        P        02 55 21.8 +1.8
TNS   Taunus Mts      49.67 306 eP        P        02 55 21.5 +1.4
      comp=Z,6.5nm,0.8s,baz=72,slow=7.8
STU   Stuttgart       49.72 304 eP        P        02 55 21.9 +1.4
      comp=Z,30nm,0.3s,baz=72,slow=7.8
DAVA  Damuels         49.83 302 i P       P        02 55 22.5 +1.0
      comp=Z,3.8nm,0.7s
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FUORN Ofenpass-Fuorn  49.83 301           P        02 55 21.5 -0.1
FUORN                            IAmb     IAmb     02 55 22.3
      comp=Z,25nm,1.4s
BUG   Bochum--Univer  49.96 308 eP        P        02 55 23.3 +1.1
      comp=Z,16nm,1.1s,baz=72,slow=7.8
DAVOX Davos/Dischmat  50.02 302  LR       LR       03 17 37.2
      comp=Z,441nm,19.7s,baz=72,slow=37
PETK  Petropavlovsk-  50.35  49  P        P        02 55 26.3 +1.1
      comp=Z,1.8nm,0.8s,baz=354,slow=12,SNR=1.1
PETK                             LR       LR       03 18 09.4
      comp=Z,535nm,19.6s,baz=285,slow=38
      comp=Z,1.8nm,0.8s
BFO   Black Forest    50.42 304  P        P        02 55 25.7 -0.1
BFO   Black Forest    50.42 304  P        P        02 55 25.7 -0.1
BFO                              pmax     pmax
      comp=Z,64nm,1.8s
BFO   Black Forest    50.42 304 eP        P        02 55 25.9 +0.2
      comp=Z,51nm,1.6s,baz=72,slow=7.8
TUE   Stuetta         50.47 301           P        02 55 26.9 +0.4
TUE                              IAmb     IAmb     02 55 36.1
      comp=Z,48nm,1.9s
ECH   Echery          51.19 304           P        02 55 32.1 +0.5
ECH   Echery          51.19 304  P        P        02 55 32.1 +0.5
ECH                              pmax     pmax
      comp=Z,22nm,1.4s
WLF   Walferdange     51.26 306  P        P        02 55 32.1 +0.1
WLF                              IAmb     IAmb     02 55 34.3
      comp=Z,25nm,1.2s
WLF   Walferdange     51.26 306  P        P        02 55 32.2 +0.1
WLF                              pmax     pmax
      comp=Z,25nm,1.2s
WLF   Walferdange     51.26 306 eP        P        02 55 33.6 +1.6
      comp=Z,24nm,1.2s,baz=72,slow=7.8
SENIN Lac Senin/Sane  51.82 302           P        02 55 37.4 +0.8
DAV   Davao City (W)  51.96 119  LR       LR       03 18 29.8
      comp=Z,132nm,18.7s,baz=346,slow=37
BNI   Bardonecchia    52.75 301           P        02 55 43.6 +0.2
BNI   Bardonecchia    52.75 301  P        P        02 55 43.6 +0.2
BNI                              pmax     pmax
      comp=Z,73nm,1.3s
CLF   Chambon-Foret   54.27 306  P        P        02 55 54.9 +0.6
EKA   Eskdalemuir Ar  54.34 316  P        P        02 55 54.8  0.0
      comp=Z,4.8nm,0.9s,baz=61,slow=7.7,SNR=4.6
EKA                              LR       LR       03 21 05.2
      comp=Z,766nm,18.2s,baz=100,slow=38
      comp=Z,4.8nm,0.9s
KEST  Kesra           55.21 289  P        P        02 56 02.2 +0.7
      comp=Z,13nm,1.1s,baz=72,slow=9.6,SNR=6.4
      comp=Z,13nm,1.1s
LODK  Lodwar          56.26 240           P        02 56 09.2  0.0
BORG  Borgarnes       58.20 331  LR       LR       03 19 33.4
      comp=Z,215nm,21.1s,baz=81,slow=34
A19K  Wainwright      59.55  21  P        P        02 56 32.0 +0.6
      baz=310
C16K  Lisburne Hills  59.55  23  P        P        02 56 31.7 +0.3
      baz=307
B18K  Kokolik River   59.89  22  P        P        02 56 34.1 +0.3
      baz=309
GAMB  Gambell         60.06  29  P        P        02 56 35.5 +0.5
      baz=304
C17K  DeLong Mountai  60.06  23  P        P        02 56 35.6 +0.6
      baz=309
TNA   Tin City        60.36  27  P        P        02 56 37.2 +0.2
      baz=306
RDOG  Red Dog Mine    60.40  23  P        P        02 56 37.1 -0.2
      baz=309
C18K  Utukok River    60.52  22  P        P        02 56 38.7 +0.5
C18K  Utukok River    60.52  22  P        P        02 56 38.4 +0.2
      baz=310
A22K  Sinclair Lake   60.53  18  P        P        02 56 38.5 +0.4
      baz=314
D17K  Noatak River    60.58  23  P        P        02 56 38.8 +0.3
      baz=309
C19K  Lookout Ridge   60.66  21  P        P        02 56 39.8 +0.7
C19K                             IAmb     IAmb     02 56 45.9
      comp=Z,32nm,1.4s
C19K  Lookout Ridge   60.66  21  P        P        02 56 39.6 +0.5
      baz=311
B20K  Meade River     60.69  20  P        P        02 56 39.8 +0.7
B20K  Meade River     60.69  20  P        P        02 56 39.5 +0.3
      baz=313
F14K  Arctic Creek    60.94  26  P        P        02 56 41.3 +0.3
      baz=307
E17K  Hotham Inlet    61.35  24  P        P        02 56 44.3 +0.6
      baz=310,SNR=6.7
F15K  North Star Dit  61.35  26  P        P        02 56 44.5 +0.7
      baz=309
B22K  Teshekpuk Lake  61.37  18  P        P        02 56 44.4 +0.6
B22K                             IAmb     IAmb     02 56 46.3
      comp=Z,20nm,1.0s
B22K  Teshekpuk Lake  61.37  18  P        P        02 56 44.8 +1.0
      baz=316
D19K  Kuna River      61.47  21  P        P        02 56 44.7 +0.1
D19K  Kuna River      61.47  21  P        P        02 56 44.8 +0.2
      baz=313
E18K  Tukpahlearik C  61.49  23  P        P        02 56 45.6 +1.0
      baz=311
B21K  Ikpikpuk River  61.59  19           P        02 56 46.0 +0.7
B21K  Ikpikpuk River  61.59  19  P        P        02 56 46.0 +0.7
      baz=315,SNR=9.0
D20K  Etivluk River   61.72  21  P        P        02 56 47.0 +0.7
D20K  Etivluk River   61.72  21  P        P        02 56 46.7 +0.5
      baz=314
ANM   Nome            61.82  27  P        P        02 56 47.6 +0.6
      baz=309
C21K  Knifeblade Rid  61.88  20  P        P        02 56 47.9 +0.6
      baz=315,SNR=7.8
F17K  Baldwin Pennin  61.94  24  P        P        02 56 48.5 +0.8
F17K  Baldwin Pennin  61.94  24  P        P        02 56 47.8 +0.1
      baz=311
G15K  Niukluk         62.00  26  P        P        02 56 48.5 +0.4
      baz=309
E20K  Nigu River      62.15  21  P        P        02 56 49.7 +0.5
      baz=314
ESBB  Sonseca Array   62.24 300           P        02 56 50.4 +0.1
ESDC  Sonseca Array   62.24 300  P        P        02 56 49.9 -0.3
      comp=Z,11nm,1.2s,baz=54,slow=6.7,SNR=20
      comp=Z,11nm,1.2s
ESDC  Sonseca Array   62.24 300           P        02 56 50.2 -0.1
ESDC                             IAmb     IAmb     02 56 57.4
      comp=Z,28nm,1.6s
G16K  Koyuk River     62.28  25  P        P        02 56 50.5 +0.5
      baz=310
MBAR  Mbarara         62.31 241  P        P        02 56 50.7 -0.4
MBAR  Mbarara         62.31 241  P        P        02 56 50.7 -0.4
MBAR                             pmax     pmax
      comp=Z,17nm,1.5s
F18K  Selawik         62.31  23  P        P        02 56 50.5 +0.3
      baz=312
C23K  Itkillik River  62.40  18           P        02 56 51.4 +0.7
C23K  Itkillik River  62.40  18  P        P        02 56 51.3 +0.5
      baz=318,SNR=8.2
E19K  Redstone River  62.42  22  P        P        02 56 52.0 +1.0
E19K  Redstone River  62.42  22  P        P        02 56 51.3 +0.4
      baz=314
E21K  Killik River    62.60  20  P        P        02 56 51.9 -0.3
E21K                             IAmb     IAmb     02 56 54.5
      comp=Z,19nm,1.1s
E21K  Killik River    62.60  20  P        P        02 56 52.9 +0.7
      baz=316
D22K  Ayikyak River   62.61  19  IAmb     IAmb     02 56 54.9
      comp=Z,24nm,1.1s
D22K  Ayikyak River   62.61  19  P        P        02 56 52.9 +0.7
      baz=317
F19K  Shaleruckik Mo  62.70  23  IAmb     IAmb     02 56 53.2
      comp=Z,40nm,1.9s
F19K  Shaleruckik Mo  62.70  23  P        P        02 56 53.1 +0.3
      baz=314
G17K  Kiwalik Mounta  62.75  25  P        P        02 56 53.4 +0.2
      baz=312
H16K  Elim            62.82  26  P        P        02 56 54.0 +0.4
      baz=311
C24K  Franklin Bluff  62.92  18  P        P        02 56 54.8 +0.6
      baz=320
D23K  Nanushuk River  63.03  19  IAmb     IAmb     02 56 57.0
      comp=Z,19nm,1.4s
D23K  Nanushuk River  63.03  19  P        P        02 56 55.3 +0.3
      baz=318
G18K  Tagagawik       63.09  24  P        P        02 56 55.8 +0.3
      baz=313
F20K  Avaraart Lake   63.13  22  P        P        02 56 55.9 +0.3
      baz=315
D24K  Happy Valley    63.33  18  P        P        02 56 57.5 +0.5
      baz=320
H17K  Granite Mounta  63.36  25  P        P        02 56 57.2  0.0
      baz=313
E22K  Anaktuvuk Pass  63.37  20  P        P        02 56 57.4 +0.1
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      baz=318
G19K  Purcell Mounta   63.38  23  IAmb  IAmb  02 57 03.6
      comp=Z,30nm,1.6s
G19K  Purcell Mounta   63.38  23  P     P     02 56 57.8 +0.5
      baz=314
TOLK  Toolik Lake Re   63.54  19        P     02 56 58.9 +0.4
TOLK                              IAmb  IAmb  02 57 06.9
      comp=Z,14nm,1.0s
TOLK  Toolik Lake Re   63.54  19  P     P     02 56 58.7 +0.2
      baz=319,SNR=8.4
C26K  Camden Bay       63.59  16  P     P     02 56 59.0 +0.3
      baz=323
F21K  Alatna River     63.61  21  IAmb  IAmb  02 57 05.9
      comp=Z,16nm,1.0s
F21K  Alatna River     63.61  21  P     P     02 56 59.4 +0.4
      baz=317
H18K  Honhosa River    63.69  24  IAmb  IAmb  02 57 05.4
      comp=Z,32nm,1.6s
H18K  Honhosa River    63.69  24  P     P     02 56 59.8 +0.3
      baz=314
F22K  John River       63.74  20  P     P     02 57 00.1 +0.3
      baz=318
D25K  Kavik River      63.75  17  IAmb  IAmb  02 57 02.4
      comp=Z,16nm,1.2s
D25K  Kavik River      63.75  17  P     P     02 57 00.1 +0.3
      baz=322
K13K  Kusilvak Mount   63.75  29  P     P     02 57 00.1 +0.2
      baz=310
I17K  Unalakleet       63.82  26  P     P     02 57 00.6 +0.4
      baz=312
RES   Resolute Bay     63.84 359  LR    LR    03 26 34.0
      comp=Z,161nm,18.6s,baz=21,slow=38
E23K  Chandalar        63.98  19  P     P     02 57 01.6 +0.3
      baz=319,SNR=10
H19K  Roundabout Mou   64.00  23  IAmb  IAmb  02 57 08.2
      comp=Z,21nm,1.4s
H19K  Roundabout Mou   64.00  23  P     P     02 57 02.2 +0.7
      baz=315
C27K  Jago River       64.08  16  IAmb  IAmb  02 57 04.2
      comp=Z,17nm,1.2s
C27K  Jago River       64.08  16  P     P     02 57 02.9 +1.0
      baz=324
G21K  Allakaket        64.12  21  IAmb  IAmb  02 57 27.7
      comp=Z,34nm,1.8s
G21K  Allakaket        64.12  21  P     P     02 57 02.7 +0.5
      baz=317
E24K  Your Creek       64.24  19  IAmb  IAmb  02 57 04.9
      comp=Z,26nm,1.6s
E24K  Your Creek       64.24  19  P     P     02 57 03.2 +0.2
      baz=320,SNR=7.1
J16K  Anvik River      64.26  26  P     P     02 57 03.6 +0.4
      baz=313
G22K  Bettles          64.36  20  P     P     02 57 03.9 +0.2
      baz=318
GCSA  Galena City Sc   64.43  24  P     P     02 57 04.3  0.0
      baz=315
IMAR  Indian Mountai   64.45  22  P     P     02 57 04.8 +0.4
COLD  Coldfoot         64.46  20  IAmb  IAmb  02 57 07.0
      comp=Z,12nm,1.0s
COLD  Coldfoot         64.46  20  P     P     02 57 04.7 +0.2
      baz=319,SNR=12
H20K  Anotleneega Mo   64.48  23  P     P     02 57 04.9 +0.2
      baz=316
J17K  VABM Dome        64.68  26  IAmb  IAmb  02 57 13.5
      comp=Z,26nm,1.3s
J17K  VABM Dome        64.68  26  P     P     02 57 05.8 -0.1
      baz=314
F24K  Squaw Lake       64.81  19  P     P     02 57 07.1 +0.3
      baz=321
E25K  Arctic Village   64.88  18  P     P     02 57 07.3 +0.1
      baz=323,SNR=6.1
G23K  Bananza Creek    64.90  20  IAmb  IAmb  02 57 09.0
      comp=Z,28nm,1.7s
G23K  Bananza Creek    64.90  20  P     P     02 57 07.6 +0.2
      baz=320
D27M  Malcolm River    64.95  15  IAmb  IAmb  02 57 15.9
      comp=Z,42nm,1.9s
D27M  Malcolm River    64.95  15  P     P     02 57 07.9 +0.2
      baz=326
H21K  Melozitna Rive   64.95  22  IAmb  IAmb  02 57 09.5
      comp=Z,24nm,1.4s
H21K  Melozitna Rive   64.95  22  P     P     02 57 07.9 +0.2
      baz=318,SNR=7.6
POIN  Pond Inlet       64.97 353  P     P     02 57 08.4 +0.8
POIN                              IAmb  IAmb  02 57 09.4
      comp=Z,24nm,1.5s
A36M  Sachs Harbour    64.99   9  P     P     02 57 08.4 +0.6
      baz=338,SNR=6.9
L15K  Ungalak Mounta   65.05  28  P     P     02 57 08.6 +0.2
      baz=313
I20K  Naaghedeneel     65.11  23  P     P     02 57 09.2 +0.5
      baz=317
TAM   Tamanrasset      65.11 279        P     02 57 09.7 +0.1
TAM   Tamanrasset      65.11 279  P     P     02 57 09.7 +0.1
TAM                               pmax  pmax
      comp=Z,24nm,0.5s
H22K  Ishtalitna Cre   65.17  21  P     P     02 57 09.8 +0.7
      baz=319
F25K  Christian Rive   65.29  18  P     P     02 57 10.4 +0.5
      baz=323
D28M  Stokes Point     65.31  15  P     P     02 57 10.9 +1.0
      baz=328
J19K  Poorman          65.35  24  IAmb  IAmb  02 57 17.4
      comp=Z,31nm,1.4s
J19K  Poorman          65.35  24  P     P     02 57 10.8 +0.5
      baz=316,SNR=7.0
J18K  Innoko River     65.39  25  IAmb  IAmb  02 57 18.7
      comp=Z,34nm,1.6s
J18K  Innoko River     65.39  25  P     P     02 57 11.4 +0.9
      baz=316
K17K  Iditarod         65.41  26  P     P     02 57 11.7 +1.0
      baz=315
M14K  Bethel           65.51  29  P     P     02 57 12.1 +0.8
      baz=312
F26K  Sheenjek River   65.55  17  P     P     02 57 12.1 +0.5
      baz=324
G24K  Hadweenzic Riv   65.56  19  IAmb  IAmb  02 57 13.7
      comp=Z,31nm,1.4s
G24K  Hadweenzic Riv   65.56  19  P     P     02 57 12.6 +1.0
      baz=322
J20K  Nowinta River    65.66  23  P     P     02 57 13.1 +0.8
      baz=317,SNR=9.0
SFJD  Kangerlussuaq    65.67 341  LR    LR    03 30 50.0
      comp=Z,277nm,18.5s,baz=42,slow=40
E27K  Coleen River     65.70  16  IAmb  IAmb  02 57 19.6
      comp=Z,16nm,1.0s
E27K  Coleen River     65.70  16  P     P     02 57 13.5 +1.0
      baz=326
H23K  Yukon River      65.71  21  IAmb  IAmb  02 57 15.0
      comp=Z,32nm,1.4s
H23K  Yukon River      65.71  21  P     P     02 57 13.6 +1.0
      baz=320,SNR=8.1
L16K  Owhat River      65.72  27  IAmb  IAmb  02 57 20.8
      comp=Z,16nm,1.1s
L16K  Owhat River      65.72  27  P     P     02 57 13.8 +1.1
      baz=314
E28M  Babbage River    65.77  15  P     P     02 57 13.3 +0.4
      baz=327,SNR=11
L17K  Donlin           65.83  26  P     P     02 57 14.0 +0.6
      baz=315
G25K  Bearman Lake     65.84  19  P     P     02 57 14.3 +1.0
      baz=323
M15K  Kasigluk River   66.01  28  P     P     02 57 15.3 +0.8
      baz=314
H24K  Noodor Dome      66.13  20  IAmb  IAmb  02 57 22.0
      comp=Z,29nm,1.6s
H24K  Noodor Dome      66.13  20  P     P     02 57 16.0 +0.6
      baz=322
N14K  Kuskokwak Cree   66.17  29  P     P     02 57 16.3 +0.7
      baz=313
FYU   Fort Yukon       66.21  19  IAmb  IAmb  02 57 18.9
      comp=Z,26nm,1.2s
G26K  Porcupine Rive   66.23  18  IAmb  IAmb  02 57 18.3
      comp=Z,27nm,1.4s
G26K  Porcupine Rive   66.23  18  P     P     02 57 16.5 +0.6
      baz=324
E29M  Blow River       66.27  15  IAmb  IAmb  02 57 23.6
      comp=Z,19nm,0.9s
E29M  Blow River       66.27  15  P     P     02 57 16.8 +0.6
      baz=329
I23K  Minto, Yukon-K   66.28  21  P     P     02 57 16.6 +0.4
      baz=320
K20K  Telida           66.29  24  IAmb  IAmb  02 57 19.4
      comp=Z,13nm,1.0s
K20K  Telida           66.29  24  P     P     02 57 17.0 +0.6
      baz=318
L18K  Granite Mounta   66.30  26  P     P     02 57 17.0 +0.6
      baz=316
M16K  Timber Creek     66.39  28  P     P     02 57 17.4 +0.4
      baz=315
CHUM  Lake Minchumin   66.42  23  P     P     02 57 18.1 +0.9
      baz=319
F28M  Old Crow         66.54  16  IAmb  IAmb  02 57 20.5
      comp=Z,16nm,1.2s
F28M  Old Crow         66.54  16  P     P     02 57 19.0 +1.1
      baz=327,SNR=14
MD01  Midelt array s   66.58 294        P     02 57 19.0 +0.1
MD31  MD31             66.58 294        P     02 57 19.2 +0.4
MD31                              IAmb  IAmb  02 57 20.6
      comp=Z,18nm,1.2s
N15K  Kwethluk River   66.58  29  P     P     02 57 18.7 +0.4
      baz=314
M17K  Holitna River    66.64  27  P     P     02 57 19.1 +0.5
      baz=316
BPAW  Bear Paw Mtn.    66.64  22  IAmb  IAmb  02 57 20.8
      comp=Z,26nm,1.2s
BPAW  Bear Paw Mtn.    66.64  22  P     P     02 57 19.1 +0.5
      baz=320,SNR=8.1
NEA2  Nenana           66.79  21  IAmb  IAmb  02 57 26.3
      comp=Z,37nm,1.6s
NEA2  Nenana           66.79  21  P     P     02 57 20.4 +0.9
      baz=321
POKR  Poker Plat Res   66.81  20  P     P     02 57 20.5 +0.8
      baz=322
G27K  Doyon Strip      66.83  17  P     P     02 57 20.7 +0.9
      baz=326
N16K  Nishlik Lake     66.84  28  P     P     02 57 20.7 +0.8
      baz=315
COLA  College          66.90  21  P     P     02 57 21.2 +1.0
      baz=322
L19K  White Mountain   66.91  25  P     P     02 57 21.1 +0.7
      baz=317
PRP   Porcupine Dome   66.98  19  P     P     02 57 21.3 +0.4
      baz=323,SNR=7.0
L20K  Farewell, AK     67.00  25  P     P     02 57 21.6 +0.7
      baz=318
CCB   Clear Creek Bu   67.09  21  IAmb  IAmb  02 58 26.8
      comp=Z,40nm,2.0s
M18K  Stony River      67.11  26  P     P     02 57 22.2 +0.6
      baz=317
INK   Inuvik           67.15  13  IAmb  IAmb  02 57 23.4
      comp=Z,18nm,1.3s
INK   Inuvik           67.15  13  P     P     02 57 22.5 +0.8
      baz=332,SNR=7.4
PPLA  Purkeypile       67.20  24  P     P     02 57 22.7 +0.3
      baz=319
ILAR  Eielson Array    67.23  20  P     P     02 57 21.9 -0.4
      comp=Z,5.1nm,0.9s,baz=315,slow=4.7,SNR=34
ILAR                              LR    LR    03 29 49.5
      comp=Z,172nm,18.1s,baz=306,slow=39
      comp=Z,5.1nm,0.9s
ILAR  Eielson Array    67.23  20        P     02 57 22.0 -0.4
ILAR  Eielson Array    67.23  20  P     P     02 57 22.0 -0.4
TRF   Thorofare Moun   67.34  23  P     P     02 57 23.4 +0.2
      baz=320
H27K  Steamboat Moun   67.34  17  IAmb  IAmb  02 57 31.0
      comp=Z,43nm,1.9s
H27K  Steamboat Moun   67.34  17  P     P     02 57 23.6 +0.5
      baz=326
F30M  Barrier River    67.35  15  IAmb  IAmb  02 57 29.4
      comp=Z,25nm,1.4s
F30M  Barrier River    67.35  15  P     P     02 57 23.4 +0.3
      baz=330
N17K  Nushagak Hills   67.35  27  P     P     02 57 23.4 +0.3
      baz=316
O15K  Ungalikthiuk R   67.38  29  P     P     02 57 23.4  0.0
      baz=315
MCK   McKinley         67.50  22  P     P     02 57 23.8 -0.3
      baz=321
HDA   Harding Lake     67.50  21  P     P     02 57 24.3 +0.2
      baz=323
G29M  Pine Creek       67.52  16  P     P     02 57 24.8 +0.7
      baz=329
C36M  Paulatuk         67.61  10  IAmb  IAmb  02 57 30.6
      comp=Z,19nm,0.9s
C36M  Paulatuk         67.61  10  P     P     02 57 24.7 +0.1
      baz=339,SNR=7.7
M20K  Styx River       67.68  25  P     P     02 57 25.6 +0.3
      baz=319
O16K  Kokwok River B   67.71  28  P     P     02 57 26.0 +0.6
      baz=316
I26K  Coal Creek Min   67.73  19  P     P     02 57 25.9 +0.4
      baz=325
J25K  Salcha River,    67.75  20  P     P     02 57 26.0 +0.3
      baz=324
G30M  tAoh Zraii Nji   67.82  15  IAmb  IAmb  02 57 33.3
      comp=Z,31nm,1.4s
G30M  tAoh Zraii Nji   67.82  15  P     P     02 57 26.3 +0.3
      baz=330,SNR=8.4
I27K  Kandik River     67.85  18  P     P     02 57 26.9 +0.6
      baz=326
F31M  Tsiigehtchic     67.88  14  IAmb  IAmb  02 57 32.9
      comp=Z,10nm,0.8s
F31M  Tsiigehtchic     67.88  14  P     P     02 57 26.4 +0.1
      baz=332,SNR=8.3
L22K  Petersville      67.91  23  IAmb  IAmb  02 57 32.7
      comp=Z,39nm,1.7s
H29M  Whitestone       68.04  16  P     P     02 57 27.6 +0.2
      baz=329
SKT   Skwentna         68.10  24  P     P     02 57 28.1 +0.2
      baz=320
CUT   Chulitna         68.15  23  P     P     02 57 27.9 -0.2
      baz=321
G31M  Satah River      68.24  14  IAmb  IAmb  02 57 36.1
      comp=Z,14nm,0.7s
G31M  Satah River      68.24  14  P     P     02 57 28.7 +0.1
      baz=332,SNR=13
EPYK  Eagle Plains     68.25  16  P     P     02 57 28.7 -0.1
      baz=330
J26L  Joseph Creek     68.30  19  IAmb  IAmb  02 57 35.8
      comp=Z,12nm,1.0s
J26L  Joseph Creek     68.30  19  P     P     02 57 29.2 +0.1
      baz=325,SNR=11
K24K  Donnelly Dome    68.30  21  P     P     02 57 29.0 -0.1
      baz=324
WAT1  Susitna Watana   68.32  22  P     P     02 57 28.9 -0.3
      baz=322
UNV   Unalaska Valle   68.32  36  P     P     02 57 29.4  0.0
      baz=312
I28M  Miner Creek      68.36  17  P     P     02 57 29.3 -0.3
      baz=328
STLK  Strandline Lak   68.38  25  IAmb  IAmb  02 57 36.2
      comp=Z,16nm,1.4s
DHY   Denali Highway   68.45  22  IAmb  IAmb  02 57 36.9
      comp=Z,8.7nm,0.7s
DHY   Denali Highway   68.45  22  P     P     02 57 29.8 -0.5
      baz=323
SPCR  Spurr Chakacha   68.49  25  P     P     02 57 29.9 -0.5
      baz=320
O18K  Koktuh Hills     68.52  27  P     P     02 57 30.0 -0.6
      baz=318
O19K  Port Alsworth    68.56  26  P     P     02 57 30.4 -0.4
      baz=318
RIDG  Independent Ri   68.59  20  IAmb  IAmb  02 57 37.6
      comp=Z,17nm,0.8s
RIDG  Independent Ri   68.59  20  P     P     02 57 30.3 -0.7
      baz=324,SNR=9.5
SCRK  Sand Creek       68.62  20  IAmb  IAmb  02 57 37.8
      comp=Z,28nm,1.6s
SCRK  Sand Creek       68.62  20  P     P     02 57 30.9 -0.3
      baz=325,SNR=5.5
M22K  Willow           68.70  24  P     P     02 57 31.9 +0.3
      baz=321
SUA   Susitna One      68.74  24  P     P     02 57 31.8 -0.2
      baz=320
WAT6  Susitna Watana   68.75  22  P     P     02 57 31.8 -0.3
      baz=322
I29M  Ogilvie Camp,    68.79  17  P     P     02 57 32.3 +0.2
      baz=329
P18K  Big Mountain,    68.85  27  P     P     02 57 33.0 +0.3
      baz=318
Q16K  King Salmon      68.88  28  P     P     02 57 32.6 -0.2
      baz=317
FALS  False Pass       68.97  34  P     P     02 57 33.0 -0.3
      baz=313
K27K  Chicken          69.05  19  IAmb  IAmb  02 57 41.1
      comp=Z,16nm,1.2s
K27K  Chicken          69.05  19  P     P     02 57 33.6 -0.2
      baz=326
PAX   Paxson           69.06  21  P     P     02 57 33.4 -0.5
      baz=324,SNR=5.6
PMR   Palmer           69.12  23  P     P     02 57 34.2  0.0
      baz=322
SML   Sawmill          69.19  23  P     P     02 57 34.4 -0.4
      baz=322
H31M  Peel River       69.22  15  IAmb  IAmb  02 58 00.3
      comp=Z,39nm,1.9s
H31M  Peel River       69.22  15  P     P     02 57 34.6 -0.2
      baz=332
I30M  Mount Dempster   69.32  16  IAmb  IAmb  02 57 41.9
      comp=Z,21nm,1.2s
I30M  Mount Dempster   69.32  16  P     P     02 57 35.5 -0.1
      baz=330
P19K  Oil Pt           69.33  26  P     P     02 57 35.8 +0.2
      baz=319
RC01  Rabbit Creek A   69.34  24  P     P     02 57 36.0 +0.4
      baz=321
M23K  Glacier View     69.38  23  P     P     02 57 36.7 +0.8
      baz=323
SCM   Sheep Creek Mo   69.46  22  P     P     02 57 37.3 +0.9
      baz=323
Q17K  Contact Creek    69.46  28  P     P     02 57 36.6 +0.1
      baz=318
KNK   Knik Glacier     69.47  23  P     P     02 57 37.1 +0.7
      baz=322
Q18K  Katmai Hardscr   69.48  28  P     P     02 57 36.7  0.0
      baz=318
S14K  Fog Glacier      69.53  31  P     P     02 57 37.0  0.0
      baz=316
M24K  Tolsona, Glenn   69.56  22  P     P     02 57 37.5 +0.4
      baz=324
L26K  Log Cabin Wild   69.57  20  P     P     02 57 37.2 +0.1
      baz=326
J29N  Klondike Camp    69.59  17  IAmb  IAmb  02 57 38.9
      comp=Z,16nm,1.2s
J29N  Klondike Camp    69.59  17  P     P     02 57 37.5 +0.3
      baz=329
HARP  HAARP            69.61  21  P     P     02 57 37.7 +0.5
      baz=324
DAWY  Dawson           69.66  18  P     P     02 57 37.8 +0.2
      baz=328,SNR=5.3
Q19K  Cape Douglas,    69.74  27  P     P     02 57 38.0 -0.1
      baz=319
R17L  Mt. Peulik Vol   69.76  29  P     P     02 57 37.6 -0.7
      baz=317
HOM   Homer            69.85  26  P     P     02 57 39.0 +0.3
      baz=320
J30M  Hart River       69.90  16  IAmb  IAmb  02 58 59.2
      comp=Z,32nm,1.9s
J30M  Hart River       69.90  16  P     P     02 57 39.4 +0.3
      baz=331
L27K  Beaver Creek,    69.92  19  IAmb  IAmb  02 57 42.0
      comp=Z,13nm,1.0s
L27K  Beaver Creek,    69.92  19  P     P     02 57 39.5 +0.2
      baz=327
BCAR  Beaver Creek A   69.93  19        P     02 57 39.9 +0.6
PWL   Port Wells       69.94  24  P     P     02 57 39.8 +0.5
      baz=322
KLU   Klutina          70.13  22  P     P     02 57 40.9 +0.3
      baz=324
M26K  Nabesna, AK      70.18  20  IAmb  IAmb  02 57 44.1
      comp=Z,29nm,1.5s
M26K  Nabesna, AK      70.18  20  P     P     02 57 40.9 +0.1
      baz=326
SEW   Seward           70.20  24  P     P     02 57 41.0 +0.2
      baz=322
K29M  Barlow Dome      70.28  17  IAmb  IAmb  02 57 48.8
      comp=Z,30nm,1.6s
K29M  Barlow Dome      70.28  17  P     P     02 57 41.4 -0.1
      baz=330,SNR=7.4
N25K  Chitina, Valde   70.41  22  P     P     02 57 41.7 -0.5
      baz=325,SNR=5.3
R18K  Karluk           70.49  28  P     P     02 57 43.3 +0.6
      baz=319
M27K  Edge Creek, AK   70.50  20  IAmb  IAmb  02 57 45.4
      comp=Z,13nm,1.0s
M27K  Edge Creek, AK   70.50  20  P     P     02 57 43.3 +0.4
      baz=327
BVCY  Beaver Creek     70.71  19  P     P     02 57 44.4 +0.3
      baz=328
L29M  L29M             70.77  18  IAmb  IAmb  02 57 47.0
      comp=Z,21nm,1.2s
L29M  L29M             70.77  18  P     P     02 57 44.9 +0.4
      baz=330
EYAK  Cordova Ski Ar   70.95  23  P     P     02 57 45.7 +0.3
      baz=324
KDAK  Kodiak Island    70.98  27  LR    LR    03 31 53.3
      comp=Z,237nm,20.2s,baz=336,slow=38
KDAK  Kodiak Island    70.98  27  P     P     02 57 46.2 +0.5
      baz=320
MCARA McCarthy VSAT    71.02  21  P     P     02 57 45.9  0.0
      baz=326
OHAK  Old Harbor       71.17  28  P     P     02 57 46.5 -0.3
      baz=320
M29M  Somme Creek      71.27  18  IAmb  IAmb  02 57 49.7
      comp=Z,42nm,1.8s
M29M  Somme Creek      71.27  18  P     P     02 57 47.1 -0.4
      baz=329
YUK3  Moose Creek      71.36  20  P     P     02 57 48.4 +0.2
      baz=328
CHIR  Chirikof Islan   71.38  30  P     P     02 57 48.6 +0.5
      baz=318
CRQE  Cirque           71.53  21  P     P     02 57 49.7 +0.5
      baz=326
M30M  Minto, Yukon     71.54  18  P     P     02 57 49.6 +0.6
      baz=331
BARN  Barnard Glacie   71.65  21  IAmb  IAmb  02 57 57.5
      comp=Z,25nm,1.3s
CTG   Chitna Glacier   71.82  21  P     P     02 57 51.4 +0.5
      baz=328
YUK8  Steele Glacier   71.95  20  P     P     02 57 52.3 +0.5
      baz=329
YUK4  Talbot Arm       72.18  19  P     P     02 57 53.7 +0.6
      baz=330
FRB   Frobisher Bay    72.23 347  LR    LR    03 33 52.2
      comp=Z,281nm,18.2s,baz=52,slow=39
O28M  Mount Upton      72.28  20  P     P     02 57 54.5 +0.7
      baz=328
M31M  Drury Creek, Y   72.41  17  IAmb  IAmb  02 58 02.2
      comp=Z,41nm,1.8s
M31M  Drury Creek, Y   72.41  17  P     P     02 57 54.4 +0.2
      baz=332
N30M  Aishikik Lake    72.45  18  P     P     02 57 55.2 +0.7
      baz=331
N31M  Braeburn, Yuko   72.73  18  IAmb  IAmb  02 58 04.7
      comp=Z,15nm,0.9s
N31M  Braeburn, Yuko   72.73  18  P     P     02 57 57.0 +0.8
      baz=332
PINM  Pinnacle         72.84  21  P     P     02 57 57.7 +0.7
      baz=328
HYT   Haines Junctio   72.91  19  P     P     02 57 57.9 +0.5
      baz=330
O30N  Mendenhall       73.29  18  P     P     02 58 00.4 +0.9
      baz=331
WRGLY Wrigley          73.47  12  IAmb  IAmb  02 58 07.6
      comp=Z,27nm,1.3s
P29M  Windy Craggy     73.89  20  P     P     02 58 02.7 -0.4
      baz=330
TORD  Torodi Ar. Bea   73.93 273  P     P     02 58 03.7 -0.3
      comp=Z,7.6nm,0.8s,baz=41,slow=8.6,SNR=6.2
      comp=Z,7.6nm,0.8s
TORD  Torodi Ar. Bea   73.93 273  P     P     02 58 04.1 +0.2
PLBC  Pleasant Camp    74.38  19  P     P     02 58 06.4 +0.5
      baz=331
P33M  Teslin, Yukon    74.53  17  P     P     02 58 07.0 +0.1
      baz=334
SKAG  Skagway          74.63  19  P     P     02 58 07.7 +0.4
      baz=332
YKA   Yellowknife Ar   75.29   8  P     P     02 58 11.0 -0.1
      comp=Z,4.7nm,1.1s,baz=338,slow=5.9,SNR=21
YKA                               LR    LR    03 35 21.0
      comp=Z,163nm,18.2s,baz=84,slow=39
      comp=Z,4.7nm,1.1s
YKA   Yellowknife Ar   75.29   8 i P    P     02 58 11.8 +0.7
YKA                               pmax  pmax
      comp=Z,4.0nm,1.0s
YKAW1 Yellowknife Wh   75.31   8  IAmb  IAmb  02 58 12.4
      comp=Z,23nm,1.4s
WTLY  Watson Lake, Y   75.46  15  P     P     02 58 12.3 +0.2
      baz=337
R33M  Jennings River   75.67  17  P     P     02 58 13.9 +0.4
      baz=335
S32K  Killisnoo        76.58  19  P     P     02 58 19.2 +0.7
      baz=333
LIRD  Liard River Hi   76.62  14  P     P     02 58 19.8 +1.0
      baz=339
S34M  Telegraph Cree   76.99  17  P     P     02 58 21.6 +0.8
      baz=335
TOAD  Toad River Com   77.31  14  P     P     02 58 23.5 +0.9
      baz=340
WRA   Warramunga Arr   78.35 130  P     P     02 58 28.6 -0.3
      comp=Z,7.9nm,0.9s,baz=326,slow=5.4,SNR=42
      comp=Z,7.9nm,0.9s
WRA   Warramunga Arr   78.35 130        P     02 58 29.2 +0.4
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WRA	Warramunga Arr	78.35	130	P	P	02 58 29.2	+0.4
WRA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
WR8	Warramunga Arr	78.45	130		P	02 58 29.7	+0.3
PMG	Port Moresby	78.54	114	LR	LR	03 36 57.2	
	comp=Z,38nm,18.6s,baz=228,slow=39						
CRAG	Craig	78.74	19	P	P	02 58 30.8	+0.3
	baz=334						
V35K	Ketchikan	79.23	19	P	P	02 58 32.7	-0.6
	baz=335						
SCHQ	Schefferville	80.11	342	P	P	02 58 38.6	+0.5
	comp=Z,3.8nm,0.8s,baz=53,slow=10,SNR=1.8						
	comp=Z,3.8nm,0.8s						
ASAR	Alice Springs	81.06	133	P	P	02 58 43.6	0.0
	comp=Z,4.8nm,0.9s,baz=325,slow=5.1,SNR=34						
	comp=Z,4.8nm,0.9s						
DBIC	Dimbokro	83.01	273	P	P	02 58 53.7	-0.4
	comp=Z,10nm,0.9s,baz=59,slow=5.3,SNR=8.0						
	comp=Z,10nm,0.9s						
FFC	Flin Flon	83.85	2		P	02 58 57.5	-0.3
FFC				IAmb	IAmb	02 59 03.9	
	comp=Z,18nm,1.3s						
FFC	Flin Flon	83.85	2	P	P	02 58 57.5	-0.3
FFC				pmax	pmax		
	comp=Z,18nm,1.3s						
EDM	Edmonton	84.53	9	IAmb	IAmb	02 59 02.4	
	comp=Z,12nm,1.0s						
BOSA	Boshof	87.25	227	P	P	02 59 14.2	-0.8
	comp=Z,4.4nm,1.0s,baz=66,slow=10.0,SNR=2.9						
	comp=Z,4.4nm,1.0s						
B08A	Colville Reser	88.38	14	IAmb	IAmb	02 59 21.9	
	comp=Z,23nm,1.5s						
NEW	Newport	88.85	12	IAmb	IAmb	03 00 14.2	
	comp=Z,18nm,1.7s						
C09A	Chrisman Ranch	89.11	13	IAmb	IAmb	02 59 25.5	
	comp=Z,18nm,1.4s						
LON	Longmire	89.45	16	IAmb	IAmb	03 02 10.8	
	comp=Z,16nm,1.7s						
E09A	Wood Farm, Sta	90.37	14	IAmb	IAmb	02 59 31.9	
	comp=Z,12nm,1.2s						
MSO	Missoula	90.72	11	IAmb	IAmb	02 59 33.0	
	comp=Z,12nm,1.4s						
HOOD	Mount Hood Mea	90.85	16	IAmb	IAmb	02 59 34.9	
	comp=Z,16nm,1.2s						
STKA	Stephens Creek	91.69	133	P	P	02 59 35.0	-0.7
	comp=Z,1.2nm,0.3s,baz=322,slow=9.2,SNR=4.3						
	comp=Z,1.2nm,0.3s						
PLID	Pearl Lake	92.12	12	IAmb	IAmb	02 59 38.9	
	comp=Z,15nm,1.4s						
I04A	Tendick Farm,	92.14	17	IAmb	IAmb	02 59 45.8	
	comp=Z,17nm,1.5s						
DLMT	Dillon	92.34	10	IAmb	IAmb	02 59 46.6	
	comp=Z,13nm,1.4s						
PINE	Pine Mountain	92.46	16	IAmb	IAmb	02 59 47.6	
	comp=Z,10nm,1.3s						
I07A	Izee	92.47	15	IAmb	IAmb	02 59 42.0	
	comp=Z,17nm,1.5s						
YHL	Hebgen Lake	93.03	9	IAmb	IAmb	03 00 32.2	
	comp=Z,17nm,1.8s						
SPMN	Marine on St.	93.28	356		P	02 59 40.9	-2.2
SPMN				IAmb	IAmb	02 59 45.7	
	comp=Z,15nm,1.3s						
J08A	Circle Bar Ran	93.36	15	IAmb	IAmb	02 59 50.8	
	comp=Z,13nm,1.5s						
PDAR	Pinedale Array	95.27	8	P	P	02 59 52.0	-0.5
	comp=Z,0.4nm,0.6s,baz=38,slow=2.6,SNR=4.4						
	comp=Z,0.4nm,0.6s						
HWUT	Hardware Ranch	96.17	10	IAmb	IAmb	02 59 59.2	
	comp=Z,11nm,1.4s						
NVAR	Mina Array Bea	98.16	16	P	Pdif	03 00 06.3	+0.6
	comp=Z,0.8nm,1.0s,baz=0.5,slow=4.1,SNR=4.8						
	comp=Z,0.8nm,1.0s						
NVL	N'lazarevskaya	122.70	202	*i* PKIKP	PKiKP	03 05 31.4	+8.3
NVL				*e*		03 07 07.0	
NVL				*e*PPP	PPP	03 09 46.0	
NVL				pmax	pmax		
	comp=Z,14nm,1.4s						
LPAZ	La Paz	143.71	305	PKP	PKPbc	03 06 02.2	+0.1
	comp=Z,0.7nm,0.5s,baz=83,slow=3.8,SNR=2.1						
GO01	Chusmiza	146.92	303		PKPbc	03 06 12.3	+0.6
PB08	IPOC Station P	147.24	302	PKPdf	PKPdf	03 06 10.0	-0.3
PB11	IPOC Station P	147.28	303		PKPdf	03 06 10.5	+0.5

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*SNET **05** 03:02:35.8±2.8, 13°.89N×91°.97W, h20^{km}, ML3.5*
*GCG **05** 03:02:35.6±1.8, 13°.86N×91°.97W, h19^{km}±13^{km}, MD4.1, ML4.0*
*CATAC **05** 03:02:35.1±0.6, 14°N±3°×9°2W±°, h30^{km}±5^{km}, M3.6/17, MLv3.6/17, Error ellipse: s-maj=7.1km s-min=2.9km az=38.9, confirmed*
ISC 05 03:02:34.6±2.7**, 13°.7N**±0°.1×**92°.1W**±0°.1**, h35^{km}, n47, σ1^s.18**/49**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	Retalhuleu	0.91	28	P	Pn	03 02 50.5	-0.4
STG5	El Palmar, Qui	1.02	48	*i* P	Pn	03 02 52.3	-0.2
STG8	El Palmar, Qui	1.05	46	*e*P	Pn	03 02 53.2	+0.2
STG8				IAML		03 03 11.6	
	comp=N,2μm,0.2s						
SMCA	Catarina	1.13	3	*e*P	Pn	03 02 52.6	-1.3
QUEO	Labor Ovalle	1.29	28	*e*P	Pn	03 02 56.3	-0.1
SOKI	Kika Raxquin	1.30	33	*e*P	Pn	03 02 55.8	-0.9
ESSG	Sabana Grande	1.43	62	*i* P	Pn	03 02 57.4	-0.7
ESSJ	San Jos, E	1.60	95	*e*P	Pn	03 02 56.4	-3.9
FG16	Alotenango, Sa	1.67	71	*i* P	Pn	03 02 57.9	-3.7
FG16				IAML		03 03 25.9	
	comp=N,10μm,0.2s						
HUEH	Huehuetenango	1.70	21	P	Pn	03 03 01.2	-0.8
HUEH	Huehuetenango	1.70	21	S	Sn	03 03 21.5	-1.2
PCG5	San Vicente Pa	1.78	74	*e*P	Pn	03 02 60.0	-3.0
APG	El Apazote	2.06	52	*e*P	Pn	03 03 08.2	+1.2
FAME	Alcaldia de Sa	2.06	86	S	Sn	03 03 31.2	-0.2
FAME	Alcaldia de Sa	2.06	86	P	Pn	03 03 06.7	0.0
NUBE	Las Nubes	2.30	85	*e*P	Pn	03 03 09.8	-0.2
NUBE				*e*S	Sn	03 03 38.6	+1.4
NUBE	Las Nubes	2.30	85	*e*P	Pn	03 03 09.7	-0.4
NUBE	Las Nubes	2.30	85	S	Sn	03 03 37.2	0.0
NUBE	Las Nubes	2.30	85	P	Pn	03 03 09.9	-0.2
SLOZ	Alcaldia de Sa	2.30	82	S	Sn	03 03 37.0	-0.3
CEVE	Cerro Verde	2.44	87	*e*P	Pn	03 03 12.7	+0.5
SBLS	San Blas	2.44	87	*e*P	Pn	03 03 12.4	+0.1
UNIC	Universidad Ca	2.53	84	S	Sn	03 03 43.1	+0.3
UNIC	Universidad Ca	2.53	84	P	Pn	03 03 12.6	-0.6
CCIG	Comitan	2.55	360	*e*P	Pn	03 03 15.3	+1.7
CCIG	Comitan	2.55	360	S	Sn	03 03 42.8	-0.7
JAYA	Jayaque - finc	2.61	91	*e*P	Pn	03 03 14.0	-0.4
JAYA				*e*S	Sn	03 03 47.5	+2.5
JAYA	Jayaque - finc	2.61	91	*e*P	Pn	03 03 14.5	+0.1
JAYA	Jayaque - finc	2.61	91	P	Pn	03 03 14.2	-0.3
JAYA	Jayaque - finc	2.61	91	S	Sn	03 03 45.0	-0.1
PMON	Piamonte	2.74	90	P	Pn	03 03 17.0	+0.8
PMON	Piamonte	2.74	90	S	Sn	03 03 49.0	+0.8
MTO3	Montecristo	2.78	76	*e*P	Pn	03 03 16.9	+0.2
MTO3	Montecristo	2.78	76	*e*P	Pn	03 03 17.0	+0.2
MTO3	Montecristo	2.78	76	P	Pn	03 03 16.8	0.0
MTO3	Montecristo	2.78	76	S	Sn	03 03 49.0	-0.2
ESQI	Esquipulas	2.84	73	P	Pn	03 03 17.5	0.0
ESQI	Esquipulas	2.84	73	S	Sn	03 03 50.7	+0.2
LOMA	Loma Larga	2.88	91	S	Sn	03 03 52.3	+0.6
LOMA	Loma Larga	2.88	91	P	Pn	03 03 18.4	+0.2
LFRS	El Faro	2.99	91	*e*P	Pn	03 03 18.9	-0.7
LLGN	La Laguna	3.13	82	S	Sn	03 03 58.2	+0.4
SCLA	Alcaldia de Sa	3.31	90	S	Sn	03 04 03.0	+0.8
SCLA	Alcaldia de Sa	3.31	90	P	Pn	03 03 25.1	+1.1
PACA	Pacayal	3.71	93	S	Sn	03 04 13.7	+1.4
CNCH	Conchagua	4.21	96	P	Pn	03 03 36.4	0.0
CNCH	Conchagua	4.21	96	S	Sn	03 04 25.2	+0.8

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*IDC **05** 03:04:11.1±9.4, 41°.56N×19°.78E, h0^{km}, mb3.7/4, mbtmp3.6/5, ML2.4/1, Error ellipse: s-maj=175.9km s-min=27.4km az=30.0*
*SKO **05** 03:04:13.9, 41°.56N×19°.43E, h17^{km}, ML2.8*
*TIR **05** 03:04:14.5, 41°.58N×19°.54E, h32^{km}±3^{km}, Ml3.1/5*
*PDG **05** 03:04:14.1±0.3, 41°.56N×19°.56E, h13^{km}, ML2.7/13, Error ellipse: s-maj=0.7km s-min=0.7km az=90.0*
ISC 05 03:04:14.0±0.9**, 41°.54N**±0°.02×**19°.53E**±0°.02**, h17^{km}**±7^{km}**, n62, σ1^s.29**/88**, mb3.7**/3**, 18C-12D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.32	128	Pg	Pg	03 04 20.1	-0.7
TIR				Sg	Sg	03 04 24.4	-1.1
TIR				AML	AML	03 04 25.2	
	7.5nm,0.2s						
ULC	Ulcinj	0.47	333	*e*Pg	Pg	03 04 23.2	-0.3
ULC				*i* Sg	Sb	03 04 30.6	+0.1
SDA	Shkodra	0.51	357	Pg	Pg	03 04 23.6	-0.6
SDA				Sg	Sn	03 04 33.6	-1.1
DRME	Dracevica, Mon	0.69	338	⇑*i*Pg	Pg	03 04 27.0	-0.6
DRME				*e*Sg	Sb	03 04 37.8	+0.9
PHP	Peshkopia	0.70	78	Pg	Pg	03 04 27.0	-0.7
PHP				Sg	Sb	03 04 37.7	+0.7
PHP				AML	AML	03 04 43.9	
	3.2nm,0.6s						
BUM	Brajici-Budva	0.89	328	⇑*i*Pg	Pb	03 04 31.0	-0.1
BUM				*i* Sg	Sn	03 04 45.2	+0.8
PDG	Podgorica	0.91	347	Pg	Pb	03 04 30.4	-0.8
PDG				Sg	Sn	03 04 45.0	+0.4
PDG	Podgorica	0.91	347	⇓P	Pb	03 04 30.2	-1.1
PDG				⇓S	Sn	03 04 44.8	+0.1
PDG	Podgorica	0.91	347	⇑*i*Pg	Pb	03 04 30.2	-1.1
PDG				*i* Sg	Sn	03 04 44.6	0.0
OHR	Ohrid	1.05	114	*i* Pg	Pb	03 04 33.4	-0.4
OHR				*i* Sg	Sn	03 04 50.6	+2.5
OHR				*e*Lg	Lg	03 04 51.9	
	comp=N,487nm,0.8s						
OHR				*e*Lg	Lg	03 04 53.4	
	comp=E,302nm,0.6s						
VLO	Vlora	1.07	181	Pg	Pg	03 04 34.9	+0.2
VLO				Sg	Sg	03 04 50.1	+1.3
VLO				AML	AML	03 04 53.8	
	comp=E,3.1nm,0.4s						
PVY	Plav	1.10	17	⇓*i*Pg	Pb	03 04 34.1	-0.5
PVY				*i* Sg	Sn	03 04 50.7	+1.2
CEME	Cevo	1.10	336	⇑*i*Pg	Pb	03 04 34.4	-0.2
CEME				*e*Sg	Sg	03 04 51.8	+2.0
HCY	Herceg Novi	1.19	320	⇓*i*Pg	Pb	03 04 36.4	+0.4
HCY				*i* Sg	Sg	03 04 55.0	+2.5
NKME	Niksic	1.30	341	*e*Pg	Pb	03 04 38.0	+0.1
NKME				*e*Sg	Sg	03 04 58.0	+2.0
KOME	Kolasin	1.31	360	⇓*i*Pg	Pb	03 04 38.0	-0.1
KOME				*e*Sg	Sg	03 04 58.2	+1.9
KBN	Korca	1.32	134	⇑Pg	Pb	03 04 39.0	+0.6
KBN				Sg	Sg	03 04 56.9	+0.1
IVA	Berane	1.35	11	⇑*i*Pg	Pb	03 04 38.7	-0.3
IVA				*i* Sg	Sg	03 04 59.3	+1.4
TREB	Trebinje	1.47	324	*e*Pn	Pn	03 04 40.1	+0.5
SKO	Skopje	1.49	73	*i* Pg	Pg	03 04 42.0	-0.7
SKO				*i* Sg	Sg	03 05 03.4	+1.2
BRY	Bratogost	1.54	332	⇓*i*Pg	Pb	03 04 42.4	+0.2
BRY				*i* Sg	Sg	03 05 04.6	+0.7
NEST	Nestorio	1.61	134	Pn	Pb	03 04 43.5	+0.2
NEST				Sn	Sg	03 05 06.8	+0.8
NEST				AML	AML	03 05 08.4	
	comp=E,0.7nm,0.5s						
UPM	Unac-Piva	1.72	345	⇓*i*Pn	Pb	03 04 44.7	-0.6
UPM				*i* Sn	Sg	03 05 08.6	-1.0
KLINJ	Klinje	1.77	337	*e*Pn	Pb	03 04 45.3	-0.7
PLE	Pljevlja	1.79	357	⇓*i*Pn	Pb	03 04 46.5	+0.1
PLE				*i* Sn	Sg	03 05 09.9	-1.8
KEK	Kerkira	1.84	174	Pn	Pg	03 04 49.1	-0.2
NOCI	Noci	2.01	249	Pn	Pb	03 04 49.9	-0.1
NOCI				Sn	Sb	03 05 15.4	+0.7
NOCI				AML	AML	03 05 25.9	
	comp=E,0.7nm,0.4s						
RUDO	Rudo	2.08	357	*e*Pn	Pb	03 04 49.5	-1.7
IGT	Igoumenitsa	2.10	163	Pn	Pn	03 04 49.0	+0.6
IGT				Sn	Sn	03 05 14.3	+0.2
BARS	Barje	2.12	52	*i* Pn	Pb	03 04 50.0	-1.9
VAY	Valandovo	2.30	95	*i* Pn	Pn	03 04 52.4	+1.4
VAY				*i* Sn	Sn	03 05 20.4	+1.6
VAY				*e*Lg	Lg	03 05 21.8	
	comp=N,34nm,0.7s						
VAY				*e*Lg	Lg	03 05 22.8	
	comp=E,38nm,0.9s						
MATE	Matera	2.31	248	⇑P	Pn	03 04 50.7	-0.5
KNT	Kendrikon	2.56	97	*i* Pn	Pn	03 04 56.1	+1.4
BOVS	Bovan	2.64	37	⇓P	Pn	03 04 57.0	+1.2
KKB	Krupnik	2.71	82	*i* Pn	Pn	03 04 58.5	+1.8
THE	Thessaloniki	2.75	108	*i* Pn	Pn	03 04 58.0	+0.8
SOH	Sokhos	2.98	103	*i* Pn	Pn	03 05 01.6	+1.2
SRS	Serrai	3.09	97	*i* Pn	Pn	03 05 03.1	+1.1
MMB	Musomishta	3.17	89	*i* Pn	Pn	03 05 05.3	+2.2
TIP	Timpagrande	3.17	223	⇑P	Pn	03 05 02.0	-1.1
BLY	Banja Luka	3.63	333	*e*Pn	Pb	03 05 19.3	+1.6
BLY	Banja Luka	3.63	333	⇑P	Pn	03 05 09.8	+0.3
HERR	Herculane	3.95	31	⇑P	Pn	03 05 15.1	+1.4
BZS	Buzias	4.34	20	⇓P	Pn	03 05 20.1	+0.9
GZR	Gura Zlata	4.52	30	⇑P	Pn	03 05 23.0	+1.4
SURR	Surduc	4.61	23	⇑P	Pn	03 05 24.5	+1.7
AQU	L'Aquila	4.64	282	*e*Pn	Pn	03 05 25.4	+2.1
MORH	Mrgy, Hungar	4.71	352	*e*Pn	Pn	03 05 23.9	-0.3
MORH	Mrgy, Hungar	4.71	352	⇑P	Pn	03 05 24.8	+0.6
ELND	Elena	4.91	72	⇑P	Pn	03 05 28.9	+1.9
SIRR	Siria	4.97	17	⇓P	Pn	03 05 29.7	+1.9
ARR	Arges	5.33	42	⇑P	Pn	03 05 35.0	+2.2
VOIR		5.59	44	⇑P	Pn	03 05 38.1	+1.7
DRGR		5.72	22	⇓P	Pn	03 05 40.1	+2.0
MLR	Muntele Rosu	6.11	48	⇑P	Pn	03 05 44.9	+1.4
VRI	Vrincioaia	6.77	48	⇑P	Pn	03 05 54.6	+2.1
KECS	Kecovo	6.97	5	*e*PN	Pn	03 05 58.3	+3.0
GERES	GERESS Array B	8.38	333	Pn	Pn	03 06 16.2	+1.6
	baz=150,slow=14,SNR=2.1						
	comp=E,0.2nm,0.6s						
FINES	FINESS Array B	20.32	9	P	P	03 08 47.4	-1.4
	comp=E,4.1nm,0.9s,baz=168,slow=9.8,SNR=4.4						
	comp=E,4.1nm,0.9s						
BVAR	Borovoye Array	35.63	54	P	P	03 11 09.9	-0.7
	comp=E,0.5nm,0.6s,baz=299,slow=3.0,SNR=2.7						
	comp=E,0.5nm,0.6s						
ZALV	Zalesovo Beam	44.08	51	P	P	03 12 18.9	-1.8
	comp=E,0.8nm,0.6s,baz=292,slow=7.6,SNR=3.5						
	comp=E,0.8nm,0.6s						
MKAR	Makanchi Array	44.27	61	P	P	03 12 20.2	-2.3
	comp=E,0.9nm,0.7s,baz=288,slow=7.0,SNR=1.9						
	comp=E,0.9nm,0.7s						

IDC 05 03:15:01.8±4.5**, 18°.70S×177°.08W, h0^{km}, mb4.1**/4**, mbtmp4.1**/4**, Error ellipse: s-maj=187.4km s-min=38.5km az=139.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	39.37	242	P	P	03 22 33.4	+0.2
	1.8nm,0.6s,baz=88,slow=9.6,SNR=4.3						
	1.8nm,0.6s						
WRA	Warramunga Arr	45.73	260	P	P	03 23 25.0	-0.2
	1.2nm,0.3s,baz=98,slow=7.8,SNR=25						
	1.2nm,0.3s						
ASAR	Alice Springs	45.79	255	P	P	03 23 25.4	-0.3
	3.3nm,0.5s,baz=89,slow=7.9,SNR=64						
	3.3nm,0.5s						
ILAR	Eielson Array	86.38	12	P	P	03 27 45.4	-0.1
	0.3nm,0.9s,baz=201,slow=4.8,SNR=1.0						
	0.3nm,0.9s						

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*NEIC **05** 03:17:03.9±1.0, 19°.7N±0°.1×64°.2W±0°.1, h10^{km}±2^{km}, ML2.6/14, Md3.7/7(RSPR), Error ellipse: s-maj=29.6km s-min=4.1km az=143.0*
RSPR 05 03:17:06.5, 19°.49N×63°.99W, h40^{km}±27^{km}**, MD3.6**/7**, 8C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUMP	Col San Antoni	2.21	233		Pn	03 17 40.0	-0.8
HUMP				IAML		03 18 11.4	
	18nm,0.2s						
HUMP				IAML		03 18 14.1	
	26nm,0.2s						
HUMP	Col San Antoni	2.21	233		Sn	03 18 05.7	-1.2
HUMP	Col San Antoni	2.21	233	⇑*e*P	Pn	03 17 40.2	-0.5
HUMP	Col San Antoni	2.21	233	*e*S	Sn	03 18 05.7	-1.2
GCPR	Guaynabo City	2.31	240	Pn	Pn	03 17 40.4	-1.6
GCPR				IAML		03 18 00.8	
	comp=E,16nm,3.5s						
SJG	San Juan	2.46	237		Pn	03 17 43.5	-0.7
SJG	San Juan	2.46	237	⇑*e*P	Pn	03 17 43.8	-0.4
SJG	San Juan	2.46	237	*e*S	Sn	03 18 11.8	-1.2
ECPR	Experimental S	2.53	243	⇑*e*P	Pn	03 17 44.0	-1.1
ECPR	Experimental S	2.53	243	*e*S	Sn	03 18 14.0	-0.7
AOPR	Arecibo Observ	2.85	247		Pn	03 17 47.9	-1.6
AOPR				IAML		03 18 32.7	
	comp=E,47nm,1.5s						
AOPR	Arecibo Observ	2.85	247	⇑*e*P	Pn	03 17 48.3	-1.3
OBIP	Obispado Ponce	2.87	240		Pn	03 17 48.8	-0.9
OBIP				IAML		03 18 28.3	
	comp=N,18nm,2.9s						
OBIP				IAML		03 19 25.1	
	comp=E,16nm,3.4s						
OBIP	Obispado Ponce	2.87	240	⇑*e*P	Pn	03 17 49.3	-0.4
AGPR	Aguadilla, PR	3.12	252	Pn	Pn	03 17 50.7	-2.5
LSP	Las Mesas	3.21	246		Pn	03 17 54.4	-0.1
LSP	Las Mesas	3.21	246	⇑*e*P	Pn	03 17 54.4	-0.1
MLPR	Magueyes Islan	3.27	243	⇑*e*P	Pn	03 17 54.4	-0.8
MLPR	Magueyes Islan	3.27	243	*e*S	Sn	03 18 32.3	-0.5
CRPR	Cabo Rojo, PR	3.31	244		Pn	03 17 54.4	-1.4
CRPR				IAML		03 18 18.4	
	comp=E,23nm,2.7s						
CRPR				IAML		03 19 41.3	
	comp=E,25nm,3.0s						
CRPR	Cabo Rojo, PR	3.31	244		Sn	03 18 33.5	-0.3
CRPR	Cabo Rojo, PR	3.31	244	⇑*e*P	Pn	03 17 54.8	-0.9
CRPR	Cabo Rojo, PR	3.31	244	*e*S	Sn	03 18 33.5	-0.3
DR12	Loma Pena Alta	5.14	263	Pn	Pn	03 18 18.5	-2.6

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*NEIC **05** 03:23:17.5, 13°.70S×76°.10W, h46^{km}*
*NEIC **05** 03:23:17.5, 13°.90S×76°.10W, h46^{km}, Moment Tensor Solution. Duration: 2^s.3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$6.06; M$_{\theta\theta}$-1.98; M$_{\phi\phi}$-4.08; M$_{r\theta}$-0.19; M$_{\theta\phi}$1.14; M$_{\phi r}$-5.06; Fault plane solution: M$_0$7.45000×10^{16} NP1: ϕ_s331.81000°, δ24.67000°, λ70.58000°. NP2: ϕ_s173.01000°, δ66.82000°, λ98.68000°. Principal axes: T 8.1877, Plg67.0000°, Azm99.0000°; N -1.7945, Plg8.0000°, Azm350.0000°; P -6.3931, Plg21.0000°, Azm256.0000°;*
*MOS **05** 03:23:19.2±1.2, 13°.61S×76°.01W, h52^{km}, mb5.5/16 Error ellipse: s-maj=13.8km s-min=6.8km az=109.4*
*NEIC **05** 03:23:19.1±1.4, 13°.68S±0°.07×76°.07W±0°.09, h35^{km}±4^{km}, mb5.3/521, Mww5.2/31, Error ellipse: s-maj=14.5km s-min=7.4km az=60.0*
*IDC **05** 03:23:20.2±0.3, 13°.61S×76°.01W, h50^{km}±3^{km}, mb4.5/20, mbtmp4.8/23, MS4.1/41, Error ellipse: s-maj=16.9km s-min=5.9km az=62.0*
*VAO **05** 03:23:21.1±0.8, 13°.58S×75°.95W, h58^{km}±5^{km}, mb5.4, Presumed earthquake*
*GCMT **05** 03:23:25.1±0.2, 13°.54S±0°.01×76°.25W±0°.02, h60^{km}±1^{km}, MW5.3/112, Moment Tensor Solution. s83,c101; s112,c176; Duration: 1^s.0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.69±.02; M$_{\theta\theta}$0.32±.02; M$_{\phi\phi}$-1.01±.02; M$_{r\theta}$0.05±.01; M$_{\theta\phi}$0.21±.02; M$_{\phi r}$-0.52±.02; Best double couple: M$_0$1.01200×10^{17} NP1: ϕ_s347.00000°, δ30.00000°, λ84.00000°. NP2: ϕ_s174.00000°, δ61.00000°, λ93.00000°. Principal axes: T 0.8350, Plg74.0000°, Azm92.0000°; N 0.3510, Plg3.0000°, Azm352.0000°; P -1.1880, Plg16.0000°, Azm262.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 05 03:23:20.2±0.3**, 13°.62S**±0°.04×**76°.05W**±0°.05**, h49^{km}**±2^{km}**, h49^{km}:pP-P, n792, σ1^s.21**/577**, mb5.3**/256**, MS4.2**/41**, 23C-5D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	1.80	334	P	Pn	03 23 49.7	+0.9
	2μm,0.3s,baz=168,slow=13,SNR=346						
NNA				S	Sn	03 24 10.5	-0.1
	6μm,0.3s,baz=169,slow=14,SNR=9.9						
NNA				LR	LR	03 24 46.7	
	comp=Z,6μm,19.5s,baz=152,slow=48						
NNA	Nana	1.80	334		Pn	03 23 48.3	-0.6
NNA				Sn	Sn	03 24 10.5	-0.1
NNA	Nana	1.80	334	*c* *i*P	Pn	03 23 48.5	-0.4
ATAH	Atahualpa	6.85	340	P	Pn	03 25 00.4	+2.0
	33nm,0.3s,baz=154,slow=3.3,SNR=65						
ATAH				S	Sn	03 26 17.6	+2.2
	214nm,0.7s,baz=103,slow=14,SNR=1.7						
ATAH				LR	LR	03 27 39.0	
	comp=Z,2μm,21.8s,baz=175,slow=38						
AP01	Chacalluta	7.24	131	Pn	Pn	03 25 03.1	-0.3
PB12	IPOC Station P	7.40	133		Pn	03 25 04.2	-1.5
PB18	Visviri	7.46	123		Pn	03 25 06.1	-0.8
PB16	IPOC Station P	7.84	128		Pn	03 25 11.6	-0.6
LPAZ	La Paz	8.10	110	P	Pn	03 25 18.0	+2.3
	60nm,0.5s,baz=340,slow=9.1,SNR=154						
LPAZ				S	Sn	03 26 51.1	+4.8
	72nm,0.8s,baz=212,slow=7.6,SNR=1.5						
LPAZ	La Paz	8.10	110		Pn	03 25 17.5	+1.7
LPAZ	La Paz	8.10	110	P	Pn	03 25 17.5	+1.7
LPAZ	La Paz	8.10	110	*e*P	Pn	03 25 15.6	-0.1
PB11	IPOC Station P	8.64	136		Pn	03 25 21.2	-1.6
HMBC	Humberstone	8.86	139		Pn	03 25 23.6	-2.1
TA01	Diego Aracena	8.89	142		Pn	03 25 24.6	-1.5
GO01	Chusmiza	8.90	133		Pn	03 25 25.2	-1.5
PATCX	Punta Patache	9.11	143		Pn	03 25 27.4	-1.7
PB08	IPOC Station P	9.25	135		Pn	03 25 29.9	-1.4
PB02	IPOC Station P	9.64	143		Pn	03 25 34.6	-1.9
PB01	IPOC Station P	9.68	141		Pn	03 25 35.1	-1.8
PB07	IPOC Station P	9.97	145		Pn	03 25 39.0	-1.9
PB03	IPOC Station P	10.30	145		Pn	03 25 43.7	-1.8
PB09	IPOC Station P	10.39	142		Pn	03 25 45.7	-1.1
PB05	IPOC Station P	10.72	150		Pn	03 25 50.2	-1.1
PB06	IPOC Station P	10.93	147		Pn	03 25 52.5	-1.5
PB10	IPOC Station P	11.13	153		Pn	03 25 55.0	-1.7
COHC	Cochancay	11.53	344	P	Pn	03 26 04.8	+2.6
	0.9nm,0.9s						
AF01	San Pedro de A	11.91	142		Pn	03 26 06.8	-0.8
PB14	IPOC Station P	12.17	155		Pn	03 26 09.1	-2.1
GO02	Mina Guanaco	12.99	153		Pn	03 26 21.0	-1.4
FLF1	Flavio Alfaro-	13.71	344	P	Pn	03 26 31.5	-0.5
PTLC	Puerto Leguiza	13.76	5	P	Pn	03 26 27.3	-5.4
BONI	La Bonita	14.06	354	P	Pn	03 26 38.9	+1.9
	912nm64nm,0.7s						
PAC1	Pacto, Paraso	14.07	349	P	P	03 26 42.1	-1.4
TULM	Tulcn-Chalpat	14.35	353	P	P	03 26 44.1	-2.9
	1μm119nm,0.9s						
CMBC	Cumbal	14.58	353	P	Pn	03 26 45.8	+1.8
AC02	Maricunga	14.65	155	Pn	Pn	03 26 42.5	-2.5
AC06	Mina Casimiro	14.66	160	Pn	Pn	03 26 43.3	-1.4
GO03	Copiapo	14.92	160	Pn	Pn	03 26 45.2	-2.9
TEFE	Tefe	15.10	49	*e*P	Pn	03 26 49.0	-1.5
FLOC	Florencia	15.11	2		Pn	03 26 50.2	-0.5
FLOC	Florencia	15.11	2	P	Pn	03 26 51.5	+0.8
	1μm100nm,1.4s						
CRUC	La Cruz	15.12	357	P	Pn	03 26 53.2	+2.1
AC04	Llanos de Chal	15.23	163	Pn	Pn	03 26 50.0	-2.1
VILB	Vilhena	15.44	89		Pn	03 26 52.7	-2.2
VILB	Vilhena	15.44	89	*e*P	Pn	03 26 52.8	-2.2
BBAC	Balboa, Cauca	15.59	356	P	P	03 26 59.8	-0.7
	685nm58nm,1.1s						
GARC	Garzon, Huila	15.72	2	P	Pn	03 27 00.2	+1.5
MACC	Macarena, Meta	15.82	8	P	Pn	03 27 00.8	+1.1
	1μm102nm,1.3s						
AC05	El Transito	16.06	161	P	Pn	03 27 01.2	-1.6
POPC	Popayan, Colom	16.07	358	P	P	03 27 06.9	+1.1
	959nm110nm,1.1s						
LCO	Las Campanas	16.10	163	P	Pn	03 27 03.0	-0.5
LCO	Las Campanas	16.10	163	P	Pn	03 27 03.0	-0.5
LCO				pmax	pmax		
	comp=Z,84nm,1.1s						
SGC2	Sao Gabriel da	16.12	35	P	Pn	03 27 01.6	-2.0
	comp=Z,1μmcomp=Z,100nm,0.9s						
PTLB	Pontes e Lacer	16.47	98	P	Pn	03 27 06.5	-1.5
PTLB	Pontes e Lacer	16.47	98	*e*P	Pn	03 27 08.2	+0.2
JAMC	Jamundi, Valle	16.74	358	P	Pn	03 27 12.3	+0.7
	comp=Z,806nmcomp=Z,43nm,1.0s						
URMC	La Uribe, Meta	16.84	6	P	P	03 27 14.7	+0.5
	comp=Z,1μmcomp=Z,83nm,1.0s						
GO04	Tololo Observa	17.17	164	P	Pn	03 27 15.1	-1.7
CO01	Juntas del Tor	17.18	162		Pn	03 27 16.4	-0.6
ORTC	Ortega, Tolima	17.44	3	P	P	03 27 21.9	+1.1
	comp=Z,1μmcomp=Z,102nm,1.1s						
CO06	Fray Jorge	17.45	167	Pn	Pn	03 27 18.0	-2.1
YOTC	Yotoco, Valle	17.50	359	P	Pn	03 27 20.0	-0.9
VILC	Villavicencio,	17.77	8	P	P	03 27 26.3	+1.7
	comp=Z,1μmcomp=Z,134nm,0.9s						
CO03	El Pedregal	17.83	165		Pn	03 27 23.8	-1.1
CO02	Combarbal	18.10	166		P	03 27 25.6	-2.4
CVER	Cruz Verde, Cu	18.13	6	P	Pn	03 27 32.4	+3.4
CHIC	Chingaza	18.28	7	P	Pn	03 27 33.4	+2.7
	comp=Z,1μmcomp=Z,45nm,0.9s						

MACA	Manacapuru-AM	18.40	57	P	P	03 27 30.2	-1.1
MACA	Manacapuru-AM	18.40	57	eP	P	03 27 30.2	-1.1
PLMC	San Jos del P	18.41	359	P	Pn	03 27 32.7	+0.7
	comp=Z,677nmcomp=Z,50nm,0.6s						
ROSC	El Rosal	18.42	5	P	Pn	03 27 33.5	+1.1
	comp=Z,16nm,0.6s,baz=171,slow=7.3,SNR=13						
ROSC				S	S	03 31 02.3	+2.1
	comp=Z,10nm,0.6s,baz=93,slow=15,SNR=1.6						
ROSC				LR	LR	03 36 06.4	
	comp=Z,907nm,18.7s,baz=207,slow=42						
ROSC	El Rosal	18.42	5	P	Pn	03 27 33.2	+0.7
ROSC	El Rosal	18.42	5	P	Pn	03 27 35.4	+2.9
	comp=Z,1µmcomp=Z,45nm,0.9s						
GUY2C	Guyana, Caldas	18.74	2	P	Pn	03 27 38.7	+2.4
	comp=Z,1µmcomp=Z,120nm,1.0s						
PDRB	Porto dos Gac	18.96	86	eP	P	03 27 37.2	-0.3
PAYG	Puerto Ayora	19.09	311	P	P	03 27 38.3	-0.6
SPBC	San Pablo de B	19.25	6	P	Pn	03 27 43.6	+1.5
	comp=Z,786nmcomp=Z,33nm,0.8s						
CFA	Coronel Fontan	19.28	159	P	P	03 27 41.5	+0.6
	comp=Z,24nm,0.8s,baz=342,slow=10.0,SNR=32						
CFA				LR	LR	03 34 37.7	
	comp=Z,335nm,18.3s,baz=348,slow=35						
MURT	Porto Murtinho	19.29	117	eP	P	03 27 41.1	0.0
VA06	Catapilco	19.34	168	P	P	03 27 40.6	-0.9
CBOC	Ciudad Bolivar	19.36	0	P	Pn	03 27 43.7	+0.2
	comp=Z,711nmcomp=Z,58nm,0.9s						
RUSC	La Rusia	19.61	9	P	P	03 27 45.3	+0.2
RUSC				IAmb	IAmb	03 27 53.9	
	comp=Z,171nm,1.1s						
RUSC	La Rusia	19.61	9	P	Pn	03 27 48.0	+1.2
	comp=Z,2µmcomp=Z,162nm,1.1s						
BDQN	Bodoquena, MS	19.65	113	eP	P	03 27 44.5	-0.5
VA03	San Esteban	19.70	166	P	P	03 27 43.6	-1.9
VA03				IAmb	IAmb	03 27 52.6	
	comp=Z,153nm,0.7s						
SALV	Santo Antonio	19.81	99	eP	P	03 27 45.9	-0.9
H03N1	Juan Fernandez	19.90	187	T	T	03 47 47.2	
	baz=7.5,slow=74,SNR=114						
H03N2	Juan Fernandez	19.90	187	T	T	03 47 46.5	
	baz=7.5,slow=74,SNR=138						
H03N3	Juan Fernandez	19.92	187	T	T	03 47 46.0	
	baz=7.5,slow=74,SNR=121						
CLDB	Colider	19.98	84	eP	P	03 27 48.5	-0.1
PEL	Peldehue	20.04	167	P	P	03 27 48.8	-0.4
PEL				IAmb	IAmb	03 27 55.6	
	comp=Z,167nm,0.8s						
PEL	Peldehue	20.04	167	P	P	03 27 48.8	-0.4
PEL				pmax	pmax		
	comp=Z,167nm,0.8s						
MT02	Curacav	20.05	168	P	P	03 27 48.8	-0.5
PTBC	PUERTO BERRIO,	20.09	5	P	Pn	03 27 51.0	-1.0
	comp=Z,2µmcomp=Z,206nm,0.7s						
MT05	Renca	20.27	167	P	P	03 27 50.2	-1.5
H03S3	Juan Fernandez	20.28	187	T	T	03 48 09.4	
	baz=8.4,SNR=6.3						
BARC	Barichara	20.29	8	P	Pn	03 27 53.9	-0.6
	comp=Z,824nmcomp=Z,40nm,0.7s						
H03S2	Juan Fernandez	20.29	187	T	T	03 48 06.1	
	baz=8.4,SNR=4.9						
H03S1	Juan Fernandez	20.30	187	T	T	03 48 13.9	
	baz=8.4,SNR=7.1						
MT16	CCHEN	20.35	167	P	P	03 27 52.1	-0.4
MT16				IAmb	IAmb	03 27 58.9	
	comp=Z,81nm,0.8s						
VA05	Santo Domingo	20.35	169	P	P	03 27 50.9	-1.5
MT03	Universidad Ad	20.41	167	P	P	03 27 51.7	-1.6
MT08	Bocatoma Ro	20.48	165	P	P	03 27 52.9	-1.3
MT08				IAmb	IAmb	03 28 01.6	
	comp=Z,182nm,0.8s						
DBBC	Dabeiba	20.51	360	P	Pn	03 27 57.2	+0.2
MT09	Talagante	20.58	168	P	P	03 27 53.0	-2.2
BRJC	Barrancabermej	20.59	7	P	P	03 27 55.7	+0.5
	comp=Z,2µmcomp=Z,102nm,0.9s						
AQDB	Aquidauana	20.60	112	P	P	03 27 54.9	-0.5
AQDB				IAmb	IAmb	03 27 58.2	
	comp=Z,96nm,1.0s						
AQDB	Aquidauana	20.60	112	eP	P	03 27 55.8	+0.4
MT01	Popeta	20.62	169	P	P	03 27 54.1	-1.3
MT13	San Alfonso	20.70	166	P	P	03 27 55.3	-1.2
PP1B	Ponte de Pedra	20.76	104	eP	P	03 27 56.8	-0.4
LMEL	Las Melosas	20.82	166	P	P	03 27 57.9	+0.1
LMEL				IAmb	IAmb	03 28 03.9	
	comp=Z,174nm,1.1s						
BO04	La Punta	20.87	167	P	P	03 27 57.0	-1.2
BO04				IAmb	IAmb	03 28 03.4	
	comp=Z,143nm,1.0s						
PAMC	Pamplona, Colo	21.09	9	P	P	03 28 04.1	+3.0
	comp=Z,713nmcomp=Z,68nm,0.8s						
BO01	Tunca	21.16	169	P	P	03 27 59.3	-1.9
BO01				IAmb	IAmb	03 28 06.7	
	comp=Z,152nm,1.4s						
UREC	San Jos de Ur	21.24	1	P	P	03 28 03.3	+1.0
	comp=Z,740nmcomp=Z,65nm,1.0s						
NPGB	Novo Progresso	21.37	74	eP	P	03 28 02.4	-1.2
BO02	Sierra Bellavi	21.61	168	P	P	03 28 05.4	-0.7
BO02				IAmb	IAmb	03 28 26.9	
	comp=Z,126nm,0.9s						
CPUP	Villa Florida	21.63	129	P	P	03 28 06.0	-0.3
	comp=Z,6.5nm,0.9s,baz=203,slow=13,SNR=40						
CPUP				pP	pP	03 28 19.1	+1.0
	comp=Z,13nm,1.0s,baz=179,slow=8.1,SNR=12						
CPUP				LR	LR	03 38 20.7	
	comp=Z,324nm,21.2s,baz=182,slow=42						
	comp=Z,6.5nm,0.9s						
CPUP	Villa Florida	21.63	129	P	P	03 28 05.6	-0.7
CPUP	Villa Florida	21.63	129	eP	P	03 28 06.3	0.0
OCAC	Ocana	21.89	7	P	P	03 28 09.2	-0.1
ITTB	Itaituba	22.05	67	eP	P	03 28 10.2	-0.7
BOAV	Boa Vista	22.15	45	P	P	03 28 11.4	-0.6
BOAV				IAmb	IAmb	03 28 31.7	
	comp=Z,260nm,1.6s						
BOAV	Boa Vista	22.15	45	eP	P	03 28 11.9	-0.1
BOAV	Boa Vista	22.15	45	P	P	03 28 12.2	+0.2
	comp=Z,2µmcomp=Z,81nm,0.8s						
ML02	Panimavida	22.43	170	P	P	03 28 14.2	-0.7
C2SB	Chapadao do Su	22.86	106	eP	P	03 28 19.3	-0.2
SDV	Santo Domingo	23.00	14	P	P	03 28 20.1	-1.1
SDV				IAmb	IAmb	03 28 41.1	
	comp=Z,106nm,1.1s						
SDV	Santo Domingo	23.00	14	eP	P	03 28 19.7	-1.4
SDV	Santo Domingo	23.00	14	P	P	03 28 21.9	+0.7
BRU2	Volcan	23.23	343	P	P	03 28 23.1	-0.3
BRU2				IAmb	IAmb	03 28 39.6	
	comp=Z,122nm,1.1s						
BI02	San Fabin de	23.34	170	P	P	03 28 22.9	-1.3
BI02				IAmb	IAmb	03 28 45.2	
	comp=Z,155nm,1.4s						
ARGC	Ariguani, Magd	23.40	4	P	P	03 28 34.0	+9.2
ARAG	Araguaiana, MT	23.54	98	eP	P	03 28 24.2	-2.0
SNDB	Serra Nova Dou	24.19	89	eP	P	03 28 31.5	-0.8
PSAL	Palomas, Salto	24.28	139	eP	P	03 28 32.4	-0.5
MAL2	Monte Alegre,	24.51	64	P	P	03 28 34.6	-0.6
PTGB	Pitanga	25.15	120	eP	P	03 28 40.6	-0.4
ITRB	Iturama	25.32	107	eP	P	03 28 41.9	-0.7
JTS	Las Juntas de	25.35	339	LR	LR	03 38 03.0	
	comp=Z,772nm,21.4s,baz=158,slow=35						
JTS	Las Juntas de	25.35	339⇑	eP	P	03 28 41.5	-1.3
JTS				pmax	pmax		
	comp=Z,13nm,1.0s						
ITAB	Concordia	26.12	125	P	P	03 28 48.5	-1.2
ITAB				IAmb	IAmb	03 29 08.7	
	comp=Z,117nm,1.2s						
ITAB	Concordia	26.12	125	eP	P	03 28 48.7	-1.0
CPSB	Cacapava Do Su	26.71	132	eP	P	03 28 53.8	-1.2
LR05	Currie	26.74	173	P	P	03 28 54.5	-0.6
LR05				IAmb	IAmb	03 29 15.7	
	comp=Z,88nm,1.2s						
PRPB	Parauapebas	26.86	77	eP	P	03 28 55.8	-0.8
FRTB	Fartura	26.87	115	eP	P	03 28 55.9	-0.7
IPMB	Ipameri, GO	27.12	103	eP	P	03 28 57.7	-1.1
BDFB	Brasilia	27.19	98	P	P	03 28 58.5	-1.0
	comp=Z,4.3nm,0.6s,baz=262,slow=12,SNR=7.4						
BDFB				pP	pP	03 29 12.1	-0.7
	comp=Z,8.3nm,0.7s,baz=284,slow=9.8,SNR=7.3						
BDFB				LR	LR	03 40 55.4	
	comp=Z,689nm,19.2s,baz=275,slow=39						
	comp=Z,4.3nm,0.6s						
BDFB	Brasilia	27.19	98	P	P	03 28 58.3	-1.3
BB19B	Bebedouro	27.26	110	eP	P	03 28 59.1	-1.0
TRQA	Tornquist	27.36	155	P	P	03 28 58.8	-1.9
TRQA	Tornquist	27.36	155	P	P	03 28 58.8	-1.9
TRQA				pmax	pmax		
	comp=Z,72nm,1.6s						
PLTB	Pedras Altas	27.37	135	P	P	03 28 59.9	-1.0
PLTB	Pedras Altas	27.37	135	eP	P	03 29 00.4	-0.5
PLCA	Paso Flores	27.43	171	P	P	03 29 01.3	-0.1
	comp=Z,25nm,1.0s,baz=342,slow=10.0,SNR=36						
PLCA				pP	pP	03 29 14.8	+0.6
	comp=Z,68nm,1.2s,baz=346,slow=9.0,SNR=13						
PLCA				LR	LR	03 38 38.8	
	comp=Z,293nm,19.9s,baz=1.5,slow=34						
	comp=Z,25nm,1.0s						
PLCA	Paso Flores	27.43	171	P	P	03 29 01.0	-0.4
PLCA				IAmb	IAmb	03 29 22.1	
	comp=Z,95nm,1.4s						
PLCA	Paso Flores	27.43	171	eP	P	03 29 01.2	-0.2
CNLB	Canela	28.08	128	eP	P	03 29 06.9	-0.4
SMTB	Santa Maria do	28.30	83	eP	P	03 29 09.2	-0.2
RCLB	Rio Claro- Sao	28.45	112	eP	P	03 29 10.9	+0.2
SPB	Sao Paulo	28.82	114	P	P	03 29 14.0	+0.1
SPB				IAmb	IAmb	03 29 33.4	
	comp=Z,52nm,1.1s						
SPB	Sao Paulo	28.82	114	eP	P	03 29 13.7	-0.2
LL01	San Ignacio de	28.82	174	P	P	03 29 13.4	-0.2
PMNB	Patos De Minas	28.85	104	eP	P	03 29 12.9	-1.4
VAO	Valinhos	29.09	113	P	P	03 29 16.8	+0.3
VAO				IAmb	IAmb	03 30 14.6	
	comp=Z,69nm,1.5s						
VAO	Valinhos	29.09	113	eP	P	03 29 15.7	-0.8
PET01	Itanhaem-SP	29.15	116	eP	P	03 29 16.2	-0.6
LL02	Futaleuf	29.68	174	P	P	03 29 20.8	-0.5
TMAB	Tom-Au,PA,Br	29.81	70	eP	P	03 29 21.3	-1.5
SDBA	SAO DESIDERIO	30.36	91	eP	P	03 29 26.2	-1.5
BSCB	Bom Sucesso	30.70	108	eP	P	03 29 30.5	-0.2
JANB	Januaria	30.77	97	eP	P	03 29 29.5	-1.8
MTO3	Montecristo	30.80	334	P	P	03 29 32.0	+0.2
AY01	Puyuhuapi	30.83	175	P	P	03 29 30.2	-1.1
DIAM	Diamantina, MG	31.45	103	eP	P	03 29 36.5	-0.8
COYC	Coyhaique	32.02	175	P	P	03 29 40.5	-1.4
COYC				IAmb	IAmb	03 29 42.9	
	comp=Z,37nm,0.9s						
COYC	Coyhaique	32.02	175	P	P	03 29 41.8	-0.1
COYC				pP	pP	03 29 56.0	+1.2
COYC				sP	sP	03 30 01.5	+0.9
VAS01	Vassouras-RJ	32.13	110	eP	P	03 29 43.4	+0.2
OBIP	Obispado Ponce	32.81	17	P	P	03 29 48.4	-0.7
OBIP				IAmb	IAmb	03 30 08.3	
	comp=Z,92nm,1.5s						
SJG	San Juan	33.01	17	LR	LR	03 45 17.2	
	comp=Z,245nm,22.0s,baz=182,slow=40						
SJG	San Juan	33.01	17	P	P	03 29 50.2	-0.6
SJG	San Juan	33.01	17	P	P	03 29 50.2	-0.6
SJG				pmax	pmax		
	comp=Z,16nm,0.8s						
AOPR	Arecibo Observ	33.06	16	P	P	03 29 51.0	-0.3
DUB01	Friburgo-RJ	33.08	110	eP	P	03 29 50.0	-1.6
AY03	Cochrane	33.65	176	P	P	03 29 55.2	-0.9
AY03				IAmb	IAmb	03 30 17.7	
	comp=Z,74nm,1.4s						
CAM01	Campos-RJ	33.70	109	eP	P	03 29 56.7	-0.2
RPN	Rapa Nui	33.85	241	LR	LR	03 40 29.2	
	comp=Z,392nm,21.9s,baz=96,slow=30						
BSFB	Barra de Sao F	34.15	103	eP	P	03 29 60.0	-0.9
RIB01	Linhares ES	34.61	104	eP	P	03 30 04.1	-0.7
GUA01	Guaratinga, BA	35.09	99	eP	P	03 30 08.4	-0.5
NBPS	Pedro II - PI	35.34	78	eP	P	03 30 09.9	-1.3
CMC01	Camacan, BA	35.38	97	eP	P	03 30 10.9	-0.6
NBIT	Itapeh - BA	35.48	97	eP	P	03 30 11.5	-0.8
TEIG	Tepich	35.72	340	P	P	03 30 13.9	-0.3
TEIG				IAmb	IAmb	03 30 30.6	
	comp=Z,36nm,0.8s						
TEIG	Tepich	35.72	340	P	P	03 30 15.4	+1.1
TEIG				pP	pP	03 30 28.8	+1.5
TEIG				sP	sP	03 30 35.5	+2.4
CMIG	Matias Romero	35.74	328	LR	LR	03 42 42.1	
	comp=Z,197nm,21.6s,baz=132,slow=32						
NBMO	Morrinhos-CE	37.00	77	eP	P	03 30 24.8	-0.6
NBTA	Tacaratu-PE	37.48	87	eP	P	03 30 28.7	-0.7
GO09	Cerro Castillo	37.67	176	IAmb	IAmb	03 30 32.7	
	comp=Z,59nm,1.1s						
NBPA	Parau_RN	39.12	82	eP	P	03 30 42.4	-0.9
RCBR	Riachuelo	40.27	83	eP	P	03 30 52.5	-0.3
NBPV	Pedro Velho	40.72	84	eP	P	03 30 55.9	-0.7
HBVL	Hebbronville	46.03	332	P	P	03 31 40.6	+1.6
HBVL				IAmb	IAmb	03 31 56.8	
	comp=Z,35nm,1.1s						
250A	Grady	46.39	348	IAmb	IAmb	03 31 42.8	
	comp=Z,30nm,1.0s						
152A	Waverly Hall	46.77	350	P	P	03 31 44.5	-0.2
GOGA	Godfrey	47.30	352	IAmb	IAmb	03 31 49.7	
	comp=Z,25nm,1.1s						
HKT	Hockley	47.33	336	P	P	03 31 49.9	+0.8
HKT				IAmb	IAmb	03 32 06.9	
	comp=Z,47nm,1.6s						
HKT	Hockley	47.33	336	d iP	P	03 31 51.3	+2.2
HKT				pmax	pmax		
	comp=Z,30nm,1.6s						
833A	Chaparral WMA,	47.43	332	P	P	03 31 49.9	-0.1
Y57A	Sumter	47.55	355	IAmb	IAmb	03 31 51.8	
	comp=Z,25nm,0.7s						
LRAL	Lakeview Retre	47.56	348	P	P	03 31 50.4	-0.5
LRAL				IAmb	IAmb	03 31 51.8	
	comp=Z,33nm,1.1s						
146A	Union	47.65	345	P	P	03 31 51.6	0.0
146A				IAmb	IAmb	03 31 53.1	
	comp=Z,46nm,1.1s						
JSC	Jenkinsville	47.90	354	P	P	03 31 53.6	+0.1
JSC				IAmb	IAmb	03 33 22.8	
	comp=Z,21nm,1.0s						
JSC	Jenkinsville	47.90	354	P	P	03 31 53.6	+0.1
JSC				pmax	pmax		
	comp=Z,21nm,1.0s						
HNVL	Huntsville, TX	47.91	337	P	P	03 31 53.7	0.0
Z47A	Carrollton	47.95	346	P	P	03 31 53.4	-0.5
HODGE	Hodges	47.95	353	P	P	03 31 52.7	-1.3
BIRD	Birdtown, Kers	48.18	355	P	P	03 31 55.5	-0.2
BIRD				IAmb	IAmb	03 31 56.7	
	comp=Z,23nm,0.8s						
Y49A	Blount Mountai	48.24	348	P	P	03 31 55.6	-0.5
HNDO	Hondo	48.41	333	P	P	03 31 58.6	+1.0
PAULI	Pauline	48.49	354	P	P	03 31 58.1	+0.1
PAULI				IAmb	IAmb	03 31 59.0	
	comp=Z,29nm,0.7s						
X51A	Calhoun	48.65	350	IAmb	IAmb	03 31 60.0	
	comp=Z,27nm,1.0s						
W57A	Gilead	48.65	356	P	P	03 31 59.8	+0.5
W57A				IAmb	IAmb	03 32 00.3	
	comp=Z,39nm,0.9s						
FPAL	Fort Paine	48.75	349	P	P	03 31 59.6	-0.5
FPAL				IAmb	IAmb	03 32 00.6	
	comp=Z,19nm,0.9s						
KMSC	Kings Mountain	48.76	354	P	P	03 31 59.8	-0.3
BG3	Lake Jocassee	48.79	352	IAmb	IAmb	03 32 01.5	
	comp=Z,38nm,1.4s						
DRIO	Del Rio	48.93	331	P	P	03 32 01.6	+0.1
X48A	Hartselle	48.94	348	P	P	03 32 00.5	-1.0
X48A				IAmb	IAmb	03 32 02.0	
	comp=Z,18nm,0.7s						
X48A				PcP	PcP	03 33 25.5	+0.3
237A	Washetta, Mont	49.16	338	IAmb	IAmb	03 32 06.8	
	comp=Z,37nm,1.1s						
V58A	Windy Hill, Pi	49.23	357	IAmb	IAmb	03 32 04.7	
	comp=Z,28nm,0.9s						
W50A	Signal Mountai	49.34	350	IAmb	IAmb	03 32 05.2	
	comp=Z,30nm,0.8s						
SWET	Sewanee	49.47	349	IAmb	IAmb	03 32 05.9	
	comp=Z,33nm,0.7s						
OXF	Oxford	49.53	345	IAmb	IAmb	03 32 06.9	
	comp=Z,44nm,1.0s						
TKL	Tuckaleechee C	49.55	352	LR	LR	03 53 44.7	
	comp=Z,226nm,18.8s,baz=154,slow=37						
TKL	Tuckaleechee C	49.55	352	IAmb	IAmb	03 32 06.8	
	comp=Z,40nm,1.4s						
PLAL	Pickwick Lake	49.67	347	IAmb	IAmb	03 32 07.2	
	comp=Z,42nm,1.1s						
FW13	Cleburne	50.09	336	IAmb	IAmb	03 32 25.5	
	comp=Z,18nm,0.7s						
U54A	Nelsons Funny	50.17	354	IAmb	IAmb	03 32 11.8	
	comp=Z,31nm,0.9s						
LPIG	La Paz	50.26	318	LR	LR	03 49 03.8	
	comp=Z,210nm,21.4s,baz=123,slow=31						
T59A	Double "B" Far	50.34	358	IAmb	IAmb	03 32 13.3	
	comp=Z,24nm,0.8s						
TXAR	Lajitas Array	50.35	328	P	P	03 32 13.6	+1.1
	comp=Z,6.2nm,0.7s,baz=149,slow=8.8,SNR=91						
TXAR				pP	pP	03 32 24.9	-1.0
	comp=Z,4.3nm,0.8s,baz=161,slow=8.5,SNR=8.4						
TXAR				LR	LR	03 52 44.4	
	comp=Z,236nm,18.8s,baz=112,slow=35						
	comp=Z,6.2nm,0.7s						
TXAR	Lajitas Array	50.35	328	P	P	03 32 12.6	+0.1
TX31	Lajitas Ar. Si	50.35	328	P	P	03 32 12.8	+0.3
TZTN	Tazewell	50.40	352	IAmb	IAmb	03 32 12.7	
	comp=Z,18nm,0.7s						
UALR	University of	50.56	343	IAmb	IAmb	03 32 15.3	
	comp=Z,47nm,0.9s						
MIAR	Mount Ida	50.72	341	IAmb	IAmb	03 32 16.7	
	comp=Z,27nm,0.8s						
WVT	Waverly	50.72	348	P	P	03 32 13.8	-1.1
WVT				IAmb	IAmb	03 32 14.2	
	comp=Z,15nm,0.6s						
WVT	Waverly	50.72	348	P	P	03 32 13.9	-1.1
WVT				pmax	pmax		
	comp=Z,15nm,0.6s						
WVT	Waverly	50.72	348	P	P	03 32 13.5	-1.5
WVT				pP	pP	03 32 26.5	-2.1
Z35A	Perchaven, San	50.89	337	IAmb	IAmb	03 32 18.6	
	comp=Z,41nm,0.9s						
WHAR	Wooly Hollow	51.02	343	IAmb	IAmb	03 32 18.7	
	comp=Z,37nm,0.9s						
ABTX	Abilene, Hawle	51.23	334	P	P	03 32 19.2	+0.2
ABTX				IAmb	IAmb	03 32 35.7	
	comp=Z,32nm,0.9s						
R58B	Mineral	51.34	358	IAmb	IAmb	03 32 21.4	
	comp=Z,50nm,1.3s						
T47A	Sharon Grove	51.41	349	IAmb	IAmb	03 32 20.1	
	comp=Z,22nm,0.9s						
LCAR	Lake Charles	51.45	344	IAmb	IAmb	03 32 20.7	
	comp=Z,22nm,0.8s						
S51A	Beattyville	51.48	352	IAmb	IAmb	03 32 20.7	
	comp=Z,21nm,0.7s						
FCAR	Ozark Folk Cen	51.54	343	IAmb	IAmb	03 32 22.1	
	comp=Z,25nm,1.0s						
CBN	Corbin Frederi	51.57	359	IAmb	IAmb	03 32 22.3	
	comp=Z,24nm,0.6s						
WTFS	Witchita Falls	51.74	336	IAmb	IAmb	03 32 24.6	
	comp=Z,86nm,1.6s						
PBMO	Poplar Bluff	51.93	345	IAmb	IAmb	03 32 24.6	
	comp=Z,34nm,0.7s						
ODSA	Odessa	52.09	331	IAmb	IAmb	03 32 41.9	
	comp=Z,25nm,1.0s						
SN07	Snyder 07	52.16	333	IAmb	IAmb	03 32 27.8	
	comp=Z,54nm,1.7s						
R50A	Paris	52.21	352	IAmb	IAmb	03 32 26.2	
	comp=Z,26nm,0.7s						
CGM3	Cape Girardeau	52.24	346	IAmb	IAmb	03 32 26.8	
	comp=Z,35nm,0.9s						
R49A	Shelbyville	52.34	351	IAmb	IAmb	03 32 27.6	
	comp=Z,54nm,1.3s						
POST	Post	52.41	333	IAmb	IAmb	03 32 43.6	
	comp=Z,32nm,1.0s						
HHAR	Hobbs	52.43	342	IAmb	IAmb	03 32 28.7	
	comp=Z,20nm,0.6s						
USIN	University of	52.46	348	IAmb	IAmb	03 32 28.3	
	comp=Z,43nm,0.8s						
WCI	Wyandotte Cave	52.47	350	P	P	03 32 27.0	-1.0
WCI				IAmb	IAmb	03 32 28.4	
	comp=Z,38nm,0.8s						
WCI	Wyandotte Cave	52.47	350	P	P	03 32 27.0	-1.0
WCI				pmax	pmax		
	comp=Z,38nm,0.8s						
WCI	Wyandotte Cave	52.47	350	P	P	03 32 26.8	-1.2
WCI				PcP	PcP	03 33 38.8	+0.6
Q56A	Snyder Ridge,	52.47	357	IAmb	IAmb	03 32 29.8	
	comp=Z,29nm,0.9s						
Q54A	Coxs Mills	52.52	355	IAmb	IAmb	03 32 28.8	
	comp=Z,25nm,0.6s						
FNO	Franklin	52.66	338	IAmb	IAmb	03 32 30.8	
	comp=Z,32nm,1.0s						
DKNS	Dickens	52.67	334	IAmb	IAmb	03 32 31.0	
	comp=Z,20nm,0.7s						
DEOK	Depew	52.87	339	IAmb	IAmb	03 32 33.2	
	comp=Z,31nm,1.1s						
OK052	Battle Ridge R	53.11	339	IAmb	IAmb	03 32 34.0	
	comp=Z,25nm,0.9s						
P51A	Williamsport	53.23	353	IAmb	IAmb	03 32 33.7	
	comp=Z,21nm,0.7s						
QUOK	Quay	53.23	339	IAmb	IAmb	03 32 35.8	
	comp=Z,42nm,1.3s						
P52A	Corning	53.28	354	IAmb	IAmb	03 32 34.1	
	comp=Z,18nm,0.7s						
CCM	Cathedral Cave	53.35	345	P	P	03 32 34.2	-0.3
CCM				IAmb	IAmb	03 32 35.3	
	comp=Z,27nm,1.2s						
CCM	Cathedral Cave	53.35	345	P	P	03 32 34.2	-0.3
CCM				pmax	pmax		
	comp=Z,27nm,1.2s						
P48A	Milroy	53.53	351	IAmb	IAmb	03 32 35.1	
	comp=Z,26nm,0.6s						
OK048	Pawnee Station	53.54	339	IAmb	IAmb	03 32 37.4	
	comp=Z,37nm,1.1s						
O52A	Adamsville	53.73	354	IAmb	IAmb	03 32 37.1	
	comp=Z,21nm,0.7s						
ACSO	Alum Creek Sta	53.97	353	IAmb	IAmb	03 32 38.8	
	comp=Z,30nm,0.7s						
CROK	Carrier	53.99	338	IAmb	IAmb	03 32 40.4	
	comp=Z,40nm,0.9s						
SSPA	Standing Stone	54.01	358	P	P	03 32 39.1	-0.2
SSPA				IAmb	IAmb	03 32 40.2	
	comp=Z,17nm,0.7s						
SSPA	Standing Stone	54.01	358	P	P	03 32 39.6	+0.3
SSPA				pP	pP	03 32 54.0	+0.9
SSPA				PcP	PcP	03 33 44.5	+0.5
O49A	Covington	54.09	352	IAmb	IAmb	03 32 39.5	
	comp=Z,24nm,0.7s						
ELIS	Ellis County	54.13	337	IAmb	IAmb	03 32 42.2	
	comp=Z,30nm,0.8s						
N58A	Sunbury	54.19	359	IAmb	IAmb	03 32 42.2	
	comp=Z,22nm,0.8s						
OK038	West end E0370	54.24	337	IAmb	IAmb	03 32 41.9	
	comp=Z,30nm,0.8s						
KAN01	Argonia South	54.48	339	IAmb	IAmb	03 32 45.4	
	comp=Z,32nm,1.0s						
WSPT	Westport, CT	54.57	3	IAmb	IAmb	03 32 44.5	
	comp=Z,36nm,1.0s						
KAN08	Anthony NE Sta	54.63	339	IAmb	IAmb	03 32 45.4	
	comp=Z,35nm,1.0s						
M57A	Sunshine Farm,	54.69	359	IAmb	IAmb	03 32 46.0	
	comp=Z,28nm,0.9s						
P40A	Paris	54.94	345	IAmb	IAmb	03 32 46.2	
	comp=Z,25nm,0.6s						
319A	Douglas	54.95	325	IAmb	IAmb	03 32 48.8	
	comp=Z,18nm,0.7s						
N47A	Urbana	54.96	351	IAmb	IAmb	03 32 45.9	
	comp=Z,37nm,0.9s						
PAOC	Oil Creek Stat	54.96	357	IAmb	IAmb	03 32 47.3	
	comp=Z,36nm,1.1s						
121A	Cookes Peak, D	55.03	327	IAmb	IAmb	03 32 49.9	
	comp=Z,16nm,0.7s						
L56A	Greenwood	55.50	359	IAmb	IAmb	03 32 50.8	
	comp=Z,24nm,0.7s						
BINY	Binghamton	55.54	0	IAmb	IAmb	03 32 51.7	
	comp=Z,30nm,0.8s						
K57A	Scipio Center	56.08	360	IAmb	IAmb	03 32 55.4	
	comp=Z,36nm,0.8s						
MMNY	Mt. Morris Dam	56.10	358	IAmb	IAmb	03 32 54.8	
	comp=Z,28nm,0.8s						
ABQ	Albuquerque	56.26	330	IAmb	IAmb	03 32 58.2	
	comp=Z,50nm,1.7s						
ANMO	Albuquerque	56.27	330	LR	LR	03 55 10.3	
	comp=Z,274nm,21.4s,baz=102,slow=34						
ANMO	Albuquerque	56.27	330	P	P	03 32 55.6	-0.4
ANMO				IAmb	IAmb	03 32 58.2	
	comp=Z,52nm,1.8s						
ANMO	Albuquerque	56.27	330	ceP	P	03 32 57.0	+1.0
ANMO				pmax	pmax		
	comp=Z,23nm,1.6s						
ANMO	Albuquerque	56.27	330	P	P	03 32 56.9	+0.9
TASM	ASL Pad, Albuq	56.27	330	IAmb	IAmb	03 32 58.3	
	comp=Z,49nm,1.7s						
TASM	ASL Pad, Albuq	56.27	330	IAmb	IAmb	03 32 58.3	
	comp=Z,49nm,1.7s						
TASM	ASL Pad, Albuq	56.27	330	IAmb	IAmb	03 32 58.3	
	comp=Z,48nm,1.7s						
TASM	ASL Pad, Albuq	56.27	330	IAmb	IAmb	03 32 58.3	
	comp=Z,48nm,1.7s						
RKT	Rikitea	56.40	251	eLR	LR	03 49 14.3	
	comp=Z,10µm,45.0s						
TUC	Tucson	56.49	325	P	P	03 32 58.1	+0.6
TUC	Tucson	56.49	325	P	P	03 32 58.1	+0.6
TUC				pmax	pmax		
	comp=Z,11nm,1.1s						
J59A	Piesco	56.83	1	IAmb	IAmb	03 33 01.3	
	comp=Z,43nm,1.2s						
NCB	Newcomb	57.34	2	IAmb	IAmb	03 33 04.3	

	comp=Z,25nm,0.7s						
214A	**Organ Pipe Nat**	**57.40**	**323**	IAmb	IAmb	03 33 07.5	
	comp=Z,39nm,1.5s						
SCIA	**State Center**	**57.48**	**345**	IAmb	IAmb	03 33 04.3	
	comp=Z,26nm,1.1s						
DELO	**Deloro Mine**	**57.88**	**359**	IAmb	IAmb	03 33 07.5	
	comp=Z,30nm,0.8s						
KSCO	**Kaye Shedlock'**	**57.95**	**336**	IAmb	IAmb	03 33 10.2	
	comp=Z,34nm,1.1s						
LONY	**Lake Ozonia**	**57.98**	**1**	IAmb	IAmb	03 33 08.7	
	comp=Z,25nm,0.8s						
SADO	**Sadowa**	**58.18**	**357**	LR	LR	03 58 47.0	
	comp=Z,152nm,21.8s,baz=204,slow=37						
I42A	**Draeger Farm,**	**58.43**	**349**	IAmb	IAmb	03 33 11.2	
	comp=Z,27nm,0.8s						
I40A	**Norwalk**	**58.76**	**348**	IAmb	IAmb	03 33 13.5	
	comp=Z,30nm,1.1s						
G62A	**West of Eustis**	**58.78**	**5**	P	**P**	**03 33 13.1**	**-0.1**
G62A				IAmb	IAmb	03 33 15.5	
	comp=Z,32nm,1.0s						
PKME	**Peaks-Kenny Pk**	**58.93**	**6**	P	**P**	**03 33 14.5**	**+0.3**
WUAZ	**Wupatki**	**59.22**	**327**	IAmb	IAmb	03 33 33.7	
	comp=Z,36nm,1.4s						
I37A	**Lemond, Waseca**	**59.51**	**346**	IAmb	IAmb	03 33 55.0	
	comp=Z,62nm,1.7s						
TRQ	**Mont Tremblant**	**59.58**	**1**	P	**P**	**03 33 18.8**	**0.0**
BLYC	**Blythe**	**59.69**	**323**	IAmb	IAmb	03 33 36.8	
	comp=Z,20nm,1.1s						
PV01	**Paradox Valley**	**59.83**	**331**	IAmb	IAmb	03 33 23.4	
	comp=Z,55nm,1.7s						
ISCO	**Idaho Springs**	**59.85**	**334**	IAmb	IAmb	03 33 23.3	
	comp=Z,44nm,1.8s						
PV15	**Paradox Valley**	**59.96**	**331**	IAmb	IAmb	03 33 24.3	
	comp=Z,38nm,1.1s						
PV02	**Paradox Valley**	**59.97**	**331**	IAmb	IAmb	03 33 25.0	
	comp=Z,46nm,1.3s						
PV13	**Radium Mtn., P**	**59.97**	**330**	IAmb	IAmb	03 33 57.6	
	comp=Z,18nm,1.0s						
PV05	**Paradox Valley**	**60.04**	**330**	IAmb	IAmb	03 33 24.5	
	comp=Z,60nm,1.8s						
LMN	**Caledonia Moun**	**60.06**	**9**	P	**P**	**03 33 22.4**	**+0.3**
LMN				IAmb	IAmb	03 33 23.2	
	comp=Z,28nm,0.8s						
PV03	**Paradox Valley**	**60.06**	**331**	P	**P**	**03 33 22.8**	**+0.3**
PV18	**Skein Mesa, Pa**	**60.09**	**330**	P	**P**	**03 33 22.7**	**+0.1**
PV18				IAmb	IAmb	03 34 21.3	
	comp=Z,51nm,1.5s						
PV12	**Saucer Basin,**	**60.09**	**331**	IAmb	IAmb	03 33 40.1	
	comp=Z,30nm,1.1s						
PV16	**Nyswonger Mesa**	**60.14**	**331**	IAmb	IAmb	03 33 39.3	
	comp=Z,51nm,1.8s						
BC3	**Big Chuckawall**	**60.17**	**322**	IAmb	IAmb	03 33 40.2	
	comp=Z,19nm,1.1s						
PV19	**Morning Glory**	**60.17**	**330**	IAmb	IAmb	03 33 40.4	
	comp=Z,21nm,1.1s						
PV10	**Paradox Valley**	**60.25**	**330**	IAmb	IAmb	03 34 09.2	
	comp=Z,62nm,1.7s						
E62A	**Clayton Lake**	**60.25**	**5**	P	**P**	**03 33 23.6**	**+0.3**
E62A				IAmb	IAmb	03 33 24.9	
	comp=Z,20nm,0.8s						
PV22	**Blue Mesa, Par**	**60.26**	**331**	IAmb	IAmb	03 33 42.9	
	comp=Z,37nm,2.0s						
W13A	**Hualapai Mount**	**60.29**	**325**	IAmb	IAmb	03 33 41.4	
	comp=Z,20nm,1.2s						
IRM	**Iron Mountain**	**60.34**	**323**	IAmb	IAmb	03 33 41.3	
	comp=Z,25nm,1.0s						
BORC	**Borrego Spring**	**60.48**	**321**	IAmb	IAmb	03 33 42.4	
	comp=Z,39nm,1.5s						
SPMN	**Marine on St.**	**60.51**	**346**	IAmb	IAmb	03 33 25.6	
	comp=Z,28nm,0.8s						
PMD	**Palm Desert**	**60.71**	**322**	IAmb	IAmb	03 33 43.9	
	comp=Z,26nm,1.4s						
BELC	**Belle Mtn. Jos**	**60.73**	**322**	IAmb	IAmb	03 33 45.9	
	comp=Z,42nm,1.5s						
PFO	**Pinyon Flats O**	**60.74**	**322**	LR	LR	03 55 27.7	
	comp=Z,223nm,21.3s,baz=118,slow=32						
PFO	**Pinyon Flats O**	**60.74**	**322**	P	**P**	**03 33 28.1**	**+1.0**
PFO				IAmb	IAmb	03 33 57.8	
	comp=Z,24nm,1.2s						
PFO	**Pinyon Flats O**	**60.74**	**322**	*i* P	**P**	**03 33 27.2**	**+0.1**
D62A	**Allapoint, All**	**60.75**	**5**	P	**P**	**03 33 27.5**	**+0.8**
D62A				IAmb	IAmb	03 33 28.1	
	comp=Z,17nm,0.8s						
DNR	**Dunn Ranch,Anz**	**60.81**	**322**	IAmb	IAmb	03 33 45.0	
	comp=Z,30nm,1.2s						
DANC	**Danby, Needles**	**60.82**	**323**	IAmb	IAmb	03 33 47.0	
	comp=Z,28nm,0.9s						
VLDQ	**Val d'Or**	**61.47**	**359**	IAmb	IAmb	03 33 32.1	
	comp=Z,24nm,0.7s						
P18A	**Preston Nutter**	**61.81**	**330**	IAmb	IAmb	03 33 37.1	
	comp=Z,49nm,1.8s						
P17A	**Butcher Ranch,**	**61.93**	**330**	IAmb	IAmb	03 33 51.5	
	comp=Z,19nm,0.9s						
RDMU	**Red Mountain**	**62.24**	**332**	IAmb	IAmb	03 34 03.6	
	comp=Z,18nm,0.8s						
CCCA	**Chr Cany lake**	**62.60**	**323**	IAmb	IAmb	03 34 00.9	
	comp=Z,27nm,1.1s						
K22A	**Casper**	**62.60**	**335**	IAmb	IAmb	03 33 40.7	
	comp=Z,21nm,0.6s						
BSUT	**Blindstream Ca**	**62.77**	**331**	IAmb	IAmb	03 33 43.4	
	comp=Z,61nm,1.7s						
MPU	**Maple Canyon**	**62.79**	**330**	IAmb	IAmb	03 33 59.1	
	comp=Z,52nm,2.0s						
RSSD	**Black Hills**	**62.88**	**338**	P	**P**	**03 33 42.1**	**+0.7**
RSSD				IAmb	IAmb	03 33 43.3	
	comp=Z,47nm,1.6s						
RSSD	**Black Hills**	**62.88**	**338**	P	**P**	**03 33 42.1**	**+0.7**
RSSD				pmax	pmax		
	comp=Z,47nm,1.6s						
RSSD	**Black Hills**	**62.88**	**338**	P	**P**	**03 33 42.4**	**+1.0**
RSSD				pP	**pP**	**03 33 56.2**	**+1.0**
RSSD				PcP	**PcP**	**03 34 19.9**	**+0.6**
TAOE	**Nuku Hiva Isla**	**62.91**	**267**	*e*LR	LR	03 52 21.6	
	comp=Z,1µm,26.7s						
FURC	**Furnace Creek,**	**62.96**	**324**	IAmb	IAmb	03 33 59.0	
	comp=Z,29nm,1.0s						
WCT	**Wildcat Mounta**	**63.05**	**324**	IAmb	IAmb	03 33 59.9	
	comp=Z,21nm,1.0s						
TBO	**Thunder Bay**	**63.12**	**350**	IAmb	IAmb	03 33 43.0	
	comp=Z,22nm,0.8s						
S11A	**Rachel**	**63.16**	**325**	IAmb	IAmb	03 34 15.8	
	comp=Z,29nm,1.2s						
CTU	**Camp Tracy**	**63.37**	**330**	IAmb	IAmb	03 34 05.2	
	comp=Z,39nm,1.8s						
SPR3	**Spring Creek 3**	**63.39**	**327**	IAmb	IAmb	03 34 02.3	
	comp=Z,39nm,1.4s						
TCUT	**Toone Canyon**	**63.53**	**331**	IAmb	IAmb	03 34 03.4	
	comp=Z,23nm,0.9s						
GRAC	**Grapevine Rang**	**63.62**	**324**	IAmb	IAmb	03 34 05.2	
	comp=Z,51nm,1.7s						
HWUT	**Hardware Ranch**	**63.98**	**331**	IAmb	IAmb	03 34 17.4	
	comp=Z,25nm,1.1s						
PDAR	**Pinedale Array**	**63.99**	**333**	P	**P**	**03 33 48.9**	**+0.1**
	comp=Z,3.1nm,0.7s,baz=123,slow=9.0,SNR=30						
PDAR				pP	**pP**	**03 34 04.0**	**+1.3**
	comp=Z,3.6nm,0.8s,baz=120,slow=5.3,SNR=7.5						
PDAR				LR	LR	04 02 45.3	
	comp=Z,56nm,21.2s,baz=120,slow=37						
	comp=Z,3.1nm,0.7s						
AGMN	**Agassiz Nation**	**64.12**	**345**	IAmb	IAmb	03 33 50.2	
	comp=Z,29nm,0.8s						
DSP	**Deep Springs**	**64.22**	**324**	IAmb	IAmb	03 34 07.5	
	comp=Z,19nm,1.0s						
HVU	**Hansel Valley**	**64.69**	**330**	IAmb	IAmb	03 33 55.1	
	comp=Z,20nm,1.1s						
MDPB	**Devils Postpil**	**65.05**	**323**	IAmb	IAmb	03 34 12.8	
	comp=Z,23nm,1.0s						
ELK	**Elko**	**65.14**	**328**	LR	LR	04 00 07.1	
	comp=Z,247nm,21.1s,baz=156,slow=34						
NVAR	**Mina Array Bea**	**65.15**	**324**	P	**P**	**03 33 57.7**	**+1.2**
	comp=Z,2.4nm,0.8s,baz=138,slow=6.8,SNR=20						
NVAR				pP	**pP**	**03 34 11.7**	**+1.4**
	comp=Z,9.6nm,0.8s,baz=138,slow=6.6,SNR=31						
NVAR				LR	LR	03 59 56.8	
	comp=Z,177nm,19.3s,baz=134,slow=34						
	comp=Z,2.4nm,0.8s						
NVAR	**Mina Array Bea**	**65.15**	**324**	P	**P**	**03 33 57.2**	**+0.8**
RLMT	**Red Lodge**	**65.76**	**335**	IAmb	IAmb	03 34 02.3	
	comp=Z,42nm,1.5s						
WAKR	**Walker**	**65.84**	**324**	IAmb	IAmb	03 34 18.5	
	comp=Z,20nm,1.1s						
ULM	**Lac du Bonnet**	**65.94**	**346**	P	**P**	**03 34 00.6**	**-0.4**
	comp=Z,34nm,0.9s,baz=150,slow=6.7,SNR=27						
ULM				pP	**pP**	**03 34 15.3**	**+0.4**
	comp=Z,23nm,0.8s,baz=156,slow=5.5,SNR=8.5						
ULM				LR	LR	04 02 53.6	
	comp=Z,75nm,21.9s,baz=138,slow=36						
	comp=Z,34nm,0.9s						
ULM	**Lac du Bonnet**	**65.94**	**346**	P	**P**	**03 34 00.7**	**-0.3**
ULM	**Lac du Bonnet**	**65.94**	**346**	P	**P**	**03 34 00.7**	**-0.3**
ULM				pmax	pmax		
	comp=Z,39nm,0.9s						
YNE	**Yellowstone No**	**65.98**	**334**	IAmb	IAmb	03 34 03.6	
	comp=Z,33nm,0.9s						
YMR	**Madison River**	**66.12**	**333**	IAmb	IAmb	03 34 20.6	
	comp=Z,57nm,1.6s						
YHB	**Horse Butte**	**66.28**	**333**	IAmb	IAmb	03 34 20.9	
	comp=Z,25nm,1.0s						
PNTR	**Pine Nut**	**66.34**	**324**	IAmb	IAmb	03 34 21.6	
	comp=Z,30nm,1.0s						
YHL	**Hebgen Lake**	**66.36**	**333**	IAmb	IAmb	03 34 22.2	
	comp=Z,34nm,0.9s						
HLID	**Hailey**	**66.83**	**331**	IAmb	IAmb	03 34 26.0	
	comp=Z,71nm,1.9s						
BOZ	**Bozeman (W)**	**67.14**	**334**	IAmb	IAmb	03 34 25.6	
	comp=Z,21nm,1.1s						
BEKR	**Beckworth**	**67.30**	**324**	IAmb	IAmb	03 34 27.4	
	comp=Z,23nm,1.0s						
DLMT	**Dillon**	**67.38**	**333**	IAmb	IAmb	03 34 27.9	
	comp=Z,35nm,1.4s						
BELA	**Belgrano 2**	**67.49**	**171**	P	**P**	**03 34 10.6**	**0.0**
BELA				IAmb	IAmb	03 34 12.1	
	comp=Z,29nm,0.8s						
EGMT	**Eagleton**	**68.32**	**336**	IAmb	IAmb	03 34 32.7	
	comp=Z,34nm,1.1s						
O03E	**Paynes Creek**	**68.40**	**324**	IAmb	IAmb	03 34 33.6	
	comp=Z,62nm,1.6s						
SCHQ	**Schefferville**	**68.63**	**6**	P	**P**	**03 34 17.2**	**-0.8**
	comp=Z,2.8nm,0.5s,baz=192,slow=6.7,SNR=6.4						
SCHQ				LR	LR	04 07 06.5	
	comp=Z,57nm,19.1s,baz=198,slow=38						
	comp=Z,2.8nm,0.5s						
PLID	**Pearl Lake**	**68.73**	**331**	IAmb	IAmb	03 34 36.9	
	comp=Z,31nm,1.6s						
MSO	**Missoula**	**69.11**	**333**	IAmb	IAmb	03 34 39.1	
	comp=Z,31nm,1.1s						
BMO	**Blue Mountains**	**69.19**	**330**	IAmb	IAmb	03 34 39.8	
	comp=Z,48nm,1.8s						
VNA3	**Neumayer Olymp**	**69.67**	**162**	⇑P	**P**	**03 34 24.6**	**+0.4**
	comp=Z,27nm,1.3s						
TBI	**Tubuai**	**69.68**	**250**	*e*S	**S**	**03 43 33.7**	**+3.1**
	comp=Z,680nm,24.8s						
TBI	**Tubuai**	**69.68**	**250**	*e*LR	LR	03 55 31.3	
	comp=Z,4µm,28.8s						
I07A	**Izee**	**69.74**	**328**	IAmb	IAmb	03 34 42.6	
	comp=Z,43nm,1.0s						
YBH	**Yreka Blue Hor**	**69.87**	**325**	LR	LR	04 02 54.1	
	comp=Z,14nm,21.7s,baz=111,slow=34						
VNA1	**Neumayer--Stat**	**69.93**	**161**	⇑P	**P**	**03 34 26.7**	**+0.9**
	comp=Z,37nm,1.1s						
F10A	**Beach Ranch, E**	**69.97**	**331**	IAmb	IAmb	03 34 54.1	
	comp=Z,20nm,0.8s						
J05D	**Fort Rock, OR**	**70.09**	**327**	IAmb	IAmb	03 34 44.6	
	comp=Z,26nm,0.9s						
PINE	**Pine Mountain**	**70.28**	**327**	IAmb	IAmb	03 34 46.6	
	comp=Z,31nm,0.9s						
PPT2	**Papeete2**	**70.53**	**256**	*e*S	**S**	**03 43 35.8**	**-5.1**
	comp=Z,204nm,28.2s						
PPT2	**Papeete2**	**70.53**	**256**	*e*LR	LR	03 55 54.9	
	comp=Z,594nm,27.2s						
PPT2				*e*LR	LR	03 55 55.9	
	comp=Z,397nm,30.0s						
KSXB	**Camp Six Broad**	**70.59**	**324**	IAmb	IAmb	03 34 47.8	
	comp=Z,41nm,1.1s						
L02F	**Cave Junction**	**70.61**	**324**	IAmb	IAmb	03 34 48.2	
	comp=Z,36nm,1.2s						
E09A	**Wood Farm, Sta**	**70.80**	**331**	IAmb	IAmb	03 34 48.6	
	comp=Z,29nm,1.0s						
WIFE	**Three Sisters-**	**70.93**	**327**	IAmb	IAmb	03 34 49.7	
	comp=Z,31nm,0.9s						
I04A	**Tendick Farm,**	**71.07**	**326**	IAmb	IAmb	03 34 49.6	
	comp=Z,21nm,0.9s						
F07A	**Phinny Hill Vi**	**71.22**	**329**	IAmb	IAmb	03 34 51.8	
	comp=Z,36nm,1.1s						
HAWA	**Hanford**	**71.38**	**330**	IAmb	IAmb	03 34 52.3	
	comp=Z,31nm,1.1s						
G05A	**Wamic**	**71.47**	**328**	IAmb	IAmb	03 34 53.4	
	comp=Z,46nm,1.0s						
FFC	**Flin Flon**	**71.55**	**344**	P	**P**	**03 34 36.0**	**+0.2**
FFC				IAmb	IAmb	03 34 37.0	
	comp=Z,75nm,1.9s						
FFC	**Flin Flon**	**71.55**	**344**	P	**P**	**03 34 36.0**	**+0.2**
FFC				pmax	pmax		
	comp=Z,75nm,2.0s						
FFC	**Flin Flon**	**71.55**	**344**	P	**P**	**03 34 35.8**	**0.0**
H04A	**Detroit Lake**	**71.55**	**327**	IAmb	IAmb	03 34 52.6	
	comp=Z,24nm,0.9s						
NEW	**Newport**	**71.60**	**332**	LR	LR	04 07 15.0	
	comp=Z,92nm,22.0s,baz=130,slow=37						
NEW	**Newport**	**71.60**	**332**	IAmb	IAmb	03 34 53.1	
	comp=Z,22nm,0.9s						
WAH2	**Wahluke Slope**	**71.65**	**330**	IAmb	IAmb	03 34 53.9	
	comp=Z,52nm,1.4s						
E07A	**Sunnyside**	**71.65**	**330**	IAmb	IAmb	03 34 54.8	
	comp=Z,53nm,1.1s						
HOOD	**Mount Hood Mea**	**71.70**	**328**	IAmb	IAmb	03 34 57.0	
	comp=Z,44nm,1.1s						
SNAA	**Sanae**	**71.89**	**161**	⇑P	**P**	**03 34 38.3**	**+0.4**
	comp=Z,492nm,0.6s						
SNAA	**Sanae**	**71.89**	**161**	P	**P**	**03 34 38.1**	**+0.3**
	comp=Z,26nm,0.7s,baz=275,slow=7.6,SNR=74						
SNAA				pP	**pP**	**03 34 53.0**	**+1.0**
	comp=Z,17nm,0.8s,baz=257,slow=8.1,SNR=6.9						
SNAA				LR	LR	04 04 34.9	
	comp=Z,168nm,20.2s,baz=12,slow=34						
	comp=Z,26nm,0.7s						
SNAA	**Sanae**	**71.89**	**161**	P	**P**	**03 34 38.0**	**+0.3**
SNAA	**Sanae**	**71.89**	**161**	*c* *i*P	**P**	**03 34 38.2**	**+0.4**
SNAA				pmax	pmax		
	comp=Z,61nm,1.3s						
EPH	**Ephrata**	**72.09**	**331**	IAmb	IAmb	03 34 56.8	
	comp=Z,40nm,1.4s						
LTY	**Liberty**	**72.54**	**330**	IAmb	IAmb	03 35 00.0	
	comp=Z,79nm,1.9s						
D05A	**Enumclaw**	**73.14**	**329**	IAmb	IAmb	03 35 03.1	
	comp=Z,51nm,1.0s						
DBIC	**Dimbokro**	**73.48**	**79**	P	**P**	**03 34 48.2**	**0.0**
	comp=Z,36nm,0.6s,baz=272,slow=5.9,SNR=64						
DBIC				LR	LR	04 05 53.0	
	comp=Z,345nm,18.3s,baz=260,slow=35						
	comp=Z,36nm,0.6s						
DBIC	**Dimbokro**	**73.48**	**79**	P	**P**	**03 34 48.1**	**-0.1**
DBIC	**Dimbokro**	**73.48**	**79**	P	**P**	**03 34 48.2**	**0.0**
TROLL	**Troll, Antarti**	**73.60**	**161**	⇑P	**P**	**03 34 48.6**	**+0.6**
	comp=Z,753nm,0.7s						
FCC	**Fort Churchill**	**73.62**	**350**	IAmb	IAmb	03 34 49.3	
	comp=Z,40nm,1.2s						
GNW	**Green Mountain**	**73.82**	**329**	IAmb	IAmb	03 35 06.3	
	comp=Z,34nm,1.3s						
LLLB	**Lillooet**	**75.45**	**332**	IAmb	IAmb	03 35 16.7	
	comp=Z,51nm,1.6s						
QSPA	**South Pole Qui**	**76.52**	**180**	P	**P**	**03 35 09.0**	**+4.0**
	comp=Z,10nm,0.8s,baz=154,slow=2.3,SNR=24						
QSPA				pP	**sP**	**03 35 23.5**	**-1.3**
	comp=Z,16nm,0.9s,baz=127,slow=2.5,SNR=8.5						
QSPA	**South Pole Qui**	**76.52**	**180**	P	**P**	**03 35 09.5**	**+4.5**
QSPA	**South Pole Qui**	**76.52**	**180**	P	P	03 35 10.3	+5.3
QSPA				pP	sP	03 35 25.3	+0.6
NVL	**N'lazarevskaya**	**76.54**	**160**	*e*P	**P**	**03 35 05.1**	**+0.3**
NVL				*e*		03 37 58.7	
NVL				*e*PPP	PPP	03 39 45.1	
NVL				*e*S	**S**	**03 44 51.9**	**+5.1**
NVL				*e*SS	**SS**	**03 49 47.9**	**+5.8**
NVL				pmax	pmax		
	comp=Z,48nm,1.1s						
NVL				MLR	MLR		
	comp=Z,738nm,24.0s						
FRB	**Frobisher Bay**	**77.35**	**3**	LR	LR	04 09 20.2	
	comp=Z,126nm,21.7s,baz=155,slow=36						
ACRG	**Accra**	**77.65**	**81**	P	**P**	**03 35 12.3**	**+0.2**
BBB	**Bella Bella**	**79.42**	**330**	LR	LR	04 11 29.9	
	comp=Z,89nm,18.9s,baz=144,slow=36						
RAR	**Rarotonga**	**79.44**	**251**	LR	LR	04 01 28.3	
	comp=Z,149nm,21.3s,baz=100,slow=29						
MORF	**Marmelete**	**80.98**	**48**	*e*P	**P**	**03 35 32.1**	**+2.3**
TORD	**Torodi Ar. Bea**	**81.48**	**74**	P	**P**	**03 35 32.9**	**0.0**
	comp=Z,42nm,0.8s,baz=306,slow=4.1,SNR=43						
TORD				pP	**pP**	**03 35 47.5**	**-0.2**
	comp=Z,26nm,0.9s,baz=304,slow=4.2,SNR=6.3						
	comp=Z,42nm,0.8s						
TORD	**Torodi Ar. Bea**	**81.48**	**74**	P	**P**	**03 35 33.0**	**+0.2**
TORD				IAmb	IAmb	03 35 34.3	
	comp=Z,39nm,0.8s						
PCVE	**Castro Verde**	**81.56**	**48**	*e*P	**P**	**03 35 35.0**	**+2.1**
YKA	**Yellowknife Ar**	**81.62**	**343**	P	**P**	**03 35 32.5**	**0.0**
	comp=Z,7.6nm,0.8s,baz=146,slow=5.0,SNR=64						
YKA				pP	**pP**	**03 35 45.9**	**-0.9**
	comp=Z,11nm,1.0s,baz=145,slow=4.5,SNR=14						
YKA				LR	LR	04 12 54.9	
	comp=Z,78nm,20.7s,baz=349,slow=36						
	comp=Z,7.6nm,0.8s						
YKAW3	**Yellowknife Wh**	**81.68**	**343**	IAmb	IAmb	03 35 49.4	
	comp=Z,38nm,1.1s						
PMTG	**Montargil**	**82.02**	**47**	*e*P	**P**	**03 35 36.6**	**+1.4**
PMTG				*i* IAmb	IAmb	03 35 38.8	
	comp=Z,51nm,1.6s						
PARRA	**Arraiolos**	**82.05**	**47**	*e*P	**P**	**03 35 36.6**	**+1.2**
PARRA				*i* IAmb	IAmb	03 35 39.1	
	comp=Z,47nm,1.5s						
MD31	**MD31**	**82.18**	**54**	IAmb	IAmb	03 35 58.2	
	comp=Z,33nm,1.6s						
PSARD	**Sardoal**	**82.29**	**46**	*e*P	**P**	**03 35 38.1**	**+1.4**
PSARD				*i* IAmb	IAmb	03 35 39.0	
	comp=Z,60nm,1.2s						
PBAR	**Barrancos**	**82.51**	**48**	*e*P	**P**	**03 35 39.2**	**+1.5**
PBAR				*i* IAmb	IAmb	03 35 41.5	
	comp=Z,33nm,1.5s						
TOAD	**Toad River Com**	**82.51**	**337**	P	**P**	**03 35 37.8**	**+0.4**
	baz=132						
SFJD	**Kangerlussuaq**	**82.54**	**10**	LR	LR	04 13 09.8	
	comp=Z,59nm,20.0s,baz=177,slow=36						
PCBR	**Castelo Branco**	**82.87**	**46**	*e*P	**P**	**03 35 40.8**	**+1.2**
PCBR				*i* IAmb	IAmb	03 35 41.7	
	comp=Z,43nm,1.4s						
KOTAN	**Kotaneelee Air**	**82.94**	**338**	P	**P**	**03 35 40.6**	**+1.1**
	baz=133						
PVIS	**Viseu**	**82.94**	**45**	*e*P	**P**	**03 35 41.0**	**+0.9**
V35K	**Ketchikan**	**82.99**	**332**	P	**P**	**03 35 41.1**	**+1.3**
	baz=126						
POLO	**Lamas de Olo**	**83.28**	**45**	*e*P	**P**	**03 35 42.9**	**+1.1**
POLO				*i* IAmb	IAmb	03 35 44.2	
	comp=Z,22nm,1.6s						
PVRL	**Vila Real**	**83.30**	**45**	*e*P	**P**	**03 35 43.2**	**+1.4**
VNDA	**Vanda**	**83.33**	**191**	P	**P**	**03 35 42.0**	**+0.6**
	comp=Z,2.9nm,0.9s,baz=112,slow=4.0,SNR=6.3						
VNDA				pP	**pP**	**03 35 54.9**	**-0.9**
	comp=Z,1.9nm,1.0s,baz=186,slow=6.8,SNR=2.1						
	comp=Z,2.9nm,0.9s						
VNDA	**Vanda**	**83.33**	**191**	P	**P**	**03 35 41.3**	**-0.1**
T35M	**Bob Quinn**	**83.37**	**333**	IAmb	IAmb	03 35 59.4	
	comp=Z,28nm,1.0s						
T35M	**Bob Quinn**	**83.37**	**333**	P	**P**	**03 35 43.5**	**+1.7**
	baz=128						
MVO	**Moncorvo**	**83.72**	**45**	*e*P	**P**	**03 35 45.4**	**+1.3**
MVO				*i* IAmb	IAmb	03 35 47.2	
	comp=Z,40nm,1.6s						
CRAG	**Craig**	**83.77**	**331**	P	**P**	**03 35 44.8**	**+1.0**
	baz=125						
WRAK	**Wrangell Islan**	**83.96**	**332**	P	**P**	**03 35 46.2**	**+1.4**
	baz=126						
U33K	**Whale Pass**	**84.14**	**332**	P	**P**	**03 35 47.6**	**+1.9**
	baz=125						
DLBC	**Dease Lake**	**84.17**	**335**	LR	LR	04 17 08.9	
	comp=Z,84nm,18.4s,baz=84,slow=38						
DLBC	**Dease Lake**	**84.17**	**335**	P	**P**	**03 35 47.6**	**+1.6**
	baz=128						
S34M	**Telegraph Cree**	**84.31**	**334**	P	**P**	**03 35 48.4**	**+1.8**
	baz=127						
WTLY	**Watson Lake, Y**	**84.71**	**336**	IAmb	IAmb	03 36 05.8	
	comp=Z,18nm,1.0s						
WTLY	**Watson Lake, Y**	**84.71**	**336**	P	**P**	**03 35 50.0**	**+1.4**
	baz=129						
WRGLY	**Wrigley**	**84.88**	**340**	P	**P**	**03 35 50.9**	**+1.6**
	baz=134						
PAB	**San Pablo**	**84.97**	**47**	P	**P**	**03 35 51.1**	**+0.6**
PAB	**San Pablo**	**84.97**	**47**	P	**P**	**03 35 51.1**	**+0.6**
PAB				pmax	pmax		
	comp=Z,92nm,2.0s						
R33M	**Jennings River**	**85.14**	**335**	P	**P**	**03 35 52.5**	**+1.7**
	baz=127						
ESDC	**Sonseca Array**	**85.30**	**47**	P	**P**	**03 35 51.9**	**-0.2**
	comp=Z,2.8nm,0.8s,baz=258,slow=4.8,SNR=23						
ESDC				pP	**pP**	**03 36 05.6**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=259,slow=5.3,SNR=2.6						
ESDC				LR	LR	04 09 21.5	
	comp=Z,176nm,21.9s,baz=251,slow=32						
	comp=Z,2.8nm,0.8s						
ESDC	**Sonseca Array**	**85.30**	**47**	P	**P**	**03 35 52.4**	**+0.3**
ESDC				IAmb	IAmb	03 36 43.0	
	comp=Z,42nm,2.0s						
Q32M	**Nakina River**	**85.42**	**334**	P	**P**	**03 35 53.5**	**+1.1**
	baz=126						
SYO	**Syowa Base**	**86.17**	**161**	⇑*i*P	**P**	**03 35 55.8**	**0.0**
SYO	**Syowa Base**	**86.17**	**161**	⇑*e*PcP	**PcP**	**03 35 57.4**	**-1.0**
SYO	**Syowa Base**	**86.17**	**161**	⇑*e*sP	sP	03 36 09.2	-6.6
P33M	**Teslin, Yukon**	**86.38**	**335**	IAmb	IAmb	03 36 14.1	
	comp=Z,20nm,1.0s						
P33M	**Teslin, Yukon**	**86.38**	**335**	P	**P**	**03 35 58.5**	**+1.6**
	baz=126						
P32M	**Atlin**	**86.39**	**334**	P	**P**	**03 35 58.1**	**+1.1**
	baz=125						
SKAG	**Skagway**	**87.00**	**334**	P	**P**	**03 36 01.3**	**+1.4**
	baz=123						
N32M	**Quiet Lake**	**87.03**	**336**	P	**P**	**03 36 01.7**	**+1.6**
	baz=125						
PLBC	**Pleasant Camp**	**87.44**	**334**	P	**P**	**03 36 03.9**	**+1.8**
	baz=122						
WHY	**Whitehorse**	**87.47**	**335**	P	**P**	**03 36 03.4**	**+1.0**
	baz=124						
TAM	**Tamanrasset**	**87.63**	**66**	P	**P**	**03 36 05.3**	**+1.3**
TAM				pP	**pP**	**03 36 19.5**	**+1.0**
O30N	**Mendenhall**	**88.03**	**335**	P	**P**	**03 36 06.2**	**+1.3**
	baz=123,SNR=5.2						
P30M	**Million Dollar**	**88.05**	**334**	P	**P**	**03 36 06.6**	**+1.6**
	baz=122						
P29M	**Windy Craggy**	**88.13**	**333**	P	**P**	**03 36 06.5**	**+1.2**
	baz=121						
M31M	**Drury Creek, Y**	**88.14**	**336**	IAmb	IAmb	03 36 22.7	
	comp=Z,20nm,1.0s						
M31M	**Drury Creek, Y**	**88.14**	**336**	P	**P**	**03 36 06.6**	**+1.2**
	baz=124,SNR=5.9						
N31M	**Braeburn, Yuko**	**88.29**	**336**	P	**P**	**03 36 07.4**	**+1.3**
	baz=123,SNR=9.1						
BORG	**Borgarnes**	**88.31**	**21**	LR	LR	04 15 34.7	
	comp=Z,48nm,18.8s,baz=233,slow=36						
HYT	**Haines Junctio**	**88.65**	**334**	P	**P**	**03 36 09.5**	**+1.5**
	baz=121						
N30M	**Aishikik Lake**	**88.81**	**335**	P	**P**	**03 36 10.0**	**+1.4**
	baz=122						
O29M	**Mount Kennedy**	**88.83**	**334**	P	**P**	**03 36 09.8**	**+1.0**
	baz=120						
RES	**Resolute Bay**	**88.92**	**355**	LR	LR	04 22 46.2	
	comp=Z,57nm,18.2s,baz=153,slow=40						
TSUM	**Tsumeb**	**88.95**	**109**	P	**P**	**03 36 10.4**	**+0.1**
TSUM				IAmb	IAmb	03 36 11.1	
	comp=Z,11nm,0.9s						
TSUM	**Tsumeb**	**88.95**	**109**	P	**P**	**03 36 10.7**	**+0.3**
YUK6	**Outpost Mounta**	**89.07**	**334**	P	**P**	**03 36 11.0**	**+0.9**
	baz=121						
M30M	**Minto, Yukon**	**89.28**	**336**	P	**P**	**03 36 11.8**	**+1.0**
	baz=122,SNR=9.1						
YUK4	**Talbot Arm**	**89.39**	**335**	P	**P**	**03 36 12.9**	**+1.4**
	baz=120,SNR=14						
PINM	**Pinnacle**	**89.46**	**333**	P	**P**	**03 36 12.9**	**+1.2**
	baz=119						
MAYO	**Mayo, Yukon**	**89.48**	**337**	P	**P**	**03 36 13.1**	**+1.5**
	baz=123						
SUMG	**Summit**	**89.49**	**11**	IAmb	IAmb	03 36 13.3	
	comp=Z,31nm,0.7s						
O28M	**Mount Upton**	**89.76**	**334**	P	**P**	**03 36 14.6**	**+1.3**
	baz=119						
YUK8	**Steele Glacier**	**89.83**	**334**	P	**P**	**03 36 15.0**	**+1.4**
	baz=119,SNR=6.5						
M29M	**Somme Creek**	**89.88**	**336**	P	**P**	**03 36 14.8**	**+1.2**
	baz=121						
L29M	**L29M**	**90.08**	**336**	P	**P**	**03 36 15.5**	**+1.0**
	baz=121						
TULEG	**Thule**	**90.09**	**2**	IAmb	IAmb	03 36 15.8	
	comp=Z,20nm,1.0s						
H31M	**Peel River**	**90.15**	**339**	P	**P**	**03 36 15.8**	**+1.1**
	baz=124						
J30M	**Hart River**	**90.18**	**338**	P	**P**	**03 36 15.9**	**+0.9**
	baz=122						
K29M	**Barlow Dome**	**90.23**	**337**	P	**P**	**03 36 15.9**	**+0.6**
	baz=121,SNR=14						
MESA	**MESA**	**90.25**	**333**	P	**P**	**03 36 15.9**	**+0.4**
	baz=118						
CTG	**Chitna Glacier**	**90.35**	**334**	P	**P**	**03 36 16.3**	**+0.4**
	baz=118						
YUK3	**Moose Creek**	**90.36**	**335**	P	**P**	**03 36 16.6**	**+0.6**
	baz=119,SNR=6.9						
I30M	**Mount Dempster**	**90.54**	**339**	P	**P**	**03 36 17.4**	**+0.7**
	baz=122,SNR=14						

G31M	Satah River	90.76	340	IAmb	IAmb	03 36 38.9	
	comp=Z,18nm,1.1s						
G31M	Satah River	90.76	340	P	P	03 36 17.7	+0.3
	baz=124,SNR=5.5						
J29N	Klondike Camp	90.81	337	P	P	03 36 18.6	+0.7
	baz=121,SNR=6.7						
BVCY	Beaver Creek	90.83	335	P	P	03 36 19.0	+1.0
	baz=118						
F31M	Tsiigehtchic	90.89	341	IAmb	IAmb	03 36 34.7	
	comp=Z,20nm,1.1s						
F31M	Tsiigehtchic	90.89	341	P	P	03 36 18.9	+0.8
	baz=125,SNR=6.9						
LKGWB	Lokgwabe	90.99	115	P	P	03 36 22.2	+2.4
CRQE	Cirque	91.01	333	P	P	03 36 19.1	+0.2
	baz=116						
DAWY	Dawson	91.06	337	P	P	03 36 19.7	+0.7
	baz=120,SNR=7.8						
M27K	Edge Creek, AK	91.22	335	P	P	03 36 20.7	+0.8
	baz=118						
KAIM	Kayak Island	91.25	332	P	P	03 36 20.3	+0.4
	baz=115						
MCARA	McCarthy VSAT	91.27	334	P	P	03 36 20.5	+0.6
	baz=117						
EPYK	Eagle Plains	91.28	339	P	P	03 36 20.4	+0.5
	baz=122						
I29M	Ogilvie Camp,	91.31	338	P	P	03 36 20.5	+0.4
	baz=121,SNR=8.1						
INK	Inuvik	91.31	342	LR	LR	04 19 36.6	
	comp=Z,98nm,20.9s,baz=334,slow=37						
INK	Inuvik	91.31	342	P	P	03 36 20.3	+0.3
	baz=125,SNR=11						
A36M	Sachs Harbour	91.42	346	P	P	03 36 20.3	-0.1
	baz=133,SNR=16						
G30M	tAoh Zraii Nji	91.43	340	P	P	03 36 21.2	+0.5
	baz=122						
BCAR	Beaver Creek A	91.52	335	P	P	03 36 21.7	+0.6
L27K	Beaver Creek,	91.53	335	P	P	03 36 21.8	+0.6
	baz=118						
F30M	Barrier River	91.63	341	P	P	03 36 21.8	+0.3
	baz=123						
EKA	Eskdalemuir Ar	91.64	33	P	P	03 36 21.1	-0.7
	comp=Z,3.6nm,0.9s,baz=248,slow=7.6,SNR=3.0						
EKA				LR	LR	04 12 59.5	
	comp=Z,114nm,19.6s,baz=194,slow=32						
	comp=Z,3.6nm,0.9s						
GRTLG	Ghanzi	91.71	112	IAmb	IAmb	03 36 25.9	
	comp=Z,21nm,1.2s						
M26K	Nabesna, AK	91.71	335	P	P	03 36 22.0	-0.1
	baz=117						
H29M	Whitestone	91.77	339	P	P	03 36 22.9	+0.7
	baz=121,SNR=5.1						
BMRM	Bremner River	91.77	333	P	P	03 36 22.8	+0.4
	baz=115						
Q23K	Middleton Isla	91.93	331	P	P	03 36 23.6	+0.5
	baz=114						
I28M	Miner Creek	91.94	338	P	P	03 36 23.7	+0.5
	baz=119						
G29M	Pine Creek	92.00	340	P	P	03 36 24.0	+0.7
	baz=121						
N25K	Chitina, Valde	92.04	334	P	P	03 36 24.1	+0.4
	baz=115						
K27K	Chicken	92.08	336	P	P	03 36 24.5	+0.9
	baz=117						
EYAK	Cordova Ski Ar	92.11	332	P	P	03 36 25.1	+1.2
	baz=114						
L26K	Log Cabin Wild	92.13	335	P	P	03 36 24.9	+0.9
	baz=116						
KLU	Klutina	92.57	333	P	P	03 36 26.9	+0.8
	baz=114						
HARP	HAARP	92.62	334	P	P	03 36 27.0	+0.8
	baz=115						
I27K	Kandik River	92.63	338	P	P	03 36 26.7	+0.5
	baz=118						
P23K	Montague Islan	92.64	332	P	P	03 36 26.5	+0.1
	baz=113						
DOT	Dot Lake	92.69	336	IAmb	IAmb	03 36 43.0	
	comp=Z,13nm,0.9s						
E29M	Blow River	92.72	341	P	P	03 36 26.6	+0.1
	baz=121						
SCRK	Sand Creek	92.81	336	IAmb	IAmb	03 36 43.7	
	comp=Z,14nm,1.2s						
SCRK	Sand Creek	92.81	336	P	P	03 36 27.5	+0.3
	baz=116						
GLI	Glacier Island	92.85	332	P	P	03 36 27.8	+0.5
	baz=113						
J26L	Joseph Creek	92.87	336	P	P	03 36 27.7	+0.3
	baz=116						
H27K	Steamboat Moun	92.89	338	P	P	03 36 27.8	+0.4
	baz=118						
M24K	Tolsona, Glenn	92.93	334	P	P	03 36 28.0	+0.2
	baz=114						
F28M	Old Crow	92.98	340	IAmb	IAmb	03 36 45.0	
	comp=Z,9.0nm,0.9s						
F28M	Old Crow	92.98	340	P	P	03 36 27.9	+0.1
	baz=119						
PAX	Paxson	92.98	335	P	P	03 36 28.3	+0.3
	baz=114						
RIDG	Independent Ri	93.05	335	P	P	03 36 28.7	+0.5
	baz=115						
I26K	Coal Creek Min	93.07	337	P	P	03 36 29.0	+0.7
	baz=116						
G27K	Doyon Strip	93.20	339	P	P	03 36 29.5	+0.6
	baz=118						
BOSA	Boshof	93.21	120	P	P	03 36 29.0	-1.0
	comp=Z,6.2nm,0.9s,baz=290,slow=2.7,SNR=8.2						
	comp=Z,6.2nm,0.9s						
BOSA	Boshof	93.21	120	P	P	03 36 29.6	-0.4
BOSA	Boshof	93.21	120	P	P	03 36 29.6	-0.4
BOSA				pmax	pmax		
	comp=Z,43nm,1.7s						
SCM	Sheep Creek Mo	93.32	333	P	P	03 36 29.7	+0.2
	baz=113						
E28M	Babbage River	93.35	341	P	P	03 36 29.6	+0.1
	baz=119						
PWL	Port Wells	93.40	332	P	P	03 36 30.3	+0.4
	baz=112						
K24K	Donnelly Dome	93.45	335	P	P	03 36 30.5	+0.4
	baz=114						
D28M	Stokes Point	93.46	342	P	P	03 36 30.7	+0.8
	baz=120						
M23K	Glacier View	93.48	333	P	P	03 36 30.8	+0.6
	baz=112						
RAO	Raoul Island	93.50	239	LR	LR	04 08 44.6	
	comp=Z,145nm,20.9s,baz=108,slow=29						
J25K	Salcha River,	93.62	336	P	P	03 36 31.4	+0.5
	baz=114						
KNK	Knik Glacier	93.66	333	P	P	03 36 31.6	+0.6
	baz=112						
MAW	Mawson	93.71	165	P	P	03 36 30.6	-0.6
	comp=Z,4.6nm,0.9s,baz=209,slow=3.3,SNR=5.9						
MAW				pP	pP	03 36 44.6	-1.1
	comp=Z,6.1nm,0.9s,baz=208,slow=2.4,SNR=4.6						
	comp=Z,4.6nm,0.9s						
SML	Sawmill	93.75	333	P	P	03 36 31.8	+0.3
	baz=112						
WAT6	Susitna Watana	93.79	334	P	P	03 36 32.1	+0.3
	baz=112						
E27K	Coleen River	93.82	340	P	P	03 36 32.3	+0.6
	baz=118						
DHY	Denali Highway	93.83	334	P	P	03 36 32.0	+0.1
	baz=113						
O22K	Cooper Landing	93.90	332	P	P	03 36 32.9	+0.8
	baz=111						
G26K	Porcupine Rive	94.02	339	P	P	03 36 33.2	+0.7
	baz=116						
PMR	Palmer	94.03	333	P	P	03 36 32.8	+0.2
	baz=111						
PRP	Porcupine Dome	94.06	337	IAmb	IAmb	03 36 49.5	
	comp=Z,13nm,1.1s						
PRP	Porcupine Dome	94.06	337	P	P	03 36 33.3	+0.4
	baz=114						
D27M	Malcolm River	94.11	341	P	P	03 36 33.3	+0.2
	baz=118						
BRSE	Bradley Lake S	94.12	331	P	P	03 36 33.6	+0.4
	baz=110						
RC01	Rabbit Creek A	94.12	332	P	P	03 36 33.6	+0.4
	baz=111						
KEST	Kesra	94.16	54	P	P	03 36 32.7	-1.4
	comp=Z,2.4nm,0.7s,baz=239,slow=5.9,SNR=1.1						
KEST				LR	LR	04 19 50.2	
	comp=Z,81nm,19.3s,baz=241,slow=36						
	comp=Z,2.4nm,0.7s						
HDA	Harding Lake	94.17	336	P	P	03 36 33.5	+0.2
	baz=113						
WAT1	Susitna Watana	94.23	334	P	P	03 36 33.9	+0.2
	baz=112						
IL31		94.28	336	IAmb	IAmb	03 37 09.4	
	comp=Z,25nm,1.9s						
ILAR	Eielson Array	94.28	336	P	P	03 36 33.3	-0.5
	comp=Z,1.5nm,0.7s,baz=149,slow=3.0,SNR=25						
ILAR				pP	pP	03 36 47.8	-0.6
	comp=Z,2.6nm,0.8s,baz=153,slow=3.7,SNR=12						
ILAR				PP	PP	03 40 19.1	-2.3
	comp=Z,1.2nm,0.9s,baz=116,slow=8.2,SNR=7.9						
ILAR				LR	LR	04 20 53.7	
	comp=Z,78nm,21.7s,baz=102,slow=37						
	comp=Z,1.5nm,0.7s						
KDAK	Kodiak Island	94.38	328	P	P	03 36 34.2	-0.2
	baz=109						
F26K	Sheenjek River	94.47	339	P	P	03 36 35.3	+0.7
	baz=115						
Q20K	Shuyak Island	94.55	329	P	P	03 36 34.8	-0.3
	baz=109						
OHAK	Old Harbor	94.56	328	P	P	03 36 35.5	+0.2
	baz=108						
POKR	Poker Plat Res	94.63	336	P	P	03 36 35.7	+0.3
	baz=112						
COLA	College	94.70	336	⇑eP	P	03 36 34.6	-1.1
COLA				pmax	pmax		
	comp=Z,31nm,2.9s						
COLA	College	94.70	336	P	P	03 36 36.2	+0.5
	baz=112						
SUA	Susitna One	94.71	332	P	P	03 36 36.2	+0.2
	baz=110						
MCK	McKinley	94.72	335	P	P	03 36 36.0	+0.1
	baz=111						
G25K	Bearman Lake	94.78	338	P	P	03 36 36.7	+0.7
	baz=114						
CUT	Chulitna	94.82	333	P	P	03 36 37.0	+0.7
	baz=110						
SII	Sitkinak Islan	94.83	327	P	P	03 36 36.1	-0.5
	baz=107						
F25K	Christian Rive	94.95	339	P	P	03 36 37.2	+0.3
	baz=114						
H24K	Noodor Dome	95.08	337	P	P	03 36 37.9	+0.3
	baz=112						
NEA2	Nenana	95.09	336	IAmb	IAmb	03 36 53.6	
	comp=Z,15nm,1.1s						
NEA2	Nenana	95.09	336	P	P	03 36 37.8	+0.3
	baz=111						
E25K	Arctic Village	95.14	339	P	P	03 36 38.2	+0.5
	baz=114						
C27K	Jago River	95.15	341	P	P	03 36 38.8	+1.1
	baz=116						
TRF	Thorofare Moun	95.19	334	P	P	03 36 38.4	+0.2
	baz=110						
SKT	Skwentna	95.23	333	P	P	03 36 38.5	+0.3
	baz=109						
G24K	Hadweenzic Riv	95.25	338	P	P	03 36 38.8	+0.5
	baz=112						
Q19K	Cape Douglas,	95.27	329	P	P	03 36 38.9	+0.4
	baz=108						
P19K	Oil Pt	95.29	330	P	P	03 36 39.0	+0.4
	baz=108						
SPCR	Spurr Chakacha	95.29	332	P	P	03 36 38.9	+0.3
	baz=109						
CHIR	Chirikof Islan	95.39	326	P	P	03 36 39.4	+0.3
	baz=106						
I23K	Minto, Yukon-K	95.40	336	P	P	03 36 39.1	+0.2
	baz=111						
C26K	Camden Bay	95.66	341	P	P	03 36 40.7	+0.8
	baz=114						
BPAW	Bear Paw Mtn.	95.70	335	P	P	03 36 40.6	+0.3
	baz=109						
F24K	Squaw Lake	95.71	338	P	P	03 36 40.7	+0.4
	baz=112						
H23K	Yukon River	95.71	337	P	P	03 36 40.7	+0.3
	baz=110						
PPLA	Purkeypile	95.82	333	P	P	03 36 41.1	0.0
	baz=108						
Q18K	Katmai Hardscr	95.86	329	P	P	03 36 41.7	+0.3
	baz=106						
D25K	Kavik River	95.89	340	P	P	03 36 41.3	+0.2
	baz=113						
M20K	Styx River	95.92	332	P	P	03 36 41.1	-0.4
	baz=108						
E24K	Your Creek	96.13	339	P	P	03 36 42.9	+0.7
	baz=111						
CHUM	Lake Minchumin	96.19	334	P	P	03 36 43.0	+0.5
	baz=108						
G23K	Bananza Creek	96.20	337	P	P	03 36 43.5	+0.9
	baz=110						
R17L	Mt. Peulik Vol	96.28	328	P	P	03 36 43.5	+0.4
	baz=106						
BFO	Black Forest	96.36	42	i P	P	03 36 42.1	-1.6
COLD	Coldfoot	96.44	338	P	P	03 36 44.6	+0.9
	baz=110						
H22K	Ishtalitna Cre	96.45	336	P	P	03 36 44.7	+1.0
	baz=109						
I21K	Tanana	96.46	336	P	P	03 36 44.5	+0.8
	baz=108						
E23K	Chandalar	96.52	339	P	P	03 36 45.1	+1.1
	baz=110						
D24K	Happy Valley	96.63	340	P	P	03 36 45.5	+1.1
	baz=111						
Q16K	King Salmon	96.70	329	P	P	03 36 45.5	+0.6
	baz=105						
TOLK	Toolik Lake Re	96.71	339	P	P	03 36 45.5	+0.7
	baz=110						
K20K	Telida	96.77	334	P	P	03 36 45.8	+0.6
	baz=107						
C24K	Franklin Bluff	96.79	340	P	P	03 36 45.7	+0.6
	baz=111						
H21K	Melozitna Rive	96.93	336	P	P	03 36 45.8	-0.1
	baz=108						
DAVOX	Davos/Dischmat	97.04	44	LR	LR	04 19 37.0	
	comp=Z,85nm,19.2s,baz=264,slow=35						
J20K	Nowinta River	97.04	334	P	Pdif	03 36 46.4	-0.1
	baz=107						
DAVA	Damuels	97.15	43	eP	Pdif	03 36 48.1	+0.6
	comp=Z,3.4nm,0.7s						
D23K	Nanushuk River	97.20	339	P	Pdif	03 36 48.1	+1.0
	baz=109						
F22K	John River	97.26	338	P	Pdif	03 36 48.2	+0.8
	baz=108						
E22K	Anaktuvuk Pass	97.32	339	P	Pdif	03 36 48.5	+0.8
	baz=108						
CHNA	Chernabura Isl	97.33	325	P	Pdif	03 36 48.5	+0.6
	baz=103						
I20K	Naaghedeneel	97.36	335	P	Pdif	03 36 48.6	+0.8
	baz=106						
N17K	Nushagak Hills	97.43	330	P	Pdif	03 36 48.8	+0.5
	baz=104						
C23K	Itkillik River	97.46	340	P	Pdif	03 36 48.4	+0.2
	baz=109						
G21K	Allakaket	97.46	337	P	Pdif	03 36 48.5	+0.2
	baz=107						
FETA	Feichten	97.66	44	i P	Pdif	03 36 50.3	+0.5
	comp=Z,1.4nm,0.6s						
H20K	Anotleneega Mo	97.71	336	P	Pdif	03 36 49.9	+0.4
	baz=106						
RETA	Reutte	97.78	43	i P	Pdif	03 36 50.8	+0.5
	comp=Z,0.6nm,0.3s						
D22K	Ayikyak River	97.86	339	P	Pdif	03 36 50.9	+0.8
	baz=107						
J18K	Innoko River	97.95	333	P	Pdif	03 36 51.5	+0.9
	baz=104						
MOTA	Moosalm	97.97	43	i P	Pdif	03 36 51.5	+0.2
	comp=Z,7.8nm,0.8s						
SQTA	Sankt Quirin	98.02	43	i P	Pdif	03 36 52.0	+0.6
	comp=Z,3.3nm,0.5s						
CTI	Castel Tesino	98.09	45	P	Pdif	03 36 52.1	+0.3
CTI				IAmb	IAmb	03 36 53.0	
	comp=Z,14nm,1.1s						
CTI	Castel Tesino	98.09	45	P	Pdif	03 36 52.1	+0.4
CTI				pmax	pmax		
	comp=Z,14nm,1.1s						
E21K	Killik River	98.18	339	P	Pdif	03 36 51.5	0.0
	baz=106						
WATA	Walderalm	98.29	43	i Pdiff	Pdif	03 36 52.7	+0.1
	comp=Z,4.9nm,0.7s						
WTTA	Wattenberg	98.31	43	i Pdiff	Pdif	03 36 52.9	+0.1
	comp=Z,6.6nm,0.6s						
VAE	Valguarnera	98.51	54	LR	LR	04 22 44.6	
	comp=Z,120nm,18.0s,baz=164,slow=36						
B22K	Teshekpuk Lake	98.53	340	P	Pdif	03 36 53.4	+0.5
	baz=106						
C21K	Knifeblade Rid	98.66	339	P	Pdif	03 36 53.9	+0.2
	baz=105						
B21K	Ikpikpuk River	98.73	340	P	Pdif	03 36 54.4	+0.5
	baz=106						
G19K	Purcell Mounta	98.76	336	P	Pdif	03 36 54.9	+0.8
	baz=104						
ABTA	Abfaltersbach	98.81	44	i Pdiff	Pdif	03 36 55.6	+0.7
	comp=Z,6.0nm,0.9s						
E20K	Nigu River	98.93	338	P	Pdif	03 36 55.5	+0.6
	baz=104						
J17K	VABM Dome	98.97	333	P	Pdif	03 36 55.7	+0.7
	baz=102						
LESA	Schwarzleotal	99.04	43	ePdiff	Pdif	03 36 56.1	+0.2
	comp=Z,0.9nm,0.4s						
H18K	Honhosa River	99.05	335	P	Pdif	03 36 56.2	+0.8
	baz=103						
E19K	Redstone River	99.12	337	P	Pdif	03 36 55.8	+0.1
	baz=103						
O14K	Tigyukauivet M	99.16	329	P	Pdif	03 36 56.2	+0.2
	baz=101						
F19K	Shaleruckik Mo	99.18	337	P	Pdif	03 36 56.1	+0.2
	baz=103						
D20K	Etivluk River	99.19	339	P	Pdif	03 36 56.5	+0.5
	baz=104						
A22K	Sinclair Lake	99.21	341	P	Pdif	03 36 57.0	+1.0
	baz=105						
G18K	Tagagawik	99.32	336	P	Pdif	03 36 57.1	+0.5
	baz=102						
KBA	Koelnbreinsper	99.43	44	ePdiff	Pdif	03 36 58.1	+0.3
	comp=Z,2.1nm,0.6s						
N14K	Kuskokwak Cree	99.50	329	P	Pdif	03 36 58.5	+1.0
	baz=101						
I17K	Unalakleet	99.77	333	P	Pdif	03 37 00.5	+1.9
	baz=101						
KHC	Kasperske Hory	99.92	42	⇑eP	Pdif	03 37 00.2	+0.5
KHC				pmax	pmax		
	comp=Z,18nm,3.3s						
GERES	GERESS Array B	99.96	42	P	Pdif	03 37 00.3	+0.3
	comp=Z,1.1nm,0.8s,baz=343,slow=1.4,SNR=8.4						
GERES				pP	pP	03 37 15.7	+0.9
	comp=Z,0.5nm,0.6s,baz=278,slow=3.9,SNR=2.8						
GERES				LR	LR	04 18 47.4	
	comp=Z,96nm,18.7s,baz=270,slow=33						
	comp=Z,1.1nm,0.8s						
MOA	Molln	100.17	43	ePdiff	Pdif	03 37 01.5	+0.7
	comp=Z,2.4nm,0.7s						
C19K	Lookout Ridge	100.33	339	P	Pdif	03 37 02.3	+1.3
	baz=101						
E18K	Tukpahlearik C	100.39	337	P	Pdif	03 37 02.2	+0.9
	baz=100						
NOA	NORSAR Array B	100.48	30	P	Pdif	03 37 02.8	+0.8
	comp=Z,1.1nm,1.0s,baz=302,slow=9.2,SNR=1.7						
G16K	Koyuk River	100.74	335	P	Pdif	03 37 04.0	+1.1
	baz=99						
E17K	Hotham Inlet	100.80	337	P	Pdif	03 37 04.3	+1.2
	baz=99						
C18K	Utukok River	100.82	338	P	Pdif	03 37 04.3	+1.0
	baz=100						
J14K	Nanvaranak Lak	100.85	332	P	Pdif	03 37 05.1	+1.7
	baz=99						
BRTR	Keskin Array B	113.68	52	PKiKP	PKiKP	03 41 51.5	-2.2
	comp=Z,0.7nm,0.8s,baz=298,slow=2.7,SNR=3.7						
MMAI	Mount Meron Ar	115.19	60	PKP	PKPdf	03 41 54.0	-2.6
	comp=Z,1.9nm,0.7s,baz=285,slow=12,SNR=1.9						
ANN	Anapa	116.11	47	i PKIKP	PKPdf	03 41 55.6	-2.3
ANN				e		03 43 01.1	
ANN				pmax	pmax		
	comp=Z,32nm,0.9s						
ERBR	Yeremizino-Bor	118.12	45	i PKIKP	PKPdf	03 42 01.5	-0.3
ERBR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
LABN	Labinsk	118.46	46	i PKIKP	PKiKP	03 42 08.3	+5.8
LABN				pmax	pmax		
	comp=Z,21nm,0.6s						
KIRV	Kirov	119.66	29	⇓iPKIKP	PKiKP	03 42 04.6	+0.2
H11N3	WAKE ISLAND Hy	119.66	285	T	T	05 52 25.4	
	baz=96,slow=74,SNR=201						
H11N2	WAKE ISLAND Hy	119.68	285	T	T	05 52 26.3	
	baz=96,slow=74,SNR=233						
H11N1	WAKE ISLAND Hy	119.68	285	T	T	05 52 29.6	
	baz=96,slow=74,SNR=100						
H11S2	WAKE ISLAND Hy	119.75	284	T	T	05 52 44.9	
	baz=93,slow=74,SNR=150						
H11S1	WAKE ISLAND Hy	119.75	284	T	T	05 52 43.9	
	baz=93,slow=74,SNR=119						
H11S3	WAKE ISLAND Hy	119.77	284	T	T	05 52 45.9	
	baz=93,slow=74,SNR=96						
KIV	Kislovodsk	119.96	47	i PKIKP	PKPdf	03 42 03.7	-1.9
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KBZ	Khabaz	120.15	47	PKP	PKPdf	03 42 04.4	-1.4
	comp=Z,2.4nm,0.8s,baz=207,slow=2.0,SNR=7.4						
KBZ	Khabaz	120.15	47	⇑iPKIKP	PKPdf	03 42 05.0	-0.8
STKA	Stephens Creek	122.14	218	PKP	PKPdf	03 42 09.3	-0.8
	comp=Z,0.9nm,0.5s,baz=81,slow=8.2,SNR=3.3						
STKA	Stephens Creek	122.14	218	⇓ePKIKP	PKiKP	03 42 10.2	0.0
ARTI	Arti	124.96	29	i PKIKP	PKiKP	03 42 15.2	+0.2
ARTI						03 44 06.6	
ARTI						03 49 25.3	
ARTI				SP	SP	03 54 09.6	+12
ARTI				SS	SS	04 01 11.3	+16
YAK	Yakutsk	128.27	345	⇑ePKIKP	PKiKP	03 42 21.2	-0.2
BORK	Borovoye	132.48	27	⇑iPKIKP	PKPdf	03 42 28.4	-0.7
BVAR	Borovoye Array	132.52	27	PKP	PKPdf	03 42 28.6	-0.6
	comp=Z,0.4nm,0.4s,baz=253,slow=1.5,SNR=7.3						
BVAR				pPKP	pPKPdf	03 42 43.1	-1.1
	comp=Z,2.5nm,0.9s,baz=318,slow=2.0,SNR=4.3						
ASAR	Alice Springs	132.76	219	PKP	PKPdf	03 42 30.1	-0.5
	comp=Z,3.9nm,0.9s,baz=140,slow=2.1,SNR=21						
ASAR				pPKP	pPKPdf	03 42 44.2	-1.5
	comp=Z,3.0nm,0.9s,baz=141,slow=1.9,SNR=8.3						
YSS	Yuzhno-Sakhali	133.59	324	ePKIKP	PKiKP	03 42 42.2	+10
WRAB	Tennant Creek	135.20	223	⇑ePKIKP	PKPdf	03 42 35.6	+0.4
WRA	Warramunga Arr	135.21	222	PKP	PKPdf	03 42 35.3	0.0
	comp=Z,4.6nm,0.8s,baz=137,slow=1.6,SNR=30						
WRA				pPKP	pPKPdf	03 42 50.1	-0.3
	comp=Z,6.5nm,0.9s,baz=139,slow=1.5,SNR=14						
WRA	Warramunga Arr	135.21	222		PKPdf	03 42 34.7	-0.6
ZALV	Zalesovo Beam	137.03	17	PKhKP	PKPpre	03 42 31.7	
	comp=Z,1.5nm,0.7s,baz=339,slow=3.7,SNR=3.1						
ZALV				PKP	PKPdf	03 42 37.5	0.0
	comp=Z,9.6nm,0.8s,baz=332,slow=1.4,SNR=26						
ZALV				pPKP	pPKPdf	03 42 52.1	-0.4
	comp=Z,7.7nm,0.8s,baz=318,slow=2.0,SNR=8.2						
ZALV	Zalesovo Beam	137.03	17		PKPdf	03 42 37.2	-0.3
KURK	Kurchatov	137.67	24		PKPdf	03 42 38.6	-0.2
KURK	Kurchatov	137.67	24	⇑iPKIKP	PKPdf	03 42 38.9	+0.1
KURBB	Kurchatov Arra	137.71	24	PKhKP	PKPpre	03 42 26.5	
	comp=Z,0.1nm,0.3s,baz=302,slow=3.8,SNR=4.3						
KURBB				PKP	PKPdf	03 42 39.0	+0.1
	comp=Z,4.3nm,0.8s,baz=310,slow=2.6,SNR=22						
KURBB				pPKP	pPKPdf	03 42 53.2	-0.7
	comp=Z,3.0nm,1.0s,baz=319,slow=2.2,SNR=6.1						
USRK	Ussuriysk Ar.	141.24	327	PKhKP	PKPpre	03 42 40.2	
	comp=Z,3.1nm,0.7s,baz=68,slow=3.9,SNR=4.7						
AAK	Ala-Archa	141.50	36	⇑ePKIKP	PKPdf	03 42 42.2	-4.1
DGZ	Jazzator, Alta	141.56	17	⇑iPKIKP	PKPdf	03 42 43.0	-3.2
MJAR	Matsushiro Arr	141.80	313	PKhKP	PKPpre	03 42 41.0	
	comp=Z,1.1nm,0.4s,baz=106,slow=0.7,SNR=5.2						
MAJO	Matsushiro	141.80	313	⇑ePKIKP	PKPdf	03 42 46.3	-0.5
HILR	Hailar Array B	141.89	343	PKhKP	PKPpre	03 42 36.4	
	comp=Z,0.5nm,0.3s,baz=66,slow=1.7,SNR=1.9						
HILR				PKP	PKPdf	03 42 45.6	-1.0
	comp=Z,2.5nm,0.5s,baz=82,slow=2.1,SNR=7.3						
MK31	Makanchi Array	142.27	24	⇑ePKIKP	PKPdf	03 42 47.2	-0.1
MKAR	Makanchi Array	142.27	24	PKhKP	PKPpre	03 42 42.3	
	comp=Z,2.8nm,0.8s,baz=331,slow=3.2,SNR=7.5						
MKAR				PKP	PKPdf	03 42 46.1	-1.3
	comp=Z,2.4nm,0.7s,baz=299,slow=2.0,SNR=13						
MKAR				pPKP	pPKPdf	03 43 00.9	-1.4
	comp=Z,2.6nm,0.9s,baz=309,slow=2.3,SNR=4.2						
BNX	BinXian	142.34	333	⇓PKP	PKPdf	03 42 43.4	-4.1
KNGR	Kungurtug, Tuv	142.75	7	⇓ePKIKP	PKPdf	03 42 44.6	-3.6
KSH	Kashi	144.34	38	PKP	PKPdf	03 42 51.0	-0.4
CN2	Changchun	144.73	333	ePKP	PKPab	03 42 49.0	-1.5
ULN	Ulaanbaatar	145.76	356	PKP	PKPab	03 42 54.9	+0.4
ULN	Ulaanbaatar	145.76	356	c iPKP2	PKPab	03 42 54.5	0.0
SONM	Songino Array	145.83	357	PKPbc	PKPab	03 42 54.9	+0.2
	comp=Z,30nm,0.7s,baz=335,slow=2.4,SNR=104						
SONM				pPKPbc	pPKPdf	03 43 08.6	-0.2
	comp=Z,36nm,1.1s,baz=350,slow=2.5,SNR=12						
SONM	Songino Array	145.83	357		PKPab	03 42 54.8	+0.1
WMQ	Urumqi	146.83	22	ePKPbc	PKPab	03 42 58.0	-0.6
WMQ				LR	LR		
	comp=Z,200nm,19.7s						
KSRS	Korea Array	148.07	322	PKPbc	PKPdf	03 42 58.2	+0.6
	comp=Z,10nm,1.0s,baz=46,slow=1.8,SNR=8.5						
KSRS				pPKPbc	pPKPdf	03 43 13.7	+1.1
	comp=Z,6.8nm,1.0s,baz=43,slow=1.3,SNR=3.9						
XLT	XiLinHaoTe	148.09	343	ePKPbc	PKPbc	03 43 00.7	0.0
HHC	Hu-ho-hao-te	152.07	348	eP	PKiKP	03 43 11.3	+0.5
HHC				sP	pPKPbc	03 43 25.6	+0.1
WBSI	Waikabubak, Su	152.27	214	PKP	PKiKP	03 43 13.7	+1.8
BTO	Baotou	152.60	350	ePKPbc	PKPbc	03 43 11.7	0.0
BTO				PKPab	pPKPbc	03 43 26.5	-0.2

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BTO                                     pmax     pmax
         comp=Z,40nm,0.8s
BTO                                     pmax     pmax
         comp=Z,550nm,5.5s
SANI   Sanana            153.17 236     PKP      PKiKP     03 43 13.9 +0.2
GTA    Gaotai            154.06   7    ePKPbc    PKPdf     03 43 07.6 +0.7
TIA    Tai'an            154.59 335     PKPbc    PKPdf     03 43 08.3 +0.8
HYB    Hyderabad         155.25  78    ePKPdf    PKPdf     03 43 08.0 -1.0
GOMU   GeErMu            156.07  18     PKP      PKPdf     03 43 10.7 +0.7
NJ2    Nanjing           157.13 326    ePKP      PKPdf     03 43 12.9 +1.9
LZDM   Lanzhou Array     157.76   1     PKPab    PKPab     03 43 43.7 -0.9
         comp=Z,0.9nm,0.3s,baz=325,slow=7.0,SNR=4.1
CD2    Chengdu           162.79   1     PKP      PKPdf     03 43 17.0 -0.5
PZH    PanZhiHua         167.02   9     PKP      PKPdf     03 43 22.0 +0.6
CMAR   Chiang Mai Arr    173.20  44     PKP      PKPdf     03 43 25.1 +0.1
         comp=Z,2.2nm,0.6s,baz=357,slow=1.6,SNR=11
CMAR                                    pPKP     pPKPdf    03 43 39.9 -0.2
         comp=Z,1.0nm,0.3s,baz=355,slow=1.0,SNR=2.7
CMAR                                    PKPab    PKPab     03 44 52.6  0.0
         comp=Z,0.9nm,0.3s,baz=309,slow=5.5,SNR=7.0
CMAR   Chiang Mai Arr    173.20  44              PKPdf     03 43 24.3 -0.6
CMAR                                             PKPab     03 44 52.1 -0.5
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*IDC **05** 03:30:01.5±1.5, 32.°08S×72.°23W, h0km, mb4.4/1, mbtmp4.0/3, ML3.8/2, Error ellipse: s-maj=46.1km s-min=34.2km az=154.0*

*SJA **05** 03:30:03.4±0.8, 32.°14S×71.°91W, h22km±2km, ML3.7, MW3.9*

*GUC **05** 03:30:05.9±0.7, 32.°13S×71.°76W, h35km±1km, ML3.7*

ISC 05 03:30:02.7±1.2**, 32.°09S**±0.°02×**71.°83W**±0.°03**, h5**km±8km**,**
n83, σ1.°76/131**, 5C-12D, Near coast of central Chile**

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Code   Station Name        Δ°   AZ°     Phase ID            Time    Res
                                       Op       ISC        h  m  s   ISC
VA06   Catapilco         0.65 136⇓iP       Pb        03 30 17.4 +0.8
VA06                                IAML             03 30 26.4
         comp=E,7µm,0.6s
CO04   Los Peladeros     0.73  87⇓iP       Pn        03 30 19.1 -0.8
CO04                             i S       Sg        03 30 26.4 +0.1
VA01   Torpederas        0.94 170 i P      Pg        03 30 22.0 +1.2
VA01                             i S       Sg        03 30 34.1 +1.0
VA01   Torpederas        0.94 170 eP       Pg        03 30 22.0 +1.2
VA01                             eS        Sg        03 30 34.7 +1.6
ROC1   El Roble          1.12 142 eP       Pg        03 30 24.9 +0.6
ROC1                             eS        Sg        03 30 39.2 +0.3
ROCH   El Roble          1.12 142⇓iP       Pg        03 30 24.9 +0.6
ROCH                             i S       Sg        03 30 38.7 -0.1
ROCH                                IAML             03 30 41.9
         comp=N,3µm,0.4s
CO02   Combarbal         1.13  39⇓iP       Pn        03 30 26.1 +0.8
CO02                             i S       Sn        03 30 40.1 -1.3
CO02   Combarbal         1.13  39 eP       Pn        03 30 26.2 +0.8
CO02                             eS        Sn        03 30 41.5 +0.1
CO02                                IAML             03 30 43.1
         comp=Z,3µm,0.2s
VA03   San Esteban       1.28 122⇓iP       Pn        03 30 27.1 -0.2
VA03                             i S       Sb        03 30 42.6 -1.5
VA03                                IAML             03 30 45.0
         comp=N,3µm,0.4s
VA03   San Esteban       1.28 122 eP       Pn        03 30 10.7  -17
VA03                             eS        Sb        03 30 44.0 -0.1
VA03                                IAML             03 30 45.1
         comp=Z,1µm,0.5s
MT02   Curacav           1.31 153⇓iP       Pn        03 30 27.6 -0.1
MT02                             i S       Sb        03 30 43.0 -1.9
MT02   Curacav           1.31 153 eP       Pn        03 30 22.1 -5.5
MT02                             eP        Pn        03 30 27.6 -0.1
MT02                             eS        Sb        03 30 43.8 -1.1
MT02                                IAML             03 30 46.1
         comp=Z,668nm,0.5s
CO06   Fray Jorge        1.42   7 i P      Pg        03 30 30.2 +0.3
CO06                             i S       Sg        03 30 48.1 -0.3
CO06                                IAML             03 30 54.4
         comp=E,1µm,0.3s
PEL    Peldehue          1.43 138⇓iP       Pn        03 30 29.6 +0.2
PEL                              i S       Sn        03 30 46.8 -1.8
PEL                                 IAML             03 30 49.8
         comp=N,2µm,0.3s
PEL    Peldehue          1.43 138 eP       Pn        03 30 29.6 +0.2
PEL                              eS        Sn        03 30 48.5 -0.2
PEL                                 IAML             03 30 50.7
         comp=Z,1µm,0.4s
VA05   Santo Domingo     1.57 173 i P      Pn        03 30 31.1 -0.2
VA05                             i S       Sn        03 30 50.2 -1.9
CO03   El Pedregal       1.58  38⇓iP       Pg        03 30 33.3 +0.2
CO03                             i S       Sg        03 30 52.7 -0.9
CO03                                IAML             03 30 57.7
         comp=E,1µm,0.4s
CO03   El Pedregal       1.58  38 eP       Pg        03 30 33.4 +0.3
CO03                             eS        Sg        03 30 54.5 +0.8
CO03                                IAML             03 30 55.8
         comp=Z,738nm,0.7s
MT05   Renca             1.59 145⇑iP       Pn        03 30 32.2 +0.6
MT05                             i S       Sn        03 30 52.1 -0.6
MT05                                IAML             03 30 54.9
         comp=N,2µm,0.2s
MT05   Renca             1.59 145 eP       Pn        03 30 31.7 +0.1
MT05                             eS        Sb        03 30 53.4 +0.2
MT05                                IAML             03 30 56.4
         comp=Z,597nm,1.0s
MT10   Hacienda Santa    1.61 138⇓iP       Pn        03 30 32.4 +0.5
MT10                             i S       Sn        03 30 52.4 -0.8
MT14   Cerro Cal¡n       1.70 140⇓eP       Pn        03 30 33.8 +0.7
MT14                             eS        Sn        03 30 54.9 -0.4
MT14                                IAML             03 31 05.9
         comp=E,2µm,0.5s
MT16   CCHEN             1.73 141 i P      Pn        03 30 34.2 +0.7
MT16                             i S       Sn        03 30 55.5 -0.6
MT03   Universidad Ad    1.79 142⇑iP       Pn        03 30 35.2 +0.8
MT03                             i S       Sn        03 30 57.5 -0.1
MT03                                IAML             03 30 60.0
         comp=E,2µm,0.2s
MT03   Universidad Ad    1.79 142 eP       Pn        03 30 35.6 +1.2
MT03                             eS        Sn        03 30 58.4 +0.8
MT03                                IAML             03 31 02.2
         comp=Z,680nm,0.3s
MT09   Talagante         1.83 157⇑iP       Pn        03 30 36.0 +1.0
MT09                             i S       Sn        03 30 58.6 +0.1
MT09                                IAML             03 31 05.9
         comp=N,1µm,0.3s
MT01   Popeta            1.84 165⇑iP       Pn        03 30 35.3 +0.3
MT01                             i S       Sn        03 30 56.5 -2.1
MT01                                IAML             03 31 06.5
         comp=N,586nm,0.4s
MT01   Popeta            1.84 165 eP       Pn        03 30 35.4 +0.5
MT01                             eS        Sn        03 30 52.0 -6.6
MT01                                IAML             03 31 06.2
         comp=Z,429nm,0.3s
MT15   Las Vizcachas     1.88 144 i P      Pn        03 30 36.1 +0.6
MT15                             i S       Sn        03 30 59.6 -0.1
MT15                                IAML             03 31 07.7
         comp=N,2µm,0.3s
MT04   Ro Olivares       1.94 133⇓iP       Pn        03 30 37.5 +0.9
MT04                             i S       Sn        03 31 01.3 -0.2
MT04   Ro Olivares       1.94 133 eP       Pn        03 30 37.9 +1.3
MT04                             eS        Sb        03 31 03.1 -0.2
MT04                                IAML             03 31 05.9
         comp=Z,294nm,0.6s
MT08   Bocatoma Ro       2.04 132 eP       Pn        03 30 39.2 +1.3
MT08                             i S       Sn        03 31 04.4 +0.4
MT08   Bocatoma Ro       2.04 132 eP       Pb        03 30 39.7 -0.8
MT08                             eS        Sb        03 31 06.0 -0.2
MT08                                IAML             03 31 07.7
         comp=Z,200nm,0.3s
MT13   San Alfonso       2.10 142⇑iP       Pn        03 30 39.8 +1.1
MT13                             i S       Sn        03 31 05.2 -0.2
MT13                                IAML             03 31 07.6
         comp=N,947nm,0.4s
MT13   San Alfonso       2.10 142 eP       Pn        03 30 40.0 +1.3
MT13                             eS        Sn        03 31 06.4 +1.1
MT13                                IAML             03 31 08.3
         comp=Z,569nm,0.5s
GO04   Tololo Observa    2.11  25 eP       Pb        03 30 41.0 -0.5
GO04                             eS        Sn        03 31 04.5 -1.0
GO04                             eS        Sg        03 31 11.9 +1.6
GO04                                IAML             03 31 13.3
         comp=Z,1µm,0.3s
BO04   La Punta          2.16 152⇓eP       Pn        03 30 40.3 +0.9
BO04                             eS        Sn        03 31 06.6  0.0
RTLS   Leoncito          2.18  83 eP       Pg        03 30 43.8 -0.6
RTLS                             eS        Sg        03 31 12.6 -0.1
RTLS                                IAML             03 31 17.4
         comp=Z,642nm,0.9s
LMEL   Las Melosas       2.23 142 eP       Pn        03 30 41.3 +0.9
LMEL                             eS        Sn        03 31 09.8 +1.4
LMEL                                IAML             03 31 18.0
         comp=Z,296nm,0.3s
BO01   Tunca             2.38 165 eP       Pn        03 30 42.8 +0.4
BO01                             eS        Sn        03 31 12.2 +0.2
BO01                                IAML             03 31 23.3
         comp=Z,207nm,0.5s
ARCO   CERRO ARCO        2.56 108 eP       Pb        03 30 50.1 +0.8
ARCO                             eS        Sb        03 31 18.9 -2.3
ARCO                                IAML             03 31 31.4
         comp=Z,268nm,0.8s
CO01   Juntas del Tor    2.58  36 eS       Sb        03 31 18.9 -2.9
CO01   Juntas del Tor    2.58  36 eP       Pb        03 30 48.3 -1.3
CO01                             eS        Sb        03 31 22.1 +0.4
CO01                                IAML             03 31 24.1
         comp=Z,368nm,0.3s
ASAL   Salagasta         2.59 102 eP       Pb        03 30 50.3 +0.6
ASAL                             eS        Sb        03 31 22.2 +0.4
AAGR   Agrelo            2.73 112 eP       Pn        03 30 39.2 -8.1
AAGR                             eP        Pb        03 30 49.6 -2.4
AAGR                                IAML             03 31 36.8
         comp=Z,248nm,1.4s
AROD   Rodeo             2.79  47 eP       Pb        03 30 52.7 -0.5
AROD                             eS        Sb        03 31 27.0 -0.8
ACCO   Cerro Coronel     2.80  58 eP       Pb        03 30 53.0 -0.4
ACCO                             eS        Sb        03 31 27.4 -0.9
BO02   Sierra Bellavi    2.84 162 eP       Pn        03 30 49.5 +0.7
BO02                             eS        Sn        03 31 24.6 +1.2
BO02                                IAML             03 31 34.3
         comp=Z,370nm,0.5s
SJA    San Juan          2.84  80 eP       Pn        03 30 37.0  -12
GO05   Hualane           2.91 182 eP       Pn        03 30 49.4 -0.3
GO05                             eS        Sn        03 31 23.3 -1.9
RTLL   Cerro Villicun    2.96  76 eP       Pb        03 30 54.9 -1.1
RTLL                             eS        Sb        03 31 31.8 -0.8
RTLL                                IAML             03 31 46.2
         comp=Z,167nm,0.9s
ACDV   Cuesta del Vie    3.01  51 eP       Pg        03 31 00.0 -0.4
ACDV                             eS        Sb        03 31 33.5 -0.6
ACDV                                IAML             03 31 40.0
         comp=Z,120nm,0.3s
CFA    Coronel Fontan    3.10  82  Pn      Pb        03 30 56.1 -2.2
         comp=Z,11nm,0.3s,baz=254,slow=16,SNR=101
CFA                                 Sn     Sb        03 31 37.0 +0.6
         comp=Z,16nm,0.3s,baz=243,slow=18,SNR=8.2
         comp=Z,21nm,0.3s
CFA    Coronel Fontan    3.10  82 eP       Pb        03 30 56.0 -2.4
CFA                                 IAML             03 31 33.3
         comp=Z,78nm,1.1s
CFA                              eS        Sb        03 31 34.1 -2.3
AVIZ   Vizcacheras       3.12 117 eP       Pn        03 30 43.3 -9.3
AVIZ                             eS        Sg        03 31 41.1 -1.7
LCO    Las Campanas      3.22  18 eP       Pn        03 30 55.1 +0.9
LCO                                 IAML             03 31 50.3
         comp=Z,341nm,0.5s
AC05   El Transito       3.51  23 eP       Pn        03 31 00.6 +2.5
AC05                             eS        Sn        03 31 41.5 +1.4
AC05                                IAML             03 31 57.3
         comp=Z,115nm,0.4s
AGUA   GUANDACOL         3.87  49 eP       Pb        03 31 08.2 -3.4
AGUA                             eS        Sb        03 31 59.0 +0.2
AGUA                                IAML             03 32 12.1
         comp=Z,185nm,0.9s
RFA    San Rafael        3.88 134 eP       Pn        03 31 05.9 +2.7
AC04   Llanos de Chal    3.93  10 eP       Pn        03 31 04.5 +0.9
AC04                             eS        Sb        03 32 02.1 +1.9
AC04                                IAML             03 32 13.8
         comp=Z,114nm,0.4s
AVFE   Valle Fertil      4.01  70 eP       Pb        03 31 09.3 -4.5
AVFE                             eS        Sb        03 31 59.1 -3.5
AVFE                                IAML             03 32 05.6
         comp=Z,120nm,0.4s
ACHE   Chepes            4.51  80 eP       Pn        03 31 14.9 +3.1
ACHE                             eS        Sn        03 32 09.6 +4.9
VCA    Vinchina          4.58  44 eP       Pn        03 31 17.5 +4.6
VCA                              eS        Sb        03 32 22.0 +2.8
VCA                                 IAML             03 32 33.7
         comp=Z,146nm,0.7s
GO03   Copiapo           4.69  18 eP       Pn        03 31 17.5 +3.3
GO03                             eS        Sb        03 32 19.9 -2.4
GO03                                IAML             03 32 42.5
         comp=Z,95nm,0.7s
APLL   PUNTA DE LOS L    4.85  71 eP       Pn        03 31 20.4 +4.0
APLL                             eS        Sn        03 32 17.6 +4.6
APLL                                IAML             03 32 24.3
         comp=Z,84nm,0.9s
ACLC   CERRO LA CRUZ     4.97  59 eP       Pn        03 31 21.8 +3.6
ACLC                             eS        Sb        03 32 23.2 -7.3
ACLC                                IAML             03 32 30.5
         comp=Z,86nm,1.4s
H03N1  Juan Fernandez    6.11 255  Pn      Pn        03 31 34.7 +1.3
         baz=175,slow=25
H03N1                               T      T         03 38 06.3
         baz=84,slow=73,SNR=2025
H03N3  Juan Fernandez    6.12 255  Pn      Pn        03 31 35.0 +1.3
         baz=175,slow=25
H03N3                               T      T         03 38 06.2
         baz=84,slow=73,SNR=2545
H03N2  Juan Fernandez    6.13 255  Pn      Pn        03 31 34.9 +1.2
         baz=175,slow=25
H03N2                               T      T         03 38 13.9
         baz=84,slow=73,SNR=2936
H03S3  Juan Fernandez    6.19 252  T       T         03 38 16.8
         baz=77,slow=75,SNR=11
H03S1  Juan Fernandez    6.20 252  T       T         03 38 11.3
         baz=77,slow=75,SNR=9.8
H03S2  Juan Fernandez    6.21 252  T       T         03 38 14.4
         baz=77,slow=75,SNR=12
PLCA   Paso Flores       8.69 174  Pn      Pn        03 32 09.6 +0.4
         comp=Z,0.2nm,0.3s,baz=347,slow=14,SNR=9.5
         comp=Z,1.2nm,0.5s
TORD   Torodi Ar. Bea   83.40  70  P       P         03 42 33.8 +2.3
         comp=Z,1.7nm,0.5s,baz=229,slow=6.3,SNR=2.8
         comp=Z,1.7nm,0.5s
WRA    Warramunga Arr  122.51 209  PKP     PKPdf     03 48 58.6 -1.3
         comp=Z,0.3nm,0.8s,baz=143,slow=1.9,SNR=1.6
H11S2  WAKE ISLAND Hy1 25.95 270   T       T         06 08 05.9
         baz=118,slow=75,SNR=16
H11S1  WAKE ISLAND Hy1 25.96 270   T       T         06 08 06.9
         baz=118,slow=75,SNR=14
H11S3  WAKE ISLAND Hy1 25.97 270   T       T         06 08 05.6
         baz=118,slow=75,SNR=11
H11N3  WAKE ISLAND Hy1 26.31 272   T       T         06 08 33.3
         baz=114,slow=74
H11N1  WAKE ISLAND Hy1 26.33 272   T       T         06 08 34.0
         baz=114
H11N2  WAKE ISLAND Hy1 26.33 272   T       T         06 08 33.6
         baz=114,slow=74
BVAR   Borovoye Array  145.75  41  PKPbc   PKPdf     03 49 41.3 -0.6
         comp=Z,0.4nm,0.3s,baz=301,slow=2.7,SNR=3.1
KURBB  Kurchatov Arra  151.34  41  PKPbc   PKPbc     03 49 56.9 -0.2
         comp=Z,0.4nm,0.5s,baz=285,slow=2.4,SNR=3.3
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DJA 05 03:38:18.0±0.6**, 7°S**±4°×**10°6E**±°**, h13**km±4km**, M3.8**/19**,**
mb3.9/3**, MLv3.8**/19**, Jawa**

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Code   Station Name        Δ°   AZ°     Phase ID            Time    Res
                                       Op       ISC        h  m  s   ISC
SKJI   Sukabumi          0.61  70  P       Pb        03 38 30.8 +0.3
SBJI   Serang            1.09   8  P       Pb        03 38 37.7 -1.1
CNJI   Cibinong          1.15  95  P       Pb        03 38 38.6 -1.1
TNG    Tangerang         1.23  33  P       Pn        03 38 40.2 -0.7
TNG                                P       Pb        03 38 40.5 -0.5
LEM    Lembang           1.67  77  P       Pn        03 38 47.7 +0.6
BBJI   Bungbulang        1.68  99  P       Pn        03 38 46.5 -0.6
KASI   Kota Agung        2.23 319  P       Pn        03 38 55.2 +0.5
KLSI                     2.79 334  P       Pn        03 39 02.8 +0.3
LWLI   Liwa              2.90 319  P       Pn        03 39 03.6 -0.4
KPJI   Karang Pucung     2.93  93  P       Pn        03 39 04.1 -0.2
MDSI   Maura Dua         3.25 326  P       Pn        03 39 09.0 +0.3
UGM    Wanagama          4.56  99  P       Pn        03 39 26.2 -0.6
PCJI   Pacitan           5.24 101  P       Pn        03 39 36.5 +0.4
         0.1nm16nm,1.0s
NGJI   Ngawi             5.44  92  P       Pn        03 39 38.6 -0.2
         39nm,2.1s
SNJI   Sawahan-Nganju    5.76  96  P       Pn        03 39 44.5 +1.1
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*NEIC **05** 03:38:33.5±1.9, 24.°17S±0.°06×66.°91W±0.°09, h205km±6km, mb4.4/16, Mwr4.3(GUC), Error ellipse: s-maj=12.4km s-min=9.0km az=74.0*

*IDC **05** 03:38:33.5±1.8, 24.°18S×66.°82W, h190km±17km, mb3.5/9, mbtmp3.9/15, Error ellipse: s-maj=20.5km s-min=14.6km az=70.0*

*GUC **05** 03:38:34.6±0.7, 24.°12S×67.°35W, h225km±6km, ML4.5*

*SJA **05** 03:38:34.4±0.6, 24.°12S×66.°89W, h168km±7km, ML4.4, MW4.0*

ISC 05 03:38:33.2±0.4**, 24.°22S**±0.°03×**66.°88W**±0.°03**, h193**km±3km**,**
n124, σ1.°94/133**, mb3.9**/11**, 12C-1D, Salta Province**

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Code   Station Name        Δ°   AZ°     Phase ID            Time    Res
                                       Op       ISC        h  m  s   ISC
SALTA                    0.49  90⇓iP       Pn        03 39 02.2 +2.0
SALTA                    0.49  90 eP       Pn        03 38 56.8 -3.3
SALTA                            eP                  03 39 02.2
SALTA                            eP                  03 39 02.4
SLA    San Lorenzo       1.35 112⇑eP       Pn        03 39 07.6 +2.4
SLA                              eS        Sn        03 39 32.0 +2.1
SLA    San Lorenzo       1.35 112 eP       Pn        03 39 07.5 +2.4
SLA                              eS        Sn        03 39 27.7 -2.2
AF01   San Pedro de A    1.74 316          Pn        03 39 10.0 +1.0
AF01                               Sn      Sn        03 39 37.3 +0.6
AF01   San Pedro de A    1.74 316 eP       Pn        03 39 11.2 +2.2
AF01                             i S       Sn        03 39 39.1 +2.4
AF01                                IAML             03 39 42.2
         comp=E,2µm,0.2s
AF01   San Pedro de A    1.74 316 eP       Pn        03 39 15.0 +6.0
AF01                             eS        Sn        03 39 29.9 -6.7
FSA    Cafayete          2.05 157 eP       Pn        03 39 13.7 +1.8
FSA                              eS        Sn        03 39 43.1 +1.0
YJA    Yavi              2.39  32 eP       Pn        03 39 17.3 +1.3
YJA    Yavi              2.39  32 eP       Pn        03 39 18.0 +2.0
YJA                              eS        Sn        03 39 47.0 -2.3
GO02   Mina Guanaco      2.64 249          Pn        03 39 19.9 +1.4
GO02   Mina Guanaco      2.64 249⇑iP       Pn        03 39 19.7 +1.2
GO02                             i S       Sn        03 39 54.3 +0.4
GO02   Mina Guanaco      2.64 249 eP       Pn        03 39 19.8 +1.2
GO02                             eS        Sn        03 39 54.7 +0.8
GO02                                IAML             03 39 55.9
         comp=Z,2µm,0.2s
PB06   IPOC Station P    2.90 301          Pn        03 39 22.4 +0.8
PB06   IPOC Station P    2.90 301⇑iP       Pn        03 39 22.3 +0.8
PB06                             i S       Sn        03 39 57.8 -1.3
PB06   IPOC Station P    2.90 301 eP       Pn        03 39 22.1 +0.6
PB06                             eS        Sn        03 39 58.2 -1.0
PB06                                IAML             03 40 02.6
         comp=Z,2µm,0.2s
AHML   Horco Molle       2.91 152⇑iP       Pn        03 39 13.7 -7.7
AHML   Horco Molle       2.91 152 eP       Pn        03 39 08.8  -13
AHML                             eS        Sn        03 39 51.4 -7.8
PB14   IPOC Station P    3.24 262          Pn        03 39 26.4 +0.7
PB14   IPOC Station P    3.24 262⇑iP       Pn        03 39 26.0 +0.3
PB14                                IAML             03 40 07.5
         comp=N,561nm,0.2s
PB14   IPOC Station P    3.24 262 eP       Pn        03 39 26.0 +0.3
PB14                             eS        Sn        03 40 05.5 -1.1
PB14                                IAML             03 40 07.3
         comp=Z,933nm,0.3s
PB09   IPOC Station P    3.25 318          Pn        03 39 27.0 +1.2
PB09   IPOC Station P    3.25 318⇑iP       Pn        03 39 26.7 +1.0
PB09                             i S       Sn        03 40 05.9 -0.9
PB09                                IAML             03 40 11.2
         comp=N,802nm,0.4s
PB09   IPOC Station P    3.25 318 eP       Pn        03 39 26.8 +1.0
PB09                             eS        Sn        03 40 06.1 -0.7
PB09                                IAML             03 40 12.0
         comp=Z,750nm,0.4s
AC02   Maricunga         3.30 218  Pn      Pn        03 39 28.0 +1.4
AC02   Maricunga         3.30 218 eP       Pn        03 39 28.3 +1.7
AC02   Maricunga         3.30 218 eP       Pn        03 39 28.9 +2.3
AC02                             eS        Sn        03 39 53.5  -15
PB05   IPOC Station P    3.34 293          Pn        03 39 27.1 +0.3
PB05   IPOC Station P    3.34 293⇑iP       Pn        03 39 27.1 +0.3
PB05                             i S       Sn        03 40 06.0 -2.7
PB05   IPOC Station P    3.34 293 eP       Pn        03 39 27.1 +0.3
PB05                             eS        Sn        03 40 08.0 -0.7
PB05                                IAML             03 40 13.7
         comp=Z,517nm,0.8s
PB03   IPOC Station P    3.42 309          Pn        03 39 28.1 +0.4
PB03   IPOC Station P    3.42 309⇑iP       Pn        03 39 27.9 +0.2
PB03   IPOC Station P    3.42 309 eP       Pn        03 39 18.1  -10
PB10   IPOC Station P    3.44 281          Pn        03 39 28.5 +0.7
PB10   IPOC Station P    3.44 281 i P      Pn        03 39 27.9 +0.1
PB10                             i S       Sn        03 40 07.6 -2.9
PB10   IPOC Station P    3.44 281 eP       Pn        03 39 28.3 +0.5
PB10                             eS        Sn        03 40 08.3 -2.2
PB10                                IAML             03 40 13.9
         comp=Z,775nm,0.5s
PB07   IPOC Station P    3.72 311          Pn        03 39 31.6  0.0
PB07   IPOC Station P    3.72 311⇑iP       Pn        03 39 31.5  0.0
PB07                             i S       Sn        03 40 13.9 -3.2
TINO   Tinogasta         3.87 189 eP       Pn        03 39 35.8 +2.6
AC01   Pan de Azucar     3.88 240          Pn        03 39 33.0 -0.3
AC01   Pan de Azucar     3.88 240⇑iP       Pn        03 39 32.9 -0.3
AC01                             i S       Sn        03 40 17.8 -2.5
PB01   IPOC Station P    3.98 322          Pn        03 39 34.4 -0.3
PB01   IPOC Station P    3.98 322⇑iP       Pn        03 39 34.3 -0.4
PB01                             i S       Sn        03 40 19.2 -3.6
PB02   IPOC Station P    4.01 315          Pn        03 39 34.8 -0.3
PB02   IPOC Station P    4.01 315 i P      Pn        03 39 34.6 -0.5
PB02                             i S       Sn        03 40 19.8 -3.8
CYA    Choya             4.31 167 eP       Pn        03 39 41.1 +2.4
CYA                              eS        Sn        03 40 32.8 +2.6
AC06   Mina Casimiro     4.42 224          Pn        03 39 40.0 -0.1
AC06   Mina Casimiro     4.42 224 eP       Pn        03 39 39.8 -0.3
GO03   Copiapo           4.52 221          Pn        03 39 41.4 +0.1
GO03   Copiapo           4.52 221 eP       Pn        03 39 41.2 -0.1
GO03                             eS        Sn        03 40 33.1 -1.8
GO03   Copiapo           4.52 221 eP       Pn        03 39 41.5 +0.1
GO03                             eS        Sn        03 40 33.4 -1.5
GO03                                IAML             03 40 38.3
         comp=Z,118nm,0.3s
PATCX  Punta Patache     4.54 318          Pn        03 39 40.7 -1.0
PATCX  Punta Patache     4.54 318 eP       Pn        03 39 40.3 -1.4
PATCX                            i S       Sn        03 40 29.4 -6.2
PX03   IPOC Station P    4.58 326 eP       Pn        03 39 40.6 -1.6
PX03                             eS        Sn        03 40 32.4 -4.1
PB08   IPOC Station P    4.58 332          Pn        03 39 42.7 +0.2
PB08   IPOC Station P    4.58 332⇑iP       Pn        03 39 42.8 +0.2
PB08                             i S       Sn        03 40 34.6 -2.3
VCA    Vinchina          4.65 195 eP       Pn        03 39 45.9 +2.8
VCA                              eS        Sn        03 40 38.5 +0.3
TA01   Diego Aracena     4.75 319          Pn        03 39 43.0 -1.3
TA01   Diego Aracena     4.75 319 eP       Pn        03 39 42.6 -1.8
TA01                             eS        Sn        03 40 35.5 -4.8
TA01   Diego Aracena     4.75 319 eP       Pn        03 39 42.5 -1.8
TA01                             eS        Sn        03 40 36.1 -4.2
TA01                                IAML             03 40 46.4
         comp=Z,213nm,0.4s
HMBC   Humberstone       4.82 324          Pn        03 39 43.4 -1.9
GO01   Chusmiza          5.02 334          Pn        03 39 47.9 -0.3
GO01   Chusmiza          5.02 334 eP       Pn        03 39 47.5 -0.7
GO01                             eS        Sn        03 40 46.1 -1.1
GO01                                IAML             03 40 49.9
         comp=Z,176nm,0.3s
PB11   IPOC Station P    5.13 329          Pn        03 39 48.3 -1.2
ACLC   CERRO LA CRUZ     5.18 181 eP       Pn        03 39 50.9 +1.0
ACLC                             eS        Sn        03 40 49.3 -1.1
AC04   Llanos de Chal    5.47 223  Pn      Pn        03 39 53.1 -0.4
PSGCX  Pisagua           5.50 326          Pn        03 39 51.8 -2.3
AC05   El Transito       5.51 213  Pn      Pn        03 39 54.1  0.0
LCO    Las Campanas      5.87 215  Pn      Pn        03 39 57.8 -1.1
PB16   IPOC Station P    6.35 337          Pn        03 40 04.8 -0.8
CO01   Juntas del Tor    6.41 206  Pn      Pn        03 40 06.0 +0.1
PB12   IPOC Station P    6.44 329          Pn        03 40 03.1 -3.2
PB18   Visviri           7.04 339          Pn        03 40 11.9 -2.6
CO03   El Pedregal       7.41 206  Pn      Pn        03 40 17.6 -1.1
CFA    Coronel Fontan    7.45 189  P       Pn        03 40 19.1 -0.2
         comp=Z,1.2nm,0.3s,baz=357,slow=9.6,SNR=54
CFA                                 S      Sn        03 41 38.3 -5.2
         comp=Z,4.5nm,0.3s,baz=342,slow=19,SNR=10.0
CO06   Fray Jorge        7.69 212  Pn      Pn        03 40 21.5 -0.8
LPAZ   La Paz            7.98 351  P       Pn        03 40 26.6 -0.3
         comp=Z,7.6nm,0.4s,baz=158,slow=8.2,SNR=38
LPAZ                                S      Sn        03 41 53.7 -3.4
         comp=Z,4.6nm,0.7s,baz=233,slow=20,SNR=4.1
LPAZ   La Paz            7.98 351          Pn        03 40 25.7 -1.2
CPUP   Villa Florida     8.89 106  P       Pn        03 40 39.0 +0.9
         comp=Z,0.9nm,0.9s,baz=133,slow=8.9,SNR=3.6
CPUP   Villa Florida     8.89 106  Pn      Pn        03 40 39.5 +1.4
MT02   Curacav           9.74 202  Pn      Pn        03 40 48.5 -0.7
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MT09	Talagante	10.17	200	Pn	Pn	03 40 54.5	-0.4
ITAB	Concordia	13.63	106	Pn	Pn	03 41 37.7	-1.0
TRQA	Tornquist	14.41	164	Pn	Pn	03 41 47.1	-1.3
NNA	Nana	15.41	320	P	Pn	03 42 02.0	+1.1
	comp=Z,3.8nm,0.3s,baz=156,slow=13,SNR=1.6						
NNA	Nana	15.41	320		Pn	03 42 00.0	-0.8
NNA				IAmb	IAmb	03 42 25.5	
	comp=Z,18nm,1.1s						
PLCA	Paso Flores	16.75	190	P	P	03 42 17.2	+1.5
	comp=Z,1.6nm,0.8s,baz=17,slow=8.7,SNR=3.0						
PLCA	Paso Flores	16.75	190	P	P	03 42 14.0	-1.8
VAO	Valinhos	18.29	90	P	P	03 42 32.2	-0.6
VAO				IAmb	IAmb	03 42 33.8	
	comp=Z,6.9nm,0.8s						
LL02	Futaleuf	19.36	191	P	P	03 42 43.9	-0.1
LL02				IAmb	IAmb	03 42 48.5	
	comp=Z,14nm,0.8s						
BDFB	Brasilia	19.67	68	P	P	03 42 47.4	-0.3
	comp=Z,6.9nm,0.7s,baz=240,slow=12,SNR=6.9						
BDFB	Brasilia	19.67	68	P	P	03 42 46.8	-1.0
BDFB				IAmb	IAmb	03 42 49.1	
	comp=Z,8.3nm,0.8s						
PMSA	Palmer Station	40.59	178	P	P	03 45 51.2	-2.3
CRPR	Cabo Rojo, PR	41.98	360	P	P	03 46 01.3	-4.0
CRPR				IAmb	IAmb	03 46 23.1	
	comp=Z,28nm,1.2s						
MTO3	Montecristo	44.23	328	P	P	03 46 17.1	-6.7
SNAA	Sanae	59.10	161	P	P	03 48 14.0	+1.1
	comp=Z,1.7nm,0.7s,baz=268,slow=8.8,SNR=3.5						
	comp=Z,1.7nm,0.7s						
SNAA	Sanae	59.10	161	P	P	03 48 12.6	-0.3
WVT	Waverly	63.21	341	P	P	03 48 39.0	-1.8
WVT				IAmb	IAmb	03 48 41.0	
	comp=Z,4.0nm,0.7s						
TXAR	Lajitas Array	63.92	324	P	P	03 48 46.5	+0.8
	comp=Z,0.3nm,0.6s,baz=157,slow=6.7,SNR=4.4						
	comp=Z,0.3nm,0.6s						
TXAR	Lajitas Array	63.92	324	P	P	03 48 44.1	-1.7
QSPA	South Pole Qui	65.98	180	P	P	03 49 03.2	+4.6
	comp=Z,3.2nm,0.5s,baz=166,slow=1.9,SNR=12						
QSPA	South Pole Qui	65.98	180	P	P	03 48 59.0	+0.4
QSPA				IAmb	IAmb	03 49 05.0	
	comp=Z,4.4nm,0.8s						
OK038	West end E0370	67.45	333	P	P	03 49 04.7	-3.4
PH02	Texas Public H	67.96	330	P	P	03 49 07.7	-3.7
PH02				IAmb	IAmb	03 49 09.8	
	comp=Z,28nm,0.6s						
TORD	Torodi Ar. Bea	76.55	69	P	P	03 50 02.1	-0.4
	comp=Z,1.4nm,0.3s,baz=288,slow=3.7,SNR=3.0						
	comp=Z,1.4nm,0.3s						
PDAR	Pinedale Array	77.40	329	P	P	03 50 07.9	+0.9
	comp=Z,0.2nm,0.5s,baz=111,slow=8.1,SNR=2.6						
	comp=Z,0.2nm,0.5s						
PDAR	Pinedale Array	77.40	329	P	P	03 50 05.7	-1.3
NVAR	Mina Array Bea	78.78	321	P	P	03 50 15.1	+0.4
	comp=Z,0.3nm,0.7s,baz=141,slow=7.1,SNR=3.8						
	comp=Z,0.3nm,0.7s						
NVAR	Mina Array Bea	78.78	321	P	P	03 50 13.0	-1.7
BOSA	Boshof	80.53	117	P	P	03 50 24.8	+0.4
	comp=Z,1.7nm,0.8s,baz=246,slow=10.0,SNR=1.5						
	comp=Z,1.7nm,0.8s						
BOSA	Boshof	80.53	117	P	P	03 50 23.2	-1.2
BOSA				IAmb	IAmb	03 50 36.4	
	comp=Z,16nm,1.4s						
MAW	Mawson	81.19	163	P	P	03 50 28.1	+1.2
	comp=Z,3.0nm,0.7s,baz=187,slow=6.5,SNR=4.0						
	comp=Z,3.0nm,0.7s						
ESDC	Sonseca Array	86.48	44	P	P	03 50 55.0	+0.8
	comp=Z,0.8nm,1.0s,baz=236,slow=9.1,SNR=2.5						
	comp=Z,0.8nm,1.0s						
ESDC	Sonseca Array	86.48	44	P	P	03 50 53.2	-1.0
YKA	Yellowknife Ar	94.37	340	P	P	03 51 30.9	+0.5
	comp=Z,0.4nm,0.6s,baz=135,slow=3.6,SNR=5.2						
	comp=Z,0.4nm,0.6s						
YKA	Yellowknife Ar	94.37	340	P	P	03 51 29.7	-0.6
ASAR	Alice Springs	128.30	204	PKP	PKPdf	03 57 17.7	+0.4
	comp=Z,0.2nm,0.3s,baz=148,slow=2.7,SNR=4.9						
WRA	Warramunga Arr	131.48	207	PKP	PKPdf	03 57 24.2	+0.8
	comp=Z,0.5nm,0.5s,baz=160,slow=1.7,SNR=10						
BVAR	Borovoye Array	136.91	37	PKP	PKPdf	03 57 33.0	+0.5
	comp=Z,1.1nm,0.4s,baz=14,slow=13,SNR=1.9						
KURBB	Kurchatov Arra	142.49	36	PKP	PKPdf	03 57 43.0	+0.3
	comp=Z,0.5nm,0.6s,baz=309,slow=2.9,SNR=3.3						
ZALV	Zalesovo Beam	143.54	28	PKP	PKPab	03 57 43.0	+1.6
	comp=Z,1.9nm,0.5s,baz=287,slow=3.2,SNR=9.5						
ZALV	Zalesovo Beam	143.54	28		PKPab	03 57 42.8	+1.4
MKAR	Makanchi Array	146.63	40	PKPbc	PKPdf	03 57 50.9	+0.9
	comp=Z,3.6nm,0.7s,baz=324,slow=1.9,SNR=18						
MKAR	Makanchi Array	146.63	40	PKPbc	PKPdf	03 57 50.6	+0.5

NNC 05 03:53:10.8±3.8**, 37°.01N**×**70°.86E, h0^{km}, mb3.8, mpv3.4, 2C-2D, Error ellipse: s-maj=31.4km s-min=25.0km az=155.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.09	358	⇑Pn	Pn	03 54 42.9	+0.8
	2.4nm,0.2s,baz=175,slow=12,SNR=41						
KK31				⇓Sn	Sn	03 55 54.0	+1.5
	0.6nm,0.3s,baz=179,slow=23						
AAK	Ala-Archa	6.28	25	⇑Pn	Pn	03 54 44.4	-0.4
	0.6nm,0.4s						
AAK				⇓Sn	Sn	03 55 57.8	+0.5
	1.2nm,0.7s						
AB31	Akbulak array	14.58	330	P	Pn	03 56 37.5	-0.8
	1.6nm,0.9s,baz=154,slow=11,SNR=5.5						

WEL 05 03:54:50.5±0.7**, 32°S**±9°×**18°0W**±2°1**, h12^{km}, M4.3**/8**, mB4.9**/7**, ML4.0**/12**, MLv4.3**/8**, Mw(mB)4.2**/7**, Error ellipse: s-maj=30.0km s-min=4.9km az=111.7, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.63	29	S	Sn	03 56 25.9	-3.4
MXZ	Matakaoa Point	5.29	195	P	Pn	03 56 11.9	+2.6
MXZ				S	Sn	03 57 12.6	+2.3
WMGZ	Waiomatatini S	5.52	194	P	Pn	03 56 15.0	+2.5
WMGZ				S	Sn	03 57 16.7	+0.9
HAZ	Te Kaha	5.61	199	P	Pn	03 56 15.4	+1.8
HAZ				S	Sn	03 57 16.1	-1.8
PKGZ	Pakihiroa	5.63	196	P	Pn	03 56 17.4	+3.3
WBSC	Whangarei Boys	5.76	234	P	Pn	03 56 14.5	-1.2
PUZ	Puketiti	5.79	194	P	Pn	03 56 18.4	+2.1
PUZ				S	Sn	03 57 21.5	-1.1
RUGZ	Raukumara Rang	5.83	199	P	Pn	03 56 18.3	+1.5
RUGZ				S	Sn	03 57 21.5	-2.1
WIAZ	Waiheke Island	5.92	222	P	Pn	03 56 16.5	-1.5
WHRZ	Whale Island	5.95	204	P	Pn	03 56 17.8	-0.5
TWGZ	Tauwhareparae	5.95	196	P	Pn	03 56 20.7	+2.2
TWGZ				S	Sn	03 57 26.9	+0.3
CNGZ	Carnagh Statio	6.20	193	P	Pn	03 56 24.2	+2.4
MWZ	Matawai	6.22	199	P	Pn	03 56 22.8	+0.7
MWZ				S	Sn	03 57 31.2	-1.9
TKGZ	Te Karaka	6.24	196	P	Pn	03 56 23.0	+0.7
URZ	Urewera	6.27	202	P	Pn	03 56 23.2	+0.4
URZ				S	Sn	03 57 33.1	-1.1
RIGZ	Rimuhau	6.51	196	P	Pn	03 56 26.7	+0.6
RIGZ				S	Sn	03 57 38.2	-2.1

IDC 05 03:59:39.3±23.0**, 1°.52N**×**96°.87E, h0^{km}, mb3.8**/2**, mbtmp3.8**/3**, ML4.5**/1**, MS3.8**/1**, Error ellipse: s-maj=643.7km s-min=136.9km az=120.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.95	7	Pn	Pn	04 03 38.0	0.0
	0.6nm,0.3s,baz=186,slow=9.3,SNR=1.3						
	0.5nm,0.3s						
H08S2	Diego Garcia H	25.97	249	T	T	04 31 54.0	
	baz=68,slow=75,SNR=23						
H08S3	Diego Garcia H	25.97	249	T	T	04 31 55.5	
	baz=68,slow=75,SNR=29						
H08S1	Diego Carcia H	25.99	249	T	T	04 31 50.3	
	baz=68,slow=75,SNR=17						
H01W3	Cape Leeuwin H	39.67	158	T	T	04 50 20.7	
	baz=332,slow=76,SNR=9.8						
H01W2	Cape Leeuwin H	39.68	158	T	T	04 50 23.4	
	baz=332,slow=76,SNR=11						
H01W1	Cape Leeuwin H	39.68	158	T	T	04 50 24.9	
	baz=332,slow=76,SNR=11						
MKAR	Makanchi Array	46.85	346	P	P	04 08 11.1	-0.1
	0.7nm,0.8s,baz=160,slow=7.6,SNR=4.1						
	0.7nm,0.8s						
ZALV	Zalesovo Beam	53.19	351	P	P	04 08 59.0	-0.1
	1.2nm,0.6s,baz=185,slow=7.2,SNR=5.9						
	1.2nm,0.6s						
BVAR	Borovoye Array	55.84	341	LR	LR	04 36 26.2	
	comp=Z,96nm,21.9s,baz=294,slow=40						
H04N2	CROZET ISLANDS	61.86	214	T	T	05 17 34.2	
	baz=52,slow=75,SNR=51						
H04N1	CROZET ISLANDS	61.87	214	T	T	05 17 20.7	
	baz=52,slow=75,SNR=62						
H04N3	CROZET ISLANDS	61.88	214	T	T	05 17 19.4	
	baz=52,slow=75,SNR=52						
H04S1	CROZET ISLANDS	62.20	213	T	T	05 17 47.3	
	baz=53,slow=76,SNR=7.3						
H04S3	CROZET ISLANDS	62.21	213	T	T	05 17 44.4	
	baz=53,slow=76,SNR=16						
H04S2	CROZET ISLANDS	62.22	213	T	T	05 17 48.3	
	baz=53,slow=76,SNR=6.6						

TAP ***05*** *04:12:01.5, 24°.26N×122°.88E, h53^{km}, ML3.5, D*
JMA ***05*** *04:12:01.4±0.1, 24°N±3°×122°.9E±0°.6, h56^{km}±2^{km}, MV2.8/13, NW OFF ISHIGAKIJIMA IS*
ISC 05 04:12:01.9±1.2**, 24°.11N**±0°.04×**122°.88E**±0°.02**, h48^{km}**±10^{km}**, n90, σ1^{s}.21**/153**, 1C-12D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.34	9	P	Pn	04 12 10.8	-0.5
JYNG				S	Sn	04 12 17.4	-0.5
YOJ	Yonaguni jima	0.37	18	⇓*i*P	Pn	04 12 11.0	-0.5
YOJ				*i* S	Sn	04 12 17.6	-0.7
YOJ	Yonaguni jima	0.37	18	P	Pn	04 12 11.0	-0.5
YOJ				S	Sn	04 12 17.7	-0.6
EOS4	EOS4	0.52	271	⇓P	Pn	04 12 13.5	+0.7
EOS4				S	Sn	04 12 22.0	+1.3
EOS3	EOS3	0.55	289	P	Pn	04 12 14.2	+0.7
EOS3				*e*S	Sn	04 12 23.7	+2.0
EOS2	EOS2	0.67	297	P	Pn	04 12 15.2	+0.2
IRIF	Iriomote-Funau	0.80	74	P	Pn	04 12 16.7	-0.2
IRIF				*e*S	Sn	04 12 29.2	+1.3
HATJ	Hateruma jima	0.84	94	*e*S	Sn	04 12 30.8	+2.0
JKRS	Kuro-shima	1.03	83	P	Pn	04 12 20.1	+0.1
JKRS				*e*S	Sn	04 12 35.0	+1.6
TWC	Suao	1.07	298	*e*P	Pn	04 12 20.1	-0.3
TWC				*e*S	Sn	04 12 32.5	-1.7
ENA	Nanau	1.09	287	*e*P	Pn	04 12 20.1	-0.6
ETL	Fush Village	1.15	273	*e*P	Pn	04 12 21.2	-0.4
JIJ	Ishigaki jima	1.18	78	P	Pn	04 12 21.6	-0.3
JIJ				S	Sn	04 12 36.4	-0.4
TWD	Chiawan	1.18	269	*e*P	Pn	04 12 21.3	-0.6
TWD				*e*S	Sn	04 12 35.4	-1.5
NACB	Ninganchiao	1.18	273	⇓P	Pn	04 12 21.4	-0.6
NACB				*e*S	Sn	04 12 35.8	-1.1
TEYL	Yanliau Villag	1.20	259	P	Pn	04 12 21.8	-0.5
TEYL				S	Sn	04 12 37.4	-0.1
SHUL	Shoufeng	1.25	255	P	Pn	04 12 22.6	-0.4
SHUL				S	Sn	04 12 37.8	-0.9
ETM	Tongmen	1.28	264	*e*P	Pn	04 12 22.6	-0.8
ETM				*e*S	Sn	04 12 37.5	-2.0
ETLH	Xiulin Townshi	1.28	274	*e*P	Pn	04 12 23.0	-0.5
ETLH				*e*S	Sn	04 12 38.5	-1.1
TIPB	Shuangxi	1.29	312	P	Pn	04 12 22.5	-1.0
TIPB				S	Sn	04 12 37.4	-2.3
LATG	Datong	1.31	289	*e*P	Pn	04 12 23.7	-0.1
LATG				*e*S	Sn	04 12 39.5	-0.7
ENTT	Nioudou	1.31	294	⇓P	Pn	04 12 24.0	+0.2
SXI1	Grass Mountain	1.34	317	*e*P	Pn	04 12 23.2	-1.0
FUSB	Fushanzhiwuyua	1.35	299	*e*P	Pn	04 12 24.8	+0.4
FUSB				*e*S	Sn	04 12 39.9	-1.2
ESL	Shilin	1.36	258	*e*P	Pn	04 12 23.6	-0.9
JISG	Ishigakijimahi	1.38	70	P	Pn	04 12 24.2	-0.6
JISG				S	Sn	04 12 41.0	-0.9
WFSB	Wu-fen Shan	1.39	314	*e*S	Sn	04 12 39.7	-2.3
EGFH	Guangfu	1.41	252	*e*S	Sn	04 12 41.2	-1.3
NNSB	Datong	1.41	283	*e*P	Pn	04 12 24.8	-0.4
NNSB				*e*S	Sn	04 12 41.7	-1.0
NNS	Nan Shan	1.42	284	*e*P	Pn	04 12 24.9	-0.4
NWLT	Wulai	1.42	298	*e*P	Pn	04 12 25.9	+0.5
NWLT				*e*S	Sn	04 12 43.4	+0.4
WARBT	Fenglin Townsh	1.43	254	⇓P	Pn	04 12 24.6	-0.8
WARBT				*e*S	Sn	04 12 41.6	-1.4
HGSD	Ruisui	1.47	245	⇓P	Pn	04 12 25.4	-0.6
HGSD				S	Sn	04 12 42.7	-1.5
WHF	Hehuan Shan	1.48	272	*e*P	Pn	04 12 25.9	-0.6
WHF				*e*S	Sn	04 12 43.7	-1.2
YHNB	Yeheng	1.48	292	⇓P	Pn	04 12 26.3	+0.1
YHNB				S	Sn	04 12 44.1	-0.4
NSK	Sanguang	1.50	292	*e*P	Pn	04 12 26.4	0.0
NSK				*e*S	Sn	04 12 43.8	-1.1
FUSS	Fushou	1.50	275	*e*P	Pn	04 12 26.6	0.0
ECBN	Changbin	1.54	239	*e*S	Sn	04 12 44.3	-1.4
EHYH	Wanrong	1.54	247	*e*P	Pn	04 12 26.8	-0.2
EHYH				*e*S	Sn	04 12 45.1	-0.6
EHY	Hungye	1.55	247	*e*P	Pn	04 12 26.7	-0.4
EHY				*e*S	Sn	04 12 45.5	-0.6
TWT	Tachien	1.57	275	*e*P	Pn	04 12 27.9	+0.4
OWD	Renai	1.57	265	⇓P	Pn	04 12 27.2	-0.3
OWD				*e*S	Sn	04 12 45.4	-1.4
YM01	YM01	1.58	311	*e*S	Sn	04 12 45.7	-1.1
TDCB	Techi	1.58	275	*e*P	Pn	04 12 27.8	+0.2
TDCB				*e*S	Sn	04 12 46.2	-0.9
WUSB	Renai	1.62	266	⇓*i*P	Pn	04 12 28.2	0.0
WUSB				*e*S	Sn	04 12 47.3	-0.6
YULB	Yu-li	1.62	244	P	Pn	04 12 27.8	-0.3
YULB				*e*S	Sn	04 12 46.9	-0.9
VWDT	VWDT	1.64	258	⇓P	Pn	04 12 28.4	+0.2
VWDT				*e*S	Sn	04 12 47.4	-0.7
TWF1	Yuli	1.64	243	⇑P	Pn	04 12 28.2	-0.1
TWF1				*e*S	Sn	04 12 47.5	-0.8
CHKH	Chenggong	1.65	236	*e*S	Sn	04 12 46.1	-2.2
KSHI	Guanxi Townshi	1.69	293	*e*S	Sn	04 12 50.6	+1.1
NFF	Wufeng Townshi	1.69	288	*e*P	Pn	04 12 29.9	+0.8
FULB	Fuli	1.72	238	*e*P	Pn	04 12 28.6	-0.8
FULB				*e*S	Sn	04 12 49.3	-0.9
CHKT	Chengkung	1.72	234	*e*S	Sn	04 12 47.9	-2.2
JTJ	Tarama	1.74	72	*e*P	Pn	04 12 29.6	-0.1
JTJ				*e*S	Sn	04 12 50.0	-0.6
WHP	Taichung City	1.78	276	*e*P	Pn	04 12 31.2	+0.9
WHP				*e*S	Sn	04 12 51.8	0.0
LIOB	Emei	1.79	288	*e*P	Pn	04 12 31.1	+0.8
LIOB				*e*S	Sn	04 12 52.9	+1.1
NSTT	Nanjuang	1.79	287	*e*P	Pn	04 12 31.2	+0.8
NSTT				*e*S	Sn	04 12 52.9	+0.9
SSLB	Suanglung	1.80	260	⇓P	Pn	04 12 30.6	+0.1
SSLB				*e*S	Sn	04 12 50.8	-1.3
WCS	Beigang Elemen	1.80	269	*e*P	Pn	04 12 31.0	+0.5
EHD	Haiduan	1.81	238	*e*P	Pn	04 12 29.7	-1.0
EHD				*e*S	Sn	04 12 50.7	-1.8
SMLT	Sun Moon Lake	1.83	263	⇓P	Pn	04 12 31.4	+0.4
SMLT				*e*S	Sn	04 12 53.5	+0.5
EDH	Donghe	1.84	232	*e*S	Sn	04 12 51.1	-2.1
TYC	Yuchr	1.87	264	*e*P	Pn	04 12 32.0	+0.6
YUS	Yu-Shan	1.88	251	*e*P	Pn	04 12 32.5	+0.5
YUS				*e*S	Sn	04 12 53.7	-1.0
LDUT	Ludao	1.94	222	*e*P	Pn	04 12 30.0	-2.4
LDUT				*e*S	Sn	04 12 52.7	-2.7
ELDTW	Lidau	1.94	242	*e*P	Pn	04 12 32.2	-0.4
ELDTW				*e*S	Sn	04 12 53.9	-2.0
WJS	Zhushan	1.99	262	*e*P	Pn	04 12 34.9	+1.7
WJS				*e*S	Sn	04 12 59.7	+2.8
ALS	Alishan	2.00	253	*e*P	Pn	04 12 34.3	+0.8
ALS				*e*S	Sn	04 12 57.7	+0.3
LONT	Longtian	2.01	234	*e*P	Pn	04 12 33.3	-0.1
LONT				*e*S	Sn	04 12 54.9	-2.4
WNT	Mingjian	2.03	264	*e*P	Pn	04 12 35.2	+1.6
WNT				*e*S	Sn	04 12 59.2	+1.5
CHN5	Tsauling	2.08	256	*e*P	Pn	04 12 35.7	+1.2
CHN5				*e*S	Sn	04 13 00.7	+1.4
TWGBT	Beinan	2.10	232	*e*P	Pn	04 12 34.5	-0.1
TWGBT				*e*S	Sn	04 12 58.1	-1.4
TWG	Pinlang	2.10	233	*e*P	Pn	04 12 34.6	0.0
TWG				*e*S	Sn	04 12 58.4	-1.2
STYH	Taoyuan	2.15	245	*e*P	Pn	04 12 36.1	+0.8
STYH				*e*S	Sn	04 13 01.0	+0.3
WDLH	Douliu	2.19	259	*e*P	Pn	04 12 37.2	+1.4
WDLH				*e*S	Sn	04 13 03.5	+1.8
WCKO	Fanlu	2.19	253	*e*P	Pn	04 12 37.6	+1.7
WCKO				*e*S	Sn	04 13 04.1	+2.2
TPUB	Ta-pu	2.22	249	*e*P	Pn	04 12 37.8	+1.5
TPUB				*e*S	Sn	04 13 04.3	+1.8
WTP	Ta-pu	2.25	248	*e*P	Pn	04 12 38.3	+1.6
WTP				*e*S	Sn	04 13 05.3	+2.0
SGST	Jiashian	2.35	245	*e*P	Pn	04 12 39.3	+1.3
SGST				*e*S	Sn	04 13 07.1	+1.5
CHN1	Nanshi	2.35	247	*e*P	Pn	04 12 39.9	+1.8
CHN1				*e*S	Sn	04 13 08.0	+2.3
TWK	Hsinying	2.35	249	*e*P	Pn	04 12 39.5	+1.4
TWK				*e*S	Sn	04 13 07.9	+2.0
SNST	Tainan City	2.36	248	*e*P	Pn	04 12 40.1	+1.9
SNST				*e*S	Sn	04 13 07.7	+1.7
SSD	Sandimen	2.48	237	*e*P	Pn	04 12 42.0	+2.3
WSL	Shuilin Townsh	2.50	257	*e*P	Pn	04 12 41.5	+1.4
WSL				*e*S	Sn	04 13 10.1	+0.7
SCST	Cishan	2.51	241	*e*P	Pn	04 12 42.8	+2.5
EAST	Anshuo	2.54	228	*e*P	Pn	04 12 40.5	-0.3
MASBT	Mashibuluo	2.55	235	*e*P	Pn	04 12 41.5	+0.7
SCZT	Fangliau	2.71	231	*e*P	Pn	04 12 45.0	+2.0
TSCK	Chigu Township	2.74	250	*e*P	Pn	04 12 45.0	+1.6
PHUB	P'eng-hu	3.09	260	*e*P	Pn	04 12 48.1	-0.1
PHUB				*e*S	Sn	04 13 23.5	-0.4

IDC ***05*** *04:17:38.2±0.7, 43°.39N×147°.86E, h0^{km}, mb4.1/29, mbtmp4.1/33, ML3.2/4, MS3.9/4, Error ellipse: s-maj=17.7km s-min=13.3km az=159.0*
SKHL ***05*** *04:17:39.3±0.1, 43°.20N×148°.20E, h35^{km}±5^{km}, mb5.5/3*
MOS ***05*** *04:17:40.7±1.0, 43°.34N×147°.91E, h31^{km}, mb4.9/28, MS4.1/5, Error ellipse: s-maj=8.6km s-min=6.0km az=117.9*
JMA ***05*** *04:17:40.2±0.4, 43°N±1°×14°8E±°, h0^{km}, MV4.3/30, E OFF HOKKAIDO*
NEIC ***05*** *04:17:40.4±1.1, 43°.4N±0°.1×147°.90E±0°.03, h10^{km}±1^{km}, mb4.7/53, Error ellipse: s-maj=17.4km s-min=4.8km az=178.0*
NIED ***05*** *04:17:40.2, 43°.21N×147°.68E, h0^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.97; $M_{\theta\theta}$0.20; $M_{\phi\phi}$-1.17; $M_{r\theta}$1.87; $M_{\theta\phi}$-1.40; $M_{\phi r}$1.35; Fault plane solution: $M_0$2.84000×10^{15} NP1: ϕ_s174.00000°, δ27.00000°, λ30.00000°. NP2:ϕ_s57.00000°, δ77.00000°, λ114.00000°.*
ISC 05 04:17:39.5±0.5**, 43°.30N**±0°.05×**148°.00E**±0°.05**, h10^{km}, n239, σ1^{s}.48**/250**, mb4.6**/88**, MS4.1**/8**, 18C-15D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	1.02	304	*e*P	Pn	04 18 06.9	+7.0
SHO				AMB	AMB	04 18 09.8	
	4μm,0.3s						
SHO				*e*S	Sn	04 18 20.7	+6.4
SHO				A	A	04 18 26.5	
	19μm,0.5s						
SHO				A	A	04 18 26.5	
	19μm,0.5s						
NEM2	Nemuro 2	1.65	273	P	Pn	04 18 07.3	-1.1
NEM2				*e*S	Sn	04 18 25.8	-3.8
NMR	Nemuro--Hokkai	1.66	273	*e*PN	Pn	04 18 07.2	-1.4
NMR				*i* S	Sn	04 18 28.1	-1.8
NMR	Nemuro--Hokkai	1.66	273	*e*P	Pn	04 18 07.2	-1.4
NMR				*i* S	Sn	04 18 28.1	-1.8
YUK	Yuzh-Kuril'sk	1.71	296	*e*PN	Pn	04 18 08.6	-0.8
YUK				*i* S	Sn	04 18 30.5	-0.8
YUK				pmax	pmax		
	comp=N,275nm,0.2s						
YUK				pmax	pmax		
	comp=E,502nm,0.2s						
YUK				pmax	pmax		
	comp=Z,1μm,0.2s						
YUK				smax	smax		
	comp=N,3μm,0.4s						
YUK				smax	smax		
	comp=E,4μm,0.6s						
YUK	Yuzh-Kuril'sk	1.71	296	*e*P	Pn	04 18 08.6	-0.8
YUK				AMB	AMB	04 18 12.0	
	comp=E,1μm,0.3s						
YUK				*i* S	Sn	04 18 30.5	-0.8
YUK				A	A	04 18 34.9	
	comp=E,4μm,0.5s						
YUK				A	A	04 18 34.9	
	comp=E,6μm,0.5s						
GLVR	Golovnino	1.85	285	*e*S	Sn	04 18 33.4	-1.4
KUR	Kuril'sk	1.94	357	*e*PN	Pn	04 18 12.4	0.0
KUR				*i* S	Sn	04 18 35.3	-1.5
KUR				pmax	pmax		
	comp=N,314nm,0.5s						
KUR				pmax	pmax		
	comp=E,164nm,0.5s						
KUR				pmax	pmax		
	comp=Z,515nm,0.5s						
KUR				smax	smax		
	comp=E,2μm,0.4s						
KUR				smax	smax		
	comp=N,1μm,0.3s						
KUR	Kuril'sk	1.94	357	*e*P	Pn	04 18 11.1	-1.3
KUR				AMB	AMB	04 18 15.1	
	comp=N,690nm,0.5s						
KUR				*e*S	Sn	04 18 35.0	-1.8
KUR				A	A	04 18 37.3	
	comp=N,1μm,0.5s						
KUR				A	A	04 18 37.3	
	comp=N,2μm,0.5s						
JKHN	Kushirohamanak	2.08	265	*e*P	Pn	04 18 14.3	-0.2
JKHN				*e*S	Sn	04 18 38.9	-1.6
RUSJ	Misakicho	2.15	293	*e*PN	Pn	04 18 15.0	-0.4
RUSJ				*i* S	Sn	04 18 42.7	+0.6
JRA	Rausu	2.18	288	*e*P	Pn	04 18 15.4	-0.4
JNSB	Nemuroshibetsu	2.23	283	P	Pn	04 18 16.1	-0.4
AKK	Akkeshi	2.33	264	*e*P	Pn	04 18 17.4	-0.4
JNK	Nakash	2.40	278	P	Pn	04 18 17.9	-1.0
JAK	Akkeshi	2.43	264	*e*P	Pn	04 18 18.6	-0.7
JTKR	Abashiri--Toko	3.04	284	P	Pn	04 18 28.2	+0.5
JAR	Ashorobuto	3.08	271	P	Pn	04 18 27.9	-0.3
JCH	Churui	3.47	260	*e*P	Pn	04 18 33.7	+0.2
ERM	Erimo	3.79	252		Pn	04 18 39.0	+1.0
ERM				Sn	Sn	04 19 21.5	-1.2
JEM	Erimo	3.79	252	*e*P	Pn	04 18 39.1	+1.1
JKK2	Kamakawa 2	3.85	280	*e*P	Pn	04 18 40.3	+1.4
JFR	Furan	3.95	270	*e*P	Pn	04 18 39.3	-0.9
JNBK	Urakawa-nobuka	3.99	257	*e*P	Pn	04 18 40.7	0.0
JKA	Kamikawa-asahi	4.00	284		Pn	04 18 41.0	+0.2
ASAJ	Asahikawa	4.00	284	Pn	Pn	04 18 42.0	+1.2
	comp=N,4.3nm,0.3s,baz=99,slow=11,SNR=12						
ASAJ				Sn	Sn	04 19 27.6	-0.1
	comp=N,0.6nm,0.3s,baz=112,slow=28,SNR=1.3						
ASAJ	Asahikawa	4.00	284	PN	Pn	04 18 41.0	+0.2
YSS	Yuzhno-Sakhali	5.21	316		Pn	04 18 56.0	-1.4
YSS	Yuzhno-Sakhali	5.21	316	*e*PN	Pn	04 18 59.0	+1.6
YSS				pmax	pmax		
	comp=Z,60nm,0.7s						
YSS				MLR	MLR		
	comp=Z,2μm,14.0s						
YSS	Yuzhno-Sakhali	5.21	316	*e*P	Pn	04 18 59.0	+1.6
YSS				*e*S	Sn	04 19 57.0	-0.4
JTM	Tenmabayashi	5.74	246		Pn	04 19 04.3	-0.4
TYV	Tymovskoe	8.39	336	*e*P	Pn	04 19 42.7	+1.6
SKR	Severo-Kuril's	9.23	34	⇑*e*PN	Pn	04 19 53.0	+0.4
SKR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MAJO	Matsushiro	10.10	231	⇑*i*PN	Pn	04 20 07.2	+2.6
MAJO				pmax	pmax		
	comp=Z,11nm,1.0s						
MJAR	Matsushiro Arr	10.10	231	Pn	Pn	04 20 05.1	+0.5
	comp=Z,0.1nm,0.3s,baz=28,slow=14,SNR=7.0						
	comp=Z,0.9nm,0.3s						
USRK	Ussuriysk Ar.	11.62	280	Pn	Pn	04 20 24.0	-1.2
	comp=Z,0.2nm,0.3s,baz=91,slow=12,SNR=2.1						
	comp=Z,3.7nm,1.0s						
PETK	Petropavlovsk-	11.74	30	Pn	Pn	04 20 27.1	+0.1
	comp=Z,0.4nm,0.3s,baz=203,slow=11,SNR=5.4						
	comp=Z,1.8nm,0.5s						
BNX	BinXian	14.89	287	⇓P	Pn	04 21 07.8	-2.2
BNX				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KSRS	Korea Array	16.36	256	Pn	Pn	04 21 28.7	-0.4
	comp=Z,0.4nm,0.3s,baz=62,slow=14,SNR=2.3						
	comp=Z,1.8nm,0.8s						
ZEA	Zeya	17.20	315	*e*P	Pn	04 21 27.6	-12
DL2	Dalian	20.31	267	P	P	04 22 15.8	+0.2
DL2				pmax	pmax		
	comp=Z,72nm,1.3s						
HILR	Hailar Array B	20.38	298	P	P	04 22 13.3	-2.9
	comp=Z,3.5nm,0.4s,baz=96,slow=10,SNR=10						

	comp=Z,3.5nm,0.4s						
YAK	**Yakutsk**	**21.66**	**336**	*e*P	**P**	**04 22 24.4**	**-5.4**
YAK				*e*S	**S**	**04 26 24.2**	**-5.1**
YAK				pmax	pmax		
	comp=Z,35nm,1.2s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.0s						
YAK				smax	smax		
	comp=E,1µm,4.7s						
YAK				smax	smax		
	comp=N,2µm,5.9s						
XLT	**XiLinHaoTe**	**23.05**	**283**	*e*P	**P**	**04 22 41.9**	**-3.1**
XLT				sP	pwP	04 22 50.8	-2.0
XLT				PP	**PnPn**	**04 23 11.8**	**+2.0**
XLT				pmax	pmax		
	comp=Z,16nm,0.7s						
BJI	**Beijing**	**23.92**	**273**	P	**P**	**04 22 52.0**	**-1.4**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TIA	**Tai'an**	**24.67**	**264**	P	**P**	**04 23 02.1**	**+1.6**
TIA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NJ2	**Nanjing**	**25.53**	**254**	*e*P	**P**	**04 23 08.1**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HNS	**HongShan**	**25.93**	**268**	⇓P	**P**	**04 23 13.9**	**+2.1**
HNS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**27.02**	**277**	*e*P	**P**	**04 23 22.1**	**+0.3**
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,5.4s						
BTO	**Baotou**	**28.21**	**278**	*e*P	**P**	**04 23 35.8**	**+3.3**
BTO				S	**S**	**04 28 25.0**	**+6.9**
BTO				pmax	pmax		
	comp=Z,49nm,0.9s						
BTO				pmax	pmax		
	comp=Z,880nm,6.0s						
BTO				LR	LR		
	comp=N,1µm,6.2s						
BTO				LR	LR		
	comp=E,1µm,6.9s						
BTO				LR	LR		
	comp=Z,440nm,7.1s						
H11N2	**WAKE ISLAND Hy**	**28.36**	**140**	T	T	04 54 29.3	
	baz=330,slow=75,SNR=79						
H11N1	**WAKE ISLAND Hy**	**28.37**	**140**	T	T	04 54 36.3	
	baz=330,slow=75,SNR=70						
H11N3	**WAKE ISLAND Hy**	**28.38**	**140**	T	T	04 54 37.5	
	baz=330,slow=75,SNR=72						
ULN	**Ulaanbaatar**	**28.77**	**294**		**P**	**04 23 36.0**	**-1.5**
ULN				IAmb	IAmb	04 23 38.9	
	comp=Z,22nm,1.2s						
ULN	**Ulaanbaatar**	**28.77**	**294**	⇑*i*P	**P**	**04 23 37.5**	**+0.1**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ULN	**Ulaanbaatar**	**28.77**	**294**	*e*P	**P**	**04 23 37.5**	**+0.1**
SONM	**Songino Array**	**29.21**	**294**	P	**P**	**04 23 40.7**	**-0.7**
	comp=Z,8.7nm,0.8s,baz=76,slow=14,SNR=31						
	comp=Z,8.7nm,0.8s						
SONM	**Songino Array**	**29.21**	**294**	P	**P**	**04 23 41.2**	**-0.1**
SONM				IAmb	IAmb	04 23 42.3	
	comp=Z,9.7nm,1.0s						
SONM	**Songino Array**	**29.21**	**294**	P	**P**	**04 23 41.2**	**-0.1**
SONM				pmax	pmax		
	comp=Z,10.0nm,1.0s						
H11S1	**WAKE ISLAND Hy**	**29.33**	**142**	T	T	04 55 37.9	
	baz=332,slow=76,SNR=188						
H11S3	**WAKE ISLAND Hy**	**29.34**	**142**	T	T	04 55 42.1	
	baz=332,slow=76,SNR=143						
H11S2	**WAKE ISLAND Hy**	**29.35**	**142**	T	T	04 55 37.9	
	baz=332,slow=76,SNR=118						
MIDW	**Midway**	**31.62**	**107**	P	**P**	**04 24 01.6**	**-1.0**
XAN	**Xi'an**	**31.64**	**266**	P	**P**	**04 24 06.0**	**+3.2**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
LZH	**Lanzhou**	**34.41**	**273**	*e*P	**P**	**04 24 27.5**	**+0.4**
LZH				pP	pwP	04 24 33.2	-2.5
LZH				sP	sP	04 24 35.2	+6.1
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZDM	**Lanzhou Array**	**34.57**	**273**	P	**P**	**04 24 27.8**	**-1.0**
	comp=Z,1.2nm,0.3s,baz=75,slow=1.7,SNR=6.4						
	comp=Z,1.2nm,0.3s						
GTA	**Gaotai**	**35.98**	**281**	*e*P	**P**	**04 24 41.5**	**+0.9**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
D19K	**Kuna River**	**37.45**	**29**	P	**P**	**04 24 53.2**	**+0.6**
D19K				IAmb	IAmb	04 24 56.7	
	comp=Z,12nm,1.0s						
H19K	**Roundabout Mou**	**37.51**	**34**	P	**P**	**04 24 54.1**	**+1.0**
H19K				IAmb	IAmb	04 25 12.1	
	comp=Z,8.2nm,0.8s						
E19K	**Redstone River**	**37.54**	**31**	P	**P**	**04 24 54.3**	**+0.9**
D20K	**Etivluk River**	**38.04**	**29**	P	**P**	**04 24 58.4**	**+0.8**
D20K				IAmb	IAmb	04 25 11.2	
	comp=Z,25nm,1.4s						
B21K	**Ikpikpuk River**	**38.93**	**28**		**P**	**04 25 05.6**	**+0.6**
B21K				IAmb	IAmb	04 25 23.9	
	comp=Z,15nm,1.1s						
D22K	**Ayikyak River**	**39.47**	**29**		**P**	**04 25 09.7**	**+0.1**
E22K	**Anaktuvuk Pass**	**39.68**	**31**	P	**P**	**04 25 12.0**	**+0.6**
E22K				IAmb	IAmb	04 25 24.1	
	comp=Z,20nm,1.4s						
NRIK	**Noril'sk**	**39.94**	**331**	P	**P**	**04 25 11.9**	**-1.6**
	comp=Z,1.3nm,0.4s,baz=75,slow=3.0,SNR=2.0						
	comp=Z,1.3nm,0.4s						
C23K	**Itkillik River**	**40.34**	**28**	P	**P**	**04 25 17.2**	**+0.5**
C23K				IAmb	IAmb	04 25 33.0	
	comp=Z,28nm,1.4s						
E23K	**Chandalar**	**40.50**	**31**	P	**P**	**04 25 18.8**	**+0.6**
D24K	**Happy Valley**	**40.89**	**29**	P	**P**	**04 25 21.6**	**+0.3**
GOMU	**GeErMu**	**40.91**	**279**	P	**P**	**04 25 22.4**	**0.0**
GOMU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH	**PanZhiHua**	**40.91**	**261**	P	**P**	**04 25 21.9**	**-0.3**
E24K	**Your Creek**	**40.92**	**31**	P	**P**	**04 25 22.5**	**+0.9**
E24K				IAmb	IAmb	04 25 37.4	
	comp=Z,9.5nm,0.9s						
C24K	**Franklin Bluff**	**40.99**	**28**	P	**P**	**04 25 22.1**	**0.0**
C24K				IAmb	IAmb	04 25 23.8	
	comp=Z,9.8nm,0.8s						
DAV	**Davao City (W)**	**41.12**	**215**	LR	LR	04 38 54.9	
	comp=Z,188nm,21.9s,baz=150,slow=31						
G24K	**Hadweenzic Riv**	**41.25**	**33**	P	**P**	**04 25 24.2**	**-0.1**
G24K				IAmb	IAmb	04 25 39.8	
	comp=Z,19nm,1.4s						
ILAR	**Eielson Array**	**41.49**	**36**	P	**P**	**04 25 26.9**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=274,slow=9.7,SNR=8.5						
	comp=Z,0.7nm,0.8s						
ZALV	**Zalesovo Beam**	**41.76**	**308**	P	**P**	**04 25 27.6**	**-1.0**
	comp=Z,1.8nm,0.7s,baz=61,slow=7.0,SNR=7.4						
ZALV				PcP	**PcP**	**04 27 24.4**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=40,slow=2.5,SNR=3.7						
	comp=Z,1.8nm,0.7s						
ZALV	**Zalesovo Beam**	**41.76**	**308**	*i* P	**P**	**04 25 27.7**	**-0.9**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s						
D25K	**Kavik River**	**41.77**	**29**	P	**P**	**04 25 29.2**	**+0.6**
F26K	**Sheenjek River**	**42.55**	**32**	P	**P**	**04 25 35.5**	**+0.5**
C27K	**Jago River**	**42.72**	**29**	P	**P**	**04 25 36.3**	**0.0**
C27K				IAmb	IAmb	04 25 42.4	
	comp=Z,21nm,1.4s						
WMQ	**Urumqi**	**42.83**	**292**	*e*P	**P**	**04 25 39.0**	**+1.4**
WMQ				sP	pwP	04 25 44.8	-1.5
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ				LR	LR		
	comp=Z,200nm,19.9s						
E27K	**Coleen River**	**43.50**	**31**		**P**	**04 25 42.7**	**0.0**
K27K	**Chicken**	**43.62**	**37**	P	**P**	**04 25 44.8**	**+1.1**
K27K				IAmb	IAmb	04 25 59.7	
	comp=Z,14nm,1.1s						
H27K	**Steamboat Moun**	**43.65**	**34**	P	**P**	**04 25 44.6**	**+0.7**
L27K	**Beaver Creek,**	**43.85**	**38**	P	**P**	**04 25 46.3**	**+0.8**
E28M	**Babbage River**	**44.24**	**30**	P	**P**	**04 25 49.8**	**+1.2**
E28M				IAmb	IAmb	04 26 04.4	
	comp=Z,9.4nm,1.1s						
I28M	**Miner Creek**	**44.37**	**35**		**P**	**04 25 50.7**	**+0.9**
E29M	**Blow River**	**44.86**	**30**		**P**	**04 25 54.2**	**+0.7**
E29M				IAmb	IAmb	04 26 09.7	
	comp=Z,9.6nm,0.8s						
MK31	**Makanchi Array**	**45.34**	**298**	*d* *i*P	**P**	**04 25 57.6**	**0.0**
MKAR	**Makanchi Array**	**45.34**	**298**	P	**P**	**04 25 57.5**	**-0.2**
	comp=Z,4.6nm,0.6s,baz=79,slow=8.8,SNR=32						
	comp=Z,4.6nm,0.6s						
MAKZ	**Makanchi**	**45.53**	**298**	P	**P**	**04 25 59.3**	**+0.1**
MAKZ				IAmb	IAmb	04 26 00.0	
	comp=Z,8.8nm,0.8s						
MAKZ	**Makanchi**	**45.53**	**298**	P	**P**	**04 25 59.3**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
G30M	**tAoh Zraii Nji**	**45.67**	**32**		**P**	**04 26 01.0**	**+1.0**
G30M				IAmb	IAmb	04 26 15.9	
	comp=Z,4.4nm,0.7s						
F30M	**Barrier River**	**45.74**	**31**		**P**	**04 26 01.2**	**+0.7**
I30M	**Mount Dempster**	**45.88**	**35**	P	**P**	**04 26 02.7**	**+0.8**
KURK	**Kurchatov**	**46.29**	**305**		**P**	**04 26 04.1**	**-0.9**
KURK				IAmb	IAmb	04 26 05.3	
	comp=Z,6.2nm,0.7s						
KURK	**Kurchatov**	**46.29**	**305**	⇓*i*P	**P**	**04 26 04.8**	**-0.2**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KURK	**Kurchatov**	**46.29**	**305**	*e*P	**P**	**04 26 04.8**	**-0.2**
KURBB	**Kurchatov Arra**	**46.38**	**305**	P	**P**	**04 26 04.9**	**-0.8**
	comp=Z,7.3nm,0.8s,baz=73,slow=8.7,SNR=25						
KURBB				PcP	**PcP**	**04 27 40.7**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=72,slow=4.0,SNR=1.4						
	comp=Z,7.3nm,0.8s						
INK	**Inuvik**	**46.48**	**30**	P	**P**	**04 26 08.0**	**+1.7**
INK				IAmb	IAmb	04 26 14.6	
	comp=Z,8.6nm,1.4s						
INK	**Inuvik**	**46.48**	**30**	P	**P**	**04 26 08.0**	**+1.7**
INK				pmax	pmax		
	comp=Z,9.0nm,1.5s						
F31M	**Tsiigehtchic**	**46.55**	**31**		**P**	**04 26 07.0**	**+0.2**
F31M				IAmb	IAmb	04 26 24.5	
	comp=Z,12nm,1.3s						
CMAR	**Chiang Mai Arr**	**47.99**	**255**	P	**P**	**04 26 19.2**	**+0.5**
	comp=Z,0.9nm,0.4s,baz=38,slow=7.2,SNR=4.4						
	comp=Z,0.9nm,0.4s						
CMAR	**Chiang Mai Arr**	**47.99**	**255**	*i* P	**P**	**04 26 21.2**	**+2.5**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WUS	**Wushi**	**49.62**	**293**		**P**	**04 26 30.7**	**-0.5**
BVAR	**Borovoye Array**	**50.26**	**310**	P	**P**	**04 26 35.3**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=72,slow=9.5,SNR=12						
	comp=Z,2.2nm,0.6s						
BORK	**Borovoye**	**50.30**	**310**		**P**	**04 26 35.0**	**-0.9**
BORK	**Borovoye**	**50.30**	**310**	⇓*i*P	**P**	**04 26 35.8**	**-0.1**
BORK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
EVN	**Everest**	**50.95**	**274**	P	**P**	**04 26 41.5**	**-0.5**
EVN				IAmb	IAmb	04 27 04.8	
	comp=Z,9.0nm,1.1s						
BOOM	**Boomskoye usch**	**51.22**	**295**	P	**P**	**04 26 42.8**	**-0.5**
BOOM	**Boomskoye usch**	**51.22**	**295**	P	**P**	**04 26 42.8**	**-0.5**
BOOM				pmax	pmax		
	comp=Z,17nm,0.9s						
FRU1	**Bishkek**	**51.94**	**296**	P	**P**	**04 26 48.1**	**-0.4**
FRU1	**Bishkek**	**51.94**	**296**	P	**P**	**04 26 48.1**	**-0.4**
FRU1				pmax	pmax		
	comp=Z,51nm,0.5s						
AAK	**Ala-Archa**	**52.11**	**296**		**P**	**04 26 48.8**	**-1.1**
AAK	**Ala-Archa**	**52.11**	**296**	⇓*i*P	**P**	**04 26 49.2**	**-0.7**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AAK	**Ala-Archa**	**52.11**	**296**	*e*P	**P**	**04 26 49.2**	**-0.7**
KK31	**Karatay Array**	**54.47**	**299**		**P**	**04 27 06.5**	**-0.6**
KK31				IAmb	IAmb	04 27 08.8	
	comp=Z,8.6nm,0.8s						
KK31	**Karatay Array**	**54.47**	**299**	P	**P**	**04 27 06.5**	**-0.6**
KK31				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KKAR	**Karatay Array**	**54.47**	**299**	P	**P**	**04 27 06.7**	**-0.3**
KKAR	**Karatay Array**	**54.47**	**299**	P	**P**	**04 27 06.7**	**-0.3**
ARTI	**Arti**	**55.20**	**317**		**P**	**04 27 11.4**	**-0.7**
ARTI	**Arti**	**55.20**	**317**	*c* *i*P	**P**	**04 27 11.2**	**-0.9**
ARTI						04 29 13.6	
ARTI				S	**S**	**04 34 56.7**	**+1.6**
ARTI				SS	**SS**	**04 38 37.2**	**-1.4**
ARTI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
RES	**Resolute Bay**	**55.22**	**17**		**P**	**04 27 12.5**	**+0.5**
RES				IAmb	IAmb	04 27 13.8	
	comp=Z,5.3nm,0.7s						
RES	**Resolute Bay**	**55.22**	**17**	P	**P**	**04 27 12.5**	**+0.5**
RES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SPITS	**Spitsbergen Ar**	**55.34**	**349**	P	**P**	**04 27 11.6**	**-1.3**
	comp=Z,4.8nm,0.8s,baz=353,slow=10,SNR=1.2						
	comp=Z,4.8nm,0.8s						
YKA	**Yellowknife Ar**	**55.83**	**34**	P	**P**	**04 27 17.1**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=303,slow=7.7,SNR=5.2						
	comp=Z,0.8nm,0.8s						
GAR	**Garm**	**56.65**	**294**	P	**P**	**04 27 22.8**	**-0.2**
CHGR	**Chuyangaron**	**57.60**	**295**	P	**P**	**04 27 29.4**	**-0.3**
CHGR	**Chuyangaron**	**57.60**	**295**	P	**P**	**04 27 29.4**	**-0.3**
CHGR				pmax	pmax		
	comp=Z,15nm,0.7s						
AB31	**Akbulak array**	**57.82**	**309**	P	**P**	**04 27 30.8**	**-0.1**
ABKAR	**Akbulak array**	**57.82**	**309**	P	**P**	**04 27 30.7**	**-0.2**
KIRV	**Kirov**	**58.33**	**323**	⇑*i*P	**P**	**04 27 33.3**	**-0.9**
ARCES	**ARCESS Array B**	**59.88**	**340**	P	**P**	**04 27 43.7**	**-1.2**
	comp=Z,3.7nm,0.9s,baz=33,slow=5.3,SNR=7.8						
	comp=Z,3.7nm,0.9s						
KLMR	**Klimovskoe**	**61.14**	**328**	*e*P	**P**	**04 27 51.4**	**-2.2**
KLMR				pmax	pmax		
	comp=Z,11nm,1.0s						
BLKN	**Baker Lake**	**61.60**	**26**	P	**P**	**04 27 56.8**	**+0.2**
NEW	**Newport**	**62.16**	**49**	P	**P**	**04 28 02.3**	**+1.5**
	comp=Z,0.8nm,0.7s,baz=270,slow=8.1,SNR=2.0						
	comp=Z,0.8nm,0.7s						
BELG	**Belogornoye**	**62.65**	**317**	⇑*i*P	**P**	**04 28 04.4**	**+0.6**
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WRA	**Warramunga Arr**	**64.17**	**194**	P	**P**	**04 28 14.3**	**0.0**
	comp=Z,0.9nm,0.8s,baz=16,slow=6.7,SNR=5.5						
	comp=Z,0.9nm,0.8s						
FINES	**FINESS Array B**	**65.55**	**333**	P	**P**	**04 28 21.7**	**-1.1**
	comp=Z,3.3nm,0.6s,baz=53,slow=6.6,SNR=19						
	comp=Z,3.3nm,0.6s						
OBN	**Obninsk**	**66.04**	**324**	⇓*e*P	**P**	**04 28 25.8**	**-0.2**
OBN				*e*		04 28 56.6	
OBN				*e*		04 30 50.7	
OBN				*e*PPP	PPP	04 32 29.0	
OBN				pmax	pmax		
	comp=Z,12nm,0.8s						
OBN				MLR	MLR		
	comp=Z,98nm,10.0s						
OBN	**Obninsk**	**66.04**	**324**	*e*P	**P**	**04 28 25.8**	**-0.2**
VRH	**Novokhopyorsk**	**66.27**	**319**	*e*P	**P**	**04 28 24.8**	**-2.8**
VRH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LPSR	**Galich'ya Gora**	**66.67**	**321**	*e*P	**P**	**04 28 28.6**	**-1.5**
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NVAR	**Mina Array Bea**	**67.29**	**58**	P	**P**	**04 28 34.9**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=302,slow=4.9,SNR=4.4						
	comp=Z,0.3nm,0.6s						
VSR	**Storozhevoye**	**67.47**	**320**	*e*P	**P**	**04 28 33.0**	**-2.3**
VSR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
VORD	**Divnogorie**	**67.58**	**320**	*e*P	**P**	**04 28 34.7**	**-1.2**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ASAR	**Alice Springs**	**67.89**	**194**	P	**P**	**04 28 38.4**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=7.2,slow=5.5,SNR=5.5						
	comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	**69.73**	**50**	P	**P**	**04 28 50.2**	**+0.4**
	comp=Z,0.2nm,0.7s,baz=316,slow=4.6,SNR=2.0						
	comp=Z,0.2nm,0.7s						
MNK	**Minsk**	**70.03**	**328**	*i* P	**P**	**04 28 49.5**	**-1.7**
MNK				*i*		04 29 11.3	
MNK				*i*		04 31 24.4	
MNK				*i* PPP	PPP	04 33 06.2	
MNK				*i* S	**S**	**04 38 01.2**	**-0.2**
MNK				*i*		04 38 51.9	
MNK				*i* SS	**SS**	**04 42 36.1**	**+6.3**
MNK				pmax	pmax		
	comp=N,14nm,0.8s						
MNK				pmax	pmax		
	comp=Z,20nm,0.9s						
MNK				pmax	pmax		
	comp=E,24nm,0.9s						
MNK				MLR	MLR		
	comp=Z,52nm,8.0s						
NB2	**NORSAR Subarra**	**70.24**	**339**	P	**P**	**04 28 51.7**	**-0.7**
	comp=Z,3.2nm,0.9s,baz=31,slow=6.2						
NOA	**NORSAR Array B**	**70.24**	**339**	P	**P**	**04 28 51.8**	**-0.6**
	comp=Z,3.9nm,0.8s,baz=34,slow=6.2,SNR=10						
	comp=Z,3.9nm,0.8s						
HFS	**Hagfors**	**70.34**	**338**	P	**P**	**04 28 52.1**	**-0.8**
	comp=Z,3.2nm,0.5s,baz=34,slow=5.3,SNR=23						
	comp=Z,3.2nm,0.5s						
KVAR	**Kislovodsk Arr**	**70.52**	**312**	LR	LR	05 01 46.5	
	comp=Z,106nm,18.2s,baz=106,slow=38						
KIV	**Kislovodsk**	**70.52**	**312**		**P**	**04 28 54.0**	**-0.4**
KIV	**Kislovodsk**	**70.52**	**312**	⇑P	**P**	**04 28 55.6**	**+1.1**
KIV	**Kislovodsk**	**70.52**	**312**	*e*P	**P**	**04 28 55.3**	**+0.8**
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
KIV				MLR	MLR		
	comp=Z,98nm,18.0s						
KIV	**Kislovodsk**	**70.52**	**312**	*e*P	**P**	**04 28 56.2**	**+1.7**
KIV	**Kislovodsk**	**70.52**	**312**	P	**P**	**04 28 54.1**	**-0.4**
	comp=Z,14nm,0.7s						
KBZ	**Khabaz**	**70.56**	**312**	P	**P**	**04 28 54.7**	**+0.1**
	comp=Z,7.5nm,0.8s,baz=61,slow=5.3,SNR=15						
	comp=Z,7.5nm,0.8s						
KBZ	**Khabaz**	**70.56**	**312**	⇓*i*P	**P**	**04 28 55.3**	**+0.8**
KBZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KBZ	**Khabaz**	**70.56**	**312**	*e*P	**P**	**04 28 55.3**	**+0.8**
AK03	**Malin Array Si**	**72.29**	**324**	P	**P**	**04 29 04.0**	**-0.9**
AKASG	**Malin Array Be**	**72.31**	**324**	P	**P**	**04 29 04.4**	**-0.6**
	comp=Z,1.4nm,0.3s,baz=39,slow=6.0,SNR=16						
	comp=Z,1.4nm,0.3s						
AKASG	**Malin Array Be**	**72.31**	**324**	*ce*P	**P**	**04 29 04.5**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKBB	**Malin Array Si**	**72.31**	**324**		**P**	**04 29 04.6**	**-0.3**
AKBB	**Malin Array Si**	**72.31**	**324**	⇑*i*P	**P**	**04 29 04.9**	**-0.1**
AKBB				pmax	pmax		
	comp=Z,13nm,1.0s						
AKBB	**Malin Array Si**	**72.31**	**324**	P	**P**	**04 29 04.1**	**-0.9**
AK04	**Malin Array Si**	**72.31**	**324**	P	**P**	**04 29 04.1**	**-0.9**
AK01	**Malin Array Si**	**72.32**	**324**	P	**P**	**04 29 04.1**	**-0.9**
KIEV	**Kiev**	**72.32**	**324**		**P**	**04 29 04.2**	**-0.9**
KIEV	**Kiev**	**72.32**	**324**	⇓P	**P**	**04 29 04.3**	**-0.7**
KIEV	**Kiev**	**72.32**	**324**	⇓P	**P**	**04 29 04.3**	**-0.7**
KIEV	**Kiev**	**72.32**	**324**	P	**P**	**04 29 04.1**	**-0.9**
AK22	**Malin Array Si**	**72.33**	**324**	P	**P**	**04 29 04.8**	**-0.3**
AK21	**Malin Array Si**	**72.33**	**324**	P	**P**	**04 29 04.7**	**-0.4**
AK08	**Malin Array Si**	**72.34**	**324**	P	**P**	**04 29 04.5**	**-0.7**
AK09	**Malin Array Si**	**72.34**	**324**	P	**P**	**04 29 04.5**	**-0.7**
AK02	**Malin Array Si**	**72.34**	**324**	P	**P**	**04 29 04.5**	**-0.7**
AK11	**Malin Array Si**	**72.35**	**324**	P	**P**	**04 29 04.5**	**-0.7**
AK18	**Malin Array Si**	**72.36**	**324**	P	**P**	**04 29 04.6**	**-0.7**
SOC	**Sochi**	**72.36**	**314**	*e*P	**P**	**04 29 04.7**	**-0.7**
SOC				*e*S	**S**	**04 38 30.9**	**+2.2**
SOC				*e*SS	**SS**	**04 43 11.7**	**+5.7**
SOC				pmax	pmax		
	comp=Z,24nm,1.1s						
SOC				MLR	MLR		
	comp=Z,241nm,18.0s						
AK20	**Malin Array Si**	**72.36**	**324**	P	**P**	**04 29 04.6**	**-0.7**
AK10	**Malin Array Si**	**72.37**	**324**	P	**P**	**04 29 04.6**	**-0.8**
RNPP8	**Varash**	**73.23**	**326**	P	**P**	**04 29 10.2**	**-0.2**
LUBAR	**Lubar, Ukraine**	**73.51**	**324**	P	**P**	**04 29 11.3**	**-0.9**
SORM	**Soroca**	**74.60**	**323**	⇓P	**P**	**04 29 18.0**	**-0.5**
SORM	**Soroca**	**74.60**	**323**	⇓P	**P**	**04 29 18.0**	**-0.5**
BUR08	**Bucovina Ar. S**	**76.35**	**324**		**P**	**04 29 27.8**	**-0.9**
BUR08				IAmb	IAmb	04 29 32.0	
	comp=Z,5.7nm,0.8s						
BURAR	**Bucovina Array**	**76.36**	**324**	⇑P	**P**	**04 29 28.6**	**-0.2**
BURAR	**Bucovina Array**	**76.36**	**324**	⇑P	**P**	**04 29 28.6**	**-0.2**
STHS	**Stebnicka Huta**	**76.57**	**327**	*e*P	**P**	**04 29 32.7**	**+2.8**
STHS				*e*		04 29 44.2	
STHS	**Stebnicka Huta**	**76.57**	**327**	*e*P	**P**	**04 29 32.7**	**+2.8**
STHS				*e*		04 29 44.2	
TESR	**Tescani**	**76.59**	**323**	⇓P	**P**	**04 29 29.1**	**-0.9**
CFR	**Carcaliu**	**76.94**	**321**	⇑P	**P**	**04 29 32.0**	**0.0**
CFR	**Carcaliu**	**76.94**	**321**	⇑P	**P**	**04 29 32.0**	**0.0**
TPGR	**Topolog**	**77.05**	**321**	⇑P	**P**	**04 29 32.9**	**+0.2**
COVR	**Voineasa-Covas**	**77.30**	**322**	⇓P	**P**	**04 29 33.1**	**-1.0**
DPC	**Dobruska-Polom**	**77.66**	**331**	*e*P	**P**	**04 29 38.6**	**+2.6**
DPC	**Dobruska-Polom**	**77.66**	**331**	*e*P	**P**	**04 29 38.6**	**+2.6**
SCHQ	**Schefferville**	**77.84**	**20**	P	**P**	**04 29 36.7**	**-0.2**
	comp=Z,3.9nm,0.8s,baz=352,slow=14,SNR=1.7						
	comp=Z,3.9nm,0.8s						
MAUC	**Maruska**	**77.92**	**329**	*e*P	**P**	**04 29 40.1**	**+2.6**
CLL	**Collm**	**78.00**	**333**		**P**	**04 29 37.7**	**-0.1**
CLL				IAmb	IAmb	04 29 39.7	
	comp=Z,6.4nm,0.7s						
CLL	**Collm**	**78.00**	**333**	*i* P	**P**	**04 29 37.4**	**-0.4**
CLL				*i*		04 29 49.8	
CLL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CLL	**Collm**	**78.00**	**333**	*i* P	**P**	**04 29 37.4**	**-0.4**
	comp=Z,9.0nm,1.0s						
CLL				*e*PcP	**PcP**	**04 29 48.0**	**+0.5**
VOIR		**78.13**	**323**	⇑P	**P**	**04 29 38.6**	**-0.1**
VOIR		**78.13**	**323**	⇑P	**P**	**04 29 38.6**	**-0.1**
BRTR	**Keskin Array B**	**78.30**	**314**	P	**P**	**04 29 40.0**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=97,slow=4.3,SNR=5.1						
	comp=Z,0.9nm,0.8s						
BRTR	**Keskin Array B**	**78.30**	**314**	*ce*P	**P**	**04 29 40.2**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARR	**Arges**	**78.36**	**323**	⇓P	**P**	**04 29 40.5**	**+0.5**
EKA	**Eskdalemuir Ar**	**78.73**	**344**	P	**P**	**04 29 41.6**	**-0.2**
	comp=Z,1.5nm,0.6s,baz=20,slow=5.7,SNR=3.7						
	comp=Z,1.5nm,0.6s						
MODS	**Modra-Piesok**	**78.94**	**329**	*e*P	**P**	**04 29 45.2**	**+2.1**
MODS				*e*		04 29 57.2	
MODS	**Modra-Piesok**	**78.94**	**329**	*e*P	**P**	**04 29 45.2**	**+2.1**
MODS				*e*		04 29 57.2	
KHC	**Kasperske Hory**	**79.65**	**332**	P	**P**	**04 29 47.0**	**0.0**
KHC				IAmb	IAmb	04 30 01.0	
	comp=Z,5.2nm,0.8s						
KHC	**Kasperske Hory**	**79.65**	**332**	⇑*i*P	**P**	**04 29 47.8**	**+0.8**
KHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KHC	**Kasperske Hory**	**79.65**	**332**	*e*P	**P**	**04 29 47.1**	**+0.1**
GERES	**GERESS Array B**	**79.85**	**331**	P	**P**	**04 29 47.5**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=22,slow=7.4,SNR=5.0						
	comp=Z,0.7nm,0.6s						
KBA	**Koelnbreinsper**	**81.48**	**331**	*e*pP	**P**	**04 29 57.5**	**+0.5**
	comp=Z,1.8nm,0.6s						
WATA	**Walderalm**	**81.88**	**332**	*e*pP	**P**	**04 30 01.5**	**+2.5**
	comp=Z,3.3nm,0.5s						
WTTA	**Wattenberg**	**81.92**	**332**	*i* pP	**P**	**04 30 01.7**	**+2.3**
	comp=Z,1.7nm,0.5s						
MOTA	**Moosalm**	**82.03**	**332**	*e*pP	**P**	**04 30 02.6**	**+2.7**
	comp=Z,1.5nm,0.5s						
MMAI	**Mount Meron Ar**	**82.25**	**308**	P	**P**	**04 30 01.6**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=48,slow=6.4,SNR=1.6						
MMAI				LR	LR	05 10 38.1	
	comp=Z,62nm,18.1s,baz=357,slow=39						
	comp=Z,0.6nm,0.4s						
TXAR	**Lajitas Array**	**82.38**	**57**	P	**P**	**04 30 03.0**	**+1.0**
	comp=Z,0.5nm,0.8s,baz=305,slow=4.5,SNR=6.1						
	comp=Z,0.5nm,0.8s						
TXAR	**Lajitas Array**	**82.38**	**57**	P	**P**	**04 30 03.0**	**+1.0**
DAVA	**Damuels**	**82.50**	**333**	*e*PcP	**P**	**04 30 05.7**	**+3.3**
	comp=Z,1.8nm,0.5s						
PPT	**Papeete**	**83.26**	**122**	LR	LR	04 57 37.4	
	comp=Z,26nm,21.0s,baz=67,slow=29						
H03N2	**Juan Fernandez**	**142.34**	**91**	T	T	07 16 30.5	
	baz=304,slow=77,SNR=5.2						
H03N3	**Juan Fernandez**	**142.36**	**91**	T	T	07 16 31.6	
	baz=304,slow=77,SNR=5.5						
H03N1	**Juan Fernandez**	**142.36**	**91**	T	T	07 16 32.2	
	baz=304,slow=77,SNR=7.1						
BDFB	**Brasilia**	**149.23**	**31**	PKPbc	**PKPbc**	**04 37 28.0**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=26,slow=6.1,SNR=1.9						

SNET ***05*** *04:56:12.3±0.5, 12°.69N×88°.25W, h66^{km}, ML3.8*

CATAC ***05*** *04:56:12.2±0.3, 13°N±2°×8°8W±°, h36^{km}±4^{km}, M4.0/38, MLv4.0/38, Error ellipse: s-maj=4.7km s-min=1.4km az=27.8, confirmed*

ISC 05 04:56:12.3±1.3**, 12°.65N**±0°.07×**88°.27W**±0°.04**, h62**^{km}±17^{km}**, n81, σ0^{s}.40**/94**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCND	**La Caada**	**0.75**	**29**	*e*P	**Pn**	**04 56 26.9**	**-0.4**
LCND	**La Caada**	**0.75**	**29**	S	**Sn**	**04 56 38.9**	**+0.6**
LCND	**La Caada**	**0.75**	**29**	P	**Pn**	**04 56 27.0**	**-0.4**
CNCH	**Conchagua**	**0.75**	**34**	S	**Sn**	**04 56 38.9**	**+0.4**
CNCH	**Conchagua**	**0.75**	**34**	P	**Pn**	**04 56 27.3**	**-0.1**

CSGN	Cosiguina Volc	0.76	65	P	Pn	04 56 26.9	-0.6
CSGN				S	Sn	04 56 38.8	+0.1
BLLM	Bellamira	0.79	2	eP	Pn	04 56 27.5	-0.3
PACA	Pacayal	0.81	356	P	Pn	04 56 28.1	-0.2
PACA	Pacayal	0.81	356	S	Sn	04 56 40.1	+0.2
POTN	Potosi Cosigui	0.82	65	P	Pn	04 56 27.7	-0.5
POTN				S	Sn	04 56 39.8	0.0
CNRM	Centro Naciona	0.82	6	eP	Pn	04 56 28.1	-0.2
CNRM				eS	Sn	04 56 40.4	+0.4
CNRM	Centro Naciona	0.82	6	P	Pn	04 56 27.9	-0.3
TECO	Alcaldia de Te	1.01	330	P	Pn	04 56 30.1	-0.5
TECO	Alcaldia de Te	1.01	330	S	Sn	04 56 44.3	0.0
UESV	Universidad de	1.10	333	P	Pn	04 56 31.7	-0.1
UESV	Universidad de	1.10	333	S	Sn	04 56 46.6	+0.2
SCLA	Alcaldia de Sa	1.14	337	P	Pn	04 56 32.2	-0.1
SCLA	Alcaldia de Sa	1.14	337	S	Sn	04 56 47.7	+0.5
CRIN	San Cristobal	1.19	88	P	Pn	04 56 33.0	+0.1
CRIN	San Cristobal	1.19	88	S	Sn	04 56 49.1	+0.8
PAVA	Las Pavas	1.24	328	P	Pn	04 56 33.7	-0.1
PAVA	Las Pavas	1.24	328	S	Sn	04 56 50.7	+1.0
PKGN	Cerro Pekin	1.26	89	P	Pn	04 56 33.7	-0.2
PKGN				S	Sn	04 56 50.4	+0.4
PANCS	Alcalda de	1.30	317	P	Pn	04 56 33.8	-0.8
PANCS	Alcalda de	1.30	317	S	Sn	04 56 50.9	-0.2
LBRS	Las Brisas	1.32	325	eP	Pn	04 56 34.9	+0.2
LOMA	Loma Larga	1.32	318	P	Pn	04 56 33.4	-1.5
LOMA	Loma Larga	1.32	318	S	Sn	04 56 51.3	-0.4
UDBS	Universidad Do	1.37	321	S	Sn	04 56 53.0	+0.3
UDBS	Universidad Do	1.37	321	P	Pn	04 56 35.4	0.0
IGN	Direccin Gen	1.38	320	S	Sn	04 56 53.2	+0.4
IGN	Direccin Gen	1.38	320	P	Pn	04 56 35.1	-0.4
ALEN	Leon	1.38	98	P	Pn	04 56 35.1	-0.3
QUEN	Al S del Volca	1.38	92	P	Pn	04 56 35.5	0.0
QUEN				S	Sn	04 56 53.7	+0.8
UTEC	Universidad Te	1.39	319	P	Pn	04 56 35.3	-0.3
UTEC	Universidad Te	1.39	319	S	Sn	04 56 53.1	+0.1
TEL3	Telica 3	1.39	93	P	Pn	04 56 35.6	0.0
POLN	Al Sur del Vol	1.42	90	P	Pn	04 56 35.6	-0.4
POLN				S	Sn	04 56 54.0	+0.2
UEES	Universidad Ev	1.42	318	P	Pn	04 56 36.3	+0.1
UEES	Universidad Ev	1.42	318	S	Sn	04 56 54.1	+0.1
BOQS	Boqueron	1.46	318	eP	Pn	04 56 36.9	+0.1
PMON	Piamonte	1.47	316	P	Pn	04 56 36.8	0.0
PMON	Piamonte	1.47	316	S	Sn	04 56 55.3	+0.2
JAYA	Jayaque - finc	1.52	311	eP	Pn	04 56 37.4	-0.1
JAYA	Jayaque - finc	1.52	311	P	Pn	04 56 37.2	-0.4
JAYA	Jayaque - finc	1.52	311	S	Sn	04 56 56.6	0.0
CNGA	Al SSO del Vol	1.54	96	P	Pn	04 56 37.3	-0.3
CNGA				S	Sn	04 56 56.8	+0.2
CNGN	Cerro Negro	1.54	95	S	Sn	04 56 56.9	+0.2
CNGN	Cerro Negro	1.54	95	P	Pn	04 56 37.0	-0.6
CEDA	San Andres	1.59	316	P	Pn	04 56 38.3	0.0
CEDA	San Andres	1.59	316	S	Sn	04 56 58.0	+0.2
LLGN	La Laguna	1.64	336	P	Pn	04 56 38.8	-0.3
LLGN	La Laguna	1.64	336	S	Sn	04 56 58.8	-0.5
TGUH	Tegucigalpa,Un	1.70	35	P	Pn	04 56 39.8	-0.1
TGUH				S	Sn	04 57 01.2	+0.5
COPN	Copaltepe	1.70	106	P	Pn	04 56 39.5	-0.3
MOMN	Momotombo	1.70	98	P	Pn	04 56 39.5	-0.4
MOM3	MOM3	1.71	94	P	Pn	04 56 39.6	-0.4
MOM3				S	Sn	04 57 01.1	+0.3
MOM2	El Cardon	1.75	97	P	Pn	04 56 40.4	0.0
MOM2				S	Sn	04 57 02.2	+0.4
CEVE	Cerro Verde	1.77	312	eP	Pn	04 56 41.3	+0.4
CEVE	Cerro Verde	1.77	312	P	Pn	04 56 41.3	+0.4
CEVE	Cerro Verde	1.77	312	S	Sn	04 57 03.1	+0.6
UNIC	Universidad Ca	1.82	317	P	Pn	04 56 41.3	-0.2
UNIC	Universidad Ca	1.82	317	S	Sn	04 57 04.0	+0.5
AMTN	Mateare	1.84	103	S	Sn	04 57 04.3	+0.4
AMTN	Mateare	1.84	103	P	Pn	04 56 41.1	-0.5
LIMN	Finca el Limon	1.90	77	P	Pn	04 56 41.9	-0.6
LIMN				S	Sn	04 57 05.7	+0.3
YUSH	Yuscaran	1.90	47	P	Pn	04 56 42.2	-0.3
YUSH	Yuscaran	1.90	47	S	Sn	04 57 05.4	0.0
APYN	Apoyeque	1.92	102	P	Pn	04 56 42.7	0.0
NUBE	Las Nubes	1.93	310	P	Pn	04 56 43.1	+0.1
NUBE	Las Nubes	1.93	310	S	Sn	04 57 06.7	+0.4
APQ2	Apoyeque	1.95	103	P	Pn	04 56 43.0	-0.2
APQ2				S	Sn	04 57 06.5	-0.1
ABCN	Banco Central	1.98	105	P	Pn	04 56 43.4	-0.2
ABCN	Banco Central	1.98	105	S	Sn	04 57 07.7	+0.3
OCON	Estacion meteo	2.00	61	P	Pn	04 56 43.3	-0.6
ALLN	Telcor Managua	2.01	104	S	Sn	04 57 08.1	+0.1
ALLN	Telcor Managua	2.01	104	P	Pn	04 56 43.5	-0.4
UNAN	Cigeo UNAN	2.02	105	P	Pn	04 56 44.5	+0.4
UNAN				S	Sn	04 57 08.2	-0.2
MTO3	Montecristo	2.04	329	P	Pn	04 56 44.5	-0.1
FAME	Alcaldia de Sa	2.07	305	S	Sn	04 57 09.1	-0.6
FAME	Alcaldia de Sa	2.07	305	P	Pn	04 56 44.8	-0.1

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*MOS **05** 04:58:55.5±0.9, 43°.06N×145°.05E, h71^{km}, mb4.3/12, Error ellipse: s-maj=9.8km s-min=6.7km az=83.6*

MOS Felt (III) at Yuzhno-Kuril'sk, (II-III) at Goryachiy Plyazh, (II) at Golovnino.

*NIED **05** 04:58:56.8, 43°.07N×145°.00E, h61^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.17; $M_{\theta\theta}$-0.59; $M_{\phi\phi}$-0.58; $M_{r\theta}$0.59; $M_{\theta\phi}$-0.29; $M_{\phi r}$0.45; Fault plane solution: $M_0$1.26000×10^{15} NP1: ϕ_s224.00000°, δ27.00000°, λ85.00000°. NP2: ϕ_s50.00000°, δ63.00000°, λ93.00000°.*

*JMA **05** 04:58:56.8±0.1, 43°.1N±0°.5×145°.0E±0°.6, h61^{km}±1^{km}, MD4.1/39, MV4.4/39, KUSHIRO REGION*

JMA Felt II J1 at KUSHIRO REGION .

*SKHL **05** 04:58:57.1±0.1, 43°.10N×145°.00E, h74^{km}±5^{km}, mb5.5/4*

*NEIC **05** 04:58:57.9±1.4, 43°.14N±0°.07×144°.9E±0°.1, h71^{km}±7^{km}, mb4.2/20, Error ellipse: s-maj=14.7km s-min=9.6km az=104.0*

*IDC **05** 04:58:58.9±1.9, 43°.11N×144°.94E, h82^{km}±15^{km}, mb3.7/19, mbtmp4.0/23, Error ellipse: s-maj=14.9km s-min=13.6km az=98.0*

ISC 05 04:58:56.5±0.6, **43°.07N**±0°.05×**144°.99E**±0°.03, **h62**^{km}±5^{km}, **n137**, $\sigma 1\overset{s}{.}02$/151, **mb4.1**/35, **2C-9D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKK	Akkeshi	0.12	242	eP	Pn	04 59 06.0	+0.2
JKHN	Kushirohamanak	0.13	86	P	Pn	04 59 06.2	+0.4
JKHN				S	Sn	04 59 12.6	0.0
JKHN	Kushirohamanak	0.13	86	A	A	04 59 06.2	
	comp=N,7.0nm,0.2s,comp=E,11nm,1.3s						
JAK	Akkeshi	0.23	250	P	Pn	04 59 06.6	+0.2
JAK				S	Sn	04 59 13.7	+0.3
JAK	Akkeshi	0.23	250	A	A	04 59 06.6	
	comp=N,22nm,0.2s,comp=E,43nm,0.7s						
JNK	Nakash	0.55	339	⇓ iP	Pn	04 59 08.9	-0.3
JNK				⇓S	Sn	04 59 17.6	-0.8
JNK	Nakash	0.55	339	A	A	04 59 08.9	
	comp=N,17nm,0.3s,comp=E,32nm,0.5s						
NMR	Nemuro--Hokkai	0.62	61	ePN	Pn	04 59 09.7	-0.2
NMR				i S	Sn	04 59 18.8	-0.8
NMR	Nemuro--Hokkai	0.62	61	eP	Pn	04 59 09.7	-0.2
NMR				i S	Sn	04 59 18.9	-0.7
NEM2	Nemuro 2	0.62	62	P	Pn	04 59 09.7	-0.2
NEM2				S	Sn	04 59 18.9	-0.9
JNSB	Nemuroshibetsu	0.70	1	A	A	04 59 11.2	
	comp=N,15nm,0.2s,comp=E,17nm,0.7s						
GLVR	Golovnino	0.77	30	⇑ iPN	Pn	04 59 12.0	+0.3
GLVR				i S	Sn	04 59 23.3	+0.5
GLVR				pmax	pmax		
	comp=Z,9µm,0.1s						
GLVR				smax	smax		
	comp=N,29µm,0.2s						
GLVR				smax	smax		
	comp=E,12µm,0.2s						
GLVR	Golovnino	0.77	30	i P	Pn	04 59 12.0	+0.3
GLVR				AMB	AMB	04 59 12.3	
	comp=E,9µm,0.5s						
GLVR				i S	Sn	04 59 23.3	+0.5
GLVR				A	A	04 59 24.1	
	comp=E,29µm,0.5s						
GLVR				A	A	04 59 24.1	
	comp=E,12µm,0.5s						
JOB	Onbets	0.86	259	⇓ iP	Pn	04 59 13.3	+0.5
JOB				⇓S	Sn	04 59 25.4	+0.4
JRA	Rausu	0.87	6	i P	Pn	04 59 13.2	+0.2
JRA				i S	Sn	04 59 25.1	0.0
JRA	Rausu	0.87	6	A	A	04 59 13.2	
	comp=N,14nm,0.2s,comp=E,32nm,0.3s						
JAR	Ashorobuto	0.92	284	⇓ iP	Pn	04 59 14.0	+0.4
JAR				⇓S	Sn	04 59 26.3	+0.1
JAR	Ashorobuto	0.92	284	A	A	04 59 14.0	
	comp=N,44nm,0.4s,comp=E,31nm,0.3s						
RUSJ	Misakicho	1.05	10	ePN	Pn	04 59 15.9	+0.7
RUSJ				i S	Sn	04 59 30.4	+1.3
YUK	Yuzh-Kuril'sk	1.15	33	c iPN	Pn	04 59 16.9	+0.3
YUK				i S	Sn	04 59 31.2	-0.3
YUK	Yuzh-Kuril'sk	1.15	33	i P	Pn	04 59 16.9	+0.3
YUK				AMB	AMB	04 59 17.2	
	comp=E,10µm,0.5s						
YUK				i S	Sn	04 59 31.7	+0.2
YUK				A	A	04 59 32.2	
	comp=E,16µm,0.6s						
YUK				A	A	04 59 32.2	
	comp=E,22µm,0.6s						
JTKR	Abashiri--Toko	1.19	319	⇓ iP	Pn	04 59 17.9	+0.8
JCH	Churui	1.28	250	P	Pn	04 59 18.7	+0.4
JCH				S	Sn	04 59 34.4	-0.2
JMP	Maruseppu	1.51	309	⇓P	Pn	04 59 22.1	+0.7
SHO	Shikotan	1.56	59	eP	Pn	04 59 29.6	+7.6
SHO				AMB	AMB	04 59 31.2	
	comp=E,490nm,0.3s						
SHO				eS	Sn	04 59 47.0	+5.8
SHO				A	A	04 59 49.2	
	comp=E,6µm,0.4s						
SHO				A	A	04 59 49.2	
	comp=E,3µm,0.4s						
ERM	Erimo	1.72	233		Pn	04 59 26.1	+1.9
ERM	Erimo	1.72	233	PN	Pn	04 59 26.1	+1.9
JNBK	Urakawa-nobuka	1.83	245	A	A	04 59 26.7	
	comp=N,4.0nm,0.7s,comp=E,4.0nm,0.5s						
JKA	Kamikawa-asahi	2.02	302		Pn	04 59 29.9	+1.6
ASAJ	Asahikawa	2.03	302	P	Pn	04 59 29.9	+1.5
	comp=E,214nm,0.3s,baz=144,slow=8.9,SNR=202						
ASAJ				S	Sn	04 59 55.3	+2.7
	comp=E,353nm,0.6s,baz=54,slow=25,SNR=7.4						
KUR	Kuril'sk	2.99	43	ePN	Pn	04 59 43.3	+1.8
KUR				i S	Sn	05 00 17.3	+1.2
KUR				pmax	pmax		
	comp=Z,236nm,0.6s						
KUR				smax	smax		
	comp=N,496nm,0.4s						
KUR				smax	smax		
	comp=E,610nm,0.4s						
KUR	Kuril'sk	2.99	43	eS	Sn	05 00 16.6	+0.5
KUR				eP	Pn	04 59 42.6	+1.1
KUR				AMB	AMB	04 59 43.7	
	comp=E,350nm,0.5s						
KUR				A	A	05 00 24.3	
	comp=E,600nm,0.4s						
KUR				A	A	05 00 24.3	
	comp=E,850nm,0.4s						
JTM	Tenmabayashi	3.71	233		Pn	04 59 51.8	+0.5
YSS	Yuzhno-Sakhali	4.19	339	Pn	Pn	04 59 57.9	0.0
YSS	Yuzhno-Sakhali	4.19	339	ePN	Pn	04 59 58.9	+1.1
YSS	Yuzhno-Sakhali	4.19	339	eS	Sn	05 00 46.1	+0.6
YSS				eP	Pn	04 59 59.4	+1.6
TYV	Tymovskoe	7.95	349	eP	Pn	05 00 51.5	+2.2
MJA0	Matsu Arr-Jizo	8.33	221	ePN	Pn	05 00 54.3	-0.3
MJB9	Matsu-Tunnel	8.35	221	Pn	Pn	05 00 55.5	+0.7
MAJO	Matsushiro	8.35	221	Pn	Pn	05 00 55.2	+0.3
MAJO	Matsushiro	8.35	221	i PN	Pn	05 00 54.9	0.0
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MJAR	Matsushiro Arr	8.35	221	P	Pn	05 00 55.3	+0.4
	comp=Z,6.3nm,0.7s,baz=30,slow=13,SNR=13						
MJAR	Matsushiro Arr	8.35	221		Pn	05 00 54.9	0.0
USRK	Ussuriysk Ar.	9.49	281	P	Pn	05 01 13.3	+2.9
	comp=Z,1.9nm,0.6s,baz=92,slow=16,SNR=6.0						
JGF	Kuroka	9.52	221	Pn	Pn	05 01 10.9	0.0
KSRS	Korea Array	14.18	252	P	Pn	05 02 16.2	+2.1
	comp=Z,1.3nm,0.8s,baz=57,slow=15,SNR=1.5						
HILR	Hailar Array B	18.55	299	P	P	05 03 08.3	+0.3
	comp=Z,0.9nm,0.3s,baz=95,slow=11,SNR=2.5						
SEY	Seymchan	20.36	10	i P	P	05 03 27.2	-0.4
SEY				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SEY	Seymchan	20.36	10	eP	P	05 03 27.2	-0.4
YAK	Yakutsk	21.04	340	i P	P	05 03 34.5	-0.4
YAK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BTO	Baotou	26.06	277	eP	P	05 04 23.6	-0.5
BTO				S	S	05 08 48.2	-2.6
BTO				pmax	pmax		
	comp=Z,17nm,0.6s						
BTO				pmax	pmax		
	comp=Z,710nm,5.9s						
BTO				LR	LR		
	comp=N,1µm,4.7s						
BTO				LR	LR		
	comp=E,1µm,6.3s						
BTO				LR	LR		
	comp=Z,640nm,6.2s						
SONM	Songino Array	27.29	294	P	P	05 04 35.6	+0.5
	comp=Z,3.4nm,0.9s,baz=99,slow=7.3,SNR=6.6						
	comp=Z,3.4nm,0.9s						
SONM	Songino Array	27.29	294	P	P	05 04 34.9	-0.2
SONM	Songino Array	27.29	294	eP	P	05 04 35.7	+0.6
SONM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
H11N2	WAKE ISLAND Hy	29.68	135	T	T	05 36 03.9	
	baz=328,slow=75,SNR=822						
H11N1	WAKE ISLAND Hy	29.69	135	T	T	05 36 00.4	
	baz=328,slow=75,SNR=765						
H11N3	WAKE ISLAND Hy	29.70	135	T	T	05 36 00.8	
	baz=328,slow=75,SNR=808						
TIXI	Tiksi	29.72	350	i P	P	05 04 55.6	-0.7
TIXI				pmax	pmax		
	comp=Z,48nm,4.3s						
H11S1	WAKE ISLAND Hy	30.60	136	T	T	05 37 12.3	
	baz=329,slow=76,SNR=1437						
H11S3	WAKE ISLAND Hy	30.61	136	T	T	05 37 10.0	
	baz=329,slow=76,SNR=980						
H11S2	WAKE ISLAND Hy	30.62	136	T	T	05 37 08.5	
	baz=329,slow=76,SNR=985						
KNGR	Kungurtug, Tuv	32.85	300	i P	P	05 05 23.6	-0.7
KNGR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
M16K	Timber Creek	37.48	42	P	P	05 06 04.6	+1.0
C18K	Utukok River	37.66	29	P	P	05 06 04.4	-0.9
G18K	Tagagawik	38.08	34	P	P	05 06 08.9	+0.1
G18K				IAmb	IAmb	05 06 17.0	
	comp=Z,4.0nm,1.2s						
M17K	Holitna River	38.22	41	P	P	05 06 10.9	+1.0
NRIK	Noril'sk	39.09	332	i P	P	05 06 17.4	+0.3
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
D20K	Etivluk River	39.31	29	P	P	05 06 18.3	-0.7
D20K				IAmb	IAmb	05 06 19.2	
	comp=Z,2.4nm,0.9s						
DGZ	Jazzator, Alta	39.40	300	i P	P	05 06 19.7	-0.4
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.2s						
IMAR	Indian Mountai	40.09	34	P	P	05 06 25.1	-0.3
ZALV	Zalesovo Beam	40.15	307	P	P	05 06 25.8	-0.3
	comp=Z,0.6nm,0.3s,baz=148,slow=16,SNR=1.9						
ZALV				PcP	PcP	05 08 27.8	-1.4
	comp=Z,0.9nm,0.4s,baz=79,slow=4.1,SNR=2.2						
	comp=Z,0.6nm,0.3s						
ZALV	Zalesovo Beam	40.15	307	P	P	05 06 26.0	-0.1
ZALV					PcP	05 08 28.8	-0.5
ZALV	Zalesovo Beam	40.15	307	P	P	05 06 26.0	-0.1
ZALV						05 08 28.8	
E22K	Anaktuvuk Pass	41.00	31	P	P	05 06 33.0	0.0
E22K				IAmb	IAmb	05 06 34.7	
	comp=Z,7.0nm,1.3s						
D24K	Happy Valley	42.16	29	P	P	05 06 42.4	0.0
D24K				IAmb	IAmb	05 06 43.0	
	comp=Z,3.7nm,0.9s						
ILAR	Eielson Array	42.96	36	P	P	05 06 49.3	+0.3
	comp=Z,0.6nm,0.5s,baz=261,slow=5.8,SNR=13						
	comp=Z,0.6nm,0.5s						
ILAR	Eielson Array	42.96	36	P	P	05 06 49.5	+0.5
ILAR	Eielson Array	42.96	36	eP	P	05 06 49.0	0.0
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
D25K	Kavik River	43.03	29	P	P	05 06 49.3	-0.3
D25K				IAmb	IAmb	05 06 52.2	
	comp=Z,5.0nm,1.4s						
MKAR	Makanchi Array	43.50	298	P	P	05 06 53.8	+0.1
	comp=Z,1.9nm,0.5s,baz=76,slow=10,SNR=7.0						
MKAR				PcP	PcP	05 08 40.0	-0.6
	comp=Z,0.5nm,0.6s,baz=49,slow=3.1,SNR=1.6						
	comp=Z,1.9nm,0.5s						
MKAR	Makanchi Array	43.50	298	P	P	05 06 53.7	+0.1
MKAR					PcP	05 08 39.6	-0.9
MKAR	Makanchi Array	43.50	298	i P	P	05 06 54.0	+0.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	43.50	298	eP	P	05 06 54.0	+0.4
F26K	Sheenjek River	43.89	31	P	P	05 06 57.4	+0.9
KURK	Kurchatov	44.60	304	P	P	05 07 01.8	-0.5
KURK					PcP	05 08 44.2	0.0
KURK	Kurchatov	44.60	304	P	P	05 07 02.9	+0.6
KURK						05 08 44.1	
KURK	Kurchatov	44.60	304	eP	P	05 07 02.9	+0.6
KURBB	Kurchatov Arra	44.68	304	P	P	05 07 02.9	0.0
	comp=Z,1.2nm,0.6s,baz=96,slow=8.2,SNR=6.2						
KURBB				PcP	PcP	05 08 44.1	-0.4
	comp=Z,0.6nm,0.7s,baz=79,slow=2.8,SNR=2.2						
	comp=Z,1.2nm,0.6s						
H27K	Steamboat Moun	45.05	33	P	P	05 07 07.3	+1.6
H27K				IAmb	IAmb	05 07 09.8	
	comp=Z,3.5nm,1.3s						
BCAR	Beaver Creek A	45.40	38	P	P	05 07 09.6	+1.0
CMAR	Chiang Mai Arr	45.82	252	P	P	05 07 13.2	+0.9
	comp=Z,1.9nm,0.3s,baz=52,slow=8.2,SNR=5.8						
	comp=Z,1.9nm,0.3s						
CMAR	Chiang Mai Arr	45.82	252	P	P	05 07 12.3	0.0
I30M	Mount Dempster	47.31	34	P	P	05 07 24.2	+0.5
I30M				IAmb	IAmb	05 07 41.5	
	comp=Z,2.9nm,0.8s						
I30M				PcP	PcP	05 08 52.4	-1.2
BVAR	Borovoye Array	48.71	309	P	P	05 07 34.5	+0.1
	comp=Z,1.1nm,0.4s,baz=80,slow=9.0,SNR=7.1						
	comp=Z,1.1nm,0.4s						
BOOM	Boomskoye usch	49.33	294	P	P	05 07 39.0	-0.5
BOOM				PcP	PcP	05 09 00.7	-0.7
AAK	Ala-Archa	50.22	295	P	P	05 07 45.9	-0.4
AAK				IAmb	IAmb	05 08 08.3	
	comp=Z,3.2nm,0.8s						
AAK	Ala-Archa	50.22	295	P	P	05 07 45.9	-0.4
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AAK	Ala-Archa	50.22	295	eP	P	05 07 49.5	+3.2
KK31	Karatay Array	52.63	297	P	P	05 08 03.1	-1.0
KK31				IAmb	IAmb	05 08 04.4	
	comp=Z,4.3nm,0.8s						
KK31	Karatay Array	52.63	297	P	P	05 08 03.1	-1.0
KK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KKAR	Karatay Array	52.63	297	P	P	05 08 03.8	-0.3
KKAR	Karatay Array	52.63	297	P	P	05 08 03.8	-0.3
ARTI	Arti	53.87	317	d iP	P	05 08 12.3	-0.6
ARTI				S	S	05 15 42.3	-0.8
ARTI				SS	SKiKP	05 19 18.2	-1.7
ARTI				pmax	pmax		
	comp=Z,13nm,2.2s						
RES	Resolute Bay	56.06	16	P	P	05 08 28.0	-0.4
RES				IAmb	IAmb	05 08 29.9	
	comp=Z,4.5nm,0.9s						
RES	Resolute Bay	56.06	16	P	P	05 08 28.0	-0.4
RES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YKA	Yellowknife Ar	57.23	33	P	P	05 08 37.2	+0.3
	comp=Z,0.8nm,0.9s,baz=305,slow=7.8,SNR=4.6						
	comp=Z,0.8nm,0.9s						
YKA	Yellowknife Ar	57.23	33	P	P	05 08 36.5	-0.4
YKA	Yellowknife Ar	57.23	33	eP	P	05 08 37.1	+0.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	Warramunga Arr	63.47	191	P	P	05 09 19.4	-0.5
	comp=Z,1.0nm,0.8s,baz=10,slow=7.0,SNR=8.5						
	comp=Z,1.0nm,0.8s						
WRA	Warramunga Arr	63.47	191	P	P	05 09 20.6	+0.7
WRA	Warramunga Arr	63.47	191	eP	P	05 09 20.9	+1.0
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	FINESS Array B	64.75	332	P	P	05 09 27.1	-0.8
	comp=Z,1.2nm,0.5s,baz=34,slow=8.4,SNR=9.2						
	comp=Z,1.2nm,0.5s						
ASAR	Alice Springs	67.19	191	P	P	05 09 45.0	+1.1
	comp=Z,1.4nm,0.7s,baz=13,slow=6.2,SNR=17						
	comp=Z,1.4nm,0.7s						
ASAR	Alice Springs	67.19	191	P	P	05 09 44.8	+0.9
KIV	Kislovodsk	69.03	311	eP	P	05 09 54.7	-0.8
KBZ	Khabaz	69.06	311	P	P	05 09 56.2	+0.7
	comp=Z,2.4nm,0.8s,baz=67,slow=7.6,SNR=4.1						
	comp=Z,2.4nm,0.8s						
KBZ	Khabaz	69.06	311	eP	P	05 09 57.2	+1.7
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KBZ	Khabaz	69.06	311	eP	P	05 09 57.2	+1.7
NVAR	Mina Array Bea	69.27	57	P	P	05 09 58.5	+1.3
	comp=Z,0.9nm,0.7s,baz=287,slow=6.8,SNR=11						
	comp=Z,0.9nm,0.7s						
NVAR	Mina Array Bea	69.27	57	P	P	05 09 57.6	+0.4
NB2	NORSAR Subarra	69.65	338	P	P	05 09 58.4	-0.6
	comp=Z,0.9nm,0.6s,baz=33,slow=6.5						
NOA	NORSAR Array B	69.65	338	P	P	05 09 58.3	-0.7
	comp=Z,1.0nm,0.6s,baz=35,slow=6.1,SNR=4.7						
	comp=Z,1.0nm,0.6s						
NOA	NORSAR Array B	69.65	338	eP	P	05 09 56.7	-2.3
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HFS	Hagfors	69.69	336	P	P	05 09 58.6	-0.6
	comp=Z,1.8nm,0.4s,baz=42,slow=6.8,SNR=9.3						
	comp=Z,1.8nm,0.4s						
AKASG	Malin Array Be	71.18	323	P	P	05 10 07.7	-0.7
	comp=Z,0.9nm,0.5s,baz=37,slow=5.6,SNR=4.6						
	comp=Z,0.9nm,0.5s						
AKASG	Malin Array Be	71.18	323	P	P	05 10 07.9	-0.5
AKASG				IAmb	IAmb	05 10 47.3	
	comp=Z,2.6nm,1.1s						
AKASG	Malin Array Be	71.18	323	i P	P	05 10 09.3	+0.9
PD31	Pinedale Array	71.54	48	P	P	05 10 10.8	-0.3
PDAR	Pinedale Array	71.54	48	P	P	05 10 11.3	+0.3
	comp=Z,0.9nm,0.5s,baz=18,slow=0.6,SNR=19						
	comp=Z,0.9nm,0.5s						
PDAR	Pinedale Array	71.54	48	P	P	05 10 11.1	+0.1
EKA	Eskdalemuir Ar	78.30	342	P	P	05 10 49.4	-0.1
	comp=Z,0.5nm,0.4s,baz=22,slow=4.8,SNR=6.5						
	comp=Z,0.5nm,0.4s						
TXAR	Lajitas Array	84.33	55	P	P	05 11 21.8	-0.2
	comp=Z,0.6nm,0.7s,baz=294,slow=3.6,SNR=9.7						
	comp=Z,0.6nm,0.7s						
TXAR	Lajitas Array	84.33	55	P	P	05 11 22.1	+0.1
TXAR	Lajitas Array	84.33	55	P	P	05 11 22.1	+0.1
H03N2	Juan Fernandez	144.54	89	T	T	07 59 34.9	
	baz=302,slow=77,SNR=5.2						
H03N3	Juan Fernandez	144.56	89	T	T	07 59 38.4	
	baz=302,slow=77,SNR=5.3						
H03N1	Juan Fernandez	144.56	89	T	T	07 59 36.4	
	baz=302,slow=77,SNR=7.5						

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*IDC **05** 04:58:58.3±0.6, 39°.80N×77°.37E, h0^{km}, mb4.0/19, mbtmp4.0/25, ML3.3/6, MS3.4/13, Error ellipse: s-maj=13.4km s-min=10.3km az=56.0*

*MOS **05** 04:58:58.9±1.1, 39°.86N×77°.37E, h9^{km}, mb4.3/13, Error ellipse: s-maj=6.5km s-min=4.1km az=110.2*

*NNC **05** 04:58:59.9±1.4, 39°.88N×77°.30E, h0^{km}, mb4.7, mpv4.5, Error ellipse: s-maj=11.0km s-min=7.9km az=166.0*

*KRNET **05** 04:58:59.1±0.1, 39°.93N×77°.33E, mb4.6*

*NEIC **05** 04:59:00.6±1.8, 39°.88N±0°.06×77°.47E±0°.08, h9^{km}±1^{km}, mb4.5/25, Error ellipse: s-maj=9.5km s-min=7.5km az=129.0*

*SOME **05** 04:59:03.9, 40°.13N×77°.30E, h10^{km}, MS3.7*

ISC 05 04:58:59.3±1.4, **39°.80N**±0°.03×**77°.35E**±0°.03, **h6**^{km}±9^{km}, **n231**, $\sigma 1\overset{s}{.}71$/288, **mb4.2**/36, **MS3.6**/8, **38C-38D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	1.10	256	Pn	Pg	04 59 29.9	+9.5
KSH				Sn	Sg	04 59 49.1	+14
KSH				smax	smax		
	comp=N,2µm,0.8s						
KSH				smax	smax		
	comp=E,3µm,0.9s						
JNKS	Jany-Kuch	1.80	315	⇑ eP	Pn	04 59 30.8	-0.4
JNKS				⇑ eS	Sn	04 59 54.1	-0.5
TARG	Taragay, Kyrgy	1.96	10		Pn	04 59 32.3	-1.2
TARG				Sn	Sn	04 59 56.8	-1.8
TARG	Taragay, Kyrgy	1.96	10	⇓ eP	Pn	04 59 32.9	-0.6
TARG				⇓ eS	Sn	04 59 57.7	-0.9
TARG	Taragay, Kyrgy	1.96	10	ePN	Pn	04 59 32.9	-0.6
TARG				eS	Sn	04 59 57.7	-0.9

Sta	Name	Dist	Az	Phase	ISC phase	Time	Res
WUS	Wushi	2.00	45		Pn	04 59 32.7	-1.0
KDJ	Kajisay	2.33	357		Pn	04 59 38.5	+0.1
KDJ	Kajisay	2.33	357	⇓eP	Pn	04 59 38.5	+0.1
KDJ				⇓eS	Sn	05 00 07.2	-0.3
KDJ	Kajisay	2.33	357	PN	Pn	04 59 38.5	+0.1
PRZ	Przheval'sk	2.80	16		Pn	04 59 47.2	+2.4
PRZ	Przheval'sk	2.80	16	⇑eP	Pn	04 59 45.3	+0.5
PRZ				⇑eS	Sn	05 00 19.2	+0.3
PRZ	Przheval'sk	2.80	16	PN	Pn	04 59 47.2	+2.4
BOOM	Boomskoye usch	2.89	339		Pn	04 59 47.8	+1.7
BOOM	Boomskoye usch	2.89	339	⇓eP	Pn	04 59 46.3	+0.2
BOOM				⇓eS	Sn	05 00 20.8	-0.5
BOOM	Boomskoye usch	2.89	339	PN	Pn	04 59 47.8	+1.7
SALK	Salom-Alik	2.91	293	⇑eP	Pn	04 59 47.3	+1.0
SALK				⇑eS	Sn	05 00 22.7	+1.1
SALK	Salom-Alik	2.91	293	ePN	Pn	04 59 47.3	+1.0
SALK				eS	Sn	05 00 22.7	+1.1
SFK	Sufi-Kurgan	2.96	275	⇑eP	Pn	04 59 48.9	+1.7
SFK				⇑eS	Sn	05 00 25.3	+2.1
SFK	Sufi-Kurgan	2.96	275	ePN	Pn	04 59 48.9	+1.7
SFK				eS	Sn	05 00 25.3	+2.1
ARLS	Aral	3.08	313	⇑eP	Pn	04 59 49.4	+0.7
ARLS				⇑eS	Sn	05 00 26.0	0.0
UCH	Uchtor	3.24	319	P	Pn	04 59 54.0	+2.9
	SNR=76						
UCH	Uchtor	3.24	319	⇑eP	Pn	04 59 51.5	+0.4
UCH				⇑eS	Sn	05 00 29.8	-0.4
UCH	Uchtor	3.24	319	ePN	Pn	04 59 51.5	+0.4
UCH				eS	Sn	05 00 29.8	-0.4
TNSS	Tian-Shan	3.25	355	Pg	Pb	04 59 58.4	+0.8
	comp=E,124nm,0.6s						
TNSS				Lg	Lg	05 00 38.6	
	comp=E,207nm,1.0s						
TNSS	Tian-Shan	3.25	355	eP	Pb	04 59 58.2	+0.6
	comp=E,124nm,0.5s						
TNSS				eS	Sb	05 00 37.2	-0.4
	comp=E,207nm,0.9s						
SATY	Saty	3.35	13	Pg	Pb	05 00 01.1	+1.9
	comp=E,139nm,0.5s						
SATY				Lg	Lg	05 00 42.2	
	comp=E,658nm,1.1s						
MDOK	Medeo	3.37	356	Pg	Pb	05 00 00.5	+1.0
	comp=E,174nm,0.8s						
MDOK				Lg	Lg	05 00 41.2	
	comp=E,352nm,0.8s						
KBK	Karagaybulak	3.38	328	P	Pb	04 59 57.4	-2.4
	SNR=6.4						
KBK	Karagaybulak	3.38	328	⇑eP	Pn	04 59 53.2	+0.4
KBK				⇑eS	Sn	05 00 32.7	-0.6
KBK	Karagaybulak	3.38	328	ePN	Pn	04 59 53.2	+0.4
KBK				eS	Sn	05 00 32.7	-0.6
TKM2	Tokmak 2	3.38	338	P	Pn	04 59 55.8	+2.8
	SNR=37						
TKM2	Tokmak 2	3.38	338	⇑eP	Pn	04 59 53.2	+0.3
TKM2				⇑eS	Sn	05 00 32.7	-0.8
TKM2	Tokmak 2	3.38	338	ePN	Pn	04 59 53.2	+0.3
TKM2				eS	Sn	05 00 32.7	-0.8
MTBS	Maitube	3.40	349	Pg	Pb	05 00 01.3	+1.3
	comp=E,106nm,0.5s						
MTBS				Lg	Lg	05 00 42.6	
	comp=E,175nm,1.1s						
MTBS	Maitube	3.40	349	eP	Pb	04 59 59.8	-0.2
	comp=E,48nm,0.5s						
MTBS				eS	Sb	05 00 39.8	-1.8
	comp=E,115nm,0.9s						
KST	Kastek	3.40	343	Pg	Pb	05 00 00.6	+0.4
	comp=E,56nm,0.6s						
KST				Lg	Lg	05 00 41.2	
	comp=E,196nm,1.2s						
KST	Kastek	3.40	343	eP	Pb	05 00 00.6	+0.4
	comp=E,56nm,0.6s						
KST				eS	Sb	05 00 41.2	-0.6
	comp=E,196nm,1.2s						
AAA	Alma-Ata	3.42	355	Pg	Pb	05 00 01.7	+1.3
	comp=E,442nm,0.4s						
AAA				Lg	Lg	05 00 44.1	
	comp=E,39nm,0.9s						
AAA	Alma-Ata	3.42	355	eP	Pb	05 00 00.9	+0.5
	comp=E,487nm,0.6s						
AAA				eS	Sb	05 00 41.7	-0.5
	comp=E,39nm,0.9s						
KNDC	Almaty	3.43	355	⇑Pg	Pb	05 00 00.0	-0.4
	comp=E,327nm,0.6s						
KNDC				⇓Lg	Lg	05 00 45.9	
	comp=E,780nm,0.9s						
KNDC	Almaty	3.43	355	PN	Pb	05 00 01.4	+0.9
KOTS	Kotyrbulak	3.44	357	Pg	Pb	05 00 02.2	+1.5
	comp=E,285nm,0.5s						
KOTS				Lg	Lg	05 00 44.8	
	comp=E,931nm,0.7s						
KOTS	Kotyrbulak	3.44	357	eP	Pb	05 00 00.4	-0.3
	comp=E,220nm,0.8s						
KOTS				eS	Sb	05 00 40.9	-1.9
	comp=E,931nm,0.7s						
AAK	Ala-Archa	3.56	324	P	Pn	04 59 58.5	+3.2
	SNR=51						
AAK	Ala-Archa	3.56	324	Pn	Pn	04 59 58.3	+3.0
	comp=E,6.4nm,0.3s,baz=135,slow=6.6,SNR=35						
AAK				Pg	Pb	05 00 03.9	+1.1
	comp=E,25nm,0.3s,baz=157,slow=11,SNR=44						
AAK				Lg	Lg	05 00 49.0	
	comp=E,14nm,0.3s,baz=117,slow=18,SNR=12						
AAK				LR	LR	05 00 58.7	
	comp=E,73nm,19.6s,baz=117,slow=34						
	comp=E,52nm,0.6s						
AAK	Ala-Archa	3.56	324		Pn	04 59 57.3	+2.0
AAK	Ala-Archa	3.56	324	⇓eP	Pn	04 59 55.8	+0.5
AAK				⇓eS	Sn	05 00 37.2	-0.5
AAK	Ala-Archa	3.56	324	⇓Pg	Pb	05 00 02.5	-0.3
	comp=E,306nm,1.3s						
AAK				⇑Lg	Lg	05 00 49.6	
	comp=E,528nm,1.2s						
AAK	Ala-Archa	3.56	324	i PN	Pn	04 59 57.9	+2.6
OHH	Osh	3.57	283	⇑eP	Pn	04 59 56.9	+1.6
OHH				⇑eS	Sn	05 00 39.1	+1.2
OHH	Osh	3.57	283	ePN	Pn	04 59 56.9	+1.6
OHH				eS	Sn	05 00 39.1	+1.2
UZB	Uzynbulak	3.57	20	Pg	Pb	05 00 04.1	+1.1
	comp=E,66nm,0.7s						
UZB				Lg	Lg	05 00 48.0	
	comp=E,162nm,1.1s						
UZB	Uzynbulak	3.57	20	eP	Pb	05 00 04.1	+1.1
	comp=E,66nm,0.7s						
UZB				eS	Sb	05 00 48.0	+1.3
	comp=E,162nm,1.1s						
DGS	Degeres	3.64	342	Pg	Pb	05 00 05.4	+1.3
	comp=E,116nm,0.6s						
DGS				Lg	Lg	05 00 49.4	
	comp=E,469nm,1.0s						
FRU1	Bishkek	3.64	327	Pn	Pn	04 59 59.1	+2.9
FRU1	Bishkek	3.64	327	⇓eP	Pn	04 59 57.0	+0.7
FRU1				⇓eS	Sn	05 00 39.3	-0.2
FRU1	Bishkek	3.64	327	PN	Pn	04 59 59.1	+2.9
ARSB	Arslanbob	3.66	296		Pn	04 59 58.7	+2.1
ARSB	Arslanbob	3.66	296	⇑eP	Pn	04 59 57.7	+1.1
ARSB				⇑eS	Sn	05 00 40.6	+0.5
ARSB	Arslanbob	3.66	296	PN	Pn	04 59 58.7	+2.1
SHLS	Shalkode	3.71	25	Pg	Pg	05 00 09.9	-0.5
	comp=E,152nm,0.6s						
SHLS				Lg	Lg	05 00 57.3	
	comp=E,355nm,1.4s						
SHLS	Shalkode	3.71	25	eP	Pg	05 00 09.9	-0.5
	comp=E,152nm,0.6s						
SHLS				eS	Sg	05 00 57.3	-1.2
	comp=E,355nm,1.4s						
KURS	Kuram	3.74	9	Pg	Pb	05 00 05.0	-0.8
	comp=E,148nm,0.7s						
CHMS	Chumysh	3.75	329	P	Pn	05 00 01.5	+3.8
	SNR=16						
CHMS	Chumysh	3.75	329	⇓eP	Pn	04 59 58.1	+0.4
CHMS				⇓eS	Sn	05 00 41.2	-0.9
CHMS	Chumysh	3.75	329	ePN	Pn	04 59 58.1	+0.4
CHMS				eS	Sn	05 00 41.2	-0.9
KPKS	Kokpek	3.80	15	Pg	Pb	05 00 07.3	+0.5
	comp=E,0.6nm,0.3s						
KPKS				Lg	Lg	05 00 53.2	
	comp=E,257nm,0.7s						
PDGK	Podgornoye	3.87	24	⇑Pn	Pn	05 00 00.3	+0.7
	comp=E,30nm,0.6s						
PDGK				⇓Pg	Pb	05 00 09.2	+1.0
	comp=E,397nm,1.1s						
PDGK				⇓Lg	Lg	05 01 00.8	
	comp=E,517nm,1.0s						
PDGK	Podgornoye	3.87	24	PN	Pn	05 00 00.3	+0.7
PDGK						05 00 08.5	
EKS2	Erkin-Say	3.93	318	P	Pn	05 00 04.0	+3.7
	SNR=29						
EKS2	Erkin-Say	3.93	318	⇓eP	Pn	05 00 00.8	+0.5
EKS2				⇓eS	Sn	05 00 46.1	-0.7
EKS2	Erkin-Say	3.93	318	ePN	Pn	05 00 00.8	+0.5
EKS2				eS	Sn	05 00 46.1	-0.7
KTBS	Karatobe	3.94	353	Pg	Pb	05 00 09.3	0.0
	comp=E,69nm,0.4s						
USP	Ospenovka	4.07	329	P	Pn	05 00 05.4	+3.3
	SNR=18						
USP	Ospenovka	4.07	329	⇑eP	Pn	05 00 02.7	+0.5
USP				⇑eS	Sn	05 00 49.0	-1.2
USP	Ospenovka	4.07	329	ePN	Pn	05 00 02.7	+0.5
USP				eS	Sn	05 00 49.0	-1.2
KRBS	Karabastau	4.09	343	Pg	Pb	05 00 14.1	+2.3
	comp=E,55nm,0.6s						
KRBS				Lg	Lg	05 01 05.1	
	comp=E,131nm,0.8s						
KUU	Kurty	4.16	350	Pg	Pb	05 00 14.8	+1.9
	comp=E,25nm,0.7s						
KUU				Lg	Lg	05 01 05.8	
	comp=E,172nm,1.2s						
KUU	Kurty	4.16	350	eP	Pb	05 00 14.8	+1.9
	comp=E,25nm,0.7s						
KUU				eS	Sb	05 01 05.8	+2.4
	comp=E,172nm,1.2s						
MRKS	Merke	4.28	315	Pg	Pb	05 00 17.1	+2.1
	comp=E,28nm,0.6s						
MRKS				Lg	Lg	05 01 10.5	
	comp=E,142nm,1.1s						
MRKS	Merke	4.28	315	eP	Pb	05 00 17.1	+2.1
	comp=E,28nm,0.6s						
MRKS				eS	Sb	05 01 10.5	+3.6
	comp=E,142nm,1.1s						
KTMS	Ketmen	4.28	31	Pg	Pb	05 00 15.7	+0.6
	comp=E,20nm,0.5s						
KTMS				Lg	Lg	05 01 07.8	
	comp=E,85nm,0.7s						
KTMS	Ketmen	4.28	31	eP	Pb	05 00 17.4	+2.3
	comp=E,19nm,0.5s						
KTMS				eS	Sb	05 01 10.5	+3.4
	comp=E,115nm,1.0s						
DRK	Karamyk	4.30	267	Pn	Pn	05 00 08.7	+3.2
DRK	Karamyk	4.30	267	⇓eP	Pn	05 00 07.6	+2.1
DRK				⇓eS	Sn	05 00 57.7	+1.6
DRK	Karamyk	4.30	267	PN	Pn	05 00 08.7	+3.2
BLB	Baldybastay	4.38	11	Pg	Pb	05 00 18.5	+1.8
	comp=E,108nm,0.5s						
BLB				Lg	Lg	05 01 13.1	
	comp=E,201nm,1.1s						
ARXS	Arharly	4.42	4	Pg	Pb	05 00 19.9	+2.4
	comp=E,115nm,0.7s						
ARXS				Lg	Lg	05 01 15.0	
	comp=E,185nm,1.1s						
ARXS	Arharly	4.42	4	eP	Pb	05 00 19.9	+2.4
	comp=E,115nm,0.7s						
ARXS				eS	Sb	05 01 15.0	+3.9
	comp=E,185nm,1.1s						
MNAS	Manas	4.54	308	⇑eP	Pn	05 00 09.5	+0.8
MNAS				⇑eS	Sn	05 01 01.1	-0.7
MNAS	Manas	4.54	308	ePN	Pn	05 00 09.5	+0.8
MNAS				eS	Sn	05 01 01.1	-0.7
ARK	Arkit	4.55	298	⇓eP	Pn	05 00 10.0	+1.2
ARK				⇓eS	Sn	05 01 01.9	-0.2
ARK	Arkit	4.55	298	ePN	Pn	05 00 10.0	+1.2
ARK				eS	Sn	05 01 01.9	-0.2
KNOS	Konyrlen	4.75	16	Pg	Pb	05 00 26.3	+3.2
	comp=E,83nm,0.7s						
KNOS				Lg	Lg	05 01 25.6	
	comp=E,57nm,1.0s						
MANEM	Manem	4.98	245		Pn	05 00 20.6	+5.8
TRKS	Terek-Say	5.03	292	⇓eP	Pn	05 00 16.2	+0.8
TRKS				⇓eS	Sn	05 01 12.5	-1.4
TRKS	Terek-Say	5.03	292	ePN	Pn	05 00 16.2	+0.8
TRKS				eS	Sn	05 01 12.5	-1.4
TDK	Taldyqorghan	5.26	8	Pg	Pb	05 00 34.8	+3.2
	comp=E,152nm,0.5s						
TDK				Lg	Lg	05 01 40.0	
	comp=E,198nm,0.7s						
TDK	Taldyqorghan	5.26	8	eP	Pb	05 00 34.8	+3.2
	comp=E,152nm,0.5s						
TDK				eS	Sb	05 01 40.0	+5.0
	comp=E,198nm,0.7s						
GAR	Garm	5.51	264		Pn	05 00 23.4	+1.4
GAR	Garm	5.51	264	⇓eP	Pn	05 00 24.1	+2.1
GAR				⇓eS	Sn	05 01 26.4	+0.7
GAR	Garm	5.51	264	ePN	Pn	05 00 24.1	+2.1
GAR				eS	Sn	05 01 26.4	+0.7
ALCI	Alchi Leh	5.58	181	eP	Pn	05 00 27.3	+4.1
ALCI				eS	Sn	05 01 28.1	+0.3
ALCI				IAML		05 02 12.2	
	comp=E,402nm,0.5s						
ALCI				IAML		05 02 12.3	
	comp=N,471nm,0.9s						
KAPS	Kapalarasan	5.68	14	Pg	Pb	05 00 42.9	+4.1
	comp=N,33nm,0.6s						
KAPS				Lg	Lg	05 01 54.5	
	comp=N,57nm,1.1s						
BTLS	Baital	5.78	336	Pg	Pb	05 00 45.1	+4.6
	comp=N,22nm,0.7s						
BTLS				Lg	Lg	05 01 58.2	
	comp=N,40nm,0.8s						
BTLS	Baital	5.78	336	eP	Pb	05 00 45.1	+4.6
	comp=N,22nm,0.7s						
BTLS				eS	Sb	05 01 58.2	+8.2
	comp=N,40nm,0.8s						
KK31	Karatay Array	6.11	305		Pn	05 00 31.8	+1.7
KK31	Karatay Array	6.11	305	⇓Pn	Pn	05 00 30.1	0.0
	comp=N,5.0nm,0.7s,baz=119,slow=12,SNR=32						
KK31				Pg	Pb	05 00 48.8	+2.7
	comp=N,29nm,0.8s,baz=125,slow=15,SNR=13						
KK31				⇑Lg	Lg	05 02 10.5	
	comp=N,117nm,0.9s,baz=124,slow=30						
KK31	Karatay Array	6.11	305	i PN	Pn	05 00 28.9	-1.2
KK31				i		05 00 48.7	
KKAR	Karatay Array	6.11	305		Pn	05 00 31.2	+1.1
KKAR	Karatay Array	6.11	305	PN	Pn	05 00 31.2	+1.1
CHGR	Chuyangaron	6.46	262		Pn	05 00 36.0	+0.9
CHGR	Chuyangaron	6.46	262	PN	Pn	05 00 36.0	+0.9
BRLS	Borolday	6.50	302	eP	Pg	05 01 01.3	-2.6
	comp=N,5.7nm,0.3s						
BRLS				eS	Sg	05 02 25.2	-2.8
	comp=N,78nm,1.0s						
NIL	Nilore	6.96	209		Pn	05 00 46.5	+4.6
NIL	Nilore	6.96	209	PN	Pn	05 00 46.5	+4.6
TSSA	Tissa	7.02	188	eP	Pn	05 00 45.9	+3.1
TSSA				eS	Sn	05 02 03.0	-0.1
TSSA				IAML		05 02 14.3	
	comp=N,264nm,1.0s						
TSSA				IAML		05 02 16.2	
	comp=E,2µm,0.0s						
HNLY	HANLEY	7.13	169	eP	Pn	05 00 47.4	+2.7
HNLY				eS	Sn	05 02 03.4	-2.8
HNLY				IAML		05 02 56.1	
	comp=E,156nm,1.9s						
HNLY				IAML		05 03 05.9	
	comp=N,154nm,1.2s						
THN	Thein Dam	7.46	190	eP	Pn	05 00 51.8	+3.0
THN				eS	Sn	05 02 11.8	-2.0
THN				IAML		05 02 26.6	
	comp=N,185nm,0.6s						
THN				IAML		05 02 29.2	
	comp=E,165nm,0.3s						
SHAA	Shahritus	7.55	256		Pn	05 00 50.3	+0.2
MAKZ	Makanchi	7.77	24	Pn	Pn	05 00 54.3	+1.3
MAKZ	Makanchi	7.77	24	⇓Pn	Pn	05 00 53.9	+0.9
	comp=E,13nm,1.4s						
MAKZ				⇓Lg	Lg	05 03 05.3	
	comp=E,127nm,2.1s						
MAKZ	Makanchi	7.77	24	P	Pn	05 00 54.3	+1.3
MK31	Makanchi Array	7.86	26	Pn	Pn	05 00 55.0	+0.8
	comp=E,3.5nm,0.5s,baz=201,slow=13,SNR=18						
MK31				⇓Sn	Sn	05 02 24.3	+0.8
	comp=E,12nm,0.8s,baz=208,slow=20						
MK31				⇑Lg	Lg	05 03 07.5	
	comp=E,65nm,1.6s,baz=205,slow=26						
MK31	Makanchi Array	7.86	26c	iP	Pn	05 00 56.5	+2.3
MKAR	Makanchi Array	7.86	26	Pn	Pn	05 00 55.4	+1.2
	comp=E,1.5nm,0.3s,baz=195,slow=12,SNR=19						
MKAR				Sn	Sn	05 02 23.1	-0.4
	comp=E,0.5nm,0.3s,baz=203,slow=21,SNR=4.1						
MKAR				Lg	Lg	05 03 02.8	
	comp=E,0.5nm,0.3s,baz=200,slow=24,SNR=3.8						
MKAR				LR	LR	05 03 34.0	
	comp=E,30nm,18.5s,baz=197,slow=35						
	comp=E,1.9nm,0.4s						
MKAR	Makanchi Array	7.86	26		Pn	05 00 54.6	+0.4
MKAR	Makanchi Array	7.86	26	P	Pn	05 00 54.6	+0.4
KLP	Kalpa	8.28	175	eP	Pn	05 01 02.6	+2.3
KLP				eS	Sn	05 02 30.4	-3.9
KLP				IAML		05 02 46.3	
	comp=E,172nm,0.8s						
KLP				IAML		05 03 11.8	
	comp=N,154nm,0.3s						
KBL	Kabul	8.45	234		Pn	05 01 06.1	+3.6
KBL	Kabul	8.45	234	P	Pn	05 01 06.1	+3.6
WMQ	Urumqi	8.71	59	Pn	Pn	05 01 08.2	+2.4
WMQ				Sn	Sn	05 02 47.1	+2.8
WMQ				smax	smax		
	comp=N,43nm,1.1s						
WMQ				smax	smax		
	comp=E,38nm,1.3s						
KURBB	Kurchatov Arra	10.86	4	Pn	Pn	05 01 34.3	-0.8
	comp=E,0.2nm,0.3s,baz=189,slow=12,SNR=13						
KURBB				Sn	Sn	05 03 33.1	-3.8
	comp=E,0.1nm,0.3s,baz=201,slow=33,SNR=4.2						
KURBB				Lg	Lg	05 04 36.8	
	comp=E,0.1nm,0.3s,baz=190,slow=32,SNR=9.8						
KURBB				LR	LR	05 06 00.4	
	comp=E,278nm,20.9s,baz=201,slow=39						
	comp=E,1.5nm,0.6s						
KURBB	Kurchatov Arra	10.86	4	⇓Pn	Pn	05 01 34.7	-0.5
	comp=E,0.1nm,0.2s						
KURBB				⇑Sn	Sn	05 03 38.3	+1.5
	comp=E,10nm,0.8s						
KURBB				⇑Lg	Lg	05 04 42.5	
	comp=E,80nm,1.1s						
KURBB	Kurchatov Arra	10.86	4	P	Pn	05 01 33.7	-1.4
KURBB						05 03 42.0	
KURK	Kurchatov	10.95	4		Pn	05 01 35.7	-0.8
KURK	Kurchatov	10.95	4	⇑Pn	Pn	05 01 36.8	+0.3
	comp=E,4.4nm,1.2s						
KURK				⇑Sn	Sn	05 03 38.8	-0.5
	comp=E,4.0nm,0.9s						
KURK				⇓Lg	Lg	05 04 45.6	
	comp=E,34nm,1.3s						
KURK	Kurchatov	10.95	4	P	Pn	05 01 35.7	-0.8
KUDL	Kundal	11.65	184	eP	Pn	05 01 47.8	+1.7
KUDL				eS	Sn	05 03 50.0	-6.5
KUDL				IAML		05 03 57.4	
	comp=N,58nm,0.3s						
KUDL				IAML		05 03 58.6	
	comp=E,67nm,0.4s						
BVA0	Borovoye Array	14.06	342	P	Pn	05 02 19.3	+0.4
	comp=E,17nm,1.0s,baz=137,slow=9.4,SNR=27						
BVA0	Borovoye Array	14.06	342	i P	P	05 02 23.3	-3.6
BVAR	Borovoye Array	14.06	342	Pn	Pn	05 02 17.3	-1.7
	baz=147,slow=14,SNR=7.7						
BVAR				Lg	Lg	05 06 17.1	
	baz=146,slow=27,SNR=6.8						
BVAR				LR	LR	05 07 51.6	
	comp=E,208nm,20.4s,baz=159,slow=38						
	comp=E,1.8nm,0.7s						
BORK	Borovoye	14.10	342		Pn	05 02 19.4	0.0
BORK	Borovoye	14.10	342	⇓iP	Pn	05 02 21.1	+1.7
BORK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
EVN	Everest	14.18	144		Pn	05 02 19.7	-1.6
ZAA0	Zalesovo Array	15.03	17		Pn	05 02 30.8	-1.4
ZALV	Zalesovo Beam	15.03	17	Pn	Pn	05 02 31.1	-1.1
	comp=Z,0.2nm,0.3s,baz=209,slow=12,SNR=8.7						
ZALV				Sn	Sn	05 05 20.2	+1.4
	comp=Z,0.1nm,0.3s,baz=200,slow=16,SNR=1.7						
ZALV				Lg	Lg	05 06 54.3	
	comp=Z,0.2nm,0.3s,baz=208,slow=25,SNR=3.9						
ZALV				LR	LR	05 08 36.1	
	comp=Z,180nm,20.4s,baz=206,slow=38						
	comp=Z,1.7nm,0.7s						
ZALV	Zalesovo Beam	15.03	17		Pn	05 02 30.4	-1.8
ZALV	Zalesovo Beam	15.03	17	eP	Pn	05 02 31.2	-1.0
AB31	Akbulak array	15.57	313	Pn	Pn	05 02 38.0	-1.3
AB31	Akbulak array	15.57	313	⇓P	Pn	05 02 38.4	-0.9
	comp=Z,4.8nm,0.7s						
AB31	Akbulak array	15.57	313	P	Pn	05 02 38.4	-0.9
AKTO	Aktyubinsk	17.25	314	P	Pn	05 03 00.7	0.0
	comp=Z,0.3nm,0.3s,baz=114,slow=10,SNR=16						
AKTO				LR	LR	05 10 07.5	
	comp=Z,163nm,21.1s,baz=240,slow=39						
	comp=Z,15nm,1.1s						
AKTO	Aktyubinsk	17.25	314	⇓P	Pn	05 03 00.0	-0.6
	comp=Z,13nm,1.2s						
GTA	Gaotai	17.32	84	eP	Pn	05 02 59.0	-2.8
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SHL	Shillong	18.70	135	P	Pn	05 03 19.3	+0.3
SHL	Shillong	18.70	135	P	Pn	05 03 19.3	+0.3
SHL				pmax	pmax		
	comp=Z,16nm,1.0s						
ARTI	Arti	20.76	329	P	P	05 03 40.6	-0.1
	comp=Z,6.3nm,0.8s,baz=131,slow=6.2,SNR=5.2						
ARTI				Lg	Lg	05 09 58.6	
	comp=Z,0.2nm,0.3s,baz=75,slow=20,SNR=2.1						
ARTI				LR	LR	05 11 55.5	
	comp=Z,137nm,20.3s,baz=127,slow=37						
	comp=Z,6.3nm,0.8s						
ARTI	Arti	20.76	329		P	05 03 40.4	-0.3
ARTI	Arti	20.76	329c	iP	P	05 03 41.5	+0.8
ARTI						05 03 58.3	
ARTI				S	Sn	05 07 35.3	-2.1
ARTI				SS	SnSn	05 07 54.1	+2.0
ARTI				pmax	pmax		
	comp=Z,17nm,1.5s						
ZAK	Zakamensk	21.04	51	eP	P	05 03 44.2	+0.3
ZAK				pmax	pmax		
	comp=Z,25nm,1.3s						
LZDM	Lanzhou Array	21.12	92	P	P	05 03 44.8	-0.3
	comp=Z,1.0nm,0.3s,baz=301,slow=12,SNR=3.9						
	comp=Z,1.0nm,0.3s						
LZH	Lanzhou	21.19	92	eP	P	05 03 47.1	+1.4
LZH				pP	pP	05 03 50.6	+2.8
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
SONM	Songino Array	22.35	59	P	P	05 03 58.0	0.0
	comp=Z,3.6nm,0.8s,baz=264,slow=9.4,SNR=17						
	comp=Z,3.6nm,0.8s						
SONM	Songino Array	22.35	59	P	P	05 03 57.7	-0.3
SONM	Songino Array	22.35	59	eP	P	05 03 58.7	+0.7
SONM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ULN	Ulaanbaatar	22.79	59		P	05 04 01.9	-0.8
ULN				IAmb	IAmb	05 04 09.5	
	comp=Z,12nm,1.1s						
ULN	Ulaanbaatar	22.79	59	⇓iP	P	05 04 04.0	+1.3
ULN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BELG	Belogornoye	23.96	312	⇓iP	P	05 04 14.6	+0.4
BELG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
XAN	Xi'an	25.81	93	P	P	05 04 32.2	+0.9
XAN				pmax	pmax		
	comp=Z,28nm,0.8s						
KBZ	Khabaz	25.88	290	P	P	05 04 32.9	+1.1
	comp=Z,0.8nm,0.7s,baz=44,slow=13,SNR=1.3						
	comp=Z,0.8nm,0.7s						
KIRV	Kirov	25.89	326	⇓eP	P	05 04 30.8	-0.9
KIV	Kislovodsk	26.02	291	eP	P	05 04 31.9	-1.3
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CMAR	Chiang Mai Arr	28.29	133	P	P	05 04 55.0	+1.3
	comp=Z,0.5nm,0.3s,baz=316,slow=11,SNR=5.0						
	comp=Z,0.5nm,0.3s						
CMAR	Chiang Mai Arr	28.29	133	eP	P	05 04 57.8	+4.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NRIK	Noril'sk	30.10	7	P	P	05 05 09.8	+0.6
	comp=Z,3.4nm,0.6s,baz=169,slow=4.4,SNR=7.2						
	comp=Z,3.4nm,0.6s						
NRIK	Noril'sk	30.10	7	P	P	05 05 08.7	-0.5
NRIK				IAmb	IAmb	05 05 11.3	
	comp=Z,5.0nm,0.8s						
MOS	Moscow	30.58	315	eP	P	05 05 25.5	+12
OBN	Obninsk	31.02	313	⇑eP	P	05 05 15.9	-1.6
OBN				e		05 06 15.9	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,70nm,10.0s						
KLMR	Klimovskoe	31.37	325	eP	P	05 05 18.1	-2.4
KLMR				pmax	pmax		
	comp=Z,20nm,1.7s						
RAYN	Ar Rayn	31.38	248	P	P	05 05 20.9	-0.2
RAYN				IAmb	IAmb	05 05 23.6	

	comp=Z,5.6nm,1.0s						
RAYN	Ar Rayn	31.38	248	P	P	05 05 20.9	-0.2
RAYN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PALK	Pallekele	32.53	174	LR	LR	05 19 25.5	
	comp=Z,155nm,18.1s,baz=8.5,slow=38						
BR131	Keskin Array S	33.35	284	⇑iP	P	05 05 37.6	-0.7
BRTR	Keskin Array B	33.35	284	P	P	05 05 39.1	+0.8
	comp=Z,0.9nm,0.7s,baz=87,slow=7.5,SNR=4.6						
	comp=Z,0.9nm,0.7s						
BRTR	Keskin Array B	33.35	284	eP	P	05 05 38.9	+0.6
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
HEH	HeiHe	36.26	56	eP	P	05 06 03.3	+0.1
HEH				pmax	pmax		
	comp=Z,19nm,1.0s						
FINES	FINESS Array B	37.74	322	P	P	05 06 16.0	+0.4
	comp=Z,1.4nm,0.6s,baz=109,slow=9.1,SNR=12						
	comp=Z,1.4nm,0.6s						
FINES	FINESS Array B	37.74	322	i P	P	05 06 16.1	+0.4
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YAK	Yakutsk	38.35	37	LR	LR	05 24 42.7	
	comp=Z,98nm,19.0s,baz=270,slow=40						
YAK	Yakutsk	38.35	37	⇑iP	P	05 06 21.8	+1.1
YAK				pmax	pmax		
	comp=Z,20nm,1.2s						
ARCES	ARCESS Array B	40.16	335	P	P	05 06 35.9	+0.1
	comp=Z,4.8nm,0.8s,baz=84,slow=5.2,SNR=8.0						
	comp=Z,4.8nm,0.8s						
ARCES	ARCESS Array B	40.16	335	P	P	05 06 36.2	+0.4
TIXI	Tiksi	40.84	22	LR	LR	05 23 32.7	
	comp=Z,83nm,20.9s,baz=206,slow=36						
TIXI	Tiksi	40.84	22	P	P	05 06 41.0	-0.3
TIXI				IAmb	IAmb	05 06 42.0	
	comp=Z,14nm,0.9s						
TIXI	Tiksi	40.84	22	P	P	05 06 41.0	-0.3
TIXI				pmax	pmax		
	comp=Z,15nm,0.9s						
HFS	Hagfors	43.69	320	P	P	05 07 05.1	+0.4
	comp=Z,1.8nm,0.7s,baz=70,slow=8.7,SNR=5.3						
	comp=Z,1.8nm,0.7s						
NC405	NORSAR Array S	44.63	321	P	P	05 07 12.4	+0.2
NC602	NORSAR Array S	44.73	320	P	P	05 07 12.9	-0.1
NORES	NORESS Array B	44.73	320	P	P	05 07 12.9	-0.1
NB2	NORSAR Subarra	44.87	321	P	P	05 07 14.2	0.0
	comp=Z,0.5nm,0.5s,baz=88,slow=7.9						
NOA	NORSAR Array B	44.87	321	P	P	05 07 13.9	-0.3
	comp=Z,0.3nm,0.4s,baz=100,slow=5.2,SNR=2.0						
NOA				LR	LR	05 26 55.5	
	comp=Z,79nm,20.3s,baz=355,slow=37						
	comp=Z,0.3nm,0.4s						
GERES	GERESS Array B	45.21	303	P	P	05 07 17.0	-0.1
	comp=Z,0.5nm,0.6s,baz=67,slow=8.0,SNR=5.6						
	comp=Z,0.5nm,0.6s						
GERES	GERESS Array B	45.21	303	eP	P	05 07 18.3	+1.2
ESDC	Sonseca Array	60.31	299	P	P	05 09 08.3	-0.6
	comp=Z,1.2nm,1.0s,baz=97,slow=8.3,SNR=2.8						
	comp=Z,1.2nm,1.0s						
C19K	Lookout Ridge	63.62	20	P	P	05 09 29.7	-1.0
D19K	Kuna River	64.43	20	P	P	05 09 35.7	-0.3
D20K	Etivluk River	64.66	19	P	P	05 09 37.2	-0.2
H18K	Honhosa River	66.77	22	P	P	05 09 51.4	+0.3
H18K				IAmb	IAmb	05 09 51.5	
	comp=Z,1.6nm,0.9s						
J16K	Anvik River	67.42	25	P	P	05 09 55.8	+0.6
IMAR	Indian Mountai	67.44	20	P	P	05 09 54.8	-0.5
G24K	Hadweenzic Riv	68.43	18	P	P	05 10 02.1	+0.5
G24K				IAmb	IAmb	05 10 20.7	
	comp=Z,4.3nm,1.3s						
E27K	Coleen River	68.44	15	P	P	05 10 01.9	+0.2
E27K				IAmb	IAmb	05 10 13.1	
	comp=Z,3.1nm,1.3s						
E29M	Blow River	68.95	13	P	P	05 10 04.8	0.0
E29M				IAmb	IAmb	05 10 06.2	
	comp=Z,7.1nm,1.2s						
INK	Inuvik	69.75	12		P	05 10 09.1	-0.6
INK	Inuvik	69.75	12	P	P	05 10 09.1	-0.6
INK				pmax	pmax		
	comp=Z,12nm,1.4s						
ILAR	Eielson Array	70.15	19	P	P	05 10 11.1	-1.2
	comp=Z,1.4nm,1.0s,baz=324,slow=5.4,SNR=8.5						
	comp=Z,1.4nm,1.0s						
ILAR	Eielson Array	70.15	19	eP	P	05 10 11.2	-1.1
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TORD	Torodi Ar. Bea	70.73	271	P	P	05 10 15.9	-0.6
	comp=Z,12nm,1.0s,baz=36,slow=8.4,SNR=50						
	comp=Z,12nm,1.0s						
TORD	Torodi Ar. Bea	70.73	271	P	P	05 10 16.2	-0.3
TORD				IAmb	IAmb	05 10 17.5	
	comp=Z,8.0nm,1.1s						
J26L	Joseph Creek	71.17	17	P	P	05 10 18.2	-0.4
J26L				IAmb	IAmb	05 10 18.7	
	comp=Z,4.1nm,1.1s						
YKA	Yellowknife Ar	77.60	6	P	P	05 10 55.1	-0.8
	comp=Z,1.3nm,1.0s,baz=341,slow=5.4,SNR=9.8						
	comp=Z,1.3nm,1.0s						
WB0	Warramunga Arr	79.61	127	P	P	05 11 07.6	0.0
WB0				IAmb	IAmb	05 11 09.1	
	comp=Z,11nm,1.3s						
WRA	Warramunga Arr	79.71	127	P	P	05 11 07.8	-0.3
	comp=Z,2.0nm,0.8s,baz=322,slow=5.0,SNR=17						
	comp=Z,2.0nm,0.8s						
WRA	Warramunga Arr	79.71	127	i P	P	05 11 08.8	+0.7
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
DBIC	Dimbokro	79.78	270	P	P	05 11 08.8	+0.1
	comp=Z,7.4nm,1.0s,baz=55,slow=8.2,SNR=4.6						
	comp=Z,7.4nm,1.0s						
SCHQ	Schefferville	80.87	340	LR	LR	05 51 11.7	
	comp=Z,32nm,18.1s,baz=25,slow=39						
ASAR	Alice Springs	82.25	129	P	P	05 11 21.1	-0.5
	comp=Z,1.8nm,0.8s,baz=326,slow=5.6,SNR=14						
	comp=Z,1.8nm,0.8s						
ULM	Lac du Bonnet	90.13	356	LR	LR	05 55 44.9	
	comp=Z,41nm,18.1s,baz=8.5,slow=38						
NVL	N'lazarevskaya	119.72	200	i PKIKP	PKiKP	05 17 51.9	+2.8
NVL				e		05 19 15.2	
NVL				ePPP	PPP	05 21 47.3	
NVL				eSS	SS	05 35 41.7	+4.3
NVL				eSSS	SSS	05 40 07.3	
NVL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
QSPA	South Pole Qui	129.58	180	PKP	PKiKP	05 18 08.3	-0.6
	comp=Z,0.4nm,0.3s,baz=270,slow=5.1,SNR=1.8						

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*NEIC **05** 05:12:36.8±1.3, 19°.26N±0°.04×67°.44W±0°.04, h10^{km}±1^{km}, ML2.5/20, Md3.5/11(RSPR), Error ellipse: s-maj=7.3km s-min=6.7km az=10.0*

*SDD **05** 05:12:39.7±2.0, 19°.32N×67°.15W, h31^{km}±86^{km}, MD3.2, ML3.3, MW3.0, Presumed earthquake*

*RSPR **05** 05:12:40.1, 19°.32N×67°.46W, h45^{km}±8^{km}, MD3.5/11*

*OSPL **05** 05:12:41.6±0.4, 19°.18N×67°.34W, h17^{km}±2^{km}, ML2.2, Presumed earthquake*

ISC 05 05:12:37.1±1.4**, 19°.34N**±0°.06×**67°.31W**±0°.03**, h20**^{km}±6^{km}**, n50,** σ0^{s}.77/66**, 20C-6D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	0.89	168	Pg	Pg	05 12 54.0	-0.5
AGPR				IAML		05 13 06.5	
	164nm,0.3s						
AGPR				IAML		05 13 10.5	
	130nm,0.3s						
AGPR	Aguadilla, PR	0.89	168	⇑eP	Pn	05 12 55.1	+0.6
AGPR	Aguadilla, PR	0.89	168	eS	Sn	05 13 07.8	+0.9
AGPR	Aguadilla, PR	0.89	168	⇑ePg	Pn	05 12 54.7	+0.2
AGPR				⇑eSg	Sb	05 13 05.5	+0.1
AGPR				IAML		05 13 06.9	
	comp=N,1μm,0.3s						
AGPR	Aguadilla, PR	0.89	168	i P	Pn	05 12 54.9	+0.4
AGPR				eS	Sb	05 13 04.6	-0.7
AGPR				IAML		05 13 07.3	
	comp=Z,97nm,1.0s						
IDE	Isla Desecheo	0.96	189		Pg	05 12 55.7	-0.2
IDE					Sb	05 13 07.8	+0.4
IDE	Isla Desecheo	0.96	189	⇑eP	Pg	05 12 55.7	-0.2
IDE	Isla Desecheo	0.96	189	eS	Sb	05 13 07.8	+0.4
AOPR	Arecibo Observ	1.12	152		Pg	05 12 58.0	-0.9
AOPR				IAML		05 13 18.0	
	comp=N,164nm,0.5s						
AOPR	Arecibo Observ	1.12	152	⇑eP	Pg	05 12 58.1	-0.8
AOPR	Arecibo Observ	1.12	152	eS	Sg	05 13 14.5	+0.8
AOPR	Arecibo Observ	1.12	152	ePg	Pg	05 12 58.3	-0.6
AOPR				⇓eSg	Sb	05 13 10.7	-1.4
AOPR				IAML		05 13 18.4	
	comp=N,1μm,0.3s						
PRSN	Puerto Rico Se	1.13	172	Pg	Pg	05 12 58.5	-0.5
PRSN	Puerto Rico Se	1.13	172	⇑ePg	Pb	05 12 58.1	+0.1
PRSN				⇓eSg	Sb	05 13 12.1	-0.2
PRSN				IAML		05 13 24.9	
	comp=N,2μm,0.3s						
EMPR	Esperanza - Ma	1.14	139		Pg	05 13 00.2	+1.0
EMPR					Sg	05 13 14.5	+0.4
EMPR	Esperanza - Ma	1.14	139	Pg	Pg	05 12 58.1	-1.0
EMPR				IAML		05 13 26.6	
	comp=N,129nm,0.5s						
EMPR				IAML		05 13 26.8	
	comp=N,105nm,0.5s						
EMPR	Esperanza - Ma	1.14	139	⇑eP	Pg	05 13 00.2	+1.0
EMPR	Esperanza - Ma	1.14	139	eS	Sg	05 13 14.5	+0.4
LSP	Las Mesas	1.18	169		Pg	05 12 59.5	-0.5
LSP					Sn	05 13 14.2	+0.1
LSP	Las Mesas	1.18	169	⇑eP	Pg	05 12 59.5	-0.5
LSP	Las Mesas	1.18	169	eS	Sn	05 13 14.2	+0.1
UUPR	Utuado, UPR, P	1.22	153	Pn	Pb	05 12 59.5	0.0
CRPR	Cabo Rojo, PR	1.34	172		Pn	05 13 00.5	-0.2
CRPR					Sn	05 13 17.6	-0.4
CRPR	Cabo Rojo, PR	1.34	172	⇑eP	Pb	05 13 01.4	-0.2
CRPR	Cabo Rojo, PR	1.34	172	eS	Sn	05 13 17.8	-0.2
CRPR	Cabo Rojo, PR	1.34	172	ePg	Pb	05 13 01.8	+0.2
CRPR				⇑eSg	Sn	05 13 18.0	0.0
CRPR				IAML		05 13 24.1	
	comp=N,359nm,0.3s						
CRPR	Cabo Rojo, PR	1.34	172	i P	Pg	05 13 02.0	-1.0
CRPR				eS	Sn	05 13 16.7	-1.3
CRPR				IAML		05 13 21.3	
	comp=Z,43nm,0.3s						
ECPR	Experimental S	1.36	138	⇑eP	Pb	05 13 02.1	+0.2
MLPR	Magueyes Islan	1.39	169	⇑eP	Pb	05 13 02.4	0.0
MLPR	Magueyes Islan	1.39	169	eS	Sb	05 13 19.6	-0.1
MLPR	Magueyes Islan	1.39	169	⇓ePg	Pg	05 13 02.8	-1.2
MLPR				⇑eSg	Sn	05 13 18.7	-0.4
MLPR				IAML		05 13 29.3	
	comp=N,195nm,0.3s						
OBIP	Obispado Ponce	1.46	152		Pb	05 13 03.2	-0.2
OBIP					Sb	05 13 21.3	-0.3
OBIP				IAML		05 13 25.8	
	comp=E,61nm,0.3s						
OBIP				IAML		05 13 29.1	
	comp=N,53nm,0.4s						
OBIP	Obispado Ponce	1.46	152	⇑eP	Pb	05 13 03.3	-0.2
OBIP	Obispado Ponce	1.46	152	eS	Sb	05 13 22.3	+0.7
HIDR	Higuey Centro	1.52	241	ePg	Pg	05 13 06.0	-0.5
HIDR				⇑eSg	Sg	05 13 28.7	+2.3
HIDR				IAML		05 13 31.0	
	comp=N,365nm,0.2s						
GCPR	Guaynabo City	1.55	131		Pb	05 13 05.0	-0.1
GCPR	Guaynabo City	1.55	131	⇑eP	Pb	05 13 05.6	+0.4
GCPR	Guaynabo City	1.55	131	eS	Sb	05 13 25.6	+1.2
SJG	San Juan	1.65	138		Pb	05 13 06.6	-0.1
SJG				IAML		05 13 33.8	
	comp=N,42nm,0.2s						
SJG	San Juan	1.65	138	⇑eP	Pb	05 13 06.7	-0.1
SJG	San Juan	1.65	138	eS	Sb	05 13 27.6	+0.4
SJG	San Juan	1.65	138	i P	Pb	05 13 06.7	-0.1
SJG				eS	Sn	05 13 25.7	+0.2
SJG				IAML		05 13 32.6	
	comp=Z,21nm,0.3s						
MIDR	Miches	1.68	258	⇑ePg	Pg	05 13 10.4	+0.9
MIDR				IAML		05 13 49.7	
	comp=N,30nm,2.9s						
HUMP	Col San Antoni	1.83	131		Pb	05 13 08.9	-1.0
HUMP					Sb	05 13 32.2	-0.2
HUMP	Col San Antoni	1.83	131	IAML		05 13 38.5	
	comp=N,38nm,0.2s						
HUMP				IAML		05 13 40.4	
	comp=N,36nm,0.2s						
HUMP	Col San Antoni	1.83	131	⇑eP	Pb	05 13 09.6	-0.2
HUMP	Col San Antoni	1.83	131	eS	Sb	05 13 32.0	-0.4
DR12	Loma Pena Alta	2.03	255	Pn	Pn	05 13 09.4	-0.8
HATOM	Hato Mayor del	2.03	255	⇓ePg	Pg	05 13 14.2	-2.0
HATOM				⇓eSg	Sg	05 13 42.5	-0.1
HATOM				IAML		05 13 52.2	
	comp=N,206nm,0.3s						
DR08	Loma La Naviza	2.59	262	⇓ePg	Pg	05 13 25.3	-1.5
DR08				⇑eSg	Sb	05 13 56.2	+1.9
DR08				IAML		05 14 05.1	
	comp=N,2μm,0.2s						

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*MDD **05** 05:17:31.7±0.9, 36°.63N×11°.40W, h36^{km}±25^{km}, Mb4.1/7, M_mb3.5/7, Error ellipse: s-maj=11.0km s-min=5.5km az=87.0*

*INMG **05** 05:17:34.3±1.3, 36°.62N×11°.32W, h34^{km}, ML1.9, Error ellipse: s-maj=6.6km s-min=4.3km az=98.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*

*IGIL **05** 05:17:34.1, 36°.63N×11°.22W, h21^{km}, ML1.7*

*CNRM **05** 05:17:37.9, 36°.43N×10°.74W, h31^{km}*

ISC 05 05:17:32.5±2.1**, 36°.59N**±0°.04×**11°.2W**±0°.1**, h35**^{km}**, n44,** σ1^{s}.51/64**, 6C-1D, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	Vila Bisbo	1.97	73	⇓eP	Pn	05 18 04.8	+1.4
PFVI				eS	Sn	05 18 28.1	+1.2
PFVI				i IAML		05 18 28.6	
PFVI				i IAML		05 18 28.6	
PFVI				i IAML		05 18 30.7	
PFVI	Vila Bisbo	1.97	73	P	Pn	05 18 04.7	+1.4
PFVI	Vila Bisbo	1.97	73	S	Sn	05 18 26.4	-0.4
MORF	Marmelete	2.15	70	eP	Pn	05 18 07.4	+1.5
MORF				eS	Sn	05 18 31.8	+0.4
MORF				IAML		05 18 34.5	
	comp=E,11nm,0.2s						
MORF	Marmelete	2.15	70	eP	Pn	05 18 07.5	+1.5
MORF				eS	Sn	05 18 32.5	+1.1
MORF				i IAML		05 18 34.5	
MORF				i IAML		05 18 34.7	
MORF				i IAML		05 18 34.9	
PTEO	Sao Teotonio	2.19	63	eP	Pn	05 18 08.0	+1.6
PTEO				eS	Sn	05 18 33.2	+0.9
PTEO				i IAML		05 18 38.3	
PTEO				i IAML		05 18 39.3	
PTEO				i IAML		05 18 44.6	
MESJ	Messejana	2.68	61	eP	Pn	05 18 14.6	+1.5
MESJ				eS	Sn	05 18 44.3	0.0
MESJ				IAML		05 18 46.1	
	comp=E,1.3nm,0.1s						
MESJ	Messejana	2.68	61	eP	Pn	05 18 15.1	+2.0
MESJ				eS	Sn	05 18 44.6	+0.3
MESJ				i IAML		05 18 47.0	
MESJ				i IAML		05 18 49.1	
MESJ				i IAML		05 18 52.1	
PBDV	Barranco-do-Ve	2.69	75	eP	Pn	05 18 15.2	+1.9
PBDV				eS	Sn	05 18 45.8	+1.1
PBDV				i IAML		05 18 47.9	
PBDV				i IAML		05 18 52.8	
PBDV				i IAML		05 18 55.9	
PCVE	Castro Verde	2.72	67	eP	Pn	05 18 15.2	+1.5
PCVE				eS	Sn	05 18 45.9	+0.4
PCVE				i IAML		05 18 48.3	
PCVE				i IAML		05 18 49.8	
PCVE				i IAML		05 18 50.2	
PMAFR	Mafra	2.80	32	eS	Sn	05 18 47.1	-0.4
PMAFR				i IAML		05 18 55.5	
PMAFR				i IAML		05 18 58.5	
PVAQ	Vaqueiros	2.89	73	eP	Pn	05 18 17.9	+1.8
PVAQ				eS	Sn	05 18 50.4	+0.7
PVAQ				i IAML		05 18 55.1	
PVAQ				i IAML		05 18 55.2	
PVAQ				i IAML		05 18 58.1	
MOE	Montemor	2.97	49	eS	Sn	05 18 51.1	-0.4
MOE				i IAML		05 18 52.8	
MOE				i IAML		05 18 53.9	
MOE				i IAML		05 18 54.8	
PBEJ	Beja	3.01	61	eS	Sn	05 18 53.0	+0.4
PBEJ				i IAML		05 18 54.4	
PBEJ				i IAML		05 18 57.9	
PBEJ				i IAML		05 18 59.4	
EGRO	El Granado	3.11	71	P	Pn	05 18 20.6	+1.6
EGRO				⇑iIVmb_VC		05 18 25.1	
	comp=E,169nm,SNR=1.5						
EGRO				S	Sn	05 18 56.2	+1.3
PARRA	Arraiolos	3.34	47	eP	Pn	05 18 23.6	+1.4
PARRA				eS	Sn	05 19 00.5	-0.3
PARRA				i IAML		05 19 01.4	
PARRA				i IAML		05 19 04.2	
PARRA				i IAML		05 19 07.5	
PMTG	Montargil	3.41	43	eP	Pn	05 18 24.2	+1.0
PMTG				eS	Sn	05 19 01.9	-0.5
PMTG				i IAML		05 19 06.0	
PMTG				i IAML		05 19 06.0	
PMTG				i IAML		05 19 09.6	
PSBE	So Bento	3.48	32	eS	Sn	05 19 03.8	-0.4
PSBE				i IAML		05 19 08.0	
PESTR	Estremoz	3.65	50	eS	Sn	05 19 08.1	-0.2
PBAR	Barrancos	3.66	63	eP	Pn	05 18 28.6	+1.9
PBAR				eS	Sn	05 19 08.2	-0.4
PBAR				i IAML		05 19 10.7	
PBAR				i IAML		05 19 11.4	
PBAR				i IAML		05 19 21.7	
EMIN	Mina Concepcio	3.79	71	P	Pn	05 18 27.3	-1.2
EMIN				⇑iIVmb_VC		05 18 37.1	
	comp=E,148nm,SNR=1.7						
EMIN				S	Sn	05 19 10.1	-1.8
PSARD	Sardoal	3.84	37	eS	Sn	05 19 11.9	-1.1
PSARD				i IAML		05 19 12.5	
PSARD				i IAML		05 19 13.8	
PSARD				i IAML		05 19 18.2	
EBAD	Badajoz	3.95	56	P	Pn	05 18 30.3	-0.4
EBAD				⇑iIVmb_VC		05 18 35.8	
	comp=E,157nm,SNR=1.8						
EBAD				S	Sn	05 19 14.7	-1.2
PMRV	Marv??o	4.12	45	eP	Pn	05 18 33.8	+0.7
PMRV				eS	Sn	05 19 18.8	-1.3
PMRV				i IAML		05 19 19.5	
PMRV				i IAML		05 19 20.3	
PMRV				i IAML		05 19 20.7	
ECAB	El Cabril	4.83	70	P	Pn	05 18 43.4	+0.6
ECAB				⇑iIVmb_VC		05 18 44.5	
	comp=E,113nm,SNR=1.3						
ECAB				S	Sn	05 19 36.0	-1.4
EADA	Adamuz	5.49	71	⇑iIVmb_VC		05 18 52.1	
	comp=E,109nm,SNR=1.0						
EADA				P	Pn	05 18 52.3	+0.5
EADA				S	Sn	05 19 52.8	-1.0
MVO	Moncorvo	5.60	34	eS	Sn	05 19 54.4	-2.2
ELOB	Lobios	5.80	24	P	Pn	05 18 55.7	-0.5
ELOB				⇑iIVmb_VC		05 18 59.4	
	comp=E,196nm,SNR=1.3						
ELOB				S	Sn	05 19 56.8	-4.7
LCRM	LCR	5.94	117	P	Pn	05 18 58.7	+0.6
LCRM	LCR	5.94	117	S	Sn	05 20 03.3	-1.6
OUK	Oukaimeden	6.03	152	P	Pn	05 19 01.0	+1.4
OUK	Oukaimeden	6.03	152	S	Sn	05 20 06.9	-0.7
TISM	Timmit	6.25	140	P	Pn	05 19 03.0	+0.8
TISM	Timmit	6.25	140	S	Sn	05 20 10.3	-2.1
PSIM	Granatula de C	6.30	67	P	Pn	05 19 03.6	+0.6
PSIM				S	Sn	05 20 12.1	-1.6
MD31	MD31	6.46	123	P	Pn	05 19 06.6	+1.4
MD31	MD31	6.46	123	S	Sn	05 20 13.7	-4.1
TIO	Tiouine	6.52	149	P	Pn	05 19 07.5	+1.3
TIO	Tiouine	6.52	149	S	Sn	05 20 17.5	-1.9
EQES	Quesada	6.59	77	S	Sn	05 20 18.7	-2.2
MDT	Midelt	6.60	123	P	Pn	05 19 08.5	+1.4
MDT	Midelt	6.60	123	S	Sn	05 20 18.2	-3.0
OUZM	OUZ	6.76	146	P	Pn	05 19 10.7	+1.4
OUZM	OUZ	6.76	146	S	Sn	05 20 25.4	+0.2

NIC 05 05:37:23.9, 34°.76N×33°.43E, h25^{km}, Ml1.8/8, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASGA	Asgata	0.15	280	P	Pb	05 37 29.1	0.0
ASGA				S	Sb	05 37 33.0	+0.6
ASGA				AML	AML	05 37 34.0	
	1.3nm,0.2s						
ASGA				AML	AML	05 37 34.1	
	1.2nm,0.2s						
CSS	Mathiatis	0.22	337	P	Pb	05 37 29.9	+0.1
CSS				S	Sb	05 37 34.8	+0.9
CSS				AML	AML	05 37 35.1	
	0.9nm,0.4s						
CSS				AML	AML	05 37 35.1	
	0.9nm,0.6s						
MVOU	Mavrovouni	0.30	32	P	Pb	05 37 31.4	+0.4
MVOU				S	Sb	05 37 36.5	+0.8
MVOU				AML	AML	05 37 38.3	
	0.5nm,0.3s						
MVOU				AML	AML	05 37 38.3	
	0.4nm,0.3s						
XYLS	Xyliatos	0.41	309	P	Pb	05 37 32.3	-0.3
XYLS				S	Sb	05 37 38.6	+0.1
XYLS				AML	AML	05 37 39.0	
	0.7nm,0.2s						
XYLS				AML	AML	05 37 44.0	
	0.4nm,0.2s						
APOL	The Sanctuary	0.48	260	P	Pb	05 37 34.0	+0.3
APOL				S	Sn	05 37 41.7	-1.1
APOL				AML	AML	05 37 42.1	
	0.3nm,0.3s						
APOL				AML	AML	05 37 42.7	
	0.3nm,0.2s						
TROD	Troodos	0.50	292	P	Pb	05 37 34.1	-0.2
TROD				S	Sn	05 37 42.5	-1.2
TROD				AML	AML	05 37 46.9	
	0.3nm,0.3s						
TROD				AML	AML	05 37 47.0	
	0.2nm,0.4s						
ALFC	Alefka	0.79	300	P	Pb	05 37 39.1	+0.1
ALFC				S	Sn	05 37 51.0	+0.4
ALFC				AML	AML	05 37 53.5	
	0.2nm,0.3s						
ALFC				AML	AML	05 37 54.1	
	0.2nm,0.7s						
AKMS	Akamas	0.94	286	P	Pb	05 37 41.4	-0.1
AKMS				S	Sn	05 37 55.1	+0.9
AKMS				AML	AML	05 37 56.6	
	0.1nm,0.8s						
AKMS				AML	AML	05 38 09.9	
	0.2nm,1.2s						

NIC 05 05:38:02.8, 34°.79N×33°.36E, h24^{km}, Ml1.9/8, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASGA	Asgata	0.10	270	P	Pb	05 38 07.0	-0.2
ASGA				S	Sb	05 38 10.9	+0.7
ASGA				AML	AML	05 38 12.0	
	1.6nm,0.2s						
ASGA				AML	AML	05 38 13.7	
	1.3nm,0.3s						
CSS	Mathiatis	0.18	351	P	Pb	05 38 08.0	-0.1
CSS				S	Sb	05 38 12.6	+0.9
CSS				AML	AML	05 38 13.1	
	1.3nm,0.4s						
CSS				AML	AML	05 38 13.1	
	1.4nm,0.6s						
MVOU	Mavrovouni	0.32	44	P	Pb	05 38 09.2	-0.8
MVOU				S	Sb	05 38 15.5	+0.6
MVOU				AML	AML	05 38 16.3	
	0.6nm,0.4s						
MVOU				AML	AML	05 38 16.3	
	0.4nm,0.4s						
XYLS	Xyliatos	0.34	311	P	Pb	05 38 10.3	-0.1
XYLS				S	Sb	05 38 16.6	+0.9
XYLS				AML	AML	05 38 17.0	
	1.1nm,0.2s						
XYLS				AML	AML	05 38 18.8	
	0.5nm,0.3s						
APOL	The Sanctuary	0.43	254	P	Pb	05 38 12.0	+0.3
APOL				S	Sn	05 38 19.9	-0.7
APOL				AML	AML	05 38 20.8	
	0.5nm,0.2s						
APOL				AML	AML	05 38 20.9	
	0.4nm,0.2s						
TROD	Troodos	0.44	292	P	Pb	05 38 12.0	-0.1
TROD				S	Sb	05 38 19.5	+1.1
TROD				AML	AML	05 38 24.2	
	0.2nm,0.4s						
TROD				AML	AML	05 38 24.9	
	0.4nm,0.3s						
PARAL	Paralimni	0.59	69	P	Pb	05 38 14.8	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PARAL				S	Sn	05 38 24.3	-0.3
PARAL				AML	AML	05 38 26.2	
	0.3nm,0.8s						
PARAL				AML	AML	05 38 26.5	
	0.3nm,0.6s						
ALFC	Alefka	0.73	301	P	Pb	05 38 17.3	+0.4
ALFC				S	Sn	05 38 28.1	0.0
ALFC				AML	AML	05 38 31.2	
	0.2nm,0.4s						
ALFC				AML	AML	05 38 32.2	
	0.3nm,0.5s						

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*GCG **05** 05:52:56.9±1.6, 15°.13N×88°.80W, h9^{km}±19^{km}, MD3.7, ML3.5, MW2.9*

*CATAC **05** 05:52:56.7±0.2, 15°N±1°×8°9W±°, h5^{km}±1^{km}, M3.3/20, MLv3.3/20, Error ellipse: s-maj=3.3km s-min=2.6km az=100.4, confirmed*

*SNET **05** 05:52:57.5±1.2, 15°.12N×88°.83W, h5^{km}, ML3.3*

ISC 05 05:52:57.0±1.2, **15°.14N**±0°.02×**88°.85W**±0°.03, **h6**^{km}±10^{km}, **n61**, σ**0^{s}.77**/67, **Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IZABA	Izabal, Puerto	0.64	23	P	Pg	05 53 08.6	-0.7
IZABA	Izabal, Puerto	0.64	23	S	Sg	05 53 18.1	+0.5
ZAFR2	Estanzuela, Za	0.74	221	*i* P	Pg	05 53 11.4	0.0
ZAFR2				*e*S	Sb	05 53 22.9	+0.2
ESQI	Esquipulas	0.75	220	*e*P	Pg	05 53 11.6	+0.1
ESQI				*e*S	Sb	05 53 22.6	-0.5
ESQI	Esquipulas	0.75	220	P	Pg	05 53 11.3	-0.2
MTO3	Montecristo	0.89	214	*i* P	Pg	05 53 13.8	-0.3
MTO3	Montecristo	0.89	214	P	Pg	05 53 13.8	-0.3
MTO3	Montecristo	0.89	214	S	Sg	05 53 26.2	+0.4
LLGN	La Laguna	0.98	186	S	Sb	05 53 29.1	-0.5
LLGN	La Laguna	0.98	186	P	Pg	05 53 15.6	-0.2
UNIC	Universidad Ca	1.34	211	P	Pn	05 53 21.7	-0.6
UNIC	Universidad Ca	1.34	211	S	Sn	05 53 40.4	0.0
PAVA	Las Pavas	1.42	184	P	Pn	05 53 22.1	-1.4
PAVA	Las Pavas	1.42	184	S	Sn	05 53 42.6	+0.1
CEDA	San Andres	1.43	202	P	Pn	05 53 22.8	-0.7
CEDA	San Andres	1.43	202	S	Sb	05 53 42.6	0.0
SCLA	Alcaldia de Sa	1.44	175	P	Pn	05 53 22.3	-1.3
SCLA	Alcaldia de Sa	1.44	175	S	Sg	05 53 43.3	+0.1
UDBS	Universidad Do	1.45	192	S	Sb	05 53 42.9	-0.2
UDBS	Universidad Do	1.45	192	P	Pn	05 53 22.8	-1.0
UEES	Universidad Ev	1.47	195	P	Pn	05 53 22.7	-1.4
UEES	Universidad Ev	1.47	195	S	Sg	05 53 43.9	-0.4
PMON	Piamonte	1.49	198	S	Sg	05 53 44.8	-0.2
PMON	Piamonte	1.49	198	P	Pn	05 53 23.3	-1.1
UESV	Universidad de	1.50	178	S	Sb	05 53 44.3	-0.3
UESV	Universidad de	1.50	178	P	Pn	05 53 22.9	-1.5
CEVE	Cerro Verde	1.51	210	*e*P	Pn	05 53 24.9	+0.1
CEVE				*e*S	Sg	05 53 47.0	+1.4
CEVE	Cerro Verde	1.51	210	P	Pn	05 53 24.3	-0.5
CEVE	Cerro Verde	1.51	210	S	Sg	05 53 45.7	+0.2
LOMA	Loma Larga	1.52	192	P	Pn	05 53 23.1	-1.8
LOMA	Loma Larga	1.52	192	S	Sn	05 53 44.7	-0.4
NUBE	Las Nubes	1.53	216	*e*P	Pn	05 53 25.2	+0.2
NUBE				*e*S	Sb	05 53 45.5	0.0
NUBE	Las Nubes	1.53	216	P	Pn	05 53 24.9	-0.1
NUBE	Las Nubes	1.53	216	S	Sg	05 53 46.1	-0.1
AVCB	Coban	1.54	282	*e*S	Sg	05 53 48.9	+2.3
AVCB				IAML		05 53 51.2	
	comp=E,2μm,0.3s						
APG	El Apazote	1.57	265	*e*P	Pn	05 53 25.3	-0.4
JAYA	Jayaque - finc	1.59	202	*e*P	Pn	05 53 25.6	-0.2
JAYA	Jayaque - finc	1.59	202	*e*P	Pn	05 53 25.5	-0.2
JAYA	Jayaque - finc	1.59	202	P	Pn	05 53 25.7	-0.2
JAYA	Jayaque - finc	1.59	202	S	Sb	05 53 47.3	0.0
TECO	Alcaldia de Te	1.60	178	S	Sn	05 53 46.7	-0.1
LALI	Alcalda de L	1.71	196	S	Sn	05 53 49.9	+0.5
FAME	Alcaldia de Sa	1.72	221	P	Pn	05 53 27.5	+0.1
PACA	Pacayal	1.74	163	P	Pn	05 53 28.4	+0.6
PACA	Pacayal	1.74	163	S	Sn	05 53 50.5	+0.1
CNRM	Centro Naciona	1.78	158	S	Sb	05 53 51.9	-0.8
BLLM	Bellamira	1.79	161	*e*P	Pn	05 53 28.4	-0.1
TGUH	Tegucigalpa,Un	1.87	125	P	Pn	05 53 28.4	-1.2
TGUH				S	Sn	05 53 53.4	-0.2
PETF	Flores	2.02	331	*e*P	Pn	05 53 31.3	-0.3
PETF				*e*S	Sn	05 53 56.6	-0.6
PETF				IAML		05 54 07.1	
	comp=N,205nm,0.5s						
PETF	Flores	2.02	331	P	Pn	05 53 31.1	-0.5
PETF	Flores	2.02	331	S	Sn	05 53 57.0	-0.1
LCND	La Caada	2.04	153	*e*P	Pn	05 53 32.5	+0.5
LCND	La Caada	2.04	153	P	Pn	05 53 32.5	+0.5
CNCH	Conchagua	2.10	152	*e*P	Pn	05 53 33.4	+0.6
CNCH	Conchagua	2.10	152	P	Pn	05 53 33.4	+0.6
YUSH	Yuscaran	2.27	121	P	Pn	05 53 34.9	-0.3
YUSH	Yuscaran	2.27	121	S	Sn	05 54 04.5	+1.0
CSGN	Cosiguina Volc	2.49	150	S	Sn	05 54 10.7	+1.8
POTN	Potosi Cosigui	2.50	148	P	Pn	05 53 38.4	+0.2
OCON	Estacion meteo	2.74	123	P	Pn	05 53 42.0	+0.4
POLN	Al Sur del Vol	3.17	141	S	Sn	05 54 27.6	+2.0

NNC 05 05:59:41.9±6.9, **42°.18N**×**88°.02E**, **h0**^{km}, **mb3.9**, **mpv3.5**, **5C**, **Error ellipse: s-maj=52.6km s-min=41.6km az=121.0**, **Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	Makanchi Array	6.17	320	Pn	Pn	06 01 13.4	-0.9
	1.3nm,0.7s,baz=133,slow=13,SNR=7.7						
MK31				⇑Sn	Sn	06 02 27.3	+1.7
	5.3nm,0.8s,baz=141,slow=23						
MAKZ	Makanchi	6.33	319	⇑Pn	Pn	06 01 15.8	-0.7
	14nm,1.6s						
MAKZ				⇑Sn	Sn	06 02 30.0	+0.5
	10nm,1.2s						
PDGK	Podgornoye	6.39	283	⇑Pn	Pn	06 01 18.4	+1.0
	14nm,2.9s						
PDGK				⇑Sn	Sn	06 02 33.0	+2.0
	3.3nm,0.6s						

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*IDC **05** 06:01:16.4±0.7, 36°.68N×140°.57E, h0^{km}, mb3.7/11, mbtmp3.8/12, ML3.7/1, Error ellipse: s-maj=18.3km s-min=12.9km az=171.0*

*NIED **05** 06:01:17.9, 36°.78N×140°.57E, h9^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-5.08; M$_{\theta\theta}$0.29; M$_{\phi\phi}$4.79; M$_{r\theta}$1.90; M$_{\theta\phi}$-0.53; M$_{\phi r}$3.01; Fault plane solution: M$_0$6.07000×10^{14} NP1: φ$_s$338.00000°, δ32.00000°, λ-120.00000°. NP2: φ$_s$193.00000°, δ62.00000°, λ-72.00000°.*

*JMA **05** 06:01:17.9±0.0, 36°.8N±0°.1×140°.6E±0°.2, h9^{km}, MV3.9/20, NORTHERN IBARAKI PREF*

JMA Felt II J1 at NORTHERN IBARAKI PREF .

ISC 05 06:01:17.7±1.1, **36°.75N**±0°.03×**140°.50E**±0°.04, **h4**^{km}±8^{km}, **n42**, σ**1^{s}.78**/41, **mb3.7**/11, **2D**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.15	157	P	Pg	06 01 21.4	+0.8
JHO				S	Sg	06 01 24.1	+1.5
JFFD	Fukushimafurud	0.35	9	⇓*i*P	Pg	06 01 24.2	-0.2
JFFD				⇓*e*S	Sg	06 01 28.4	-0.5
ONAJ	Iwakimizuishiy	0.43	34	P	Pg	06 01 25.3	-0.7
ONAJ				S	Sg	06 01 30.8	-0.8
JSB	Shiboa	0.51	296	P	Pb	06 01 29.1	-0.2
JSB				S	Sb	06 01 37.2	+0.1
JYT	Yasato	0.57	205	P	Pb	06 01 29.8	-0.5
JYT				S	Sb	06 01 38.1	-0.7
JFK	Kawauchi	0.69	26	*e*P	Pg	06 01 30.5	-0.4
JFK				S	Sg	06 01 38.8	-1.0
JOTO	OTAMA OYAMA	0.82	351	*i* P	Pg	06 01 33.3	-0.2
JOTO				S	Sg	06 01 43.9	-0.2
MJAR	Matsushiro Arr	1.85	264	Pg	Pn	06 01 51.1	+0.8
	12nm,0.3s,baz=87,slow=15,SNR=215						
MJAR				Lg	Lg	06 02 16.6	
	17nm,0.3s,baz=112,slow=22,SNR=5.6						
MJAR				LR	LR	06 02 48.3	
	comp=Z,91nm,20.1s,baz=15,slow=48						
MAJO	Matsushiro	1.85	264	P	Pb	06 01 51.5	-0.7
JSD	Sado	2.20	307	P	Pn	06 01 56.0	+1.0
JSD	Sado	2.20	307	S	Sb	06 02 25.1	-0.5
JGF	Kuroka	2.79	247	P	Pn	06 02 05.4	+2.3
JGF	Kuroka	2.79	247	S	Sn	06 02 40.1	+2.9
INU	Inuyama	3.15	245	S	Sn	06 02 48.5	+2.4
JHJ	Hachijo jima 2	3.67	189	Pn	Pn	06 02 13.1	-2.2
	17nm,0.3s,baz=28,slow=17,SNR=1.8						
JHJ				Sn	Sn	06 02 57.5	-1.5
	9.1nm,0.3s,baz=88,slow=18,SNR=1.6						
	93nm,0.7s						
JHJ2	Mitsune	3.67	189	P	Pn	06 02 17.4	+2.1
JTM	Tenmabayashi	4.06	6	P	Pn	06 02 21.8	+1.2
ERM	Erimo	5.65	21	P	Pn	06 02 46.2	+3.8
ERM	Erimo	5.65	21	S	Sn	06 03 52.1	+4.4
JEM	Erimo	5.65	21	P	Pn	06 02 46.3	+3.9
JEM	Erimo	5.65	21	S	Sn	06 03 52.0	+4.3
SONM	Songino Array	27.34	305	P	P	06 07 03.1	-0.7
	0.5nm,0.4s,baz=92,slow=8.9,SNR=2.5						
	0.5nm,0.4s						
H11N2	WAKE ISLAND Hy	28.64	119	T	T	06 36 58.8	
	baz=312,slow=75,SNR=195						
H11N1	WAKE ISLAND Hy	28.65	119	T	T	06 36 59.9	
	baz=312,slow=75,SNR=211						
H11N3	WAKE ISLAND Hy	28.66	119	T	T	06 37 00.1	
	baz=312,slow=75,SNR=167						
H11S1	WAKE ISLAND Hy	29.33	121	T	T	06 37 50.3	
	baz=314,slow=76,SNR=637						
H11S3	WAKE ISLAND Hy	29.33	121	T	T	06 37 52.0	
	baz=314,slow=76,SNR=306						
H11S2	WAKE ISLAND Hy	29.35	121	T	T	06 37 52.3	
	baz=314,slow=76,SNR=361						
ZALV	Zalesovo Beam	41.56	313	P	P	06 09 05.1	-1.2
	0.9nm,0.5s,baz=100,slow=6.5,SNR=3.5						
	0.9nm,0.5s						
MKAR	Makanchi Array	43.65	302	P	P	06 09 23.1	-0.2
	0.5nm,0.6s,baz=96,slow=13,SNR=3.3						
	0.5nm,0.6s						
KURBB	Kurchatov Arra	45.60	308	P	P	06 09 39.2	+0.4
	0.9nm,0.3s,baz=86,slow=8.2,SNR=4.1						
	0.9nm,0.3s						
ILAR	Eielson Array	50.13	32	P	P	06 10 13.7	0.0
	0.4nm,0.8s,baz=274,slow=8.1,SNR=4.1						
	0.4nm,0.8s						
BVAR	Borovoye Array	50.22	312	P	P	06 10 14.2	-0.4
	0.4nm,0.6s,baz=99,slow=8.9,SNR=2.5						
	0.4nm,0.6s						
WRA	Warramunga Arr	56.68	187	P	P	06 11 00.8	-1.6
	1.0nm,0.6s,baz=4.5,slow=7.3,SNR=8.5						
	1.0nm,0.6s						
ASAR	Alice Springs	60.41	187	P	P	06 11 27.8	-0.6
	0.5nm,0.8s,baz=28,slow=3.8,SNR=4.5						
	0.5nm,0.8s						
NVAR	Mina Array Bea	75.75	53	P	P	06 13 05.0	+0.1
	0.9nm,0.7s,baz=293,slow=5.4,SNR=7.3						
	0.9nm,0.7s						
PDAR	Pinedale Array	78.39	45	P	P	06 13 18.9	-0.9
	0.3nm,0.5s,baz=285,slow=2.3,SNR=3.8						
	0.3nm,0.5s						
TXAR	Lajitas Array	90.88	52	P	P	06 14 22.3	-0.6
	0.3nm,0.5s,baz=302,slow=2.8,SNR=7.5						
	0.3nm,0.5s						
LPAZ	La Paz	147.47	59	PKPbc	PKPbc	06 21 02.4	-1.8
	1.0nm,0.6s,baz=304,slow=3.6,SNR=4.0						
H03N2	Juan Fernandez	147.72	96	T	T	09 05 54.8	
	baz=291,slow=76,SNR=24						
H03N3	Juan Fernandez	147.74	96	T	T	09 05 55.3	
	baz=291,slow=76,SNR=17						
H03N1	Juan Fernandez	147.74	96	T	T	09 05 56.1	
	baz=291,slow=76,SNR=21						

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*IDC **05** 06:03:39.0±1.1, 1°.66N×122°.40E, h0^{km}, mb3.8/5, mbtmp3.8/5, MS3.1/2, Error ellipse: s-maj=202.6km s-min=20.3km az=63.0*

*DJA **05** 06:03:39.6±0.5, 2°N±6°×12°3E±°, h10^{km}, M3.9/8, MLv3.9/8*

ISC 05 06:03:44.1±1.1, **1°.8N**±0°.1×**122°.58E**±0°.08, **h35**^{km}, **n13**, σ**1^{s}.31**/11, **mb4.0**/5, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	Gorontalo	1.24	160	P	Pn	06 04 02.7	-2.2
MRSI	Marisa	1.46	206	P	Pn	06 04 07.7	-0.3
MNI	Manado	2.29	99	P	Pn	06 04 19.2	-0.2
LUWI	Luwuk	2.83	176	P	Pn	06 04 28.4	+1.5
APSI	Ampana	2.85	199	P	Pn	06 04 28.0	+0.9
MPSI	Mapaga	3.05	242	P	Pn	06 04 28.5	-1.4
DAV	Davao City (W)	6.03	30	LR	LR	06 07 34.4	
	comp=Z,69nm,18.9s,baz=201,slow=38						
WRA	Warramunga Arr	24.50	152	P	P	06 08 59.4	-0.9
	1.4nm,0.7s,baz=328,slow=10,SNR=10						
	1.4nm,0.7s						
ASAR	Alice Springs	27.61	157	P	P	06 09 28.6	+0.2
	0.4nm,0.6s,baz=331,slow=9.3,SNR=4.5						
	0.4nm,0.6s						
MKAR	Makanchi Array	56.87	328	P	P	06 13 26.8	+1.4
	1.0nm,0.7s,baz=123,slow=8.9,SNR=6.8						
	1.0nm,0.7s						
ZALV	Zalesovo Beam	60.51	335	P	P	06 13 51.4	+0.8
	0.5nm,0.4s,baz=142,slow=7.3,SNR=3.6						
	0.5nm,0.4s						
KURBB	Kurchatov Arra	61.20	330	P	P	06 13 54.8	-0.6
	1.8nm,0.8s,baz=130,slow=5.8,SNR=9.3						
	1.8nm,0.8s						
EIL	Elat	87.06	299	LR	LR	07 01 59.4	
	comp=Z,19nm,18.0s,baz=49,slow=40						

RSNC 05 06:10:40.5±0.0, **7°N**±1°×**7°3W**±°, **h147**^{km}±2^{km}, **M2.9**, **mb3.2**, **mB5.3**, **ML2.5**, **Mw(mB)4.8**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.24	178	P	Pn	06 11 00.2	-0.6
BARC				S	Sn	06 11 15.0	-1.3
BRJC	Barrancabermej	0.57	285	P	Pn	06 11 02.0	+0.1
BRJC				S	Sn	06 11 19.1	+1.0
PAMC	Pamplona, Colo	0.70	44	P	Pn	06 11 03.1	-0.2
PAMC				S	Sn	06 11 20.2	-0.4
RUSC	La Rusia	0.94	173	P	Pn	06 11 04.1	-1.0
RUSC				S	Sn	06 11 22.8	-0.9
PTBC	PUERTO BERRIO,	1.29	257	P	Pn	06 11 06.7	-1.0
PTBC				S	Sn	06 11 27.8	-0.7
OCAC	Ocana	1.41	355	P	Pn	06 11 08.3	-0.7
OCAC				S	Sn	06 11 30.0	-0.9
SPBC	San Pablo de B	1.46	217	P	Pn	06 11 09.2	-0.4
SPBC				S	Sn	06 11 30.0	-1.8
CHIC	Chingaza	2.25	194	P	Pn	06 11 18.3	-0.6
CHIC				S	Sn	06 11 47.6	-0.8
ROSC	El Rosal	2.27	210	P	Pn	06 11 20.0	+0.9
ROSC				S	Sn	06 11 47.8	-1.0
CVER	Cruz Verde, Cu	2.46	201	P	Pn	06 11 21.4	0.0
CVER				S	Sn	06 11 53.3	+0.4
UREC	San Jos de Ur	2.50	292	P	Pn	06 11 20.1	-1.4
UREC				S	Sn	06 11 50.7	-2.3
GUY2C	Guyana, Caldas	2.69	234	P	Pn	06 11 24.5	+0.2
GUY2C				S	Sn	06 11 57.3	-0.7
VILC	Villavicencio,	2.75	191	P	Pn	06 11 23.8	-0.9
VILC				S	Sn	06 11 58.0	-0.8
NIZA	Niza - Manizal	2.87	232	P	Pn	06 11 25.5	-0.9
NIZA				S	Sn	06 12 03.8	+2.0
CBOC	Ciudad Bolivar	2.96	251	P	Pn	06 11 27.7	+0.2
CBOC				S	Sn	06 12 05.0	+1.3
DBBC	Dabeiba	3.00	274	P	Pn	06 11 28.4	+0.5
DBBC				S	Sn	06 12 04.0	-0.5
ARGC	Ariguani, Magd	3.19	341	P	Pn	06 11 30.3	+0.2
ARGC				S	Sn	06 12 08.8	+0.2
SDV	Santo Domingo	3.25	51	P	Pn	06 11 28.9	-2.3
SDV				S	Sn	06 12 10.5	+0.1
PRAC	Prado	3.53	209	P	Pn	06 11 34.0	-0.6
PRAC				S	Sn	06 12 15.6	-0.9
ORTC	Ortega, Tolima	3.55	215	P	Pn	06 11 34.5	-0.4
ORTC				S	Sn	06 12 16.6	-0.5
PLMC	San Jos del P	3.62	238	P	Pn	06 11 35.8	-0.1
PLMC				S	Sn	06 12 18.3	-0.5
URMC	La Uribe, Meta	3.75	198	P	Pn	06 11 37.2	-0.4
URMC				S	Sn	06 12 20.8	-1.0
YOTC	Yotoco, Valle	4.23	228	P	Pn	06 11 42.2	-1.6
YOTC				S	Sn	06 12 33.2	+0.2
MACC	Macarena, Meta	4.70	188	P	Pn	06 11 46.4	-3.6
MACC				S	Sn	06 12 38.5	-5.6
URIC	Uribia, Colomb	4.98	14	P	Pn	06 11 50.8	-2.9
URIC				S	Sn	06 12 47.3	-3.4
JAMC	Jamundi, Valle	4.99	224	P	Pn	06 11 54.3	+0.3
	4.8nm,1.5s						
JAMC				S	Sn	06 12 51.3	0.0
	4.8nm,1.5s						
GARC	Garzon, Huila	5.15	207	P	Pn	06 11 53.4	-2.8
GARC				S	Sn	06 12 52.2	-3.0
FLOC	Florencia	5.76	205	P	Pn	06 12 02.4	-1.7
	4.1nm,1.4s						
BBAC	Balboa, Cauca	6.26	220	P	Pn	06 12 10.8	-0.1
	3.6nm,0.8s						
CRUC	La Cruz	6.43	216	P	Pn	06 12 13.4	0.0

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*KRNET **05** 06:13:22.9±0.1, 42°.20N×78°.39E, h15^{km}, mb2.7*

*SOME **05** 06:13:23.6, 42°.18N×78°.35E, h10^{km}*

ISC 05 06:13:23.9±1.2, **42°.21N**±0°.04×**78°.31E**±0°.03, **h10**^{km}±10^{km}, **n18**, σ**1^{s}.48**/36, **12C-2D**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.28	14	⇑*i*P	Pg	06 13 28.8	-0.9
PRZ				⇑*i*S	Sg	06 13 33.0	-0.5
TARG	Taragay, Kyrgy	0.61	218	⇓*i*P	Pg	06 13 35.4	-0.4
TARG				⇓*i*S	Sg	06 13 44.2	+0.4
KDJ	Kajisay	0.84	265	⇑*i*P	Pg	06 13 39.8	-0.3
KDJ				⇑*i*S	Sb	06 13 52.3	+0.1
UZB	Uzynbulak	1.07	29	*e*P	Pb	06 13 42.6	-2.1
	4.2nm,0.2s						
UZB				*e*S	Sb	06 13 56.0	-2.9
	23nm,0.3s						
SHLS	Shalkode	1.27	42	*e*P	Pg	06 13 50.6	+2.3
	9.3nm,0.2s						
SHLS				*e*S	Sg	06 14 09.8	+4.9
	48nm,0.4s						
KPKS	Kokpek	1.29	12	*e*P	Pn	06 13 47.1	-1.0
	0.3nm,0.2s						
KPKS				*e*S	Sb	06 14 03.6	-1.3
	6.3nm,0.3s						
TNSS	Tian-Shan	1.30	310	*e*P	Pb	06 13 48.6	-0.1
	1.3nm,0.1s						
TNSS				*e*S	Sn	06 14 06.4	+0.1
	4.9nm,0.2s						
KOTS	Kotyrbulak	1.35	320	*e*P	Pb	06 13 49.6	+0.2
	8.3nm,0.2s						
KOTS				*e*S	Sg	06 14 08.3	+0.9
	22nm,0.2s						
MTBS	Maitube	1.66	304	*e*P	Pb	06 13 55.3	+0.6
	3.8nm,0.2s						
MTBS				*e*S	Sg	06 14 17.9	+0.5
	38nm,0.2s						
BOOM	Boomskoye usch	1.78	280	⇑*i*P	Pb	06 13 56.8	+0.1
BOOM				⇑*i*S	Sg	06 14 21.3	+0.3
KST	Kastek	1.92	296	*e*P	Pg	06 14 00.2	-0.5
	3.3nm,0.2s						
KST				*e*S	Sg	06 14 26.3	+0.7
	55nm,0.7s						
ARXS	Arharly	2.03	350	*e*P	Pb	06 14 00.9	-0.1
	10nm,0.3s						
ARXS				*e*S	Sg	06 14 27.9	-1.4
	7.6nm,0.2s						
TKM2	Tokmak 2	2.12	290	⇑*i*P	Pb	06 14 01.8	-0.8
TKM2				⇑*i*S	Sb	06 14 30.1	+0.9
DGS	Degeres	2.13	300	*e*P	Pb	06 14 03.9	+1.1
	1.8nm,0.3s						
DGS				*e*S	Sg	06 14 32.6	+0.1
	27nm,0.4s						
KUU	Kurty	2.22	320	*e*P	Pb	06 14 05.2	+1.1
	6.4nm,0.1s						
KUU				*e*S	Sg	06 14 34.8	-0.3
	19nm,0.3s						
JNKS	Jany-Kuch	2.30	241	⇑*e*P	Pb	06 14 04.2	-1.4
JNKS				⇑*e*S	Sb	06 14 33.4	-0.8
KRBS	Karabastau	2.44	308	*e*P	Pb	06 14 09.2	+1.3
	2.4nm,0.2s						
KRBS				*e*S	Sg	06 14 41.6	-0.6
	17nm,0.4s						
UCH	Uchtor	2.82	272	⇑*e*P	Pn	06 14 11.6	+2.1
UCH				⇑*i*S	Sb	06 14 47.0	-2.3

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*ASRS **05** 06:34:49.0±1.4, 54°.27N×86°.92E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 05 06:34:45.8±3.7, **54°.35N**×**87°.45E**, **h0**^{km}, **mbtmp2.8**/2, **ML2.4**/2, **Error ellipse: s-maj=31.0km s-min=21.8km az=31.0**, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.60	256	I	I	06 44 40.0	
	0.1nm,1.3s,baz=73,slow=270,SNR=1.7						
ZALV	Zalesovo Beam	1.60	256	Pg	Pn	06 35 14.0	-1.2
	1.6nm,0.3s,baz=75,slow=17,SNR=13						
ZALV				Lg	Lg	06 35 36.6	
	1.2nm,0.3s,baz=83,slow=29,SNR=5.7						
KURBB	Kurchatov Arra	6.60	239	Pn	Pn	06 36 25.6	+1.6
	0.1nm,0.3s,baz=49,slow=14,SNR=2.0						
KURBB				Sn	Sn	06 37 36.3	-3.6
	baz=138,slow=40						
KURBB				Lg	Lg	06 38 13.6	
	0.1nm,0.3s,baz=73,slow=34,SNR=1.3						
	0.4nm,0.3s						
MKAR	Makanchi Array	8.25	205	Pn	Pn	06 36 46.9	+0.3
	baz=25,slow=13,SNR=2.1						
MKAR				Lg	Lg	06 39 09.4	
	baz=8.4,slow=39,SNR=0.9						
	0.4nm,0.8s						

IDC 05 06:39:47.9±53.0, **22°.67S**×**173°.89W**, **h0**^{km}, **mb3.8**/3, **mbtmp3.8**/3, **Error ellipse: s-maj=1005.0km s-min=184.8km az=87.0**, **Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.38	247	P	P	06 47 27.6	-0.2
	1.3nm,0.6s,baz=88,slow=14,SNR=3.3						
	1.3nm,0.6s						
ASAR	Alice Springs	47.78	258	P	P	06 48 27.4	0.0
	0.2nm,0.3s,baz=92,slow=6.8,SNR=7.1						
	0.2nm,0.3s						
WRA	Warramunga Arr	48.12	263	P	P	06 48 29.8	-0.2
	1.0nm,0.4s,baz=103,slow=8.1,SNR=13						
	1.0nm,0.4s						

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*TAP **05** 06:46:31.0, 22°.73N×120°.41E, h24^{km}, ML3.6, B*

ISC 05 06:46:31.6±0.9, **22°.73N**±0°.02×**120°.38E**±0°.02, **h32**^{km}±5^{km}, **n111**, σ**0^{s}.99**/181, **3C-3D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGLT	Jiouru	0.10	91	P	Pb	06 46 36.3	-0.9
SGLT				*i* S	Sb	06 46 41.0	0.0
TWM1	Shoushan	0.10	21	⇓*i*P	Pb	06 46 36.9	-0.3
WSSB	Gushan	0.14	233	⇑*i*P	Pb	06 46 36.8	-0.7
WSSB				*i* S	Sb	06 46 41.5	0.0
KAU	Kaohsiung	0.17	203	*i* P	Pb	06 46 37.1	-0.6
KAU				S	Sb	06 46 42.3	+0.4
SSD	Sandimen	0.23	85	⇑*i*P	Pn	06 46 37.7	-1.2
SSD				S	Sb	06 46 42.5	-0.5
MASBT	Mashibuluo	0.26	116	⇑*i*P	Pb	06 46 37.9	-0.8
MASBT				*i* S	Sb	06 46 43.0	-0.5
SHHT	Tainan City	0.29	354	P	Pn	06 46 39.6	-0.1
SHHT				S	Sn	06 46 46.3	+1.3
TAI1	Yung-k'ang	0.34	335	*e*P	Pn	06 46 39.9	-0.4
TAI1				S	Sn	06 46 46.5	+0.3
CHN3	Shinhua	0.35	357	P	Pn	06 46 40.5	0.0
CHN3				S	Sn	06 46 47.8	+1.5
WLCH	Liuqiu	0.38	180	*i* P	Pn	06 46 41.1	+0.4
WLCH				*e*S	Sn	06 46 49.6	+2.7
TWP	Hsiaoliuchiu	0.38	183	P	Pn	06 46 41.0	+0.1
TWP				*e*S	Sn	06 46 49.0	+1.9
SGST	Jiashian	0.40	28	*e*P	Pb	06 46 39.7	-0.9
SGST				*e*S	Sn	06 46 46.6	-1.0
SCZT	Fangliau	0.42	148	⇓*i*P	Pn	06 46 40.6	-0.8
SCZT				*i* S	Sn	06 46 47.5	-0.5
SSHA	Shanhua	0.42	348	P	Pn	06 46 41.4	0.0
SSHA				S	Sn	06 46 49.4	+1.4
CHN1	Nanshi	0.47	16	⇓*i*P	Pn	06 46 41.8	-0.4
CHN1				S	Sn	06 46 49.9	+0.3
SCLT	Jiali	0.48	339	P	Pn	06 46 41.8	-0.5
SCLT				*e*S	Sn	06 46 50.4	+0.9
TSCK	Chigu Township	0.50	327	P	Pn	06 46 42.1	-0.4
TSCK				S	Sn	06 46 50.2	+0.2
SNST	Tainan City	0.50	12	P	Pn	06 46 42.1	-0.5
SNST				S	Sn	06 46 50.6	+0.4
ECL	Taimali	0.54	104	P	Pn	06 46 42.3	-0.8
ECL				S	Sn	06 46 49.9	-1.2
TWK	Hsinying	0.55	10	*i* P	Pn	06 46 43.1	-0.2
TWK				S	Sn	06 46 52.0	+0.7
EAST	Anshuo	0.55	128	*i* P	Pn	06 46 43.0	-0.2

EAST				S	Sn	06 46 51.6	+0.3
WTP	Ta-pu	0.56	22	P	Pn	06 46 43.0	-0.4
WTP				S	Sn	06 46 51.8	+0.2
STYH	Taoyuan	0.57	39	P	Pn	06 46 43.2	-0.3
STYH				S	Sn	06 46 51.4	-0.4
TAW	Tawu	0.60	128	P	Pn	06 46 43.6	-0.3
TAW				*i* S	Sn	06 46 52.7	+0.2
TPUB	Ta-pu	0.61	22	P	Pn	06 46 43.7	-0.4
TPUB	Ta-pu	0.61	22	S	Sn	06 46 53.0	0.0
TPUB	Ta-pu	0.61	22	P	Pn	06 46 43.6	-0.5
TPUB	Ta-pu	0.61	22	S	Sn	06 46 53.3	+0.3
TPUB	Ta-pu	0.61	22	*i* P	Pn	06 46 43.7	-0.4
TPUB				S	Sn	06 46 52.9	0.0
CHN8	Yiju	0.64	346	*e*P	Pn	06 46 44.4	0.0
CHN8				*e*S	Sn	06 46 54.7	+1.3
TWG	Pinlang	0.64	82	P	Pn	06 46 44.4	-0.1
TWG				S	Sn	06 46 54.2	+0.6
TWGBT	Beinan	0.65	82	P	Pn	06 46 44.6	0.0
TWGBT	Beinan	0.65	82	S	Sn	06 46 54.6	+0.8
TWGBT	Beinan	0.65	82	P	Pn	06 46 44.4	-0.2
TWGBT	Beinan	0.65	82	S	Sn	06 46 55.0	+1.2
TWGBT	Beinan	0.65	82	*i* P	Pn	06 46 44.5	-0.2
TWGBT				*e*S	Sn	06 46 54.5	+0.8
LONT	Longtian	0.71	75	P	Pn	06 46 45.6	+0.2
LONT				*e*S	Sn	06 46 55.8	+0.4
WCKO	Fanlu	0.74	16	*i* P	Pn	06 46 45.8	0.0
WCKO				*i* S	Sn	06 46 56.3	+0.3
ELDTW	Lidau	0.74	52	P	Pn	06 46 46.2	+0.2
ELDTW				S	Sn	06 46 56.6	+0.3
CHY	Chiayi	0.77	3	P	Pn	06 46 46.8	+0.6
CHY				*e*S	Sn	06 46 57.9	+1.2
HEN	Hengchun	0.79	155	P	Pn	06 46 47.3	+0.8
HEN				*e*S	Sn	06 46 59.2	+2.0
WSL	Shuilin Townsh	0.80	350	*e*P	Pb	06 46 46.5	-0.6
WSL				*e*S	Sn	06 46 59.2	+1.6
SMST	Manzhou Townsh	0.82	149	*e*P	Pn	06 46 47.4	+0.4
SMST				*e*S	Sn	06 46 58.7	+0.7
WDGT	Dungji	0.85	309	*e*P	Pn	06 46 47.6	+0.3
ECS	Chishang	0.85	64	*e*P	Pn	06 46 47.8	+0.4
ECS				*e*S	Sn	06 47 00.5	+1.7
EHD	Haiduan	0.87	61	*e*P	Pb	06 46 47.2	-1.0
EHD				*e*S	Sn	06 46 58.8	-0.4
ALS	Alishan	0.87	26	*e*P	Pn	06 46 48.0	+0.1
ALS				*e*S	Sn	06 47 00.7	+1.1
TWK1	Hengchun	0.87	153	P	Pn	06 46 48.6	+0.9
TWK1				*e*S	Sn	06 47 01.0	+1.8
TWKBT	Hengchun	0.88	153	P	Pn	06 46 48.4	+0.6
TWKBT				*e*S	Sn	06 47 01.3	+1.9
EDH	Donghe	0.89	74	P	Pn	06 46 48.4	+0.5
EDH				S	Sn	06 47 00.9	+1.3
CHN5	Tsauling	0.91	17	P	Pn	06 46 48.2	0.0
CHN5				*i* S	Sn	06 47 01.2	+0.9
WSF	Szhu	0.92	351	*e*P	Pb	06 46 48.0	-1.0
WSF				*e*S	Sn	06 47 00.6	+0.2
YUS	Yu-Shan	0.92	35	*e*P	Pn	06 46 49.3	+0.5
YUS				*e*S	Sn	06 47 02.2	+1.0
TSEB	Hengchuen, Pin	0.95	150	*e*P	Pb	06 46 48.3	-1.3
TSEB				*e*S	Sn	06 47 01.5	+0.3
FULB	Fuli	0.96	61	*e*P	Pn	06 46 50.1	+1.2
FULB				*e*S	Sn	06 47 03.9	+2.4
WDLH	Douliu	0.97	8	*e*P	Pn	06 46 49.0	0.0
WDLH				*e*S	Sn	06 47 02.8	+1.1
VCHM	Qimei	1.00	299	*e*P	Pn	06 46 49.2	-0.1
VCHM				*e*S	Sb	06 47 01.5	-1.7
LDUT	Ludao	1.00	93	*e*P	Pb	06 46 49.7	-0.8
LDUT				*e*S	Sn	06 47 02.9	+0.3
CHKH	Chenggong	1.04	63	*e*P	Pb	06 46 50.7	-0.4
CHKH				*e*S	Sn	06 47 03.9	+0.4
TWF1	Yuli	1.05	53	P	Pb	06 46 50.8	-0.4
TWF1				*i* S	Sn	06 47 04.9	+1.2
WHYT	Xinyi Township	1.06	24	*e*P	Pb	06 46 50.5	-0.9
WHYT				*e*S	Sn	06 47 04.7	+0.7
YULB	Yu-li	1.07	52	P	Pb	06 46 51.1	-0.5
YULB	Yu-li	1.07	52	S	Sn	06 47 05.4	+1.2
YULB	Yu-li	1.07	52	P	Pb	06 46 51.4	-0.2
YULB	Yu-li	1.07	52	P	Pb	06 46 51.0	-0.7
YULB				S	Sn	06 47 04.6	+0.4
PHUB	P'eng-hu	1.08	317	P	Pn	06 46 49.5	-1.0
PHUB				S	Sb	06 47 03.1	-2.4
PNG	Penghu	1.13	318	*e*P	Pn	06 46 49.8	-1.3
WJS	Zhushan	1.14	16	*e*P	Pb	06 46 51.9	-0.8
WJS				*i* S	Sb	06 47 07.9	+0.8
EHY	Hungye	1.16	48	*e*P	Pb	06 46 53.1	0.0
EHY				S	Sb	06 47 07.6	-0.2
EHYH	Wanrong	1.17	49	*e*P	Pb	06 46 52.7	-0.6
EHYH				*e*S	Sb	06 47 08.0	-0.1
SSLB	Suanglung	1.18	26	P	Pb	06 46 52.3	-1.2
SSLB	Suanglung	1.18	26	S	Sb	06 47 09.3	+0.9
SSLB	Suanglung	1.18	26	P	Pb	06 46 52.4	-1.0
SSLB	Suanglung	1.18	26	S	Sb	06 47 09.6	+1.2
SSLB	Suanglung	1.18	26	*e*P	Pb	06 46 52.2	-1.2
SSLB				*e*S	Sb	06 47 08.4	0.0
WNT	Mingjian	1.18	14	*e*P	Pb	06 46 52.8	-0.6
WNT				*e*S	Sb	06 47 08.7	+0.3
HGSD	Ruisui	1.23	51	*e*P	Pb	06 46 53.9	-0.3
HGSD				*e*S	Sb	06 47 10.9	+1.2
SMLT	Sun Moon Lake	1.25	22	*e*P	Pn	06 46 52.7	-0.2
SMLT				*e*S	Sb	06 47 10.9	+0.6
TYC	Yuchr	1.25	20	*e*P	Pn	06 46 53.2	+0.4
TYC				*e*S	Sb	06 47 10.9	+0.5
LYUB	Lan-yu	1.33	123	*e*P	Pn	06 46 51.8	-2.1
LYUB				*e*S	Sn	06 47 07.9	-2.6
EGFH	Guangfu	1.34	46	*e*P	Pb	06 46 55.4	-0.8
EGFH				*e*S	Sb	06 47 13.7	+0.7
WARBT	Fenglin Townsh	1.35	43	P	Pb	06 46 55.3	-1.0
WARBT				*e*S	Sb	06 47 12.9	-0.4
WCS	Beigang Elemen	1.41	20	*e*P	Pn	06 46 55.3	+0.2
WCS				*e*S	Sb	06 47 14.3	-0.6
OWD	Renai	1.42	31	*e*P	Pn	06 46 55.7	+0.4
WUSB	Renai	1.43	28	*e*P	Pb	06 46 56.2	-1.5
WUSB				*e*S	Sn	06 47 13.5	+0.3
ESL	Shilin	1.45	42	*e*P	Pb	06 46 56.8	-1.2
ESL				*e*S	Sb	06 47 15.8	-0.3
SHUL	Shoufeng	1.51	46	*e*P	Pb	06 46 57.3	-1.7
SHUL				*e*S	Sb	06 47 19.3	+1.4
WHF	Hehuan Shan	1.63	30	*e*P	Pb	06 46 59.7	-1.5
WHP	Taichung City	1.63	18	*e*P	Pn	06 46 58.7	+0.6
WHP				*e*S	Sb	06 47 21.5	+0.3
TWQ1	Liyutan	1.65	12	*e*P	Pb	06 47 00.3	-1.1
TWQ1				*e*S	Sb	06 47 21.1	-0.8
HWA	Hwalien	1.68	42	*e*P	Pn	06 46 58.8	+0.1
TDCB	Techi	1.68	25	*e*P	Pn	06 46 58.7	-0.2
TWT	Tachien	1.69	25	*e*P	Pn	06 46 59.6	+0.6
ETLH	Xiulin Townshi	1.79	34	*e*P	Pn	06 47 01.5	+1.2
NACB	Ninganchiao	1.82	37	P	Pn	06 47 01.7	+1.0
NACB	Ninganchiao	1.82	37	*e*P	Pn	06 47 01.1	+0.4
NNSB	Datong	1.93	28	*e*P	Pn	06 47 02.9	+0.6
NNS	Nan Shan	1.93	28	*e*P	Pn	06 47 03.6	+1.2
NSTT	Nanjuang	1.98	17	*e*P	Pn	06 47 03.5	+0.6
LIOB	Emei	2.00	17	*e*P	Pn	06 47 03.9	+0.8
NFF	Wufeng Townshi	2.01	19	*e*P	Pn	06 47 03.9	+0.5
LATG	Datong	2.08	30	*e*P	Pn	06 47 05.5	+1.1
NSK	Sanguang	2.14	25	*e*P	Pn	06 47 07.0	+1.9
YHNB	Yeheng	2.14	25	P	Pb	06 47 07.4	-2.3
YHNB	Yeheng	2.14	25	*e*P	Pn	06 47 06.4	+1.3
ENTT	Nioudou	2.19	29	*e*P	Pn	06 47 07.4	+1.6
NWLT	Wulai	2.28	26	*e*P	Pb	06 47 10.3	-1.9
FUSB	Fushanzhiwuyua	2.31	28	*e*P	Pb	06 47 10.5	-2.0
PTMZ	Houxiangcun	2.58	334	*e*P	Pn	06 47 13.8	+2.7
TIPB	Shuangxi	2.60	30	*e*P	Pn	06 47 13.6	+2.2
SXI1	Grass Mountain	2.72	30	*e*P	Pn	06 47 14.7	+1.5

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*ISK **05** 06:56:13.8, 34°.82N×32°.97E, h10^{km}, ML2.8/14*

*GII **05** 06:56:15.0±0.0, 34°.707N±0°.003×33°.447E±0°.001, h18^{km}, Mws2.6, confirmed*

*NIC **05** 06:56:16.4, 34°.79N×33°.37E, h22^{km}, Ml2.6/11*

ISC 05 06:56:15.6±0.9**, 34°.74N**±0°.02×**33°.44E**±0°.03**, h23**^{km}±6^{km}**, n68, σ0^{s}.73**/85**, 1C-4D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASGA	Asgata	0.16	287	⇓*i*P	Pb	06 56 20.5	-0.2
ASGA				S	Sb	06 56 24.3	+0.2
ASGA				AML	AML	06 56 25.5	
	10nm,0.4s						
ASGA				AML	AML	06 56 25.6	
	8.2nm,0.2s						
CSS	Mathiatis	0.24	338	Pg	Pb	06 56 20.9	-0.7
CSS				Sg	Sb	06 56 26.1	+0.3
CSS	Mathiatis	0.24	338	P	Pb	06 56 21.4	-0.2
CSS	Mathiatis	0.24	338	P	Pb	06 56 21.2	-0.5
CSS				S	Sb	06 56 25.7	-0.1
CSS	Mathiatis	0.24	338	⇓*i*P	Pb	06 56 21.4	-0.2
CSS				S	Sb	06 56 26.0	+0.2
CSS				AML	AML	06 56 26.5	
	6.9nm,0.4s						
CSS				AML	AML	06 56 26.6	
	8.0nm,0.7s						
MVOU	Mavrovouni	0.32	30	⇓*e*P	Pb	06 56 22.7	-0.1
MVOU				S	Sb	06 56 28.8	+1.1
MVOU				AML	AML	06 56 29.8	
	3.9nm,0.3s						
MVOU				AML	AML	06 56 29.8	
	2.6nm,0.3s						
ATHAL	Athalassa	0.40	355	P	Pb	06 56 24.0	-0.1
ATHAL				S	Sn	06 56 31.4	-1.4
ATHAL				AML	AML	06 56 36.5	
	6.8nm,0.5s						
ATHAL				AML	AML	06 56 37.2	
	4.7nm,0.5s						
XYLS	Xyliatos	0.42	311	⇓*i*P	Pb	06 56 23.7	-0.7
XYLS				S	Sb	06 56 29.9	-0.6
XYLS				AML	AML	06 56 30.4	
	5.2nm,0.3s						
XYLS				AML	AML	06 56 32.3	
	2.5nm,0.3s						
APOL	The Sanctuary	0.48	262	P	Pb	06 56 25.6	+0.2
APOL				S	Sb	06 56 32.9	+0.9
APOL				AML	AML	06 56 34.4	
	2.3nm,0.3s						
TROD	Troodos	0.52	294	P	Pb	06 56 25.5	-0.6
TROD				S	Sn	06 56 35.1	-0.8
TROD				AML	AML	06 56 38.4	
	1.2nm,0.4s						
TROD				AML	AML	06 56 39.6	
	1.8nm,0.4s						
LFK	Lefkose	0.55	8	Pg	Pb	06 56 26.8	+0.2
LFK				Sg	Sn	06 56 36.5	+0.1
PARAL	Paralimni	0.56	62	⇑*e*P	Pn	06 56 28.1	+0.1
PARAL				S	Sn	06 56 38.0	+1.4
PARAL				AML	AML	06 56 39.6	
	2.2nm,0.7s						
PARAL				AML	AML	06 56 40.0	
	2.0nm,0.6s						
NATA	Nata	0.72	274	P	Pb	06 56 29.4	0.0
NATA				S	Sn	06 56 41.8	+1.2
NATA				AML	AML	06 56 47.9	
	1.5nm,0.5s						
NATA				AML	AML	06 56 52.3	
	1.0nm,0.7s						
ALFC	Alefka	0.81	301	P	Pb	06 56 30.4	-0.5
ALFC				S	Sn	06 56 42.1	-0.7
ALFC				AML	AML	06 56 45.0	
	1.2nm,0.4s						
ALFC				AML	AML	06 56 45.6	
	1.4nm,0.5s						
AKMS	Akamas	0.95	287	P	Pn	06 56 33.7	+0.2
AKMS				S	Sn	06 56 47.0	+0.7
AKMS				AML	AML	06 56 54.9	
	0.7nm,0.5s						
AKMS				AML	AML	06 56 58.3	
	0.6nm,0.6s						
AKK1	Akkuyu-Mersin	1.41	3	Pn	Pn	06 56 40.0	+0.3
TEKE	Tekeli-Mersin	1.43	349	Pn	Pn	06 56 39.1	-0.9
TISA	Tisan-Mersin	1.43	8	Pn	Pb	06 56 40.9	-0.7
YESI	Yesilovacik-Me	1.46	6	Pn	Pn	06 56 41.1	+0.6
KARG	Kargicak-Mersi	1.48	8	Pn	Pn	06 56 41.5	+0.8
TEPK	Tepekoy-MERSIN	1.48	3	Pn	Pn	06 56 40.7	-0.2
IKL	Isikli	1.51	8	Pn	Pn	06 56 41.8	+0.6
BERE	Bereket-Mersin	1.62	354	Pn	Pn	06 56 42.6	-0.2
SILI	Silifke-Mersin	1.67	14	Pn	Pb	06 56 44.7	-1.0
KEBE	Keben-Mersin	1.72	7	Pn	Pn	06 56 44.8	+0.7
OSC2	CSNet OBS 4	1.92	211	P	Pb	06 56 48.8	-1.2
OSC2				S	Sb	06 57 16.8	+3.3
OSC1	CSNet OBS 1	2.18	236	P	Pb	06 56 53.4	-0.9
HNTI	Hanita	2.19	138	P	Pn	06 56 50.1	-0.5
HNTI	Hanita	2.19	138	S	Sn	06 57 16.4	-0.6
MERS	Mersin	2.30	22	Pn	Pn	06 56 53.5	+1.4
MMA0B	Mount Meron ar	2.37	136	P	Pn	06 56 52.6	-0.5
MMA0B	Mount Meron ar	2.37	136	S	Sn	06 57 21.6	+0.1
GEM	Giv'at Ha'Em	2.40	129	P	Pn	06 56 52.8	-0.5
GEM				S	Sn	06 57 21.4	-0.6
GEM	Giv'at Ha'Em	2.40	129	P	Pn	06 56 52.0	-1.4
NATI	Neve Ativ	2.41	127	P	Pn	06 56 53.2	-0.3
KRMN	Karaman	2.44	357	Pn	Pn	06 56 53.9	-0.1
KSHT	Keshet	2.64	131	P	Pn	06 56 56.9	+0.1
KSHT	Keshet	2.64	131	S	Sn	06 57 27.2	-0.8
SHMJ	Saham	2.79	135	P	Pn	06 56 59.2	+0.4
SHMJ				S	Sn	06 57 32.6	+0.9
MMLI	Mount Malkishu	2.83	144	P	Pn	06 56 59.3	0.0
MMLI	Mount Malkishu	2.83	144	P	Pn	06 56 58.9	-0.5
MMLI	Mount Malkishu	2.83	144	S	Sn	06 57 32.0	-0.7
QRNJ	Al-Qirein	2.99	143	P	Pn	06 57 02.5	+1.1
HMDT	Nahal Hemdat	3.03	144	P	Pn	06 57 02.3	+0.3
HMDT	Nahal Hemdat	3.03	144	S	Sn	06 57 37.4	-0.2
SALP	Salfit	3.04	151	P	Pn	06 57 03.4	+1.2
SALP	Salfit	3.04	151	P	Pn	06 57 02.0	-0.2
DSI	Dead Sea	3.55	152	P	Pn	06 57 09.7	+0.4
DSI	Dead Sea	3.55	152	P	Pn	06 57 09.2	0.0
DSI	Dead Sea	3.55	152	S	Sn	06 57 49.7	-0.8
YTIR	Yattir	3.65	157	P	Pn	06 57 11.0	+0.3
YTIR	Yattir	3.65	157	P	Pn	06 57 10.4	-0.2
YTIR	Yattir	3.65	157	S	Sn	06 57 52.7	-0.4
MSBI	Mazada	3.78	154	P	Pn	06 57 13.0	+0.7
MSBI	Mazada	3.78	154	P	Pn	06 57 12.8	+0.5
MSBI	Mazada	3.78	154	S	Sn	06 57 55.6	-0.4
ASF	Jabal al Asfar	3.86	131	P	Pn	06 57 13.3	-0.3
GHAJ	Ghor Haditha	3.86	152	P	Pn	06 57 13.9	+0.4
GHAJ	Ghor Haditha	3.86	152	S	Sn	06 57 58.5	+0.4
PRNI	Paran	4.57	163	P	Pn	06 57 23.2	-0.1
PRNI	Paran	4.57	163	P	Pn	06 57 23.0	-0.2
PRNI	Paran	4.57	163	S	Sn	06 58 15.0	-0.7
KRMI	Paran Flat	4.73	166	P	Pn	06 57 25.3	-0.2
MBRI	Mt Berech	5.08	165	P	Pn	06 57 30.6	+0.2
MBRI	Mt Berech	5.08	165	P	Pn	06 57 30.4	0.0
MBRI	Mt Berech	5.08	165	S	Sn	06 58 27.9	-0.6
EIL	Elat	5.21	165	P	Pn	06 57 31.9	-0.2
EIL	Elat	5.21	165	S	Sn	06 58 31.0	-0.5

IDC 05 07:02:04.2±1.5**, 51°.34N**×**81°.82E, h0**^{km}**, mbtmp2.3**/1**, ML2.2**/1**, 1C-3D, Error ellipse: s-maj=18.4km s-min=12.2km az=146.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	2.12	254	⇓Pn	Pb	07 02 43.8	+0.3
	0.5nm,0.6s						
KURK				⇑Sn	Sg	07 03 11.5	-0.6
	3.7nm,0.8s						
KURBB	Kurchatov Arra	2.20	252	Pg	Pb	07 02 43.6	-1.3
	0.2nm,0.3s,baz=70,slow=18,SNR=16						
KURBB				Lg	Lg	07 03 15.3	
	0.2nm,0.3s,baz=73,slow=30,SNR=5.6						
KURBB	Kurchatov Arra	2.20	252	⇓Pn	Pb	07 02 43.8	-1.0
	1.1nm,0.2s,baz=76,slow=11						
KURBB				⇓Sn	Sb	07 03 11.8	-0.9
	15nm,0.8s,baz=82,slow=24						
I46RU	ZALESOVO INFRA	3.19	34	I	I	07 19 00.0	
	0.1nm,0.9s,baz=217,slow=330,SNR=60						
ZALV	Zalesovo Beam	3.19	34	Pg	Pb	07 03 02.4	+0.8
	0.4nm,0.3s,baz=218,slow=16,SNR=4.9						
ZALV				Sn	Sn	07 03 30.9	-3.3
	0.2nm,0.3s,baz=212,slow=27,SNR=2.7						
ZALV				Lg	Lg	07 03 45.5	
	0.4nm,0.3s,baz=213,slow=26,SNR=6.7						
MKAR	Makanchi Array	4.56	176	Pn	Pn	07 03 15.7	+1.3
	0.1nm,0.3s,baz=3.0,slow=11,SNR=2.0						
	0.2nm,0.3s						

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*NAO **05** 07:22:34.0, 35°.66N×22°.52E, h10^{km}, MB4.5*

*HLW **05** 07:22:41.9, 36°.09N×21°.75E, h19^{km}±2^{km}, Ml3.8*

*THE **05** 07:22:42.9, 36° N±3° ×2° 2E± °, h14^{km}±10^{km}, M3.7/22, MLh3.7/22*

*PDG **05** 07:22:42.9±0.1, 36°.33N×20°.72E, h8^{km}±11^{km}, ML4.3/12, Error ellipse: s-maj=51.3km s-min=11.7km az=90.0*

*NEIC **05** 07:22:43.5±1.6, 36°.16N±0°.06×21°.84E±0°.02, h43^{km}±9^{km}, mb4.4/27, Error ellipse: s-maj=9.5km s-min=1.4km az=193.0*

*ATH **05** 07:22:44.0, 36°.16N×21°.79E, h35^{km}±5^{km}, ML3.9/21, Manual Solution by E.Daskalaki First location: 2019/12/05 07:23:56, This location: 2019/12/05 07:36:04 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*

*MOS **05** 07:22:45.7±0.9, 36°.48N×22°.07E, h58^{km}, mb4.4/11, Error ellipse: s-maj=9.9km s-min=5.1km az=62.1*

*IDC **05** 07:22:46.9±1.7, 36°.24N×22°.05E, h69^{km}±16^{km}, mb3.8/19, mbtmp4.0/27, MS3.3/12, Error ellipse: s-maj=17.9km s-min=13.7km az=8.0*

ISC 05 07:22:44.1±0.9**, 36°.25N**±0°.04×**21°.88E**±0°.04**, h46**^{km}±8^{km}**, n223, σ1^{s}.62**/245**, mb4.3**/36**, MS3.2**/5**, 22C-10D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTHA	Methoni	0.58	346	P	Pn	07 22 57.0	+0.8
MTHA				S	Sn	07 23 06.0	+1.1
PYL	PYLOS	0.65	350	P	Pn	07 22 57.5	+0.4
PYL				S	Sn	07 23 08.2	+1.8
PYL	PYLOS	0.65	350	P	Pn	07 22 57.2	+0.1
PYL				S	Sn	07 23 08.1	+1.7
PYL1	Pylos	0.68	347	P	Pn	07 22 57.9	+0.5
PYL1				S	Sn	07 23 08.3	+1.3
KLMT	Kalamata	0.82	10	P	Pn	07 23 00.4	+1.1
ITM	Ithomi	0.93	2	P	Pn	07 23 01.6	+0.9
ITM				S	Sn	07 23 16.6	+3.6
ITM	Ithomi	0.93	2		Pn	07 23 01.7	+0.9
ITM				Sn	Sn	07 23 15.3	+2.3
ITM	Ithomi	0.93	2	P	Pn	07 23 01.7	+0.9
KTHA	Kythira Island	0.95	89	P	Pn	07 23 02.3	+1.2
VLI	Veliai	0.97	61	P	Pn	07 23 02.3	+0.9
VLI				S	Sn	07 23 18.3	+4.3
VLI	Veliai	0.97	61	P	Pn	07 23 02.0	+0.7
NPS1	Neapolis Lacon	0.99	74	P	Pn	07 23 03.0	+1.4
MNVA	Monemvasia	1.03	65	P	Pn	07 23 03.3	+1.2
VLX	Vlachokerasia	1.18	20	P	Pn	07 23 05.7	+1.3
VLX				S	Sn	07 23 24.6	+5.2
ANKY	Antikythira Is	1.21	108	P	Pn	07 23 05.7	+1.0
ANKY				S	Sn	07 23 23.0	+3.1
ANKY	Antikythira Is	1.21	108	P	Pn	07 23 05.7	+1.0
ZARO	Zacharo	1.24	351	P	Pn	07 23 06.6	+1.5
AMT	Artemida-Makis	1.28	354	P	Pn	07 23 07.0	+1.3
LTHK	Lithakia	1.68	330	P	Pn	07 23 11.2	+0.1
LTHK	Lithakia	1.68	330	P	Pn	07 23 11.1	+0.1
DRO	Drossia	1.70	355	P	Pn	07 23 13.4	+2.0
DRO	Drossia	1.70	355	P	Pn	07 23 12.8	+1.4
GUR	Goura	1.72	12	P	Pn	07 23 14.1	+2.4
GUR	Goura	1.72	12	P	Pn	07 23 14.1	+2.4
MET2	Kameni Chora,	1.79	40	P	Pn	07 23 14.1	+1.6
KLV	Kalavryta, Ach	1.80	7	P	Pn	07 23 15.1	+2.3
KLV	Kalavryta, Ach	1.80	7	P	Pn	07 23 14.9	+2.1
MET5	Makryloggos,Me	1.81	40	P	Pn	07 23 14.4	+1.6
MET4	Agioi Theodoro	1.83	41	P	Pn	07 23 14.4	+1.3
RLS	Riolos of Patr	1.83	350	P	Pn	07 23 15.1	+1.9
RLS	Riolos of Patr	1.83	350	P	Pn	07 23 15.0	+1.9
ORTH	Orthonies,Zaky	1.85	330	P	Pn	07 23 14.6	+1.1
ORTH	Orthonies,Zaky	1.85	330	P	Pn	07 23 14.3	+0.9
IMMV	Iera Moni Meta	1.88	114	P	Pn	07 23 14.2	+0.4
IMMV	Iera Moni Meta	1.88	114	P	Pn	07 23 14.2	+0.4
CHAN	Chania	1.90	112	P	Pn	07 23 14.3	+0.3
LOUT	Loutraki	1.94	26	P	Pn	07 23 16.3	+1.7
LTK	Loutraki	1.97	26	P	Pn	07 23 16.2	+1.1
RTZL	Ratzakli, Kefa	2.02	334	P	Pn	07 23 15.9	+0.2
VAM	Vamos	2.06	113	P	Pn	07 23 16.4	0.0
VAM	Vamos	2.06	113	P	Pn	07 23 16.6	+0.3
MHLO	Agia Marina, M	2.08	77	P	Pn	07 23 16.5	0.0
MHLO	Agia Marina, M	2.08	77	P	Pn	07 23 16.2	-0.3
KALE	Kalithea	2.14	5	P	Pn	07 23 19.3	+1.8
SERG	Sergoula	2.16	4	P	Pn	07 23 20.4	+2.8
EFP	Efpalio	2.17	1	P	Pn	07 23 20.8	+3.1
EFP	Efpalio	2.17	1	P	Pn	07 23 20.5	+2.8
VLS	Valsamata	2.18	332	P	Pn	07 23 18.9	+0.9
VLS	Valsamata	2.18	332	P	Pn	07 23 18.5	+0.6
VLY	Voula,Athens	2.21	43	P	Pn	07 23 18.6	+0.3
MAGU	Magoula	2.24	35	P	Pn	07 23 19.9	+1.2
VIL2	Platees	2.25	29	P	Pn	07 23 18.9	0.0
GVD	Gavdhos	2.29	127	P	Pn	07 23 19.3	-0.1
DMLN	Damoulianata-K	2.32	329	P	Pn	07 23 20.5	+0.7
DMLN	Damoulianata-K	2.32	329	P	Pn	07 23 20.1	+0.3
STFN	Stefani	2.33	34	P	Pn	07 23 20.6	+0.6
ANX	Ano Chora	2.34	1	P	Pn	07 23 22.2	+2.1
PVO	Paravola	2.38	353	P	Pn	07 23 23.9	+3.3
FSK	Fiskardo	2.44	335	P	Pn	07 23 22.7	+1.2
DION	Dionisos Attik	2.45	41	P	Pn	07 23 22.7	+1.0
LKR	Lokris	2.55	20	P	Pn	07 23 23.7	+0.7
EVGI	Lefkada island	2.56	338	P	Pn	07 23 24.7	+1.7
AXAR	Agios Charalam	2.58	14	P	Pn	07 23 25.3	+1.8
IDI	Anoyia	2.63	111	P	Pn	07 23 24.8	+0.7
	12nm,0.5s,baz=281,slow=10,SNR=17						
IDI				S	Sn	07 23 50.0	-4.8
	60nm,0.4s,baz=290,slow=23,SNR=9.3						
IDI				LR	LR	07 24 22.0	
	comp=Z,191nm,20.7s,baz=286,slow=38						
IDI	Anoyia	2.63	111	P	Pn	07 23 24.1	-0.1
IDI	Anoyia	2.63	111		Pn	07 23 23.5	-0.7
APE	Apeiranthos	3.04	73	⇑P	Pn	07 23 30.8	+1.0
APE	Apeiranthos	3.04	73	*d i*P	Pn	07 23 30.4	+0.6
LIT	Litokhoron	3.87	7		Pn	07 23 42.5	+1.4
LIT	Litokhoron	3.87	7	P	Pn	07 23 42.5	+1.4
KARP	Karpathos	4.34	98	Pn	Pn	07 23 47.1	-0.5
OHR	Ohrid	4.92	350	*i* Pn	Pn	07 23 57.8	+2.2
TIP	Timpagrande	5.00	307		Pn	07 23 56.2	-0.5
TIP	Timpagrande	5.00	307	⇑P	Pn	07 23 57.0	+0.3
ARG	Arkhangelos	5.05	89	Pn	Pn	07 23 57.7	+0.4
ARG	Arkhangelos	5.05	89	P	Pn	07 23 57.7	+0.4
VAY	Valandovo	5.09	6	*i* Pn	Pn	07 23 58.7	+0.9
CEL	Celeste	5.18	295		Pn	07 23 58.4	-0.7
SLUM	Salum	5.50	149	P	Pn	07 24 01.8	-1.7
SLUM				S	Sn	07 24 59.8	-5.6
RDO	Rodhopi	5.66	29	Pn	Pn	07 24 06.2	+0.6
WDD	Wied Dalam	5.97	268	Pn	Pn	07 24 08.7	-1.3
MATE	Matera	5.98	319	⇑P	Pn	07 24 09.2	-0.8
ULC	Ulcinj	6.06	341	*e*Pn	Pn	07 24 10.2	-1.0
ULC				*i* Sn	Sn	07 25 15.9	-3.3
CUC	Castrocucco	6.07	310		Pn	07 24 11.6	+0.3
VAE	Valguarnera	6.11	284	P	Pn	07 24 15.3	+3.4
	11nm,0.4s,baz=136,slow=14,SNR=2.1						
VAE				S	Sn	07 25 24.9	+4.3
	18nm,0.4s,baz=177,slow=14,SNR=2.1						
RAFF	Raffo Rosso	6.12	281	Pn	Pn	07 24 11.2	-0.8
AKAS	Kas	6.24	88	Pn	Pn	07 24 12.4	-1.4
DRME	Dracevica, Mon	6.28	341	⇓*i*Pn	Pn	07 24 13.4	-0.8
DRME				*e*Sn	Sn	07 25 21.3	-3.4
BUM	Brajici-Budva	6.47	340	*e*Pn	Pn	07 24 15.4	-1.4
BUM				*i* Sn	Sn	07 25 25.0	-4.3
ELL	Elmali	6.49	83	Pn	Pn	07 24 17.2	+0.1
ELL	Elmali	6.49	83	P	Pn	07 24 17.2	+0.1
ACER	Acerenza	6.49	316		Pn	07 24 17.6	+0.5
PDG	Podgorica	6.50	343	Pn	Pn	07 24 16.6	-0.4
PDG	Podgorica	6.50	343	⇓P	Pn	07 24 15.5	-1.5
PDG	Podgorica	6.50	343	*e*Pn	Pn	07 24 16.4	-0.7
PDG				*i* Sn	Sn	07 25 26.7	-3.1
PVY	Plav	6.50	347	*e*Pn	Pn	07 24 17.6	+0.2
PVY				*i* Sn	Sn	07 25 28.7	-1.6
CEME	Cevo	6.69	341	⇑*i*Pn	Pn	07 24 18.6	-1.2
CEME				*e*Sn	Sn	07 25 30.6	-4.1
HCY	Herceg Novi	6.72	338	*e*Pn	Pn	07 24 18.4	-1.8
HCY				*i* Sn	Sn	07 25 30.3	-5.0
IVA	Berane	6.79	348	*e*Pn	Pn	07 24 21.4	+0.2
IVA				*i* Sn	Sn	07 25 35.3	-1.8
KOME	Kolasin	6.84	345	*e*Pn	Pn	07 24 21.6	-0.3
KOME				*e*Sn	Sn	07 25 35.7	-2.7
NKME	Niksic	6.89	342	*e*Pn	Pn	07 24 21.5	-1.0
NKME				*e*Sn	Sn	07 25 35.6	-4.0
BRY	Bratogost	7.12	340	⇑*i*Pn	Pn	07 24 24.4	-1.4
BRY				*i* Sn	Sn	07 25 40.4	-5.1
SGRT	San Giovanni R	7.28	321	Pn	Pn	07 24 26.9	-1.1
UPM	Unac-Piva	7.31	343	*e*Pn	Pn	07 24 27.5	-0.9
UPM				*i* Sn	Sn	07 25 46.1	-4.0
ELND	Elena	7.34	24	⇓P	Pn	07 24 28.9	+0.2
BOVS	Bovan	7.37	359	⇓P	Pn	07 24 29.1	0.0
PAOL	Paolisi	7.45	312	Pn	Pn	07 24 30.2	-0.1
SWA2		7.61	156	P	Pn	07 24 30.8	-1.7
HERR	Herculane	8.63	3	⇑P	Pn	07 24 46.4	0.0
GZR	Gura Zlata	9.15	4	⇓P	Pn	07 24 54.2	+0.6
GZR	Gura Zlata	9.15	4	⇓P	Pn	07 24 54.2	+0.6
ARR	Arges	9.34	12	⇑P	Pn	07 24 56.9	+0.7

NRCA	Norcia	9.43	317	Pn	Pn	07 24 57.9	+0.5
VOIR		9.48	14	⇑P	Pn	07 24 58.8	+0.7
VOIR		9.48	14	⇑P	Pn	07 24 58.8	+0.7
FDMO	Fiordimonte	9.58	318	Pn	Pn	07 24 58.5	-0.9
MLR	Muntele Rosu	9.72	17	P	Pn	07 25 04.4	+2.9
	3.5nm,0.9s,baz=160,slow=23,SNR=3.2						
MLR				LR	LR	07 29 21.0	
	comp=Z,112nm,19.3s,baz=158,slow=41						
MLR	Muntele Rosu	9.72	17	Pn	Pn	07 25 00.3	-1.2
MLR	Muntele Rosu	9.72	17	⇑P	Pn	07 25 01.0	-0.4
MLR	Muntele Rosu	9.72	17	⇑P	Pn	07 25 01.0	-0.4
BR131	Keskin Array S	9.91	66		Pn	07 25 02.6	-1.4
BR131	Keskin Array S	9.91	66	⇑iP	Pn	07 25 06.4	+2.4
BRTR	Keskin Array B	9.91	66	P	Pn	07 25 06.2	+2.2
	2.3nm,0.8s,baz=253,slow=14,SNR=8.2						
BRTR				LR	LR	07 29 36.4	
	comp=Z,149nm,18.9s,baz=277,slow=42						
BRTR	Keskin Array B	9.91	66	i P	Pn	07 25 06.9	+2.9
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MORH	Mrgy, Hungar	10.24	347	⇑P	Pn	07 25 06.5	-1.9
MMAI	Mount Meron Ar	11.60	102	P	Pn	07 25 28.6	+1.6
	comp=Z,1.4nm,0.3s,baz=14,slow=41,SNR=2.5						
SOKA	Soboth	11.61	336	ePn	Pn	07 25 25.5	-1.6
	comp=Z,4.2nm,0.5s						
OBKA	Obir	11.62	334	ePn	Pn	07 25 27.5	+0.1
	comp=Z,1.1nm,0.2s						
PSZ	Piszkesteto	11.75	353	Pn	Pn	07 25 28.3	-0.8
PSZ	Piszkesteto	11.75	353	⇑P	Pn	07 25 28.3	-0.8
PSZ	Piszkesteto	11.75	353	P	Pn	07 25 28.3	-0.8
KECS	Kecovo	12.27	356	ePN	Pn	07 25 39.0	+3.0
SALO	Salr	12.69	321	Pn	Pn	07 25 41.9	0.0
EIL	Elat	12.78	117	P	Pn	07 25 44.8	+1.6
	comp=Z,2.0nm,0.4s,baz=309,slow=21,SNR=1.9						
STHS	Stebnicka Huta	13.16	358	eP	P	07 25 57.6	+0.4
STHS	Stebnicka Huta	13.16	358	ePN	P	07 25 57.6	+0.4
VRAC	Vranov	13.61	345	LR	LR	07 32 10.8	
	comp=Z,107nm,18.7s,baz=154,slow=41						
GERES	GERESS Array B	13.94	337	P	Pn	07 25 57.0	-2.0
	comp=Z,0.4nm,0.3s,baz=155,slow=13,SNR=3.0						
GERES				LR	LR	07 32 42.6	
	comp=Z,273nm,19.1s,baz=115,slow=42						
KIEV	Kiev	15.37	18	Pn	Pn	07 26 16.4	-1.3
KIEV	Kiev	15.37	18	P	Pn	07 26 16.5	-1.3
KIEV				pmax	pmax		
	comp=Z,11nm,1.4s						
AKASG	Malin Array Be	15.38	18	P	Pn	07 26 20.0	+2.1
	comp=Z,0.5nm,0.4s,baz=210,slow=9.4,SNR=11						
AKASG				LR	LR	07 32 11.6	
	comp=Z,122nm,19.7s,baz=248,slow=37						
AKASG	Malin Array Be	15.38	18	Pn	Pn	07 26 17.0	-0.9
AKASG	Malin Array Be	15.38	18	ceP	P	07 26 21.1	-0.7
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKBB	Malin Array Si	15.38	18	Pn	Pn	07 26 16.7	-1.2
AKBB	Malin Array Si	15.38	18	P	Pn	07 26 16.7	-1.2
AKBB				pmax	pmax		
	comp=Z,12nm,1.4s						
KIV	Kislovodsk	17.65	58	eP	Pn	07 26 46.0	-0.6
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KBZ	Khabaz	17.72	59	P	P	07 26 48.2	+0.4
	comp=Z,7.1nm,0.9s,baz=223,slow=7.0,SNR=12						
KBZ	Khabaz	17.72	59	⇑iP	P	07 26 48.9	+1.2
GNI	Garni	18.37	71	LR	LR	07 34 56.5	
	comp=Z,68nm,19.6s,baz=280,slow=40						
NACGM	Naroch	18.95	9	eP	P	07 27 01.1	-0.1
	comp=Z,31nm,0.8s,baz=192						
VORD	Divnogorie	19.30	35	eP	P	07 27 03.6	-1.4
VORD				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VSR	Storozhevoye	19.41	34	eP	P	07 27 05.7	-0.5
VSR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LPSR	Galich'ya Gora	20.29	31	eP	P	07 27 13.3	-2.5
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VRH	Novokhopyorsk	20.61	37	eP	P	07 27 18.6	-0.7
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ESDC	Sonseca Array	20.64	287	P	Pn	07 27 23.7	+1.3
	comp=Z,1.4nm,0.8s,baz=86,slow=10.0,SNR=6.7						
	comp=Z,1.4nm,0.8s						
AKT	Akhty	20.76	68	eP	P	07 27 21.2	+0.1
AKT				e		07 27 41.0	
AKT				pmax	pmax		
	comp=Z,7.0nm,0.5s						
OBN	Obninsk	21.39	24	⇓eP	P	07 27 27.8	+0.2
OBN				e		07 27 52.5	
OBN				eS	S	07 31 18.4	-3.9
OBN				pmax	pmax		
	comp=Z,19nm,1.0s						
OBN				MLR	MLR		
	comp=Z,42nm,7.0s						
BELG	Belogornoye	24.30	40	P	P	07 27 55.5	-1.4
	comp=Z,14nm,0.5s,baz=42,slow=1.4,SNR=6.4						
	comp=Z,14nm,0.5s						
BELG	Belogornoye	24.30	40	⇑iP	P	07 27 57.0	0.0
BELG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HFS	Hagfors	24.47	350	P	P	07 27 58.5	0.0
	comp=Z,1.6nm,0.3s,baz=153,slow=10.0,SNR=16						
HFS				LR	LR	07 38 45.7	
	comp=Z,39nm,18.5s,baz=64,slow=39						
	comp=Z,1.6nm,0.3s						
FINES	FINESS Array B	25.35	5	P	P	07 28 06.5	0.0
	comp=Z,4.3nm,0.8s,baz=165,slow=11,SNR=9.5						
	comp=Z,4.3nm,0.8s						
FINES	FINESS Array B	25.35	5	P	P	07 28 06.3	-0.2
NC602	NORSAR Array S	25.38	348	P	P	07 28 06.9	+0.2
EKA	Eskdalemuir Ar	25.63	326	P	P	07 28 11.5	+2.4
	comp=Z,1.3nm,0.6s,baz=128,slow=9.6,SNR=2.4						
	comp=Z,1.3nm,0.6s						
NB2	NORSAR Subarra	25.72	348	P	P	07 28 09.9	0.0
	comp=Z,10nm,1.1s,baz=159,slow=9.3						
NOA	NORSAR Array B	25.72	348	P	P	07 28 10.1	+0.3
	comp=Z,0.7nm,0.5s,baz=160,slow=10,SNR=3.5						
NOA				LR	LR	07 40 34.8	
	comp=Z,77nm,19.1s,baz=5.0,slow=42						
	comp=Z,0.7nm,0.5s						
KLMR	Klimovskoe	27.06	19	eP	P	07 28 20.8	-1.1
KLMR				pmax	pmax		
	comp=Z,24nm,1.7s						
KIRV	Kirov	28.72	30	⇑iP	P	07 28 36.6	-0.1
TORD	Torodi Ar. Bea	29.30	223	P	P	07 28 42.6	+0.3
	comp=Z,1.3nm,0.3s,baz=28,slow=6.5,SNR=3.3						
	comp=Z,1.3nm,0.3s						
AKTO	Aktyubinsk	29.53	50	LR	LR	07 42 36.0	
	comp=Z,32nm,20.7s,baz=322,slow=40						
AB31	Akbulak array	30.48	53	P	P	07 28 51.7	-0.8
ABKAR	Akbulak array	30.48	53	P	P	07 28 51.2	-1.2
ARTI	Arti	31.72	39	P	P	07 29 02.6	-0.7
ARTI				IAmb	IAmb	07 29 04.1	
	comp=Z,9.2nm,0.9s						
ARTI	Arti	31.72	39	c iP	P	07 29 03.4	+0.1
ARTI				S	S	07 34 11.7	+2.2
ARTI				SS	SnSn	07 36 00.7	+1.5
ARTI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ARCES	ARCESS Array B	33.40	2	P	P	07 29 18.4	+0.6
	comp=Z,2.5nm,0.5s,baz=183,slow=9.5,SNR=22						
ARCES				LR	LR	07 43 27.8	
	comp=Z,205nm,19.0s,baz=227,slow=37						
	comp=Z,2.5nm,0.5s						
ARCES	ARCESS Array B	33.40	2	P	P	07 29 18.2	+0.3
CHGR	Chuyangaron	37.28	72	P	P	07 29 51.3	-0.4
CHGR	Chuyangaron	37.28	72	P	P	07 29 51.3	-0.4
CHGR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BORK	Borovoye	37.52	48	P	P	07 29 53.6	+0.2
BORK				IAmb	IAmb	07 29 54.5	
	comp=Z,2.2nm,0.8s						
BORK	Borovoye	37.52	48	⇑iP	P	07 29 53.9	+0.5
BORK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BVAR	Borovoye Array	37.56	48	P	P	07 29 53.4	-0.4
	comp=Z,2.1nm,0.6s,baz=268,slow=6.4,SNR=11						
	comp=Z,2.1nm,0.6s						
KK31	Karatay Array	37.61	64	P	P	07 29 53.7	-0.6
KK31				IAmb	IAmb	07 29 55.7	
	comp=Z,6.2nm,1.4s						
KK31	Karatay Array	37.61	64	P	P	07 29 53.7	-0.6
KK31				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KKAR	Karatay Array	37.61	64	P	P	07 29 53.5	-0.9
KKAR	Karatay Array	37.61	64	P	P	07 29 53.5	-0.9
ARSB	Arslanbob	39.68	67	P	P	07 30 11.4	-0.5
ARSB				IAmb	IAmb	07 30 30.2	
	comp=Z,8.0nm,1.3s						
ARSB	Arslanbob	39.68	67	P	P	07 30 11.4	-0.5
ARSB				pmax	pmax		
	comp=Z,8.0nm,1.3s						
AAK	Ala-Archa	40.58	64	⇑iP	P	07 30 20.6	+1.3
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BOOM	Boomskoye usch	41.66	64	P	P	07 30 28.1	-0.1
BOOM				IAmb	IAmb	07 30 30.6	
	comp=Z,3.2nm,0.6s						
BOOM	Boomskoye usch	41.66	64	P	P	07 30 28.1	-0.1
BOOM				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SPITS	Spitsbergen Ar	42.10	358	P	P	07 30 32.4	+1.3
	comp=Z,11nm,0.8s,baz=168,slow=6.0,SNR=1.9						
	comp=Z,11nm,0.8s						
KURBB	Kurchatov Arra	42.53	52	P	P	07 30 34.1	-0.8
	comp=Z,1.1nm,0.5s,baz=274,slow=7.8,SNR=10						
	comp=Z,1.1nm,0.5s						
KURK	Kurchatov	42.58	52	P	P	07 30 34.2	-1.2
WUS	Wushi	44.31	65	P	P	07 30 49.9	+0.2
WUS				IAmb	IAmb	07 31 15.8	
	comp=Z,3.5nm,0.5s						
MK31	Makanchi Array	45.41	57	d iP	P	07 30 57.6	-0.5
MKAR	Makanchi Array	45.41	57	P	P	07 30 57.7	-0.5
	comp=Z,1.8nm,0.4s,baz=269,slow=7.8,SNR=38						
	comp=Z,1.8nm,0.4s						
ZALV	Zalesovo Beam	46.19	47	P	P	07 31 03.2	-0.9
	comp=Z,2.9nm,0.5s,baz=269,slow=9.3,SNR=16						
	comp=Z,2.9nm,0.5s						
ZALV	Zalesovo Beam	46.19	47	P	P	07 31 02.8	-1.3
NRIK	Noril'sk	48.04	26	P	P	07 31 18.4	+0.1
	comp=Z,1.7nm,0.4s,baz=254,slow=3.9,SNR=4.7						
	comp=Z,1.7nm,0.4s						
NRIK	Noril'sk	48.04	26	P	P	07 31 18.0	-0.3
NRIK				IAmb	IAmb	07 31 20.1	
	comp=Z,2.8nm,0.9s						
NRIK	Noril'sk	48.04	26	⇓iP	P	07 31 19.1	+0.8
EVN	Everest	54.73	79	P	P	07 32 08.6	-1.2
EVN				IAmb	IAmb	07 32 10.3	
	comp=Z,4.1nm,0.7s						
SONM	Songino Array	60.85	50	P	P	07 32 51.7	-0.1
	comp=Z,0.6nm,0.5s,baz=269,slow=7.1,SNR=4.6						
	comp=Z,0.6nm,0.5s						
LBTB	Lobatse	61.04	176	LR	LR	08 02 37.2	
	comp=Z,46nm,18.2s,baz=141,slow=39						
TIXI	Tiksi	61.07	20	⇑iP	P	07 32 52.8	+0.1
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILON	Igloolik, Nuna	61.14	337	P	P	07 32 53.7	+0.5
A36M	Sachs Harbour	69.61	350	P	P	07 33 47.6	-0.3
A36M				IAmb	IAmb	07 34 13.3	
	comp=Z,7.3nm,1.4s						
C23K	Itkillik River	74.08	357	P	P	07 34 15.3	+0.6
D25K	Kavik River	74.38	356	P	P	07 34 17.0	+0.3
E29M	Blow River	74.58	352	P	P	07 34 18.4	+0.7
E29M				IAmb	IAmb	07 34 37.3	
	comp=Z,8.3nm,1.4s						
D23K	Nanushuk River	74.95	357	P	P	07 34 21.1	+1.2
D23K				IAmb	IAmb	07 34 50.5	
	comp=Z,8.8nm,1.4s						
F31M	Tsiigehtchic	74.98	351	P	P	07 34 21.0	+1.0
F31M				IAmb	IAmb	07 34 26.7	
	comp=Z,10.0nm,1.5s						
G31M	Satah River	75.54	351	P	P	07 34 24.1	+0.8
G31M				IAmb	IAmb	07 34 40.9	
	comp=Z,6.6nm,1.4s						
YKA	Yellowknife Ar	75.56	341	P	P	07 34 24.6	+1.2
	comp=Z,0.1nm,0.4s,baz=318,slow=20,SNR=2.9						
	comp=Z,0.1nm,0.4s						
C16K	Lisburne Hills	75.65	3	P	P	07 34 24.8	+1.0
E19K	Redstone River	76.61	360	P	P	07 34 30.0	+0.6
E19K				IAmb	IAmb	07 34 31.4	
	comp=Z,2.4nm,0.7s						
H29M	Whitestone	76.72	352	P	P	07 34 29.9	-0.1
H29M				IAmb	IAmb	07 34 39.0	
	comp=Z,2.5nm,1.1s						
ILAR	Eielson Array	78.92	355	P	P	07 34 43.5	+1.2
	comp=Z,0.3nm,0.8s,baz=355,slow=7.7,SNR=2.3						
	comp=Z,0.3nm,0.8s						
KSRS	Korea Array	79.70	51	P	P	07 34 46.9	-0.1
	comp=Z,2.0nm,0.7s,baz=309,slow=5.3,SNR=2.8						
	comp=Z,2.0nm,0.7s						
PDAR	Pinedale Array	89.75	326	P	P	07 35 37.9	0.0
	comp=Z,0.2nm,0.6s,baz=119,slow=27,SNR=1.9						
	comp=Z,0.2nm,0.6s						
WRA	Warramunga Arr	119.35	94	PKP	PKiKP	07 41 28.9	+0.1
	comp=Z,0.5nm,0.7s,baz=306,slow=1.8,SNR=1.9						
ASAR	Alice Springs	120.86	98	PKP	PKiKP	07 41 30.9	-0.7
	comp=Z,0.3nm,0.5s,baz=314,slow=2.1,SNR=5.2						
ASAR	Alice Springs	120.86	98	PKIKP	PKiKP	07 41 31.0	-0.7

IDC 05 07:44:50.1±2.9**, 15°.01S**×**174°.78W, h0$^{\mathrm{km}}$, mb3.5**/4**,**
mbtmp3.5/4**, Error ellipse: s-maj=174.5km**
s-min=30.7km az=147.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	48.96	252	P	P	07 53 38.6	-0.1
	0.9nm,0.6s,baz=88,slow=8.3,SNR=15						
	0.9nm,0.6s						
NVAR	Mina Array Bea	74.94	43	P	P	07 56 33.8	+0.3
	0.2nm,0.6s,baz=239,slow=5.0,SNR=2.2						
	0.2nm,0.6s						
ILAR	Eielson Array	82.33	12	P	P	07 57 13.1	-0.2
	0.1nm,0.3s,baz=201,slow=4.6,SNR=5.1						
	0.1nm,0.3s						
PDAR	Pinedale Array	82.87	42	P	P	07 57 16.9	0.0
	0.3nm,0.6s,baz=199,slow=4.1,SNR=3.7						
	0.3nm,0.6s						

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*IDC **05** 07:45:32.2±3.8, 56°.56N×158°.11W, h0$^{\mathrm{km}}$, mb3.2/4,*
mbtmp3.3/7, ML3.3/3, Error ellipse: s-maj=58.9km
s-min=26.4km az=86.0
*AEIC **05** 07:45:35.2±1.0, 57°.11N±0°.03×157°.67W±0°.05, h9$^{\mathrm{km}}$±5$^{\mathrm{km}}$,*
ML3.4, mb3.6/2(NEIC), ML3.6/76(NEIC), Error ellipse:
s-maj=5.3km s-min=2.6km az=135.0
*NEIC **05** 07:45:36.2±1.2, 57°.11N±0°.02×157°.67W±0°.04, h15$^{\mathrm{km}}$±6$^{\mathrm{km}}$,*
Error ellipse: s-maj=4.1km s-min=3.0km az=137.0
ISC 05 07:45:35.1±1.1**, 57°.10N**±0°.04×**157°.64W**±0°.04**, h8$^{\mathrm{km}}$**±9$^{\mathrm{km}}$**,**
n143, σ0^{s}69/156**, mb3.2**/4**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANNE	Aniakchak Nort	0.30	231		Pg	07 45 40.7	-0.3
ANNW	Aniakchak Nort	0.34	247		Pb	07 45 42.6	-0.9
ANPK	Aniakchak Peak	0.37	226		Pg	07 45 42.5	+0.1
AZAC	Aniakchak	0.38	238		Pg	07 45 42.9	+0.2
ANPB	Aniakchak Plen	0.46	230		Pg	07 45 43.9	-0.2
R16K	Pilot Point	0.47	4	Pg	Pg	07 45 44.8	+0.6
PLBL	Peulik Blue Cr	0.75	36		Pg	07 45 49.8	+0.3
PLK4	Peulik 4	0.88	52	Pg	Pg	07 45 51.3	-0.7
PLK4				Sg	Sg	07 46 04.0	+0.7
PLK1	Peulik 1	0.90	38		Pg	07 45 52.1	-0.2
PLK3	Peulik 3	0.95	51		Pg	07 45 52.7	-0.6
PLK3					Sb	07 46 06.7	+0.2
PLK2	Peulik 2	0.97	46		Pg	07 45 53.3	-0.5
PLK5	Peulik 5	0.99	24		Pb	07 45 54.4	-0.1
PLK5					Sn	07 46 08.8	-0.6
VNSG	Veniaminof 6	1.26	220		Pn	07 45 57.3	-1.8
VNSS	Veniaminof 8	1.33	230		Pn	07 45 59.7	-0.5
VNSS					Pb	07 45 59.9	-0.6
VNFG	Fog Glacier, M	1.34	233		Pn	07 45 59.4	-0.7
VNFG					Sg	07 46 19.1	+1.1
VNWF	Veniaminof 8	1.43	229		Pn	07 46 01.3	-0.1
VNKR	Veniaminof 5	1.44	222		Pn	07 46 00.6	-0.9
VNSW	Veniaminof 7	1.48	227		Pn	07 46 02.1	0.0
CNTC	Contact Creek	1.50	38		Pn	07 46 01.7	-0.7
CNTC					Pb	07 46 02.9	-0.4
CNTC					Sn	07 46 21.8	-0.4
ANCK	Angle Creek	1.59	45		Pn	07 46 03.3	-0.4
Q16K	King Salmon	1.67	18		Pn	07 46 04.6	0.0
Q16K					Sb	07 46 27.3	+0.2
ACHA	Angle Creek He	1.67	47		Pn	07 46 04.4	-0.3
MGLS	Mageik Landsli	1.69	51		Pn	07 46 04.6	-0.3
MGLS					Sg	07 46 28.9	-0.4
CHIR	Chirikof Islan	1.70	138		Pn	07 46 05.4	+0.3
CHIR				IAML		07 46 31.1	
	comp=N,554nm,1.2s						
CHIR				IAML		07 46 31.8	
	comp=E,962nm,0.8s						
KABU	Katmai Buttres	1.73	46		Pn	07 46 05.3	-0.2
KABU					Sb	07 46 29.9	+1.0
KBM	Katmai Bkd Mtn	1.76	47		Pn	07 46 06.1	+0.1
R18K	Karluk	1.79	74		Pn	07 46 06.2	-0.1
R18K				IAML		07 46 38.1	
	comp=E,654nm,0.5s						
KVTA	Katmai Vly 10	1.80	43		Pn	07 46 06.1	-0.3
KVTA					Pb	07 46 06.8	-1.5
KAKN	Katmai Knife C	1.83	48		Pn	07 46 07.0	+0.1
P16K	Nushagak River	1.94	355		Pn	07 46 08.8	+0.4
SII	Sitkinak Islan	1.98	105		Pn	07 46 09.3	+0.5
SII				IAML		07 46 42.6	
	comp=N,534nm,0.7s						
KAWH	Katmai	1.99	49		Pn	07 46 09.2	0.0
KAWH					Pb	07 46 09.6	-2.1
KAHC	Katmai Hardscr	2.09	41		Pn	07 46 10.3	-0.3
KARR	Katmai Rainbow	2.10	47		Pn	07 46 10.6	-0.1
KAHG	Katmai Hook Gl	2.17	49		Pn	07 46 11.5	0.0
P17K	Kvichak River	2.19	16		Pn	07 46 11.8	0.0
SDPT	Sand Point	2.37	223	Pn	Pn	07 46 14.2	0.0
SDPT				IAML		07 46 59.6	
	comp=E,306nm,0.6s						
SDPT				IAML		07 47 00.6	
	comp=N,362nm,1.1s						
OHAK	Old Harbor	2.37	85		Pn	07 46 14.9	+0.6
O15K	Ungalikthiuk R	2.38	332		Pn	07 46 14.4	-0.1
O15K				IAML		07 46 56.5	
	comp=E,231nm,0.7s						
O16K	Kokwok River B	2.51	355		Pn	07 46 16.4	+0.2
CNBA	Chernabura Isl	2.54	206		Pn	07 46 16.6	0.0
CNBA				IAML		07 47 00.6	
	comp=N,302nm,1.1s						
P18K	Big Mountain,	2.63	28		Pn	07 46 17.9	+0.1
P18K				IAML		07 47 04.2	
	comp=E,175nm,0.6s						
O17K	Koliganek Bris	2.69	6		Pn	07 46 18.6	-0.1
Q19K	Cape Douglas,	2.81	48	Pn	Pn	07 46 20.9	+0.5
Q19K				IAML		07 47 12.6	
	comp=N,281nm,0.9s						
KDAK	Kodiak Island	2.82	74	Pn	Pn	07 46 21.7	+1.3
	comp=N,7.4nm,0.3s,baz=231,slow=5.3,SNR=144						
KDAK				Sn	Sb	07 47 02.3	+2.1
	comp=N,3.8nm,0.3s,baz=2.9,slow=17,SNR=6.9						
	comp=N,21nm,0.4s						
KDAK	Kodiak Island	2.82	74		Pn	07 46 20.5	+0.1
S12K	Black Hills	2.83	242	Pn	Pn	07 46 20.6	0.0
S12K				IAML		07 47 14.8	
	comp=N,319nm,0.7s						
PS1A	Pavlof South-1	2.84	235		Pn	07 46 20.9	+0.1
O14K	Tigyukauivet M	2.89	320	Pn	Pn	07 46 21.1	-0.2
O14K				IAML		07 47 17.3	
	comp=N,174nm,0.9s						
O14K				IAML		07 47 22.4	
	comp=E,150nm,0.9s						
PS4A	Pavlof South-4	2.94	235		Pn	07 46 22.4	+0.3
PN7A	Pavlof North-7	2.95	237		Pn	07 46 22.6	+0.2
HAG	Hague Volcano	2.98	235		Pn	07 46 22.9	+0.3
O18K	Koktuh Hills	3.04	24		Pn	07 46 23.7	+0.1
O18K				IAML		07 47 17.2	
	comp=N,216nm,0.8s						
O18K				IAML		07 47 21.5	
	comp=E,166nm,0.9s						
DOL	Dolgoi Island	3.07	232		Pn	07 46 24.1	+0.2
SYI	Shuyak Island	3.19	59	Pn	Pn	07 46 25.5	0.0
DT1	Dutton Round H	3.28	234		Pn	07 46 26.8	+0.1
N15K	Kwethluk River	3.33	338		Pn	07 46 28.5	+1.0
N15K				IAML		07 47 23.3	
	comp=N,138nm,0.6s						
N16K	Nishlik Lake	3.43	351		Pn	07 46 29.5	+0.6
N17K	Nushagak Hills	3.44	4		Pn	07 46 29.4	+0.4
N17K				IAML		07 47 29.6	
	comp=N,84nm,0.8s						
N17K				IAML		07 47 39.7	
	comp=E,80nm,0.9s						
P19K	Oil Pt	3.45	40	Pn	Pn	07 46 29.5	+0.3
N14K	Kuskokwak Cree	3.54	325	Pn	Pn	07 46 30.4	+0.1
N14K				IAML		07 47 31.9	
	comp=E,180nm,1.0s						
N14K				IAML		07 47 56.7	
	comp=N,169nm,0.9s						
O19K	Port Alsworth	3.55	28		Pn	07 46 31.0	+0.5
N18K	Kilae Creek	3.70	13		Pn	07 46 32.9	+0.3
ILSW	Iliamna Southw	3.73	37	Pn	Pn	07 46 33.6	+0.5
ILSW				IAML		07 47 36.5	
	comp=E,69nm,0.9s						
ILSW				IAML		07 47 39.8	
	comp=N,70nm,0.9s						
ILS	Iliamna Low So	3.73	38		Pn	07 46 33.2	+0.1
IVE	Iliamna Volcan	3.80	38		Pn	07 46 34.2	+0.3
M15K	Kasigluk River	3.94	338		Pn	07 46 36.1	+0.3
M16K	Timber Creek	3.99	351		Pn	07 46 37.4	+0.9
M16K				IAML		07 47 59.3	
	comp=E,84nm,0.9s						
M16K				IAML		07 48 01.1	
	comp=N,69nm,1.0s						
N19K	Bonanza Creek	4.07	22	Pn	Pn	07 46 38.4	+0.8
N19K				IAML		07 47 43.6	
	comp=E,97nm,1.0s						
N19K				IAML		07 47 56.8	
	comp=N,73nm,0.6s						
RED	Redoubt Volcan	4.18	35		Pn	07 46 40.4	+1.1
RED				IAML		07 47 53.6	
	comp=E,55nm,1.2s						
M14K	Bethel	4.29	330		Pn	07 46 40.9	+0.3
M14K				IAML		07 47 58.9	
	comp=N,94nm,1.1s						
M14K				IAML		07 48 06.1	
	comp=E,73nm,0.8s						
M17K	Holitna River	4.31	1	Pn	Pn	07 46 40.9	-0.1
DFR	Drift River	4.34	34		Pn	07 46 42.2	+0.7
M13K	Dall Lake	4.46	321	Pn	Pn	07 46 43.7	+0.8
M13K				IAML		07 48 05.0	
	comp=E,40nm,0.7s						
M13K				IAML		07 48 08.7	
	comp=N,53nm,0.8s						
M18K	Stony River	4.50	11		Pn	07 46 43.5	0.0
L16K	Owhat River	4.72	349	Pn	Pn	07 46 46.4	-0.1
L16K				IAML		07 48 14.4	
	comp=N,45nm,1.1s						
L16K				IAML		07 48 23.9	
	comp=E,36nm,1.1s						
SPNN	North Nagishla	4.97	29		Pn	07 46 50.5	+0.3
L14K	Kuka Creek	4.98	331		Pn	07 46 50.3	+0.3
L14K				IAML		07 48 33.2	
	comp=E,63nm,0.9s						
L15K	Ungalak Mounta	4.99	338		Pn	07 46 50.1	-0.1
SPU	Mount Spurr	5.00	33	Pn	Pn	07 46 51.2	+0.8
L17K	Donlin	5.06	356		Pn	07 46 51.4	+0.2
L18K	Granite Mounta	5.16	5	Pn	Pn	07 46 52.6	0.0
L18K				IAML		07 48 32.2	
	comp=E,30nm,1.2s						
L18K				IAML		07 48 34.7	
	comp=N,50nm,0.9s						
L19K	White Mountain	5.29	14		Pn	07 46 54.6	+0.2
M20K	Styx River	5.32	24	Pn	Pn	07 46 56.0	+1.2
M20K				IAML		07 48 30.9	
	comp=N,25nm,0.8s						
M20K				IAML		07 48 38.8	
	comp=E,34nm,0.8s						
STLK	Strandline Lak	5.32	32	Pn	Pn	07 46 56.3	+1.4
K15K	Wolf Creek Mou	5.57	341	Pn	Pn	07 46 59.0	+0.8
K17K	Iditarod	5.64	357	Pn	Pn	07 46 59.4	+0.2
SKT	Skwentna	5.79	30	Pn	Pn	07 47 02.7	+1.4
UNV	Unalaska Valle	6.00	241	Pn	Pn	07 47 04.2	+0.1
K13K	Kusilvak Mount	6.02	327	Pn	Pn	07 47 04.7	+0.4
J17K	VABM Dome	6.36	354	Pn	Pn	07 47 08.4	-0.6
J16K	Anvik River	6.38	348		Pn	07 47 08.8	-0.4
J14K	Nanvaranak Lak	6.40	335	Pn	Pn	07 47 09.9	+0.4
J18K	Innoko River	6.40	4		Pn	07 47 10.1	+0.4
PPLA	Purkeypile	6.42	23	Pn	Pn	07 47 11.6	+1.6
L22K	Petersville	6.45	30	Pn	Pn	07 47 11.7	+1.4
GHO	Glory Hole Cre	6.45	40	Pn	Pn	07 47 11.6	+1.1
FID	Port Fidalgo	6.83	53	Pn	Pn	07 47 15.5	-0.1
I17K	Unalakleet	6.97	349	Pn	Pn	07 47 17.0	-0.4
J19K	Poorman	6.99	7	Pn	Pn	07 47 17.5	-0.1
CHUM	Lake Minchumin	7.29	19		Pn	07 47 22.0	+0.2
J20K	Nowinta River	7.30	12	Pn	Pn	07 47 22.4	+0.4
KLU	Klutina	7.44	49	Pn	Pn	07 47 24.6	+0.7
BPAW	Bear Paw Mtn.	7.74	22	Pn	Pn	07 47 28.5	+0.5
DHY	Denali Highway	7.88	36	Pn	Pn	07 47 30.2	+0.2
H16K	Elim	7.88	345		Pn	07 47 30.5	+0.5
MCK	McKinley	7.92	29	Pn	Pn	07 47 30.3	-0.1
H17K	Granite Mounta	7.94	353	Pn	Pn	07 47 30.9	+0.2

H18K	Honhosa River	8.09	358		Pn	07 47 32.8	+0.1
GLB	Gilahina Butte	8.30	53	Pn	Pn	07 47 35.8	0.0
ANM	Nome	8.38	336	Pn	Pn	07 47 37.3	+0.6
H19K	Roundabout Mou	8.47	3	Pn	Pn	07 47 38.6	+0.7
G16K	Koyuk River	8.62	347	Pn	Pn	07 47 40.3	+0.3
WRH	Wood River Hil	8.73	28	Pn	Pn	07 47 42.0	+0.4
G18K	Tagagawik	8.84	357	Pn	Pn	07 47 43.4	+0.4
H21K	Melozitna Rive	8.89	13	Pn	Pn	07 47 43.4	-0.4
GRNC	Granite Creek	8.98	59	Pn	Pn	07 47 45.5	+0.3
I23K	Minto, Yukon-K	9.00	23	Pn	Pn	07 47 45.1	-0.1
IMAR	Indian Mountai	9.10	10	Pn	Pn	07 47 46.9	+0.3
ILAR	Eielson Array	9.29	30	Pn	Pn	07 47 50.2	+1.1
	comp=E,0.1nm,0.3s,baz=222,slow=13,SNR=7.8						
ILAR				Sn	Sn	07 49 42.9	+9.1
	baz=202,slow=28						
	comp=E,0.7nm,0.6s						
H23K	Yukon River	9.56	20	Pn	Pn	07 47 53.6	+0.7
O28M	Mount Upton	9.73	61	Pn	Pn	07 47 56.5	+1.0
F19K	Shaleruckik Mo	9.77	360	Pn	Pn	07 47 55.7	0.0
BCAR	Beaver Creek A	9.90	46	Pn	Pn	07 47 57.4	-0.3
H24K	Noodor Dome	9.91	24	Pn	Pn	07 47 58.7	+0.9
F20K	Avaraart Lake	10.02	4	Pn	Pn	07 48 00.1	+0.9
G23K	Bananza Creek	10.28	17	Pn	Pn	07 48 02.4	-0.4
E18K	Tukpahlearik C	10.45	354	Pn	Pn	07 48 05.4	+0.4
G24K	Hadweenzic Riv	10.74	22	Pn	Pn	07 48 09.4	+0.4
I26K	Coal Creek Min	10.76	34	Pn	Pn	07 48 10.3	+0.9
F24K	Squaw Lake	11.37	19	Pn	Pn	07 48 18.7	+1.0
E22K	Anaktuvuk Pass	11.39	11	Pn	Pn	07 48 17.9	+0.1
E21K	Killik River	11.50	7	Pn	Pn	07 48 20.9	+1.4
H27K	Steamboat Moun	11.89	33	Pn	Pn	07 48 23.6	-1.1
I28M	Miner Creek	11.89	38	Pn	Pn	07 48 24.1	-0.8
G31M	Satah River	14.63	38	Pn	Pn	07 49 00.3	-1.7
INK	Inuvik	15.62	34	Pn	P	07 49 20.6	+1.2
	comp=E,0.1nm,0.3s,baz=261,slow=15,SNR=3.8						
	comp=E,0.8nm,0.7s						
INK	Inuvik	15.62	34	Pn	Pn	07 49 14.3	-0.9
INK				IAmb	IAmb	07 49 34.8	
	comp=Z,5.0nm,1.4s						
A36M	Sachs Harbour	19.99	29	P	P	07 50 06.8	-0.8
A36M				IAmb	IAmb	07 50 43.6	
	comp=Z,4.0nm,1.1s						
YKA	Yellowknife Ar	21.97	58	P	P	07 50 31.1	+2.1
	comp=Z,0.4nm,0.6s,baz=273,slow=11,SNR=5.3						
	comp=Z,0.4nm,0.6s						
NVAR	Mina Array Bea	31.77	109	P	P	07 51 58.5	-1.3
	comp=Z,0.6nm,0.8s,baz=298,slow=9.4,SNR=5.1						
	comp=Z,0.6nm,0.8s						
PDAR	Pinedale Array	33.34	94	P	P	07 52 12.8	-0.8
	comp=Z,0.1nm,0.5s,baz=308,slow=7.9,SNR=2.0						
	comp=Z,0.1nm,0.5s						
TXAR	Lajitas Array	46.47	103	P	P	07 54 03.5	+0.9
	comp=Z,0.2nm,0.6s,baz=301,slow=6.4,SNR=2.6						
	comp=Z,0.2nm,0.6s						

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*NEIC **05** 07:53:47.6±1.2, 21°.6S±0°.1×179°.22W±0°.07, h609^{km}±8^{km}, mb4.4/19, Error ellipse: s-maj=17.6km s-min=9.2km az=183.0*

*IDC **05** 07:53:51.8±2.2, 21°.46S×179°.51W, h648^{km}±24^{km}, mb3.6/15, mbtmp4.6/16, Error ellipse: s-maj=27.9km s-min=12.1km az=152.0*

ISC 05 07:53:47.3±0.5**, 21°.57S**±0°.07×**179°.30W**±0°.08**, h604**^{km}**, n57,** σ1^{s}**01**/61**, mb4.4**/25**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.56	326		P	07 55 18.6	+1.4
RAO	Raoul Island	7.75	171	P	P	07 55 45.2	+1.0
	224nm,0.3s,baz=238,slow=23,SNR=2.3						
RAO				S	S	07 57 20.0	-0.2
	259nm,0.4s,baz=280,slow=23,SNR=5.7						
RAO	Raoul Island	7.75	171	P	P	07 55 44.2	-0.1
NIUE	Niue	9.14	76	P	P	07 55 57.2	-0.5
AFI	Afiamalu	10.46	44	P	P	07 56 09.5	-1.4
MARNC	Mare, Loyalty	11.79	268	P	P	07 56 23.4	-0.5
PINNC	Pines Island,	12.33	263	P	P	07 56 30.0	+0.7
DZM	Mont Dzumac	13.25	265	P	P	07 56 39.2	+0.5
	6.2nm,0.6s,baz=92,slow=14,SNR=14						
DZM	Mont Dzumac	13.25	265	P	P	07 56 38.8	+0.1
URZ	Urewera	16.92	190	S	S	07 59 57.8	-1.9
	5.9nm,0.9s,baz=46,slow=23,SNR=7.0						
THZ	Tophouse	21.18	196	P	P	07 57 51.6	+0.4
CTAO	Charters Tower	32.19	266	P	P	07 59 28.4	+0.8
PMG	Port Moresby	34.42	285	P	P	07 59 46.9	+0.6
	16nm,0.7s,baz=113,slow=6.4,SNR=8.0						
	16nm,0.7s						
PMG	Port Moresby	34.42	285		P	07 59 46.6	+0.2
PMG				IAmb	IAmb	07 59 47.7	
	comp=Z,18nm,0.8s						
STKA	Stephens Creek	36.23	245	P	P	08 00 02.5	+1.4
	comp=Z,3.7nm,0.4s,baz=94,slow=12,SNR=9.7						
	comp=Z,3.7nm,0.4s						
COEN	Coen	36.45	276	P	P	08 00 03.6	+0.5
COEN				IAmb	IAmb	08 00 05.2	
	comp=Z,11nm,0.7s						
AS31	Alice Springs	43.09	258		P	08 00 56.1	+0.1
AS31				IAmb	IAmb	08 00 57.2	
	comp=Z,4.4nm,0.7s						
ASAR	Alice Springs	43.10	258	P	P	08 00 56.5	+0.5
	comp=Z,15nm,0.6s,baz=94,slow=7.8,SNR=270						
ASAR				PcP	PcP	08 02 32.2	+0.3
	comp=Z,2.4nm,0.7s,baz=106,slow=3.8,SNR=7.8						
ASAR				ScP	ScP	08 05 27.7	+1.4
	comp=Z,1.1nm,0.7s,baz=104,slow=4.5,SNR=7.0						
ASAR				S	S	08 06 37.3	-2.5
	comp=Z,2.5nm,1.0s,baz=96,slow=16,SNR=15						
	comp=Z,15nm,0.6s						
JAY	Jayapura	43.25	290	P	P	08 00 57.6	+0.3
	comp=Z,41nm,0.7s,baz=158,slow=10.0,SNR=7.8						
	comp=Z,41nm,0.7s						
WRAB	Tennant Creek	43.25	263	P	P	08 00 56.1	-1.1
WRAB				IAmb	IAmb	08 00 57.9	
	comp=Z,15nm,0.9s						
WRA	Warramunga Arr	43.26	263	P	P	08 00 57.1	-0.1
	comp=Z,5.6nm,0.3s,baz=96,slow=7.8,SNR=72						
WRA				PcP	PcP	08 02 32.9	+0.4
	comp=Z,0.8nm,0.6s,baz=94,slow=3.6,SNR=1.4						
WRA				ScP	ScP	08 05 28.8	+1.8
	comp=Z,0.8nm,0.8s,baz=98,slow=3.6,SNR=3.9						
WRA				S	S	08 06 37.8	-4.3
	comp=Z,0.5nm,0.6s,baz=341,slow=11,SNR=2.4						
	comp=Z,5.6nm,0.3s						
WRA	Warramunga Arr	43.26	263		P	08 00 56.8	-0.5
MTN	Manton Dam	47.97	272		P	08 01 32.5	-0.5
MTN				IAmb	IAmb	08 01 33.7	
	comp=Z,14nm,0.7s						
KNRA	Kununurra	49.38	268		P	08 01 43.2	-0.2
KNRA				IAmb	IAmb	08 01 44.5	
	comp=Z,12nm,0.6s						
FITZ	Fitzroy Crossi	51.69	264	P	P	08 02 00.7	+0.5
	comp=Z,6.0nm,0.3s,baz=79,slow=5.0,SNR=80						
	comp=Z,6.0nm,0.3s						
FITZ	Fitzroy Crossi	51.69	264	P	P	08 02 00.1	-0.1
VNDA	Vanda	56.74	185	P	P	08 02 34.9	+0.4
MJAR	Matsushiro Arr	70.36	325	P	P	08 04 01.5	-0.2
	comp=Z,3.0nm,0.6s,baz=162,slow=5.8,SNR=9.5						
	comp=Z,3.0nm,0.6s						
MJAR	Matsushiro Arr	70.36	325	P	P	08 04 01.1	-0.6
KSRS	Korea Array	76.89	319	P	P	08 04 39.2	+0.7
	comp=Z,1.3nm,0.7s,baz=98,slow=7.7,SNR=4.2						
	comp=Z,1.3nm,0.7s						
PETK	Petropavlovsk-	77.00	346	P	P	08 04 38.4	-0.4
	comp=Z,3.0nm,0.6s,baz=175,slow=6.4,SNR=8.7						
	comp=Z,3.0nm,0.6s						
PETK	Petropavlovsk-	77.00	346	P	P	08 04 38.8	0.0
BELA	Belgrano 2	78.66	173	P	P	08 04 47.6	+0.1
BELA				IAmb	IAmb	08 04 48.4	
	comp=Z,4.8nm,0.7s						
USRK	Ussuriysk Ar.	79.17	327	P	P	08 04 52.1	+1.5
	comp=Z,3.2nm,0.7s,baz=145,slow=38,SNR=2.7						
	comp=Z,3.2nm,0.7s						
NVAR	Mina Array Bea	82.64	44	P	P	08 05 08.6	-0.2
	comp=Z,0.4nm,0.7s,baz=222,slow=8.5,SNR=4.3						
	comp=Z,0.4nm,0.7s						
M16K	Timber Creek	83.93	10	P	P	08 05 15.5	+1.1
K15K	Wolf Creek Mou	84.77	8	P	P	08 05 19.4	+0.9
K15K				IAmb	IAmb	08 05 53.0	
	comp=Z,32nm,1.5s						
STLK	Strandline Lak	85.68	13	P	P	08 05 21.5	-1.4
STLK				IAmb	IAmb	08 05 47.7	
	comp=Z,6.3nm,1.4s						
SUA	Susitna One	85.87	13	P	P	08 05 23.3	-0.7
GHO	Glory Hole Cre	86.55	14	P	P	08 05 26.7	-0.3
GHO				IAmb	IAmb	08 05 27.5	
	comp=Z,7.6nm,0.6s						
J18K	Innoko River	86.59	10	P	P	08 05 27.1	-0.1
J18K				IAmb	IAmb	08 06 10.5	
	comp=Z,7.3nm,1.4s						
TXAR	Lajitas Array	88.66	58	P	P	08 05 38.8	+1.1
	comp=Z,0.7nm,0.8s,baz=219,slow=6.1,SNR=8.6						
	comp=Z,0.7nm,0.8s						
TXAR	Lajitas Array	88.66	58	P	P	08 05 37.4	-0.3
HILR	Hailar Array B	89.03	325	P	P	08 05 38.9	0.0
	comp=Z,3.4nm,0.8s,baz=141,slow=7.6,SNR=3.9						
	comp=Z,3.4nm,0.8s						
CMAR	Chiang Mai Arr	89.33	290	P	P	08 05 41.2	+0.2
	comp=Z,3.8nm,0.8s,baz=125,slow=3.0,SNR=18						
	comp=Z,3.8nm,0.8s						
ILAR	Eielson Array	89.63	13	P	P	08 05 40.7	-0.6
	comp=Z,0.4nm,0.4s,baz=218,slow=4.9,SNR=14						
	comp=Z,0.4nm,0.4s						
BVAR	Borovoye Array	119.11	320	PKP	PKPdf	08 11 27.5	-0.8
	comp=Z,2.2nm,0.3s,baz=119,slow=2.0,SNR=11						
SPITS	Spitsbergen Ar	122.85	356	PKP	PKPdf	08 11 34.0	-0.8
	comp=Z,14nm,0.9s,baz=72,slow=5.4,SNR=4.4						
ARCES	ARCESS Array B	129.74	349	PKP	PKPdf	08 11 48.1	0.0
	comp=Z,1.1nm,0.4s,baz=67,slow=0.7,SNR=9.4						
FINES	FINESS Array B	136.44	343	PKP	PKiKP	08 12 02.0	-0.8
	comp=Z,1.9nm,0.7s,baz=0.0,slow=0.0,SNR=4.2						
HFS	Hagfors	140.39	350	PKhKP	PKPpre	08 12 01.5	
	comp=Z,1.9nm,0.3s,baz=72,slow=4.8,SNR=17						
AKASG	Malin Array Be	143.33	329	PKP	PKPab	08 12 11.4	-0.7
	comp=Z,4.5nm,0.4s,baz=44,slow=4.2,SNR=42						
KIEV	Kiev	143.35	329		PKPab	08 12 11.3	-0.9
EKA	Eskdalemuir Ar	146.16	4	PKPbc	PKPbc	08 12 20.4	-0.2
	comp=Z,1.2nm,0.7s,baz=334,slow=25,SNR=4.0						
BRTR	Keskin Array B	146.63	310	PKPbc	PKPbc	08 12 22.4	-0.3
	comp=Z,2.3nm,0.6s,baz=133,slow=4.6,SNR=12						
MMAI	Mount Meron Ar	147.26	298	PKPbc	PKiKP	08 12 25.4	-0.6
	comp=Z,2.6nm,0.4s,baz=64,slow=5.7,SNR=5.1						
GERES	GERESS Array B	150.87	342	PKPbc	PKPbc	08 12 31.9	-0.8
	comp=Z,0.9nm,0.4s,baz=341,slow=3.2,SNR=8.4						

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*SOME **05** 07:54:00.7, 40°.30N×78°.25E, h5^{km}, MS3.5*

*KRNET **05** 07:54:04.9±0.1, 40°.37N×78°.15E, mb4.8*

*BJI **05** 07:54:04.9, 40°.35N×78°.25E, h18^{km}, mB4.6/3, mb4.6/26, ML4.5/9, Ms4.0/3, Ms7 3.9/3*

*MOS **05** 07:54:04.1±1.1, 40°.20N×78°.40E, h25^{km}, mb4.2/7, Error ellipse: s-maj=7.0km s-min=4.5km az=116.2*

*IDC **05** 07:54:05.8±0.6, 40°.22N×78°.20E, h28^{km}±3^{km}, mb3.9/17, mbtmp4.1/23, ML3.7/6, MS3.8/30, Error ellipse: s-maj=13.8km s-min=10.7km az=44.0*

*NEIC **05** 07:54:07.5±2.4, 40°.36N±0°.06×78°.41E±0°.08, h38^{km}±9^{km}, mb4.5/20, Error ellipse: s-maj=9.5km s-min=8.2km az=131.0*

*NNC **05** 07:54:12.2±4.1, 40°.83N×78°.82E, h0^{km}, mb5.1, mpv4.8, Error ellipse: s-maj=35.0km s-min=20.6km az=157.0*

ISC 05 07:54:05.6±0.5**, 40°.36N**±0°.03×**78°.35E**±0°.03**, h23**^{km}±3^{km}**, n221,** σ1^{s}**95**/253**, mb4.4**/33**, MS3.8**/27**, 45C-28D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WUS	Wushi	1.06	38		Pn	07 54 25.4	+0.2
TARG	Taragay, Kyrgy	1.43	343		Pb	07 54 30.8	-1.0
TARG				Sn	Sb	07 54 48.4	-1.3
TARG	Taragay, Kyrgy	1.43	343	⇓eP	Pb	07 54 30.9	-0.9
TARG				⇓eS	Sb	07 54 49.8	+0.1
TARG	Taragay, Kyrgy	1.43	343	PN	Pb	07 54 30.8	-1.0
TARG						07 54 48.4	
KDJ	Kajisay	1.98	334		Pb	07 54 39.8	-1.2
KDJ	Kajisay	1.98	334	⇑eP	Pb	07 54 39.9	-1.1
KDJ				⇑eS	Sb	07 55 05.5	+0.3
KDJ	Kajisay	1.98	334	PN	Pb	07 54 39.8	-1.2
KSH	Kashi	2.01	246	Pn	Pb	07 54 45.0	+3.4
KSH				Sn	Sb	07 55 16.8	+11
KSH				smax	smax		
	comp=N,4µm,1.0s						
KSH				smax	smax		
	comp=E,3µm,0.9s						
PRZ	Przheval'sk	2.12	1		Pb	07 54 43.1	-0.3
PRZ	Przheval'sk	2.12	1	⇑eP	Pb	07 54 43.4	0.0
PRZ				⇑eS	Sb	07 55 11.6	+2.2
PRZ	Przheval'sk	2.12	1	PN	Pb	07 54 43.1	-0.3
JNKS	Jany-Kuch	2.17	290	⇑eP	Pn	07 54 41.8	+1.3
JNKS				⇑eS	Sn	07 55 08.7	+1.9
SATY	Saty	2.69	1	Pg	Pb	07 54 53.0	-0.2
	1µm,0.6s						
SATY				Lg	Lg	07 55 30.6	
	1µm,0.6s						
BOOM	Boomskoye usch	2.79	320		Pn	07 54 50.7	+1.6
BOOM				Sn	Sb	07 55 27.5	-1.3
BOOM	Boomskoye usch	2.79	320	⇑eP	Pn	07 54 51.4	+2.3
BOOM				⇑eS	Sb	07 55 25.4	-3.4
BOOM	Boomskoye usch	2.79	320	ePN	Pn	07 54 51.4	+2.3
BOOM				eS	Sb	07 55 25.4	-3.4
UZB	Uzynbulak	2.83	10	Pg	Pb	07 54 53.5	-2.0
	184nm,0.9s						
UZB				Lg	Lg	07 55 31.4	
	2µm,0.7s						
UZB	Uzynbulak	2.83	10	eP	Pb	07 54 53.5	-2.0
	184nm,0.9s						
UZB				eS	Sb	07 55 31.4	+1.7
	2µm,0.7s						
TNSS	Tian-Shan	2.87	339	Pg	Pb	07 54 55.2	-1.2
	493nm,0.4s						
TNSS				Lg	Lg	07 55 34.3	
	337nm,0.5s						
TNSS	Tian-Shan	2.87	339	eP	Pb	07 54 55.2	-1.2
	493nm,0.4s						
TNSS				eS	Sb	07 55 34.3	+3.1
	337nm,0.5s						
SHLS	Shalkode	2.91	16	Pg	Pb	07 54 59.1	+2.2
	1µm,0.5s						
SHLS				Lg	Lg	07 55 41.1	
	3µm,0.4s						
SHLS	Shalkode	2.91	16	eP	Pb	07 54 59.1	+2.2
	1µm,0.5s						
SHLS				eS	Sb	07 55 41.1	+8.9
	3µm,0.4s						
MDOK	Medeo	2.96	341	Pg	Pb	07 54 56.6	-1.2
	761nm,0.7s						
MDOK				Lg	Lg	07 55 36.9	
	1µm,0.6s						
KOTS	Kotyrbulak	3.02	343	Pg	Pb	07 54 57.9	-0.8
	1µm,0.6s						
KOTS				Lg	Lg	07 55 39.4	
	2µm,0.4s						
KOTS	Kotyrbulak	3.02	343	eP	Pb	07 54 57.9	-0.8
	1µm,0.6s						
KOTS				eS	Sb	07 55 39.4	+4.3
	2µm,0.4s						
KNDC	Almaty	3.04	340	⇓Pg	Pb	07 55 01.8	+2.8
	1µm,0.8s						
KNDC				⇑Lg	Lg	07 55 39.1	
	2µm,0.7s						
KNDC	Almaty	3.04	340	PN	Pb	07 54 59.7	+0.7
AAA	Alma-Ata	3.04	340	Pg	Pb	07 54 58.1	-1.0
	1µm,0.6s						
AAA				Lg	Lg	07 55 40.2	
	198nm,0.4s						
AAA	Alma-Ata	3.04	340	eP	Pb	07 54 58.1	-1.0
	1µm,0.6s						
AAA				eS	Sb	07 55 40.2	+4.5
	198nm,0.4s						
PDGK	Podgornoye	3.08	16	⇑Pn	Pb	07 54 55.6	-4.2
	316nm,0.5s						
PDGK				⇑Lg	Lg	07 55 33.9	
	2µm,0.9s						
PDGK	Podgornoye	3.08	16	PN	Pb	07 54 56.6	-3.2
KPKS	Kokpek	3.11	4	Pg	Pb	07 54 59.9	-0.3
	1.0nm,0.6s						
KPKS				Lg	Lg	07 55 42.8	
	2µm,0.5s						
MTBS	Maitube	3.12	333	Pg	Pb	07 54 58.4	-2.0
	741nm,0.5s						
MTBS				Lg	Lg	07 55 39.8	
	990nm,0.4s						
MTBS	Maitube	3.12	333	eP	Pb	07 54 58.4	-2.0
	741nm,0.5s						
MTBS				eS	Sb	07 55 39.8	+1.8
	990nm,0.4s						
KURS	Kuram	3.13	358	Pg	Pb	07 55 00.5	0.0
	631nm,0.6s						
KURS				Lg	Lg	07 55 43.6	
	790nm,0.9s						
KST	Kastek	3.22	327	Pg	Pb	07 55 00.7	-1.4
	438nm,0.7s						
KST				Lg	Lg	07 55 44.0	
	2µm,0.5s						
KST	Kastek	3.22	327	eP	Pb	07 55 00.7	-1.4
	438nm,0.7s						
KST				eS	Sb	07 55 44.0	+3.0
	2µm,0.5s						
TKM2	Tokmak 2	3.29	322	P	Pn	07 54 58.6	+2.7
	SNR=88						
TKM2	Tokmak 2	3.29	322	⇓eP	Pn	07 54 58.3	+2.4
TKM2				⇓eS	Sn	07 55 37.3	+3.0
TKM2	Tokmak 2	3.29	322	ePN	Pn	07 54 58.3	+2.4
TKM2				eS	Sn	07 55 37.3	+3.0
ARLS	Aral	3.39	298	⇑eP	Pn	07 54 58.8	+1.5
ARLS				⇑eS	Sn	07 55 38.9	+2.0
KBK	Karagaybulak	3.43	313	P	Pn	07 55 01.0	+3.2
	SNR=22						
KBK	Karagaybulak	3.43	313	⇑eP	Pn	07 55 00.2	+2.4
KBK				⇑eS	Sn	07 55 40.5	+2.6
KBK	Karagaybulak	3.43	313	ePN	Pn	07 55 00.2	+2.4
KBK				eS	Sn	07 55 40.5	+2.6
UCH	Uchtor	3.44	304	P	Pn	07 55 01.0	+2.8
	SNR=40						
UCH	Uchtor	3.44	304	⇓eP	Pn	07 55 00.2	+2.0
UCH				⇓eS	Sn	07 55 40.7	+2.2
UCH	Uchtor	3.44	304	ePN	Pn	07 55 00.2	+2.0
UCH				eS	Sn	07 55 40.7	+2.2
DGS	Degeres	3.46	327	Pg	Pb	07 55 04.6	-1.7
	240nm,0.5s						
DGS				Lg	Lg	07 55 50.8	
	2µm,0.7s						
SALK	Salom-Alik	3.49	280	⇑eP	Pn	07 55 00.6	+2.0
SALK				⇑eS	Sn	07 55 41.3	+2.1
SALK	Salom-Alik	3.49	280	ePN	Pn	07 55 00.6	+2.0
SALK				eS	Sn	07 55 41.3	+2.1
KTBS	Karatobe	3.57	340	Pg	Pb	07 55 07.9	-0.2
	390nm,0.5s						
KTBS				Lg	Lg	07 55 56.0	
	673nm,0.6s						
AAK	Ala-Archa	3.68	309	P	Pn	07 55 04.3	+3.0
	SNR=6.6						
AAK	Ala-Archa	3.68	309	Pn	Pn	07 55 04.1	+2.9
	2.8nm,0.3s,baz=160,slow=9.2,SNR=38						
AAK				Lg	Lg	07 55 57.0	
	31nm,0.3s,baz=310,slow=17,SNR=12						
	21nm,0.6s						
AAK	Ala-Archa	3.68	309		Pn	07 55 03.6	+2.3
AAK	Ala-Archa	3.68	309	⇓eP	Pn	07 55 03.5	+2.3
AAK				⇓eS	Sn	07 55 46.4	+2.4
AAK	Ala-Archa	3.68	309	⇑Pg	Pb	07 55 18.7	+8.7
	295nm,0.9s						
AAK				⇓Lg	Lg	07 56 08.2	
	1µm,1.2s						
AAK	Ala-Archa	3.68	309	d iPN	Pn	07 55 03.8	+2.5
FRU1	Bishkek	3.71	312		Pn	07 55 04.1	+2.6
FRU1	Bishkek	3.71	312	⇑eP	Pn	07 55 04.2	+2.6
FRU1				⇑eS	Sn	07 55 47.5	+2.9
FRU1	Bishkek	3.71	312	PN	Pn	07 55 04.1	+2.6
BLB	Baldybastay	3.73	1	Pg	Pb	07 55 10.9	0.0
	765nm,0.6s						
BLB				Lg	Lg	07 56 01.7	
	1µm,0.6s						
CHMS	Chumysh	3.77	316	P	Pn	07 55 01.0	-1.3
	SNR=8.0						
CHMS	Chumysh	3.77	316	⇓eP	Pn	07 55 04.7	+2.4
CHMS				⇓eS	Sn	07 55 48.4	+2.4
CHMS	Chumysh	3.77	316	ePN	Pn	07 55 04.7	+2.4
KUU	Kurty	3.83	338	Pg	Pb	07 55 11.6	-0.9
	103nm,0.6s						
KUU				Lg	Lg	07 56 02.6	
	306nm,0.6s						
KUU	Kurty	3.83	338	eP	Pb	07 55 11.6	-0.9
	103nm,0.6s						
KUU				eS	Sb	07 56 02.5	+4.1
	306nm,0.6s						
ARXS	Arharly	3.87	354	Pg	Pb	07 55 12.7	-0.4
	239nm,0.5s						
ARXS				Lg	Lg	07 56 05.6	
	557nm,0.6s						
ARXS	Arharly	3.87	354	eP	Pb	07 55 12.7	-0.4
	239nm,0.5s						
ARXS				eS	Sb	07 56 05.7	+6.1
	557nm,0.6s						
KRBS	Karabastau	3.88	330	Pg	Pb	07 55 12.0	-1.4
	315nm,0.6s						
KRBS				Lg	Lg	07 56 03.4	
	137nm,0.6s						
KNOS	Konyrlen	4.04	8	Pg	Pb	07 55 16.6	+0.5
	204nm,0.5s						
KNOS				Lg	Lg	07 56 11.4	
	496nm,0.5s						
USP	Ospenovka	4.09	316	P	Pb	07 55 16.7	-0.2
	SNR=12						
USP	Ospenovka	4.09	316	⇓eP	Pn	07 55 09.2	+2.5
USP				⇓eS	Sn	07 55 56.1	+2.2
USP	Ospenovka	4.09	316	ePN	Pn	07 55 09.2	+2.5
EKS2	Erkin-Say	4.13	305	P	Pn	07 55 10.7	+3.3
	SNR=5.7						
EKS2	Erkin-Say	4.13	305	⇑eP	Pn	07 55 09.7	+2.3
EKS2				⇑eS	Sn	07 55 57.0	+1.9
EKS2	Erkin-Say	4.13	305	ePN	Pn	07 55 09.7	+2.3
SGDS	Sogindy	4.15	319	Pg	Pb	07 55 16.6	-1.4
	52nm,0.5s						
SGDS				Lg	Lg	07 56 11.0	
	470nm,1.3s						
ARSB	Arslanbob	4.18	285	Pn	Pn	07 55 11.8	+3.6
ARSB	Arslanbob	4.18	285	⇓eP	Pn	07 55 10.3	+2.1
ARSB				⇓eS	Sn	07 55 58.1	+1.7
ARSB	Arslanbob	4.18	285	ePN	Pn	07 55 10.3	+2.1
ARSB				eS	Sn	07 55 58.1	+1.7
OHH	Osh	4.25	274	⇑eP	Pn	07 55 11.2	+2.2
OHH				⇑eS	Sn	07 55 59.5	+1.6
OHH	Osh	4.25	274	ePN	Pn	07 55 11.2	+2.2
OHH				eS	Sn	07 55 59.5	+1.6
MRKS	Merke	4.52	303	Pg	Pb	07 55 23.2	-1.2
	82nm,0.5s						
MRKS	Merke	4.52	303	eP	Pb	07 55 23.2	-1.2
	82nm,0.5s						
MRKS				eS	Sb	07 56 22.3	+3.9
	183nm,0.5s						
TDK	Taldyqorghan	4.64	0	Pg	Pb	07 55 28.9	+2.6
	755nm,0.8s						
TDK				Lg	Lg	07 56 32.0	
	1µm,0.6s						
TDK	Taldyqorghan	4.64	0	eP	Pb	07 55 27.9	+1.7
	790nm,0.8s						
TDK				eS	Sb	07 56 30.3	+8.7
	1µm,0.6s						
MNAS	Manas	4.88	298	⇑eP	Pn	07 55 20.0	+2.3
MNAS				⇑eS	Sn	07 56 14.9	+1.3
MNAS	Manas	4.88	298	ePN	Pn	07 55 20.0	+2.3
KAPS	Kapalarasan	4.97	8	Pg	Pb	07 55 33.3	+1.3
	81nm,0.5s						
KAPS				Lg	Lg	07 56 40.0	
	271nm,0.6s						
ARK	Arkit	5.04	289	⇑eP	Pn	07 55 22.0	+2.2
ARK				⇑eS	Sn	07 56 18.3	+0.9
ARK	Arkit	5.04	289	ePN	Pn	07 55 22.0	+2.2
DRK	Karamyk	5.11	262		Pn	07 55 22.1	+1.0
DRK	Karamyk	5.11	262	⇑eP	Pn	07 55 23.3	+2.2
DRK				⇑eS	Sn	07 56 20.6	+1.1
DRK	Karamyk	5.11	262	PN	Pn	07 55 22.1	+1.0
TRKS	Terek-Say	5.58	284	⇓eP	Pn	07 55 29.1	+1.7
TRKS				⇓eS	Sn	07 56 30.5	-0.4
TRKS	Terek-Say	5.58	284	ePN	Pn	07 55 29.1	+1.7
BTLS	Baital	5.65	327	Lg	Lg	07 56 57.4	
	141nm,1.1s						
BTLS	Baital	5.65	327	eP	Pb	07 55 45.4	+1.9
	114nm,0.8s						
BTLS				eS	Sb	07 57 00.2	+10
	262nm,0.6s						
MANEM	Manem	5.91	244		Pn	07 55 34.4	+2.4
GAR	Garm	6.35	260		Pn	07 55 37.8	0.0
KK31	Karatay Array	6.47	298	Pn	Pn	07 55 40.4	+0.9
KK31	Karatay Array	6.47	298	⇓Pn	Pb	07 55 49.6	-7.9
	16nm,0.6s,baz=101,slow=14						
KK31				⇑Pg	Pn	07 56 10.8	+31
	25nm,0.6s,baz=100,slow=15,SNR=9.1						
KK31				⇑Lg	Lg	07 57 40.1	
	88nm,0.8s,baz=94,slow=24						
KK31	Karatay Array	6.47	298	PN	Pn	07 55 40.4	+0.9
MAKZ	Makanchi	6.96	21		Pn	07 55 46.9	+0.8
MAKZ	Makanchi	6.96	21	⇑Pn	Pn	07 55 48.0	+1.9
	13nm,0.8s						
MAKZ				⇑Sn	Sn	07 57 03.2	-1.3
	14nm,0.6s						

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MAKZ                                 ⇓Lg      Lg       07 57 36.6
      103nm,1.4s
MAKZ  Makanchi            6.96  21   PN       Pn       07 55 46.9 +0.8
MK31  Makanchi Array      7.04  23   Pn       Pn       07 55 48.2 +1.1
MK31  Makanchi Array      7.04  23   Pn       Pn       07 55 49.5 +2.3
      2.7nm,0.3s,baz=193,slow=13,SNR=117
MK31                                 ⇑Sn      Sn       07 57 05.8 -0.6
      54nm,0.7s,baz=193,slow=26
MK31                                 ⇓Lg      Lg       07 57 38.6
      82nm,0.9s,baz=200,slow=21
MK31  Makanchi Array      7.04  23⇓iPN        Pn       07 55 49.7 +2.5
MKAR  Makanchi Array      7.04  23   Pn       Pn       07 55 49.8 +2.6
      3.7nm,0.3s,baz=201,slow=14,SNR=92
MKAR                                 Sn       Sn       07 57 09.2 +2.7
      4.6nm,0.3s,baz=197,slow=16,SNR=7.2
MKAR                                 Lg       Lg       07 57 50.2
      7.9nm,0.3s,baz=209,slow=28,SNR=6.1
      6.3nm,0.4s
MKAR  Makanchi Array      7.04  23            Pn       07 55 48.7 +1.5
MKAR  Makanchi Array      7.04  23 i PN       Pn       07 55 49.7 +2.6
MKAR                                 pmax     pmax
      comp=Z,7.0nm,0.4s
CHGR  Chuyangaron         7.31 259            Pn       07 55 49.8 -1.2
CHGR  Chuyangaron         7.31 259   P        Pn       07 55 49.8 -1.2
WMQ   Urumqi              7.76  61   Pn       Pn       07 56 01.0 +3.8
WMQ                                  Sn       Sn       07 57 29.4 +5.1
WMQ                                  smax     smax
      comp=Z,140nm,1.3s
WMQ                                  smax     smax
      comp=Z,150nm,1.7s
NIL   Nilore              7.84 213            Pn       07 55 59.2 +0.9
NIL   Nilore              7.84 213   P        Pn       07 55 59.2 +0.9
SHAA  Shahritus           8.44 254            Pn       07 56 04.6 -2.0
KBL   Kabul               9.41 235            Pn       07 56 19.7 -0.2
KBL   Kabul               9.41 235   P        Pn       07 56 19.7 -0.2
KURBB Kurchatov Arra     10.26   1   Pn       Pn       07 56 32.2 +0.9
      comp=Z,0.8nm,0.3s,baz=189,slow=12,SNR=122
KURBB                                Sn       Sn       07 58 26.7 +1.1
      comp=Z,0.2nm,0.3s,baz=180,slow=27,SNR=4.4
KURBB                                Lg       Lg       07 59 27.6
      comp=Z,0.5nm,0.3s,baz=189,slow=25,SNR=5.8
KURBB                                LR       LR       08 00 49.5
      comp=Z,360nm,21.4s,baz=208,slow=39
      comp=Z,12nm,0.7s
KURBB Kurchatov Arra     10.26   1  ⇓Pn       Pn       07 56 34.2 +2.9
      comp=Z,22nm,0.9s
KURBB                               ⇑Lg       Lg       07 59 23.8
      comp=Z,191nm,0.8s
KURBB Kurchatov Arra     10.26   1   P        Pn       07 56 34.2 +2.9
KURK  Kurchatov          10.36   1            Pn       07 56 33.6 +1.0
KURK  Kurchatov          10.36   1  ⇓Pn       Pn       07 56 35.8 +3.2
      comp=Z,16nm,0.8s
KURK                                ⇑Lg       Lg       07 59 26.1
      comp=Z,75nm,1.2s
KURK  Kurchatov          10.36   1d iP        Pn       07 56 33.4 +0.8
KURK                                 pmax     pmax
      comp=Z,48nm,0.8s
GOMU  GeErMu             13.58 103   P        Pn       07 57 15.4 -1.8
BVA0  Borovoye Array     13.78 339  ⇓P        P        07 57 24.1 -3.6
      comp=Z,18nm,0.8s,baz=153,slow=12,SNR=68
BVA0  Borovoye Array     13.78 339   P        P        07 57 24.1 -3.6
BVAR  Borovoye Array     13.78 339   Pn       Pn       07 57 18.4 -1.1
      comp=Z,0.2nm,0.3s,baz=153,slow=13,SNR=92
BVAR                                 Lg       Lg       08 01 15.8
      comp=Z,0.1nm,0.3s,baz=153,slow=27,SNR=8.6
BVAR                                 LR       LR       08 02 48.3
      comp=Z,268nm,21.6s,baz=159,slow=38
      comp=Z,19nm,0.7s
BORK  Borovoye           13.82 339            Pn       07 57 18.4 -1.5
BORK  Borovoye           13.82 339c iP        Pn       07 57 19.1 -0.8
BORK                                 pmax     pmax
      comp=Z,17nm,0.8s
BRVK  Borovoye           13.84 339  ⇑P        P        07 57 24.8 -3.5
      comp=Z,10nm,0.8s
HRA   Herat              14.12 250   Pn       Pn       07 57 20.9 -3.5
EVN   Everest            14.21 148            Pn       07 57 25.0 -1.0
ZAA0  Zalesovo Array     14.28  16            Pn       07 57 25.7 -0.4
ZALV  Zalesovo Beam      14.28  16   Pn       Pn       07 57 26.5 +0.3
      comp=Z,2.3nm,0.3s,baz=209,slow=14,SNR=5.5
ZALV                                 Sn       Sn       08 00 00.4 -3.2
      comp=Z,0.2nm,0.3s,baz=217,slow=22,SNR=2.1
ZALV                                 Lg       Lg       08 01 42.8
      comp=Z,0.2nm,0.3s,baz=190,slow=24,SNR=5.8
ZALV                                 LR       LR       08 03 18.9
      comp=Z,326nm,18.4s,baz=202,slow=38
      comp=Z,3.5nm,0.6s
ZALV  Zalesovo Beam      14.28  16            Pn       07 57 26.7 +0.5
ZALV  Zalesovo Beam      14.28  16   P        Pn       07 57 26.7 +0.5
AB31  Akbulak array      15.77 310            Pn       07 57 45.4 -0.7
AB31  Akbulak array      15.77 310   P        P        07 57 54.7 +4.9
      comp=Z,4.6nm,1.2s,baz=115,slow=8.2,SNR=10
AB31  Akbulak array      15.77 310   P        P        07 57 54.7 +4.9
ABKAR Akbulak array      15.77 310            Pn       07 57 45.6 -0.4
GTA   Gaotai             16.50  86  eP        Pn       07 57 54.4 -1.2
GTA                                  pP       P        07 58 00.0 +1.8
GTA                                  pmax     pmax
      comp=Z,9.0nm,0.8s
AKTO  Aktyubinsk         17.42 312   P        Pn       07 58 06.0 -1.0
      comp=Z,0.2nm,0.3s,baz=122,slow=12,SNR=10
AKTO                                 LR       LR       08 05 27.5
      comp=Z,174nm,21.6s,baz=158,slow=39
      comp=Z,4.2nm,0.7s
AKTO  Aktyubinsk         17.42 312   P        Pn       07 58 06.0 -1.0
SHL   Shillong           18.58 138   P        P        07 58 20.5 -0.8
SHL   Shillong           18.58 138   P        P        07 58 20.5 -0.8
SHL                                  pmax     pmax
      comp=Z,13nm,0.7s
ZAK   Zakamensk          20.09  52  eP        Pn       07 58 39.0 -0.4
ZAK                                  pmax     pmax
      comp=Z,11nm,1.1s
LZDM  Lanzhou Array      20.38  94   P        Pn       07 58 42.9 -0.3
      comp=Z,3.6nm,0.4s,baz=278,slow=10,SNR=6.3
      comp=Z,3.6nm,0.4s
LZH   Lanzhou            20.45  94  eP        Pn       07 58 43.9 +0.1
LZH                                  pP       sP       07 58 53.5 +1.8
LZH                                  pmax     pmax
      comp=Z,15nm,1.2s
ARTI  Arti               20.68 327   P        Pn       07 58 44.9 -1.3
      comp=Z,8.8nm,1.0s,baz=156,slow=3.1,SNR=5.0
ARTI                                 LR       LR       08 06 53.8
      comp=Z,171nm,18.9s,baz=122,slow=37
      comp=Z,8.8nm,1.0s
ARTI  Arti               20.68 327   P        P        07 58 43.3 -0.5
ARTI  Arti               20.68 327c iP        Pn       07 58 45.0 -1.2
ARTI                                                   07 59 01.9
ARTI                                 S        S        08 02 33.5 -0.1
ARTI                                 SS       SnSn     08 02 53.9 +0.4
ARTI                                 pmax     pmax
      comp=Z,7.0nm,1.0s
SONM  Songino Array      21.40  60   P        P        07 58 54.2 +2.5
      comp=Z,8.0nm,0.8s,baz=257,slow=11,SNR=26
SONM                                 LR       LR       08 07 58.0
      comp=Z,66nm,18.8s,baz=241,slow=39
      comp=Z,8.0nm,0.8s
SONM  Songino Array      21.40  60   P        P        07 58 53.1 +1.4
ULN   Ulaanbaatar        21.84  60   P        P        07 58 57.1 +0.7
ULN                                  IAmb     IAmb     07 59 04.3
      comp=Z,13nm,1.1s
ULN   Ulaanbaatar        21.84  60⇑iP         P        07 58 58.9 +2.4
ULN                                  pmax     pmax
      comp=Z,9.0nm,0.9s
PZH   PanZhiHua          23.83 118   P        P        07 59 16.7 -0.4
BTO   Baotou             24.03  79  eP        P        07 59 17.2 -1.6
BTO                                  pmax     pmax
      comp=Z,18nm,0.6s
BELG  Belogornoye        24.18 310⇑iP         P        07 59 21.4 +1.5
BELG                                 pmax     pmax
      comp=Z,4.0nm,1.1s
XAN   Xi'an              25.08  95   P        P        07 59 29.5 +1.1
XAN                                  pmax     pmax
      comp=Z,30nm,0.7s
HHC   Hu-ho-hao-te       25.14  78  eP        P        07 59 28.8 -0.2
HHC                                  pmax     pmax
      comp=Z,15nm,0.6s
HHC                                  pmax     pmax
      comp=Z,140nm,5.8s
KMI   Kunming            25.41 119   P        P        07 59 33.2 +1.5
KMI                                  pmax     pmax
      comp=Z,16nm,0.8s
KIRV  Kirov              25.87 324   LR       LR       08 10 16.4
      comp=Z,225nm,20.2s,baz=126,slow=37
KIRV  Kirov              25.87 324⇑iP         P        07 59 37.3 +2.1
KBZ   Khabaz             26.42 289   LR       LR       08 11 53.0
      comp=Z,99nm,18.0s,baz=90,slow=40
KIV   Kislovodsk         26.55 290  eP        P        07 59 41.5 -0.2
KIV                                  pmax     pmax
      comp=Z,6.0nm,1.0s
KIV                                  MLR      MLR
      comp=Z,81nm,15.0s
GYA   Guiyang            27.26 112  ⇓P        P        07 59 49.5 +1.2
GYA                                  S        S        08 04 26.0 -0.4
GYA                                  pmax     pmax
      comp=Z,21nm,0.8s
GYA                                  LR       LR
      comp=Z,340nm,5.8s
CMAR  Chiang Mai Arr     28.12 135   LR       LR       08 13 02.6
      comp=Z,36nm,18.9s,baz=310,slow=40
CMAR  Chiang Mai Arr     28.12 135   P        P        07 59 55.2 -0.7
CMAR  Chiang Mai Arr     28.12 135   P        P        07 59 55.2 -0.7
NRIK  Noril'sk           29.45   7   LR       LR       08 13 33.1
      comp=Z,99nm,19.0s,baz=209,slow=39
KLMR  Klimovskoe         31.36 324  eP        P        08 00 22.9 -1.3
KLMR                                 pmax     pmax
      comp=Z,31nm,1.6s
PALK  Pallekele          33.02 176   LR       LR       08 14 48.5
      comp=Z,188nm,18.7s,baz=360,slow=38
NJ2   Nanjing            33.48  91  eP        P        08 00 42.8 -0.3
NJ2                                  pmax     pmax
      comp=Z,8.0nm,0.5s
BR131 Keskin Array S     33.96 284            P        08 00 47.0 -0.3
BR131                                IAmb     IAmb     08 00 54.8
      comp=Z,9.8nm,0.8s
BR131 Keskin Array S     33.96 284⇑iP         P        08 00 47.7 +0.4
BRTR  Keskin Array B     33.96 284   P        P        08 00 47.5 +0.2
      comp=Z,2.0nm,0.8s,baz=81,slow=7.7,SNR=9.9
BRTR                                 pP       pP       08 00 54.0 -0.9
      comp=Z,6.8nm,0.7s,baz=93,slow=8.5,SNR=22
      comp=Z,2.0nm,0.8s
BRTR  Keskin Array B     33.96 284            P        08 00 46.9 -0.4
AKASG Malin Array Be     35.33 304   P        P        08 00 58.8 -0.1
      comp=Z,0.5nm,0.4s,baz=73,slow=8.9,SNR=1.3
AKASG                                LR       LR       08 18 55.2
      comp=Z,161nm,19.2s,baz=60,slow=42
      comp=Z,0.5nm,0.4s
YAK   Yakutsk            37.44  37⇑iP         P        08 01 17.6 +0.9
YAK                                  pmax     pmax
      comp=Z,8.0nm,0.8s
FINES FINESS Array B     37.78 322   P        P        08 01 20.1 +0.5
      comp=Z,2.8nm,0.7s,baz=104,slow=7.3,SNR=16
FINES                                pP       pP       08 01 26.2 -0.9
      comp=Z,3.0nm,0.8s,baz=96,slow=8.4,SNR=2.6
FINES                                LR       LR       08 16 18.7
      comp=Z,137nm,18.1s,baz=48,slow=35
      comp=Z,2.8nm,0.7s
FINES FINESS Array B     37.78 322   P        P        08 01 19.1 -0.5
MLR   Muntele Rosu       38.15 296   LR       LR       08 19 48.5
      comp=Z,170nm,18.8s,baz=66,slow=40
ARCES ARCESS Array B     39.99 334   P        P        08 01 39.0 +1.0
      comp=Z,3.0nm,0.8s,baz=107,slow=7.6,SNR=7.2
ARCES                                pP       pP       08 01 46.2 +0.6
      comp=Z,2.7nm,0.6s,baz=92,slow=7.4,SNR=2.1
ARCES                                LR       LR       08 17 41.8
      comp=Z,188nm,18.2s,baz=60,slow=35
      comp=Z,3.0nm,0.8s
TIXI  Tiksi              40.02  22   LR       LR       08 19 16.7
      comp=Z,160nm,18.3s,baz=200,slow=38
VRAC  Vranov             43.58 303   LR       LR       08 22 25.7
      comp=Z,102nm,18.7s,baz=44,slow=39
HFS   Hagfors            43.77 319   P        P        08 02 07.7 -1.3
      comp=Z,15nm,1.2s,baz=114,slow=7.2,SNR=5.4
HFS                                  pP       sP       08 02 18.2 -1.6
      comp=Z,5.9nm,0.9s,baz=99,slow=9.5,SNR=2.3
HFS                                  LR       LR       08 19 58.1
      comp=Z,216nm,18.9s,baz=50,slow=35
      comp=Z,15nm,1.2s
NB2   NORSAR Subarra     44.93 321   P        P        08 02 17.7 -0.6
      comp=Z,4.0nm,0.9s,baz=86,slow=7.9
NOA   NORSAR Array B     44.93 321   P        P        08 02 16.9 -1.4
      comp=Z,3.0nm,1.1s,baz=135,slow=27,SNR=2.3
NOA                                  pP       pP       08 02 25.3 -0.7
      comp=Z,1.1nm,0.8s,baz=100,slow=7.2,SNR=2.0
NOA                                  LR       LR       08 21 21.0
      comp=Z,93nm,19.1s,baz=5.0,slow=36
      comp=Z,3.0nm,1.1s
GERES GERESS Array B     45.54 303   P        P        08 02 21.9 -1.5
      comp=Z,1.0nm,0.7s,baz=72,slow=8.6,SNR=5.5
GERES                                pP       pP       08 02 31.2 +0.1
      comp=Z,1.4nm,0.7s,baz=79,slow=8.3,SNR=4.6
GERES                                LR       LR       08 22 57.9
      comp=Z,114nm,18.5s,baz=58,slow=38
      comp=Z,1.0nm,0.7s
MJAR  Matsushiro Arr     46.26  75   P        P        08 02 29.1 -0.1
      comp=Z,2.9nm,1.1s,baz=292,slow=9.7,SNR=2.6
      comp=Z,2.9nm,1.1s
DAVOX Davos/Dischmat     48.60 302   LR       LR       08 25 49.1
      comp=Z,140nm,19.0s,baz=68,slow=39
VAE   Valguarnera        48.86 288   LR       LR       08 29 36.9
      comp=Z,52nm,21.7s,baz=48,slow=44
EKA   Eskdalemuir Ar     53.57 315   LR       LR       08 28 29.6
      comp=Z,300nm,19.4s,baz=9.5,slow=38
BORG  Borgarnes          58.16 330   LR       LR       08 28 40.5
      comp=Z,96nm,18.6s,baz=76,slow=36
ESDC  Sonseca Array      60.72 299   P        P        08 04 13.5 -1.8
      comp=Z,0.6nm,0.6s,baz=42,slow=7.0,SNR=4.6
ESDC                                 LR       LR       08 34 46.8
      comp=Z,88nm,18.5s,baz=24,slow=40
      comp=Z,0.6nm,0.6s
A36M  Sachs Harbour      66.72   8   P        P        08 04 54.0 -0.2
A36M                                 IAmb     IAmb     08 04 55.0
      comp=Z,3.9nm,0.8s
J17K  VABM Dome          67.00  24   P        P        08 04 55.4 -0.8
J20K  Nowinta River      67.90  22   P        P        08 05 02.4 +0.6
J20K                                 IAmb     IAmb     08 05 28.7
      comp=Z,7.7nm,1.3s
H24K  Noodor Dome        68.26  19   P        P        08 05 03.5 -0.7
L18K  Granite Mounta     68.61  24   P        P        08 05 06.8 +0.6
L18K                                 IAmb     IAmb     08 05 19.6
      comp=Z,5.5nm,1.0s
M16K  Timber Creek       68.75  26   P        P        08 05 06.9 -0.3
M16K                                 IAmb     IAmb     08 05 35.3
      comp=Z,40nm,1.5s
BPAW  Bear Paw Mtn.      68.84  21   P        P        08 05 07.9 +0.1
BPAW                                 IAmb     IAmb     08 05 27.6
      comp=Z,4.7nm,1.3s
N15K  Kwethluk River     68.98  27   P        P        08 05 09.2 +0.5
INK   Inuvik             69.05  12   P        P        08 05 08.2 -0.6
INK                                  IAmb     IAmb     08 05 08.8
      comp=Z,3.7nm,1.1s
INK   Inuvik             69.05  12   P        P        08 05 08.3 -0.6
INK                                  pmax     pmax
      comp=Z,4.0nm,1.2s
L19K  White Mountain     69.21  24   P        P        08 05 10.7 +0.7
L19K                                 IAmb     IAmb     08 05 24.3
      comp=Z,3.8nm,1.1s
F30M  Barrier River      69.29  13   P        P        08 05 09.7 -0.8
F30M                                 IAmb     IAmb     08 05 14.9
      comp=Z,7.3nm,1.1s
ILAR  Eielson Array      69.38  19   P        P        08 05 10.8 -0.3
      comp=Z,0.7nm,0.8s,baz=313,slow=5.7,SNR=9.1
ILAR                                 sP       sP       08 05 24.3 +2.2
      comp=Z,0.6nm,0.7s,baz=314,slow=5.7,SNR=3.6
ILAR                                 LR       LR       08 39 49.4
      comp=Z,78nm,18.4s,baz=347,slow=39
      comp=Z,0.7nm,0.8s
FITZ  Fitzroy Crossi     72.92 133   P        P        08 05 32.6 -0.4
      comp=Z,2.5nm,0.9s,baz=319,slow=11,SNR=4.2
      comp=Z,2.5nm,0.9s
FRB   Frobisher Bay      72.96 345   LR       LR       08 40 50.2
      comp=Z,44nm,19.7s,baz=36,slow=38
KDAK  Kodiak Island      73.34  26   LR       LR       08 41 07.3
      comp=Z,92nm,20.4s,baz=314,slow=38
YKA   Yellowknife Ar     76.96   6   P        P        08 05 55.2 -0.6
      comp=Z,0.6nm,0.9s,baz=342,slow=5.8,SNR=5.7
      comp=Z,0.6nm,0.9s
WRA   Warramunga Arr     79.43 128   P        P        08 06 09.0 -1.1
      comp=Z,1.9nm,0.8s,baz=323,slow=5.2,SNR=9.8
      comp=Z,1.9nm,0.8s
WRA   Warramunga Arr     79.43 128 i P        P        08 06 10.1  0.0
WRA                                  pmax     pmax
      comp=Z,2.0nm,0.9s
ASAR  Alice Springs      82.02 130   P        P        08 06 23.4 -0.5
      comp=Z,1.5nm,0.7s,baz=319,slow=5.4,SNR=20
ASAR                                 pP       sP       08 06 33.9 -1.0
      comp=Z,0.7nm,0.5s,baz=321,slow=5.9,SNR=4.6
      comp=Z,1.5nm,0.7s
BBB   Bella Bella        85.00  16   LR       LR       08 52 26.9
      comp=Z,26nm,19.0s,baz=106,slow=41
SADO  Sadowa             92.87 344   LR       LR       08 52 30.9
      comp=Z,48nm,18.5s,baz=316,slow=38
NVL   N'lazarevskaya    120.51 201  ePKIKP    PKiKP    08 12 55.2 +1.2
NVL                                 e                  08 14 21.1
NVL                                 ePPP      PPP      08 16 55.5
NVL                                 eSS       SS       08 30 49.4 -0.1
NVL                                 eSSS      SSS      08 35 16.9
NVL                                  pmax     pmax
      comp=Z,9.0nm,0.7s
```

IDC ***05*** *08:01:26.3±2.1, 1.°32N×127.°25E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=193.6km s-min=23.2km az=67.0*

DJA ***05*** *08:01:31.8±0.4, 1°N±5°×12°6E±°, h10km, M3.3/7, MLv3.3/7*

ISC 05 08:01:34.0±1.1, **0.°75N**±0.°10×**126.°26E**±0.°07, **h47**km, **n8, σ1.°05**/9, **mb3.5**/4, **Northern Molucca Sea**

```
Code  Station Name         Δ°   AZ°    Phase ID            Time      Res
                                     Op       ISC        h  m  s    ISC
TNTI  Ternate             1.11  89   P        Pn       08 01 53.6 +0.5
MNI   Manado              1.58 296   P        Pn       08 01 58.8 -0.8
MNI                                  S        Sn       08 02 18.9  0.0
SANI  Sanana              2.79 186   P        Pn       08 02 15.5 -0.7
GTOI  Gorontalo           3.25 268   P        Pn       08 02 24.2 +1.7
WRA   Warramunga Arr     22.04 159   P        P        08 06 24.9 +0.1
      0.9nm,0.8s,baz=341,slow=11,SNR=5.6
      0.9nm,0.8s
ASAR  Alice Springs      25.38 163   P        P        08 06 58.1 +1.0
      0.3nm,0.4s,baz=347,slow=11,SNR=5.5
      0.3nm,0.4s
MKAR  Makanchi Array     59.74 326   P        P        08 11 34.0 -0.1
      0.3nm,0.4s,baz=133,slow=7.0,SNR=4.4
      0.3nm,0.4s
KURBB Kurchatov Arra     64.00 328   P        P        08 12 01.4 -1.2
      0.5nm,0.7s,baz=128,slow=5.6,SNR=3.5
      0.5nm,0.7s
```

SJA ***05*** *08:01:53.3±1.5, 29.°70S×71.°37W, h38km±5km, ML4.3, MW3.9*

IDC ***05*** *08:01:54.5±2.8, 29.°75S×71.°25W, h47km±25km, mb3.8/9, mbtmp4.0/13, ML3.6/4, MS3.2/2, Error ellipse: s-maj=24.9km s-min=17.0km az=85.0*

GUC ***05*** *08:01:54.1±0.6, 29.°80S×71.°28W, h50km±2km, ML4.4*

NEIC ***05*** *08:01:55.1±1.6, 29.°73S±0.°03×71.°33W±0.°08, h46km±6km, mb4.3/10, ML4.5(GUC), Error ellipse: s-maj=10.1km s-min=2.8km az=103.0*

ISC 05 08:01:53.7±0.8, **29.°70S**±0.°03×**71.°47W**±0.°05, **h42**km±7km, **n119, σ1.°32**/129, **mb4.3**/13, **4C-2D, Near coast of central Chile**

```
Code  Station Name         Δ°   AZ°    Phase ID            Time      Res
                                     Op       ISC        h  m  s    ISC
CO05  La Serena           0.30 138            Pn       08 02 02.6 +0.5
CO05                                 Sn       Sn       08 02 08.7 +0.6
CO05  La Serena           0.30 138⇑iP         Pn       08 02 02.7 +0.5
CO05                                eS        Sn       08 02 08.7 +0.6
CO05                                 IAML              08 02 09.5
      comp=E,66μm,0.4s
GO04  Tololo Observa      0.75 129            Pn       08 02 08.2 +0.1
GO04                                 Sn       Sn       08 02 17.8 -0.7
GO04  Tololo Observa      0.75 129  eP        Pn       08 02 07.8 -0.3
GO04                                eS        Sn       08 02 17.8 -0.7
GO04  Tololo Observa      0.75 129 i P        Pn       08 02 07.8 -0.3
GO04                               i S        Sn       08 02 18.4 -0.1
GO04                                 IAML              08 02 19.6
      comp=Z,68μm,0.6s
LCO   Las Campanas        0.96  45            Pn       08 02 11.1 +0.2
LCO                                  Sn       Sn       08 02 24.1 +0.5
LCO   Las Campanas        0.96  45  eP        Pn       08 02 10.7 -0.3
LCO   Las Campanas        0.96  45 i P        Pn       08 02 11.1 +0.2
LCO                                i S        Sn       08 02 23.9 +0.4
LCO                                  IAML              08 02 24.5
      comp=Z,11μm,0.3s
CO06  Fray Jorge          0.98 188            Pn       08 02 11.9 +0.9
CO06                                 Sn       Sn       08 02 25.8 +2.0
CO06  Fray Jorge          0.98 188  eP        Pn       08 02 11.9 +0.9
CO06                                 IAML              08 02 29.6
      comp=E,11μm,0.2s
CO01  Juntas del Tor      1.23 104            Pn       08 02 15.0 +0.3
CO01  Juntas del Tor      1.23 104  eP        Pn       08 02 14.8 +0.2
CO01                                eS        Sn       08 02 30.1 -0.1
CO01                                 IAML              08 02 30.7
      comp=N,8μm,0.3s
CO01  Juntas del Tor      1.23 104 i P        Pn       08 02 15.0 +0.3
CO01                               i S        Sn       08 02 29.9 -0.3
CO01                                 IAML              08 02 31.7
      comp=Z,5μm,0.2s
CO03  El Pedregal         1.33 149            Pn       08 02 15.9 +0.1
CO03  El Pedregal         1.33 149  eP        Pn       08 02 15.8  0.0
CO03                                eS        Sn       08 02 31.9 -0.4
CO03                                 IAML              08 02 32.4
      comp=N,7μm,0.2s
CO03  El Pedregal         1.33 149 i P        Pn       08 02 15.9 +0.1
CO03                               i S        Sn       08 02 32.7 +0.4
CO03                                 IAML              08 02 33.4
      comp=Z,3μm,0.3s
AC05  El Transito         1.35  51            Pn       08 02 16.9 +0.7
AC05  El Transito         1.35  51  eP        Pn       08 02 17.0 +0.8
AC05                                 IAML              08 02 35.8
      comp=N,5μm,0.3s
AC05  El Transito         1.35  51 i P        Pn       08 02 16.2  0.0
AC05                               i S        Sn       08 02 33.8 +0.7
AC05                                 IAML              08 02 34.6
      comp=Z,2μm,0.3s
AC04  Llanos de Chal      1.53  13            Pn       08 02 19.8 +1.3
AC04  Llanos de Chal      1.53  13  eP        Pn       08 02 19.3 +0.8
AC04                                 IAML              08 02 43.7
      comp=N,4μm,0.4s
AC04  Llanos de Chal      1.53  13 i P        Pn       08 02 19.6 +1.1
AC04                                 IAML              08 02 43.5
      comp=Z,2μm,0.7s
CO02  Combarbal           1.56 165            Pn       08 02 19.4 +0.4
CO02  Combarbal           1.56 165  eP        Pn       08 02 19.4 +0.4
CO02                                 IAML              08 02 40.4
      comp=N,13μm,0.3s
CO02  Combarbal           1.56 165 i P        Pn       08 02 19.6 +0.5
CO02                               i S        Sn       08 02 39.9 +1.8
CO02                                 IAML              08 02 45.9
      comp=Z,3μm,0.4s
AROD  Rodeo               1.80 106 i P        Pn       08 02 24.4 +1.9
ACDV  Cuesta del Vie      2.10 104 i P        Pn       08 02 27.6 +1.1
ACDV                                 IAML              08 02 59.3
      comp=Z,1μm,0.5s
ACCO  Cerro Coronel       2.27 114 i P        Pn       08 02 31.0 +2.1
GO03  Copiapo             2.36  28            Pn       08 02 31.1 +1.1
GO03  Copiapo             2.36  28  eP        Pn       08 02 32.5 +2.5
GO03                                 IAML              08 03 09.3
      comp=E,2μm,0.6s
GO03  Copiapo             2.36  28 i P        Pn       08 02 30.7 +0.7
GO03                                 IAML              08 03 15.3
      comp=Z,1μm,0.6s
CO04  Los Peladeros       2.38 170  eP        Pn       08 02 31.5 +1.0
CO04                                 IAML              08 03 08.0
      comp=N,6μm,0.2s
AC06  Mina Casimiro       2.53  23            Pn       08 02 33.1 +0.8
AC06  Mina Casimiro       2.53  23  eP        Pn       08 02 32.9 +0.6
AC06                                 IAML              08 03 16.4
      comp=N,1μm,0.6s
AGUA  GUANDACOL           2.60  86 i P        Pn       08 02 36.7 +3.3
AGUA                                 IAML              08 03 15.5
      comp=Z,2μm,0.6s
RTLS  Leoncito            2.81 139⇓iP         Pn       08 02 39.4 +3.0
RTLS                                 IAML              08 03 25.3
      comp=Z,3μm,0.6s
VA06  Catapilco           2.86 177            Pn       08 02 37.7 +0.9
VA06  Catapilco           2.86 177  eP        Pn       08 02 37.6 +0.8
VA06                                 IAML              08 03 27.6
      comp=E,3μm,0.5s
VCA   Vinchina            3.01  72⇓eP         Pn       08 02 42.9 +3.9
VCA   Vinchina            3.01  72 i P        Pn       08 02 43.2 +4.2
VCA                                  IAML              08 03 28.8
      comp=Z,3μm,0.5s
VA03  San Esteban         3.16 166            Pn       08 02 43.2 +2.2
VA03  San Esteban         3.16 166  eP        Pn       08 02 43.0 +2.0
VA03                                 IAML              08 03 27.7
      comp=E,2μm,0.3s
VA03  San Esteban         3.16 166 i P        Pn       08 02 42.8 +1.8
VA03                                 IAML              08 03 29.2
      comp=Z,1μm,0.7s
ROCH  El Roble            3.29 173  eP        Pn       08 02 43.9 +1.0
ROCH                                 IAML              08 03 34.0
      comp=N,2μm,0.5s
VA01  Torpederas          3.32 183            Pn       08 02 43.4 +0.3
VA01  Torpederas          3.32 183  eP        Pn       08 02 43.2 +0.1
VA01                                 IAML              08 03 36.2
      comp=E,766nm,0.5s
CFA   Coronel Fontan      3.38 125   P        Pn       08 02 45.9 +2.0
      comp=E,102nm,0.3s,baz=314,slow=8.9,SNR=219
```

CFA				S	Sn	08 03 26.9	+4.1
	comp=E,314nm,0.5s,baz=122,slow=7.2,SNR=12						
PEL	Peldehue	3.50	169		Pn	08 02 47.1	+1.5
PEL	Peldehue	3.50	169	eP	Pn	08 02 46.8	+1.1
PEL				IAML		08 03 43.8	
	comp=N,723nm,0.5s						
AC02	Maricunga	3.52	37		Pn	08 02 48.1	+1.8
AC02	Maricunga	3.52	37	eP	Pn	08 02 47.8	+1.5
AC02				IAML		08 03 48.9	
	comp=N,1µm,0.4s						
MT02	Curacav	3.56	175		Pn	08 02 47.1	+0.6
MT02	Curacav	3.56	175	eP	Pn	08 02 46.8	+0.3
MT02				IAML		08 03 39.0	
	comp=N,576nm,0.4s						
AC01	Pan de Azucar	3.62	13		Pn	08 02 46.4	-0.8
AC01	Pan de Azucar	3.62	13	eP	Pn	08 02 46.4	-0.8
MT10	Hacienda Santa	3.66	168	eP	Pn	08 02 49.3	+1.4
MT05	Renca	3.74	171		Pn	08 02 50.1	+1.2
MT05	Renca	3.74	171	eP	Pn	08 02 50.3	+1.4
MT05	Renca	3.74	171	iP	Pn	08 02 50.5	+1.6
MT05				IAML		08 03 52.5	
	comp=Z,698nm,0.5s						
MT14	Cerro Cal¡n	3.77	168	eP	Pn	08 02 51.1	+1.7
MT16	CCHEN	3.81	168		Pn	08 02 51.3	+1.5
MT16	CCHEN	3.81	168	eP	Pn	08 02 51.9	+2.0
MT04	Ro Olivares	3.87	163	⇑eP	Pn	08 02 53.7	+2.8
MT04	Ro Olivares	3.87	163	iP	Pn	08 02 53.7	+2.8
MT04				IAML		08 03 54.2	
	comp=Z,399nm,0.9s						
MT03	Universidad Ad	3.87	168	eP	Pn	08 02 52.1	+1.3
MT08	Bocatoma Ro	3.94	162	eP	Pn	08 02 55.4	+3.6
VA05	Santo Domingo	3.95	182		Pn	08 02 51.4	-0.3
VA05	Santo Domingo	3.95	182	eP	Pn	08 02 51.4	-0.3
MT15	Las Vizcachas	3.98	168	⇑eP	Pn	08 02 53.8	+1.6
MT09	Talagante	4.09	174		Pn	08 02 54.3	+0.5
MT12	Pirque	4.10	169	⇑eP	Pn	08 02 55.1	+1.3
MT01	Popeta	4.16	177		Pn	08 02 54.8	+0.2
MT13	San Alfonso	4.16	166		Pn	08 02 56.1	+1.4
MT13	San Alfonso	4.16	166	eP	Pn	08 02 57.2	+2.5
LMEL	Las Melosas	4.28	166		Pn	08 02 58.1	+1.7
BO04	La Punta	4.34	170		Pn	08 02 57.7	+0.5
BO01	Tunca	4.69	176		Pn	08 03 01.8	-0.2
BO02	Sierra Bellavi	5.12	174		Pn	08 03 08.6	+0.8
CYA	Choya	5.12	77	eP	Pn	08 03 08.8	+0.9
ML02	Panimavida	6.05	180		Pn	08 03 20.3	-0.3
BI02	San Fabin de	6.95	179		Pn	08 03 33.3	+0.3
H03N1	Juan Fernandez	7.36	238	T	T	08 11 22.2	
	baz=65,slow=72,SNR=2507						
H03N2	Juan Fernandez	7.38	238	T	T	08 11 20.5	
	baz=65,slow=72,SNR=2501						
H03N3	Juan Fernandez	7.38	238	T	T	08 11 14.7	
	baz=65,slow=72,SNR=1461						
PB03	IPOC Station P	7.77	12	Pn	Pn	08 03 44.5	+0.1
LR03	Panguipulli	9.94	184		Pn	08 04 12.4	-1.4
PLCA	Paso Flores	11.04	176	P	Pn	08 04 28.1	-0.9
	comp=Z,0.1nm,0.3s,baz=339,slow=9.5,SNR=5.3						
	comp=Z,0.5nm,0.4s						
PLCA	Paso Flores	11.04	176	Pn	Pn	08 04 28.6	-0.4
TRQA	Tornquist	11.47	139	Pn	Pn	08 04 35.1	+0.2
CPUP	Villa Florida	12.94	78	P	Pn	08 04 53.6	-1.3
	comp=Z,0.1nm,0.3s,baz=100,slow=11,SNR=6.9						
CPUP				S	Sn	08 07 14.7	-2.8
	comp=Z,4.3nm,0.8s,baz=154,slow=2.1,SNR=4.2						
CPUP				LR	LR	08 10 14.3	
	comp=Z,37nm,20.3s,baz=78,slow=39						
	comp=Z,0.7nm,0.4s						
CPUP	Villa Florida	12.94	78		Pn	08 04 54.5	-0.4
LPAZ	La Paz	13.69	14	P	Pn	08 05 07.7	+1.9
	comp=Z,0.1nm,0.3s,baz=186,slow=7.6,SNR=5.7						
	comp=Z,1.0nm,0.6s						
LPAZ	La Paz	13.69	14	Pn	Pn	08 05 06.0	+0.1
SIV	San Ignacio	16.66	37	P	Pn	08 05 42.9	-1.2
	baz=230,slow=22,SNR=4.0						
	comp=Z,1.9nm,0.6s						
BDFB	Brasilia	25.70	62	P	P	08 07 18.4	-1.8
	comp=Z,1.9nm,0.6s,baz=245,slow=9.7,SNR=3.9						
	comp=Z,1.9nm,0.6s						
MDP	Montagnes des	39.03	31	LR	LR	08 27 14.4	
	comp=Z,75nm,18.1s,baz=254,slow=39						
BELA	Belgrano 2	51.03	171	P	P	08 10 50.5	-0.5
BELA				IAmb	IAmb	08 10 57.4	
	comp=Z,2.2nm,0.9s						
SNAA	Sanae	55.40	159	P	P	08 11 23.2	-0.1
	comp=Z,3.3nm,0.9s,baz=265,slow=12,SNR=6.7						
	comp=Z,3.3nm,0.9s						
SNAA	Sanae	55.40	159	P	P	08 11 23.5	+0.3
QSPA	South Pole Qui	60.53	180	P	P	08 11 59.7	+0.4
	comp=Z,1.1nm,0.6s,baz=145,slow=3.0,SNR=4.3						
	comp=Z,1.1nm,0.6s						
SAND	Sanderson	66.12	331	P	P	08 12 37.6	+1.0
TXAR	Lajitas Array	66.25	329	P	P	08 12 38.8	+1.2
	comp=Z,0.3nm,0.5s,baz=154,slow=8.5,SNR=8.7						
	comp=Z,0.3nm,0.5s						
TXAR	Lajitas Array	66.25	329	P	P	08 12 39.2	+1.6
TX31	Lajitas Ar. Si	66.25	329	P	P	08 12 39.0	+1.5
PLPT	Palo Pinto	67.17	336	P	P	08 12 44.7	+1.5
PLPT				IAmb	IAmb	08 12 45.5	
	comp=Z,3.5nm,1.1s						
ODSA	Odessa	68.19	332	P	P	08 12 51.3	+1.5
APMT	Aspermont	68.30	334	P	P	08 12 52.1	+1.8
APMT				IAmb	IAmb	08 13 17.9	
	comp=Z,2.9nm,1.0s						
DBIC	Dimbokro	73.37	72	P	P	08 13 20.6	-0.9
	comp=Z,2.4nm,0.6s,baz=246,slow=4.2,SNR=2.2						
	comp=Z,2.4nm,0.6s						
DBIC	Dimbokro	73.37	72	P	P	08 13 20.7	-0.9
DBIC				IAmb	IAmb	08 13 21.7	
	comp=Z,5.2nm,0.9s						
MAW	Mawson	77.16	164	P	P	08 13 42.1	-0.3
	comp=Z,9.9nm,1.2s,baz=210,slow=7.4,SNR=9.0						
	comp=Z,9.9nm,1.2s						
SRU	San Rafael Swe	77.52	330	P	P	08 13 46.9	+1.8
SRU				IAmb	IAmb	08 13 47.5	
	comp=Z,3.0nm,0.9s						
PDAR	Pinedale Array	80.16	333	P	P	08 14 00.5	+1.0
	comp=Z,0.3nm,0.6s,baz=153,slow=3.4,SNR=2.9						
	comp=Z,0.3nm,0.6s						
NVAR	Mina Array Bea	80.65	325	P	P	08 14 03.2	+1.0
	comp=Z,0.5nm,0.8s,baz=133,slow=6.9,SNR=4.0						
	comp=Z,0.5nm,0.8s						
BOSA	Boshof	81.65	118	P	P	08 14 06.7	-1.2
	comp=Z,2.1nm,0.6s,baz=218,slow=6.6,SNR=6.5						
	comp=Z,2.1nm,0.6s						
ASAR	Alice Springs	121.61	207	PKP	PKPdf	08 20 41.8	-1.5
	comp=Z,0.2nm,0.7s,baz=142,slow=2.2,SNR=2.1						
WRA	Warramunga Arr	124.73	210	PKP	PKPdf	08 20 48.6	-0.8
	comp=Z,0.8nm,0.8s,baz=146,slow=1.8,SNR=3.1						
KURBB	Kurchatov Arra	149.31	39	PKPbc	PKPbc	08 21 37.8	+0.4
	comp=Z,1.2nm,0.5s,baz=305,slow=3.2,SNR=17						
ZALV	Zalesovo Beam	150.28	29	PKPbc	PKPbc	08 21 40.1	+0.4
	comp=Z,7.3nm,0.6s,baz=303,slow=3.4,SNR=33						
MKAR	Makanchi Array	153.43	43	PKPbc	PKPbc	08 21 47.0	-0.2
	comp=Z,0.5nm,0.7s,baz=316,slow=4.0,SNR=2.6						

MEX ***05*** *08:02:24.5±0.8, 13°.89N×93°.38W, h10^{km}, MD4.0*
GCG ***05*** *08:02:25.4±1.2, 13°.97N×92°.96W, h0^{km}±10^{km}, MD4.0, MW2.9*
ISC 05 08:02:19.5±2.0**, 13°.85N**±0°.07×**93°.32W**±0°.03**, h12**^{km}±12^{km},
n26, σ**2^s.00**/45**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.46	44	eP	Pg	08 02 47.8	+0.2
THIG				eS	Sn	08 03 05.8	+1.0
SMCA	Catarina	1.56	50	eP	Pb	08 02 49.0	+0.7
PATR	El Naranjo	1.64	40	eP	Pb	08 02 49.9	+0.1
PATR				eS	Sb	08 03 09.7	-0.7
CHUJ	Union Juarez	1.70	43	eP	Pn	08 02 50.6	+1.3
CHUJ				eS	Sg	08 03 12.2	-2.1
RTAL	Retalhuleu	1.71	67	eP	Pb	08 02 51.4	+0.6
RTAL				eS	Sn	08 03 11.8	+0.9
PAVE	Pavencul	1.73	40	eP	Pb	08 02 51.3	-0.1
PAVE				eS	Sn	08 03 12.0	+0.2
PCIG		1.84	3	eP	Pn	08 02 52.3	+1.3
PCIG				eS	Sn	08 03 14.2	0.0
STG2	El Palmar, Qui	1.97	73	eP	Pn	08 02 53.2	+0.3
STG2				eS	Sn	08 03 15.6	-2.0
STG5	El Palmar, Qui	1.98	74	eP	Pn	08 02 53.1	+0.1
STG8	El Palmar, Qui	2.00	72	eP	Pn	08 02 53.7	+0.4
QUEO	Labor Ovalle	2.02	60	eP	Pb	08 02 56.4	+0.1
QUEO				eS	Sb	08 03 21.3	-0.2
HUEH	Huehuetenango	2.28	50	eP	Pb	08 03 00.4	-0.4
HUEH				eS	Sb	08 03 27.7	-1.4
HUEH	Huehuetenango	2.28	50	eP	Pb	08 03 00.6	-0.1
QUIS	Sacapulas	2.58	56	eP	Pb	08 03 05.2	-0.7
CCIG	Comitan	2.67	25	eP	Pb	08 03 06.9	-0.5
CCIG				eS	Sn	08 03 35.1	+0.2
CCIG	Comitan	2.67	25	eP	Pb	08 03 06.9	-0.5
CCIG				eS	Sb	08 03 39.2	-0.9
HUIG	Huatulco	3.30	306	eP	Pn	08 03 12.1	+1.0
HUIG				eS	Sn	08 03 44.0	-6.4
NUBE	Las Nubes	3.44	89	eP	Pn	08 03 16.1	+3.1
UXUV	UXUV	3.54	347	eP	Pn	08 03 18.2	+3.9
UXUV				eS	Sn	08 03 54.2	-1.8
CMIG	Matias Romero	3.56	335	eP	Pn	08 03 17.8	+3.2
CMIG				eS	Sn	08 03 56.6	0.0
PEIG	Puerto Escondi	4.27	300	eP	Pn	08 03 27.0	+2.5
PEIG				eS	Sn	08 04 10.9	-3.4
PETF	Flores	4.51	47	eP	Pn	08 03 27.9	+0.2
NEUV	Arroyo Zacate	4.52	328	eP	Pn	08 03 30.9	+3.1
NEUV				eS	Sn	08 04 18.3	-2.1
YOIG	Yosondua	5.05	307	eP	Pn	08 03 38.4	+2.9
YOIG				eS	Sn	08 04 32.8	-1.2
TXIG	Tlaxiaco	5.46	309	eP	Pn	08 03 43.4	+2.4
TXIG				eS	Sn	08 04 42.6	-1.4
TOIG	Toxpalan	5.55	320	eP	Pn	08 03 45.8	+3.7
TOIG				eS	Sn	08 04 46.5	+0.6

UCR ***05*** *08:14:45.5±1.0, 10°.41N×84°.21W, h113^{km}±1^{km}, MW3.9*
UPA ***05*** *08:14:46.9±1.6, 10°.64N×84°.05W, h71^{km}±29^{km}, MD3.4*
ISC 05 08:14:47.3±1.4**, 10°.33N**±0°.05×**84°.24W**±0°.03**, h105**^{km}±7^{km},
n139, σ**0^s.77**/193**, 46C-25D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARTO	Ro Cuarto	0.03	61	⇓iP	Pn	08 15 01.4	-0.5
ARTO				eS	Sn	08 15 12.7	-0.1
ITAL	Pital	0.12	347	⇓iP	Pn	08 15 01.5	-0.5
ITAL				eS	Sn	08 15 12.7	-0.3
VPL2	V. Platanar	0.14	261	eP	Pn	08 15 01.9	-0.3
VPL1	V. Platanar	0.14	239	eP	Pn	08 15 02.1	-0.2
VPS8	V Poas	0.15	180	⇓iP	Pn	08 15 02.3	-0.2
QUEU	Ciudad Quesada	0.19	268	⇓eP	Pn	08 15 02.0	-0.2
ZARE	Zarcero	0.20	225	⇑eP	Pn	08 15 02.4	-0.1
GREC	Grecia	0.26	195	eP	Pn	08 15 02.5	-0.1
NARAN	Naranjo de Ala	0.26	210	eP	Pn	08 15 02.3	-0.3
TCS1	Tacares	0.29	191	⇑iP	Pn	08 15 02.3	-0.4
TCS1				eS	Sn	08 15 14.8	+0.8
RAMO	San Ramon	0.33	223	⇓eP	Pn	08 15 02.4	-0.4
PALD	Palmares	0.33	215	⇑eP	Pn	08 15 02.1	-0.7
SRA1	San Ramn	0.34	224	⇑iP	Pn	08 15 02.4	-0.5
HEME	Heredia, Merce	0.35	163	eP	Pn	08 15 03.5	+0.6
HDC	Heredia	0.35	159	⇓iP	Pn	08 15 02.6	-0.3
HDC				eS	Sn	08 15 15.0	+0.4
BELE	Belen	0.35	171	⇑eP	Pn	08 15 02.6	-0.4
SOCE	Pocosol	0.37	278	⇑iP	Pn	08 15 02.7	-0.3
SOCE				eS	Sn	08 15 15.0	+0.3
ATEO	Atenas	0.37	202	⇑iP	Pn	08 15 02.4	-0.6
ATEO				eS	Sn	08 15 14.8	+0.1
SANTA	Santa Ana	0.40	172	eP	Pn	08 15 02.6	-0.5
MEXI	Barrio Mexico	0.41	158	eP	Pn	08 15 02.9	-0.4
LUPE	Guadalupe	0.42	154	eP	Pn	08 15 02.1	-1.3
CVIMO	Finca Echandi	0.42	136	⇓iP	Pn	08 15 03.0	-0.5
CVIMO				eS	Sn	08 15 15.8	+0.3
CORON	Coronado	0.42	146	⇑eP	Pn	08 15 03.1	-0.4
CENT	San Jose	0.43	158	⇑iP	Pn	08 15 04.0	+0.6
SJS	Escuela Geolog	0.43	154	eP	Pn	08 15 02.8	-0.6
ECI	Escuela Centro	0.43	154	eP	Pn	08 15 02.8	-0.6
SJS3	Mercedes San J	0.43	154	eP	Pn	08 15 03.0	-0.4
LUJA	Lujan	0.43	157	⇑eP	Pn	08 15 03.0	-0.5
LUJA				eS	Sn	08 15 16.9	+1.4
FORC	Fortuna	0.44	288	⇑iP	Pn	08 15 03.0	-0.3
FORC				eS	Sn	08 15 15.9	+0.6
VACR	Volcan Arenal	0.45	289	⇑iP	Pn	08 15 03.2	-0.2
VACR				eS	Sn	08 15 16.1	+0.7
PILE	Guapiles	0.46	104	⇓iP	Pn	08 15 02.8	-0.6
PILE				eS	Sn	08 15 15.4	-0.1
AMPA	Desamparados	0.47	157	eP	Pn	08 15 02.9	-0.7
CEDE	Laguna Cedeo	0.48	289	⇑iP	Pn	08 15 03.5	-0.1
CEDE				eS	Sn	08 15 16.0	+0.2
PURI	Puriscal	0.48	188	eP	Pn	08 15 03.3	-0.4
ARE1	Arenal 1	0.49	286	⇑iP	Pn	08 15 03.4	-0.2
TRIO	Tres Rios	0.49	150	⇓iP	Pn	08 15 03.1	-0.7
TRIO				eS	Sn	08 15 15.5	-0.6
VARE2	V. Arenal	0.49	286	⇑iP	Pn	08 15 03.4	-0.2
VARE2				eS	Sn	08 15 16.5	+0.6
REZ	Monterrey de S	0.49	294	⇑eP	Pn	08 15 03.6	-0.1
REZ				eS	Sn	08 15 16.7	+0.7
CASO	Castillo	0.49	282	⇑iP	Pn	08 15 03.4	-0.3
CASO				eS	Sn	08 15 16.4	+0.5
OROT	Orotina	0.50	214	eP	Pn	08 15 03.4	-0.4
CARI	Cariari	0.50	86	⇓iP	Pn	08 15 03.2	-0.4
CARI				eS	Sn	08 15 16.3	+0.4
VICA	Volcano Irazu	0.52	131	⇓iP	Pn	08 15 03.6	-0.7
VICA				eS	Sn	08 15 17.1	+0.1
ACOS	Acosta	0.54	172	eP	Pn	08 15 03.7	-0.4
ARZA	Esparza	0.54	231	⇑iP	Pn	08 15 03.5	-0.5
TABAC	Tabacon	0.54	288	⇑iP	Pn	08 15 03.9	-0.2
TABAC				eS	Sn	08 15 17.2	+0.6
TRT2	Tortugero	0.55	65	⇓iP	Pn	08 15 03.1	-0.9
TAGO	Cartago	0.56	146	eP	Pn	08 15 04.5	+0.2
TAGO				eS	Sn	08 15 17.2	+0.2
RAFA	San Farael, Vo	0.56	131	eP	Pn	08 15 04.2	-0.4
CVTR	Volcan Turrial	0.57	123	⇓iP	Pn	08 15 03.9	-0.8
VTR0	Volcan Turrial	0.57	123	⇓iP	Pn	08 15 03.9	-0.7
CVTQ	Turrialba Volc	0.57	124	⇓iP	Pn	08 15 04.1	-0.5
MTEVE	Monteverde	0.57	269	⇑iP	Pn	08 15 04.0	-0.4
MTEVE				eS	Sn	08 15 17.8	+0.6
CVTV	Tajo	0.58	124	⇓iP	Pn	08 15 04.1	-0.6
PCAYA	Pacayas	0.59	134	⇑iP	Pn	08 15 04.2	-0.4
PCAYA				eS	Sn	08 15 18.5	+1.0
ROBF	Roble, Puntare	0.60	235	eP	Pn	08 15 04.0	-0.4
ABRB	Las Abras (San	0.61	122	⇓iP	Pn	08 15 04.2	-0.6
VTCV	VTCV, Calle Va	0.61	124	⇓iP	Pn	08 15 04.3	-0.5
VTCV				eS	Sn	08 15 18.5	+0.7
REPA	Paraso	0.62	143	eP	Pn	08 15 04.2	-0.6
REPA				eS	Sn	08 15 18.9	+1.1
LCR2	La Lucha 2	0.63	158	eP	Pn	08 15 04.5	-0.4
LCR2				eS	Sn	08 15 18.3	+0.2
VINA	Juan Vinas	0.65	131	⇓iP	Pn	08 15 04.5	-0.6
VINA				eS	Sn	08 15 18.9	+0.7
EGUB	Earth Gu¡pi	0.65	100	⇓iP	Pn	08 15 04.2	-0.6
RESJ	San Isidro (Tu	0.66	117	⇓iP	Pn	08 15 04.5	-0.5
RESJ				eS	Sn	08 15 18.7	+0.4
CHIK	Chiripa	0.66	280	eP	Pn	08 15 05.1	0.0
ENAS	Puntarenas	0.68	239	eP	Pn	08 15 04.9	-0.2
RVLA	Villa Bonita	0.68	109	⇓eP	Pn	08 15 04.7	-0.4
RVLA				eS	Sn	08 15 18.9	+0.5
PITB	Pirrs, San	0.70	162	eP	Pn	08 15 05.0	-0.4
PICV	PH. Pirrs	0.70	176	eP	Pn	08 15 04.9	-0.5
JTS	Las Juntas de	0.70	267	⇑eP	Pn	08 15 04.7	-0.5
JTS				eS	Sn	08 15 18.6	-0.2
JTS	Las Juntas de	0.70	267	⇑iP	Pn	08 15 04.7	-0.5
JTS				eS	Sn	08 15 18.6	-0.2
JUNT	Juntas	0.71	266	⇑iP	Pn	08 15 04.7	-0.6
JUNT				eS	Sn	08 15 20.4	+1.7
QUEB	Quebradon, Cot	0.71	295	eP	Pn	08 15 04.7	-0.6
TILA	Tilaran	0.73	281	⇑iP	Pn	08 15 05.2	-0.3
TILA				eS	Sn	08 15 19.9	+0.6
PIEC	Cerro El Cedra	0.76	158	eP	Pn	08 15 04.1	-2.0
IRES	Siquirres	0.76	108	⇓iP	Pn	08 15 05.2	-0.6
IRES				eS	Sn	08 15 19.9	+0.2
BITO	Garabito Jaco	0.80	208	⇑eP	Pn	08 15 06.2	0.0
BITO				eS	Sn	08 15 21.6	+1.4
TIMP	Tierras Morena	0.80	288	⇑iP	Pn	08 15 05.9	-0.4
TIMP				eS	Sn	08 15 20.7	+0.2
TENO	El Achiote	0.81	297	eP	Pn	08 15 06.4	+0.1
INVE	Universidad In	0.82	280	⇑iP	Pn	08 15 06.1	-0.2
INVE				eS	Sn	08 15 21.0	+0.3
CNAS	Canas	0.84	277	⇑iP	Pn	08 15 07.3	+0.8
CNAS				eS	Sn	08 15 23.1	+2.1
PAQE	Paquera	0.85	233	eP	Pn	08 15 06.7	+0.1
MOTZ	Rio Naranjo	0.89	294	eP	Pn	08 15 07.0	-0.1
SVQ2	Quepos	0.89	175	eP	Pn	08 15 06.8	-0.3
QUEP	Quepos	0.90	175	eP	Pn	08 15 06.7	-0.4
BUS1	Rivas	0.91	148	⇑iP	Pn	08 15 06.8	-0.9
BUS1				eS	Sn	08 15 22.2	-0.8
TAAN	Batan	0.91	105	eP	Pn	08 15 06.6	-0.6
UPAL	Upala	0.94	307	⇓iP	Pn	08 15 07.2	-0.4
CUI	Cuipilapa	0.96	290	⇑iP	Pn	08 15 07.5	-0.3
CUI				eS	Sn	08 15 23.9	+0.6
JCR1	Jicaral	0.98	241	eP	Pn	08 15 07.1	-0.9
VMAR	Armenia, Volca	0.98	299	⇑iP	Pn	08 15 07.5	-0.5
VMAR				eS	Sn	08 15 24.0	+0.4
COLC	Colonia	1.00	290	⇑iP	Pn	08 15 07.8	-0.4
COLC				eS	Sn	08 15 24.8	+0.8
MESS	Mesas	1.02	294	eP	Pn	08 15 07.8	-0.6
NYURE	Nandayure	1.05	252	⇑iP	Pn	08 15 08.0	-0.7
NYURE				eS	Sn	08 15 24.4	-0.4
CAO2	Cobano, Puntar	1.06	233	eP	Pn	08 15 08.4	-0.4
PLVR	Palo Verde	1.09	271	eP	Pn	08 15 08.8	-0.5
ZEDO	Perez Zeledon	1.11	150	⇑iP	Pn	08 15 08.8	-0.7
GPS2	Hotel Rincn d	1.17	291	⇑iP	Pn	08 15 09.8	-0.3
GPS1	Guardaparques	1.18	292	⇑iP	Pn	08 15 09.9	-0.3
GPS3	Bodega del ICE	1.18	291	⇓iP	Pn	08 15 13.7	+3.5
VORI	VORI	1.19	294	⇑iP	Pn	08 15 10.4	-0.1
PEJA	Penjamo Buenos	1.19	298	eP	Pn	08 15 09.8	-0.5
VRLE	La Escondida,	1.20	293	⇑iP	Pn	08 15 10.1	-0.3
NICO	Nicoya	1.20	261	⇑eP	Pn	08 15 10.1	-0.2
BUAI	Buenos Aires	1.20	297	⇑iP	Pn	08 15 09.7	-0.7
BUAI				eS	Sn	08 15 28.5	+0.6
CMARA	Lajas Hojancha	1.20	255	⇑iP	Pn	08 15 09.6	-0.8
CMARA				eS	Sn	08 15 27.4	-0.5
SAJE	San Jernim	1.22	143	⇑iP	Pn	08 15 09.8	-1.0
SAJE				eS	Sn	08 15 26.9	-1.5
LAPC	Finca la Perla	1.25	291	⇑iP	Pn	08 15 10.4	-0.5
LAPC				eS	Sn	08 15 28.4	-0.4
JUD3	Juan Diaz 3	1.29	263	⇑iP	Pn	08 15 10.8	-0.6
JUD3				eS	Sn	08 15 28.6	-1.0
DELF	Filadelfia	1.29	275	eP	Pn	08 15 11.1	-0.3
ELI1	Hacienda Flor	1.33	284	eP	Pn	08 15 11.5	-0.3
ELI1				eS	Sn	08 15 31.2	+0.9
EDPE	Pejibaye, P	1.34	150	eP	Pn	08 15 11.6	-0.4
DRK0	Durika	1.45	137	eP	Pn	08 15 12.5	-0.9
DRK0				eS	Sn	08 15 32.0	-1.1
DRK0	Durika	1.45	137	eP	Pn	08 15 12.2	-1.2
BURE	Buenos Aires	1.45	142	eP	Pn	08 15 12.5	-0.9
CEUA	Cerro Uatsi, L	1.46	119	eP	Pn	08 15 13.4	-0.1
SAJU	San Juanillo,	1.47	260	⇑iP	Pn	08 15 12.1	-1.4
SAJU				eS	Sn	08 15 31.1	-2.2
LCRUZ	La Cruz	1.55	299	eP	Pn	08 15 14.3	-0.2
PANP	Palmar Norte	1.56	150	eP	Pn	08 15 14.3	-0.4
FIMO	Fila Mora	1.59	147	eP	Pn	08 15 15.6	+0.4
EDP2	Potrero Grande	1.68	141	eP	Pn	08 15 15.4	-0.7
ALCO	Alturas Coton,	1.95	134	eP	Pn	08 15 18.6	-1.0
VITO	San Vito	1.96	140	eP	Pn	08 15 19.6	-0.1
EDAD	Golfito	1.98	147	eP	Pn	08 15 18.2	-1.7
JIME	Puerto Jimenez	2.00	153	eP	Pn	08 15 20.8	+0.7
FITO	Golfito	2.00	148	eP	Pn	08 15 17.9	-2.2
PTJ1	Puerto Jimnez	2.01	152	eP	Pn	08 15 20.4	+0.1
PTJ1				eS	Sn	08 15 47.9	+2.5
RSRNO	Rio Sereno	2.03	138	eP	Pn	08 15 20.1	-0.6
BRU2	Volcan	2.16	135	eP	Pn	08 15 21.3	-1.0
BRU2				eS	Sn	08 15 49.2	+0.1
BRU2	Volcan	2.16	135	eP	Pn	08 15 21.4	-1.0
DMCAL	E. de Neily	2.18	139	eP	Pn	08 15 21.5	-1.1
CLLRA	Cordillera,	2.25	134	eP	Pn	08 15 22.8	-0.7
LNBQ3	Los Naranjos,	2.34	131	eP	Pn	08 15 24.9	+0.2
LNBQ3				eS	Sn	08 15 53.5	+0.2
PTAR3	Potrerillos Ar	2.37	133	eS	Sn	08 15 54.4	+0.6
BQSF3	Alto Boquete,	2.38	131	eP	Pn	08 15 26.3	+1.1
PBNVO	Pueblo Nuevo,	2.48	125	eP	Pn	08 15 25.3	-0.9
PSOM3	Paja de Sombre	2.50	131	eP	Pn	08 15 27.6	+0.9
PTPM	Petroterminale	2.50	147	eP	Pn	08 15 27.9	+1.3
PTPM				eS	Sn	08 15 59.0	+2.1
PTPA	Petro Terminal	2.51	147	eP	Pn	08 15 27.9	+1.1
RBALA	Bur	2.51	125	eP	Pn	08 15 26.0	-0.8
DVD	David	2.58	137	eP	Pn	08 15 27.7	0.0

SOME ***05*** *08:20:26.2, 41°.77N×79°.25E, h10^{km}*
KRNET ***05*** *08:20:26.4±0.1, 41°.73N×79°.23E, h12^{km}, mb2.7*
ISC 05 08:20:24.2±2.3**, 41°.63N**±0°.08×**79°.38E**±0°.08**, h3**^{km}±12^{km},
n17, σ**1^s.54**/34**, 10C-4D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	1.12	320	⇓eP	Pb	08 20 45.8	-0.4
PRZ				⇓eS	Sg	08 20 59.3	-0.8
TARG	Taragay, Kyrgy	1.18	275	⇓iP	Pg	08 20 46.8	0.0
TARG				⇓iS	Sg	08 21 02.2	+0.1
SHLS	Shalkode	1.52	2	eP	Pg	08 20 53.8	+0.4
	11nm,0.1s						
SHLS				eS	Sg	08 21 13.6	+0.4
	87nm,0.5s						
UZB	Uzynbulak	1.54	350	eP	Pb	08 20 52.4	-1.0
	2.8nm,0.1s						
UZB				eS	Sn	08 21 11.1	-2.0
	18nm,0.3s						
KDJ	Kajisay	1.71	288	⇑iP	Pb	08 20 56.1	-0.3
KDJ				⇑iS	Sb	08 21 17.9	-0.5
KPKS	Kokpek	1.90	345	eP	Pb	08 20 57.8	-1.8
	3.3nm,0.2s						
KPKS				eS	Sn	08 21 20.3	-1.7
	24nm,0.3s						
TNSS	Tian-Shan	2.28	309	eP	Pb	08 21 05.8	-0.4
	1.5nm,0.1s						
TNSS				eS	Sb	08 21 34.5	-0.5
	4.9nm,0.2s						
KOTS	Kotyrbulak	2.32	314	eP	Pb	08 21 06.7	+0.1
	12nm,0.1s						
KOTS				eS	Sb	08 21 35.8	+0.1
	24nm,0.3s						
MTBS	Maitube	2.65	305	eP	Pb	08 21 12.7	+0.5
	3.5nm,0.2s						
MTBS				eS	Sb	08 21 45.9	+0.8
	27nm,0.2s						
BOOM	Boomskoye usch	2.70	290	⇑iP	Pb	08 21 11.5	-1.7
BOOM				⇑iS	Sb	08 21 44.5	-2.2
ARXS	Arharly	2.82	337	eP	Pb	08 21 14.4	-0.7
	1.5nm,0.2s						
ARXS				eS	Sb	08 21 48.9	-1.2
	16nm,0.4s						
JNKS	Jany-Kuch	2.86	260	⇑eP	Pb	08 21 14.5	-1.5
JNKS				⇑eS	Sb	08 21 49.5	-1.9
KST	Kastek	2.90	300	eP	Pb	08 21 15.5	-1.0
	1.8nm,0.2s						
KST				eS	Sb	08 21 50.8	-1.5
	13nm,0.8s						
TKM2	Tokmak 2	3.08	296	⇑iP	Pb	08 21 17.0	-2.8
TKM2				⇑iS	Sb	08 21 54.0	-3.9
DGS	Degeres	3.11	302	eP	Pb	08 21 20.1	-0.1
	1.3nm,0.2s						
DGS				eS	Sb	08 21 59.1	+0.5
	11nm,0.3s						
KRBS	Karabastau	3.42	308	eP	Pb	08 21 25.4	0.0
	0.8nm,0.3s						
KRBS				eS	Sb	08 22 08.4	+1.1
	2.3nm,0.3s						
AAK	Ala-Archa	3.77	287	⇑iP	Pn	08 21 26.4	+3.2
AAK				⇑iS	Sn	08 22 10.2	+2.1

AZER ***05*** *08:30:41.7, 38°.50N×44°.45E, h8^{km}, ml2.5*
AFAD ***05*** *08:30:41.8, 38°.50N×44°.66E, h7^{km}±2^{km}, ML2.3*
TEH ***05*** *08:30:42.9, 38°.41N×44°.43E, h9^{km}±170^{km}*
ISC 05 08:30:43.2±1.2**, 38°.44N**±0°.03×**44°.52E**±0°.02**, h8**^{km}±11^{km},
n20, σ**1^s.93**/35**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.47	298	P	Pb	08 30 52.4	-1.5
OZAP				S	Sb	08 31 01.0	-0.1
OZAP				i IAML		08 31 02.0	
	comp=N,194nm,0.5s						
OZAP				i IAML		08 31 05.0	
	comp=E,207nm,0.8s						
YOVA	Hakkari_Yksek	0.87	192	P	Pn	08 31 00.7	-1.3
YOVA				S	Sn	08 31 17.1	+2.1
YOVA				i IAML		08 31 19.0	
	comp=N,68nm,0.4s						
YOVA				i IAML		08 31 44.0	
	comp=E,98nm,1.5s						
TVAN	Van	0.88	276	P	Pb	08 30 59.9	-1.0
TVAN				S	Sn	08 31 15.1	-0.1
TVAN				i IAML		08 31 21.0	
	comp=N,111nm,0.6s						
TVAN				i IAML		08 31 25.0	
	comp=E,106nm,0.6s						
MAKU	Maku	0.92	8	Pg	Pn	08 31 01.5	-1.2
VMUR	Van-Muradiye	0.93	307	P	Pn	08 31 00.9	-1.8
VMUR				S	Sn	08 31 16.8	+0.5
VMUR				i IAML		08 31 17.0	
	comp=N,66nm,0.9s						

VMUR				*i* IAML		08 31 26.0	
	comp=E,73nm,0.5s						
IMRD	Marand	0.96	73	Pg	Pn	08 31 03.3	+0.1
IMRD				Sg	Sn	08 31 18.4	+1.2
NAX	Nakhchivan	1.06	46	P	Pn	08 31 04.9	+0.5
NAX				S	Sn	08 31 21.2	+1.8
HAKT	HAKKARI	1.09	216	P	Pn	08 31 04.3	-0.7
HAKT				S	Sn	08 31 22.0	+1.6
HAKT				*i* IAML		08 31 22.0	
	comp=N,70nm,0.3s						
HAKT				*i* IAML		08 31 23.0	
	comp=E,64nm,0.5s						
HAKT	HAKKARI	1.09	216	P	Pn	08 31 04.6	-0.4
HAKT				S	Sn	08 31 22.5	+2.1
SBZ	Shahbuz	1.25	40	P	Pg	08 31 08.0	+0.8
SBZ				S	Sn	08 31 26.7	+2.6
ORD	Ordubad	1.25	67	P	Pg	08 31 08.5	+1.2
ORD				S	Sn	08 31 28.0	+3.9
ITBZ	Tabriz	1.29	99	Pg	Pg	08 31 08.7	+0.6
HYR	Heyderabad	1.30	11	P	Pg	08 31 09.5	+1.2
HYR				S	Sg	08 31 27.8	+2.6
IAZR	Azarshahr	1.38	123	Pg	Pg	08 31 09.9	+0.1
DORK	Agr/Tutak/Do	1.66	305	P	Pg	08 31 15.1	+0.1
DORK				S	Sg	08 31 42.0	+5.5
DORK				*i* IAML		08 31 44.0	
	comp=N,25nm,0.6s						
KOTA	Agri, Merkez-K	1.70	323	P	Pg	08 31 15.6	-0.4
KOTA				S	Sg	08 31 38.0	0.0
IHRS	Heris	1.98	93	Pn	Pg	08 31 20.9	-0.4
GDB	GEDABAY	2.47	22	P	Pg	08 31 28.4	-2.2
GDB				S	Sg	08 32 01.0	-1.6
YRD	Yardimli	2.95	80	P	Pb	08 31 33.0	-3.1
YRD				S	Sb	08 32 12.5	+0.1
LRK	Lerik	3.00	85	P	Pb	08 31 34.2	-2.8

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*IDC **05** 08:39:51.7±1.7, 1°.21N×125°.43E, h0^{km}, mb3.6/3, mbtmp3.6/4, ML3.6/1, Error ellipse: s-maj=122.9km s-min=25.3km az=67.0*

*DJA **05** 08:39:56.0±2.3, 1°N±5°×12°6E±°, h19^{km}±24^{km}, M3.7/7, MLv3.7/7*

ISC 05 08:39:57.9±1.0**, 1°.41N**±0°.10×**126°.15E**±0°.08**, h54^{km}, n9, σ0^{s}.86**/10**, mb3.6**/3**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MNI	Manado	1.31	272	P	Pn	08 40 18.9	-1.0
TNTI	Ternate	1.38	117	P	Pn	08 40 20.5	-0.3
SGSI	Sangihe	2.34	345	P	Sn	08 41 01.8	+0.1
GTOI	Gorontalo	3.23	256	P	Pn	08 40 47.3	+1.2
LUWI	Luwuk	4.16	234	P	Pn	08 40 58.3	-0.6
FITZ	Fitzroy Crossi	19.39	181	P	P	08 44 18.8	-0.7
	0.1nm,0.3s,baz=12,slow=9.3,SNR=2.1						
	1.8nm,0.8s						
WRA	Warramunga Arr	22.69	160	P	P	08 44 55.4	+0.2
	1.3nm,0.6s,baz=334,slow=11,SNR=9.5						
	1.3nm,0.6s						
ASAR	Alice Springs	26.04	164	P	P	08 45 26.8	+0.4
	1.0nm,0.9s,baz=346,slow=8.8,SNR=15						
ASAR				PcP	PcP	08 48 54.6	+1.2
	0.2nm,0.5s,baz=356,slow=2.2,SNR=2.1						
	1.0nm,0.9s						
MKAR	Makanchi Array	59.13	326	P	P	08 49 52.7	-0.4
	0.4nm,0.6s,baz=129,slow=7.2,SNR=3.9						
	0.4nm,0.6s						

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*SKHL **05** 08:49:20.3±0.8, 43°.20N×148°.30E, h24^{km}±4^{km}, mb5.6/4, ms4.6/3*

*BJI **05** 08:49:21.6, 43°.46N×147°.95E, h16^{km}, mB5.2/15, mb4.7/55, Ms4.7/19, Ms7 4.4/20*

*IDC **05** 08:49:21.1±0.6, 43°.36N×147°.86E, h0^{km}, mb4.6/30, mbtmp4.5/38, ML3.6/6, MS3.8/23, Error ellipse: s-maj=14.6km s-min=12.1km az=150.0*

*MOS **05** 08:49:22.6±1.2, 43°.38N×147°.86E, h20^{km}, mb5.2/29, MS3.9/5, Error ellipse: s-maj=7.7km s-min=5.1km az=120.8*

*JMA **05** 08:49:22.6±0.4, 43°N±1°×14°8E±°, h5^{km}, MD4.5/31, MV4.6/31, E OFF HOKKAIDO*

*NIED **05** 08:49:22.6, 43°.20N×147°.78E, h5^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}4.13; $M_{\theta\theta}$-0.40; $M_{\phi\phi}$-3.73; $M_{r\theta}$3.04; $M_{\theta\phi}$-3.62; $M_{\phi r}$2.46; Fault plane solution: $M_0$6.49000×10^{15} NP1: ϕ_s192.00000°, δ30.00000°, λ58.00000°. NP2: ϕ_s48.00000°, δ65.00000°, λ107.00000°.*

*NEIC **05** 08:49:23.8±1.7, 43°.37N±0°.07×147°.7E±0°.1, h10^{km}±1^{km}, mb4.9/68 Error ellipse: s-maj=14.8km s-min=11.5km az=118.0*

ISC 05 08:49:23.2±0.8**, 43°.38N**±0°.04×**147°.89E**±0°.04**, h13^{km}**±4^{km}**, n342, σ1^{s}.59**/348**, mb4.8**/105**, MS4.0**/27**, 26C-23D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SHO	Shikotan	0.91	303	*e*P	Pn	08 49 50.1	+8.4
SHO				AMB	AMB	08 49 52.5	
	10µm,0.4s						
SHO				*e*S	Sn	08 50 06.1	+11
SHO				A	A	08 50 08.5	
	30µm,0.5s						
SHO				A	A	08 50 08.5	
	42µm,0.5s						
NEM2	Nemuro 2	1.57	270	P	Pn	08 49 50.3	-0.4
NEM2				S	Sn	08 50 10.0	-0.8
NEM2	Nemuro 2	1.57	270	A	A	08 49 50.3	
	comp=N,10.0nm,2.1s,comp=E,14nm,3.1s						
NMR	Nemuro--Hokkai	1.58	270	⇑*i*PN	Pn	08 49 50.0	-0.8
NMR				*e*S	Sg	08 50 14.5	+0.6
NMR	Nemuro--Hokkai	1.58	270	*i* P	Pn	08 49 50.1	-0.8
NMR				*e*S	Sb	08 50 12.0	0.0
YUK	Yuzh-Kuril'sk	1.61	295	*c i*PN	Pn	08 49 51.4	+0.1
YUK				*i* S	Sg	08 50 15.6	+0.5
YUK				pmax	pmax		
	comp=Z,2µm,0.6s						
YUK				pmax	pmax		
	comp=E,599nm,0.7s						
YUK				pmax	pmax		
	comp=N,302nm,0.3s						
YUK				smax	smax		
	comp=N,3µm,0.7s						
YUK				smax	smax		
	comp=E,11µm,0.6s						
YUK	Yuzh-Kuril'sk	1.61	295	*i* P	Pn	08 49 51.5	+0.1
YUK				AMB	AMB	08 49 54.1	
	comp=E,2µm,0.5s						
YUK				*i* S	Sg	08 50 15.3	+0.2
YUK				A	A	08 50 18.0	
	comp=E,6µm,0.5s						
YUK				A	A	08 50 18.0	
	comp=E,11µm,0.5s						
YUK				AMS	AMS	08 50 50.0	
	comp=E,20µm,9.0s						
YUK				AMS	AMS	08 50 50.0	
	comp=E,20µm,9.0s						
GLVR	Golovnino	1.76	283	⇑*i*PN	Pn	08 49 53.5	+0.1
GLVR				*e*S	Sb	08 50 16.9	-0.4
GLVR				pmax	pmax		
	comp=Z,709nm,0.4s						
GLVR				pmax	pmax		
	comp=N,199nm,0.3s						
GLVR				pmax	pmax		
	comp=E,151nm,0.3s						
GLVR				smax	smax		
	comp=N,3µm,0.5s						
GLVR				smax	smax		
	comp=E,2µm,0.6s						
GLVR	Golovnino	1.76	283	*e*P	Pn	08 49 53.5	+0.1
GLVR				AMB	AMB	08 49 53.9	
	comp=E,710nm,0.4s						
GLVR				*e*S	Sb	08 50 16.9	-0.4
GLVR				A	A	08 50 17.7	
	comp=E,3µm,0.5s						
GLVR				A	A	08 50 17.7	
	comp=E,2µm,0.5s						
KUR	Kuril'sk	1.85	359	*e*PN	Pb	08 49 56.1	-0.8
KUR				*e*S	Sb	08 50 19.5	-0.5
KUR				pmax	pmax		
	comp=Z,616nm,0.5s						
KUR				pmax	pmax		
	comp=N,247nm,0.3s						
KUR				pmax	pmax		
	comp=E,248nm,0.3s						
KUR				smax	smax		
	comp=E,2µm,0.4s						
KUR				smax	smax		
	comp=N,640nm,0.3s						
KUR	Kuril'sk	1.85	359	*e*P	Pn	08 49 53.7	-1.0
KUR				AMB	AMB	08 50 06.7	
	comp=N,530nm,0.4s						
KUR				*e*S	Sn	08 50 17.7	-0.2
KUR				A	A	08 50 21.3	
	comp=N,2µm,0.5s						
KUR				A	A	08 50 21.3	
	comp=N,4µm,0.5s						
KUR				AMS	AMS	08 50 50.1	
	comp=N,11µm,9.0s						
KUR				AMS	AMS	08 50 50.1	
	comp=N,9µm,9.0s						
JKHN	Kushirohamanak	2.02	263	P	Pn	08 49 56.9	0.0
JKHN				S	Sn	08 50 21.6	-0.3
JKHN	Kushirohamanak	2.02	263	A	A	08 49 56.9	
	comp=N,10.0nm,2.0s,comp=E,15nm,1.5s						
RUSJ	Misakicho	2.05	292	⇓*e*PN	Pb	08 49 58.8	-1.4
RUSJ				*i* S	Sb	08 50 25.4	-0.2
JRA	Rausu	2.09	287	P	Pn	08 49 58.3	+0.5
JRA	Rausu	2.09	287	A	A	08 49 58.3	
	comp=N,7.0nm,1.1s,comp=E,6.0nm,4.4s						
JNSB	Nemuroshibetsu	2.13	282	P	Pn	08 49 59.0	+0.5
JNSB	Nemuroshibetsu	2.13	282	A	A	08 49 59.0	
	comp=N,11nm,4.6s,comp=E,9.0nm,5.9s						
AKK	Akkeshi	2.26	262	*e*P	Pn	08 50 00.0	-0.2
JNK	Nakash	2.32	276	P	Pn	08 50 00.7	-0.3
JNK				*e*S	Sn	08 50 28.9	-0.5
JAK	Akkeshi	2.37	262	P	Pn	08 50 01.4	-0.3
JAK				*e*S	Sn	08 50 29.7	-0.9
JAK	Akkeshi	2.37	262	A	A	08 50 01.4	
	comp=N,7.0nm,3.4s,comp=E,8.0nm,2.2s						
JTKR	Abashiri--Toko	2.95	283	P	Pn	08 50 10.9	+1.2
JOB	Onbets	3.01	262	P	Pn	08 50 10.4	-0.1
JAR	Ashorobuto	3.01	270	P	Pn	08 50 10.6	0.0
JAR				*e*S	Sn	08 50 46.6	+0.2
JMP	Maruseppu	3.35	282	P	Pn	08 50 16.6	+1.5
JCH	Churui	3.41	259	P	Pn	08 50 15.5	-0.5
ERM	Erimo	3.75	250		Pn	08 50 21.0	+0.4
ERM	Erimo	3.75	250	PN	Pn	08 50 21.0	+0.4
JKK2	Kamakawa 2	3.77	279	P	Pn	08 50 22.7	+1.7
JKA	Kamikawa-asahi	3.90	283		Pn	08 50 23.5	+0.7
JKA	Kamikawa-asahi	3.90	283	*e*P	Pn	08 50 24.0	+1.2
ASAJ	Asahikawa	3.91	283	Pn	Pn	08 50 24.0	+1.1
	comp=E,7.8nm,0.3s,baz=105,slow=6.5,SNR=32						
ASAJ				Sn	Sn	08 51 09.3	+0.8
	comp=E,7.5nm,0.3s,baz=341,slow=5.6,SNR=3.9						
	comp=E,38nm,0.5s						
JNBK	Urakawa-nobuka	3.94	256	P	Pn	08 50 22.9	-0.3
JWK2	Keihoku	4.71	296	P	Pn	08 50 37.3	+3.3
JEW	Eniwo	4.75	266	P	Pn	08 50 35.9	+1.5
YSS	Yuzhno-Sakhali	5.10	316		Pn	08 50 39.7	+0.5
YSS	Yuzhno-Sakhali	5.10	316	*e*PN	Pn	08 50 41.1	+1.9
YSS	Yuzhno-Sakhali	5.10	316	*e*P	Pn	08 50 41.2	+2.0
YSS				*e*S	Sn	08 51 42.0	+4.2
YSS				AMS	AMS	08 52 52.0	
	comp=E,2µm,12.0s						
YSS				AMS	AMS	08 52 52.0	
	comp=E,2µm,12.0s						
JTM	Tenmabayashi	5.70	245		Pn	08 50 46.3	-1.2
TEY	Ternei	8.28	285	*e*PN	Pn	08 51 28.9	+6.0
TYV	Tymovskoe	8.29	336	*e*P	Pn	08 51 24.8	+1.8
JSD	Sado	9.05	237	Pn	Pn	08 51 31.6	-1.9
SKR	Severo-Kuril's	9.21	35	*i* PN	Pn	08 51 37.7	+2.1
SKR	Severo-Kuril's	9.21	35	*e*P	Pn	08 51 33.0	-2.6
SKR				AMB	AMB	08 51 41.1	
	comp=E,70nm,0.6s						
SKR				*e*S	Sn	08 53 12.5	-6.5
SKR				A	A	08 53 16.8	
	comp=E,40nm,0.6s						
SKR				A	A	08 53 16.8	
	comp=E,30nm,0.6s						
MJB9	Matsu-Tunnel	10.09	231		Pn	08 51 45.0	-2.7
MAJO	Matsushiro	10.09	231		Pn	08 51 44.2	-3.5
MAJO	Matsushiro	10.09	231	*i* PN	Pn	08 51 45.7	-2.0
MJAR	Matsushiro Arr	10.09	231	Pn	Pn	08 51 45.9	-1.8
	comp=E,0.1nm,0.3s,baz=27,slow=14,SNR=8.6						
MJAR				Sn	Sn	08 53 37.4	-3.3
	comp=E,0.3nm,0.3s,baz=90,slow=27,SNR=5.4						
MJAR				LR	LR	08 56 16.2	
	comp=E,388nm,18.4s,baz=56,slow=41						
	comp=E,2.5nm,0.6s						
MJAR	Matsushiro Arr	10.09	231	Pn	Pn	08 51 45.3	-2.4
PAU	Pauzhetka	10.09	34	*e*P	Pn	08 51 46.0	-1.7
PAU				*e*S	Sn	08 53 36.8	-3.9
OKH	Okha	10.70	344	*de*PN	Pn	08 51 44.7	-11
OKH				MLR	MLR		
	comp=N,700nm,17.0s						
OKH				MLR	MLR		
	comp=Z,900nm,8.0s						
JGF	Kuroka	11.24	230	Pn	Pn	08 52 01.4	-2.2
USRK	Ussuriysk Ar.	11.53	280	Pn	Pn	08 52 07.3	-0.1
	comp=Z,0.3nm,0.3s,baz=92,slow=13,SNR=5.4						
	comp=Z,6.9nm,0.9s						
INU	Inuyama	11.62	230	Pn	Pn	08 52 05.8	-2.8
PEA0B	Petropavlovsk-	11.72	30	Pn	Pn	08 52 09.8	-0.1
PEA0B	Petropavlovsk-	11.72	30	PN	Pn	08 52 09.8	-0.1
PETK	Petropavlovsk-	11.72	30	Pn	Pn	08 52 09.8	-0.2
	comp=Z,0.8nm,0.3s,baz=218,slow=13,SNR=6.0						
	comp=Z,2.7nm,0.5s						
PETK	Petropavlovsk-	11.72	30	Pn	Pn	08 52 09.0	-0.9
BNX	BinXian	14.79	286	⇑P	Pn	08 52 51.1	-0.9
BNX				pmax	pmax		
	comp=Z,26nm,0.9s						
KSRS	Korea Array	16.30	255	Pn	Pn	08 53 12.0	+0.3
	comp=Z,0.2nm,0.3s,baz=61,slow=13,SNR=4.2						
KSRS				LR	LR	08 59 33.3	
	comp=Z,168µm,20.1s,baz=70,slow=38						
	comp=Z,2.1nm,0.8s						
MA2	Magadan	16.32	5	Pn	Pn	08 53 11.9	+0.1
	comp=Z,17nm,0.9s,baz=210,slow=16,SNR=2.5						
MA2				LR	LR	08 59 27.6	
	comp=Z,270nm,18.1s,baz=262,slow=37						
JNU	Nakatsue	16.80	238	Pn	Pn	08 53 17.9	-0.3
	comp=Z,13nm,0.9s,baz=29,slow=10,SNR=2.9						
JNU				LR	LR	08 59 51.2	
	comp=Z,259nm,19.2s,baz=43,slow=38						
JNU	Nakatsue	16.80	238	Pn	Pn	08 53 16.4	-1.8
JCJ	Chichijima	16.89	198	Pn	Pn	08 53 18.7	-0.6
ZEA	Zeya	17.09	315	*e*P	Pn	08 53 21.2	-0.4
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA				MLR	MLR		
	comp=Z,700nm,18.0s						
SHEM	Shemya Is, Ala	19.76	53	LR	LR	09 01 60.0	
	comp=Z,74nm,20.1s,baz=202,slow=38						
SEY	Seymchan	19.77	6	P	P	08 53 52.2	-0.4
	comp=Z,0.4nm,0.3s,baz=180,slow=8.8,SNR=9.4						
SEY				LR	LR	09 01 48.6	
	comp=Z,258nm,18.5s,baz=149,slow=38						
	comp=Z,10nm,0.9s						
SEY	Seymchan	19.77	6	*ce*P	P	08 53 53.0	+0.4
SEY				pmax	pmax		
	comp=Z,14nm,1.1s						
SEY				MLR	MLR		
	comp=Z,303nm,16.0s						
SEY	Seymchan	19.77	6	*e*P	P	08 53 53.0	+0.4
DL2	Dalian	20.24	266	P	P	08 53 58.3	+0.3
DL2				pmax	pmax		
	comp=Z,90nm,1.1s						
HIA	Hailar	20.24	297		P	08 53 55.9	-2.2
HIA	Hailar	20.24	297	*i* P	P	08 53 57.0	-1.0
HIA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HILR	Hailar Array B	20.27	298	P	P	08 53 55.5	-2.8
	comp=Z,6.7nm,0.4s,baz=104,slow=11,SNR=15						
HILR				LR	LR	09 02 20.1	
	comp=Z,192nm,20.0s,baz=70,slow=38						
YAK	Yakutsk	21.55	336	P	P	08 54 09.6	-2.3
	comp=Z,49nm,0.7s,baz=140,slow=0.9,SNR=11						
YAK				S	S	08 58 04.8	-5.5
	comp=Z,11nm,0.5s,baz=176,slow=2.2,SNR=1.0						
YAK				LR	LR	09 03 01.3	
	comp=Z,375nm,19.1s,baz=127,slow=38						
YAK	Yakutsk	21.55	336		P	08 54 08.8	-3.1
YAK				IAmb	IAmb	08 54 11.2	
	comp=Z,55nm,0.8s						
YAK	Yakutsk	21.55	336	*e*P	P	08 54 07.9	-4.1
YAK				*e**PP	sP	08 54 15.5	-0.2
YAK				*e*S	S	08 58 07.0	-3.3
YAK				*e**SS	Sn	08 58 20.4	+1.6
YAK				*e*SSS	SSS	08 58 49.3	
YAK				*e*		09 05 26.8	
YAK				pmax	pmax		
	comp=Z,64nm,1.0s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.1s						
YAK				smax	smax		
	comp=N,988nm,5.9s						
YAK				smax	smax		
	comp=E,355nm,4.3s						
YAK				MLR	MLR		
	comp=Z,409nm,19.0s						
YAK				MLR	MLR		
	comp=N,328nm,19.0s						
YAK				MLR	MLR		
	comp=E,368nm,21.0s						
XLT	XiLinHaoTe	22.96	282	*e*P	P	08 54 26.1	-1.2
XLT				sP	pwP	08 54 34.0	-0.7
XLT				pmax	pmax		
	comp=E,38nm,0.7s						
BJI	Beijing	23.84	273	P	P	08 54 34.2	-1.7
BJI				pmax	pmax		
	comp=E,8.0nm,1.1s						
BJI				LR	LR		
	comp=E,270nm,15.9s						
BJT	Baijiatuau	23.85	273		P	08 54 34.6	-1.4
BJT	Baijiatuau	23.85	273	P	P	08 54 34.6	-1.4
BJT				pmax	pmax		
	comp=Z,19nm,1.2s						
TIA	Tai'an	24.60	264	P	P	08 54 44.7	+1.6
TIA				pmax	pmax		
	comp=Z,21nm,0.8s						
NJ2	Nanjing	25.48	253	*e*P	P	08 54 51.8	+0.9
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
NJ2				LR	LR		
	comp=Z,1µm,17.0s						
NJ2				LR	LR		
	comp=Z,820nm,15.6s						
NJ2				LR	LR		
	comp=Z,550nm,13.3s						
HNS	HongShan	25.86	268	⇓P	P	08 54 55.5	+1.1
HNS				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC	Hu-ho-hao-te	26.93	277	*e*P	P	08 55 04.2	0.0
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,260nm,5.5s						
HHC				LR	LR		
	comp=Z,330nm,11.1s						
HHC				LR	LR		
	comp=Z,340nm,11.2s						
HHC				LR	LR		
	comp=Z,340nm,12.0s						
BTO	Baotou	28.12	277	*e*P	P	08 55 18.5	+3.6
BTO				S	S	09 00 07.1	+7.4
BTO				pmax	pmax		
	comp=Z,74nm,0.7s						
BTO				pmax	pmax		
	comp=Z,670nm,5.9s						
BTO				LR	LR		
	comp=Z,750nm,6.3s						
BTO				LR	LR		
	comp=Z,740nm,5.6s						
BTO				LR	LR		
	comp=Z,700nm,6.9s						
H11N2	WAKE ISLAND Hy	28.47	140	T	T	09 25 08.6	
	baz=320						
H11N1	WAKE ISLAND Hy	28.48	140	T	T	09 25 06.7	
	baz=320						
H11N3	WAKE ISLAND Hy	28.49	140	T	T	09 25 03.6	
	baz=320						
ULN	Ulaanbaatar	28.67	293	P	P	08 55 19.7	0.0
ULN				IAmb	IAmb	08 55 21.5	
	comp=Z,28nm,0.8s						
ULN	Ulaanbaatar	28.67	293	P	P	08 55 19.7	0.0
ULN				pmax	pmax		
	comp=Z,28nm,0.8s						
ULN	Ulaanbaatar	28.67	293	*e*P	P	08 55 18.8	-0.9
LYN	LuoYang	28.74	264	*e*P	P	08 55 21.7	+1.4
LYN				pmax	pmax		
	comp=Z,12nm,1.0s						
SONM	Songino Array	29.11	293	P	P	08 55 24.0	+0.4
	comp=Z,22nm,0.8s,baz=84,slow=8.5,SNR=65						
SONM				LR	LR	09 08 18.0	
	comp=Z,475nm,20.5s,baz=96,slow=39						
	comp=Z,22nm,0.8s						
H11S1	WAKE ISLAND Hy	29.44	142	T	T	09 26 14.7	
	baz=323						
H11S3	WAKE ISLAND Hy	29.45	142	T	T	09 26 13.9	
	baz=323						
H11S2	WAKE ISLAND Hy	29.46	142	T	T	09 26 15.4	
	baz=323						
TIXI	Tiksi	29.84	348	*i* P	P	08 55 26.9	-2.7
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TIXI				MLR	MLR		
	comp=Z,284nm,16.0s						
TLY	Talaya	30.60	301	P	P	08 55 34.8	-1.9
ZAK	Zakamensk	30.90	299	*e*P	P	08 55 36.9	-2.5
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	31.56	266	P	P	08 55 51.4	+6.1
XAN				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH	Lanzhou	34.33	273	*e*P	P	08 56 10.7	+1.1
LZH				sP	pwP	08 56 19.0	+1.9
LZH				pmax	pmax		
	comp=Z,34nm,1.3s						
LZDM	Lanzhou Array	34.49	273	P	P	08 56 11.1	-0.2
	comp=Z,11nm,0.7s,baz=101,slow=3.0,SNR=13						
	comp=Z,11nm,0.7s						
KNGR	Kungurtug, Tuv	34.54	300	*i* P	P	08 56 10.8	-0.4
KNGR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
F17K	Baldwin Pennin	35.74	32	P	P	08 56 22.0	+0.8
F17K				IAmb	IAmb	08 56 36.6	
	comp=Z,19nm,1.0s						
GTA	Gaotai	35.89	280	*e*P	P	08 56 23.6	+0.6
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GTA				LR	LR		
	comp=Z,240nm,13.5s						
GTA				LR	LR		
	comp=Z,360nm,14.5s						
GTA				LR	LR		
	comp=Z,340nm,12.4s						
C18K	Utukok River	36.37	29		P	08 56 27.2	+0.5
C18K				IAmb	IAmb	08 56 42.5	
	comp=Z,13nm,0.9s						
H18K	Honhosa River	36.63	35	P	P	08 56 30.4	+1.5
H18K				IAmb	IAmb	08 56 44.8	
	comp=Z,16nm,0.9s						
G18K	Tagagawik	36.65	34	P	P	08 56 30.9	+1.9
G18K				IAmb	IAmb	08 56 45.6	
	comp=Z,13nm,0.9s						
C19K	Lookout Ridge	37.06	28	P	P	08 56 34.0	+1.5
C19K				IAmb	IAmb	08 56 46.9	
	comp=Z,21nm,1.2s						
F19K	Shaleruckik Mo	37.18	32	P	P	08 56 34.7	+1.2
F19K				IAmb	IAmb	08 56 48.3	
	comp=Z,16nm,1.1s						
J19K	Poorman	37.65	37	P	P	08 56 39.0	+1.4
J19K				IAmb	IAmb	08 56 53.3	
	comp=Z,12nm,0.9s						
F20K	Avaraart Lake	38.02	32	P	P	08 56 42.0	+1.5
B20K	Meade River	38.13	27	P	P	08 56 43.0	+1.6
B20K				IAmb	IAmb	08 56 56.3	
	comp=Z,18nm,0.8s						
J20K	Nowinta River	38.31	37		P	08 56 44.8	+1.6
J20K				IAmb	IAmb	08 56 59.2	
	comp=Z,25nm,1.4s						
IMAR	Indian Mountai	38.65	34	P	P	08 56 48.2	+2.3
OHAK	Old Harbor	38.78	48	P	P	08 56 49.4	+2.3
OHAK				IAmb	IAmb	08 56 56.5	
	comp=Z,18nm,1.2s						
H21K	Melozitna Rive	39.01	34	P	P	08 56 51.0	+2.0
KDAK	Kodiak Island	39.11	47	P	P	08 56 52.1	+2.3
KDAK	Kodiak Island	39.11	47	P	P	08 56 52.1	+2.3
KDAK				pmax	pmax		
	comp=Z,74nm,1.4s						
BPAW	Bear Paw Mtn.	39.69	37	P	P	08 56 57.3	+2.6
L22K	Petersville	39.78	39	P	P	08 56 57.7	+2.2

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SUA   Susitna One       39.82  41    P       P        08 56 58.0 +2.2
SUA                                  IAmb    IAmb     08 57 20.4
      comp=Z,28nm,1.4s
NRIK  Noril'sk          39.84 331    P       P        08 56 55.8  0.0
      comp=Z,1.4nm,0.4s,baz=72,slow=3.2,SNR=3.8
NRIK                                 LR      LR       09 14 38.8
      comp=Z,132nm,19.1s,baz=80,slow=38
      comp=Z,1.4nm,0.4s
NRIK  Noril'sk          39.84 331  i P       P        08 56 56.1 +0.3
NRIK                                 pmax    pmax
      comp=Z,3.0nm,1.1s
TRF   Thorofare Moun    39.99  38    P       P        08 57 00.1 +2.7
GOMU  GeErMu            40.83 278    P       P        08 57 05.3 +0.5
GOMU                                 pmax    pmax
      comp=Z,15nm,0.9s
GOMU                                 LR      LR
      comp=Z,230nm,16.3s
GOMU                                 LR      LR
      comp=Z,260nm,16.9s
GOMU                                 LR      LR
      comp=Z,360nm,15.4s
PZH   PanZhiHua         40.85 261    P       P        08 57 05.4 +0.6
DGZ   Jazzator, Alta    41.07 301  i P       P        08 57 06.3 -0.1
DGZ                                  pmax    pmax
      comp=Z,7.0nm,0.9s
HDA   Harding Lake      41.45  37    P       P        08 57 10.2 +1.0
IL31                    41.47  36            P        08 57 10.2 +0.9
IL31                                 IAmb    IAmb     08 57 25.4
      comp=Z,16nm,1.0s
ILAR  Eielson Array     41.47  36    P       P        08 57 09.8 +0.5
      comp=Z,1.3nm,0.5s,baz=264,slow=7.6,SNR=15
ILAR                                 LR      LR       09 14 36.8
      comp=Z,62nm,19.1s,baz=288,slow=36
      comp=Z,1.3nm,0.5s
ZALV  Zalesovo Beam     41.65 308    P       P        08 57 10.3 -0.6
      comp=Z,3.7nm,0.7s,baz=78,slow=6.0,SNR=9.4
ZALV                                 PcP     PcP      08 59 07.6 +0.1
      comp=Z,2.9nm,0.8s,baz=48,slow=2.2,SNR=5.0
ZALV                                 LR      LR       09 17 24.1
      comp=Z,64nm,18.4s,baz=48,slow=40
      comp=Z,3.7nm,0.7s
ZALV  Zalesovo Beam     41.65 308            P        08 57 10.5 -0.5
ZALV  Zalesovo Beam     41.65 308  i P       P        08 57 10.8 -0.2
ZALV                                 pmax    pmax
      comp=Z,4.0nm,0.7s
E25K  Arctic Village    41.99  31            P        08 57 15.1 +1.5
PRP   Porcupine Dome    42.02  35            P        08 57 15.9 +1.9
PRP                                  IAmb    IAmb     08 57 30.1
      comp=Z,25nm,1.4s
C27K  Jago River        42.69  29    P       P        08 57 20.9 +1.7
C27K                                 IAmb    IAmb     08 57 35.0
      comp=Z,21nm,1.0s
WMQ   Urumqi            42.73 292  eP        P        08 57 22.4 +2.4
WMQ                                  pmax    pmax
      comp=Z,26nm,1.3s
WMQ                                  LR      LR
      comp=Z,1µm,10.3s
WMQ                                  LR      LR
      comp=Z,380nm,17.7s
DOT   Dot Lake          42.77  38    P       P        08 57 20.6 +0.6
SCRK  Sand Creek        42.77  37            P        08 57 20.7 +0.6
L26K  Log Cabin Wild    43.15  38    P       P        08 57 25.5 +2.4
L26K                                 IAmb    IAmb     08 57 40.4
      comp=Z,19nm,1.1s
K27K  Chicken           43.61  37    P       P        08 57 28.4 +1.7
K27K                                 IAmb    IAmb     08 57 43.8
      comp=Z,29nm,1.1s
BCAR  Beaver Creek A    43.86  38            P        08 57 30.9 +2.0
F28M  Old Crow          44.16  32    P       P        08 57 33.4 +2.3
DAWY  Dawson            44.77  37    P       P        08 57 38.3 +2.2
I29M  Ogilvie Camp,     45.04  35    P       P        08 57 39.7 +1.5
MK31  Makanchi Array    45.23 298ceP         P        08 57 40.6 +0.6
MKAR  Makanchi Array    45.23 298    P       P        08 57 40.1 +0.1
      comp=Z,16nm,0.8s,baz=78,slow=8.8,SNR=63
MKAR                                 PcP     PcP      08 59 19.6 -0.2
      comp=Z,1.0nm,0.6s,baz=48,slow=2.1,SNR=1.8
      comp=Z,16nm,0.8s
MKAR  Makanchi Array    45.23 298            P        08 57 40.4 +0.4
MKAR  Makanchi Array    45.23 298ceP         P        08 57 40.5 +0.5
MKAR                                 pmax    pmax
      comp=Z,17nm,0.8s
MKAR  Makanchi Array    45.23 298  eP        P        08 57 40.5 +0.5
MAKZ  Makanchi          45.43 298            P        08 57 41.9 +0.4
MAKZ  Makanchi          45.43 298    P       P        08 57 41.9 +0.4
MAKZ                                 pmax    pmax
      comp=Z,21nm,0.9s
KURK  Kurchatov         46.18 305            P        08 57 47.9 +0.5
KURK  Kurchatov         46.18 305    P       P        08 57 48.0 +0.6
KURK  Kurchatov         46.18 305  eP        P        08 57 47.9 +0.5
HYT   Haines Junctio    46.26  41            P        08 57 50.4 +2.4
KURBB Kurchatov Arra    46.27 304    P       P        08 57 48.0  0.0
      comp=Z,13nm,0.6s,baz=72,slow=8.7,SNR=29
      comp=Z,13nm,0.6s
CHTO  Chiang Mai        47.70 255            P        08 57 59.5 -0.1
CHTO                                 IAmb    IAmb     08 58 01.2
      comp=Z,5.5nm,0.8s
CHTO  Chiang Mai        47.70 255    P       P        08 57 59.5 -0.1
CHTO                                 pmax    pmax
      comp=Z,6.0nm,0.8s
CMAR  Chiang Mai Arr    47.94 255    P       P        08 58 02.0 +0.5
      comp=Z,2.5nm,0.8s,baz=38,slow=8.0,SNR=11
      comp=Z,2.5nm,0.8s
CMAR  Chiang Mai Arr    47.94 255  i P       P        08 58 02.5 +1.0
CMAR                                 pmax    pmax
      comp=Z,2.0nm,0.8s
SHL   Shillong          48.55 268            P        08 58 05.5 -0.9
SHL                                  IAmb    IAmb     08 58 06.9
      comp=Z,12nm,0.9s
SHL   Shillong          48.55 268    P       P        08 58 05.5 -0.9
SHL                                  pmax    pmax
      comp=Z,12nm,0.9s
BVAR  Borovoye Array    50.16 310    P       P        08 58 18.2 +0.1
      comp=Z,8.5nm,0.9s,baz=69,slow=8.1,SNR=15
      comp=Z,8.5nm,0.9s
BORK  Borovoye          50.19 310ceP         P        08 58 19.4 +1.1
BORK                                 pmax    pmax
      comp=Z,10.0nm,0.8s
EVN   Everest           50.87 273            P        08 58 25.2 +0.6
EVN                                  IAmb    IAmb     08 58 43.9
      comp=Z,14nm,0.8s
BOOM  Boomskoye usch    51.12 295    P       P        08 58 26.6 +0.9
BOOM  Boomskoye usch    51.12 295    P       P        08 58 26.6 +0.9
BOOM                                 pmax    pmax
      comp=Z,34nm,0.9s
AAK   Ala-Archa         52.00 296    P       P        08 58 32.3  0.0
      comp=Z,7.6nm,0.7s,baz=73,slow=11,SNR=17
      comp=Z,7.6nm,0.7s
AAK   Ala-Archa         52.00 296            P        08 58 31.8 -0.5
AAK                                  IAmb    IAmb     08 58 35.1
      comp=Z,9.6nm,0.8s
AAK   Ala-Archa         52.00 296  eP        P        08 58 33.1 +0.8
KSH   Kashi             52.50 292    P       P        08 58 39.6 +3.6
KSH                                  pmax    pmax
      comp=Z,5.0nm,0.9s
KSH                                  LR      LR
      comp=Z,270nm,7.9s
KSH                                  LR      LR
      comp=Z,430nm,8.2s
KSH                                  LR      LR
      comp=Z,480nm,17.5s
SVE   Sverdlovsk        53.78 317  eP        P        08 58 45.3 +0.3
SVE                                  pmax    pmax
      comp=Z,24nm,1.0s
ARTI  Arti              55.09 317    P       P        08 58 54.0 -0.5
      comp=Z,17nm,0.8s,baz=72,slow=3.8,SNR=19
ARTI                                 LR      LR       09 25 05.2
      comp=Z,229nm,20.1s,baz=83,slow=39
      comp=Z,17nm,0.8s
ARTI  Arti              55.09 317c iP        P        08 58 52.4 -2.1
ARTI                                 S       S        09 06 36.4 -0.2
ARTI                                 SS      SS       09 10 15.6 -4.2
ARTI                                 pmax    pmax
      comp=Z,26nm,1.0s
SPITS Spitsbergen Ar    55.25 349    P       P        08 58 54.0 -1.4
      comp=Z,24nm,1.1s,baz=66,slow=8.5,SNR=4.3
      comp=Z,24nm,1.1s
SPITS Spitsbergen Ar    55.25 349    P       P        08 58 54.0 -1.4
DRK   Karamyk           55.32 294    P       P        08 58 56.3 -0.5
DRK                                  IAmb    IAmb     08 59 10.4
      comp=Z,19nm,1.2s
DRK   Karamyk           55.32 294    P       P        08 58 56.3 -0.5
DRK                                  pmax    pmax
      comp=Z,19nm,1.2s
YKA   Yellowknife Ar    55.81  34    P       P        08 58 60.0 +0.4
      comp=Z,1.1nm,0.7s,baz=299,slow=7.5,SNR=8.5
YKA                                  LR      LR       09 25 01.1
      comp=Z,58nm,18.3s,baz=26,slow=38
      comp=Z,1.1nm,0.7s
YKA   Yellowknife Ar    55.81  34  i P       P        08 59 00.6 +1.0
YKA                                  pmax    pmax
      comp=Z,2.0nm,0.9s
MANEM Manem             56.40 292            P        08 59 05.0 +0.4
MANEM                                IAmb    IAmb     08 59 32.3
      comp=Z,12nm,0.8s
GAR   Garm              56.55 294            P        08 59 05.4 -0.1
NIL   Nilore            57.41 287    P       P        08 59 11.1 -0.4
NIL   Nilore            57.41 287    P       P        08 59 11.1 -0.4
NIL                                  pmax    pmax
      comp=Z,24nm,1.0s
CHGR  Chuyangaron       57.50 294            P        08 59 11.5 -0.6
CHGR  Chuyangaron       57.50 294    P       P        08 59 11.5 -0.6
CHGR                                 pmax    pmax
      comp=Z,44nm,0.9s
AB31  Akbulak array     57.72 309            P        08 59 12.7 -0.7
ABKAR Akbulak array     57.72 309            P        08 59 13.1 -0.3
AKTO  Aktyubinsk        58.19 311    P       P        08 59 16.7 +0.1
      comp=Z,6.1nm,0.7s,baz=47,slow=5.0,SNR=15
      comp=Z,6.1nm,0.7s
KIRV  Kirov             58.22 322    P       P        08 59 16.6  0.0
      comp=Z,29nm,0.8s,baz=34,slow=3.6,SNR=6.9
KIRV                                 LR      LR       09 26 38.7
      comp=Z,169nm,18.3s,baz=34,slow=38
      comp=Z,29nm,0.8s
KIRV  Kirov             58.22 322ceP         P        08 59 17.0 +0.3
SHAA  Shahritus         58.78 294            P        08 59 20.4 -0.7
SHAA                                 IAmb    IAmb     08 59 22.4
      comp=Z,27nm,0.9s
ARCES ARCESS Array B    59.78 340    P       P        08 59 27.0 -0.4
      comp=Z,9.9nm,1.0s,baz=45,slow=7.6,SNR=16
      comp=Z,9.9nm,1.0s
KBL   Kabul             59.82 290            P        08 59 27.7 -0.8
KBL                                  IAmb    IAmb     08 59 42.0
      comp=Z,14nm,1.0s
KBL   Kabul             59.82 290    P       P        08 59 27.7 -0.8
KBL                                  pmax    pmax
      comp=Z,14nm,1.0s
KLMR  Klimovskoe        61.04 328  eP        P        08 59 34.3 -1.8
KLMR                                 pmax    pmax
      comp=Z,34nm,1.2s
BLKN  Baker Lake        61.56  26            P        08 59 40.0 +0.5
BELG  Belogornoye       62.54 317  i P       P        08 59 46.5 +0.2
BELG                                 pmax    pmax
      comp=Z,9.0nm,0.9s
WB0   Warramunga Arr    64.05 194    P       P        08 59 56.7 +0.1
WB0                                  IAmb    IAmb     09 00 13.6
      comp=Z,6.6nm,0.9s
WRA   Warramunga Arr    64.23 194    P       P        08 59 56.2 -1.6
      comp=Z,2.1nm,0.8s,baz=15,slow=7.0,SNR=10
      comp=Z,2.1nm,0.8s
WRA   Warramunga Arr    64.23 194    P       P        08 59 57.3 -0.5
WRA   Warramunga Arr    64.23 194  i P       P        08 59 57.9 +0.1
WRA                                  pmax    pmax
      comp=Z,2.0nm,0.8s
SUMG  Summit            64.26   2            P        08 59 57.8 -0.1
SUMG                                 IAmb    IAmb     08 59 59.3
      comp=Z,9.6nm,0.8s
SUMG  Summit            64.26   2    P       P        08 59 57.8 -0.1
SUMG                                 pmax    pmax
      comp=Z,10.0nm,0.8s
MOS   Moscow            65.07 324  eP        P        09 00 02.0 -0.9
MOS                                  pmax    pmax
      comp=Z,33nm,0.8s
FINES FINESS Array B    65.45 333    P       P        09 00 05.0 -0.3
      comp=Z,11nm,0.8s,baz=69,slow=4.6,SNR=15
      comp=Z,11nm,0.8s
FINES FINESS Array B    65.45 333    P       P        09 00 05.0 -0.3
OBN   Obninsk           65.93 324ceP         P        09 00 07.4 -1.1
OBN                                e                  09 00 41.2
OBN                                e                  09 02 36.5
OBN                                eS        S        09 09 08.6  +13
OBN                                  pmax    pmax
      comp=Z,51nm,1.7s
OBN   Obninsk           65.93 324  eP        P        09 00 07.4 -1.1
VRH   Novokhopyorsk     66.16 319  eP        P        09 00 08.5 -1.5
VRH                                  pmax    pmax
      comp=Z,20nm,0.9s
LPSR  Galich'ya Gora    66.56 321  eP        P        09 00 11.3 -1.3
LPSR                                 pmax    pmax
      comp=Z,20nm,0.9s
BOZ   Bozeman (W)       66.78  49    P       P        09 00 17.4 +3.0
BOZ   Bozeman (W)       66.78  49    P       P        09 00 17.4 +3.0
BOZ                                  pmax    pmax
      comp=Z,4.0nm,0.9s
NVAR  Mina Array Bea    67.32  58    P       P        09 00 19.3 +1.3
      comp=Z,1.2nm,0.8s,baz=307,slow=6.6,SNR=1.6
      comp=Z,1.2nm,0.8s
DZM   Mont Dzumac       67.32 161  eLR       LR       09 20 35.2
      comp=Z,54nm,22.4s
VSR   Storozhevoye      67.37 320  eP        P        09 00 16.5 -1.2
VSR                                  pmax    pmax
      comp=Z,20nm,0.8s
VORD  Divnogorie        67.47 320  eP        P        09 00 17.0 -1.4
VORD                                 pmax    pmax
      comp=Z,30nm,0.9s
ASAR  Alice Springs     67.94 194    P       P        09 00 21.5 -0.1
      comp=Z,0.9nm,0.8s,baz=21,slow=4.0,SNR=8.8
      comp=Z,0.9nm,0.8s
AKT   Akhty             69.21 308  eP        P        09 00 28.4 -1.2
AKT                                e                  09 00 52.3
AKT                                  pmax    pmax
      comp=Z,25nm,1.1s
FRB   Frobisher Bay     69.39  16    LR      LR       09 32 50.3
      comp=Z,40nm,19.9s,baz=28,slow=38
PDAR  Pinedale Array    69.74  50    P       P        09 00 33.6 +0.6
      comp=Z,0.6nm,0.8s,baz=295,slow=4.4,SNR=2.3
MNK   Minsk             69.93 327  i P       P        09 00 33.8 +0.1
MNK                                i                  09 00 55.8
MNK                                i                  09 03 08.4
MNK                                i PPP     PPP      09 04 50.1
MNK                                i S       S        09 09 44.9 +1.9
MNK                                i                  09 10 36.0
MNK                                i SS      SS       09 14 15.2 +4.2
MNK                                  pmax    pmax
      comp=N,19nm,0.8s
MNK                                  pmax    pmax
      comp=Z,39nm,0.8s
MNK                                  pmax    pmax
      comp=E,42nm,0.9s
MNK                                  MLR     MLR
      comp=Z,263nm,16.0s
MNK                                  MLR     MLR
      comp=N,397nm,18.0s
MNK                                  MLR     MLR
      comp=E,808nm,21.0s
NB2   NORSAR Subarra    70.14 339    P       P        09 00 34.6 -0.4
      comp=Z,6.6nm,0.8s,baz=32,slow=6.2
NOA   NORSAR Array B    70.14 339    P       P        09 00 35.0  0.0
      comp=Z,11nm,0.9s,baz=33,slow=6.1,SNR=21
NOA                                  LR      LR       09 35 55.0
      comp=Z,62nm,18.2s,baz=0.0,slow=40
      comp=Z,11nm,0.9s
NOA   NORSAR Array B    70.14 339    P       P        09 00 35.0  0.0
HFS   Hagfors           70.24 338    P       P        09 00 35.1 -0.5
      comp=Z,6.7nm,0.5s,baz=46,slow=6.4,SNR=22
      comp=Z,6.7nm,0.5s
KIV   Kislovodsk        70.41 312            P        09 00 37.8 +0.8
KIV   Kislovodsk        70.41 312  ⇓P        P        09 00 39.0 +2.0
KIV   Kislovodsk        70.41 312  ⇓P        P        09 00 39.0 +2.0
KIV   Kislovodsk        70.41 312  eP        P        09 00 37.8 +0.8
KBZ   Khabaz            70.45 312    P       P        09 00 37.9 +0.8
      comp=Z,14nm,0.8s,baz=59,slow=4.9,SNR=27
      comp=Z,14nm,0.8s
KBZ   Khabaz            70.45 312ceP         P        09 00 36.4 -0.6
KBZ                                  pmax    pmax
      comp=Z,17nm,0.9s
KBZ   Khabaz            70.45 312  eP        P        09 00 36.1 -0.9
SHA1  Shidzhatmaz       70.57 312ceP         P        09 00 38.5 +0.4
NEUR  Neytrino          70.86 312  i P       P        09 00 39.7 -0.2
NEUR                                 pmax    pmax
      comp=Z,4.0nm,1.3s
PFO   Pinyon Flats O    71.51  61    LR      LR       09 34 38.0
      comp=Z,22nm,18.2s,baz=258,slow=38
AKASG Malin Array Be    72.20 324    P       P        09 00 47.0 -0.4
      comp=Z,14nm,0.8s,baz=40,slow=6.1,SNR=28
      comp=Z,14nm,0.8s
AKASG Malin Array Be    72.20 324    P       P        09 00 47.9 +0.4
AKASG                                IAmb    IAmb     09 00 49.7
      comp=Z,11nm,1.1s
AKASG Malin Array Be    72.20 324ceP         P        09 00 47.5  0.0
AKASG                                pmax    pmax
      comp=Z,14nm,0.8s
AKBB  Malin Array Si    72.20 324            P        09 00 47.1 -0.4
AKBB  Malin Array Si    72.20 324ceP         P        09 00 47.7 +0.2
AKBB                                 pmax    pmax
      comp=Z,29nm,1.0s
AKBB  Malin Array Si    72.20 324    P       P        09 00 47.0 -0.5
AK04  Malin Array Si    72.21 324    P       P        09 00 47.4 -0.1
KIEV  Kiev              72.21 324            P        09 00 47.4 -0.2
KIEV  Kiev              72.21 324  ⇓P        P        09 00 47.8 +0.2
KIEV  Kiev              72.21 324  ⇓P        P        09 00 47.8 +0.2
KIEV  Kiev              72.21 324    P       P        09 00 47.0 -0.6
KIEV                                 pP      pwP      09 00 58.6 +2.7
AK01  Malin Array Si    72.21 324    P       P        09 00 47.5 -0.1
AK22  Malin Array Si    72.22 324    P       P        09 00 47.6  0.0
AK21  Malin Array Si    72.22 324    P       P        09 00 47.6  0.0
AK08  Malin Array Si    72.23 324    P       P        09 00 47.7  0.0
AK09  Malin Array Si    72.23 324    P       P        09 00 47.7  0.0
AK02  Malin Array Si    72.24 324    P       P        09 00 47.7  0.0
AK11  Malin Array Si    72.24 324    P       P        09 00 47.7  0.0
AK18  Malin Array Si    72.25 324    P       P        09 00 47.6 -0.2
AK20  Malin Array Si    72.26 324    P       P        09 00 47.6 -0.3
AK10  Malin Array Si    72.26 324    P       P        09 00 47.6 -0.3
AK05  Malin Array Si    72.27 324    P       P        09 00 47.9  0.0
AK12  Malin Array Si    72.27 324    P       P        09 00 47.9  0.0
AK16  Malin Array Si    72.27 324    P       P        09 00 47.9  0.0
AK19  Malin Array Si    72.27 324    P       P        09 00 47.9  0.0
AK17  Malin Array Si    72.28 324    P       P        09 00 47.9 -0.1
AK06  Malin Array Si    72.29 324    P       P        09 00 48.0 -0.1
AK14  Malin Array Si    72.30 324    P       P        09 00 48.1  0.0
AK07  Malin Array Si    72.32 324    P       P        09 00 48.2  0.0
AK13  Malin Array Si    72.33 324    P       P        09 00 48.3  0.0
LUBAR Lubar, Ukraine    73.41 324    P       P        09 00 54.2 -0.5
SORM  Soroca            74.50 323  ⇓P        P        09 01 02.1 +1.0
SORM  Soroca            74.50 323  ⇓P        P        09 01 02.1 +1.0
KMPD  K-Podol'skiy      74.99 324    P       P        09 01 03.6 -0.4
KMPD                                 P       P        09 01 03.6 -0.4
MARD  Mardin            75.99 308    P       P        09 01 10.9 +0.8
MARD                                 IAmb    IAmb     09 01 12.4
      comp=Z,16nm,0.9s
BUR08 Bucovina Ar. S    76.24 324            P        09 01 11.5 +0.2
BUR08                                IAmb    IAmb     09 01 14.3
      comp=Z,12nm,0.8s
BURAR Bucovina Array    76.25 324    P       P        09 01 11.7 +0.3
BURAR Bucovina Array    76.25 324  ⇓P        P        09 01 12.1 +0.7
BURAR Bucovina Array    76.25 324  ⇓P        P        09 01 12.1 +0.7
STHS  Stebnicka Huta    76.47 327  eP        P        09 01 13.7 +1.3
STHS                               e                  09 01 27.1
STHS                                 pmax    pmax
      comp=Z,9.0nm,1.4s
STHS  Stebnicka Huta    76.47 327  eP        P        09 01 13.7 +1.3
STHS                               e                  09 01 27.1
TESR  Tescani           76.48 323  ⇓P        P        09 01 13.5 +0.9
ONER  Baraj Valea Uz    76.73 323  ⇑P        P        09 01 15.1 +1.2
TPGR  Topolog           76.94 321  ⇑P        P        09 01 16.7 +1.5
VRI   Vrincioaia        76.94 322  ⇓P        P        09 01 17.0 +1.8
VRI   Vrincioaia        76.94 322  ⇓P        P        09 01 17.0 +1.8
PLOR  Plostina          76.99 322  ⇓P        P        09 01 17.5 +2.0
PLOR  Plostina          76.99 322  ⇓P        P        09 01 17.5 +2.0
OZUR                    77.18 323  ⇓P        P        09 01 18.4 +1.8
STEB  Steborice         77.37 330  eP        P        09 01 18.6 +1.1
MLR   Muntele Rosu      77.58 322  ⇑P        P        09 01 21.4 +2.5
MLR   Muntele Rosu      77.58 322  ⇑P        P        09 01 21.4 +2.5
MORC  Moravsky Berou    77.58 330  ⇓P        P        09 01 20.6 +1.8
MORC  Moravsky Berou    77.58 330  eP        P        09 01 20.0 +1.3
MORC  Moravsky Berou    77.58 330  ⇓P        P        09 01 20.6 +1.8
ISR   Istrita           77.60 322  ⇑P        P        09 01 20.8 +1.9
ISR   Istrita           77.60 322  ⇑P        P        09 01 20.8 +1.9
KRLC  Kraliky           77.61 330  eP        P        09 01 21.0 +2.1
KRLC                               e                  09 01 32.0
KRLC  Kraliky           77.61 330  eP        P        09 01 21.0 +2.1
KRLC                               ePCP      PcP      09 01 32.0 +2.9
SCHQ  Schefferville     77.79  20    P       P        09 01 19.8  0.0
      comp=Z,8.2nm,1.1s,baz=333,slow=6.8,SNR=1.7
      comp=Z,8.2nm,1.1s
MAUC  Maruska           77.81 329  eP        P        09 01 08.2  -12
CLL   Collm             77.89 333    P       P        09 01 21.3 +1.0
CLL                                  IAmb    IAmb     09 01 35.2
      comp=Z,12nm,0.8s
CLL   Collm             77.89 333  i P       P        09 01 20.5 +0.1
CLL                                i                  09 01 33.3
CLL                                  pmax    pmax
      comp=Z,11nm,0.8s
CLL   Collm             77.89 333  i P       P        09 01 20.5 +0.1
      comp=Z,11nm,0.8s
CLL                                i PcP     PcP      09 01 33.3 +3.1
      comp=Z,27nm,1.3s
CLL                                ePP       PP       09 04 18.0 +2.6
VOIR                    78.02 323  ⇑P        P        09 01 22.8 +1.5
VOIR                    78.02 323  ⇑P        P        09 01 22.8 +1.5
BRTR  Keskin Array B    78.19 314    P       P        09 01 22.9 +0.5
      comp=Z,1.9nm,0.8s,baz=50,slow=4.7,SNR=7.2
      comp=Z,1.9nm,0.8s
BRTR  Keskin Array B    78.19 314ceP         P        09 01 23.2 +0.8
BRTR                                 pmax    pmax
      comp=Z,2.0nm,0.8s
ARR   Arges             78.26 323  ⇓P        P        09 01 24.2 +1.6
JAVC  Velka Javorina    78.29 329  eP        P        09 01 25.0 +2.3
VRAC  Vranov            78.32 330    LR      LR       09 37 53.1
      comp=Z,43nm,18.4s,baz=19,slow=37
VRAC  Vranov            78.32 330  eP        P        09 01 23.3 +0.5
KRUC  Moravsky          78.60 330  eP        P        09 01 24.8 +0.5
EKA   Eskdalemuir Ar    78.63 344    P       P        09 01 24.2 -0.2
      comp=Z,7.1nm,0.9s,baz=17,slow=4.4,SNR=5.0
      comp=Z,7.1nm,0.9s
SIRR  Siria             78.82 325  ⇑P        P        09 01 28.5 +2.9
MODS  Modra-Piesok      78.84 329  eP        P        09 01 29.1 +3.4
MODS                               e                  09 01 40.4
MODS  Modra-Piesok      78.84 329  e         PcP      09 01 40.4 +6.0
MODS  Modra-Piesok      78.84 329  eP        P        09 01 29.1 +3.4
GZR   Gura Zlata        79.04 324  ⇓P        P        09 01 27.6 +0.7
GZR   Gura Zlata        79.04 324  ⇓P        P        09 01 27.6 +0.7
KHC   Kasperske Hory    79.55 331ceP         P        09 01 29.8 +0.2
KHC                                  pmax    pmax
      comp=Z,11nm,1.0s
KHC   Kasperske Hory    79.55 331  eP        P        09 01 30.2 +0.6
KHC                                ex        x        09 01 43.2
CKRC  Cesky Krumlov     79.55 331  eP        P        09 01 30.0 +0.4
CKRC                               e                  09 01 42.0
CKRC  Cesky Krumlov     79.55 331  eP        P        09 01 30.0 +0.4
CKRC                               ex        x        09 01 42.0
ELND  Elena             79.60 321  ⇓P        P        09 01 31.4 +1.4
CONA  Conrad Observa    79.74 329  eP        P        09 01 34.1 +3.4
      comp=Z,8.5nm,1.1s
GERES GERESS Array B    79.74 331    P       P        09 01 30.2 -0.5
      comp=Z,1.4nm,0.6s,baz=28,slow=6.0,SNR=7.7
GERES                                LR      LR       09 40 33.2
      comp=Z,149nm,18.6s,baz=40,slow=38
      comp=Z,1.4nm,0.6s
RONA  Rosalia, Austr    79.77 329  eP        P        09 01 34.6 +3.8
      comp=Z,7.6nm,1.0s
RAR   Rarotonga         80.24 131    LR      LR       09 35 39.7
      comp=Z,62nm,18.4s,baz=192,slow=35
SOKA  Soboth            81.09 329  eP        P        09 01 41.1 +3.1
      comp=Z,9.4nm,1.0s
LESA  Schwarzleotal     81.31 331  eP        P        09 01 42.7 +3.6
      comp=Z,1.4nm,0.3s
MMAI  Mount Meron Ar    82.14 308    P       P        09 01 44.0 +0.2
      comp=Z,2.8nm,0.5s,baz=52,slow=3.3,SNR=4.5
      comp=Z,2.8nm,0.5s
TX31  Lajitas Ar. Si    82.41  57    P       P        09 01 46.1 +0.8
TX31                                 IAmb    IAmb     09 02 12.4
      comp=Z,6.8nm,1.3s
TXAR  Lajitas Array     82.41  57    P       P        09 01 46.4 +1.1
      comp=Z,0.7nm,0.6s,baz=300,slow=3.6,SNR=8.4
      comp=Z,0.7nm,0.6s
DAVOX Davos/Dischmat    82.84 332    LR      LR       09 42 00.2
      comp=Z,41nm,20.5s,baz=75,slow=38
TAOE  Nuku Hiva Isla    83.20 109  eLR       LR       09 28 02.9
      comp=Z,70nm,23.7s
PPT   Papeete           83.37 122    LR      LR       09 40 08.4
      comp=Z,96nm,18.4s,baz=336,slow=36
PPT2  Papeete2          83.38 122  eLR       LR       09 27 59.7
      comp=Z,66nm,20.0s
PPT2                               eLR       LR       09 28 00.8
      comp=Z,100nm,27.2s
TBI   Tubuai            87.81 125  eLR       LR       09 29 59.6
      comp=Z,893nm,35.0s
ESDC  Sonseca Array     93.50 339    LR      LR       09 50 59.6
      comp=Z,77nm,18.1s,baz=26,slow=40
SNAA  Sanae            148.26 197    PKPbc   PKPbc    09 09 07.6 -0.1
      comp=Z,2.2nm,1.0s,baz=52,slow=3.9,SNR=3.0
BDFB  Brasilia         149.20  31    PKPbc   PKPbc    09 09 11.9 +0.1
      comp=Z,1.5nm,0.4s,baz=315,slow=5.7,SNR=4.0
PLCA  Paso Flores      151.50  98    PKPbc   PKiKP    09 09 16.9 -0.1
      comp=Z,0.7nm,0.6s,baz=291,slow=4.2,SNR=3.5
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*IDC **05** 08:55:29.9±1.0, 35°.66N×117°.61W, h0^{km}, mbtmp3.2/6, ML3.6/5, Error ellipse: s-maj=17.5km s-min=7.0km az=70.0*

*NEIC **05** 08:55:31.0±1.2, 35°.703N±0°.006×117°.61W±0°.01, h12^{km}±2^{km}, Error ellipse: s-maj=1.5km s-min=0.9km az=88.0*

*PAS **05** 08:55:31.6±1.2, 35°.697N±0°.007×117°.61W±0°.01, h8^{km}±3^{km}, Mwr3.8/6, ML3.9/172(NEIC), Error ellipse: s-maj=1.3km s-min=1.1km az=85.0*

ISC 05 08:55:31.5±0.8**, 35°.69N**±0°.02×**117°.60W**±0°.02**, h13**^{km}±4^{km}**, n141, σ0^s.70**/163**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GPO	China Lake	0.07	235		Pg	08 55 33.7	-0.5
GPO					Sg	08 55 35.6	-0.4
WSHM	Spangler Hills	0.12	136		Pg	08 55 34.5	-0.3
WSHM				Sg	Sg	08 55 36.8	-0.4
WSHM				IAML		08 55 37.5	
	58µm,0.4s						
SRTC	Snort	0.12	272		Pg	08 55 34.7	-0.2
SRTC					Sg	08 55 37.4	+0.2
CLC	China Lake	0.13	360		Pg	08 55 34.3	-0.6
CLC				Sg	Sg	08 55 36.4	-1.0
CLC				IAML		08 55 36.7	
	comp=N,45µm,0.3s						
CLC				IAML		08 55 36.8	
	comp=E,44µm,0.4s						
TOW	Tower One	0.18	312		Pg	08 55 35.6	-0.1
TOW					Sg	08 55 38.9	+0.2
LRMC	Laurel Mtn Rad	0.22	199		Pg	08 55 35.9	-0.4
LRMC				IAML		08 55 40.3	
	comp=N,18µm,0.2s						
LRMC				IAML		08 55 40.5	
	comp=E,17µm,0.2s						
CCCA	Chr Cany lake	0.25	130		Pg	08 55 37.1	+0.3
RCWM	Renegade Canyo	0.27	351		Pg	08 55 36.8	-0.4
RCWM					Sg	08 55 40.6	-0.4
WVPM	Volcano Peak E	0.32	326		Pg	08 55 37.5	-0.6
WVPM					Sg	08 55 41.6	-0.9
WCSM	Coso Springs S	0.37	338		Pg	08 55 38.5	-0.5
WCSM					Sg	08 55 43.5	-0.5
WRVM	Rose V. Centra	0.40	323		Pg	08 55 38.9	-0.6
WRVM					Sg	08 55 44.5	-0.5
DTP	Desert Tortois	0.47	206		Pg	08 55 40.4	-0.3
DTP					Sg	08 55 46.8	-0.1
WBSM	Bird Springs	0.47	251		Pg	08 55 40.4	-0.4
WBSM					Sg	08 55 46.7	-0.4
MFS	McCloud Flat S	0.48	334		Pg	08 55 40.5	-0.5
MFS					Sg	08 55 47.3	-0.1
WORM	Onyx Ranch	0.53	271		Pg	08 55 41.2	-0.6
WORM					Sg	08 55 48.0	-0.8
WHFM	Hanning Flat	0.61	271		Pg	08 55 42.9	-0.5
WHFM					Sg	08 55 50.6	-0.9
CCAC	Calif City Air	0.63	213		Pg	08 55 43.6	-0.3
CCAC					Sg	08 55 52.2	0.0
QSM	Queen of Sheba	0.65	65		Pb	08 55 44.0	-0.8
QSM					Sb	08 55 52.7	-1.1
QSM				IAML		08 55 53.1	
	comp=N,10µm,0.5s						
ISA	Isabella, Lake	0.71	268		Sg	08 55 53.9	-0.9
ISA	Isabella, Lake	0.71	268		Pg	08 55 44.8	-0.5
ISA				IAML		08 55 54.9	
	comp=E,7µm,0.3s						
ISA				IAML		08 55 58.1	
	comp=N,8µm,0.3s						
GSC	Goldstone, Bar	0.75	121		Sb	08 55 56.5	-0.2
GSC	Goldstone, Bar	0.75	121		Pb	08 55 45.8	-0.6
HYS	Haystack Butte	0.82	178		Pb	08 55 47.0	-0.7
HYS					Sg	08 55 58.0	-0.2
CWC	Cottonwood Cre	0.85	333		Sg	08 55 58.5	-0.6
CWC	Cottonwood Cre	0.85	333		Pg	08 55 47.4	-0.5
CWC				IAML		08 56 02.2	
	comp=N,3µm,0.3s						
EDW2	Edwards Air Fo	0.87	202		Pg	08 55 47.6	-0.6
EDW2					Sb	08 56 00.4	+0.5
CGO	Cerro Gordo	0.88	349		Pg	08 55 47.6	-0.9
CGO					Sb	08 56 00.6	0.0
RRX	Edison Barstow	0.95	149		Pb	08 55 49.4	-0.3
RRX					Sn	08 56 03.1	-0.7
TPO	Tropico Hills	0.96	213		Sb	08 56 02.5	-0.1
TPO	Tropico Hills	0.96	213		Pg	08 55 49.5	-0.5
TPO				IAML		08 56 08.4	
	comp=N,4µm,0.5s						
FURC	Furnace Creek,	0.98	37		Pb	08 55 50.2	-0.1
FURC				IAML		08 56 16.3	
	comp=N,4µm,0.9s						
TEJ	El Tejon	1.00	243		Pg	08 55 49.5	-1.3
TEJ					Sg	08 56 02.2	-1.7
ALV	Alvord Mountai	1.01	128		Sb	08 56 04.1	+0.1
SBB	Saddle Back Bu	1.01	191		Pg	08 55 50.4	-0.6
FOXC	Fox Airport	1.07	209		Pg	08 55 51.7	-0.5
FOXC					Sn	08 56 07.4	+0.3
SPG2	Springville 2	1.08	299		Pg	08 55 51.1	-1.2
SHOC	Shoshone, Teco	1.09	78		Pb	08 55 51.8	-0.5
MAGC	SCE Magundon P	1.13	254		Pg	08 55 52.4	-0.8
ADO	Adelanto Recei	1.14	173		Pn	08 55 53.7	+0.5
TJR	Tejon Ranch	1.15	235		Pg	08 55 52.1	-1.5
ARVC	Arvin	1.15	241		Pg	08 55 52.5	-1.1
THC	Tehachapi Micr	1.17	229		Pg	08 55 52.7	-1.3
LEOC	Leona Valley	1.20	209		Pg	08 55 53.6	-1.0
LRRC	Littlerock Res	1.21	197		Pb	08 55 53.7	-0.5
VES	Vestal, Richgr	1.22	278		Pn	08 55 53.8	-0.4
VES				IAML		08 56 13.8	
	comp=N,4µm,0.6s						
HOLC	Holcomb Ridge	1.24	189		Pb	08 55 54.1	-0.7
JNH	Juniper Hills	1.27	193		Pn	08 55 54.6	-0.4
BAKC	Calstate	1.28	255		Pn	08 55 55.0	0.0
BTPC	Burnt Peak	1.28	219		Pn	08 55 55.3	+0.1
TMC	Table Mountain	1.31	183		Pn	08 55 55.4	-0.4
AMDNV	Amargosa	1.31	54		Pn	08 55 54.8	-0.7
GRAC	Grapevine Rang	1.32	8		Pb	08 55 55.8	-0.3
GRAC				IAML		08 56 16.9	
	comp=N,2µm,0.5s						
GRAC				IAML		08 56 21.7	
	comp=E,2µm,0.6s						
DSCC	Desert Studies	1.33	114		Pn	08 55 54.9	-0.9
HEC	Hector,Ludlow	1.34	129		Pn	08 55 55.4	-0.6
WCT	Wildcat Mounta	1.35	35		Pn	08 55 55.7	-0.4
SGV	South Grapevin	1.37	19		Pn	08 55 56.2	-0.2
TUQ	Turquoise Moun	1.39	100		Pn	08 55 56.2	-0.4
CHFC	Chilao Flat St	1.40	195		Pn	08 55 56.4	-0.4
OSI	Osito Audit: C	1.41	221		Pn	08 55 57.0	+0.1
OSI				IAML		08 56 19.9	
	comp=N,1µm,1.0s						
OSI				IAML		08 56 22.6	
	comp=E,2µm,0.8s						
TIN	Tinemaha, Big	1.46	340		Pn	08 55 57.8	+0.2
TIN				IAML		08 56 22.9	
	comp=N,2µm,0.8s						
TIN				IAML		08 56 29.9	
	comp=E,2µm,1.2s						
SIL	Silver Peak	1.48	154		Pn	08 55 57.6	-0.4
MWC	Mount Wilson	1.51	195		Pn	08 55 58.6	+0.2
MWC				IAML		08 56 21.7	
	comp=N,3µm,0.5s						
MWC				IAML		08 56 23.3	
	comp=E,2µm,0.7s						
BBRC	Big Bear Solar	1.53	158		Pn	08 55 58.3	-0.3
MPI	Mount Pinos, F	1.54	236		Pn	08 55 59.5	+0.6
DECC	Green Verdugo	1.55	203		Pn	08 55 59.3	+0.4
LOK	Lockwood Valle	1.56	232		Pn	08 55 59.2	+0.2
PASC	Pasadena Art C	1.59	198		Pn	08 55 59.0	-0.3
PSRC	Puddingstone R	1.60	186		Pn	08 55 59.8	+0.4
SVD	Seven Oaks Dam	1.63	165		Pn	08 55 59.9	0.0
GMN	Gold Mountain	1.63	9		Pn	08 56 00.0	-0.1
BCW	Bitter Crk WRg	1.66	244		Pn	08 55 59.9	-0.5
TPNV	Topopah Spring	1.66	40		Pn	08 56 00.3	-0.2
TPNV				IAML		08 56 28.6	
	comp=E,1µm,0.8s						
TPNV				IAML		08 56 29.3	
	comp=E,2µm,0.5s						
MTPC	Mountain Pass	1.68	96		Pn	08 56 00.1	-0.6
MTPC				IAML		08 56 25.2	
	comp=N,2µm,0.3s						
MLSC	Mira Loma	1.68	179		Pg	08 56 03.5	-0.2
BLCC	Black Canyon	1.69	212		Pn	08 56 01.0	+0.3
RVR	Riverside	1.70	174		Pn	08 56 00.8	-0.1
DSP	Deep Springs	1.71	350		Pn	08 56 01.1	+0.2
GTM	Goat Mountain	1.72	143		Pn	08 56 00.6	-0.7
DJJ	Donna J Jenkin	1.73	204		Pn	08 56 01.2	0.0
CRGC	Crocker Grade	1.79	256		Pb	08 56 04.5	+0.3
BBSC	Beaumont Base	1.83	164		Pn	08 56 03.2	+0.5
CARC	Carrizo Plain	1.87	259		Pn	08 56 03.4	+0.1
BLAC	Blackrock camp	1.90	148		Pn	08 56 03.4	-0.2
YEG	Yeguas Mountai	1.94	263		Pn	08 56 05.5	+1.3
VG2	Vista Grande	1.96	160		Pn	08 56 04.9	+0.5
PKM	Mcpherson Peak	1.98	247		Pb	08 56 07.5	0.0
SMMC	Simmler	1.99	260		Pn	08 56 05.4	+0.5
ELS	Elsinore Mount	2.04	176		Pn	08 56 05.5	-0.1
DANC	Danby, Needles	2.10	119		Pn	08 56 05.5	-0.8
BELC	Belle Mtn. Jos	2.13	142		Pn	08 56 06.5	-0.4
BELC				IAML		08 56 42.4	
	comp=N,800nm,0.6s						
BELC				IAML		08 56 50.5	
	comp=E,810nm,0.6s						
SHPR	Sheep Range	2.14	67		Pn	08 56 07.3	+0.3
V12A	Nelson	2.23	88		Pn	08 56 08.0	-0.3
V12A				IAML		08 56 46.6	
	comp=E,722nm,0.3s						
V12A				IAML		08 56 48.1	
	comp=N,717nm,0.5s						
DNR	Dunn Ranch,Anz	2.26	159		Pn	08 56 08.9	+0.2
PMD	Palm Desert	2.27	153		Pn	08 56 08.5	-0.2
PMD				IAML		08 56 49.1	
	comp=E,553nm,0.4s						
PFO	Pinyon Flats O	2.27	155	Pn	Pn	08 56 08.6	-0.2
	comp=E,13nm,0.3s,baz=331,slow=12,SNR=122						
PFO				Lg	Lg	08 56 42.9	
	comp=E,140nm,0.3s,baz=74,slow=16,SNR=16						
	comp=E,26nm,0.3s						
PFO	Pinyon Flats O	2.27	155		Pn	08 56 08.7	-0.2
PFO				IAML		08 56 45.1	
	comp=E,428nm,0.5s						
PFO				IAML		08 56 49.8	
	comp=E,469nm,0.8s						
PKD	Bear Valley Ra	2.41	277		Pn	08 56 10.0	-0.6
PKD				IAML		08 56 54.4	
	comp=N,370nm,0.6s						
PKD				IAML		08 57 10.5	
	comp=E,424nm,1.2s						
S11A	Rachel	2.46	37		Pn	08 56 11.7	+0.3
S11A				IAML		08 57 05.4	
	comp=E,902nm,0.8s						
IRM	Iron Mountain	2.53	126		Pn	08 56 11.2	-1.0
IRM				IAML		08 56 52.7	
	comp=N,575nm,0.4s						
IRM				IAML		08 56 52.9	
	comp=E,867nm,0.4s						
BORC	Borrego Spring	2.60	158		Pn	08 56 13.2	-0.1
BORC				IAML		08 56 59.2	
	comp=E,436nm,1.1s						
BORC				IAML		08 57 01.4	
	comp=N,504nm,0.7s						
PMPB	Monarch Peak	2.65	282		Pn	08 56 14.3	+0.3
BC3	Big Chuckawall	2.69	138		Pn	08 56 13.6	-0.9
BC3				IAML		08 57 02.3	
	comp=E,478nm,0.6s						
BC3				IAML		08 57 03.2	
	comp=N,565nm,0.6s						
DPP	Dos Picos Cty	2.74	168		Pn	08 56 15.1	0.0
DPP				IAML		08 56 59.6	
	comp=E,374nm,1.0s						
NV11	Mina Array Sit	2.78	351		Pn	08 56 16.4	+0.6
NVAR	Mina Array Bea	2.79	349	Pn	Pn	08 56 16.4	+0.2
	comp=E,6.4nm,0.3s,baz=168,slow=18,SNR=50						
NVAR				Lg	Lg	08 56 59.2	
	comp=E,17nm,0.3s,baz=36,slow=27,SNR=4.6						
	comp=E,4.6nm,0.3s						
NVAR	Mina Array Bea	2.79	349		Pn	08 56 17.1	+1.0
CPE	Camp Elliot	2.82	172		Pn	08 56 16.2	0.0
CPE				IAML		08 57 00.9	
	comp=N,328nm,0.3s						
CPE				IAML		08 57 03.1	
	comp=E,465nm,0.7s						
BBGB	Big Mountain B	2.92	289		Pn	08 56 19.0	+1.2
HULI	Fort Hunter Li	2.97	277		Pn	08 56 18.3	0.0
HULI				IAML		08 57 07.7	
	comp=E,415nm,0.8s						
HULI				IAML		08 57 11.2	
	comp=N,330nm,0.8s						
RYN	Ryan	3.03	346		Pn	08 56 19.5	+0.3
W13A	Hualapai Mount	3.09	100		Pn	08 56 19.5	-0.6
W13A				IAML		08 57 11.5	
	comp=N,254nm,1.0s						
W13A				IAML		08 57 11.5	
	comp=E,295nm,0.6s						
BAR	Barrett	3.10	165		Pn	08 56 19.7	-0.3
BAR				IAML		08 57 08.4	
	comp=N,296nm,0.5s						
BAR				IAML		08 57 08.6	
	comp=E,484nm,0.6s						
Q09A	Carvers	3.16	6		Pn	08 56 21.1	+0.1
Q09A				IAML		08 57 23.3	
	comp=N,296nm,1.4s						
Q09A				IAML		08 57 26.2	
	comp=E,455nm,0.8s						
BLYC	Blythe	3.18	126		Pn	08 56 19.9	-1.3
BLYC				IAML		08 57 16.4	
	comp=N,329nm,0.7s						
BLYC				IAML		08 57 22.8	
	comp=E,364nm,0.6s						
TJX	Tijuana	3.20	172		Pn	08 56 20.7	-0.7
SAO	San Andreas Ge	3.29	290		Pn	08 56 22.3	-0.4
YUH	Yuha Desert	3.33	155		Pn	08 56 22.8	-0.5
CBX	Cerro Bola	3.45	167		Pn	08 56 25.3	+0.2
MHC	Mount Hamilton	3.65	298		Pn	08 56 27.8	0.0
MHC				IAML		08 57 33.9	
	comp=N,294nm,1.1s						
MHC				IAML		08 57 35.6	
	comp=E,242nm,0.7s						
PNTR	Pine Nut	3.75	335		Pn	08 56 28.8	-0.5
PNTR				IAML		08 57 54.9	
	comp=N,212nm,0.7s						
PNTR				IAML		08 57 56.1	
	comp=E,229nm,0.9s						
LCMT	Little Creek M	3.75	68		Pn	08 56 30.3	+1.1
CCUT	Cedar City	3.88	60		Pn	08 56 31.9	+0.9
CCX	Cicese	3.89	168		Pn	08 56 31.8	+0.9
CCX				IAML		08 57 36.6	
	comp=E,175nm,1.0s						
CCX				IAML		08 57 37.1	
	comp=N,142nm,0.7s						
ESJX	Sierra Juarez	3.92	159		Pn	08 56 31.6	+0.1
ESJX				IAML		08 57 37.5	
	comp=E,126nm,0.6s						
KNB	Kanab	4.08	70		Pn	08 56 34.8	+1.1
KNB				IAML		08 57 50.0	
	comp=E,98nm,1.3s						
KNB				IAML		08 58 02.7	
	comp=N,107nm,1.3s						
JRSC	Jasper Ridge	4.11	296		Pn	08 56 34.8	+0.8
JRSC				IAML		08 57 48.5	
	comp=N,91nm,3.1s						
PSUT	Pine Spring	4.12	45		Pn	08 56 34.5	+0.2
PSUT				IAML		08 57 45.7	
	comp=E,122nm,0.9s						
PSUT				IAML		08 57 47.7	
	comp=N,103nm,1.0s						
Y14A	Wickenburg	4.16	113		Pn	08 56 34.1	-0.6
SPR3	Spring Creek 3	4.21	37		Pn	08 56 34.5	-1.1
113A	Mohawk Valley,	4.31	131		Pn	08 56 35.4	-1.2
PKCU	Pink Cliffs	4.60	66		Pn	08 56 42.4	+1.4
PKCU				IAML		08 58 13.9	
	comp=N,131nm,2.2s						
MTPU	Mount Pierson	4.94	60		Pn	08 56 47.1	+1.4
ORV	Oroville	4.95	322		Pn	08 56 47.3	+1.8
ORV				IAML		08 58 13.5	
	comp=N,52nm,0.8s						
ORV				IAML		08 58 14.1	
	comp=E,90nm,1.1s						
WUAZ	Wupatki	5.07	90		Pn	08 56 48.5	+1.2
WUAZ				IAML		08 58 17.6	
	comp=E,111nm,0.6s						
WUAZ				IAML		08 58 24.8	
	comp=E,104nm,1.6s						
X16A	Lo Mia Camp, P	5.21	102		Pn	08 56 49.5	+0.3
X16A				IAML		08 58 19.6	
	comp=E,60nm,1.3s						
X16A				IAML		08 58 28.4	
	comp=N,82nm,1.2s						
ELK	Elko	5.38	19	Pn	Pn	08 56 52.5	+0.9
	comp=N,1.0nm,0.3s,baz=202,slow=11,SNR=23						
ELK				Lg	Lg	08 58 21.4	
	comp=N,6.1nm,0.3s,baz=113,slow=17,SNR=11						
	comp=N,2.1nm,0.3s						
ELK	Elko	5.38	19		Pn	08 56 52.4	+0.7
YBH	Yreka Blue Hor	7.24	328	Pn	Pn	08 57 19.0	+2.0
	baz=143,slow=5.1,SNR=2.0						
YBH				Lg	Lg	08 59 17.2	
	baz=40,slow=3.3,SNR=4.1						
ANMO	Albuquerque	9.13	91	Pn	Pn	08 57 43.1	-0.1
	comp=N,0.2nm,0.3s,baz=276,slow=14,SNR=2.2						
ANMO				Pg		08 58 17.6	
	comp=N,0.3nm,0.3s,baz=271,slow=13,SNR=7.8						
ANMO				Lg	Lg	09 00 18.6	
	comp=N,0.1nm,0.3s,baz=128,slow=12,SNR=6.5						
PDAR	Pinedale Array	9.42	39	Pn	Pn	08 57 49.5	+2.3
	baz=218,slow=13,SNR=4.1						
	comp=N,0.4nm,0.8s						
TXAR	Lajitas Array	13.35	114	Pn	Pn	08 58 42.9	+2.2
	comp=N,0.2nm,0.3s,baz=292,slow=13,SNR=15						
	comp=N,0.4nm,0.5s						

STR 05 08:58:40.7±0.5**, 46°N**±3°×°±°**, h0**^{km}**, MLv1.2**/7**, LOCSAT earthModelID alpes_taup-2.11 preliminary, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OGSM	Saint Maurice	0.26	130	Pg	Pg	08 58 46.0	+0.3
OGSM				Sg	Sg	08 58 49.9	+0.7
OG35	Corcelles	0.29	23	Pg	Pg	08 58 47.1	+0.8
OG35				Sg	Sg	08 58 51.7	+1.7
OGMY	Moye	0.35	73	Pg	Pg	08 58 47.4	0.0
OGMY				Sg	Sg	08 58 53.4	+1.4
SSB	Saint Sauveur	0.79	231	Pg	Pg	08 58 55.9	+0.1
SSB				Sn	Sb	08 59 08.9	+0.3
RSL	Roselend	0.86	96	Pg	Pg	08 58 57.3	+0.2
COLF	Collangettes	1.23	258	Pn	Pg	08 59 03.8	-0.5
COLF				Sg	Sg	08 59 20.3	0.0

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*IDC **05** 09:09:10.6±2.3, 5°.05N×95°.35E, h0^{km}, mb3.7/3, mbtmp3.7/4, ML3.0/1, Error ellipse: s-maj=104.8km s-min=21.3km az=46.0*

*DJA **05** 09:09:15.1±1.3, 5°N±6°×9°6E±1°0, h10^{km}, M4.1/6, MLv4.1/6*

ISC 05 09:09:14.3±1.4**, 5°.31N**±0°.08×**95°.8E**±0°.1**, h10**^{km}**, n14, σ2^s.30**/13**, mb4.0**/3**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	1.18	94	P	Pn	09 09 38.0	+1.1
MLSI	Meulaboh, Aceh	1.21	148	P	Pn	09 09 37.7	+0.3
MLSI				S	Sn	09 09 56.2	+2.3
TPTI		2.48	145	P	Pn	09 09 56.4	+1.7
KCSI	Kotacane, Aceh	2.67	132	P	Pn	09 09 59.4	+1.9
SNSI	Sinabang, Aceh	2.93	169	P	Pn	09 10 02.9	+1.9
PSI	Prapat	4.02	128	Pn	Pn	09 10 18.1	+2.1
	0.9nm,0.3s,baz=295,slow=19,SNR=4.8						
PSI				Sn	Sb	09 11 10.0	-4.0
	1.2nm,0.3s,baz=291,slow=19,SNR=4.1						
PSI				Lg	Lg	09 11 25.6	
	2.0nm,0.3s,baz=124,slow=8.2,SNR=5.3						
	2.9nm,0.4s						
PSI	Prapat	4.02	128	P	Pn	09 10 18.5	+2.5
KULM	Kulim	4.86	90	P	Pn	09 10 30.2	+2.6
H08S2	Diego Garcia H	26.55	241	T	T	09 41 56.6	
	baz=61,slow=76,SNR=6.5						
H08S3	Diego Garcia H	26.55	241	T	T	09 41 51.5	
	baz=61,slow=76,SNR=4.2						
H08S1	Diego Carcia H	26.56	241	T	T	09 41 56.2	
	baz=61,slow=76,SNR=4.3						
MKAR	Makanchi Array	42.94	346	P	P	09 17 12.5	-0.9
	0.2nm,0.6s,baz=169,slow=8.5,SNR=1.3						
	0.2nm,0.6s						
WRA	Warramunga Arr	45.47	125	P	P	09 17 32.8	-1.3
	1.4nm,0.8s,baz=305,slow=9.1,SNR=12						
	1.4nm,0.8s						
ASAR	Alice Springs	47.05	129	P	P	09 17 45.8	-0.7
	2.1nm,0.7s,baz=300,slow=7.5,SNR=30						
	2.1nm,0.7s						

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*NEIC **05** 09:13:45.6±2.1, 5°.45N±0°.08×95°.58E±0°.05, h10^{km}±1^{km}, mb4.6/23, Error ellipse: s-maj=12.9km s-min=9.3km az=178.0*

*BKK **05** 09:13:47.3±1.3, 5°N±9°×9°6E±1°0, h7^{km}±11^{km}, M4.7/8, mb4.7/4, mB7.0/1, Mjma4.4/8, ML4.9/8, MLv4.7/7, Mw(mB)6.9/1*

*IDC **05** 09:13:50.1±1.9, 5°.37N×95°.64E, h54^{km}±17^{km}, mb3.9/16, mbtmp4.1/19, ML4.1/3, MS3.7/31, Error ellipse: s-maj=29.0km s-min=9.0km az=48.0*

*DJA **05** 09:13:51.6±1.2, 5°N±4°×9°6E±°, h12^{km}±6^{km}, M4.9/29, mb4.8/29, mB5.5/8, MLv5.0/14, Mw(mB)5.0/8, MwMwp6.5/1, Mwp6.4/1*

ISC 05 09:13:44.8±0.4**, 5°.39N**±0°.05×**95°.52E**±0°.05**, h10**^{km}**, n115, σ1^s.54**/89**, mb4.7**/39**, MS3.8**/28**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSI	Meulaboh, Aceh	1.43	142	P	Pn	09 14 10.2	-0.5
LHMI	Lhok Sumawe	1.43	96		Pn	09 14 09.8	-1.0
LHMI				Sn	Sb	09 14 30.1	+0.2
LHMI	Lhok Sumawe	1.43	96	P	Pn	09 14 09.4	-1.4
TPTI		2.69	142	P	Pn	09 14 28.2	+0.1
KCSI	Kotacane, Aceh	2.92	129	P	Pn	09 14 31.9	+0.6
SNSI	Sinabang, Aceh	3.07	165	P	Pn	09 14 33.2	-0.2
TSI	Tuntungan	3.57	122	P	Pn	09 14 40.0	-0.3
PKDT	Phuket	3.74	48	P	Pn	09 14 42.4	-0.2
PSI	Prapat	4.26	127	P	Pn	09 14 51.0	+1.0
	11nm,0.3s,baz=312,slow=12,SNR=19						
PSI				S	Sn	09 15 40.8	+1.0
	171nm,0.6s,baz=308,slow=6.9,SNR=5.6						
	76nm,0.8s						
PSI	Prapat	4.26	127	P	Pn	09 14 50.6	+0.7
RPSI	Rantau Prapat	4.33	128		Pn	09 14 51.0	+0.3
RPSI					Sn	09 15 40.8	-0.4
GSI	Gunungsitoli	4.55	153		Pn	09 14 54.8	+1.0
GSI				Sn	Sn	09 15 43.2	-3.5
GSI	Gunungsitoli	4.55	153	P	Pn	09 14 53.9	+0.1
RNTT	Ranong	4.94	36	P	Pn	09 14 59.3	+0.2
KULM	Kulim	5.11	91		Pn	09 14 60.0	-1.5
KULM	Kulim	5.11	91	P	Pn	09 14 59.8	-1.7
IPM	Ipoh	5.56	99		Pn	09 15 05.8	-2.0
IPM				Sn	Sn	09 16 07.1	-4.6
IPM	Ipoh	5.56	99	P	Pn	09 15 05.7	-2.0
	1.2nm61nm,0.6s						
PBSI	Pulau Batu	6.07	153	P	Pn	09 15 16.1	+1.4
	0.5nm84nm,0.8s						
MNSI	Mandailing Nat	6.11	138	P	Pn	09 15 15.8	+0.6
	1.1nm45nm,0.5s						
PPI	Padang Panjang	7.58	140	P	Pn	09 15 35.7	+0.3
	0.3nm38nm,0.8s						
PDSI	Padang	7.97	142	P	Pn	09 15 41.2	+0.3
	0.5nm23nm,0.4s						
MDSI	Maura Dua	13.08	138	P	Pn	09 16 48.9	-1.9
	24nm,0.8s						
CMAR	Chiang Mai Arr	13.41	14	P	Pn	09 16 58.4	+3.1
	0.5nm,0.3s,baz=209,slow=11,SNR=23						
CMAR				LR	LR	09 22 32.5	
	comp=Z,245nm,19.1s,baz=210,slow=39						
	0.8nm,0.3s						
CMAR	Chiang Mai Arr	13.41	14		Pn	09 16 56.0	+0.7
CHTO	Chiang Mai	13.75	14	Pn	Pn	09 17 00.7	+0.7
CHTO	Chiang Mai	13.75	14	P	P	09 17 09.4	+0.8
PALK	Pallekele	14.84	278	P	P	09 17 18.5	-2.3
	0.5nm,0.3s,baz=94,slow=15,SNR=1.3						
PALK				S	Sn	09 19 56.7	-3.0
	2.7nm,0.4s,baz=22,slow=19,SNR=2.1						
PALK				LR	LR	09 22 55.9	
	comp=Z,198nm,18.7s,baz=88,slow=36						
	2.1nm,0.4s						
SBUM	Sibu	16.92	99	P	Pn	09 17 42.0	+0.2
BRDH	Bariadhala	17.59	348	LR	LR	09 26 24.1	
	comp=Z,350nm,18.2s,baz=150,slow=43						
KKM	Kota Kinabalu	20.61	87		P	09 18 25.7	+1.2
KKM				IAmb	IAmb	09 18 31.5	
	comp=Z,48nm,1.0s						
KKM	Kota Kinabalu	20.61	87	P	Pn	09 18 26.8	+0.1
	comp=Z,61nm,1.0s						
SNJI	Sawahan-Nganju	20.83	129	P	P	09 18 28.1	+1.2
BBKI	Banjar Baru	21.21	114	P	P	09 18 32.4	+1.5
	comp=Z,66nm,1.0s						
MYLDM	Lahad Datu	22.89	89		P	09 18 47.7	-1.2
MYLDM				IAmb	IAmb	09 18 54.2	
	comp=Z,30nm,1.0s						
KHKI	Kahang-Kahang	24.25	124	P	P	09 19 03.6	+1.3

	comp=Z,50nm,0.8s						
KLNI	Mataram	24.69	124	P	P	09 19 08.0	+1.8
	comp=Z,21nm,1.1s						
MMSI	Mamuju	24.71	108	P	P	09 19 08.4	+1.9
MPSI	Mapaga	24.86	101	P	P	09 19 09.7	+1.9
TWSI	Taliwang, Sumb	25.51	123	P	P	09 19 16.4	+2.7
	comp=Z,23nm,0.9s						
TOLI2	Tolitoli	25.57	99		P	09 19 14.3	0.0
TOLI2				IAmb	IAmb	09 19 19.4	
	comp=Z,18nm,1.1s						
TTSI	Tana Toraja	25.68	108	P	P	09 19 17.6	+2.4
	comp=Z,30nm,0.9s						
SPSI	Sidrap Palu	25.95	111	P	P	09 19 20.6	+2.9
	comp=Z,14nm,0.8s						
PLAI	Plampang	26.31	122	P	P	09 19 22.4	+1.5
	comp=Z,14nm,0.7s						
KAPI	Kappang	26.32	113	LR	LR	09 30 36.7	
	comp=Z,182nm,18.2s,baz=248,slow=38						
H08S2	Diego Garcia H	26.37	241	T	T	09 46 24.8	
	baz=61,slow=75,SNR=165						
H08S3	Diego Garcia H	26.37	241	T	T	09 46 25.0	
	baz=61,slow=75,SNR=209						
H08S1	Diego Carcia H	26.39	241	T	T	09 46 27.7	
	baz=61,slow=75,SNR=50						
BKSI	Bulukumba	26.78	113	P	P	09 19 26.1	+0.9
	comp=Z,33nm,0.8s						
APSI	Ampana	26.84	103	P	P	09 19 28.8	+3.1
	comp=Z,819nmcomp=Z,23nm,1.1s						
GTOI	Gorontalo	27.85	99	P	P	09 19 36.1	+1.3
	comp=Z,19nm,1.3s						
EDFI	Ende, Flores	29.64	118	P	P	09 19 51.5	+0.7
DAV	Davao City (W)	29.93	85	LR	LR	09 34 07.6	
	comp=Z,188nm,18.9s,baz=258,slow=41						
XAN	Xi'an	31.10	22	P	P	09 20 04.2	+0.7
XAN				pP	sP	09 20 09.4	+1.5
XAN				pmax	pmax		
	comp=Z,17nm,1.2s						
SOEI	Soe	32.36	118	P	P	09 20 15.4	+0.5
	comp=Z,19nm,0.9s						
FITZ	Fitzroy Crossi	37.79	129	P	P	09 20 59.9	-1.7
	comp=Z,14nm,0.7s,baz=324,slow=5.5,SNR=33						
FITZ				LR	LR	09 38 03.6	
	comp=Z,141nm,19.1s,baz=322,slow=39						
	comp=Z,14nm,0.7s						
FITZ	Fitzroy Crossi	37.79	129		P	09 21 01.1	-0.5
MANEM	Manem	38.69	329		P	09 21 09.8	+0.6
MANEM				IAmb	IAmb	09 21 30.4	
	comp=Z,22nm,1.0s						
BJT	Baijiatuau	39.17	25	P	P	09 21 12.2	-0.7
BJT				IAmb	IAmb	09 21 21.3	
	comp=Z,18nm,1.0s						
MTN	Manton Dam	39.76	117		P	09 21 18.4	+0.4
MTN				IAmb	IAmb	09 21 20.0	
	comp=Z,6.5nm,0.5s						
AAK	Ala-Archa	41.51	336	LR	LR	09 39 57.6	
	comp=Z,171nm,21.9s,baz=154,slow=38						
MKAR	Makanchi Array	42.80	347	P	P	09 21 42.4	-0.4
	comp=Z,0.6nm,0.8s,baz=181,slow=8.5,SNR=3.3						
MKAR				LR	LR	09 42 59.3	
	comp=Z,61nm,18.3s,baz=142,slow=41						
	comp=Z,0.6nm,0.8s						
JNU	Nakatsue	42.93	45	LR	LR	09 40 28.0	
	comp=Z,74nm,19.6s,baz=246,slow=37						
SONM	Songino Array	43.30	11	P	P	09 21 47.1	+0.2
	comp=Z,0.3nm,0.5s,baz=188,slow=9.9,SNR=2.7						
SONM				LR	LR	09 43 22.9	
	comp=Z,84nm,18.3s,baz=207,slow=41						
	comp=Z,0.3nm,0.5s						
NWAO	Narrogin (SRO)	43.33	153	LR	LR	09 36 59.9	
	comp=Z,85nm,20.5s,baz=320,slow=32						
KKAR	Karatay Array	43.58	333	P	P	09 21 49.1	0.0
WB0	Warramunga Arr	45.68	124		P	09 22 05.0	-1.2
WRA	Warramunga Arr	45.73	125	P	P	09 22 05.6	-1.0
	comp=Z,14nm,0.8s,baz=302,slow=9.3,SNR=39						
WRA				PcP	PcP	09 23 43.1	-1.4
	comp=Z,1.2nm,0.6s,baz=308,slow=3.3,SNR=5.2						
	comp=Z,14nm,0.8s						
WRA	Warramunga Arr	45.73	125		P	09 22 05.9	-0.6
WRAB	Tennant Creek	45.73	125	P	P	09 22 06.5	-0.1
AS31	Alice Springs	47.29	129	IAmb	IAmb	09 22 22.4	
	comp=Z,3.7nm,0.7s						
ASAR	Alice Springs	47.29	129	P	P	09 22 17.9	-0.9
	comp=Z,12nm,0.7s,baz=301,slow=7.7,SNR=49						
ASAR				PcP	PcP	09 23 49.4	-0.6
	comp=Z,0.8nm,0.7s,baz=313,slow=3.0,SNR=5.0						
ASAR				S	S	09 29 06.9	-5.7
	comp=Z,0.6nm,0.9s,baz=292,slow=13,SNR=7.4						
ASAR				LR	LR	09 43 05.5	
	comp=Z,81nm,19.8s,baz=299,slow=37						
	comp=Z,12nm,0.7s						
ASAR	Alice Springs	47.29	129		P	09 22 18.1	-0.7
FORT	Forrest	47.56	141	P	P	09 22 22.1	+1.4
FORT				IAmb	IAmb	09 22 50.1	
	comp=Z,8.6nm,0.8s						
ZALV	Zalesovo Beam	49.19	352	P	P	09 22 32.4	-0.5
	comp=Z,0.3nm,0.5s,baz=147,slow=8.5,SNR=4.2						
ZALV				LR	LR	09 46 45.2	
	comp=Z,54nm,18.6s,baz=209,slow=40						
	comp=Z,0.3nm,0.5s						
MJAR	Matsushiro Arr	49.86	46	LR	LR	09 44 40.6	
	comp=Z,92nm,19.8s,baz=242,slow=37						
BVAR	Borovoye Array	51.77	341	P	P	09 22 52.1	-0.4
	comp=Z,0.2nm,0.4s,baz=160,slow=4.6,SNR=3.7						
BVAR				LR	LR	09 48 25.8	
	comp=Z,92nm,18.1s,baz=154,slow=40						
	comp=Z,0.2nm,0.4s						
AB31	Akbulak array	53.05	332	IAmb	IAmb	09 23 22.4	
	comp=Z,8.7nm,1.1s						
ABKAR	Akbulak array	53.05	332	P	P	09 23 02.6	+0.6
PMG	Port Moresby	53.52	106	LR	LR	09 50 47.6	
	comp=Z,62nm,18.1s,baz=230,slow=42						
PMG	Port Moresby	53.52	106	P	P	09 23 09.0	+2.9
	comp=Z,11nm,1.2s						
AKTO	Aktyubinsk	54.77	332	P	P	09 23 14.0	-0.6
	comp=Z,0.7nm,0.4s,baz=111,slow=5.6,SNR=3.7						
	comp=Z,0.7nm,0.4s						
ASAJ	Asahikawa	56.42	39	LR	LR	09 48 35.9	
	comp=Z,56nm,18.9s,baz=228,slow=37						
STKA	Stephens Creek	57.42	133	P	P	09 23 33.3	-0.6
	comp=Z,5.0nm,0.7s,baz=323,slow=8.7,SNR=10						
STKA				LR	LR	09 50 40.2	
	comp=Z,84nm,20.6s,baz=288,slow=39						
	comp=Z,5.0nm,0.7s						
STKA	Stephens Creek	57.42	133		P	09 23 34.4	+0.5
ARTI	Arti	58.73	337	LR	LR	09 50 46.7	
	comp=Z,139nm,18.9s,baz=131,slow=38						
BELG	Belogornoye	61.13	329	P	P	09 23 59.7	+0.5
	comp=Z,5.4nm,0.8s,baz=106,slow=6.0,SNR=2.2						
	comp=Z,5.4nm,0.8s						
NRIK	Noril'sk	64.07	357	LR	LR	09 56 05.4	
	comp=Z,43nm,18.1s,baz=200,slow=40						
H04N2	CROZET ISLANDS	64.34	212	T	T	10 33 56.2	
	baz=48,slow=74,SNR=2.9						
H04N1	CROZET ISLANDS	64.35	212	T	T	10 33 49.7	
	baz=48,slow=74,SNR=6.8						
H04N3	CROZET ISLANDS	64.36	212	T	T	10 33 48.2	
	baz=48,slow=74,SNR=2.7						
CAN	Canberra	64.48	133	P	P	09 24 23.3	+1.3
H04S1	CROZET ISLANDS	64.72	212	T	T	10 34 05.9	
	baz=51,slow=75,SNR=3.8						
H04S3	CROZET ISLANDS	64.73	212	T	T	10 34 05.6	
	baz=51,slow=75,SNR=4.7						
H04S2	CROZET ISLANDS	64.74	212	T	T	10 34 07.6	
	baz=51,slow=75,SNR=3.2						
MBAR	Mbarara	64.96	267	LR	LR	09 48 58.3	
	comp=Z,25nm,20.4s,baz=58,slow=32						
BRTR	Keskin Array B	65.08	311	P	P	09 24 27.7	+1.7
	comp=Z,1.1nm,0.7s,baz=141,slow=8.0,SNR=3.8						
	comp=Z,1.1nm,0.7s						
MA2	Magadan	68.33	27	LR	LR	09 56 44.0	
	comp=Z,64nm,21.4s,baz=190,slow=38						
PETK	Petropavlovsk-	69.23	35	LR	LR	09 58 20.4	
	comp=Z,49nm,19.9s,baz=247,slow=39						
SEY	Seymchan	70.61	24	LR	LR	09 56 23.4	
	comp=Z,76nm,19.1s,baz=68,slow=36						
AKASG	Malin Array Be	70.94	322	P	P	09 25 02.7	+0.4
	comp=Z,0.5nm,0.4s,baz=86,slow=4.4,SNR=4.6						
	comp=Z,0.5nm,0.4s						
AKASG	Malin Array Be	70.94	322	IAmb	IAmb	09 25 27.5	
	comp=Z,4.9nm,1.4s						
AKBB	Malin Array Si	70.94	322	P	P	09 25 02.6	+0.2
AKBB				IAmb	IAmb	09 25 20.4	
	comp=Z,4.1nm,1.0s						
BURAR	Bucovina Array	72.79	318	P	P	09 25 14.4	+0.7
BURAR				IAmb	IAmb	09 25 28.8	
	comp=Z,2.3nm,1.0s						
BOSA	Boshof	75.45	239	P	P	09 25 29.3	-0.4
	comp=Z,1.6nm,0.6s,baz=95,slow=7.2,SNR=4.0						
	comp=Z,1.6nm,0.6s						
FINES	FINESS Array B	75.53	332	P	P	09 25 28.1	-1.1
	comp=Z,1.0nm,0.6s,baz=104,slow=8.0,SNR=3.8						
	comp=Z,1.0nm,0.6s						
ARCES	ARCESS Array B	78.05	340	P	P	09 25 43.9	+0.6
	comp=Z,3.0nm,1.0s,baz=98,slow=3.9,SNR=1.2						
ARCES				LR	LR	10 02 45.7	
	comp=Z,112nm,20.9s,baz=123,slow=38						
	comp=Z,3.0nm,1.0s						
ARCES	ARCESS Array B	78.05	340	IAmb	IAmb	09 26 15.7	
	comp=Z,6.3nm,1.1s						
GERES	GERESS Array B	80.58	318	P	P	09 25 56.6	-1.2
	comp=Z,0.2nm,0.2s,baz=97,slow=4.3,SNR=5.5						
	comp=Z,0.2nm,0.2s						
NOA	NORSAR Array B	82.55	331	LR	LR	10 05 50.8	
	comp=Z,57nm,18.2s,baz=295,slow=38						
VNDA	Vanda	90.24	169	LR	LR	10 02 40.7	
	comp=Z,50nm,18.7s,baz=325,slow=32						
TORD	Torodi Ar. Bea	92.50	283	LR	LR	10 07 38.1	
	comp=Z,52nm,18.4s,baz=158,slow=35						
QSPA	South Pole Qui	95.31	180	LR	LR	10 07 30.4	
	comp=Z,38nm,18.6s,baz=280,slow=34						
DBIC	Dimbokro	99.63	278	LR	LR	10 10 06.3	
	comp=Z,22nm,19.0s,baz=90,slow=34						
RES	Resolute Bay	99.80	3	LR	LR	10 16 52.2	
	comp=Z,36nm,19.2s,baz=9.5,slow=38						

IDC 05 09:54:02.1±2.3**,6°.45S**×**129°.27E,h0^{km},mb3.7**/1**,**
mbtmp3.6/3**,ML3.8**/2**,Error ellipse: s-maj=114.2km**
s-min=32.8km az=68.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.29	160	Pn	Pn	09 57 25.0	-0.9
	0.6nm,0.3s,baz=339,slow=13,SNR=32						
WRA				Sn	Sn	09 59 52.8	-12
	0.9nm,0.3s,baz=336,slow=23,SNR=11						
	0.7nm,0.3s						
ASAR	Alice Springs	17.69	166	P	P	09 58 10.8	-0.3
	0.2nm,0.3s,baz=344,slow=14,SNR=22						
ASAR				S	Sn	10 01 16.6	-11
	0.6nm,0.6s,baz=353,slow=26,SNR=6.3						
	0.4nm,0.4s						
MKAR	Makanchi Array	67.37	327	P	P	10 04 59.2	0.0
	0.3nm,0.4s,baz=115,slow=7.2,SNR=2.8						
	0.3nm,0.4s						

IDC ***05*** *10:01:25.4±1.5,8°.81S×129°.72E,h0^{km},mb3.8/4,*
mbtmp3.9/7,ML3.8/3,Error ellipse: s-maj=65.2km
s-min=24.8km az=78.0

ISC 05 10:01:31.2±1.2**,8°.99S**±0°.09×**129°.9E**±0°.1**,h35^{km},n8,**
σ2^{s}58/11**,mb3.8**/5**,Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.96	204	Pn	Pn	10 03 52.7	+0.8
	0.9nm,0.3s,baz=40,slow=13,SNR=10						
FITZ				Sn	Sn	10 05 41.5	-1.0
	1.0nm,0.3s,baz=107,slow=8.6,SNR=3.8						
	2.5nm,0.3s						
WRA	Warramunga Arr	11.71	159	Pn	Pn	10 04 16.4	+0.6
	0.5nm,0.3s,baz=335,slow=12,SNR=16						
WRA				Sn	Sn	10 06 22.6	-2.8
	0.7nm,0.3s,baz=332,slow=21,SNR=5.3						
	3.7nm,0.7s						
ASAR	Alice Springs	15.09	166	Pn	Pn	10 05 01.9	0.0
	0.3nm,0.3s,baz=350,slow=9.4,SNR=17						
ASAR				Sn	Sn	10 07 46.0	-2.1
	0.2nm,0.3s,baz=344,slow=18,SNR=4.5						
	0.9nm,0.6s						
STKA	Stephens Creek	25.23	156	P	P	10 06 58.5	+4.5
	2.7nm,0.9s,baz=341,slow=11,SNR=2.9						
MKAR	Makanchi Array	69.83	327	P	P	10 12 37.7	-0.5
	0.6nm,0.5s,baz=115,slow=7.8,SNR=6.8						
	0.6nm,0.5s						
ZALV	Zalesovo Beam	73.31	334	P	P	10 12 55.6	-3.4
	0.4nm,0.4s,baz=120,slow=5.2,SNR=1.9						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	74.15	329	P	P	10 13 01.5	-2.4
	0.3nm,0.3s,baz=128,slow=4.9,SNR=4.2						
	0.3nm,0.3s						
BVAR	Borovoye Array	79.69	328	P	P	10 13 34.4	-0.8
	0.6nm,0.6s,baz=131,slow=4.0,SNR=3.6						
	0.6nm,0.6s						

NNC ***05*** *10:40:22.4±0.8,42°.91N×69°.87E,h0^{km},mb4.0,mpv3.7,*
Error ellipse: s-maj=10.0km s-min=4.3km az=160.0
SOME ***05*** *10:40:23.4,42°.73N×70°.03E,h15^{km}*
KRNET ***05*** *10:40:24.0±0.1,42°.77N×70°.04E,h30^{km},mb3.2*

ISC 05 10:40:21.8±1.2**,42°.79N**±0°.03×**69°.92E**±0°.03**,h2^{km}**±11^{km}**,**
n35,σ1^{s}58/60**,15C-6D,Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRLS	Borolday	0.25	346	P	Pg	10 40 25.7	-0.9
	428nm,0.1s						
BRLS				S	Sg	10 40 28.5	-1.4
	1μm,0.1s						
BRLS	Borolday	0.25	346	*e*P	Pg	10 40 25.6	-1.0
	428nm,0.1s						
BRLS				*e*S	Sg	10 40 27.9	-2.0
	1μm,0.1s						
CHM	Chimkent	0.52	206	*e*P	Pg	10 40 32.5	+0.7
	134nm,0.1s						
CHM				*e*S	Sg	10 40 39.0	+0.3
	586nm,0.3s						
KK07	Karatay Array	0.52	55	P	Pg	10 40 32.4	+0.5
KK07				S	Sg	10 40 39.1	+0.4
KK08	Karatay Array	0.53	53	P	Pg	10 40 32.4	+0.5
KK08				S	Sg	10 40 39.2	+0.4
KK03	Karatay Array	0.53	54	P	Pg	10 40 32.6	+0.5
KK03				S	Sg	10 40 39.6	+0.6
KK01	Karatay Array	0.54	54	P	Pg	10 40 32.5	+0.4
KK01				S	Sg	10 40 39.5	+0.4
KK02	Karatay Array	0.54	54	P	Pg	10 40 32.7	+0.5
KK02				S	Sg	10 40 39.6	+0.4
KK04	Karatay Array	0.54	53	P	Pg	10 40 32.6	+0.4
KK04				S	Sg	10 40 39.5	+0.3
KK31	Karatay Array	0.54	54	P	Pg	10 40 32.2	0.0
	15nm,0.3s,baz=341,slow=12,SNR=562						
KK31				⇑S	Sg	10 40 39.6	+0.4
	29nm,0.1s						
KK06	Karatay Array	0.54	55	P	Pg	10 40 32.8	+0.6
KK06				S	Sg	10 40 39.8	+0.5
KK09	Karatay Array	0.54	52	P	Pg	10 40 32.7	+0.5
KK09				S	Sg	10 40 39.8	+0.5
KK05	Karatay Array	0.55	53	P	Pg	10 40 32.7	+0.2
KK05				S	Sg	10 40 39.5	-0.1
TRKS	Terek-Say	1.55	144	⇑*i*P	Pg	10 40 52.3	+0.7
TRKS				⇑*i*S	Sg	10 41 13.0	+1.3
ARK	Arkit	1.81	122	⇑*i*P	Pb	10 40 55.4	-0.4
ARK				⇑*i*S	Sg	10 41 18.0	-2.0
MNAS	Manas	1.93	98	⇑*i*P	Pb	10 40 56.7	-1.2
MNAS				⇑*i*S	Sb	10 41 20.8	-1.7
MRKS	Merke	2.44	90	Pg	Pb	10 41 05.7	-0.7
	17nm,0.4s						
MRKS				Lg	Lg	10 41 36.7	
	58nm,0.2s						
MRKS	Merke	2.44	90	*e*P	Pb	10 41 05.7	-0.7
	17nm,0.4s						
MRKS				*e*S	Sb	10 41 36.7	-0.3
	58nm,0.2s						
ARSB	Arslanbob	2.71	122	⇑*e*P	Pn	10 41 07.4	+0.9
ARSB				⇑*e*S	Sb	10 41 39.8	-5.1
EKS2	Erkin-Say	2.85	91	⇑*i*P	Pn	10 41 09.5	+1.1
EKS2				⇑*i*S	Sn	10 41 42.7	-0.6
OHH	Osh	3.12	136	⇓*e*P	Pn	10 41 13.5	+1.4
OHH				⇓*e*S	Sn	10 41 49.5	-0.5
ARLS	Aral	3.40	104	⇑*e*P	Pn	10 41 17.5	+1.5
ARLS				⇑*e*S	Sn	10 41 56.3	-0.6
UCH	Uchtor	3.44	98	⇓*i*P	Pn	10 41 18.2	+1.3
UCH				⇓*i*S	Sn	10 41 57.4	-1.1
SALK	Salom-Alik	3.48	122	⇑*e*P	Pn	10 41 18.5	+1.3
SALK				⇑*i*S	Sn	10 41 58.2	-0.8
SGDS	Sogindy	3.51	78	Lg	Lg	10 42 09.5	
	12nm,0.3s						
BTLS	Baital	3.74	52	Lg	Lg	10 42 17.4	
	16nm,0.3s						
BTLS	Baital	3.74	52	*e*P	Pb	10 41 29.1	+0.6
	6.1nm,0.2s						
BTLS				*e*S	Sb	10 42 16.4	+2.1
	11nm,0.4s						
KRBS	Karabastau	4.30	76	Pg	Pb	10 41 40.5	+2.3
	6.1nm,0.6s						
KRBS	Karabastau	4.30	76	*e*P	Pb	10 41 40.5	+2.3
	6.1nm,0.6s						
KRBS				*e*S	Sg	10 42 36.2	-3.8
	6.6nm,0.8s						
DGS	Degeres	4.32	82	Lg	Lg	10 42 33.9	
	16nm,0.7s						
DGS	Degeres	4.32	82	*e*P	Pb	10 41 39.8	+1.3
	6.5nm,0.4s						
DGS				*e*S	Sb	10 42 33.9	+2.9
	16nm,0.7s						
BOOM	Boomskoye usch	4.45	92	⇓*e*P	Pn	10 41 31.9	+1.4
BOOM				⇓*e*S	Sn	10 42 21.4	-1.6
MTBS	Maitube	4.79	84	*e*P	Pb	10 41 49.6	+3.1
	2.5nm,0.3s						
MTBS				*e*S	Sg	10 42 51.3	-4.5
	10nm,0.3s						
ARXS	Arharly	5.93	73	Pg	Pg	10 42 11.2	-4.2
	2.9nm,0.5s						
ARXS	Arharly	5.93	73	*e*P	Pg	10 42 13.4	-2.0
	3.5nm,0.4s						
ARXS				*e*S	Sg	10 43 32.3	+0.2
	12nm,0.6s						

JMA ***05*** *10:47:01.4±0.3,26°N±1°×12°5E±°,h110^{km},MV3.7/19,NW*
OFF MIYAKOJIMA ISLAND
IDC ***05*** *10:47:11.6±18.0,25°.82N×124°.95E,h239^{km}±224^{km},*
mb2.9/7,mbtmp3.5/8,ML3.4/1,Error ellipse:
s-maj=214.8km s-min=16.0km az=62.0

ISC 05 10:47:01.6±0.8**,25°.83N**±0°.08×**125°.15E**±0°.06**,**
h142^{km}±10^{km}**,n32,σ1^{s}22**/47**,mb3.3**/7**,Southwestern**
Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKM	Ikemajima	0.91	174	P	Pn	10 47 25.3	+0.5
JIRB	Irabujima	1.00	179	P	Pn	10 47 25.7	+0.2
JIRB				S	Sn	10 47 43.0	-0.9
JMJ	Miyako jima 2	1.02	173	P	Pn	10 47 27.1	+1.3
JOGS	Gusukube	1.09	168	P	Pn	10 47 27.3	+0.9
JOGS				S	Sn	10 47 46.2	+0.9
JMJ2	Miyako jima3	1.10	171	*i* P	Pn	10 47 27.2	+0.8
JMJ2				S	Sn	10 47 46.0	+0.5
JTJ	Tarama	1.25	199	*i* P	Pn	10 47 28.0	0.0
JTJ				S	Sn	10 47 46.9	-1.1
JISG	Ishigakijimahi	1.45	212	*i* P	Pn	10 47 30.0	-0.1
JISG				S	Sn	10 47 50.3	-1.4
JKE	Kume jima 2	1.55	71	S	Sn	10 47 52.9	-0.7
JIJ	Ishigaki jima	1.72	212	*i* P	Pn	10 47 32.6	-0.5
JIJ				S	Sn	10 47 54.5	-2.6
JKRS	Kuro-shima	1.90	213	P	Pn	10 47 34.7	-0.3
JKRS				S	Sn	10 47 59.0	-1.6
IRIF	Iriomote-Funau	1.97	221	P	Pn	10 47 35.4	-0.4
IRIF				S	Sn	10 48 00.4	-1.7
HATJ	Hateruma jima	2.15	215	P	Pn	10 47 37.9	-0.1
HATJ				S	Sn	10 48 04.7	-1.2
JJT3	Tamagusuku3	2.39	82	P	Pn	10 47 42.0	+1.1
JJT3				S	Sn	10 48 11.6	+0.3
JNTH	Nagotoyohara	2.67	75	P	Pn	10 47 44.9	+0.5
JNTH				S	Sn	10 48 15.9	-1.6
JIH	Iheya	2.80	64	P	Pn	10 47 46.5	+0.5
JIH				S	Sn	10 48 18.6	-1.7
JOW	Kunigami	2.98	70	P	Pn	10 47 48.2	-0.1
JOW				S	Sn	10 48 22.2	-2.2
JYRO	Yoronjima	3.19	67	P	Pn	10 47 50.9	-0.1
JYRO				S	Sn	10 48 27.6	-1.7
TATO	Taipei	3.42	256	P	Pn	10 47 57.1	+3.1
YHNB	Yeheng	3.61	252	P	Pn	10 47 58.2	+1.7
NACB	Ninganchiao	3.62	244	P	Pn	10 47 56.0	-0.7
JTK	Tokunoshima	3.92	59	P	Pn	10 48 00.0	-0.5
JTK				S	Sn	10 48 43.8	-2.4
YULB	Yu-li	4.26	236	P	Pn	10 48 03.4	-1.7
SSLB	Suanglung	4.32	243	P	Pn	10 48 05.2	-0.7
TPUB	Ta-pu	4.83	239	P	Pn	10 48 13.2	+0.6
KSRS	Korea Array	11.82	11	P	P	10 49 53.4	+0.5
	0.2nm,0.3s,baz=187,slow=11,SNR=1.7						
	0.5nm,0.4s						
SONM	Songino Array	26.46	331	P	P	10 52 26.7	+1.2
	0.4nm,0.5s,baz=140,slow=9.2,SNR=2.6						
	0.4nm,0.5s						
MKAR	Makanchi Array	39.75	313	P	P	10 54 20.2	-0.2
	0.3nm,0.5s,baz=101,slow=8.7,SNR=2.9						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	40.92	324	P	P	10 54 29.0	-0.7
	1.0nm,0.4s,baz=107,slow=8.6,SNR=5.6						
	1.0nm,0.4s						
KURBB	Kurchatov Arra	43.25	317	P	P	10 54 48.2	-0.5
	0.2nm,0.4s,baz=111,slow=8.0,SNR=4.4						
	0.2nm,0.4s						
WRA	Warramunga Arr	46.37	168	P	P	10 55 14.8	+1.0
	0.1nm,0.5s,baz=349,slow=7.9,SNR=1.3						
	0.1nm,0.5s						
BVAR	Borovoye Array	48.74	319	P	P	10 55 31.9	+0.2
	0.3nm,0.3s,baz=99,slow=9.3,SNR=2.0						
	0.3nm,0.3s						
ASAR	Alice Springs	49.93	169	P	P	10 55 41.3	+0.2
	0.2nm,0.4s,baz=349,slow=9.4,SNR=6.2						
	0.2nm,0.4s						

JSO ***05*** *11:03:12.3±0.3,32°N±2°×3°6E±°,h11^{km}±4^{km},M2.5/13,*
MLv2.5/13,MLv2.5/13
GII ***05*** *11:03:12.8±0.0,31°.917N±0°.002×35°.494E±0°.001,h16^{km},*
Mws2.2,confirmed

ISC 05 11:03:12.7±0.9**,31°.92N**±0°.02×**35°.49E**±0°.05**,h18^{km}**±2^{km}**,**
n51,σ0^{s}48/53**,Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NAAM	Naama	0.02	247	P	Pg	11 03 16.2	+0.3
NAAM	Naama	0.02	247	S	Sg	11 03 18.9	+0.9
UJAP	Al Uja	0.04	330	P	Pg	11 03 16.0	+0.1
UJAP	Al Uja	0.04	330	P	Pg	11 03 16.0	+0.1
UJAP	Al Uja	0.04	330	S	Sg	11 03 18.3	+0.2
YITV	Yitav	0.07	300	P	Pg	11 03 16.2	+0.1
VJRH	Vered Jericho	0.10	208	P	Pg	11 03 16.5	+0.2
VJRH	Vered Jericho	0.10	208	S	Sg	11 03 19.2	+0.4
KARV	Kedem Haarava	0.11	175	P	Pg	11 03 17.7	+1.2
KARV	Kedem Haarava	0.11	175	S	Sg	11 03 20.0	+1.1
ALMO	Almog	0.13	191	P	Pg	11 03 16.8	+0.1
ALMO	Almog	0.13	191	S	Sg	11 03 19.9	+0.6
SLMZ	Shlomzion	0.19	1	P	Pb	11 03 17.2	+0.3
SLMZ	Shlomzion	0.19	1	S	Sg	11 03 21.0	+0.2
RGMN	Argaman	0.26	6	P	Pg	11 03 18.4	-0.1
RGMN	Argaman	0.26	6	S	Sb	11 03 23.0	+0.6
JER	Jerusalem	0.29	240	P	Pg	11 03 19.2	+0.1
JER	Jerusalem	0.29	240	S	Sg	11 03 23.8	+0.4
HMRA	Hamra	0.29	351	P	Pg	11 03 19.0	-0.1
HMRA	Hamra	0.29	351	S	Sb	11 03 24.1	+0.4
ROII	Roi	0.33	360	P	Pg	11 03 19.7	-0.1
ROII	Roi	0.33	360	S	Sg	11 03 25.1	+0.5
HMDT	Nahal Hemdat	0.34	5	P	Pg	11 03 19.8	-0.1
HMDT				S	Sb	11 03 25.5	+0.2
HMDT	Nahal Hemdat	0.34	5	P	Pg	11 03 19.8	-0.1
MZS	Mizpe Shalem	0.35	192	P	Pg	11 03 19.9	-0.2
MZS	Mizpe Shalem	0.35	192	S	Sb	11 03 26.2	+0.5
DSI	Dead Sea	0.36	195	P	Pg	11 03 19.7	-0.5
DSI	Dead Sea	0.36	195	P	Pg	11 03 19.5	-0.7
DSI	Dead Sea	0.36	195	S	Sg	11 03 25.0	-0.3
QRNJ	Al-Qirein	0.42	10	P	Pg	11 03 21.3	-0.1
SLTI	Sal'it	0.50	311	P	Pg	11 03 22.2	-0.6
SLTI	Sal'it	0.50	311	S	Sg	11 03 29.9	+0.3
MMLI	Mount Malkishu	0.53	354	P	Pg	11 03 23.5	+0.2
MMLI	Mount Malkishu	0.53	354	P	Pg	11 03 23.5	+0.2
MMLI	Mount Malkishu	0.53	354	S	Sg	11 03 30.7	+0.3
GHAJ	Ghor Haditha	0.61	174	P	Pb	11 03 24.5	-0.2
GHAJ				S	Sg	11 03 33.6	+0.6
GHAJ	Ghor Haditha	0.61	174	P	Pb	11 03 24.4	-0.4
YTIR	Yattir	0.64	210	P	Pb	11 03 24.8	-0.4
LISJ	El Lisan	0.67	181	P	Pg	11 03 26.3	+0.4
MLDT	Moledet	0.67	356	P	Pb	11 03 25.1	-0.7
MLDT	Moledet	0.67	356	S	Sg	11 03 35.6	+0.6
GOLA	Golan Heights	0.81	10	P	Pb	11 03 27.9	-0.3
GOLA	Golan Heights	0.81	10	S	Sn	11 03 40.4	-0.3
SHMJ	Saham	0.84	16	P	Pb	11 03 28.3	-0.5
ASF	Jabal al Asfar	1.22	78	P	Pn	11 03 33.7	-1.2
GEM	Giv'at Ha'Em	1.30	6	P	Pn	11 03 36.2	+0.3
NATI	Neve Ativ	1.36	9	P	Pn	11 03 36.3	-0.4
NATI	Neve Ativ	1.36	9	S	Sb	11 03 55.2	+0.6
PRNI	Paran	1.61	195	P	Pn	11 03 40.6	+0.4
PRNI	Paran	1.61	195	P	Pn	11 03 40.4	+0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRNI	Paran	1.61	195	S	Sb	11 04 01.6	-0.3

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*DSN **05** 11:06:30.1±1.2, 27°.08N×56°.45E, h15km, ML2.8/6, Error ellipse: s-maj=39.7km s-min=8.1km az=103.0*

*OMAN **05** 11:06:31.5±0.6, 26°.96N×56°.62E, h5km±3km, ml2.9/12, Error ellipse: s-maj=6.0km s-min=3.2km az=121.0*

*TEH **05** 11:06:33.0, 27°.49N×56°.37E, h10km±140km*

ISC 05 11:06:28.6±1.5**, 27°.10N**±0°.03×**56°.49E**±0°.06**, h4**km±13km**, n33, σ0ˢ.84**/44**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBND	Bandar-abas	0.35	8	Pg	Pg	11 06 36.5	+1.1
BNDS	Bandar-Abbas	0.41	317	Pg	Pb	11 06 37.6	-1.0
GENO	Geno	0.41	317	Pg	Pb	11 06 37.5	-1.0
SHME	Shamm	1.09	196	P	Pb	11 06 49.8	-0.3
	SNR=56						
SHME				S	Sb	11 07 05.0	+0.3
SHME	Shamm	1.09	196	eP	Pg	11 06 49.5	-0.1
	SNR=22						
SHME				S	Sb	11 07 04.8	+0.1
BANOM	Banah	1.19	188	P	Pg	11 06 51.4	0.0
BANOM				S	Sb	11 07 07.9	+0.5
BANOM	Banah	1.19	188	eP	Pg	11 06 51.0	-0.4
	SNR=263						
BANOM				S	Sb	11 07 07.9	+0.5
KHNJ	Kahnooj	1.37	52	Pg	Pn	11 06 55.0	+0.4
MASF	Masafi	1.75	190	P	Pb	11 07 00.9	-0.4
	SNR=11						
MASF				S	Sb	11 07 23.6	0.0
MSFE	Esma-Masafi	1.76	190	eP	Pn	11 07 00.1	+0.1
	SNR=11						
MDH	Madha	1.80	185	P	Pb	11 07 01.8	-0.4
	SNR=10						
MDH				S	Sn	11 07 24.4	+0.5
MDH	Madha	1.80	185	eP	Pn	11 06 59.0	-1.6
	SNR=9.8						
UOSS	Minazif	2.16	187	P	Pn	11 07 06.7	+1.3
NAZ	Nazwa, Dubai	2.23	200	P	Pb	11 07 08.2	-1.3
HATD	Hatta, Dubai	2.29	188	P	Pn	11 07 08.8	+1.6
HATD	Hatta, Dubai	2.29	188	eP	Pn	11 07 08.0	+0.8
	SNR=15						
ASHO	Ashiyiah	2.44	189	P	Pn	11 07 10.5	+1.2
ASHO	Ashiyiah	2.44	189	eP	Pn	11 07 10.4	+1.1
	SNR=13						
NGRK	Negar Kerman	2.54	5	Pn	Pn	11 07 11.4	+0.4
KBAM	BAM	2.67	40	Pn	Pb	11 07 15.8	-1.3
CHMN	Cheshme madani	2.90	18	Pn	Pb	11 07 20.0	-1.2
KHGB	Koh Gabri	3.26	360	Pn	Pn	11 07 20.5	-0.3
HOQ	Hoqain	3.58	168	P	Pn	11 07 25.0	0.0
HOQ				S	Sn	11 08 07.6	-0.2
ARQ	Araqi	3.75	179	P	Pn	11 07 28.8	+1.4
ARQ				S	Sn	11 08 12.6	+0.7
BIDO	Bidbid	3.86	157	P	Pn	11 07 28.8	0.0
BIDO				S	Sn	11 08 14.1	-0.6
SMDO	Samad	4.27	160	P	Pn	11 07 34.4	-0.1
SMDO				S	Sn	11 08 24.5	-0.4
WSAR	Wadi Sarin	4.31	153	P	Pn	11 07 34.6	-0.4
	SNR=7.4						
BSY	Bisya	4.39	171	P	Pn	11 07 36.4	+0.3
BSY				S	Sn	11 08 28.4	+0.8
NGCH	Negor - Chabah	4.52	112	P	Pn	11 07 39.9	+2.0
JMDO	Jabal Madar	4.94	162	P	Pn	11 07 43.8	+0.1
WBK	Wadi Bani Khal	5.01	153	P	Pn	11 07 44.7	0.0
	SNR=9.1						
JLN	Jalan Bani Buh	5.60	151	P	Pn	11 07 52.4	-0.4
	SNR=7.4						
MHTO	MHTO	6.24	167	P	Pn	11 08 01.4	-0.1
	SNR=9.1						

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*NEIC **05** 11:06:37.1±2.0, 6°.22S±0°.07×128°.68E±0°.07, h303km±6km, mb4.5/35, Error ellipse: s-maj=10.4km s-min=10.3km az=76.0*

*DJA **05** 11:06:37.5±0.1, 6°S±2°×12°9E±°, h311km±2km, M4.7/73, mb4.7/73, mB5.2/23, MLv5.2/23, Mw(mB)4.5/23*

*IDC **05** 11:06:38.3±1.3, 6°.27S×128°.63E, h328km±13km, mb3.6/12, mbtmp4.4/16, Error ellipse: s-maj=16.3km s-min=7.9km az=70.0*

ISC 05 11:06:38.8±0.3**, 6°.26S**±0°.04×**128°.67E**±0°.04**, h334**km**, n232, σ1ˢ.70**/238**, mb4.4**/40**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	2.12	36	P	Pn	11 07 27.2	-2.4
BNDI	Bandanaira	2.12	36	S	S	11 08 06.1	-4.1
BNDI	Bandanaira	2.12	36	P	Pn	11 07 26.5	-3.1
BNDI				S	S	11 08 05.7	-4.5
AAI	Ambon	2.59	350	P	Pn	11 07 31.3	-2.2
AAI				S	S	11 08 12.3	-4.9
MSAI	Masohi	2.90	5	P	Pn	11 07 32.6	-3.6
MSAI				S	S	11 08 13.8	-8.4
KRAI	Karang Ratu	2.93	355	P	Pn	11 07 34.2	-2.2
SAUI	Saumlaki	3.13	123		Pn	11 07 35.7	-2.6
SAUI	Saumlaki	3.13	123	P	Pn	11 07 36.1	-2.1
SAUI	Saumlaki	3.13	123	S	S	11 08 21.9	-4.0
SAUI	Saumlaki	3.13	123	P	Pn	11 07 35.9	-2.3
NLAI	Namlea	3.38	332	P	Pn	11 07 39.4	-1.3
FAKI	Fak Fak	4.87	47		Pn	11 07 52.2	-4.2
FAKI	Fak Fak	4.87	47	P	Pn	11 07 52.7	-3.7
FAKI	Fak Fak	4.87	47	P	Pn	11 07 52.5	-3.9
SANI	Sanana	4.96	327	P	Pn	11 07 55.1	-2.2
SANI	Sanana	4.96	327	P	Pn	11 07 54.9	-2.4
SOEI	Soe	5.57	231		Pn	11 08 02.2	-2.2
SOEI	Soe	5.57	231	P	Pn	11 08 02.8	-1.6
SOEI	Soe	5.57	231	S	S	11 09 09.9	-3.6
SOEI	Soe	5.57	231	P	Pn	11 08 02.4	-2.0
	3.2nm3μm170nm,1.0s						
KMPI	Kaimana, Papua	5.64	63	P	Pn	11 08 01.8	-3.3
SWI	Sorong	5.95	26	P	Pn	11 08 04.7	-3.9
	4.6nm4μm70nm,0.6s						
BATI	Baumata	6.32	231	P	Pn	11 08 11.5	-1.4
	723nm,0.4s,baz=91,slow=2.6,SNR=107						
BATI				S	S	11 09 20.6	-8.5
	579nm,0.7s,baz=88,slow=3.4,SNR=28						
BATI	Baumata	6.32	231	P	Pn	11 08 11.1	-1.8
MMRI	Maumere	6.80	249	P	Pn	11 08 17.9	-0.6
	0.4nm44nm,0.6s						
MTN	Manton Dam	6.98	160		Pn	11 08 18.1	-2.6
TNTI	Ternate	7.10	349	Pn	Pn	11 08 20.5	-1.6
TNTI	Ternate	7.10	349	P	Pn	11 08 20.9	-1.2
RKPI	Ransiki, Papua	7.24	50	P	Pn	11 08 21.4	-2.4
EDFI	Ende, Flores	7.35	250	P	Pn	11 08 23.8	-1.3
	0.1nm38nm,0.6s						
MWPI	Manokwari, Pap	7.53	46	P	Pn	11 08 25.2	-2.1
	245nm,0.7s						
BKSI	Bulukumba	8.55	276	P	Pn	11 08 39.5	+0.1
	53nm,1.1s						
BNSI	Bone	8.72	282	P	Pn	11 08 41.4	-0.1
	32nm,0.9s						
SRPI	Serui, Papua	8.72	60	P	Pn	11 08 39.8	-1.7
BASI	Baing, Sumba	8.92	243	P	Pn	11 08 42.9	-1.0
	107nm,1.0s						
KAPI	Kappang	8.96	277	P	Pn	11 08 43.7	-0.6
	8.0nm,0.3s,baz=93,slow=9.9,SNR=4.4						
KAPI	Kappang	8.96	277	P	Pn	11 08 43.9	-0.4
BAKI	Biak	8.97	56	P	Pn	11 08 42.8	-1.7
LBFI	Labuhan Bajo,	8.98	255	P	Pn	11 08 44.4	-0.2
	706nm65nm,0.6s						
SPSI	Sidrap Palu	9.15	284	P	Pn	11 08 46.5	-0.2
	21nm,0.7s						
KNRA	Kununurra	9.36	179		Pn	11 08 47.2	-2.0
TTSI	Tana Toraja	9.38	289	P	Pn	11 08 49.3	-0.1
MRSI	Marisa	9.47	315	P	Pn	11 08 50.5	-0.1
	26nm,0.5s						
WBSI	Waikabubak, Su	9.78	249	P	Pn	11 08 52.0	-2.3
	2μm146nm,0.7s						
PMSI	Majene	10.09	285	P	Pn	11 08 57.5	-0.6
	69nm,0.9s						
WAMI	Wamena	10.28	77	P	Pn	11 09 01.7	+1.4
MMSI	Mamuju	10.35	290	P	Pn	11 09 02.5	+1.3
	724nm81nm,0.9s						
DBNI	Kabupaten Domp	10.51	257	P	Pn	11 09 01.8	-1.2
	877nm68nm,0.6s						
TOLI2	Tolitoli	10.75	313		Pn	11 09 05.2	-0.7
TOLI2	Tolitoli	10.75	313	P	Pn	11 09 05.6	-0.3
TOLI2	Tolitoli	10.75	313	S	S	11 11 06.0	-0.7
SMPI	Sarmi	10.88	67	P	Pn	11 09 06.3	-1.2
	71nm,1.1s						
MPSI	Mapaga	10.93	306	P	Pn	11 09 08.3	+0.2
	22nm,0.7s						
PLAI	Plampang	11.09	256	P	Pn	11 09 07.9	-2.2
PLAI	Plampang	11.09	256	S	S	11 11 12.2	-2.3
PLAI	Plampang	11.09	256	P	Pn	11 09 07.7	-2.4
	1μm116nm,0.7s						
MMPI	Merauke	11.83	101	P	Pn	11 09 18.7	-0.2
TWSI	Taliwang, Sumb	11.94	257	P	Pn	11 09 18.1	-2.1
	51nm,0.7s						
GENI	Genyem	12.03	73	P	Pn	11 09 20.6	-0.7
	115nm,0.7s						
FITZ	Fitzroy Crossi	12.14	194	P	Pn	11 09 20.5	-2.0
	6.2nm,0.5s,baz=31,slow=7.4,SNR=29						
FITZ				S	S	11 11 36.4	-1.1
	26nm,0.9s,baz=227,slow=17,SNR=14						
JAY	Jayapura	12.56	73	P	P	11 09 26.2	-1.3
	56nm,0.7s,baz=235,slow=6.9,SNR=14						
JAY	Jayapura	12.56	73	P	P	11 09 26.3	-1.3
	69nm,0.8s						
KLNI	Mataram	12.65	259	P	P	11 09 26.0	-2.5
	59nm,0.6s						
KHKI	Kahang-Kahang	13.12	260	P	P	11 09 32.5	-1.2
	49nm,0.8s						
IGBI	Denpasar	13.64	258	P	P	11 09 39.3	-0.1
	75nm,0.5s						
RTBI	Rangdo, Negare	13.79	260	P	P	11 09 40.2	-0.8
	50nm,0.6s						
BBKI	Banjar Baru	14.05	281	P	Pn	11 09 45.4	+0.1
ABJI	Asem Bagus	14.40	263	P	Pn	11 09 49.4	0.0
	117nm,0.9s						
WB0	Warramunga Arr	14.54	158	P	P	11 09 48.2	-1.1
JAGI	Jajag, Banyuwa	14.56	260		P	11 09 47.7	-1.9
JAGI	Jajag, Banyuwa	14.56	260	P	P	11 09 48.5	-1.1
JAGI	Jajag, Banyuwa	14.56	260	P	P	11 09 48.2	-1.4
KMMI	Kalianget	14.62	266	P	Pn	11 09 51.9	0.0
	2μm195nm,1.0s						
WRAB	Tennant Creek	14.68	158	P	P	11 09 50.3	-0.5
WRAB	Tennant Creek	14.68	158	P	P	11 09 50.4	-0.3
WRA	Warramunga Arr	14.68	158	P	P	11 09 50.3	-0.5
	94nm,0.4s,baz=333,slow=12,SNR=684						
WRA				S	S	11 12 23.2	-6.8
	9.5nm,0.6s,baz=342,slow=20,SNR=11						
WRA				ScP	ScP	11 17 41.8	+0.4
	3.3nm,0.7s,baz=323,slow=2.6,SNR=5.8						
WRA	Warramunga Arr	14.68	158	P	P	11 09 49.4	-1.4
BLJI	Banyuglugur	15.03	263	P	P	11 09 55.5	+0.8
	79nm,1.1s						
PKKI	Palangkaraya	15.18	285	P	Pn	11 09 58.0	-0.5
	254nm,0.9s						
GMJI	Gumukmas	15.23	262	P	P	11 09 56.8	-0.1
	38nm,0.7s						
COEN	Coen	16.20	119	P	P	11 10 07.0	-0.4
COEN	Coen	16.20	119	P	P	11 10 07.2	-0.2
SJI	Sawahan	16.84	264	P	P	11 10 15.4	+1.0
	46nm,0.7s						
SNJI	Sawahan-Nganju	16.85	264	P	P	11 10 15.6	+1.0
	49nm,0.6s						
MBWA	Marble Bar	17.16	209		P	11 10 17.1	-0.7
MBWA	Marble Bar	17.16	209	P	P	11 10 17.8	+0.1
KKM	Kota Kinabalu	17.43	314	P	P	11 10 20.6	-0.2
KKM				IAmb	IAmb	11 10 21.5	
	comp=Z,28nm,1.0s						
KKM	Kota Kinabalu	17.43	314	P	P	11 10 21.3	+0.5
KKM	Kota Kinabalu	17.43	314	P	P	11 10 20.4	-0.4
	comp=Z,31nm,0.9s						
PCJI	Pacitan	17.46	263	P	P	11 10 20.5	-0.5
	comp=Z,51nm,0.5s						
PSA00	Pilbara Seismi	17.46	208		P	11 10 20.3	-0.6
PSA00	Pilbara Seismi	17.46	208	P	P	11 10 21.0	+0.1
QIS	Mount Isa	17.74	144	P	P	11 10 23.7	-0.3
AS31	Alice Springs	18.03	164	P	P	11 10 27.6	+0.6
ASAR	Alice Springs	18.03	164	P	P	11 10 27.5	+0.4
	comp=Z,196nm,0.4s,baz=346,slow=12,SNR=476						
ASAR				S	S	11 13 36.3	-0.1
	comp=Z,52nm,0.9s,baz=344,slow=19,SNR=62						
ASAR				ScP	ScP	11 17 49.4	+1.3
	comp=Z,6.8nm,0.5s,baz=342,slow=2.3,SNR=15						
UGM	Wanagama	18.08	264	P	P	11 10 27.5	-0.2
UGM	Wanagama	18.08	264	P	P	11 10 28.1	+0.4
SBUM	Sibu	18.56	297	P	P	11 10 34.1	+1.4
PMG	Port Moresby	18.59	101	P	P	11 10 34.6	+1.6
	comp=Z,38nm,0.7s,baz=314,slow=2.1,SNR=16						
PMG	Port Moresby	18.59	101	P	P	11 10 33.1	+0.1
PMG	Port Moresby	18.59	101	P	P	11 10 34.8	+1.8
PMG	Port Moresby	18.59	101	P	P	11 10 33.1	+0.1
	comp=Z,54nm,0.8s						
MTSU	Mount Surprise	19.30	129	P	P	11 10 40.2	-0.5
KPJI	Karang Pucung	19.62	266	P	P	11 10 44.8	+0.7
	comp=Z,61nm,0.7s						
BBJI	Bungbulang	20.90	265	P	P	11 10 56.7	+0.2
BBJI	Bungbulang	20.90	265	P	P	11 10 56.2	-0.3
	comp=Z,45nm,0.9s						
CNJI	Cibinong	21.41	266	P	P	11 11 02.3	+1.2
	comp=Z,54nm,1.4s						
TV1H	Townsville Har	21.87	128	P	P	11 11 06.6	+1.4
CTA	Charters Tower	21.93	130	P	P	11 11 07.0	+1.2
CTAO	Charters Tower	21.93	130	P	P	11 11 06.6	+0.8
CTAO				IAmb	IAmb	11 11 08.6	
	comp=Z,24nm,0.8s						
CTAO	Charters Tower	21.93	130	P	P	11 11 07.0	+1.2
MEEK	Meekatharra	22.42	204	P	P	11 11 10.0	-0.2
INKA	Innaminka	24.25	153	P	P	11 11 27.3	+0.6
INKA				IAmb	IAmb	11 11 28.4	
	comp=Z,16nm,0.7s						
FORT	Forrest	24.40	181	P	P	11 11 28.1	+0.1
QLP	Quilpie	25.08	145	P	P	11 11 34.1	0.0
MYKOM	Kota Tinggi	26.03	287	P	P	11 11 43.9	+1.1
MYKOM				IAmb	IAmb	11 11 57.4	
	comp=Z,55nm,1.3s						
MYKOM	Kota Tinggi	26.03	287	P	P	11 11 44.3	+1.5
	comp=Z,30nm,1.3s						
BLDU	Ballidu	26.71	203	P	P	11 11 50.2	+1.6
KLBR	Kellerberrin	27.20	201	P	P	11 11 53.6	+0.7
BBOO	Buckleboo	27.30	166	P	P	11 11 53.8	-0.1
BBOO				IAmb	IAmb	11 11 54.7	
	comp=Z,25nm,0.6s						
BBOO	Buckleboo	27.30	166	P	P	11 11 54.2	+0.3
STKA	Stephens Creek	28.21	156	P	P	11 12 01.9	0.0
	comp=Z,26nm,0.6s,baz=337,slow=7.9,SNR=89						
	comp=Z,26nm,0.6s						
STKA	Stephens Creek	28.21	156	P	P	11 12 02.2	+0.3
STKA	Stephens Creek	28.21	156	P	P	11 12 02.5	+0.6
EIDS	Eidsvold	28.66	134	P	P	11 12 05.1	-0.8
EIDS				IAmb	IAmb	11 12 17.0	
	comp=Z,16nm,1.4s						
HTT	Hallett	28.67	162	P	P	11 12 06.5	+0.5
PPI	Padang Panjang	28.79	280	P	P	11 12 08.5	+1.3
	comp=Z,34nm,0.9s						
IPM	Ipoh	29.59	290	P	P	11 12 15.3	+1.0
IPM				IAmb	IAmb	11 12 45.4	
	comp=Z,38nm,1.5s						
CMSA	Cobar Meteorol	29.78	150	P	P	11 12 16.6	+0.9
KULM	Kulim	30.23	292	P	P	11 12 19.7	-0.2
KULM				IAmb	IAmb	11 12 22.2	
	comp=Z,15nm,0.8s						
KULM	Kulim	30.23	292	P	P	11 12 21.7	+1.8
KULM	Kulim	30.23	292	P	P	11 12 21.3	+1.4
	comp=Z,23nm,0.9s						
TATA	Tatamba Isabel	30.95	96	P	P	11 12 25.0	-1.2
SAVO	Savo Central	30.99	97	P	P	11 12 26.0	-0.6
PSI	Prapat	31.03	286	P	P	11 12 26.5	-0.5
	comp=Z,27nm,1.0s						
GSI	Gunungsitoli	31.93	283	P	P	11 12 35.5	+0.8
	comp=Z,60nm,0.9s						
ARMA	Armidale	32.30	141	P	P	11 12 38.1	+0.2
ARMA				IAmb	IAmb	11 12 39.7	
	comp=Z,13nm,0.8s						
ARMA	Armidale	32.30	141	P	P	11 12 39.0	+1.2
PATS	Pohnpei	32.31	67	P	P	11 12 38.6	+0.6
KCSI	Kotacane, Aceh	32.34	287	P	P	11 12 38.5	+0.2
	comp=Z,1μmcomp=Z,8.5nm,0.9s						
MGBR	Mount Gambier	33.15	163	P	P	11 12 45.0	+0.1
MLSI	Meulaboh, Aceh	33.87	287	P	P	11 12 52.4	+1.1
	comp=Z,57nm,0.7s						
CAN	Canberra	34.45	150	P	P	11 12 57.6	+1.5
CNB	Canberra Magne	34.63	149	P	P	11 12 58.1	+0.4
TOO	Toolangi	34.73	156	P	P	11 12 59.8	+1.3
MILA	Mila	35.91	151	P	P	11 13 09.8	+1.3
CMAR	Chiang Mai Arr	38.24	311	P	P	11 13 28.4	+0.4
	comp=Z,6.0nm,0.6s,baz=137,slow=7.1,SNR=47						
	comp=Z,6.0nm,0.6s						
CHTO	Chiang Mai	38.46	311	P	P	11 13 29.5	-0.3
CHTO				IAmb	IAmb	11 13 30.9	
	comp=Z,14nm,0.7s						
CHTO	Chiang Mai	38.46	311	P	P	11 13 30.0	+0.1
	comp=Z,20nm,0.9s						
SANVU	Saraoutou	38.88	107	P	P	11 13 34.0	+0.7
NJ2	Nanjing	39.23	347	eP	P	11 13 38.4	+2.5
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
DZM	Mont Dzumac	39.71	117	P	P	11 13 40.8	+0.5
YATNC	Mamie plateau,	40.10	117	P	P	11 13 44.0	+0.7
PINNC	Pines Island,	40.76	118	P	P	11 13 48.5	-0.1
PINNC				IAmb	IAmb	11 14 05.9	
	comp=Z,53nm,1.3s						
PZH	PanZhiHua	41.73	322	P	P	11 13 59.5	+2.9
KSRS	Korea Array	43.49	359	P	P	11 14 10.3	+0.2
	comp=Z,1.3nm,0.7s,baz=174,slow=10,SNR=3.3						
	comp=Z,1.3nm,0.7s						
SHL	Shillong	47.73	313	P	P	11 14 42.7	-0.9
LZH	Lanzhou	48.13	333	eP	P	11 14 46.8	+0.3
LZH				pP	pP	11 15 49.9	-4.1
LZH				pmax	pmax		
	comp=Z,13nm,1.3s						
HHC	Hu-ho-hao-te	49.44	343	eP	P	11 14 58.4	+2.3
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,200nm,5.2s						
MSVF	Nonsavu	49.49	108	P	P	11 14 57.7	+0.8
MSVF	Nonsavu	49.49	108	P	P	11 14 58.6	+1.7
USRK	Ussuriysk Ar.	50.31	3	P	P	11 15 02.3	-0.1
	comp=Z,1.1nm,0.6s,baz=180,slow=7.7,SNR=1.7						
	comp=Z,1.1nm,0.6s						
OUZ	Omahuta	50.33	131	P	P	11 15 04.8	+2.0
OUZ	Omahuta	50.33	131	P	P	11 15 04.4	+1.6
LSA	Lhasa	50.75	317	P	P	11 15 07.1	+0.6
LSA				IAmb	IAmb	11 15 15.4	
	comp=Z,8.9nm,0.5s						
WHZ	Wether Hill Ro	52.06	146	P	P	11 15 15.9	+0.5
QRZ	Quartz Range	52.09	138	P	P	11 15 17.2	+1.5
QRZ				IAmb	IAmb	11 15 59.1	
	comp=Z,71nm,1.5s						
QRZ	Quartz Range	52.09	138	P	P	11 15 17.2	+1.5
QRZ	Quartz Range	52.09	138	P	P	11 15 17.5	+1.8
LBZ	Lake Benmore	52.47	143	P	P	11 15 19.3	+0.8
RPZ	Rata Peaks	52.63	142	P	P	11 15 20.2	+0.6
RPZ	Rata Peaks	52.63	142	P	P	11 15 20.9	+1.3
THZ	Tophouse	52.80	139	P	P	11 15 21.7	+0.9
EVN	Everest	52.80	312	P	P	11 15 22.0	+0.2
EVN				IAmb	IAmb	11 15 22.7	
	comp=Z,12nm,0.6s						
NNZ	Nelson	52.84	138	P	P	11 15 21.2	0.0
LTZ	Lake Taylor	52.90	140	P	P	11 15 23.0	+1.5
WAZ	Wanganui	53.26	136	P	P	11 15 25.9	+1.7
WTVZ	West Tongariro	53.40	135	P	P	11 15 27.3	+1.9
GVZ	Greta Valley S	53.48	140	P	P	11 15 26.7	+1.0
KHZ	Kahutara	53.53	139	P	P	11 15 26.7	+0.6
KHZ	Kahutara	53.53	139	P	P	11 15 26.7	+0.6
MQZ	McQueen’s Vall	53.61	141	P	P	11 15 27.6	+0.9
SNZO	South Karori	53.77	138	P	P	11 15 27.8	0.0
BKZ	Black Stump Fm	54.06	135	P	P	11 15 30.2	+0.2
BKZ				IAmb	IAmb	11 15 30.6	
	comp=Z,33nm,1.4s						
BKZ	Black Stump Fm	54.06	135	P	P	11 15 30.4	+0.4
BKZ	Black Stump Fm	54.06	135	P	P	11 15 30.4	+0.4
MRZ	Mangatainoka R	54.06	137	P	P	11 15 30.1	+0.1
KWHZ	Kaweka Forest	54.12	135	P	P	11 15 31.3	+0.8
URZ	Urewera	54.13	133	P	P	11 15 30.5	0.0
URZ	Urewera	54.13	133	P	P	11 15 30.5	0.0
KRHZ	Kereru	54.17	135	P	P	11 15 31.2	+0.4
MTHZ	Maungataniwha	54.18	134	P	P	11 15 31.7	+0.9
MCHZ	McNeill Hill	54.32	135	P	P	11 15 32.7	+0.9
HAZ	Te Kaha	54.43	133	P	P	11 15 32.8	+0.2
RUGZ	Raukumara Rang	54.43	133	P	P	11 15 32.3	-0.5
RAGZ	Rawiri	54.45	134	P	P	11 15 33.4	+0.5
ARHZ	Aropaoanui	54.46	135	P	P	11 15 33.6	+0.8
MWZ	Matawai	54.47	133	P	P	11 15 33.3	+0.4
TWGZ	Tauwhareparae	54.73	133	P	P	11 15 36.3	+1.5
MXZ	Matakaoa Point	54.74	132	P	P	11 15 35.7	+0.9
MXZ	Matakaoa Point	54.74	132	P	P	11 15 35.7	+0.9
RIGZ	Rimuhau	54.78	134	P	P	11 15 35.5	+0.4
KNZ	Kokohu	54.84	134	P	P	11 15 35.8	+0.3
PUZ	Puketiti	54.90	133	P	P	11 15 36.2	+0.3
SONM	Songino Array	57.33	342	P	P	11 15 53.2	+0.3
	comp=Z,0.7nm,0.7s,baz=167,slow=9.2,SNR=4.5						
	comp=Z,0.7nm,0.7s						
SONM	Songino Array	57.33	342	P	P	11 15 54.3	+1.4
WMQ	Urumqi	62.05	328	eP	P	11 16 27.0	+2.1
WMQ				PcP	PcP	11 17 03.4	+1.6
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
PETK	Petropavlovsk-	64.04	19	P	P	11 16 37.5	-0.1
	comp=Z,5.2nm,0.8s,baz=167,slow=3.8,SNR=10.0						
	comp=Z,5.2nm,0.8s						
PETK	Petropavlovsk-	64.04	19	P	P	11 16 37.8	+0.1
KSH	Kashi	66.58	318	P	P	11 16 56.4	+2.2
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MKAR	Makanchi Array	66.88	327	P	P	11 16 56.1	+0.3
	comp=Z,2.4nm,0.4s,baz=115,slow=8.7,SNR=50						
	comp=Z,2.4nm,0.4s						
MKAR	Makanchi Array	66.88	327	P	P	11 16 55.7	-0.2
MAKZ	Makanchi	67.06	327	P	P	11 16 57.2	+0.3
MAKZ				IAmb	IAmb	11 17 00.6	
	comp=Z,12nm,1.4s						
ARSB	Arslanbob	69.46	318	P	P	11 17 12.6	+0.6
ZAA0	Zalesovo Array	70.34	334	P	P	11 17 16.4	-0.4
ZALV	Zalesovo Beam	70.34	334	P	P	11 17 16.2	-0.6
	comp=Z,1.5nm,0.6s,baz=116,slow=4.4,SNR=6.8						
	comp=Z,1.5nm,0.6s						
KURBB	Kurchatov Arra	71.19	329	P	P	11 17 21.9	0.0
	comp=Z,2.2nm,0.4s,baz=128,slow=4.9,SNR=33						
	comp=Z,2.2nm,0.4s						
KURK	Kurchatov	71.20	329	P	P	11 17 21.9	-0.1
VNDA	Vanda	73.34	173	P	P	11 17 34.2	+0.1
	comp=Z,3.2nm,0.8s,baz=320,slow=5.7,SNR=10.0						
	comp=Z,3.2nm,0.8s						
VNDA	Vanda	73.34	173	IAmb	IAmb	11 17 39.1	
	comp=Z,6.4nm,1.1s						
BVAR	Borovoye Array	76.73	328	P	P	11 17 53.4	-0.4
	comp=Z,0.6nm,0.4s,baz=126,slow=8.5,SNR=4.6						
	comp=Z,0.6nm,0.4s						
QSPA	South Pole Qui	83.72	180	P	P	11 18 34.0	+3.3
	comp=Z,2.5nm,0.4s,baz=302,slow=3.2,SNR=10						
QSPA	South Pole Qui	83.72	180	IAmb	IAmb	11 18 35.0	
	comp=Z,4.1nm,0.8s						
RAYN	Ar Rayn	86.23	294		P	11 18 44.8	+0.9
RAYN				IAmb	IAmb	11 18 47.7	
	comp=Z,3.0nm,0.7s						
ILAR	Eielson Array	93.24	25	P	P	11 19 14.4	-1.2
	comp=Z,0.4nm,0.7s,baz=258,slow=5.5,SNR=6.8						
	comp=Z,0.4nm,0.7s						
PDAR	Pinedale Array	117.31	45	PKP	PKPdf	11 24 45.2	-0.2
	comp=Z,0.1nm,0.4s,baz=319,slow=3.1,SNR=4.2						
MNTX	Cornudas Mount	123.65	56		PKiKP	11 24 59.0	+1.1
TX31	Lajitas Ar. Si	125.67	58		PKiKP	11 25 02.8	+0.6
GO02	Mina Guanaco	144.07	151		PKPbc	11 25 36.1	+0.9
PB14	IPOC Station P	144.12	150		PKPbc	11 25 36.3	+1.0
CPUP	Villa Florida	147.09	170	PKPbc	PKPbc	11 25 43.3	-0.3
	comp=Z,1.2nm,0.7s,baz=172,slow=4.7,SNR=8.0						
LPAZ	La Paz	152.11	144	PKPbc	PKPbc	11 25 57.4	+0.6
	comp=Z,1.6nm,0.4s,baz=256,slow=4.2,SNR=8.7						

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*IDC **05** 11:09:13.0±1.9, 14°.01N×145°.48E, h83km±55km, mb3.3/5, mbtmp3.6/5, Error ellipse: s-maj=141.7km s-min=40.7km az=2.0*

*NEIC **05** 11:09:14.4±0.7, 13°.73N±0°.09×145°.4E±0°.1, h100km±8km, mb4.4/15, Error ellipse: s-maj=18.7km s-min=11.1km az=120.0*

ISC 05 11:09:14.1±0.8**, 13°.7N**±0°.1×**145°.4E**±0°.1**, h100**km**, n30, σ0ˢ.58**/24**, mb4.1**/14**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.56	254	P	Pn	11 09 30.6	+0.3
	1μm,0.3s,baz=126,slow=3.5,SNR=319						
GUMO				S	Sn	11 09 42.5	-0.1
	5μm,0.4s,baz=333,slow=23,SNR=21						
DPSS	Saipan	1.53	13	Pn	Pn	11 09 41.4	+0.6
PATS	Pohnpei	14.41	117	Pn	Pn	11 12 33.3	-0.1
H11S3	WAKE ISLAND Hy	20.96	74	T	T	11 36 26.3	
	baz=260						
H11S1	WAKE ISLAND Hy	20.97	74	T	T	11 36 27.4	
	baz=260						
H11S2	WAKE ISLAND Hy	20.97	74	T	T	11 36 34.1	
	baz=260						
H11N1	WAKE ISLAND Hy	21.39	71	T	T	11 37 06.9	
	baz=257,slow=75,SNR=5.7						
H11N2	WAKE ISLAND Hy	21.39	71	T	T	11 37 09.1	

	baz=257,slow=75,SNR=4.7						
H11N3	**WAKE ISLAND Hy**	**21.40**	**71**	T	T	11 37 07.7	
	baz=257,slow=75,SNR=5.4						
BBOO	**Buckleboo**	**47.15**	**191**	P	**P**	**11 17 37.1**	**+0.6**
BBOO				IAmb	IAmb	11 18 17.8	
	comp=Z,17nm,1.3s						
N19K	**Bonanza Creek**	**63.69**	**28**	P	**P**	**11 19 35.2**	**+0.4**
N19K				IAmb	IAmb	11 19 42.9	
	comp=Z,19nm,1.4s						
KURK	**Kurchatov**	**64.82**	**320**	P	**P**	**11 19 41.6**	**-0.7**
KURK	**Kurchatov**	**64.82**	**320**	IAmb	IAmb	11 19 48.7	
	comp=Z,4.4nm,1.4s						
KURBB	**Kurchatov Arra**	**64.86**	**320**	P	**P**	**11 19 41.6**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=98,slow=6.9,SNR=1.9						
	comp=Z,0.3nm,0.6s						
BRLK	**Bradley Lake**	**65.06**	**30**	P	**P**	**11 19 43.3**	**-0.5**
PPLA	**Purkeypile**	**65.41**	**27**	P	**P**	**11 19 46.1**	**+0.1**
SLKM	**Skilak Lake**	**65.59**	**29**	P	**P**	**11 19 47.0**	**-0.1**
SLKM				IAmb	IAmb	11 20 04.8	
	comp=Z,15nm,1.2s						
D20K	**Etivluk River**	**65.92**	**20**	P	**P**	**11 19 49.0**	**0.0**
B20K	**Meade River**	**66.32**	**18**	P	**P**	**11 19 51.6**	**+0.1**
B20K				IAmb	IAmb	11 20 29.9	
	comp=Z,3.4nm,1.1s						
PMR	**Palmer**	**66.39**	**28**	P	**P**	**11 19 50.8**	**-1.4**
PMR				IAmb	IAmb	11 20 30.5	
	comp=Z,5.6nm,1.2s						
SML	**Sawmill**	**66.82**	**28**	P	**P**	**11 19 55.1**	**+0.2**
E22K	**Anaktuvuk Pass**	**67.33**	**21**	P	**P**	**11 19 58.0**	**0.0**
E22K				IAmb	IAmb	11 20 26.2	
	comp=Z,3.7nm,1.4s						
ILAR	**Eielson Array**	**68.20**	**25**	P	**P**	**11 20 02.4**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=252,slow=5.7,SNR=14						
	comp=Z,0.5nm,0.5s						
E24K	**Your Creek**	**68.49**	**22**	P	**P**	**11 20 05.6**	**+0.2**
DOT	**Dot Lake**	**69.15**	**27**	P	**P**	**11 20 09.5**	**0.0**
DOT				IAmb	IAmb	11 20 30.4	
	comp=Z,13nm,1.4s						
D25K	**Kavik River**	**69.58**	**21**	P	**P**	**11 20 12.7**	**+0.6**
BVAR	**Borovoye Array**	**70.14**	**322**	P	**P**	**11 20 16.4**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=92,slow=7.6,SNR=2.1						
	comp=Z,0.4nm,0.4s						
H27K	**Steamboat Moun**	**70.69**	**24**	P	**P**	**11 20 19.4**	**+0.4**
H27K				IAmb	IAmb	11 20 56.9	
	comp=Z,4.4nm,1.4s						
YKA	**Yellowknife Ar**	**82.47**	**27**	P	**P**	**11 21 25.1**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=284,slow=5.8,SNR=5.8						
	comp=Z,0.4nm,0.7s						
NVAR	**Mina Array Bea**	**86.40**	**51**	P	**P**	**11 21 45.5**	**-0.4**
	comp=Z,0.1nm,0.5s,baz=280,slow=3.7,SNR=1.8						
	comp=Z,0.1nm,0.5s						

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*UPP **05** 11:26:37.5±0.1, 67°.85N×20°.22E, h0^{km}, ML2.5, Confirmed Induced event*

*HEL **05** 11:26:38.1±0.4, 67°.77N×20°.31E, h0^{km}, ML1.0, Suspected explosion*

ISC 05 11:26:37.3±0.9**, 67°.82N**±0°.03×**20°.25E**±0°.03**, h0^{km}, n18, σ0^s.85**/29**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.14**	**14**	P	**Pg**	**11 26 39.9**	**-0.1**
KUA				S	**Sg**	**11 26 41.6**	**-0.3**
RATU	**Laukkuluspa**	**0.25**	**272**	P	**Pg**	**11 26 42.2**	**+0.2**
KOVU	**Salmi**	**0.41**	**356**	P	**Pg**	**11 26 44.8**	**-0.3**
	baz=176						
KOVU				S	**Sg**	**11 26 50.0**	**-0.4**
NIKU	**Nikkaluokta**	**0.46**	**277**	P	**Pg**	**11 26 46.1**	**0.0**
NIKU				S	**Sg**	**11 26 52.3**	**+0.2**
LANU	**Lannavaara**	**0.70**	**70**	P	**Pg**	**11 26 50.8**	**+0.1**
LANU				S	**Sg**	**11 27 00.2**	**+0.4**
LANU	**Lannavaara**	**0.70**	**70**	PG	**Pg**	**11 26 50.8**	**+0.1**
LANU				SG	**Sg**	**11 27 00.2**	**+0.4**
KIF	**Kilpisjarvi**	**1.21**	**10**	PG	**Pn**	**11 27 01.5**	**+0.1**
KIF				SG	**Sg**	**11 27 16.1**	**-0.1**
KIF				MSG		11 27 17.2	
	comp=Z,2.5nm,0.2s						
PAJU	**Pajala**	**1.36**	**124**	P	**Pg**	**11 27 03.1**	**-0.3**
PAJU	**Pajala**	**1.36**	**124**	PN	**Pg**	**11 27 02.9**	**-0.4**
	baz=308						
PAJU				SN	**Sn**	**11 27 21.8**	**-0.5**
HEF	**Hetta**	**1.41**	**63**	PG	**Pg**	**11 27 03.6**	**-0.7**
	baz=246						
HEF				MSG		11 27 20.6	
	comp=Z,0.8nm,0.2s						
HEF				SN	**Sn**	**11 27 26.3**	**+2.8**
ERTU	**Ertsjaerv**	**1.48**	**148**	PN	**Pb**	**11 27 05.7**	**+0.2**
KLF	**Kolari**	**1.54**	**110**	PN	**Pb**	**11 27 06.5**	**-0.2**
KLF				MSG		11 27 23.2	
	comp=Z,0.7nm,0.2s						
KLF				SN	**Sn**	**11 27 28.0**	**+1.3**
KTK1	**Kautokeino**	**1.63**	**41**	PG	**Pb**	**11 27 08.0**	**-0.2**
KTK1				SN	**Sg**	**11 27 29.5**	**-0.2**
KALU	**Kalix**	**2.32**	**146**	PG	**Pb**	**11 27 18.5**	**-1.4**
TOF	**Tornio**	**2.37**	**135**	PG	**Pb**	**11 27 19.6**	**-1.1**
TOF				MSG		11 27 46.8	
	comp=Z,0.4nm,0.2s						
RNF	**Rovaniemi**	**2.55**	**116**	PG	**Pb**	**11 27 22.8**	**-1.0**
RNF				SG	**Sb**	**11 27 57.0**	**+1.3**
ARA0	**ARCESS Array S**	**2.58**	**46**	SG	**Sb**	**11 27 56.5**	**-0.2**
KEV	**Kevo**	**3.14**	**48**	SB	**Sb**	**11 28 11.2**	**-1.4**

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*IDC **05** 11:27:19.9±0.9, 35°.14N×3°.71W, h0^{km}, mb3.7/7, mbtmp3.7/9, ML3.5/2, MS3.0/3, Error ellipse: s-maj=30.0km s-min=13.2km az=104.0*

*CNRM **05** 11:27:22.0, 35°.18N×3°.56W, h18^{km}, ML4.1*

*MDD **05** 11:27:22.3±0.3, 35°.04N×3°.62W, h6^{km}, mb_Lg3.3/40, Error ellipse: s-maj=3.1km s-min=2.1km az=140.0*

*IGIL **05** 11:27:23.2, 35°.10N×3°.68W, h2^{km}, ML3.3*

*INMG **05** 11:27:23.2±1.5, 35°.10N×3°.60W, h12^{km}±5^{km}, ML3.0, Error ellipse: s-maj=3.0km s-min=2.5km az=131.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Al Hoceima (MARR)*

*SFS **05** 11:27:23.6, 35°.13N×3°.58W, h16^{km}, ML3.8/20, ML3.7/28, MLv3.5/28*

ISC 05 11:27:22.2±1.1**, 35°.12N**±0°.02×**3°.61W**±0°.02**, h17**^{km}±7^{km}**, n138, σ1^s.45**/212**, mb3.9**/6**, 1C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.29**	**289**	P	**Pg**	**11 27 28.8**	**+0.3**
PALE	**Palemas**	**0.29**	**289**	S	**Sb**	**11 27 34.2**	**+0.7**
EMEL	**Melilla**	**0.56**	**71**	⇑Pg	**Pg**	**11 27 33.1**	**-0.2**
EMEL				Sg	**Sn**	**11 27 42.7**	**-1.6**
EMLI	**Melilla**	**0.57**	**71**	Pg	**Pg**	**11 27 33.1**	**-0.3**
EMLI				Sg	**Sb**	**11 27 41.1**	**-0.3**
WMELI	**Melilla**	**0.57**	**70**	Pg	**Pb**	**11 27 33.3**	**-0.4**
WMELI				Sg	**Sb**	**11 27 41.4**	**-0.2**
AKLM	**AKL**	**0.65**	**199**	P	**Pg**	**11 27 34.3**	**-0.7**
AKLM	**AKL**	**0.65**	**199**	S	**Sb**	**11 27 44.7**	**+0.9**
EALB	**Alboran**	**0.94**	**30**	Pg	**Pn**	**11 27 40.5**	**-0.1**
EALB				Sg	**Sn**	**11 27 53.5**	**-0.2**
EALB	**Alboran**	**0.94**	**30**	Pg	**Pn**	**11 27 40.5**	**-0.1**
EALB				Sg	**Sn**	**11 27 54.0**	**+0.3**
EALB				*i* IVmb_Lg		11 27 55.8	
TAF	**Taforalt**	**1.03**	**107**	P	**Pb**	**11 27 41.0**	**-0.5**
TAF	**Taforalt**	**1.03**	**107**	S	**Sg**	**11 27 54.9**	**-0.7**
ECEU	**Ceuta**	**1.64**	**299**	Pn	**Pn**	**11 27 48.8**	**-1.5**
ECEU				Sn	**Sn**	**11 28 11.6**	**+0.6**
ECEU	**Ceuta**	**1.64**	**299**	Pn	**Pn**	**11 27 48.9**	**-1.5**
ECEU				Sn	**Sn**	**11 28 08.5**	**-2.5**
ECEU				*i* IVmb_Lg		11 28 10.8	
EMIJ	**Mijas**	**1.72**	**327**	Pn	**Pn**	**11 27 52.0**	**+0.5**
EMIJ				Sn	**Sn**	**11 28 11.9**	**-1.2**
EMIJ	**Mijas**	**1.72**	**327**	Pn	**Pn**	**11 27 51.7**	**+0.3**
EMIJ				Sn	**Sn**	**11 28 13.4**	**+0.3**
EMIJ				*i* IVmb_Lg		11 28 18.1	
ELGU	**Los Guajares,**	**1.74**	**359**	Pn	**Pn**	**11 27 51.0**	**-0.8**
ELGU				Sn	**Sn**	**11 28 12.2**	**-1.4**
ELGU	**Los Guajares,**	**1.74**	**359**	Pn	**Pn**	**11 27 50.7**	**-1.1**
ELGU				Sn	**Sn**	**11 28 12.4**	**-1.2**
ELGU				*i* IVmb_Lg		11 28 16.5	
LCRM	**LCR**	**1.77**	**216**	P	**Pb**	**11 27 54.6**	**+0.3**
LCRM	**LCR**	**1.77**	**216**	S	**Sg**	**11 28 20.3**	**+1.2**
EXEJI	**El Ejido**	**1.77**	**21**	Sn	**Sn**	**11 28 14.8**	**+0.6**
EXAGR	**Agron**	**1.91**	**355**	Pn	**Pn**	**11 27 55.6**	**+1.4**
EXAGR				Sn	**Sn**	**11 28 18.7**	**+0.8**
EJIF	**Jimena Fronter**	**2.01**	**312**	Pn	**Pn**	**11 27 55.0**	**-0.4**
EJIF				Sn	**Sn**	**11 28 21.6**	**+1.4**
EGOR	**Sierra Gorda,**	**2.03**	**349**	Pn	**Pn**	**11 27 55.5**	**-0.2**
EGOR				Sn	**Sn**	**11 28 21.0**	**+0.2**
EGOR	**Sierra Gorda,**	**2.03**	**349**	Pn	**Pn**	**11 27 56.1**	**+0.4**
EGOR				Sn	**Sb**	**11 28 23.5**	**-0.1**
EGOR				*i* IVmb_Lg		11 28 31.5	
IFR	**Ifrane**	**2.04**	**219**	Pn	**Pn**	**11 27 56.0**	**+0.1**
IFR				Sn	**Sn**	**11 28 20.3**	**-0.7**
EQUE	**Quentar**	**2.08**	**4**	Pn	**Pn**	**11 27 56.8**	**+0.3**
EQUE				Sn	**Sn**	**11 28 22.6**	**+0.5**
EQUE				*i* IVmb_Lg		11 28 36.6	
EQTA	**Presa de Quent**	**2.09**	**4**	Pn	**Pn**	**11 27 56.9**	**+0.4**
EQTA				Sn	**Sn**	**11 28 21.8**	**-0.4**
ENIJ	**Nijar**	**2.17**	**31**	Pn	**Pn**	**11 27 57.2**	**-0.3**
ENIJ				Sn	**Sn**	**11 28 22.3**	**-1.7**
ENIJ	**Nijar**	**2.17**	**31**	Pn	**Pn**	**11 27 57.9**	**+0.4**
ENIJ				Sn	**Sn**	**11 28 24.0**	**-0.1**
ENIJ				*i* IVmb_Lg		11 28 27.3	
CNIL	**Conil**	**2.35**	**303**	Pn	**Pn**	**11 28 02.1**	**+2.1**
CZD	**Col de Zad**	**2.40**	**210**	P	**Pn**	**11 28 03.0**	**+2.0**
CZD	**Col de Zad**	**2.40**	**210**	S	**Sn**	**11 28 32.1**	**+2.0**
MD31	**MD31**	**2.44**	**203**	P	**Pn**	**11 28 01.9**	**+0.5**
MD31	**MD31**	**2.44**	**203**	S	**Sb**	**11 28 34.0**	**-1.6**
MDT	**Midelt**	**2.45**	**200**	Pn	**Pn**	**11 28 01.8**	**+0.4**
	2.9nm,0.3s,baz=29,slow=14,SNR=29						
MDT				Lg	Lg	11 28 37.4	
	55nm,0.3s,baz=236,slow=10,SNR=9.5						
MDT				LR	LR	11 29 01.4	
	comp=Z,116nm,18.6s,baz=326,slow=42						
	10nm,0.3s						
MDT	**Midelt**	**2.45**	**200**	P	**Pn**	**11 28 01.9**	**+0.4**
MDT	**Midelt**	**2.45**	**200**	S	**Sn**	**11 28 33.0**	**+2.0**
ESPR	**Espera**	**2.52**	**314**	Pn	**Pn**	**11 28 04.0**	**+1.5**
ESPR				Sn	**Sn**	**11 28 31.9**	**-0.9**
ESPR	**Espera**	**2.52**	**314**	Pn	**Pn**	**11 28 04.1**	**+1.7**
ESPR				Sn	**Sb**	**11 28 36.6**	**-1.2**
ESPR				*i* IVmb_Lg		11 28 45.4	
EQES	**Quesada**	**2.71**	**9**	Pn	**Pn**	**11 28 06.3**	**+1.2**
EQES				Sn	**Sn**	**11 28 39.2**	**+1.6**
EQES				*i* IVmb_Lg		11 28 46.5	
E0802	**Ubeda,Jaen**	**2.91**	**4**	Sn	**Sn**	**11 28 45.6**	**+3.3**
ELOR	**Lorca, Murcia**	**2.93**	**30**	Sn	**Sn**	**11 28 43.6**	**+0.8**
ELOR				*i* IVmb_Lg		11 28 48.9	
TLOR	**Lorca, Murcia**	**2.96**	**31**	Sn	**Sn**	**11 28 42.7**	**-1.0**
TLOR	**Lorca, Murcia**	**2.96**	**31**	Sn	**Sn**	**11 28 42.9**	**-0.9**
EADA	**Adamuz**	**3.14**	**346**	Pn	**Pn**	**11 28 12.0**	**+1.1**
EADA	**Adamuz**	**3.14**	**346**	Pn	**Pn**	**11 28 11.8**	**+0.8**
EADA				Sn	**Sn**	**11 28 51.4**	**+3.4**
EADA				*i* IVmb_Lg		11 29 00.5	
CART	**Cartagena**	**3.24**	**40**	Pn	**Pn**	**11 28 11.7**	**-0.5**
CART				Sn	**Sn**	**11 28 48.0**	**-2.4**
CART	**Cartagena**	**3.24**	**40**	P	**Pn**	**11 28 11.3**	**-0.9**
CART	**Cartagena**	**3.24**	**40**	S	**Sn**	**11 28 48.5**	**-1.8**
ECAB	**El Cabril**	**3.29**	**334**	Pn	**Pn**	**11 28 14.0**	**+1.0**
ECAB				Sn	**Sn**	**11 28 51.3**	**-0.4**
ECAB	**El Cabril**	**3.29**	**334**	Pn	**Pn**	**11 28 13.8**	**+0.8**
ECAB				Sn	**Sn**	**11 28 53.6**	**+1.8**
ECAB				*i* IVmb_Lg		11 29 08.8	
EMUR	**La Murta**	**3.32**	**34**	Pn	**Pn**	**11 28 14.1**	**+0.7**
EMUR				Sn	**Sn**	**11 28 50.6**	**-1.8**
EMUR	**La Murta**	**3.32**	**34**	Pn	**Pn**	**11 28 13.6**	**+0.2**
EMUR				Sn	**Sn**	**11 28 51.5**	**-1.0**
EMUR				*i* IVmb_Lg		11 28 54.1	
FIGM	**Figuig**	**3.56**	**146**	P	**Pn**	**11 28 17.4**	**+0.5**
FIGM	**Figuig**	**3.56**	**146**	S	**Sn**	**11 29 00.1**	**+1.4**
EMIN	**Mina Concepcio**	**3.62**	**318**	Pn	**Pn**	**11 28 17.6**	**+0.2**
EMIN				Sn	**Sn**	**11 28 58.7**	**-1.0**
EMIN	**Mina Concepcio**	**3.62**	**318**	Pn	**Pn**	**11 28 17.5**	**0.0**
EMIN				Sn	**Sn**	**11 28 58.7**	**-1.0**
EMIN				*i* IVmb_Lg		11 29 07.7	
PSIM	**Granatula de C**	**3.69**	**358**	Pn	**Pn**	**11 28 18.9**	**+0.3**
PSIM				Sn	**Sn**	**11 29 03.0**	**+1.3**
ARF	**Arif**	**3.71**	**188**	P	**Pn**	**11 28 20.3**	**+1.4**
ARF	**Arif**	**3.71**	**188**	S	**Sn**	**11 29 05.2**	**+2.9**
ETOB	**Tobarra**	**3.88**	**25**	Pn	**Pn**	**11 28 22.9**	**+1.7**
ETOB				Sn	**Sn**	**11 29 03.6**	**-2.9**
ETOB	**Tobarra**	**3.88**	**25**	Pn	**Pn**	**11 28 23.7**	**+2.5**
ETOB				Sn	**Sn**	**11 29 07.9**	**+1.4**
ETOB				*i* IVmb_Lg		11 29 11.7	
EGRO	**El Granado**	**3.95**	**309**	Pn	**Pn**	**11 28 22.3**	**+0.3**
EGRO				Sn	**Sn**	**11 29 06.0**	**-1.9**
EGRO	**El Granado**	**3.95**	**309**	Pn	**Pn**	**11 28 22.3**	**+0.3**
EGRO				Sn	**Sn**	**11 29 06.0**	**-1.9**
EGRO				*i* IVmb_Lg		11 29 10.0	
PBDV	**Barranco-do-Ve**	**4.09**	**302**	Pn	**Pn**	**11 28 24.2**	**+0.2**
PBDV				Sn	**Sn**	**11 29 08.9**	**-2.5**
PBDV	**Barranco-do-Ve**	**4.09**	**302**	*e*P	**Pn**	**11 28 24.3**	**+0.2**
PBDV				*e*S	**Sn**	**11 29 09.8**	**-1.7**
PBDV				*i* IAML		11 29 12.5	
PBDV				*i* IAML		11 29 13.5	
PBDV				*i* IAML		11 29 15.4	
PBAR	**Barrancos**	**4.11**	**319**	Pn	**Pn**	**11 28 24.5**	**+0.3**
PBAR				Sn	**Sn**	**11 29 09.5**	**-2.4**
PBAR	**Barrancos**	**4.11**	**319**	*e*P	**Pn**	**11 28 25.2**	**+1.0**
PBAR				*e*S	**Sn**	**11 29 12.8**	**+0.8**
PBAR				*i* IAML		11 29 15.6	
PBAR				*i* IAML		11 29 16.7	
PBAR				*i* IAML		11 29 18.8	
TISM	**Timmit**	**4.14**	**216**	P	**Pn**	**11 28 25.2**	**+0.6**
TISM	**Timmit**	**4.14**	**216**	S	**Sn**	**11 29 15.3**	**+2.7**
AFON	**Font Roja**	**4.31**	**34**	Pn	**Pn**	**11 28 27.4**	**+0.3**
AFON				Sn	**Sn**	**11 29 19.6**	**+2.6**
AFON				*i* IVmb_Lg		11 29 21.6	
PCVE	**Castro Verde**	**4.37**	**306**	Pn	**Pn**	**11 28 27.8**	**+0.1**
PCVE				Sn	**Sn**	**11 29 16.7**	**-1.6**
PCVE	**Castro Verde**	**4.37**	**306**	*e*P	**Pn**	**11 28 28.5**	**+0.7**
PCVE				*e*S	**Sn**	**11 29 18.3**	**+0.1**
PCVE				*i* IAML		11 29 22.0	
PCVE				*i* IAML		11 29 22.3	
PCVE				*i* IAML		11 29 23.7	
SRHM	**Skhour des Reh**	**4.44**	**235**	P	**Pn**	**11 28 32.5**	**+3.6**
SRHM	**Skhour des Reh**	**4.44**	**235**	S	**Sb**	**11 29 28.5**	**-4.7**
PAB	**San Pablo**	**4.46**	**353**	Pn	**Pn**	**11 28 30.3**	**+1.3**
PAB				Sn	**Sn**	**11 29 20.3**	**-0.3**
EBEN2	**Beniarda presa**	**4.48**	**37**	Pn	**Pn**	**11 28 30.3**	**+1.0**
EBEN2				Sn	**Sn**	**11 29 20.2**	**-1.0**
PBEJ	**Beja**	**4.49**	**311**	*e*P	**Pn**	**11 28 30.2**	**+0.8**
PBEJ				*e*S	**Sn**	**11 29 20.7**	**-0.6**
PBEJ				*i* IAML		11 29 24.1	
PBEJ				*i* IAML		11 29 27.2	
PBEJ				*i* IAML		11 29 27.5	
EBAD	**Badajoz**	**4.54**	**324**	Pn	**Pn**	**11 28 30.3**	**+0.2**
EBAD				Sn	**Sn**	**11 29 21.2**	**-1.3**
EBAD	**Badajoz**	**4.54**	**324**	Pn	**Pn**	**11 28 30.3**	**+0.2**
EBAD				Sn	**Sn**	**11 29 21.7**	**-0.8**
EBAD				*i* IVmb_Lg		11 29 26.1	
ESDC	**Sonseca Array**	**4.55**	**357**	Pn	**Pn**	**11 28 31.6**	**+1.2**
ESDC				Sn	**Sn**	**11 29 23.5**	**+0.6**
ESDC				*i* IVmb_Lg		11 29 45.4	
ESDC	**Sonseca Array**	**4.55**	**357**	Pn	**Pn**	**11 28 31.6**	**+1.2**
	2.2nm,0.3s,baz=178,slow=12,SNR=71						
ESDC				Sn	**Sn**	**11 29 23.4**	**+0.4**
	0.6nm,0.3s,baz=184,slow=22,SNR=4.2						
ESDC				Lg	Lg	11 29 42.4	
	0.9nm,0.3s,baz=176,slow=24,SNR=4.3						
	7.2nm,0.3s						
ESBB	**Sonseca Array**	**4.55**	**357**	Pn	**Pn**	**11 28 31.5**	**+1.1**
ESBB				Sn	**Sn**	**11 29 23.9**	**+0.9**
EVIV	**Cofrentes, Val**	**4.59**	**25**	Pn	**Pn**	**11 28 31.8**	**+0.9**
EVIV				Sn	**Sn**	**11 29 27.4**	**+3.6**
MESJ	**Messejana**	**4.60**	**307**	*e*P	**Pn**	**11 28 31.3**	**+0.3**
MESJ	**Messejana**	**4.60**	**307**	*e*P	**Pn**	**11 28 31.9**	**+0.9**
MESJ				*e*S	**Sn**	**11 29 24.2**	**+0.1**
MESJ				*i* IAML		11 29 25.2	
MESJ				*i* IAML		11 29 27.7	
MESJ				*i* IAML		11 29 28.4	
MORF	**Marmelete**	**4.62**	**300**	*e*P	**Pn**	**11 28 31.6**	**+0.2**
MORF				*e*S	**Sn**	**11 29 21.5**	**-3.2**
MORF				IAML		11 29 26.2	
	comp=E,50nm,0.4s						
MORF	**Marmelete**	**4.62**	**300**	*e*P	**Pn**	**11 28 32.5**	**+1.1**
MORF				*e*S	**Sn**	**11 29 24.3**	**-0.4**
MORF				*i* IAML		11 29 26.5	
MORF				*i* IAML		11 29 30.4	
MORF				*i* IAML		11 29 36.3	
TZRR	**Tazzarine**	**4.63**	**201**	P	**Pn**	**11 28 32.2**	**+0.8**
TZRR	**Tazzarine**	**4.63**	**201**	S	**Sn**	**11 29 27.0**	**+2.1**
PFVI	**Vila Bisbo**	**4.68**	**297**	Pn	**Pn**	**11 28 33.0**	**+0.9**
PFVI				Sn	**Sn**	**11 29 22.7**	**-3.2**
PFVI	**Vila Bisbo**	**4.68**	**297**	*e*P	**Pn**	**11 28 32.9**	**+0.9**
PFVI				*e*S	**Sn**	**11 29 25.4**	**-0.5**
PFVI				*i* IAML		11 29 26.9	
PFVI				*i* IAML		11 29 29.8	
PFVI				*i* IAML		11 29 36.8	
PFVI	**Vila Bisbo**	**4.68**	**297**	P	**Pn**	**11 28 33.0**	**+0.9**
PFVI	**Vila Bisbo**	**4.68**	**297**	S	**Sn**	**11 29 26.4**	**+0.5**
PTEO	**Sao Teotonio**	**4.79**	**302**	*e*P	**Pn**	**11 28 34.2**	**+0.6**
PTEO				*e*S	**Sn**	**11 29 28.1**	**-0.5**
PTEO				*i* IAML		11 29 30.3	
PTEO				*i* IAML		11 29 31.8	
PTEO				*i* IAML		11 29 42.7	
PESTR	**Estremoz**	**4.91**	**321**	Pn	**Pn**	**11 28 36.5**	**+1.2**
PESTR				Sn	**Sn**	**11 29 30.1**	**-1.6**
PESTR	**Estremoz**	**4.91**	**321**	*e*P	**Pn**	**11 28 36.8**	**+1.5**
PESTR				*e*S	**Sn**	**11 29 31.6**	**-0.2**
PESTR				*i* IAML		11 29 42.7	
PESTR				*i* IAML		11 29 43.1	
PESTR				*i* IAML		11 29 44.6	
OUZM	**OUZ**	**4.97**	**213**	P	**Pn**	**11 28 39.1**	**+2.9**
OUZM	**OUZ**	**4.97**	**213**	S	**Sn**	**11 29 39.7**	**+6.5**
MOE	**Montemor**	**5.10**	**313**	*e*P	**Pn**	**11 28 39.4**	**+1.6**
MOE				*e*S	**Sn**	**11 29 35.7**	**-0.6**
MOE				*i* IAML		11 29 47.0	
MOE				*i* IAML		11 29 53.4	
MOE				*i* IAML		11 29 59.1	
TIO	**Tiouine**	**5.19**	**217**	Sn	**Sn**	**11 29 37.3**	**-1.5**
TIO				Pn	**Pn**	**11 28 40.9**	**+1.7**
PMRV	**Marv??o**	**5.25**	**326**	*e*P	**Pn**	**11 28 41.1**	**+1.1**
PMRV				*e*S	**Sn**	**11 29 39.7**	**-0.4**
PMRV				*i* IAML		11 29 44.5	
PMRV				*i* IAML		11 29 55.4	
PMRV				*i* IAML		11 29 56.3	
ZGR	**Zagora**	**5.27**	**199**	P	**Pn**	**11 28 41.6**	**+1.3**
ZGR	**Zagora**	**5.27**	**199**	S	**Sn**	**11 29 43.3**	**+2.6**
OUK	**Oukaimeden**	**5.29**	**224**	P	**Pn**	**11 28 41.0**	**+0.2**
OUK	**Oukaimeden**	**5.29**	**224**	S	**Sn**	**11 29 43.8**	**+2.2**
EPLA	**Plasencia**	**5.31**	**339**	Pn	**Pn**	**11 28 41.5**	**+0.7**
EPLA				Sn	**Sn**	**11 29 41.8**	**+0.3**
PMTG	**Montargil**	**5.40**	**318**	*e*P	**Pn**	**11 28 43.0**	**+1.0**
PMTG				*e*S	**Sn**	**11 29 42.9**	**-0.8**
PMTG				*i* IAML		11 29 46.9	
PMTG				*i* IAML		11 29 55.7	
PMTG				*i* IAML		11 29 59.2	
YEBES	**Yebes (Guadala**	**5.41**	**4**	Pn	**Pn**	**11 28 43.9**	**+1.7**
GUD	**Guadarrama**	**5.53**	**356**	Pn	**Pn**	**11 28 45.0**	**+1.2**
GUD				Sn	**Sn**	**11 29 47.2**	**+0.1**
GUD				*i* IVmb_Lg		11 30 13.4	
PCBR	**Castelo Branco**	**5.63**	**328**	*e*P	**Pn**	**11 28 46.0**	**+1.0**
PCBR				*e*S	**Sn**	**11 29 47.5**	**-1.8**
PCBR				*i* IAML		11 29 51.0	
PCBR				*i* IAML		11 29 51.1	
PCBR				*i* IAML		11 29 51.9	
E0901	**Celadas (Terue**	**5.70**	**19**	Pn	**Pn**	**11 28 48.6**	**+2.4**
E0901				Sn	**Sn**	**11 29 50.4**	**-0.8**
PSARD	**Sardoal**	**5.76**	**322**	*e*P	**Pn**	**11 28 48.0**	**+1.1**
PSARD				*e*S	**Sn**	**11 29 51.7**	**-0.8**
PSARD				*i* IAML		11 29 59.2	
PSARD				*i* IAML		11 30 02.1	
PSARD				*i* IAML		11 30 06.7	
EMOS	**Mosqueruela**	**5.79**	**24**	Pn	**Pn**	**11 28 49.6**	**+2.1**
PSBE	**So Bento**	**6.03**	**318**	*e*P	**Pn**	**11 28 51.9**	**+1.3**
PSBE				*e*S	**Sn**	**11 29 57.1**	**-2.0**
MTE	**Manteigas**	**6.12**	**331**	*e*P	**Pn**	**11 28 53.1**	**+1.2**
MTE				*e*S	**Sn**	**11 29 59.8**	**-1.8**
MTE				*i* IAML		11 30 06.9	
MTE				*i* IAML		11 30 13.0	
MTE				*i* IAML		11 30 19.3	
EJUZ	**Juzbado, Salam**	**6.22**	**344**	Pn	**Pn**	**11 28 54.8**	**+1.5**
PCAS	**Casmilo, Conde**	**6.27**	**323**	*e*P	**Pn**	**11 28 55.7**	**+1.8**
PCAS				*e*S	**Sn**	**11 30 02.7**	**-2.4**
PCAS				*i* IAML		11 30 06.8	
PCAS				*i* IAML		11 30 11.5	
PCAS				*i* IAML		11 30 15.3	
PVIS	**Viseu**	**6.53**	**330**	*e*P	**Pn**	**11 28 58.8**	**+1.2**
PVIS				*e*S	**Sn**	**11 30 11.2**	**-0.5**
MVO	**Moncorvo**	**6.61**	**337**	*e*P	**Pn**	**11 28 59.9**	**+1.3**
MVO				*e*S	**Sn**	**11 30 11.6**	**-2.0**
MVO				*i* IAML		11 30 21.8	
MVO				*i* IAML		11 30 29.6	
MVO				*i* IAML		11 30 57.5	
ETOS	**Mallorca**	**6.90**	**46**	Pn	**Pn**	**11 29 02.8**	**+0.2**
PVRL	**Vila Real**	**6.94**	**333**	*e*P	**Pn**	**11 29 04.4**	**+1.2**
PVRL				*e*S	**Sn**	**11 30 20.9**	**-0.9**
POLO	**Lamas de Olo**	**7.06**	**333**	*e*P	**Pn**	**11 29 06.0**	**+1.2**
PBRG	**Braganca**	**7.11**	**341**	*e*P	**Pn**	**11 29 06.5**	**+1.0**
ECAL	**Calabor**	**7.24**	**341**	Pn	**Pn**	**11 29 08.4**	**+1.1**
ECAL	**Calabor**	**7.24**	**341**	Pn	**Pn**	**11 29 09.1**	**+1.8**
ECAL				Sn	**Sn**	**11 30 27.3**	**-1.7**
ECAL				*i* IVmb_Lg		11 30 34.5	
PCAB	**Cabril**	**7.44**	**334**	*e*P	**Pn**	**11 29 11.7**	**+1.8**
ELOB	**Lobios**	**7.59**	**334**	Pn	**Pn**	**11 29 12.6**	**+0.6**
ELOB				Sn	**Sn**	**11 30 36.3**	**-1.3**
ELOB				*i* IVmb_Lg		11 30 44.2	
KEST	**Kesra**	**10.59**	**83**	LR	LR	11 34 24.1	
	comp=E,56nm,18.4s,baz=287,slow=40						
EKA	**Eskdalemuir Ar**	**20.21**	**1**	P	Pn	11 31 57.5	-0.5
	comp=E,3.0nm,0.7s,baz=181,slow=10,SNR=4.1						
	comp=E,3.0nm,0.7s						
KIRV	**Kirov**	**41.74**	**39**	LR	LR	11 51 32.1	
	comp=E,76nm,18.4s,baz=263,slow=35						
KURBB	**Kurchatov Arra**	**59.14**	**47**	P	**P**	**11 37 22.2**	**+0.5**
	comp=E,0.8nm,0.4s,baz=293,slow=7.6,SNR=8.4						
	comp=E,0.8nm,0.4s						
ZALV	**Zalesovo Beam**	**61.62**	**42**	P	**P**	**11 37 39.2**	**+0.5**
	comp=E,0.9nm,0.6s,baz=300,slow=12,SNR=4.0						
	comp=E,0.9nm,0.6s						
MKAR	**Makanchi Array**	**62.84**	**50**	P	**P**	**11 37 47.5**	**+0.5**
	comp=E,0.5nm,0.6s,baz=286,slow=5.9,SNR=3.7						
	comp=E,0.5nm,0.6s						
YKA	**Yellowknife Ar**	**68.23**	**332**	P	**P**	**11 38 21.8**	**+0.3**
	comp=E,0.3nm,0.7s,baz=57,slow=6.1,SNR=5.3						
	comp=E,0.3nm,0.7s						
PDAR	**Pinedale Array**	**77.20**	**313**	P	**P**	**11 39 15.2**	**-0.4**
	comp=E,0.7nm,0.7s,baz=65,slow=7.4,SNR=6.5						
	comp=E,0.7nm,0.7s						
TXAR	**Lajitas Array**	**81.14**	**300**	P	**P**	**11 39 36.6**	**-0.5**
	comp=E,0.2nm,0.8s,baz=52,slow=6.4,SNR=1.9						
	comp=E,0.2nm,0.8s						
ASAR	**Alice Springs**	**141.52**	**84**	PKP	**PKPdf**	**11 46 53.7**	**+0.9**
	comp=E,0.2nm,0.7s,baz=315,slow=2.7,SNR=1.9						

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*NEIC **05** 11:41:48.0±2.3, 19°.01N±0°.03×67°.13W±0°.02, h10^{km}±1^{km}, ML2.6/16, Md3.3/9(RSPR), Error ellipse: s-maj=5.9km s-min=3.1km az=149.0*

*RSPR **05** 11:41:48.6, 19°.04N×67°.18W, h7^{km}±2^{km}, MD3.2/9*

*SDD **05** 11:41:48.1±2.2, 19°.09N×67°.11W, h17^{km}±51^{km}, MD3.1, ML3.3, MW3.0, Presumed earthquake*

*OSPL **05** 11:41:48.0±0.4, 19°.09N×67°.27W, h21^{km}±2^{km}, ML2.6, Presumed earthquake*

ISC 05 11:41:47.4±1.4**, 19°.05N**±0°.06×**67°.08W**±0°.03**, h17**^{km}±9^{km}**, n47, σ0^s.75**/60**, 21C-2D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.58**	**183**	⇑*e*P	**Pb**	**11 41 59.5**	**+0.3**
AGPR	**Aguadilla, PR**	**0.58**	**183**	*e*S	**Sb**	**11 42 07.9**	**+0.9**
AGPR	**Aguadilla, PR**	**0.58**	**183**	⇑*e*Pg	**Pb**	**11 41 59.4**	**+0.3**
AGPR				⇑*e*Sg	**Sb**	**11 42 07.1**	**0.0**
AGPR				IAML		11 42 10.9	
	comp=N,3µm,0.2s						
AGPR	**Aguadilla, PR**	**0.58**	**183**	*i* P	**Pb**	**11 41 59.6**	**+0.5**
AGPR				*e*S	**Sb**	**11 42 08.1**	**+1.0**
AGPR				IAML		11 42 10.3	
	comp=Z,286nm,0.2s						
IDE	**Isla Desecheo**	**0.76**	**209**		**Pb**	**11 42 01.5**	**-0.6**
IDE					**Sb**	**11 42 11.6**	**-0.6**
IDE	**Isla Desecheo**	**0.76**	**209**	⇑*e*P	**Pb**	**11 42 01.5**	**-0.6**
IDE	**Isla Desecheo**	**0.76**	**209**	*e*S	**Sb**	**11 42 11.6**	**-0.6**
AOPR	**Arecibo Observ**	**0.76**	**156**		**Pb**	**11 42 02.6**	**+0.3**
AOPR					**Sn**	**11 42 13.9**	**-0.7**
AOPR	**Arecibo Observ**	**0.76**	**156**	⇑*e*P	**Pb**	**11 42 02.6**	**+0.3**
AOPR	**Arecibo Observ**	**0.76**	**156**	*e*S	**Sn**	**11 42 13.9**	**-0.7**
AOPR	**Arecibo Observ**	**0.76**	**156**	⇑*e*Pg	**Pb**	**11 42 02.6**	**+0.3**
AOPR				⇑*e*Sg	**Sn**	**11 42 15.0**	**+0.3**
AOPR				IAML		11 42 23.1	
	comp=N,2µm,0.2s						
EMPR	**Esperanza - Ma**	**0.77**	**137**		**Pn**	**11 42 03.7**	**+0.1**
EMPR					**Sn**	**11 42 14.4**	**-0.4**
EMPR	**Esperanza - Ma**	**0.77**	**137**	IAML		11 42 26.2	
	comp=N,178nm,0.7s						
EMPR	**Esperanza - Ma**	**0.77**	**137**	⇑*e*P	**Pn**	**11 42 03.7**	**+0.1**

EMPR	Esperanza - Ma	0.77	137	eS	Sn	11 42 14.4	-0.4
LSP	Las Mesas	0.87	180		Pg	11 42 04.1	-0.2
LSP					Sg	11 42 16.0	+0.2
LSP	Las Mesas	0.87	180	⇑eP	Pg	11 42 04.1	-0.2
LSP	Las Mesas	0.87	180	eS	Sg	11 42 16.0	+0.2
ECPR	Experimental S	1.00	137	⇑eP	Pg	11 42 06.6	-0.1
ECPR	Experimental S	1.00	137	eS	Sn	11 42 22.4	+2.0
CRPR	Cabo Rojo, PR	1.04	181		Pb	11 42 06.4	-0.5
CRPR					Sb	11 42 20.1	-0.2
CRPR	Cabo Rojo, PR	1.04	181	IAML		11 42 21.2	
	comp=N,190nm,0.3s						
CRPR				IAML		11 42 22.8	
	comp=N,140nm,0.2s						
CRPR	Cabo Rojo, PR	1.04	181	⇑eP	Pb	11 42 06.4	-0.5
CRPR	Cabo Rojo, PR	1.04	181	eS	Sb	11 42 20.1	-0.2
CRPR	Cabo Rojo, PR	1.04	181	⇑ePg	Pb	11 42 06.6	-0.3
CRPR				⇑eSg	Sb	11 42 19.9	-0.4
CRPR				IAML		11 42 21.1	
	comp=N,1µm,0.3s						
CRPR	Cabo Rojo, PR	1.04	181	i P	Pb	11 42 06.5	-0.4
CRPR				eS	Sb	11 42 20.0	-0.3
CRPR				IAML		11 42 20.5	
	comp=Z,138nm,0.5s						
MLPR	Magueyes Islan	1.07	178	⇑eP	Pb	11 42 07.1	-0.5
MLPR	Magueyes Islan	1.07	178	eS	Sb	11 42 21.2	-0.1
MLPR	Magueyes Islan	1.07	178	⇑ePg	Pb	11 42 07.1	-0.5
MLPR				⇓eSg	Sb	11 42 21.3	0.0
MLPR				IAML		11 42 22.2	
	comp=N,849nm,0.4s						
OBIP	Obispado Ponce	1.10	156		Pn	11 42 07.8	-0.2
OBIP					Sb	11 42 22.5	+0.4
OBIP	Obispado Ponce	1.10	156	IAML		11 42 25.2	
	comp=E,157nm,0.3s						
OBIP	Obispado Ponce	1.10	156	⇑eP	Pn	11 42 07.8	-0.2
OBIP	Obispado Ponce	1.10	156	eS	Sb	11 42 22.5	+0.4
GCPR	Guaynabo City	1.20	128		Pn	11 42 08.9	-0.5
GCPR					Sg	11 42 26.5	+0.2
GCPR	Guaynabo City	1.20	128	⇑eP	Pn	11 42 08.9	-0.5
GCPR	Guaynabo City	1.20	128	eS	Sg	11 42 26.5	+0.2
SJG	San Juan	1.28	136	Pn	Pg	11 42 12.0	-0.2
SJG				IAML		11 42 36.2	
	comp=E,119nm,0.2s						
SJG				IAML		11 42 36.6	
	comp=E,90nm,0.2s						
SJG	San Juan	1.28	136	i P	Pb	11 42 11.2	0.0
SJG				eS	Sg	11 42 28.7	-0.3
SJG				IAML		11 42 33.8	
	comp=Z,43nm,0.1s						
HUMP	Col San Antoni	1.48	127		Pn	11 42 11.6	-1.7
HUMP					Sg	11 42 36.3	+1.2
HUMP	Col San Antoni	1.48	127	IAML		11 42 39.3	
	comp=Z,77nm,0.3s						
HUMP				IAML		11 42 45.9	
	comp=Z,98nm,0.2s						
HUMP	Col San Antoni	1.48	127	⇑eP	Pn	11 42 11.6	-1.7
HUMP	Col San Antoni	1.48	127	eS	Sg	11 42 36.3	+1.2
MIDR	Miches	1.86	268	⇑ePg	Pn	11 42 18.6	+0.1
MIDR				⇓eSg	Sb	11 42 43.9	-0.1
MIDR				IAML		11 42 48.6	
	comp=N,39nm,0.5s						
MIDR				IAML		11 42 49.1	
	comp=E,108nm,0.3s						
DR12	Loma Pena Alta	2.19	264	Pn	Pn	11 42 23.1	-0.1
HATOM	Hato Mayor del	2.19	264	⇑ePg	Pb	11 42 24.8	-1.8
HATOM				⇑eSg	Sb	11 42 54.0	+0.5
HATOM				IAML		11 42 54.4	
	comp=N,285nm,0.3s						
BANI	BANI	3.17	259	Pn	Pn	11 42 38.4	+1.6
SDDR	Presa de Saban	3.98	270	Pn	Pn	11 42 49.8	+2.1

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*NEIC **05** 11:57:14.6±1.8, 15.°5S±0.°1×167.°8E±0.°1, h122km±6km, mb4.1/15, Error ellipse: s-maj=19.2km s-min=14.0km az=68.0*

*IDC **05** 11:57:15.6±4.6, 15.°68S×167.°71E, h136km±41km, mb3.7/6, mbtmp4.1/7, Error ellipse: s-maj=33.8km s-min=28.2km az=173.0*

*NOU **05** 11:57:17.0, 15.°61S×167.°61E, h106km, MLv4.7/20, Vanuatu Islands*

ISC 05 11:57:11.6±0.8**, 15.°50S**±0.°08×**168.°0E**±0.°1**, h100km, n46, σ2^{s}51**/44**, mb4.1**/13**, 1C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.73	274		Pn	11 57 32.9	+3.6
SANVU	Saraoutou	0.73	274	P	Pn	11 57 33.4	+4.1
SANVU	Saraoutou	0.73	274	S	Sn	11 57 47.8	+5.2
DVP	Devils Point	2.22	174	P	Pn	11 57 52.0	+4.9
RTV	Rentapao	2.32	169	P	Pn	11 57 53.9	+5.5
MARNC	Mare, Loyalty	5.95	179	Pn	Pn	11 58 40.0	+2.8
MARNC	Mare, Loyalty	5.95	179	P	Pn	11 58 40.4	+3.2
YATNC	Mamie plateau,	6.60	189	P	Pn	11 58 47.8	+1.7
DZM	Mont Dzumac	6.69	192	P	Pn	11 58 50.2	+2.8
	8.8nm,0.3s,baz=353,slow=8.1,SNR=77						
DZM				S	Sn	12 00 00.9	-1.2
	12nm,0.4s,baz=136,slow=22,SNR=3.9						
DZM	Mont Dzumac	6.69	192		Pn	11 58 49.9	+2.5
DZM	Mont Dzumac	6.69	192	P	Pn	11 58 50.6	+3.2
ONTNC	Ouen Toro	6.92	192		Pn	11 58 53.2	+2.8
ONTNC	Ouen Toro	6.92	192	P	Pn	11 58 54.7	+4.3
OUENC	Ouen Island, N	6.96	189	P	Pn	11 58 55.6	+4.6
PINNC	Pines Island,	7.09	184	Pn	Pn	11 58 56.1	+3.4
PINNC	Pines Island,	7.09	184	P	Pn	11 58 56.9	+4.2
NGOA	Tingoa Renbel	8.62	296	P	Pn	11 59 15.2	+1.6
SAVO	Savo Central	10.16	307	P	Pn	11 59 38.7	+4.2
EIDS	Eidsvold	18.60	235	P	P	12 01 20.8	-0.3
EIDS				IAmb	IAmb	12 01 22.6	
	comp=Z,7.6nm,0.8s						
COEN	Coen	24.02	270	P	P	12 02 16.2	-1.2
COEN				IAmb	IAmb	12 02 59.7	
	comp=Z,3.7nm,1.0s						
BKZ	Black Stump Fm	24.74	164	P	P	12 02 25.4	+1.7
BKZ				IAmb	IAmb	12 03 01.7	
	comp=Z,24nm,1.5s						
INKA	Innaminka	28.00	240	P	P	12 02 52.6	-0.7
INKA				IAmb	IAmb	12 03 31.3	
	comp=Z,3.7nm,1.4s						
WR0	Warramunga Arr	32.10	257	P	P	12 03 27.3	-2.3
WR0				IAmb	IAmb	12 04 00.9	
	comp=Z,6.2nm,1.4s						
WB0	Warramunga Arr	32.24	257	P	P	12 03 28.6	-2.2
WB0				IAmb	IAmb	12 03 59.6	
	comp=Z,2.9nm,1.0s						
WB2	Warramunga Arr	32.28	257	P	P	12 03 28.9	-2.3
WB2				IAmb	IAmb	12 03 45.8	
	comp=Z,5.1nm,1.4s						
WRA	Warramunga Arr	32.29	257	P	P	12 03 28.3	-2.9
	comp=Z,0.9nm,0.6s,baz=80,slow=6.0,SNR=16						
WRA				PcP	PcP	12 06 15.6	-1.7
	comp=Z,0.3nm,0.7s,baz=85,slow=2.7,SNR=2.7						
	comp=Z,0.9nm,0.6s						
AS31	Alice Springs	33.03	250	P	P	12 03 36.0	-1.7
ASAR	Alice Springs	33.03	250	P	P	12 03 35.4	-2.3
	comp=Z,1.3nm,0.3s,baz=80,slow=9.0,SNR=45						
ASAR				PcP	PcP	12 06 18.4	-0.9
	comp=Z,0.4nm,0.7s,baz=87,slow=3.4,SNR=2.4						
	comp=Z,1.3nm,0.3s						
BBOO	Buckleboo	33.64	233	P	P	12 03 41.7	-1.1
KNRA	Kununurra	37.72	264	P	P	12 04 15.9	-1.9
KNRA				IAmb	IAmb	12 04 56.4	
	comp=Z,13nm,1.5s						
FITZ	Fitzroy Crossi	40.53	260	P	P	12 04 40.1	-1.2
CMAR	Chiang Mai Arr	75.87	294	P	P	12 08 48.0	+0.4
	comp=Z,0.7nm,0.6s,baz=133,slow=4.5,SNR=6.2						
	comp=Z,0.7nm,0.6s						
SONM	Songino Array	83.51	323	P	P	12 09 28.8	+0.3
	comp=Z,0.7nm,0.4s,baz=128,slow=4.7,SNR=7.2						
	comp=Z,0.7nm,0.4s						
SONM	Songino Array	83.51	323	IAmb	IAmb	12 09 30.3	
	comp=Z,4.2nm,1.3s						
ILAR	Eielson Array	87.05	18	P	P	12 09 44.8	-0.8
	comp=Z,0.3nm,0.4s,baz=236,slow=5.0,SNR=9.4						
	comp=Z,0.3nm,0.4s						
TROLL	Troll, Antarti	92.15	184	⇑P	P	12 10 09.2	-0.5
	comp=Z,241nm,0.7s						
SNAA	Sanae	92.82	183	P	P	12 10 11.4	-1.2
SNAA	Sanae	92.82	183	P	P	12 10 11.3	-1.3
	comp=Z,1.4nm,0.6s,baz=192,slow=19,SNR=5.2						
	comp=Z,1.4nm,0.6s						
SNAA	Sanae	92.82	183	IAmb	IAmb	12 10 13.9	
	comp=Z,5.1nm,1.2s						
F31M	Tsiigehtchic	92.84	19	P	P	12 10 13.7	+1.1
VNA2	Neumayer--Watz	93.73	182	P	P	12 10 09.6	-7.2
	baz=213,slow=5.8						
VNA1	Neumayer--Stat	94.03	181	P	P	12 10 16.1	-2.0
ARCES	ARCESS Array B	121.16	345	PKP	PKPdf	12 15 51.7	-0.5
	comp=Z,1.1nm,0.4s,baz=49,slow=1.9,SNR=23						
FINES	FINESS Array B	126.68	338	PKP	PKPdf	12 16 02.9	-0.1
	comp=Z,4.2nm,1.0s,baz=48,slow=2.1,SNR=5.1						
AKASG	Malin Array Be	131.74	326	PKP	PKPdf	12 16 13.1	+0.2
	comp=Z,0.7nm,0.4s,baz=53,slow=3.6,SNR=2.2						
BRTR	Keskin Array B	133.51	310	PKP	PKPdf	12 16 17.3	+0.5
	comp=Z,0.6nm,0.6s,baz=64,slow=3.4,SNR=2.5						

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*IDC **05** 12:07:59.5±1.5, 1.°07N×126.°62E, h0km, mb3.6/4, mbtmp3.7/5, ML3.3/1, Error ellipse: s-maj=111.6km s-min=21.5km az=69.0*

*DJA **05** 12:08:06.7±0.9, 1°N±3°×12°7E±°, h14km±9km, M3.6/11, mb3.8/1, MLv3.6/11*

ISC 05 12:08:06.6±0.9**, 0.°90N**±0.°07×**126.°52E**±0.°06**, h39km, n11, σ1^{s}92**/13**, mb3.6**/4**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.85	99	P	Pn	12 08 23.5	+1.4
TNTI				S	Sn	12 08 35.1	+1.7
MNI	Manado	1.77	288	P	Pn	12 08 36.9	+2.2
SGSI	Sangihe	2.94	340	P	Pn	12 08 53.0	+2.2
SANI	Sanana	2.98	190	P	Pn	12 08 52.5	+1.1
NLAI	Namlea	4.16	172	P	Pn	12 09 09.9	+2.4
LUWI	Luwuk	4.22	243	P	Pn	12 09 10.3	+1.9
FITZ	Fitzroy Crossi	18.90	183	P	P	12 12 23.4	-0.6
	0.1nm,0.3s,baz=355,slow=14,SNR=2.8						
	3.8nm,1.1s						
WRA	Warramunga Arr	22.09	160	P	P	12 12 57.9	-0.6
	1.0nm,0.4s,baz=340,slow=11,SNR=25						
	1.0nm,0.4s						
ASAR	Alice Springs	25.45	164	P	P	12 13 30.9	-0.1
	0.5nm,0.3s,baz=340,slow=8.4,SNR=18						
ASAR				PcP	PcP	12 17 00.9	-1.7
	0.2nm,0.8s,baz=331,slow=2.4,SNR=2.1						
	0.5nm,0.3s						
MKAR	Makanchi Array	59.76	326	P	P	12 18 04.9	-2.8
	0.5nm,0.9s,baz=121,slow=8.4,SNR=1.9						
	0.5nm,0.9s						
KURBB	Kurchatov Arra	64.00	328	P	P	12 18 35.2	-0.9
	0.4nm,0.3s,baz=130,slow=7.3,SNR=1.8						
	0.4nm,0.3s						

WEL 05 12:10:16.2±1.1**, 32°S**±9°×**18°0W**±2°3**, h340km**±15km**, mB4.4**/6**, ML4.2**/7**, MLv4.3**/7**, Mw(mB)3.5**/6**, Error ellipse: s-maj=31.6km s-min=5.2km az=108.5, confirmed, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.71	34	P	Pn	12 11 08.9	-3.3
GLKZ				S	S	12 11 56.0	-1.2
MXZ	Matakaoa Point	6.25	195	P	Pn	12 11 51.1	+1.7
MXZ				S	S	12 13 07.4	+2.4
WMGZ	Waiomatatini S	6.47	194	P	Pn	12 11 53.8	+1.8
WMGZ				S	S	12 13 11.9	+2.2
HAZ	Te Kaha	6.56	198	P	Pn	12 11 54.2	+1.2
HAZ				S	S	12 13 14.5	+2.9
WCZ	Waipu Caves	6.66	227	P	Pn	12 11 56.6	+2.4
PUZ	Puketiti	6.75	194	P	Pn	12 11 54.3	-0.9
PUZ				S	S	12 13 17.1	+1.4
RUGZ	Raukumara Rang	6.79	198	P	Pn	12 11 57.3	+1.5
RUGZ				S	S	12 13 16.4	-0.3
TWGZ	Tauwhareparae	6.91	196	P	Pn	12 11 59.3	+2.1
TWGZ				S	S	12 13 22.3	+3.1
OPRZ	Ohinepanea	7.03	205	P	Pn	12 12 02.2	+3.7
MWZ	Matawai	7.17	198	P	Pn	12 12 00.6	+0.3
MWZ				S	S	12 13 25.1	+0.3
URZ	Urewera	7.22	201	P	Pn	12 12 01.0	+0.2
URZ				S	S	12 13 25.9	+0.1
RAGZ	Rawiri	7.35	198	P	Pn	12 12 03.2	+0.8
RIGZ	Rimuhau	7.47	196	P	Pn	12 12 04.3	+0.6
RIGZ				S	S	12 13 32.3	+1.1
MUGZ	Murupara	7.53	202	P	Pn	12 12 04.3	-0.1
MUGZ				S	S	12 13 31.4	-1.1
SNGZ	Shannon Statio	7.64	198	P	Pn	12 12 07.8	+2.0
SNGZ				S	S	12 13 39.2	+4.1
PRGZ	Paritu Road	7.65	195	P	Pn	12 12 07.6	+1.8
PRGZ				S	S	12 13 38.0	+2.9
ALRZ	Allen Road	7.75	204	P	Pn	12 12 08.9	+1.9
KNZ	Kokohu	7.79	196	P	Pn	12 12 07.2	-0.3
KNZ				S	S	12 13 36.7	-1.4
RAHZ	Arahi	7.84	199	P	Pn	12 12 07.5	-0.6
RAHZ				S	S	12 13 39.2	-0.1
MTHZ	Maungataniwha	7.85	200	P	Pn	12 12 10.3	+2.0
MTHZ				S	S	12 13 37.0	-2.6
MHGZ	Mahia Peninsul	7.86	194	P	Pn	12 12 09.5	+1.1
MHGZ				S	S	12 13 38.9	-0.9
WHHZ	Waihua	7.95	198	P	Pn	12 12 09.8	+0.4
WHHZ				S	S	12 13 43.3	+1.6
NMHZ	Naumai	8.09	200	P	Pn	12 12 12.9	+1.7
ARHZ	Aropaoanui	8.19	199	P	Pn	12 12 11.4	-0.8
ARHZ				S	S	12 13 47.1	+0.2
BKZ	Black Stump Fm	8.24	201	P	Pn	12 12 11.7	-1.3
BKZ				S	S	12 13 49.8	+1.6
HIZ	Hauiti	8.29	211	P	P	12 12 16.4	-0.5
MCHZ	McNeill Hill	8.44	200	P	Pn	12 12 14.0	-1.3
MCHZ				S	S	12 13 52.7	+0.3
KWHZ	Kaweka Forest	8.50	201	P	Pn	12 12 15.2	-0.9
KWHZ				S	S	12 13 53.3	-0.6
CKHZ	Cape Kidnapper	8.54	197	P	Pn	12 12 14.0	-2.4
KAHZ	Kahuranaki	8.72	198	P	Pn	12 12 17.5	-1.1
KAHZ				S	S	12 13 58.7	+0.1
KRHZ	Kereru	8.72	201	P	Pn	12 12 17.6	-1.0
KRHZ				S	S	12 13 55.4	-3.2
VRZ	Vera Road	8.85	210	P	Pn	12 12 20.5	+0.4
PXZ	Pawanui	8.94	197	P	Pn	12 12 19.3	-2.0
PXZ				S	S	12 14 01.7	-1.8
PNHZ	Pukenui	9.02	201	P	Pn	12 12 20.2	-2.0
PNHZ				S	S	12 14 01.4	-3.9
MRZ	Mangatainoka R	9.89	202	P	Pn	12 12 30.4	-2.3
OGWZ	Otaki Gorge	10.17	203	P	Pn	12 12 32.1	-3.8
OGWZ				S	S	12 14 26.2	-4.5

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*MOS **05** 12:18:01.9±1.0, 36.°06N×69.°06E, h9km, mb4.7/17, Error ellipse: s-maj=9.1km s-min=4.7km az=76.1*

*IDC **05** 12:18:01.5±0.9, 35.°94N×69.°25E, h0km, mb4.2/20, mbtmp4.2/25, ML3.9/5, MS4.2/2, Error ellipse: s-maj=17.8km s-min=12.6km az=157.0*

*NEIC **05** 12:18:03.9±2.1, 36.°04N±0.°02×68.°96E±0.°07, h10km±1km, mb4.7/26, Error ellipse: s-maj=10.6km s-min=2.9km az=253.0*

*NNC **05** 12:18:07.5±4.7, 36.°36N×68.°98E, h0km, mb5.0, mpv4.6, Error ellipse: s-maj=39.3km s-min=36.9km az=134.0*

ISC 05 12:18:03.8±0.5**, 36.°09N**±0.°05×**69.°06E**±0.°05**, h10km, n148, σ2^{s}07**/154**, mb4.4**/36**, 9C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	1.55	180		Pn	12 18 30.6	-1.0
KBL	Kabul	1.55	180	PG	Pn	12 18 30.6	-1.0
SHAA	Shahritus	1.65	333		Pb	12 18 34.7	+0.5
MANEM	Manem	2.55	55		Pn	12 18 49.0	+3.5
CHGR	Chuyangaron	2.56	2		Pn	12 18 46.5	+1.0
CHGR	Chuyangaron	2.56	2	PN	Pn	12 18 46.5	+1.0
GAR	Garm	3.07	19		Pn	12 18 55.0	+2.5
DRK	Karamyk	4.02	32		Pn	12 19 09.1	+3.4
DRK	Karamyk	4.02	32	PN	Pn	12 19 09.1	+3.4
NIL	Nilore	4.22	124		Pn	12 19 10.2	+2.0
NIL	Nilore	4.22	124	PN	Pn	12 19 10.2	+2.0
SRNI	Srinagar	5.13	112	eP	Pn	12 19 22.4	+1.5
SRNI				eS	Sn	12 20 20.7	+0.4
SRNI				IAML		12 20 49.7	
	comp=E,2µm,0.6s						
SRNI				IAML		12 21 10.7	
	comp=N,1µm,0.7s						
JMU	Jammu	5.80	123	eP	Pn	12 19 32.0	+1.0
JMU				eS	Sn	12 20 35.3	-3.3
JMU				IAML		12 21 12.1	
	comp=E,844nm,0.8s						
JMU				IAML		12 21 20.6	
	comp=N,697nm,0.8s						
ARSB	Arslanbob	6.06	29		Pn	12 19 34.9	+1.4
ARSB	Arslanbob	6.06	29	PN	Pn	12 19 34.9	+1.4
KSH	Kashi	6.45	56	Pn	Pn	12 19 38.1	-0.9
KSH				Sn	Sn	12 20 42.5	-10
KSH				smax	smax		
	comp=N,260nm,1.0s						
KSH				smax	smax		
	comp=E,250nm,0.8s						
TSSA	Tissa	6.70	117	eP	Pn	12 19 43.4	+1.0
TSSA				eS	Sn	12 20 57.8	-1.1
TSSA				IAML		12 21 03.3	
	comp=E,674nm,0.4s						
TSSA				IAML		12 21 34.0	
	comp=N,751nm,0.7s						
ALCI	Alchi Leh	6.92	103	eP	Pn	12 19 47.8	+2.2
ALCI				eS	Sn	12 21 02.3	-2.2
ALCI				IAML		12 21 11.6	
	comp=E,673nm,0.5s						
ALCI				IAML		12 21 12.6	
	comp=N,653nm,0.4s						
BRLS	Borolday	6.95	5	Lg	Lg	12 20 57.7	
	comp=N,47nm,0.2s						
KK31	Karatay Array	7.09	9		Pn	12 19 48.7	+1.1
KK31	Karatay Array	7.09	9	P	Pn	12 19 49.2	+1.6
	comp=N,27nm,0.6s,baz=195,slow=14,SNR=282						
KK31				⇑S	Sn	12 21 09.3	+1.1
	comp=N,41nm,0.7s,baz=192,slow=25						
KK31	Karatay Array	7.09	9	PN	Pn	12 19 48.7	+1.1
KKAR	Karatay Array	7.09	9		Pn	12 19 49.0	+1.4
KKAR	Karatay Array	7.09	9	PN	Pn	12 19 49.0	+1.4
DHRM	DHARAMSHALA	7.12	120	eP	Pn	12 19 50.8	+2.5
DHRM				eS	Sn	12 21 07.2	-2.2
DHRM				IAML		12 21 19.6	
	comp=E,441nm,0.8s						
DHRM				IAML		12 21 36.3	
	comp=N,268nm,0.4s						
UCH	Uchtor	7.45	33	P	Pn	12 19 56.0	+3.1
	SNR=14						
EKS2	Erkin-Say	7.51	28	P	Pn	12 19 55.3	+1.9
	SNR=27						
BHK	Bhakra	7.69	125	eS	Sn	12 21 28.5	+5.2
BHK				IAML		12 22 10.4	
	comp=N,180nm,0.5s						
BHK				IAML		12 22 13.8	
	comp=E,195nm,1.1s						
AAK	Ala-Archa	7.77	31	P	Pn	12 19 59.4	+2.3
	SNR=45						
AAK	Ala-Archa	7.77	31	Pn	Pn	12 19 59.1	+2.0
	comp=E,9.6nm,0.3s,baz=203,slow=4.6,SNR=38						
AAK				Sn	Sn	12 21 25.8	+0.5
	comp=E,4.5nm,0.3s,baz=333,slow=22,SNR=13						
AAK				Lg	Lg	12 22 08.9	
	baz=139,slow=20						
	comp=E,27nm,0.5s						
AAK	Ala-Archa	7.77	31		Pn	12 19 58.4	+1.3
AAK	Ala-Archa	7.77	31	⇓P	Pn	12 19 59.3	+2.3
	comp=E,9.4nm,0.5s						
AAK				⇑S	Sn	12 21 26.5	+1.2
	comp=E,28nm,0.6s						
AAK	Ala-Archa	7.77	31	i P	Pn	12 19 58.8	+1.7
FRU1	Bishkek	7.97	31		Pn	12 20 01.4	+1.7
FRU1	Bishkek	7.97	31	P	Pn	12 20 01.4	+1.7
KBK	Karagaybulak	7.98	33	P	Pn	12 20 02.5	+2.5
	SNR=11						
CHMS	Chumysh	8.18	31	P	Pn	12 20 04.5	+1.9
	SNR=37						
USP	Ospenovka	8.30	29	P	Pn	12 20 05.4	+1.1
	SNR=43						
BOOM	Boomskoye usch	8.32	38		Pn	12 20 05.8	+1.2
BOOM	Boomskoye usch	8.32	38	P	Pn	12 20 05.8	+1.2
TKM2	Tokmak 2	8.48	35	P	Pn	12 20 08.6	+1.7
	SNR=25						
SGDS	Sogindy	8.51	29	Pg	Pn	12 20 08.1	+1.1
	comp=E,28nm,0.3s						
SGDS				Lg	Lg	12 21 42.2	
	comp=E,20nm,0.5s						
KDJ	Kajisay	8.73	44		Pn	12 20 11.5	+1.3
KDJ	Kajisay	8.73	44	P	Pn	12 20 11.5	+1.3
KST	Kastek	8.75	35	Pg	Pn	12 20 12.1	+1.7
	comp=E,24nm,0.5s						
DGS	Degeres	8.82	34	Pg	Pn	12 20 13.4	+2.1
	comp=E,9.2nm,0.7s						
TARG	Taragay, Kyrgy	8.84	48		Pn	12 20 12.7	+0.8
TARG	Taragay, Kyrgy	8.84	48	P	Pn	12 20 12.7	+0.8
MTBS	Maitube	9.04	37	Pg	Pn	12 20 16.1	+1.8
	comp=E,21nm,0.4s						
KRBS	Karabastau	9.14	32	Pg	Pn	12 20 17.9	+2.3
	comp=E,8.1nm,0.7s						
KRBS				Lg	Lg	12 21 59.3	
	comp=E,2.9nm,0.5s						
WUS	Wushi	9.44	54		Pn	12 20 20.8	+0.9
KOTS	Kotyrbulak	9.45	39	Pg	Pn	12 20 22.1	+2.0
	comp=E,24nm,0.4s						
KOTS				Lg	Lg	12 22 06.5	
	comp=E,14nm,0.7s						
DDI	Dehra Dun	9.48	125	eS	Sn	12 22 01.8	-5.3
DDI				IAML		12 23 16.4	
	comp=N,166nm,0.7s						
DDI				IAML		12 23 16.7	
	comp=E,206nm,1.1s						
PRZ	Przheval'sk	9.65	46		Pn	12 20 24.0	+1.2
PRZ	Przheval'sk	9.65	46	P	Pn	12 20 24.0	+1.2
MAKZ	Makanchi	14.42	38		Pn	12 21 26.9	-1.0
MAKZ	Makanchi	14.42	38	P	Pn	12 21 26.9	-1.0
MK31	Makanchi Array	14.56	39	i P	Pn	12 21 29.1	-0.8
MKAR	Makanchi Array	14.56	39	Pn	Pn	12 21 29.2	-0.7
	comp=E,0.3nm,0.3s,baz=220,slow=15,SNR=12						
	comp=E,1.9nm,0.6s						
MKAR	Makanchi Array	14.56	39		Pn	12 21 29.4	-0.5
MKAR	Makanchi Array	14.56	39	i P	Pn	12 21 29.6	-0.3
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AB31	Akbulak array	14.75	336		Pn	12 21 30.6	-1.8
ABKAR	Akbulak array	14.75	336		Pn	12 21 30.7	-1.6
KURBB	Kurchatov Arra	16.05	22	Pn	Pn	12 21 45.9	-3.5
	comp=Z,0.4nm,0.3s,baz=209,slow=13,SNR=14						
	comp=Z,2.9nm,0.2s						
KURK	Kurchatov	16.16	22	ceP	Pn	12 21 47.9	-3.0
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WMQ	Urumqi	16.22	56	eP	Pn	12 21 53.8	+2.0
WMQ				S	Sn	12 24 51.5	-0.2
WMQ				sS	S	12 25 03.1	-1.7
WMQ				pmax	pmax		
	comp=Z,21nm,1.1s						
AKTO	Aktyubinsk	16.41	334	Pn	Pn	12 21 53.6	-0.5
	comp=Z,1.1nm,0.3s,baz=143,slow=10,SNR=15						
AKTO				Sn	Sn	12 24 49.0	-7.1
	comp=Z,0.4nm,0.3s,baz=39,slow=17,SNR=1.7						
	comp=Z,6.6nm,0.6s						
BVAR	Borovoye Array	16.96	3	P	Pn	12 22 00.2	-0.8
	comp=Z,0.1nm,0.3s,baz=185,slow=14,SNR=13						
BVAR				S	Sn	12 25 01.1	-8.3
	comp=Z,0.8nm,0.5s,baz=183,slow=18,SNR=1.9						
	comp=Z,3.3nm,0.5s						
BORK	Borovoye	16.97	3		Pn	12 22 00.3	-0.8
BORK	Borovoye	16.97	3	ceP	Pn	12 22 00.7	-0.5
BORK				pmax	pmax		
	comp=Z,13nm,1.3s						
DGZ	Jazzator, Alta	19.07	39	i P	P	12 22 26.4	+0.1
DGZ				pmax	pmax		
	comp=Z,11nm,0.8s						
GOMU	GeErMu	20.79	82	P	Pn	12 22 49.4	+1.5
GOMU				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ZAA0	Zalesovo Array	20.96	27		P	12 22 46.0	-0.8
ZAA0				IAmb	IAmb	12 22 53.5	
	comp=Z,16nm,0.8s						
ZALV	Zalesovo Beam	20.96	27	P	P	12 22 46.3	-0.4
	comp=Z,15nm,0.6s,baz=217,slow=10,SNR=55						
ZALV				S	S	12 26 44.9	+4.8
	comp=Z,1.0nm,0.6s,baz=230,slow=24,SNR=2.9						
	comp=Z,15nm,0.6s						
ZALV	Zalesovo Beam	20.96	27		P	12 22 46.4	-0.3
ZALV	Zalesovo Beam	20.96	27	i P	P	12 22 46.5	-0.3
ZALV				pmax	pmax		
	comp=Z,15nm,0.6s						
KBZ	Khabaz	21.41	299	P	P	12 22 52.0	+0.4
	comp=Z,2.7nm,0.7s,baz=110,slow=9.9,SNR=6.5						
	comp=Z,2.7nm,0.7s						
KBZ	Khabaz	21.41	299	i P	P	12 22 56.5	+4.9
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NEUR	Neytrino	21.46	298	i P	P	12 22 58.8	+6.4
NEUR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ARTI	Arti	21.55	344	P	P	12 22 55.0	+2.0
	comp=Z,14nm,0.7s,baz=163,slow=5.1,SNR=17						
ARTI				S	S	12 26 50.8	-1.0

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             comp=Z,1.1nm,0.3s,baz=162,slow=20,SNR=1.8
             comp=Z,14nm,0.7s
ARTI   Arti              21.55 344          P      12 22 53.1 +0.1
ARTI                                 IAmb   IAmb   12 22 57.4
             comp=Z,21nm,0.6s
ARTI   Arti              21.55 344c iP      P      12 22 55.2 +2.1
ARTI                                               12 23 11.2
ARTI                                 S      S      12 26 44.6 -7.1
ARTI                                 pmax   pmax
             comp=Z,17nm,0.8s
SHA1   Shidzhatmaz       21.58 299ceP       P      12 22 57.8 +4.0
KIV    Kislovodsk        21.60 299 eP       P      12 22 57.4 +3.5
KIV                                 eS      S      12 26 52.1 -1.1
KIV                                  pmax   pmax
             comp=Z,10.0nm,1.0s
SHL    Shillong          22.18 112          P      12 22 59.1 -1.2
SHL                                  IAmb   IAmb   12 23 06.1
             comp=Z,50nm,0.9s
SHL    Shillong          22.18 112   P      P      12 22 59.1 -1.2
SHL                                  pmax   pmax
             comp=Z,50nm,0.9s
BELG   Belogornoye       22.26 324 i P      P      12 23 02.2 +1.5
BELG                                 pmax   pmax
             comp=Z,10.0nm,0.9s
GTA    Gaotai            24.48  73 eP       P      12 23 24.1 +0.9
GTA                                  pmax   pmax
             comp=Z,6.0nm,0.7s
KNGR   Kungurtug, Tuv    25.07  46 i P      P      12 23 29.7 +1.3
KNGR                                 pmax   pmax
             comp=Z,18nm,0.8s
BRTR   Keskin Array B    28.07 288   P      P      12 23 57.4 +1.8
             comp=Z,0.7nm,0.6s,baz=89,slow=9.5,SNR=3.5
             comp=Z,0.7nm,0.6s
OBN    Obninsk           29.24 321⇑eP       P      12 24 07.6 +2.0
OBN                                 e              12 25 03.3
OBN                                 eS      S      12 28 56.3 -1.8
OBN                                  pmax   pmax
             comp=Z,8.0nm,0.8s
OBN                                  MLR    MLR
             comp=Z,68nm,8.0s
EIL    Elat              29.25 267   LR     LR     12 38 20.5
             comp=Z,127nm,19.6s,baz=144,slow=42
SONM   Songino Array     29.86  55   P      P      12 24 11.7 +0.3
             comp=Z,1.8nm,0.7s,baz=258,slow=9.6,SNR=13
             comp=Z,1.8nm,0.7s
SONM   Songino Array     29.86  55   P      P      12 24 12.4 +1.0
ULN    Ulaanbaatar       30.30  55   P      P      12 24 16.8 +1.5
ULN    Ulaanbaatar       30.30  55ceP       P      12 24 16.5 +1.2
ULN                                  pmax   pmax
             comp=Z,5.0nm,0.8s
CMAR   Chiang Mai Arr    31.67 116   P      P      12 24 25.6 -1.8
             comp=Z,0.4nm,0.4s,baz=290,slow=9.4,SNR=4.7
             comp=Z,0.4nm,0.4s
AKASG  Malin Array Be    31.99 310   P      P      12 24 31.0 +1.1
             comp=Z,2.0nm,0.6s,baz=89,slow=7.2,SNR=18
             comp=Z,2.0nm,0.6s
AKASG  Malin Array Be    31.99 310   IAmb   IAmb   12 24 32.0
             comp=Z,2.1nm,0.8s
AKASG  Malin Array Be    31.99 310   P      P      12 24 31.0 +1.1
AKASG                                pmax   pmax
             comp=Z,2.0nm,0.8s
AKBB   Malin Array Si    31.99 310   P      P      12 24 29.4 -0.5
AKBB                                 IAmb   IAmb   12 24 34.6
             comp=Z,16nm,1.2s
AKBB   Malin Array Si    31.99 310   P      P      12 24 29.4 -0.5
AKBB                                 pmax   pmax
             comp=Z,16nm,1.3s
KIEV   Kiev              32.00 310   P      P      12 24 30.1 +0.1
KIEV                                 IAmb   IAmb   12 24 34.6
             comp=Z,14nm,1.2s
KIEV   Kiev              32.00 310   P      P      12 24 30.1 +0.1
KIEV                                 pmax   pmax
             comp=Z,14nm,1.3s
MLR    Muntele Rosu      33.61 300   P      P      12 24 43.1 -1.3
MLR                                  IAmb   IAmb   12 24 51.6
             comp=Z,8.7nm,0.9s
MLR    Muntele Rosu      33.61 300   P      P      12 24 43.1 -1.3
MLR                                  pmax   pmax
             comp=Z,9.0nm,0.9s
BURAR  Bucovina Array    34.19 304   P      P      12 24 49.2 -0.2
NRIK   Noril'sk          34.82  11   P      P      12 24 55.2 +0.8
             comp=Z,2.7nm,0.5s,baz=205,slow=5.7,SNR=4.8
             comp=Z,2.7nm,0.5s
NRIK   Noril'sk          34.82  11   P      P      12 24 54.8 +0.4
NRIK                                 IAmb   IAmb   12 24 59.1
             comp=Z,3.9nm,0.7s
NRIK   Noril'sk          34.82  11ceP       P      12 24 55.7 +1.3
FIA1   FINESS Array S    36.96 327   P      P      12 25 12.6 -0.2
FINES  FINESS Array B    36.96 327   P      P      12 25 13.6 +0.9
             comp=Z,5.2nm,0.7s,baz=116,slow=13,SNR=12
             comp=Z,5.2nm,0.7s
FINES  FINESS Array B    36.96 327   P      P      12 25 12.6 -0.2
FINES  FINESS Array B    36.96 327 i P      P      12 25 19.2 +6.4
FINES                                pmax   pmax
             comp=Z,3.0nm,0.8s
ARCES  ARCESS Array B    40.93 338   P      P      12 25 46.5 +0.5
             comp=Z,2.2nm,0.6s,baz=118,slow=8.9,SNR=4.7
             comp=Z,2.2nm,0.6s
ARCES  ARCESS Array B    40.93 338   IAmb   IAmb   12 25 56.4
             comp=Z,13nm,1.2s
ARCES  ARCESS Array B    40.93 338   P      P      12 25 46.5 +0.5
ARCES                                pmax   pmax
             comp=Z,13nm,1.3s
GERES  GERESS Array B    41.88 306   P      P      12 25 54.7 +0.5
             comp=Z,0.3nm,0.3s,baz=72,slow=8.6,SNR=4.7
             comp=Z,0.3nm,0.3s
HFS    Hagfors           42.42 322   P      P      12 25 59.1 +0.8
             comp=Z,11nm,0.7s,baz=109,slow=8.5,SNR=14
             comp=Z,11nm,0.7s
ZEA    Zeya              43.50  47 eP       P      12 26 08.5 +1.4
NC303  NORSAR Array S    43.72 324   P      P      12 26 08.4 -0.3
HEH    HeiHe             43.74  52 eP       P      12 26 08.9 -0.2
HEH                                  pmax   pmax
             comp=Z,8.0nm,1.0s
NB2    NORSAR Subarra    43.77 323   P      P      12 26 09.5 +0.2
             comp=Z,2.6nm,0.6s,baz=98,slow=8.6
NOA    NORSAR Array B    43.77 323   P      P      12 26 09.4 +0.2
             comp=Z,3.7nm,0.7s,baz=98,slow=8.0,SNR=10.0
             comp=Z,3.7nm,0.7s
NC204  NORSAR Array S    44.01 324   P      P      12 26 11.0 -0.3
YAK    Yakutsk           45.21  35 eP       P      12 26 21.4 +0.8
YAK                                  pmax   pmax
             comp=Z,9.0nm,0.6s
YAK                                  pmax   pmax
             comp=N,5.0nm,1.3s
YAK                                  pmax   pmax
             comp=E,3.0nm,1.3s
KSRS   Korea Array       46.49  70   P      P      12 26 27.7 -3.5
             comp=E,1.3nm,0.6s,baz=277,slow=7.7,SNR=4.1
             comp=E,1.3nm,0.6s
TIXI   Tiksi             46.74  22          P      12 26 32.5 -0.1
TIXI                                 IAmb   IAmb   12 26 34.4
             comp=Z,7.0nm,0.9s
TIXI   Tiksi             46.74  22 i P      P      12 26 33.2 +0.6
TIXI                                 pmax   pmax
             comp=Z,5.0nm,0.9s
SPITS  Spitsbergen Ar    47.53 347   P      P      12 26 40.2 +1.4
             comp=Z,16nm,1.0s,baz=122,slow=11,SNR=5.5
             comp=Z,16nm,1.0s
KEST   Kesra             47.67 288   P      P      12 26 42.9 +2.4
             comp=Z,2.3nm,0.5s,baz=79,slow=5.2,SNR=11
             comp=Z,2.3nm,0.5s
KEST   Kesra             47.67 288   IAmb   IAmb   12 27 16.8
             comp=Z,8.7nm,1.1s
YSS    Yuzhno-Sakhali    54.34  54 eP       P      12 27 22.7 -7.6
SEY    Seymchan          55.62  33 i P      P      12 27 39.2 -0.2
ESDC   Sonseca Array     56.26 297   P      P      12 27 45.3 +0.9
             comp=Z,1.4nm,0.7s,baz=71,slow=7.4,SNR=8.4
             comp=Z,1.4nm,0.7s
PEA0B  Petropavlovsk-    61.35  43   P      P      12 28 19.7 +0.2
PEA0B  Petropavlovsk-    61.35  43   P      P      12 28 19.7 +0.2
PEA0B                                pmax   pmax
             comp=Z,70nm,1.5s
PETK   Petropavlovsk-    61.35  43   P      P      12 28 20.1 +0.6
PETK   Petropavlovsk-    61.35  43   P      P      12 28 20.1 +0.6
B20K   Meade River       69.02  15   P      P      12 29 09.2 +0.1
B20K                                 IAmb   IAmb   12 29 14.8
             comp=Z,3.0nm,0.9s
A36M   Sachs Harbour     71.75   5   P      P      12 29 25.7 +0.1
A36M                                 IAmb   IAmb   12 29 29.9
             comp=Z,5.0nm,0.9s
ILAR   Eielson Array     75.59  15   P      P      12 29 47.6 -0.8
             comp=Z,0.3nm,0.7s,baz=324,slow=4.2,SNR=7.4
             comp=Z,0.3nm,0.7s
BOSA   Boshof            76.44 219   P      P      12 29 52.0 -1.6
             comp=Z,5.2nm,1.1s,baz=31,slow=5.9,SNR=3.9
             comp=Z,5.2nm,1.1s
BOSA   Boshof            76.44 219   IAmb   IAmb   12 29 53.0
             comp=Z,6.9nm,1.1s
BOSA   Boshof            76.44 219   P      P      12 29 52.1 -1.6
BOSA                                 pmax   pmax
             comp=Z,7.0nm,1.1s
YKA    Yellowknife Ar    81.71   2   P      P      12 30 22.0 -0.1
             comp=Z,0.3nm,0.7s,baz=353,slow=5.7,SNR=4.1
             comp=Z,0.3nm,0.7s
YKA    Yellowknife Ar    81.71   2   P      P      12 30 22.0 -0.1
NEW    Newport           95.84   4   LR     LR     13 19 21.3
             comp=Z,362nm,20.9s,baz=301,slow=38
```

DJA ***05*** *12:19:20.2±0.2, 1°N±3°×12°7E±°, h142km±3km, M4.3/17, mb4.4/16, mB4.8/7, MLv4.6/17, Mw(mB)4.0/7*

NEIC ***05*** *12:19:20.0±1.4, 1°.06N±0°.06×127°.53E±0°.09, h149km±5km, mb4.4/30, Error ellipse: s-maj=13.1km s-min=8.5km az=91.0*

IDC ***05*** *12:19:21.1±2.6, 1°.11N×127°.60E, h165km±25km, mb3.7/12, mbtmp4.2/15, Error ellipse: s-maj=26.5km s-min=9.4km az=80.0*

ISC 05 12:19:19.6±0.5**, 1°.07N**±0°.05×**127°.53E**±0°.07**, h150**km**, n88,** σ**1s38**/90**, mb4.4**/25**, Halmahera**

```
Code   Station Name        Δ°   AZ°    Phase ID       Time      Res
                                     Op     ISC    h  m  s    ISC
TNTI   Ternate            0.34 208          Pn     12 19 40.5 +0.2
TNTI   Ternate            0.34 208   P      Pn     12 19 40.6 +0.3
TNTI   Ternate            0.34 208   P      Pn     12 19 40.5 +0.2
TNTI                                 S      Sn     12 19 56.8 +0.7
MNI    Manado             2.71 278   P      Pn     12 20 03.0 -0.4
SGSI   Sangihe            3.27 322   P      Pn     12 20 09.4 -1.1
SANI   Sanana             3.46 206   P      Pn     12 20 12.3 -0.6
SANI   Sanana             3.46 206   P      Pn     12 20 12.4 -0.5
SWI    Sorong             4.20 117   P      Pn     12 20 25.0 +2.5
NLAI   Namlea             4.30 186   P      Pn     12 20 24.7 +0.8
KRAI   Karang Ratu        4.45 169   P      Pn     12 20 28.0 +2.2
GTOI   Gorontalo          4.54 265   P      Pn     12 20 27.9 +1.0
MSAI   Masohi             4.61 162   P      Pn     12 20 30.6 +2.7
AAI    Ambon              4.77 172   P      Pn     12 20 32.0 +1.9
LUWI   Luwuk              5.20 246   Pn     Pn     12 20 34.5 -1.2
LUWI   Luwuk              5.20 246   P      Pn     12 20 36.7 +1.0
LUWI   Luwuk              5.20 246   P      Pn     12 20 35.9 +0.2
MRSI   Marisa             5.62 264   P      Pn     12 20 40.7 -0.6
FAKI   Fak Fak            6.16 130   Pn     Pn     12 20 49.1 +0.5
APSI   Ampana             6.20 251   P      Pn     12 20 48.7 -0.3
             1.1nm2μm65nm,0.5s
TOLI2  Tolitoli           6.75 270          Pn     12 20 56.0 -0.3
TOLI2  Tolitoli           6.75 270   P      Pn     12 20 56.2 -0.1
MPSI   Mapaga             7.66 265   P      Pn     12 21 09.1 +0.5
             0.1nm479nm14nm,0.7s
TTSI   Tana Toraja        8.72 242   P      Pn     12 21 23.5 +0.8
             52nm,0.6s
BNSI   Bone               9.20 234   P      Pn     12 21 30.7 +1.7
             20nm,0.8s
SPSI   Sidrap Palu        9.23 237   P      Pn     12 21 31.9 +2.5
             755nm31nm,0.5s
KAPI   Kappang            9.84 232   P      Pn     12 21 40.1 +2.4
             9.9nm,0.4s,baz=92,slow=17,SNR=3.6
KAPI                                 S      Sn     12 23 25.5 -1.2
             23nm,0.4s,baz=163,slow=22,SNR=14
MYLDM  Lahad Datu         9.89 295          Pn     12 21 40.8 +2.6
EDFI   Ende, Flores      11.36 211   P      Pn     12 21 58.7 +1.0
             11nm,0.6s
BATI   Baumata           11.85 199   P      Pn     12 22 07.2 +3.2
             20nm,0.6s,baz=218,slow=1.7,SNR=7.0
DBNI   Kabupaten Domp    13.22 224   P      P      12 22 24.4 -1.8
             9.8nm,0.8s
PLAI   Plampang          13.82 224   P      P      12 22 32.7 -0.2
PLAI   Plampang          13.82 224   P      P      12 22 32.0 -0.9
             486nm41nm,1.0s
MTN    Manton Dam        14.28 166   P      Pn     12 22 34.0 -1.2
TWSI   Taliwang, Sumb    14.41 227   P      P      12 22 39.8 +0.5
             26nm,1.0s
JAGI   Jajag, Banyuwa    16.36 234          Pn     12 23 00.1 -0.7
JAGI                                 IAmb   IAmb   12 23 05.0
             comp=Z,14nm,0.9s
JAGI   Jajag, Banyuwa    16.36 234   P      P      12 23 04.5 +3.5
KNRA   Kununurra         16.69 176          P      12 23 04.6  0.0
KNRA                                 IAmb   IAmb   12 23 06.6
             comp=Z,13nm,0.7s
FITZ   Fitzroy Crossi    19.14 185   P      P      12 23 31.6 +0.2
             comp=Z,2.5nm,0.3s,baz=16,slow=8.9,SNR=21
FITZ   Fitzroy Crossi    19.14 185   P      P      12 23 30.4 -1.0
KPJI   Karang Pucung     20.34 245   P      Pn     12 23 47.5 -0.6
             comp=Z,39nm,0.8s
BBJI   Bungbulang        21.57 247   P      P      12 24 00.4 +2.8
WRAB   Tennant Creek     21.92 163   P      P      12 24 01.2  0.0
WRA    Warramunga Arr    21.93 163   P      P      12 24 00.8 -0.4
             comp=Z,8.2nm,0.5s,baz=339,slow=10,SNR=121
WRA                                  S      S      12 27 49.9 -3.3
             comp=Z,1.0nm,1.0s,baz=347,slow=18,SNR=4.2
             comp=Z,8.2nm,0.5s
WRA    Warramunga Arr    21.93 163          P      12 23 59.1 -2.2
MBWA   Marble Bar        23.37 199   P      P      12 24 14.1 -0.8
MBWA                                 IAmb   IAmb   12 24 16.2
             comp=Z,8.1nm,0.6s
MBWA   Marble Bar        23.37 199   P      P      12 24 15.2 +0.3
PSA00  Pilbara Seismi    23.73 198   P      P      12 24 18.1  0.0
PSA00                                IAmb   IAmb   12 24 19.4
             comp=Z,5.4nm,0.8s
PSA00  Pilbara Seismi    23.73 198   P      P      12 24 17.7 -0.4
PSA00                                IAmb   IAmb   12 24 19.5
             comp=Z,10nm,0.8s
QIS    Mount Isa         24.54 152   P      P      12 24 27.0 +1.5
AS31   Alice Springs     25.36 166          P      12 24 33.3 +0.3
AS31                                 IAmb   IAmb   12 24 37.1
             comp=Z,4.0nm,0.2s
ASAR   Alice Springs     25.36 166   P      P      12 24 33.3 +0.3
             comp=Z,1.7nm,0.3s,baz=346,slow=6.7,SNR=25
ASAR                                 S      S      12 28 48.5 +0.1
             comp=Z,0.3nm,0.7s,baz=344,slow=17,SNR=2.6
             comp=Z,1.7nm,0.3s
ASAR   Alice Springs     25.36 166   P      P      12 24 33.5 +0.6
JOW    Kunigami          25.62   2   P      P      12 24 40.6 +5.4
MEEK   Meekatharra       28.86 197   P      P      12 25 05.2 +1.0
FORT   Forrest           31.68 179   P      P      12 25 28.8 -0.1
FORT                                 IAmb   IAmb   12 26 09.4
             comp=Z,11nm,1.1s
MORW   Morawa            31.92 199   P      P      12 25 31.2  0.0
MORW                                 IAmb   IAmb   12 25 56.5
             comp=Z,7.4nm,1.0s
BBOO   Buckleboo         34.65 167   P      P      12 25 54.9 +0.2
BBOO                                 IAmb   IAmb   12 26 22.6
             comp=Z,21nm,1.4s
STKA   Stephens Creek    35.38 159   P      P      12 26 01.5 +0.5
             comp=Z,1.7nm,0.4s,baz=345,slow=7.3,SNR=8.1
             comp=Z,1.7nm,0.4s
KSRS   Korea Array       36.20   1   P      P      12 26 08.1 +0.2
             comp=Z,1.3nm,0.6s,baz=175,slow=8.8,SNR=3.1
             comp=Z,1.3nm,0.6s
MJAR   Matsushiro Arr    36.65  14   P      P      12 26 10.1 -1.7
             comp=Z,1.4nm,0.4s,baz=193,slow=9.1,SNR=8.4
             comp=Z,1.4nm,0.4s
MJAR   Matsushiro Arr    36.65  14   P      P      12 26 10.2 -1.6
MAJO   Matsushiro        36.65  14   P      P      12 26 10.3 -1.5
MJB9   Matsu-Tunnel      36.66  14   P      P      12 26 11.1 -0.7
USRK   Ussuriysk Ar.     43.12   5   P      P      12 27 04.5 -0.5
             comp=Z,1.3nm,0.4s,baz=180,slow=6.9,SNR=4.7
             comp=Z,1.3nm,0.4s
EVN    Everest           47.23 308   P      P      12 27 37.0 -1.4
SONM   Songino Array     50.05 342   P      P      12 27 59.5 +0.4
             comp=Z,0.6nm,0.6s,baz=158,slow=11,SNR=3.2
             comp=Z,0.6nm,0.6s
FUNA   Funafuti          52.37 102   P      P      12 28 16.2 -0.6
PEA0B  Petropavlovsk-    57.59  21   P      P      12 28 53.5 -0.2
PETK   Petropavlovsk-    57.59  21   P      P      12 28 54.0 +0.4
             comp=Z,4.2nm,0.8s,baz=190,slow=6.0,SNR=8.7
             comp=Z,4.2nm,0.8s
PETK   Petropavlovsk-    57.59  21   P      P      12 28 53.9 +0.3
PYZ    Puysegur Point    58.30 149   P      P      12 28 57.2 -1.5
MKAR   Makanchi Array    60.18 326   P      P      12 29 12.0 +0.3
             comp=Z,1.4nm,0.6s,baz=112,slow=8.4,SNR=13
             comp=Z,1.4nm,0.6s
MKAR   Makanchi Array    60.18 326   P      P      12 29 11.8 +0.1
ZALV   Zalesovo Beam     63.30 333   P      P      12 29 30.2 -2.1
             comp=Z,0.4nm,0.4s,baz=104,slow=6.1,SNR=2.4
             comp=Z,0.4nm,0.4s
KURBB  Kurchatov Arra    64.39 328   P      P      12 29 39.4 -0.1
             comp=Z,1.9nm,0.3s,baz=125,slow=5.9,SNR=7.7
             comp=Z,1.9nm,0.3s
KURK   Kurchatov         64.40 328   P      P      12 29 39.4 -0.2
KURK   Kurchatov         64.40 328   IAmb   IAmb   12 29 40.2
             comp=Z,3.8nm,0.3s
BVAR   Borovoye Array    69.97 327   P      P      12 30 14.6 -0.1
             comp=Z,0.8nm,0.4s,baz=119,slow=5.5,SNR=4.6
             comp=Z,0.8nm,0.4s
ABKAR  Akbulak array     74.70 321   P      P      12 30 42.0 -0.9
G18K   Tagagawik         82.45  23   P      P      12 31 26.1 +1.2
C19K   Lookout Ridge     82.94  20   P      P      12 31 28.2 +0.8
C19K                                 IAmb   IAmb   12 31 37.2
             comp=Z,5.6nm,1.3s
G19K   Purcell Mounta    83.13  23   P      P      12 31 29.1 +0.7
G19K                                 IAmb   IAmb   12 31 30.2
             comp=Z,2.8nm,0.7s
H19K   Roundabout Mou    83.25  24   P      P      12 31 29.8 +0.8
D20K   Etivluk River     83.89  21   P      P      12 31 32.8 +0.5
B21K   Ikpikpuk River    84.78  20   P      P      12 31 37.0 +0.4
B21K                                 IAmb   IAmb   12 32 06.2
             comp=Z,10nm,1.5s
E23K   Chandalar         86.33  22   P      P      12 31 44.5  0.0
E23K                                 IAmb   IAmb   12 32 04.2
             comp=Z,9.5nm,1.5s
I27K   Kandik River      89.39  25   P      P      12 31 59.3 +0.3
I27K                                 IAmb   IAmb   12 32 41.2
             comp=Z,6.0nm,1.4s
FARO   Faro, Yukon       93.32  28   P      P      12 32 17.2 -0.1
FARO                                 IAmb   IAmb   12 32 48.6
             comp=Z,6.8nm,1.5s
```

BJI ***05*** *12:24:38.9, 4°.78N×127°.11E, h73km, mB5.6/57, mb5.5/93, Ms5.3/97, Ms7 5.2/96*

MAN ***05*** *12:24:39.2, 5°.16N×127°.08E, h34km, mb6.1, ML5.2, MS5.7*

MAN INTENSITY III - ALABEL GLAN AND MALAPATAN SARANGANI; INTENSITY II - GENERAL SANTOS CITY; KORONADAL CITY; POLOMOLOK TAMPAKAN AND TUPI SOUTH COTABATO; DAVAO CITY; DIGOS CITY; BANSALAN HAGONOY MAGSAYSAY MATANAO ; PADADA AND SANTA CRUZ DAVAO DEL SUR; KIAMBA SARANGANI; MAKILALA AND TULUNAN COTABATO.

NEIC ***05*** *12:24:40.7, 5°.35N×126°.81E, h16km*

MOS ***05*** *12:24:40.6±0.9, 5°.40N×126°.67E, h34km, mb5.8/57, MS5.2/30, Error ellipse: s-maj=8.0km s-min=3.9km az=117.2*

IDC ***05*** *12:24:42.7±1.1, 5°.46N×126°.72E, h38km±8km, mb5.1/39, mbtmp5.3/43, ML4.7/3, MS4.8/60, Error ellipse: s-maj=14.2km s-min=6.6km az=81.0*

NEIC ***05*** *12:24:44.0±1.7, 5°.38N±0°.06×126°.75E±0°.08, h44km±1km, mb5.6/345, Ms_20 5.1/89, Mwb5.7/71, Mww5.6/23, Error ellipse: s-maj=13.2km s-min=8.9km az=249.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr2.99; Mθθ-2.78; Mφφ-0.21; Mrθ-1.98; Mθφ-2.14; Mφr0.53; Fault plane solution: M0 4.14000×10^{17} NP1: φs263.62000°, δ61.24000°, λ118.06000°. NP2: φs35.70000°, δ39.32000°, λ49.41000°. Principal axes: T 3.9616, Plg63.0000°, Azm220.0000°; N 0.3427, Plg24.0000°, Azm69.0000°; P -4.3042, Plg12.0000°, Azm334.0000°;*

NEIC ***05*** *12:24:44, 5°.38N×126°.77E, h46km*

NEIC ***05*** *12:24:44, 5°.48N×126°.77E, h46km, Moment Tensor Solution. Duration: 3s1 Moment tensor: Scale 10^{17}Nm; Mrr2.11; Mθθ-1.15; Mφφ-0.96; Mrθ-1.02; Mθφ-1.73; Mφr0.70; Fault plane solution: M0 2.80000×10^{17} NP1:φs20.33000°, δ49.00000°, λ49.53000°. NP2:φs252.77000°, δ54.96000°, λ126.75000°. Principal axes: T 2.8044, Plg60.0000°, Azm222.0000°; N -0.0060, Plg29.0000°, Azm50.0000°; P -2.7984, Plg3.0000°, Azm318.0000°;*

GCMT ***05*** *12:24:44.0±0.1, 5°.48N±0°.01×126°.78E±0°.01, h41km, MW5.7/147, Moment Tensor Solution. s131, c246; s147, c283; Duration: 1s7 Moment tensor: Scale 10^{17} Nm; Mrr2.46±.05; Mθθ-2.08±.04; Mφφ-0.38±.04; Mrθ-2.08±.04; Mθφ-2.64±.03; Mφr0.64±.05; Best double couple: M0 4.10800×10^{17} NP1:φs22.00000°, δ45.00000°, λ37.00000°. NP2:φs264.00000°, δ65.00000°, λ128.00000°. Principal axes: T 3.9380, Plg53.0000°, Azm221.0000°; N 0.3390, Plg34.0000°, Azm66.0000°; P -4.2780, Plg12.0000°, Azm328.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***05*** *12:24:45.4±0.2, 5°N±2°×12°7E±°, h62km±2km, M5.6/108, mB6.1/99, mb5.9/108, MLv6.1/12, Mw5.7/61, Mw(mB)5.7/99, MwMwp5.4/73, Mwp5.6/73*

IPGP ***05*** *12:24:45.0, 5°.36N×126°.77E, h52km, Mw5.6, Fault plane solution: NP1:φs30.00000°, δ36.00000°, λ43.00000°. NP2:φs263.00000°, δ66.00000°, λ118.00000°.*

ISC 05 12:24:45.0±0.3**, 5°.38N**±0°.02×**126°.77E**±0°.03**, h61**km±2km**, h63km:pP-P, n1374,** σ**1s51**/1369**, mb5.6**/308**, 47C-33D, Mindanao**

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Code   Station Name        Δ°   AZ°    Phase ID       Time      Res
                                     Op     ISC    h  m  s    ISC
DAV    Davao City (W)     2.06 325   Pn     Pn     12 25 18.2 +0.9
             2μm,0.3s,baz=163,slow=1.1,SNR=102
DAV                                  Sn     Sn     12 25 38.8 -3.2
             2μm,0.3s,baz=103,slow=21,SNR=12
DAV    Davao City (W)     2.06 325   P      Pn     12 25 19.1 +1.8
DAV                                  S      Sn     12 25 45.2 +3.2
DAV    Davao City (W)     2.06 325          Pn     12 25 18.0 +0.7
DAV    Davao City (W)     2.06 325   P      Pn     12 25 19.7 +2.4
DAV    Davao City (W)     2.06 325   P      Pn     12 25 18.6 +1.3
DAV    Davao City (W)     2.06 325   P      Pn     12 25 14.0 -3.3
SGSI   Sangihe            2.09 216   P      Pn     12 25 17.4 -0.3
SGSI                                 S      Sn     12 25 44.5 +1.8
MNI    Manado             4.36 206   P      Pn     12 25 50.0 +1.2
MNI                                  S      Sn     12 26 39.2 +0.9
TNTI   Ternate            4.61 173          Pn     12 25 51.3 -0.9
TNTI   Ternate            4.61 173   P      Pn     12 25 53.3 +1.0
TNTI   Ternate            4.61 173   S      Sn     12 26 46.9 +2.3
TNTI   Ternate            4.61 173   P      Pn     12 25 53.0 +0.7
TNTI                                 S      Sn     12 26 44.1 -0.5
GTOI   Gorontalo          6.02 219   P      Pn     12 26 12.1 +0.5
             18μm2μm,0.7s
MRSI   Marisa             6.85 225   P      Pn     12 26 23.7 +0.7
TOLI2  Tolitoli           7.33 235          Pn     12 26 28.0 -1.4
TOLI2  Tolitoli           7.33 235   P      Pn     12 26 29.4 -0.1
TOLI2  Tolitoli           7.33 235   S      Sn     12 27 51.9 +0.6
SANI   Sanana             7.42 186   P      Pn     12 26 27.9 -2.8
SANI   Sanana             7.42 186   P      Pn     12 26 27.9 -2.8
             5.7nm26μm13μm617nm,0.6s
LUWI   Luwuk              7.53 212          Pn     12 26 33.8 +1.7
LUWI   Luwuk              7.53 212   P      Pn     12 26 35.7 +3.5
LUWI   Luwuk              7.53 212   P      Pn     12 26 35.5 +3.3
             17μm3μm,1.1s
SWI    Sorong             7.65 144   P      Pn     12 26 33.0 -0.9
             2.4nm10μm677nm,0.7s
APSI   Ampana             8.07 219   P      Pn     12 26 43.4 +3.7
             19μm1μm,1.2s
MYLDM  Lahad Datu         8.24 269          Pn     12 26 45.0 +3.0
MYLDM  Lahad Datu         8.24 269   P      Pn     12 26 45.2 +3.2
MYLDM  Lahad Datu         8.24 269   S      Sn     12 28 16.5 +2.8
MYLDM  Lahad Datu         8.24 269   P      Pn     12 26 44.6 +2.6
             22μm11μm1μm,1.4s
MPSI   Mapaga             8.50 234   P      Pn     12 26 45.8 +0.3
NLAI   Namlea             8.56 178   P      Pn     12 26 45.1 -1.3
             22μm14μm769nm,0.5s
KRAI   Karang Ratu        8.79 169   P      Pn     12 26 50.8 +1.3
             10μm712nm,0.6s
AAI    Ambon              9.12 171   P      Pn     12 26 53.7 -0.2
             10μm789nm,0.7s
MWPI   Manokwari, Pap     9.59 131   P      Pn     12 27 00.2 -0.2
             21μm8μm393nm,0.6s
FAKI   Fak Fak            9.89 146          Pn     12 27 04.3 -0.2
FAKI   Fak Fak            9.89 146   P      Pn     12 27 05.2 +0.6
FAKI   Fak Fak            9.89 146   P      Pn     12 27 05.1 +0.5
             7μm731nm,0.9s
RKPI   Ransiki, Papua    10.07 133   P      Pn     12 27 09.2 +2.1
             19μm15μm691nm,1.0s
BNDI   Bandanaira        10.32 162   P      Pn     12 27 12.6 +2.2
BNDI   Bandanaira        10.32 162   P      Pn     12 27 13.3 +2.9
             2μm,1.5s
TGY    Tagaytay City     10.40 327   Pn     Pn     12 27 15.6 +4.0
             51nm,0.3s,baz=246,slow=2.5,SNR=40
TGY                                  LR     LR     12 32 12.9
             comp=Z,11μm,21.6s,baz=134,slow=44
KKM    Kota Kinabalu     10.53 274          Pn     12 27 15.5 +2.2
KKM    Kota Kinabalu     10.53 274   P      Pn     12 27 14.5 +1.2
KKM    Kota Kinabalu     10.53 274   S      Sn     12 29 12.5 +2.7
BNSI   Bone              11.78 215   P      Pn     12 27 31.1 +0.8
PMSI   Majene            11.81 222   P      Pn     12 27 32.7 +1.9
             9μm11μm793nm,1.3s
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BKB	Balikpapan	11.87	237		Pn	12 27 33.3	+1.7
SRPI	Serui, Papua	11.88	127	P	Pn	12 27 33.2	+1.4
	9µm936nm,1.6s						
KAPI	Kappang	12.48	214	Pn	Pn	12 27 39.6	-0.3
	8.3nm,0.3s,baz=25,slow=8.3,SNR=56						
KAPI				Sn	Sn	12 29 58.4	+1.1
	5.4nm,0.3s,baz=123,slow=21,SNR=1.1						
	294nm,1.1s						
KAPI	Kappang	12.48	214	P	Pn	12 27 40.1	+0.2
KAPI				P	Pn	12 27 40.1	+0.2
KAPI				S	Sn	12 29 57.6	+0.3
KAPI				S	Sn	12 29 57.6	+0.3
KAPI	Kappang	12.48	214	P	Pn	12 27 40.2	+0.2
KAPI	Kappang	12.48	214	P	Pn	12 27 40.9	+1.0
KAPI	Kappang	12.48	214	⇓*i*P	Pn	12 27 40.4	+0.5
BKSI	Bulukumba	12.53	212	P	Pn	12 27 41.0	+0.4
	339nm,0.8s						
MKS	Makassar	12.80	215	P	Pn	12 27 45.2	+0.9
	7µm5µm311nm,1.1s						
MTKI	Muara Teweh, K	13.42	242	P	Pn	12 27 53.8	+1.1
	9µm13µm740nm,1.6s						
SMPI	Sarmi	13.99	121	P	Pn	12 28 01.0	+0.6
	13µm10µm576nm,1.6s						
SAUI	Saumlaki	14.02	161		Pn	12 27 59.1	-1.7
SAUI	Saumlaki	14.02	161	P	Pn	12 28 00.3	-0.4
	586nm,1.1s						
MMRI	Maumere	14.64	198		Pn	12 28 07.7	-1.1
MMRI	Maumere	14.64	198	P	Pn	12 28 08.1	-0.7
MMRI	Maumere	14.64	198	P	Pn	12 28 08.8	0.0
	8µm8µm694nm,1.2s						
BBKI	Banjar Baru	14.80	234	P	P	12 28 14.4	-1.1
SBUM	Sibu	14.81	259	Pn	Pn	12 28 12.0	+0.9
SBUM	Sibu	14.81	259	P	P	12 28 14.3	-1.2
SBUM	Sibu	14.81	259	P	P	12 28 13.9	-1.6
	4µm285nm,0.7s						
PKKI	Palangkaraya	14.86	240	P	P	12 28 14.6	-1.5
EDFI	Ende, Flores	14.92	200	P	Pn	12 28 12.2	-0.4
	9µm4µm496nm,1.0s						
SOEI	Soe	15.24	189		Pn	12 28 16.1	-0.6
SOEI				IAmb	IAmb	12 28 24.2	
	comp=Z,508nm,1.4s						
SOEI	Soe	15.24	189	P	Pn	12 28 16.7	0.0
SOEI	Soe	15.24	189	P	Pn	12 28 18.2	+1.5
	comp=Z,13µmcomp=Z,10µmcomp=Z,777nm,0.8s						
LBFI	Labuhan Bajo,	15.38	207	P	Pn	12 28 17.8	-0.7
	comp=Z,7µmcomp=Z,14µmcomp=Z,910nm,0.7s						
GENI	Genyem	15.55	120	P	P	12 28 23.6	-0.2
	comp=Z,13µmcomp=Z,12µmcomp=Z,604nm,1.7s						
BATI	Baumata	15.79	191	Pn	Pn	12 28 23.4	-0.3
	comp=Z,312nm,0.9s,baz=328,slow=2.7,SNR=140						
BATI				Sn	Sn	12 31 19.4	+1.5
	comp=Z,4.0nm,0.3s,baz=216,slow=14,SNR=1.2						
BATI				ScP	ScP	12 36 53.5	+4.0
	comp=Z,18nm,0.7s,baz=56,slow=3.6,SNR=2.5						
BATI	Baumata	15.79	191	P	P	12 28 25.5	-1.0
JAY	Jayapura	15.97	119	Pn	Pn	12 28 25.2	-0.9
	comp=Z,0.9nm,0.3s,baz=325,slow=19,SNR=7.4						
JAY				LR	LR	12 34 23.6	
	comp=Z,6µm,19.7s,baz=324,slow=36						
	comp=Z,54nm,0.9s						
JAY	Jayapura	15.97	119	P	Pn	12 28 25.4	-0.7
DBNI	Kabupaten Domp	16.16	212	P	P	12 28 29.6	-1.0
WBSI	Waikabubak, Su	16.63	206	P	Pn	12 28 34.3	0.0
	comp=Z,7µmcomp=Z,7µmcomp=Z,832nm,0.6s						
BASI	Baing, Sumba	16.68	202	P	Pn	12 28 34.1	-0.7
	comp=Z,9µmcomp=Z,14µmcomp=Z,1µm,1.4s						
PLAI	Plampang	16.72	212	P	Pn	12 28 34.7	-0.7
PLAI	Plampang	16.72	212	P	Pn	12 28 35.3	-0.1
	comp=Z,8µmcomp=Z,8µmcomp=Z,561nm,0.7s						
KSM	Kuching	16.88	257	P	P	12 28 40.4	+1.8
KSM	Kuching	16.88	257	P	P	12 28 39.7	+1.1
TWSI	Taliwang, Sumb	17.14	215	P	P	12 28 41.3	-0.1
	comp=Z,7µmcomp=Z,12µmcomp=Z,1µm,0.8s						
KLNI	Mataram	17.36	218	P	Pn	12 28 43.0	-0.3
	comp=Z,8µmcomp=Z,6µmcomp=Z,654nm,0.6s						
KHKI	Kahang-Kahang	17.62	219	P	P	12 28 48.1	+1.4
	comp=Z,9µmcomp=Z,5µmcomp=Z,412nm,0.7s						
KMMI	Kalianget	17.77	226	P	P	12 28 49.8	+1.4
	comp=Z,8µmcomp=Z,5µmcomp=Z,570nm,1.1s						
ABJI	Asem Bagus	18.10	224	P	P	12 28 51.1	-0.9
	comp=Z,8µmcomp=Z,291nm,0.6s						
DNP	Denpasar	18.11	220	P	Pn	12 28 53.6	+1.2
RTBI	Rangdo, Negare	18.11	221	P	P	12 28 51.4	-0.8
	comp=Z,7µmcomp=Z,7µmcomp=Z,583nm,0.7s						
DRS	Darwin Rock St	18.16	167	P	P	12 28 51.5	-1.2
TWGBT	Beinan	18.19	343	P	Pn	12 28 53.8	+0.4
TWGBT	Beinan	18.19	343	S	S	12 32 18.3	+0.6
TWG	Pinlang	18.20	343	P	P	12 28 51.8	-1.3
IGBI	Denpasar	18.25	219	P	P	12 28 53.5	-0.2
	comp=Z,7µmcomp=Z,13µmcomp=Z,666nm,0.5s						
BLJI	Banyuglugur	18.51	225	P	Pn	12 28 57.3	0.0
	comp=Z,6µmcomp=Z,305nm,0.6s						
MTN	Manton Dam	18.61	167	P	P	12 28 56.1	-1.5
MTN				IAmb	IAmb	12 29 02.0	
	comp=Z,181nm,0.6s						
JAGI	Jajag, Banyuwa	18.64	223	P	P	12 28 56.6	-1.4
JAGI	Jajag, Banyuwa	18.64	223	P	P	12 28 58.2	+0.2
JAGI	Jajag, Banyuwa	18.64	223	S	S	12 32 27.7	+0.4
JAGI	Jajag, Banyuwa	18.64	223	P	P	12 28 58.5	+0.5
	comp=Z,6µmcomp=Z,6µmcomp=Z,605nm,0.7s						
YULB	Yu-li	18.67	344	P	Pn	12 28 58.6	-0.7
YULB	Yu-li	18.67	344	P	Pn	12 28 58.5	-0.7
YULB	Yu-li	18.67	344	S	S	12 32 29.4	+1.7
GRJI	Gresik	18.78	230	P	Pn	12 29 01.1	+0.6
	comp=Z,7µmcomp=Z,6µmcomp=Z,516nm,1.1s						
TPUB	Ta-pu	18.78	342	P	P	12 28 59.6	+0.2
TPUB				IAmb	IAmb	12 29 13.4	
	comp=Z,346nm,0.9s						
TPUB	Ta-pu	18.78	342	P	P	12 28 59.6	+0.2
TPUB	Ta-pu	18.78	342	S	S	12 32 31.5	+1.6
GMJI	Gumukmas	18.99	225	P	Pn	12 29 02.6	-0.4
	comp=Z,8µmcomp=Z,313nm,0.7s						
SSLB	Suanglung	19.14	344	P	Pn	12 29 05.2	+0.4
SSLB				IAmb	IAmb	12 29 14.8	
	comp=Z,234nm,0.8s						
SSLB	Suanglung	19.14	344	P	Pn	12 29 04.9	0.0
TBJI	Tambak Boyo	19.20	231	P	Pn	12 29 05.4	-0.2
	comp=Z,7µmcomp=Z,10µmcomp=Z,558nm,0.7s						
DLV	Lat	19.21	291	P	Pn	12 29 06.2	+0.3
DLV				IAmb	IAmb	12 29 07.8	
	comp=Z,254nm,0.8s						
DLV	Lat	19.21	291	P	Pn	12 29 06.7	+0.8
MMPI	Merauke	19.32	135	P	Pn	12 29 09.3	+2.3
NACB	Ninganchiao	19.34	346	P	P	12 29 05.6	+0.1
NACB	Ninganchiao	19.34	346	P	Pn	12 29 07.0	-0.2
JMJ	Miyako jima 2	19.38	356	P	Pn	12 29 07.2	-0.4
GUMO	Guam	19.61	64	P	Pn	12 29 09.4	-1.0
	comp=Z,5.0nm,0.3s,baz=185,slow=13,SNR=4.2						
GUMO				LR	LR	12 37 21.3	
	comp=Z,830nm,18.2s,baz=237,slow=39						
	comp=Z,66nm,0.7s						
NGJI	Ngawi	19.84	231	P	P	12 29 11.8	+0.7
	comp=Z,10µmcomp=Z,7µmcomp=Z,325nm,0.8s						
SJI	Sawahan	19.84	229	P	P	12 29 11.9	+0.7
	comp=Z,5µmcomp=Z,574nm,0.8s						
YHNB	Yeheng	19.87	345	P	Pn	12 29 12.9	-0.6
YHNB				IAmb	IAmb	12 29 27.9	
	comp=Z,265nm,0.7s						
YHNB	Yeheng	19.87	345	P	Pn	12 29 12.5	-1.0
SNJI	Sawahan-Nganju	19.88	229	P	P	12 29 12.3	+0.6
	comp=Z,6µmcomp=Z,4µmcomp=Z,418nm,0.8s						
TATO	Taipei	20.14	346	IAMs_20	IAMs_20	12 36 43.9	
	comp=Z,7µm,20.0s						
TATO	Taipei	20.14	346	P	Pn	12 29 15.6	-0.9
SMRI	Semarang	20.45	233	P	P	12 29 18.7	+1.0
SMRI	Semarang	20.45	233	P	Pn	12 29 19.5	-0.8
SMRI	Semarang	20.45	233	P	P	12 29 18.7	+1.0
	comp=Z,9µmcomp=Z,840nm,0.9s						
PCJI	Pacitan	20.58	229	P	P	12 29 18.3	-0.8
	comp=Z,5µmcomp=Z,3µmcomp=Z,355nm,0.7s						
KNMB	Chin-men Tao	20.62	338		Pn	12 29 21.2	-1.0
KNMB				IAmb	IAmb	12 29 28.8	
	comp=Z,222nm,0.8s						
TPI	Tanjungpandan	20.74	248	P	P	12 29 21.0	+0.2
	comp=Z,5µmcomp=Z,6µmcomp=Z,339nm,0.7s						
HKPS	Hong Kong Po S	20.77	325	P	P	12 29 22.4	+1.3
HKPS				IAmb	IAmb	12 29 29.6	
	comp=Z,294nm,1.0s						
HKPS				IAMs_20	IAMs_20	12 37 07.6	
	comp=Z,8µm,22.0s						
HKPS	Hong Kong Po S	20.77	325	P	Pn	12 29 22.9	-1.2
UGM	Wanagama	20.91	231	P	P	12 29 22.6	-0.1
UGM	Wanagama	20.91	231	P	P	12 29 23.5	+0.8
UGM	Wanagama	20.91	231	P	P	12 29 20.7	-2.0
	comp=Z,4µmcomp=Z,5µmcomp=Z,312nm,0.9s						
QZH	Quanzhou	20.98	339	P	P	12 29 24.4	+1.1
QZH				S	S	12 33 15.8	+2.1
QZH				pmax	pmax		
	comp=Z,290nm,0.7s						
QZH				LR	LR		
	comp=Z,7µm,19.9s						
QZH				LR	LR		
	comp=Z,4µm,18.2s						
QZH				LR	LR		
	comp=Z,13µm,21.2s						
KNRA	Kununurra	21.01	175	P	P	12 29 23.3	-0.4
KNRA				IAmb	IAmb	12 29 42.2	
	comp=Z,280nm,0.8s						
YOGI	Yogyakarta	21.02	232	P	P	12 29 25.3	+1.4
	comp=Z,14µmcomp=Z,1µm,1.2s						
QIZ	Qiongzhong	21.37	311	P	P	12 29 27.9	+0.4
QIZ	Qiongzhong	21.37	311	IAMs_20	IAMs_20	12 36 49.5	
	comp=Z,6µm,22.0s						
QIZ	Qiongzhong	21.37	311	P	P	12 29 27.7	+0.2
QIZ				sP	sP	12 29 49.2	+1.6
QIZ				S	S	12 33 21.9	+0.3
QIZ				sS	sS	12 33 46.5	+4.5
QIZ				SS	SnSn	12 34 07.4	+19
QIZ				pmax	pmax		
	comp=Z,89nm,1.4s						
QIZ				LR	LR		
	comp=Z,3µm,17.6s						
QIZ				LR	LR		
	comp=Z,4µm,19.5s						
QIZ				LR	LR		
	comp=Z,7µm,33.5s						
QIZ	Qiongzhong	21.37	311	P	P	12 29 30.1	+2.6
JOW	Kunigami	21.38	4	P	P	12 29 26.1	-1.5
	comp=Z,45nm,0.6s,baz=124,slow=5.4,SNR=6.1						
JOW				LR	LR	12 38 57.7	
	comp=Z,2µm,18.5s,baz=178,slow=40						
	comp=Z,45nm,0.6s						
JOW	Kunigami	21.38	4	P	P	12 29 28.2	+0.6
CTJI	Waduk Cacaban	21.43	235	P	P	12 29 29.0	+0.7
	comp=Z,5µmcomp=Z,5µmcomp=Z,382nm,0.9s						
KPJI	Karang Pucung	21.83	235	P	P	12 29 33.0	+0.5
	comp=Z,6µmcomp=Z,4µmcomp=Z,548nm,0.8s						
GZH	Guangzhou	21.86	325	P	P	12 29 36.2	+3.4
GZH				S	Sn	12 33 39.8	-4.3
GZH				pmax	pmax		
	comp=Z,290nm,0.8s						
GZH				LR	LR		
	comp=Z,6µm,24.9s						
GZH				LR	LR		
	comp=Z,4µm,22.6s						
GZH				LR	LR		
	comp=Z,12µm,27.5s						
PPBI	Pangkal Pinang	21.93	251	P	P	12 29 33.1	-0.5
TPRI	Tanjung Pinang	22.64	259	P	P	12 29 41.0	-0.3
	comp=Z,4µmcomp=Z,8µmcomp=Z,519nm,1.1s						
DSRI	Dabo	22.92	256	P	P	12 29 43.1	-1.0
BBJI	Bungbulang	22.95	236	P	P	12 29 41.8	-2.7
BBJI	Bungbulang	22.95	236	P	P	12 29 42.1	-2.4
	comp=Z,3µmcomp=Z,493nm,0.8s						
TNG	Tangerang	23.14	241	P	P	12 29 46.4	+0.1
	comp=Z,468nm,0.4s						
TNG				P	P	12 29 46.0	-0.3
MYKOM	Kota Tinggi	23.15	262	P	P	12 29 46.7	+0.2
MYKOM	Kota Tinggi	23.15	262	P	P	12 29 47.0	+0.6
MYKOM	Kota Tinggi	23.15	262	P	P	12 29 47.1	+0.6
	comp=Z,9µmcomp=Z,494nm,1.4s						
DBJI	Dramaga	23.24	240	P	P	12 29 48.2	+0.9
	comp=Z,5µmcomp=Z,13µmcomp=Z,796nm,1.8s						
BTDF	Bukit Timah Da	23.30	261	P	P	12 29 48.7	+0.8
BTDF	Bukit Timah Da	23.30	261	P	P	12 29 48.2	+0.3
CNJI	Cibinong	23.30	237	P	P	12 29 46.7	-1.2
FITZ	Fitzroy Crossi	23.35	183	P	P	12 29 48.1	-0.2
	comp=Z,87nm,0.5s,baz=348,slow=7.2,SNR=243						
FITZ				S	S	12 34 01.5	+5.0
	comp=Z,50nm,1.0s,baz=347,slow=19,SNR=6.7						
FITZ				ScP	ScP	12 37 09.2	+2.5
	comp=Z,14nm,0.7s,baz=338,slow=5.4,SNR=6.1						
	comp=Z,87nm,0.5s						
FITZ	Fitzroy Crossi	23.35	183	P	P	12 29 48.0	-0.3
PMBI	Palembang	23.47	250	P	P	12 29 50.4	+0.9
PMBI	Palembang	23.47	250	P	P	12 29 51.1	+1.6
SBJI	Serang	23.56	241	P	P	12 29 50.5	+0.2
	comp=Z,683nm,0.7s						
BLSI	Bandar Lampung	24.00	244	P	P	12 29 53.8	-0.5
	comp=Z,4µmcomp=Z,5µmcomp=Z,485nm,0.7s						
JMBI	JAMBI	24.13	254	P	P	12 29 58.9	+3.4
	comp=Z,6µmcomp=Z,12µmcomp=Z,751nm,0.8s						
KLI	Kotabumi	24.14	245	P	P	12 29 55.0	-0.5
	comp=Z,4µmcomp=Z,5µmcomp=Z,552nm,0.7s						
KLSI		24.18	246	P	P	12 29 55.5	-0.4
	comp=Z,5µmcomp=Z,5µmcomp=Z,364nm,1.2s						
MDSI	Maura Dua	24.60	247	P	P	12 29 59.2	-0.6
	comp=Z,3µmcomp=Z,166nm,0.7s						
KASI	Kota Agung	24.74	244	P	P	12 30 01.9	+0.9
	comp=Z,4µmcomp=Z,4µmcomp=Z,368nm,0.8s						
LWLI	Liwa	24.92	246	P	P	12 30 03.2	+0.4
	comp=Z,4µmcomp=Z,7µmcomp=Z,656nm,0.8s						
PMG	Port Moresby	25.07	126	P	P	12 30 04.7	+0.7
	comp=Z,14nm,0.7s,baz=351,slow=11,SNR=6.0						
PMG				ScP	ScP	12 37 14.4	+2.9
	comp=Z,11nm,0.8s,baz=35,slow=7.6,SNR=3.9						
PMG				LR	LR	12 41 08.6	
	comp=Z,2µm,21.6s,baz=318,slow=39						
	comp=Z,14nm,0.7s						
PMG	Port Moresby	25.07	126	P	P	12 30 04.9	+0.9
PMG	Port Moresby	25.07	126	⇑*i*P	P	12 30 06.1	+2.1
PMG				pmax	pmax		
	comp=Z,12nm,0.7s						
COEN	Coen	25.18	140	P	P	12 30 05.3	+0.3
COEN	Coen	25.18	140	P	P	12 30 04.3	-0.7
GULI	GuiLin	25.29	323	P	P	12 30 09.1	+3.2
GULI				S	S	12 34 25.2	-2.4
GULI				pmax	pmax		
	comp=Z,39nm,0.8s						
GULI				LR	LR		
	comp=Z,4µm,18.4s						
GULI				LR	LR		
	comp=Z,4µm,20.1s						
GULI				LR	LR		
	comp=Z,7µm,19.5s						
IPM	Ipoh	25.67	269	P	P	12 30 09.7	+0.1
IPM				IAmb	IAmb	12 30 12.5	
	comp=Z,177nm,0.8s						
IPM	Ipoh	25.67	269	P	P	12 30 09.6	+0.1
IPM	Ipoh	25.67	269	P	P	12 30 09.2	-0.3
	comp=Z,2µmcomp=Z,247nm,0.8s						
MNAI	Manna	25.68	248	P	P	12 30 10.3	+0.7
MNAI	Manna	25.68	248	P	P	12 30 10.9	+1.3
	comp=Z,9µmcomp=Z,519nm,1.3s						
MASI	Maura Aman, Be	25.93	251	P	P	12 30 13.0	+1.1
KULM	Kulim	26.01	271	P	P	12 30 11.8	-0.7
KULM				IAmb	IAmb	12 30 39.1	
	comp=Z,131nm,1.0s						
KULM	Kulim	26.01	271	P	P	12 30 12.2	-0.4
WB0	Warramunga Arr	26.09	164	P	P	12 30 12.3	-0.9
SSE	Sheshan	26.12	349	P	P	12 30 14.8	+1.5
SSE				S	S	12 34 43.4	+2.9
SSE				pmax	pmax		
	comp=Z,20nm,0.9s						
SSE				pmax	pmax		
	comp=Z,520nm,3.5s						
SSE				LR	LR		
	comp=Z,2µm,18.5s						
SSE				LR	LR		
	comp=Z,1µm,19.1s						
JCJ	Chichijima	26.12	33	LR	LR	12 38 13.2	
	comp=Z,2µm,21.2s,baz=225,slow=31						
JCJ	Chichijima	26.12	33	P	P	12 30 10.7	-2.7
CNSH	ChangSha	26.21	331	P	P	12 30 15.6	+1.4
CNSH				S	S	12 34 43.9	+1.7
CNSH				LR	LR		
	comp=Z,7µm,25.5s						
CNSH				LR	LR		
	comp=Z,6µm,23.0s						
CNSH				LR	LR		
	comp=Z,12µm,24.1s						
XMI	Christmas Isla	26.23	233	P	P	12 30 12.9	-1.7
WRAB	Tennant Creek	26.23	164	P	P	12 30 13.4	-1.1
WRAB	Tennant Creek	26.23	164	P	P	12 30 13.7	-0.7
WRAB	Tennant Creek	26.23	164	*c i*P	P	12 30 13.8	-0.7
WRAB				pmax	pmax		
	comp=Z,237nm,1.4s						
WRA	Warramunga Arr	26.24	164	P	P	12 30 13.7	-0.8
	comp=Z,145nm,0.9s,baz=341,slow=10.0,SNR=205						
WRA				PcP	PcP	12 33 40.1	0.0
	comp=Z,14nm,0.6s,baz=338,slow=2.5,SNR=4.3						
WRA				S	S	12 34 48.1	+5.4
	comp=Z,33nm,1.3s,baz=338,slow=16,SNR=6.1						
WRA				ScP	ScP	12 37 16.0	+1.2
	comp=Z,16nm,1.0s,baz=341,slow=3.3,SNR=5.2						
WRA				LR	LR	12 41 17.6	
	comp=Z,2µm,20.7s,baz=335,slow=38						
WRA				PKiKP	PKiKP	12 41 19.8	+0.3
	comp=Z,0.8nm,0.5s,baz=306,slow=1.3,SNR=5.8						
WRA				P3KPbc		13 02 54.6	
	comp=Z,0.5nm,0.6s,baz=176,slow=7.8,SNR=7.2						
WRA	Warramunga Arr	26.24	164	*i* P	P	12 30 11.8	-2.7
WRA				pmax	pmax		
	comp=Z,145nm,0.9s						
KRJI	Kerinci	26.35	254	P	P	12 30 17.7	+1.9
	comp=Z,491nm,0.9s						
PPI	Padang Panjang	26.97	258	P	P	12 30 21.7	+0.5
	comp=Z,3µmcomp=Z,4µmcomp=Z,199nm,1.0s						
PDSI	Padang	27.01	257	P	P	12 30 23.5	+1.9
	comp=Z,5µmcomp=Z,437nm,0.9s						
RABL	Rabaul	27.08	110	P	P	12 30 22.7	+0.5
RABL				IAmb	IAmb	12 30 57.5	
	comp=Z,91nm,0.9s						
SLVN	Son La	27.26	308	P	P	12 30 24.5	+0.7
MBWA	Marble Bar	27.26	194	P	P	12 30 23.6	-0.1
MBWA				P	P	12 30 23.6	-0.1
MBWA				S	S	12 34 56.7	-2.0
MBWA				S	S	12 34 56.7	-2.0
MBWA	Marble Bar	27.26	194	P	P	12 30 23.6	-0.1
MBWA	Marble Bar	27.26	194	P	P	12 30 23.2	-0.5
MNSI	Mandailing Nat	27.52	261	P	P	12 30 28.3	+2.1
	comp=Z,168nm,0.8s						
NJ2	Nanjing	27.55	345	*e*P	P	12 30 26.8	+0.6
NJ2				pP	pwP	12 30 42.6	-2.3
NJ2				S	S	12 35 03.2	0.0
NJ2				pmax	pmax		
	comp=Z,22nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,750nm,4.8s						
NJ2				LR	LR		
	comp=Z,3µm,23.6s						
NJ2				LR	LR		
	comp=Z,3µm,20.4s						
NJ2				LR	LR		
	comp=Z,4µm,22.7s						
PSA00	Pilbara Seismi	27.63	194	P	P	12 30 26.7	-0.3
PSA00	Pilbara Seismi	27.63	194	P	P	12 30 26.9	-0.1
PSA00				IAmb	IAmb	12 30 28.7	
	comp=Z,657nm,1.6s						
PSA00	Pilbara Seismi	27.63	194	P	P	12 30 27.0	0.0
WHN	Wuhan	27.63	336	⇑P	P	12 30 29.0	+2.1
WHN				pP	pwP	12 30 42.7	-1.6
WHN				PP	PnPn	12 31 21.3	+5.9
WHN				S	S	12 35 06.0	+1.5
WHN				pmax	pmax		
	comp=Z,350nm,1.2s						
WHN				LR	LR		
	comp=Z,12µm,16.6s						
WHN				LR	LR		
	comp=Z,17µm,23.7s						
WHN				LR	LR		
	comp=Z,17µm,16.8s						
JNU	Nakatsue	27.87	7	P	P	12 30 26.6	-2.5
	comp=Z,16nm,0.8s,baz=223,slow=0.7,SNR=12						
JNU				LR	LR	12 43 48.8	
	comp=Z,1µm,18.5s,baz=185,slow=41						
	comp=Z,16nm,0.8s						
JNU	Nakatsue	27.87	7	P	P	12 30 29.4	+0.3
JNU				IAmb	IAmb	12 31 28.6	
	comp=Z,177nm,1.3s						
JNU	Nakatsue	27.87	7	P	P	12 30 27.0	-2.1
PSI	Prapat	27.89	266	P	P	12 30 29.6	0.0
	comp=Z,123nm,1.1s						
PPSI	Pulau Pagai	27.93	254	P	P	12 30 30.7	+0.9
	comp=Z,3µmcomp=Z,199nm,0.8s						
GYA	Guiyang	28.43	320	⇓P	P	12 30 36.9	+2.6
GYA				sP	sP	12 30 59.5	+3.8
GYA				S	S	12 35 17.5	+0.1
GYA				pmax	pmax		
	comp=Z,15nm,1.0s						
GYA				pmax	pmax		
	comp=Z,540nm,3.9s						
GYA				LR	LR		
	comp=Z,3µm,16.4s						
GYA				LR	LR		
	comp=Z,5µm,18.8s						
GYA				LR	LR		
	comp=Z,6µm,21.6s						
SISI	Saibi	28.44	257	P	P	12 30 34.2	-0.2
	comp=Z,4µmcomp=Z,265nm,0.9s						
QIS	Mount Isa	28.69	154	P	P	12 30 36.7	+0.2
PBSI	Pulau Batu	28.96	260	P	P	12 30 38.6	-0.4
KCSI	Kotacane, Aceh	28.97	268	P	P	12 30 38.3	-0.8
	comp=Z,2µmcomp=Z,208nm,0.8s						
JMN	Monobe	28.97	12	P	P	12 30 39.8	+0.9
JMN				IAmb	IAmb	12 31 36.2	
	comp=Z,145nm,1.2s						
JMN	Monobe	28.97	12	P	P	12 30 39.6	+0.7
MTSU	Mount Surprise	29.07	144	P	P	12 30 39.8	-0.2
JTU	Tsushima	29.11	4	P	P	12 30 41.2	+1.2
GSI	Gunungsitoli	29.42	263	P	P	12 30 41.4	-1.7
GSI				IAMs_20	IAMs_20	12 43 08.1	
	comp=Z,3µm,22.0s						
GSI	Gunungsitoli	29.42	263	P	P	12 30 41.5	-1.6
GSI	Gunungsitoli	29.42	263	P	P	12 30 42.1	-1.0
	comp=Z,3µmcomp=Z,360nm,0.9s						
TPTI		29.58	267	P	P	12 30 44.0	-0.5
	comp=Z,102nm,0.9s						
ENH	Enshi	29.64	329	P	P	12 30 44.6	-0.3
ENH				IAmb	IAmb	12 30 52.2	
	comp=Z,177nm,0.9s						
AS31	Alice Springs	29.69	167	P	P	12 30 44.9	-0.5
ASAR	Alice Springs	29.69	167	P	P	12 30 44.5	-0.9
	comp=Z,19nm,0.7s,baz=355,slow=7.8,SNR=49						
ASAR				PcP	PcP	12 33 49.2	+0.7
	comp=Z,22nm,0.6s,baz=348,slow=2.2,SNR=8.5						
ASAR				S	S	12 35 41.7	+4.6
	comp=Z,25nm,1.3s,baz=358,slow=22,SNR=2.9						
ASAR				ScP	ScP	12 37 27.0	+1.6
	comp=Z,12nm,0.6s,baz=346,slow=3.5,SNR=9.9						
ASAR				LR	LR	12 43 12.6	
	comp=Z,881nm,19.2s,baz=356,slow=37						
ASAR				P3KPbc		13 02 42.0	
	comp=Z,0.7nm,0.7s,baz=166,slow=3.8,SNR=9.5						
	comp=Z,19nm,0.7s						
ASAR	Alice Springs	29.69	167	P	P	12 30 44.9	-0.5
LHMI	Lhok Sumawe	29.70	271	P	P	12 30 46.1	+0.6
LHMI	Lhok Sumawe	29.70	271	P	P	12 30 42.7	-2.8
	comp=Z,189nm,0.7s						
CM31	Chiang Mai Arr	30.11	298	P	P	12 30 50.0	+0.8
	SNR=9.2						
CM31	Chiang Mai Arr	30.11	298	P	P	12 30 48.5	-0.6
CMAR	Chiang Mai Arr	30.11	298	P	P	12 30 48.9	-0.3
	comp=Z,23nm,0.7s,baz=119,slow=7.5,SNR=92						
CMAR				PcP	PcP	12 33 51.0	+1.3
	comp=Z,12nm,0.8s,baz=114,slow=4.6,SNR=7.4						
CMAR				ScP	ScP	12 37 27.9	+1.1
	comp=Z,35nm,1.1s,baz=101,slow=3.1,SNR=15						
CMAR				PKiKP	PKiKP	12 41 21.2	-0.7
	comp=Z,1.5nm,0.6s,baz=257,slow=0.8,SNR=5.6						
CMAR				LR	LR	12 44 53.0	
	comp=Z,2µm,19.0s,baz=110,slow=40						
	comp=Z,23nm,0.7s						
CMAR	Chiang Mai Arr	30.11	298	P	P	12 30 48.7	-0.5
JHJ	Hachijo jima 2	30.15	22	LR	LR	12 43 23.8	
	comp=Z,1µm,20.6s,baz=222,slow=37						
CHTO	Chiang Mai	30.25	299	P	P	12 30 49.2	-1.2
CHTO	Chiang Mai	30.25	299	P	P	12 30 49.3	-1.0
CHTO				IAmb	IAmb	12 30 58.2	
	comp=Z,48nm,0.6s						
CHTO				IAMs_20	IAMs_20	12 44 55.1	
	comp=Z,2µm,18.0s						
CHTO	Chiang Mai	30.25	299	P	P	12 30 50.0	-0.3
CHTO	Chiang Mai	30.25	299	P	P	12 30 50.8	+0.5
	comp=Z,68nm,0.6s						
CHTO	Chiang Mai	30.25	299	P	P	12 30 49.3	-1.0
CHTO				pmax	pmax		
	comp=Z,48nm,0.6s						
CHTO				MLR	MLR		
	comp=Z,2µm,18.0s						
CHTO	Chiang Mai	30.25	299	P	P	12 30 49.8	-0.6
CHTO				pP	pP	12 31 01.3	-3.3
CHTO				PcP	PcP	12 33 51.2	+1.2
KMI	Kunming	30.27	313	⇑P	P	12 30 51.9	+1.1
KMI				pP	sP	12 31 10.9	-1.0
KMI				sP	pP	12 31 18.2	+13
KMI				PP	PnPn	12 31 53.8	+2.9

KMI				S	S	12 35 42.8	-3.9
KMI				pmax	pmax		
	comp=Z,62nm,1.0s						
KMI				pmax	pmax		
	comp=Z,410nm,6.9s						
KMI				LR	LR		
	comp=Z,3µm,21.5s						
KMI				LR	LR		
	comp=Z,3µm,27.9s						
KMI				LR	LR		
	comp=Z,4µm,23.5s						
MLSI	**Meulaboh, Aceh**	30.28	269	P	P	12 30 48.5	-2.2
GIRL	**Giralia**	30.43	203	P	P	12 30 52.5	+0.6
GIRL				IAmb	IAmb	12 30 54.3	
	comp=Z,120nm,0.8s						
TJN	**Taejon**	30.86	1	⇑*i*P	P	12 30 54.8	-0.7
TJN				pmax	pmax		
	comp=Z,1.0nm,1.2s						
INU	**Inuyama**	31.29	16	IAMs_20	IAMs_20	12 43 38.4	
	comp=Z,3µm,19.0s						
INU	**Inuyama**	31.29	16	P	P	12 30 59.4	+0.1
PATS	**Pohnpei**	31.39	86	IAMs_20	IAMs_20	12 41 02.5	
	comp=Z,2µm,19.0s						
TV1H	**Townsville Har**	31.43	142	P	P	12 31 01.8	+1.1
JGF	**Kuroka**	31.62	17	P	P	12 31 03.7	+1.4
JGF	**Kuroka**	31.62	17	P	P	12 31 03.4	+1.1
CTA	**Charters Tower**	31.74	143	LR	LR	12 44 49.3	
	comp=Z,102nm,21.9s,baz=311,slow=38						
CTA	**Charters Tower**	31.74	143	P	P	12 31 03.1	-0.3
CTAO	**Charters Tower**	31.74	143	P	P	12 31 03.6	+0.1
CTAO				IAmb	IAmb	12 31 06.8	
	comp=Z,118nm,1.4s						
CTAO	**Charters Tower**	31.74	143	IAMs_20	IAMs_20	12 44 37.0	
	comp=Z,3µm,21.0s						
CTAO	**Charters Tower**	31.74	143	P	P	12 31 03.1	-0.3
CTAO	**Charters Tower**	31.74	143	P	P	12 31 03.6	+0.1
CTAO				pmax	pmax		
	comp=Z,118nm,1.4s						
CTAO				MLR	MLR		
	comp=Z,3µm,21.0s						
CTAO	**Charters Tower**	31.74	143	P	P	12 31 04.1	+0.7
PZH	**PanZhiHua**	31.82	314	P	P	12 31 06.6	+2.4
PZH				PP	PnPn	12 32 12.8	+2.0
PZH				S	S	12 36 12.2	+1.6
PZH				pmax	pmax		
	comp=Z,40nm,1.1s						
PZH				pmax	pmax		
	comp=Z,400nm,5.7s						
PZH				LR	LR		
	comp=Z,1µm,19.2s						
PZH				LR	LR		
	comp=Z,3µm,20.4s						
PZH				LR	LR		
	comp=Z,3µm,18.6s						
LYN	**LuoYang**	31.91	337	P	P	12 31 06.2	+1.4
LYN				pP	sP	12 31 25.9	-0.3
LYN				sP	pwP	12 31 36.6	+15
LYN				PP	PP	12 32 12.3	-5.6
LYN				S	S	12 36 12.0	+0.5
LYN				SS	SS	12 38 18.4	-12
LYN				pmax	pmax		
	comp=Z,140nm,0.7s						
LYN				pmax	pmax		
	comp=Z,1µm,4.5s						
LYN				LR	LR		
	comp=Z,3µm,22.3s						
LYN				LR	LR		
	comp=Z,5µm,24.1s						
LYN				LR	LR		
	comp=Z,10µm,22.0s						
KSAR	**Wonju Array Be**	31.93	2	P	P	12 31 05.5	+0.7
KSAR	**Wonju Array Be**	31.93	2	P	P	12 31 05.6	+0.7
TIA	**Tai'an**	31.94	345	P	P	12 31 05.8	+0.7
TIA				PcP	PcP	12 33 55.5	+1.3
TIA				S	S	12 36 09.9	-2.1
TIA				pmax	pmax		
	comp=Z,63nm,0.8s						
TIA				pmax	pmax		
	comp=Z,740nm,4.4s						
TIA				LR	LR		
	comp=Z,4µm,17.9s						
TIA				LR	LR		
	comp=Z,1µm,17.2s						
TIA				LR	LR		
	comp=Z,6µm,18.9s						
KSRS	**Korea Array**	31.95	2	P	P	12 31 03.5	-1.6
	comp=Z,5.0nm,0.6s,baz=180,slow=9.8,SNR=17						
KSRS				PcP	PcP	12 33 55.0	+0.9
	comp=Z,12nm,0.7s,baz=183,slow=2.1,SNR=14						
KSRS				ScP	ScP	12 37 33.9	+1.4
	comp=Z,3.8nm,0.8s,baz=181,slow=3.0,SNR=5.1						
KSRS				LR	LR	12 46 24.3	
	comp=Z,848µm,18.0s,baz=175,slow=41						
	comp=Z,5.0nm,0.6s						
INCN	**Inchon**	31.96	360	IAMs_20	IAMs_20	12 46 23.9	
	comp=Z,4µm,20.0s						
KS19	**Wonju Array Si**	31.99	2	P	P	12 31 06.5	+1.0
MAJO	**Matsushiro**	32.74	17	P	P	12 31 12.2	+0.1
MAJO				IAmb	IAmb	12 31 36.1	
	comp=Z,104nm,1.4s						
MAJO	**Matsushiro**	32.74	17	IAMs_20	IAMs_20	12 43 26.8	
	comp=Z,3µm,22.0s						
MAJO	**Matsushiro**	32.74	17	P	P	12 31 12.3	+0.2
MAJO	**Matsushiro**	32.74	17	P	P	12 31 12.2	+0.1
MAJO				pmax	pmax		
	comp=Z,104nm,1.5s						
MAJO				MLR	MLR		
	comp=Z,3µm,22.0s						
MJAR	**Matsushiro Arr**	32.74	17	P	P	12 31 11.2	-0.9
	comp=Z,5.8nm,0.5s,baz=183,slow=8.7,SNR=19						
MJAR				PcP	PcP	12 33 57.1	+0.7
	comp=Z,24nm,0.7s,baz=173,slow=4.0,SNR=15						
MJAR				ScP	ScP	12 37 36.7	+1.4
	comp=Z,9.9nm,0.8s,baz=174,slow=3.7,SNR=8.0						
MJAR				LR	LR	12 42 52.5	
	comp=Z,2µm,21.7s,baz=212,slow=33						
	comp=Z,5.8nm,0.5s						
MJAR	**Matsushiro Arr**	32.74	17	P	P	12 31 12.6	+0.5
MJAR	**Matsushiro Arr**	32.74	17	P	P	12 31 12.6	+0.5
MJAR				pmax	pmax		
	comp=Z,40nm,1.5s						
MJB9	**Matsu-Tunnel**	32.75	17	P	P	12 31 12.9	+0.7
MJB9				IAmb	IAmb	12 31 37.1	
	comp=Z,105nm,1.5s						
MEEK	**Meekatharra**	32.79	194	P	P	12 31 12.0	-0.6
XAN	**Xi'an**	32.98	332	P	P	12 31 13.3	-0.9
XAN				PP	PnPn	12 32 24.9	-0.5
XAN				S	S	12 36 27.8	-0.6
XAN				SS	SnSn	12 38 35.8	+4.3
XAN				pmax	pmax		
	comp=Z,380nm,0.7s						
XAN				pmax	pmax		
	comp=Z,1µm,4.3s						
XAN				LR	LR		
	comp=Z,8µm,21.3s						
XAN				LR	LR		
	comp=Z,7µm,21.6s						
XAN				LR	LR		
	comp=Z,14µm,22.0s						
CD2	**Chengdu**	33.36	322	P	P	12 31 19.0	+1.4
CD2				sP	sP	12 31 42.8	+3.6
CD2				PP	PP	12 32 33.0	-1.1
CD2				S	S	12 36 34.5	+0.2
CD2				sS	sS	12 37 08.1	+9.4
CD2				pmax	pmax		
	comp=Z,100nm,1.0s						
CD2				pmax	pmax		
	comp=Z,640nm,5.8s						
CD2				LR	LR		
	comp=Z,5µm,17.3s						
CD2				LR	LR		
	comp=Z,3µm,17.1s						
CD2				LR	LR		
	comp=Z,7µm,15.9s						
TNCH	**TengChong**	33.41	309	P	P	12 31 20.3	+2.1
TNCH				sP	sP	12 31 40.0	+0.5
TNCH				S	S	12 36 37.7	+2.3
TNCH				pmax	pmax		
	comp=Z,270nm,3.6s						
TNCH				LR	LR		
	comp=Z,2µm,19.2s						
TNCH				LR	LR		
	comp=Z,2µm,20.1s						
TNCH				LR	LR		
	comp=Z,4µm,28.0s						
DL2	**Dalian**	33.70	353	P	P	12 31 20.5	+0.1
DL2				S	S	12 36 37.1	-2.1
DL2				pmax	pmax		
	comp=Z,200nm,0.9s						
DL2				pmax	pmax		
	comp=Z,370nm,5.7s						
DL2				LR	LR		
	comp=Z,2µm,21.5s						
DL2				LR	LR		
	comp=Z,2µm,20.9s						
DL2				LR	LR		
	comp=Z,4µm,23.9s						
HNS	**HongShan**	33.73	343	⇑P	P	12 31 20.4	-0.2
HNS				S	S	12 36 37.5	-2.1
HNS				pmax	pmax		
	comp=Z,470nm,0.7s						
HNS				LR	LR		
	comp=Z,2µm,23.9s						
HNS				LR	LR		
	comp=Z,2µm,23.9s						
HNS				LR	LR		
	comp=Z,5µm,23.9s						
TIY	**Taiyuan**	34.74	340	*e*P	P	12 31 31.2	+1.7
TIY				PP	PP	12 32 50.0	+0.7
TIY				S	S	12 36 55.3	-0.2
TIY				SS	SnSn	12 39 17.0	+2.9
TIY				pmax	pmax		
	comp=Z,66nm,0.9s						
TIY				pmax	pmax		
	comp=Z,690nm,3.9s						
TIY				LR	LR		
	comp=Z,2µm,19.9s						
TIY				LR	LR		
	comp=Z,2µm,22.0s						
TIY				LR	LR		
	comp=Z,3µm,21.3s						
INKA	**Innaminka**	35.58	158	P	P	12 31 37.5	+0.7
INKA				IAmb	IAmb	12 31 39.1	
	comp=Z,65nm,0.8s						
TATA	**Tatamba Isabel**	35.66	112	P	P	12 31 39.5	+1.8
MORW	**Morawa**	35.77	196	P	P	12 31 38.3	0.0
MORW				IAmb	IAmb	12 31 45.5	
	comp=Z,76nm,0.8s						
MORW	**Morawa**	35.77	196	P	P	12 31 38.0	-0.3
BJT	**Baijiatuau**	35.79	346	P	P	12 31 38.1	-0.3
BJT	**Baijiatuau**	35.79	346	IAMs_20	IAMs_20	12 47 28.3	
	comp=Z,3µm,21.0s						
BJT	**Baijiatuau**	35.79	346	P	P	12 31 39.9	+1.5
BJT	**Baijiatuau**	35.79	346	P	P	12 31 38.1	-0.3
BJT				pmax	pmax		
	comp=Z,332nm,1.0s						
BJT				MLR	MLR		
	comp=Z,3µm,21.0s						
BJT	**Baijiatuau**	35.79	346	P	P	12 31 39.2	+0.8
BJT				pP	pP	12 31 50.3	-2.2
BJT				sP	pwP	12 31 55.4	-1.9
BJI	**Beijing**	35.81	346	P	P	12 31 37.5	-1.0
BJI				pP	pP	12 31 52.3	-0.3
BJI				sP	sP	12 32 00.1	+0.7
BJI				PP	PP	12 33 00.8	-0.1
BJI				S	S	12 37 09.5	-2.1
BJI				ScS	ScS	12 41 48.2	-3.0
BJI				pmax	pmax		
	comp=Z,86nm,1.2s						
BJI				pmax	pmax		
	comp=Z,350nm,3.6s						
BJI				LR	LR		
	comp=Z,1µm,20.1s						
BJI				LR	LR		
	comp=Z,810nm,22.6s						
BJI				LR	LR		
	comp=Z,2µm,20.1s						
FORT	**Forrest**	35.97	178	P	P	12 31 39.5	-0.5
FORT				IAmb	IAmb	12 32 04.8	
	comp=Z,91nm,0.8s						
QLP	**Quilpie**	35.99	153	P	P	12 31 40.2	-0.1
SNY	**Shenyang**	36.41	356	⇑P	P	12 31 43.8	+0.2
SNY				S	S	12 37 20.4	-0.3
SNY				pmax	pmax		
	comp=Z,75nm,0.9s						
SNY				pmax	pmax		
	comp=Z,450nm,4.2s						
SNY				LR	LR		
	comp=Z,1µm,23.1s						
SNY				LR	LR		
	comp=Z,1µm,17.9s						
SNY				LR	LR		
	comp=Z,3µm,22.4s						
BLDU	**Ballidu**	37.06	194	P	P	12 31 48.5	-0.8
LZDM	**Lanzhou Array**	37.10	328	P	P	12 31 50.3	+0.3
	comp=Z,108nm,0.9s,baz=133,slow=8.1,SNR=77						
LZDM				PcP	PcP	12 34 10.6	+1.1
	comp=Z,3.8nm,0.4s,baz=182,slow=4.3,SNR=2.3						
LZDM				ScP	ScP	12 37 53.6	+2.2
	comp=Z,5.9nm,0.6s,baz=145,slow=5.4,SNR=4.1						
LZDM				LR	LR	12 48 18.9	
	comp=Z,5µm,21.8s,baz=110,slow=38						
	comp=Z,108nm,0.9s						
LZH	**Lanzhou**	37.12	328	*e*P	P	12 31 50.5	+0.5
LZH				pP	pP	12 32 05.1	+0.8
LZH				PP	PnPn	12 33 22.0	+5.4
LZH				S	S	12 37 33.5	+1.3
LZH				sS	sS	12 38 01.5	+4.7
LZH				SS	SnSn	12 40 09.4	-2.4
LZH				pmax	pmax		
	comp=Z,400nm,1.3s						
LZH				pmax	pmax		
	comp=Z,890nm,4.8s						
LZH				LR	LR		
	comp=Z,6µm,17.2s						
LZH				LR	LR		
	comp=Z,8µm,17.2s						
LZH				LR	LR		
	comp=Z,15µm,17.9s						
NGOA	**Tingoa Renbel**	37.15	117	P	P	12 31 49.3	-1.0
JTM	**Tenmabayashi**	37.52	18	P	P	12 31 54.3	+1.3
KLBR	**Kellerberrin**	37.76	193	P	P	12 31 55.2	0.0
HHC	**Hu-ho-hao-te**	37.86	341	*e*P	P	12 31 57.3	+1.2
HHC				pP	pP	12 32 09.6	-1.4
HHC				S	S	12 37 37.4	-5.8
HHC				pmax	pmax		
	comp=Z,89nm,1.3s						
HHC				LR	LR		
	comp=Z,2µm,20.4s						
HHC				LR	LR		
	comp=Z,2µm,19.0s						
HHC				LR	LR		
	comp=Z,3µm,18.7s						
BRDH	**Bariadhala**	38.02	300	LR	LR	12 47 08.0	
	comp=Z,2µm,21.8s,baz=118,slow=36						
BTO	**Baotou**	38.16	339	*e*P	P	12 32 00.2	+1.5
BTO				pP	sP	12 32 20.6	+0.2
BTO				S	S	12 37 51.8	+4.0
BTO				pmax	pmax		
	comp=Z,78nm,0.9s						
BTO				pmax	pmax		
	comp=Z,2µm,5.2s						
BTO				LR	LR		
	comp=Z,3µm,22.6s						
BTO				LR	LR		
	comp=Z,5µm,14.5s						
BTO				LR	LR		
	comp=Z,7µm,20.0s						
CN2	**Changchun**	38.29	358	*e*P	P	12 31 56.9	-2.6
CN2				*e*pP	pP	12 32 14.9	+1.2
CN2				*e*S	S	12 37 46.6	-2.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,300nm,4.0s						
CN2				LR	LR		
	comp=Z,500nm,11.0s						
CN2				LR	LR		
	comp=Z,700nm,11.0s						
CN2				LR	LR		
	comp=Z,800nm,13.0s						
MUN	**Mundaring**	38.49	194	P	P	12 32 01.1	-0.2
EIDS	**Eidsvold**	38.63	143	P	P	12 32 01.6	-1.0
EIDS				IAmb	IAmb	12 32 04.5	
	comp=Z,95nm,1.1s						
EIDS	**Eidsvold**	38.63	143	P	P	12 32 02.2	-0.4
USRK	**Ussuriysk Ar.**	38.94	6	P	P	12 32 04.3	-0.7
	comp=Z,24nm,0.5s,baz=174,slow=7.4,SNR=55						
	comp=Z,24nm,0.5s						
SHL	**Shillong**	38.96	305	P	P	12 32 05.1	-0.6
	SNR=40						
SHL	**Shillong**	38.96	305	P	P	12 32 04.6	-1.1
SHL	**Shillong**	38.96	305	P	P	12 32 04.6	-1.1
SHL				pmax	pmax		
	comp=Z,201nm,0.6s						
BBOO	**Buckleboo**	38.99	168	P	P	12 32 05.1	-0.4
BBOO				IAmb	IAmb	12 32 18.5	
	comp=Z,92nm,0.7s						
BBOO	**Buckleboo**	38.99	168	P	P	12 32 05.1	-0.4
NWAO	**Narrogin (SRO)**	39.16	193	P	P	12 32 07.0	+0.1
	comp=Z,116nm,0.5s,baz=18,slow=7.6,SNR=211						
NWAO				LR	LR	12 49 14.6	
	comp=Z,892nm,21.7s,baz=1.5,slow=38						
	comp=Z,116nm,0.5s						
NWAO	**Narrogin (SRO)**	39.16	193	P	P	12 32 07.1	+0.2
NWAO				S	S	12 38 01.2	-1.4
NWAO	**Narrogin (SRO)**	39.16	193	P	P	12 32 06.7	-0.1
NWAO	**Narrogin (SRO)**	39.16	193	P	P	12 32 06.8	-0.1
MDJ	**Mudanjiang**	39.16	3	P	P	12 32 06.6	-0.2
MDJ				IAmb	IAmb	12 32 12.3	
	comp=Z,59nm,0.9s						
MDJ				IAMs_20	IAMs_20	12 50 50.2	
	comp=Z,2µm,20.0s						
MDJ	**Mudanjiang**	39.16	3	P	P	12 32 07.8	+1.0
MDJ				S	S	12 38 02.9	+0.5
MDJ				pmax	pmax		
	comp=Z,55nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,340nm,5.6s						
MDJ				LR	LR		
	comp=Z,2µm,16.3s						
MDJ				LR	LR		
	comp=Z,1µm,16.0s						
MDJ				LR	LR		
	comp=Z,3µm,24.9s						
MDJ	**Mudanjiang**	39.16	3	P	P	12 32 07.6	+0.8
ERM	**Erimo**	39.29	19	IAMs_20	IAMs_20	12 45 19.5	
	comp=Z,3µm,22.0s						
ERM	**Erimo**	39.29	19	P	P	12 32 08.8	+0.9
JEM	**Erimo**	39.30	19	P	P	12 32 09.3	+1.4
XLT	**XiLinHaoTe**	39.51	348	*e*P	P	12 32 10.1	+0.3
XLT				pP	pwP	12 32 27.7	-1.2
XLT				sP	sP	12 32 37.2	+6.4
XLT				PcP	PcP	12 34 15.2	-1.3
XLT				S	S	12 38 03.3	-4.5
XLT				pmax	pmax		
	comp=Z,97nm,0.8s						
XLT				pmax	pmax		
	comp=Z,690nm,4.2s						
XLT				LR	LR		
	comp=Z,210nm,23.8s						
XLT				LR	LR		
	comp=Z,2µm,22.5s						
XLT				LR	LR		
	comp=Z,4µm,23.0s						
WHYH	**Whyalla**	39.55	166	P	P	12 32 10.2	0.0
STKA	**Stephens Creek**	39.65	160	P	P	12 32 11.3	+0.3
	comp=Z,184nm,0.9s,baz=336,slow=8.3,SNR=146						
STKA				ScP	ScP	12 38 03.0	+2.3
	comp=Z,16nm,0.9s,baz=336,slow=7.8,SNR=4.0						
STKA				LR	LR	12 50 40.1	
	comp=Z,2µm,21.5s,baz=327,slow=39						
	comp=Z,184nm,0.9s						
STKA	**Stephens Creek**	39.65	160	P	P	12 32 10.7	-0.3
STKA	**Stephens Creek**	39.65	160	P	P	12 32 10.9	-0.1
STKA	**Stephens Creek**	39.65	160	*c i*P	P	12 32 11.0	-0.1
BNX	**BinXian**	40.21	1	⇓P	P	12 32 15.5	0.0
BNX				pP	sP	12 32 35.4	-1.0
BNX				S	S	12 38 20.0	+1.9
BNX				sS	sS	12 38 49.8	+7.0
BNX				pmax	pmax		
	comp=Z,44nm,0.7s						
BNX				LR	LR		
	comp=Z,2µm,18.4s						
BNX				LR	LR		
	comp=Z,2µm,22.8s						
BNX				LR	LR		
	comp=Z,3µm,23.8s						
HTT	**Hallett**	40.28	164	P	P	12 32 16.8	+0.5
TEY	**Ternei**	40.43	11	*e*P	P	12 32 18.2	+0.9
CMSA	**Cobar Meteorol**	40.91	155	P	P	12 32 21.7	+0.2
ASAJ	**Asahikawa**	41.02	17	P	P	12 32 22.4	+0.2
	comp=Z,17nm,0.6s,baz=228,slow=9.4,SNR=20						
ASAJ				LR	LR	12 49 38.3	
	comp=Z,2µm,21.0s,baz=221,slow=36						
	comp=Z,17nm,0.6s						
JKA	**Kamikawa-asahi**	41.02	17	P	P	12 32 22.3	+0.1
JKA				IAmb	IAmb	12 32 45.8	
	comp=Z,358nm,1.9s						
LSA	**Lhasa**	41.41	310	P	P	12 32 26.5	+0.3
LSA	**Lhasa**	41.41	310	P	P	12 32 21.8	-4.4
LSA				S	S	12 38 30.6	-6.7
LSA				pmax	pmax		
	comp=Z,37nm,0.7s						
LSA				LR	LR		
	comp=Z,1µm,20.8s						
LSA				LR	LR		
	comp=Z,700nm,23.7s						
LSA				LR	LR		
	comp=Z,2µm,21.1s						
LSA	**Lhasa**	41.41	310	P	P	12 32 27.5	+1.3
LSA	**Lhasa**	41.41	310	P	P	12 32 26.5	+0.3
LSA				pmax	pmax		
	comp=Z,66nm,1.0s						
LSA	**Lhasa**	41.41	310	PcP	PcP	12 34 25.0	+1.6
GTA	**Gaotai**	41.72	328	*e*P	P	12 32 28.6	+0.4
GTA				PcP	PcP	12 34 24.0	+0.2
GTA				S	S	12 38 43.5	+2.4
GTA				pmax	pmax		
	comp=Z,13nm,0.9s						
GTA				pmax	pmax		
	comp=Z,530nm,4.7s						
GTA				LR	LR		
	comp=Z,5µm,23.6s						
GTA				LR	LR		
	comp=Z,7µm,22.9s						
GTA				LR	LR		
	comp=Z,12µm,22.9s						
GOMU	**GeErMu**	42.44	321	P	P	12 32 34.7	+0.3
GOMU				S	S	12 38 52.1	-0.1
GOMU				SS	SS	12 42 07.8	+4.4
GOMU				pmax	pmax		
	comp=Z,43nm,1.4s						
GOMU				LR	LR		
	comp=Z,3µm,18.4s						
GOMU				LR	LR		
	comp=Z,3µm,18.4s						
GOMU				LR	LR		
	comp=Z,7µm,19.0s						
ARMA	**Armidale**	42.82	148	P	P	12 32 37.0	-0.3
ARMA	**Armidale**	42.82	148	P	P	12 32 37.6	+0.4
YSS	**Yuzhno-Sakhali**	43.66	16	P	P	12 32 43.6	0.0
YSS	**Yuzhno-Sakhali**	43.66	16	P	P	12 32 44.6	+1.0
YSS	**Yuzhno-Sakhali**	43.66	16	*e*P	P	12 32 45.0	+1.4
YSS				*e*S	S	12 39 12.1	+3.2
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS				MLR	MLR		
	comp=Z,2µm,15.0s						
YSS				MLR	MLR		
	comp=N,1µm,14.0s						
YSS				MLR	MLR		
	comp=E,2µm,14.0s						
EVN	**Everest**	44.07	305	P	P	12 32 47.7	-0.3
HIA	**Hailar**	44.14	353	P	P	12 32 47.3	-0.2
HIA	**Hailar**	44.14	353	IAMs_20	IAMs_20	12 52 08.7	
	comp=Z,3µm,22.0s						
HIA	**Hailar**	44.14	353	P	P	12 32 48.7	+1.2
HIA	**Hailar**	44.14	353	P	P	12 32 47.3	-0.2
HIA				pmax	pmax		
	comp=Z,27nm,0.8s						
HIA				MLR	MLR		
	comp=Z,3µm,22.0s						
HILR	**Hailar Array B**	44.42	353	P	P	12 32 49.4	-0.4
	comp=Z,26nm,0.6s,baz=168,slow=12,SNR=19						
HILR				PcP	PP	12 34 33.5	-1.0
	comp=Z,44nm,0.6s,baz=155,slow=4.9,SNR=13						
HILR				ScP	ScP	12 38 20.8	+1.2
	comp=Z,1.2nm,0.3s,baz=161,slow=5.8,SNR=2.0						
HILR				LR	LR	12 55 48.1	
	comp=Z,807nm,18.1s,baz=125,slow=42						
	comp=Z,26nm,0.6s						
HEH	**HeiHe**	44.73	1	*e*P	P	12 32 52.2	+0.1
HEH				PcP	PcP	12 34 33.1	-0.4
HEH				S	S	12 39 25.1	+0.7
HEH				pmax	pmax		
	comp=Z,26nm,1.0s						

HEH				LR	LR		
	comp=Z,940nm,19.7s						
HEH				LR	LR		
	comp=Z,2µm,18.9s						
HEH				LR	LR		
	comp=Z,3µm,21.2s						
SANVU	Saraoutou	45.07	118	IAMs_20	IAMs_20	12 50 09.4	
	comp=Z,2µm,22.0s						
SANVU	Saraoutou	45.07	118	P	P	12 32 52.3	-3.1
CAN	Canberra	45.56	154	P	P	12 32 60.0	+0.9
CAN	Canberra	45.56	154	P	P	12 33 00.5	+1.5
CAN	Canberra	45.56	154	P	P	12 33 00.0	+0.9
CAN				pmax	pmax		
	comp=Z,498nm,1.6s						
ULN	Ulaanbaatar	45.58	341	P	P	12 32 59.8	+0.7
ULN				S	S	12 39 37.5	+0.3
ULN	Ulaanbaatar	45.58	341	P	P	12 32 59.8	+0.7
ULN				IAmb	IAmb	12 33 02.5	
	comp=Z,91nm,0.9s						
ULN	Ulaanbaatar	45.58	341	IAMs_20	IAMs_20	12 52 55.5	
	comp=Z,2µm,21.0s						
ULN	Ulaanbaatar	45.58	341	c iP	P	12 33 00.1	+1.0
ULN				pmax	pmax		
	comp=Z,107nm,1.0s						
ULN	Ulaanbaatar	45.58	341	P	P	12 33 00.2	+1.0
ULN				PcP	PcP	12 34 38.5	+1.7
CNB	Canberra Magne	45.72	154	P	P	12 33 01.2	+0.9
SONM	Songino Array	45.76	341	P	P	12 33 00.3	-0.2
	comp=Z,28nm,0.7s,baz=158,slow=6.5,SNR=89						
SONM				PcP	PcP	12 34 38.0	+0.6
	comp=Z,16nm,0.7s,baz=163,slow=3.1,SNR=3.9						
SONM				ScP	ScP	12 38 25.7	+0.4
	comp=Z,4.1nm,0.8s,baz=135,slow=3.1,SNR=4.5						
SONM				LR	LR	12 53 23.3	
	comp=Z,2µm,21.3s,baz=149,slow=38						
	comp=Z,28nm,0.7s						
SONM	Songino Array	45.76	341	P	P	12 33 01.2	+0.7
SONM	Songino Array	45.76	341	P	P	12 33 01.2	+0.7
PALK	Pallekele	45.81	275	LR	LR	12 54 41.1	
	comp=Z,632nm,19.0s,baz=83,slow=39						
GRNR	Gornyy	45.96	9	⇓iP	P	12 33 01.8	-0.1
GRNR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,630nm,19.0s						
GRNR				MLR	MLR		
	comp=N,770nm,18.0s						
GRNR				MLR	MLR		
	comp=Z,1µm,14.0s						
TOO	Toolangi	46.15	159	P	P	12 33 04.8	+1.2
TOO	Toolangi	46.15	159	P	P	12 33 04.8	+1.2
TOO				pmax	pmax		
	comp=Z,40nm,1.1s						
TARA	Tarawa	46.23	93	IAMs_20	IAMs_20	12 48 44.2	
	comp=Z,2µm,20.0s						
DZM	Mont Dzumac	47.46	127	LR	LR	12 52 04.4	
	comp=Z,1µm,21.5s,baz=312,slow=34						
DZM	Mont Dzumac	47.46	127	eP	P	12 33 12.9	-1.3
	comp=Z,88nm,0.9s						
DZM	Mont Dzumac	47.46	127	ePP	PP	12 35 02.6	-3.5
	comp=Z,194nm,29.1s						
DZM				eS	S	12 39 55.5	-9.1
	comp=Z,880nm,34.4s						
DZM				eSS	SS	12 43 33.0	-0.3
	comp=Z,2µm,27.3s						
DZM				eLQ	LQ	12 44 46.2	
	comp=Z,3µm,43.0s						
DZM				eLR	LR	12 46 45.4	
	comp=Z,3µm,28.4s						
DZM	Mont Dzumac	47.46	127	IAmb	IAmb	12 33 45.9	
	comp=Z,38nm,0.8s						
DZM	Mont Dzumac	47.46	127	P	P	12 33 13.7	-0.5
CIT	Chita	47.77	349	eP	P	12 33 17.8	+1.8
CIT				e		12 33 34.2	
CIT				e		12 34 42.0	
CIT				e		12 40 26.6	
CIT				pmax	pmax		
	comp=Z,162nm,1.6s						
YATNC	Mamie plateau,	47.81	126	P	P	12 33 16.7	-0.1
OUENC	Ouen Island, N	47.95	127	P	P	12 33 17.8	0.0
ZEA	Zeya	48.22	0	eP	P	12 33 19.6	+0.2
ZEA				e		12 40 09.6	
ZEA				e		12 43 42.5	
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA				MLR	MLR		
	comp=N,800nm,17.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,19.0s						
HYB	Hyderabad	48.62	288	eP	P	12 33 21.8	-1.4
HYB				IVmBBB		12 33 22.8	
	comp=Z,521nm,3.0s						
HYB				esP	pwP	12 33 40.9	-1.5
HYB				ePcP	PcP	12 34 48.2	+0.2
HYB				ePP	PP	12 35 17.7	+1.1
HYB				eS	S	12 40 20.6	-0.5
ZAK	Zakamensk	49.00	340	eP	P	12 33 25.4	-0.2
ZAK				pmax	pmax		
	comp=Z,65nm,1.7s						
ZAK				pmax	pmax		
	comp=Z,19nm,1.6s						
TLY	Talaya	49.99	341	P	P	12 33 33.7	+0.7
TLY				S	S	12 40 36.1	-3.1
TLY	Talaya	49.99	341	P	P	12 33 33.9	+0.8
TLY				IAmb	IAmb	12 33 42.4	
	comp=Z,56nm,0.7s						
TLY	Talaya	49.99	341	ceP	P	12 33 34.9	+1.9
TLY				pmax	pmax		
	comp=Z,129nm,1.7s						
TLY	Talaya	49.99	341	P	P	12 33 34.5	+1.5
IRK	Irkutsk	50.28	342	eP	P	12 33 35.3	+0.1
IRK				pmax	pmax		
	comp=Z,214nm,1.9s						
MOY	Mondy	50.86	340	eP	P	12 33 40.3	+0.6
MOY				pmax	pmax		
	comp=Z,165nm,2.2s						
WMQ	Urumqi	51.41	324	eP	P	12 33 46.2	+2.2
WMQ				sP	sP	12 34 10.2	+4.4
WMQ				S	S	12 41 01.5	+2.2
WMQ				ScS	ScS	12 43 27.6	-1.4
WMQ				pmax	pmax		
	comp=Z,46nm,0.9s						
WMQ				LR	LR		
	comp=Z,5µm,22.5s						
WMQ				LR	LR		
	comp=Z,5µm,19.7s						
WMQ				LR	LR		
	comp=Z,7µm,24.1s						
TAU	Tasmania Unive	51.55	161	P	P	12 33 45.0	+0.2
PEA0B	Petropavlovsk-	53.90	23	P	P	12 34 02.8	+0.7
PEA0B				IAmb	IAmb	12 34 18.9	
	comp=Z,104nm,1.1s						
PEA0B	Petropavlovsk-	53.90	23	⇑iP	P	12 34 02.4	+0.3
PETK	Petropavlovsk-	53.90	23	P	P	12 34 02.2	+0.1
	comp=Z,24nm,0.8s,baz=222,slow=7.0,SNR=28						
PETK				LR	LR	12 56 48.7	
	comp=Z,548nm,21.9s,baz=214,slow=36						
	comp=Z,24nm,0.8s						
PETK	Petropavlovsk-	53.90	23	P	P	12 34 03.2	+1.1
PETK	Petropavlovsk-	53.90	23	P	P	12 34 03.2	+1.1
PET	Petropavlovsk	54.20	23	P	P	12 34 04.6	+0.3
PET				IAmb	IAmb	12 34 12.5	
	comp=Z,126nm,1.3s						
PET	Petropavlovsk	54.20	23	eP	P	12 34 07.2	+3.0
PET				eS	S	12 41 43.6	+6.8
PET				pmax	pmax		
	comp=Z,89nm,1.3s						
PET				MLR	MLR		
	comp=Z,700nm,16.0s						
ZSN	Zaisan	55.16	326	eP	P	12 34 11.7	+0.4
ZSN	Zaisan	55.16	326	eP	P	12 34 11.7	+0.4
WUS	Wushi	55.38	317	IAmb	IAmb	12 35 15.3	
	comp=Z,51nm,0.6s						
WUS	Wushi	55.38	317	IAMs_20	IAMs_20	13 00 37.6	
	comp=Z,2µm,22.0s						
WUS	Wushi	55.38	317	P	P	12 34 12.9	-0.3
WUS				PcP	PcP	12 35 13.8	+0.7
MSVF	Nonsavu	55.57	116	P	P	12 34 15.1	+0.3
MSVF				IAmb	IAmb	12 34 37.1	
	comp=Z,64nm,1.0s						
MSVF	Nonsavu	55.57	116	IAMs_20	IAMs_20	12 55 25.7	
	comp=Z,2µm,22.0s						
MSVF	Nonsavu	55.57	116	P	P	12 34 15.1	+0.3
MSVF	Nonsavu	55.57	116	P	P	12 34 15.1	+0.3
MSVF				pmax	pmax		
	comp=Z,64nm,1.0s						
SHLS	Shalkode	56.12	320	eP	P	12 34 16.4	-2.0
	comp=Z,45nm,1.1s						
SHLS	Shalkode	56.12	320	eP	P	12 34 16.4	-2.0
SHLS				pmax	pmax		
	comp=Z,45nm,1.1s						
PDGK	Podgornoye	56.18	320	P	P	12 34 17.1	-1.8
MK31	Makanchi Array	56.24	325	eP	P	12 34 18.7	-0.4
MKAR	Makanchi Array	56.24	325	P	P	12 34 18.7	-0.4
	comp=Z,72nm,0.7s,baz=121,slow=7.7,SNR=208						
MKAR				PcP	PcP	12 35 16.8	+0.7
	comp=Z,43nm,0.7s,baz=120,slow=6.0,SNR=5.9						
MKAR				ScP	ScP	12 39 11.7	+1.4
	comp=Z,24nm,0.8s,baz=122,slow=4.3,SNR=13						
MKAR				LR	LR	12 59 41.7	
	comp=Z,5µm,21.9s,baz=83,slow=37						
MKAR				PKPPKP	P'P'df	13 04 14.3	-2.9
	comp=Z,0.9nm,0.8s,baz=262,slow=2.5,SNR=4.0						
MKAR				P4KPbc		13 11 32.7	
	comp=Z,2.1nm,0.7s,baz=114,slow=4.5,SNR=14						
	comp=Z,72nm,0.7s						
MKAR	Makanchi Array	56.24	325	P	P	12 34 18.6	-0.6
MKAR	Makanchi Array	56.24	325	i P	P	12 34 18.3	-0.8
MKAR				pmax	pmax		
	comp=Z,73nm,0.7s						
UZB	Uzynbulak	56.40	319	eP	P	12 34 20.3	-0.2
	comp=Z,27nm,0.7s						
UZB	Uzynbulak	56.40	319	eP	P	12 34 20.2	-0.2
UZB				pmax	pmax		
	comp=Z,27nm,0.7s						
MAKZ	Makanchi	56.43	324	P	P	12 34 20.4	0.0
MAKZ	Makanchi	56.43	324	P	P	12 34 22.6	+2.1
MAKZ	Makanchi	56.43	324	P	P	12 34 21.0	+0.5
MAKZ				pP	pP	12 34 33.2	-2.7
TARG	Taragay, Kyrgy	56.57	317	P	P	12 34 22.4	+0.4
TARG				IAmb	IAmb	12 34 38.4	
	comp=Z,33nm,0.7s						
TARG	Taragay, Kyrgy	56.57	317	P	P	12 34 22.4	+0.4
TARG				pmax	pmax		
	comp=Z,33nm,0.7s						
YAK	Yakutsk	56.57	2	P	P	12 34 21.4	+0.4
	comp=Z,66nm,0.7s,baz=194,slow=1.5,SNR=25						
YAK				LR	LR	12 56 53.8	
	comp=Z,784nm,21.7s,baz=176,slow=34						
	comp=Z,66nm,0.7s						
YAK	Yakutsk	56.57	2	P	P	12 34 22.1	+1.0
YAK	Yakutsk	56.57	2	⇓iP	P	12 34 22.0	+1.0
YAK				pmax	pmax		
	comp=Z,58nm,0.8s						
SATY	Saty	56.76	319	eP	P	12 34 23.0	-0.1
	comp=Z,31nm,0.7s						
SATY	Saty	56.76	319	eP	P	12 34 22.9	-0.1
SATY				pmax	pmax		
	comp=Z,31nm,0.7s						
KSH	Kashi	56.92	314	P	P	12 34 24.2	0.0
KSH				sP	sP	12 34 47.5	+1.1
KSH				S	S	12 42 13.9	0.0
KSH				ScS	ScS	12 44 07.9	-0.5
KSH				SS	SS	12 46 05.8	+2.7
KSH				pmax	pmax		
	comp=Z,22nm,0.9s						
KSH				pmax	pmax		
	comp=Z,240nm,5.9s						
KSH				LR	LR		
	comp=Z,1µm,18.9s						
KSH				LR	LR		
	comp=Z,3µm,19.6s						
KSH				LR	LR		
	comp=Z,4µm,22.7s						
NIL	Nilore	56.97	307	P	P	12 34 22.0	-2.6
NIL	Nilore	56.97	307	P	P	12 34 24.2	-0.4
NIL	Nilore	56.97	307	P	P	12 34 24.2	-0.4
NIL				pmax	pmax		
	comp=Z,193nm,1.1s						
MA2	Magadan	57.11	14	⇑iP	P	12 34 27.3	+2.3
MA2				pmax	pmax		
	comp=Z,25nm,1.0s						
MA2				MLR	MLR		
	comp=Z,1µm,19.0s						
ARXS	Arharly	57.66	320	eP	P	12 34 28.6	-0.7
TDK	Taldyqorghan	57.66	321	eP	P	12 34 29.4	+0.1
	comp=Z,39nm,0.8s						
TDK				LR	LR	12 59 59.2	
	comp=Z,1µm,17.4s						
TDK	Taldyqorghan	57.66	321	eP	P	12 34 29.3	+0.1
TDK				pmax	pmax		
	comp=Z,39nm,0.8s						
TDK				MLR	MLR		
	comp=Z,1µm,17.0s						
MDOK	Medeo	57.70	319	eP	P	12 34 29.6	-0.1
MDOK				LR	LR	13 00 06.7	
MDOK	Medeo	57.70	319	eP	P	12 34 29.5	-0.1
TNSS	Tian-Shan	57.71	318	eP	P	12 34 29.8	-0.3
TNSS	Tian-Shan	57.71	318	eP	P	12 34 29.7	-0.3
KUU	Kurty	58.48	319	eP	P	12 34 35.2	+0.3
	comp=Z,52nm,0.9s						
KUU				LR	LR	13 00 21.6	
	comp=Z,1µm,20.4s						
KUU	Kurty	58.48	319	eP	P	12 34 35.2	+0.3
KUU				pmax	pmax		
	comp=Z,52nm,0.9s						
KUU				MLR	MLR		
	comp=Z,1µm,20.0s						
TKM2	Tokmak 2	58.55	318	P	P	12 34 35.8	0.0
	SNR=61						
KBK	Karagaybulak	58.88	317	P	P	12 34 38.3	+0.4
	SNR=34						
UCH	Uchtor	59.01	317	P	P	12 34 39.9	+0.7
	SNR=69						
ZAA0	Zalesovo Array	59.15	333	P	P	12 34 39.3	-0.1
ZALV	Zalesovo Beam	59.15	333	P	P	12 34 39.2	-0.1
	comp=Z,41nm,0.7s,baz=130,slow=7.1,SNR=71						
ZALV				LR	LR	13 01 54.4	
	comp=Z,2µm,21.5s,baz=137,slow=38						
ZALV				PKPPKP	P'P'df	13 04 10.3	-2.1
	comp=Z,0.7nm,0.6s,baz=327,slow=2.5,SNR=5.0						
ZALV				PKP2bc		13 04 21.4	
	comp=Z,2.0nm,0.7s,baz=298,slow=2.5,SNR=8.6						
	comp=Z,41nm,0.7s						
ZALV	Zalesovo Beam	59.15	333	P	P	12 34 39.0	-0.3
CHMS	Chumysh	59.15	318	P	P	12 34 39.5	-0.2
	SNR=15						
FRU1	Bishkek	59.16	317	P	P	12 34 40.1	+0.3
FRU1	Bishkek	59.16	317	P	P	12 34 40.1	+0.3
FRU1				pmax	pmax		
	comp=Z,57nm,0.6s						
AAK	Ala-Archa	59.18	317	P	P	12 34 40.5	+0.5
	SNR=20						
AAK	Ala-Archa	59.18	317	LR	LR	13 03 35.8	
	comp=Z,2µm,20.3s,baz=95,slow=40						
AAK	Ala-Archa	59.18	317	P	P	12 34 37.9	-2.1
AAK	Ala-Archa	59.18	317	P	P	12 34 40.0	+0.1
AAK				IAmb	IAmb	12 35 30.2	
	comp=Z,43nm,0.8s						
AAK	Ala-Archa	59.18	317	IAMs_20	IAMs_20	13 02 52.0	
	comp=Z,2µm,22.0s						
AAK	Ala-Archa	59.18	317	i P	P	12 34 40.1	+0.1
	SNR=23						
AAK	Ala-Archa	59.18	317	P	P	12 34 40.1	+0.1
SEM	Semipalatinsk	59.34	327	eP	P	12 34 41.3	+0.3
	comp=Z,41nm,1.3s						
SEM				LR	LR	13 00 47.8	
SEM	Semipalatinsk	59.34	327	eP	P	12 34 41.3	+0.3
SEM				pmax	pmax		
	comp=Z,41nm,1.3s						
MANEM	Manem	59.38	311	P	P	12 34 41.4	-0.2
MANEM				IAmb	IAmb	12 35 01.7	
	comp=Z,129nm,0.7s						
SGDS	Sogindy	59.42	318	eP	P	12 34 41.6	+0.1
EKS2	Erkin-Say	59.68	317	P	P	12 34 43.7	+0.3
	SNR=50						
OUZ	Omahuta	59.71	136	P	P	12 34 45.1	+1.6
OUZ	Omahuta	59.71	136	P	P	12 34 45.7	+2.2
KURBB	Kurchatov Arra	60.39	327	P	P	12 34 48.2	+0.3
	comp=Z,177nm,0.9s,baz=125,slow=6.0,SNR=191						
KURBB				LR	LR	13 03 04.5	
	comp=Z,2µm,21.8s,baz=132,slow=38						
KURBB				PKPPKP	P'P'df	13 04 03.0	-7.7
	comp=Z,0.8nm,0.4s,baz=281,slow=3.3,SNR=6.8						
KURBB				P4KPbc		13 11 51.0	
	comp=Z,0.6nm,0.8s,baz=124,slow=3.9,SNR=8.6						
	comp=Z,177nm,0.9s						
KURBB	Kurchatov Arra	60.39	327	P	P	12 34 47.1	-0.8
KURK	Kurchatov	60.39	327	P	P	12 34 48.3	+0.4
KURK				S	S	12 42 55.8	-2.4
KURK	Kurchatov	60.39	327	P	P	12 34 47.8	0.0
KURK	Kurchatov	60.39	327	IAMs_20	IAMs_20	13 01 47.8	
	comp=Z,2µm,22.0s						
KURK	Kurchatov	60.39	327	c iP	P	12 34 47.9	0.0
KURK				pmax	pmax		
	comp=Z,226nm,0.9s						
KURK				MLR	MLR		
	comp=Z,2µm,21.0s						
KURK	Kurchatov	60.39	327	P	P	12 34 48.5	+0.6
KURK				pP	pP	12 35 00.5	-3.1
SEY	Seymchan	60.43	13	LR	LR	13 01 59.2	
	comp=Z,638nm,20.0s,baz=210,slow=37						
SEY	Seymchan	60.43	13	eP	P	12 34 51.1	+3.2
SEY				pmax	pmax		
	comp=Z,48nm,1.5s						
BTLS	Baital	60.45	320	eP	P	12 34 48.5	0.0
	comp=Z,32nm,0.9s						
BTLS	Baital	60.45	320	eP	P	12 34 48.4	0.0
BTLS				pmax	pmax		
	comp=Z,32nm,0.9s						
KBL	Kabul	60.57	307	P	P	12 34 47.8	-1.9
	SNR=14						
KBL				S	S	12 42 57.2	-4.4
WCZ	Waipu Caves	60.61	137	P	P	12 34 51.6	+1.9
SHEM	Shemya Is, Ala	61.03	31	LR	LR	12 56 21.0	
	comp=Z,592nm,21.4s,baz=274,slow=31						
DZA	Taraz	61.43	316	eP	P	12 34 55.4	+0.2
	comp=Z,22nm,0.8s						
DZA	Taraz	61.43	316	eP	P	12 34 55.4	+0.2
DZA				pmax	pmax		
	comp=Z,22nm,0.8s						
CHGR	Chuyangaron	61.61	311	P	P	12 34 56.1	-0.5
CHGR	Chuyangaron	61.61	311	P	P	12 34 56.1	-0.5
CHGR				pmax	pmax		
	comp=Z,141nm,0.8s						
KUZ	Kuaotunu	61.98	137	P	P	12 35 00.0	+1.1
KUZ	Kuaotunu	61.98	137	P	P	12 35 00.4	+1.5
KK31	Karatay Array	62.07	316	P	P	12 34 58.8	-0.7
KK31				IAmb	IAmb	12 35 01.9	
	comp=Z,57nm,0.8s						
KK31	Karatay Array	62.07	316	i P	P	12 34 58.6	-0.9
KKAR	Karatay Array	62.07	316	P	P	12 34 58.9	-0.6
KKAR	Karatay Array	62.07	316	P	P	12 34 58.9	-0.6
IUG	Iuzhnay	62.08	315	eP	P	12 34 59.6	0.0
	comp=Z,33nm,0.8s						
IUG				eS	S	12 43 20.2	-0.1
IUG	Iuzhnay	62.08	315	eP	P	12 34 59.6	0.0
IUG				eS	S	12 43 20.1	-0.1
IUG				pmax	pmax		
	comp=Z,33nm,0.8s						
SHAA	Shahritus	62.09	310	IAmb	IAmb	12 35 49.0	
	comp=Z,103nm,1.0s						
QRZ	Quartz Range	62.19	142	P	P	12 35 01.5	+1.3
QRZ	Quartz Range	62.19	142	P	P	12 35 01.6	+1.3
KHEZ	Kahui Hut	62.24	140	P	P	12 35 03.4	+2.7
FOZ	Fox Glacier	62.27	146	P	P	12 35 03.3	+2.7
DSZ	Denniston Nort	62.30	143	P	P	12 35 02.5	+1.5
HIZ	Hauiti	62.35	139	P	P	12 35 03.5	+2.2
HIZ	Hauiti	62.35	139	P	P	12 35 03.6	+2.2
TOZ	Tahuroa Road	62.35	138	P	P	12 35 03.1	+1.7
CHM	Chimkent	62.43	315	eP	P	12 35 02.4	+0.4
	comp=Z,16nm,0.7s						
CHM				LR	LR	13 02 38.0	
CHM	Chimkent	62.43	315	eP	P	12 35 02.3	+0.4
CHM				pmax	pmax		
	comp=Z,16nm,0.7s						
BRLS	Borolday	62.51	316	eP	P	12 35 02.2	-0.3
	comp=Z,17nm,0.7s						
BRLS	Borolday	62.51	316	eP	P	12 35 02.1	-0.3
BRLS				pmax	pmax		
	comp=Z,17nm,0.7s						
VRZ	Vera Road	62.62	139	P	P	12 35 05.5	+2.4
MRNZ	Matariki Terra	62.67	142	P	P	12 35 03.6	+0.2
INZ	Inchbonnie	62.69	144	P	P	12 35 04.3	+0.8
WHZ	Wether Hill Ro	62.82	149	P	P	12 35 05.3	+0.9
NNZ	Nelson	62.94	142	P	P	12 35 05.9	+0.7
THZ	Tophouse	62.97	143	P	P	12 35 05.4	-0.1
LBZ	Lake Benmore	63.02	146	P	P	12 35 06.8	+1.1
DUWZ	D'Urville Isla	63.03	141	P	P	12 35 07.2	+1.3
RPZ	Rata Peaks	63.08	145	LR	LR	13 04 08.8	
	comp=Z,1µm,19.5s,baz=300,slow=38						
RPZ	Rata Peaks	63.08	145	P	P	12 35 06.9	+0.8
RPZ	Rata Peaks	63.08	145	P	P	12 35 07.4	+1.2
WAZ	Wanganui	63.12	140	P	P	12 35 08.2	+1.7
NGZ	Ngauruhoe	63.20	139	P	P	12 35 08.8	+1.6
LTZ	Lake Taylor	63.20	144	P	P	12 35 08.4	+1.4
MHCZ	Mount Hutt	63.26	145	P	P	12 35 08.4	+1.1
RAO	Raoul Island	63.26	126	LR	LR	13 00 51.1	
	comp=Z,405nm,21.7s,baz=310,slow=34						
BRZS	Berezniki	63.38	324	eP	P	12 35 08.5	+0.4
BRZS	Berezniki	63.38	324	eP	P	12 35 08.5	+0.4
OXZ	Oxford	63.40	145	P	P	12 35 08.1	-0.2
TMZ	Timaru	63.47	146	P	P	12 35 09.9	+1.2
APZ	The Paps	63.48	150	P	P	12 35 09.9	+1.1
TCW	Tory Channel	63.49	142	P	P	12 35 08.7	-0.2
TCW	Tory Channel	63.49	142	P	P	12 35 09.2	+0.3
ODZ	Otahua Downs	63.69	147	P	P	12 35 11.2	+1.1
ODZ	Otahua Downs	63.69	147	P	P	12 35 11.0	+0.9
URZ	Urewera	63.71	137	LR	LR	13 01 57.4	
	comp=Z,2µm,21.6s,baz=306,slow=35						
URZ	Urewera	63.71	137	P	P	12 35 10.6	+0.2
URZ	Urewera	63.71	137	P	P	12 35 09.8	-0.6
KHZ	Kahutara	63.74	143	P	P	12 35 09.7	-0.7
KHZ	Kahutara	63.74	143	P	P	12 35 10.1	-0.4
GVZ	Greta Valley S	63.77	144	P	P	12 35 11.8	+1.1
BKZ	Black Stump Fm	63.78	139	P	P	12 35 10.6	-0.3
BKZ	Black Stump Fm	63.78	139	P	P	12 35 10.9	0.0
RTZ	Ruatahuna	63.81	138	P	P	12 35 11.6	+0.4
SNZO	South Karori	63.81	141	P	P	12 35 10.6	-0.3
SYZ	Scrubby Hill	63.87	149	P	P	12 35 12.3	+1.1
SYZ	Scrubby Hill	63.87	149	P	P	12 35 12.7	+1.5
HAZ	Te Kaha	63.91	137	P	P	12 35 12.9	+1.3
BHW	Baring Head	63.97	141	P	P	12 35 11.0	-1.0
BHW				IAmb	IAmb	12 35 12.2	
	comp=Z,40nm,0.6s						
BHW	Baring Head	63.97	141	P	P	12 35 11.9	-0.1
MQZ	McQueen's Vall	63.99	145	P	P	12 35 12.8	+0.8
MQZ				IAmb	IAmb	12 35 14.5	
	comp=Z,67nm,0.9s						
MQZ	McQueen's Vall	63.99	145	P	P	12 35 13.0	+0.9
MRZ	Mangatainoka R	63.99	140	P	P	12 35 11.3	-1.0
MRZ	Mangatainoka R	63.99	140	P	P	12 35 12.1	-0.1
MWZ	Matawai	64.03	137	P	P	12 35 12.7	+0.2
MXZ	Matakaoa Point	64.17	136	IAMs_20	IAMs_20	13 00 58.1	
	comp=Z,1µm,20.0s						
MXZ	Matakaoa Point	64.17	136	P	P	12 35 14.0	+0.6
MXZ	Matakaoa Point	64.17	136	P	P	12 35 14.0	+0.6
PUZ	Puketiti	64.39	137	P	P	12 35 15.5	+0.6
BFZ	Birch Farm	64.43	140	IAmb	IAmb	12 37 26.2	
	comp=Z,61nm,1.0s						
BFZ	Birch Farm	64.43	140	P	P	12 35 15.7	+0.6
BFZ	Birch Farm	64.43	140	P	P	12 35 15.7	+0.6
PXZ	Pawanui	64.48	139	P	P	12 35 16.0	+0.7
KNZ	Kokohu	64.48	138	P	P	12 35 15.7	+0.3
ADK	Adak	65.59	35	P	P	12 35 23.9	+1.5
BVA0	Borovoye Array	65.97	327	i P	P	12 35 25.0	+0.1
BVAR	Borovoye Array	65.97	327	P	P	12 35 24.6	-0.2
	comp=Z,210nm,0.9s,baz=120,slow=8.8,SNR=216						
BVAR				PKPPKP	P'P'df	13 04 00.9	-0.7
	comp=Z,2.0nm,0.9s,baz=298,slow=3.2,SNR=8.7						
BVAR				LR	LR	13 07 27.9	
	comp=Z,1µm,19.7s,baz=112,slow=39						
	comp=Z,210nm,0.9s						
HRA	Herat	66.02	305	IAmb	IAmb	12 36 01.6	
	comp=Z,37nm,1.0s						
BORK	Borovoye	66.02	327	P	P	12 35 25.1	-0.1
BORK	Borovoye	66.02	327	P	P	12 35 25.1	-0.1
BORK				pmax	pmax		
	comp=Z,250nm,0.9s						
BORK				MLR	MLR		
	comp=Z,2µm,21.0s						
BORK	Borovoye	66.02	327	P	P	12 35 25.4	+0.2
TIXI	Tiksi	66.21	1	LR	LR	13 06 38.9	
	comp=Z,613nm,19.6s,baz=202,slow=38						
TIXI	Tiksi	66.21	1	P	P	12 35 25.2	-0.8
TIXI				IAmb	IAmb	12 35 53.9	
	comp=Z,109nm,1.4s						
TIXI	Tiksi	66.21	1	IAMs_20	IAMs_20	13 02 29.0	
	comp=Z,2µm,22.0s						
TIXI	Tiksi	66.21	1	⇑iP	P	12 35 27.1	+1.1
TIXI				pmax	pmax		
	comp=Z,11nm,0.9s						
JLN	Jalan Bani Buh	67.03	292	P	P	12 35 29.8	-2.5
ATKA	Atka Island	67.13	35	P	P	12 35 32.4	+0.2

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WBK   Wadi Bani Khal   67.47 292   P        P        12 35 32.2 -2.9
WSAR  Wadi Sarin       67.82 293   P        P        12 35 34.3 -2.9
JMDO  Jabal Madar      68.26 292   P        P        12 35 37.2 -2.8
BIDO  Bidbid           68.30 293   P        P        12 35 38.4 -1.8
      SNR=7.3
MHTO  MHTO             68.31 290   P        P        12 35 37.1 -3.2
SMDO  Samad            68.34 293   P        P        12 35 37.9 -2.7
SMDO                               P        P        12 35 37.9 -2.7
NRIK  Noril'sk         68.85 346   P        P        12 35 42.7  0.0
      comp=Z,24nm,0.6s,baz=131,slow=5.5,SNR=57
NRIK                               LR       LR       13 09 26.7
      comp=Z,2µm,19.4s,baz=146,slow=39
      comp=Z,24nm,0.6s
HOQ   Hoqain           69.05 293   P        P        12 35 43.3 -1.6
      SNR=5.1
HOQ                                P        P        12 35 43.3 -1.6
      SNR=5.1
BSY   Bisya            69.11 292   P        P        12 35 43.7 -1.6
ARQ   Araqi            69.76 293   P        P        12 35 46.7 -2.6
SOHO  SOHO             69.79 294   P        P        12 35 45.1 -4.3
SOHO  SOHO             69.79 294   P        P        12 35 47.7 -1.7
MDH   Madha            70.08 295   P        P        12 35 48.9 -2.3
BANOM Banah            70.11 296   P        P        12 35 49.2 -2.2
BANOM Banah            70.11 296 i P        P        12 35 50.2 -1.2
      SNR=11
UOSS  Minazif          70.14 294   P        P        12 35 48.9 -2.6
UOSS  Minazif          70.14 294   P        P        12 35 50.3 -1.3
HATD  Hatta, Dubai     70.20 294   P        P        12 35 49.8 -2.1
HATD  Hatta, Dubai     70.20 294 i P        P        12 35 50.8 -1.1
      SNR=8.3
MSFE  Esma-Masafi      70.20 295 i P        P        12 35 50.6 -1.4
      SNR=6.8
MASF  Masafi           70.20 295   P        P        12 35 49.6 -2.4
ASHO  Ashiyiah         70.26 294 i P        P        12 35 50.3 -2.1
      SNR=14
SHME  Shamm            70.26 296   P        P        12 35 50.4 -1.9
SHME  Shamm            70.26 296 i P        P        12 35 51.1 -1.2
      SNR=6.0
NIKH  Nikolski High    70.45  35   P        P        12 35 52.9  0.0
NIKH  Nikolski High    70.45  35   P        P        12 35 53.0  0.0
      baz=252
ALNE  Al Ain           70.50 294   P        P        12 35 51.0 -2.8
      SNR=8.3
ALNE  Al Ain           70.50 294 i P        P        12 35 52.9 -1.0
      SNR=6.0
AB31  Akbulak array    70.91 320   P        P        12 35 55.2 -0.6
AB31                               IAmb     IAmb     12 36 18.9
      comp=Z,66nm,0.8s
AB31  Akbulak array    70.91 320   P        P        12 35 54.0 -1.8
ABKAR Akbulak array    70.91 320   P        P        12 35 55.2 -0.6
ASUD  Al Ashush, Dub   70.92 294   P        P        12 35 55.0 -1.3
ASUD  Al Ashush, Dub   70.92 294   P        P        12 35 55.4 -0.9
UMZA  Um Al Zommool    70.99 292   P        P        12 35 55.1 -1.7
SPIA  Saint Paul Isl   71.07  31   P        P        12 35 56.6 +0.1
      baz=250
AJN   Ajban            71.22 294   P        P        12 35 54.1 -4.1
AJN   Ajban            71.22 294   P        P        12 35 56.9 -1.3
UNV   Unalaska Valle   72.05  35   P        P        12 36 02.4 -0.1
UNV                                IAmb     IAmb     12 36 21.2
      comp=Z,73nm,0.8s
UNV   Unalaska Valle   72.05  35   P        P        12 36 02.2 -0.3
UNV   Unalaska Valle   72.05  35   P        P        12 36 02.4 -0.1
      baz=254
MZWR  Madinat Zayed    72.20 293   P        P        12 36 02.4 -1.7
AKTO  Aktyubinsk       72.41 321   LR       LR       13 10 30.1
      comp=Z,4µm,21.8s,baz=93,slow=38
AKTO  Aktyubinsk       72.41 321   P        P        12 36 02.0 -2.7
CASY  Casey            72.45 187   P        P        12 36 05.2 +0.6
CASY  Casey            72.45 187   P        P        12 36 05.6 +1.0
AKUT  Akutan           72.55  35   P        P        12 36 05.4  0.0
AKUT  Akutan           72.55  35   P        P        12 36 05.0 -0.5
MZR   Muzera           72.55 292   P        P        12 36 05.3 -0.9
      SNR=7.4
MZR   Muzera           72.55 292 i P        P        12 36 05.0 -1.1
      SNR=10
SVE   Sverdlovsk       72.59 328deP         P        12 36 06.2 +0.5
SVE                              eS         S        12 45 23.8 -1.9
SVE                                pmax     pmax
      comp=Z,194nm,1.3s
SVE                                MLR      MLR
      comp=Z,2µm,22.0s
GAMB  Gambell          72.88  24   P        P        12 36 08.2 +0.9
      baz=246
GHWR  Ruwais           73.13 293   P        P        12 36 07.9 -1.6
JRN   Qarnain Island   73.18 294   P        P        12 36 07.7 -2.2
ARTI  Arti             73.66 327   P        P        12 36 11.4 -0.6
      comp=Z,40nm,0.8s,baz=122,slow=3.3,SNR=31
ARTI                               LR       LR       13 12 08.7
      comp=Z,645nm,21.1s,baz=108,slow=39
      comp=Z,40nm,0.8s
ARTI  Arti             73.66 327   P        P        12 36 11.6 -0.4
ARTI                               IAmb     IAmb     12 36 30.3
      comp=Z,71nm,0.8s
ARTI  Arti             73.66 327   IAMs_20  IAMs_20  13 11 05.9
      comp=Z,1µm,21.0s
ARTI  Arti             73.66 327c iP        P        12 36 11.7 -0.3
ARTI                               *PP      pP       12 36 29.2 +0.7
ARTI                               S        S        12 45 39.5 +1.7
ARTI                               SS       SS       12 50 18.9 -3.2
ARTI                               pmax     pmax
      comp=Z,118nm,1.3s
ARTI                               MLR      MLR
      comp=Z,2µm,28.0s
FALS  False Pass       74.06  34   P        P        12 36 14.3 -0.1
      baz=256
M11K  Mekoryuk         74.11  28   P        P        12 36 15.6 +1.1
      baz=252
SLWR  Sila             74.21 293   P        P        12 36 13.8 -2.0
TRNA  Turayna          74.66 294   P        P        12 36 15.9 -2.5
SMRA  Abu-Samra        75.02 294   P        P        12 36 18.5 -2.0
K13K  Kusilvak Mount   75.28  27   P        P        12 36 21.9 +0.6
      baz=253
M13K  Dall Lake        75.47  29   P        P        12 36 23.2 +0.8
      baz=255
F14K  Arctic Creek     75.66  23   P        P        12 36 24.7 +1.3
      baz=251
ANM   Nome             75.76  24   P        P        12 36 24.4 +0.4
      baz=252
SDPT  Sand Point       75.82  34   P        P        12 36 24.5  0.0
SDPT  Sand Point       75.82  34   P        P        12 36 24.9 +0.5
      baz=259
J14K  Nanvaranak Lak   76.00  26   P        P        12 36 26.4 +1.0
      baz=254
L14K  Kuka Creek       76.03  28   IAmb     IAmb     12 36 49.6
      comp=Z,50nm,0.8s
L14K  Kuka Creek       76.03  28   P        P        12 36 26.9 +1.3
      baz=255
N14K  Kuskokwak Cree   76.16  29   P        P        12 36 27.3 +0.9
      baz=257
O14K  Tigyukauivet M   76.22  30   P        P        12 36 27.2 +0.5
      baz=257
M14K  Bethel           76.22  29   IAmb     IAmb     12 36 50.5
      comp=Z,60nm,0.9s
M14K  Bethel           76.22  29   P        P        12 36 27.3 +0.6
      baz=256
F15K  North Star Dit   76.40  23   P        P        12 36 28.4 +0.8
      baz=252
G15K  Niukluk          76.43  24   P        P        12 36 28.9 +1.1
      baz=253
RAR   Rarotonga        76.64 113   LR       LR       13 05 31.4
      comp=Z,342nm,22.0s,baz=277,slow=32
L15K  Ungalak Mounta   76.67  28   P        P        12 36 30.5 +1.3
      baz=256
K15K  Wolf Creek Mou   76.80  27   P        P        12 36 31.3 +1.4
      baz=256
M15K  Kasigluk River   76.82  29   P        P        12 36 31.1 +1.0
      baz=257
O15K  Ungalikthiuk R   76.92  30   P        P        12 36 31.5 +0.8
      baz=258
C16K  Lisburne Hills   76.94  21   P        P        12 36 31.7 +1.1
      baz=251
KNHH  Kane Nui o Ham   76.98  71   P        P        12 36 32.2 +0.2
N15K  Kwethluk River   77.00  29   P        P        12 36 32.3 +1.2
      baz=258
H16K  Elim             77.07  25   P        P        12 36 32.1 +0.7
      baz=255,SNR=7.3
G16K  Koyuk River      77.22  24   P        P        12 36 33.5 +1.2
      baz=255
J16K  Anvik River      77.44  26   IAmb     IAmb     12 36 57.2
      comp=Z,157nm,1.9s
J16K  Anvik River      77.44  26   P        P        12 36 34.7 +1.1
      baz=257
I17K  Unalakleet       77.54  26   IAmb     IAmb     12 37 36.2
      comp=Z,62nm,1.4s
I17K  Unalakleet       77.54  26   P        P        12 36 35.2 +1.1
      baz=257,SNR=5.8
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D17K  Noatak River     77.58  22   P        P        12 36 35.1 +0.9
      baz=254,SNR=15
L16K  Owhat River      77.61  28   IAmb     IAmb     12 37 16.9
      comp=Z,64nm,1.3s
L16K  Owhat River      77.61  28   P        P        12 36 35.5 +1.0
      baz=258
N16K  Nishlik Lake     77.70  29   P        P        12 36 35.6 +0.6
      baz=259
M16K  Timber Creek     77.72  29   IAmb     IAmb     12 37 18.5
      comp=Z,39nm,0.9s
M16K  Timber Creek     77.72  29   P        P        12 36 36.2 +1.1
      baz=259
C17K  DeLong Mountai   77.77  21   P        P        12 36 36.6 +1.3
      baz=253
P16K  Nushagak River   77.83  31   P        P        12 36 36.7 +1.0
      baz=260
O16K  Kokwok River B   77.87  30   IAmb     IAmb     12 37 20.4
      comp=Z,119nm,1.6s
O16K  Kokwok River B   77.87  30   P        P        12 36 36.7 +0.7
      baz=260
E17K  Hotham Inlet     77.88  22   P        P        12 36 37.1 +1.2
      baz=255,SNR=15
F17K  Baldwin Pennin   77.93  23   IAmb     IAmb     12 36 56.2
      comp=Z,80nm,1.7s
F17K  Baldwin Pennin   77.93  23   P        P        12 36 37.1 +0.9
      baz=256
G17K  Kiwalik Mounta   77.94  24   P        P        12 36 37.2 +0.9
      baz=256
H17K  Granite Mounta   78.11  25   P        P        12 36 38.3 +1.0
      baz=257
J17K  VABM Dome        78.14  26   IAmb     IAmb     12 37 17.8
      comp=Z,46nm,1.1s
J17K  VABM Dome        78.14  26   P        P        12 36 38.9 +1.5
      baz=258
L17K  Donlin           78.24  28   P        P        12 36 38.7 +0.7
      baz=259
AKT   Akhty            78.25 311  eP        P        12 36 37.5 -1.1
AKT                               e                  12 36 45.1
AKT                               eS        S        12 46 26.0 -3.2
AKT                               e                  12 46 49.9
AKT                                pmax     pmax
      comp=Z,100nm,1.1s
AKT                                MLR      MLR
      comp=Z,4µm,30.0s
K17K  Iditarod         78.35  27   IAmb     IAmb     12 37 02.9
      comp=Z,71nm,1.0s
K17K  Iditarod         78.35  27   P        P        12 36 39.0 +0.4
      baz=259,SNR=6.5
O17K  Koliganek Bris   78.40  30   P        P        12 36 40.1 +1.2
      baz=261
E18K  Tukpahlearik C   78.42  22   P        P        12 36 40.0 +1.1
      baz=256
Q16K  King Salmon      78.45  31   P        P        12 36 39.7 +0.5
      baz=261
R17L  Mt. Peulik Vol   78.45  32   P        P        12 36 39.4 +0.1
      baz=262
PLK4  Peulik 4         78.45  32   IAmb     IAmb     12 36 55.0
      comp=Z,159nm,1.6s
N17K  Nushagak Hills   78.48  29   P        P        12 36 39.8 +0.5
      baz=260
B18K  Kokolik River    78.49  20   P        P        12 36 40.4 +1.1
      baz=254,SNR=7.0
MAK   Makhachkala      78.50 313  eP        P        12 36 38.2 -1.6
MAK                               e*PP      pP       12 36 53.5 -2.7
MAK                               ePPP      PPP      12 41 23.2
MAK                               eS        S        12 46 26.8 -4.7
MAK                               e*SS      sS       12 46 58.6 -0.4
MAK                               eSS       SS       12 51 41.7 +5.8
MAK                               eSSS      SSS      12 54 57.6
MAK                                pmax     pmax
      comp=Z,132nm,1.0s
MAK                                MLR      MLR
      comp=Z,1µm,16.0s
M17K  Holitna River    78.51  28   IAmb     IAmb     12 37 20.9
      comp=Z,174nm,1.9s
M17K  Holitna River    78.51  28   P        P        12 36 40.2 +0.7
      baz=260
C18K  Utukok River     78.52  21   P        P        12 36 39.9 +0.4
      baz=255
F18K  Selawik          78.59  23   P        P        12 36 41.0 +1.2
      baz=257,SNR=6.2
CHIR  Chirikof Islan   78.61  34   P        P        12 36 41.2 +1.1
      baz=263
P17K  Kvichak River    78.64  31   P        P        12 36 41.5 +1.3
      baz=261
H18K  Honhosa River    78.80  25   P        P        12 36 41.9 +0.9
      baz=258
G18K  Tagagawik        78.83  24   P        P        12 36 41.8 +0.6
      baz=258
KIRV  Kirov            78.85 329c iP        P        12 36 41.5 +0.2
A19K  Wainwright       78.96  19   P        P        12 36 42.8 +1.0
      baz=255
L18K  Granite Mounta   79.00  28   P        P        12 36 43.2 +1.1
      baz=260
N18K  Kilae Creek      79.14  29   P        P        12 36 44.3 +1.3
      baz=262
BELG  Belogornoye      79.14 322d iP        P        12 36 42.6 -0.5
BELG                               pmax     pmax
      comp=Z,45nm,0.9s
BELG                               MLR      MLR
      comp=Z,278nm,22.0s
C19K  Lookout Ridge    79.19  21   IAmb     IAmb     12 37 31.3
      comp=Z,183nm,1.8s
C19K  Lookout Ridge    79.19  21   P        P        12 36 43.7 +0.6
      baz=256,SNR=13
J18K  Innoko River     79.19  26   P        P        12 36 43.7 +0.5
      baz=260
P18K  Big Mountain,    79.28  31   P        P        12 36 44.2 +0.4
      baz=262
M18K  Stony River      79.29  28   P        P        12 36 44.4 +0.7
      baz=261
Q18K  Katmai Hardscr   79.30  31   P        P        12 36 44.1  0.0
      baz=263
GCSA  Galena City Sc   79.34  25   P        P        12 36 44.4 +0.5
      baz=260,SNR=7.4
O18K  Koktuh Hills     79.36  30   P        P        12 36 44.8 +0.6
      baz=262,SNR=7.1
F19K  Shaleruckik Mo   79.37  23   P        P        12 36 44.8 +0.7
      baz=259
SII   Sitkinak Islan   79.50  34   P        P        12 36 46.2 +1.2
SII                                IAmb     IAmb     12 37 05.5
      comp=Z,59nm,0.8s
SII   Sitkinak Islan   79.50  34   P        P        12 36 45.9 +0.9
SII   Sitkinak Islan   79.50  34   P        P        12 36 45.7 +0.7
      baz=264
G19K  Purcell Mounta   79.51  24   P        P        12 36 45.7 +0.8
      baz=259
D19K  Kuna River       79.58  21   P        P        12 36 45.9 +0.7
      baz=258
H19K  Roundabout Mou   79.66  24   P        P        12 36 46.7 +1.0
      baz=260,SNR=18
E19K  Redstone River   79.70  22   P        P        12 36 46.8 +0.8
      baz=259,SNR=19
J19K  Poorman          79.76  26   P        P        12 36 47.2 +0.9
      baz=261
N19K  Bonanza Creek    79.84  29   IAmb     IAmb     12 37 09.5
      comp=Z,121nm,1.7s
N19K  Bonanza Creek    79.84  29   P        P        12 36 47.4 +0.5
      baz=263,SNR=9.7
L19K  White Mountain   79.84  28   P        P        12 36 47.6 +0.8
      baz=262
O19K  Port Alsworth    79.84  30   P        P        12 36 47.7 +0.9
      baz=263
RAYN  Ar Rayn          79.88 293   P        P        12 36 45.7 -2.2
RAYN  Ar Rayn          79.88 293   P        P        12 36 46.5 -1.3
RAYN                               IAmb     IAmb     12 36 47.8
      comp=Z,52nm,0.7s
RAYN  Ar Rayn          79.88 293 i P        P        12 36 46.5 -1.3
      SNR=73
RAYN  Ar Rayn          79.88 293   P        P        12 36 46.9 -0.9
RAYN  Ar Rayn          79.88 293   P        P        12 36 46.6 -1.3
Q19K  Cape Douglas,    80.04  31   IAmb     IAmb     12 37 05.5
      comp=Z,148nm,1.4s
Q19K  Cape Douglas,    80.04  31   P        P        12 36 48.2 +0.3
      baz=264,SNR=5.9
OHAK  Old Harbor       80.05  33   P        P        12 36 48.4 +0.5
OHAK  Old Harbor       80.05  33   P        P        12 36 48.6 +0.6
      baz=264,SNR=5.3
D20K  Etivluk River    80.16  21   P        P        12 36 49.2 +0.8
      baz=259
F20K  Avaraart Lake    80.20  23   P        P        12 36 49.6 +1.0
      baz=260,SNR=10
B20K  Meade River      80.22  20   P        P        12 36 49.5 +0.9
      baz=259,SNR=17
E20K  Nigu River       80.24  22   P        P        12 36 49.7 +0.8
      baz=260
H20K  Anotleneega Mo   80.30  24   P        P        12 36 50.0 +0.8
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      baz=262,SNR=20
K20K  Telida           80.36  27   P        P        12 36 50.3 +0.8
      baz=263
I20K  Naaghedeneel     80.37  25   IAmb     IAmb     12 37 02.9
      comp=Z,48nm,0.8s
I20K  Naaghedeneel     80.37  25   P        P        12 36 50.5 +1.0
      baz=262
CCD   Concordia, Ant   80.38 181   P        P        12 36 51.1 +1.2
CCD                                sP       pwP      12 37 08.6 -0.6
ILSW  Iliamna Southw   80.41  30   IAmb     IAmb     12 37 39.6
      comp=Z,79nm,1.7s
J20K  Nowinta River    80.43  26   IAmb     IAmb     12 37 21.0
      comp=Z,172nm,2.0s
J20K  Nowinta River    80.43  26   P        P        12 36 50.8 +0.9
      baz=262,SNR=12
KDAK  Kodiak Island    80.48  32   P        P        12 36 50.8 +0.5
KDAK                               IAmb     IAmb     12 36 51.6
      comp=Z,53nm,0.7s
KDAK  Kodiak Island    80.48  32   P        P        12 36 50.8 +0.5
KDAK                               pmax     pmax
      comp=Z,53nm,0.7s
KDAK  Kodiak Island    80.48  32   P        P        12 36 51.1 +0.8
      baz=265
M20K  Styx River       80.61  28   IAmb     IAmb     12 37 11.8
      comp=Z,53nm,1.0s
M20K  Styx River       80.61  28   P        P        12 36 51.9 +0.9
      baz=264,SNR=16
A21K  Barrow           80.65  19   P        P        12 36 51.7 +0.8
      baz=259,SNR=15
Q20K  Shuyak Island    80.66  32   P        P        12 36 51.8 +0.6
      baz=265
SYI   Shuyak Island    80.66  32   IAmb     IAmb     12 37 21.5
      comp=Z,52nm,0.9s
IMAR  Indian Mountai   80.83  24   P        P        12 36 52.8 +0.8
C21K  Knifeblade Rid   80.89  21   P        P        12 36 53.4 +1.1
      baz=261
SPCR  Spurr Chakacha   80.98  29   P        P        12 36 53.4 +0.4
      baz=265
G21K  Allakaket        81.00  24   P        P        12 36 53.9 +1.1
      baz=263
B21K  Ikpikpuk River   81.02  20   IAmb     IAmb     12 37 16.0
      comp=Z,55nm,0.8s
B21K  Ikpikpuk River   81.02  20   P        P        12 36 54.1 +1.2
      baz=261
F21K  Alatna River     81.10  23   P        P        12 36 53.9 +0.5
      baz=263
A22K  Sinclair Lake    81.12  19   P        P        12 36 54.1 +0.7
      baz=261
PPLA  Purkeypile       81.15  27   IAmb     IAmb     12 37 12.8
      comp=Z,189nm,1.9s
PPLA  Purkeypile       81.15  27   P        P        12 36 54.4 +0.5
      baz=264,SNR=9.0
H21K  Melozitna Rive   81.18  24   P        P        12 36 54.8 +0.9
      baz=264
CHUM  Lake Minchumin   81.19  26   P        P        12 36 54.8 +0.9
      baz=264,SNR=16
SKT   Skwentna         81.38  28   P        P        12 36 55.0 +0.1
SKT                                IAmb     IAmb     12 37 10.5
      comp=Z,55nm,1.2s
SKT   Skwentna         81.38  28   P        P        12 36 55.1 +0.1
      baz=265,SNR=7.9
AVY   Angavokely       81.42 250   P        P        12 36 56.8 +0.5
I21K  Tanana           81.47  25   P        P        12 36 56.2 +0.8
      baz=264,SNR=19
BRLK  Bradley Lake     81.52  30   IAmb     IAmb     12 37 20.1
      comp=Z,69nm,1.1s
B22K  Teshekpuk Lake   81.53  20   IAmb     IAmb     12 37 13.9
      comp=Z,39nm,0.8s
B22K  Teshekpuk Lake   81.53  20   P        P        12 36 56.5 +0.9
      baz=262
BRSE  Bradley Lake S   81.59  30   P        P        12 36 56.1  0.0
      baz=266
D22K  Ayikyak River    81.60  21   P        P        12 36 57.2 +1.2
      baz=263
F22K  John River       81.63  23   P        P        12 36 57.4 +1.1
      baz=264
SUA   Susitna One      81.71  29   P        P        12 36 56.6 -0.3
SUA                                IAmb     IAmb     12 36 59.7
      comp=Z,54nm,0.8s
SUA   Susitna One      81.71  29   P        P        12 36 56.3 -0.6
      baz=266,SNR=21
L22K  Petersville      81.77  28   IAmb     IAmb     12 36 58.5
      comp=Z,60nm,0.7s
H22K  Ishtalitna Cre   81.79  24   P        P        12 36 57.9 +0.8
      baz=265,SNR=13
GOF   Gofitskoye       81.79 315ceP         P        12 36 59.2 +1.7
BPAW  Bear Paw Mtn.    81.80  26   IAmb     IAmb     12 37 17.6
      comp=Z,66nm,1.1s
BPAW  Bear Paw Mtn.    81.80  26   P        P        12 36 57.7 +0.5
      baz=265,SNR=14
G22K  Bettles          81.83  23   P        P        12 36 57.3  0.0
      baz=264
E22K  Anaktuvuk Pass   81.84  22   P        P        12 36 58.2 +0.9
      baz=264,SNR=20
OPO   Ambohidratompo   81.88 250   P        P        12 36 59.1 +0.4
KBZ   Khabaz           81.89 313   P        P        12 36 57.5 -0.5
      comp=Z,14nm,0.8s,baz=96,slow=2.9,SNR=24
KBZ                                LR       LR       13 19 40.0
      comp=Z,875nm,19.0s,baz=71,slow=40
      comp=Z,14nm,0.8s
KBZ   Khabaz           81.89 313⇓iP         P        12 36 58.0  0.0
KBZ                                pmax     pmax
      comp=Z,22nm,1.0s
ABM   Ambohimiarambe   81.89 249   P        P        12 36 58.9 +0.1
SLKM  Skilak Lake      81.90  30   IAmb     IAmb     12 37 17.1
      comp=Z,42nm,0.6s
ABPO  Ambohimpanom     81.91 250   P        P        12 36 58.3 -0.5
ABPO                               IAmb     IAmb     12 37 01.0
      comp=Z,45nm,0.8s
ABPO  Ambohimpanom     81.91 250   P        P        12 36 58.3 -0.5
ABPO                               pmax     pmax
      comp=Z,45nm,0.8s
ABPO  Ambohimpanom     81.91 250   P        P        12 36 59.9 +1.1
MLY   Manley           81.98  25   IAmb     IAmb     12 37 01.4
      comp=Z,35nm,0.7s
MLY   Manley           81.98  25   P        P        12 36 59.0 +0.8
      baz=265
CUT   Chulitna         82.00  28   IAmb     IAmb     12 37 44.2
      comp=Z,85nm,1.1s
CUT   Chulitna         82.00  28   P        P        12 36 59.0 +0.8
      baz=266
M22K  Willow           82.03  28   P        P        12 36 58.1 -0.2
      baz=266,SNR=13
KIV   Kislovodsk       82.04 314   P        P        12 36 58.7 -0.3
KIV   Kislovodsk       82.04 314   P        P        12 36 58.9 -0.2
KIV                                IAMs_20  IAMs_20  13 17 29.9
      comp=Z,1µm,22.0s
KIV   Kislovodsk       82.04 314 ⇑P         P        12 36 59.3 +0.3
KIV   Kislovodsk       82.04 314 i P        P        12 36 58.8 -0.2
      SNR=9.1
KIV   Kislovodsk       82.04 314 eP         P        12 36 58.6 -0.3
KIV                              eS         S        12 47 08.4 -0.5
KIV                                pmax     pmax
      comp=Z,12nm,3.0s
KIV                                pmax     pmax
      comp=Z,67nm,1.0s
KIV                                MLR      MLR
      comp=Z,877nm,19.0s
KIV   Kislovodsk       82.04 314   P        P        12 36 58.4 -0.6
      comp=Z,952nmcomp=Z,75nm,0.8s
TRF   Thorofare Moun   82.06  27   IAmb     IAmb     12 37 36.9
      comp=Z,87nm,1.4s
TRF   Thorofare Moun   82.06  27   P        P        12 36 59.2 +0.5
      baz=266,SNR=7.1
O22K  Cooper Landing   82.14  30   P        P        12 36 59.3 +0.3
      baz=267,SNR=6.0
RC01  Rabbit Creek A   82.17  29   P        P        12 36 59.0 -0.1
      baz=267,SNR=9.1
FIRM  Firavahana       82.19 250   P        P        12 36 59.8 -0.6
SEW   Seward           82.26  30   IAmb     IAmb     12 37 19.2
      comp=Z,50nm,1.0s
SEW   Seward           82.26  30   P        P        12 36 59.9 +0.3
      baz=267
D23K  Nanushuk River   82.33  21   IAmb     IAmb     12 37 35.3
      comp=Z,46nm,1.1s
D23K  Nanushuk River   82.33  21   P        P        12 37 00.8 +0.9
      baz=265
COLD  Coldfoot         82.37  23   IAmb     IAmb     12 37 15.8
      comp=Z,30nm,0.6s
COLD  Coldfoot         82.37  23   P        P        12 37 01.2 +1.1
      baz=266,SNR=41
G23K  Bananza Creek    82.40  23   P        P        12 37 00.8 +0.5
      baz=266
C23K  Itkillik River   82.43  20   IAmb     IAmb     12 37 24.1
      comp=Z,42nm,0.7s
C23K  Itkillik River   82.43  20   P        P        12 37 01.1 +0.8
      baz=265,SNR=28
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BWN	Browne	82.47	26	IAmb	IAmb	12 37 31.8	
	comp=Z,93nm,1.1s						
PMR	Palmer	82.49	29	IAmb	IAmb	12 37 37.6	
	comp=Z,56nm,1.2s						
PMR	Palmer	82.49	29	P	P	12 37 00.7	-0.1
PMR	Palmer	82.49	29	P	P	12 37 00.7	-0.1
	baz=267,SNR=14						
H23K	Yukon River	82.53	24	IAmb	IAmb	12 37 49.0	
	comp=Z,35nm,0.9s						
H23K	Yukon River	82.53	24	P	P	12 37 01.6	+0.6
	baz=266						
GURO	Guroymak-BITLI	82.57	308	IAmb	IAmb	12 37 06.0	
	comp=Z,76nm,0.9s						
I23K	Minto, Yukon-K	82.57	25	IAmb	IAmb	12 37 26.0	
	comp=Z,122nm,1.5s						
I23K	Minto, Yukon-K	82.57	25	P	P	12 37 02.3	+1.1
	baz=267,SNR=9.0						
GHO	Glory Hole Cre	82.59	28	IAmb	IAmb	12 37 57.9	
	comp=Z,60nm,1.1s						
E23K	Chandalar	82.65	22	IAmb	IAmb	12 37 28.5	
	comp=Z,57nm,0.9s						
E23K	Chandalar	82.65	22	P	P	12 37 02.6	+0.9
	baz=266,SNR=15						
NEA2	Nenana	82.66	26	P	P	12 37 02.2	+0.5
	baz=267,SNR=15						
MCK	McKinley	82.68	27	IAmb	IAmb	12 37 27.6	
	comp=Z,59nm,0.8s						
MCK	McKinley	82.68	27	P	P	12 37 01.6	-0.2
	baz=267,SNR=24						
DGRM	Ambatolahisoa	82.69	250	P	P	12 37 03.2	+0.3
RND	Reindeer	82.70	27	IAmb	IAmb	12 37 27.0	
	comp=Z,33nm,0.8s						
TOLK	Toolik Lake Re	82.71	22	P	P	12 37 02.3	+0.4
	baz=266,SNR=20						
VRH	Novokhopyorsk	82.74	321	*e*P	P	12 37 02.5	+0.2
VRH				*e*S	S	12 47 11.5	-3.9
VRH				pmax	pmax		
	comp=Z,157nm,0.6s						
VRH				smax	smax		
	comp=E,2µm,5.2s						
VOI	Vohitsoka	82.74	247	P	P	12 37 02.0	-1.0
KNK	Knik Glacier	82.80	29	P	P	12 37 02.9	+0.4
KNK				IAmb	IAmb	12 37 22.6	
	comp=Z,44nm,0.9s						
KNK	Knik Glacier	82.80	29	P	P	12 37 02.7	+0.2
	baz=268,SNR=12						
WAT1	Susitna Watana	82.81	27	P	P	12 37 02.8	+0.3
	baz=268						
PWL	Port Wells	82.84	29	P	P	12 37 02.8	+0.1
PWL				IAmb	IAmb	12 37 28.1	
	comp=Z,67nm,0.9s						
PWL	Port Wells	82.84	29	P	P	12 37 02.7	-0.1
	baz=268,SNR=6.3						
SML	Sawmill	82.88	28	IAmb	IAmb	12 37 50.8	
	comp=Z,93nm,1.1s						
SML	Sawmill	82.88	28	P	P	12 37 03.0	+0.1
	baz=268,SNR=9.6						
D24K	Happy Valley	83.01	21	IAmb	IAmb	12 37 26.8	
	comp=Z,49nm,0.8s						
D24K	Happy Valley	83.01	21	P	P	12 37 04.3	+0.9
	baz=267						
E24K	Your Creek	83.08	22	P	P	12 37 04.8	+0.9
	baz=267,SNR=15						
WRH	Wood River Hil	83.08	26	IAmb	IAmb	12 37 19.8	
	comp=Z,102nm,1.5s						
C24K	Franklin Bluff	83.09	20	IAmb	IAmb	12 37 43.7	
	comp=Z,56nm,1.1s						
C24K	Franklin Bluff	83.09	20	P	P	12 37 04.5	+0.7
	baz=267,SNR=8.9						
M23K	Glacier View	83.17	28	P	P	12 37 04.6	+0.3
	baz=269,SNR=12						
WAT6	Susitna Watana	83.18	28	P	P	12 37 04.5	0.0
	baz=268,SNR=13						
COLA	College	83.20	25	P	P	12 37 04.0	-0.4
COLA	College	83.20	25	P	P	12 37 03.9	-0.4
COLA	College	83.20	25	P	P	12 37 05.1	+0.7
COLA	College	83.20	25	P	P	12 37 04.2	-0.2
	baz=268						
COLA	College	83.20	25	P	P	12 37 03.7	-0.6
CCB	Clear Creek Bu	83.21	26	IAmb	IAmb	12 37 20.2	
	comp=Z,77nm,1.4s						
H24K	Noodor Dome	83.22	24	IAmb	IAmb	12 37 52.5	
	comp=Z,45nm,1.0s						
H24K	Noodor Dome	83.22	24	P	P	12 37 05.1	+0.6
	baz=268						
F24K	Squaw Lake	83.28	23	IAmb	IAmb	12 37 32.4	
	comp=Z,123nm,1.8s						
F24K	Squaw Lake	83.28	23	P	P	12 37 05.8	+0.9
	baz=268						
P23K	Montague Islan	83.29	30	P	P	12 37 05.8	+0.9
	baz=269						
SCM	Sheep Creek Mo	83.35	28	IAmb	IAmb	12 37 22.0	
	comp=Z,97nm,1.1s						
SCM	Sheep Creek Mo	83.35	28	P	P	12 37 05.8	+0.4
	baz=269,SNR=8.7						
DHY	Denali Highway	83.36	27	IAmb	IAmb	12 37 37.2	
	comp=Z,134nm,2.0s						
DHY	Denali Highway	83.36	27	P	P	12 37 06.5	+1.0
	baz=269,SNR=7.8						
POKR	Poker Plat Res	83.38	25	P	P	12 37 06.9	+1.5
	baz=268,SNR=7.3						
G24K	Hadweenzic Riv	83.41	24	IAmb	IAmb	12 37 23.1	
	comp=Z,71nm,1.2s						
G24K	Hadweenzic Riv	83.41	24	P	P	12 37 07.0	+1.5
	baz=268						
LABN	Labinsk	83.44	314	*e*P	P	12 37 06.1	0.0
LABN				*e**PP	pP	12 37 19.9	-2.9
LABN				*e*S	S	12 47 21.2	-1.7
LABN				pmax	pmax		
	comp=Z,42nm,0.7s						
LABN				MLR	MLR		
	comp=Z,3µm,23.0s						
GLI	Glacier Island	83.45	29	P	P	12 37 05.8	-0.1
	baz=269						
HDA	Harding Lake	83.57	26	IAmb	IAmb	12 37 38.7	
	comp=Z,32nm,0.8s						
HDA	Harding Lake	83.57	26	P	P	12 37 05.4	-1.0
	baz=269,SNR=23						
MARD	Mardin	83.59	307	IAmb	IAmb	12 37 28.0	
	comp=Z,42nm,0.8s						
ERBR	Yeremizino-Bor	83.59	315	*e*P	P	12 37 05.1	-1.8
ERBR				*e**PP	pP	12 37 20.2	-3.4
ERBR				*e*S	S	12 47 21.2	-3.2
ERBR				pmax	pmax		
	comp=Z,61nm,0.7s						
ILAR	Eielson Array	83.61	25	P	P	12 37 05.3	-1.2
	comp=Z,6.4nm,0.6s,baz=256,slow=6.2,SNR=119						
ILAR				PKKP	PKKPdf	12 55 18.2	+0.9
	comp=Z,0.8nm,0.8s,baz=42,slow=2.3,SNR=4.9						
ILAR				PKPPKP		13 03 28.8	
	comp=Z,0.8nm,1.0s,baz=172,slow=0.8,SNR=4.8						
	comp=Z,6.4nm,0.6s						
ILAR	Eielson Array	83.61	25	P	P	12 37 05.5	-1.0
ILAR	Eielson Array	83.61	25	P	P	12 37 05.5	-1.0
Q23K	Middleton Isla	83.81	31	P	P	12 37 07.5	-0.1
	baz=270						
D25K	Kavik River	83.89	21	IAmb	IAmb	12 37 24.9	
	comp=Z,103nm,1.6s						
D25K	Kavik River	83.89	21	P	P	12 37 08.4	+0.5
	baz=269						
M24K	Tolsona, Glenn	83.90	28	IAmb	IAmb	12 37 25.2	
	comp=Z,58nm,0.9s						
M24K	Tolsona, Glenn	83.90	28	P	P	12 37 08.8	+0.7
	baz=270,SNR=12						
G25K	Bearman Lake	83.96	23	P	P	12 37 09.5	+1.2
	baz=270						
KLMR	Klimovskoe	84.00	331	*e*P	P	12 37 06.6	-2.0
KLMR				*e**PP	pP	12 37 23.6	-0.9
KLMR				*e*		12 40 21.3	
KLMR				S	SKSac	12 47 22.9	-3.5
KLMR				pmax	pmax		
	comp=Z,183nm,0.8s						
KLU	Klutina	84.02	29	IAmb	IAmb	12 37 38.3	
	comp=Z,30nm,0.7s						
KLU	Klutina	84.02	29	P	P	12 37 09.6	+0.7
	baz=270,SNR=12						
K24K	Donnelly Dome	84.08	26	IAmb	IAmb	12 37 33.5	
	comp=Z,37nm,0.8s						
K24K	Donnelly Dome	84.08	26	P	P	12 37 09.2	+0.2
	baz=270,SNR=11						
DIV	Divide	84.10	29	IAmb	IAmb	12 37 11.0	
	comp=Z,56nm,0.7s						
EYAK	Cordova Ski Ar	84.11	30	P	P	12 37 10.0	+0.9
EYAK	Cordova Ski Ar	84.11	30	P	P	12 37 10.0	+0.9
	baz=270						
F25K	Christian Rive	84.14	23	IAmb	IAmb	12 37 26.3	
	comp=Z,45nm,1.2s						
F25K	Christian Rive	84.14	23	P	P	12 37 10.4	+1.1
	baz=270						
E25K	Arctic Village	84.17	22	IAmb	IAmb	12 37 27.0	
	comp=Z,75nm,1.1s						
E25K	Arctic Village	84.17	22	P	P	12 37 10.7	+1.3
	baz=270,SNR=19						
PRP	Porcupine Dome	84.19	25	P	P	12 37 09.1	-0.5
	baz=270,SNR=11						
SOC	Sochi	84.20	313	*e*P	P	12 37 08.3	-1.7
SOC				*e*		12 40 27.6	
SOC				*e*S	SKSac	12 47 21.6	-6.8
SOC				*e*SS	SS	12 52 54.2	-6.5
SOC				pmax	pmax		
	comp=Z,36nm,0.7s						
SOC				MLR	MLR		
	comp=Z,1µm,22.0s						
PAX	Paxson	84.23	27	IAmb	IAmb	12 37 26.6	
	comp=Z,89nm,1.5s						
PAX	Paxson	84.23	27	P	P	12 37 09.9	+0.1
	baz=270,SNR=8.1						
J25K	Salcha River,	84.26	26	P	P	12 37 09.7	-0.2
	baz=270						
VORD	Divnogorie	84.27	321	*e*P	P	12 37 08.9	-1.3
VORD				pmax	pmax		
	comp=Z,80nm,0.9s						
VORR	Voronezh	84.31	321	*e*P	P	12 37 09.1	-1.2
VORR				*e*S	SKSac	12 47 26.0	-2.7
VORR				pmax	pmax		
	comp=Z,203nm,0.5s						
VORR				smax	smax		
	comp=N,200nm,0.5s						
VSR	Storozhevoye	84.35	321	*e*P	P	12 37 09.0	-1.5
VSR				pmax	pmax		
	comp=Z,80nm,0.8s						
HARP	HAARP	84.38	28	P	P	12 37 10.9	+0.4
	baz=271,SNR=5.7						
C26K	Camden Bay	84.41	20	P	P	12 37 11.4	+0.9
	baz=270						
LPSR	Galich'ya Gora	84.46	322	*e*P	P	12 37 11.0	-0.1
LPSR				*e*S	SKSac	12 47 26.4	-3.3
LPSR				pmax	pmax		
	comp=Z,290nm,0.8s						
LPSR				smax	smax		
	comp=N,500nm,2.3s						
RIDG	Independent Ri	84.50	27	IAmb	IAmb	12 37 27.4	
	comp=Z,64nm,1.1s						
RIDG	Independent Ri	84.50	27	P	P	12 37 11.1	-0.1
	baz=271,SNR=9.4						
N25K	Chitina, Valde	84.66	29	IAmb	IAmb	12 37 29.0	
	comp=Z,53nm,1.0s						
N25K	Chitina, Valde	84.66	29	P	P	12 37 12.7	+0.7
	baz=271,SNR=8.2						
BMRM	Bremner River	84.67	29	IAmb	IAmb	12 37 47.6	
	comp=Z,58nm,1.0s						
BMRM	Bremner River	84.67	29	P	P	12 37 12.9	+0.8
	baz=271,SNR=9.5						
F26K	Sheenjek River	84.71	23	IAmb	IAmb	12 37 29.2	
	comp=Z,42nm,1.4s						
F26K	Sheenjek River	84.71	23	P	P	12 37 13.5	+1.3
	baz=271						
KAIM	Kayak Island	84.79	30	P	P	12 37 13.6	+1.0
	baz=272						
C27K	Jago River	84.83	21	IAmb	IAmb	12 37 30.2	
	comp=Z,50nm,0.9s						
C27K	Jago River	84.83	21	P	P	12 37 13.9	+1.3
	baz=271,SNR=18						
G26K	Porcupine Rive	84.87	23	IAmb	IAmb	12 37 30.6	
	comp=Z,57nm,1.1s						
G26K	Porcupine Rive	84.87	23	P	P	12 37 14.4	+1.5
	baz=272						
SCRK	Sand Creek	84.87	26	IAmb	IAmb	12 37 29.6	
	comp=Z,55nm,1.4s						
SCRK	Sand Creek	84.87	26	P	P	12 37 14.2	+1.0
	baz=272						
MENT	Mentasta	85.03	27	IAmb	IAmb	12 37 46.5	
	comp=Z,32nm,1.0s						
GLB	Gilahina Butte	85.04	29	IAmb	IAmb	12 37 30.7	
	comp=Z,66nm,1.0s						
J26L	Joseph Creek	85.04	26	P	P	12 37 14.1	+0.2
	baz=272						
VNDA	Vanda	85.04	173	P	P	12 37 13.3	-0.2
	comp=Z,27nm,0.7s,baz=320,slow=6.0,SNR=64						
VNDA				LR	LR	13 14 23.6	
	comp=Z,810nm,21.6s,baz=336,slow=35						
	comp=Z,27nm,0.7s						
VNDA	Vanda	85.04	173	P	P	12 37 14.2	+0.7
VNDA				IAmb	IAmb	12 37 15.1	
	comp=Z,29nm,0.8s						
VNDA	Vanda	85.04	173	P	P	12 37 14.2	+0.7
VNDA				pmax	pmax		
	comp=Z,29nm,0.8s						
VNDA	Vanda	85.04	173	P	P	12 37 14.0	+0.5
VNDA				PcP	PcP	12 37 17.4	+0.8
MOS	Moscow	85.12	325	*e*P	P	12 37 12.5	-1.8
MOS				*e*		12 37 20.2	
MOS				*e*		12 37 27.8	
MOS				*e*		12 47 32.6	
MOS				*e*S	SKSac	12 47 35.6	+1.9
MOS				pmax	pmax		
	comp=Z,300nm,0.7s						
MOS				pmax	pmax		
	comp=Z,205nm,0.7s						
MOS				MLR	MLR		
	comp=Z,1µm,19.0s						
I26K	Coal Creek Min	85.19	25	IAmb	IAmb	12 37 47.7	
	comp=Z,30nm,0.9s						
I26K	Coal Creek Min	85.19	25	P	P	12 37 15.3	+0.8
	baz=272						
L26K	Log Cabin Wild	85.19	27	P	P	12 37 15.4	+0.8
	baz=272,SNR=5.8						
VRDI	Verde Repeater	85.22	29	IAmb	IAmb	12 37 16.5	
	comp=Z,24nm,0.7s						
MAW	Mawson	85.31	200	P	P	12 37 15.5	+0.6
	comp=Z,48nm,0.7s,baz=62,slow=6.0,SNR=34						
MAW				LR	LR	13 14 28.0	
	comp=Z,175nm,18.8s,baz=60,slow=35						
	comp=Z,48nm,0.7s						
BGLC	Bering Glacier	85.35	30	P	P	12 37 16.0	+0.6
	baz=273						
M26K	Nabesna, AK	85.38	28	IAmb	IAmb	12 38 10.9	
	comp=Z,43nm,1.4s						
M26K	Nabesna, AK	85.38	28	P	P	12 37 16.4	+0.7
	baz=273						
CRQE	Cirque	85.42	30	P	P	12 37 16.4	+0.5
	baz=273						
MCARA	McCarthy VSAT	85.42	29	IAmb	IAmb	12 37 59.6	
	comp=Z,47nm,0.8s						
MCARA	McCarthy VSAT	85.42	29	P	P	12 37 16.3	+0.6
	baz=273,SNR=9.7						
TGL	Tana Glacier	85.54	30	IAmb	IAmb	12 37 33.4	
	comp=Z,53nm,0.9s						
PPT	Papeete	85.58	108	LR	LR	13 10 06.6	
	comp=Z,286nm,21.2s,baz=269,slow=32						
PPT2	Papeete2	85.58	108	*e*PKIKP	P	12 37 11.7	-5.8
	comp=Z,230nm,28.0s						
PPT2	Papeete2	85.58	108	*e*PP	PP	12 40 34.5	-2.5
	comp=Z,86nm,23.0s						
PPT2				*e*S	SKSac	12 47 39.7	+1.4
	comp=Z,238nm,22.2s						
PPT2				*e*SS	SS	12 53 19.8	-2.7
	comp=Z,595nm,30.0s						
PPT2				*e*LQ	LQ	13 00 29.9	
	comp=Z,3µm,40.8s						
PPT2				*e*LR	LR	13 04 21.9	
	comp=Z,820nm,29.0s						
PPT2				*e*LR	LR	13 04 26.0	
	comp=Z,914nm,24.2s						
E27K	Coleen River	85.66	22	IAmb	IAmb	12 37 34.2	
	comp=Z,58nm,1.4s						
E27K				IAMs_20	IAMs_20	13 19 14.1	
	comp=Z,932nm,21.0s						
E27K	Coleen River	85.66	22	P	P	12 37 17.7	+0.9
	baz=274						
K27K	Chicken	85.71	26	IAmb	IAmb	12 37 34.9	
	comp=Z,57nm,1.1s						
K27K	Chicken	85.71	26	P	P	12 37 18.1	+1.0
	baz=273						
G27K	Doyon Strip	85.72	23	P	P	12 37 18.2	+1.1
	baz=274						
OBN	Obninsk	85.75	325	P	P	12 37 18.2	+0.7
OBN	Obninsk	85.75	325	⇑P	P	12 37 18.1	+0.7
OBN	Obninsk	85.75	325	*de*P	P	12 37 17.8	+0.4
OBN				*i* *PP	pP	12 37 34.9	+1.5
OBN				*e*		12 40 37.7	
OBN				*e*PPP	PPP	12 42 27.5	
OBN				*e*S	SKSac	12 47 38.8	+1.1
OBN				*e*SS	SS	12 53 19.5	-3.3
OBN				pmax	pmax		
	comp=Z,105nm,0.8s						
OBN				MLR	MLR		
	comp=Z,2µm,21.0s						
OBN	Obninsk	85.75	325	P	P	12 37 17.5	+0.1
	comp=Z,237nm,1.7s						
OBN	Obninsk	85.75	325	P	P	12 37 17.7	+0.2
OBN				pP	pP	12 37 29.9	-3.4
ANN	Anapa	85.78	314	*e*P	P	12 37 16.8	-1.1
ANN				*e**PP	pP	12 37 33.7	-1.0
ANN				*e*S	SKSac	12 47 36.6	-1.8
ANN				*e*		12 47 41.9	
ANN				*e*SS	SS	12 53 32.3	+8.4
ANN				*e*SSS	SSS	12 57 00.7	
ANN				pmax	pmax		
	comp=Z,215nm,0.8s						
ANN				MLR	MLR		
	comp=Z,1µm,21.0s						
H27K	Steamboat Moun	85.81	24	IAmb	IAmb	12 37 35.3	
	comp=Z,28nm,1.0s						
H27K	Steamboat Moun	85.81	24	P	P	12 37 18.7	+1.0
	baz=274						
I27K	Kandik River	85.81	25	IAmb	IAmb	12 37 35.2	
	comp=Z,63nm,1.0s						
I27K	Kandik River	85.81	25	P	P	12 37 18.5	+0.8
	baz=274,SNR=17						
D27M	Malcolm River	85.82	21	IAmb	IAmb	12 37 50.1	
	comp=Z,23nm,0.8s						
D27M	Malcolm River	85.82	21	P	P	12 37 18.6	+1.0
	baz=274						
LVZ	Lovozero	85.86	338	P	P	12 37 18.9	+1.1
L27K	Beaver Creek,	85.88	27	IAmb	IAmb	12 37 35.4	
	comp=Z,45nm,1.4s						
L27K	Beaver Creek,	85.88	27	P	P	12 37 19.4	+1.3
	baz=274						
BCAR	Beaver Creek A	85.90	27	P	P	12 37 19.1	+0.9
M27K	Edge Creek, AK	85.91	28	IAmb	IAmb	12 37 59.7	
	comp=Z,28nm,1.1s						
M27K				IAMs_20	IAMs_20	13 14 09.8	
	comp=Z,954nm,20.0s						
M27K	Edge Creek, AK	85.91	28	P	P	12 37 19.6	+1.3
	baz=274						
TVO	Taravao	85.91	108	*e*P	P	12 37 17.0	-2.1
	comp=Z,14nm,0.9s						
MESA	MESA	86.01	30	P	P	12 37 19.1	+0.2
	baz=274						
GRNC	Granite Creek	86.07	29	IAmb	IAmb	12 37 36.5	
	comp=Z,48nm,1.0s						
BARN	Barnard Glacie	86.10	29	IAmb	IAmb	12 37 36.8	
	comp=Z,51nm,1.0s						
CTG	Chitna Glacier	86.26	29	P	P	12 37 20.9	+0.8
	baz=274,SNR=7.3						
KHAM	Kharkiv	86.26	320	P	P	12 37 20.5	+0.3
F28M	Old Crow	86.35	23	IAmb	IAmb	12 37 37.4	
	comp=Z,25nm,0.8s						
F28M	Old Crow	86.35	23	P	P	12 37 20.9	+0.6
	baz=275,SNR=24						
APA	Apatity	86.36	337⇓	*e*P	P	12 37 16.8	-3.4
APA				*e*		12 40 40.1	
APA				*e*S	SKSac	12 47 44.6	+3.5
APA				*e*SS	SS	12 53 27.8	-3.4
APA				MLR	MLR		
	comp=Z,5µm,21.0s						
BVCY	Beaver Creek	86.37	28	P	P	12 37 21.5	+1.0
	baz=275						
E28M	Babbage River	86.38	22	IAmb	IAmb	12 37 43.3	
	comp=Z,38nm,1.2s						
E28M	Babbage River	86.38	22	P	P	12 37 21.1	+0.7
	baz=275						
TABL	Table Mountain	86.39	30	IAmb	IAmb	12 38 23.2	
	comp=Z,48nm,0.9s						
TBI	Tubuai	86.41	114	*e*P	P	12 37 22.6	+1.2
	comp=Z,800nm,29.0s						
TBI	Tubuai	86.41	114	*e*S	SKSac	12 47 44.3	+1.2
	comp=Z,1µm,28.5s						
TBI				*e*SS	SS	12 53 34.0	-0.3
	comp=Z,4µm,24.2s						
TBI				*e*LQ	LQ	13 01 05.7	
	comp=Z,7µm,33.5s						
TBI				*e*LR	LR	13 04 45.7	
	comp=Z,2µm,24.8s						
TBI				*e*LR	LR	13 04 49.0	
	comp=Z,6µm,25.0s						
LOGN	Logan Glacier	86.43	29	P	P	12 37 21.2	+0.2
LOGN				IAmb	IAmb	12 37 38.4	
	comp=Z,33nm,0.9s						
I28M	Miner Creek	86.52	25	IAmb	IAmb	12 37 24.6	
	comp=Z,30nm,0.8s						
I28M				IAMs_20	IAMs_20	13 13 02.0	
	comp=Z,988nm,21.0s						
I28M	Miner Creek	86.52	25	P	P	12 37 22.2	+0.9
	baz=275						
D28M	Stokes Point	86.60	21	P	P	12 37 22.1	+0.7
	baz=276						
YUK3	Moose Creek	86.61	28	P	P	12 37 22.4	+0.5
	baz=275						
O28M	Mount Upton	86.83	29	P	P	12 37 23.5	+0.4
	baz=275						
DAWY	Dawson	86.89	26	P	P	12 37 23.6	+0.6
	baz=276,SNR=6.7						
YUK8	Steele Glacier	86.99	29	P	P	12 37 23.9	+0.1
	baz=276						
E29M	Blow River	87.01	22	P	P	12 37 24.0	+0.5
	baz=277						
ASF	Jabal al Asfar	87.07	302	LR	LR	13 22 53.2	
	comp=Z,247nm,18.8s,baz=77,slow=40						
H29M	Whitestone	87.08	24	P	P	12 37 24.7	+0.8
	baz=277,SNR=5.3						
G29M	Pine Creek	87.14	23	IAmb	IAmb	12 37 46.4	
	comp=Z,32nm,0.8s						
G29M	Pine Creek	87.14	23	P	P	12 37 24.9	+0.8
	baz=277						
I29M	Ogilvie Camp,	87.21	25	P	P	12 37 25.4	+0.9
	baz=277,SNR=7.3						
J29N	Klondike Camp	87.35	26	P	P	12 37 26.1	+0.8
	baz=277						
BNN	Bunyan	87.39	309	IAmb	IAmb	12 37 46.9	
	comp=Z,61nm,1.2s						
PLTM	Poltava	87.39	319	P	P	12 37 24.6	-1.0
M29M	Somme Creek	87.48	28	IAmb	IAmb	12 37 56.5	
	comp=Z,43nm,1.8s						
M29M	Somme Creek	87.48	28	P	P	12 37 26.6	+0.6
	baz=277						
YUK4	Talbot Arm	87.52	29	P	P	12 37 26.6	+0.3
	baz=277						
L29M	L29M	87.55	27	IAmb	IAmb	12 37 49.8	
	comp=Z,22nm,0.9s						
L29M	L29M	87.55	27	P	P	12 37 27.0	+0.8
	baz=277						
O29M	Mount Kennedy	87.68	30	P	P	12 37 27.3	+0.3
	baz=277						
YUK6	Outpost Mounta	87.71	29	P	P	12 37 27.8	+0.5
	baz=277						
EPYK	Eagle Plains	87.72	24	IAmb	IAmb	12 38 03.5	
	comp=Z,36nm,1.3s						
EPYK	Eagle Plains	87.72	24	P	P	12 37 27.5	+0.5
	baz=278						
K29M	Barlow Dome	87.73	26	P	P	12 37 27.8	+0.6
	baz=278						
G30M	tAoh Zraii Nji	87.83	23	P	P	12 37 27.8	+0.3
	baz=278						
F30M	Barrier River	87.90	22	P	P	12 37 28.3	+0.6
	baz=279						
I30M	Mount Dempster	88.03	25	P	P	12 37 29.4	+0.8
	baz=278						
SIM	Simferopol'	88.12	315	*e*P	P	12 37 29.0	-0.3
SIM				*e*S	SKSac	12 47 50.2	-2.6
SIM				SS	SS	12 53 58.0	-0.1
SIM				pmax	pmax		
	comp=Z,50nm,0.9s						
SIM				smax	smax		
	comp=E,430nm,11.0s						
SIM				pmax	pmax		
	comp=E,200nm,16.0s						
HYT	Haines Junctio	88.14	29	P	P	12 37 29.8	+0.6
	baz=278						
J30M	Hart River	88.15	25	P	P	12 37 30.0	+0.9
	baz=278						
P29M	Windy Craggy	88.18	30	P	P	12 37 30.1	+0.8
	baz=277						
M30M	Minto, Yukon	88.23	27	P	P	12 37 30.3	+0.9
	baz=278						
N30M	Aishikik Lake	88.25	29	P	P	12 37 30.4	+0.8
	baz=278						
MMAI	Mount Meron Ar	88.25	303	P	P	12 37 29.9	-0.4
	comp=E,5.1nm,0.4s,baz=84,slow=7.7,SNR=7.3						
MMAI				LR	LR	13 21 21.3	

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       comp=E,500nm,22.0s,baz=76,slow=38
       comp=E,5.1nm,0.4s
GHAJ   Ghor Haditha       88.27 301   IAMs_20   IAMs_20   13 24 12.9
       comp=Z,491nm,20.0s
MAYO   Mayo, Yukon        88.48  26   P         P         12 37 30.8 +0.3
       baz=279
BZK    Bozkurt            88.50 312  ⇓P         P         12 37 30.8 -0.3
G31M   Satah River        88.60  23   P         P         12 37 31.5 +0.5
       baz=280
INK    Inuvik             88.62  22   P         P         12 37 30.2 -0.8
       comp=Z,1.9nm,0.5s,baz=280,slow=4.5,SNR=16
INK                                   LR        LR        13 19 01.6
       comp=Z,412nm,21.7s,baz=298,slow=37
       comp=Z,1.9nm,0.5s
INK    Inuvik             88.62  22   IAmb      IAmb      12 37 46.9
       comp=Z,31nm,1.4s
INK    Inuvik             88.62  22   P         P         12 37 31.3 +0.2
       baz=281
PUL    Pulkovo            88.64 330 ⇓iP         P         12 37 30.4 -0.9
PUL                                   pmax      pmax
       comp=Z,130nm,0.9s
F31M   Tsiigehtchic       88.71  22   IAmb      IAmb      12 37 47.5
       comp=Z,63nm,1.6s
F31M   Tsiigehtchic       88.71  22   P         P         12 37 31.6 +0.2
       baz=281
H31M   Peel River         88.77  24   P         P         12 37 32.8 +0.8
       baz=280
ILGA   Ilgaz              88.81 311   IAmb      IAmb      12 37 38.4
       comp=Z,25nm,0.9s
O30N   Mendenhall         88.83  29   P         P         12 37 33.2 +0.8
       baz=279
KIRS   Kirsehir-Merke     88.86 309  ⇑P         P         12 37 32.8 -0.2
N31M   Braeburn, Yuko     88.87  28   P         P         12 37 33.0 +0.5
       baz=279
SPA0   Spitsbergen Ar     88.88 349  eP         P         12 37 32.9 +0.7
SPITS  Spitsbergen Ar     88.88 349   P         P         12 37 31.9 -0.3
       comp=Z,20nm,0.8s,baz=96,slow=8.5,SNR=20
SPITS                                 LR        LR        13 22 23.0
       comp=Z,1µm,21.3s,baz=53,slow=39
       comp=Z,20nm,0.8s
PLBC   Pleasant Camp      88.90  30   P         P         12 37 33.3 +0.8
       baz=279
ARA0   ARCESS Array S     88.93 340  eP         P         12 37 32.5 -0.1
ARCES  ARCESS Array B     88.93 340   P         P         12 37 31.7 -0.8
       comp=Z,15nm,0.5s,baz=84,slow=5.0,SNR=87
ARCES                                 PKKPbc    PKKPbc    12 55 11.4 -2.6
       comp=Z,2.4nm,0.6s,baz=271,slow=1.1,SNR=6.7
ARCES                                 LR        LR        13 22 45.5
       comp=Z,909nm,19.4s,baz=87,slow=39
       comp=Z,15nm,0.5s
ARCES  ARCESS Array B     88.93 340   P         P         12 37 32.4 -0.2
ARCES  ARCESS Array B     88.93 340   P         P         12 37 32.4 -0.2
ARCES                                 pmax      pmax
       comp=Z,57nm,1.1s
KIBK   Kibwezi            88.95 268   P         P         12 37 34.4 +0.5
       SNR=5.8
KIBK   Kibwezi            88.95 268   IAmb      IAmb      12 37 35.4
       comp=Z,22nm,0.8s
BR131  Keskin Array S     89.01 310   P         P         12 37 32.2 -1.5
       SNR=15
BR131  Keskin Array S     89.01 310   IAmb      IAmb      12 37 34.7
       comp=Z,33nm,0.8s
BR131  Keskin Array S     89.01 310c iP         P         12 37 32.4 -1.4
BRTR   Keskin Array B     89.01 310   P         P         12 37 32.3 -1.5
       comp=Z,27nm,0.8s,baz=97,slow=5.0,SNR=88
BRTR                                  LR        LR        13 24 12.4
       comp=Z,257nm,19.7s,baz=72,slow=40
       comp=Z,27nm,0.8s
BRTR   Keskin Array B     89.01 310   P         P         12 37 32.7 -1.1
BRTR   Keskin Array B     89.01 310 i P         P         12 37 32.4 -1.4
BRTR                                  pmax      pmax
       comp=Z,28nm,0.8s
S31K   Pelican            89.19  32   P         P         12 37 33.8 -0.1
       baz=279
HAMF   Hammerfest         89.28 341  eP         P         12 37 34.4 +0.2
SKAG   Skagway            89.42  30   P         P         12 37 35.9 +0.9
       baz=280
WHY    Whitehorse         89.44  29   IAmb      IAmb      12 37 51.8
       comp=Z,44nm,1.2s
WHY    Whitehorse         89.44  29   P         P         12 37 35.7 +0.5
       baz=280
ANTO   Ankara             89.64 310   P         P         12 37 36.1 -0.5
ANTO                                  IAmb      IAmb      12 37 56.6
       comp=Z,28nm,0.9s
ANTO   Ankara             89.64 310   IAMs_20   IAMs_20   13 24 29.7
       comp=Z,721nm,20.0s
ANTO   Ankara             89.64 310  ⇓P         P         12 37 36.0 -0.5
ANTO   Ankara             89.64 310   P         P         12 37 36.1 -0.5
ANTO                                  pmax      pmax
       comp=Z,28nm,1.0s
ANTO   Ankara             89.64 310   P         P         12 37 35.4 -1.2
       comp=Z,18nm,0.9s
KTK1   Kautokeino         89.83 339  eP         P         12 37 36.9 +0.1
FARO   Faro, Yukon        89.87  27   IAmb      IAmb      12 37 53.5
       comp=Z,18nm,0.9s
FARO   Faro, Yukon        89.87  27   P         P         12 37 37.7 +0.5
       baz=281
S32K   Killisnoo          90.15  32   P         P         12 37 39.1 +0.6
       baz=280
NE56   Odesa              90.15 317   P         P         12 37 37.0 -1.7
N32M   Quiet Lake         90.21  29   IAmb      IAmb      12 38 01.9
       comp=Z,22nm,0.8s
N32M   Quiet Lake         90.21  29   P         P         12 37 39.3 +0.6
       baz=282
FIA1   FINESS Array S     90.41 332   P         P         12 37 39.4 -0.2
A36M   Sachs Harbour      90.41  17   P         P         12 37 40.0 +0.6
A36M   Sachs Harbour      90.41  17   P         P         12 37 40.0 +0.6
       baz=289
FINES  FINESS Array B     90.41 332   P         P         12 37 39.2 -0.3
       comp=Z,17nm,0.4s,baz=66,slow=4.6,SNR=157
FINES                                 PKKPbc    PKKPdf    12 55 07.7 +2.1
       comp=Z,2.6nm,0.9s,baz=158,slow=6.2,SNR=3.4
FINES                                 LR        LR        13 23 05.6
       comp=Z,1µm,19.1s,baz=78,slow=39
       comp=Z,17nm,0.4s
FINES  FINESS Array B     90.41 332 i P         P         12 37 39.5 -0.1
FINES                                 pmax      pmax
       comp=Z,17nm,0.4s
P33M   Teslin, Yukon      90.53  29   P         P         12 37 40.8 +0.5
       baz=282
AK09   Malin Array Si     90.62 321   P         P         12 37 40.5 -0.3
AK03   Malin Array Si     90.65 321   P         P         12 37 40.4 -0.5
AK10   Malin Array Si     90.65 321   P         P         12 37 40.6 -0.3
AKASG  Malin Array Be     90.65 321   P         P         12 37 40.3 -0.7
       comp=Z,18nm,0.7s,baz=69,slow=4.6,SNR=46
       comp=Z,18nm,0.7s
AKASG  Malin Array Be     90.65 321   P         P         12 37 41.5 +0.5
AKASG                                 IAmb      IAmb      12 37 42.7
       comp=Z,30nm,1.1s
AKASG  Malin Array Be     90.65 321 i P         P         12 37 40.5 -0.4
AKASG                                 pmax      pmax
       comp=Z,19nm,0.7s
AKBB   Malin Array Si     90.65 321   P         P         12 37 40.5 -0.5
AKBB   Malin Array Si     90.65 321   P         P         12 37 40.5 -0.5
AKBB                                  pmax      pmax
       comp=Z,50nm,1.1s
AKBB   Malin Array Si     90.65 321   P         P         12 37 40.3 -0.6
JETT   Jettan, Norway     90.65 340  eP         P         12 37 40.4 -0.3
AK01   Malin Array Si     90.66 321   P         P         12 37 40.4 -0.6
KIEV   Kiev               90.66 321   P         P         12 37 40.4 -0.6
KIEV                                  IAmb      IAmb      12 37 44.4
       comp=Z,45nm,1.1s
KIEV   Kiev               90.66 321  ⇑P         P         12 37 40.9 -0.1
KIEV   Kiev               90.66 321 i P         P         12 37 40.2 -0.8
       SNR=14
KIEV   Kiev               90.66 321   P         P         12 37 40.9 -0.1
KIEV   Kiev               90.66 321   P         P         12 37 40.3 -0.7
       comp=Z,172nm,1.0s
MNK    Minsk              90.81 325 i P         P         12 37 40.3 -1.3
MNK                                 i *PP       pP        12 37 57.3 -0.4
MNK                                 i                     12 41 16.5
MNK                                 i PPP       PPP       12 43 14.5
MNK                                 i S         SKSac     12 48 06.2 -1.9
MNK                                 i *SS       ScS       12 48 36.7 +0.1
MNK                                 i SS        SS        12 54 37.1 +0.6
MNK                                 i SSS       SSS       12 58 14.7
MNK                                   pmax      pmax
       comp=Z,130nm,0.8s
MNK                                   pmax      pmax
       comp=E,30nm,1.0s
MNK                                   pmax      pmax
       comp=N,43nm,0.8s
MNK                                   MLR       MLR
       comp=E,733nm,20.0s
MNK                                   MLR       MLR
       comp=N,949nm,22.0s
MNK                                   MLR       MLR
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       comp=Z,2µm,24.0s
PURM   Purcari            90.87 317  ⇓P         P         12 37 42.3 +0.3
TRO    Tromso             91.12 341  eP         P         12 37 42.6 -0.1
BORA   Eskisehir          91.43 310   IAmb      IAmb      12 38 05.1
       comp=Z,26nm,0.8s
KIS    Kishinev           91.52 317  eP         P         12 37 42.0 -3.1
KIS                                  eL         L         13 19 51.0
KIS                                   LRM       MLR       13 22 48.0
       comp=Z,700nm,20.0s
MILM   Milestii Mici      91.53 317  eP         P         12 37 42.0 -3.1
MILM                                 eL         L         13 17 41.0
MILM                                  LRM       MLR       13 22 21.0
       comp=Z,2µm,19.0s
WRAK   Wrangell Islan     91.55  33   P         P         12 37 45.4 +0.4
       baz=282
R33M   Jennings River     91.62  30   P         P         12 37 45.8 +0.4
       baz=283
SORM   Soroca             91.64 318  ⇓P         P         12 37 45.8 +0.2
SORM   Soroca             91.64 318   P         P         12 37 45.8 +0.2
C36M   Paulatuk           91.66  20   IAmb      IAmb      12 38 01.1
       comp=Z,42nm,1.3s
C36M   Paulatuk           91.66  20   P         P         12 37 46.1 +0.9
       baz=290
ISP    Isparta            91.66 308   IAMs_20   IAMs_20   13 26 24.4
       comp=Z,542nm,20.0s
LUBAR  Lubar, Ukraine     91.71 320   P         P         12 37 45.0 -0.9
TLCR                      91.81 316  ⇓P         P         12 37 47.4 +0.9
TLCR                      91.81 316   P         P         12 37 47.3 +0.9
S34M   Telegraph Cree     91.87  31   P         P         12 37 47.1 +0.6
       baz=283
TPGR   Topolog            92.15 315  ⇑P         P         12 37 48.0 -0.1
MANR   Mangalia           92.20 314  ⇓P         P         12 37 48.1 -0.2
VLDR   Vladesti           92.21 316  ⇑P         P         12 37 48.2 -0.1
CFR    Carcaliu           92.29 316  ⇑P         P         12 37 48.6 -0.1
CFR    Carcaliu           92.29 316   P         P         12 37 48.6 -0.1
ELL    Elmali             92.30 307   IAmb      IAmb      12 37 54.1
       comp=Z,35nm,1.0s
SCTR   Scanteiesti        92.30 316  ⇓P         P         12 37 48.6 -0.1
DLBC   Dease Lake         92.32  31   P         P         12 37 48.8 +0.1
       comp=Z,1.6nm,0.7s,baz=348,slow=15,SNR=7.7
DLBC                                  LR        LR        13 14 25.9
       comp=Z,604nm,21.3s,baz=280,slow=32
       comp=Z,1.6nm,0.7s
DLBC   Dease Lake         92.32  31   P         P         12 37 48.9 +0.3
       baz=284
TLBR   Topalu             92.46 315  ⇑P         P         12 37 50.1 +0.6
WTLY   Watson Lake, Y     92.50  29   IAmb      IAmb      12 38 44.6
       comp=Z,29nm,1.3s
WTLY   Watson Lake, Y     92.50  29   P         P         12 37 50.0 +0.6
       baz=285
T35M   Bob Quinn          92.55  32   P         P         12 37 50.5 +0.8
       baz=284
RNPP9  Sopachiv           92.59 322   P         P         12 37 50.0 +0.1
RNPP8  Varash             92.63 322   P         P         12 37 49.8 -0.3
RNPP5  Staryi Chortor     92.63 322   P         P         12 37 49.3 -0.8
ICOR   Ion Corvin         92.71 315  ⇓P         P         12 37 51.1 +0.5
KMPD   K-Podol'skiy       92.80 319   P         P         12 37 50.6 -0.3
PANC   Panciu             92.85 316  ⇑P         P         12 37 51.2  0.0
STEI   Steigen            92.98 339  eP         P         12 37 50.7 -0.7
TESR   Tescani            93.07 317  ⇑P         P         12 37 51.8 -0.5
GIRR   Girov              93.08 318  ⇑P         P         12 37 52.4  0.0
VRI    Vrincioaia         93.14 316  ⇑P         P         12 37 53.3 +0.6
VRI    Vrincioaia         93.14 316   P         P         12 37 53.2 +0.6
FAUS   Fauske             93.17 339  eP         P         12 37 52.9 +0.7
PLOR   Plostina           93.19 316  ⇑P         P         12 37 52.5 -0.4
PLOR   Plostina           93.19 316   P         P         12 37 52.5 -0.4
BISRR  Bisoca             93.21 316  ⇓P         P         12 37 53.9 +0.8
ONER   Baraj Valea Uz     93.28 317  ⇓P         P         12 37 54.1 +0.9
ISR    Istrita            93.41 316  ⇓P         P         12 37 54.6 +0.7
COVR   Voineasa-Covas     93.50 316  ⇑P         P         12 37 54.1 -0.2
NEHR   Nehoiu             93.52 316  ⇓P         P         12 37 55.4 +1.0
TURR   Turia              93.59 317  ⇑P         P         12 37 54.7 -0.1
SUW    Suwalki            93.61 325  eP         P         12 37 54.1 -0.4
RAZG   Razgrad            93.73 314  ⇑P         P         12 37 55.1 -0.2
MLR    Muntele Rosu       93.75 316  ⇑P         P         12 37 55.9 +0.3
MLR    Muntele Rosu       93.75 316   P         P         12 37 55.9 +0.3
MLR    Muntele Rosu       93.75 316   P         P         12 37 55.1 -0.5
BURAR  Bucovina Array     93.81 318   P         P         12 37 56.1 +0.4
BURAR                                 IAmb      IAmb      12 38 05.3
       comp=Z,27nm,0.9s
BURAR  Bucovina Array     93.81 318  ⇑P         P         12 37 56.4 +0.6
BURAR  Bucovina Array     93.81 318   P         P         12 37 56.3 +0.6
BUR08  Bucovina Ar. S     93.81 318   IAmb      IAmb      12 38 04.5
       comp=Z,23nm,1.0s
TAOE   Nuku Hiva Isla     93.85  98  ePP        PP        12 41 39.6 -3.4
       comp=Z,119nm,29.3s
TAOE                                 eS         S         12 49 00.3 -1.9
       comp=Z,239nm,30.6s
TAOE                                 eSS        SS        12 55 15.6 -7.0
       comp=Z,208nm,28.8s
TAOE   Nuku Hiva Isla     93.85  98  eLR        LR        13 08 08.0
       comp=Z,2µm,24.8s
MOR8   Moi Rana           93.94 338  eP         P         12 37 54.8 -1.0
SYO    Syowa Base         93.97 201⇑iP          P         12 37 57.0 +1.2
SYO    Syowa Base         93.97 201⇓ePcP        PcP       12 37 58.6 +2.4
RAUS   Rausandaksla       93.98 338  eP         P         12 37 57.1 +1.1
WRGLY  Wrigley            93.99  25   P         P         12 37 56.8 +0.7
       baz=290
LIRD   Liard River Hi     94.01  29   P         P         12 37 56.8 +0.5
       baz=288
DOPR   Dopca              94.03 317  ⇑P         P         12 37 56.5 -0.3
VOIR                      94.38 316  ⇓P         P         12 37 58.9 +0.5
VOIR                      94.38 316   P         P         12 37 58.9 +0.5
TOAD   Toad River Com     94.61  30   P         P         12 37 59.0 -0.1
       baz=288
ARR    Arges              94.68 316  ⇑P         P         12 38 00.7 +0.9
KOTAN  Kotaneelee Air     94.77  28   P         P         12 37 59.8  0.0
       baz=289
TNR    Turnu Rosu         94.86 317  ⇑P         P         12 38 01.7 +1.1
TNR    Turnu Rosu         94.86 317   P         P         12 38 01.6 +1.1
RDO    Rodhopi            94.91 312   IAmb      IAmb      12 38 02.0
       comp=Z,20nm,0.8s
BBB    Bella Bella        94.96  37   LR        LR        13 19 11.3
       comp=Z,120nm,19.5s,baz=281,slow=34
VLAD   Vladila            95.13 315  ⇓P         P         12 38 02.2 +0.4
QSPA   South Pole Qui     95.27 180   P         P         12 38 05.5 +3.5
       comp=Z,16nm,1.0s,baz=336,slow=2.4,SNR=31
QSPA                                  LR        LR        13 21 59.9
       comp=Z,630nm,20.3s,baz=350,slow=36
QSPA   South Pole Qui     95.27 180   P         P         12 38 05.2 +3.2
QSPA                                  IAmb      IAmb      12 38 07.6
       comp=Z,29nm,1.1s
MARR   Marisel-Cluj       95.41 318  ⇑P         P         12 38 03.7 +0.5
NSS    Namsos             95.55 337  eP         P         12 38 03.1 -0.1
STHS   Stebnicka Huta     95.95 321  ePDIFF     P         12 38 06.4 +1.0
GZR    Gura Zlata         95.95 317  ⇓P         P         12 38 06.5 +0.9
GZR    Gura Zlata         95.95 317   P         P         12 38 06.5 +0.9
MBAR   Mbarara            96.06 270   LR        LR        13 21 15.4
       comp=Z,239nm,20.9s,baz=71,slow=35
RES    Resolute Bay       96.19  10   P         P         12 38 05.7 -0.3
       comp=Z,3.5nm,0.7s,baz=277,slow=5.8,SNR=16
RES                                   LR        LR        13 27 37.4
       comp=Z,284nm,18.8s,baz=358,slow=39
       comp=Z,3.5nm,0.7s
SURR   Surduc             96.31 317  ⇓P         P         12 38 07.7 +0.6
HERR   Herculane          96.32 316  ⇑P         P         12 38 07.2  0.0
IDI    Anoyia             96.56 306   LR        LR        13 29 08.6
       comp=Z,201nm,19.6s,baz=74,slow=40
HFS    Hagfors            96.59 332   P         P         12 38 07.2 -0.9
       comp=Z,18nm,0.7s,baz=76,slow=6.1,SNR=36
HFS                                   LR        LR        13 27 05.4
       comp=Z,1µm,19.9s,baz=66,slow=39
       comp=Z,18nm,0.7s
OJC    Ojcow              96.63 322  eP         P         12 38 08.4  0.0
OJC    Ojcow              96.63 322   P         P         12 38 08.0 -0.5
OJC    Ojcow              96.63 322   P         P         12 38 08.0 -0.5
KECS   Kecovo             96.68 320  eP         P         12 38 09.6 +0.9
KECS   Kecovo             96.68 320  ePDIFF     P         12 38 09.6 +0.9
BZS    Buzias             96.68 317  ⇑P         P         12 38 08.4 -0.4
BZS    Buzias             96.68 317   P         P         12 38 08.4 -0.4
MDVR   Moldovita          96.83 316  ⇑P         P         12 38 10.5 +0.9
POGA   Pongola            96.94 243   P         P         12 38 09.6 -0.7
BOVS   Bovan              97.12 315  ⇑P         P         12 38 10.0 -0.8
LANS   Liptovska Anna     97.14 321  ePDIFF     Pdif      12 38 12.0 +1.1
PSZ    Piszkesteto        97.21 320  ⇑P         P         12 38 11.0 -0.3
PSZ    Piszkesteto        97.21 320   P         P         12 38 10.9 -0.3
NB2    NORSAR Subarra     97.34 334   P         P         12 38 10.8 -0.7
       comp=Z,14nm,0.7s,baz=66,slow=4.6
NB2    NORSAR Subarra     97.34 334   P         P         12 38 10.8 -0.7
       baz=66,slow=4.6
NOA    NORSAR Array B     97.34 334   P         P         12 38 10.5 -1.0
       comp=Z,12nm,0.7s,baz=66,slow=4.6,SNR=38
NOA                                   LR        LR        13 26 07.7
       comp=Z,2µm,21.8s,baz=65,slow=38
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       comp=Z,12nm,0.7s
YKAW3  Yellowknife Wh     97.96  24   IAmb      IAmb      12 38 31.6
       comp=Z,44nm,2.0s
STEB   Steborice          97.96 322  ePDIFF     Pdif      12 38 14.9 +0.4
YKA    Yellowknife Ar     97.99  24   P         P         12 38 13.7 -0.6
       comp=Z,0.8nm,0.6s,baz=299,slow=5.4,SNR=10
YKA                                   PKiKP     PKiKP     12 42 47.8 +0.5
       comp=Z,0.8nm,0.6s,baz=285,slow=2.3,SNR=6.6
       comp=Z,0.8nm,0.6s
YKA    Yellowknife Ar     97.99  24 i P         Pdif      12 38 14.3  0.0
YKA                                   pmax      pmax
       comp=Z,1.0nm,0.7s
MAUC   Maruska            98.10 321  ePDIFF     Pdif      12 38 15.7 +0.5
MAUC                                 ex         x         12 38 20.4
MORC   Moravsky Berou     98.15 322   IAmb      IAmb      12 38 34.9
       comp=Z,22nm,1.3s
MORC   Moravsky Berou     98.15 322  ⇓P         P         12 38 15.3 -0.2
MORC   Moravsky Berou     98.15 322  eP         Pdif      12 38 15.6 +0.2
MORC   Moravsky Berou     98.15 322   P         P         12 38 15.2 -0.2
JMIC   Jan Mayen          98.28 347   LR        LR        13 27 06.9
       comp=Z,571nm,20.6s,baz=63,slow=38
JAVC   Velka Javorina     98.35 321  eP         Pdif      12 38 17.3 +0.9
KRLC   Kraliky            98.52 322  eP         Pdif      12 38 17.9 +0.8
KRLC   Kraliky            98.52 322  ePDIFF     Pdif      12 38 17.9 +0.8
MORH   Mrgy, Hungar       98.52 318  ⇓P         Pdif      12 38 17.8 +0.7
KSP    Ksiaz              98.56 323  eP         Pdif      12 38 17.6 +0.4
OSTC   Ostas              98.70 323  eP         Pdif      12 38 18.5 +0.7
OSTC   Ostas              98.70 323  ePDIFF     Pdif      12 38 18.5 +0.7
DPC    Dobruska-Polom     98.71 323  eP         Pdif      12 38 18.6 +0.7
DPC    Dobruska-Polom     98.71 323  ePDIFF     Pdif      12 38 18.6 +0.7
CHVC   Chvalec            98.79 323  eP         Pdif      12 38 18.6 +0.4
CHVC   Chvalec            98.79 323  ePDIFF     Pdif      12 38 18.6 +0.4
CHVC                                 ex         x         12 38 24.1
UPC    Upice              98.84 323  eP         P         12 38 18.2 -0.2
UPC                                   MLR       MLR
       comp=Z,1µm,20.2s
UPC    Upice              98.84 323  ePDIFF     P         12 38 18.2 -0.2
UPC                                   AMS       AMS       13 26 30.0
       comp=Z,1µm,20.2s
VRAC   Vranov             98.88 322   LR        LR        13 27 24.0
       comp=Z,338nm,18.5s,baz=68,slow=38
VRAC   Vranov             98.88 322  ⇓P         Pdif      12 38 19.3 +0.6
VRAC   Vranov             98.88 322  eP         Pdif      12 38 19.0 +0.3
VRAC   Vranov             98.88 322   P         Pdif      12 38 19.2 +0.5
KRUC   Moravsky           99.09 321  eP         Pdif      12 38 19.6  0.0
PDG    Podgorica          99.17 314   IAmb      IAmb      12 38 21.7
       comp=Z,24nm,0.8s
PDG                                   IAMs_20   IAMs_20   13 27 36.3
       comp=Z,837nm,21.0s
PDG    Podgorica          99.17 314  ⇑P         Pdif      12 38 19.5 -0.6
RONA   Rosalia, Austr     99.59 320 i P         SKSac     12 49 04.2 +8.8
       comp=Z,2.7nm,0.5s
LSZ    Lusaka             99.66 255   LR        LR        13 21 00.4
       comp=Z,595nm,21.5s,baz=98,slow=34
LSZ    Lusaka             99.66 255   IAMs_20   IAMs_20   13 19 40.3
       comp=Z,820nm,22.0s
RKT    Rikitea            99.67 112  eS         S         12 49 46.5 -5.2
       comp=Z,11µm,38.2s
RKT                                  eSS        SS        12 56 44.4 +0.1
       comp=Z,3µm,31.8s
RKT    Rikitea            99.67 112  eLQ        LQ        13 06 45.5
       comp=Z,6µm,34.0s
RKT                                  eLR        LR        13 10 53.3
       comp=Z,4µm,25.0s
PVCC   Panska Ves         99.70 323  eP         Pdif      12 38 23.4 +1.2
PVCC                                  MLR       MLR
       comp=Z,1µm,18.8s
PVCC   Panska Ves         99.70 323  ePDIFF     Pdif      12 38 23.4 +1.2
PVCC                                  AMS       AMS       13 27 10.0
       comp=Z,1µm,18.8s
PRU    Pruhonice          99.91 323  eP         Pdif      12 38 23.8 +0.6
PRU                                   MLR       MLR
       comp=Z,1µm,17.8s
PRU    Pruhonice          99.91 323  ePDIFF     Pdif      12 38 23.8 +0.6
PRU                                   AMS       AMS       13 27 40.0
       comp=Z,1µm,17.8s
PRA    Prague             99.94 323   AMS       AMS       13 27 30.0
       comp=Z,1µm,22.3s
ZVC    Zvikov            100.31 322  ePDIFF     Pdif      12 38 25.7 +0.7
CLL    Collm             100.34 324 i P         Pdif      12 38 25.0  0.0
CLL                                  eS         Sdif      12 49 54.0 -2.1
CLL                                   pmax      pmax
       comp=Z,21nm,1.2s
CLL                                   MLR       MLR
       comp=Z,2µm,21.9s
HSKC   Hora Svate Kat    100.35 324  ePDIFF     Pdif      12 38 25.9 +0.7
HSKC                                 ex         x         12 38 30.8
HSKC                                  AMS       AMS       13 28 00.0
       comp=Z,2µm,20.4s
CKRC   Cesky Krumlov     100.46 322  eP         Pdif      12 38 26.0 +0.3
CKRC   Cesky Krumlov     100.46 322  ePDIFF     Pdif      12 38 26.0 +0.3
SOKA   Soboth            100.74 319  ePdiff     Pdif      12 38 27.5 +0.4
       comp=Z,0.7nm,0.2s
KHC    Kasperske Hory    100.80 322  eP         Pdif      12 38 27.9 +0.7
KHC                                   MLR       MLR
       comp=Z,900nm,17.3s
KHC    Kasperske Hory    100.80 322  ePDIFF     Pdif      12 38 27.9 +0.7
KHC                                  ex         x         12 38 33.0
KHC                                   AMS       AMS       13 28 10.0
       comp=Z,900nm,17.3s
GERES  GERESS Array B    100.83 322   P         Pdif      12 38 27.6 +0.1
       comp=Z,5.5nm,0.7s,baz=64,slow=6.1,SNR=31
GERES                                 PKiKP     PKiKP     12 42 53.1 +0.1
       comp=Z,1.8nm,0.8s,baz=79,slow=5.8,SNR=3.9
MOA    Molln             100.83 321 i Pdiff     Pdif      12 38 28.1 +0.7
       comp=Z,7.4nm,0.7s
OBKA   Obir              101.11 319 i P         SKSac     12 49 09.1 +6.1
       comp=Z,3.1nm,0.5s
KBA    Koelnbreinsper    101.69 320 i Pdiff     Pdif      12 38 30.9 -0.6
       comp=Z,4.2nm,0.6s
LESA   Schwarzleotal     101.99 321 i Pdiff     Pdif      12 38 32.8 +0.2
       comp=Z,4.8nm,0.7s
LESA   Schwarzleotal     101.99 321  eP         SKSac     12 49 08.4 +1.4
       comp=Z,8.9nm,1.1s
ABTA   Abfaltersbach     102.34 320  ePdiff     Pdif      12 38 33.3 -0.9
       comp=Z,16nm,1.7s
BOSA   Boshof            102.66 242   P         Pdif      12 38 35.1 -0.9
       comp=Z,2.7nm,0.8s,baz=111,slow=8.0,SNR=4.1
BOSA                                  PKKPbc    PKKPbc    12 54 35.9 -0.1
       comp=Z,4.0nm,0.7s,baz=266,slow=4.9,SNR=6.5
WTTA   Wattenberg        102.70 321  ePdiff     Pdif      12 38 34.7 -1.2
       comp=Z,8.8nm,0.8s
WTTA   Wattenberg        102.70 321  eP         SKSac     12 49 11.4 +0.7
       comp=Z,8.4nm,0.7s
WATA   Walderalm         102.71 321  eP         SKSac     12 49 12.2 +1.5
       comp=Z,7.3nm,0.5s
CEL    Celeste           102.82 311   IAMs_20   IAMs_20   13 33 13.5
       comp=Z,571nm,21.0s
SQTA   Sankt Quirin      102.99 321 i Pdiff     Pdif      12 38 36.8 -0.3
       comp=Z,2.7nm,0.3s
SQTA   Sankt Quirin      102.99 321  eP         SKSac     12 49 11.6 -0.3
       comp=Z,11nm,1.3s
MOTA   Moosalm           103.01 321  ePdiff     Pdif      12 38 37.3  0.0
       comp=Z,6.1nm,0.6s
MOTA   Moosalm           103.01 321  eP         SKSac     12 49 13.2 +1.1
       comp=Z,12nm,0.8s
FETA   Feichten          103.37 321 i Pdiff     Pdif      12 38 39.0 +0.2
       comp=Z,5.0nm,0.9s
TROLL  Troll, Antarti    105.22 195  ⇓P         Pdif      12 38 53.0 +6.5
       comp=Z,227nm,0.7s
NVAR   Mina Array Bea    105.78  48   Pdiff     Pdif      12 38 49.5 -0.3
       comp=Z,1.9nm,0.7s,baz=264,slow=5.7,SNR=15
NVAR                                  PKiKP     PKiKP     12 43 04.3 +1.8
       comp=Z,1.5nm,0.7s,baz=327,slow=3.2,SNR=8.8
NVAR                                  PKKPbc    PKKPbc    12 54 26.3 -0.7
       comp=Z,2.9nm,0.7s,baz=136,slow=4.2,SNR=26
BNI    Bardonecchia      106.75 320   IAMs_20   IAMs_20   13 12 26.6
       comp=Z,808nm,21.0s
SNAA   Sanae             106.81 195  ⇓P         Pdif      12 38 54.7 +1.2
       comp=Z,54nm,0.6s
SNAA   Sanae             106.81 195   Pdiff     Pdif      12 38 54.2 +0.7
       comp=Z,2.3nm,0.6s,baz=179,slow=4.8,SNR=9.9
SNAA                                  PKKPbc    PKKPbc    12 54 20.4 -4.3
       comp=Z,2.2nm,0.7s,baz=211,slow=5.5,SNR=8.2
SNAA   Sanae             106.81 195   IAMs_20   IAMs_20   13 24 22.5
       comp=Z,654nm,20.0s
PDAR   Pinedale Array    110.09  41   PKiKP     PKiKP     12 43 11.2 +0.8
       comp=Z,1.3nm,0.8s,baz=29,slow=3.3,SNR=8.4
PDAR                                  PKKPbc    PKKPbc    12 54 10.8 -2.8
       comp=Z,1.8nm,0.6s,baz=124,slow=4.9,SNR=17
ULM    Lac du Bonnet     113.50  28   PKiKP     PKiKP     12 43 16.2 -0.1
       comp=Z,5.1nm,0.6s,baz=325,slow=2.1,SNR=8.1
ANMO   Albuquerque       115.88  47             PKPdf     12 43 22.4 +0.7
ANMO   Albuquerque       115.88  47   IAMs_20   IAMs_20   13 36 18.0
       comp=Z,288nm,19.0s
ANMO   Albuquerque       115.88  47   PKIKP     PKPdf     12 43 22.4 +0.7
```

EDA	Edea	116.05	277		PKPdf	12 43 21.6	-0.6
EDA				IAMs_20	IAMs_20	13 35 31.0	
	comp=Z,462nm,22.0s						
ESDC	Sonseca Array	116.25	319	PKP	PKPdf	12 43 21.8	-0.2
	comp=Z,1.0nm,0.6s,baz=29,slow=1.7,SNR=7.3						
ESDC				PKKPbc	PKKPbc	12 53 51.8	-0.8
	comp=Z,1.1nm,0.7s,baz=240,slow=4.3,SNR=5.9						
MVO	Moncorvo	117.34	322	ePKPdf	PKiKP	12 43 24.9	+0.8
MVO				eLR	LR	13 27 23.2	
MVO				i IAMs_20	IAMs_20	13 40 18.2	
	comp=Z,1µm,22.0s						
PGAV	Gavieira, Arco	117.61	324	ePKPdf	PKiKP	12 43 25.6	+0.9
PGAV				eLR	LR	13 25 51.2	
PGAV				i IAMs_20	IAMs_20	13 40 40.6	
	comp=Z,883nm,20.0s						
POLO	Lamas de Olo	117.68	323	ePKPdf	PKiKP	12 43 26.0	+1.2
MTE	Manteigas	118.11	322		PKiKP	12 43 26.7	+1.0
MTE	Manteigas	118.11	322	ePKPdf	PKiKP	12 43 26.8	+1.2
MTE				eLR	LR	13 28 05.6	
MTE				i IAMs_20	IAMs_20	13 41 14.2	
	comp=Z,987nm,22.0s						
PVIS	Viseu	118.14	322	ePKPdf	PKiKP	12 43 26.9	+1.2
PCBR	Castelo Branco	118.39	321	ePKPdf	PKiKP	12 43 27.3	+1.2
PMRV	Marv??o	118.58	321	eLR	LR	13 34 35.7	
PMRV				i IAMs_20	IAMs_20	13 40 55.6	
	comp=Z,1µm,22.0s						
PCAS	Casmilo, Conde	118.90	322	ePKPdf	PKiKP	12 43 27.5	+0.4
SCHQ	Schefferville	118.94	9	PKP	PKPdf	12 43 26.6	-0.2
	comp=Z,14nm,0.7s,baz=4.9,slow=1.6,SNR=16						
SCHQ				PKKPbc	PKKPbc	12 53 38.8	-4.7
	comp=Z,4.0nm,0.9s,baz=183,slow=5.9,SNR=3.5						
PESTR	Estremoz	119.03	320	ePKPdf	PKiKP	12 43 28.1	+0.7
PBAR	Barrancos	119.08	319	ePKPdf	PKiKP	12 43 28.5	+1.0
PARRA	Arraiolos	119.35	321	ePKPdf	PKiKP	12 43 29.1	+1.1
PSBE	So Bento	119.41	322	ePKPdf	PKiKP	12 43 29.4	+1.2
PBEJ	Beja	119.69	320	ePKPdf	PKiKP	12 43 29.9	+1.2
MOE	Montemor	119.72	320	ePKPdf	PKiKP	12 43 29.8	+1.1
MESJ	Messejana	120.03	320	ePKPdf	PKPdf	12 43 29.3	0.0
MESJ				IAMs_20	IAMs_20	13 41 14.2	
	comp=Z,767nm,11.7s						
MESJ	Messejana	120.03	320	ePKPdf	PKiKP	12 43 30.5	+1.1
MESJ	Messejana	120.03	320	ePKIKP	PKPdf	12 43 29.3	0.0
PCVE	Castro Verde	120.03	319	ePKPdf	PKiKP	12 43 30.5	+1.2
MD01	Midelt array s	120.35	313		PKiKP	12 43 31.1	+0.7
TXAR	Lajitas Array	120.55	51	PKP	PKiKP	12 43 31.1	+0.3
	comp=Z,5.3nm,0.7s,baz=225,slow=1.0,SNR=66						
TXAR				PKKPbc	PKKPbc	12 53 35.6	-1.2
	comp=Z,2.6nm,0.7s,baz=132,slow=6.1,SNR=10						
TXAR	Lajitas Array	120.55	51		PKiKP	12 43 31.3	+0.5
MORF	Marmelete	120.62	319	ePKPdf	PKPdf	12 43 30.4	-0.1
MORF				IAMs_20	IAMs_20	13 41 24.7	
	comp=Z,1µm,19.1s						
MORF	Marmelete	120.62	319	ePKIKP	PKPdf	12 43 30.4	-0.1
ESPZ	Base Esperanza	122.03	178		PKiKP	12 43 33.3	+0.8
OK052	Battle Ridge R	122.04	41	IAMs_20	IAMs_20	13 37 22.5	
	comp=Z,575nm,22.0s						
TORD	Torodi Ar. Bea	122.44	289	PKP	PKPdf	12 43 34.2	-0.3
	comp=Z,26nm,0.7s,baz=53,slow=4.3,SNR=13						
CCM	Cathedral Cave	124.20	36		PKPdf	12 43 37.3	0.0
CCM	Cathedral Cave	124.20	36	PKIKP	PKPdf	12 43 37.3	0.0
WCI	Wyandotte Cave	126.85	32		PKiKP	12 43 43.3	+0.5
WCI	Wyandotte Cave	126.85	32	PKIKP	PKiKP	12 43 43.3	+0.5
WVT	Waverly	127.50	35		PKiKP	12 43 44.5	+0.3
WVT	Waverly	127.50	35	PKIKP	PKiKP	12 43 44.5	+0.3
SSPA	Standing Stone	128.92	24		PKiKP	12 43 46.9	0.0
DBIC	Dimbokro	130.26	283	PKP	PKPdf	12 43 48.9	-0.6
	comp=Z,16nm,0.7s,baz=123,slow=3.6,SNR=15						
KMSC	Kings Mountain	131.79	31	IAMs_20	IAMs_20	13 39 42.1	
	comp=Z,595nm,21.0s						
TEIG	Tepich	137.18	53	IAMs_20	IAMs_20	13 55 39.1	
	comp=Z,376nm,19.0s						
LL02	Futaleuf	138.90	159		PKPdf	12 44 02.7	-2.1
PLCA	Paso Flores	141.52	159	PKhKP	PKPpre	12 44 05.2	
	comp=Z,3.0nm,0.6s,baz=199,slow=4.2,SNR=15						
PLCA				SKPbc	SKiKP	12 47 45.4	+1.7
	comp=Z,11nm,1.0s,baz=175,slow=4.5,SNR=5.1						
PLCA	Paso Flores	141.52	159	PKPdf	PKPdf	12 44 06.6	-3.2
PLCA	Paso Flores	141.52	159	PKIKP	PKPdf	12 44 06.6	-3.2
BI02	San Fabin de	144.74	154	IAMs_20	IAMs_20	13 30 04.1	
	comp=Z,367nm,21.0s						
JTS	Las Juntas de	144.78	64		PKPdf	12 44 16.5	+0.3
JTS	Las Juntas de	144.78	64	PKIKP	PKPdf	12 44 16.5	+0.3
HDC	Heredia	145.65	64	eP	PKPdf	12 44 17.6	-0.2
MTDJ	Mount Denham	146.46	45	i P	PKPab	12 44 21.4	+0.1
TRQA	Tornquist	146.51	167		PKPbc	12 44 20.2	+0.3
TRQA	Tornquist	146.51	167	PKP2	PKPbc	12 44 20.2	+0.3
GTBY	Guantanamo Bay	146.90	40		PKPbc	12 44 20.6	-0.9
STH	Stony Hill	147.07	44	i P	PKPbc	12 44 22.2	+0.1
HOJ	Hope	147.16	44	i P	PKPbc	12 44 22.8	+0.5
CFA	Coronel Fontan	150.35	153	PKP	PKPdf	12 44 25.0	0.0
	comp=Z,4.5nm,0.7s,baz=216,slow=1.7,SNR=6.2						
CFA				PKPbc	PKPbc	12 44 30.6	+0.3
	comp=Z,24nm,0.7s,baz=199,slow=3.7,SNR=12						
SJG	San Juan	153.40	28		PKPbc	12 44 35.9	-1.5
SJG	San Juan	153.40	28	IAMs_20	IAMs_20	13 55 47.3	
	comp=Z,400nm,20.0s						
SJG	San Juan	153.40	28	PKIKP	PKPbc	12 44 35.9	-1.5
ATAH	Atahualpa	154.92	95	PKP	PKPdf	12 44 33.8	+1.1
	comp=Z,12nm,1.0s,baz=261,slow=2.9,SNR=13						
NNA	Nana	155.76	107	PKP	PKPdf	12 44 34.2	+1.0
	comp=Z,6.4nm,0.4s,baz=270,slow=1.0,SNR=4.6						
ROSC	El Rosal	156.62	65	PKP	PKPdf	12 44 35.6	+0.8
	comp=Z,8.3nm,0.4s,baz=282,slow=0.6,SNR=9.8						
SDV	Santo Domingo	157.60	51	PKP	PKPdf	12 44 36.2	+0.4
	comp=Z,36nm,0.8s,baz=355,slow=1.0,SNR=34						
SDV	Santo Domingo	157.60	51	IAMs_20	IAMs_20	13 52 38.0	
	comp=Z,361nm,22.0s						
SDV	Santo Domingo	157.60	51	eP	PKPdf	12 44 36.5	+0.6
CPUP	Villa Florida	158.80	170	PKP	PKPdf	12 44 37.1	+0.5
	comp=Z,1.7nm,0.7s,baz=189,slow=0.6,SNR=9.2						
CPUP				PKPab	PKPab	12 45 12.8	+0.4
	comp=Z,6.8nm,0.7s,baz=158,slow=5.4,SNR=3.3						
CPUP	Villa Florida	158.80	170	eP	PKPdf	12 44 38.1	+1.4
CZSB	Cruzeiro do Su	160.51	98	eP	PKPdf	12 44 39.3	+0.3
LPAZ	La Paz	161.80	128	PKP	PKPdf	12 44 41.5	+0.5
	comp=Z,6.7nm,0.7s,baz=289,slow=3.6,SNR=25						
LPAZ				PKPab	PKPab	12 45 28.4	+1.7
	comp=Z,22nm,1.0s,baz=228,slow=2.0,SNR=11						
LPAZ	La Paz	161.80	128	eP	PKPdf	12 44 40.5	-0.6
RCBR	Riachuelo	162.75	268		PKPdf	12 44 42.3	+0.9
RCBR	Riachuelo	162.75	268	PKIKP	PKPdf	12 44 42.3	+0.9
NBPA	Parau_RN	163.96	268	eP	PKPdf	12 44 42.5	0.0
DIAM	Diamantina, MG	164.13	215	eP	PKPdf	12 44 42.5	-0.2
NBTA	Tacaratu-PE	164.51	255	eP	PKPdf	12 44 43.3	+0.3
BDQN	Bodoquena, MS	164.63	167	eP	PKPdf	12 44 42.9	0.0
AQDB	Aquidauana	164.80	171	eP	PKPdf	12 44 43.3	+0.3
PP1B	Ponte de Pedra	167.74	173	eP	PKPdf	12 44 44.9	-0.5
NBPS	Pedro II - PI	168.22	274	eP	PKPdf	12 44 45.7	-0.3
PTLB	Pontes e Lacer	168.43	150	eP	PKPdf	12 44 46.1	+0.2
TEFE	Tefe	168.48	81	eP	PKPdf	12 44 44.9	-1.1
BDFB	Brasilia	168.59	206	PKP	PKPdf	12 44 46.3	+0.1
	comp=Z,5.1nm,0.7s,baz=147,slow=2.5,SNR=5.2						
BDFB				PKPab	PKPab	12 45 56.1	+0.4
	comp=Z,35nm,0.8s,baz=139,slow=3.3,SNR=23						
BDFB	Brasilia	168.59	206		PKPdf	12 44 46.4	+0.3
BDFB					PKPab	12 45 56.9	+1.1
SDBA	SAO DESIDERIO	169.21	229	eP	PKPdf	12 44 46.5	0.0
SALV	Santo Antonio	169.26	167	eP	PKPdf	12 44 46.9	+0.5
BOAV	Boa Vista	169.38	44	eP	PKPdf	12 44 46.1	-0.5
VILB	Vilhena	169.80	138	eP	PKPdf	12 44 46.1	-0.7
MACA	Manacapuru-AM	172.25	74	eP	PKPdf	12 44 47.7	-0.4
PDRB	Porto dos Gac	172.90	151	eP	PKPdf	12 44 48.5	+0.1
SNDB	Serra Nova Dou	173.17	196	eP	PKPdf	12 44 48.1	-0.3
SMTB	Santa Maria do	173.42	238	eP	PKPdf	12 44 47.3	-1.3
TMAB	Tom-Au,PA,Br	174.07	300	eP	PKPdf	12 44 48.5	-0.3
PRPB	Parauapebas	176.51	257	eP	PKPdf	12 44 48.5	-1.0
ITTB	Itaituba	177.31	68	eP	PKPdf	12 44 49.3	-0.3
NPGB	Novo Progresso	177.31	128	eP	PKPdf	12 44 48.9	-0.7

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*UPP **05** 12:30:44.3±0.2, 67°.85N×20°.22E, h0^{km}, ML2.5, Confirmed Induced event*

*HEL **05** 12:30:45.7±0.2, 67°.89N×20°.21E, h0^{km}, ML1.0, Suspected explosion*

ISC 05 12:30:44.7±0.8**, 67°.85N**±0°.03×**20°.20E**±0°.03**, h0**^{km}**, n13, σ0^{s}75**/22**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.11	27	P	Pg	12 30 46.8	-0.1
KUA				S	Sg	12 30 48.5	+0.2
RATU	Laukkuluspa	0.23	263	P	Pg	12 30 49.0	-0.2
RATU				S	Sg	12 30 52.4	+0.2
KOVU	Salmi	0.37	358	P	Pg	12 30 51.6	-0.2
KOVU				S	Sg	12 30 56.9	+0.2
NIKU	Nikkaluokta	0.44	272	P	Pg	12 30 52.9	-0.2
NIKU				S	Sg	12 30 59.1	+0.2
LANU	Lannavaara	0.70	73	PG	Pg	12 30 58.1	-0.1
LANU				SG	Sg	12 31 07.0	-0.3
KIF	Kilpisjarvi	1.18	11	MSG		12 31 21.5	
	comp=Z,1.5nm,0.2s						
KIF				SN	Sg	12 31 22.9	+0.4
HEF	Hetta	1.41	65	PG	Pn	12 31 10.4	-1.2
HEF				MSG		12 31 27.7	
	comp=Z,0.8nm,0.2s						
HEF				SN	Sn	12 31 33.3	+2.4
ERTU	Ertsjaerv	1.52	148	PG	Pb	12 31 13.2	-0.5
ERTU				SG	Sn	12 31 33.4	-0.2
KLF	Kolari	1.57	112	PG	Pb	12 31 14.2	-0.4
KLF				MSG		12 31 33.1	
	comp=Z,0.6nm,0.2s						
KLF				SG	Sb	12 31 34.7	-0.4
KTK1	Kautokeino	1.62	43	PN	Pb	12 31 14.9	-0.5
TOF	Tornio	2.41	136	PN	Pn	12 31 26.6	+1.3
TOF				MSG		12 31 57.7	
	comp=Z,0.4nm,0.2s						
TOF				SB	Sb	12 31 58.9	-0.1
ARA0	ARCESS Array S	2.57	46	SG	Sb	12 32 03.8	+0.1
RNF	Rovaniemi	2.58	116	SB	Sb	12 32 03.7	-0.3

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*KRSC **05** 12:38:22.2±2.7, 49°.48N×157°.20E, h16^{km}±36^{km}, Ml5.5, Felt [IV] at Severo-Kurilsk.*

*MOS **05** 12:38:26.4±1.2, 49°.67N×156°.27E, h62^{km}, mb4.9/25, Error ellipse: s-maj=7.7km s-min=3.1km az=78.0*

MOS Felt (IV) at Severo-Kuril'sk.

*IDC **05** 12:38:28.6±1.9, 49°.83N×156°.13E, h62^{km}±16^{km}, mb4.1/31, mbtmp4.5/37, MS4.4/9, Error ellipse: s-maj=13.5km s-min=9.1km az=142.0*

*NEIC **05** 12:38:28.7±1.5, 49°.85N±0°.09×156°.1E±0°.1, h58^{km}±2^{km}, mb4.9/153, Error ellipse: s-maj=13.9km s-min=10.0km az=139.0*

ISC 05 12:38:27.6±0.6**, 49°.67N**±0°.05×**156°.33E**±0°.05**, h55**^{km}±4^{km}**, h55**^{km}**:pP-P, n574, σ1^{s}20**/549**, mb4.8**/138**, MS4.9**/8**, 2C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.03	352	⇓iPN	Pn	12 38 45.4	-0.4
SKR				eS	Sn	12 38 59.7	+0.5
SKR				pmax	pmax		
	comp=Z,2µm,0.4s						
SKR				smax	smax		
	comp=N,46µm,0.6s						
SKR				smax	smax		
	comp=E,37µm,0.7s						
SKR	Severo-Kuril's	1.03	352	eP	Pn	12 38 45.4	-0.4
SKR				eS	Sn	12 38 59.9	+0.7
PAU	Pauzhetka	1.83	10	PN	Pn	12 38 56.5	-0.1
PAU				S	Sn	12 39 20.1	+1.5
PAU	Pauzhetka	1.83	10	eP	Pn	12 38 56.5	-0.1
PAU				eS	Sn	12 39 20.1	+1.5
KDTR	Khodutka, Kamc	2.42	27	PN	Pn	12 39 03.5	-1.0
KDTR				S	Sn	12 39 32.2	-0.7
KDTR	Khodutka, Kamc	2.42	27	eP	Pn	12 39 03.6	-1.0
KDTR				eS	Sn	12 39 32.2	-0.7
MIPR	Malaya Ipel'ka	2.63	6	PN	Pn	12 39 08.4	+0.9
MIPR				S	Sn	12 39 40.5	+2.4
MIPR	Malaya Ipel'ka	2.63	6	eP	Pn	12 39 08.5	+0.9
MIPR				eS	Sn	12 39 40.6	+2.4
ASAK	Asacha	2.90	19	PN	Pn	12 39 11.7	+0.5
ASAK	Asacha	2.90	19	eP	Pn	12 39 11.7	+0.5
MTVR	Mutnovka	3.05	22	PN	Pn	12 39 13.2	-0.2
MTVR				S	Sn	12 39 49.8	+1.0
MTVR	Mutnovka	3.05	22	eP	Pn	12 39 13.2	-0.2
MTVR				eS	Sn	12 39 49.8	+1.0
GRL	Gorelyy	3.09	20	PN	Pn	12 39 14.2	+0.3
GRL				S	Sn	12 39 52.8	+3.1
GRL	Gorelyy	3.09	20	eP	Pn	12 39 14.3	+0.3
GRL				eS	Sn	12 39 52.9	+3.1
RUS	Russkaya	3.10	26	PN	Pn	12 39 12.8	-1.0
RUS				S	Sn	12 39 48.8	-0.8
RUS	Russkaya	3.10	26	eP	Pn	12 39 12.9	-1.0
RUS				eS	Sn	12 39 48.8	-0.8
APC	Apacha	3.31	9	PN	Pn	12 39 17.9	+1.2
APC	Apacha	3.31	9	eP	Pn	12 39 17.9	+1.2
KRMR	Karymshinskiy	3.36	19	PN	Pn	12 39 18.4	+0.9
KRMR				S	Sn	12 39 59.8	+3.6
KRMR	Karymshinskiy	3.36	19	eP	Pn	12 39 18.5	+0.9
KRMR				eS	Sn	12 39 59.8	+3.6
PEA0B	Petropavlovsk-	3.55	13		Pn	12 39 20.6	+0.4
PEA0B	Petropavlovsk-	3.55	13	i PN	Pn	12 39 20.7	+0.5
PETK	Petropavlovsk-	3.55	13	P	Pn	12 39 20.5	+0.3
	comp=E,65nm,0.6s,baz=197,slow=14,SNR=156						
PETK				S	Sn	12 39 58.8	-2.1
	comp=E,161nm,0.7s,baz=185,slow=16,SNR=5.4						
PETK				LR	LR	12 40 45.4	
	comp=E,1µm,21.6s,baz=180,slow=40						
PETK	Petropavlovsk-	3.55	13		Pn	12 39 20.3	+0.2
PET	Petropavlovsk	3.67	23		Pn	12 39 21.2	-0.5
PET	Petropavlovsk	3.67	23	P	Pn	12 39 22.2	+0.5
PET	Petropavlovsk	3.67	23	ePN	Pn	12 39 22.6	+0.9
PET				eS	Sn	12 40 04.9	+1.3
PET				pmax	pmax		
	comp=Z,229nm,0.6s						
PET				smax	smax		
	comp=E,4µm,0.6s						
PET				smax	smax		
	comp=N,5µm,0.7s						
PET				MLR	MLR		
	comp=Z,300nm,10.0s						
PET	Petropavlovsk	3.67	23	eP	Pn	12 39 22.1	+0.4
PET				eS	Sn	12 40 05.3	+1.8
INSR	Institute	3.69	22	PN	Pn	12 39 23.0	+1.0
INSR				S	Sn	12 40 07.0	+2.8
INSR	Institute	3.69	22	eP	Pn	12 39 23.0	+1.0
INSR				eS	Sn	12 40 07.0	+2.8
DALK	Dalny	3.70	23	PN	Pn	12 39 21.8	-0.3
DALK				S	Sn	12 40 06.4	+2.1
DALK	Dalny	3.70	23	eP	Pn	12 39 21.8	-0.3
DALK				eS	Sn	12 40 06.4	+2.1
UGLR	Uglovaya	3.88	23	PN	Pn	12 39 25.1	+0.5
UGLR				S	Sn	12 40 12.0	+3.1
UGLR	Uglovaya	3.88	23	eP	Pn	12 39 25.2	+0.5
UGLR				eS	Sn	12 40 12.0	+3.1
AVH	Avacha	3.91	22	PN	Pn	12 39 25.9	+0.8
AVH				S	Sn	12 40 14.2	+4.6
AVH	Avacha	3.91	22	eP	Pn	12 39 25.9	+0.8
AVH				eS	Sn	12 40 14.2	+4.6
KOK	Koryaka	3.91	21	PN	Pn	12 39 26.6	+1.5
KOK	Koryaka	3.91	21	eP	Pn	12 39 26.6	+1.5
KRER	Koryakskii	3.94	22	PN	Pn	12 39 26.7	+1.0
KRER	Koryakskii	3.94	22	eP	Pn	12 39 26.7	+1.0
SDLR	Sedlovina	3.95	23	PN	Pn	12 39 25.6	-0.1
SDLR	Sedlovina	3.95	23	eP	Pn	12 39 25.6	-0.1
KRX	Arik	3.97	21	PN	Pn	12 39 27.0	+1.0
KRX	Arik	3.97	21	eP	Pn	12 39 27.0	+1.0
NLC	Nalytchevo	3.98	27	PN	Pn	12 39 25.9	-0.1
NLC	Nalytchevo	3.98	27	eP	Pn	12 39 25.9	-0.1
SPN	Mys Shipunski	4.14	33	PN	Pn	12 39 27.2	-1.0
SPN	Mys Shipunski	4.14	33	eP	Pn	12 39 27.2	-1.0
GNL	Ganaly	4.16	13	PN	Pn	12 39 30.1	+1.6
GNL	Ganaly	4.16	13	eP	Pn	12 39 30.1	+1.6
KII	Karymskiy	4.78	23	PN	Pn	12 39 38.2	+1.2
KII	Karymskiy	4.78	23	eP	Pn	12 39 38.3	+1.2
MKZ	Mys Kozlova	5.92	32	PN	Pn	12 39 50.8	-1.7
MKZ	Mys Kozlova	5.92	32	eP	Pn	12 39 50.8	-1.7
KZV	Kizimen	5.97	22	PN	Pn	12 39 53.8	+0.4
KZV	Kizimen	5.97	22	eP	Pn	12 39 53.8	+0.4
ESO	Esso	6.43	12	PN	Pn	12 40 01.3	+1.7
ESO	Esso	6.43	12	eP	Pn	12 40 01.4	+1.7
KMNR	Kamenistaya	6.54	20	PN	Pn	12 40 05.5	+4.3
KMNR	Kamenistaya	6.54	20	eP	Pn	12 40 05.6	+4.3
KPT	Kopyto	6.74	19	PN	Pn	12 40 06.9	+3.1
KPT	Kopyto	6.74	19	eP	Pn	12 40 06.9	+3.1
KOZ	Kozyrevsk	6.75	17	PN	Pn	12 40 06.7	+2.7
KOZ	Kozyrevsk	6.75	17	eP	Pn	12 40 06.7	+2.7
KLY	Klyuchi	7.15	20	PN	Pn	12 40 11.3	+2.0
KLY	Klyuchi	7.15	20	eP	Pn	12 40 11.4	+2.0
KUR	Kuril'sk	7.25	235	ePN	Pn	12 40 09.2	-1.6
KUR				S	Sn	12 41 35.1	+3.5
KUR				pmax	pmax		
	comp=Z,156nm,0.4s						
KUR				smax	smax		
	comp=N,153nm,1.5s						
KUR				smax	smax		
	comp=E,81nm,0.5s						
SRKR	Sorokina	7.58	21	PN	Pn	12 40 18.2	+2.9
SRKR	Sorokina	7.58	21	eP	Pn	12 40 18.2	+2.9
SMKR	Semkarok	7.58	22	PN	Pn	12 40 17.1	+1.7
SMKR	Semkarok	7.58	22	eP	Pn	12 40 17.2	+1.7
KBTR	Krutoberegovo	7.63	28	PN	Pn	12 40 14.5	-1.5
KBTR	Krutoberegovo	7.63	28	eP	Pn	12 40 14.6	-1.5
TYV	Tymovskoe	8.84	283	ePN	Pn	12 40 32.3	-0.3
TYV				pmax	pmax		
	comp=Z,22nm,1.4s						
TYV				pmax	pmax		
	comp=Z,200nm,2.3s						
YUK	Yuzh-Kuril'sk	9.12	236	ePN	Pn	12 40 36.0	-0.3
YUK				pmax	pmax		
	comp=N,37nm,0.2s						
YUK				pmax	pmax		
	comp=Z,248nm,0.2s						
YUK				pmax	pmax		
	comp=E,108nm,0.3s						
YUK				pmax	pmax		
	comp=Z,1µm,1.9s						
OKH	Okha	9.20	300	dePN	Pn	12 40 41.0	+3.7
OKH				MLR	MLR		
	comp=N,1µm,11.0s						
OKH				MLR	MLR		
	comp=Z,1µm,14.0s						
OKH				MLR	MLR		
	comp=E,2µm,16.0s						
RUSJ	Misakicho	9.40	238	PN	Pn	12 40 43.2	+2.9
YSS	Yuzhno-Sakhali	9.44	258		Pn	12 40 40.2	-0.6
YSS	Yuzhno-Sakhali	9.44	258	P	Pn	12 40 40.9	+0.1
YSS	Yuzhno-Sakhali	9.44	258	ePN	Pn	12 40 43.9	+3.1
YSS				pmax	pmax		
	comp=Z,60nm,1.2s						
YSS				MLR	MLR		
	comp=Z,900nm,13.0s						
GLVR	Golovnino	9.50	235	ePN	Pn	12 40 42.1	+0.6
NMR	Nemuro--Hokkai	9.64	233	ePN	Pn	12 40 40.3	-3.2
MA2	Magadan	10.44	344	P	Pn	12 40 54.6	+0.3
	comp=Z,32nm,0.6s,baz=155,slow=11,SNR=22						
MA2				S	Sn	12 42 46.0	-3.5
	comp=Z,14nm,0.9s,baz=162,slow=20,SNR=1.4						
MA2				LR	LR	12 45 20.4	
	comp=Z,512nm,19.4s,baz=196,slow=40						
MA2	Magadan	10.44	344	P	Pn	12 40 55.3	+1.0
JKA	Kamikawa-asahi	10.91	245		Pn	12 41 01.9	+1.1
ASAJ	Asahikawa	10.91	245	P	Pn	12 41 02.5	+1.7
	comp=Z,42nm,0.9s,baz=54,slow=9.5,SNR=15						
SHEM	Shemya Is, Ala	11.56	68	P	Pn	12 41 06.8	-2.8
	comp=Z,121nm,0.7s,baz=248,slow=19,SNR=10						
SHEM				S	Sn	12 43 03.9	-13
	comp=Z,184nm,0.7s,baz=251,slow=19,SNR=11						
SHEM				LR	LR	12 45 25.9	
	comp=Z,377nm,21.9s,baz=332,slow=36						
SMY	Shemya	11.56	68	Pn	Pn	12 41 07.2	-2.4
SMY	Shemya	11.56	68	P	Pn	12 41 07.6	-2.1
SMY	Shemya	11.56	68	PN	Pn	12 41 07.2	-2.4
ERM	Erimo	11.94	235	Pn	Pn	12 41 13.4	-1.5
ERM	Erimo	11.94	235	P	Pn	12 41 13.9	-1.0
ERM	Erimo	11.94	235	PN	Pn	12 41 13.4	-1.5
JEM	Erimo	11.94	235	P	Pn	12 41 13.5	-1.4
SEY	Seymchan	13.47	352	P	Pn	12 41 36.9	+1.2
	comp=Z,3.0nm,0.5s,baz=160,slow=15,SNR=8.0						
SEY	Seymchan	13.47	352	i PN	Pn	12 41 35.5	-0.2
SEY				pmax	pmax		
	comp=Z,6.0nm,0.8s						
JTM	Tenmabayashi	13.92	236	Pn	Pn	12 41 37.2	-4.7
JTM	Tenmabayashi	13.92	236	P	Pn	12 41 41.4	-0.5
TEY	Ternei	14.14	258	eP	P	12 41 51.0	+0.2
USRK	Ussuriysk Ar.	17.46	261	P	Pn	12 42 25.9	-1.2
	comp=Z,3.9nm,0.8s,baz=57,slow=15,SNR=4.9						
ZEA	Zeya	18.41	294	eP	Pn	12 42 40.3	+1.8
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.6s						
MJAR	Matsushiro Arr	18.57	232	P	P	12 42 38.9	-0.9
	comp=Z,4.7nm,0.9s,baz=25,slow=10,SNR=8.3						
MJAR	Matsushiro Arr	18.57	232	P	P	12 42 36.8	-3.1
MJB9	Matsu-Tunnel	18.57	232	P	P	12 42 36.5	-3.3
HEH	HeiHe	18.57	283	eP	Pn	12 42 41.5	+1.0
HEH				pmax	pmax		
	comp=Z,40nm,1.2s						
MAJO	Matsushiro	18.57	232	P	P	12 42 36.8	-3.1
MAJO	Matsushiro	18.57	232	P	P	12 42 41.6	+1.8
MAJO	Matsushiro	18.57	232	i P	P	12 42 40.1	+0.3
MDJ	Mudanjiang	18.83	265		P	12 42 42.4	-0.2
MDJ	Mudanjiang	18.83	265	P	P	12 42 43.6	+1.0
MDJ				pmax	pmax		
	comp=Z,18nm,1.9s						
YAK	Yakutsk	19.24	320	P	P	12 42 45.9	-1.0
	comp=Z,33nm,0.5s,baz=116,slow=3.6,SNR=9.8						
YAK	Yakutsk	19.24	320	P	P	12 42 44.4	-2.5
YAK				IAmb	IAmb	12 42 52.2	
	comp=Z,65nm,0.8s						
YAK	Yakutsk	19.24	320	eP	P	12 42 45.5	-1.4
YAK				eS	S	12 46 19.4	-2.2
YAK				pmax	pmax		
	comp=Z,95nm,1.3s						
YAK				pmax	pmax		
	comp=E,53nm,1.7s						
YAK				pmax	pmax		
	comp=N,15nm,1.4s						
YAK				smax	smax		
	comp=E,1µm,5.3s						
YAK				smax	smax		
	comp=N,462nm,4.8s						
JGF	Kuroka	19.73	232	P	P	12 42 51.7	-0.8
JGF	Kuroka	19.73	232	P	P	12 42 55.5	+2.9
BNX	BinXian	19.80	270	⇓P	P	12 42 55.0	+1.8
BNX				pmax	pmax		
	comp=N,15nm,1.0s						
SPIA	Saint Paul Isl	21.11	56	P	P	12 43 08.3	+1.0
	baz=264						
P08K	Saint George I	21.44	58	P	P	12 43 11.7	+1.0
	baz=266						
NIKH	Nikolski High	21.88	68	P	P	12 43 16.9	+1.4
	baz=276						
GAMB	Gambell	22.20	39	P	P	12 43 19.2	+0.4
	baz=246						
UNV	Unalaska Valle	23.20	65	P	P	12 43 30.9	+1.5
	baz=275						
M11K	Mekoryuk	23.67	49	P	P	12 43 34.3	+0.7
	baz=260						
KSRS	Korea Array	23.77	250	P	P	12 43 34.5	-0.4
	comp=N,6.6nm,0.9s,baz=47,slow=10.0,SNR=9.6						
	comp=N,6.6nm,0.9s						
TNA	Tin City	24.41	36	P	P	12 43 41.3	+1.0
TNA				IAmb	IAmb	12 43 51.2	
	comp=Z,60nm,1.3s						
TNA	Tin City	24.41	36	P	P	12 43 41.2	+0.8
	baz=247						
K13K	Kusilvak Mount	24.70	45	P	P	12 43 44.2	+1.1
	baz=259						
FALS	False Pass	24.92	62	P	P	12 43 45.9	+0.8
	baz=275						
F14K	Arctic Creek	24.99	37	P	P	12 43 46.4	+0.7
	baz=249						
ANM	Nome	25.07	39	P	P	12 43 45.8	-0.6
ANM	Nome	25.07	39	P	P	12 43 45.8	-0.6
ANM				pmax	pmax		
	comp=Z,125nm,2.0s						
ANM	Nome	25.07	39	P	P	12 43 47.1	+0.7
	baz=252						
M13K	Dall Lake	25.07	49	P	P	12 43 47.6	+1.2
	baz=263						
JNU	Nakatsue	25.07	238	P	P	12 43 45.1	-1.6
JNU				IAmb	IAmb	12 44 04.5	
	comp=Z,74nm,1.5s						
JNU	Nakatsue	25.07	238	P	P	12 43 49.8	+3.0
TIXI	Tiksi	25.36	340		P	12 43 46.6	-2.3
TIXI				IAmb	IAmb	12 43 48.5	
	comp=Z,36nm,0.7s						
TIXI	Tiksi	25.36	340	i P	P	12 43 47.6	-1.3
TIXI				pmax	pmax		
	comp=Z,38nm,0.9s						
J14K	Nanvaranak Lak	25.37	44	P	P	12 43 50.2	+1.1
	baz=258						
L14K	Kuka Creek	25.52	47	P	P	12 43 51.8	+1.3
	baz=262						
F15K	North Star Dit	25.73	37	P	P	12 43 53.4	+1.0
	baz=251						
G15K	Niukluk	25.74	39	P	P	12 43 53.2	+0.7
	baz=253						
M14K	Bethel	25.79	49	P	P	12 43 53.9	+1.0

	baz=264						
N14K	Kuskokwak Cree	25.85	51	P	P	12 43 54.2	+0.8
	baz=266						
O14K	Tigyukauivet M	26.02	52	P	P	12 43 56.2	+1.1
	baz=268						
L15K	Ungalak Mounta	26.14	47	P	P	12 43 57.3	+1.2
	baz=262						
K15K	Wolf Creek Mou	26.21	45	P	P	12 43 57.3	+0.6
	baz=261						
M15K	Kasigluk River	26.41	49	P	P	12 43 59.5	+0.9
	baz=265						
C16K	Lisburne Hills	26.46	31		P	12 43 58.9	0.0
C16K				IAmb	IAmb	12 44 02.0	
	comp=Z,37nm,1.1s						
C16K	Lisburne Hills	26.46	31	P	P	12 43 59.7	+0.8
	baz=245						
G16K	Koyuk River	26.54	38	P	P	12 44 00.8	+1.1
	baz=254						
SDPT	Sand Point	26.55	61	P	P	12 44 01.2	+1.3
	baz=276						
N15K	Kwethluk River	26.66	50	P	P	12 44 01.8	+0.9
	baz=267						
O15K	Ungalikthiuk R	26.76	52	P	P	12 44 02.4	+0.7
	baz=269						
J16K	Anvik River	26.80	43	P	P	12 44 02.9	+0.9
	baz=260						
I17K	Unalakleet	26.87	42	P	P	12 44 03.4	+0.8
	baz=259						
S14K	Fog Glacier	26.99	59	P	P	12 44 05.3	+1.4
	baz=275						
D17K	Noatak River	27.01	33	P	P	12 44 04.2	+0.3
	baz=249,SNR=10						
L16K	Owhat River	27.09	47	P	P	12 44 04.8	+0.2
	baz=264						
CHNA	Chernabura Isl	27.12	62	P	P	12 44 06.2	+1.2
	baz=278						
RDOG	Red Dog Mine	27.20	32		P	12 44 05.0	-0.6
RDOG				IAmb	IAmb	12 44 06.8	
	comp=Z,22nm,0.8s						
RDOG	Red Dog Mine	27.20	32	P	P	12 44 06.6	+1.0
	baz=248						
E17K	Hotham Inlet	27.25	35	P	P	12 44 06.7	+0.7
	baz=252,SNR=19						
G17K	Kiwalik Mounta	27.25	38	P	P	12 44 06.4	+0.3
	baz=256						
C17K	DeLong Mountai	27.27	32	P	P	12 44 06.6	+0.4
	baz=247						
F17K	Baldwin Pennin	27.27	36		P	12 44 06.9	+0.7
F17K				IAmb	IAmb	12 44 08.6	
	comp=Z,29nm,1.1s						
F17K	Baldwin Pennin	27.27	36	P	P	12 44 07.0	+0.7
	baz=253						
M16K	Timber Creek	27.28	48	P	P	12 44 07.0	+0.6
	baz=266						
N16K	Nishlik Lake	27.34	50	P	P	12 44 07.2	+0.3
	baz=267						
H17K	Granite Mounta	27.42	40	P	P	12 44 07.6	0.0
	baz=258						
J17K	VABM Dome	27.50	43	P	P	12 44 08.7	+0.4
	baz=262						
O16K	Kokwok River B	27.65	52	P	P	12 44 10.2	+0.5
	baz=270						
L17K	Donlin	27.69	46	P	P	12 44 10.5	+0.4
	baz=265						
K17K	Iditarod	27.75	45	P	P	12 44 11.0	+0.4
	baz=264						
E18K	Tukpahlearik C	27.81	34	P	P	12 44 11.8	+0.7
E18K	Tukpahlearik C	27.81	34	P	P	12 44 11.5	+0.4
	baz=252						
F18K	Selawik	27.93	36	P	P	12 44 12.2	+0.1
	baz=255,SNR=8.0						
C18K	Utukok River	28.01	32		P	12 44 13.2	+0.3
C18K				IAmb	IAmb	12 44 14.4	
	comp=Z,34nm,1.1s						
C18K	Utukok River	28.01	32	P	P	12 44 12.9	0.0
	baz=249,SNR=8.5						
M17K	Holitna River	28.04	48	P	P	12 44 13.3	+0.1
	baz=267						
B18K	Kokolik River	28.08	30	P	P	12 44 13.7	+0.3
	baz=247						
H18K	Honhosa River	28.11	40	P	P	12 44 13.6	-0.2
	baz=259						
N17K	Nushagak Hills	28.12	50	P	P	12 44 14.5	+0.6
	baz=269						
G18K	Tagagawik	28.15	38	P	P	12 44 14.9	+0.8
G18K				IAmb	IAmb	12 44 34.9	
	comp=Z,41nm,1.8s						
G18K	Tagagawik	28.15	38	P	P	12 44 14.8	+0.7
	baz=257						
O17K	Koliganek Bris	28.16	51	P	P	12 44 15.1	+0.9
	baz=270						
Q16K	King Salmon	28.41	53	P	P	12 44 17.1	+0.7
	baz=273						
L18K	Granite Mounta	28.45	46	P	P	12 44 17.6	+0.8
	baz=266						
P17K	Kvichak River	28.50	52	P	P	12 44 18.4	+1.2
	baz=272						
J18K	Innoko River	28.56	43	P	P	12 44 18.4	+0.7
	baz=264						
R17L	Mt. Peulik Vol	28.63	56	P	P	12 44 19.5	+1.0
	baz=275						
A19K	Wainwright	28.64	29	P	P	12 44 19.0	+0.6
	baz=247						
F19K	Shaleruckik Mo	28.71	36		P	12 44 19.0	0.0
F19K	Shaleruckik Mo	28.71	36	P	P	12 44 19.8	+0.7
	baz=256						
C19K	Lookout Ridge	28.72	31	P	P	12 44 18.7	-0.5
C19K				IAmb	IAmb	12 44 20.7	
	comp=Z,14nm,0.7s						
C19K	Lookout Ridge	28.72	31	P	P	12 44 19.8	+0.6
	baz=250,SNR=9.6						
G19K	Purcell Mounta	28.83	38	IAmb	IAmb	12 45 22.3	
	comp=Z,36nm,1.8s						
G19K	Purcell Mounta	28.83	38	P	P	12 44 20.7	+0.6
	baz=258						
H19K	Roundabout Mou	28.97	39	P	P	12 44 21.6	+0.3
	baz=260						
D19K	Kuna River	29.03	33	IAmb	IAmb	12 44 23.6	
	comp=Z,41nm,1.2s						
D19K	Kuna River	29.03	33	P	P	12 44 22.0	+0.1
	baz=253,SNR=12						
E19K	Redstone River	29.07	35	P	P	12 44 22.6	+0.3
E19K	Redstone River	29.07	35	P	P	12 44 22.7	+0.4
	baz=256,SNR=8.1						
J19K	Poorman	29.10	42	P	P	12 44 23.2	+0.7
	baz=264						
O18K	Koktuh Hills	29.11	51	P	P	12 44 23.2	+0.5
	baz=272						
P18K	Big Mountain,	29.11	52	P	P	12 44 23.8	+1.0
	baz=272						
CHIR	Chirikof Islan	29.23	59	P	P	12 44 24.7	+0.9
	baz=279						
Q18K	Katmai Hardscr	29.27	53	P	P	12 44 25.0	+0.8
	baz=274						
L19K	White Mountain	29.31	46	P	P	12 44 25.1	+0.7
	baz=268						
N19K	Bonanza Creek	29.46	49	P	P	12 44 26.1	+0.2
	baz=271						
O19K	Port Alsworth	29.55	50	P	P	12 44 26.7	+0.2
	baz=272						
F20K	Avaraart Lake	29.55	36	P	P	12 44 26.8	+0.3
	baz=258						
H20K	Anotleneega Mo	29.61	39	P	P	12 44 27.1	0.0
	baz=262						
D20K	Etivluk River	29.62	33	IAmb	IAmb	12 44 28.5	
	comp=Z,49nm,1.2s						
D20K	Etivluk River	29.62	33	P	P	12 44 26.7	-0.5
	baz=254,SNR=16						
E20K	Nigu River	29.66	34	P	P	12 44 27.1	-0.4
	baz=256						
K20K	Telida	29.73	44	P	P	12 44 28.8	+0.6
	baz=266						
J20K	Nowinta River	29.76	42	P	P	12 44 29.2	+0.8
	baz=265						
L20K	Farewell, AK	29.77	46	P	P	12 44 29.5	+0.9
	baz=268						
B20K	Meade River	29.82	30		P	12 44 29.3	+0.4
B20K	Meade River	29.82	30	P	P	12 44 29.1	+0.3
	baz=252,SNR=22						
SII	Sitkinak Islan	29.92	58	P	P	12 44 30.2	+0.2
	baz=278						
Q19K	Cape Douglas,	29.96	53	P	P	12 44 30.5	+0.2
	baz=275						
M20K	Styx River	30.11	47	P	P	12 44 31.1	-0.5
	baz=270						
P19K	Oil Pt	30.12	51	P	P	12 44 32.0	+0.3
	baz=274						
IMAR	Indian Mountai	30.14	39	P	P	12 44 31.1	-0.7
G21K	Allakaket	30.32	38	P	P	12 44 33.4	+0.1
	baz=262						
OHAK	Old Harbor	30.32	56	P	P	12 44 32.3	-1.1
OHAK	Old Harbor	30.32	56	P	P	12 44 36.2	+2.8
OHAK	Old Harbor	30.32	56	P	P	12 44 34.3	+0.9
	baz=278						
C21K	Knifeblade Rid	30.38	32	P	P	12 44 34.0	+0.2
	baz=256						
A21K	Barrow	30.43	28	P	P	12 44 34.5	+0.3
	baz=250,SNR=16						
F21K	Alatna River	30.44	36	P	P	12 44 34.7	+0.2
	baz=260						
H21K	Melozitna Rive	30.49	39	P	P	12 44 35.3	+0.5
	baz=264						
E21K	Killik River	30.50	34	P	P	12 44 35.2	+0.3
	baz=258						
CHUM	Lake Minchumin	30.55	43	P	P	12 44 35.3	0.0
	baz=267						
B21K	Ikpikpuk River	30.56	31	P	P	12 44 35.5	+0.2
	baz=255						
PPLA	Purkeypile	30.57	45	P	P	12 44 35.1	-0.5
	baz=269						
KDAK	Kodiak Island	30.63	55	P	P	12 44 34.9	-1.2
	comp=Z,4.1nm,0.8s,baz=262,slow=4.2,SNR=5.2						
	comp=Z,4.1nm,0.8s						
KDAK	Kodiak Island	30.63	55	P	P	12 44 35.1	-1.0
KDAK	Kodiak Island	30.63	55	P	P	12 44 35.9	-0.1
	baz=277						
Q20K	Shuyak Island	30.63	53	P	P	12 44 36.2	+0.1
	baz=276						
I21K	Tanana	30.78	40	P	P	12 44 36.8	-0.6
	baz=265						
A22K	Sinclair Lake	30.83	29	P	P	12 44 37.7	-0.1
	baz=253,SNR=38						
SKT	Skwentna	30.87	47	P	P	12 44 38.7	+0.5
SKT				IAmb	IAmb	12 44 57.5	
	comp=Z,41nm,2.0s						
SKT	Skwentna	30.87	47	P	P	12 44 38.3	+0.1
	baz=271						
F22K	John River	30.99	36	P	P	12 44 39.0	-0.2
	baz=261						
H11N2	WAKE ISLAND Hy	31.04	160	T	T	13 17 35.2	
	baz=347,slow=77,SNR=88						
D22K	Ayikyak River	31.05	33	IAmb	IAmb	12 44 42.1	
	comp=Z,38nm,1.8s						
D22K	Ayikyak River	31.05	33	P	P	12 44 40.0	+0.3
	baz=258						
H11N1	WAKE ISLAND Hy	31.06	160	T	T	13 17 37.6	
	baz=347,slow=77,SNR=93						
H11N3	WAKE ISLAND Hy	31.06	160	T	T	13 17 37.5	
	baz=347,slow=77,SNR=113						
CAPN	Captain Cook N	31.09	49	P	P	12 44 40.2	+0.1
	baz=274						
H22K	Ishtalitna Cre	31.10	39	P	P	12 44 40.1	-0.1
	baz=265						
BPAW	Bear Paw Mtn.	31.14	42	P	P	12 44 40.8	+0.2
	baz=268						
B22K	Teshekpuk Lake	31.14	30	IAmb	IAmb	12 44 41.2	
	comp=Z,22nm,0.8s						
B22K	Teshekpuk Lake	31.14	30	P	P	12 44 39.8	-0.6
	baz=255,SNR=12						
CNPM	China Poot	31.14	51	P	P	12 44 39.8	-0.8
G22K	Bettles	31.16	37	P	P	12 44 40.9	+0.2
	baz=263						
L22K	Petersville	31.22	46	P	P	12 44 40.7	-0.6
L22K				IAmb	IAmb	12 44 44.8	
	comp=Z,44nm,1.8s						
E22K	Anaktuvuk Pass	31.23	35	IAmb	IAmb	12 44 42.7	
	comp=Z,18nm,1.1s						
E22K	Anaktuvuk Pass	31.23	35	P	P	12 44 41.1	-0.2
	baz=261,SNR=14						
SUA	Susitna One	31.26	48	P	P	12 44 41.9	+0.2
	baz=273						
MLY	Manley	31.30	41	P	P	12 44 42.3	+0.3
	baz=267						
BRSE	Bradley Lake S	31.37	51	P	P	12 44 42.6	-0.1
	baz=276						
TRF	Thorofare Moun	31.44	44	P	P	12 44 43.5	+0.2
	baz=270						
CUT	Chulitna	31.45	46	P	P	12 44 43.8	+0.5
	baz=272						
M22K	Willow	31.54	47	P	P	12 44 44.9	+0.8
	baz=273						
COLD	Coldfoot	31.71	37	P	P	12 44 45.6	+0.1
	baz=264,SNR=10						
G23K	Bananza Creek	31.72	38	P	P	12 44 45.2	-0.5
	baz=265						
RC01	Rabbit Creek A	31.76	48	P	P	12 44 46.4	+0.3
	baz=274						
D23K	Nanushuk River	31.78	33	IAmb	IAmb	12 44 48.4	
	comp=Z,16nm,1.1s						
D23K	Nanushuk River	31.78	33	P	P	12 44 45.9	-0.2
	baz=260						
BWN	Browne	31.81	42	IAmb	IAmb	12 45 05.6	
	comp=Z,20nm,0.9s						
O22K	Cooper Landing	31.82	49	P	P	12 44 46.3	-0.2
	baz=275						
H23K	Yukon River	31.84	39	IAmb	IAmb	12 45 21.3	
	comp=Z,38nm,2.0s						
H23K	Yukon River	31.84	39	P	P	12 44 46.4	-0.4
	baz=267						
I23K	Minto, Yukon-K	31.89	41	P	P	12 44 47.6	+0.5
	baz=268						
C23K	Itkillik River	31.96	32	P	P	12 44 47.5	-0.2
	baz=259						
SEW	Seward	31.98	50	P	P	12 44 48.0	+0.1
	baz=276						
NEA2	Nenana	31.99	42	P	P	12 44 48.4	+0.3
NEA2	Nenana	31.99	42	P	P	12 44 47.8	-0.3
	baz=269,SNR=7.3						
E23K	Chandalar	32.03	35	IAmb	IAmb	12 44 51.0	
	comp=Z,22nm,0.9s						
E23K	Chandalar	32.03	35	P	P	12 44 48.3	-0.2
	baz=263,SNR=18						
MCK	McKinley	32.04	43	IAmb	IAmb	12 44 50.4	
	comp=Z,12nm,0.8s						
MCK	McKinley	32.04	43	P	P	12 44 48.9	+0.4
	baz=271						
ULN	Ulaanbaatar	32.07	286	*i* P	P	12 44 48.6	-0.5
ULN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
RND	Reindeer	32.08	44	P	P	12 44 49.0	+0.1
RND				IAmb	IAmb	12 44 50.4	
	comp=Z,15nm,1.0s						
RND	Reindeer	32.08	44	P	P	12 44 49.0	+0.1
RND				pmax	pmax		
	comp=Z,15nm,1.0s						
TOLK	Toolik Lake Re	32.13	34	IAmb	IAmb	12 44 50.5	
	comp=Z,20nm,1.2s						
TOLK	Toolik Lake Re	32.13	34	P	P	12 44 48.8	-0.5
	baz=262,SNR=7.7						
H11S1	WAKE ISLAND Hy	32.18	161	T	T	13 19 02.0	
	baz=347,slow=76,SNR=71						
H11S3	WAKE ISLAND Hy	32.20	161	T	T	13 19 07.9	
	baz=347,slow=76,SNR=170						
H11S2	WAKE ISLAND Hy	32.20	161	T	T	13 19 07.6	
	baz=347,slow=76,SNR=136						
WAT1	Susitna Watana	32.23	45	P	P	12 44 50.3	+0.1
	baz=272						
HHC	Hu-ho-hao-te	32.30	271	*e*P	P	12 44 49.9	-1.2
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
KNK	Knik Glacier	32.36	48	P	P	12 44 51.5	+0.2
	baz=275						
SML	Sawmill	32.39	47	IAmb	IAmb	12 44 52.6	
	comp=Z,24nm,1.0s						
SML	Sawmill	32.39	47	P	P	12 44 51.5	-0.1
	baz=274,SNR=5.4						
E24K	Your Creek	32.45	35	IAmb	IAmb	12 44 53.9	
	comp=Z,24nm,0.9s						
E24K	Your Creek	32.45	35	P	P	12 44 52.0	-0.2
	baz=264,SNR=20						
PWL	Port Wells	32.46	49	P	P	12 44 52.3	+0.1
	baz=276						
D24K	Happy Valley	32.47	33	IAmb	IAmb	12 44 53.4	
	comp=Z,16nm,0.8s						
D24K	Happy Valley	32.47	33	P	P	12 44 52.4	+0.2
	baz=262						
SONM	Songino Array	32.49	286	P	P	12 44 51.4	-1.4
	comp=Z,0.3nm,0.3s,baz=77,slow=6.4,SNR=2.1						
SONM				PcP	PcP	12 47 38.2	-0.2
	comp=Z,1.1nm,0.8s,baz=69,slow=1.2,SNR=4.5						
SONM	Songino Array	32.49	286	P	P	12 44 51.4	-1.4
SONM				pmax	pmax		
	comp=Z,11nm,1.8s						
COLA	College	32.52	41	P	P	12 44 53.9	+1.3
COLA	College	32.52	41	P	P	12 44 52.6	0.0
	baz=270						
COLA	College	32.52	41	P	P	12 44 53.1	+0.5
H24K	Noodor Dome	32.53	39	P	P	12 44 52.8	0.0
	baz=268						
C24K	Franklin Bluff	32.60	32	P	P	12 44 53.5	+0.2
	baz=261						
WAT6	Susitna Watana	32.62	45	P	P	12 44 53.7	0.0
	baz=273						
F24K	Squaw Lake	32.63	36	IAmb	IAmb	12 44 56.2	
	comp=Z,30nm,1.6s						
F24K	Squaw Lake	32.63	36	P	P	12 44 53.3	-0.3
	baz=266,SNR=8.6						
M23K	Glacier View	32.68	47	P	P	12 44 54.3	+0.2
	baz=275						
POKR	Poker Plat Res	32.70	41	IAmb	IAmb	12 44 57.5	
	comp=Z,21nm,1.1s						
POKR	Poker Plat Res	32.70	41	P	P	12 44 54.0	-0.2
	baz=270						
G24K	Hadweenzic Riv	32.73	38	IAmb	IAmb	12 44 56.6	
	comp=Z,20nm,1.1s						
G24K	Hadweenzic Riv	32.73	38	P	P	12 44 54.2	-0.3
	baz=267						
DHY	Denali Highway	32.76	44	P	P	12 44 54.1	-0.9
	baz=273						
SCM	Sheep Creek Mo	32.86	47	P	P	12 44 55.3	-0.5
	baz=275						
HDA	Harding Lake	32.91	42	IAmb	IAmb	12 44 57.5	
	comp=Z,7.8nm,0.4s						
HDA	Harding Lake	32.91	42	P	P	12 44 55.9	-0.2
	baz=271,SNR=7.0						
NJ2	Nanjing	32.93	252	*e*P	P	12 44 57.7	+1.2
NJ2				pmax	pmax		
	comp=Z,12nm,0.8s						
ILAR	Eielson Array	32.93	41	P	P	12 44 56.0	-0.3
	comp=Z,3.0nm,0.8s,baz=261,slow=7.6,SNR=28						
ILAR				PcP	PcP	12 47 37.9	-1.3
	comp=Z,0.5nm,0.9s,baz=246,slow=3.8,SNR=2.0						
	comp=Z,3.0nm,0.8s						
P23K	Montague Islan	33.02	50	P	P	12 44 57.5	+0.4
	baz=278						
GLI	Glacier Island	33.06	48	P	P	12 44 57.1	-0.3
	baz=277						
G25K	Bearman Lake	33.28	38	P	P	12 44 58.2	-1.1
	baz=268						
D25K	Kavik River	33.36	33	P	P	12 44 59.8	-0.2
	baz=264,SNR=45						
M24K	Tolsona, Glenn	33.38	46	P	P	12 45 00.9	+0.6
	baz=276						
BTO	Baotou	33.43	272	*e*P	P	12 45 01.4	+0.4
BTO				pmax	pmax		
	comp=Z,15nm,0.6s						
K24K	Donnelly Dome	33.44	43	IAmb	IAmb	12 45 03.7	
	comp=Z,16nm,0.9s						
K24K	Donnelly Dome	33.44	43	P	P	12 45 01.2	+0.4
	baz=273,SNR=5.9						
F25K	Christian Rive	33.49	36	P	P	12 45 00.8	-0.4
	baz=268						
PRP	Porcupine Dome	33.50	40	IAmb	IAmb	12 45 03.0	
	comp=Z,13nm,1.1s						
PRP	Porcupine Dome	33.50	40	P	P	12 45 01.1	-0.2
	baz=271,SNR=7.5						
E25K	Arctic Village	33.55	35	IAmb	IAmb	12 45 03.7	
	comp=Z,12nm,0.9s						
E25K	Arctic Village	33.55	35	P	P	12 45 01.4	-0.3
	baz=267,SNR=10.0						
KLU	Klutina	33.56	47	P	P	12 45 02.2	+0.4
	baz=277						
J25K	Salcha River,	33.59	42	P	P	12 45 01.9	-0.1
	baz=272						
Q23K	Middleton Isla	33.63	51	P	P	12 45 01.5	-0.8
	baz=279						
PAX	Paxson	33.63	45	P	P	12 45 02.2	-0.3
	baz=275						
EYAK	Cordova Ski Ar	33.76	49	P	P	12 45 03.5	0.0
	baz=278						
HARP	HAARP	33.83	46	P	P	12 45 04.1	0.0
	baz=276						
RIDG	Independent Ri	33.86	43	IAmb	IAmb	12 45 06.8	
	comp=Z,23nm,1.2s						
RIDG	Independent Ri	33.86	43	P	P	12 45 03.6	-0.8
	baz=274,SNR=5.3						
C26K	Camden Bay	33.93	32	P	P	12 45 05.1	+0.3
	baz=265						
F26K	Sheenjek River	34.07	36	P	P	12 45 06.7	+0.6
	baz=269						
N25K	Chitina, Valde	34.18	47	P	P	12 45 07.1	-0.1
	baz=278						
G26K	Porcupine Rive	34.20	37	IAmb	IAmb	12 45 09.5	
	comp=Z,23nm,1.1s						
G26K	Porcupine Rive	34.20	37	P	P	12 45 07.7	+0.5
	baz=270						
DOT	Dot Lake	34.22	43	IAmb	IAmb	12 45 22.1	
	comp=Z,37nm,2.0s						
SCRK	Sand Creek	34.22	43		P	12 45 07.5	-0.1
SCRK	Sand Creek	34.22	43	P	P	12 45 07.6	-0.1
	baz=274,SNR=5.2						
BMRM	Bremner River	34.26	48	P	P	12 45 08.7	+0.8
	baz=278						
C27K	Jago River	34.32	33	P	P	12 45 08.8	+0.5
	baz=266						
J26L	Joseph Creek	34.37	42	P	P	12 45 09.5	+0.6
	baz=274						
KAIM	Kayak Island	34.51	50	P	P	12 45 09.9	-0.1
	baz=280						
L26K	Log Cabin Wild	34.59	44	P	P	12 45 11.4	+0.7
	baz=276						
M26K	Nabesna, AK	34.83	45	IAmb	IAmb	12 45 16.0	
	comp=Z,16nm,1.1s						
M26K	Nabesna, AK	34.83	45	P	P	12 45 13.5	+0.7
	baz=278						
MCARA	McCarthy VSAT	34.96	47	P	P	12 45 14.4	+0.5
	baz=279						
CRQE	Cirque	35.02	48	P	P	12 45 14.8	+0.2
	baz=280						
E27K	Coleen River	35.04	35	IAmb	IAmb	12 45 16.4	
	comp=Z,12nm,1.0s						
E27K	Coleen River	35.04	35	P	P	12 45 14.9	+0.4
	baz=270						
BGLC	Bering Glacier	35.04	49	P	P	12 45 14.7	+0.2
	baz=281						
G27K	Doyon Strip	35.04	38	P	P	12 45 14.7	+0.1
	baz=272						
K27K	Chicken	35.06	42	IAmb	IAmb	12 45 16.3	
	comp=Z,19nm,1.1s						
K27K	Chicken	35.06	42	P	P	12 45 15.1	+0.4
	baz=276						
H27K	Steamboat Moun	35.12	39	P	P	12 45 15.1	-0.1
	baz=273						
I27K	Kandik River	35.12	40	P	P	12 45 15.7	+0.4
	baz=274						
D27M	Malcolm River	35.27	33	P	P	12 45 17.0	+0.4
	baz=270,SNR=16						
L27K	Beaver Creek,	35.28	44	IAmb	IAmb	12 45 18.9	
	comp=Z,21nm,0.9s						
L27K	Beaver Creek,	35.28	44	P	P	12 45 17.1	+0.5
	baz=278,SNR=18						
BCAR	Beaver Creek A	35.30	44		P	12 45 18.1	+1.3
M27K	Edge Creek, AK	35.35	45	IAmb	IAmb	12 45 22.3	
	comp=Z,22nm,1.2s						
M27K	Edge Creek, AK	35.35	45	P	P	12 45 17.8	+0.4
	baz=278						
MESA	MESA	35.69	49	P	P	12 45 20.8	+0.4
	baz=282						
F28M	Old Crow	35.70	36	P	P	12 45 20.2	0.0
	baz=273,SNR=14						
E28M	Babbage River	35.80	34	IAmb	IAmb	12 45 22.9	
	comp=Z,25nm,1.5s						
E28M	Babbage River	35.80	34	P	P	12 45 21.2	+0.2
	baz=272,SNR=7.8						
BVCY	Beaver Creek	35.81	45	P	P	12 45 21.2	0.0
	baz=279						
CTG	Chitna Glacier	35.83	48	P	P	12 45 21.7	+0.2
	baz=281						
I28M	Miner Creek	35.83	40	IAmb	IAmb	12 45 23.0	
	comp=Z,12nm,1.1s						
I28M	Miner Creek	35.83	40	P	P	12 45 21.6	+0.2
	baz=276,SNR=6.3						
D28M	Stokes Point	36.06	33	P	P	12 45 23.3	+0.1
	baz=272						
YUK3	Moose Creek	36.10	46	P	P	12 45 24.1	+0.2
	baz=280,SNR=6.5						
DAWY	Dawson	36.23	42	P	P	12 45 24.8	0.0
	baz=278						
H29M	Whitestone	36.40	38	IAmb	IAmb	12 45 28.4	
	comp=Z,22nm,1.3s						
H29M	Whitestone	36.40	38	P	P	12 45 26.4	+0.3
	baz=276						
E29M	Blow River	36.41	35	P	P	12 45 26.3	+0.1
	baz=274,SNR=18						

O28M	Mount Upton	36.42	48	P	P	12 45 26.7	0.0
	baz=282						
G29M	Pine Creek	36.47	37	P	P	12 45 27.3	+0.5
	baz=276						
I29M	Ogilvie Camp,	36.52	40	IAmb	IAmb	12 45 28.8	
	comp=Z,10nm,1.1s						
I29M	Ogilvie Camp,	36.52	40	P	P	12 45 27.5	+0.3
	baz=277						
YUK8	Steele Glacier	36.52	47	P	P	12 45 28.2	+0.7
	baz=282						
PINM	Pinnacle	36.53	49	P	P	12 45 28.4	+1.0
	baz=283						
J29N	Klondike Camp	36.68	41	P	P	12 45 29.7	+1.1
	baz=279						
M29M	Somme Creek	36.91	45	IAmb	IAmb	12 45 47.1	
	comp=Z,8.3nm,0.6s						
M29M	Somme Creek	36.91	45	P	P	12 45 31.3	+0.7
	baz=281						
L29M	L29M	36.93	44	P	P	12 45 31.6	+0.8
	baz=280						
YUK4	Talbot Arm	37.04	47	P	P	12 45 32.9	+1.1
	baz=282						
EPYK	Eagle Plains	37.04	38	P	P	12 45 32.5	+0.9
EPYK	Eagle Plains	37.04	38	P	P	12 45 32.1	+0.5
	baz=277,SNR=6.8						
K29M	Barlow Dome	37.08	42	P	P	12 45 33.0	+0.9
	baz=280						
G30M	tAoh Zraii Nji	37.17	37	IAmb	IAmb	12 45 34.6	
	comp=Z,23nm,1.4s						
G30M	tAoh Zraii Nji	37.17	37	P	P	12 45 33.5	+0.8
	baz=277						
YUK6	Outpost Mounta	37.26	47	P	P	12 45 33.9	+0.1
	baz=283						
F30M	Barrier River	37.26	36	P	P	12 45 34.6	+1.2
	baz=276,SNR=11						
O29M	Mount Kennedy	37.30	48	P	P	12 45 35.0	+0.9
	baz=284						
I30M	Mount Dempster	37.34	40	IAmb	IAmb	12 45 36.0	
	comp=Z,15nm,1.1s						
I30M	Mount Dempster	37.34	40	P	P	12 45 35.1	+0.8
	baz=279						
NRIK	Noril'sk	37.42	327	*i* P	P	12 45 34.7	-0.1
NRIK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
J30M	Hart River	37.47	41	P	P	12 45 36.0	+0.7
	baz=280						
M30M	Minto, Yukon	37.64	44	P	P	12 45 37.9	+1.1
	baz=282						
HYT	Haines Junctio	37.70	47	IAmb	IAmb	12 45 53.0	
	comp=Z,11nm,1.0s						
HYT	Haines Junctio	37.70	47	P	P	12 45 38.1	+0.8
	baz=284						
N30M	Aishikik Lake	37.74	46	P	P	12 45 38.7	+1.0
	baz=283						
MAYO	Mayo, Yukon	37.83	42	P	P	12 45 39.3	+1.0
	baz=282,SNR=10						
P29M	Windy Craggy	37.88	49	P	P	12 45 39.7	+1.0
	baz=285						
G31M	Satah River	37.94	37	P	P	12 45 40.0	+1.0
	baz=279,SNR=7.4						
INK	Inuvik	38.03	35	P	P	12 45 40.7	+0.8
	comp=Z,7.1nm,0.4s,baz=280,slow=5.7,SNR=73						
	comp=Z,7.1nm,0.4s						
INK	Inuvik	38.03	35	IAmb	IAmb	12 45 41.9	
	comp=Z,15nm,1.1s						
INK	Inuvik	38.03	35	P	P	12 45 40.2	+0.3
	baz=278,SNR=12						
F31M	Tsiigehtchic	38.06	36	IAmb	IAmb	12 45 42.4	
	comp=Z,26nm,1.2s						
F31M	Tsiigehtchic	38.06	36	P	P	12 45 40.3	+0.1
	baz=278,SNR=11						
H31M	Peel River	38.08	39	IAmb	IAmb	12 45 42.4	
	comp=Z,27nm,1.4s						
H31M	Peel River	38.08	39	P	P	12 45 41.3	+0.9
	baz=280						
N31M	Braeburn, Yuko	38.35	46	IAmb	IAmb	12 45 48.1	
	comp=Z,19nm,1.1s						
N31M	Braeburn, Yuko	38.35	46	P	P	12 45 43.5	+0.7
	baz=284						
O30N	Mendenhall	38.38	47	P	P	12 45 43.9	+0.9
	baz=285						
PLBC	Pleasant Camp	38.60	49	P	P	12 45 44.8	+0.1
	baz=286						
M31M	Drury Creek, Y	38.81	44	P	P	12 45 47.6	+1.0
	baz=284,SNR=5.6						
WHY	Whitehorse	38.98	47	P	P	12 45 48.4	+0.2
	baz=286						
FARO	Faro, Yukon	39.28	44	IAmb	IAmb	12 46 44.1	
	comp=Z,34nm,1.9s						
FARO	Faro, Yukon	39.28	44	P	P	12 45 50.8	+0.3
	baz=285						
P33M	Teslin, Yukon	40.09	47	P	P	12 45 58.0	+0.6
	baz=288						
A36M	Sachs Harbour	40.27	28	P	P	12 45 58.7	+0.1
	baz=280,SNR=17						
GTA	Gaotai	40.68	278	*e*P	P	12 46 02.3	-0.2
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
C36M	Paulatuk	41.21	32		P	12 46 06.8	+0.5
C36M				IAmb	IAmb	12 46 08.1	
	comp=Z,31nm,0.9s						
C36M	Paulatuk	41.21	32	P	P	12 46 06.9	+0.7
	baz=284,SNR=22						
U33K	Whale Pass	41.33	53	P	P	12 46 08.1	+0.7
	baz=292						
CRAG	Craig	41.58	54	P	P	12 46 10.4	+0.9
	baz=293						
WRAK	Wrangell Islan	41.62	52	P	P	12 46 10.9	+1.1
	baz=292						
WTLY	Watson Lake, Y	42.03	46	P	P	12 46 13.7	+0.5
WTLY	Watson Lake, Y	42.03	46	P	P	12 46 13.8	+0.6
	baz=291						
ZALV	Zalesovo Beam	42.70	304	P	P	12 46 17.2	-1.4
	comp=Z,1.9nm,0.4s,baz=58,slow=7.5,SNR=6.8						
ZALV				PcP	PcP	12 48 08.2	-1.2
	comp=Z,1.1nm,0.4s,baz=62,slow=3.5,SNR=6.4						
	comp=Z,1.9nm,0.4s						
DGZ	Jazzator, Alta	43.11	298	*i* P	P	12 46 21.8	-0.4
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
WRGLY	Wrigley	43.30	41	P	P	12 46 24.8	+1.4
LIRD	Liard River Hi	43.55	46	P	P	12 46 26.8	+1.3
	baz=293						
GOMU	GeErMu	45.76	277	P	P	12 46 41.7	-2.1
GOMU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WMQ	Urumqi	45.91	290	*e*P	P	12 46 49.2	+4.7
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
ALE	Alert	46.61	6	P	P	12 46 49.0	-0.5
ALE				pP	pP	12 47 01.2	-2.8
YKAW3	Yellowknife Wh	47.27	39	P	P	12 46 56.0	+1.2
YKAW3				IAmb	IAmb	12 46 57.1	
	comp=Z,12nm,1.0s						
YKA	Yellowknife Ar	47.30	39	P	P	12 46 55.6	+0.6
	comp=Z,7.7nm,0.9s,baz=298,slow=8.5,SNR=29						
YKA				PcP	PcP	12 48 25.4	+0.2
	comp=Z,1.2nm,0.9s,baz=304,slow=4.4,SNR=4.6						
	comp=Z,7.7nm,0.9s						
YKA	Yellowknife Ar	47.30	39	*i* P	P	12 46 56.0	+1.0
YKA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
RES	Resolute Bay	47.37	20	P	P	12 46 55.4	0.0
	comp=Z,4.0nm,0.5s,baz=303,slow=7.8,SNR=28						
	comp=Z,4.0nm,0.5s						
RES	Resolute Bay	47.37	20	P	P	12 46 55.7	+0.2
MK31	Makanchi Array	47.54	296	*i* P	P	12 46 56.6	-0.6
MKAR	Makanchi Array	47.54	296	P	P	12 46 55.8	-1.3
	comp=Z,1.3nm,0.3s,baz=51,slow=5.7,SNR=27						
MKAR				PcP	PcP	12 48 25.9	-0.4
	comp=Z,2.4nm,0.9s,baz=64,slow=6.6,SNR=2.7						
	comp=Z,1.3nm,0.3s						
MKAR	Makanchi Array	47.54	296	P	P	12 46 55.9	-1.2
PZH	PanZhiHua	47.56	262	P	P	12 46 58.3	+0.6
KURK	Kurchatov	47.57	303	P	P	12 46 56.0	-1.3
KURK				IAmb	IAmb	12 46 57.4	
	comp=Z,24nm,1.1s						
KURK	Kurchatov	47.57	303	*i* P	P	12 46 55.3	-2.0
KURK				*i* *PP	pP	12 47 11.4	-0.4
KURK				pmax	pmax		
	comp=Z,17nm,1.0s						
KURBB	Kurchatov Arra	47.66	303	P	P	12 46 56.5	-1.5
	comp=Z,9.3nm,0.7s,baz=63,slow=7.9,SNR=16						
KURBB				PcP	PcP	12 48 26.5	-0.1
	comp=Z,1.2nm,0.2s,baz=65,slow=3.6,SNR=5.0						
	comp=Z,9.3nm,0.7s						
SPITS	Spitsbergen Ar	50.12	350	P	P	12 47 14.2	-2.3
	comp=Z,18nm,1.0s,baz=52,slow=7.5,SNR=6.5						
	comp=Z,18nm,1.0s						
BVAR	Borovoye Array	50.69	309	P	P	12 47 19.4	-1.7
	comp=Z,1.7nm,0.3s,baz=47,slow=8.3,SNR=15						
BVAR				PcP	PcP	12 48 36.8	-0.8
	comp=Z,3.0nm,0.7s,baz=72,slow=4.8,SNR=4.9						
	comp=Z,1.7nm,0.3s						
BORK	Borovoye	50.71	309	*i* P	P	12 47 19.3	-1.9
BORK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TULEG	Thule	50.83	12	P	P	12 47 20.7	-1.1
TULEG				IAmb	IAmb	12 47 21.6	
	comp=Z,13nm,1.1s						
EDM	Edmonton	52.76	49		P	12 47 37.8	+1.2
EDM	Edmonton	52.76	49	P	P	12 47 37.8	+1.2
EDM				pmax	pmax		
	comp=Z,17nm,0.9s						
ARTI	Arti	54.42	317*c*	*i*P	P	12 47 48.7	+0.1
ARTI				S	S	12 55 24.6	+1.9
ARTI				SS	SS	12 59 04.2	-0.6
ARTI				pmax	pmax		
	comp=Z,14nm,1.3s						
AAK	Ala-Archa	54.47	296	*i* P	P	12 47 48.4	-1.0
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CHTO	Chiang Mai	54.87	257		P	12 47 52.7	+0.3
CHTO	Chiang Mai	54.87	257	P	P	12 47 52.7	+0.3
CHTO				pmax	pmax		
	comp=Z,23nm,1.2s						
CHTO	Chiang Mai	54.87	257	P	P	12 47 52.9	+0.5
CM31	Chiang Mai Arr	55.14	257	P	P	12 47 54.6	+0.3
CM31				IAmb	IAmb	12 47 56.4	
	comp=Z,14nm,1.1s						
CMAR	Chiang Mai Arr	55.14	257	P	P	12 47 54.8	+0.5
	comp=Z,8.2nm,1.0s,baz=26,slow=7.8,SNR=35						
	comp=Z,8.2nm,1.0s						
CMAR	Chiang Mai Arr	55.14	257		P	12 47 54.4	+0.2
CMAR	Chiang Mai Arr	55.14	257	*i* P	P	12 47 55.7	+1.4
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KSH	Kashi	55.53	292	P	P	12 48 00.5	+3.5
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES	ARCESS Array B	55.79	341	P	P	12 47 56.0	-2.3
	comp=Z,2.5nm,0.7s,baz=39,slow=7.6,SNR=11						
	comp=Z,2.5nm,0.7s						
ARCES	ARCESS Array B	55.79	341	P	P	12 47 56.0	-2.3
ARCES				pmax	pmax		
	comp=Z,161nm,1.9s						
ARSB	Arslanbob	56.17	296	IAmb	IAmb	12 49 02.3	
	comp=Z,11nm,1.4s						
WVOR	Wild Horse Val	56.45	62	IAmb	IAmb	12 48 24.5	
	comp=Z,6.7nm,0.8s						
FFC	Flin Flon	57.13	43	P	P	12 48 09.1	+1.1
FFC				IAmb	IAmb	12 48 23.4	
	comp=Z,28nm,1.7s						
FFC	Flin Flon	57.13	43	P	P	12 48 09.1	+1.1
FFC				pmax	pmax		
	comp=Z,28nm,1.7s						
AB31	Akbulak array	58.20	310	IAmb	IAmb	12 48 15.8	
	comp=Z,9.6nm,1.1s						
ABKAR	Akbulak array	58.20	310		P	12 48 14.5	-1.2
RYN	Ryan	58.96	66	P	P	12 48 22.5	+1.2
NVAR	Mina Array Bea	59.22	66	P	P	12 48 24.3	+1.2
	comp=Z,1.4nm,0.7s,baz=296,slow=6.7,SNR=6.8						
	comp=Z,1.4nm,0.7s						
YHH	Holmes Hill	59.27	56	P	P	12 48 24.6	+1.1
NIL	Nilore	61.02	289	P	P	12 48 34.7	-0.5
NIL				IAmb	IAmb	12 48 35.9	
	comp=Z,13nm,1.1s						
NIL	Nilore	61.02	289	P	P	12 48 34.7	-0.5
NIL				pmax	pmax		
	comp=Z,13nm,1.1s						
SPR3	Spring Creek 3	61.17	63		P	12 48 39.0	+2.4
SPR3				IAmb	IAmb	12 48 55.6	
	comp=Z,21nm,1.8s						
PDAR	Pinedale Array	61.32	57	P	P	12 48 37.7	+0.2
	comp=Z,1.2nm,0.9s,baz=316,slow=4.1,SNR=4.3						
	comp=Z,1.2nm,0.9s						
FINES	FINESS Array B	62.30	336	P	P	12 48 41.9	-1.5
	comp=Z,1.7nm,0.4s,baz=36,slow=5.8,SNR=12						
	comp=Z,1.7nm,0.4s						
FINES	FINESS Array B	62.30	336	*i* P	P	12 48 42.2	-1.2
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
RDMU	Red Mountain	62.80	59	IAmb	IAmb	12 49 03.7	
	comp=Z,8.3nm,0.9s						
SRU	San Rafael Swe	63.27	60	IAmb	IAmb	12 49 08.6	
	comp=Z,6.6nm,0.8s						
RSSD	Black Hills	63.32	53	P	P	12 48 51.7	+1.0
RSSD				IAmb	IAmb	12 49 05.8	
	comp=Z,8.2nm,0.8s						
RSSD	Black Hills	63.32	53	P	P	12 48 51.7	+1.0
RSSD				pmax	pmax		
	comp=Z,8.0nm,0.8s						
RSSD	Black Hills	63.32	53	P	P	12 48 51.8	+1.0
RSSD				pP	pP	12 49 05.2	-0.4
OBN	Obninsk	64.10	326⇑	*e*P	P	12 48 53.8	-1.6
OBN				*e*		12 51 14.2	
OBN				*e*S	S	12 57 41.3	+14
OBN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,2µm,23.0s						
COEN	Coen	64.40	194		P	12 48 59.0	+1.2
PV18	Skein Mesa, Pa	64.78	60		P	12 49 01.1	+0.7
PV18				IAmb	IAmb	12 49 15.8	
	comp=Z,13nm,0.9s						
NB2	NORSAR Subarra	66.13	342	P	P	12 49 07.4	-1.2
	comp=Z,1.5nm,0.7s,baz=22,slow=6.5						
NOA	NORSAR Array B	66.13	342	P	P	12 49 07.3	-1.2
	comp=Z,3.0nm,0.8s,baz=26,slow=6.9,SNR=5.5						
	comp=Z,3.0nm,0.8s						
HFS	Hagfors	66.45	341	P	P	12 49 09.1	-1.4
	comp=Z,1.0nm,0.3s,baz=46,slow=6.4,SNR=5.4						
	comp=Z,1.0nm,0.3s						
MNK	Minsk	67.55	330	*i* P	P	12 49 15.7	-1.9
MNK				*i* *PP	pP	12 49 32.1	-0.8
MNK				*i*		12 49 42.4	
MNK				*i*		12 51 45.0	
MNK				*i* PPP	PPP	12 53 22.8	
MNK				*i* S	S	12 58 08.2	-1.5
MNK				*i* *SS	sS	12 58 36.4	+1.0
MNK				*i*		12 59 08.5	
MNK				*i* SS	SS	13 02 30.7	+0.8
MNK				pmax	pmax		
	comp=Z,12nm,0.7s						
MNK				pmax	pmax		
	comp=N,21nm,0.9s						
MNK				pmax	pmax		
	comp=E,25nm,0.9s						
MNK				MLR	MLR		
	comp=N,1µm,24.0s						
MNK				MLR	MLR		
	comp=Z,1µm,21.0s						
MNK				MLR	MLR		
	comp=E,691nm,19.0s						
SCHQ	Schefferville	69.77	25	P	P	12 49 30.9	-0.5
	comp=E,3.6nm,0.4s,baz=311,slow=7.6,SNR=10						
	comp=E,3.6nm,0.4s						
KIV	Kislovodsk	70.27	315	*e*P	P	12 49 36.0	+1.2
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AKASG	Malin Array Be	70.28	327	P	P	12 49 32.6	-2.0
	comp=Z,1.1nm,0.4s,baz=34,slow=6.5,SNR=4.7						
	comp=Z,1.1nm,0.4s						
AKASG	Malin Array Be	70.28	327	*i* P	P	12 49 36.7	+2.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KBZ	Khabaz	70.35	315	P	P	12 49 33.9	-1.2
	comp=Z,3.1nm,0.8s,baz=57,slow=4.0,SNR=6.0						
	comp=Z,3.1nm,0.8s						
KBZ	Khabaz	70.35	315	*i* P	P	12 49 34.7	-0.4
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SHA1	Shidzhatmaz	70.45	315	*i* P	P	12 49 36.4	+0.3
WB0	Warramunga Arr	71.81	202		P	12 49 44.5	+0.4
WRAB	Tennant Creek	71.98	202	*i* P	P	12 49 46.0	+0.8
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WRAB	Tennant Creek	71.98	202	P	P	12 49 45.1	-0.1
WRA	Warramunga Arr	72.00	202	P	P	12 49 45.4	+0.2
	comp=Z,3.8nm,0.9s,baz=20,slow=6.4,SNR=16						
	comp=Z,3.8nm,0.9s						
WRA	Warramunga Arr	72.00	202		P	12 49 45.6	+0.4
R40A	Maddies Statio	73.59	50	IAmb	IAmb	12 50 08.8	
	comp=Z,7.7nm,0.7s						
EKA	Eskdalemuir Ar	73.97	348	P	P	12 49 56.0	-0.6
	comp=Z,1.3nm,0.3s,baz=21,slow=5.1,SNR=15						
	comp=Z,1.3nm,0.3s						
STHS	Stebnicka Huta	74.03	331	*e*P	P	12 49 59.2	+2.1
STHS	Stebnicka Huta	74.03	331	*e*P	P	12 49 59.2	+2.1
TXAR	Lajitas Array	74.22	63	P	P	12 49 58.7	+0.1
	comp=Z,1.8nm,0.6s,baz=300,slow=5.0,SNR=15						
	comp=Z,1.8nm,0.6s						
TXAR	Lajitas Array	74.22	63		P	12 49 59.4	+0.8
CLL	Collm	74.66	337	*i* P	P	12 50 00.0	-0.6
CLL	Collm	74.66	337	*i* P	P	12 50 00.0	-0.6
LANS	Liptovska Anna	74.81	332	*e*P	P	12 50 02.0	+0.4
LANS	Liptovska Anna	74.81	332	*e*P	P	12 50 02.0	+0.4
KECS	Kecovo	75.09	331	*e*P	P	12 50 04.1	+0.8
KECS	Kecovo	75.09	331	*e*P	P	12 50 04.0	+0.8
VRAC	Vranov	75.51	334	P	P	12 50 05.1	-0.5
	comp=Z,2.9nm,0.4s,baz=35,slow=12,SNR=2.1						
	comp=Z,2.9nm,0.4s						
ASAR	Alice Springs	75.68	201	P	P	12 50 07.6	+0.8
	comp=Z,1.9nm,0.8s,baz=12,slow=5.5,SNR=20						
	comp=Z,1.9nm,0.8s						
MODS	Modra-Piesok	76.16	333	*e*P	P	12 50 11.4	+2.1
MODS	Modra-Piesok	76.16	333	*e*P	P	12 50 11.4	+2.1
KHC	Kasperske Hory	76.50	336	P	P	12 50 10.9	-0.4
KHC	Kasperske Hory	76.50	336	*i* P	P	12 50 10.6	-0.7
KHC				pmax	pmax		
	comp=Z,16nm,2.1s						
KHC	Kasperske Hory	76.50	336	*e*P	P	12 50 09.0	-2.3
GERES	GERESS Array B	76.73	336	P	P	12 50 11.6	-1.1
	comp=Z,0.4nm,0.3s,baz=23,slow=4.8,SNR=4.1						
GERES				LR	LR	13 28 45.9	
	comp=Z,526nm,20.2s,baz=72,slow=39						
	comp=Z,0.4nm,0.3s						
BNN	Bunyan	77.44	316	IAmb	IAmb	12 50 17.8	
	comp=Z,8.2nm,0.8s						
UOSS	Minazif	77.58	294		P	12 50 17.2	-0.5
UOSS	Minazif	77.58	294	P	P	12 50 17.0	-0.6
UOSS				pP	PcP	12 50 30.5	+2.7
BR131	Keskin Array S	77.69	318	*i* P	P	12 50 18.4	+0.1
BRTR	Keskin Array B	77.69	318	P	P	12 50 17.9	-0.4
	comp=Z,4.2nm,1.0s,baz=45,slow=1.9,SNR=12						
	comp=Z,4.2nm,1.0s						
BRTR	Keskin Array B	77.69	318	*i* P	P	12 50 18.1	-0.2
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LESA	Schwarzleotal	78.31	336	*e*P	P	12 50 22.1	+0.6
	comp=Z,10.0nm,1.0s						
KBA	Koelnbreinsper	78.44	335	*e*P	P	12 50 22.9	+0.5
	comp=Z,15nm,1.0s						
WATA	Walderalm	78.68	336	*e*P	P	12 50 24.7	+1.1
	comp=Z,26nm,1.6s						
WTTA	Wattenberg	78.73	336	*e*P	P	12 50 24.8	+0.9
	comp=Z,18nm,0.9s						
RETA	Reutte	78.75	337	*e*P	P	12 50 24.5	+0.6
	comp=Z,5.3nm,0.9s						
MOTA	Moosalm	78.79	337	*e*P	P	12 50 24.9	+0.7
	comp=Z,21nm,1.2s						
SQTA	Sankt Quirin	78.88	337	*e*P	P	12 50 24.9	+0.2
	comp=Z,19nm,1.2s						
ABTA	Abfaltersbach	78.97	336	*e*P	P	12 50 22.3	-2.8
	comp=Z,8.2nm,1.0s						
DAVA	Damuels	79.16	337	*e*P	P	12 50 27.0	+0.8
	comp=Z,7.7nm,0.8s						
FETA	Feichten	79.19	337	*e*P	P	12 50 26.7	+0.2
	comp=Z,13nm,1.3s						
DAVOX	Davos/Dischmat	79.63	337	LR	LR	13 31 42.4	
	comp=Z,490nm,18.3s,baz=66,slow=40						
TUE	Stuetta	80.05	338		P	12 50 31.2	0.0
TUE				IAmb	IAmb	12 50 32.3	
	comp=Z,13nm,0.8s						
MANT	Manisa	80.86	321	IAmb	IAmb	12 50 35.8	
	comp=Z,18nm,0.9s						
PDG	Podgorica	80.87	329	IAmb	IAmb	12 50 37.7	
	comp=Z,21nm,1.2s						
SSB	Saint Sauveur	82.30	340	P	P	12 50 43.1	+0.2
SSB				pP	pP	12 50 56.4	-2.1
MMAI	Mount Meron Ar	82.44	313	P	P	12 50 44.0	+0.1
	comp=Z,13nm,0.7s,baz=42,slow=6.6,SNR=7.5						
	comp=Z,13nm,0.7s						
RAYN	Ar Rayn	84.86	301		P	12 50 56.2	-0.2
RAYN	Ar Rayn	84.86	301	P	P	12 50 56.2	-0.2
RAYN				pmax	pmax		
	comp=Z,51nm,1.6s						
RAYN	Ar Rayn	84.86	301	P	P	12 50 56.2	-0.2
RAYN				PcP	PcP	12 50 58.7	-0.9
RAYN				pP	pP	12 51 08.8	-3.3
VAE	Valguarnera	86.92	331	LR	LR	13 33 31.2	
	comp=Z,277nm,21.5s,baz=52,slow=38						
ESDC	Sonseca Array	89.36	345	P	P	12 51 16.8	-1.1
	comp=Z,2.2nm,1.0s,baz=356,slow=4.3,SNR=6.4						
	comp=Z,2.2nm,1.0s						
ESDC	Sonseca Array	89.36	345	IAmb	IAmb	12 54 34.6	
	comp=Z,14nm,1.9s						
KEST	Kesra	90.08	334	P	P	12 51 21.9	+0.6
	comp=Z,5.6nm,0.8s,baz=56,slow=3.6,SNR=4.5						
KEST				LR	LR	13 35 40.6	
	comp=Z,659nm,21.8s,baz=50,slow=38						
	comp=Z,5.6nm,0.8s						
MDT	Midelt	96.15	344	LR	LR	13 41 47.0	
	comp=Z,315nm,20.5s,baz=51,slow=40						
JTS	Las Juntas de	99.92	61	LR	LR	13 38 46.9	
	comp=Z,231nm,19.8s,baz=306,slow=36						
CPUP	Villa Florida	145.16	61	PKPbc	PKPbc	12 57 58.1	-0.2
	comp=Z,1.3nm,0.9s,baz=333,slow=2.3,SNR=6.7						
PLCA	Paso Flores	146.26	93	PKPbc	PKPdf	12 58 01.5	+1.4
	comp=Z,2.9nm,0.9s,baz=290,slow=4.7,SNR=6.1						
SNAA	Sanae	155.96	196	PKPab	PKPab	12 58 41.1	-0.3
	comp=Z,2.5nm,0.8s,baz=134,slow=6.0,SNR=5.1						

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*UPP **05** 13:00:02.8±0.3, 59°.84N×11°.76E, h0^{km}, ML2.9, Presumed earthquake*

*DNK **05** 13:00:04.0±1.3, 59°.80N×11°.79E, h6^{km}±6^{km}, Presumed earthquake*

ISC 05 13:00:02.5±1.1**, 59°.85N**±0°.04×**11°.73E**±0°.05**, h10**^{km}**, n19,** σ0^{s}.**50**/26**, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
FINU	Finntorp	0.59	140	P	Pg	13 00 13.6	-0.3
FINU	Finntorp	0.59	140	P	Pg	13 00 13.6	-0.3
STRU	Stroemstad	0.87	199	P	Pg	13 00 18.9	-0.3
STRU				S	Sg	13 00 30.2	-0.3
STRU	Stroemstad	0.87	199	*e*P	Pg	13 00 18.9	-0.2
STRU	Stroemstad	0.87	199	P	Pg	13 00 18.9	-0.3
STRU				*i* P	Pb	13 00 19.2	-0.4
STRU				S	Sg	13 00 30.2	-0.3
STRU				*i* S	Sg	13 00 30.2	-0.3
NC602	NORSAR Array S	0.89	354	*e*P	Pg	13 00 19.1	-0.4
UDD	Uddeholm	0.97	75	P	Pg	13 00 20.7	-0.4
UDD	Uddeholm	0.97	75	P	Pg	13 00 20.7	-0.4
NASU	Vaermlandsnaes	1.19	141	P	Pb	13 00 24.5	-0.6
NASU	Vaermlandsnaes	1.19	141	P	Pb	13 00 24.5	-0.6
VANU	Vaenersborg	1.38	173	P	Pb	13 00 28.1	-0.2
VANU	Vaenersborg	1.38	173	P	Pb	13 00 28.1	-0.2
NRAU	Nora	1.70	98	P	Pb	13 00 33.6	-0.2
NRAU	Nora	1.70	98	P	Pb	13 00 33.6	-0.2
TJOU	Tjoern	1.83	182	P	Pb	13 00 36.0	0.0
TJOU	Tjoern	1.83	182	*i* P	Pb	13 00 35.7	-0.2
TJOU				P	Pb	13 00 36.0	0.0
TJOU				*i* S	Sb	13 00 58.1	-0.8
ASKU	Askersund	1.85	120	P	Pb	13 00 36.6	+0.2
ASKU	Askersund	1.85	120	P	Pb	13 00 36.6	+0.2
ONAU	Onsala	2.47	178	*i* P	Pn	13 00 44.3	+1.7
ONAU				*i* S	Sn	13 01 12.6	-0.2

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*NEIC **05** 13:16:32.6±2.6, 8°.2S±0°.1×121°.8E±0°.1, h194^{km}±7^{km}, mb4.2/9, Error ellipse: s-maj=19.2km s-min=11.8km az=53.0*

*DJA **05** 13:16:32.9±0.2, 8°S±2°×12°2E±°, h178^{km}±2^{km}, M4.0/19, mb4.1/19, mB4.5/2, MLv3.9/19, Mw(mB)3.7/2*

*IDC **05** 13:16:33.0±1.4, 8°.27S×121°.63E, h200^{km}±12^{km}, mb3.2/4, mbtmp3.8/9, MS2.9/1, Error ellipse: s-maj=89.0km s-min=10.1km az=57.0*

ISC 05 13:16:32.6±0.6**, 8°.32S**±0°.05×**121°.78E**±0°.05**, h200**^{km}**, n65,** σ**1**^{s}.**67**/72**, mb4.1**/8**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
EDFI	Ende, Flores	0.43	191	P	Pn	13 16 58.2	-1.5
EDFI				S	Sn	13 17 17.4	-3.4
MMRI	Maumere	0.55	125		Pn	13 16 59.0	-1.1
MMRI	Maumere	0.55	125	P	Pn	13 16 58.9	-1.1

MMRI				S	Sn	13 17 18.4	-2.7
LBFI	Labuhan Bajo,	1.87	265	P	Pn	13 17 07.9	-2.0
BASI	Baing, Sumba	2.23	212	P	Pn	13 17 11.9	-1.7
BATI	Baumata	2.64	135	P	Pn	13 17 19.1	+0.9
	14nm,0.3s,baz=302,slow=10,SNR=7.1						
BATI				S	Sn	13 17 51.4	-2.4
	86nm,0.3s,baz=141,slow=6.3,SNR=8.1						
BATI				LR	LR	13 18 56.4	
	comp=Z,216nm,19.1s,baz=234,slow=52						
BATI	Baumata	2.64	135	P	Pn	13 17 18.6	+0.4
WBSI	Waikabubak, Su	2.70	241	P	Pn	13 17 16.9	-1.9
SOEI	Soe	2.84	120		Pn	13 17 21.3	+0.7
SOEI	Soe	2.84	120	P	Pn	13 17 21.1	+0.5
BKSI	Bulukumba	3.40	331	P	Pn	13 17 24.8	-2.3
DBNI	Kabupaten Domp	3.43	267	P	Pn	13 17 26.1	-1.4
KAPI	Kappang	3.85	328	P	Pn	13 17 32.1	-0.5
	26nm,0.6s,baz=139,slow=9.1,SNR=16						
KAPI	Kappang	3.85	328		Pn	13 17 31.9	-0.7
KAPI	Kappang	3.85	328	P	Pn	13 17 31.9	-0.7
PLAI	Plampang	3.99	262	P	Pn	13 17 33.1	-1.2
PLAI	Plampang	3.99	262	P	Pn	13 17 33.1	-1.2
KKSI	Kolaka, Sulawe	4.12	358	P	Pn	13 17 34.9	-1.1
BNSI	Bone	4.23	337	P	Pn	13 17 37.4	0.0
TWSI	Taliwang, Sumb	4.86	265	P	Pn	13 17 43.9	-1.4
TTSI	Tana Toraja	5.59	340	P	Pn	13 17 54.8	+0.1
	0.1nm26nm,0.8s						
KLNI	Mataram	5.62	269	P	Pn	13 17 54.8	-0.3
KHKI	Kahang-Kahang	6.10	269	P	Pn	13 18 00.4	-0.9
IGBI	Denpasar	6.58	265	P	Pn	13 18 07.5	+0.1
	22nm,0.5s						
JAGI	Jajag, Banyuwa	7.54	268	P	Pn	13 18 19.8	-0.2
	14nm,0.9s						
SNJI	Sawahan-Nganju	9.93	272	P	Pn	13 18 51.3	0.0
	8.1nm,0.5s						
KNRA	Kununurra	10.01	138	Pn	Pn	13 18 51.4	-0.7
MTN	Manton Dam	10.24	117		Pn	13 18 54.5	-0.5
FITZ	Fitzroy Crossi	10.42	159	P	Pn	13 18 57.6	+0.2
	0.9nm,0.3s,baz=339,slow=12,SNR=10						
FITZ				S	Sn	13 20 50.0	-3.7
	5.5nm,0.6s,baz=51,slow=23,SNR=8.0						
FITZ	Fitzroy Crossi	10.42	159		Pn	13 18 56.4	-1.0
PCJI	Pacitan	10.49	270	P	Pn	13 18 57.1	-1.2
	21nm,0.9s						
UGM	Wanagama	11.15	271	P	Pn	13 19 07.2	+0.4
	44nm,2.4s						
FAKI	Fak Fak	11.72	63		Pn	13 19 11.8	-2.3
FAKI	Fak Fak	11.72	63	P	Pn	13 19 13.8	-0.3
FAKI	Fak Fak	11.72	63	S	S	13 21 25.5	+0.5
FAKI	Fak Fak	11.72	63	P	Pn	13 19 13.7	-0.3
MBWA	Marble Bar	12.92	189	Pn	Pn	13 19 29.4	+0.3
MBWA	Marble Bar	12.92	189	P	P	13 19 35.8	+3.3
BBJI	Bungbulang	14.02	272	P	P	13 19 43.9	-1.0
WB0	Warramunga Arr	16.70	134		P	13 20 11.8	-2.6
WB0				IAmb	IAmb	13 20 48.6	
	comp=Z,2.5nm,0.9s						
WRA	Warramunga Arr	16.77	135	P	Pn	13 20 17.6	+1.3
	comp=Z,0.5nm,0.5s,baz=312,slow=12,SNR=40						
WRA				S	S	13 23 16.4	-3.9
	comp=Z,0.6nm,0.7s,baz=302,slow=22,SNR=4.1						
WRA	Warramunga Arr	16.77	135	P	P	13 20 13.8	-1.4
WRAB	Tennant Creek	16.78	135	P	Pn	13 20 18.3	+1.9
KASI	Kota Agung	17.38	278	P	Pn	13 20 23.6	+0.1
	comp=Z,19nm,1.4s						
MEEK	Meekatharra	18.46	189	P	Pn	13 20 36.4	+0.2
AS31	Alice Springs	19.18	144	P	P	13 20 42.5	+1.1
ASAR	Alice Springs	19.18	144	P	Pn	13 20 44.4	-0.3
	comp=Z,5.0nm,0.3s,baz=328,slow=11,SNR=270						
ASAR				S	S	13 24 10.8	+2.7
	comp=Z,1.6nm,1.0s,baz=316,slow=20,SNR=7.0						
ASAR				ScP	ScP	13 28 12.9	-0.3
	comp=Z,0.5nm,0.6s,baz=331,slow=2.0,SNR=7.9						
ASAR	Alice Springs	19.18	144	P	P	13 20 42.5	+1.1
QIS	Mount Isa	21.09	127	P	P	13 21 04.7	+2.9
MORW	Morawa	21.33	194	P	P	13 21 05.7	+1.4
MORW				IAmb	IAmb	13 21 06.6	
	comp=Z,9.7nm,0.9s						
MORW	Morawa	21.33	194	P	P	13 21 05.6	+1.4
COEN	Coen	21.72	107	P	P	13 21 09.2	+0.8
COEN				IAmb	IAmb	13 21 10.0	
	comp=Z,6.8nm,0.9s						
COEN	Coen	21.72	107	P	P	13 21 09.5	+1.2
BLDU	Ballidu	22.68	191	P	P	13 21 19.4	+2.2
FORT	Forrest	23.10	166	P	P	13 21 23.8	+2.9
FORT				IAmb	IAmb	13 21 24.8	
	comp=Z,11nm,0.7s						
KLBR	Kellerberrin	23.46	189	P	P	13 21 26.4	+2.2
MTSU	Mount Surprise	23.98	116	P	P	13 21 32.2	+3.0
BBOO	Buckleboo	27.73	153	P	P	13 22 04.8	+2.2
BBOO				IAmb	IAmb	13 22 42.4	
	comp=Z,8.1nm,1.1s						
STKA	Stephens Creek	29.82	145	P	P	13 22 24.1	+3.0
	comp=Z,0.8nm,0.3s,baz=333,slow=9.0,SNR=5.8						
	comp=Z,0.8nm,0.3s						
STKA	Stephens Creek	29.82	145	P	P	13 22 21.9	+0.8
MKAR	Makanchi Array	65.15	331	P	P	13 26 52.0	-0.2
	comp=Z,0.2nm,0.3s,baz=138,slow=7.9,SNR=8.0						
	comp=Z,0.2nm,0.3s						
MKAR	Makanchi Array	65.15	331	P	P	13 26 50.8	-1.4
ZALV	Zalesovo Beam	69.42	338	P	P	13 27 18.3	-0.5
	comp=Z,0.4nm,0.3s,baz=148,slow=6.5,SNR=2.9						
	comp=Z,0.4nm,0.3s						
KURBB	Kurchatov Arra	69.61	332	P	P	13 27 19.1	-1.0
	comp=Z,0.2nm,0.5s,baz=140,slow=6.0,SNR=5.4						
	comp=Z,0.2nm,0.5s						
KURK	Kurchatov	69.64	332	P	P	13 27 19.2	-1.0

JMA 05 13:34:53.1±0.0,36°.8N±0°.1×140°.6E±0°.2,h9^{km},MV1.2/32, NORTHERN IBARAKI PREF,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.20	177	P	Pg	13 34 57.4	+0.1
JHO				eS	Sg	13 35 00.2	+0.2
JFFD	Fukushimafurud	0.28	1	i P	Pg	13 34 58.9	+0.1
JFFD				eS	Sg	13 35 03.0	+0.3
ONAJ	Iwakimizuishiy	0.35	34	eP	Pg	13 35 00.3	+0.1
JFK	Kawauchi	0.61	25	eS	Sg	13 35 13.1	0.0
JYT	Yasato	0.65	207	eP	Pg	13 35 05.5	-0.2
JOTO	OTAMA OYAMA	0.77	347	eP	Pg	13 35 08.1	+0.1

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*NIED **05** 13:35:16.3,36°.81N×140°.55E,h8^{km},MW4.3,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-3.27; $M_{\theta\theta}$0.82; $M_{\phi\phi}$2.46; $M_{r\theta}$-0.42; $M_{\theta\phi}$-1.21; $M_{\phi r}$1.71; Fault plane solution: $M_0$3.64000×10^{15} NP1: ϕ_s326.00000°,δ31.00000°,λ-101.00000°. NP2: ϕ_s158.00000°,δ59.00000°,λ-84.00000°.*

*JMA **05** 13:35:16.3±0.0,36°.8N±0°.1×140°.5E±0°.2,h8^{km},MD4.6/20,MW4.4/20,NORTHERN IBARAKI PREF*

JMA Felt III J1 at NORTHERN IBARAKI PREF .

*MOS **05** 13:35:19.2±0.9,36°.89N×140°.39E,h45^{km},mb4.6/23,Error ellipse: s-maj=9.6km s-min=6.5km az=92.3*

*IDC **05** 13:35:20.4±2.0,36°.80N×140°.35E,h40^{km}±18^{km},mb4.0/20,mbtmp4.3/23,ML4.6/3,MS3.8/4,Error ellipse: s-maj=16.1km s-min=12.0km az=73.0*

*NEIC **05** 13:35:22.4±1.7,36°.88N±0°.07×140°.31E±0°.10,h53^{km}±7^{km},mb4.6/158,Error ellipse: s-maj=12.3km s-min=8.7km az=122.0*

ISC 05 13:35:16.9±0.8,36°.81N±0°.02×140°.49E±0°.03,h15^{km}±5^{km},n260,σ1^{s}.50/157,mb4.6/104,MS4.4/4,2C-2D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.21	162	i P	Pg	13 35 20.4	-1.3
JHO				S	Sg	13 35 22.9	-1.9
JHO	Hitachi	0.21	162	A	A	13 35 20.4	
	comp=N,156nm,0.8s,comp=E,138nm,0.7s						
JFFD	Fukushimafurud	0.29	11	i P	Pg	13 35 21.9	-1.1
JFFD				S	Sg	13 35 25.8	-1.4
JFFD	Fukushimafurud	0.29	11	A	A	13 35 21.9	
	comp=N,41nm,2.7s,comp=E,67nm,1.4s						
ONAJ	Iwakimizuishiy	0.38	40	i P	Pg	13 35 23.3	-1.4
ONAJ				S	Sg	13 35 28.5	-1.5
ONAJ	Iwakimizuishiy	0.38	40	A	A	13 35 23.3	
	comp=N,60nm,3.4s,comp=E,77nm,2.2s						
JHYU	Hitachinakayam	0.47	171	A	A	13 35 25.5	
	comp=N,49nm,3.0s,comp=E,85nm,0.5s						
JSB	Shiboa	0.49	289	i P	Pg	13 35 27.1	+0.5
JSB				S	Sb	13 35 34.5	+0.4
JSB	Shiboa	0.49	289	A	A	13 35 27.1	
	comp=N,81nm,2.7s,comp=E,87nm,5.0s						
JYT	Yasato	0.63	203	i P	Pg	13 35 28.5	-0.7
JYT	Yasato	0.63	203	A	A	13 35 28.5	
	comp=N,53nm,0.4s,comp=E,46nm,0.3s						
JFK	Kawauchi	0.64	29	i P	Pg	13 35 27.8	-1.6
JFK				S	Sg	13 35 36.1	-1.7
JFK	Kawauchi	0.64	29	A	A	13 35 27.8	
	comp=N,29nm,3.8s,comp=E,18nm,2.3s						
JOTO	OTAMA OYAMA	0.76	351	i P	Pg	13 35 31.0	-0.7
JOTO				S	Sg	13 35 41.2	-0.6
JOTO	OTAMA OYAMA	0.76	351	A	A	13 35 31.0	
	comp=N,58nm,0.3s,comp=E,53nm,0.4s						
JIHU	Itakohorinouch	0.84	178	A	A	13 35 32.4	
	comp=N,97nm,3.2s,comp=E,148nm,5.0s						
JFY	Yanaizu	0.87	314	i P	Pb	13 35 33.4	-0.3
JFY				S	Sb	13 35 45.3	+0.1
JFY	Yanaizu	0.87	314	A	A	13 35 33.4	
	comp=N,11nm,3.1s,comp=E,17nm,4.4s						
JAG	Ashikaga	0.92	246	i P	Pb	13 35 33.7	-0.8
JAG	Ashikaga	0.92	246	A	A	13 35 33.7	
	comp=N,14nm,4.2s,comp=E,15nm,4.0s						
JMST	Minamisoumatoc	0.97	19	A	A	13 35 34.4	
	comp=N,21nm,3.6s,comp=E,17nm,0.4s						
JKT	Katashina	1.00	268	A	A	13 35 36.0	
	comp=N,12nm,4.3s,comp=E,15nm,1.1s						
JMM	Marumori	1.08	13	A	A	13 35 36.6	
	comp=N,26nm,4.5s,comp=E,16nm,4.1s						
JCAJ	Choshiashikaji	1.12	165	A	A	13 35 37.3	
	comp=N,67nm,3.5s,comp=E,56nm,4.1s						
JYAR	Yonezawaarcadi	1.14	346	A	A	13 35 37.8	
	comp=N,21nm,1.3s,comp=E,14nm,1.3s						
JSMT	Sammumatsuo	1.16	182	A	A	13 35 38.2	
	comp=N,48nm,1.7s,comp=E,36nm,2.6s						
TOK	Tokyo	1.27	208	A	A	13 35 40.2	
	comp=N,54nm,1.7s,comp=E,40nm,1.3s						
JNS	Sasagawa	1.38	317	A	A	13 35 42.1	
	comp=N,11nm,4.3s,comp=E,6.0nm,6.1s						
JCCN	Chibachonan	1.44	188	A	A	13 35 42.7	
	comp=N,27nm,4.4s,comp=E,28nm,3.2s						
JYS	Shirataka	1.45	347	A	A	13 35 43.0	
	comp=N,15nm,0.6s,comp=E,20nm,1.7s						
I30JP	ISUMI INFRASON	1.50	186	Pn	Pb	13 35 44.5	0.0
	baz=11,slow=9.2						
I30JP				Sn	Sb	13 36 03.6	+0.3
	baz=76,slow=137						
I30JP				I	I	13 44 00.0	
	baz=16,slow=309,SNR=0.7						
JGK	Kuni	1.51	261	A	A	13 35 44.4	
	comp=N,11nm,1.0s,comp=E,15nm,1.0s						
JOU	Okura	1.56	5	A	A	13 35 44.5	
	comp=N,28nm,2.3s,comp=E,29nm,4.4s						
JSGW	Sagamiharawaka	1.59	221	A	A	13 35 45.4	
	comp=N,6.0nm,4.3s,comp=E,7.0nm,7.3s						
JIKH	Ishinomakikobu	1.69	27	A	A	13 35 46.2	
	comp=N,13nm,0.9s,comp=E,22nm,3.1s						
JYO	Yokosk	1.72	203	A	A	13 35 47.1	
	comp=N,19nm,4.9s,comp=E,15nm,3.1s						
JIO	Ouri	1.78	22	A	A	13 35 47.6	
	comp=N,10.0nm,4.7s,comp=E,20nm,2.3s						
JOFO	Osakifurukawao	1.82	10	A	A	13 35 48.3	
	comp=N,79nm,3.3s,comp=E,71nm,1.8s						
MJA0	Matsu Arr-Jizo	1.82	262	eP	Pn	13 35 48.8	+1.0
MJA0				pmax	pmax		
	comp=Z,27nm,0.3s						
MJAR	Matsushiro Arr	1.85	262	Pn	Pn	13 35 48.8	+0.7
	comp=Z,27nm,0.3s,baz=85,slow=16,SNR=945						
MJAR				Sn	Sn	13 36 12.3	+1.0
	comp=Z,38nm,0.3s,baz=82,slow=27,SNR=21						
MJAR				LR	LR	13 36 40.0	
	comp=Z,864nm,18.3s,baz=72,slow=46						
MJAR	Matsushiro Arr	1.85	262		Pn	13 35 49.1	+0.9
MAJO	Matsushiro	1.86	262		Pn	13 35 49.5	+1.3
MAJO				Sn	Sb	13 36 14.9	+1.4
MAJO	Matsushiro	1.86	262	P	Pb	13 35 49.8	-0.7
MAJO	Matsushiro	1.86	262	i P	Pn	13 35 49.2	+1.0
MJB9	Matsu-Tunnel	1.86	263		Pb	13 35 50.2	-0.4
MJB9				Sn	Sg	13 36 15.8	-0.9
JYA	Atsumi	1.89	341	A	A	13 35 49.6	
	comp=N,12nm,1.2s,comp=E,17nm,1.4s						
JJN	Nakama	1.89	280	A	A	13 35 50.1	
	comp=N,15nm,2.1s,comp=E,16nm,3.7s						
JOD2	Odawara 2	1.92	217	A	A	13 35 50.2	
	comp=N,10.0nm,3.3s,comp=E,6.0nm,1.1s						
JYK	Kaneyama	2.11	357	A	A	13 35 52.7	
	comp=N,10.0nm,1.3s,comp=E,10.0nm,2.3s						
JKMT	Kesennumamotoy	2.15	21	A	A	13 35 53.0	
	comp=N,4.0nm,2.5s,comp=E,11nm,1.9s						
JSD	Sado	2.16	305		Pn	13 35 52.2	-0.1
JSD	Sado	2.16	305	P	Pn	13 35 53.1	+0.8
JHTM	Izuhatsuma	2.20	214	A	A	13 35 54.4	
	comp=N,15nm,1.5s,comp=E,14nm,2.0s						
JMK	Ichinoseki	2.22	15	A	A	13 35 54.1	
	comp=N,4.0nm,4.9s,comp=E,7.0nm,2.8s						
JIM2	Oshima 3	2.26	203	A	A	13 35 55.0	
	comp=N,10.0nm,2.7s,comp=E,13nm,3.1s						
JNY	Yasuok	2.58	237	A	A	13 35 59.9	
	comp=N,5.0nm,0.8s,comp=E,4.0nm,3.1s						
JRG	Rokugo	2.59	2	A	A	13 35 59.5	
	comp=N,7.0nm,3.8s,comp=E,9.0nm,4.2s						
JGF	Kuroka	2.81	246		Pn	13 36 03.6	+2.3
JGF	Kuroka	2.81	246	P	Pn	13 36 03.4	+2.1
JSG	Sagara	2.84	222		Pn	13 36 03.3	+1.6
JSG	Sagara	2.84	222	P	Pn	13 36 03.8	+2.2
JSZI	Iwateshizukuis	2.95	7	A	A	13 36 04.7	
	comp=N,16nm,2.1s,comp=E,13nm,3.1s						
JAO	Obara	3.04	241	A	A	13 36 06.6	
	comp=N,3.0nm,1.5s,comp=E,3.0nm,5.3s						
INU	Inuyama	3.17	244		Pn	13 36 08.1	+1.9
INU	Inuyama	3.17	244	P	Pn	13 36 08.8	+2.6
JTH	Tanohata	3.31	19	A	A	13 36 09.6	
	comp=N,4.0nm,9.5s,comp=E,10.0nm,2.8s						
JAA	Atsumi	3.48	232	A	A	13 36 12.8	
	comp=N,3.0nm,4.6s,comp=E,2.0nm,4.8s						
JKEN	Kujiedanarisaw	3.52	15	A	A	13 36 12.7	
	comp=N,8.0nm,1.0s,comp=E,14nm,1.9s						
JANG	Nango	3.65	12	A	A	13 36 14.6	
	comp=N,3.0nm,2.9s,comp=E,6.0nm,4.3s						
JHJ	Hachijo jima 2	3.73	189	Pn	Pn	13 36 14.2	+0.3
	comp=E,43nm,0.3s,baz=68,slow=18,SNR=5.2						
JHJ				Sn	Sn	13 36 53.2	-4.2
	comp=E,52nm,0.3s,baz=53,slow=20,SNR=1.4						
	comp=E,192nm,0.5s						
JHJ2	Mitsune	3.73	189	P	Pn	13 36 14.2	+0.3
JTM	Tenmabayashi	4.00	6		Pn	13 36 19.9	+2.3
JTM	Tenmabayashi	4.00	6	P	Pn	13 36 20.4	+2.8
ERM	Erimo	5.59	21	Pn	Pn	13 36 40.2	+0.7
ERM	Erimo	5.59	21	P	Pn	13 36 40.6	+1.1
ERM	Erimo	5.59	21	P	Pn	13 36 40.2	+0.7
JEM	Erimo	5.59	21	P	Pn	13 36 40.6	+1.1
JMN	Monobe	6.22	242	Pn	Pn	13 36 47.4	-0.8
JMN	Monobe	6.22	242	P	Pn	13 36 50.7	+2.5
ASAJ	Asahikawa	7.47	12	Pn	Pn	13 37 05.3	0.0
	comp=E,5.2nm,0.3s,baz=231,slow=11,SNR=38						
	comp=E,16nm,0.3s						
ASAJ	Asahikawa	7.47	12	P	Pn	13 37 05.4	+0.1
JKA	Kamikawa-asahi	7.47	12		Pn	13 37 05.3	0.0
YUK	Yuzh-Kuril'sk	8.30	28	i P	Pn	13 37 19.8	+3.2
JNU	Nakatsue	8.70	248	Pn	Pn	13 37 25.4	+3.1
	comp=E,0.2nm,0.3s,baz=6.3,slow=9.2,SNR=1.9						
JNU	Nakatsue	8.70	248	P	Pn	13 37 24.9	+2.6
TEY	Ternei	8.73	342	eP	Pn	13 37 30.0	+7.5
JCJ	Chichijima	9.79	171	Pn	Pn	13 37 23.6	-13
	comp=E,13nm,0.3s,baz=307,slow=15,SNR=5.8						
JCJ				LR	LR	13 41 57.2	
	comp=E,94nm,18.4s,baz=232,slow=40						
USRK	Ussuriysk Ar.	9.82	321	Pn	Pn	13 37 43.2	+5.8
	comp=E,0.4nm,0.3s,baz=133,slow=14,SNR=9.5						
KSRS	Korea Array	10.06	277	Pn	Pn	13 37 45.9	+5.1
	comp=E,0.3nm,0.3s,baz=101,slow=14,SNR=10						
KUR	Kuril'sk	10.09	31	i P	Pn	13 37 45.3	+4.2
YSS	Yuzhno-Sakhali	10.28	9	eP	Pn	13 37 46.4	+2.7
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MDJ	Mudanjiang	11.36	317	P	Pn	13 38 00.9	+2.3
MDJ				pmax	pmax		
	comp=Z,11nm,2.4s						
TYV	Tymovskoe	14.14	6	eP	P	13 38 43.0	-1.0
TYV				pmax	pmax		
	comp=Z,19nm,1.2s						
TYV				pmax	pmax		
	comp=Z,300nm,3.7s						
OKH	Okha	16.83	5	deP	Pn	13 39 03.4	-8.4
OKH				MLR	MLR		
	comp=E,1μm,22.0s						
OKH				MLR	MLR		
	comp=N,1μm,23.0s						
OKH				MLR	MLR		
	comp=Z,300nm,19.0s						
NJ2	Nanjing	18.46	261	eP	P	13 39 32.0	0.0
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA	Zeya	19.27	336	eP	P	13 39 40.3	-0.5
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
HILR	Hailar Array B	19.70	317	P	Pn	13 39 46.7	-0.2
	baz=130,slow=13						
	comp=Z,18nm,0.6s						
XLT	XiLinHaoTe	19.86	298	eP	P	13 39 46.4	-1.1
XLT				pP	sP	13 39 59.1	+5.2
XLT				sP	pP	13 40 03.9	+12
XLT				pmax	pmax		
	comp=Z,18nm,0.9s						
PETK	Petropavlovsk-	20.26	31	P	Pn	13 39 56.0	+2.4
	comp=Z,10nm,1.0s,baz=225,slow=7.8,SNR=4.7						
PETK	Petropavlovsk-	20.26	31	P	P	13 39 52.2	+0.7
PETK	Petropavlovsk-	20.26	31	P	P	13 39 52.2	+0.7
HNS	HongShan	20.56	279	⇓P	P	13 39 53.8	-1.1
HNS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YULB	Yu-li	21.27	236	P	P	13 40 01.6	-1.0
YULB				IAmb	IAmb	13 40 21.4	
	comp=Z,29nm,1.0s						
HHC	Hu-ho-hao-te	22.84	289	eP	P	13 40 19.9	+0.3
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,7.6s						
YAK	Yakutsk	26.14	348		P	13 40 49.1	-1.0
YAK	Yakutsk	26.14	348	eP	P	13 40 48.8	-1.3
YAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.1s						
ULN	Ulaanbaatar	26.87	305	i P	P	13 40 56.3	-0.8
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SEY	Seymchan	27.16	12	i P	P	13 41 00.2	+0.9
SEY				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SONM	Songino Array	27.30	305	P	P	13 40 59.7	-1.2
	comp=Z,5.0nm,0.9s,baz=105,slow=9.3,SNR=12						
	comp=Z,5.0nm,0.9s						
SONM	Songino Array	27.30	305	eP	P	13 41 00.9	0.0
SONM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
H11N2	WAKE ISLAND Hy	28.68	119	T	T	14 10 59.0	
	baz=312,slow=75,SNR=1710						
H11N1	WAKE ISLAND Hy	28.68	119	T	T	14 10 59.6	
	baz=312,slow=75,SNR=1409						
H11N3	WAKE ISLAND Hy	28.69	119	T	T	14 11 00.4	
	baz=312,slow=75,SNR=1460						
H11S1	WAKE ISLAND Hy	29.36	121	T	T	14 11 51.5	
	baz=314,slow=76,SNR=3266						
H11S3	WAKE ISLAND Hy	29.37	121	T	T	14 11 50.6	
	baz=314,slow=76,SNR=1796						
H11S2	WAKE ISLAND Hy	29.38	121	T	T	14 11 52.7	
	baz=314,slow=76,SNR=1907						
PZH	PanZhiHua	34.34	264	P	P	13 42 04.8	+1.5
TIXI	Tiksi	35.43	354	i P	P	13 42 12.3	+0.4
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
DGZ	Jazzator, Alta	39.93	306	i P	P	13 42 49.5	-1.0
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FAKI	Fak Fak	40.26	193	P	P	13 42 54.0	+0.7
FAKI				IAmb	IAmb	13 42 58.5	
	comp=Z,16nm,1.1s						
WMQ	Urumqi	40.28	297	eP	P	13 42 52.7	-0.7
WMQ				pmax	pmax		
	comp=Z,45nm,0.9s						
CMAR	Chiang Mai Arr	40.73	255	P	P	13 42 56.2	-1.0
	comp=Z,0.3nm,0.5s,baz=60,slow=8.4,SNR=1.8						
CMAR				LR	LR	13 59 55.0	
	comp=Z,54nm,20.0s,baz=5.0,slow=36						
	comp=Z,0.3nm,0.5s						
ZAA0	Zalesovo Array	41.52	313	P	P	13 43 02.9	-0.5
ZALV	Zalesovo Beam	41.52	313	P	P	13 43 02.3	-1.0
	comp=Z,2.7nm,0.6s,baz=94,slow=7.3,SNR=10						
	comp=Z,2.7nm,0.6s						
ZALV	Zalesovo Beam	41.52	313	P	P	13 43 02.5	-0.8
ZALV	Zalesovo Beam	41.52	313	eP	P	13 43 03.4	0.0
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NRIK	Noril'sk	43.16	336	i P	P	13 43 16.4	-0.1
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
C16K	Lisburne Hills	43.23	26	P	P	13 43 17.4	+0.3
C16K				IAmb	IAmb	13 43 44.3	
	comp=Z,25nm,1.4s						
MK31	Makanchi Array	43.61	302	i P	P	13 43 19.7	-0.8
CNBA	Chernabura Isl	44.00	46	P	P	13 43 26.3	+2.9
C19K	Lookout Ridge	45.48	26	P	P	13 43 36.6	+1.5
C19K				IAmb	IAmb	13 43 41.3	
	comp=Z,11nm,1.1s						
KURK	Kurchatov	45.49	308	P	P	13 43 33.4	-2.0
KURK				IAmb	IAmb	13 43 35.5	
	comp=Z,10nm,1.1s						
KURK	Kurchatov	45.49	308	i P	P	13 43 34.7	-0.7
KURK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KURBB	Kurchatov Arra	45.56	308	P	P	13 43 35.4	-0.5
	comp=Z,4.4nm,0.9s,baz=83,slow=8.0,SNR=29						
	comp=Z,4.4nm,0.9s						
D19K	Kuna River	45.88	27	P	P	13 43 38.8	+0.5
D19K				IAmb	IAmb	13 43 44.4	
	comp=Z,8.4nm,1.0s						
B20K	Meade River	46.51	25	IAmb	IAmb	13 43 47.2	
	comp=Z,6.3nm,0.9s						
B21K	Ikpikpuk River	47.31	26		P	13 43 50.4	+1.0
B21K				IAmb	IAmb	13 44 27.5	
	comp=Z,7.3nm,1.1s						
D22K	Ayikyak River	47.90	27	IAmb	IAmb	13 43 59.2	
	comp=Z,14nm,1.4s						
E22K	Anaktuvuk Pass	48.15	28		P	13 43 56.9	+0.9
E22K				IAmb	IAmb	13 44 03.6	
	comp=Z,7.1nm,1.1s						
BOOM	Boomskoye usch	48.96	298	P	P	13 44 02.6	-0.2
BOOM				IAmb	IAmb	13 44 21.5	
	comp=Z,6.8nm,1.2s						
BOOM	Boomskoye usch	48.96	298	P	P	13 44 02.6	-0.2
BOOM				pmax	pmax		
	comp=Z,7.0nm,1.2s						
E23K	Chandalar	48.97	28	IAmb	IAmb	13 44 08.0	
	comp=Z,8.3nm,0.9s						
E24K	Your Creek	49.39	28	IAmb	IAmb	13 44 12.9	
	comp=Z,6.6nm,1.1s						
KSH	Kashi	49.82	294	P	P	13 44 14.6	+5.2
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AAK	Ala-Archa	49.95	298	P	P	13 44 10.1	-0.2
AAK	Ala-Archa	49.95	298	i P	P	13 44 09.2	-1.1
AAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
IL31		50.08	32	P	P	13 44 11.7	+1.0
IL31				IAmb	IAmb	13 44 18.6	
	comp=Z,9.8nm,1.5s						
ILAR	Eielson Array	50.08	32	P	P	13 44 10.7	-0.1
	comp=Z,2.2nm,0.9s,baz=265,slow=6.1,SNR=12						
	comp=Z,2.2nm,0.9s						
ILAR	Eielson Array	50.08	32	eP	P	13 44 13.0	+2.2
ILAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MTN	Manton Dam	50.17	192		P	13 44 12.9	+1.0
BVAR	Borovoye Array	50.18	312	P	P	13 44 11.4	-0.3
	comp=Z,1.9nm,0.7s,baz=75,slow=6.4,SNR=7.9						
BVAR				PcP	PcP	13 45 29.9	-0.9
	comp=Z,1.0nm,0.6s,baz=82,slow=3.6,SNR=2.3						
	comp=Z,1.9nm,0.7s						
BORK	Borovoye	50.22	312	P	P	13 44 11.6	-0.4
BORK	Borovoye	50.22	312	i P	P	13 44 11.4	-0.6
BORK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
COEN	Coen	50.55	177		P	13 44 14.9	0.0
COEN				IAmb	IAmb	13 44 19.8	
	comp=Z,6.9nm,0.9s						
F26K	Sheenjek River	51.04	28	IAmb	IAmb	13 44 23.8	
	comp=Z,6.1nm,1.1s						
SCRK	Sand Creek	51.40	33		P	13 44 21.8	+0.9
SCRK				IAmb	IAmb	13 44 25.1	

	comp=Z,9.8nm,1.3s						
ARSB	**Arslanbob**	**51.42**	**297**	P	**P**	**13 44 20.4**	**-1.0**
ARSB				IAmb	IAmb	13 44 22.8	
	comp=Z,5.2nm,0.8s						
ARSB	**Arslanbob**	**51.42**	**297**	P	**P**	**13 44 20.4**	**-1.0**
ARSB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
L27K	**Beaver Creek,**	**52.48**	**34**	P	**P**	**13 44 29.9**	**+1.1**
L27K				IAmb	IAmb	13 44 33.9	
	comp=Z,6.7nm,1.1s						
KKAR	**Karatay Array**	**52.60**	**300**	P	**P**	**13 44 28.7**	**-1.3**
KKAR	**Karatay Array**	**52.60**	**300**	P	**P**	**13 44 28.7**	**-1.3**
KNRA	**Kununurra**	**53.36**	**194**		**P**	**13 44 36.3**	**+0.5**
MANEM	**Manem**	**53.66**	**293**	P	**P**	**13 44 36.6**	**-1.6**
MANEM				IAmb	IAmb	13 44 43.1	
	comp=Z,14nm,1.1s						
EPYK	**Eagle Plains**	**54.09**	**30**		**P**	**13 44 41.6**	**+1.0**
L29M	**L29M**	**54.12**	**34**	IAmb	IAmb	13 44 46.8	
	comp=Z,9.3nm,1.1s						
G30M	**tAoh Zraii Nji**	**54.17**	**29**	IAmb	IAmb	13 44 46.2	
	comp=Z,7.4nm,1.1s						
F30M	**Barrier River**	**54.22**	**28**	P	**P**	**13 44 44.1**	**+2.5**
F30M				IAmb	IAmb	13 44 47.5	
	comp=Z,9.1nm,1.1s						
K29M	**Barlow Dome**	**54.24**	**33**	IAmb	IAmb	13 44 44.4	
	comp=Z,13nm,1.4s						
INK	**Inuvik**	**54.92**	**27**	P	**P**	**13 44 46.7**	**+0.1**
INK	**Inuvik**	**54.92**	**27**	P	**P**	**13 44 46.7**	**+0.1**
INK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ARTI	**Arti**	**56.15**	**318***c*	*i*P	**P**	**13 44 54.5**	**-1.1**
ARTI				S	**S**	**13 52 40.7**	**-3.3**
ARTI				SS	**SS**	**13 56 21.7**	**-8.1**
ARTI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WB0	**Warramunga Arr**	**56.56**	**187**	P	**P**	**13 44 58.0**	**-0.8**
WRAB	**Tennant Creek**	**56.73**	**187**	*i* P	**P**	**13 45 00.8**	**+0.7**
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WRA	**Warramunga Arr**	**56.74**	**187**	P	**P**	**13 44 59.6**	**-0.5**
	comp=Z,2.6nm,0.5s,baz=4.2,slow=7.1,SNR=33						
	comp=Z,2.6nm,0.5s						
WRA	**Warramunga Arr**	**56.74**	**187**		**P**	**13 44 58.7**	**-1.4**
WRA	**Warramunga Arr**	**56.74**	**187**	*i* P	**P**	**13 44 59.5**	**-0.6**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
A36M	**Sachs Harbour**	**56.74**	**22**	IAmb	IAmb	13 45 03.6	
	comp=Z,8.2nm,1.1s						
AB31	**Akbulak array**	**57.52**	**310**	IAmb	IAmb	13 45 08.1	
	comp=Z,8.1nm,1.1s						
ABKAR	**Akbulak array**	**57.52**	**310**		**P**	**13 45 03.5**	**-1.9**
KIRV	**Kirov**	**59.98**	**323**	*i* P	**P**	**13 45 22.1**	**-0.3**
AS31	**Alice Springs**	**60.47**	**187**	P	**P**	**13 45 26.5**	**+0.4**
ASAR	**Alice Springs**	**60.47**	**187**	P	**P**	**13 45 25.5**	**-0.6**
	comp=Z,2.3nm,0.9s,baz=7.0,slow=5.5,SNR=16						
	comp=Z,2.3nm,0.9s						
ASAR	**Alice Springs**	**60.47**	**187**		**P**	**13 45 25.7**	**-0.4**
ASAR	**Alice Springs**	**60.47**	**187**	P	**P**	**13 45 25.7**	**-0.4**
ARCES	**ARCESS Array B**	**63.95**	**339**	P	**P**	**13 45 48.0**	**-0.9**
	comp=Z,5.3nm,1.0s,baz=56,slow=5.7,SNR=4.6						
	comp=Z,5.3nm,1.0s						
ARCES	**ARCESS Array B**	**63.95**	**339**	*e*P	**P**	**13 45 49.9**	**+1.0**
ARCES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
YKA	**Yellowknife Ar**	**64.37**	**30**	P	**P**	**13 45 52.1**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=298,slow=7.3,SNR=5.6						
	comp=Z,0.6nm,0.7s						
YKA	**Yellowknife Ar**	**64.37**	**30**	*e*P	**P**	**13 45 54.8**	**+3.0**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
OBN	**Obninsk**	**67.83**	**323**⇑	*e*P	**P**	**13 46 12.6**	**-1.5**
OBN				*e*		13 48 39.9	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,141nm,11.0s						
STKA	**Stephens Creek**	**68.34**	**179**	P	**P**	**13 46 17.0**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=290,slow=3.2,SNR=3.6						
	comp=Z,0.8nm,0.4s						
STKA	**Stephens Creek**	**68.34**	**179**	P	**P**	**13 46 17.4**	**0.0**
STKA	**Stephens Creek**	**68.34**	**179**	*e*P	**P**	**13 46 19.9**	**+2.5**
STKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	**FINESS Array B**	**68.67**	**332**	P	**P**	**13 46 18.5**	**-0.7**
	comp=Z,2.9nm,0.8s,baz=44,slow=6.3,SNR=4.5						
	comp=Z,2.9nm,0.8s						
H04A	**Detroit Lake**	**69.81**	**49**	P	**P**	**13 46 27.9**	**+1.2**
KIV	**Kislovodsk**	**70.49**	**311**	*e*P	**P**	**13 46 30.2**	**-0.8**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PINE	**Pine Mountain**	**71.05**	**49**		**P**	**13 46 35.8**	**+1.3**
J05D	**Fort Rock, OR**	**71.14**	**50**	IAmb	IAmb	13 46 41.1	
	comp=Z,14nm,1.4s						
E09A	**Wood Farm, Sta**	**71.20**	**46**	IAmb	IAmb	13 46 37.3	
	comp=Z,8.4nm,1.2s						
O03E	**Paynes Creek**	**72.42**	**53**	IAmb	IAmb	13 46 55.9	
	comp=Z,15nm,1.4s						
BEKR	**Beckworth**	**73.58**	**52**	IAmb	IAmb	13 46 54.4	
	comp=Z,9.4nm,1.1s						
HFS	**Hagfors**	**73.99**	**335**	P	**P**	**13 46 51.1**	**-0.3**
	comp=Z,7.2nm,1.0s,baz=55,slow=2.9,SNR=8.2						
	comp=Z,7.2nm,1.0s						
AKASG	**Malin Array Be**	**74.02**	**322**	P	**P**	**13 46 51.1**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=48,slow=5.2,SNR=6.8						
	comp=Z,0.6nm,0.4s						
NOA	**NORSAR Array B**	**74.11**	**337**	P	**P**	**13 46 51.9**	**-0.3**
	comp=Z,1.7nm,0.9s,baz=52,slow=2.2,SNR=1.5						
	comp=Z,1.7nm,0.9s						
PAHR	**Pah Rah Range**	**74.29**	**52**	IAmb	IAmb	13 46 55.8	
	comp=Z,8.7nm,1.1s						
MFID	**Camas Ranch**	**74.32**	**47**	IAmb	IAmb	13 46 58.9	
	comp=Z,8.6nm,1.2s						
EGMT	**Eagleton**	**74.93**	**41**	IAmb	IAmb	13 46 59.1	
	comp=Z,15nm,1.4s						
DLMT	**Dillon**	**75.02**	**44**	IAmb	IAmb	13 47 03.4	
	comp=Z,11nm,1.1s						
NVAR	**Mina Array Bea**	**75.71**	**53**	P	**P**	**13 47 03.7**	**+1.6**
	comp=Z,5.8nm,0.9s,baz=287,slow=5.8,SNR=32						
	comp=Z,5.8nm,0.9s						
NV11	**Mina Array Sit**	**75.81**	**53**	IAmb	IAmb	13 47 04.9	
	comp=Z,10nm,1.3s						
YHB	**Horse Butte**	**76.18**	**44**	IAmb	IAmb	13 47 06.9	
	comp=Z,11nm,1.2s						
DSP	**Deep Springs**	**76.55**	**53**	IAmb	IAmb	13 47 09.2	
	comp=Z,6.3nm,1.1s						
BGU	**Big Grassy Mou**	**77.48**	**48**	IAmb	IAmb	13 47 16.6	
	comp=Z,6.6nm,1.1s						
WSHM	**Spangler Hills**	**77.90**	**55**	IAmb	IAmb	13 47 37.0	
	comp=Z,12nm,1.5s						
HWUT	**Hardware Ranch**	**77.92**	**47**	IAmb	IAmb	13 47 19.8	
	comp=Z,6.3nm,1.0s						
DUG	**Dugway, Tooele**	**78.06**	**49**	IAmb	IAmb	13 47 20.5	
	comp=Z,12nm,1.3s						
TCUT	**Toone Canyon**	**78.32**	**47**	IAmb	IAmb	13 47 21.4	
	comp=Z,7.5nm,0.9s						
PDAR	**Pinedale Array**	**78.35**	**45**	P	**P**	**13 47 17.4**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=263,slow=3.2,SNR=13						
	comp=Z,1.8nm,0.8s						
BRTR	**Keskin Array B**	**78.45**	**311**	P	**P**	**13 47 18.1**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=93,slow=4.9,SNR=4.3						
	comp=Z,0.9nm,0.7s						
BRTR	**Keskin Array B**	**78.45**	**311**	*e*P	**P**	**13 47 19.4**	**+2.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PSUT	**Pine Spring**	**78.45**	**50**	IAmb	IAmb	13 47 22.4	
	comp=Z,6.6nm,1.0s						
MPU	**Maple Canyon**	**78.88**	**48**	IAmb	IAmb	13 47 24.4	
	comp=Z,6.8nm,1.0s						
TMUT	**Trail Mountain**	**79.59**	**49**	IAmb	IAmb	13 47 26.0	
	comp=Z,15nm,1.5s						
RDMU	**Red Mountain**	**79.75**	**47**	IAmb	IAmb	13 47 30.2	
	comp=Z,10nm,1.0s						
P17A	**Butcher Ranch,**	**79.75**	**48**	IAmb	IAmb	13 47 30.3	
	comp=Z,11nm,1.0s						
LCMT	**Little Creek M**	**79.77**	**51**	IAmb	IAmb	13 47 30.1	
	comp=Z,7.7nm,1.1s						
PFO	**Pinyon Flats O**	**79.78**	**56**	IAmb	IAmb	13 47 26.5	
	comp=Z,9.0nm,1.1s						
MTPU	**Mount Pierson**	**79.78**	**50**	IAmb	IAmb	13 47 30.6	
	comp=Z,7.7nm,1.1s						
Q16A	**Castle Valley**	**79.85**	**49**	IAmb	IAmb	13 47 27.7	
	comp=Z,15nm,1.4s						
P18A	**Preston Nutter**	**79.95**	**48**	IAmb	IAmb	13 47 31.5	
	comp=Z,7.1nm,0.9s						
KNB	**Kanab**	**80.03**	**51**	IAmb	IAmb	13 47 31.8	
	comp=Z,12nm,1.2s						
SRU	**San Rafael Swe**	**80.11**	**48**	IAmb	IAmb	13 47 30.9	
	comp=Z,7.4nm,0.8s						
IRM	**Iron Mountain**	**80.31**	**55**	IAmb	IAmb	13 47 31.3	
	comp=Z,8.4nm,1.2s						
U15A	**North Rim**	**80.73**	**51**	IAmb	IAmb	13 47 34.9	
	comp=Z,7.7nm,1.0s						
CLL	**Collm**	**80.92**	**330**	*i* P	**P**	**13 47 30.0**	**-0.4**
CLL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CLL	**Collm**	**80.92**	**330**	*i* P	**P**	**13 47 30.0**	**-0.4**
	comp=Z,6.0nm,0.9s						
BLYC	**Blythe**	**80.97**	**55**	IAmb	IAmb	13 47 33.1	
	comp=Z,8.0nm,1.1s						
ESJX	**Sierra Juarez**	**81.10**	**57**	IAmb	IAmb	13 47 36.9	
	comp=Z,11nm,1.1s						
GLA	**Glamis**	**81.20**	**55**	IAmb	IAmb	13 47 37.2	
	comp=Z,12nm,1.2s						
PV21	**Cone Mtn., Par**	**81.39**	**48**	IAmb	IAmb	13 47 38.4	
	comp=Z,10nm,1.0s						
PV22	**Blue Mesa, Par**	**81.52**	**48**	IAmb	IAmb	13 47 40.0	
	comp=Z,7.3nm,0.9s						
PV16	**Nyswonger Mesa**	**81.59**	**48**	IAmb	IAmb	13 47 40.1	
	comp=Z,8.1nm,1.0s						
PV03	**Paradox Valley**	**81.67**	**48**	IAmb	IAmb	13 47 39.9	
	comp=Z,9.3nm,1.1s						
Y14A	**Wickenburg**	**81.84**	**54**	IAmb	IAmb	13 47 40.5	
	comp=Z,6.8nm,1.2s						
PV01	**Paradox Valley**	**81.91**	**48**	IAmb	IAmb	13 47 38.4	
	comp=Z,11nm,1.1s						
GERES	**GERESS Array B**	**82.51**	**328**	P	**P**	**13 47 37.7**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=74,slow=6.4,SNR=3.6						
	comp=Z,0.4nm,0.3s						
GERES	**GERESS Array B**	**82.51**	**328**	*e*P	**P**	**13 47 36.9**	**-2.1**
TASM	**ASL Pad, Albuq**	**85.29**	**49**	IAmb	IAmb	13 47 58.8	
	comp=Z,5.6nm,1.2s						
TASM	**ASL Pad, Albuq**	**85.29**	**49**	IAmb	IAmb	13 47 58.8	
	comp=Z,6.2nm,1.2s						
TASM	**ASL Pad, Albuq**	**85.29**	**49**	IAmb	IAmb	13 47 58.8	
	comp=Z,6.2nm,1.2s						
TASM	**ASL Pad, Albuq**	**85.29**	**49**	IAmb	IAmb	13 47 58.8	
	comp=Z,4.8nm,1.1s						
ANMO	**Albuquerque**	**85.30**	**49**	IAmb	IAmb	13 47 58.7	
	comp=Z,4.6nm,1.1s						
ABQ	**Albuquerque**	**85.30**	**49**	IAmb	IAmb	13 47 58.8	
	comp=Z,4.9nm,1.1s						
121A	**Cookes Peak, D**	**86.08**	**52**	IAmb	IAmb	13 48 02.1	
	comp=Z,5.5nm,0.9s						
TXAR	**Lajitas Array**	**90.84**	**52**	P	**P**	**13 48 20.9**	**+0.8**
	comp=Z,2.2nm,0.8s,baz=297,slow=3.4,SNR=18						
	comp=Z,2.2nm,0.8s						
KEST	**Kesra**	**94.75**	**322**	LR	LR	14 35 46.4	
	comp=Z,142nm,18.8s,baz=316,slow=38						
ESDC	**Sonseca Array**	**97.16**	**333**	LR	LR	14 39 01.5	
	comp=Z,95nm,19.2s,baz=204,slow=39						
LPAZ	**La Paz**	**147.44**	**59**	PKPbc	**PKPbc**	**13 55 00.7**	**-0.7**
	comp=Z,2.5nm,0.7s,baz=336,slow=2.3,SNR=10						
H03N2	**Juan Fernandez**	**147.74**	**96**	T	T	16 39 51.6	
	baz=291,slow=76,SNR=193						
H03N3	**Juan Fernandez**	**147.75**	**96**	T	T	16 39 55.0	
	baz=291,slow=76,SNR=216						
H03N1	**Juan Fernandez**	**147.75**	**96**	T	T	16 39 52.5	
	baz=291,slow=76,SNR=181						

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*JMA **05** 13:45:22.4±0.3, 43°N±1°×14°8E±°, h8^{km}, MD4.4/36, MV4.7/36, E OFF HOKKAIDO*

*NIED **05** 13:45:22.4, 43°.25N×147°.77E, h8^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.02; $M_{\theta\theta}$-0.28; $M_{\phi\phi}$-1.73; $M_{r\theta}$2.36; $M_{\theta\phi}$-1.98; $M_{\phi r}$1.56; Fault plane solution: $M_0$3.88000×10^{15} NP1: ϕ_s188.00000°, δ27.00000°, λ46.00000°. NP2: ϕ_s55.00000°, δ71.00000°, λ109.00000°.*

*NEIC **05** 13:45:24.0±2.6, 43°.44N±0°.05×147°.7E±0°.1, h10^{km}±1^{km}, mb4.6/59 Error ellipse: s-maj=17.5km s-min=8.1km az=109.0*

*MOS **05** 13:45:24.9±1.1, 43°.45N×147°.84E, h38^{km}, mb5.0/20, MS4.1/5, Error ellipse: s-maj=10.4km s-min=6.8km az=129.2*

*SKHL **05** 13:45:24.0±0.7, 43°.30N×148°.00E, h45^{km}±5^{km}, mb5.3/4*

*IDC **05** 13:45:26.5±0.5, 43°.37N×147°.78E, h35^{km}±4^{km}, mb4.0/24, mbtmp4.2/28, ML3.6/3, MS3.8/7, Error ellipse: s-maj=14.0km s-min=12.0km az=146.0*

ISC 05 13:45:24.5±0.6, **43°.33N**±0°.05×**147°.89E**±0°.05, **h23**^{km}±3^{km}, **h23**^{km}**:pP-P, n200, σ1°.60**/200, **mb4.6**/72, **MS3.9**/10, **13C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	**0.94**	**305**	*e*P	Pn	13 45 49.3	+7.1
SHO				AMB	AMB	13 45 51.0	
	4μm,0.4s						
SHO				*e*S	Sn	13 46 04.6	+10
SHO				A	A	13 46 05.4	
	22μm,0.6s						
SHO				A	A	13 46 05.4	
	18μm,0.6s						
NEM2	**Nemuro 2**	**1.57**	**272**	P	**Pn**	**13 45 49.5**	**-1.4**
NEM2				S	**Sn**	**13 46 09.1**	**-1.3**
NEM2	**Nemuro 2**	**1.57**	**272**	A	A	13 45 49.5	
	comp=N,9.0nm,1.4s,comp=E,10.0nm,0.8s						
NMR	**Nemuro--Hokkai**	**1.58**	**272**	*e*PN	**Pn**	**13 45 49.6**	**-1.4**
NMR				*e*S	**Sn**	**13 46 09.3**	**-1.4**
NMR	**Nemuro--Hokkai**	**1.58**	**272**	*e*P	**Pn**	**13 45 49.8**	**-1.2**
NMR				*e*S	**Sn**	**13 46 09.4**	**-1.3**
YUK	**Yuzh-Kuril'sk**	**1.63**	**296**	*e*PN	**Pn**	**13 45 50.7**	**-1.0**
YUK				*e*S	**Sn**	**13 46 09.4**	**-2.6**
YUK				pmax	pmax		
	comp=N,181nm,0.3s						
YUK				pmax	pmax		
	comp=Z,2μm,0.3s						
YUK				pmax	pmax		
	comp=E,131nm,0.2s						
YUK				smax	smax		
	comp=N,4μm,0.4s						
YUK				smax	smax		
	comp=E,8μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.63**	**296**	*e*P	**Pn**	**13 45 50.7**	**-1.0**
YUK				AMB	AMB	13 45 54.1	
	comp=E,2μm,0.3s						
YUK				*e*S	**Sn**	**13 46 11.1**	**-0.9**
YUK				A	A	13 46 14.8	
	comp=E,4μm,0.5s						
YUK				A	A	13 46 14.8	
	comp=E,8μm,0.5s						
GLVR	**Golovnino**	**1.77**	**284**	*e*PN	**Pn**	**13 45 52.8**	**-0.9**
GLVR				*e*S	**Sn**	**13 46 14.0**	**-1.5**
GLVR				pmax	pmax		
	comp=Z,625nm,0.4s						
GLVR				pmax	pmax		
	comp=N,257nm,0.3s						
GLVR				pmax	pmax		
	comp=E,234nm,0.3s						
GLVR				smax	smax		
	comp=E,5μm,0.7s						
GLVR				smax	smax		
	comp=N,3μm,0.3s						
GLVR	**Golovnino**	**1.77**	**284**	*e*P	**Pn**	**13 45 52.8**	**-0.9**
GLVR				AMB	AMB	13 45 58.2	
	comp=N,630nm,0.4s						
GLVR				*e*S	**Sn**	**13 46 14.0**	**-1.5**
GLVR				A	A	13 46 21.3	
	comp=N,3μm,0.5s						
GLVR				A	A	13 46 21.3	
	comp=N,5μm,0.5s						
KUR	**Kuril'sk**	**1.90**	**359**	*e*PN	**Pn**	**13 45 54.2**	**-1.2**
KUR				*e*S	**Sn**	**13 46 17.0**	**-1.7**
KUR				pmax	pmax		
	comp=Z,355nm,0.5s						
KUR				pmax	pmax		
	comp=N,148nm,0.3s						
KUR				pmax	pmax		
	comp=E,154nm,0.4s						
KUR				smax	smax		
	comp=E,939nm,0.4s						
KUR				smax	smax		
	comp=N,552nm,0.5s						
KUR	**Kuril'sk**	**1.90**	**359**	*e*P	**Pn**	**13 45 54.7**	**-0.7**
KUR				AMB	AMB	13 46 04.0	
	comp=N,360nm,0.3s						
KUR				*e*S	**Sn**	**13 46 17.2**	**-1.5**
KUR				A	A	13 46 24.5	
	comp=N,1μm,0.5s						
KUR				A	A	13 46 24.5	
	comp=N,1μm,0.5s						
JKHN	**Kushirohamanak**	**2.01**	**264**	P	**Pn**	**13 45 56.5**	**-0.5**
JKHN				S	**Sn**	**13 46 20.9**	**-0.5**
JKHN	**Kushirohamanak**	**2.01**	**264**	A	A	13 45 56.5	
	comp=N,8.0nm,2.1s,comp=E,11nm,1.9s						
RUSJ	**Misakicho**	**2.07**	**293**⇑	*e*PN	**Pn**	**13 45 57.5**	**-0.2**
RUSJ				*e*S	**Sn**	**13 46 21.2**	**-1.5**
JRA	**Rausu**	**2.10**	**288**	*e*P	**Pn**	**13 45 57.6**	**-0.5**
JRA				*e*S	**Sn**	**13 46 23.3**	**-0.2**
JRA	**Rausu**	**2.10**	**288**	A	A	13 45 57.6	
	comp=N,5.0nm,1.9s,comp=E,6.0nm,5.8s						
JNSB	**Nemuroshibetsu**	**2.15**	**283**	P	**Pn**	**13 45 58.3**	**-0.5**
JNSB				S	**Sn**	**13 46 24.7**	**0.0**
JNSB	**Nemuroshibetsu**	**2.15**	**283**	A	A	13 45 58.3	
	comp=N,11nm,3.6s,comp=E,10.0nm,4.4s						
AKK	**Akkeshi**	**2.25**	**263**	*e*P	**Pn**	**13 45 59.1**	**-1.2**
JNK	**Nakash**	**2.32**	**277**	P	**Pn**	**13 46 00.1**	**-1.1**
JNK				S	**Sn**	**13 46 28.0**	**-1.1**
JAK	**Akkeshi**	**2.36**	**263**	P	**Pn**	**13 46 00.6**	**-1.1**
JAK				S	**Sn**	**13 46 28.7**	**-1.3**
JAK	**Akkeshi**	**2.36**	**263**	A	A	13 46 00.6	
	comp=N,6.0nm,1.2s,comp=E,6.0nm,2.5s						
JTKR	**Abashiri--Toko**	**2.96**	**284**	P	**Pn**	**13 46 10.3**	**+0.3**
JOB	**Onbets**	**3.00**	**263**	P	**Pn**	**13 46 09.9**	**-0.6**
JOB				*e*S	**Sn**	**13 46 44.8**	**-1.0**
JAR	**Ashorobuto**	**3.01**	**271**	P	**Pn**	**13 46 10.3**	**-0.4**
JAR				*e*S	**Sn**	**13 46 45.5**	**-0.5**
JMP	**Maruseppu**	**3.36**	**283**	*e*P	**Pn**	**13 46 16.1**	**+0.6**
JCH	**Churui**	**3.40**	**259**	P	**Pn**	**13 46 15.5**	**-0.6**
JCH				*e*S	**Sn**	**13 46 52.7**	**-2.9**
ERM	**Erimo**	**3.73**	**251**	Pn	**Pn**	**13 46 21.2**	**+0.6**
ERM	**Erimo**	**3.73**	**251**	PN	**Pn**	**13 46 21.2**	**+0.6**
JEM	**Erimo**	**3.73**	**251**	*e*P	**Pn**	**13 46 21.1**	**+0.5**
JKK2	**Kamakawa 2**	**3.77**	**280**	P	**Pn**	**13 46 22.5**	**+1.2**
JKA	**Kamikawa-asahi**	**3.92**	**283**		**Pn**	**13 46 24.9**	**+1.7**
ASAJ	**Asahikawa**	**3.92**	**283**	Pn	**Pn**	**13 46 24.6**	**+1.5**
	comp=E,7.1nm,0.3s,baz=158,slow=9.9,SNR=28						
ASAJ				LR	LR	13 48 07.7	
	comp=E,843nm,19.8s,baz=166,slow=42						
	comp=E,16nm,0.4s						
ASAJ	**Asahikawa**	**3.92**	**283**	PN	**Pn**	**13 46 24.9**	**+1.7**
JNBK	**Urakawa-nobuka**	**3.92**	**256**	P	**Pn**	**13 46 22.5**	**-0.7**
JSE	**Soyaes**	**4.15**	**295**	*e*P	**Pn**	**13 46 27.1**	**+0.8**
JWK2	**Keihoku**	**4.74**	**297**	*e*P	**Pn**	**13 46 36.7**	**+2.3**
JEW	**Eniwo**	**4.74**	**266**	*e*P	**Pn**	**13 46 35.2**	**+0.7**
JEW				*e*S	**Sn**	**13 47 28.3**	**-0.5**
YSS	**Yuzhno-Sakhali**	**5.13**	**317**		**Pn**	**13 46 40.4**	**+0.6**
YSS	**Yuzhno-Sakhali**	**5.13**	**317**	*e*PN	**Pn**	**13 46 40.7**	**+0.9**
YSS				pmax	pmax		
	comp=Z,60nm,0.5s						
YSS				MLR	MLR		
	comp=Z,1μm,18.0s						
YSS	**Yuzhno-Sakhali**	**5.13**	**317**	*e*P	**Pn**	**13 46 40.7**	**+0.9**
YSS				*e*S	**Sn**	**13 47 38.7**	**+0.5**
TYV	**Tymovskoe**	**8.34**	**336**	*e*PN	Pn	13 47 09.5	-14
TYV				pmax	pmax		
	comp=Z,20nm,1.2s						
TYV				pmax	pmax		
	comp=Z,300nm,2.1s						
TYV	**Tymovskoe**	**8.34**	**336**	*e*P	**Pn**	**13 47 24.0**	**+0.2**
MAJO	**Matsushiro**	**10.06**	**231**		**Pn**	**13 47 46.2**	**-1.3**
MAJO	**Matsushiro**	**10.06**	**231**	PN	**Pn**	**13 47 46.2**	**-1.3**
MJAR	**Matsushiro Arr**	**10.06**	**231**	Pn	**Pn**	**13 47 47.0**	**-0.5**
	comp=Z,2.8nm,0.8s,baz=27,slow=14,SNR=2.3						
MJAR	**Matsushiro Arr**	**10.06**	**231**	PN	**Pn**	**13 47 47.0**	**-0.5**
MJB9	**Matsu-Tunnel**	**10.06**	**231**		**Pn**	**13 47 46.4**	**-1.1**
USRK	**Ussuriysk Ar.**	**11.54**	**280**	Pn	**Pn**	**13 48 07.8**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=85,slow=8.8,SNR=3.1						
	comp=Z,3.8nm,0.8s						
INU	**Inuyama**	**11.59**	**230**	Pn	**Pn**	**13 48 06.7**	**-1.6**
PETK	**Petropavlovsk-**	**11.76**	**30**	Pn	**Pn**	**13 48 10.0**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=215,slow=12,SNR=12						
	comp=Z,1.4nm,0.5s						
PETK	**Petropavlovsk-**	**11.76**	**30**	PN	**Pn**	**13 48 10.0**	**-0.6**
PET	**Petropavlovsk**	**12.05**	**33**	Pn	**Pn**	**13 48 13.9**	**-0.7**
BNX	**BinXian**	**14.81**	**286**	⇓P	**Pn**	**13 48 51.6**	**-0.7**
BNX				pmax	pmax		
	comp=Z,8.0nm,1.0s						
JNU	**Nakatsue**	**16.78**	**238**	LR	LR	13 55 50.7	
	comp=Z,171nm,18.7s,baz=16,slow=37						
ZEA	**Zeya**	**17.12**	**315**	*e*P	**P**	**13 49 28.6**	**+5.1**
SEY	**Seymchan**	**19.81**	**6**	P	**P**	**13 49 51.1**	**-2.0**
	comp=Z,3.6nm,0.7s,baz=287,slow=17,SNR=5.6						
SEY				LR	LR	13 57 28.5	
	comp=Z,203nm,19.6s,baz=176,slow=36						
DL2	**Dalian**	**20.24**	**266**	P	**P**	**13 49 57.1**	**-0.8**
DL2				pmax	pmax		
	comp=Z,50nm,1.1s						
HILR	**Hailar Array B**	**20.29**	**298**	P	**P**	**13 49 56.3**	**-2.2**
	comp=Z,13nm,0.5s,baz=92,slow=10,SNR=4.1						
	comp=Z,13nm,0.5s						
YAK	**Yakutsk**	**21.60**	**336**	P	**P**	**13 50 08.9**	**-3.4**
	comp=Z,16nm,0.3s,baz=133,slow=2.4,SNR=7.8						
YAK	**Yakutsk**	**21.60**	**336**		**P**	**13 50 08.4**	**-3.9**
YAK				IAmb	IAmb	13 50 10.2	
	comp=Z,23nm,0.8s						
YAK	**Yakutsk**	**21.60**	**336**	*e*P	**P**	**13 50 08.4**	**-3.9**
YAK				*e*		13 50 30.1	
YAK				*e*S	**S**	**13 54 08.6**	**-1.6**
YAK				*e**SS	Sn	13 54 23.2	+3.9
YAK				*e*SS	**SnSn**	**13 54 36.4**	**+2.0**
YAK				pmax	pmax		
	comp=Z,24nm,1.0s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,690nm,4.9s						
YAK				pmax	pmax		
	comp=N,922nm,5.8s						
YAK				pmax	pmax		
	comp=E,384nm,3.5s						
YAK				smax	smax		
	comp=N,936nm,5.4s						
YAK				smax	smax		
	comp=E,613nm,4.9s						
YAK				MLR	MLR		
	comp=Z,240nm,24.0s						
YAK				MLR	MLR		
	comp=N,148nm,22.0s						
YAK				MLR	MLR		
	comp=E,162nm,19.0s						
XLT	**XiLinHaoTe**	**22.97**	**282**	*e*P	**P**	**13 50 27.1**	**-0.1**
XLT				pP	pP	13 50 33.6	+0.8
XLT				sP	pwP	13 50 37.4	+0.4
XLT				PP	**PnPn**	**13 51 00.6**	**+8.5**
XLT				pmax	pmax		
	comp=Z,15nm,0.7s						
XLT				pmax	pmax		
	comp=Z,390nm,5.4s						
H11N2	**WAKE ISLAND Hy**	**28.43**	**140**	T	T	14 22 07.5	
	baz=330,slow=75,SNR=67						
H11N1	**WAKE ISLAND Hy**	**28.45**	**140**	T	T	14 22 07.2	
	baz=330,slow=75,SNR=89						
H11N3	**WAKE ISLAND Hy**	**28.45**	**140**	T	T	14 22 07.6	
	baz=330,slow=75,SNR=69						
ULN	**Ulaanbaatar**	**28.69**	**293***c*	*e*P	**P**	**13 51 20.6**	**+0.9**
ULN				pmax	pmax		
	comp=Z,20nm,1.3s						
ULN	**Ulaanbaatar**	**28.69**	**293**	*e*P	**P**	**13 51 20.6**	**+0.9**
SONM	**Songino Array**	**29.13**	**294**	P	**P**	**13 51 24.2**	**+0.6**
	comp=Z,8.3nm,0.7s,baz=86,slow=8.5,SNR=35						
SONM				LR	LR	14 04 15.8	
	comp=Z,294nm,20.8s,baz=33,slow=39						
	comp=Z,8.3nm,0.7s						
SONM	**Songino Array**	**29.13**	**294**		**P**	**13 51 23.7**	**+0.1**
SONM				IAmb	IAmb	13 51 24.8	
	comp=Z,15nm,1.2s						
H11S1	**WAKE ISLAND Hy**	**29.40**	**141**	T	T	14 23 15.8	
	baz=332,slow=76,SNR=24						
H11S3	**WAKE ISLAND Hy**	**29.41**	**141**	T	T	14 23 27.0	
	baz=332,slow=76,SNR=80						
H11S2	**WAKE ISLAND Hy**	**29.42**	**141**	T	T	14 23 26.6	
	baz=332,slow=76,SNR=54						
TIXI	**Tiksi**	**29.88**	**348**	P	P	13 51 24.4	-5.4
TIXI	**Tiksi**	**29.88**	**348**	P	P	13 51 24.4	-5.4
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
XAN	**Xi'an**	**31.56**	**266**	P	P	13 51 51.5	+6.4
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
LZH	**Lanzhou**	**34.33**	**273**	*e*P	**P**	**13 52 10.2**	**+0.8**
LZH				pP	sP	13 52 16.5	-1.4
LZH				sP	pwP	13 52 20.7	+1.3
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						

LZDM	Lanzhou Array	34.49	273	P	P	13 52 11.6	+0.6
	comp=Z,3.0nm,0.5s,baz=96,slow=3.0,SNR=5.4						
	comp=Z,3.0nm,0.5s						
GTA	Gaotai	35.90	281	*e*P	P	13 52 22.8	-0.1
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
D19K	Kuna River	37.46	29		P	13 52 36.6	+0.9
D19K				IAmb	IAmb	13 52 55.3	
	comp=Z,7.2nm,0.8s						
H19K	Roundabout Mou	37.52	34	P	P	13 52 38.0	+1.8
H19K				IAmb	IAmb	13 52 49.7	
	comp=Z,14nm,1.1s						
E19K	Redstone River	37.55	31		P	13 52 37.9	+1.4
E19K				IAmb	IAmb	13 52 53.5	
	comp=Z,8.0nm,0.9s						
D20K	Etivluk River	38.05	29		P	13 52 42.4	+1.8
D20K				IAmb	IAmb	13 52 59.7	
	comp=Z,16nm,1.2s						
B20K	Meade River	38.17	27	P	P	13 52 43.0	+1.4
B20K				IAmb	IAmb	13 52 54.5	
	comp=Z,9.4nm,0.6s						
B21K	Ikpikpuk River	38.94	28		P	13 52 49.0	+0.9
B21K				IAmb	IAmb	13 53 01.7	
	comp=Z,11nm,0.7s						
D22K	Ayikyak River	39.48	29		P	13 52 54.0	+1.3
D22K				IAmb	IAmb	13 52 56.0	
	comp=Z,5.3nm,0.5s						
E22K	Anaktuvuk Pass	39.70	31		P	13 52 56.0	+1.5
E22K				IAmb	IAmb	13 53 09.2	
	comp=Z,7.5nm,0.8s						
G23K	Bananza Creek	40.25	33	P	P	13 53 05.2	+6.1
C23K	Itkillik River	40.35	28		P	13 53 01.1	+1.3
D24K	Happy Valley	40.90	29	IAmb	IAmb	13 53 24.6	
	comp=Z,7.3nm,0.8s						
E24K	Your Creek	40.93	31	IAmb	IAmb	13 53 20.2	
	comp=Z,9.3nm,1.1s						
DGZ	Jazzator, Alta	41.09	301	*i* P	P	13 53 07.2	+0.8
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
G24K	Hadweenzic Riv	41.26	33	IAmb	IAmb	13 53 34.5	
	comp=Z,15nm,1.4s						
ILAR	Eielson Array	41.51	36	P	P	13 53 10.0	+0.6
	comp=Z,0.8nm,0.8s,baz=264,slow=8.8,SNR=10						
	comp=Z,0.8nm,0.8s						
ZALV	Zalesovo Beam	41.68	308	P	P	13 53 10.1	-0.8
	comp=Z,1.6nm,0.5s,baz=74,slow=6.9,SNR=10						
ZALV				PcP	PcP	13 55 05.8	-1.4
	comp=Z,0.8nm,0.6s,baz=90,slow=3.0,SNR=3.9						
ZALV				LR	LR	14 11 37.6	
	comp=Z,92nm,18.3s,baz=285,slow=38						
	comp=Z,1.6nm,0.5s						
ZALV	Zalesovo Beam	41.68	308		P	13 53 07.9	-3.0
ZALV	Zalesovo Beam	41.68	308	*i* P	P	13 53 10.3	-0.6
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s						
D25K	Kavik River	41.78	29	IAmb	IAmb	13 53 14.7	
	comp=Z,6.5nm,0.7s						
C27K	Jago River	42.73	29	IAmb	IAmb	13 53 22.7	
	comp=Z,13nm,1.2s						
DOT	Dot Lake	42.81	38	IAmb	IAmb	13 53 36.9	
	comp=Z,12nm,1.5s						
H27K	Steamboat Moun	43.66	34	IAmb	IAmb	13 53 50.7	
	comp=Z,10.0nm,1.1s						
L27K	Beaver Creek,	43.87	38	IAmb	IAmb	13 53 46.4	
	comp=Z,5.8nm,0.8s						
E28M	Babbage River	44.25	30		P	13 53 33.0	+1.4
I28M	Miner Creek	44.39	35	IAmb	IAmb	13 53 48.3	
	comp=Z,7.9nm,0.8s						
E29M	Blow River	44.87	30	IAmb	IAmb	13 53 52.2	
	comp=Z,7.6nm,0.8s						
G29M	Pine Creek	44.99	32	IAmb	IAmb	13 54 16.0	
	comp=Z,10nm,1.1s						
I29M	Ogilvie Camp,	45.08	35	IAmb	IAmb	13 53 53.6	
	comp=Z,8.1nm,1.0s						
MK31	Makanchi Array	45.26	298	*ce*P	P	13 53 40.4	+0.5
MKAR	Makanchi Array	45.26	298	P	P	13 53 40.0	+0.1
	comp=Z,4.8nm,0.7s,baz=79,slow=9.1,SNR=61						
	comp=Z,4.8nm,0.7s						
MKAR	Makanchi Array	45.26	298		P	13 53 39.4	-0.5
MAKZ	Makanchi	45.45	298		P	13 53 39.6	-1.9
MAKZ	Makanchi	45.45	298	P	P	13 53 39.6	-1.9
MAKZ				pmax	pmax		
	comp=Z,18nm,1.1s						
I30M	Mount Dempster	45.90	35		P	13 53 46.8	+1.9
I30M				IAmb	IAmb	13 54 00.4	
	comp=Z,8.0nm,0.8s						
KURK	Kurchatov	46.21	305		P	13 53 46.3	-1.1
KURK				IAmb	IAmb	13 53 47.8	
	comp=Z,8.4nm,0.8s						
KURK	Kurchatov	46.21	305	*ce*P	P	13 53 47.4	+0.1
KURK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KURK				MLR	MLR		
	comp=Z,85nm,15.0s						
KURK	Kurchatov	46.21	305	*e*P	P	13 53 47.4	+0.1
KURBB	Kurchatov Arra	46.30	304	P	P	13 53 47.3	-0.7
	comp=Z,4.4nm,0.4s,baz=73,slow=8.8,SNR=36						
KURBB				LR	LR	14 14 25.1	
	comp=Z,96nm,18.8s,baz=182,slow=38						
	comp=Z,4.4nm,0.4s						
INK	Inuvik	46.49	30	IAmb	IAmb	13 54 04.3	
	comp=Z,4.7nm,0.8s						
CMAR	Chiang Mai Arr	47.93	255	P	P	13 54 02.1	+1.0
	comp=Z,0.9nm,0.7s,baz=44,slow=7.7,SNR=7.2						
	comp=Z,0.9nm,0.7s						
A36M	Sachs Harbour	48.53	24	IAmb	IAmb	13 54 20.1	
	comp=Z,5.8nm,1.1s						
C36M	Paulatuk	49.60	28	IAmb	IAmb	13 54 27.3	
	comp=Z,7.8nm,1.1s						
BVAR	Borovoye Array	50.19	310	P	P	13 54 17.5	-0.5
	comp=Z,2.8nm,0.7s,baz=83,slow=9.2,SNR=5.4						
	comp=Z,2.8nm,0.7s						
BORK	Borovoye	50.22	310		P	13 54 17.1	-1.2
BORK				IAmb	IAmb	13 54 19.5	
	comp=Z,7.1nm,1.1s						
BORK	Borovoye	50.22	310	*ce*P	P	13 54 18.7	+0.5
BORK				pmax	pmax		
	comp=Z,12nm,1.7s						
KDJ	Kajisay	50.48	294	IAmb	IAmb	13 54 22.6	
	comp=Z,8.8nm,1.0s						
EVN	Everest	50.87	274		P	13 54 24.2	-0.1
AAK	Ala-Archa	52.02	296		P	13 54 30.8	-1.4
AAK				IAmb	IAmb	13 54 39.0	
	comp=Z,11nm,1.4s						
AAK	Ala-Archa	52.02	296	*ce*P	P	13 54 32.6	+0.4
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
AAK				MLR	MLR		
	comp=Z,79nm,14.0s						
AAK	Ala-Archa	52.02	296	*e*P	P	13 54 32.6	+0.4
KSH	Kashi	52.52	292	P	P	13 54 38.7	+2.9
KSH				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARTI	Arti	55.13	317		P	13 54 52.1	-2.4
ARTI	Arti	55.13	317	*d i*P	P	13 54 54.1	-0.4
ARTI						13 56 52.5	
ARTI				S	S	14 02 38.8	+3.0
ARTI				SS	SS	14 06 22.3	+3.2
ARTI				pmax	pmax		
	comp=Z,20nm,1.4s						
RES	Resolute Bay	55.21	17		P	13 54 54.1	-0.8
RES	Resolute Bay	55.21	17	P	P	13 54 54.1	-0.8
RES				pmax	pmax		
	comp=Z,16nm,1.3s						
YKA	Yellowknife Ar	55.85	34	P	P	13 55 00.5	+0.9
	comp=Z,0.7nm,0.7s,baz=302,slow=7.5,SNR=8.0						
	comp=Z,0.7nm,0.7s						
YKA	Yellowknife Ar	55.85	34	*i* P	P	13 55 00.3	+0.7
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NIL	Nilore	57.43	287		P	13 55 11.2	-0.1
NIL	Nilore	57.43	287	P	P	13 55 11.2	-0.1
NIL				pmax	pmax		
	comp=Z,27nm,1.5s						
ABKAR	Akbulak array	57.75	309		P	13 55 13.0	-0.2
KIRV	Kirov	58.26	322	*ce*P	P	13 55 16.9	+0.3
SHAA	Shahritus	58.80	294	IAmb	IAmb	13 55 21.9	
	comp=Z,19nm,0.5s						
ARCES	ARCESS Array B	59.83	340	P	P	13 55 26.8	-0.7
	comp=Z,2.3nm,0.7s,baz=49,slow=7.3,SNR=16						
	comp=Z,2.3nm,0.7s						
KLMR	Klimovskoe	61.08	328	*e*P	P	13 55 33.9	-2.1
KLMR				pmax	pmax		
	comp=Z,45nm,2.0s						
WRA	Warramunga Arr	64.18	194	P	P	13 55 56.4	-0.8
	comp=Z,1.2nm,0.9s,baz=13,slow=6.8,SNR=8.0						
WRA				pP	pwP	13 56 07.6	-1.2
	comp=Z,2.2nm,0.8s,baz=15,slow=6.8,SNR=9.3						
	comp=Z,1.2nm,0.9s						
WRA	Warramunga Arr	64.18	194	*i* P	P	13 55 57.9	+0.7
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FINES	FINESS Array B	65.49	333	P	P	13 56 04.6	-0.6
	comp=Z,5.7nm,0.7s,baz=44,slow=9.0,SNR=16						
	comp=Z,5.7nm,0.7s						
FINES	FINESS Array B	65.49	333	*ce*P	P	13 56 04.9	-0.4
FINES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
OBN	Obninsk	65.97	324⇑	*e*P	P	13 56 07.3	-1.1
OBN				*e*		13 58 32.2	
OBN				*e*S	S	14 04 55.8	+1.5
OBN				pmax	pmax		
	comp=Z,62nm,2.5s						
OBN				MLR	MLR		
	comp=Z,136nm,13.0s						
OBN	Obninsk	65.97	324	*e*P	P	13 56 07.3	-1.1
VRH	Novokhopyorsk	66.19	319	*e*P	P	13 56 08.0	-2.0
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LPSR	Galich'ya Gora	66.59	321	*e*P	P	13 56 10.8	-1.7
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NVAR	Mina Array Bea	67.34	58	P	P	13 56 18.9	+1.0
	comp=Z,0.4nm,0.7s,baz=294,slow=5.6,SNR=4.5						
NVAR				pP	pwP	13 56 29.4	+0.2
	comp=Z,0.7nm,0.7s,baz=292,slow=7.7,SNR=4.3						
	comp=Z,0.4nm,0.7s						
VSR	Storozhevoye	67.40	320	*e*P	P	13 56 15.4	-2.3
VSR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ASAR	Alice Springs	67.90	194	P	P	13 56 22.2	+1.2
	comp=Z,0.6nm,0.8s,baz=16,slow=5.6,SNR=9.9						
ASAR				pP	pwP	13 56 32.2	-0.5
	comp=Z,1.7nm,0.7s,baz=11,slow=5.7,SNR=20						
	comp=Z,0.6nm,0.8s						
PDAR	Pinedale Array	69.77	50	P	P	13 56 34.0	+1.0
	comp=Z,0.1nm,0.4s,baz=348,slow=2.4,SNR=3.3						
	comp=Z,0.1nm,0.4s						
NB2	NORSAR Subarra	70.19	339	P	P	13 56 34.6	-0.3
	comp=Z,5.1nm,0.6s,baz=32,slow=6.5						
NOA	NORSAR Array B	70.19	339	P	P	13 56 34.4	-0.5
	comp=Z,3.8nm,0.6s,baz=31,slow=6.3,SNR=9.9						
NOA				pP	pwP	13 56 46.0	-0.2
	comp=Z,0.8nm,0.5s,baz=33,slow=6.5,SNR=2.6						
	comp=Z,3.8nm,0.6s						
HFS	Hagfors	70.28	338	P	P	13 56 35.0	-0.5
	comp=Z,4.5nm,0.5s,baz=54,slow=7.5,SNR=21						
	comp=Z,4.5nm,0.5s						
HFS	Hagfors	70.28	338	P	P	13 56 35.0	-0.5
KIV	Kislovodsk	70.44	312	*e*P	P	13 56 36.4	-0.4
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
KIV				MLR	MLR		
	comp=Z,106nm,18.0s						
KIV	Kislovodsk	70.44	312	*e*P	P	13 56 36.5	-0.4
KBZ	Khabaz	70.48	312	P	P	13 56 37.8	+0.9
	comp=Z,8.7nm,0.9s,baz=55,slow=4.1,SNR=19						
KBZ				LR	LR	14 32 16.6	
	comp=Z,124nm,18.3s,baz=5.0,slow=40						
	comp=Z,8.7nm,0.9s						
KBZ	Khabaz	70.48	312	*ce*P	P	13 56 35.8	-1.1
KBZ				pmax	pmax		
	comp=Z,11nm,0.9s						
KBZ	Khabaz	70.48	312	*e*P	P	13 56 35.8	-1.1
SHA1	Shidzhatmaz	70.60	312	*ce*P	P	13 56 38.5	+0.5
AK03	Malin Array Si	72.22	324	P	P	13 56 47.0	-0.3
AKASG	Malin Array Be	72.23	324	P	P	13 56 47.3	-0.1
	comp=Z,3.7nm,0.4s,baz=39,slow=6.3,SNR=21						
	comp=Z,3.7nm,0.4s						
AKASG	Malin Array Be	72.23	324	IAmb	IAmb	13 56 49.6	
	comp=Z,7.3nm,1.2s						
AKBB	Malin Array Si	72.23	324	*ce*P	P	13 56 47.7	+0.3
AKBB	Malin Array Si	72.23	324	P	P	13 56 46.5	-0.9
AK04	Malin Array Si	72.24	324	P	P	13 56 47.2	-0.3
KIEV	Kiev	72.25	324	P	P	13 56 46.7	-0.8
	comp=Z,69nm,1.1s						
AK08	Malin Array Si	72.27	324	P	P	13 56 47.3	-0.3
AK02	Malin Array Si	72.28	324	P	P	13 56 47.4	-0.2
AK11	Malin Array Si	72.28	324	P	P	13 56 47.3	-0.3
SOC	Sochi	72.28	314	*e*P	P	13 56 40.6	-7.2
SOC				*e*S	S	14 06 00.8	-8.6
SOC				*e*SS	SS	14 10 49.5	+3.0
SOC				pmax	pmax		
	comp=Z,21nm,1.0s						
SOC				MLR	MLR		
	comp=Z,169nm,14.0s						
AK18	Malin Array Si	72.29	324	P	P	13 56 47.4	-0.3
AK12	Malin Array Si	72.31	324	P	P	13 56 47.5	-0.3
AK16	Malin Array Si	72.31	324	P	P	13 56 47.6	-0.2
RNPP8	Varash	73.16	326	P	P	13 56 51.9	-1.0
LUBAR	Lubar, Ukraine	73.44	324	P	P	13 56 52.9	-1.7
KMPD	K-Podol'skiy	75.03	324	P	P	13 57 03.4	-0.4
KWP	Kalwaria Pacla	75.75	327	P	P	13 57 08.4	+0.4
KSV	Kosov	75.81	325	P	P	13 57 07.8	-0.6
BUR08	Bucovina Ar. S	76.28	324		P	13 57 10.3	-0.8
STHS	Stebnicka Huta	76.50	327	*e*P	P	13 57 14.8	+2.5
STHS	Stebnicka Huta	76.50	327	*e*P	P	13 57 14.8	+2.5
LANS	Liptovska Anna	77.41	328	*e*P	P	13 57 19.1	+1.6
LANS	Liptovska Anna	77.41	328	*e*P	P	13 57 19.1	+1.6
CLL	Collm	77.93	333	*i* P	P	13 57 20.2	-0.1
CLL				*i*		13 57 32.5	
CLL	Collm	77.93	333	*i* P	P	13 57 20.2	-0.1
CLL				*i* PcP	pwP	13 57 32.5	+0.9
BRTR	Keskin Array B	78.22	314	P	P	13 57 22.4	+0.1
	comp=Z,1.1nm,0.6s,baz=64,slow=2.6,SNR=5.5						
BRTR				pP	pwP	13 57 33.0	-0.1
	comp=Z,1.1nm,0.7s,baz=49,slow=1.8,SNR=4.0						
	comp=Z,1.1nm,0.6s						
BRTR	Keskin Array B	78.22	314	*ce*P	P	13 57 25.0	+2.7
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
EKA	Eskdalemuir Ar	78.68	344	P	P	13 57 23.5	-0.8
	comp=Z,0.8nm,0.4s,baz=29,slow=8.9,SNR=3.9						
	comp=Z,0.8nm,0.4s						
MODS	Modra-Piesok	78.88	329	*e*P	P	13 57 28.8	+3.2
MODS	Modra-Piesok	78.88	329	*e*P	P	13 57 28.8	+3.2
KHC	Kasperske Hory	79.59	331	*e*P	P	13 57 29.9	+0.4
KHC				*e*		13 57 43.1	
KHC	Kasperske Hory	79.59	331	*e*P	P	13 57 29.9	+0.4
KHC				*e*x	x	13 57 43.1	
GERES	GERESS Array B	79.78	331	P	P	13 57 31.1	+0.5
	comp=Z,0.5nm,0.4s,baz=37,slow=9.9,SNR=3.7						
GERES				pP	pwP	13 57 42.2	+0.2
	comp=Z,0.7nm,0.3s,baz=5.7,slow=5.4,SNR=1.4						
	comp=Z,0.5nm,0.4s						
TXAR	Lajitas Array	82.43	57	P	P	13 57 46.3	+1.3
	comp=Z,0.5nm,0.7s,baz=291,slow=3.1,SNR=7.3						
TXAR				pP	pwP	13 57 57.0	+0.4
	comp=Z,0.9nm,0.7s,baz=289,slow=3.8,SNR=9.4						
	comp=Z,0.5nm,0.7s						

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*PDG **05** 13:58:51.7±0.0, 43°.24N×18°.05E, h10^{km}, ML2.5/13, Error ellipse: s-maj=0.1km s-min=0.0km az=90.0*
*BEO **05** 13:58:52.6±0.3, 43°.22N×18°.03E, h8^{km}±2^{km}, ML2.1/10*
*RHSSO **05** 13:58:53.3±0.5, 43°.17N×18°.10E, h9^{km}, ML2.3/3*
ISC 05 13:58:51.5±1.1, **43°.23N**±0°.02×**18°.03E**±0°.02, **h5**^{km}±10^{km}, **n38**, σ**0^{s}.96**/73, **4C-2D**, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLINJ	Klinje	0.41	98	*e*Pg	Pb	13 59 00.2	-1.2
KLINJ				*e*Sg	Sb	13 59 06.6	-1.4
STON	Ston	0.43	214	*e*Pg	Pb	13 59 00.4	-1.1
STON				Sg	Sb	13 59 07.2	-1.0
STON	Ston	0.43	214	*e*Pg	Pg	13 59 00.1	+0.4
STON				*e*Sg	Sb	13 59 07.0	-1.3
BRY	Bratogost	0.50	131	*e*Pg	Pg	13 59 01.0	-0.1
BRY				*i* Sg	Sg	13 59 08.8	+1.3
TREB	Trebinje	0.56	155⇑	*i*Pg	Pg	13 59 02.1	-0.2
TREB				*e*Sg	Sg	13 59 10.7	+1.2
DBRK	Dubrovnik	0.56	171	*i* Pg	Pg	13 59 02.7	+0.4
DBRK				Sg	Sg	13 59 09.2	-0.4
UPM	Unac-Piva	0.64	92	*e*Pg	Pg	13 59 03.4	-0.5
UPM				*i* Sg	Sb	13 59 13.4	-1.3
RICI	Ricice	0.70	293	*e*Pg	Pb	13 59 05.8	-0.5
RICI				Sg	Sb	13 59 16.1	-0.3
MAKA	Makarska	0.74	275	*e*Pg	Pb	13 59 06.0	-0.8
MAKA				Sg	Sb	13 59 17.2	0.0
NKME	Niksic	0.82	124⇓	*i*Pg	Pg	13 59 06.9	-0.3
NKME				*e*Sg	Sb	13 59 19.7	0.0
HCY	Herceg Novi	0.85	156⇓	*i*Pg	Pg	13 59 07.6	-0.2
HCY				*i* Sg	Sb	13 59 21.1	+0.6
CEME	Cevo	0.94	136	*e*Pg	Pg	13 59 09.1	-0.5
CEME				*e*Sg	Sb	13 59 24.1	+0.9
LSTV	Lastovo	0.95	242	*e*Pg	Pn	13 59 10.6	-1.0
LSTV				Sg	Sb	13 59 23.6	+0.2
PLE	Pljevlja	1.00	84⇑	*i*Pg	Pg	13 59 09.9	-0.8
PLE				*i* Sg	Sb	13 59 25.4	+0.4
RUDO	Rudo	1.05	68⇑	*i*Pg	Pg	13 59 11.3	-0.4
RUDO				*e*Sg	Sb	13 59 26.3	-0.1
BUM	Brajici-Budva	1.12	145⇑	*i*Pg	Pg	13 59 12.5	-0.5
BUM				*i* Sg	Sn	13 59 30.3	+0.4
HVAR	Hvar	1.15	268	*e*Pg	Pn	13 59 14.3	-0.1
HVAR				Sg	Sn	13 59 30.7	+0.2
KOME	Kolasin	1.15	108	*e*Pg	Pg	13 59 12.8	-0.8
KOME				*e*Sg	Sn	13 59 30.9	+0.2
BBLS	Lazi&#263i	1.19	57	*e*Pg	Pn	13 59 14.3	-0.6
BBLS				*e*Sg	Sn	13 59 30.8	-0.8
PDG	Podgorica	1.20	131	*e*Pg	Pg	13 59 13.6	-1.0
PDG				*e*Sg	Sn	13 59 31.8	+0.1
PDG	Podgorica	1.20	131	*e*Pg	Pg	13 59 13.9	-0.7
PDG				*i* Sg	Sn	13 59 32.8	+1.1
DRME	Dracevica, Mon	1.34	140	*e*Pg	Pn	13 59 16.5	-0.5
DRME				*e*Sg	Sn	13 59 37.7	+2.5
KIJV	Kijevo	1.41	304	*e*Pn	Pg	13 59 18.9	+0.3
KIJV				Sn	Sn	13 59 39.2	+2.3
IVA	Berane	1.41	104	*e*Pg	Pn	13 59 17.6	-0.4
IVA				*i* Sg	Sn	13 59 39.4	+2.3
SJES	Sjenica	1.42	88	*e*Pg	Pg	13 59 19.3	+0.5
SJES				*e*Sg	Sn	13 59 37.5	+0.1
ULC	Ulcinj	1.55	144	*e*Pg	Pb	13 59 20.4	-0.3
ULC				*i* Sg	Sg	13 59 43.1	+1.8
PVY	Plav	1.55	113	*e*Pg	Pb	13 59 20.3	-0.6
PVY				*i* Sg	Sg	13 59 42.9	+1.5
IVAS	Ivanjica	1.59	77	*e*Pg	Pn	13 59 20.1	-0.3
IVAS				*e*Sg	Sb	13 59 41.3	-0.6
BLY	Banja Luka	1.64	339	*e*Pn	Pg	13 59 23.3	+0.4
BLY				*e*Sn	Sg	13 59 45.6	+1.4
BLY	Banja Luka	1.64	339	*e*Sg	Sg	13 59 47.1	+2.9
DIVS	Divibare	1.67	58	*e*Pn	Pn	13 59 21.3	-0.3
DIVS				*e*Sn	Sg	13 59 44.1	-1.1
TEKS	Tekeris	1.71	39	*e*Pg	Pg	13 59 24.6	+0.3
ZIRJ	Zirje	1.79	285	*e*Pn	Pg	13 59 24.5	-1.3
ZIRJ				Sn	Sg	13 59 48.4	-0.5
MORI	Morici	1.80	292	*e*Pn	Pg	13 59 25.3	-0.8
MORI				Sn	Sg	13 59 49.7	+0.3
TRUS	Trudelj	1.99	59	*e*Pn	Pn	13 59 25.4	-0.5
GOCS	Kraljevo Serbi	2.10	80	*e*Pn	Pn	13 59 27.5	0.0
GOCS				*e*Sn	Sn	13 59 54.0	-0.1
SELS	Selova	2.26	89	*e*Pn	Pn	13 59 30.0	+0.4
SELS				*e*Sn	Sn	13 59 58.7	+0.8
BARS	Barje	2.81	97	*e*Pn	Pn	13 59 38.0	+0.9
BARS				*e*Sn	Sn	14 00 12.5	+1.1

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*IDC **05** 14:08:25.1±1.4, 3°.47S×145°.99E, h0^{km}, mb3.7/5, mbtmp3.9/7, ML4.0/1, MS3.4/5, Error ellipse: s-maj=44.7km s-min=21.3km az=91.0*
ISC 05 14:08:29.2±1.1, **3°.5S**±0°.1×**145°.8E**±0°.2, **h25**^{km}, **n11**, σ**1^{s}.66**/8, **mb3.8**/5, **MS3.5**/3, **Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	5.20	280	LR	LR	14 11 39.2	
	comp=Z,292nm,20.8s,baz=22,slow=36						
PMG	Port Moresby	6.04	167	Pn	Pn	14 09 55.2	-1.8
	5.9nm,0.4s,baz=23,slow=4.8,SNR=6.0						
PMG				Sn	Sn	14 11 08.1	+2.7
	baz=150,slow=21						
PMG				LR	LR	14 12 07.6	
	comp=Z,118nm,19.1s,baz=358,slow=37						
WRA	Warramunga Arr	19.83	214	P	Pn	14 12 58.9	-1.1
	0.5nm,0.3s,baz=39,slow=12,SNR=73						
	24nm,0.9s						
ASAR	Alice Springs	23.14	209	P	P	14 13 34.0	+0.1
	6.9nm,1.0s,baz=40,slow=8.7,SNR=56						
	6.9nm,1.0s						
FITZ	Fitzroy Crossi	24.53	232	LR	LR	14 24 10.3	
	comp=Z,147nm,18.3s,baz=62,slow=38						
DZM	Mont Dzumac	27.24	134	LR	LR	14 23 20.5	
	comp=Z,150nm,18.8s,baz=360,slow=33						
URZ	Urewera	44.88	145	LR	LR	14 32 29.9	
	comp=Z,51nm,20.1s,baz=298,slow=32						
CMAR	Chiang Mai Arr	51.05	297	P	P	14 17 30.2	+0.5
	0.5nm,0.8s,baz=106,slow=8.4,SNR=4.2						
	0.5nm,0.8s						
KURBB	Kurchatov Arra	78.52	323	P	P	14 20 29.7	+1.4
	0.2nm,0.3s,baz=101,slow=4.9,SNR=2.9						
	0.2nm,0.3s						
ILAR	Eielson Array	83.64	23	P	P	14 20 54.9	-0.4
	0.7nm,1.0s,baz=251,slow=5.9,SNR=4.1						
	0.7nm,1.0s						
BVAR	Borovoye Array	84.05	324	P	P	14 20 57.7	0.0
	0.5nm,0.8s,baz=117,slow=5.0,SNR=1.9						
	0.5nm,0.8s						

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*NDI **05** 14:19:31.4±1.6, 25°.73N×95°.16E, h34^{km}±12^{km}, ML3.5, MW3.6*
*IDC **05** 14:19:31.8±3.7, 25°.50N×95°.19E, h114^{km}±38^{km}, mb3.4/6, mbtmp3.7/7, MS4.3/1, Error ellipse: s-maj=82.8km s-min=15.9km az=58.0*
ISC 05 14:19:29.8±1.0, **25°.71N**±0°.05×**95°.12E**±0°.07, **h86**^{km}±9^{km}, **n30**, σ**1^{s}.32**/44, **mb3.5**/6, **Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOKO	MOKOCHONG	0.82	319	*e*P	Pn	14 19 48.1	+0.7
MOKO				*e*S	Sn	14 19 59.5	-0.9
MOKO				IAML		14 20 04.8	
	comp=E,2µm,0.3s						
MOKO				IAML		14 20 07.8	
	comp=N,1µm,0.7s						
KOHI	KOHIMA	0.91	271	*e*P	Pn	14 19 49.5	+1.1
KOHI				*e*S	Sn	14 20 02.1	0.0
KOHI				IAML		14 20 07.7	
	comp=E,827nm,0.3s						
KOHI				IAML		14 20 07.7	
	comp=N,579nm,0.3s						
JORH	JORHAT	1.29	323	*e*S	Sn	14 20 09.6	-0.4
JORH				IAML		14 20 20.6	
	comp=E,1µm,0.1s						
JORH				IAML		14 20 20.7	
	comp=N,2µm,0.2s						
IMP	Imphal	1.37	231	*e*P	Pn	14 19 55.4	+1.6
IMP				*e*S	Sn	14 20 12.7	+0.8
IMP				IAML		14 20 19.0	
	comp=E,92nm,0.3s						
IMP				IAML		14 20 20.4	
	comp=N,133nm,0.9s						
LKP	Lekhapani	1.75	22	*e*P	Pn	14 19 59.6	+1.0
LKP				IAML		14 20 18.9	
	comp=N,386nm,0.5s						
LKP				*e*S	Sn	14 20 20.0	-0.4
LKP				IAML		14 20 20.9	
	comp=E,567nm,0.5s						
ITAN	ITANAGAR	1.90	319	*e*P	Pn	14 20 01.6	+1.0
ITAN				*e*S	Sn	14 20 23.6	-0.4
ITAN				IAML		14 20 27.6	
	comp=N,1µm,0.2s						
ITAN				IAML		14 20 28.5	
	comp=E,956nm,0.2s						
ZIRO	ZIRO	2.14	328	*e*P	Pn	14 20 04.0	+0.1
ZIRO				*e*S	Sn	14 20 28.8	-1.1
ZIRO				IAML		14 20 31.9	
	comp=N,2µm,0.2s						
ZIRO				IAML		14 20 32.5	
	comp=E,2µm,0.3s						
TEZP	TEZPUR	2.27	294	*e*P	Pn	14 20 06.5	+1.1
TEZP				*e*S	Sn	14 20 33.4	+0.7
TEZP				IAML		14 20 35.3	
	comp=E,2µm,0.1s						
TEZP				IAML		14 20 35.9	
	comp=N,3µm,0.2s						
SHL	Shillong	2.92	268	*e*P	Pn	14 20 14.7	+0.3
SHL				*e*S	Sn	14 20 46.4	-2.2
SHL				IAML		14 20 51.4	
	comp=N,342nm,0.0s						
SHL				IAML		14 20 51.5	
	comp=N,374nm,0.0s						
TAWA	Tawang	3.46	304	*e*S	Sn	14 21 02.5	+0.5
SAIH	SAIHA	3.75	212	*e*P	Pn	14 20 27.3	+1.8

SAIH				*e*S	Sn	14 21 08.6	0.0
SAIH				IAML		14 21 14.9	
	comp=N,37nm,0.6s						
SAIH				IAML		14 21 16.9	
	comp=E,70nm,0.5s						
DHUB	DHUBRI	4.62	275	*e*S	Sn	14 21 28.3	-1.4
DHUB				IAML		14 21 32.9	
	comp=N,125nm,0.2s						
DHUB				IAML		14 21 33.4	
	comp=E,103nm,0.1s						
TAPN	Taplejung	6.83	286	Pn	Pn	14 21 09.1	+1.5
	baz=274,slow=0.0						
TAPN				Sn	Sn	14 22 25.8	+1.7
	baz=274,slow=0.0						
RAMN	Ramite	7.74	281	Pn	Pn	14 21 21.3	+1.3
	baz=271,slow=0.0						
CMAR	Chiang Mai Arr	8.04	153	P	Pn	14 21 23.1	-0.8
	comp=E,3.5nm,0.8s,baz=329,slow=13,SNR=27						
JIRN	Jiri	8.22	286	Pn	Pn	14 21 27.5	+0.9
	baz=276,slow=0.0						
JIRN				Sn	Sn	14 22 58.1	+0.1
	comp=E,20nm,0.2s,baz=276,slow=0.0						
GUN	Gumba	8.54	287	Pn	Pn	14 21 32.4	+1.4
	baz=278,slow=0.0						
GUN				Sn	Sn	14 23 05.9	+0.1
	baz=278,slow=0.0						
PKI	Pulchoki	8.88	284	Pn	Pn	14 21 35.8	+0.2
	baz=276,slow=0.0						
PKI				Sn	Sn	14 23 12.4	-1.8
	baz=276,slow=0.0						
PKIN	Phulchoki	8.89	284	Pn	Pn	14 21 35.9	+0.2
	baz=276,slow=0.0						
PKIN				Sn	Sn	14 23 12.8	-1.6
	baz=276,slow=0.0						
DMN	Daman	9.15	284	Sn	Sn	14 23 21.8	+1.1
	baz=276,slow=0.0						
GKN	Gorkha	9.63	286	Pn	Pn	14 21 46.1	+0.4
	baz=278,slow=0.0						
GKN				Sn	Sn	14 23 30.7	-1.6
	baz=278,slow=0.0						
DANN	Dangsing	10.46	287	Pn	Pn	14 21 55.9	-1.2
	baz=280,slow=0.0						
DANN				Sn	Sn	14 23 48.7	-3.9
	baz=280,slow=0.0						
PYUN	Piuthan	11.08	285	Pn	Pn	14 22 03.6	-1.9
	baz=278,slow=0.0						
MKAR	Makanchi Array	23.39	337	P	P	14 24 31.5	+0.6
	comp=E,0.6nm,0.7s,baz=143,slow=10.0,SNR=4.5						
	comp=E,0.6nm,0.7s						
KURBB	Kurchatov Arra	27.96	337	P	P	14 25 13.4	+1.4
	comp=E,0.5nm,0.2s,baz=155,slow=9.0,SNR=2.8						
	comp=E,0.5nm,0.2s						
BVAR	Borovoye Array	32.99	332	P	P	14 25 57.8	+1.4
	comp=E,0.3nm,0.5s,baz=131,slow=8.2,SNR=3.2						
	comp=E,0.3nm,0.5s						
MJAR	Matsushiro Arr	38.16	63	LR	LR	14 42 59.7	
	comp=E,421nm,18.2s,baz=55,slow=37						
FINES	FINESS Array B	57.77	328	P	P	14 29 12.2	+0.6
	comp=E,8.9nm,1.1s,baz=96,slow=7.2,SNR=2.2						
	comp=E,8.9nm,1.1s						
WRA	Warramunga Arr	59.25	136	P	P	14 29 19.8	-2.7
	comp=E,0.1nm,0.2s,baz=322,slow=7.3,SNR=12						
	comp=E,0.1nm,0.2s						
ASAR	Alice Springs	61.80	139	P	P	14 29 38.0	-1.9
	comp=E,0.4nm,0.8s,baz=322,slow=7.9,SNR=5.5						
	comp=E,0.4nm,0.8s						

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*NEIC **05** 14:30:22.0±0.4, 36°.361N±0°.009×98°.148W±0°.009, h5^{km}±1^{km}, mb_Lg2.9/82, ML2.9/36, ML3.1/70, Error ellipse: s-maj=2.0km s-min=1.7km az=54.0*
*NEIC **05** 14:31:16.1±1.1, 36°.359N±0°.004×98°.15W±0°.01, h6^{km}±5^{km}, Error ellipse: s-maj=1.2km s-min=0.7km az=93.0*
NEIC 05 14:30:22.1±0.4**, 36°.363N**±0°.009×**98°.15W**±0°.01**, h6**^{km}±1^{km}**, Error ellipse: s-maj=1.4km s-min=1.2km az=160.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.20	44		Pg	14 30 26.6	+0.6
CROK					Sg	14 30 29.7	+1.0
CROK				IAML		14 30 30.0	
	comp=N,7μm,0.5s						
OK038	West end E0370	0.49	284		Pg	14 30 31.8	+0.3
OK038					Sg	14 30 38.9	+0.9
GC02	Grant County #	0.54	26		Pg	14 30 32.8	+0.3
GC02					Sg	14 30 40.4	+0.8
NOKA	Waynoka	0.68	294		Pg	14 30 35.3	+0.1
NOKA					Sg	14 30 44.9	+0.8
NOKA				IAML		14 30 51.9	
	comp=E,1μm,0.3s						
BCOK	Bluff Creek, N	0.83	148		Pg	14 30 37.9	-0.2
BCOK					Sg	14 30 49.5	+0.7
CSTR	Hydro, Custer	0.84	211		Pg	14 30 38.5	+0.4
CSTR					Sb	14 30 50.1	-0.5
KAN13	South Haven SW	0.84	40		Pg	14 30 38.2	-0.1
KAN13					Sg	14 30 49.7	+0.4
KAN01	Argonia South	0.85	22		Pg	14 30 38.3	-0.1
KAN01					Sg	14 30 49.9	+0.5
KAN01				IAML		14 30 51.8	
	comp=E,558nm,0.1s						
KAN01				IAML		14 30 52.6	
	comp=N,393nm,0.1s						
BLOK	Blackwell	0.85	62		Pg	14 30 38.4	0.0
BLOK					Sg	14 30 49.8	+0.3
KAN08	Anthony NE Sta	0.87	10		Pg	14 30 38.9	0.0
KAN08					Sg	14 30 50.8	+0.5
KAN08				IAML		14 30 53.3	
	comp=N,467nm,0.3s						
OK048	Pawnee Station	0.98	87		Pg	14 30 40.4	-0.4
OK048	Pawnee Station	0.98	87		Pg	14 30 40.7	-0.1
OK048					Sb	14 30 54.2	-0.3
ELIS	Ellis County	1.07	254		Pg	14 30 42.2	-0.3
ELIS				IAML		14 31 04.7	
	comp=N,582nm,0.2s						
ELIS				IAML		14 31 06.0	
	comp=E,558nm,0.2s						
OK051	E0350 and S346	1.07	82		Pg	14 30 42.2	-0.4
OK052	Battle Ridge R	1.15	108		Pg	14 30 42.2	-2.0
OK052				IAML		14 31 05.9	
	comp=E,341nm,0.4s						
QUOK	Quay	1.18	99		Pg	14 30 44.0	-0.8
QUOK				IAML		14 31 09.5	
	comp=E,404nm,0.2s						
FNO	Franklin	1.26	151		Pn	14 30 45.0	-1.2
FNO				IAML		14 31 10.1	
	comp=E,411nm,0.5s						
T35A	Sooner Cattle	1.43	67		Pn	14 30 48.3	-0.3
DEOK	Depew	1.44	111		Pn	14 30 48.3	-0.3
WMOK	Wichita Mounta	1.70	198		Pn	14 30 52.4	+0.1
WMOK	Wichita Mounta	1.70	198	IAmb_Lg		14 31 20.0	
	comp=Z,83nm,0.9s						
X34A	Smith Ranch, M	1.78	171		Pb	14 30 54.3	-0.7
X34A				IAmb_Lg		14 31 21.3	
	comp=Z,66nm,0.7s						
R32A	Long Quarter,	2.10	348		Pn	14 30 56.5	-1.3
SMWD	Samnorwood	2.11	234		Pn	14 30 59.1	+1.1
SMWD				IAmb_Lg		14 31 29.6	
	comp=Z,50nm,0.8s						
CBKS	Cedar Bluff	2.75	333	Pn	Pn	14 31 06.0	-0.8
KSU1	Kansas State U	2.99	24	IAmb_Lg		14 32 01.6	
	comp=Z,46nm,0.9s						
PH02	Texas Public H	3.23	254	IAmb_Lg		14 32 02.3	
	comp=Z,17nm,0.9s						
HHAR	Hobbs	3.40	90	IAmb_Lg		14 32 09.1	
	comp=Z,28nm,0.8s						
APMT	Aspermont	3.44	209	IAmb_Lg		14 32 18.9	
	comp=Z,20nm,0.8s						
DKNS	Dickens	3.52	221	IAmb_Lg		14 32 16.7	
	comp=Z,51nm,0.8s						
RTBA	Rita Blanca	3.70	273		Pn	14 31 20.6	+0.7
ABTX	Abilene, Hawle	3.93	199	IAmb_Lg		14 32 27.0	
	comp=Z,40nm,1.1s						
SN07	Snyder 07	3.97	215	IAmb_Lg		14 32 32.9	
	comp=Z,27nm,0.7s						
POST	Post	4.29	221	IAmb_Lg		14 32 42.1	
	comp=Z,30nm,0.7s						
X40A	Basin Creek Fa	4.73	112	IAmb_Lg		14 33 05.2	
	comp=Z,29nm,0.7s						
MGMO	Mountain Grove	4.79	79	IAmb_Lg		14 33 04.0	
	comp=Z,15nm,0.8s						
WHAR	Wooly Hollow	4.88	101	IAmb_Lg		14 33 07.4	
	comp=Z,19nm,0.8s						
P38A	Dawn	4.89	47	IAmb_Lg		14 33 02.9	
	comp=Z,32nm,1.1s						
FCAR	Ozark Folk Cen	4.90	94	IAmb_Lg		14 33 05.0	
	comp=Z,20nm,1.0s						
UALR	University of	4.99	107	IAmb_Lg		14 33 04.8	
	comp=Z,20nm,0.7s						
BGNE	Belgrade	5.04	0		Pn	14 31 37.8	-0.4
R40A	Maddies Statio	5.07	66	IAmb_Lg		14 33 12.6	
	comp=Z,13nm,0.8s						
T25A	Trinidad	5.08	281	IAmb_Lg		14 33 08.2	
	comp=Z,32nm,0.8s						
BRDY	Brady	5.11	188	IAmb_Lg		14 33 15.0	
	comp=Z,17nm,0.9s						
435B	Jarrell	5.59	175	IAmb_Lg		14 33 25.0	
	comp=Z,18nm,0.9s						
LCAR	Lake Charles	5.67	91	IAmb_Lg		14 33 20.6	
	comp=Z,26nm,1.3s						
CCM	Cathedral Cave	5.77	71	IAmb_Lg		14 33 26.6	
	comp=Z,24nm,0.8s						
SDCO	Great Sand Dun	6.04	285	IAmb_Lg		14 33 40.1	
	comp=Z,10.0nm,0.9s						
Q24A	Divide	6.13	297	IAmb_Lg		14 33 39.4	
	comp=Z,12nm,0.8s						
PBMO	Poplar Bluff	6.23	84	IAmb_Lg		14 33 40.4	
	comp=Z,24nm,0.7s						
FVM	French Village	6.38	73	IAmb_Lg		14 33 47.8	
	comp=Z,16nm,0.9s						
K30B	Basset	6.40	350	IAmb_Lg		14 33 54.7	
	comp=Z,23nm,0.9s						
143A	Socs Landing,	6.66	121	IAmb_Lg		14 33 56.1	
	comp=Z,20nm,0.9s						
ISCO	Idaho Springs	6.81	302	IAmb_Lg		14 34 00.1	
	comp=Z,20nm,1.1s						
TASM	ASL Pad, Albuq	6.91	261	IAmb_Lg		14 34 06.5	
	comp=Z,4.7nm,0.9s						
TASM	ASL Pad, Albuq	6.91	261	IAmb_Lg		14 34 15.1	
	comp=Z,8.5nm,1.3s						
S44A	Carbondale	7.24	77	IAmb_Lg		14 34 23.6	
	comp=Z,17nm,0.7s						
ECSD	EROS Data Cent	7.46	9	IAmb_Lg		14 34 26.4	
	comp=Z,7.9nm,1.0s						
Q44A	Meyer Farm, Va	7.68	68	IAmb_Lg		14 34 40.8	
	comp=Z,15nm,0.9s						
HAYD	Hayden	8.26	303	IAmb_Lg		14 35 04.5	
	comp=Z,9.7nm,1.0s						

NEIC 05 14:31:15.9±1.4**, 36°.364N**±0°.010×**98°.13W**±0°.01**, h5**^{km}±1^{km}**, mb_Lg2.8**/17**, ML3.0**/8**, ML2.7**/16**, Error ellipse: s-maj=2.6km s-min=1.8km az=108.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.18	39		Pg	14 31 20.7	+1.2
CROK				IAML		14 31 24.1	
	comp=N,3μm,0.3s						
BLOK	Blackwell	0.83	61	Pg	Pg	14 31 31.2	-0.7
KAN08	Anthony NE Sta	0.87	8	Pg	Pg	14 31 32.1	-0.4
OK048	Pawnee Station	0.96	87	Pg	Pg	14 31 33.1	-1.1
OK052	Battle Ridge R	1.13	109	Pg	Pg	14 31 37.2	-0.4
QUOK	Quay	1.16	99	Pg	Pg	14 31 38.0	-0.2
T35A	Sooner Cattle	1.41	67	Pg	Pg	14 31 43.0	+0.1
X34A	Smith Ranch, M	1.77	172	Pn	Pn	14 31 45.1	-2.2
DKNS	Dickens	3.54	221		Pn	14 32 06.5	-5.0
Z38A	Mt. Pleasant	4.03	139	IAmb_Lg		14 33 26.7	
	comp=Z,32nm,0.8s						
WHAR	Wooly Hollow	4.86	101	IAmb_Lg		14 33 50.2	
	comp=Z,20nm,1.1s						
BGNE	Belgrade	5.04	360	IAmb_Lg		14 33 58.6	
	comp=Z,25nm,0.8s						
SGCY	Sterling City	5.09	210	IAmb_Lg		14 34 11.1	
	comp=Z,18nm,0.8s						
T25A	Trinidad	5.11	281	IAmb_Lg		14 34 03.5	
	comp=Z,20nm,1.0s						
N38A	Joes South For	5.85	39	IAmb_Lg		14 34 28.2	
	comp=Z,22nm,0.8s						
PBMO	Poplar Bluff	6.21	84	IAmb_Lg		14 34 37.1	
	comp=Z,13nm,0.8s						
S44A	Carbondale	7.22	77	IAmb_Lg		14 35 05.9	
	comp=Z,8.6nm,0.7s						

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*BJI **05** 14:35:14.9, 43°.87N×147°.90E, h18^{km}, mB5.3/7, mb4.8/34, Ms4.7/12, Ms7 4.5/12*
*NEIC **05** 14:35:15.3±1.7, 43°.33N±0°.09×147°.7E±0°.1, h10^{km}±1^{km}, mb4.8/105, Error ellipse: s-maj=17.6km s-min=13.6km az=137.0*
*SKHL **05** 14:35:15.0±0.2, 43°.20N×148°.10E, h38^{km}±7^{km}, mb5.7/4*
*MOS **05** 14:35:16.8±1.0, 43°.43N×147°.89E, h36^{km}, mb5.2/25, MS4.0/6, Error ellipse: s-maj=8.7km s-min=5.4km az=120.5*
*NIED **05** 14:35:17.3, 43°.26N×147°.63E, h19^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.83; $M_{\theta\theta}$-0.40; $M_{\phi\phi}$-2.43; $M_{r\theta}$3.81; $M_{\theta\phi}$-2.75; $M_{\phi r}$3.11; Fault plane solution: $M_0$6.14000×10^{15} NP1: ϕ_s191.00000°, δ22.00000°, λ52.00000°. NP2:ϕ_s50.00000°, δ73.00000°, λ104.00000°.*
*JMA **05** 14:35:17.3±0.6, 43°N±1°×14°8E±°, h19^{km}, MD4.5/37, MV4.9/37, E OFF HOKKAIDO*
*IDC **05** 14:35:18.8±0.6, 43°.35N×147°.81E, h35^{km}±4^{km}, mb4.3/25, mbtmp4.4/32, ML3.7/6, MS3.8/6, Error ellipse: s-maj=12.9km s-min=11.5km az=127.0*
ISC 05 14:35:15.9±0.7**, 43°.41N**±0°.04×**147°.63E**±0°.04**, h11**^{km}±3^{km}**, h10**^{km}**:pP-P, n545, σ1^{s}56**/526**, mb4.8**/121**, MS4.3**/4**, 38C-6D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.74	309	*e*P	Pn	14 35 41.9	+10
SHO				AMB	AMB	14 35 43.3	
	7μm,0.5s						
SHO				*e*S	Sn	14 35 57.0	+13
SHO				A	A	14 35 59.1	
	79μm,0.6s						
SHO				A	A	14 35 59.1	
	68μm,0.6s						
NEM2	Nemuro 2	1.37	269	*e*P	Pg	14 35 41.9	-0.4
NEM2	Nemuro 2	1.37	269	A	A	14 35 41.9	
	comp=N,14nm,0.9s,comp=E,18nm,0.8s						
NMR	Nemuro--Hokkai	1.38	269	*e*PN	Pg	14 35 41.9	-0.5
NMR				*i* S	Sg	14 36 01.9	+1.4
NMR	Nemuro--Hokkai	1.38	269	*e*P	Pg	14 35 42.0	-0.5
NMR				*i* S	Sg	14 36 02.1	+1.6
YUK	Yuzh-Kuril'sk	1.43	297*c*	*i*PN	Pg	14 35 43.2	-0.1
YUK				*e*S	Sg	14 36 05.1	+3.3
YUK				pmax	pmax		
	comp=Z,2μm,0.3s						
YUK				pmax	pmax		
	comp=N,342nm,0.4s						
YUK				smax	smax		
	comp=E,11μm,0.4s						
YUK				smax	smax		
	comp=N,13μm,0.5s						
YUK	Yuzh-Kuril'sk	1.43	297	*i* P	Pg	14 35 43.4	+0.1
YUK				AMB	AMB	14 35 46.6	
	comp=N,2μm,0.3s						
YUK				*e*S	Sg	14 36 04.9	+3.1
YUK				A	A	14 36 07.7	
	comp=N,12μm,0.5s						
YUK				A	A	14 36 07.7	
	comp=N,13μm,0.5s						
GLVR	Golovnino	1.57	283	*e*PN	Pg	14 35 45.4	-0.6
GLVR				*e*S	Sg	14 36 06.9	+0.6
GLVR				pmax	pmax		
	comp=N,362nm,0.4s						
GLVR				pmax	pmax		
	comp=E,228nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,1μm,0.4s						
GLVR				smax	smax		
	comp=N,4μm,0.3s						
GLVR				smax	smax		
	comp=E,7μm,0.5s						
GLVR	Golovnino	1.57	283	*e*P	Pg	14 35 45.4	-0.6
GLVR				AMB	AMB	14 35 49.1	
	comp=E,1μm,0.3s						
GLVR				*e*S	Sg	14 36 06.9	+0.6
GLVR				A	A	14 36 14.0	
	comp=E,4μm,0.4s						
GLVR				A	A	14 36 14.0	
	comp=E,7μm,0.4s						
JKHN	Kushirohamanak	1.83	261	*e*P	Pb	14 35 48.8	-0.6
JKHN				*e*S	Sb	14 36 11.6	-0.7
JKHN	Kushirohamanak	1.83	261	A	A	14 35 48.8	
	comp=N,13nm,1.4s,comp=E,16nm,5.4s						
KUR	Kuril'sk	1.83	5*c*	*i*PN	Pn	14 35 47.5	+0.1
KUR				*e*S	Sn	14 36 10.5	-0.1
KUR				pmax	pmax		
	comp=N,507nm,0.5s						
KUR				pmax	pmax		
	comp=Z,839nm,0.5s						
KUR				pmax	pmax		
	comp=E,455nm,0.4s						
KUR				smax	smax		
	comp=E,3μm,0.5s						
KUR				smax	smax		
	comp=N,570nm,0.3s						
KUR	Kuril'sk	1.83	5	*e*P	Pn	14 35 46.6	-0.8
KUR				AMB	AMB	14 35 56.1	
	comp=N,840nm,0.4s						
KUR				*e*S	Sn	14 36 10.5	-0.1
KUR				A	A	14 36 19.6	
	comp=N,2μm,0.4s						
KUR				A	A	14 36 19.6	
	comp=N,3μm,0.4s						
RUSJ	Misakicho	1.86	293	*e*PN	Pb	14 35 50.1	+0.2
RUSJ				*e*S	Sg	14 36 16.7	+1.0
JRA	Rausu	1.89	287	*e*P	Pb	14 35 50.0	-0.5
JRA	Rausu	1.89	287	A	A	14 35 50.0	
	comp=N,6.0nm,1.2s,comp=E,8.0nm,5.6s						
JNSB	Nemuroshibetsu	1.94	282	*e*P	Pb	14 35 50.6	-0.7
JNSB	Nemuroshibetsu	1.94	282	A	A	14 35 50.6	
	comp=N,10.0nm,0.9s,comp=E,11nm,2.5s						
AKK	Akkeshi	2.07	260	*e*P	Pb	14 35 52.1	-1.4
JNK	Nakash	2.12	276	*e*P	Pb	14 35 52.6	-1.9
JAK	Akkeshi	2.18	260	*e*P	Pn	14 35 53.0	+0.9
JAK	Akkeshi	2.18	260	A	A	14 35 53.0	
	comp=N,9.0nm,1.4s,comp=E,9.0nm,1.9s						
JTKR	Abashiri--Toko	2.75	283	*e*P	Pb	14 36 02.8	-2.4
JAR	Ashorobuto	2.81	269	*e*P	Pn	14 36 02.5	+1.6
JOB	Onbets	2.82	261	*e*P	Pn	14 36 02.0	+1.1
JOB				*e*S	Sn	14 36 34.2	-0.7
JMP	Maruseppu	3.15	282	*e*P	Pn	14 36 08.3	+2.8
JCH	Churui	3.23	257	*e*P	Pn	14 36 07.2	+0.7
JCH				*e*S	Sn	14 36 44.6	-0.3
ERM	Erimo	3.58	249		Pn	14 36 13.9	+2.6
ERM	Erimo	3.58	249	PN	Pn	14 36 13.9	+2.6
JKA	Kamikawa-asahi	3.71	283		Pn	14 36 16.6	+3.4
ASAJ	Asahikawa	3.71	283	Pn	Pb	14 36 17.6	-4.0
	comp=E,13nm,0.3s,baz=188,slow=4.5,SNR=62						
ASAJ				LR	LR	14 38 00.6	
	comp=E,1μm,19.4s,baz=166,slow=42						
	comp=E,40nm,0.4s						
YSS	Yuzhno-Sakhali	4.94	318		Pn	14 36 33.0	+2.9
YSS	Yuzhno-Sakhali	4.94	318	*e*PN	Pn	14 36 33.0	+2.9
YSS				pmax	pmax		
	comp=Z,80nm,0.9s						
YSS				MLR	MLR		
	comp=Z,2μm,14.0s						
YSS	Yuzhno-Sakhali	4.94	318	*e*P	Pn	14 36 33.0	+2.9
YSS				*e*S	Sn	14 37 32.6	+5.4
JTM	Tenmabayashi	5.54	244		Pn	14 36 38.6	+0.4
JTM				Sn	Sn	14 37 38.9	-3.0
TYV	Tymovskoe	8.19	337	*e*PN	Pn	14 37 11.5	-3.2
TYV				pmax	pmax		
	comp=Z,24nm,1.1s						
TYV				pmax	pmax		
	comp=Z,500nm,2.5s						
TYV	Tymovskoe	8.19	337	*e*P	Pn	14 37 18.8	+4.1
SKR	Severo-Kuril’s	9.30	36	*i* PN	Pn	14 37 28.6	-1.2
SKR	Severo-Kuril’s	9.30	36	*e*P	Pn	14 37 28.3	-1.5
SKR				*e*S	Sn	14 39 07.9	-6.5
MAJO	Matsushiro	9.96	230		Pn	14 37 38.2	-0.7
MAJO	Matsushiro	9.96	230	*i* PN	Pn	14 37 38.4	-0.6
MJAR	Matsushiro Arr	9.96	230	Pn	Pn	14 37 38.3	-0.7
	comp=Z,0.1nm,0.3s,baz=29,slow=14,SNR=10						
MJAR				Sn	Sn	14 39 35.3	+4.6
	comp=Z,0.1nm,0.3s,baz=347,slow=24,SNR=2.9						
	comp=Z,3.9nm,0.9s						
MJB9	Matsu-Tunnel	9.96	230		Pn	14 37 38.1	-0.8
PAU	Pauzhetka	10.18	34	*e*P	Pn	14 37 40.7	-1.2
JGF	Kuroka	11.11	229		Pn	14 37 54.3	-0.5
USRK	Ussuriysk Ar.	11.33	279	Pn	Pn	14 38 00.7	+2.9
	comp=Z,0.5nm,0.3s,baz=83,slow=14,SNR=5.5						
	comp=Z,6.4nm,0.7s						
PETK	Petropavlovsk-	11.79	31	Pn	Pn	14 38 02.6	-1.3
	comp=Z,0.8nm,0.3s,baz=212,slow=12,SNR=22						
PETK				LR	LR	14 43 28.0	
	comp=Z,327nm,18.6s,baz=184,slow=42						
	comp=Z,4.8nm,0.5s						
BNX	BinXian	14.60	286	⇓P	Pn	14 38 43.4	+1.0
BNX				pmax	pmax		
	comp=Z,21nm,0.9s						
HEH	HeiHe	15.41	303	*e*P	Pn	14 38 51.8	-1.4
HEH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HEH				LR	LR		
	comp=Z,590nm,15.9s						
HEH				LR	LR		
	comp=Z,1μm,15.4s						
HEH				LR	LR		
	comp=Z,1μm,14.0s						
CN2	Changchun	16.07	279	*e*P	P	14 39 03.5	-1.6
CN2				*e*sP	pwP	14 39 10.0	-0.9
CN2				*e*S	Sn	14 41 59.8	0.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,2μm,14.0s						
CN2				LR	LR		
	comp=Z,1μm,14.0s						
CN2				LR	LR		
	comp=Z,2μm,14.0s						
KSRS	Korea Array	16.12	255	Pn	Pn	14 39 02.7	+0.2
	comp=Z,0.1nm,0.3s,baz=58,slow=12,SNR=4.5						
	comp=Z,2.4nm,0.9s						
MA2	Magadan	16.31	6	Pn	Pn	14 39 05.7	+1.0
	comp=Z,15nm,0.9s,baz=183,slow=19,SNR=4.2						
MA2				LR	LR	14 45 28.6	
	comp=Z,217nm,18.4s,baz=221,slow=37						
MA2	Magadan	16.31	6*c*	*e*P	Pn	14 39 02.4	-2.3
MA2				pmax	pmax		
	comp=Z,61nm,1.3s						
JNU	Nakatsue	16.66	238	LR	LR	14 46 04.2	
	comp=Z,262nm,18.8s,baz=38,slow=39						
ZEA	Zeya	16.93	315	*e*P	Pn	14 39 09.6	-3.0
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA				MLR	MLR		
	comp=E,200nm,12.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,14.0s						
SEY	Seymchan	19.76	6	P	P	14 39 45.1	-0.5
	comp=Z,0.4nm,0.3s,baz=178,slow=8.0,SNR=10						
SEY				LR	LR	14 47 40.2	
	comp=Z,209nm,18.4s,baz=171,slow=37						
	comp=Z,11nm,1.0s						
SEY	Seymchan	19.76	6	*i* P	P	14 39 45.3	-0.3
SEY				pmax	pmax		
	comp=Z,11nm,1.1s						
SEY	Seymchan	19.76	6	*e*P	P	14 39 45.3	-0.3
DL2	Dalian	20.05	266	P	P	14 39 48.0	-1.0
DL2				S	S	14 43 28.0	-6.2
DL2				pmax	pmax		
	comp=Z,64nm,1.2s						
DL2				pmax	pmax		
	comp=Z,270nm,7.1s						
DL2				LR	LR		
	comp=Z,880nm,10.5s						
DL2				LR	LR		
	comp=Z,630nm,10.9s						
DL2				LR	LR		
	comp=Z,690nm,15.9s						
HIA	Hailar	20.06	297		P	14 39 46.4	-2.6
HIA	Hailar	20.06	297	*i* P	Pn	14 39 50.1	-0.8
HIA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HILR	Hailar Array B	20.09	298	P	P	14 39 47.7	-1.7
	comp=Z,7.6nm,0.4s,baz=92,slow=11,SNR=14						
YAK	Yakutsk	21.45	337	P	P	14 40 01.4	-2.5
	comp=Z,26nm,0.3s,baz=250,slow=0.9,SNR=21						
YAK				LR	LR	14 48 51.5	
	comp=Z,296nm,18.3s,baz=127,slow=38						
YAK	Yakutsk	21.45	337		P	14 39 59.7	-4.2
YAK				IAmb	IAmb	14 40 02.3	
	comp=Z,42nm,0.8s						
YAK	Yakutsk	21.45	337	*e*P	P	14 40 00.3	-3.6
YAK				*e*		14 40 15.9	
YAK				*e*PPP	PPP	14 40 26.0	
YAK				*e*S	S	14 43 54.8	-6.7

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YAK                                 e*SS     sS       14 44 01.1  -4.1
YAK                                 eSSS     SSS      14 44 30.6
YAK                                  pmax    pmax
      comp=N,7.0nm,1.4s
YAK                                  pmax    pmax
      comp=E,8.0nm,1.1s
YAK                                  pmax    pmax
      comp=Z,41nm,0.9s
YAK                                  smax    smax
      comp=N,430nm,3.3s
YAK                                  smax    smax
      comp=E,452nm,3.8s
YAK                                  MLR     MLR
      comp=Z,326nm,20.0s
YAK                                  MLR     MLR
      comp=N,200nm,16.0s
YAK                                  MLR     MLR
      comp=E,238nm,16.0s
XLT   XiLinHaoTe       22.76 282    eP       P        14 40 18.4  +0.1
XLT                                  pP      pwP      14 40 23.6  -0.5
XLT                                  PP      PnPn     14 40 46.8  +4.6
XLT                                  pmax    pmax
      comp=E,27nm,0.7s
BTO   Baotou           27.93 277    eP       P        14 41 07.3  +1.1
BTO                                  pP      pwP      14 41 10.9  -1.6
BTO                                  S       S        14 45 50.6  +0.7
BTO                                  pmax    pmax
      comp=E,17nm,0.7s
BTO                                  pmax    pmax
      comp=E,460nm,5.3s
BTO                                  LR      LR
      comp=E,810nm,5.5s
BTO                                  LR      LR
      comp=E,610nm,4.8s
BTO                                  LR      LR
      comp=E,680nm,6.4s
ULN   Ulaanbaatar      28.48 293     P       P        14 41 11.3  +0.2
ULN   Ulaanbaatar      28.48 293   ceP       P        14 41 11.7  +0.6
ULN                                  pmax    pmax
      comp=Z,38nm,1.3s
ULN   Ulaanbaatar      28.48 293    eP       P        14 41 11.7  +0.6
LYN   LuoYang          28.55 264    eP       P        14 41 19.2  +7.5
LYN                                  pmax    pmax
      comp=Z,13nm,0.7s
H11N2 WAKE ISLAND Hy   28.61 140     T       T        15 11 59.6
      baz=330,slow=75,SNR=254
H11N1 WAKE ISLAND Hy   28.63 140     T       T        15 12 00.5
      baz=330,slow=75,SNR=231
H11N3 WAKE ISLAND Hy   28.63 140     T       T        15 12 00.9
      baz=330,slow=75,SNR=192
SONM  Songino Array    28.92 293     P       P        14 41 16.3  +1.3
      comp=Z,16nm,0.6s,baz=87,slow=8.5,SNR=28
      comp=Z,16nm,0.6s
SONM  Songino Array    28.92 293             P        14 41 15.8  +0.8
SONM                                 IAmb    IAmb     14 41 17.2
      comp=Z,24nm,1.0s
H11S1 WAKE ISLAND Hy   29.58 141     T       T        15 13 06.6
      baz=331,slow=76,SNR=348
H11S3 WAKE ISLAND Hy   29.59 141     T       T        15 13 13.4
      baz=331,slow=76,SNR=213
H11S2 WAKE ISLAND Hy   29.60 141     T       T        15 13 08.0
      baz=331,slow=76,SNR=275
SPIA  Saint Paul Isl   29.70  48     P       P        14 41 25.7  +4.1
      baz=260
TIXI  Tiksi            29.77 348   ceP       P        14 41 19.4  -2.7
TIXI                                 pmax    pmax
      comp=Z,15nm,2.5s
P08K  Saint George I   29.99  49     P       P        14 41 27.9  +3.7
      baz=262
NIKH  Nikolski High    30.12  56     P       P        14 41 33.3  +7.9
      baz=269
ZAK   Zakamensk        30.72 299    eP       P        14 41 31.3  +0.4
ZAK                                  pmax    pmax
      comp=Z,9.0nm,1.2s
GAMB  Gambell          30.79  34     P       P        14 41 31.8  +0.6
      baz=248
XAN   Xi'an            31.37 266     P       P        14 41 43.8  +7.1
XAN                                  pmax    pmax
      comp=Z,20nm,0.9s
UNV   Unalaska Valle   31.54  54     P       P        14 41 44.7  +6.8
      baz=270
M11K  Mekoryuk         32.33  42     P       P        14 41 46.5  +1.8
      baz=259
TNA   Tin City         32.95  32     P       P        14 41 50.5  +0.3
      baz=250
FALS  False Pass       33.35  52     P       P        14 41 58.8  +5.1
      baz=270
F14K  Arctic Creek     33.55  33     P       P        14 41 55.2  -0.2
      baz=252
ANM   Nome             33.67  35     P       P        14 41 57.4  +0.9
      baz=254
J14K  Nanvaranak Lak   34.03  38     P       P        14 42 00.8  +1.3
      baz=258
LZH   Lanzhou          34.13 273    eP       P        14 42 02.6  +1.6
LZH                                  sP      pwP      14 42 13.0  +5.7
LZH                                  pmax    pmax
      comp=Z,46nm,1.3s
L14K  Kuka Creek       34.19  41     P       P        14 42 02.4  +1.5
      baz=261
F15K  North Star Dit   34.29  33     P       P        14 42 01.7  -0.1
      baz=253
LZDM  Lanzhou Array    34.30 273     P       P        14 42 03.9  +1.3
      comp=Z,4.9nm,0.5s,baz=90,slow=3.0,SNR=9.8
      comp=Z,4.9nm,0.5s
G15K  Niukluk          34.34  34     P       P        14 42 02.3   0.0
      baz=255
KNGR  Kungurtug, Tuv   34.36 300    i P      P        14 42 03.8  +1.1
KNGR                                 pmax    pmax
      comp=Z,8.0nm,1.0s
M14K  Bethel           34.46  42     P       P        14 42 04.9  +1.6
      baz=263
N14K  Kuskokwak Cree   34.50  43     P       P        14 42 06.3  +2.6
      baz=264
O14K  Tigyukauivet M   34.66  45     P       P        14 42 08.3  +3.2
      baz=266
C16K  Lisburne Hills   34.87  28     P       P        14 42 06.9  +0.1
      baz=249
K15K  Wolf Creek Mou   34.87  39     P       P        14 42 09.6  +2.6
      baz=261
H16K  Elim             35.00  35     P       P        14 42 09.1  +1.2
      baz=257
SDPT  Sand Point       35.02  52     P       P        14 42 13.8  +5.5
      baz=272
M15K  Kasigluk River   35.07  42     P       P        14 42 11.1  +2.5
      baz=264
N15K  Kwethluk River   35.32  43     P       P        14 42 13.5  +2.7
      baz=266
O15K  Ungalikthiuk R   35.40  45     P       P        14 42 13.6  +2.1
      baz=267
J16K  Anvik River      35.45  38     P       P        14 42 13.9  +2.1
      baz=261
D17K  Noatak River     35.48  30     P       P        14 42 12.0   0.0
      baz=252
I17K  Unalakleet       35.51  37     P       P        14 42 14.3  +2.0
      baz=260
CHNA  Chernabura Isl   35.56  52     P       P        14 42 18.4  +5.5
      baz=274
RDOG  Red Dog Mine     35.65  29     P       P        14 42 14.1  +0.5
      baz=252
C17K  DeLong Mountai   35.69  29     P       P        14 42 14.3  +0.4
      baz=251
GTA   Gaotai           35.69 280    eP       P        14 42 15.7  +1.3
GTA                                  pmax    pmax
      comp=Z,12nm,1.0s
L16K  Owhat River      35.76  41     P       P        14 42 16.7  +2.2
      baz=264
E17K  Hotham Inlet     35.77  31     P       P        14 42 14.8  +0.2
      baz=254
F17K  Baldwin Pennin   35.82  32             P        14 42 13.6  -1.4
F17K                                 IAmb    IAmb     14 42 16.1
      comp=Z,26nm,1.4s
F17K  Baldwin Pennin   35.82  32     P       P        14 42 15.8  +0.8
      baz=256
G17K  Kiwalik Mounta   35.84  34     P       P        14 42 15.9  +0.6
      baz=258
M16K  Timber Creek     35.95  42     P       P        14 42 18.3  +2.1
      baz=265
N16K  Nishlik Lake     36.00  43     P       P        14 42 18.7  +2.0
      baz=266
H17K  Granite Mounta   36.04  35     P       P        14 42 18.2  +1.3
      baz=259
J17K  VABM Dome        36.15  38             P        14 42 17.4  -0.4
J17K                                 IAmb    IAmb     14 42 32.2
      comp=Z,24nm,1.1s
J17K  VABM Dome        36.15  38     P       P        14 42 19.0  +1.1
      baz=262
O16K  Kokwok River B   36.30  44     P       P        14 42 21.0  +1.9
      baz=268
E18K  Tukpahlearik C   36.32  31     P       P        14 42 19.8  +0.5
      baz=255
L17K  Donlin           36.36  40     P       P        14 42 20.9  +1.3
      baz=264
K17K  Iditarod         36.41  39     P       P        14 42 20.8  +0.7
      baz=264
C18K  Utukok River     36.44  29             P        14 42 19.4  -0.9
C18K                                 IAmb    IAmb     14 42 32.2
      comp=Z,12nm,0.8s
C18K  Utukok River     36.44  29     P       P        14 42 19.9  -0.4
      baz=253
B18K  Kokolik River    36.45  27     P       P        14 42 20.5  +0.2
      baz=251
F18K  Selawik          36.48  32     P       P        14 42 20.6   0.0
      baz=257
M17K  Holitna River    36.71  41     P       P        14 42 24.0  +1.3
      baz=266
H18K  Honhosa River    36.72  35     P       P        14 42 21.5  -1.2
H18K                                 IAmb    IAmb     14 42 36.6
      comp=Z,14nm,0.9s
H18K  Honhosa River    36.72  35     P       P        14 42 23.4  +0.7
      baz=260
G18K  Tagagawik        36.73  34     P       P        14 42 22.2  -0.7
G18K  Tagagawik        36.73  34     P       P        14 42 23.1  +0.2
      baz=259
N17K  Nushagak Hills   36.78  43     P       P        14 42 24.9  +1.6
      baz=268
O17K  Koliganek Bris   36.81  44     P       P        14 42 26.1  +2.6
      baz=269
Q16K  King Salmon      37.03  46     P       P        14 42 27.9  +2.5
      baz=271
L18K  Granite Mounta   37.12  40     P       P        14 42 27.4  +1.3
      baz=266
C19K  Lookout Ridge    37.13  28     P       P        14 42 25.6  -0.6
C19K                                 IAmb    IAmb     14 42 38.1
      comp=Z,11nm,0.8s
C19K  Lookout Ridge    37.13  28     P       P        14 42 25.9  -0.3
      baz=254
P17K  Kvichak River    37.14  45     P       P        14 42 28.4  +2.1
      baz=270
J18K  Innoko River     37.21  38     P       P        14 42 27.5  +0.5
      baz=264
R17L  Mt. Peulik Vol   37.22  48     P       P        14 42 29.9  +2.9
      baz=272
F19K  Shaleruckik Mo   37.26  32     IAmb    IAmb     14 43 07.7
      comp=Z,18nm,1.3s
F19K  Shaleruckik Mo   37.26  32     P       P        14 42 27.3  +0.1
      baz=259
G19K  Purcell Mounta   37.41  33     P       P        14 42 28.0  -0.5
G19K                                 IAmb    IAmb     14 43 08.4
      comp=Z,26nm,1.6s
G19K  Purcell Mounta   37.41  33     P       P        14 42 28.7  +0.2
      baz=260
N18K  Kilae Creek      37.43  42     P       P        14 42 30.6  +1.8
      baz=269
M18K  Stony River      37.48  41     P       P        14 42 30.7  +1.4
      baz=268
D19K  Kuna River       37.49  29     P       P        14 42 28.7  -0.5
      baz=256
H19K  Roundabout Mou   37.57  34     P       P        14 42 30.1  +0.2
      baz=262
E19K  Redstone River   37.59  31     IAmb    IAmb     14 42 35.1
      comp=Z,15nm,0.9s
E19K  Redstone River   37.59  31     P       P        14 42 30.2  +0.1
      baz=258
CHIR  Chirikof Islan   37.74  50     P       P        14 42 35.3  +3.8
      baz=275
J19K  Poorman          37.74  37     IAmb    IAmb     14 42 45.7
      comp=Z,18nm,1.0s
J19K  Poorman          37.74  37     P       P        14 42 31.4   0.0
      baz=265
P18K  Big Mountain,    37.76  45     P       P        14 42 33.3  +1.6
      baz=271
O18K  Koktuh Hills     37.76  44     P       P        14 42 32.9  +1.2
      baz=270
Q18K  Katmai Hardscr   37.89  46     P       P        14 42 34.5  +1.7
      baz=272
L19K  White Mountain   37.97  40     P       P        14 42 35.5  +2.1
      baz=268
D20K  Etivluk River    38.08  29             P        14 42 33.4  -0.9
D20K                                 IAmb    IAmb     14 42 46.8
      comp=Z,12nm,0.8s
D20K  Etivluk River    38.08  29     P       P        14 42 34.3  +0.1
      baz=258,SNR=8.6
F20K  Avaraart Lake    38.09  32     P       P        14 42 33.4  -0.9
F20K                                 IAmb    IAmb     14 43 57.8
      comp=Z,27nm,1.9s
F20K  Avaraart Lake    38.09  32     P       P        14 42 34.7  +0.4
      baz=261
N19K  Bonanza Creek    38.12  42     P       P        14 42 36.8  +2.0
      baz=270
E20K  Nigu River       38.14  30     P       P        14 42 35.2  +0.4
      baz=259
B20K  Meade River      38.19  27     IAmb    IAmb     14 42 47.1
      comp=Z,17nm,0.7s
B20K  Meade River      38.19  27     P       P        14 42 35.0  -0.1
      baz=255
O19K  Port Alsworth    38.20  43     P       P        14 42 37.5  +2.2
      baz=271
H20K  Anotleneega Mo   38.22  35     P       P        14 42 35.4  -0.1
      baz=263
I20K  Naaghedeneel     38.31  36     P       P        14 42 37.3  +1.1
      baz=265
K20K  Telida           38.39  38     P       P        14 42 37.4  +0.5
      baz=267
J20K  Nowinta River    38.41  37             P        14 42 36.1  -0.9
J20K  Nowinta River    38.41  37     P       P        14 42 37.6  +0.6
      baz=266
SII   Sitkinak Islan   38.47  49     P       P        14 42 42.5  +4.8
      baz=275
Q19K  Cape Douglas,    38.59  45     P       P        14 42 41.6  +3.0
      baz=273
A21K  Barrow           38.71  25     P       P        14 42 38.9  -0.5
      baz=254,SNR=5.9
IMAR  Indian Mountai   38.73  34     P       P        14 42 39.4  -0.3
P19K  Oil Pt           38.77  44     P       P        14 42 42.7  +2.6
      baz=272
M20K  Styx River       38.78  41     P       P        14 42 42.0  +1.8
      baz=270
C21K  Knifeblade Rid   38.81  29     P       P        14 42 40.3  -0.1
      baz=259
G21K  Allakaket        38.89  33     P       P        14 42 41.5  +0.5
      baz=263
OHAK  Old Harbor       38.90  48     P       P        14 42 45.3  +4.1
      baz=275
B21K  Ikpikpuk River   38.97  28     P       P        14 42 41.4  -0.2
      baz=258
E21K  Killik River     38.98  30     IAmb    IAmb     14 42 43.6
      comp=Z,37nm,1.8s
E21K  Killik River     38.98  30     P       P        14 42 42.0  +0.2
      baz=261
O20K  Slope Mountain   39.06  43     P       P        14 42 45.2  +2.7
      baz=272
H21K  Melozitna Rive   39.09  35     IAmb    IAmb     14 42 56.6
      comp=Z,45nm,1.9s
H21K  Melozitna Rive   39.09  35     P       P        14 42 43.6  +0.8
      baz=265
A22K  Sinclair Lake    39.14  26     P       P        14 42 43.1   0.0
      baz=256
CHUM  Lake Minchumin   39.19  37     P       P        14 42 44.7  +1.1
      baz=268
PPLA  Purkeypile       39.23  39     P       P        14 42 45.6  +1.5
      baz=269
KDAK  Kodiak Island    39.23  47     P       P        14 42 47.4  +3.4
      baz=275
Q20K  Shuyak Island    39.26  46     P       P        14 42 46.9  +2.7
      baz=274
I21K  Tanana           39.40  35     P       P        14 42 46.6  +1.3
      baz=266
B22K  Teshekpuk Lake   39.51  27     IAmb    IAmb     14 43 36.3
      comp=Z,43nm,1.9s
B22K  Teshekpuk Lake   39.51  27     P       P        14 42 45.7  -0.5
      baz=259
D22K  Ayikyak River    39.51  29     P       P        14 42 46.9  +0.7
      baz=261
F22K  John River       39.52  32     P       P        14 42 46.9  +0.6
      baz=264
SKT   Skwentna         39.53  40     P       P        14 42 47.5  +1.0
      baz=271
H22K  Ishtalitna Cre   39.70  34     P       P        14 42 48.1  +0.3
H22K  Ishtalitna Cre   39.70  34     P       P        14 42 48.3  +0.5
      baz=266
NRIK  Noril'sk         39.72 331    i P      P        14 42 48.7  +0.8
NRIK                                 pmax    pmax
      comp=Z,5.0nm,1.0s
G22K  Bettles          39.72  33     P       P        14 42 48.3  +0.3
      baz=265
E22K  Anaktuvuk Pass   39.73  31             P        14 42 47.9  -0.2
E22K                                 IAmb    IAmb     14 42 50.2
      comp=Z,15nm,0.6s
E22K  Anaktuvuk Pass   39.73  31     P       P        14 42 48.1   0.0
      baz=263,SNR=20
BPAW  Bear Paw Mtn.    39.79  37     P       P        14 42 49.6  +1.0
      baz=269
MLY   Manley           39.92  36     IAmb    IAmb     14 43 12.3
      comp=Z,27nm,1.6s
MLY   Manley           39.92  36     P       P        14 42 50.1  +0.4
      baz=268
SUA   Susitna One      39.92  41     P       P        14 42 51.3  +1.5
      baz=272
BRSE  Bradley Lake S   40.02  44     P       P        14 42 51.8  +1.3
      baz=274
TRF   Thorofare Moun   40.09  38     P       P        14 42 52.3  +1.0
      baz=270
CUT   Chulitna         40.12  40     P       P        14 42 52.2  +1.0
      baz=271
M22K  Willow           40.21  41     P       P        14 42 53.5  +1.5
      baz=272
D23K  Nanushuk River   40.24  29     IAmb    IAmb     14 43 18.4
      comp=Z,38nm,1.8s
D23K  Nanushuk River   40.24  29     P       P        14 42 52.3   0.0
      baz=263
COLD  Coldfoot         40.26  32             P        14 42 51.7  -0.7
COLD  Coldfoot         40.26  32     P       P        14 42 52.6  +0.2
      baz=266
G23K  Bananza Creek    40.29  33             P        14 42 51.9  -0.8
G23K                                 IAmb    IAmb     14 43 14.1
      comp=Z,38nm,1.9s
G23K  Bananza Creek    40.29  33     P       P        14 42 52.9  +0.2
      baz=266
C23K  Itkillik River   40.38  28     IAmb    IAmb     14 43 05.4
      comp=Z,14nm,0.8s
C23K  Itkillik River   40.38  28     P       P        14 42 53.5  +0.2
      baz=262
RC01  Rabbit Creek A   40.43  42     P       P        14 42 55.5  +1.6
      baz=273
H23K  Yukon River      40.45  34     P       P        14 42 54.9  +0.9
      baz=268
O22K  Cooper Landing   40.48  43     P       P        14 42 56.3  +2.1
      baz=274
I23K  Minto, Yukon-K   40.51  35     P       P        14 42 54.9  +0.4
      baz=269
E23K  Chandalar        40.54  31     P       P        14 42 55.1  +0.2
      baz=265
TOLK  Toolik Lake Re   40.61  30             P        14 42 54.4  -1.0
TOLK  Toolik Lake Re   40.61  30     P       P        14 42 55.7  +0.3
      baz=265,SNR=7.2
NEA2  Nenana           40.63  36     P       P        14 42 55.2  -0.3
NEA2                                 IAmb    IAmb     14 43 09.2
      comp=Z,14nm,0.8s
NEA2  Nenana           40.63  36     P       P        14 42 56.4  +0.9
      baz=270
GOMU  GeErMu           40.63 278     P       P        14 42 57.1  +0.8
GOMU                                 pmax    pmax
      comp=Z,13nm,1.1s
GOMU  GeErMu           40.63 278     P       P        14 42 57.2  +0.9
GOMU                                 PcP     PcP      14 44 59.1  +0.9
GOMU                                 pmax    pmax
      comp=Z,13nm,1.1s
SEW   Seward           40.64  43     P       P        14 42 57.0  +1.4
      baz=275
PMR   Palmer           40.69  41     P       P        14 42 57.1  +1.0
      baz=273
MCK   McKinley         40.69  38     P       P        14 42 56.3  +0.2
      baz=271
DGZ   Jazzator, Alta   40.89 301    i P      P        14 42 59.0  +0.9
DGZ                                  pmax    pmax
      comp=Z,5.0nm,0.9s
WAT1  Susitna Watana   40.90  39     P       P        14 42 59.0  +1.2
      baz=272
D24K  Happy Valley     40.93  29     IAmb    IAmb     14 42 59.5
      comp=Z,14nm,0.7s
D24K  Happy Valley     40.93  29     P       P        14 42 57.9   0.0
      baz=265
E24K  Your Creek       40.97  31     IAmb    IAmb     14 43 17.5
      comp=Z,11nm,0.8s
E24K  Your Creek       40.97  31     P       P        14 42 57.9  -0.5
      baz=266
C24K  Franklin Bluff   41.02  28     IAmb    IAmb     14 43 11.1
      comp=Z,22nm,0.8s
C24K  Franklin Bluff   41.02  28     P       P        14 42 58.6  -0.1
      baz=264
KNK   Knik Glacier     41.02  41     P       P        14 43 00.5  +1.6
      baz=274
SML   Sawmill          41.05  41     P       P        14 42 59.0  -0.2
SML                                  IAmb    IAmb     14 43 14.1
      comp=Z,34nm,1.2s
SML   Sawmill          41.05  41     P       P        14 43 00.7  +1.6
      baz=274
PWL   Port Wells       41.13  42     P       P        14 43 01.8  +2.1
      baz=275
H24K  Noodor Dome      41.13  34     P       P        14 42 59.0  -0.7
H24K  Noodor Dome      41.13  34     P       P        14 43 00.5  +0.7
      baz=270
COLA  College          41.15  36     P       P        14 43 00.7  +0.9
      baz=271
F24K  Squaw Lake       41.17  32     P       P        14 42 59.4  -0.6
F24K                                 IAmb    IAmb     14 43 42.0
      comp=Z,32nm,1.9s
F24K  Squaw Lake       41.17  32     P       P        14 42 59.8  -0.1
      baz=268
WAT6  Susitna Watana   41.28  39     P       P        14 43 01.9  +0.8
      baz=273
G24K  Hadweenzic Riv   41.30  33     P       P        14 43 02.0  +0.9
      baz=269,SNR=8.3
POKR  Poker Plat Res   41.32  35     P       P        14 43 02.2  +1.0
      baz=271
M23K  Glacier View     41.34  41     P       P        14 43 02.2  +0.7
      baz=274
DHY   Denali Highway   41.42  39     P       P        14 43 02.7  +0.5
      baz=273
ZALV  Zalesovo Beam    41.48 307     P       P        14 43 02.6   0.0
      comp=Z,3.2nm,0.5s,baz=83,slow=6.5,SNR=17
ZALV                                 PcP     PcP      14 44 59.0  -1.1
      comp=Z,1.6nm,0.7s,baz=90,slow=4.4,SNR=3.7
      comp=Z,3.2nm,0.5s
ZALV  Zalesovo Beam    41.48 307             P        14 43 02.0  -0.7
SCM   Sheep Creek Mo   41.53  40     P       P        14 43 03.2  +0.1
      baz=275
HDA   Harding Lake     41.55  37     P       P        14 43 03.5  +0.4
      baz=272
ILAR  Eielson Array    41.56  36     P       P        14 43 02.4  -0.8
      comp=Z,0.9nm,0.7s,baz=267,slow=9.8,SNR=19
      comp=Z,0.9nm,0.7s
ILAR  Eielson Array    41.56  36             P        14 43 04.2  +1.0
GLI   Glacier Island   41.73  42     P       P        14 43 06.0  +1.4
      baz=276
D25K  Kavik River      41.81  29     IAmb    IAmb     14 43 07.0
      comp=Z,16nm,0.7s
D25K  Kavik River      41.81  29     P       P        14 43 05.2  -0.1
      baz=267
G25K  Bearman Lake     41.85  33     P       P        14 43 06.0  +0.5
      baz=270
F25K  Christian Rive   42.03  32     IAmb    IAmb     14 43 31.5
      comp=Z,29nm,1.9s
F25K  Christian Rive   42.03  32     P       P        14 43 07.5  +0.4
      baz=270
M24K  Tolsona, Glenn   42.05  40     P       P        14 43 08.3  +1.0
      baz=275
E25K  Arctic Village   42.06  31     P       P        14 43 07.4  +0.1
      baz=269
K24K  Donnelly Dome    42.09  37     P       P        14 43 07.9  +0.3
      baz=274
PRP   Porcupine Dome   42.11  35     P       P        14 43 08.4  +0.6
      baz=272
J25K  Salcha River,    42.22  36     P       P        14 43 09.5  +0.9
      baz=273
KLU   Klutina          42.23  41     P       P        14 43 09.4  +0.6
      baz=276
PAX   Paxson           42.29  39     P       P        14 43 10.1  +0.8
      baz=275
C26K  Camden Bay       42.35  28     P       P        14 43 09.5   0.0
      baz=268
EYAK  Cordova Ski Ar   42.42  42     P       P        14 43 11.4  +1.2
      baz=277
HARP  HAARP            42.49  39     P       P        14 43 12.0  +1.1
      baz=276
RIDG  Independent Ri   42.51  37     P       P        14 43 11.6  +0.6
      baz=275
F26K  Sheenjek River   42.60  32     P       P        14 43 11.9  +0.2
      baz=271
C27K  Jago River       42.76  29     IAmb    IAmb     14 43 14.8
      comp=Z,13nm,0.7s
C27K  Jago River       42.76  29     P       P        14 43 13.0  +0.1
      baz=269
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G26K	**Porcupine Rive**	42.76	33	P	P	14 43 14.0	+1.0
	baz=272						
N25K	**Chitina, Valde**	42.84	41	P	P	14 43 14.6	+0.8
	baz=277						
SCRK	**Sand Creek**	42.87	37	P	P	14 43 14.4	+0.4
	baz=275						
BMRM	**Bremner River**	42.92	42	P	P	14 43 16.5	+2.0
	baz=278						
J26L	**Joseph Creek**	43.01	36	IAmb	IAmb	14 43 38.3	
	comp=Z,28nm,1.8s						
J26L	**Joseph Creek**	43.01	36	P	P	14 43 15.4	+0.3
	baz=275						
KAIM	**Kayak Island**	43.17	43	P	P	14 43 18.0	+1.7
	baz=279						
L26K	**Log Cabin Wild**	43.25	38	P	P	14 43 17.8	+0.8
	baz=277						
M26K	**Nabesna, AK**	43.49	39	IAmb	IAmb	14 43 34.5	
	comp=Z,26nm,1.1s						
M26K	**Nabesna, AK**	43.49	39	P	P	14 43 20.2	+1.3
	baz=278						
E27K	**Coleen River**	43.55	31	P	P	14 43 19.8	+0.5
	baz=273						
G27K	**Doyon Strip**	43.61	33	P	P	14 43 20.6	+0.8
	baz=274						
MCARA	**McCarthy VSAT**	43.62	41	P	P	14 43 21.1	+1.1
	baz=279						
CRQE	**Cirque**	43.69	42	P	P	14 43 22.0	+1.3
	baz=279						
K27K	**Chicken**	43.70	37	IAmb	IAmb	14 43 34.9	
	comp=Z,27nm,1.1s						
K27K	**Chicken**	43.70	37	P	P	14 43 21.4	+0.8
	baz=277						
H27K	**Steamboat Moun**	43.71	34	P	P	14 43 20.5	-0.1
H27K				IAmb	IAmb	14 43 35.5	
	comp=Z,19nm,1.2s						
H27K	**Steamboat Moun**	43.71	34	P	P	14 43 21.0	+0.4
	baz=275						
I27K	**Kandik River**	43.73	35	P	P	14 43 21.2	+0.3
	baz=275						
D27M	**Malcolm River**	43.73	29	P	P	14 43 20.8	-0.1
	baz=272						
L27K	**Beaver Creek,**	43.93	38	P	P	14 43 23.1	+0.6
	baz=278						
BCAR	**Beaver Creek A**	43.95	38		P	14 43 23.3	+0.6
M27K	**Edge Creek, AK**	44.01	39	P	P	14 43 24.4	+1.2
	baz=278						
F28M	**Old Crow**	44.24	32	P	P	14 43 25.1	+0.3
	baz=275,SNR=6.2						
E28M	**Babbage River**	44.28	30	P	P	14 43 25.7	+0.5
	baz=274,SNR=8.6						
MESA	**MESA**	44.35	42	P	P	14 43 26.5	+0.5
	baz=281						
I28M	**Miner Creek**	44.44	35	IAmb	IAmb	14 43 40.8	
	comp=Z,13nm,0.8s						
I28M	**Miner Creek**	44.44	35	P	P	14 43 27.3	+0.7
	baz=277						
BVCY	**Beaver Creek**	44.47	39	P	P	14 43 27.4	+0.6
	baz=279						
CTG	**Chitna Glacier**	44.50	41	P	P	14 43 28.2	+1.0
	baz=280						
D28M	**Stokes Point**	44.52	29	P	P	14 43 27.3	+0.2
	baz=274						
YUK3	**Moose Creek**	44.77	40	P	P	14 43 30.2	+0.8
	baz=280						
DAWY	**Dawson**	44.87	37	P	P	14 43 30.5	+0.5
	baz=279						
E29M	**Blow River**	44.91	30	IAmb	IAmb	14 43 44.7	
	comp=Z,10nm,0.9s						
E29M	**Blow River**	44.91	30	P	P	14 43 30.2	0.0
	baz=276						
H29M	**Whitestone**	44.98	33	P	P	14 43 31.3	+0.5
	baz=278						
G29M	**Pine Creek**	45.03	32	IAmb	IAmb	14 43 45.8	
	comp=Z,13nm,0.9s						
G29M	**Pine Creek**	45.03	32	P	P	14 43 31.7	+0.5
	baz=277						
MK31	**Makanchi Array**	45.05	298	*ce*P	P	14 43 32.5	+0.9
MKAR	**Makanchi Array**	45.05	298	P	P	14 43 32.4	+0.7
	comp=Z,7.4nm,0.5s,baz=80,slow=9.1,SNR=104						
	comp=Z,7.4nm,0.5s						
MKAR	**Makanchi Array**	45.05	298		P	14 43 32.2	+0.5
O28M	**Mount Upton**	45.09	41	P	P	14 43 34.1	+2.0
	baz=282						
I29M	**Ogilvie Camp,**	45.13	35	P	P	14 43 32.7	+0.7
	baz=278						
YUK8	**Steele Glacier**	45.19	41	P	P	14 43 34.5	+1.7
	baz=281						
MAKZ	**Makanchi**	45.25	298		P	14 43 33.9	+0.7
MAKZ	**Makanchi**	45.25	298	⇓P	P	14 43 33.7	+0.5
J29N	**Klondike Camp**	45.31	36	P	P	14 43 34.4	+0.9
	baz=279						
M29M	**Somme Creek**	45.56	39	P	P	14 43 36.4	+0.8
	baz=281						
L29M	**L29M**	45.59	38	P	P	14 43 37.1	+1.4
	baz=281						
EPYK	**Eagle Plains**	45.62	33	P	P	14 43 37.0	+1.1
	baz=279						
YUK4	**Talbot Arm**	45.70	40	P	P	14 43 38.5	+1.6
	baz=282						
K29M	**Barlow Dome**	45.72	37	P	P	14 43 37.9	+1.1
	baz=281						
G30M	**tAoh Zraii Nji**	45.72	32	IAmb	IAmb	14 44 02.4	
	comp=Z,8.7nm,0.8s						
G30M	**tAoh Zraii Nji**	45.72	32	P	P	14 43 37.1	+0.4
	baz=279						
F30M	**Barrier River**	45.79	31	P	P	14 43 37.8	+0.6
	baz=278						
YUK6	**Outpost Mounta**	45.92	41	P	P	14 43 40.1	+1.5
	baz=283						
I30M	**Mount Dempster**	45.95	35	P	P	14 43 39.6	+1.0
	baz=280						
O29M	**Mount Kennedy**	45.97	42	P	P	14 43 40.5	+1.7
	baz=283						
KURK	**Kurchatov**	46.01	304		P	14 43 38.9	-0.2
KURK	**Kurchatov**	46.01	304	*ce*P	P	14 43 39.5	+0.4
KURK				pmax	pmax		
	comp=Z,14nm,0.6s						
KURK	**Kurchatov**	46.01	304	*e*P	P	14 43 39.5	+0.4
J30M	**Hart River**	46.09	36	IAmb	IAmb	14 43 54.1	
	comp=Z,5.7nm,0.7s						
J30M	**Hart River**	46.09	36	P	P	14 43 40.7	+1.0
	baz=281						
KURBB	**Kurchatov Arra**	46.09	304	P	P	14 43 40.1	+0.4
	comp=Z,8.9nm,0.4s,baz=74,slow=8.7,SNR=66						
	comp=Z,8.9nm,0.4s						
M30M	**Minto, Yukon**	46.30	38	P	P	14 43 42.3	+1.0
	baz=282						
HYT	**Haines Junctio**	46.36	41		P	14 43 41.2	-0.7
HYT	**Haines Junctio**	46.36	41	P	P	14 43 43.1	+1.2
	baz=284,SNR=7.5						
N30M	**Aishikik Lake**	46.41	40	P	P	14 43 44.0	+1.8
	baz=283						
MAYO	**Mayo, Yukon**	46.48	37	P	P	14 43 43.6	+1.0
	baz=282						
G31M	**Satah River**	46.49	32	IAmb	IAmb	14 44 03.4	
	comp=Z,6.5nm,0.8s						
G31M	**Satah River**	46.49	32	P	P	14 43 43.3	+0.7
	baz=280						
INK	**Inuvik**	46.52	30	IAmb	IAmb	14 43 48.0	
	comp=Z,6.4nm,0.5s						
INK	**Inuvik**	46.52	30	P	P	14 43 42.6	-0.3
	baz=280						
P29M	**Windy Craggy**	46.54	42		P	14 43 42.4	-0.8
P29M	**Windy Craggy**	46.54	42	P	P	14 43 45.0	+1.8
	baz=284						
F31M	**Tsiigehtchic**	46.60	31	IAmb	IAmb	14 44 10.3	
	comp=Z,6.6nm,0.8s						
F31M	**Tsiigehtchic**	46.60	31	P	P	14 43 44.1	+0.6
	baz=280						
H31M	**Peel River**	46.67	34	P	P	14 43 43.5	-0.7
H31M	**Peel River**	46.67	34	P	P	14 43 44.7	+0.5
	baz=281						
P30M	**Million Dollar**	46.80	42	P	P	14 43 47.0	+1.7
	baz=284						
N31M	**Braeburn, Yuko**	47.01	40	P	P	14 43 48.2	+1.3
	baz=284						
O30N	**Mendenhall**	47.05	41	P	P	14 43 48.6	+1.4
	baz=285						
PLBC	**Pleasant Camp**	47.26	42	P	P	14 43 50.4	+1.6
	baz=286						
M31M	**Drury Creek, Y**	47.47	38	IAmb	IAmb	14 44 06.0	
	comp=Z,13nm,1.1s						
M31M	**Drury Creek, Y**	47.47	38	P	P	14 43 51.3	+0.8
	baz=285						
WHY	**Whitehorse**	47.65	41	P	P	14 43 53.3	+1.3
	baz=286						
S31K	**Pelican**	47.75	44	P	P	14 43 54.2	+1.7
	baz=287						
CMAR	**Chiang Mai Arr**	47.76	254	P	P	14 43 53.9	+0.7
	comp=Z,1.6nm,0.7s,baz=39,slow=7.7,SNR=11						
	comp=Z,1.6nm,0.7s						
CMAR	**Chiang Mai Arr**	47.76	254	P	P	14 43 52.9	-0.3
CMAR	**Chiang Mai Arr**	47.76	254	*i* P	P	14 43 54.5	+1.3
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SKAG	**Skagway**	47.77	42	P	P	14 43 54.6	+1.9
	baz=286						
FARO	**Faro, Yukon**	47.94	38	P	P	14 43 54.8	+0.7
	baz=285						
SIT	**Sitka**	48.49	45	P	P	14 44 00.8	+2.5
	baz=288						
P32M	**Atlin**	48.52	42	P	P	14 43 59.8	+1.2
	baz=287						
R32K	**Eaglecrest**	48.52	44	P	P	14 44 00.4	+1.8
	baz=288						
A36M	**Sachs Harbour**	48.54	24	IAmb	IAmb	14 44 04.6	
	comp=Z,6.9nm,0.8s						
A36M	**Sachs Harbour**	48.54	24	P	P	14 43 58.4	-0.1
	baz=284,SNR=6.6						
S32K	**Killisnoo**	48.75	45	P	P	14 44 02.1	+1.8
	baz=289						
P33M	**Teslin, Yukon**	48.76	41	P	P	14 44 01.9	+1.4
	baz=288						
C36M	**Paulatuk**	49.62	28	IAmb	IAmb	14 44 19.6	
	comp=Z,11nm,0.9s						
C36M	**Paulatuk**	49.62	28	P	P	14 44 06.6	-0.2
	baz=287,SNR=8.8						
T33K	**Petersburg**	49.80	45	P	P	14 44 10.2	+1.9
	baz=290						
R33M	**Jennings River**	49.91	41	P	P	14 44 10.7	+1.4
	baz=290						
U33K	**Whale Pass**	49.96	46	P	P	14 44 12.0	+2.5
	baz=291						
BVAR	**Borovoye Array**	49.99	310	P	P	14 44 10.6	+0.7
	comp=Z,4.7nm,0.6s,baz=77,slow=10.0,SNR=21						
	comp=Z,4.7nm,0.6s						
BORK	**Borovoye**	50.02	310		P	14 44 10.1	-0.1
BORK				IAmb	IAmb	14 44 11.9	
	comp=Z,8.4nm,0.8s						
BORK	**Borovoye**	50.02	310	*ce*P	P	14 44 11.0	+0.9
BORK				pmax	pmax		
	comp=Z,11nm,0.8s						
TARG	**Taragay, Kyrgy**	50.04	294	IAmb	IAmb	14 44 27.1	
	comp=Z,6.6nm,0.8s						
CRAG	**Craig**	50.19	47	P	P	14 44 14.2	+2.9
	baz=291						
WRAK	**Wrangell Islan**	50.25	45	P	P	14 44 14.9	+3.1
	baz=291						
S34M	**Telegraph Cree**	50.34	43	P	P	14 44 14.9	+2.5
	baz=291						
EVN	**Everest**	50.67	273		P	14 44 13.4	-2.8
EVN				IAmb	IAmb	14 44 30.3	
	comp=Z,13nm,0.7s						
WTLY	**Watson Lake, Y**	50.69	40	P	P	14 44 17.0	+1.8
	baz=291						
DLBC	**Dease Lake**	50.70	42	P	P	14 44 17.1	+1.9
	baz=291						
TKM2	**Tokmak 2**	50.97	296	P	P	14 44 18.9	+1.2
	SNR=29						
V35K	**Ketchikan**	51.04	47	P	P	14 44 20.7	+3.0
	baz=292						
T35M	**Bob Quinn**	51.12	44	P	P	14 44 20.6	+2.2
	baz=292						
KBK	**Karagaybulak**	51.51	296	P	P	14 44 22.9	+1.1
	SNR=18						
USP	**Ospenovka**	51.53	297	P	P	14 44 22.8	+1.1
	SNR=21						
AAK	**Ala-Archa**	51.82	296	P	P	14 44 24.7	+0.7
	SNR=8.7						
AAK	**Ala-Archa**	51.82	296		P	14 44 23.9	-0.1
AAK				IAmb	IAmb	14 44 31.0	
	comp=Z,6.2nm,0.7s						
AAK	**Ala-Archa**	51.82	296	*ce*P	P	14 44 25.0	+1.0
AAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AAK	**Ala-Archa**	51.82	296	*e*P	P	14 44 25.0	+1.0
LIRD	**Liard River Hi**	52.22	40	P	P	14 44 28.4	+1.8
	baz=293						
EKS2	**Erkin-Say**	52.27	296	P	P	14 44 28.3	+0.9
	SNR=14						
KSH	**Kashi**	52.31	292	P	P	14 44 31.9	+4.2
KSH				pP	pwP	14 44 36.5	+2.8
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TOAD	**Toad River Com**	52.85	41	P	P	14 44 32.5	+1.2
	baz=294						
KOTAN	**Kotaneelee Air**	52.88	39	P	P	14 44 33.2	+1.8
	baz=294						
SVE	**Sverdlovsk**	53.63	317	*e*P	P	14 44 37.1	+0.1
SVE				pmax	pmax		
	comp=Z,20nm,1.1s						
KKAR	**Karatay Array**	54.18	298		P	14 44 41.4	+0.1
KKAR	**Karatay Array**	54.18	298	P	P	14 44 41.4	+0.1
ARTI	**Arti**	54.94	317		P	14 44 45.1	-1.4
ARTI	**Arti**	54.94	317	*c i*P	P	14 44 46.2	-0.3
ARTI				S	S	14 52 29.8	+1.9
ARTI				SS	SS	14 56 12.8	+2.1
ARTI				pmax	pmax		
	comp=Z,28nm,1.3s						
SPITS	**Spitsbergen Ar**	55.19	349	P	P	14 44 46.0	-2.1
	comp=Z,20nm,1.1s,baz=29,slow=9.1,SNR=4.1						
	comp=Z,20nm,1.1s						
SPITS	**Spitsbergen Ar**	55.19	349	P	P	14 44 46.0	-2.1
RES	**Resolute Bay**	55.20	17	IAmb	IAmb	14 44 48.3	
	comp=Z,12nm,1.1s						
YKA	**Yellowknife Ar**	55.90	34	P	P	14 44 52.8	-0.5
	comp=Z,2.1nm,0.7s,baz=299,slow=7.6,SNR=20						
	comp=Z,2.1nm,0.7s						
YKA	**Yellowknife Ar**	55.90	34	P	P	14 44 53.0	-0.3
YKA	**Yellowknife Ar**	55.90	34	*i* P	P	14 44 51.7	-1.6
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YKAW1	**Yellowknife Wh**	55.95	34	IAmb	IAmb	14 46 24.9	
	comp=Z,22nm,1.9s						
MANEM	**Manem**	56.21	292	IAmb	IAmb	14 45 20.3	
	comp=Z,17nm,1.1s						
ABKAR	**Akbulak array**	57.55	309		P	14 45 05.4	+0.2
KIRV	**Kirov**	58.08	322	*ce*P	P	14 45 08.9	+0.1
ARCES	**ARCESS Array B**	59.69	340	P	P	14 45 19.1	-0.8
	comp=Z,1.3nm,0.4s,baz=49,slow=7.5,SNR=22						
	comp=Z,1.3nm,0.4s						
KLMR	**Klimovskoe**	60.91	328	*e*P	P	14 45 26.0	-2.3
KLMR				pmax	pmax		
	comp=Z,37nm,1.4s						
BELG	**Belogornoye**	62.38	317	*i* P	P	14 45 39.2	+0.8
BELG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WRAB	**Tennant Creek**	64.20	194	*i* P	P	14 45 49.9	-0.8
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WRA	**Warramunga Arr**	64.21	194	P	P	14 45 49.0	-1.8
	comp=Z,1.9nm,0.9s,baz=15,slow=6.8,SNR=9.4						
WRA				pP	pwP	14 45 59.5	+2.2
	comp=Z,3.3nm,0.7s,baz=10,slow=6.7,SNR=8.8						
	comp=Z,1.9nm,0.9s						
WRA	**Warramunga Arr**	64.21	194	*i* P	P	14 45 50.2	-0.6
WRA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MOS	**Moscow**	64.93	324	*e*P	P	14 45 54.8	-0.3
MOS				pmax	pmax		
	comp=Z,33nm,0.9s						
FINES	**FINESS Array B**	65.34	333	P	P	14 45 56.7	-1.0
	comp=Z,8.3nm,0.7s,baz=44,slow=7.4,SNR=21						
FINES				pP	pwP	14 46 07.2	+3.3
	comp=Z,4.5nm,0.6s,baz=39,slow=6.6,SNR=2.9						
	comp=Z,8.3nm,0.7s						
FINES	**FINESS Array B**	65.34	333	*ce*P	P	14 45 57.0	-0.7
FINES				pmax	pmax		
	comp=Z,8.0nm,0.7s						
OBN	**Obninsk**	65.80	324	*ce*P	P	14 46 00.4	-0.3
OBN				pmax	pmax		
	comp=Z,19nm,0.9s						
OBN				MLR	MLR		
	comp=Z,60nm,7.0s						
OBN	**Obninsk**	65.80	324	*e*P	P	14 46 00.4	-0.3
VRH	**Novokhopyorsk**	66.01	319	*e*P	P	14 46 00.4	-1.8
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LPSR	**Galich'ya Gora**	66.42	321	*e*P	P	14 46 02.9	-1.9
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR	**Storozhevoye**	67.22	320	*e*P	P	14 46 08.2	-1.7
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VORD	**Divnogorie**	67.33	319	*e*P	P	14 46 09.3	-1.3
VORD				pmax	pmax		
	comp=Z,20nm,1.0s						
NVAR	**Mina Array Bea**	67.47	58	P	P	14 46 11.6	-0.4
	comp=Z,1.6nm,0.8s,baz=289,slow=5.8,SNR=12						
	comp=Z,1.6nm,0.8s						
ASAR	**Alice Springs**	67.92	194	P	P	14 46 14.3	-0.3
	comp=Z,1.2nm,0.8s,baz=12,slow=5.8,SNR=17						
ASAR				pP	pwP	14 46 23.9	+2.8
	comp=Z,1.0nm,0.8s,baz=11,slow=5.7,SNR=9.6						
	comp=Z,1.2nm,0.8s						
AKT	**Akhty**	69.04	308	*e*P	P	14 46 20.7	-1.0
AKT				*e*		14 46 42.6	
AKT				*e*		14 48 52.6	
AKT				pmax	pmax		
	comp=Z,20nm,1.0s						
GOF	**Gofitskoye**	69.33	313	*ce*P	P	14 46 24.0	+0.7
MNK	**Minsk**	69.80	327	*i* P	P	14 46 25.2	-0.8
MNK				*i*		14 46 46.9	
MNK				*i*		14 49 00.0	
MNK				*i* PPP	PPP	14 50 41.9	
MNK				*i* S	S	14 55 36.9	+2.0
MNK				*i*		14 56 27.5	
MNK				*i* SS	SS	15 00 07.5	+5.1
MNK				pmax	pmax		
	comp=N,17nm,0.8s						
MNK				pmax	pmax		
	comp=E,9.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,27nm,0.8s						
MNK				MLR	MLR		
	comp=Z,171nm,17.0s						
NC405	**NORSAR Array S**	69.86	339		P	14 46 25.7	-0.6
PDAR	**Pinedale Array**	69.87	50	P	P	14 46 26.0	-1.0
	comp=Z,0.6nm,0.8s,baz=267,slow=2.3,SNR=4.6						
	comp=Z,0.6nm,0.8s						
NB2	**NORSAR Subarra**	70.05	339	P	P	14 46 26.9	-0.6
	comp=Z,3.3nm,0.5s,baz=31,slow=6.5						
NOA	**NORSAR Array B**	70.05	339	P	P	14 46 27.2	-0.3
	comp=Z,12nm,0.9s,baz=32,slow=6.2,SNR=21						
	comp=Z,12nm,0.9s						
HFS	**Hagfors**	70.14	337	P	P	14 46 27.5	-0.5
	comp=Z,14nm,0.7s,baz=45,slow=6.5,SNR=36						
	comp=Z,14nm,0.7s						
KIV	**Kislovodsk**	70.25	312	⇑P	P	14 46 29.7	+0.6
KIV	**Kislovodsk**	70.25	312	*e*P	P	14 46 28.0	-1.1
KIV				pmax	pmax		
	comp=Z,34nm,1.1s						
KIV				MLR	MLR		
	comp=Z,153nm,18.0s						
KIV	**Kislovodsk**	70.25	312	*e*P	P	14 46 29.3	+0.2
KBZ	**Khabaz**	70.29	312	P	P	14 46 30.2	+1.0
	comp=Z,17nm,0.9s,baz=51,slow=3.9,SNR=37						
	comp=Z,17nm,0.9s						
KBZ	**Khabaz**	70.29	312	*ce*P	P	14 46 29.2	0.0
KBZ				pmax	pmax		
	comp=Z,20nm,0.9s						
KBZ	**Khabaz**	70.29	312	*e*P	P	14 46 29.2	0.0
SHA1	**Shidzhatmaz**	70.41	312	*ce*P	P	14 46 30.6	+0.3
NEUR	**Neytrino**	70.70	312	*i* P	P	14 46 32.4	+0.4
NEUR				pmax	pmax		
	comp=Z,4.0nm,1.2s						
AK03	**Malin Array Si**	72.04	324	P	P	14 46 39.3	-0.4
AKASG	**Malin Array Be**	72.06	324	P	P	14 46 39.6	-0.2
	comp=Z,10nm,0.5s,baz=40,slow=6.0,SNR=36						
	comp=Z,10nm,0.5s						
AKASG	**Malin Array Be**	72.06	324	P	P	14 46 39.6	-0.2
AKASG				IAmb	IAmb	14 46 42.2	
	comp=Z,15nm,1.2s						
AKBB	**Malin Array Si**	72.06	324	*ce*P	P	14 46 39.6	-0.2
AKBB				pmax	pmax		
	comp=Z,25nm,0.9s						
AKBB	**Malin Array Si**	72.06	324	P	P	14 46 38.9	-0.9
AK04	**Malin Array Si**	72.07	324	P	P	14 46 39.5	-0.4
KIEV	**Kiev**	72.07	324		P	14 46 38.3	-1.6
KIEV	**Kiev**	72.07	324	⇓P	P	14 46 38.9	-0.9
KIEV	**Kiev**	72.07	324	⇓P	P	14 46 38.9	-0.9
KIEV	**Kiev**	72.07	324	P	P	14 46 39.2	-0.7
AK22	**Malin Array Si**	72.08	324	P	P	14 46 39.7	-0.2
SOC	**Sochi**	72.09	313	*e*P	P	14 46 39.7	-0.4
SOC				*e*PPP	PPP	14 51 01.0	
SOC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AK08	**Malin Array Si**	72.10	324	P	P	14 46 39.5	-0.5
AK11	**Malin Array Si**	72.10	324	P	P	14 46 39.7	-0.3
RNPP9	**Sopachiv**	72.92	326	P	P	14 46 44.3	-0.6
RNPP8	**Varash**	72.99	326	P	P	14 46 45.1	-0.2
LUBAR	**Lubar, Ukraine**	73.27	324	P	P	14 46 46.6	-0.4
SORM	**Soroca**	74.36	323	⇑P	P	14 46 51.6	-1.7
SORM	**Soroca**	74.36	323	⇑P	P	14 46 51.7	-1.7
KMPD	**K-Podol'skiy**	74.86	324	P	P	14 46 55.6	-0.7
KMPD				P	P	14 46 55.3	-1.0
MILM	**Milestii Mici**	75.06	322	⇑P	P	14 46 56.4	-1.1
MILM	**Milestii Mici**	75.06	322	⇑P	P	14 46 56.4	-1.1
BURAR	**Bucovina Array**	76.12	324		P	14 47 03.9	+0.2
BURAR	**Bucovina Array**	76.12	324	⇑P	P	14 47 04.4	+0.7
BURAR	**Bucovina Array**	76.12	324	⇑P	P	14 47 04.4	+0.7
STHS	**Stebnicka Huta**	76.34	327	*e*P	P	14 47 05.7	+0.9
STHS	**Stebnicka Huta**	76.34	327	*e*P	P	14 47 05.7	+0.9
ONER	**Baraj Valea Uz**	76.59	322	⇑P	P	14 47 07.5	+1.2
CFR	**Carcaliu**	76.69	321	⇑P	P	14 47 06.7	-0.1
CFR	**Carcaliu**	76.69	321	⇑P	P	14 47 06.7	-0.1
TPGR	**Topolog**	76.80	320	⇑P	P	14 47 07.8	+0.3
VRI	**Vrincioaia**	76.80	322	⇑P	P	14 47 03.5	-4.0
VRI	**Vrincioaia**	76.80	322	⇑P	P	14 47 03.5	-4.0
OZUR		77.04	323	⇑P	P	14 47 09.6	+0.7
LANS	**Liptovska Anna**	77.24	328	*e*P	P	14 47 11.5	+1.5
LANS	**Liptovska Anna**	77.24	328	*e*P	P	14 47 11.5	+1.5
STEB	**Steborice**	77.25	329	*e*P	P	14 47 11.5	+1.6
MORC	**Moravsky Berou**	77.46	329	⇑P	P	14 47 11.4	+0.2
MORC	**Moravsky Berou**	77.46	329	*e*P	P	14 47 11.3	+0.2
MORC	**Moravsky Berou**	77.46	329	⇑P	P	14 47 11.4	+0.2
CLL	**Collm**	77.78	333	*i* P	P	14 47 12.3	-0.5
CLL				*i*		14 47 25.1	
CLL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CLL	**Collm**	77.78	333	*i* P	P	14 47 12.3	-0.5
	comp=Z,10.0nm,0.6s						
CLL				*i* PcP	PcP	14 47 25.1	+2.3
	comp=Z,15nm,1.0s						
VOIR		77.88	323	⇑P	P	14 47 14.1	+0.4
VOIR		77.88	323	⇑P	P	14 47 14.1	+0.4
BRTR	**Keskin Array B**	78.03	314	P	P	14 47 14.9	+0.3
	comp=Z,3.1nm,0.8s,baz=74,slow=4.0,SNR=13						
BRTR				pP	PcP	14 47 26.9	+2.6
	comp=Z,2.0nm,0.7s,baz=106,slow=2.9,SNR=6.1						
	comp=Z,3.1nm,0.8s						
BRTR	**Keskin Array B**	78.03	314	P	P	14 47 13.7	-1.0
BRTR	**Keskin Array B**	78.03	314	P	P	14 47 13.7	-1.0
ARR	**Arges**	78.12	323	⇑P	P	14 47 15.9	+0.9
VRAC	**Vranov**	78.20	330	*e*P	P	14 47 15.4	+0.1
KRUC	**Moravsky**	78.47	330	*e*P	P	14 47 16.9	+0.1
EKA	**Eskdalemuir Ar**	78.55	343	P	P	14 47 16.9	-0.1
	comp=Z,2.3nm,0.5s,baz=23,slow=5.5,SNR=6.7						
	comp=Z,2.3nm,0.5s						
SURR	**Surduc**	78.90	324	⇓P	P	14 47 19.1	0.0
ZVC	**Zvikov**	78.95	331	*e*P	P	14 47 21.5	+2.1
KHC	**Kasperske Hory**	79.43	331	*ce*P	P	14 47 22.8	+0.7
KHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KHC	**Kasperske Hory**	79.43	331	*e*P	P	14 47 22.3	+0.2
KHC				*e*x	x	14 47 34.0	
CKRC	**Cesky Krumlov**	79.43	331	*e*P	P	14 47 24.5	+2.4
CKRC	**Cesky Krumlov**	79.43	331	*e*P	P	14 47 24.5	+2.4
CONA	**Conrad Observa**	79.61	329	*e*P	P	14 47 23.4	+0.2
	comp=Z,4.9nm,1.1s						
GERES	**GERESS Array B**	79.63	331	P	P	14 47 22.6	-0.6
	comp=Z,1.1nm,0.6s,baz=35,slow=5.1,SNR=6.7						
GERES				pP	PcP	14 47 35.4	+4.4
	comp=Z,1.1nm,0.6s,baz=15,slow=5.5,SNR=4.3						
	comp=Z,1.1nm,0.6s						
RONA	**Rosalia, Austr**	79.64	329	*e*P	P	14 47 24.0	+0.8
	comp=Z,7.9nm,0.8s						
BIOA	**Bad Ischl, Aus**	80.63	330	*e*P	P	14 47 31.4	+2.8
	comp=Z,12nm,1.2s						
BOVS	**Bovan**	80.77	323	⇑P	P	14 47 28.6	-0.8
LESA	**Schwarzleotal**	81.20	331	*e*P	P	14 47 31.8	+0.1
	comp=Z,6.8nm,1.0s						
KBA	**Koelnbreinsper**	81.25	330	*e*P	P	14 47 32.5	+0.4
	comp=Z,9.4nm,0.9s						
MYKA	**Terra Mystica**	81.53	330	P	P	14 47 32.6	-0.9
	comp=Z,2.5nm,0.6s						
WTTA	**Wattenberg**	81.70	331	*e*P	P	14 47 34.4	-0.1
	comp=Z,5.4nm,0.7s						
MOTA	**Moosalm**	81.81	332	P	P	14 47 35.5	+0.5
	comp=Z,7.4nm,0.8s						

ABTA	Abfaltersbach	81.83	331	eP	P	14 47 34.8	-0.2
	comp=Z,4.7nm,1.1s						
SQTA	Sankt Quirin	81.89	332	eP	P	14 47 35.4	0.0
	comp=Z,3.1nm,0.6s						
MMAI	Mount Meron Ar	81.97	308	P	P	14 47 36.4	+0.5
	comp=Z,2.3nm,0.5s,baz=40,slow=7.7,SNR=2.3						
	comp=Z,2.3nm,0.5s						
DAVA	Damuels	82.28	332	eP	P	14 47 40.3	+2.9
	comp=Z,7.9nm,1.0s						
TXAR	Lajitas Array	82.55	57	P	P	14 47 38.6	-0.5
	comp=Z,1.3nm,0.6s,baz=302,slow=3.9,SNR=16						
	comp=Z,1.3nm,0.6s						
TXAR	Lajitas Array	82.55	57	P	P	14 47 38.4	-0.7
TXAR	Lajitas Array	82.55	57	P	P	14 47 38.4	-0.7
TROLL	Troll, Antarti	146.78	199	⇓P	PKPbc	14 54 56.4	-0.5
	comp=Z,241nm,0.7s						
SNAA	Sanae	148.23	197	P	PKPbc	14 54 59.7	-1.1
SNAA	Sanae	148.23	197	PKPbc	PKPbc	14 54 59.6	-1.2
	comp=Z,3.0nm,1.1s,baz=284,slow=4.2,SNR=4.0						
BDFB	Brasilia	149.27	31	PKPbc	PKPdf	14 55 02.7	+1.8
	comp=Z,3.1nm,0.5s,baz=270,slow=1.0,SNR=5.1						
CFA	Coronel Fontan	149.43	79	PKPbc	PKPbc	14 55 03.7	-1.4
	comp=Z,1.0nm,0.7s,baz=283,slow=5.1,SNR=2.4						
VNA3	Neumayer Olymp	149.93	194	P	PKPbc	14 55 02.7	-2.3

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*NEIC **05** 14:39:13.7±1.0, 15°.30S±0°.10×174°.1W±0°.1, h60^{km}±7^{km}, mb4.8/35, Error ellipse: s-maj=17.2km s-min=12.5km az=125.0*

*IDC **05** 14:39:15.8±6.7, 15°.47S×173°.93W, h88^{km}±63^{km}, mb4.0/9, mbtmp4.3/11, ML3.5/2, MS3.3/1, Error ellipse: s-maj=42.7km s-min=17.1km az=153.0*

*NOU **05** 14:39:18.2, 15°.23S×173°.46W, h151^{km}, mb5.0/9, Tonga Islands*

ISC 05 14:39:15.8±0.4**, 15°.37S**±0°.07×**173°.93W**±0°.07**, h94^{km}, n83, σ1^{s}70**/81**, mb4.6**/21**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.54	55		Pn	14 39 55.1	-0.2
AFI	Afiamalu	2.54	55	Sn	Sn	14 40 22.5	-3.1
AFI	Afiamalu	2.54	55	P	Pn	14 39 55.1	-0.2
AFI	Afiamalu	2.54	55	S	Sn	14 40 22.6	-3.1
NIUE	Niue	5.31	135		Pn	14 40 32.9	+0.3
NIUE	Niue	5.31	135	P	Pn	14 40 32.8	+0.1
MSVF	Nonsavu	8.04	252	P	Pn	14 41 18.7	+8.7
RAO	Raoul Island	14.30	194	LR	LR	14 46 28.9	
	comp=Z,116nm,21.3s,baz=104,slow=30						
RAR	Rarotonga	14.64	115	P	Pn	14 42 37.9	-0.3
	0.9nm,0.3s,baz=85,slow=19,SNR=2.7						
	9.5nm,0.6s						
RAR	Rarotonga	14.64	115	Pn	Pn	14 42 38.5	+0.3
RAR	Rarotonga	14.64	115	P	Pn	14 42 34.0	-4.3
MARNC	Mare, Loyalty	18.16	248		P	14 43 16.7	-4.2
MARNC				IAmb	IAmb	14 43 27.7	
	comp=Z,103nm,1.1s						
MARNC	Mare, Loyalty	18.16	248	P	Pn	14 43 25.0	+3.1
PINNC	Pines Island,	19.02	245	P	P	14 43 26.1	-4.3
PINNC				IAmb	IAmb	14 43 41.6	
	comp=Z,54nm,1.4s						
DZM	Mont Dzumac	19.74	247	P	Pn	14 43 40.2	-0.5
	comp=Z,0.4nm,0.3s,baz=76,slow=17,SNR=7.5						
	comp=Z,9.0nm,0.9s						
DZM	Mont Dzumac	19.74	247		P	14 43 32.4	-6.0
OUZ	Omahuta	22.72	207	P	P	14 44 12.5	+2.6
WCZ	Waipu Caves	23.01	205	P	P	14 44 12.6	-0.2
KUZ	Kuaotunu	23.20	201	P	P	14 44 14.7	+0.2
KUZ	Kuaotunu	23.20	201	P	P	14 44 15.7	+1.2
WIAZ	Waiheke Island	23.45	203	P	P	14 44 18.4	+1.5
MKAZ	Moumakai	23.72	202	P	P	14 44 20.6	+1.4
URZ	Urewera	24.13	197	P	P	14 44 22.9	-0.1
	comp=Z,5.9nm,0.6s,baz=229,slow=3.4,SNR=11						
	comp=Z,5.9nm,0.6s						
URZ	Urewera	24.13	197	P	P	14 44 23.2	+0.3
TOZ	Tahuroa Road	24.16	201	P	P	14 44 22.5	-0.7
VRZ	Vera Road	25.67	201	P	P	14 44 38.5	+1.7
QRZ	Quartz Range	27.96	202	P	P	14 44 57.7	+0.2
QRZ	Quartz Range	27.96	202	P	P	14 44 58.3	+0.8
INZ	Inchbonnie	30.02	202	P	P	14 45 15.2	-0.4
INZ	Inchbonnie	30.02	202	P	P	14 45 15.2	-0.4
WHZ	Wether Hill Ro	34.02	203	P	P	14 45 49.0	-1.7
WHZ	Wether Hill Ro	34.02	203	P	P	14 45 52.2	+1.5
ARMA	Armidale	34.92	239	P	P	14 45 58.3	-0.6
ARMA				IAmb	IAmb	14 45 59.5	
	comp=Z,18nm,1.4s						
CTAO	Charters Tower	38.15	257	P	P	14 46 25.2	-1.2
CTAO				IAmb	IAmb	14 46 59.2	
	comp=Z,11nm,1.4s						
COEN	Coen	41.48	266	P	P	14 46 53.1	-0.8
COEN				IAmb	IAmb	14 46 56.1	
	comp=Z,7.7nm,0.7s						
STKA	Stephens Creek	43.61	240	P	P	14 47 10.4	-0.6
	comp=Z,1.5nm,0.3s,baz=127,slow=9.1,SNR=4.0						
	comp=Z,1.5nm,0.3s						
INKA	Innaminka	43.69	246		P	14 47 11.6	-0.1
BBOO	Buckleboo	48.39	240	P	P	14 47 48.0	-0.5
WRA	Warramunga Arr	49.36	257	P	P	14 47 55.6	-0.5
	comp=Z,6.2nm,0.9s,baz=98,slow=6.6,SNR=62						
WRA				PcP	PcP	14 49 18.1	+0.7
	comp=Z,0.8nm,0.6s,baz=99,slow=3.2,SNR=2.8						
	comp=Z,6.2nm,0.9s						
WRA	Warramunga Arr	49.36	257		P	14 47 54.5	-1.7
AS31	Alice Springs	49.64	252		P	14 47 57.6	-0.7
AS31				IAmb	IAmb	14 47 59.3	
	comp=Z,5.5nm,0.8s						
ASAR	Alice Springs	49.64	252	P	P	14 47 58.0	-0.3
	comp=Z,17nm,0.4s,baz=88,slow=7.6,SNR=361						
	comp=Z,17nm,0.4s						
MTN	Manton Dam	53.23	265	P	P	14 48 24.1	-1.0
MTN				IAmb	IAmb	14 48 26.1	
	comp=Z,8.4nm,0.8s						
FORT	Forrest	54.98	243	P	P	14 48 36.8	-0.8
FORT				IAmb	IAmb	14 48 38.0	
	comp=Z,13nm,0.8s						
FITZ	Fitzroy Crossi	57.72	258	P	P	14 48 56.4	-0.9
SOEI	Soe	60.42	267	P	P	14 49 17.6	+1.5
PSA00	Pilbara Seismi	62.73	253	P	P	14 49 30.4	-1.0
PSA00				IAmb	IAmb	14 49 31.9	
	comp=Z,13nm,0.8s						
PSA00	Pilbara Seismi	62.73	253	P	P	14 49 30.6	-0.8
PSA00				IAmb	IAmb	14 49 32.0	
	comp=Z,4.6nm,0.9s						
MBWA	Marble Bar	62.88	254	P	P	14 49 31.2	-1.3
MBWA				IAmb	IAmb	14 50 22.2	
	comp=Z,22nm,1.4s						
NWAO	Narrogin (SRO)	64.19	241	P	P	14 49 40.8	-0.1
SHEM	Shemya Is, Ala	68.61	352	P	P	14 50 09.2	+0.8
NVAR	Mina Array Bea	74.65	42	P	P	14 50 47.4	+2.1
	comp=Z,1.3nm,0.7s,baz=225,slow=9.9,SNR=14						
	comp=Z,1.3nm,0.7s						
NVAR	Mina Array Bea	74.65	42	P	P	14 50 47.2	+1.9
QSPA	South Pole Qui	74.67	180	P	P	14 50 50.3	+5.3
	comp=Z,7.8nm,1.0s,baz=19,slow=1.2,SNR=21						
QSPA	South Pole Qui	74.67	180		P	14 50 49.5	+4.5
QSPA				IAmb	IAmb	14 50 51.2	
	comp=Z,7.3nm,0.9s						
GMN	Gold Mountain	74.71	44	P	P	14 50 47.0	+1.2
ILSW	Iliamna Southw	76.95	11	P	P	14 50 59.0	+1.1
ILSW				IAmb	IAmb	14 52 06.6	
	comp=Z,45nm,1.6s						
M17K	Holitna River	77.63	8	P	P	14 51 02.8	+1.3
K15K	Wolf Creek Mou	78.03	6	P	P	14 51 05.6	+2.0
L18K	Granite Mounta	78.52	8	P	P	14 51 08.7	+2.3
J16K	Anvik River	79.09	6	P	P	14 51 11.6	+2.2
GHO	Glory Hole Cre	79.40	12	P	P	14 51 12.6	+1.3
BCPM	Bancas Point	80.01	17	P	P	14 51 16.1	+1.6
J20K	Nowinta River	80.75	9	P	P	14 51 19.9	+1.5
J20K				IAmb	IAmb	14 53 52.3	
	comp=Z,38nm,1.9s						
MCMT	McKenzie Canyo	81.55	39	P	P	14 51 24.7	+1.3
CCB	Clear Creek Bu	82.23	11	P	P	14 51 26.4	+0.2
ILAR	Eielson Array	82.52	11	P	P	14 51 28.4	+0.8
	comp=Z,0.7nm,0.5s,baz=228,slow=6.4,SNR=16						
	comp=Z,0.7nm,0.5s						
ILAR	Eielson Array	82.52	11	P	P	14 51 27.9	+0.2
PDAR	Pinedale Array	82.58	42	P	P	14 51 29.4	+0.6
	comp=Z,0.9nm,0.7s,baz=215,slow=2.9,SNR=8.0						
	comp=Z,0.9nm,0.7s						
G26K	Porcupine Rive	85.05	11	P	P	14 51 42.0	+1.5
G26K				IAmb	IAmb	14 51 43.4	
	comp=Z,5.5nm,0.8s						
YKA	Yellowknife Ar	90.27	24	P	P	14 52 05.5	-0.2
	comp=Z,0.9nm,1.1s,baz=251,slow=4.4,SNR=4.8						
	comp=Z,0.9nm,1.1s						
CMAR	Chiang Mai Arr	92.12	288	P	P	14 52 17.6	+2.2
	comp=Z,0.5nm,0.3s,baz=102,slow=3.2,SNR=6.6						
	comp=Z,0.5nm,0.3s						
BVAR	Borovoye Array	117.55	322	PKP	PKPdf	14 57 50.0	-0.6
	comp=Z,0.8nm,0.7s,baz=48,slow=2.2,SNR=5.0						
ARCES	ARCESS Array B	124.51	352	PKP	PKiKP	14 58 04.6	+0.8
	comp=Z,6.0nm,1.0s,baz=14,slow=1.6,SNR=4.1						
VRAC	Vranov	145.08	348	ePKP	PKPdf	14 58 42.9	+0.6
JAVC	Velka Javorina	145.27	347	ePKP	PKiKP	14 58 44.9	-1.7
KRUC	Moravsky	145.35	348	ePKP	PKPab	14 58 43.6	+0.7
BRTR	Keskin Array B	145.81	321	PKPbc	PKPab	14 58 45.5	+0.3
	comp=Z,3.1nm,0.7s,baz=81,slow=2.9,SNR=18						
MODS	Modra-Piesok	145.82	347	ePN	PKPab	14 58 45.0	+0.3
GERES	GERESS Array B	146.04	351	PKPbc	PKPab	14 58 46.0	+0.4
	comp=Z,0.5nm,0.2s,baz=357,slow=2.7,SNR=7.1						
CONA	Conrad Observa	146.54	348	ePKP	PKPab	14 58 48.3	+0.7
	comp=Z,2.7nm,0.7s						
RONA	Rosalia, Austr	146.67	347	ePKP	PKPab	14 58 48.7	+0.6
ABTA	Abfaltersbach	148.26	352	ePKP	PKiKP	14 58 52.4	-0.5
	comp=Z,5.6nm,0.9s						

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*IDC **05** 14:41:46.7±1.9, 28°.24S×178°.38W, h0^{km}, mb4.1/3, mbtmp4.1/3, MS3.3/1, Error ellipse: s-maj=55.5km s-min=39.2km az=37.0*

*WEL **05** 14:42:12.1±1.1, 29°S±7°×18°0W±2°1, h430^{km}±15^{km}, M3.5/2, mB4.6/2, MLv3.5/2, Mw(mB)3.8/2, Error ellipse: s-maj=27.8km s-min=8.9km az=96.7, confirmed*

ISC 05 14:42:25.0±1.0**, 29°.9S**±0°.1×**179°.0W**±0°.2**, h350^{km}, n19, σ2^{s}33**/22**, mb3.5**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.11	57	P	Pn	14 43 12.6	+1.3
GLKZ				S	S	14 43 49.0	+0.7
RIZ	Raoul Island	1.12	56	P	Pn	14 43 12.5	+1.2
WMGZ	Waiomatatini S	8.21	195	P	Pn	14 44 17.3	-4.3
WMGZ				S	S	14 45 59.0	+2.3
HAZ	Te Kaha	8.31	198	P	Pn	14 44 17.5	-5.2
HAZ				S	S	14 46 00.6	+1.9
PUZ	Puketiti	8.49	195	P	Pn	14 44 22.6	-2.3
PUZ				S	S	14 46 04.7	+2.0
TWGZ	Tauwhareparae	8.65	196	P	Pn	14 44 24.7	-2.2
TWGZ				S	S	14 46 09.9	+3.5
MWZ	Matawai	8.92	198	P	Pn	14 44 23.9	-6.1
MWZ				S	S	14 46 14.0	+1.9
URZ	Urewera	8.96	200	S	S	14 46 16.3	+3.2
RIGZ	Rimuhau	9.21	196	P	Pn	14 44 27.5	-5.9
RIGZ				S	S	14 46 20.7	+2.2
PXZ	Pawanui	10.69	197	P	Pn	14 44 39.1	-12
PXZ				S	S	14 46 50.2	-0.8
PNHZ	Pukenui	10.76	200	P	Pn	14 44 36.2	-16
PNHZ				S	S	14 46 53.6	+0.9
MRZ	Mangatainoka R	11.64	201	P	P	14 45 03.6	+1.2
MRZ				S	S	14 47 10.8	-1.2
HOWZ	Holdsworth Sta	11.87	201	P	P	14 44 48.8	-16
HOWZ				S	S	14 47 14.5	-2.7
DZM	Mont Dzumac	15.22	297	LR	LR	14 49 51.5	
	comp=Z,108nm,19.8s,baz=24,slow=32						
ASAR	Alice Springs	42.28	267	P	P	14 49 46.7	+1.0
	1.5nm,0.6s,baz=102,slow=7.5,SNR=4.4						
	1.5nm,0.6s						
WRA	Warramunga Arr	43.22	272	P	P	14 49 54.4	+1.2
	2.6nm,0.5s,baz=110,slow=7.7,SNR=12						
	2.6nm,0.5s						
QSPA	South Pole Qui	60.23	180	P	P	14 52 07.7	+11
	0.9nm,0.6s,baz=321,slow=1.3,SNR=5.4						
	0.9nm,0.6s						
FINES	FINESS Array B	144.36	340	PKP	PKiKP	15 01 19.4	-3.5
	1.4nm,0.3s,baz=50,slow=3.7,SNR=17						
HFS	Hagfors	148.56	348	PKPbc	PKiKP	15 01 30.7	-0.9
	2.1nm,0.9s,baz=33,slow=3.4,SNR=4.2						

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*JMA **05** 14:52:01.8±0.4, 43°N±1°×14°8E±°, h12^{km}, MV4.2/34, E OFF HOKKAIDO*

*NIED **05** 14:52:01.8, 43°.27N×147°.66E, h12^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.60; M$_{\theta\theta}$-0.04; M$_{\phi\phi}$-0.56; M$_{r\theta}$0.49; M$_{\theta\phi}$-0.60; M$_{\phi r}$0.53; Fault plane solution: M$_0$1.07000×10^{15} NP1: φ$_s$196.00000°, δ25.00000°, λ65.00000°. NP2:φ$_s$44.00000°, δ67.00000°, λ101.00000°.*

*NEIC **05** 14:52:01.5±2.2, 43°.53N±0°.06×147°.8E±0°.2, h10^{km}±2^{km}, mb4.4/13 Error ellipse: s-maj=19.1km s-min=8.3km az=104.0*

*MOS **05** 14:52:02.5±0.9, 43°.40N×147°.90E, h43^{km}, mb4.6/13, Error ellipse: s-maj=11.2km s-min=7.2km az=125.0*

*SKHL **05** 14:52:02.7±0.0, 43°.30N×147°.90E, h55^{km}±2^{km}, mb4.9/3*

*IDC **05** 14:52:04.0±0.8, 43°.39N×147°.67E, h32^{km}±5^{km}, mb3.9/22, mbtmp4.0/25, ML3.0/3, MS4.1/2, Error ellipse: s-maj=17.1km s-min=16.1km az=126.0*

ISC 05 14:52:02.7±0.7**, 43°.34N**±0°.05×**147°.83E**±0°.05**, h27^{km}**±4^{km}**, n119, σ1^{s}41**/134**, mb4.3**/36**, 3C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.52	272	P	Pn	14 52 27.2	-0.9
NMR	Nemuro--Hokkai	1.53	272	ePN	Pn	14 52 27.6	-0.7
NMR				eS	Sn	14 52 45.5	-1.8
NMR	Nemuro--Hokkai	1.53	272	eP	Pn	14 52 27.3	-1.0
NMR				eS	Sn	14 52 45.8	-1.5
YUK	Yuzh-Kuril'sk	1.59	297c	iPN	Pn	14 52 28.5	-0.5
YUK				eS	Sn	14 52 47.9	-0.7
YUK				pmax	pmax		
	comp=N,125nm,0.2s						
YUK				pmax	pmax		
	comp=Z,706nm,0.2s						
YUK				smax	smax		
	comp=E,3µm,0.5s						
YUK				smax	smax		
	comp=N,3µm,0.4s						
YUK	Yuzh-Kuril'sk	1.59	297	i P	Pn	14 52 28.6	-0.5
YUK				AMB	AMB	14 52 30.4	
	comp=N,660nm,0.3s						
YUK				eS	Sn	14 52 48.0	-0.7
YUK				A	A	14 52 52.4	
	comp=N,3µm,0.5s						
YUK				A	A	14 52 52.4	
	comp=N,4µm,0.5s						
GLVR	Golovnino	1.73	284	ePN	Pn	14 52 30.7	-0.3
GLVR				eS	Sn	14 52 51.5	-0.6
GLVR				pmax	pmax		
	comp=Z,322nm,0.2s						
GLVR				pmax	pmax		
	comp=N,34nm,0.1s						
GLVR				pmax	pmax		
	comp=E,53nm,0.1s						
GLVR				smax	smax		
	comp=N,988nm,0.2s						
GLVR				smax	smax		
	comp=E,2µm,0.3s						
GLVR	Golovnino	1.73	284	eP	Pn	14 52 30.5	-0.5
GLVR				AMB	AMB	14 52 34.9	
	comp=E,320nm,0.2s						
GLVR				eS	Sn	14 52 51.5	-0.6
GLVR				A	A	14 52 54.8	
	comp=E,980nm,0.3s						
GLVR				A	A	14 52 54.8	
	comp=E,2µm,0.3s						
KUR	Kuril'sk	1.89	1	ePN	Pn	14 52 32.1	-1.2
KUR				eS	Sn	14 52 54.8	-1.5
KUR	Kuril'sk	1.89	1	eP	Pn	14 52 32.2	-1.1
KUR				AMB	AMB	14 52 34.4	
	comp=E,230nm,0.4s						
KUR				eS	Sn	14 52 54.9	-1.4
KUR				A	A	14 53 04.5	
	comp=E,480nm,0.5s						
KUR				A	A	14 53 04.5	
	comp=E,690nm,0.5s						
JKHN	Kushirohamanak	1.97	263	eP	Pn	14 52 34.2	-0.1
RUSJ	Misakicho	2.02	293	ePN	Pn	14 52 35.9	+0.9
RUSJ				eS	Sn	14 52 57.2	-2.2
JRA	Rausu	2.05	288	P	Pn	14 52 35.5	0.0
JNSB	Nemuroshibetsu	2.10	283	P	Pn	14 52 36.0	-0.1
AKK	Akkeshi	2.21	263	eP	Pn	14 52 37.5	-0.1
JNK	Nakash	2.28	277	P	Pn	14 52 38.1	-0.5
JNK				eS	Sn	14 53 04.9	-0.8
JAK	Akkeshi	2.32	263	eS	Sn	14 53 05.7	-1.0
JAK	Akkeshi	2.32	263	eP	Pn	14 52 38.3	-0.8
JTKR	Abashiri--Toko	2.91	284	P	Pn	14 52 48.3	+1.0
JOB	Onbets	2.96	263	eP	Pn	14 52 47.6	-0.3
JOB				eS	Sn	14 53 20.8	-1.7
JAR	Ashorobuto	2.96	271	P	Pn	14 52 47.9	-0.1
JAR				eS	Sn	14 53 22.3	-0.3
JMP	Maruseppu	3.31	283	P	Pn	14 52 53.9	+1.1
JCH	Churui	3.36	259	P	Pn	14 52 53.0	-0.4
JCH				eS	Sn	14 53 30.2	-2.2
ERM	Erimo	3.69	251		Pn	14 52 58.9	+0.9
ERM	Erimo	3.69	251	PN	Pn	14 52 58.9	+0.9
JEM	Erimo	3.69	251	eP	Pn	14 52 59.0	+1.1
JKK2	Kamakawa 2	3.73	280	eP	Pn	14 53 00.2	+1.7
JKA	Kamikawa-asahi	3.87	283		Pn	14 53 04.7	+4.3
ASAJ	Asahikawa	3.87	283	Pn	Pn	14 53 03.0	+2.6
	comp=E,4.0nm,0.3s,baz=143,slow=12,SNR=22						
ASAJ	Asahikawa	3.87	283	PN	Pn	14 53 04.7	+4.2
JNBK	Urakawa-nobuka	3.88	256	eP	Pn	14 53 00.3	-0.3
JEW	Eniwo	4.70	266	eP	Pn	14 53 13.1	+1.2
JEW				eS	Sn	14 54 06.0	+0.5
YSS	Yuzhno-Sakhali	5.09	317	Pn	Pn	14 53 13.3	-3.9
YSS	Yuzhno-Sakhali	5.09	317	ePN	Pn	14 53 18.3	+1.1
YSS				eS	Sn	14 54 16.8	+1.7
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				smax	smax		
	comp=N,30nm,0.7s						
YSS				smax	smax		
	comp=E,10.0nm,0.5s						
YSS				MLR	MLR		
	comp=Z,900nm,11.0s						
YSS	Yuzhno-Sakhali	5.09	317	eP	Pn	14 53 18.3	+1.1
YSS				AMB	AMB	14 53 28.0	
	comp=Z,20nm,0.8s						
YSS				eS	Sn	14 54 15.5	+0.4
YSS				A	A	14 54 27.0	
	comp=Z,20nm,0.3s						
YSS				A	A	14 54 27.0	
	comp=Z,20nm,0.3s						
YSS				AMS	AMS	14 55 36.0	
	comp=Z,900nm,11.0s						
JTM	Tenmabayashi	5.64	245		Pn	14 53 24.2	-0.6
MJA0	Matsu Arr-Jizo	10.01	230	ePN	Pn	14 54 24.2	-0.5
MJAR	Matsushiro Arr	10.03	231	Pn	Pn	14 54 24.1	-0.9
	baz=27,slow=14,SNR=5.2						
	comp=Z,2.0nm,1.0s						
PAU	Pauzhetka	10.15	34	eP	Pn	14 54 26.1	-0.5
PETK	Petropavlovsk-	11.77	30	Pn	Pn	14 54 48.4	-0.3
	comp=Z,0.4nm,0.3s,baz=220,slow=14,SNR=11						
	comp=Z,2.1nm,0.7s						
JHJ	Hachijo jima 2	12.00	214	LR	LR	14 59 27.6	
	comp=Z,1µm,20.3s,baz=286,slow=37						
KS19	Wonju Array Si	16.27	256	P	P	14 55 54.0	+1.9
KS19				IAmb	IAmb	14 56 07.0	
	comp=Z,42nm,1.2s						
KSAR	Wonju Array Be	16.28	256	P	P	14 55 55.4	+3.2
KSAR	Wonju Array Be	16.28	256	P	P	14 55 55.4	+3.2
INCN	Inchon	17.15	257	P	Pn	14 55 59.8	-0.6
SEY	Seymchan	19.81	6	P	P	14 56 29.5	-1.4
	comp=Z,0.2nm,0.3s,baz=221,slow=20,SNR=1.3						
	comp=Z,4.4nm,1.1s						
HILR	Hailar Array B	20.25	298	P	P	14 56 34.4	-1.4
	comp=Z,1.4nm,0.3s,baz=92,slow=11,SNR=6.9						
	comp=Z,1.4nm,0.3s						
YAK	Yakutsk	21.57	336	P	P	14 56 46.7	-3.2
	comp=Z,7.8nm,0.3s,baz=133,slow=5.1,SNR=5.2						
YAK	Yakutsk	21.57	336	eP	P	14 56 46.7	-3.2
YAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.4s						
H11N2	WAKE ISLAND Hy	28.47	140	T	T	15 28 48.8	
	baz=330,slow=75,SNR=55						
H11N1	WAKE ISLAND Hy	28.48	140	T	T	15 28 52.1	
	baz=330,slow=75,SNR=40						
H11N3	WAKE ISLAND Hy	28.49	140	T	T	15 28 50.2	
	baz=330,slow=75,SNR=38						
SONM	Songino Array	29.09	293	P	P	14 58 01.9	+0.9
	comp=N,3.5nm,0.6s,baz=87,slow=8.8,SNR=18						
	comp=N,3.5nm,0.6s						
SONM	Songino Array	29.09	293	P	P	14 58 01.4	+0.4
H11S1	WAKE ISLAND Hy	29.44	141	T	T	15 29 46.0	
	baz=331,slow=76,SNR=53						
H11S3	WAKE ISLAND Hy	29.44	141	T	T	15 29 56.0	
	baz=331,slow=76,SNR=34						
H11S2	WAKE ISLAND Hy	29.45	141	T	T	15 30 00.8	
	baz=331,slow=76,SNR=39						
TIXI	Tiksi	29.86	348	i P	P	14 58 07.5	+0.1
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.3s						
TIXI	Tiksi	29.86	348	eP	P	14 58 07.5	+0.1
NIKH	Nikolski High	30.04	56	P	P	14 58 08.3	-0.9
B20K	Meade River	38.18	27		P	14 59 19.6	+0.1
B20K				IAmb	IAmb	14 59 35.3	
	comp=Z,4.8nm,0.8s						
B21K	Ikpikpuk River	38.95	28		P	14 59 25.6	-0.4
B21K				IAmb	IAmb	14 59 39.4	
	comp=Z,5.6nm,0.7s						
E22K	Anaktuvuk Pass	39.71	31		P	14 59 32.9	+0.5
E24K	Your Creek	40.95	31	P	P	14 59 43.7	+1.0
E24K				IAmb	IAmb	14 59 57.3	
	comp=Z,5.0nm,0.9s						
DGZ	Jazzator, Alta	41.05	301	i P	P	14 59 43.5	-0.3
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ILAR	Eielson Array	41.53	36	P	P	14 59 47.6	+0.2
	comp=Z,0.3nm,0.6s,baz=266,slow=9.4,SNR=6.3						
	comp=Z,0.3nm,0.6s						
ZALV	Zalesovo Beam	41.64	308	P	P	14 59 48.1	-0.3
	comp=Z,0.8nm,0.5s,baz=79,slow=6.5,SNR=4.1						
	comp=Z,0.8nm,0.5s						
ZALV	Zalesovo Beam	41.64	308	eP	P	14 59 49.3	+0.9
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
D25K	Kavik River	41.80	29	P	P	14 59 49.8	+0.2
C27K	Jago River	42.75	29	P	P	14 59 58.1	+0.8
C27K				IAmb	IAmb	15 00 13.0	
	comp=Z,6.6nm,1.3s						
MK31	Makanchi Array	45.21	298	i P	P	15 00 16.5	-0.9
MKAR	Makanchi Array	45.21	298	P	P	15 00 17.4	0.0
	comp=Z,1.8nm,0.5s,baz=79,slow=8.5,SNR=27						
	comp=Z,1.8nm,0.5s						
MKAR	Makanchi Array	45.21	298		P	15 00 16.9	-0.5
MKAR	Makanchi Array	45.21	298	eP	P	15 00 17.7	+0.3
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	Makanchi Array	45.21	298	eP	P	15 00 17.7	+0.3
KURK	Kurchatov	46.17	305		P	15 00 24.1	-0.7
KURK				IAmb	IAmb	15 00 25.5	
	comp=Z,3.7nm,0.6s						
KURK	Kurchatov	46.17	305	P	P	15 00 24.1	-0.7
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KURK	Kurchatov	46.17	305	eP	P	15 00 24.1	-0.7
KURBB	Kurchatov Arra	46.25	304	P	P	15 00 25.2	-0.2
	comp=Z,3.4nm,0.6s,baz=77,slow=8.5,SNR=28						
	comp=Z,3.4nm,0.6s						
BVAR	Borovoye Array	50.15	310	P	P	15 00 54.8	-0.7
	comp=Z,0.9nm,0.4s,baz=84,slow=9.6,SNR=10.0						
	comp=Z,0.9nm,0.4s						
BORK	Borovoye	50.18	310	i P	P	15 00 55.6	-0.1
BORK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BOOM	Boomskoye usch	51.10	295		P	15 01 02.5	-0.6
BOOM				IAmb	IAmb	15 01 04.9	
	comp=Z,5.3nm,0.8s						
BOOM	Boomskoye usch	51.10	295	P	P	15 01 02.5	-0.6
BOOM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AAK	Ala-Archa	51.98	296	i P	P	15 01 09.5	-0.1
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AAK	Ala-Archa	51.98	296	eP	P	15 01 09.5	-0.1
ARSB	Arslanbob	53.59	295		P	15 01 21.4	-0.2
ARSB	Arslanbob	53.59	295	P	P	15 01 21.4	-0.2
ARSB				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ARTI	Arti	55.09	317	P	P	15 01 30.6	-1.4
	comp=Z,2.5nm,0.6s,baz=95,slow=4.5,SNR=4.5						
	comp=Z,2.5nm,0.6s						
ARTI	Arti	55.09	317c	iP	P	15 01 31.8	-0.2
ARTI						15 03 36.8	
ARTI				S	S	15 09 17.8	+5.1
ARTI				SS	SS	15 13 00.0	+3.9
ARTI				pmax	pmax		
	comp=Z,35nm,4.4s						
YKA	Yellowknife Ar	55.87	34	P	P	15 01 39.4	+1.9
	comp=Z,0.3nm,0.6s,baz=299,slow=7.3,SNR=5.8						

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           comp=Z,0.3nm,0.6s
AB31  Akbulak array       57.70 309          P        15 01 51.1 +0.4
ABKAR Akbulak array       57.70 309          P        15 01 50.2 -0.6
AKTO  Aktyubinsk          58.18 311   P      P        15 01 54.0  0.0
           comp=Z,1.0nm,0.3s,baz=81,slow=7.8,SNR=2.1
           comp=Z,1.0nm,0.3s
KIRV  Kirov               58.22 322 i P      P        15 01 53.4 -0.8
ARCES ARCESS Array B      59.80 340   P      P        15 02 04.3 -0.7
           comp=Z,4.0nm,0.9s,baz=50,slow=8.0,SNR=7.5
           comp=Z,4.0nm,0.9s
ARCES ARCESS Array B      59.80 340  eP      P        15 02 03.8 -1.2
ARCES                                 pmax   pmax
           comp=Z,7.0nm,1.1s
BELG  Belogornoye         62.53 317   P      P        15 02 21.8 -1.9
           comp=Z,9.1nm,0.7s,baz=32,slow=3.3,SNR=4.5
           comp=Z,9.1nm,0.7s
WRA   Warramunga Arr      64.18 194   P      P        15 02 34.9  0.0
           comp=Z,0.4nm,0.7s,baz=8.8,slow=6.4,SNR=2.9
WRA                                   pP     sP       15 02 45.1 +0.5
           comp=Z,1.2nm,0.8s,baz=9.1,slow=6.7,SNR=6.0
           comp=Z,0.4nm,0.7s
FINES FINESS Array B      65.46 333   P      P        15 02 42.2 -0.6
           comp=Z,4.2nm,0.7s,baz=44,slow=6.3,SNR=8.2
FINES                                 pP     sP       15 02 52.7 -0.1
           comp=Z,2.0nm,0.6s,baz=44,slow=8.1,SNR=2.0
           comp=Z,4.2nm,0.7s
FINES FINESS Array B      65.46 333   P      P        15 02 40.7 -2.2
OBN   Obninsk             65.94 324⇑eP      P        15 02 44.9 -1.1
OBN                                  e                15 05 10.0
OBN                                  eS      S        15 11 50.4 +19
OBN                                  eSS     SS       15 15 43.4 -2.3
OBN                                   pmax   pmax
           comp=Z,5.0nm,1.0s
OBN   Obninsk             65.94 324  eP      P        15 02 44.9 -1.1
NVAR  Mina Array Bea      67.38  58   P      P        15 02 56.8 +1.0
           comp=Z,0.1nm,0.3s,baz=306,slow=4.8,SNR=2.4
           comp=Z,0.1nm,0.3s
ASAR  Alice Springs       67.89 194   P      P        15 02 59.4 +0.6
           comp=Z,0.3nm,0.7s,baz=8.8,slow=5.4,SNR=4.9
           comp=Z,0.3nm,0.7s
NB2   NORSAR Subarra      70.16 339   P      P        15 03 12.5  0.0
           comp=Z,0.9nm,0.5s,baz=30,slow=6.5
NOA   NORSAR Array B      70.16 339   P      P        15 03 12.3 -0.3
           comp=Z,1.4nm,0.6s,baz=31,slow=6.3,SNR=5.4
           comp=Z,1.4nm,0.6s
NOA   NORSAR Array B      70.16 339  eP      P        15 03 12.5  0.0
NOA                                   pmax   pmax
           comp=Z,2.0nm,0.6s
HFS   Hagfors             70.26 338   P      P        15 03 12.9 -0.2
           comp=Z,3.1nm,0.5s,baz=72,slow=4.8,SNR=13
           comp=Z,3.1nm,0.5s
KIV   Kislovodsk          70.40 312  eP      P        15 03 15.0 +0.6
KIV                                   pmax   pmax
           comp=Z,9.0nm,1.0s
KIV   Kislovodsk          70.40 312  eP      P        15 03 15.0 +0.6
KBZ   Khabaz              70.44 312   P      P        15 03 15.4 +1.0
           comp=Z,3.3nm,0.8s,baz=64,slow=6.8,SNR=9.2
           comp=Z,3.3nm,0.8s
KBZ   Khabaz              70.44 312 i P      P        15 03 13.6 -0.8
KBZ                                   pmax   pmax
           comp=Z,3.0nm,0.9s
KBZ   Khabaz              70.44 312  eP      P        15 03 13.6 -0.8
AKASG Malin Array Be      72.20 324   P      P        15 03 24.7 -0.3
           comp=Z,1.2nm,0.3s,baz=42,slow=6.4,SNR=8.9
AKASG                                 pP     sP       15 03 35.4 +0.4
           comp=Z,1.7nm,0.6s,baz=39,slow=6.3,SNR=2.8
           comp=Z,1.2nm,0.3s
AKASG Malin Array Be      72.20 324  eP      P        15 03 25.0  0.0
AKASG                                 pmax   pmax
           comp=Z,1.0nm,0.3s
SOC   Sochi               72.24 314  eP      P        15 03 24.3 -1.0
SOC                                  e                15 06 04.8
SOC                                  eS      S        15 12 42.8 -3.5
SOC                                   pmax   pmax
           comp=Z,19nm,1.1s
SOC                                   MLR    MLR
           comp=Z,240nm,16.0s
BRTR  Keskin Array B      78.18 314   P      P        15 03 58.4 -1.4
           comp=Z,0.5nm,0.6s,baz=72,slow=4.7,SNR=2.1
           comp=Z,0.5nm,0.6s
TXAR  Lajitas Array       82.47  57   P      P        15 04 24.9 +2.0
           comp=Z,0.3nm,0.6s,baz=289,slow=3.7,SNR=3.6
           comp=Z,0.3nm,0.6s
TXAR  Lajitas Array       82.47  57   P      P        15 04 25.0 +2.0
VAE   Valguarnera         89.12 325   LR     LR       15 47 10.9
           comp=Z,76nm,19.7s,baz=29,slow=37
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BJI ***05*** *14:54:05.9, 30°.74N×131°.79E, h44km, mB5.0/21, mb4.5/55, Ms4.7/47, Ms7 4.7/46*

NIED ***05*** *14:54:11.2, 31°.11N×131°.45E, h30km, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}1.55; $M_{\theta\theta}$-0.42; $M_{\phi\phi}$-1.13; $M_{r\theta}$0.81; $M_{\theta\phi}$-0.42; $M_{\phi r}$1.12; Fault plane solution: $M_0$1.99000×10^{16} NP1: ϕ_s201.00000°, δ23.00000°, λ79.00000°. NP2: ϕ_s32.00000°, δ67.00000°, λ95.00000°.*

NEIC ***05*** *14:54:11.7±1.5, 31°.12N±0°.07×131°.38E±0°.03, h39km±7km, mb4.9/103 Error ellipse: s-maj=10.2km s-min=2.4km az=165.0*

JMA ***05*** *14:54:11.2±0.1, 31°.1N±0°.4×131°.5E±0°.6, h30km±1km, MD4.7/40, MW4.9/40, SE OFF OSUMI PEN*

JMA Felt III J1 at SE OFF OSUMI PEN .

IDC ***05*** *14:54:12.8±1.7, 31°.18N×131°.37E, h54km±15km, mb4.1/33, mbtmp4.4/38, ML3.9/5, MS4.3/49, Error ellipse: s-maj=13.1km s-min=11.7km az=88.0*

GCMT ***05*** *14:54:12.8±0.3, 31°.19N±0°.03×131°.56E±0°.03, h34km, MW5.0/65, Moment Tensor Solution. s46,c55; s65,c80; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.48±.20; $M_{\theta\theta}$-0.42±.12; $M_{\phi\phi}$-3.06±.12; $M_{r\theta}$1.14±.15; $M_{\theta\phi}$-0.71±.08; $M_{\phi r}$0.43±.15; Best double couple: $M_0$3.55600×10^{16} NP1: ϕ_s181.00000°, δ41.00000°, λ69.00000°. NP2: ϕ_s28.00000°, δ53.00000°, λ107.00000°. Principal axes: T 3.7970, Plg75.0000°, Azm352.0000°; N -0.4830, Plg14.0000°, Azm198.0000°; P -3.3160, Plg6.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 14:54:11.4±0.6**, 31°.11N**±0°.03×**131°.42E**±0°.04**, h41**km±4km**, h41**km**:pP-P, n285,** σ1**ˢ.45**/208**, mb4.8**/96**, MS4.4**/56**, 1C-12D, Kyushu**

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Code  Station Name         Δ°   AZ°     Phase ID           Time     Res
                                     Op      ISC         h  m  s   ISC
JTSR  Tashiro 2           0.43 278⇓iP      Pn       14 54 20.6 -0.7
JTSR                              ⇓S       Sn       14 54 28.1 -0.3
JTSR  Tashiro 2           0.43 278  A       A        14 54 20.6
           comp=N,159nm,0.4s,comp=E,79nm,0.9s
JNAR  Kushima--Naru       0.44 343⇓iP      Pn       14 54 20.5 -0.9
JNAR                              ⇓S       Sn       14 54 27.5 -0.9
JNAR  Kushima--Naru       0.44 343  A       A        14 54 20.5
           comp=N,175nm,1.8s,comp=E,160nm,1.2s
JNKG  Nichinankitago      0.56 356⇓iP      Pn       14 54 22.5 -0.5
JNKG                              ⇓S       Sn       14 54 30.9 -0.2
JNKG  Nichinankitago      0.56 356  A       A        14 54 22.5
           comp=N,127nm,2.3s,comp=E,256nm,1.5s
JTN   Tanegashima 3       0.59 220  P       Pn       14 54 23.6 +0.1
JTN                                 S       Sn       14 54 33.0 +1.1
JTN   Tanegashima 3       0.59 220  A       A        14 54 23.6
           comp=N,47nm,0.9s,comp=E,61nm,1.6s
JMTN  Minamitane          0.84 212 i P      Pn       14 54 27.2 +0.4
JMTN  Minamitane          0.84 212  A       A        14 54 27.2
           comp=N,21nm,2.6s,comp=E,36nm,3.8s
JTZ   Takazaki            0.84 340⇓iP      Pn       14 54 26.9  0.0
JTZ                               ⇓S       Sn       14 54 40.0 +2.0
JTZ   Takazaki            0.84 340  A       A        14 54 26.9
           comp=N,64nm,1.9s,comp=E,173nm,1.0s
JSU   Suzuyama            0.92 296⇓iP      Pn       14 54 28.0 +0.1
JSU                              ⇓eS       Sn       14 54 40.1 +0.2
JSU   Suzuyama            0.92 296  A       A        14 54 28.0
           comp=N,40nm,2.2s,comp=E,60nm,2.7s
JTSN  Tsuno               1.14   4  P       Pn       14 54 30.5 -0.4
JTSN  Tsuno               1.14   4  A       A        14 54 30.5
           comp=N,28nm,1.9s,comp=E,43nm,1.3s
JYAK  Yakushimahirau      1.17 222 i P      Pn       14 54 31.9 +0.6
JYAK                                S       Sn       14 54 47.3 +1.2
JYAK  Yakushimahirau      1.17 222  A       A        14 54 31.9
           comp=N,19nm,0.7s,comp=E,24nm,0.8s
JKC   Kuchinoerabu        1.23 239  P       Pn       14 54 32.7 +0.5
JZO   Okuchi              1.25 326 i P      Pn       14 54 33.0 +0.6
JZO   Okuchi              1.25 326  A       A        14 54 33.0
           comp=N,23nm,2.4s,comp=E,30nm,1.8s
JHHC  Hyugahichiya        1.34   8  A       A        14 54 34.4
           comp=N,25nm,1.2s,comp=E,33nm,1.6s
JKIT  Kitakata            1.51   1  A       A        14 54 37.0
           comp=N,28nm,1.1s,comp=E,65nm,1.8s
JIU3  Izumi3              1.53 340  A       A        14 54 37.2
           comp=N,21nm,3.0s,comp=E,26nm,1.2s
JSJ   Shimokoshiki        1.56 292  A       A        14 54 38.0
           comp=N,10.0nm,2.1s,comp=E,10.0nm,3.3s
JSKE  Saikikamae          1.73  14  A       A        14 54 40.1
           comp=N,10.0nm,1.8s,comp=E,14nm,3.1s
JHD   Hondo               1.74 321  A       A        14 54 40.5
           comp=N,17nm,1.6s,comp=E,20nm,2.7s
JNN   Nakanoshima         1.84 227  A       A        14 54 42.0
           comp=N,14nm,1.2s,comp=E,13nm,5.1s
JUS   Usuki               1.97   8  A       A        14 54 43.6
           comp=N,19nm,1.6s,comp=E,22nm,2.7s
JTA   Tamana              2.00 338  A       A        14 54 44.1
           comp=N,11nm,3.6s,comp=E,15nm,3.2s
JNU   Nakatsue            2.06 347  P       Pn       14 54 44.5 +0.9
           comp=E,310nm,0.4s,baz=214,slow=4.8,SNR=177
JNU                                 S       Sn       14 55 13.8 +5.7
           comp=E,1μm,0.7s,baz=188,slow=17,SNR=6.8
JNU                                 LR      LR       14 55 18.3
           comp=E,2μm,21.1s,baz=202,slow=33
JNU   Nakatsue            2.06 347          Pn       14 54 43.9 +0.2
JNU   Nakatsue            2.06 347  P       Pn       14 54 44.9 +1.3
JNU   Nakatsue            2.06 347  A       A        14 54 45.0
           comp=N,13nm,1.9s,comp=E,17nm,2.1s
JBEP  Beppuamama          2.22 360  A       A        14 54 47.2
           comp=N,21nm,1.9s,comp=E,34nm,2.8s
UWA2  Uwa jima 2          2.34  26  A       A        14 54 48.8
           comp=N,7.0nm,2.3s,comp=E,8.0nm,1.4s
JUR   Ureshino            2.34 328  A       A        14 54 49.1
           comp=N,9.0nm,3.3s,comp=E,9.0nm,3.3s
JFI   Itaya               2.47 340  A       A        14 54 51.0
           comp=N,5.0nm,4.6s,comp=E,6.0nm,2.3s
JKI   Kunimi              2.52   3  A       A        14 54 51.5
           comp=N,12nm,1.2s,comp=E,19nm,3.0s
JKU   Kubokawa            2.60  32  A       A        14 54 52.5
           comp=N,7.0nm,1.4s,comp=E,9.0nm,1.8s
JNA   Nagahama            2.60  20  A       A        14 54 52.5
           comp=N,8.0nm,5.5s,comp=E,5.0nm,2.6s
JET   Tanbara             3.00  27  A       A        14 54 58.2
           comp=N,7.0nm,3.1s,comp=E,4.0nm,4.0s
JII   Iki                 3.04 332  A       A        14 54 59.0
           comp=N,11nm,2.4s,comp=E,11nm,5.5s
JMN   Monobe              3.34  38          Pn       14 55 01.1 -0.1
JMN   Monobe              3.34  38  P       Pn       14 55 01.7 +0.5
JMN   Monobe              3.34  38  A       A        14 55 03.0
           comp=N,5.0nm,1.9s,comp=E,5.0nm,3.3s
JHIK  Hikimi              3.44   7  A       A        14 55 04.5
           comp=N,4.0nm,3.8s,comp=E,7.0nm,1.8s
JHGM  Hagimishima         3.67 356  A       A        14 55 07.8
           comp=N,7.0nm,2.2s,comp=E,7.0nm,2.9s
JTU   Tsushima            3.81 334  P       Pn       14 55 09.1 +1.5
JJG   Jouge               3.81  22  A       A        14 55 09.8
           comp=N,5.0nm,3.1s,comp=E,5.0nm,4.0s
JGT2  ShimaneMisato       4.05  13  A       A        14 55 13.2
           comp=N,4.0nm,3.4s,comp=E,4.0nm,1.6s
JISK  Izumosakaura        4.54  15  A       A        14 55 20.1
           comp=N,7.0nm,1.6s,comp=E,6.0nm,1.5s
JNM   Ikuma               4.58  17  A       A        14 55 20.6
           comp=N,11nm,1.4s,comp=E,11nm,2.3s
JOW   Kunigami            5.07 214  P       Pn       14 55 25.3 +0.3
           comp=E,27nm,0.3s,baz=89,slow=17,SNR=37
           comp=E,47nm,0.3s
JOW   Kunigami            5.07 214          Pn       14 55 24.9 -0.1
JOW   Kunigami            5.07 214  P       Pn       14 55 25.5 +0.5
TJN   Taejon              6.25 328          Pn       14 55 41.5 +0.4
TJN   Taejon              6.25 328  P       Pn       14 55 43.3 +2.2
INU   Inuyama             6.32  46          Pn       14 55 42.6 +0.6
INU   Inuyama             6.32  46  P       Pn       14 55 43.1 +1.1
JGF   Kuroka              6.69  46          Pn       14 55 48.0 +0.8
KSRS  Korea Array         6.96 336  P       Pn       14 55 52.9 +2.1
           comp=E,3.0nm,0.3s,baz=168,slow=14,SNR=38
           comp=E,4.3nm,0.4s
KSRS  Korea Array         6.96 336  P       Pn       14 55 52.9 +2.1
JHJ   Hachijo jima 2      7.37  72  P       Pn       14 55 57.0 +0.4
           comp=E,19nm,0.3s,baz=240,slow=20,SNR=1.1
           comp=E,68nm,0.5s
INCN  Inchon              7.49 329          Pn       14 55 58.0 -0.2
INCN  Inchon              7.49 329  P       Pn       14 55 58.0 -0.2
MAJO  Matsushiro          7.83  44  P       Pn       14 56 04.0 +1.2
MJAR  Matsushiro Arr      7.83  44  P       Pn       14 56 04.2 +1.4
           comp=E,0.2nm,0.3s,baz=239,slow=14,SNR=9.2
           comp=E,4.3nm,0.6s
SSE   Sheshan             8.77 273  P       Pn       14 56 13.2 -2.5
SSE                                 S       Sn       14 57 50.4 -2.9
SSE                                 pmax    pmax
           comp=E,14nm,0.6s
SSE                                 pmax    pmax
           comp=E,250nm,4.9s
SSE                                 LR      LR
           comp=E,370nm,15.6s
SSE                                 LR      LR
           comp=E,1μm,15.5s
JCJ   Chichijima         10.23 110  LR      LR       14 59 54.2
           comp=E,863nm,20.7s,baz=282,slow=33
NJ2   Nanjing            10.76 278 eP       Pn       14 56 44.4 +1.5
NJ2                                 S       Sn       14 58 44.6 +2.6
NJ2                                 pmax    pmax
           comp=E,8.0nm,0.7s
NJ2                                 pmax    pmax
           comp=E,600nm,5.3s
NJ2                                 LR      LR
           comp=E,1μm,15.2s
NJ2                                 LR      LR
           comp=E,2μm,17.1s
NJ2                                 LR      LR
           comp=E,3μm,13.7s
TIA   Tai'an             12.95 297  P       Pn       14 57 17.0 +4.2
TIA                                 pmax    pmax
           comp=E,38nm,0.9s
TIA                                 LR      LR
           comp=E,1μm,11.0s
TIA                                 LR      LR
           comp=E,2μm,11.3s
TIA                                 LR      LR
           comp=E,3μm,12.0s
USRK  Ussuriysk Ar.      13.08   2  P       P        14 57 19.3 -4.7
           comp=E,3.9nm,1.0s,baz=182,slow=8.7,SNR=2.0
BNX   BinXian            14.94 349⇑P       P        14 57 45.5 +0.8
BNX                                 pmax    pmax
           comp=E,22nm,1.0s
HNS   HongShan           15.17 299⇓P       P        14 57 45.7 -1.5
HNS                                 pmax    pmax
           comp=E,42nm,1.4s
HNS                                 LR      LR
           comp=E,1μm,15.9s
HNS                                 LR      LR
           comp=E,2μm,16.7s
HNS                                 LR      LR
           comp=E,2μm,17.5s
BJT   Baijiatuau         15.25 310          P        14 57 49.3 +1.2
ASAJ  Asahikawa          15.70  31  P       Pn       14 57 48.8 -0.8
           comp=E,0.4nm,0.3s,baz=243,slow=18,SNR=1.8
ASAJ                                LR      LR       15 03 59.1
           comp=E,955nm,19.3s,baz=185,slow=37
           comp=E,18nm,1.1s
LYN   LuoYang            16.30 287  P       P        14 58 02.5 +2.7
LYN                                 pP      pP       14 58 09.6 -0.3
LYN                                 pmax    pmax
           comp=E,21nm,1.1s
LYN                                 LR      LR
           comp=E,980nm,13.1s
LYN                                 LR      LR
           comp=E,2μm,14.1s
LYN                                 LR      LR
           comp=E,4μm,16.5s
XLT   XiLinHaoTe         17.60 321 eP       P        14 58 14.5 +0.2
XLT                                 sP      sP       14 58 31.0 +1.4
XLT                                 PP      PnPn     14 58 34.0 +9.4
XLT                                 pmax    pmax
           comp=E,9.0nm,0.9s
XLT                                 pmax    pmax
           comp=E,360nm,4.4s
XLT                                 LR      LR
           comp=E,2μm,15.3s
XLT                                 LR      LR
           comp=E,3μm,14.5s
HHC   Hu-ho-hao-te       18.75 307 eP       Pn       14 58 27.3 -0.3
HHC                                 sP      sP       14 58 40.9 -1.3
HHC                                 pmax    pmax
           comp=E,10.0nm,0.6s
HHC                                 pmax    pmax
           comp=E,250nm,5.9s
HHC                                 LR      LR
           comp=E,2μm,12.3s
HHC                                 LR      LR
           comp=E,2μm,12.3s
HHC                                 LR      LR
           comp=E,2μm,13.7s
ENH   Enshi              18.88 273          P        14 58 27.3 -1.1
ENH                                 IAmb    IAmb     14 58 31.4
           comp=Z,41nm,0.5s
XAN   Xi'an              19.18 285  P       P        14 58 32.0 +0.3
XAN                                 pP      pP       14 58 39.9 -1.9
XAN                                 S       Sn       15 02 04.9 -2.0
XAN                                 pmax    pmax
           comp=Z,19nm,0.7s
XAN                                 pmax    pmax
           comp=Z,460nm,5.5s
XAN                                 LR      LR
           comp=Z,2μm,13.6s
XAN                                 LR      LR
           comp=Z,3μm,13.6s
XAN                                 LR      LR
           comp=Z,4μm,16.1s
HEH   HeiHe              19.36 352 eP       Pn       14 58 34.1 -0.7
HEH                                 pmax    pmax
           comp=Z,26nm,1.1s
BTO   Baotou             19.72 305 eP       Pn       14 58 41.0 +1.7
BTO                                 pP      pP       14 58 48.6 +0.9
BTO                                 S       Sn       15 02 24.2 +4.2
BTO                                 pmax    pmax
           comp=Z,15nm,0.7s
BTO                                 pmax    pmax
           comp=Z,1μm,6.3s
BTO                                 LR      LR
           comp=Z,3μm,14.6s
BTO                                 LR      LR
           comp=Z,3μm,13.4s
BTO                                 LR      LR
           comp=Z,4μm,14.8s
HIA   Hailar             20.17 337  P       P        14 58 40.6 -1.7
HILR  Hailar Array B     20.42 338  P       P        14 58 44.2 -0.8
           comp=Z,8.2nm,0.5s,baz=154,slow=10,SNR=13
HILR                                LR      LR       15 07 23.1
           comp=Z,2μm,18.5s,baz=120,slow=39
           comp=Z,8.2nm,0.5s
GUMO  Guam               21.38 142  LR      LR       15 05 37.3
           comp=Z,320nm,20.4s,baz=342,slow=32
GYA   Guiyang            22.17 264⇓P       P        14 59 05.2 +1.1
GYA                                 pmax    pmax
           comp=Z,29nm,0.5s
LZH   Lanzhou            23.46 290 eP       P        14 59 16.8 -0.6
LZH                                 pP      pP       14 59 26.8 -1.3
LZH                                 sP      sP       14 59 31.9 -1.3
LZH                                 pmax    pmax
           comp=Z,39nm,1.3s
LZH                                 LR      LR
           comp=Z,850nm,14.4s
LZH                                 LR      LR
           comp=Z,1μm,14.4s
LZH                                 LR      LR
           comp=Z,2μm,14.4s
LZDM  Lanzhou Array      23.57 289  P       P        14 59 18.1 -0.5
           comp=Z,38nm,0.9s,baz=126,slow=9.3,SNR=9.2
LZDM                                LR      LR       15 09 38.9
           comp=Z,1μm,18.7s,baz=100,slow=39
           comp=Z,38nm,0.9s
CD2   Chengdu            23.69 277  P       P        14 59 19.2 -0.3
CD2                                 S       S        15 03 34.2 +2.5
CD2                                 pmax    pmax
           comp=Z,70nm,0.5s
CD2                                 LR      LR
           comp=Z,1μm,11.0s
CD2                                 LR      LR
           comp=Z,2μm,9.0s
DAV   Davao City (W)     24.53 194  LR      LR       15 10 24.7
           comp=Z,160nm,18.2s,baz=31,slow=40
ULN   Ulaanbaatar        25.02 319  P       P        14 59 29.6 -2.0
ULN                                 IAmb    IAmb     14 59 33.6
           comp=Z,38nm,1.1s
SONM  Songino Array      25.37 318  P       P        14 59 34.9 +0.1
           comp=Z,5.5nm,0.6s,baz=135,slow=7.9,SNR=24
SONM                                LR      LR       15 10 59.0
           comp=Z,2μm,18.2s,baz=128,slow=40
           comp=Z,5.5nm,0.6s
SONM  Songino Array      25.37 318          P        14 59 34.1 -0.7
PZH   PanZhiHua          26.37 267  P       P        14 59 42.9 -1.1
PZH                                 pmax    pmax
           comp=Z,10.0nm,0.9s
GTA   Gaotai             27.00 297 eP       P        14 59 50.3 +0.7
GTA                                 pmax    pmax
           comp=Z,8.0nm,0.7s
GTA                                 LR      LR
           comp=Z,700nm,15.3s
GTA                                 LR      LR
           comp=Z,670nm,17.8s
GTA                                 LR      LR
           comp=Z,920nm,18.5s
PETK  Petropavlovsk-     29.09  33  P       P        15 00 07.4 -0.6
           comp=Z,4.1nm,0.9s,baz=268,slow=10,SNR=2.5
PETK                                LR      LR       15 12 47.6
           comp=Z,552nm,18.5s,baz=210,slow=38
           comp=Z,4.1nm,0.9s
TNCH  TengChong          29.59 266 eP       P        15 00 14.2 +1.4
TNCH                                S       S        15 05 03.0 -2.4
TNCH                                LR      LR
           comp=Z,580nm,14.2s
TNCH                                LR      LR
           comp=Z,640nm,15.1s
TNCH                                LR      LR
           comp=Z,1μm,16.5s
GOMU  GeErMu             30.77 289  P       P        15 00 23.0 -0.4
GOMU                                pmax    pmax
           comp=Z,11nm,1.0s
GOMU                                LR      LR
           comp=Z,420nm,18.4s
GOMU                                LR      LR
           comp=Z,440nm,19.7s
GOMU                                LR      LR
           comp=Z,860nm,17.0s
YAK   Yakutsk            30.95 358  LR      LR       15 13 08.6
           comp=Z,479nm,19.6s,baz=190,slow=37
MA2   Magadan            31.30  19  LR      LR       15 14 02.4
           comp=Z,396nm,19.0s,baz=209,slow=38
CHTO  Chiang Mai         31.77 255          P        15 00 31.0 -0.9
CHTO  Chiang Mai         31.77 255  pmax    pmax
           comp=Z,8.0nm,0.8s
CHTO  Chiang Mai         31.77 255  P       P        15 00 31.8 -0.1
CHTO                                pP      pP       15 00 42.2 -0.9
CHTO  Chiang Mai         31.77 255  P       P        15 00 31.0 -0.9
CM31  Chiang Mai Arr     31.94 254  P       P        15 00 31.8 -1.7
CMAR  Chiang Mai Arr     31.94 254  P       P        15 00 33.4 -0.1
           comp=Z,2.4nm,0.6s,baz=48,slow=8.3,SNR=22
CMAR                                PcP     PcP      15 03 24.1 +1.0
           comp=Z,0.6nm,0.6s,baz=16,slow=1.3,SNR=5.0
CMAR                                LR      LR       15 14 59.2
           comp=Z,433nm,18.9s,baz=60,slow=39
           comp=Z,2.4nm,0.6s
CMAR  Chiang Mai Arr     31.94 254  P       P        15 00 32.9 -0.6
CMAR                                        PcP      15 03 24.3 +1.2
CMAR  Chiang Mai Arr     31.94 254                   15 03 24.2
CMAR  Chiang Mai Arr     31.94 254  P       P        15 00 33.4 -0.1
FAKI  Fak Fak            33.85 179  P       P        15 00 50.6 +0.6
FAKI                                IAmb    IAmb     15 01 02.7
           comp=Z,16nm,0.7s
H11N2 WAKE ISLAND Hy     33.85 101  T       T        15 36 45.6
           baz=296,slow=75,SNR=117
H11N1 WAKE ISLAND Hy     33.85 101  T       T        15 36 51.6
           baz=296,slow=75,SNR=70
H11N3 WAKE ISLAND Hy     33.87 101  T       T        15 36 46.8
           baz=296,slow=75,SNR=109
H11S3 WAKE ISLAND Hy     34.24 103  T       T        15 37 40.0
           baz=304,slow=75,SNR=13
H11S1 WAKE ISLAND Hy     34.24 103  T       T        15 37 44.0
           baz=304,slow=75,SNR=7.2
H11S2 WAKE ISLAND Hy     34.26 103  T       T        15 37 49.1
           baz=304,slow=75,SNR=8.6
SEY   Seymchan           34.56  17  P       P        15 00 57.2 +1.4
           comp=Z,5.1nm,0.8s,baz=212,slow=9.5,SNR=10
SEY                                 LR      LR       15 16 29.1
           comp=Z,388nm,18.0s,baz=222,slow=39
           comp=Z,5.1nm,0.8s
JAY   Jayapura           34.59 164  LR      LR       15 13 08.8
           comp=Z,319nm,20.0s,baz=13,slow=33
BRDH  Bariadhala         36.30 267  LR      LR       15 18 37.5
           comp=Z,642nm,18.4s,baz=136,slow=40
WMQ   Urumqi             36.55 303 eP       P        15 01 14.9 +1.7
WMQ                                 LR      LR
           comp=Z,680nm,15.9s
WMQ                                 LR      LR
           comp=Z,810nm,21.5s
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KAPI	Kappang	37.61	199	LR	LR	15 17 49.5	
	comp=Z,106nm,20.6s,baz=360,slow=38						
ZAA0	Zalesovo Array	40.27	318	P	P	15 01 43.5	-0.7
ZALV	Zalesovo Beam	40.27	318	P	P	15 01 43.0	-1.3
	comp=Z,0.9nm,0.5s,baz=98,slow=11,SNR=7.1						
	comp=Z,0.9nm,0.5s						
ZALV	Zalesovo Beam	40.27	318	P	P	15 01 43.3	-0.9
MKAR	Makanchi Array	40.61	307	P	P	15 01 46.6	-0.6
	comp=Z,2.7nm,0.7s,baz=87,slow=9.8,SNR=12						
MKAR				PcP	PcP	15 03 48.0	-0.6
	comp=Z,0.4nm,0.5s,baz=90,slow=4.9,SNR=2.0						
	comp=Z,2.7nm,0.7s						
MKAR	Makanchi Array	40.61	307		P	15 01 45.4	-1.8
TIXI	Tiksi	40.62	359	P	P	15 01 46.6	-0.2
	comp=Z,3.4nm,0.4s,baz=215,slow=7.3,SNR=7.4						
TIXI				LR	LR	15 19 27.5	
	comp=Z,491nm,18.3s,baz=197,slow=37						
	comp=Z,3.4nm,0.4s						
TIXI	Tiksi	40.62	359		P	15 01 47.4	+0.5
PSI	Prapat	41.62	234	LR	LR	15 19 48.7	
	comp=Z,126nm,19.7s,baz=24,slow=37						
PMG	Port Moresby	43.02	157	LR	LR	15 18 07.6	
	comp=Z,197nm,20.7s,baz=340,slow=33						
KURK	Kurchatov	43.41	313		P	15 02 08.6	-1.3
KURK	Kurchatov	43.41	313	P	P	15 02 09.1	-0.8
KURBB	Kurchatov Arra	43.45	312	P	P	15 02 09.4	-0.9
	comp=Z,3.4nm,0.6s,baz=100,slow=9.2,SNR=26						
KURBB				LR	LR	15 21 59.1	
	comp=Z,1µm,18.7s,baz=135,slow=38						
	comp=Z,3.4nm,0.6s						
GSI	Gunungsitoli	43.63	234	P	P	15 02 11.4	-0.7
GSI				IAmb	IAmb	15 02 23.6	
	comp=Z,54nm,1.5s						
TARG	Taragay, Kyrgy	43.80	299	P	P	15 02 13.3	-0.4
TKM2	Tokmak 2	45.35	301	P	P	15 02 26.5	+0.7
	SNR=17						
KSH	Kashi	45.40	297	P	P	15 02 30.1	+3.9
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KSH				LR	LR		
	comp=Z,430nm,14.1s						
KSH				LR	LR		
	comp=Z,850nm,16.1s						
KSH				LR	LR		
	comp=Z,870nm,18.9s						
NRIK	Noril'sk	45.56	340	P	P	15 02 25.9	-1.0
	comp=Z,3.8nm,0.5s,baz=116,slow=9.5,SNR=10						
NRIK				LR	LR	15 23 05.2	
	comp=Z,826nm,18.9s,baz=125,slow=38						
	comp=Z,3.8nm,0.5s						
NRIK	Noril'sk	45.56	340	P	P	15 02 25.5	-1.4
KBK	Karagaybulak	45.85	301	P	P	15 02 30.0	+0.2
	SNR=5.3						
USP	Ospenovka	46.13	302	P	P	15 02 31.8	+0.1
	SNR=5.8						
AAK	Ala-Archa	46.18	301	P	P	15 02 33.0	+0.7
	SNR=6.8						
AAK	Ala-Archa	46.18	301		P	15 02 32.3	0.0
AAK	Ala-Archa	46.18	301	P	P	15 02 32.7	+0.4
AAK				pP	pP	15 02 43.3	-0.7
AAK				PcP	PcP	15 04 09.1	+1.4
UCH	Uchtor	46.20	300	P	P	15 02 34.5	+1.6
	SNR=8.1						
ARSB	Arslanbob	47.44	299	P	P	15 02 42.0	-0.2
ARSB				IAmb	IAmb	15 02 43.9	
	comp=Z,37nm,1.7s						
NIL	Nilore	48.63	289		P	15 02 50.3	-1.1
NIL				IAmb	IAmb	15 02 54.9	
	comp=Z,7.8nm,0.6s						
BVAR	Borovoye Array	48.65	315	P	P	15 02 50.6	-0.6
	comp=Z,19nm,0.5s,baz=99,slow=9.5,SNR=108						
	comp=Z,19nm,0.5s						
BORK	Borovoye	48.69	315		P	15 02 50.6	-0.9
BORK	Borovoye	48.69	315	P	P	15 02 51.1	-0.4
BORK				pP	pP	15 03 03.0	-0.1
BORK				sP	sP	15 03 07.8	-0.2
KK31	Karatay Array	49.04	302	IAmb	IAmb	15 02 55.4	
	comp=Z,12nm,0.7s						
KKAR	Karatay Array	49.04	302		P	15 02 54.4	0.0
CHGR	Chuyangaron	50.77	297	P	P	15 03 07.7	+0.1
CHGR				IAmb	IAmb	15 03 39.1	
	comp=Z,18nm,1.1s						
WRA	Warramunga Arr	50.83	176	P	P	15 03 08.2	+0.2
	comp=Z,1.4nm,0.8s,baz=353,slow=8.2,SNR=6.5						
	comp=Z,1.4nm,0.8s						
F17K	Baldwin Pennin	52.87	28	P	P	15 03 24.1	+1.4
F17K				IAmb	IAmb	15 03 37.4	
	comp=Z,13nm,0.9s						
PALK	Pallekele	52.88	254	LR	LR	15 26 33.7	
	comp=Z,297nm,21.7s,baz=52,slow=37						
E18K	Tukpahlearik C	53.24	27	P	P	15 03 26.7	+1.2
E18K				IAmb	IAmb	15 03 42.8	
	comp=Z,10nm,0.9s						
AS31	Alice Springs	54.51	177	P	P	15 03 35.1	-0.1
ASAR	Alice Springs	54.51	177	P	P	15 03 36.0	+0.8
	comp=Z,0.9nm,0.6s,baz=10,slow=13,SNR=22						
ASAR				LR	LR	15 25 51.1	
	comp=Z,99nm,22.0s,baz=284,slow=35						
	comp=Z,0.9nm,0.6s						
ASAR	Alice Springs	54.51	177	P	P	15 03 35.8	+0.6
E19K	Redstone River	54.54	27	P	P	15 03 35.8	+0.9
B20K	Meade River	54.78	24	P	P	15 03 38.1	+1.5
AB31	Akbulak array	55.47	311	P	P	15 03 40.6	-1.2
AB31				IAmb	IAmb	15 03 42.5	
	comp=Z,17nm,1.4s						
ABKAR	Akbulak array	55.47	311	P	P	15 03 40.8	-1.1
ARTI	Arti	55.50	320	P	P	15 03 41.2	-0.8
	comp=Z,25nm,0.5s,baz=84,slow=4.0,SNR=64						
ARTI				LR	LR	15 30 03.7	
	comp=Z,709nm,18.7s,baz=92,slow=39						
ARTI	Arti	55.50	320	P	P	15 03 40.7	-1.3
ARTI	Arti	55.50	320	P	P	15 03 41.0	-1.0
ARTI				pP	pP	15 03 53.0	-0.8
ARTI				PcP	PcP	15 04 41.6	0.0
B21K	Ikpikpuk River	55.63	24	IAmb	IAmb	15 03 59.3	
	comp=Z,9.3nm,0.8s						
J20K	Nowinta River	55.74	31	IAmb	IAmb	15 04 02.0	
	comp=Z,15nm,1.1s						
B22K	Teshekpuk Lake	56.08	23	IAmb	IAmb	15 04 01.5	
	comp=Z,19nm,1.4s						
D22K	Ayikyak River	56.30	25	IAmb	IAmb	15 04 04.3	
	comp=Z,9.0nm,0.7s						
AKTO	Aktyubinsk	56.50	313	P	P	15 03 50.2	+0.9
	comp=Z,3.2nm,0.6s,baz=81,slow=8.0,SNR=6.6						
AKTO				LR	LR	15 30 09.7	
	comp=Z,1µm,18.3s,baz=54,slow=38						
	comp=Z,3.2nm,0.6s						
E22K	Anaktuvuk Pass	56.62	26	P	P	15 03 51.2	+1.3
H22K	Ishtalitna Cre	56.85	29	P	P	15 03 53.2	+1.7
H22K				IAmb	IAmb	15 03 55.4	
	comp=Z,10nm,1.1s						
KDAK	Kodiak Island	56.96	38	LR	LR	15 28 38.5	
	comp=Z,105nm,21.7s,baz=240,slow=36						
E23K	Chandalar	57.45	26	IAmb	IAmb	15 04 20.2	
	comp=Z,12nm,1.1s						
NEA2	Nenana	57.92	30	P	P	15 03 58.4	-0.7
NEA2				IAmb	IAmb	15 04 02.3	
	comp=Z,7.7nm,0.8s						
RND	Reindeer	58.13	31	P	P	15 04 01.2	+0.5
H24K	Noodor Dome	58.29	29	IAmb	IAmb	15 04 44.4	
	comp=Z,25nm,1.8s						
D25K	Kavik River	58.54	24	IAmb	IAmb	15 04 16.3	
	comp=Z,15nm,1.4s						
ILAR	Eielson Array	58.83	30	P	P	15 04 05.4	0.0
	comp=Z,1.1nm,0.6s,baz=264,slow=5.1,SNR=26						
ILAR				LR	LR	15 31 18.0	
	comp=Z,96nm,18.9s,baz=280,slow=38						
	comp=Z,1.1nm,0.6s						
HDA	Harding Lake	58.85	30	P	P	15 04 05.9	+0.4
F25K	Christian Rive	58.99	26	IAmb	IAmb	15 04 20.8	
	comp=Z,10nm,1.3s						
PRP	Porcupine Dome	59.30	29	P	P	15 04 09.3	+0.4
F26K	Sheenjek River	59.54	26	IAmb	IAmb	15 04 27.9	
	comp=Z,6.1nm,0.8s						
KIRV	Kirov	59.97	323	P	P	15 04 11.7	-1.6
	comp=Z,6.2nm,0.5s,baz=70,slow=4.9,SNR=4.7						
KIRV				LR	LR	15 32 11.0	
	comp=Z,259nm,20.0s,baz=86,slow=38						
	comp=Z,6.2nm,0.5s						
SCRK	Sand Creek	60.20	30	P	P	15 04 15.0	0.0
SCRK				IAmb	IAmb	15 06 01.2	
	comp=Z,23nm,1.9s						
E27K	Coleen River	60.42	25	IAmb	IAmb	15 04 32.8	
	comp=Z,13nm,1.4s						
MENT	Mentasta	60.51	32	P	P	15 04 17.3	+0.3
M26K	Nabesna, AK	60.94	32	IAmb	IAmb	15 04 36.4	
	comp=Z,15nm,1.2s						
K27K	Chicken	61.01	30	IAmb	IAmb	15 04 45.8	
	comp=Z,19nm,1.5s						
E28M	Babbage River	61.09	25	IAmb	IAmb	15 04 37.1	
	comp=Z,13nm,1.3s						
F28M	Old Crow	61.16	26	IAmb	IAmb	15 04 38.6	
	comp=Z,12nm,1.3s						
I28M	Miner Creek	61.60	28	IAmb	IAmb	15 05 05.0	
	comp=Z,14nm,1.4s						
BELG	Belogornoye	62.41	317	P	P	15 04 28.7	-1.2
	comp=Z,7.3nm,0.7s,baz=242,slow=12,SNR=3.6						
	comp=Z,7.3nm,0.7s						
DZM	Mont Dzumac	62.65	143	*e*LR	LR	15 23 14.8	
	comp=Z,132nm,23.1s						
EPYK	Eagle Plains	62.66	27	IAmb	IAmb	15 04 43.1	
	comp=Z,16nm,1.2s						
F30M	Barrier River	62.69	26	IAmb	IAmb	15 04 47.7	
	comp=Z,18nm,1.2s						
L29M	L29M	62.95	31	IAmb	IAmb	15 04 49.3	
	comp=Z,11nm,1.1s						
K29M	Barlow Dome	63.01	30	IAmb	IAmb	15 04 46.5	
	comp=Z,17nm,1.6s						
I30M	Mount Dempster	63.11	28	IAmb	IAmb	15 04 37.7	
	comp=Z,8.1nm,1.1s						
INK	Inuvik	63.31	24	LR	LR	15 35 38.0	
	comp=Z,99nm,18.8s,baz=324,slow=39						
INK	Inuvik	63.31	24	P	P	15 04 36.2	+0.6
STKA	Stephens Creek	63.38	170	P	P	15 04 37.1	+0.6
	comp=Z,1.3nm,0.3s,baz=305,slow=4.9,SNR=3.1						
STKA				LR	LR	15 32 22.5	
	comp=Z,122nm,19.9s,baz=25,slow=36						
	comp=Z,1.3nm,0.3s						
H31M	Peel River	63.75	27	IAmb	IAmb	15 04 55.2	
	comp=Z,17nm,1.1s						
SPITS	Spitsbergen Ar	64.65	348	LR	LR	15 34 47.8	
	comp=Z,358nm,18.8s,baz=41,slow=38						
A36M	Sachs Harbour	64.72	20	IAmb	IAmb	15 04 48.1	
	comp=Z,14nm,0.8s						
FARO	Faro, Yukon	65.32	31	IAmb	IAmb	15 05 03.7	
	comp=Z,8.6nm,0.8s						
C36M	Paulatuk	66.15	22	IAmb	IAmb	15 05 05.8	
	comp=Z,12nm,0.9s						
ARCES	ARCESS Array B	66.51	338	P	P	15 04 55.9	-0.7
	comp=Z,1.6nm,0.5s,baz=63,slow=5.4,SNR=16						
ARCES				LR	LR	15 39 19.1	
	comp=Z,722nm,18.1s,baz=66,slow=41						
	comp=Z,1.6nm,0.5s						
KBZ	Khabaz	68.28	309	P	P	15 05 08.1	+0.1
	comp=Z,5.3nm,0.6s,baz=93,slow=14,SNR=9.7						
	comp=Z,5.3nm,0.6s						
DLBC	Dease Lake	68.28	34	LR	LR	15 36 30.8	
	comp=Z,57nm,18.3s,baz=292,slow=37						
KIV	Kislovodsk	68.33	309	P	P	15 05 08.7	+0.1
KIV	Kislovodsk	68.33	309	P	P	15 05 08.7	+0.1
	comp=Z,25nm,1.2s						
FINES	FINESS Array B	70.01	330	P	P	15 05 17.2	-1.3
	comp=Z,4.0nm,0.6s,baz=70,slow=5.3,SNR=22						
FINES				LR	LR	15 39 47.4	
	comp=Z,693nm,18.5s,baz=44,slow=39						
	comp=Z,4.0nm,0.6s						
FINES	FINESS Array B	70.01	330	P	P	15 05 16.4	-2.1
RES	Resolute Bay	70.23	12	P	P	15 05 20.2	+0.5
GURO	Guroymak-BITLI	70.96	304	IAmb	IAmb	15 05 34.7	
	comp=Z,25nm,1.5s						
MARD	Mardin	72.38	303	IAmb	IAmb	15 05 45.6	
	comp=Z,17nm,0.7s						
YKA	Yellowknife Ar	72.93	26	P	P	15 05 34.1	-2.0
	comp=Z,0.9nm,0.8s,baz=304,slow=6.3,SNR=10.0						
YKA				LR	LR	15 41 43.4	
	comp=Z,57nm,18.2s,baz=288,slow=39						
	comp=Z,0.9nm,0.8s						
AK03	Malin Array Si	73.64	320	P	P	15 05 39.6	-0.9
AKASG	Malin Array Be	73.65	320	P	P	15 05 39.8	-0.7
	comp=Z,3.4nm,0.5s,baz=52,slow=7.0,SNR=9.6						
AKASG				LR	LR	15 40 40.6	
	comp=Z,351nm,18.3s,baz=51,slow=38						
	comp=Z,3.4nm,0.5s						
AKASG	Malin Array Be	73.65	320	P	P	15 05 39.2	-1.4
AKBB	Malin Array Si	73.65	320	IAmb	IAmb	15 05 47.3	
	comp=Z,8.5nm,0.6s						
AKBB	Malin Array Si	73.65	320	P	P	15 05 39.8	-0.7
AK09	Malin Array Si	73.66	320	P	P	15 05 39.9	-0.7
AK01	Malin Array Si	73.66	320	P	P	15 05 39.7	-0.9
KIEV	Kiev	73.66	320	P	P	15 05 39.8	-0.8
KIEV				IAmb	IAmb	15 05 47.3	
	comp=Z,7.6nm,0.6s						
KIEV	Kiev	73.66	320	P	P	15 05 39.8	-0.8
	comp=Z,52nm,1.0s						
AK08	Malin Array Si	73.66	320	P	P	15 05 40.0	-0.6
AK04	Malin Array Si	73.67	320	P	P	15 05 39.6	-1.1
AK02	Malin Array Si	73.68	320	P	P	15 05 39.8	-0.9
AK10	Malin Array Si	73.68	320	P	P	15 05 40.0	-0.7
AK11	Malin Array Si	73.69	320	P	P	15 05 40.1	-0.7
AK22	Malin Array Si	73.70	320	P	P	15 05 40.0	-0.9
AK21	Malin Array Si	73.71	320	P	P	15 05 40.1	-0.8
AK12	Malin Array Si	73.72	320	P	P	15 05 40.0	-0.9
AK20	Malin Array Si	73.75	320	P	P	15 05 40.2	-0.9
LUBAR	Lubar, Ukraine	74.85	319	P	P	15 05 47.2	-0.4
RAYN	Ar Rayn	74.92	289	P	P	15 05 47.4	-1.1
RAYN				IAmb	IAmb	15 06 00.4	
	comp=Z,15nm,1.1s						
RAYN	Ar Rayn	74.92	289	P	P	15 05 48.8	+0.3
BNN	Bunyan	75.16	306	P	P	15 05 49.0	-0.7
HFS	Hagfors	75.80	333	P	P	15 05 50.9	-1.9
	comp=Z,3.4nm,0.6s,baz=72,slow=4.8,SNR=11						
HFS				LR	LR	15 43 33.5	
	comp=Z,456nm,18.4s,baz=38,slow=39						
	comp=Z,3.4nm,0.6s						
NB2	NORSAR Subarra	76.17	334	P	P	15 05 53.6	-1.4
	comp=Z,5.2nm,0.7s,baz=50,slow=5.9						
NOA	NORSAR Array B	76.17	334	P	P	15 05 53.7	-1.3
	comp=Z,1.8nm,0.6s,baz=50,slow=5.6,SNR=8.5						
NOA				LR	LR	15 42 37.5	
	comp=Z,259nm,18.4s,baz=40,slow=38						
	comp=Z,1.8nm,0.6s						
BR131	Keskin Array S	76.25	308	IAmb	IAmb	15 06 07.7	
	comp=Z,18nm,1.0s						
BRTR	Keskin Array B	76.25	308	P	P	15 05 56.1	+0.2
	comp=Z,2.7nm,0.7s,baz=112,slow=5.2,SNR=14						
	comp=Z,2.7nm,0.7s						
BRTR	Keskin Array B	76.25	308	P	P	15 05 55.4	-0.6
KMPD	K-Podol'skiy	76.28	319	P	P	15 05 55.5	-0.3
MMAI	Mount Meron Ar	78.27	301	P	P	15 06 08.4	+1.0
	comp=Z,2.7nm,0.6s,baz=90,slow=9.1,SNR=2.1						
	comp=Z,2.7nm,0.6s						
BORA	Eskisehir	78.30	310	IAmb	IAmb	15 06 18.7	
	comp=Z,15nm,1.0s						
LANS	Liptovska Anna	79.79	322	*e*P	P	15 06 17.3	+2.0
VRAC	Vranov	81.20	323	LR	LR	15 46 11.6	
	comp=Z,442nm,18.1s,baz=58,slow=38						
MODS	Modra-Piesok	81.42	322	*e*P	P	15 06 28.0	+4.0
CLL	Collm	81.72	326	P	P	15 06 25.3	-0.2
	comp=Z,5.4nm,0.5s						
CLL	Collm	81.72	326	*e*P	P	15 06 26.0	+0.5
CLL				AMS	AMS	15 47 00.0	
	comp=N,400nm,20.6s						
CLL				AMS	AMS	15 47 00.0	
	comp=E,400nm,18.2s						
CLL				AMS	AMS	15 47 00.0	
	comp=Z,700nm,18.5s						
BMO	Blue Mountains	81.95	42	P	P	15 06 28.1	+1.1
BMO				IAmb	IAmb	15 06 42.5	
	comp=Z,15nm,1.5s						
BORG	Borgarnes	82.11	349	LR	LR	15 45 33.2	
	comp=Z,59nm,20.0s,baz=44,slow=38						
GERES	GERESS Array B	82.97	324	P	P	15 06 30.8	-1.4
	comp=Z,0.3nm,0.3s,baz=29,slow=4.3,SNR=2.0						
GERES				LR	LR	15 47 03.7	
	comp=Z,362nm,19.4s,baz=61,slow=38						
	comp=Z,0.3nm,0.3s						
FFC	Flin Flon	82.99	28	P	P	15 06 32.2	+0.2
SOKA	Soboth	83.66	322	*e*PcP	P	15 06 36.9	+1.1
	comp=Z,2.6nm,0.5s						
RAR	Rarotonga	84.01	119	LR	LR	15 35 34.3	
	comp=Z,43nm,21.8s,baz=258,slow=30						
OBKA	Obir	84.03	322	*e*P	P	15 06 36.5	-1.2
	comp=Z,1.2nm,0.3s						
LESA	Schwarzleotal	84.41	323	*e*PcP	P	15 06 40.5	+0.9
	comp=Z,3.8nm,0.5s						
MYKA	Terra Mystica	84.43	322	*i* P	P	15 06 40.1	+0.4
	comp=Z,3.7nm,0.5s						
ABTA	Abfaltersbach	84.94	323	*i* P	P	15 06 42.7	+0.3
	comp=Z,2.1nm,0.5s						
NVAR	Mina Array Bea	85.14	48	P	P	15 06 44.8	+1.2
	comp=Z,0.5nm,0.6s,baz=299,slow=5.1,SNR=4.5						
	comp=Z,0.5nm,0.6s						
EKA	Eskdalemuir Ar	85.53	336	P	P	15 06 43.9	-1.1
	comp=Z,1.0nm,0.4s,baz=49,slow=5.4,SNR=5.6						
EKA				LR	LR	15 50 37.8	
	comp=Z,360nm,19.1s,baz=5.0,slow=40						
	comp=Z,1.0nm,0.4s						
DAVOX	Davos/Dischmat	86.27	324	LR	LR	15 50 24.0	
	comp=Z,410nm,18.1s,baz=39,slow=39						
BW06	Boulder Array	87.63	40	IAmb	IAmb	15 07 20.2	
	comp=Z,17nm,1.8s						
PDAR	Pinedale Array	87.63	40	P	P	15 06 56.0	+0.1
	comp=Z,1.0nm,0.7s,baz=336,slow=1.0,SNR=8.5						
PDAR				LR	LR	15 49 40.6	
	comp=Z,8.1nm,18.1s,baz=330,slow=38						
	comp=Z,1.0nm,0.7s						
ULM	Lac du Bonnet	88.81	28	P	P	15 07 00.8	-0.1
	comp=Z,5.5nm,0.6s,baz=314,slow=5.2,SNR=8.0						
ULM				LR	LR	15 51 54.1	
	comp=Z,102nm,18.6s,baz=12,slow=39						
	comp=Z,5.5nm,0.6s						
PPT	Papeete	89.89	111	LR	LR	15 41 45.7	
	comp=Z,59nm,19.5s,baz=278,slow=32						
PPT2	Papeete2	89.91	111	*e*LR	LR	15 35 47.9	
	comp=Z,126nm,22.5s						
PPT2				*e*LR	LR	15 35 54.4	
	comp=Z,123nm,24.2s						
EPLO	Experimental L	90.13	27	IAmb	IAmb	15 07 09.4	
	comp=Z,6.7nm,0.9s						
PV18	Skein Mesa, Pa	91.00	43	P	P	15 07 12.4	+0.7
PV03	Paradox Valley	91.03	43	IAmb	IAmb	15 07 31.2	
	comp=Z,14nm,1.6s						
PV01	Paradox Valley	91.27	43	P	P	15 07 14.4	+1.4
PV01				IAmb	IAmb	15 07 23.8	
	comp=Z,7.4nm,1.1s						
SCHQ	Schefferville	92.98	10	LR	LR	15 53 19.1	
	comp=Z,185nm,18.0s,baz=334,slow=38						
KEST	Kesra	94.11	316	LR	LR	15 55 22.0	
	comp=Z,308nm,18.9s,baz=19,slow=39						
ESDC	Sonseca Array	98.30	327	LR	LR	15 58 40.4	
	comp=Z,227nm,18.2s,baz=24,slow=39						
SADO	Sadowa	99.51	22	LR	LR	15 58 03.6	
	comp=Z,126nm,18.4s,baz=325,slow=38						
DBIC	Dimbokro	123.81	304	PKP	PKPdf	15 13 04.3	-1.3
	comp=Z,1.8nm,0.5s,baz=97,slow=2.6,SNR=2.0						

*IDC **05** 14:55:53.2±11.0, 36°.85N×20°.34E, h0^{km}, mb3.9/3, mbtmp3.8/4, ML3.2/1, Error ellipse: s-maj=218.4km s-min=46.6km az=26.0*

*THE **05** 14:56:08.0, 38°.3N±0°.7×21°.6E±0°.6, h0^{km}±4^{km}, M3.2/12, MLh3.2/12*

*ATH **05** 14:56:08.1, 38°.32N×21°.56E, h12^{km}, ML3.2/37, Manual Solution by N.Liadopoulou First location: 2019/12/05 14:57:20, This location: 2019/12/05 15:21:31 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

ISC 05 14:56:08.1±0.8**, 38°.31N**±0°.02×**21°.57E**±0°.02**, h11^{km}**±5^{km}**, n94, σ0^{s}.39**/118**, mb3.9**/3**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSL1	Messolongi	0.13	299	P	Pg	14 56 11.2	0.0
MSL1				S	Sg	14 56 13.0	-0.5
PATG	Patra B	0.15	120	P	Pg	14 56 11.8	+0.3
PATG				S	Sg	14 56 14.4	+0.5
PATC	Patra C	0.16	105	P	Pg	14 56 12.0	+0.3
PATC				S	Sg	14 56 14.6	+0.4
UPR	University Cam	0.18	99	P	Pg	14 56 12.4	+0.5
UPR				S	Sg	14 56 14.1	-0.6
UPR	University Cam	0.18	99	P	Pg	14 56 12.6	+0.6
UPR				S	Sg	14 56 14.4	-0.3
AXS	Araxos	0.19	232	P	Pg	14 56 11.5	-0.7
AXS				S	Sg	14 56 14.6	-0.4
RLS	Riolos of Patr	0.27	197	P	Pg	14 56 13.1	-0.4
RLS				S	Sg	14 56 17.5	+0.3
RLS	Riolos of Patr	0.27	197	P	Pg	14 56 13.2	-0.4
RLS				S	Sg	14 56 17.4	+0.3
EFP	Efpalio	0.29	67	P	Pg	14 56 13.5	-0.5
EFP				S	Sg	14 56 18.3	+0.4
EFP	Efpalio	0.29	67	P	Pg	14 56 13.5	-0.5
EFP				S	Sg	14 56 18.2	+0.2
PVO	Paravola	0.31	354	P	Pg	14 56 14.1	-0.2
PVO				S	Sg	14 56 19.4	+0.9
PVO	Paravola	0.31	354	P	Pg	14 56 14.2	-0.2
PVO				S	Sg	14 56 19.0	+0.5
DRO	Drossia	0.38	162	S	Sg	14 56 21.3	+0.7
DRO	Drossia	0.38	162	P	Pg	14 56 15.2	-0.4
DRO				S	Sg	14 56 21.6	+1.0
ANX	Ano Chora	0.40	45	P	Pg	14 56 15.4	-0.6
ANX				S	Sg	14 56 21.6	+0.3
ANX	Ano Chora	0.40	45	P	Pg	14 56 15.7	-0.2
ANX				S	Sg	14 56 21.7	+0.4
SERG	Sergoula	0.40	75	P	Pg	14 56 15.7	-0.3
SERG				S	Sg	14 56 21.8	+0.5
SERG	Sergoula	0.40	75	P	Pg	14 56 15.7	-0.3
SERG				S	Sg	14 56 21.9	+0.6
AST1	Astakos	0.44	302	P	Pg	14 56 16.8	0.0
AST1				S	Sb	14 56 23.9	-0.5
LCHA	Lechaina	0.44	213	P	Pg	14 56 17.1	+0.4
KALE	Kalithea	0.46	80	P	Pg	14 56 16.7	-0.4
KALE				S	Sg	14 56 23.9	+0.6
KALE	Kalithea	0.46	80	P	Pg	14 56 16.6	-0.5
KALE				S	Sg	14 56 23.8	+0.6
KLV1	Kalavrita	0.51	123	P	Pg	14 56 18.0	-0.1
KLV1				S	Sb	14 56 25.9	-0.6
KLV	Kalavryta, Ach	0.53	120	P	Pg	14 56 18.2	-0.3
KLV				S	Sb	14 56 27.0	-0.2
KLV	Kalavryta, Ach	0.53	120	P	Pg	14 56 18.4	-0.1
KLV				S	Sg	14 56 26.4	+0.8
CLEM	Kyllini,Ilia,G	0.54	219	P	Pg	14 56 19.2	+0.6
EVR	Evrytania	0.63	17	P	Pg	14 56 20.7	+0.3
EVR				S	Sg	14 56 29.2	+0.4
EVR	Evrytania	0.63	17	P	Pg	14 56 20.8	+0.4
EVR				S	Sg	14 56 29.2	+0.4
RTZL	Ratzakli, Kefa	0.67	250	P	Pg	14 56 21.0	-0.1
RTZL	Ratzakli, Kefa	0.67	250	P	Pg	14 56 21.1	+0.1
AMPL	Ampelaki	0.67	336	S	Sb	14 56 30.6	-0.4
GUR	Goura	0.72	121	P	Pg	14 56 21.6	-0.3
SMHA	Samh	0.72	266	P	Pg	14 56 21.7	-0.4
DLFA	Delphi	0.75	77	P	Pg	14 56 21.7	-0.9
KYPS	Kipseli, Zakin	0.77	230	P	Pg	14 56 23.2	+0.4
EVGI	Lefkada island	0.78	294	P	Pg	14 56 23.4	+0.2
VLS	Valsamata	0.78	260	P	Pg	14 56 22.5	-0.7
AMT	Artemida-Makis	0.79	172	P	Pg	14 56 23.6	+0.3
NYDR	Nydri-Lefkada	0.79	301	P	Pg	14 56 23.5	+0.2
FSK	Fiskardo	0.80	281	P	Pg	14 56 22.9	-0.6
ORTH	Orthonies,Zaky	0.83	236	P	Pb	14 56 24.6	+0.2
ZARO	Zacharo	0.83	175	P	Pb	14 56 24.4	+0.1
MAKR	Makrakomi, Fth	0.83	32	P	Pb	14 56 24.7	+0.2
LTHK	Lithakia	0.83	224	P	Pb	14 56 24.6	+0.1
LKD2	Lefkada island	0.86	304	P	Pg	14 56 24.4	-0.2
ARG2	Argostoli	0.86	261	P	Pb	14 56 25.5	+0.6
DRAG	Dragano-Lefkad	0.86	296	P	Pg	14 56 24.8	+0.1
TSLK	Tsoukalades, L	0.88	306	P	Pb	14 56 25.6	+0.3
LAM2	Lamia	0.90	49	P	Pg	14 56 25.2	-0.2
AGG	Agios Georgios	0.93	40	P	Pg	14 56 26.1	+0.1
DMLN	Damoulianata-K	0.94	266	P	Pg	14 56 26.3	+0.1
ART2	Arta	0.95	332	P	Pg	14 56 26.4	0.0
AXAR	Agios Charalam	0.97	62	P	Pg	14 56 26.6	-0.2
KIAA	Kiato	0.98	107	P	Pn	14 56 27.7	0.0
TETR	Tetrakomo, Epi	1.06	348	P	Pg	14 56 28.5	0.0
SOFA	Sofades	1.10	22	P	Pn	14 56 29.6	+0.2
LTK	Loutraki	1.14	104	P	Pb	14 56 30.0	+0.2
LOUT	Loutraki	1.16	106	P	Pb	14 56 30.0	0.0
ITM	Ithomi	1.17	166	P	Pb	14 56 30.1	-0.1
LKR	Lokris	1.18	73	P	Pb	14 56 30.4	+0.1
ATAL	Atalanti	1.20	71	P	Pn	14 56 30.8	0.0
AIDA	Aidipsos	1.28	65	P	Pn	14 56 31.4	-0.5
THL	Klokotos Trika	1.30	15	P	Pb	14 56 32.7	+0.3
VIL2	Platees	1.34	94	P	Pg	14 56 33.9	0.0
PYL	PYLOS	1.42	174	P	Pn	14 56 33.8	0.0
JAN	Janina	1.45	338	P	Pn	14 56 34.2	0.0
MAGU	Magoula	1.55	98	P	Pn	14 56 35.6	+0.1
IGT	Igoumenitsa	1.55	322	P	Pn	14 56 35.4	-0.2
MET2	Kameni Chora,	1.56	116	P	Pb	14 56 36.8	-0.1
STFN	Stefani	1.56	94	P	Pn	14 56 35.9	+0.1
MET5	Makryloggos,Me	1.57	115	P	Pn	14 56 35.8	-0.1
MET4	Agioi Theodoro	1.60	115	P	Pn	14 56 36.7	+0.4
NEO	Neokhori	1.63	52	P	Pn	14 56 37.3	+0.6
KPRO	Kipourio	1.65	355	P	Pn	14 56 37.3	+0.3
ATH	Athens Observa	1.73	101	P	Pn	14 56 38.3	+0.3
ATHU	Athens Univers	1.78	100	P	Pn	14 56 38.9	+0.1
VLY	Voula,Athens	1.82	104	P	Pn	14 56 39.7	+0.5

PTL	Penteli	1.83	98	P	Pn	14 56 39.2	-0.2
DION	Dionisos Attik	1.88	96	P	Pn	14 56 40.4	+0.2
LIT	Litokhoron	1.93	22	P	Pn	14 56 40.7	-0.1
VLI	Veliai	1.93	145	P	Pn	14 56 41.0	+0.2
AOS2	Alonissos-2	1.97	64	P	Pn	14 56 40.6	-0.7
KZN	Kozani	2.00	4	P	Pn	14 56 41.6	-0.2
KYMI	Kymi, Euboea I	2.02	80	P	Pn	14 56 41.6	-0.4
NEST	Nestorio	2.14	349	P	Pn	14 56 43.9	+0.1
KARY	Karystos	2.28	96	P	Pn	14 56 45.7	+0.1
KTHA	Kythira Island	2.37	149	P	Pn	14 56 46.7	-0.2
PLG	Polygyros	2.52	35	P	Pn	14 56 49.0	+0.1
OUR	Ouranopolis	2.75	42	P	Pn	14 56 52.5	+0.3
KNT	Kendrikon	3.03	19	P	Pn	14 56 55.7	-0.2
BRTR	Keskin Array B	9.50	78	Pn	Pn	14 58 31.1	+6.2
	0.2nm,0.3s,baz=257,slow=14,SNR=5.8						
	0.5nm,0.4s						
HFS	Hagfors	22.41	350	P	P	15 01 06.2	-0.1
	5.0nm,1.1s,baz=145,slow=10,SNR=1.5						
	5.0nm,1.1s						
MKAR	Makanchi Array	44.53	59	P	P	15 04 19.2	-0.4
	0.5nm,0.4s,baz=275,slow=6.7,SNR=5.8						
	0.5nm,0.4s						
ZALV	Zalesovo Beam	44.99	48	P	P	15 04 23.2	+0.1
	0.8nm,0.6s,baz=280,slow=8.6,SNR=2.4						
	0.8nm,0.6s						

CATAC ***05*** *15:11:41.1±0.5, 14°N±2°×9°2W±°, h22^{km}±4^{km}, M5.0/31, mb5.0/3, mB5.6/5, MLv4.8/31, Mw(mB)5.1/5, Error ellipse: s-maj=5.9km s-min=2.7km az=53.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.72; M$_{\theta\theta}$-1.26; M$_{\phi\phi}$-0.46; M$_{r\theta}$1.41; M$_{\theta\phi}$1.69; M$_{\phi r}$-0.90; Fault plane solution: M$_0$2.83283×10^{15} NP1:φ$_s$122.63097°, δ64.06002°, λ83.41356°. NP2:φ$_s$317.41753°, δ26.70685°, λ103.26801°. Principal axes: T 2.3035, Plg70.2168°, Azm18.7661°; N 0.8595, Plg5.9204°, Azm125.5224°; P -3.1630, Plg18.8058°, Azm217.5461°; confirmed*

SNET ***05*** *15:11:42.2±3.9, 13°.92N×91°.95W, h10^{km}, ML4.7*

UCR ***05*** *15:11:43.9±1.1, 14°.12N×91°.95W, h40^{km}, MB4.6(NEIC)*

GCG ***05*** *15:11:44.3±1.8, 13°.92N×91°.86W, h18^{km}±7^{km}, MD4.9, ML4.8*

NEIC ***05*** *15:11:45.3±2.0, 13°.95N±0°.06×91°.93W±0°.06, h41^{km}±7^{km}, mb4.6/263, Error ellipse: s-maj=8.8km s-min=8.1km az=210.0*

IDC ***05*** *15:11:51.6±2.2, 14°.22N×91°.41W, h97^{km}±16^{km}, mb4.1/11, mbtmp4.4/13, MS3.5/7, Error ellipse: s-maj=34.4km s-min=15.2km az=49.0*

ISC 05 15:11:42.5±1.3**, 13°.80N**±0°.04×**92°.04W**±0°.04**, h30**^{km}±9^{km}**, n493, σ1^{s}.26**/416**, mb4.6**/115**, MS3.4**/6**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.80	24		Pb	15 11 57.2	-0.5
RTAL				Sn	Sb	15 12 08.2	-0.1
RTAL	Retalhuleu	0.80	24	*i* P	Pb	15 11 57.3	-0.5
RTAL				*e*S	Sb	15 12 09.0	+0.7
RTAL	Retalhuleu	0.80	24	P	Pb	15 11 57.3	-0.5
RTAL	Retalhuleu	0.80	24	S	Sn	15 12 10.4	+1.8
QUEO	Labor Ovalle	1.18	25	*i* P	Pn	15 12 02.5	-0.7
SOKI	Kika Raxquin	1.19	31	*e*P	Pn	15 12 02.5	-0.9
SOKI				IAML		15 12 36.3	
	comp=N,13μm,0.7s						
ESSG	Sabana Grande	1.31	63	*i* P	Pn	15 12 04.1	-0.7
ESSG				IAML		15 12 21.2	
	comp=E,18μm,0.4s						
ESSJ	San Jos, E	1.51	99	*i* P	Pn	15 12 03.3	-4.2
FG16	Alotenango, Sa	1.55	72	*i* P	Pn	15 12 04.7	-3.6
FG16				IAML		15 12 25.3	
	comp=N,112μm,0.3s						
HUEH	Huehuetenango	1.60	19		Pn	15 12 08.6	-0.4
HUEH	Huehuetenango	1.60	19	*e*P	Pn	15 12 09.3	+0.3
HUEH				IAML		15 12 36.0	
	comp=N,12μm,0.5s						
HUEH	Huehuetenango	1.60	19	P	Pn	15 12 09.3	+0.3
HUEH	Huehuetenango	1.60	19	S	Sb	15 12 31.9	+0.5
GCG4	OSOP	1.66	61	*i* P	Pn	15 12 10.4	+0.7
GCG4				*e*S	Sn	15 12 30.4	+0.3
PCG5	San Vicente Pa	1.66	75	*e*P	Pn	15 12 06.9	-2.8
QUIS	Sacapulas	1.74	31	*e*P	Pn	15 12 11.8	+0.9
QUIS				IAML		15 12 37.0	
	comp=E,8μm,0.5s						
APG	El Apazote	1.94	52	P	Pn	15 12 14.8	+1.1
	comp=E,82nm,0.3s,baz=218,slow=17,SNR=733						
APG				S	Sn	15 12 37.6	+0.5
	comp=E,76nm,0.3s,baz=61,slow=23,SNR=8.8						
APG				LR	LR	15 12 48.4	
	comp=E,45nm,21.8s,baz=286,slow=47						
APG	El Apazote	1.94	52	*i* P	Pn	15 12 14.7	+1.1
FAME	Alcaldia de Sa	1.96	88	P	Pn	15 12 12.9	-0.8
NUBE	Las Nubes	2.19	87	*e*P	Pn	15 12 16.8	-0.3
NUBE				*e*S	Sn	15 12 41.6	-1.7
NUBE	Las Nubes	2.19	87	*e*P	Pn	15 12 16.8	-0.3
NUBE				*e*S	Sn	15 12 41.6	-1.7
NUBE	Las Nubes	2.19	87	P	Pn	15 12 16.7	-0.3
NUBE	Las Nubes	2.19	87	S	Sn	15 12 44.2	+0.9
AVCB	Coban	2.29	43	IAML		15 12 56.9	
	comp=N,18μm,0.5s						
JUAM	Asuncion Mita	2.32	76	*i* P	Pn	15 12 19.2	+0.5
JUAM				*e*S	Sn	15 12 47.7	+1.3
JUAM				IAML		15 12 50.4	
	comp=N,4μm,0.4s						
CEVE	Cerro Verde	2.34	89	*e*P	Pn	15 12 20.0	+0.8
CEVE	Cerro Verde	2.34	89	P	Pn	15 12 19.8	+0.6
CEVE	Cerro Verde	2.34	89	S	Sn	15 12 48.8	+1.7
SBLS	San Blas	2.34	89	*e*P	Pn	15 12 19.5	+0.3
SNJE	San Jose	2.36	88	*e*P	Pn	15 12 20.1	+0.7
UNIC	Universidad Ca	2.42	85	P	Pn	15 12 20.6	+0.4
CCIG	Comitan	2.47	358		Pn	15 12 22.5	+1.5
CCIG				Sn	Sn	15 12 50.7	+0.4
CCIG	Comitan	2.47	358	*e*P	Pn	15 12 22.9	+1.9
CCIG	Comitan	2.47	358	S	Sn	15 12 52.7	+2.4
JAYA	Jayaque - finc	2.52	93	*e*P	Pn	15 12 21.4	-0.1
JAYA	Jayaque - finc	2.52	93	*e*P	Pn	15 12 21.3	-0.3
JAYA				*e*S	Sn	15 12 50.3	-1.1
JAYA	Jayaque - finc	2.52	93	P	Pn	15 12 21.5	0.0
JAYA	Jayaque - finc	2.52	93	S	Sn	15 12 52.8	+1.4
PMON	Piamonte	2.65	91	*e*P	Pn	15 12 24.0	+0.7
PMON				*e*S	Sn	15 12 54.1	-0.3
PMON	Piamonte	2.65	91	P	Pn	15 12 24.2	+0.9
PMON	Piamonte	2.65	91	S	Sn	15 12 55.5	+1.1
LALI	Alcalda de L	2.66	96	*e*P	Pn	15 12 24.3	+1.1
MTO3	Montecristo	2.66	77		Pn	15 12 23.6	0.0
MTO3	Montecristo	2.66	77	*e*P	Pn	15 12 24.0	+0.4
MTO3	Montecristo	2.66	77	S	Sn	15 12 57.5	+2.5
MTO3	Montecristo	2.66	77	P	Pn	15 12 24.0	+0.4
BOQS	Boqueron	2.68	91	*e*P	Pn	15 12 24.6	+0.8
ESQI	Esquipulas	2.72	73		Pn	15 12 23.9	-0.4
IGN	Direccin Gen	2.79	91	S	Sn	15 12 59.7	+1.9
IGN	Direccin Gen	2.79	91	P	Pn	15 12 26.0	+0.8
LOMA	Loma Larga	2.79	93	P	Pn	15 12 24.9	-0.3
UDBS	Universidad Do	2.80	91	P	Pn	15 12 26.2	+0.9
UDBS	Universidad Do	2.80	91	S	Sn	15 12 59.7	+1.5
PAVA	Las Pavas	3.01	91	P	Pn	15 12 29.1	+0.9
LLGN	La Laguna	3.02	83	P	Pn	15 12 28.7	+0.3
LLGN	La Laguna	3.02	83	S	Sn	15 13 06.2	+2.5
UESV	Universidad de	3.16	92	P	Pn	15 12 31.2	+0.9
TECO	Alcaldia de Te	3.17	94	P	Pn	15 12 31.3	+0.9
SCLA	Alcaldia de Sa	3.21	91	P	Pn	15 12 32.1	+1.0
TECA	Tecapa	3.45	95	*e*P	Pn	15 12 35.2	+0.9
RANC	El Ranchito	3.66	95	*e*P	Pn	15 12 38.0	+0.8
BLLM	Bellamira	3.71	95	*e*P	Pn	15 12 39.4	+1.5
PETF	Flores	3.74	34		Pn	15 12 37.0	-1.3
PETF	Flores	3.74	34	*e*P	Pn	15 12 39.3	+1.0
PETF	Flores	3.74	34	P	Pn	15 12 40.2	+2.0
PETF	Flores	3.74	34	S	Sn	15 13 24.7	+3.4
LCND	La Caada	4.06	96	*e*P	Pn	15 12 43.2	+0.6
LCND	La Caada	4.06	96	P	Pn	15 12 43.0	+0.4
CNCH	Conchagua	4.12	97	P	Pn	15 12 44.9	+1.3
CMIG	Matias Romero	4.28	320	P	Pn	15 12 44.9	-0.7
	comp=N,30nm,0.3s,baz=154,slow=12,SNR=46						
CMIG				S	Sn	15 13 33.7	-0.8
	comp=N,213nm,0.4s,baz=154,slow=12,SNR=8.7						
CMIG				LR	LR	15 15 01.0	
	comp=N,335nm,18.8s,baz=125,slow=43						
CSGN	Cosiguina Volc	4.43	100	P	Pn	15 12 48.4	+0.6
CSGN				S	Sn	15 13 40.6	+2.1
CSGN	Cosiguina Volc	4.43	100	*e*P	Pn	15 12 48.7	+0.9
POTN	Potosi Cosigui	4.48	100	P	Pn	15 12 48.3	0.0
TGUH	Tegucigalpa,Un	4.63	86		Pn	15 12 50.4	-0.2
TGUH	Tegucigalpa,Un	4.63	86	P	Pn	15 12 50.4	-0.2
CRIN	San Cristobal	4.97	102		Pn	15 12 56.6	+1.3
CRIN	San Cristobal	4.97	102	P	Pn	15 12 56.0	+0.7
CRIN	San Cristobal	4.97	102	*e*P	Pn	15 12 59.1	+3.8
YUSH	Yuscaran	5.04	88	P	Pn	15 12 56.9	+0.6
PKGN	Cerro Pekin	5.05	102	P	Pn	15 12 57.7	+1.5
SCIG	Sabancuy	5.21	9	P	Pn	15 12 58.8	+0.4
SCIG	Sabancuy	5.21	9	S	Sn	15 13 59.1	+1.7
POLN	Al Sur del Vol	5.21	102	P	Pn	15 13 00.6	+2.1
PACN	Al O del Volca	5.27	104	P	Pn	15 13 00.4	+1.2
PACN				S	Sn	15 14 01.2	+2.2
CNGN	Cerro Negro	5.36	103		Pn	15 13 01.5	+1.0
CNGN	Cerro Negro	5.36	103	*e*P	Pn	15 13 01.9	+1.4
COPN	Copaltepe	5.54	106	*e*P	Pn	15 13 04.5	+1.5
COPN				*e*S	Sn	15 14 08.1	+2.3
USIM	UNAN	5.86	106	Pn	Pn	15 13 08.6	+1.2
MGAN	Managua	5.88	106	Pn	Pn	15 13 08.6	+1.0
BOAB	BOACO BROADBAN	6.35	101		Pn	15 13 14.2	+0.1
SIUN	Universidad Ur	7.06	90		Pn	15 13 23.8	0.0
LAPC	Finca la Perla	7.12	114	*e*P	Pn	15 13 29.0	+4.3
SAJU	San Juanillo,	7.21	120	*e*P	Pn	15 13 28.2	+2.2
JUD3	Juan Diaz 3	7.31	119		Pn	15 13 28.7	+1.3
JUD3	Juan Diaz 3	7.31	119	*e*P	Pn	15 13 29.7	+2.3
TEIG	Tepich	7.33	29		Pn	15 13 25.9	-1.7
VMAR	Armenia, Volca	7.38	113	*e*P	Pn	15 13 32.4	+4.0
CUI	Cuipilapa	7.41	114	*e*P	Pn	15 13 32.5	+3.8
INVE	Universidad In	7.57	115	*e*P	Pn	15 13 36.9	+6.0
ESPN	Las Esperanzas	7.71	101		Pn	15 13 33.1	+0.4
JTS	Las Juntas de	7.75	116	P	Pn	15 13 37.6	+4.2
	comp=N,7.8nm,0.3s,baz=304,slow=20,SNR=7.1						
JTS	Las Juntas de	7.75	116		Pn	15 13 35.0	+1.6
JTS	Las Juntas de	7.75	116	*e*P	Pn	15 13 37.4	+4.0
ARE1	Arenal 1	7.88	114	*e*P	Pn	15 13 39.0	+3.7
VARE2	V. Arenal	7.88	114	*e*P	Pn	15 13 38.8	+3.6
SOCE	Pocosol	8.01	114	Pn	Pn	15 13 37.6	+0.7
BILN	Bilwi Airport	8.41	87	Pn	Pn	15 13 43.2	+0.8
PIEC	Cerro El Cedra	8.93	117	*e*P	Pn	15 13 54.0	+4.2
BUS1	Rivas	9.15	117	*e*P	Pn	15 13 56.4	+3.5
DRK0	Durika	9.72	117	*e*P	Pn	15 14 02.5	+1.9
PIRO	Carate, Puerto	10.08	121		Pn	15 14 08.0	+2.7
PIRO	Carate, Puerto	10.08	121	*e*P	Pn	15 14 08.6	+3.4
ALCO	Alturas Coton,	10.22	117	*e*P	Pn	15 14 10.4	+2.9
PRVC	Isla de Provid	10.38	91	Pn	Pn	15 14 09.8	+0.3
BRU2	Volcan	10.42	118		Pn	15 14 11.5	+1.3
MOIG	Morelia	10.54	305		Pn	15 14 15.5	+3.7
SOR	Soroa	12.38	42		Pn	15 14 36.2	-0.7
ZAIG	Zacatecas	13.40	313	Pn	Pn	15 14 52.8	+1.9
PAYG	Puerto Ayora	14.48	173	Pn	P	15 15 08.5	-3.4
HBVL	Hebbronville	14.59	336		Pn	15 15 06.3	-0.6
CAIB	Caibarien	14.73	52		Pn	15 15 05.3	-3.5
833A	Chaparral WMA,	15.99	336		Pn	15 15 23.9	-1.5
HNDO	Hondo	17.03	338	P	Pn	15 15 38.2	-0.3
DRIO	Del Rio	17.47	334		P	15 15 45.5	+0.6
346A	Big Creek Wild	17.67	7	P	Pn	15 15 45.9	-0.5
346A				IAmb	IAmb	15 15 58.3	
	comp=Z,32nm,0.6s						
553A	Crawfordville	17.76	22	P	Pn	15 15 45.4	-2.2
656A	Willston	17.82	28	P	Pn	15 15 47.0	-1.3
656A				IAmb	IAmb	15 15 53.4	
	comp=Z,49nm,0.6s						
HPIG		18.26	318	P	P	15 15 55.0	+1.0
VBMS	Vicksburg	18.39	4	P	P	15 15 54.1	-1.0
VBMS				IAmb	IAmb	15 16 03.0	
	comp=Z,26nm,0.7s						
BRDY	Brady	18.55	341		P	15 15 56.4	-0.4
SAND	Sanderson	18.59	332		Pn	15 15 57.7	-0.1
143A	Socs Landing,	18.83	2	P	P	15 15 58.1	-1.8
143A				IAmb	IAmb	15 16 02.9	
	comp=Z,36nm,0.7s						
TXAR	Lajitas Array	18.85	327	P	Pn	15 16 02.9	+1.9
	comp=Z,9.1nm,0.8s,baz=156,slow=12,SNR=58						
TXAR	Lajitas Array	18.85	327		Pn	15 16 01.5	+0.6
TX31	Lajitas Ar. Si	18.85	327		Pn	15 16 01.3	+0.4
OZNA	Ozona	18.99	335		Pn	15 16 02.4	-0.2
FW13	Cleburne	19.12	346	P	P	15 16 03.4	+0.3
ROSC	El Rosal	19.60	115	P	P	15 16 09.6	+0.7
ROSC				IAmb	IAmb	15 16 13.7	
	comp=Z,19nm,0.9s						
Z47A	Carrollton	19.65	10	P	P	15 16 09.8	+1.0
ALPN	Alpine	19.67	329		Pn	15 16 10.3	-0.6
LRAL	Lakeview Retre	19.70	13	P	P	15 16 09.6	+0.2
PLPT	Palo Pinto	19.78	344	P	P	15 16 10.4	+0.1
PLPT				IAmb	IAmb	15 16 12.3	
	comp=Z,25nm,0.8s						
SGCY	Sterling City	19.87	337		Pn	15 16 12.2	-0.9
SGCY				IAmb	IAmb	15 16 13.5	
	comp=Z,16nm,0.7s						
152A	Waverly Hall	19.94	18	P	P	15 16 11.3	-0.8
ABTX	Abilene, Hawle	19.99	341		P	15 16 12.8	+0.1
Z35A	Perchaven, San	20.02	347	P	P	15 16 12.9	0.0
Z35A				IAmb	IAmb	15 16 15.5	
	comp=Z,26nm,0.7s						
MNHN	Monahans	20.05	332		Pn	15 16 14.3	-0.9
MNHN				IAmb	IAmb	15 16 17.2	
	comp=Z,37nm,0.8s						
RUSC	La Rusia	20.24	111		P	15 16 16.9	+0.9
FLOC	Florencia	20.25	125		Pn	15 16 17.8	+0.1
FLOC				IAmb	IAmb	15 16 29.4	
	comp=Z,18nm,0.9s						
PECS	Pecos	20.59	330	P	Pn	15 16 20.4	-1.3
X40A	Basin Creek Fa	20.61	358	P	P	15 16 19.1	-0.2
Y49A	Blount Mountai	20.61	13	P	P	15 16 19.1	-0.3
ODSA	Odessa	20.62	334	P	P	15 16 19.9	+0.2
ODSA				IAmb	IAmb	15 16 21.9	
	comp=Z,28nm,0.9s						
VHRN	Van Horn	20.69	327		Pn	15 16 21.4	-1.5
MIAR	Mount Ida	20.70	356		P	15 16 20.3	0.0
MIAR				IAmb	IAmb	15 16 41.4	
	comp=Z,30nm,1.4s						
WTFS	Witchita Falls	20.72	345	P	P	15 16 19.7	-0.9
WTFS				IAmb	IAmb	15 16 21.9	
	comp=Z,14nm,0.6s						
APMT	Aspermont	20.79	341		P	15 16 21.0	-0.3
APMT				IAmb	IAmb	15 16 23.7	
	comp=Z,20nm,0.6s						
GOGA	Godfrey	21.03	20	P	P	15 16 23.4	-0.4
POST	Post	21.03	337	IAmb	IAmb	15 16 25.7	
	comp=Z,26nm,0.8s						
X48A	Hartselle	21.06	12		P	15 16 23.0	-1.1
X48A				IAmb	IAmb	15 16 31.1	
	comp=Z,14nm,0.7s						
Y52A	Lilburn	21.25	19	P	P	15 16 25.2	-1.0
Y52A				IAmb	IAmb	15 16 29.6	
	comp=Z,11nm,0.6s						
DKNS	Dickens	21.37	339	P	P	15 16 27.7	+0.1
DKNS				IAmb	IAmb	15 16 33.6	
	comp=Z,11nm,0.6s						
FPAL	Fort Paine	21.46	15	IAmb	IAmb	15 16 30.6	
	comp=Z,12nm,0.6s						
GDL2	Guadalupe Moun	21.52	330		P	15 16 30.5	+1.3
SDV	Santo Domingo	21.54	101	P	P	15 16 27.3	-2.4
	comp=Z,3.0nm,0.4s,baz=324,slow=3.2,SNR=5.1						
	comp=Z,3.0nm,0.4s						
SDV	Santo Domingo	21.54	101	P	P	15 16 28.1	-1.6
MNTX	Cornudas Mount	21.62	328		P	15 16 31.1	+0.8
MNTX				IAmb	IAmb	15 16 32.7	
	comp=Z,18nm,0.9s						
FNO	Franklin	21.91	348	P	P	15 16 31.9	-1.4
FCAR	Ozark Folk Cen	22.00	360	P	P	15 16 33.1	-1.1
SWET	Sewanee	22.03	13	IAmb	IAmb	15 16 55.2	
	comp=Z,48nm,1.5s						
LCAR	Lake Charles	22.19	2	IAmb	IAmb	15 16 54.5	
	comp=Z,9.9nm,0.6s						
MSTX	Muleshoe	22.32	336	IAmb	IAmb	15 16 39.7	
	comp=Z,14nm,0.7s						
V48A	Smith Brothers	22.35	11	P	P	15 16 37.0	-1.0
V48A				IAmb	IAmb	15 16 38.6	
	comp=Z,12nm,0.6s						
SMWD	Samnorwood	22.47	342		P	15 16 38.3	-1.1
OK052	Battle Ridge R	22.52	350	IAmb	IAmb	15 16 40.5	
	comp=Z,19nm,0.7s						
WVT	Waverly	22.56	9	P	P	15 16 38.3	-1.9
WVT				IAmb	IAmb	15 16 40.9	
	comp=Z,11nm,0.6s						
CPCT	Cooper Cave	22.60	16	IAmb	IAmb	15 16 59.0	
	comp=Z,11nm,0.6s						
AMTX	Amarillo	22.73	339		P	15 16 40.9	-1.3
OK048	Pawnee Station	22.95	350	IAmb	IAmb	15 16 44.6	
	comp=Z,15nm,0.6s						
OK051	E0350 and S346	23.02	350	P	P	15 16 43.3	-1.8
ELIS	Ellis County	23.14	345	IAmb	IAmb	15 16 46.8	
	comp=Z,18nm,0.6s						
U49A	Red Boiling Sp	23.31	13	P	P	15 16 45.5	-2.4
U49A				IAmb	IAmb	15 16 56.9	
	comp=Z,15nm,0.8s						
T47A	Sharon Grove	23.51	10		P	15 16 47.8	-2.2
T47A				IAmb	IAmb	15 16 50.9	
	comp=Z,23nm,0.8s						
121A	Cookes Peak, D	23.55	325	IAmb	IAmb	15 16 55.5	
	comp=Z,22nm,0.9s						
TZTN	Tazewell	23.89	17	P	P	15 16 52.3	-1.4
TZTN				IAmb	IAmb	15 17 14.8	
	comp=Z,19nm,1.1s						
V55A	Taylorsville	24.02	22	IAmb	IAmb	15 16 55.3	
	comp=Z,23nm,1.1s						
CCM	Cathedral Cave	24.17	2	P	P	15 16 54.0	-2.2
Y22A	Socorro	24.20	328	IAmb	IAmb	15 17 02.5	
	comp=Z,15nm,0.8s						
DUN6	Lazy B Ranch	24.32	323	IAmb	IAmb	15 17 02.1	
	comp=Z,28nm,1.0s						
RTBA	Rita Blanca	24.50	339		P	15 16 59.4	0.0
RTBA				IAmb	IAmb	15 17 03.0	
	comp=Z,11nm,0.6s						
ABQ	Albuquerque	24.76	331	IAmb	IAmb	15 17 05.8	
	comp=Z,9.2nm,0.7s						
ANMO	Albuquerque	24.76	331	P	P	15 17 01.8	0.0
ANMO				IAmb	IAmb	15 17 05.8	
	comp=Z,9.1nm,0.7s						
TASM	ASL Pad, Albuq	24.76	331	IAmb	IAmb	15 17 05.9	
	comp=Z,9.7nm,0.7s						
TASM	ASL Pad, Albuq	24.76	331	IAmb	IAmb	15 17 05.9	
	comp=Z,9.5nm,0.7s						
TASM	ASL Pad, Albuq	24.76	331	IAmb	IAmb	15 17 05.9	
	comp=Z,9.6nm,0.7s						
TASM	ASL Pad, Albuq	24.76	331	IAmb	IAmb	15 17 05.5	
	comp=Z,10nm,0.8s						
ATAH	Atahualpa	24.82	146	LR	LR	15 25 32.9	
	comp=Z,96nm,18.6s,baz=1.6,slow=33						
S51A	Beattyville	24.91	16	IAmb	IAmb	15 17 04.4	
	comp=Z,14nm,0.9s						
TUC	Tucson	25.17	320	P	P	15 17 06.0	+0.6
SJG	San Juan	25.25	77	LR	LR	15 27 35.1	
	comp=Z,81nm,19.1s,baz=214,slow=38						
P46A	Rosedale	26.07	9		P	15 17 11.2	-2.2
P46A				IAmb	IAmb	15 17 13.0	
	comp=Z,18nm,0.8s						
PV02	Paradox Valley	28.48	332	P	P	15 17 35.8	+0.5
PV02				IAmb	IAmb	15 17 38.4	
	comp=Z,17nm,1.2s						
PV13	Radium Mtn., P	28.48	331	IAmb	IAmb	15 17 38.2	
	comp=Z,14nm,1.0s						
PV05	Paradox Valley	28.54	331	IAmb	IAmb	15 17 38.5	
	comp=Z,9.7nm,0.9s						
PV18	Skein Mesa, Pa	28.59	331	IAmb	IAmb	15 17 38.9	
	comp=Z,23nm,1.1s						
PV12	Saucer Basin,	28.59	332	IAmb	IAmb	15 17 41.3	
	comp=Z,13nm,0.7s						
PV17	East Wray Mesa	28.64	331	IAmb	IAmb	15 17 39.4	
	comp=Z,9.4nm,0.8s						
PV19	Morning Glory	28.67	331	IAmb	IAmb	15 17 42.1	
	comp=Z,11nm,0.9s						
PV20	West Nyswonger	28.69	332	P	P	15 17 37.9	+0.7
PV20				IAmb	IAmb	15 17 40.3	
	comp=Z,15nm,1.2s						
PV04	Paradox Valley	28.70	332	IAmb	IAmb	15 17 41.0	
	comp=Z,6.6nm,0.6s						
PV10	Paradox Valley	28.75	331	IAmb	IAmb	15 17 39.9	
	comp=Z,12nm,0.9s						
PV23	Carpenter Ridg	28.80	332	IAmb	IAmb	15 17 45.2	
	comp=Z,14nm,0.8s						
KNB	Kanab	29.65	325	IAmb	IAmb	15 17 49.1	
	comp=Z,7.2nm,0.7s						
V12A	Nelson	29.96	321	IAmb	IAmb	15 17 51.6	
	comp=Z,8.4nm,0.8s						
MTPU	Mount Pierson	30.05	327	IAmb	IAmb	15 17 53.0	
	comp=Z,5.8nm,0.8s						
SZCU	Shurtz Canyon	30.21	325	IAmb	IAmb	15 17 54.6	
	comp=Z,7.1nm,0.8s						
CCUT	Cedar City	30.34	325	IAmb	IAmb	15 17 55.6	
	comp=Z,7.1nm,0.9s						
P17A	Butcher Ranch,	30.43	331	IAmb	IAmb	15 17 55.1	
	comp=Z,6.7nm,0.7s						
TMUT	Trail Mountain	30.51	330	P	P	15 17 54.5	+1.1
TMUT				IAmb	IAmb	15 17 59.2	
	comp=Z,6.4nm,0.9s						
TCRU	Three Creeks R	30.61	328	IAmb	IAmb	15 18 00.1	
	comp=Z,5.9nm,0.6s						
S11A	Rachel	31.77	323	IAmb	IAmb	15 18 08.8	
	comp=Z,12nm,1.0s						
SPR3	Spring Creek 3	31.90	326	IAmb	IAmb	15 18 08.5	
	comp=Z,4.9nm,0.9s						
TCUT	Toone Canyon	32.04	332	IAmb	IAmb	15 18 09.6	
	comp=Z,9.0nm,0.8s						
GRAC	Grapevine Rang	32.33	320	IAmb	IAmb	15 18 12.9	
	comp=Z,5.2nm,0.8s						
CWC	Cottonwood Cre	32.44	319		P	15 18 11.8	+1.6
HWUT	Hardware Ranch	32.50	332	IAmb	IAmb	15 18 14.1	
	comp=Z,5.4nm,0.8s						
PDAR	Pinedale Array	32.59	336	P	P	15 18 12.1	+0.4
	comp=Z,0.8nm,0.5s,baz=139,slow=11,SNR=8.6						
PDAR				PcP	PcP	15 20 59.0	+1.4
	comp=Z,0.7nm,0.5s,baz=149,slow=5.5,SNR=6.9						
	comp=Z,0.8nm,0.5s						
SADO	Sadowa	32.77	17	LR	LR	15 32 37.3	
	comp=Z,76nm,18.6s,baz=113,slow=39						
BOAV	Boa Vista	33.14	107		P	15 18 14.3	-2.1
BOAV				IAmb	IAmb	15 18 17.0	
	comp=Z,5.1nm,0.8s						
HVU	Hansel Valley	33.19	331	IAmb	IAmb	15 18 19.6	
	comp=Z,6.3nm,0.9s						
ELK	Elko	33.64	327		P	15 18 22.0	+1.2
ELK				IAmb	IAmb	15 18 25.5	
	comp=Z,4.6nm,0.7s						
NV11	Mina Array Sit	33.72	321	IAmb	IAmb	15 18 25.2	
	comp=Z,7.4nm,0.8s						
MDPB	Devils Postpil	33.79	320	P	P	15 18 23.9	+1.6
NVAR	Mina Array Bea	33.81	321	P	P	15 18 25.4	+3.1
	comp=Z,7.0nm,0.7s,baz=134,slow=8.6,SNR=62						
NVAR				PcP	PcP	15 21 02.5	+1.4
	comp=Z,1.3nm,0.7s,baz=123,slow=3.2,SNR=5.3						
NVAR				LR	LR	15 34 04.7	
	comp=Z,128nm,18.2s,baz=144,slow=40						
	comp=Z,7.0nm,0.7s						
NVAR	Mina Array Bea	33.81	321	P	P	15 18 24.5	+2.2
NVAR					PcP	15 21 01.4	+0.3
RLMT	Red Lodge	34.48	338	IAmb	IAmb	15 18 29.7	
	comp=Z,3.0nm,0.6s						
YNE	Yellowstone No	34.66	337	IAmb	IAmb	15 18 33.0	
	comp=Z,5.5nm,0.9s						
YMR	Madison River	34.74	336	IAmb	IAmb	15 18 33.1	
	comp=Z,3.9nm,0.7s						
PNTR	Pine Nut	35.01	321	IAmb	IAmb	15 18 36.3	
	comp=Z,6.4nm,0.8s						
HLID	Hailey	35.34	331	IAmb	IAmb	15 18 39.8	
	comp=Z,5.4nm,0.8s						
MCMT	McKenzie Canyo	35.64	334	P	P	15 18 39.3	+1.2
MFID	Camas Ranch	35.90	330	IAmb	IAmb	15 18 44.7	
	comp=Z,4.7nm,0.9s						
WVOR	Wild Horse Val	36.64	326	IAmb	IAmb	15 18 54.4	
	comp=Z,6.0nm,0.8s						
O03E	Paynes Creek	37.09	321	IAmb	IAmb	15 18 56.4	
	comp=Z,5.2nm,0.8s						
PLID	Pearl Lake	37.24	332		P	15 18 52.2	+0.5
PLID				IAmb	IAmb	15 18 53.5	
	comp=Z,6.6nm,0.8s						
LPAZ	La Paz	38.10	141	P	P	15 18 59.9	+0.2
	comp=Z,1.4nm,0.8s,baz=315,slow=5.7,SNR=4.3						
	comp=Z,1.4nm,0.8s						
PINE	Pine Mountain	38.80	326	IAmb	IAmb	15 19 08.0	
	comp=Z,6.3nm,0.9s						
G05A	Wamic	39.97	327	IAmb	IAmb	15 19 21.1	
	comp=Z,18nm,1.1s						
H04A	Detroit Lake	40.06	326	IAmb	IAmb	15 19 19.4	
	comp=Z,11nm,0.7s						
C09A	Chrisman Ranch	40.31	333	P	P	15 19 17.9	+0.8
C09A				IAmb	IAmb	15 19 19.0	
	comp=Z,7.3nm,0.8s						
EPH	Ephrata	40.59	331	IAmb	IAmb	15 19 23.8	
	comp=Z,8.8nm,1.2s						
LON	Longmire	41.24	329	IAmb	IAmb	15 19 28.5	
	comp=Z,6.3nm,0.8s						
EDM	Edmonton	42.81	341		P	15 19 36.4	-1.2
LLLB	Lillooet	43.98	333	P	P	15 19 47.5	+0.4
LLLB				IAmb	IAmb	15 19 49.2	
	comp=Z,18nm,1.4s						
RPN	Rapa Nui	44.01	202	LR	LR	15 33 32.6	
	comp=Z,45nm,18.4s,baz=60,slow=29						
SCHQ	Schefferville	45.42	20	P	P	15 19 55.9	-2.6
	comp=Z,6.1nm,0.8s,baz=196,slow=8.8,SNR=4.7						
	comp=Z,6.1nm,0.8s						

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SCHQ  Schefferville      45.42  20  IAmb   IAmb    15 19 58.3
      comp=Z,119nm,1.1s
YKA   Yellowknife Ar     51.22 347  P      P       15 20 42.2 -0.7
      comp=Z,2.2nm,0.6s,baz=153,slow=7.3,SNR=23
YKA                                 PcP    PcP     15 21 57.9 -0.1
      comp=Z,1.5nm,0.7s,baz=158,slow=3.1,SNR=8.5
      comp=Z,2.2nm,0.6s
YKA   Yellowknife Ar     51.22 347  P      P       15 20 41.7 -1.3
YKA                                        PcP     15 21 57.2 -0.7
YKAW3 Yellowknife Wh     51.28 347         P       15 20 42.7 -0.7
YKAW3                               IAmb   IAmb    15 20 44.2
      comp=Z,4.9nm,0.6s
TOAD  Toad River Com     51.32 339  P      P       15 20 43.9 +0.1
      baz=137
KOTAN Kotaneelee Air     51.87 340  P      P       15 20 48.8 +0.9
      baz=139
T35M  Bob Quinn          51.96 335  P      P       15 20 49.9 +1.2
      baz=130
BDFB  Brasilia           52.44 122  LR     LR      15 42 38.0
      comp=Z,62nm,19.4s,baz=229,slow=35
DLBC  Dease Lake         52.82 336  P      P       15 20 56.6 +1.4
      baz=131
WTLY  Watson Lake, Y     53.49 338  P      P       15 21 00.1 +0.1
WTLY  Watson Lake, Y     53.49 338  P      P       15 21 01.1 +1.1
      baz=133
R33M  Jennings River     53.82 337  P      P       15 21 03.7 +1.2
      baz=131
Q32M  Nakina River       54.06 336  P      P       15 21 05.0 +0.7
      baz=129
N32M  Quiet Lake         55.77 337  P      P       15 21 17.5 +1.0
      baz=129
WHY   Whitehorse         56.15 336  P      P       15 21 20.5 +1.2
      baz=127
FARO  Faro, Yukon        56.55 338  P      P       15 21 22.9 +0.8
      baz=130
O30N  Mendenhall         56.69 336  P      P       15 21 23.5 +0.5
      baz=126
P29M  Windy Craggy       56.71 334  P      P       15 21 24.2 +1.0
      baz=123
M31M  Drury Creek, Y     56.91 338  P      P       15 21 26.0 +1.4
      baz=128
N31M  Braeburn, Yuko     57.00 337  P      P       15 21 25.9 +0.7
      baz=126
HYT   Haines Junctio     57.29 335  P      P       15 21 27.8 +0.4
      baz=124
N30M  Aishikik Lake      57.49 336  P      P       15 21 29.4 +0.6
      baz=125
YUK6  Outpost Mounta     57.70 335  P      P       15 21 31.0 +0.6
      baz=124
M30M  Minto, Yukon       58.03 337  IAmb   IAmb    15 21 34.7
      comp=Z,3.9nm,0.8s
M30M  Minto, Yukon       58.03 337  P      P       15 21 33.2 +0.8
      baz=126
YUK4  Talbot Arm         58.04 336  P      P       15 21 33.0 +0.2
      baz=124
MAYO  Mayo, Yukon        58.32 339  P      P       15 21 36.0 +1.6
      baz=127
YUK8  Steele Glacier     58.46 335  P      P       15 21 36.8 +1.1
      baz=122
M29M  Somme Creek        58.59 337  PcP    PcP     15 22 27.9 +1.4
M29M  Somme Creek        58.59 337  P      P       15 21 37.3 +0.9
      baz=124
L29M  L29M               58.84 337  P      P       15 21 38.3 +0.1
L29M                                PcP    PcP     15 22 29.0 +1.7
L29M  L29M               58.84 337  P      P       15 21 38.8 +0.6
      baz=125
K29M  Barlow Dome        59.05 338  P      P       15 21 40.4 +0.7
      baz=126
J30M  Hart River         59.07 339  P      P       15 21 40.3 +0.5
J30M                                IAmb   IAmb    15 21 41.4
      comp=Z,4.3nm,0.9s
J30M  Hart River         59.07 339  P      P       15 21 40.8 +0.9
      baz=127
H31M  Peel River         59.20 341  P      P       15 21 41.1 +0.6
      baz=130
I30M  Mount Dempster     59.49 340  IAmb   IAmb    15 21 43.9
      comp=Z,5.4nm,0.8s
I30M  Mount Dempster     59.49 340  P      P       15 21 43.3 +0.6
      baz=128
BVCY  Beaver Creek       59.50 336  P      P       15 21 43.6 +0.9
      baz=122
J29N  Klondike Camp      59.66 339  P      P       15 21 44.7 +0.9
      baz=125
DAWY  Dawson             59.85 338  P      P       15 21 45.6 +0.5
      baz=124
MCARA McCarthy VSAT      59.86 334  P      P       15 21 46.1 +0.9
      baz=119
M27K  Edge Creek, AK     59.88 336  P      P       15 21 46.5 +1.1
      baz=121
G31M  Satah River        59.91 342  P      P       15 21 46.0 +0.6
      baz=131
F31M  Tsiigehtchic       60.10 343  IAmb   IAmb    15 21 47.5
      comp=Z,5.6nm,0.9s
F31M  Tsiigehtchic       60.10 343  P      P       15 21 47.3 +0.7
      baz=132
BCAR  Beaver Creek A     60.21 336  P      P       15 21 47.7 +0.1
BCAR                                PcP    PcP     15 22 32.9  0.0
I29M  Ogilvie Camp,      60.22 340  P      P       15 21 46.7 -0.8
I29M                                IAmb   IAmb    15 21 48.9
      comp=Z,3.5nm,0.7s
I29M  Ogilvie Camp,      60.22 340  P      P       15 21 47.7 +0.1
      baz=126
L27K  Beaver Creek,      60.22 336  IAmb   IAmb    15 21 50.0
      comp=Z,6.3nm,0.8s
L27K  Beaver Creek,      60.22 336  P      P       15 21 48.3 +0.6
      baz=121
EPYK  Eagle Plains       60.31 341  P      P       15 21 48.3 +0.1
      baz=128
M26K  Nabesna, AK        60.35 335  P      P       15 21 49.3 +0.7
      baz=120
Q23K  Middleton Isla     60.44 331  P      P       15 21 50.0 +1.0
      baz=115
G30M  tAoh Zraii Nji     60.54 342  P      P       15 21 50.2 +0.4
      baz=129
INK   Inuvik             60.62 344  IAmb   IAmb    15 21 51.1
      comp=Z,5.3nm,0.7s
INK   Inuvik             60.62 344  P      P       15 21 50.8 +0.6
      baz=132,SNR=5.8
N25K  Chitina, Valde     60.63 334  P      P       15 21 52.0 +1.5
      baz=117
EYAK  Cordova Ski Ar     60.65 333  P      P       15 21 51.4 +0.9
      baz=116
H29M  Whitestone         60.75 340  P      P       15 21 51.6 +0.5
      baz=126
L26K  Log Cabin Wild     60.80 336  P      P       15 21 53.0 +1.4
      baz=119
F30M  Barrier River      60.81 342  P      P       15 21 52.4 +0.9
      baz=129
K27K  Chicken            60.83 337  P      P       15 21 53.0 +1.3
      baz=121
I28M  Miner Creek        60.83 339  P      P       15 21 52.6 +0.8
      baz=124
G29M  Pine Creek         61.05 341  P      P       15 21 54.2 +1.0
      baz=127
KLU   Klutina            61.14 334  P      P       15 21 55.3 +1.3
      baz=116
HARP  HAARP              61.23 335  P      P       15 21 55.3 +0.8
      baz=117
DOT   Dot Lake           61.39 336  IAmb   IAmb    15 21 57.5
      comp=Z,4.6nm,0.8s
I27K  Kandik River       61.50 339  IAmb   IAmb    15 21 58.1
      comp=Z,7.4nm,0.9s
I27K  Kandik River       61.50 339  P      P       15 21 57.5 +1.2
      baz=122
SCRK  Sand Creek         61.52 337  P      P       15 21 57.1 +0.6
      baz=119
M24K  Tolsona, Glenn     61.52 334  P      P       15 21 58.2 +1.6
      baz=116
J26L  Joseph Creek       61.62 337  IAmb   IAmb    15 21 59.3
      comp=Z,6.0nm,0.8s
J26L  Joseph Creek       61.62 337  P      P       15 21 58.9 +1.6
      baz=120,SNR=6.9
PAX   Paxson             61.63 335  P      P       15 21 58.8 +1.6
      baz=117
RIDG  Independent Ri     61.74 336  P      P       15 21 59.4 +1.4
      baz=118
H27K  Steamboat Moun     61.81 340  IAmb   IAmb    15 21 60.0
      comp=Z,5.7nm,0.9s
H27K  Steamboat Moun     61.81 340  P      P       15 21 59.8 +1.4
      baz=123
I26K  Coal Creek Min     61.89 338  IAmb   IAmb    15 22 00.9
      comp=Z,5.5nm,0.7s
I26K  Coal Creek Min     61.89 338  P      P       15 21 59.2 +0.4
      baz=121
SCM   Sheep Creek Mo     61.90 334  P      P       15 22 00.0 +0.9
      baz=115
E29M  Blow River         61.92 342         P       15 21 59.4 +0.4
E29M                                IAmb   IAmb    15 22 00.5
```

```
      comp=Z,4.7nm,0.8s
E29M                                PcP    PcP     15 22 38.5 -1.1
E29M  Blow River         61.92 342  P      P       15 22 00.1 +1.0
      baz=128,SNR=6.4
F28M  Old Crow           62.05 341  P      P       15 22 00.8 +0.8
      baz=125,SNR=16
M23K  Glacier View       62.05 334  P      P       15 22 01.4 +1.4
      baz=114
K24K  Donnelly Dome      62.14 336  P      P       15 22 02.1 +1.4
      baz=117
G27K  Doyon Strip        62.17 340  IAmb   IAmb    15 22 01.5
      comp=Z,2.3nm,0.7s
G27K  Doyon Strip        62.17 340  P      P       15 22 01.1 +0.3
      baz=123
KNK   Knik Glacier       62.21 333  P      P       15 22 02.5 +1.4
      baz=114
SML   Sawmill            62.32 334  P      P       15 22 03.0 +1.1
      baz=114
J25K  Salcha River,      62.36 337  IAmb   IAmb    15 22 05.9
      comp=Z,5.2nm,0.7s
J25K  Salcha River,      62.36 337  P      P       15 22 03.1 +1.0
      baz=118
WAT6  Susitna Watana     62.39 334  P      P       15 22 03.4 +1.0
      baz=115
DHY   Denali Highway     62.45 335  P      P       15 22 03.2 +0.4
      baz=115
E28M  Babbage River      62.53 342  IAmb   IAmb    15 22 04.6
      comp=Z,7.6nm,0.9s
E28M  Babbage River      62.53 342  P      P       15 22 03.6 +0.4
      baz=126,SNR=12
PMR   Palmer             62.58 333  P      P       15 22 04.1 +0.6
      baz=113
BRSE  Bradley Lake S     62.62 331  P      P       15 22 05.3 +1.4
      baz=110
D28M  Stokes Point       62.73 343  P      P       15 22 05.0 +0.6
      baz=127
WAT1  Susitna Watana     62.83 335  P      P       15 22 05.8 +0.5
      baz=114
PRP   Porcupine Dome     62.85 338  P      P       15 22 06.3 +0.9
      baz=118,SNR=7.4
KDAK  Kodiak Island      62.87 328  P      P       15 22 06.4 +0.8
      baz=108
HDA   Harding Lake       62.87 336  P      P       15 22 05.9 +0.4
      baz=116
E27K  Coleen River       62.91 341  P      P       15 22 06.4 +0.7
      baz=124
G26K  Porcupine Rive     62.96 340  IAmb   IAmb    15 22 07.7
      comp=Z,4.0nm,0.9s
G26K  Porcupine Rive     62.96 340  P      P       15 22 06.7 +0.7
      baz=121
ILAR  Eielson Array      63.01 337  P      P       15 22 06.8 +0.4
      comp=Z,4.8nm,0.8s,baz=121,slow=4.7,SNR=40
ILAR                                PcP    PcP     15 22 44.5 +0.4
      comp=Z,0.7nm,0.7s,baz=142,slow=2.1,SNR=4.6
      comp=Z,4.8nm,0.8s
ILAR  Eielson Array      63.01 337  P      P       15 22 06.1 -0.2
ILAR                                       PcP     15 22 41.6 -2.5
OHAK  Old Harbor         63.06 328  P      P       15 22 09.0 +2.1
      baz=107
SUA   Susitna One        63.25 333  P      P       15 22 09.5 +1.3
      baz=111
D27M  Malcolm River      63.33 342  IAmb   IAmb    15 22 09.9
      comp=Z,5.4nm,0.7s
D27M  Malcolm River      63.33 342  P      P       15 22 09.8 +1.4
      baz=125
MCK   McKinley           63.37 335  P      P       15 22 09.9 +1.1
      baz=114
POKR  Poker Plat Res     63.38 337  P      P       15 22 09.9 +1.1
      baz=116
COLA  College            63.43 337  P      P       15 22 10.0 +0.9
      baz=116
F26K  Sheenjek River     63.46 340  IAmb   IAmb    15 22 11.7
      comp=Z,6.5nm,1.1s
F26K  Sheenjek River     63.46 340  P      P       15 22 10.3 +0.9
      baz=121,SNR=6.7
G25K  Bearman Lake       63.66 339  P      P       15 22 11.8 +1.3
      baz=118,SNR=5.5
NEA2  Nenana             63.78 336  P      P       15 22 12.3 +0.8
      baz=114
SKT   Skwentna           63.78 333  P      P       15 22 12.1 +0.5
      baz=111
TRF   Thorofare Moun     63.81 335  P      P       15 22 13.0 +1.1
      baz=113
SPCR  Spurr Chakacha     63.81 332  P      P       15 22 12.6 +0.7
      baz=110
H24K  Noodor Dome        63.87 338  P      P       15 22 13.2 +1.1
      baz=116,SNR=6.5
F25K  Christian Rive     63.91 340  P      P       15 22 13.5 +1.2
      baz=119
G24K  Hadweenzic Riv     64.11 339  IAmb   IAmb    15 22 15.3
      comp=Z,7.0nm,1.0s
G24K  Hadweenzic Riv     64.11 339  P      P       15 22 14.6 +1.0
      baz=117
I23K  Minto, Yukon-K     64.12 337  P      P       15 22 15.2 +1.6
      baz=114,SNR=5.0
E25K  Arctic Village     64.14 340  IAmb   IAmb    15 22 15.7
      comp=Z,7.0nm,0.8s
E25K  Arctic Village     64.14 340  P      P       15 22 15.2 +1.4
      baz=120,SNR=8.4
BPAW  Bear Paw Mtn.      64.34 335  P      P       15 22 15.7 +0.5
      baz=112
C27K  Jago River         64.35 342  P      P       15 22 15.6 +0.5
C27K                                IAmb   IAmb    15 22 16.8
      comp=Z,9.1nm,0.9s
C27K  Jago River         64.35 342  P      P       15 22 16.6 +1.5
      baz=122
Q18K  Katmai Hardscr     64.35 329  P      P       15 22 16.3 +0.8
      baz=106
PPLA  Purkeypile         64.40 334  P      P       15 22 16.7 +0.9
      baz=111
M20K  Styx River         64.46 333  IAmb   IAmb    15 22 47.6
      comp=Z,9.7nm,1.4s
M20K  Styx River         64.46 333  P      P       15 22 17.0 +0.9
      baz=109
O19K  Port Alsworth      64.47 331  P      P       15 22 17.0 +1.0
      baz=107
H23K  Yukon River        64.48 337  P      P       15 22 16.6 +0.5
      baz=114
MLY   Manley             64.61 336  P      P       15 22 17.8 +0.9
      baz=113
F24K  Squaw Lake         64.63 339  IAmb   IAmb    15 22 19.1
      comp=Z,2.8nm,0.8s
F24K  Squaw Lake         64.63 339  P      P       15 22 17.9 +0.8
      baz=117
P18K  Big Mountain,      64.67 330  P      P       15 22 18.4 +1.0
      baz=106
Q17K  Contact Creek      64.69 328  P      P       15 22 18.4 +0.7
      baz=105
N19K  Bonanza Creek      64.73 331  P      P       15 22 18.2 +0.3
      baz=107
R17L  Mt. Peulik Vol     64.77 328  P      P       15 22 18.8 +0.7
      baz=104
O18K  Koktuh Hills       64.80 330  P      P       15 22 18.7 +0.5
      baz=106
CHUM  Lake Minchumin     64.81 335  P      P       15 22 18.6 +0.4
      baz=111
C26K  Camden Bay         64.86 342  P      P       15 22 20.3 +2.0
      baz=121
D25K  Kavik River        65.00 341  P      P       15 22 20.5 +1.1
      baz=119,SNR=18
G23K  Bananza Creek      65.03 338  P      P       15 22 20.6 +1.0
      baz=114
E24K  Your Creek         65.09 340  IAmb   IAmb    15 22 21.9
      comp=Z,2.5nm,0.7s
E24K  Your Creek         65.09 340  P      P       15 22 21.2 +1.1
      baz=116
I21K  Tanana             65.15 336  P      P       15 22 21.2 +0.8
      baz=112
Q16K  King Salmon        65.19 329  P      P       15 22 22.2 +1.5
      baz=104
H22K  Ishtalitna Cre     65.20 337  P      P       15 22 21.2 +0.5
      baz=113
COLD  Coldfoot           65.31 339  IAmb   IAmb    15 22 23.8
      comp=Z,8.3nm,1.0s
COLD  Coldfoot           65.31 339  P      P       15 22 23.2 +1.8
      baz=114,SNR=6.1
N18K  Kilae Creek        65.36 331  P      P       15 22 22.5 +0.7
      baz=106
K20K  Telida             65.36 334  P      P       15 22 22.2 +0.4
      baz=109
E23K  Chandalar          65.46 340  P      P       15 22 24.1 +1.6
      baz=115
M18K  Stony River        65.56 332  P      P       15 22 23.4 +0.3
      baz=106
G22K  Bettles            65.65 338  P      P       15 22 24.1 +0.5
      baz=113
H21K  Melozitna Rive     65.65 337  P      P       15 22 23.9 +0.3
      baz=111
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J20K  Nowinta River      65.67 335  P      P       15 22 24.5 +0.7
      baz=109
D24K  Happy Valley       65.69 341  IAmb   IAmb    15 22 36.9
      comp=Z,5.2nm,0.9s
D24K  Happy Valley       65.69 341  P      P       15 22 24.5 +0.7
      baz=117
TOLK  Toolik Lake Re     65.70 340  P      P       15 22 25.1 +1.2
      baz=116,SNR=11
C24K  Franklin Bluff     65.91 341  P      P       15 22 26.3 +1.1
      baz=117
N17K  Nushagak Hills     65.93 331  P      P       15 22 26.2 +0.6
      baz=105
I20K  Naaghedeneel       66.01 335  P      P       15 22 26.8 +0.8
      baz=109
F22K  John River         66.12 339  P      P       15 22 28.1 +1.4
      baz=113
D23K  Nanushuk River     66.20 340  P      P       15 22 28.5 +1.3
      baz=115
J19K  Poorman            66.22 334  P      P       15 22 27.3 -0.1
      baz=108
G21K  Allakaket          66.23 337  P      P       15 22 27.3 -0.1
G21K  Allakaket          66.23 337  P      P       15 22 28.3 +0.9
      baz=111,SNR=7.7
E22K  Anaktuvuk Pass     66.24 339         P       15 22 27.4 -0.1
E22K  Anaktuvuk Pass     66.24 339  P      P       15 22 28.6 +1.2
      baz=113,SNR=10
M17K  Holitna River      66.28 331  P      P       15 22 28.4 +0.7
      baz=105
H20K  Anotleneega Mo     66.40 336  P      P       15 22 29.5 +1.0
      baz=109
F21K  Alatna River       66.48 338  P      P       15 22 30.5 +1.6
      baz=111
J18K  Innoko River       66.53 334  P      P       15 22 30.5 +1.2
      baz=106
C23K  Itkillik River     66.55 341  P      P       15 22 30.5 +1.2
      baz=115
N16K  Nishlik Lake       66.68 330  P      P       15 22 30.9 +0.6
      baz=103
D22K  Ayikyak River      66.83 340  P      P       15 22 32.4 +1.2
      baz=113
H19K  Roundabout Mou     67.03 336  P      P       15 22 33.1 +0.6
      baz=108
E21K  Killik River       67.10 339  P      P       15 22 33.8 +0.9
      baz=111
F20K  Avaraart Lake      67.24 338  P      P       15 22 35.0 +1.3
      baz=109
L16K  Owhat River        67.30 332  P      P       15 22 35.3 +1.0
      baz=103
G19K  Purcell Mounta     67.47 336  P      P       15 22 36.2 +1.0
      baz=107
C21K  Knifeblade Rid     67.64 340  P      P       15 22 37.2 +0.9
      baz=111
B22K  Teshekpuk Lake     67.64 341  P      P       15 22 36.9 +0.7
      baz=112
H18K  Honhosa River      67.69 335  P      P       15 22 37.6 +1.0
      baz=106
B21K  Ikpikpuk River     67.75 340  P      P       15 22 37.7 +0.8
      baz=111
E20K  Nigu River         67.81 339  P      P       15 22 39.0 +1.5
      baz=109
E19K  Redstone River     67.93 338  IAmb   IAmb    15 22 56.4
      comp=Z,5.8nm,1.1s
E19K  Redstone River     67.93 338  P      P       15 22 38.2 +0.1
      baz=108
F19K  Shaleruckik Mo     67.94 337  IAmb   IAmb    15 22 39.8
      comp=Z,5.3nm,0.8s
F19K  Shaleruckik Mo     67.94 337  P      P       15 22 38.9 +0.7
      baz=107
N14K  Kuskokwak Cree     67.98 329  P      P       15 22 40.3 +1.7
      baz=100
G18K  Tagagawik          68.01 336  P      P       15 22 39.8 +1.1
      baz=106
D20K  Etivluk River      68.11 339  P      P       15 22 40.0 +0.8
      baz=109,SNR=12
J16K  Anvik River        68.17 333  P      P       15 22 41.2 +1.4
      baz=103
M14K  Bethel             68.27 330  P      P       15 22 41.7 +1.4
      baz=100
I17K  Unalakleet         68.35 334  P      P       15 22 42.1 +1.3
      baz=103
A22K  Sinclair Lake      68.37 342  P      P       15 22 41.7 +0.9
      baz=111
K15K  Wolf Creek Mou     68.37 332  P      P       15 22 42.7 +1.7
      baz=102
D19K  Kuna River         68.56 339  IAmb   IAmb    15 22 43.6
      comp=Z,7.1nm,0.8s
D19K  Kuna River         68.56 339  P      P       15 22 42.8 +0.7
      baz=107
F18K  Selawik            68.59 337  P      P       15 22 43.4 +1.2
      baz=105
G17K  Kiwalik Mounta     68.71 335  P      P       15 22 44.7 +1.6
      baz=104
B20K  Meade River        68.71 340  P      P       15 22 44.1 +1.2
      baz=109
A21K  Barrow             68.98 342  P      P       15 22 45.7 +1.1
      baz=110
E18K  Tukpahlearik C     69.17 337  P      P       15 22 46.7 +0.8
      baz=104
C19K  Lookout Ridge      69.25 339  P      P       15 22 46.7 +0.3
C19K                                IAmb   IAmb    15 22 49.1
      comp=Z,12nm,1.1s
C19K  Lookout Ridge      69.25 339  P      P       15 22 47.6 +1.2
      baz=106
E17K  Hotham Inlet       69.55 337  P      P       15 22 48.8 +0.6
      baz=103,SNR=8.2
C18K  Utukok River       69.69 339  P      P       15 22 49.7 +0.5
      baz=104
A19K  Wainwright         70.05 340  P      P       15 22 52.2 +1.0
      baz=105
B18K  Kokolik River      70.08 339  P      P       15 22 53.4 +1.9
      baz=104
D17K  Noatak River       70.16 337  P      P       15 22 53.0 +1.1
      baz=102
C17K  DeLong Mountai     70.36 338  P      P       15 22 53.6 +0.4
      baz=102
ANM   Nome               70.49 334  P      P       15 22 55.1 +1.0
      baz=99
P08K  Saint George I     71.72 325  P      P       15 23 03.2 +1.6
      baz=92
EKA   Eskdalemuir Ar     78.15  36  P      P       15 23 35.6 -3.2
      comp=Z,2.0nm,0.5s,baz=272,slow=5.8,SNR=7.2
      comp=Z,2.0nm,0.5s
SPITS Spitsbergen Ar     80.29  11  P      P       15 23 48.4 -1.8
      comp=Z,13nm,0.9s,baz=205,slow=6.4,SNR=5.4
      comp=Z,13nm,0.9s
ARCES ARCESS Array B     86.34  18  P      P       15 24 19.7 -1.7
      comp=Z,1.4nm,0.6s,baz=335,slow=5.4,SNR=5.1
      comp=Z,1.4nm,0.6s
TIXI  Tiksi              90.45 348  P      P       15 24 40.5 -0.4
      comp=Z,4.5nm,0.3s,baz=50,slow=6.1,SNR=7.3
      comp=Z,4.5nm,0.3s
TIXI  Tiksi              90.45 348         P       15 24 40.2 -0.6
KURBB Kurchatov Arra    115.33   7  PKP    PKiKP   15 30 20.9 -0.3
      comp=Z,0.3nm,0.3s,baz=360,slow=1.6,SNR=6.8
BOSA  Boshof            120.30 115  PKP    PKiKP   15 30 33.2 +1.6
      comp=Z,1.3nm,0.6s,baz=272,slow=2.2,SNR=3.0
HHC   Hu-ho-hao-te      121.40 339  eP     PKiKP   15 30 35.7 +2.2
NJ2   Nanjing           125.65 328  eP     PKiKP   15 30 42.3 +0.3
NJ2                                 pmax   pmax
      comp=Z,15nm,0.7s
WRA   Warramunga Arr    135.31 256  PKP    PKPdf   15 31 00.5 +0.2
      comp=Z,0.8nm,0.9s,baz=88,slow=2.5,SNR=6.0
ASAR  Alice Springs     135.56 250  PKhKP  PKPpre  15 30 57.1
      comp=Z,0.3nm,0.8s,baz=95,slow=2.6,SNR=3.5
PZH   PanZhiHua         137.76 341  PKP    PKPdf   15 31 03.3 -1.5
CMAR  Chiang Mai Arr    146.17 341  PKPbc  PKPab   15 31 21.1 -0.3
      comp=Z,11nm,0.7s,baz=334,slow=3.5,SNR=68
CMAR  Chiang Mai Arr    146.17 341         PKPdf   15 31 19.6 -0.2
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*IDC **05** 15:20:10.8±1.7, 46°.27N×53°.27E, h0km, mb3.4/2,*
mbtmp3.6/5, ML3.0/3, Error ellipse: s-maj=56.6km
s-min=11.8km az=156.0

*NNC **05** 15:20:17.4±5.4, 46°.26N×53°.75E, h0km, mb3.2, mpv2.8,*
Error ellipse: s-maj=43.6km s-min=38.5km az=106.0

ISC 05 15:20:12.4±1.3, **46°.1N**±0°.2×**53°.2E**±0°.1, **h10**km, **n7,**
σ**1^{s}93**/10, **3C-2D, Western Kazakhstan**

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Code  Station Name         Δ°  AZ°   Phase ID           Time       Res
                                    Op     ISC        h  m  s     ISC
AKTO  Aktyubinsk          5.39  35 ⇑Pn     Pn        15 21 34.2 +1.2
      1.4nm,0.7s
AKTO                               ⇓Sn     Sn        15 22 33.5 -1.6
      2.3nm,0.7s
AB31  Akbulak array       5.55  53 ⇓Pn     Pn        15 21 36.1 +1.1
      0.2nm,0.2s,baz=232,slow=13,SNR=6.7
AB31                               ⇑Pg     Pb        15 21 51.3 +2.0
      0.6nm,0.3s,baz=229,slow=14,SNR=8.2
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AB31				⇑Sn	Sn	15 22 37.8	-1.0
	1.6nm,0.5s,baz=235,slow=20						
KBZ	**Khabaz**	7.67	256	Pn	Pn	15 22 05.6	+1.5
	0.4nm,0.3s,baz=155,slow=4.4,SNR=16						
KBZ				Sn	Sn	15 23 29.3	-1.7
	0.5nm,0.3s,baz=308,slow=18,SNR=2.1						
	3.3nm,0.6s						
BVAR	**Borovoye Array**	13.12	52	Pn	Pn	15 23 12.7	-6.0
	0.1nm,0.3s,baz=243,slow=13,SNR=6.9						
	0.9nm,0.5s						
KURBB	**Kurchatov Arra**	17.41	66	P	Pn	15 24 12.0	-3.2
	baz=268,slow=12,SNR=6.3						
	0.3nm,0.3s						
ZALV	**Zalesovo Beam**	21.64	57	P	P	15 25 02.0	-0.6
	0.4nm,0.4s,baz=267,slow=9.5,SNR=2.3						
	0.4nm,0.4s						
FINES	**FINESS Array B**	21.93	324	P	P	15 25 05.2	-0.5
	2.3nm,0.6s,baz=138,slow=11,SNR=5.5						
	2.3nm,0.6s						

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*ISK **05** 15:31:07.2, 34°.60N×33°.32E, h13^{km}, ML2.8/15*
*GII **05** 15:31:09.4±0.0, 34°.688N±0°.002×33°.457E±0°.001, h18^{km}, Mws2.4, confirmed*
*NIC **05** 15:31:10.8, 34°.80N×33°.39E, h21^{km}, Ml2.5/11*
*AFAD **05** 15:31:11.4, 35°.02N×33°.28E, h4^{km}±1^{km}, ML2.3*
ISC 05 15:31:09.4±0.9**, 34°.75N**±0°.02×**33°.48E**±0°.03**, h28**^{km}±6^{km}**, n87, σ1^{s}26**/108**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASGA	**Asgata**	0.20	281	P	Pb	15 31 15.0	-0.3
ASGA				S	Sb	15 31 18.4	-1.0
ASGA				AML	AML	15 31 20.0	
	7.8nm,0.4s						
ASGA				AML	AML	15 31 20.1	
	6.1nm,0.3s						
CSS	**Mathiatis**	0.25	330	Pg	Pb	15 31 15.3	-0.7
CSS				Sg	Sb	15 31 20.5	0.0
CSS	**Mathiatis**	0.25	330	P	Pb	15 31 15.8	-0.2
CSS				S	Sb	15 31 20.5	0.0
CSS	**Mathiatis**	0.25	330	P	Pb	15 31 15.8	-0.2
CSS				S	Sb	15 31 20.0	-0.5
CSS				AML	AML	15 31 21.0	
	5.1nm,0.4s						
CSS				AML	AML	15 31 21.1	
	5.7nm,0.6s						
MVOU	**Mavrovouni**	0.29	24	P	Pn	15 31 17.2	-0.7
MVOU				S	Sn	15 31 23.2	-0.2
MVOU				AML	AML	15 31 24.2	
	2.5nm,0.4s						
MVOU				AML	AML	15 31 24.3	
	1.7nm,0.3s						
ATHAL	**Athalassa**	0.40	350	P	Pn	15 31 18.6	-0.7
ATHAL				S	Sb	15 31 24.2	+0.1
ATHAL				AML	AML	15 31 31.0	
	5.1nm,0.4s						
ATHAL				AML	AML	15 31 33.7	
	3.1nm,0.5s						
XYLS	**Xyliatos**	0.45	307	P	Pb	15 31 18.2	-0.7
XYLS				S	Sb	15 31 24.4	-1.0
XYLS				AML	AML	15 31 24.9	
	4.8nm,0.3s						
XYLS				AML	AML	15 31 26.8	
	2.3nm,0.3s						
APOL	**The Sanctuary**	0.52	262	P	Pb	15 31 19.6	-0.4
APOL				S	Sb	15 31 27.3	+0.1
APOL				AML	AML	15 31 28.8	
	1.5nm,0.3s						
APOL				AML	AML	15 31 28.8	
	1.9nm,0.4s						
PARAL	**Paralimni**	0.52	62	P	Pn	15 31 22.6	+1.6
PARAL				S	Sn	15 31 31.1	+2.1
PARAL				AML	AML	15 31 34.2	
	1.3nm,0.7s						
PARAL				AML	AML	15 31 34.5	
	1.3nm,0.6s						
LFK	**Lefkose**	0.53	4	Pg	Pn	15 31 21.1	-0.1
LFK				Sg	Sn	15 31 31.6	+2.2
TROD	**Troodos**	0.55	292	P	Pb	15 31 20.1	-0.6
TROD				S	Sb	15 31 27.8	-0.5
TROD				AML	AML	15 31 32.8	
	1.7nm,0.3s						
TROD				AML	AML	15 31 32.9	
	1.0nm,0.4s						
NATA	**Nata**	0.75	273	P	Pb	15 31 23.5	-0.4
NATA				S	Sn	15 31 34.8	+0.1
NATA				AML	AML	15 31 39.3	
	0.6nm,0.6s						
NATA				AML	AML	15 31 41.6	
	1.2nm,0.4s						
ALFC	**Alefka**	0.83	300	P	Pb	15 31 25.0	-0.3
ALFC				S	Sb	15 31 36.2	0.0
ALFC				AML	AML	15 31 39.5	
	1.1nm,0.4s						
ALFC				AML	AML	15 31 40.1	
	1.2nm,0.5s						
AKMS	**Akamas**	0.98	286	P	Pn	15 31 27.9	+0.5
AKMS				S	Sn	15 31 41.6	+1.2
AKMS				AML	AML	15 31 48.6	
	0.6nm,0.5s						
AKMS				AML	AML	15 31 52.8	
	0.5nm,0.6s						
TISA	**Tisan-Mersin**	1.42	6	Pn	Pb	15 31 35.7	+0.5
TISA				Sn	Sb	15 31 56.6	+3.7
TEKE	**Tekeli-Mersin**	1.43	348	Pn	Pb	15 31 34.6	-0.7
GULN	**MERSIN_Gulnar**	1.43	2	P	Pb	15 31 34.3	-1.2
GULN				S	Sb	15 31 54.0	+0.6
GULN				*i* IAML		15 31 55.0	
	comp=E,70nm,0.4s						
YESI	**Yesilovacik-Me**	1.45	5	Pn	Pb	15 31 36.1	+0.3
KARG	**Kargicak-Mersi**	1.46	7	Pn	Pb	15 31 36.4	+0.4
BERE	**Bereket-Mersin**	1.61	352	Pn	Pb	15 31 37.6	-1.0
SILI	**Silifke-Mersin**	1.66	12	Pn	Pb	15 31 39.2	0.0
KEBE	**Keben-Mersin**	1.71	6	Pn	Pb	15 31 39.9	-0.3
GAZI	**Gazipasa**	1.76	328	P	Pn	15 31 39.3	+1.1
GAZI				S	Sn	15 31 59.3	-0.3
GAZI				*i* IAML		15 32 18.0	
	comp=N,63nm,2.2s						
KIZK	**Mersin**	1.81	17	P	Pb	15 31 41.2	-0.7
ERMK	**Ermenek**	1.95	346	P	Pb	15 31 42.8	-1.5
ERMK				*i* IAML		15 32 10.0	
	comp=N,27nm,0.5s						
ERMK				*i* IAML		15 32 14.0	
	comp=E,36nm,0.5s						
OSC2	**CSNet OBS 4**	1.95	212	P	Pb	15 31 42.8	-1.4
OSC2				S	Sb	15 32 07.9	-0.3
MERS	**Mersin**	2.28	21	Pn	Pb	15 31 48.1	-1.8
MMC7	**Mount Meron ar**	2.34	137	P	Pn	15 31 46.8	+0.7
MMC7	**Mount Meron ar**	2.34	137	S	Sn	15 32 14.8	+0.8
MMA0B	**Mount Meron ar**	2.35	137	P	Pn	15 31 47.1	+0.8
MMA0B	**Mount Meron ar**	2.35	137	S	Sn	15 32 15.1	+0.8
HDMB	**Hadim**	2.36	340	Pn	Pn	15 31 48.2	+1.7
GEM	**Giv'at Ha'Em**	2.37	130	P	Pn	15 31 47.0	+0.5
GEM	**Giv'at Ha'Em**	2.37	130	P	Pn	15 31 47.1	+0.5
GEM	**Giv'at Ha'Em**	2.37	130	S	Sn	15 32 15.3	+0.6
NATI	**Neve Ativ**	2.39	128	P	Pn	15 31 47.9	+1.2
NATI	**Neve Ativ**	2.39	128	P	Pn	15 31 47.6	+1.0
NATI	**Neve Ativ**	2.39	128	S	Sn	15 32 15.8	+0.8
KRMN	**Karaman**	2.43	356	Pn	Pb	15 31 49.8	-2.7
OFRI	**`Ofer**	2.46	149	P	Pn	15 31 48.5	+0.7
OFRI	**`Ofer**	2.46	149	P	Pn	15 31 47.9	+0.1
OFRI	**`Ofer**	2.46	149	S	Sn	15 32 16.8	-0.1
KKBE	**Karaman, Kazim**	2.51	350	P	Pb	15 31 51.5	-2.3
KKBE				S	Sb	15 32 22.0	-2.3
KSHT	**Keshet**	2.62	132	P	Pn	15 31 50.5	+0.6
KSHT	**Keshet**	2.62	132	S	Sn	15 32 21.3	+0.5
KERG	**Konya-Eregli**	2.71	11	P	Pb	15 31 54.2	-3.1
KERG				S	Sb	15 32 28.5	-1.7
KERG				*i* IAML		15 32 37.0	
	comp=E,18nm,0.4s						
TAHT	**Tahtakopru-Hat**	2.74	53	Pn	Pb	15 31 55.2	-2.5
SHMJ	**Saham**	2.77	136	P	Pn	15 31 53.9	+1.9
KARA	**Karaisali**	2.81	26	Pn	Pb	15 31 55.9	-3.1
MMLI	**Mount Malkishu**	2.81	144	Pn	Pn	15 31 52.8	+0.2
MMLI	**Mount Malkishu**	2.81	144	P	Pn	15 31 53.7	+1.1
MMLI	**Mount Malkishu**	2.81	144	P	Pn	15 31 53.4	+0.8
MMLI	**Mount Malkishu**	2.81	144	S	Sn	15 32 26.3	+0.7
SEYD	**Seydisehir-KON**	2.97	334	Pn	Pn	15 31 56.6	+1.8
QRNJ	**Al-Qirein**	2.97	143	P	Pn	15 31 56.7	+2.0
HMDT	**Nahal Hemdat**	3.02	145	P	Pn	15 31 57.1	+1.8
HMDT	**Nahal Hemdat**	3.02	145	P	Pn	15 31 56.5	+1.2
HMDT	**Nahal Hemdat**	3.02	145	S	Sn	15 32 31.3	+0.8
SALP	**Salfit**	3.03	151	P	Pn	15 31 56.2	+0.6
SALP	**Salfit**	3.03	151	P	Pn	15 31 56.0	+0.5
SALP	**Salfit**	3.03	151	S	Sn	15 32 31.6	+0.6
SEDI	**Konya, Seydise**	3.04	333	P	Pb	15 31 59.5	-3.4
SEDI				S	Sn	15 32 34.6	+3.3
SEDI				*i* IAML		15 32 54.0	
	comp=E,13nm,1.4s						
BALJ	**Balqa**	3.21	145	P	Pn	15 31 59.9	+1.9
AMAZ	**Amatzia**	3.42	159	P	Pn	15 32 01.3	+0.3
AMAZ	**Amatzia**	3.42	159	S	Sn	15 32 41.3	+0.7
DSI	**Dead Sea**	3.54	153	P	Pn	15 32 04.0	+1.4
DSI	**Dead Sea**	3.54	153	P	Pn	15 32 03.5	+0.9
DSI	**Dead Sea**	3.54	153	S	Sn	15 32 44.3	+0.7
MSBI	**Mazada**	3.77	155	P	Pn	15 32 07.0	+1.3
MSBI	**Mazada**	3.77	155	P	Pn	15 32 06.9	+1.3
MSBI	**Mazada**	3.77	155	S	Sn	15 32 50.1	+1.0
GHAJ	**Ghor Haditha**	3.85	152	P	Pn	15 32 08.3	+1.4
KZIT	**Kziot**	3.91	168	P	Pn	15 32 08.1	+0.5
KZIT	**Kziot**	3.91	168	S	Sn	15 32 52.3	-0.2
PRNI	**Paran**	4.57	163	P	Pn	15 32 17.9	+1.2
PRNI	**Paran**	4.57	163	P	Pn	15 32 17.2	+0.5
PRNI	**Paran**	4.57	163	S	Sn	15 33 08.9	0.0
KRMI	**Paran Flat**	4.73	167	P	Pn	15 32 19.6	+0.6
KRMI	**Paran Flat**	4.73	167	S	Sn	15 33 13.1	+0.1
HRFI	**Mount Harif**	4.88	164	P	Pn	15 32 22.2	+1.2
HRFI	**Mount Harif**	4.88	164	P	Pn	15 32 21.7	+0.7
HRFI	**Mount Harif**	4.88	164	S	Sn	15 33 16.9	+0.3
MBRI	**Mt Berech**	5.08	166	P	Pn	15 32 25.2	+1.3
MBRI	**Mt Berech**	5.08	166	P	Pn	15 32 24.6	+0.7
MBRI	**Mt Berech**	5.08	166	S	Sn	15 33 21.6	-0.1
EIL	**Elat**	5.21	166	P	Pn	15 32 26.6	+1.0
EIL	**Elat**	5.21	166	S	Sn	15 33 24.9	+0.1

IDC 05 15:43:20.6±4.1**, 49°.70S**×**121°.47E, h0**^{km}**, mb3.7**/2**, mbtmp3.9**/3**, ML1.9**/1**, MS3.5**/5**, Error ellipse: s-maj=119.6km s-min=64.8km az=85.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	15.74	337	T	T	16 02 32.1	
	baz=162,slow=74,SNR=15						
H01W1	**Cape Leeuwin H**	15.74	337	T	T	16 02 35.0	
	baz=162,slow=74,SNR=17						
H01W3	**Cape Leeuwin H**	15.76	337	T	T	16 02 35.5	
	baz=162,slow=74,SNR=16						
NWAO	**Narrogin (SRO)**	17.05	348	P	P	15 47 21.4	-0.9
	0.2nm,0.3s,baz=144,slow=17,SNR=1.8						
	8.8nm,1.1s						
ASAR	**Alice Springs**	27.76	25	P	P	15 49 11.1	0.0
	1.3nm,1.0s,baz=204,slow=8.3,SNR=8.2						
ASAR				LR	LR	15 58 48.6	
	comp=Z,71nm,21.7s,baz=189,slow=33						
	1.3nm,1.0s						
WRA	**Warramunga Arr**	31.42	24	P	P	15 49 43.1	-0.4
	0.8nm,1.1s,baz=199,slow=8.3,SNR=2.8						
	0.8nm,1.1s						
FITZ	**Fitzroy Crossi**	31.71	8	LR	LR	16 01 22.5	
	comp=Z,118nm,20.3s,baz=231,slow=34						
VNDA	**Vanda**	31.80	164	LR	LR	16 01 31.9	
	comp=Z,102nm,18.5s,baz=350,slow=34						
QSPA	**South Pole Qui**	40.42	180	LR	LR	16 06 55.9	
	comp=Z,87nm,19.6s,baz=1.0,slow=35						
JAY	**Jayapura**	49.79	26	LR	LR	16 12 34.5	
	comp=Z,32nm,21.0s,baz=232,slow=35						
YKA	**Yellowknife Ar**	147.34	46	PKPbc	PKPbc	16 03 04.1	-0.8
	0.4nm,0.9s,baz=286,slow=3.4,SNR=4.5						

IDC 05 15:50:29.0±2.0**, 13°.32N**×**121°.61E, h0**^{km}**, mb3.8**/3**, mbtmp3.8**/3**, Error ellipse: s-maj=280.1km s-min=28.5km az=67.0, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	35.34	159	P	P	15 57 27.4	+1.0
	0.8nm,0.5s,baz=340,slow=9.4,SNR=28						
	0.8nm,0.5s						
ASAR	**Alice Springs**	38.67	162	P	P	15 57 53.6	-1.1
	0.4nm,0.4s,baz=340,slow=11,SNR=35						
	0.4nm,0.4s						
ZALV	**Zalesovo Beam**	49.80	332	P	P	15 59 23.4	-0.1
	0.4nm,0.4s,baz=119,slow=8.4,SNR=2.1						
	0.4nm,0.4s						

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*SOME **05** 15:51:51.6, 41°.15N×78°.77E, h5^{km}*
*KRNET **05** 15:51:52.3±0.1, 41°.18N×78°.83E, h15^{km}, mb3.1*
*NNC **05** 15:51:52.8±1.1, 41°.14N×78°.73E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=7.4km s-min=4.5km az=168.0*
ISC 05 15:51:47.4±1.9**, 40°.83N**±0°.07×**78°.77E**±0°.05**, h1**^{km}±12^{km}**, n37, σ1^{s}65**/55**, 11C-13D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	1.16	322	⇓*i*P	Pg	15 52 10.3	+0.7
TARG				⇓*i*S	Sg	15 52 23.4	-1.2
PRZ	**Przheval'sk**	1.68	351	⇓*e*P	Pn	15 52 17.7	-0.4
PRZ				⇓*e*S	Sn	15 52 36.1	-4.3
KDJ	**Kajisay**	1.77	318	⇓*i*P	Pb	15 52 21.0	+0.3
KDJ				⇓*i*S	Sb	15 52 42.1	-1.3
SATY	**Saty**	2.25	353	Pg	Pb	15 52 28.5	-0.4
	18nm,0.4s						
SATY				Lg	Lg	15 52 56.2	
	57nm,0.3s						
UZB	**Uzynbulak**	2.33	5	Pg	Pb	15 52 29.4	-0.8
	9.1nm,0.7s						
UZB				Lg	Lg	15 52 56.4	
	36nm,1.1s						
UZB	**Uzynbulak**	2.33	5	*e*P	Pb	15 52 29.4	-0.8
	9.1nm,0.7s						
UZB				*e*S	Sb	15 52 56.4	-3.2
	36nm,1.1s						
JNKS	**Jany-Kuch**	2.37	277	⇑*e*P	Pg	15 52 34.2	+1.4
JNKS				⇑*e*S	Sg	15 53 05.0	+1.5
SHLS	**Shalkode**	2.39	12	Pg	Pg	15 52 33.5	+0.4
	28nm,0.5s						
SHLS				Lg	Lg	15 53 02.3	
	122nm,0.4s						
SHLS	**Shalkode**	2.39	12	*e*P	Pg	15 52 32.6	-0.5
	25nm,0.4s						
SHLS				*e*S	Sg	15 53 01.9	-2.2
	152nm,0.5s						
TNSS	**Tian-Shan**	2.59	329	Pg	Pb	15 52 35.4	+0.5
	5.6nm,0.5s						
TNSS				Lg	Lg	15 53 07.1	
	13nm,0.8s						
TNSS	**Tian-Shan**	2.59	329	*e*P	Pb	15 52 35.4	+0.5
	5.6nm,0.5s						
TNSS				*e*S	Sb	15 53 07.1	-0.3
	13nm,0.8s						
KPKS	**Kokpek**	2.64	359	Pg	Pb	15 52 35.3	-0.2
	18nm,0.5s						
KPKS				Lg	Lg	15 53 05.0	
	47nm,0.3s						
MDOK	**Medeo**	2.66	332	Pg	Pb	15 52 36.6	+0.6
	25nm,0.5s						
MDOK				Lg	Lg	15 53 09.3	
	38nm,0.7s						
BOOM	**Boomskoye usch**	2.69	309	⇓*i*P	Pb	15 52 36.2	-0.3
BOOM				⇓*i*S	Sb	15 53 08.4	-1.7
KURS	**Kuram**	2.70	351	Pg	Pb	15 52 36.4	-0.1
	15nm,1.3s						
KURS				Lg	Lg	15 53 09.1	
	15nm,0.4s						
KOTS	**Kotyrbulak**	2.70	333	Pg	Pb	15 52 37.2	+0.5
	31nm,0.5s						
KOTS				Lg	Lg	15 53 10.0	
	41nm,0.6s						
KOTS	**Kotyrbulak**	2.70	333	*e*P	Pb	15 52 37.2	+0.5
	31nm,0.5s						
KOTS				*e*S	Sb	15 53 10.0	-0.4
	41nm,0.6s						
KTMS	**Ketmen**	2.87	24	Pg	Pb	15 52 39.7	+0.2
	5.3nm,0.5s						
KTMS				Lg	Lg	15 53 14.8	
	86nm,0.7s						
KTMS	**Ketmen**	2.87	24	*e*P	Pb	15 52 39.7	+0.2
	5.3nm,0.5s						
KTMS				*e*S	Sb	15 53 14.8	-0.4
	86nm,0.7s						
MTBS	**Maitube**	2.89	324	Pg	Pb	15 52 40.8	+1.1
	16nm,0.6s						
MTBS				Lg	Lg	15 53 16.4	
	18nm,0.6s						
MTBS	**Maitube**	2.89	324	*e*P	Pb	15 52 40.8	+1.1
	16nm,0.6s						
MTBS				*e*S	Sb	15 53 16.4	+0.8
	18nm,0.6s						
KST	**Kastek**	3.05	318	Pg	Pb	15 52 43.6	+1.1
	9.1nm,0.6s						
KST				Lg	Lg	15 53 21.2	
	22nm,0.8s						
KST	**Kastek**	3.05	318	*e*P	Pb	15 52 43.6	+1.1
	9.1nm,0.6s						
KST				*e*S	Sb	15 53 21.2	+1.0
	22nm,0.8s						
TKM2	**Tokmak 2**	3.16	313	⇑*i*P	Pb	15 52 42.6	-1.9
TKM2				⇑*i*S	Sn	15 53 19.1	+2.2
KTBS	**Karatobe**	3.27	332	Pg	Pb	15 52 46.8	+0.5
	8.3nm,0.5s						
KTBS				Lg	Lg	15 53 26.6	
	23nm,0.9s						
BLB	**Baldybastay**	3.28	356	Pg	Pb	15 52 46.0	-0.4
	19nm,0.5s						
BLB				Lg	Lg	15 53 25.3	
	91nm,0.5s						
DGS	**Degeres**	3.29	318	Pg	Pb	15 52 48.0	+1.4
	12nm,0.4s						
DGS				Lg	Lg	15 53 28.7	
	11nm,0.6s						
ARXS	**Arharly**	3.46	349	Pg	Pb	15 52 49.9	+0.5
	7.8nm,0.6s						
ARXS				Lg	Lg	15 53 30.9	
	25nm,0.5s						
ARXS	**Arharly**	3.46	349	*e*P	Pb	15 52 50.2	+0.7
	6.9nm,0.5s						
ARXS				*e*S	Sb	15 53 31.9	0.0
	48nm,0.5s						
UCH	**Uchtor**	3.49	295	⇑*e*P	Pb	15 52 48.3	-1.9
UCH				⇑*i*S	Sb	15 53 29.3	-3.9
ARLS	**Aral**	3.50	289	⇓*i*P	Pb	15 52 48.8	-1.5
ARLS				⇓*i*S	Sb	15 53 29.9	-3.5
KNOS	**Konyrlen**	3.54	5	Pg	Pb	15 52 51.1	+0.1
	7.8nm,0.5s						
KNOS				Lg	Lg	15 53 33.4	
	43nm,0.6s						
AAK	**Ala-Archa**	3.67	301	⇓*i*P	Pb	15 52 50.4	-2.8
AAK				⇓*i*S	Sn	15 53 32.8	+3.3
KRBS	**Karabastau**	3.67	322	Pg	Pb	15 52 54.7	+1.6
	2.7nm,0.4s						
KRBS				Lg	Lg	15 53 39.4	
	1.8nm,0.6s						
SALK	**Salom-Alik**	3.75	273	⇑*i*P	Pb	15 52 53.5	-1.0
SALK				⇑*i*S	Sb	15 53 38.1	-2.4
MAKZ	**Makanchi**	6.42	20	⇑Pn	Pn	15 53 25.7	+2.7
	4.3nm,1.2s						
MAKZ				⇓Lg	Lg	15 55 06.7	
	12nm,2.5s						
MK31	**Makanchi Array**	6.49	22	⇑Pn	Pn	15 53 26.3	+2.3
	0.8nm,0.7s,baz=209,slow=13,SNR=6.6						
MK31				⇑Lg	Lg	15 55 08.9	
	1.9nm,0.6s,baz=200,slow=24						

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*NEIC **05** 15:53:03.2±1.7, 20°.3S±0°.1×178°.1W±0°.1, h535^{km}±6^{km}, mb4.3/77, Error ellipse: s-maj=18.1km s-min=13.4km az=160.0*
*IDC **05** 15:53:05.4±2.1, 20°.24S×178°.25W, h556^{km}±22^{km}, mb3.7/16, mbtmp4.6/17, Error ellipse: s-maj=19.0km s-min=11.5km az=151.0*
ISC 05 15:53:02.5±0.5**, 20°.32S**±0°.10×**178°.10W**±0°.07**, h534**^{km}**, n110, σ1^{s}09**/99**, mb4.2**/48**, 1C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	4.46	305		P	15 54 29.5	+2.4
NIUE	**Niue**	7.79	82	P	P	15 54 56.1	-1.7
AFI	**Afiamalu**	8.78	44	P	P	15 55 05.4	-2.5
MARNC	**Mare, Loyalty**	13.02	262	P	P	15 55 51.5	-0.2
PINNC	**Pines Island,**	13.65	258	P	P	15 55 58.2	0.0
DZM	**Mont Dzumac**	14.53	260	P	P	15 56 08.5	+1.0
	4.0nm,0.7s,baz=101,slow=18,SNR=5.8						
DZM	**Mont Dzumac**	14.53	260	P	P	15 56 06.8	-0.7
SANVU	**Saraoutou**	14.80	287		P	15 56 10.2	-0.1
TOZ	**Tahuroa Road**	18.23	196	P	P	15 56 43.2	+0.1
TOZ				IAmb	IAmb	15 57 20.1	
	comp=Z,17nm,1.5s						
PPTF	**Pamatai, Papee**	27.11	89	P	P	15 58 02.1	-0.9
EIDS	**Eidsvold**	28.81	254	P	P	15 58 17.7	0.0
CTAO	**Charters Tower**	33.42	264		P	15 58 56.8	-0.5
PMG	**Port Moresby**	35.21	283	P	P	15 59 12.6	+0.3
COEN	**Coen**	37.48	273	P	P	15 59 31.0	-0.1
COEN				IAmb	IAmb	15 59 32.4	
	comp=Z,7.9nm,0.8s						
STKA	**Stephens Creek**	37.79	244	P	P	15 59 33.3	-0.1
	comp=Z,2.3nm,0.8s,baz=71,slow=9.6,SNR=3.2						
	comp=Z,2.3nm,0.8s						
STKA	**Stephens Creek**	37.79	244	P	P	15 59 32.8	-0.5
INKA	**Innaminka**	38.17	251	P	P	15 59 35.5	-1.0
BBOO	**Buckleboo**	42.55	243	P	P	16 00 10.1	-1.4
JAY	**Jayapura**	43.90	288	P	P	16 00 22.8	+0.6
	comp=Z,22nm,0.6s,baz=158,slow=6.0,SNR=8.0						
	comp=Z,22nm,0.6s						
AS31	**Alice Springs**	44.47	257		P	16 00 25.7	-0.9
AS31				IAmb	IAmb	16 00 26.8	
	comp=Z,3.9nm,0.6s						
ASAR	**Alice Springs**	44.47	257	P	P	16 00 26.4	-0.2
	comp=Z,13nm,0.6s,baz=97,slow=7.6,SNR=280						
ASAR				PcP	PcP	16 01 56.7	-1.9
	comp=Z,0.7nm,0.6s,baz=102,slow=4.2,SNR=4.3						
ASAR				ScP	ScP	16 04 59.5	-0.4
	comp=Z,0.7nm,0.9s,baz=94,slow=3.6,SNR=4.2						
ASAR				S	S	16 06 20.6	-2.4
	comp=Z,2.6nm,1.0s,baz=94,slow=15,SNR=16						
	comp=Z,13nm,0.6s						
ASAR	**Alice Springs**	44.47	257		P	16 00 25.5	-1.1
WB0	**Warramunga Arr**	44.51	262		P	16 00 25.2	-1.7
WRAB	**Tennant Creek**	44.53	262	P	P	16 00 25.9	-1.1
WRAB				IAmb	IAmb	16 00 26.9	
	comp=Z,13nm,1.1s						
WRA	**Warramunga Arr**	44.54	262	P	P	16 00 26.2	-0.8
	comp=Z,7.1nm,0.5s,baz=97,slow=8.1,SNR=80						
	comp=Z,7.1nm,0.5s						
WRA	**Warramunga Arr**	44.54	262		P	16 00 25.2	-1.9
KHLU	**Kahalu`u**	45.23	30	P	P	16 00 32.2	-0.2
MTN	**Manton Dam**	49.07	270		P	16 01 00.6	-0.7
MTN				IAmb	IAmb	16 01 01.6	
	comp=Z,12nm,0.8s						
FORT	**Forrest**	49.28	246	P	P	16 01 01.4	-1.3
FORT				IAmb	IAmb	16 01 35.3	
	comp=Z,8.8nm,1.1s						
KNRA	**Kununurra**	50.58	266		P	16 01 11.9	-0.5
KNRA				IAmb	IAmb	16 01 13.3	
	comp=Z,7.5nm,0.7s						
FAKI	**Fak Fak**	51.37	283	P	P	16 01 17.8	-0.5
FITZ	**Fitzroy Crossi**	52.96	262		P	16 01 29.3	-0.3
SOEI	**Soe**	56.41	272		P	16 01 54.3	+0.4
BATI	**Baumata**	56.84	271	P	P	16 01 58.1	+1.4
	comp=Z,13nm,0.6s,baz=146,slow=5.6,SNR=4.7						
	comp=Z,13nm,0.6s						
MBWA	**Marble Bar**	57.80	257	P	P	16 02 01.6	-1.6
MBWA				IAmb	IAmb	16 02 03.0	
	comp=Z,7.0nm,0.8s						
NWAO	**Narrogin (SRO)**	58.37	243	P	P	16 02 06.0	-0.9
NWAO				IAmb	IAmb	16 02 19.3	
	comp=Z,24nm,1.4s						
MORW	**Morawa**	59.81	248	P	P	16 02 15.4	-1.3
MORW				IAmb	IAmb	16 02 45.6	
	comp=Z,14nm,1.4s						
GIRL	**Giralia**	62.51	254	P	P	16 02 34.6	+0.2
TOLI2	**Tolitoli**	63.48	282	P	P	16 02 41.6	+0.8
KKM	**Kota Kinabalu**	69.62	285	P	P	16 03 19.0	+0.1
QSPA	**South Pole Qui**	69.75	180	P	P	16 03 22.0	+3.2
	comp=Z,1.2nm,0.7s,baz=246,slow=0.6,SNR=7.8						
	comp=Z,1.2nm,0.7s						
QSPA	**South Pole Qui**	69.75	180	P	P	16 03 21.2	+2.4
MJAR	**Matsushiro Arr**	70.01	324	P	P	16 03 20.2	-0.4
	comp=Z,3.6nm,0.5s,baz=160,slow=6.1,SNR=16						
	comp=Z,3.6nm,0.5s						
MJAR	**Matsushiro Arr**	70.01	324	P	P	16 03 20.4	-0.3
MAJO	**Matsushiro**	70.01	324	P	P	16 03 20.4	-0.2
MAJO				IAmb	IAmb	16 03 40.3	
	comp=Z,17nm,1.2s						
JTM	**Tenmabayashi**	71.66	328	P	P	16 03 30.7	+0.5
KIWB	**Kanaga Island**	71.86	1	P	P	16 03 31.2	+0.1
ADK	**Adak**	71.90	1	P	P	16 03 31.1	-0.2
JKA	**Kamikawa-asahi**	73.52	332	P	P	16 03 41.5	+0.7
SSLB	**Suanglung**	73.80	303	P	P	16 03 41.0	-1.9
TPUB	**Ta-pu**	73.80	303	P	P	16 03 41.8	-1.2

PEA0B	Petropavlovsk-	76.07	345	P	P	16 03 54.8	-0.2
PETK	Petropavlovsk-	76.07	345	P	P	16 03 56.0	+1.0
	comp=Z,6.5nm,0.7s,baz=157,slow=5.0,SNR=9.3						
	comp=Z,6.5nm,0.7s						
PETK	Petropavlovsk-	76.07	345	P	P	16 03 55.1	+0.2
KSRS	Korea Array	76.69	319	P	P	16 03 60.0	+1.3
	comp=Z,2.3nm,0.6s,baz=130,slow=6.1,SNR=14						
	comp=Z,2.3nm,0.6s						
PKD	Bear Valley Ra	78.06	44	P	P	16 04 06.9	+0.7
PKD				IAmb	IAmb	16 04 15.3	
	comp=Z,14nm,1.2s						
KMRM	Mail Ridge	78.67	39	P	P	16 04 11.0	+1.6
KMRM				IAmb	IAmb	16 04 11.9	
	comp=Z,16nm,0.8s						
USRK	Ussuriysk Ar.	78.76	326	P	P	16 04 10.7	+1.0
	comp=Z,6.3nm,0.7s,baz=155,slow=3.3,SNR=7.0						
	comp=Z,6.3nm,0.7s						
DPP	Dos Picos Cty	78.85	49	P	P	16 04 10.9	+0.4
O02D	Mt. Diablo Mer	79.19	40	P	P	16 04 13.2	+0.9
O02D				IAmb	IAmb	16 04 14.7	
	comp=Z,5.9nm,0.7s						
ORV	Oroville	79.60	41	P	P	16 04 15.1	+0.8
M02C	Callahan	79.91	39	P	P	16 04 17.2	+1.2
YBH	Yreka Blue Hor	80.20	39		P	16 04 18.8	+1.2
WAKR	Walker	80.27	43	P	P	16 04 18.6	+0.5
WAKR				IAmb	IAmb	16 04 20.1	
	comp=Z,7.4nm,1.0s						
BEKR	Beckworth	80.49	41		P	16 04 19.6	+0.4
PNTR	Pine Nut	80.51	42	P	P	16 04 19.5	+0.2
PNTR				IAmb	IAmb	16 04 21.1	
	comp=Z,10nm,0.8s						
DSP	Deep Springs	80.57	44	P	P	16 04 20.1	+0.7
DANC	Danby, Needles	80.82	48	IAmb	IAmb	16 04 22.9	
	comp=Z,6.2nm,1.0s						
NVAR	Mina Array Bea	80.95	43	P	P	16 04 22.6	+0.9
	comp=Z,2.9nm,0.8s,baz=225,slow=9.1,SNR=16						
	comp=Z,2.9nm,0.8s						
NV11	Mina Array Sit	81.05	43	P	P	16 04 22.5	+0.4
J04A	Umpqua Nationa	81.48	38	P	P	16 04 24.5	+0.2
K05A	Summer Lake	81.88	39	P	P	16 04 27.4	+1.1
K05A				IAmb	IAmb	16 04 28.4	
	comp=Z,11nm,1.0s						
J05D	Fort Rock, OR	82.02	38	IAmb	IAmb	16 04 28.9	
	comp=Z,11nm,0.7s						
BNX	BinXian	82.22	325	⇑P	P	16 04 28.3	+0.6
BNX				pmax	pmax		
	comp=Z,11nm,0.7s						
PINE	Pine Mountain	82.49	38	IAmb	IAmb	16 04 31.5	
	comp=Z,8.4nm,0.8s						
PRN	Pahroc Range	82.53	46	P	P	16 04 30.3	+0.7
PRN				IAmb	IAmb	16 04 31.6	
	comp=Z,5.3nm,0.9s						
I07A	Izee	83.50	38	IAmb	IAmb	16 04 36.6	
	comp=Z,6.6nm,1.1s						
U15A	North Rim	83.91	48	IAmb	IAmb	16 04 38.8	
	comp=Z,4.9nm,0.9s						
F10A	Beach Ranch, E	85.91	38	IAmb	IAmb	16 04 47.5	
	comp=Z,8.2nm,0.9s						
VHRN	Van Horn	86.62	56		P	16 04 50.2	+0.4
VHRN				IAmb	IAmb	16 04 51.6	
	comp=Z,4.6nm,0.8s						
MNTX	Cornudas Mount	86.72	55	IAmb	IAmb	16 04 51.8	
	comp=Z,4.0nm,0.9s						
TX31	Lajitas Ar. Si	87.03	57	IAmb	IAmb	16 04 53.5	
	comp=Z,3.7nm,0.9s						
TXAR	Lajitas Array	87.03	57	P	P	16 04 52.6	+0.9
	comp=Z,3.3nm,0.9s,baz=221,slow=6.3,SNR=19						
	comp=Z,3.3nm,0.9s						
ALPN	Alpine	87.50	56	IAmb	IAmb	16 04 55.4	
	comp=Z,4.9nm,0.7s						
ILAR	Eielson Array	88.16	13	P	P	16 04 55.4	-0.6
	comp=Z,0.3nm,0.3s,baz=215,slow=5.2,SNR=22						
	comp=Z,0.3nm,0.3s						
M29M	Somme Creek	88.25	17	P	P	16 04 56.8	+0.2
M29M				IAmb	IAmb	16 05 17.0	
	comp=Z,8.0nm,1.4s						
HILR	Hailar Array B	88.65	325	P	P	16 04 59.3	+0.6
	comp=Z,2.2nm,0.7s,baz=120,slow=5.8,SNR=5.7						
	comp=Z,2.2nm,0.7s						
PDAR	Pinedale Array	88.89	43	P	P	16 05 00.6	+0.3
	comp=Z,1.6nm,0.6s,baz=198,slow=2.9,SNR=17						
	comp=Z,1.6nm,0.6s						
HHC	Hu-ho-hao-te	89.16	314	*e*P	P	16 05 02.6	+1.2
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,240nm,4.7s						
DRIO	Del Rio	89.49	58	IAmb	IAmb	16 05 04.1	
	comp=Z,3.6nm,0.8s						
CM31	Chiang Mai Arr	89.97	290	P	P	16 05 06.1	+0.6
CM31				IAmb	IAmb	16 05 07.7	
	comp=Z,4.3nm,0.8s						
CMAR	Chiang Mai Arr	89.97	290	P	P	16 05 07.1	+1.6
	comp=Z,3.6nm,0.9s,baz=120,slow=2.8,SNR=24						
	comp=Z,3.6nm,0.9s						
CMAR	Chiang Mai Arr	89.97	290		P	16 05 06.0	+0.5
CHTO	Chiang Mai	90.10	290		P	16 05 06.3	+0.2
PZH	PanZhiHua	90.54	298	P	P	16 05 09.0	+0.8
HERN	Volcan Telica	95.46	79	IAmb	IAmb	16 05 38.8	
	comp=Z,179nm,0.9s						
BVAR	Borovoye Array	118.88	320	PKP	PKPdf	16 10 48.8	-1.3
	comp=Z,1.1nm,0.4s,baz=120,slow=2.0,SNR=9.3						
FINES	FINESS Array B	135.57	344	PKP	PKPdf	16 11 19.3	-2.2
	comp=Z,5.9nm,1.1s,baz=191,slow=1.9,SNR=3.4						
HFS	Hagfors	139.34	351	PKhKP	PKPpre	16 11 20.9	
	comp=Z,3.5nm,0.9s,baz=94,slow=4.3,SNR=6.1						
AKASG	Malin Array Be	142.81	331	PKhKP	PKPpre	16 11 31.5	
	comp=Z,3.1nm,0.5s,baz=44,slow=4.2,SNR=19						
LODK	Lodwar	143.33	247		PKPab	16 11 34.9	-0.3
EKA	Eskdalemuir Ar	144.83	5	PKP	PKPdf	16 11 36.8	-1.6
	comp=Z,3.0nm,0.8s,baz=346,slow=2.5,SNR=1.7						
BNN	Bunyan	145.45	310		PKPdf	16 11 40.6	+0.5
BR131	Keskin Array S	146.65	312		PKPdf	16 11 42.8	+0.6
BRTR	Keskin Array B	146.65	312	PKPbc	PKPbc	16 11 44.1	-0.6
	comp=Z,1.5nm,0.8s,baz=137,slow=4.4,SNR=6.7						
BRTR	Keskin Array B	146.65	312		PKPdf	16 11 43.5	+1.3
BUR08	Bucovina Ar. S	146.84	331		PKPdf	16 11 43.8	+1.6
MMAI	Mount Meron Ar	147.64	300	PKPbc	PKPbc	16 11 47.8	+0.3
	comp=Z,1.7nm,0.5s,baz=68,slow=5.5,SNR=7.4						
CLL	Collm	147.86	347		PKPdf	16 11 45.3	+1.7
GERES	GERESS Array B	150.00	344	PKPbc	PKPbc	16 11 52.4	-0.4
	comp=Z,1.0nm,0.8s,baz=90,slow=4.0,SNR=4.1						

OMAN 05 16:08:46.1±1.0**,25.°02N×63.°03E,h76**km±24km**,mb4.3**/12,
ml3.6/6**,Error ellipse: s-maj=7.7km s-min=7.1km**
az=107.0,Southwestern Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NGCH	Negor - Chabah	1.74	282	P	Pn	16 09 13.5	-1.0
NGCH				S	Sn	16 09 37.2	+1.1
JLN	Jalan Bani Buh	4.38	230	P	Pn	16 09 47.9	-2.3
	SNR=6.0						
JLN				S	Sn	16 10 40.2	+0.2
WSAR	Wadi Sarin	4.39	247	P	Pn	16 09 50.0	-0.3
	SNR=22						
WSAR				S	Sn	16 10 40.5	+0.2
WBK	Wadi Bani Khal	4.42	238	P	Pn	16 09 49.2	-1.7
	SNR=63						
WBK				S	Sn	16 10 41.3	+0.2
BIDO	Bidbid	4.71	253	P	Pn	16 09 55.2	+0.4
BIDO				S	Sn	16 10 49.0	+0.8
SMDO	Samad	4.95	248	P	Pn	16 09 58.0	-0.1
	SNR=10						
SMDO				S	Sn	16 10 55.4	+1.3
JMDO	Jabal Madar	5.23	241	P	Pn	16 10 00.5	-1.4
JMDO				S	Sn	16 11 01.8	+1.1
HOQ	Hoqain	5.41	256	P	Pn	16 10 03.4	-0.9
HOQ				S	Sn	16 11 06.3	+1.1
BSY	Bisya	5.79	248	P	Pn	16 10 10.0	+0.4
BSY				S	Sn	16 11 15.7	+1.0
SOHO	SOHO	5.97	263	P	Pn	16 10 11.0	-1.0
SOHO				S	Sn	16 11 19.1	+0.1
MDH	Madha	6.10	274	P	Pn	16 10 12.8	-1.0
BANOM	Banah	6.14	280	P	Pn	16 10 12.8	-1.5
BANOM				S	Sn	16 11 22.9	-0.4
MHTO	MHTO	6.15	230	P	Pn	16 10 14.7	+0.3
MHTO				S	Sn	16 11 23.5	+0.1
ARQ	Araqi	6.17	256	P	Pn	16 10 17.0	+2.3
	SNR=16						
UOSS	Minazif	6.19	271	P	Pn	16 10 14.4	-0.6
UOSS				S	Sn	16 11 23.6	-0.7
MASF	Masafi	6.23	275	P	Pn	16 10 17.1	+1.5
MASF				S	Sn	16 11 24.3	-1.0
HATD	Hatta, Dubai	6.26	270	P	Pn	16 10 18.7	+2.7
HATD				S	Sn	16 11 26.4	+0.3
SHME	Shamm	6.30	281	P	Pn	16 10 17.3	+0.9
	SNR=9.3						
ASHO	Ashiyiah	6.34	268	P	Pn	16 10 18.6	+1.6
	SNR=10						
ASHO				S	Sn	16 11 29.1	+1.1
ALNE	Al Ain	6.69	263	P	Pn	16 10 23.1	+1.2
	SNR=6.7						
ALNE				S	Sn	16 11 38.6	+1.9
UMZA	Um Al Zommool	7.55	254	P	Pn	16 10 34.5	+0.9

AFAD ***05*** *16:14:54.0,34.°77N×33.°50E,h6km±1km,MW3.5*
ISK ***05*** *16:14:55.2,34.°82N×32.°95E,h10km,ML3.5/15*
GII ***05*** *16:14:56.6±0.0,34.°693N±0.°002×33.°458E±0.°001,*
h18km,Mws3.1,confirmed
GRAL ***05*** *16:14:57.5±0.3,34.°75N×33.°38E,h72km±58km,MD3.5*
NIC ***05*** *16:14:57.8,34.°81N×33.°38E,h23km,Ml3.2/13*
ISC 05 16:14:57.1±0.9**,34.°71N**±0.°02×**33.°47E**±0.°02**,h23**km±6km**,**
n158,σ**1§03**/198**,4D,Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASGA	Asgata	0.20	294	⇓*i*P	Pb	16 15 02.1	-0.5
ASGA				S	Sb	16 15 06.2	-0.1
ASGA				AML	AML	16 15 07.1	
	46nm,0.4s						
ASGA				AML	AML	16 15 07.3	
	37nm,0.3s						
LAR1C	Larnaka City C	0.25	28	P	Pb	16 15 03.8	+0.6
LAR1C				S	Sb	16 15 08.3	+0.9
CSS	Mathiatis	0.28	336	Pg	Pb	16 15 02.9	-0.8
CSS				Sg	Sb	16 15 07.9	-0.4
CSS	Mathiatis	0.28	336	Pg	Pb	16 15 02.7	-1.0
CSS				Sg	Sb	16 15 07.9	-0.4
CSS	Mathiatis	0.28	336	P	Pb	16 15 02.9	-0.8
CSS				S	Sb	16 15 07.6	-0.7
CSS	Mathiatis	0.28	336	⇓*i*P	Pb	16 15 03.0	-0.7
CSS				S	Sb	16 15 06.9	-1.4
CSS				AML	AML	16 15 08.2	
	30nm,0.4s						
CSS				AML	AML	16 15 08.2	
	33nm,0.7s						
MVOU	Mavrovouni	0.34	23	P	Pb	16 15 04.2	-0.3
MVOU				S	Sb	16 15 09.6	0.0
MVOU				AML	AML	16 15 11.4	
	17nm,0.3s						
MVOU				AML	AML	16 15 11.4	
	12nm,0.3s						
ATHAL	Athalassa	0.44	352	P	Pb	16 15 05.9	-0.4
ATHAL				S	Sb	16 15 11.1	-1.3
ATHAL				AML	AML	16 15 18.2	
	31nm,0.4s						
ATHAL				AML	AML	16 15 20.9	
	20nm,0.5s						
XYLS	Xyliatos	0.46	312	⇓*i*P	Pb	16 15 05.3	-1.3
XYLS				S	Sb	16 15 11.4	-1.9
XYLS				AML	AML	16 15 12.1	
	26nm,0.3s						
XYLS				AML	AML	16 15 13.9	
	12nm,0.3s						
APOL	The Sanctuary	0.50	266	P	Pb	16 15 06.7	-0.6
APOL				S	Sb	16 15 14.8	+0.6
APOL				AML	AML	16 15 15.9	
	6.3nm,0.3s						
APOL				AML	AML	16 15 16.0	
	9.4nm,0.4s						
PAR1C	Paralimni Civi	0.53	52	S	Sn	16 15 17.1	-0.3
PARAL	Paralimni	0.55	58	P	Pn	16 15 09.5	+0.1
PARAL				S	Sn	16 15 18.4	+0.5
PARAL				AML	AML	16 15 21.3	
	8.9nm,0.7s						
PARAL				AML	AML	16 15 21.6	
	8.5nm,0.6s						
TROD	Troodos	0.55	296	⇓*i*P	Pb	16 15 07.2	-1.1
TROD				S	Sb	16 15 14.8	-1.1
TROD				AML	AML	16 15 19.9	
	8.6nm,0.3s						
TROD				AML	AML	16 15 20.1	
	5.3nm,0.4s						
LFK	Lefkose	0.58	5	Pg	Pb	16 15 08.3	-0.3
LFK				Sg	Sn	16 15 18.6	-0.1
LFK	Lefkose	0.58	5	Pg	Pb	16 15 08.4	-0.2
LFK				Sg	Sn	16 15 18.3	-0.4
NATA	Nata	0.75	276	P	Pb	16 15 10.7	-0.8
NATA				S	Sb	16 15 21.6	+0.4
NATA				AML	AML	16 15 29.5	
	6.5nm,0.5s						
NATA				AML	AML	16 15 33.9	
	4.7nm,0.6s						
ALFC	Alefka	0.85	302	P	Pb	16 15 11.6	-1.5
ALFC				S	Sb	16 15 24.1	0.0
ALFC				AML	AML	16 15 26.6	
	5.8nm,0.4s						
ALFC				AML	AML	16 15 27.3	
	6.8nm,0.5s						
AKMS	Akamas	0.98	289	P	Pn	16 15 14.8	-0.7
AKMS				S	Sb	16 15 27.7	-0.4
AKMS				AML	AML	16 15 36.5	
	3.0nm,0.4s						
AKMS				AML	AML	16 15 39.9	
	2.9nm,0.8s						
AKK2	Akkuyu-Mersin	1.43	3	Pn	Pn	16 15 21.7	+0.1
AKK2	Akkuyu-Mersin	1.43	3	Pn	Pn	16 15 21.4	-0.2
AKK2				Sn	Sb	16 15 40.4	-0.4
AKK1	Akkuyu-Mersin	1.44	2	Pn	Pn	16 15 21.6	-0.1
AKK1				Sn	Sb	16 15 41.8	+0.8
AKK1	Akkuyu-Mersin	1.44	2	Pn	Pn	16 15 21.5	-0.1
AKK1				Sn	Sb	16 15 40.5	-0.5
TEKE	Tekeli-Mersin	1.46	349	Pn	Pn	16 15 21.6	-0.4
TEKE	Tekeli-Mersin	1.46	349	Pn	Pn	16 15 21.1	-0.9
TISA	Tisan-Mersin	1.46	7	Pn	Pn	16 15 21.8	-0.2
TISA	Tisan-Mersin	1.46	7	Pn	Pn	16 15 22.3	+0.3
GULN	MERSIN_Gulnar	1.48	2	P	Pn	16 15 21.3	-1.0
GULN				S	Sn	16 15 41.1	+0.3
GULN				*i* IAML		16 15 42.0	
	comp=E,320nm,0.4s						
YESI	Yesilovacik-Me	1.49	5	Pn	Pn	16 15 22.2	-0.2
YESI	Yesilovacik-Me	1.49	5	Pn	Pn	16 15 22.5	+0.1
OREN	Orenkoy-Mersin	1.50	360	Pn	Pn	16 15 22.4	-0.1
OREN	Orenkoy-Mersin	1.50	360	Pn	Pn	16 15 22.0	-0.5
OREN				Sn	Sn	16 15 41.8	+0.5
KARG	Kargicak-Mersi	1.51	7	Pn	Pn	16 15 22.7	0.0
KARG	Kargicak-Mersi	1.51	7	Pn	Pn	16 15 22.9	+0.2
KARG				Sn	Sb	16 15 43.3	+0.2
TEPK	Tepekoy-MERSIN	1.52	2	Pn	Pn	16 15 21.9	-0.9
TEPK	Tepekoy-MERSIN	1.52	2	Pn	Pn	16 15 22.3	-0.5
TEPK				Sn	Sn	16 15 42.6	+0.7
IKL	Isikli	1.54	6	Pn	Pn	16 15 22.4	-0.7
BERE	Bereket-Mersin	1.65	353	Pn	Pn	16 15 24.3	-0.5
BERE	Bereket-Mersin	1.65	353	Pn	Pn	16 15 23.4	-1.4
SILI	Silifke-Mersin	1.70	12	Pn	Pn	16 15 25.8	+0.5
SILI	Silifke-Mersin	1.70	12	Pn	Pn	16 15 25.5	+0.2
SLFK	Silifke-Mersin	1.73	13	Pn	Pn	16 15 25.6	-0.1
SLFK	Silifke-Mersin	1.73	13	Pn	Pn	16 15 26.3	+0.6
TEVE	Tevekalti-Mers	1.73	359	Pn	Pn	16 15 25.8	+0.1
TEVE	Tevekalti-Mers	1.73	359	Pn	Pn	16 15 25.1	-0.6
KEBE	Keben-Mersin	1.75	6	Pn	Pn	16 15 25.5	-0.5
KEBE	Keben-Mersin	1.75	6	Pn	Pn	16 15 26.2	+0.2
GAZI	Gazipasa	1.79	329	P	Pn	16 15 26.2	-0.4
GAZI				S	Sn	16 15 46.8	-1.9
GAZI				*i* IAML		16 15 53.0	
	comp=N,212nm,0.5s						
GAZI				*i* IAML		16 15 54.0	
	comp=E,169nm,0.6s						
KIZK	Mersin	1.85	17	P	Pn	16 15 27.9	+0.5
KIZK				S	Sb	16 15 52.3	-0.8
KIZK				*i* IAML		16 15 58.0	
	comp=N,202nm,0.6s						
OSC2	CSNet OBS 4	1.91	212	P	Pb	16 15 30.1	-1.1
OSC2				S	Sb	16 15 55.3	+0.8
OSC2				AML	AML	16 16 10.1	
	0.8nm,0.3s						
OSC2				AML	AML	16 16 15.2	
	0.7nm,0.6s						
BHL	Bhannes	1.98	113	*e*P	Pn	16 15 29.3	+0.1
ERMK	Ermenek	1.99	347	P	Pn	16 15 30.5	+1.1
ERMK				*i* IAML		16 15 59.0	
	comp=N,181nm,0.3s						
ERMK				*i* IAML		16 16 08.0	
	comp=E,171nm,0.6s						
DQRL	Deir Qamar	2.00	119	*e*P	Pn	16 15 29.6	0.0
HWQ	Hawqa	2.09	101	*e*P	Pn	16 15 30.7	0.0
HWQ				*e*S	Sn	16 15 55.4	-0.7
HNTI	Hanita	2.15	138	P	Pn	16 15 31.9	+0.4
HNTI	Hanita	2.15	138	P	Pn	16 15 31.7	+0.2
HNTI	Hanita	2.15	138	S	Sn	16 15 57.3	-0.1
QRWL	Qaraoun	2.17	122	*e*P	Pn	16 15 31.8	0.0
ZAHL	Zahle	2.17	112	*e*P	Pn	16 15 32.0	+0.1
OSC1	CSNet OBS 1	2.18	237	P	Pn	16 15 31.7	-0.2
OSC1				S	Sn	16 15 59.7	+1.6
OSC1				AML	AML	16 16 10.4	
	0.1nm,0.3s						
OSC1				AML	AML	16 16 13.8	
	0.2nm,0.4s						
BEIL	Beino	2.24	93	*e*P	Pn	16 15 32.5	-0.3
RCY	Rachaya	2.30	121	*e*P	Pn	16 15 33.7	0.0
RCY				*e*S	Sn	16 16 00.4	-1.0
MERS	Mersin	2.32	21	Pn	Pn	16 15 34.4	+0.5
SHBL	Chebaa	2.32	125	*e*P	Pn	16 15 33.8	-0.2
MMA0B	Mount Meron ar	2.33	136	P	Pn	16 15 34.1	+0.1
MMA0B	Mount Meron ar	2.33	136	S	Sn	16 16 02.1	+0.2
GEM	Giv'at Ha'Em	2.35	129	P	Pn	16 15 34.2	-0.1
GEM	Giv'at Ha'Em	2.35	129	P	Pn	16 15 34.3	+0.1
GEM	Giv'at Ha'Em	2.35	129	S	Sn	16 16 02.4	-0.1
NATI	Neve Ativ	2.37	127	P	Pn	16 15 34.7	+0.2
NATI	Neve Ativ	2.37	127	P	Pn	16 15 34.6	+0.1
NATI	Neve Ativ	2.37	127	S	Sn	16 16 02.9	+0.1
HDMB	Hadim	2.39	341	Pn	Pn	16 15 35.5	+0.5
OFRI	`Ofer	2.43	148	P	Pn	16 15 35.2	-0.2
OFRI	`Ofer	2.43	148	P	Pn	16 15 35.0	-0.4
OFRI	`Ofer	2.43	148	S	Sn	16 16 03.9	-0.6
BLGI	Bet Lehem HaGe	2.43	143	P	Pn	16 15 36.3	+0.9
BLGI	Bet Lehem HaGe	2.43	143	P	Pn	16 15 35.5	+0.1
BLGI	Bet Lehem HaGe	2.43	143	S	Sn	16 16 05.4	+1.0
ASUZ	Hatay-Arsuz	2.46	49	P	Pn	16 15 37.0	+1.3
ASUZ				S	Sn	16 16 04.8	-0.3
ASUZ				*i* IAML		16 16 23.0	
	comp=N,117nm,1.9s						
ASUZ				*i* IAML		16 16 55.0	
	comp=E,82nm,1.5s						
KRMN	Karaman	2.47	356	Pn	Pn	16 15 36.2	+0.2
KRMN	Karaman	2.47	356	Pn	Pn	16 15 35.2	-0.8
FKH	Fakeheh	2.47	100	*e*P	Pn	16 15 35.9	-0.1
KKBE	Karaman, Kazim	2.55	350	P	Pn	16 15 39.2	+2.2
KKBE				S	Sn	16 16 10.1	+2.8
KSHT	Keshet	2.60	131	P	Pn	16 15 37.6	-0.1
KSHT	Keshet	2.60	131	S	Sn	16 16 08.9	+0.3
SHMJ	Saham	2.75	135	P	Pn	16 15 40.8	+1.1
YURE	YUREGIR	2.75	39	P	Pn	16 15 40.6	+0.8
YURE				*i* IAML		16 16 27.0	
	comp=E,92nm,2.5s						
YURE				*i* IAML		16 17 06.0	
	comp=N,116nm,2.2s						
KERG	Konya-Eregli	2.76	11	P	Pn	16 15 42.1	+2.2
KERG				S	Sb	16 16 16.2	-2.9
TAHT	Tahtakopru-Hat	2.77	52	Pn	Pn	16 15 40.8	+0.8
GULE	Gulek	2.78	22	P	Pn	16 15 42.4	+2.1
MMLI	Mount Malkishu	2.79	144	Pn	Pn	16 15 38.8	-1.5
MMLI	Mount Malkishu	2.79	144	P	Pn	16 15 40.3	+0.1
MMLI	Mount Malkishu	2.79	144	S	Sn	16 16 13.6	+0.4
SLTI	Sal'it	2.79	151	P	Pn	16 15 41.6	+1.4
SLTI	Sal'it	2.79	151	P	Pn	16 15 40.3	+0.1
SLTI	Sal'it	2.79	151	S	Sn	16 16 13.4	+0.3
KARA	Karaisali	2.86	26	Pn	Pn	16 15 41.9	+0.7
QRNJ	Al-Qirein	2.94	143	P	Pn	16 15 43.4	+1.0
CEYT	Ceyhan	2.95	38	Pn	Pn	16 15 43.1	+0.6
HMDT	Nahal Hemdat	2.99	144	P	Pn	16 15 44.2	+1.2
HMDT	Nahal Hemdat	2.99	144	P	Pn	16 15 43.8	+0.8
HMDT	Nahal Hemdat	2.99	144	S	Sn	16 16 18.6	+0.5
SALP	Salfit	3.00	151	P	Pn	16 15 43.3	+0.1
SALP	Salfit	3.00	151	P	Pn	16 15 43.1	-0.1
SALP	Salfit	3.00	151	S	Sn	16 16 18.4	0.0
SEYD	Seydisehir-KON	3.00	334	Pn	Pn	16 15 43.6	+0.3
AKUM	Antalya-Kumluc	3.02	303	P	Pn	16 15 45.7	+2.3
SEDI	Konya, Seydise	3.07	334	P	Pn	16 15 46.9	+2.6
SEDI				S	Sb	16 16 24.8	-3.5
HASA	Hatay-Hassa-Ha	3.19	49	P	Pn	16 15 46.3	+0.4
HASA				S	Sn	16 16 21.9	-1.2
HASA				*i* IAML		16 16 39.0	
	comp=N,103nm,0.5s						
HASA				*i* IAML		16 16 41.0	
	comp=E,51nm,0.3s						
UJAP	Al Uja	3.21	148	Pn	Pn	16 15 44.8	-1.2
UJAP	Al Uja	3.21	148	P	Pn	16 15 46.8	+0.8
UJAP	Al Uja	3.21	148	S	Sn	16 16 24.1	+0.6
KONT	Konya--Tatoy	3.36	345	P	Pn	16 15 49.7	+1.6
KONT				S	Sn	16 16 30.8	+3.5
AMAZ	Amatzia	3.39	159	P	Pn	16 15 48.6	+0.1
AMAZ	Amatzia	3.39	159	S	Sn	16 16 28.9	+0.9
KORT	Korkueli	3.42	313	P	Pn	16 15 52.3	+3.3
HSUJ	Al Zarqa	3.45	138	P	Pn	16 15 51.2	+1.8
NIDE	Nigde/Merkez-G	3.45	17	P	Pn	16 15 51.5	+1.9
NIDE				S	Sn	16 16 32.2	+2.4
DSI	Dead Sea	3.51	152	P	Pn	16 15 51.1	+0.9
DSI	Dead Sea	3.51	152	P	Pn	16 15 50.6	+0.4
DSI	Dead Sea	3.51	152	S	Sn	16 16 31.6	+0.6
KAMA	Osmaniye	3.59	45	P	Pn	16 15 51.8	+0.5
KAMA				S	Sn	16 16 29.3	-3.6
YTIR	Yattir	3.61	157	P	Pn	16 15 52.7	+1.1
YTIR	Yattir	3.61	157	P	Pn	16 15 51.6	0.0
YTIR	Yattir	3.61	157	S	Sn	16 16 34.6	+1.1
BSIR	Belisirma, Guz	3.62	10	P	Pn	16 15 54.0	+2.2
DOGA	KONYA_Doganhis	3.69	337	P	Pn	16 15 54.2	+1.4
DOGA				*i* IAML		16 16 55.0	
	comp=E,40nm,0.7s						
ANDN	Andirin	3.69	38	P	Pn	16 15 54.5	+1.7
ANDN				S	Sn	16 16 36.2	+0.5
ANDN				*i* IAML		16 16 43.0	
	comp=N,15nm,0.3s						
ANDN				*i* IAML		16 16 46.0	
	comp=E,16nm,0.5s						
YAHY	KAYSERI_Yahyal	3.71	24	P	Pn	16 15 55.5	+2.4
YAHY				S	Sn	16 16 37.4	+1.3
MSBI	Mazada	3.74	154	P	Pn	16 15 54.2	+1.0
MSBI	Mazada	3.74	154	S	Sn	16 16 37.1	+0.7
ASF	Jabal al Asfar	3.82	130	P	Pn	16 15 56.4	+1.9
GHAJ	Ghor Haditha	3.82	152	P	Pn	16 15 56.3	+1.9
KZIT	Kziot	3.87	168	P	Pn	16 15 55.6	+0.5
KZIT	Kziot	3.87	168	S	Sn	16 16 39.6	-0.2
KDHN	Kadinhani	3.96	344	P	Pn	16 15 57.5	+1.0
CAME	Cameli-Denizli	4.06	305	Pn	Pn	16 15 57.9	+0.1
IDAN	Idan	4.15	158	P	Pn	16 15 59.8	+0.9
IDAN	Idan	4.15	158	S	Sn	16 16 46.6	-0.1
APMY	Acipayam-Deniz	4.36	310	Pn	Pn	16 16 02.6	+0.6
ZFRI	Zfri	4.38	160	P	Pn	16 16 03.1	+0.9
ZFRI	Zfri	4.38	160	P	Pn	16 16 02.4	+0.2
ZFRI	Zfri	4.38	160	S	Sn	16 16 51.9	-0.6
PRNI	Paran	4.53	163	P	Pn	16 16 04.8	+0.6
PRNI	Paran	4.53	163	P	Pn	16 16 04.6	+0.4
PRNI	Paran	4.53	163	S	Sn	16 16 56.7	+0.5
KRMI	Paran Flat	4.70	167	P	Pn	16 16 07.1	+0.6
KRMI	Paran Flat	4.70	167	P	Pn	16 16 06.9	+0.3
KRMI	Paran Flat	4.70	167	S	Sn	16 17 00.2	-0.1
HRFI	Mount Harif	4.84	164	P	Pn	16 16 09.0	+0.5
HRFI	Mount Harif	4.84	164	P	Pn	16 16 08.6	+0.1
HRFI	Mount Harif	4.84	164	S	Sn	16 17 03.9	+0.1
MBRI	Mt Berech	5.05	166	P	Pn	16 16 12.1	+0.7
MBRI	Mt Berech	5.05	166	P	Pn	16 16 11.6	+0.2
MBRI	Mt Berech	5.05	166	S	Sn	16 17 09.4	+0.4
AQBJ	Aqaba	5.14	164	P	Pn	16 16 13.4	+0.8
EIL	Elat	5.17	166	P	Pn	16 16 13.3	+0.2
EIL	Elat	5.17	166	S	Sn	16 17 12.4	+0.4

IDC ***05*** *16:15:20.6±1.5,21.°93N×120.°90E,h0km,mb3.4/6,*
mbtmp3.4/6,MS3.1/3,Error ellipse: s-maj=58.6km
s-min=21.5km az=59.0
TAP ***05*** *16:15:24.5,21.°84N×120.°59E,h42km,ML3.7,D*
ISC 05 16:15:24.9±1.0**,21.°79N**±0.°05×**120.°52E**±0.°03**,h32**km±6km**,**
n131,σ**1§17**/200**,mb3.5**/5**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNW	Nanwan	0.28	51	*e*P	Pb	16 15 32.2	0.0
HEN	Hengchun	0.30	43	*i* P	Pb	16 15 32.5	0.0
HEN				*i* S	Sb	16 15 38.3	+0.6
TWK1	Hengchun	0.31	60	*i* P	Pb	16 15 32.5	-0.2
TWK1				*i* S	Sb	16 15 38.3	+0.3
TWKBT	Hengchun	0.31	61	*i* P	Pb	16 15 32.5	-0.3
TWKBT				*i* S	Sb	16 15 38.2	+0.2
TSEB	Hengchuen, Pin	0.37	72	*i* P	Pb	16 15 33.0	-0.5
TSEB				*i* S	Sb	16 15 39.5	+0.1

SMST	Manzhou Townsh	0.38	52	*i* P	Pb	16 15 33.3	-0.3
SMST				*i* S	Sb	16 15 39.7	+0.1
TWP	Hsiaoliuchiu	0.57	345	*i* P	Pb	16 15 36.3	-0.3
TWP				S	Sn	16 15 47.6	+2.4
WLCH	Liuqiu	0.58	347	S	Sn	16 15 47.7	+2.5
SCZT	Fangliau	0.59	9	*i* P	Pb	16 15 36.5	-0.4
SCZT				S	Sb	16 15 44.5	-0.6
TAWH	Dawu Township	0.65	32	P	Pb	16 15 37.3	-0.5
TAWH				S	Sb	16 15 43.9	-2.8
TAW	Tawu	0.67	32	P	Pb	16 15 37.6	-0.6
TAW				S	Sb	16 15 46.1	-1.1
EAST	Anshuo	0.67	27	*e*P	Pb	16 15 37.5	-0.7
MASBT	Mashibuluo	0.83	7	*i* P	Pn	16 15 39.7	-0.7
MASBT				*e*S	Sb	16 15 49.7	-2.0
WSSB	Gushan	0.88	344	S	Sn	16 15 53.7	+0.9
ECL	Taimali	0.90	26	*e*P	Pn	16 15 40.8	-0.5
SGLT	Jiouru	0.93	358	P	Pn	16 15 42.6	+0.8
SGLT				*e*S	Sb	16 15 57.0	+2.3
SSD	Sandimen	0.96	6	*i* P	Pn	16 15 41.5	-0.7
SSD				S	Sn	16 15 53.5	-1.2
LYUB	Lan-yu	1.01	78	*i* P	Pn	16 15 40.6	-2.2
LYUB				*e*S	Sn	16 15 52.5	-3.4
TWM1	Shoushan	1.04	355	*e*P	Pn	16 15 44.0	+0.8
TWG	Pinlang	1.15	26	*e*P	Pn	16 15 45.0	+0.3
TWGBT	Beinan	1.15	27	P	Pn	16 15 44.1	-0.7
TWGBT	Beinan	1.15	27	*e*P	Pn	16 15 44.0	-0.8
TWGBT				*e*S	Sn	16 16 00.2	+0.8
LDUT	Ludao	1.25	45	*e*P	Pn	16 15 44.8	-1.3
LONT	Longtian	1.25	27	*e*P	Pn	16 15 45.5	-0.6
LONT				*e*S	Sn	16 16 01.4	-0.4
TAI1	Yung-k'ang	1.28	348	*e*S	Sn	16 16 02.7	+0.3
SGST	Jiashian	1.29	3	*e*P	Pn	16 15 45.7	-1.0
SGST				*e*S	Sn	16 16 01.6	-1.3
SSHA	Shanhua	1.36	351	*e*S	Sn	16 16 04.8	+0.2
EDH	Donghe	1.39	31	*e*P	Pn	16 15 47.1	-0.9
CHN1	Nanshi	1.39	0	*e*P	Pn	16 15 47.7	-0.4
CHN1				*e*S	Sn	16 16 04.3	-1.1
STYH	Taoyuan	1.40	10	*e*P	Pn	16 15 47.9	-0.2
TSCK	Chigu Township	1.41	344	*e*P	Pn	16 15 47.6	-0.7
TSCK				S	Sn	16 16 04.2	-1.7
SCLT	Jiali	1.41	348	*e*S	Sn	16 16 05.4	-0.5
SNST	Tainan City	1.43	359	*e*P	Pn	16 15 48.6	+0.1
SNST				*e*S	Sn	16 16 05.6	-0.6
ECS	Chishang	1.46	26	*e*P	Pn	16 15 48.8	-0.2
WTP	Ta-pu	1.46	3	*e*P	Pn	16 15 48.4	-0.6
WTP				*e*S	Sn	16 16 06.0	-1.0
ELDTW	Lidau	1.47	18	*e*P	Pn	16 15 49.3	+0.1
ELDTW				*e*S	Sn	16 16 06.7	-0.8
TWK	Hsinying	1.47	359	*e*P	Pn	16 15 49.3	0.0
TWK				*e*S	Sn	16 16 05.8	-1.6
EHD	Haiduan	1.50	25	*e*P	Pn	16 15 48.2	-1.3
TPUB	Ta-pu	1.51	4	P	Pn	16 15 49.0	-0.8
TPUB	Ta-pu	1.51	4	*e*P	Pn	16 15 49.0	-0.8
TPUB				*e*S	Sn	16 16 07.5	-0.8
CHN8	Yiju	1.58	350	*e*S	Sn	16 16 09.1	-0.8
FULB	Fuli	1.58	27	*e*P	Pn	16 15 51.0	+0.3
WCKO	Fanlu	1.65	3	*e*P	Pn	16 15 51.1	-0.5
WCKO				*e*S	Sn	16 16 10.1	-1.6
CHY	Chiayi	1.71	357	*e*P	Pn	16 15 52.4	+0.1
CHY				*e*S	Sn	16 16 11.2	-1.9
TWF1	Yuli	1.72	25	*e*P	Pn	16 15 53.5	+1.0
TWF1				*e*S	Sn	16 16 12.3	-1.0
ALS	Alishan	1.74	9	*e*P	Pn	16 15 52.9	-0.1
ALS				*e*S	Sn	16 16 13.6	-0.7
VCHM	Qimei	1.74	325	*e*P	Pn	16 15 51.9	-1.0
VCHM				*e*S	Sn	16 16 11.7	-2.1
WSL	Shuilin Townsh	1.75	351	P	Pn	16 15 52.1	-0.9
WSL				S	Sn	16 16 12.4	-1.7
YULB	Yu-li	1.75	24	P	Pn	16 15 53.3	+0.2
YULB	Yu-li	1.75	24	*e*P	Pn	16 15 53.2	+0.2
YULB				*e*S	Sn	16 16 13.4	-0.9
CHN5	Tsauling	1.81	5	P	Pn	16 15 53.5	-0.4
EHYH	Wanrong	1.86	24	*e*P	Pn	16 15 54.4	-0.2
WSF	Szhu	1.86	352	*i* S	Sn	16 16 15.3	-1.7
EHY	Hungye	1.86	23	*e*P	Pn	16 15 54.4	-0.2
WGK	Gukeng	1.89	1	*i* P	Pn	16 15 54.4	-0.5
WGK				*e*S	Sn	16 16 16.8	-0.8
HGSD	Ruisui	1.89	26	*e*P	Pn	16 15 55.8	+0.8
HGSD				*e*S	Sn	16 16 18.6	+0.9
WDLH	Douliu	1.89	1	P	Pn	16 15 54.4	-0.6
WDLH				*e*S	Sn	16 16 16.5	-1.2
WDL	Douliou City	1.92	1	*e*S	Sn	16 16 17.6	-0.8
WHYT	Xinyi Township	1.93	9	P	Pn	16 15 55.2	-0.2
WHYT				S	Sn	16 16 17.1	-1.5
PHUB	P'eng-hu	1.93	333	P	Pn	16 15 55.4	-0.1
PHUB				S	Sn	16 16 15.7	-2.9
PNG	Penghu	1.98	334	*e*S	Sn	16 16 17.9	-2.1
SSLB	Suanglung	2.03	11	P	Pn	16 15 56.8	-0.1
SSLB	Suanglung	2.03	11	P	Pn	16 15 56.7	-0.3
SSLB				S	Sn	16 16 19.7	-1.5
WJS	Zhushan	2.04	5	*e*P	Pn	16 15 56.4	-0.5
WJS				S	Sn	16 16 20.7	-0.6
VWDT	VWDT	2.04	16	*e*P	Pn	16 15 57.6	+0.6
VWDT				*e*S	Sn	16 16 22.9	+1.5
EGFH	Guangfu	2.05	24	*e*P	Pn	16 15 58.0	+0.9
WARBT	Fenglin Townsh	2.08	22	*e*P	Pn	16 15 57.1	-0.5
WARBT				*e*S	Sn	16 16 21.9	-0.6
WNT	Mingjian	2.09	4	*e*S	Sn	16 16 21.4	-1.1
SMLT	Sun Moon Lake	2.12	9	*e*P	Pn	16 15 58.0	-0.1
SMLT				*e*S	Sn	16 16 22.3	-1.1
TYC	Yuchr	2.13	8	*e*P	Pn	16 15 58.3	+0.1
TYC				*e*S	Sn	16 16 22.6	-0.9
ESL	Shilin	2.19	23	*e*P	Pn	16 16 00.1	+1.1
ESL				*e*S	Sn	16 16 22.7	-2.3
SHUL	Shoufeng	2.21	26	*e*P	Pn	16 16 01.6	+2.2
OWD	Renai	2.24	16	P	Pn	16 15 59.9	0.0
WUSB	Renai	2.26	14	P	Pn	16 16 00.2	+0.1
WUSB				S	Sn	16 16 25.4	-1.7
WCH1	Changhua City	2.27	1	*e*P	Pn	16 15 59.7	-0.5
WCH1				*e*S	Sn	16 16 26.2	-0.9
WCHH	Zhanghua	2.28	1	*e*S	Sn	16 16 26.7	-0.7
WCS	Beigang Elemen	2.29	9	*e*P	Pn	16 16 00.1	-0.3
WCS				*e*S	Sn	16 16 25.4	-2.1
ETM	Tongmen	2.35	22	*e*P	Pn	16 16 02.0	+0.8
ETM				*e*S	Sn	16 16 29.1	+0.1
TCU	Taichung	2.35	3	*e*S	Sn	16 16 28.4	-0.7
WHF	Hehuan Shan	2.45	16	*e*P	Pn	16 16 04.0	+1.1
WHP	Taichung City	2.51	9	*e*P	Pn	16 16 03.7	+0.2
WHP				*e*S	Sn	16 16 32.7	-0.4
TDCB	Techi	2.52	13	*e*P	Pn	16 16 04.9	+1.1
TDCB				*e*S	Sn	16 16 32.1	-1.4
TWT	Tachien	2.53	14	*e*P	Pn	16 16 04.0	+0.1
TWT				*e*S	Sn	16 16 34.4	+0.7
TWQ1	Liyutan	2.56	5	*e*P	Pn	16 16 04.6	+0.5
TWQ1				*e*S	Sn	16 16 33.9	-0.3
ETLH	Xiulin Townshi	2.57	20	*e*P	Pn	16 16 04.3	0.0
ETLH				*e*S	Sn	16 16 33.6	-0.9
ETL	Fush Village	2.57	23	*e*P	Pn	16 16 05.0	+0.7
ETL				*e*S	Sn	16 16 35.0	+0.5
NACB	Ninganchiao	2.58	22	P	Pn	16 16 05.5	+1.2
NACB	Ninganchiao	2.58	22	*e*P	Pn	16 16 05.5	+1.2
NACB				*e*S	Sn	16 16 33.8	-0.8
NSY	Sanyi	2.63	5	*e*S	Sn	16 16 35.3	-0.6
NNSB	Datong	2.75	17	P	Pn	16 16 07.6	+0.8
NNSB				*e*S	Sn	16 16 38.5	-0.5
NNS	Nan Shan	2.76	16	*e*P	Pn	16 16 08.0	+1.0
NNS				*e*S	Sn	16 16 38.1	-1.1
EOS4	EOS4	2.85	35	*e*P	Pn	16 16 08.4	+0.5
EOS4				*e*S	Sn	16 16 39.8	-1.1
ENA	Nanau	2.86	23	*e*P	Pn	16 16 09.5	+1.2
NSTT	Nanjuang	2.87	9	P	Pn	16 16 08.5	+0.1
NSTT				*e*S	Sn	16 16 39.5	-2.2
LIOB	Emei	2.88	9	P	Pn	16 16 08.8	+0.2
NFF	Wufeng Townshi	2.88	11	*e*P	Pn	16 16 08.5	-0.2
NFF				*e*S	Sn	16 16 41.0	-1.3
EWUT	Wuta	2.89	23	*e*P	Pn	16 16 09.5	+0.8
EWUT				*e*S	Sn	16 16 42.7	+0.4
LATG	Datong	2.89	19	*e*P	Pn	16 16 10.3	+1.5
LATG				*e*S	Sn	16 16 41.1	-1.3
YHNB	Yeheng	2.98	15	P	Pn	16 16 10.8	+0.9
YHNB	Yeheng	2.98	15	*e*P	Pn	16 16 09.9	0.0
YHNB				*e*S	Sn	16 16 43.2	-1.4
NSK	Sanguang	2.98	15	*e*P	Pn	16 16 10.6	+0.6
NSK				*e*S	Sn	16 16 42.4	-2.2
EOS3	EOS3	2.99	33	*e*P	Pn	16 16 10.9	+1.0
EOS3				*e*S	Sn	16 16 42.1	-2.5
ENTT	Nioudou	3.00	19	*e*P	Pn	16 16 11.5	+1.3
ENTT				*e*S	Sn	16 16 46.7	+1.7
KSHI	Guanxi Townshi	3.04	11	*e*P	Pn	16 16 09.9	-0.8
KSHI				*e*S	Sn	16 16 44.8	-1.2
EOS2	EOS2	3.06	31	*e*P	Pn	16 16 09.6	-1.3
TWE	Neicheng	3.11	20	*e*P	Pn	16 16 12.1	+0.5
NWLT	Wulai	3.11	17	*e*P	Pn	16 16 12.4	+0.6
NWLT				*e*S	Sn	16 16 46.6	-1.3
FUSB	Fushanzhiwuyua	3.12	18	P	Pn	16 16 12.9	+1.0
FUSB				*e*S	Sn	16 16 48.4	+0.4
KNM	Kinmen	3.25	324	*e*P	Pn	16 16 14.3	+0.7
KNM				*e*S	Sn	16 16 50.2	-0.9
TATO	Taipei	3.30	15	P	Pn	16 16 14.6	+0.3
KNMB	Chin-men Tao	3.31	324	*e*P	Pn	16 16 14.1	-0.4
ZPLA	Ao Xicun	3.33	310	*e*P	Pn	16 16 14.5	-0.2
TIPB	Shuangxi	3.39	20	*e*P	Pn	16 16 16.4	+0.8
TIPB				*e*S	Sn	16 16 55.6	+0.8
DSXP	Dongshan	3.44	304	*e*P	Pn	16 16 16.8	+0.6
DSXP				*e*S	Sn	16 16 54.2	-1.6
PTMZ	Houxiangcun	3.48	339	*e*P	Pn	16 16 16.4	-0.4
ZUZH	Zhuzihu	3.49	15	*e*P	Pn	16 16 16.6	-0.4
SXI1	Grass Mountain	3.52	20	*e*P	Pn	16 16 20.4	+3.0
AXDP	Jialang	3.88	323	*e*P	Pn	16 16 21.9	-0.4
AXDP				S	Sn	16 17 04.4	-2.4
MATB	Ma-tsu	4.38	353	*e*P	Pn	16 16 28.0	-1.1
MATB				*e*S	Sn	16 17 15.1	-3.9
LYJJ	Jianjiangzhen	4.79	352	*e*P	Pn	16 16 34.0	-0.8
XPSS	Dashiqiu	5.13	357	*e*P	Pn	16 16 38.1	-1.4
SXFK	Yanhouchang	5.29	331	*e*P	Pn	16 16 41.4	-0.3
SXFK				*e*S	Sn	16 17 37.6	-3.9
JNU	Nakatsue	14.55	37	LR	LR	16 24 35.1	
	comp=Z,52nm,18.3s,baz=352,slow=39						
CMAR	Chiang Mai Arr	20.53	265	P	Pn	16 20 04.8	+1.8
	1.0nm,0.8s,baz=75,slow=9.1,SNR=7.4						
	1.0nm,0.8s						
ASAJ	Asahikawa	28.80	34	LR	LR	16 32 19.8	
	comp=Z,29nm,19.3s,baz=324,slow=36						
MKAR	Makanchi Array	39.67	318	P	P	16 22 54.7	+0.8
	0.6nm,0.7s,baz=101,slow=7.6,SNR=4.6						
	0.6nm,0.7s						
KURBB	Kurchatov Arra	43.57	322	P	P	16 23 27.1	+1.4
	0.6nm,0.8s,baz=128,slow=7.1,SNR=4.5						
	0.6nm,0.8s						
WRA	Warramunga Arr	43.62	161	P	P	16 23 26.9	+0.5
	0.6nm,0.7s,baz=343,slow=8.3,SNR=3.2						
	0.6nm,0.7s						
ASAR	Alice Springs	47.02	163	P	P	16 23 54.1	+0.7
	0.1nm,0.4s,baz=343,slow=6.7,SNR=5.9						
	0.1nm,0.4s						
BVAR	Borovoye Array	49.16	322	P	P	16 24 11.3	+1.7
	0.4nm,0.5s,baz=103,slow=10,SNR=4.6						
	0.4nm,0.5s						
KDAK	Kodiak Island	70.21	35	LR	LR	16 58 24.5	
	comp=Z,23nm,19.1s,baz=80,slow=37						

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*IDC **05** 16:15:43.5±2.1, 51°.68N×175°.61W, h0^{km}, mb3.8/5, mbtmp3.8/7, ML3.7/2, MS3.3/3, Error ellipse: s-maj=63.2km s-min=20.7km az=4.0*

*NEIC **05** 16:15:47.7±1.8, 51°.34N±0°.06×175°.59W±0°.05, h45^{km}±8^{km}, mb4.0/55, ML4.3/14, ML3.9(AEIC), Error ellipse: s-maj=9.2km s-min=4.1km az=173.0*

*AEIC **05** 16:15:47.2±1.9, 51°.36N±0°.06×175°.54W±0°.02, h29^{km}±5^{km}, Error ellipse: s-maj=8.6km s-min=1.7km az=176.0*

ISC 05 16:15:45.9±1.5**, 51°.29N**±0°.07×**175°.59W**±0°.04**, h31**^{km}±7^{km}**, n138, **σ1§**47**/137**, mb4.0**/21**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSIG	Igitkin Island	0.73	343		Pb	16 16 00.4	+0.2
GSIG					Sb	16 16 09.6	-0.3
ETKA	Kagalaska Isla	0.77	319		Pb	16 16 00.9	+0.1
GSCK	Great Sitkin C	0.81	334		Pn	16 16 01.8	+0.6
GSCK					Sn	16 16 12.6	+0.4
GSMY	Great Sitkin M	0.81	339		Pb	16 16 01.7	+0.2
GSMY					Sn	16 16 12.2	-0.1
GSTD	Great Sitkin T	0.84	336		Pn	16 16 02.3	+0.6
GSTD					Sn	16 16 13.2	+0.1
GSTR	Great Sitkin T	0.86	340		Pb	16 16 02.6	+0.3
GSTR				Sn	Sn	16 16 13.6	+0.1
GSSP	Great Sitkin S	0.88	336		Pb	16 16 03.0	+0.2
ADK	Adak	0.91	311		Pn	16 16 02.7	+0.1
ADK				Sn	Sb	16 16 12.6	-2.3
ADK				IAML		16 16 17.5	
	8µm,0.2s						
ADK				IAML		16 16 17.9	
	8µm,0.3s						
ADAG	Mount Adagdak	0.94	318		Pb	16 16 04.1	+0.4
ADAG					Sn	16 16 16.2	+0.9
KIRH	Kanaga Island	1.12	304		Pn	16 16 06.5	+1.0
KIWB	Kanaga Island	1.13	301		Pn	16 16 06.5	+0.9
KIWB					Sn	16 16 18.6	-1.5
KIWB				IAML		16 16 24.1	
	comp=E,6µm,0.4s						
KIKV	Kanaga Island	1.15	301		Sb	16 16 24.1	+2.3
KINC	Kanaga Island	1.16	304		Pn	16 16 06.9	+0.9
KICM	Kanaga Island	1.18	303		Pn	16 16 07.4	+1.0
ATKA	Atka Island	1.26	43		Pn	16 16 06.9	-0.5
ATKA					Sn	16 16 21.9	-1.3
KOKL	Mount Kliuchef	1.35	39		Pn	16 16 08.9	+0.3
KOFP	Korovin Flat P	1.35	43		Pn	16 16 09.1	+0.3
KOWE	Korovin West	1.36	37		Pn	16 16 09.4	+0.5
KONW	Korovin Northw	1.40	37		Pn	16 16 09.9	+0.5
KOSE	Korovin Southe	1.43	41		Pn	16 16 10.3	+0.6
TAFL	Tanaga Flats	1.52	289		Pn	16 16 12.0	+1.0
TAFP	Tanaga Falls P	1.61	293		Pn	16 16 13.8	+1.5
GAEA	Gareloi East	2.03	285		Pn	16 16 20.5	+2.4
GAKI	Gareloi-Kavalg	2.04	279		Pn	16 16 20.0	+1.9
GALAA	Gareloi Lava P	2.04	285		Pn	16 16 20.5	+2.3
GANE	Gareloi Northe	2.06	286		Pn	16 16 20.9	+2.4
CEPE	Semis' Perret	3.04	285		Pn	16 16 35.1	+3.1
AMKA	Amchitka	3.21	274		Pn	16 16 35.6	+1.5
AMKA				IAML		16 17 28.5	
	comp=N,468nm,0.5s						
LSPA	Little Sitkin	3.70	283		Pn	16 16 43.8	+2.9
LSNW	Little Sitkin	3.74	283		Pn	16 16 43.8	+2.4
CLES	Cleveland East	3.83	64	Pn	Pn	16 16 44.3	+1.5
NIKH	Nikolski High	4.48	65		Pn	16 16 53.4	+1.8
NIKH				IAML		16 18 06.3	
	comp=E,329nm,0.7s						
NIKH				IAML		16 18 07.7	
	comp=N,332nm,0.6s						
OKSP	Okmok Steeple	4.89	63		Pn	16 17 00.6	+3.2
OKTU	Okmok Mt. Tuli	5.08	63		Pn	16 17 02.9	+3.0
MREP	Makushin Rep't	5.96	61		Pn	16 17 14.6	+2.6
MSW	Makushin Switc	5.97	60		Pn	16 17 14.9	+2.7
UNV	Unalaska Valle	6.10	62		Pn	16 17 16.1	+2.2
P08K	Saint George I	6.40	31	Pn	Pn	16 17 19.2	+1.2
LVA	Lava Point	6.48	60	Pn	Pn	16 17 18.8	-0.3
SHEM	Shemya Is, Ala	6.53	287	Pn	Pn	16 17 19.5	-0.2
SMY	Shemya	6.53	287	Pn	Pn	16 17 19.3	-0.5
AKUT	Akutan	6.61	61	Pn	Pn	16 17 22.0	+1.2
SPIA	Saint Paul Isl	6.68	26		Pn	16 17 24.3	+2.5
FALS	False Pass	8.15	59	Pn	Pn	16 17 43.7	+1.7
SDPT	Sand Point	9.91	60	Pn	Pn	16 18 07.6	+1.5
CNBA	Chernabura Isl	10.26	64	Pn	Pn	16 18 11.7	+0.8
M11K	Mekoryuk	10.52	26	Pn	Pn	16 18 16.2	+1.8
O14K	Tigyukauivet M	11.40	40	Pn	Pn	16 18 27.7	+1.3
N14K	Kuskokwak Cree	11.66	37	Pn	Pn	16 18 31.6	+1.6
O15K	Ungalikthiuk R	11.95	43	Pn	Pn	16 18 36.6	+2.7
N15K	Kwethluk River	12.43	38	Pn	Pn	16 18 43.8	+3.2
O16K	Kokwok River B	12.92	43	Pn	Pn	16 18 51.0	+3.8
N17K	Nushagak Hills	13.81	41	Pn	Pn	16 19 02.1	+2.8
O18K	Koktuh Hills	14.31	45		P	16 19 10.9	-2.1
ANM	Nome	14.34	18	Pn	Pn	16 19 10.3	+3.7
N18K	Kilae Creek	14.43	42	Pn	Pn	16 19 09.0	+1.1
J16K	Anvik River	14.44	28	Pn	Pn	16 19 05.3	-2.7
Q19K	Cape Douglas,	14.65	50	Pn	Pn	16 19 10.4	-0.4
K17K	Iditarod	14.76	33	Pn	Pn	16 19 10.2	-2.1
KDAK	Kodiak Island	14.80	55	Pn	Pn	16 19 10.4	-2.4
	comp=N,0.2nm,0.3s,baz=12,slow=4.5,SNR=10						
KDAK				Sn	Sn	16 21 57.9	+2.3
	comp=N,0.1nm,0.3s,baz=209,slow=19,SNR=1.6						
KDAK				LR	LR	16 24 25.2	
	comp=N,75nm,19.5s,baz=223,slow=36						
	comp=N,5.3nm,0.9s						
N19K	Bonanza Creek	15.09	43		P	16 19 20.2	-1.5
L19K	White Mountain	15.68	38		P	16 19 28.2	+0.1
L19K				IAmb	IAmb	16 19 36.1	
	comp=Z,17nm,1.2s						
G16K	Koyuk River	15.70	21		P	16 19 29.7	+1.4
BRLK	Bradley Lake	16.27	49	Pn	Pn	16 19 31.0	-1.0
PETK	Petropavlovsk-	16.45	287	LR	LR	16 24 46.9	
	comp=Z,31nm,19.0s,baz=126,slow=33						
STLK	Strandline Lak	16.55	43	Pn	Pn	16 19 35.8	+0.3
SUA	Susitna One	17.00	44		P	16 19 43.9	+1.0
SUA				IAmb	IAmb	16 20 07.1	
	comp=Z,12nm,1.2s						
L22K	Petersville	17.48	40		P	16 19 49.3	+1.2
F19K	Shaleruckik Mo	17.96	23		Pn	16 19 53.4	+0.5
IMAR	Indian Mountai	18.44	29		P	16 19 58.7	+0.1
E19K	Redstone River	18.58	22		P	16 20 00.2	+0.1
RND	Reindeer	18.67	39		P	16 20 00.7	-0.5
MCK	McKinley	18.79	38		P	16 20 01.1	-1.4
G21K	Allakaket	18.88	28		P	16 20 02.0	-1.3
DHY	Denali Highway	19.12	41	P	P	16 20 06.0	-0.2
H22K	Ishtalitna Cre	19.12	31		P	16 20 05.6	-0.5
NEA2	Nenana	19.18	36		P	16 20 05.4	-1.3
I23K	Minto, Yukon-K	19.37	34	P	P	16 20 08.9	+0.2
I23K				IAmb	IAmb	16 20 15.3	
	comp=Z,4.6nm,0.6s						
CCB	Clear Creek Bu	19.67	37		P	16 20 10.7	-1.4
D20K	Etivluk River	19.72	21		P	16 20 13.2	+0.6
D20K				IAmb	IAmb	16 20 21.0	
	comp=Z,16nm,1.5s						
HDA	Harding Lake	19.88	38	P	P	16 20 13.6	-0.8
HDA				IAmb	IAmb	16 20 24.3	
	comp=Z,5.5nm,0.8s						
K24K	Donnelly Dome	20.08	40	P	P	16 20 15.2	-1.3
IL31		20.08	37		P	16 20 14.1	-2.4
IL31				IAmb	IAmb	16 20 48.7	
	comp=Z,8.3nm,1.3s						
ILAR	Eielson Array	20.08	37	P	P	16 20 15.8	-0.8
	comp=Z,0.3nm,0.3s,baz=226,slow=9.3,SNR=28						
	comp=Z,0.4nm,0.4s						
ILAR	Eielson Array	20.08	37	P	P	16 20 14.7	-1.8
E21K	Killik River	20.13	23	P	P	16 20 15.1	-1.9
H24K	Noodor Dome	20.27	34	P	P	16 20 16.8	-1.8
H24K				IAmb	IAmb	16 20 25.4	
	comp=Z,8.3nm,1.1s						
COLD	Coldfoot	20.33	29		P	16 20 16.2	-3.0
COLD				IAmb	IAmb	16 20 28.9	
	comp=Z,4.7nm,0.8s						
E22K	Anaktuvuk Pass	20.47	26		P	16 20 20.8	+0.1
E22K				IAmb	IAmb	16 20 30.4	
	comp=Z,6.6nm,1.1s						
J25K	Salcha River,	20.59	38	P	P	16 20 22.0	-0.1
J25K				IAmb	IAmb	16 20 29.7	
	comp=Z,5.1nm,0.5s						
DOT	Dot Lake	20.72	41	P	P	16 20 23.8	+0.3
DOT				IAmb	IAmb	16 20 29.5	
	comp=Z,5.0nm,0.8s						
D22K	Ayikyak River	20.77	23		P	16 20 24.1	+0.1
D22K				IAmb	IAmb	16 20 36.1	
	comp=Z,11nm,1.1s						
SCRK	Sand Creek	20.87	40		P	16 20 25.3	+0.1
SCRK				IAmb	IAmb	16 20 30.7	
	comp=Z,11nm,1.0s						
B21K	Ikpikpuk River	20.88	21		P	16 20 25.9	+0.8
F24K	Squaw Lake	21.22	30	P	P	16 20 29.9	+1.1
F24K				IAmb	IAmb	16 20 36.0	
	comp=Z,14nm,1.4s						
J26L	Joseph Creek	21.25	39		P	16 20 28.8	-0.5
J26L				IAmb	IAmb	16 20 34.1	
	comp=Z,5.3nm,0.6s						
D23K	Nanushuk River	21.35	25	P	P	16 20 30.9	+0.7
D23K				IAmb	IAmb	16 20 40.7	
	comp=Z,4.2nm,0.7s						
E24K	Your Creek	21.37	28	P	P	16 20 30.4	-0.1
E24K				IAmb	IAmb	16 20 58.8	
	comp=Z,7.0nm,1.3s						
TOLK	Toolik Lake Re	21.43	26		P	16 20 31.0	-0.1
TOLK				IAmb	IAmb	16 20 41.9	
	comp=Z,5.1nm,0.7s						
I26K	Coal Creek Min	21.74	37		P	16 20 34.4	0.0
I26K				IAmb	IAmb	16 21 02.6	
	comp=Z,5.7nm,1.2s						
D24K	Happy Valley	21.97	26		P	16 20 35.8	-1.1
D24K				IAmb	IAmb	16 21 04.7	
	comp=Z,3.4nm,0.8s						
C23K	Itkillik River	21.97	23		P	16 20 36.8	0.0
E25K	Arctic Village	22.29	30		P	16 20 39.8	-0.5
E25K				IAmb	IAmb	16 20 47.7	
	comp=Z,4.7nm,1.1s						
C24K	Franklin Bluff	22.38	24		P	16 20 40.4	-0.8
C24K				IAmb	IAmb	16 21 23.8	
	comp=Z,6.5nm,1.1s						
D25K	Kavik River	22.75	27		P	16 20 45.6	+0.4
D25K				IAmb	IAmb	16 20 59.9	
	comp=Z,2.9nm,0.8s						
I28M	Miner Creek	23.04	38		P	16 20 47.9	-0.3
I28M				IAmb	IAmb	16 20 54.3	
	comp=Z,5.4nm,1.1s						
H29M	Whitestone	23.91	37		P	16 20 56.2	-0.5
H29M				IAmb	IAmb	16 21 20.5	
	comp=Z,5.5nm,1.2s						
I30M	Mount Dempster	24.38	40		P	16 21 00.8	-0.3
I30M				IAmb	IAmb	16 21 07.0	
	comp=Z,2.9nm,0.8s						
E28M	Babbage River	24.46	31		P	16 21 02.0	+0.3
E28M				IAmb	IAmb	16 21 08.7	
	comp=Z,3.5nm,0.8s						
E29M	Blow River	24.91	33		P	16 21 06.7	+0.9
E29M				IAmb	IAmb	16 21 13.1	
	comp=Z,3.7nm,0.8s						
H11N2	WAKE ISLAND Hy	34.38	210	T	T	16 59 12.2	
	baz=18,slow=76,SNR=21						
H11N3	WAKE ISLAND Hy	34.39	210	T	T	16 59 13.2	
	baz=18,slow=76,SNR=25						
H11N1	WAKE ISLAND Hy	34.40	210	T	T	16 59 13.6	
	baz=18,slow=76,SNR=26						
H11S1	WAKE ISLAND Hy	35.59	210	T	T	17 00 41.8	
	baz=18,slow=76,SNR=9.0						
H11S2	WAKE ISLAND Hy	35.61	210	T	T	17 00 36.4	
	baz=18,slow=76,SNR=5.8						
H11S3	WAKE ISLAND Hy	35.61	210	T	T	17 00 44.6	
	baz=18,slow=76,SNR=6.1						
MCMT	McKenzie Canyo	41.28	73	P	P	16 23 28.2	-0.3
YHH	Holmes Hill	42.50	72	P	P	16 23 39.6	+1.1
BW06	Boulder Array	44.41	74	P	P	16 23 54.1	+0.3
PD31	Pinedale Array	44.41	74	P	P	16 23 54.1	+0.3
PDAR	Pinedale Array	44.41	74	P	P	16 23 55.8	+1.9
	comp=Z,0.7nm,0.6s,baz=310,slow=4.6,SNR=8.3						
	comp=Z,0.7nm,0.6s						
ILON	Igloolik, Nuna	44.51	30	P	P	16 23 52.7	-1.2
FCC	Fort Churchill	44.55	47	P	P	16 23 53.9	-0.5
FCC				IAmb	IAmb	16 24 08.0	
	comp=Z,5.2nm,1.5s						
PV05	Paradox Valley	47.49	79	P	P	16 24 16.6	-1.6
PV13	Radium Mtn., P	47.62	79	P	P	16 24 18.0	-1.1
TXAR	Lajitas Array	56.67	83	P	P	16 25 28.1	+1.7
	comp=Z,0.2nm,0.4s,baz=317,slow=6.7,SNR=2.2						
	comp=Z,0.2nm,0.4s						
TXAR	Lajitas Array	56.67	83	P	P	16 25 25.8	-0.6
R40A	Maddies Statio	57.47	68	P	P	16 25 31.9	+0.2
KURK	Kurchatov	60.52	315	P	P	16 25 53.0	+0.3
KURBB	Kurchatov Arra	60.63	315	P	P	16 25 54.1	+0.7
	comp=Z,0.7nm,0.4s,baz=44,slow=6.5,SNR=14						
	comp=Z,0.7nm,0.4s						
MKAR	Makanchi Array	61.65	310	P	P	16 25 59.6	-0.9
	comp=Z,0.2nm,0.3s,baz=49,slow=6.2,SNR=7.2						
	comp=Z,0.2nm,0.3s						
MKAR	Makanchi Array	61.65	310	P	P	16 25 60.0	-0.5
BVAR	Borovoye Array	62.24	321	P	P	16 26 05.2	+0.9
	comp=Z,0.7nm,0.3s,baz=52,slow=6.9,SNR=11						
	comp=Z,0.7nm,0.3s						
MLR	Muntele Rosu	81.82	345	LR	LR	17 09 21.1	
	comp=Z,65nm,18.0s,baz=312,slow=40						
WB0	Warramunga Arr	83.20	227	P	P	16 28 08.0	-1.0
H03N2	Juan Fernandez	119.19	108	T	T	18 45 53.2	
	baz=316,SNR=6.5						
H03N1	Juan Fernandez	119.20	108	T	T	18 45 48.8	
	baz=316,slow=74,SNR=8.2						
H03N3	Juan Fernandez	119.21	108	T	T	18 45 49.4	
	baz=316,slow=74,SNR=7.1						

IDC 05 16:17:05.8±6.0**, 5°.70S**×**133°.57E, h0**^{km}**, mb3.5**/1**, mbtmp3.2**/3**, ML3.1**/2**, Error ellipse: s-maj=340.3km s-min=34.1km az=77.0, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.18	177	Pn	Pn	16 20 28.1	0.0
	0.1nm,0.3s,baz=359,slow=13,SNR=7.4						
WRA				Sn	Sn	16 22 53.5	-13
	0.3nm,0.3s,baz=356,slow=18,SNR=4.2						
	0.4nm,0.9s						
ASAR	Alice Springs	17.87	179	P	Pn	16 21 16.1	0.0
	0.1nm,0.3s,baz=346,slow=8.6,SNR=8.0						
	0.2nm,0.5s						

MKAR	**Makanchi Array**	**69.14**	**325**	P	P	16 28 14.1	0.0
	0.4nm,0.7s,baz=112,slow=7.9,SNR=2.5						
	0.4nm,0.7s						

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*CATAC **05** 16:24:21.8±0.4, 13°N±2°×9°1W±°, h21km±3km, M4.7/35, MLv4.7/35, Error ellipse: s-maj=4.7km s-min=3.9km az=72.1, confirmed*
*GCG **05** 16:24:22.6±2.4, 13°.44N×90°.55W, h35km±26km, MD4.8, ML4.8*
*SNET **05** 16:24:23.9±1.4, 13°.42N×90°.41W, h25km, ML4.5*
*NEIC **05** 16:24:24±2.2, 13°.48N±0°.05×90°.52W±0°.04, h53km±8km, mb4.2/28, Error ellipse: s-maj=7.1km s-min=5.7km az=160.0*
*IDC **05** 16:24:27.8±2.0, 13°.71N×90°.12W, h93km±12km, mb3.5/6, mbtmp3.9/9, MS3.1/7, Error ellipse: s-maj=39.8km s-min=11.4km az=48.0*
*UCR **05** 16:25:03.6±1.0, 12°.37N×87°.71W, h53km, MB4.2(NEIC)*
ISC 05 16:24:23.9±0.9, **13°.50N**±0°.05×**90°.47W**±0°.04, **h62**km±8km, **n192, σ1s.35**/215, **mb4.1**/17, **5C, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESSJ	**San Jos, E**	**0.07**	**336**	*i* P	**Pn**	**16 24 35.4**	**+2.3**
FAME	**Alcaldia de Sa**	**0.56**	**52**	P	**Pn**	**16 24 35.4**	**-1.3**
PCG5	**San Vicente Pa**	**0.72**	**7**	*e*P	**Pn**	**16 24 38.8**	**+0.1**
FG16	**Alotenango, Sa**	**0.77**	**357**	*i* P	**Pn**	**16 24 41.0**	**+1.6**
FG16				IAML		16 25 01.7	
	comp=N,82µm,0.2s						
NUBE	**Las Nubes**	**0.78**	**59**	⇑*i*P	**Pn**	**16 24 38.6**	**-0.8**
NUBE	**Las Nubes**	**0.78**	**59**	*i* P	**Pn**	**16 24 38.6**	**-0.8**
NUBE				*e*S	**Sn**	**16 24 49.9**	**-0.9**
NUBE	**Las Nubes**	**0.78**	**59**	P	**Pn**	**16 24 38.7**	**-0.8**
NUBE	**Las Nubes**	**0.78**	**59**	S	**Sn**	**16 24 50.3**	**-0.5**
CEVE	**Cerro Verde**	**0.89**	**68**	P	**Pn**	**16 24 40.4**	**-0.4**
CEVE	**Cerro Verde**	**0.89**	**68**	S	**Sn**	**16 24 54.3**	**+1.0**
SBLS	**San Blas**	**0.89**	**68**	*i* P	**Pn**	**16 24 40.2**	**-0.7**
SBLS				*e*S	**Sn**	**16 24 53.2**	**-0.2**
RTR	**El Retiro**	**0.90**	**64**	*e*P	**Pn**	**16 24 40.4**	**-0.5**
SNJE	**San Jose**	**0.92**	**66**	*i* P	**Pn**	**16 24 40.7**	**-0.5**
SNJE				*e*S	**Sn**	**16 24 54.0**	**+0.1**
ESSG	**Sabana Grande**	**0.95**	**339**	*e*P	**Pn**	**16 24 39.4**	**-2.0**
JAYA	**Jayaque - finc**	**1.01**	**81**	*i* P	**Pn**	**16 24 41.5**	**-0.7**
JAYA				*e*S	**Sn**	**16 24 55.4**	**-0.5**
JAYA	**Jayaque - finc**	**1.01**	**81**	*i* P	**Pn**	**16 24 41.6**	**-0.7**
JAYA				*e*S	**Sn**	**16 24 54.6**	**-1.3**
JAYA	**Jayaque - finc**	**1.01**	**81**	P	**Pn**	**16 24 41.5**	**-0.7**
JAYA	**Jayaque - finc**	**1.01**	**81**	S	**Sn**	**16 24 56.2**	**+0.3**
UNIC	**Universidad Ca**	**1.02**	**62**	*i* P	**Pn**	**16 24 42.1**	**-0.2**
UNIC				*e*S	**Sn**	**16 24 56.3**	**+0.3**
UNIC	**Universidad Ca**	**1.02**	**62**	P	**Pn**	**16 24 42.1**	**-0.2**
UNIC	**Universidad Ca**	**1.02**	**62**	S	**Sn**	**16 24 57.1**	**+1.1**
CEDA	**San Andres**	**1.09**	**74**	*e*P	**Pn**	**16 24 43.2**	**-0.1**
CEDA	**San Andres**	**1.09**	**74**	P	**Pn**	**16 24 43.0**	**-0.3**
CEDA	**San Andres**	**1.09**	**74**	S	**Sn**	**16 24 58.9**	**+1.3**
JUAM	**Asuncion Mita**	**1.12**	**42**	*i* P	**Pn**	**16 24 43.8**	**+0.2**
JUAM				*e*S	**Sn**	**16 24 58.7**	**+0.4**
JUAM				IAML		16 25 01.7	
	comp=N,12µm,0.3s						
LALI	**Alcalda de L**	**1.12**	**90**	*e*P	**Pn**	**16 24 42.9**	**-0.7**
LALI	**Alcalda de L**	**1.12**	**90**	P	**Pn**	**16 24 43.3**	**-0.2**
LALI	**Alcalda de L**	**1.12**	**90**	S	**Sn**	**16 24 59.2**	**+1.0**
PMON	**Piamonte**	**1.15**	**79**	*e*P	**Pn**	**16 24 43.7**	**-0.4**
PMON				*e*S	**Sn**	**16 24 59.4**	**+0.3**
PMON	**Piamonte**	**1.15**	**79**	P	**Pn**	**16 24 44.1**	**0.0**
PMON	**Piamonte**	**1.15**	**79**	S	**Sn**	**16 25 00.5**	**+1.4**
BOQS	**Boqueron**	**1.18**	**78**	*i* P	**Pn**	**16 24 44.5**	**-0.2**
UEES	**Universidad Ev**	**1.22**	**80**	P	**Pn**	**16 24 44.9**	**0.0**
UEES	**Universidad Ev**	**1.22**	**80**	S	**Sn**	**16 25 01.9**	**+1.2**
UTEC	**Universidad Te**	**1.25**	**81**	S	**Sn**	**16 25 03.2**	**+1.7**
UTEC	**Universidad Te**	**1.25**	**81**	P	**Pn**	**16 24 45.3**	**-0.1**
UESS	**Universidad de**	**1.26**	**80**	*e*P	**Pn**	**16 24 45.6**	**+0.1**
PANCS	**Alcalda de**	**1.26**	**85**	*e*P	**Pn**	**16 24 45.4**	**-0.1**
PANCS	**Alcalda de**	**1.26**	**85**	P	**Pn**	**16 24 45.5**	**-0.1**
PANCS	**Alcalda de**	**1.26**	**85**	S	**Sn**	**16 25 03.0**	**+1.3**
STG8	**El Palmar, Qui**	**1.27**	**318**	*i* P	**Pn**	**16 24 49.0**	**+3.2**
LOMA	**Loma Larga**	**1.27**	**83**	*e*P	**Pn**	**16 24 44.1**	**-1.7**
LOMA	**Loma Larga**	**1.27**	**83**	S	**Sn**	**16 25 03.2**	**+1.1**
STG2	**El Palmar, Qui**	**1.28**	**317**	*e*P	**Pn**	**16 24 49.1**	**+3.3**
STG2				*e*S	**Sn**	**16 25 09.2**	**+6.9**
IGN	**Direccin Gen**	**1.28**	**80**	P	**Pn**	**16 24 46.1**	**+0.3**
IGN	**Direccin Gen**	**1.28**	**80**	S	**Sn**	**16 25 04.1**	**+1.9**
UDBS	**Universidad Do**	**1.30**	**80**	*e*P	**Pn**	**16 24 46.3**	**+0.3**
UDBS				*e*S	**Sn**	**16 25 04.1**	**+1.5**
UDBS	**Universidad Do**	**1.30**	**80**	P	**Pn**	**16 24 46.4**	**+0.3**
LFRS	**El Faro**	**1.38**	**85**	*e*P	**Pn**	**16 24 47.1**	**0.0**
MTO3	**Montecristo**	**1.40**	**50**		**Pn**	**16 24 47.8**	**+0.3**
MTO3				Sn	**Sn**	**16 25 04.3**	**-0.9**
MTO3	**Montecristo**	**1.40**	**50**	*i* P	**Pn**	**16 24 47.8**	**+0.3**
MTO3	**Montecristo**	**1.40**	**50**	*i* P	**Pn**	**16 24 47.8**	**+0.3**
MTO3	**Montecristo**	**1.40**	**50**	P	**Pn**	**16 24 47.9**	**+0.3**
MTO3	**Montecristo**	**1.40**	**50**	S	**Sn**	**16 25 07.5**	**+2.3**
LBRS	**Las Brisas**	**1.41**	**80**	*e*P	**Pn**	**16 24 47.8**	**+0.3**
APG	**El Apazote**	**1.50**	**0**	P	**Pn**	**16 24 49.7**	**+0.8**
	comp=N,18nm,0.3s,baz=170,slow=10,SNR=184						
APG				S	**Sn**	**16 25 10.2**	**+2.6**
	comp=N,76nm,0.3s,baz=68,slow=19,SNR=21						
APG	**El Apazote**	**1.50**	**0**	*i* P	**Pn**	**16 24 49.5**	**+0.7**
PAVA	**Las Pavas**	**1.51**	**82**	S	**Sn**	**16 25 10.2**	**+2.5**
PAVA	**Las Pavas**	**1.51**	**82**	P	**Pn**	**16 24 49.2**	**+0.3**
ESQI	**Esquipulas**	**1.52**	**46**		**Pn**	**16 24 49.3**	**+0.3**
ESQI				Sn	**Sn**	**16 25 07.5**	**-0.5**
ESQI	**Esquipulas**	**1.52**	**46**	*i* P	**Pn**	**16 24 49.5**	**+0.4**
ESQI	**Esquipulas**	**1.52**	**46**	P	**Pn**	**16 24 49.8**	**+0.8**
ESQI	**Esquipulas**	**1.52**	**46**	S	**Sn**	**16 25 11.8**	**+3.8**
ZAFR2	**Estanzuela, Za**	**1.53**	**45**	*i* P	**Pn**	**16 24 51.7**	**+2.7**
RTAL	**Retalhuleu**	**1.56**	**311**		**Pn**	**16 24 47.3**	**-2.3**
RTAL				Sn	**Sn**	**16 25 05.0**	**-3.9**
SOKI	**Kika Raxquin**	**1.59**	**326**	*e*P	**Pn**	**16 24 49.6**	**-0.7**
LLGN	**La Laguna**	**1.62**	**66**	P	**Pn**	**16 24 50.6**	**+0.2**
UESV	**Universidad de**	**1.65**	**85**	S	**Sn**	**16 25 13.6**	**+2.8**
TECO	**Alcaldia de Te**	**1.65**	**88**	S	**Sn**	**16 25 13.1**	**+2.2**
TECO	**Alcaldia de Te**	**1.65**	**88**	P	**Pn**	**16 24 50.8**	**+0.2**
QUEO	**Labor Ovalle**	**1.70**	**324**	*e*P	**Pn**	**16 24 51.5**	**-0.1**
QUEO				IAML		16 25 23.8	
	comp=E,7µm,0.3s						
QUIS	**Sacapulas**	**1.88**	**341**	*e*P	**Pn**	**16 24 54.8**	**+0.9**
QUIS				*e*S	**Sn**	**16 25 19.1**	**+2.4**
QUIS				IAML		16 25 22.4	
	comp=E,4µm,0.4s						
SMCA	**Catarina**	**2.06**	**311**	*e*P	**Pn**	**16 24 54.8**	**-1.4**
SMCA				IAML		16 25 31.4	
	comp=E,3µm,0.5s						
HUEH	**Huehuetenango**	**2.07**	**331**		**Pn**	**16 24 56.2**	**-0.4**
HUEH	**Huehuetenango**	**2.07**	**331**	*e*S	**Sn**	**16 25 24.6**	**+3.3**
HUEH				IAML		16 25 38.5	
	comp=E,5µm,0.5s						
BLLM	**Bellamira**	**2.17**	**91**	*e*P	**Pn**	**16 24 58.2**	**+0.4**
THIG		**2.23**	**309**	*i* P	**Pn**	**16 24 57.6**	**-1.0**
THIG				*e*S	**Sn**	**16 25 22.5**	**-2.6**
CSGN	**Cosiguina Volc**	**2.88**	**100**	P	**Pn**	**16 25 07.8**	**+0.2**
CSGN				S	**Sn**	**16 25 42.2**	**+1.1**
POTN	**Potosi Cosigui**	**2.93**	**99**	P	**Pn**	**16 25 08.3**	**+0.2**
TGUH	**Tegucigalpa,Un**	**3.16**	**80**		**Pn**	**16 25 11.1**	**-0.2**
CCIG	**Comitan**	**3.20**	**330**		**Pn**	**16 25 12.6**	**+0.6**
CCIG	**Comitan**	**3.20**	**330**	*i* P	**Pn**	**16 25 13.5**	**+1.6**
CRIN	**San Cristobal**	**3.43**	**103**		**Pn**	**16 25 14.1**	**-0.9**
CRIN	**San Cristobal**	**3.43**	**103**	P	**Pn**	**16 25 16.2**	**+1.3**
CRIN	**San Cristobal**	**3.43**	**103**	S	**Sn**	**16 25 57.7**	**+3.2**
CRIN	**San Cristobal**	**3.43**	**103**	*e*P	**Pn**	**16 25 15.8**	**+0.9**
PETF	**Flores**	**3.45**	**10**		**Pn**	**16 25 13.6**	**-1.6**
PKGN	**Cerro Pekin**	**3.50**	**103**	P	**Pn**	**16 25 16.2**	**+0.3**
PKGN				S	**Sn**	**16 25 57.7**	**+1.5**
YUSH	**Yuscaran**	**3.56**	**82**	P	**Pn**	**16 25 17.0**	**+0.2**
YUSH	**Yuscaran**	**3.56**	**82**	S	**Sn**	**16 25 59.9**	**+2.3**
HERN	**Volcan Telica**	**3.66**	**104**	Pn	**Pn**	**16 25 16.3**	**-1.8**
POLN	**Al Sur del Vol**	**3.67**	**103**	P	**Pn**	**16 25 18.3**	**+0.1**
ILCN	**San Idelfonso**	**3.79**	**104**	P	**Pn**	**16 25 19.2**	**-0.6**
ILCN				S	**Sn**	**16 26 05.9**	**+2.7**
CNGA	**Al SSO del Vol**	**3.81**	**105**	P	**Pn**	**16 25 19.4**	**-0.7**
CNGA				S	**Sn**	**16 26 05.5**	**+1.7**
CNGN	**Cerro Negro**	**3.81**	**105**		**Pn**	**16 25 19.4**	**-0.8**
CNGN	**Cerro Negro**	**3.81**	**105**	P	**Pn**	**16 25 20.5**	**+0.3**
CNGN	**Cerro Negro**	**3.81**	**105**	S	**Sn**	**16 26 05.5**	**+1.7**
CNGN	**Cerro Negro**	**3.81**	**105**	*e*P	**Pn**	**16 25 19.2**	**-1.0**
MOM3	**MOM3**	**3.98**	**104**	P	**Pn**	**16 25 22.0**	**-0.5**
MOM3				S	**Sn**	**16 26 09.0**	**+1.1**
MOMN	**Momotombo**	**3.98**	**105**	P	**Pn**	**16 25 21.8**	**-0.7**
COPN	**Copaltepe**	**4.01**	**109**	P	**Pn**	**16 25 22.5**	**-0.3**
COPN	**Copaltepe**	**4.01**	**109**	*e*P	**Pn**	**16 25 20.9**	**-1.9**
LIMN	**Finca el Limon**	**4.02**	**96**	P	**Pn**	**16 25 22.3**	**-0.8**
LIMN				S	**Sn**	**16 26 11.6**	**+2.5**
MOM2	**El Cardon**	**4.03**	**105**	P	**Pn**	**16 25 22.8**	**-0.3**
MOM2				S	**Sn**	**16 26 10.7**	**+1.7**
RCVN	**Varillal2**	**4.16**	**88**	P	**Pn**	**16 25 25.2**	**+0.2**
APQ3	**Volcan Apoyequ**	**4.18**	**106**	P	**Pn**	**16 25 25.7**	**+0.5**
APQ3				S	**Sn**	**16 26 14.0**	**+1.1**
RCON	**San Juan de Ri**	**4.20**	**90**	P	**Pn**	**16 25 26.0**	**+0.4**
RCPN	**Sur Rio San Ju**	**4.26**	**89**	P	**Pn**	**16 25 26.7**	**+0.3**
TISN	**Laguna Tiscapa**	**4.32**	**108**	P	**Pn**	**16 25 28.3**	**+1.2**
MGAN	**Managua**	**4.33**	**108**		**Pn**	**16 25 26.2**	**-1.1**
CRUN	**El Crucero**	**4.34**	**110**	P	**Pn**	**16 25 26.7**	**-0.8**
MAS3	**Al N del Volca**	**4.44**	**109**	P	**Pn**	**16 25 28.4**	**-0.3**
MAS3				S	**Sn**	**16 26 19.0**	**-0.3**
MATN	**Matagalpa**	**4.46**	**97**	P	**Pn**	**16 25 28.1**	**-1.1**
MASN	**Masaya**	**4.48**	**109**	P	**Pn**	**16 25 29.1**	**-0.2**
MASN				S	**Sn**	**16 26 20.8**	**+0.7**
SABN	**Sabanita**	**4.48**	**110**	P	**Pn**	**16 25 29.8**	**+0.5**
BOAB	**BOACO BROADBAN**	**4.80**	**102**		**Pn**	**16 25 32.3**	**-1.4**
BOAB	**BOACO BROADBAN**	**4.80**	**102**	S	**Sn**	**16 26 30.2**	**+2.1**
BOAB	**BOACO BROADBAN**	**4.80**	**102**	P	**Pn**	**16 25 33.1**	**-0.6**
LCRUZ	**La Cruz**	**5.31**	**116**	*e*P	**Pn**	**16 25 39.2**	**-1.4**
SIUN	**Universidad Ur**	**5.54**	**87**		**Pn**	**16 25 43.7**	**-0.2**
CMIG	**Matias Romero**	**5.56**	**311**	P	**Pn**	**16 25 43.6**	**-0.4**
	comp=E,25nm,0.3s,baz=109,slow=11,SNR=43						
CMIG				S	**Sn**	**16 26 46.2**	**-0.4**
	comp=E,66nm,0.5s,baz=158,slow=23,SNR=5.6						
CMIG				LR	LR	16 28 18.3	
	comp=E,175nm,21.0s,baz=60,slow=40						
LAPC	**Finca la Perla**	**5.63**	**118**	*e*P	**Pn**	**16 25 46.1**	**+1.1**
SAJU	**San Juanillo,**	**5.78**	**126**	⇑*i*P	**Pn**	**16 25 47.5**	**+0.4**
JUD3	**Juan Diaz 3**	**5.86**	**124**		**Pn**	**16 25 48.5**	**+0.3**
JUD3	**Juan Diaz 3**	**5.86**	**124**	⇑*i*P	**Pn**	**16 25 48.9**	**+0.7**
VMAR	**Armenia, Volca**	**5.88**	**116**	*e*P	**Pn**	**16 25 48.2**	**-0.3**
CUI	**Cuipilapa**	**5.91**	**118**	*e*P	**Pn**	**16 25 49.8**	**+0.8**
PLVR	**Palo Verde**	**5.91**	**121**	⇑*i*P	**Pn**	**16 25 49.9**	**+0.9**
MOTZ	**Rio Naranjo**	**5.98**	**117**	*e*P	**Pn**	**16 25 51.2**	**+1.4**
INVE	**Universidad In**	**6.09**	**119**	*e*P	**Pn**	**16 25 51.9**	**+0.6**
JTS	**Las Juntas de**	**6.27**	**120**	P	**Pn**	**16 25 55.0**	**+1.1**
	comp=E,18nm,0.3s,baz=113,slow=23,SNR=14						
JTS				S	**Sn**	**16 27 05.4**	**+1.2**
	comp=E,14nm,0.4s,baz=280,slow=19,SNR=1.2						
JTS	**Las Juntas de**	**6.27**	**120**		**Pn**	**16 25 54.3**	**+0.4**
JTS	**Las Juntas de**	**6.27**	**120**	*e*P	**Pn**	**16 25 55.0**	**+1.1**
ARE1	**Arenal 1**	**6.39**	**118**	*e*P	**Pn**	**16 25 56.9**	**+1.4**
CASO	**Castillo**	**6.39**	**118**	*e*P	**Pn**	**16 25 56.7**	**+1.2**
VARE2	**V. Arenal**	**6.39**	**118**	⇑*e*P	**Pn**	**16 25 56.7**	**+1.2**
BILN	**Bilwi Airport**	**6.92**	**85**	Pn	**Pn**	**16 26 04.1**	**+1.4**
TEIG	**Tepich**	**7.01**	**17**		**Pn**	**16 26 05.9**	**+1.9**
ACOS	**Acosta**	**7.19**	**120**	*e*P	**Pn**	**16 26 09.2**	**+2.7**
PIEC	**Cerro El Cedra**	**7.46**	**120**	*e*P	**Pn**	**16 26 11.8**	**+1.5**
EGUB	**Earth Gu¡pi**	**7.49**	**115**	Pn	**Pn**	**16 26 11.9**	**+1.4**
PIRO	**Carate, Puerto**	**8.64**	**125**		**Pn**	**16 26 28.4**	**+2.1**
PIRO	**Carate, Puerto**	**8.64**	**125**	*e*P	**Pn**	**16 26 28.9**	**+2.6**
ALCO	**Alturas Coton,**	**8.75**	**120**	*e*P	**Pn**	**16 26 29.2**	**+1.3**
BRU2	**Volcan**	**8.95**	**121**		**Pn**	**16 26 31.4**	**+0.6**
SOR	**Soroa**	**11.65**	**36**	Pn	**Pn**	**16 27 08.3**	**+1.0**
HNDO	**Hondo**	**17.92**	**334**	P	**Pn**	**16 28 29.5**	**+0.6**
FLOC	**Florencia**	**18.85**	**128**		**P**	**16 28 38.9**	**-0.2**
BRDY	**Brady**	**19.36**	**337**		**P**	**16 28 43.6**	**-0.9**
SAND	**Sanderson**	**19.60**	**329**	P	**P**	**16 28 47.5**	**+0.2**
TXAR	**Lajitas Array**	**19.95**	**324**	P	**Pn**	**16 28 53.5**	**+0.2**
	comp=E,1.2nm,0.7s,baz=156,slow=12,SNR=13						
TXAR	**Lajitas Array**	**19.95**	**324**	P	**Pn**	**16 28 52.3**	**-0.9**
TX31	**Lajitas Ar. Si**	**19.95**	**324**		**P**	**16 28 51.7**	**+0.6**
SDV	**Santo Domingo**	**19.99**	**101**	P	**P**	**16 28 49.9**	**-1.8**
	comp=E,3.0nm,0.6s,baz=266,slow=19,SNR=1.4						
SDV				LR	LR	16 37 01.4	
	comp=E,48nm,20.0s,baz=273,slow=38						
PLPT	**Palo Pinto**	**20.52**	**341**	P	**P**	**16 28 57.4**	**+0.3**
PLPT				IAmb	IAmb	16 29 00.1	
	comp=Z,15nm,0.8s						
Y49A	**Blount Mountai**	**20.60**	**10**		**P**	**16 28 58.3**	**+0.3**
Y49A				IAmb	IAmb	16 29 02.2	
	comp=Z,12nm,0.8s						
ALPN	**Alpine**	**20.73**	**326**	P	**P**	**16 28 59.2**	**-0.4**
X48A	**Hartselle**	**21.09**	**8**		**P**	**16 29 03.7**	**+0.5**
X48A				IAmb	IAmb	16 29 07.3	
	comp=Z,8.6nm,0.9s						
MIAR	**Mount Ida**	**21.14**	**353**	P	**P**	**16 29 04.7**	**+1.0**
MIAR				IAmb	IAmb	16 29 14.0	
	comp=Z,7.7nm,0.9s						
APMT	**Aspermont**	**21.61**	**338**		**P**	**16 29 08.9**	**+0.1**
APMT				IAmb	IAmb	16 29 11.4	
	comp=Z,7.4nm,0.7s						
PECS	**Pecos**	**21.63**	**327**	P	**P**	**16 29 09.2**	**+0.1**
PECS				IAmb	IAmb	16 29 12.8	
	comp=Z,6.2nm,0.6s						
VHRN	**Van Horn**	**21.79**	**324**		**P**	**16 29 11.4**	**+0.5**
VHRN				IAmb	IAmb	16 29 12.7	
	comp=Z,7.7nm,0.8s						
MNTX	**Cornudas Mount**	**22.70**	**325**		**P**	**16 29 20.6**	**0.0**
MNTX				IAmb	IAmb	16 29 22.3	
	comp=Z,6.3nm,0.8s						
TKL	**Tuckaleechee C**	**22.88**	**14**	P	**P**	**16 29 22.0**	**-0.2**
	comp=Z,4.1nm,0.6s,baz=216,slow=8.7,SNR=5.4						
	comp=Z,4.1nm,0.6s						
TKL	**Tuckaleechee C**	**22.88**	**14**	IAmb	IAmb	16 29 44.1	
	comp=Z,10.0nm,1.0s						
HHAR	**Hobbs**	**22.90**	**353**	P	**P**	**16 29 22.6**	**+0.1**
HHAR				IAmb	IAmb	16 29 24.8	
	comp=Z,8.6nm,1.1s						
T47A	**Sharon Grove**	**23.59**	**7**		**P**	**16 29 28.7**	**-0.3**
TZTN	**Tazewell**	**23.77**	**14**	P	**P**	**16 29 29.8**	**-1.0**
T35A	**Sooner Cattle**	**23.94**	**348**	P	**P**	**16 29 31.2**	**-1.1**
121A	**Cookes Peak, D**	**24.69**	**323**		**P**	**16 29 39.8**	**+0.5**
121A				IAmb	IAmb	16 29 43.7	
	comp=Z,9.7nm,0.9s						
ANMO	**Albuquerque**	**25.78**	**329**	LR	LR	16 41 17.9	
	comp=Z,29nm,19.1s,baz=84,slow=39						
PFO	**Pinyon Flats O**	**30.96**	**315**	LR	LR	16 43 45.0	
	comp=Z,75nm,19.2s,baz=148,slow=37						
MTPU	**Mount Pierson**	**31.14**	**326**		**P**	**16 30 38.4**	**+1.2**
MTPU				IAmb	IAmb	16 30 40.7	
	comp=Z,3.1nm,0.9s						
PSUT	**Pine Spring**	**32.42**	**325**	P	**P**	**16 30 48.5**	**+0.2**
PDAR	**Pinedale Array**	**33.50**	**334**	P	**P**	**16 30 58.1**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=115,slow=7.5,SNR=3.0						
	comp=Z,0.2nm,0.5s						
ELK	**Elko**	**34.73**	**326**	LR	LR	16 48 37.8	
	comp=Z,52nm,18.2s,baz=45,slow=42						
NV11	**Mina Array Sit**	**34.91**	**320**	P	**P**	**16 31 10.7**	**+0.9**
NV11				IAmb	IAmb	16 31 13.0	
	comp=Z,4.4nm,0.9s						
NVAR	**Mina Array Bea**	**35.00**	**320**	P	**P**	**16 31 13.3**	**+2.6**
	comp=Z,4.2nm,0.7s,baz=134,slow=8.6,SNR=23						
NVAR				PcP	**PcP**	**16 33 43.7**	**+1.9**
	comp=Z,1.1nm,0.7s,baz=121,slow=2.7,SNR=5.5						
	comp=Z,4.2nm,0.7s						
NVAR	**Mina Array Bea**	**35.00**	**320**	P	**P**	**16 31 11.7**	**+1.1**
NVAR					**PcP**	**16 33 42.6**	**+0.8**
BEKR	**Beckworth**	**37.14**	**321**		**P**	**16 31 30.0**	**+1.1**
BEKR				IAmb	IAmb	16 31 31.7	
	comp=Z,3.6nm,0.9s						
J08A	**Circle Bar Ran**	**38.27**	**326**	P	**P**	**16 31 39.2**	**+0.9**
YBH	**Yreka Blue Hor**	**39.68**	**321**	LR	LR	16 52 39.7	
	comp=Z,4.7nm,19.9s,baz=96,slow=43						
NEW	**Newport**	**41.11**	**333**	LR	LR	16 51 05.4	
	comp=Z,44nm,19.1s,baz=98,slow=39						
HOOD	**Mount Hood Mea**	**41.28**	**326**	P	**P**	**16 32 03.6**	**+0.3**
SCHQ	**Schefferville**	**45.19**	**19**	P	**P**	**16 32 32.6**	**-2.0**
	comp=Z,4.3nm,0.9s,baz=232,slow=14,SNR=2.2						
	comp=Z,4.3nm,0.9s						
YKA	**Yellowknife Ar**	**51.86**	**346**	P	**P**	**16 33 23.4**	**-2.3**
	comp=Z,0.6nm,0.9s,baz=154,slow=7.5,SNR=5.8						
	comp=Z,0.6nm,0.9s						
YKA	**Yellowknife Ar**	**51.86**	**346**	P	**P**	**16 33 23.8**	**-1.8**
ILAR	**Eielson Array**	**63.88**	**337**	P	**P**	**16 34 48.8**	**-1.0**
	comp=Z,0.5nm,0.9s,baz=167,slow=5.2,SNR=8.1						
	comp=Z,0.5nm,0.9s						
ILAR	**Eielson Array**	**63.88**	**337**	P	**P**	**16 34 49.1**	**-0.8**
FITZ	**Fitzroy Crossi**	**144.99**	**258**		PKPbc	16 43 52.7	-1.7
CMAR	**Chiang Mai Arr**	**146.92**	**343**	PKPbc	**PKPbc**	**16 43 59.4**	**-0.9**
	comp=Z,2.3nm,0.6s,baz=343,slow=3.5,SNR=14						
CMAR	**Chiang Mai Arr**	**146.92**	**343**		**PKPdf**	**16 43 58.8**	**+0.5**

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*IDC **05** 16:29:40.8±9.0, 3°.87S×128°.24E, h170km±87km, mb3.2/4, mbtmp3.7/6, Error ellipse: s-maj=102.3km s-min=20.7km az=60.0*
*DJA **05** 16:29:50.6±0.2, 4°S±3°×12°8E±°, h255km±3km, M4.0/15, mb3.9/13, mB5.0/4, MLv4.0/15, Mw(mB)4.3/4*
ISC 05 16:29:50.1±0.7, **4°.25S**±0°.07×**127°.67E**±0°.06, **h250**km, **n36, σ1s.35**/40, **mb3.4**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.76**	**43**	P	**Pn**	**16 30 26.0**	**+2.0**
AAI				S	**S**	**16 30 53.2**	**+2.6**
NLAI	**Namlea**	**1.16**	**330**	P	**Pn**	**16 30 28.9**	**+2.8**
NLAI				S	**S**	**16 30 56.8**	**+2.4**
KRAI	**Karang Ratu**	**1.17**	**38**	P	**Pn**	**16 30 27.8**	**+1.6**
MSAI	**Masohi**	**1.54**	**54**	P	**Pn**	**16 30 29.5**	**+0.7**
MSAI				S	**S**	**16 30 59.2**	**0.0**
BNDI	**Bandanaira**	**2.24**	**97**	P	**Pn**	**16 30 36.6**	**+1.8**
BNDI	**Bandanaira**	**2.24**	**97**	P	**Pn**	**16 30 36.4**	**+1.6**
SANI	**Sanana**	**2.76**	**322**	P	**Pn**	**16 30 40.4**	**+0.4**
SANI	**Sanana**	**2.76**	**322**	S	**S**	**16 31 21.2**	**+1.6**
SANI	**Sanana**	**2.76**	**322**	P	**Pn**	**16 30 40.5**	**+0.4**
FAKI	**Fak Fak**	**4.75**	**74**	P	**Pn**	**16 31 03.7**	**+0.7**
FAKI	**Fak Fak**	**4.75**	**74**	P	**Pn**	**16 31 03.7**	**+0.7**
SWI	**Sorong**	**4.92**	**47**	P	**Pn**	**16 31 05.6**	**+0.7**
LUWI	**Luwuk**	**5.84**	**303**	P	**Pn**	**16 31 17.7**	**+1.4**
KMPI	**Kaimana, Papua**	**6.04**	**85**	P	**Pn**	**16 31 19.0**	**+0.1**
SOEI	**Soe**	**6.43**	**212**	P	**Pn**	**16 31 24.9**	**+1.1**
RKPI	**Ransiki, Papua**	**7.04**	**67**	P	**Pn**	**16 31 31.4**	**0.0**
DRS	**Darwin Rock St**	**8.73**	**159**	P	**Pn**	**16 31 53.2**	**+0.5**
WBSI	**Waikabubak, Su**	**9.81**	**236**	P	**Pn**	**16 32 06.3**	**-0.1**
	18nm,0.8s						
DBNI	**Kabupaten Domp**	**10.22**	**245**	P	**Pn**	**16 32 12.6**	**+1.1**
	5.4nm,0.8s						
PLAI	**Plampang**	**10.83**	**245**	P	**Pn**	**16 32 19.4**	**+0.2**
PLAI	**Plampang**	**10.83**	**245**	S	**S**	**16 34 21.3**	**+0.6**
PLAI	**Plampang**	**10.83**	**245**	P	**Pn**	**16 32 18.9**	**-0.3**
	20nm,0.8s						
TWSI	**Taliwang, Sumb**	**11.61**	**247**	P	**Pn**	**16 32 28.9**	**-0.1**
	12nm,0.9s						
KLNI	**Mataram**	**12.23**	**250**	P	**Pn**	**16 32 36.6**	**-0.1**
	10nm,1.0s						
FITZ	**Fitzroy Crossi**	**13.91**	**188**	P	**Pn**	**16 32 55.2**	**-1.9**
	1.0nm,0.5s,baz=29,slow=11,SNR=7.3						
JAGI	**Jajag, Banyuwa**	**14.07**	**252**	P	**Pn**	**16 32 58.8**	**-0.5**
JAGI	**Jajag, Banyuwa**	**14.07**	**252**	P	**Pn**	**16 32 58.6**	**-0.7**
WRAB	**Tennant Creek**	**16.89**	**158**	P	**P**	**16 33 30.2**	**-0.6**
WRA	**Warramunga Arr**	**16.90**	**158**	P	**P**	**16 33 29.7**	**-1.2**
	0.8nm,0.4s,baz=334,slow=12,SNR=24						
WRA				S	**S**	**16 36 37.8**	**+3.6**
	1.1nm,0.7s,baz=340,slow=17,SNR=7.1						
COEN	**Coen**	**18.08**	**123**	P	**P**	**16 33 43.2**	**-0.5**
COEN	**Coen**	**18.08**	**123**	S	**S**	**16 36 57.7**	**-0.1**
QIS	**Mount Isa**	**19.94**	**145**	P	**P**	**16 34 03.3**	**-0.3**
ASAR	**Alice Springs**	**20.22**	**163**	P	**P**	**16 34 05.0**	**-1.7**
	1.1nm,0.4s,baz=344,slow=10.0,SNR=44						
	1.1nm,0.4s						
CMAR	**Chiang Mai Arr**	**36.20**	**309**	P	**P**	**16 36 29.5**	**-0.1**
	0.6nm,0.5s,baz=118,slow=8.8,SNR=5.4						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**64.67**	**327**	P	**P**	**16 40 00.3**	**-1.2**
	0.4nm,0.4s,baz=117,slow=8.1,SNR=7.4						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**68.97**	**329**	P	**P**	**16 40 27.0**	**-1.4**
	0.3nm,0.5s,baz=133,slow=4.8,SNR=4.1						
	0.3nm,0.5s						

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*BEO **05** 16:42:51.3±0.3, 43°.23N×17°.88E, h9km±2km, ML2.4/14*
*PDG **05** 16:42:51.6±0.2, 43°.18N×17°.98E, h10km±1km, ML2.6/13, Error ellipse: s-maj=0.6km s-min=0.5km az=90.0*
*RHSSO **05** 16:42:52.2±0.5, 43°.19N×17°.99E, h8km, ML2.7/4*
ISC 05 16:42:51.5±1.0, **43°.20N**±0°.02×**17°.97E**±0°.02, **h8**km±9km, **n41, σ0s.91**/81, **6C-8D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	**Ston**	**0.38**	**211**	*e*Pg	**Pg**	**16 42 58.9**	**-0.1**
STON				Sg	**Sb**	**16 43 05.3**	**-1.3**
STON	**Ston**	**0.38**	**211**	*e*Pg	**Pg**	**16 42 58.5**	**-0.4**
STON				*e*Sg	**Sg**	**16 43 05.1**	**+1.1**
KLINJ	**Klinje**	**0.45**	**94**	*e*Pg	**Pg**	**16 43 00.5**	**+0.2**
KLINJ				*e*Sg	**Sb**	**16 43 07.4**	**-1.3**
BRY	**Bratogost**	**0.51**	**125**	⇑*i*Pg	**Pg**	**16 43 01.0**	**-0.5**
BRY				*i* Sg	**Sb**	**16 43 09.1**	**-1.4**
DBRK	**Dubrovnik**	**0.55**	**166**	*i* Pg	**Pg**	**16 43 02.0**	**0.0**
DBRK				Sg	**Sb**	**16 43 10.0**	**-1.3**
TREB	**Trebinje**	**0.56**	**150**	*e*Pg	**Pg**	**16 43 01.7**	**-0.6**
TREB				*e*Sg	**Sb**	**16 43 10.8**	**-0.8**
RICI	**Ricice**	**0.68**	**296**	*e*Pg	**Pg**	**16 43 03.9**	**-0.7**
RICI				Sg	**Sg**	**16 43 13.6**	**+0.2**
UPM	**Unac-Piva**	**0.69**	**89**	⇓*i*Pg	**Pg**	**16 43 04.6**	**-0.1**
UPM				*i* Sg	**Sb**	**16 43 15.0**	**-0.5**
MAKA	**Makarska**	**0.70**	**278**	*i* Pg	**Pg**	**16 43 04.1**	**-0.9**
MAKA				Sg	**Sg**	**16 43 15.0**	**+0.9**
NKME	**Niksic**	**0.84**	**121**	⇓*i*Pg	**Pg**	**16 43 06.5**	**-1.2**
NKME				*e*Sg	**Sb**	**16 43 19.6**	**-0.3**
HCY	**Herceg Novi**	**0.85**	**153**	⇑*i*Pg	**Pg**	**16 43 06.6**	**-1.1**
HCY				*i* Sg	**Sb**	**16 43 19.5**	**-0.4**
LSTV	**Lastovo**	**0.90**	**242**	*i* Pg	**Pg**	**16 43 07.3**	**-1.5**
LSTV				Sg	**Sb**	**16 43 21.2**	**-0.2**
CEME	**Cevo**	**0.96**	**133**	⇓*i*Pg	**Pg**	**16 43 08.6**	**-1.3**
CEME				*e*Sg	**Sb**	**16 43 23.3**	**+0.1**
PLE	**Pljevlja**	**1.05**	**82**	⇑*i*Pg	**Pg**	**16 43 10.8**	**-0.8**
PLE				*i* Sg	**Sn**	**16 43 26.9**	**-0.5**
RUDO	**Rudo**	**1.10**	**67**	⇑*i*Pg	**Pg**	**16 43 11.1**	**-1.6**
RUDO				*e*Sg	**Sg**	**16 43 26.5**	**-0.5**
HVAR	**Hvar**	**1.11**	**269**	*e*Pg	**Pg**	**16 43 11.8**	**-1.1**
HVAR				Sg	**Sg**	**16 43 27.6**	**+0.4**
BUM	**Brajici-Budva**	**1.13**	**142**	⇓*i*Pg	**Pg**	**16 43 12.5**	**-0.6**
BUM				*i* Sg	**Sn**	**16 43 29.4**	**0.0**
KOME	**Kolasin**	**1.19**	**107**	⇑*i*Pg	**Pb**	**16 43 13.9**	**-0.4**
KOME				*e*Sg	**Sn**	**16 43 31.6**	**+0.7**
PDG	**Podgorica**	**1.22**	**129**	*e*Pg	**Pb**	**16 43 14.5**	**-0.3**
PDG				*e*Sg	**Sn**	**16 43 32.8**	**+1.3**
PDG	**Podgorica**	**1.22**	**129**	⇓*i*Pg	**Pb**	**16 43 14.3**	**-0.5**
PDG				*i* Sg	**Sn**	**16 43 32.8**	**+1.3**
BBLS	**Lazi&#263i**	**1.24**	**57**	*e*Pg	**Pn**	**16 43 14.1**	**-1.1**
BBLS				*e*Sg	**Sn**	**16 43 32.0**	**-0.1**
DRME	**Dracevica, Mon**	**1.35**	**138**	⇓*i*Pg	**Pn**	**16 43 16.4**	**-0.3**
DRME				*e*Sg	**Sg**	**16 43 36.5**	**+1.5**
KIJV	**Kijevo**	**1.39**	**306**	*e*Pn	**Pn**	**16 43 17.2**	**0.0**
KIJV				Sg	**Sn**	**16 43 36.2**	**+0.4**
IVA	**Berane**	**1.45**	**102**	⇑*i*Pg	**Pb**	**16 43 18.4**	**-0.4**
IVA				*i* Sg	**Sg**	**16 43 39.9**	**+1.8**
SJES	**Sjenica**	**1.47**	**87**	*e*Pg	**Pb**	**16 43 19.0**	**-0.1**
SJES				*e*Sg	**Sg**	**16 43 39.3**	**+0.6**
ULC	**Ulcinj**	**1.55**	**142**	⇓*i*Pg	**Pb**	**16 43 20.1**	**-0.4**
ULC				*i* Sg	**Sg**	**16 43 42.1**	**+0.7**
PVY	**Plav**	**1.58**	**112**	⇓*i*Pg	**Pb**	**16 43 20.6**	**-0.5**
PVY				*i* Sg	**Sg**	**16 43 43.8**	**+1.4**
IVAS	**Ivanjica**	**1.64**	**76**	*e*Pn	**Pn**	**16 43 19.9**	**-0.7**
IVAS				*e*Sn	**Sb**	**16 43 43.1**	**+0.3**
BLY	**Banja Luka**	**1.65**	**340**	*e*Pn	**Pn**	**16 43 21.5**	**+0.7**
BLY				*e*Sn	**Sb**	**16 43 43.1**	**0.0**
BLY	**Banja Luka**	**1.65**	**340**	*e*Pg	**Pn**	**16 43 21.4**	**+0.7**
BLY				*e*Sg	**Sb**	**16 43 42.9**	**-0.2**
DIVS	**Divibare**	**1.72**	**58**	*e*Pn	**Pn**	**16 43 21.2**	**-0.6**
DIVS				*e*Sn	**Sb**	**16 43 45.6**	**+0.3**
ZIRJ	**Zirje**	**1.75**	**286**	*e*Pn	**Pn**	**16 43 22.8**	**+0.7**
ZIRJ				Sn	**Sb**	**16 43 45.6**	**-0.4**
TEKS	**Tekeris**	**1.76**	**39**	*e*Pn	**Pn**	**16 43 20.8**	**-1.5**
TEKS				*e*Sn	**Sb**	**16 43 47.0**	**+0.7**
MORI	**Morici**	**1.77**	**293**	*e*Pn	**Pn**	**16 43 23.3**	**+0.8**
MORI				Sn	**Sn**	**16 43 45.4**	**+0.2**
TRUS	**Trudelj**	**2.04**	**59**	*e*Pn	**Pn**	**16 43 25.3**	**-0.9**
TRUS				*e*Sn	**Sn**	**16 43 51.9**	**0.0**
GOCS	**Kraljevo Serbi**	**2.15**	**79**	*e*Sn	**Sn**	**16 43 55.5**	**+0.9**
SELS	**Selova**	**2.30**	**88**	*e*Pn	**Pn**	**16 43 30.0**	**+0.2**
SELS				*e*Sn	**Sn**	**16 43 59.1**	**+0.8**
BARS	**Barje**	**2.85**	**96**	*e*Pn	**Pn**	**16 43 38.3**	**+1.0**
BARS				*e*Sn	**Sn**	**16 44 13.9**	**+2.2**
MORH	**Mrgy, Hungar**	**3.05**	**9**	*e*Pn	**Pn**	**16 43 41.4**	**+1.4**
MORH				*e*Sn	**Sn**	**16 44 17.6**	**+0.9**
ZAGS	**Zajecar**	**3.16**	**77**	*e*Pn	**Pn**	**16 43 43.8**	**+2.2**
ZAGS				*e*Sn	**Sn**	**16 44 19.9**	**+0.4**
ZAPS	**Zavoj**	**3.41**	**87**	*e*Pn	**Pn**	**16 43 45.2**	**+0.2**
ZAPS				*e*Sn	**Sn**	**16 44 24.4**	**-1.2**

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*JMA **05** 16:50:03.7±0.7, 21°N±3°×12°3E±°, h8km, MV4.5/21, FAR S OFF ISHIGAKIJIMA*
*TAP **05** 16:50:04.0, 21°.08N×122°.61E, h37km±1km, ML4.7, D*
*IDC **05** 16:50:04.9±0.8, 20°.82N×122°.80E, h39km±8km, mb3.3/7, mbtmp3.6/9, ML3.9/2, MS3.4/1, Error ellipse: s-maj=31.1km s-min=14.4km az=70.0*

ISC 05 16:50:05.0±0.9,20°.99N±0°.08×122°.62E±0°.04,h36^{km}±3^{km}, n162,σ1^{s}89/287,mb3.4/8,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LYUB	**Lan-yu**	1.40	316	*e*P	Pn	16 50 27.4	-0.5
LYUB				*e*S	Sn	16 50 43.6	-1.5
LAY	**Lan-yu**	1.44	316	*e*P	Pn	16 50 27.5	-1.1
LAY				*e*S	Sn	16 50 43.2	-3.2
TSEB	**Hengchuen, Pin**	1.84	300	*e*P	Pn	16 50 35.6	+1.6
TSEB				*e*S	Sn	16 50 57.3	+1.2
TWKBT	**Hengchun**	1.93	300	*e*P	Pn	16 50 34.4	-0.9
TWKBT				*e*S	Sn	16 50 58.8	+0.4
TWK1	**Hengchun**	1.94	300	*e*P	Pn	16 50 33.3	-2.1
TWK1				*e*S	Sn	16 50 58.4	-0.2
LDUT	**Ludao**	1.99	328	*e*P	Pn	16 50 34.2	-1.8
LDUT				*e*S	Sn	16 50 57.6	-2.1
HEN	**Hengchun**	2.02	300	*e*P	Pn	16 50 36.4	-0.2
HEN				*e*S	Sn	16 51 00.9	+0.3
TAWH	**Dawu Township**	2.10	310	*e*P	Pn	16 50 35.9	-1.7
TAWH				*e*S	Sn	16 51 00.0	-2.5
TAW	**Tawu**	2.10	311	*e*P	Pn	16 50 38.5	+0.9
TAW				*e*S	Sn	16 51 01.9	-0.7
ECL	**Taimali**	2.23	316	*e*P	Pn	16 50 38.4	-1.0
ECL				*e*S	Sn	16 51 03.3	-2.3
TTN	**Taitung**	2.23	322	*e*S	Sn	16 51 05.9	+0.3
SCZT	**Fangliau**	2.32	307	*e*P	Pn	16 50 40.8	+0.2
SCZT				*e*S	Sn	16 51 04.0	-3.8
TWGBT	**Beinan**	2.32	322	P	Pn	16 50 41.3	+0.7
TWGBT	**Beinan**	2.32	322	S	Sn	16 51 07.4	-0.4
TWGBT	**Beinan**	2.32	322	*e*P	Pn	16 50 39.8	-0.7
TWGBT				*e*S	Sn	16 51 06.4	-1.4
EDH	**Donghe**	2.32	328	*e*P	Pn	16 50 38.9	-1.7
EDH				*e*S	Sn	16 51 05.3	-2.7
TWG	**Pinlang**	2.32	322	*e*P	Pn	16 50 40.0	-0.7
TWG				*e*S	Sn	16 51 06.0	-2.0
LONT	**Longtian**	2.36	324	*e*P	Pn	16 50 40.9	-0.3
LONT				*e*S	Sn	16 51 06.2	-2.7
MASBT	**Mashibuluo**	2.46	311	*e*P	Pn	16 50 42.6	+0.2
MASBT				*e*S	Sn	16 51 09.6	-1.6
ECS	**Chishang**	2.47	328	*e*P	Pn	16 50 41.8	-0.8
ECS				*e*S	Sn	16 51 10.1	-1.5
CHKH	**Chenggong**	2.47	333	*e*P	Pn	16 50 40.7	-2.0
CHKH				*e*S	Sn	16 51 08.4	-3.2
EHD	**Haiduan**	2.52	329	*e*P	Pn	16 50 41.4	-2.0
EHD				*e*S	Sn	16 51 09.9	-2.9
FULB	**Fuli**	2.52	331	*e*P	Pn	16 50 41.4	-2.0
FULB				*e*S	Sn	16 51 11.1	-1.8
SSD	**Sandimen**	2.54	314	*e*P	Pn	16 50 43.7	0.0
SSD				*e*S	Sn	16 51 12.1	-1.4
ECBN	**Changbin**	2.56	335	*e*P	Pn	16 50 42.2	-1.7
ECBN				*e*S	Sn	16 51 10.5	-3.3
SGLT	**Jiouru**	2.63	311	*e*S	Sn	16 51 17.3	+1.8
EYUL	**Yuli**	2.64	333	*e*P	Pn	16 50 43.5	-1.5
EYUL				*e*S	Sn	16 51 15.7	-0.1
ELDTW	**Lidau**	2.65	326	*e*P	Pn	16 50 44.1	-1.2
ELDTW				*e*S	Sn	16 51 11.8	-4.4
TWF1	**Yuli**	2.65	333	*e*P	Pn	16 50 43.5	-1.8
TWF1				*e*S	Sn	16 51 14.9	-1.3
YULB	**Yu-li**	2.69	333	P	Pn	16 50 44.7	-1.0
YULB	**Yu-li**	2.69	333	S	Sn	16 51 16.5	-0.5
YULB	**Yu-li**	2.69	333	*e*P	Pn	16 50 44.4	-1.3
YULB				*e*S	Sn	16 51 15.6	-1.4
HGSD	**Ruisui**	2.73	336	*e*P	Pn	16 50 44.1	-2.1
HGSD				*e*S	Sn	16 51 14.2	-3.8
TWM1	**Shoushan**	2.74	312	*e*P	Pn	16 50 48.7	+2.3
TWM1				*e*S	Sn	16 51 23.9	+5.6
EHYH	**Wanrong**	2.76	335	*e*P	Pn	16 50 45.4	-1.3
EHYH				*e*S	Sn	16 51 17.6	-1.2
STYH	**Taoyuan**	2.77	322	*e*P	Pn	16 50 47.1	+0.4
STYH				*e*S	Sn	16 51 18.7	-0.1
EHY	**Hungye**	2.78	335	*e*P	Pn	16 50 45.4	-1.5
EHY				*e*S	Sn	16 51 16.7	-2.6
EGFH	**Guangfu**	2.89	338	*e*P	Pn	16 50 47.5	-0.9
EGFH				*e*S	Sn	16 51 20.5	-1.4
WTP	**Ta-pu**	2.92	321	*e*P	Pn	16 50 50.4	+1.5
WTP				*e*S	Sn	16 51 24.9	+2.2
CHN1	**Nanshi**	2.92	319	*e*P	Pn	16 50 51.1	+2.1
WARBT	**Fenglin Townsh**	2.95	337	*e*P	Pn	16 50 48.0	-1.3
WARBT				*e*S	Sn	16 51 20.5	-2.9
CHN3	**Shinhua**	2.95	315	*e*S	Sn	16 51 27.1	+3.7
TPUB	**Ta-pu**	2.95	322	P	Pn	16 50 51.0	+1.7
TPUB	**Ta-pu**	2.95	322	S	Sn	16 51 24.8	+1.3
TPUB	**Ta-pu**	2.95	322	*e*P	Pn	16 50 50.8	+1.5
TPUB				*e*S	Sn	16 51 25.2	+1.6
SHUL	**Shoufeng**	2.95	341	*e*P	Pn	16 50 48.2	-1.1
SHUL				*e*S	Sn	16 51 21.9	-1.6
SNST	**Tainan City**	2.97	319	*e*P	Pn	16 50 51.2	+1.7
SNST				*e*S	Sn	16 51 27.1	+3.2
TWK	**Hsinying**	3.01	319	*e*P	Pn	16 50 52.3	+2.2
TWK				*e*S	Sn	16 51 27.0	+2.0
CHN4	**Tsaushan**	3.01	322	*e*P	Pn	16 50 52.1	+2.0
CHN4				*e*S	Sn	16 51 27.8	+2.8
ESL	**Shilin**	3.02	339	*e*P	Pn	16 50 48.7	-1.5
ESL				*e*S	Sn	16 51 22.3	-2.9
ALS	**Alishan**	3.02	326	*e*P	Pn	16 50 51.2	+0.6
ALS				*e*S	Sn	16 51 27.4	+1.7
WCKO	**Fanlu**	3.07	323	*e*P	Pn	16 50 53.0	+2.0
WCKO				*e*S	Sn	16 51 29.2	+2.7
VWDT	**VWDT**	3.07	334	*e*P	Pn	16 50 50.8	-0.2
VWDT				*e*S	Sn	16 51 21.9	-4.6
EOS4	**EOS4**	3.13	355	*e*P	Pn	16 50 51.6	+0.2
EOS4				*e*S	Sn	16 51 26.3	-1.0
SCLT	**Jiali**	3.13	314	*e*S	Sn	16 51 29.5	+1.6
ETM	**Tongmen**	3.14	341	*e*P	Pn	16 50 50.0	-1.9
ETM				*e*S	Sn	16 51 24.7	-3.5
WHYT	**Xinyi Township**	3.15	329	*e*P	Pn	16 50 52.7	+0.6
WHYT				*e*S	Sn	16 51 30.2	+1.7
CHN5	**Tsauling**	3.16	326	*e*P	Pn	16 50 53.7	+1.4
CHN5				*e*S	Sn	16 51 32.1	+3.4
SSLB	**Suanglung**	3.18	331	P	Pn	16 50 52.8	+0.2
SSLB	**Suanglung**	3.18	331	*e*P	Pn	16 50 52.4	-0.2
SSLB				*e*S	Sn	16 51 22.5	-6.8
TSCK	**Chigu Township**	3.19	313	*e*S	Sn	16 51 30.1	+0.8
CHN2	**Minshiung**	3.22	322	*e*S	Sn	16 51 32.5	+2.4
TWD	**Chiawan**	3.22	343	*e*P	Pn	16 50 52.7	-0.3
TWD				*e*S	Sn	16 51 26.8	-3.3
CHY	**Chiayi**	3.22	321	*e*P	Pn	16 50 55.6	+2.6
CHY				*e*S	Sn	16 51 32.0	+1.9
CHN8	**Yiju**	3.24	317	*e*S	Sn	16 51 32.9	+2.3
OWD	**Renai**	3.24	336	*e*P	Pn	16 50 52.6	-0.8
OWD				*e*S	Sn	16 51 29.3	-1.6
HATJ	**Hateruma jima**	3.24	19	*e*P	Pn	16 50 52.5	-0.8
HATJ				*e*S	Sn	16 51 30.0	-0.7
ETL	**Fush Village**	3.29	344	*e*P	Pn	16 50 52.7	-1.3
ETL				*e*S	Sn	16 51 29.5	-2.4
SMLT	**Sun Moon Lake**	3.29	331	*e*P	Pn	16 50 54.8	+0.7
SMLT				*e*S	Sn	16 51 32.9	+0.9
EOS3	**EOS3**	3.29	355	*e*P	Pn	16 50 54.8	+0.9
EOS3				*e*S	Sn	16 51 31.5	-0.2
WGK	**Gukeng**	3.29	325	*e*P	Pn	16 50 55.8	+1.8
WGK				*e*S	Sn	16 51 33.7	+1.8
WUSB	**Renai**	3.30	335	*e*P	Pn	16 50 53.9	-0.3
WUSB				*e*S	Sn	16 51 29.4	-2.8
WDLH	**Douliu**	3.31	325	*e*P	Pn	16 50 55.8	+1.6
WDLH				*e*S	Sn	16 51 35.0	+2.7
NACB	**Ninganchiao**	3.31	344	P	Pn	16 50 52.9	-1.3
NACB	**Ninganchiao**	3.31	344	*e*P	Pn	16 50 53.0	-1.2
NACB				*e*S	Sn	16 51 29.8	-2.5
WJS	**Zhushan**	3.32	328	*e*P	Pn	16 50 56.3	+1.9
WJS				*e*S	Sn	16 51 36.1	+3.5
TYC	**Yuchr**	3.33	331	*e*P	Pn	16 50 55.2	+0.8
TYC				*e*S	Sn	16 51 35.6	+2.8
WSL	**Shuilin Townsh**	3.36	319	*e*P	Pn	16 50 57.0	+2.1
WSL				*e*S	Sn	16 51 34.0	+0.4
ETLH	**Xiulin Townshi**	3.37	342	*e*P	Pn	16 50 54.1	-1.1
ETLH				*e*S	Sn	16 51 30.8	-3.2
WHF	**Hehuan Shan**	3.38	338	*e*P	Pn	16 50 55.0	-0.7
WHF				*e*S	Sn	16 51 31.4	-3.3
WNT	**Mingjian**	3.39	328	*e*P	Pn	16 50 57.5	+2.2
WNT				*e*S	Sn	16 51 37.4	+3.2
EAHA	**Aohua**	3.42	346	*e*P	Pn	16 50 54.9	-0.9
EAHA				*e*S	Sn	16 51 33.6	-1.5
EOS2	**EOS2**	3.43	354	*e*P	Pn	16 50 56.9	+1.1
EOS2				*e*S	Sn	16 51 33.0	-2.1
WCS	**Beigang Elemen**	3.44	333	*e*P	Pn	16 50 56.8	+0.8
WCS				*e*S	Sn	16 51 36.4	+0.8
JYNG	**Yonagunijimaku**	3.46	5	P	Pn	16 50 57.4	+1.1
YOJ	**Yonaguni jima**	3.47	6	P	Pn	16 50 57.8	+1.3
YOJ	**Yonaguni jima**	3.47	6	*e*P	Pn	16 50 57.6	+1.1
YOJ				*e*S	Sn	16 51 35.3	-1.1
YOJ	**Yonaguni jima**	3.47	6	P	Pn	16 50 57.7	+1.3
JKRS	**Kuro-shima**	3.48	21	*e*P	Pn	16 50 57.7	+1.1
JKRS				S	Sn	16 51 36.7	+0.3
IRIF	**Iriomote-Funau**	3.48	17	P	Pn	16 50 57.2	+0.6
IRIF				S	Sn	16 51 36.6	0.0
TWT	**Tachien**	3.51	338	*e*P	Pn	16 50 57.7	+0.5
TWT				*e*S	Sn	16 51 37.0	-0.6
ENA	**Nanau**	3.52	347	*e*P	Pn	16 50 57.2	+0.1
ENA				*e*S	Sn	16 51 36.1	-1.4
TDCB	**Techi**	3.52	338	*e*P	Pn	16 50 58.0	+0.8
TDCB				*e*S	Sn	16 51 36.4	-1.3
EWUT	**Wuta**	3.53	347	*e*P	Pn	16 50 57.3	+0.1
EWUT				*e*S	Sn	16 51 37.0	-0.7
NNSB	**Datong**	3.61	342	*e*P	Pn	16 50 57.9	-0.5
NNSB				*e*S	Sn	16 51 35.9	-4.0
WCH1	**Changhua City**	3.62	328	*e*S	Sn	16 51 42.8	+2.8
WCHH	**Zhanghua**	3.62	329	*e*P	Pn	16 51 01.4	+2.9
WCHH				*e*S	Sn	16 51 42.0	+2.0
TCU	**Taichung**	3.62	331	*e*P	Pn	16 51 00.3	+1.8
TCU				*e*S	Sn	16 51 43.1	+3.1
WHP	**Taichung City**	3.62	335	*e*P	Pn	16 51 00.9	+2.3
WHP				*e*S	Sn	16 51 43.7	+3.5
NNS	**Nan Shan**	3.62	342	*e*P	Pn	16 50 59.4	+0.8
NNS				*e*S	Sn	16 51 37.7	-2.6
JIJ	**Ishigaki jima**	3.64	22	P	Pn	16 50 59.1	+0.3
JIJ				S	Sn	16 51 39.3	-1.2
ESAO	**Su ao**	3.64	349	*e*P	Pn	16 50 59.8	+1.0
ESAO				*e*S	Sn	16 51 39.7	-0.8
LATG	**Datong**	3.67	344	*e*P	Pn	16 50 59.7	+0.4
LATG				*e*S	Sn	16 51 40.5	-1.0
TWC	**Suao**	3.67	349	*e*P	Pn	16 50 59.9	+0.7
TWC				*e*S	Sn	16 51 40.5	-0.8
VCHM	**Qimei**	3.69	307	*e*P	Pn	16 50 59.1	-0.4
VCHM				*e*S	Sn	16 51 39.6	-2.2
NDS	**Dongshan**	3.72	347	*e*P	Pn	16 51 00.9	+1.0
NDS				*e*S	Sn	16 51 40.4	-2.1
TWQ1	**Liyutan**	3.75	333	*e*P	Pn	16 51 02.7	+2.3
TWQ1				*e*S	Sn	16 51 46.8	+3.4
ENTT	**Nioudou**	3.76	345	*e*P	Pn	16 51 01.4	+0.9
ENTT				*e*S	Sn	16 51 42.2	-1.4
PHUB	**P'eng-hu**	3.78	312	*e*P	Pn	16 50 59.8	-0.9
PHUB				*e*S	Sn	16 51 42.3	-1.7
TWE	**Neicheng**	3.82	347	*e*P	Pn	16 51 02.4	+1.2
TWE				*e*S	Sn	16 51 44.4	-0.4
NSY	**Sanyi**	3.82	334	*e*S	Sn	16 51 48.6	+3.6
YHNB	**Yeheng**	3.84	343	P	Pn	16 51 01.6	0.0
YHNB	**Yeheng**	3.84	343	*e*P	Pn	16 51 02.2	+0.6
YHNB				*e*S	Sn	16 51 43.4	-2.2
NSK	**Sanguang**	3.85	343	*e*P	Pn	16 51 02.5	+0.8
NSK				*e*S	Sn	16 51 44.7	-1.1
NFF	**Wufeng Townshi**	3.88	339	*e*P	Pn	16 51 03.7	+1.6
NFF				*e*S	Sn	16 51 45.6	-1.0
JISG	**Ishigakijimahi**	3.91	23	P	Pn	16 51 02.7	+0.3
JISG				S	Sn	16 51 46.1	-0.9
NWLT	**Wulai**	3.91	345	*e*P	Pn	16 51 03.6	+1.1
NWLT				*e*S	Sn	16 51 45.1	-2.0
NMLH	**Miaoli**	3.92	335	*e*P	Pn	16 51 03.9	+1.3
NMLH				*e*S	Sn	16 51 49.3	+2.0
NSTT	**Nanjuang**	3.92	338	*e*P	Pn	16 51 04.8	+2.1
NSTT				*e*S	Sn	16 51 49.3	+1.9
LIOB	**Emei**	3.93	338	*e*P	Pn	16 51 04.0	+1.3
LIOB				*e*S	Sn	16 51 49.3	+1.6
KSHI	**Guanxi Townshi**	4.00	341	*e*P	Pn	16 51 05.8	+2.1
KSHI				*e*S	Sn	16 51 50.4	+1.0
TIPB	**Shuangxi**	4.03	350	*e*P	Pn	16 51 06.0	+1.8
TIPB				*e*S	Sn	16 51 49.0	-1.2
TWB1	**Santiao Chiao**	4.04	352	*e*P	Pn	16 51 05.2	+0.9
TWB1				*e*S	Sn	16 51 49.5	-0.9
TWA	**Mucha**	4.09	347	*e*P	Pn	16 51 07.0	+2.1
TWA				*e*S	Sn	16 51 51.5	0.0
TATO	**Taipei**	4.10	345	P	Pn	16 51 06.5	+1.4
JTJ	**Tarama**	4.11	27	P	Pn	16 51 06.6	+1.4
JTJ				S	Sn	16 51 51.2	-0.8
NWF	**Wu-fen Shan**	4.14	349	*e*P	Pn	16 51 07.8	+2.1
NWF				*e*S	Sn	16 51 52.0	-0.9
WFSB	**Wu-fen Shan**	4.14	349	*e*P	Pn	16 51 07.5	+1.9
WFSB				*e*S	Sn	16 51 52.1	-0.6
SXI1	**Grass Mountain**	4.14	351	*e*P	Pn	16 51 07.0	+1.2
SXI1				*e*S	Sn	16 51 51.5	-1.5
TAP	**Taipei**	4.16	346	*e*P	Pn	16 51 08.4	+2.4
TAP				*e*S	Sn	16 51 54.2	+0.9
NCUH	**Zhongli**	4.18	342	*e*P	Pn	16 51 07.6	+1.5
NCUH				*e*S	Sn	16 51 56.0	+2.3
TWS1	**Kuangyinshan**	4.24	345	*e*P	Pn	16 51 09.4	+2.4
TWS1				*e*S	Sn	16 51 56.7	+1.5
YM01	**YM01**	4.25	347	*e*P	Pn	16 51 09.3	+2.1
YM01				*e*S	Sn	16 51 55.8	+0.2
ZUZH	**Zhuzihu**	4.27	347	*e*P	Pn	16 51 08.1	+0.6
ZUZH				*e*S	Sn	16 51 54.7	-1.4
YM08	**YM08**	4.29	347	*e*P	Pn	16 51 08.9	+1.3
YM08				*e*S	Sn	16 51 54.2	-2.2
NTST	**Danshui**	4.29	346	*e*P	Pn	16 51 09.7	+1.9
NTST				*e*S	Sn	16 51 56.9	+0.3
ANP	**Anpu**	4.30	347	*e*P	Pn	16 51 09.7	+1.8
ANP				*e*S	Sn	16 51 52.4	-4.4
JIRB	**Irabujima**	4.49	31	*e*P	Pn	16 51 11.2	+0.8
JIRB				*e*S	Sn	16 52 01.5	+0.2
JMJ2	**Miyako jima3**	4.49	33	P	Pn	16 51 11.6	+1.1
JMJ2				*e*S	Sn	16 52 02.4	+1.0
JMJ	**Miyako jima 2**	4.53	32	P	Pn	16 51 11.6	+0.5
JOGS	**Gusukube**	4.55	34	*e*P	Pn	16 51 12.6	+1.3
KNM	**Kinmen**	5.16	312	*e*P	Pn	16 51 19.1	-0.5
KNM				*e*S	Sn	16 52 18.5	+0.6
PTMZ	**Houxiangcun**	5.16	322	*e*P	Pn	16 51 20.4	+0.7
PTMZ				*e*S	Sn	16 52 14.6	-3.4
KNMB	**Chin-men Tao**	5.22	312	*e*P	Pn	16 51 19.5	-0.9
KNMB				*e*S	Sn	16 52 16.9	-2.6
DSXP	**Dongshan**	5.52	300	*e*P	Pn	16 51 23.9	-0.8
DSXP				*e*S	Sn	16 52 23.9	-3.0
MATB	**Ma-tsu**	5.70	335	*e*S	Sn	16 52 29.1	-2.1
AXDP	**Jialang**	5.79	313	*e*P	Pn	16 51 28.2	-0.2
AXDP				*e*S	Sn	16 52 31.2	-2.4
XPSS	**Dashiqiu**	6.32	340	*e*P	Pn	16 51 35.5	-0.1
XPSS				*e*S	Sn	16 52 43.4	-3.1
SXFK	**Yanhouchang**	7.06	321	*e*P	Pn	16 51 46.2	+0.4
JNTH	**Nagotoyohara**	7.40	41	*e*P	Pn	16 51 50.8	+0.3
JNTH				*e*S	Sn	16 53 09.3	-3.9
JOW	**Kunigami**	7.78	41	Pn	Pn	16 51 56.0	+0.3
	4.4nm,0.3s,baz=142,slow=23,SNR=5.9						
	13nm,0.3s						
JAM	**Amami Oshima**	9.74	39	*e*P	Pn	16 52 21.2	-1.3
JAM				*e*S	Sn	16 54 05.3	-5.3
KSRS	**Korea Array**	17.04	15	P	P	16 54 02.7	+0.8
	0.4nm,0.3s,baz=199,slow=11,SNR=8.0						
	1.1nm,0.5s						
CMAR	**Chiang Mai Arr**	22.43	268	P	P	16 55 02.6	+1.8
	0.5nm,0.3s,baz=84,slow=11,SNR=5.9						
	0.5nm,0.3s						
SONM	**Songino Array**	29.81	338	P	P	16 56 09.4	+0.8
	0.5nm,0.9s,baz=139,slow=9.0,SNR=3.0						
SONM				pP	pwP	16 56 22.1	-1.6
	0.7nm,0.7s,baz=153,slow=8.2,SNR=4.3						
	0.5nm,0.9s						
MKAR	**Makanchi Array**	41.57	318	P	P	16 57 50.9	+1.7
	0.5nm,0.4s,baz=109,slow=9.3,SNR=12						
	0.5nm,0.4s						
WRA	**Warramunga Arr**	42.27	163	P	P	16 57 52.1	-3.0
	0.3nm,0.8s,baz=342,slow=8.4,SNR=1.9						
WRA				pP	pP	16 58 03.1	-1.0
	0.4nm,0.6s,baz=344,slow=8.4,SNR=2.9						
	0.3nm,0.8s						
ZALV	**Zalesovo Beam**	43.64	328	P	P	16 58 06.8	+0.9
	0.9nm,0.6s,baz=117,slow=8.8,SNR=4.4						
ZALV				pP	sP	16 58 17.6	-1.0
	1.0nm,0.6s,baz=118,slow=10,SNR=3.9						
	0.9nm,0.6s						
KURBB	**Kurchatov Arra**	45.41	322	P	P	16 58 22.0	+1.9
	0.4nm,0.8s,baz=113,slow=9.8,SNR=2.5						
	0.4nm,0.8s						
ASAR	**Alice Springs**	45.73	165	P	P	16 58 21.3	-1.5
	0.2nm,0.6s,baz=343,slow=8.4,SNR=3.5						
ASAR				pP	pP	16 58 32.5	+0.5
	0.3nm,0.7s,baz=347,slow=8.9,SNR=6.5						
	0.2nm,0.6s						
NRIK	**Noril'sk**	52.82	345	LR	LR	17 23 17.3	
	comp=Z,41nm,21.0s,baz=338,slow=38						
YKA	**Yellowknife Ar**	85.38	23	pP	pP	17 02 52.0	+3.9
	0.4nm,0.7s,baz=307,slow=5.7,SNR=4.8						

ANF 05 17:03:54.7±0.2,64°.62N×138°.74W,h6^{km}±2^{km},ML3.5/28,
Error ellipse: s-maj=2.2km s-min=1.6km az=73.0,
Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
J29N	**Klondike Camp**	0.28	126	P	Pg	17 04 00.9	+0.7
	baz=299,SNR=303						
J29N				S	Sg	17 04 04.4	+0.6
	baz=299						
DAWY	**Dawson**	0.62	208	P	Pg	17 04 06.4	-0.2
	baz=30,SNR=486						
I29M	**Ogilvie Camp,**	0.77	14	P	Pb	17 04 10.3	-0.2
	baz=192,SNR=24						
K29M	**Barlow Dome**	0.94	145	P	Pg	17 04 12.7	0.0
	baz=325						
I28M	**Miner Creek**	0.98	329	P	Pb	17 04 13.9	-0.2
	baz=149						
J30M	**Hart River**	1.04	91	P	Pg	17 04 13.8	-0.8
	baz=271						
I30M	**Mount Dempster**	1.18	58	P	Pg	17 04 17.2	-0.1
	baz=238,SNR=82						
L29M	**L29M**	1.54	170	P	Pn	17 04 22.8	+0.1
	baz=350,SNR=153						
K27K	**Chicken**	1.57	249	P	Pn	17 04 22.4	-0.7
	baz=68,SNR=83						
I27K	**Kandik River**	1.57	310	P	Pn	17 04 23.4	+0.3
	baz=129,SNR=43						
I27K				S	Sn	17 04 43.5	-0.3
	baz=129						
I27K				S	Sn	17 04 43.5	-0.3
	baz=129						
H29M	**Whitestone**	1.62	5	P	Pn	17 04 24.1	+0.4
	baz=185,SNR=112						
EPYK	**Eagle Plains**	1.95	25	P	Pn	17 04 28.8	+0.4
	baz=206						
H27K	**Steamboat Moun**	2.00	326	P	Pn	17 04 29.6	+0.6
	baz=144						
I26K	**Coal Creek Min**	2.00	292	P	Pn	17 04 29.0	0.0
	baz=109						
L27K	**Beaver Creek,**	2.08	223	P	Pn	17 04 30.0	0.0
	baz=41						
J26L	**Joseph Creek**	2.09	269	P	Pn	17 04 29.5	-0.7
	baz=86,SNR=50						
M29M	**Somme Creek**	2.18	177	P	Pn	17 04 31.8	+0.2
	baz=357						
H31M	**Peel River**	2.21	55	P	Pn	17 04 32.5	+0.6
	baz=238						
M30M	**Minto, Yukon**	2.22	156	P	Pn	17 04 31.7	-0.4
	baz=338,SNR=5.5						
G29M	**Pine Creek**	2.33	7	P	Pn	17 04 33.4	-0.1
	baz=187						
SCRK	**Sand Creek**	2.38	257	P	Pn	17 04 33.9	-0.4
	baz=73,SNR=49						
BVCY	**Beaver Creek**	2.41	204	P	Pn	17 04 34.8	+0.2
	baz=23						
G30M	**tAoh Zraii Nji**	2.59	22	P	Pn	17 04 37.3	+0.1
	baz=204,SNR=38						
M27K	**Edge Creek, AK**	2.67	213	P	Pn	17 04 38.2	-0.1
	baz=31,SNR=12						
J25K	**Salcha River,**	2.86	273	P	Pn	17 04 40.2	-0.6
	baz=88						
YUK3	**Moose Creek**	2.96	196	P	Pn	17 04 42.5	+0.2
	baz=15,SNR=29						
G31M	**Satah River**	2.96	36	P	Pn	17 04 42.4	+0.2
	baz=220,SNR=26						
PRP	**Porcupine Dome**	3.02	291	P	Pn	17 04 42.7	-0.3
	baz=105						
F28M	**Old Crow**	3.05	352	P	Pn	17 04 42.9	-0.5
	baz=171						
N30M	**Aishikik Lake**	3.26	166	P	Pn	17 04 46.7	+0.5
	baz=347						
YUK4	**Talbot Arm**	3.28	179	P	Pn	17 04 45.7	-1.1
	baz=359,SNR=32						
YUK8	**Steele Glacier**	3.38	188	P	Pn	17 04 48.2	0.0
	baz=7.8,SNR=15						
HARP	**HAARP**	3.63	235	P	Pg	17 05 04.6	+0.3
	baz=50						
YUK6	**Outpost Mounta**	3.69	177	P	Pn	17 04 53.0	+0.6
	baz=358,SNR=16						
MCARA	**McCarthy VSAT**	3.79	213	P	Pn	17 04 54.4	+0.9
	baz=30,SNR=7.8						

ANF 05 17:04:08.6±0.1,64°.59N×138°.77W,h7^{km}±1^{km},ML3.6/55,
Error ellipse: s-maj=0.9km s-min=0.7km az=86.0,
Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
J29N	**Klondike Camp**	0.27	119	S	Sg	17 04 18.0	+0.4
	baz=294						
J29N	**Klondike Camp**	0.27	119	P	Pg	17 04 14.7	+0.8
	baz=294						
DAWY	**Dawson**	0.59	208	S	Sg	17 04 27.7	+0.1
	baz=27						
DAWY	**Dawson**	0.59	208	P	Pg	17 04 20.4	+0.5
	baz=27						
I29M	**Ogilvie Camp,**	0.80	14	S	Sg	17 04 34.9	+0.5
	baz=195						
I29M	**Ogilvie Camp,**	0.80	14	P	Pg	17 04 24.2	+0.2
	baz=195						
K29M	**Barlow Dome**	0.92	143	S	Sg	17 04 38.6	+0.3
	baz=323						
K29M	**Barlow Dome**	0.92	143	P	Pg	17 04 26.5	+0.2
	baz=323						
I28M	**Miner Creek**	1.00	331	S	Sb	17 04 41.3	-0.4
	baz=151						
I28M	**Miner Creek**	1.00	331	P	Pg	17 04 27.6	-0.1
	baz=151						
J30M	**Hart River**	1.05	89	P	Pg	17 04 28.7	-0.1
	baz=270						
I30M	**Mount Dempster**	1.20	57	S	Sg	17 04 47.0	-0.3
	baz=238						
I30M	**Mount Dempster**	1.20	57	P	Pg	17 04 31.1	-0.5
	baz=238						
L29M	**L29M**	1.51	169	S	Sg	17 04 56.9	0.0
	baz=349						
L29M	**L29M**	1.51	169	P	Pn	17 04 36.4	+0.3
	baz=349						
K27K	**Chicken**	1.55	250	P	Pn	17 04 36.7	+0.1
	baz=68						
K27K	**Chicken**	1.55	250	S	Sn	17 04 57.1	+0.2
	baz=68						
K27K	**Chicken**	1.55	250	S	Sn	17 04 57.1	+0.2
	baz=68						
I27K	**Kandik River**	1.58	312	P	Pn	17 04 37.0	-0.1
	baz=130						
I27K	**Kandik River**	1.58	312	Sb	Sg	17 04 59.4	+0.1
	baz=130						
I27K	**Kandik River**	1.58	312	Sb	Sg	17 04 59.4	+0.1
	baz=130						
MAYO	**Mayo, Yukon**	1.61	127	S	Sg	17 04 59.8	-0.3
	baz=309						
MAYO	**Mayo, Yukon**	1.61	127	Pg	Pg	17 04 39.2	-0.2
	baz=309						
H29M	**Whitestone**	1.65	6	S	Sb	17 05 00.3	0.0
	baz=186						
H29M	**Whitestone**	1.65	6	P	Pn	17 04 37.9	-0.1
	baz=186						
EPYK	**Eagle Plains**	1.99	25	S	Sn	17 05 08.5	+0.8
	baz=206						
EPYK	**Eagle Plains**	1.99	25	P	Pn	17 04 42.7	+0.1
	baz=206						
I26K	**Coal Creek Min**	2.00	293	P	Pn	17 04 42.7	-0.1
	baz=110						
H27K	**Steamboat Moun**	2.02	326	S	Sn	17 05 09.3	+0.8
	baz=144						
H27K	**Steamboat Moun**	2.02	326	Pb	Pb	17 04 45.5	-0.1
	baz=144						
L27K	**Beaver Creek,**	2.04	223	Sb	Sb	17 05 12.7	+1.1
	baz=40						
L27K	**Beaver Creek,**	2.04	223	Pb	Pb	17 04 46.1	0.0
	baz=40						
J26L	**Joseph Creek**	2.07	270	P	Pn	17 04 43.5	-0.4
	baz=86						
J26L	**Joseph Creek**	2.07	270	S	Sn	17 05 10.9	+0.9
	baz=86						
J26L	**Joseph Creek**	2.07	270	S	Sn	17 05 10.9	+0.9
	baz=86						
M29M	**Somme Creek**	2.15	176	Sb	Sg	17 05 16.3	-1.3
	baz=356						
M30M	**Minto, Yukon**	2.20	155	Sb	Sb	17 05 17.6	+1.4
	baz=337						
M30M	**Minto, Yukon**	2.20	155	P	Pn	17 04 45.6	0.0
	baz=337						
H31M	**Peel River**	2.23	55	Sb	Sg	17 05 18.9	-1.3
	baz=238						
SCRK	**Sand Creek**	2.36	257	Sb	Sb	17 05 22.3	+1.6

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	baz=73						
SCRK	**Sand Creek** baz=73	**2.36**	**257**	Pb	Pb	17 04 51.5	+0.1
G29M	**Pine Creek** baz=188	**2.36**	**7**	P	Pn	17 04 47.4	-0.3
BVCY	**Beaver Creek** baz=22	**2.37**	**204**	Sb	Sg	17 05 23.0	-1.7
G27K	**Doyon Strip** baz=151	**2.53**	**333**	S	Sn	17 05 21.5	+0.3
L26K	**Log Cabin Wild** baz=51	**2.56**	**234**	Sb	Sb	17 05 28.1	+1.5
G30M	**tAoh Zraii Nji** baz=205	**2.62**	**22**	P	Pn	17 04 51.4	-0.1
M27K	**Edge Creek, AK** baz=31	**2.64**	**213**	Sb	Sb	17 05 30.9	+2.2
RIDG	**Independent Ri** baz=70	**2.79**	**255**	Sb	Sb	17 05 35.3	+2.1
J25K	**Salcha River,** baz=88	**2.85**	**274**	P	Pn	17 04 54.4	-0.1
J25K	**Salcha River,** baz=88	**2.85**	**274**	Sb	Sb	17 05 36.5	+1.8
J25K	**Salcha River,** baz=88	**2.85**	**274**	Sb	Sb	17 05 36.5	+1.8
M26K	**Nabesna, AK** baz=39	**2.90**	**223**	Sb	Sb	17 05 38.1	+1.9
YUK3	**Moose Creek** baz=14	**2.92**	**196**	Sb	Sb	17 05 38.6	+1.5
YUK3	**Moose Creek** baz=14	**2.92**	**196**	P	Pn	17 04 56.2	+0.5
G31M	**Satah River** baz=220	**2.99**	**36**	P	Pn	17 04 56.5	+0.1
PRP	**Porcupine Dome** baz=106	**3.01**	**291**	P	Pn	17 04 56.5	-0.3
M31M	**Drury Creek, Y** baz=322	**3.10**	**139**	Sb	Sb	17 05 44.9	+2.9
N30M	**Aishikik Lake** baz=347	**3.23**	**166**	P	Pn	17 05 00.0	+0.3
YUK4	**Talbot Arm** baz=358	**3.25**	**179**	P	Pn	17 04 59.4	-0.8
YUK8	**Steele Glacier** baz=7.3	**3.34**	**188**	P	Pn	17 05 01.8	+0.3
PAX	**Paxson** baz=59	**3.39**	**244**	P	Pn	17 05 02.2	+0.2
FARO	**Faro, Yukon** baz=316	**3.40**	**132**	Sb	Sb	17 05 53.2	+2.7
N31M	**Braeburn, Yuko** baz=337	**3.40**	**155**	P	Pn	17 05 01.6	-0.4
F31M	**Tsiigehtchic** baz=218	**3.53**	**33**	S	Sn	17 05 46.3	+0.7
F31M	**Tsiigehtchic** baz=218	**3.53**	**33**	P	Pn	17 05 03.5	-0.2
YUK6	**Outpost Mounta** baz=357	**3.66**	**177**	P	Pn	17 05 05.2	-0.6
POKR	**Poker Plat Res** baz=95	**3.74**	**282**	P	Pn	17 05 06.4	-0.2
POKR	**Poker Plat Res** baz=95	**3.74**	**282**	Sb	Sb	17 06 02.6	+2.3
POKR	**Poker Plat Res** baz=95	**3.74**	**282**	Sb	Sb	17 06 02.6	+2.3
MCARA	**McCarthy VSAT** baz=29	**3.75**	**213**	P	Pn	17 05 06.6	-0.3
E27K	**Coleen River** baz=162	**3.79**	**344**	P	Pn	17 05 07.0	-0.4
F26K	**Sheenjek River** baz=143	**3.81**	**327**	P	Pn	17 05 07.6	-0.1
E29M	**Blow River** baz=186	**3.84**	**5**	P	Pn	17 05 07.7	-0.3
O30N	**Mendenhall** baz=343	**4.02**	**161**	P	Pn	17 05 10.4	-0.2
H24K	**Noodor Dome** baz=104	**4.04**	**292**	P	Pn	17 05 10.6	-0.2
E28M	**Babbage River** baz=176	**4.05**	**356**	P	Pn	17 05 10.8	-0.1
DHY	**Denali Highway** baz=65	**4.10**	**252**	P	Pn	17 05 11.6	-0.2
F25K	**Christian Rive** baz=134	**4.12**	**320**	P	Pn	17 05 11.3	-0.6
M24K	**Tolsona, Glenn** baz=50	**4.16**	**237**	P	Pn	17 05 11.8	-0.7
INK	**Inuvik** baz=212	**4.29**	**27**	P	Pn	17 05 13.6	-0.6
O29M	**Mount Kennedy** baz=359	**4.30**	**179**	P	Pn	17 05 14.0	-0.5
WHY	**Whitehorse** baz=337	**4.33**	**154**	P	Pn	17 05 14.7	-0.1
NEA2	**Nenana** baz=86	**4.44**	**275**	P	Pn	17 05 16.0	-0.3
E25K	**Arctic Village** baz=140	**4.48**	**325**	P	Pn	17 05 16.8	-0.1
WAT6	**Susitna Watana** baz=60	**4.48**	**247**	P	Pn	17 05 16.9	-0.1
MCK	**McKinley** baz=75	**4.53**	**264**	P	Pn	17 05 17.7	+0.1
I23K	**Minto, Yukon-K** baz=93	**4.55**	**282**	P	Pn	17 05 17.9	+0.1
G23K	**Bananza Creek** baz=110	**5.12**	**300**	P	Pn	17 05 26.1	+0.4
SML	**Sawmill** baz=53	**5.15**	**242**	P	Pn	17 05 26.2	+0.2
TRF	**Thorofare Moun** baz=72	**5.19**	**263**	P	Pn	17 05 26.7	-0.1
H22K	**Ishtalitna Cre** baz=98	**5.46**	**290**	P	Pn	17 05 31.1	+0.8

IDC 05 17:10:18.5±4.9**, 16°.26S**×**176°.25W, h0**^{km}**, mb4.3**/3**, mbtmp4.3**/3**, Error ellipse: s-maj=169.2km s-min=97.9km az=156.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek** 1.3nm,0.5s,baz=84,slow=11,SNR=3.7 1.3nm,0.5s	**41.24**	**240**	P	P	17 18 06.2	+0.7
WRA	**Warramunga Arr** 1.0nm,0.6s,baz=95,slow=7.8,SNR=19 1.0nm,0.6s	**46.98**	**258**	P	P	17 18 51.3	-0.5
ASAR	**Alice Springs** 9.1nm,0.6s,baz=89,slow=7.8,SNR=336	**47.24**	**253**	P	P	17 18 53.5	-0.3
ASAR	0.3nm,0.4s,baz=103,slow=3.9,SNR=5.3 9.1nm,0.6s			PcP	PcP	17 20 24.9	-0.4

IDC 05 17:29:44.3±1.1**, 62°.59S**×**176°.32W, h0**^{km}**, mb3.6**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=105.5km s-min=34.1km az=26.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H** baz=144,slow=76,SNR=6.7	**50.37**	**269**	T	T	18 33 18.9	
H01W2	**Cape Leeuwin H** baz=144,slow=76,SNR=5.5	**50.37**	**269**	T	T	18 33 24.2	
H01W3	**Cape Leeuwin H** baz=144,slow=76,SNR=6.3	**50.38**	**269**	T	T	18 33 24.4	
ASAR	**Alice Springs** 0.4nm,0.7s,baz=149,slow=6.8,SNR=5.4 0.4nm,0.7s	**51.11**	**296**	P	P	17 38 47.8	-0.8
WRA	**Warramunga Arr** 0.2nm,0.6s,baz=150,slow=7.1,SNR=1.6 0.2nm,0.6s	**54.25**	**298**	P	P	17 39 13.6	+1.8
H03S2	**Juan Fernandez** baz=210,slow=74,SNR=13	**63.78**	**113**	T	T	18 50 14.5	
H03S1	**Juan Fernandez** baz=210,slow=74,SNR=12	**63.79**	**113**	T	T	18 50 14.4	
H03S3	**Juan Fernandez** baz=210,slow=74,SNR=13	**63.80**	**113**	T	T	18 50 16.8	
LPAZ	**La Paz** 1.3nm,0.7s,baz=183,slow=4.6,SNR=4.5 1.3nm,0.7s	**83.78**	**113**	P	P	17 42 17.0	+1.0
ILAR	**Eielson Array** 0.4nm,0.7s,baz=206,slow=5.9,SNR=4.5	**128.91**	**16**	PKP	PKPdf	17 48 50.6	-1.4
BVAR	**Borovoye Array** 1.6nm,0.7s,baz=158,slow=2.1,SNR=10.0	**144.79**	**286**	PKP	PKPab	17 49 20.5	-0.2
KBZ	**Khabaz** 1.8nm,0.9s,baz=132,slow=4.5,SNR=4.6	**150.52**	**249**	PKPbc	PKPbc	17 49 36.8	0.0
BRTR	**Keskin Array B** 0.9nm,0.8s,baz=142,slow=5.4,SNR=5.8	**150.87**	**232**	PKPbc	PKPbc	17 49 37.1	-0.9

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*KRNET **05** 17:40:20.5±0.1, 41°.29N×78°.86E, h12^{km}, mb2.5*
*SOME **05** 17:40:20.7, 41°.15N×78°.72E, h10^{km}*
ISC 05 17:40:22.9±2.2**, 41°.29N**±0°.08×**78°.67E**±0°.06**, h16**^{km}±14^{km}**, n13, σ1ˢ.70**/26**, 10C-2D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.78**	**304**	⇑*i*P	**Pg**	**17 40 37.8**	**-0.5**
TARG				⇑*i*S	**Sb**	**17 40 50.9**	**+1.9**
PRZ	**Przheval'sk**	**1.21**	**350**	⇑*i*P	**Pn**	**17 40 44.5**	**-0.9**
PRZ				⇑*i*S	**Sb**	**17 41 01.9**	**+0.9**
KDJ	**Kajisay**	**1.40**	**307**	⇓*i*P	**Pb**	**17 40 48.8**	**+0.1**
KDJ				⇓*i*S	**Sg**	**17 41 09.3**	**+1.2**
UZB	**Uzynbulak** 1.6nm,0.2s	**1.87**	**8**	*e*P	**Pg**	**17 40 57.6**	**-1.4**
UZB	6.9nm,0.3s			*e*S	**Sg**	**17 41 24.2**	**+0.9**
SHLS	**Shalkode** 7.6nm,0.2s	**1.96**	**17**	*e*P	**Pg**	**17 41 00.7**	**+0.2**
SHLS	21nm,0.3s			*e*S	**Sg**	**17 41 29.4**	**+3.5**
TNSS	**Tian-Shan** 2.2nm,0.4s	**2.17**	**324**	*e*P	**Pg**	**17 41 03.5**	**-1.0**
TNSS	3.3nm,0.5s			*e*S	**Sg**	**17 41 34.9**	**+2.2**
KOTS	**Kotyrbulak** 5.9nm,0.3s	**2.26**	**330**	*e*P	**Pg**	**17 41 04.8**	**-1.5**
KOTS	9.4nm,0.5s			*e*S	**Sg**	**17 41 36.7**	**+1.0**
JNKS	**Jany-Kuch**	**2.29**	**265**	⇑*e*P	**Pb**	**17 41 03.6**	**-0.4**
JNKS				⇑*e*S	**Sb**	**17 41 34.8**	**+2.6**
BOOM	**Boomskoye usch**	**2.37**	**301**	⇑*i*P	**Pb**	**17 41 04.4**	**-0.8**
BOOM				⇑*i*S	**Sb**	**17 41 36.3**	**+2.0**
MTBS	**Maitube** 2.0nm,0.1s	**2.48**	**319**	*e*P	**Pb**	**17 41 08.5**	**+1.3**
MTBS	6.0nm,0.5s			*e*S	**Sg**	**17 41 42.7**	**+0.1**
KST	**Kastek** 2.6nm,0.5s	**2.67**	**312**	*e*P	**Pg**	**17 41 12.7**	**-1.4**
KST	7.1nm,0.7s			*e*S	**Sg**	**17 41 50.1**	**+1.4**
TKM2	**Tokmak 2**	**2.81**	**306**	⇑*i*P	**Pb**	**17 41 10.3**	**-2.5**
TKM2				⇑*i*S	**Sb**	**17 41 46.9**	**-0.1**
ARXS	**Arharly** 1.3nm,0.2s	**2.99**	**348**	*e*P	**Pg**	**17 41 17.4**	**-2.7**
ARXS	9.4nm,0.5s			*e*S	**Sg**	**17 41 58.2**	**-0.7**

IDC 05 17:47:32.2±2.8**, 8°.30S**×**159°.16E, h0**^{km}**, mb3.5**/4**, mbtmp3.5**/4**, Error ellipse: s-maj=127.0km s-min=29.6km az=131.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.4nm,0.7s,baz=69,slow=9.6,SNR=2.5 0.4nm,0.7s	**26.67**	**242**	P	P	17 53 13.3	+0.1
ASAR	**Alice Springs** 0.1nm,0.4s,baz=68,slow=8.9,SNR=2.8 0.1nm,0.4s	**28.61**	**235**	P	P	17 53 30.5	-0.1
ILAR	**Eielson Array** 0.3nm,0.4s,baz=245,slow=4.9,SNR=10 0.3nm,0.4s	**83.10**	**20**	P	P	17 59 59.5	-0.1
MKAR	**Makanchi Array** 0.5nm,0.6s,baz=94,slow=5.9,SNR=4.6 0.5nm,0.6s	**87.12**	**318**	P	P	18 00 20.4	+0.2

IDC 05 17:51:01.4±14.0**, 4°.00S**×**103°.49W, h0**^{km}**, mb3.2**/3**, mbtmp3.2**/3**, MS3.4**/13**, Error ellipse: s-maj=507.3km s-min=173.8km az=114.0, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero** comp=Z,129nm,19.9s,baz=180,slow=31	**22.62**	**22**	LR	LR	18 02 51.1	
JTS	**Las Juntas de** comp=Z,179nm,20.5s,baz=164,slow=30	**23.29**	**52**	LR	LR	18 02 51.4	
LPIG	**La Paz** comp=Z,99nm,21.9s,baz=200,slow=30	**28.71**	**347**	LR	LR	18 05 15.3	
ROSC	**El Rosal** comp=Z,90nm,21.9s,baz=244,slow=32	**30.44**	**73**	LR	LR	18 07 10.1	
TXAR	**Lajitas Array** comp=Z,38nm,18.4s,baz=170,slow=31	**33.14**	**360**	LR	LR	18 08 13.8	
SDV	**Santo Domingo** comp=Z,88nm,21.9s,baz=256,slow=32	**35.17**	**69**	LR	LR	18 09 49.3	
LPAZ	**La Paz** comp=Z,65nm,20.0s,baz=256,slow=31	**36.81**	**112**	LR	LR	18 10 07.6	
ANMO	**Albuquerque** comp=Z,17nm,18.9s,baz=254,slow=36	**38.84**	**356**	LR	LR	18 14 01.8	
PFO	**Pinyon Flats O** comp=Z,98nm,20.0s,baz=123,slow=31	**39.37**	**343**	LR	LR	18 11 23.8	
NVAR	**Mina Array Bea** comp=Z,92nm,21.1s,baz=189,slow=30	**44.39**	**343**	LR	LR	18 13 25.7	
PDAR	**Pinedale Array** 0.4nm,0.8s,baz=157,slow=7.1,SNR=8.1 0.4nm,0.8s	**46.87**	**354**	P	P	17 59 34.0	+0.4
PLCA	**Paso Flores** comp=Z,110nm,18.5s,baz=255,slow=30	**47.06**	**146**	LR	LR	18 14 34.1	
YBH	**Yreka Blue Hor** comp=Z,5.2nm,18.4s,baz=161,slow=31	**48.77**	**341**	LR	LR	18 15 52.2	
CPUP	**Villa Florida** comp=Z,17nm,18.2s,baz=189,slow=33	**49.41**	**122**	LR	LR	18 17 51.8	
YKA	**Yellowknife Ar** 0.1nm,0.5s,baz=177,slow=6.7,SNR=4.2 0.1nm,0.5s	**66.85**	**354**	P	P	18 01 54.1	-0.7
ILAR	**Eielson Array** 0.2nm,0.7s,baz=156,slow=5.3,SNR=9.9 0.2nm,0.7s	**75.64**	**342**	P	P	18 02 48.2	+0.2

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*IDC **05** 17:51:49.6±2.7, 21°.23S×176°.48W, h0^{km}, mb3.4/2, mbtmp3.9/3, ML4.8/1, Error ellipse: s-maj=66.5km s-min=50.3km az=111.0*
*NEIC **05** 17:52:13.6±2.0, 22°.2S±0°.2×176°.57W±0°.08, h202^{km}±9^{km}, mb4.6/26, Error ellipse: s-maj=25.9km s-min=3.6km az=155.0*
ISC 05 17:52:11.8±0.7**, 22°.11S**±0°.09×**176°.44W**±0°.08**, h200**^{km}**, n36, σ1ˢ.44**/36**, mb4.3**/10**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.76**	**309**		**Pn**	**17 53 50.8**	**+1.7**
NIUE	**Niue**	**6.81**	**65**		**Pn**	**17 53 52.8**	**+3.3**
NIUE				Sn	**Sn**	**17 55 03.1**	**-3.9**
AFI	**Afiamalu**	**9.28**	**29**	Pn	**Pn**	**17 54 22.5**	**+0.6**
DZM	**Mont Dzumac**	**15.86**	**267**	P	**P**	**17 55 41.0**	**-3.4**
DZM	comp=Z,13nm,1.3s			IAmb	IAmb	17 56 17.5	
SANVU	**Saraoutou**	**16.84**	**290**	P	**P**	**17 55 55.1**	**+0.1**
SANVU	comp=Z,16nm,0.9s			IAmb	IAmb	17 56 09.4	
URZ	**Urewera** comp=Z,2.9nm,0.3s,baz=339,slow=2.4,SNR=15 comp=Z,10.0nm,0.4s	**17.03**	**198**	P	**Pn**	**17 55 59.5**	**+1.3**
HIZ	**Hauiti**	**17.98**	**203**	P	**P**	**17 56 07.1**	**-0.2**
BKZ	**Black Stump Fm**	**18.05**	**198**		**P**	**17 56 08.5**	**+0.5**
BKZ	comp=Z,26nm,1.4s			IAmb	IAmb	17 56 26.5	
MRZ	**Mangatainoka R**	**19.69**	**198**	P	**P**	**17 56 26.6**	**+0.8**
MRZ	comp=Z,43nm,1.4s			IAmb	IAmb	17 56 52.0	
BHW	**Baring Head**	**20.59**	**199**	P	**P**	**17 56 35.5**	**+0.2**
BHW	comp=Z,54nm,1.3s			IAmb	IAmb	17 56 36.5	
TCW	**Tory Channel**	**20.59**	**200**	P	**P**	**17 56 34.6**	**-0.7**
QRZ	**Quartz Range**	**20.86**	**204**	P	**P**	**17 56 39.4**	**+1.1**
NNZ	**Nelson**	**20.90**	**202**	P	**P**	**17 56 38.4**	**-0.1**
NNZ	comp=Z,42nm,1.1s			IAmb	IAmb	17 57 14.1	
MRNZ	**Matariki Terra**	**21.28**	**203**	P	**P**	**17 56 42.6**	**0.0**
THZ	**Tophouse**	**21.55**	**202**	P	**P**	**17 56 48.5**	**+3.1**
THZ	comp=Z,38nm,1.2s			IAmb	IAmb	17 57 16.2	
KHZ	**Kahutara**	**21.92**	**200**	P	**P**	**17 56 49.8**	**+0.7**
KHZ	comp=Z,28nm,1.2s			IAmb	IAmb	17 56 53.2	
GVZ	**Greta Valley S**	**22.58**	**200**	P	**P**	**17 56 54.7**	**-0.5**
LTZ	**Lake Taylor**	**22.67**	**202**	P	**P**	**17 56 55.0**	**-1.1**
LTZ	comp=Z,37nm,1.4s			IAmb	IAmb	17 56 59.2	
INZ	**Inchbonnie**	**22.91**	**203**	P	**P**	**17 56 58.3**	**+0.1**
FOZ	**Fox Glacier**	**24.22**	**205**	P	**P**	**17 57 10.9**	**+0.9**
CTAO	**Charters Tower**	**34.81**	**266**	P	**P**	**17 58 42.5**	**-1.2**
CTAO	comp=Z,12nm,1.4s			IAmb	IAmb	17 59 11.4	
ASAR	**Alice Springs** comp=Z,0.3nm,0.6s,baz=100,slow=7.6,SNR=8.5 comp=Z,0.3nm,0.6s	**45.59**	**258**	P	**P**	**18 00 12.4**	**+0.2**
WB0	**Warramunga Arr**	**45.82**	**263**	P	**P**	**18 00 14.6**	**+0.5**
WB2	**Warramunga Arr**	**45.82**	**263**	P	**P**	**18 00 13.7**	**-0.4**
WRAB	**Tennant Creek**	**45.83**	**263**	P	**P**	**18 00 14.7**	**+0.5**
WRA	**Warramunga Arr** comp=Z,0.4nm,0.6s,baz=96,slow=8.4,SNR=10 comp=Z,0.4nm,0.6s	**45.84**	**263**	P	**P**	**18 00 14.7**	**+0.5**
WRA	**Warramunga Arr**	**45.84**	**263**	P	**P**	**18 00 12.9**	**-1.2**
KNRA	**Kununurra**	**52.01**	**267**	P	**P**	**18 00 59.6**	**-1.6**
KNRA	comp=Z,12nm,1.3s			IAmb	IAmb	18 01 19.0	
FITZ	**Fitzroy Crossi**	**54.27**	**263**	P	**P**	**18 01 18.7**	**+1.2**
SBA	**Scott Base**	**56.38**	**184**	P	**P**	**18 01 30.9**	**-0.8**
VNDA	**Vanda**	**56.45**	**186**	P	**P**	**18 01 31.4**	**-0.8**
VNDA	comp=Z,7.9nm,1.4s			IAmb	IAmb	18 02 14.6	
SOEI	**Soe**	**58.01**	**272**	P	**P**	**18 01 44.0**	**-0.2**
SOEI	comp=Z,13nm,1.2s			IAmb	IAmb	18 02 15.6	
QSPA	**South Pole Qui**	**67.97**	**180**	P	P	18 02 54.2	+5.2
SNAA	**Sanae**	**86.37**	**178**	P	**P**	**18 04 30.6**	**-0.5**
SNAA	comp=Z,7.9nm,1.5s			IAmb	IAmb	18 04 33.1	
AKASG	**Malin Array Be** comp=Z,0.6nm,0.5s,baz=34,slow=3.4,SNR=4.1	**145.12**	**331**	PKP	**PKPab**	**18 11 25.4**	**+0.1**
BRTR	**Keskin Array B** comp=Z,0.5nm,0.6s,baz=131,slow=4.4,SNR=2.9	**148.99**	**311**	PKPbc	**PKiKP**	**18 11 38.6**	**+1.0**

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*AFAD **05** 17:57:40.7, 35°.01N×26°.03E, h7^{km}±2^{km}, ML2.6*
*GII **05** 17:57:44.0±0.0, 35°.01N±0°.06×26°.48E±0°.02, h30^{km}, Mws3.1, confirmed*
*ISK **05** 17:57:45.6, 35°.47N×26°.09E, h8^{km}, ML2.3/6*
*THE **05** 17:57:47.2, 35°N±7°×2°6E±°, h34^{km}±5^{km}, M2.5/4, MLh2.5/4*
ISC 05 17:57:44.5±1.2**, 35°.11N**±0°.06×**26°.50E**±0°.03**, h33**^{km}±4^{km}**, n32, σ2ˢ.53**/45**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.24**	**271**	P	**Pn**	**17 57 53.5**	**+2.1**
ZKR				S	**Sb**	**17 57 58.7**	**+2.4**
ZKR	**Zakros**	**0.24**	**271**	Pg	**Pn**	**17 57 53.5**	**+2.1**
ZKR				Sg	**Sb**	**17 57 58.9**	**+2.6**
KARP	**Karpathos**	**0.69**	**51**	P	**Pn**	**17 58 01.1**	**+3.1**
KARP				S	**Sn**	**17 58 11.2**	**+3.5**
KARP	**Karpathos**	**0.69**	**51**	Pg	**Pn**	**17 58 02.5**	**+4.5**
KARP				Sg	**Sn**	**17 58 15.9**	**+8.3**
NPS	**Neapolis**	**0.75**	**282**	P	**Pn**	**17 57 58.5**	**-0.3**
NPS				S	**Sb**	**17 58 07.2**	**-1.9**
IDI	**Anoyia**	**1.33**	**278**	P	**Pn**	**17 58 06.5**	**-0.4**
IDI				S	**Sn**	**17 58 22.1**	**-1.5**
IDI	**Anoyia**	**1.33**	**278**	Pg	**Pn**	**17 58 05.3**	**-1.6**
THERA	**Ancient Thera,**	**1.51**	**327**	P	**Pn**	**17 58 08.2**	**-1.0**
DAT	**Datca**	**1.83**	**28**	Pn	**Pb**	**17 58 17.1**	**-0.4**
IMMV	**Iera Moni Meta**	**2.09**	**280**	Pn	**Pn**	**17 58 17.1**	**-0.2**
APE	**Apeiranthos**	**2.11**	**338**	Pn	**Pn**	**17 58 15.4**	**-2.1**
APE	**Apeiranthos**	**2.11**	**338**	P	**Pn**	**17 58 17.5**	**0.0**
TURN	**Turunc**	**2.18**	**40**	P	**Pb**	**17 58 21.6**	**-1.7**
TURN				S	**Sn**	**17 58 46.7**	**+2.4**
TURN	comp=N,30nm,0.4s			*i* IAML		17 58 55.0	
IZZE	**Mula-Seydike**	**2.58**	**58**	P	**Pb**	**17 58 27.6**	**-2.5**
IZZE				S	**Sn**	**17 58 57.5**	**+3.4**
IZZE	comp=E,22nm,1.0s			*i* IAML		17 59 23.0	
SABU	**Mula-Dalaman**	**2.63**	**49**	P	**Pb**	**17 58 28.4**	**-2.6**
SABU				S	**Sb**	**17 59 04.4**	**+1.5**
SABU	comp=N,34nm,0.9s			*i* IAML		17 59 16.0	
SABU	comp=E,31nm,0.7s			*i* IAML		17 59 18.0	
DNZT	**Denizli-Tavas-**	**2.97**	**43**	P	**Pn**	**17 58 33.3**	**+3.8**
DNZT				S	**Sb**	**17 59 12.5**	**-0.2**
DNZT	comp=N,21nm,0.8s			*i* IAML		17 59 18.0	
DNZT	comp=E,16nm,1.1s			*i* IAML		17 59 25.0	
KNIK	**Mula-Seydike**	**3.03**	**54**	P	**Pb**	**17 58 34.5**	**-3.4**
KNIK	comp=N,15nm,1.6s			*i* IAML		17 59 36.0	
KNIK	comp=E,16nm,2.5s			*i* IAML		17 59 46.0	
TAVA	**DENIZLI_Tavas**	**3.05**	**39**	P	**Pn**	**17 58 33.9**	**+3.3**
TAVA				S	**Sb**	**17 59 13.9**	**-1.1**
ESEN	**Aydn-Nazilli**	**3.06**	**28**	P	**Pn**	**17 58 34.2**	**+3.5**
ESEN				S	**Sb**	**17 59 12.2**	**-3.2**
GOLH	**Golhisar**	**3.26**	**49**	P	**Pn**	**17 58 37.2**	**+3.8**
GOLH				S	**Sb**	**17 59 19.8**	**-1.2**
GOLH	comp=E,29nm,0.7s			*i* IAML		17 59 32.0	
KZIT	**Kziot**	**7.84**	**120**	P	**Pn**	**17 59 36.1**	**-0.2**
KZIT	**Kziot**	**7.84**	**120**	S	**Sn**	**18 01 03.5**	**-0.5**
DSI	**Dead Sea**	**8.22**	**113**	P	**Pn**	**17 59 42.1**	**+0.6**
DSI	**Dead Sea**	**8.22**	**113**	S	**Sn**	**18 01 13.2**	**0.0**
MSBI	**Mazada**	**8.33**	**115**	P	**Pn**	**17 59 42.9**	**0.0**
MSBI	**Mazada**	**8.33**	**115**	S	**Sn**	**18 01 16.0**	**+0.2**
KRMI	**Paran Flat**	**8.54**	**123**	P	**Pn**	**17 59 45.6**	**-0.2**
KRMI	**Paran Flat**	**8.54**	**123**	S	**Sn**	**18 01 19.7**	**-1.3**
PRNI	**Paran**	**8.59**	**121**	P	**Pn**	**17 59 46.9**	**+0.3**
PRNI	**Paran**	**8.59**	**121**	S	**Sn**	**18 01 21.7**	**-0.6**
MBRI	**Mt Berech**	**8.86**	**124**	P	**Pn**	**17 59 50.1**	**-0.2**
MBRI	**Mt Berech**	**8.86**	**124**	S	**Sn**	**18 01 28.5**	**-0.7**

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*IDC **05** 18:32:55.7±11.0, 21°.62N×143°.34E, h301^{km}±98^{km}, mb3.2/10, mbtmp3.8/10, Error ellipse: s-maj=107.6km s-min=13.3km az=78.0*
ISC 05 18:32:55.7±2.4**, 21°.6N**±0°.2×**143°.3E**±0°.6**, h300**^{km}**, n10, σ0ˢ.43**/10**, mb3.3**/9**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	**Korea Array** 0.7nm,0.6s,baz=142,slow=8.5,SNR=4.6 0.7nm,0.6s	**20.66**	**323**	P	**P**	**18 37 13.1**	**-0.1**
SONM	**Songino Array** 0.2nm,0.4s,baz=128,slow=6.3,SNR=1.9 0.2nm,0.4s	**39.49**	**321**	P	**P**	**18 39 58.0**	**+0.2**
WRA	**Warramunga Arr** 1.2nm,0.6s,baz=13,slow=9.1,SNR=20 1.2nm,0.6s	**42.18**	**193**	P	**P**	**18 40 20.3**	**+0.5**
FITZ	**Fitzroy Crossi** 1.4nm,0.8s,baz=37,slow=10,SNR=1.8 1.4nm,0.8s	**43.05**	**205**	P	**P**	**18 40 26.8**	**0.0**
ASAR	**Alice Springs** 0.4nm,0.7s,baz=15,slow=12,SNR=7.9 0.4nm,0.7s	**45.89**	**192**	P	**P**	**18 40 49.0**	**-0.1**
MKAR	**Makanchi Array** 0.4nm,0.6s,baz=92,slow=8.0,SNR=3.3 0.4nm,0.6s	**54.85**	**313**	P	**P**	**18 41 55.6**	**+0.1**
KURBB	**Kurchatov Arra** 0.4nm,0.4s,baz=91,slow=7.7,SNR=4.4 0.4nm,0.4s	**57.67**	**317**	P	**P**	**18 42 14.9**	**-0.2**
BVAR	**Borovoye Array** 1.0nm,0.3s,baz=95,slow=7.3,SNR=9.4 1.0nm,0.3s	**62.82**	**320**	P	**P**	**18 42 50.0**	**+0.2**
ARCES	**ARCESS Array B** 2.3nm,0.8s,baz=52,slow=6.3,SNR=3.7 2.3nm,0.8s	**79.06**	**342**	P	**P**	**18 44 26.9**	**+0.3**
FINES	**FINESS Array B** 5.7nm,1.1s,baz=124,slow=3.4,SNR=4.2 5.7nm,1.1s	**83.33**	**335**	P	**P**	**18 44 48.1**	**-0.9**

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*IDC **05** 18:50:05.0±0.7, 64°.60N×138°.94W, h0^{km}, mb3.8/6, mbtmp3.7/10, ML3.6/4, MS4.3/2, Error ellipse: s-maj=16.7km s-min=9.1km az=15.0*
*NEIC **05** 18:50:05.3±1.4, 64°.59N±0°.03×138°.80W±0°.07, h7^{km}±4^{km}, ML3.8/223, Mwr3.5/82, ML3.6(AEIC), Error ellipse: s-maj=4.8km s-min=2.8km az=53.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}1.34; $M_{\theta\theta}$-2.43; $M_{\phi\phi}$1.08; $M_{r\theta}$0.20; $M_{\theta\phi}$0.37; $M_{\phi r}$1.23; Fault plane solution: $M_0$2.48000×10^{14} NP1:ϕ_s61.99000°, δ59.49000°, λ38.48000°. NP2:ϕ_s310.01000°, δ57.58000°, λ143.03000°. Principal axes: T 2.4840, Plg48.0000°, Azm277.0000°; N -0.0181, Plg42.0000°, Azm95.0000°; P -2.4659, Plg1.0000°, Azm186.0000°;*
*AEIC **05** 18:50:05.5±1.3, 64°.59N±0°.02×138°.80W±0°.07, h9^{km}±4^{km} Error ellipse: s-maj=4.5km s-min=2.5km az=65.0*
*NEIC **05** 18:50:05.4, 64°.62N×138°.81W, h4^{km}*
*ANF **05** 18:50:05.3±0.2, 64°.60N×138°.75W, h4^{km}±1^{km}, ML4.0/84, Error ellipse: s-maj=1.2km s-min=0.9km az=85.0*
ISC 05 18:50:05.4±0.9**, 64°.61N**±0°.01×**138°.75W**±0°.02**, h12**^{km}±6^{km}**,**

n372,$\sigma 1^{s}32$/402,mb3.8/6,Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
J29N	Klondike Camp	0.28	124		Pg	18 50 11.6	+0.4
J29N					Sg	18 50 15.3	+0.3
J29N					Sb	18 50 15.5	-1.5
J29N	Klondike Camp	0.28	124	IAML		18 50 16.6	
	comp=N,37µm,0.5s						
J29N				IAML		18 50 18.5	
	comp=E,23µm,0.6s						
J29N	Klondike Camp	0.28	124	P	Pg	18 50 11.6	+0.4
	baz=298,SNR=219						
J29N				S	Sg	18 50 15.3	+0.3
	baz=298						
DAWY	Dawson	0.61	207		Pg	18 50 17.1	-0.2
DAWY					Sg	18 50 24.7	-0.7
DAWY					Sb	18 50 24.9	-1.7
DAWY	Dawson	0.61	207	IAML		18 50 24.9	
	comp=E,4µm,0.5s						
DAWY				IAML		18 50 25.7	
	comp=N,5µm,0.3s						
DAWY	Dawson	0.61	207	P	Pg	18 50 17.1	-0.2
	baz=26						
DAWY				S	Sg	18 50 24.5	-0.9
	baz=26						
I29M	Ogilvie Camp,	0.78	14		Pg	18 50 20.7	+0.2
I29M	Ogilvie Camp,	0.78	14		Sb	18 50 31.7	+0.4
I29M					Sg	18 50 31.9	+1.3
I29M	Ogilvie Camp,	0.78	14	P	Pg	18 50 20.8	+0.4
	baz=195,SNR=124						
I29M				S	Sb	18 50 31.6	+0.2
	baz=195						
K29M	Barlow Dome	0.94	145		Pg	18 50 23.3	-0.2
K29M	Barlow Dome	0.94	145		Sb	18 50 36.2	+0.2
K29M	Barlow Dome	0.94	145	P	Pg	18 50 23.3	-0.2
	baz=324						
K29M				S	Sg	18 50 35.5	-0.2
	baz=324						
I28M	Miner Creek	0.98	330	Pg	Pg	18 50 23.9	-0.4
I28M				IAML		18 50 38.9	
	comp=E,3µm,0.6s						
I28M				IAML		18 50 39.2	
	comp=N,3µm,0.5s						
I28M	Miner Creek	0.98	330		Sb	18 50 38.1	+0.9
I28M	Miner Creek	0.98	330	P	Pb	18 50 24.3	0.0
	baz=150						
I28M				S	Sb	18 50 38.0	+0.7
	baz=150						
J30M	Hart River	1.04	91	Pg	Pb	18 50 25.1	-0.3
J30M	Hart River	1.04	91	P	Pb	18 50 24.6	-0.9
	baz=272,SNR=36						
J30M				S	Sg	18 50 38.1	-1.0
	baz=272						
I30M	Mount Dempster	1.18	58		Pn	18 50 27.7	-0.2
I30M				IAML		18 50 45.2	
	comp=E,1µm,0.6s						
I30M				IAML		18 50 46.0	
	comp=N,2µm,0.4s						
I30M	Mount Dempster	1.18	58	P	Pn	18 50 27.9	+0.1
	baz=239						
I30M				S	Sb	18 50 43.4	+0.3
	baz=239						
L29M	L29M	1.53	169	Pn	Pb	18 50 33.3	-0.4
L29M				IAML		18 50 56.1	
	comp=E,1µm,0.6s						
L29M	L29M	1.53	169		Sb	18 50 53.3	+0.2
L29M	L29M	1.53	169	P	Pb	18 50 33.1	-0.5
	baz=349						
L29M				S	Sb	18 50 53.2	+0.2
	baz=349						
K27K	Chicken	1.56	250		Pn	18 50 32.8	0.0
K27K	Chicken	1.56	250	P	Pn	18 50 32.9	0.0
	baz=67						
K27K				S	Sb	18 50 54.2	+0.3
	baz=67						
K27K				S	Sb	18 50 54.2	+0.3
	baz=67						
I27K	Kandik River	1.57	311	Pn	Pb	18 50 33.8	-0.6
I27K				IAML		18 50 57.0	
	comp=E,788nm,0.7s						
I27K	Kandik River	1.57	311	P	Pb	18 50 34.1	-0.3
	baz=129						
I27K				S	Sg	18 50 55.2	-0.7
	baz=129						
I27K				S	Sg	18 50 55.2	-0.7
	baz=129						
MAYO	Mayo, Yukon	1.61	128		Pg	18 50 36.2	-0.2
MAYO	Mayo, Yukon	1.61	128		Sb	18 50 55.9	+0.5
MAYO					Sg	18 50 57.0	-0.3
MAYO	Mayo, Yukon	1.61	128	Pg	Pg	18 50 36.1	-0.2
	baz=309						
MAYO				S	Sg	18 50 56.6	-0.6
	baz=309						
H29M	Whitestone	1.62	5		Pn	18 50 34.6	+0.9
H29M				IAML		18 51 02.5	
	comp=E,880nm,0.7s						
H29M	Whitestone	1.62	5		Sb	18 50 56.7	+1.1
H29M	Whitestone	1.62	5	P	Pb	18 50 34.8	-0.4
	baz=186						
H29M				S	Sb	18 50 56.9	+1.2
	baz=186						
EPYK	Eagle Plains	1.96	25		Pn	18 50 39.2	+0.8
EPYK				IAML		18 51 14.4	
	comp=E,807nm,0.8s						
EPYK				IAML		18 51 17.0	
	comp=N,901nm,0.6s						
EPYK	Eagle Plains	1.96	25		Sb	18 51 05.1	-0.3
EPYK	Eagle Plains	1.96	25	P	Pn	18 50 39.4	+0.9
	baz=207,SNR=28						
EPYK				S	Sb	18 51 05.0	-0.3
	baz=207						
H27K	Steamboat Moun	2.00	326		Pb	18 50 40.5	-1.2
H27K	Steamboat Moun	2.00	326	P	Pn	18 50 40.1	+1.2
	baz=144,SNR=39						
H27K				S	Sb	18 51 06.4	-0.1
	baz=144						
I26K	Coal Creek Min	2.00	292		Pn	18 50 39.1	+0.2
I26K				IAML		18 51 08.0	
	comp=N,749nm,0.4s						
I26K				IAML		18 51 10.9	
	comp=E,868nm,0.6s						
I26K	Coal Creek Min	2.00	292		Sn	18 51 04.9	+1.0
I26K	Coal Creek Min	2.00	292	P	Pn	18 50 39.4	+0.5
	baz=109						
I26K				S	Sb	18 51 06.1	-0.3
	baz=109						
I26K				S	Sb	18 51 06.1	-0.3
	baz=109						
BCAR	Beaver Creek A	2.05	222		Pn	18 50 40.2	+0.5
BC01	Beaver Creek A	2.07	223		Pn	18 50 40.8	+0.9
L27K	Beaver Creek,	2.07	223		Pn	18 50 40.8	+0.9
L27K	Beaver Creek,	2.07	223	IAML		18 51 12.5	
	comp=N,491nm,0.6s						
L27K				IAML		18 51 12.8	
	comp=E,616nm,0.6s						
L27K	Beaver Creek,	2.07	223	P	Pn	18 50 40.5	+0.6
	baz=40						
L27K				S	Sb	18 51 07.9	-0.5
	baz=40						
J26L	Joseph Creek	2.08	269		Pn	18 50 40.4	+0.3
J26L					Sn	18 51 07.2	+1.1
J26L	Joseph Creek	2.08	269	IAML		18 51 11.0	
	comp=N,459nm,0.4s						
J26L	Joseph Creek	2.08	269	P	Pn	18 50 40.2	+0.1
	baz=86						
J26L				S	Sn	18 51 07.1	+1.1
	baz=86						
J26L				S	Sn	18 51 07.1	+1.1
	baz=86						
M29M	Somme Creek	2.18	176	Pn	Pn	18 50 42.3	+0.9
M29M				IAML		18 51 20.6	
	comp=E,423nm,0.8s						
M29M	Somme Creek	2.18	176	P	Pn	18 50 42.4	+0.9
	baz=356,SNR=12						
M29M				Sb	Sg	18 51 13.8	-1.6
	baz=356						
H31M	Peel River	2.21	55		Pn	18 50 42.9	+1.0
H31M	Peel River	2.21	55	IAML		18 51 16.7	
	comp=N,805nm,0.5s						
H31M	Peel River	2.21	55	P	Pn	18 50 42.9	+1.0
	baz=239						
H31M				S	Sn	18 51 11.3	+2.3
	baz=239						
M30M	Minto, Yukon	2.22	156		Pn	18 50 42.6	+0.6
M30M					Sb	18 51 14.0	+1.2
M30M	Minto, Yukon	2.22	156	IAML		18 51 16.7	
	comp=N,437nm,0.6s						
M30M				IAML		18 51 17.3	
	comp=E,551nm,0.8s						
M30M	Minto, Yukon	2.22	156	P	Pn	18 50 42.4	+0.4
	baz=337,SNR=5.3						
M30M				Sb	Sb	18 51 14.4	+1.6
	baz=337						
G29M	Pine Creek	2.33	7		Pn	18 50 44.0	+0.5
G29M	Pine Creek	2.33	7	IAML		18 51 25.0	
	comp=N,720nm,0.8s						
G29M				IAML		18 51 33.1	
	comp=E,535nm,0.7s						
G29M	Pine Creek	2.33	7	P	Pn	18 50 44.1	+0.5
	baz=188,SNR=13						
G29M				S	Sn	18 51 13.2	+1.1
	baz=188						
SCRK	Sand Creek	2.37	257		Pn	18 50 44.7	+0.7
SCRK	Sand Creek	2.37	257	P	Pn	18 50 44.8	+0.7
	baz=72						
SCRK				Sb	Sb	18 51 18.6	+1.4
	baz=72						
BVCY	Beaver Creek	2.40	204		Pn	18 50 45.1	+0.7
BVCY					Sb	18 51 19.4	+1.4
BVCY	Beaver Creek	2.40	204	P	Pn	18 50 45.3	+0.9
	baz=22						
BVCY				Sb	Sg	18 51 20.0	-2.4
	baz=22						
G27K	Doyon Strip	2.51	333		Pn	18 50 47.1	+1.1
G27K	Doyon Strip	2.51	333	P	Pn	18 50 47.0	+1.1
	baz=151						
G27K				Pg	Pg	18 50 53.0	-0.6
	baz=151,SNR=23						
G27K				Pg	Pg	18 50 53.0	-0.6
	baz=151,SNR=23						
G27K				S	Sn	18 51 18.4	+1.8
	baz=151						
G27K				S	Sn	18 51 18.4	+1.8
	baz=151						
DOT	Dot Lake	2.52	250		Pn	18 50 46.3	+0.2
DOT				IAML		18 51 29.1	
	comp=E,479nm,0.6s						
DOT				IAML		18 51 29.3	
	comp=N,605nm,0.7s						
L26K	Log Cabin Wild	2.59	234		Pn	18 50 47.5	+0.5
L26K	Log Cabin Wild	2.59	234	Pb	Pb	18 50 51.7	+0.1
	baz=50						
L26K				Sb	Sb	18 51 25.2	+1.8
	baz=50						
L26K				Sb	Sb	18 51 25.2	+1.8
	baz=50						
G30M	tAoh Zraii Nji	2.60	22		Pn	18 50 48.1	+0.9
G30M	tAoh Zraii Nji	2.60	22	IAML		18 51 31.1	
	comp=E,320nm,0.8s						
G30M	tAoh Zraii Nji	2.60	22	P	Pn	18 50 48.0	+0.8
	baz=205						
G30M				S	Sn	18 51 20.5	+1.9
	baz=205						
M27K	Edge Creek, AK	2.66	213		Pn	18 50 48.3	+0.1
M27K	Edge Creek, AK	2.66	213	P	Pn	18 50 48.5	+0.3
	baz=30						
M27K				Sb	Sb	18 51 27.8	+2.2
	baz=30						
M27K				Sb	Sb	18 51 27.8	+2.2
	baz=30						
MENT	Mentasta	2.77	235		Pn	18 50 50.1	+0.6
RIDG	Independent Ri	2.81	255		Pn	18 50 50.5	+0.5
RIDG				IAML		18 51 44.2	
	comp=N,223nm,0.8s						
RIDG	Independent Ri	2.81	255	P	Pn	18 50 50.3	+0.2
	baz=70						
RIDG				Sb	Sg	18 51 32.3	-3.2
	baz=70						
J25K	Salcha River,	2.85	273		Pn	18 50 50.6	-0.1
J25K				IAML		18 51 41.7	
	comp=N,227nm,0.9s						
J25K	Salcha River,	2.85	273	P	Pn	18 50 50.7	0.0
	baz=88						
J25K				Sb	Sb	18 51 33.2	+2.2
	baz=88						
J25K				Sb	Sb	18 51 33.2	+2.2
	baz=88						
M26K	Nabesna, AK	2.92	223		Pn	18 50 52.2	+0.6
M26K				IAML		18 51 42.0	
	comp=N,410nm,0.6s						
M26K				IAML		18 51 44.6	
	comp=E,272nm,0.6s						
M26K	Nabesna, AK	2.92	223	P	Pn	18 50 52.3	+0.7
	baz=39						
M26K				Sb	Sb	18 51 35.3	+2.3
	baz=39						
M26K				Sb	Sb	18 51 35.3	+2.3
	baz=39						
YUK3	Moose Creek	2.95	196		Pn	18 50 52.4	+0.2
YUK3	Moose Creek	2.95	196	P	Pn	18 50 53.3	+1.2
	baz=14						
YUK3				Sb	Sb	18 51 35.8	+1.9
	baz=14						
G31M	Satah River	2.97	36		Pn	18 50 53.0	+0.9
G31M	Satah River	2.97	36	IAML		18 51 44.3	
	comp=N,372nm,0.8s						
G31M				IAML		18 51 46.1	
	comp=E,314nm,0.6s						
G31M	Satah River	2.97	36	P	Pn	18 50 52.9	+0.7
	baz=221,SNR=85						
G31M				Sb	Sb	18 51 36.7	+2.5
	baz=221						
YUK2	White River	2.99	199		Pn	18 50 53.1	+0.5
PRP	Porcupine Dome	3.01	291		Pn	18 50 53.2	+0.2
PRP	Porcupine Dome	3.01	291	P	Pn	18 50 53.2	+0.2
	baz=105						
PRP				S	Sn	18 51 30.3	+1.4
	baz=105						
F28M	Old Crow	3.05	352		Pn	18 50 54.0	+0.6
F28M	Old Crow	3.05	352	P	Pn	18 50 54.0	+0.6
	baz=171,SNR=39						
M31M	Drury Creek, Y	3.11	139		Pn	18 50 54.3	+0.1
M31M	Drury Creek, Y	3.11	139	IAML		18 51 42.6	
	comp=N,259nm,0.5s						
M31M				IAML		18 51 48.6	
	comp=E,295nm,0.6s						
M31M	Drury Creek, Y	3.11	139	P	Pn	18 50 54.1	-0.1
	baz=322,SNR=8.9						
M31M				Sb	Sg	18 51 42.1	-3.1
	baz=322						
G26K	Porcupine Rive	3.13	321		Pn	18 50 55.4	+1.0
G26K	Porcupine Rive	3.13	321	IAML		18 51 49.6	
	comp=E,294nm,1.0s						
G26K				IAML		18 51 51.4	
	comp=N,234nm,1.6s						
G26K	Porcupine Rive	3.13	321	P	Pn	18 50 55.5	+1.0
	baz=137,SNR=19						
K24K	Donnelly Dome	3.18	258		Pn	18 50 55.7	+0.5
K24K				IAML		18 51 53.5	
	comp=N,334nm,1.2s						
K24K	Donnelly Dome	3.18	258	Sb	Sg	18 51 43.9	-3.5
	baz=72						
F30M	Barrier River	3.25	20		Pn	18 50 57.3	+1.3
F30M	Barrier River	3.25	20	IAML		18 51 55.1	
	comp=E,179nm,0.9s						
F30M				IAML		18 51 55.2	
	comp=N,289nm,1.2s						
F30M	Barrier River	3.25	20	P	Pn	18 50 56.9	+0.9
	baz=203						
F30M				Sb	Sg	18 51 46.3	-3.2
	baz=203						
N30M	Aishikik Lake	3.25	166		Pn	18 50 57.0	+0.8
N30M	Aishikik Lake	3.25	166	IAML		18 51 53.9	
	comp=E,229nm,0.8s						
N30M				IAML		18 51 55.1	
	comp=N,270nm,0.7s						
N30M	Aishikik Lake	3.25	166	P	Pn	18 50 57.2	+1.0
	baz=347,SNR=76						
N30M				Sb	Sb	18 51 45.9	+3.4
	baz=347						
YUK4	Talbot Arm	3.28	179	P	Pn	18 50 56.7	+0.1
	baz=358						
YUK4				Sb	Sb	18 51 44.0	+0.6
	baz=358						
FYU	Fort Yukon	3.33	309		Pn	18 50 57.9	+0.7
FYU				IAML		18 51 55.9	
	comp=E,250nm,1.2s						
YUK8	Steele Glacier	3.37	188	P	Pn	18 50 59.6	+1.6
	baz=7.2						
YUK8				Sb	Sg	18 51 50.0	-3.5
	baz=7.2						
FARO	Faro, Yukon	3.41	132		Pn	18 50 58.1	-0.2
FARO	Faro, Yukon	3.41	132	Sb	Sg	18 51 51.1	-3.5
	baz=316						
PAX	Paxson	3.41	244		Pn	18 50 59.2	+0.9
PAX	Paxson	3.41	244	IAML		18 51 54.6	
	comp=N,166nm,1.0s						
PAX				IAML		18 51 59.0	
	comp=E,150nm,0.9s						
PAX	Paxson	3.41	244	P	Pn	18 50 59.4	+1.1
	baz=58						
PAX				Sb	Sb	18 51 50.4	+3.4
	baz=58						
N31M	Braeburn, Yuko	3.41	155		Pn	18 50 59.4	+1.0
N31M	Braeburn, Yuko	3.41	155	P	Pn	18 50 59.4	+1.0
	baz=338,SNR=19						
N31M				Sb	Sg	18 51 51.8	-3.1
	baz=338						
IL01		3.50	276		Pn	18 50 59.5	+0.1
IL31		3.50	276		Pn	18 50 59.3	-0.2
ILAR	Eielson Array	3.50	276	Pn	Pn	18 50 59.4	-0.2
	comp=E,9.4nm,0.3s,baz=94,slow=13,SNR=348						
ILAR				Lg	Lg	18 51 52.4	
	comp=E,19nm,0.3s,baz=360,slow=20,SNR=12						
	comp=E,24nm,0.5s						
ILAR	Eielson Array	3.50	276		Pn	18 50 59.2	-0.3
F31M	Tsiigehtchic	3.50	33		Pn	18 50 60.0	+0.5
F31M				IAML		18 51 58.8	
	comp=E,260nm,1.1s						
F31M	Tsiigehtchic	3.50	33	P	Pn	18 50 59.9	+0.4
	baz=218,SNR=16						
YUK5	Granite Creek	3.52	173		Pn	18 51 00.8	+0.9
HDA	Harding Lake	3.55	270		Pn	18 51 00.8	+0.6
HDA	Harding Lake	3.55	270	IAML		18 52 04.9	
	comp=E,230nm,0.6s						
HDA	Harding Lake	3.55	270	P	Pn	18 51 01.3	+1.1
	baz=83						
HARP	HAARP	3.63	235		Pn	18 51 01.9	+0.5
HARP	HAARP	3.63	235	P	Pn	18 51 02.2	+0.9
	baz=50						
WASW	Wrangell South	3.64	225		Pn	18 51 02.0	+0.3
YUK6	Outpost Mounta	3.69	177		Pn	18 51 02.6	+0.3
YUK6	Outpost Mounta	3.69	177	P	Pn	18 51 03.8	+1.5
	baz=357						
G25K	Bearman Lake	3.73	309		Pn	18 51 03.6	+0.9
G25K	Bearman Lake	3.73	309	P	Pn	18 51 03.5	+0.8
	baz=122						
POKR	Poker Plat Res	3.74	282		Pn	18 51 03.2	+0.4
POKR	Poker Plat Res	3.74	282	IAML		18 52 04.0	
	comp=E,131nm,0.7s						
POKR				IAML		18 52 18.5	
	comp=N,122nm,0.8s						
POKR	Poker Plat Res	3.74	282	P	Pn	18 51 03.0	+0.1
	baz=94						
POKR				Sb	Sb	18 51 59.5	+3.0
	baz=94						
POKR				Sb	Sb	18 51 59.5	+3.0
	baz=94						
E27K	Coleen River	3.77	344		Pn	18 51 04.1	+0.9
E27K				IAML		18 52 09.8	
	comp=N,100nm,0.8s						
E27K				IAML		18 52 11.3	
	comp=E,103nm,1.2s						
E27K	Coleen River	3.77	344	P	Pn	18 51 04.2	+0.9
	baz=161						
MCARA	McCarthy VSAT	3.78	213		Pn	18 51 03.7	+0.4
MCARA				IAML		18 52 08.6	
	comp=E,216nm,0.9s						
MCARA				IAML		18 52 10.8	
	comp=N,185nm,0.6s						
MCARA	McCarthy VSAT	3.78	213	P	Pn	18 51 05.1	+1.8
	baz=29						
F26K	Sheenjek River	3.79	327		Pn	18 51 04.8	+1.2
F26K	Sheenjek River	3.79	327	P	Pn	18 51 05.2	+1.6
	baz=143,SNR=30						
BARN	Barnard Glacie	3.81	202		Pn	18 51 04.8	+1.0
BARN	Barnard Glacie	3.81	202	IAML		18 52 10.0	
	comp=N,176nm,0.8s						
BARN				IAML		18 52 10.3	
	comp=E,148nm,0.8s						
E29M	Blow River	3.81	5		Pn	18 51 04.5	+0.7
E29M	Blow River	3.81	5	IAML		18 52 13.6	
	comp=N,115nm,0.9s						
E29M				IAML		18 52 14.1	
	comp=E,119nm,0.8s						
E29M	Blow River	3.81	5	P	Pn	18 51 04.3	+0.5
	baz=186						
PTPK	Patty Peak	3.83	208		Pn	18 51 04.9	+0.6
HYT	Haines Junctio	3.84	171		Pn	18 51 05.1	+0.8
HYT	Haines Junctio	3.84	171	P	Pn	18 51 05.8	+1.4
	baz=352						
HYT				Sb	Sb	18 52 03.8	+4.2
	baz=352						
CTGM	Chitina Glacie	3.85	199		Pn	18 51 05.4	+0.9
CTGM	Chitina Glacie	3.85	199	IAML		18 52 13.1	
	comp=E,119nm,0.7s						
CTG	Chitna Glacier	3.85	199	P	Pn	18 51 06.3	+1.9
	baz=17						
CTG				S	Sn	18 51 52.2	+2.7
	baz=17						
CCB	Clear Creek Bu	3.90	275		Pn	18 51 04.9	-0.1
O28M	Mount Upton	3.91	190		Pn	18 51 05.6	+0.2
O28M	Mount Upton	3.91	190	IAML		18 52 11.5	
	comp=N,95nm,1.1s						
O28M	Mount Upton	3.91	190	P	Pn	18 51 07.5	+2.0
	baz=8.9						
O28M				S	Sn	18 51 53.3	+2.0
	baz=8.9						
COLA	College	3.91	278		Pn	18 51 05.8	+0.6
COLA	College	3.91	278	Pn	Pn	18 51 05.4	+0.3
COLA				IAML		18 52 15.2	
	comp=N,356nm,0.6s						
COLA				IAML		18 52 16.4	
	comp=N,395nm,0.5s						
COLA	College	3.91	278	P	Pn	18 51 06.7	+1.6
	baz=90						
GLB	Gilahina Butte	3.93	218		Pn	18 51 06.5	+1.0
LOGN	Logan Glacier	3.94	196		Pn	18 51 07.5	+1.8
LOGN	Logan Glacier	3.94	196	IAML		18 52 12.2	
	comp=E,123nm,0.9s						
LOGN				IAML		18 52 18.9	
	comp=N,113nm,0.9s						
BALM	Baldy	3.95	206		Pn	18 51 07.1	+1.3
VRDI	Verde Repeater	4.02	214		Pn	18 51 07.5	+0.7
VRDI	Verde Repeater	4.02	214	IAML		18 52 23.4	
	comp=N,92nm,1.1s						
N25K	Chitina, Valde	4.02	224		Pn	18 51 06.8	+0.1
N25K	Chitina, Valde	4.02	224	P	Pn	18 51 08.2	+1.5
	baz=39						
E28M	Babbage River	4.03	356		Pn	18 51 07.5	+0.8
E28M	Babbage River	4.03	356	P	Pn	18 51 07.2	+0.5
	baz=176						
H24K	Noodor Dome	4.04	292	IAML		18 52 20.3	
	comp=E,100nm,0.8s						
H24K				IAML		18 52 20.6	
	comp=N,85nm,0.8s						
H24K	Noodor Dome	4.04	292	P	Pn	18 51 07.0	+0.1
	baz=104						
WRH	Wood River Hil	4.04	272		Pn	18 51 06.9	0.0
WRH				IAML		18 52 22.0	
	comp=N,120nm,1.5s						
O30N	Mendenhall	4.04	161		Pn	18 51 07.7	+0.7
O30N	Mendenhall	4.04	161	IAML		18 52 14.9	
	comp=E,155nm,0.5s						
O30N	Mendenhall	4.04	161	P	Pn	18 51 07.7	+0.7
	baz=343,SNR=26						
O30N				S	Sn	18 51 55.8	+1.6
	baz=343						
KIAG	Kiagna River	4.05	206		Pn	18 51 08.6	+1.3
F25K	Christian Rive	4.10	320		Pn	18 51 08.6	+0.8
F25K	Christian Rive	4.10	320	IAML		18 52 25.3	
	comp=E,78nm,1.2s						
F25K	Christian Rive	4.10	320	P	Pn	18 51 09.0	+1.1
	baz=134,SNR=29						
DHY	Denali Highway	4.12	252		Pn	18 51 08.5	+0.4
DHY	Denali Highway	4.12	252	IAML		18 52 25.9	
	comp=E,82nm,1.3s						
DHY	Denali Highway	4.12	252	P	Pn	18 51 08.7	+0.5
	baz=64						
GRNC	Granite Creek	4.13	201		Pn	18 51 08.8	+0.4
GRNC				IAML		18 52 19.8	
	comp=E,103nm,0.7s						
GRNC				IAML		18 52 22.6	
	comp=N,131nm,0.9s						
G24K	Hadweenzic Riv	4.18	304		Pn	18 51 09.3	+0.5
G24K	Hadweenzic Riv	4.18	304	IAML		18 52 22.7	
	comp=N,87nm,1.3s						
G24K				IAML		18 52 28.3	
	comp=E,76nm,0.8s						

G24K	Hadweenzic Riv	4.18	304	P	Pn	18 51 09.0	+0.2
	baz=117						
M24K	Tolsona, Glenn	4.18	236	Pn	Pn	18 51 09.1	+0.1
M24K	Tolsona, Glenn	4.18	236	Sb	Sg	18 52 14.1	-5.4
	baz=50						
INK	Inuvik	4.26	27	Pn	Pn	18 51 10.2	+0.2
	comp=E,1.4nm,0.3s,baz=208,slow=13,SNR=32						
INK				Pg	Pb	18 51 22.1	+1.9
	comp=E,4.4nm,0.3s,baz=208,slow=14,SNR=20						
INK				Sn	Sn	18 51 58.2	-1.3
	comp=E,4.9nm,0.3s,baz=215,slow=6.4,SNR=3.9						
INK				Lg	Lg	18 52 16.0	
	comp=E,10nm,0.3s,baz=338,slow=27,SNR=7.7						
	comp=E,4.3nm,0.3s						
INK	Inuvik	4.26	27		Pn	18 51 10.4	+0.5
INK	Inuvik	4.26	27	IAML		18 52 25.1	
	comp=E,67nm,1.1s						
INK	Inuvik	4.26	27	P	Pn	18 51 10.2	+0.2
	baz=212						
TGL	Tana Glacier	4.30	208		Pn	18 51 12.0	+1.4
TGL	Tana Glacier	4.30	208	IAML		18 52 21.6	
	comp=E,124nm,0.7s						
TGL				IAML		18 52 28.2	
	comp=N,128nm,0.8s						
O29M	Mount Kennedy	4.33	179		Pn	18 51 12.3	+1.4
O29M				IAML		18 52 23.0	
	comp=E,105nm,1.0s						
O29M				IAML		18 52 25.7	
	comp=N,87nm,0.6s						
O29M	Mount Kennedy	4.33	179	P	Pn	18 51 13.3	+2.3
	baz=359,SNR=98						
TABL	Table Mountain	4.33	196		Pn	18 51 11.3	+0.2
TABL				IAML		18 52 26.5	
	comp=E,102nm,1.3s						
TABL				IAML		18 52 28.7	
	comp=N,102nm,1.0s						
N32M	Quiet Lake	4.33	141		Pn	18 51 11.0	0.0
N32M	Quiet Lake	4.33	141	P	Pn	18 51 10.9	0.0
	baz=325						
WHY	Whitehorse	4.35	154		Pn	18 51 11.7	+0.4
WHY	Whitehorse	4.35	154	IAML		18 52 32.4	
	comp=N,126nm,1.1s						
WHY	Whitehorse	4.35	154	P	Pn	18 51 11.6	+0.4
	baz=337						
WHY				S	Sn	18 52 04.4	+2.6
	baz=337						
ISLE	Juniper Island	4.35	204		Pn	18 51 11.6	+0.3
CRQE	Cirque	4.36	209	P	Pn	18 51 13.6	+2.2
	baz=25						
CRQE				Sb	Sg	18 52 19.7	-5.5
	baz=25						
CRQM	Cirque	4.36	210		Pn	18 51 11.8	+0.2
CRQM				IAML		18 52 27.3	
	comp=E,122nm,1.0s						
NEA2	Nenana	4.45	274		Pn	18 51 12.3	-0.2
NEA2				IAML		18 52 32.6	
	comp=E,71nm,1.2s						
NEA2				IAML		18 52 32.6	
	comp=N,82nm,0.9s						
NEA2	Nenana	4.45	274	P	Pn	18 51 12.6	+0.1
	baz=85						
E25K	Arctic Village	4.47	325		Pn	18 51 13.5	+0.7
E25K	Arctic Village	4.47	325	P	Pn	18 51 14.3	+1.5
	baz=139						
YAH	Yahtse	4.48	199		Pn	18 51 14.2	+0.9
YAH				IAML		18 52 11.0	
	comp=E,87nm,2.9s						
YAH				IAML		18 52 35.1	
	comp=N,106nm,3.0s						
WAT6	Susitna Watana	4.50	247		Pn	18 51 14.1	+0.7
WAT6	Susitna Watana	4.50	247	P	Pn	18 51 14.4	+1.0
	baz=59						
WAT6				Sb	Sb	18 52 23.1	+4.6
	baz=59						
KLU	Klutina	4.52	229		Pn	18 51 14.6	+1.0
KLU	Klutina	4.52	229	IAML		18 52 26.8	
	comp=N,91nm,0.8s						
KLU	Klutina	4.52	229	P	Pn	18 51 16.9	+3.3
	baz=43						
BMRM	Bremner River	4.54	219		Pn	18 51 15.0	+1.2
BMRM	Bremner River	4.54	219	IAML		18 52 33.5	
	comp=E,65nm,0.8s						
BMRM				IAML		18 52 40.1	
	comp=N,89nm,2.4s						
BMRM	Bremner River	4.54	219	P	Pn	18 51 15.3	+1.5
	baz=34						
MCK	McKinley	4.54	263		Pn	18 51 14.0	+0.1
MCK				IAML		18 52 33.9	
	comp=N,60nm,0.9s						
MCK				IAML		18 52 37.0	
	comp=E,63nm,0.6s						
MCK	McKinley	4.54	263	P	Pn	18 51 14.4	+0.5
	baz=74						
I23K	Minto, Yukon-K	4.56	282		Pn	18 51 14.2	+0.2
I23K				IAML		18 52 36.6	
	comp=E,86nm,1.4s						
I23K	Minto, Yukon-K	4.56	282	P	Pn	18 51 14.2	+0.2
	baz=92						
P30M	Million Dollar	4.58	169		Pn	18 51 15.2	+0.8
P30M	Million Dollar	4.58	169	IAML		18 52 37.6	
	comp=N,70nm,0.8s						
P30M	Million Dollar	4.58	169	P	Pn	18 51 15.6	+1.2
	baz=350						
PCA	Pinnacle	4.58	189		Pn	18 51 14.3	-0.1
PINM	Pinnacle	4.58	189	P	Pn	18 51 17.3	+2.8
	baz=7.9						
WAX	Waxell Ridge	4.59	206		Pn	18 51 14.6	+0.1
RND	Reindeer	4.61	259		Pn	18 51 15.7	+0.9
RND	Reindeer	4.61	259	IAML		18 52 38.7	
	comp=N,63nm,0.9s						
RND				IAML		18 52 40.0	
	comp=E,59nm,0.8s						
BWN	Browne	4.67	269		Pn	18 51 14.6	-1.0
MESA	MESA	4.69	200		Pn	18 51 17.3	+1.3
MESA	MESA	4.69	200	P	Pn	18 51 18.5	+2.5
	baz=17						
BCPM	Bancas Point	4.69	185		Pn	18 51 17.1	+1.2
BCPM	Bancas Point	4.69	185	IAML		18 52 35.0	
	comp=N,88nm,0.8s						
BCPM				IAML		18 52 37.7	
	comp=E,87nm,1.0s						
H23K	Yukon River	4.70	290		Pn	18 51 15.0	-1.1
H23K				IAML		18 52 45.3	
	comp=N,65nm,1.0s						
H23K				IAML		18 52 46.7	
	comp=E,50nm,0.9s						
H23K	Yukon River	4.70	290	P	Pn	18 51 15.7	-0.4
	baz=100						
WAT1	Susitna Watana	4.71	252	P	Pn	18 51 17.5	+1.4
	baz=64						
F24K	Squaw Lake	4.73	312		Pn	18 51 17.3	+0.9
F24K	Squaw Lake	4.73	312	P	Pn	18 51 17.8	+1.4
	baz=124						
D27M	Malcolm River	4.74	350		Pn	18 51 17.4	+0.9
D27M	Malcolm River	4.74	350	P	Pn	18 51 18.0	+1.5
	baz=169						
D28M	Stokes Point	4.74	0	P	Pn	18 51 18.5	+2.0
	baz=180						
DIV	Divide	4.75	226		Pn	18 51 18.4	+1.7
DIV				IAML		18 52 50.3	
	comp=N,49nm,0.9s						
SCM	Sheep Creek Mo	4.78	238		Pn	18 51 18.2	+1.1
SCM	Sheep Creek Mo	4.78	238	P	Pn	18 51 19.1	+2.0
	baz=51						
BERG	Berg Lake	4.81	211		Pn	18 51 17.5	0.0
WAT7	Susitna Watana	4.83	253		Pn	18 51 19.1	+1.3
SNH	Sunshine Point	4.83	205	Pn	Pn	18 51 18.2	+0.4
HMT	Hamilton	4.99	213	Pn	Pn	18 51 19.9	-0.1
P29M	Windy Craggy	5.02	174		Pn	18 51 21.0	+0.6
P29M				IAML		18 52 51.5	
	comp=E,68nm,0.5s						
P29M				IAML		18 52 58.5	
	comp=N,77nm,0.9s						
P29M	Windy Craggy	5.02	174	P	Pn	18 51 22.2	+1.7
	baz=355,SNR=18						
RAGM	Ragged Mountai	5.05	216	Pn	Pn	18 51 21.4	+0.6
G23K	Bananza Creek	5.12	299		Pn	18 51 22.2	+0.5
G23K	Bananza Creek	5.12	299	IAML		18 52 53.3	
	comp=N,39nm,1.3s						
G23K	Bananza Creek	5.12	299	P	Pn	18 51 21.7	-0.1
	baz=110						
SUCK	Suckling Hills	5.12	210	Pn	Pn	18 51 21.9	+0.1
MLY	Manley	5.14	280		Pn	18 51 22.0	-0.1
MLY				IAML		18 52 53.0	
	comp=N,47nm,1.6s						
MLY				IAML		18 52 55.5	
	comp=E,37nm,0.9s						
MLY	Manley	5.14	280	P	Pn	18 51 22.0	-0.1
	baz=90						
SML	Sawmill	5.17	241		Pn	18 51 23.8	+1.3
SML	Sawmill	5.17	241	IAML		18 52 53.0	
	comp=E,77nm,1.8s						
SML				IAML		18 52 54.9	
	comp=N,76nm,1.9s						
SML	Sawmill	5.17	241	P	Pn	18 51 24.4	+1.9
	baz=53						
P33M	Teslin, Yukon	5.20	145	Pn	Pn	18 51 22.3	-0.7
P33M				IAML		18 52 49.0	
	comp=E,64nm,0.8s						
P33M				IAML		18 53 04.6	
	comp=N,50nm,1.3s						
TRF	Thorofare Moun	5.21	262		Pn	18 51 23.9	+0.8
TRF	Thorofare Moun	5.21	262	IAML		18 53 03.2	
	comp=N,75nm,2.1s						
TRF	Thorofare Moun	5.21	262	P	Pn	18 51 24.0	+1.0
	baz=72						
E24K	Your Creek	5.24	316		Pn	18 51 24.8	+1.4
E24K	Your Creek	5.24	316	P	Pn	18 51 25.1	+1.7
	baz=127						
FID	Port Fidalgo	5.26	226	Pn	Pn	18 51 25.9	+2.2
FID				IAML		18 52 59.6	
	comp=N,45nm,2.9s						
PLBC	Pleasant Camp	5.29	167	P	Pn	18 51 26.0	+1.9
	baz=348						
BPAW	Bear Paw Mtn.	5.34	270		Pn	18 51 25.2	+0.4
BPAW	Bear Paw Mtn.	5.34	270	IAML		18 52 56.8	
	comp=E,41nm,0.9s						
BPAW				IAML		18 52 59.2	
	comp=N,65nm,1.3s						
BPAW	Bear Paw Mtn.	5.34	270	P	Pn	18 51 25.2	+0.4
	baz=79						
COLD	Coldfoot	5.37	304		Pn	18 51 26.3	+1.1
COLD	Coldfoot	5.37	304	IAML		18 53 05.5	
	comp=N,37nm,1.8s						
COLD	Coldfoot	5.37	304	P	Pn	18 51 26.7	+1.5
	baz=114						
C27K	Jago River	5.40	341		Pn	18 51 27.4	+1.9
C27K	Jago River	5.40	341	P	Pn	18 51 27.6	+2.1
	baz=157						
GHO	Glory Hole Cre	5.41	243		Pn	18 51 25.7	-0.2
GHO				IAML		18 53 02.4	
	comp=E,56nm,2.0s						
GHO				IAML		18 53 04.8	
	comp=N,56nm,1.4s						
H22K	Ishtalitna Cre	5.46	289		Pn	18 51 25.8	-0.6
H22K	Ishtalitna Cre	5.46	289	P	Pn	18 51 27.7	+1.3
	baz=98						
KNK	Knik Glacier	5.46	238		Pn	18 51 25.5	-1.0
KNK	Knik Glacier	5.46	238	P	Pn	18 51 27.5	+1.0
	baz=50						
P32M	Atlin	5.56	153		Pn	18 51 27.9	0.0
P32M	Atlin	5.56	153	P	Pn	18 51 28.7	+0.8
	baz=337,SNR=6.9						
E23K	Chandalar	5.58	313		Pn	18 51 28.9	+0.8
E23K	Chandalar	5.58	313	P	Pn	18 51 30.0	+1.9
	baz=124						
D25K	Kavik River	5.60	331		Pn	18 51 30.5	+2.2
D25K	Kavik River	5.60	331	P	Pn	18 51 30.1	+1.7
	baz=144						
CUT	Chulitna	5.61	252		Pn	18 51 28.8	+0.3
CUT	Chulitna	5.61	252	P	Pn	18 51 30.1	+1.7
	baz=62						
I21K	Tanana	5.66	282	P	Pn	18 51 30.0	+0.8
	baz=90						
TGTN	Hyland Airport	5.68	118		Pn	18 51 31.5	+2.1
TGTN	Hyland Airport	5.68	118	P	Pn	18 51 30.9	+1.4
	baz=307,SNR=21						
G22K	Bettles	5.74	300	P	Pn	18 51 30.9	+0.7
	baz=108						
L22K	Petersville	5.76	254		Pn	18 51 31.3	+0.7
C26K	Camden Bay	5.84	339	P	Pn	18 51 33.6	+2.0
	baz=153						
M22K	Willow	5.89	246		Pn	18 51 31.9	-0.4
TOLK	Toolik Lake Re	5.91	318		Pn	18 51 33.9	+1.3
TOLK	Toolik Lake Re	5.91	318	P	Pn	18 51 34.8	+2.3
	baz=128						
CHUM	Lake Minchumin	5.96	269		Pn	18 51 33.5	+0.2
CHUM	Lake Minchumin	5.96	269	P	Pn	18 51 33.4	+0.2
	baz=77						
H21K	Melozitna Rive	6.02	286		Pn	18 51 34.4	+0.3
H21K	Melozitna Rive	6.02	286	P	Pn	18 51 34.4	+0.3
	baz=94						
D24K	Happy Valley	6.04	323		Pn	18 51 34.7	+0.3
F22K	John River	6.19	304		Pn	18 51 38.0	+1.5
F22K	John River	6.19	304	P	Pn	18 51 37.8	+1.4
	baz=112						
E22K	Anaktuvuk Pass	6.33	310		Pn	18 51 40.0	+1.6
E22K	Anaktuvuk Pass	6.33	310	P	Pn	18 51 40.2	+1.8
	baz=118						
SKT	Skwentna	6.34	251		Pn	18 51 38.4	-0.1
SKT	Skwentna	6.34	251	P	Pn	18 51 40.4	+1.9
	baz=60						
R33M	Jennings River	6.38	141		Pn	18 51 38.0	-1.2
G21K	Allakaket	6.41	294		Pn	18 51 38.4	-1.1
G21K	Allakaket	6.41	294	P	Pn	18 51 40.2	+0.7
	baz=101						
C24K	Franklin Bluff	6.42	327		Pn	18 51 39.7	+0.1
C24K	Franklin Bluff	6.42	327	P	Pn	18 51 41.5	+1.9
	baz=138						
D23K	Nanushuk River	6.42	318		Pn	18 51 39.4	-0.2
D23K	Nanushuk River	6.42	318	P	Pn	18 51 41.8	+2.2
	baz=128						
Q32M	Nakina River	6.45	149		Pn	18 51 40.0	-0.2
Q32M	Nakina River	6.45	149	P	Pn	18 51 42.6	+2.5
	baz=334,SNR=19						
IM04	Indian Mountai	6.45	289		Pn	18 51 40.5	+0.5
F21K	Alatna River	6.57	300		Pn	18 51 41.3	-0.4
F21K	Alatna River	6.57	300	P	Pn	18 51 42.5	+0.8
	baz=107						
J20K	Nowinta River	6.69	273		Pn	18 51 42.3	-0.9
J20K	Nowinta River	6.69	273	P	Pn	18 51 43.2	-0.1
	baz=80						
I20K	Naaghedeneel	6.74	279		Pn	18 51 43.9	-0.1
I20K	Naaghedeneel	6.74	279	P	Pn	18 51 44.2	+0.2
	baz=85						
H20K	Anotleneega Mo	6.88	285		Pn	18 51 46.7	+0.8
H20K	Anotleneega Mo	6.88	285	P	Pn	18 51 46.5	+0.6
	baz=90						
C23K	Itkillik River	6.97	324		Pn	18 51 47.0	-0.1
C23K	Itkillik River	6.97	324	P	Pn	18 51 48.8	+1.7
	baz=133						
M20K	Styx River	7.04	254	P	Pn	18 51 49.5	+1.3
	baz=61						
E21K	Killik River	7.18	309	P	Pn	18 51 51.4	+1.4
	baz=115						
J19K	Poorman	7.36	273		Pn	18 51 51.9	-0.6
J19K	Poorman	7.36	273	P	Pn	18 51 52.3	-0.1
	baz=78						
F20K	Avaraart Lake	7.38	297		Pn	18 51 52.5	-0.2
F20K	Avaraart Lake	7.38	297	P	Pn	18 51 53.0	+0.3
	baz=102						
C36M	Paulatuk	7.45	44		Pn	18 51 53.5	-0.1
C36M	Paulatuk	7.45	44	P	Pn	18 51 53.5	-0.1
	baz=237,SNR=13						
DLBC	Dease Lake	7.46	142	Pn	Pn	18 51 54.9	+1.0
	comp=N,0.5nm,0.3s,baz=3.0,slow=13,SNR=7.1						
DLBC				Lg	Lg	18 53 58.2	
	comp=N,1.8nm,0.3s,baz=39,slow=26,SNR=12						
	comp=N,0.9nm,0.3s						
DLBC	Dease Lake	7.46	142	P	Pn	18 51 54.8	+0.9
	baz=330						
H19K	Roundabout Mou	7.53	285		Pn	18 51 54.3	-0.5
H19K	Roundabout Mou	7.53	285	P	Pn	18 51 55.3	+0.5
	baz=89						
G19K	Purcell Mounta	7.81	290	P	Pn	18 51 58.9	+0.3
	baz=93						
KOTAN	Kotaneelee Air	8.17	117	P	Pn	18 52 04.4	+0.9
	baz=310						
H18K	Honhosa River	8.36	283	P	Pn	18 52 06.2	0.0
	baz=85						
A36M	Sachs Harbour	8.91	28		Pn	18 52 13.3	-0.3
B20K	Meade River	8.91	315		Pn	18 52 13.6	-0.1
I17K	Unalakleet	9.57	276		Pn	18 52 22.0	-0.6
C18K	Utukok River	9.76	304		Pn	18 52 24.6	-0.7
YKAW3	Yellowknife Wh	10.92	90		Pn	18 52 40.3	-0.9
YKA	Yellowknife Ar	10.95	90	Pn	Pn	18 52 42.2	+0.7
	comp=N,0.4nm,0.3s,baz=270,slow=13,SNR=16						
YKA				Sn	Sn	18 54 38.8	-5.0
	comp=N,0.3nm,0.3s,baz=285,slow=23,SNR=4.6						
	comp=N,0.8nm,0.5s						
YKA	Yellowknife Ar	10.95	90		Pn	18 52 40.1	-1.5
YKAW1	Yellowknife Wh	11.00	90	Pn	Pn	18 52 41.5	-0.9
J14K	Nanvaranak Lak	11.14	272	Pn	Pn	18 52 45.2	+1.1
C16K	Lisburne Hills	11.20	301	Pn	Pn	18 52 45.5	+0.5
ANM	Nome	11.40	282	Pn	Pn	18 52 47.9	+0.1
RES	Resolute Bay	17.74	37	P	Pn	18 54 09.8	-1.8
	comp=N,2.2nm,0.6s,baz=260,slow=11,SNR=7.6						
RES				S	Sn	18 57 17.5	-11
	comp=N,2.1nm,0.8s,baz=331,slow=13,SNR=3.0						
RES	Resolute Bay	17.74	37	P	Pn	18 54 09.5	-2.2
ILON	Igloolik, Nuna	22.01	52	P	P	18 54 58.8	-0.2
LRM	Limekiln Ridge	23.75	130	P	P	18 55 15.7	-1.8
PDAR	Pinedale Array	27.43	129	P	P	18 55 52.2	+1.3
	comp=N,0.4nm,0.8s,baz=337,slow=5.5,SNR=2.1						
	comp=N,0.4nm,0.8s						
NRIK	Noril'sk	42.45	338	LR	LR	19 18 06.7	
	comp=N,114nm,18.1s,baz=142,slow=40						
FINES	FINESS Array B	53.75	9	P	P	18 59 28.3	+1.7
	comp=N,4.9nm,1.0s,baz=355,slow=8.8,SNR=3.6						
	comp=N,4.9nm,1.0s						
FINES	FINESS Array B	53.75	9	P	P	18 59 27.5	+0.9
ZALV	Zalesovo Beam	57.10	331	P	P	18 59 51.1	+0.2
	comp=N,0.5nm,0.5s,baz=20,slow=4.6,SNR=2.2						
	comp=N,0.5nm,0.5s						
ZALV	Zalesovo Beam	57.10	331	P	P	18 59 50.3	-0.7
BVAR	Borovoye Array	60.55	340	P	P	19 00 17.3	+2.3
	comp=N,0.4nm,0.5s,baz=32,slow=8.4,SNR=3.0						
	comp=N,0.4nm,0.5s						
KURK	Kurchatov	61.40	334	P	P	19 00 20.9	+0.2
KURBB	Kurchatov Arra	61.51	334	P	P	19 00 22.4	+1.0
	comp=N,0.5nm,0.2s,baz=20,slow=5.7,SNR=4.1						
	comp=N,0.5nm,0.2s						
MKAR	Makanchi Array	64.39	330	P	P	19 00 41.1	+0.3
	comp=N,0.5nm,0.8s,baz=38,slow=9.7,SNR=2.4						
	comp=N,0.5nm,0.8s						
MKAR	Makanchi Array	64.39	330	P	P	19 00 40.5	-0.3
DZM	Mont Dzumac	96.12	230	LR	LR	19 37 29.4	
	comp=N,361nm,20.8s,baz=1.5,slow=30						

GCG ***05*** *19:01:09.9±2.7, 17°.40N×94°.86W, h158^{km}±82^{km}, MD5.3, ML5.2*

IDC ***05*** *19:01:12.6±0.4, 17°.41N×94°.44W, h126^{km}±4^{km}, mb4.1/23, mbtmp4.6/25, MS3.5/19, Error ellipse: s-maj=14.1km s-min=8.2km az=53.0*

NEIC ***05*** *19:01:13.5±2.6, 17°.32N±0°.05×94°.69W±0°.04, h138^{km}±4^{km}, mb4.8/225, Md5.1/171(MEX), Error ellipse: s-maj=7.1km s-min=6.1km az=187.0*

MEX ***05*** *19:01:14.4±1.2, 17°.33N×94°.68W, h139^{km}±7^{km}, MD5.1*

GCMT ***05*** *19:01:15.5±0.4, 17°.52N±0°.02×94°.55W±0°.02, h132^{km}±3^{km}, MW5.0/100, Moment Tensor Solution. s28,c28; s100,c133; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.30±.10; $M_{\theta\theta}$-0.68±.15; $M_{\phi\phi}$2.97±.15; $M_{r\theta}$1.28±.08; $M_{\theta\phi}$-2.29±.14; $M_{\phi r}$-0.88±.10; Best double couple: $M_0$3.69100×10^{16} NP1:ϕ_s185.00000°, δ43.00000°, λ-42.00000°. NP2:ϕ_s309.00000°, δ63.00000°, λ-124.00000°. Principal axes: T 4.3510, Plg12.0000°, Azm63.0000°; N -1.3260, Plg30.0000°, Azm326.0000°; P -3.0320, Plg57.0000°, Azm171.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

CATAC ***05*** *19:01:15.8±0.4, 17°N±2°×9°4W±°, h93^{km}±5^{km}, M5.1/19, mb4.9/10, mB5.4/7, MLv5.3/19, Mw(mB)4.8/7, MwMwp4.6/2, Mwp5.0/2 Error ellipse: s-maj=5.9km s-min=4.2km az=52.5, confirmed*

ISC 05 19:01:13.5±0.4**, 17°.31N**±0°.03×**94°.60W**±0°.03**, h143**^{km}±3^{km}**, h144**^{km}**:pP-P, n425,** σ**2**^{s}**.41**/432**, mb4.8**/123**, 30C-2D, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.35	231	P	Pn	19 01 32.5	-1.0
	4µm,0.3s,baz=159,slow=1.8						
CMIG				S	Sn	19 01 46.2	-2.4
	baz=218,slow=20						
CMIG	Matias Romero	0.35	231		Pn	19 01 32.3	-1.2
CMIG					Sn	19 01 46.0	-2.6
CMIG	Matias Romero	0.35	231	*i* P	Pn	19 01 32.3	-1.2
CMIG				*e*S	Sn	19 01 46.0	-2.6
UXUV	UXUV	0.44	89		Pn	19 01 33.5	-0.3
UXUV					Sn	19 01 47.8	-1.4
UXUV	UXUV	0.44	89	*e*P	Pn	19 01 33.5	-0.3
UXUV				*e*S	Sn	19 01 47.8	-1.4
MIHL	Minatitlan	0.68	5		Pn	19 01 35.1	-0.1
MIHL					Sn	19 01 51.3	-0.4
MIHL	Minatitlan	0.68	5	*i* P	Pn	19 01 35.1	-0.1
MIHL				*i* S	Sn	19 01 51.3	-0.4
TUIG	Tuzandepetl	0.74	13		Pn	19 01 35.4	-0.3
TUIG					Sn	19 01 50.9	-1.6
TUIG	Tuzandepetl	0.74	13	⇓*i*P	Pn	19 01 35.4	-0.3
TUIG				*e*S	Sn	19 01 50.9	-1.6
NEUV	Arroyo Zacate	1.21	289		Pn	19 01 37.9	-1.8
NEUV					Sn	19 01 55.8	-3.7
NEUV	Arroyo Zacate	1.21	289	⇑*e*P	Pn	19 01 37.9	-1.8
NEUV				*e*S	Sn	19 01 55.8	-3.7
PMUV	Sontecomapan	1.32	338		Pn	19 01 39.6	-1.3
PMUV					Sn	19 01 58.5	-3.2
PMUV	Sontecomapan	1.32	338	*i* P	Pn	19 01 39.6	-1.3
PMUV				*i* S	Sn	19 01 58.5	-3.2
TGBT	Tuxtla Gutierr	1.54	110		Pn	19 01 43.6	+0.5
TGBT					Sn	19 02 05.3	-0.3
TGBT	Tuxtla Gutierr	1.54	110	*e*P	Pn	19 01 43.6	+0.5
TGBT				*e*S	Sn	19 02 05.3	-0.3
VHSA	Villahermosa	1.72	67		Pn	19 01 46.0	+0.9
VHSA					Sn	19 02 10.2	+1.1
VHSA	Villahermosa	1.72	67	*e*P	Pn	19 01 46.0	+0.9
VHSA				*e*S	Sn	19 02 10.2	+1.1
OXLC	Oaxaca	2.02	263		Pn	19 01 47.5	-1.3
OXLC					Sn	19 02 14.0	-1.7
OXLC	Oaxaca	2.02	263	*e*P	Pn	19 01 47.5	-1.3
OXLC				*e*S	Sn	19 02 14.0	-1.7
OXBJ	Oaxaca	2.04	263		Pn	19 01 51.4	+2.4
OXBJ					Sn	19 02 17.7	+1.6
OXBJ	Oaxaca	2.04	263	*e*P	Pn	19 01 51.4	+2.4
OXBJ				*e*S	Sn	19 02 17.7	+1.6
OXIG	Oaxaca	2.05	264		Pn	19 01 48.0	-1.1
OXIG					Sn	19 02 14.3	-2.0
VHO	Vista Hermosa	2.05	264	⇑*i*P	Pn	19 01 48.0	-1.1
VHO				*e*S	Sn	19 02 14.3	-2.0
PCIG		2.08	140		Pn	19 01 49.6	+0.4
PCIG					Sn	19 02 15.2	-1.4
PCIG		2.08	140	*e*P	Pn	19 01 49.6	+0.4
PCIG				*e*S	Sn	19 02 15.2	-1.4
HUIG	Huatulco	2.11	223		Pn	19 01 46.0	-3.6
HUIG					Sn	19 02 14.0	-3.3
HUIG	Huatulco	2.11	223	*e*P	Pn	19 01 46.0	-3.6
HUIG				*e*S	Sn	19 02 14.0	-3.3
HUIG	Huatulco	2.11	223	*i* P	Pn	19 01 45.9	-3.6
HUIG				*e*S	Sn	19 02 12.7	-4.5
HUIG				IAML		19 02 22.3	
	comp=N,10µm,1.0s						
PANG	Puerto Angel	2.43	228		Pn	19 01 49.8	-3.7
PANG					Sn	19 02 20.2	-4.0
PANG	Puerto Angel	2.43	228	*e*P	Pn	19 01 49.8	-3.7
PANG				*e*S	Sn	19 02 20.2	-4.0
TOIG	Toxpalan	2.47	289		Pn	19 01 53.1	-1.0
TOIG					Sn	19 02 22.2	-3.1
TOIG	Toxpalan	2.47	289	⇑*e*P	Pn	19 01 53.1	-1.0
TOIG				*e*S	Sn	19 02 22.2	-3.1
CCIG	Comitan	2.58	113		Sn	19 02 25.2	-2.5
CCIG	Comitan	2.58	113		Pn	19 01 55.7	+0.2
CCIG	Comitan	2.58	113	⇑*i*P	Pn	19 01 56.2	+0.7
CCIG				*e*S	Sn	19 02 25.2	-2.5
CCIG	Comitan	2.58	113	*i* P	Pn	19 01 56.1	+0.7
CCIG				IAML		19 02 34.2	
	comp=N,5µm,0.5s						
CCIG	Comitan	2.58	113	⇑P	Pn	19 01 56.0	+0.5
CCIG	Comitan	2.58	113	S	Sn	19 02 27.3	-0.4
PEIG	Puerto Escondi	2.77	242		Pn	19 01 53.8	-3.9
PEIG					Sn	19 02 26.0	-5.7
PEIG	Puerto Escondi	2.77	242	*e*P	Pn	19 01 53.8	-3.9
PEIG				*e*S	Sn	19 02 26.0	-5.7
TPIG	Tehuac#an	2.85	293		Pn	19 01 58.4	-0.5
TPIG					Sn	19 02 30.6	-3.2
TPIG	Tehuac#an	2.85	293	⇑*e*P	Pn	19 01 58.4	-0.5
TPIG				*e*S	Sn	19 02 30.6	-3.2
YOIG	Yosondua	2.85	261		Pn	19 01 56.9	-2.1
YOIG					Sn	19 02 27.4	-6.7
YOIG	Yosondua	2.85	261	⇑*e*P	Pn	19 01 56.9	-2.1
YOIG				*e*S	Sn	19 02 27.4	-6.7
JAUV	Jalcomulco	2.92	315		Pn	19 01 57.5	-2.2

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JAUV                                  Sn   19 02 30.8  -4.6
JAUV  Jalcomulco         2.92 315  i P    Pn   19 01 57.5  -2.2
JAUV                               i S    Sn   19 02 30.8  -4.6
LVIG  Laguna Verde       2.95 325         Pn   19 01 57.6  -2.4
LVIG                                      Sn   19 02 29.0  -6.9
LVIG  Laguna Verde       2.95 325⇓iP      Pn   19 01 57.6  -2.4
LVIG                                eS    Sn   19 02 29.0  -6.9
TXIG  Tlaxiaco           3.02 269         Pn   19 01 59.9  -1.4
TXIG                                      Sn   19 02 29.5  -8.5
TXIG  Tlaxiaco           3.02 269⇑iP      Pn   19 01 59.9  -1.4
TXIG                                eS    Sn   19 02 29.5  -8.5
HLIG  Huajuapan de L     3.10 280         Pn   19 02 01.1  -1.0
HLIG  Huajuapan de L     3.10 280⇑iP      Pn   19 02 01.1  -1.0
HLIG                                eS    Sn   19 02 30.3  -9.2
PAVE  Pavencul           3.14 132         Pn   19 02 03.5  +0.8
PAVE                                      Sn   19 02 38.8  -1.8
PAVE  Pavencul           3.14 132  eP     Pn   19 02 03.5  +0.8
PAVE                               eS     Sn   19 02 38.8  -1.8
PATR  El Naranjo         3.15 133         Pn   19 02 03.4  +0.5
PATR                                      Sn   19 02 38.0  -2.9
PATR  El Naranjo         3.15 133  eP     Pn   19 02 03.4  +0.5
PATR                               eS     Sn   19 02 38.0  -2.9
CHUJ  Union Juarez       3.26 132  eP     Pn   19 02 05.0  +0.7
CHUJ                               eS     Sn   19 02 39.0  -4.3
THIG                     3.28 136         Pn   19 02 04.4  +0.1
THIG                                      Sn   19 02 38.2  -5.4
THIG                     3.28 136  eP     Pn   19 02 04.4  +0.1
THIG                               eS     Sn   19 02 38.2  -5.4
THIG                     3.28 136  i P    Pn   19 02 06.3  +2.0
FTIG  Fresnillo de T     3.42 281         Pn   19 02 05.4  -0.8
FTIG                                      Sn   19 02 42.1  -4.7
FTIG  Fresnillo de T     3.42 281⇑iP      Pn   19 02 05.4  -0.8
FTIG                               eS     Sn   19 02 42.1  -4.7
SMCA  Catarina           3.44 135  eP     Pn   19 02 07.2  +0.7
PNIG  Pinotepa           3.50 255         Pn   19 02 03.6  -3.5
PNIG  Pinotepa           3.50 255⇑iP      Pn   19 02 03.6  -3.5
PNIG                               eS     Sn   19 02 36.4   -12
HUEH  Huehuetenango      3.58 123         Sn   19 02 47.9  -2.9
HUEH  Huehuetenango      3.58 123         Pn   19 02 08.4   0.0
HUEH  Huehuetenango      3.58 123  eP     Pn   19 02 08.3   0.0
HUEH                               eS     Sn   19 02 47.9  -2.9
HUEH  Huehuetenango      3.58 123  eP     Pn   19 02 08.4   0.0
HUEH  Huehuetenango      3.58 123  ⇑P     Pn   19 02 08.5  +0.2
HUEH  Huehuetenango      3.58 123   S     Sn   19 02 50.2  -0.6
SCIG  Sabancuy           3.64  63         Pn   19 02 08.6  -0.3
SCIG                                      Sn   19 02 48.9  -3.0
SCIG  Sabancuy           3.64  63⇑iP      Pn   19 02 08.6  -0.3
SCIG                               eS     Sn   19 02 48.9  -3.0
SCIG  Sabancuy           3.64  63  i P    Pn   19 02 08.2  -0.7
SCIG                                IAML       19 02 52.9
      comp=E,1µm,1.0s
SCIG  Sabancuy           3.64  63  ⇑P     Pn   19 02 08.2  -0.7
SCIG  Sabancuy           3.64  63   S     Sn   19 02 49.3  -2.6
PHPU  Puebla             3.80 298         Pn   19 02 10.2  -1.1
PHPU                                      Sn   19 02 53.2  -2.9
PHPU  Puebla             3.80 298  eP     Pn   19 02 10.2  -1.1
PHPU                               eS     Sn   19 02 53.2  -2.9
HMTT  Tlapaneco          3.81 278         Pn   19 02 10.4  -0.8
HMTT                                      Sn   19 02 50.5  -5.4
HMTT  Tlapaneco          3.81 278  eP     Pn   19 02 10.4  -0.8
HMTT                               eS     Sn   19 02 50.5  -5.4
MGIG  Malinaltepec       3.85 269         Pn   19 02 10.1  -1.8
MGIG                                      Sn   19 02 52.5  -4.5
MGIG  Malinaltepec       3.85 269  eP     Pn   19 02 10.1  -1.8
MGIG                               eS     Sn   19 02 52.5  -4.5
QUIS  Sacapulas          3.93 120  eP     Pn   19 02 11.9  -0.9
QUIS                               i S    Sn   19 02 56.0  -2.8
QUIS                                IAML       19 02 60.0
      comp=E,6µm,0.3s
RTAL  Retalhuleu         3.94 134         Pn   19 02 13.9  +1.1
RTAL  Retalhuleu         3.94 134  eP     Pn   19 02 12.1  -0.8
RTAL                               eS     Sn   19 02 59.9  +1.0
RTAL  Retalhuleu         3.94 134  ⇑P     Pn   19 02 14.6  +1.8
RTAL  Retalhuleu         3.94 134   S     Sn   19 03 00.3  +1.4
SOKI  Kika Raxquin       3.95 128  IAML        19 03 52.6
      comp=N,3µm,1.0s
CXUV  Coxquihui          4.01 316         Pn   19 02 12.6  -1.2
CXUV                                      Sn   19 02 54.1  -6.6
CXUV  Coxquihui          4.01 316  eP     Pn   19 02 12.6  -1.2
CXUV                               i S    Sn   19 02 54.1  -6.6
PPSX  Xalitzintla        4.11 296  eP     Pn   19 02 16.4  +1.0
PPSX                               eS     Sn   19 02 50.5   -13
PPCL  Tochimilco         4.14 293  eP     Pn   19 02 16.2  +0.5
PPCL                               eS     Sn   19 02 52.1   -12
PPPT  Popocatepetl       4.16 294  eP     Pn   19 02 16.7  +0.4
PPPT                               eS     Sn   19 02 52.8   -12
PBPN  Popocatepetl       4.20 295  eP     Pn   19 02 17.3  +0.6
PBPN                               eS     Sn   19 02 53.1   -13
PPM   Popocatepetl       4.20 295⇑iP      Pn   19 02 17.7  +0.9
PPM                                eS     Sn   19 02 55.7   -10
PPIG  Popocatepetl       4.21 295         Pn   19 02 17.7  +0.9
PBXN  Popocatepetl       4.21 294  eP     Pn   19 02 17.6  +0.7
PBXN                               eS     Sn   19 02 52.1   -14
STG2  El Palmar, Qui     4.22 132  eP     Pn   19 02 12.2  -4.5
STG8  El Palmar, Qui     4.23 132  eP     Pn   19 02 12.3  -4.6
CRIG  Cruz Grande        4.37 263         Pn   19 02 15.3  -3.2
CRIG                                      Sn   19 03 00.3  -8.7
CRIG  Cruz Grande        4.37 263⇑eP      Pn   19 02 15.3  -3.2
CRIG                               eS     Sn   19 03 00.3  -8.7
YAIG  Yautepec           4.52 291         Pn   19 02 20.6   0.0
YAIG  Yautepec           4.52 291⇑iP      Pn   19 02 20.6   0.0
YAIG                               eS     Sn   19 02 59.7   -13
PETF  Flores             4.55  94         Sn   19 03 10.5  -2.7
PETF  Flores             4.55  94         Pn   19 02 20.6  -0.2
PETF  Flores             4.55  94  eP     Pn   19 02 19.9  -1.0
PETF                               eS     Sn   19 03 10.5  -2.7
PETF  Flores             4.55  94  eP     Pn   19 02 20.8   0.0
PETF                                IAML       19 03 14.7
      comp=E,1µm,0.5s
PETF  Flores             4.55  94   P     Pn   19 02 21.0  +0.2
PETF  Flores             4.55  94   S     Sn   19 03 11.1  -2.2
MPVM  San Francisco      4.59 295         Pn   19 02 22.6  +0.9
MPVM  San Francisco      4.59 295  eP     Pn   19 02 22.6  +0.9
APG   El Apazote         4.59 119   P     Pn   19 02 20.9  -0.8
      comp=E,6.4nm,0.4s,baz=210,slow=15,SNR=44
APG                                 S     Sn   19 03 11.9  -2.7
      comp=E,34nm,0.4s,baz=240,slow=23,SNR=25
APG   El Apazote         4.59 119  eP     Pn   19 02 20.8  -0.8
APG                                eS     Sn   19 03 03.8   -11
THVM  De Xico            4.60 296         Pn   19 02 24.0  +2.1
THVM  De Xico            4.60 296  eP     Pn   19 02 24.0  +2.1
VTVM  Tizayuca           4.65 302         Pn   19 02 23.4  +0.9
VTVM  Tizayuca           4.65 302  eP     Pn   19 02 23.4  +0.9
XCVM  Xochimilco         4.70 295         Pn   19 02 23.9  +0.8
XCVM  Xochimilco         4.70 295  eP     Pn   19 02 23.9  +0.8
TLVM  San Miguel Top     4.72 294         Pn   19 02 24.1  +0.7
TLVM  San Miguel Top     4.72 294  eP     Pn   19 02 24.1  +0.7
PBVM  Pinon              4.75 297         Pn   19 02 24.1  +0.5
PBVM  Pinon              4.75 297  eP     Pn   19 02 24.1  +0.5
UNM   Universidad Na     4.79 295         Pn   19 02 25.4  +1.2
UNM   Universidad Na     4.79 295  eP     Pn   19 02 23.8  -0.5
UNM                                eS     Sn   19 03 14.4  -4.9
CUP5  Mexico City        4.79 295         Pn   19 02 25.3  +1.0
CUP5                                      Sn   19 03 17.3  -2.0
CUP5  Mexico City        4.79 295  eP     Pn   19 02 25.3  +1.0
CUP5                               eS     Sn   19 03 17.3  -2.0
BJVM  Benito Juarez      4.80 296         Pn   19 02 24.5  +0.1
BJVM  Benito Juarez      4.80 296  eP     Pn   19 02 24.5  +0.1
MEIG  Mezcala            4.82 278         Pn   19 02 23.8  -0.8
MEIG                                      Sn   19 03 12.9  -7.0
MEIG  Mezcala            4.82 278⇑iP      Pn   19 02 23.8  -0.8
MEIG                               eS     Sn   19 03 12.9  -7.0
DAIG  Los Arroyos        4.83 267         Pn   19 02 22.1  -2.5
DAIG                                      Sn   19 03 14.3  -5.8
DAIG  Los Arroyos        4.83 267⇑iP      Pn   19 02 22.1  -2.5
DAIG                               eS     Sn   19 03 14.3  -5.8
PTVM  Pico Tres Padr     4.84 299         Pn   19 02 25.3  +0.2
PTVM  Pico Tres Padr     4.84 299  eP     Pn   19 02 25.3  +0.2
MHVM  Bosque de Chap     4.84 296         Pn   19 02 25.5  +0.4
MHVM  Bosque de Chap     4.84 296  eP     Pn   19 02 25.5  +0.4
MCRU  Las Cruces         4.85 295  eP     Pn   19 02 28.3  +3.1
APVM  Azcapotzalco       4.88 297         Pn   19 02 24.5  -1.0
APVM  Azcapotzalco       4.88 297  eP     Pn   19 02 24.5  -1.0
AOVM  Tlapan             4.89 294         Pn   19 02 26.3  +0.5
AOVM  Tlapan             4.89 294  eP     Pn   19 02 26.3  +0.5
ZUVM  ZUMPANGO           4.93 301         Pn   19 02 26.3  +0.2
ZUVM  ZUMPANGO           4.93 301  eP     Pn   19 02 26.3  +0.2
MAVM  Malinalco, Edo     4.93 290         Pn   19 02 26.7  +0.6
MAVM  Malinalco, Edo     4.93 290  eP     Pn   19 02 26.7  +0.6
INVM  La Marquesa        4.95 294         Pn   19 02 27.1  +0.5
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INVM  La Marquesa        4.95 294  eP     Pn   19 02 27.1  +0.5
AZVM  Cuida Lopez Ma     4.98 298         Pn   19 02 27.1  +0.2
AZVM  Cuida Lopez Ma     4.98 298  eP     Pn   19 02 27.1  +0.2
DHIG  Demacu             5.14 306         Pn   19 02 29.7  +0.7
DHIG                                      Sn   19 03 26.6  -1.2
DEIG  Demacu             5.14 306⇑iP      Pn   19 02 29.7  +0.7
DEIG                               eS     Sn   19 03 26.6  -1.2
TOVM  TOLUCA             5.20 293         Pn   19 02 30.3  +0.4
TOVM  TOLUCA             5.20 293  eP     Pn   19 02 30.3  +0.4
CAIG  El Cayaco          5.42 268         Pn   19 02 29.9  -2.5
CAIG                                      Sn   19 03 29.2  -4.8
CAIG  El Cayaco          5.42 268⇑iP      Pn   19 02 29.9  -2.5
CAIG                               eS     Sn   19 03 29.2  -4.8
CTUV  Llano Grande       5.45 320         Pn   19 02 32.5  -0.3
CTUV                                      Sn   19 03 29.6  -5.0
CTUV  Llano Grande       5.45 320  eP     Pn   19 02 32.5  -0.3
CTUV                               eS     Sn   19 03 29.6  -5.0
ARIG  Puente Sto Nin     5.56 281         Pn   19 02 34.2  -0.1
ARIG                                      Sn   19 03 30.9  -6.4
ARIG  Puente Sto Nin     5.56 281⇑iP      Pn   19 02 34.2  -0.1
ARIG                               eS     Sn   19 03 30.9  -6.4
ATYC  Atoyac             5.57 270         Pn   19 02 31.1  -3.3
ATYC                                      Sn   19 03 30.7  -6.9
ATYC  Atoyac             5.57 270  eP     Pn   19 02 31.1  -3.3
ATYC                               eS     Sn   19 03 30.7  -6.9
FAME  Alcaldia de Sa     5.61 127   S     Sn   19 03 41.3  +2.8
FAME  Alcaldia de Sa     5.61 127   P     Pn   19 02 37.9  +2.9
ACIG  Acambay            5.66 299         Pn   19 02 36.0  +0.1
ACIG  Acambay            5.66 299  eP     Pn   19 02 36.0  +0.1
ZAFR2 Estanzuela, Za     5.74 118  i P    Pn   19 02 31.1  -5.6
NUBE  Las Nubes          5.75 125   P     Pn   19 02 39.8  +2.8
NUBE  Las Nubes          5.75 125   S     Sn   19 03 44.2  +2.0
ESQI  Esquipulas         5.75 118         Pn   19 02 37.3  +0.3
ESQI  Esquipulas         5.75 118   P     Pn   19 02 38.6  +1.6
ESQI  Esquipulas         5.75 118   S     Sn   19 03 41.9  -0.3
MYIG  Merida             5.86  51         Pn   19 02 37.9  -0.3
MYIG                                      Sn   19 03 43.7  -0.7
MYIG  Merida             5.86  51⇑eP      Pn   19 02 37.9  -0.3
MYIG                               eS     Sn   19 03 43.7  -0.7
MYIG  Merida             5.86  51   P     Pn   19 02 38.7  +0.4
CEVE  Cerro Verde        5.92 125   P     Pn   19 02 41.3  +2.0
IZABA Izabal, Puerto     5.98 104   P     Pn   19 02 40.6  +0.6
JAYA  Jayaque - finc     6.16 125   P     Pn   19 02 44.3  +1.8
JAYA  Jayaque - finc     6.16 125   S     Sn   19 03 52.8  +0.8
JRQG  Juriquilla Cam     6.48 302         Pn   19 02 47.7  +1.0
ZIIG  Zihuatanejo        6.55 274         Pn   19 02 46.4  -1.2
ZIIG                                      Sn   19 03 56.9  -4.4
ZIIG  Zihuatanejo        6.55 274⇑eP      Pn   19 02 46.4  -1.2
ZIIG                               eS     Sn   19 03 56.9  -4.4
TEIG  Tepich             6.66  63         Sn   19 04 00.2  -3.5
TEIG  Tepich             6.66  63         Pn   19 02 47.8  -1.2
TEIG  Tepich             6.66  63⇑eP      Pn   19 02 47.8  -1.2
TEIG                               eS     Sn   19 04 00.2  -3.5
TEIG  Tepich             6.66  63   P     Pn   19 02 48.2  -0.8
TEIG                                S     Sn   19 04 01.7  -2.0
MOIG  Morelia            6.68 292         Sn   19 04 05.5  +1.0
MOIG  Morelia            6.68 292         Pn   19 02 50.6  +1.1
MOIG  Morelia            6.68 292⇑eP      Pn   19 02 50.5  +1.0
MOIG                               eS     Sn   19 04 05.5  +1.0
MOIG  Morelia            6.68 292   P     Pn   19 02 50.6  +1.1
PACA  Pacayal            7.16 121   P     Pn   19 03 02.4  +6.5
IGIG  Irapuato, Guan     7.22 299         Pn   19 02 57.3  +0.5
IGIG                                      Sn   19 04 18.5  +0.8
IGIG  Irapuato, Guan     7.22 299  eP     Pn   19 02 57.3  +0.5
IGIG                               eS     Sn   19 04 18.5  +0.8
TGUH  Tegucigalpa,Un     7.77 114   Pn    Pn   19 03 04.4  +0.4
CSGN  Cosiguina Volc     8.05 121   P     Pn   19 03 11.6  +3.8
YUSH  Yuscaran           8.19 113   P     Pn   19 03 11.9  +2.2
YUSH  Yuscaran           8.19 113   S     Sn   19 04 41.6  +0.8
MMIG  Aquila             8.38 278         Pn   19 03 11.7  -0.5
MMIG                                      Sn   19 04 40.3  -5.1
MMIG  Aquila             8.38 278  eP     Pn   19 03 11.7  -0.5
MMIG                               eS     Sn   19 04 40.3  -5.1
PKGN  Cerro Pekin        8.69 121   P     Pn   19 03 18.1  +1.8
LNIG  Linares            8.81 330         Pn   19 03 17.9  +0.2
LNIG                                      Sn   19 04 54.2  -1.3
LNIG  Linares            8.81 330  eP     Pn   19 03 17.9  +0.2
LNIG                               eS     Sn   19 04 54.2  -1.3
INCO  Volcan de Coli     8.82 286⇑eP      Pn   19 03 19.8  +1.4
INCO                               eS     Sn   19 04 59.3  +2.8
MNGA  Volcan de Coli     8.82 285⇑eP      Pn   19 03 19.7  +1.4
MNGA                               eS     Sn   19 04 58.7  +2.3
SOMAC Volcano de Col     8.85 286  eP     Pn   19 03 20.0  +1.3
SOMAC                              eS     Sn   19 05 01.3  +4.3
CEGR  Campo Tres         9.03 285⇑eP      Pn   19 03 21.3  +0.4
CEGR                               eS     Sn   19 05 00.0  -1.1
CDAR  Ciudad de Arme     9.09 282  eP     Pn   19 03 20.9  -0.6
CDAR                               eS     Sn   19 05 02.0  -0.4
MOMN  Momotombo          9.19 121   P     Pn   19 03 26.3  +3.3
MOMN                                S     Sn   19 05 08.8  +3.8
ZAIG  Zacatecas          9.24 307         Pn   19 03 24.5  +0.6
ZAIG  Zacatecas          9.24 307  eP     Pn   19 03 22.7  -1.2
ZAIG                               e           19 04 20.0
COPN  Copaltepe          9.28 122   P     Pn   19 03 25.4  +1.2
MNIG  Monterrey          9.81 328         Pn   19 03 29.0  -2.2
MNIG                                      Sn   19 05 22.6  +2.9
MNIG  Monterrey          9.81 328  eP     Pn   19 03 29.0  -2.2
MNIG                               eS     Sn   19 05 22.6  +2.9
ANIG  Ahuacatlan        10.08 293         Pn   19 03 36.1  +1.2
ANIG                                      Sn   19 05 28.2  +1.8
ANIG  Ahuacatlan        10.08 293  eP     Pn   19 03 36.1  +1.2
ANIG                               eS     Sn   19 05 28.2  +1.8
SIUN  Universidad Ur    10.13 109         Pn   19 03 35.2  -0.2
CJM   Chamela           10.15 284  eP     Pn   19 03 37.8  +2.2
CJM                                eS     Sn   19 05 25.9  -2.0
HBVL  Hebbronville      10.41 340         Pn   19 03 39.8  +0.7
JUD3  Juan Diaz 3       11.31 128         Pn   19 03 51.5  +0.4
JTS   Las Juntas de     11.68 125   P     Pn   19 03 56.6  +0.6
      comp=E,18nm,0.3s,baz=258,slow=12,SNR=12
JTS                                 S     Sn   19 06 15.7   +11
      comp=E,13nm,0.4s,baz=328,slow=20,SNR=4.6
JTS                                 LR    LR   19 08 07.0
      comp=E,45nm,21.5s,baz=310,slow=36
JTS   Las Juntas de     11.68 125         Pn   19 03 56.2  +0.2
833A  Chaparral WMA,    11.81 339         Pn   19 03 57.3  -0.3
SOR   Soroa             12.18  62         Pn   19 03 59.8  -2.6
MLDN  Muldoon           12.62 350         Pn   19 04 08.5  +0.5
HKT   Hockley           12.63 355         Pn   19 04 08.4  +0.3
HNDO  Hondo             12.89 341         Pn   19 04 11.7  +0.1
DRIO  Del Rio           13.26 337         Pn   19 04 15.8  -0.4
HNVL  Huntsville, TX    13.41 357   P     P    19 04 22.1  -0.4
435B  Jarrell           13.68 349         P    19 04 26.1  +0.5
JCT   Junction City     13.94 341         Pn   19 04 24.5  -0.5
JCT   Junction City     13.94 341  eP     Pn   19 04 24.5  -0.5
HPIG                    14.02 315         Pn   19 04 27.0  +0.8
SAND  Sanderson         14.34 333         Pn   19 04 30.6  +0.5
BRU2  Volcan            14.36 125         Pn   19 04 29.8  -0.7
NATX  Nacogdoches       14.39 360         P    19 04 33.2  -0.1
BRDY  Brady             14.47 345         Pn   19 04 32.0  +0.3
TXAR  Lajitas Array     14.57 327   P     P    19 04 34.6  -0.9
      comp=E,9.5nm,0.9s,baz=151,slow=14,SNR=76
TXAR                                LR    LR   19 10 34.2
      comp=E,39nm,21.9s,baz=130,slow=38
TXAR  Lajitas Array     14.57 327         Pn   19 04 33.6  +0.6
237A  Washetta, Mont    14.67 356         Pn   19 04 34.4  +0.4
346A  Big Creek Wild    14.77  17         Pn   19 04 34.5  -0.9
OZNA  Ozona             14.79 338         Pn   19 04 36.7  +0.9
CAIB  Caibarien         15.13  68         Pn   19 04 38.0  -2.0
ALPN  Alpine            15.40 329         Pn   19 04 43.9  +0.5
BRAL  Brewton           15.41  25         Pn   19 04 42.3  -1.0
SGCY  Sterling City     15.70 339         Pn   19 04 47.0  +0.1
LPIG  La Paz            16.16 297   LR    LR   19 11 25.6
      comp=E,104nm,19.6s,baz=142,slow=38
DWPF  Disney Wildern    16.21  46   P     Pn   19 04 52.7  -0.4
656A  Willston          16.32  41         Pn   19 04 53.1  -1.4
352A  Blakely           16.62  30   P     Pn   19 04 57.3  -0.8
MNTX  Cornudas Mount    17.34 328   P     Pn   19 05 08.3  +1.4
MNTX  Cornudas Mount    17.34 328  eP     Pn   19 05 08.3  +1.4
HSIG                    18.99 311   P     P    19 05 24.7  +0.6
319A  Douglas           19.33 319   P     P    19 05 27.8  -0.1
W52A  Murphy            20.11  26   P     P    19 05 35.4  -0.7
HODGE Hodges            20.16  31   P     P    19 05 35.0  -1.6
ANMO  Albuquerque       20.50 331   P     P    19 05 41.0  +0.5
      comp=E,5.4nm,0.6s,baz=147,slow=12,SNR=15
      comp=E,5.4nm,0.6s
ANMO  Albuquerque       20.50 331   P     P    19 05 41.5  +0.9
TASM  ASL Pad, Albuq    20.50 331   P     P    19 05 41.1  +0.5
TKL   Tuckaleechee C    20.66  26   P     P    19 05 40.3  -1.6
      comp=E,19nm,0.8s,baz=194,slow=13,SNR=15
      comp=E,19nm,0.8s
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CCM   Cathedral Cave    20.88   7         P    19 05 42.9  -1.4
TUC   Tucson            20.90 319         P    19 05 46.0  +1.2
CBKS  Cedar Bluff       21.89 349  IAmb   IAmb 19 05 58.0
      comp=Z,41nm,0.9s
V55A  Taylorsville      21.96  30  IAmb   IAmb 19 05 56.1
      comp=Z,66nm,1.1s
W57A  Gilead            22.03  33  IAmb   IAmb 19 06 26.0
      comp=Z,48nm,1.2s
Q44A  Meyer Farm, Va    22.06  12  IAmb   IAmb 19 05 56.5
      comp=Z,46nm,0.8s
WCI   Wyandotte Cave    22.08  18  P      P    19 05 55.6  -1.4
WCI                                IAmb   IAmb 19 05 57.2
      comp=Z,62nm,0.8s
OLIL  Olney             22.09  14  IAmb   IAmb 19 05 57.3
      comp=Z,65nm,0.9s
P40A  Paris             22.25   5  IAmb   IAmb 19 05 58.5
      comp=Z,55nm,0.8s
P38A  Dawn              22.25   2  IAmb   IAmb 19 06 29.2
      comp=Z,33nm,0.8s
S51A  Beattyville       22.45  23  IAmb   IAmb 19 06 25.1
      comp=Z,45nm,0.8s
P43A  Skaggs, Pawnee    22.68  10  IAmb   IAmb 19 06 03.0
      comp=Z,47nm,0.9s
X16A  Lo Mia Camp, P    22.74 322  IAmb   IAmb 19 06 07.5
      comp=Z,28nm,0.9s
R50A  Paris             22.75  21  IAmb   IAmb 19 06 29.1
      comp=Z,80nm,1.5s
V58A  Windy Hill, Pi    22.98  34  IAmb   IAmb 19 06 38.3
      comp=Z,51nm,1.0s
P46A  Rosedale          23.14  15  IAmb   IAmb 19 06 07.4
      comp=Z,64nm,1.0s
BLA   Blacksburg        23.44  29  IAmb   IAmb 19 06 10.9
      comp=Z,52nm,1.0s
WUAZ  Wupatki           23.48 324  IAmb   IAmb 19 06 14.7
      comp=Z,30nm,0.9s
SFIN  Lafayette         23.89  14  IAmb   IAmb 19 06 16.3
      comp=Z,35nm,1.0s
GLA   Glamis            24.03 315  IAmb   IAmb 19 06 19.5
      comp=Z,28nm,0.8s
PV01  Paradox Valley    24.09 332  IAmb   IAmb 19 06 49.9
      comp=Z,35nm,1.3s
PV05  Paradox Valley    24.28 331  IAmb   IAmb 19 06 51.2
      comp=Z,44nm,1.4s
PV07  Paradox Valley    24.38 333  IAmb   IAmb 19 06 53.3
      comp=Z,29nm,1.1s
PV17  East Wray Mesa    24.39 332  IAmb   IAmb 19 06 52.2
      comp=Z,30nm,1.2s
PV20  West Nyswonger    24.44 332  IAmb   IAmb 19 06 59.4
      comp=Z,46nm,1.1s
R55A  Marlinton         24.45  28  IAmb   IAmb 19 06 21.3
      comp=Z,38nm,0.7s
PV04  Paradox Valley    24.45 332  IAmb   IAmb 19 06 53.8
      comp=Z,59nm,1.1s
PV14  Lion Creek, Pa    24.49 332  IAmb   IAmb 19 06 53.9
      comp=Z,25nm,1.1s
PV10  Paradox Valley    24.50 332  IAmb   IAmb 19 06 52.5
      comp=Z,32nm,1.1s
PV22  Blue Mesa, Par    24.52 332  IAmb   IAmb 19 06 54.4
      comp=Z,47nm,1.4s
PV23  Carpenter Ridg    24.55 332  IAmb   IAmb 19 06 26.5
      comp=Z,42nm,0.9s
YUH   Yuha Desert       24.56 312  IAmb   IAmb 19 06 24.4
      comp=Z,52nm,1.8s
M44A  Midewin, Midew    24.65  12  IAmb   IAmb 19 06 56.1
      comp=Z,64nm,1.1s
N47A  Urbana            24.71  16  IAmb   IAmb 19 06 54.5
      comp=Z,50nm,1.0s
CBX   Cerro Bola        24.91 311  IAmb   IAmb 19 06 26.7
      comp=Z,31nm,1.1s
L42A  Oliver, Polo      24.97   9  IAmb   IAmb 19 06 25.6
      comp=Z,44nm,0.9s
N49A  Columbus Grove    25.19  19  IAmb   IAmb 19 06 57.2
      comp=Z,41nm,1.2s
KNB   Kanab             25.37 324  IAmb   IAmb 19 07 01.7
      comp=Z,22nm,1.0s
PFO   Pinyon Flats O    25.47 314         P    19 06 29.7  +1.2
Q56A  Snyder Ridge,     25.49  29  IAmb   IAmb 19 07 02.8
      comp=Z,46nm,1.1s
O53A  New Philadelph    25.63  24  IAmb   IAmb 19 07 06.5
      comp=Z,42nm,0.9s
MTPU  Mount Pierson     25.77 327  IAmb   IAmb 19 07 09.5
      comp=Z,22nm,0.9s
ELS   Elsinore Mount    26.16 313  P      P    19 06 35.3  +0.6
ECSD  EROS Data Cent    26.39 357  IAmb   IAmb 19 07 21.2
      comp=Z,28nm,0.8s
I40A  Norwalk           26.71   6  IAmb   IAmb 19 07 13.5
      comp=Z,40nm,1.1s
PDAR  Pinedale Array    28.39 336  P      P    19 06 55.8  +1.1
      comp=Z,0.5nm,0.6s,baz=140,slow=8.4,SNR=4.0
PDAR                               pP     pP   19 07 22.9  -2.4
      comp=Z,3.0nm,1.0s,baz=144,slow=10,SNR=5.1
PDAR                               LR     LR   19 20 15.6
      comp=Z,30nm,19.2s,baz=127,slow=40
      comp=Z,0.5nm,0.6s
E38A  The Farm, Brul    29.32   4  IAmb   IAmb 19 07 02.9
      comp=Z,20nm,0.7s
NVAR  Mina Array Bea    29.54 320  P      P    19 07 07.5  +2.6
      comp=Z,12nm,0.8s,baz=136,slow=9.3,SNR=68
NVAR                               PcP    PcP  19 10 08.0  +1.4
      comp=Z,1.6nm,0.7s,baz=106,slow=3.2,SNR=3.7
NVAR                               LR     LR   19 19 43.8
      comp=Z,75nm,19.3s,baz=118,slow=38
      comp=Z,12nm,0.8s
NVAR  Mina Array Bea    29.54 320  P      P    19 07 06.5  +1.7
PKD   Bear Valley Ra    29.55 314  IAmb   IAmb 19 07 07.6
      comp=Z,17nm,1.1s
SADO  Sadowa            30.30  22  P      P    19 07 09.0  -2.2
      comp=Z,6.2nm,0.3s,baz=250,slow=7.5,SNR=12
      comp=Z,6.2nm,0.3s
SADO  Sadowa            30.30  22  IAmb   IAmb 19 08 15.0
      comp=Z,26nm,1.3s
YNE   Yellowstone No    30.49 338  IAmb   IAmb 19 08 10.8
      comp=Z,15nm,1.2s
MDND  Maddock           30.73 353  IAmb   IAmb 19 07 15.9
      comp=Z,29nm,0.8s
BUKO  Buck Lake         30.79  21  IAmb   IAmb 19 07 14.6
      comp=Z,20nm,0.9s
MPK   Martis Peak       31.13 320  IAmb   IAmb 19 07 22.5
      comp=Z,18nm,1.0s
TBO   Thunder Bay       31.54   7  IAmb   IAmb 19 07 22.0
      comp=Z,30nm,1.0s
NCB   Newcomb           31.66  29  IAmb   IAmb 19 07 22.9
      comp=Z,22nm,0.9s
DLMT  Dillon            31.76 336  IAmb   IAmb 19 07 59.1
      comp=Z,23nm,1.1s
LONY  Lake Ozonia       32.01  27  IAmb   IAmb 19 07 25.6
      comp=Z,16nm,0.9s
EPLO  Experimental L    32.29   1  IAmb   IAmb 19 07 28.6
      comp=Z,30nm,1.0s
ULM   Lac du Bonnet     32.87 358  P      P    19 07 31.9  -1.7
      comp=Z,19nm,0.9s,baz=173,slow=8.2,SNR=15
      comp=Z,19nm,0.9s
ULM   Lac du Bonnet     32.87 358  IAmb   IAmb 19 07 33.8
      comp=Z,22nm,1.0s
J08A  Circle Bar Ran    32.91 327  IAmb   IAmb 19 07 36.9
      comp=Z,19nm,0.8s
MNTQ  Montreal, Queb    33.12  27  IAmb   IAmb 19 07 35.4
      comp=Z,21nm,0.9s
TRQ   Mont Tremblant    33.29  26  IAmb   IAmb 19 07 37.7
      comp=Z,24nm,1.1s
F10A  Beach Ranch, E    34.22 332  IAmb   IAmb 19 08 19.7
      comp=Z,17nm,0.9s
H04A  Detroit Lake      35.78 326  IAmb   IAmb 19 08 00.9
      comp=Z,12nm,1.0s
D08A  Wollman Farm,     35.81 331  IAmb   IAmb 19 08 42.7
      comp=Z,25nm,1.8s
HOOD  Mount Hood Mea    35.92 327  IAmb   IAmb 19 08 03.5
      comp=Z,36nm,1.1s
NEW   Newport           35.94 334  P      P    19 08 00.4  +0.2
      comp=Z,2.2nm,0.6s,baz=120,slow=9.1,SNR=3.8
NEW                                LR     LR   19 26 49.0
      comp=Z,108nm,18.1s,baz=124,slow=43
      comp=Z,2.2nm,0.6s
NEW   Newport           35.94 334  IAmb   IAmb 19 08 44.1
      comp=Z,23nm,1.9s
D62A  Allapoint, All    36.40  30  IAmb   IAmb 19 08 03.8
      comp=Z,28nm,1.1s
FFC   Flin Flon         37.77 353         P    19 08 14.8  -0.8
FFC                                IAmb   IAmb 19 09 02.6
      comp=Z,18nm,1.4s
FFC   Flin Flon         37.77 353  P      P    19 08 15.5   0.0
BATG  Bathurst New B    38.00  32  P      P    19 08 16.2  -1.4
BATG                               IAmb   IAmb 19 08 16.9
      comp=Z,22nm,1.1s
LLLB  Lillooet          39.74 333  IAmb   IAmb 19 09 18.3
      comp=Z,17nm,1.4s
FCC   Fort Churchill    41.39   0         P    19 08 45.3  -0.1
LPAZ  La Paz            42.37 141  P      P    19 08 55.7  +1.1
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             comp=Z,8.2nm,0.8s,baz=338,slow=9.5,SNR=30
LPAZ                                 LR      LR        19 24 27.7
             comp=Z,63nm,20.4s,baz=325,slow=33
             comp=Z,8.2nm,0.8s
LPAZ   La Paz             42.37 141          P         19 08 55.0 +0.4
LPAZ   La Paz             42.37 141  P       P         19 08 55.3 +0.7
MDP    Montagnes des      42.80 101  LR      LR        19 28 26.0
             comp=Z,40nm,18.4s,baz=350,slow=38
SCHQ   Schefferville      43.09  23  P       P         19 08 57.8 -1.5
             comp=Z,9.1nm,0.9s,baz=220,slow=5.8,SNR=6.4
SCHQ                                 LR      LR        19 29 32.1
             comp=Z,106nm,18.3s,baz=240,slow=40
             comp=Z,9.1nm,0.9s
PB16   IPOC Station P     43.18 144  IAmb    IAmb      19 09 04.2
             comp=Z,19nm,1.2s
PB11   IPOC Station P     44.25 145  IAmb    IAmb      19 09 11.6
             comp=Z,25nm,1.0s
GO01   Chusmiza           44.42 145  IAmb    IAmb      19 09 14.2
             comp=Z,15nm,0.9s
YKAW1  Yellowknife Wh     47.22 348          P         19 09 31.7  0.0
YKA    Yellowknife Ar     47.26 348  P       P         19 09 32.2 +0.3
             comp=Z,2.1nm,0.8s,baz=158,slow=7.2,SNR=20
YKA                                  pP      pP        19 10 02.5 -2.0
             comp=Z,4.7nm,0.9s,baz=158,slow=7.1,SNR=8.3
             comp=Z,2.1nm,0.8s
YKA    Yellowknife Ar     47.26 348          pP        19 10 04.8 +0.3
YKAW3  Yellowknife Wh     47.32 348          P         19 09 32.2 -0.3
YKAW3                                IAmb    IAmb      19 10 06.5
             comp=Z,17nm,1.2s
PTLB   Pontes e Lacer     47.78 131          P         19 09 36.7 +0.1
PTLB                                 IAmb    IAmb      19 09 37.6
             comp=Z,15nm,1.0s
DLBC   Dease Lake         48.62 336  P       P         19 09 44.7 +2.1
             comp=Z,7.4nm,0.8s,baz=132,slow=5.2,SNR=15
             comp=Z,7.4nm,0.8s
LCO    Las Campanas       51.52 153          P         19 10 06.0 +1.0
LCO                                  IAmb    IAmb      19 10 07.6
             comp=Z,18nm,0.9s
LCO    Las Campanas       51.52 153  P       P         19 10 06.2 +1.2
LCO                                  pP      pP        19 10 38.7 +0.2
LCO                                  sP      sP        19 10 53.5 -0.9
AC05   El Transito        51.55 153  IAmb    IAmb      19 10 07.9
             comp=Z,26nm,1.2s
ILON   Igloolik, Nuna     52.65   6          P         19 10 11.8 -0.6
ILON                                 IAmb    IAmb      19 10 13.6
             comp=Z,23nm,0.9s
M30M   Minto, Yukon       53.85 337  IAmb    IAmb      19 11 45.8
             comp=Z,42nm,1.8s
M29M   Somme Creek        54.40 337  IAmb    IAmb      19 10 28.4
             comp=Z,17nm,0.9s
L27K   Beaver Creek,      56.03 336  IAmb    IAmb      19 11 52.9
             comp=Z,11nm,0.7s
POIN   Pond Inlet         56.22   6  P       P         19 10 38.5 +0.3
POIN                                 IAmb    IAmb      19 10 39.1
             comp=Z,14nm,1.2s
N25K   Chitina, Valde     56.41 334  IAmb    IAmb      19 11 16.9
             comp=Z,16nm,1.0s
INK    Inuvik             56.57 344  P       P         19 10 41.5 +0.7
             comp=Z,5.3nm,0.8s,baz=122,slow=6.9,SNR=17
INK                                  pP      pP        19 11 12.4 -2.0
             comp=Z,5.7nm,0.8s,baz=134,slow=8.4,SNR=5.8
             comp=Z,5.3nm,0.8s
INK    Inuvik             56.57 344          pP        19 11 14.7 +0.3
KLU    Klutina            56.91 333  IAmb    IAmb      19 11 20.2
             comp=Z,13nm,1.0s
SFJD   Kangerlussuaq      57.17  19  LR      LR        19 35 57.0
             comp=Z,56nm,18.3s,baz=194,slow=36
DOT    Dot Lake           57.20 336  IAmb    IAmb      19 11 49.0
             comp=Z,9.9nm,0.6s
RES    Resolute Bay       57.39 360  P       P         19 10 45.9 -0.6
             comp=Z,1.7nm,0.5s,baz=247,slow=2.9,SNR=8.3
             comp=Z,1.7nm,0.5s
RES    Resolute Bay       57.39 360  IAmb    IAmb      19 12 27.1
             comp=Z,13nm,1.5s
J26L   Joseph Creek       57.45 337  IAmb    IAmb      19 11 37.5
             comp=Z,15nm,1.1s
E29M   Blow River         57.84 343  IAmb    IAmb      19 11 40.0
             comp=Z,12nm,1.2s
F28M   Old Crow           57.95 341  IAmb    IAmb      19 11 43.1
             comp=Z,15nm,1.2s
BI02   San Fabin de       58.03 158  IAmb    IAmb      19 10 54.0
             comp=Z,18nm,1.1s
PRP    Porcupine Dome     58.68 338  IAmb    IAmb      19 10 58.0
             comp=Z,7.8nm,0.9s
G26K   Porcupine Rive     58.82 340  IAmb    IAmb      19 11 33.5
             comp=Z,17nm,1.5s
IL31                      58.82 337  IAmb    IAmb      19 10 58.4
             comp=Z,11nm,1.1s
ILAR   Eielson Array      58.82 337  P       P         19 10 57.2 +0.6
             comp=Z,3.3nm,0.9s,baz=127,slow=4.9,SNR=25
             comp=Z,3.3nm,0.9s
ILAR   Eielson Array      58.82 337          P         19 10 56.6  0.0
SPU    Mount Spurr        59.49 332  IAmb    IAmb      19 11 38.4
             comp=Z,13nm,0.9s
H24K   Noodor Dome        59.69 338  IAmb    IAmb      19 11 04.4
             comp=Z,13nm,1.0s
F25K   Christian Rive     59.77 340  IAmb    IAmb      19 11 41.1
             comp=Z,26nm,1.6s
G24K   Hadweenzic Riv     59.95 339  IAmb    IAmb      19 11 41.8
             comp=Z,26nm,1.4s
E25K   Arctic Village     60.02 340  IAmb    IAmb      19 11 42.6
             comp=Z,21nm,1.6s
N19K   Bonanza Creek      60.48 331          P         19 11 08.3 +0.2
N19K                                 IAmb    IAmb      19 11 09.6
             comp=Z,15nm,0.9s
G23K   Bananza Creek      60.86 338  IAmb    IAmb      19 11 57.7
             comp=Z,16nm,1.4s
H22K   Ishtalitna Cre     61.01 337  IAmb    IAmb      19 11 16.5
             comp=Z,15nm,1.3s
COLD   Coldfoot           61.15 338          P         19 11 13.8 +1.3
COLD                                 IAmb    IAmb      19 12 31.9
             comp=Z,33nm,1.9s
PLCA   Paso Flores        61.92 159  P       P         19 11 19.4 +1.4
             comp=Z,14nm,1.0s,baz=336,slow=8.9,SNR=15
PLCA                                 pP      pP        19 11 49.8 -2.5
             comp=Z,8.2nm,1.1s,baz=341,slow=7.1,SNR=4.9
             comp=Z,14nm,1.0s
PLCA   Paso Flores        61.92 159          P         19 11 19.1 +1.1
PLCA                                 IAmb    IAmb      19 11 20.3
             comp=Z,20nm,1.0s
PLCA                                         pP        19 11 53.2 +1.0
PLCA   Paso Flores        61.92 159  P       P         19 11 19.3 +1.2
PLCA                                 pP      pP        19 11 52.9 +0.6
D23K   Nanushuk River     62.08 340  IAmb    IAmb      19 11 57.5
             comp=Z,24nm,1.4s
E22K   Anaktuvuk Pass     62.09 339  IAmb    IAmb      19 11 56.2
             comp=Z,25nm,1.4s
C23K   Itkillik River     62.45 341  IAmb    IAmb      19 11 23.2
             comp=Z,22nm,1.0s
D22K   Ayikyak River      62.70 340  IAmb    IAmb      19 12 15.6
             comp=Z,14nm,0.9s
TRQA   Tornquist          63.03 151          P         19 11 26.0 +0.7
TRQA                                 IAmb    IAmb      19 11 27.2
             comp=Z,25nm,1.3s
F19K   Shaleruckik Mo     63.76 337  IAmb    IAmb      19 11 31.6
             comp=Z,18nm,1.2s
D20K   Etivluk River      63.96 339          P         19 11 32.2 +1.1
COYC   Coyhaique          65.84 163          P         19 11 44.7 +1.2
BORG   Borgarnes          67.35  26  LR      LR        19 44 09.8
             comp=Z,46nm,18.5s,baz=159,slow=38
EKA    Eskdalemuir Ar     76.77  36  P       P         19 12 48.2 -0.8
             comp=Z,5.5nm,0.6s,baz=270,slow=5.7,SNR=11
             comp=Z,5.5nm,0.6s
SPITS  Spitsbergen Ar     77.36  11  LR      LR        19 49 22.7
             comp=Z,39nm,18.8s,baz=164,slow=37
PAB    San Pablo          79.38  52  P       P         19 13 03.2 -0.8
PAB                                  IAmb    IAmb      19 13 05.9
             comp=Z,21nm,1.2s
ESDC   Sonseca Array      79.64  52  P       P         19 13 05.4  0.0
             comp=Z,7.0nm,1.0s,baz=291,slow=4.6,SNR=19
ESDC                                 LR      LR        19 45 19.2
             comp=Z,61nm,19.6s,baz=300,slow=33
             comp=Z,7.0nm,1.0s
ESDC   Sonseca Array      79.64  52          P         19 13 05.0 -0.4
ESBB   Sonseca Array      79.64  52          P         19 13 05.3  0.0
ESBB                                 IAmb    IAmb      19 13 06.7
             comp=Z,14nm,1.2s
MDT    Midelt             80.82  59  LR      LR        19 46 56.3
             comp=Z,48nm,18.4s,baz=318,slow=34
NB2    NORSAR Subarra     82.44  28  P       P         19 13 20.4 +0.7
             comp=Z,37nm,1.7s,baz=292,slow=5.1
NB2    NORSAR Subarra     82.44  28  P       P         19 13 20.4 +0.7
             baz=292,slow=5.1
NOA    NORSAR Array B     82.44  28  P       P         19 13 20.4 +0.7
             comp=Z,6.0nm,0.9s,baz=292,slow=5.2,SNR=9.0
             comp=Z,6.0nm,0.9s
ARCES  ARCESS Array B     83.78  18  P       P         19 13 27.0 +0.6
             comp=Z,1.4nm,0.4s,baz=295,slow=3.3,SNR=15
             comp=Z,1.4nm,0.4s
HFS    Hagfors            83.92  29  P       P         19 13 27.5 +0.2
             comp=Z,5.2nm,0.9s,baz=270,slow=7.1,SNR=4.5
             comp=Z,5.2nm,0.9s
DBIC   Dimbokro           87.81  84  P       P         19 13 47.4 +0.2
             comp=Z,4.0nm,0.8s,baz=299,slow=6.5,SNR=3.9
DBIC                                 LR      LR        19 53 01.7
             comp=Z,17nm,18.0s,baz=355,slow=36
             comp=Z,4.0nm,0.8s
DBIC   Dimbokro           87.81  84  IAmb    IAmb      19 16 06.7
             comp=Z,14nm,1.4s
FINES  FINESS Array B     88.56  24  P       P         19 13 50.3 +0.5
             comp=Z,5.3nm,1.1s,baz=266,slow=5.7,SNR=4.8
             comp=Z,5.3nm,1.1s
GERES  GERESS Array B     88.64  39  P       P         19 13 50.2 -0.4
             comp=Z,1.1nm,1.0s,baz=349,slow=10.0,SNR=4.0
             comp=Z,1.1nm,1.0s
VRAC   Vranov             90.14  38  LR      LR        19 54 00.7
             comp=Z,39nm,19.3s,baz=322,slow=35
KEST   Kesra              90.88  52  LR      LR        19 50 50.0
             comp=Z,28nm,19.1s,baz=291,slow=33
NRIK   Noril'sk           93.57 359  LR      LR        20 03 00.0
             comp=Z,45nm,18.2s,baz=324,slow=40
VAE    Valguarnera        93.92  49  LR      LR        19 57 11.2
             comp=Z,36nm,19.4s,baz=329,slow=36
HHC    Hu-ho-hao-te      117.24 338  eP      PKPdf     19 19 39.5 -2.8
NJ2    Nanjing           121.37 327  eP      PKPdf     19 19 50.5 +0.2
NJ2                                  pmax    pmax
             comp=Z,6.0nm,0.6s
BOSA   Boshof            123.99 113  PKP     PKPdf     19 19 55.0 -0.5
             comp=Z,3.8nm,0.8s,baz=256,slow=3.1,SNR=6.0
STKA   Stephens Creek    127.41 243  PKP     PKPdf     19 20 02.2 +0.4
             comp=Z,1.7nm,0.8s,baz=0.0,slow=2.0,SNR=5.2
PZH    PanZhiHua         133.64 340  PKP     PKPdf     19 20 12.9 -1.1
WRA    Warramunga Arr    133.67 259  PKP     PKPdf     19 20 14.4 +0.4
             comp=Z,2.1nm,0.9s,baz=82,slow=2.7,SNR=8.4
ASAR   Alice Springs     134.29 254  PKhKP   PKPpre    19 20 08.3
             comp=Z,0.7nm,1.0s,baz=77,slow=2.6,SNR=4.5
ASAR                                 PKP     PKPdf     19 20 14.8 -0.3
             comp=Z,1.2nm,0.8s,baz=86,slow=1.5,SNR=11
CMAR   Chiang Mai Arr    142.04 339  PKhKP   PKPpre    19 20 24.9
             comp=Z,1.0nm,1.0s,baz=0.0,slow=4.4,SNR=4.0
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BJI ***05*** *19:32:36.0, 8°.13S×128°.65E, h143km, mb4.9/56, mB5.4/14*

MOS ***05*** *19:32:42.3±1.0, 7°.36S×128°.38E, h145km, mb4.8/36, Error ellipse: s-maj=10.5km s-min=5.5km az=117.1*

NEIC ***05*** *19:32:42.5±1.9, 7°.37S±0°.07×128°.39E±0°.06, h132km±1km, mb5.0/77, Error ellipse: s-maj=10.5km s-min=9.3km az=178.0*

IDC ***05*** *19:32:43.4±1.7, 7°.40S×128°.37E, h142km±15km, mb4.5/25, mbtmp4.9/29, MS3.2/8, Error ellipse: s-maj=14.4km s-min=9.1km az=79.0*

DJA ***05*** *19:32:43.2±0.1, 8°S±2°×12°8E±°, h146km±2km, M4.7/92, mb5.0/92, mB5.2/40, MLv5.2/19, Mw(mB)4.6/40, MwMwp5.1/1, Mwp5.3/1*

ISC 05 19:32:43.0±0.4**, 7°.48S**±0°.04×**128°.37E**±0°.04**, h142**km±3km**, h142km:pP-P, n441,** σ1ˢ.**49**/437**, mb4.9**/117**, 15C-5D, Banda Sea**

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Code   Station Name        Δ°   AZ°    Phase ID         Time      Res
                                     Op      ISC       h  m  s    ISC
SAUI   Saumlaki            2.95 100          Pn        19 33 29.9 +0.5
SAUI   Saumlaki            2.95 100  P       Pn        19 33 30.3 +0.9
SAUI   Saumlaki            2.95 100  S       Sn        19 34 06.6 +1.4
SAUI   Saumlaki            2.95 100  P       Pn        19 33 29.6 +0.2
BNDI   Bandanaira          3.31  28  P       Pn        19 33 34.9 +0.8
BNDI   Bandanaira          3.31  28  P       Pn        19 33 34.6 +0.5
AAI    Ambon               3.77 357  P       Pn        19 33 41.2 +1.1
KRAI   Karang Ratu         4.14   0  P       Pn        19 33 46.4 +1.5
MSAI   Masohi              4.15   8  P       Pn        19 33 46.4 +1.4
NLAI   Namlea              4.40 343  P       Pn        19 33 50.5 +2.2
SOEI   Soe                 4.64 241          Pn        19 33 52.3 +0.7
SOEI   Soe                 4.64 241  P       Pn        19 33 53.0 +1.4
SOEI   Soe                 4.64 241  S       Sn        19 34 47.1 +2.1
SOEI   Soe                 4.64 241  P       Pn        19 33 52.5 +0.9
BATI   Baumata             5.38 239  P       Pn        19 34 02.8 +1.4
             2µm,0.5s,baz=112,slow=2.8,SNR=821
BATI                                 S       Sn        19 34 58.3 -4.1
             2µm,0.6s,baz=88,slow=21,SNR=24
BATI   Baumata             5.38 239  P       Pn        19 34 01.8 +0.5
DRS    Darwin Rock St      5.51 153  P       Pn        19 34 02.9 -0.2
SANI   Sanana              5.89 336  P       Pn        19 34 10.6 +2.4
SANI   Sanana              5.89 336  P       Pn        19 34 09.4 +1.2
             0.5nm2µm148nm,1.1s
FAKI   Fak Fak             5.96  41          Pn        19 34 07.5 -1.6
FAKI   Fak Fak             5.96  41  P       Pn        19 34 07.7 -1.4
FAKI   Fak Fak             5.96  41  P       Pn        19 34 07.4 -1.7
             1.3nm5µm330nm,0.7s
MTN    Manton Dam          5.98 153          Pn        19 34 09.0 -0.4
MMRI   Maumere             6.17 259          Pn        19 34 12.4 +0.4
MMRI   Maumere             6.17 259  P       Pn        19 34 13.3 +1.3
MMRI   Maumere             6.17 259  S       Sn        19 35 22.2 +0.6
MMRI   Maumere             6.17 259  P       Pn        19 34 12.7 +0.7
             1.6nm3µm172nm,0.5s
KMPI   Kaimana, Papua      6.53  55  P       Pn        19 34 15.4 -1.3
KDI    Kendari             6.70 301  P       Pn        19 34 20.6 +1.5
EDFI   Ende, Flores        6.73 259  P       Pn        19 34 19.9 +0.4
             0.6nm1µm63nm,0.7s
SWI    Sorong              7.18  24  P       Pn        19 34 25.5  0.0
             1.2nm5µm229nm,0.5s
KNRA   Kununurra           8.15 177          Pn        19 34 37.9 -0.6
BASI   Baing, Sumba        8.16 250  P       Pn        19 34 38.1 -0.5
             3µm132nm,0.5s
TNTI   Ternate             8.26 353          Pn        19 34 41.1 +1.2
TNTI   Ternate             8.26 353  P       Pn        19 34 41.2 +1.2
RKPI   Ransiki, Papua      8.29  45  P       Pn        19 34 39.1 -1.3
LBFI   Labuhan Bajo,       8.45 263  P       Pn        19 34 42.7 +0.2
             1µm92nm,0.7s
BKSI   Bulukumba           8.47 284  P       Pn        19 34 43.5 +0.8
             1µm126nm,1.0s
LUWI   Luwuk               8.49 319          Pn        19 34 45.7 +2.8
LUWI   Luwuk               8.49 319  P       Pn        19 34 46.8 +3.8
LUWI   Luwuk               8.49 319  P       Pn        19 34 45.6 +2.6
             4µm459nm,1.2s
MWPI   Manokwari, Pap      8.62  41  P       Pn        19 34 44.9 +0.1
             267nm,0.9s
BNSI   Bone                8.77 290  P       Pn        19 34 48.4 +1.7
             1µm93nm,0.7s
KAPI   Kappang             8.91 285  P       Pn        19 34 50.4 +1.8
             56nm,0.9s,baz=92,slow=8.6,SNR=18
KAPI   Kappang             8.91 285          Pn        19 34 48.5 -0.1
KAPI   Kappang             8.91 285  P       Pn        19 34 50.1 +1.5
KAPI   Kappang             8.91 285 iP       Pn        19 34 49.3 +0.7
MKS    Makassar            9.12 284  P       Pn        19 34 52.5 +1.0
             75nm,0.7s
WBSI   Waikabubak, Su      9.13 256  P       Pn        19 34 49.7 -1.9
             2µm125nm,0.7s
SPSI   Sidrap Palu         9.24 292  P       Pn        19 34 54.4 +1.4
             830nm71nm,1.3s
APSI   Ampana              9.35 314  P       Pn        19 34 57.5 +3.0
             1µm127nm,1.2s
MNI    Manado              9.54 338  P       Pn        19 34 59.6 +2.5
             2µm241nm,1.1s
TTSI   Tana Toraja         9.58 297  P       Pn        19 34 59.4 +1.8
             53nm,1.1s
SRPI   Serui, Papua        9.62  55  P       Pn        19 34 56.3 -1.9
             1µm101nm,0.7s
GTOI   Gorontalo           9.67 326  P       Pn        19 35 03.7 +4.9
             55nm,0.8s
BAKI   Biak                9.93  51  P       Pn        19 35 02.9 +0.6
DBNI   Kabupaten Domp     10.01 264  P       Pn        19 35 02.1 -1.2
             66nm,0.8s
MRSI   Marisa             10.18 321  P       Pn        19 35 08.3 +2.7
             658nm39nm,0.9s
PMSI   Majene             10.20 292  P       Pn        19 35 07.5 +1.6
             1µm112nm,0.6s
MMSI   Mamuju             10.55 296  P       Pn        19 35 12.4 +1.8
             34nm,0.8s
PLAI   Plampang           10.57 262  P       Pn        19 35 09.2 -1.5
PLAI   Plampang           10.57 262  P       Pn        19 35 08.8 -1.9
             1µm52nm,0.6s
PCI    Palu               10.72 307  P       Pn        19 35 14.9 +2.1
             1µm50nm,0.5s
FITZ   Fitzroy Crossi     10.88 194  P       Pn        19 35 12.3 -2.6
             17nm,0.3s,baz=23,slow=9.8,SNR=142
FITZ                                 S       Sn        19 37 06.9 -8.1
             274nm,0.8s,baz=58,slow=15,SNR=15
FITZ   Fitzroy Crossi     10.88 194          Pn        19 35 12.0 -2.8
FITZ   Fitzroy Crossi     10.88 194  P       Pn        19 35 12.6 -2.3
TOLI2  Tolitoli           11.41 318          Pn        19 35 23.2 +1.4
TOLI2  Tolitoli           11.41 318  P       Pn        19 35 24.8 +3.0
TWSI   Taliwang, Sumb     11.44 263  P       Pn        19 35 20.9 -1.3
             35nm,0.6s
SGSI   Sangihe            11.45 346  P       Pn        19 35 23.3 +0.9
MPSI   Mapaga             11.47 312  P       Pn        19 35 24.6 +1.9
             34nm,0.8s
SMPI   Sarmi              11.66  63  P       Pn        19 35 23.8 -1.4
             117nm,1.1s
MMPI   Merauke            11.94  96  P       Pn        19 35 26.6 -2.3
KLNI   Mataram            12.19 265  P       Pn        19 35 31.0 -1.1
             25nm,0.5s
KHKI   Kahang-Kahang      12.67 265  P       Pn        19 35 38.1 -0.2
             27nm,0.6s
GENI   Genyem             12.72  68  P       Pn        19 35 38.7 -0.2
             129nm,0.6s
BKB    Balikpapan         12.99 298          Pn        19 35 42.3 -0.2
BKB    Balikpapan         12.99 298  P       Pn        19 35 44.1 +1.6
             105nm,0.8s
IGBI   Denpasar           13.15 263  P       Pn        19 35 46.5 +2.0
JAY    Jayapura           13.24  69  P       Pn        19 35 46.0 +0.3
             18nm,0.8s,baz=223,slow=16,SNR=8.2
JAY    Jayapura           13.24  69  P       Pn        19 35 45.9 +0.1
             41nm,0.9s
WB0    Warramunga Arr     13.54 155          Pn        19 35 45.8 -3.6
WRAB   Tennant Creek      13.67 155          Pn        19 35 47.7 -3.4
WRAB   Tennant Creek      13.67 155  P       Pn        19 35 48.4 -2.7
WRAB   Tennant Creek      13.67 155ceP       Pn        19 35 48.3 -2.8
WRAB                                 pmax    pmax
             comp=Z,122nm,1.0s
WRA    Warramunga Arr     13.67 156  P       Pn        19 35 48.4 -2.8
             comp=Z,95nm,1.0s,baz=334,slow=14,SNR=159
WRA                                  S       Sn        19 38 10.7  -12
             comp=Z,74nm,0.5s,baz=328,slow=24,SNR=10
WRA    Warramunga Arr     13.67 156  Pn      Pn        19 35 47.5 -3.7
BBKI   Banjar Baru        14.04 286  P       P         19 35 58.4 -0.8
             comp=Z,3µmcomp=Z,235nm,0.7s
JAGI   Jajag, Banyuwa     14.11 265          Pn        19 35 56.1 -0.7
JAGI   Jajag, Banyuwa     14.11 265  P       Pn        19 35 56.0 -0.7
JAGI   Jajag, Banyuwa     14.11 265  P       Pn        19 35 55.6 -1.2
             comp=Z,943nmcomp=Z,41nm,0.6s
KMMI   Kalianget          14.29 271  P       P         19 36 02.0  0.0
BLJI   Banyuglugur        14.64 268  P       P         19 36 05.3 -0.6
             comp=Z,171nm,0.6s
DAV    Davao City (W)     14.72 349  LR      LR        19 41 14.6
             comp=Z,71nm,20.0s,baz=152,slow=35
GMJI   Gumukmas           14.80 266  P       Pn        19 36 06.2 +0.8
             comp=Z,4µmcomp=Z,27nm,0.5s
TARAI  Tarakan            15.21 315  P       P         19 36 12.5 +0.3
             comp=Z,66nm,0.6s
COEN   Coen               15.90 115          Pn        19 36 16.6 -2.5
COEN   Coen               15.90 115  P       Pn        19 36 17.9 -1.2
MBWA   Marble Bar         15.95 211          Pn        19 36 17.8 -1.8
MBWA   Marble Bar         15.95 211  P       Pn        19 36 19.4 -0.2
MYLDM  Lahad Datu         15.97 322          Pn        19 36 17.6 -2.3
MYLDM  Lahad Datu         15.97 322  P       P         19 36 23.5 +2.9
             comp=Z,58nm,1.1s
PSA00  Pilbara Seismi     16.25 210          Pn        19 36 22.6 -0.6
PSA00  Pilbara Seismi     16.25 210          Pn        19 36 21.1 -2.2
PSA00  Pilbara Seismi     16.25 210  P       Pn        19 36 23.3 +0.1
SJI    Sawahan            16.45 268  P       Pn        19 36 25.2 -0.7
             comp=Z,1µmcomp=Z,53nm,0.4s
SNJI   Sawahan-Nganju     16.46 268  P       P         19 36 26.1 -0.2
             comp=Z,1µmcomp=Z,141nm,0.6s
AS31   Alice Springs      16.95 162          P         19 36 29.9 -1.5
ASAR   Alice Springs      16.95 162  P       P         19 36 31.1 -0.3
             comp=Z,52nm,0.6s,baz=336,slow=9.9,SNR=254
ASAR                                 S       S         19 39 25.4  -15
             comp=Z,10.0nm,0.7s,baz=324,slow=14,SNR=4.4
ASAR                                 LR      LR        19 43 45.6
             comp=Z,104nm,19.1s,baz=341,slow=39
ASAR   Alice Springs      16.95 162          P         19 36 29.5 -1.9
QIS    Mount Isa          16.95 141  P       Pn        19 36 32.3 +0.5
PCJI   Pacitan            17.04 266  P       P         19 36 31.1 -1.4
             comp=Z,85nm,0.5s
UGM    Wanagama           17.69 267          P         19 36 38.8 -0.8
UGM    Wanagama           17.69 267  P       P         19 36 39.6  0.0
UGM    Wanagama           17.69 267  P       P         19 36 39.1 -0.5
             comp=Z,30nm,0.6s
KKM    Kota Kinabalu      18.10 318          Pn        19 36 49.4 +3.8
KKM    Kota Kinabalu      18.10 318  P       Pn        19 36 48.5 +2.8
KKM    Kota Kinabalu      18.10 318  P       Pn        19 36 45.8 +0.1
             comp=Z,52nm,1.1s
PMG    Port Moresby       18.69  97  P       P         19 36 50.5  0.0
             comp=Z,86nm,0.7s,baz=310,slow=4.4,SNR=27
PMG                                  S       S         19 40 13.4 -2.7
             comp=Z,10nm,0.7s,baz=0.0,slow=20,SNR=1.7
PMG                                  LR      LR        19 44 47.2
             comp=Z,185nm,19.2s,baz=259,slow=39
PMG    Port Moresby       18.69  97  P       P         19 36 50.7 +0.2
PMG    Port Moresby       18.69  97  P       P         19 36 51.2 +0.7
PMG    Port Moresby       18.69  97  P       P         19 36 50.1 -0.4
             comp=Z,1µmcomp=Z,160nm,1.1s
PMG    Port Moresby       18.69  97ceP       P         19 36 50.1 -0.4
PMG                                  pmax    pmax
             comp=Z,200nm,1.3s
SBUM   Sibu               18.89 301          P         19 36 52.5 -0.2
SBUM   Sibu               18.89 301  P       Pn        19 36 56.0 +1.1
SBUM   Sibu               18.89 301  P       Pn        19 36 55.3 +0.4
             comp=Z,29nm,0.7s
CTJI   Waduk Cacaban      19.03 270  P       P         19 36 53.8 -0.5
             comp=Z,32nm,0.7s
KPJI   Karang Pucung      19.27 269  P       P         19 36 55.4 -1.5
             comp=Z,69nm,0.6s
MANU   Manus Island       19.68  75          P         19 37 01.8 +0.5
GIRL   Giralia            20.30 221  P       P         19 37 09.5 +1.6
BBJI   Bungbulang         20.54 269  P       P         19 37 07.9 -2.6
BBJI   Bungbulang         20.54 269  P       P         19 37 08.0 -2.6
             comp=Z,29nm,0.7s
CNJI   Cibinong           21.06 269  P       P         19 37 14.4 -1.7
             comp=Z,48nm,0.9s
TPI    Tanjungpandan      21.15 282  P       P         19 37 17.5 +0.4
             comp=Z,59nm,0.8s
MEEK   Meekatharra        21.19 205  P       P         19 37 17.8 +0.4
TV1H   Townsville Har     21.39 125  P       P         19 37 21.5 +2.0
CTA    Charters Tower     21.39 128  LR      LR        19 46 40.9
             comp=Z,6.8nm,18.2s,baz=226,slow=39
CTA    Charters Tower     21.39 128  P       P         19 37 21.3 +1.7
CTAO   Charters Tower     21.39 128          P         19 37 20.2 +0.6
CTAO   Charters Tower     21.39 128  P       P         19 37 21.3 +1.7
CTAO   Charters Tower     21.39 128  P       P         19 37 20.2 +0.6
XMI    Christmas Isla     22.59 261  P       P         19 37 30.3 -1.6
PPBI   Pangkal Pinang     22.76 282  P       P         19 37 34.5 +1.0
FORT   Forrest            23.18 181          P         19 37 38.6 +1.4
INKA   Innaminka          23.31 151          P         19 37 40.8 +2.4
KLSI                      23.66 275  P       P         19 37 43.3 +1.5
KASI   Kota Agung         23.79 273  P       P         19 37 40.5 -2.5
MDSI   Maura Dua          24.23 276  P       P         19 37 45.5 -1.5
QLP    Quilpie            24.26 143  P       P         19 37 48.9 +1.9
MORW   Morawa             24.41 207          P         19 37 50.3 +1.9
MORW   Morawa             24.41 207  P       P         19 37 50.3 +1.9
DSRI   Dabo               24.71 285  P       P         19 37 53.0 +1.7
             comp=Z,72nm,1.0s
TPRI   Tanjung Pinang     25.20 288  P       P         19 37 56.6 +0.9
             comp=Z,90nm,1.0s
BLDU   Ballidu            25.47 204  P       P         19 37 58.6 +0.6
KSI    Kapahiang          25.93 277  P       P         19 38 00.9 -1.5
             comp=Z,19nm,0.7s
KLBR   Kellerberrin       25.95 201  P       P         19 38 03.3 +1.0
BTDF   Bukit Timah Da     26.06 289  P       P         19 38 03.4 -0.1
             comp=Z,28nm,1.1s
MYKOM  Kota Tinggi        26.14 290  P       P         19 38 04.6 +0.4
MYKOM                                IAmb    IAmb      19 38 06.1
             comp=Z,34nm,1.0s
MYKOM  Kota Tinggi        26.14 290  P       P         19 38 05.2 +1.0
             comp=Z,40nm,1.4s
BBOO   Buckleboo          26.20 165          P         19 38 05.2 +0.7
BBOO                                 IAmb    IAmb      19 38 44.6
             comp=Z,14nm,0.6s
BBOO   Buckleboo          26.20 165  P       P         19 38 05.9 +1.4
MASI   Maura Aman, Be     26.36 278  P       P         19 38 05.8 -0.5
             comp=Z,45nm,0.9s
MUN    Mundaring          26.88 203  P       P         19 38 11.5 +0.9
STKA   Stephens Creek     27.23 155  P       P         19 38 15.1 +1.4
             comp=Z,5.8nm,0.5s,baz=328,slow=8.0,SNR=12
STKA                                 LR      LR        19 49 52.5
             comp=Z,67nm,20.2s,baz=345,slow=38
             comp=Z,5.8nm,0.5s
STKA   Stephens Creek     27.23 155  P       P         19 38 14.2 +0.4
STKA   Stephens Creek     27.23 155  P       P         19 38 15.3 +1.6
KRJI   Kerinci            27.33 280  P       P         19 38 15.5 +0.5
             comp=Z,85nm,0.6s
NWAO   Narrogin (SRO)     27.34 201  P       P         19 38 15.4 +0.7
             comp=Z,12nm,0.6s,baz=33,slow=8.0,SNR=16
             comp=Z,12nm,0.6s
NWAO   Narrogin (SRO)     27.34 201  P       P         19 38 15.1 +0.3
NWAO                                 IAmb    IAmb      19 38 27.4
             comp=Z,53nm,1.6s
NWAO   Narrogin (SRO)     27.34 201  P       P         19 38 15.5 +0.7
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HTT   Hallett           27.61 161    P      P       19 38 19.6 +2.4
PDSI  Padang            28.57 282    P      P       19 38 24.8 -1.1
      comp=Z,24nm,0.8s
PPI   Padang Panjang    28.74 283    P      P       19 38 27.2 -0.2
      comp=Z,29nm,1.1s
IPM   Ipoh              29.76 293    IAmb   IAmb    19 38 38.0
      comp=Z,23nm,0.8s
IPM   Ipoh              29.76 293    P      P       19 38 36.9 +0.5
IPM   Ipoh              29.76 293    P      P       19 38 37.1 +0.7
      comp=Z,35nm,1.0s
SISI  Saibi             29.81 280    P      P       19 38 35.8 -1.1
      comp=Z,14nm,0.8s
MNSI  Mandailing Nat    29.86 285    P      P       19 38 36.0 -1.4
      comp=Z,36nm,0.6s
KULM  Kulim             30.42 294    P      P       19 38 42.8 +0.5
KULM                                 IAmb   IAmb    19 39 38.1
      comp=Z,87nm,1.7s
KULM  Kulim             30.42 294    P      P       19 38 42.9 +0.5
KULM  Kulim             30.42 294    P      P       19 38 43.1 +0.8
      comp=Z,18nm,0.6s
PSI   Prapat            31.10 288    P      P       19 38 47.2 -1.2
      comp=Z,32nm,0.7s
TATA  Tatamba Isabel    31.15  94    P      P       19 38 48.9 +0.2
NGOA  Tingoa Renbel     31.51 100    P      P       19 38 52.4 +0.6
TPUB  Ta-pu             31.52 346    P      P       19 38 49.5 -2.2
TPUB  Ta-pu             31.52 346    P      P       19 38 50.0 -1.8
TSI   Tuntungan         31.68 289    P      P       19 38 53.4 +0.1
SSLB  Suanglung         31.91 347    P      P       19 38 52.9 -2.4
GSI   Gunungsitoli      31.93 285    IAmb   IAmb    19 38 58.2
      comp=Z,30nm,1.1s
GSI   Gunungsitoli      31.93 285    P      P       19 38 54.8 -0.8
GSI   Gunungsitoli      31.93 285    P      P       19 38 54.5 -1.1
      comp=Z,26nm,1.1s
KCSI  Kotacane, Aceh    32.43 289    P      P       19 38 58.1 -1.8
      comp=Z,12nm,1.0s
YHNB  Yeheng            32.67 348    P      P       19 39 00.3 -1.7
YHNB  Yeheng            32.67 348    P      P       19 39 01.0 -1.0
LHMI  Lhok Sumawe       33.80 291    P      P       19 39 10.9 -0.9
LHMI  Lhok Sumawe       33.80 291    P      P       19 39 11.8  0.0
MLSI  Meulaboh, Aceh    33.96 289    P      P       19 39 11.8 -1.4
      comp=Z,97nm,1.3s
SLVN  Son La            37.37 321    P      P       19 39 42.8 +0.5
SLVN                                 IAmb   IAmb    19 39 50.9
      comp=Z,12nm,0.7s
CMAR  Chiang Mai Arr    38.82 312    P      P       19 39 54.5 +0.1
      comp=Z,4.7nm,0.5s,baz=140,slow=6.9,SNR=48
CMAR                                 PcP    PcP     19 42 03.9 +0.9
      comp=Z,3.9nm,0.7s,baz=168,slow=2.9,SNR=13
CMAR                                 ScP    ScP     19 45 38.8 +0.6
      comp=Z,1.1nm,0.8s,baz=141,slow=3.6,SNR=5.0
      comp=Z,4.7nm,0.5s
CMAR  Chiang Mai Arr    38.82 312           P       19 39 53.3 -1.1
CMAR                                        PcP     19 42 04.0 +1.0
CMAR  Chiang Mai Arr    38.82 312  i P      P       19 39 55.0 +0.6
CMAR                                 pmax   pmax
      comp=Z,6.0nm,0.5s
SANVU Saraoutou         38.83 105           P       19 39 54.1 -0.4
SANVU                                IAmb   IAmb    19 39 56.8
      comp=Z,54nm,1.3s
CHTO  Chiang Mai        39.04 312           P       19 39 55.9 -0.4
CHTO                                 IAmb   IAmb    19 39 57.8
      comp=Z,33nm,1.5s
CHTO  Chiang Mai        39.04 312    P      P       19 39 57.3 +1.0
CHTO  Chiang Mai        39.04 312    P      P       19 39 56.9 +0.6
CHTO  Chiang Mai        39.04 312    P      P       19 39 55.9 -0.4
CHTO                                 pmax   pmax
      comp=Z,33nm,1.5s
CHTO  Chiang Mai        39.04 312    P      P       19 39 57.1 +0.8
CHTO                                 pP     pP      19 40 27.1 +1.0
WHN   Wuhan             40.13 341    P      P       19 40 06.2 +1.2
NJ2   Nanjing           40.35 347  e P      P       19 40 09.0 +2.2
NJ2                                  pmax   pmax
      comp=Z,13nm,0.7s
KMI   Kunming           40.90 323    P      P       19 40 13.0 +1.2
KMI                                  pP     pwP     19 40 48.3 +0.7
KMI                                  pmax   pmax
      comp=Z,17nm,1.1s
ENH   Enshi             41.69 335    P      P       19 40 18.1 +0.3
PZH   PanZhiHua         42.53 324    P      P       19 40 24.9  0.0
PZH                                  pmax   pmax
      comp=Z,20nm,0.9s
LYN   LuoYang           44.43 341    P      P       19 40 40.5 +0.7
LYN                                  pmax   pmax
      comp=Z,22nm,1.0s
KSAR  Wonju Array Be    44.69 359    P      P       19 40 40.6 -1.2
KSAR  Wonju Array Be    44.69 359    P      P       19 40 40.6 -1.2
KSRS  Korea Array       44.70 360    P      P       19 40 42.1 +0.3
      comp=Z,4.0nm,0.5s,baz=180,slow=9.4,SNR=32
      comp=Z,4.0nm,0.5s
TIA   Tai'an            44.73 347    P      P       19 40 41.5 -0.7
TIA                                  pmax   pmax
      comp=Z,10.0nm,0.9s
KS19  Wonju Array Si    44.75 359    P      P       19 40 42.0 -0.3
KS19                                 IAmb   IAmb    19 41 57.1
      comp=Z,102nm,1.8s
MAJO  Matsushiro        44.76  11    P      P       19 40 40.1 -2.3
MAJO                                 IAmb   IAmb    19 42 27.0
      comp=Z,42nm,1.4s
MAJO  Matsushiro        44.76  11    P      P       19 40 43.6 +1.2
MAJO  Matsushiro        44.76  11    P      P       19 40 40.1 -2.3
MAJO                                 pmax   pmax
      comp=Z,42nm,1.5s
MJAR  Matsushiro Arr    44.76  11    P      P       19 40 40.5 -1.9
      comp=Z,2.8nm,0.5s,baz=186,slow=9.4,SNR=14
      comp=Z,2.8nm,0.5s
MJAR  Matsushiro Arr    44.76  11    P      P       19 40 40.5 -1.9
MJAR                                 pmax   pmax
      comp=Z,13nm,1.6s
CD2   Chengdu           44.87 330    P      P       19 40 43.4  0.0
CD2                                  pmax   pmax
      comp=Z,30nm,0.7s
XAN   Xi'an             45.22 337    P      P       19 40 43.9 -2.2
XAN                                  pmax   pmax
      comp=Z,32nm,0.8s
HNS   HongShan          46.44 345  ⇓P      P       19 40 55.5  0.0
HNS                                  pmax   pmax
      comp=Z,20nm,0.9s
SHL   Shillong          48.35 314           P       19 41 09.2 -1.5
SHL                                  IAmb   IAmb    19 41 12.4
      comp=Z,25nm,0.8s
SHL   Shillong          48.35 314    P      P       19 41 09.3 -1.5
SHL                                  pmax   pmax
      comp=Z,25nm,0.8s
BJT   Baijiatuau        48.59 348           P       19 41 12.4 +0.3
BJT   Baijiatuau        48.59 348    P      P       19 41 12.4 +0.3
BJT                                  pmax   pmax
      comp=Z,14nm,1.0s
BJI   Beijing           48.61 348    P      P       19 41 11.7 -0.6
BJI                                  PcP    PcP     19 42 35.9 +0.2
BJI                                  pmax   pmax
      comp=Z,7.0nm,1.1s
LZDM  Lanzhou Array     49.05 333    P      P       19 41 15.7 -0.5
      comp=Z,4.3nm,0.3s,baz=190,slow=9.2,SNR=6.2
      comp=Z,4.3nm,0.3s
LZH   Lanzhou           49.09 334  e P      P       19 41 17.2 +1.0
LZH                                  sP     sP      19 42 02.0 -0.4
LZH                                  pmax   pmax
      comp=Z,39nm,1.3s
JTM   Tenmabayashi      49.43  13    P      P       19 41 17.4 -1.2
MSHR  Mys Shultsa       49.89   3ceP      P       19 41 23.1 +1.2
MSHR                                 pmax   pmax
      comp=Z,75nm,1.3s
HHC   Hu-ho-hao-te      50.52 343  e P      P       19 41 30.5 +3.6
HHC                                  pmax   pmax
      comp=Z,10.0nm,0.7s
HHC                                  pmax   pmax
      comp=Z,120nm,5.1s
BTO   Baotou            50.75 342  e P      P       19 41 32.9 +4.3
BTO                                  pmax   pmax
      comp=Z,10.0nm,0.6s
BTO                                  pmax   pmax
      comp=Z,620nm,5.5s
LSA   Lhasa             51.44 318    IAmb   IAmb    19 41 36.4
      comp=Z,30nm,1.3s
LSA   Lhasa             51.44 318    P      P       19 41 30.8 -3.6
LSA                                  pmax   pmax
      comp=Z,16nm,0.5s
LSA   Lhasa             51.44 318  i P      P       19 41 35.1 +0.6
      SNR=17
LSA   Lhasa             51.44 318    P      P       19 41 35.0 +0.6
USRK  Ussuriysk Ar.     51.55   3    P      P       19 41 34.2 -0.1
      comp=Z,5.6nm,0.5s,baz=183,slow=7.1,SNR=23
      comp=Z,5.6nm,0.5s
XLT   XiLinHaoTe        52.34 349  e P      P       19 41 38.7 -1.6
XLT                                  sP     sP      19 42 27.1 +0.2
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XLT                                  pmax   pmax
      comp=Z,22nm,0.9s
KHZ   Kahutara          52.80 139    P      P       19 41 44.8 +1.1
ASAJ  Asahikawa         52.95  13    LR     LR      20 04 20.0
      comp=Z,19nm,20.7s,baz=104,slow=36
ASAJ  Asahikawa         52.95  13    P      P       19 41 43.9 -0.8
ASAJ                                 pmax   pmax
      comp=Z,147nm,1.7s
JKA   Kamikawa-asahi    52.95  13    P      P       19 41 43.9 -0.8
URZ   Urewera           53.52 133    LR     LR      20 03 47.5
      comp=Z,47nm,21.0s,baz=320,slow=35
GTA   Gaotai            53.63 333    P      P       19 41 50.9 +0.9
GTA                                  pmax   pmax
      comp=Z,29nm,0.8s
GOMU  GeErMu            53.67 326    P      P       19 41 50.8 +0.2
HYB   Hyderabad         55.08 297  e P      P       19 42 00.7  0.0
YSS   Yuzhno-Sakhali    55.69  12  e P      P       19 42 05.6 +1.2
YSS                                  pmax   pmax
      comp=Z,10.0nm,0.8s
HILR  Hailar Array B    57.30 353    P      P       19 42 16.4 +0.5
      comp=Z,9.1nm,0.6s,baz=164,slow=9.2,SNR=2.2
      comp=Z,9.1nm,0.6s
HEH   HeiHe             57.50 359  e P      P       19 42 16.4 -0.8
HEH                                  pmax   pmax
      comp=Z,16nm,1.3s
ULN   Ulaanbaatar       58.24 343    P      P       19 42 22.6 -0.1
ULN   Ulaanbaatar       58.24 343ceP      P       19 42 23.6 +1.0
ULN                                  pmax   pmax
      comp=Z,25nm,1.0s
ULN   Ulaanbaatar       58.24 343    P      P       19 42 23.3 +0.6
SONM  Songino Array     58.40 343    P      P       19 42 24.5 +0.8
      comp=Z,12nm,0.8s,baz=175,slow=7.6,SNR=69
      comp=Z,12nm,0.8s
SONM  Songino Array     58.40 343           P       19 42 23.8 +0.1
SONM                                 IAmb   IAmb    19 42 25.4
      comp=Z,20nm,1.0s
CASY  Casey             59.99 188           P       19 42 35.0 +0.8
ZEA   Zeya              60.99 359  e P      P       19 42 42.1 +0.9
ZEA                                  pmax   pmax
      comp=N,10.0nm,1.2s
ZEA                                  pmax   pmax
      comp=Z,10.0nm,0.6s
ZAK   Zakamensk         61.60 342  e P      P       19 42 45.2 -0.3
ZAK                                  pmax   pmax
      comp=Z,12nm,1.3s
TLY   Talaya            62.64 343           P       19 42 51.4 -0.9
TLY                                  IAmb   IAmb    19 42 54.0
      comp=Z,9.9nm,0.8s
TLY   Talaya            62.64 343ceP      P       19 42 53.8 +1.5
TLY                                  pmax   pmax
      comp=Z,8.0nm,0.7s
WMQ   Urumqi            62.93 328  e P      P       19 42 55.0 +0.6
WMQ                                  pP     pP      19 43 28.2 +1.1
WMQ                                  pmax   pmax
      comp=Z,21nm,1.5s
MOY   Mondy             63.44 341  e P      P       19 42 58.6 +1.0
MOY                                  pmax   pmax
      comp=Z,38nm,1.7s
KNGR  Kungurtug, Tuv    63.72 339  i P      P       19 43 00.3 +0.8
KNGR                                 pmax   pmax
      comp=Z,9.0nm,1.0s
PETK  Petropavlovsk-    65.29  19    P      P       19 43 09.7 +0.1
      comp=Z,11nm,0.7s,baz=187,slow=4.6,SNR=21
      comp=Z,11nm,0.7s
WUS   Wushi             66.14 321    P      P       19 43 14.9 -0.5
NIL   Nilore            66.31 312           P       19 43 15.6 -1.0
NIL   Nilore            66.31 312    P      P       19 43 15.6 -1.0
NIL                                  pmax   pmax
      comp=Z,25nm,0.6s
ZSN   Zaisan            66.85 329  e P      P       19 43 20.2 +0.6
ZSN   Zaisan            66.85 329  e P      P       19 43 20.2 +0.6
SHLS  Shalkode          67.12 323  e P      P       19 43 20.7 -0.9
      comp=Z,4.0nm,0.5s
SHLS  Shalkode          67.12 323  e P      P       19 43 20.7 -0.9
SHLS                                 pmax   pmax
      comp=Z,4.0nm,0.5s
DGZ   Jazzator, Alta    67.17 333  i P      P       19 43 22.8 +1.0
DGZ                                  pmax   pmax
      comp=Z,25nm,0.9s
KSH   Kashi             67.29 318    P      P       19 43 23.2 +0.5
KSH                                  pmax   pmax
      comp=Z,13nm,0.7s
PRZ   Przheval'sk       67.37 322    P      P       19 43 22.5 -0.8
PRZ   Przheval'sk       67.37 322    P      P       19 43 22.5 -0.8
PRZ                                  pmax   pmax
      comp=Z,16nm,1.2s
UZB   Uzynbulak         67.38 323  e P      P       19 43 23.9 +0.7
UZB   Uzynbulak         67.38 323  e P      P       19 43 23.9 +0.7
CCD   Concordia, Ant    67.64 181    P      P       19 43 26.6 +1.9
SATY  Saty              67.69 323  e P      P       19 43 25.9 +0.7
SATY  Saty              67.69 323  e P      P       19 43 25.9 +0.7
MK31  Makanchi Array    67.75 328ceP      P       19 43 25.8 +0.4
MKAR  Makanchi Array    67.75 328    P      P       19 43 25.5 +0.2
      comp=Z,11nm,0.7s,baz=120,slow=7.8,SNR=188
      comp=Z,11nm,0.7s
MKAR  Makanchi Array    67.75 328           P       19 43 24.9 -0.4
MAKZ  Makanchi          67.93 328           P       19 43 25.9 -0.5
MAKZ                                 IAmb   IAmb    19 43 28.9
      comp=Z,17nm,1.1s
MAKZ  Makanchi          67.93 328    P      P       19 43 25.9 -0.5
MAKZ                                 pmax   pmax
      comp=Z,17nm,1.1s
TNSS  Tian-Shan         68.57 322  e P      P       19 43 31.3 +0.2
TNSS  Tian-Shan         68.57 322  e P      P       19 43 31.2 +0.2
MDOK  Medeo             68.57 322  e P      P       19 43 31.4 +0.7
MDOK  Medeo             68.57 322  e P      P       19 43 31.4 +0.7
TDK   Taldyqorghan      68.81 324  e P      P       19 43 32.7 +0.7
      comp=Z,23nm,1.1s
TDK   Taldyqorghan      68.81 324  e P      P       19 43 32.7 +0.7
TDK                                  pmax   pmax
      comp=Z,23nm,1.1s
BOOM  Boomskoye usch    68.89 321           P       19 43 32.7  0.0
BOOM  Boomskoye usch    68.89 321    P      P       19 43 32.7  0.0
BOOM                                 pmax   pmax
      comp=Z,6.0nm,0.6s
YAK   Yakutsk           69.31   1           P       19 43 33.5 -1.1
YAK   Yakutsk           69.31   1  e P      P       19 43 34.6  0.0
YAK                                e *PP    pP      19 44 09.5 +1.5
YAK                                e S      S       19 52 30.4 +0.9
YAK                                e SS     SS      19 56 57.3 -2.2
YAK                                  pmax   pmax
      comp=Z,36nm,0.9s
YAK                                  pmax   pmax
      comp=N,6.0nm,0.9s
YAK                                  pmax   pmax
      comp=E,8.0nm,1.4s
YAK                                  pmax   pmax
      comp=Z,740nm,5.5s
YAK                                  pmax   pmax
      comp=N,781nm,5.3s
YAK                                  pmax   pmax
      comp=E,564nm,5.3s
YAK                                  smax   smax
      comp=N,793nm,5.4s
YAK                                  smax   smax
      comp=E,280nm,4.3s
YAK   Yakutsk           69.31   1    P      P       19 43 34.1 -0.5
YAK                                  pP     pP      19 44 07.2 -0.8
KBL   Kabul             69.84 311    P      P       19 43 37.4 -1.4
KBL   Kabul             69.84 311    P      P       19 43 37.4 -1.4
KBL                                  pmax   pmax
      comp=Z,6.0nm,0.7s
AAK   Ala-Archa         69.87 321           P       19 43 38.7 -0.1
AAK   Ala-Archa         69.87 321  i P      P       19 43 39.6 +0.9
      SNR=13
AAK   Ala-Archa         69.87 321ceP      P       19 43 39.9 +1.1
AAK                                  pmax   pmax
      comp=Z,17nm,1.7s
AAK   Ala-Archa         69.87 321    P      P       19 43 39.6 +0.9
AAK                                  PcP    PcP     19 44 01.0 +0.7
AAK                                  sP     sP      19 44 27.6 +1.2
DRK   Karamyk           70.07 317    P      P       19 43 39.6 -0.5
DRK                                  IAmb   IAmb    19 43 42.2
      comp=Z,11nm,0.6s
DRK   Karamyk           70.07 317    P      P       19 43 39.7 -0.5
DRK                                  pmax   pmax
      comp=Z,11nm,0.6s
SGDS  Sogindy           70.21 321  e P      P       19 43 41.2 +0.5
GAR   Garm              70.86 316    IAmb   IAmb    19 43 46.8
      comp=Z,17nm,1.0s
SEM   Semipalatinsk     71.08 330  e P      P       19 43 46.2 +0.1
      comp=Z,14nm,0.8s
SEM   Semipalatinsk     71.08 330  e P      P       19 43 46.1 +0.1
SEM                                  pmax   pmax
      comp=Z,14nm,0.8s
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ZAA0  Zalesovo Array    71.31 335    IAmb   IAmb    19 43 47.4
      comp=Z,25nm,0.8s
ZALV  Zalesovo Beam     71.31 335    P      P       19 43 46.1 -0.8
      comp=Z,20nm,0.6s,baz=125,slow=4.8,SNR=98
      comp=Z,20nm,0.6s
ZALV  Zalesovo Beam     71.31 335           P       19 43 45.7 -1.2
ZALV  Zalesovo Beam     71.31 335  i P      P       19 43 46.5 -0.5
ZALV                                 pmax   pmax
      comp=Z,21nm,0.6s
BTLS  Baital            71.41 323  e P      P       19 43 48.2 +0.3
BTLS  Baital            71.41 323  e P      P       19 43 48.1 +0.3
CHGR  Chuyangaron       71.52 315    IAmb   IAmb    19 43 50.4
      comp=Z,17nm,0.7s
DZA   Taraz             72.01 320  e P      P       19 43 52.0 +0.4
DZA   Taraz             72.01 320  e P      P       19 43 51.9 +0.4
KURBB Kurchatov Arra    72.08 329    P      P       19 43 51.9 +0.2
      comp=Z,50nm,0.9s,baz=130,slow=5.0,SNR=183
      comp=Z,50nm,0.9s
KURK  Kurchatov         72.09 329           P       19 43 51.2 -0.5
KURK  Kurchatov         72.09 329ceP      P       19 43 51.8 +0.1
KURK                                 pmax   pmax
      comp=Z,101nm,1.3s
KURK  Kurchatov         72.09 329    P      P       19 43 51.8 +0.1
KURK                                 PcP    PcP     19 44 08.1 -1.2
VNDA  Vanda             72.17 173    P      P       19 43 52.7 +0.9
      comp=Z,1.8nm,0.4s,baz=321,slow=7.6,SNR=8.2
      comp=Z,1.8nm,0.4s
VNDA  Vanda             72.17 173    IAmb   IAmb    19 43 58.9
      comp=Z,57nm,2.0s
IUG   Iuzhnay           72.50 318  e P      P       19 43 55.3 +0.7
      comp=Z,7.7nm,0.5s
IUG   Iuzhnay           72.50 318  e P      P       19 43 55.2 +0.7
IUG                                  pmax   pmax
      comp=Z,8.0nm,0.5s
SEY   Seymchan          72.58  11ceP      P       19 43 54.4  0.0
SEY                                  pmax   pmax
      comp=Z,63nm,2.5s
KKAR  Karatay Array     72.64 319           P       19 43 54.8 -0.4
KKAR  Karatay Array     72.64 319    P      P       19 43 54.8 -0.4
CHM   Chimkent          72.87 318  e P      P       19 43 57.4 +0.9
      comp=Z,14nm,1.2s
CHM   Chimkent          72.87 318  e P      P       19 43 57.4 +0.9
CHM                                  pmax   pmax
      comp=Z,14nm,1.2s
BRLS  Borolday          73.04 319  e P      P       19 43 58.0 +0.4
BRLS  Borolday          73.04 319  e P      P       19 43 58.0 +0.4
MAW   Mawson            73.91 201    P      P       19 44 03.8 +1.6
      comp=Z,5.0nm,0.7s,baz=69,slow=8.9,SNR=5.3
      comp=Z,5.0nm,0.7s
BRZS  Berezniki         74.81 326  e P      P       19 44 08.5 +0.7
BRZS  Berezniki         74.81 326  e P      P       19 44 08.4 +0.7
MDH   Madha             77.21 298    P      P       19 44 20.6 -1.2
HATD  Hatta, Dubai      77.24 297    P      P       19 44 22.5 +0.5
ASHO  Ashiyiah          77.27 297  i P      P       19 44 22.1 -0.1
      SNR=6.3
MSFE  Esma-Masafi       77.34 298  i P      P       19 44 22.8 +0.2
      SNR=6.9
BANOM Banah             77.37 299    P      P       19 44 23.0 +0.3
SHME  Shamm             77.53 299  i P      P       19 44 23.8 +0.2
      SNR=12
BVAR  Borovoye Array    77.61 328    P      P       19 44 23.4 -0.1
      comp=Z,20nm,0.7s,baz=126,slow=6.4,SNR=124
      comp=Z,20nm,0.7s
BORK  Borovoye          77.66 328           P       19 44 23.2 -0.5
BORK                                 IAmb   IAmb    19 44 25.1
      comp=Z,35nm,0.9s
BORK  Borovoye          77.66 328ceP      P       19 44 23.9 +0.2
BORK                                 pmax   pmax
      comp=Z,30nm,0.7s
BORK  Borovoye          77.66 328    P      P       19 44 23.7  0.0
BORK                                 PcP    PcP     19 44 32.9 -0.3
NAZ   Nazwa, Dubai      77.69 298    P      P       19 44 24.9 +0.4
FAQ   Al Faqa, Dubai    77.69 297    P      P       19 44 24.1 -0.4
ASUD  Al Ashush, Dub    77.89 297    P      P       19 44 25.5 -0.1
TIXI  Tiksi             78.97   0           P       19 44 29.9 -0.6
TIXI                                 IAmb   IAmb    19 44 30.9
      comp=Z,13nm,0.6s
TIXI  Tiksi             78.97   0ceP      P       19 44 30.7 +0.2
TIXI                                 pmax   pmax
      comp=Z,8.0nm,0.8s
MZR   Muzera            79.17 295  i P      P       19 44 32.4 -0.3
      SNR=7.8
NRIK  Noril'sk          81.64 346    P      P       19 44 44.2 -0.6
      comp=Z,9.1nm,0.6s,baz=144,slow=6.4,SNR=17
      comp=Z,9.1nm,0.6s
AB31  Akbulak array     81.88 322    IAmb   IAmb    19 44 48.9
      comp=Z,14nm,0.7s
ABKAR Akbulak array     81.88 322           P       19 44 45.4 -1.1
QSPA  South Pole Qui    82.50 180    P      P       19 44 54.0 +4.4
      comp=Z,4.1nm,0.7s,baz=302,slow=1.6,SNR=15
QSPA  South Pole Qui    82.50 180    P      P       19 44 53.6 +4.0
QSPA  South Pole Qui    82.50 180    P      P       19 44 54.9 +5.2
SYO   Syowa Base        82.63 201⇓e P      P       19 44 51.0 +0.9
SYO   Syowa Base        82.63 201⇑e PcP    PcP     19 44 56.6 +1.9
SVE   Sverdlovsk        84.34 329⇑e P      P       19 44 59.1 +0.1
SVE                                  pmax   pmax
      comp=Z,44nm,0.7s
ARTI  Arti              85.34 328    P      P       19 45 03.3 -0.8
      comp=Z,31nm,0.6s,baz=110,slow=2.0,SNR=46
      comp=Z,31nm,0.6s
ARTI  Arti              85.34 328           P       19 45 02.7 -1.3
ARTI  Arti              85.34 328c i P      P       19 45 03.8 -0.2
ARTI                                 *PP    pP      19 45 38.4 +0.1
ARTI                                 S      SKSac   19 55 14.6 -1.0
ARTI                                 SS     SS      20 00 54.8 -6.1
ARTI                                 pmax   pmax
      comp=Z,34nm,0.7s
ARTI  Arti              85.34 328    P      P       19 45 03.2 -0.8
ARTI                                 PcP    PcP     19 45 06.8  0.0
ARTI                                 pP     pP      19 45 37.8 -0.6
ARTI                                 sP     sP      19 45 52.2 -0.5
RAYN  Ar Rayn           86.46 294           P       19 45 09.9 -0.5
RAYN  Ar Rayn           86.46 294  i P      P       19 45 10.0 -0.3
      SNR=7.6
RAYN  Ar Rayn           86.46 294    P      P       19 45 09.9 -0.5
RAYN                                 pmax   pmax
      comp=Z,3.0nm,0.6s
AKT   Akhty             87.94 312  e P      P       19 45 16.5 -0.7
AKT                                  pmax   pmax
      comp=Z,16nm,1.0s
BELG  Belogornoye       90.25 323    P      P       19 45 26.4 -1.2
      comp=Z,12nm,0.6s,baz=80,slow=11,SNR=2.6
      comp=Z,12nm,0.6s
KIRV  Kirov             90.61 329    P      P       19 45 27.2 -1.8
      comp=Z,6.8nm,0.6s,baz=202,slow=2.5,SNR=3.6
      comp=Z,6.8nm,0.6s
D19K  Kuna River        90.95  21    IAmb   IAmb    19 45 30.8
      comp=Z,5.8nm,0.8s
E19K  Redstone River    90.95  22    IAmb   IAmb    19 45 31.3
      comp=Z,5.8nm,0.8s
D20K  Etivluk River     91.54  21    IAmb   IAmb    19 45 33.5
      comp=Z,6.2nm,0.9s
GURO  Guroymak-BITLI    91.75 308    IAmb   IAmb    19 45 41.8
      comp=Z,6.0nm,0.7s
KBZ   Khabaz            91.85 314    P      P       19 45 34.0 -1.2
      comp=Z,2.2nm,0.8s,baz=104,slow=3.3,SNR=7.7
      comp=Z,2.2nm,0.8s
KBZ   Khabaz            91.85 314  i P      P       19 45 34.3 -0.9
KBZ                                  pmax   pmax
      comp=Z,3.0nm,1.0s
NEUR  Neytrino          91.92 313  i P      P       19 45 35.7 -0.1
NEUR                                 pmax   pmax
      comp=Z,1.0nm,1.1s
KIV   Kislovodsk        92.03 314  e P      P       19 45 37.5 +1.3
KIV                                  pmax   pmax
      comp=Z,4.0nm,1.0s
TROLL Troll, Antarti    93.29 195  ⇓P      P       19 45 43.6 +2.1
      comp=Z,508nm,0.6s
RND   Reindeer          93.41  27    IAmb   IAmb    19 45 41.3
      comp=Z,12nm,0.8s
G23K  Bananza Creek     93.51  23    IAmb   IAmb    19 45 43.5
      comp=Z,22nm,1.8s
C23K  Itkillik River    93.88  20    IAmb   IAmb    19 45 44.2
      comp=Z,6.6nm,0.8s
DHY   Denali Highway    94.02  27    IAmb   IAmb    19 45 45.1
      comp=Z,7.2nm,0.8s
CCB   Clear Creek Bu    94.06  25           P       19 45 42.1 -2.8
CCB                                  IAmb   IAmb    19 45 44.0
      comp=Z,5.2nm,0.9s
BELA  Belgrano 2        94.25 184           P       19 45 45.2 -0.4
BELA                                 IAmb   IAmb    19 45 47.4
      comp=Z,5.1nm,0.5s
ILAR  Eielson Array     94.47  25    P      P       19 45 44.7 -2.1
      comp=Z,1.4nm,0.8s,baz=264,slow=4.1,SNR=12
ILAR                                 PKKP   PKKPdf  20 02 46.1 -1.1
      comp=Z,0.7nm,0.8s,baz=32,slow=2.0,SNR=7.0
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	comp=Z,1.4nm,0.8s						
SNAA	Sanae	94.81	194	⇓P	P	19 45 50.1	+1.7
	comp=Z,92nm,0.7s						
SNAA	Sanae	94.81	194	⇓P	PKiKP	19 50 36.8	+7.1
	comp=Z,22nm,0.2s						
SNAA	Sanae	94.81	194	P	P	19 45 47.1	-1.3
	comp=Z,4.5nm,0.8s,baz=210,slow=8.1,SNR=13						
SNAA				LR	LR	20 26 54.1	
	comp=Z,34nm,18.8s,baz=198,slow=34						
	comp=Z,4.5nm,0.8s						
SNAA	Sanae	94.81	194	P	P	19 45 49.5	+1.1
SNAA				IAmb	IAmb	19 45 51.1	
	comp=Z,8.1nm,1.1s						
SNAA	Sanae	94.81	194	P	P	19 45 49.5	+1.1
SNAA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
L27K	Beaver Creek,	96.53	27	IAmb	IAmb	19 45 57.3	
	comp=Z,4.2nm,0.8s						
OBN	Obninsk	97.11	325	⇑eP	Pdif	19 46 01.6	+2.6
OBN				e		19 50 00.3	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BOSA	Boshof	97.82	240	P	Pdif	19 46 03.1	0.0
	comp=Z,2.8nm,0.7s,baz=106,slow=4.0,SNR=11						
	comp=Z,2.8nm,0.7s						
BOSA	Boshof	97.82	240	P	Pdif	19 46 03.1	0.0
BOSA				pmax	pmax		
	comp=Z,65nm,2.0s						
BRTR	Keskin Array B	98.36	309	P	P	19 46 04.8	-0.3
	comp=Z,0.8nm,0.8s,baz=146,slow=3.7,SNR=4.5						
	comp=Z,0.8nm,0.8s						
BRTR	Keskin Array B	98.36	309	iP	Pdif	19 46 06.3	+1.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BR105	Keskin Array S	98.37	309	P	Pdif	19 46 05.5	+0.2
ARCES	ARCESS Array B	101.46	340	P	Pdif	19 46 16.8	-1.4
	comp=Z,7.6nm,1.0s,baz=78,slow=5.1,SNR=6.9						
AK09	Malin Array Si	101.50	320	P	Pdif	19 46 17.4	-1.3
AKASG	Malin Array Be	101.54	320	P	Pdif	19 46 17.0	-1.8
	comp=Z,0.7nm,0.5s,baz=76,slow=4.4,SNR=4.5						
AKASG	Malin Array Be	101.54	320	iP	Pdif	19 46 18.1	-0.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SPITS	Spitsbergen Ar	101.72	349	P	Pdif	19 46 18.6	-0.6
	comp=Z,6.2nm,0.8s,baz=127,slow=9.6,SNR=4.5						
FINES	FINESS Array B	102.41	331	P	Pdif	19 46 20.9	-1.5
	comp=Z,22nm,1.2s,baz=142,slow=10,SNR=3.9						
FINES				PKiKP	PKiKP	19 50 42.7	-0.6
	comp=Z,7.0nm,1.1s,baz=46,slow=4.0,SNR=5.2						
FINES	FINESS Array B	102.41	331	P	Pdif	19 46 21.0	-1.5
HFS	Hagfors	108.61	331	Pdiff	Pdif	19 46 48.9	-1.2
	comp=Z,3.3nm,0.9s,baz=72,slow=9.5,SNR=4.4						
YKA	Yellowknife Ar	108.89	26	PKiKP	PKiKP	19 50 55.0	-0.2
	comp=Z,1.6nm,0.7s,baz=293,slow=2.2,SNR=22						
YKA				PKKPbc	PKKPbc	20 02 03.8	-2.3
	comp=Z,0.7nm,0.7s,baz=111,slow=2.2,SNR=8.6						
MODS	Modra-Piesok	109.53	319	eP	Pdif	19 47 00.2	+5.7
MODS	Modra-Piesok	109.53	319	ePDIFF	Pdif	19 47 00.2	+5.7
CONA	Conrad Observa	110.55	318	ePKiKP	PKiKP	19 50 59.0	+0.1
	comp=Z,0.9nm,0.5s						
GERES	GERESS Array B	111.74	320	PKiKP	PKiKP	19 51 01.3	+0.1
	comp=Z,2.0nm,0.6s,baz=76,slow=2.0,SNR=16						
NVAR	Mina Array Bea	112.86	52	PKiKP	PKiKP	19 51 04.2	+0.4
	comp=Z,1.4nm,0.8s,baz=18,slow=2.5,SNR=5.7						
WTTA	Wattenberg	113.48	318	ePKiKP	PKiKP	19 51 04.6	0.0
	comp=Z,6.4nm,0.4s						
SQTA	Sankt Quirin	113.78	318	iPKiKP	PKiKP	19 51 05.2	0.0
	comp=Z,0.9nm,0.3s						
MOTA	Moosalm	113.81	319	iPKiKP	PKiKP	19 51 05.0	-0.2
	comp=Z,2.8nm,0.4s						
FETA	Feichten	114.14	318	iPKiKP	PKPdf	19 51 05.8	-0.1
	comp=Z,1.9nm,0.6s						
DAVA	Damuels	114.63	319	iPKiKP	PKPdf	19 51 06.7	-0.2
	comp=Z,5.6nm,0.4s						
DAVOX	Davos/Dischmat	114.77	318	PKP	PKPdf	19 51 07.3	+0.1
	comp=Z,3.8nm,0.5s,baz=233,slow=10.0,SNR=11						
ELK	Elko	114.78	49	PKP	PKiKP	19 51 07.3	-0.1
	comp=Z,1.2nm,0.5s,baz=178,slow=0.8,SNR=8.2						
KEST	Kesra	117.81	306	PKP	PKiKP	19 51 13.8	+0.5
	comp=Z,3.1nm,0.5s,baz=17,slow=1.5,SNR=9.6						
PDAR	Pinedale Array	118.38	45	PKP	PKiKP	19 51 15.0	+0.7
	comp=Z,2.9nm,0.7s,baz=293,slow=0.9,SNR=29						
PDAR				PKKPbc	PKKPbc	20 01 33.3	-0.4
	comp=Z,1.2nm,0.7s,baz=112,slow=5.5,SNR=11						
EKA	Eskdalemuir Ar	118.80	331	PKP	PKPdf	19 51 13.9	-0.5
	comp=Z,0.4nm,0.3s,baz=35,slow=2.3,SNR=3.8						
ANMO	Albuquerque	122.89	53	PKP	PKiKP	19 51 24.0	+0.6
	comp=Z,4.6nm,1.0s,baz=205,slow=5.2,SNR=6.6						
ULM	Lac du Bonnet	123.73	33	PKP	PKPdf	19 51 23.9	-0.1
	comp=Z,6.7nm,0.7s,baz=302,slow=2.5,SNR=8.5						
TXAR	Lajitas Array	126.56	59	PKP	PKiKP	19 51 31.3	+0.6
	comp=Z,1.6nm,0.7s,baz=261,slow=1.0,SNR=17						
ESDC	Sonseca Array	126.70	315	PKP	PKiKP	19 51 30.9	+0.3
	comp=Z,1.4nm,0.9s,baz=37,slow=4.0,SNR=5.5						
TORD	Torodi Ar. Bea	127.31	281	PKP	PKPdf	19 51 31.7	-0.2
	comp=Z,1.6nm,0.3s,baz=31,slow=6.8,SNR=3.8						
PLCA	Paso Flores	128.96	162	PKP	PKiKP	19 51 35.2	0.0
	comp=Z,2.6nm,0.8s,baz=207,slow=4.5,SNR=4.6						
SCHQ	Schefferville	131.24	12	PKP	PKPdf	19 51 38.6	+0.4
	comp=Z,4.0nm,0.6s,baz=297,slow=2.3,SNR=7.1						
DBIC	Dimbokro	133.59	272	PKP	PKPdf	19 51 43.6	-0.2
	comp=Z,6.9nm,0.5s,baz=109,slow=2.9,SNR=13						
CFA	Coronel Fontan	138.02	159	PKhKP	PKPpre	19 51 42.4	
	comp=Z,0.8nm,0.5s,baz=191,slow=5.2,SNR=2.4						
CFA				PKP	PKPdf	19 51 51.0	-0.7
	comp=Z,1.6nm,0.4s,baz=243,slow=4.0,SNR=6.2						
CPUP	Villa Florida	145.94	171	PKPbc	PKPdf	19 52 05.8	0.0
	comp=Z,2.8nm,1.0s,baz=62,slow=5.6,SNR=13						
CPUP	Villa Florida	145.94	171		PKPdf	19 52 05.4	-0.5
SOR	Soroa	146.22	60	PKPdf	PKPdf	19 52 06.2	-0.2
SOR	Soroa	146.22	60	PKP2	PKPdf	19 52 06.2	-0.2
LPAZ	La Paz	151.29	145	PKP	PKPdf	19 52 16.6	+1.1
	comp=Z,1.6nm,0.7s,baz=174,slow=1.7,SNR=5.2						
LPAZ				PKPbc	PKiKP	19 52 22.9	+0.8
	comp=Z,5.2nm,0.4s,baz=152,slow=2.1,SNR=26						
LPAZ	La Paz	151.29	145		PKPdf	19 52 17.9	+2.4

ROM 05 19:45:18.1±0.2**, 43°.969N**±0°.004×**10°.44E**±0°.01**, h5km**±1km**,**
ML0.6/2**, Error ellipse: s-maj=0.7km s-min=0.7km**
az=87.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CARD	Cardoso	0.07	29	P	Pg	19 45 19.8	+0.2
CARD				S	Sg	19 45 20.9	+0.1
CARD				AML	AML		
	comp=E,392µm,0.3s						
CARD				AML	AML		
	comp=N,365µm,1.5s						
CARD				AML	AML		
	comp=E,328µm,0.1s						
CARD				AML	AML		
	comp=N,317µm,0.1s						
MAIM	Mastiano	0.07	144	P	Pg	19 45 20.1	+0.4
MAIM				S	Sg	19 45 21.5	+0.8
BDI	Bagni Di Lucca	0.15	51	P	Pg	19 45 21.5	+0.3
BDI				S	Sg	19 45 24.1	+1.0
BDI				AML	AML		
	comp=E,41µm,0.9s						
BDI				AML	AML		
	comp=N,47µm,1.6s						
BDI				AML	AML		
	comp=N,30µm,0.3s						
VLC	Villacollemand	0.19	349	P	Pg	19 45 22.5	+0.6
SARO	Sassorosso	0.22	353	P	Pg	19 45 23.3	+0.9
SARO				S	Sg	19 45 27.0	+1.7
PII	Pisa	0.26	166	P	Pg	19 45 23.6	+0.6
PII				AML	AML		
	comp=E,30µm,0.4s						
PII				AML	AML		
	comp=E,30µm,1.6s						
EQUI	Equi	0.28	314	P	Pg	19 45 24.3	+0.6

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*IDC **05** 19:51:19.2±1.2, 1°.69N×126°.56E, h0km, mb3.9/7,*
mbtmp4.0/7, Error ellipse: s-maj=141.0km s-min=16.5km
az=66.0
*DJA **05** 19:51:23.8±0.2, 2°N±2°×12°6E±°, h10km, M4.0/13, mB4.8/1,*
mb4.2/4, MLv4.0/13, Mw(mB)4.0/1
*NEIC **05** 19:51:27.2±2.6, 1°.48N±0°.10×126°.38E±0°.07, h47km±8km,*
mb4.4/24, Error ellipse: s-maj=15.2km s-min=9.1km
az=203.0
ISC 05 19:51:26.2±0.6**, 1°.57N**±0°.05×**126°.45E**±0°.05**, h47km, n53,**
σ**1.49**/55**, mb4.4**/19**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TNTI	Ternate	1.21	131		Pn	19 51 46.1	-0.6
TNTI	Ternate	1.21	131	P	Pn	19 51 46.3	-0.4
TNTI				S	Sn	19 52 03.8	+1.8
MNI	Manado	1.61	265	P	Pn	19 51 50.0	-2.2
MNI				S	Sn	19 52 11.4	-0.5
SGSI	Sangihe	2.29	336	P	Pn	19 52 00.5	-1.0
SGSI				S	Sn	19 52 30.3	+1.7
GTOI	Gorontalo	3.56	255	P	Pn	19 52 19.9	+0.9
GTOI				S	Sn	19 53 02.9	+3.1
SANI	Sanana	3.63	187	P	Pn	19 52 18.6	-1.3
SANI				S	Sn	19 53 02.0	+0.5
LUWI	Luwuk	4.50	235		Pn	19 52 32.1	+0.2
LUWI	Luwuk	4.50	235	P	Pn	19 52 34.1	+2.2
MRSI	Marisa	4.64	256	P	Pn	19 52 32.3	-1.4
NLAI	Namlea	4.82	172	P	Pn	19 52 36.1	-0.2
KRAI	Karang Ratu	5.23	158	P	Pn	19 52 43.1	+1.2
	0.1nm9.7nm,0.7s						
APSI	Ampana	5.40	243	P	Pn	19 52 44.0	-0.2
	0.3nm838nm65nm,0.9s						
TOLI2	Tolitoli	5.69	265		Pn	19 52 45.7	-2.5
MPSI	Mapaga	6.67	259	P	Pn	19 53 03.1	+1.5
	0.1nm12nm,1.5s						
BNSI	Bone	8.68	227	P	Pn	19 53 28.6	-0.7
MYLDM	Lahad Datu	8.71	294		Pn	19 53 31.6	+2.0
MYLDM	Lahad Datu	8.71	294	P	Pn	19 53 38.3	+8.7
EDFI	Ende, Flores	11.30	205	P	Pn	19 54 23.1	+18
TWSI	Taliwang, Sumb	13.99	223	P	P	19 54 54.0	+5.3
MTN	Manton Dam	15.06	162		Pn	19 54 55.6	-0.4
JAGI	Jajag, Banyuwa	15.81	231	P	P	19 55 09.6	+0.7
KNRA	Kununurra	17.29	172		Pn	19 55 23.6	-0.7
FITZ	Fitzroy Crossi	19.56	182	P	P	19 55 48.5	-1.8
WB0	Warramunga Arr	22.59	160	P	P	19 56 22.3	-0.7
COEN	Coen	22.65	133	P	P	19 56 23.5	0.0
COEN				IAmb	IAmb	19 57 05.0	
	comp=Z,12nm,1.4s						
WRAB	Tennant Creek	22.73	160	P	P	19 56 24.5	+0.1
WRAB				IAmb	IAmb	19 56 28.4	
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	22.74	160	P	P	19 56 23.3	-1.1
	comp=Z,2.4nm,0.4s,baz=340,slow=11,SNR=28						
	comp=Z,2.4nm,0.4s						
AS31	Alice Springs	26.11	164	P	P	19 56 55.9	0.0
ASAR	Alice Springs	26.11	164	P	P	19 56 55.9	-0.1
	comp=Z,0.7nm,0.4s,baz=344,slow=7.6,SNR=22						
ASAR				PcP	PcP	20 00 23.4	+0.8
	comp=Z,0.5nm,0.4s,baz=350,slow=2.1,SNR=9.5						
	comp=Z,0.7nm,0.4s						
FORT	Forrest	32.21	177	P	P	19 57 49.7	-0.2
FORT				IAmb	IAmb	19 58 17.7	
	comp=Z,8.0nm,1.1s						
BBOO	Buckleboo	35.38	166	P	P	19 58 17.6	+0.1
NWAO	Narrogin (SRO)	35.40	193	P	P	19 58 17.2	-0.4
STKA	Stephens Creek	36.24	158	P	P	19 58 24.9	+0.1
	comp=Z,2.1nm,0.7s,baz=307,slow=10.0,SNR=4.5						
	comp=Z,2.1nm,0.7s						
MKAR	Makanchi Array	59.17	326	P	P	20 01 21.7	-0.6
	comp=Z,0.7nm,0.5s,baz=120,slow=7.7,SNR=14						
	comp=Z,0.7nm,0.5s						
ZALV	Zalesovo Beam	62.38	334	P	P	20 01 44.0	+0.1
	comp=Z,0.4nm,0.4s,baz=122,slow=6.4,SNR=2.5						
	comp=Z,0.4nm,0.4s						
KURBB	Kurchatov Arra	63.40	328	P	P	20 01 48.7	-2.1
	comp=Z,1.0nm,0.3s,baz=128,slow=6.5,SNR=4.9						
	comp=Z,1.0nm,0.3s						
KURK	Kurchatov	63.41	328	P	P	20 01 48.7	-2.1
KURK	Kurchatov	63.41	328	IAmb	IAmb	20 01 53.5	
	comp=Z,3.0nm,0.9s						
BVAR	Borovoye Array	68.97	328	P	P	20 02 26.8	+0.3
	comp=Z,0.4nm,0.5s,baz=103,slow=4.7,SNR=5.8						
	comp=Z,0.4nm,0.5s						
BORK	Borovoye	69.02	328	P	P	20 02 26.5	-0.3
CLES	Cleveland East	73.09	35	P	P	20 02 50.9	-0.5
ABKAR	Akbulak array	73.64	321	P	P	20 02 52.7	-2.1
G19K	Purcell Mounta	83.10	23	P	P	20 03 49.4	+2.7
G19K				IAmb	IAmb	20 03 50.1	
	comp=Z,4.5nm,0.8s						
D19K	Kuna River	83.22	21	P	P	20 03 49.4	+2.1
D19K				IAmb	IAmb	20 03 55.8	
	comp=Z,4.0nm,1.1s						
H19K	Roundabout Mou	83.24	24	P	P	20 03 49.7	+2.3
H19K				IAmb	IAmb	20 04 14.2	
	comp=Z,9.3nm,1.4s						
E19K	Redstone River	83.32	22	P	P	20 03 50.3	+2.5
E19K				IAmb	IAmb	20 03 51.6	
	comp=Z,3.2nm,0.8s						
D20K	Etivluk River	83.81	21	P	P	20 03 53.0	+2.7
D20K				IAmb	IAmb	20 04 00.7	
	comp=Z,4.1nm,1.4s						
B20K	Meade River	83.89	20	P	P	20 03 52.8	+2.2
B20K				IAmb	IAmb	20 03 54.4	
	comp=Z,4.4nm,1.0s						
B21K	Ikpikpuk River	84.68	20	P	P	20 03 57.4	+2.8
B21K				IAmb	IAmb	20 03 58.4	
	comp=Z,5.7nm,1.2s						
SKT	Skwentna	84.86	28	P	P	20 03 56.9	+1.2
B22K	Teshekpuk Lake	85.20	20	P	P	20 03 58.4	+1.2
B22K				IAmb	IAmb	20 04 00.6	
	comp=Z,3.2nm,0.9s						
L22K	Petersville	85.27	27	P	P	20 03 58.6	+0.8
BCAR	Beaver Creek A	89.41	27	P	P	20 04 19.0	+1.2

IDC 05 19:57:59.3±16.0**, 3°.41S**×**104°.91W, h0km, mb3.3**/3**,**
mbtmp3.3/3**, MS3.4**/6**, Error ellipse: s-maj=538.7km**
s-min=193.6km az=117.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CMIG	Matias Romero	22.65	26	LR	LR	20 09 43.0	
	comp=Z,68nm,19.9s,baz=180,slow=31						
JTS	Las Juntas de	24.09	55	LR	LR	20 09 43.3	
	comp=Z,102nm,21.5s,baz=261,slow=29						
LPIG	La Paz	27.85	349	LR	LR	20 12 08.9	
	comp=Z,80nm,21.4s,baz=214,slow=30						
SDV	Santo Domingo	36.28	70	LR	LR	20 16 41.7	
	comp=Z,66nm,20.4s,baz=248,slow=31						
PDAR	Pinedale Array	46.16	355	P	P	20 06 25.9	0.0
	0.3nm,0.6s,baz=169,slow=6.8,SNR=3.9						
	0.3nm,0.6s						
PLCA	Paso Flores	48.34	145	LR	LR	20 21 46.5	
	comp=Z,42nm,18.8s,baz=272,slow=30						
ULM	Lac du Bonnet	54.02	7	LR	LR	20 27 51.6	
	comp=Z,34nm,18.3s,baz=20,slow=33						
YKA	Yellowknife Ar	66.14	355	P	P	20 08 47.8	-0.4
	0.1nm,0.5s,baz=173,slow=5.8,SNR=4.1						
	0.1nm,0.5s						
ILAR	Eielson Array	74.66	343	P	P	20 09 40.6	+0.3
	0.2nm,0.6s,baz=152,slow=4.8,SNR=5.0						
	0.2nm,0.6s						

NNC 05 20:23:39.6±7.5**, 36°.91N**×**70°.33E, h0km, mb3.7, mpv3.5,**
1C-2D, Error ellipse: s-maj=62.4km s-min=48.1km
az=160.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BRLS	Borolday	6.12	357	Pg	Pn	20 25 11.4	0.0
	0.8nm,0.1s						
BRLS				Lg	Lg	20 26 18.8	
	6.4nm,0.3s						
KK31	Karatay Array	6.19	1	P	Pn	20 25 13.0	+0.7
	1.4nm,0.3s,baz=182,slow=13,SNR=68						
KK31				⇓S	Sn	20 26 25.5	+1.8
	7.1nm,0.5s,baz=185,slow=23						
AAK	Ala-Archa	6.56	28	⇑P	Pn	20 25 16.3	-1.2
AAK				⇓S	Sn	20 26 33.1	0.0
SGDS	Sogindy	7.32	25	Pg	Pn	20 25 26.6	-1.2
	0.5nm,0.1s						
SGDS				Lg	Lg	20 26 47.3	
	3.1nm,0.5s						
AB31	Akbulak array	14.47	332	P	Pn	20 27 06.8	+1.2
	0.6nm,0.6s,baz=332,slow=15,SNR=10						

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*GII **05** 20:28:50.0±0.0, 34°.70N±0°.04×33°.47E±0°.01, h18km,*
Mws2.7, confirmed
*NIC **05** 20:28:50.7, 34°.77N×33°.41E, h26km±1km, Ml2.0/6*
ISC 05 20:28:50.4±0.9**, 34°.73N**±0°.05×**33°.43E**±0°.04**, h26km**±8km**,**
n53, σ**0.56**/60**, 1C-3D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ASGA	Asgata	0.16	292	⇑iP	Pb	20 28 55.6	0.0
ASGA				S	Sb	20 28 59.9	+0.6
ASGA				AML	AML	20 29 00.7	
	2.2nm,0.3s						
ASGA				AML	AML	20 29 02.3	
	1.9nm,0.4s						
CSS	Mathiatis	0.25	341	P	Pb	20 28 56.3	-0.5
CSS	Mathiatis	0.25	341	P	Pb	20 28 56.3	-0.5
CSS				S	Sb	20 29 00.7	-0.5
CSS	Mathiatis	0.25	341	⇓iP	Pb	20 28 56.6	-0.2
CSS				S	Sb	20 29 01.1	0.0
CSS				AML	AML	20 29 01.6	
	0.8nm,0.3s						
CSS				AML	AML	20 29 03.7	
	1.1nm,0.7s						
MVOU	Mavrovouni	0.34	30	⇓eP	Pb	20 28 57.8	-0.2
MVOU				S	Sb	20 29 03.9	+0.7
MVOU				AML	AML	20 29 04.8	
	0.7nm,0.3s						
MVOU				AML	AML	20 29 04.8	
	0.7nm,0.4s						
ATHAL	Athalassa	0.41	357	P	Pb	20 28 59.5	+0.3
XYLS	Xyliatos	0.42	313	⇓iP	Pb	20 28 58.9	-0.5
XYLS				S	Sb	20 29 04.9	-0.6
XYLS				AML	AML	20 29 06.8	
	0.7nm,0.3s						
XYLS				AML	AML	20 29 08.4	
	0.7nm,0.3s						
APOL	The Sanctuary	0.47	263	P	Pb	20 29 00.4	+0.3
APOL				S	Sn	20 29 08.5	-0.4
APOL				AML	AML	20 29 08.8	
	0.5nm,0.2s						
APOL				AML	AML	20 29 09.4	
	0.4nm,0.2s						
TROD	Troodos	0.51	296	P	Pb	20 29 00.7	-0.2
TROD				S	Sb	20 29 08.6	+0.5
TROD				AML	AML	20 29 13.8	
	0.5nm,0.4s						
TROD				AML	AML	20 29 15.0	
	0.2nm,0.4s						
PARAL	Paralimni	0.57	62	P	Pn	20 29 03.5	+0.7
MMC7	Mount Meron ar	2.36	136	P	Pn	20 29 27.4	-0.1
MMC7	Mount Meron ar	2.36	136	S	Sn	20 29 55.7	+0.1
MMA0B	Mount Meron ar	2.37	136	P	Pn	20 29 27.9	+0.2
MMA0B	Mount Meron ar	2.37	136	S	Sn	20 29 55.5	-0.4
GEM	Giv'at Ha'Em	2.40	128	P	Pn	20 29 28.4	+0.5
GEM	Giv'at Ha'Em	2.40	128	P	Pn	20 29 27.8	-0.1
GEM	Giv'at Ha'Em	2.40	128	S	Sn	20 29 55.3	-1.1
NATI	Neve Ativ	2.41	127	P	Pn	20 29 28.5	+0.4
NATI	Neve Ativ	2.41	127	P	Pn	20 29 28.3	+0.2
NATI	Neve Ativ	2.41	127	S	Sn	20 29 56.1	-0.6
OFRI	`Ofer	2.47	148	P	Pn	20 29 29.0	0.0
OFRI	`Ofer	2.47	148	P	Pn	20 29 28.7	-0.2
OFRI	`Ofer	2.47	148	S	Sn	20 29 57.4	-0.9
KSHT	Keshet	2.64	131	P	Pn	20 29 31.9	+0.6
KSHT	Keshet	2.64	131	S	Sn	20 30 02.0	-0.5
SHMJ	Saham	2.79	135	P	Pn	20 29 34.3	+1.0
MMLI	Mount Malkishu	2.83	143	P	Pn	20 29 33.7	-0.2
MMLI	Mount Malkishu	2.83	143	S	Sn	20 30 06.6	-0.5
QRNJ	Al-Qirein	2.98	142	P	Pn	20 29 37.1	+1.1
HMDT	Nahal Hemdat	3.03	144	P	Pn	20 29 36.4	-0.2
HMDT	Nahal Hemdat	3.03	144	P	Pn	20 29 36.1	-0.5
HMDT	Nahal Hemdat	3.03	144	S	Sn	20 30 11.2	-0.8
SALP	Salfit	3.03	150	P	Pn	20 29 37.2	+0.5
SALP	Salfit	3.03	150	P	Pn	20 29 36.8	0.0
SALP	Salfit	3.03	150	S	Sn	20 30 12.2	0.0
DSI	Dead Sea	3.55	152	P	Pn	20 29 44.9	+1.1
DSI	Dead Sea	3.55	152	P	Pn	20 29 43.8	+0.1
DSI	Dead Sea	3.55	152	S	Sn	20 30 24.3	-0.6
MSBI	Mazada	3.77	154	P	Pn	20 29 47.1	+0.4
GHAJ	Ghor Haditha	3.86	152	P	Pn	20 29 49.2	+1.2
GHAJ	Ghor Haditha	3.86	152	P	Pn	20 29 48.5	+0.5
KZIT	Kziot	3.90	168	P	Pn	20 29 48.0	-0.6
KZIT	Kziot	3.90	168	S	Sn	20 30 33.3	-0.2
PRNI	Paran	4.56	163	P	Pn	20 29 58.5	+0.8
PRNI	Paran	4.56	163	P	Pn	20 29 57.8	+0.1
PRNI	Paran	4.56	163	S	Sn	20 30 49.3	-0.6
KRMI	Paran Flat	4.72	166	P	Pn	20 30 00.6	+0.6
KRMI	Paran Flat	4.72	166	S	Sn	20 30 54.3	+0.4
HRFI	Mount Harif	4.87	163	P	Pn	20 30 02.7	+0.7
HRFI	Mount Harif	4.87	163	P	Pn	20 30 02.5	+0.5
HRFI	Mount Harif	4.87	163	S	Sn	20 30 57.0	-0.5
MBRI	Mt Berech	5.08	165	P	Pn	20 30 04.9	0.0
MBRI	Mt Berech	5.08	165	S	Sn	20 31 03.1	+0.4

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*IDC **05** 20:31:17.8±1.9, 59°.96N×153°.04W, h102km±30km, mb3.8/9,*
mbtmp4.2/14, Error ellipse: s-maj=33.5km s-min=13.8km
az=120.0
*NEIC **05** 20:31:19.0±0.8, 59°.98N±0°.04×152°.90W±0°.09,*
h115km±4km, Error ellipse: s-maj=6.6km s-min=5.2km
az=111.0
*AEIC **05** 20:31:19.9±0.8, 59°.96N±0°.04×152°.90W±0°.09,*
h113km±4km, ML3.6, mb4.2/8(NEIC), ML3.8/190(NEIC),
Error ellipse: s-maj=6.4km s-min=5.2km az=106.0
ISC 05 20:31:18.9±0.6**, 59°.97N**±0°.04×**152°.82W**±0°.04**,**
h118km±5km**, n249,** σ**0.93**/228**, mb4.2**/11**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
IVE	Iliamna Volcan	0.11	297		Pn	20 31 34.8	-0.4
IVE					Sn	20 31 47.0	-0.5
ILS	Iliamna Low So	0.13	266		Pn	20 31 34.8	-0.4
ILS					Sn	20 31 46.9	-0.6
ILSW	Iliamna Southw	0.16	276		Pn	20 31 34.5	-0.8
ILSW					Sn	20 31 46.1	-1.6
ILSW				IAML		20 31 47.7	
	comp=E,3µm,0.6s						
ILSW				IAML		20 31 48.3	
	comp=N,1µm,0.5s						
P19K	Oil Pt	0.38	214		Pn	20 31 35.5	-0.5
P19K	Oil Pt	0.38	214		Sn	20 31 48.5	-0.4
RED	Redoubt Volcan	0.45	3		Pn	20 31 36.0	-0.4
RED				IAML		20 31 49.8	
	comp=E,3µm,0.7s						
RED				IAML		20 31 49.9	
	comp=N,2µm,0.5s						
RED	Redoubt Volcan	0.45	3		Sn	20 31 49.2	-0.5
RDSO	Redoubt South	0.49	4		Pn	20 31 36.6	-0.2
RDSO					Sn	20 31 49.5	-0.7
RDWB	Redoubt West	0.52	359		Pn	20 31 36.7	-0.3
RDWB					Sn	20 31 49.8	-0.7
RDJH	Redoubt Jeurge	0.63	1		Pn	20 31 37.6	-0.1
DFR	Drift River	0.63	6		Sn	20 31 51.6	-0.1
AU22	Augustine Moun	0.66	205		Pn	20 31 37.3	-0.3
AU22					Sn	20 31 51.3	-0.5
AUL	Augustine Lava	0.67	208		Pn	20 31 37.5	-0.2
AUL					Sn	20 31 51.5	-0.5
AUF	Augustine Flow	0.67	209		Pn	20 31 37.3	-0.4
AUF					Sn	20 31 51.5	-0.4
HOM	Homer	0.67	117		Pn	20 31 38.2	+0.4
HOM				IAML		20 31 55.7	
	comp=N,3µm,0.3s						
AUCH	Augustine Cone	0.69	208		Pn	20 31 37.6	-0.4
AUJK	Augustine Jueg	0.69	206		Sn	20 31 51.7	-0.6
O19K	Port Alsworth	0.79	288		Pn	20 31 38.0	-0.7
O19K				IAML		20 31 53.8	
	comp=N,2µm,0.4s						
O19K	Port Alsworth	0.79	288		Sn	20 31 52.4	-1.3
CNPM	China Poot	0.92	118		Pn	20 31 40.2	+0.3
CNPM				IAML		20 31 56.5	
	comp=N,2µm,0.2s						
CNPM				IAML		20 31 57.4	
	comp=E,2µm,0.3s						
CNPM	China Poot	0.92	118		Sn	20 31 56.0	+0.1
BRLK	Bradley Lake	1.00	101		Pn	20 31 41.0	+0.3
BRLK				IAML		20 31 58.5	
	comp=N,2µm,0.1s						
BRSE	Bradley Lake S	1.07	101		Pn	20 31 41.9	+0.4
BRSE					Sn	20 31 58.5	0.0
Q19K	Cape Douglas,	1.12	202		Pn	20 31 41.3	-0.8
Q19K				IAML		20 32 01.3	
	comp=N,1µm,0.6s						
Q19K				IAML		20 32 02.7	
	comp=E,1µm,0.7s						
CAPN	Captain Cook N	1.15	45		Pn	20 31 44.5	+2.3
N19K	Bonanza Creek	1.19	316		Pn	20 31 42.4	-0.4
O18K	Koktuh Hills	1.21	266		Pn	20 31 41.9	-1.0
O18K				IAML		20 32 00.2	
	comp=E,532nm,0.8s						
O18K				IAML		20 32 00.4	
	comp=N,676nm,0.8s						

SPU	Mount Spurr	1.28	17		Pn	20 31 43.9	+0.2
P18K	Big Mountain,	1.35	246		Pn	20 31 43.2	-1.3
P18K	Big Mountain,	1.35	246		Sn	20 32 01.7	-2.2
SYI	Shuyak Island	1.38	171		Pn	20 31 44.5	-0.3
SYI				IAML		20 32 04.5	
	comp=N,2µm,0.6s						
SYI				IAML		20 32 06.6	
	comp=E,1µm,0.4s						
SYI	Shuyak Island	1.38	171		Sn	20 32 03.4	-0.9
SLKM	Skilak Lake	1.41	66		Pn	20 31 45.2	+0.1
SLKM	Skilak Lake	1.41	66		Sn	20 32 04.5	-0.5
KAPH	Katmai Pasha	1.58	210		Pn	20 31 46.9	-0.3
STLK	Strandline Lak	1.61	17		Pn	20 31 48.0	+0.4
STLK				IAML		20 32 12.9	
	comp=E,359nm,0.3s						
STLK				IAML		20 32 12.9	
	comp=N,338nm,0.4s						
O22K	Cooper Landing	1.63	70		Pn	20 31 48.1	+0.5
N18K	Kilae Creek	1.69	296		Pn	20 31 47.7	-0.7
SEW	Seward	1.69	84		Pn	20 31 48.6	+0.2
SEW				IAML		20 32 10.9	
	comp=N,809nm,0.5s						
SEW				IAML		20 32 16.9	
	comp=E,719nm,0.7s						
SUA	Susitna One	1.81	33		Pn	20 31 50.7	+0.6
SUA				IAML		20 32 17.4	
	comp=N,1µm,0.7s						
RC01	Rabbit Creek A	1.90	52		Pn	20 31 51.2	+0.3
M20K	Styx River	1.93	356		Pn	20 31 51.8	+0.4
P17K	Kvichak River	2.00	249		Pn	20 31 51.7	-0.5
KBM	Katmai Bkd Mtn	2.10	217		Pn	20 31 53.4	-0.1
SKT	Skwentna	2.12	17		Pn	20 31 53.8	+0.2
SKT				IAML		20 32 24.1	
	comp=E,208nm,0.3s						
SKT				IAML		20 32 24.4	
	comp=N,308nm,0.4s						
M18K	Stony River	2.12	317		Pn	20 31 53.1	-0.6
ACHA	Angle Creek He	2.19	217		Pn	20 31 53.8	-0.8
KDAK	Kodiak Island	2.19	177	P	Pn	20 31 53.3	-1.3
	comp=N,230nm,0.3s,baz=58,slow=3.8,SNR=289						
KDAK				S	Sn	20 32 20.2	-1.8
	comp=N,184nm,0.3s,baz=308,slow=23,SNR=32						
KDAK	Kodiak Island	2.19	177		Pn	20 31 53.3	-1.3
KDAK				IAML		20 32 21.6	
	comp=N,602nm,0.4s						
KDAK				IAML		20 32 26.9	
	comp=N,791nm,0.6s						
M22K	Willow	2.23	35		Pn	20 31 55.5	+0.5
ANCK	Angle Creek	2.25	219		Pn	20 31 55.0	-0.4
N17K	Nushagak Hills	2.25	286		Pn	20 31 54.6	-0.7
PWL	Port Wells	2.40	66		Pn	20 31 56.7	-0.5
PWL				IAML		20 32 29.8	
	comp=E,794nm,0.5s						
PMR	Palmer	2.44	46		Pn	20 31 57.1	-0.5
PMR				IAML		20 32 27.1	
	comp=N,480nm,0.1s						
PMR				IAML		20 32 27.3	
	comp=E,665nm,0.2s						
PMR	Palmer	2.44	46	P	Pn	20 31 57.0	-0.7
GHO	Glory Hole Cre	2.63	45	IAML		20 32 32.2	
	comp=N,696nm,0.2s						
GHO				IAML		20 32 32.7	
	comp=E,626nm,0.4s						
M17K	Holitna River	2.69	304		Pn	20 32 00.4	-0.5
O16K	Kokwok River B	2.69	264		Pn	20 32 00.5	-0.5
P23K	Montague Islan	2.72	87		Pn	20 32 02.1	+0.7
CUT	Chulitna	2.74	26		Pn	20 32 01.5	-0.1
CUT	Chulitna	2.74	26	IAML		20 32 37.7	
	comp=N,567nm,0.5s						
CUT				IAML		20 32 39.6	
	comp=E,509nm,0.4s						
L22K	Petersville	2.75	20		Pn	20 32 02.1	+0.3
L22K				IAML		20 32 37.4	
	comp=E,200nm,0.4s						
L22K				IAML		20 32 37.9	
	comp=N,181nm,0.5s						
OHAK	Old Harbor	2.76	185		Pn	20 32 00.3	-1.7
OHAK				IAML		20 32 33.3	
	comp=N,244nm,0.5s						
OHAK				IAML		20 32 39.6	
	comp=E,148nm,0.5s						
OHAK	Old Harbor	2.76	185	P	Pn	20 32 00.2	-1.7
P16K	Nushagak River	2.80	253		Pn	20 32 02.4	0.0
PLK2	Peulik 2	2.86	221		Pn	20 32 03.3	0.0
SML	Sawmill	2.87	48		Pn	20 32 02.7	-0.6
SML				IAML		20 32 38.7	
	comp=N,433nm,0.5s						
SML				IAML		20 32 39.0	
	comp=E,444nm,0.9s						
PLK1	Peulik 1	2.93	224		Pn	20 32 03.7	-0.5
PPLA	Purkeypile	2.96	6	IAML		20 33 04.2	
	comp=E,82nm,0.7s						
PLK4	Peulik 4	2.98	220		Pn	20 32 04.6	-0.3
PLK4				IAML		20 33 04.4	
	comp=E,84nm,1.1s						
PLK4				IAML		20 33 14.4	
	comp=N,79nm,0.9s						
GLI	Glacier Island	2.98	70		Pn	20 32 04.3	-0.5
GLI	Glacier Island	2.98	70	IAML		20 32 39.7	
	comp=N,344nm,0.5s						
GLI				IAML		20 32 41.7	
	comp=E,354nm,0.4s						
N16K	Nishlik Lake	3.01	282		Pn	20 32 05.1	-0.2
M23K	Glacier View	3.09	51		Pn	20 32 05.9	-0.4
HIN	Hinchinbrook I	3.19	79		Pn	20 32 06.9	-0.6
HIN	Hinchinbrook I	3.19	79	IAML		20 32 45.9	
	comp=E,396nm,0.4s						
HIN				IAML		20 32 46.6	
	comp=N,344nm,0.4s						
FID	Port Fidalgo	3.25	73		Pn	20 32 06.9	-1.4
SCM	Sheep Creek Mo	3.27	53	IAML		20 32 49.8	
	comp=N,331nm,0.5s						
MID	Middleton Isla	3.33	97		Pn	20 32 09.5	+0.1
MID	Middleton Isla	3.33	97	IAML		20 32 50.1	
	comp=E,206nm,0.8s						
MID				IAML		20 32 51.0	
	comp=N,211nm,0.5s						
K20K	Telida	3.45	351		Pn	20 32 11.1	+0.1
SII	Sitkinak Islan	3.49	192		Pn	20 32 09.8	-1.8
SII	Sitkinak Islan	3.49	192	IAML		20 32 51.2	
	comp=N,308nm,0.8s						
SII				IAML		20 32 52.5	
	comp=E,265nm,0.5s						
SII	Sitkinak Islan	3.49	192	P	Pn	20 32 09.8	-1.8
EYAK	Cordova Ski Ar	3.57	78		Pn	20 32 12.6	0.0
EYAK	Cordova Ski Ar	3.57	78	IAML		20 32 55.0	
	comp=E,208nm,0.5s						
EYAK				IAML		20 32 55.2	
	comp=N,191nm,0.4s						
EYAK	Cordova Ski Ar	3.57	78	P	Pn	20 32 13.4	+0.8
N15K	Kwethluk River	3.65	276		Pn	20 32 14.5	+0.8
N15K				IAML		20 32 56.1	
	comp=N,68nm,1.0s						
O15K	Ungalikthiuk R	3.65	260		Pn	20 32 14.1	+0.4
DIV	Divide	3.67	68	IAML		20 33 00.2	
	comp=N,222nm,0.3s						
DIV				IAML		20 33 00.5	
	comp=E,129nm,0.7s						
L16K	Owhat River	3.70	301		Pn	20 32 13.6	-0.6
TRF	Thorofare Moun	3.70	18	IAML		20 33 03.1	
	comp=E,63nm,0.7s						
TRF				IAML		20 33 20.4	
	comp=N,95nm,0.5s						
K17K	Iditarod	3.82	319		Pn	20 32 15.4	-0.5
RND	Reindeer	3.93	27	IAML		20 33 03.7	
	comp=E,58nm,0.6s						
RND				IAML		20 33 17.1	
	comp=N,52nm,1.0s						
CHUM	Lake Minchumin	3.94	3		Pn	20 32 17.6	+0.1
J18K	Innoko River	3.97	334		Pn	20 32 17.1	-0.8
M15K	Kasigluk River	3.98	284		Pn	20 32 17.8	-0.2
DHY	Denali Highway	4.06	38	IAML		20 33 07.3	
	comp=E,195nm,0.6s						
DHY				IAML		20 33 07.9	
	comp=N,151nm,0.4s						
GOAT	Goat Mountain	4.08	78		Pn	20 32 18.8	-0.6
RAGM	Ragged Mountai	4.09	81		Pn	20 32 20.1	+0.5
BMRM	Bremner River	4.19	73	IAML		20 33 11.3	
	comp=E,210nm,0.4s						
MCK	McKinley	4.20	24	IAML		20 33 12.8	
	comp=E,53nm,0.5s						
MCK				IAML		20 33 14.1	
	comp=N,46nm,0.2s						
KAIM	Kayak Island	4.23	87		Pn	20 32 22.0	+0.7
BPAW	Bear Paw Mtn.	4.24	11		Pn	20 32 20.8	-0.6
BPAW	Bear Paw Mtn.	4.24	11	IAML		20 33 11.2	
	comp=N,29nm,0.6s						
BPAW				IAML		20 33 43.6	
	comp=E,31nm,0.9s						
J19K	Poorman	4.25	343		Pn	20 32 21.5	-0.2
HMT	Hamilton	4.29	81		Pn	20 32 22.8	+0.6
O14K	Tigyukauivet M	4.35	264		Pn	20 32 23.5	+0.6
N25K	Chitina, Valde	4.35	64	IAML		20 33 13.8	
	comp=E,148nm,0.5s						
N25K				IAML		20 33 14.8	
	comp=N,112nm,0.6s						
CHIR	Chirikof Islan	4.42	201		Pn	20 32 21.9	-2.1
CHIR	Chirikof Islan	4.42	201	IAML		20 33 11.5	
	comp=E,48nm,0.6s						
CHIR				IAML		20 33 26.2	
	comp=N,55nm,1.2s						
CHIR	Chirikof Islan	4.42	201	P	Pn	20 32 21.6	-2.3
HARP	HAARP	4.44	53		Pn	20 32 24.4	+0.2
NICHA	Nichawak Mount	4.44	83		Pn	20 32 24.9	+0.7
N14K	Kuskokwak Cree	4.46	273		Pn	20 32 25.3	+0.9
N14K	Kuskokwak Cree	4.46	273	IAML		20 34 09.5	
	comp=E,47nm,1.1s						
N14K				IAML		20 34 27.3	
	comp=N,28nm,1.1s						
BWN	Browne	4.50	19	IAML		20 33 50.1	
	comp=E,66nm,0.7s						
BWN				IAML		20 34 06.9	
	comp=N,72nm,1.0s						
J17K	VABM Dome	4.55	322		Pn	20 32 24.8	-0.8
BERG	Berg Lake	4.57	81		Pn	20 32 26.3	+0.3
L15K	Ungalak Mounta	4.58	296		Pn	20 32 25.6	-0.4
PAX	Paxson	4.63	46	IAML		20 33 19.0	
	comp=N,85nm,0.5s						
PAX				IAML		20 33 22.1	
	comp=E,83nm,0.7s						
WASW	Wrangell South	4.65	61		Pn	20 32 27.2	-0.1
GLB	Gilahina Butte	4.67	68		Pn	20 32 27.0	-0.3
GLB	Gilahina Butte	4.67	68	IAML		20 33 22.0	
	comp=E,111nm,0.6s						
GLB				IAML		20 33 22.0	
	comp=N,145nm,0.7s						
VRDI	Verde Repeater	4.79	71		Pn	20 32 28.7	-0.4
VRDI	Verde Repeater	4.79	71	IAML		20 33 23.4	
	comp=E,55nm,0.6s						
VRDI				IAML		20 33 25.1	
	comp=N,104nm,0.5s						
KHIT	Khitrov Hills	4.80	80		Pn	20 32 29.3	+0.2
I20K	Naaghedeneel	4.91	352		Pn	20 32 30.9	+0.5
I20K	Naaghedeneel	4.91	352	IAML		20 33 42.2	
	comp=E,51nm,1.2s						
I20K				IAML		20 34 04.9	
	comp=N,52nm,0.8s						
NEA2	Nenana	4.96	19	IAML		20 33 26.6	
	comp=N,21nm,0.9s						
J16K	Anvik River	4.98	315		Pn	20 32 30.8	-0.7
WAX	Waxell Ridge	5.00	80		Pn	20 32 32.3	+0.6
MCARA	McCarthy VSAT	5.02	69		Pn	20 32 32.1	+0.1
TGL	Tana Glacier	5.02	77		Pn	20 32 32.4	+0.2
TGL	Tana Glacier	5.02	77	IAML		20 33 32.3	
	comp=E,113nm,0.4s						
TGL				IAML		20 33 33.1	
	comp=N,123nm,0.5s						
WRH	Wood River Hil	5.03	24		Pn	20 32 31.4	-0.7
WRH	Wood River Hil	5.03	24	IAML		20 33 31.9	
	comp=N,19nm,1.1s						
WRH				IAML		20 33 34.1	
	comp=E,17nm,1.2s						
L14K	Kuka Creek	5.04	290		Pn	20 32 33.1	+0.9
K24K	Donnelly Dome	5.09	38		Pn	20 32 34.2	+1.3
MLY	Manley	5.17	10		Pn	20 32 33.6	-0.4
HDA	Harding Lake	5.24	29		Pn	20 32 34.6	-0.2
HDA	Harding Lake	5.24	29	IAML		20 33 34.5	
	comp=E,101nm,0.5s						
HDA				IAML		20 33 34.8	
	comp=N,81nm,0.5s						
CCB	Clear Creek Bu	5.25	24	IAML		20 33 34.6	
	comp=E,20nm,0.4s						
CCB				IAML		20 33 35.1	
	comp=N,20nm,0.7s						
I21K	Tanana	5.25	4		Pn	20 32 35.2	+0.2
VNKR	Veniaminof 5	5.26	224		Pn	20 32 34.9	-0.4
KIAG	Kiagna River	5.27	75		Pn	20 32 36.2	+0.7
MENT	Mentasta	5.28	52	IAML		20 33 52.0	
	comp=N,78nm,1.0s						
MENT				IAML		20 33 53.1	
	comp=E,79nm,0.6s						
BALM	Baldy	5.29	74		Pn	20 32 36.5	+0.9
M26K	Nabesna, AK	5.34	59		Pn	20 32 37.3	+1.0
M26K	Nabesna, AK	5.34	59	IAML		20 33 37.6	
	comp=E,38nm,1.1s						
M26K				IAML		20 33 38.7	
	comp=N,54nm,0.7s						
RIDG	Independent Ri	5.34	41		Pn	20 32 36.7	+0.3
RIDG	Independent Ri	5.34	41	IAML		20 33 35.9	
	comp=E,93nm,0.8s						
RIDG				IAML		20 33 39.9	
	comp=N,73nm,0.8s						
BAGL	Bagley Icefiel	5.37	80		Pn	20 32 37.6	+0.9
COLA	College	5.44	23		Pn	20 32 37.1	-0.4
COLA	College	5.44	23	P	Pn	20 32 37.2	-0.4
MESA	MESA	5.45	83		Pn	20 32 38.7	+0.8
YAH	Yahtse	5.54	81		Pn	20 32 40.1	+0.8
GRNC	Granite Creek	5.55	77		Pn	20 32 40.0	+0.7
ILAR	Eielson Array	5.55	27	P	Pn	20 32 38.5	-0.6
	comp=N,39nm,0.6s,baz=221,slow=14,SNR=426						
ILAR				S	Sn	20 33 37.0	-4.7
	comp=N,6.2nm,0.7s,baz=211,slow=25,SNR=6.8						
ILAR	Eielson Array	5.55	27		Pn	20 32 38.2	-1.0
DOT	Dot Lake	5.55	45		Pn	20 32 39.1	-0.1
BARN	Barnard Glacie	5.62	74		Pn	20 32 41.3	+1.0
H20K	Anotleneega Mo	5.63	351		Pn	20 32 40.2	+0.1
H21K	Melozitna Rive	5.71	0		Pn	20 32 40.9	-0.4
POKR	Poker Plat Res	5.74	23		Pn	20 32 41.5	-0.1
RKAV	Rock Avalanche	5.75	82		Pn	20 32 43.2	+1.4
CTGM	Chitina Glacie	5.77	75		Pn	20 32 43.4	+1.2
H18K	Honhosa River	5.80	336		Pn	20 32 42.3	-0.2
H19K	Roundabout Mou	5.82	345		Pn	20 32 42.9	+0.1
TABL	Table Mountain	5.84	80		Pn	20 32 44.1	+0.8
CHX	Chaix Hills	5.87	84		Pn	20 32 44.1	+0.6
LOGN	Logan Glacier	5.92	77		Pn	20 32 44.8	+0.6
H17K	Granite Mounta	5.97	330		Pn	20 32 44.4	-0.4
SAMH	Samovar Hills	6.04	83		Pn	20 32 47.0	+1.3
IM04	Indian Mountai	6.05	356		Pn	20 32 46.1	+0.3
IMAR	Indian Mountai	6.05	356		Pn	20 32 45.6	-0.3
BC03		6.12	55		Pn	20 32 47.0	+0.2
BVCY	Beaver Creek	6.28	62		Pn	20 32 50.2	+1.3
PCA	Pinnacle	6.30	83		Pn	20 32 50.2	+0.9
YUK3	Moose Creek	6.30	68		Pn	20 32 49.9	+0.4
O28M	Mount Upton	6.32	77		Pn	20 32 50.8	+1.0
PS1A	Pavlof South-1	6.60	230		Pn	20 32 53.1	-0.2
BCPM	Bancas Point	6.62	84		Pn	20 32 55.1	+1.5
G23K	Bananza Creek	6.88	9		Pn	20 32 57.2	+0.1
I26K	Coal Creek Min	6.96	36		Pn	20 32 57.2	-0.9
DT1	Dutton Round H	7.04	230		Pn	20 32 58.9	-0.4
O29M	Mount Kennedy	7.12	81		Pn	20 33 01.9	+1.5
G24K	Hadweenzic Riv	7.17	17		Pn	20 33 00.2	-0.7
F20K	Avaraart Lake	7.23	351		Pn	20 33 02.1	+0.4
F19K	Shaleruckik Mo	7.24	344		Pn	20 33 02.4	+0.6
F21K	Alatna River	7.29	358		Pn	20 33 03.0	+0.4
M29M	Somme Creek	7.36	64		Pn	20 33 04.5	+0.8
G25K	Bearman Lake	7.46	21		Pn	20 33 03.6	-1.2
F22K	John River	7.58	2		Pn	20 33 07.1	+0.6
P29M	Windy Craggy	7.62	86		Pn	20 33 08.6	+1.5
L29M	L29M	7.69	60		Pn	20 33 08.8	+0.7
E19K	Redstone River	7.77	347		Pn	20 33 09.6	+0.6
N30M	Aishikik Lake	7.86	72		Pn	20 33 10.1	-0.3
I28M	Miner Creek	8.07	42		Pn	20 33 12.1	-1.1
H27K	Steamboat Moun	8.10	34		Pn	20 33 12.0	-1.5
M30M	Minto, Yukon	8.15	64		Pn	20 33 14.5	+0.3
E22K	Anaktuvuk Pass	8.21	3		Pn	20 33 15.8	+0.7
E23K	Chandalar	8.24	8		Pn	20 33 15.6	+0.1
F25K	Christian Rive	8.28	19		Pn	20 33 15.2	-0.9
PLBC	Pleasant Camp	8.33	86		Pn	20 33 18.2	+1.5
E24K	Your Creek	8.36	11		Pn	20 33 16.7	-0.3
E20K	Nigu River	8.45	351		Pn	20 33 19.5	+1.2
G27K	Doyon Strip	8.49	31		Pn	20 33 17.3	-1.5
E21K	Killik River	8.52	357		Pn	20 33 18.9	-0.4
F26K	Sheenjek River	8.64	23		Pn	20 33 19.9	-1.0
E25K	Arctic Village	8.77	18		Pn	20 33 21.6	-1.0
TOLK	Toolik Lake Re	8.82	8		Pn	20 33 23.5	+0.2
SKAG	Skagway	8.85	86	P	Pn	20 33 26.2	+2.5
D19K	Kuna River	8.86	347		Pn	20 33 23.9	+0.1
D20K	Etivluk River	8.93	351		Pn	20 33 24.7	0.0
D22K	Ayikyak River	8.95	0		Pn	20 33 25.3	+0.3
J30M	Hart River	8.95	52		Pn	20 33 26.4	+1.2
D23K	Nanushuk River	9.08	5		Pn	20 33 27.6	+0.8
F28M	Old Crow	9.55	31		Pn	20 33 32.1	-1.0
E27K	Coleen River	9.58	26		Pn	20 33 32.7	-0.8
SIT	Sitka	9.60	100	P	Pn	20 33 36.0	+2.2
JIS	Juneau Island	9.63	92	P	Pn	20 33 37.5	+3.4
B21K	Ikpikpuk River	9.72	356		Pn	20 33 34.6	-0.8
D25K	Kavik River	9.78	14		Pn	20 33 35.6	-0.7
C24K	Franklin Bluff	9.95	8		Pn	20 33 38.1	-0.3
C23K	Itkillik River	9.95	4		Pn	20 33 38.4	-0.1
DLBC	Dease Lake	11.77	88	P	Pn	20 34 05.1	+2.2
	comp=N,4.9nm,0.3s,baz=222,slow=10,SNR=31						
DLBC				S	Sn	20 36 09.2	-3.1
	comp=N,0.8nm,0.4s,baz=260,slow=21,SNR=1.5						
INK	Inuvik	11.81	37	P	Pn	20 34 03.3	0.0
	comp=N,2.6nm,0.7s,baz=233,slow=15,SNR=15						
INK	Inuvik	11.81	37		Pn	20 34 03.7	+0.4
YKA	Yellowknife Ar	18.38	66	P	P	20 35 25.7	+1.4
	comp=N,4.3nm,0.4s,baz=254,slow=11,SNR=98						
YKA	Yellowknife Ar	18.38	66		P	20 35 25.2	+0.9
SPITS	Spitsbergen Ar	41.94	3	P	P	20 38 57.5	+0.3
	comp=N,11nm,0.9s,baz=347,slow=5.9,SNR=2.0 comp=N,11nm,0.9s						
NRIK	Noril'sk	43.97	334	P	P	20 39 13.6	0.0
	comp=N,1.9nm,0.4s,baz=109,slow=7.0,SNR=5.4 comp=N,1.9nm,0.4s						
NRIK	Noril'sk	43.97	334	P	P	20 39 15.0	+1.4
NRIK				IAmb	IAmb	20 39 49.1	
	comp=Z,6.7nm,1.4s						
FVM	French Village	44.45	91	P	P	20 39 18.7	+0.8
FVM				IAmb	IAmb	20 40 01.2	
	comp=Z,8.8nm,1.3s						
SSPA	Standing Stone	48.69	78	P	P	20 39 50.3	-0.5
MJAR	Matsushiro Arr	48.87	274	P	P	20 39 52.2	-0.2
	comp=Z,1.5nm,0.8s,baz=48,slow=6.4,SNR=1.9 comp=Z,1.5nm,0.8s						
KSRS	Korea Array	53.27	283	P	P	20 40 25.2	+0.1
	comp=Z,2.5nm,0.8s,baz=47,slow=6.4,SNR=4.2 comp=Z,2.5nm,0.8s						
SONM	Songino Array	54.88	306	P	P	20 40 38.1	+1.3
	comp=Z,2.0nm,0.7s,baz=42,slow=7.1,SNR=15 comp=Z,2.0nm,0.7s						
SONM	Songino Array	54.88	306	IAmb	IAmb	20 40 38.5	
	comp=Z,1.8nm,0.8s						
ZAA0	Zalesovo Array	57.45	324	P	P	20 40 54.6	-0.2
ZAA0				IAmb	IAmb	20 40 55.9	
	comp=Z,1.8nm,0.7s						
ZALV	Zalesovo Beam	57.45	324	P	P	20 40 54.8	-0.1
	comp=Z,1.7nm,0.5s,baz=33,slow=7.0,SNR=10 comp=Z,1.7nm,0.5s						
KURK	Kurchatov	62.11	326	P	P	20 41 27.4	+0.6
BVAR	Borovoye Array	62.14	332	P	P	20 41 26.9	-0.1
	comp=Z,1.7nm,0.7s,baz=22,slow=6.3,SNR=8.0 comp=Z,1.7nm,0.7s						
KURBB	Kurchatov Arra	62.22	326	P	P	20 41 27.4	-0.1
	comp=Z,0.8nm,0.6s,baz=30,slow=6.6,SNR=6.0 comp=Z,0.8nm,0.6s						
MKAR	Makanchi Array	64.51	321	P	P	20 41 42.1	-0.6
	comp=Z,0.7nm,0.6s,baz=36,slow=6.7,SNR=7.7 comp=Z,0.7nm,0.6s						
MAKZ	Makanchi	64.60	322	P	P	20 41 42.4	-0.8
AB31	Akbulak array	67.93	338	P	P	20 42 03.4	-1.0
ABKAR	Akbulak array	67.93	338	P	P	20 42 03.7	-0.6

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*SOME **05** 20:48:43.1, 41°.72N×81°.80E, h10^{km}*

*IDC **05** 20:48:44.9±0.9, 41°.70N×81°.68E, h0^{km}, mb3.8/10, mbtmp3.7/17, ML3.0/7, Error ellipse: s-maj=15.3km s-min=13.5km az=57.0*

*NNC **05** 20:48:45.2±2.6, 41°.12N×81°.08E, h0^{km}, mb4.5, mpv4.2, Error ellipse: s-maj=21.5km s-min=12.4km az=148.0*

ISC 05 20:48:47.8±0.8**, 41°.74N**±0°.05×**81°.63E**±0°.04**, h17^{km}, n52, σ1^{s}95**/61**, mb3.8**/9**, 7C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	1.95	331	Pg	Pn	20 49 20.1	-0.1
	105nm,0.2s						
KTMS				Lg	Lg	20 49 46.8	
	155nm,0.4s						
KTMS	Ketmen	1.95	331	*e*P	Pn	20 49 20.1	-0.1
	105nm,0.2s						
KTMS				*e*S	Sb	20 49 46.8	-0.2
	155nm,0.4s						
SHLS	Shalkode	2.14	312	*e*P	Pn	20 49 21.9	-0.9
	234nm,0.3s						
SHLS				*e*S	Sn	20 49 50.0	+1.0
	907nm,0.4s						
PDGK	Podgornoye	2.24	316	⇑Pg	Pg	20 49 31.0	+0.2
	141nm,0.4s						
PDGK				⇓Lg	Lg	20 50 04.8	
	283nm,0.7s						
UZB	Uzynbulak	2.39	307	Lg	Lg	20 50 03.1	
	284nm,0.5s						
UZB	Uzynbulak	2.39	307	*e*P	Pb	20 49 29.4	-1.0
	100nm,0.5s						
UZB				*e*S	Sg	20 50 03.1	-1.4
	284nm,0.5s						
SATY	Saty	2.73	300	Lg	Lg	20 50 13.5	
	172nm,0.1s						
KPKS	Kokpek	2.77	309	Lg	Lg	20 50 14.1	
	398nm,0.3s						
KURS	Kuram	3.09	305	Pg	Pb	20 49 41.3	-1.0
	49nm,0.5s						
KURS				Lg	Lg	20 50 23.0	
	34nm,0.3s						
BLB	Baldybastay	3.30	317	Pg	Pb	20 49 45.0	-0.9
	32nm,0.3s						
BLB				Lg	Lg	20 50 30.0	
	71nm,0.3s						
KOTS	Kotyrbulak	3.66	296	Pg	Pb	20 49 51.1	-0.9
	60nm,0.5s						
KOTS				Lg	Lg	20 50 41.6	
	248nm,0.7s						
KOTS	Kotyrbulak	3.66	296	*e*P	Pb	20 49 52.2	+0.2
	61nm,0.5s						
KOTS				*e*S	Sg	20 50 42.1	-3.2
	156nm,0.5s						
MDOK	Medeo	3.68	294	Pg	Pb	20 49 51.9	-0.4
	17nm,0.4s						
TNSS	Tian-Shan	3.70	292	Pg	Pb	20 49 53.2	+0.3
	8.4nm,0.7s						
TNSS				Lg	Lg	20 50 43.4	
	13nm,1.0s						
TNSS	Tian-Shan	3.70	292	*e*P	Pb	20 49 53.2	+0.3
	8.4nm,0.7s						
TNSS				*e*S	Sg	20 50 43.4	-3.3
	13nm,1.0s						
ARXS	Arharly	3.73	313	Pg	Pb	20 49 53.0	-0.2
	16nm,0.2s						
ARXS	Arharly	3.73	313	*e*P	Pb	20 49 53.0	-0.2
	16nm,0.2s						
ARXS				*e*S	Sb	20 50 43.1	+5.0
	125nm,0.5s						
KNDC	Almaty	3.75	295	⇑Pg	Pb	20 49 52.1	-1.5
	89nm,0.7s						
KNDC				⇑Lg	Lg	20 50 43.6	
	221nm,1.1s						
KAPS	Kapalarasan	3.91	336	Pg	Pb	20 49 56.0	-0.3
	66nm,0.2s						
KAPS				Lg	Lg	20 50 50.4	
	86nm,0.1s						
TDK	Taldyqorghan	4.02	325	Lg	Lg	20 50 51.3	
	257nm,0.6s						
TDK	Taldyqorghan	4.02	325	*e*P	Pb	20 49 58.6	+0.5
	87nm,0.5s						
TDK				*e*S	Sg	20 50 52.7	-4.0
	158nm,0.6s						
MTBS	Maitube	4.09	292	Pg	Pb	20 49 58.7	-0.7
	15nm,0.3s						
MTBS				Lg	Lg	20 50 52.7	
	30nm,0.4s						
MTBS	Maitube	4.09	292	*e*P	Pb	20 50 00.5	+1.1
	13nm,0.5s						
MTBS				*e*S	Sg	20 50 56.3	-2.8
	48nm,0.5s						
KST	Kastek	4.39	289	Pg	Pb	20 50 05.1	+0.5
	39nm,0.9s						
KST				Lg	Lg	20 51 03.5	
	65nm,0.7s						
KST	Kastek	4.39	289	*e*P	Pb	20 50 06.1	+1.6
	22nm,0.6s						
KST				*e*S	Sg	20 51 05.6	-3.2
	62nm,0.6s						
DGS	Degeres	4.58	291	Pg	Pb	20 50 08.0	+0.2
	33nm,0.4s						

DGS				Lg	Lg	20 51 08.6	
	32nm,0.5s						
KRBS	Karabastau	4.80	296	Lg	Lg	20 51 15.0	
	11nm,0.5s						
MAKZ	Makanchi	5.07	3	⇓Pn	Pb	20 50 10.6	-5.4
	9.9nm,0.5s						
MAKZ				⇑Sn	Sb	20 51 20.3	+3.6
	35nm,0.8s						
MKAR	Makanchi Array	5.07	5	Pn	Pn	20 50 05.4	+2.4
	2.3nm,0.3s,baz=187,slow=14,SNR=66						
MKAR				Sn	Sn	20 51 03.9	+2.7
	3.9nm,0.3s,baz=186,slow=25,SNR=5.1						
MKAR				Lg	Lg	20 51 28.1	
	11nm,0.3s,baz=184,slow=31,SNR=11						
	3.8nm,0.4s						
MK31	Makanchi Array	5.07	5	Pn	Pb	20 50 11.1	-5.0
	1.8nm,0.3s,baz=191,slow=13,SNR=163						
MK31				⇑Sn	Sb	20 51 19.8	+3.1
	21nm,0.4s,baz=185,slow=25						
AAK	Ala-Archa	5.38	282	Pn	Pn	20 50 09.7	+2.3
	0.4nm,0.3s,baz=99,slow=7.7,SNR=7.3						
AAK				Pg	Pb	20 50 23.5	+2.1
	0.7nm,0.3s,baz=114,slow=12,SNR=7.2						
AAK				Sn	Sn	20 51 09.8	+0.9
	0.3nm,0.3s,baz=56,slow=20,SNR=0.9						
AAK				Lg	Lg	20 51 37.8	
	1.6nm,0.3s,baz=264,slow=20,SNR=3.8						
	1.3nm,0.3s						
AAK	Ala-Archa	5.38	282	⇓Pn	Pn	20 50 03.8	-3.6
	4.7nm,1.3s						
AAK				⇑Pg	Pb	20 50 19.0	-2.3
	43nm,1.2s						
AAK				⇓Lg	Lg	20 51 29.2	
	32nm,0.8s						
ZSN	Zaisan	6.16	21	*e*P	Pb	20 50 37.5	+3.0
	3.2nm,0.3s						
ZSN				*e*S	Sg	20 51 59.3	-5.9
	28nm,0.5s						
KK31	Karatay Array	8.34	283	Pg	Pb	20 51 14.4	+2.8
	3.1nm,0.6s,baz=91,slow=15,SNR=16						
KK31				⇑Lg	Lg	20 53 05.0	
	9.2nm,0.8s,baz=102,slow=28						
KURBB	Kurchatov Arra	9.14	347	Pn	Pn	20 50 59.4	+0.7
	0.1nm,0.3s,baz=174,slow=12,SNR=5.1						
KURBB				Sn	Sn	20 52 42.6	+1.5
	0.1nm,0.3s,baz=178,slow=28,SNR=2.3						
KURBB				Lg	Lg	20 53 32.9	
	0.2nm,0.3s,baz=36,slow=12,SNR=4.0						
	0.2nm,0.3s						
KURBB	Kurchatov Arra	9.14	347	⇓P	Pn	20 51 06.3	+7.5
	3.9nm,0.6s						
KURK	Kurchatov	9.21	348	⇓P	Pn	20 51 07.1	+7.3
	2.4nm,0.7s						
ZALV	Zalesovo Beam	12.40	9	Pn	Pn	20 51 41.4	-1.9
	0.2nm,0.3s,baz=210,slow=12,SNR=4.0						
ZALV				Sn	Sn	20 54 01.0	+0.1
	0.1nm,0.3s,baz=210,slow=13,SNR=1.2						
ZALV				Lg	Lg	20 55 20.1	
	0.1nm,0.3s,baz=197,slow=24,SNR=2.5						
	0.6nm,0.5s						
BVAR	Borovoye Array	13.60	330	Pn	Pn	20 51 58.7	-1.0
	baz=148,slow=14,SNR=2.4						
BVAR				Lg	Lg	20 56 00.5	
	baz=142,slow=31,SNR=4.3						
	0.3nm,0.4s						
AKTO	Aktyubinsk	18.48	306	P	Pn	20 53 02.9	0.0
	0.2nm,0.3s,baz=125,slow=11,SNR=3.6						
	1.5nm,0.6s						
SONM	Songino Array	18.56	62	P	Pn	20 53 02.9	-1.1
	0.1nm,0.3s,baz=249,slow=12,SNR=5.3						
	0.7nm,0.8s						
ARTI	Arti	20.99	322	P	P	20 53 30.2	+0.2
	5.4nm,0.8s,baz=138,slow=6.9,SNR=8.7						
	5.4nm,0.8s						
BRTR	Keskin Array B	36.05	283	P	P	20 55 49.2	+0.8
	0.8nm,0.6s,baz=107,slow=8.0,SNR=5.6						
	0.8nm,0.6s						
FINES	FINESS Array B	38.27	320	P	P	20 56 07.2	+0.5
	4.2nm,1.0s,baz=100,slow=7.6,SNR=1.7						
	4.2nm,1.0s						
ARCES	ARCESS Array B	39.86	333	P	P	20 56 20.1	+0.1
	4.3nm,1.0s,baz=92,slow=8.4,SNR=6.5						
	4.3nm,1.0s						
HFS	Hagfors	44.36	318	P	P	20 56 56.5	-0.3
	5.8nm,1.0s,baz=81,slow=11,SNR=7.5						
	5.8nm,1.0s						
NB2	NORSAR Subarra	45.45	320	P	P	20 57 05.4	-0.1
	comp=Z,0.4nm,0.4s,baz=82,slow=7.9						
NOA	NORSAR Array B	45.45	320	P	P	20 57 05.1	-0.4
	comp=Z,0.8nm,0.6s,baz=80,slow=8.1,SNR=2.3						
	comp=Z,0.8nm,0.6s						
ILAR	Eielson Array	67.24	20	P	P	20 59 40.3	-0.4
	comp=Z,0.3nm,0.7s,baz=322,slow=5.1,SNR=5.7						
	comp=Z,0.3nm,0.7s						
YKA	Yellowknife Ar	75.29	8	P	P	21 00 29.7	+0.3
	comp=Z,0.2nm,0.7s,baz=335,slow=6.2,SNR=2.7						
	comp=Z,0.2nm,0.7s						
WRA	Warramunga Arr	78.37	130	P	P	21 00 47.5	+0.2
	comp=Z,0.5nm,0.8s,baz=327,slow=5.3,SNR=4.9						
	comp=Z,0.5nm,0.8s						
ASAR	Alice Springs	81.08	133	P	P	21 01 01.6	-0.4
	comp=Z,0.4nm,0.8s,baz=327,slow=2.1,SNR=4.3						
	comp=Z,0.4nm,0.8s						

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*MOS **05** 20:59:24.4±1.2, 43°.23N×148°.04E, h13^{km}, mb4.4/8, Error ellipse: s-maj=12.7km s-min=8.1km az=42.5*

*NEIC **05** 20:59:26.9±2.1, 43°.21N±0°.09×148°.0E±0°.1, h10^{km}±1^{km}, mb4.2/41, Error ellipse: s-maj=16.4km s-min=14.9km az=129.0*

*NIED **05** 20:59:28.0, 43°.32N×147°.75E, h15^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$3.35; M$_{\theta\theta}$0.25; M$_{\phi\phi}$-3.60; M$_{r\theta}$2.57; M$_{\theta\phi}$-3.19; M$_{\phi r}$2.13; Fault plane solution: M$_{0}$5.61000×10^{14} NP1: φ$_{s}$183.00000°, δ32.00000°, λ49.00000°. NP2: φ$_{s}$49.00000°, δ66.00000°, λ113.00000°.*

*SKHL **05** 20:59:28.1±0.1, 43°.20N×148°.10E, h44^{km}±7^{km}, mb4.8/3*

*JMA **05** 20:59:28.0±0.4, 43°N±1°×14°8E±°, h15^{km}, MV3.6/27, E OFF HOKKAIDO*

*IDC **05** 20:59:32.5±3.8, 43°.27N×147°.84E, h59^{km}±31^{km}, mb3.6/14, mbtmp3.9/16, ML3.1/2, MS3.2/3, Error ellipse: s-maj=25.3km s-min=24.3km az=41.0*

ISC 05 20:59:30.3±2.0, **43°.20N**±0°.07×**147°.91E**±0°.09, **h41**^{km}±16^{km}, **n106**, σ**1^{s}.28**/105, **mb4.2**/36, **MS3.2**/3, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	1.03	311	*e*S	Sn	21 00 07.9	+6.5
SHO				*e*P	Pn	20 59 53.8	+5.6
SHO				AMB	AMB	20 59 55.3	
	1μm,0.5s						
SHO				A	A	21 00 08.9	
	4μm,0.5s						
SHO				A	A	21 00 08.9	
	3μm,0.5s						
NEM2	Nemuro 2	1.59	277	*e*P	Pn	20 59 54.2	-1.7
NEM2				*e*S	Sn	21 00 13.0	-2.1
NMR	Nemuro--Hokkai	1.60	277	*e*PN	Pn	20 59 54.2	-1.8
NMR				*e*S	Sn	21 00 13.6	-1.8
NMR	Nemuro--Hokkai	1.60	277	*e*S	Sn	21 00 13.9	-1.5
NMR				*e*P	Pn	20 59 54.3	-1.8
YUK	Yuzh-Kuril'sk	1.70	300	PN	Pn	20 59 55.8	-1.7
YUK				*e*S	Sn	21 00 16.9	-1.1
YUK				pmax	pmax		
	comp=Z,409nm,0.3s						
YUK				pmax	pmax		
	comp=N,210nm,0.2s						
YUK				pmax	pmax		
	comp=E,126nm,0.2s						
YUK				smax	smax		
	comp=N,535nm,0.3s						
YUK				smax	smax		
	comp=E,1μm,0.5s						
YUK	Yuzh-Kuril'sk	1.70	300	*e*S	Sn	21 00 16.0	-2.0
YUK				*e*P	Pn	20 59 55.4	-2.1
YUK				AMB	AMB	20 59 56.7	
	comp=E,390nm,0.3s						
YUK				A	A	21 00 23.5	
	comp=E,2μm,0.5s						
YUK				A	A	21 00 23.5	
	comp=E,2μm,0.5s						
GLVR	Golovnino	1.82	288	PN	Pn	20 59 57.5	-1.5
GLVR				*e*S	Sn	21 00 19.7	-1.1
GLVR	Golovnino	1.82	288	*e*S	Sn	21 00 19.7	-1.1
GLVR				*e*P	Pn	20 59 57.5	-1.5
JKHN	Kushirohamanak	2.01	268	*e*P	Pn	21 00 01.0	-0.7
JKHN				*e*S	Sn	21 00 24.5	-1.1
KUR	Kuril'sk	2.03	359	*e*PN	Pn	20 59 59.3	-2.7
KUR				*e*S	Sn	21 00 26.3	+0.2
KUR				smax	smax		
	comp=E,297nm,0.4s						
KUR				smax	smax		
	comp=N,277nm,0.3s						
KUR	Kuril'sk	2.03	359	*e*S	Sn	21 00 21.4	-4.7
KUR				*e*P	Pn	20 59 58.9	-3.1
KUR				AMB	AMB	20 59 59.9	
	comp=N,190nm,0.5s						
KUR				A	A	21 00 27.7	
	comp=N,280nm,0.4s						
KUR				A	A	21 00 27.7	
	comp=N,320nm,0.4s						
RUSJ	Misakicho	2.13	296	*e*PN	Pn	21 00 02.4	-0.9
RUSJ				*e*S	Sn	21 00 27.5	-1.0
JRA	Rausu	2.15	291	*e*P	Pn	21 00 02.2	-1.4
JRA				*e*S	Sn	21 00 27.7	-1.4
JNSB	Nemuroshibetsu	2.19	286	*e*P	Pn	21 00 02.9	-1.2
AKK	Akkeshi	2.25	266	*e*P	Pn	21 00 04.4	-0.6
JNK	Nakash	2.35	280	*e*P	Pn	21 00 05.1	-1.3
JNK				*e*S	Sn	21 00 32.6	-1.5
JAK	Akkeshi	2.36	266	*e*P	Pn	21 00 05.4	-1.1
JAK				*e*S	Sn	21 00 32.7	-1.5
JTKR	Abashiri--Toko	3.00	286	*e*P	Pn	21 00 14.8	-0.5
JAR	Ashorobuto	3.02	273	*e*P	Pn	21 00 15.1	-0.6
JAR				*e*S	Sn	21 00 50.1	-0.4
JCH	Churui	3.39	262	*e*P	Pn	21 00 20.6	0.0
JCH				*e*S	Sn	21 00 58.9	-0.7
JMP	Maruseppu	3.40	285	*e*P	Pn	21 00 20.7	-0.1
ERM	Erimo	3.70	253	Pn	Pn	21 00 26.0	+1.1
ERM	Erimo	3.70	253	PN	Pn	21 00 26.0	+1.1
JEM	Erimo	3.70	253	*e*P	Pn	21 00 26.0	+1.1
JNBK	Urakawa-nobuka	3.91	258	*e*P	Pn	21 00 27.9	+0.2
JKA	Kamikawa-asahi	3.96	285		Pn	21 00 29.7	+1.3
JKA					Sn	21 01 15.5	+1.9
ASAJ	Asahikawa	3.96	285	P	Pn	21 00 29.7	+1.3
	comp=N,2.2nm,0.3s,baz=82,slow=11,SNR=6.6						
ASAJ				S	Sn	21 01 15.5	+1.9
	comp=N,9.1nm,0.5s,baz=290,slow=33,SNR=1.0						
	comp=N,7.2nm,0.4s						
YSS	Yuzhno-Sakhali	5.23	318	Pn	Pn	21 00 47.0	+1.1
YSS	Yuzhno-Sakhali	5.23	318	*e*PN	Pn	21 00 45.8	-0.1
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS	Yuzhno-Sakhali	5.23	318	*e*P	Pn	21 00 45.8	-0.1
JTM	Tenmabayashi	5.64	247	Pn	Pn	21 00 51.0	-0.5
MJAR	Matsushiro Arr	9.98	231	P	Pn	21 01 51.6	+0.4
	baz=27,slow=13,SNR=5.7						
	comp=Z,1.0nm,0.8s						
H11N2	WAKE ISLAND Hy	28.33	140	T	T	21 36 27.8	
	baz=323						
H11N1	WAKE ISLAND Hy	28.34	140	T	T	21 36 17.2	
	baz=323						
H11N3	WAKE ISLAND Hy	28.34	140	T	T	21 36 34.9	
	baz=323						
SONM	Songino Array	29.19	294	P	P	21 05 27.7	-0.2
	comp=Z,1.4nm,0.6s,baz=81,slow=8.2,SNR=9.1						
SONM				LR	LR	21 18 45.1	
	comp=Z,43nm,18.4s,baz=334,slow=40						
	comp=Z,1.4nm,0.6s						
SONM	Songino Array	29.19	294	P	P	21 05 27.7	-0.2
SONM				pmax	pmax		
	comp=Z,2.0nm,1.3s						
LZDM	Lanzhou Array	34.51	273	P	P	21 06 15.8	+0.9
	comp=Z,0.8nm,0.3s,baz=90,slow=8.6,SNR=1.4						
	comp=Z,0.8nm,0.3s						
H18K	Honhosa River	36.77	35	P	P	21 06 34.1	+0.5
G18K	Tagagawik	36.79	33	P	P	21 06 34.2	+0.5
C19K	Lookout Ridge	37.21	28	P	P	21 06 37.2	-0.1
C19K				IAmb	IAmb	21 06 59.5	
	comp=Z,7.8nm,1.5s						
F19K	Shaleruckik Mo	37.33	32	P	P	21 06 40.1	+2.0
D19K	Kuna River	37.57	29	P	P	21 06 39.8	-0.5
D19K				IAmb	IAmb	21 07 07.5	
	comp=Z,8.9nm,1.4s						
H19K	Roundabout Mou	37.63	34	P	P	21 06 39.0	-1.7
H19K				IAmb	IAmb	21 07 07.3	
	comp=Z,6.1nm,1.1s						
E19K	Redstone River	37.66	31	P	P	21 06 40.2	-0.8
E19K				IAmb	IAmb	21 06 46.4	
	comp=Z,4.4nm,1.2s						
D20K	Etivluk River	38.16	29	P	P	21 06 45.9	+0.7
D20K				IAmb	IAmb	21 06 58.2	
	comp=Z,2.6nm,0.8s						
B20K	Meade River	38.28	27	P	P	21 06 46.9	+0.7
B20K				IAmb	IAmb	21 07 19.2	
	comp=Z,9.2nm,1.4s						
IMAR	Indian Mountai	38.79	34	P	P	21 06 51.3	+0.7
G21K	Allakaket	38.95	33	P	P	21 06 51.8	-0.1
B21K	Ikpikpuk River	39.05	28	P	P	21 06 53.3	+0.7
B21K				IAmb	IAmb	21 07 06.0	
	comp=Z,2.8nm,0.7s						
D22K	Ayikyak River	39.59	29	P	P	21 06 57.7	+0.5
D22K				IAmb	IAmb	21 07 16.1	
	comp=Z,7.8nm,1.4s						
B22K	Teshekpuk Lake	39.60	27	P	P	21 06 57.4	+0.2
E22K	Anaktuvuk Pass	39.80	31	P	P	21 06 59.6	+0.6
C23K	Itkillik River	40.46	28	P	P	21 07 04.4	+0.1
E23K	Chandalar	40.62	31	P	P	21 07 06.6	+0.8
E23K				IAmb	IAmb	21 07 47.9	
	comp=Z,5.8nm,1.4s						
E24K	Your Creek	41.04	31	P	P	21 07 10.2	+0.9
E24K				IAmb	IAmb	21 07 28.7	
	comp=Z,7.6nm,1.5s						
G24K	Hadweenzic Riv	41.37	33	P	P	21 07 12.7	+0.9
ILAR	Eielson Array	41.61	36	P	P	21 07 15.0	+1.1
	comp=Z,0.2nm,0.6s,baz=263,slow=7.0,SNR=6.2						
	comp=Z,0.2nm,0.6s						
ZALV	Zalesovo Beam	41.77	308	P	P	21 07 15.0	-0.3
	comp=Z,0.4nm,0.4s,baz=90,slow=7.2,SNR=2.7						
	comp=Z,0.4nm,0.4s						
ZALV	Zalesovo Beam	41.77	308	P	P	21 07 15.0	-0.3
D25K	Kavik River	41.89	29	P	P	21 07 16.6	+0.5
D25K				IAmb	IAmb	21 07 47.0	
	comp=Z,5.5nm,1.4s						
FID	Port Fidalgo	42.06	42	P	P	21 07 16.8	-0.8
KLU	Klutina	42.25	41	P	P	21 07 20.7	+1.5
KLU				IAmb	IAmb	21 08 04.8	
	comp=Z,7.1nm,1.1s						
F26K	Sheenjek River	42.67	31	P	P	21 07 23.1	+0.6
C27K	Jago River	42.84	29	P	P	21 07 25.0	+1.1
BCAR	Beaver Creek A	43.99	38	P	P	21 07 31.6	-1.6
MKAR	Makanchi Array	45.33	298	P	P	21 07 44.2	+0.1
	comp=Z,0.7nm,0.5s,baz=76,slow=9.1,SNR=12						
	comp=Z,0.7nm,0.5s						
MAKZ	Makanchi	45.52	298	P	P	21 07 45.7	0.0
MAKZ	Makanchi	45.52	298	P	P	21 07 45.7	0.0
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
G30M	tAoh Zraii Nji	45.78	32	P	P	21 07 48.0	+0.6
G30M				IAmb	IAmb	21 08 09.2	
	comp=Z,2.5nm,1.0s						
F30M	Barrier River	45.86	31	P	P	21 07 49.2	+1.2
F30M				IAmb	IAmb	21 08 32.6	
	comp=Z,3.2nm,1.1s						
I30M	Mount Dempster	46.00	35	P	P	21 07 49.2	-0.1
I30M				IAmb	IAmb	21 08 04.1	
	comp=Z,2.4nm,0.8s						
KURK	Kurchatov	46.29	305	P	P	21 07 51.1	-0.4
KURK				IAmb	IAmb	21 07 52.3	
	comp=Z,2.1nm,0.6s						
KURK	Kurchatov	46.29	305	P	P	21 07 51.9	+0.3
KURK	Kurchatov	46.29	305	*e*P	P	21 07 51.9	+0.3
KURBB	Kurchatov Arra	46.38	305	P	P	21 07 51.9	-0.4
	comp=Z,1.7nm,0.6s,baz=76,slow=8.7,SNR=17						
	comp=Z,1.7nm,0.6s						
G31M	Satah River	46.55	32	P	P	21 07 54.2	+0.8
INK	Inuvik	46.60	30	P	P	21 07 55.3	+1.6
INK				IAmb	IAmb	21 08 05.4	
	comp=Z,3.4nm,1.4s						
INK	Inuvik	46.60	30	P	P	21 07 55.3	+1.6
INK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
WUS	Wushi	49.60	293	P	P	21 08 18.0	+0.5
C36M	Paulatuk	49.71	28	P	P	21 08 20.1	+2.4
BVAR	Borovoye Array	50.28	310	P	P	21 08 21.7	-0.6
	comp=Z,0.4nm,0.5s,baz=88,slow=9.3,SNR=5.5						
	comp=Z,0.4nm,0.5s						
KDJ	Kajisay	50.55	295	P	P	21 08 25.9	+1.2
KDJ				IAmb	IAmb	21 09 01.7	
	comp=Z,3.3nm,1.0s						
KDJ	Kajisay	50.55	295	P	P	21 08 25.9	+1.2
KDJ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BOOM	Boomskoye usch	51.21	296	P	P	21 08 30.6	+0.9
BOOM				IAmb	IAmb	21 09 04.4	
	comp=Z,6.4nm,1.4s						
BOOM	Boomskoye usch	51.21	296	P	P	21 08 30.6	+0.9
BOOM				pmax	pmax		
	comp=Z,6.0nm,1.4s						
ARSB	Arslanbob	53.70	296	P	P	21 08 49.0	+0.9
ARSB	Arslanbob	53.70	296	P	P	21 08 49.0	+0.9
ARSB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KK31	Karatay Array	54.46	299	P	P	21 08 52.0	-1.4
KK31				IAmb	IAmb	21 08 54.4	
	comp=Z,1.7nm,0.8s						
KK31	Karatay Array	54.46	299	P	P	21 08 52.0	-1.4
KK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KKAR	Karatay Array	54.46	299	P	P	21 08 52.3	-1.2
KKAR	Karatay Array	54.46	299	P	P	21 08 52.3	-1.2
AB31	Akbulak array	57.84	309	P	P	21 09 17.2	-0.2
SHAA	Shahritus	58.86	294		P	21 09 25.1	+0.3
SHAA				IAmb	IAmb	21 09 30.2	
	comp=Z,7.1nm,1.1s						
ARCES	ARCESS Array B	59.95	340	P	P	21 09 30.6	-1.2
	comp=Z,2.2nm,0.8s,baz=11,slow=2.5,SNR=4.3						
	comp=Z,2.2nm,0.8s						
WRA	Warramunga Arr	64.06	194	P	P	21 10 00.7	+0.8
	comp=Z,0.4nm,0.8s,baz=330,slow=6.5,SNR=1.6						
	comp=Z,0.4nm,0.8s						
FITZ	Fitzroy Crossi	64.34	204	LR	LR	21 40 44.7	
	comp=Z,15nm,18.4s,baz=13,slow=38						
FINES	FINESS Array B	65.61	333	P	P	21 10 08.6	-0.9
	comp=Z,2.4nm,0.7s,baz=38,slow=9.6,SNR=6.3						
	comp=Z,2.4nm,0.7s						
NB2	NORSAR Subarra	70.31	339	P	P	21 10 39.0	-0.2
	comp=Z,0.6nm,0.5s,baz=31,slow=6.5						
NOA	NORSAR Array B	70.31	339	P	P	21 10 38.9	-0.2
	comp=Z,1.5nm,0.8s,baz=32,slow=6.7,SNR=4.1						
	comp=Z,1.5nm,0.8s						
HFS	Hagfors	70.41	338	P	P	21 10 39.1	-0.6
	comp=Z,1.4nm,0.5s,baz=52,slow=8.5,SNR=9.6						
	comp=Z,1.4nm,0.5s						
KBZ	Khabaz	70.58	312	P	P	21 10 41.5	+0.6
	comp=Z,1.5nm,0.7s,baz=352,slow=2.1,SNR=6.2						
	comp=Z,1.5nm,0.7s						
AKASG	Malin Array Be	72.35	324	P	P	21 10 50.6	-0.9
	comp=Z,0.5nm,0.3s,baz=40,slow=6.4,SNR=3.0						
	comp=Z,0.5nm,0.3s						
AKASG	Malin Array Be	72.35	324	IAmb	IAmb	21 11 19.4	
	comp=Z,2.9nm,1.1s						
AKASG	Malin Array Be	72.35	324	P	P	21 10 50.6	-0.9
AKASG				pmax	pmax		
	comp=Z,3.0nm,1.2s						
NWAO	Narrogin (SRO)	80.80	206	LR	LR	21 51 35.3	
	comp=Z,11nm,18.5s,baz=230,slow=39						

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*IDC **05** 21:11:42.0±1.4, 56°.70N×149°.53W, h0^{km}, mb4.0/10, mbtmp4.0/14, ML3.9/4, MS3.2/3, Error ellipse: s-maj=32.0km s-min=19.3km az=10.0*

*NEIC **05** 21:11:44.3±1.4, 56°.92N±0°.05×149°.63W±0°.05, h10^{km}±2^{km}, mb4.1/10, ML4.0/120, ML3.9(AEIC), Error ellipse: s-maj=9.9km s-min=3.0km az=154.0*

*AEIC **05** 21:11:49.7±1.5, 56°.99N±0°.06×149°.56W±0°.09, h11^{km}±7^{km}, Error ellipse: s-maj=9.3km s-min=6.5km az=156.0*

ISC 05 21:11:44.2±0.5, **56°.96N**±0°.06×**149°.61W**±0°.04, **h10**^{km}, **n315**, σ**1^{s}.10**/321, **mb4.1**/11, **Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAK	Kodiak Island	1.81	298	Pn	Pn	21 12 15.9	+0.5
	60nm,0.3s,baz=64,slow=2.1,SNR=2631						
KDAK				Sn	Sn	21 12 36.5	-1.8
	107nm,0.3s,baz=274,slow=1.5,SNR=11						
KDAK				LR	LR	21 13 12.2	
	comp=Z,91nm,18.3s,baz=332,slow=46						
KDAK	Kodiak Island	1.81	298		Pn	21 12 15.9	+0.5
KDAK	Kodiak Island	1.81	298		Sn	21 12 36.9	-1.4
OHAK	Old Harbor	2.03	279		Pn	21 12 18.4	+0.1
OHAK				IAML		21 12 42.3	
	comp=E,1μm,0.7s						
OHAK				IAML		21 12 42.5	
	comp=N,2μm,0.6s						
OHAK	Old Harbor	2.03	279		Sn	21 12 41.2	-2.4
OHAK					Sb	21 12 41.5	-4.8
OHAK	Old Harbor	2.03	279	P	Pn	21 12 18.3	0.0
SYI	Shuyak Island	2.23	319		Pn	21 12 21.6	+0.6
SYI					Sn	21 12 47.3	-1.3
SYI				IAML		21 12 48.7	
	comp=N,672nm,0.4s						
SYI				IAML		21 12 49.7	
	comp=E,973nm,0.6s						
SII	Sitkinak Islan	2.55	263		Pn	21 12 25.4	-0.2
SII					Sn	21 12 54.3	-2.4
SII				IAML		21 12 56.7	
	comp=N,1μm,0.8s						
SII				IAML		21 12 57.3	
	comp=E,775nm,0.6s						
SII	Sitkinak Islan	2.55	263	P	Pn	21 12 25.6	0.0
R18K	Karluk	2.70	285	Pn	Pn	21 12 28.1	+0.5
R18K				Sn	Sn	21 12 58.7	-1.6
CNPM	China Poot	2.71	342		Pn	21 12 27.9	+0.1
BRSE	Bradley Lake S	2.85	348		Pn	21 12 29.5	-0.2
BRSE					Sn	21 13 01.6	-2.5
BRLK	Bradley Lake	2.89	347		Pn	21 12 30.0	-0.2
HOM	Homer	2.91	339		Pn	21 12 31.2	+0.8
HOM					Sn	21 13 05.7	+0.2
Q19K	Cape Douglas,	2.92	314		Pn	21 12 31.9	+1.2
MID	Middleton Isla	3.02	34		Pn	21 12 31.8	-0.1
AUI	Augustine Isla	3.12	321		Pn	21 12 34.5	+1.1
AUJK	Augustine Jueg	3.13	321		Pn	21 12 34.6	+1.1
AUCH	Augustine Cone	3.15	321		Pn	21 12 35.0	+1.1
SEW	Seward	3.15	1		Pn	21 12 33.3	-0.4
AUW	Augustine West	3.17	321		Pn	21 12 35.2	+1.2
P23K	Montague Islan	3.26	20		Pn	21 12 35.1	-0.1
P23K				IAML		21 13 13.2	
	comp=E,377nm,0.4s						
P23K				IAML		21 13 13.6	
	comp=N,387nm,0.4s						
CAHL	Cahill	3.26	292		Pn	21 12 36.7	+1.3
P19K	Oil Pt	3.31	326		Pn	21 12 36.7	+0.7
KABU	Katmai Buttres	3.32	296		Pn	21 12 38.3	+2.0
ACHA	Angle Creek He	3.32	294		Pn	21 12 37.7	+1.4
ANCK	Angle Creek	3.40	294		Pn	21 12 39.1	+1.8
O22K	Cooper Landing	3.53	359		Pn	21 12 38.6	-0.4
CHIR	Chirikof Islan	3.54	254		Pn	21 12 38.9	-0.2
CHIR				IAML		21 13 18.1	
	comp=E,240nm,0.6s						
CHIR					Sn	21 13 18.4	-2.5
CHIR	Chirikof Islan	3.54	254	P	Pn	21 12 39.0	-0.1
ILSW	Iliamna Southw	3.55	330		Pn	21 12 39.5	+0.1
ILSW				IAML		21 13 24.4	
	comp=E,366nm,0.5s						
ILSW				IAML		21 13 25.0	
	comp=N,262nm,0.6s						
SLKM	Skilak Lake	3.57	355		Pn	21 12 39.2	-0.4
SLKM				IAML		21 13 20.9	
	comp=E,437nm,0.3s						
CNTC	Contact Creek	3.62	294		Pn	21 12 41.7	+1.3
PLK4	Peulik 4	3.73	283		Pn	21 12 42.7	+0.9
HIN	Hinchinbrook I	3.81	24		Pn	21 12 43.1	+0.3
HIN				IAML		21 13 26.7	
	comp=N,241nm,0.4s						
HIN				IAML		21 13 27.4	
	comp=E,190nm,0.8s						
RED	Redoubt Volcan	3.84	336		Pn	21 12 43.0	-0.4
RED				IAML		21 13 29.2	
	comp=N,254nm,0.7s						
RED				IAML		21 13 31.2	
	comp=E,226nm,0.7s						
P18K	Big Mountain,	3.85	312		Pn	21 12 43.5	+0.1
PLK1	Peulik 1	3.88	285		Pn	21 12 44.6	+0.8
PWL	Port Wells	3.96	9		Pn	21 12 44.7	-0.3
PWL				IAML		21 13 28.3	
	comp=N,204nm,0.4s						
PWL				IAML		21 13 28.6	
	comp=E,282nm,0.6s						
PLBL	Peulik Blue Cr	3.98	284		Pn	21 12 46.5	+1.3
RDJH	Redoubt Jeurge	4.00	337		Pn	21 12 45.2	-0.4
KAIM	Kayak Island	4.03	40		Pn	21 12 46.6	+0.7
KAIM				IAML		21 13 33.8	
	comp=N,291nm,0.6s						
O19K	Port Alsworth	4.07	325		Pn	21 12 47.4	+0.9
EYAK	Cordova Ski Ar	4.12	28		Pn	21 12 47.4	+0.4

EYAK				IAML		21 13 34.2	
	comp=E,171nm,0.6s						
EYAK				IAML		21 13 35.0	
	comp=N,150nm,0.5s						
EYAK	**Cordova Ski Ar**	**4.12**	**28**	P	**Pn**	**21 12 47.3**	**+0.2**
FID	**Port Fidalgo**	**4.13**	**22**		**Pn**	**21 12 47.1**	**-0.2**
FID				IAML		21 13 32.5	
	comp=E,142nm,0.5s						
O18K	**Koktuh Hills**	**4.13**	**317**		**Pn**	**21 12 47.7**	**+0.4**
O18K				IAML		21 13 40.5	
	comp=N,166nm,0.7s						
O18K				IAML		21 13 48.6	
	comp=E,135nm,0.7s						
GLI	**Glacier Island**	**4.14**	**17**		**Pn**	**21 12 47.4**	**0.0**
GLI				IAML		21 13 33.8	
	comp=N,186nm,0.7s						
GLI				IAML		21 13 35.1	
	comp=E,137nm,0.6s						
RC01	**Rabbit Creek A**	**4.14**	**359**		**Pn**	**21 12 47.5**	**+0.1**
RC01				IAML		21 13 34.0	
	comp=N,167nm,0.4s						
RC01				IAML		21 13 34.2	
	comp=E,245nm,0.4s						
P17K	**Kvichak River**	**4.26**	**305**		**Pn**	**21 12 50.1**	**+1.1**
RAGM	**Ragged Mountai**	**4.29**	**35**		**Pn**	**21 12 50.0**	**+0.5**
RAGM				IAML		21 13 43.4	
	comp=E,263nm,0.4s						
SUCK	**Suckling Hills**	**4.37**	**42**		**Pn**	**21 12 51.3**	**+0.8**
SUCK					**Sn**	**21 13 39.9**	**-1.4**
SUCK				IAML		21 13 41.9	
	comp=E,154nm,0.5s						
SUCK				IAML		21 13 42.8	
	comp=N,242nm,0.5s						
HMT	**Hamilton**	**4.38**	**37**		**Pn**	**21 12 51.4**	**+0.6**
SPU	**Mount Spurr**	**4.42**	**344**		**Pn**	**21 12 51.0**	**-0.3**
CKL	**Chakachamna La**	**4.47**	**343**		**Pn**	**21 12 51.7**	**-0.4**
KNK	**Knik Glacier**	**4.50**	**7**		**Pn**	**21 12 52.4**	**0.0**
KNK				IAML		21 13 47.4	
	comp=N,100nm,0.6s						
KNK				IAML		21 13 48.6	
	comp=E,122nm,0.8s						
SPBG	**Spurr Blockage**	**4.54**	**343**		**Pn**	**21 12 52.8**	**-0.2**
SUA	**Susitna One**	**4.55**	**353**		**Pn**	**21 12 52.9**	**-0.3**
BGLC	**Bering Glacier**	**4.58**	**44**		**Pn**	**21 12 54.2**	**+0.8**
BGLC					**Pn**	**21 12 54.4**	**+1.0**
SPWE	**Spurr West**	**4.58**	**342**		**Pn**	**21 12 53.5**	**-0.1**
N19K	**Bonanza Creek**	**4.62**	**329**		**Pn**	**21 12 54.2**	**+0.1**
BERG	**Berg Lake**	**4.62**	**39**	Pn	**Pn**	**21 12 54.5**	**+0.5**
DIV	**Divide**	**4.62**	**24**		**Pn**	**21 12 54.5**	**+0.5**
PMR	**Palmer**	**4.65**	**3**		**Pn**	**21 12 54.5**	**+0.2**
PMR				IAML		21 13 48.5	
	comp=N,89nm,0.5s						
PMR	**Palmer**	**4.65**	**3**	P	**Pn**	**21 12 54.6**	**+0.2**
STLK	**Strandline Lak**	**4.69**	**347**		**Pn**	**21 12 55.1**	**+0.1**
STLK				IAML		21 13 53.4	
	comp=N,94nm,0.4s						
BMRM	**Bremner River**	**4.78**	**31**		**Pn**	**21 12 56.8**	**+0.6**
BMRM				IAML		21 13 50.5	
	comp=N,87nm,0.5s						
BMRM				IAML		21 13 52.6	
	comp=E,106nm,0.3s						
SNH	**Sunshine Point**	**4.79**	**45**		**Pn**	**21 12 57.3**	**+0.9**
SNH				IAML		21 13 50.3	
	comp=E,153nm,0.7s						
SNH				IAML		21 13 53.7	
	comp=N,140nm,0.5s						
M22K	**Willow**	**4.81**	**357**		**Pn**	**21 12 57.4**	**+0.8**
M22K				IAML		21 13 59.6	
	comp=E,151nm,1.1s						
M22K				IAML		21 14 04.9	
	comp=N,135nm,0.4s						
GHO	**Glory Hole Cre**	**4.84**	**4**		**Pn**	**21 12 57.6**	**+0.5**
SML	**Sawmill**	**4.90**	**7**		**Pn**	**21 12 58.5**	**+0.5**
SML				IAML		21 13 55.0	
	comp=E,120nm,0.5s						
SML				IAML		21 13 55.6	
	comp=N,123nm,0.7s						
P16K	**Nushagak River**	**4.92**	**298**		**Pn**	**21 12 59.7**	**+1.6**
KLU	**Klutina**	**4.92**	**21**		**Pn**	**21 12 58.8**	**+0.6**
KLU				IAML		21 13 52.6	
	comp=E,144nm,0.4s						
KLU				IAML		21 13 54.4	
	comp=N,162nm,0.5s						
N18K	**Kilae Creek**	**4.96**	**321**		**Pn**	**21 12 58.5**	**-0.1**
WAX	**Waxell Ridge**	**4.96**	**42**		**Pn**	**21 12 59.4**	**+0.6**
SCM	**Sheep Creek Mo**	**5.02**	**12**		**Pn**	**21 13 00.3**	**+0.7**
SCM				IAML		21 13 58.0	
	comp=N,122nm,0.5s						
BARK	**Barkley Ridge**	**5.07**	**44**		**Pn**	**21 13 01.1**	**+0.9**
CRQM	**Cirque**	**5.07**	**39**		**Pn**	**21 13 00.9**	**+0.5**
CRQM				IAML		21 14 02.6	
	comp=E,118nm,0.6s						
SKT	**Skwentna**	**5.13**	**350**		**Pn**	**21 13 01.2**	**+0.2**
SKT				IAML		21 14 00.8	
	comp=N,81nm,0.3s						
SKT				IAML		21 14 02.9	
	comp=E,80nm,0.7s						
MESA	**MESA**	**5.14**	**48**		**Pn**	**21 13 01.3**	**0.0**
MESA				IAML		21 14 07.4	
	comp=E,92nm,0.9s						
TGL	**Tana Glacier**	**5.18**	**40**		**Pn**	**21 13 02.5**	**+0.8**
TGL				IAML		21 13 58.9	
	comp=E,120nm,0.4s						
TGL				IAML		21 13 59.5	
	comp=N,116nm,0.4s						
O16K	**Kokwok River B**	**5.20**	**304**		**Pn**	**21 13 02.6**	**+0.7**
O16K				IAML		21 14 18.9	
	comp=N,60nm,0.5s						
M20K	**Styx River**	**5.25**	**341**	Pn	**Pn**	**21 13 02.5**	**-0.2**
ISLE	**Juniper Island**	**5.25**	**43**		**Pn**	**21 13 03.4**	**+0.6**
ISLE				IAML		21 14 00.8	
	comp=N,90nm,0.8s						
ISLE				IAML		21 14 01.4	
	comp=E,95nm,1.2s						
N25K	**Chitina, Valde**	**5.32**	**27**		**Pn**	**21 13 04.2**	**+0.6**
N25K				IAML		21 14 03.4	
	comp=E,71nm,0.4s						
VRDI	**Verde Repeater**	**5.32**	**34**		**Pn**	**21 13 04.4**	**+0.5**
VRDI				IAML		21 14 04.9	
	comp=N,70nm,0.6s						
N17K	**Nushagak Hills**	**5.32**	**315**		**Pn**	**21 13 03.9**	**+0.2**
N17K				IAML		21 14 23.3	
	comp=N,57nm,0.6s						
YAH	**Yahtse**	**5.33**	**47**		**Pn**	**21 13 04.5**	**+0.6**
YAH				IAML		21 14 03.5	
	comp=E,70nm,0.5s						
YAH				IAML		21 14 05.0	
	comp=N,121nm,0.6s						
VNHG	**Veniaminof 1**	**5.33**	**266**		**Pn**	**21 13 05.3**	**+1.4**
GLB	**Gilahina Butte**	**5.39**	**31**		**Pn**	**21 13 05.0**	**+0.4**
CHX	**Chaix Hills**	**5.43**	**52**		**Pn**	**21 13 06.1**	**+1.0**
M24K	**Tolsona, Glenn**	**5.45**	**17**		**Pn**	**21 13 06.3**	**+1.0**
CUT	**Chulitna**	**5.47**	**357**		**Pn**	**21 13 06.2**	**+0.6**
CUT					**Pn**	**21 13 06.3**	**+0.7**
VNKR	**Veniaminof 5**	**5.49**	**264**		**Pn**	**21 13 07.6**	**+1.7**
M18K	**Stony River**	**5.55**	**327**		**Pn**	**21 13 06.5**	**-0.3**
GRNC	**Granite Creek**	**5.56**	**44**		**Pn**	**21 13 07.7**	**+0.7**
MCARA	**McCarthy VSAT**	**5.58**	**35**		**Pn**	**21 13 07.8**	**+0.7**
L22K	**Petersville**	**5.61**	**354**		**Pn**	**21 13 08.5**	**+0.8**
TABL	**Table Mountain**	**5.62**	**48**		**Pn**	**21 13 08.7**	**+0.7**
WACK	**Wrangell Chich**	**5.71**	**26**		**Pn**	**21 13 09.9**	**+0.7**
BARN	**Barnard Glacie**	**5.80**	**42**		**Pn**	**21 13 11.4**	**+1.0**
PCA	**Pinnacle**	**5.82**	**53**		**Pn**	**21 13 11.3**	**+0.8**
O15K	**Ungalikthiuk R**	**5.86**	**297**		**Pn**	**21 13 12.5**	**+1.5**
CTGM	**Chitina Glacie**	**5.86**	**43**		**Pn**	**21 13 11.8**	**+0.6**
L19K	**White Mountain**	**5.87**	**335**		**Pn**	**21 13 10.8**	**-0.4**
WAT7	**Susitna Watana**	**5.90**	**3**		**Pn**	**21 13 12.1**	**+0.4**
LOGN	**Logan Glacier**	**5.90**	**45**		**Pn**	**21 13 12.5**	**+0.7**
WAT1	**Susitna Watana**	**5.91**	**5**		**Pn**	**21 13 12.2**	**+0.5**
N16K	**Nishlik Lake**	**5.93**	**310**		**Pn**	**21 13 12.8**	**+0.8**
M17K	**Holitna River**	**6.00**	**321**		**Pn**	**21 13 12.7**	**-0.2**
CHNA	**Chernabura Isl**	**6.01**	**253**	P	**Pn**	**21 13 14.3**	**+1.3**
CNBA	**Chernabura Isl**	**6.01**	**253**	Pn	**Pn**	**21 13 13.1**	**0.0**
BCPM	**Bancas Point**	**6.03**	**56**		**Pn**	**21 13 13.9**	**+0.6**
PPLA	**Purkeypile**	**6.09**	**349**		**Pn**	**21 13 15.2**	**+0.8**
O28M	**Mount Upton**	**6.20**	**48**		**Pn**	**21 13 16.1**	**+0.3**
DHY	**Denali Highway**	**6.23**	**9**		**Pn**	**21 13 16.8**	**+0.5**
SDPT	**Sand Point**	**6.29**	**260**		**Pn**	**21 13 17.6**	**+0.8**
SDPT	**Sand Point**	**6.29**	**260**	P	**Pn**	**21 13 17.9**	**+1.1**
M16K	**Timber Creek**	**6.32**	**314**		**Pn**	**21 13 17.8**	**+0.6**
N15K	**Kwethluk River**	**6.36**	**305**		**Pn**	**21 13 19.2**	**+1.4**
PAX	**Paxson**	**6.37**	**17**		**Pn**	**21 13 18.5**	**+0.4**
L18K	**Granite Mounta**	**6.38**	**329**		**Pn**	**21 13 17.7**	**-0.4**
M26K	**Nabesna, AK**	**6.40**	**29**		**Pn**	**21 13 18.8**	**+0.4**
RND	**Reindeer**	6.48	3		**Pn**	**21 13 20.1**	**+0.6**
TRF	**Thorofare Moun**	**6.52**	**357**		**Pn**	**21 13 20.3**	**+0.2**
O14K	**Tigyukauivet M**	**6.59**	**295**	Pn	**Pn**	**21 13 21.9**	**+0.9**
O29M	**Mount Kennedy**	**6.66**	**55**		**Pn**	**21 13 23.3**	**+1.2**
M27K	**Edge Creek, AK**	**6.67**	**33**		**Pn**	**21 13 23.1**	**+0.8**
MENT	**Mentasta**	**6.68**	**24**		**Pn**	**21 13 22.9**	**+0.6**
K20K	**Telida**	**6.79**	**343**		**Pn**	**21 13 23.5**	**-0.3**
MCK	**McKinley**	**6.80**	**3**		**Pn**	**21 13 24.9**	**+1.0**
P29M	**Windy Craggy**	**6.80**	**62**		**Pn**	**21 13 24.4**	**+0.4**
L17K	**Donlin**	**6.81**	**323**		**Pn**	**21 13 24.2**	**+0.2**
L26K	**Log Cabin Wild**	**6.84**	**25**		**Pn**	**21 13 25.6**	**+1.1**
M15K	**Kasigluk River**	**6.86**	**308**		**Pn**	**21 13 25.5**	**+0.8**
L16K	**Owhat River**	**6.93**	**317**		**Pn**	**21 13 26.2**	**+0.5**
N14K	**Kuskokwak Cree**	**7.00**	**300**	Pn	**Pn**	**21 13 27.9**	**+1.3**
BVCY	**Beaver Creek**	**7.03**	**35**		**Pn**	**21 13 28.5**	**+1.4**
PS4A	**Pavlof South-4**	**7.03**	**262**		**Pn**	**21 13 28.8**	**+1.7**
S12K	**Black Hills**	**7.04**	**265**	Pn	**Pn**	**21 13 27.6**	**+0.4**
HAG	**Hague Volcano**	**7.07**	**262**		**Pn**	**21 13 29.7**	**+2.1**
PN7A	**Pavlof North-7**	**7.08**	**263**		**Pn**	**21 13 29.4**	**+1.5**
DOL	**Dolgoi Island**	**7.10**	**260**		**Pn**	**21 13 28.4**	**+0.4**
K24K	**Donnelly Dome**	**7.12**	**14**		**Pn**	**21 13 29.4**	**+1.1**
BPAW	**Bear Paw Mtn.**	**7.19**	**355**		**Pn**	**21 13 28.8**	**-0.5**
RIDG	**Independent Ri**	**7.20**	**17**		**Pn**	**21 13 30.4**	**+1.0**
BWN	**Browne**	**7.23**	**0**		**Pn**	**21 13 30.2**	**+0.4**
K17K	**Iditarod**	**7.24**	**326**		**Pn**	**21 13 29.8**	**-0.1**
DOT	**Dot Lake**	**7.25**	**20**		**Pn**	**21 13 31.0**	**+1.0**
BC01	**Beaver Creek A**	**7.25**	**29**		**Pn**	**21 13 30.9**	**+0.8**
L27K	**Beaver Creek,**	**7.25**	**29**		**Pn**	**21 13 31.1**	**+1.0**
BCAR	**Beaver Creek A**	**7.26**	**29**		**Pn**	**21 13 31.3**	**+1.0**
S31K	**Pelican**	**7.28**	**77**		**Pn**	**21 13 30.2**	**-0.3**
DTNA	**Dutton South F**	**7.31**	**261**		**Pn**	**21 13 31.8**	**+0.9**
P30M	**Million Dollar**	**7.33**	**59**		**Pn**	**21 13 32.5**	**+1.3**
DT1	**Dutton Round H**	**7.34**	**261**		**Pn**	**21 13 32.3**	**+1.0**
HYT	**Haines Junctio**	**7.36**	**53**		**Pn**	**21 13 32.7**	**+1.0**
J18K	**Innoko River**	**7.42**	**334**		**Pn**	**21 13 32.8**	**+0.4**
M14K	**Bethel**	**7.44**	**306**		**Pn**	**21 13 34.5**	**+1.9**
SCRK	**Sand Creek**	**7.56**	**19**		**Pn**	**21 13 34.8**	**+0.3**
WRH	**Wood River Hil**	**7.57**	**5**		**Pn**	**21 13 34.8**	**+0.4**
J20K	**Nowinta River**	**7.57**	**345**		**Pn**	**21 13 34.2**	**-0.3**
HDA	**Harding Lake**	**7.58**	**9**		**Pn**	**21 13 35.0**	**+0.4**
J19K	**Poorman**	**7.65**	**340**		**Pn**	**21 13 34.9**	**-0.6**
NEA2	**Nenana**	**7.66**	**2**		**Pn**	**21 13 35.6**	**-0.1**
L15K	**Ungalak Mounta**	**7.69**	**313**		**Pn**	**21 13 37.0**	**+0.8**
CCB	**Clear Creek Bu**	**7.76**	**6**		**Pn**	**21 13 36.8**	**-0.2**
SIT	**Sitka**	**7.80**	**83**	Pn	**Pn**	**21 13 35.6**	**-2.0**
SIT	**Sitka**	**7.80**	**83**	P	**Pn**	**21 13 35.4**	**-2.2**
N30M	**Aishikik Lake**	**7.84**	**50**		**Pn**	**21 13 38.9**	**+0.7**
M29M	**Somme Creek**	**7.86**	**41**		**Pn**	**21 13 39.8**	**+1.2**
SKAG	**Skagway**	**7.94**	**66**		**Pn**	**21 13 40.5**	**+0.9**
SKAG	**Skagway**	**7.94**	**66**	P	**Pn**	**21 13 40.7**	**+1.2**
IL31		**7.95**	**8**		**Pn**	**21 13 40.1**	**+0.6**
ILAR	**Eielson Array**	**7.95**	**8**	Pn	**Pn**	**21 13 39.9**	**+0.3**
	comp=N,1.7nm,0.3s,baz=190,slow=13,SNR=74						
ILAR				Sn	**Sn**	**21 15 02.5**	**-6.9**
	comp=N,1.9nm,0.3s,baz=195,slow=21,SNR=6.9						
	comp=N,6.1nm,0.5s						
J25K	**Salcha River,**	**7.95**	**13**		**Pn**	**21 13 39.2**	**-0.5**
M13K	**Dall Lake**	**7.95**	**302**	Pn	**Pn**	**21 13 41.7**	**+2.1**
O30N	**Mendenhall**	**7.97**	**56**	Pn	**Pn**	**21 13 40.9**	**+0.9**
COLA	**College**	**7.98**	**5**		**Pn**	**21 13 40.5**	**+0.5**
COLA	**College**	**7.98**	**5**	P	**Pn**	**21 13 41.4**	**+1.3**
J17K	**VABM Dome**	**7.99**	**328**		**Pn**	**21 13 39.5**	**-0.7**
K27K	**Chicken**	**8.00**	**24**	Pn	**Pn**	**21 13 40.8**	**+0.5**
L14K	**Kuka Creek**	**8.02**	**309**		**Pn**	**21 13 42.2**	**+1.6**
FALS	**False Pass**	**8.04**	**261**	Pn	**Pn**	**21 13 41.8**	**+0.9**
BESE	**Bessie Mountai**	**8.05**	**72**	Pn	**Pn**	**21 13 41.4**	**+0.3**
K15K	**Wolf Creek Mou**	**8.06**	**316**	Pn	**Pn**	**21 13 42.4**	**+1.2**
MLY	**Manley**	**8.12**	**357**	Pn	**Pn**	**21 13 42.0**	**0.0**
S32K	**Killisnoo**	**8.18**	**80**	Pn	**Pn**	**21 13 42.7**	**0.0**
R32K	**Eaglecrest**	**8.21**	**74**	Pn	**Pn**	**21 13 43.7**	**+0.6**
I23K	**Minto, Yukon-K**	**8.21**	**1**		**Pn**	**21 13 43.5**	**+0.3**
POKR	**Poker Plat Res**	**8.25**	**6**	Pn	**Pn**	**21 13 43.2**	**-0.5**
JIS	**Juneau Island**	**8.28**	**74**	P	**Pn**	**21 13 45.1**	**+1.0**
J16K	**Anvik River**	**8.38**	**324**	Pn	**Pn**	**21 13 45.5**	**0.0**
N31M	**Braeburn, Yuko**	**8.41**	**52**	Pn	**Pn**	**21 13 46.9**	**+0.9**
L29M	**L29M**	**8.41**	**38**		**Pn**	**21 13 47.2**	**+1.2**
WHY	**Whitehorse**	**8.49**	**58**		**Pn**	**21 13 48.4**	**+1.3**
M30M	**Minto, Yukon**	**8.56**	**44**		**Pn**	**21 13 48.9**	**+0.8**
DAWY	**Dawson**	**8.71**	**31**		**Pn**	**21 13 51.5**	**+1.4**
P32M	**Atlin**	**8.78**	**66**		**Pn**	**21 13 51.9**	**+0.9**
PRP	**Porcupine Dome**	**8.80**	**11**		**Pn**	**21 13 52.1**	**+0.6**
I17K	**Unalakleet**	**8.84**	**326**	Pn	**Pn**	**21 13 51.3**	**-0.4**
H21K	**Melozitna Rive**	**8.86**	**351**		**Pn**	**21 13 52.0**	**-0.1**
H23K	**Yukon River**	**8.89**	**0**	Pn	**Pn**	**21 13 53.2**	**+0.6**
I26K	**Coal Creek Min**	**8.93**	**18**	Pn	**Pn**	**21 13 53.9**	**+0.9**
H24K	**Noodor Dome**	**8.94**	**5**		**Pn**	**21 13 54.4**	**+1.1**
H22K	**Ishtalitna Cre**	**9.00**	**355**		**Pn**	**21 13 53.6**	**-0.5**
J14K	**Nanvaranak Lak**	**9.09**	**315**	Pn	**Pn**	**21 13 56.6**	**+1.3**
K29M	**Barlow Dome**	**9.12**	**36**	Pn	**Pn**	**21 13 57.1**	**+1.4**
K13K	**Kusilvak Mount**	**9.13**	**309**	Pn	**Pn**	**21 13 56.9**	**+1.1**
U33K	**Whale Pass**	**9.15**	**88**	Pn	**Pn**	**21 13 54.4**	**-1.7**
H19K	**Roundabout Mou**	**9.20**	**342**	Pn	**Pn**	**21 13 57.0**	**+0.3**
H18K	**Honhosa River**	**9.24**	**336**	Pn	**Pn**	**21 13 56.9**	**-0.4**
IMAR	**Indian Mountai**	**9.26**	**349**		**Pn**	**21 13 57.5**	**-0.1**
M11K	**Mekoryuk**	**9.29**	**299**	Pn	**Pn**	**21 13 58.8**	**+0.8**
CRAG	**Craig**	**9.30**	**92**	Pn	**Pn**	**21 13 56.1**	**-2.0**
CRAG	**Craig**	**9.30**	**92**	P	**Pn**	**21 13 56.2**	**-2.0**
J29N	**Klondike Camp**	**9.34**	**32**	Pn	**Pn**	**21 13 59.4**	**+0.6**
P33M	**Teslin, Yukon**	**9.35**	**63**		**Pn**	**21 13 59.8**	**+0.9**
H17K	**Granite Mounta**	**9.43**	**332**	Pn	**Pn**	**21 13 59.8**	**-0.1**
Q32M	**Nakina River**	**9.43**	**71**	Pn	**Pn**	**21 14 00.9**	**+0.8**
I27K	**Kandik River**	**9.47**	**21**	Pn	**Pn**	**21 14 01.7**	**+1.1**
N32M	**Quiet Lake**	**9.48**	**57**	Pn	**Pn**	**21 14 01.6**	**+0.9**
AKUT	**Akutan**	**9.59**	**260**	Pn	**Pn**	**21 14 01.3**	**-0.8**
I28M	**Miner Creek**	**9.69**	**25**		**Pn**	**21 14 04.8**	**+1.2**
G21K	**Allakaket**	**9.76**	**351**		**Pn**	**21 14 04.2**	**-0.2**
FARO	**Faro, Yukon**	**9.77**	**51**		**Pn**	**21 14 05.7**	**+1.1**
G23K	**Bananza Creek**	**9.79**	**359**	Pn	**Pn**	**21 14 04.9**	**+0.1**
G24K	**Hadweenzic Riv**	**9.82**	**5**		**Pn**	**21 14 06.3**	**+1.0**
FYU	**Fort Yukon**	**9.85**	**10**	Pn	**Pn**	**21 14 06.7**	**+1.1**
G19K	**Purcell Mounta**	**9.87**	**342**		**Pn**	**21 14 06.4**	**+0.4**
G18K	**Tagagawik**	**9.94**	**338**	Pn	**Pn**	**21 14 06.7**	**-0.2**
J30M	**Hart River**	**10.00**	**35**		**Pn**	**21 14 09.1**	**+1.3**
S34M	**Telegraph Cree**	**10.00**	**77**	Pn	**Pn**	**21 14 08.3**	**+0.5**
H27K	**Steamboat Moun**	**10.05**	**19**	Pn	**Pn**	**21 14 09.1**	**+0.6**
UNV	**Unalaska Valle**	**10.10**	**259**	Pn	**Pn**	**21 14 08.7**	**-0.5**
UNV	**Unalaska Valle**	**10.10**	**259**	P	**Pn**	**21 14 09.8**	**+0.7**
R33M	**Jennings River**	**10.13**	**68**		**Pn**	**21 14 10.3**	**+0.6**
V35K	**Ketchikan**	**10.17**	**92**	Pn	**Pn**	**21 14 09.0**	**-1.1**
COLD	**Coldfoot**	**10.31**	**359**	Pn	**Pn**	**21 14 11.4**	**-0.5**
G26K	**Porcupine Rive**	**10.38**	**13**		**Pn**	**21 14 13.8**	**+0.8**
G16K	**Koyuk River**	**10.43**	**329**	Pn	**Pn**	**21 14 14.0**	**+0.4**
I30M	**Mount Dempster**	**10.45**	**32**		**Pn**	**21 14 15.9**	**+2.0**
F21K	**Alatna River**	**10.45**	**352**	Pn	**Pn**	**21 14 14.9**	**+1.0**
DIB	**Dawson Inlet,**	**10.51**	**104**	Pn	**Pn**	**21 14 13.5**	**-1.2**
F20K	**Avaraart Lake**	**10.52**	**347**	Pn	**Pn**	**21 14 14.2**	**-0.5**
G27K	**Doyon Strip**	**10.56**	**17**	Pn	**Pn**	**21 14 15.3**	**0.0**
DLBC	**Dease Lake**	**10.58**	**74**	Pn	**Pn**	**21 14 16.1**	**+0.4**
	comp=N,0.8nm,0.3s,baz=267,slow=6.5,SNR=6.4						
DLBC				Sn	**Sn**	**21 16 09.0**	**-5.1**
	comp=N,1.0nm,0.3s,baz=229,slow=25,SNR=3.1						
DLBC				LR	LR	21 17 36.1	
	comp=N,90nm,18.8s,baz=114,slow=33						
	comp=N,2.1nm,0.3s						
F19K	**Shaleruckik Mo**	**10.61**	**342**	Pn	**Pn**	**21 14 15.3**	**-0.8**
F24K	**Squaw Lake**	**10.62**	**4**	Pn	**Pn**	**21 14 17.1**	**+0.8**
H29M	**Whitestone**	**10.70**	**25**		**Pn**	**21 14 17.0**	**-0.2**
MOBC	**Moresby Island**	**10.81**	**103**	Pn	**Pn**	**21 14 17.8**	**-1.1**
ANM	**Nome**	**10.81**	**321**	Pn	**Pn**	**21 14 18.8**	**0.0**
F25K	**Christian Rive**	**10.82**	**8**		**Pn**	**21 14 19.7**	**+0.6**
P08K	**Saint George I**	**10.94**	**276**	Pn	**Pn**	**21 14 18.2**	**-2.4**
F17K	**Baldwin Pennin**	**10.97**	**335**	Pn	**Pn**	**21 14 21.3**	**+0.4**
E19K	**Redstone River**	**11.10**	**345**		**Pn**	**21 14 23.4**	**+0.6**
E23K	**Chandalar**	**11.14**	**360**		**Pn**	**21 14 23.8**	**+0.4**
E24K	**Your Creek**	**11.17**	**2**	Pn	**Pn**	**21 14 24.2**	**+0.5**
E22K	**Anaktuvuk Pass**	**11.26**	**356**		**Pn**	**21 14 25.6**	**+0.6**
F15K	**North Star Dit**	**11.33**	**327**	Pn	**Pn**	**21 14 26.9**	**+1.1**
G29M	**Pine Creek**	**11.35**	**24**		**Pn**	**21 14 27.2**	**+1.0**
E25K	**Arctic Village**	**11.35**	**8**		**Pn**	**21 14 26.8**	**+0.7**
H31M	**Peel River**	**11.46**	**33**		**Pn**	**21 14 28.5**	**+0.8**
F28M	**Old Crow**	**11.59**	**19**		**Pn**	**21 14 31.1**	**+1.7**
HG4B	**Hotspring**	**11.63**	**106**	Pn	**Pn**	**21 14 29.6**	**-0.6**
E18K	**Tukpahlearik C**	**11.66**	**339**	Pn	**Pn**	**21 14 30.4**	**0.0**
TOLK	**Toolik Lake Re**	**11.72**	**0**		**Pn**	**21 14 33.1**	**+1.8**
NIKH	**Nikolski High**	**11.75**	**258**	Pn	**Pn**	**21 14 31.1**	**-0.5**
G30M	**tAoh Zraii Nji**	**11.82**	**26**		**Pn**	**21 14 34.1**	**+1.5**
E27K	**Coleen River**	**11.84**	**15**		**Pn**	**21 14 33.2**	**+0.3**
D22K	**Ayikyak River**	**12.04**	**355**	Pn	**Pn**	**21 14 35.8**	**+0.2**
D23K	**Nanushuk River**	**12.06**	**358**		**Pn**	**21 14 37.6**	**+1.8**
D19K	**Kuna River**	**12.20**	**345**	Pn	**Pn**	**21 14 37.3**	**-0.4**
D20K	**Etivluk River**	**12.21**	**348**	Pn	**Pn**	**21 14 38.0**	**+0.1**
G31M	**Satah River**	**12.28**	**29**		**Pn**	**21 14 39.8**	**+1.1**
F30M	**Barrier River**	**12.43**	**25**	Pn	**Pn**	**21 14 41.9**	**+1.1**
E28M	**Babbage River**	**12.53**	**17**		**Pn**	**21 14 43.0**	**+0.6**
E29M	**Blow River**	**12.63**	**20**	Pn	**Pn**	**21 14 44.7**	**+1.1**
F31M	**Tsiigehtchic**	**12.80**	**28**		**Pn**	**21 14 45.6**	**-0.3**
C18K	**Utukok River**	**12.83**	**341**	Pn	**Pn**	**21 14 45.7**	**-0.7**
C23K	**Itkillik River**	**12.93**	**358**		**Pn**	**21 14 49.1**	**+1.4**
C19K	**Lookout Ridge**	**12.97**	**344**	Pn	**Pn**	**21 14 47.0**	**-1.3**
BBB	**Bella Bella**	**13.33**	**102**	LR	LR	21 18 25.5	
	comp=N,31nm,20.5s,baz=222,slow=30						
INK	**Inuvik**	**13.51**	**26**	Pn	**Pn**	**21 14 56.5**	**+1.0**
	comp=N,0.4nm,0.3s,baz=212,slow=16,SNR=25						
	comp=N,7.2nm,0.8s						
INK	**Inuvik**	**13.51**	**26**		**Pn**	**21 14 56.4**	**+0.9**
B22K	**Teshekpuk Lake**	**13.53**	**354**		**Pn**	**21 14 55.7**	**-0.2**
ATKA	**Atka Island**	**14.99**	**262**		**P**	**21 15 21.6**	**+0.2**
C36M	**Paulatuk**	**16.75**	**32**		**Pn**	**21 15 38.5**	**0.0**
C36M				IAmb	IAmb	21 15 42.5	
	comp=Z,8.4nm,0.8s						
A36M	**Sachs Harbour**	**18.13**	**24**		**P**	**21 15 56.9**	**+1.0**
A36M				IAmb	IAmb	21 16 11.6	
	comp=Z,11nm,0.8s						
YKA	**Yellowknife Ar**	**18.32**	**58**	P	**P**	**21 15 59.7**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=269,slow=12,SNR=20						
	comp=Z,2.3nm,0.6s						
YKA	**Yellowknife Ar**	**18.32**	**58**	P	**P**	**21 15 59.4**	**+1.2**
YKAW3	**Yellowknife Wh**	**18.32**	**58**	P	**P**	**21 15 59.1**	**+1.0**
YKAW1	**Yellowknife Wh**	**18.38**	**58**	P	**P**	**21 16 01.0**	**+2.3**
WISH	**Wishkah**	**18.59**	**111**	P	**Pn**	**21 16 02.1**	**+0.7**
WISH				IAmb	IAmb	21 16 04.7	
	comp=Z,21nm,0.8s						
GNW	**Green Mountain**	**18.78**	**109**	P	**P**	**21 16 02.4**	**-0.9**
GNW				IAmb	IAmb	21 16 19.7	
	comp=Z,6.2nm,1.1s						
AMKA	**Amchitka**	**18.93**	**266**	P	**P**	**21 16 05.0**	**+0.1**
TXAR	**Lajitas Array**	**42.23**	**111**	P	**P**	**21 19 36.0**	**-1.4**
	comp=Z,0.6nm,1.1s,baz=339,slow=7.8,SNR=3.7						
	comp=Z,0.6nm,1.1s						
SUMG	**Summit**	**42.42**	**25**		**P**	**21 19 39.2**	**+0.5**
H11N2	**WAKE ISLAND Hy**	**49.08**	**239**	T	T	22 13 57.1	
	baz=31						
H11N3	**WAKE ISLAND Hy**	**49.08**	**239**	T	T	22 13 52.3	
	baz=31						
H11N1	**WAKE ISLAND Hy**	**49.09**	**239**	T	T	22 13 59.9	
	baz=31						
V55A	**Taylorsville**	**49.33**	**85**	P	**P**	**21 20 31.4**	**-1.8**
ARCES	**ARCESS Array B**	**53.76**	**2**	P	**P**	**21 21 06.5**	**+0.5**
	comp=Z,4.4nm,0.9s,baz=10,slow=5.6,SNR=1.5						
	comp=Z,4.4nm,0.9s						
SONM	**Songino Array**	**58.06**	**310**	P	**P**	**21 21 38.7**	**+1.5**
	comp=Z,0.8nm,0.6s,baz=49,slow=4.9,SNR=6.0						
	comp=Z,0.8nm,0.6s						
SONM	**Songino Array**	**58.06**	**310**	IAmb	IAmb	21 21 53.7	
	comp=Z,2.0nm,1.1s						
ZALV	**Zalesovo Beam**	**60.89**	**327**	P	**P**	**21 21 57.4**	**+0.9**
	comp=Z,1.2nm,0.6s,baz=32,slow=6.9,SNR=6.5						
	comp=Z,1.2nm,0.6s						
HHC	**Hu-ho-hao-te**	**61.23**	**301**	*e*P	**P**	**21 22 02.6**	**+3.5**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,150nm,5.4s						
FINES	**FINESS Array B**	**61.88**	**2**	P	**P**	**21 22 02.6**	**-0.5**
	comp=Z,7.0nm,1.1s,baz=339,slow=10,SNR=4.8						
	comp=Z,7.0nm,1.1s						
EKA	**Eskdalemuir Ar**	**64.80**	**20**	P	**P**	**21 22 23.3**	**+0.9**
	comp=Z,1.5nm,0.8s,baz=341,slow=6.2,SNR=2.0						
	comp=Z,1.5nm,0.8s						
BVAR	**Borovoye Array**	**65.59**	**335**	P	**P**	**21 22 28.6**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=12,slow=7.8,SNR=4.2						
	comp=Z,0.4nm,0.3s						
MKAR	**Makanchi Array**	**67.94**	**324**	P	**P**	**21 22 43.7**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=20,slow=6.9,SNR=8.4						
	comp=Z,0.4nm,0.4s						
AKASG	**Malin Array Be**	**72.70**	**1**	P	**P**	**21 23 12.5**	**+0.7**
	comp=Z,0.3nm,0.2s,baz=359,slow=6.0,SNR=1.9						
	comp=Z,0.3nm,0.2s						
AKASG	**Malin Array Be**	**72.70**	**1**	IAmb	IAmb	21 23 29.9	
	comp=Z,1.7nm,0.9s						
GERES	**GERESS Array B**	**73.65**	**11**	P	**P**	**21 23 18.8**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=0.8,slow=6.9,SNR=3.1						
	comp=Z,0.4nm,0.6s						
AAK	**Ala-Archa**	**74.08**	**328**	LR	LR	21 59 59.9	
	comp=Z,49nm,19.8s,baz=342,slow=39						

NNC 05 21:22:26.4±7.7**,37°.73N×71°.52E,$h0^{km}$,mb3.6,mpv3.5,**
3D,Error ellipse: s-maj=61.3km s-min=46.3km az=164.0,
Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.40**	**24**	⇓Pn	Pn	21 23 48.3	-0.1
	0.6nm,0.4s						
AAK				⇓Sn	Sn	21 24 51.1	-0.2
	1.6nm,0.6s						
KK31	**Karatay Array**	**5.42**	**352**	Pn	Pn	21 23 49.4	+1.0
	2.4nm,0.3s,baz=173,slow=12,SNR=14						
KK31				⇓Sn	Sn	21 24 53.5	+2.0
	2.0nm,0.2s,baz=176,slow=21						
BRLS	**Borolday**	**5.44**	**347**	Pg	Pn	21 23 47.0	-1.8
	2.4nm,0.2s						
BRLS				Lg	Lg	21 24 47.9	
	7.1nm,0.7s						
SGDS	**Sogindy**	**6.18**	**22**	Pg	Pn	21 23 58.3	-0.7
	1.2nm,0.2s						
SGDS				Lg	Lg	21 25 10.0	
	3.0nm,0.5s						
AB31	**Akbulak array**	**14.23**	**328**	P	Pn	21 25 47.9	-1.2
	1.0nm,0.8s,baz=32,slow=9.8,SNR=12						

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*SOME **05** 22:05:18.3, 42°.30N×82°.08E, $h15^{km}$*
*NNC **05** 22:05:21.0±2.5, 41°.52N×81°.24E, $h0^{km}$, mb3.6, mpv3.3,*
Error ellipse: s-maj=22.1km s-min=15.9km az=65.0
ISC 05 22:05:22.8±3.0**,41°.8N**±0°.2×**81°.3E**±0°.1**,$h16^{km}$,n9,**
σ**1^{s}.90**/12**,3C,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**1.94**	**316**	Pg	**Pn**	**22 05 55.4**	**+0.2**
	16nm,0.1s						
SHLS				Lg	Lg	22 06 22.5	
	54nm,0.4s						
UZB	**Uzynbulak**	**2.17**	**310**	Pg	**Pg**	**22 06 03.2**	**-1.2**
	3.6nm,0.1s						
UZB				Lg	Lg	22 06 35.6	
	32nm,0.5s						
UZB	**Uzynbulak**	**2.17**	**310**	*e*P	**Pb**	**22 06 01.9**	**+0.1**
	3.8nm,0.2s						
UZB				*e*S	**Sg**	**22 06 33.2**	**+0.5**
	26nm,0.3s						
SATY	**Saty**	**2.50**	**302**	Pg	**Pb**	**22 06 07.0**	**-0.3**
	1.5nm,0.1s						
SATY				Pg	**Pg**	**22 06 09.1**	**-1.5**
	1.8nm,0.1s						
SATY				Lg	Lg	22 06 42.5	
	8.1nm,0.2s						
KPKS	**Kokpek**	**2.57**	**312**	Pg	**Pb**	**22 06 09.9**	**+1.4**
	2.0nm,0.0s						
KPKS				Pg	**Pg**	**22 06 10.1**	**-1.8**
	2.2nm,0.2s						
KPKS				Lg	Lg	22 06 46.4	
	29nm,0.4s						
KPKS				Lg	Lg	22 06 46.5	
	29nm,0.3s						
ARXS	**Arharly**	**3.53**	**315**	*e*P	**Pb**	**22 06 24.1**	**-0.7**
	0.9nm,0.3s						
ARXS				*e*S	**Sb**	**22 07 11.2**	**+3.8**
	5.1nm,0.5s						
KAPS	**Kapalarasan**	**3.79**	**339**	S	**Sb**	**22 07 12.6**	**-2.4**
	23nm,0.2s						
MAKZ	**Makanchi**	**5.07**	**5**	⇑Pn	**Pn**	**22 06 39.5**	**+1.4**
	7.3nm,1.5s						
MAKZ				⇑Lg	Lg	22 06 52.0	
	2.7nm,0.5s						
MK31	**Makanchi Array**	**5.08**	**8**	Pn	Pn	22 06 40.2	+1.9
	1.0nm,0.4s,baz=210,slow=16,SNR=38						
MK31				⇑Lg	Lg	22 06 54.3	
	2.9nm,0.4s,baz=211,slow=27						

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*SOF **05** 22:08:32.6, 41°.39N±0°.02×23°.57E±0°.01, $h13^{km}$±1^{km},*
MD2.5/5
*SKO **05** 22:08:34.0, 41°.43N×23°.57E, $h0^{km}$, ML1.5*

ISC 05 22:08:33.6±1.0**, 41°.41N**±0°.02×**23°.57E**±0°.04**, h10**^{km}±11^{km}**,**
n14, σ0^{s}.35/26**, 2C-1D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMB	**Musomishta**	**0.19**	**45**	Pg	**Pg**	**22 08 37.6**	**0.0**
MMB				Sg	**Sg**	**22 08 40.1**	**-0.3**
MMB	**Musomishta**	**0.19**	**45**	⇓ *i*Pg	**Pg**	**22 08 37.5**	**-0.1**
MMB				*i* Sg	**Sg**	**22 08 40.4**	**0.0**
SRS	**Serrai**	**0.29**	**177**	⇑ *i*Pg	**Pg**	**22 08 39.4**	**-0.1**
SRS				*i* Sg	**Sg**	**22 08 44.0**	**+0.6**
KKB	**Krupnik**	**0.54**	**322**	Pg	**Pg**	**22 08 43.9**	**-0.2**
KKB				Sg	**Sg**	**22 08 51.3**	**0.0**
KKB	**Krupnik**	**0.54**	**322**	⇑ *i*Pg	**Pg**	**22 08 44.0**	**-0.2**
KKB				*i* Sg	**Sg**	**22 08 51.5**	**+0.1**
KNT	**Kendrikon**	**0.57**	**244**	*i* Pg	**Pg**	**22 08 44.3**	**-0.3**
KNT				*i* Sg	**Sg**	**22 08 52.1**	**+0.1**
SOH	**Sokhos**	**0.61**	**196**	*i* Pg	**Pg**	**22 08 45.0**	**-0.5**
SOH				*i* Sg	**Sg**	**22 08 54.0**	**+0.5**
VAY	**Valandovo**	**0.76**	**263**	*i* Pg	**Pb**	**22 08 48.8**	**-0.1**
VAY				*i* Sg	**Sg**	**22 08 58.2**	**+0.1**
VAY				*e*Lg	Lg	22 08 58.6	
	comp=N,8.9nm,0.3s						
VAY				*e*Lg	Lg	22 09 00.4	
	comp=E,6.9nm,0.2s						
THE	**Thessaloniki**	**0.91**	**211**	*i* Pg	**Pg**	**22 08 50.5**	**-0.5**
THE				*i* Sg	**Sg**	**22 09 02.9**	**+0.2**
RZN	**Rozhen**	**0.92**	**72**	P	**Pg**	**22 08 50.9**	**-0.4**
PLNA	**Plana**	**1.07**	**354**	P	**Pg**	**22 08 53.7**	**-0.5**
PLNA				S	**Sb**	**22 09 08.4**	**0.0**
VTS	**Vitosha**	**1.23**	**348**	P	**Pg**	**22 08 56.9**	**-0.4**
VTS				S	**Sb**	**22 09 13.2**	**+0.1**
BLSH	**Balsha**	**1.46**	**351**	P	**Pb**	**22 09 00.8**	**-0.1**
BLSH				S	**Sg**	**22 09 21.3**	**+0.7**
BARS	**Barje**	**1.92**	**318**	*i* Pn	**Pb**	**22 09 09.3**	**+0.6**

MOS ***05*** *22:15:54.2±1.1, 43°.20N×148°.02E, h26^{km}, mb4.4/16, Error ellipse: s-maj=13.7km s-min=8.3km az=42.6*
NEIC ***05*** *22:15:55.7±1.9, 43°.18N±0°.10×147°.7E±0°.1, h10^{km}±1^{km}, mb4.3/41, Error ellipse: s-maj=17.5km s-min=15.2km az=137.0*
SKHL ***05*** *22:15:56.4±0.1, 43°.30N×148°.00E, h38^{km}±5^{km}, mb5.0/3*
NIED ***05*** *22:15:56.5, 43°.29N×147°.72E, h12^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.20; $M_{\theta\theta}$-0.52; $M_{\phi\phi}$-3.67; $M_{r\theta}$5.60; $M_{\theta\phi}$-3.11; $M_{\phi r}$3.07; Fault plane solution: $M_0$8.13000×10^{14} NP1: ϕ_s186.00000°, δ25.00000°, λ43.00000°. NP2:ϕ_s55.00000°, δ73.00000°, λ109.00000°.*
JMA ***05*** *22:15:56.5±0.3, 43°N±1°×14°8E±°, h12^{km}, MV4.0/30, E OFF HOKKAIDO*
IDC ***05*** *22:16:04.5±3.0, 43°.16N×147°.34E, h82^{km}±25^{km}, mb3.5/17, mbtmp3.8/19, MS3.1/2, Error ellipse: s-maj=21.3km s-min=19.0km az=58.0*
ISC 05 22:15:57.3±1.7**, 43°.36N**±0°.06×**147°.71E**±0°.07**, h19**^{km}±7^{km}**,**
n131, σ1^{s}.53/136**, mb4.2**/44**, 3C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.82**	**309**	*e*P	Pn	22 16 22.2	+8.4
SHO				AMB	AMB	22 16 23.7	
	2µm,0.6s						
SHO				*e*S	Sn	22 16 35.2	+10
SHO				A	A	22 16 37.3	
	7µm,0.5s						
SHO				A	A	22 16 37.3	
	6µm,0.5s						
NEM2	**Nemuro 2**	**1.43**	**271**	P	**Pn**	**22 16 22.5**	**+0.3**
NEM2				*e*S	**Sb**	**22 16 42.1**	**+0.9**
NMR	**Nemuro--Hokkai**	**1.45**	**271**	*e*PN	**Pn**	**22 16 22.4**	**+0.1**
NMR				*e*S	**Sb**	**22 16 42.0**	**+0.5**
NMR	**Nemuro--Hokkai**	**1.45**	**271**	*e*P	**Pn**	**22 16 22.3**	**0.0**
NMR				*e*S	**Sb**	**22 16 41.8**	**+0.3**
YUK	**Yuzh-Kuril'sk**	**1.50**	**297**	*e*PN	**Pn**	**22 16 23.5**	**+0.4**
YUK				*e*S	**Sb**	**22 16 43.7**	**+0.6**
YUK				pmax	pmax		
	comp=Z,388nm,0.2s						
YUK				smax	smax		
	comp=E,2µm,0.5s						
YUK				smax	smax		
	comp=N,883nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.50**	**297**	*e*P	**Pn**	**22 16 23.5**	**+0.4**
YUK				AMB	AMB	22 16 24.8	
	comp=N,410nm,0.3s						
YUK				*e*S	**Sb**	**22 16 43.7**	**+0.6**
YUK				A	A	22 16 47.6	
	comp=N,2µm,0.5s						
YUK				A	A	22 16 47.6	
	comp=N,3µm,0.5s						
GLVR	**Golovnino**	**1.64**	**284**	*e*PN	**Pn**	**22 16 25.3**	**+0.3**
GLVR				*e*S	**Sb**	**22 16 47.3**	**+0.3**
GLVR				pmax	pmax		
	comp=Z,208nm,0.4s						
GLVR				smax	smax		
	comp=N,972nm,0.3s						
GLVR				smax	smax		
	comp=E,1µm,0.4s						
GLVR	**Golovnino**	**1.64**	**284**	*e*P	**Pn**	**22 16 25.3**	**+0.3**
GLVR				AMB	AMB	22 16 30.4	
	comp=E,210nm,0.3s						
GLVR				*e*S	**Sb**	**22 16 47.3**	**+0.3**
GLVR				A	A	22 16 51.1	
	comp=E,970nm,0.4s						
GLVR				A	A	22 16 51.1	
	comp=E,1µm,0.4s						
KUR	**Kuril'sk**	**1.88**	**3**	*e*PN	**Pn**	**22 16 29.1**	**+0.8**
KUR				S	**Sn**	**22 16 51.8**	**+0.3**
KUR				smax	smax		
	comp=N,303nm,0.5s						
KUR				smax	smax		
	comp=E,362nm,0.5s						
KUR	**Kuril'sk**	**1.88**	**3**	*e*P	**Pn**	**22 16 27.4**	**-0.9**
KUR				AMB	AMB	22 16 31.7	
	comp=E,140nm,0.3s						
KUR				*e*S	**Sn**	**22 16 50.1**	**-1.4**
KUR				A	A	22 16 56.3	
	comp=E,280nm,0.5s						
KUR				A	A	22 16 56.3	
	comp=E,470nm,0.5s						
JKHN	**Kushirohamanak**	**1.88**	**263**	P	**Pn**	**22 16 29.6**	**+1.2**
JKHN				*e*S	**Sb**	**22 16 53.2**	**-0.9**
RUSJ	**Misakicho**	**1.93**	**294**	*e*PN	**Pn**	**22 16 29.6**	**+0.5**
RUSJ				S	**Sn**	**22 16 54.4**	**+1.6**
JRA	**Rausu**	**1.97**	**288**	*e*P	**Pn**	**22 16 30.6**	**+1.1**
JNSB	**Nemuroshibetsu**	**2.01**	**283**	*e*P	**Pn**	**22 16 31.5**	**+1.3**
JNSB				*e*S	**Sb**	**22 16 57.4**	**-0.4**
AKK	**Akkeshi**	**2.12**	**262**	*e*P	**Pn**	**22 16 31.9**	**+0.2**
JNK	**Nakash**	**2.19**	**277**	P	**Pn**	**22 16 33.2**	**+0.6**
JNK				S	**Sn**	**22 16 59.9**	**+0.7**
JAK	**Akkeshi**	**2.23**	**262**	P	**Pn**	**22 16 33.9**	**+0.7**
JAK				*e*S	**Sn**	**22 17 00.4**	**+0.2**
JTKR	**Abashiri--Toko**	**2.83**	**284**	P	**Pn**	**22 16 43.3**	**+2.0**
JOB	**Onbets**	**2.87**	**262**	*e*P	**Pn**	**22 16 42.9**	**+0.9**
JAR	**Ashorobuto**	**2.88**	**270**	P	**Pn**	**22 16 43.5**	**+1.5**
JMP	**Maruseppu**	**3.22**	**283**	P	**Pn**	**22 16 49.2**	**+2.3**
JCH	**Churui**	**3.27**	**258**	P	**Pn**	**22 16 49.3**	**+1.8**
JCH				S	**Sn**	**22 17 27.2**	**+1.3**
JEM	**Erimo**	**3.61**	**250**	P	**Pn**	**22 16 54.6**	**+2.5**
ERM	**Erimo**	**3.61**	**250**		**Pn**	**22 16 53.6**	**+1.4**
ERM	**Erimo**	**3.61**	**250**	PN	**Pn**	**22 16 53.6**	**+1.4**
JKK2	**Kamakawa 2**	**3.64**	**280**	*e*P	**Pn**	**22 16 55.5**	**+2.9**
JFR	**Furan**	**3.74**	**269**	P	**Pn**	**22 16 56.6**	**+2.6**
JKA	**Kamikawa-asahi**	**3.78**	**283**		**Pn**	**22 16 56.5**	**+2.0**
ASAJ	**Asahikawa**	**3.78**	**283**	P	**Pn**	**22 16 57.9**	**+3.4**
	comp=E,12nm,0.4s,baz=140,slow=7.8,SNR=19						
ASAJ				S	**Sn**	**22 17 39.1**	**+0.7**
	comp=E,20nm,0.6s,baz=30,slow=7.1,SNR=3.9						
JNBK	**Urakawa-nobuka**	**3.80**	**255**	*e*P	**Pn**	**22 16 55.6**	**+0.8**
YSS	**Yuzhno-Sakhali**	**5.02**	**317**	*e*PN	Pb	22 17 19.7	-4.8
YSS				*e*S	**Sb**	**22 18 20.5**	**-3.9**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YSS				smax	smax		
	comp=N,30nm,0.7s						
YSS				smax	smax		
	comp=E,10.0nm,0.8s						
YSS	**Yuzhno-Sakhali**	**5.02**	**317**	*e*P	**Pn**	**22 17 13.4**	**+1.9**
JTM	**Tenmabayashi**	**5.57**	**245**	Pn	**Pn**	**22 17 19.5**	**+0.5**
TEY	**Ternei**	**8.16**	**286**	*e*PN	Pn	22 17 45.1	-9.4
MJAR	**Matsushiro Arr**	**9.97**	**230**	P	**Pn**	**22 18 18.4**	**-1.1**
	comp=E,1.0nm,0.6s,baz=28,slow=14,SNR=2.5						
MJAR	**Matsushiro Arr**	**9.97**	**230**		**Pn**	**22 18 18.8**	**-0.7**
MJAR	**Matsushiro Arr**	**9.97**	**230**	PN	**Pn**	**22 18 18.8**	**-0.7**
JGF	**Kuroka**	**11.13**	**229**		**Pn**	**22 18 35.0**	**-0.3**
JHJ2	**Mitsune**	**11.96**	**214**	Pn	**Pn**	**22 18 44.8**	**-1.8**
JNU	**Nakatsue**	**16.68**	**238**	LR	LR	22 26 32.5	
	comp=E,40nm,18.2s,baz=352,slow=38						
HILR	**Hailar Array B**	**20.16**	**298**	P	**P**	**22 20 30.2**	**-0.2**
	comp=E,1.1nm,0.4s,baz=101,slow=9.8,SNR=1.9						
	comp=E,1.1nm,0.4s						
YAK	**Yakutsk**	**21.52**	**337**	*i* P	**P**	**22 20 38.8**	**-6.0**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**28.54**	**140**	T	T	22 52 50.5	
	baz=330,slow=75,SNR=18						
H11N1	**WAKE ISLAND Hy**	**28.55**	**140**	T	T	22 52 50.2	
	baz=330,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy**	**28.55**	**140**	T	T	22 52 51.9	
	baz=330,slow=75,SNR=16						
SONM	**Songino Array**	**29.00**	**293**	P	**P**	**22 21 56.6**	**+0.8**
	comp=Z,1.9nm,0.6s,baz=88,slow=8.6,SNR=14						
SONM				LR	LR	22 34 27.7	
	comp=Z,51nm,19.5s,baz=62,slow=38						
	comp=Z,1.9nm,0.6s						
SONM	**Songino Array**	**29.00**	**293**	P	**P**	**22 21 56.3**	**+0.6**
SONM	**Songino Array**	**29.00**	**293**	*e*P	**P**	**22 21 56.8**	**+1.0**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
H11S1	**WAKE ISLAND Hy**	**29.51**	**141**	T	T	22 53 52.9	
	baz=331,slow=76,SNR=51						
YULB	**Yu-li**	**29.51**	**236**	P	**P**	**22 21 58.8**	**-1.6**
H11S3	**WAKE ISLAND Hy**	**29.51**	**141**	T	T	22 53 58.2	
	baz=331,slow=76,SNR=44						
H11S2	**WAKE ISLAND Hy**	**29.52**	**141**	T	T	22 53 53.1	
	baz=331,slow=76,SNR=32						
LVA	**Lava Point**	**31.80**	**54**	P	**P**	**22 22 23.1**	**+2.8**
C16K	**Lisburne Hills**	**34.88**	**28**	P	**P**	**22 22 51.1**	**+4.1**
O15K	**Ungalikthiuk R**	**35.39**	**45**	P	**P**	**22 22 53.4**	**+1.9**
C18K	**Utukok River**	**36.45**	**29**	P	**P**	**22 23 00.8**	**+0.2**
C18K				IAmb	IAmb	22 23 11.7	
	comp=Z,11nm,1.4s						
G18K	**Tagagawik**	**36.74**	**34**	P	**P**	**22 23 05.9**	**+3.0**
C19K	**Lookout Ridge**	**37.14**	**28**	P	**P**	**22 23 07.2**	**+0.8**
D19K	**Kuna River**	**37.50**	**29**	P	**P**	**22 23 10.9**	**+1.4**
D19K				IAmb	IAmb	22 23 23.0	
	comp=Z,5.3nm,1.1s						
H19K	**Roundabout Mou**	**37.58**	**34**	P	**P**	**22 23 10.2**	**+0.2**
H19K				IAmb	IAmb	22 23 15.7	
	comp=Z,12nm,1.4s						
E19K	**Redstone River**	**37.60**	**31**	P	**P**	**22 23 10.7**	**+0.5**
E19K				IAmb	IAmb	22 23 24.2	
	comp=Z,7.7nm,1.4s						
J19K	**Poorman**	**37.75**	**37**	P	**P**	**22 23 14.4**	**+3.0**
J19K				IAmb	IAmb	22 23 23.7	
	comp=Z,10nm,1.5s						
D20K	**Etivluk River**	**38.09**	**29**	P	**P**	**22 23 14.7**	**+0.4**
D20K				IAmb	IAmb	22 23 28.3	
	comp=Z,6.4nm,1.1s						
B20K	**Meade River**	**38.21**	**27**	P	**P**	**22 23 15.5**	**+0.3**
B20K				IAmb	IAmb	22 23 27.1	
	comp=Z,3.4nm,0.7s						
J20K	**Nowinta River**	**38.41**	**37**	P	**P**	**22 23 19.6**	**+2.5**
J20K				IAmb	IAmb	22 23 38.2	
	comp=Z,6.2nm,1.4s						
IMAR	**Indian Mountai**	**38.74**	**34**	P	**P**	**22 23 20.6**	**+0.7**
B21K	**Ikpikpuk River**	**38.98**	**28**	P	**P**	**22 23 22.6**	**+0.9**
B21K				IAmb	IAmb	22 23 34.3	
	comp=Z,4.7nm,0.8s						
F21K	**Alatna River**	**38.99**	**32**	P	**P**	**22 23 23.9**	**+1.9**
B22K	**Teshekpuk Lake**	**39.52**	**27**	P	**P**	**22 23 26.6**	**+0.3**
B22K				IAmb	IAmb	22 23 27.3	
	comp=Z,10nm,1.4s						
D22K	**Ayikyak River**	**39.53**	**29**	P	**P**	**22 23 26.7**	**+0.3**
E22K	**Anaktuvuk Pass**	**39.74**	**31**	P	**P**	**22 23 28.8**	**+0.6**
BPAW	**Bear Paw Mtn.**	**39.79**	**37**	P	**P**	**22 23 32.8**	**+4.2**
C23K	**Itkillik River**	**40.39**	**28**	P	**P**	**22 23 34.0**	**+0.5**
C23K				IAmb	IAmb	22 23 56.5	
	comp=Z,8.9nm,1.5s						
E23K	**Chandalar**	**40.55**	**31**	P	**P**	**22 23 35.9**	**+0.9**
E23K				IAmb	IAmb	22 23 36.0	
	comp=Z,6.9nm,1.5s						
E24K	**Your Creek**	**40.98**	**31**	P	**P**	**22 23 38.8**	**+0.4**
G24K	**Hadweenzic Riv**	**41.31**	**33**	P	**P**	**22 23 41.7**	**+0.6**
ZALV	**Zalesovo Beam**	**41.56**	**308**	P	**P**	**22 23 42.8**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=77,slow=7.6,SNR=3.0						
	comp=Z,0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**41.56**	**308**	P	**P**	**22 23 43.7**	**+0.4**
ILAR	**Eielson Array**	**41.57**	**36**	P	**P**	**22 23 47.1**	**+3.9**
	comp=Z,0.3nm,0.7s,baz=268,slow=7.4,SNR=5.1						
	comp=Z,0.3nm,0.7s						
ILAR	**Eielson Array**	**41.57**	**36**	P	**P**	**22 23 45.7**	**+2.4**
ILAR	**Eielson Array**	**41.57**	**36**	P	**P**	**22 23 45.7**	**+2.4**
D25K	**Kavik River**	**41.82**	**29**	P	**P**	**22 23 45.2**	**-0.1**
D25K				IAmb	IAmb	22 23 57.9	
	comp=Z,3.3nm,0.7s						
F25K	**Christian Rive**	**42.04**	**32**	P	**P**	**22 23 48.3**	**+1.2**
F26K	**Sheenjek River**	**42.61**	**32**	P	**P**	**22 23 54.6**	**+2.8**
C27K	**Jago River**	**42.77**	**29**	P	**P**	**22 23 53.7**	**+0.7**
C27K				IAmb	IAmb	22 24 36.0	
	comp=Z,9.7nm,1.5s						
G29M	**Pine Creek**	**45.04**	**32**	P	**P**	**22 24 13.4**	**+2.1**
G29M				IAmb	IAmb	22 24 17.0	
	comp=Z,3.2nm,1.2s						
MK31	**Makanchi Array**	**45.13**	**298**	Pg	**P**	**22 24 13.5**	**+1.3**
	comp=Z,0.8nm,0.5s,baz=215,slow=12,SNR=12						
MK31				⇑Lg	Lg	22 25 26.0	
	comp=Z,0.4nm,0.4s,baz=210,slow=30						
MKAR	**Makanchi Array**	**45.13**	**298**	P	**P**	**22 24 12.3**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=76,slow=8.2,SNR=15						
	comp=Z,0.9nm,0.5s						
MKAR	**Makanchi Array**	**45.13**	**298**	*e*P	**P**	**22 24 12.9**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**45.13**	**298**	*e*P	**P**	**22 24 12.9**	**+0.6**
MAKZ	**Makanchi**	**45.32**	**298**	⇑Pg	**P**	**22 24 13.3**	**-0.5**
	comp=Z,6.6nm,1.1s						
MAKZ				⇑Lg	Lg	22 25 23.0	
	comp=Z,8.8nm,2.0s						
KURK	**Kurchatov**	**46.09**	**304**		**P**	**22 24 19.7**	**0.0**
KURK				IAmb	IAmb	22 24 20.5	
	comp=Z,2.4nm,0.6s						
KURK	**Kurchatov**	**46.09**	**304**	*i* P	**P**	**22 24 19.0**	**-0.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	**Kurchatov**	**46.09**	**304**	*e*P	**P**	**22 24 19.0**	**-0.7**
KURBB	**Kurchatov Arra**	**46.17**	**304**	P	**P**	**22 24 19.8**	**-0.5**
	comp=Z,2.0nm,0.6s,baz=77,slow=8.7,SNR=19						
	comp=Z,2.0nm,0.6s						
WUS	**Wushi**	**49.41**	**292**	P	**P**	**22 24 46.7**	**+0.9**
BVAR	**Borovoye Array**	**50.07**	**310**	P	**P**	**22 24 48.2**	**-2.2**
	comp=Z,0.7nm,0.4s,baz=77,slow=7.3,SNR=5.2						
	comp=Z,0.7nm,0.4s						
BORK	**Borovoye**	**50.10**	**310**	*i* P	**P**	**22 24 49.4**	**-1.3**
BORK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
TARG	**Taragay, Kyrgy**	**50.12**	**294**	P	**P**	**22 24 51.2**	**-0.3**
TARG				IAmb	IAmb	22 24 54.8	
	comp=Z,1.7nm,0.7s						
TARG	**Taragay, Kyrgy**	**50.12**	**294**	P	**P**	**22 24 51.2**	**-0.3**
TARG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KDJ	**Kajisay**	**50.35**	**294**	P	**P**	**22 24 52.7**	**-0.3**
KDJ				IAmb	IAmb	22 25 04.8	
	comp=Z,4.2nm,1.0s						
KDJ	**Kajisay**	**50.35**	**294**	P	**P**	**22 24 52.7**	**-0.3**
KDJ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BOOM	**Boomskoye usch**	**51.01**	**295**	P	**P**	**22 24 58.5**	**+0.5**
BOOM				IAmb	IAmb	22 24 59.8	
	comp=Z,3.2nm,0.8s						
BOOM	**Boomskoye usch**	**51.01**	**295**	P	**P**	**22 24 58.5**	**+0.5**
BOOM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AAK	**Ala-Archa**	**51.89**	**296**	*i* P	**P**	**22 25 04.5**	**-0.1**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
AAK	**Ala-Archa**	**51.89**	**296**	*e*P	**P**	**22 25 04.5**	**-0.1**
KK31	**Karatay Array**	**54.26**	**298**		**P**	**22 25 22.2**	**+0.5**
KK31				IAmb	IAmb	22 25 23.6	
	comp=Z,1.6nm,0.7s						
KK31	**Karatay Array**	**54.26**	**298**	P	**P**	**22 25 22.3**	**+0.5**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARTI	**Arti**	**55.02**	**317**	*i* P	**P**	**22 25 25.0**	**-2.1**
ARTI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YKA	**Yellowknife Ar**	**55.90**	**34**	P	**P**	**22 25 37.1**	**+3.7**
	comp=Z,0.1nm,0.6s,baz=303,slow=7.8,SNR=1.9						
	comp=Z,0.1nm,0.6s						
ARCES	**ARCESS Array B**	**59.76**	**340**	P	**P**	**22 25 59.1**	**-1.2**
	comp=Z,12nm,1.1s,baz=29,slow=3.5,SNR=5.3						
	comp=Z,12nm,1.1s						
ARCES	**ARCESS Array B**	**59.76**	**340**	IAmb	IAmb	22 26 08.8	
	comp=Z,12nm,1.1s						
ARCES	**ARCESS Array B**	**59.76**	**340**	*e*P	**P**	**22 25 59.7**	**-0.6**
ARCES				pmax	pmax		
	comp=Z,12nm,1.1s						
WRA	**Warramunga Arr**	**64.17**	**194**	P	**P**	**22 26 28.3**	**-2.2**
	comp=Z,0.4nm,0.7s,baz=6.9,slow=6.4,SNR=2.8						
	comp=Z,0.4nm,0.7s						
FINES	**FINESS Array B**	**65.41**	**333**	P	**P**	**22 26 37.6**	**-0.5**
	comp=Z,2.0nm,0.6s,baz=46,slow=5.5,SNR=6.1						
	comp=Z,2.0nm,0.6s						
FINES	**FINESS Array B**	**65.41**	**333**	*i* P	**P**	**22 26 38.9**	**+0.8**
FINES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OBN	**Obninsk**	**65.87**	**324**	*i* P	**P**	**22 26 40.6**	**-0.6**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
OBN	**Obninsk**	**65.87**	**324**	*e*P	**P**	**22 26 40.7**	**-0.5**
ASAR	**Alice Springs**	**67.89**	**194**	P	**P**	**22 26 52.7**	**-1.6**
	comp=Z,0.3nm,0.8s,baz=10,slow=7.7,SNR=2.8						
	comp=Z,0.3nm,0.8s						
NB2	**NORSAR Subarra**	**70.11**	**339**	P	**P**	**22 27 07.4**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=31,slow=6.2						
NOA	**NORSAR Array B**	**70.11**	**339**	P	**P**	**22 27 07.5**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=32,slow=6.3,SNR=3.7						
	comp=Z,1.0nm,0.6s						
HFS	**Hagfors**	**70.21**	**338**	P	**P**	**22 27 07.6**	**-0.7**
	comp=Z,1.6nm,0.5s,baz=57,slow=5.5,SNR=11						
	comp=Z,1.6nm,0.5s						
KIV	**Kislovodsk**	**70.33**	**312**	*e*P	**P**	**22 27 10.3**	**+0.8**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV	**Kislovodsk**	**70.33**	**312**	*e*P	**P**	**22 27 10.4**	**+0.9**
KBZ	**Khabaz**	**70.36**	**312**	P	**P**	**22 27 10.0**	**+0.4**
	comp=Z,1.7nm,0.6s,baz=81,slow=6.2,SNR=7.5						
	comp=Z,1.7nm,0.6s						
KBZ	**Khabaz**	**70.36**	**312**	*i* P	**P**	**22 27 10.6**	**+1.0**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KBZ	**Khabaz**	**70.36**	**312**	*e*P	**P**	**22 27 10.6**	**+1.0**
AKASG	**Malin Array Be**	**72.14**	**324**	P	**P**	**22 27 19.8**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=42,slow=6.0,SNR=5.8						
	comp=Z,0.8nm,0.4s						
AKASG	**Malin Array Be**	**72.14**	**324**	IAmb	IAmb	22 27 30.9	
	comp=Z,4.5nm,1.3s						
AKASG	**Malin Array Be**	**72.14**	**324**	P	**P**	**22 27 19.8**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,5.0nm,1.3s						
TXAR	**Lajitas Array**	**82.53**	**57**	P	**P**	**22 28 19.4**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=301,slow=5.8,SNR=2.0						
	comp=Z,0.2nm,0.5s						

ANF 05 22:39:18.7±0.2**, 64°.61N×138°.76W, h5**^{km}±1^{km}**, ML3.5**/72**,**
Error ellipse: s-maj=1.1km s-min=0.9km az=96.0,
Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
J29N	**Klondike Camp**	**0.28**	**124**	P	Pg	22 39 24.8	+0.6
	baz=304,SNR=24						
J29N				S	Sg	22 39 28.6	+0.6
	baz=304						
DAWY	**Dawson**	**0.61**	**207**	P	Pg	22 39 30.4	-0.1
	baz=26						
DAWY				S	Sg	22 39 38.0	-0.4
	baz=26						
I29M	**Ogilvie Camp,**	**0.78**	**14**	P	Pb	22 39 34.4	-0.3
	baz=195,SNR=117						
I29M				S	Sb	22 39 44.7	-0.9
	baz=195						
K29M	**Barlow Dome**	**0.94**	**144**	P	Pg	22 39 36.5	-0.3
	baz=325						
K29M				S	Sb	22 39 49.9	-0.5
	baz=325						
I28M	**Miner Creek**	**0.98**	**330**	P	Pb	22 39 38.0	-0.2
	baz=149						
I28M				Sb	Sb	22 39 51.6	+0.1
	baz=149						
J30M	**Hart River**	**1.05**	**91**	P	Pg	22 39 37.6	-1.2
	baz=273						
J30M				S	Sg	22 39 52.6	+0.2
	baz=273						
I30M	**Mount Dempster**	**1.19**	**58**	P	Pg	22 39 41.0	-0.4
	baz=240,SNR=435						
I30M				S	Sb	22 39 57.2	-0.3
	baz=240						
L29M	**L29M**	**1.53**	**169**	P	Pn	22 39 46.5	-0.2
	baz=350,SNR=295						
L29M				S	Sn	22 40 06.6	-0.5
	baz=350						
K27K	**Chicken**	**1.56**	**250**	P	Pn	22 39 46.1	-1.0
	baz=66						
K27K				S	Sn	22 40 07.0	-0.6
	baz=66						
K27K				S	Sn	22 40 07.0	-0.6
	baz=66						
I27K	**Kandik River**	**1.57**	**311**	P	Pn	22 39 47.3	0.0
	baz=128						
I27K				S	Sn	22 40 08.0	+0.1
	baz=128						
I27K				S	Sn	22 40 08.0	+0.1
	baz=128						
MAYO	**Mayo, Yukon**	**1.62**	**128**	P	Pb	22 39 49.2	+0.1
	baz=310,SNR=6.3						
MAYO				S	Sg	22 40 11.2	+0.5
	baz=310						
H29M	**Whitestone**	**1.62**	**6**	P	Pn	22 39 48.0	0.0
	baz=186,SNR=392						
H29M				S	Sb	22 40 09.8	-0.1
	baz=186						
EPYK	**Eagle Plains**	**1.96**	**25**	P	Pn	22 39 52.6	-0.1
	baz=207,SNR=14						
EPYK				S	Sn	22 40 18.2	+0.5
	baz=207						
I26K	**Coal Creek Min**	**2.00**	**292**	P	Pn	22 39 52.6	-0.5
	baz=108						
I26K				S	Sn	22 40 19.4	+1.0
	baz=108						
I26K				S	Sn	22 40 19.4	+1.0
	baz=108						
H27K	**Steamboat Moun**	**2.00**	**326**	P	Pn	22 39 53.5	+0.4
	baz=144,SNR=272						
H27K				S	Sb	22 40 19.7	-1.0
	baz=144						
L27K	**Beaver Creek,**	**2.06**	**223**	P	Pn	22 39 54.2	+0.1
	baz=40,SNR=73						
L27K				S	Sb	22 40 21.9	-0.7
	baz=40						
J26L	**Joseph Creek**	**2.08**	**269**	P	Pn	22 39 53.4	-0.9
	baz=85						
J26L				S	Sn	22 40 20.0	-0.5
	baz=85						
J26L				S	Sn	22 40 20.0	-0.5
	baz=85						
M29M	**Somme Creek**	**2.18**	**176**	P	Pn	22 39 55.8	+0.1
	baz=356						
M29M				Sb	Sg	22 40 27.7	-1.0
	baz=356						
H31M	**Peel River**	**2.22**	**55**	P	Pn	22 39 56.1	-0.1
	baz=239						
H31M				S	Sn	22 40 24.8	+0.8
	baz=239						
M30M	**Minto, Yukon**	**2.22**	**156**	P	Pn	22 39 55.7	-0.6
	baz=338,SNR=33						
M30M				S	Sb	22 40 26.1	-1.1
	baz=338						
G29M	**Pine Creek**	**2.33**	**7**	P	Pn	22 39 57.3	-0.4
	baz=188						
G29M				S	Sn	22 40 26.5	-0.2
	baz=188						
SCRK	**Sand Creek**	**2.36**	**257**	P	Pn	22 39 57.5	-0.8
	baz=72,SNR=30						
BVCY	**Beaver Creek**	**2.40**	**204**	P	Pn	22 39 58.8	+0.2
	baz=22,SNR=17						
G27K	**Doyon Strip**	**2.51**	**333**	P	Pn	22 40 00.2	0.0
	baz=150,SNR=66						
G27K				S	Sn	22 40 31.0	-0.2
	baz=150						
G27K				S	Sn	22 40 31.0	-0.2
	baz=150						
L26K	**Log Cabin Wild**	**2.58**	**234**	P	Pn	22 40 01.5	+0.3
	baz=50,SNR=29						
L26K				Sb	Sb	22 40 38.6	+1.2
	baz=50						

L26K				Sb	Sb	22 40 38.6	+1.2
	baz=50						
G30M	**tAoh Zraii Nji**	**2.60**	**23**	P	Pn	22 40 01.3	-0.2
	baz=205						
G30M				S	Sn	22 40 33.6	+0.2
	baz=205						
M27K	**Edge Creek, AK**	**2.66**	**213**	P	Pn	22 40 02.3	0.0
	baz=30,SNR=36						
M27K				Sb	Sb	22 40 41.1	+1.3
	baz=30						
M27K				Sb	Sb	22 40 41.1	+1.3
	baz=30						
RIDG	**Independent Ri**	**2.80**	**255**	Sb	Sb	22 40 44.9	+1.0
	baz=69						
J25K	**Salcha River,**	**2.85**	**273**	P	Pn	22 40 04.1	-0.8
	baz=87						
J25K				Sb	Sb	22 40 47.1	+2.0
	baz=87						
J25K				Sb	Sb	22 40 47.1	+2.0
	baz=87						
M26K	**Nabesna, AK**	**2.92**	**222**	P	Pn	22 40 05.7	-0.1
	baz=38,SNR=12						
M26K				Sb	Sb	22 40 48.8	+1.7
	baz=38						
M26K				Sb	Sb	22 40 48.8	+1.7
	baz=38						
YUK3	**Moose Creek**	**2.95**	**196**	P	Pn	22 40 06.4	0.0
	baz=14,SNR=91						
YUK3				Sb	Sb	22 40 49.7	+1.5
	baz=14						
G31M	**Satah River**	**2.97**	**37**	P	Pn	22 40 06.1	-0.3
	baz=221,SNR=102						
G31M				S	Sn	22 40 42.0	-0.4
	baz=221						
PRP	**Porcupine Dome**	**3.01**	**291**	P	Pn	22 40 06.5	-0.6
	baz=105						
PRP				S	Sn	22 40 44.8	+1.2
	baz=105						
F28M	**Old Crow**	**3.05**	**352**	P	Pn	22 40 07.3	-0.3
	baz=171,SNR=31						
F28M				Sb	Sb	22 40 52.6	+1.6
	baz=171						
M31M	**Drury Creek, Y**	**3.12**	**139**	Sb	Sb	22 40 54.9	+2.1
	baz=323						
G26K	**Porcupine Rive**	**3.13**	**321**	P	Pn	22 40 08.9	+0.3
	baz=136						
G26K				Sb	Sb	22 40 55.9	+2.7
	baz=136						
K24K	**Donnelly Dome**	**3.17**	**258**	Sb	Sb	22 40 57.4	+3.0
	baz=72						
F30M	**Barrier River**	**3.25**	**21**	P	Pn	22 40 09.9	-0.4
	baz=203						
N30M	**Aishikik Lake**	**3.25**	**166**	P	Pn	22 40 10.4	0.0
	baz=347						
N30M				Sb	Sb	22 40 59.8	+3.0
	baz=347						
YUK4	**Talbot Arm**	**3.28**	**179**	P	Pn	22 40 10.1	-0.8
	baz=358,SNR=99						
YUK8	**Steele Glacier**	**3.37**	**188**	P	Pn	22 40 12.5	+0.3
	baz=7.2,SNR=38						
YUK8				S	Sn	22 40 53.7	+1.0
	baz=7.2						
PAX	**Paxson**	**3.40**	**244**	P	Pn	22 40 12.7	+0.2
	baz=58						
PAX				Sb	Sb	22 41 03.6	+2.5
	baz=58						
FARO	**Faro, Yukon**	**3.41**	**132**	Sb	Sb	22 41 04.3	+3.0
	baz=317						
N31M	**Braeburn, Yuko**	**3.42**	**155**	Sb	Sg	22 41 05.4	-3.0
	baz=338						
F31M	**Tsiigehtchic**	**3.50**	**34**	P	Pn	22 40 13.3	-0.5
	baz=218						
F31M				Sb	Sb	22 41 06.6	+2.7
	baz=218						
HDA	**Harding Lake**	**3.54**	**270**	Sb	Sb	22 41 08.5	+3.4
	baz=83						
HARP	**HAARP**	**3.62**	**235**	Sb	Sb	22 41 11.1	+3.6
	baz=49						
YUK6	**Outpost Mounta**	**3.69**	**177**	P	Pn	22 40 17.0	+0.5
	baz=357,SNR=49						
YUK6				Sb	Sg	22 41 13.9	-3.0
	baz=357						
G25K	**Bearman Lake**	**3.73**	**309**	P	Pn	22 40 16.9	0.0
	baz=122						
POKR	**Poker Plat Res**	**3.73**	**282**	P	Pn	22 40 16.6	-0.4
	baz=94						
POKR				Sb	Sb	22 41 13.7	+3.1
	baz=94						
POKR				Sb	Sb	22 41 13.7	+3.1
	baz=94						
E27K	**Coleen River**	**3.77**	**344**	P	Pn	22 40 17.3	-0.1
	baz=161,SNR=12						
E27K				Sb	Sb	22 41 14.7	+3.1
	baz=161						
E27K				Sb	Sb	22 41 14.7	+3.1
	baz=161						
MCARA	**McCarthy VSAT**	**3.78**	**213**	P	Pn	22 40 18.1	+0.6
	baz=29,SNR=29						
MCARA				Sb	Sb	22 41 15.7	+3.8
	baz=29						
F26K	**Sheenjek River**	**3.79**	**327**	P	Pn	22 40 18.3	+0.6
	baz=142						
E29M	**Blow River**	**3.81**	**5**	P	Pn	22 40 17.8	-0.2
	baz=186						
HYT	**Haines Junctio**	**3.84**	**171**	P	Pn	22 40 18.9	+0.3
	baz=352,SNR=8.8						
HYT				Sb	Sb	22 41 17.0	+3.1
	baz=352						
CTG	**Chitna Glacier**	**3.84**	**199**	P	Pn	22 40 19.2	+0.6
	baz=17,SNR=26						
CTG				S	Sn	22 41 05.4	+1.2
	baz=17						
COLA	**College**	**3.91**	**278**	P	Pn	22 40 19.7	+0.5
	baz=90						
COLA				Sb	Sg	22 41 20.1	-3.8
	baz=90						
O28M	**Mount Upton**	**3.91**	**190**	S	Sn	22 41 06.5	+0.5
	baz=9.0						
N25K	**Chitina, Valde**	**4.01**	**224**	Sb	Sb	22 41 22.2	+3.5
	baz=39						
E28M	**Babbage River**	**4.03**	**356**	P	Pn	22 40 20.7	-0.2
	baz=175						
H24K	**Noodor Dome**	**4.03**	**292**	P	Pn	22 40 20.8	-0.3
	baz=104						
H24K				Sb	Sb	22 41 21.7	+2.6
	baz=104						
H24K				Sb	Sb	22 41 21.7	+2.6
	baz=104						
O30N	**Mendenhall**	**4.05**	**161**	P	Pn	22 40 21.4	+0.1
	baz=343						
O30N				Sb	Sb	22 41 23.2	+3.6
	baz=343						
F25K	**Christian Rive**	**4.10**	**320**	P	Pn	22 40 22.6	+0.6
	baz=134,SNR=10						
F25K				Sb	Sb	22 41 23.6	+2.5
	baz=134						
DHY	**Denali Highway**	**4.11**	**252**	P	Pn	22 40 22.2	-0.1
	baz=64						
DHY				Sb	Sb	22 41 24.2	+2.6
	baz=64						
G24K	**Hadweenzic Riv**	**4.17**	**304**	Sb	Sb	22 41 26.2	+3.0
	baz=116						
M24K	**Tolsona, Glenn**	**4.18**	**236**	Sb	Sb	22 41 27.9	+4.6
	baz=50						
INK	**Inuvik**	**4.26**	**27**	P	Pn	22 40 24.1	-0.1
	baz=212						
O29M	**Mount Kennedy**	**4.33**	**179**	P	Pn	22 40 26.1	+0.9
	baz=359,SNR=37						
O29M				Sb	Sb	22 41 32.5	+4.8
	baz=359						
N32M	**Quiet Lake**	**4.34**	**141**	Sb	Sg	22 41 33.1	-4.7
	baz=326						
WHY	**Whitehorse**	**4.35**	**154**	P	Pn	22 40 25.4	-0.2
	baz=337,SNR=7.1						
WHY				Sb	Sg	22 41 34.1	-4.2
	baz=337						
CRQE	**Cirque**	**4.36**	**209**	Sb	Sb	22 41 32.5	+3.9
	baz=25						
NEA2	**Nenana**	**4.44**	**274**	S	Sn	22 41 17.0	-1.7
	baz=85						
E25K	**Arctic Village**	**4.46**	**325**	P	Pn	22 40 27.8	+0.8
	baz=139,SNR=14						
E25K				S	Sn	22 41 19.5	+0.3
	baz=139						
E25K				S	Sn	22 41 19.5	+0.3
	baz=139						
WAT6	**Susitna Watana**	**4.50**	**247**	P	Pn	22 40 27.9	+0.3
	baz=59						
WAT6				Sb	Sb	22 41 35.8	+3.2
	baz=59						
KLU	**Klutina**	**4.52**	**229**	Sb	Sb	22 41 37.5	+4.4
	baz=43						
MCK	**McKinley**	**4.54**	**263**	P	Pn	22 40 27.6	-0.4
	baz=74						
MCK				Sb	Sb	22 41 38.5	+4.8
	baz=74						
I23K	**Minto, Yukon-K**	**4.55**	**282**	P	Pn	22 40 28.3	+0.1
	baz=92						
I23K				Sb	Sb	22 41 37.9	+3.9
	baz=92						
I23K				Sb	Sb	22 41 37.9	+3.9
	baz=92						
P30M	**Million Dollar**	**4.58**	**169**	Sb	Sb	22 41 40.1	+5.0
	baz=350						
PINM	**Pinnacle**	**4.58**	**189**	S	Sn	22 41 24.3	+1.9
	baz=8.0						
WAT1	**Susitna Watana**	**4.70**	**252**	Sb	Sg	22 41 44.0	-5.5
	baz=63						
F24K	**Squaw Lake**	**4.72**	**312**	P	Pn	22 40 31.6	+1.0
	baz=124						
D27M	**Malcolm River**	**4.73**	**350**	P	Pn	22 40 31.7	+1.0
	baz=168						
D28M	**Stokes Point**	**4.74**	**0**	P	Pn	22 40 31.8	+1.1
	baz=180						
SCM	**Sheep Creek Mo**	**4.77**	**238**	Sb	Sb	22 41 44.6	+4.1
	baz=50						
M23K	**Glacier View**	**4.94**	**239**	Sb	Sb	22 41 49.2	+3.9
	baz=51						
MLY	**Manley**	**5.13**	**280**	P	Pn	22 40 35.9	-0.3
	baz=89						
SML	**Sawmill**	**5.16**	**241**	Sb	Sb	22 41 55.7	+4.0
	baz=53						
TRF	**Thorofare Moun**	**5.20**	**262**	P	Pn	22 40 37.3	0.0
	baz=72						
P33M	**Teslin, Yukon**	**5.21**	**145**	Sb	Sb	22 41 58.8	+5.8
	baz=330						
E24K	**Your Creek**	**5.24**	**316**	P	Pn	22 40 38.3	+0.7
	baz=127						
COLD	**Coldfoot**	**5.37**	**304**	S	Sn	22 41 41.7	+0.2
	baz=114						
C27K	**Jago River**	**5.39**	**341**	P	Pn	22 40 40.7	+1.0
	baz=157						
H22K	**Ishtalitna Cre**	**5.45**	**289**	S	Sn	22 41 42.6	-1.0
	baz=98						
E23K	**Chandalar**	**5.57**	**313**	P	Pn	22 40 43.2	+0.9
	baz=123						
TOLK	**Toolik Lake Re**	**5.90**	**318**	P	Pn	22 40 47.8	+1.1
	baz=128						
H21K	**Melozitna Rive**	**6.02**	**286**	P	Pn	22 40 48.0	-0.3
	baz=94						
F22K	**John River**	**6.18**	**304**	P	Pn	22 40 51.2	+0.7
	baz=112						
H20K	**Anotleneega Mo**	**6.87**	**285**	P	Pn	22 40 59.8	-0.2
	baz=90						
J19K	**Poorman**	**7.35**	**273**	P	Pn	22 41 06.0	-0.6
	baz=78						
C36M	**Paulatuk**	**7.45**	**44**	P	Pn	22 41 07.4	-0.6
	baz=238						

SJA ***05*** *22:42:31.9±1.2, 21°.99S×68°.86W, h116^{km}±9^{km}, ML4.0, MW3.9*

GUC ***05*** *22:42:33.6±0.8, 21°.98S×68°.75W, h103^{km}±5^{km}, ML3.9*

ISC 05 22:42:33.2±1.8**, 21°.98S**±0°.04×**68°.83W**±0°.07**, h111**^{km}±13^{km}**, n21, σ0^{s}.45**/42**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.43**	**295**	*e*P	**Pn**	**22 42 49.7**	**-0.2**
PB09				*i* S	**Sn**	**22 43 01.9**	**-0.5**
PB09				IAML		22 43 03.6	
	comp=N,4μm,0.3s						
PB09	**IPOC Station P**	**0.43**	**295**	*e*P	**Pn**	**22 42 49.7**	**-0.2**
PB09				*e*S	**Sn**	**22 43 02.7**	**+0.3**
PB09				IAML		22 43 03.5	
	comp=Z,3μm,0.5s						
PB03	**IPOC Station P**	**0.86**	**265**	*e*P	**Pn**	**22 42 53.0**	**-0.2**
PB03				*i* S	**Sn**	**22 43 08.4**	**0.0**
PB03				IAML		22 43 09.3	
	comp=N,4μm,0.1s						
PB03	**IPOC Station P**	**0.86**	**265**	*e*P	**Pn**	**22 42 53.1**	**-0.2**
PB03				*e*S	**Sn**	**22 43 08.1**	**-0.2**
PB03				IAML		22 43 10.1	
	comp=Z,2μm,0.2s						
PB06	**IPOC Station P**	**1.00**	**224**	*e*P	**Pn**	**22 42 54.6**	**0.0**
PB06				*i* S	**Sn**	**22 43 10.9**	**+0.2**
PB06				IAML		22 43 12.2	
	comp=E,2μm,0.3s						
PB07	**IPOC Station P**	**1.01**	**284**	*e*P	**Pn**	**22 42 54.9**	**+0.1**
PB07				*i* S	**Sn**	**22 43 11.5**	**+0.4**
PB07				IAML		22 43 11.8	
	comp=N,4μm,0.3s						
PB01	**IPOC Station P**	**1.12**	**327**	*e*P	**Pn**	**22 42 55.5**	**-0.2**
PB01				*i* S	**Sn**	**22 43 13.0**	**+0.1**
PB01	**IPOC Station P**	**1.12**	**327**	*e*P	**Pn**	**22 42 55.6**	**-0.2**
PB01				*e*S	**Sn**	**22 43 12.9**	**+0.1**
PB01				IAML		22 43 14.6	
	comp=Z,2μm,0.2s						
AF01	**San Pedro de A**	**1.14**	**148**	*e*P	**Pn**	**22 42 55.2**	**-1.0**
AF01				*e*S	**Sn**	**22 43 15.1**	**+1.5**
AF01				IAML		22 43 37.5	
	comp=Z,1μm,0.5s						
PB02	**IPOC Station P**	**1.19**	**303**	*e*P	**Pn**	**22 42 56.6**	**0.0**
PB02				*i* S	**Sn**	**22 43 14.8**	**+0.5**
PB02				IAML		22 43 16.0	
	comp=E,4μm,0.2s						
PB02	**IPOC Station P**	**1.19**	**303**	*e*P	**Pn**	**22 42 56.6**	**0.0**
PB02				*e*S	**Sn**	**22 43 14.1**	**-0.2**
PB02				IAML		22 43 16.6	
	comp=Z,4μm,0.3s						
PB05	**IPOC Station P**	**1.54**	**235**	*e*P	**Pn**	**22 43 00.6**	**-0.1**
PB05				*i* S	**Sn**	**22 43 21.6**	**+0.1**
PATCX	**Punta Patache**	**1.69**	**313**	*e*P	**Pn**	**22 43 02.5**	**0.0**
PATCX				*i* S	**Sn**	**22 43 25.4**	**+0.7**
PATCX				IAML		22 43 27.9	
	comp=E,2μm,0.2s						
PATCX	**Punta Patache**	**1.69**	**313**	*e*P	**Pn**	**22 43 02.3**	**-0.1**
PATCX				*e*S	**Sn**	**22 43 25.5**	**+0.7**
PATCX				IAML		22 43 28.1	
	comp=Z,700nm,0.2s						
PX03	**IPOC Station P**	**1.74**	**334**	*e*P	**Pn**	**22 43 02.5**	**-0.6**
PX03				*i* S	**Sn**	**22 43 26.0**	**+0.2**
PB08	**IPOC Station P**	**1.86**	**351**	*e*P	**Pn**	**22 43 05.3**	**+0.5**
PB08				*i* S	**Sn**	**22 43 29.3**	**+0.4**
PB08				IAML		22 43 31.9	
	comp=N,734nm,0.3s						
TA01	**Diego Aracena**	**1.89**	**318**	*e*P	**Pn**	**22 43 04.4**	**-0.4**
TA01				*i* S	**Sn**	**22 43 29.2**	**+0.2**
TA01				IAML		22 43 30.9	
	comp=N,2μm,0.5s						
TA01	**Diego Aracena**	**1.89**	**318**	*e*P	**Pn**	**22 43 04.5**	**-0.4**
TA01				*e*S	**Sn**	**22 43 29.2**	**+0.2**
TA01				IAML		22 43 30.8	
	comp=Z,980nm,0.3s						
TA02	**Huaiquique**	**2.09**	**324**	*e*P	**Pn**	**22 43 06.8**	**-0.6**
TA02				*i* S	**Sn**	**22 43 33.1**	**-0.5**
GO01	**Chusmiza**	**2.33**	**351**	*e*P	**Pn**	**22 43 11.2**	**+0.3**
GO01				*i* S	**Sn**	**22 43 39.7**	**0.0**
PB11	**IPOC Station P**	**2.34**	**341**	*e*P	**Pn**	**22 43 10.4**	**-0.4**
PB11				*i* S	**Sn**	**22 43 39.4**	**-0.2**

NEIC ***05*** *22:49:15.9±1.2, 51°.0N±0°.1×3°.1W±0°.2, h10^{km}±2^{km}, ML3.4/8, Error ellipse: s-maj=26.6km s-min=9.3km az=221.0*

LDG ***05*** *22:49:16.9±0.1, 51°.05N×2°.96W, h5^{km}, Ml3.5/31, Error ellipse: s-maj=2.0km s-min=1.7km az=76.0*

BGS ***05*** *22:49:18.0±0.6, 51°.12N×2°.98W, h4^{km}±7^{km}, ML3.2*

ISC 05 22:49:15.9±1.1**, 51°.01N**±0°.02×**2°.86W**±0°.03**, h17**^{km}±9^{km}**, n76, σ2^{s}.15**/133**, 5D, United Kingdom**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OLDB	**Oldbury-Upon-S**	**0.68**	**16**	*e*P	**Pb**	**22 49 29.6**	**+0.4**
OLDB				*e*S	**Sb**	**22 49 37.7**	**-0.5**
OLDB				IAML		22 49 43.0	
	comp=E,2μm,0.4s						
OLDB				IAML		22 49 43.1	
	comp=N,2μm,0.3s						
MONM	**Monmouth**	**0.83**	**2**	*e*P	**Pb**	**22 49 31.9**	**+0.1**
MONM				*e*S	**Sg**	**22 49 42.0**	**-1.0**
MONM				IAML		22 49 42.2	
	comp=N,1μm,0.2s						
MONM				IAML		22 49 42.2	
	comp=E,1μm,0.2s						
SWN1	**Swindon**	**0.83**	**52**	*e*P	**Pn**	**22 49 33.8**	**+1.0**
SWN1				*e*S	**Sn**	**22 49 45.4**	**+0.8**
SWN1				IAML		22 49 46.9	
	comp=E,464nm,0.2s						
SWN1				IAML		22 49 50.2	
	comp=N,491nm,0.2s						
STRD	**Stroud**	**0.88**	**29**	*e*P	**Pn**	**22 49 33.5**	**+0.1**
STRD				*e*S	**Sb**	**22 49 44.2**	**+0.2**
STRD				IAML		22 49 45.2	
	comp=E,695nm,0.1s						
STRD				IAML		22 49 45.7	
	comp=N,700nm,0.1s						
MCH1	**Michaelchurch**	**0.99**	**355**	*e*P	**Pg**	**22 49 34.4**	**-0.6**
MCH1				*e*S	**Sg**	**22 49 46.3**	**-1.8**
MCH1				IAML		22 49 46.6	
	comp=E,1μm,0.3s						
MCH1				IAML		22 49 46.7	
	comp=N,2μm,0.1s						
HTL	**Hartland**	**1.03**	**270**	*e*P	**Pg**	**22 49 35.3**	**-0.5**
HTL				IAML		22 49 50.6	
	comp=E,485nm,0.4s						
HTL				IAML		22 49 51.1	
	comp=N,512nm,0.4s						
BUW	**Bucklebury Wes**	**1.10**	**68**	*e*Pg	**Pn**	**22 49 38.8**	**+2.4**
BUW				*e*Sg	**Sn**	**22 49 54.1**	**+2.9**
BUW	**Bucklebury Wes**	**1.10**	**68**	*e*P	**Pn**	**22 49 38.8**	**+2.4**
BUW				*e*S	**Sn**	**22 49 54.1**	**+2.9**
HLM1	**Long Mynd**	**1.51**	**359**	*e*P	**Pn**	**22 49 43.1**	**+1.0**
HLM1				*e*S	**Sn**	**22 50 01.6**	**+0.3**
HLM1				IAML		22 50 02.5	
	comp=E,332nm,0.3s						
HLM1				IAML		22 50 04.2	
	comp=N,325nm,0.2s						
RSBS	**Rosebush, Pemb**	**1.51**	**309**	*e*P	**Pn**	**22 49 42.4**	**+0.3**
RSBS				*e*S	**Sn**	**22 50 01.0**	**-0.3**
RSBS				IAML		22 50 02.1	
	comp=E,358nm,0.1s						
RSBS				IAML		22 50 02.5	
	comp=N,455nm,0.2s						
CCA1	**Carnmenellis**	**1.72**	**242**	*e*P	**Pn**	**22 49 45.8**	**+0.8**
CCA1				IAML		22 50 13.8	
	comp=E,58nm,0.2s						
CCA1				IAML		22 50 14.8	
	comp=N,65nm,0.2s						
FOEL	**Foel Wylfa**	**1.89**	**354**	*e*P	**Pn**	**22 49 49.1**	**+1.7**
FOEL				IAML		22 50 13.4	
	comp=E,175nm,0.3s						
FOEL				IAML		22 50 16.5	
	comp=N,191nm,0.5s						
CWF	**Charnwood Fore**	**1.98**	**28**	*e*P	**Pn**	**22 49 49.9**	**+1.4**
CWF				IAML		22 50 17.1	
	comp=N,99nm,0.3s						
CWF				IAML		22 50 17.2	
	comp=E,135nm,0.2s						
WLF1	**Llynfaes**	**2.47**	**338**	*e*P	**Pn**	**22 49 56.1**	**+0.9**
WLF1				IAML		22 50 29.6	
	comp=E,75nm,0.2s						
WLF1				IAML		22 50 30.4	
	comp=N,62nm,0.3s						
LBWR	**Ladybower, Pea**	**2.49**	**16**	*e*P	**Pn**	**22 49 57.7**	**+2.1**
LBWR				IAML		22 50 32.5	
	comp=E,160nm,0.3s						
LBWR				IAML		22 50 32.7	
	comp=N,118nm,0.4s						
ROSF	**Rostrenen**	**2.69**	**186**	*e*Pn	**Pn**	**22 49 59.9**	**+1.6**
ROSF	**Rostrenen**	**2.69**	**186**	*e*Pg	**Pg**	**22 50 07.7**	**+0.2**
ROSF				*e*Sn	**Sn**	**22 50 31.0**	**+0.5**
ROSF				*e*Sg	**Sb**	**22 50 40.2**	**+4.0**
	comp=N,43nm,0.2s						
FLN	**La Foliniere**	**2.73**	**145**	*e*Pn	**Pn**	**22 50 00.5**	**+1.7**
	baz=324						
FLN	**La Foliniere**	**2.73**	**145**	*e*Pg	**Pg**	**22 50 08.5**	**+0.4**
	baz=330						
FLN				*e*Sg	**Sg**	**22 50 44.6**	**+1.2**
	comp=N,73nm,0.2s						
SGMF	**Saint Gilles**	**2.77**	**176**	*e*Pn	**Pn**	**22 50 00.9**	**+1.5**
SGMF				*e*Sn	**Sn**	**22 50 32.7**	**+0.4**
SGMF				*e*Sg	**Sg**	**22 50 45.3**	**+0.5**
	comp=N,48nm,0.3s						
GRR	**Gorron**	**2.93**	**153**	*e*Pn	**Pn**	**22 50 03.2**	**+1.6**
GRR	**Gorron**	**2.93**	**153**	*e*Pg	**Pg**	**22 50 13.2**	**+1.2**
GRR				*e*Sg	**Sg**	**22 50 49.5**	**-0.4**
	comp=N,41nm,0.2s						
LDF	**La Druitiere**	**3.00**	**143**	*e*Pn	**Pn**	**22 50 04.0**	**+1.4**
LDF	**La Druitiere**	**3.00**	**143**	*e*Pg	**Pg**	**22 50 13.5**	**+0.2**
LDF				*e*Sg	**Sg**	**22 50 52.5**	**+0.3**
	comp=N,45nm,0.3s						
QUIF	**Quistinic**	**3.11**	**184**	*e*Pn	**Pn**	**22 50 05.4**	**+1.4**
QUIF				*e*Sn	**Sn**	**22 50 40.7**	**+0.1**
QUIF				*e*Sg	**Sg**	**22 50 55.8**	**+0.2**
	comp=N,50nm,0.3s						
DSB	**Dublin**	**3.12**	**317**	Pn	**Pn**	**22 50 04.2**	**+0.1**
DSB					**Sn**	**22 50 39.2**	**-1.7**
ESK	**Eskdalemuir**	**4.32**	**357**	Pn	**Pn**	**22 50 21.3**	**+0.6**
ESK				IAML		22 50 56.1	
	comp=N,54nm,4.9s						
ESK				Sn	**Sn**	**22 51 06.3**	**-4.2**
ESK				IAML		22 53 13.8	
	comp=N,66nm,5.0s						
EKB	**Eskdalemuir**	**4.33**	**357**	Pn	**Pn**	**22 50 21.1**	**+0.2**
CLF	**Chambon-Foret**	**4.48**	**130**	Pn	**Pn**	**22 50 25.3**	**+2.5**
CLF				Sn	**Sn**	**22 51 18.1**	**+3.7**
UCC	**Uccle**	**4.57**	**90**	Pn	**Pn**	**22 50 27.0**	**+2.8**
UCC				IAML		22 51 28.1	
	comp=E,18nm,3.5s						
UCC				IAML		22 53 03.7	
	comp=N,29nm,4.7s						
UCC	**Uccle**	**4.57**	**90**	*d*P	**Pn**	**22 50 27.6**	**+3.5**
UCC				*d*S	**Sn**	**22 51 16.0**	**-0.8**
BAIF	**Baives**	**4.61**	**99**	*e*Pn	**Pn**	**22 50 26.8**	**+2.2**
BAIF				*e*Sn	**Sn**	**22 51 16.5**	**-1.1**
	comp=N,6.4nm,0.2s						
BAIF				*e*Sg	**Sg**	**22 51 43.4**	**-0.2**
	comp=N,6.7nm,0.4s						
MFF	**Saint Martin d**	**4.76**	**157**	*e*Pn	**Pn**	**22 50 27.4**	**+0.7**
MFF	**Saint Martin d**	**4.76**	**157**	*e*Pn	**Pn**	**22 50 27.5**	**+0.7**
	baz=340						
MFF				*e*Sn	**Sn**	**22 51 18.7**	**-2.8**
	comp=N,2.9nm,0.2s						
MFF				*e*Sn	Sb	22 51 19.0	-17
	comp=N,5.5nm,0.2s						
GIVF	**Givet**	**4.98**	**98**	*e*Pn	**Pn**	**22 50 31.1**	**+1.4**
GIVF				*e*Sn	**Sn**	**22 51 25.7**	**-1.2**
	comp=N,16nm,0.3s						
GIVF				*e*Sg	**Sg**	**22 51 56.7**	**+1.1**
	comp=N,7.1nm,0.2s						
HYF	**Humbligny**	**5.20**	**134**	*e*Pn	**Pn**	**22 50 33.4**	**+0.6**
HYF	**Humbligny**	**5.20**	**134**	*e*Pg	**Pg**	**22 50 55.4**	**0.0**
SAVF	**Savonnieres en**	**5.70**	**112**	*e*Pn	**Pn**	**22 50 41.2**	**+1.6**
	baz=298						
SAVF				*e*Sn	**Sn**	**22 51 40.9**	**-3.6**
	comp=N,11nm,0.3s						
MEZF	**Maizieres J’vi**	**5.71**	**113**	*e*Pn	**Pn**	**22 50 41.8**	**+2.1**
MEZF				*e*Sn	**Sn**	**22 51 42.0**	**-2.8**
	comp=N,5.2nm,0.3s						
MEZF				*e*Sg	**Sg**	**22 52 18.5**	**-0.4**
	comp=N,8.5nm,0.2s						
BTNL	**Ternell**	**5.71**	**91**	*d*P	**Pn**	**22 50 41.6**	**+1.7**
BTNL				*d*S	**Sn**	**22 51 43.5**	**-1.4**
SSF	**Saint Saulge**	**5.75**	**131**	*e*Pn	**Pn**	**22 50 41.7**	**+1.3**
SSF	**Saint Saulge**	**5.75**	**131**	*e*Pg	**Pg**	**22 51 05.5**	**-0.5**
SSF				*e*Sn	**Sn**	**22 51 43.1**	**-2.9**
SSF				*e*Sg	**Sg**	**22 52 18.3**	**-2.1**
	comp=N,10nm,0.3s						
LOR	**Lormes**	**5.78**	**128**	*e*Pn	**Pn**	**22 50 42.2**	**+1.4**
	baz=312						
LOR				*e*Sn	**Sn**	**22 51 42.8**	**-3.9**
LOR				*e*Sg	**Sg**	**22 52 19.0**	**-2.3**
	comp=N,13nm,0.3s						
TCF	**Toulx Ste Croi**	**5.80**	**143**	*e*Pn	**Pn**	**22 50 42.0**	**+1.0**
TCF				*e*Sn	**Sn**	**22 51 42.6**	**-4.5**
TCF				*e*Sg	**Sg**	**22 52 19.7**	**-2.1**
	comp=N,7.0nm,0.4s						
BGF	**Bois d'Agland**	**5.84**	**138**	*e*Pn	**Pn**	**22 50 43.2**	**+1.7**
BGF				*e*Sn	**Sn**	**22 51 44.3**	**-3.7**
BGF				*e*Sg	**Sg**	**22 52 23.7**	**+0.7**
	comp=N,64nm,0.4s						
SFTF	**Sexfontaines**	**5.85**	**116**	*e*Pn	**Pn**	**22 50 42.9**	**+1.2**
	baz=303						
SFTF				*e*Sn	**Sn**	**22 51 45.1**	**-3.2**
SFTF				*e*Sg	**Sg**	**22 52 23.2**	**-0.3**
	comp=N,1.9nm,0.2s						
AVF	**Avril sur Loir**	**5.88**	**134**	*e*Pn	**Pn**	**22 50 43.6**	**+1.5**

AVF				eSn	Sn	22 51 44.4	-4.7
AVF				eSg	Sg	22 52 22.5	-2.0
	comp=N,5.1nm,0.3s						
WLF	Walferdange	5.92	100	Pn	Pn	22 50 46.0	+3.3
WLF	Walferdange	5.92	100	dP	Pn	22 50 46.0	+3.3
PAGF	Fort de Pagny	6.08	111	ePn	Pn	22 50 46.4	+1.6
	baz=297						
PAGF				eSg	Sg	22 52 30.0	-0.7
	comp=N,7.2nm,0.2s						
SMF	Signal de Mont	6.21	132	ePn	Pn	22 50 48.2	+1.5
SMF				eSn	Sn	22 51 54.3	-3.0
SMF				eSg	Sg	22 52 34.3	-0.9
	comp=N,4.7nm,0.3s						
RJF	Les Rejaudoux	6.42	151	ePn	Pn	22 50 50.6	+1.1
RJF				eSn	Sn	22 51 57.1	-5.2
LFF	La Frestale	6.54	157	ePn	Pn	22 50 51.6	+0.5
LFF				eSn	Sn	22 52 01.5	-3.7
LFF				eSg	Sg	22 52 45.0	-0.5
	comp=N,5.9nm,0.3s						
HAU	Haudompre	6.71	113	ePn	Pn	22 50 54.7	+1.2
HAU				eSn	Sn	22 52 03.9	-5.5
HAU				eSg	Sg	22 52 49.5	-1.4
	comp=N,6.1nm,0.3s						
CAF	Calviac	6.93	150	ePn	Pn	22 50 57.2	+0.7
CAF				eSn	Sn	22 52 09.3	-5.6
CDF	Champ du Feu	7.07	108	ePn	Pn	22 50 59.9	+1.4
CDF				eSn	Sn	22 52 15.2	-3.2
CDF				eSg	Sg	22 53 00.3	-2.1
	comp=N,1.7nm,0.2s						
ECH	Echery	7.08	109	Pn	Pn	22 51 01.5	+2.8
HINF	Hinteralfeld	7.09	113	ePn	Pn	22 51 00.2	+1.4
HINF				eSn	Sn	22 52 13.2	-5.8
HINF				eSg	Sg	22 53 01.3	-2.0
	comp=N,3.5nm,0.3s						
CABF	La Chapelle	7.36	123	ePn	Pn	22 51 03.6	+1.0
CABF				eSg	Sg	22 53 11.6	-0.4
	comp=N,3.4nm,0.4s						
SSB	Saint Sauveur	7.57	136	Pn	Pn	22 51 06.9	+1.5
BFO	Black Forest	7.74	106	Pn	Pn	22 51 09.5	+1.9
VIVF	Saint-Julien-l	7.96	138	ePn	Pn	22 51 12.3	+1.5
SJPF	Ste Jean	7.98	171	ePn	Pn	22 51 11.4	+0.4
SJPF				eSn	Sn	22 52 34.1	-6.7
SENIN	Lac Senin/Sane	8.17	121		Pn	22 51 15.3	+1.5
ETSF	Etsaut	8.27	168	ePn	Pn	22 51 14.5	-0.5
EPF	Esparros	8.28	164	ePn	Pn	22 51 15.6	+0.5
LASF	Ste Croix	8.29	144	ePn	Pn	22 51 16.7	+1.5
MTLF	Montolieu	8.41	154	ePn	Pn	22 51 17.5	+0.6
LPL	La Plagne	8.43	127	ePn	Pn	22 51 19.4	+2.1
LPG	La Plagne	8.45	127	ePn	Pn	22 51 19.8	+2.1
ORIF	Oris-en-Rattie	8.45	133	ePn	Pn	22 51 19.3	+1.8
BNI	Bardonecchia	8.73	129	Pn	Pn	22 51 24.3	+2.9
CEST	Esterri de Car	8.87	160	Pn	Pn	22 51 27.0	+3.6
MBDF	Montbardon	9.02	130	ePn	Pn	22 51 28.1	+2.8
TUE	Stuetta	9.25	115	Pn	Pn	22 51 32.2	+3.6
CORI	Orista	9.65	158	Pn	Pn	22 51 35.7	+1.9

IDC ***05*** *22:52:05.3±0.7, 43.°36N×147.°86E, h0^{km}, mb4.1/22, mbtmp4.1/27, ML3.5/5, MS3.4/6, Error ellipse: s-maj=17.8km s-min=14.2km az=161.0*

MOS ***05*** *22:52:06.0±1.0, 43.°28N×147.°91E, h18^{km}, mb4.7/23, Error ellipse: s-maj=8.1km s-min=6.3km az=118.5*

NIED ***05*** *22:52:07.2, 43.°28N×147.°78E, h10^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.07; $M_{\theta\theta}$-0.09; $M_{\phi\phi}$-0.98; $M_{r\theta}$0.93; $M_{\theta\phi}$-0.99; $M_{\phi r}$0.67; Fault plane solution: $M_0$1.79000×10^{15} NP1: ϕ_s188.00000°, δ30.00000°, λ51.00000°. NP2: ϕ_s51.00000°, δ67.00000°, λ110.00000°.*

SKHL ***05*** *22:52:07.3±0.2, 43.°30N×148.°10E, h33^{km}±4^{km}, mb5.3/3*

JMA ***05*** *22:52:07.2±0.3, 43°N±1°×14°8E±°, h10^{km}, MV4.4/32, E OFF HOKKAIDO*

NEIC ***05*** *22:52:08.2±1.2, 43.°35N±0.°08×147.°79E±0.°08, h10^{km}±1^{km}, mb4.3/108, Error ellipse: s-maj=13.9km s-min=9.1km az=201.0*

ISC 05 22:52:06.9±2.0**, 43.°32N**±0.°05×**147.°87E**±0.°04**, h10**^{km}±12^{km}**, n272, σ1^{s}37**/280**, mb4.4**/97**, MS3.6**/4**, 10C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.93	306	eP	Pn	22 52 34.0	+7.9
SHO				AMB	AMB	22 52 35.3	
	3μm,0.4s						
SHO				eS	Sn	22 52 48.2	+8.7
SHO				A	A	22 52 49.8	
	17μm,0.5s						
SHO				A	A	22 52 49.8	
	14μm,0.5s						
NEM2	Nemuro 2	1.55	272	eP	Pn	22 52 34.1	-0.4
NEM2				eS	Sn	22 52 53.6	-1.1
NMR	Nemuro--Hokkai	1.56	272	⇑iPN	Pn	22 52 34.2	-0.5
NMR				eS	Sg	22 52 56.7	-0.4
NMR	Nemuro--Hokkai	1.56	272	i P	Pn	22 52 34.4	-0.3
NMR				eS	Sn	22 52 54.9	-0.1
YUK	Yuzh-Kuril'sk	1.62	297	i PN	Pn	22 52 35.3	-0.2
YUK	Yuzh-Kuril'sk	1.62	297	eP	Pn	22 52 35.3	-0.2
YUK				AMB	AMB	22 52 36.7	
	830nm,0.3s						
YUK				eS	Sn	22 52 56.2	-0.3
YUK				A	A	22 53 01.2	
	4μm,0.5s						
YUK				A	A	22 53 01.2	
	5μm,0.5s						
GLVR	Golovnino	1.76	284	ePN	Pn	22 52 37.5	+0.1
GLVR				eS	Sn	22 53 00.1	+0.2
GLVR				pmax	pmax		
	comp=N,282nm,0.3s						
GLVR				pmax	pmax		
	comp=E,251nm,0.3s						
GLVR				pmax	pmax		
	comp=Z,335nm,0.3s						
GLVR				smax	smax		
	comp=N,2μm,0.3s						
GLVR				smax	smax		
	comp=E,3μm,0.4s						
GLVR	Golovnino	1.76	284	eP	Pn	22 52 37.5	+0.1
GLVR				AMB	AMB	22 52 39.1	
	comp=E,340nm,0.3s						
GLVR				eS	Sn	22 53 00.1	+0.2
GLVR				A	A	22 53 06.6	
	comp=E,2μm,0.4s						
GLVR				A	A	22 53 06.6	
	comp=E,3μm,0.4s						
KUR	Kuril'sk	1.91	360	ePN	Pn	22 52 39.0	-0.5
KUR				i S	Sn	22 53 01.7	-1.9
KUR				pmax	pmax		
	comp=N,212nm,0.4s						
KUR				pmax	pmax		
	comp=E,122nm,0.4s						
KUR				pmax	pmax		
	comp=Z,264nm,0.4s						
KUR				smax	smax		
	comp=N,759nm,0.4s						
KUR				smax	smax		
	comp=E,711nm,0.4s						
KUR	Kuril'sk	1.91	360	eP	Pn	22 52 38.4	-1.1
KUR				AMB	AMB	22 52 40.8	
	comp=E,290nm,0.4s						
KUR				eS	Sn	22 53 00.5	-3.1
KUR				A	A	22 53 08.7	
	comp=E,870nm,0.5s						
KUR				A	A	22 53 08.7	
	comp=E,1μm,0.5s						
JKHN	Kushirohamanak	2.00	264	eP	Pn	22 52 41.1	+0.5
JKHN				eS	Sn	22 53 05.5	-0.2
RUSJ	Misakicho	2.06	293	ePN	Pn	22 52 42.5	+1.0
RUSJ				S	Sb	22 53 09.1	-0.8
JRA	Rausu	2.09	288	eP	Pn	22 52 42.2	+0.3
JNSB	Nemuroshibetsu	2.13	283	eP	Pn	22 52 42.9	+0.4
AKK	Akkeshi	2.24	263	eP	Pn	22 52 44.0	0.0
JNK	Nakash	2.31	278	eP	Pn	22 52 45.0	0.0
JAK	Akkeshi	2.34	263	eP	Pn	22 52 45.3	-0.1
JAK				eS	Sn	22 53 12.5	-1.8
JTKR	Abashiri--Toko	2.95	284	eP	Pn	22 52 54.8	+1.0
JOB	Onbets	2.98	263	P	Pn	22 52 54.5	+0.3
JAR	Ashorobuto	2.99	271	eP	Pn	22 52 54.6	+0.2
JMP	Maruseppu	3.34	283	eP	Pn	22 53 00.8	+1.6
JCH	Churui	3.38	259	eP	Pn	22 53 00.3	+0.6
JCH				eS	Sn	22 53 38.2	-1.7
JEM	Erimo	3.71	251	eP	Pn	22 53 05.5	+1.2
JEM				eS	Sn	22 53 47.8	-0.3
ERM	Erimo	3.71	251		Pn	22 53 05.9	+1.6
ERM	Erimo	3.71	251	PN	Pn	22 53 05.9	+1.6
JKK2	Kamakawa 2	3.76	280	eP	Pn	22 53 07.8	+2.9
JKA	Kamikawa-asahi	3.90	284		Pn	22 53 09.5	+2.6
ASAJ	Asahikawa	3.90	284	Pn	Pn	22 53 08.3	+1.4
	comp=E,7.7nm,0.3s,baz=101,slow=6.3,SNR=19						
ASAJ				Sn	Sn	22 53 55.0	+2.3
	comp=E,3.4nm,0.3s,baz=230,slow=21,SNR=1.5						
	comp=E,15nm,0.4s						
JNBK	Urakawa-nobuka	3.91	256	eP	Pn	22 53 07.3	+0.4
YSS	Yuzhno-Sakhali	5.12	317	Pn	Pn	22 53 24.7	+1.0
YSS	Yuzhno-Sakhali	5.12	317	ePN	Pn	22 53 24.9	+1.3
YSS	Yuzhno-Sakhali	5.12	317	eP	Pn	22 53 25.0	+1.3
YSS				eS	Sn	22 54 22.9	0.0
JTM	Tenmabayashi	5.66	246		Pn	22 53 31.2	+0.1
TYV	Tymovskoe	8.34	337	eP	Pn	22 54 10.7	+3.0
MJA0	Matsu Arr-Jizo	10.02	231	ePN	Pn	22 54 32.0	+1.1
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MJAR	Matsushiro Arr	10.04	231	Pn	Pn	22 54 30.3	-0.8
	comp=Z,0.1nm,0.3s,baz=28,slow=14,SNR=7.0						
	comp=Z,1.6nm,0.7s						
MJB9	Matsu-Tunnel	10.04	231	Pn	Pn	22 54 31.5	+0.3
MAJO	Matsushiro	10.04	231	Pn	Pn	22 54 30.7	-0.5
MAJO	Matsushiro	10.04	231	PN	Pn	22 54 30.7	-0.5
JGF	Kuroka	11.20	230	Pn	Pn	22 54 47.1	+0.1
USRK	Ussuriysk Ar.	11.52	280	Pn	Pn	22 54 50.9	-0.5
	comp=Z,0.2nm,0.3s,baz=93,slow=10,SNR=2.4						
	comp=Z,1.9nm,0.7s						
PEA0B	Petropavlovsk-	11.77	30	Pn	Pn	22 54 55.7	+0.9
PEA0B	Petropavlovsk-	11.77	30	PN	Pn	22 54 55.7	+0.9
PETK	Petropavlovsk-	11.77	30	Pn	Pn	22 54 54.2	-0.6
	comp=Z,0.5nm,0.3s,baz=34,slow=11,SNR=5.1						
	comp=Z,3.3nm,0.7s						
PETK	Petropavlovsk-	11.77	30	Pn	Pn	22 54 55.2	+0.5
PETK	Petropavlovsk-	11.77	30	PN	Pn	22 54 55.2	+0.5
BNX	BinXian	14.79	286	⇑P	Pn	22 55 35.0	-1.1
BNX				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MA2	Magadan	16.37	5	LR	LR	23 02 37.5	
	comp=Z,102nm,18.9s,baz=206,slow=39						
JNU	Nakatsue	16.76	238	LR	LR	23 02 34.5	
	comp=Z,118nm,18.3s,baz=4.5,slow=38						
SEY	Seymchan	19.82	6	P	P	22 56 37.1	-0.2
	comp=Z,0.3nm,0.3s,baz=182,slow=20,SNR=2.3						
SEY				LR	LR	23 04 00.3	
	comp=Z,84nm,18.1s,baz=148,slow=36						
	comp=Z,3.3nm,0.7s						
HILR	Hailar Array B	20.28	298	P	P	22 56 39.6	-3.0
	comp=Z,1.9nm,0.3s,baz=92,slow=11,SNR=11						
YAK	Yakutsk	21.60	336	LR	LR	23 05 25.8	
	comp=Z,65nm,19.0s,baz=109,slow=37						
YAK	Yakutsk	21.60	336	eP	P	22 56 51.1	-5.5
YAK				pmax	pmax		
	comp=Z,12nm,0.8s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.4s						
KIWB	Kanaga Island	24.89	58	P	P	22 57 29.4	-0.2
H11N2	WAKE ISLAND Hy	28.44	140	T	T	23 28 51.6	
	baz=330,slow=75,SNR=77						
H11N1	WAKE ISLAND Hy	28.45	140	T	T	23 28 50.1	
	baz=330,slow=75,SNR=77						
H11N3	WAKE ISLAND Hy	28.45	140	T	T	23 28 56.3	
	baz=330,slow=75,SNR=54						
ULN	Ulaanbaatar	28.68	293	P	P	22 58 04.6	+0.6
ULN	Ulaanbaatar	28.68	293	ceP	P	22 58 03.8	-0.2
ULN				pmax	pmax		
	comp=Z,17nm,1.7s						
ULN	Ulaanbaatar	28.68	293	eP	P	22 58 03.8	-0.2
SONM	Songino Array	29.12	294	P	P	22 58 07.7	-0.2
	comp=Z,5.6nm,0.6s,baz=86,slow=8.2,SNR=32						
	comp=Z,5.6nm,0.6s						
SONM	Songino Array	29.12	294	P	P	22 58 08.0	+0.1
SONM				IAmb	IAmb	22 58 09.2	
	comp=Z,4.3nm,0.8s						
SONM	Songino Array	29.12	294	eP	P	22 58 08.6	+0.7
SONM				pmax	pmax		
	comp=Z,6.0nm,0.6s						
H11S1	WAKE ISLAND Hy	29.41	141	T	T	23 30 02.7	
	baz=331,slow=76,SNR=188						
H11S3	WAKE ISLAND Hy	29.41	141	T	T	23 29 55.9	
	baz=331,slow=76,SNR=110						
H11S2	WAKE ISLAND Hy	29.42	141	T	T	23 30 14.2	
	baz=331,slow=76,SNR=99						
J14K	Nanvaranak Lak	33.98	38	P	P	22 58 52.5	+2.2
LZH	Lanzhou	34.31	273	eP	P	22 58 54.7	+1.0
LZH				pP	pwP	22 59 04.5	+3.3
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZDM	Lanzhou Array	34.48	273	P	P	22 58 54.2	-1.1
	comp=Z,1.0nm,0.3s,baz=64,slow=3.4,SNR=6.3						
	comp=Z,1.0nm,0.3s						
C16K	Lisburne Hills	34.86	28	P	P	22 58 59.1	+1.3
C16K				IAmb	IAmb	22 59 11.8	
	comp=Z,4.9nm,0.9s						
G16K	Koyuk River	35.10	34	P	P	22 59 01.7	+1.8
G16K				IAmb	IAmb	22 59 05.3	
	comp=Z,3.0nm,1.0s						
N15K	Kwethluk River	35.26	43	P	P	22 59 02.0	+0.6
N15K				IAmb	IAmb	22 59 02.4	
	comp=Z,6.7nm,0.9s						
GTA	Gaotai	35.88	281	eP	P	22 59 08.0	+0.9
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
J17K	VABM Dome	36.10	38	P	P	22 59 10.9	+2.3
J17K				IAmb	IAmb	22 59 20.3	
	comp=Z,6.2nm,1.2s						
K17K	Iditarod	36.37	39	P	P	22 59 10.2	-0.6
K17K				IAmb	IAmb	22 59 23.2	
	comp=Z,6.6nm,1.1s						
C18K	Utukok River	36.43	29	P	P	22 59 12.2	+0.8
C18K				IAmb	IAmb	22 59 24.3	
	comp=Z,6.7nm,0.8s						
M17K	Holitna River	36.65	41	P	P	22 59 16.2	+2.9
M17K				IAmb	IAmb	22 59 29.6	
	comp=Z,8.8nm,0.9s						
H18K	Honhosa River	36.69	35	P	P	22 59 14.7	+1.1
H18K				IAmb	IAmb	22 59 16.2	
	comp=Z,4.2nm,1.0s						
G18K	Tagagawik	36.70	34	P	P	22 59 15.4	+1.7
G18K				IAmb	IAmb	22 59 30.3	
	comp=Z,4.4nm,0.9s						
F19K	Shaleruckik Mo	37.24	32	P	P	22 59 19.7	+1.5
F19K				IAmb	IAmb	22 59 34.0	
	comp=Z,5.1nm,1.1s						
N18K	Kilae Creek	37.37	42	P	P	22 59 21.4	+2.0
G19K	Purcell Mounta	37.38	33	P	P	22 59 20.5	+1.1
D19K	Kuna River	37.48	29	P	P	22 59 21.1	+0.8
D19K				IAmb	IAmb	22 59 35.1	
	comp=Z,8.8nm,0.9s						
H19K	Roundabout Mou	37.54	34		P	22 59 21.7	+1.0
H19K				IAmb	IAmb	22 59 35.0	
	comp=Z,7.1nm,0.9s						
E19K	Redstone River	37.57	31		P	22 59 22.2	+1.2
E19K				IAmb	IAmb	22 59 35.8	
	comp=Z,5.1nm,0.9s						
J19K	Poorman	37.70	37	P	P	22 59 23.1	+0.9
L19K	White Mountain	37.92	40	P	P	22 59 25.5	+1.4
D20K	Etivluk River	38.06	29		P	22 59 26.1	+0.9
D20K				IAmb	IAmb	22 59 40.2	
	comp=Z,8.3nm,0.8s						
F20K	Avaraart Lake	38.07	32	P	P	22 59 26.4	+1.2
B20K	Meade River	38.18	27	P	P	22 59 26.9	+0.8
J20K	Nowinta River	38.37	37	P	P	22 59 29.1	+1.4
IMAR	Indian Mountai	38.70	34	P	P	22 59 32.3	+1.7
B21K	Ikpikpuk River	38.95	28		P	22 59 33.8	+1.2
E21K	Killik River	38.96	30	P	P	22 59 33.8	+1.0
E21K				IAmb	IAmb	22 59 48.0	
	comp=Z,4.1nm,0.8s						
H21K	Melozitna Rive	39.06	34	P	P	22 59 33.9	+0.3
PPLA	Purkeypile	39.18	39	P	P	22 59 37.2	+2.5
PPLA				IAmb	IAmb	22 59 52.7	
	comp=Z,8.2nm,1.2s						
D22K	Ayikyak River	39.50	29	P	P	22 59 38.4	+1.1
B22K	Teshekpuk Lake	39.50	27		P	22 59 37.8	+0.7
H22K	Ishtalitna Cre	39.66	34	P	P	22 59 40.3	+1.6
E22K	Anaktuvuk Pass	39.71	31		P	22 59 40.4	+1.4
E22K				IAmb	IAmb	22 59 53.6	
	comp=Z,4.8nm,0.8s						
L22K	Petersville	39.83	39	P	P	22 59 40.8	+0.7
SUA	Susitna One	39.87	41	P	P	22 59 42.3	+1.8
SUA				IAmb	IAmb	22 59 51.5	
	comp=Z,11nm,1.2s						
TRF	Thorofare Moun	40.05	38	P	P	22 59 43.9	+1.8
D23K	Nanushuk River	40.23	29	P	P	22 59 45.0	+1.8
C23K	Itkillik River	40.37	28		P	22 59 45.5	+1.2
C23K				IAmb	IAmb	22 59 45.7	
	comp=Z,5.0nm,1.0s						
H23K	Yukon River	40.41	34	P	P	22 59 46.2	+1.3
H23K				IAmb	IAmb	23 00 00.3	
	comp=Z,3.7nm,0.9s						
O22K	Cooper Landing	40.42	43	P	P	22 59 46.2	+1.4
E23K	Chandalar	40.52	31	P	P	22 59 46.8	+1.0
E23K				IAmb	IAmb	23 00 03.9	
	comp=Z,6.2nm,1.0s						
TOLK	Toolik Lake Re	40.59	30	P	P	22 59 47.4	+1.1
GHO	Glory Hole Cre	40.72	41	P	P	22 59 49.1	+1.6
GHO				IAmb	IAmb	23 00 03.9	
	comp=Z,8.4nm,1.0s						
GOMU	GeErMu	40.82	279	P	P	22 59 50.0	+1.0
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
E24K	Your Creek	40.95	31	P	P	22 59 50.9	+1.6
E24K				IAmb	IAmb	23 00 04.1	
	comp=Z,5.2nm,0.8s						
SML	Sawmill	41.00	41	P	P	22 59 50.9	+1.1
SML				IAmb	IAmb	23 00 05.4	
	comp=Z,9.7nm,1.0s						
C24K	Franklin Bluff	41.01	28	P	P	22 59 50.7	+1.1
WRH	Wood River Hil	41.01	36	P	P	22 59 50.8	+1.0
WRH				IAmb	IAmb	23 00 03.7	
	comp=Z,5.5nm,1.0s						
DGZ	Jazzator, Alta	41.09	301	i P	P	22 59 49.5	-1.3
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.6s						
H24K	Noodor Dome	41.10	34	P	P	22 59 51.7	+1.1
CCB	Clear Creek Bu	41.13	36	P	P	22 59 52.1	+1.3
F24K	Squaw Lake	41.15	32	P	P	22 59 51.6	+0.7
DHY	Denali Highway	41.37	39	P	P	22 59 54.2	+1.2
HDA	Harding Lake	41.51	36	P	P	22 59 54.5	+0.7
IL31		41.52	36	P	P	22 59 54.4	+0.4
ILAR	Eielson Array	41.52	36	P	P	22 59 54.0	0.0
	comp=Z,0.6nm,0.9s,baz=254,slow=7.5,SNR=7.5						
	comp=Z,0.6nm,0.9s						
ILAR	Eielson Array	41.52	36	P	P	22 59 53.5	-0.5
ILAR	Eielson Array	41.52	36	P	P	22 59 53.5	-0.5
ZAA0	Zalesovo Array	41.67	308	P	P	22 59 55.4	0.0
ZALV	Zalesovo Beam	41.67	308	P	P	22 59 54.7	-0.6
	comp=Z,1.1nm,0.4s,baz=91,slow=5.0,SNR=7.4						
ZALV				PcP	PcP	23 01 52.1	+0.2
	comp=Z,0.3nm,0.4s,baz=88,slow=3.3,SNR=3.5						
	comp=Z,1.1nm,0.4s						
ZALV	Zalesovo Beam	41.67	308	P	P	22 59 55.2	-0.1
ZALV	Zalesovo Beam	41.67	308	eP	P	22 59 58.6	+3.3
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
D25K	Kavik River	41.80	29	P	P	22 59 57.1	+0.9
D25K				IAmb	IAmb	23 00 09.9	
	comp=Z,6.0nm,0.7s						
M24K	Tolsona, Glenn	42.00	40	P	P	23 00 00.6	+2.6
M24K				IAmb	IAmb	23 00 08.7	
	comp=Z,6.8nm,1.1s						
F25K	Christian Rive	42.01	32	P	P	22 59 59.5	+1.5
E25K	Arctic Village	42.04	31	P	P	23 00 00.2	+2.0
PRP	Porcupine Dome	42.08	35	P	P	23 00 00.7	+2.0
J25K	Salcha River,	42.18	36	P	P	23 00 00.5	+1.0
F26K	Sheenjek River	42.58	32	P	P	23 00 05.0	+2.4
G26K	Porcupine Rive	42.74	33	P	P	23 00 06.3	+2.4
G26K				IAmb	IAmb	23 00 22.8	
	comp=Z,6.2nm,0.9s						
WMQ	Urumqi	42.74	292	eP	P	23 00 06.8	+2.5
WMQ				LR	LR		
	comp=Z,140nm,24.0s						
DOT	Dot Lake	42.82	38	P	P	23 00 05.6	+1.0
J26L	Joseph Creek	42.97	36	P	P	23 00 05.8	-0.1
M26K	Nabesna, AK	43.44	39	P	P	23 00 10.9	+1.3
M26K				IAmb	IAmb	23 00 17.5	
	comp=Z,5.8nm,1.0s						
E27K	Coleen River	43.53	31	P	P	23 00 11.2	+0.9
MCARA	McCarthy VSAT	43.57	41	P	P	23 00 12.7	+2.0
G27K	Doyon Strip	43.58	33	P	P	23 00 13.1	+2.3
CRQM	Cirque	43.61	42	P	P	23 00 10.9	-0.3
K27K	Chicken	43.66	37	P	P	23 00 12.1	+0.8
K27K				IAmb	IAmb	23 00 26.6	
	comp=Z,6.0nm,0.9s						
H27K	Steamboat Moun	43.68	34	P	P	23 00 12.5	+0.9
I27K	Kandik River	43.70	35	P	P	23 00 13.5	+1.8
L27K	Beaver Creek,	43.89	38	P	P	23 00 14.6	+1.4
L27K				IAmb	IAmb	23 00 29.9	
	comp=Z,3.1nm,0.7s						
BCAR	Beaver Creek A	43.91	38	P	P	23 00 15.9	+2.5
F28M	Old Crow	44.22	32	P	P	23 00 17.1	+1.3
E28M	Babbage River	44.27	30	P	P	23 00 17.2	+1.0
E28M				IAmb	IAmb	23 00 30.7	
	comp=Z,2.4nm,0.8s						
BARN	Barnard Glacie	44.27	41	P	P	23 00 17.3	+0.7
BARN				IAmb	IAmb	23 00 20.1	
	comp=Z,5.3nm,1.0s						
GRNC	Granite Creek	44.29	42	P	P	23 00 18.6	+1.9
I28M	Miner Creek	44.41	35	P	P	23 00 19.1	+1.6
I28M				IAmb	IAmb	23 00 32.6	
	comp=Z,4.4nm,0.7s						
CTGM	Chitina Glacie	44.45	41	P	P	23 00 18.8	+0.9
E29M	Blow River	44.89	30	P	P	23 00 22.9	+1.8
E29M				IAmb	IAmb	23 00 36.1	
	comp=Z,6.5nm,0.9s						
H29M	Whitestone	44.95	33	P	P	23 00 24.2	+2.5
H29M				IAmb	IAmb	23 00 36.6	
	comp=Z,3.0nm,0.9s						
G29M	Pine Creek	45.00	32	P	P	23 00 23.5	+1.4
G29M				IAmb	IAmb	23 00 34.2	
	comp=Z,2.3nm,0.8s						
MK31	Makanchi Array	45.25	298	ceP	P	23 00 25.0	+0.7
MKAR	Makanchi Array	45.25	298	P	P	23 00 24.4	+0.1
	comp=Z,2.2nm,0.4s,baz=78,slow=8.7,SNR=47						
MKAR				LR	LR	23 20 19.5	
	comp=Z,95nm,19.0s,baz=28,slow=38						
	comp=Z,2.2nm,0.4s						
MAKZ	Makanchi	45.44	298	P	P	23 00 26.0	+0.2
MAKZ				IAmb	IAmb	23 00 26.6	
	comp=Z,5.6nm,0.9s						
MAKZ	Makanchi	45.44	298	P	P	23 00 26.0	+0.2
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
M29M	Somme Creek	45.52	39	P	P	23 00 28.3	+1.9
M29M				IAmb	IAmb	23 00 42.6	
	comp=Z,2.6nm,0.9s						
G30M	tAoh Zraii Nji	45.70	32		P	23 00 29.1	+1.5
G30M				IAmb	IAmb	23 00 42.5	
	comp=Z,3.6nm,0.8s						
F30M	Barrier River	45.77	31	P	P	23 00 31.3	+3.1
I30M	Mount Dempster	45.92	35		P	23 00 31.0	+1.5
J30M	Hart River	46.05	36	P	P	23 00 32.4	+1.8
J30M				IAmb	IAmb	23 00 45.4	
	comp=Z,2.3nm,0.8s						
KURK	Kurchatov	46.20	305		P	23 00 31.3	-0.4
KURK	Kurchatov	46.20	305	ceP	P	23 00 31.7	0.0
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KURK	Kurchatov	46.20	305	eP	P	23 00 31.7	0.0
KURBB	Kurchatov Arra	46.29	304	P	P	23 00 31.9	-0.4
	comp=Z,5.4nm,0.6s,baz=74,slow=8.8,SNR=24						
	comp=Z,5.4nm,0.6s						
HYT	Haines Junctio	46.31	41	P	P	23 00 35.3	+2.7
INK	Inuvik	46.51	30		P	23 00 35.4	+1.5
INK	Inuvik	46.51	30	P	P	23 00 35.4	+1.5
INK				pmax	pmax		
	comp=Z,3.0nm,0.4s						
F31M	Tsiigehtchic	46.58	31	P	P	23 00 36.5	+2.1
F31M				IAmb	IAmb	23 00 50.7	
	comp=Z,6.0nm,1.1s						
H31M	Peel River	46.64	34	P	P	23 00 36.3	+1.3
H31M				IAmb	IAmb	23 00 50.1	
	comp=Z,2.6nm,0.7s						
CMAR	Chiang Mai Arr	47.91	255	LR	LR	23 22 53.6	
	comp=Z,35nm,18.8s,baz=175,slow=39						
WUS	Wushi	49.53	292		P	23 00 58.4	+0.6
C36M	Paulatuk	49.61	28	P	P	23 00 59.0	+1.1
BVAR	Borovoye Array	50.18	310	P	P	23 01 02.4	0.0
	comp=Z,1.4nm,0.5s,baz=81,slow=9.1,SNR=17						
	comp=Z,1.4nm,0.5s						
BORK	Borovoye	50.21	310		P	23 01 03.0	+0.3
BORK				IAmb	IAmb	23 01 03.9	
	comp=Z,4.2nm,1.0s						
BORK	Borovoye	50.21	310	ceP	P	23 01 03.7	+1.0
BORK				pmax	pmax		
	comp=Z,5.0nm,1.7s						

TARG	Taragay, Kyrgy	50.24	294		P	23 01 04.4	+0.8
TARG				IAmb	IAmb	23 01 06.5	
	comp=Z,3.4nm,0.8s						
TARG	Taragay, Kyrgy	50.24	294	P	P	23 01 04.4	+0.8
TARG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KDJ	Kajisay	50.47	294	P	P	23 01 05.5	+0.4
KDJ				IAmb	IAmb	23 01 22.9	
	comp=Z,4.1nm,0.8s						
KDJ	Kajisay	50.47	294	P	P	23 01 05.5	+0.4
KDJ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
EVN	Everest	50.85	274		P	23 01 09.1	+0.5
BOOM	Boomskoye usch	51.13	295		P	23 01 10.8	+0.9
BOOM	Boomskoye usch	51.13	295	P	P	23 01 10.9	+0.9
BOOM				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AAK	Ala-Archa	52.01	296		P	23 01 16.9	+0.3
AAK				IAmb	IAmb	23 01 17.2	
	comp=Z,2.3nm,0.6s						
AAK	Ala-Archa	52.01	296	ceP	P	23 01 17.5	+0.9
AAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
AAK	Ala-Archa	52.01	296	eP	P	23 01 17.5	+0.9
KSH	Kashi	52.51	292	P	P	23 01 23.5	+3.3
KSH				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KK31	Karatay Array	54.38	298		P	23 01 33.8	0.0
KK31				IAmb	IAmb	23 01 34.6	
	comp=Z,4.4nm,0.8s						
KK31	Karatay Array	54.38	298	P	P	23 01 33.8	0.0
KK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KKAR	Karatay Array	54.38	298		P	23 01 33.8	0.0
KKAR	Karatay Array	54.38	298	P	P	23 01 33.8	0.0
ARTI	Arti	55.12	317		P	23 01 38.3	-0.6
ARTI	Arti	55.12	317	diP	P	23 01 37.6	-1.4
ARTI						23 02 39.2	
ARTI						23 03 38.9	
ARTI				S	S	23 09 21.0	-0.5
ARTI				SS	SS	23 13 02.2	-2.5
ARTI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
RES	Resolute Bay	55.23	17	P	P	23 01 39.7	+0.3
RES				IAmb	IAmb	23 01 40.3	
	comp=Z,6.6nm,1.1s						
RES	Resolute Bay	55.23	17	P	P	23 01 39.7	+0.3
RES				pmax	pmax		
	comp=Z,7.0nm,1.1s						
YKAW3	Yellowknife Wh	55.83	34	P	P	23 01 45.4	+1.4
YKAW3				IAmb	IAmb	23 02 01.3	
	comp=Z,3.0nm,1.1s						
YKA	Yellowknife Ar	55.87	34	P	P	23 01 44.5	+0.3
	comp=Z,0.8nm,0.9s,baz=298,slow=7.7,SNR=5.7						
	comp=Z,0.8nm,0.9s						
YKA	Yellowknife Ar	55.87	34	eP	P	23 01 45.1	+0.9
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CHGR	Chuyangaron	57.51	294		P	23 01 56.6	+0.2
CHGR	Chuyangaron	57.51	294	P	P	23 01 56.6	+0.2
CHGR				pmax	pmax		
	comp=Z,16nm,0.8s						
AB31	Akbulak array	57.74	309		P	23 01 57.9	+0.2
ABKAR	Akbulak array	57.74	309		P	23 01 57.9	+0.2
KIRV	Kirov	58.25	322	ceP	P	23 02 01.9	+0.8
SHAA	Shahritus	58.78	294		P	23 02 05.9	+0.6
SHAA				IAmb	IAmb	23 02 06.3	
	comp=Z,15nm,0.5s						
ARCES	ARCESS Array B	59.83	340	P	P	23 02 10.2	-1.7
	comp=Z,2.4nm,0.7s,baz=50,slow=5.4,SNR=14						
	comp=Z,2.4nm,0.7s						
ARCES	ARCESS Array B	59.83	340	eP	P	23 02 11.0	-0.9
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KLMR	Klimovskoe	61.08	328	eP	P	23 02 17.3	-3.2
KLMR				e		23 03 01.2	
KLMR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WRA	Warramunga Arr	64.17	194	P	P	23 02 40.6	-1.0
	comp=Z,0.9nm,0.9s,baz=14,slow=6.7,SNR=6.4						
	comp=Z,0.9nm,0.9s						
WRA	Warramunga Arr	64.17	194	eP	P	23 02 41.7	+0.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FINES	FINESS Array B	65.49	333	P	P	23 02 48.7	-1.1
	comp=Z,5.8nm,0.7s,baz=43,slow=6.7,SNR=18						
	comp=Z,5.8nm,0.7s						
FINES	FINESS Array B	65.49	333	eP	P	23 02 49.3	-0.5
FINES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
OBN	Obninsk	65.97	324	ceP	P	23 02 52.4	-0.5
OBN				e		23 05 22.2	
OBN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
OBN	Obninsk	65.97	324	eP	P	23 02 53.1	+0.2
NVAR	Mina Array Bea	67.36	58	P	P	23 03 02.5	0.0
	comp=Z,0.1nm,0.3s,baz=312,slow=5.1,SNR=1.8						
	comp=Z,0.1nm,0.3s						
ASAR	Alice Springs	67.89	194	P	P	23 03 06.6	+1.1
	comp=Z,0.4nm,0.6s,baz=207,slow=21,SNR=7.0						
	comp=Z,0.4nm,0.6s						
PDAR	Pinedale Array	69.78	50	P	P	23 03 17.3	-0.2
	comp=Z,0.1nm,0.5s,baz=301,slow=1.8,SNR=4.5						
	comp=Z,0.1nm,0.5s						
NB2	NORSAR Subarra	70.19	339	P	P	23 03 19.2	-0.2
	comp=Z,2.0nm,0.5s,baz=30,slow=6.5						
NOA	NORSAR Array B	70.19	339	P	P	23 03 19.3	-0.2
	comp=Z,2.3nm,0.5s,baz=33,slow=6.5,SNR=13						
	comp=Z,2.3nm,0.5s						
NCK	Nalchik	70.25	311	iP	P	23 03 20.4	+0.3
NCK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HFS	Hagfors	70.28	338	P	P	23 03 19.5	-0.5
	comp=Z,5.1nm,0.5s,baz=46,slow=6.4,SNR=30						
	comp=Z,5.1nm,0.5s						
KIV	Kislovodsk	70.44	312	eP	P	23 03 22.3	+0.9
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KIV	Kislovodsk	70.44	312	eP	P	23 03 22.3	+0.9
KBZ	Khabaz	70.47	312	P	P	23 03 22.3	+0.9
	comp=Z,7.0nm,0.8s,baz=86,slow=4.2,SNR=20						
	comp=Z,7.0nm,0.8s						
KBZ	Khabaz	70.47	312	iP	P	23 03 22.1	+0.7
KBZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KBZ	Khabaz	70.47	312	eP	P	23 03 22.1	+0.7
SHA1	Shidzhatmaz	70.60	312	iP	P	23 03 22.8	+0.3
AK03	Malin Array Si	72.22	324	P	P	23 03 31.5	-0.3
AKASG	Malin Array Be	72.23	324	P	P	23 03 31.8	-0.1
	comp=Z,2.1nm,0.4s,baz=40,slow=5.9,SNR=12						
	comp=Z,2.1nm,0.4s						
AKASG	Malin Array Be	72.23	324	P	P	23 03 32.1	+0.2
AKASG				IAmb	IAmb	23 03 33.6	
	comp=Z,2.4nm,0.8s						
AKBB	Malin Array Si	72.23	324	P	P	23 03 32.0	+0.1
AKBB	Malin Array Si	72.23	324	ceP	P	23 03 32.3	+0.4
AKBB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AKBB	Malin Array Si	72.23	324	P	P	23 03 31.3	-0.6
AK04	Malin Array Si	72.24	324	P	P	23 03 30.8	-1.2
AK01	Malin Array Si	72.25	324	P	P	23 03 31.1	-0.9
KIEV	Kiev	72.25	324	P	P	23 03 31.4	-0.6
KIEV	Kiev	72.25	324	P	P	23 03 31.4	-0.6
KIEV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIEV	Kiev	72.25	324	P	P	23 03 31.0	-1.0
AK22	Malin Array Si	72.25	324	P	P	23 03 31.4	-0.7
AK21	Malin Array Si	72.25	324	P	P	23 03 31.3	-0.8
AK09	Malin Array Si	72.27	324	P	P	23 03 31.7	-0.5
AK02	Malin Array Si	72.27	324	P	P	23 03 31.6	-0.6
AK11	Malin Array Si	72.27	324	P	P	23 03 31.6	-0.6
AK05	Malin Array Si	72.30	324	P	P	23 03 32.1	-0.3
AK12	Malin Array Si	72.31	324	P	P	23 03 32.1	-0.3
AK16	Malin Array Si	72.31	324	P	P	23 03 31.9	-0.5
AK19	Malin Array Si	72.31	324	P	P	23 03 31.7	-0.7
AK17	Malin Array Si	72.32	324	P	P	23 03 32.1	-0.3
AK06	Malin Array Si	72.33	324	P	P	23 03 32.1	-0.4
AK14	Malin Array Si	72.33	324	P	P	23 03 32.2	-0.3
AK07	Malin Array Si	72.35	324	P	P	23 03 32.2	-0.5
BUR08	Bucovina Ar. S	76.27	324	P	P	23 03 56.0	+0.3
BUR08				IAmb	IAmb	23 04 02.8	
	comp=Z,2.1nm,0.8s						
BURAR	Bucovina Array	76.29	324	P	P	23 03 55.3	-0.5
BURAR				IAmb	IAmb	23 04 09.4	
	comp=Z,3.1nm,0.8s						
LANS	Liptovska Anna	77.41	328	eP	P	23 04 03.4	+1.4
LANS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LANS	Liptovska Anna	77.41	328	eP	P	23 04 03.4	+1.4
CLL	Collm	77.93	333	eP	P	23 04 06.0	+1.2
CLL	Collm	77.93	333	eP	P	23 04 06.0	+1.2
BRTR	Keskin Array B	78.22	314	P	P	23 04 07.3	+0.5
	comp=Z,0.9nm,0.6s,baz=64,slow=4.3,SNR=6.1						
	comp=Z,0.9nm,0.6s						
EKA	Eskdalemuir Ar	78.68	344	P	P	23 04 08.2	-0.7
	comp=Z,1.9nm,0.6s,baz=22,slow=6.1,SNR=3.5						
	comp=Z,1.9nm,0.6s						
CONA	Conrad Observa	79.78	329	epP	P	23 04 15.8	+0.7
	comp=Z,0.5nm,0.3s						
KBA	Koelnbreinsper	81.41	330	epP	P	23 04 23.3	-0.7
	comp=Z,2.8nm,0.6s						
OBKA	Obir	81.45	329	eP	P	23 04 20.3	-3.9
	comp=Z,2.4nm,0.6s						
WTTA	Wattenberg	81.86	332	epP	P	23 04 26.2	-0.2
	comp=Z,0.9nm,0.5s						
MOTA	Moosalm	81.97	332	epP	P	23 04 26.9	-0.1
	comp=Z,1.2nm,0.5s						
MMAI	Mount Meron Ar	82.16	308	P	P	23 04 28.2	+0.1
	comp=Z,2.5nm,0.7s,baz=46,slow=4.2,SNR=4.9						
	comp=Z,2.5nm,0.7s						
TXAR	Lajitas Array	82.45	57	P	P	23 04 30.4	+0.7
	comp=Z,0.4nm,0.6s,baz=293,slow=4.4,SNR=5.9						
	comp=Z,0.4nm,0.6s						

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*TAP **05** 23:04:38.0, 23°.84N × 122°.75E, h21km, ML2.9, D*
*JMA **05** 23:04:38.4±0.2, 23°.9N±0°.9 × 122°.7E±0°.7, h27km, MV3.0/9, NW OFF ISHIGAKIJIMA IS*
ISC 05 23:04:37.5±1.1, **23°.78N**±0°.04 × **122°.74E**±0°.02, **h20**km±7km, **n69, σ0ˢ.96**/97, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	EOS4	0.51	311	eP	Pb	23 04 47.6	0.0
EOS3	EOS3	0.63	322	eP	Pb	23 04 50.1	+0.3
EOS3				eS	Sn	23 05 00.5	-0.1
EOS2	EOS2	0.79	324	iP	Pn	23 04 53.1	-0.2
EOS2				S	Sn	23 05 04.1	-0.3
HATJ	Hateruma jima	1.01	74	eS	Sb	23 05 09.4	+0.3
IRIF	Iriomote-Funau	1.06	58	P	Pn	23 04 57.2	+0.1
IRIF				eS	Sn	23 05 10.7	-0.5
EWUT	Wuta	1.10	307	iP	Pn	23 04 57.6	-0.2
ENA	Nanau	1.12	305	iP	Pn	23 04 57.9	0.0
NACB	Ninganchiao	1.12	291	P	Pn	23 04 57.3	-0.7
NACB	Ninganchiao	1.12	291	P	Pn	23 04 57.4	-0.6
ESAO	Su ao	1.14	314	iP	Pb	23 04 58.2	-0.3
ETM	Tongmen	1.16	279	eP	Pn	23 04 57.8	-0.8
ETM				eS	Sn	23 05 14.3	+0.5
TWC	Suao	1.16	315	iP	Pn	23 04 58.4	-0.2
TWC				eS	Sn	23 05 13.3	-0.4
ETLH	Xiulin Townshi	1.23	290	P	Pn	23 04 59.2	-0.3
JKRS	Kuro-shima	1.24	68	eP	Pb	23 05 00.3	0.0
JKRS				eS	Sn	23 05 16.9	+1.1
HGSD	Ruisui	1.24	257	P	Pn	23 04 59.0	-0.7
HGSD				S	Sn	23 05 13.2	-2.7
WARBT	Fenglin Townsh	1.25	267	P	Pn	23 04 58.9	-0.9
WARBT				eS	Sn	23 05 12.9	-3.0
NDS	Dongshan	1.26	312	P	Pb	23 05 00.6	0.0
EHYH	Wanrong	1.31	258	P	Pn	23 05 00.5	-0.2
EHY	Hungye	1.33	258	P	Pn	23 05 00.8	-0.2
LATG	Datong	1.34	304	P	Pb	23 05 01.7	-0.2
LATG				eS	Sb	23 05 19.6	+0.8
TWE	Neicheng	1.35	314	P	Pb	23 05 02.2	+0.1
ENTT	Nioudou	1.37	309	eP	Pb	23 05 02.4	-0.1
EYUL	Yuli	1.38	252	iP	Pn	23 05 01.5	0.0
YULB	Yu-li	1.38	254	P	Pn	23 05 01.6	0.0
YULB	Yu-li	1.38	254	eP	Pn	23 05 01.6	0.0
YULB				S	Sn	23 05 19.6	+0.2
TWF1	Yuli	1.39	252	iP	Pn	23 05 01.5	-0.3
NNSB	Datong	1.40	298	P	Pb	23 05 02.5	-0.4
NNSB				eS	Sb	23 05 20.5	0.0
WHF	Hehuan Shan	1.40	285	eP	Pn	23 05 02.0	-0.2
JIJ	Ishigaki jima	1.40	65	eP	Pb	23 05 02.5	-0.5
JIJ				eS	Sb	23 05 19.9	-0.6
NNS	Nan Shan	1.41	298	eP	Pn	23 05 02.7	+0.6
FUSB	Fushanzhiwuyua	1.43	313	eP	Pb	23 05 03.6	0.0
FUSB				eS	Sb	23 05 22.4	+0.9
OWD	Renai	1.45	277	eP	Pn	23 05 02.5	-0.2
OWD				eS	Sn	23 05 18.4	-2.7
FUSS	Fushou	1.45	289	eP	Pn	23 05 03.0	+0.3
TIPB	Shuangxi	1.45	325	P	Pb	23 05 04.6	+0.8
TIPB				eS	Sb	23 05 21.6	-0.3
FULB	Fuli	1.45	247	eP	Pn	23 05 02.0	-0.6
VWDT	VWDT	1.47	269	P	Pn	23 05 03.0	+0.2
WUSB	Renai	1.50	278	eP	Pn	23 05 03.6	+0.3
NWLT	Wulai	1.50	311	eP	Pb	23 05 05.0	+0.3
TWT	Tachien	1.51	288	eP	Pb	23 05 04.5	-0.3
SXI1	Grass Mountain	1.53	329	eP	Pb	23 05 04.5	-0.6
SXI1				eS	Sb	23 05 23.5	-0.6
YHNB	Yeheng	1.53	306	P	Pb	23 05 05.4	+0.2
YHNB	Yeheng	1.53	306	P	Pb	23 05 04.5	-0.6
YHNB				eS	Sb	23 05 23.7	-0.4
NSK	Sanguang	1.54	305	eP	Pn	23 05 04.6	+0.7
NSK				eS	Sb	23 05 24.2	-0.4
EHD	Haiduan	1.55	246	eP	Pn	23 05 02.5	-1.4
EHD				S	Sn	23 05 21.3	-2.1
SSLB	Suanglung	1.64	271	P	Pn	23 05 04.7	-0.5
SSLB	Suanglung	1.64	271	eP	Pn	23 05 05.5	+0.4
JISG	Ishigakijimahi	1.64	60	eP	Pb	23 05 06.5	-0.5
JISG				eS	Sb	23 05 26.9	-0.3
TATO	Taipei	1.65	316	P	Pb	23 05 10.5	+3.3
YUS	Yu-Shan	1.67	260	eP	Pn	23 05 06.4	+0.4
YUS				S	Sn	23 05 27.3	+0.3
SMLT	Sun Moon Lake	1.69	274	eP	Pn	23 05 06.6	+0.6
ELDTW	Lidau	1.69	250	eP	Pn	23 05 05.7	-0.3
ELDTW				eS	Sn	23 05 26.1	-0.9
NFF	Wufeng Townshi	1.71	300	eP	Pb	23 05 07.9	-0.3
WHP	Taichung City	1.71	287	eP	Pb	23 05 08.5	+0.1
WHYT	Xinyi Township	1.73	268	eP	Pn	23 05 07.4	+0.9
ZUZH	Zhuzihu	1.75	322	eP	Pb	23 05 08.9	-0.1
LIOB	Emei	1.79	299	eP	Pb	23 05 09.5	-0.2
ALS	Alishan	1.80	262	P	Pn	23 05 08.6	+1.0
ALS				eS	Sn	23 05 30.8	+0.8
NSTT	Nanjuang	1.80	298	eP	Pb	23 05 09.6	-0.1
NSTT				eS	Sn	23 05 29.4	-0.3
TWGBT	Beinan	1.81	238	eP	Pn	23 05 07.5	+0.1
TWGBT				eS	Sn	23 05 29.1	-0.7
TWG	Pinlang	1.81	238	eP	Pn	23 05 07.6	+0.1
TWQ1	Liyutan	1.89	288	eP	Pb	23 05 10.6	-0.6
STYH	Taoyuan	1.91	252	iP	Pn	23 05 09.6	+0.8
STYH				S	Sn	23 05 32.9	+0.6
WCKO	Fanlu	1.99	261	eP	Pn	23 05 11.8	+1.8
TPUB	Ta-pu	2.00	257	P	Pn	23 05 12.1	+2.0
TPUB	Ta-pu	2.00	257	P	Pn	23 05 11.8	+1.7
WTP	Ta-pu	2.03	255	eP	Pn	23 05 12.2	+1.7
CHN1	Nanshi	2.12	254	eP	Pn	23 05 13.9	+2.1
TWK	Hsinying	2.13	256	eP	Pn	23 05 13.7	+1.7
TWK				eS	Sb	23 05 42.1	+0.6
MASBT	Mashibuluo	2.26	239	eP	Pn	23 05 14.5	+0.8
MASBT				eS	Sn	23 05 43.3	+2.2

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*AFAD **05** 23:27:33.3, 35°.02N × 26°.27E, h5km±3km, ML2.5*
*ISK **05** 23:27:37.4, 35°.42N × 26°.22E, h16km, ML2.5/11*
*ATH **05** 23:27:37.9, 35°.23N × 26°.24E, h37km±1km, ML2.6/5, Manual Solution by M.Kolligri First location: 2019/12/05 23:28:49, This location: 2020/07/30 20:43:22 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 1 km*
*THE **05** 23:27:38.9, 35°N±6° × 2°6E±°, h23km±5km, M2.5/4, MLh2.5/4*
ISC 05 23:27:38.2±0.9, **35°.35N**±0°.05 × **26°.27E**±0°.03, **h29**km±8km, **n33, σ1ˢ.06**/48, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIT2	Siteia	0.19	223	P	Pn	23 27 44.2	-0.9
SIT2				S	Sb	23 27 48.6	+0.5
ZKR	Zakros	0.23	190	P	Pb	23 27 44.1	-0.6
ZKR				S	Sb	23 27 49.2	+0.1
ZKR	Zakros	0.23	190	Pg	Pb	23 27 43.9	-0.7
ZKR				Sg	Sb	23 27 49.5	+0.5
ZKR	Zakros	0.23	190	P	Pb	23 27 43.7	-0.9
ZKR				S	Sb	23 27 48.7	-0.3
NPS	Neapolis	0.54	261	P	Pb	23 27 49.1	-0.1
NPS				S	Sn	23 27 57.5	-0.6
NPS	Neapolis	0.54	261	P	Pb	23 27 48.8	-0.4
NPS				S	Sb	23 27 56.8	+0.1
KARP	Karpathos	0.76	74	P	Pn	23 27 53.4	+0.4
KARP				S	Sn	23 28 04.5	+1.0
KARP	Karpathos	0.76	74	Pg	Pn	23 27 53.4	+0.4
KARP	Karpathos	0.76	74	P	Pn	23 27 53.2	+0.2
KARP				S	Sn	23 28 04.2	+0.7
IACM	Heraklion	0.98	268	P	Pn	23 27 56.3	+0.4
IDI	Anoyia	1.13	268	P	Pb	23 27 58.7	-0.4
IDI				S	Sn	23 28 13.3	+0.7
IDI	Anoyia	1.13	268	Pn	Pb	23 27 58.6	-0.4
IDI	Anoyia	1.13	268	P	Pn	23 27 57.6	-0.5
THERA	Ancient Thera,	1.21	328	P	Pn	23 27 59.3	+0.2
THR6	Thira Island,	1.23	325	P	Pb	23 28 00.2	-0.6
THR6	Thira Island,	1.23	325	P	Pn	23 27 59.9	+0.5
THR8	Santorini-Mono	1.24	329	P	Pn	23 27 59.9	+0.4
DAT	Datca	1.74	37	Pn	Pn	23 28 07.1	+0.5
ARG	Arkhangelos	1.75	60	Pn	Pn	23 28 07.8	+1.3
APE	Apeiranthos	1.82	341	Pn	Pn	23 28 07.9	+0.3
APE				Sn	Sn	23 28 30.0	+0.3
IMMV	Iera Moni Meta	1.87	274	Pn	Pn	23 28 09.7	+1.5
TURN	Turunc	2.15	48	P	Pn	23 28 12.9	+0.9
TURN				S	Sn	23 28 37.9	+0.2
TURN				i IAML		23 28 48.0	
	comp=E,23nm,0.6s						
TURN				i IAML		23 28 51.0	
	comp=N,21nm,0.5s						
TURN	Turunc	2.15	48	Pn	Pn	23 28 12.6	+0.6
MLSB	Milas	2.30	32	Pn	Pn	23 28 15.1	+1.0
YER	Yerkesik	2.42	42	Pn	Pn	23 28 17.1	+1.3
DALY	Dalyan (Mula)	2.43	52	Pn	Pn	23 28 17.3	+1.4
IZZE	Mula-Seydike	2.64	65	P	Pn	23 28 18.3	-0.5
IZZE				i IAML		23 29 52.0	
	comp=E,23nm,2.2s						
SABU	Mula-Dalaman	2.64	55	P	Pn	23 28 19.2	+0.4
SABU				S	Sb	23 28 56.0	-0.8
SABU				i IAML		23 29 04.0	
	comp=E,19nm,0.9s						
SABU				i IAML		23 29 12.0	
	comp=N,30nm,1.4s						
DNZT	Denizli-Tavas-	2.95	48	P	Pn	23 28 23.4	+0.3
DNZT				S	Sb	23 29 03.1	-2.6
DNZT				i IAML		23 29 12.0	
	comp=N,15nm,0.9s						
DNZT				i IAML		23 29 14.0	
	comp=E,18nm,1.3s						
ESEN	Aydn-Nazilli	2.97	34	P	Pn	23 28 24.6	+1.3
ESEN				S	Sb	23 29 02.8	-3.3
TAVA	DENIZLI_Tavas	3.01	44	P	Pn	23 28 24.9	+0.9
TAVA				S	Sn	23 29 02.2	+3.1
TAVA				i IAML		23 29 31.0	
	comp=N,14nm,1.9s						
KNIK	Mula-Seydike	3.07	60	P	Pn	23 28 25.0	+0.2
KNIK				i IAML		23 29 35.0	
	comp=N,16nm,2.9s						
KNIK				i IAML		23 29 56.0	
	comp=E,18nm,2.1s						
GOLH	Golhisar	3.26	54	P	Pn	23 28 28.0	+0.6

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*DJA **05** 23:28:04.6±0.4, 8°S±4° × 10°4E±°, h10km, M4.7/22, mB6.1/2, mb4.8/9, MLv4.6/22, Mw(mB)5.7/2*
*IDC **05** 23:28:05.2±0.7, 7°.54S × 103°.73E, h0km, mb4.2/16, mbtmp4.2/17, ML5.0/1, MS3.1/2, Error ellipse: s-maj=26.0km s-min=14.4km az=59.0*
*NEIC **05** 23:28:07.2±0.8, 7°.55S±0°.08 × 103°.70E±0°.03, h10km±1km, mb4.6/18, Error ellipse: s-maj=13.2km s-min=4.7km az=183.0*
ISC 05 23:28:06.8±0.5, **7°.52S**±0°.07 × **103°.70E**±0°.07, **h10**km, **n78, σ0ˢ.69**/62, **mb4.4**/22, **Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	2.13	22	P	Pn	23 28 41.6	-0.9
KASI				S	Sn	23 29 07.3	-1.7
LWLI	Liwa	2.51	8	P	Pn	23 28 47.4	-0.4
BLSI	Bandar Lampung	2.63	36	P	Pn	23 28 49.3	0.0
SBJI	Serang	2.78	60	P	Pn	23 28 51.5	+0.1
KLI	Kotabumi	2.87	24	P	Pn	23 28 52.5	-0.2
SKJI	Sukabumi	2.88	80	P	Pn	23 28 53.1	+0.3
KLSI		2.99	20	P	Pn	23 28 54.7	+0.4
MDSI	Maura Dua	3.05	9	P	Pn	23 28 54.7	-0.4
DBJI	Dramaga	3.17	73	P	Pn	23 28 57.9	+1.0
TNG	Tangerang	3.21	66	P	Pb	23 28 58.0	-6.0
TNG				P	Pn	23 28 57.7	+0.3
MNAI	Manna	3.22	347	Pn	Pn	23 28 57.4	-0.1
MNAI	Manna	3.22	347	P	Pn	23 28 56.4	-1.1
CNJI	Cibinong	3.41	87	P	Pn	23 28 59.3	-0.7
BBJI	Bungbulang	3.92	90	P	Pn	23 29 06.4	-0.7
UBSI	University, Be	3.99	339	P	Pn	23 29 05.7	-2.4
KSI	Kapahiang	3.99	344	P	Pn	23 29 07.0	-1.2
MASI	Maura Aman, Be	4.58	341	P	Pn	23 29 14.1	-2.2
KPJI	Karang Pucung	5.19	88	P	Pn	23 29 25.7	+1.1
	0.3nm61nm,0.5s						
CTJI	Waduk Cacaban	5.46	85	P	Pn	23 29 28.7	+0.4
	0.3nm42nm,0.5s						
KRJI	Kerinci	5.83	337	P	Pn	23 29 31.0	-2.5
SMRI	Semarang	6.70	86	Pn	Pn	23 29 46.1	+0.7
SMRI	Semarang	6.70	86	P	Pn	23 29 45.9	+0.5
	0.5nm89nm,0.6s						
UGM	Wanagama	6.77	94		Pn	23 29 46.2	-0.2
UGM	Wanagama	6.77	94	P	Pn	23 29 46.6	+0.2
	0.5nm94nm,0.6s						
PDSI	Padang	7.31	334	P	Pn	23 29 50.8	-3.0
	0.3nm22nm,0.6s						
PCJI	Pacitan	7.44	96	P	Pn	23 29 55.3	-0.2
	0.4nm56nm,1.0s						
SISI	Saibi	7.67	323	P	Pn	23 29 55.7	-3.0
	0.2nm50nm,0.6s						
SNJI	Sawahan-Nganju	7.99	92	P	Pn	23 30 04.7	+1.4
COCO	West Island	8.21	235		Pn	23 30 05.9	-0.1
JAGI	Jajag, Banyuwa	10.39	96		Pn	23 30 35.4	-0.7
JAGI	Jajag, Banyuwa	10.39	96	P	Pn	23 30 36.2	+0.1
PSI	Prapat	11.30	335	LR	LR	23 34 40.1	
	comp=Z,77nm,19.8s,baz=173,slow=35						
KAPI	Kappang	16.15	82	LR	LR	23 38 44.0	
	comp=Z,76nm,21.1s,baz=262,slow=40						
TOLI2	Tolitoli	19.07	64		P	23 32 32.0	+2.3
MYLDM	Lahad Datu	19.42	50	P	Pn	23 32 44.7	+10
BATI	Baumata	19.90	99	P	P	23 32 38.0	-0.8
	4.6nm,0.3s,baz=76,slow=6.6,SNR=2.1						
	8.2nm,0.3s						
SOEI	Soe	20.45	98		P	23 32 44.3	-0.6
SOEI				IAmb	IAmb	23 33 12.5	
	comp=Z,40nm,1.0s						
CMAR	Chiang Mai Arr	26.23	350	P	P	23 33 43.0	+0.8
	comp=Z,16nm,1.0s,baz=183,slow=8.5,SNR=38						
	comp=Z,16nm,1.0s						
CMAR	Chiang Mai Arr	26.23	350		P	23 33 41.5	-0.7
CHTO	Chiang Mai	26.58	350		P	23 33 45.8	+0.5
CHTO				IAmb	IAmb	23 33 47.8	
	comp=Z,12nm,1.0s						
H08S2	Diego Garcia H	30.93	268	T	T	00 07 29.2	
	baz=90,slow=75,SNR=12						
H08S3	Diego Garcia H	30.94	268	T	T	00 07 55.6	
	baz=90,slow=75,SNR=11						
H08S1	Diego Carcia H	30.95	268	T	T	00 07 51.3	
	baz=90,slow=75,SNR=9.4						
WB0	Warramunga Arr	32.15	115	P	P	23 34 34.2	-0.7
WB0				IAmb	IAmb	23 34 53.7	
	comp=Z,5.3nm,1.1s						
WRA	Warramunga Arr	32.15	116	P	P	23 34 34.6	-0.4
	comp=Z,1.0nm,0.5s,baz=286,slow=11,SNR=18						
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	32.15	116	P	P	23 34 34.1	-0.9
ASAR	Alice Springs	33.12	122	P	P	23 34 43.1	-0.3
	comp=Z,0.5nm,0.5s,baz=297,slow=8.4,SNR=7.6						
	comp=Z,0.5nm,0.5s						
EVN	Everest	38.86	336		P	23 35 33.1	-0.1
STKA	Stephens Creek	42.78	130	P	P	23 36 03.9	-0.9
	comp=Z,0.9nm,0.4s,baz=317,slow=8.6,SNR=3.1						
	comp=Z,0.9nm,0.4s						
STKA	Stephens Creek	42.78	130	P	P	23 36 04.4	-0.5
LZDM	Lanzhou Array	43.24	360	P	P	23 36 08.3	-0.5
	comp=Z,1.7nm,0.4s,baz=192,slow=11,SNR=4.4						
	comp=Z,1.7nm,0.4s						
WUS	Wushi	53.44	337	P	P	23 37 27.2	0.0
MANEM	Manem	53.89	329		P	23 37 31.3	+0.5
MANEM				IAmb	IAmb	23 37 39.7	
	comp=Z,21nm,0.6s						
SONM	Songino Array	55.16	2	P	P	23 37 39.7	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,6.3nm,0.7s,baz=180,slow=9.0,SNR=22						
	comp=Z,6.3nm,0.7s						
SONM	Songino Array	55.16	2	P	P	23 37 39.5	-0.2
SONM				IAmb	IAmb	23 37 44.0	
	comp=Z,6.7nm,0.8s						
ARSB	Arslanbob	56.18	332	IAmb	IAmb	23 38 03.2	
	comp=Z,5.9nm,1.0s						
MKAR	Makanchi Array	57.33	343	P	P	23 37 55.2	+0.2
	comp=Z,2.0nm,0.7s,baz=147,slow=8.4,SNR=14						
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	57.33	343	P	P	23 37 55.1	+0.1
HILR	Hailar Array B	58.54	12	P	P	23 38 03.6	+0.1
	comp=Z,3.0nm,0.5s,baz=195,slow=9.2,SNR=7.4						
	comp=Z,3.0nm,0.5s						
H04N2	CROZET ISLANDS	58.76	220	T	T	00 42 35.8	
	baz=66						
H04N1	CROZET ISLANDS	58.77	220	T	T	00 42 44.0	
	baz=66						
H04N3	CROZET ISLANDS	58.78	220	T	T	00 42 48.2	
	baz=66						
KURBB	Kurchatov Arra	61.87	342	P	P	23 38 26.4	+0.1
	comp=Z,0.6nm,0.4s,baz=159,slow=6.4,SNR=6.9						
	comp=Z,0.6nm,0.4s						
KURK	Kurchatov	61.93	342		P	23 38 26.9	+0.3
KURK				IAmb	IAmb	23 38 38.4	
	comp=Z,3.3nm,0.8s						
ZAA0	Zalesovo Array	63.27	348	IAmb	IAmb	23 38 36.4	
	comp=Z,4.8nm,0.9s						
ZALV	Zalesovo Beam	63.27	348	P	P	23 38 35.5	0.0
	comp=Z,3.3nm,0.8s,baz=158,slow=4.8,SNR=16						
	comp=Z,3.3nm,0.8s						
BVAR	Borovoye Array	66.61	339	P	P	23 38 57.3	-0.1
	comp=Z,1.7nm,0.7s,baz=138,slow=11,SNR=5.8						
	comp=Z,1.7nm,0.7s						
AB31	Akbulak array	68.22	331		P	23 39 07.7	+0.1
AB31				IAmb	IAmb	23 39 16.4	
	comp=Z,3.8nm,0.8s						
ABKAR	Akbulak array	68.22	331		P	23 39 07.6	+0.1
KBZ	Khabaz	74.86	319	P	P	23 39 48.2	+0.4
	comp=Z,1.7nm,1.0s,baz=180,slow=8.2,SNR=2.6						
	comp=Z,1.7nm,1.0s						
BOSA	Boshof	76.32	242	P	P	23 39 56.9	+0.2
	comp=Z,2.2nm,0.9s,baz=58,slow=1.5,SNR=4.4						
	comp=Z,2.2nm,0.9s						
BOSA	Boshof	76.32	242	P	P	23 39 56.4	-0.3
BOSA				IAmb	IAmb	23 40 00.1	
	comp=Z,3.6nm,1.1s						
BRTR	Keskin Array B	79.74	313	P	P	23 40 15.6	+0.1
	comp=Z,0.5nm,0.6s,baz=124,slow=8.0,SNR=4.2						
	comp=Z,0.5nm,0.6s						
QSPA	South Pole Qui	82.48	180	P	P	23 40 29.0	-0.5
	comp=Z,2.9nm,1.2s,baz=53,slow=7.3,SNR=2.8						
	comp=Z,2.9nm,1.2s						
QSPA	South Pole Qui	82.48	180	IAmb	IAmb	23 40 31.3	
	comp=Z,1.1nm,0.9s						
SNAA	Sanae	88.06	198	P	P	23 40 58.0	+0.8
	comp=Z,1.3nm,0.8s,baz=171,slow=10,SNR=3.8						
	comp=Z,1.3nm,0.8s						
SNAA	Sanae	88.06	198	P	P	23 40 57.7	+0.4
SNAA				IAmb	IAmb	23 40 59.2	
	comp=Z,1.9nm,0.9s						
TXAR	Lajitas Array	146.32	46	PKPbc	PKPdf	23 47 48.7	+1.1
	comp=Z,1.7nm,0.7s,baz=286,slow=2.0,SNR=16						

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*SJA **05** 23:32:13.3±0.7, 22°.65S×68°.99W, h123^{km}±3^{km}, ML3.5, MW3.7*

*GUC **05** 23:32:14.8±0.7, 22°.64S×69°.01W, h120^{km}±4^{km}, ML3.9*

ISC 05 23:32:14.5±1.1, **22°.64S**±0°.03×**69°.07W**±0°.04, **h128**^{km}±7^{km}, **n37**, σ1^s.**67**/67, **10C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB06	IPOC Station P	0.47	262	⇑eP	Pn	23 32 32.6	-0.7
PB06				eS	Sn	23 32 46.2	-1.3
PB06				IAML		23 32 47.0	
	comp=E,8µm,0.1s						
PB06	IPOC Station P	0.47	262	eP	Pn	23 32 32.5	-0.7
PB06				eS	Sn	23 32 46.6	-0.9
PB06				IAML		23 32 49.1	
	comp=Z,2µm,0.1s						
PB09	IPOC Station P	0.85	349	⇑eP	Pn	23 32 36.0	-0.1
PB09				eS	Sn	23 32 51.6	-0.8
PB09				IAML		23 32 53.0	
	comp=N,2µm,0.3s						
PB09	IPOC Station P	0.85	349	eP	Pn	23 32 35.3	-0.8
PB09				eP		23 32 36.0	
PB09				eS	Sn	23 32 50.6	-1.8
PB09				IAML		23 32 52.4	
	comp=Z,1µm,0.2s						
PB03	IPOC Station P	0.86	313	⇑eP	Pn	23 32 36.0	-0.2
PB03				eS	Sn	23 32 51.7	-0.8
PB03				IAML		23 32 53.3	
	comp=N,5µm,0.2s						
PB03	IPOC Station P	0.86	313	eP	Pn	23 32 36.0	-0.2
PB03				eS	Sn	23 32 52.1	-0.4
PB03				IAML		23 32 53.3	
	comp=Z,3µm,0.2s						
AF01	San Pedro de A	0.88	111	⇓eP	Pn	23 32 35.1	-1.4
AF01				eS	Sn	23 32 50.3	-2.7
AF01	San Pedro de A	0.88	111	eP	Pn	23 32 35.0	-1.4
AF01				eS	Sn	23 32 50.5	-2.5
AF01				IAML		23 33 06.5	
	comp=Z,4µm,0.6s						
PB05	IPOC Station P	1.07	258	⇑eP	Pn	23 32 38.1	+0.1
PB05				eS	Sn	23 32 55.3	-0.5
PB05	IPOC Station P	1.07	258	eP	Pn	23 32 37.8	-0.1
PB05				IAML		23 32 57.1	
	comp=Z,532nm,0.4s						
PB05				eS	Sn	23 32 57.2	+1.4
PB07	IPOC Station P	1.18	320	⇑eP	Pn	23 32 39.4	+0.2
PB07				eS	Sn	23 32 57.2	-0.7
PB07				IAML		23 32 58.6	
	comp=E,4µm,0.2s						
PB07	IPOC Station P	1.18	320	eP	Pn	23 32 39.1	0.0
PB07				eS	Sn	23 32 57.9	0.0
PB07				IAML		23 32 58.6	
	comp=Z,3µm,0.2s						
PB02	IPOC Station P	1.52	330	⇑eP	Pn	23 32 43.0	+0.2
PB02				eS	Sn	23 33 03.7	-0.6
PB02				IAML		23 33 05.7	
	comp=E,2µm,0.3s						
PB02	IPOC Station P	1.52	330	eP	Pn	23 32 42.9	+0.2
PB02				eS	Sn	23 33 04.5	+0.2
PB02				IAML		23 33 05.1	
	comp=Z,1µm,0.2s						
PB10	IPOC Station P	1.62	237	⇑eP	Pn	23 32 43.9	0.0
PB10				eS	Sn	23 33 05.9	-0.3
PB10	IPOC Station P	1.62	237	eP	Pn	23 32 43.8	0.0
PB10				eS	Sn	23 33 06.2	+0.1
PB10				IAML		23 33 09.3	
	comp=Z,250nm,0.4s						
PB01	IPOC Station P	1.63	346	⇑eP	Pn	23 32 43.9	-0.1
PB01				eS	Sn	23 33 06.0	-0.7
PB01				IAML		23 33 07.2	
	comp=E,2µm,0.3s						
PB01	IPOC Station P	1.63	346	eP	Pn	23 32 44.0	-0.1
PB01				eS	Sn	23 33 06.7	+0.1
PB01				IAML		23 33 08.2	
	comp=Z,633nm,0.2s						
PATCX	Punta Patache	2.07	331	⇑eP	Pn	23 32 49.0	-0.3
PATCX				IAML		23 33 19.6	
	comp=E,438nm,0.3s						
PATCX	Punta Patache	2.07	331	eP	Pn	23 32 49.2	-0.1
PATCX				eS	Sn	23 33 16.2	+0.3
PATCX				IAML		23 33 19.5	
	comp=Z,302nm,0.3s						
TA01	Diego Aracena	2.31	333	eP	Pn	23 32 51.8	-0.4
TA01				eS	Sn	23 33 17.8	-3.3
TA01				IAML		23 33 24.7	
	comp=Z,175nm,0.3s						
PB14	IPOC Station P	2.33	211	eP	Pn	23 32 52.3	-0.4
PB14				eS	Sn	23 33 21.9	-0.1
PB14				IAML		23 33 22.1	
	comp=Z,155nm,0.1s						
PB08	IPOC Station P	2.49	358	eP	Pn	23 32 54.5	-0.3
PB08				eP		23 32 55.0	
PB08				eS	Sn	23 33 26.5	+0.8
PB08				IAML		23 33 54.3	
	comp=Z,85nm,0.3s						
TA02	Huaiquique	2.55	337	eP	Pn	23 32 55.0	-0.3
TA02				eS	Sn	23 33 22.1	-4.5
TA02				IAML		23 33 27.4	
	comp=Z,183nm,0.1s						
GO02	Mina Guanaco	2.56	191	⇑eP	Pn	23 32 55.4	-0.2
GO02				eS	Sn	23 33 27.7	+0.4
GO02				IAML		23 33 28.4	
	comp=N,672nm,0.1s						
GO02	Mina Guanaco	2.56	191	eP	Pn	23 32 55.4	-0.2
GO02				eS	Sn	23 33 26.8	-0.5
GO02				IAML		23 33 29.0	
	comp=Z,360nm,0.3s						
PB11	IPOC Station P	2.91	349	eP	Pn	23 32 59.6	-0.5
PB11				eS	Sn	23 33 29.6	-5.6
PB11				IAML		23 34 04.3	
	comp=Z,134nm,0.5s						
GO01	Chusmiza	2.96	358	eP	Pn	23 33 01.2	+0.2
GO01				IAML		23 33 49.4	
	comp=N,197nm,0.4s						
GO01	Chusmiza	2.96	358	eP	Pn	23 33 00.7	-0.3
GO01				eS	Sn	23 33 32.2	-4.5
GO01				IAML		23 33 33.1	
	comp=Z,116nm,0.5s						
SALTA		2.96	123	eP	Pn	23 33 02.2	+1.2
SALTA				eP	P	23 33 03.2	+2.2
SALTA				eP	P	23 33 03.2	+2.2
SALTA				eS	Sn	23 33 25.2	-12
SALTA				IAML		23 33 32.1	
	comp=Z,23nm,2.0s						
YJA	Yavi	3.32	83	eP	Pn	23 33 08.2	+2.5
YJA				IAML		23 33 56.8	
	comp=Z,2.9nm,1.4s						
HJA	Humahuaca	3.42	100	eP	Pn	23 33 07.7	+0.8
HJA				IAML		23 33 57.7	
	comp=Z,3.2nm,0.8s						
AC01	Pan de Azucar	3.76	201	eP	Pn	23 33 09.8	-1.3
AC01				eS	Sn	23 33 52.8	-2.1
AC01				IAML		23 33 52.9	
	comp=Z,78nm,0.7s						
AZAP	Zapla	4.00	114	eP	Pn	23 33 14.8	+0.3
AZAP				IAML		23 34 19.8	
	comp=Z,11nm,1.3s						
PB12	IPOC Station P	4.17	343	eP	Pn	23 33 17.8	+1.1
PB12				eS	Sn	23 33 49.0	-16
PB12				IAML		23 34 31.4	
	comp=Z,49nm,0.7s						
AC02	Maricunga	4.18	181	eS	Sn	23 33 59.8	-5.8
AC02				IAML		23 34 05.1	
	comp=Z,198nm,0.8s						
GO03	Copiapo	5.05	192	eP	Pn	23 33 26.7	-1.5
GO03				eS	Sn	23 34 38.2	+13
GO03				IAML		23 34 41.7	
	comp=Z,28nm,0.2s						

ZUR 05 23:44:13.6, 46°.33N×7°.38E, h5^{km}±1^{km}, **MLh0.7**/10, **5C-2D, Error ellipse: s-maj=1859.3km s-min=736.6km az=104.0, Switzerland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAW2	Sanetsch, VS	0.04	252	⇓Pg	Pg	23 44 15.2	+0.2
RAW2				Sg	Sg	23 44 16.2	+0.2
STSW2	Zeuzier, Staus	0.04	67	⇑Pg	Pg	23 44 15.2	+0.2
STSW2				Sg	Sg	23 44 16.2	+0.2
SAYF2	Ayent-Fortunoz	0.05	145	⇑Pg	Pg	23 44 15.1	+0.2
SAYF2				Sg	Sg	23 44 16.2	+0.3
SENIN	Lac Senin/Sane	0.06	303	⇓Pg	Pg	23 44 15.5	+0.2
SENIN				Sg	Sg	23 44 16.7	+0.3
SIOV	Sion-Valere	0.09	185	⇑Pg	Pg	23 44 15.8	+0.2
SIOV				Sg	Sg	23 44 17.3	+0.3
RAW1	Lenk, BE	0.10	24	⇑Pg	Pg	23 44 16.0	+0.2
RAW1				Sg	Sg	23 44 17.8	+0.5
GRYON	Gryon	0.20	247	Pg	Pg	23 44 17.6	+0.1
GRYON				Sg	Sg	23 44 20.7	+0.5
FULLY	Reservoir Maze	0.24	224	⇑Pg	Pg	23 44 18.4	+0.2
DIX	Grande Dixence	0.25	175	Pg	Pg	23 44 18.8	+0.3
DIX				Sg	Sg	23 44 22.0	+0.2
LAUCH	Lauchernalp	0.29	72	Pg	Pg	23 44 19.5	+0.3
LAUCH				Sg	Sg	23 44 23.5	+0.4
JAUN	Jaun, Euschels	0.31	349	Sg	Sg	23 44 25.0	+1.2

ZUR 05 23:44:24.8, 46°.33N×7°.37E, h4^{km}±1^{km}, **MLh0.5**/15, **3C-1D, Error ellipse: s-maj=3502.2km s-min=1094.6km az=67.0, Switzerland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAW2	Sanetsch, VS	0.04	249	⇑Pg	Pg	23 44 26.1	+0.2
RAW2				Sg	Sg	23 44 27.2	+0.3
STSW2	Zeuzier, Staus	0.04	70	⇑Pg	Pg	23 44 26.1	+0.2
STSW2				Sg	Sg	23 44 27.1	+0.3
SAYF2	Ayent-Fortunoz	0.05	144	⇑Pg	Pg	23 44 26.1	+0.1
SAYF2				Sg	Sg	23 44 27.1	+0.3
SENIN	Lac Senin/Sane	0.06	303	⇓Pg	Pg	23 44 26.4	+0.2
SENIN				Sg	Sg	23 44 27.7	+0.4
RAW1	Lenk, BE	0.10	26	Pg	Pg	23 44 27.0	+0.2
RAW1				Sg	Sg	23 44 28.7	+0.5

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*BEO **05** 23:47:22.2±0.3, 43°.13N×17°.89E, h0^{km}, ML2.6/6*

*RHSSO **05** 23:47:22.1±0.3, 43°.10N×17°.99E, h8^{km}, ML2.9/5*

*PDG **05** 23:47:22.8±0.3, 43°.08N×18°.06E, h10^{km}±1^{km}, ML2.6/13, Error ellipse: s-maj=1.0km s-min=1.6km az=0.0*

ISC 05 23:47:21.3±1.1, **43°.12N**±0°.02×**17°.96E**±0°.01, **h2**^{km}±9^{km}, **n80**, σ1^s.**22**/135, **14C-22D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STON	Ston	0.31	218	*i* Pg	Pg	23 47 27.2	-0.1
STON				Sg	Sg	23 47 31.8	+0.4
STON	Ston	0.31	218	ePg	Pg	23 47 27.3	-0.1
STON				eSg	Sg	23 47 31.9	+0.4
KLINJ	Klinje	0.46	83	ePg	Pg	23 47 29.9	-0.2
KLINJ				eSg	Sg	23 47 37.1	+1.0
DBRK	Dubrovnik	0.47	163	*i* Pg	Pg	23 47 30.8	+0.4
DBRK				Sg	Sg	23 47 37.6	+1.2
BRY	Bratogost	0.47	117	⇓*i*Pg	Pg	23 47 30.7	+0.3
BRY				*i* Sg	Sg	23 47 36.6	0.0
TREB	Trebinje	0.49	145	ePg	Pg	23 47 30.8	0.0
TREB				eSg	Sb	23 47 38.8	-1.5
TREB	Trebinje	0.49	145	ePg	Pg	23 47 30.9	+0.1
TREB				eSg	Sb	23 47 39.6	-0.7
UPM	Unac-Piva	0.69	83	⇓*i*Pg	Pg	23 47 34.6	0.0
UPM				*i* Sg	Sg	23 47 45.1	+1.5
MAKA	Makarska	0.71	284	*i* Pg	Pg	23 47 34.0	-1.0
MAKA				Sg	Sg	23 47 43.8	-0.4
RICI	Ricice	0.71	302	ePg	Pg	23 47 33.9	-1.1
RICI				Sg	Sg	23 47 43.7	-0.6
HCY	Herceg Novi	0.78	150	⇓*i*Pg	Pg	23 47 35.7	-0.5
HCY				*i* Sg	Sg	23 47 46.4	+0.1
NKME	Niksic	0.81	116	⇓*i*Pg	Pg	23 47 36.6	-0.2
NKME				eSg	Sg	23 47 47.2	0.0
LSTV	Lastovo	0.86	246	ePg	Pg	23 47 36.1	-1.7
LSTV				Sg	Sg	23 47 49.2	+0.1
CEME	Cevo	0.91	129	⇓*i*Pg	Pg	23 47 38.6	-0.1
CEME				eSg	Sg	23 47 50.7	+0.3
PLE	Pljevlja	1.06	78	⇓*i*Pg	Pg	23 47 41.4	-0.3
PLE				*i* Sg	Sn	23 47 58.5	-0.3
BUM	Brajici-Budva	1.07	140	⇓*i*Pg	Pg	23 47 41.5	-0.3
BUM				*i* Sg	Sb	23 47 56.2	-0.8
HVAR	Hvar	1.11	274	ePg	Pg	23 47 42.0	-0.6
HVAR				Sg	Sg	23 47 57.0	0.0
RUDO	Rudo	1.14	64	⇑*i*Pg	Pg	23 47 41.5	-1.7
RUDO				eSg	Sg	23 47 58.6	+0.6
RUDO	Rudo	1.14	64	ePg	Pg	23 47 41.8	-1.4
RUDO				eSg	Sg	23 47 58.8	+0.8
KOME	Kolasin	1.17	103	⇑*i*Pg	Pg	23 47 43.5	-0.2
KOME				eSg	Sn	23 48 00.1	-1.3
PDG	Podgorica	1.17	125	⇓P	Pg	23 47 44.0	+0.1
PDG				⇑S	Sn	23 48 00.7	-0.6
PDG	Podgorica	1.17	125	ePg	Pb	23 47 44.3	0.0
PDG	Podgorica	1.17	125	⇓*i*Pg	Pg	23 47 43.6	-0.2
PDG				*i* Sg	Sb	23 47 59.7	-0.2
BBLS	Lazi&#263i	1.29	54	ePg	Pn	23 47 45.9	-0.5
BBLS				eSg	Sn	23 48 05.0	+0.7
DRME	Dracevica, Mon	1.29	136	⇑*i*Pg	Pn	23 47 46.0	-0.4
DRME				eSg	Sn	23 48 04.0	-0.3
IVA	Berane	1.44	99	⇓*i*Pg	Pb	23 47 48.7	-0.2
IVA				*i* Sg	Sg	23 48 08.4	+0.9
KIJV	Kijevo	1.44	309	ePg	Pn	23 47 47.8	-0.7
KIJV				Sg	Sn	23 48 06.5	-1.5
SJES	Sjenica	1.48	84	ePg	Pg	23 47 50.6	+1.0
SJES				eSg	Sg	23 48 10.2	+1.4
ULC	Ulcinj	1.49	140	⇑*i*Pg	Pn	23 47 48.4	-0.8
ULC				*i* Sg	Sg	23 48 09.7	+0.4
PVY	Plav	1.56	109	⇑*i*Pg	Pb	23 47 51.0	0.0
PVY				*i* Sg	Sb	23 48 10.8	-0.4
IVAS	Ivanjica	1.66	73	ePg	Pn	23 47 51.8	+0.3
IVAS				eSg	Sg	23 48 16.1	+1.4
BLY	Banja Luka	1.72	341	ePn	Pn	23 47 52.8	+0.5
BLY				eSn	Sn	23 48 16.0	+1.1
BLY	Banja Luka	1.72	341	⇓P	Pn	23 47 52.8	+0.5
BLY				⇑S	Sn	23 48 15.8	+0.9
BLY	Banja Luka	1.72	341	ePg	Pn	23 47 53.7	+1.4
BLY				eSg	Sg	23 48 18.4	+1.7
DIVS	Divibare	1.77	56	ePn	Pn	23 47 53.1	+0.1
DIVS				eSn	Sg	23 48 21.3	+3.2
ZIRJ	Zirje	1.77	288	ePn	Pn	23 47 53.0	0.0
ZIRJ				Sn	Sn	23 48 16.8	+0.7
MORI	Morici	1.80	295	*i* Pn	Pn	23 47 54.0	+0.6
MORI				Sn	Sn	23 48 17.4	+0.5
TEKS	Tekeris	1.82	38	ePn	Pn	23 47 53.1	-0.6
TRUS	Trudelj	2.09	57	ePn	Pn	23 47 57.2	-0.2
GRUS	Gruza	2.14	68	ePn	Pn	23 47 58.5	+0.4
GOCS	Kraljevo Serbi	2.17	77	ePn	Pn	23 47 59.2	+0.7
SELS	Selova	2.31	86	ePn	Pb	23 48 02.2	-1.5
FRGS	Fruska Gora	2.43	32	ePn	Pn	23 48 01.8	-0.3
MATE	Matera	2.64	201	⇓P	Pn	23 48 06.7	+1.8
BOVS	Bovan	2.78	78	⇓P	Pn	23 48 07.2	+0.4
BOVS				⇓S	Sn	23 48 40.6	-0.2
BOVS	Bovan	2.78	78	ePn	Pb	23 48 09.5	-2.1
BARS	Barje	2.84	95	ePn	Pn	23 48 10.0	+2.3
BARS				eSn	Sb	23 48 46.0	-2.0
MORH	Mrgy, Hungar	3.13	9	ePn	Pn	23 48 12.3	+0.6
MORH				eSn	Sn	23 48 49.0	-0.7
MORH	Mrgy, Hungar	3.13	9	⇑P	Pn	23 48 10.6	-1.1
MORH				⇑S	Sn	23 48 49.9	+0.3
VRSS	Vrsac	3.14	49	ePn	Pn	23 48 11.6	-0.2
MDVR	Moldovita	3.18	57	⇑P	Pn	23 48 11.9	-0.5
ZAGS	Zajecar	3.18	76	ePn	Pn	23 48 13.7	+1.3
BOSS	Bosilegrad	3.38	99	ePn	Pn	23 48 16.9	+1.8
ZAPS	Zavoj	3.42	86	ePn	Pn	23 48 17.7	+2.0
ZAPS				eSn	Sn	23 48 58.8	+2.0
AQU	L'Aquila	3.45	259	ePn	Pn	23 48 15.9	-0.2
AQU				eSn	Sn	23 48 56.1	-1.4
BEHE	Becsehely	3.46	346	ePn	Pn	23 48 16.6	+0.5
BEHE				eSn	Sn	23 48 57.6	0.0
BLKB	Belogradchik	3.47	80	⇑S	Sn	23 48 57.5	-0.6
BZS	Buzias	3.62	45	⇓P	Pn	23 48 17.3	-1.0
BZS				⇓S	Sn	23 49 01.7	+0.1
VTS	Vitosha	3.91	96	ePn	Pn	23 48 24.8	+2.3
SURR	Surduc	3.98	47	⇓P	Pn	23 48 22.4	-0.9
SURR				⇓S	Sn	23 49 09.3	-1.1
SIRR	Siria	4.11	39	⇑P	Pn	23 48 24.2	-0.9
SIRR				⇓S	Sn	23 49 13.0	-0.7
SOKA	Soboth	4.12	331	ePn	Pn	23 48 26.3	+0.9
	2.2nm,0.3s,SNR=8.5						
SOKA				eSn	Sn	23 49 14.5	+0.3
	3.4nm,0.6s						
GZR	Gura Zlata	4.14	55	⇓P	Pn	23 48 25.7	+0.1
GZR				⇑S	Sn	23 49 14.0	-0.5
OBKA	Obir	4.17	326	ePn	Pn	23 48 28.3	+2.3
	0.7nm,0.2s						
ARSA	Arzberg	4.48	338	ePn	Pn	23 48 31.5	+1.3
	2.3nm,0.3s						
ARSA				eSn	Sn	23 49 24.2	+1.3
	2.4nm,0.4s						
ARSA	Arzberg	4.48	338	ePn	Pn	23 48 31.5	+1.3
RONA	Rosalia, Austr	4.73	346	*i* Pn	Pn	23 48 35.7	+2.1
	1.0nm,0.2s						
RONA				Sn	Sn	23 49 28.8	-0.3
	2.0nm,0.5s						
DRGR		4.98	41	⇓P	Pn	23 48 36.7	-0.5
DRGR				⇓S	Sn	23 49 34.4	-1.0
CONA	Conrad Observa	5.03	344	ePn	Pn	23 48 39.4	+1.5
	0.8nm,0.2s						
CONA				eSn	Sn	23 49 35.5	-1.1
	4.5nm,0.7s						
MARR	Marisel-Cluj	5.10	44	⇑P	Pn	23 48 38.5	-0.4
KBA	Koelnbreinsper	5.13	322	ePn	Pn	23 48 43.1	+3.7
	1.9nm,0.6s						
ABTA	Abfaltersbach	5.30	315	ePn	Pn	23 48 43.7	+2.1
	1.0nm,0.3s						
ABTA				eSn	Sn	23 49 44.6	+1.2
	2.5nm,0.7s						
MOA	Molln	5.40	332	ePn	Pn	23 48 45.4	+2.6
	1.1nm,0.3s						
MOA				eSn	Sn	23 49 45.6	+0.1
	2.8nm,0.5s						
BIOA	Bad Ischl, Aus	5.49	328	ePn	Pn	23 48 46.1	+1.9
	2.0nm,0.3s						
LESA	Schwarzleotal	5.70	321	ePn	Pn	23 48 48.2	+1.2
	1.5nm,0.3s,SNR=4.8						
WTTA	Wattenberg	6.10	315	ePn	Pn	23 48 54.8	+2.2
	2.9nm,0.3s						
WTTA				eSn	Sn	23 50 08.0	+5.1
	3.0nm,0.4s						
WATA	Walderalm	6.17	315	ePn	Pn	23 48 56.4	+2.8
	1.5nm,0.3s						
SQTA	Sankt Quirin	6.29	313	ePn	Pn	23 48 57.1	+1.9
	1.2nm,0.2s						
MOTA	Moosalm	6.43	313	ePn	Pn	23 48 58.1	+1.0
	1.1nm,0.3s						
FETA	Feichten	6.44	310	ePn	Pn	23 48 58.1	+0.9
	0.5nm,0.4s						

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*IDC **06** 00:05:59.3±1.7, 33°.04N×83°.15E, h0^{km}, mb3.3/7, mbtmp3.4/10, ML3.0/3, MS3.1/3, Error ellipse: s-maj=54.9km s-min=18.3km az=65.0*

ISC 06 00:06:05.2±1.3, **33°.1N**±0°.1×**83°.4E**±0°.2, **h35**^{km}, **n12**, σ1^s.**48**/11, **mb3.2**/5, **Xizang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	11.80	326	Pn	Pn	00 08 51.6	+0.5
	baz=18,slow=22,SNR=3.3						
AAK				LR	LR	00 13 04.4	
	comp=Z,31nm,19.6s,baz=136,slow=36						
	0.3nm,0.4s						
MKAR	Makanchi Array	13.69	357	Pn	Pn	00 09 14.9	-1.8
	0.2nm,0.3s,baz=187,slow=12,SNR=11						
MKAR				Sn	Sn	00 11 49.3	+1.9
	baz=208,slow=28,SNR=1.9						
	0.6nm,0.9s						
KURBB	Kurchatov Arra	17.85	350	P	Pn	00 10 08.6	-2.0
	0.1nm,0.3s,baz=168,slow=9.6,SNR=5.8						
	0.5nm,0.3s						
CMAR	Chiang Mai Arr	20.20	132	P	P	00 10 38.0	+1.0
	1.1nm,0.3s,baz=317,slow=10,SNR=6.3						
	1.1nm,0.3s						
ZALV	Zalesovo Beam	20.85	2	P	P	00 10 44.6	+0.8
	0.3nm,0.3s,baz=189,slow=7.3,SNR=3.6						
	0.3nm,0.3s						
BVAR	Borovoye Array	21.98	339	P	P	00 10 55.0	-0.9
	0.6nm,0.7s,baz=145,slow=8.1,SNR=4.8						
	0.6nm,0.7s						
SONM	Songino Array	22.75	43	P	P	00 11 05.3	+1.0
	0.7nm,0.9s,baz=232,slow=10,SNR=4.2						
	0.7nm,0.9s						
AKTO	Aktyubinsk	25.44	320	LR	LR	00 21 21.1	
	comp=Z,88nm,20.0s,baz=262,slow=36						
EIL	Elat	41.19	279	LR	LR	00 31 27.2	
	comp=Z,41nm,18.8s,baz=52,slow=37						
WRA	Warramunga Arr	71.77	130	P	P	00 17 25.2	+1.0
	0.2nm,0.5s,baz=327,slow=6.0,SNR=5.3						
	0.2nm,0.5s						
ASAR	Alice Springs	74.21	133	P	P	00 17 37.4	-1.2
	0.2nm,0.6s,baz=308,slow=5.6,SNR=4.1						
	0.2nm,0.6s						
ILAR	Eielson Array	74.85	20	P	P	00 17 41.0	-0.7
	0.2nm,0.7s,baz=294,slow=3.8,SNR=4.1						
	0.2nm,0.7s						

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*NEIC **06** 00:07:39.2±2.8, 17°.38S±0°.07×69°.60W±0°.09, h151^{km}±7^{km}, mb4.4/12, ML4.3(GUC), Error ellipse: s-maj=13.3km s-min=8.5km az=124.0*

*VAO **06** 00:07:40.8±0.9, 17°.30S×69°.34W, h153^{km}±4^{km}, mb4.5, Presumed earthquake*

*IDC **06** 00:07:41.7±1.2, 17°.29S×69°.34W, h164^{km}±9^{km}, mb4.0/12, mbtmp4.4/12, Error ellipse: s-maj=20.0km s-min=13.8km az=85.0*

*GUC **06** 00:07:41.8±0.6, 17°.44S×69°.54W, h140^{km}±4^{km}, ML4.3*

ISC 06 00:07:39.0±0.6, **17°.37S**±0°.04×**69°.58W**±0°.05, **h150**^{km}±5^{km}, **n102**, σ1^s.**33**/113, **mb4.2**/13, **1C-4D, Peru-Bolivia border**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB18	Visviri	0.24	157		Pn	00 08 01.6	+1.6
PB18	Visviri	0.24	157	⇓iP	Pn	00 08 01.7	+1.6
PB18				iS	Sn	00 08 16.4	+0.3
PB16	IPOC Station P	0.96	176	Pn	Pn	00 08 05.5	+1.3
PB16				Sn	Sn	00 08 25.8	+2.4
AP01	Chacalluta	1.23	216		Pn	00 08 06.2	+0.3
AP01					Sn	00 08 24.9	-1.6
AP01	Chacalluta	1.23	216	iP	Pn	00 08 06.0	+0.1
AP01				IAML		00 08 27.1	
	comp=N,10μm,0.3s						
PB12	IPOC Station P	1.43	210		Pn	00 08 07.9	0.0
PB12	IPOC Station P	1.43	210	⇑iP	Pn	00 08 07.9	0.0
PB12				iS	Sn	00 08 29.3	-0.9
PB12				IAML		00 08 31.1	
	comp=N,2μm,0.3s						
PX02	IPOC Station P	1.69	200	iP	Pn	00 08 10.1	-0.7
PX02				iS	Sn	00 08 32.5	-2.7
PX02				IAML		00 08 35.5	
	comp=N,977nm,0.5s						
LPAZ	La Paz	1.75	52	P	Pn	00 08 13.0	+1.0
	comp=N,252nm,0.3s,baz=265,slow=3.0,SNR=1690						
LPAZ				S	Sn	00 08 37.6	+0.4
	comp=N,480nm,0.6s,baz=20,slow=15,SNR=31						
LPAZ	La Paz	1.75	52		Pn	00 08 13.0	+1.0
LPAZ	La Paz	1.75	52	eP	Pn	00 08 11.7	-0.3
LPAZ				eS	Sn	00 08 35.1	-2.1
GO01	Chusmiza	2.31	171		Pn	00 08 19.5	+1.1
GO01	Chusmiza	2.31	171	⇓eP	Pn	00 08 19.7	+1.3
GO01				IAML		00 08 54.0	
	comp=E,2μm,0.1s						
PB11	IPOC Station P	2.38	182		Pn	00 08 19.0	+0.2
PB11	IPOC Station P	2.38	182	⇓iP	Pn	00 08 19.2	+0.3
PB11				iS	Sn	00 08 48.8	-0.8
PB11				IAML		00 08 51.2	
	comp=E,1μm,0.1s						
PB08	IPOC Station P	2.79	172		Pn	00 08 24.9	+0.8
PB08	IPOC Station P	2.79	172	iP	Pn	00 08 25.1	+1.0
PB08				iS	Sn	00 08 58.3	-0.6
PB08				IAML		00 09 00.8	
	comp=E,560nm,0.4s						
HMBC	Humberstone	2.91	186	Pn	Pn	00 08 25.2	-0.1
TA02	Huaiquique	2.93	190	eP	Pn	00 08 25.1	-0.4
PX03	IPOC Station P	3.02	181	eP	Pn	00 08 25.8	-0.9
TA01	Diego Aracena	3.23	190		Pn	00 08 28.6	-0.7
TA01	Diego Aracena	3.23	190	⇓iP	Pn	00 08 28.6	-0.7
TA01				iS	Sn	00 09 03.9	-4.4
TA01				IAML		00 09 06.4	
	comp=N,672nm,0.3s						
PATCX	Punta Patache	3.48	189		Pn	00 08 32.2	-0.3
PATCX	Punta Patache	3.48	189	eP	Pn	00 08 31.8	-0.7
PB01	IPOC Station P	3.66	179		Pn	00 08 34.8	-0.1
PB02	IPOC Station P	3.94	184		Pn	00 08 38.6	0.0
PB07	IPOC Station P	4.34	184		Pn	00 08 44.2	+0.3
PB09	IPOC Station P	4.41	176		Pn	00 08 45.4	+0.5
PB03	IPOC Station P	4.66	182		Pn	00 08 47.8	-0.2
PB06	IPOC Station P	5.31	180		Pn	00 08 56.1	-0.6
PB05	IPOC Station P	5.49	186		Pn	00 08 57.9	-1.1
AF01	San Pedro de A	5.71	167		Pn	00 09 01.5	-0.6
PB10	IPOC Station P	6.18	188		Pn	00 09 06.5	-1.6
PB14	IPOC Station P	7.26	186		Pn	00 09 20.5	-2.3
GO02	Mina Guanaco	7.75	180		Pn	00 09 27.9	-1.5
AC01	Pan de Azucar	8.79	186	Pn	Pn	00 09 40.0	-2.9
NNA	Nana	8.83	306	P	Pn	00 09 43.7	+0.1
	comp=N,25nm,0.3s,baz=131,slow=10,SNR=14						
NNA				S	Sn	00 11 18.7	-3.2
	comp=N,13nm,0.4s,baz=42,slow=23,SNR=6.5						
NNA	Nana	8.83	306		Pn	00 09 43.0	-0.7
AC02	Maricunga	9.43	178	Pn	Pn	00 09 50.5	-1.4
VILB	Vilhena	10.06	65		Pn	00 09 57.3	-2.6
VILB	Vilhena	10.06	65	eP	Pn	00 09 57.4	-2.5
PTLB	Pontes e Lacer	10.20	81		Pn	00 09 58.8	-2.9
PTLB	Pontes e Lacer	10.20	81	eP	Pn	00 09 59.1	-2.6
SALV	Santo Antonio	13.38	86	eP	Pn	00 10 42.0	-1.2
PDRB	Porto dos Gac	13.69	67	eP	Pn	00 10 45.3	-1.8
PP1B	Ponte de Pedra	14.02	93	eP	Pn	00 10 50.2	-1.1
CFA	Coronel Fontan	14.22	175	P	Pn	00 10 52.2	-1.6
	comp=N,7.4nm,0.6s,baz=354,slow=12,SNR=4.8						
CPUP	Villa Florida	14.44	130	eP	P	00 10 56.6	-2.4
CLDB	Colider	14.84	66	eP	Pn	00 11 01.2	-0.4
BO01	Tunca	17.01	184		Pn	00 11 29.3	+1.4
BO01				IAmb	IAmb	00 11 32.0	
	comp=Z,15nm,0.7s						
NPGB	Novo Progresso	17.26	55	eP	Pn	00 11 30.4	-0.8
BO02	Sierra Bellavi	17.39	183	Pn	Pn	00 11 33.4	+0.9
BO02				IAmb	IAmb	00 11 37.0	
	comp=Z,24nm,1.0s						
PTGB	Pitanga	17.89	117	eP	Pn	00 11 38.1	-0.6
SNDB	Serra Nova Dou	18.48	76	eP	P	00 11 43.4	-0.3
ITTB	Itaituba	18.73	48	eP	P	00 11 45.1	-1.3
FRTB	Fartura	19.67	111	eP	P	00 11 56.0	-0.6
BB19B	Bebedouro	20.21	104	eP	P	00 12 02.7	+0.3
IPMB	Ipameri, GO	20.37	95	eP	P	00 12 03.2	-0.9
PLTB	Pedras Altas	20.37	138	eP	P	00 12 03.7	-0.2
BDFB	Brasilia	20.75	88	P	P	00 12 07.3	-0.9
	comp=Z,11nm,0.5s,baz=254,slow=8.0,SNR=24						
	comp=Z,11nm,0.5s						
BDFB	Brasilia	20.75	88		P	00 12 06.7	-1.5
MAL2	Monte Alegre,	21.48	46		P	00 12 14.6	-1.4
MAL2				IAmb	IAmb	00 12 16.5	
	comp=Z,18nm,1.1s						
BOAV	Boa Vista	21.57	25	P	P	00 12 14.9	-2.1
TRQA	Tornquist	21.66	164	P	P	00 12 18.1	+0.4
VAO	Valinhos	21.94	109	P	P	00 12 18.8	-2.0
VAO				IAmb	IAmb	00 12 20.0	
	comp=Z,8.3nm,0.5s						
PMNB	Patos De Minas	22.04	97	eP	P	00 12 21.8	-0.1
PRPB	Parauapebas	22.29	62	eP	P	00 12 22.6	-1.7
LR05	Currie	22.88	185		P	00 12 30.9	+1.3
SMTB	Santa Maria do	23.00	71	eP	P	00 12 30.2	-0.8
PARB	Paraibuna	23.21	109	eP	P	00 12 33.0	+0.1
PLCA	Paso Flores	23.30	182	P	P	00 12 35.1	+1.6
	comp=Z,17nm,0.9s,baz=1.7,slow=10,SNR=23						
	comp=Z,17nm,0.9s						
PLCA	Paso Flores	23.30	182		P	00 12 34.4	+0.9
PLCA				IAmb	IAmb	00 12 37.3	
	comp=Z,19nm,0.9s						
PLCA	Paso Flores	23.30	182	eP	P	00 12 35.3	+1.8
BSCB	Bom Sucesso	23.69	103	eP	P	00 12 37.1	-0.2
SDBA	SAO DESIDERIO	24.34	82	eP	P	00 12 43.5	+0.3
JANB	Januaria	24.36	88	eP	P	00 12 42.5	-0.9
DIAM	Diamantina, MG	24.67	96	eP	P	00 12 46.5	+0.2
BSFB	Barra de Sao F	27.34	98	eP	P	00 13 10.1	-0.1
RIB01	Linhares ES	27.75	99	eP	P	00 13 13.6	-0.2
GUA01	Guaratinga, BA	28.47	93	eP	P	00 13 20.4	+0.1
CMC01	Camacan, BA	28.89	90	eP	P	00 13 23.6	-0.3
NBIT	Itapeh - BA	29.04	90	eP	P	00 13 25.1	-0.2
GDU01	Guandu, BA	29.11	87	eP	P	00 13 24.8	-1.2
TXAR	Lajitas Array	56.91	324	P	P	00 17 09.8	+1.2
	comp=Z,0.1nm,0.3s,baz=141,slow=16,SNR=4.4						
SNAA	Sanae	66.37	162	P	P	00 18 12.5	+1.1
	comp=Z,3.6nm,0.6s,baz=268,slow=8.3,SNR=26						
	comp=Z,3.6nm,0.6s						
SNAA	Sanae	66.37	162		P	00 18 12.6	+1.2
SNAA				IAmb	IAmb	00 18 15.5	
	comp=Z,2.0nm,0.8s						
DBIC	Dimbokro	68.23	75	P	P	00 18 23.4	-0.6
	comp=Z,9.8nm,0.5s,baz=265,slow=6.3,SNR=33						
	comp=Z,9.8nm,0.5s						
DBIC	Dimbokro	68.23	75	P	P	00 18 23.6	-0.4
PDAR	Pinedale Array	70.24	330	P	P	00 18 37.2	+1.2
	comp=Z,0.2nm,0.4s,baz=122,slow=11,SNR=3.9						
	comp=Z,0.2nm,0.4s						
ULM	Lac du Bonnet	71.21	343	P	P	00 18 41.5	+0.1
	comp=Z,2.8nm,0.5s,baz=109,slow=6.1,SNR=3.1						
	comp=Z,2.8nm,0.5s						
QSPA	South Pole Qui	72.80	180	P	P	00 18 53.1	+2.1
	comp=Z,1.3nm,0.2s,baz=152,slow=2.2,SNR=6.2						
	comp=Z,1.3nm,0.2s						
TORD	Torodi Ar. Bea	76.61	72	P	P	00 19 13.0	-0.6
	comp=Z,4.9nm,0.7s,baz=284,slow=3.8,SNR=5.7						
	comp=Z,4.9nm,0.7s						
TORD	Torodi Ar. Bea	76.61	72	P	P	00 19 13.3	-0.3
VNDA	Vanda	80.79	190	P	P	00 19 37.8	+2.4
	comp=Z,1.8nm,0.7s,baz=97,slow=4.2,SNR=3.8						
	comp=Z,1.8nm,0.7s						
ESDC	Sonseca Array	83.36	45	P	P	00 19 49.9	+0.4
	comp=Z,0.3nm,0.5s,baz=257,slow=4.9,SNR=6.1						
	comp=Z,0.3nm,0.5s						
YKA	Yellowknife Ar	87.10	341	P	P	00 20 08.6	+1.2
	comp=Z,1.0nm,0.7s,baz=140,slow=4.1,SNR=18						
	comp=Z,1.0nm,0.7s						
MAW	Mawson	88.45	164	P	P	00 20 15.2	+1.4
	comp=Z,3.2nm,0.6s,baz=196,slow=6.5,SNR=8.2						
	comp=Z,3.2nm,0.6s						
ASAR	Alice Springs	133.21	210	PKP	PKiKP	00 26 38.8	-0.3
	comp=Z,0.4nm,0.5s,baz=148,slow=1.4,SNR=6.2						
WRA	Warramunga Arr	136.11	213	PKP	PKPdf	00 26 43.4	+0.1
	comp=Z,0.6nm,0.5s,baz=137,slow=1.9,SNR=6.9						
ZALV	Zalesovo Beam	138.45	23	PKP	PKiKP	00 26 47.2	-1.4
	comp=Z,0.4nm,0.3s,baz=345,slow=1.6,SNR=2.2						
HILR	Hailar Array B	147.02	349	PKPbc	PKPab	00 27 05.4	-0.5
	comp=Z,1.1nm,0.5s,baz=48,slow=2.3,SNR=5.2						
SONM	Songino Array	149.44	5	PKPbc	PKiKP	00 27 11.1	-0.5
	comp=Z,0.8nm,0.5s,baz=297,slow=1.6,SNR=5.7						

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*CATAC **06** 00:20:10.0±0.5, 13°N±3°×9°0W±°, h27^{km}±2^{km}, M3.4/19, MLv3.4/19, Error ellipse: s-maj=6.4km s-min=2.8km az=26.9, confirmed*

*GCG **06** 00:20:11.5±0.4, 13°.24N×89°.59W, h50^{km}±29^{km}, MD3.6, ML3.5*

*SNET **06** 00:20:11.0±1.2, 13°.22N×89°.54W, h53^{km}±11^{km}, ML3.4*

ISC 06 00:20:10.5±1.5**, 13°.14N**±0°.06×**89°.53W**±0°.04**, h23**^{km}±14^{km}**, n73, σ0^{s}55**/79**, 2C-6D, El Salvador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.40	30	eP	Pn	00 20 21.0	+0.1
LALI				eS	Sn	00 20 28.7	+1.0
LALI	Alcalda de L	0.40	30	iP	Pn	00 20 21.0	+0.1
LALI	Alcalda de L	0.40	30	P	Pn	00 20 21.0	+0.1
LALI	Alcalda de L	0.40	30	S	Sn	00 20 27.8	0.0
JAYA	Jayaque - finc	0.52	9	⇓iP	Pn	00 20 22.2	-0.4
JAYA				eS	Sn	00 20 30.4	-0.4
JAYA	Jayaque - finc	0.52	9	iP	Pn	00 20 22.2	-0.4
JAYA				eS	Sn	00 20 30.3	-0.6
JAYA	Jayaque - finc	0.52	9	P	Pn	00 20 22.3	-0.4
PANCS	Alcalda de	0.58	36	P	Pn	00 20 22.8	-0.6
PANCS	Alcalda de	0.58	36	S	Sn	00 20 32.1	-0.2
PMON	Piamonte	0.61	20	⇓iP	Pn	00 20 23.4	-0.5
PMON	Piamonte	0.61	20	P	Pn	00 20 23.4	-0.5
PMON	Piamonte	0.61	20	S	Sn	00 20 33.2	+0.2
LOMA	Loma Larga	0.61	35	P	Pb	00 20 22.3	-0.4
LOMA	Loma Larga	0.61	35	S	Sn	00 20 32.8	-0.4
UEES	Universidad Ev	0.64	26	P	Pn	00 20 23.9	-0.4
UEES	Universidad Ev	0.64	26	S	Sn	00 20 34.1	+0.3
BOQS	Boqueron	0.64	22	⇓iP	Pn	00 20 24.1	-0.3
UTEC	Universidad Te	0.64	30	P	Pn	00 20 24.0	-0.3
UTEC	Universidad Te	0.64	30	S	Sn	00 20 34.1	+0.2
PIC2	El Picacho	0.66	24	eP	Pn	00 20 24.5	-0.2
LFRS	El Faro	0.66	43	⇑eP	Pn	00 20 24.4	-0.3
IGN	Direccin Gen	0.67	32	P	Pn	00 20 24.3	-0.4
IGN	Direccin Gen	0.67	32	S	Sn	00 20 34.7	+0.3
CEDA	San Andres	0.67	11	⇓iP	Pn	00 20 24.2	-0.5
CEDA	San Andres	0.67	11	S	Sn	00 20 34.5	0.0
UDBS	Universidad Do	0.68	33	S	Sn	00 20 35.0	+0.3
CEVE	Cerro Verde	0.69	352	eP	Pn	00 20 24.5	-0.6
CEVE	Cerro Verde	0.69	352	P	Pn	00 20 24.7	-0.4
CEVE	Cerro Verde	0.69	352	S	Sn	00 20 35.1	-0.1
SBLS	San Blas	0.70	353	eP	Pn	00 20 24.6	-0.7
LFU	La Fuente	0.73	34	⇓eP	Pn	00 20 25.4	-0.1
SNJE	San Jose	0.73	354	eP	Pn	00 20 24.9	-0.7
LBRS	Las Brisas	0.76	38	⇑iP	Pn	00 20 25.9	0.0
RTR	El Retiro	0.76	352	eP	Pn	00 20 25.6	-0.4
NUBE	Las Nubes	0.80	342	⇓eP	Pb	00 20 25.5	-0.3
NUBE	Las Nubes	0.80	342	iP	Pb	00 20 25.5	-0.3
NUBE				eS	Sb	00 20 36.5	+0.3
NUBE	Las Nubes	0.80	342	P	Pb	00 20 25.5	-0.3
PAVA	Las Pavas	0.81	45	eP	Pn	00 20 26.7	+0.1
PAVA	Las Pavas	0.81	45	P	Pn	00 20 26.7	+0.1
PAVA	Las Pavas	0.81	45	S	Sn	00 20 38.8	+0.7
SNVI	San Vicente	0.82	55	eP	Pb	00 20 26.4	+0.2
TECO	Alcaldia de Te	0.83	61	eP	Pb	00 20 26.1	-0.2
TECO	Alcaldia de Te	0.83	61	P	Pb	00 20 26.2	-0.1
TECO	Alcaldia de Te	0.83	61	S	Sb	00 20 38.0	+0.9
FAME	Alcaldia de Sa	0.84	326	P	Pb	00 20 25.8	-0.7
FAME	Alcaldia de Sa	0.84	326	S	Sb	00 20 37.3	-0.2
UESV	Universidad de	0.88	56	P	Pn	00 20 27.3	-0.1
UESV	Universidad de	0.88	56	S	Sn	00 20 39.7	+0.2
SLOZ	Alcaldia de Sa	0.92	344	P	Pn	00 20 28.5	+0.5
TECA	Tecapa	1.06	70	eP	Pb	00 20 29.6	-0.7
LLGN	La Laguna	1.17	29	P	Pn	00 20 31.0	-0.5
PACA	Pacayal	1.22	74	eP	Pb	00 20 32.8	-0.2
PACA	Pacayal	1.22	74	P	Pb	00 20 33.0	0.0
PACA	Pacayal	1.22	74	S	Sn	00 20 49.0	+0.8
LCY	Lacayo	1.24	77	eP	Pb	00 20 32.8	-0.4
RANC	El Ranchito	1.25	76	eP	Pn	00 20 32.7	0.0
BLLM	Bellamira	1.29	76	eP	Pn	00 20 33.5	+0.2
CNRM	Centro Naciona	1.37	76	S	Sn	00 20 51.9	+0.4
ESQI	Esquipulas	1.42	7	P	Pn	00 20 34.7	-0.3
ESQI	Esquipulas	1.42	7	S	Sn	00 20 52.9	-0.3
FG16	Alotenango, Sa	1.48	320	eP	Pb	00 20 39.9	+2.5
LCND	La Caada	1.61	84	eP	Pn	00 20 37.6	0.0
LCND	La Caada	1.61	84	P	Pn	00 20 37.5	0.0
CNCH	Conchagua	1.66	85	eP	Pn	00 20 38.4	+0.1
CNCH	Conchagua	1.66	85	S	Sn	00 21 00.0	+1.1
CNCH	Conchagua	1.66	85	P	Pn	00 20 38.1	-0.2
ESSG	Sabana Grande	1.77	315	eP	Pn	00 20 39.0	-0.8
CSGN	Cosiguina Volc	1.93	95	P	Pn	00 20 42.2	+0.2
CSGN				S	Sn	00 21 05.5	0.0
POTN	Potosi Cosigui	1.98	94	S	Sn	00 21 07.0	+0.4
PKGN	Cerro Pekin	2.53	100	P	Pn	00 20 49.5	-0.8
PKGN				S	Sn	00 21 19.6	-0.8
TELN	Telica	2.69	101	P	Pn	00 20 51.1	-1.3
YUSH	Yuscaran	2.74	72	P	Pn	00 20 52.3	-0.8
YUSH	Yuscaran	2.74	72	S	Sn	00 21 26.0	+0.5

IDC 06 00:25:44.5±8.9**, 20°.92S×176°.30E, h0**^{km}**, mb3.4**/3**, mbtmp3.4**/3**, MS3.0**/1**, Error ellipse: s-maj=393.0km s-min=43.2km az=148.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	39.22	258	P	P	00 33 14.9	0.0
	0.2nm,0.5s,baz=91,slow=8.7,SNR=5.3						
ASAR				LR	LR	00 47 53.3	
	comp=Z,22nm,18.4s,baz=278,slow=34						
	0.2nm,0.5s						
WRA	Warramunga Arr	39.26	264	P	P	00 33 14.7	-0.4
	0.3nm,0.7s,baz=98,slow=6.5,SNR=2.3						
	0.3nm,0.7s						
ILAR	Eielson Array	90.00	15	P	P	00 38 45.4	+0.1
	0.6nm,1.0s,baz=221,slow=9.3,SNR=2.3						
	0.6nm,1.0s						

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*ASRS **06** 00:44:42.7, 54°.7N±0°.4×83°.6E±0°.4, h1^{km}, MLh3.1/10, confirmed*

*NNC **06** 00:44:43.9±2.0, 54°.58N×83°.69E, h0^{km}, mb3.5, mpv3.0, Error ellipse: s-maj=17.9km s-min=5.5km az=11.0, Suspected Mining explosion.*

ISC 06 00:44:43.6±0.8**, 54°.57N**±0°.03×**83°.58E**±0°.03**, h0**^{km}**, n15, σ1^{s}10**/28**, 10C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KHAR	Kharino, NSO,	0.04	7	⇑P	Pg	00 44 44.4	0.0
KHAR				S	Sg	00 44 45.5	+0.5
NVSII	Novosibirsk	0.34	324	⇓P	Pg	00 44 49.4	-0.6
NVSII				S	Sg	00 44 53.7	-0.7
BSTK	Bystrovka, Nov	0.54	270	P	Pb	00 44 54.8	-1.1
BSTK				S	Sb	00 45 02.9	-1.2
ZAA0	Zalesovo Array	0.96	130	⇓P	Pg	00 45 01.3	-0.6
	1.2nm,0.4s						
ZAA0				⇑S	Sg	00 45 14.4	+0.1
	29nm,0.9s						
SALR	Pechorkino, Sa	1.25	96	⇑P	Pg	00 45 06.1	-1.4
SALR				S	Sg	00 45 23.4	-0.3
BJR1	Bachatsky 1, K	1.48	102	P	Pn	00 45 11.0	-0.4
BJR1				S	Sg	00 45 31.5	+0.6
BJR2	Bachatsky-2, K	1.52	100	P	Pn	00 45 12.1	+0.2
BJR2				S	Sn	00 45 32.5	+0.1
BJR3	Bachatsky-3 (S	1.55	102	P	Pn	00 45 12.2	-0.2
BJR3				S	Sg	00 45 33.9	+0.8
POMOR	Pomortsevo, Ku	1.73	94	P	Pb	00 45 16.3	+0.2
POMOR				S	Sg	00 45 39.6	+0.6
KOTO	Kotino, Kuzbas	1.99	100	P	Pb	00 45 20.5	-0.1
ELT	Eltsovka	2.05	129	P	Pn	00 45 20.0	+0.8
BRCR	Berchikul'	2.93	67	P	Pn	00 45 32.3	+1.0
KURK	Kurchatov	4.90	220	⇑Pn	Pn	00 46 00.5	+2.1
	0.5nm,0.4s						
KURK				⇑Pg	Pg	00 46 16.3	-1.1
	1.4nm,0.6s						
KURK				⇑Sn	Sn	00 46 57.0	+1.2
	2.0nm,0.6s						
KURK				⇑Lg	Lg	00 47 22.2	
	16nm,0.8s						
KURBB	Kurchatov Arra	5.01	220	⇓Pn	Pn	00 46 02.6	+2.6
	2.9nm,0.8s						
KURBB				⇓Pg	Pg	00 46 18.7	-0.8
	2.6nm,0.5s						
KURBB				⇑Sn	Sn	00 47 00.1	+1.7
	22nm,0.7s						
KURBB				⇑Lg	Lg	00 47 26.5	
	36nm,0.7s						
MK31	Makanchi Array	7.83	187	⇓Pn	Pn	00 46 36.8	-1.8
	1.1nm,0.6s,baz=15,slow=12,SNR=13						
MK31				⇑Lg	Lg	00 48 50.6	
	3.4nm,0.7s,baz=20,slow=30,SNR=3.6						

RSNC 06 01:01:24.2±0.0**, 7°N**±1°×**7°3W**±°**, h148**^{km}±1^{km}**, M3.4, mB4.9, mb3.8, ML3.0, Mw(mB)4.2, Northern Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.24	181	P	Pn	01 01 44.2	-0.5
BARC				S	Sn	01 01 59.6	-0.6
BRJC	Barrancabermej	0.58	284	P	Pn	01 01 45.9	+0.2
BRJC				S	Sn	01 02 02.8	+0.7
PAMC	Pamplona, Colo	0.69	43	P	Pn	01 01 47.2	+0.1
PAMC				S	Sn	01 02 04.0	-0.4
RUSC	La Rusia	0.94	174	P	Pn	01 01 48.0	-0.9
RUSC				S	Sn	01 02 06.7	-0.9
PTBC	PUERTO BERRIO,	1.30	257	P	Pn	01 01 50.6	-1.0
PTBC				S	Sn	01 02 11.7	-0.8
OCAC	Ocana	1.41	354	P	Pn	01 01 52.2	-0.6
OCAC				S	Sn	01 02 14.2	-0.6
SPBC	San Pablo de B	1.47	217	P	Pn	01 01 52.9	-0.5
SPBC				S	Sn	01 02 15.4	-0.3
NORC	Norcasia	2.10	233	P	Pn	01 01 59.9	-0.5
NORC				S	Sn	01 02 27.5	-0.8
CHIC	Chingaza	2.25	194	P	Pn	01 02 02.0	-0.7
CHIC				S	Sn	01 02 31.6	-0.6
ROSC	El Rosal	2.28	210	P	Pn	01 02 03.9	+0.9
ROSC				S	Sn	01 02 33.1	+0.4
HELC	Santa Helena	2.42	255	P	Pn	01 02 05.0	+0.4
HELC				S	Sn	01 02 34.3	-1.3
CVER	Cruz Verde, Cu	2.46	201	P	Pn	01 02 05.6	+0.4
CVER				S	Sn	01 02 36.9	+0.1
UREC	San Jos de Ur	2.51	292	P	Pn	01 02 04.0	-1.3
UREC				S	Sn	01 02 35.4	-1.6
GUY2C	Guyana, Caldas	2.70	234	P	Pn	01 02 08.1	0.0
GUY2C				S	Sn	01 02 41.7	-0.2
VILC	Villavicencio,	2.75	191	P	Pn	01 02 07.5	-1.0
VILC				S	Sn	01 02 42.0	-0.7
NIZA	Niza - Manizal	2.88	232	P	Pn	01 02 09.5	-0.8
NIZA				S	Sn	01 02 46.1	+0.3
CBOC	Ciudad Bolivar	2.97	251	P	Pn	01 02 11.8	+0.5
CBOC				S	Sn	01 02 47.8	+0.1
DBBC	Dabeiba	3.01	274	P	Pn	01 02 11.5	-0.3
DBBC				S	Sn	01 02 47.3	-1.2
ARGC	Ariguani, Magd	3.19	341	P	Pn	01 02 14.1	+0.2
ARGC				S	Sn	01 02 52.3	-0.1
SDV	Santo Domingo	3.25	51	P	Pn	01 02 13.7	-1.1
SDV				S	Sn	01 02 50.7	-3.3
PRAC	Prado	3.53	209	P	Pn	01 02 17.3	-1.1
PRAC				S	Sn	01 02 59.3	-1.1
ORTC	Ortega, Tolima	3.56	215	P	Pn	01 02 18.4	-0.3
ORTC				S	Sn	01 03 00.6	-0.4
PLMC	San Jos del P	3.63	238	P	Pn	01 02 19.3	-0.4
PLMC				S	Sn	01 03 01.7	-1.0
LCBC	Los crdobas,	3.75	303	P	Pn	01 02 20.3	-0.8
LCBC				S	Sn	01 03 04.5	-0.8
URMC	La Uribe, Meta	3.75	199	P	Pn	01 02 20.8	-0.5
URMC				S	Sn	01 03 04.2	-1.5
YOTC	Yotoco, Valle	4.23	228	P	Pn	01 02 26.7	-0.9
YOTC				S	Sn	01 03 17.0	+0.1
SMRC	Santa Marta, M	4.43	347	P	Pn	01 02 29.4	-0.7
SMRC				S	Sn	01 03 17.7	-3.6
CAPC	Capurgana	4.51	294	P	Pn	01 02 30.7	-0.4
CAPC				S	Sn	01 03 19.3	-3.8
BETC	Betania	4.70	209	P	Pn	01 02 32.5	-1.2
BETC				S	Sn	01 03 20.4	-7.4
MACC	Macarena, Meta	4.70	188	P	Pn	01 02 31.0	-2.7
MACC				S	Sn	01 03 22.2	-5.7
URIC	Uribia, Colomb	4.98	14	P	Pn	01 02 34.4	-3.0
URIC				S	Sn	01 03 29.5	-4.9
JAMC	Jamundi, Valle	5.00	224	P	Pn	01 02 36.9	-0.9
	13nm,0.6s						
JAMC				S	Sn	01 03 33.7	-1.5
	13nm,0.6s						
GARC	Garzon, Huila	5.16	207	P	Pn	01 02 38.1	-1.9
GARC				S	Sn	01 03 35.5	-3.5
POPC	Popayan, Colom	5.50	219	P	Pn	01 02 43.9	-0.7
	6.7nm,0.5s						
POPC				S	Sn	01 03 47.1	-0.2
	6.7nm,0.5s						
FLOC	Florencia	5.77	205	P	Pn	01 02 46.7	-1.2
	8.8nm,0.6s						
FLOC				S	Sn	01 03 50.5	-2.7
	8.8nm,0.6s						
BBAC	Balboa, Cauca	6.26	221	P	Pn	01 02 55.0	+0.3
BBAC				S	Sn	01 04 03.3	-2.1

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*DJA **06** 01:03:34.9±1.2, 12°S±3°×11°7E±°, h17^{km}±11^{km}, M5.0/31, mB5.5/19, mb4.9/28, MLv5.2/31, Mw(mB)4.9/19, MwMwp4.5/1, Mwp4.9/1*

*NEIC **06** 01:03:37.7±2.8, 11°.46S±0°.05×117°.04E±0°.07, h35^{km}±1^{km}, mb4.5/20, Error ellipse: s-maj=14.7km s-min=5.2km az=234.0*

*IDC **06** 01:03:41.1±4.8, 11°.22S×117°.34E, h65^{km}±43^{km}, mb3.9/11, mbtmp4.2/13, ML4.6/3, MS2.8/4, Error ellipse: s-maj=37.6km s-min=14.5km az=64.0*

ISC 06 01:03:36.1±0.5**, 11°.49S**±0°.05×**117°.19E**±0°.05**, h26**^{km}**, n120, σ2^{s}03**/119**, mb4.5**/23**, 1C, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLAI	Plampang	2.71	12	P	Pn	01 04 18.5	+0.5
PLAI	Plampang	2.71	12	P	Pn	01 04 17.3	-0.7
TWSI	Taliwang, Sumb	2.75	354	P	Pn	01 04 17.8	-0.8
WBSI	Waikabubak, Su	2.83	50	P	Pn	01 04 20.5	+0.7
DBNI	Kabupaten Domp	3.17	20	P	Pn	01 04 25.9	+1.6
KLNI	Mataram	3.23	340	P	Pn	01 04 24.8	-0.5
IGBI	Denpasar	3.33	323	P	Pn	01 04 24.5	-2.1
DNP	Denpasar	3.41	325	P	Pn	01 04 27.2	-0.4
KHKI	Kahang-Kahang	3.48	333	P	Pn	01 04 29.3	+0.7
BASI	Baing, Sumba	3.56	70	P	Pn	01 04 31.1	+1.5
RTBI	Rangdo, Negare	3.74	323	P	Pn	01 04 30.9	-1.3
SRBI	Singaraja	3.91	330	P	Pn	01 04 34.4	-0.1
JAGI	Jajag, Banyuwa	4.24	315		Pn	01 04 36.9	-2.2
JAGI	Jajag, Banyuwa	4.24	315	P	Pn	01 04 37.1	-2.0
JAGI	Jajag, Banyuwa	4.24	315	P	Pn	01 04 36.6	-2.5
BYJI	Banyuwangi	4.29	319	P	Pn	01 04 39.4	-0.4
BYJI				S	Sn	01 05 29.4	+0.4
ABJI	Asem Bagus	4.69	321	P	Pn	01 04 44.6	-0.6
GMJI	Gumukmas	4.89	311	P	Pn	01 04 45.8	-2.1
BLJI	Banyuglugur	5.14	316	P	Pn	01 04 50.1	-1.4
EDFI	Ende, Flores	5.20	59	P	Pn	01 04 54.1	+1.8
	0.9nm5μm71nm,0.4s						
KMMI	Kalianget	5.44	324	P	Pn	01 04 56.0	+0.4
	2μm46nm,0.7s						
MMRI	Maumere	5.72	61	Pn	Pn	01 05 00.3	+0.9
MMRI	Maumere	5.72	61	P	Pn	01 05 02.9	+3.5
MMRI	Maumere	5.72	61	P	Pn	01 05 02.0	+2.6
	1.3nm4μm90nm,0.5s						
BATI	Baumata	6.48	79	P	Pn	01 05 11.3	+1.4
	53nm,0.3s,baz=274,slow=5.1,SNR=10						
BATI				S	Sn	01 06 23.3	+0.2
	104nm,0.3s,baz=34,slow=20,SNR=11						
BATI	Baumata	6.48	79	P	Pn	01 05 11.3	+1.4
SNJI	Sawahan-Nganju	6.50	304	P	Pn	01 05 08.8	-1.6
	1.4nm69nm,0.6s						
SJI	Sawahan	6.52	304	P	Pn	01 05 09.3	-1.3
MKS	Makassar	6.63	20	P	Pn	01 05 14.3	+2.4
PCJI	Pacitan	6.77	298	P	Pn	01 05 11.4	-2.5
	1.0nm78nm,0.6s						
KAPI	Kappang	6.91	22	P	Pn	01 05 16.6	+0.8
	10nm,0.3s,baz=195,slow=8.4,SNR=28						
KAPI				S	Sn	01 06 28.8	-4.9
	46nm,0.3s,baz=264,slow=22,SNR=14						

KAPI				LR	LR	01 08 25.5	
	comp=Z,50nm,19.3s,baz=159,slow=43						
	27nm,0.3s						
KAPI	**Kappang**	**6.91**	**22**	P	**Pn**	**01 05 18.0**	**+2.2**
KAPI	**Kappang**	**6.91**	**22**	P	**Pn**	**01 05 16.3**	**+0.5**
NGJI	**Ngawi**	**6.98**	**305**	P	**Pn**	**01 05 16.1**	**-0.7**
	0.5nm38nm,0.7s						
TBJI	**Tambak Boyo**	**7.03**	**311**	P	**Pn**	**01 05 17.7**	**+0.3**
	0.5nm55nm,0.9s						
SOEI	**Soe**	**7.16**	**77**		**Pn**	**01 05 22.1**	**+2.7**
SOEI	**Soe**	**7.16**	**77**	P	**Pn**	**01 05 22.5**	**+3.1**
SOEI	**Soe**	**7.16**	**77**	P	**Pn**	**01 05 21.8**	**+2.4**
	0.7nm2μm150nm,0.7s						
UGM	**Wanagama**	**7.47**	**298**		**Pn**	**01 05 22.1**	**-1.5**
UGM	**Wanagama**	**7.47**	**298**	P	**Pn**	**01 05 22.1**	**-1.5**
UGM	**Wanagama**	**7.47**	**298**	P	**Pn**	**01 05 21.8**	**-1.8**
	1.0nm84nm,0.6s						
BNSI	**Bone**	**7.61**	**22**	P	**Pn**	**01 05 28.0**	**+2.6**
	0.3nm79nm,0.6s						
YOGI	**Yogyakarta**	**7.72**	**298**	P	**Pn**	**01 05 26.5**	**-0.4**
	153nm,1.6s						
SPSI	**Sidrap Palu**	**7.90**	**19**	P	**Pn**	**01 05 29.6**	**+0.2**
	26nm,0.5s						
SMRI	**Semarang**	**7.99**	**303**	P	**Pn**	**01 05 28.7**	**-2.0**
	0.8nm68nm,1.2s						
PMSI	**Majene**	**8.12**	**12**	P	**Pn**	**01 05 33.5**	**+1.1**
BBKI	**Banjar Baru**	**8.31**	**344**	P	**Pn**	**01 05 35.8**	**+0.8**
	7μm76nm,1.1s						
KKSI	**Kolaka, Sulawe**	**8.51**	**32**	P	**Pn**	**01 05 39.6**	**+1.9**
TTSI	**Tana Toraja**	**8.78**	**17**	P	**Pn**	**01 05 43.8**	**+2.3**
MMSI	**Mamuju**	**8.91**	**11**	P	**Pn**	**01 05 45.6**	**+2.4**
	1μm78nm,0.6s						
CTJI	**Waduk Cacaban**	**9.07**	**299**	P	**Pn**	**01 05 43.5**	**-2.0**
	29nm,0.6s						
KPJI	**Karang Pucung**	**9.14**	**296**	P	**Pn**	**01 05 44.9**	**-1.5**
	45nm,0.5s						
MBWA	**Marble Bar**	**9.92**	**166**		**Pn**	**01 05 56.3**	**-0.7**
MBWA	**Marble Bar**	**9.92**	**166**	P	**Pn**	**01 05 56.1**	**-1.0**
BBJI	**Bungbulang**	**10.23**	**292**	P	**Pn**	**01 05 58.5**	**-2.9**
BBJI	**Bungbulang**	**10.23**	**292**	P	**Pn**	**01 05 59.1**	**-2.3**
PSA00	**Pilbara Seismi**	**10.34**	**166**		**Pn**	**01 06 02.1**	**-0.8**
PSA00	**Pilbara Seismi**	**10.34**	**166**		**Pn**	**01 06 00.8**	**-2.0**
PSA00	**Pilbara Seismi**	**10.34**	**166**	P	**Pn**	**01 06 02.4**	**-0.5**
FITZ	**Fitzroy Crossi**	**10.48**	**130**	P	**Pn**	**01 06 06.0**	**+1.2**
	8.6nm,0.3s,baz=319,slow=8.6,SNR=48						
FITZ				S	**Sn**	**01 07 54.9**	**-6.5**
	63nm,0.4s,baz=176,slow=22,SNR=14						
FITZ				LR	LR	01 09 50.4	
	comp=Z,94nm,20.8s,baz=318,slow=35						
FITZ	**Fitzroy Crossi**	**10.48**	**130**		**Pn**	**01 06 05.8**	**+1.0**
MTKI	**Muara Teweh, K**	**10.72**	**348**	P	**Pn**	**01 06 09.3**	**+1.2**
CNJI	**Cibinong**	**10.76**	**292**	P	**Pn**	**01 06 06.6**	**-2.1**
	1μm17nm,0.5s						
XMI	**Christmas Isla**	**11.34**	**274**	P	**Pn**	**01 06 13.4**	**-3.2**
GIRL	**Giralia**	**11.45**	**194**		**Pn**	**01 06 16.9**	**-1.0**
KNRA	**Kununurra**	**11.99**	**112**		**Pn**	**01 06 26.2**	**+0.7**
MPSI	**Mapaga**	**12.05**	**13**	P	**Pn**	**01 06 27.2**	**+0.9**
MTN	**Manton Dam**	**13.69**	**97**		**Pn**	**01 06 50.1**	**+1.3**
MEEK	**Meekatharra**	**15.13**	**175**	P	**Pn**	**01 07 06.8**	**-1.4**
MNAI	**Manna**	**15.77**	**296**	P	**Pn**	**01 07 13.0**	**-3.7**
FAKI	**Fak Fak**	**17.18**	**61**		**Pn**	**01 07 32.6**	**-1.9**
FAKI				IAmb	IAmb	01 07 42.2	
	comp=Z,37nm,1.4s						
FAKI	**Fak Fak**	**17.18**	**61**	P	**P**	**01 07 36.8**	**+0.8**
MORW	**Morawa**	**17.52**	**183**	P	**Pn**	**01 07 37.6**	**-1.1**
MORW	**Morawa**	**17.52**	**183**	P	**Pn**	**01 07 37.8**	**-0.9**
BTDF	**Bukit Timah Da**	**18.46**	**313**	P	**P**	**01 07 49.3**	**-0.8**
WB0	**Warramunga Arr**	**18.48**	**119**	P	**Pn**	**01 07 52.0**	**+1.5**
WRA	**Warramunga Arr**	**18.51**	**119**	P	**Pn**	**01 07 51.6**	**+0.7**
	comp=Z,1.1nm,0.3s,baz=293,slow=10,SNR=27						
WRA				S	Sn	01 11 05.0	-12
	comp=Z,3.8nm,0.5s,baz=292,slow=24,SNR=5.2						
	comp=Z,5.2nm,0.8s						
WRAB	**Tennant Creek**	**18.51**	**119**	P	**Pn**	**01 07 53.1**	**+2.2**
BLDU	**Ballidu**	**19.04**	**181**	P	**Pn**	**01 07 57.7**	**+0.5**
AS31	**Alice Springs**	**19.98**	**130**	P	Pn	01 08 10.2	+1.6
ASAR	**Alice Springs**	**19.98**	**130**	P	Pn	01 08 09.3	+0.7
	comp=Z,5.2nm,0.6s,baz=300,slow=9.9,SNR=74						
ASAR				S	**S**	**01 11 43.0**	**-7.4**
	comp=Z,5.7nm,0.6s,baz=303,slow=22,SNR=13						
ASAR				LR	LR	01 16 10.6	
	comp=Z,28nm,19.9s,baz=273,slow=37						
	comp=Z,5.2nm,0.6s						
ASAR	**Alice Springs**	**19.98**	**130**	P	Pn	01 08 10.1	+1.5
KLBR	**Kellerberrin**	**20.01**	**179**	P	Pn	01 08 09.2	+0.4
MUN	**Mundaring**	**20.41**	**182**	P	Pn	01 08 13.2	-0.3
NWAO	**Narrogin (SRO)**	**21.34**	**180**	P	**P**	**01 08 27.7**	**+6.4**
NWAO				IAmb	IAmb	01 08 29.9	
	comp=Z,21nm,0.7s						
FORT	**Forrest**	**21.68**	**154**	P	**P**	**01 08 27.4**	**+2.4**
FORT				IAmb	IAmb	01 08 48.4	
	comp=Z,9.8nm,0.7s						
IPM	**Ipoh**	**22.59**	**314**	P	**P**	**01 08 36.5**	**+1.5**
IPM				IAmb	IAmb	01 08 37.6	
	comp=Z,17nm,0.7s						
QIS	**Mount Isa**	**23.33**	**116**	P	**P**	**01 08 45.2**	**+2.7**
COEN	**Coen**	**25.46**	**98**	P	**P**	**01 09 04.1**	**+1.8**
BBOO	**Buckleboo**	**27.39**	**144**	P	**P**	**01 09 20.1**	**+0.5**
STKA	**Stephens Creek**	**30.29**	**136**	P	**P**	**01 09 46.7**	**+1.3**
	comp=Z,1.4nm,0.6s,baz=315,slow=5.7,SNR=2.9						
	comp=Z,1.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**34.78**	**329**	P	**P**	**01 10 24.1**	**-0.7**
	comp=Z,1.3nm,0.3s,baz=144,slow=8.4,SNR=2.3						
CMAR				LR	LR	01 24 42.7	
	comp=Z,15nm,19.4s,baz=150,slow=36						
	comp=Z,1.3nm,0.3s						
PZH	**PanZhiHua**	**40.64**	**338**	P	**P**	**01 11 18.0**	**+3.6**
NJ2	**Nanjing**	**43.32**	**2**	*e*P	**P**	**01 11 37.7**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
XAN	**Xi'an**	**45.95**	**350**	⇑P	**P**	**01 12 01.7**	**+4.6**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
EVN	**Everest**	**49.02**	**324**	P	**P**	**01 12 20.6**	**-1.2**
BJI	**Beijing**	**51.27**	**359**	P	**P**	**01 12 36.4**	**-1.4**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**52.33**	**355**	*e*P	**P**	**01 12 49.2**	**+3.3**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,51nm,3.6s						
USRK	**Ussuriysk Ar.**	**57.03**	**13**	P	**P**	**01 13 18.3**	**-1.4**
	comp=Z,2.5nm,0.7s,baz=126,slow=7.4,SNR=4.5						
	comp=Z,2.5nm,0.7s						
SONM	**Songino Array**	**59.84**	**352**	P	**P**	**01 13 38.2**	**-1.2**
	comp=Z,2.9nm,0.7s,baz=169,slow=8.7,SNR=2.6						
	comp=Z,2.9nm,0.7s						
SONM	**Songino Array**	**59.84**	**352**	P	**P**	**01 13 38.3**	**-1.2**
SONM				IAmb	IAmb	01 13 39.2	
	comp=Z,4.3nm,0.9s						
HILR	**Hailar Array B**	**60.82**	**2**	P	**P**	**01 13 44.8**	**-1.2**
	comp=Z,1.9nm,0.5s,baz=171,slow=9.8,SNR=4.3						
	comp=Z,1.9nm,0.5s						
KSH	**Kashi**	**63.58**	**325**	P	**P**	**01 14 05.0**	**+0.1**
KSH				pP	sP	01 14 12.4	-1.1
KSH				sP	pwP	01 14 20.1	+1.1
KSH				pmax	pmax		
	comp=Z,4.0nm,1.2s						
TARG	**Taragay, Kyrgy**	**64.16**	**328**	P	**P**	**01 14 10.3**	**+1.3**
TARG				IAmb	IAmb	01 14 26.6	
	comp=Z,2.5nm,0.6s						
KDJ	**Kajisay**	**64.78**	**328**	P	**P**	**01 14 12.9**	**+0.2**
KDJ				IAmb	IAmb	01 14 29.1	
	comp=Z,5.4nm,0.8s						
BOOM	**Boomskoye usch**	**65.68**	**328**	P	**P**	**01 14 18.0**	**-0.6**
BOOM				IAmb	IAmb	01 14 34.8	
	comp=Z,3.6nm,0.7s						
MK31	**Makanchi Array**	**65.89**	**334**	P	**P**	**01 14 19.2**	**-0.4**
MK31				IAmb	IAmb	01 14 19.7	
	comp=Z,4.0nm,1.2s						
MKAR	**Makanchi Array**	**65.89**	**334**	P	**P**	**01 14 19.1**	**-0.5**
	comp=Z,2.0nm,0.5s,baz=152,slow=7.1,SNR=31						
	comp=Z,2.0nm,0.5s						
MKAR	**Makanchi Array**	**65.89**	**334**	P	**P**	**01 14 19.4**	**-0.3**
GAR	**Garm**	**66.54**	**322**	P	**P**	**01 14 23.7**	**-0.4**
KURBB	**Kurchatov Arra**	**70.43**	**335**	P	**P**	**01 14 47.5**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=147,slow=5.8,SNR=11						
	comp=Z,0.7nm,0.6s						
KURK	**Kurchatov**	**70.46**	**335**	P	**P**	**01 14 47.5**	**-0.6**
KURK	**Kurchatov**	**70.46**	**335**	IAmb	IAmb	01 15 07.2	
	comp=Z,2.9nm,0.7s						
ZALV	**Zalesovo Beam**	**70.75**	**340**	P	**P**	**01 14 48.0**	**-1.8**
	comp=Z,1.2nm,0.4s,baz=153,slow=5.2,SNR=6.9						
	comp=Z,1.2nm,0.4s						
ZALV	**Zalesovo Beam**	**70.75**	**340**	P	**P**	**01 14 48.4**	**-1.4**
BVAR	**Borovoye Array**	**75.67**	**333**	P	**P**	**01 15 18.2**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=140,slow=6.9,SNR=7.1						
	comp=Z,1.1nm,0.7s						
AB31	**Akbulak array**	**78.58**	**326**	P	**P**	**01 15 34.8**	**-0.6**
ABKAR	**Akbulak array**	**78.58**	**326**	P	**P**	**01 15 35.1**	**-0.3**
SNAA	**Sanae**	**88.14**	**196**	P	**P**	**01 16 25.9**	**+1.5**
	comp=Z,0.9nm,0.8s,baz=52,slow=12,SNR=1.8						
	comp=Z,0.9nm,0.8s						
SNAA	**Sanae**	**88.14**	**196**	P	**P**	**01 16 25.6**	**+1.3**

TRN 06 01:06:53.8, 11°.51N×60°.09W, h69^{km}, MD3.6, East of Tobago., Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	**Trinidad (W)**	**1.55**	**236**	*e*P	Pn	01 07 19.7	+0.3
PSMG	**Mucurapo Girls**	**1.65**	**240**	*e*P	Pn	01 07 20.6	0.0
PSMG				*e*S	Sn	01 07 41.6	+0.6
DMDM	**Guralp CMG5TDE**	**1.65**	**241**	*e*P	Pn	01 07 19.9	-0.7
GRGR	**Grenville**	**1.65**	**292**	*e*P	Pn	01 07 20.9	+0.2
GRGR				*e*S	Sn	01 07 40.5	-0.7
GRW	**Mount Saint Ca**	**1.67**	**293**	*e*P	Pn	01 07 20.9	-0.2
GRW				*e*S	Sn	01 07 41.6	-0.1
GRHS	**Sauteurs**	**1.68**	**295**	*e*P	Pn	01 07 21.6	+0.6
GRHS				*e*S	Sn	01 07 41.5	-0.2
BBGH	**Gun Hill**	**1.70**	**18**	*e*P	Pn	01 07 21.9	+0.5
BBGH				*e*S	Sn	01 07 42.9	+0.6
GRFF	**Grenada Fort F**	**1.70**	**288**	*e*P	Pn	01 07 21.6	+0.2
GRFF				*e*S	Sn	01 07 42.0	-0.3
SVB	**Belmont**	**2.08**	**327**	*e*P	Pn	01 07 26.5	-0.1
SVB				*e*S	Sn	01 07 50.7	-0.9
MCLT	**Moule a Chique**	**2.34**	**339**	*e*P	Pn	01 07 30.1	+0.1
MCLT				*e*S	Sn	01 07 56.6	-1.1
SLAC	**Saint Lucia, A**	**2.50**	**342**	*e*P	Pn	01 07 32.6	+0.4
SLAC				*e*S	Sn	01 08 00.7	-0.9
SLCP	**Castries, St.**	**2.63**	**341**	*e*P	Pn	01 07 34.2	+0.2
SLCP				*e*S	Sn	01 08 04.9	0.0
SLBI	**Saint Lucia, B**	**2.64**	**341**	*e*P	Pn	01 07 34.1	0.0
SLBI				*e*S	Sn	01 08 04.7	-0.3
BIM	**Bigot**	**3.13**	**342**	*e*P	Pn	01 07 41.7	+0.8
BIM				*e*S	Sn	01 08 15.9	-1.3
ILAM	**Ilet Lapin Mar**	**3.33**	**347**	*e*P	Pn	01 07 43.3	-0.2
ILAM				*e*S	Sn	01 08 20.5	-1.4
DSLB	**Salisbury**	**4.11**	**342**	*e*P	Pn	01 07 54.3	+0.1
DSLB				*e*S	Sn	01 08 40.1	-0.9
TBG	**Guadaloupe-3**	**4.57**	**341**	*e*P	Pn	01 08 00.7	+0.2
TBG				*e*S	Sn	01 08 50.2	-2.0
PCRV	**Puerto La Cruz**	**4.66**	**254**	*e*P	Pn	01 08 03.1	+1.4
PCRV				*e*S	Sn	01 08 52.9	-1.8
ATGZ	**Broadband at L**	**4.83**	**341**	*e*P	Pn	01 08 04.2	+0.3

IDC 06 01:33:41.7±2.7, 17°.50S×178°.23W, h0^{km}, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=270.8km s-min=28.0km az=157.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**44.87**	**259**	P	P	01 41 57.9	-0.4
	0.4nm,0.7s,baz=95,slow=8.2,SNR=3.6						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**45.06**	**254**	P	P	01 41 59.9	0.0
	2.7nm,0.5s,baz=89,slow=8.1,SNR=40						
	2.7nm,0.5s						
TXAR	**Lajitas Array**	**85.64**	**58**	P	P	01 46 23.5	+0.8
	0.3nm,0.7s,baz=228,slow=6.6,SNR=5.2						
	0.3nm,0.7s						
PDAR	**Pinedale Array**	**86.94**	**43**	P	P	01 46 28.1	-0.9
	0.1nm,0.3s,baz=204,slow=2.6,SNR=3.7						
	0.1nm,0.3s						

IDC 06 01:36:32.1±1.4, 41°.73S×84°.51W, h0^{km}, mb3.9/5, mbtmp3.9/5, MS3.3/8, Error ellipse: s-maj=109.6km s-min=32.6km az=62.0, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03S2	**Juan Fernandez**	**9.03**	**31**	T	T	01 48 01.5	
	baz=208,slow=73,SNR=384						
H03S1	**Juan Fernandez**	**9.03**	**31**	T	T	01 48 03.0	
	baz=208,slow=73,SNR=311						
H03S3	**Juan Fernandez**	**9.05**	**31**	T	T	01 48 00.1	
	baz=208,slow=73,SNR=801						
H03N3	**Juan Fernandez**	**9.37**	**30**	T	T	01 48 24.7	
	baz=203,slow=71,SNR=114						
H03N2	**Juan Fernandez**	**9.38**	**30**	T	T	01 48 24.1	
	baz=203,slow=71,SNR=170						
H03N1	**Juan Fernandez**	**9.39**	**30**	T	T	01 48 23.8	
	baz=203,slow=71,SNR=95						
PLCA	**Paso Flores**	**10.57**	**89**	LR	LR	01 42 35.5	
	comp=Z,165nm,19.9s,baz=248,slow=34						
CPUP	**Villa Florida**	**27.11**	**64**	LR	LR	01 52 31.0	
	comp=Z,32nm,18.9s,baz=85,slow=35						
LPAZ	**La Paz**	**29.01**	**34**	LR	LR	01 52 23.7	
	comp=Z,25nm,18.4s,baz=192,slow=33						
ATAH	**Atahualpa**	**34.88**	**11**	LR	LR	01 53 39.0	
	comp=Z,46nm,21.1s,baz=255,slow=29						
BDFB	**Brasilia**	**40.77**	**61**	LR	LR	02 00 47.9	
	comp=Z,92nm,19.1s,baz=315,slow=36						
ROSC	**El Rosal**	**47.27**	**14**	LR	LR	02 02 41.3	
	comp=Z,89nm,18.9s,baz=148,slow=33						
SNAA	**Sanae**	**48.45**	**155**	P	P	01 45 15.5	-0.2
	0.9nm,0.8s,baz=356,slow=22,SNR=2.1						
	0.9nm,0.8s						
SDV	**Santo Domingo**	**51.95**	**18**	LR	LR	02 04 41.6	
	comp=Z,31nm,20.3s,baz=230,slow=32						
MDP	**Montagnes des**	**54.93**	**40**	LR	LR	02 08 55.2	
	comp=Z,29nm,18.4s,baz=196,slow=35						
TXAR	**Lajitas Array**	**72.89**	**343**	P	P	01 48 02.5	-0.4
	0.5nm,0.8s,baz=161,slow=7.6,SNR=5.9						
	0.5nm,0.8s						
NVAR	**Mina Array Bea**	**85.52**	**334**	P	P	01 49 12.3	+0.4
	0.9nm,0.8s,baz=158,slow=6.5,SNR=6.6						
	0.9nm,0.8s						
PDAR	**Pinedale Array**	**87.09**	**342**	P	P	01 49 19.6	+0.1
	1.6nm,1.0s,baz=141,slow=6.1,SNR=8.0						
	1.6nm,1.0s						
TORD	**Torodi Ar. Bea**	**95.83**	**78**	P	P	01 50 00.6	0.0
	0.4nm,0.8s,baz=238,slow=4.9,SNR=1.2						
	0.4nm,0.8s						

*NNC **06** 01:37:41.6±5.9, 47°.71N×90°.11E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=59.6km s-min=55.3km az=172.0*

*ASRS **06** 01:37:42.9±0.6, 48°N±3°×9°1E±°, h8^{km}, MLh3.2/8, Error ellipse: s-maj=6.4km s-min=4.0km az=1.2, confirmed*

ISC 06 01:37:35.1±2.2, 47°.3N±0°.1×90°.89E±0°.07, h10^{km}, n16, σ2^{s}74/28, 3C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUR	**Chagan-Uzun**	**3.25**	**330**	Pg	**Pn**	**01 38 27.7**	**+1.5**
CUR				Sg	**Sb**	**01 39 08.8**	**-3.6**
DGZ	**Jazzator, Alta**	**3.30**	**317**	Pg	**Pn**	**01 38 30.9**	**+3.9**
DGZ				Sg	**Sn**	**01 39 08.8**	**+2.4**
AKAR	**Aktash**	**3.69**	**325**	Pn	**Pn**	**01 38 33.4**	**+1.1**
AKAR				Pg	**Pb**	**01 38 41.2**	**+0.8**
AKAR				Sg	**Sb**	**01 39 21.3**	**-4.0**
TEL	**Teeli**	**3.73**	**353**	Pn	**Pn**	**01 38 34.1**	**+1.4**
TEL				Pg	**Pb**	**01 38 40.4**	**-0.6**
TEL				Sg	**Sb**	**01 39 22.8**	**-3.4**
CHBI	**Chibit, Altay**	**3.73**	**324**	Pn	**Pn**	**01 38 33.7**	**+0.8**
CHBI				Pg	**Pb**	**01 38 40.5**	**-0.6**
CHBI				Sg	**Sb**	**01 39 23.0**	**-3.4**
ULGR	**Ulagan, Altay**	**3.82**	**331**	Pn	**Pn**	**01 38 35.5**	**+1.4**
ULGR				Pg	**Pb**	**01 38 42.4**	**-0.3**
ULGR				Sg	**Sb**	**01 39 25.4**	**-3.6**
ELDR	**Elanda**	**5.00**	**323**	Pg	**Pb**	**01 39 03.0**	**+0.3**
ELDR				Sg	**Sb**	**01 40 03.8**	**+1.0**
ARTR	**Artybash**	**5.05**	**334**	Pg	**Pb**	**01 39 04.2**	**+0.6**
ARTR				Sg	**Sb**	**01 40 03.2**	**-1.1**
KNGR	**Kungurtug, Tuv**	**5.46**	**51**	Sg	**Sg**	**01 40 27.6**	**-2.7**
TASR	**Tashtagol**	**5.77**	**342**	Sg	**Sb**	**01 40 28.8**	**+3.7**
MK31	**Makanchi Array**	**5.90**	**268**	Pn	**Pn**	**01 39 04.5**	**+1.9**
	1.8nm,0.8s,baz=89,slow=14,SNR=11						
MK31				⇑Lg	Lg	01 40 31.7	
	4.0nm,0.6s,baz=88,slow=30,SNR=5.6						
VEH	**Verkhnyaya Baz**	**5.95**	**357**	Sg	**Sb**	**01 40 34.1**	**+4.1**
TDJR	**Todzha**	**6.09**	**32**	Sg	**Sg**	**01 40 47.6**	**-3.0**
LUZB	**Luzhba, Kemero**	**6.47**	**349**	Sg	**Sb**	**01 40 50.7**	**+5.7**
KURK	**Kurchatov**	**8.74**	**297**	⇓Pn	**Pn**	**01 39 39.6**	**-1.9**
	1.0nm,0.7s						
KURK				⇓Lg	Lg	01 41 59.8	
	2.9nm,0.8s						
KURBB	**Kurchatov Arra**	**8.77**	**297**	⇑Pn	**Pn**	**01 39 40.3**	**-1.6**
	1.0nm,0.3s						
KURBB				⇑Lg	Lg	01 42 01.3	
	11nm,0.7s						

*IDC **06** 01:45:41.8±0.5, 49°.23S×120°.61E, h0^{km}, mb4.8/20, mbtmp4.8/21, ML2.5/1, MS4.0/22, Error ellipse: s-maj=25.4km s-min=11.8km az=106.0*

*MOS **06** 01:45:42.0±0.9, 49°.24S×120°.69E, h10^{km}, mb5.2/15, Error ellipse: s-maj=24.2km s-min=9.1km az=82.3*

*NEIC **06** 01:45:43.5±1.9, 49°.29S±0°.09×120°.6E±0°.1, h10^{km}±1^{km}, mb5.1/37, Error ellipse: s-maj=15.2km s-min=15.0km az=189.0*

*GCMT **06** 01:45:44.5±0.3, 49°.29S±0°.02×120°.75E±0°.07, h14^{km}±1^{km}, MW4.8/83, Moment Tensor Solution. s19,c20; s83,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.22±.19; $M_{\theta\theta}$2.02±.13; $M_{\phi\phi}$0.19±.10; $M_{r\theta}$-0.60±.30; $M_{\theta\phi}$-0.28±.08; $M_{\phi r}$0.06±.34; Best double couple: $M_0$2.22500×10^{16} NP1:ϕ_s279.00000°,δ37.00000°,λ-89.00000°. NP2: ϕ_s98.00000°,δ53.00000°,λ-91.00000°. Principal axes: T 2.1460, Plg8.0000°, Azm188.0000°; N 0.1560, Plg1.0000°, Azm98.0000°; P -2.3040, Plg82.0000°, Azm3.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **06** 01:45:45.8, 48°.72S×120°.98E, h17^{km}, mB5.5/9, mb5.1/40, Ms5.2/2, Ms7 5.0/2*

ISC 06 01:45:43.6±0.3, 49°.24S±0°.06×120°.72E±0°.10, h10^{km}, n196, σ1^{s}38/179, mb5.0/66, MS3.9/23, 13C-2D, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**15.13**	**339**	T	T	02 04 43.5	
	baz=162,slow=74,SNR=162						
H01W1	**Cape Leeuwin H**	**15.13**	**339**	T	T	02 04 43.5	
	baz=162,slow=74,SNR=124						
H01W3	**Cape Leeuwin H**	**15.15**	**339**	T	T	02 04 44.5	
	baz=162,slow=74,SNR=162						
NWAO	**Narrogin (SRO)**	**16.51**	**350**	Pn	**Pn**	**01 49 34.8**	**-0.4**
	1.0nm,0.3s,baz=163,slow=9.2,SNR=5.2						
NWAO				LR	LR	01 54 18.1	
	comp=Z,1μm,21.5s,baz=159,slow=31						
	4.2nm,0.5s						
NWAO	**Narrogin (SRO)**	**16.51**	**350**		**Pn**	**01 49 36.5**	**+1.4**
CASY	**Casey**	**17.88**	**193**		**Pn**	**01 49 49.8**	**-2.2**
CASY				IAmb	IAmb	01 49 58.7	
	comp=Z,147nm,1.6s						
MORW	**Morawa**	**20.46**	**348**		**P**	**01 50 20.6**	**-0.6**
MORW				IAmb	IAmb	01 50 29.5	
	comp=Z,75nm,1.2s						
TOO	**Toolangi**	**21.34**	**66**		**P**	**01 50 32.5**	**+1.7**
TOO	**Toolangi**	**21.34**	**66**	P	**P**	**01 50 32.5**	**+1.7**
TOO				pmax	pmax		
	comp=Z,55nm,1.3s						
STKA	**Stephens Creek**	**23.38**	**50**	P	**P**	**01 50 52.3**	**0.0**
	comp=Z,14nm,0.9s,baz=193,slow=12,SNR=20						
STKA				LR	LR	01 58 36.8	
	comp=Z,331nm,19.5s,baz=213,slow=33						
	comp=Z,14nm,0.9s						
STKA	**Stephens Creek**	**23.38**	**50**		**P**	**01 50 51.5**	**-0.8**
STKA	**Stephens Creek**	**23.38**	**50**	*i* P	**P**	**01 50 52.5**	**+0.2**
INKA	**Innaminka**	**26.43**	**43**		**P**	**01 51 20.0**	**-0.4**
ASAR	**Alice Springs**	**27.56**	**27**	P	**P**	**01 51 30.4**	**-0.3**
	comp=Z,30nm,1.0s,baz=200,slow=8.5,SNR=124						
ASAR				PcP	**PcP**	**01 54 47.1**	**-1.3**
	comp=Z,1.2nm,0.8s,baz=231,slow=0.6,SNR=5.1						
ASAR				LR	LR	02 01 06.7	
	comp=Z,732nm,21.2s,baz=220,slow=34						
	comp=Z,30nm,1.0s						
AS31	**Alice Springs**	**27.56**	**27**	P	**P**	**01 51 30.2**	**-0.4**
WRA	**Warramunga Arr**	**31.21**	**25**	P	**P**	**01 52 02.4**	**-0.6**
	comp=Z,11nm,1.0s,baz=199,slow=9.2,SNR=26						
WRA				PcP	**PcP**	**01 54 55.6**	**-2.1**
	comp=Z,2.7nm,1.0s,baz=203,slow=2.7,SNR=5.8						
	comp=Z,11nm,1.0s						
WRA	**Warramunga Arr**	**31.21**	**25**	P	**P**	**01 52 01.3**	**-1.7**
WRAB	**Tennant Creek**	**31.22**	**25**	*i* P	**P**	**01 52 03.2**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,12nm,1.0s						
FITZ	**Fitzroy Crossi**	**31.32**	**9**	P	**P**	**01 52 04.0**	**0.0**
	comp=Z,20nm,1.0s,baz=185,slow=10,SNR=26						
	comp=Z,20nm,1.0s						
FITZ	**Fitzroy Crossi**	**31.32**	**9**	P	**P**	**01 52 04.4**	**+0.4**
WB0	**Warramunga Arr**	**31.39**	**25**	P	**P**	**01 52 03.8**	**-0.8**
WB0				IAmb	IAmb	01 52 11.7	
	comp=Z,19nm,1.1s						
VNDA	**Vanda**	**32.37**	**164**	P	**P**	**01 52 12.6**	**-0.1**
	comp=Z,5.2nm,1.0s,baz=303,slow=7.7,SNR=6.7						
	comp=Z,5.2nm,1.0s						
VNDA	**Vanda**	**32.37**	**164**	P	**P**	**01 52 12.4**	**-0.3**
VNDA				IAmb	IAmb	01 52 42.2	
	comp=Z,31nm,1.6s						
MAW	**Mawson**	**33.77**	**216**	P	**P**	**01 52 24.9**	**0.0**
	comp=Z,15nm,1.0s,baz=74,slow=12,SNR=14						
MAW				LR	LR	02 04 23.8	
	comp=Z,192nm,18.4s,baz=92,slow=33						
	comp=Z,15nm,1.0s						
CTA	**Charters Tower**	**35.54**	**44**	LR	LR	02 06 54.7	
	comp=Z,7.8nm,18.9s,baz=220,slow=36						
BATI	**Baumata**	**38.99**	**5**	P	**P**	**01 53 09.6**	**-0.5**
	comp=Z,15nm,0.4s,baz=0.2,slow=5.9,SNR=6.0						
BATI				LR	LR	02 09 45.2	
	comp=Z,412nm,18.1s,baz=201,slow=37						
	comp=Z,15nm,0.4s						
SOEI	**Soe**	**39.47**	**6**	P	**P**	**01 53 15.8**	**+1.6**
	comp=Z,29nm,0.8s						
COEN	**Coen**	**39.73**	**35**	P	**P**	**01 53 16.8**	**+0.5**
PLAI	**Plampang**	**40.36**	**356**	P	**P**	**01 53 20.4**	**-1.0**
	comp=Z,11nm,1.3s						
EDFI	**Ende, Flores**	**40.37**	**1**	P	**P**	**01 53 21.3**	**-0.3**
	comp=Z,15nm,1.2s						
MMRI	**Maumere**	**40.49**	**2**	P	**P**	**01 53 21.6**	**-0.9**
TWSI	**Taliwang, Sumb**	**40.50**	**354**	P	**P**	**01 53 22.2**	**-0.4**
	comp=Z,15nm,1.2s						
DBNI	**Kabupaten Domp**	**40.66**	**356**	P	**P**	**01 53 25.2**	**+1.3**
	comp=Z,11nm,1.3s						
DNP	**Denpasar**	**40.70**	**352**	P	**P**	**01 53 24.7**	**+0.5**
QSPA	**South Pole Qui**	**40.88**	**180**	P	**P**	**01 53 25.2**	**-0.2**
	comp=Z,19nm,1.0s,baz=329,slow=4.8,SNR=27						
QSPA				LR	LR	02 09 23.8	
	comp=Z,355nm,21.2s,baz=354,slow=35						
	comp=Z,19nm,1.0s						
QSPA	**South Pole Qui**	**40.88**	**180**	P	**P**	**01 53 25.3**	**-0.2**
QSPA				IAmb	IAmb	01 53 26.7	
	comp=Z,43nm,1.2s						
RTZ	**Ruatahuna**	**41.01**	**97**	P	**P**	**01 53 26.1**	**-0.7**
RTZ				IAmb	IAmb	01 53 34.4	
	comp=Z,40nm,0.9s						
SNJI	**Sawahan-Nganju**	**42.01**	**347**	P	**P**	**01 53 36.8**	**+1.6**
	comp=Z,21nm,1.9s						
SJI	**Sawahan**	**42.05**	**347**	P	**P**	**01 53 35.9**	**+0.5**
	comp=Z,3μmcomp=Z,29nm,1.2s						
SYO	**Syowa Base**	**42.18**	**212**	⇓*i*P	**P**	**01 53 35.0**	**-0.8**
SYO	**Syowa Base**	**42.18**	**212**	⇓*e*pP	**P**	**01 53 37.6**	**+1.8**
KAPI	**Kappang**	**44.08**	**359**	P	**P**	**01 53 52.0**	**+0.2**
	comp=Z,5.8nm,0.3s,baz=205,slow=7.2,SNR=5.1						
KAPI				LR	LR	02 11 58.8	
	comp=Z,147nm,19.1s,baz=161,slow=36						
	comp=Z,5.8nm,0.3s						
KAPI	**Kappang**	**44.08**	**359**	IAmb	IAmb	01 54 00.3	
	comp=Z,16nm,1.1s						
KAPI	**Kappang**	**44.08**	**359**	P	**P**	**01 53 52.0**	**+0.2**
SPSI	**Sidrap Palu**	**45.12**	**359**	P	**P**	**01 54 00.9**	**+0.8**
	comp=Z,43nm,1.2s						
PMG	**Port Moresby**	**45.44**	**38**	P	**P**	**01 54 03.1**	**+0.5**
	comp=Z,11nm,0.7s,baz=229,slow=12,SNR=6.8						
PMG				LR	LR	02 12 37.0	
	comp=Z,159nm,20.2s,baz=192,slow=36						
	comp=Z,11nm,0.7s						
PMG	**Port Moresby**	**45.44**	**38**	P	**P**	**01 54 03.4**	**+0.8**
PMG				IAmb	IAmb	01 54 11.4	
	comp=Z,51nm,1.4s						
PMG	**Port Moresby**	**45.44**	**38**	P	**P**	**01 54 03.2**	**+0.6**
	comp=Z,28nm,1.2s						
PMG	**Port Moresby**	**45.44**	**38**	*i* P	**P**	**01 54 02.5**	**-0.1**
PMG				pmax	pmax		
	comp=Z,20nm,1.1s						
NLAI	**Namlea**	**46.16**	**9**	P	**P**	**01 54 08.0**	**-0.3**
	comp=Z,21nm,1.1s						
KRAI	**Karang Ratu**	**46.22**	**11**	P	**P**	**01 54 07.2**	**-1.6**
KLSI		**46.43**	**338**	P	**P**	**01 54 11.2**	**+0.8**

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      comp=Z,22nm,1.6s
MDSI  Maura Dua          46.76 337   P        P       01 54 13.0  0.0
      comp=Z,15nm,1.1s
FAKI  Fak Fak            47.19  16   P        P       01 54 17.6 +1.2
FAKI  Fak Fak            47.19  16   P        P       01 54 17.3 +0.9
MPSI  Mapaga             49.39 359   P        P       01 54 33.7 +0.4
      comp=Z,1µmcomp=Z,9.9nm,0.9s
GTOI  Gorontalo          49.72   3   P        P       01 54 36.9 +1.0
      comp=Z,16nm,1.3s
NVL   N'lazarevskaya     50.03 204  iP        P       01 54 37.3 -0.3
NVL                                 e                 01 56 32.3
NVL                                 ePPP      PPP     01 57 26.3
NVL                                 eS        S       02 01 48.6 +0.6
NVL                                 eSS       SS      02 05 23.0 +2.7
NVL                                 eSSS      SSS     02 06 45.7
NVL                                  pmax     pmax
      comp=Z,41nm,1.2s
TOLI2 Tolitoli           50.16   0   P        P       01 54 38.0 -1.1
TOLI2                                IAmb     IAmb    01 54 40.3
      comp=Z,24nm,1.2s
TROLL Troll, Antarti     51.56 200  ⇑P        P       01 54 48.3 -1.0
      comp=Z,724nm,0.8s
TROLL                                pP       sP      01 54 56.1 +4.5
BELA  Belgrano 2         52.24 186   P        P       01 54 52.7 -1.4
BELA                                 IAmb     IAmb    01 54 54.7
      comp=Z,41nm,1.1s
SGSI  Sangihe            52.88   6   P        P       01 54 57.1 -2.4
SNAA  Sanae              52.99 199  ⇑P        P       01 54 58.8 -1.0
      comp=Z,628nm,0.8s
SNAA                                 pP       sP      01 55 06.5 +4.2
SNAA  Sanae              52.99 199   P        P       01 54 59.7 -0.2
      comp=Z,38nm,1.0s,baz=138,slow=9.0,SNR=53
SNAA                                 LR       LR      02 16 22.4
      comp=Z,422nm,18.8s,baz=190,slow=35
      comp=Z,38nm,1.0s
SNAA  Sanae              52.99 199   P        P       01 54 59.2 -0.7
SNAA  Sanae              52.99 199  iP        P       01 54 59.1 -0.7
SNAA                                 pmax     pmax
      comp=Z,70nm,1.1s
VNA2  Neumayer--Watz     54.52 199  ⇑P        P       01 55 08.7 -2.3
      comp=Z,11nm,0.5s,baz=126,slow=4.7
VNA3  Neumayer Olymp     54.74 198  ⇑P        P       01 55 11.7 -0.8
      comp=Z,1.5nm,0.5s
VNA3                                 pP       sP      01 55 19.0 +4.1
VNA1  Neumayer--Stat     54.92 198  ⇑P        P       01 55 13.8  0.0
      comp=Z,0.0nm,0.1s
VNA1                                 pP       sP      01 55 20.9 +4.7
PSI   Prapat             55.17 333   LR       LR      02 18 11.3
      comp=Z,44nm,18.0s,baz=152,slow=35
DAV   Davao City (W)     56.24   6   LR       LR      02 18 33.1
      comp=Z,76nm,21.9s,baz=166,slow=35
GUMO  Guam               66.10  26   LR       LR      02 25 12.2
      comp=Z,56nm,19.1s,baz=122,slow=36
PALK  Pallekele          66.24 316   LR       LR      02 18 54.5
      comp=Z,144nm,21.6s,baz=142,slow=30
PMSA  Palmer Station     66.26 178   LR       LR      02 24 21.7
      comp=Z,284nm,20.7s,baz=201,slow=35
CMAR  Chiang Mai Arr     70.12 338   P        P       01 56 56.0  0.0
      comp=Z,1.7nm,0.3s,baz=188,slow=5.0,SNR=20
      comp=Z,1.7nm,0.3s
CMAR  Chiang Mai Arr     70.12 338            P       01 56 55.6 -0.3
CMAR  Chiang Mai Arr     70.12 338  iP        P       01 56 56.0  0.0
CMAR                                 pmax     pmax
      comp=Z,2.0nm,0.3s
SUR   Sutherland         72.11 241   P        P       01 57 06.7 -1.7
BOSA  Boshof             72.24 247   P        P       01 57 08.1 -0.9
      comp=Z,8.5nm,1.1s,baz=131,slow=11,SNR=4.5
      comp=Z,8.5nm,1.1s
BOSA  Boshof             72.24 247   P        P       01 57 08.4 -0.7
BOSA                                 IAmb     IAmb    01 57 10.1
      comp=Z,28nm,1.4s
BOSA  Boshof             72.24 247   P        P       01 57 08.4 -0.7
BOSA                                 pmax     pmax
      comp=Z,28nm,1.4s
KMI   Kunming            75.75 343   P        P       01 57 31.4 +1.9
KMI                                  pmax     pmax
      comp=Z,51nm,0.9s
HYB   Hyderabad          76.17 319  eP        P       01 57 31.6 -0.1
PPT2  Papeete2           76.70 101  eLR       LR      02 21 09.8
      comp=Z,54nm,25.0s
PPT2                                eLR       LR      02 21 10.9
      comp=Z,93nm,24.0s
PZH   PanZhiHua          77.28 343   P        P       01 57 38.6 +0.6
PZH                                  pmax     pmax
      comp=Z,10.0nm,0.8s
SHL   Shillong           78.79 334   P        P       01 57 45.9 -0.6
SHL                                  IAmb     IAmb    01 57 47.3
      comp=Z,31nm,1.1s
SHL   Shillong           78.79 334   P        P       01 57 45.9 -0.6
SHL                                  pmax     pmax
      comp=Z,31nm,1.1s
WHN   Wuhan              79.63 354  ⇑P        P       01 57 51.2 +0.5
WHN                                  pmax     pmax
      comp=Z,110nm,1.2s
GRTLG Ghanzi             80.06 249   IAmb     IAmb    01 57 55.7
      comp=Z,35nm,1.6s
NJ2   Nanjing            80.95 358  eP        P       01 58 00.4 +2.7
NJ2                                  pmax     pmax
      comp=Z,12nm,0.6s
CD2   Chengdu            81.22 345   P        P       01 58 00.2 +0.9
CD2                                  pmax     pmax
      comp=Z,30nm,0.5s
WIN   Windhoek           81.63 245   IAmb     IAmb    01 58 11.1
      comp=Z,18nm,1.2s
WIN   Windhoek           81.63 245   P        P       01 58 02.9 +0.8
JNU   Nakatsue           82.50   9   LR       LR      02 37 38.2
      comp=Z,33nm,19.3s,baz=185,slow=38
EVN   Everest            82.59 330   P        P       01 58 07.1 -0.2
KIBK  Kibwezi            83.44 274   IAmb     IAmb    01 58 20.4
      comp=Z,18nm,1.3s
XAN   Xi'an              83.58 350  ⇑P        P       01 58 11.6  0.0
XAN                                  pmax     pmax
      comp=Z,19nm,1.3s
XAN                                  pmax     pmax
      comp=Z,260nm,4.0s
JHJ   Hachijo jima 2     83.74  16   LR       LR      02 34 08.8
      comp=Z,69nm,19.7s,baz=108,slow=35
TSUM  Tsumeb             83.90 248   LR       LR      02 30 32.0
      comp=Z,60nm,18.9s,baz=152,slow=32
TSUM  Tsumeb             83.90 248   P        P       01 58 15.3 +1.4
TIA   Tai'an             85.14 357   P        P       01 58 19.7 +0.3
TIA                                  pmax     pmax
      comp=Z,18nm,1.1s
LZDM  Lanzhou Array      86.17 346   P        P       01 58 24.7 -0.2
      comp=Z,1.6nm,0.4s,baz=193,slow=6.1,SNR=8.2
      comp=Z,1.6nm,0.4s
LZH   Lanzhou            86.27 346  eP        P       01 58 25.5 +0.3
LZH                                  pP       PcP     01 58 32.6 +4.9
LZH                                  pmax     pmax
      comp=Z,19nm,1.2s
HNS   HongShan           86.43 355  ⇑P        P       01 58 26.5 +0.8
HNS                                  pmax     pmax
      comp=Z,24nm,1.3s
KSAR  Wonju Array Be     86.54   6   P        P       01 58 27.1 +0.8
KSAR  Wonju Array Be     86.54   6   P        P       01 58 27.1 +0.8
KSRS  Korea Array        86.56   6   P        P       01 58 26.2 -0.1
      comp=Z,4.5nm,1.0s,baz=182,slow=3.8,SNR=9.6
KSRS                                 LR       LR      02 38 11.8
      comp=Z,13µm,20.0s,baz=185,slow=36
      comp=Z,4.5nm,1.0s
MJAR  Matsushiro Arr     86.81  14   P        P       01 58 27.8 +0.1
      comp=Z,1.0nm,0.2s,baz=178,slow=3.8,SNR=4.5
MJAR                                 LR       LR      02 33 39.1
      comp=Z,36nm,21.8s,baz=194,slow=33
      comp=Z,1.0nm,0.2s
MJAR  Matsushiro Arr     86.81  14   IAmb     IAmb    01 58 28.4
      comp=Z,12nm,1.4s
MAJO  Matsushiro         86.81  14  iP        P       01 58 27.7  0.0
MAJO                                 pmax     pmax
      comp=Z,14nm,1.2s
TIY   Taiyuan            86.89 353   P        P       01 58 29.1 +1.0
TIY                                  pmax     pmax
      comp=Z,40nm,0.5s
LL02  Futaleuf           87.29 171   P        P       01 58 28.1 -2.1
LL02                                 IAmb     IAmb    01 59 11.5
      comp=Z,28nm,1.6s
GOMU  GeErMu             88.12 339   P        P       01 58 36.8 +2.4
TAOE  Nuku Hiva Isla     89.27 103  eLR       LR      02 27 00.4
      comp=Z,111nm,26.7s
MBAR  Mbarara            89.53 270   LR       LR      02 31 27.7
      comp=Z,44nm,20.6s,baz=144,slow=31
MBAR  Mbarara            89.53 270   P        P       01 58 42.9 +1.4
MBAR                                 IAmb     IAmb    01 58 43.8
      comp=Z,13nm,1.2s
MBAR  Mbarara            89.53 270  iP        P       01 58 41.0 -0.5
PLCA  Paso Flores        89.86 171   P        P       01 58 43.0 +0.5
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      comp=Z,5.9nm,1.1s,baz=166,slow=6.8,SNR=3.6
PLCA                                 LR       LR      02 33 30.1
      comp=Z,47nm,21.2s,baz=180,slow=32
      comp=Z,5.9nm,1.1s
PLCA  Paso Flores        89.86 171   P        P       01 58 43.0 +0.5
BTO   Baotou             89.97 352  eP        P       01 58 46.2 +3.6
BTO                                  pmax     pmax
      comp=Z,12nm,0.6s
HHC   Hu-ho-hao-te       90.07 353  eP        P       01 58 46.7 +3.5
HHC                                  pmax     pmax
      comp=Z,11nm,0.6s
HHC                                  pmax     pmax
      comp=Z,150nm,4.1s
GTA   Gaotai             90.19 344  eP        P       01 58 43.9 +0.1
GTA                                  sP       sP      01 58 51.1 +4.8
GTA                                  pmax     pmax
      comp=Z,16nm,1.0s
CN2   Changchun          92.75   3  eP        P       01 58 55.9 +0.5
CN2                                  pmax     pmax
      comp=Z,10.0nm,1.0s
XLT   XiLinHaoTe         92.85 357  eP        P       01 58 55.8 -0.1
XLT                                  pmax     pmax
      comp=Z,12nm,1.4s
XLT                                  pmax     pmax
      comp=Z,180nm,4.6s
USRK  Ussuriysk Ar.      93.58   8   P        P       01 58 59.7 +0.5
      comp=Z,3.9nm,0.9s,baz=123,slow=7.0,SNR=4.0
      comp=Z,3.9nm,0.9s
ASAJ  Asahikawa          94.93  16   LR       LR      02 42 24.7
      comp=Z,37nm,19.2s,baz=354,slow=36
KBL   Kabul              95.21 319   P        P       01 59 06.7 -0.5
KBL                                  IAmb     IAmb    01 59 08.2
      comp=Z,9.2nm,1.2s
KBL   Kabul              95.21 319   P        P       01 59 06.7 -0.5
KBL                                  pmax     pmax
      comp=Z,9.0nm,1.2s
WMQ   Urumqi             97.09 337  eP        P       01 59 16.7 +1.4
ULN   Ulaanbaatar        97.45 351  iP        P       01 59 16.3 -0.6
ULN                                  pmax     pmax
      comp=Z,3.0nm,1.0s
SONM  Songino Array      97.49 350   P        P       01 59 16.2 -0.9
      comp=Z,2.2nm,1.0s,baz=167,slow=5.8,SNR=9.7
SONM                                 LR       LR      02 44 36.6
      comp=Z,28nm,20.5s,baz=177,slow=36
      comp=Z,2.2nm,1.0s
SONM  Songino Array      97.49 350   IAmb     IAmb    01 59 18.1
      comp=Z,12nm,1.6s
HILR  Hailar Array B     98.42 359   P        P       01 59 21.2 +0.1
      comp=Z,6.7nm,0.9s,baz=114,slow=7.0,SNR=4.9
      comp=Z,6.7nm,0.9s
TLY   Talaya            101.60 349  iP        Pdif    01 59 35.4 +0.2
TLY                                  pmax     pmax
      comp=Z,4.0nm,0.9s
DGZ   Jazzator, Alta    102.63 339  iP        Pdif    01 59 40.0  0.0
DGZ                                  pmax     pmax
      comp=Z,2.0nm,1.2s
KURBB Kurchatov Arra    105.84 334   Pdiff    Pdif    01 59 53.4 -0.6
      comp=Z,0.5nm,0.6s,baz=163,slow=3.7,SNR=4.8
KURK  Kurchatov         105.90 334   P        Pdif    01 59 53.4 -0.9
BRTR  Keskin Array B    117.07 300   PKP      PKPdf   02 04 26.8 -1.5
      comp=Z,1.4nm,1.0s,baz=90,slow=1.4,SNR=4.9
TORD  Torodi Ar. Bea    118.71 256   PKP      PKPdf   02 04 31.1 -1.0
      comp=Z,2.9nm,1.1s,baz=23,slow=5.0,SNR=9.3
TIXI  Tiksi             120.73   3c iPKIKP    PKPdf   02 04 32.9 -1.2
TIXI                                 pmax     pmax
      comp=Z,10.0nm,1.7s
BAL3X Bal3x, Balta      124.58 305   PKP      PKPdf   02 04 40.1 -2.2
BISRR Bisoca            124.72 301   PKP      PKPdf   02 04 42.2 -0.5
OBN   Obninsk           125.44 315  iPKIKP    PKPdf   02 04 43.6  0.0
OBN                                  pmax     pmax
      comp=Z,10.0nm,1.0s
AK07  Malin Array Si    126.35 308   PKP      PKPdf   02 04 44.3 -1.2
AK08  Malin Array Si    126.37 308   PKP      PKPdf   02 04 44.7 -0.9
AK05  Malin Array Si    126.39 308   PKP      PKPdf   02 04 44.3 -1.3
AKASG Malin Array Be    126.42 308   PKP      PKPdf   02 04 44.0 -1.7
      comp=Z,0.5nm,0.5s,baz=94,slow=1.7,SNR=8.8
AKASG Malin Array Be    126.42 308c iPKIKP    PKPdf   02 04 44.9 -0.8
AKASG                                pmax     pmax
      comp=Z,1.0nm,0.4s
AKBB  Malin Array Si    126.42 308c iPKIKP    PKPdf   02 04 45.6 -0.1
AK12  Malin Array Si    126.43 308   PKP      PKPdf   02 04 44.3 -1.4
AK17  Malin Array Si    126.50 308   PKP      PKPdf   02 04 44.9 -0.9
AK18  Malin Array Si    126.52 308   PKP      PKPdf   02 04 44.3 -1.6
AK20  Malin Array Si    126.56 308   PKP      PKPdf   02 04 45.0 -0.9
AK21  Malin Array Si    126.56 308   PKP      PKPdf   02 04 44.2 -1.7
LUBAR Lubar, Ukraine    126.74 306   PKP      PKPdf   02 04 45.5 -0.8
HORU  Horodok           127.04 305   PKP      PKPdf   02 04 46.2 -0.7
KLMR  Klimovskoe        127.56 322  ePKIKP    PKPdf   02 04 45.2 -2.3
KLMR                                e                 02 06 46.4
KLMR                                 pmax     pmax
      comp=Z,25nm,1.2s
RNPP5 Staryi Chortor    128.46 307   PKP      PKPdf   02 04 49.0 -0.6
RNPP9 Sopachiv          128.56 307   PKP      PKPdf   02 04 48.3 -1.4
UZHM  Uzhgorod          128.97 302   PKP      PKPdf   02 04 48.9 -1.7
KEST  Kesra             129.30 282   PKP      PKPdf   02 04 52.1 +0.3
      comp=Z,6.7nm,1.1s,baz=2.6,slow=4.2,SNR=4.2
MODS  Modra-Piesok      131.64 300  ePKIKP    PKPdf   02 04 56.5 +0.7
MODS  Modra-Piesok      131.64 300  ePKP      PKPdf   02 04 56.5 +0.7
SOKA  Soboth            132.05 297  ePKP      PKPdf   02 04 56.1 -0.5
      comp=Z,1.2nm,0.9s
CONA  Conrad Observa    132.22 299  ePKP      PKPdf   02 04 56.0 -1.0
      comp=Z,4.3nm,1.2s
MYKA  Terra Mystica     132.84 296  ePKP      PKPdf   02 04 57.1 -1.1
      comp=Z,1.3nm,0.5s
BIOA  Bad Ischl, Aus    133.38 297  ePKP      PKPdf   02 04 58.5 -0.6
      comp=Z,0.2nm,0.3s
ABTA  Abfaltersbach     133.56 296  ePKP      PKPdf   02 04 58.6 -1.0
      comp=Z,5.9nm,1.3s
LESA  Schwarzleotal     133.81 297  ePKP      PKPdf   02 04 58.7 -1.2
      comp=Z,3.0nm,1.2s
GERES GERESS Array B    133.93 299   PKP      PKPdf   02 04 59.0 -1.2
      comp=Z,2.0nm,1.0s,baz=96,slow=1.0,SNR=6.7
ILAR  Eielson Array     133.96  37   PKP      PKPdf   02 04 58.5 -1.1
      comp=Z,0.5nm,0.6s,baz=282,slow=3.5,SNR=5.1
KHC   Kasperske Hory    134.14 299c iPKIKP    PKPdf   02 04 59.9 -0.6
KHC                                  pmax     pmax
      comp=Z,15nm,2.5s
WTTA  Wattenberg        134.34 296  ePKP      PKPdf   02 05 00.1 -1.0
      comp=Z,2.2nm,0.8s
WATA  Walderalm         134.41 296  ePKP      PKPdf   02 04 60.0 -1.2
      comp=Z,1.0nm,0.5s
SQTA  Sankt Quirin      134.57 296  ePKP      PKPdf   02 05 00.6 -0.9
      comp=Z,1.4nm,0.7s
MOTA  Moosalm           134.70 296  ePKP      PKPdf   02 05 00.5 -1.2
      comp=Z,3.9nm,1.4s
FETA  Feichten          134.76 295  ePKP      PKPdf   02 05 00.9 -1.0
      comp=Z,3.4nm,1.1s
RETA  Reutte            134.97 296  ePKP      PKPdf   02 05 01.2 -0.9
      comp=Z,4.7nm,1.1s
CLL   Collm             135.49 301  ePKIKP    PKPdf   02 05 04.0 +1.2
CLL   Collm             135.49 301  ePKPdf    PKPdf   02 05 04.0 +1.2
NVAR  Mina Array Bea    137.09  82   PKP      PKPdf   02 05 06.8 +0.2
      comp=Z,0.9nm,0.8s,baz=231,slow=3.9,SNR=7.5
NVAR  Mina Array Bea    137.09  82            PKPdf   02 05 05.6 -1.0
NOA   NORSAR Array B    140.02 314   PKP      PKPdf   02 05 10.9  0.0
      comp=Z,0.8nm,0.9s,baz=186,slow=12,SNR=2.6
ESDC  Sonseca Array     140.18 278   PKP      PKPdf   02 05 11.8 -0.1
      comp=Z,0.4nm,0.4s,baz=122,slow=1.9,SNR=5.9
TXAR  Lajitas Array     141.00 104   PKP      PKPdf   02 05 13.0 -0.8
      comp=Z,0.9nm,1.0s,baz=204,slow=2.7,SNR=7.4
ANMO  Albuquerque       142.81  95c iPKIKP    PKPdf   02 05 13.4 -3.6
ANMO                                 pmax     pmax
      comp=Z,3.0nm,1.0s
MVO   Moncorvo          142.96 278  ePKPdf    PKPdf   02 05 13.3 -3.6
PBRG  Braganca          143.09 279  ePKPdf    PKPab   02 05 12.4 -0.1
POLO  Lamas de Olo      143.56 278  ePKPdf    PKPab   02 05 13.6 -0.8
PGAV  Gavieira, Arco    144.16 278  ePKPdf    PKPab   02 05 17.0 +0.2
PDAR  Pinedale Array    145.03  81   PKPbc    PKPbc   02 05 19.8 -0.4
      comp=Z,5.4nm,1.0s,baz=207,slow=3.0,SNR=28
EKA   Eskdalemuir Ar    145.95 302   PKPbc    PKPdf   02 05 21.4 -0.2
      comp=Z,15nm,1.0s,baz=94,slow=3.4,SNR=11
EGMT  Eagleton          147.12  73            PKPdf   02 05 26.4 +2.5
YKA   Yellowknife Ar    147.36  45   PKPbc    PKPdf   02 05 26.0 +2.3
      comp=Z,8.7nm,0.9s,baz=279,slow=3.4,SNR=68
YKAW3 Yellowknife Wh    147.36  45            PKPdf   02 05 26.0 +2.3
OK052 Battle Ridge R    149.71 102            PKPdf   02 05 32.8 +4.4
```

ROM 06 01:54:55.3±0.2, 43°.93N±0°.01×11°.03E±0°.01, h53^{km}±1^{km}, ML1.5/8, 1C-3D, Error ellipse: s-maj=1.3km s-min=0.6km az=28.0, Central Italy

```
Code  Station Name       Δ°    AZ°   Phase ID         Time       Res
                                     Op       ISC     h  m  s    ISC
MPPT  Montemurlo          0.05  55  ⇓P        Pn      01 55 03.5 +0.1
MPPT                                 S        Sn      01 55 09.9 +0.6
MPPT                                 AML      AML
      comp=E,17µm,0.2s
MPPT                                 AML      AML
      comp=N,9µm,0.2s
MOCL  Monte Cuccoli       0.13  54  ⇑P        Pn      01 55 03.6 -0.1
MOCL                                 S        Sn      01 55 09.9 +0.2
CRMI  Carmignano          0.14 197  ⇓P        Pn      01 55 04.5 +0.8
CRMI                                 S        Sn      01 55 11.3 +1.7
CRMI                                 AML      AML
      comp=E,18µm,0.4s
CRMI                                 AML      AML
      comp=N,20µm,0.5s
FNVD  Fontana Vidola      0.25  16   P        Pn      01 55 04.5 +0.1
BDI   Bagni Di Lucca      0.34 294   P        Pn      01 55 05.1  0.0
BDI                                  S        Sn      01 55 12.6 +0.4
BDI                                  AML      AML
      comp=E,29µm,0.1s
BDI                                  AML      AML
      comp=N,21µm,0.1s
RUFI  Rufina              0.36 104   P        Pn      01 55 05.3 +0.1
RUFI                                 S        Sn      01 55 12.5 +0.2
MAIM  Mastiano            0.39 268   P        Pn      01 55 06.1 +0.6
MAIM                                 S        Sn      01 55 13.9 +1.0
CARD  Cardoso             0.41 284  ⇓P        Pn      01 55 05.8 +0.1
CARD                                 S        Sn      01 55 13.5 +0.3
CARD                                 AML      AML
      comp=N,58µm,0.2s
CARD                                 AML      AML
      comp=E,68µm,0.4s
CARD                                 AML      AML
      comp=N,58µm,0.2s
CARD                                 AML      AML
      comp=E,63µm,0.2s
PII   Pisa                0.42 241   P        Pn      01 55 05.5 -0.3
PII                                  AML      AML
      comp=E,101µm,1.5s
PII                                  AML      AML
      comp=N,77µm,0.2s
ZCCA  Zocca               0.43 355   P        Pn      01 55 06.3 +0.4
SARO  Sassorosso          0.52 300   P        Pn      01 55 07.3 +0.3
SARO                                 S        Sn      01 55 15.8 +0.3
GSCL  Gusciola            0.53 323   P        Pn      01 55 07.6 +0.4
GSCL                                 S        Sn      01 55 17.2 +1.5
MTRZ  Monterenzio         0.55  35   P        Pn      01 55 07.2 -0.2
ASQU  Asqua               0.56 103   P        Pn      01 55 07.6  0.0
SFI   Santa Sofia         0.59  92   P        Pn      01 55 07.5 -0.3
EQUI  Equi                0.68 291   P        Pn      01 55 08.9  0.0
EQUI                                 S        Sn      01 55 18.4 -0.3
MAGO  Bibbona             0.71 203   AML      AML
      comp=E,422µm,0.1s
MAGO                                 AML      AML
      comp=N,300µm,1.6s
FROS  Frosini             0.72 173   AML      AML
      comp=N,114µm,1.6s
FROS                                 AML      AML
      comp=E,109µm,1.1s
CRE   Caprese Michel      0.73 114   P        Pn      01 55 10.1 +0.4
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ROM 06 01:54:58.4±0.1, 43°.434N±0°.005×10°.73E±0°.01, h12^{km}±3^{km}, ML1.4/6, Error ellipse: s-maj=0.7km s-min=0.6km az=111.0, Central Italy

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Code  Station Name       Δ°    AZ°   Phase ID         Time       Res
                                     Op       ISC     h  m  s    ISC
MAGO  Bibbona             0.17 198   P        Pb      01 55 02.8 -0.6
MAGO                                 S        Sg      01 55 05.5 +0.6
TRIF  Trifonti            0.34 158   P        Pg      01 55 05.7 +0.4
TRIF                                 S        Sg      01 55 10.4 +0.5
FROS  Frosini             0.38 126   P        Pb      01 55 06.8 -0.3
FROS                                 S        Sb      01 55 12.4 -0.6
FROS                                 AML      AML
      comp=E,109µm,1.1s
FROS                                 AML      AML
      comp=N,114µm,1.6s
OSSC  Osservatorio P      0.39  76   P        Pg      01 55 06.6 +0.5
OSSC                                 S        Sg      01 55 12.0 +0.7
OSSC                                 AML      AML
      comp=E,78µm,1.0s
OSSC                                 AML      AML
      comp=N,96µm,1.2s
CRMI  Carmignano          0.40  26   P        Pb      01 55 07.1 -0.3
CRMI                                 S        Sb      01 55 13.1 -0.4
CRMI                                 AML      AML
      comp=E,18µm,0.4s
CRMI                                 AML      AML
      comp=N,21µm,1.2s
CRMI                                 AML      AML
      comp=N,21µm,0.8s
CSNT  Castellina Chi      0.41  85   P        Pg      01 55 06.8 +0.3
CSNT                                 S        Sg      01 55 12.3 +0.3
CARD  Cardoso             0.62 343   AML      AML
      comp=N,58µm,0.2s
CARD                                 AML      AML
      comp=E,68µm,0.4s
CARD                                 AML      AML
      comp=E,68µm,0.4s
RUFI  Rufina              0.70  54   P        Pg      01 55 11.0 -0.9
RUFI                                 S        Sg      01 55 21.4 +0.4
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*IDC **06** 01:58:06.4±1.3, 48°.75S×119°.08E, h0^{km}, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=111.9km s-min=28.1km az=114.0*

ISC 06 01:58:07.8±1.2, 48°.8S±0°.3×119°.3E±0°.6, h10^{km}, n9, σ0^{s}.86/6, mb3.6/4, Western Indian-Antarctic Ridge

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Code  Station Name       Δ°    AZ°   Phase ID         Time       Res
                                     Op       ISC     h  m  s    ISC
H01W2 Cape Leeuwin H     14.44 343   T        T       02 17 14.5
      baz=162,slow=74,SNR=14
H01W1 Cape Leeuwin H     14.45 343   T        T       02 17 14.7
      baz=162,slow=74,SNR=12
H01W3 Cape Leeuwin H     14.46 343   T        T       02 17 14.7
      baz=162,slow=74,SNR=12
ASAR  Alice Springs      27.63  30   P        P       02 03 55.5  0.0
      0.4nm,0.7s,baz=206,slow=8.4,SNR=6.6
      0.4nm,0.7s
WRA   Warramunga Arr     31.25  28   P        P       02 04 26.8 -0.8
      0.4nm,0.8s,baz=189,slow=9.0,SNR=3.0
      0.4nm,0.8s
SNAA  Sanae              53.08 200   P        P       02 07 24.3 -0.4
      1.3nm,0.9s,baz=147,slow=6.8,SNR=4.3
      1.3nm,0.9s
SONM  Songino Array      96.94 351   P        P       02 11 39.3 +0.6
      0.2nm,0.5s,baz=170,slow=8.8,SNR=1.8
      0.2nm,0.5s
PDAR  Pinedale Array    145.88  81   PKPbc    PKPab   02 17 48.5 +1.0
      0.2nm,0.8s,baz=218,slow=2.3,SNR=1.8
YKA   Yellowknife Ar    147.72  45   PKPbc    PKPbc   02 17 51.0 -0.3
      0.3nm,0.7s,baz=266,slow=3.0,SNR=5.5
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*IDC **06** 02:07:42.5±0.9, 49°.30S×120°.91E, h0^{km}, mb4.1/7, mbtmp4.1/8, ML2.2/1, MS3.5/9, Error ellipse: s-maj=45.5km s-min=18.2km az=107.0*

*NEIC **06** 02:07:44.0±2.3, 49°.3S±0°.1×120°.2E±0°.2, h10^{km}±1^{km}, mb4.2/9, Error ellipse: s-maj=28.0km s-min=14.1km az=115.0*

ISC 06 02:07:43.8±0.6, 49°.27S±0°.08×120°.4E±0°.2, h10^{km}, n32, σ1^{s}.17/26, mb4.0/9, MS3.5/8, Western Indian-Antarctic Ridge

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Code  Station Name       Δ°    AZ°   Phase ID         Time       Res
                                     Op       ISC     h  m  s    ISC
H01W2 Cape Leeuwin H     15.10 340   T        T       02 27 02.6
      baz=162,slow=74,SNR=47
H01W1 Cape Leeuwin H     15.10 340   T        T       02 26 49.9
      baz=162,slow=74,SNR=40
H01W3 Cape Leeuwin H     15.11 340   T        T       02 26 55.4
      baz=162,slow=74,SNR=43
NWAO  Narrogin (SRO)     16.50 350   Pn       Pn      02 11 36.0 +0.8
      0.4nm,0.3s,baz=183,slow=14,SNR=1.6
NWAO                                 LR       LR      02 16 19.5
      comp=Z,171nm,20.8s,baz=275,slow=31
      3.5nm,0.6s
NWAO  Narrogin (SRO)     16.50 350   Pn       Pn      02 11 32.1 -3.1
NWAO                                 IAmb     IAmb    02 11 45.5
      comp=Z,22nm,1.4s
CASY  Casey              17.81 193   Pn       Pn      02 11 49.0 -2.4
TOO   Toolangi           21.52  67   P        P       02 12 34.0 +1.1
TOO                                  IAmb     IAmb    02 12 55.5
      comp=Z,16nm,1.3s
STKA  Stephens Creek     23.54  50   P        P       02 12 52.3 -1.8
      comp=Z,3.0nm,0.8s,baz=206,slow=12,SNR=4.7
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STKA				LR	LR	02 20 07.8	
	comp=Z,67nm,21.5s,baz=204,slow=32						
	comp=Z,3.0nm,0.8s						
STKA	Stephens Creek	23.54	50	P	P	02 12 54.3	+0.2
ASAR	Alice Springs	27.67	27	P	P	02 13 30.9	-0.9
	comp=Z,1.3nm,0.8s,baz=206,slow=8.4,SNR=16						
ASAR				LR	LR	02 22 56.4	
	comp=Z,144nm,21.6s,baz=130,slow=33						
	comp=Z,1.3nm,0.8s						
ASAR	Alice Springs	27.67	27	P	P	02 13 31.3	-0.5
AS31	Alice Springs	27.67	27	P	P	02 13 31.2	-0.6
WRA	Warramunga Arr	31.31	26	P	P	02 14 03.6	-0.5
	comp=Z,0.6nm,0.8s,baz=199,slow=10,SNR=4.6						
	comp=Z,0.6nm,0.8s						
FITZ	Fitzroy Crossi	31.38	10	P	P	02 14 05.0	+0.4
	comp=Z,1.6nm,0.8s,baz=166,slow=10.0,SNR=5.0						
FITZ				LR	LR	02 25 31.2	
	comp=Z,86nm,20.1s,baz=154,slow=34						
	comp=Z,1.6nm,0.8s						
FITZ	Fitzroy Crossi	31.38	10	P	P	02 14 05.3	+0.6
FITZ				IAmb	IAmb	02 14 34.1	
	comp=Z,2.2nm,1.4s						
VNDA	Vanda	32.39	164	LR	LR	02 26 43.4	
	comp=Z,109nm,18.2s,baz=318,slow=35						
VNDA	Vanda	32.39	164	P	P	02 14 13.5	+0.4
MAW	Mawson	33.64	216	LR	LR	02 26 16.1	
	comp=Z,41nm,18.4s,baz=77,slow=33						
QSPA	South Pole Qui	40.85	180	P	P	02 15 25.7	+0.3
	comp=Z,0.9nm,0.3s,baz=305,slow=4.9,SNR=3.5						
QSPA				LR	LR	02 31 35.2	
	comp=Z,61nm,19.1s,baz=332,slow=35						
	comp=Z,0.9nm,0.3s						
KAPI	Kappang	44.10	359	LR	LR	02 32 43.6	
	comp=Z,53nm,18.5s,baz=140,slow=34						
TROLL	Troll, Antarti	51.47	201	P	P	02 16 49.2	+0.4
BELA	Belgrano 2	52.19	186	P	P	02 16 53.8	-0.2
BELA				IAmb	IAmb	02 17 02.5	
	comp=Z,5.7nm,1.1s						
SNAA	Sanae	52.91	199	P	P	02 17 00.4	+0.9
SNAA	Sanae	52.91	199	P	P	02 16 60.0	+0.6
	comp=Z,4.6nm,0.8s,baz=129,slow=7.9,SNR=13						
SNAA				LR	LR	02 38 03.3	
	comp=Z,74nm,19.8s,baz=192,slow=34						
	comp=Z,4.6nm,0.8s						
SNAA	Sanae	52.91	199	P	P	02 17 00.3	+0.9
CMAR	Chiang Mai Arr	70.08	338	P	P	02 18 57.2	+1.3
	comp=Z,1.7nm,0.3s,baz=121,slow=3.9,SNR=1.6						
	comp=Z,1.7nm,0.3s						
PDAR	Pinedale Array	145.22	81	PKP	PKPbc	02 27 20.4	-0.6
	comp=Z,0.3nm,0.7s,baz=220,slow=3.9,SNR=4.1						
YHH	Holmes Hill	145.31	77		PKPdf	02 27 22.6	+1.2
EKA	Eskdalemuir Ar	145.81	302	PKPbc	PKPab	02 27 23.0	+0.5
	comp=Z,2.5nm,0.9s,baz=47,slow=3.4,SNR=2.5						
APMT	Aspermont	146.08	103		PKPdf	02 27 21.8	-0.9
YKA	Yellowknife Ar	147.51	45	PKPbc	PKPbc	02 27 25.8	-1.0
	comp=Z,1.0nm,0.7s,baz=279,slow=3.5,SNR=18						
YKA	Yellowknife Ar	147.51	45	PKPdf	PKPdf	02 27 25.0	+0.9

*DJA **06** 02:22:40.0±0.4, 2°S±4°×14°0E±°, h10^{km}, M4.6/8, mb4.2/6, mB6.1/3, MLv4.7/8, Mw(mB)5.7/3*
*IDC **06** 02:22:41.5±0.8, 1°.93S×139°.80E, h0^{km}, mb3.8/7, mbtmp3.9/9, ML3.9/1, MS3.4/1, Error ellipse: s-maj=15.4km s-min=10.4km az=35.0*
*NEIC **06** 02:22:43.5±1.9, 1°.9S±0°.1×139°.89E±0°.09, h10^{km}±2^{km}, mb4.1/11, Error ellipse: s-maj=24.3km s-min=9.0km az=30.0*
ISC 06 02:22:42.8±0.7**, 1°.89S**±0°.08×**139°.83E**±0°.06**, h10**^{km}**, n34, σ1^{s}.41**/36**, mb4.0**/12**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	0.78	154	P	Pn	02 23 00.0	+0.1
JAY	Jayapura	1.07	126	Pg	Pg	02 23 02.1	-1.4
	134nm,0.3s,baz=319,slow=9.3,SNR=241						
JAY				Lg	Lg	02 23 17.3	
	314nm,0.3s,baz=115,slow=19,SNR=12						
JAY				LR	LR	02 23 29.5	
	comp=Z,801nm,18.5s,baz=21,slow=45						
JAY	Jayapura	1.07	126	P	Pg	02 23 02.0	-1.5
SMPI	Sarmi	1.12	265	P	Pb	02 23 05.0	+0.6
WAMI	Wamena	2.28	209	P	Pn	02 23 20.8	+0.3
SRPI	Serui, Papua	3.59	270	P	Pn	02 23 37.3	-1.3
BAKI	Biak	3.79	280	P	Pn	02 23 38.4	-2.9
RKPI	Ransiki, Papua	5.66	274	P	Pn	02 24 06.5	-0.6
MMPI	Merauke	6.56	175	P	Pn	02 24 21.4	+2.0
FAKI	Fak Fak	7.64	262	P	Pn	02 24 34.7	+0.4
	0.1nm8.1nm,0.8s						
PMG	Port Moresby	10.44	136	Pn	Pn	02 25 10.6	-2.1
	2.7nm,0.3s,baz=260,slow=17,SNR=1.4						
PMG				LR	LR	02 29 30.4	
	comp=Z,205nm,20.5s,baz=340,slow=39						
LUWI	Luwuk	17.07	273	P	Pn	02 26 43.7	+1.9
	4µm18nm,1.4s						
SOEI	Soe	17.34	243	P	P	02 26 46.9	+0.3
KNRA	Kununurra	17.52	218		Pn	02 26 46.4	-0.9
KNRA				IAmb	IAmb	02 26 52.3	
	comp=Z,7.4nm,0.8s						
WB0	Warramunga Arr	18.55	196		P	02 26 57.2	-2.7
WB0				IAmb	IAmb	02 27 14.6	
	comp=Z,6.4nm,0.9s						
WRA	Warramunga Arr	18.73	196	P	P	02 27 00.5	-1.4
	comp=Z,0.4nm,0.3s,baz=18,slow=12,SNR=31						
WRA				S	Sn	02 30 14.4	-18
	comp=Z,0.7nm,0.8s,baz=16,slow=23,SNR=3.0						
	comp=Z,4.8nm,0.8s						
WRA	Warramunga Arr	18.73	196		P	02 27 02.2	+0.3
FITZ	Fitzroy Crossi	21.30	220	P	P	02 27 29.7	-0.1
	comp=Z,6.8nm,0.8s,baz=44,slow=11,SNR=16						
FITZ				S	S	02 31 27.6	+1.1
	comp=Z,2.6nm,0.8s,baz=98,slow=14,SNR=3.7						
	comp=Z,6.8nm,0.8s						
FITZ	Fitzroy Crossi	21.30	220	P	P	02 27 29.2	-0.6
AS31	Alice Springs	22.40	194		P	02 27 42.7	+1.1
AS31				IAmb	IAmb	02 27 48.0	
	comp=Z,2.1nm,0.6s						
ASAR	Alice Springs	22.40	194	P	P	02 27 41.3	-0.4
	comp=Z,1.8nm,0.5s,baz=24,slow=9.8,SNR=30						
ASAR				S	S	02 31 44.2	-3.8
	comp=Z,2.9nm,1.1s,baz=15,slow=24,SNR=11						
	comp=Z,1.8nm,0.5s						
ASAR	Alice Springs	22.40	194	P	P	02 27 41.1	-0.6
EIDS	Eidsvold	25.75	156	P	P	02 28 15.1	+1.4
EIDS				IAmb	IAmb	02 28 18.0	
	comp=Z,6.2nm,0.9s						
MBWA	Marble Bar	27.40	224	P	P	02 28 28.1	-0.6
MBWA				IAmb	IAmb	02 28 33.4	
	comp=Z,6.0nm,0.8s						
PSA00	Pilbara Seismi	27.60	223	P	P	02 28 30.2	-0.3
PSA00				IAmb	IAmb	02 29 03.6	
	comp=Z,5.6nm,1.4s						
PSA00	Pilbara Seismi	27.60	223	P	P	02 28 30.3	-0.3
PSA00				IAmb	IAmb	02 29 06.2	
	comp=Z,14nm,1.4s						
FORT	Forrest	30.82	200	P	P	02 29 00.1	+1.1
FORT				IAmb	IAmb	02 29 23.7	
	comp=Z,4.1nm,0.8s						
MSVF	Nonsavu	40.69	115	P	P	02 30 24.2	+0.2
MKAR	Makanchi Array	69.83	322	P	P	02 33 53.8	+0.1
	comp=Z,1.2nm,0.9s,baz=113,slow=6.6,SNR=5.6						
	comp=Z,1.2nm,0.9s						
ZALV	Zalesovo Beam	71.80	329	P	P	02 34 05.6	+0.1
	comp=Z,0.4nm,0.4s,baz=123,slow=7.1,SNR=3.7						
	comp=Z,0.4nm,0.4s						
KURBB	Kurchatov Arra	73.71	324	P	P	02 34 17.9	+1.0
	comp=Z,0.8nm,1.1s,baz=116,slow=6.4,SNR=1.6						
	comp=Z,0.8nm,1.1s						
BVAR	Borovoye Array	79.28	325	P	P	02 34 49.5	+1.0
	comp=Z,0.6nm,0.6s,baz=94,slow=5.8,SNR=7.3						
	comp=Z,0.6nm,0.6s						
ILAR	Eielson Array	84.62	24	P	P	02 35 16.3	0.0
	comp=Z,0.4nm,1.0s,baz=247,slow=5.9,SNR=2.0						
	comp=Z,0.4nm,1.0s						
ABKAR	Akbulak array	84.82	320	P	P	02 35 19.9	+2.2

*PDG **06** 02:31:46.2±0.6, 41°.58N×19°.44E, h24^{km}±1^{km}, ML2.7/12, Error ellipse: s-maj=0.6km s-min=1.7km az=0.0*
*TIR **06** 02:31:46.2, 41°.60N×19°.61E, h16^{km}±1^{km}, Ml2.9/5*
*THE **06** 02:31:46.2, 42°N±9°×1°9E±°, h11^{km}, M2.7/7, MLh2.7/7*
ISC 06 02:31:46.1±1.0**, 41°.59N**±0°.02×**19°.54E**±0°.03**, h9**^{km}±9^{km}**, n51, σ0^{s}.83**/75**, 17C-15D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.35	135	Pg	Pg	02 31 52.1	-0.8
TIR				AML	AML	02 31 56.8	
	3.2nm,0.3s						
TIR				Sg	Sg	02 31 57.9	+0.3
ULC	Ulcinj	0.43	330	⇑*i*Pg	Pg	02 31 54.4	-0.1
ULC				*i* Sg	Sb	02 32 01.9	-0.6
SDA	Shkodra	0.46	357	Pg	Pg	02 31 55.0	0.0
SDA				Sg	Sb	02 32 02.5	-0.8
DRME	Dracevica, Mon	0.65	336	⇑*i*Pg	Pg	02 31 58.6	0.0
DRME				*e*Sg	Sb	02 32 09.2	+0.5
PHP	Peshkopia	0.69	82	Pg	Pg	02 31 58.0	-1.3
PHP				Sg	Sg	02 32 07.7	-0.6
PHP				AML	AML	02 32 11.4	
	2.7nm,0.3s						
BUM	Brajici-Budva	0.85	326	⇑*i*Pg	Pb	02 32 02.6	-0.5
BUM				*i* Sg	Sb	02 32 14.4	-0.3
PDG	Podgorica	0.86	346	Pn	Pg	02 32 02.5	-0.2
PDG				Sn	Sn	02 32 15.8	-1.2
PDG	Podgorica	0.86	346	⇓P	Pn	02 32 04.3	-0.1
PDG				⇓S	Sn	02 32 17.7	+0.6
PDG	Podgorica	0.86	346	⇓*i*Pg	Pg	02 32 02.1	-0.6
PDG				*i* Sg	Sn	02 32 15.9	-1.2
PVY	Plav	1.05	17	⇓*i*Pg	Pb	02 32 05.5	-1.0
PVY				*i* Sg	Sn	02 32 22.7	+0.8
CEME	Cevo	1.06	334	⇓*i*Pg	Pb	02 32 06.1	-0.5
CEME				*e*Sg	Sn	02 32 22.0	-0.1
VLO	Vlora	1.12	182	Pn	Pb	02 32 07.5	-0.2
VLO				Sn	Sg	02 32 22.7	+0.5
VLO				AML	AML	02 32 32.1	
	2.4nm,0.4s						
VLO	Vlora	1.12	182	P	Pb	02 32 07.4	-0.2
VLO				S	Sn	02 32 24.2	+0.7
HCY	Herceg Novi	1.15	318	⇑*i*Pg	Pg	02 32 08.1	-0.1
HCY				*i* Sg	Sn	02 32 25.2	+0.9
NKME	Niksic	1.25	340	⇓*i*Pg	Pn	02 32 09.3	-0.5
NKME				*e*Sg	Sg	02 32 27.4	+1.1
KOME	Kolasin	1.26	359	⇑*i*Pg	Pn	02 32 09.5	-0.4
KOME				*e*Sg	Sg	02 32 27.9	+1.4
IVA	Berane	1.30	12	⇑*i*Pg	Pn	02 32 09.8	-0.8
IVA				*i* Sg	Sg	02 32 29.3	+1.2
KBN	Korca	1.35	135	Pn	Pn	02 32 11.3	+0.1
KBN				Sn	Sb	02 32 28.7	-0.5
KBN	Korca	1.35	135	P	Pn	02 32 11.4	+0.1
KBN				S	Sg	02 32 31.9	+2.3
TREB	Trebinje	1.43	322	*e*Pn	Pn	02 32 11.4	-0.8
BRY	Bratogost	1.50	331	⇑*i*Pg	Pb	02 32 13.3	-0.9
BRY				*i* Sg	Sb	02 32 33.0	-0.4
NEST	Nestorio	1.64	135	P	Pn	02 32 15.7	+0.4
NEST				S	Sg	02 32 39.0	+0.1
KLINJ	Klinje	1.73	336	*e*Pn	Pb	02 32 17.0	-1.0
PLE	Pljevlja	1.74	356	⇓*i*Pn	Pb	02 32 17.7	-0.5
PLE				*i* Sn	Sb	02 32 39.9	-0.3
PENT	Pentalofos	1.85	138	P	Pn	02 32 19.0	+0.9
PENT				S	Sb	02 32 44.0	+0.5
RUDO	Rudo	2.03	357	*e*Pn	Pn	02 32 21.0	+0.6
NOCI	Noci	2.03	247	Pn	Pn	02 32 18.6	-1.9
NOCI				Sn	Sg	02 32 51.9	+0.6
NOCI				AML	AML	02 32 55.8	
	0.7nm,0.4s						
KPRO	Kipourio	2.15	139	P	Pn	02 32 23.1	+0.9
IGT	Igoumenitsa	2.15	163	P	Pn	02 32 21.4	-0.7
JAN	Janina	2.18	152	P	Pn	02 32 22.7	+0.1
MATE	Matera	2.34	247	⇓P	Pn	02 32 23.0	-1.7
BOVS	Bovan	2.59	37	⇓P	Pn	02 32 28.3	+0.1
TIP	Timpagrande	3.21	222	⇓P	Pn	02 32 34.9	-1.9
MDVR	Moldovita	3.56	26	⇑P	Pn	02 32 41.7	+0.1
BLY	Banja Luka	3.59	332	*e*Pn	Pb	02 32 51.5	+1.8
BLY	Banja Luka	3.59	332	⇑P	Pn	02 32 42.5	+0.6
HERR	Herculane	3.90	32	⇑P	Pn	02 32 46.2	+0.1
BZS	Buzias	4.30	20	⇓P	Pn	02 32 51.4	-0.2
GZR	Gura Zlata	4.47	31	⇑P	Pn	02 32 54.9	+0.9
SURR	Surduc	4.56	23	⇓P	Pn	02 32 54.7	-0.5
AQU	L'Aquila	4.63	281	*e*Pn	Pn	02 32 55.4	-0.9
MORH	Mrgy, Hungar	4.67	352	*e*Pn	Pn	02 32 56.6	0.0
MORH	Mrgy, Hungar	4.67	352	⇑P	Pn	02 32 56.8	+0.1
ELND	Elena	4.89	72	⇑P	Pn	02 33 00.0	+0.2
SIRR	Siria	4.92	17	⇑P	Pn	02 33 00.0	-0.1
ARR	Arges	5.29	43	⇑P	Pn	02 33 06.3	+1.0
VOIR		5.55	44	⇑P	Pn	02 33 09.8	+0.8
MLR	Muntele Rosu	6.07	48	⇓P	Pn	02 33 16.9	+0.8
PLOR	Plostina	6.68	48	⇓P	Pn	02 33 25.9	+1.5
VRI	Vrincioaia	6.74	48	⇑P	Pn	02 33 25.5	+0.4
TLCR		7.65	59	⇓P	Pn	02 33 37.7	0.0

*TAP **06** 02:35:10.0, 24°.01N×121°.78E, h6^{km}, ML3.6, C*
ISC 06 02:35:11.4±0.9**, 24°.00N**±0°.02×**121°.76E**±0°.03**, h12**^{km}±5^{km}**, n96, σ0^{s}.89**/140**, 11C-8D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.14	260	⇓P	Pg	02 35 14.6	-0.3
HWA				*i* S	Sg	02 35 18.6	+1.2
TWD	Chiawan	0.17	297	⇓*i*P	Pg	02 35 14.4	-0.9
TWD				*i* S	Sg	02 35 18.1	+0.2
TEYL	Yanliau Villag	0.20	228	⇑P	Pg	02 35 15.4	-0.4
TEYL				S	Sg	02 35 19.4	+0.6
ETL	Fush Village	0.20	321	P	Pg	02 35 15.1	-0.7
NACB	Ninganchiao	0.23	319	P	Pg	02 35 15.5	-0.8
NACB	Ninganchiao	0.23	319	⇓*i*P	Pg	02 35 15.5	-0.8
NACB				S	Sg	02 35 19.2	-0.4
ETM	Tongmen	0.25	262	⇑*i*P	Pg	02 35 16.1	-0.5
ETM				S	Sb	02 35 20.6	+0.5
SHUL	Shoufeng	0.28	220	*e*P	Pb	02 35 17.4	-0.9
SHUL				S	Sb	02 35 22.9	0.0
ETLH	Xiulin Townshi	0.33	309	*e*P	Pb	02 35 17.6	-1.6
ETLH				*e*S	Sb	02 35 22.7	-1.7
EAHA	Aohua	0.33	357	*e*P	Pb	02 35 17.8	-1.3
EAHA				S	Sb	02 35 23.1	-1.2
ESL	Shilin	0.35	238	P	Pg	02 35 17.9	-0.7
ESL				*e*S	Sb	02 35 24.2	-0.8
TEGC	Jichi Village	0.35	215	*e*P	Pb	02 35 19.4	-0.2
ENA	Nanau	0.42	358	*e*P	Pb	02 35 19.7	-1.1
ENA				*e*S	Sb	02 35 26.0	-1.2
WARBT	Fenglin Townsh	0.44	230	⇑*i*P	Pg	02 35 19.6	-0.6
WARBT				*e*S	Sb	02 35 27.7	0.0
WHF	Hehuan Shan	0.47	288	⇓*e*P	Pg	02 35 20.3	-0.6
WHF				*e*S	Sg	02 35 27.3	0.0
EOS4	EOS4	0.52	77	*e*P	Pn	02 35 22.7	-1.6
FUSS	Fushou	0.53	298	*e*P	Pb	02 35 21.8	-1.0
FUSS				*e*S	Sb	02 35 30.4	0.0
OWD	Renai	0.54	265	⇑*i*P	Pb	02 35 21.7	-1.1
OWD				S	Sb	02 35 29.7	-0.8
NNSB	Datong	0.55	321	*e*P	Pb	02 35 22.0	-1.0
NNSB				*e*S	Sb	02 35 30.1	-0.7
NNS	Nan Shan	0.56	321	⇑P	Pb	02 35 22.2	-1.0
NNS				*e*S	Sb	02 35 30.6	-0.7
LATG	Datong	0.57	338	⇓*e*P	Pb	02 35 22.4	-1.0
LATG				*e*S	Sb	02 35 31.4	-0.1
ESAO	Su ao	0.58	8	*e*P	Pb	02 35 22.6	-0.8
WUSB	Renai	0.59	269	⇑P	Pb	02 35 22.7	-0.9
WUSB				*e*S	Sb	02 35 31.9	0.0
TWT	Tachien	0.59	295	P	Pb	02 35 23.2	-0.5
TWT				S	Sb	02 35 32.4	+0.3
HGSD	Ruisui	0.59	211	*e*P	Pb	02 35 23.3	-0.4
TDCB	Techi	0.60	295	⇑*i*P	Pb	02 35 23.3	-0.7
TDCB				*e*S	Sb	02 35 32.1	-0.3
TWC	Suao	0.61	8	P	Pb	02 35 23.9	-0.1
VWDT	VWDT	0.62	247	⇑*i*P	Pb	02 35 23.4	-0.7
VWDT				S	Sb	02 35 31.9	-0.8
EHYH	Wanrong	0.63	217	*e*P	Pb	02 35 23.2	-1.1
ENTT	Nioudou	0.66	345	P	Pb	02 35 24.4	-0.4
ENTT				*e*S	Sb	02 35 34.1	+0.1
TWE	Neicheng	0.72	353	*e*P	Pb	02 35 25.7	-0.2
TWE				*e*S	Sb	02 35 35.6	-0.1
YULB	Yu-li	0.74	215	P	Pb	02 35 26.0	-0.2
YULB	Yu-li	0.74	215	*e*P	Pb	02 35 25.4	-0.9
YHNB	Yeheng	0.75	332	P	Pb	02 35 26.3	-0.1
YHNB	Yeheng	0.75	332	⇓P	Pb	02 35 26.1	-0.3
YHNB				S	Sb	02 35 36.6	-0.1
DPDB	Guoxing	0.76	273	*e*P	Pb	02 35 26.2	-0.4
DPDB				*e*S	Sb	02 35 37.4	+0.5
NSK	Sanguang	0.76	331	P	Pb	02 35 26.3	-0.4
NSK				*e*S	Sb	02 35 37.2	+0.2
SSLB	Suanglung	0.77	254	P	Pb	02 35 26.1	-0.6
SSLB	Suanglung	0.77	254	⇑*i*P	Pb	02 35 25.9	-0.8
SSLB				*e*S	Sg	02 35 36.0	-0.4
FUSB	Fushanzhiwuyua	0.77	348	*e*P	Pn	02 35 26.7	-1.4
FUSB				*e*S	Sb	02 35 37.5	+0.3
TWF1	Yuli	0.77	213	*e*P	Pb	02 35 25.7	-1.1
WCS	Beigang Elemen	0.78	274	P	Pb	02 35 26.4	-0.4
WCS				S	Sb	02 35 37.5	+0.2
WHP	Taichung City	0.79	290	P	Pb	02 35 27.1	-0.1
WHP				S	Sb	02 35 38.8	+0.9
SMLT	Sun Moon Lake	0.80	262	⇑*i*P	Pb	02 35 26.6	-0.6
SMLT				S	Sb	02 35 37.4	-0.6
TYC	Yuchr	0.83	263	⇑*i*P	Pb	02 35 27.0	-0.7
TYC				S	Sb	02 35 38.8	0.0
NFF	Wufeng Townshi	0.86	317	P	Pn	02 35 28.1	-1.2
CHKH	Chenggong	0.87	203	*e*P	Pb	02 35 27.5	-0.9
CHKH				*e*S	Sb	02 35 40.1	0.0
WHYT	Xinyi Township	0.88	250	P	Pb	02 35 28.0	-0.6
WHYT				S	Sb	02 35 41.5	+1.0
YUS	Yu-Shan	0.90	236	P	Pb	02 35 28.7	-0.5
FULB	Fuli	0.91	208	*e*P	Pn	02 35 29.1	-0.8
LIOB	Emei	0.93	314	*e*P	Pn	02 35 30.2	-0.1
NSTT	Nanjuang	0.93	312	⇓P	Pn	02 35 30.0	-0.3
KSHI	Guanxi Townshi	0.94	326	*e*P	Pn	02 35 30.2	-0.2
WJS	Zhushan	0.96	259	*e*P	Pn	02 35 30.9	+0.3
WJS				*e*S	Sn	02 35 45.0	+0.8
TWQ1	Liyutan	0.96	291	*e*P	Pn	02 35 31.0	+0.3
TIPB	Shuangxi	0.97	4	P	Pn	02 35 30.2	-0.6
CHKT	Chengkung	0.97	202	*e*P	Pg	02 35 29.1	-1.0
TWA	Mucha	0.99	351	*e*P	Pn	02 35 30.9	-0.1
EHD	Haiduan	0.99	211	*e*P	Pb	02 35 29.7	-0.8
WNT	Mingjian	0.99	263	*e*P	Pn	02 35 31.1	0.0
WNT				*e*S	Sn	02 35 46.1	+1.1
NSY	Sanyi	1.00	295	*e*P	Pn	02 35 31.9	+0.7
TATO	Taipei	1.00	346	P	Pn	02 35 31.8	+0.6
TATO	Taipei	1.00	346	*e*P	Pn	02 35 31.3	+0.1
ALS	Alishan	1.00	241	*e*P	Pb	02 35 30.6	-0.2
NMLH	Miaoli	1.03	301	*e*P	Pn	02 35 32.6	+0.9
ELDTW	Lidau	1.06	220	*e*P	Pg	02 35 30.7	-1.1
WFSB	Wu-fen Shan	1.06	1	*e*P	Pn	02 35 32.6	+0.5
CHN5	Tsauling	1.07	248	⇓P	Pn	02 35 32.3	+0.1
CHN5				*e*S	Sn	02 35 49.2	+2.1
SXI1	Grass Mountain	1.09	6	*e*P	Pn	02 35 33.5	+0.9
NCUH	Zhongli	1.09	332	*e*P	Pn	02 35 33.4	+0.9
EDH	Donghe	1.11	202	*e*P	Pg	02 35 31.5	-1.3
EDH				*e*S	Sn	02 35 47.4	-0.5
YM01	YM01	1.15	351	*e*P	Pn	02 35 34.3	+1.0
ZUZH	Zhuzihu	1.17	350	*e*P	Pn	02 35 34.5	+0.9
WCKO	Fanlu	1.20	242	*e*P	Pn	02 35 34.6	+0.6
STYH	Taoyuan	1.23	228	*e*P	Pn	02 35 33.9	-0.4
YOJ	Yonaguni jima	1.23	68	P	Pn	02 35 38.1	+3.7
YOJ	Yonaguni jima	1.23	68	*e*P	Pn	02 35 36.2	+1.8
STYT	Tauyuan	1.24	228	*e*P	Pn	02 35 33.7	-0.9
STYT				*e*S	Sn	02 35 52.4	+1.1
TPUB	Ta-pu	1.25	236	P	Pg	02 35 36.1	+0.7
TPUB	Ta-pu	1.25	236	*e*P	Pg	02 35 34.4	-1.0
CHN4	Tsaushan	1.25	239	*e*P	Pg	02 35 34.4	-1.0
RLNB	Erlin	1.28	265	*e*P	Pg	02 35 35.2	-1.0
RLNB				*e*S	Sn	02 35 54.6	+2.4
WTP	Ta-pu	1.29	235	*e*P	Pg	02 35 35.6	-0.7
CHY	Chiayi	1.32	248	*e*P	Pg	02 35 36.9	0.0
CHY				*e*S	Sn	02 35 55.1	+1.9
TWGBT	Beinan	1.33	208	P	Pg	02 35 36.4	-0.7
TWGBT	Beinan	1.33	208	*e*P	Pn	02 35 34.6	-1.2
TWG	Pinlang	1.33	208	*e*P	Pb	02 35 35.7	-0.6
TWK	Hsinying	1.38	238	*e*P	Pg	02 35 37.3	-0.6
TWK				*e*S	Sg	02 35 56.7	+0.9
CHN1	Nanshi	1.39	234	*e*P	Pg	02 35 37.9	-0.3
SGST	Jiashian	1.42	230	*e*P	Pg	02 35 37.6	-1.0
SGST				*e*S	Sg	02 35 58.2	+1.1
WSL	Shuilin Townsh	1.48	252	*e*P	Pg	02 35 38.8	-1.1
SSD	Sandimen	1.62	220	*e*P	Pb	02 35 40.2	-1.1
MASBT	Mashibuluo	1.73	217	*e*P	Pb	02 35 42.0	-1.0
MASBT				*e*S	Sb	02 36 05.2	+0.5
EAST	Anshuo	1.82	208	*e*P	Pn	02 35 42.9	+0.4
SCZT	Fangliau	1.93	213	*e*P	Pb	02 35 45.3	-1.3
PHUB	P'eng-hu	2.06	257	*e*S	Sb	02 36 14.0	-0.3

ROM 06 02:35:15.4±0.1**, 42°.618N**±0°.004×**13°.236E**±0°.005**, h10**^{km}**, ML1.9**/53**, 4C-2D, Error ellipse: s-maj=0.4km s-min=0.3km az=235.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	SAN MARTINO	0.07	80	⇓P	Pg	02 35 18.3	+0.5
SMA1				S	Sg	02 35 20.2	+0.6
SMA1				AML	AML		
	comp=E,7775µm,0.3s						
SMA1				AML	AML		
	comp=N,1870µm,0.6s						
SMA1				AML	AML		
	comp=N,1478µm,0.2s						
SMA1				AML	AML		
	comp=E,7776µm,0.3s						
RM33	Pellescritta (	0.11	188	⇑P	Pg	02 35 18.8	+0.5
RM33				S	Sg	02 35 21.1	+0.7
RM33				AML	AML		
	comp=N,1440µm,1.0s						
RM33				AML	AML		
	comp=E,1865µm,1.4s						
RM33				AML	AML		
	comp=N,1455µm,1.0s						
RM33				AML	AML		
	comp=E,2015µm,1.4s						
RM33				AML	AML		
	comp=N,1440µm,1.0s						
RM33				AML	AML		
	comp=N,1424µm,0.1s						
RM33				AML	AML		
	comp=E,1699µm,0.2s						
RM33				AML	AML		
	comp=N,1415µm,0.1s						
RM33				AML	AML		
	comp=E,1769µm,0.2s						
RM33				AML	AML		
	comp=E,1699µm,1.8s						
LNSS	Leonessa	0.14	264	⇑P	Pg	02 35 19.4	+0.6
LNSS				S	Sg	02 35 22.2	+1.0
LNSS				AML	AML		
	comp=E,714µm,0.3s						
LNSS				AML	AML		
	comp=E,715µm,0.3s						
LNSS				AML	AML		
	comp=N,704µm,0.4s						
LNSS				AML	AML		
	comp=E,790µm,0.1s						
LNSS				AML	AML		
	comp=N,735µm,0.4s						
LNSS				AML	AML		
	comp=N,530µm,0.1s						
LNSS				AML	AML		
	comp=E,790µm,0.1s						
LNSS				AML	AML		
	comp=N,599µm,0.2s						
LNSS				AML	AML		
	comp=E,714µm,0.1s						
CAMP	Campotosto	0.15	123	⇓P	Pg	02 35 19.3	+0.4
CAMP				S	Sg	02 35 22.0	+0.6
CAMP				AML	AML		
	comp=E,192µm,0.5s						
CAMP				AML	AML		
	comp=N,235µm,0.4s						
CAMP				AML	AML		
	comp=E,163µm,0.3s						
CAMP				AML	AML		
	comp=N,225µm,0.6s						
MTRA	Matera	0.18	40	⇑P	Pg	02 35 19.7	+0.3
MTRA				S	Sg	02 35 22.6	+0.5
MTRA				AML	AML		
	comp=E,1910µm,0.6s						
MTRA				AML	AML		
	comp=N,1510µm,0.4s						
MTRA				AML	AML		
	comp=E,1880µm,0.3s						
MTRA				AML	AML		
	comp=E,1910µm,0.5s						
MTRA				AML	AML		
	comp=N,1485µm,0.4s						
MTRA				AML	AML		
	comp=N,1165µm,0.4s						
MTRA				AML	AML		
	comp=E,1667µm,0.3s						
MTRA				AML	AML		
	comp=N,1174µm,0.1s						
MTRA				AML	AML		
	comp=E,1676µm,0.2s						
NRCA	Norcia	0.23	337	P	Pg	02 35 20.6	+0.3
NRCA				S	Sg	02 35 24.4	+0.8
NRCA				AML	AML		
	comp=E,602µm,0.5s						

NRCA				AML	AML		
	comp=N,609µm,0.4s						
NRCA				AML	AML		
	comp=E,602µm,0.5s						
NRCA				AML	AML		
	comp=N,609µm,0.4s						
NRCA				AML	AML		
	comp=E,636µm,0.5s						
NRCA				AML	AML		
	comp=N,638µm,1.2s						
NRCA				AML	AML		
	comp=N,575µm,0.1s						
NRCA				AML	AML		
	comp=E,588µm,0.1s						
NRCA				AML	AML		
	comp=E,594µm,0.2s						
NRCA				AML	AML		
	comp=N,634µm,0.1s						
GAVE	**Gavelli**	**0.26**	**287**	⇑P	Pg	02 35 21.2	+0.4
GAVE				S	Sg	02 35 25.5	+1.0
GAVE				AML	AML		
	comp=E,827µm,0.2s						
GAVE				AML	AML		
	comp=N,654µm,0.1s						
GAVE				AML	AML		
	comp=E,827µm,0.2s						
GAVE				AML	AML		
	comp=N,654µm,0.1s						
GAVE				AML	AML		
	comp=N,199µm,0.9s						
GAVE				AML	AML		
	comp=E,863µm,0.2s						
TERO	**Teramo**	**0.27**	**89**	P	Pg	02 35 21.1	+0.1
TERO				S	Sg	02 35 25.2	+0.5
TERO				AML	AML		
	comp=N,544µm,1.0s						
TERO				AML	AML		
	comp=E,463µm,0.5s						
TERO				AML	AML		
	comp=E,374µm,0.1s						
TERO				AML	AML		
	comp=N,400µm,0.1s						
MMO1	**Montemonaco**	**0.29**	**13**	P	Pg	02 35 21.6	+0.2
MMO1				S	Sg	02 35 26.2	+1.0
AQU	**L'Aquila**	**0.29**	**155**	P	Pb	02 35 22.2	-0.5
AQU				S	Sb	02 35 26.5	-1.0
MC2	**Monte Cornacci**	**0.30**	**354**	P	Pg	02 35 21.8	+0.3
MC2				S	Sg	02 35 26.7	+1.1
GIGS	**Gran Sasso**	**0.30**	**124**	P	Pg	02 35 21.6	+0.1
GIGS				S	Sg	02 35 26.1	+0.7
GIGS				AML	AML		
	comp=N,120µm,0.1s						
GIGS				AML	AML		
	comp=E,77µm,0.1s						
GIGS				AML	AML		
	comp=E,77µm,0.1s						
GIGS				AML	AML		
	comp=N,121µm,0.1s						
ARRO	**Arrone**	**0.35**	**264**	P	Pg	02 35 22.7	+0.3
ARRO				S	Sg	02 35 28.1	+1.1
ARRO				AML	AML		
	comp=E,140µm,0.2s						
ARRO				AML	AML		
	comp=N,149µm,1.2s						
ARRO				AML	AML		
	comp=E,139µm,0.2s						
ARRO				AML	AML		
	comp=N,125µm,0.1s						
FIAM	**Fiamignano**	**0.36**	**194**	P	Pg	02 35 22.9	+0.4
FIAM				S	Sb	02 35 28.6	-1.0
FIAM				AML	AML		
	comp=E,64µm,0.4s						
FIAM				AML	AML		
	comp=N,37µm,1.0s						
FEMA	**Monte Fema**	**0.37**	**338**	P	Pg	02 35 23.3	+0.5
MF5	**Montefalcone A**	**0.41**	**24**	P	Pg	02 35 24.0	+0.5
MF5				S	Sb	02 35 30.8	-0.1
MF5				AML	AML		
	comp=E,180µm,0.2s						
MF5				AML	AML		
	comp=N,131µm,0.3s						
FDMO	**Fiordimonte**	**0.43**	**345**	P	Pg	02 35 24.0	+0.1
FDMO				AML	AML		
	comp=E,74µm,0.5s						
FDMO				AML	AML		
	comp=N,82µm,0.6s						
FDMO				AML	AML		
	comp=E,61µm,0.1s						
FDMO				AML	AML		
	comp=N,80µm,0.2s						
FAGN	**Fagnano**	**0.44**	**144**	P	Pb	02 35 24.7	-0.5
FAGN				AML	AML		
	comp=E,148µm,0.4s						
FAGN				AML	AML		
	comp=N,104µm,0.4s						
FAGN				AML	AML		
	comp=E,148µm,0.4s						
FAGN				AML	AML		
	comp=E,148µm,1.6s						
FAGN				AML	AML		
	comp=N,103µm,0.2s						
GUMA	**Gualdo di Mace**	**0.45**	**9**	P	Pg	02 35 24.7	+0.5
GUMA				S	Sb	02 35 31.2	-1.0
GUMA				AML	AML		
	comp=E,323µm,0.3s						
GUMA				AML	AML		
	comp=N,1402µm,1.1s						
GUMA				AML	AML		
	comp=E,473µm,0.3s						
GUMA				AML	AML		
	comp=N,228µm,0.5s						
GUMA				AML	AML		
	comp=E,323µm,0.3s						
GUMA				AML	AML		
	comp=E,473µm,0.3s						
GUMA				AML	AML		
	comp=N,217µm,0.3s						
CESI	**CESI - Serrava**	**0.46**	**328**	P	Pg	02 35 24.7	+0.3
CESI				S	Sb	02 35 32.0	-0.5
CESI				AML	AML		
	comp=E,68µm,1.2s						
CESI				AML	AML		
	comp=N,84µm,0.3s						
CESI				AML	AML		
	comp=N,78µm,0.1s						
CESI				AML	AML		
	comp=E,52µm,0.3s						
OFFI	**Offida**	**0.46**	**46**	P	Pb	02 35 25.3	-0.3
OFFI				S	Sb	02 35 33.9	+1.5
OFFI				AML	AML		
	comp=E,324µm,0.2s						
OFFI				AML	AML		
	comp=N,232µm,0.5s						
OFFI				AML	AML		
	comp=N,232µm,0.5s						
OFFI				AML	AML		
	comp=E,324µm,0.2s						
CSP1	**Cessapalombo**	**0.47**	**357**	P	Pg	02 35 24.8	+0.1
CSP1				S	Sb	02 35 32.2	-0.7
CSP1				AML	AML		
	comp=E,92µm,1.2s						
CSP1				AML	AML		
	comp=N,90µm,0.4s						
CSP1				AML	AML		
	comp=E,75µm,0.2s						
CSP1				AML	AML		
	comp=N,85µm,0.2s						
CESX	**Cesi**	**0.48**	**269**	P	Pg	02 35 25.0	+0.1
CESX				AML	AML		
	comp=E,122µm,1.4s						
CESX				AML	AML		
	comp=N,160µm,0.2s						
CESX				AML	AML		
	comp=E,121µm,0.2s						
CESX				AML	AML		
	comp=N,160µm,0.2s						
SAP2	**Sant'Angelo in**	**0.49**	**14**	P	Pb	02 35 25.8	-0.3
VCEL	**Villa Celiera**	**0.50**	**116**	P	Pg	02 35 25.7	+0.5
VCEL				S	Sb	02 35 33.3	-0.3
VCEL				AML	AML		
	comp=E,218µm,1.3s						
VCEL				AML	AML		
	comp=N,198µm,0.6s						
VCEL				AML	AML		
	comp=E,198µm,0.3s						
VCEL				AML	AML		
	comp=N,180µm,0.2s						
MNTT	**Montottone**	**0.52**	**31**	P	Pb	02 35 26.4	-0.2
MNTT				AML	AML		
	comp=E,154µm,1.0s						
MNTT				AML	AML		
	comp=N,198µm,1.2s						
MOMA	**Monte Martano**	**0.53**	**291**	P	Pg	02 35 25.8	+0.1
MOMA				S	Sb	02 35 33.9	-0.5
MOMA				AML	AML		
	comp=E,165µm,0.2s						
MOMA				AML	AML		
	comp=N,143µm,0.2s						
MOMA				AML	AML		
	comp=N,143µm,0.2s						
MOMA				AML	AML		
	comp=E,142µm,0.2s						
MOMA				AML	AML		
	comp=E,165µm,0.2s						
MML1	**Montelago di S**	**0.53**	**339**	P	Pg	02 35 25.9	+0.1
MML1				S	Sb	02 35 34.5	-0.1
T0110	**Collepietro**	**0.56**	**134**	P	Pg	02 35 26.8	+0.5
T0110				AML	AML		
	comp=E,126µm,0.4s						
T0110				AML	AML		
	comp=N,95µm,0.4s						
SNTG	**Esanatoglia**	**0.67**	**341**	AML	AML		
	comp=E,30µm,0.6s						
SNTG				AML	AML		
	comp=N,31µm,1.5s						
SNTG				AML	AML		
	comp=N,31µm,0.5s						
SNTG				AML	AML		
	comp=E,25µm,0.1s						
SNTG				AML	AML		
	comp=N,27µm,0.3s						
EL6	**Elcito**	**0.72**	**352**	AML	AML		
	comp=N,62µm,0.3s						
EL6				AML	AML		
	comp=E,66µm,0.1s						
ARVD	**Arcevia**	**0.91**	**346**	AML	AML		
	comp=E,14µm,0.2s						

ROM 06 02:36:03.2±0.1, 42°.618N±0°.004×13°.251E±0°.005, h12^{km}, ML0.8/13, Error ellipse: s-maj=0.4km s-min=0.2km az=359.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	**SAN MARTINO**	**0.06**	**78**	P	Pg	02 36 06.3	+0.5
SMA1				S	Sg	02 36 08.2	+0.4
SMA1				AML	AML		
	comp=E,1810µm,0.2s						
SMA1				AML	AML		
	comp=N,467µm,0.8s						
SMA1				AML	AML		
	comp=E,542µm,0.2s						
SMA1				AML	AML		
	comp=N,113µm,0.2s						
RM33	**Pellescritta (**	**0.11**	**194**	P	Pg	02 36 06.8	+0.5
RM33				S	Sg	02 36 09.0	+0.4
RM33				AML	AML		
	comp=E,378µm,1.4s						
RM33				AML	AML		
	comp=E,384µm,1.4s						
RM33				AML	AML		
	comp=N,322µm,0.1s						
RM33				AML	AML		
	comp=E,378µm,1.4s						
RM33				AML	AML		
	comp=N,357µm,0.1s						
RM33				AML	AML		
	comp=E,106µm,0.2s						
RM33				AML	AML		
	comp=N,58µm,0.1s						
RM33				AML	AML		
	comp=E,56µm,0.1s						
RM33				AML	AML		
	comp=N,62µm,0.1s						
CAMP	**Campotosto**	**0.14**	**125**	P	Pg	02 36 06.4	-0.4
CAMP				S	Sg	02 36 09.8	+0.5
LNSS	**Leonessa**	**0.16**	**265**	P	Pg	02 36 07.3	+0.4
LNSS				S	Sg	02 36 10.2	+0.5
LNSS				AML	AML		
	comp=E,136µm,0.3s						
LNSS				AML	AML		
	comp=N,139µm,0.4s						
LNSS				AML	AML		
	comp=E,28µm,0.1s						
LNSS				AML	AML		
	comp=N,23µm,0.1s						
MTRA	**Matera**	**0.17**	**38**	P	Pg	02 36 07.7	+0.4
MTRA				S	Sg	02 36 10.6	+0.5
MTRA				AML	AML		
	comp=E,363µm,1.3s						
MTRA				AML	AML		
	comp=N,299µm,0.4s						
MTRA				AML	AML		
	comp=E,364µm,1.3s						
MTRA				AML	AML		
	comp=N,302µm,1.3s						
MTRA				AML	AML		
	comp=E,352µm,1.3s						
MTRA				AML	AML		
	comp=N,47µm,0.2s						
MTRA				AML	AML		
	comp=N,46µm,0.1s						
NRCA	**Norcia**	**0.24**	**335**	P	Pg	02 36 08.6	+0.3
NRCA				S	Sg	02 36 12.4	+0.6
NRCA				AML	AML		
	comp=E,122µm,0.1s						
NRCA				AML	AML		
	comp=N,107µm,1.5s						
NRCA				AML	AML		
	comp=E,73µm,0.1s						
NRCA				AML	AML		
	comp=N,43µm,0.1s						
TERO	**Teramo**	**0.26**	**89**	P	Pg	02 36 09.1	+0.5
TERO				S	Sg	02 36 13.2	+0.9
TERO				AML	AML		
	comp=E,102µm,0.6s						
TERO				AML	AML		
	comp=N,140µm,1.0s						
TERO				AML	AML		
	comp=E,21µm,0.1s						
TERO				AML	AML		
	comp=N,28µm,0.1s						
GAVE	**Gavelli**	**0.27**	**286**	P	Pg	02 36 09.3	+0.4
GAVE				S	Sg	02 36 13.7	+0.9
GAVE				AML	AML		
	comp=N,131µm,0.1s						
GAVE				AML	AML		
	comp=E,146µm,0.2s						
GAVE				AML	AML		
	comp=E,31µm,0.2s						
GIGS	**Gran Sasso**	**0.29**	**125**	P	Pg	02 36 09.6	+0.4
GIGS				S	Sb	02 36 14.2	-0.9
GIGS				AML	AML		
	comp=N,30µm,0.7s						
GIGS				AML	AML		
	comp=E,22µm,0.1s						
GIGS				AML	AML		
	comp=N,30µm,0.7s						
GIGS				AML	AML		
	comp=E,6µm,0.1s						
GIGS				AML	AML		
	comp=N,11µm,0.1s						
MF5	**Montefalcone A**	**0.40**	**22**	P	Pb	02 36 12.2	-0.1
MF5				S	Sg	02 36 17.3	+0.7

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*WEL **06** 03:16:03.8±0.4, 44°S±2°×16°9E±°, h4^{km}±2^{km}, M4.0/11, ML3.9/11, MLv4.0/11, Error ellipse: s-maj=3.4km s-min=2.5km az=116.2, confirmed*

*WEL **06** 03:16:04.8, 44°.09S×168°.77E, h4^{km}, ML4.1, Mw3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14} Nm; M$_{rr}$2.30; M$_{\theta\theta}$0.17; M$_{\phi\phi}$-2.47; M$_{r\theta}$1.06; M$_{\theta\phi}$-1.33; M$_{\phi r}$-1.09; Fault plane solution: M$_{0}$3.13000×10^{14} NP1: φ$_{s}$176.00000°, δ58.00000°, λ55.00000°. NP2: φ$_{s}$49.00000°, δ46.00000°, λ133.00000°. Principal axes: T 3.1620, Plg60.0000°, Azm32.0000°; N -0.0610, Plg29.0000°, Azm196.0000°; P -3.1010, Plg7.0000°, Azm290.0000°; Stations used: WKZ ODZ RPZ REVERSE FAULTING*

*NOU **06** 03:16:04.4, 44°.00S×168°.80E, h0^{km}, ML4.4/16, Off W. Coast of S. Island, N.Z.*

ISC 06 03:16:02.8±0.9, 44°.13S±0°.03×168°.65E±0°.03, h11^{km}±6^{km}, n83, σ1^{s}.06/93, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCZ	**Jackson Bay**	**0.11**	**61**	P	**Pg**	**03 16 05.5**	**-0.3**
JCZ	**Jackson Bay**	**0.11**	**61**	P	**Pg**	**03 16 05.4**	**-0.3**
JCZ				S	**Sg**	**03 16 06.3**	**-1.6**
NSBS	**Neils Beach**	**0.13**	**2**	P	**Pg**	**03 16 07.0**	**+1.1**
NSBS				S	**Sg**	**03 16 09.5**	**+1.4**
HDWS	**Haast DOC Work**	**0.37**	**49**	P	**Pg**	**03 16 09.7**	**-0.5**
HDWS				S	**Sg**	**03 16 13.9**	**-1.2**
WNPS	**Wanaka Nationa**	**0.67**	**149**	P	**Pb**	**03 16 17.1**	**+0.6**
WNPS				S	**Sg**	**03 16 25.2**	**+0.7**
WKZ	**Wanaka**	**0.75**	**160**	P	**Pb**	**03 16 18.3**	**+0.5**
WKZ				S	**Sb**	**03 16 28.1**	**0.0**
MSZ	**Milford Sound**	**0.76**	**223**	P	**Pn**	**03 16 19.3**	**-0.1**
MSZ				S	**Sn**	**03 16 30.4**	**-0.4**
GLNY	**Glenorchy**	**0.76**	**193**	P	**Pn**	**03 16 19.3**	**-0.1**
QTPS	**Queenstown Pol**	**0.91**	**180**	P	**Pn**	**03 16 21.7**	**+0.2**
FOZ	**Fox Glacier**	**1.03**	**55**	P	**Pg**	**03 16 21.6**	**-1.0**
FOZ				S	**Sg**	**03 16 36.4**	**+0.4**
TWAS	**Twizel Area Sc**	**1.05**	**98**	P	**Pg**	**03 16 22.9**	**-0.1**
TWAS				S	**Sg**	**03 16 35.8**	**-0.8**
MCNS	**Mount Cook Ann**	**1.11**	**70**	P	**Pg**	**03 16 23.0**	**-1.2**
LBZ	**Lake Benmore**	**1.13**	**104**	P	**Pg**	**03 16 24.3**	**-0.2**
LBZ				S	**Sg**	**03 16 38.2**	**-1.0**
FGPS	**Fox Glacier Pa**	**1.19**	**57**	P	**Pb**	**03 16 25.1**	**-0.2**
EAZ	**Earnscleugh**	**1.20**	**157**	P	**Pn**	**03 16 26.3**	**+0.8**
EAZ				S	**Sn**	**03 16 42.1**	**+0.4**
MLZ	**Mavora Lakes**	**1.30**	**197**	P	**Pg**	**03 16 28.5**	**+0.7**
FJDS	**Franz Josef DO**	**1.33**	**57**	P	**Pn**	**03 16 26.7**	**-0.5**
FJDS				S	**Sb**	**03 16 43.9**	**-0.9**
WHFS	**Whataroa Fire**	**1.51**	**56**	P	**Pn**	**03 16 29.2**	**-0.5**
ODZ	**Otahua Downs**	**1.69**	**124**	P	**Pb**	**03 16 34.0**	**+0.1**
ODZ	**Otahua Downs**	**1.69**	**124**	S	**Sb**	**03 16 56.1**	**+0.9**
ODZ	**Otahua Downs**	**1.69**	**124**	P	**Pn**	**03 16 33.3**	**+1.1**
ODZ				S	**Sn**	**03 16 55.3**	**+1.4**
TMZ	**Timaru**	**1.71**	**99**	P	**Pn**	**03 16 33.2**	**+0.7**
DCZ	**Deep Cove**	**1.71**	**218**	P	**Pg**	**03 16 36.0**	**+0.3**
RPZ	**Rata Peaks**	**1.78**	**78**	P	**Pb**	**03 16 35.3**	**-0.1**
RPZ	**Rata Peaks**	**1.78**	**78**	S	**Sn**	**03 16 57.5**	**+1.4**
RPZ	**Rata Peaks**	**1.78**	**78**	P	**Pn**	**03 16 34.1**	**+0.7**
ARCZ	**Arundel**	**1.83**	**85**	P	**Pb**	**03 16 36.2**	**-0.1**
WHZ	**Wether Hill Ro**	**1.84**	**196**	P	**Pb**	**03 16 36.8**	**+0.4**
WVZ	**Waitaha Valley**	**1.84**	**56**	P	**Pn**	**03 16 33.6**	**-0.7**
TUZ	**Tuapeka**	**1.96**	**160**	P	**Pg**	**03 16 39.5**	**-0.8**
MHCZ	**Mount Hutt**	**2.19**	**75**	P	**Pn**	**03 16 40.5**	**+1.3**
HHSZ	**Highcliff Hill**	**2.23**	**143**	P	**Pb**	**03 16 43.6**	**+0.4**
WACZ	**Wakanui South**	**2.30**	**87**	P	**Pn**	**03 16 40.4**	**-0.2**
SYZ	**Scrubby Hill**	**2.44**	**172**	P	**Pb**	**03 16 46.0**	**-0.6**
SYZ	**Scrubby Hill**	**2.44**	**172**	S	**Sg**	**03 17 19.1**	**-1.9**
SYZ	**Scrubby Hill**	**2.44**	**172**	P	**Pb**	**03 16 44.7**	**-1.8**
INZ	**Inchbonnie**	**2.47**	**56**	P	**Pn**	**03 16 42.3**	**-0.6**
PYZ	**Puysegur Point**	**2.47**	**214**	P	**Pg**	**03 16 49.6**	**-0.6**
PYZ	**Puysegur Point**	**2.47**	**214**	S	**Sg**	**03 17 21.7**	**-0.5**
PYZ	**Puysegur Point**	**2.47**	**214**	P	**Pg**	**03 16 50.2**	**0.0**
RACZ	**Rakaia**	**2.55**	**82**	P	**Pn**	**03 16 45.8**	**+1.8**
OXZ	**Oxford**	**2.58**	**73**	P	**Pn**	**03 16 44.4**	**0.0**
APZ	**The Paps**	**2.75**	**190**	P	**Pb**	**03 16 50.0**	**-1.9**
MQZ	**McQueen's Vall**	**2.92**	**83**	P	**Pn**	**03 16 48.3**	**-0.8**
LTZ	**Lake Taylor**	**2.96**	**64**	P	**Pn**	**03 16 49.8**	**+0.1**
AMCZ	**Amberley**	**3.05**	**73**	P	**Pn**	**03 16 51.2**	**+0.3**
AKCZ	**Akaroa Harbour**	**3.08**	**87**	P	**Pn**	**03 16 50.6**	**-0.7**
DSZ	**Denniston Nort**	**3.32**	**45**	P	**Pn**	**03 16 53.9**	**-0.8**
GVZ	**Greta Valley S**	**3.39**	**72**	P	**Pn**	**03 16 55.7**	**+0.2**
THZ	**Tophouse**	**3.91**	**54**	P	**Pn**	**03 17 03.0**	**+0.2**
KHZ	**Kahutara**	**3.96**	**66**	P	**Pn**	**03 17 05.3**	**+2.0**
KHZ	**Kahutara**	**3.96**	**66**	S	**Sn**	**03 17 50.3**	**+0.7**
KHZ	**Kahutara**	**3.96**	**66**	P	**Pn**	**03 17 04.1**	**+0.8**
MRNZ	**Matariki Terra**	**4.07**	**49**	P	**Pn**	**03 17 04.7**	**-0.2**
QRZ	**Quartz Range**	**4.37**	**42**	P	**Pn**	**03 17 09.1**	**+0.1**
QRZ	**Quartz Range**	**4.37**	**42**	P	**Pn**	**03 17 08.5**	**-0.5**
TKNZ	**Takaka Hill**	**4.43**	**47**	P	**Pn**	**03 17 09.7**	**-0.3**
NNZ	**Nelson**	**4.54**	**52**	P	**Pn**	**03 17 11.6**	**+0.3**
TUWZ	**Tuamarina**	**4.73**	**57**	P	**Pn**	**03 17 16.2**	**+2.1**
TCW	**Tory Channel**	**5.07**	**57**	P	**Pn**	**03 17 19.7**	**+1.1**
DUWZ	**D'Urville Isla**	**5.12**	**51**	P	**Pn**	**03 17 20.2**	**+0.8**
SNZO	**South Karori**	**5.27**	**60**	P	**Pn**	**03 17 22.8**	**+1.4**
MSWZ	**Moikau Station**	**5.56**	**63**	P	**Pn**	**03 17 25.3**	**-0.1**
CAW	**Cannon Point**	**5.61**	**60**	P	**Pn**	**03 17 25.3**	**-0.8**
KIW	**Kapiti Island**	**5.66**	**57**	P	**Pn**	**03 17 27.3**	**+0.5**
OGWZ	**Otaki Gorge**	**5.84**	**58**	P	**Pn**	**03 17 31.1**	**+1.8**
TRWZ	**Traveller**	**5.85**	**65**	P	**Pn**	**03 17 28.6**	**-0.8**
HOWZ	**Holdsworth Sta**	**6.01**	**60**	P	Pn	03 17 36.7	+5.1
MRZ	**Mangatainoka R**	**6.18**	**58**	P	Pn	03 17 39.7	+5.7
KHEZ	**Kahui Hut**	**6.28**	**42**	P	**Pn**	**03 17 35.6**	**+0.3**
KHEZ	**Kahui Hut**	**6.28**	**42**	P	**Pn**	**03 17 35.8**	**+0.5**
PKE	**Pukeiti**	**6.34**	**41**	P	**Pn**	**03 17 36.9**	**+0.7**
WAZ	**Wanganui**	**6.43**	**49**	P	**Pn**	**03 17 39.1**	**+1.7**
BFZ	**Birch Farm**	**6.59**	**61**	P	**Pn**	**03 17 39.4**	**-0.1**
WNVZ	**Wahianoa**	**7.07**	**50**	P	**Pn**	**03 17 48.5**	**+2.3**
FWVZ	**Far West T-bar**	**7.09**	**49**	P	**Pn**	**03 17 49.0**	**+2.3**
TWVZ	**Taurewa**	**7.16**	**48**	P	**Pn**	**03 17 48.5**	**+1.0**
NGZ	**Ngauruhoe**	**7.18**	**49**	P	**Pn**	**03 17 50.0**	**+2.3**
WTVZ	**West Tongariro**	**7.21**	**48**	P	**Pn**	**03 17 50.4**	**+2.2**
NNVZ	**North Ngauruho**	**7.21**	**49**	P	**Pn**	**03 17 50.1**	**+1.9**
ETVZ	**East Tongariro**	**7.26**	**49**	P	**Pn**	**03 17 51.4**	**+2.5**
HIZ	**Hauiti**	**7.29**	**42**	P	**Pn**	**03 17 47.9**	**-1.3**
HIZ	**Hauiti**	**7.29**	**42**	P	**Pn**	**03 17 48.2**	**-1.0**

GCG 06 03:30:57.1±0.6, 14°.01N×91°.82W, h6^{km}±15^{km}, ML3.9, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG2	**El Palmar, Qui**	**0.60**	**46**	*e*P	Pn	03 31 12.0	-0.3
STG8	**El Palmar, Qui**	**0.63**	**47**	*e*P	Pn	03 31 12.1	-0.6
STG8				*e*S	Sn	03 31 24.7	+1.4
SOKI	**Kika Raxquin**	**0.90**	**27**	*e*P	Pb	03 31 14.9	-0.4
ESSG	**Sabana Grande**	**1.03**	**69**	*e*P	Pg	03 31 16.2	-0.8
FG16	**Alotenango, Sa**	**1.30**	**78**	*e*P	Pn	03 31 16.8	-5.2
FG16				IAML		03 31 39.4	
	comp=E,3µm,0.2s						
PCG5	**San Vicente Pa**	**1.42**	**82**	*e*P	Pn	03 31 19.2	-4.4
APG	**El Apazote**	**1.64**	**53**	*e*P	Pn	03 31 27.1	+0.3
CCIG	**Comitan**	**2.27**	**352**	*e*P	Pn	03 31 35.4	+0.1

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*IDC **06** 03:40:28.4±0.6, 49°.15S×120°.42E, h0^{km}, mb4.6/14, mbtmp4.6/15, ML2.3/1, MS3.9/30, Error ellipse: s-maj=28.5km s-min=14.1km az=109.0*

*BJI **06** 03:40:28.0, 49°.30S×120°.80E, h10^{km}, mb5.1/24*

*NEIC **06** 03:40:30.0±1.4, 49°.28S±0°.09×120°.7E±0°.2, h10^{km}±1^{km}, mb4.9/32, Error ellipse: s-maj=22.0km s-min=15.5km az=98.0*

*GCMT **06** 03:40:32.0±0.4, 49°.13S±0°.03×120°.80E±0°.08, h20^{km}±1^{km}, MW4.9/79, Moment Tensor Solution. s20,c23; s79,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.83±.21; M$_{\theta\theta}$2.04±.14; M$_{\phi\phi}$0.78±.12; M$_{r\theta}$0.82±.27; M$_{\theta\phi}$0.06±.09; M$_{\phi r}$0.23±.32; Best double couple: M$_{0}$2.57900×10^{16} NP1: φ$_{s}$89.00000°, δ36.00000°, λ-86.00000°. NP2: φ$_{s}$264.00000°, δ55.00000°, λ-93.00000°. Principal axes: T 2.1820, Plg9.0000°, Azm356.0000°; N 0.7900, Plg3.0000°, Azm265.0000°; P -2.9770, Plg80.0000°, Azm161.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 03:40:30.1±0.4, 49°.25S±0°.06×120°.7E±0°.1, h10^{km}, n107, σ1^{s}.14/84, mb4.8/44, MS3.9/31, 7C, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**15.12**	**339**	T	T	03 59 32.0	
	baz=162,slow=74,SNR=98						
H01W2	**Cape Leeuwin H**	**15.12**	**339**	T	T	03 59 31.5	
	baz=162,slow=74,SNR=144						
H01W3	**Cape Leeuwin H**	**15.14**	**339**	T	T	03 59 33.0	
	baz=162,slow=74,SNR=103						
NWAO	**Narrogin (SRO)**	**16.50**	**350**	Pn	**Pn**	**03 44 20.4**	**-1.1**
	0.5nm,0.3s,baz=186,slow=9.9,SNR=5.8						
NWAO				LR	LR	03 49 04.5	
	comp=Z,1µm,21.4s,baz=138,slow=32 9.1nm,0.8s						
NWAO	**Narrogin (SRO)**	**16.50**	**350**		**P**	**03 44 23.6**	**-0.6**
CASY	**Casey**	**17.87**	**193**	P	**Pn**	**03 44 36.7**	**-1.7**
CASY				IAmb	IAmb	03 44 45.1	
	comp=Z,162nm,1.9s						

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MORW  Morawa            20.46 348          P        03 45 07.9 +0.2
MORW                              IAmb     IAmb     03 45 15.3
      comp=Z,54nm,1.1s
TOO   Toolangi          21.38  66          P        03 45 18.6 +1.0
STKA  Stephens Creek    23.41  50 P        P        03 45 39.2 +0.2
      comp=Z,9.4nm,0.9s,baz=207,slow=12,SNR=13
STKA                              LR       LR       03 53 13.9
      comp=Z,274nm,19.9s,baz=212,slow=33
      comp=Z,9.4nm,0.9s
STKA  Stephens Creek    23.41  50          P        03 45 38.1 -1.0
INKA  Innaminka         26.46  43          P        03 46 06.5 -0.6
ASAR  Alice Springs     27.58  27 P        P        03 46 16.9 -0.3
      comp=Z,22nm,1.0s,baz=199,slow=8.7,SNR=58
ASAR                              LR       LR       03 55 53.2
      comp=Z,610nm,21.1s,baz=222,slow=34
      comp=Z,22nm,1.0s
ASAR  Alice Springs     27.58  27          P        03 46 17.1 -0.2
AS31  Alice Springs     27.58  27          P        03 46 17.0 -0.3
PSA00 Pilbara Seismi    27.62 358          P        03 46 17.7 +0.1
WRA   Warramunga Arr    31.23  25 P        P        03 46 49.0 -0.7
      comp=Z,7.1nm,1.0s,baz=199,slow=9.2,SNR=19
WRA                               PcP      PcP      03 49 43.7 -0.5
      comp=Z,1.9nm,0.9s,baz=213,slow=2.8,SNR=5.3
WRA                               LR       LR       03 59 26.6
      comp=Z,254nm,18.3s,baz=217,slow=36
      comp=Z,7.1nm,1.0s
WRA   Warramunga Arr    31.23  25 P        P        03 46 49.1 -0.6
WRAB  Tennant Creek     31.24  25 P        P        03 46 49.5 -0.2
WRAB                              IAmb     IAmb     03 46 56.1
      comp=Z,11nm,0.9s
FITZ  Fitzroy Crossi    31.33   9 P        P        03 46 50.3 -0.2
      comp=Z,15nm,0.9s,baz=180,slow=11,SNR=19
FITZ                              LR       LR       03 58 26.7
      comp=Z,449nm,19.6s,baz=197,slow=34
      comp=Z,15nm,0.9s
FITZ  Fitzroy Crossi    31.33   9 P        P        03 46 51.1 +0.6
WB0   Warramunga Arr    31.41  25 P        P        03 46 50.5 -0.7
WB0                               IAmb     IAmb     03 46 58.1
      comp=Z,14nm,1.1s
VNDA  Vanda             32.38 164 P        P        03 46 59.5 +0.2
      comp=Z,2.2nm,0.9s,baz=308,slow=9.5,SNR=7.2
VNDA                              LR       LR       03 59 27.8
      comp=Z,491nm,18.0s,baz=322,slow=35
      comp=Z,2.2nm,0.9s
MAW   Mawson            33.74 216 P        P        03 47 10.9 -0.3
      comp=Z,11nm,1.0s,baz=102,slow=8.6,SNR=7.1
MAW                               LR       LR       03 59 09.7
      comp=Z,188nm,18.7s,baz=80,slow=33
      comp=Z,11nm,1.0s
KNRA  Kununurra         34.13  14 P        P        03 47 13.9 -1.1
KNRA                              IAmb     IAmb     03 47 22.2
      comp=Z,13nm,1.0s
RPZ   Rata Peaks        34.60 100 LR       LR       03 57 49.2
      comp=Z,158nm,20.3s,baz=140,slow=30
CTA   Charters Tower    35.57  44 LR       LR       04 01 41.0
      comp=Z,6.5nm,18.9s,baz=216,slow=36
CTAO  Charters Tower    35.57  44 P        P        03 47 27.7 +0.3
CTAO                              IAmb     IAmb     03 47 35.1
      comp=Z,31nm,1.4s
MTN   Manton Dam        37.31  17 P        P        03 47 42.8 +0.5
MTN                               IAmb     IAmb     03 47 49.7
      comp=Z,17nm,1.1s
BATI  Baumata           39.00   5 LR       LR       04 04 30.6
      comp=Z,291nm,18.0s,baz=214,slow=37
SOEI  Soe               39.48   6 P        P        03 48 01.7 +1.0
      comp=Z,19nm,1.1s
COEN  Coen              39.76  36 IAmb     IAmb     03 48 10.8
      comp=Z,26nm,1.3s
PLAI  Plampang          40.36 356 P        P        03 48 08.1 +0.2
      comp=Z,16nm,1.1s
EDFI  Ende, Flores      40.37   2 P        P        03 48 07.1 -1.0
      comp=Z,3µmcomp=Z,11nm,1.3s
QSPA  South Pole Qui    40.88 180 LR       LR       04 04 20.2
      comp=Z,259nm,20.0s,baz=326,slow=35
QSPA  South Pole Qui    40.88 180 P        P        03 48 11.0 -1.0
QSPA                              IAmb     IAmb     03 48 13.2
      comp=Z,36nm,1.3s
RTZ   Ruatahuna         41.05  97 P        P        03 48 12.0 -1.5
RTZ                               IAmb     IAmb     03 48 14.3
      comp=Z,34nm,1.1s
BLJI  Banyuglugur       41.79 349 P        P        03 48 19.3 -0.3
SNJI  Sawahan-Nganju    42.00 347 P        P        03 48 22.2 +0.6
      comp=Z,11nm,1.5s
SYO   Syowa Base        42.16 212⇑eP       P        03 48 22.0 -0.2
SYO   Syowa Base        42.16 212⇑esP      sP       03 48 28.6 +4.1
KAPI  Kappang           44.08 359 LR       LR       04 05 18.1
      comp=Z,137nm,21.1s,baz=167,slow=34
SPSI  Sidrap Palu       45.12 359 P        P        03 48 47.1 +0.5
      comp=Z,908nmcomp=Z,30nm,1.3s
PMG   Port Moresby      45.46  38 LR       LR       04 07 23.6
      comp=Z,128nm,19.8s,baz=185,slow=36
PMG   Port Moresby      45.46  38 P        P        03 48 49.3  0.0
      comp=Z,14nm,1.0s
MDSI  Maura Dua         46.75 337 P        P        03 48 58.8 -0.6
      comp=Z,7.3nm,0.8s
FAKI  Fak Fak           47.20  16 P        P        03 49 04.1 +1.2
FAKI  Fak Fak           47.20  16 P        P        03 49 02.9 -0.1
LUWI  Luwuk             48.05   3 P        P        03 49 08.7 -0.8
MPSI  Mapaga            49.39 359 P        P        03 49 20.2 +0.4
      comp=Z,848nmcomp=Z,6.5nm,1.1s
JAY   Jayapura          49.61  27 LR       LR       04 10 07.7
      comp=Z,237nm,20.2s,baz=215,slow=36
TOLI2 Tolitoli          50.16   0 P        P        03 49 25.4 -0.2
TOLI2                             IAmb     IAmb     03 49 26.8
      comp=Z,15nm,1.1s
TROLL Troll, Antarti    51.54 200 ⇑P       P        03 49 34.7 -1.0
      comp=Z,500nm,0.8s
TROLL                             pP       pwP      03 49 43.0 -0.4
BELA  Belgrano 2        52.24 186 P        P        03 49 40.0 -0.6
SNAA  Sanae             52.98 199 ⇑P       P        03 49 45.5 -0.7
      comp=Z,463nm,0.9s
SNAA                              pP       pwP      03 49 53.7 -0.3
SNAA  Sanae             52.98 199 P        P        03 49 46.4 +0.1
      comp=Z,22nm,1.0s,baz=145,slow=8.8,SNR=32
SNAA                              LR       LR       04 11 08.7
      comp=Z,383nm,18.5s,baz=191,slow=35
      comp=Z,22nm,1.0s
SNAA  Sanae             52.98 199 P        P        03 49 45.8 -0.5
VNA2  Neumayer--Watz    54.51 199 ⇑P       P        03 49 57.7 +0.3
      comp=Z,18nm,0.6s,baz=213,slow=6.1
VNA3  Neumayer Olymp    54.72 198 ⇑P       P        03 49 58.4 -0.6
      comp=Z,7.6nm,0.8s
VNA3                              pP       sP       03 50 06.0 +4.6
VNA1  Neumayer--Stat    54.91 198 ⇑P       P        03 50 00.5 +0.3
      comp=Z,21nm,1.0s
VNA1                              pP       pwP      03 50 07.5 -0.4
PSI   Prapat            55.16 333 LR       LR       04 11 36.2
      comp=Z,70nm,18.6s,baz=154,slow=34
DAV   Davao City (W)    56.24   6 LR       LR       04 15 07.3
      comp=Z,56nm,19.9s,baz=158,slow=37
GUMO  Guam              66.12  26 LR       LR       04 20 15.1
      comp=Z,39nm,18.7s,baz=154,slow=36
PALK  Pallekele         66.21 316 LR       LR       04 13 41.3
      comp=Z,108nm,21.6s,baz=138,slow=30
PMSA  Palmer Station    66.26 178 LR       LR       04 18 46.7
      comp=Z,241nm,21.6s,baz=236,slow=35
CMAR  Chiang Mai Arr    70.11 338 P        P        03 51 40.4 -2.0
      comp=Z,3.9nm,0.3s,baz=190,slow=5.3,SNR=13
CMAR                              LR       LR       04 23 58.8
      comp=Z,37nm,18.1s,baz=170,slow=37
      comp=Z,3.9nm,0.3s
CMAR  Chiang Mai Arr    70.11 338          P        03 51 42.1 -0.2
BOSA  Boshof            72.21 247 P        P        03 51 54.2 -1.2
      comp=Z,4.9nm,1.1s,baz=148,slow=6.7,SNR=3.6
      comp=Z,4.9nm,1.1s
LBTB  Lobatse           74.62 250 LR       LR       04 18 36.9
      comp=Z,87nm,18.7s,baz=138,slow=31
KMI   Kunming           75.74 343 P        P        03 52 17.5 +1.6
KMI                               pmax     pmax
      comp=Z,23nm,1.1s
PHPEN Phepeng           75.96 247 P        P        03 52 18.1 +0.8
BRDH  Bariadhala        76.13 333 LR       LR       04 22 56.1
      comp=Z,81nm,19.3s,baz=300,slow=34
PZH   PanZhiHua         77.28 343 P        P        03 52 28.2 +3.8
SHL   Shillong          78.78 334 P        P        03 52 32.4 -0.5
SHL                               IAmb     IAmb     03 52 33.9
      comp=Z,18nm,1.0s
WHN   Wuhan             79.63 354 P        P        03 52 37.5 +0.3
KSANE Kasane            80.23 254 P        P        03 52 41.1  0.0
KSANE                             IAmb     IAmb     03 52 49.7
      comp=Z,12nm,1.0s
NJ2   Nanjing           80.95 358 eP       P        03 52 46.4 +2.2
NJ2                               pmax     pmax
      comp=Z,5.0nm,0.5s
EVN   Everest           82.58 330 P        P        03 52 53.7 -0.1
JHJ   Hachijo jima 2    83.75  16 LR       LR       04 28 54.0
      comp=Z,69nm,18.9s,baz=98,slow=35
TSUM  Tsumeb            83.87 248 LR       LR       04 24 42.1
      comp=Z,51nm,18.7s,baz=154,slow=32
TSUM  Tsumeb            83.87 248 P        P        03 53 01.5 +1.3
TSUM                              IAmb     IAmb     03 53 03.1
      comp=Z,12nm,1.3s
LZDM  Lanzhou Array     86.16 346 P        P        03 53 10.6 -0.7
      comp=Z,0.8nm,0.3s,baz=200,slow=7.9,SNR=5.6
LZDM                              LR       LR       04 33 13.6
      comp=Z,41nm,19.2s,baz=315,slow=37
      comp=Z,0.8nm,0.3s
LZH   Lanzhou           86.26 346 eP       P        03 53 12.0 +0.3
LZH                               sP       pwP      03 53 19.9 +0.4
LZH                               pmax     pmax
      comp=Z,23nm,1.2s
KSAR  Wonju Array Be    86.55   6 P        P        03 53 12.8  0.0
KSRS  Korea Array       86.56   6 P        P        03 53 12.8  0.0
      comp=Z,4.3nm,1.0s,baz=168,slow=4.8,SNR=9.5
KSRS                              LR       LR       04 33 18.3
      comp=Z,12µm,19.7s,baz=185,slow=37
      comp=Z,4.3nm,1.0s
MJAR  Matsushiro Arr    86.82  14 P        P        03 53 13.3 -0.9
      comp=Z,0.7nm,0.4s,baz=187,slow=4.9,SNR=3.0
MJAR                              LR       LR       04 34 22.1
      comp=Z,19nm,18.0s,baz=207,slow=37
      comp=Z,0.7nm,0.4s
MJAR  Matsushiro Arr    86.82  14 IAmb     IAmb     03 53 15.5
      comp=Z,13nm,1.5s
PLCA  Paso Flores       89.86 172 P        P        03 53 29.4 +0.3
      comp=Z,5.0nm,1.2s,baz=248,slow=8.3,SNR=3.5
PLCA                              LR       LR       04 31 19.5
      comp=Z,39nm,20.2s,baz=190,slow=34
      comp=Z,5.0nm,1.2s
HHC   Hu-ho-hao-te      90.07 353 eP       P        03 53 32.7 +3.1
HHC                               pmax     pmax
      comp=Z,5.0nm,0.5s
GTA   Gaotai            90.18 344 eP       P        03 53 30.7 +0.5
GTA                               sP       pwP      03 53 37.5 -0.6
GTA                               pmax     pmax
      comp=Z,9.0nm,1.2s
CN2   Changchun         92.76   3 eP       P        03 53 38.7 -3.2
CN2                               pmax     pmax
      comp=Z,10.0nm,0.7s
XLT   XiLinHaoTe        92.85 357 eP       P        03 53 43.1 +0.7
XLT                               pmax     pmax
      comp=Z,10.0nm,1.2s
ASAJ  Asahikawa         94.94  16 LR       LR       04 34 59.3
      comp=Z,49nm,21.9s,baz=168,slow=34
WMQ   Urumqi            97.08 337 eP       Pdif     03 54 04.4 +2.6
SONM  Songino Array     97.48 350 P        P        03 54 01.4 -2.1
      comp=Z,1.6nm,1.1s,baz=176,slow=2.3,SNR=5.6
SONM                              LR       LR       04 41 20.1
      comp=Z,25nm,18.1s,baz=135,slow=38
      comp=Z,1.6nm,1.1s
SONM  Songino Array     97.48 350 IAmb     IAmb     03 54 10.7
      comp=Z,6.4nm,1.4s
AAK   Ala-Archa        100.07 327 LR       LR       04 34 32.8
      comp=Z,46nm,20.2s,baz=158,slow=32
TORD  Torodi Ar. Bea   118.68 256 PKP      PKPdf    03 59 18.1 -0.3
      comp=Z,2.3nm,1.1s,baz=20,slow=3.1,SNR=6.6
AKASG Malin Array Be   126.40 308 PKP      PKPdf    03 59 33.5 +1.4
      comp=Z,0.3nm,0.4s,baz=86,slow=1.2,SNR=4.2
GERES GERESS Array B   133.90 299 PKP      PKPdf    03 59 46.0 -0.5
      comp=Z,1.4nm,1.0s,baz=212,slow=3.5,SNR=4.7
NVAR  Mina Array Bea   137.13  82 PKP      PKPdf    03 59 54.1 +1.0
      comp=Z,0.5nm,0.8s,baz=266,slow=2.4,SNR=3.7
ESDC  Sonseca Array    140.15 278 PKP      PKPdf    03 59 58.5 +0.1
      comp=Z,1.2nm,0.9s,baz=62,slow=2.7,SNR=4.4
TXAR  Lajitas Array    141.03 104 PKP      PKPdf    04 00 00.8 +0.4
      comp=Z,0.4nm,0.9s,baz=190,slow=3.7,SNR=5.5
PDAR  Pinedale Array   145.06  81 PKPbc    PKPbc    04 00 06.6 -0.1
      comp=Z,3.4nm,1.1s,baz=202,slow=3.2,SNR=18
PDAR  Pinedale Array   145.06  81          PKPbc    04 00 05.6 -1.1
EKA   Eskdalemuir Ar   145.93 302 PKPbc    PKPdf    04 00 08.7 +0.7
      comp=Z,12nm,1.0s,baz=122,slow=3.1,SNR=9.1
YKA   Yellowknife Ar   147.39  45 PKPbc    PKPbc    04 00 12.9 +0.2
      comp=Z,5.5nm,0.9s,baz=280,slow=3.3,SNR=36
YKA   Yellowknife Ar   147.39  45          PKPdf    04 00 11.7 +1.5
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GCMT 06 03:59:56.0±0.4**, 41°.26S**±0°.02×**90°.83W**±0°.03**, h15**km±1km**,** **MW4.8**/82**, Moment Tensor Solution. s8,c8; s82,c114; Duration: 0 Moment tensor: Scale** 10^{16}**Nm;** Mrr-0.41±.10; Mθθ0.40±.09; Mφφ0.00±.07; Mrθ-0.35±.16; Mθφ-1.81±.07; Mφr-0.29±.15; **Best double couple:** M0 1.89700×10^{16} **NP1:**φs355.00000°**,**δ76.00000°, λ-12.00000°. **NP2:**φs88.00000°**,**δ78.00000°, λ-166.00000°. **Principal axes:** T 2.0290**,** Plg2.0000°**,** Azm222.0000°**;** N -0.2640**,** Plg71.0000°**,** Azm127.0000°**;** P -1.7660**,** Plg19.0000°**,** Azm312.0000°**; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southeast of Easter Island**

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*IDC **06** 04:01:15.0±0.7, 49°.23S×120°.63E, h0km, mb4.3/9, mbtmp4.3/10, ML2.3/1, MS3.5/16 Error ellipse: s-maj=35.2km s-min=15.4km az=107.0*

*NEIC **06** 04:01:16.7±2.4, 49°.32S±0°.05×120°.8E±0°.3, h10km±1km, mb4.4/12, Error ellipse: s-maj=33.4km s-min=8.7km az=93.0*

ISC 06 04:01:17.0±0.5**, 49°.35S**±0°.08×**120°.8E**±0°.2**, h10**km**, n47, σ1s.09**/39**, mb4.5**/17**, MS3.5**/15**, 5D, Western Indian-Antarctic Ridge**

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Code  Station Name       Δ°   AZ°   Phase ID             Time     Res
                                  Op       ISC          h  m  s   ISC
H01W2 Cape Leeuwin H    15.26 339 T        T        04 20 19.6
      baz=162,slow=74,SNR=66
H01W1 Cape Leeuwin H    15.26 339 T        T        04 20 29.2
      baz=162,slow=74,SNR=65
H01W3 Cape Leeuwin H    15.27 339 T        T        04 20 20.1
      baz=162,slow=74,SNR=52
NWAO  Narrogin (SRO)    16.62 349 Pn       Pn       04 05 09.0 -1.0
      0.6nm,0.3s,baz=159,slow=14,SNR=2.5
NWAO                              LR       LR       04 10 20.3
      comp=Z,166nm,18.5s,baz=102,slow=33
      5.0nm,0.6s
NWAO  Narrogin (SRO)    16.62 349          Pn       04 05 10.5 +0.5
MORW  Morawa            20.58 348          P        04 05 55.6 -0.3
MORW                              IAmb     IAmb     04 06 02.8
      comp=Z,32nm,1.5s
STKA  Stephens Creek    23.40  49 P        P        04 06 25.7 -0.2
      comp=Z,4.8nm,0.7s,baz=212,slow=12,SNR=9.9
STKA                              LR       LR       04 14 29.2
      comp=Z,82nm,18.2s,baz=209,slow=34
      comp=Z,4.8nm,0.7s
STKA  Stephens Creek    23.40  49          P        04 06 25.4 -0.5
ASAR  Alice Springs     27.62  27 P        P        04 07 03.4 -1.2
      comp=Z,5.6nm,0.9s,baz=203,slow=8.7,SNR=43
ASAR                              LR       LR       04 16 40.3
      comp=Z,197nm,20.4s,baz=212,slow=34
      comp=Z,5.6nm,0.9s
ASAR  Alice Springs     27.62  27          P        04 07 03.3 -1.3
AS31  Alice Springs     27.62  27          P        04 07 03.3 -1.3
WRA   Warramunga Arr    31.27  25 P        P        04 07 35.8 -1.2
      comp=Z,2.3nm,0.8s,baz=200,slow=9.2,SNR=9.5
WRA                               LR       LR       04 19 29.9
      comp=Z,172nm,19.9s,baz=246,slow=35
      comp=Z,2.3nm,0.8s
FITZ  Fitzroy Crossi    31.41   9 LR       LR       04 19 33.3
      comp=Z,94nm,18.8s,baz=189,slow=35
FITZ  Fitzroy Crossi    31.41   9          P        04 07 38.1 -0.1
WB0   Warramunga Arr    31.45  25          P        04 07 36.9 -1.6
WB0                               IAmb     IAmb     04 08 02.4
      comp=Z,6.7nm,1.3s
VNDA  Vanda             32.25 164 P        P        04 07 46.2 +1.1
      comp=Z,1.3nm,0.8s,baz=307,slow=12,SNR=5.0
VNDA                              LR       LR       04 19 55.3
      comp=Z,161nm,18.8s,baz=1.0,slow=35
      comp=Z,1.3nm,0.8s
VNDA  Vanda             32.25 164 IAmb     IAmb     04 07 53.6
      comp=Z,3.3nm,0.9s
MAW   Mawson            33.72 216 P        P        04 07 57.9  0.0
      comp=Z,3.2nm,0.8s,baz=81,slow=13,SNR=4.5
MAW                               LR       LR       04 19 57.2
      comp=Z,62nm,19.3s,baz=58,slow=33
      comp=Z,3.2nm,0.8s
BATI  Baumata           39.09   4 LR       LR       04 24 31.8
      comp=Z,93nm,19.2s,baz=232,slow=36
QSPA  South Pole Qui    40.78 180 P        P        04 08 58.1 +0.1
      comp=Z,1.5nm,0.2s,baz=343,slow=4.0,SNR=6.9
QSPA                              LR       LR       04 25 34.3
      comp=Z,70nm,18.6s,baz=316,slow=36
      comp=Z,1.5nm,0.2s
KAPI  Kappang           44.19 358 LR       LR       04 26 05.0
      comp=Z,46nm,18.9s,baz=194,slow=34
PMG   Port Moresby      45.48  38 LR       LR       04 29 22.1
      comp=Z,38nm,18.6s,baz=170,slow=37
FAKI  Fak Fak           47.28  16 P        P        04 09 50.9 +0.5
JAY   Jayapura          49.66  26 LR       LR       04 30 45.2
      comp=Z,78nm,19.9s,baz=294,slow=36
TOLI2 Tolitoli          50.26 360 P        P        04 10 13.2 -0.2
TOLI2                             IAmb     IAmb     04 10 14.6
      comp=Z,7.7nm,1.1s
TROLL Troll, Antarti    51.48 200 ⇓P       P        04 10 21.7 -0.4
      comp=Z,400nm,0.8s
TROLL                             pP       pwP      04 10 29.0 -0.4
BELA  Belgrano 2        52.15 186 P        P        04 10 25.6 -1.2
BELA                              IAmb     IAmb     04 10 34.7
      comp=Z,9.9nm,1.0s
SNAA  Sanae             52.92 199 ⇓P       P        04 10 32.3 -0.4
      comp=Z,284nm,0.8s
SNAA                              pP       pwP      04 10 39.8 -0.2
SNAA  Sanae             52.92 199 P        P        04 10 32.7  0.0
      comp=Z,7.0nm,0.8s,baz=142,slow=8.5,SNR=19
      comp=Z,7.0nm,0.8s
SNAA  Sanae             52.92 199          P        04 10 32.0 -0.7
VNA2  Neumayer--Watz    54.45 199 ⇓P       P        04 10 42.9 -0.9
      comp=Z,14nm,0.8s,baz=145,slow=4.1
VNA2                              pP       pwP      04 10 51.4 +0.3
VNA3  Neumayer Olymp    54.66 198 ⇓P       P        04 10 45.4  0.0
      comp=Z,7.8nm,0.7s
VNA3                              pP       pwP      04 10 52.2 -0.5
VNA1  Neumayer--Stat    54.84 198 ⇓P       P        04 10 47.3 +0.7
      comp=Z,12nm,1.0s
VNA1                              pP       pwP      04 10 54.1 +0.2
GUMO  Guam              66.17  26 LR       LR       04 40 56.2
      comp=Z,23nm,18.3s,baz=72,slow=36
CMAR  Chiang Mai Arr    70.24 338 P        P        04 12 29.1 -1.0
      comp=Z,1.1nm,0.3s,baz=148,slow=5.2,SNR=1.6
CMAR                              LR       LR       04 40 40.0
      comp=Z,11nm,20.9s,baz=145,slow=34
      comp=Z,1.1nm,0.3s
BRDH  Bariadhala        76.27 332 LR       LR       04 45 58.4
      comp=Z,26nm,18.1s,baz=284,slow=35
PZH   PanZhiHua         77.40 343 P        P        04 13 15.3 +3.2
NJ2   Nanjing           81.05 358 eP       P        04 13 33.8 +2.1
NJ2                               pmax     pmax
      comp=Z,12nm,0.6s
TSUM  Tsumeb            83.92 248 LR       LR       04 46 13.4
      comp=Z,54nm,20.8s,baz=153,slow=32
HHC   Hu-ho-hao-te      90.19 353 eP       P        04 14 18.6 +1.5
HHC                               pmax     pmax
      comp=Z,12nm,0.6s
HHC                               pmax     pmax
      comp=Z,120nm,4.5s
SONM  Songino Array     97.60 350 P        P        04 14 49.2 -1.8
      comp=Z,0.2nm,0.4s,baz=179,slow=7.2,SNR=1.7
      comp=Z,0.2nm,0.4s
SONM  Songino Array     97.60 350 IAmb     IAmb     04 14 50.2
      comp=Z,0.6nm,1.0s
BRTR  Keskin Array B   117.18 300 PKP      PKPdf    04 20 00.3 -1.6
      comp=Z,0.6nm,0.9s,baz=172,slow=2.9,SNR=4.2
ILAR  Eielson Array    134.01  37 PKP      PKPdf    04 20 32.5 -0.6
      comp=Z,0.2nm,0.7s,baz=239,slow=2.1,SNR=1.7
PDAR  Pinedale Array   144.98  81 PKPbc    PKPab    04 20 53.5 +0.1
      comp=Z,0.4nm,0.8s,baz=235,slow=5.9,SNR=4.5
EKA   Eskdalemuir Ar   146.07 302 PKPbc    PKPdf    04 20 54.9 -0.2
      comp=Z,3.1nm,0.8s,baz=116,slow=1.7,SNR=4.3
YKA   Yellowknife Ar   147.39  45 PKPbc    PKPdf    04 20 58.6 +1.5
      comp=Z,1.6nm,0.8s,baz=267,slow=3.5,SNR=21
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*CATAC **06** 04:15:32.8±0.4, 12°N±3°×8°9W±°, h10km, M3.3/20, MLv3.3/20, Error ellipse: s-maj=6.2km s-min=3.1km az=12.1, confirmed*

*SNET **06** 04:15:33.0±1.9, 11°.77N×88°.58W, h37km±68km, ML3.5*

ISC 06 04:15:31.3±3.6**, 11°.86N**±0°.09×**88°.61W**±0°.05**, h7**km±18km**, n48, σ0s.81**/56**, Off coast of central America**

```
Code  Station Name       Δ°   AZ°   Phase ID             Time     Res
                                  Op       ISC          h  m  s   ISC
CSGN  Cosiguina Volc     1.51  42 P        Pn       04 15 59.7 +0.8
CSGN                              S        Sb       04 16 19.6 +0.4
POTN  Potosi Cosigui     1.56  43 P        Pn       04 16 00.0 +0.5
POTN                              S        Sb       04 16 20.6  0.0
LCY   Lacayo             1.59  11 eP       Pn       04 16 00.8 +0.9
CNCH  Conchagua          1.60  28 eP       Pn       04 16 00.5 +0.4
CNCH  Conchagua          1.60  28 P        Pn       04 16 00.3 +0.2
CNCH  Conchagua          1.60  28 S        Sn       04 16 21.2  0.0
LCND  La Caada           1.60  26 eP       Pn       04 16 00.6 +0.5
LCND  La Caada           1.60  26 P        Pn       04 16 00.7 +0.6
BLLM  Bellamira          1.62  13 eP       Pn       04 16 01.1 +0.8
PACA  Pacayal            1.63  10 eP       Pn       04 16 01.1 +0.5
PACA                              eS       Sn       04 16 21.1 -0.8
PACA  Pacayal            1.63  10 P        Pn       04 16 01.3 +0.8
PACA  Pacayal            1.63  10 S        Sg       04 16 22.9 -0.7
TECA  Tecapa             1.63   4 eP       Pn       04 16 01.4 +0.7
CNRM  Centro Naciona     1.67  15 S        Sb       04 16 22.9 -0.6
TECO  Alcaldia de Te     1.68 354 eP       Pn       04 16 01.8 +0.6
TECO                              eS       Sn       04 16 23.1 +0.1
TECO  Alcaldia de Te     1.68 354 P        Pn       04 16 01.6 +0.5
LALI  Alcalda de L       1.77 337 P        Pn       04 16 03.1 +0.8
UESV  Universidad de     1.78 354 P        Pn       04 16 03.5 +1.0
PKGN  Cerro Pekin        1.79  63 P        Pn       04 16 03.2 +0.7
PKGN                              S        Sn       04 16 25.4 -0.2
LFRS  El Faro            1.81 346 eP       Pn       04 16 03.7 +0.7
LOMA  Loma Larga         1.86 343 P        Pn       04 16 03.1 -0.7
LOMA  Loma Larga         1.86 343 S        Sn       04 16 26.8 -0.9
PAVA  Las Pavas          1.88 350 P        Pn       04 16 04.8 +0.9
POLN  Al Sur del Vol     1.92  66 P        Pn       04 16 04.1 -0.3
POLN                              S        Sn       04 16 28.4 -0.5
IGN   Direccin Gen       1.93 343 P        Pn       04 16 05.3 +0.8
UEES  Universidad Ev     1.95 342 P        Pn       04 16 06.0 +1.0
JAYA  Jayaque - finc     1.97 335 eP       Pn       04 16 06.0 +0.7
JAYA  Jayaque - finc     1.97 335 P        Pn       04 16 06.0 +0.7
JAYA  Jayaque - finc     1.97 335 S        Sn       04 16 29.4 -0.9
PMON  Piamonte           1.97 340 eP       Pn       04 16 06.2 +1.0
PMON  Piamonte           1.97 340 P        Pn       04 16 06.3 +1.0
BOQS  Boqueron           1.98 341 eP       Pn       04 16 06.5 +1.0
COPN  Copaltepe          2.00  80 P        Pn       04 16 05.7 +0.2
MOM3  MOM3               2.14  72 P        Pn       04 16 07.8 +0.3
CEVE  Cerro Verde        2.20 333 P        Pn       04 16 09.8 +1.3
SBLS  San Blas           2.21 333 eP       Pn       04 16 09.7 +1.1
SNJE  San Jose           2.23 334 eP       Pn       04 16 10.0 +1.2
LLGN  La Laguna          2.32 352 P        Pn       04 16 11.4 +1.4
LLGN  La Laguna          2.32 352 S        Sn       04 16 38.6 -0.2
NUBE  Las Nubes          2.33 331 eP       Pn       04 16 11.3 +1.0
NUBE  Las Nubes          2.33 331 P        Pn       04 16 11.3 +1.0
NUBE  Las Nubes          2.33 331 S        Sn       04 16 38.5 -0.8
FAME  Alcaldia de Sa     2.41 325 P        Pn       04 16 11.8 +0.7
FAME  Alcaldia de Sa     2.41 325 S        Sn       04 16 38.9 -2.0
LIMN  Finca el Limon     2.50  61 P        Pn       04 16 12.4  0.0
LIMN                              S        Sn       04 16 43.6 +0.4
TGUH  Tegucigalpa,Un     2.54  31 P        Pn       04 16 14.4 +1.3
TGUH                              S        Sn       04 16 44.3 -0.2
RCVN  Varillal2          2.91  54 P        Pn       04 16 19.2 +1.0
RCPN  Sur Rio San Ju     2.96  56 P        Pn       04 16 19.1 +0.2
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*NNC **06** 04:17:23.6±4.5, 47°.72N×90°.11E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=49.5km s-min=37.2km az=162.0*

*ASRS **06** 04:17:23.7±1.0, 48°N±4°×9°0E±°, h10km, MLh3.0/6, Error ellipse: s-maj=10.3km s-min=9.0km az=47.4, confirmed*

ISC 06 04:17:20.4±1.8**, 47°.81N**±0°.09×**90°.64E**±0°.05**, h10**km**, n15, σ1s.12**/20**, 7C, Northern Xinjiang**

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Code  Station Name       Δ°   AZ°   Phase ID             Time     Res
                                  Op       ISC          h  m  s   ISC
CUR   Chagan-Uzun        2.74 327 Pg       Pb       04 18 09.9 +0.3
CUR                               Sg       Sg       04 18 49.7 +1.3
DGZ   Jazzator, Alta     2.84 313 Pg       Pg       04 18 14.7 -0.1
DGZ                               Sg       Sg       04 18 51.1 -0.5
AKAR  Aktash             3.20 323 Pg       Pg       04 18 23.0 +1.3
AKAR                              Sg       Sg       04 19 03.4 +0.3
TEL   Teeli              3.22 355 Pg       Pg       04 18 21.5 -0.6
TEL                               Sg       Sg       04 19 05.0 +1.2
CHBI  Chibit, Altay      3.24 322 Pg       Pg       04 18 22.1 -0.4
CHBI                              Sg       Sg       04 19 04.0 -0.5
ULGR  Ulagan, Altay      3.31 329 Sg       Sg       04 19 06.5 -0.3
YALR  Yailyu, Altay      4.42 335 Sg       Sg       04 19 43.3 +1.1
ELDR  Elanda             4.51 321 Pg       Pg       04 18 45.7 -1.2
ELDR                              Sg       Sg       04 19 45.7 +0.5
ARTR  Artybash           4.54 333 Sg       Sg       04 19 42.8 -3.3
ARDR  Aradan             5.10  20 Sg       Sg       04 20 04.8 +0.8
KNGR  Kungurtug, Tuv     5.30  56 Sg       Sg       04 20 10.1 -0.6
MK31  Makanchi Array     5.77 263 ⇑Pn      Pn       04 18 46.5 +0.5
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	0.7nm,0.6s,baz=85,slow=14,SNR=3.9						
MK31				⇑Lg	Lg	04 20 14.8	
	3.4nm,0.7s,baz=88,slow=31,SNR=5.5						
MAKZ	Makanchi	5.97	263	⇑Lg	Lg	04 20 20.7	
	5.9nm,0.9s						
KURK	Kurchatov	8.38	295	⇑Pn	Pn	04 19 22.0	+0.1
	1.6nm,1.2s						
KURK				⇑Lg	Lg	04 21 42.1	
	1.8nm,0.7s						
KURBB	Kurchatov Arra	8.41	294	⇑Pn	Pn	04 19 21.7	-0.5
	6.1nm,1.4s						
KURBB				⇑Lg	Lg	04 21 43.1	
	5.3nm,0.6s						

GUC 06 04:25:52.8±0.5, 24°.11S×67°.43W, h201^{km}±6^{km}, ML3.5, 3C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	San Pedro de A	1.34	329	eP	Pn	04 26 24.9	-0.7
GO02	Mina Guanaco	2.23	241	⇑iP	Pn	04 26 33.1	-1.0
PB06	IPOC Station P	2.41	305	⇑iP	Pn	04 26 36.2	+0.2
PB06				i S	S	04 27 08.9	0.0
PB06				IAML		04 27 11.6	
	comp=E,189nm,0.1s						
PB05	IPOC Station P	2.84	296	i P	Pn	04 26 40.8	+0.1
PB05				i S	S	04 27 16.6	-0.8
PB05				IAML		04 27 18.7	
	comp=N,57nm,0.3s						
PB09	IPOC Station P	2.84	324	i P	Pn	04 26 41.4	+0.5
PB09				i S	S	04 27 17.9	+0.2
PB10	IPOC Station P	2.92	281	i P	Pn	04 26 41.8	+0.2
PB10				i S	S	04 27 18.8	-0.2
PB10				IAML		04 27 24.0	
	comp=E,65nm,0.4s						
PB03	IPOC Station P	2.96	313	i S	S	04 27 19.3	-0.8
PB03				IAML		04 27 23.0	
	comp=E,62nm,0.2s						
AC02	Maricunga	3.12	209	⇑iP	Pn	04 26 42.4	-2.0
PB07	IPOC Station P	3.28	316	i P	Pn	04 26 46.1	+0.1
PB07				i S	S	04 27 26.1	-0.9
AC01	Pan de Azucar	3.52	234	i P	Pn	04 26 46.6	-2.1
AC01				i S	S	04 27 28.7	-3.3
PB02	IPOC Station P	3.59	320	eP	Pn	04 26 49.9	+0.2
PB02				eS	S	04 27 32.8	-0.8
PB02				IAML		04 27 38.4	
	comp=N,47nm,0.3s						
PB01	IPOC Station P	3.59	328	eP	Pn	04 26 49.6	-0.2
PB01				eS	S	04 27 32.8	-0.9
PB01				IAML		04 27 36.0	
	comp=N,34nm,0.3s						
PB08	IPOC Station P	4.26	338	⇓eP	Pn	04 26 59.3	+1.0
PB08				i S	S	04 27 48.8	-0.3

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*THE **06** 04:27:49.0, 38°N±2°×2°1E±°, h8^{km}±2^{km}, M2.7/17, MLh2.7/17*

*ATH **06** 04:27:48.2, 37°.66N×20°.56E, h15^{km}±1^{km}, ML2.7/19, Manual Solution by E.Daskalaki First location: 2019/12/06 04:28:52, This location: 2019/12/06 12:21:24 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*

ISC 06 04:27:48.8±1.3, 37°.66N±0°.05×20°.58E±0°.04, h13^{km}±6^{km}, n56, σ0^{s}65/84, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTHK	Lithakia	0.20	77	P	Pg	04 27 53.5	+0.1
LTHK				S	Sg	04 27 56.3	-0.2
LTHK	Lithakia	0.20	77	P	Pg	04 27 53.4	+0.1
LTHK				S	Sg	04 27 56.3	-0.2
ORTH	Orthonies,Zaky	0.21	25	P	Pb	04 27 54.1	-0.3
ORTH				S	Sg	04 27 56.8	+0.2
KYPS	Kipseli, Zakin	0.24	51	P	Pg	04 27 54.3	+0.3
KYPS				S	Sg	04 27 58.1	+0.6
RTZL	Ratzakli, Kefa	0.44	20	P	Pg	04 27 57.4	-0.1
RTZL				S	Sb	04 28 04.2	-0.6
RTZL	Ratzakli, Kefa	0.44	20	P	Pg	04 27 57.4	-0.1
RTZL				S	Sg	04 28 03.5	+0.2
CLEM	Kyllini,Ilia,G	0.49	62	P	Pg	04 27 58.3	-0.2
CLEM				S	Sb	04 28 05.9	-0.5
KFL1	Kefalonia,Entr	0.51	352	P	Pg	04 27 58.8	0.0
KFL1				S	Sg	04 28 05.8	+0.2
VLS	Valsamata	0.51	0	P	Pg	04 27 58.5	-0.4
VLS				S	Sg	04 28 06.1	+0.4
VLS	Valsamata	0.51	0	P	Pg	04 27 58.5	-0.4
VLS				S	Sg	04 28 06.0	+0.2
ARG2	Argostoli	0.52	352	P	Pg	04 27 58.5	-0.5
ARG2				S	Sb	04 28 07.1	-0.1
ARG2	Argostoli	0.52	352	P	Pg	04 27 59.1	0.0
ARG2				S	Sg	04 28 06.3	+0.4
LXR1	Lixouri, Cepha	0.55	348	P	Pg	04 27 59.9	+0.3
LXR1				S	Sb	04 28 09.3	+1.3
SMHA	Samh	0.59	5	P	Pg	04 27 58.5	-1.8
SMHA				S	Sg	04 28 07.2	-1.0
DMLN	Damoulianata-K	0.60	344	P	Pg	04 28 00.7	+0.2
DMLN				S	Sb	04 28 10.5	+1.0
DMLN	Damoulianata-K	0.60	344	P	Pg	04 28 00.3	-0.2
DMLN				S	Sg	04 28 08.5	0.0
KRT2	Ano Kourtesi L	0.66	63	P	Pg	04 28 01.9	+0.2
KRT2				S	Sb	04 28 10.9	-0.3
YRMI	Loutra Irminis	0.75	54	P	Pg	04 28 02.7	-0.6
YRMI				S	Sg	04 28 13.1	-0.1
FSK	Fiskardo	0.79	359	P	Pg	04 28 03.4	-0.9
FSK				S	Sg	04 28 14.7	+0.1
RLS	Riolos of Patr	0.80	60	P	Pg	04 28 04.0	-0.3
RLS				S	Sb	04 28 16.3	+1.0
RLS	Riolos of Patr	0.80	60	P	Pg	04 28 03.8	-0.5
RLS				S	Sb	04 28 15.4	+0.1
AXS	Araxos	0.82	49	P	Pg	04 28 04.3	-0.5
AXS				S	Sb	04 28 15.9	0.0
ZARO	Zacharo	0.86	102	P	Pn	04 28 06.3	-0.3
AMT	Artemida-Makis	0.90	98	P	Pg	04 28 06.0	-0.2
AMT				S	Sb	04 28 19.3	+1.0
DRO	Drossia	0.94	72	P	Pg	04 28 06.5	-0.4
DRO				S	Sn	04 28 21.4	+0.4
DRO	Drossia	0.94	72	P	Pg	04 28 06.3	-0.6
DRO				S	Sg	04 28 19.2	0.0
EVGI	Lefkada island	0.96	3	P	Pb	04 28 06.6	-0.6
EVGI				S	Sn	04 28 21.9	+0.5
EVGI	Lefkada island	0.96	3	P	Pb	04 28 06.2	-1.1
EVGI				S	Sn	04 28 21.1	-0.3
DRAG	Dragano-Lefkad	1.02	360	P	Pb	04 28 07.1	-1.2
DRAG	Dragano-Lefkad	1.02	360	P	Pb	04 28 07.3	-1.0
NYDR	Nydri-Lefkada	1.05	5	P	Pb	04 28 08.2	-0.7
NYDR	Nydri-Lefkada	1.05	5	P	Pb	04 28 07.9	-0.9
LKD2	Lefkada island	1.12	3	P	Pg	04 28 11.3	+0.8
LKD2	Lefkada island	1.12	3	P	Pb	04 28 09.2	-0.9
UPR	University Cam	1.13	57	P	Pb	04 28 09.8	-0.5
TSLK	Tsoukalades, L	1.16	3	P	Pb	04 28 10.5	-0.2
TSLK	Tsoukalades, L	1.16	3	P	Pb	04 28 10.0	-0.7
ITM	Ithomi	1.17	114	P	Pn	04 28 11.0	+0.1
ITM	Ithomi	1.17	114	P	Pn	04 28 10.6	-0.3
PYL	PYLOS	1.20	129	P	Pn	04 28 11.0	-0.3
PVO	Paravola	1.21	38	P	Pn	04 28 11.3	0.0
PVO	Paravola	1.21	38	P	Pn	04 28 11.3	0.0
EFP	Efpalio	1.29	53	P	Pn	04 28 12.6	+0.1
EFP				S	Sg	04 28 33.6	+3.1
EFP	Efpalio	1.29	53	P	Pn	04 28 12.0	-0.5
KLV	Kalavryta, Ach	1.30	73	P	Pn	04 28 12.6	0.0
KLV	Kalavryta, Ach	1.30	73	P	Pn	04 28 12.1	-0.6
AMPL	Ampelaki	1.35	21	P	Pn	04 28 13.6	+0.2
SERG	Sergoula	1.38	57	P	Pn	04 28 13.7	-0.1
SERG	Sergoula	1.38	57	P	Pn	04 28 13.6	-0.2
ANX	Ano Chora	1.40	48	P	Pn	04 28 14.2	0.0
GUR	Goura	1.42	78	P	Pn	04 28 14.6	+0.3
KALE	Kalithea	1.43	59	P	Pn	04 28 14.2	-0.2
VLX	Vlachokerasia	1.46	101	P	Pb	04 28 15.7	-0.1
EVR	Evrytania	1.58	37	P	Pb	04 28 17.6	-0.3
TETR	Tetrakomo, Epi	1.76	18	P	Pn	04 28 19.6	+0.5
IGT	Igoumenitsa	1.88	354	P	Pn	04 28 21.4	+0.8

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*BEO **06** 04:28:03.9±0.5, 41°.47N×19°.61E, h4^{km}±3^{km}, ML3.1/9*

*SKO **06** 04:28:03.7, 41°.49N×19°.47E, h11^{km}, ML3.2*

*TIR **06** 04:28:05.1, 41°.58N×19°.64E, h28^{km}±2^{km}, Ml3.4/4*

*PDG **06** 04:28:07.4±0.3, 41°.69N×19°.56E, h10^{km}±1^{km}, MD3.3/6, ML3.2/13, Error ellipse: s-maj=1.4km s-min=1.5km az=0.0*

ISC 06 04:28:04.4±1.0, 41°.53N±0°.02×19°.57E±0°.02, h9^{km}±8^{km}, n70, σ0^{s}77/112, 17C-13D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.29	128	Pg	Pg	04 28 10.0	-0.1
TIR				AML	AML	04 28 14.6	
	66nm,0.5s						
TIR				Sg	Sg	04 28 14.8	+0.8
TIR	Tirane	0.29	128	i Sg	Sg	04 28 15.2	+1.2
ULC	Ulcinj	0.50	331	⇑iPg	Pg	04 28 13.9	-0.2
ULC				i Sg	Sg	04 28 20.8	+0.1
SDA	Shkodra	0.53	354	Pg	Pg	04 28 14.8	+0.2
SDA				Sg	Sb	04 28 22.8	-0.8
PHP	Peshkopia	0.67	76	Pg	Pg	04 28 16.3	-1.2
PHP				Sg	Sg	04 28 26.2	-0.1
PHP				AML	AML	04 28 33.8	
	5.6nm,0.5s						
DRME	Dracevica, Mon	0.72	337	⇓iPg	Pg	04 28 18.1	-0.2
DRME				eSg	Sg	04 28 27.7	0.0
BUM	Brajici-Budva	0.92	327	⇑iPg	Pg	04 28 22.3	+0.1
BUM				i Sg	Sb	04 28 35.2	+0.2
PDG	Podgorica	0.93	346	Pn	Pg	04 28 22.2	-0.2
PDG				Sn	Sb	04 28 35.5	+0.3
PDG	Podgorica	0.93	346	⇓P	Pg	04 28 22.4	0.0
PDG				⇑S	Sn	04 28 38.7	+1.5
PDG	Podgorica	0.93	346	ePg	Pg	04 28 21.8	-0.6
PDG	Podgorica	0.93	346	⇑iPg	Pg	04 28 22.1	-0.2
PDG				i Sg	Sg	04 28 34.2	-0.3
OHR	Ohrid	1.02	114	i Pg	Pg	04 28 22.8	-1.1
OHR				i Sg	Sn	04 28 39.3	+0.1
OHR				eLg	Lg	04 28 40.1	
	comp=N,238nm,0.3s						
OHR				eLg	Lg	04 28 41.6	
	comp=E,286nm,0.6s						
VLO	Vlora	1.06	183	Pn	Pn	04 28 25.7	+0.4
VLO				Sn	Sn	04 28 40.9	+0.7
VLO				AML	AML	04 28 50.1	
	comp=E,5.2nm,0.4s						
PVY	Plav	1.11	15	⇓iPg	Pg	04 28 24.5	-1.2
PVY				i Sg	Sn	04 28 40.6	-1.0
CEME	Cevo	1.13	335	⇑iPg	Pg	04 28 25.7	-0.4
CEME				eSg	Sb	04 28 40.7	-0.2
HCY	Herceg Novi	1.22	319	⇑iPg	Pb	04 28 27.5	-0.1
HCY				i Sg	Sn	04 28 45.7	+1.5
KBN	Korca	1.29	134	Pn	Pn	04 28 28.7	+0.1
KBN				Sn	Sn	04 28 46.8	+0.8
NKME	Niksic	1.32	340	⇑iPg	Pb	04 28 29.4	0.0
NKME				eSg	Sg	04 28 47.2	+0.3
KOME	Kolasin	1.32	358	⇑iPg	Pn	04 28 29.0	-0.1
KOME				eSg	Sn	04 28 48.2	+1.3
IVA	Berane	1.37	10	⇓iPg	Pn	04 28 29.6	-0.1
IVA				i Sg	Sg	04 28 48.3	-0.1
SKO	Skopje	1.47	72	i Pg	Pb	04 28 31.6	-0.3
SKO				i Sg	Sg	04 28 53.0	+1.3
TREB	Trebinje	1.50	323	ePg	Pn	04 28 31.8	+0.4
TREB				eSg	Sg	04 28 53.1	+0.6
BRY	Bratogost	1.57	331	⇓iPg	Pb	04 28 33.3	-0.4
BRY				i Sg	Sg	04 28 56.2	+1.2
UPM	Unac-Piva	1.75	344	⇓iPn	Pb	04 28 36.6	-0.1
UPM				i Sn	Sb	04 28 59.3	+0.5
SJES	Sjenica	1.76	10	ePn	Pb	04 28 36.6	-0.3
SJES				eSg	Sg	04 29 01.6	+0.6
PLE	Pljevlja	1.81	356	⇑iPn	Pb	04 28 37.8	+0.1
PLE				i Sn	Sb	04 29 00.3	-0.2
STON	Ston	1.93	315	ePn	Pn	04 28 37.4	0.0
STON				eSn	Sb	04 29 03.2	-0.7
NOCI	Noci	2.03	250	Pn	Pn	04 28 37.6	-1.1
SELS	Selova	2.05	34	ePn	Pn	04 28 39.3	+0.3
SELS				eSn	Sn	04 29 04.7	0.0
IVAS	Ivanjica	2.09	12	ePn	Pn	04 28 40.2	+0.5
IVAS				eSn	Sg	04 29 10.2	-1.5
RUDO	Rudo	2.10	356	ePn	Pb	04 28 41.6	-1.0
RUDO				eSn	Sb	04 29 09.4	+0.7
BARS	Barje	2.11	52	i Pn	Pn	04 28 40.0	+0.2
BARS	Barje	2.11	52	ePn	Pn	04 28 40.1	+0.2
GOCS	Kraljevo Serbi	2.25	25	ePn	Pn	04 28 42.2	+0.3
GOCS				eSn	Sn	04 29 11.0	+1.2
VAY	Valandovo	2.27	94	i Pn	Pn	04 28 42.2	+0.2
VAY				i Sn	Sn	04 29 09.4	-0.6
VAY				eLg	Lg	04 29 13.4	
	comp=E,110nm,0.8s						
VAY				eLg	Lg	04 29 14.0	
	comp=N,75nm,0.7s						
MATE	Matera	2.33	249	⇓P	Pn	04 28 41.9	-1.0
BBLS	Lazi&#263i	2.34	357	ePn	Pn	04 28 44.5	+1.4
BOSS	Bosilegrad	2.38	65	ePn	Pn	04 28 43.3	-0.2
GRUS	Gruza	2.51	19	ePn	Pn	04 28 46.2	+0.9
DIVS	Divibare	2.59	7	ePn	Pn	04 28 47.3	+0.8
BOVS	Bovan	2.63	36	⇑P	Pn	04 28 47.0	-0.1
BOVS				⇑S	Sn	04 29 19.9	+0.9
BOVS	Bovan	2.63	36	ePn	Pn	04 28 47.3	+0.3
BOVS				eSn	Sn	04 29 20.0	+0.9
KKB	Krupnik	2.69	82	i Pn	Pn	04 28 48.3	+0.5
TRUS	Trudelj	2.77	13	ePn	Pn	04 28 49.3	+0.4
ZAPS	Zavoj	2.87	51	ePn	Pn	04 28 51.0	+0.7
ZAPS				eSn	Sn	04 29 26.2	+1.3
VTS	Vitosha	2.94	67	ePn	Pn	04 28 51.3	-0.1
VTS				eSn	Sn	04 29 27.2	+0.3
SOH	Sokhos	2.94	103	i Pn	Pn	04 28 53.6	+2.2
ZAGS	Zajecar	3.01	40	ePn	Pn	04 28 52.7	+0.4
TEKS	Tekeris	3.02	359	ePn	Pn	04 28 52.4	0.0
SRS	Serrai	3.06	96	i Pn	Pn	04 28 53.2	+0.3
BLKB	Belogradchik	3.11	47	⇓S	Sn	04 29 31.4	+0.6
BLKB	Belogradchik	3.11	47	ePn	Pn	04 28 54.1	+0.5
BLKB				eSn	Sn	04 29 31.3	+0.4
BORS2	Bor- Borsko je	3.13	34	ePn	Pn	04 28 52.7	-1.2
BORS2				eSn	Sn	04 29 30.5	-1.0
MMB	Musomishta	3.14	88	i Pn	Pn	04 28 54.5	+0.5
TIP	Timpagrande	3.18	223	⇑P	Pn	04 28 53.3	-1.3
AVAS	Avala Beograd	3.24	12	ePn	Pn	04 28 55.6	+0.2
MDVR	Moldovita	3.61	25	ePn	Pn	04 29 00.4	-0.2
MDVR				eSn	Sn	04 29 42.2	-1.1
FRGS	Fruska Gora	3.63	3	ePn	Pn	04 29 02.3	+1.5
VRSS	Vrsac	3.82	19	ePn	Pn	04 29 03.7	+0.4
HERR	Herculane	3.95	31	⇓P	Pn	04 29 04.5	-0.6
HERR				⇑S	Sn	04 29 51.6	+0.1
BZS	Buzias	4.35	19	⇑P	Pn	04 29 10.5	-0.2
GZR	Gura Zlata	4.52	30	⇓P	Pn	04 29 13.4	+0.4
GZR				⇑S	Sn	04 30 06.4	+0.7
SURR	Surduc	4.62	23	⇓P	Pn	04 29 13.7	-0.6
MORH	Mrgy, Hungar	4.74	352	⇓P	Pn	04 29 16.1	+0.2
SIRR	Siria	4.97	17	⇑P	Pn	04 29 20.0	+0.7
SIRR	Siria	4.97	17	ePn	Pn	04 29 19.7	+0.5
SIRR				eSn	Sn	04 30 14.7	-2.2
VOIR		5.58	44	⇓P	Pn	04 29 27.8	+0.1
VOIR				⇑S	Sn	04 30 32.1	+0.2
SOKA	Soboth	6.10	329	i Pn	Pn	04 29 35.3	+0.6
	comp=N,0.9nm,0.5s						
OBKA	Obir	6.16	326	i Pn	Pn	04 29 35.6	+0.1
	comp=N,1.0nm,0.2s						
KECS	Kecovo	6.99	5	ePN	Pn	04 29 49.1	+2.3
KECS				eSN	Sn	04 31 05.9	-0.5

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*ASRS **06** 04:38:48.0±0.2, 51°N±1°×8°9E±°, h10^{km}, MLh3.4/13, Error ellipse: s-maj=2.8km s-min=1.9km az=139.6, confirmed*

*NNC **06** 04:38:53.6±3.6, 51°.19N×88°.97E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=28.2km s-min=15.7km az=90.0*

ISC 06 04:38:48.7±1.1, 51°.09N±0°.03×89°.37E±0°.03, h2^{km}±11^{km}, n22, σ1^{s}30/41, 7C-13D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEL	Teeli	0.53	98	⇑Pg	Pg	04 38 59.1	+0.2
TEL				Sg	Sg	04 39 06.0	+0.3
ULGR	Ulagan, Altay	1.01	243	Pg	Pn	04 39 08.6	-1.4
ULGR				Sg	Sb	04 39 20.9	-1.8
CUR	Chagan-Uzun	1.19	213	⇓Pg	Pg	04 39 11.7	+0.3
CUR				Sg	Sg	04 39 26.9	+0.2
YALR	Yailyu, Altay	1.29	302	⇑Pg	Pg	04 39 14.5	+1.1
YALR				Sg	Sn	04 39 31.7	0.0
AKAR	Aktash	1.35	236	⇓Pg	Pg	04 39 14.6	0.0
AKAR				Sg	Sg	04 39 32.3	+0.1
CHBI	Chibit, Altay	1.42	237	⇓Pg	Pg	04 39 16.0	+0.1
CHBI				Sg	Sg	04 39 33.9	-0.3
ARTR	Artybash	1.48	299	⇑Pg	Pg	04 39 17.8	+0.7
ARTR				Sg	Sg	04 39 38.2	+1.9
DGZ	Jazzator, Alta	1.86	222	⇓Pg	Pg	04 39 24.1	-0.3
DGZ				Sg	Sg	04 39 50.0	+1.5
DJO	Djoy, Khakassi	2.04	33	Pg	Pg	04 39 28.4	+0.6
DJO				Sg	Sg	04 39 56.0	+1.8
ELDR	Elanda	2.07	275	Pg	Pg	04 39 28.5	+0.2
ELDR				Sg	Sg	04 39 55.4	+0.4
CERR	Cheremushki	2.17	35	Pg	Pg	04 39 30.4	+0.1
CERR				Sg	Sg	04 40 01.0	+2.7
VEH	Verkhnyaya Baz	2.24	15	⇓Pg	Pg	04 39 32.3	+0.7
VEH				Sg	Sg	04 40 00.8	+0.2
LUZB	Luzhba, Kemero	2.59	354	Pg	Pg	04 39 37.8	-0.5
LUZB				Sg	Sg	04 40 10.6	-1.2
KALT2	Kaltan 2	2.63	332	Pg	Pg	04 39 38.9	-0.1
KALT2				Sg	Sg	04 40 14.3	+1.2
KIYZ	Kiyzas, Kuzbas	2.66	339	Pg	Pg	04 39 38.4	-1.2
KIYZ				Sg	Sg	04 40 13.9	-0.1
ELT	Eltsovka	2.90	320	Pg	Pb	04 39 39.4	-1.7
ELT				Sg	Sb	04 40 15.5	-1.5
ARDR	Aradan	2.93	58	Pg	Pg	04 39 43.9	-0.8
ARDR				Sg	Sg	04 40 24.1	+1.4
KZLR	Kyzyl	3.25	77	Sg	Sg	04 40 30.2	-2.6
ZAA0	Zalesovo Array	3.98	318	⇓Pg	Pb	04 39 59.8	+0.2
	1.1nm,0.9s						
ZAA0				⇓Lg	Lg	04 40 52.9	
	2.7nm,0.8s						
MK31	Makanchi Array	6.34	230	⇑Pn	Pn	04 40 26.0	+2.8
	1.2nm,0.5s,baz=54,slow=13,SNR=31						
MK31				⇓Pg	Pg	04 40 47.8	-2.3
	2.2nm,0.6s,baz=55,slow=15,SNR=3.4						
MK31				⇑Sn	Sn	04 41 38.4	+2.2
	0.8nm,0.3s						
MK31				⇑Lg	Lg	04 42 09.7	
	4.2nm,0.5s,baz=50,slow=28,SNR=4.5						
KURK	Kurchatov	6.81	271	⇑Pn	Pn	04 40 34.3	+4.8
	1.6nm,1.1s						
KURK				⇓Sn	Sn	04 41 47.3	-0.2
	2.6nm,0.7s						
KURK				⇓Lg	Lg	04 42 20.4	
	15nm,0.8s						
KURBB	Kurchatov Arra	6.88	270	⇓Pn	Pn	04 40 33.8	+3.3
	3.7nm,0.6s						
KURBB				⇓Sn	Sn	04 41 50.1	+0.8
	20nm,0.8s						
KURBB				⇓Lg	Lg	04 42 25.6	
	46nm,0.9s						

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*NOU **06** 04:43:21.9, 37°.15S×177°.42E, h172^{km}, MLv3.9/12, Off E. Coast of N. Island, N.Z.*

*IDC **06** 04:43:22.3±2.6, 37°.41S×177°.60E, h195^{km}±36^{km}, mb3.2/2, mbtmp3.7/2, Error ellipse: s-maj=139.2km s-min=35.8km az=2.0*

*WEL **06** 04:43:23.8±1.0, 37°S±4°×17°7E±°, h158^{km}±9^{km}, M3.3/23, ML3.2/6, MLv3.3/23, Error ellipse: s-maj=7.6km s-min=5.8km az=84.1, confirmed*

ISC 06 04:43:20.9±1.1, 37°.05S±0°.05×177°.52E±0°.06, h192^{km}±7^{km}, n116, σ1^{s}23/136, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	Te Kaha	0.74	163	P	Pn	04 43 47.7	-0.4
HAZ				S	Sn	04 44 06.5	-2.9
MXZ	Matakaoa Point	0.81	129	P	Pn	04 43 48.0	-0.5
MXZ	Matakaoa Point	0.81	129	P	Sn	04 44 08.2	-1.9
MXZ	Matakaoa Point	0.81	129	P	Pn	04 43 48.1	-0.5
MXZ				S	Sn	04 44 08.1	-1.9
WHRZ	Whale Island	0.91	208	P	Pn	04 43 50.0	+0.7
RUGZ	Raukumara Rang	0.92	172	P	Pn	04 43 48.8	-0.7
PKGZ	Pakihiroa	0.93	151	P	Pn	04 43 49.9	+0.5
PKGZ				S	Sn	04 44 10.1	-1.5
WMGZ	Waiomatatini S	1.05	137	P	Pn	04 43 50.6	+0.4
WMGZ				S	Sn	04 44 11.9	-1.0
OPRZ	Ohinepanea	1.10	224	P	Pn	04 43 50.8	+0.2
MARZ	Manawahe	1.15	215	P	Pn	04 43 50.1	-0.8
PUZ	Puketiti	1.18	150	P	Pn	04 43 51.6	+0.4
PUZ				S	Sn	04 44 13.2	-1.5
TWGZ	Tauwhareparae	1.19	162	S	Sn	04 44 14.4	-0.6
URZ	Urewera	1.25	195	P	Pn	04 43 52.0	+0.3
	90nm,0.4s,baz=27,slow=4.5,SNR=402						
URZ				S	Sn	04 44 13.8	-1.9
	205nm,0.4s,baz=17,slow=19,SNR=46						
URZ	Urewera	1.25	195	P	Pn	04 43 51.9	+0.2
URZ				S	Sn	04 44 14.6	-1.2
MWZ	Matawai	1.28	180	P	Pn	04 43 52.5	+0.4
MWZ				S	Sn	04 44 15.2	-1.2
OMRZ	Omania	1.39	220	P	Pn	04 43 53.9	+0.9
KARZ	Kaharoa	1.40	226	P	Pn	04 43 54.0	+1.0
TKGZ	Te Karaka	1.41	169	P	Pn	04 43 53.9	+0.9
TKGZ				S	Sn	04 44 17.1	-1.1
TARZ	Mount Tarawera	1.43	214	P	Pn	04 43 54.7	+1.4
RAGZ	Rawiri	1.45	183	P	Pn	04 43 54.6	+1.1
RAGZ				S	Sn	04 44 18.7	-0.2
KUZ	Kuaotunu	1.47	281	P	Pn	04 43 52.9	-0.7
KUZ	Kuaotunu	1.47	281	S	Sn	04 44 16.6	-2.3
KUZ	Kuaotunu	1.47	281	P	Pn	04 43 53.0	-0.7
KMRZ	Kaimai	1.49	237	P	Pn	04 43 54.8	+1.0
RRRZ	Republican Roa	1.51	211	P	Pn	04 43 55.0	+0.9
CNGZ	Carnagh Statio	1.53	159	P	Pn	04 43 55.5	+1.3
CNGZ				S	Sn	04 44 21.0	+0.8
MUGZ	Murupara	1.54	202	P	Pn	04 43 55.0	+0.7
RTZ	Ruatahuna	1.62	195	P	Pn	04 43 55.4	+0.3
RTZ				S	Sn	04 44 20.7	-1.2
RIGZ	Rimuhau	1.67	173	P	Pn	04 43 56.4	+0.9
RIGZ				S	Sn	04 44 22.4	-0.1
SNGZ	Shannon Statio	1.74	185	P	Pn	04 43 57.0	+0.9
TOZ	Tahuroa Road	1.74	246	P	Pn	04 43 57.3	+1.2
ALRZ	Allen Road	1.77	211	P	Pn	04 43 57.6	+1.1
GRZ	Great Barrier	1.84	295	P	Pn	04 43 56.5	-0.7
MTHZ	Maungataniwha	1.88	196	P	Pn	04 43 58.1	+0.5
MTHZ				S	Sn	04 44 26.6	+0.3
MKAZ	Moumakai	1.89	268	P	Pn	04 43 58.3	+0.7
PRGZ	Paritu Road	1.89	171	P	Pn	04 43 58.5	+0.8
RAHZ	Arahi	1.90	190	P	Pn	04 43 58.8	+1.1
RAHZ				S	Sn	04 44 26.4	-0.2
WIAZ	Waiheke Island	1.93	277	P	Pn	04 43 58.4	+0.3
KNZ	Kokohu	1.97	176	P	Pn	04 43 59.4	+0.9
KNZ				S	Sn	04 44 27.4	-0.5
MRHZ	Matea Rd	1.98	206	P	Pn	04 43 59.5	+0.8
TLZ	Tolley Road	2.02	230	P	Pn	04 44 00.8	+1.7
WHHZ	Waihua	2.04	186	P	Pn	04 44 00.3	+1.1
WHHZ				S	Sn	04 44 29.2	+0.1
ETAZ	East Tamaki Re	2.08	272	P	Pn	04 44 00.5	+0.9
MBAZ	Motutapu North	2.12	277	P	Pn	04 44 00.7	+0.6
NMHZ	Naumai	2.12	195	P	Pn	04 44 01.7	+1.5
NMHZ				S	Sn	04 44 31.4	+0.5
MHGZ	Mahia Peninsul	2.12	172	P	Pn	04 44 01.4	+1.3
ABAZ	Army Bay	2.20	281	P	Pn	04 44 01.6	+0.6
EPAZ	Eden Park BICE	2.23	274	P	Pn	04 44 02.3	+1.0
HBAZ	Herne Bay Bore	2.24	274	P	Pn	04 44 02.5	+1.1
ARHZ	Aropaoanui	2.25	190	P	Pn	04 44 02.5	+1.1
ARHZ				S	Sn	04 44 33.1	-0.2
BKZ	Black Stump Fm	2.26	201	P	Pn	04 44 02.2	+0.5
BKZ				S	Sn	04 44 33.1	-0.5
AWAZ	Awhitu Peninsu	2.30	269	P	Pn	04 44 03.3	+1.2
RVAZ	Riverhead Bore	2.37	276	P	Pn	04 44 03.7	+0.9
MCHZ	McNeill Hill	2.48	195	P	Pn	04 44 05.4	+1.3
NTVZ	North Tongarir	2.51	215	P	Pn	04 44 05.9	+1.3
TMVZ	Te Maari	2.51	214	P	Pn	04 44 06.0	+1.5
KRVZ	Karewarewa	2.52	215	P	Pn	04 44 06.6	+2.0
KWHZ	Kaweka Forest	2.52	200	P	Pn	04 44 05.2	+0.6
ETVZ	East Tongariro	2.52	214	P	Pn	04 44 05.9	+1.2
WTVZ	West Tongariro	2.56	216	P	Pn	04 44 06.8	+1.7
NNVZ	North Ngauruho	2.56	215	P	Pn	04 44 08.9	+3.7
HIZ	Hauiti	2.57	234	P	Pn	04 44 07.2	+2.2
OTVZ	Oturere	2.57	214	P	Pn	04 44 06.2	+1.0
SNVZ	South Ngauruho	2.60	214	P	Pn	04 44 06.9	+1.4
TWVZ	Taurewa	2.60	218	P	Pn	04 44 06.4	+0.8
CKHZ	Cape Kidnapper	2.63	187	P	Pn	04 44 06.6	+0.9
FWVZ	Far West T-bar	2.69	215	P	Pn	04 44 08.1	+1.4
MAVZ	Matarangi	2.70	214	P	Pn	04 44 08.2	+1.3
WNVZ	Wahianoa	2.73	213	P	Pn	04 44 07.8	+0.7
MOVZ	Moawhango	2.73	210	P	Pn	04 44 07.2	+0.2
KRHZ	Kereru	2.74	199	P	Pn	04 44 07.4	+0.3
WCZ	Waipu Caves	2.79	292	P	Pn	04 44 07.3	-0.3
KAHZ	Kahuranaki	2.79	190	P	Pn	04 44 08.4	+0.8
PXZ	Pawanui	3.02	190	P	Pn	04 44 10.6	+0.3
PNHZ	Pukenui	3.04	199	P	Pn	04 44 10.8	+0.2
WPHZ	Waipukurau	3.13	195	P	Pn	04 44 12.0	+0.4
TSZ	Takapari Road	3.24	202	P	Pn	04 44 13.2	+0.1
PRHZ	Porangahau	3.29	192	P	Pn	04 44 13.9	+0.4
WAZ	Wanganui	3.35	216	P	Pn	04 44 15.4	+1.1
DVHZ	Dannevirke	3.41	198	P	Pn	04 44 14.9	-0.2
POWZ	Post Office Ro	3.61	202	P	Pn	04 44 17.4	-0.1

OUZ	**Omahuta**	**3.66**	**299**	P	**Pn**	**04 44 18.0**	**-0.2**
PRWZ	**Pori Road**	**3.70**	**199**	P	**Pn**	**04 44 18.8**	**+0.1**
BFZ	**Birch Farm**	**3.76**	**195**	P	**Pn**	**04 44 19.0**	**-0.4**
BFZ	**Birch Farm**	**3.76**	**195**	S	**Sn**	**04 45 02.6**	**-2.7**
BFZ	**Birch Farm**	**3.76**	**195**	P	**Pn**	**04 44 19.1**	**-0.2**
MRZ	**Mangatainoka R**	**3.91**	**202**	P	**Pn**	**04 44 20.5**	**-0.7**
TIWZ	**Tintock**	**3.93**	**198**	P	**Pn**	**04 44 21.4**	**-0.2**
CPWZ	**Castlepoint**	**3.99**	**194**	P	**Pn**	**04 44 22.5**	**+0.4**
HOWZ	**Holdsworth Sta**	**4.15**	**201**	P	**Pn**	**04 44 23.2**	**-1.0**
OGWZ	**Otaki Gorge**	**4.18**	**205**	P	**Pn**	**04 44 23.8**	**-0.8**
TMWZ	**Te Maipa**	**4.25**	**197**	P	**Pn**	**04 44 24.8**	**-0.7**
KIW	**Kapiti Island**	**4.32**	**207**	P	**Pn**	**04 44 25.2**	**-1.1**
MTW	**Mount Morrison**	**4.39**	**200**	P	**Pn**	**04 44 26.1**	**-1.2**
CAW	**Cannon Point**	**4.48**	**204**	P	**Pn**	**04 44 27.1**	**-1.3**
TRWZ	**Traveller**	**4.57**	**198**	P	**Pn**	**04 44 28.6**	**-0.9**
PAWZ	**Paruwai Farm**	**4.62**	**200**	P	**Pn**	**04 44 28.9**	**-1.3**
DUWZ	**D'Urville Isla**	**4.68**	**216**	P	**Pn**	**04 44 29.6**	**-1.4**
MSWZ	**Moikau Station**	**4.70**	**201**	P	**Pn**	**04 44 29.8**	**-1.5**
SNZO	**South Karori**	**4.78**	**206**	P	**Pn**	**04 44 31.3**	**-0.9**
SNZO	**South Karori**	**4.78**	**206**	S	**Sn**	**04 45 26.1**	**-2.4**
BHW	**Baring Head**	**4.81**	**204**	P	**Pn**	**04 44 30.9**	**-1.7**
TCW	**Tory Channel**	**4.86**	**210**	P	**Pn**	**04 44 31.5**	**-1.7**
TUWZ	**Tuamarina**	**5.18**	**211**	P	**Pn**	**04 44 36.1**	**-1.2**
NNZ	**Nelson**	**5.26**	**216**	P	**Pn**	**04 44 37.0**	**-1.3**
QRZ	**Quartz Range**	**5.42**	**224**	P	**Pn**	**04 44 39.8**	**-0.6**
QRZ	**Quartz Range**	**5.42**	**224**	P	**Pn**	**04 44 38.3**	**-2.1**
BSWZ	**Blackbirch Sta**	**5.45**	**210**	P	**Pn**	**04 44 39.9**	**-0.9**
MRNZ	**Matariki Terra**	**5.70**	**219**	P	**Pn**	**04 44 42.1**	**-2.0**
THZ	**Tophouse**	**5.91**	**216**	P	**Pn**	**04 44 44.9**	**-1.9**
KHZ	**Kahutara**	**6.17**	**209**	P	**Pn**	**04 44 48.0**	**-2.2**
KHZ	**Kahutara**	**6.17**	**209**	S	**Sn**	**04 45 57.7**	**-3.2**
KHZ	**Kahutara**	**6.17**	**209**	P	**Pn**	**04 44 48.4**	**-1.8**
ASAR	**Alice Springs**	**39.59**	**277**	P	**P**	**04 50 36.1**	**+2.3**
	0.9nm,0.5s,baz=121,slow=8.6,SNR=19						
	0.9nm,0.5s						
WRA	**Warramunga Arr**	**41.21**	**282**	P	**P**	**04 50 49.0**	**+2.0**
	0.3nm,0.4s,baz=121,slow=8.1,SNR=10						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**149.74**	**333**	PKPbc	**PKiKP**	**05 02 47.8**	**-0.1**
	2.8nm,0.9s,baz=48,slow=2.1,SNR=7.1						

IDC 06 04:55:46.5±2.3**, 49°.60S**×**121°.26E, h0**^{km}**, mb3.6**/3**, mbtmp3.6**/3**, MS2.9**/1**, Error ellipse: s-maj=416.6km s-min=29.6km az=112.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**15.60**	**338**	T	T	05 14 55.3	
	baz=162,slow=74,SNR=16						
H01W2	**Cape Leeuwin H**	**15.60**	**338**	T	T	05 14 48.9	
	baz=162,slow=74,SNR=18						
H01W3	**Cape Leeuwin H**	**15.61**	**338**	T	T	05 14 54.8	
	baz=162,slow=74,SNR=15						
ASAR	**Alice Springs**	**27.72**	**26**	P	P	05 01 36.1	-0.4
	0.6nm,0.8s,baz=193,slow=8.5,SNR=6.1						
ASAR				LR	LR	05 11 54.2	
	comp=Z,24nm,19.9s,baz=294,slow=35						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**31.38**	**24**	P	P	05 02 08.9	0.0
	0.3nm,0.8s,baz=193,slow=8.9,SNR=1.3						
	0.3nm,0.8s						
SNAA	**Sanae**	**52.77**	**199**	P	P	05 05 02.3	-0.4
	1.3nm,0.9s,baz=160,slow=15,SNR=2.6						
	1.3nm,0.9s						
YKA	**Yellowknife Ar**	**147.36**	**45**	PKPbc	PKPbc	05 15 30.6	-0.2
	0.5nm,0.8s,baz=268,slow=3.9,SNR=7.3						

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*SNET **06** 05:01:35.7±0.7, 13°.18N×89°.53W, h50^{km}±6^{km}, ML4.4*

*CATAC **06** 05:01:35.2±0.5, 13°N±3°×9°0W±°, h30^{km}±2^{km}, M4.4/18, MLv4.4/18, Error ellipse: s-maj=6.6km s-min=4.3km az=32.5, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.56; M$_{\theta\theta}$0.58; M$_{\phi\phi}$-0.02; M$_{r\theta}$2.11; M$_{\theta\phi}$-0.09; M$_{\phi r}$-1.81; Fault plane solution: M$_0$2.84032×10^{15} NP1: φ$_s$81.30931°, δ7.62003°, λ-138.18686°. NP2:φ$_s$309.74857°, δ84.92804°, λ-84.30571°. Principal axes: T 2.7687, Plg39.6689°, Azm34.5190°; N 0.1382, Plg5.6719°, Azm129.2435°; P -2.9069, Plg49.7627°, Azm225.9840°; confirmed*

*NEIC **06** 05:01:36.0±1.9, 13°.16N±0°.07×89°.53W±0°.06, h68^{km}±5^{km}, mb4.2/29 Error ellipse: s-maj=10.7km s-min=7.7km az=217.0*

*GCG **06** 05:01:37.6±1.3, 13°.29N×89°.60W, h46^{km}±13^{km}, MD4.7, ML4.7*

*IDC **06** 05:01:38.2±1.3, 13°.59N×89°.05W, h82^{km}±9^{km}, mb3.7/10, mbtmp4.0/12, MS3.4/10, Error ellipse: s-maj=30.9km s-min=9.5km az=41.0*

ISC 06 05:01:36.0±0.8**, 13°.21N**±0°.06×**89°.47W**±0°.03**, h71**^{km}±5^{km}**, n161, σ1**^{s}**45**/165**, mb4.2**/17**, 1C-17D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.31**	**27**	⇓*e*P	**Pn**	**05 01 46.1**	**-1.2**
LALI				*e*S	**Sn**	**05 01 54.1**	**-1.4**
LALI	**Alcalda de L**	**0.31**	**27**	*i* P	**Pn**	**05 01 46.1**	**-1.2**
LALI	**Alcalda de L**	**0.31**	**27**	P	**Pn**	**05 01 46.0**	**-1.2**
JAYA	**Jayaque - finc**	**0.44**	**2**	⇓*i*P	**Pn**	**05 01 47.3**	**-1.3**
JAYA	**Jayaque - finc**	**0.44**	**2**	*i* P	**Pn**	**05 01 47.3**	**-1.3**
JAYA				*e*S	**Sn**	**05 01 55.5**	**-2.2**
JAYA	**Jayaque - finc**	**0.44**	**2**	P	**Pn**	**05 01 47.2**	**-1.3**
JAYA	**Jayaque - finc**	**0.44**	**2**	S	**Sn**	**05 01 56.0**	**-1.7**
PANCS	**Alcalda de**	**0.49**	**35**	*e*P	**Pn**	**05 01 48.0**	**-0.9**
PANCS	**Alcalda de**	**0.49**	**35**	P	**Pn**	**05 01 48.0**	**-0.9**
PANCS	**Alcalda de**	**0.49**	**35**	S	**Sn**	**05 01 57.6**	**-0.7**
LOMA	**Loma Larga**	**0.52**	**34**	P	**Pn**	**05 01 47.3**	**-1.9**
LOMA	**Loma Larga**	**0.52**	**34**	S	**Sn**	**05 01 57.8**	**-1.1**
PMON	**Piamonte**	**0.52**	**17**	⇓*i*P	**Pn**	**05 01 48.4**	**-0.8**
PMON	**Piamonte**	**0.52**	**17**	P	**Pn**	**05 01 48.3**	**-0.8**
UEES	**Universidad Ev**	**0.55**	**24**	⇓*e*P	**Pn**	**05 01 48.9**	**-0.6**
UEES	**Universidad Ev**	**0.55**	**24**	P	**Pn**	**05 01 48.8**	**-0.7**
UEES	**Universidad Ev**	**0.55**	**24**	S	**Sn**	**05 01 59.4**	**0.0**
BOQS	**Boqueron**	**0.55**	**19**	⇓*i*P	**Pn**	**05 01 49.1**	**-0.6**
UTEC	**Universidad Te**	**0.55**	**28**	P	**Pn**	**05 01 48.9**	**-0.6**
UTEC	**Universidad Te**	**0.55**	**28**	S	**Sn**	**05 01 59.7**	**+0.4**
PIC2	**El Picacho**	**0.57**	**21**	⇓*e*P	**Pn**	**05 01 49.3**	**-0.5**
LFRS	**El Faro**	**0.57**	**44**	⇑*i*P	**Pn**	**05 01 49.2**	**-0.5**
IGN	**Direccin Gen**	**0.58**	**30**	*e*P	**Pn**	**05 01 49.4**	**-0.3**
IGN	**Direccin Gen**	**0.58**	**30**	S	**Sn**	**05 02 00.3**	**+0.4**
IGN	**Direccin Gen**	**0.58**	**30**	P	**Pn**	**05 01 49.2**	**-0.5**
UDBS	**Universidad Do**	**0.59**	**31**	*e*P	**Pn**	**05 01 49.6**	**-0.2**
CEDA	**San Andres**	**0.59**	**7**	⇓*i*P	**Pn**	**05 01 49.3**	**-0.6**
CEDA	**San Andres**	**0.59**	**7**	S	**Sn**	**05 01 59.8**	**-0.3**
CEDA	**San Andres**	**0.59**	**7**	P	**Pn**	**05 01 49.1**	**-0.8**
CEVE	**Cerro Verde**	**0.63**	**346**	⇓*e*P	**Pn**	**05 01 49.7**	**-0.9**
CEVE	**Cerro Verde**	**0.63**	**346**	P	**Pn**	**05 01 49.6**	**-0.9**
CEVE	**Cerro Verde**	**0.63**	**346**	S	**Sn**	**05 02 00.5**	**-0.7**
LFU	**La Fuente**	**0.64**	**33**	⇓*e*P	**Pn**	**05 01 50.3**	**-0.1**
SBLS	**San Blas**	**0.64**	**347**	⇓*i*P	**Pn**	**05 01 49.7**	**-0.9**
SNJE	**San Jose**	**0.67**	**349**	⇓*i*P	**Pn**	**05 01 50.0**	**-0.9**
LBRS	**Las Brisas**	**0.67**	**38**	⇓*i*P	**Pn**	**05 01 50.7**	**0.0**
RTR	**El Retiro**	**0.70**	**346**	⇓*i*P	**Pn**	**05 01 50.5**	**-0.7**
PAVA	**Las Pavas**	**0.72**	**46**	⇓*e*P	**Pn**	**05 01 51.5**	**+0.3**
PAVA	**Las Pavas**	**0.72**	**46**	S	**Sn**	**05 02 03.8**	**+1.3**
PAVA	**Las Pavas**	**0.72**	**46**	P	**Pn**	**05 01 51.4**	**+0.1**
SNVI	**San Vicente**	**0.73**	**57**	*e*P	**Pn**	**05 01 51.4**	**-0.1**
TECO	**Alcaldia de Te**	**0.74**	**64**	⇓*e*P	**Pn**	**05 01 51.0**	**-0.4**
TECO	**Alcaldia de Te**	**0.74**	**64**	P	**Pn**	**05 01 51.0**	**-0.4**
NUBE	**Las Nubes**	**0.75**	**336**	⇓*e*P	**Pn**	**05 01 50.6**	**-1.1**
NUBE	**Las Nubes**	**0.75**	**336**	*i* P	**Pn**	**05 01 50.6**	**-1.1**
NUBE				*e*S	**Sn**	**05 02 01.2**	**-2.0**
NUBE	**Las Nubes**	**0.75**	**336**	P	**Pn**	**05 01 50.5**	**-1.1**
UNIC	**Universidad Ca**	**0.77**	**354**	S	**Sn**	**05 02 03.3**	**-0.3**
UNIC	**Universidad Ca**	**0.77**	**354**	P	**Pn**	**05 01 51.4**	**-0.4**
UESV	**Universidad de**	**0.79**	**57**	S	**Sn**	**05 02 04.8**	**+1.0**
UESV	**Universidad de**	**0.79**	**57**	P	**Pn**	**05 01 52.1**	**+0.1**
FAME	**Alcaldia de Sa**	**0.82**	**320**	S	**Sn**	**05 02 02.4**	**-2.1**
FAME	**Alcaldia de Sa**	**0.82**	**320**	P	**Pn**	**05 01 51.0**	**-1.4**
RBDL	**Robledal**	**0.92**	**347**	⇓*e*P	**Pn**	**05 01 53.5**	**-0.3**
TECA	**Tecapa**	**0.98**	**73**	*e*P	**Pn**	**05 01 54.5**	**0.0**
ESSJ	**San Jos, E**	**1.06**	**289**	*e*P	Pn	05 02 00.5	+5.2
LLGN	**La Laguna**	**1.07**	**28**	*e*P	**Pn**	**05 01 55.8**	**+0.2**
LLGN	**La Laguna**	**1.07**	**28**	P	**Pn**	**05 01 56.0**	**+0.4**
LLGN	**La Laguna**	**1.07**	**28**	S	**Sn**	**05 02 10.7**	**+0.6**
PACA	**Pacayal**	**1.14**	**77**	*e*P	**Pn**	**05 01 57.6**	**+1.1**
PACA	**Pacayal**	**1.14**	**77**	P	**Pn**	**05 01 57.2**	**+0.7**
PACA	**Pacayal**	**1.14**	**77**	S	**Sn**	**05 02 14.7**	**+2.9**
LCY	**Lacayo**	**1.16**	**79**	*e*P	**Pn**	**05 01 57.5**	**+0.8**
RANC	**El Ranchito**	**1.17**	**79**	*e*P	**Pn**	**05 01 57.5**	**+0.7**
MTO3	**Montecristo**	**1.19**	**5**		**Pn**	**05 01 56.6**	**-0.5**
BLLM	**Bellamira**	**1.22**	**79**	*e*P	**Pn**	**05 01 58.2**	**+0.8**
CNRM	**Centro Naciona**	**1.29**	**78**	P	**Pn**	**05 01 59.3**	**+1.0**
CNRM	**Centro Naciona**	**1.29**	**78**	S	**Sn**	**05 02 18.1**	**+3.2**
PCG5	**San Vicente Pa**	**1.33**	**319**	*e*P	**Pn**	**05 02 02.6**	**+3.6**
ESQI	**Esquipulas**	**1.35**	**5**		**Pn**	**05 01 59.4**	**+0.3**
ESQI				Sn	**Sn**	**05 02 16.9**	**+0.5**
ESQI	**Esquipulas**	**1.35**	**5**	*e*P	**Pn**	**05 01 59.5**	**+0.3**
ESQI	**Esquipulas**	**1.35**	**5**	P	**Pn**	**05 01 59.4**	**+0.3**
ESQI	**Esquipulas**	**1.35**	**5**	S	**Sn**	**05 02 17.4**	**+0.9**
ZAFR2	**Estanzuela, Za**	**1.36**	**5**	*e*P	Pn	05 02 04.8	+5.5
FG16	**Alotenango, Sa**	**1.46**	**316**	*e*P	Pn	05 02 05.1	+4.4
FG16				*e*S	**Sn**	**05 02 26.6**	**+7.3**
FG16				IAML		05 02 31.8	
	comp=E,28μm,0.2s						
LCND	**La Caada**	**1.54**	**86**	*e*P	**Pn**	**05 02 02.3**	**+0.8**
LCND	**La Caada**	**1.54**	**86**	P	**Pn**	**05 02 02.4**	**+0.9**
CNCH	**Conchagua**	**1.59**	**87**	*e*P	**Pn**	**05 02 03.2**	**+0.8**
CNCH	**Conchagua**	**1.59**	**87**	P	**Pn**	**05 02 03.1**	**+0.8**
CNCH	**Conchagua**	**1.59**	**87**	S	**Sn**	**05 02 25.4**	**+3.2**
ESSG	**Sabana Grande**	**1.76**	**312**	*e*P	**Pn**	**05 02 04.0**	**-0.6**
ESSG				*e*S	**Sn**	**05 02 24.2**	**-2.0**
CSGN	**Cosiguina Volc**	**1.88**	**97**	P	**Pn**	**05 02 07.3**	**+1.3**
POTN	**Potosi Cosigui**	**1.92**	**96**	P	**Pn**	**05 02 07.8**	**+1.1**
POTN				S	**Sn**	**05 02 32.5**	**+2.6**
APG	**El Apazote**	**2.03**	**332**	P	**Pn**	**05 02 08.5**	**+0.2**
	comp=E,8.6nm,0.7s,baz=141,slow=12,SNR=58						
APG				LR	LR	05 02 33.9	
	comp=E,8.2nm,18.4s,baz=58,slow=28						
APG				S	**Sn**	**05 02 34.6**	**+1.8**
	comp=E,10nm,0.3s,baz=56,slow=29,SNR=7.7						
APG	**El Apazote**	**2.03**	**332**	*i* P	**Pn**	**05 02 08.4**	**+0.2**
STG5	**El Palmar, Qui**	**2.18**	**303**	*e*P	**Pn**	**05 02 14.2**	**+4.1**
STG8	**El Palmar, Qui**	**2.21**	**304**	*e*P	Pn	05 02 15.3	+4.7
STG8				*e*S	**Sn**	**05 02 43.9**	**+6.8**
STG8				IAML		05 02 48.0	
	comp=E,4μm,0.2s						
STG2	**El Palmar, Qui**	**2.22**	**304**	*e*P	Pn	05 02 15.3	+4.6
TGUH	**Tegucigalpa,Un**	**2.29**	**68**		**Pn**	**05 02 12.6**	**+0.9**
TGUH				Sn	**Sn**	**05 02 40.0**	**+0.8**
CRIN	**San Cristobal**	**2.41**	**102**		**Pn**	**05 02 13.1**	**-0.2**
AVCB	**Coban**	**2.42**	**338**	IAML		05 03 05.2	
	comp=N,3μm,0.8s						
SOKI	**Kika Raxquin**	**2.47**	**311**	*e*P	**Pn**	**05 02 15.1**	**+0.8**
RTAL	**Retalhuleu**	**2.53**	**301**		**Pn**	**05 02 15.0**	**+0.2**
RTAL				Sn	**Sn**	**05 02 44.4**	**-0.2**
QUEO	**Labor Ovalle**	**2.58**	**310**	IAML		05 02 58.1	
	comp=E,2μm,0.5s						
QUIS	**Sacapulas**	**2.60**	**323**	*e*P	**Pn**	**05 02 17.7**	**+1.8**
HERN	**Volcan Telica**	**2.64**	**103**		**Pn**	**05 02 16.3**	**-0.1**
CNGN	**Cerro Negro**	**2.79**	**104**		**Pn**	**05 02 18.2**	**-0.2**
HUEH	**Huehuetenango**	**2.88**	**317**		**Pn**	**05 02 19.8**	**+0.1**
SMCA	**Catarina**	**3.01**	**303**	*e*P	**Pn**	**05 02 21.3**	**-0.1**
THIG		**3.20**	**302**	*e*S	**Sn**	**05 02 58.8**	**-2.1**
MGAN	**Managua**	**3.32**	**108**		**Pn**	**05 02 24.8**	**-0.7**
PETF	**Flores**	**3.71**	**354**		**Pn**	**05 02 32.1**	**+1.3**
BOAB	**BOACO BROADBAN**	**3.79**	**101**		**Pn**	**05 02 32.1**	**+0.1**
CCIG	**Comitan**	**4.00**	**320**		**Pn**	**05 02 36.3**	**+1.3**
CCIG	**Comitan**	**4.00**	**320**	*e*P	**Pn**	**05 02 36.6**	**+1.6**
SIUN	**Universidad Ur**	**4.59**	**83**		**Pn**	**05 02 44.4**	**+1.4**
JUD3	**Juan Diaz 3**	**4.89**	**128**		**Pn**	**05 02 48.8**	**+1.7**
JTS	**Las Juntas de**	**5.29**	**123**	P	**Pn**	**05 02 54.5**	**+1.9**
	comp=E,2.7nm,0.3s,baz=306,slow=19,SNR=7.2						
JTS				S	**Sn**	**05 03 52.9**	**+0.7**
	comp=E,8.2nm,0.5s,baz=300,slow=20,SNR=1.2						
JTS				LR	LR	05 04 23.0	
	comp=E,34nm,21.5s,baz=314,slow=32						
JTS	**Las Juntas de**	**5.29**	**123**		**Pn**	**05 02 54.3**	**+1.8**
CMIG	**Matias Romero**	**6.50**	**307**	P	**Pn**	**05 03 09.1**	**0.0**
	comp=E,7.4nm,0.4s,baz=121,slow=11,SNR=12						
CMIG				S	**Sn**	**05 04 21.1**	**-0.7**
	comp=E,16nm,0.3s,baz=96,slow=19,SNR=12						
CMIG				LR	LR	05 06 07.5	
	comp=E,105nm,21.3s,baz=135,slow=41						
TEIG	**Tepich**	**7.07**	**9**		**Pn**	**05 03 18.1**	**+1.3**
PIRO	**Carate, Puerto**	**7.69**	**128**		**Pn**	**05 03 27.3**	**+2.0**
SOR	**Soroa**	**11.34**	**32**	Pn	**Pn**	**05 04 17.1**	**+1.9**
833A	**Chaparral WMA,**	**17.66**	**330**	P	**Pn**	**05 05 37.3**	**+0.1**
352A	**Blakely**	**18.66**	**12**	P	**Pn**	**05 05 50.0**	**+0.7**
352A				IAmb	IAmb	05 05 53.2	
	comp=Z,25nm,1.2s						
TIGA	**Tifton**	**18.93**	**16**	P	**P**	**05 05 50.8**	**-0.5**
TIGA				IAmb	IAmb	05 05 54.2	
	comp=Z,17nm,0.8s						
VBMS	**Vicksburg**	**18.95**	**357**	P	**P**	**05 05 51.5**	**+0.1**
SDV	**Santo Domingo**	**18.98**	**101**	P	**P**	**05 05 49.6**	**-2.5**
	comp=Z,2.4nm,0.6s,baz=304,slow=7.3,SNR=4.3						
DRIO	**Del Rio**	**19.16**	**329**	P	**P**	**05 05 54.5**	**+0.6**
JCT	**Junction City**	**19.66**	**333**	P	**P**	**05 05 58.0**	**-1.2**
JCT				IAmb	IAmb	05 06 04.4	
	comp=Z,7.1nm,0.8s						
LRAL	**Lakeview Retre**	**19.86**	**6**		**P**	**05 06 01.9**	**+0.5**
LRAL				IAmb	IAmb	05 06 05.9	
	comp=Z,8.2nm,0.9s						
Z47A	**Carrollton**	**19.94**	**3**	P	**P**	**05 06 02.4**	**+0.2**
Z47A				IAmb	IAmb	05 06 10.3	
	comp=Z,9.2nm,0.7s						
BRDY	**Brady**	**20.02**	**336**		**P**	**05 06 02.8**	**-0.3**
BRDY				IAmb	IAmb	05 06 05.5	
	comp=Z,11nm,0.8s						
FW13	**Cleburne**	**20.40**	**340**	P	**P**	**05 06 07.4**	**+0.1**
OZNA	**Ozona**	**20.65**	**330**	P	**P**	**05 06 09.1**	**-0.9**
Y49A	**Blount Mountai**	**20.74**	**7**		**P**	**05 06 11.5**	**+0.6**
Y49A				IAmb	IAmb	05 06 14.4	
	comp=Z,9.4nm,0.8s						
TXAR	**Lajitas Array**	**20.76**	**323**	P	**P**	**05 06 12.7**	**+1.4**
	comp=Z,1.5nm,0.4s,baz=137,slow=8.1,SNR=47						
TXAR				PcP	**PcP**	**05 10 19.2**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=142,slow=0.8,SNR=4.6						
	comp=Z,1.5nm,0.4s						
TX31	**Lajitas Ar. Si**	**20.76**	**323**		**P**	**05 06 12.2**	**+0.9**
PLPT	**Palo Pinto**	**21.12**	**339**	P	**P**	**05 06 14.5**	**-0.6**
PLPT				IAmb	IAmb	05 06 42.7	
	comp=Z,18nm,1.0s						
X40A	**Basin Creek Fa**	**21.40**	**352**	P	**P**	**05 06 18.6**	**+0.7**
ABTX	**Abilene, Hawle**	**21.45**	**336**		**P**	**05 06 19.2**	**+0.7**
FPAL	**Fort Paine**	**21.52**	**9**	P	**P**	**05 06 18.9**	**-0.4**
MIAR	**Mount Ida**	**21.57**	**351**		**P**	**05 06 19.8**	**+0.1**
MIAR				IAmb	IAmb	05 06 23.2	
	comp=Z,7.9nm,0.8s						
MNHN	**Monahans**	**21.80**	**328**	P	**P**	**05 06 21.6**	**-0.7**
HODGE	**Hodges**	**21.93**	**16**	P	**P**	**05 06 24.5**	**+0.9**
HODGE				IAmb	IAmb	05 06 26.1	
	comp=Z,7.9nm,0.9s						
WTFS	**Witchita Falls**	**22.04**	**340**		**P**	**05 06 24.3**	**-0.6**
WHAR	**Wooly Hollow**	**22.13**	**354**		**P**	**05 06 25.7**	**-0.1**
WHAR				IAmb	IAmb	05 06 28.3	
	comp=Z,8.3nm,0.9s						
SWET	**Sewanee**	**22.14**	**8**	P	**P**	**05 06 25.6**	**-0.3**
SWET				IAmb	IAmb	05 06 28.9	
	comp=Z,7.7nm,0.9s						
APMT	**Aspermont**	**22.26**	**336**		**P**	**05 06 26.3**	**-0.9**
APMT				IAmb	IAmb	05 06 27.8	
	comp=Z,7.9nm,0.8s						
LCAR	**Lake Charles**	**22.81**	**356**	P	**P**	**05 06 32.3**	**-0.7**
LCAR				IAmb	IAmb	05 06 34.4	
	comp=Z,6.8nm,0.9s						
TKL	**Tuckaleechee C**	**22.93**	**12**	P	**P**	**05 06 32.5**	**-1.8**
	comp=Z,1.6nm,0.5s,baz=184,slow=13,SNR=5.5						
TKL				LR	LR	05 15 37.0	
	comp=Z,101nm,19.2s,baz=180,slow=37						
	comp=Z,1.6nm,0.5s						
NOKA	**Waynoka**	**24.82**	**342**	P	**P**	**05 06 51.2**	**-0.5**
R40A	**Maddies Statio**	**25.10**	**355**		**P**	**05 06 53.2**	**-0.9**
R40A				IAmb	IAmb	05 06 55.7	
	comp=Z,5.6nm,0.7s						
PFO	**Pinyon Flats O**	**31.86**	**314**	LR	LR	05 22 03.6	
	comp=Z,43nm,21.8s,baz=74,slow=38						
SUSD	**Miller**	**32.17**	**347**		**P**	**05 07 56.7**	**-0.4**
SADO	**Sadowa**	**32.66**	**14**	LR	LR	05 20 54.7	
	comp=Z,80nm,19.9s,baz=230,slow=36						
MACA	**Manacapuru-AM**	**32.88**	**118**	P	**P**	**05 08 02.8**	**-0.7**
PDAR	**Pinedale Array**	**34.19**	**333**	P	**P**	**05 08 15.2**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=142,slow=9.5,SNR=7.1						
PDAR				PcP	**PcP**	**05 10 49.5**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=145,slow=2.3,SNR=5.1						
	comp=Z,0.5nm,0.5s						
NVAR	**Mina Array Bea**	**35.84**	**320**	P	**P**	**05 08 30.4**	**+1.2**
	comp=Z,0.9nm,0.7s,baz=115,slow=5.0,SNR=9.7						
NVAR				PcP	**PcP**	**05 10 56.4**	**+1.0**
	comp=Z,1.8nm,0.8s,baz=142,slow=1.6,SNR=11						
NVAR				ScP	**ScP**	**05 14 35.9**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=98,slow=2.2,SNR=7.6						
NVAR				LR	LR	05 26 26.7	
	comp=Z,62nm,19.5s,baz=35,slow=42						
	comp=Z,0.9nm,0.7s						
ULM	**Lac du Bonnet**	**37.31**	**353**	P	**P**	**05 08 39.9**	**-1.3**
	comp=Z,3.8nm,0.6s,baz=169,slow=5.2,SNR=4.7						
ULM				LR	LR	05 25 35.3	
	comp=Z,94nm,18.1s,baz=192,slow=39						
	comp=Z,3.8nm,0.6s						
RPN	**Rapa Nui**	**44.49**	**206**	LR	LR	05 23 05.5	
	comp=Z,41nm,20.4s,baz=54,slow=29						
SCHQ	**Schefferville**	**45.15**	**18**	P	**P**	**05 09 43.0**	**-2.4**
	comp=Z,4.7nm,0.7s,baz=228,slow=12,SNR=9.3						
	comp=Z,4.7nm,0.7s						
YKA	**Yellowknife Ar**	**52.38**	**346**	P	**P**	**05 10 39.4**	**-1.3**
	comp=Z,3.5nm,0.8s,baz=150,slow=7.1,SNR=33						
	comp=Z,3.5nm,0.8s						
FRB	**Frobisher Bay**	**52.56**	**12**	LR	LR	05 32 44.7	
	comp=Z,86nm,19.1s,baz=166,slow=36						
RES	**Resolute Bay**	**61.54**	**358**	LR	LR	05 39 39.0	
	comp=Z,50nm,19.1s,baz=23,slow=37						
ILAR	**Eielson Array**	**64.54**	**336**	P	**P**	**05 12 03.9**	**-1.4**
	comp=Z,1.1nm,1.0s,baz=116,slow=3.5,SNR=10						
	comp=Z,1.1nm,1.0s						
ESDC	**Sonseca Array**	**78.27**	**52**	P	**P**	**05 13 25.3**	**-3.3**
	comp=Z,0.4nm,0.7s,baz=280,slow=5.5,SNR=2.3						
ESDC				LR	LR	05 47 39.5	
	comp=Z,30nm,18.4s,baz=306,slow=36						
	comp=Z,0.4nm,0.7s						
ARCES	**ARCESS Array B**	**86.10**	**19**	P	**P**	**05 14 06.2**	**-2.7**
	comp=Z,3.5nm,0.9s,baz=296,slow=6.9,SNR=3.9						
	comp=Z,3.5nm,0.9s						
GOMU	**GeErMu**	**130.69**	**355**	SS	SS	05 40 15.0	-2.4
GOMU				LR	LR		
	comp=N,290nm,14.9s						
GOMU				LR	LR		
	comp=E,320nm,15.6s						
WRA	**Warramunga Arr**	**137.58**	**255**	PKP	**PKiKP**	**05 20 56.1**	**+1.4**
	comp=E,0.9nm,0.6s,baz=86,slow=1.9,SNR=11						
ASAR	**Alice Springs**	**137.71**	**249**	PKP	**PKiKP**	**05 20 56.1**	**+1.2**
	comp=E,0.5nm,0.6s,baz=87,slow=1.7,SNR=5.2						
CMAR	**Chiang Mai Arr**	**147.46**	**345**	PKPbc	**PKPdf**	**05 21 11.1**	**+0.7**
	comp=E,2.7nm,0.7s,baz=9.3,slow=3.0,SNR=9.9						

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*RHSSO **06** 05:28:39.9±0.4, 43°.16N×18°.07E, h8^{km}, ML2.6/4*

*PDG **06** 05:28:39.1±0.2, 43°.18N×18°.08E, h18^{km}, ML2.4/12, Error ellipse: s-maj=0.7km s-min=0.5km az=90.0*

*BEO **06** 05:28:40.2±0.8, 43°.19N×18°.06E, h5^{km}±3^{km}, ML2.1/7*

ISC 06 05:28:39.2±1.1**, 43°.20N**±0°.02×**18°.05E**±0°.02**, h6**^{km}±9^{km}**, n36, σ0**^{s}**86**/69**, 4C-9D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLINJ	**Klinje**	**0.39**	**94**	*e*Pg	**Pg**	**05 28 47.1**	**+0.3**
KLINJ				*e*Sg	**Sg**	**05 28 53.3**	**+1.4**
STON	**Ston**	**0.42**	**218**	*i* Pg	**Pg**	**05 28 47.5**	**+0.2**
STON				Sg	**Sg**	**05 28 54.1**	**+1.4**
BRY	**Bratogost**	**0.47**	**130**	⇓*i*Pg	**Pg**	**05 28 47.9**	**-0.3**
BRY				*i* Sg	**Sg**	**05 28 55.3**	**+1.0**
TREB	**Trebinje**	**0.53**	**156**	⇑*i*Pg	**Pg**	**05 28 48.9**	**-0.5**
TREB				*e*Sg	**Sg**	**05 28 56.8**	**+0.5**
DBRK	**Dubrovnik**	**0.54**	**173**	*i* Pg	**Pg**	**05 28 49.6**	**+0.2**
DBRK				Sg	**Sg**	**05 28 56.8**	**+0.3**
UPM	**Unac-Piva**	**0.62**	**90**	⇓*i*Pg	**Pg**	**05 28 50.8**	**-0.4**
UPM				*i* Sg	**Sb**	**05 29 00.7**	**-1.0**
RICI	**Ricice**	**0.73**	**294**	*e*Pg	**Pb**	**05 28 53.4**	**-0.9**
RICI				Sg	**Sb**	**05 29 04.1**	**-0.6**
MAKA	**Makarska**	**0.76**	**277**	*i* Pg	**Pg**	**05 28 53.6**	**-0.2**
MAKA				Sg	**Sb**	**05 29 04.4**	**-1.0**
NKME	**Niksic**	**0.79**	**123**	⇑*i*Pg	**Pg**	**05 28 53.0**	**-1.3**
NKME				*e*Sg	**Sg**	**05 29 05.5**	**+0.9**
HCY	**Herceg Novi**	**0.82**	**157**	⇑*i*Pg	**Pg**	**05 28 54.4**	**-0.5**
HCY				*i* Sg	**Sg**	**05 29 06.4**	**+0.9**
CEME	**Cevo**	**0.91**	**136**	⇓*i*Pg	**Pg**	**05 28 55.4**	**-1.3**
CEME				*e*Sg	**Sg**	**05 29 09.2**	**+0.7**
LSTV	**Lastovo**	**0.95**	**244**	*e*Pg	**Pb**	**05 28 57.9**	**-0.3**
LSTV				Sg	**Sb**	**05 29 11.1**	**0.0**
PLE	**Pljevlja**	**0.98**	**82**	⇓*i*Pg	**Pg**	**05 28 57.0**	**-1.1**
PLE				*i* Sg	**Sb**	**05 29 12.3**	**+0.3**
RUDO	**Rudo**	**1.05**	**66**	*e*Pg	**Pg**	**05 28 58.7**	**-0.5**
RUDO				*e*Sg	**Sg**	**05 29 12.8**	**0.0**
BUM	**Brajici-Budva**	**1.09**	**145**	⇓*i*Pg	**Pg**	**05 28 58.3**	**-1.8**
BUM				*i* Sg	**Sb**	**05 29 15.5**	**+0.4**
KOME	**Kolasin**	**1.13**	**108**	⇑*i*Pg	**Pg**	**05 29 00.2**	**-0.6**
KOME				*e*Sg	**Sb**	**05 29 16.3**	**+0.2**
HVAR	**Hvar**	**1.17**	**269**	*e*Pg	**Pg**	**05 29 01.0**	**-0.6**
HVAR				Sg	**Sn**	**05 29 18.2**	**-0.2**
PDG	**Podgorica**	**1.17**	**131**	⇓*i*Pg	**Pg**	**05 29 00.2**	**-1.5**
PDG				*i* Sg	**Sn**	**05 29 19.1**	**+0.7**
BBLS	**Lazi&#263i**	**1.19**	**55**	*e*Pg	**Pb**	**05 29 01.8**	**-0.4**
BBLS				*e*Sg	**Sn**	**05 29 18.8**	**-0.1**
DRME	**Dracevica, Mon**	**1.31**	**140**	⇓*i*Pg	**Pn**	**05 29 02.6**	**-1.5**
DRME				*e*Sg	**Sb**	**05 29 22.0**	**+0.7**
IVA	**Berane**	**1.39**	**103**	⇓*i*Pg	**Pn**	**05 29 04.5**	**-0.7**
IVA				*i* Sg	**Sb**	**05 29 23.7**	**+0.1**
SJES	**Sjenica**	**1.41**	**87**	*e*Pg	**Pg**	**05 29 06.1**	**0.0**
SJES				*e*Sg	**Sn**	**05 29 25.3**	**+0.9**
KIJV	**Kijevo**	**1.44**	**304**	*e*Pn	**Pg**	**05 29 06.6**	**-0.2**
KIJV				Sn	**Sn**	**05 29 28.0**	**+2.8**
ULC	**Ulcinj**	**1.52**	**144**	⇓*i*Pg	**Pn**	**05 29 05.9**	**-1.0**
ULC				*i* Sg	**Sn**	**05 29 27.3**	**+0.3**
IVAS	**Ivanjica**	**1.58**	**76**	*e*Pg	**Pn**	**05 29 07.7**	**-0.1**
IVAS				*e*Sg	**Sb**	**05 29 29.1**	**+0.1**
DIVS	**Divibare**	**1.67**	**57**	*e*Pn	**Pn**	**05 29 08.7**	**-0.4**
DIVS				*e*Sn	**Sb**	**05 29 31.5**	**-0.2**
BLY	**Banja Luka**	**1.67**	**338**	*e*Pn	**Pb**	**05 29 09.7**	**-0.6**
BLY				*e*Sn	**Sg**	**05 29 32.2**	**-0.6**
TEKS	**Tekeris**	**1.72**	**38**	*e*Pn	**Pg**	**05 29 12.2**	**+0.1**
TEKS				*e*Sn	**Sg**	**05 29 33.9**	**-0.5**
MORI	**Morici**	**1.83**	**292**	*i* Pn	**Pb**	**05 29 13.0**	**-0.1**
MORI				Sn	**Sg**	**05 29 37.5**	**-0.5**
TRUS	**Trudelj**	**1.99**	**58**	*e*Pn	**Pn**	**05 29 13.4**	**0.0**
GRUS	**Gruza**	**2.05**	**70**	*e*Pn	**Pn**	**05 29 15.0**	**+0.7**
GRUS				*e*Sn	**Sb**	**05 29 41.9**	**-0.8**
GOCS	**Kraljevo Serbi**	**2.09**	**79**	*e*Pn	**Pn**	**05 29 16.0**	**+1.2**
GOCS				*e*Sn	**Sb**	**05 29 42.6**	**-1.2**
KNYS	**Krupa na Uni**	**2.10**	**324**	*e*Pn	**Pn**	**05 29 15.4**	**+0.5**
KNYS				*e*Sn	**Sb**	**05 29 43.0**	**-1.1**
SELS	**Selova**	**2.24**	**88**	*e*Pn	**Pn**	**05 29 17.6**	**+0.7**
BARS	**Barje**	**2.79**	**97**	*e*Pn	**Pn**	**05 29 25.5**	**+1.2**
MORH	**Mrgy, Hungar**	**3.04**	**8**	*e*Pn	**Pn**	**05 29 28.9**	**+1.1**
MORH				*e*Sn	**Sn**	**05 30 05.8**	**+1.2**

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*IDC **06** 05:28:53.8±3.4, 7°.41S×119°.76E, h273^{km}±32^{km}, mb3.0/3, mbtmp3.7/6, Error ellipse: s-maj=65.9km s-min=19.0km az=66.0*

*DJA **06** 05:28:54.2±0.2, 8°S±2°×11°9E±°, h269^{km}±3^{km}, M4.0/24, mB4.8/4, mb4.1/12, MLv4.0/24, Mw(mB)4.0/4*

ISC 06 05:28:53.1±0.8**, 7°.67S**±0°.06×**119°.47E**±0°.06**, h269**^{km}**, n38, σ1**^{s}**33**/43**, mb3.4**/3**, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBFI	**Labuhan Bajo,**	**0.91**	**153**	P	**Pn**	**05 29 31.5**	**+1.8**
DBNI	**Kabupaten Domp**	**1.42**	**234**	P	**Pn**	**05 29 33.9**	**+1.2**
DBNI				S	**S**	**05 30 05.2**	**+1.2**
WBSI	**Waikabubak, Su**	**1.96**	**182**	P	**Pn**	**05 29 37.4**	**+0.5**
WBSI				S	**S**	**05 30 10.1**	**-1.6**
PLAI	**Plampang**	**2.04**	**235**	P	**Pn**	**05 29 38.6**	**+1.1**
PLAI				S	**S**	**05 30 12.3**	**-0.4**
BKSI	**Bulukumba**	**2.42**	**16**	P	**Pn**	**05 29 43.2**	**+2.2**
MKS	**Makassar**	**2.43**	**360**	P	**Pn**	**05 29 43.4**	**+2.3**
EDFI	**Ende, Flores**	**2.45**	**116**	P	**Pn**	**05 29 43.0**	**+1.7**
KAPI	**Kappang**	**2.65**	**6**	P	**Pn**	**05 29 44.7**	**+1.5**
BASI	**Baing, Sumba**	**2.76**	**157**	P	**Pn**	**05 29 45.9**	**+1.6**
TWSI	**Taliwang, Sumb**	**2.78**	**247**	P	**Pn**	**05 29 44.7**	**+0.2**
MMRI	**Maumere**	**2.90**	**110**	P	**Pn**	**05 29 47.9**	**+2.1**
BNSI	**Bone**	**3.31**	**11**	P	**Pn**	**05 29 51.2**	**+1.2**
KLNI	**Mataram**	**3.43**	**257**	P	**Pn**	**05 29 52.3**	**+1.0**
SPSI	**Sidrap Palu**	**3.69**	**5**	P	**Pn**	**05 29 55.8**	**+1.5**
KHKI	**Kahang-Kahang**	**3.89**	**259**	P	**Pn**	**05 29 57.0**	**+0.5**
KKSI	**Kolaka, Sulawe**	**4.09**	**32**	P	**Pn**	**05 30 00.7**	**+1.8**
IGBI	**Denpasar**	**4.43**	**255**	P	**Pn**	**05 30 03.7**	**+0.9**
RTBI	**Rangdo, Negare**	**4.55**	**260**	P	**Pn**	**05 30 05.7**	**+1.5**
BATI	**Baumata**	**4.85**	**122**	P	**Pn**	**05 30 08.7**	**+1.0**
	38nm,0.5s,baz=308,slow=18,SNR=4.0						
BATI				S	**S**	**05 31 05.8**	**-1.6**
	28nm,0.5s,baz=315,slow=10.0,SNR=1.6						
BATI	**Baumata**	**4.85**	**122**	P	**Pn**	**05 30 09.3**	**+1.6**
MMSI	**Mamuju**	**4.97**	**354**	P	**Pn**	**05 30 11.1**	**+1.8**
	547nm18nm,0.7s						
SOEI	**Soe**	**5.17**	**114**	P	**Pn**	**05 30 13.1**	**+1.4**

ABJI	Asem Bagus	5.19	268	P	Pn	05 30 12.5	+0.7
	0.2nm24nm,0.5s						
JAGI	Jajag, Banyuwa	5.33	261	P	Pn	05 30 13.0	-0.5
	0.3nm2μm23nm,0.7s						
GMJI	Gumukmas	6.00	264	P	Pn	05 30 21.8	+0.1
	0.1nm11nm,1.0s						
BBKI	Banjar Baru	6.22	312	P	Pn	05 30 25.7	+1.3
LUWI	Luwuk	7.36	27	P	Pn	05 30 39.3	+0.8
	4μm21nm,0.5s						
SJI	Sawahan	7.64	269	P	Pn	05 30 42.6	+0.5
SNJI	Sawahan-Nganju	7.64	269	P	Pn	05 30 43.6	+1.4
	29nm,0.7s						
PCJI	Pacitan	8.23	266	P	Pn	05 30 49.2	-0.2
WOJI	Wonogiri, Jawa	8.47	268	P	Pn	05 30 53.0	+0.6
	44nm,0.6s						
UGM	Wanagama	8.87	268	P	Pn	05 30 57.0	-0.5
	25nm,0.9s						
BBJI	Bungbulang	11.72	270	P	Pn	05 31 32.0	-1.0
FITZ	Fitzroy Crossi	11.98	151	P	P	05 31 38.4	-0.1
	1.5nm,0.5s,baz=332,slow=10,SNR=8.9						
FITZ				S	S	05 33 51.1	+1.4
	4.5nm,0.7s,baz=318,slow=18,SNR=6.7						
WRA	Warramunga Arr	18.88	132	P	P	05 32 54.1	-0.1
	0.7nm,0.5s,baz=305,slow=12,SNR=11						
ASAR	Alice Springs	21.09	141	P	P	05 33 18.2	+0.9
	0.7nm,0.4s,baz=316,slow=9.2,SNR=17						
	0.7nm,0.4s						
KSRS	Korea Array	45.58	9	P	P	05 36 44.4	-2.2
	0.6nm,0.4s,baz=194,slow=4.5,SNR=2.4						
	0.6nm,0.4s						
MKAR	Makanchi Array	63.49	332	P	P	05 38 54.2	-0.6
	0.4nm,0.4s,baz=139,slow=8.0,SNR=6.8						
	0.4nm,0.4s						

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*ATH **06** 05:31:47.6,36°.07N×26°.89E,h11^{km}±5^{km},ML2.9/6, Manual Solution by E.Daskalaki First location: 2019/12/06 05:32:54, This location: 2019/12/06 11:35:19 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 4 km*

*THE **06** 05:31:48.4,36°N±3°×2°7E±°,h18^{km}±8^{km},M3.0/8, MLh3.0/8*

*AFAD **06** 05:31:48.2,36°.03N×27°.14E,h16^{km}±1^{km},ML2.3*

*ISK **06** 05:31:48.8,36°.04N×27°.08E,h9^{km},ML2.7/17*

ISC 06 05:31:47.1±1.2,**36°.07N**±0°.02×**27°.00E**±0°.03,**h11**^{km}±10^{km},**n45**,σ**0^{s}.78**/60,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.54	166	P	Pb	05 31 59.0	+0.4
KARP				S	Sb	05 32 06.7	+0.5
KARP	Karpathos	0.54	166	Pg	Pb	05 31 59.1	+0.6
KARP				Sg	Sb	05 32 06.3	+0.1
KARP	Karpathos	0.54	166	P	Pb	05 31 58.9	+0.4
KARP				S	Sb	05 32 06.7	+0.5
NISR	Nisiros	0.55	10	P	Pb	05 31 58.9	+0.2
NISR				S	Sb	05 32 07.9	+1.2
NISR	Nisiros	0.55	10	P	Pb	05 31 58.8	0.0
NISR				S	Sb	05 32 06.8	+0.1
KSS1	Kassos Island	0.65	186	P	Pb	05 32 00.9	+0.4
ASTA	Astypalaia	0.71	312	P	Pg	05 32 00.2	-0.7
ASTA				S	Sg	05 32 08.6	-1.6
YAZI	Mula-Dat§a-	0.71	30	P	Pg	05 32 01.3	+0.4
YAZI				S	Sb	05 32 11.4	+0.1
YAZI				*i* IAML		05 32 14.0	
	comp=N,151nm,0.3s						
YAZI				*i* IAML		05 32 14.0	
	comp=E,127nm,0.5s						
DAT	Datca	0.81	35	Pg	Pn	05 32 04.2	-0.3
KLNA	Kalymnos	0.89	358	P	Pb	05 32 05.0	+0.5
ARG	Arkhangelos	0.92	80	P	Pn	05 32 05.7	-0.2
ARG				S	Sn	05 32 18.3	-0.9
ARG	Arkhangelos	0.92	80	Pg	Pn	05 32 05.8	-0.2
ARG				Sg	Sn	05 32 18.5	-0.6
ARG	Arkhangelos	0.92	80	P	Pn	05 32 05.7	-0.2
BODT	Bodrum	1.02	14	Pg	Pn	05 32 09.3	+1.9
BODT				Sg	Sn	05 32 23.8	+2.1
BDRM	Kayabasi	1.06	19	P	Pn	05 32 08.3	+0.4
BDRM				*i* IAML		05 32 24.0	
	comp=E,60nm,0.3s						
ZKR	Zakros	1.15	214	Pn	Pg	05 32 10.3	+1.1
ZKR	Zakros	1.15	214	P	Pb	05 32 08.6	-0.3
TURN	Turunc	1.23	54	P	Pn	05 32 10.1	-0.1
TURN				S	Sn	05 32 26.4	-0.2
TURN				*i* IAML		05 32 30.0	
	comp=E,94nm,0.3s						
TURN	Turunc	1.23	54	Pn	Pn	05 32 09.9	-0.2
THERA	Ancient Thera,	1.27	284	P	Pn	05 32 10.1	-0.7
THERA				S	Sg	05 32 28.6	+0.5
SNT5	Nea Kammeni, S	1.34	285	P	Pn	05 32 11.4	-0.4
SNT5	Nea Kammeni, S	1.34	285	P	Pn	05 32 11.2	-0.6
MLSB	Milas	1.37	27	Pn	Pg	05 32 15.0	+1.5
NPS	Neapolis	1.39	235	P	Pn	05 32 12.3	-0.2
NPS				S	Sn	05 32 29.9	-0.8
NPS	Neapolis	1.39	235	P	Pn	05 32 12.2	-0.2
YER	Yerkesik	1.48	44	Pn	Pg	05 32 15.9	+0.3
DALY	Dalyan (Mula)	1.53	60	Pn	Pb	05 32 15.9	+0.5
APE	Apeiranthos	1.55	311	P	Pn	05 32 13.8	-0.8
APE	Apeiranthos	1.55	311	P	Pn	05 32 13.6	-1.1
GCAM	G?zelcaml?	1.64	6	P	Pg	05 32 19.4	+0.8
GCAM				*i* IAML		05 32 54.0	
	comp=N,46nm,0.2s						
GCAM				*i* IAML		05 32 55.0	
	comp=E,47nm,0.8s						
GCAM	G?zelcaml?	1.64	6	Pn	Pg	05 32 19.1	+0.5
SABU	Mula-Dalaman	1.75	64	P	Pb	05 32 18.8	-0.5
SABU				S	Sb	05 32 41.6	+0.3
SABU				*i* IAML		05 32 50.0	
	comp=E,36nm,0.4s						
SABU				*i* IAML		05 32 52.0	
	comp=N,48nm,0.3s						
FETY	Fethiye	1.77	71	P	Pn	05 32 11.5	-6.2
IZZE	Mula-Seydike	1.83	78	P	Pb	05 32 20.1	-0.5
IDI	Anoyia	1.89	246	P	Pn	05 32 19.1	-0.3
AYDB	Zeytinkoy-Aydi	2.00	20	Pn	Pb	05 32 24.3	+0.7
DNZT	Denizli-Tavas-	2.02	53	P	Pb	05 32 24.0	0.0
DNZT				S	Sb	05 32 49.5	+0.3
CAME	Cameli-Denizli	2.05	64	Pn	Pb	05 32 23.8	-0.6
TAVA	DENIZLI_Tavas	2.07	47	P	Pb	05 32 24.7	-0.1
TAVA				S	Sb	05 32 49.6	-0.9
TAVA				*i* IAML		05 33 08.0	
	comp=N,18nm,0.8s						
AKAS	Kas	2.11	85	Pn	Pb	05 32 24.1	-1.4
KNIK	Mula-Seydike	2.21	69	P	Pb	05 32 26.1	-1.0
KNIK				*i* IAML		05 33 01.0	
	comp=E,25nm,0.5s						
KNIK				*i* IAML		05 33 06.0	
	comp=N,20nm,0.5s						
URLA	Izmir	2.31	352	Pn	Pb	05 32 28.7	-0.1
APMY	Acipayam-Deniz	2.32	52	Pn	Pb	05 32 27.9	-1.0
ODEM	Odemis-Izmir	2.37	21	Pn	Pb	05 32 28.9	-0.8
ELL	Elmali	2.44	73	Pn	Pb	05 32 29.4	-1.6

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*JMA **06** 05:39:33.7±0.1,36°.9N±0°.3×140°.4E±0°.4,h81^{km},MV3.5/40, MID FUKUSHIMA PREF*

JMA Felt II J1 at MID FUKUSHIMA PREF .

*IDC **06** 05:39:34.1±3.0,36°.85N×140°.28E,h97^{km}±28^{km},mb3.3/6, mbtmp3.6/6,MS4.0/1,Error ellipse: s-maj=35.7km s-min=27.4km az=39.0*

ISC 06 05:39:33.0±0.8,**36°.90N**±0°.05×**140°.44E**±0°.05,**h87**^{km}±6^{km},**n31**,σ**0^{s}.65**/35,**mb3.6**/6,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFFD	Fukushimafurud	0.21	26	*i* P	Pn	05 39 45.7	0.0
JFFD				S	Sn	05 39 54.3	-0.8
JHO	Hitachi	0.31	161	P	Pn	05 39 46.3	+0.2
JHO				S	Sn	05 39 55.6	-0.1
ONAJ	Iwakimizuishiy	0.35	55	*i* P	Pn	05 39 46.8	+0.4
ONAJ				S	Sn	05 39 56.3	0.0
JFK	Kawauchi	0.58	36	P	Pn	05 39 48.4	+0.3
JFK				S	Sn	05 39 59.2	-0.2
JOTO	OTAMA OYAMA	0.66	352	*i* P	Pn	05 39 49.0	+0.1
JOTO				*e*S	Sn	05 40 00.9	+0.2
JFY	Yanaizu	0.78	311	*i* P	Pn	05 39 50.2	+0.2
JFY				*e*S	Sn	05 40 02.4	-0.3
JAG	Ashikaga	0.93	239	*i* P	Pn	05 39 52.3	+0.7
JAG				*e*S	Sn	05 40 05.8	+0.3
JKT	Katashina	0.97	262	*e*P	Pn	05 39 53.0	+0.8
JKT				*e*S	Sn	05 40 07.6	+1.1
JMM	Marumori	1.00	16	*i* P	Pn	05 39 52.8	+0.3
JMM				S	Sn	05 40 06.9	-0.2
JUON	Uonuma	1.15	286	P	Pn	05 39 54.8	+0.6
JUON				*e*S	Sn	05 40 10.0	-0.2
JNS	Sasagawa	1.28	316	P	Pn	05 39 55.8	0.0
JNS				S	Sn	05 40 12.3	-0.7
JYS	Shirataka	1.35	347	P	Pn	05 39 57.5	+0.8
JYS				S	Sn	05 40 15.0	+0.4
JOU	Okura	1.47	7	P	Pn	05 39 59.0	+0.7
JRY	Ryogami san	1.52	235	*i* P	Pn	05 39 59.8	+0.9
JRY				*e*S	Sn	05 40 18.1	-0.4
MJAR	Matsushiro Arr	1.83	259	P	Pn	05 40 03.2	+0.3
	13nm,0.4s,baz=80,slow=15,SNR=25						
MJAR				S	Sn	05 40 23.7	-1.8
	29nm,0.5s,baz=89,slow=24,SNR=9.9						
SONM	Songino Array	27.22	304	P	P	05 45 09.3	+0.6
	0.6nm,0.6s,baz=107,slow=9.2,SNR=2.8						
	0.6nm,0.6s						
TGY	Tagaytay City	28.61	223	LR	LR	05 55 34.8	
	comp=Z,336nm,21.8s,baz=14,slow=34						
H11N2	WAKE ISLAND Hy	28.75	119	T	T	06 15 33.6	
	baz=313,slow=75,SNR=13						
H11N1	WAKE ISLAND Hy	28.76	119	T	T	06 15 33.9	
	baz=313,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	28.77	119	T	T	06 15 34.7	
	baz=313,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	29.45	121	T	T	06 16 23.3	
	baz=314,slow=76,SNR=46						
H11S3	WAKE ISLAND Hy	29.45	121	T	T	06 16 21.5	
	baz=314,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy	29.46	121	T	T	06 16 26.1	
	baz=314,slow=76,SNR=21						
ZALV	Zalesovo Beam	41.43	312	P	P	05 47 09.7	-1.0
	0.5nm,0.3s,baz=99,slow=8.9,SNR=3.6						
	0.5nm,0.3s						
KURBB	Kurchatov Arra	45.47	308	P	P	05 47 42.6	-0.6
	1.0nm,0.5s,baz=84,slow=8.1,SNR=6.3						
	1.0nm,0.5s						
WRA	Warramunga Arr	56.83	187	P	P	05 49 08.0	-0.5
	0.5nm,0.7s,baz=6.2,slow=7.1,SNR=2.7						
	0.5nm,0.7s						
NVAR	Mina Array Bea	75.69	53	P	P	05 51 10.2	+1.0
	0.5nm,0.7s,baz=305,slow=5.7,SNR=3.6						
	0.5nm,0.7s						
PDAR	Pinedale Array	78.31	45	P	P	05 51 23.9	0.0
	0.2nm,0.6s,baz=280,slow=8.5,SNR=2.2						
	0.2nm,0.6s						
H03N2	Juan Fernandez	147.78	96	T	T	08 44 28.6	
	baz=290						
H03N3	Juan Fernandez	147.79	96	T	T	08 44 26.5	
	baz=290						
H03N1	Juan Fernandez	147.80	96	T	T	08 44 28.3	
	baz=290,SNR=4.0						

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*MOS **06** 05:45:14.4±1.1,46°.02N×150°.53E,h128^{km},mb4.4/1,Error ellipse: s-maj=32.3km s-min=15.2km az=47.9*

*SKHL **06** 05:45:14.9±0.4,45°.50N×150°.90E,h121^{km}±4^{km},mb4.7/3, msha5.3/3*

*JMA **06** 05:45:17.3±0.7,45°N±6°×15°1E±°,h111^{km},MV3.8/11, KURILE ISLANDS REGION*

*IDC **06** 05:45:17.4±3.2,46°.19N×150°.39E,h135^{km}±27^{km},mb3.1/5, mbtmp3.5/7,Error ellipse: s-maj=57.4km s-min=24.4km az=161.0*

ISC 06 05:45:11.2±1.1,**45°.2N**±0°.1×**151°.22E**±0°.10,**h100**^{km},**n33**,σ**2^{s}.41**/36,**mb3.5**/5,**1C,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.37	271	*e*PN	Pn	05 45 49.0	+0.5
KUR				*e*S	Sn	05 46 15.8	-1.3
KUR				pmax	pmax		
	comp=Z,107nm,0.4s						
KUR				smax	smax		
	comp=N,686nm,0.4s						
KUR				smax	smax		
	comp=E,1μm,0.4s						
KUR	Kuril'sk	2.37	271	*e*P	Pn	05 45 49.3	+0.8
KUR				AMB	AMB	05 45 49.4	
	comp=E,90nm,0.4s						
KUR				*i* S	Sn	05 46 15.8	-1.3
KUR				A	A	05 46 16.9	
	comp=E,800nm,0.5s						
KUR				A	A	05 46 16.9	
	comp=E,1μm,0.5s						
YUK	Yuzh-Kuril'sk	4.00	255	*e*PN	Pn	05 46 13.5	+3.1
YUK				S	Sn	05 46 54.5	-1.8
YUK				pmax	pmax		
	comp=N,59nm,0.2s						
YUK				pmax	pmax		
	comp=Z,166nm,0.2s						
YUK				pmax	pmax		
	comp=E,31nm,0.1s						
YUK				smax	smax		
	comp=N,111nm,0.2s						
YUK				smax	smax		
	comp=E,184nm,0.3s						
YUK	Yuzh-Kuril'sk	4.00	255	*e*P	Pn	05 46 12.2	+1.8
YUK				AMB	AMB	05 46 14.2	
	comp=E,140nm,0.3s						
YUK				*e*S	Sn	05 46 55.6	-0.7
YUK				A	A	05 47 00.7	
	comp=E,190nm,0.8s						
YUK				A	A	05 47 00.7	
	comp=E,210nm,0.8s						
NEM2	Nemuro 2	4.35	247	P	Pn	05 46 18.0	+2.9
NEM2				S	Sn	05 47 04.0	-0.6
NMR	Nemuro--Hokkai	4.36	247⇑	*i*PN	Pn	05 46 18.0	+2.8
NMR				*i* S	Sn	05 47 03.7	-1.1
NMR	Nemuro--Hokkai	4.36	247	*i* P	Pn	05 46 14.8	-0.4
NMR				*i* S	Sn	05 47 00.8	-4.0
JNK	Nakash	4.94	253	P	Pn	05 46 26.2	+3.1
JNK				S	Sn	05 47 19.4	+0.5
AKK	Akkeshi	5.09	247	*e*P	Pn	05 46 28.0	+2.9
JAK	Akkeshi	5.20	247	P	Pn	05 46 29.0	+2.4
JAK				S	Sn	05 47 24.4	-0.8
JAR	Ashorobuto	5.69	253	P	Pn	05 46 36.6	+3.4
JAR				*e*S	Sn	05 47 38.2	+1.1
JOB	Onbets	5.80	249	*e*P	Pn	05 46 37.9	+3.1
JOB				S	Sn	05 47 39.1	-0.9
JKK2	Kamakawa 2	6.20	260	*e*P	Pn	05 46 42.7	+2.5
JCH	Churui	6.25	248	P	Pn	05 46 43.6	+2.9
JCH				*e*S	Sn	05 47 48.6	-2.1
JKA	Kamikawa-asahi	6.25	263	*e*P	Pn	05 46 43.0	+2.2
ASAJ	Asahikawa	6.25	263	P	Pn	05 46 43.0	+2.2
	comp=E,6.3nm,0.6s,baz=72,slow=19,SNR=1.9						
JNBK	Urakawa-nobuka	6.80	247	*e*P	Pn	05 46 51.5	+3.2
PAU	Pauzhetka	7.27	29	*e*P	Pn	05 46 58.2	+3.6
TYV	Tymovskoe	8.04	318	*e*P	Pn	05 47 05.1	0.0
JANG	Nango	8.62	239	S	Sn	05 48 44.0	-4.6
PETK	Petropavlovsk-	8.95	26	P	Pn	05 47 15.3	-2.3
	comp=E,1.8nm,0.6s,baz=222,slow=13,SNR=1.1						
H11N2	WAKE ISLAND Hy	28.55	148	T	T	06 22 46.2	
	baz=337,slow=76,SNR=10.0						
H11N1	WAKE ISLAND Hy	28.57	148	T	T	06 22 50.3	
	baz=337,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	28.57	148	T	T	06 22 47.8	
	baz=337,slow=76,SNR=13						
H11S1	WAKE ISLAND Hy	29.60	149	T	T	06 24 07.2	
	baz=337,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	29.61	149	T	T	06 23 38.0	
	baz=337,slow=76,SNR=11						
H11S2	WAKE ISLAND Hy	29.62	149	T	T	06 24 08.5	
	baz=337,slow=76,SNR=9.4						
KURK	Kurchatov	47.11	304	P	P	05 53 27.1	-5.8
KURBB	Kurchatov Arra	47.20	304	P	P	05 53 27.1	-6.5
	comp=E,0.1nm,0.3s,baz=70,slow=8.1,SNR=1.8						
	comp=E,0.1nm,0.3s						
YKA	Yellowknife Ar	52.93	35	P	P	05 54 16.4	-0.3
	comp=E,0.3nm,0.7s,baz=298,slow=7.3,SNR=4.2						
	comp=E,0.3nm,0.7s						
AKASG	Malin Array Be	72.06	325	P	P	05 56 19.6	-4.5
	comp=E,0.3nm,0.4s,baz=37,slow=6.3,SNR=1.9						
	comp=E,0.3nm,0.4s						
EKA	Eskdalemuir Ar	77.49	345	P	P	05 56 52.6	-2.8
	comp=E,0.3nm,0.4s,baz=24,slow=6.2,SNR=1.6						
	comp=E,0.3nm,0.4s						
TXAR	Lajitas Array	79.40	59	P	P	05 57 08.2	+1.7
	comp=E,0.2nm,0.6s,baz=316,slow=4.7,SNR=5.0						
	comp=E,0.2nm,0.6s						

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*NEIC **06** 05:54:18.4±1.1,19°.54N±0°.07×64°.61W±0°.07,h10^{km}±2^{km}, ML2.6/19,Md3.6/8(RSPR),Error ellipse: s-maj=14.7km s-min=6.1km az=39.0*

*RSPR **06** 05:54:22.7,19°.70N×64°.78W,h46^{km}±29^{km},MD3.6/8*

ISC 06 05:54:19.3±2.6,**19°.6N**±0°.1×**64°.61W**±0°.09,**h27**^{km},**n35**,σ**0^{s}.79**/36,**5C-4D,Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUMP	Col San Antoni	1.90	218		Pn	05 54 49.5	-0.4
HUMP	Col San Antoni	1.90	218		Sn	05 55 12.9	-0.1
HUMP	Col San Antoni	1.90	218⇑	*e*P	Pn	05 54 50.4	+0.5
HUMP	Col San Antoni	1.90	218	*e*S	Sn	05 55 12.9	-0.1
GCPR	Guaynabo City	1.92	227		Sn	05 55 13.6	0.0
GCPR	Guaynabo City	1.92	227		Pn	05 54 50.4	+0.2
GCPR	Guaynabo City	1.92	227⇑	*e*P	Pn	05 54 50.7	+0.4
GCPR	Guaynabo City	1.92	227	*e*S	Sn	05 55 13.6	0.0
SJG	San Juan	2.11	224	Pn	Pn	05 54 52.4	-0.4
SJG				IAML		05 55 29.3	
	15nm,0.3s						
SJG				IAML		05 56 10.3	
	17nm,3.7s						
ECPR	Experimental S	2.12	232	Pn	Pn	05 54 52.6	-0.3
ECPR				IAML		05 55 21.8	
	37nm,0.2s						
ECPR				IAML		05 55 22.3	
	32nm,0.2s						
ECPR	Experimental S	2.12	232⇓	*e*P	Pn	05 54 53.5	+0.6
ECPR	Experimental S	2.12	232	*e*S	Sn	05 55 18.2	-0.1
EMPR	Esperanza - Ma	2.15	238	Pn	Pn	05 54 54.2	+0.8
EMPR				IAML		05 55 36.5	
	85nm,2.2s						
EMPR				IAML		05 56 02.1	
	85nm,3.0s						
SABA	Saba	2.40	147	Pn	Pn	05 54 56.9	+0.1
AOPR	Arecibo Observ	2.40	238		Sn	05 55 24.7	-0.8
AOPR	Arecibo Observ	2.40	238		Pn	05 54 57.6	+0.8
AOPR				IAML		05 55 39.6	
	comp=E,54nm,0.3s						
AOPR	Arecibo Observ	2.40	238⇓	*e*P	Pn	05 54 57.9	+1.1
AOPR	Arecibo Observ	2.40	238	*e*S	Sn	05 55 24.7	-0.8
UUPR	Utuado, UPR, P	2.43	236	Pn	Pn	05 54 57.4	+0.2
OBIP	Obispado Ponce	2.47	230		Sn	05 55 27.2	+0.1
OBIP	Obispado Ponce	2.47	230		Pn	05 54 58.2	+0.4
OBIP				IAML		05 55 38.1	
	comp=E,16nm,3.9s						
OBIP				IAML		05 55 45.5	
	comp=N,18nm,3.3s						
OBIP	Obispado Ponce	2.47	230⇓	*e*P	Pn	05 54 58.7	+0.9
OBIP	Obispado Ponce	2.47	230	*e*S	Sn	05 55 27.2	+0.1
LSP	Las Mesas	2.76	238		Pn	05 55 02.8	+1.0
LSP					Sn	05 55 33.9	-0.4
LSP	Las Mesas	2.76	238⇓	*e*P	Pn	05 55 02.8	+1.0
LSP	Las Mesas	2.76	238	*e*S	Sn	05 55 33.9	-0.4
MLPR	Magueyes Islan	2.84	235⇑	*e*P	Pn	05 55 03.8	+0.9
MLPR	Magueyes Islan	2.84	235	*e*S	Sn	05 55 35.7	-0.5
CRPR	Cabo Rojo, PR	2.87	236		Sn	05 55 35.5	-1.5
CRPR	Cabo Rojo, PR	2.87	236		Pn	05 55 03.3	+0.1
CRPR				IAML		05 55 29.6	
	comp=N,26nm,2.9s						
CRPR				IAML		05 55 33.8	
	comp=N,27nm,3.1s						
CRPR	Cabo Rojo, PR	2.87	236⇑	*e*P	Pn	05 55 05.1	+1.8
CRPR	Cabo Rojo, PR	2.87	236	*e*S	Sn	05 55 35.5	-1.5
MIDR	Miches	4.24	262⇑	*e*P	Pn	05 55 22.3	+0.1
MIDR	Miches	4.24	262	*e*S	Sn	05 56 09.1	-1.7
DR12	Loma Pena Alta	4.59	260	Pn	Pn	05 55 27.8	+0.8

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*IDC **06** 05:54:39.8±0.5,2°.73S×68°.02E,h0^{km},mb4.3/24, mbtmp4.3/25,ML4.2/1,MS4.1/49,Error ellipse: s-maj=17.6km s-min=13.8km az=78.0*

*BJI **06** 05:54:40.3,2°.76S×67°.73E,h20^{km},mB5.3/5,mb4.6/38, Ms4.7/9,Ms7 4.5/13*

*GCMT **06** 05:54:41.6±0.2,2°.86S±0°.02×68°.06E±0°.02,h13^{km}±1^{km}, MW4.9/98,Moment Tensor Solution. s30,c36; s98,c136; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.72±.16; M$_{\theta\theta}$1.55±.10; M$_{\phi\phi}$1.17±.10; M$_{r\theta}$1.05±.27; M$_{\theta\phi}$-1.55±.07; M$_{\phi r}$-0.37±.28; Best double couple: M$_0$3.03500×10^{16} NP1:ϕ_s140.00000°,δ36.00000°,λ-76.00000°. NP2: ϕ_s303.00000°,δ56.00000°,λ-100.00000°. Principal axes: T 3.1060, Plg10.0000°, Azm40.0000°; N -0.1420, Plg8.0000°, Azm309.0000°; P -2.9640, Plg77.0000°, Azm181.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **06** 05:54:42.6±1.8,2°.63S±0°.08×68°.02E±0°.07,h10^{km}±1^{km}, mb4.8/38 Error ellipse: s-maj=15.3km s-min=8.5km az=322.0*

ISC 06 05:54:41.9±0.4,**2°.70S**±0°.06×**68°.13E**±0°.06,**h11**^{km},**n140**,σ**1^{s}.40**/96,**mb4.6**/54,**MS4.1**/54,**1C-1D,Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAAM	Kaadhehdhoo	5.80	57		Pn	05 56 06.5	-1.5
KAAM	Kaadhehdhoo	5.80	57	P	Pn	05 56 05.5	-2.5
	1.4nm125nm,1.0s						
KAAM				S	Sn	05 57 09.2	-5.4
	1.4nm125nm,1.0s						
DGAR	Diego Garcia	6.36	138		Pn	05 56 15.6	0.0
H08S3	Diego Garcia H	6.54	139	T	T	06 03 07.7	
	baz=311,slow=80,SNR=17						
H08S1	Diego Carcia H	6.54	139	T	T	06 03 06.4	
	baz=311,slow=80,SNR=14						
H08S2	Diego Garcia H	6.56	139	T	T	06 03 05.9	
	baz=311,slow=80,SNR=12						
HMDM	Hanimaadhoo	10.68	28	Pn	Pn	05 57 14.1	-0.8
PALK	Pallekele	15.98	52	Pn	Pn	05 58 27.6	+0.6
	0.8nm,0.3s,baz=233,slow=16,SNR=4.1						
PALK				LR	LR	06 03 18.1	
	comp=Z,2μm,20.6s,baz=226,slow=32						
	2.9nm,0.4s						
PALK	Pallekele	15.98	52	Pn	Pn	05 58 27.5	+0.5
PALK	Pallekele	15.98	52	P	Pn	05 58 24.8	-2.2
OPO	Ambohidratompo	25.88	231	LR	LR	06 08 09.3	
	comp=Z,682nm,18.4s,baz=190,slow=31						
ATD	Arta Tunnel	28.85	300	LR	LR	06 09 41.4	
	comp=Z,6.0nm,21.9s,baz=107,slow=31						
MLSI	Meulaboh, Aceh	29.09	76	P	P	06 00 42.2	-0.6
	29nm,1.1s						
LHMI	Lhok Sumawe	29.84	75	P	P	06 00 47.6	-1.9
PSI	Prapat	31.26	80	LR	LR	06 11 23.7	
	comp=Z,693nm,21.8s,baz=246,slow=32						
LODK	Lodwar	33.31	280	P	P	06 01 20.0	-0.2
LODK				IAmb	IAmb	06 01 28.8	
	comp=Z,7.4nm,1.1s						
KULM	Kulim	33.44	76	P	P	06 01 22.7	+1.5
KULM	Kulim	33.44	76	P	P	06 01 21.2	0.0
	comp=Z,32nm,1.1s						
IPM	Ipoh	33.63	78	P	P	06 01 24.1	+1.2
BRDH	Bariadhala	34.10	41	LR	LR	06 17 20.1	
	comp=Z,443nm,18.4s,baz=240,slow=40						
EVN	Everest	35.39	29	P	P	06 01 38.4	-0.2
EVN				IAmb	IAmb	06 01 51.5	
	comp=Z,11nm,1.4s						
SHL	Shillong	36.32	38		P	06 01 46.8	+0.6
SHL				IAmb	IAmb	06 01 48.4	
	comp=Z,26nm,1.1s						
KLI	Kotabumi	36.70	94	P	P	06 01 47.1	-2.3
CMAR	Chiang Mai Arr	36.91	54	P	P	06 01 52.5	+1.5
	comp=Z,11nm,0.9s,baz=238,slow=8.2,SNR=41						
CMAR				LR	LR	06 15 08.9	
	comp=Z,296nm,22.0s,baz=240,slow=33						
	comp=Z,11nm,0.9s						
CMAR	Chiang Mai Arr	36.91	54		P	06 01 51.9	+0.9
CHTO	Chiang Mai	37.09	54		P	06 01 53.9	+1.3
CHTO				IAmb	IAmb	06 01 55.3	
	comp=Z,27nm,0.9s						
CHTO	Chiang Mai	37.09	54	P	P	06 01 53.6	+1.0
	comp=Z,38nm,1.2s						
MBAR	Mbarara	37.44	273	LR	LR	06 16 15.2	
	comp=Z,174nm,18.9s,baz=87,slow=35						
MBAR	Mbarara	37.44	273	P	P	06 01 56.5	+0.6
PPBI	Pangkal Pinang	37.97	90	P	P	06 01 58.8	-1.4
MANEM	Manem	40.17	4		P	06 02 19.4	+0.8
MANEM				IAmb	IAmb	06 02 27.3	
	comp=Z,26nm,1.0s						
GAR	Garm	41.54	3		P	06 02 29.6	0.0
GAR				IAmb	IAmb	06 02 37.1	
	comp=Z,28nm,1.1s						
KSH	Kashi	42.62	9	P	P	06 02 35.3	-3.2
KSH				pP	sP	06 02 41.8	0.0
KSH				pmax	pmax		

	comp=Z,7.0nm,0.8s						
KSH				LR	LR		
	comp=Z,350nm,16.1s						
KSH				LR	LR		
	comp=Z,440nm,14.1s						
KMI	Kunming	43.49	48	P	P	06 02 51.1	+5.3
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KMI				LR	LR		
	comp=Z,420nm,25.9s						
PZH	PanZhiHua	43.55	46	P	P	06 02 47.8	+1.6
PZH				pmax	pmax		
	comp=Z,30nm,1.2s						
ARSB	Arslanbob	44.04	5	P	P	06 02 50.6	+0.7
TARG	Taragay, Kyrgy	45.09	10	P	P	06 02 58.8	+0.2
EIL	Elat	45.21	318	LR	LR	06 19 51.0	
	comp=Z,91nm,18.9s,baz=76,slow=34						
AAK	Ala-Archa	45.49	7	LR	LR	06 22 08.3	
	comp=Z,231nm,20.1s,baz=192,slow=36						
AAK	Ala-Archa	45.49	7		P	06 03 02.1	+0.6
AAK				IAmb	IAmb	06 03 09.3	
	comp=Z,15nm,1.6s						
H04N2	CROZET ISLANDS	45.58	196	T	T	06 51 48.0	
	baz=22,slow=75,SNR=24						
H04N1	CROZET ISLANDS	45.59	196	T	T	06 51 44.9	
	baz=22,slow=75,SNR=26						
H04N3	CROZET ISLANDS	45.60	196	T	T	06 51 49.3	
	baz=22,slow=75,SNR=28						
ASF	Jabal al Asfar	45.61	322	LR	LR	06 20 46.9	
	comp=Z,119nm,20.5s,baz=136,slow=34						
KHWEE	KHWEE	45.65	242	P	P	06 03 01.6	-1.4
LPHEP	Lephephe	45.76	240		P	06 03 02.9	-1.0
PHDHD	Phuduhudu	45.93	244	P	P	06 03 04.1	-1.2
PHDHD				IAmb	IAmb	06 03 12.6	
	comp=Z,14nm,1.1s						
GOMU	GeErMu	46.02	30	P	P	06 03 07.7	+1.7
GOMU				PcP	PcP	06 04 43.4	+0.8
GOMU				S	S	06 09 56.5	+5.0
GOMU				pmax	pmax		
	comp=Z,6.0nm,1.3s						
LBTB	Lobatse	46.57	238	LR	LR	06 20 18.5	
	comp=Z,335nm,20.6s,baz=69,slow=33						
MMAI	Mount Meron Ar	47.11	322	LR	LR	06 21 00.7	
	comp=Z,114nm,21.9s,baz=124,slow=34						
GNI	Garni	47.73	336	LR	LR	06 24 13.8	
	comp=Z,108nm,18.4s,baz=132,slow=37						
BOSA	Boshof	48.25	233	P	P	06 03 21.6	-1.7
	comp=Z,6.1nm,1.0s,baz=70,slow=9.6,SNR=4.2						
BOSA				LR	LR	06 20 13.3	
	comp=Z,220nm,21.8s,baz=48,slow=32						
	comp=Z,6.1nm,1.0s						
KGCAE	Kacgae	48.78	242		P	06 03 26.8	-0.6
QNGWA	Qangwa	48.81	246	P	P	06 03 27.0	-0.7
QNGWA				IAmb	IAmb	06 03 34.9	
	comp=Z,21nm,1.4s						
WMQ	Urumqi	49.53	19	*e*P	P	06 03 35.7	+2.9
WMQ				LR	LR		
	comp=Z,350nm,22.5s						
LZDM	Lanzhou Array	50.81	38	P	P	06 03 42.5	-0.4
	comp=Z,0.9nm,0.3s,baz=228,slow=3.7,SNR=2.1						
	comp=Z,0.9nm,0.3s						
MKAR	Makanchi Array	50.84	13	P	P	06 03 41.6	-1.0
	comp=Z,1.5nm,0.7s,baz=199,slow=8.8,SNR=10						
MKAR				LR	LR	06 24 26.7	
	comp=Z,158nm,19.6s,baz=156,slow=35						
	comp=Z,1.5nm,0.7s						
MKAR	Makanchi Array	50.84	13	P	P	06 03 41.5	-1.1
GTA	Gaotai	51.03	32	*e*P	P	06 03 44.9	+0.6
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GTA				LR	LR		
	comp=Z,470nm,18.5s						
GTA				LR	LR		
	comp=Z,650nm,19.6s						
KBZ	Khabaz	51.48	337	P	P	06 03 47.3	-0.1
	comp=Z,3.3nm,1.0s,baz=138,slow=2.6,SNR=5.1						
KBZ				LR	LR	06 26 20.8	
	comp=Z,57nm,18.5s,baz=166,slow=37						
	comp=Z,3.3nm,1.0s						
KAPI	Kappang	51.54	94	LR	LR	06 23 21.0	
	comp=Z,165nm,21.4s,baz=272,slow=33						
MPSI	Mapaga	51.84	87	P	P	06 03 49.7	-0.9
	comp=Z,2µmcomp=Z,12nm,1.1s						
TSUM	Tsumeb	52.04	248	LR	LR	06 23 26.1	
	comp=Z,339nm,19.7s,baz=146,slow=33						
AB31	Akbulak array	52.23	353		P	06 03 52.4	-0.5
ABKAR	Akbulak array	52.23	353	P	P	06 03 52.7	-0.2
BRTR	Keskin Array B	52.76	327	P	P	06 03 56.8	-0.5
	comp=Z,1.1nm,0.8s,baz=139,slow=9.2,SNR=5.7						
BRTR				LR	LR	06 26 35.0	
	comp=Z,107nm,18.5s,baz=103,slow=36						
	comp=Z,1.1nm,0.8s						
BRTR	Keskin Array B	52.76	327	P	P	06 03 56.6	-0.6
XAN	Xi'an	52.99	43	P	P	06 03 58.6	-0.3
XAN				pmax	pmax		
	comp=Z,14nm,0.9s						
H01W3	Cape Leeuwin H	53.34	133	T	T	07 01 44.9	
	baz=296						
H01W2	Cape Leeuwin H	53.34	133	T	T	07 01 27.8	
	baz=296						
H01W1	Cape Leeuwin H	53.36	133	T	T	07 01 45.5	
	baz=296						
PSA00	Pilbara Seismi	53.62	115	P	P	06 04 04.5	+0.8
PSA00				IAmb	IAmb	06 04 11.5	
	comp=Z,9.2nm,0.8s						
PSA00	Pilbara Seismi	53.62	115		P	06 04 04.9	+1.2
PSA00				IAmb	IAmb	06 04 12.5	
	comp=Z,13nm,1.3s						
AKTO	Aktyubinsk	53.64	352	LR	LR	06 28 00.1	
	comp=Z,154nm,18.0s,baz=242,slow=37						
KURBB	Kurchatov Arra	53.86	8	P	P	06 04 04.2	-0.7
	comp=Z,1.1nm,0.2s,baz=203,slow=7.6,SNR=12						
KURBB				LR	LR	06 25 58.4	
	comp=Z,176nm,19.7s,baz=150,slow=35						
	comp=Z,1.1nm,0.2s						
KURK	Kurchatov	53.96	8		P	06 04 05.2	-0.5
KURK				IAmb	IAmb	06 04 12.9	
	comp=Z,4.8nm,0.8s						
NWAO	Narrogin (SRO)	54.88	129	P	P	06 04 13.0	+0.3
	comp=Z,4.7nm,0.9s,baz=313,slow=12,SNR=1.8						
	comp=Z,4.7nm,0.9s						
BVAR	Borovoye Array	55.55	2	P	P	06 04 16.9	-0.3
	comp=Z,1.3nm,0.7s,baz=181,slow=6.5,SNR=6.4						
BVAR				LR	LR	06 27 54.2	
	comp=Z,166nm,21.5s,baz=189,slow=36						
	comp=Z,1.3nm,0.7s						
BATI	Baumata	55.61	100	LR	LR	06 27 10.0	
	comp=Z,135nm,21.6s,baz=254,slow=35						
SOEI	Soe	56.18	100	P	P	06 04 23.2	+0.6
SOEI				IAmb	IAmb	06 04 45.4	
	comp=Z,16nm,0.9s						
TWG	Pinlang	57.49	61	P	P	06 04 32.7	+1.2
ZAA0	Zalesovo Array	58.14	12		P	06 04 34.3	-1.2
ZAA0				IAmb	IAmb	06 05 57.9	
	comp=Z,6.2nm,0.7s						
ZALV	Zalesovo Beam	58.14	12	P	P	06 04 34.3	-1.2
	comp=Z,1.9nm,0.6s,baz=203,slow=7.2,SNR=11						
ZALV				LR	LR	06 28 59.1	
	comp=Z,147nm,21.5s,baz=184,slow=35						
	comp=Z,1.9nm,0.6s						
DAV	Davao City (W)	58.15	80	LR	LR	06 32 14.1	
	comp=Z,78nm,18.0s,baz=222,slow=39						
FITZ	Fitzroy Crossi	58.34	110	LR	LR	06 26 29.8	
	comp=Z,67nm,21.2s,baz=316,slow=33						
FITZ	Fitzroy Crossi	58.34	110	P	P	06 04 38.2	+0.6
HHC	Hu-ho-hao-te	58.68	38	*e*P	P	06 04 43.8	+4.1
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,4.3s						
HHC				LR	LR		
	comp=Z,180nm,13.5s						
HHC				LR	LR		
	comp=Z,200nm,13.7s						
HNS	HongShan	58.77	43	⇑P	P	06 04 43.1	+2.9
HNS				pmax	pmax		
	comp=Z,9.0nm,1.2s						
NJ2	Nanjing	59.18	50	*e*P	P	06 04 44.6	+1.4
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
ARTI	Arti	59.43	354	LR	LR	06 30 05.6	
	comp=Z,75nm,19.5s,baz=214,slow=36						
SONM	Songino Array	60.41	29	P	P	06 04 52.2	+0.7
	comp=Z,4.1nm,0.8s,baz=222,slow=6.5,SNR=21						
SONM				LR	LR	06 30 58.2	
	comp=Z,613nm,18.6s,baz=218,slow=36						
	comp=Z,4.1nm,0.8s						
SONM	Songino Array	60.41	29	P	P	06 04 51.2	-0.3
SONM				IAmb	IAmb	06 04 59.6	
	comp=Z,11nm,1.0s						
KNRA	Kununurra	61.02	106	P	P	06 04 56.5	+0.4
KNRA				IAmb	IAmb	06 05 02.8	
	comp=Z,11nm,1.2s						
AKASG	Malin Array Be	62.73	333	P	P	06 05 07.9	+0.9
	comp=Z,0.7nm,0.6s,baz=134,slow=6.0,SNR=2.1						
	comp=Z,0.7nm,0.6s						
KIRV	Kirov	62.89	349	LR	LR	06 34 14.4	
	comp=Z,115nm,18.6s,baz=148,slow=38						
MAW	Mawson	64.89	182	P	P	06 05 21.1	+0.2
	comp=Z,4.3nm,1.0s,baz=2.7,slow=8.7,SNR=4.4						
MAW				LR	LR	06 26 29.0	
	comp=Z,252nm,21.1s,baz=356,slow=29						
	comp=Z,4.3nm,1.0s						
JOW	Kunigami	64.95	59	LR	LR	06 31 51.2	
	comp=Z,120nm,21.8s,baz=90,slow=34						
WRA	Warramunga Arr	66.73	110	P	P	06 05 33.3	-0.4
	comp=Z,5.0nm,1.0s,baz=277,slow=6.4,SNR=18						
	comp=Z,5.0nm,1.0s						
WRA	Warramunga Arr	66.73	110		P	06 05 33.6	-0.2
ASAR	Alice Springs	66.76	115	P	P	06 05 34.0	+0.1
	comp=Z,2.1nm,0.8s,baz=277,slow=6.5,SNR=24						
ASAR				LR	LR	06 31 40.1	
	comp=Z,46nm,20.1s,baz=285,slow=33						
	comp=Z,2.1nm,0.8s						
ASAR	Alice Springs	66.76	115		P	06 05 34.7	+0.8
AS31	Alice Springs	66.76	115	P	P	06 05 34.7	+0.8
MODS	Modra-Piesok	67.32	326	*e*P	P	06 05 41.3	+4.4
KSRS	Korea Array	68.18	48	P	P	06 05 42.8	+0.3
	comp=Z,1.0nm,0.7s,baz=261,slow=8.1,SNR=4.2						
	comp=Z,1.0nm,0.7s						
HILR	Hailar Array B	68.38	33	P	P	06 05 44.3	+0.7
	comp=Z,1.6nm,0.4s,baz=229,slow=6.2,SNR=5.0						
	comp=Z,1.6nm,0.4s						
JNU	Nakatsue	69.00	53	LR	LR	06 37 51.5	
	comp=Z,128nm,18.2s,baz=258,slow=38						
CN2	Changchun	69.00	41	*e*P	P	06 05 48.6	+1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GERES	GERESS Array B	69.59	325	LR	LR	06 35 29.2	
	comp=Z,67nm,19.5s,baz=57,slow=35						
DAVOX	Davos/Dischmat	70.90	322	LR	LR	06 38 12.8	
	comp=Z,91nm,18.0s,baz=284,slow=37						
BNX	BinXian	71.09	40	⇓P	P	06 06 00.3	0.0
BNX				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SENIN	Lac Senin/Sane	72.34	321	P	P	06 06 06.9	-1.2
NRIK	Noril'sk	73.11	7	LR	LR	06 38 41.5	
	comp=Z,103nm,18.3s,baz=204,slow=36						
DBIC	Dimbokro	73.45	278	LR	LR	06 36 25.3	
	comp=Z,66nm,21.0s,baz=136,slow=34						
STKA	Stephens Creek	74.54	122	P	P	06 06 20.6	-0.6
	comp=Z,0.6nm,0.3s,baz=263,slow=13,SNR=3.9						
	comp=Z,0.6nm,0.3s						
HFS	Hagfors	75.51	335	P	P	06 06 24.6	-1.5
	comp=Z,7.4nm,1.1s,baz=125,slow=12,SNR=1.8						
	comp=Z,7.4nm,1.1s						
MJAR	Matsushiro Arr	75.74	51	P	P	06 06 29.6	+1.7
	comp=Z,1.5nm,0.5s,baz=260,slow=2.9,SNR=4.8						
MJAR				LR	LR	06 41 04.5	
	comp=Z,117nm,18.9s,baz=243,slow=37						
	comp=Z,1.5nm,0.5s						
JHJ	Hachijo jima 2	76.20	55	LR	LR	06 42 07.5	
	comp=Z,44nm,18.1s,baz=100,slow=37						
MDT	Midelt	77.04	304	LR	LR	06 41 45.7	
	comp=Z,82nm,18.0s,baz=116,slow=37						
JCJ	Chichijima	77.09	62	LR	LR	06 36 56.4	
	comp=Z,54nm,21.4s,baz=114,slow=33						
ARCES	ARCESS Array B	77.60	346	LR	LR	06 41 01.4	
	comp=Z,195nm,19.9s,baz=122,slow=36						
GUMO	Guam	77.76	76	LR	LR	06 40 25.5	
	comp=Z,42nm,19.7s,baz=104,slow=35						
ESDC	Sonseca Array	78.04	311	P	P	06 06 40.3	-0.6
	comp=Z,1.4nm,0.8s,baz=100,slow=5.5,SNR=9.3						
	comp=Z,1.4nm,0.8s						
ESDC	Sonseca Array	78.04	311	P	P	06 06 40.9	0.0
PMG	Port Moresby	78.74	99	P	P	06 06 46.3	+1.1
	comp=Z,3.1nm,0.2s,baz=260,slow=17,SNR=3.4						
	comp=Z,3.1nm,0.2s						
YAK	Yakutsk	79.45	25	LR	LR	06 42 53.4	
	comp=Z,243nm,21.0s,baz=269,slow=36						
ASAJ	Asahikawa	80.78	45	LR	LR	06 44 22.2	
	comp=Z,65nm,19.4s,baz=117,slow=37						
SNAA	Sanae	81.52	198	P	P	06 06 58.8	-0.4
	comp=Z,2.4nm,0.9s,baz=83,slow=19,SNR=5.7						
	comp=Z,2.4nm,0.9s						
SNAA	Sanae	81.52	198	P	P	06 06 59.8	+0.6
SNAA				IAmb	IAmb	06 07 06.7	
	comp=Z,8.0nm,1.2s						
TIXI	Tiksi	83.67	16	LR	LR	06 45 37.7	
	comp=Z,188nm,18.9s,baz=196,slow=36						
TIXI	Tiksi	83.67	16	P	P	06 07 09.4	-0.8
TIXI				IAmb	IAmb	06 07 11.8	
	comp=Z,9.8nm,1.1s						
QSPA	South Pole Qui	87.30	180	P	P	06 07 28.3	-0.4
	comp=Z,0.7nm,0.3s,baz=240,slow=2.5,SNR=4.5						
QSPA				LR	LR	06 40 04.9	
	comp=Z,243nm,21.4s,baz=268,slow=31						
	comp=Z,0.7nm,0.3s						
QSPA	South Pole Qui	87.30	180	P	P	06 07 28.5	-0.2
VNDA	Vanda	88.19	167	LR	LR	06 43 22.3	
	comp=Z,146nm,18.8s,baz=256,slow=33						
MA2	Magadan	88.57	30	LR	LR	06 48 42.7	
	comp=Z,242nm,18.5s,baz=278,slow=37						
SEY	Seymchan	89.76	27	LR	LR	06 49 05.5	
	comp=Z,293nm,21.6s,baz=278,slow=36						
BELA	Belgrano 2	90.05	192	P	P	06 07 40.8	-0.5
BELA				IAmb	IAmb	06 10 24.4	
	comp=Z,5.8nm,0.6s						
YKA	Yellowknife Ar	120.31	1	PKP	PKPdf	06 13 32.6	-0.4
	comp=Z,0.2nm,0.6s,baz=354,slow=2.8,SNR=2.7						
YKA				PP	PP	06 14 56.5	-1.6
	comp=Z,0.6nm,1.0s,baz=359,slow=7.1,SNR=6.1						
PDAR	Pinedale Array	140.05	357	PKP	PKPdf	06 14 10.1	-1.2
	comp=Z,0.4nm,0.6s,baz=4.3,slow=5.1,SNR=4.5						
NVAR	Mina Array Bea	143.96	9	PKP	PKPbc	06 14 16.7	+0.7
	comp=Z,0.5nm,0.7s,baz=350,slow=5.6,SNR=4.8						
TXAR	Lajitas Array	152.39	344	PKPbc	PKiKP	06 14 38.8	-0.4
	comp=Z,0.6nm,0.8s,baz=22,slow=2.0,SNR=4.9						

DJA 06 05:56:37.6±0.4**,8°S**±3°×**10°6E**±°**,h10**^{km}**,M3.5**/12**,mB3.3**/1**,**
mb3.3/3**,MLv3.5**/12**,Mw(mB)2.1**/1**,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SKJI	Sukabumi	0.96	43	P	Pg	05 56 55.8	-0.2
SKJI				S	Sg	05 57 04.1	-4.4
SKJI	Sukabumi	0.96	43	P	Pg	05 56 55.9	-0.1
SKJI				S	Sg	05 57 08.7	+0.2
CNJI	Cibinong	1.28	72	P	Pn	05 57 00.8	-0.8
CNJI	Cibinong	1.28	72	P	Pn	05 57 00.5	-1.1
CNJI				S	Sb	05 57 17.3	-1.1
DBJI	Dramaga	1.43	36	P	Pn	05 57 03.1	-0.5
DBJI	Dramaga	1.43	36	P	Pn	05 57 03.3	-0.3
DBJI				S	Sb	05 57 22.8	+0.3
SBJI	Serang	1.60	8	P	Pn	05 57 04.3	-1.6
SBJI	Serang	1.60	8	P	Pn	05 57 05.5	-0.4
BBJI	Bungbulang	1.75	82	P	Pn	05 57 07.6	-0.5
BBJI	Bungbulang	1.75	82	P	Pn	05 57 08.0	-0.1
BBJI				S	Sn	05 57 28.6	-2.0
CMJI	Cimerak	2.53	92	P	Pn	05 57 18.8	+0.1
KASI	Kota Agung	2.58	327	P	Pn	05 57 19.8	+0.3
KASI	Kota Agung	2.58	327	P	Pn	05 57 20.1	+0.6
KASI				S	Sn	05 57 49.2	-1.7
KLI	Kotabumi	3.01	340	P	Pn	05 57 25.1	-0.3
KLI	Kotabumi	3.01	340	P	Pn	05 57 24.8	-0.6
KPJI	Karang Pucung	3.03	83	P	Pn	05 57 28.0	+2.4
KPJI	Karang Pucung	3.03	83	P	Pn	05 57 27.5	+1.9
KLSI		3.22	339	P	Pn	05 57 30.0	+1.8
KLSI		3.22	339	P	Pn	05 57 30.3	+2.1
SCJI	Gunung Srandil	3.24	90	P	Pn	05 57 29.5	+1.0
LWLI	Liwa	3.24	326	P	Pn	05 57 29.8	+1.1
MDSI	Maura Dua	3.63	332	P	Pn	05 57 34.6	+0.7
MDSI	Maura Dua	3.63	332	P	Pn	05 57 34.9	+1.0
UGM	Wanagama	4.58	93	P	Pn	05 57 47.6	+0.5
WOJI	Wonogiri, Jawa	4.98	92	P	Pn	05 57 52.8	+0.3
KSI	Kapahiang	5.20	321	P	Pn	05 57 57.5	+1.9
PCJI	Pacitan	5.25	96	P	Pn	05 57 57.2	+1.0
	0.1nm16nm,1.8s						
PCJI	Pacitan	5.25	96	P	Pn	05 57 56.5	+0.3
	16nm,1.8s						
PPBI	Pangkal Pinang	5.52	2	P	Pn	05 58 01.0	+1.1
	24nm0.2nm,0.8s						
SNJI	Sawahan-Nganju	5.81	91	P	Pn	05 58 06.7	+2.7
	0.1nm9.0nm,0.6s						
SNJI	Sawahan-Nganju	5.81	91	P	Pn	05 58 05.8	+1.8
COCO	West Island	9.98	243	P	Pn	05 59 06.9	+5.8
MMSI	Mamuju	13.88	70	P	Pn	05 59 52.2	-2.4

NEIC ***06*** *05:58:29.5±1.3,19°44N±0°09×64°81W±0°06,h10^{km}±2^{km},*
ML2.2/16,Md3.6/6(RSPR),Error ellipse: s-maj=18.0km
s-min=4.4km az=328.0

RSPR 06 05:58:33.3,19°49N×**64°86W,h66**^{km}±25^{km}**,MD3.6**/6**,**
2C-4D,Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HUMP	Col San Antoni	1.64	215		Sn	05 59 19.6	-0.5
HUMP	Col San Antoni	1.64	215		Pn	05 58 58.1	-1.8
HUMP	Col San Antoni	1.64	215	⇓*e*P	Pn	05 58 60.0	0.0
HUMP	Col San Antoni	1.64	215	*e*S	Sn	05 59 19.6	-0.5
GCPR	Guaynabo City	1.65	225	Pn	Pn	05 58 56.8	-3.3
ECPR	Experimental S	1.84	231	Pn	Pn	05 59 01.1	-1.6
ECPR				IAML		05 59 29.8	
	19nm,0.2s						
ECPR				IAML		05 59 30.3	
	18nm,0.2s						
ECPR	Experimental S	1.84	231	⇓*e*P	Pn	05 59 01.6	-1.1
ECPR	Experimental S	1.84	231	*e*S	Sn	05 59 24.5	-0.5
EMPR	Esperanza - Ma	1.88	238	Pn	Pn	05 59 01.0	-2.2
AOPR	Arecibo Observ	2.12	238		Pn	05 59 05.5	-1.1
AOPR				IAML		05 59 54.0	
	comp=E,28nm,0.6s						
AOPR	Arecibo Observ	2.12	238		Sn	05 59 30.6	-1.4
AOPR	Arecibo Observ	2.12	238	IAML		05 59 27.5	
	comp=N,29nm,1.5s						
AOPR	Arecibo Observ	2.12	238	⇑*e*P	Pn	05 59 05.5	-1.1
AOPR	Arecibo Observ	2.12	238	*e*S	Sn	05 59 30.6	-1.4
OBIP	Obispado Ponce	2.19	229	Pn	Pn	05 59 06.0	-1.4
OBIP				IAML		05 59 19.9	
	comp=N,8.5nm,1.1s						
OBIP				IAML		05 59 21.3	
	comp=E,9.2nm,1.3s						
AGPR	Aguadilla, PR	2.36	245	Pn	Pn	05 59 07.1	-2.6
LSP	Las Mesas	2.48	239		Pn	05 59 11.0	-0.4
LSP					Sn	05 59 40.5	-0.1
LSP	Las Mesas	2.48	239	⇓*e*P	Pn	05 59 11.0	-0.4
LSP	Las Mesas	2.48	239	*e*S	Sn	05 59 40.5	-0.1
MLPR	Magueyes Islan	2.56	234	⇓*e*P	Pn	05 59 11.8	-0.7
MLPR	Magueyes Islan	2.56	234	*e*S	Sn	05 59 41.9	-0.8
CRPR	Cabo Rojo, PR	2.59	236		Sn	05 59 42.6	-0.7
CRPR	Cabo Rojo, PR	2.59	236		Pn	05 59 11.5	-1.4
CRPR				IAML		05 59 50.4	
	comp=E,14nm,1.4s						
CRPR				IAML		06 00 33.8	
	comp=E,14nm,1.4s						
CRPR	Cabo Rojo, PR	2.59	236	⇑*e*P	Pn	05 59 13.0	+0.1
CRPR	Cabo Rojo, PR	2.59	236	*e*S	Sn	05 59 42.6	-0.7
DR12	Loma Pena Alta	4.33	261	Pn	Pn	05 59 36.2	-0.5

JMA ***06*** *05:58:47.6±0.2,23°6N±0°3×122°0E±0°7,h23^{km}±3^{km},*
MV3.3/9,TAIWAN REGION

TAP ***06*** *05:58:48.4,23°62N×121°96E,h31^{km},ML3.4,C*

ISC 06 05:58:47.4±1.0**,23°60N**±0°02×**121°99E**±0°03**,h29**^{km}±9^{km}**,**
n113,σ**0§71**/180**,3C-7D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TEGC	Jichi Village	0.43	285	*i* P	Pb	05 58 57.1	+0.4
TEGC				S	Sn	05 59 04.0	-0.5
SHUL	Shoufeng	0.44	296	*i* P	Pb	05 58 57.2	+0.3
SHUL				S	Sb	05 59 03.9	+0.7
TEYL	Yanliau Villag	0.45	307	P	Pb	05 58 57.5	+0.5
TEYL				S	Sn	05 59 04.3	-0.8
HWA	Hwalien	0.52	317	*e*P	Pb	05 58 57.3	-0.8
HWA				*e*S	Sb	05 59 05.2	-0.2
EGFH	Guangfu	0.52	278	P	Pb	05 58 58.3	+0.1
HGSD	Ruisui	0.53	259	⇓*i*P	Pb	05 58 58.1	-0.2
HGSD				*i* S	Sb	05 59 05.6	-0.2
ESL	Shilin	0.56	293	⇓*i*P	Pb	05 58 58.1	-0.6
ESL				S	Sb	05 59 06.2	-0.2
WARBT	Fenglin Townsh	0.57	282	*i* P	Pb	05 58 58.5	-0.4
WARBT				*e*S	Sb	05 59 06.6	-0.2
ECBN	Changbin	0.57	241	P	Pb	05 58 59.0	+0.1
ECBN				*e*S	Sb	05 59 06.7	-0.1
ETM	Tongmen	0.59	309	*e*P	Pb	05 58 58.8	-0.5
ETM				S	Sb	05 59 06.9	-0.4
EOS4	EOS4	0.60	30	*i* P	Pb	05 58 59.6	+0.4
EOS4				*i* S	Sb	05 59 07.6	+0.4
TWD	Chiawan	0.60	323	*i* P	Pb	05 58 59.0	-0.5
TWD				*i* S	Sb	05 59 07.0	-0.7
EHYH	Wanrong	0.60	260	⇑P	Pb	05 58 59.7	+0.2
EHYH				*e*S	Sb	05 59 07.9	+0.1
EHY	Hungye	0.62	262	*i* P	Pb	05 58 59.8	-0.1
EHY				*i* S	Sb	05 59 08.4	+0.1
ETL	Fush Village	0.65	329	*e*P	Pb	05 58 59.9	-0.5
ETL				*e*S	Sb	05 59 08.3	-0.9
EYUL	Yuli	0.67	248	P	Pb	05 59 00.6	0.0
EYUL				S	Sn	05 59 10.9	+0.5
YULB	Yu-li	0.67	252	P	Pb	05 59 00.4	-0.3
YULB	Yu-li	0.67	252	S	Sb	05 59 09.9	+0.3
YULB	Yu-li	0.67	252	P	Pb	05 59 00.4	-0.3
YULB				*i* S	Sb	05 59 10.1	+0.4
NACB	Ninganchiao	0.68	328	P	Pb	05 59 00.1	-0.7
NACB	Ninganchiao	0.68	328	S	Sb	05 59 08.9	-1.0
NACB	Ninganchiao	0.68	328	⇑*i*P	Pb	05 59 00.1	-0.7
NACB				*e*S	Sb	05 59 09.0	-0.9
CHKH	Chenggong	0.68	234	*e*S	Sb	05 59 08.6	-1.3
TWF1	Yuli	0.68	249	*e*P	Pb	05 59 00.7	-0.2
TWF1				*e*S	Sb	05 59 10.5	+0.5
EOS3	EOS3	0.75	23	P	Pn	05 59 02.2	+0.2
EOS3				*i* S	Sn	05 59 12.5	+0.2
FULB	Fuli	0.76	238	P	Pb	05 59 01.5	-0.5
FULB				*e*S	Sb	05 59 11.6	-0.5
CHKT	Chengkung	0.76	229	*e*S	Sb	05 59 10.5	-1.7
EAHA	Aohua	0.76	342	*i* P	Pb	05 59 01.7	-0.5
EAHA				S	Sb	05 59 11.8	-0.5
ETLH	Xiulin Townshi	0.77	322	*e*P	Pb	05 59 01.7	-0.6
ETLH				*e*S	Sb	05 59 10.6	-1.8
VWDT	VWDT	0.80	281	⇓*i*P	Pb	05 59 02.5	-0.2
VWDT				*e*S	Sb	05 59 13.4	+0.2
OWD	Renai	0.83	296	*i* P	Pb	05 59 02.8	-0.6
OWD				*i* S	Sb	05 59 13.2	-1.1
EOS2	EOS2	0.85	15	P	Pn	05 59 03.7	+0.4
EHD	Haiduan	0.85	238	P	Pn	05 59 04.4	+0.9
EHD				*e*S	Sb	05 59 15.1	+0.4
ENA	Nanau	0.86	344	*i* P	Pb	05 59 03.2	-0.6
ENA				*i* S	Sb	05 59 14.4	-0.5
WHF	Hehuan Shan	0.86	309	P	Pb	05 59 03.4	-0.8
WHF				*e*S	Sb	05 59 14.9	-0.6
EWUT	Wuta	0.87	347	P	Pb	05 59 03.5	-0.5
EWUT				*e*S	Sb	05 59 14.8	-0.4
ECS	Chishang	0.87	235	*e*P	Pn	05 59 03.8	0.0
ECS				*e*S	Sb	05 59 15.3	0.0
EDH	Donghe	0.89	226	*e*P	Pn	05 59 03.6	-0.4
EDH				S	Sb	05 59 14.5	-1.3
WUSB	Renai	0.89	296	⇓*i*P	Pb	05 59 04.0	-0.4
WUSB				*e*S	Sb	05 59 15.2	-0.9
FUSS	Fushou	0.94	313	P	Pn	05 59 04.9	-0.1
FUSS				S	Sb	05 59 16.6	-1.1
YUS	Yu-Shan	0.96	264	⇓*i*P	Pn	05 59 05.4	0.0
YUS				*i* S	Sb	05 59 16.6	-1.7
SSLB	Suanglung	0.97	281	P	Pn	05 59 04.7	-0.5
SSLB	Suanglung	0.97	281	S	Sb	05 59 16.9	-1.3
SSLB	Suanglung	0.97	281	⇓P	Pn	05 59 04.9	-0.3
SSLB				*e*S	Sn	05 59 18.6	+0.5
ESAO	Su ao	0.98	352	P	Pb	05 59 06.3	+0.5
ESAO				*i* S	Sn	05 59 18.9	+0.6
ELDTW	Lidau	0.98	246	⇓P	Pn	05 59 04.8	-0.6
ELDTW				S	Sb	05 59 16.8	-1.9
TWT	Tachien	0.99	311	*e*P	Pb	05 59 06.1	0.0
TWT				S	Sn	05 59 18.8	+0.1
NNSB	Datong	1.00	326	*i* P	Pn	05 59 05.5	-0.1
NNSB				*e*S	Sb	05 59 17.9	-1.1
TDCB	Techi	1.00	311	⇑P	Pn	05 59 05.9	+0.2
TDCB				S	Sb	05 59 18.1	-1.2
NNS	Nan Shan	1.01	326	P	Pn	05 59 05.8	-0.1
NNS				*e*S	Sb	05 59 17.9	-1.6
TWC	Suao	1.01	353	P	Pn	05 59 06.1	+0.3
TWC				S	Sb	05 59 18.9	-0.5
LATG	Datong	1.03	336	P	Pn	05 59 05.9	-0.2
LATG				*i* S	Sb	05 59 19.0	-0.8
LDUT	Ludao	1.04	208	*e*S	Sn	05 59 17.3	-2.4

SMLT	Sun Moon Lake	1.04	286	P	Pn	05 59 06.4	+0.2
LONT	Longtian	1.05	229	*i* P	Pn	05 59 06.0	-0.2
LONT				*i* S	Sn	05 59 19.1	-0.9
WHYT	Xinyi Township	1.05	276	*i* P	Pn	05 59 06.9	+0.6
WHYT				*i* S	Sn	05 59 20.2	+0.3
NDS	Dongshan	1.06	346	*e*P	Pn	05 59 06.8	+0.3
NDS				S	Sb	05 59 20.6	-0.2
TYC	Yuchr	1.08	287	*i* P	Pn	05 59 06.9	+0.2
TYC				*e*S	Sb	05 59 21.6	+0.2
WCS	Beigang Elemen	1.09	295	*i* P	Pn	05 59 07.3	+0.5
WCS				*e*S	Sn	05 59 20.9	0.0
ALS	Alishan	1.09	266	P	Pn	05 59 07.7	+0.6
ALS				S	Sn	05 59 21.7	+0.3
ENTT	Nioudou	1.11	339	*i* P	Pn	05 59 07.4	+0.3
ENTT				*i* S	Sb	05 59 21.8	-0.3
TWGBT	Beinan	1.14	227	P	Pb	05 59 09.1	+0.5
TWGBT	Beinan	1.14	227	*e*P	Pn	05 59 07.1	-0.4
TWGBT				*e*S	Sn	05 59 21.2	-1.0
TWG	Pinlang	1.15	228	*e*S	Sn	05 59 20.9	-1.4
TWE	Neicheng	1.16	345	*e*P	Pn	05 59 08.2	+0.5
WHP	Taichung City	1.17	305	*e*P	Pb	05 59 09.6	+0.4
WHP				*i* S	Sb	05 59 23.5	-0.5
WJS	Zhushan	1.18	281	*e*P	Pb	05 59 09.7	+0.5
STYH	Taoyuan	1.20	249	*i* P	Pn	05 59 08.8	+0.6
STYH				*e*S	Sn	05 59 23.5	0.0
CHN5	Tsauling	1.21	270	*e*P	Pb	05 59 09.9	+0.2
YHNB	Yeheng	1.21	332	P	Pn	05 59 08.6	+0.1
YHNB	Yeheng	1.21	332	*i* P	Pn	05 59 08.9	+0.4
YHNB				*e*S	Sn	05 59 23.6	-0.3
FUSB	Fushanzhiwuyua	1.22	342	*e*P	Pn	05 59 09.1	+0.6
NSK	Sanguang	1.22	332	*e*P	Pn	05 59 09.0	+0.3
NSK				*i* S	Sn	05 59 23.7	-0.5
WNT	Mingjian	1.23	283	*e*P	Pb	05 59 10.4	+0.4
NWLT	Wulai	1.26	339	*e*P	Pn	05 59 09.8	+0.7
NWLT				S	Sn	05 59 24.9	-0.1
WCKO	Fanlu	1.28	263	*e*P	Pb	05 59 11.4	+0.4
WCKO				*i* S	Sb	05 59 28.0	+0.9
TPUB	Ta-pu	1.29	257	P	Pn	05 59 10.8	+1.3
TPUB	Ta-pu	1.29	257	S	Sb	05 59 28.0	+0.8
TPUB	Ta-pu	1.29	257	*i* P	Pb	05 59 10.9	-0.1
TPUB				S	Sb	05 59 28.1	+0.9
NFF	Wufeng Townshi	1.30	322	*i* P	Pb	05 59 11.7	+0.3
NFF				S	Sb	05 59 27.8	+0.1
WTP	Ta-pu	1.31	255	*e*P	Pn	05 59 11.0	+1.1
WGK	Gukeng	1.31	274	*e*P	Pb	05 59 11.8	+0.3
WDLH	Douliu	1.34	274	*e*P	Pb	05 59 11.9	+0.1
TWQ1	Liyutan	1.34	304	*e*P	Pb	05 59 12.2	+0.2
TWQ1				S	Sb	05 59 29.6	+0.8
NSTT	Nanjuang	1.37	319	*e*P	Pb	05 59 12.8	+0.3
NSTT				*i* S	Sb	05 59 28.8	-0.8
LIOB	Emei	1.37	320	P	Pb	05 59 12.8	+0.3
TIPB	Shuangxi	1.38	354	P	Pb	05 59 12.1	-0.5
TIPB				S	Sb	05 59 29.6	-0.2
KSHI	Guanxi Townshi	1.39	328	*e*P	Pb	05 59 12.4	-0.4
WCHH	Zhanghua	1.40	290	P	Pb	05 59 13.3	+0.4
TWB1	Santiao Chiao	1.40	360	*e*P	Pn	05 59 11.8	+0.7
CHN1	Nanshi	1.41	253	*e*P	Pb	05 59 13.2	+0.1
TWK	Hsinying	1.42	257	P	Pb	05 59 13.1	-0.2
SNST	Tainan City	1.42	255	*e*P	Pb	05 59 13.3	-0.1
SNST				*i* S	Sb	05 59 31.7	+0.6
TWA	Mucha	1.43	345	*e*P	Pb	05 59 12.9	-0.5
CHY	Chiayi	1.44	266	*e*P	Pb	05 59 13.5	-0.2
TATO	Taipei	1.45	342	P	Pn	05 59 12.8	+1.1
WFSB	Wu-fen Shan	1.48	353	*e*P	Pb	05 59 14.0	-0.3
SXI1	Grass Mountain	1.49	356	*e*P	Pn	05 59 13.6	+1.2
SSD	Sandimen	1.51	236	*e*P	Pn	05 59 12.5	-0.1
NCUH	Zhongli	1.55	332	*e*P	Pb	05 59 15.1	-0.4
NCUH				*i* S	Sb	05 59 34.5	-0.3
TWS1	Kuangyinshan	1.59	341	*e*P	Pn	05 59 14.8	+1.2
YM01	YM01	1.59	346	*e*P	Pn	05 59 14.7	+1.0
MASBT	Mashibuluo	1.59	232	*e*P	Pn	05 59 14.6	+0.9
ZUZH	Zhuzihu	1.61	345	*i* P	Pn	05 59 14.9	+0.9
WSL	Shuilin Townsh	1.62	268	*e*P	Pn	05 59 15.8	+1.7
YM08	YM08	1.62	347	*e*P	Pn	05 59 15.1	+0.9
ANP	Anpu	1.64	345	*e*P	Pb	05 59 16.5	-0.6
TWY	Chenhua	1.71	348	*e*S	Sn	05 59 35.5	-0.6
IRIF	Iriomote-Funau	1.75	65	*e*P	Pn	05 59 16.5	+0.6
IRIF				*e*S	Sn	05 59 38.0	+0.8
TSCK	Chigu Township	1.81	256	P	Pn	05 59 18.8	+2.1
JKRS	Kuro-shima	1.95	71	*e*P	Pn	05 59 19.5	+0.9
JKRS				*e*S	Sn	05 59 42.7	+0.5
PHUB	P'eng-hu	2.22	268	*i* P	Pn	05 59 23.7	+1.4
PHUB				S	Sn	05 59 49.7	+0.8
JISG	Ishigakijimahi	2.34	65	*e*P	Pn	05 59 24.0	+0.1
JISG				*e*S	Sn	05 59 50.9	-0.8

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*NEIC **06** 06:10:09.6±1.3, 19°.7N±0°.1×64°.5W±0°.1, h10^{km}±2^{km}, ML2.5/17, Md3.7/7(RSPR), Error ellipse: s-maj=24.2km s-min=15.8km az=136.0*

RSPR 06 06:10:14.3, 19°.78N×64°.58W, h78^{km}±30^{km}, MD3.7/7, 4C-5D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUMP	Col San Antoni	2.02	217		Sn	06 11 08.7	-2.3
HUMP	Col San Antoni	2.02	217		Pn	06 10 44.0	-2.5
HUMP				IAML		06 11 16.8	
	20nm,0.8s						
HUMP	Col San Antoni	2.02	217	⇓*e*P	Pn	06 10 44.9	-1.6
HUMP	Col San Antoni	2.02	217	*e*S	Sn	06 11 08.7	-2.3
GCPR	Guaynabo City	2.04	224	Pn	Pn	06 10 43.2	-3.5
ECPR	Experimental S	2.23	229	Pn	Pn	06 10 47.6	-1.6
ECPR				IAML		06 11 18.0	
	38nm,0.2s						
ECPR				IAML		06 11 21.5	
	29nm,0.2s						
ECPR	Experimental S	2.23	229	⇑*e*P	Pn	06 10 48.2	-1.0
ECPR	Experimental S	2.23	229	*e*S	Sn	06 11 15.4	-0.4
SJG	San Juan	2.23	222	Pn	Pn	06 10 47.0	-2.2
SJG				IAML		06 11 20.7	
	18nm,1.4s						
EMPR	Esperanza - Ma	2.25	235	Pn	Pn	06 10 47.8	-1.8
AOPR	Arecibo Observ	2.50	236		Pn	06 10 50.7	-2.2
AOPR					Sn	06 11 21.1	-1.4
AOPR				IAML		06 11 28.7	
	comp=E,48nm,0.4s						
AOPR	Arecibo Observ	2.50	236	⇓*e*P	Pn	06 10 52.7	-0.3
AOPR	Arecibo Observ	2.50	236	*e*S	Sn	06 11 22.7	+0.1
UUPR	Utuado, UPR, P	2.53	233		Pn	06 10 53.7	+0.4
UUPR					Sn	06 11 23.0	-0.2
UUPR	Utuado, UPR, P	2.53	233	⇑*e*P	Pn	06 10 53.7	+0.4
UUPR	Utuado, UPR, P	2.53	233	*e*S	Sn	06 11 23.0	-0.2
OBIP	Obispado Ponce	2.58	228		Sn	06 11 24.4	0.0
OBIP	Obispado Ponce	2.58	228		Pn	06 10 52.8	-1.1
OBIP				IAML		06 11 15.0	
	comp=N,11nm,1.3s						
OBIP				IAML		06 11 33.7	
	comp=E,14nm,1.4s						
OBIP	Obispado Ponce	2.58	228	⇑*e*P	Pn	06 10 53.4	-0.6
OBIP	Obispado Ponce	2.58	228	*e*S	Sn	06 11 24.4	0.0
LSP	Las Mesas	2.86	236		Pn	06 10 58.3	+0.5
LSP					Sn	06 11 30.6	-0.6
LSP	Las Mesas	2.86	236	⇓*e*P	Pn	06 10 58.3	+0.5
LSP	Las Mesas	2.86	236	*e*S	Sn	06 11 30.6	-0.6
MLPR	Magueyes Islan	2.95	233	⇓*e*P	Pn	06 10 58.7	-0.2
MLPR	Magueyes Islan	2.95	233	*e*S	Sn	06 11 35.2	+1.9
CRPR	Cabo Rojo, PR	2.97	234		Pn	06 10 57.3	-2.0
CRPR	Cabo Rojo, PR	2.97	234	IAML		06 12 37.9	
	comp=E,19nm,1.4s						
CRPR				IAML		06 12 47.2	
	comp=E,12nm,1.4s						
CRPR	Cabo Rojo, PR	2.97	234	⇑*e*P	Pn	06 10 59.1	-0.2
CRPR	Cabo Rojo, PR	2.97	234	*e*S	Sn	06 11 36.7	+2.7
MIDR	Miches	4.29	260	⇓*e*P	Pn	06 11 16.7	-0.5
MIDR	Miches	4.29	260	*e*S	Sn	06 12 06.8	+0.8
DR12	Loma Pena Alta	4.64	258	Pn	Pn	06 11 21.1	-1.0

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*NEIC **06** 06:58:56.9±1.6, 19°.2N±0°.2×64°.2W±0°.1, h10^{km}±2^{km}, ML2.2/12, Md3.7/3(RSPR), Error ellipse: s-maj=35.3km s-min=5.8km az=148.0*

RSPR 06 06:59:01.0, 19°.57N×64°.42W, h66^{km}±13^{km}, MD3.7/3, 4C-2D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUMP	Col San Antoni	1.96	224		Sn	06 59 55.1	-0.6
HUMP	Col San Antoni	1.96	224		Pn	06 59 29.7	-2.4
HUMP				IAML		07 00 07.2	
	10nm,1.1s						
HUMP	Col San Antoni	1.96	224	⇑*e*P	Pn	06 59 31.3	-0.8
HUMP	Col San Antoni	1.96	224	*e*S	Sn	06 59 55.1	-0.6
GCPR	Guaynabo City	2.01	232	Pn	Pn	06 59 30.2	-2.5
ECPR	Experimental S	2.22	236	Pn	Pn	06 59 34.7	-0.9
ECPR				IAML		07 00 11.1	
	13nm,0.2s						
ECPR				IAML		07 00 31.2	
	12nm,1.2s						
ECPR	Experimental S	2.22	236	⇑*e*P	Pn	06 59 35.0	-0.6
ECPR	Experimental S	2.22	236	*e*S	Sn	07 00 02.5	+0.6
AOPR	Arecibo Observ	2.52	242		Sn	07 00 09.0	-0.3
AOPR	Arecibo Observ	2.52	242		Pn	06 59 38.4	-1.3
AOPR	Arecibo Observ	2.52	242	⇓*e*P	Pn	06 59 38.9	-0.8
AOPR	Arecibo Observ	2.52	242	*e*S	Sn	07 00 09.0	-0.3
OBIP	Obispado Ponce	2.56	234	Pn	Pn	06 59 38.3	-2.0
OBIP				IAML		07 00 24.6	
	comp=E,8.2nm,1.4s						
OBIP				IAML		07 00 50.2	
	comp=N,9.8nm,1.4s						
LSP	Las Mesas	2.88	242		Pn	06 59 44.2	-0.4
LSP					Sn	07 00 19.2	+1.1
LSP	Las Mesas	2.88	242	⇑*e*P	Pn	06 59 44.2	-0.4
LSP	Las Mesas	2.88	242	*e*S	Sn	07 00 19.2	+1.1
MLPR	Magueyes Islan	2.95	238	⇑*e*P	Pn	06 59 45.1	-0.4
CRPR	Cabo Rojo, PR	2.98	239		Sn	07 00 19.9	-0.6
CRPR	Cabo Rojo, PR	2.98	239		Pn	06 59 44.6	-1.3
CRPR				IAML		07 00 08.6	
	comp=N,13nm,1.5s						
CRPR	Cabo Rojo, PR	2.98	239	⇓*e*P	Pn	06 59 45.6	-0.4
CRPR	Cabo Rojo, PR	2.98	239	*e*S	Sn	07 00 19.9	-0.6
DR12	Loma Pena Alta	4.75	261	Pn	Pn	07 00 11.6	+1.4

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*IDC **06** 07:05:34.1±1.3, 0°.94N×125°.15E, h0^{km}, mb3.9/5, mbtmp3.8/6, ML3.7/1, MS3.4/2, Error ellipse: s-maj=60.9km s-min=15.1km az=78.0*

*DJA **06** 07:05:45.6±0.6, 1°N±2°×12°5E±°, h31^{km}±10^{km}, M4.3/26, mb4.5/17, mB5.3/3, MLv4.2/26, Mw(mB)4.7/3*

ISC 06 07:05:44.6±0.9, 0°.80N±0°.06×125°.32E±0°.07, h79^{km}, n34, σ1§45/34, mb3.9/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNI	Manado	0.80	323	P	Pn	07 06 01.4	+0.1
MNI				S	Sn	07 06 14.6	+0.9
KMSI	Cibinong	1.35	260	P	Pn	07 06 08.1	+0.1
TNTI	Ternate	2.05	91	P	Pn	07 06 17.1	-0.1
GTOI	Gorontalo	2.31	266	P	Pn	07 06 22.1	+1.4
LBMI	Labuha	2.61	123	P	Pn	07 06 25.3	+0.5
GAMI	Galela, Maluku	2.68	67	P	Pn	07 06 27.2	+1.5
SGSI	Sangihe	2.87	4	P	Pn	07 06 30.4	+2.1
SANI	Sanana	2.91	167	P	Pn	07 06 26.8	-2.0
LUWI	Luwuk	3.13	234	P	Pn	07 06 32.8	+1.0
MRSI	Marisa	3.39	265	P	Pn	07 06 35.8	+0.5
APSI	Ampana	4.04	245	P	Pn	07 06 45.3	+1.2
NLAI	Namlea	4.39	156	P	Pn	07 06 48.5	-0.4
KRAI	Karang Ratu	5.12	143	P	Pn	07 07 00.0	+1.1
AAI	Ambon	5.31	147	P	Pn	07 07 02.4	+1.0
	0.4nm84nm,0.6s						
MPSI	Mapaga	5.44	265	P	Pn	07 07 05.3	+2.1
KDI	Kendari	5.44	210	P	Pn	07 07 03.0	-0.3
MSAI	Masohi	5.48	139	P	Pn	07 07 04.5	+0.7
	0.5nm3µm82nm,0.7s						
DAV	Davao City (W)	6.23	2	LR	LR	07 09 37.6	
	comp=Z,98nm,18.2s,baz=204,slow=40						
TTSI	Tana Toraja	6.69	235	P	Pn	07 07 22.2	+1.9
	0.1nm13nm,0.5s						
BNDI	Bandanaira	7.00	139	P	Pn	07 07 24.9	+0.3
	36nm,0.7s						
MMSI	Mamuju	7.28	242	P	Pn	07 07 30.9	+2.5
	0.1nm15nm,0.7s						
SPSI	Sidrap Palu	7.29	229	P	Pn	07 07 31.6	+3.1
	0.1nm838nm10nm,0.5s						
BNSI	Bone	7.33	225	P	Pn	07 07 29.7	+0.6
	0.1nm8.3nm,0.8s						
PMSI	Majene	7.69	236	P	Pn	07 07 32.5	-1.6
	44nm,1.1s						
FAKI	Fak Fak	7.86	118	P	Pn	07 07 37.9	+1.6
	0.1nm11nm,0.9s						
KMPI	Kaimana, Papua	9.48	118	P	Pn	07 07 59.7	+1.2
SAUI	Saumlaki	10.57	146	P	Pn	07 08 13.9	+0.6
FITZ	Fitzroy Crossi	18.78	179	P	P	07 09 56.3	-1.4
	0.2nm,0.3s,baz=0.0,slow=9.1,SNR=2.4						
FITZ				S	Sn	07 13 31.6	+2.5
	1.1nm,0.7s,baz=330,slow=20,SNR=2.3						
	1.1nm,0.5s						
WRA	Warramunga Arr	22.43	157	P	P	07 10 36.2	-1.0
	2.6nm,0.5s,baz=333,slow=10,SNR=18						
	2.6nm,0.5s						
ASAR	Alice Springs	25.71	162	P	P	07 11 07.8	0.0
	3.6nm,0.9s,baz=338,slow=9.0,SNR=30						
	3.6nm,0.9s						
STKA	Stephens Creek	35.98	156	P	P	07 12 38.5	+0.5
	2.5nm,0.7s,baz=332,slow=8.4,SNR=5.0						
	2.5nm,0.7s						
MKAR	Makanchi Array	59.18	327	P	P	07 15 36.1	-1.3
	0.2nm,0.5s,baz=118,slow=8.6,SNR=2.1						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	63.46	329	P	P	07 16 04.2	-1.9
	0.2nm,0.4s,baz=142,slow=6.6,SNR=1.8						
	0.2nm,0.4s						
LBTB	Lobatse	99.15	245	LR	LR	08 01 24.0	
	comp=Z,49nm,19.9s,baz=98,slow=34						

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*IDC **06** 07:44:07.8±1.2, 41°.53N×19°.26E, h0^{km}, mb3.7/10, mbtmp3.8/14, ML2.5/3, MS2.7/2, Error ellipse: s-maj=19.2km s-min=13.2km az=25.0*

*THE **06** 07:44:10.3, 42°N±13°×1°9E±°, h7^{km}±19^{km}, M3.4/11, MLh3.4/11*

*TIR **06** 07:44:12.3, 41°.66N×19°.52E, h33^{km}±2^{km}, Ml3.7/4*

*BEO **06** 07:44:12.8±0.5, 41°.59N×19°.49E, h14^{km}±1^{km}, ML3.4/20*

*PDG **06** 07:44:12.8±0.6, 41°.65N×19°.47E, h16^{km}±1^{km}, MD3.6/11, ML3.5/13, Error ellipse: s-maj=0.6km s-min=1.7km az=0.0*

*SOF **06** 07:44:34.1, 41°.91N±0°.03×21°.38E±0°.04, h40^{km}±1^{km}, MD3.1/5*

*PRU **06** 07:44:54.0, 44°.29N×17°.58E, h10^{km}*

ISC 06 07:44:12.0±0.9, 41°.61N±0°.02×19°.48E±0°.02, h19^{km}±2^{km}, n136, σ1§72/195, mb3.8/8, 32C-17D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.39	132	Pg	Pg	07 44 18.9	-1.3
TIR				Sg	Sg	07 44 24.4	-1.4
TIR				AML	AML	07 44 24.9	
	26nm,0.4s						
TIR				AML	AML	07 44 24.9	
	16nm,0.4s						
ULC	Ulcinj	0.39	334	⇑*i*Pg	Pg	07 44 20.1	-0.2
ULC				*i* Sg	Sg	07 44 25.8	-0.1
SDA	Shkodra	0.44	2	Pg	Pg	07 44 20.7	-0.5
SDA				S	Sb	07 44 28.2	+0.6
DRME	Dracevica, Mon	0.62	339	⇓*i*Pg	Pg	07 44 24.2	-0.1
DRME				*e*Sg	Sg	07 44 32.6	0.0
PHP	Peshkopia	0.73	84	Pg	Pb	07 44 24.7	-1.4
PHP				Sg	Sg	07 44 36.4	+0.3
PHP				AML	AML	07 44 41.5	
	14nm,0.6s						
PHP	Peshkopia	0.73	84	P	Pb	07 44 24.9	-1.2
PHP				S	Sn	07 44 37.2	-0.8
BUM	Brajici-Budva	0.82	328	⇑*i*Pg	Pg	07 44 28.0	-0.1
BUM				*i* Sg	Sn	07 44 39.5	-0.7
PDG	Podgorica	0.84	349	P	Pb	07 44 27.8	-0.2
PDG				Sn	Sg	07 44 39.6	0.0
PDG	Podgorica	0.84	349	⇓P	Pn	07 44 28.6	-0.2
PDG				⇑S	Sn	07 44 41.2	+0.6
PDG	Podgorica	0.84	349	*e*Pg	Pb	07 44 27.7	-0.3
PDG				*e*Sg	Sn	07 44 41.4	+0.8
PDG	Podgorica	0.84	349	⇑*i*Pg	Pb	07 44 27.7	-0.3
PDG				*i* Sg	Sn	07 44 40.9	+0.3
CEME	Cevo	1.02	336	⇑*i*Pg	Pg	07 44 32.0	0.0
CEME				*e*Sg	Sn	07 44 46.9	+1.6
PVY	Plav	1.05	20	⇑*i*Pg	Pb	07 44 30.8	-0.9
PVY				*i* Sg	Sg	07 44 48.8	+2.5
HCY	Herceg Novi	1.11	319	⇑*i*Pg	Pn	07 44 32.6	0.0
HCY				*i* Sg	Sg	07 44 50.2	+2.0
OHR	Ohrid	1.11	116	*i* Pg	Pn	07 44 31.7	-1.0
OHR				*i* Sg	Sg	07 44 49.6	+1.3
VLO	Vlora	1.14	179	Pg	Pg	07 44 33.9	-0.2
VLO				S	Sg	07 44 50.2	+1.1
VLO				AML	AML	07 44 58.8	
	7.6nm,0.5s						
NKME	Niksic	1.22	342	⇑*i*Pg	Pg	07 44 35.2	-0.5
NKME				*e*Sg	Sg	07 44 52.8	+1.1
KOME	Kolasin	1.24	1	⇑*i*Pg	Pb	07 44 34.9	0.0
KOME				*e*Sg	Sg	07 44 54.5	+2.1
IVA	Berane	1.30	14	⇓*i*Pg	Pn	07 44 35.2	-0.1
IVA				*i* Sg	Sg	07 44 56.1	+1.9
TREB	Trebinje	1.39	323	*e*Pn	Pb	07 44 37.7	+0.3
TREB	Trebinje	1.39	323	*e*Pg	Pb	07 44 37.9	+0.5
TREB				*e*Sg	Sg	07 44 57.2	+0.2
KBN	Korca	1.40	134	Pg	Pg	07 44 38.5	-0.5
KBN				Sg	Sb	07 44 56.3	+1.3
KBN	Korca	1.40	134	P	Pg	07 44 38.7	-0.3
KBN				S	Sg	07 45 00.9	+3.6
BRY	Bratogost	1.47	332	⇓*i*Pg	Pb	07 44 39.2	+0.4
BRY				*i* Sg	Sg	07 44 59.2	-0.3
SKO	Skopje	1.51	75	*i* Pn	Pb	07 44 40.0	+0.5
SKO				*i* Sn	Sg	07 45 01.2	+0.3
UPM	Unac-Piva	1.65	345	⇓*i*Pn	Pb	07 44 42.3	+0.4
UPM				*i* Sn	Sg	07 45 03.9	-1.4
NEST	Nestorio	1.69	135	P	Pb	07 44 43.5	+1.0
SJES	Sjenica	1.69	12	*e*Pg	Pg	07 44 43.6	-1.0
SJES				*e*Sg	Sg	07 45 06.2	-0.5
KLINJ	Klinje	1.69	337	*e*Pn	Pb	07 44 42.6	0.0
PLE	Pljevlja	1.72	358	⇑*i*Pn	Pg	07 44 44.3	-0.9
PLE				*i* Sn	Sg	07 45 06.4	-1.2
STON	Ston	1.82	314	*e*Pn	Pb	07 44 43.6	-1.2
STON				*e*Sn	Sb	07 45 08.1	+0.9
PENT	Pentalofos	1.89	138	P	Pb	07 44 46.8	+0.8
PENT				S	Sg	07 45 15.1	+2.0
KEK	Kerkira	1.91	173	P	Pg	07 44 48.4	-0.4
KEK				S	Sn	07 44 55.9	-11
NOCI	Noci	2.00	247	Pn	Pn	07 44 44.8	0.0
RUDO	Rudo	2.01	358	*e*Pn	Pb	07 44 47.6	-0.4
RUDO	Rudo	2.01	358	*e*Pn	Pb	07 44 47.7	-0.3
RUDO				*e*Sn	Sb	07 45 12.7	+0.1
SELS	Selova	2.02	37	*e*Pn	Pb	07 44 47.0	-1.1
SELS				*e*Sn	Sb	07 45 11.7	-1.1
IVAS	Ivanjica	2.03	14	*e*Pn	Pb	07 44 47.2	-1.1
IVAS				*e*Sn	Sb	07 45 12.5	-0.7
BARS	Barje	2.12	54	*e*Pn	Pb	07 44 48.1	-1.7
BARS				*e*Sn	Sb	07 45 14.2	-1.4
KZN	Kozani	2.17	126	P	Pb	07 44 49.9	-0.9
IGT	Igoumenitsa	2.17	162	Pn	Pn	07 44 48.2	+1.0
IGT				Sn	Sb	07 45 18.6	+1.3
IGT				AML	AML	07 45 22.7	
	0.6nm,0.5s						
IGT	Igoumenitsa	2.17	162	P	Pn	07 44 47.7	+0.4
KPRO	Kipourio	2.19	138	P	Pb	07 44 50.6	-0.4
KPRO				S	Sg	07 45 23.7	+1.2
LFKM	Lefkimmi	2.21	168	P	Pn	07 44 41.1	-6.5
LFKM				S	Sg	07 45 25.2	+2.1
GOCS	Kraljevo Serbi	2.21	27	*e*Pn	Pb	07 44 49.8	-1.6
GOCS				*e*Sn	Sn	07 45 16.4	+1.8
BBLS	Lazi&#263i	2.26	359	*e*Pn	Pb	07 44 50.8	-1.4
BBLS				*e*Sn	Sn	07 45 17.5	+1.8
GRG	Griva	2.30	106	P	Pn	07 44 50.6	+1.7
GRG				S	Sb	07 45 20.5	-0.4
MATE	Matera	2.30	246	⇑P	Pn	07 44 48.5	-0.4
VAY	Valandovo	2.34	96	*i* Pn	Pn	07 44 51.1	+1.6
VAY				*i* Sn	Sb	07 45 20.1	-2.0
BOSS	Bosilegrad	2.41	67	*e*Pn	Pn	07 44 51.7	+1.3
BOSS				*e*Sn	Sn	07 45 21.0	+1.7
GRUS	Gruza	2.45	21	*e*Pn	Pb	07 44 53.3	-2.2
GRUS				*e*Sn	Sn	07 45 22.6	+2.1
DIVS	Divibare	2.52	8	*e*Pn	Pn	07 44 54.1	+2.1
DIVS				*e*Sn	Sn	07 45 23.3	+1.1
BOVS	Bovan	2.61	38	⇓P	Pn	07 44 55.1	+2.0
BOVS	Bovan	2.61	38	*e*Pn	Pn	07 44 54.9	+1.7
BOVS				*e*Sn	Sn	07 45 25.5	+1.2
KNT	Kendrikon	2.61	99	P	Pn	07 44 54.7	+1.5
KNT				S	Sn	07 45 26.4	+2.0
TRUS	Trudelj	2.70	14	*e*Pn	Pn	07 44 56.5	+2.1
KKB	Krupnik	2.74	84	*i* P	Pn	07 44 57.0	+2.0
KKB				*i* S	Sn	07 45 14.4	-13
ZAPS	Zavoj	2.87	54	*e*Pn	Pn	07 44 58.6	+1.8
ZAPS				*e*Sn	Sn	07 45 33.4	+2.6
TEKS	Tekeris	2.94	1	*e*Pn	Pn	07 44 59.1	+1.4
TEKS				*e*Sn	Sn	07 45 34.1	+1.6
VTS	Vitosha	2.97	69	*i* P	Pn	07 45 00.4	+2.1
VTS				*i* S	Sn	07 45 19.9	-14
ZAGS	Zajecar	3.00	42	*e*Pn	Pn	07 45 00.5	+2.0
ZAGS				*e*Sn	Sn	07 45 36.7	+2.9
PLNA	Plana	3.07	72	*i* P	Pn	07 45 02.1	+2.5
PLNA				*i* S	Sn	07 45 21.0	-15
BLSH	Balsha	3.09	65	*i* P	Pn	07 45 02.2	+2.4
AVAS	Avala Beograd	3.18	13	*e*Pn	Pn	07 45 02.0	+1.0
AVAS				*e*Sn	Sn	07 45 39.4	+1.0
TIP	Timpagrande	3.19	221	⇑P	Pn	07 45 00.8	-0.5
MMB	Musomishta	3.21	90	*i* P	Pn	07 45 03.6	+2.2
MMB				*i* S	Sn	07 45 26.0	-13
KUBS	Kucevo	3.23	29	*e*Pn	Pn	07 45 02.3	+0.6
KUBS				*e*Sn	Sn	07 45 40.8	+1.1
FRGS	Fruska Gora	3.56	4	*e*Pn	Pn	07 45 07.2	+1.0
BLY	Banja Luka	3.56	333	*e*Pn	Pb	07 45 15.6	+1.3
BLY	Banja Luka	3.56	333	*e*Pn	Pn	07 45 08.5	+2.3
MDVR	Moldovita	3.57	27	⇑P	Pn	07 45 08.3	+1.9
MPEP	Malo Peshtene	3.60	60	*i* S	Sn	07 45 37.8	-11
MPEP				*i* P	Pn	07 45 09.4	+2.5
VRSS	Vrsac	3.76	20	*e*Pn	Pn	07 45 09.6	+0.6
VRSS				*e*Sn	Sn	07 45 53.2	+0.5
DJES	Djerdap	3.78	35	*e*Pn	Pn	07 45 10.9	+1.6
HERR	Herculane	3.91	32	⇑P	Pn	07 45 13.1	+2.0
SRE	Strehaia	4.09	41	⇓P	Pn	07 45 16.0	+2.4
PLVB	Pleven	4.20	63	⇓P	Pn	07 45 17.7	+2.7
BZS	Buzias	4.30	20	⇑P	Pn	07 45 18.4	+2.0
VLAD	Vladila	4.34	55	⇑P	Pn	07 45 19.9	+2.9
GZR	Gura Zlata	4.48	31	⇑P	Pn	07 45 21.6	+2.6
SURR	Surduc	4.57	24	⇑P	Pn	07 45 21.9	+1.9
AQU	L'Aquila	4.59	281	*e*Pn	Pn	07 45 19.3	-1.1
MORH	Mrgy, Hungar	4.64	353	*e*Pn	Pn	07 45 21.8	+0.7
MORH	Mrgy, Hungar	4.64	353	⇑P	Pn	07 45 22.5	+1.4
SIRR	Siria	4.92	18	⇓P	Pn	07 45 27.1	+2.2
ELND	Elena	4.93	72	⇑P	Pn	07 45 27.5	+2.4
LOT	Lotru	4.95	38	⇑P	Pn	07 45 28.0	+2.6
BOJS	Bojanci	4.96	323	*i* Pn	Pn	07 45 26.8	+1.4
HUMR	Humele	4.98	52	⇑P	Pn	07 45 28.3	+2.6
GBRS	Gornja Briga	5.18	321	*i* Pn	Pn	07 45 30.2	+1.6
ARR	Arges	5.31	43	⇓P	Pn	07 45 33.0	+2.7
MTUR	Matau	5.44	47	⇑P	Pn	07 45 35.2	+3.0
VOIR		5.57	45	⇓P	Pn	07 45 37.0	+3.1
MARR	Marisel-Cluj	5.70	26	⇓P	Pn	07 45 38.1	+2.4
JAVS	Javornik	5.80	319	*i* Pn	Pn	07 45 38.1	+0.9
SOKA	Soboth	5.99	329	*i* Pn	Pn	07 45 40.8	+1.1
	3.2nm,0.7s						
SOKA				*i* Sn	Sn	07 46 47.2	-0.6
	7.4nm,0.6s						
VOJS	Vojsko	5.99	319	*e*Pn	Pn	07 45 40.5	+0.7
MLR	Muntele Rosu	6.09	48	Pn	Pn	07 45 44.1	+2.9
	9.0nm,0.4s,baz=221,slow=1.5,SNR=20						
MLR				Sn	Sn	07 46 53.9	+3.5
	1.7nm,0.3s,baz=169,slow=21,SNR=3.1						
MLR				LR	LR	07 48 07.1	
	comp=Z,94nm,18.2s,baz=350,slow=38						
MLR	Muntele Rosu	6.09	48	⇑P	Pn	07 45 44.0	+2.9
DOPR	Dopca	6.11	42	⇓P	Pn	07 45 44.1	+2.8
ISR	Istrita	6.23	53	⇓P	Pn	07 45 46.1	+3.1
PSZ	Piszkesteto	6.32	3	⇑P	Pn	07 45 46.0	+1.9
OZUR		6.40	43	⇓P	Pn	07 45 48.3	+3.1
COVR	Voineasa-Covas	6.46	47	⇑P	Pn	07 45 48.5	+2.4
TURR	Turia	6.49	45	⇑P	Pn	07 45 49.6	+3.1
BISRR	Bisoca	6.56	51	⇓P	Pn	07 45 50.4	+2.8
PLOR	Plostina	6.71	48	⇑P	Pn	07 45 52.7	+3.3
VRI	Vrincioaia	6.76	49	⇑P	Pn	07 45 53.3	+3.1
KECS	Kecovo	6.91	6	*e*PN	Pn	07 45 55.2	+3.0
KECS				*e*SN	Sn	07 47 09.8	-0.5
MODS	Modra-Piesok	6.94	348	*e*PN	Pn	07 45 58.5	+5.8
MODS				*e*SN	Sn	07 47 10.4	-0.7
TIRR	Tirgusor	7.14	64	⇓P	Pn	07 45 57.9	+2.5
ABTA	Abfaltersbach	7.17	318	*i* Pn	Pn	07 45 57.8	+1.9
	1.3nm,0.3s						
ABTA				*e*Sn	Sn	07 47 16.7	-0.2
	11nm,0.9s						
CFR	Carcaliu	7.25	58	⇑P	Pn	07 45 59.2	+2.3
BURAR	Bucovina Array	7.27	32	⇑P	Pn	07 46 00.5	+3.3
TPGR	Topolog	7.29	61	⇑P	Pn	07 45 59.7	+2.2
LESA	Schwarzleotal	7.57	322	*e*Pn	Pn	07 46 04.1	+2.7
	3.3nm,0.3s						
IDI	Anoyia	7.61	144	Pn	Pn	07 46 01.7	-0.2
	0.4nm,0.3s,baz=318,slow=6.0,SNR=2.5						
IDI				Sn	Sn	07 47 22.2	-5.3

	0.5nm,0.3s,baz=4.1,slow=13,SNR=1.5						
	15nm,0.9s						
WTTA	**Wattenberg**	**7.96**	**318**	*i* Pn	**Pn**	**07 46 10.2**	**+3.4**
	2.2nm,0.2s						
WTTA				*e*Sn	**Sn**	**07 47 36.6**	**+0.2**
	6.7nm,0.5s						
WATA	**Walderalm**	**8.04**	**318**	*i* Pn	**Pn**	**07 46 11.6**	**+3.7**
	2.0nm,0.3s						
WATA				*i* Sn	**Sn**	**07 47 40.3**	**+2.0**
	6.6nm,0.5s						
SQTA	**Sankt Quirin**	**8.15**	**316**	*i* Pn	**Pn**	**07 46 12.6**	**+3.2**
	2.6nm,0.4s						
GERES	**GERESS Array B**	**8.30**	**333**	Pn	**Pn**	**07 46 10.8**	**-0.6**
	baz=153,slow=14,SNR=6.6						
GERES				Sn	**Sn**	**07 47 43.5**	**-1.1**
	0.1nm,0.3s,baz=158,slow=23,SNR=4.8						
	0.9nm,0.5s						
KHC	**Kasperske Hory**	**8.59**	**333**	*e*PN	**Pn**	**07 46 16.4**	**+1.1**
KHC				*e*SN	**Sn**	**07 47 50.4**	**-1.2**
DAVOX	**Davos/Dischmat**	**8.61**	**310**	Pn	**Pn**	**07 46 18.1**	**+2.3**
	1.1nm,0.3s,baz=80,slow=2.6,SNR=6.0						
DAVOX				Sn	**Sn**	**07 47 52.4**	**-0.1**
	0.3nm,0.3s,baz=162,slow=20,SNR=1.4						
BRTR	**Keskin Array B**	**10.92**	**95**	LR	LR	07 52 06.3	
	comp=Z,27nm,18.4s,baz=280,slow=43						
HFS	**Hagfors**	**18.89**	**351**	P	**P**	**07 48 31.1**	**0.0**
	0.2nm,0.3s,baz=155,slow=11,SNR=4.7						
	5.6nm,1.0s						
EKA	**Eskdalemuir Ar**	**20.21**	**320**	P	**P**	**07 48 44.4**	**-1.2**
	2.4nm,0.9s,baz=111,slow=8.5,SNR=5.0						
	2.4nm,0.9s						
FINES	**FINESS Array B**	**20.26**	**9**	P	**P**	**07 48 45.6**	**-0.4**
	4.1nm,0.7s,baz=182,slow=10,SNR=12						
	4.1nm,0.7s						
BELG	**Belogornoye**	**21.88**	**51**	P	**P**	**07 49 03.5**	**0.0**
	4.9nm,0.7s,baz=284,slow=4.2,SNR=1.6						
	4.9nm,0.7s						
BVAR	**Borovoye Array**	**35.63**	**54**	P	**P**	**07 51 08.8**	**+0.5**
	0.5nm,0.4s,baz=302,slow=6.6,SNR=2.7						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**40.92**	**57**	P	**P**	**07 51 52.9**	**0.0**
	0.2nm,0.5s,baz=285,slow=9.4,SNR=2.4						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**44.07**	**51**	P	**P**	**07 52 18.3**	**-0.1**
	1.5nm,0.4s,baz=288,slow=8.2,SNR=7.5						
	1.5nm,0.4s						
MKAR	**Makanchi Array**	**44.27**	**61**	P	**P**	**07 52 20.2**	**0.0**
	0.7nm,0.4s,baz=279,slow=7.4,SNR=7.0						
	0.7nm,0.4s						
SONM	**Songino Array**	**58.93**	**52**	P	**P**	**07 54 10.0**	**0.0**
	0.3nm,0.5s,baz=297,slow=6.3,SNR=2.1						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**73.42**	**354**	P	**P**	**07 55 42.3**	**-0.2**
	0.2nm,0.8s,baz=23,slow=6.5,SNR=2.0						
	0.2nm,0.8s						
PDAR	**Pinedale Array**	**84.27**	**325**	P	**P**	**07 56 41.1**	**-1.6**
	0.2nm,0.6s,baz=18,slow=4.6,SNR=2.4						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**123.26**	**93**	PKP	**PKPdf**	**08 03 05.6**	**-2.2**
	0.3nm,0.6s,baz=288,slow=0.9,SNR=4.8						

SVSA 06 07:46:38.9±0.7, 38°.60N×29°.14W, h7^{km}±7^{km}, ML2.1(INMG), Error ellipse: s-maj=7.5km s-min=5.4km az=68.0, #DIST_RANGE: LOCAL #IPMA_REGION: W Faial, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCAPE	**Capelo, Faial**	**0.25**	**91**	*e*P	Pg	07 46 43.8	0.0
PFCBR	**Castelo Branco**	**0.34**	**103**	*e*P	Pg	07 46 44.8	-0.8
PFCBR				*e*S	Sg	07 46 49.5	-0.7
PFCBR				*i* IAML		07 46 49.9	
PFCBR				*i* IAML		07 46 49.9	
PFCBR				*i* IAML		07 46 50.0	
CALA	**Caldeira**	**0.35**	**93**	*e*P	Pg	07 46 44.9	-0.8
CALA				*e*S	Sg	07 46 49.7	-0.6
CALA				*i* IAML		07 46 50.4	
CALA				*i* IAML		07 46 50.5	
CALA				*i* IAML		07 46 51.2	
PCED	**Cedros**	**0.35**	**85**	*e*P	Pg	07 46 45.1	-0.5
PCED				*e*S	Sg	07 46 49.6	-0.6
PCED				*i* IAML		07 46 50.2	
PCED				*i* IAML		07 46 50.4	
PCED				*i* IAML		07 46 50.6	
HOR	**Horta**	**0.41**	**100**	*e*P	Pg	07 46 45.9	-0.9
HOR				*e*S	Sg	07 46 51.1	-1.1
HOR				*i* IAML		07 46 52.3	
HOR				*i* IAML		07 46 52.7	
HOR				*i* IAML		07 46 53.1	
PCAN	**Candelaria**	**0.53**	**105**	*e*P	Pg	07 46 47.7	-1.5
PCAN				*e*S	Sg	07 46 54.5	-1.6
PCAN				*i* IAML		07 46 55.1	
PCAN				*i* IAML		07 46 56.7	
PCAN				*i* IAML		07 46 57.3	
PICO	**Pico**	**0.57**	**100**	*e*P	Pg	07 46 48.5	-1.4
PICO				*e*S	Sg	07 46 55.8	-1.6
PICO				*i* IAML		07 46 56.4	
PICO				*i* IAML		07 46 57.4	
PPNO	**Prainha do Nor**	**0.70**	**100**	*e*P	Pg	07 46 50.5	-1.9
PPNO				*e*S	Sg	07 46 59.3	-2.2
PPNO				*i* IAML		07 47 01.6	
PPNO				*i* IAML		07 47 02.0	
ROSA	**Rosais**	**0.72**	**80**	*e*P	Pg	07 46 50.5	-2.2
ROSA				*e*S	Sg	07 46 59.0	-2.9
ROSA				*i* IAML		07 47 00.4	
ROSA				*i* IAML		07 47 01.0	
ROSA				*i* IAML		07 47 01.3	
PID	**Ribeirinha**	**0.82**	**101**	*e*S	Sg	07 47 02.1	-3.2
PID				*i* IAML		07 47 03.4	
PID				*i* IAML		07 47 04.0	
PMAN	**Manadas**	**0.83**	**87**	*e*S	Sg	07 47 01.9	-3.6
PMAN				*i* IAML		07 47 02.7	
PMAN				*i* IAML		07 47 03.7	
PMAN				*i* IAML		07 47 04.1	

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*IDC **06** 08:03:46.8±1.6, 0°.94N×125°.16E, h0^{km}, mb3.8/4, mbtmp3.7/5, ML3.6/1, MS3.1/2, Error ellipse: s-maj=115.3km s-min=25.3km az=66.0*

*DJA **06** 08:03:58.1±0.2, 1°N±3°×12°5E±°, h76^{km}±5^{km}, M4.2/20, mB4.8/4, mb4.1/10, MLv4.2/20, Mw(mB)4.1/4*

ISC 06 08:03:57.3±0.9, 0°.77N±0°.07×125°.33E±0°.07, h79^{km}, n28, σ1^{s}37/27, mb3.7/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNI	**Manado**	**0.83**	**324**	P	**Pn**	**08 04 14.4**	**0.0**
KMSI	**Cibinong**	**1.36**	**262**	P	**Pn**	**08 04 20.4**	**-0.5**
GTOI	**Gorontalo**	**2.32**	**267**	P	**Pn**	**08 04 34.8**	**+1.2**
GAMI	**Galela, Maluku**	**2.67**	**67**	P	**Pn**	**08 04 39.5**	**+1.2**
SANI	**Sanana**	**2.88**	**167**	P	**Pn**	**08 04 39.4**	**-1.7**
SGSI	**Sangihe**	**2.90**	**4**	P	**Pn**	**08 04 42.8**	**+1.4**
LUWI	**Luwuk**	**3.13**	**235**	P	**Pn**	**08 04 43.5**	**-1.0**
MRSI	**Marisa**	**3.40**	**265**	P	**Pn**	**08 04 47.5**	**-0.7**
APSI	**Ampana**	**4.04**	**246**	P	**Pn**	**08 04 58.9**	**+2.0**
NLAI	**Namlea**	**4.36**	**156**	P	**Pn**	**08 05 01.1**	**-0.1**
KRAI	**Karang Ratu**	**5.09**	**143**	P	**Pn**	**08 05 13.0**	**+1.8**
	0.6nm46nm,0.6s						
MSAI	**Masohi**	**5.45**	**139**	P	**Pn**	**08 05 18.7**	**+2.6**
MPSI	**Mapaga**	**5.45**	**265**	P	**Pn**	**08 05 17.7**	**+1.6**
	0.1nm1µm4.6nm,0.5s						
PCI	**Palu**	**5.74**	**253**	P	**Pn**	**08 05 19.2**	**-0.9**
TTSI	**Tana Toraja**	**6.69**	**235**	P	**Pn**	**08 05 34.9**	**+1.9**
	0.1nm1µm25nm,0.5s						
BBSI	**Bau Bau**	**6.80**	**204**	P	**Pn**	**08 05 33.9**	**-0.7**
	77nm,0.8s						
BNSI	**Bone**	**7.33**	**225**	P	**Pn**	**08 05 44.0**	**+2.3**
FAKI	**Fak Fak**	**7.83**	**118**	P	**Pn**	**08 05 50.2**	**+1.6**
	0.1nm8.0nm,1.2s						
KAPI	**Kappang**	**8.01**	**224**	LR	LR	08 08 30.4	
	comp=Z,40nm,18.9s,baz=339,slow=35						
FITZ	**Fitzroy Crossi**	**18.76**	**179**	P	**P**	**08 08 10.2**	**0.0**
	0.1nm,0.3s,baz=1.8,slow=11,SNR=2.0						
	1.3nm,0.8s						
PPBI	**Pangkal Pinang**	**19.41**	**261**	P	**P**	**08 08 18.0**	**+0.6**
BBJI	**Bungbulang**	**19.44**	**245**	P	**P**	**08 08 17.2**	**-0.6**
	5.8nm,1.0s						
BTDF	**Bukit Timah Da**	**21.56**	**272**	P	**P**	**08 08 40.1**	**-0.5**
	25nm,1.2s						
WRA	**Warramunga Arr**	**22.40**	**157**	P	**P**	**08 08 48.9**	**-0.7**
	1.3nm,0.5s,baz=334,slow=11,SNR=12						
	1.3nm,0.5s						
ASAR	**Alice Springs**	**25.68**	**162**	P	**P**	**08 09 20.7**	**+0.5**
	0.7nm,0.5s,baz=345,slow=8.3,SNR=15						
ASAR				PcP	**PcP**	**08 12 48.8**	**-0.2**
	0.3nm,0.5s,baz=356,slow=2.7,SNR=4.9						
	0.7nm,0.5s						
STKA	**Stephens Creek**	**35.94**	**156**	P	**P**	**08 10 51.2**	**+0.9**
	3.7nm,0.8s,baz=339,slow=9.2,SNR=7.7						
	3.7nm,0.8s						
MKAR	**Makanchi Array**	**59.21**	**327**	P	**P**	**08 13 48.6**	**-1.8**
	0.2nm,0.3s,baz=128,slow=7.7,SNR=2.4						
	0.2nm,0.3s						
EIL	**Elat**	**89.95**	**300**	LR	LR	09 01 30.2	
	comp=Z,31nm,20.2s,baz=351,slow=39						

IDC 06 08:30:52.5±2.7, 49°.56S×108°.72E, h0^{km}, mb3.8/4, mbtmp3.8/4, MS3.7/6, Error ellipse: s-maj=151.0km s-min=28.0km az=127.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.18**	**17**	T	T	08 49 50.2	
	baz=199,slow=74,SNR=36						
H01W1	**Cape Leeuwin H**	**15.19**	**17**	T	T	08 49 48.7	
	baz=199,slow=74,SNR=50						
H01W3	**Cape Leeuwin H**	**15.20**	**17**	T	T	08 49 50.3	
	baz=199,slow=74,SNR=52						
STKA	**Stephens Creek**	**30.22**	**67**	P	P	08 37 04.8	+0.2
	1.9nm,1.0s,baz=246,slow=10.0,SNR=2.9						
	1.9nm,1.0s						
ASAR	**Alice Springs**	**32.52**	**47**	P	P	08 37 24.9	0.0
	0.9nm,0.8s,baz=212,slow=8.5,SNR=7.8						
ASAR				LR	LR	08 48 56.7	
	comp=Z,98nm,21.1s,baz=202,slow=33						
	0.9nm,0.8s						
VNDA	**Vanda**	**34.34**	**162**	LR	LR	08 50 54.9	
	comp=Z,175nm,19.2s,baz=295,slow=35						
WRA	**Warramunga Arr**	**35.94**	**44**	P	P	08 37 54.6	0.0
	1.3nm,0.9s,baz=211,slow=8.3,SNR=4.6						
	1.3nm,0.9s						
QSPA	**South Pole Qui**	**40.57**	**180**	LR	LR	08 54 33.6	
	comp=Z,127nm,19.7s,baz=323,slow=35						
SNAA	**Sanae**	**49.89**	**203**	P	P	08 39 47.3	+0.2
	0.9nm,0.8s,baz=196,slow=3.7,SNR=2.2						
SNAA				LR	LR	08 58 03.5	
	comp=Z,48nm,18.5s,baz=194,slow=33						
	0.9nm,0.8s						
PSI	**Prapat**	**52.84**	**348**	LR	LR	08 57 39.4	
	comp=Z,74nm,21.7s,baz=120,slow=30						
PALK	**Pallekele**	**61.65**	**328**	LR	LR	09 00 35.0	
	comp=Z,53nm,21.1s,baz=205,slow=29						
TXAR	**Lajitas Array**	**148.22**	**117**	PKPbc	PKPbc	08 50 39.0	-1.3
	0.3nm,0.8s,baz=210,slow=2.9,SNR=3.6						

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*IDC **06** 08:43:49.9±0.8, 15°.27S×175°.51W, h0^{km}, mb3.7/9, mbtmp3.8/10, ML3.7/1, MS4.3/45, Error ellipse: s-maj=46.0km s-min=18.5km az=144.0*

*GCMT **06** 08:43:58.0±0.1, 15°.34S±0°.01×175°.30W±0°.01, h12^{km}, MW5.1/135, Moment Tensor Solution. s58,c80; s135,c225; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.71±.09; M$_{\theta\theta}$4.63±.08; M$_{\phi\phi}$-3.92±.07; M$_{r\theta}$0.10±.23; M$_{\theta\phi}$2.12±.07; M$_{\phi r}$-1.33±.22; Best double couple: M$_0$4.98600×10^{16} NP1:ϕ_s300.00000°,δ76.00000°, λ-11.00000°. NP2:ϕ_s33.00000°,δ79.00000°, λ-166.00000°. Principal axes: T 5.1340, Plg2.0000°, Azm167.0000°; N -0.2950, Plg72.0000°, Azm70.0000°; P -4.8380, Plg18.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 06 08:43:51.2±0.8, 15°.7S±0°.2×174°.85W±0°.10, h10^{km}, n57, σ2^{s}40/13, mb3.7/9, MS4.3/45, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**15.30**	**113**	LR	LR	08 52 34.1	
	comp=Z,383nm,19.8s,baz=286,slow=33						
DZM	**Mont Dzumac**	**18.78**	**248**	P	**P**	**08 48 07.0**	**-3.8**
	0.2nm,0.3s,baz=71,slow=14,SNR=5.6						
DZM				LR	LR	08 54 06.1	
	comp=Z,2µm,20.1s,baz=64,slow=34						
	12nm,0.9s						
DZM	**Mont Dzumac**	**18.78**	**248**	*e*P	**P**	**08 48 10.4**	**-0.4**
	39nm,1.1s						
DZM				*e*S	**S**	**08 51 45.8**	**+1.1**
	268nm,23.2s						
DZM				*e*LR	LR	08 53 15.9	
	3µm,24.8s						
PPT	**Papeete**	**24.28**	**98**	LR	LR	08 56 19.0	
	comp=Z,495nm,20.4s,baz=269,slow=30						
PPT2	**Papeete2**	**24.28**	**98**	*e*P	P	08 49 04.6	-4.4
	58nm,26.5s						
PPT2				*e*S	**S**	**08 53 25.6**	**-2.4**
	2µm,26.0s						
PPT2				*e*LR	LR	08 55 03.0	
	2µm,25.5s						
PPT2				*e*LR	LR	08 55 09.4	
	1µm,25.5s						
TBI	**Tubuai**	**25.07**	**112**	*e*S	**S**	**08 53 42.1**	**+1.6**
	12µm,26.8s						
TBI				*e*LR	LR	08 55 29.4	
	6µm,28.0s						
TBI				*e*LR	LR	08 55 32.5	
	1µm,24.5s						
TAOE	**Nuku Hiva Isla**	**34.55**	**83**	*e*S	**S**	**08 56 05.7**	**-4.0**
	121nm,30.6s						
TAOE				*e*LR	LR	08 59 38.4	
	2µm,27.1s						
CTA	**Charters Tower**	**37.20**	**257**	LR	LR	09 04 20.7	
	comp=Z,12nm,19.0s,baz=54,slow=34						
PMG	**Port Moresby**	**37.57**	**275**	LR	LR	09 04 05.0	
	comp=Z,395nm,21.2s,baz=127,slow=33						
RKT	**Rikitea**	**38.22**	**107**	*e*LR	LR	09 01 27.8	
	4µm,26.0s						
STKA	**Stephens Creek**	**42.66**	**240**	P	**P**	**08 51 46.3**	**-1.9**
	2.2nm,0.9s,baz=68,slow=11,SNR=3.3						
	2.2nm,0.9s						
JAY	**Jayapura**	**45.69**	**282**	LR	LR	09 09 29.1	
	comp=Z,248nm,20.7s,baz=349,slow=34						
WRA	**Warramunga Arr**	**48.41**	**257**	P	P	08 52 29.3	-4.7
	1.0nm,0.8s,baz=92,slow=6.7,SNR=5.8						
WRA				LR	LR	09 10 59.7	
	comp=Z,477nm,21.6s,baz=92,slow=34						
	1.0nm,0.8s						
ASAR	**Alice Springs**	**48.68**	**252**	P	P	08 52 32.8	-3.3
	3.7nm,0.9s,baz=84,slow=8.0,SNR=39						
	3.7nm,0.9s						
FITZ	**Fitzroy Crossi**	**56.77**	**258**	LR	LR	09 15 29.7	
	comp=Z,593nm,21.3s,baz=104,slow=34						
JCJ	**Chichijima**	**59.60**	**315**	LR	LR	09 14 49.1	
	comp=Z,399nm,20.6s,baz=124,slow=32						
BATI	**Baumata**	**60.00**	**267**	LR	LR	09 18 32.1	
	comp=Z,332nm,19.2s,baz=124,slow=35						
RPN	**Rapa Nui**	**61.45**	**113**	LR	LR	09 15 15.7	
	comp=Z,95nm,21.0s,baz=294,slow=30						
VNDA	**Vanda**	**62.90**	**186**	LR	LR	09 18 33.7	
	comp=Z,90nm,19.5s,baz=34,slow=33						
DAV	**Davao City (W)**	**63.19**	**286**	LR	LR	09 18 36.6	
	comp=Z,117nm,21.5s,baz=160,slow=33						
NWAO	**Narrogin (SRO)**	**63.23**	**241**	LR	LR	09 21 52.1	
	comp=Z,404nm,18.5s,baz=78,slow=36						
KAPI	**Kappang**	**64.99**	**272**	LR	LR	09 21 10.6	
	comp=Z,86nm,19.8s,baz=94,slow=35						
JHJ	**Hachijo jima 2**	**65.09**	**319**	LR	LR	09 23 06.9	
	comp=Z,119nm,18.1s,baz=97,slow=37						
SHEM	**Shemya Is, Ala**	**68.86**	**353**	LR	LR	09 19 21.0	
	comp=Z,427nm,19.4s,baz=110,slow=31						
JOW	**Kunigami**	**69.56**	**307**	LR	LR	09 19 46.3	
	comp=Z,381nm,20.8s,baz=84,slow=31						
ASAJ	**Asahikawa**	**71.10**	**329**	LR	LR	09 21 21.5	
	comp=Z,260nm,20.6s,baz=162,slow=32						
PETK	**Petropavlovsk-**	**72.54**	**343**	LR	LR	09 20 50.1	
	comp=Z,374nm,21.7s,baz=148,slow=31						
PFO	**Pinyon Flats O**	**74.18**	**48**	LR	LR	09 20 21.9	
	comp=Z,162nm,20.2s,baz=259,slow=30						
QSPA	**South Pole Qui**	**74.30**	**180**	P	**P**	**08 55 31.7**	**+3.0**
	0.6nm,0.7s,baz=55,slow=6.8,SNR=6.0						
QSPA				LR	LR	09 22 05.3	
	comp=Z,128nm,21.6s,baz=36,slow=31						
	0.6nm,0.7s						
LPIG	**La Paz**	**74.41**	**59**	LR	LR	09 21 48.6	
	comp=Z,158nm,18.2s,baz=232,slow=30						
YBH	**Yreka Blue Hor**	**74.72**	**38**	LR	LR	09 21 16.0	
	comp=Z,12nm,19.9s,baz=252,slow=30						
NVAR	**Mina Array Bea**	**75.52**	**43**	P	**P**	**08 55 37.5**	**+1.2**
	0.4nm,0.7s,baz=228,slow=10.0,SNR=6.3						
NVAR				LR	LR	09 22 32.4	
	comp=Z,169nm,20.2s,baz=266,slow=31						
	0.4nm,0.7s						
KDAK	**Kodiak Island**	**75.54**	**12**	LR	LR	09 20 59.2	
	comp=Z,342nm,21.6s,baz=205,slow=30						
BBB	**Bella Bella**	**78.82**	**27**	LR	LR	09 24 07.2	
	comp=Z,131nm,18.4s,baz=229,slow=31						
NEW	**Newport**	**81.78**	**35**	LR	LR	09 25 48.4	
	comp=Z,72nm,18.6s,baz=236,slow=31						
TXAR	**Lajitas Array**	**81.96**	**57**	P	**P**	**08 56 13.2**	**+1.4**
	0.3nm,1.0s,baz=249,slow=3.6,SNR=5.6						
	0.3nm,1.0s						
ANMO	**Albuquerque**	**82.09**	**50**	LR	LR	09 25 10.2	
	comp=Z,157nm,20.2s,baz=250,slow=30						
SEY	**Seymchan**	**82.49**	**346**	LR	LR	09 28 40.4	
	comp=Z,281nm,19.1s,baz=134,slow=33						
DLBC	**Dease Lake**	**82.53**	**22**	LR	LR	09 25 14.2	
	comp=Z,290nm,20.0s,baz=275,slow=30						
ILAR	**Eielson Array**	**83.06**	**12**	P	P	08 56 14.3	-2.2
	0.2nm,0.6s,baz=215,slow=4.8,SNR=4.7						
ILAR				LR	LR	09 25 41.4	
	comp=Z,238nm,20.5s,baz=218,slow=30						
	0.2nm,0.6s						
PDAR	**Pinedale Array**	**83.45**	**42**	P	**P**	**08 56 20.6**	**+1.1**
	0.7nm,0.8s,baz=201,slow=2.5,SNR=5.7						
PDAR				LR	LR	09 26 53.9	
	comp=Z,74nm,20.9s,baz=253,slow=31						
	0.7nm,0.8s						
PMSA	**Palmer Station**	**84.43**	**156**	LR	LR	09 25 53.9	
	comp=Z,182nm,19.6s,baz=274,slow=30						
CMIG	**Matias Romero**	**85.31**	**71**	LR	LR	09 25 37.5	
	comp=Z,125nm,20.4s,baz=252,slow=29						
MAW	**Mawson**	**87.02**	**199**	LR	LR	09 35 27.9	
	comp=Z,155nm,18.1s,baz=114,slow=36						
PSI	**Prapat**	**87.12**	**274**	LR	LR	09 36 26.0	
	comp=Z,68nm,19.9s,baz=162,slow=36						
PLCA	**Paso Flores**	**90.31**	**133**	LR	LR	09 29 31.2	
	comp=Z,185nm,20.6s,baz=234,slow=30						
YKA	**Yellowknife Ar**	**90.97**	**24**	P	**P**	**08 56 55.4**	**+0.3**
	0.3nm,0.9s,baz=249,slow=5.1,SNR=4.5						
	0.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**91.40**	**289**	LR	LR	09 33 19.7	
	comp=Z,55nm,21.8s,baz=110,slow=33						
LZDM	**Lanzhou Array**	**92.38**	**307**	LR	LR	09 35 24.7	
	comp=Z,87nm,20.6s,baz=250,slow=34						
SNAA	**Sanae**	**92.63**	**177**	LR	LR	09 33 33.3	
	comp=Z,236nm,21.9s,baz=193,slow=32						
JTS	**Las Juntas de**	**92.64**	**80**	LR	LR	09 29 29.8	
	comp=Z,258nm,20.1s,baz=290,slow=29						
SONM	**Songino Array**	**94.17**	**319**	LR	LR	09 34 41.0	
	comp=Z,98nm,21.6s,baz=100,slow=33						
ATAH	**Atahualpa**	**94.25**	**99**	LR	LR	09 30 08.8	
	comp=Z,262nm,21.2s,baz=250,slow=29						
NNA	**Nana**	**94.34**	**104**	LR	LR	09 30 27.5	
	comp=Z,94nm,21.0s,baz=249,slow=29						
TIXI	**Tiksi**	**94.96**	**345**	LR	LR	09 34 59.5	
	comp=Z,259nm,21.2s,baz=194,slow=32						
BRDH	**Bariadhala**	**99.08**	**291**	LR	LR	09 37 37.9	
	comp=Z,67nm,21.8s,baz=163,slow=33						
BRTR	**Keskin Array B**	**145.53**	**319**	PKP	**PKPbc**	**09 03 29.9**	**-0.4**
	2.0nm,0.8s,baz=50,slow=3.9,SNR=7.2						

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*GII **06** 08:45:36.3±0.0, 35°.046N±0°.001×23°.813E±0°.001, h10^{km}, Mws4.5, confirmed*

*BEO **06** 08:45:37.8±3.9, 34°.47N×22°.98E, h64^{km}±7^{km}, ML4.0/4*

*IDC **06** 08:45:38.3±0.6, 35°.08N×23°.82E, h0^{km}, mb4.4/24, mbtmp4.4/37, ML4.2/12, MS3.8/20, Error ellipse: s-maj=12.5km s-min=8.1km az=179.0*

*MOS **06** 08:45:38.2±1.4, 35°.05N×23°.76E, h9^{km}, mb4.6/15, Error ellipse: s-maj=6.8km s-min=3.7km az=78.0*

*PDG **06** 08:45:40.2±0.4, 35°.16N×23°.78E, h13^{km}±1^{km}, ML4.5/13, Error ellipse: s-maj=1.0km s-min=1.5km az=0.0*

*THE **06** 08:45:40.8, 35°N±2°×23°.8E±0°.9, h0^{km}±1^{km}, M4.5/22, MLh4.5/22*

*NEIC **06** 08:45:40.0±2.3, 35°.09N±0°.05×23°.84E±0°.04, h5^{km}±6^{km}, mb4.5/21, Error ellipse: s-maj=7.6km s-min=5.1km az=180.0*

*ISK **06** 08:45:40.7, 35°.26N×23°.81E, h5^{km}, ML4.5/20*

*ATH **06** 08:45:40.7, 35°.19N×23°.85E, h8^{km}, Mw4.5, Moment Tensor Solution. s6 Moment tensor: M$_{rr}$-1.15; M$_{\theta\theta}$-5.04; M$_{\phi\phi}$6.18; M$_{r\theta}$2.06; M$_{\theta\phi}$-0.46; M$_{\phi r}$-0.22; Fault plane solution: NP1:ϕ_s315.00000°,δ76.00000°, λ-161.00000°. NP2:ϕ_s220.00000°,δ72.00000°, λ-15.00000°.*

*MED_RC **06** 08:45:41.0±0.6, 35°.00N×23°.79E, h14^{km}±2^{km}, MW4.5/19, Moment Tensor Solution. Body waves: s2,c2;Mantle waves: s19,c24; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.55±.37; M$_{\theta\theta}$-5.34±.44; M$_{\phi\phi}$6.89±.48; M$_{r\theta}$3.94±.94; M$_{\theta\phi}$-1.81±.31; M$_{\phi r}$0.87±.63; Best double couple: M$_0$7.62000×10^{15} NP1:ϕ_s311.00000°,δ66.00000°, λ-158.00000°. NP2:ϕ_s212.00000°,δ70.00000°, λ-25.00000°. Principal axes: T 7.1600, Plg2.0000°, Azm262.0000°; N 0.9200, Plg58.0000°, Azm356.0000°; P -8.0800, Plg32.0000°, Azm171.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

*HLW **06** 08:45:41.1, 35°.20N×23°.96E, h16^{km}±3^{km}, Md4.3, Ml4.4*

ISC 06 08:45:40.2±0.8, 35°.12N±0°.02×23°.84E±0°.02, h10^{km}±5^{km}, n410, σ2^{s}07/463, mb4.5/49, MS3.8/16, 30C-27D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	**0.20**	**303**	P	**Pg**	**08 45 44.3**	**-0.2**
KNDR				S	**Sg**	**08 45 47.4**	**-0.1**
KNDR	**Palaiochora Ch**	**0.20**	**303**	Pg	**Pg**	**08 45 44.3**	**-0.2**
KNDR				Sg	**Sg**	**08 45 47.1**	**-0.3**
KNDR	**Palaiochora Ch**	**0.20**	**303**	P	**Pg**	**08 45 44.5**	**0.0**
KNDR				S	**Sg**	**08 45 47.4**	**-0.1**
GVD	**Gavdhos**	**0.35**	**144**	P	**Pb**	**08 45 48.7**	**+0.2**
GVD				S	**Sb**	**08 45 55.6**	**+1.5**
GVD	**Gavdhos**	**0.35**	**144**	P	**Pb**	**08 45 48.7**	**+0.2**
IMMV	**Iera Moni Meta**	**0.36**	**20**	P	**Pg**	**08 45 46.5**	**-0.8**
IMMV				S	**Sg**	**08 45 51.6**	**-0.5**
IMMV	**Iera Moni Meta**	**0.36**	**20**	Pg	**Pg**	**08 45 46.6**	**-0.7**
IMMV				Sg	**Sg**	**08 45 51.3**	**-0.8**
IMMV	**Iera Moni Meta**	**0.36**	**20**	P	**Pg**	**08 45 46.6**	**-0.7**
IMMV				S	**Sg**	**08 45 50.3**	**-1.8**
CHNB	**Souda**	**0.41**	**27**	P	**Pg**	**08 45 47.7**	**-0.5**
CHNB				S	**Sg**	**08 45 52.4**	**-1.3**
VAM	**Vamos**	**0.41**	**46**	P	**Pg**	**08 45 47.9**	**-0.4**
VAM				S	**Sg**	**08 45 53.9**	**+0.2**
VAM	**Vamos**	**0.41**	**46**	P	**Pg**	**08 45 47.8**	**-0.4**
VAM				S	**Sg**	**08 45 52.5**	**-1.3**
CHAN	**Chania**	**0.43**	**23**	P	**Pg**	**08 45 48.1**	**-0.6**
CHAN				S	**Sg**	**08 45 54.0**	**-0.4**
CHAN	**Chania**	**0.43**	**23**	P	**Pg**	**08 45 48.0**	**-0.6**
CHAN				S	**Sg**	**08 45 53.6**	**-0.8**
ANKY	**Antikythira Is**	**0.86**	**330**	P	**Pg**	**08 45 56.4**	**-0.4**
ANKY				S	**Sg**	**08 46 08.6**	**+0.6**
ANKY	**Antikythira Is**	**0.86**	**330**	P	**Pg**	**08 45 55.5**	**-1.3**
ANKY				S	**Sg**	**08 46 06.2**	**-1.8**
IDI	**Anoyia**	**0.88**	**79**	Pg	**Pg**	**08 45 55.9**	**-1.2**
	181nm,0.3s,baz=277,slow=9.4,SNR=474						
IDI				Lg	Lg	08 46 08.8	
	2µm,0.3s,baz=349,slow=20,SNR=25						
IDI	**Anoyia**	**0.88**	**79**	P	**Pg**	**08 45 56.1**	**-1.1**
IDI				S	**Sn**	**08 46 11.7**	**+0.2**
IDI	**Anoyia**	**0.88**	**79**		**Pg**	**08 45 55.7**	**-1.4**
IDI				Sg	**Sg**	**08 46 08.4**	**-0.2**
IDI	**Anoyia**	**0.88**	**79**	P	**Pg**	**08 45 56.1**	**-1.1**
IDI				S	**Sg**	**08 46 08.9**	**+0.3**
IACM	**Heraklion**	**1.03**	**79**	P	**Pg**	**08 45 59.3**	**-0.7**
IACM				S	**Sn**	**08 46 17.7**	**+2.7**
IACM	**Heraklion**	**1.03**	**79**	P	**Pg**	**08 45 59.3**	**-0.7**
KTHA	**Kythira Island**	**1.29**	**331**	P	**Pn**	**08 46 03.7**	**-0.6**
KTHA	**Kythira Island**	**1.29**	**331**	Pn	**Pn**	**08 46 03.8**	**-0.6**
NPS	**Neapolis**	**1.46**	**84**	P	**Pg**	**08 46 08.6**	**+0.3**
NPS				S	**Sg**	**08 46 29.0**	**+1.8**
NPS	**Neapolis**	**1.46**	**84**	P	**Pn**	**08 46 06.8**	**+0.2**
NPS				S	**Sn**	**08 46 26.4**	**+0.6**
MHLO	**Agia Marina, M**	**1.63**	**16**	P	**Pg**	**08 46 12.8**	**+1.4**
MHLO				S	**Sn**	**08 46 31.1**	**+1.2**
MHLO	**Agia Marina, M**	**1.63**	**16**	P	**Pn**	**08 46 08.2**	**-0.7**
MHLO				S	**Sn**	**08 46 29.2**	**-0.7**
VLI	**Veliai**	**1.75**	**336**	P	**Pn**	**08 46 10.7**	**+0.1**
SAP3	**Santorini-Thir**	**1.80**	**43**	P	**Pb**	**08 46 13.2**	**+0.1**
SAP3				S	**Sb**	**08 46 37.8**	**+2.1**
SAP3	**Santorini-Thir**	**1.80**	**43**	P	**Pn**	**08 46 12.0**	**+0.8**
SNT5	**Nea Kammeni, S**	**1.80**	**44**	P	**Pn**	**08 46 11.7**	**+0.4**
SNT5				S	**Sg**	**08 46 38.4**	**+0.3**
SNT5	**Nea Kammeni, S**	**1.80**	**44**	P	**Pn**	**08 46 11.7**	**+0.4**

THERA	Ancient Thera,	1.82	47	P	Pb	08 46 14.2	+0.6
THERA				S	Sb	08 46 37.3	+0.9
THERA	Ancient Thera,	1.82	47	P	Pn	08 46 11.4	-0.2
THR8	Santorini-Mono	1.85	46	P	Pn	08 46 12.5	+0.5
ZKR	Zakros	1.95	90	Pn	Pb	08 46 16.9	+1.1
ZKR	Zakros	1.95	90	P	Pb	08 46 15.9	+0.1
NAX1	Naxos Island	2.33	32	P	Pn	08 46 18.4	-0.1
APE	Apeiranthos	2.38	35	P	Pg	08 46 25.8	0.0
APE				S	Sb	08 46 54.8	+2.3
APE	Apeiranthos	2.38	35	Pn	Pn	08 46 20.9	+1.7
APE	Apeiranthos	2.38	35	⇑P	Pn	08 46 20.1	+0.9
APE				⇓S	Sb	08 46 53.2	+0.7
APE	Apeiranthos	2.38	35	⇑*i*P	Pn	08 46 19.7	+0.5
APE	Apeiranthos	2.38	35	P	Pn	08 46 18.6	-0.7
PYL	PYLOS	2.45	317	P	Pb	08 46 24.6	+0.3
PYL	PYLOS	2.45	317	P	Pn	08 46 20.8	+0.6
MET2	Kameni Chora,	2.52	351	P	Pn	08 46 20.9	-0.2
MET4	Agioi Theodoro	2.52	352	P	Pn	08 46 21.2	0.0
MET5	Makryloggos,Me	2.52	351	P	Pn	08 46 21.6	+0.3
VLX	Vlachokerasia	2.53	333	P	Pb	08 46 24.1	-1.7
ITM	Ithomi	2.57	324	P	Pb	08 46 26.2	-0.1
ITM	Ithomi	2.57	324		Pn	08 46 23.0	+1.2
ITM	Ithomi	2.57	324	Pn	Pn	08 46 23.7	+1.9
ITM	Ithomi	2.57	324	P	Pn	08 46 23.1	+1.2
VLY	Voula,Athens	2.72	359	P	Pb	08 46 27.7	-1.3
VLY				S	Sg	08 47 06.9	-0.8
VLY	Voula,Athens	2.72	359	P	Pn	08 46 23.9	-0.1
KARP	Karpathos	2.75	80		Pn	08 46 25.0	+0.6
KARP	Karpathos	2.75	80	Pn	Pb	08 46 27.7	-1.8
KARP	Karpathos	2.75	80	P	Pn	08 46 25.9	+1.6
ATHU	Athens Univers	2.84	359	P	Pn	08 46 27.8	+2.2
ATHU	Athens Univers	2.84	359	P	Pn	08 46 24.6	-0.9
ATH	Athens Observa	2.84	358	P	Pn	08 46 28.7	+3.1
PTL	Penteli	2.92	0	P	Pn	08 46 26.8	+0.1
PTL	Penteli	2.92	0	P	Pn	08 46 26.7	0.0
LOUT	Loutraki	2.94	347	P	Pn	08 46 27.6	+0.7
DION	Dionisos Attik	2.95	2	P	Pn	08 46 27.6	+0.5
BODT	Bodrum	3.42	54	Pn	Pn	08 46 36.6	+3.1
YKAV	Yalikavak-Bodr	3.43	53	Pn	Pn	08 46 36.1	+2.5
DAT	Datca	3.43	61	Pn	Pn	08 46 37.2	+3.4
ARG	Arkhangelos	3.66	71		Pn	08 46 38.1	+1.3
ARG	Arkhangelos	3.66	71	Pn	Pn	08 46 40.7	+3.9
ARG	Arkhangelos	3.66	71	P	Pn	08 46 38.1	+1.3
CHOS	Chios island	3.71	28	Pn	Pn	08 46 39.6	+2.0
GCAM	G?zelcaml?	3.76	46	Pn	Pn	08 46 41.1	+2.9
SLUM	Salum	3.80	162	P	Pn	08 46 39.3	+0.6
GMLD	Gumuldur	3.85	39	Pn	Pn	08 46 41.7	+2.3
MLSB	Milas	3.85	55	Pn	Pn	08 46 42.8	+3.3
KUSD	Kusadasi-Aydin	3.90	45	Pn	Pn	08 46 43.0	+2.9
URLA	Izmir	3.92	34	Pn	Pn	08 46 42.6	+2.2
TURN	Turunc	3.94	64	Pn	Pn	08 46 43.7	+3.1
YER	Yerkesik	4.12	60	Pn	Pn	08 46 46.4	+3.2
BLCB	Balcova	4.15	37	Pn	Pn	08 46 46.1	+2.5
AKAS	Kas	4.83	75		Pn	08 46 54.7	+1.8
MANT	Manisa	5.07	47		Pn	08 46 57.6	+1.3
LIT	Litokhoron	5.08	348		Pn	08 46 57.2	+0.8
LIT	Litokhoron	5.08	348	P	Pn	08 46 57.2	+0.8
ELL	Elmali	5.19	70		Pn	08 46 59.7	+1.8
ELL	Elmali	5.19	70	P	Pn	08 46 59.7	+1.8
BALB	Balikesir	5.54	34		Pn	08 47 03.2	+0.6
SWA2		6.02	166	P	Pn	08 47 10.4	+1.1
ISP	Isparta	6.02	61		Pn	08 47 10.0	+0.6
ISP	Isparta	6.02	61	⇑*i*P	Pn	08 47 11.8	+2.4
RDO	Rodhopi	6.16	12		Pn	08 47 11.9	+0.7
BAND	Balkesir-Ban	6.22	32	⇑P	Pn	08 47 15.3	+3.3
VAY	Valandovo	6.27	351	*i* Pn	Pn	08 47 14.8	+2.2
MMB	Musomishta	6.41	359	P	Pn	08 47 16.7	+2.0
OHR	Ohrid	6.44	339	*i* Pn	Pn	08 47 17.8	+2.7
OHR				*i* Sn	Sn	08 48 29.0	+0.4
KKB	Krupnik	6.73	355	P	Pn	08 47 22.0	+3.0
TIP	Timpagrande	6.95	308		Pn	08 47 22.5	+0.5
TIP	Timpagrande	6.95	308	⇑P	Pn	08 47 21.6	-0.5
PLD	Plovdiv	7.05	6	*e*Pn	Pn	08 47 25.3	+1.9
BORA	Eskisehir	7.08	46		Pn	08 47 25.1	+1.2
CEL	Celeste	7.11	298		Pn	08 47 23.8	-0.4
PLNA	Plana	7.35	358	P	Pn	08 47 30.9	+3.3
PGB	Panagyurishte	7.38	2	P	Pn	08 47 31.7	+3.7
BOSS	Bosilegrad	7.44	352	*e*Pn	Pn	08 47 30.3	+1.6
VTS	Vitosha	7.50	357	P	Pn	08 47 32.4	+2.7
VTS	Vitosha	7.50	357	*e*Pn	Pn	08 47 31.1	+1.4
ULC	Ulcinj	7.72	334	⇑*i*Pn	Pn	08 47 33.0	+0.4
ULC				*i* Sn	Sn	08 48 57.7	-2.3
BLSH	Balsha	7.74	357	P	Pn	08 47 36.5	+3.7
CSS	Mathiatis	7.79	88		Pn	08 47 32.8	-0.8
BARS	Barje	7.84	349	*e*Pn	Pn	08 47 35.9	+1.7
MATE	Matera	7.88	316	⇑P	Pn	08 47 34.2	-0.6
DRME	Dracevica, Mon	7.93	334	⇓*i*Pn	Pn	08 47 35.4	-0.1
DRME				*i* Sn	Sn	08 49 02.7	-2.6
RAFF	Raffo Rosso	7.94	288		Pn	08 47 35.8	+0.1
ELND	Elena	7.95	11	⇓P	Pn	08 47 37.3	+1.5
VAE	Valguarnera	7.96	290	Pn	Pn	08 47 36.6	+0.6
	13nm,0.3s,baz=337,slow=2.9,SNR=3.6						
VAE				Sn	Sn	08 49 06.7	+0.6
	baz=80,slow=15						
CUC	Castrocucco	8.01	310		Pn	08 47 36.8	+0.2
PVY	Plav	8.05	339	⇓*i*Pn	Pn	08 47 37.7	+0.5
PVY				*i* Sn	Sn	08 49 06.2	-2.1
PDG	Podgorica	8.12	335	⇓P	Pn	08 47 39.4	+1.4
PDG	Podgorica	8.12	335	*e*Pn	Pn	08 47 36.7	-1.4
PDG				*e*Sn	Sn	08 49 03.3	-6.6
PDG	Podgorica	8.12	335	⇓*i*Pn	Pn	08 47 39.0	+0.9
PDG				*i* Sn	Sn	08 49 07.9	-2.0
RYAN	Fayoum	8.13	136	P	Pn	08 47 38.9	+0.7
BUM	Brajici-Budva	8.14	333	⇓*i*Pn	Pn	08 47 38.5	+0.1
BUM				*i* Sn	Sn	08 49 08.4	-2.0
ZAPS	Zavoj	8.19	354	*e*Pn	Pn	08 47 40.9	+1.8
MPEP	Malo Peshtene	8.22	360	P	Pn	08 47 41.3	+1.8
PLVB	Pleven	8.28	4	⇑P	Pn	08 47 41.6	+1.5
IVA	Berane	8.32	340	⇓*i*Pn	Pn	08 47 40.9	0.0
IVA				*i* Sn	Sn	08 49 11.5	-3.5
CEME	Cevo	8.34	334	⇑*i*Pn	Pn	08 47 40.5	-0.7
CEME				*i* Sn	Sn	08 49 11.7	-3.8
SELS	Selova	8.36	346	*e*Pn	Pn	08 47 41.3	0.0
SELS				*e*Sn	Sn	08 49 12.3	-3.4
ACER	Acerenza	8.41	315		Pn	08 47 41.8	-0.4
HCY	Herceg Novi	8.42	332	⇑*i*Pn	Pn	08 47 41.9	-0.2
HCY				*i* Sn	Sn	08 49 14.0	-3.2
KOME	Kolasin	8.42	338	⇓*i*Pn	Pn	08 47 42.1	-0.1
KOME				*i* Sn	Sn	08 49 13.8	-3.5
NKME	Niksic	8.53	335	⇓*i*Pn	Pn	08 47 43.8	+0.1
NKME				*i* Sn	Sn	08 49 17.3	-2.6
BLKB	Belogradchik	8.54	354	*e*Pn	Pn	08 47 46.7	+2.9
ANTO	Ankara	8.55	54		Pn	08 47 44.0	0.0
ANTO	Ankara	8.55	54	P	Pn	08 47 44.0	0.0
BOVS	Bovan	8.66	350	⇑P	Pn	08 47 46.8	+1.4
BOVS	Bovan	8.66	350	*e*Pn	Pn	08 47 46.1	+0.7
SJES	Sjenica	8.66	341	*e*Pn	Pn	08 47 44.0	-1.6
SJES				*e*Sn	Sn	08 49 18.5	-4.8
GOCS	Kraljevo Serbi	8.73	346	*e*Pn	Pn	08 47 46.1	-0.5
GOCS				*e*Sn	Sn	08 49 21.6	-3.5
ZAGS	Zajecar	8.77	352	*e*Pn	Pn	08 47 48.4	+1.5
BRY	Bratogost	8.79	334	⇓*i*Pn	Pn	08 47 45.9	-1.5
BRY				*i* Sn	Sn	08 49 21.1	-5.5
HFRF	Wahat Farafira	8.82	153	P	Pn	08 47 48.7	+1.0
PLE	Pljevlja	8.89	339	⇑*i*Pn	Pn	08 47 48.0	-0.7
PLE				*i* Sn	Sn	08 49 24.7	-4.3
IVAS	Ivanjica	8.91	342	*e*Pn	Pn	08 47 47.1	-1.8
UPM	Unac-Piva	8.93	336	⇑*i*Pn	Pn	08 47 49.5	+0.2
UPM				*i* Sn	Sn	08 49 27.1	-2.9
BR131	Keskin Array S	9.05	57		Pn	08 47 53.5	+2.6
BR131	Keskin Array S	9.05	57	*d i*P	Pn	08 47 54.4	+3.4
BRTR	Keskin Array B	9.05	57	Pn	Pn	08 47 53.7	+2.7
	1.2nm,0.3s,baz=232,slow=14,SNR=78						
	21nm,0.8s						
BRTR	Keskin Array B	9.05	57		Pn	08 47 54.0	+3.0
BRTR	Keskin Array B	9.05	57	*i* P	Pn	08 47 54.2	+3.2
BRTR				pmax	pmax		
	comp=Z,21nm,0.8s						
GRUS	Gruza	9.08	346	*e*Pn	Pn	08 47 49.9	-1.3
SGRT	San Giovanni R	9.17	319		Pn	08 47 51.1	-1.4
BBLS	Lazi&#263i	9.38	340	*e*Pn	Pn	08 47 53.3	-2.1
BBLS				*e*Sn	Sn	08 49 32.8	-8.0
DIVS	Divibare	9.44	343	*e*Pn	Pn	08 47 54.8	-1.4
DIVS				*e*Sn	Sn	08 49 34.6	-7.8
TRUS	Trudelj	9.46	345	*e*Pn	Pn	08 47 55.3	-1.2
OFRI	`Ofer	9.60	102	P	Pn	08 47 54.9	-3.5
OFRI	`Ofer	9.60	102	S	Sn	08 49 42.7	-3.7
HNTI	Hanita	9.62	99	P	Pn	08 47 55.2	-3.5
HNTI	Hanita	9.62	99	S	Sn	08 49 43.4	-3.4
SLTI	Sal'it	9.77	104	P	Pn	08 47 56.9	-3.8
SLTI	Sal'it	9.77	104	S	Sn	08 49 46.7	-3.8
ILGA	Ilgaz	9.78	50		Pn	08 48 03.3	+2.3
KZIT	Kziot	9.81	112	P	Pn	08 48 00.7	-0.6
KZIT	Kziot	9.81	112	S	Sn	08 49 47.9	-3.6
MMC7	Mount Meron ar	9.81	99	P	Pn	08 47 57.4	-4.0
MMA0B	Mount Meron ar	9.82	99	P	Pn	08 47 57.9	-3.6
MMA0B	Mount Meron ar	9.82	99	S	Sn	08 49 48.9	-3.0
MMAI	Mount Meron Ar	9.82	99	Pn	Pn	08 48 01.5	0.0
	comp=Z,6.5nm,0.3s,baz=292,slow=15,SNR=8.3						
MMAI				Sn	Sn	08 49 47.0	-4.9
	comp=Z,4.8nm,0.3s,baz=326,slow=29,SNR=3.5						
	comp=Z,5.2nm,0.4s						
QRWL	Qaraoun	9.92	96	*e*P	Pn	08 48 00.8	-2.1
AMAZ	Amatzia	9.94	108	P	Pn	08 47 59.2	-3.9
AMAZ	Amatzia	9.94	108	S	Sn	08 49 51.1	-3.5
TEKS	Tekeris	9.98	342	*e*Pn	Pn	08 48 01.5	-2.0
GEM	Giv'at Ha'Em	9.98	98	P	Pn	08 48 00.6	-3.0
GEM	Giv'at Ha'Em	9.98	98	S	Sn	08 49 52.6	-3.1
HWQ	Hawqa	10.01	91	*e*P	Pn	08 48 03.3	-0.8
MMLI	Mount Malkishu	10.01	102	P	Pn	08 48 00.1	-3.9
MMLI	Mount Malkishu	10.01	102	S	Sn	08 49 52.4	-4.0
NATI	Neve Ativ	10.03	97	P	Pn	08 48 01.1	-3.1
NATI	Neve Ativ	10.03	97	S	Sn	08 49 54.1	-2.8
HMDT	Nahal Hemdat	10.15	103	P	Pn	08 48 02.1	-3.8
HMDT	Nahal Hemdat	10.15	103	S	Sn	08 49 56.6	-3.3
KSHT	Keshet	10.16	99	P	Pn	08 48 02.9	-3.3
KSHT	Keshet	10.16	99	S	Sn	08 49 57.1	-3.2
YTIR	Yattir	10.16	108	P	Pn	08 48 02.4	-3.8
YTIR	Yattir	10.16	108	S	Sn	08 49 56.6	-3.7
BEIL	Beino	10.17	90	*e*P	Pn	08 48 04.3	-1.9
ISR	Istrita	10.20	11	⇓P	Pn	08 48 09.2	+2.6
ISR	Istrita	10.20	11	P	Pn	08 48 09.1	+2.6
DSI	Dead Sea	10.29	107	P	Pn	08 48 04.4	-3.4
DSI	Dead Sea	10.29	107	S	Sn	08 49 59.1	-4.1
GZR	Gura Zlata	10.29	356	P	Pn	08 48 09.2	+1.3
BNN	Bunyan	10.30	65		Pn	08 48 12.0	+3.8
VOIR		10.34	5	P	Pn	08 48 10.6	+2.0
MSBI	Mazada	10.37	108	P	Pn	08 48 04.9	-4.1
MSBI	Mazada	10.37	108	S	Sn	08 50 01.3	-3.9
KRMI	Paran Flat	10.45	115	P	Pn	08 48 06.3	-3.7
KRMI	Paran Flat	10.45	115	S	Sn	08 50 03.8	-3.5
MLR	Muntele Rosu	10.48	8	Pn	Pn	08 48 12.7	+2.1
	comp=Z,0.7nm,0.3s,baz=240,slow=6.3,SNR=13						
	comp=Z,18nm,0.8s						
MLR	Muntele Rosu	10.48	8	⇑P	Pn	08 48 13.5	+3.0
GHAJ	Ghor Haditha	10.54	108	P	Pn	08 48 07.1	-4.1
GHAJ	Ghor Haditha	10.54	108	S	Sn	08 50 05.7	-3.5
PRNI	Paran	10.54	114	P	Pn	08 48 07.6	-3.7
PRNI	Paran	10.54	114	S	Sn	08 50 05.2	-4.2
ZFRI	Zfri	10.57	112	P	Pn	08 48 07.8	-3.9
ZFRI	Zfri	10.57	112	S	Sn	08 50 06.2	-3.9
BZS	Buzias	10.62	352	P	Pn	08 48 13.1	+0.8
BISRR	Bisoca	10.64	11	⇑P	Pn	08 48 15.1	+2.4
HRFI	Mount Harif	10.72	115	P	Pn	08 48 09.8	-4.0
HRFI	Mount Harif	10.72	115	S	Sn	08 50 10.2	-3.7
MBRI	Mt Berech	10.76	117	P	Pn	08 48 10.8	-3.6
MBRI	Mt Berech	10.76	117	S	Sn	08 50 11.1	-3.8
EIL	Elat	10.85	117	Pn	Pn	08 48 14.8	-0.8
	comp=Z,4.8nm,0.3s,baz=322,slow=10,SNR=28						
EIL				Sn	Sn	08 50 09.9	-7.2
	comp=Z,1.2nm,0.3s,baz=63,slow=19,SNR=3.7						
	comp=Z,26nm,0.5s						
EIL	Elat	10.85	117	P	Pn	08 48 11.5	-4.0
EIL	Elat	10.85	117	S	Sn	08 50 12.7	-4.4
BLY	Banja Luka	10.88	334	⇑P	Pn	08 48 15.9	+0.1
DOPR	Dopca	10.90	6	⇑P	Pn	08 48 18.9	+2.8
PLOR	Plostina	10.93	10	⇑P	Pn	08 48 19.4	+2.8
PLOR	Plostina	10.93	10	P	Pn	08 48 19.3	+2.8
VRI	Vrincioaia	10.95	11	⇓P	Pn	08 48 18.6	+1.7
VRI	Vrincioaia	10.95	11	P	Pn	08 48 18.6	+1.7
CAMP	Campotosto	10.99	315		Pn	08 48 21.4	+4.0
GAZ	Gaziantep	11.01	75		Pn	08 48 17.6	-0.2
TURR	Turia	11.04	8	⇑P	Pn	08 48 21.0	+2.9
ASF	Jabal al Asfar	11.28	101	Sn	Sn	08 50 21.9	-5.7
	comp=Z,0.4nm,0.3s,baz=346,slow=15,SNR=2.6						
NRCA	Norcia	11.35	316		Pn	08 48 23.1	+0.7
FDMO	Fiordimonte	11.49	317		Pn	08 48 24.9	+0.7
KEST	Kesra	11.84	277	Pn	Pn	08 48 29.2	+0.1
	comp=Z,0.2nm,0.3s,baz=75,slow=7.8,SNR=4.1						
	comp=Z,1.9nm,0.6s						
BURAR	Bucovina Array	12.52	4	Pn	Pn	08 48 39.2	+0.8
BURAR	Bucovina Array	12.52	4	⇑P	Pn	08 48 41.4	+2.9
BURAR	Bucovina Array	12.52	4	P	Pn	08 48 41.3	+2.9
BUR08	Bucovina Ar. S	12.55	4		Pn	08 48 40.7	+1.9
SOKA	Soboth	13.31	333	*e*Pn	Pn	08 48 48.3	-0.9
	comp=Z,0.8nm,0.2s						
OBKA	Obir	13.36	331	*i* Pn	Pn	08 48 50.0	+0.2
	comp=Z,0.7nm,0.2s						
ARSA	Arzberg	13.62	335		Pn	08 48 53.2	-0.2
ARSA	Arzberg	13.62	335	*e*Pn	Pn	08 48 57.9	+4.5
	comp=Z,1.0nm,0.2s						
MARD	Mardin	13.86	76		Pn	08 48 56.6	-0.1
KOPT	Kop Dagi	14.09	65	Pn	Pn	08 48 59.7	-0.3
MODS	Modra-Piesok	14.11	342	*e*P	P	08 49 09.9	+2.2
MODS	Modra-Piesok	14.11	342	*e*P	P	08 49 09.9	+2.2
PRMA	PARMA	14.13	317	Pn	Pn	08 49 02.2	+1.9
CTI	Castel Tesino	14.29	323		Pn	08 49 03.1	+0.5
CTI	Castel Tesino	14.29	323	P	Pn	08 49 03.1	+0.5
ABTA	Abfaltersbach	14.40	327	*e*Pn	Pn	08 49 04.9	+0.7
	comp=Z,8.0nm,1.0s						
STHS	Stebnicka Huta	14.41	353	*e*P	P	08 49 13.6	+2.5
STHS	Stebnicka Huta	14.41	353	*e*P	P	08 49 13.6	+2.5
JAVC	Velka Javorina	14.46	344	*e*P	P	08 49 13.9	+2.2
BIOA	Bad Ischl, Aus	14.69	332	*e*Pn	Pn	08 49 08.0	+0.1
	comp=Z,1.1nm,0.4s						
SOC	Sochi	14.89	51	*e*P	Pn	08 49 08.5	-2.2
SOC				*e*S	Sn	08 51 55.6	0.0
SOC				pmax	pmax		
	comp=Z,12nm,0.9s						
SOC				MLR	MLR		
	comp=Z,243nm,13.0s						
MAUC	Maruska	14.90	345	*e*P	P	08 49 20.4	+3.8
KRUC	Moravsky	14.97	341	*e*P	P	08 49 17.6	+0.3
VRAC	Vranov	15.14	342	Pn	Pn	08 49 15.5	+1.4
	comp=Z,0.5nm,0.3s,baz=166,slow=9.5,SNR=7.0						
VRAC				LR	LR	08 56 42.4	
	comp=Z,608nm,19.0s,baz=169,slow=44						
	comp=Z,2.8nm,0.4s						
VRAC	Vranov	15.14	342	*e*P	P	08 49 19.6	+0.4
WTTA	Wattenberg	15.19	327	*e*Pn	Pn	08 49 16.0	+1.1
	comp=Z,2.5nm,0.4s						
WATA	Walderalm	15.27	327	*e*Pn	Pn	08 49 16.7	+0.9
	comp=Z,18nm,1.3s						
SQTA	Sankt Quirin	15.35	326	*e*Pn	Pn	08 49 18.6	+1.7
	comp=Z,3.6nm,0.5s						
MORC	Moravsky Berou	15.35	344	Pn	Pn	08 49 17.8	+0.9
MORC	Moravsky Berou	15.35	344	*e*P	P	08 49 22.8	+1.2
MORC	Moravsky Berou	15.35	344	P	Pn	08 49 17.8	+0.9
MORC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CKRC	Cesky Krumlov	15.39	336	*e*P	P	08 49 22.6	+0.6
CKRC	Cesky Krumlov	15.39	336	*e*P	P	08 49 22.6	+0.6
FETA	Feichten	15.43	324	*e*Pn	Pn	08 49 19.8	+1.8
	comp=Z,8.0nm,1.1s						
TREC	Trest	15.44	339	*e*P	P	08 49 23.1	+0.6
TREC	Trest	15.44	339	*e*P	P	08 49 23.1	+0.6
MOTA	Moosalm	15.49	326	*e*Pn	Pn	08 49 19.5	+0.7
	comp=Z,9.2nm,0.9s						
GERES	GERESS Array B	15.62	334	Pn	Pn	08 49 22.7	+2.3
	comp=Z,0.1nm,0.3s,baz=148,slow=11,SNR=28						
GERES				LR	LR	08 56 48.1	
	comp=Z,461nm,18.1s,baz=156,slow=43						
	comp=Z,9.7nm,0.7s						
DAVOX	Davos/Dischmat	15.68	322	Pn	Pn	08 49 23.2	+1.9
	comp=Z,0.4nm,0.3s,baz=140,slow=17,SNR=7.4						
DAVOX				LR	LR	08 56 24.2	
	comp=Z,356nm,20.0s,baz=103,slow=41						
	comp=Z,4.5nm,0.8s						
KRLC	Kraliky	15.81	343	*e*P	P	08 49 28.5	+1.9
KRLC	Kraliky	15.81	343	*e*P	P	08 49 28.5	+1.9
KHC	Kasperske Hory	15.91	335	*e*P	P	08 49 26.5	-1.2
KHC				MLR	MLR		
	comp=Z,800nm,21.0s						
KHC	Kasperske Hory	15.91	335	*e*P	P	08 49 26.5	-1.2
KHC				AMS	AMS	08 56 50.0	
	comp=Z,800nm,21.0s						
ZVC	Zvikov	15.96	337	*e*P	Pn	08 49 26.4	+1.7
DAVA	Damuels	16.03	324	*e*Pn	Pn	08 49 26.3	+0.5
	comp=Z,2.3nm,0.5s						
KIEV	Kiev	16.05	12	⇓P	Pn	08 49 27.5	+1.7
KIEV	Kiev	16.05	12	P	Pn	08 49 27.4	+1.7
AKASG	Malin Array Be	16.05	12	Pn	Pn	08 49 25.6	-0.2
	comp=Z,1.7nm,0.3s,baz=205,slow=11,SNR=11						
AKASG				LR	LR	08 56 09.8	
	comp=Z,223nm,19.9s,baz=194,slow=39						
	comp=Z,0.9nm,0.3s						
AKASG	Malin Array Be	16.05	12	*i* P	Pn	08 49 25.0	-0.9
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AKBB	Malin Array Si	16.05	12		Pn	08 49 26.3	+0.4
AKBB	Malin Array Si	16.05	12	⇑*e*P	Pn	08 49 26.7	+0.8
AKBB				pmax	pmax		
	comp=Z,27nm,1.1s						
DPC	Dobruska-Polom	16.17	343	*e*P	P	08 49 32.5	+1.8
DPC	Dobruska-Polom	16.17	343	*e*P	P	08 49 32.5	+1.8
PRU	Pruhonice	16.34	338	*e*P	P	08 49 32.2	-0.2
PRU	Pruhonice	16.34	338	*e*P	P	08 49 32.2	-0.2
PRA	Prague	16.44	338	*e*P	P	08 49 34.0	+0.4
PRA	Prague	16.44	338	*e*P	P	08 49 34.0	+0.4
SHA1	Shidzhatmaz	16.87	54	⇑*i*P	P	08 49 39.7	+1.1
KIV	Kislovodsk	16.98	53	⇑P	P	08 49 40.9	+1.2
KIV	Kislovodsk	16.98	53	*e*P	P	08 49 40.3	+0.6
KIV				pmax	pmax		
	comp=Z,56nm,1.1s						
KIV				MLR	MLR		
	comp=Z,57nm,14.0s						
KVAR	Kislovodsk Arr	16.98	53	P	P	08 49 39.7	0.0
	baz=261,slow=12						
	comp=Z,10nm,0.7s						
KBZ	Khabaz	17.02	54	P	P	08 49 39.9	-0.1
	comp=Z,1.2nm,0.3s,baz=231,slow=9.1,SNR=51						
	comp=Z,21nm,0.7s						
KBZ	Khabaz	17.02	54	*c i*P	P	08 49 40.9	+0.9
KBZ				pmax	pmax		
	comp=Z,23nm,0.9s						
GRA1	Grafenberg Arr	17.25	331		Pn	08 49 41.8	+0.8
GRA1				IAmb	IAmb	08 49 50.8	
	comp=Z,99nm,1.4s						
GRF	Grafenberg Arr	17.25	331	P	Pn	08 49 41.8	+0.8
GRF				pmax	pmax		
	comp=Z,99nm,1.4s						
PYA1	Pyatigorsk	17.29	53	⇓*i*P	P	08 49 44.4	+1.3
GNI	Garni	17.29	67	P	P	08 49 43.2	-0.1
	comp=Z,1.0nm,0.3s,baz=137,slow=11,SNR=3.3						
GNI				LR	LR	08 56 16.9	
	comp=Z,104nm,20.1s,baz=276,slow=37						
	comp=Z,6.5nm,0.5s						
GNI	Garni	17.29	67	⇓*i*P	P	08 49 44.6	+1.3
GNI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CLL	Collm	17.97	338	P	P	08 49 51.2	+0.8
CLL	Collm	17.97	338	*e*P	P	08 49 51.0	+0.6
CLL				pmax	pmax		
	comp=Z,20nm,1.0s						
CLL				MLR	MLR		
	comp=Z,300nm,20.0s						
CLL	Collm	17.97	338	*e*P	P	08 49 51.0	+0.6
	comp=Z,20nm,1.0s						
CLL				*i* x	x	08 49 55.0	
CLL				*i* x	x	08 49 57.0	
CLL				*e*(PP)	PnPn	08 50 04.0	+3.2
CLL				*i* PPP	PPP	08 50 09.3	
CLL				AMS	AMS	08 57 00.0	
	comp=Z,300nm,20.0s						
ECH	Echery	18.01	322	P	P	08 49 52.6	+1.7
ECH	Echery	18.01	322	P	P	08 49 52.7	+1.7
ECH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SUW	Suwalki	18.89	359	P	P	08 50 01.0	+0.4
SUW	Suwalki	18.89	359	P	P	08 50 01.0	+0.4
VORD	Divnogorie	19.39	31	*e*P	P	08 50 05.9	-0.1
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR	Storozhevoye	19.52	30	*e*P	Pn	08 50 11.7	+2.9
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MNK	Minsk	19.58	7	*i* P	P	08 50 07.2	-0.9
	comp=E,30nm,0.8s						
MNK				*i* P	P	08 50 07.2	-0.9
	comp=N,24nm,0.8s						
MNK				*i* P	P	08 50 07.2	-0.9
	comp=Z,34nm,0.9s,baz=190						
MNK				*i* PP	PnPn	08 50 20.4	-2.5
MNK				*i* S	S	08 53 48.0	-1.0
MNK				*i* SS	SnSn	08 54 08.1	+4.7
MNK				*i* LQ	LQ	08 56 13.1	
MNK				*i* LR	LR	08 57 28.9	
MNK				*i* LRM	MLR	08 58 14.0	
	comp=N,86nm,8.8s						
MNK				*i* LRM	MLR	08 58 28.8	
	comp=E,154nm,9.7s						
MNK				*i* LRM	MLR	08 58 29.2	
	comp=Z,165nm,9.7s						
MNK	Minsk	19.58	7	*i* P	P	08 50 07.2	-0.9
MNK				*i* S	S	08 53 48.0	-1.0
MNK				pmax	pmax		
	comp=N,24nm,0.8s						
MNK				pmax	pmax		
	comp=Z,34nm,0.9s						
MNK				pmax	pmax		
	comp=E,30nm,0.8s						
MNK				MLR	MLR		
	comp=N,86nm,9.0s						
MNK				MLR	MLR		
	comp=E,154nm,10.0s						
MNK				MLR	MLR		
	comp=Z,165nm,10.0s						
AKT	Akhty	19.77	64	*e*P	Pn	08 50 12.1	+0.2
AKT				*e*S	Sn	08 53 55.4	+1.4
AKT				pmax	pmax		
	comp=Z,20nm,1.0s						
NACGM	Naroch	19.89	5	*e*P	Pn	08 50 13.8	+0.8
	comp=Z,29nm,0.8s,baz=187						
MAK	Makhachkala	19.94	60	*d i*P	P	08 50 08.0	-4.1
MAK				*e*S	S	08 53 51.8	-4.5
MAK				pmax	pmax		
	comp=Z,117nm,0.6s						
MAK				MLR	MLR		
	comp=Z,302nm,18.0s						
TAM	Tamanrasset	20.15	237	P	P	08 50 13.5	-1.2
TAM				IAmb	IAmb	08 50 40.0	
	comp=Z,11nm,0.6s						
TAM	Tamanrasset	20.15	237	P	P	08 50 13.5	-1.2
TAM				pmax	pmax		
	comp=Z,11nm,0.6s						
MEM	Membach	20.17	326	*d*P	P	08 50 14.6	0.0
BCLA	Clavier	20.38	324	*d*P	Pn	08 50 21.0	+2.1
PABE	Paberze	20.38	0	P	P	08 50 16.6	-0.3
BGES	Gesves	20.46	324	*d*P	Pn	08 50 19.6	-0.3
BGES				*d*S	Sn	08 54 11.2	+0.9
LPSR	Galich'ya Gora	20.51	27	*e*P	P	08 50 19.9	+1.7
LPSR				pmax	pmax		
	comp=Z,40nm,0.8s						
DOU	Dourbes	20.51	323	*d*P	P	08 50 19.1	+0.8
BMRD	Maredsous	20.56	323	*d*P	Pn	08 50 21.6	+0.5
VRH	Novokhopyorsk	20.61	33	*e*P	P	08 50 19.1	-0.2
VRH				pmax	pmax		
	comp=Z,20nm,0.9s						
OBN	Obninsk	21.85	20	P	P	08 50 32.8	+0.2
	comp=Z,32nm,0.4s,baz=331,slow=19,SNR=3.1						
	comp=Z,32nm,0.4s						
OBN	Obninsk	21.85	20	*i* P	P	08 50 32.9	+0.3
OBN				*i*		08 50 56.5	
OBN				pmax	pmax		
	comp=Z,15nm,0.9s						
OBN				MLR	MLR		
	comp=Z,245nm,16.0s						
ESDC	Sonseca Array	22.50	290	P	P	08 50 40.0	+0.1
	comp=Z,7.7nm,0.8s,baz=84,slow=9.3,SNR=35						
	comp=Z,7.7nm,0.8s						
ESDC	Sonseca Array	22.50	290	P	P	08 50 40.8	+0.9
PAB	San Pablo	22.80	290	P	P	08 50 41.5	-1.6
PAB				IAmb	IAmb	08 50 49.3	
	comp=Z,39nm,1.4s						
PAB	San Pablo	22.80	290	P	P	08 50 41.5	-1.6
PAB				pmax	pmax		
	comp=Z,39nm,1.5s						
MDT	Midelt	23.67	273	LR	LR	09 01 52.9	
	comp=Z,134nm,19.8s,baz=72,slow=41						
MD01	Midelt array s	23.78	273	P	P	08 50 53.3	+0.2
BELG	Belogornoye	24.18	37	⇑*i*P	P	08 51 00.2	+3.8
BELG				pmax	pmax		
	comp=Z,32nm,7.1s						
PBRG	Braganca	24.77	295	*e*P	P	08 51 02.8	+0.8
PBRG				*i* IAmb	IAmb	08 51 07.7	
	comp=Z,22nm,1.8s						
PBAR	Barrancos	24.90	286	*e*P	P	08 51 04.9	+1.8
MVO	Moncorvo	24.93	293	*e*P	P	08 51 04.2	+0.7

MVO				*i* IAmb	IAmb	08 51 38.8	
	comp=Z,27nm,1.3s						
PMRV	**Marv??o**	**25.15**	**289**	*e*P	**P**	**08 51 06.1**	**+0.7**
PMRV				*i* IAmb	IAmb	08 51 17.1	
	comp=Z,30nm,1.8s						
PCBR	**Castelo Branco**	**25.22**	**290**	*e*P	**P**	**08 51 06.6**	**+0.6**
PCBR				*i* IAmb	IAmb	08 51 26.4	
	comp=Z,29nm,2.1s						
MTE	**Manteigas**	**25.28**	**291**	*e*P	**P**	**08 51 09.0**	**+2.3**
PVIS	**Viseu**	**25.56**	**292**	*e*P	**P**	**08 51 10.1**	**+0.9**
PARRA	**Arraiolos**	**25.66**	**288**	*e*P	**P**	**08 51 10.9**	**+0.8**
PBDV	**Barranco-do-Ve**	**25.67**	**284**	*e*P	**P**	**08 51 10.9**	**+0.8**
PCAB	**Cabril**	**25.72**	**294**	*e*P	**P**	**08 51 11.6**	**+1.0**
PSARD	**Sardoal**	**25.74**	**290**	*e*P	**P**	**08 51 11.4**	**+0.5**
PSARD				*i* IAmb	IAmb	08 51 28.1	
	comp=Z,34nm,1.5s						
PMTG	**Montargil**	**25.80**	**288**	*e*P	**P**	**08 51 13.0**	**+1.7**
HFS	**Hagfors**	**25.88**	**348**	P	**P**	**08 51 11.5**	**-0.3**
	comp=Z,4.5nm,0.5s,baz=144,slow=10,SNR=22						
HFS				LR	LR	09 01 37.7	
	comp=Z,264nm,20.2s,baz=170,slow=37 comp=Z,4.5nm,0.5s						
MOE	**Montemor**	**25.92**	**287**	*e*P	**P**	**08 51 13.4**	**+1.0**
FINES	**FINESS Array B**	**26.38**	**2**	P	**P**	**08 51 14.6**	**-1.7**
	comp=Z,2.6nm,0.5s,baz=160,slow=11,SNR=12						
FINES				PcP	**PcP**	**08 54 41.4**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=187,slow=3.3,SNR=3.5						
FINES				LR	LR	09 02 56.0	
	comp=Z,200nm,21.1s,baz=194,slow=39 comp=Z,2.6nm,0.5s						
NOA	**NORSAR Array B**	**27.17**	**347**	P	**P**	**08 51 22.7**	**-0.8**
	comp=Z,2.4nm,0.8s,baz=152,slow=11,SNR=7.7						
NOA				LR	LR	09 03 29.4	
	comp=Z,178nm,19.9s,baz=165,slow=39 comp=Z,2.4nm,0.8s						
EKA	**Eskdalemuir Ar**	**27.45**	**326**	P	**P**	**08 51 25.1**	**-0.9**
	comp=Z,2.6nm,0.6s,baz=127,slow=8.4,SNR=7.9 comp=Z,2.6nm,0.6s						
KLMR	**Klimovskoe**	**27.65**	**17**	*e*P	**P**	**08 51 27.1**	**-0.7**
KLMR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KIRV	**Kirov**	**28.93**	**28**	LR	LR	09 04 28.5	
	comp=Z,137nm,18.3s,baz=237,slow=39						
AB31	**Akbulak array**	**29.93**	**51**	P	**P**	**08 51 47.5**	**-0.7**
AB31				IAmb	IAmb	08 52 00.2	
	comp=Z,4.2nm,0.8s						
ABKAR	**Akbulak array**	**29.93**	**51**	P	**P**	**08 51 47.5**	**-0.7**
ARTI	**Arti**	**31.63**	**37**	P	**P**	**08 52 04.0**	**+0.9**
ARTI						08 53 03.8	
ARTI				S	**S**	**08 57 14.0**	**+2.1**
ARTI				SS	**SnSn**	**08 58 59.4**	**+1.9**
LODK	**Lodwar**	**33.31**	**159**	P	**P**	**08 52 19.0**	**+0.8**
LODK				IAmb	IAmb	08 52 21.4	
	comp=Z,7.4nm,1.3s						
ARCES	**ARCESS Array B**	**34.48**	**1**	P	**P**	**08 52 26.2**	**-1.6**
	comp=Z,5.7nm,0.9s,baz=157,slow=0.9,SNR=10						
ARCES				LR	LR	09 07 18.6	
	comp=Z,266nm,18.7s,baz=232,slow=38 comp=Z,5.7nm,0.9s						
CHGR	**Chuyangaron**	**36.14**	**71**	P	**P**	**08 52 41.6**	**-1.0**
CHGR	**Chuyangaron**	**36.14**	**71**	P	**P**	**08 52 41.6**	**-1.0**
CHGR				pmax	pmax		
	comp=Z,19nm,0.8s						
KK31	**Karatay Array**	**36.69**	**63**	P	**P**	**08 52 47.7**	**+0.5**
KK31				IAmb	IAmb	08 52 55.5	
	comp=Z,5.2nm,0.8s						
KK31	**Karatay Array**	**36.69**	**63**	P	**P**	**08 52 47.7**	**+0.5**
KK31				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KKAR	**Karatay Array**	**36.69**	**63**	P	**P**	**08 52 47.1**	**-0.1**
KKAR	**Karatay Array**	**36.69**	**63**	P	**P**	**08 52 47.1**	**-0.1**
BORK	**Borovoye**	**37.12**	**47**	⇑*i*P	**P**	**08 52 52.0**	**+1.3**
BORK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BVAR	**Borovoye Array**	**37.16**	**47**	P	**P**	**08 52 49.8**	**-1.2**
	comp=Z,1.4nm,0.7s,baz=266,slow=6.9,SNR=8.4 comp=Z,1.4nm,0.7s						
DBIC	**Dimbokro**	**38.71**	**230**	P	**P**	**08 53 04.0**	**-0.4**
	comp=Z,7.5nm,0.9s,baz=61,slow=5.5,SNR=4.5						
DBIC				LR	LR	09 10 09.1	
	comp=Z,87nm,18.3s,baz=106,slow=38 comp=Z,7.5nm,0.9s						
AAK	**Ala-Archa**	**39.65**	**63**	P	**P**	**08 53 12.6**	**+0.4**
	comp=Z,1.9nm,0.5s,baz=250,slow=4.0,SNR=6.7 comp=Z,1.9nm,0.5s						
AAK	**Ala-Archa**	**39.65**	**63**	P	**P**	**08 53 11.7**	**-0.6**
AAK				IAmb	IAmb	08 53 23.2	
	comp=Z,6.0nm,0.8s						
AAK	**Ala-Archa**	**39.65**	**63**	⇑*e*P	**P**	**08 53 13.8**	**+1.5**
AAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BORG	**Borgarnes**	**40.06**	**332**	LR	LR	09 11 31.6	
	comp=Z,112nm,18.2s,baz=118,slow=39						
KSH	**Kashi**	**41.22**	**68**	P	**P**	**08 53 27.3**	**+2.0**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KURBB	**Kurchatov Arra**	**41.99**	**51**	P	**P**	**08 53 30.4**	**-0.8**
	comp=Z,4.3nm,0.5s,baz=276,slow=8.6,SNR=21 comp=Z,4.3nm,0.5s						
KURK	**Kurchatov**	**42.05**	**51**	P	**P**	**08 53 31.1**	**-0.6**
KURK				IAmb	IAmb	08 53 34.6	
	comp=Z,21nm,1.5s						
KURK	**Kurchatov**	**42.05**	**51**	⇑*i*P	**P**	**08 53 33.7**	**+2.0**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SPITS	**Spitsbergen Ar**	**43.28**	**358**	P	**P**	**08 53 41.4**	**0.0**
	comp=Z,8.5nm,0.9s,baz=137,slow=24,SNR=5.8						
SPITS				LR	LR	09 12 53.0	
	comp=Z,236nm,21.2s,baz=170,slow=38 comp=Z,8.5nm,0.9s						
MK31	**Makanchi Array**	**44.70**	**56**	⇑*i*P	**P**	**08 53 56.2**	**+2.9**
MKAR	**Makanchi Array**	**44.70**	**56**	P	**P**	**08 53 53.2**	**0.0**
	comp=Z,4.2nm,0.5s,baz=272,slow=7.8,SNR=19 comp=Z,4.2nm,0.5s						
ZALV	**Zalesovo Beam**	**45.81**	**46**	P	**P**	**08 54 00.8**	**-1.1**
	comp=Z,2.4nm,0.3s,baz=258,slow=9.2,SNR=15 comp=Z,2.4nm,0.3s						
NRIK	**Noril'sk**	**48.37**	**25**	LR	LR	09 16 22.4	
	comp=Z,91nm,18.8s,baz=264,slow=38						
WMQ	**Urumqi**	**48.96**	**59**	*e*P	**P**	**08 54 28.6**	**+1.9**
WMQ				pP	sP	08 54 31.6	+0.9
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
LSZ	**Lusaka**	**50.29**	**175**	LR	LR	09 16 57.5	
	comp=Z,96nm,19.9s,baz=158,slow=37						
SFJD	**Kangerlussuaq**	**52.19**	**331**	LR	LR	09 18 46.6	
	comp=Z,86nm,19.7s,baz=92,slow=38						
KSANE	**Kasane**	**52.65**	**178**	P	**P**	**08 54 53.7**	**-0.9**
KSANE				IAmb	IAmb	08 54 56.6	
	comp=Z,8.3nm,0.8s						
EVN	**Everest**	**53.38**	**79**	P	**P**	**08 55 00.4**	**-0.4**
TSUM	**Tsumeb**	**54.35**	**187**	LR	LR	09 22 32.7	
	comp=Z,166nm,18.7s,baz=336,slow=41						
TSUM	**Tsumeb**	**54.35**	**187**		**P**	**08 55 08.0**	**+0.8**
TSUM				IAmb	IAmb	08 55 14.4	
	comp=Z,4.4nm,1.1s						
OPO	**Ambohidratompo**	**57.82**	**154**	P	**P**	**08 55 30.4**	**-1.6**
	comp=Z,3.6nm,0.8s,baz=359,slow=7.8,SNR=4.8 comp=Z,3.6nm,0.8s						
LPHEP	**Lephephe**	**58.20**	**178**	P	**P**	**08 55 35.3**	**+0.7**
GTA	**Gaotai**	**58.94**	**61**	*e*P	**P**	**08 55 39.5**	**-0.2**
GTA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LBTB	**Lobatse**	**59.83**	**178**	P	**P**	**08 55 45.8**	**-0.1**
LBTB	**Lobatse**	**59.83**	**178**	P	**P**	**08 55 45.8**	**-0.1**
LBTB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SONM	**Songino Array**	**60.35**	**50**	P	**P**	**08 55 49.4**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=272,slow=8.1,SNR=7.6 comp=Z,1.5nm,0.6s						
ULN	**Ulaanbaatar**	**60.75**	**50**	⇓*i*P	**P**	**08 55 54.2**	**+2.1**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TIXI	**Tiksi**	**61.58**	**20**	⇑*i*P	**P**	**08 56 00.0**	**+2.9**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SCHQ	**Schefferville**	**62.51**	**319**	P	**P**	**08 56 04.8**	**+1.1**
	comp=Z,3.9nm,0.9s,baz=67,slow=6.2,SNR=11 comp=Z,3.9nm,0.9s						
LZDM	**Lanzhou Array**	**63.13**	**64**	P	**P**	**08 56 08.9**	**+0.3**
	comp=Z,1.4nm,0.4s,baz=289,slow=9.2,SNR=3.8 comp=Z,1.4nm,0.4s						
BOSA	**Boshof**	**63.41**	**179**	P	**P**	**08 56 10.0**	**+0.1**
	comp=Z,6.1nm,0.9s,baz=9.7,slow=5.8,SNR=8.7						
BOSA				LR	LR	09 26 41.0	
	comp=Z,72nm,18.6s,baz=16,slow=39 comp=Z,6.1nm,0.9s						
HHC	**Hu-ho-hao-te**	**66.56**	**56**	*e*P	**P**	**08 56 29.4**	**-1.1**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,170nm,5.0s						
CMAR	**Chiang Mai Arr**	**67.65**	**83**	P	**P**	**08 56 38.0**	**+0.3**
	comp=Z,1.2nm,0.4s,baz=303,slow=7.8,SNR=10 comp=Z,1.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**67.65**	**83**	*i* P	**P**	**08 56 38.0**	**+0.3**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
XAN	**Xi'an**	**67.83**	**63**	⇓P	**P**	**08 56 39.2**	**+0.6**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HEH	**HeiHe**	**71.60**	**41**	*e*P	**P**	**08 57 01.4**	**-0.1**
WHN	**Wuhan**	**73.55**	**64**	P	**P**	**08 57 15.2**	**+1.8**
BNX	**BinXian**	**74.09**	**45**	⇓P	**P**	**08 57 18.2**	**+1.8**
BNX				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NJ2	**Nanjing**	**76.02**	**61**	*e*P	**P**	**08 57 27.4**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
YKA	**Yellowknife Ar**	**77.14**	**342**	P	**P**	**08 57 34.5**	**+1.0**
	comp=Z,1.2nm,0.7s,baz=25,slow=5.3,SNR=10 comp=Z,1.2nm,0.7s						
YKA	**Yellowknife Ar**	**77.14**	**342**	*i* P	**P**	**08 57 37.0**	**+3.5**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**77.63**	**44**	P	**P**	**08 57 36.0**	**-0.6**
	comp=Z,4.0nm,0.6s,baz=290,slow=4.7,SNR=7.1 comp=Z,4.0nm,0.6s						
KSRS	**Korea Array**	**79.16**	**52**	P	**P**	**08 57 45.0**	**-0.1**
	comp=Z,3.0nm,0.6s,baz=312,slow=4.8,SNR=13 comp=Z,3.0nm,0.6s						
ILAR	**Eielson Array**	**80.17**	**356**	P	**P**	**08 57 51.1**	**+0.9**
	comp=Z,1.1nm,0.9s,baz=356,slow=4.0,SNR=6.7 comp=Z,1.1nm,0.9s						
CPUP	**Villa Florida**	**98.03**	**244**	LR	LR	09 43 09.6	
	comp=Z,13nm,21.6s,baz=71,slow=35						
WRA	**Warramunga Arr**	**117.67**	**96**	PKP	**PKPdf**	**09 04 25.9**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=330,slow=1.5,SNR=4.6						
ASAR	**Alice Springs**	**119.11**	**100**	PKP	**PKPdf**	**09 04 29.4**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=328,slow=1.2,SNR=9.1						
QSPA	**South Pole Qui**	**124.98**	**180**	PKP	**PKPdf**	**09 04 38.8**	**-0.8**
	comp=Z,1.9nm,1.0s,baz=240,slow=3.2,SNR=4.7						

ASRS 06 09:00:08.0±1.3**, 53.°68N×87.°96E, h0^{km}, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

ASRS 06 09:00:17.0±0.5**, 54.°35N×86.°68E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

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*ISK **06** 09:00:44.7, 35.°19N×23.°85E, h5^{km}, ML3.6/16*

*ATH **06** 09:00:45.5, 35.°18N×23.°83E, h8^{km}±1^{km}, ML3.7/14, Manual Solution by E.Daskalaki First location: 2019/12/06 09:01:48, This location: 2019/12/06 10:55:32 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*

*IDC **06** 09:00:45.7±1.6, 35.°04N×23.°97E, h0^{km}, mb3.8/7, mbtmp3.8/13, ML3.3/6, MS3.8/2, Error ellipse: s-maj=32.1km s-min=10.1km az=178.0*

*THE **06** 09:00:46.1, 35°N±1°×23.°8E±0.°8, h0^{km}±1^{km}, M3.7/17, MLh3.7/17*

ISC 06 09:00:46.2±0.9**, 35.°19N**±0.°02×**23.°85E**±0.°02**, h8^{km}**±6^{km}**, n93, σ1^{s}42**/116**, mb3.8**/7**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNDR	**Palaiochora Ch**	**0.19**	**285**	P	**Pg**	**09 00 51.8**	**+1.8**
KNDR				S	**Sg**	**09 00 52.2**	**-0.3**
KNDR	**Palaiochora Ch**	**0.19**	**285**	Pg	**Pg**	**09 00 49.0**	**-1.0**
KNDR				Sg	**Sg**	**09 00 52.3**	**-0.3**
KNDR	**Palaiochora Ch**	**0.19**	**285**	P	**Pg**	**09 00 49.2**	**-0.8**
KNDR				S	**Sg**	**09 00 52.0**	**-0.5**
IMMV	**Iera Moni Meta**	**0.29**	**22**	P	**Pb**	**09 00 53.6**	**-0.2**
IMMV				S	**Sg**	**09 00 56.3**	**+0.3**
IMMV	**Iera Moni Meta**	**0.29**	**22**	Pg	**Pg**	**09 00 51.6**	**-0.4**
IMMV				Sg	**Sg**	**09 00 56.6**	**+0.7**
IMMV	**Iera Moni Meta**	**0.29**	**22**	P	**Pg**	**09 00 51.5**	**-0.5**
IMMV				S	**Sg**	**09 00 56.1**	**+0.2**
CHNB	**Souda**	**0.35**	**31**	P	**Pg**	**09 00 52.7**	**-0.3**
CHNB				S	**Sg**	**09 00 58.1**	**+0.4**
VAM	**Vamos**	**0.36**	**53**	P	**Pg**	**09 00 52.7**	**-0.6**
VAM				S	**Sg**	**09 00 58.9**	**+0.8**
VAM	**Vamos**	**0.36**	**53**	P	**Pg**	**09 00 52.6**	**-0.6**
VAM				S	**Sg**	**09 00 58.1**	**0.0**
CHAN	**Chania**	**0.37**	**26**	P	**Pg**	**09 00 53.1**	**-0.3**
CHAN				S	**Sg**	**09 00 58.8**	**+0.5**
CHAN	**Chania**	**0.37**	**26**	P	**Pg**	**09 00 52.9**	**-0.4**
CHAN				S	**Sg**	**09 00 58.5**	**+0.2**
GVD	**Gavdhos**	**0.40**	**150**	P	**Pg**	**09 00 53.8**	**-0.2**
GVD				S	**Sb**	**09 01 00.7**	**-1.0**
GVD	**Gavdhos**	**0.40**	**150**	Pg	**Pg**	**09 00 53.5**	**-0.5**
GVD				Sg	**Sb**	**09 01 00.5**	**-1.3**
GVD	**Gavdhos**	**0.40**	**150**	P	**Pg**	**09 00 53.5**	**-0.5**
GVD				S	**Sg**	**09 00 59.4**	**+0.2**
ANKY	**Antikythira Is**	**0.81**	**327**	P	**Pg**	**09 01 01.3**	**-0.5**
ANKY				S	**Sb**	**09 01 12.9**	**-0.8**
ANKY	**Antikythira Is**	**0.81**	**327**	P	**Pg**	**09 01 00.9**	**-0.8**
ANKY				S	**Sg**	**09 01 11.4**	**-0.9**
IDI	**Anoyia**	**0.86**	**83**	Pg	**Pg**	**09 01 01.2**	**-1.5**
	33nm,0.3s,baz=273,slow=18,SNR=32						
IDI				Lg	Lg	09 01 12.2	
	121nm,0.3s,baz=299,slow=21,SNR=17						
IDI	**Anoyia**	**0.86**	**83**	P	**Pg**	**09 01 01.1**	**-1.5**
IDI				S	**Sn**	**09 01 16.9**	**-0.6**
IDI	**Anoyia**	**0.86**	**83**	Pg	**Pg**	**09 01 01.5**	**-1.2**
IDI				Sg	**Sb**	**09 01 14.9**	**-0.2**
IDI	**Anoyia**	**0.86**	**83**	P	**Pg**	**09 01 00.9**	**-1.8**
IDI				S	**Sg**	**09 01 13.6**	**-0.3**
IACM	**Heraklion**	**1.01**	**83**	P	**Pb**	**09 01 05.7**	**-0.2**
IACM	**Heraklion**	**1.01**	**83**	P	**Pb**	**09 01 06.0**	**+0.1**
IACM				S	**Sb**	**09 01 19.0**	**-0.3**
KTHA	**Kythira Island**	**1.24**	**329**	P	**Pg**	**09 01 09.0**	**-1.0**
KTHA	**Kythira Island**	**1.24**	**329**	Pn	**Pg**	**09 01 09.0**	**-1.0**
KTHA	**Kythira Island**	**1.24**	**329**	P	**Pg**	**09 01 08.6**	**-1.4**
NPS	**Neapolis**	**1.45**	**87**	P	**Pg**	**09 01 13.6**	**-0.3**
NPS				S	**Sg**	**09 01 39.3**	**+6.5**
NPS	**Neapolis**	**1.45**	**87**	P	**Pn**	**09 01 11.8**	**-1.0**
NPS1	**Neapolis Lacon**	**1.47**	**335**	P	**Pn**	**09 01 12.7**	**-0.3**
MHLO	**Agia Marina, M**	**1.57**	**17**	P	**Pb**	**09 01 15.2**	**-0.2**
MHLO				S	**Sg**	**09 01 36.7**	**+0.1**
MHLO	**Agia Marina, M**	**1.57**	**17**	P	**Pn**	**09 01 14.0**	**-0.3**
MHLO				S	**Sn**	**09 01 33.0**	**-1.8**
MNVA	**Monemvasia**	**1.63**	**337**	P	**Pn**	**09 01 15.0**	**-0.2**
THR9	**Santorini-Faro**	**1.69**	**46**	P	**Pn**	**09 01 15.6**	**-0.5**
VLI	**Veliai**	**1.70**	**334**	P	**Pn**	**09 01 15.8**	**-0.3**
VLI	**Veliai**	**1.70**	**334**	P	**Pn**	**09 01 15.5**	**-0.6**
VLI				S	**Sn**	**09 01 36.6**	**-1.5**
THR6	**Thira Island,**	**1.72**	**47**	P	**Pn**	**09 01 16.8**	**+0.4**
THR5	**Thira Island,**	**1.73**	**44**	P	**Pn**	**09 01 16.4**	**-0.2**
SAP3	**Santorini-Thir**	**1.74**	**44**	P	**Pb**	**09 01 17.6**	**-0.9**
SAP3	**Santorini-Thir**	**1.74**	**44**	P	**Pn**	**09 01 16.2**	**-0.5**
SNT5	**Nea Kammeni, S**	**1.75**	**46**	P	**Pn**	**09 01 17.1**	**+0.3**
SNT5	**Nea Kammeni, S**	**1.75**	**46**	P	**Pn**	**09 01 16.4**	**-0.4**
THR3	**Thira Island,**	**1.76**	**46**	P	**Pn**	**09 01 16.9**	**0.0**
THERA	**Ancient Thera,**	**1.77**	**48**	P	**Pn**	**09 01 16.6**	**-0.6**
THR8	**Santorini-Mono**	**1.80**	**47**	P	**Pn**	**09 01 17.3**	**-0.3**
ZKR	**Zakros**	**1.94**	**91**	Pn	**Pn**	**09 01 20.4**	**+0.9**
ZKR	**Zakros**	**1.94**	**91**	P	**Pb**	**09 01 20.7**	**-1.2**
APE	**Apeiranthos**	**2.32**	**35**	P	**Pn**	**09 01 24.6**	**-0.1**
APE	**Apeiranthos**	**2.32**	**35**	Pn	**Pn**	**09 01 25.5**	**+0.8**
APE	**Apeiranthos**	**2.32**	**35**	P	**Pn**	**09 01 24.6**	**-0.1**
PYL	**PYLOS**	**2.41**	**316**	P	**Pb**	**09 01 29.7**	**-0.2**
PYL	**PYLOS**	**2.41**	**316**	P	**Pn**	**09 01 25.1**	**-0.8**
MET2	**Kameni Chora,**	**2.46**	**350**	P	**Pn**	**09 01 26.4**	**-0.2**
MET4	**Agioi Theodoro**	**2.46**	**352**	P	**Pn**	**09 01 26.3**	**-0.2**
MET5	**Makryloggos,Me**	**2.46**	**351**	P	**Pn**	**09 01 27.0**	**+0.3**
VLX	**Vlachokerasia**	**2.48**	**332**	P	**Pb**	**09 01 29.7**	**-1.4**
ITM	**Ithomi**	**2.52**	**323**	P	**Pb**	**09 01 31.3**	**-0.4**
ITM	**Ithomi**	**2.52**	**323**	Pn	**Pn**	**09 01 28.4**	**+0.9**
ITM	**Ithomi**	**2.52**	**323**	P	**Pn**	**09 01 27.0**	**-0.5**
KARP	**Karpathos**	**2.73**	**81**	Pn	**Pn**	**09 01 31.4**	**+1.0**
KARY	**Karystos**	**2.88**	**9**	P	**Pn**	**09 01 32.3**	**-0.1**
DION	**Dionisos Attik**	**2.89**	**1**	P	**Pn**	**09 01 31.9**	**-0.6**
LTK	**Loutraki**	**2.92**	**346**	P	**Pn**	**09 01 33.4**	**+0.5**
VIL2	**Platees**	**3.05**	**351**	P	**Pn**	**09 01 33.9**	**-0.9**
KLV	**Kalavryta, Ach**	**3.16**	**335**	P	**Pn**	**09 01 37.2**	**+0.9**
BODT	**Bodrum**	**3.37**	**55**	Pn	**Pn**	**09 01 40.4**	**+1.2**
DAT	**Datca**	**3.40**	**62**	Pn	**Pn**	**09 01 40.6**	**+1.0**
KYMI	**Kymi, Euboea I**	**3.45**	**3**	P	**Pn**	**09 01 40.7**	**+0.5**
KALE	**Kalithea**	**3.48**	**337**	P	**Pn**	**09 01 40.7**	**+0.1**
LKR	**Lokris**	**3.52**	**349**	P	**Pn**	**09 01 41.5**	**+0.3**
ATAL	**Atalanti**	**3.56**	**350**	P	**Pn**	**09 01 42.0**	**+0.3**
EFP	**Efpalio**	**3.59**	**335**	P	**Pn**	**09 01 43.2**	**+1.1**
AXS	**Araxos**	**3.60**	**327**	P	**Pn**	**09 01 43.7**	**+1.4**
ARG	**Arkhangelos**	**3.63**	**72**	Pn	**Pn**	**09 01 44.2**	**+1.5**
CHOS	**Chios island**	**3.65**	**28**	Pn	**Pn**	**09 01 44.6**	**+1.5**
CHOS	**Chios island**	**3.65**	**28**	P	**Pn**	**09 01 43.9**	**+0.8**
ANX	**Ano Chora**	**3.73**	**336**	P	**Pn**	**09 01 44.9**	**+0.7**
URLA	**Izmir**	**3.86**	**34**	Pn	**Pn**	**09 01 47.5**	**+1.6**
TURN	**Turunc**	**3.90**	**65**	Pn	**Pn**	**09 01 48.6**	**+2.2**
YER	**Yerkesik**	**4.08**	**60**	Pn	**Pn**	**09 01 51.1**	**+2.1**
BRTR	**Keskin Array B**	**9.01**	**57**	Pn	**Pn**	**09 02 57.9**	**+1.2**
	0.2nm,0.3s,baz=242,slow=14,SNR=15 3.6nm,0.8s						
MMAI	**Mount Meron Ar**	**9.82**	**99**	Pn	**Pn**	**09 03 05.1**	**-2.7**
	1.2nm,0.3s,baz=302,slow=12,SNR=2.2						
MMAI				Sn	**Sn**	**09 04 50.2**	**-8.2**
	1.3nm,0.3s,baz=300,slow=25,SNR=1.8 0.7nm,0.3s						
EIL	**Elat**	**10.87**	**117**	Pn	**Pn**	**09 03 20.2**	**-1.9**
	0.8nm,0.3s,baz=324,slow=14,SNR=11						
EIL				Sn	Sn	09 05 10.0	-14
	1.0nm,0.3s,baz=304,slow=18,SNR=7.3 3.6nm,0.5s						
ASF	**Jabal al Asfar**	**11.28**	**102**	Pn	**Pn**	**09 03 26.9**	**-0.8**
	0.4nm,0.3s,baz=315,slow=8.6,SNR=2.6 1.2nm,0.4s						
VRAC	**Vranov**	**15.09**	**341**	LR	LR	09 12 18.5	
	comp=Z,134nm,18.6s,baz=164,slow=45						
GERES	**GERESS Array B**	**15.57**	**334**	Pn	**P**	**09 04 29.8**	**-0.6**
	baz=140,slow=10,SNR=6.2 1.5nm,0.7s						
KBZ	**Khabaz**	**16.98**	**54**	Pn	**P**	**09 04 46.1**	**+0.2**
	0.1nm,0.3s,baz=228,slow=7.6,SNR=4.7 2.1nm,0.7s						
ESDC	**Sonseca Array**	**22.49**	**290**	P	**P**	**09 05 47.0**	**+0.9**
	1.6nm,1.0s,baz=91,slow=10.0,SNR=5.7 1.6nm,1.0s						
HFS	**Hagfors**	**25.82**	**348**	P	**P**	**09 06 18.8**	**+1.1**
	8.5nm,1.1s,baz=153,slow=8.0,SNR=5.7 8.5nm,1.1s						
EKA	**Eskdalemuir Ar**	**27.40**	**326**	P	**P**	**09 06 36.0**	**+4.0**
	0.7nm,0.5s,baz=126,slow=9.3,SNR=1.9 0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**41.94**	**51**	P	**P**	**09 08 37.6**	**+0.4**
	0.9nm,0.5s,baz=276,slow=8.6,SNR=5.8 0.9nm,0.5s						
MKAR	**Makanchi Array**	**44.66**	**56**	P	**P**	**09 09 01.4**	**+2.1**
	1.2nm,0.6s,baz=275,slow=8.2,SNR=7.2 1.2nm,0.6s						
ZALV	**Zalesovo Beam**	**45.76**	**46**	P	**P**	**09 09 08.9**	**+1.0**
	0.8nm,0.6s,baz=268,slow=7.2,SNR=2.5 0.8nm,0.6s						
RES	**Resolute Bay**	**63.36**	**345**	LR	LR	09 38 37.2	
	comp=Z,180nm,19.4s,baz=260,slow=36						
YKA	**Yellowknife Ar**	**77.09**	**342**	P	**P**	**09 12 42.1**	**+2.5**
	0.1nm,0.6s,baz=94,slow=6.4,SNR=1.7 0.1nm,0.6s						

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*ASRS **06** 09:10:50.0±2.9, 54.°62N×83.°74E, h0^{km}, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 06 09:10:53.6±1.5**, 54.°62N×83.°76E, h0^{km}, mbtmp3.0**/3**, ML2.5**/3**, Error ellipse: s-maj=15.3km s-min=8.8km az=13.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.92**	**137**	I	I	09 16 13.4	
	baz=316,slow=331,SNR=5.0						
ZALV	**Zalesovo Beam**	**0.92**	**137**	Pg	Pg	09 11 09.8	-1.4
	2.3nm,0.3s,baz=319,slow=20,SNR=16						
ZALV				Lg	Lg	09 11 25.0	
	12nm,0.3s,baz=317,slow=29,SNR=22						
KURBB	**Kurchatov Arra**	**5.12**	**221**	Pn	Pn	09 12 12.7	+1.2
	0.1nm,0.3s,baz=39,slow=13,SNR=5.2 0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.89**	**187**	Pn	Pn	09 12 49.4	-0.2
	0.2nm,0.3s,baz=16,slow=13,SNR=2.6 0.5nm,0.5s						
BVAR	**Borovoye Array**	**8.07**	**264**	Pn	Pn	09 12 51.3	-0.7
	0.1nm,0.3s,baz=70,slow=13,SNR=5.3						
BVAR				Sn	Sn	09 14 19.7	-4.2
	baz=71,slow=23,SNR=2.8 0.9nm,0.4s						

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*UPP **06** 09:14:05.2±0.1, 67.°88N×20.°15E, h0^{km}, ML2.6, Confirmed Induced event*

*HEL **06** 09:14:07.9±0.3, 67.°79N×20.°21E, h0^{km}, ML1.3, Suspected explosion*

ISC 06 09:14:05.4±0.9**, 67.°80N**±0.°03×**20.°13E**±0.°03**, h0^{km}, n20, σ1^{s}16**/31**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.17**	**27**	P	**Pg**	**09 14 07.3**	**-1.4**
KUA				S	**Sg**	**09 14 08.8**	**-2.1**
RATU	**Laukkuluspa**	**0.20**	**276**	P	**Pg**	**09 14 09.4**	**+0.1**
NIKU	**Nikkaluokta**	**0.42**	**279**	P	**Pg**	**09 14 13.3**	**-0.1**
KOVU	**Salmi**	**0.42**	**2**	P	**Pg**	**09 14 12.3**	**-1.2**
LANU	**Lannavaara**	**0.75**	**70**	PG	**Pg**	**09 14 20.3**	**+0.6**
LANU				SG	**Sg**	**09 14 30.0**	**+0.6**
MASU	**Masugnsbyn**	**0.80**	**115**	P	**Pb**	**09 14 21.5**	**-0.6**
KIF	**Kilpisjarvi**	**1.23**	**11**	PG	**Pn**	**09 14 30.9**	**+1.0**
KIF				MSG		09 14 46.5	
	comp=Z,3.9nm,0.2s						
KIF				SG	**Sn**	**09 14 47.4**	**+0.2**
PAJU	**Pajala**	**1.39**	**123**	PG	**Pg**	**09 14 30.5**	**-1.6**
	baz=304						
PAJU				SG	**Sg**	**09 14 49.4**	**-0.7**
HEF	**Hetta**	**1.46**	**64**	PG	**Pg**	**09 14 33.2**	**-0.2**
	baz=246						
HEF				MSG		09 14 51.2	
	comp=Z,1.8nm,0.2s						
HEF				SG	**Sb**	**09 14 52.4**	**-0.1**
ERTU	**Ertsjaerv**	**1.49**	**146**	PG	**Pb**	**09 14 34.0**	**+0.1**
ERTU				SN	**Sn**	**09 14 55.3**	**+1.8**
KLF	**Kolari**	**1.58**	**109**	PG	**Pg**	**09 14 36.1**	**+0.4**
KLF				MSG		09 14 54.3	
	comp=Z,1.5nm,0.2s						
KLF				SN	**Sg**	**09 14 57.6**	**+1.5**
KTK1	**Kautokeino**	**1.67**	**42**	PG	**Pg**	**09 14 38.3**	**+0.8**
KTK1				SN	**Sg**	**09 15 00.1**	**+1.0**
TRO	**Tromso**	**1.89**	**347**	SG	**Sg**	**09 15 06.4**	**+0.3**
KALU	**Kalix**	**2.33**	**145**	PN	**Pn**	**09 14 44.7**	**-0.2**
TOF	**Tornio**	**2.39**	**134**	PG	**Pb**	**09 14 49.0**	**-0.3**
TOF				MSG		09 15 17.9	
	comp=Z,1.1nm,0.2s						
TOF				SG	**Sg**	**09 15 20.9**	**-1.2**
RNF	**Rovaniemi**	**2.59**	**115**	PB	**Pb**	**09 14 50.7**	**-1.9**
RNF				SG	**Sb**	**09 15 24.6**	**-0.3**
ARA0	**ARCESS Array S**	**2.63**	**46**	PB	**Pb**	**09 14 52.1**	**-1.2**
ARA0				SB	**Sb**	**09 15 25.7**	**-0.4**
RAJF	**Raja-Jooseppi**	**3.14**	**74**	SB	**Sb**	**09 15 41.0**	**+0.3**
KEV	**Kevo**	**3.18**	**49**	SN	**Sn**	**09 15 38.2**	**+3.0**
VRF	**Varrio**	**3.60**	**86**	SG	**Sg**	**09 15 60.0**	**-1.1**

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*KRNET **06** 09:15:58.3±0.1, 40.°81N×69.°88E, mb2.6*

ISC 06 09:15:57.5±3.4**, 40.°92N**±0.°05×**69.°67E**±0.°09**, h4^{km}**±28^{km}**, n7, σ1^{s}30**/14**, 9C-4D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRKS	**Terek-Say**	**1.27**	**61**	⇑*i*P	**Pn**	**09 16 21.2**	**-0.9**
TRKS				⇑*i*S	**Sb**	**09 16 37.6**	**-1.1**
ARK	**Arkit**	**1.94**	**62**	⇑*e*P	**Pn**	**09 16 32.6**	**+1.3**
ARK				⇑*e*S	**Sb**	**09 16 58.0**	**+0.1**
DRK	**Karamyk**	**2.17**	**131**	⇓*e*P	**Pn**	**09 16 35.4**	**+0.8**
DRK				⇓*e*S	**Sn**	**09 17 02.2**	**+0.1**
KK31	**Karatay Array**	**2.27**	**16**	P	**Pb**	**09 16 40.6**	**+1.6**
	0.4nm,0.2s,baz=196,slow=14,SNR=8.2						
KK31				⇑S	**Sn**	**09 17 02.7**	**-1.6**
	1.7nm,0.3s,baz=198,slow=30,SNR=4.9						
CHGR	**Chuyangaron**	**2.29**	**190**	⇑*i*P	**Pb**	**09 16 38.5**	**-0.9**

CHGR				⇑iS	Sb	09 17 08.0	-0.1
MNAS	Manas	2.64	53	⇓iP	Pb	09 16 44.0	-1.3
MNAS				⇓iS	Sb	09 17 17.1	-1.0
SALK	Salom-Alik	3.15	89	⇑iP	Pn	09 16 49.6	+1.7
SALK				⇑iS	Sn	09 17 27.0	+1.0

NEIC ***06*** *09:28:23.8±1.2, 28°.17S±0°.06×177°.3W±0°.1, h68km±6km, mb4.6/34, Error ellipse: s-maj=20.2km s-min=5.3km az=111.0*

IDC ***06*** *09:28:23.7±1.8, 28°.11S×177°.30W, h65km±15km, mb4.2/18, mbtmp4.5/18, MS3.7/20, Error ellipse: s-maj=18.2km s-min=15.6km az=81.0*

ISC 06 09:28:21.1±0.4**, 28°.19S**±0°.05×**177°.12W**±0°.07**, h49km, n139, σ2ˢ02**/105**, mb4.6**/40**, MS3.8**/19**, 5C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	1.26	214	P	Pn	09 28 44.6	+2.2
RIZ				S	Sn	09 29 01.5	+3.2
RAO	Raoul Island	1.26	213	P	Pn	09 28 44.5	+2.1
	9µm,0.2s,baz=88,slow=6.5,SNR=119						
RAO				S	Sn	09 29 01.4	+3.1
	38µm,0.4s,baz=300,slow=24,SNR=56						
RAO	Raoul Island	1.26	213		Pn	09 28 44.5	+2.1
RAO				Sn	Sn	09 29 00.5	+2.3
GLKZ	Green Lake	1.27	213	P	Pn	09 28 44.6	+2.1
GLKZ				S	Sn	09 29 00.9	+2.4
MXZ	Matakaoa Point	10.10	201	Pn	Pn	09 30 44.9	+1.4
WMGZ	Waiomatatini S	10.30	200	P	Pn	09 30 40.9	-5.3
HAZ	Te Kaha	10.45	203	P	Pn	09 30 42.0	-6.2
HAZ				S	Sn	09 32 39.4	-4.4
PKGZ	Pakihiroa	10.45	201	P	Pn	09 30 42.8	-5.5
PKGZ				S	Sn	09 32 38.1	-5.8
OUZ	Omahuta	10.56	226	P	Pn	09 30 57.1	+7.4
WCZ	Waipu Caves	10.58	221	P	Pn	09 30 53.4	+3.3
PUZ	Puketiti	10.58	200	P	Pn	09 30 42.1	-8.0
PUZ				S	Sn	09 32 39.4	-7.8
RUGZ	Raukumara Rang	10.67	203	P	Pn	09 30 45.8	-5.6
RUGZ				S	Sn	09 32 41.9	-7.6
TWGZ	Tauwhareparae	10.76	201	P	Pn	09 30 46.8	-5.9
TWGZ				S	Sn	09 32 45.2	-6.4
CNGZ	Carnagh Statio	10.98	200	P	Pn	09 30 49.9	-5.6
CNGZ				S	Sn	09 32 45.8	-11
MWZ	Matawai	11.06	202	P	Pn	09 30 49.8	-6.8
MWZ				S	Sn	09 32 51.9	-6.9
URZ	Urewera	11.13	204	P	Pn	09 30 50.4	-7.2
	2.7nm,0.5s,baz=269,slow=4.3,SNR=9.7						
URZ				S	Sn	09 32 54.4	-6.2
	17nm,0.4s,baz=174,slow=19,SNR=17						
URZ	Urewera	11.13	204	P	Pn	09 30 51.0	-6.6
URZ				S	Sn	09 32 54.4	-6.2
NIUE	Niue	11.21	38	Pn	Pn	09 30 54.9	-3.9
RIGZ	Rimuhau	11.32	201	P	Pn	09 30 54.2	-6.0
RIGZ				S	Sn	09 32 53.6	-12
MSVF	Nonsavu	11.32	336	Pn	Pn	09 31 01.1	+0.8
MUGZ	Murupara	11.45	205	P	Pn	09 30 55.2	-6.7
MUGZ				S	Sn	09 33 00.2	-8.2
BKZ	Black Stump Fm	12.16	204	P	Pn	09 31 05.6	-6.1
BKZ				S	Sn	09 33 15.5	-10
MCHZ	McNeill Hill	12.34	203	P	Pn	09 31 08.3	-5.7
MCHZ				S	Sn	09 33 22.5	-7.5
KAHZ	Kahuranaki	12.59	202	P	Pn	09 31 09.6	-8.0
KAHZ				S	Sn	09 33 27.2	-9.1
TSZ	Takapari Road	13.14	204	P	Pn	09 31 19.9	-5.1
WAZ	Wanganui	13.25	207	P	Pn	09 31 20.3	-6.2
DZM	Mont Dzumac	16.07	289	P	P	09 32 09.1	+2.5
	13nm,0.7s,baz=107,slow=8.8,SNR=9.0						
DZM	Mont Dzumac	16.07	289	eP	Pn	09 32 01.0	-3.0
	28nm,0.8s						
DZM				eLR	LR	09 35 44.9	
	642nm,26.1s						
DZM	Mont Dzumac	16.07	289	P	Pn	09 32 03.9	-0.1
RAR	Rarotonga	17.22	70	LR	LR	09 36 42.6	
	comp=Z,189nm,20.6s,baz=270,slow=29						
TBI	Tubuai	25.35	85	eS	S	09 38 01.8	-4.8
	596nm,32.0s						
TBI				eLR	LR	09 39 51.7	
	1µm,26.2s						
TBI				eLR	LR	09 40 04.6	
	1µm,26.5s						
ARMA	Armidale	27.30	258	P	P	09 34 00.5	-0.8
PPT2	Papeete2	27.42	73	eLR	LR	09 40 57.4	
	276nm,26.0s						
PPT2				eLR	LR	09 40 58.3	
	153nm,25.2s						
PPT	Papeete	27.43	73	LR	LR	09 43 58.7	
	comp=Z,32nm,18.7s,baz=256,slow=34						
EIDS	Eidsvold	28.48	268	P	P	09 34 10.9	-0.9
EIDS				IAmb	IAmb	09 34 14.4	
	comp=Z,8.0nm,0.8s						
CAN	Canberra	29.57	247	P	P	09 34 20.5	-0.9
CAN				IAmb	IAmb	09 34 27.6	
	comp=Z,18nm,1.1s						
TOO	Toolangi	32.58	244	P	P	09 34 47.2	-0.7
TOO				IAmb	IAmb	09 35 00.1	
	comp=Z,7.0nm,1.1s						
CTAO	Charters Tower	34.28	275	P	P	09 35 02.2	-0.6
CTAO				IAmb	IAmb	09 35 20.3	
	comp=Z,8.6nm,1.1s						
STKA	Stephens Creek	35.77	254	P	P	09 35 15.6	0.0
	comp=Z,3.3nm,0.4s,baz=103,slow=8.6,SNR=11						
STKA				LR	LR	09 48 38.1	
	comp=Z,96nm,18.3s,baz=28,slow=34						
	comp=Z,3.3nm,0.4s						
INKA	Innaminka	37.08	260	P	P	09 35 25.3	-1.4
PMG	Port Moresby	38.42	292	LR	LR	09 49 36.5	
	comp=Z,98nm,19.5s,baz=122,slow=33						
COEN	Coen	39.47	283	P	P	09 35 45.5	-1.5
COEN				IAmb	IAmb	09 35 48.9	
	comp=Z,3.5nm,0.8s						
TAOE	Nuku Hiva Isla	39.76	68	eLR	LR	09 46 37.1	
	comp=Z,146nm,27.5s						
BBOO	Buckleboo	40.35	252	P	P	09 35 52.3	-1.9
BBOO				IAmb	IAmb	09 35 54.3	
	comp=Z,14nm,0.9s						
AS31	Alice Springs	44.04	264		P	09 36 23.0	-1.3
ASAR	Alice Springs	44.04	264	P	P	09 36 23.4	-1.0
	comp=Z,5.9nm,0.7s,baz=94,slow=7.3,SNR=106						
ASAR				PcP	PcP	09 38 08.6	-0.6
	comp=Z,0.9nm,0.7s,baz=98,slow=3.6,SNR=2.8						
ASAR				LR	LR	09 53 47.7	
	comp=Z,90nm,19.1s,baz=107,slow=35						
	comp=Z,5.9nm,0.7s						
ASAR	Alice Springs	44.04	264		P	09 36 23.0	-1.3
WRAB	Tennant Creek	44.83	269	P	P	09 36 29.7	-1.0
WRAB				IAmb	IAmb	09 36 30.4	
	comp=Z,12nm,0.8s						
WRA	Warramunga Arr	44.83	269	P	P	09 36 29.9	-0.7
	comp=Z,9.9nm,0.6s,baz=110,slow=6.5,SNR=68						
WRA				PcP	PcP	09 38 11.5	-0.5
	comp=Z,1.7nm,0.9s,baz=112,slow=3.3,SNR=3.4						
	comp=Z,9.9nm,0.6s						
WRA	Warramunga Arr	44.83	269	P	P	09 36 29.2	-1.4
FORT	Forrest	47.39	253		P	09 36 48.7	-2.0
FORT				IAmb	IAmb	09 36 49.6	
	comp=Z,14nm,0.7s						
VNDA	Vanda	50.36	186	P	P	09 37 14.5	+1.8
	comp=Z,1.9nm,0.7s,baz=353,slow=7.3,SNR=7.3						
	comp=Z,1.9nm,0.7s						
VNDA	Vanda	50.36	186		P	09 37 14.5	+1.8
VNDA				IAmb	IAmb	09 37 26.7	
	comp=Z,3.8nm,0.9s						
KNRA	Kununurra	51.35	272	P	P	09 37 19.9	-1.0
KNRA				IAmb	IAmb	09 37 22.1	
	comp=Z,4.7nm,0.8s						
FITZ	Fitzroy Crossi	53.17	268	P	P	09 37 33.3	-1.2
FITZ				IAmb	IAmb	09 37 34.8	
	comp=Z,2.8nm,0.8s						
GUMO	Guam	55.49	313	LR	LR	09 59 36.5	
	comp=Z,28nm,18.8s,baz=103,slow=34						
CASY	Casey	57.44	207		P	09 38 04.2	-0.4
CASY				IAmb	IAmb	09 38 04.8	
	comp=Z,10.0nm,0.6s						
BATI	Baumata	58.16	275	LR	LR	10 02 14.9	
	comp=Z,155nm,19.4s,baz=151,slow=35						
RPN	Rapa Nui	59.30	106	LR	LR	10 02 02.2	
	comp=Z,14nm,18.2s,baz=48,slow=34						
GIRL	Giralia	61.52	258	P	P	09 38 32.2	-1.1
QSPA	South Pole Qui	61.91	180	P	P	09 38 37.4	+2.0
	comp=Z,17nm,0.8s,baz=5.5,slow=0.6,SNR=133						
	comp=Z,17nm,0.8s						
QSPA	South Pole Qui	61.91	180	P	P	09 38 37.2	+1.7
BELA	Belgrano 2	71.86	172	P	P	09 39 39.2	+0.8
MAW	Mawson	74.64	200	P	P	09 39 56.1	+1.3
	comp=Z,5.6nm,0.6s,baz=139,slow=7.8,SNR=15						
	comp=Z,5.6nm,0.6s						
JGF	Kuroka	76.61	323		P	09 40 05.2	-1.3
JGF				IAmb	IAmb	09 40 05.9	
	comp=Z,4.4nm,1.0s						
MJAR	Matsushiro Arr	76.88	324	P	P	09 40 08.6	+0.5
	comp=Z,2.5nm,0.4s,baz=119,slow=5.9,SNR=11						
	comp=Z,2.5nm,0.4s						
MJAR	Matsushiro Arr	76.88	324	P	P	09 40 07.7	-0.4
ADK	Adak	79.73	0	P	P	09 40 22.9	-0.4
TROLL	Troll, Antarti	80.07	180	⇑P	P	09 40 26.4	+1.0
	comp=Z,931nm,0.7s						
SNAA	Sanae	80.33	178	⇑P	P	09 40 26.8	+0.2
	comp=Z,118nm,0.6s						
SNAA	Sanae	80.33	178	P	P	09 40 27.3	+0.6
	comp=Z,6.0nm,0.7s,baz=203,slow=7.2,SNR=26						
	comp=Z,6.0nm,0.7s						
SNAA	Sanae	80.33	178		P	09 40 26.6	-0.1
SNAA				IAmb	IAmb	09 40 28.3	
	comp=Z,9.0nm,0.9s						
VNA3	Neumayer Olymp	80.44	176	⇑P	P	09 40 27.5	+0.3
	comp=Z,18nm,0.7s						
ASAJ	Asahikawa	80.85	332	LR	LR	10 09 22.3	
	comp=Z,72nm,20.4s,baz=44,slow=30						
VNA2	Neumayer--Watz	80.89	177	⇑P	P	09 40 30.3	+0.7
	comp=Z,16nm,0.7s,baz=170,slow=3.9						
SHEM	Shemya Is, Ala	80.94	355	LR	LR	10 09 13.8	
	comp=Z,89nm,20.0s,baz=180,slow=30						
H03S2	Juan Fernandez	81.04	123	T	T	11 10 25.2	
	baz=240,slow=74						
H03S1	Juan Fernandez	81.05	124	T	T	11 10 26.3	
	baz=240,slow=74						
H03S3	Juan Fernandez	81.06	123	T	T	11 10 25.2	
	baz=240,slow=74						
VNA1	Neumayer--Stat	81.11	176	⇑P	P	09 40 31.5	+0.7
	comp=Z,19nm,1.0s						
H03N3	Juan Fernandez	81.22	123	T	T	11 10 39.9	
	baz=245,slow=72,SNR=29						
H03N2	Juan Fernandez	81.22	123	T	T	11 10 40.5	
	baz=245,slow=72,SNR=38						
H03N1	Juan Fernandez	81.23	123	T	T	11 10 39.4	
	baz=245,slow=72,SNR=43						
KSRS	Korea Array	83.18	319	P	P	09 40 42.2	+0.3
	comp=Z,1.4nm,0.6s,baz=141,slow=5.2,SNR=5.0						
	comp=Z,1.4nm,0.6s						
PLCA	Paso Flores	83.44	133	P	P	09 40 44.3	+0.6
	comp=Z,2.4nm,1.1s,baz=328,slow=9.2,SNR=3.1						
	comp=Z,2.4nm,1.1s						
PETK	Petropavlovsk-	83.88	345	P	P	09 40 44.9	-0.3
	comp=Z,5.6nm,0.7s,baz=113,slow=5.0,SNR=6.0						
	comp=Z,5.6nm,0.7s						
PETK	Petropavlovsk-	83.88	345	P	P	09 40 45.5	+0.3
PFO	Pinyon Flats O	84.15	47	LR	LR	10 15 16.0	
	comp=Z,48nm,18.4s,baz=250,slow=33						
NJ2	Nanjing	85.41	310	eP	P	09 40 54.9	+1.5
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
USRK	Ussuriysk Ar.	85.76	326	P	P	09 40 55.0	+0.2
	comp=Z,2.6nm,0.7s,baz=116,slow=6.6,SNR=4.3						
	comp=Z,2.6nm,0.7s						
NVAR	Mina Array Bea	86.10	42	P	P	09 40 58.6	+1.6
	comp=Z,2.8nm,0.8s,baz=223,slow=8.6,SNR=16						
	comp=Z,2.8nm,0.8s						
KDAK	Kodiak Island	88.09	13	LR	LR	10 14 14.2	
	comp=Z,35nm,19.2s,baz=183,slow=31						
PSUT	Pine Spring	88.87	44	P	P	09 41 11.4	+1.1
ELK	Elko	89.40	42	LR	LR	10 12 36.4	
	comp=Z,33nm,21.8s,baz=260,slow=30						
O18K	Koktuh Hills	89.57	11	P	P	09 41 12.9	+0.1
GNW	Green Mountain	89.83	33	P	P	09 41 15.7	+1.4
GNW				IAmb	IAmb	09 41 16.6	
	comp=Z,4.1nm,0.8s						
CFA	Coronel Fontan	89.92	126	P	P	09 41 16.1	+0.6
	comp=Z,1.0nm,0.7s,baz=260,slow=6.8,SNR=3.8						
	comp=Z,1.0nm,0.7s						
CNPM	China Poot	89.98	13	P	P	09 41 14.8	+0.1
ILSW	Iliamna Southw	90.05	12	P	P	09 41 15.0	-0.1
TXAR	Lajitas Array	90.55	57	P	P	09 41 19.5	+1.2
	comp=Z,0.6nm,0.9s,baz=202,slow=5.4,SNR=5.2						
TXAR				LR	LR	10 17 37.1	
	comp=Z,52nm,18.7s,baz=331,slow=33						
	comp=Z,0.6nm,0.9s						
BBB	Bella Bella	90.80	28	LR	LR	10 15 17.1	
	comp=Z,28nm,19.2s,baz=206,slow=31						
TMUT	Trail Mountain	90.97	45	P	P	09 41 21.2	+0.9
TMUT				IAmb	IAmb	09 41 22.9	
	comp=Z,4.2nm,0.7s						
SLKM	Skilak Lake	91.08	13	P	P	09 41 19.7	-0.1
MA2	Magadan	91.38	344	LR	LR	10 15 24.5	
	comp=Z,46nm,21.0s,baz=224,slow=31						
D08A	Wollman Farm,	91.43	36	P	P	09 41 22.6	+0.8
D08A				IAmb	IAmb	09 41 24.4	
	comp=Z,3.8nm,0.8s						
ANMO	Albuquerque	91.60	51	LR	LR	10 13 57.1	
	comp=Z,30nm,21.4s,baz=298,slow=30						
PLID	Pearl Lake	91.71	38	P	P	09 41 23.7	+0.3
PLID				IAmb	IAmb	09 41 42.5	
	comp=Z,2.1nm,0.9s						
NEW	Newport	93.14	35	LR	LR	10 14 35.4	
	comp=Z,44nm,21.0s,baz=304,slow=30						
CMAR	Chiang Mai Arr	93.40	289	P	P	09 41 33.2	+1.6
	comp=Z,1.2nm,0.3s,baz=121,slow=5.6,SNR=4.5						
	comp=Z,1.2nm,0.3s						
TRF	Thorofare Moun	93.78	12	P	P	09 41 32.2	-0.2
PDAR	Pinedale Array	94.01	43	P	P	09 41 34.7	+0.6
	comp=Z,1.0nm,0.8s,baz=191,slow=3.0,SNR=8.7						
	comp=Z,1.0nm,0.8s						
SEY	Seymchan	94.01	347	LR	LR	10 15 18.1	
	comp=Z,73nm,20.9s,baz=180,slow=30						
DLBC	Dease Lake	94.80	23	LR	LR	10 18 46.3	
	comp=Z,30nm,18.3s,baz=272,slow=32						
PZH	PanZhiHua	94.97	297	P	P	09 41 38.5	-0.3
PZH				pmax	pmax		
	comp=Z,20nm,0.5s						
HHC	Hu-ho-hao-te	95.26	314	eP	P	09 41 41.2	+1.5
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,190nm,4.2s						
ILAR	Eielson Array	95.61	13	P	P	09 41 40.1	-0.4
	comp=Z,1.2nm,0.7s,baz=220,slow=5.4,SNR=18						
	comp=Z,1.2nm,0.7s						
MKAR	Makanchi Array	116.93	311	PKP	PKPdf	09 46 59.0	-1.2
	comp=Z,1.4nm,0.7s,baz=142,slow=1.4,SNR=8.3						
MKAR	Makanchi Array	116.93	311		PKPdf	09 46 59.1	-1.1
NRIK	Noril'sk	117.93	336	PKP	PKPdf	09 47 00.9	-0.5
	comp=Z,1.1nm,0.4s,baz=262,slow=1.3,SNR=3.9						
KURBB	Kurchatov Arra	120.11	314	PKP	PKPdf	09 47 05.0	-1.1
	comp=Z,1.3nm,0.5s,baz=104,slow=1.9,SNR=16						
BVAR	Borovoye Array	125.34	317	PKP	PKPdf	09 47 15.5	-0.6
	comp=Z,3.8nm,0.6s,baz=80,slow=1.7,SNR=13						
ARTI	Arti	131.96	322	PKP	PKPdf	09 47 28.7	+0.1
	comp=Z,1.5nm,0.4s,baz=184,slow=2.2,SNR=4.4						
AKTO	Aktyubinsk	133.15	314	PKP	PKPdf	09 47 30.6	-0.5
	comp=Z,1.4nm,0.4s,baz=23,slow=2.3,SNR=7.3						
ARCES	ARCESS Array B	136.59	349	PKP	PKPdf	09 47 37.4	+0.5
	comp=Z,5.5nm,0.8s,baz=14,slow=2.5,SNR=6.6						
H10N3	ASCENSION HYDR	140.44	152	T	T	12 25 14.6	
	baz=204,slow=75,SNR=18						
H10N1	ASCENSION HYDR	140.44	152	T	T	12 25 18.6	
	baz=204,slow=75,SNR=19						
H10N2	ASCENSION HYDR	140.45	152	T	T	12 25 12.6	
	baz=204,slow=75,SNR=18						
FINES	FINESS Array B	143.32	342	PKhKP	PKPpre	09 47 45.2	
	comp=Z,2.6nm,0.3s,baz=46,slow=4.7,SNR=28						
KBZ	Khabaz	144.47	307	PKP	PKPdf	09 47 52.2	+0.4
	comp=Z,1.9nm,0.7s,baz=68,slow=5.0,SNR=4.9						
NB2	NORSAR Subarra	146.68	353	PKP	PKPbc	09 47 56.1	-0.8
	comp=Z,17nm,1.1s,baz=10,slow=3.2						
NOA	NORSAR Array B	146.68	353	PKPbc	PKPbc	09 47 56.2	-0.7
	comp=Z,8.6nm,0.9s,baz=13,slow=4.4,SNR=12						
HFS	Hagfors	147.23	350	PKPbc	PKPbc	09 47 57.6	-0.8
	comp=Z,14nm,0.7s,baz=66,slow=3.7,SNR=16						
AKASG	Malin Array Be	149.96	326	PKPbc	PKPbc	09 48 05.0	-0.7
	comp=Z,7.6nm,0.6s,baz=45,slow=3.3,SNR=37						
MMAI	Mount Meron Ar	151.66	288	PKPbc	PKiKP	09 48 11.2	+0.4
	comp=Z,12nm,0.6s,baz=91,slow=5.0,SNR=12						
BR131	Keskin Array S	152.15	302		PKPbc	09 48 10.7	-0.8
BRTR	Keskin Array B	152.15	302	PKPbc	PKPbc	09 48 10.6	-0.8
	comp=Z,2.8nm,0.6s,baz=142,slow=4.5,SNR=16						
BRTR	Keskin Array B	152.15	302		PKPbc	09 48 10.9	-0.5
EKA	Eskdalemuir Ar	152.53	7	PKPbc	PKiKP	09 48 14.2	+2.4
	comp=Z,0.6nm,0.4s,baz=343,slow=2.1,SNR=4.5						
EKA				PKPab	PKPab	09 48 22.0	0.0
	comp=Z,4.4nm,0.7s,baz=332,slow=3.1,SNR=8.7						
ESDC	Sonseca Array	167.22	25	PKPab	PKPab	09 49 27.2	+0.8
	comp=Z,0.5nm,0.8s,baz=352,slow=5.3,SNR=4.6						

ASRS 06 09:29:41.0±1.4**, 53°.56N**×**87°.67E, h0km, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

ASRS 06 09:30:24.0±0.8**, 54°.32N**×**86°.63E, h0km, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

IDC ***06*** *09:38:21.3±4.0, 18°.15S×178°.14W, h555km±47km, mb3.5/13, mbtmp4.4/14, Error ellipse: s-maj=19.4km s-min=17.7km az=63.0*

NEIC ***06*** *09:38:23.5±1.4, 18°.2S±0°.1×178°.1W±0°.1, h577km±9km, mb4.2/16, Error ellipse: s-maj=19.0km s-min=14.3km az=201.0*

ISC 06 09:38:24.1±0.6**, 18°.2S**±0°.1×**178°.2W**±0°.1**, h590km, n38, σ1ˢ11**/38**, mb4.1**/19**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.64	276		P	09 39 46.7	+0.1
AFI	Afiamalu	7.43	56	P	P	09 40 14.9	-3.0
DZM	Mont Dzumac	14.99	252	P	P	09 41 31.2	-1.5
	4.1nm,0.5s,baz=91,slow=18,SNR=11						
DZM	Mont Dzumac	14.99	252	P	P	09 41 32.1	-0.6
DZM				IAmb	IAmb	09 41 36.9	
	comp=Z,12nm,1.0s						
URZ	Urewera	20.46	191	P	P	09 42 19.3	-3.1
	comp=Z,8.0nm,0.4s,baz=284,slow=1.0,SNR=14						
	comp=Z,8.0nm,0.4s						
EIDS	Eidsvold	29.42	250	P	P	09 43 41.3	-0.3
EIDS				IAmb	IAmb	09 44 02.5	
	comp=Z,12nm,1.3s						
ARMA	Armidale	30.04	240	P	P	09 43 47.6	+0.7
ARMA				IAmb	IAmb	09 43 49.1	
	comp=Z,6.3nm,0.9s						
CTAO	Charters Tower	33.65	261	P	P	09 44 17.4	-0.2
CTAO				IAmb	IAmb	09 44 38.9	
	comp=Z,8.7nm,1.2s						
CAN	Canberra	33.76	233	P	P	09 44 18.9	+0.6
TOO	Toolangi	37.21	231	P	P	09 44 47.0	+0.2
COEN	Coen	37.36	271	P	P	09 44 48.7	+0.5
COEN				IAmb	IAmb	09 44 49.4	
	comp=Z,4.1nm,0.8s						
STKA	Stephens Creek	38.73	241	P	P	09 44 59.8	+0.7
	comp=Z,6.1nm,0.5s,baz=81,slow=8.8,SNR=19						
	comp=Z,6.1nm,0.5s						
STKA	Stephens Creek	38.73	241		P	09 44 59.9	+0.8
BBOO	Buckleboo	43.51	241	P	P	09 45 37.0	+0.2
WB0	Warramunga Arr	44.80	260	P	P	09 45 46.6	-0.4
WB0				IAmb	IAmb	09 45 47.0	
	comp=Z,3.5nm,0.6s						
WRA	Warramunga Arr	44.83	260	P	P	09 45 46.4	-0.8
	comp=Z,1.9nm,0.4s,baz=96,slow=7.7,SNR=49						
	comp=Z,1.9nm,0.4s						
WRA	Warramunga Arr	44.83	260	P	P	09 45 47.1	-0.1
AS31	Alice Springs	44.97	254		P	09 45 48.1	-0.1
AS31				IAmb	IAmb	09 45 49.1	
	comp=Z,3.9nm,0.5s						
ASAR	Alice Springs	44.97	254	P	P	09 45 48.0	-0.2
	comp=Z,10nm,0.7s,baz=88,slow=9.0,SNR=85						
	comp=Z,10nm,0.7s						
ASAR	Alice Springs	44.97	254	P	P	09 45 47.7	-0.6
VNDA	Vanda	60.23	185	P	P	09 47 37.1	+1.3
MJAR	Matsushiro Arr	68.25	323	P	P	09 48 26.4	-0.6
	comp=Z,1.7nm,0.6s,baz=157,slow=5.6,SNR=5.6						
	comp=Z,1.7nm,0.6s						
MJAR	Matsushiro Arr	68.25	323	P	P	09 48 27.0	-0.1
QSPA	South Pole Qui	71.91	180	P	P	09 48 49.0	+0.6
	comp=Z,2.5nm,0.8s,baz=195,slow=0.5,SNR=18						
	comp=Z,2.5nm,0.8s						
QSPA	South Pole Qui	71.91	180	P	P	09 48 49.3	+0.8
PETK	Petropavlovsk-	73.97	345	P	P	09 49 00.2	+0.1
	comp=Z,2.9nm,0.6s,baz=111,slow=6.6,SNR=6.9						
	comp=Z,2.9nm,0.6s						
PETK	Petropavlovsk-	73.97	345	P	P	09 49 00.1	0.0
NVAR	Mina Array Bea	79.42	44	P	P	09 49 31.6	+1.2
	comp=Z,1.7nm,0.6s,baz=224,slow=8.8,SNR=13						
	comp=Z,1.7nm,0.6s						
K17K	Iditarod	82.10	9	P	P	09 49 44.3	+0.9
K17K				IAmb	IAmb	09 49 51.4	
	comp=Z,19nm,1.4s						
SEY	Seymchan	84.06	347	P	P	09 49 53.0	-0.1
	comp=Z,2.3nm,0.4s,baz=142,slow=12,SNR=2.7						
	comp=Z,2.3nm,0.4s						
TXAR	Lajitas Array	85.91	58	P	P	09 50 04.9	+1.9
	comp=Z,2.4nm,0.7s,baz=218,slow=6.2,SNR=32						
	comp=Z,2.4nm,0.7s						
TXAR	Lajitas Array	85.91	58	P	P	09 50 05.2	+2.1
ILAR	Eielson Array	86.06	13	P	P	09 50 01.9	-0.8
	comp=Z,1.2nm,0.4s,baz=221,slow=4.9,SNR=48						
	comp=Z,1.2nm,0.4s						
PDAR	Pinedale Array	87.35	43	P	P	09 50 10.2	+0.5
	comp=Z,1.3nm,0.7s,baz=221,slow=3.0,SNR=13						
	comp=Z,1.3nm,0.7s						
YKA	Yellowknife Ar	94.44	25	P	P	09 50 41.0	-0.5
	comp=Z,0.3nm,0.6s,baz=243,slow=4.6,SNR=5.1						
	comp=Z,0.3nm,0.6s						
BVAR	Borovoye Array	117.19	321	PKP	PKPdf	09 56 02.5	-0.4
	comp=Z,0.4nm,0.3s,baz=59,slow=0.8,SNR=2.1						
BRTR	Keskin Array B	145.13	315	PKPbc	PKPbc	09 56 56.9	+0.2
	comp=Z,1.1nm,0.7s,baz=110,slow=3.5,SNR=6.0						
GERES	GERESS Array B	147.90	345	PKPbc	PKPdf	09 57 01.8	+1.8
	comp=Z,1.3nm,0.6s,baz=297,slow=4.4,SNR=5.3						

IDC ***06*** *09:44:55.7±4.8, 36°.40N×71°.41E, h136km±41km, mb3.6/10, mbtmp4.1/16, MS3.4/1, Error ellipse: s-maj=35.3km s-min=16.4km az=29.0*

MOS ***06*** *09:44:55.7±0.9, 36°.47N×71°.16E, h150km, mb4.2/7, Error ellipse: s-maj=10.8km s-min=5.5km az=87.5*

NEIC ***06*** *09:44:56.6±1.7, 36°.47N±0°.06×71°.10E±0°.09, h150km±6km, mb4.0/6, Error ellipse: s-maj=10.9km s-min=8.1km az=51.0*

NNC ***06*** *09:44:57.3±7.3, 36°.89N×71°.30E, h0km, mb4.7, mpv4.5, Error ellipse: s-maj=57.6km s-min=49.1km az=158.0*

ISC 06 09:44:56.2±0.6**, 36°.41N**±0°.05×**71°.29E**±0°.06**, h150km, n94, σ1ˢ64**/105**, mb4.0**/15**, 7C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANEM	Manem	1.18	15		Pn	09 45 23.1	+0.2
MANEM				Sn	Sn	09 45 42.9	-0.4
KBL	Kabul	2.61	225		Pn	09 45 38.9	-0.1
KBL	Kabul	2.61	225	PN	Pn	09 45 38.9	-0.1
GAR	Garm	2.70	344		Pn	09 45 39.1	-0.8
SHAA	Shahritus	2.79	295		Pn	09 45 39.7	-1.3
CHGR	Chuyangaron	2.81	324		Pn	09 45 39.9	-1.4
CHGR	Chuyangaron	2.81	324	PN	Pn	09 45 39.9	-1.4
DRK	Karamyk	3.10	7		Pn	09 45 45.6	+0.5
DRK	Karamyk	3.10	7	PN	Pn	09 45 45.6	+0.5
NIL	Nilore	3.19	149		Pn	09 45 48.2	+2.3
NIL	Nilore	3.19	149	PN	Pn	09 45 48.3	+2.3
JMU	Jammu	4.65	140	eP	Pn	09 46 06.5	+0.4
JMU				eS	Sn	09 46 57.6	-3.0
JMU				IAML		09 47 01.6	
	comp=N,336nm,0.9s						
JMU				IAML		09 47 02.8	
	comp=E,377nm,0.3s						
KSH	Kashi	4.83	49	Pn	Pn	09 46 04.1	-3.4
KSH				Sn	Sn	09 46 51.6	-11
KSH				smax	smax		
	comp=N,270nm,1.0s						
KSH				smax	smax		
	comp=E,160nm,0.8s						
ARSB	Arslanbob	5.09	15		Pn	09 46 10.0	-0.9
ARSB	Arslanbob	5.09	15	PN	Pn	09 46 10.0	-0.9
ALCI	Alchi Leh	5.29	113	eP	Pn	09 46 14.0	+0.1
ALCI				eS	Sn	09 47 12.7	-1.7
ALCI				IAML		09 47 14.6	
	comp=E,101nm,0.6s						
ALCI				IAML		09 47 19.0	
	comp=N,68nm,0.7s						
TSSA	Tissa	5.36	130	eP	Pn	09 46 15.3	+0.7
TSSA				eS	Sn	09 47 13.5	-2.2
TSSA				IAML		09 47 13.9	
	comp=N,494nm,0.8s						

TSSA				IAML		09 47 15.3	
	comp=E,395nm,0.5s						
DHRM	DHARAMSHALA	5.86	134	eP	Pn	09 46 22.1	+0.8
DHRM				eS	Sn	09 47 25.3	-2.5
DHRM				IAML		09 47 27.8	
	comp=N,438nm,0.4s						
DHRM				IAML		09 47 28.7	
	comp=E,494nm,0.5s						
UCH	Uchtor	6.33	22	P	Pn	09 46 27.2	-0.5
	SNR=32						
EKS2	Erkin-Say	6.54	16	P	Pn	09 46 30.1	-0.1
	SNR=43						
AAK	Ala-Archa	6.70	21	P	Pn	09 46 32.5	+0.2
	SNR=16						
AAK	Ala-Archa	6.70	21	P	Pn	09 46 32.4	0.0
	comp=E,29nm,0.4s,baz=192,slow=6.5,SNR=107						
AAK				S	Sn	09 47 45.1	-2.5
	comp=E,14nm,0.4s,baz=138,slow=22,SNR=10.0						
AAK	Ala-Archa	6.70	21		Pn	09 46 32.2	-0.1
AAK	Ala-Archa	6.70	21	⇓P	Pn	09 46 31.9	-0.4
	comp=E,8.8nm,0.5s						
AAK				⇑S	Sn	09 47 42.7	-4.9
	comp=E,14nm,0.6s						
AAK	Ala-Archa	6.70	21	c iPN	Pn	09 46 32.0	-0.3
KK31	Karatay Array	6.72	355		Pn	09 46 31.4	-1.0
KK31	Karatay Array	6.72	355	⇓P	Pn	09 46 31.4	-1.0
	comp=E,34nm,0.4s,baz=182,slow=14,SNR=468						
KK31				⇓S	Sn	09 47 45.4	-2.5
	comp=E,32nm,0.5s,baz=186,slow=25,SNR=10						
KK31	Karatay Array	6.72	355	PN	Pn	09 46 31.5	-1.0
KKAR	Karatay Array	6.72	355		Pn	09 46 31.2	-1.2
KKAR	Karatay Array	6.72	355	PN	Pn	09 46 31.2	-1.2
KBK	Karagaybulak	6.85	23	P	Pn	09 46 38.1	+3.7
	SNR=10.0						
BOOM	Boomskoye usch	7.06	29		Pn	09 46 37.1	-0.1
BOOM	Boomskoye usch	7.06	29	PN	Pn	09 46 37.1	-0.1
CHMS	Chumysh	7.11	21	P	Pn	09 46 38.6	+1.0
	SNR=8.2						
SMLA	Simla	7.18	135	eP	Pn	09 46 39.4	+0.6
SMLA				eS	Sn	09 47 55.1	-4.0
SMLA				IAML		09 47 59.6	
	comp=N,115nm,0.3s						
SMLA				IAML		09 48 02.4	
	comp=E,129nm,0.3s						
USP	Ospenovka	7.28	19	P	Pn	09 46 40.2	+0.2
	SNR=15						
HNLY	HANLEY	7.29	118	eP	Pn	09 46 41.2	+0.5
HNLY				eS	Sn	09 47 58.9	-3.7
HNLY				IAML		09 48 02.6	
	comp=N,14nm,0.4s						
HNLY				IAML		09 48 03.2	
	comp=E,15nm,1.0s						
TKM2	Tokmak 2	7.30	26	P	Pn	09 46 43.3	+2.8
	SNR=22						
KDJ	Kajisay	7.32	37	Pn	Pn	09 46 40.2	-0.3
KDJ	Kajisay	7.32	37	PN	Pn	09 46 40.3	-0.3
TARG	Taragay, Kyrgy	7.34	42		Pn	09 46 41.4	+0.2
TARG	Taragay, Kyrgy	7.34	42	PN	Pn	09 46 41.4	+0.2
KLP	Kalpa	7.55	128	eP	Pn	09 46 44.3	+0.3
KLP				eS	Sn	09 48 03.8	-4.6
KLP				IAML		09 48 11.6	
	comp=N,212nm,0.7s						
KLP				IAML		09 48 12.8	
	comp=E,161nm,0.7s						
WUS	Wushi	7.82	50		Pn	09 46 47.8	+0.4
PRZ	Przheval'sk	8.19	40		Pn	09 46 52.8	+0.6
PRZ	Przheval'sk	8.19	40	PN	Pn	09 46 52.8	+0.6
MK31	Makanchi Array	13.23	35	Pn	Pn	09 47 58.8	+0.6
MK31	Makanchi Array	13.23	35	⇑iP	Pn	09 47 58.2	-0.1
MKAR	Makanchi Array	13.23	35	P	Pn	09 47 58.2	-0.1
	comp=E,0.5nm,0.6s,baz=215,slow=12,SNR=8.3						
MKAR	Makanchi Array	13.23	35	Pn	Pn	09 47 58.7	+0.4
WMQ	Urumqi	14.56	54	eP	Pn	09 48 12.7	-2.4
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
KURBB	Kurchatov Arra	15.14	18	P	Pn	09 48 20.4	-1.8
	comp=Z,0.5nm,0.3s,baz=207,slow=11,SNR=6.2						
KURK	Kurchatov	15.25	18	⇑iP	Pn	09 48 25.2	+1.7
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AB31	Akbulak array	15.28	331		Pn	09 48 23.2	-0.7
AB31				IAmb	IAmb	09 48 27.3	
	comp=Z,5.2nm,0.8s						
AB31	Akbulak array	15.28	331	P	Pn	09 48 25.4	+1.5
	comp=Z,5.0nm,0.7s,baz=145,slow=12,SNR=52						
AB31				S	Sn	09 51 13.1	-0.5
	comp=Z,3.6nm,0.7s,baz=149,slow=24,SNR=5.3						
AB31	Akbulak array	15.28	331	eP	Pn	09 48 22.8	-1.1
ABKAR	Akbulak array	15.28	331	P	Pn	09 48 23.1	-0.8
EVN	Everest	15.60	118		Pn	09 48 28.5	-0.2
BVAR	Borovoye Array	16.63	358	P	P	09 48 40.5	+0.3
	comp=Z,2.7nm,0.5s,baz=171,slow=9.6,SNR=10						
BORK	Borovoye	16.65	358	P	P	09 48 38.7	-1.7
BORK	Borovoye	16.65	358	⇑iP	P	09 48 39.2	-1.3
BORK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AKTO	Aktyubinsk	16.98	330	P	P	09 48 45.2	+1.2
	comp=Z,23nm,0.8s,baz=143,slow=5.6,SNR=34						
AKTO				S	S	09 51 46.1	-7.1
	comp=Z,2.6nm,0.5s,baz=4.9,slow=1.4,SNR=3.8						
DGZ	Jazzator, Alta	17.72	36	⇑iP	P	09 48 53.8	+1.4
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZAA0	Zalesovo Array	19.91	24		P	09 49 17.3	+1.4
ZAA0				IAmb	IAmb	09 49 17.6	
	comp=Z,5.6nm,0.9s						
ZALV	Zalesovo Beam	19.91	24	P	P	09 49 17.1	+1.2
	comp=Z,4.4nm,0.4s,baz=224,slow=11,SNR=21						
ZALV	Zalesovo Beam	19.91	24		P	09 49 16.9	+1.0
DVE	Vedeno	20.40	296	⇓iP	P	09 49 21.0	-0.4
DVE				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ARTI	Arti	21.81	340	P	P	09 49 37.2	+1.0
	comp=Z,4.1nm,0.6s,baz=165,slow=3.2,SNR=5.8						
	comp=Z,4.1nm,0.6s						
ARTI	Arti	21.81	340	c iP	P	09 49 35.7	-0.5
ARTI						09 50 13.9	
ARTI				S	S	09 53 28.2	+1.1
ARTI				pmax	pmax		
	comp=Z,15nm,1.4s						
KBZ	Khabaz	22.85	297	P	P	09 49 48.8	+2.4
	comp=Z,1.5nm,0.8s,baz=100,slow=10,SNR=2.9						
	comp=Z,1.5nm,0.8s						
VSLR	Vesyoloye	24.88	296	eP	P	09 50 02.7	-2.2
VSLR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH	PanZhiHua	27.69	102	P	P	09 50 32.0	+1.5
SONM	Songino Array	28.20	55	LR	LR	10 01 38.8	
	comp=Z,75nm,21.6s,baz=344,slow=36						
BRTR	Keskin Array B	29.68	288	P	P	09 50 47.1	-1.0
BRTR	Keskin Array B	29.68	288	P	P	09 50 47.1	-1.0
OBN	Obninsk	30.16	319	eP	P	09 50 50.5	-1.3
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC	Hu-ho-hao-te	31.58	69	eP	P	09 51 05.6	+1.0
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,120nm,3.5s						
AKASG	Malin Array Be	33.19	309	P	P	09 51 19.5	+1.1
	comp=Z,1.3nm,0.6s,baz=83,slow=7.0,SNR=7.7						
	comp=Z,1.3nm,0.6s						
AKBB	Malin Array Si	33.19	309	P	P	09 51 19.3	+0.9
AKBB				IAmb	IAmb	09 51 20.9	
	comp=Z,2.1nm,0.6s						
AKBB	Malin Array Si	33.19	309	P	P	09 51 19.3	+0.9
AKBB				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KIEV	Kiev	33.20	309	P	P	09 51 19.4	+1.0
KIEV				IAmb	IAmb	09 51 20.9	
	comp=Z,1.9nm,0.6s						
KIEV	Kiev	33.20	309	P	P	09 51 19.4	+1.0
KIEV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	FINESS Array B	37.69	326	P	P	09 51 57.9	+1.2
	comp=Z,2.9nm,0.8s,baz=116,slow=8.7,SNR=9.0						
	comp=Z,2.9nm,0.8s						
FINES	FINESS Array B	37.69	326	i P	P	09 51 57.2	+0.5
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARCES	ARCESS Array B	41.32	338	P	P	09 52 28.2	+1.6
	comp=Z,5.8nm,0.8s,baz=111,slow=6.6,SNR=13						
	comp=Z,5.8nm,0.8s						
ARCES	ARCESS Array B	41.32	338	P	P	09 52 28.1	+1.4
HFS	Hagfors	43.28	322	P	P	09 52 43.9	+1.2
	comp=Z,4.0nm,0.6s,baz=90,slow=12,SNR=8.0						
	comp=Z,4.0nm,0.6s						
NB2	NORSAR Subarra	44.60	323	P	P	09 52 53.8	+0.7
	comp=Z,1.7nm,0.4s,baz=98,slow=7.9						
NOA	NORSAR Array B	44.60	323	P	P	09 52 53.9	+0.8
	comp=Z,2.7nm,0.7s,baz=104,slow=7.3,SNR=8.2						
	comp=Z,2.7nm,0.7s						
YKA	Yellowknife Ar	81.33	3	P	P	09 56 56.7	+1.2
	comp=Z,0.6nm,0.8s,baz=347,slow=5.5,SNR=6.7						
	comp=Z,0.6nm,0.8s						
WRA	Warramunga Arr	81.74	122	P	P	09 56 58.6	+0.3
	comp=Z,0.7nm,0.7s,baz=323,slow=5.0,SNR=6.1						
	comp=Z,0.7nm,0.7s						
ASAR	Alice Springs	84.01	125	P	P	09 57 10.7	+0.7
	comp=Z,0.7nm,0.8s,baz=308,slow=4.9,SNR=12						
	comp=Z,0.7nm,0.8s						
ASAR	Alice Springs	84.01	125	P	P	09 57 10.9	+1.0
ASAR	Alice Springs	84.01	125	P	P	09 57 10.9	+1.0

IDC 06 10:01:52.8±1.4**, 0°.59S×123°.76E, h0km, mb3.2**/4**, mbtmp3.3**/4**, Error ellipse: s-maj=185.4km s-min=23.3km az=64.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.85	152	P	P	10 06 46.1	-1.1
	0.3nm,0.5s,baz=328,slow=12,SNR=9.6						
	0.3nm,0.5s						
ASAR	Alice Springs	24.97	158	P	P	10 07 19.2	+0.9
	0.1nm,0.4s,baz=345,slow=7.3,SNR=6.8						
	0.1nm,0.4s						
MKAR	Makanchi Array	59.51	328	P	P	10 11 56.1	-1.9
	0.2nm,0.5s,baz=120,slow=5.7,SNR=1.7						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	63.16	335	P	P	10 12 24.1	+1.6
	0.4nm,0.3s,baz=126,slow=7.3,SNR=2.3						
	0.4nm,0.3s						

IDC 06 10:02:22.9±999.0**, 47°.35N×70°.67E, h0km, Error ellipse: s-maj=580.7km s-min=169.2km az=43.0, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	11.14	48	I	I	11 10 40.0	
	0.1nm,1.2s,baz=240,slow=307,SNR=1.5						
I34MN	SONGINO INFRAS	23.99	76	I	I	12 29 00.0	
	baz=280,slow=327,SNR=0.7						
I18DK	QAANAAQ INFRAS	52.99	350	I	I	15 24 50.0	
	baz=28,slow=339,SNR=2.0						

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*UPA **06** 10:16:29.6±2.0, 9°.03N×84°.10W, h4km±8km, MW4.3*
*UCR **06** 10:16:29.6±1.0, 9°.02N×84°.07W, h0km±3km, MW4.1*
*CATAC **06** 10:16:30.6±0.4, 9°N±2°×8°4W±°, h1km, M4.0/9, MLv4.0/9, Error ellipse: s-maj=6.2km s-min=3.1km az=44.8, confirmed*
ISC 06 10:16:29.0±1.2**, 8°.98N**±0°.03×**84°.10W**±0°.03**, h9km**±10km**, n135, σ0ˢ.59**/151**, 1D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVQ2	Quepos	0.45	351	eP	Pb	10 16 39.0	-0.1
OCHAL	Ojochal	0.46	75	P	Pb	10 16 39.0	-0.3
OCHAL				S	Sb	10 16 46.2	+0.1
EDPE	Pejibaye, P	0.55	71	eP	Pb	10 16 40.6	-0.1
ZEDO	Perez Zeledon	0.55	48	eP	Pb	10 16 40.7	-0.1
PANP	Palmar Norte	0.63	92	eP	Pb	10 16 42.2	+0.1
PICV	PH. Pirrs	0.65	351	eP	Pb	10 16 42.6	+0.1
PIEC	Cerro El Cedra	0.65	12	eP	Pb	10 16 42.4	-0.3
RAZU	San Marcos de	0.68	6	eP	Pb	10 16 42.8	-0.2
PITB	Pirrs, San	0.68	6	eP	Pb	10 16 43.0	-0.1
SAJE	San Jernim	0.68	58	eP	Pb	10 16 42.6	-0.5
FIMO	Fila Mora	0.73	89	eP	Pb	10 16 44.2	+0.3
LCR2	La Lucha 2	0.76	7	eP	Pb	10 16 44.2	-0.4
LCR2				eS	Sb	10 16 55.3	+0.2
BURE	Buenos Aires	0.77	76	eP	Pn	10 16 45.2	-0.9
ACOS	Acosta	0.81	355	eP	Pb	10 16 45.0	-0.3
ACOS				eS	Sb	10 16 56.8	+0.3
BITO	Garabito Jaco	0.82	321	eP	Pn	10 16 45.5	-1.2
REPA	Paraso	0.87	15	eP	Pb	10 16 46.1	-0.3
DRK0	Durika	0.88	72	eP	Pb	10 16 46.4	-0.2
DRK0				eS	Sn	10 16 59.8	-1.0
DRK0	Durika	0.88	72	P	Pb	10 16 46.3	-0.3
DRK0	Durika	0.88	72	eP	Pb	10 16 46.3	-0.3
PURI	Puriscal	0.89	346	eP	Pb	10 16 46.7	0.0
TAGO	Cartago	0.89	11	eP	Pb	10 16 46.7	-0.1
PTJ1	Puerto Jimnez	0.90	119	P	Pn	10 16 47.6	-0.2
PTJ1	Puerto Jimnez	0.90	119	S	Sn	10 17 01.7	+0.8
AMPA	Desamparados	0.91	2	eP	Pb	10 16 46.7	-0.3
AMPA				eS	Sb	10 16 59.4	+0.1
EDP2	Potrero Grande	0.91	88	eP	Pn	10 16 47.3	-0.6
TRIO	Tres Rios	0.92	6	eP	Pb	10 16 46.8	-0.4
LUJA	Lujan	0.94	1	eP	Pb	10 16 47.4	-0.1
CENT	San Jose	0.94	1	eP	Pn	10 16 48.5	-0.1
PIRO	Carate, Puerto	0.94	127	eP	Pn	10 16 48.2	-0.2
PIRO				eS	Sn	10 17 02.0	0.0
PIRO	Carate, Puerto	0.94	127	P	Pn	10 16 47.9	-0.5
PIRO	Carate, Puerto	0.94	127	S	Sn	10 17 03.2	+1.2
PIRO	Carate, Puerto	0.94	127	eP	Pn	10 16 47.9	-0.5
SANTA	Santa Ana	0.95	355	eP	Pg	10 16 47.2	-0.1
ECI	Escuela Centro	0.95	3	eP	Pb	10 16 47.6	-0.1
SJS3	Mercedes San J	0.95	3	eP	Pn	10 16 47.8	-0.8
SJS	Escuela Geolog	0.95	2	eP	Pb	10 16 47.6	-0.1
MEXI	Barrio Mexico	0.95	1	eP	Pb	10 16 47.8	0.0
LUPE	Guadalupe	0.96	2	eP	Pg	10 16 46.9	-0.7
PCAYA	Pacayas	0.97	17	eP	Pb	10 16 48.0	-0.1
VINA	Juan Vinas	0.97	21	eP	Pb	10 16 47.9	-0.2
EDAD	Golfito	0.97	110	eP	Pn	10 16 48.5	-0.4
CORON	Coronado	0.99	5	eP	Pn	10 16 48.5	-0.7
BELE	Belen	0.99	355	eP	Pb	10 16 48.0	-0.4
FITO	Golfito	0.99	111	eP	Pn	10 16 48.8	-0.3
HEME	Heredia, Merce	1.01	358	eP	Pn	10 16 49.7	+0.3
RAFA	San Farael, Vo	1.01	16	eP	Pb	10 16 48.7	-0.1
HDC	Heredia	1.01	359	eP	Pb	10 16 48.6	-0.2
OROT	Orotina	1.02	335	eP	Pb	10 16 48.6	-0.2
ATEO	Atenas	1.03	344	eP	Pb	10 16 48.8	-0.3
ATEO				eS	Sn	10 17 03.9	-0.3
VERB	Verbena	1.03	22	eP	Pb	10 16 49.0	-0.1
CVIMO	Finca Echandi	1.05	8	eP	Pn	10 16 49.4	-0.7
VTCV	VTCV, Calle Va	1.06	20	eP	Pn	10 16 49.7	-0.5
CVTQ	Turrialba Volc	1.07	18	eP	Pn	10 16 49.8	-0.6
CVTV	Tajo	1.07	19	eP	Pn	10 16 50.0	-0.4
TCS1	Tacares	1.07	349	eP	Pn	10 16 50.1	-0.2
VTR0	Volcan Turrial	1.08	18	eP	Pn	10 16 50.1	-0.6
ABRB	Las Abras (San	1.08	20	eP	Pn	10 16 50.2	-0.4
CVTR	Volcan Turrial	1.08	18	eP	Pb	10 16 50.1	-0.1
PALD	Palmares	1.12	343	eP	Pb	10 16 49.1	-1.5
RESJ	San Isidro (Tu	1.13	23	eP	Pn	10 16 50.9	-0.2
ARZA	Esparza	1.15	331	eP	Pg	10 16 50.7	-0.4
RAMO	San Ramon	1.16	342	eP	Pn	10 16 51.4	-0.1
SRA1	San Ramn	1.16	341	eP	Pn	10 16 51.4	-0.1
NELY	Ciudad Neily	1.18	106	eP	Pg	10 16 51.7	0.0
VPS8	V Poas	1.20	353	eP	Pg	10 16 52.3	+0.3
VPS5	V. Poas	1.21	354	eP	Pg	10 16 52.5	+0.3
RVLA	Villa Bonita	1.23	24	eP	Pg	10 16 52.7	+0.1
ZARE	Zarcero	1.23	346	eP	Pg	10 16 52.9	+0.2
RSRNO	Rio Sereno	1.23	98	eP	Pg	10 16 53.3	+0.6
ALCO	Alturas Coton,	1.25	91	eP	Pg	10 16 52.8	-0.2
IRES	Siquirres	1.25	28	eP	Pg	10 16 53.3	+0.3
PILE	Guapiles	1.26	14	eP	Pg	10 16 53.4	+0.1
MLIR3	Monte Lirio, C	1.27	98	eP	Pg	10 16 54.0	+0.6
VPL1	V. Platanar	1.29	348	eP	Pg	10 16 53.5	-0.4
CEUA	Cerro Uatsi, L	1.30	61	eP	Pg	10 16 55.4	+1.3
EGUB	Earth Gu¡pi	1.32	22	eP	Pg	10 16 54.1	-0.2
LPPC	Paso Canoas	1.32	110	eP	Pg	10 16 54.0	-0.4
DMCAL	E. de Neily	1.32	103	eP	Pg	10 16 53.9	-0.5
VPL2	V. Platanar	1.35	348	eP	Pg	10 16 54.8	-0.1
ARTO	Ro Cuarto	1.36	355	eP	Pg	10 16 54.7	-0.4
ARTO				eS	Sg	10 17 13.4	+0.7
QUEU	Ciudad Quesada	1.37	346	eP	Pg	10 16 55.6	+0.3
BRU2	Volcan	1.40	98	i P	Pb	10 16 55.1	-0.3
BRU2				eS	Sg	10 17 14.4	+0.3
BRU2	Volcan	1.40	98	eP	Pb	10 16 55.0	-0.3
BRIBI	Bribri	1.41	63	eP	Pg	10 16 56.6	+0.5
LESP3	La Esperanza,	1.41	114	eP	Pg	10 16 58.4	+2.3
LESP3				eS	Sg	10 17 15.6	+1.1
CARI	Cariari	1.42	14	eP	Pg	10 16 56.3	0.0
PTPM	Petroterminale	1.43	123	eP	Pg	10 16 55.8	-0.7
PTPM				eS	Sg	10 17 15.2	+0.2
ITAL	Pital	1.47	353	eP	Pb	10 16 56.5	0.0
SOCE	Pocosol	1.48	340	P	Pb	10 16 56.7	-0.1
SOCE	Pocosol	1.48	340	S	Sg	10 17 17.5	+0.7
SOCE	Pocosol	1.48	340	eP	Pg	10 16 56.8	-0.7
LMNES	Limones	1.50	126	eP	Pb	10 16 56.2	-0.8
MTEVE	Monteverde	1.51	332	eP	Pg	10 16 57.8	-0.3
NYURE	Nandayure	1.52	311	eP	Pg	10 16 58.7	+0.5
JUNT	Juntas	1.55	327	eP	Pn	10 16 56.7	-0.1
JTS	Las Juntas de	1.55	327	eP	Pn	10 16 56.6	-0.2
JTS				eS	Sb	10 17 17.5	-0.2
JTS	Las Juntas de	1.55	327	eP	Pn	10 16 56.2	-0.6
CASO	Castillo	1.57	336	eP	Pg	10 16 58.7	-0.5
JEFFS	S de V. Baru	1.57	101	eP	Pb	10 16 57.7	-0.6
FORC	Fortuna	1.58	339	eP	Pb	10 16 58.3	-0.1
VACR	Volcan Arenal	1.59	339	eP	Pg	10 16 58.9	-0.7
ARE1	Arenal 1	1.59	337	eP	Pb	10 16 58.4	-0.2
VARE2	V. Arenal	1.59	337	eP	Pb	10 16 58.7	+0.1
TRT2	Tortugero	1.60	13	P	Pb	10 16 58.3	-0.4
TRT2	Tortugero	1.60	13	S	Sg	10 17 20.0	-0.6
TRT2	Tortugero	1.60	13	eP	Pb	10 16 58.4	-0.4
CEDE	Laguna Cedeo	1.61	338	eP	Pb	10 16 59.0	0.0
BQTLY	Boquete Panama	1.63	98	eP	Pb	10 16 58.2	-1.1
LNBQ3	Los Naranjos,	1.65	97	eP	Pb	10 16 58.4	-1.1
LNBQ3				eS	Sg	10 17 22.2	+0.3
TABAC	Tabacon	1.65	336	eP	Pg	10 17 00.8	+0.1
BQSF3	Alto Boquete,	1.66	98	eP	Pg	10 17 00.3	-0.5
CNI2	El Empalme, Bo	1.66	75	⇓eP	Pb	10 16 59.3	-0.5
CNI2				i S	Sg	10 17 22.0	-0.5
CMARA	Lajas Hojancha	1.67	308	P	Pg	10 17 01.0	0.0
TILA	Tilaran	1.71	330	eP	Pn	10 16 59.0	0.0
DVD	David	1.71	108	eP	Pb	10 17 00.2	-0.5
DVD				i S	Sb	10 17 22.5	+0.2
LOCO3	Loma Colorada,	1.75	109	eP	Pb	10 17 01.2	-0.1
COVE	Coope Vega, Sa	1.75	350	P	Pb	10 17 00.4	-0.9
COVE	Coope Vega, Sa	1.75	350	S	Sg	10 17 25.9	+0.5
PEDE3	Pedregal, Chir	1.76	110	eS	Sg	10 17 24.1	-1.5
NICO	Nicoya	1.76	311	eP	Pg	10 17 02.4	-0.3
INVE	Universidad In	1.77	327	eP	Pb	10 17 00.3	-1.3
LOMA3	Las Lomas, Chi	1.77	108	eP	Pb	10 17 01.5	-0.1
PSOM3	Paja de Sombre	1.78	99	eP	Pb	10 17 00.5	-1.3
PSOM3				eS	Sb	10 17 24.6	+0.4
TIMP	Tierras Morena	1.83	330	eP	Pg	10 17 03.5	-0.7
JUD3	Juan Diaz 3	1.85	310	eP	Pg	10 17 04.7	+0.2
PBNVO	Pueblo Nuevo,	1.88	93	eP	Pn	10 17 01.8	+0.5
TENO	El Achiote	1.92	333	eP	Pb	10 17 03.9	-0.3
RBALA	Bur	1.92	93	eP	Pn	10 17 01.6	-0.3
MOTZ	Rio Naranjo	1.95	330	eP	Pb	10 17 04.5	-0.2
CUI	Cuipilapa	1.97	328	eP	Pb	10 17 04.8	-0.3
MESS	Mesas	2.06	328	eP	Pb	10 17 06.2	-0.4
VMAR	Armenia, Volca	2.08	331	eP	Pb	10 17 06.6	-0.3
UPAL	Upala	2.11	335	P	Pb	10 17 07.6	+0.3
UPAL	Upala	2.11	335	eP	Pb	10 17 07.9	+0.5
BOAB	BOACO BROADBAN	3.77	336	P	Pn	10 17 30.3	+2.9

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*NEIC **06** 10:17:35.1±0.8, 19°.63N±0°.08×64°.61W±0°.07, h10km±2km, ML3.3/24, Md3.7/12(RSPR), Error ellipse: s-maj=13.3km s-min=10.9km az=358.0*
*RSPR **06** 10:17:36.7, 19°.78N×64°.60W, h59km±18km, MD3.7/12*
ISC 06 10:17:30.6±1.9**, 19°.8N**±0°.1×**64°.37W**±0°.04**, h13km, n59, σ1ˢ.36**/60**, 5C-9D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUMP	Col San Antoni	2.13	221		Pn	10 18 06.8	+0.8
HUMP				IAML		10 18 40.5	
	215nm,0.2s						
HUMP	Col San Antoni	2.13	221		Sn	10 18 31.2	-1.1
HUMP	Col San Antoni	2.13	221	⇑eP	Pn	10 18 06.8	+0.8
HUMP	Col San Antoni	2.13	221	eS	Sn	10 18 31.8	-0.5
GCPR	Guaynabo City	2.17	229		Pn	10 18 07.2	+0.7
GCPR	Guaynabo City	2.17	229		Sn	10 18 31.9	-1.4
GCPR	Guaynabo City	2.17	229	⇓eP	Pn	10 18 07.2	+0.7
GCPR	Guaynabo City	2.17	229	eS	Sn	10 18 31.6	-1.6
SJG	San Juan	2.35	226		Pn	10 18 09.7	+0.8
SJG	San Juan	2.35	226	IAML		10 18 48.6	
	144nm,0.5s						
SJG	San Juan	2.35	226	⇓eP	Pn	10 18 09.7	+0.8
SJG	San Juan	2.35	226	eS	Sn	10 18 36.4	-1.3
SJG	San Juan	2.35	226	eP	Pn	10 18 09.5	+0.5
ECPR	Experimental S	2.37	233	Pn	Pn	10 18 10.2	+1.0
ECPR				IAML		10 18 40.1	
	290nm,0.2s						
ECPR				IAML		10 18 43.9	
	342nm,0.2s						
ECPR	Experimental S	2.37	233	⇓eP	Pn	10 18 10.1	+1.0
ECPR	Experimental S	2.37	233	eS	Sn	10 18 37.3	-0.9
SABA	Saba	2.38	153	Pn	Pb	10 18 14.4	+1.0
SABA				IAML		10 18 51.7	
	comp=N,230nm,0.6s						
EMPR	Esperanza - Ma	2.41	238	Pn	Pn	10 18 11.1	+1.4
EMPR				IAML		10 18 44.8	
	comp=N,204nm,0.7s						
EMPR				IAML		10 18 45.8	
	comp=N,299nm,0.6s						
EMPR	Esperanza - Ma	2.41	238		Sn	10 18 37.6	-1.5
EMPR	Esperanza - Ma	2.41	238	⇓eP	Pn	10 18 11.2	+1.4
EMPR	Esperanza - Ma	2.41	238	eS	Sn	10 18 37.6	-1.5
AOPR	Arecibo Observ	2.66	238		Pn	10 18 14.2	+1.0
AOPR	Arecibo Observ	2.66	238		Sn	10 18 43.1	-2.3
AOPR				IAML		10 18 55.4	
	comp=N,305nm,0.3s						
AOPR	Arecibo Observ	2.66	238	⇓eP	Pn	10 18 14.2	+1.0
AOPR	Arecibo Observ	2.66	238	eS	Sn	10 18 43.0	-2.3
AOPR	Arecibo Observ	2.66	238	eP	Pn	10 18 14.2	+1.0
UUPR	Utuado, UPR, P	2.68	236	Pn	Pn	10 18 14.6	+1.1
UUPR	Utuado, UPR, P	2.68	236		Sn	10 18 44.7	-1.2
UUPR	Utuado, UPR, P	2.68	236	⇑eP	Pn	10 18 14.7	+1.1
UUPR	Utuado, UPR, P	2.68	236	eS	Sn	10 18 44.7	-1.2
OBIP	Obispado Ponce	2.72	232		Pn	10 18 15.2	+1.2
OBIP	Obispado Ponce	2.72	232	Pn	Pn	10 18 14.0	0.0
OBIP	Obispado Ponce	2.72	232	IAML		10 18 55.6	
	comp=E,86nm,0.4s						
OBIP	Obispado Ponce	2.72	232	⇑eP	Pn	10 18 15.2	+1.2
OBIP	Obispado Ponce	2.72	232	eS	Sn	10 18 45.7	-1.1
SKI	Saint Kitts	2.87	147	eP	Pn	10 18 16.7	+0.6
SKI				eS	Sn	10 18 50.0	-0.4
AGPR	Aguadilla, PR	2.89	244	Pn	Pn	10 18 17.5	+1.0
AGPR				IAML		10 18 59.5	
	comp=E,109nm,0.5s						
AGPR				IAML		10 19 09.7	
	comp=E,116nm,0.5s						
AGPR	Aguadilla, PR	2.89	244	⇑eP	Pn	10 18 17.6	+1.2
AGPR	Aguadilla, PR	2.89	244	eS	Sn	10 18 48.6	-2.5
LSP	Las Mesas	3.02	239		Pn	10 18 19.5	+1.4
LSP					Sn	10 18 52.5	-1.7
LSP	Las Mesas	3.02	239	⇑eP	Pn	10 18 19.5	+1.4
LSP	Las Mesas	3.02	239	eS	Sn	10 18 52.5	-1.7
PRSN	Puerto Rico Se	3.04	240	Pn	Pn	10 18 19.8	+1.4
MLPR	Magueyes Islan	3.10	235	⇓eP	Pn	10 18 20.5	+1.3
MLPR	Magueyes Islan	3.10	235	eS	Sn	10 18 54.4	-1.7
CRPR	Cabo Rojo, PR	3.13	237		Pn	10 18 21.4	+1.8
CRPR	Cabo Rojo, PR	3.13	237	IAML		10 19 02.4	
	comp=E,72nm,1.1s						
CRPR	Cabo Rojo, PR	3.13	237	⇓eP	Pn	10 18 20.9	+1.3
CRPR	Cabo Rojo, PR	3.13	237	eS	Sn	10 18 55.3	-1.5
ANWB	Willy Bob	3.21	130	eP	Pn	10 18 20.9	+0.1
ANWB				eS	Sn	10 18 56.5	-2.4
IDE	Isla Desecheo	3.24	246		Pn	10 18 22.2	+1.1
IDE					Sn	10 18 57.8	-1.9
IDE	Isla Desecheo	3.24	246	⇓eP	Pn	10 18 22.2	+1.1
IDE	Isla Desecheo	3.24	246	eS	Sn	10 18 57.8	-1.9
MBWH	Windy Hill	3.65	145	eP	Pn	10 18 26.8	0.0
MLYT	Lee's Yard	3.66	145	eP	Pn	10 18 28.2	+1.1
ATGZ	Broadband at L	4.43	145	eP	Pn	10 18 38.1	+0.6
MIDR	Miches	4.49	261	⇓eP	Pn	10 18 39.1	+0.8
MIDR	Miches	4.49	261	eS	Sn	10 19 27.8	-2.6
DR12	Loma Pena Alta	4.83	259		Pn	10 18 44.7	+1.5

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*VIE **06** 10:19:06.8±0.6, 51°.47N×16°.06E, h0km, mb2.5/2, ml2.7/1, Error ellipse: s-maj=5.7km s-min=3.5km az=63.0 79 km NW of Wroclaw Suspected Mining induced.*
*PRU **06** 10:19:09.0, 51°.44N×16°.12E, h0km*
ISC 06 10:19:07.1±1.2**, 51°.48N**±0°.06×**16°.13E**±0°.03**, h0km, n23, σ0ˢ.59**/43**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.64	171	ePg	Pg	10 19 19.9	+0.5
KSP				eSg	Sg	10 19 28.6	+0.9
CHVC	Chvalec	0.89	183	ePG	Pg	10 19 24.6	+0.5

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHVC				eSG	Sb	10 19 36.9	-0.9
OSTC	Ostas	0.92	177	ePG	Pg	10 19 25.4	+0.7
OSTC				eSG	Sg	10 19 37.8	+1.1
	comp=Z,27nm,0.3s						
UPC	Upice	0.97	184	ePG	Pg	10 19 26.0	+0.3
UPC				eSG	Sg	10 19 38.5	+0.2
DPC	Dobruska-Polom	1.13	174	ePG	Pg	10 19 28.7	-0.1
DPC				eSG	Sg	10 19 43.7	+0.2
	comp=Z,20nm,0.4s						
PVCC	Panska Ves	1.37	227	ePG	Pb	10 19 33.8	+0.3
PVCC				eSG	Sn	10 19 52.2	0.0
	comp=Z,109nm,0.2s						
KRLC	Kraliky	1.46	163	ePG	Pn	10 19 34.7	-0.1
KRLC				eSG	Sg	10 19 53.7	-0.3
PRU	Pruhonice	1.80	215	ePG	Pb	10 19 40.7	-0.2
PRU				eSG	Sg	10 20 05.5	+0.7
	comp=Z,21nm,0.3s						
STEB	Steborice	1.86	145	ePG	Pb	10 19 42.3	+0.3
STEB				eSG	Sg	10 20 07.5	+0.6
	comp=Z,21nm,0.2s						
HSKC	Hora Svate Kat	1.91	244	ePG	Pb	10 19 42.2	-0.6
HSKC				eSG	Sb	10 20 07.5	+0.3
	comp=Z,23nm,0.3s						
MORC	Moravsky Berou	1.92	152	ePN	Pn	10 19 40.4	-0.7
MORC				eSG	Sn	10 20 04.9	-1.2
CLL	Collm	1.96	266	ePn	Pn	10 19 41.0	-0.7
CLL				ePg	Pb	10 19 44.0	+0.3
CLL				ex	x	10 19 47.0	
CLL				eSg	Sb	10 20 09.0	+0.2
	comp=Z,18nm,0.4s						
OKC	Ostrava-Krasne	2.08	141	eSG	Sg	10 20 13.8	-0.2
VRAC	Vranov	2.19	172	ePN	Pn	10 19 44.5	-0.3
VRAC				eSG	Sb	10 20 15.2	0.0
TREC	Trest	2.22	191	eSG	Sg	10 20 17.8	-0.6
	comp=Z,13nm,0.1s						
ZVC	Zvikov	2.38	212	eSG	Sg	10 20 23.6	-0.1
KRUC	Moravsky	2.42	176	ePN	Pn	10 19 48.3	+0.4
KRUC				eSG	Sg	10 20 24.3	-0.6
OJC	Ojcow	2.64	117	ePg	Pg	10 19 58.2	+0.4
OJC				eSg	Sg	10 20 32.8	+0.8
KHC	Kasperske Hory	2.86	216	ePN	Pn	10 19 54.8	+0.8
KHC				ePG	Pb	10 19 59.6	+0.6
KHC				eSN	Sn	10 20 28.8	-0.3
KHC				eSG	Sg	10 20 38.1	-0.8
LANS	Liptovska Anna	3.16	136	ePN	Pg	10 20 07.1	-0.6
MODS	Modra-Piesok	3.19	166	e	Pb	10 20 04.7	0.0
MODS	Modra-Piesok	3.19	166	eSG	Sg	10 20 50.2	+0.6
CONA	Conrad Observa	3.56	183	i Pn	Pn	10 20 04.4	+0.8
	comp=Z,0.3nm,0.1s						
CONA				eSg	Sg	10 21 00.2	-1.1
	comp=Z,2.0nm,0.3s						

IDC 06 10:19:46.8±368.0**, 2°.93S×38°.32W, h0^{km}, Error ellipse: s-maj=249.4km s-min=148.8km az=137.0, Brazil**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I09BR	BRASILIA INFRA	15.83	217	I	I	11 52 10.0	
	0.1nm,1.0s,baz=39,slow=320,SNR=3.6						
I41PY	VILLA FLORIDA	29.56	216	I	I	13 20 20.0	
	baz=40,slow=318,SNR=3.2						
I08BO	LAS PENAS INFR	32.45	244	I	I	13 39 40.0	
	baz=67,slow=326,SNR=2.9						
I48TN	KESRA INFRASON	58.84	45	I	I	16 19 45.7	
	baz=240,slow=308,SNR=1.1						

IDC ***06*** *10:20:00.8±1.1, 11°.01N×92°.29E, h0^{km}, mb3.9/6, mbtmp3.9/6, Error ellipse: s-maj=39.3km s-min=21.4km az=68.0*

ISC 06 10:20:04.8±1.1**, 10°.9N**±0°.1×**92°.1E**±0°.2**, h27^{km}, n13, $\sigma 1^{s}$18**/8**, mb3.9**/6**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	9.99	41	Pn	Pn	10 22 26.6	0.0
	0.5nm,0.3s,baz=236,slow=14,SNR=7.1						
CMAR				Sn	Sn	10 24 19.4	+1.5
	0.4nm,0.3s,baz=215,slow=25,SNR=1.8						
H08S3	Diego Garcia H	26.86	227	T	T	10 53 12.4	
	baz=47,slow=75,SNR=324						
H08S2	Diego Garcia H	26.86	227	T	T	10 53 10.6	
	baz=47,slow=75,SNR=165						
H08S1	Diego Carcia H	26.87	227	T	T	10 53 15.2	
	baz=47,slow=75,SNR=127						
MKAR	Makanchi Array	36.71	349	P	P	10 27 09.3	-0.3
	1.5nm,0.9s,baz=165,slow=9.8,SNR=5.5						
	1.5nm,0.9s						
SONM	Songino Array	38.71	15	P	P	10 27 25.4	-1.1
	1.1nm,0.6s,baz=198,slow=8.5,SNR=6.0						
	1.1nm,0.6s						
ZALV	Zalesovo Beam	43.31	354	P	P	10 28 03.6	-0.6
	0.8nm,0.6s,baz=170,slow=8.8,SNR=3.8						
	0.8nm,0.6s						
WRA	Warramunga Arr	51.66	126	P	P	10 29 08.8	-0.8
	1.8nm,0.9s,baz=299,slow=10,SNR=12						
	1.8nm,0.9s						
ASAR	Alice Springs	53.40	130	P	P	10 29 22.3	-0.2
	1.5nm,0.8s,baz=307,slow=7.4,SNR=14						
	1.5nm,0.8s						
H04N2	CROZET ISLANDS	67.35	209	T	T	11 43 59.4	
	baz=43,slow=75,SNR=136						
H04N1	CROZET ISLANDS	67.35	209	T	T	11 44 00.2	
	baz=43,slow=75,SNR=175						
H04N3	CROZET ISLANDS	67.36	209	T	T	11 43 55.7	
	baz=43,slow=75,SNR=153						
BOSA	Boshof	75.54	237	P	P	10 31 49.0	+1.5
	1.3nm,0.7s,baz=74,slow=7.0,SNR=4.2						
	1.3nm,0.7s						

NEIC ***06*** *10:23:25.9±2.1, 35°.06N±0°.08×23°.83E±0°.03, h2^{km}±7^{km}, mb4.0/11, Error ellipse: s-maj=11.9km s-min=1.4km az=193.0*

ISK ***06*** *10:23:26.7, 35°.20N×23°.83E, h4^{km}, ML4.0/11*

THE ***06*** *10:23:27.6, 35°N±1°×23°.8E±0°.8, h0^{km}±1^{km}, M3.9/18, MLh3.9/18*

ATH ***06*** *10:23:27.3, 35°.19N×23°.83E, h7^{km}, ML3.9/29, Manual Solution by E.Daskalaki First location: 2019/12/06 10:24:33, This location: 2019/12/06 10:33:23 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

IDC ***06*** *10:23:28.4±2.7, 35°.10N×23°.99E, h22^{km}±16^{km}, mb3.8/14, mbtmp3.9/22, ML3.9/8, MS3.5/12, Error ellipse: s-maj=19.4km s-min=12.6km az=15.0*

ISC 06 10:23:27.0±0.9**, 35°.13N**±0°.03×**23°.87E**±0°.02**, h11^{km}**±5^{km}**, n175, $\sigma 1^{s}$39**/189**, mb4.0**/17**, MS3.6**/6**, 8C-6D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNDR	Palaiochora Ch	0.23	299	P	Pg	10 23 33.9	+2.1
KNDR				S	Sg	10 23 34.2	-0.8
KNDR	Palaiochora Ch	0.23	299	Pg	Pg	10 23 31.1	-0.7
KNDR				Sg	Pg	10 23 33.9	+2.1
KNDR	Palaiochora Ch	0.23	299	P	Pg	10 23 30.9	-0.8
KNDR				S	Sg	10 23 33.8	-1.2
GVD	Gavdhos	0.34	147	P	Pb	10 23 35.5	+0.4
GVD	Gavdhos	0.34	147	Pg	Pb	10 23 35.5	+0.4
GVD				Sg	Sb	10 23 41.9	+1.5
GVD	Gavdhos	0.34	147	P	Pb	10 23 35.3	+0.2
GVD				S	Sb	10 23 41.6	+1.1
IMMV	Iera Moni Meta	0.35	16	S	Sg	10 23 38.1	-0.6
IMMV	Iera Moni Meta	0.35	16	Pg	Pg	10 23 33.0	-1.0
IMMV				Sg	Sg	10 23 37.9	-0.8
IMMV	Iera Moni Meta	0.35	16	P	Pg	10 23 33.1	-0.9
IMMV				S	Sg	10 23 37.4	-1.3
VAM	Vamos	0.39	44	P	Pg	10 23 34.6	-0.3
VAM				S	Sg	10 23 40.6	+0.6
VAM	Vamos	0.39	44	P	Pg	10 23 34.5	-0.4
VAM				S	Sg	10 23 39.5	-0.5
CHNB	Souda	0.40	24	P	Pg	10 23 34.3	-0.6
CHNB				S	Sg	10 23 39.4	-0.8
CHAN	Chania	0.42	20	P	Pg	10 23 35.1	-0.3
CHAN	Chania	0.42	20	P	Pg	10 23 34.6	-0.8
CHAN				S	Sg	10 23 39.6	-1.3
IDI	Anoyia	0.85	79	Pg	Pg	10 23 43.0	-0.6
	88nm,0.3s,baz=267,slow=11,SNR=130						
IDI				Lg	Lg	10 23 52.9	
	480nm,0.3s,baz=334,slow=20,SNR=25						
IDI				LR	LR	10 24 16.6	
	comp=Z,1μm,19.5s,baz=144,slow=63						
IDI	Anoyia	0.85	79	P	Pg	10 23 42.9	-0.6
IDI	Anoyia	0.85	79	Pg	Pg	10 23 43.3	-0.3
IDI	Anoyia	0.85	79	P	Pg	10 23 42.6	-0.9
IDI				S	Sb	10 23 56.0	+0.6
ANKY	Antikythira Is	0.87	328	P	Pg	10 23 42.9	-0.9
ANKY				S	Sg	10 23 55.2	0.0
ANKY	Antikythira Is	0.87	328	P	Pg	10 23 42.1	-1.7
ANKY				S	Sg	10 23 53.0	-2.3
IACM	Heraklion	1.00	79	P	Pn	10 23 49.0	+2.0
IACM	Heraklion	1.00	79	P	Pg	10 23 45.9	-0.5
KTHA	Kythira Island	1.30	330	P	Pn	10 23 50.9	-0.3
KTHA	Kythira Island	1.30	330	Pn	Pn	10 23 50.7	-0.5
KTHA	Kythira Island	1.30	330	P	Pn	10 23 50.0	-1.1
NPS	Neapolis	1.44	84	P	Pg	10 23 55.4	+0.7
NPS	Neapolis	1.44	84	P	Pb	10 23 53.8	0.0
NPS1	Neapolis Lacon	1.53	335	P	Pn	10 23 54.4	+0.2
NPS1				S	Sn	10 24 13.3	-0.8
MHLO	Agia Marina, M	1.62	15	P	Pb	10 23 56.9	0.0
MHLO				S	Sn	10 24 08.1	-8.3
MHLO	Agia Marina, M	1.62	15	P	Pn	10 23 54.9	-0.6
MHLO				S	Sn	10 24 15.7	-0.7
MNVA	Monemvasia	1.70	337	P	Pn	10 23 56.8	+0.3
THR9	Santorini-Faro	1.73	44	P	Pn	10 23 57.4	+0.4
THR6	Thira Island,	1.75	45	P	Pn	10 23 58.4	+1.1
VLI	Veliai	1.76	335	P	Pn	10 23 57.9	+0.5
VLI	Veliai	1.76	335	P	Pn	10 23 57.1	-0.3
SAP3	Santorini-Thir	1.78	42	P	Pn	10 23 58.4	+0.7
SAP3				S	Sn	10 24 20.5	+0.3
SNT5	Nea Kammeni, S	1.78	44	P	Pn	10 23 58.4	+0.7
THR3	Thira Island,	1.79	44	P	Pn	10 23 58.5	+0.7
THERA	Ancient Thera,	1.80	46	P	Pn	10 23 58.6	+0.6
THERA	Ancient Thera,	1.80	46	P	Pn	10 23 58.4	+0.4
THERA				S	Sn	10 24 22.0	+1.2
ZKR	Zakros	1.93	90	Pn	Pb	10 24 01.9	-0.3
ZKR	Zakros	1.93	90	P	Pb	10 24 02.4	+0.2
APE	Apeiranthos	2.36	34	Pn	Pn	10 24 06.9	+1.2
APE	Apeiranthos	2.36	34	⇓P	Pn	10 24 07.9	+2.2
APE				⇑S	Sb	10 24 41.2	+2.4
APE	Apeiranthos	2.36	34	P	Pn	10 24 05.4	-0.3
PYL	PYLOS	2.47	316	P	Pb	10 24 11.9	+0.6
PYL	PYLOS	2.47	316	P	Pn	10 24 07.1	0.0
MET2	Kameni Chora,	2.52	350	P	Pn	10 24 07.9	+0.1
MET4	Agioi Theodoro	2.52	352	P	Pn	10 24 08.2	+0.3
MET5	Makryloggos,Me	2.52	351	P	Pn	10 24 08.2	+0.3
ITM	Ithomi	2.58	323		Pn	10 24 10.1	+1.4
ITM	Ithomi	2.58	323	Pn	Pn	10 24 09.9	+1.2
ITM	Ithomi	2.58	323	P	Pn	10 24 10.3	+1.6
VLY	Voula,Athens	2.72	359	P	Pn	10 24 13.4	+2.7
VLY	Voula,Athens	2.72	359	P	Pn	10 24 10.3	-0.3
KARP	Karpathos	2.73	80	P	Pb	10 24 14.1	-1.7
KARP	Karpathos	2.73	80		Pn	10 24 11.6	+0.9
KARP	Karpathos	2.73	80	Pn	Pn	10 24 12.9	+2.2
KARP	Karpathos	2.73	80	P	Pn	10 24 12.2	+1.4
ATHU	Athens Univers	2.84	359	P	Pn	10 24 13.8	+1.6
ATHU	Athens Univers	2.84	359	P	Pn	10 24 11.2	-1.0
PTL	Penteli	2.92	0	P	Pn	10 24 14.2	+0.9
PTL	Penteli	2.92	0	P	Pn	10 24 13.5	+0.1
KARY	Karystos	2.94	9	P	Pn	10 24 13.8	+0.2
DION	Dionisos Attik	2.95	1	P	Pn	10 24 14.3	+0.5
DION	Dionisos Attik	2.95	1	P	Pn	10 24 13.9	+0.1
LTK	Loutraki	2.98	346	P	Pn	10 24 15.1	+0.9
STFN	Stefani	3.06	355	P	Pn	10 24 15.5	+0.2
GUR	Goura	3.06	337	P	Pn	10 24 16.3	+0.9
VIL2	Platees	3.12	351	P	Pn	10 24 15.4	-0.7
KLV	Kalavryta, Ach	3.22	335	P	Pn	10 24 18.7	+1.1
DRO	Drossia	3.31	329	P	Pn	10 24 19.6	+0.9
BODT	Bodrum	3.39	54	Pn	Pn	10 24 22.1	+2.2
DAT	Datca	3.41	61	Pn	Pn	10 24 22.2	+2.0
KYMI	Kymi, Euboea I	3.51	3	P	Pn	10 24 21.3	-0.1
LKR	Lokris	3.59	349	P	Pn	10 24 23.1	+0.6
ATAL	Atalanti	3.62	350	P	Pn	10 24 23.2	+0.2
ARG	Arkhangelos	3.64	71		Pn	10 24 23.7	+0.5
ARG	Arkhangelos	3.64	71	P	Pn	10 24 25.3	+2.1
EFP	Efpalio	3.65	335	P	Pn	10 24 25.5	+2.1
AXS	Araxos	3.66	328	P	Pn	10 24 25.5	+2.0
CHOS	Chios island	3.70	28	P	Pn	10 24 24.6	+0.4
AXAR	Agios Charalam	3.76	345	P	Pn	10 24 25.9	+1.0
SKY	Skiros Island	3.79	8	P	Pn	10 24 26.1	+0.9
ANX	Ano Chora	3.80	336	P	Pn	10 24 26.5	+1.0
RTZL	Ratzakli, Kefa	3.85	321	P	Pn	10 24 26.1	-0.1
AKAS	Kas	4.80	75		Pn	10 24 38.8	-0.6
MANT	Manisa	5.05	47		Pn	10 24 43.8	+1.0
LIT	Litokhoron	5.08	348		Pn	10 24 44.0	+0.8
ELL	Elmali	5.16	70		Pn	10 24 45.9	+1.6
BALB	Balikesir	5.53	34	Pn	Pn	10 24 47.3	-1.8
KEK	Kerkira	5.61	326	Pn	Pn	10 24 49.5	-0.8
RDO	Rodhopi	6.15	12		Pn	10 24 57.7	-0.1
VAY	Valandovo	6.27	351	i Pn	Pn	10 25 01.6	+2.3
OHR	Ohrid	6.45	339	i Pn	Pn	10 25 04.5	+2.7
TIP	Timpagrande	6.97	308	Pn	Pn	10 25 08.0	-1.0
TIP	Timpagrande	6.97	308	⇑P	Pn	10 25 08.5	-0.5
BORA	Eskisehir	7.07	46		Pn	10 25 11.5	+1.1
CEL	Celeste	7.13	298	Pn	Pn	10 25 09.9	-1.3
CSS	Mathiatis	7.77	88	Pn	Pn	10 25 19.1	-0.8
MDUB	Mudurnu	7.88	45	Pn	Pn	10 25 21.8	+0.2
MATE	Matera	7.90	316	⇓P	Pn	10 25 21.4	-0.4
ELND	Elena	7.95	11	⇑P	Pn	10 25 26.1	+3.7
RAFF	Raffo Rosso	7.96	288	Pn	Pn	10 25 22.1	-0.6
CUC	Castrocucco	8.03	310		Pn	10 25 23.6	+0.1
PDG	Podgorica	8.13	335	Pn	Pn	10 25 25.3	+0.4
PDG	Podgorica	8.13	335	⇑P	Pn	10 25 25.9	+1.0
PLVB	Pleven	8.27	4	⇑P	Pn	10 25 28.8	+1.9
ACER	Acerenza	8.43	314	Pn	Pn	10 25 29.8	+0.7
ANTO	Ankara	8.53	54		Pn	10 25 30.7	+0.2
BOVS	Bovan	8.66	350	⇓P	Pn	10 25 33.7	+1.5
BR131	Keskin Array S	9.03	57		Pn	10 25 37.7	+0.3
BRTR	Keskin Array B	9.03	57	Pn	Pn	10 25 41.4	+4.0
	0.5nm,0.3s,baz=241,slow=15,SNR=31						
BRTR				LR	LR	10 30 11.7	
	comp=Z,99nm,20.6s,baz=238,slow=45						
BRTR	Keskin Array B	9.03	57		Pn	10 25 38.5	+1.1
SGRT	San Giovanni R	9.18	319	Pn	Pn	10 25 38.1	-1.3
ILGA	Ilgaz	9.76	50		Pn	10 25 48.2	+0.7
MDVR	Moldovita	9.79	351	⇑P	Pn	10 25 50.2	+2.6
MMAI	Mount Meron Ar	9.80	99	Pn	Pn	10 25 47.8	-0.1
	2.0nm,0.3s,baz=303,slow=11,SNR=6.2						
MMAI				Sn	Sn	10 27 34.8	-3.2
	1.7nm,0.3s,baz=272,slow=22,SNR=2.4						
	1.9nm,0.4s						
ARR	Arges	10.25	3	⇓P	Pn	10 25 57.1	+3.1
BALJ	Balqa	10.28	104		Pn	10 25 53.3	-1.1
GZR	Gura Zlata	10.29	356	⇓P	Pn	10 25 56.7	+2.2
LOT	Lotru	10.31	360	⇑P	Pn	10 25 57.7	+2.8
VOIR		10.34	5	⇑P	Pn	10 25 58.5	+3.3
MLR	Muntele Rosu	10.47	8	Pn	Pn	10 26 00.2	+3.0
	0.2nm,0.3s,baz=195,slow=8.1,SNR=7.9						
MLR				LR	LR	10 29 41.2	
	comp=Z,118nm,21.6s,baz=186,slow=36						
	5.0nm,0.7s						
MLR	Muntele Rosu	10.47	8		Pn	10 25 59.7	+2.6
MLR	Muntele Rosu	10.47	8	⇓P	Pn	10 26 00.6	+3.4
GHAJ	Ghor Haditha	10.52	108		Pn	10 25 57.5	-0.1
EIL	Elat	10.83	117	Pn	Pn	10 26 01.6	-0.4
	1.5nm,0.3s,baz=226,slow=4.8,SNR=9.3						
EIL				Sn	Sn	10 27 56.8	-6.4
	1.1nm,0.3s,baz=293,slow=22,SNR=6.9						
	5.8nm,0.5s						
VRAC	Vranov	15.15	342	Pn	Pn	10 27 02.9	+2.1
	0.4nm,0.3s,baz=128,slow=7.8,SNR=3.2						
VRAC				LR	LR	10 34 40.4	
	comp=Z,208nm,18.8s,baz=168,slow=44						
	2.0nm,0.4s						
FUORN	Ofenpass-Fuorn	15.39	322		Pn	10 27 04.5	+0.3
FUORN				IAmb	IAmb	10 27 16.1	
	comp=Z,6.8nm,0.8s						
GERES	GERESS Array B	15.63	334	Pn	Pn	10 27 09.5	+2.3
	baz=138,slow=11,SNR=11						
GERES				LR	LR	10 34 52.1	
	comp=Z,230nm,19.5s,baz=134,slow=44						
	comp=Z,2.5nm,0.7s						
DAVOX	Davos/Dischmat	15.69	322	Pn	Pn	10 27 10.1	+2.0
	comp=Z,0.3nm,0.3s,baz=141,slow=15,SNR=4.0						
	comp=Z,2.3nm,0.7s						
KHC	Kasperske Hory	15.92	335		Pn	10 27 12.0	+1.1
AKASG	Malin Array Be	16.05	12	Pn	Pn	10 27 11.6	-0.9
	comp=Z,1.4nm,0.3s,baz=202,slow=12,SNR=4.8						
AKASG				LR	LR	10 32 52.8	
	comp=Z,135nm,18.9s,baz=172,slow=35						
	comp=Z,0.2nm,0.3s						
KARS	Kars	16.13	64	Pn	Pn	10 27 14.4	+0.7
KARS				IAmb	IAmb	10 27 22.6	
	comp=Z,20nm,0.9s						
KIV	Kislovodsk	16.96	53	P	P	10 27 27.3	+1.2
KIV				IAmb	IAmb	10 27 32.7	
	comp=Z,28nm,1.1s						
KBZ	Khabaz	17.00	54	Pn	P	10 27 26.8	+0.3
	comp=Z,0.2nm,0.3s,baz=219,slow=7.6,SNR=5.8						
	comp=Z,3.8nm,0.9s						
GNI	Garni	17.27	67	LR	LR	10 35 43.4	
	comp=Z,92nm,18.1s,baz=276,slow=43						
CLL	Collm	17.97	337	P	Pn	10 27 37.2	+0.5
CLL				IAmb	IAmb	10 27 40.6	
	comp=Z,7.0nm,1.0s						
CLL	Collm	17.97	337	eP	P	10 27 38.0	+0.8
CLL				ex	x	10 27 59.0	
ESDC	Sonseca Array	22.53	290	P	P	10 28 27.9	+1.1
	comp=Z,2.4nm,0.8s,baz=79,slow=9.6,SNR=12						
	comp=Z,2.4nm,0.8s						
MDT	Midelt	23.69	273	LR	LR	10 38 20.4	
	comp=Z,102nm,19.1s,baz=96,slow=38						
HFS	Hagfors	25.88	348	P	P	10 28 58.3	-0.2
	comp=Z,2.2nm,0.5s,baz=148,slow=9.8,SNR=13						
HFS				LR	LR	10 41 07.6	
	comp=Z,221nm,19.4s,baz=154,slow=41						
	comp=Z,2.2nm,0.5s						
FINES	FINESS Array B	26.38	2	P	P	10 29 01.2	-1.8
	comp=Z,2.2nm,0.9s,baz=224,slow=5.3,SNR=3.7						
	comp=Z,2.2nm,0.9s						
FINES	FINESS Array B	26.38	2	P	P	10 29 02.3	-0.7
NOA	NORSAR Array B	27.17	347	LR	LR	10 42 23.5	
	comp=Z,82nm,18.9s,baz=290,slow=42						
EKA	Eskdalemuir Ar	27.46	326	P	P	10 29 14.5	+1.6
	comp=Z,1.5nm,0.5s,baz=120,slow=9.3,SNR=5.4						
	comp=Z,1.5nm,0.5s						
TORD	Torodi Ar. Bea	29.67	228	P	P	10 29 32.5	-0.3
	comp=Z,2.9nm,0.3s,baz=256,slow=24,SNR=3.9						
TORD	Torodi Ar. Bea	29.67	228	IAmb	IAmb	10 29 36.1	
	comp=Z,9.8nm,0.7s						
AB31	Akbulak array	29.91	51	P	P	10 29 36.7	+2.0
AB31				IAmb	IAmb	10 29 47.0	
	comp=Z,1.6nm,1.0s						
ABKAR	Akbulak array	29.91	51	P	P	10 29 36.8	+2.1
ARCES	ARCESS Array B	34.48	1	P	P	10 30 13.2	-1.3
	comp=Z,4.6nm,0.9s,baz=169,slow=7.2,SNR=8.4						
	comp=Z,4.6nm,0.9s						
ARCES	ARCESS Array B	34.48	1	P	P	10 30 14.2	-0.2
KK31	Karatay Array	36.67	63	P	P	10 30 34.5	+0.8
KK31				IAmb	IAmb	10 30 41.2	
	comp=Z,1.0nm,0.4s						
KKAR	Karatay Array	36.67	63	P	P	10 30 34.5	+0.8
BORG	Borgarnes	40.08	332	LR	LR	10 50 06.7	
	comp=Z,113nm,18.0s,baz=94,slow=40						
BOOM	Boomskoye usch	40.70	63	P	P	10 31 09.7	+2.0
KURBB	Kurchatov Arra	41.97	51	LR	LR	10 51 56.2	
	comp=Z,75nm,20.2s,baz=169,slow=41						
MKAR	Makanchi Array	44.68	56	P	P	10 31 39.3	-0.5
	comp=Z,1.5nm,0.5s,baz=270,slow=7.7,SNR=12						
	comp=Z,1.5nm,0.5s						
MKAR	Makanchi Array	44.68	56	P	P	10 31 39.2	-0.6
ZALV	Zalesovo Beam	45.79	46	P	P	10 31 47.4	-1.0
	comp=Z,1.1nm,0.4s,baz=263,slow=10,SNR=7.0						
	comp=Z,1.1nm,0.4s						
ZALV	Zalesovo Beam	45.79	46	P	P	10 31 47.8	-0.6
SONM	Songino Array	60.33	50	P	P	10 33 35.0	-0.8
	comp=Z,0.4nm,0.5s,baz=269,slow=11,SNR=3.8						
	comp=Z,0.4nm,0.5s						
SONM	Songino Array	60.33	50	P	P	10 33 35.7	-0.2
PZH	PanZhiHua	65.89	74	P	P	10 34 14.2	+1.1
HHC	Hu-ho-hao-te	66.54	56	eP	P	10 34 17.2	+0.1
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,4.7s						
CMAR	Chiang Mai Arr	67.63	83	P	P	10 34 23.2	-1.0
	comp=Z,1.2nm,0.3s,baz=162,slow=16,SNR=2.8						
	comp=Z,1.2nm,0.3s						
YKA	Yellowknife Ar	77.15	342	P	P	10 35 19.1	-1.2
	comp=Z,0.1nm,0.5s,baz=197,slow=10,SNR=2.1						
	comp=Z,0.1nm,0.5s						
USRK	Ussuriysk Ar.	77.61	44	P	P	10 35 22.6	-0.6
	comp=Z,0.8nm,0.5s,baz=355,slow=4.0,SNR=4.9						
	comp=Z,0.8nm,0.5s						
KSRS	Korea Array	79.14	52	P	P	10 35 31.6	-0.1
	comp=Z,0.7nm,0.6s,baz=323,slow=26,SNR=2.3						
	comp=Z,0.7nm,0.6s						
ILAR	Eielson Array	80.17	356	P	P	10 35 38.5	+1.6
	comp=Z,0.2nm,0.8s,baz=343,slow=4.5,SNR=2.5						
	comp=Z,0.2nm,0.8s						
PDAR	Pinedale Array	91.57	328	P	P	10 36 33.7	-0.5
	comp=Z,0.3nm,0.9s,baz=294,slow=31,SNR=2.3						
	comp=Z,0.3nm,0.9s						
NVAR	Mina Array Bea	98.86	331	LR	LR	11 23 45.6	
	comp=Z,54nm,18.3s,baz=109,slow=37						
WRA	Warramunga Arr	117.64	96	PKP	PKPdf	10 42 12.9	-0.7
	comp=Z,0.3nm,0.9s,baz=149,slow=35,SNR=2.9						
ASAR	Alice Springs	119.09	100	PKP	PKPdf	10 42 16.2	-0.1
	comp=Z,0.2nm,0.6s,baz=274,slow=36,SNR=1.7						

IDC ***06*** *10:24:36.6±0.5, 58°.43S×23°.92W, h0^{km}, mb4.6/11, mbtmp4.6/13, ML4.9/2, MS4.0/30, Error ellipse: s-maj=20.5km s-min=15.9km az=56.0*

NEIC ***06*** *10:24:38.7±1.5, 58°.6S±0°.1×24°.2W±0°.2, h10^{km}±1^{km}, mb5.1/73, Error ellipse: s-maj=19.7km s-min=13.8km az=218.0*

GCMT ***06*** *10:24:40.7±0.2, 58°.68S±0°.01×23°.50W±0°.03, h25^{km}±1^{km}, MW5.1/111, Moment Tensor Solution. s37,c45; s111,c154; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.16±.15; M$_{\theta\theta}$-4.02±.14; M$_{\phi\phi}$3.86±.14; M$_{r\theta}$-0.42±.27; M$_{\theta\phi}$2.31±.11; M$_{\phi r}$1.98±.28; Best double couple: M$_0$4.99000×10^{16} NP1:φ$_s$62.00000°, δ68.00000°, λ7.00000°. NP2:φ$_s$329.00000°, δ84.00000°, λ157.00000°. Principal axes: T 5.1490, Plg20.0000°, Azm283.0000°; N -0.3140, Plg67.0000°, Azm135.0000°; P -4.8320, Plg11.0000°, Azm17.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 10:24:38.5±0.3**, 58°.58S**±0°.07×**24°.05W**±0°.08**, h10^{km}, n426, $\sigma 1^{s}$10**/374**, mb5.1**/42**, MS4.0**/28**, 11C-1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	8.12	297		Pn	10 26 31.4	-4.9
VNA1	Neumayer--Stat	13.81	158	⇑P	Pn	10 27 54.1	+0.2
	comp=Z,116nm,0.4s						
VNA1				⇑S	Sn	10 30 15.7	-11
VNA3	Neumayer Olymp	14.04	161	⇑P	Pn	10 27 56.7	-0.4
	comp=Z,63nm,0.3s						
VNA3				⇑S	Sn	10 30 18.6	-14
VNA2	Neumayer--Watz	14.20	157	⇑P	Pn	10 27 58.5	-0.9
	comp=Z,46nm,0.3s,baz=326,slow=14						
VNA2				⇑S	Sn	10 30 24.4	-12
	baz=333,slow=19						
SNAA	Sanae	15.73	155	⇑P	Pn	10 28 19.2	-0.7
	comp=Z,1μm,0.4s						
SNAA				⇑S	Sn	10 31 00.8	-13
SNAA	Sanae	15.73	155	Pn	Pn	10 28 19.3	-0.7
	comp=Z,11nm,0.3s,baz=332,slow=12,SNR=285						
SNAA				Sn	Sn	10 30 58.5	-16
	comp=Z,0.8nm,0.3s,baz=329,slow=16,SNR=2.1						
SNAA				LR	LR	10 33 48.8	
	comp=Z,556nm,18.9s,baz=354,slow=35						
	comp=Z,79nm,0.6s						
SNAA	Sanae	15.73	155		Pn	10 28 19.6	-0.3
SNAA				IAmb	IAmb	10 28 23.4	
	comp=Z,116nm,0.9s						
TROLL	Troll, Antarti	17.21	152	⇑P	Pn	10 28 38.6	-0.2
	comp=Z,2μm,0.8s						
TROLL				⇑S	Sn	10 31 36.7	-13
PMSA	Palmer Station	19.68	235	P	Pn	10 29 09.5	+0.7
	comp=Z,1.3nm,0.3s,baz=46,slow=5.1,SNR=4.8						
PMSA				LR	LR	10 36 02.4	
	comp=Z,232nm,18.6s,baz=81,slow=35						
	comp=Z,19nm,0.7s						
PMSA	Palmer Station	19.68	235		P	10 29 07.2	-0.1
BELA	Belgrano 2	19.71	187		P	10 29 08.3	+0.7
EFI	East Falkland	20.46	275		P	10 29 17.0	+1.1
MG02	Cerro Sombrero	25.71	263	P	P	10 30 07.6	-1.0
MG05	Puerto Natales	28.01	263	P	P	10 30 28.3	-0.9
GO09	Cerro Castillo	28.15	264		P	10 30 29.4	-1.1
GO09				IAmb	IAmb	10 30 30.0	
	comp=Z,48nm,0.9s						
SYO	Syowa Base	28.55	138	⇓eP	P	10 30 32.2	-1.7
AY03	Cochrane	30.70	270	P	P	10 30 52.3	-0.8
AY03				IAmb	IAmb	10 30 54.3	
	comp=Z,22nm,1.0s						

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COYC  Coyhaique        31.53 273        P       10 31 00.4 -0.1
QSPA  South Pole Qui   31.67 180  P     P       10 31 03.4 +1.7
      comp=Z,5.6nm,0.8s,baz=216,slow=3.8,SNR=18
QSPA                              LR    LR      10 42 53.7
      comp=Z,361nm,21.6s,baz=190,slow=34
      comp=Z,5.6nm,0.8s
QSPA  South Pole Qui   31.67 180  P     P       10 31 02.6 +0.8
QSPA                              IAmb  IAmb    10 31 55.4
      comp=Z,43nm,1.2s
TRQA  Tornquist        31.89 293  P     P       10 31 02.4 -1.3
TRQA                              IAmb  IAmb    10 32 05.9
      comp=Z,35nm,1.6s
AY01  Puyuhuapi        32.60 274  P     P       10 31 09.6 -0.3
LL02  Futaleuf         33.04 276        P       10 31 12.9 -0.8
LL02                              IAmb  IAmb    10 31 15.7
      comp=Z,32nm,1.0s
PLTB  Pedras Altas     33.44 310        P       10 31 16.1 -1.3
PLTB  Pedras Altas     33.44 310  eP    P       10 31 16.5 -0.9
LL01  San Ignacio de   33.91 277  P     P       10 31 20.9 -0.4
LL01                              IAmb  IAmb    10 31 25.1
      comp=Z,19nm,1.0s
GO07  Milladeo Hill,   34.04 275  P     P       10 31 21.0 -1.5
PLCA  Paso Flores      34.13 281  P     P       10 31 22.7 -0.7
      comp=Z,40nm,0.8s,baz=146,slow=7.8,SNR=64
PLCA                              LR    LR      10 45 19.0
      comp=Z,180nm,19.0s,baz=130,slow=36
      comp=Z,40nm,0.8s
PLCA  Paso Flores      34.13 281  P     P       10 31 22.9 -0.6
PLCA  Paso Flores      34.13 281  eP    P       10 31 21.4 -2.0
CPSB  Cacapava Do Su   34.58 312  eP    P       10 31 26.7 -0.5
CNLB  Canela           34.58 316  eP    P       10 31 27.2 -0.2
LR05  Currie           35.25 280        P       10 31 31.6 -1.4
PSAL  Palomas, Salto   35.69 306  eP    P       10 31 35.2 -1.6
LR03  Panguipulli      35.87 280  P     P       10 31 36.9 -1.4
LR04  Corral           36.25 279  P     P       10 31 41.4 -0.1
MAW   Mawson           37.10 141  P     P       10 31 46.8 -1.6
      comp=Z,2.1nm,0.5s,baz=102,slow=12,SNR=1.9
MAW                               LR    LR      10 44 39.7
      comp=Z,229nm,21.8s,baz=254,slow=32
      comp=Z,2.1nm,0.5s
BI02  San Fabin de     37.58 285        P       10 31 51.3 -1.6
BI02                              IAmb  IAmb    10 31 53.8
      comp=Z,22nm,0.8s
PARB  Paraibuna        38.43 327  eP    P       10 32 01.6 +1.4
BI05  Punta Hualpn     38.49 283        P       10 31 59.8 -0.8
SPB   Sao Paulo        38.73 324  P     P       10 32 02.3 -0.3
SPB                               IAmb  IAmb    10 32 05.1
      comp=Z,88nm,1.3s
SPB   Sao Paulo        38.73 324  eP    P       10 32 04.2 +1.6
BO02  Sierra Bellavi   38.80 287  P     P       10 32 01.2 -2.0
VAO   Valinhos         39.14 325        P       10 32 08.3 +2.1
VAO   Valinhos         39.14 325  eP    P       10 32 07.9 +1.7
PTGB  Pitanga          39.21 317  eP    P       10 32 06.6 -0.2
LMEL  Las Melosas      39.26 288  P     P       10 32 06.0 -1.3
BO01  Tunca            39.27 287  P     P       10 32 05.8 -1.2
BO04  La Punta         39.35 288  P     P       10 32 06.8 -1.0
BO04                              IAmb  IAmb    10 32 09.7
      comp=Z,49nm,1.4s
FRTB  Fartura          39.63 322  eP    P       10 32 11.2 +0.9
MT09  Talagante        39.71 288  IAmb  IAmb    10 32 13.9
      comp=Z,34nm,0.8s
CPUP  Villa Florida    39.75 310  P     P       10 32 09.9 -1.2
      comp=Z,6.6nm,0.9s,baz=14,slow=7.9,SNR=30
CPUP                              LR    LR      10 46 57.2
      comp=Z,40nm,21.2s,baz=15,slow=34
      comp=Z,6.6nm,0.9s
CPUP  Villa Florida    39.75 310        P       10 32 09.8 -1.3
CPUP  Villa Florida    39.75 310  eP    P       10 32 09.8 -1.3
MT16  CCHEN            39.75 289  IAmb  IAmb    10 32 11.8
      comp=Z,33nm,0.6s
SUR   Sutherland       39.81  69  P     P       10 32 13.3 +1.4
SUR                               IAmb  IAmb    10 32 36.4
      comp=Z,169nm,2.0s
PEL   Peldehue         40.06 289  P     P       10 32 13.1 -0.7
CFA   Coronel Fontan   40.11 293  LR    LR      10 48 09.0
      comp=Z,132nm,21.3s,baz=134,slow=35
VA05  Santo Domingo    40.12 287  IAmb  IAmb    10 32 14.9
      comp=Z,47nm,0.6s
MT02  Curacav          40.20 288  IAmb  IAmb    10 32 15.1
      comp=Z,33nm,0.8s
VA03  San Esteban      40.30 289  IAmb  IAmb    10 32 31.4
      comp=Z,33nm,0.8s
BSCB  Bom Sucesso      40.42 329  eP    P       10 32 18.9 +2.0
VA06  Catapilco        40.84 289  IAmb  IAmb    10 32 21.4
      comp=Z,21nm,0.7s
BB19B Bebedouro        41.43 324  eP    P       10 32 26.2 +1.0
BSFB  Barra de Sao F   41.55 336  eP    P       10 32 28.2 +2.1
AMBA  Amambai (Brazi   41.91 315  eP    P       10 32 27.9 -1.1
DIAM  Diamantina, MG   42.72 332  eP    P       10 32 38.0 +2.2
PMNB  Patos De Minas   43.22 328  eP    P       10 32 41.1 +1.3
ITRB  Iturama          43.28 322  eP    P       10 32 40.5 +0.3
AC05  El Transito      43.39 293  IAmb  IAmb    10 32 40.9
      comp=Z,37nm,0.8s
LCO   Las Campanas     43.45 292  P     P       10 32 39.9 -1.9
VNDA  Vanda            44.11 182  P     P       10 32 47.9 +1.6
      comp=Z,4.0nm,0.9s,baz=183,slow=8.2,SNR=7.8
VNDA                              LR    LR      10 49 26.1
      comp=Z,223nm,21.7s,baz=174,slow=34
      comp=Z,4.0nm,0.9s
VNDA  Vanda            44.11 182  P     P       10 32 47.7 +1.5
IPMB  Ipameri, GO      44.25 326  eP    P       10 32 49.0 +0.9
AC04  Llanos de Chal   44.30 292  P     P       10 32 46.9 -1.4
AC04                              IAmb  IAmb    10 32 48.0
      comp=Z,37nm,0.8s
AQDB  Aquidauana       44.41 315  eP    P       10 32 47.9 -1.3
AC02  Maricunga        44.52 296  IAmb  IAmb    10 32 50.8
      comp=Z,21nm,0.8s
CMC01 Camacan, BA      44.66 339  eP    P       10 32 52.0 +0.8
BDQN  Bodoquena, MS    44.82 314  eP    P       10 32 51.5 -1.1
C2SB  Chapadao do Su   44.97 320  eP    P       10 32 54.5 +0.8
H04S2 CROZET ISLANDS   45.02 110  T     T       11 21 50.3
      baz=226,slow=75,SNR=5.1
H04S3 CROZET ISLANDS   45.03 110  T     T       11 21 51.2
      baz=226,slow=75,SNR=9.3
H04S1 CROZET ISLANDS   45.04 110  T     T       11 21 51.4
      baz=226,slow=75,SNR=6.6
NBIT  Itapeh - BA      45.06 339  eP    P       10 32 56.8 +2.4
BOSA  Boshof           45.08  70  P     P       10 32 53.4 -1.3
      comp=Z,2.0nm,0.8s,baz=217,slow=4.7,SNR=5.2
      comp=Z,2.0nm,0.8s
BOSA  Boshof           45.08  70  P     P       10 32 53.5 -1.2
AC01  Pan de Azucar    45.80 294  P     P       10 32 58.3 -1.9
AC01                              IAmb  IAmb    10 33 29.0
      comp=Z,28nm,1.3s
JANB  Januaria         45.99 332  eP    P       10 33 03.0 +1.1
GO02  Mina Guanaco     46.15 296        P       10 33 02.3 -1.1
GO02                              IAmb  IAmb    10 33 02.8
      comp=Z,20nm,0.9s
BDFB  Brasilia         46.41 327  P     P       10 33 04.1 -1.1
      comp=Z,6.3nm,0.8s,baz=177,slow=9.5,SNR=7.6
BDFB                              LR    LR      10 50 31.6
      comp=Z,199nm,18.9s,baz=134,slow=34
      comp=Z,6.3nm,0.8s
BDFB  Brasilia         46.41 327  P     P       10 33 04.4 -0.9
BDFB                              IAmb  IAmb    10 33 20.6
      comp=Z,33nm,1.6s
PP1B  Ponte de Pedra   46.76 318  eP    P       10 33 07.2 -0.6
PB14  IPOC Station P   46.99 296  P     P       10 33 07.8 -2.2
PB14                              IAmb  IAmb    10 34 05.4
      comp=Z,64nm,2.0s
AF01  San Pedro de A   47.40 299  P     P       10 33 11.5 -1.6
ARAG  Araguaiana, MT   47.49 323  eP    P       10 33 14.1 +0.5
LBTB  Lobatse          48.24  68  LR    LR      10 51 03.1
      comp=Z,109nm,18.2s,baz=210,slow=33
PB05  IPOC Station P   48.42 297  IAmb  IAmb    10 33 20.0
      comp=Z,25nm,1.0s
KGCAE Kacgae           48.47  63  P     P       10 33 21.7 +0.4
KGCAE                             IAmb  IAmb    10 33 45.4
      comp=Z,28nm,1.1s
SALV  Santo Antonio    48.62 318  eP    P       10 33 22.0 -0.2
SDBA  SAO DESIDERIO    48.69 332  eP    P       10 33 24.3 +1.4
PB03  IPOC Station P   48.90 298  IAmb  IAmb    10 33 24.1
      comp=Z,21nm,1.2s
PB07  IPOC Station P   49.24 298  IAmb  IAmb    10 33 26.7
      comp=Z,22nm,0.9s
TSUM  Tsumeb           49.57  56  LR    LR      10 51 19.5
      comp=Z,150nm,18.4s,baz=204,slow=32
TSUM  Tsumeb           49.57  56  P     P       10 33 30.5 +0.8
PB02  IPOC Station P   49.60 299  IAmb  IAmb    10 33 29.7
      comp=Z,25nm,0.9s
PB01  IPOC Station P   49.65 299  IAmb  IAmb    10 33 30.0
      comp=Z,20nm,0.8s
PB08  IPOC Station P   50.28 300  P     P       10 33 34.6 -0.8
PTLB  Pontes e Lacer   50.29 314  P     P       10 33 34.4 -0.6
PTLB                              IAmb  IAmb    10 33 35.4
      comp=Z,29nm,0.9s
PTLB  Pontes e Lacer   50.29 314  eP    P       10 33 34.2 -0.8
NBTA  Tacaratu-PE      50.50 342  eP    P       10 33 36.4 -0.2
GO01  Chusmiza         50.71 300  P     P       10 33 37.9 -0.9
GO01                              IAmb  IAmb    10 33 38.7
      comp=Z,19nm,0.8s
PB11  IPOC Station P   50.84 300  P     P       10 33 38.2 -1.2
PB11                              IAmb  IAmb    10 33 40.0
      comp=Z,21nm,1.1s
SNDB  Serra Nova Dou   50.85 325  eP    P       10 33 40.3 +1.0
H10N1 ASCENSION HYDR51.15  12     T     T       11 29 03.9
      baz=189,slow=71,SNR=10.0
H10N3 ASCENSION HYDR51.15  12     T     T       11 29 04.4
      baz=189,slow=71,SNR=14
H10N2 ASCENSION HYDR51.16  12     T     T       11 29 03.3
      baz=189,slow=71,SNR=10
NBPV  Pedro Velho      52.75 346  eP    P       10 33 54.3 +0.8
SMTB  Santa Maria do   52.77 330  eP    P       10 33 54.3 +0.7
PDRB  Porto dos Gac    52.96 318  eP    P       10 33 54.4 -0.6
VILB  Vilhena          52.98 314  P     P       10 33 54.6 -0.6
VILB  Vilhena          52.98 314  eP    P       10 33 54.3 -0.9
LPAZ  La Paz           53.21 303  P     P       10 33 56.8 -0.8
      comp=Z,16nm,0.7s,baz=152,slow=4.1,SNR=42
LPAZ                              LR    LR      10 56 23.5
      comp=Z,68nm,21.8s,baz=128,slow=36
      comp=Z,16nm,0.7s
LPAZ  La Paz           53.21 303  P     P       10 33 56.9 -0.8
LPAZ                              IAmb  IAmb    10 33 57.8
      comp=Z,17nm,0.8s
LPAZ  La Paz           53.21 303  eP    P       10 33 56.7 -0.8
CLDB  Colider          53.33 320  eP    P       10 33 57.1 -0.6
NBPA  Parau_RN         53.66 344  eP    P       10 34 01.4 +1.3
NBPS  Pedro II - PI    55.71 339  eP    P       10 34 16.1 +1.0
PRPB  Parauapebas      55.94 329  eP    P       10 34 17.9 +1.2
NBMO  Morrinhos-CE     56.52 341  eP    P       10 34 21.9 +1.2
NPGB  Novo Progresso   56.76 322  eP    P       10 34 22.5  0.0
TMAB  Tom-Au,PA,Br     59.13 332  eP    P       10 34 40.8 +1.7
ITTB  Itaituba         59.40 323  eP    P       10 34 41.0  0.0
NNA   Nana             60.94 297  LR    LR      10 59 38.2
      comp=Z,167nm,21.7s,baz=149,slow=34
MACA  Manacapuru-AM    62.20 318  eP    P       10 35 00.6 +0.6
ATAH  Atahualpa        65.91 298  LR    LR      11 04 05.1
      comp=Z,56nm,20.3s,baz=154,slow=36
DBIC  Dimbokro         66.85  21  P     P       10 35 29.1 -1.2
      comp=Z,1.7nm,0.5s,baz=215,slow=8.0,SNR=4.1
DBIC                              LR    LR      10 58 43.0
      comp=Z,69nm,18.6s,baz=186,slow=31
      comp=Z,1.7nm,0.5s
DBIC  Dimbokro         66.85  21  P     P       10 35 29.0 -1.4
DBIC                              IAmb  IAmb    10 35 44.1
      comp=Z,18nm,1.3s
BOAV  Boa Vista        67.32 320  P     P       10 35 32.8 -0.6
BOAV  Boa Vista        67.32 320  eP    P       10 35 32.6 -0.8
MDP   Montagnes des    67.48 329  LR    LR      11 01 50.1
      comp=Z,85nm,21.7s,baz=146,slow=33
MBAR  Mbarara          71.88  59  LR    LR      11 05 10.1
      comp=Z,149nm,18.2s,baz=212,slow=34
TORD  Torodi Ar. Bea   74.50  26  P     P       10 36 17.4 +0.4
      comp=Z,4.2nm,0.3s,baz=187,slow=3.8,SNR=2.5
TORD                              LR    LR      11 04 03.8
      comp=Z,62nm,18.3s,baz=176,slow=32
      comp=Z,4.2nm,0.3s
TORD  Torodi Ar. Bea   74.50  26  P     P       10 36 17.4 +0.4
TORD                              IAmb  IAmb    10 36 31.2
      comp=Z,14nm,0.8s
ROSC  El Rosal         74.79 307  LR    LR      11 10 18.5
      comp=Z,89nm,20.6s,baz=232,slow=37
RUSC  La Rusia         75.23 309        P       10 36 20.4 -1.4
RUSC                              IAmb  IAmb    10 36 36.6
      comp=Z,16nm,1.1s
SDV   Santo Domingo    76.99 313  LR    LR      11 09 42.9
      comp=Z,225nm,21.3s,baz=118,slow=35
SDV   Santo Domingo    76.99 313  P     P       10 36 30.1 -1.4
SDV   Santo Domingo    76.99 313  eP    P       10 36 31.3 -0.2
URZ   Urewera          81.92 197  LR    LR      11 12 09.6
      comp=Z,75nm,18.1s,baz=172,slow=35
SJG   San Juan         83.88 320  LR    LR      11 14 12.8
      comp=Z,52nm,20.8s,baz=157,slow=36
TBI   Tubuai           86.75 229  eLR   LR      11 04 44.1
      comp=Z,340nm,26.2s
TBI                               eLR   LR      11 04 50.5
      comp=Z,1μm,30.5s
PPT2  Papeete2         91.98 231  eLR   LR      11 07 10.1
      comp=Z,225nm,29.2s
PPT2                              eLR   LR      11 07 19.4
      comp=Z,219nm,22.2s
PPT   Papeete          92.00 231  LR    LR      11 09 33.3
      comp=Z,119nm,21.5s,baz=126,slow=29
MDT   Midelt           92.49  16  LR    LR      11 13 22.6
      comp=Z,124nm,20.0s,baz=222,slow=32
RAR   Rarotonga        92.50 221  LR    LR      11 12 03.6
      comp=Z,42nm,19.5s,baz=130,slow=31
CMIG  Matias Romero    94.83 295  LR    LR      11 13 58.5
      comp=Z,35nm,21.5s,baz=152,slow=31
TAOE  Nuku Hiva Isla   95.59 243  eLR   LR      11 08 55.8
      comp=Z,124nm,21.4s
ASAR  Alice Springs    96.04 160  P     P       10 38 05.4 -0.7
      comp=Z,0.6nm,0.9s,baz=163,slow=3.6,SNR=2.2
ASAR                              LR    LR      11 20 01.4
      comp=Z,87nm,18.2s,baz=192,slow=35
      comp=Z,0.6nm,0.9s
KEST  Kesra            98.01  27  LR    LR      11 18 51.9
      comp=Z,92nm,18.1s,baz=281,slow=33
DZM   Mont Dzumac      99.19 190  LR    LR      11 19 12.5
      comp=Z,69nm,20.5s,baz=200,slow=33
DZM   Mont Dzumac      99.19 190  eLR   LR      11 10 34.9
      comp=Z,109nm,23.7s
ESDC  Sonseca Array    99.32  16  LR    LR      11 17 54.8
      comp=Z,101nm,18.2s,baz=153,slow=32
AKASG Malin Array Be  117.27  35  PKP   PKPdf   10 43 21.2 -1.5
      comp=Z,0.3nm,0.4s,baz=225,slow=6.2,SNR=1.5
CMAR  Chiang Mai Arr  122.61 109  PKP   PKPdf   10 43 33.3 -0.8
      comp=Z,0.5nm,0.3s,baz=217,slow=2.0,SNR=1.2
PDAR  Pinedale Array  123.09 299  PKP   PKPdf   10 43 34.4 -0.2
      comp=Z,0.6nm,0.7s,baz=134,slow=7.2,SNR=6.8
NVAR  Mina Array Bea  123.90 289  PKP   PKPdf   10 43 36.1 -0.2
      comp=Z,0.9nm,0.7s,baz=127,slow=4.2,SNR=7.2
FINES FINESS Array B  125.85  27  PKP   PKPdf   10 43 38.7 -0.2
      comp=Z,4.7nm,0.9s,baz=204,slow=3.0,SNR=3.6
FINES FINESS Array B  125.85  27        PKPdf   10 43 39.0 +0.1
PLID  Pearl Lake      127.86 296        PKiKP   10 43 44.6 +0.4
MSO   Missoula        128.21 299        PKiKP   10 43 45.7 +1.0
BMO   Blue Mountains  128.31 295        PKiKP   10 43 45.3 +0.4
PZH   PanZhiHua       130.74 106  PKP   PKiKP   10 43 51.8 +1.4
ARCES ARCESS Array B  132.67  21  PKP   PKPdf   10 43 51.6 -0.1
      comp=Z,3.8nm,0.9s,baz=225,slow=0.2,SNR=1.3
ARCES ARCESS Array B  132.67  21        PKPdf   10 43 51.9 +0.2
CD2   Chengdu         135.35 105  PKP   PKiKP   10 43 59.0 -0.5
MKAR  Makanchi Array  136.07  72  PKP   PKPdf   10 43 57.4 -1.4
      comp=Z,0.3nm,0.6s,baz=222,slow=1.6,SNR=1.7
WMQ   Urumqi          136.74  79  ePKP  PKiKP   10 44 02.2 +0.2
KURBB Kurchatov Arra  136.83  65  PKP   PKPdf   10 43 57.3 -2.7
      comp=Z,0.3nm,0.4s,baz=222,slow=2.7,SNR=2.0
YKAW1 Yellowknife Wh  139.13 315        PKPdf   10 44 04.5 +0.6
YKA   Yellowknife Ar  139.18 315  PKP   PKPdf   10 44 01.5 -2.4
      comp=Z,3.1nm,0.9s,baz=137,slow=1.5,SNR=24
YKA   Yellowknife Ar  139.18 315        PKPdf   10 44 04.5 +0.6
YKAW3 Yellowknife Wh  139.22 315        PKPdf   10 44 04.8 +0.7
XAN   Xi'an           140.46 107  PKP   PKiKP   10 44 12.4 +2.5
KOTAN Kotaneelee Air  141.53 308  P     PKiKP   10 44 10.2 -0.9
      baz=124
ZALV  Zalesovo Beam   141.93  65  PKP   PKPdf   10 44 08.1 -1.1
      comp=Z,0.3nm,0.3s,baz=207,slow=6.1,SNR=2.4
ZALV  Zalesovo Beam   141.93  65        PKPdf   10 44 08.6 -0.6
NJ2   Nanjing         143.58 120  eP    PKPdf   10 44 14.4 +1.5
NJ2                               pmax  pmax
      comp=Z,11nm,0.5s
Q32M  Nakina River    144.43 302  P     PKPdf   10 44 15.4 +1.6
      baz=121
S32K  Killisnoo       144.68 299  P     PKPdf   10 44 14.5 +0.6
      baz=122
SIT   Sitka           144.81 298  P     PKPdf   10 44 14.9 +0.8
      baz=122
R32K  Eaglecrest      145.08 300  P     PKPdf   10 44 15.8 +1.1
      baz=121,SNR=9.1
P33M  Teslin, Yukon   145.30 304  P     PKPab   10 44 16.1 +1.0
      baz=120,SNR=28
P32M  Atlin           145.39 303        PKPab   10 44 15.9 +0.5
P32M  Atlin           145.39 303  P     PKPab   10 44 16.5 +1.1
      baz=120,SNR=15
N32M  Quiet Lake      145.87 305  P     PKPab   10 44 17.5 +0.4
      baz=118
C36M  Paulatuk        145.97 321        PKPbc   10 44 16.5 -0.1
C36M  Paulatuk        145.97 321  P     PKPab   10 44 17.9 +0.8
      baz=113
HNS   HongShan        145.98 110  ⇑PKPbc PKiKP  10 44 21.3 +0.3
SKAG  Skagway         146.04 302  P     PKPab   10 44 18.1 +0.4
      baz=119
BTO   Baotou          146.07 102  ePKPbc PKPdf  10 44 13.8 -3.2
BTO                               PKPab pPKPdf  10 44 18.7  0.0
BTO                               sPKP  sPKPab  10 44 29.7 +8.8
BTO                               pmax  pmax
      comp=Z,13nm,0.6s
BTO                               pmax  pmax
      comp=Z,450nm,4.3s
WHY   Whitehorse      146.41 304  P     PKPab   10 44 19.0 -0.3
      baz=118
FARO  Faro, Yukon     146.48 307  P     PKPab   10 44 19.1 -0.3
      baz=116
PLBC  Pleasant Camp   146.50 301  P     PKPab   10 44 19.4 -0.1
      baz=119
M31M  Drury Creek, Y  146.90 306  P     PKPbc   10 44 20.1 +0.4
      baz=116,SNR=10
O30N  Mendenhall      146.99 303  P     PKPbc   10 44 20.6 +0.7
      baz=117,SNR=5.6
HHC   Hu-ho-hao-te    147.04 103  eP    PKPdf   10 44 16.1 -2.6
P30M  Million Dollar  147.08 302  P     PKPbc   10 44 20.7 +0.5
      baz=118
N31M  Braeburn, Yuko  147.18 305  P     PKPbc   10 44 21.0 +0.6
      baz=116,SNR=8.9
P29M  Windy Craggy    147.20 301  P     PKPbc   10 44 21.3 +0.7
      baz=118
A36M  Sachs Harbour   147.26 326        PKPbc   10 44 19.5 -0.8
A36M  Sachs Harbour   147.26 326  P     PKPbc   10 44 20.6 +0.4
      baz=108,SNR=33
HYT   Haines Junctio  147.64 303  P     PKPbc   10 44 22.5 +0.6
      baz=116
N30M  Aishikik Lake   147.73 304  P     PKPbc   10 44 22.9 +1.0
      baz=116
O29M  Mount Kennedy   147.88 302  P     PKPbc   10 44 23.4 +0.9
      baz=116
YUK6  Outpost Mounta  148.07 303  P     PKPbc   10 44 23.6 +0.5
      baz=116
M30M  Minto, Yukon    148.07 306  P     PKPbc   10 44 23.5 +0.6
      baz=114,SNR=13
MAYO  Mayo, Yukon     148.11 308  P     PKiKP   10 44 23.8 -0.8
      baz=113
H31M  Peel River      148.31 313  P     PKPbc   10 44 23.4 +0.1
      baz=111
YUK4  Talbot Arm      148.36 303  P     PKiKP   10 44 24.7 -0.7
      baz=115,SNR=8.7
PINM  Pinnacle        148.54 301  P     PKiKP   10 44 24.9 -0.7
      baz=116
F31M  Tsiigehtchic    148.64 316  P     PKPbc   10 44 24.4 +0.4
      baz=109
J30M  Hart River      148.66 310  P     PKPbc   10 44 24.9 +0.5
      baz=111
G31M  Satah River     148.67 315  P     PKPbc   10 44 24.6 +0.5
      baz=109,SNR=15
M29M  Somme Creek     148.73 305  P     PKiKP   10 44 25.4 -0.6
      baz=113
O28M  Mount Upton     148.81 302  P     PKiKP   10 44 26.0 -0.5
      baz=115
YUK8  Steele Glacier  148.83 303  P     PKiKP   10 44 26.0 -0.4
      baz=114
INK   Inuvik          148.83 317  P     PKPbc   10 44 24.9 +0.4
      baz=108,SNR=17
L29M  L29M            148.85 307  P     PKiKP   10 44 25.8 -0.4
      baz=112
K29M  Barlow Dome     148.87 308  P     PKPbc   10 44 25.5 +0.5
      baz=112
I30M  Mount Dempster  148.91 311  P     PKPbc   10 44 25.5 +0.5
      baz=110
SONM  Songino Array   149.14  88  PKPbc PKPbc   10 44 25.5 -0.7
      comp=Z,3.9nm,0.9s,baz=204,slow=2.8,SNR=13
YUK3  Moose Creek     149.33 303  P     PKPbc   10 44 26.8 +0.5
      baz=113
J29N  Klondike Camp   149.38 309  P     PKiKP   10 44 26.9 -0.3
      baz=110
CTG   Chitna Glacier  149.40 302  P     PKiKP   10 44 26.9 -0.5
      baz=114
G30M  tAoh Zraii Nji  149.42 314  P     PKiKP   10 44 26.7 -0.6
      baz=108
EPYK  Eagle Plains    149.42 313  P     PKPbc   10 44 26.5 +0.3
      baz=108
F30M  Barrier River   149.44 316  P     PKPbc   10 44 26.4 +0.3
      baz=107
I29M  Ogilvie Camp,   149.72 311  P     PKPbc   10 44 27.1 +0.2
      baz=109
DAWY  Dawson          149.72 308  P     PKPbc   10 44 27.1 +0.2
      baz=110
BVCY  Beaver Creek    149.75 304  P     PKPbc   10 44 27.5 +0.4
      baz=112
BGLC  Bering Glacier  149.93 299  P     PKPbc   10 44 27.7 +0.3
      baz=114
H29M  Whitestone      150.01 312  P     PKPbc   10 44 27.9 +0.4
      baz=107
G29M  Pine Creek      150.07 314  P     PKiKP   10 44 28.2 -0.3
      baz=106
CRQE  Cirque          150.10 301  P     PKPbc   10 44 28.4 +0.4
      baz=113
M27K  Edge Creek, AK  150.17 304  P     PKiKP   10 44 28.7 -0.3
      baz=111
MCARA McCarthy VSAT   150.31 302  P     PKiKP   10 44 29.2  0.0
      baz=112
I28M  Miner Creek     150.39 310  P     PKiKP   10 44 29.0 -0.4
      baz=108
L27K  Beaver Creek,   150.40 305  P     PKiKP   10 44 29.3 -0.1
      baz=110
E29M  Blow River      150.42 317  P     PKPbc   10 44 28.7 +0.2
      baz=104
M26K  Nabesna, AK     150.67 304  P     PKiKP   10 44 30.0  0.0
      baz=111
K27K  Chicken         150.83 307  P     PKiKP   10 44 30.7 +0.5
      baz=108
BMRM  Bremner River   150.86 300  P     PKiKP   10 44 30.5 +0.1
      baz=112
D28M  Stokes Point    150.92 318  P     PKiKP   10 44 30.4 +0.2
      baz=102
F28M  Old Crow        150.95 315  P     PKiKP   10 44 30.4  0.0
      baz=104
L26K  Log Cabin Wild  151.04 305  P     PKiKP   10 44 30.9 +0.3
      baz=109
E28M  Babbage River   151.05 317  P     PKiKP   10 44 30.7 +0.1
      baz=102
N25K  Chitina, Valde  151.10 302  P     PKiKP   10 44 31.6 +0.7
      baz=111
I27K  Kandik River    151.11 310  P     PKiKP   10 44 31.1 +0.3
      baz=106
EYAK  Cordova Ski Ar  151.23 299  P     PKiKP   10 44 31.6 +0.6
      baz=112
H27K  Steamboat Moun  151.24 312  P     PKiKP   10 44 31.3 +0.2
      baz=105
G27K  Doyon Strip     151.43 313  P     PKiKP   10 44 31.5 +0.1
      baz=104
J26L  Joseph Creek    151.59 308  P     PKiKP   10 44 32.4 +0.5
      baz=107
SCRK  Sand Creek      151.61 306  P     PKiKP   10 44 32.3 +0.3
      baz=107
HARP  HAARP           151.62 303  P     PKiKP   10 44 32.6 +0.7
      baz=109
I26K  Coal Creek Min  151.64 309  P     PKiKP   10 44 32.3 +0.5
      baz=106
KLU   Klutina         151.65 301  P     PKiKP   10 44 32.7 +0.7
      baz=110
D27M  Malcolm River   151.68 318  P     PKiKP   10 44 32.4 +0.5
      baz=100
E27K  Coleen River    151.71 316  P     PKiKP   10 44 32.3 +0.4
      baz=102
P23K  Montague Islan  151.78 297  P     PKiKP   10 44 32.5 +0.3
      baz=112
RIDG  Independent Ri  151.91 306  P     PKiKP   10 44 33.3 +0.8
      baz=107
PAX   Paxson          151.94 304  P     PKiKP   10 44 33.0 +0.3
      baz=108
GLI   Glacier Island  151.96 299  P     PKiKP   10 44 33.0 +0.4
      baz=111
M24K  Tolsona, Glenn  151.97 302  P     PKiKP   10 44 33.1 +0.5
      baz=109
G26K  Porcupine Rive  152.28 313  P     PKiKP   10 44 33.7 +0.6
      baz=102
K24K  Donnelly Dome   152.32 306  P     PKiKP   10 44 33.9 +0.6
      baz=106
J25K  Salcha River,   152.37 307  P     PKiKP   10 44 34.3 +0.8
      baz=105
SCM   Sheep Creek Mo  152.40 301  P     PKiKP   10 44 34.2 +0.7
      baz=109
PWL   Port Wells      152.53 299  P     PKiKP   10 44 34.3 +0.6
      baz=110
M23K  Glacier View    152.56 301  P     PKiKP   10 44 34.4 +0.6
      baz=109
F26K  Sheenjek River  152.57 314  P     PKiKP   10 44 34.7 +1.0
      baz=100
PRP   Porcupine Dome  152.66 309  P     PKiKP   10 44 34.9 +0.8
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	baz=104						
C27K	Jago River	152.70	318	P	PKiKP	10 44 34.9	+1.0
	baz=97						
KNK	Knik Glacier	152.77	300	P	PKiKP	10 44 35.2	+1.0
	baz=109						
SEW	Seward	152.78	297	P	PKiKP	10 44 35.3	+1.1
	baz=111						
DHY	Denali Highway	152.80	304	P	PKiKP	10 44 35.4	+1.0
	baz=107						
WAT6	Susitna Watana	152.81	303	P	PKiKP	10 44 35.2	+0.7
	baz=108						
SML	Sawmill	152.84	301	P	PKiKP	10 44 35.3	+0.9
	baz=109						
HDA	Harding Lake	152.98	307	P	PKiKP	10 44 35.8	+1.2
	baz=105						
O22K	Cooper Landing	153.04	297	P	PKiKP	10 44 36.4	+1.6
	baz=110						
ILAR	Eielson Array	153.04	307	PKPbc	PKPbc	10 44 34.4	-0.2
	comp=Z,8.5nm,0.9s,baz=143,slow=2.3,SNR=75						
ILAR	Eielson Array	153.04	307		PKiKP	10 44 35.2	+0.5
ILAR				PKPab	pPKPab	10 44 47.2	-0.5
F25K	Christian Rive	153.11	314	P	PKiKP	10 44 35.6	+0.8
	baz=99						
PMR	Palmer	153.13	300	P	PKiKP	10 44 35.6	+0.6
	baz=108						
C26K	Camden Bay	153.15	319	P	PKiKP	10 44 35.5	+0.7
	baz=96						
G25K	Bearman Lake	153.15	312	P	PKiKP	10 44 35.7	+0.9
	baz=101						
E25K	Arctic Village	153.17	315	P	PKiKP	10 44 35.8	+0.8
	baz=98						
WAT1	Susitna Watana	153.25	303	P	PKiKP	10 44 35.9	+0.7
	baz=106						
RC01	Rabbit Creek A	153.25	299	P	PKiKP	10 44 35.9	+0.6
	baz=109						
BRSE	Bradley Lake S	153.25	296	P	PKiKP	10 44 35.8	+0.4
	baz=111						
POKR	Poker Plat Res	153.35	308	P	PKiKP	10 44 35.8	+0.4
	baz=103						
KDAK	Kodiak Island	153.39	291	P	PKiKP	10 44 36.6	+1.0
	baz=114						
COLA	College	153.47	307		PKPab	10 44 48.6	+0.7
WRH	Wood River Hil	153.47	306		PKiKP	10 44 36.3	+0.7
WRH				PKPab	PKPab	10 44 48.7	+0.7
OHAK	Old Harbor	153.51	289	P	PKiKP	10 44 37.2	+1.4
	baz=114						
D25K	Kavik River	153.60	318	P	PKiKP	10 44 37.2	+1.4
	baz=95						
M22K	Willow	153.63	300	P	PKiKP	10 44 37.4	+1.5
	baz=108						
MCK	McKinley	153.65	305	P	PKiKP	10 44 36.7	+0.7
	baz=104						
G24K	Hadweenzic Riv	153.67	312	P	PKiKP	10 44 37.0	+1.0
	baz=100						
H24K	Noodor Dome	153.68	310	P	PKiKP	10 44 37.2	+1.1
	baz=101						
SUA	Susitna One	153.83	299	P	PKiKP	10 44 37.3	+0.7
	baz=108						
CUT	Chulitna	153.89	301	P	PKiKP	10 44 37.5	+1.0
	baz=106						
NEA2	Nenana	153.91	307	P	PKiKP	10 44 37.4	+0.9
	baz=103						
F24K	Squaw Lake	153.96	313	P	PKiKP	10 44 37.6	+1.0
	baz=98						
CHIR	Chirikof Islan	154.07	285	P	PKiKP	10 44 37.7	+0.6
	baz=116						
I23K	Minto, Yukon-K	154.15	308	P	PKiKP	10 44 38.2	+1.2
	baz=101						
TRF	Thorofare Moun	154.17	304	P	PKiKP	10 44 37.9	+0.6
	baz=104						
E24K	Your Creek	154.25	315	P	PKiKP	10 44 38.4	+1.2
	baz=96						
O20K	Slope Mountain	154.26	296	P	PKiKP	10 44 38.3	+0.8
	baz=110						
SKT	Skwentna	154.34	300	P	PKiKP	10 44 38.4	+0.9
	baz=106						
H23K	Yukon River	154.35	309	P	PKiKP	10 44 38.6	+1.2
	baz=100						
P19K	Oil Pt	154.40	294	P	PKiKP	10 44 38.4	+0.7
	baz=110						
SPCR	Spurr Chakacha	154.42	298	P	PKiKP	10 44 38.1	+0.3
	baz=108						
C24K	Franklin Bluff	154.45	318	P	PKiKP	10 44 38.8	+1.4
	baz=92						
D24K	Happy Valley	154.46	317	P	PKiKP	10 44 39.1	+1.6
	baz=94						
BPAW	Bear Paw Mtn.	154.62	305	P	PKiKP	10 44 39.2	+1.1
	baz=102						
E23K	Chandalar	154.67	314	P	PKiKP	10 44 39.4	+1.3
	baz=95						
G23K	Bananza Creek	154.68	311	P	PKiKP	10 44 39.5	+1.4
	baz=98						
TOLK	Toolik Lake Re	154.70	316	P	PKiKP	10 44 39.5	+1.4
	baz=94						
MLY	Manley	154.70	307	P	PKiKP	10 44 39.5	+1.3
	baz=101						
COLD	Coldfoot	154.81	312	P	PKiKP	10 44 39.8	+1.5
	baz=96						
PPLA	Purkeypile	154.87	302	P	PKiKP	10 44 40.0	+1.3
	baz=104						
Q18K	Katmai Hardscr	154.91	291	P	PKiKP	10 44 40.6	+1.7
	baz=111						
M20K	Styx River	155.04	299	P	PKPdf	10 44 40.6	+10
	baz=106						
O19K	Port Alsworth	155.10	295	P	PKPdf	10 44 40.6	+10
	baz=108						
H22K	Ishtalitna Cre	155.10	309	P	PKPdf	10 44 40.6	+11
	baz=98						
C23K	Itkillik River	155.11	319	P	PKPdf	10 44 40.5	+11
	baz=90						
D23K	Nanushuk River	155.12	316	P	PKPdf	10 44 40.7	+11
	baz=92						
CHUM	Lake Minchumin	155.15	304	P	PKPdf	10 44 40.5	+10
	baz=102						
R17L	Mt. Peulik Vol	155.19	289	P	PKPdf	10 44 40.9	+10
	baz=112						
Q17K	Contact Creek	155.20	290	P	PKPdf	10 44 40.9	+10
	baz=112						
I21K	Tanana	155.25	307	P	PKPdf	10 44 40.8	+11
	baz=99						
P18K	Big Mountain,	155.27	293	P	PKPdf	10 44 41.6	+11
	baz=110						
G22K	Bettles	155.28	312	P	PKPdf	10 44 41.5	+11
	baz=96						
N19K	Bonanza Creek	155.36	296	P	PKPdf	10 44 41.9	+11
	baz=107						
O18K	Koktuh Hills	155.41	294	P	PKPdf	10 44 41.6	+11
	baz=109						
E22K	Anaktuvuk Pass	155.50	314	P	PKPab	10 44 55.7	-0.9
	baz=93						
H21K	Melozitna Rive	155.66	308	P	PKPab	10 44 57.5	+0.2
	baz=98						
K20K	Telida	155.81	303	P	PKPab	10 44 59.1	+1.1
	baz=102						
D22K	Ayikyak River	155.84	316	P	PKPab	10 44 58.8	+0.8
	baz=91						
L19K	White Mountain	155.90	300	P	PKPab	10 44 58.8	+0.3
	baz=104						
N18K	Kilae Creek	155.99	296	P	PKPab	10 44 59.7	+0.8
	baz=106						
J20K	Nowinta River	156.00	305	P	PKPab	10 44 59.9	+1.1
	baz=100						
G21K	Allakaket	156.04	310	P	PKPab	10 45 00.1	+1.2
	baz=95						
B22K	Teshekpuk Lake	156.06	320	P	PKPab	10 45 00.0	+1.2
	baz=87						
F21K	Alatna River	156.08	312	P	PKPab	10 45 00.7	+1.6
	baz=94						
M18K	Stony River	156.18	298	P	PKPab	10 45 01.3	+1.7
	baz=105						
I20K	Naaghedeneel	156.24	306	P	PKPab	10 45 01.3	+1.5
	baz=98						
O17K	Koliganek Bris	156.29	293	P	PKPab	10 45 01.4	+1.3
	baz=108						
E21K	Killik River	156.31	315	P	PKPab	10 45 01.7	+1.6
	baz=90						
SDPT	Sand Point	156.34	281	P	PKPab	10 45 01.8	+1.4
	baz=116						
H20K	Anotleneega Mo	156.49	308	P	PKPab	10 45 02.0	+1.1
	baz=96						
P16K	Nushagak River	156.50	291	P	PKPab	10 45 02.0	+1.0
	baz=109						
B21K	Ikpikpuk River	156.51	318	P	PKPab	10 45 01.9	+1.0
	baz=87						
A22K	Sinclair Lake	156.52	322	P	PKPab	10 45 02.6	+1.8
	baz=84						
N17K	Nushagak Hills	156.56	295	P	PKPab	10 45 03.0	+1.7
	baz=106						
C21K	Knifeblade Rid	156.59	317	P	PKPab	10 45 03.0	+1.8
	baz=88						
J19K	Poorman	156.60	304	P	PKPab	10 45 03.1	+1.7
	baz=99						
O16K	Kokwok River B	156.72	292	P	PKPab	10 45 03.2	+1.2
	baz=108						
L18K	Granite Mounta	156.75	299	P	PKPab	10 45 03.6	+1.6
	baz=103						
M17K	Holitna River	156.90	297	P	PKPab	10 45 03.8	+1.1
	baz=104						
F20K	Avaraart Lake	156.95	312	P	PKPab	10 45 04.1	+1.4
	baz=92						
J18K	Innoko River	157.00	302	P	PKPab	10 45 04.2	+1.0
	baz=100						
A21K	Barrow	157.00	323	P	PKPab	10 45 04.3	+1.4
	baz=81						
E20K	Nigu River	157.13	315	P	PKPab	10 45 05.0	+1.4
	baz=89						
H19K	Roundabout Mou	157.15	308	P	PKPab	10 45 05.3	+1.6
	baz=95						
GCSA	Galena City Sc	157.25	306	P	PKPab	10 45 05.6	+1.5
	baz=97						
D20K	Etivluk River	157.27	316	P	PKPab	10 45 05.7	+1.5
	baz=87						
N16K	Nishlik Lake	157.30	294	P	PKPab	10 45 05.8	+1.3
	baz=105						
S12K	Black Hills	157.31	281	P	PKPab	10 45 05.8	+1.1
	baz=115						
B20K	Meade River	157.36	319	P	PKPab	10 45 05.9	+1.4
	baz=84						
O15K	Ungalikthiuk R	157.44	291	P	PKPab	10 45 06.1	+1.0
	baz=108						
G19K	Purcell Mounta	157.45	309	P	PKPab	10 45 06.1	+1.1
	baz=93						
L17K	Donlin	157.47	299	P	PKPab	10 45 06.2	+1.1
	baz=102						
M16K	Timber Creek	157.53	296	P	PKPab	10 45 06.6	+1.1
	baz=104						
E19K	Redstone River	157.54	313	P	PKPab	10 45 06.5	+1.1
	baz=90						
K17K	Iditarod	157.58	300	P	PKPab	10 45 07.0	+1.3
	baz=100						
FALS	False Pass	157.64	278	P	PKPab	10 45 06.8	+0.7
	baz=116						
F19K	Shaleruckik Mo	157.75	311	P	PKPab	10 45 06.8	+0.6
	baz=91						
D19K	Kuna River	157.84	315	P	PKPab	10 45 07.7	+1.1
	baz=86						
N15K	Kwethluk River	157.85	293	P	PKPab	10 45 07.9	+0.9
	baz=105						
H18K	Honhosa River	157.92	306	P	PKPab	10 45 08.3	+1.2
	baz=94						
L16K	Owhat River	157.92	297	P	PKPab	10 45 09.2	+2.1
	baz=102						
J17K	VABM Dome	158.04	302	P	PKPab	10 45 09.0	+1.4
	baz=98						
G18K	Tagagawik	158.08	308	P	PKPab	10 45 09.2	+1.4
	baz=92						
O14K	Tigyukauivet M	158.17	290	P	PKPab	10 45 09.2	+0.9
	baz=107						
M15K	Kasigluk River	158.27	294	P	PKPab	10 45 10.1	+1.4
	baz=104						
C19K	Lookout Ridge	158.31	317	P	PKPab	10 45 10.3	+1.5
	baz=83						
F18K	Selawik	158.50	310	P	PKPab	10 45 10.9	+1.5
	baz=90						
H17K	Granite Mounta	158.56	306	P	PKPab	10 45 11.6	+1.7
	baz=94						
N14K	Kuskokwak Cree	158.56	292	P	PKPab	10 45 11.1	+1.2
	baz=105						
A19K	Wainwright	158.65	320	P	PKPab	10 45 12.2	+2.1
	baz=79						
J16K	Anvik River	158.70	301	P	PKPab	10 45 12.2	+1.7
	baz=97						
I17K	Unalakleet	158.81	303	P	PKPab	10 45 12.3	+1.4
	baz=96						
E18K	Tukpahlearik C	158.84	313	P	PKPab	10 45 12.4	+1.4
	baz=87						
L15K	Ungalak Mounta	158.86	297	P	PKPab	10 45 13.1	+1.9
	baz=101						
M14K	Bethel	158.89	294	P	PKPab	10 45 13.1	+1.8
	baz=103						
G17K	Kiwalik Mounta	158.89	307	P	PKPab	10 45 13.2	+2.0
	baz=92						
C18K	Utukok River	158.95	316	P	PKPab	10 45 13.0	+1.5
	baz=83						
K15K	Wolf Creek Mou	158.99	298	P	PKPab	10 45 13.6	+1.8
	baz=99						
B18K	Kokolik River	159.06	318	P	PKPab	10 45 14.1	+2.3
	baz=80						
F17K	Baldwin Pennin	159.14	310	P	PKPab	10 45 14.0	+1.7
	baz=89						
E17K	Hotham Inlet	159.34	312	P	PKPab	10 45 14.8	+1.6
	baz=86						
M13K	Dall Lake	159.49	293	P	PKPab	10 45 15.5	+1.6
	baz=103						
H16K	Elim	159.54	305	P	PKPab	10 45 15.6	+1.5
	baz=92						
NIKH	Nikolski High	159.60	269	P	PKPab	10 45 15.8	+1.1
	baz=120						
G16K	Koyuk River	159.60	307	P	PKPab	10 45 15.7	+1.3
	baz=90						
RDOG	Red Dog Mine	159.65	315	P	PKPab	10 45 16.1	+1.5
	baz=83						
C17K	DeLong Mountai	159.69	316	P	PKPab	10 45 16.3	+1.6
	baz=81						
D17K	Noatak River	159.76	314	P	PKPab	10 45 16.5	+1.6
	baz=83						
J14K	Nanvaranak Lak	159.98	299	P	PKPab	10 45 17.0	+1.0
	baz=96						
G15K	Niukluk	160.31	306	P	PKPab	10 45 18.5	+1.1
	baz=90						
C16K	Lisburne Hills	160.52	316	P	PKPab	10 45 19.7	+1.4
	baz=79						
F15K	North Star Dit	160.55	308	P	PKPab	10 45 19.8	+1.3
	baz=87						
F14K	Arctic Creek	161.26	307	P	PKPab	10 45 22.9	+1.3
	baz=86						
P08K	Saint George I	161.52	279	P	PKPab	10 45 23.2	+0.2
	baz=110						
GAMB	Gambell	163.69	302	P	PKPab	10 45 32.9	+0.7
	baz=86						

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*IDC **06** 10:27:39.1±0.6, 15.°47S×174.°33W, h0^{km}, mb4.5/11, mbtmp4.5/11, MS2.6/1, Error ellipse: s-maj=29.1km s-min=15.8km az=134.0*

*NEIC **06** 10:27:55.4±1.3, 15.°68S±0.°09×174.°2W±0.°1, h130^{km}±6^{km}, mb4.6/33, Error ellipse: s-maj=14.8km s-min=13.2km az=101.0*

*NOU **06** 10:27:57.0, 15.°49S×173.°73W, h198^{km}, mb4.5/8, Tonga Islands*

ISC 06 10:27:56.4±0.4, **15.°63S**±0.°05×**174.°14W**±0.°06, **h150^{km}**, **n99**, σ1^{s}**33**/102, **mb4.5**/26, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.86	53	Pn	Pn	10 28 41.1	-1.0
AFI	Afiamalu	2.86	53	P	Pn	10 28 41.2	-0.8
AFI	Afiamalu	2.86	53	P	Sn	10 29 13.7	-3.6
AFI	Afiamalu	2.86	53	P	Pn	10 28 41.1	-1.0
AFI				S	Sn	10 29 12.7	-4.5
NIUE	Niue	5.29	131		Pn	10 29 13.9	+0.4
NIUE				Sn	Sn	10 30 10.7	-3.1
NIUE	Niue	5.29	131	P	Pn	10 29 14.1	+0.5
NIUE	Niue	5.29	131	S	Sn	10 30 11.6	-2.3
NIUE	Niue	5.29	131	P	Pn	10 29 13.6	0.0
NIUE				S	Sn	10 30 10.7	-3.1
MSVF	Nonsavu	7.77	253	P	Pn	10 29 52.9	+6.1
RAR	Rarotonga	14.72	114	LR	LR	10 35 41.5	
	comp=Z,22nm,18.9s,baz=140,slow=32						
MARNC	Mare, Loyalty	17.87	248	P	Pn	10 31 54.3	-1.4
PINNC	Pines Island,	18.72	245	P	Pn	10 32 04.1	-1.7
OUENC	Ouen Island, N	19.20	247	P	Pn	10 32 09.5	-1.8
DZM	Mont Dzumac	19.45	248		P	10 32 10.7	-0.9
DZM				IAmb	IAmb	10 32 18.3	
	comp=Z,39nm,1.3s						
DZM	Mont Dzumac	19.45	248	P	Pn	10 32 13.3	-1.1
ONTNC	Ouen Toro	19.51	247		P	10 32 10.8	-1.3
ONTNC				IAmb	IAmb	10 32 18.2	
	comp=Z,41nm,0.8s						
WMGZ	Waiomatatini S	23.06	195	P	P	10 32 49.8	+1.1
HAZ	Te Kaha	23.17	196	P	P	10 32 50.6	+1.0
PUZ	Puketiti	23.34	195	P	P	10 32 53.0	+1.8
RUGZ	Raukumara Rang	23.39	196	P	P	10 32 53.4	+1.6
TWGZ	Tauwhareparae	23.51	196	P	P	10 32 53.2	+0.4
MWZ	Matawai	23.78	196	P	P	10 32 55.1	-0.1
URZ	Urewera	23.82	197	P	P	10 32 54.3	-1.3
URZ	Urewera	23.82	197	P	P	10 32 53.7	-1.9
TOZ	Tahuroa Road	23.84	201	P	P	10 32 57.6	+1.9
BKZ	Black Stump Fm	24.84	198	P	P	10 33 04.7	-0.2
PXZ	Pawanui	25.55	196	P	P	10 33 11.1	0.0
BFZ	Birch Farm	26.32	197	P	P	10 33 18.9	+0.7
KHZ	Kahutara	28.72	199	P	P	10 33 38.3	-1.2
INZ	Inchbonnie	29.70	202	P	P	10 33 46.9	-1.2
OXZ	Oxford	30.02	200	P	P	10 33 50.7	-0.3
JCZ	Jackson Bay	31.85	204	P	P	10 34 05.7	-1.4
WHZ	Wether Hill Ro	33.70	203	P	P	10 34 23.4	+0.2
EIDS	Eidsvold	33.90	248	P	P	10 34 24.2	-0.9
EIDS				IAmb	IAmb	10 34 55.6	
	comp=Z,16nm,1.4s						
ARMA	Armidale	34.61	239	P	P	10 34 30.1	-1.3
ARMA				IAmb	IAmb	10 34 31.3	
	comp=Z,8.0nm,0.8s						
CTAO	Charters Tower	37.90	257	P	P	10 34 59.3	0.0
CTAO				IAmb	IAmb	10 35 24.0	
	comp=Z,11nm,1.2s						
CAN	Canberra	38.32	232	P	P	10 35 01.8	-0.9
CAN				IAmb	IAmb	10 35 21.7	
	comp=Z,24nm,1.3s						
COEN	Coen	41.25	267		P	10 35 27.3	+0.2
COEN				IAmb	IAmb	10 35 28.0	
	comp=Z,12nm,0.7s						
TOO	Toolangi	41.77	231	P	P	10 35 30.8	-0.3
STKA	Stephens Creek	43.30	240	P	P	10 35 43.7	+0.2
	comp=Z,4.0nm,0.4s,baz=82,slow=12,SNR=19						
	comp=Z,4.0nm,0.4s						
STKA	Stephens Creek	43.30	240	P	P	10 35 43.0	-0.5
INKA	Innaminka	43.39	246	P	P	10 35 43.7	-0.6
BBOO	Buckleboo	48.08	240	P	P	10 36 19.9	-1.1
BBOO				IAmb	IAmb	10 36 21.6	
	comp=Z,7.2nm,0.6s						
WB0	Warramunga Arr	49.06	257		P	10 36 27.3	-1.3
WB0				IAmb	IAmb	10 36 27.9	
	comp=Z,9.0nm,0.8s						
WRAB	Tennant Creek	49.09	257	P	P	10 36 28.0	-0.8
WRA	Warramunga Arr	49.10	257	P	P	10 36 27.5	-1.4
	comp=Z,5.7nm,0.6s,baz=90,slow=6.9,SNR=127						
WRA				PcP	PcP	10 37 50.8	+0.4
	comp=Z,0.8nm,0.5s,baz=94,slow=3.7,SNR=5.7						
	comp=Z,5.7nm,0.6s						
WRA	Warramunga Arr	49.10	257		P	10 36 27.4	-1.6
AS31	Alice Springs	49.36	252		P	10 36 29.9	-1.0
AS31				IAmb	IAmb	10 36 30.3	
	comp=Z,4.4nm,0.5s						
ASAR	Alice Springs	49.36	252	P	P	10 36 29.6	-1.3
	comp=Z,11nm,0.4s,baz=89,slow=8.0,SNR=439						
ASAR				PcP	PcP	10 37 51.5	+0.2
	comp=Z,0.9nm,0.5s,baz=92,slow=3.6,SNR=2.4						
	comp=Z,11nm,0.4s						
ASAR	Alice Springs	49.36	252		P	10 36 30.1	-0.9
MTN	Manton Dam	53.00	266	P	P	10 36 57.3	-0.8
MTN				IAmb	IAmb	10 37 04.6	
	comp=Z,12nm,1.4s						
FORT	Forrest	54.67	243	P	P	10 37 09.1	-1.0
KNRA	Kununurra	54.83	262	P	P	10 37 10.6	-0.8
KNRA				IAmb	IAmb	10 37 52.6	
	comp=Z,8.7nm,1.2s						
FITZ	Fitzroy Crossi	57.46	258	P	P	10 37 28.8	-1.3
PSA00	Pilbara Seismi	62.45	254	P	P	10 38 03.3	-0.8
SBA	Scott Base	62.97	184	P	P	10 38 07.7	+1.2
VNDA	Vanda	63.08	186	P	P	10 38 09.4	+2.1
	comp=Z,6.7nm,0.9s,baz=2.2,slow=7.3,SNR=12						
	comp=Z,6.7nm,0.9s						
VNDA	Vanda	63.08	186	P	P	10 38 08.7	+1.4
VNDA				IAmb	IAmb	10 38 10.4	
	comp=Z,6.4nm,0.9s						
NWAO	Narrogin (SRO)	63.88	241	P	P	10 38 12.3	-1.0
MORW	Morawa	65.14	245	P	P	10 38 21.1	-0.5
MORW				IAmb	IAmb	10 38 42.8	
	comp=Z,17nm,1.4s						
GIRL	Giralia	67.47	252	P	P	10 38 37.4	+0.8
CASY	Casey	69.90	205	P	P	10 38 50.3	-0.4
CASY				IAmb	IAmb	10 38 52.0	
	comp=Z,11nm,1.1s						
JOW	Kunigami	70.05	307	P	P	10 38 52.4	+0.1
QSPA	South Pole Qui	74.41	180	P	P	10 39 19.1	+1.3
	comp=Z,9.0nm,0.7s,baz=45,slow=1.7,SNR=26						
	comp=Z,9.0nm,0.7s						
QSPA	South Pole Qui	74.41	180	P	P	10 39 18.8	+1.0
QSPA				IAmb	IAmb	10 39 20.4	
	comp=Z,12nm,0.8s						
NVAR	Mina Array Bea	74.98	42	P	P	10 39 23.8	+2.2
	comp=Z,3.2nm,0.8s,baz=229,slow=10.0,SNR=22						
	comp=Z,3.2nm,0.8s						
NVAR	Mina Array Bea	74.98	42	P	P	10 39 23.2	+1.7
NJ2	Nanjing	79.73	307	*e*P	P	10 39 48.5	+0.6
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TXAR	Lajitas Array	81.33	56	P	P	10 39 59.0	+2.4
	comp=Z,0.9nm,0.5s,baz=224,slow=7.4,SNR=20						
	comp=Z,0.9nm,0.5s						
IMAR	Indian Mountai	82.80	8	P	P	10 40 04.7	+1.4
ILAR	Eielson Array	82.81	11	P	P	10 40 03.9	+0.5
	comp=Z,1.7nm,0.8s,baz=224,slow=5.2,SNR=15						
	comp=Z,1.7nm,0.8s						
PDAR	Pinedale Array	82.91	42	P	P	10 40 06.0	+1.2
	comp=Z,2.5nm,0.8s,baz=217,slow=3.3,SNR=19						
	comp=Z,2.5nm,0.8s						
PDAR	Pinedale Array	82.91	42	P	P	10 40 06.1	+1.4
DRIO	Del Rio	83.83	57		P	10 40 10.3	+0.9
MSTX	Muleshoe	83.86	52	P	P	10 40 10.6	+1.0
MSTX				IAmb	IAmb	10 40 11.9	
	comp=Z,7.4nm,0.8s						
BELA	Belgrano 2	83.87	172		P	10 40 09.1	+0.3
HHC	Hu-ho-hao-te	88.66	313	*e*P	P	10 40 34.2	+1.3
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,4.7s						
YKA	Yellowknife Ar	90.59	24	P	P	10 40 42.6	+1.5
	comp=Z,1.4nm,0.9s,baz=244,slow=4.9,SNR=13						
	comp=Z,1.4nm,0.9s						
YKA	Yellowknife Ar	90.59	24	P	P	10 40 42.4	+1.2
PZH	PanZhiHua	91.74	297	P	P	10 40 48.0	+0.4
CMAR	Chiang Mai Arr	92.01	288	P	P	10 40 50.2	+1.4
	comp=Z,1.6nm,0.5s,baz=84,slow=2.8,SNR=12						
	comp=Z,1.6nm,0.5s						
CMAR	Chiang Mai Arr	92.01	288	P	P	10 40 49.7	+0.9
ARCES	ARCESS Array B	124.74	352	PKP	PKiKP	10 46 38.7	+0.7
	comp=Z,5.7nm,0.9s,baz=318,slow=1.6,SNR=5.3						
ARCES	ARCESS Array B	124.74	352		PKiKP	10 46 38.2	+0.2
LANS	Liptovska Anna	144.77	344	*e*PKP	PKPdf	10 47 16.2	+0.8
JAVC	Velka Javorina	145.48	346	*e*PKP	PKiKP	10 47 19.0	-1.7
KRUC	Moravsky	145.56	348	*e*PKP	PKPab	10 47 17.8	+0.2
BRTR	Keskin Array B	145.88	320	PKPbc	PKPab	10 47 19.1	-0.3
	comp=Z,4.2nm,0.8s,baz=106,slow=2.5,SNR=21						
BRTR	Keskin Array B	145.88	320		PKPab	10 47 19.2	-0.1
MODS	Modra-Piesok	146.02	346	*e*PKP	PKiKP	10 47 20.0	-1.8
GERES	GERESS Array B	146.26	351	PKPbc	PKPab	10 47 19.9	-0.4
	comp=Z,1.4nm,0.6s,baz=50,slow=4.6,SNR=7.3						
CONA	Conrad Observa	146.75	348	*e*PKiKP	PKPab	10 47 21.9	-0.4
	comp=Z,3.7nm,0.7s						
RONA	Rosalia, Austr	146.88	347	*e*PKiKP	PKPab	10 47 21.7	-1.0
	comp=Z,7.0nm,0.8s						
KBA	Koelnbreinsper	148.03	350	*e*PKP	PKiKP	10 47 24.7	-1.5
	comp=Z,4.0nm,0.5s						
WTTA	Wattenberg	148.10	353	*e*PKP	PKiKP	10 47 25.1	-1.2
	comp=Z,7.2nm,0.5s						
SOKA	Soboth	148.11	348	*e*PKP	PKiKP	10 47 24.9	-1.4
	comp=Z,3.3nm,0.7s						
DAVA	Damuels	148.26	355	*e*PKP	PKiKP	10 47 25.8	-0.8
	comp=Z,4.8nm,0.6s						
ABTA	Abfaltersbach	148.48	351	*e*PKiKP	PKPbc	10 47 25.0	-0.6
	comp=Z,4.8nm,0.6s						
ESDC	Sonseca Array	154.55	18	PKPab	PKPab	10 47 55.6	+0.9
	comp=Z,1.5nm,0.8s,baz=338,slow=4.4,SNR=7.3						

RSNC 06 10:33:05.8±0.0, **2°N**±1°×**7°6W**±°, **h15^{km}**±2^{km}, **M1.3, ML1.3, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GARC	Garzon, Huila	0.12	147	P	Pg	10 33 09.5	-0.1
GARC				S	Sb	10 33 13.0	+0.2
FLOC	Florencia	0.71	188	P	Pg	10 33 18.2	-1.5
FLOC				S	Sg	10 33 28.0	-1.1
POPC	Popayan, Colom	1.14	283	P	Pb	10 33 25.9	-1.5
URMC	La Uribe, Meta	1.52	51	P	Pn	10 33 31.8	-0.7
URMC				S	Sn	10 33 49.4	-2.6
URMC	La Uribe, Meta	1.52	51	P	Pn	10 33 31.2	-1.3

URMC				S	Sn	10 33 50.3	-1.7
PRAC	Prado	1.57	25	P	Pn	10 33 31.9	-1.3
PRAC				S	Sn	10 33 52.9	-0.3
PRAC	Prado	1.57	25	P	Pn	10 33 32.0	-1.2
PRAC				S	Sn	10 33 53.1	-0.1
ORTC	Ortega, Tolima	1.64	11	P	Pn	10 33 33.5	-0.7
ORTC				S	Sb	10 33 55.8	-0.5
ORTC	Ortega, Tolima	1.64	11	P	Pn	10 33 33.5	-0.7
ORTC				S	Sb	10 33 56.4	+0.1
MACC	Macarena, Meta	1.72	95	P	Pn	10 33 34.3	-0.9
MACC				S	Sn	10 33 56.1	-0.8
MACC	Macarena, Meta	1.72	95	P	Pn	10 33 34.4	-0.8
MACC				S	Sn	10 33 55.7	-1.2
PIZC	Pizarro, Choco	3.21	326	P	Pb	10 33 59.7	-2.8
SPBC	San Pablo de B	3.66	24	P	Pn	10 33 52.4	-10

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*BER **06** 10:38:15.4±2.4, 76°.24N×26°.19E, h31^{km}±10^{km}, ML2.4, ML2.5(NAO), Confirmed Earthquake*

*NAO **06** 10:38:15.6±1.6, 76°.22N×24°.62E, h16^{km}±7^{km}, ML2.5*

*FCIAR **06** 10:38:19.0, 76°.35N×24°.82E, h10^{km}, station ZFI2 has station magnitude of 3.80 station OMEGA has station magnitude of 3.80*

*KOLA **06** 10:38:20.3, 76°.52N×22°.81E, h0^{km}, ML2.2, Storfjorden zone*

ISC 06 10:38:16.1±1.6, 76°.29N±0°.04×24°.29E±0°.05, h17^{km}±11^{km}, n19, σ1^s.75/34, 1C, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPEN	Hopen	0.28	37	*e*P	Pb	10 38 23.6	+0.9
HOPEN				*e*S	Sb	10 38 29.2	+2.1
HOPEN				IAML		10 38 29.5	
	comp=Z,534nm,0.1s						
HSPB	Hornsund (broa	2.16	294	P	Pn	10 38 51.5	+0.3
HSPB	Hornsund (broa	2.16	294	P	Pg	10 38 57.0	-0.4
HSPB				*e*S	Sg	10 39 24.5	-0.9
HSPB	Hornsund (broa	2.16	294	*e*P	Pn	10 38 52.0	+0.8
HSPB				*e*Pg	Pg	10 38 57.5	+0.1
HSPB				*e*S	Sg	10 39 23.6	-1.8
HSPB				IAML		10 39 27.2	
	comp=Z,16nm,0.4s						
BJO1	Bjornoya	2.24	219	*e*S	Sn	10 39 21.3	+1.7
BEA1	Bear Island, N	2.24	219	Pn	Pn	10 38 52.7	+0.4
	baz=41,slow=18						
BEA1				Sn	Sn	10 39 19.6	0.0
	baz=41,slow=37						
BEAR	Bear Island, N	2.24	219	Pn	Pn	10 38 52.7	+0.3
	baz=41,slow=18						
BEAR				Sn	Sn	10 39 19.6	0.0
	baz=41,slow=37						
SPA0	Spitsbergen Ar	2.59	321	Pn	Pn	10 38 58.5	+1.3
	baz=136,slow=12						
SPA0				Sn	Sn	10 39 28.9	+0.7
	baz=136,slow=37						
SPA0				Lg	Lg	10 39 40.3	
	baz=140,slow=37						
SPA0	Spitsbergen Ar	2.59	321	⇑*i*P	Pn	10 38 58.4	+1.3
SPA0				*i* S	Sn	10 39 29.1	+0.8
SPA0	Spitsbergen Ar	2.59	321	*e*P	Pn	10 38 58.4	+1.3
SPA0				*e*Sg	Sg	10 39 39.8	+0.6
SPA0				IAML		10 39 46.6	
	comp=Z,42nm,0.5s						
SPITS	Spitsbergen Ar	2.59	321	P	Pn	10 38 58.5	+1.3
SPITS				S	Sn	10 39 27.4	-0.9
BRBB	Barentsburg B	2.89	314	P	Pn	10 39 00.9	-0.3
BRBB				S	Sn	10 39 35.0	-0.5
BRBB	Barentsburg B	2.89	314	*e*P	Pn	10 39 02.5	+1.2
BRBB				*e*S	Sn	10 39 37.0	+1.5
KBS	Kingsbay	3.75	321	P	Pn	10 39 14.8	+1.7
KBS				S	Sn	10 39 51.3	-5.5
KBS	Kingsbay	3.75	321	*e*P	Pn	10 39 14.1	+1.0
OMEGA	Omega	6.43	35	*e*P	Pn	10 39 51.1	+1.3
OMEGA				*e*S	Sn	10 41 00.1	-2.6
	comp=Z,38nm,3.7s						
ZFI2	Zemlya Franca-	6.43	35	*e*P	Pn	10 39 50.9	+1.0
ZFI2				*e*S	Sn	10 40 60.0	-2.8
	comp=Z,34nm,3.7s						
ARA0	ARCESS Array S	6.80	176	Pn	Pn	10 39 52.2	-2.7
	baz=358,slow=10						
ARA0				Sn	Sn	10 41 01.9	-10
	baz=359,slow=22						
ARA0	ARCESS Array S	6.80	176	Pn	Pn	10 39 52.2	-2.7
	baz=358,slow=10						
ARA0				Sn	Sn	10 41 01.9	-10
	baz=359,slow=22						

IDC 06 10:52:33.3±8.4, 3°.29S×105°.09W, h0^{km}, mb3.4/5, mbtmp3.4/5, MS3.7/8, Error ellipse: s-maj=229.4km s-min=126.8km az=118.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H06E1	SOCORRO T-PHAS	22.68	346	T	T	11 22 23.7	
RPN	Rapa Nui	24.04	189	LR	LR	11 04 13.1	
	comp=Z,171nm,18.1s,baz=46,slow=29						
LPIG	La Paz	27.70	350	LR	LR	11 06 56.1	
	comp=Z,154nm,21.3s,baz=199,slow=31						
TXAR	Lajitas Array	32.47	2	P	P	10 59 05.5	-0.2
	0.2nm,0.7s,baz=189,slow=8.8,SNR=2.1						
	0.2nm,0.7s						
PFO	Pinyon Flats O	38.25	345	LR	LR	11 12 18.2	
	comp=Z,144nm,20.1s,baz=118,slow=31						
LPAZ	La Paz	38.55	112	LR	LR	11 12 57.4	
	comp=Z,70nm,18.1s,baz=352,slow=32						
H03N2	Juan Fernandez	38.68	144	T	T	11 39 29.5	
	baz=317,slow=78,SNR=9.2						
H03N1	Juan Fernandez	38.70	144	T	T	11 39 20.8	
	baz=317,slow=78,SNR=12						
H03N3	Juan Fernandez	38.70	144	T	T	11 39 28.2	
	baz=317,slow=78,SNR=6.4						
NVAR	Mina Array Bea	43.28	345	P	P	11 00 36.3	-0.8
	0.1nm,0.3s,baz=180,slow=3.9,SNR=4.1						
NVAR				LR	LR	11 15 17.2	
	comp=Z,84nm,18.8s,baz=114,slow=32						
	0.1nm,0.3s						
PDAR	Pinedale Array	46.02	355	P	P	11 01 00.1	+1.1
	0.7nm,0.7s,baz=175,slow=6.0,SNR=6.5						
	0.7nm,0.7s						
PLCA	Paso Flores	48.54	145	LR	LR	11 16 30.6	
	comp=Z,115nm,18.1s,baz=336,slow=30						
CPUP	Villa Florida	51.14	121	LR	LR	11 19 17.0	
	comp=Z,15nm,18.7s,baz=202,slow=31						
YKA	Yellowknife Ar	66.01	355	P	P	11 03 20.6	-0.8
	0.4nm,0.9s,baz=169,slow=6.3,SNR=4.9						
	0.4nm,0.9s						
PMSA	Palmer Station	68.02	162	LR	LR	11 24 30.0	
	comp=Z,130nm,19.2s,baz=189,slow=28						
ILAR	Eielson Array	74.49	343	P	P	11 04 13.8	+0.4
	0.7nm,1.0s,baz=145,slow=5.5,SNR=5.9						
	0.7nm,1.0s						
H11S2	WAKE ISLAND Hy	89.33	288	T	T	12 46 00.6	
	baz=95,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	89.33	288	T	T	12 46 00.3	
	baz=95,slow=75,SNR=10						
H11S3	WAKE ISLAND Hy	89.35	288	T	T	12 46 06.7	
	baz=95,slow=75,SNR=9.7						

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*IDC **06** 10:54:54.9±2.3, 15°.23S×167°.52E, h130^{km}±19^{km}, mb3.9/12, mbtmp4.3/13, MS3.4/2, Error ellipse: s-maj=25.9km s-min=15.8km az=96.0*

*NEIC **06** 10:54:54.4±1.6, 15°.13S±0°.02×167°.7E±0°.1, h132^{km}±6^{km}, mb4.3/17, Error ellipse: s-maj=20.2km s-min=2.1km az=94.0*

*NOU **06** 10:54:56.1, 15°.30S×167°.60E, h124^{km}, mb4.8/27, Vanuatu Islands*

ISC 06 10:54:54.6±0.6, 15°.25S±0°.06×167°.63E±0°.08, h129^{km}, n62, σ1^s.20/65, mb4.2/18, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.46	244		Pn	10 55 14.0	+0.7
SANVU				Sn	Sn	10 55 29.7	+2.2
SANVU	Saraoutou	0.46	244	P	Pn	10 55 14.4	+1.1
SANVU	Saraoutou	0.46	244	S	Sn	10 55 29.8	+2.3
SANVU	Saraoutou	0.46	244	P	Pn	10 55 14.5	+1.1
DVP	Devils Point	2.52	168	P	Pn	10 55 36.8	+1.7
DVP	Devils Point	2.52	168	S	Sn	10 56 06.9	+0.7
DVP	Devils Point	2.52	168	P	Pn	10 55 37.0	+1.9
RTV	Rentapao	2.64	163	P	Pn	10 55 38.4	+1.8
RTV	Rentapao	2.64	163	S	Sn	10 56 09.7	+0.7
RTV	Rentapao	2.64	163	P	Pn	10 55 38.2	+1.6
KOUNC	Koumac, New Ca	6.16	211	P	Pn	10 56 24.3	+1.0
KOUNC	Koumac, New Ca	6.16	211	S	Sn	10 57 32.2	-0.4
MARNC	Mare, Loyalty	6.21	177	Pn	Pn	10 56 23.4	-0.6
MARNC	Mare, Loyalty	6.21	177	P	Pn	10 56 23.0	-1.0
YATNC	Mamie plateau,	6.81	186	P	Pn	10 56 32.4	+0.3
DZM	Mont Dzumac	6.88	189	P	Pn	10 56 34.1	+1.0
	40nm,0.3s,baz=59,slow=9.3,SNR=234						
DZM				S	Sn	10 57 50.3	+0.2
	15nm,0.5s,baz=119,slow=23,SNR=1.3						
DZM				LR	LR	10 58 42.0	
	comp=Z,100nm,18.6s,baz=38,slow=33						
DZM	Mont Dzumac	6.88	189		Pn	10 56 34.4	+1.3
DZM	Mont Dzumac	6.88	189	P	Pn	10 56 34.0	+0.9
ONTNC	Ouen Toro	7.11	189		Pn	10 56 37.9	+1.8
ONTNC	Ouen Toro	7.11	189	P	Pn	10 56 37.5	+1.4
OUENC	Ouen Island, N	7.17	186	P	Pn	10 56 38.7	+1.8
PINNC	Pines Island,	7.33	181		Pn	10 56 40.4	+1.4
PINNC	Pines Island,	7.33	181	P	Pn	10 56 39.8	+0.8
NGOA	Tingoa Renbel	8.23	296	P	Pn	10 56 52.9	+1.7
SAVO	Savo Central	9.75	308	P	Pn	10 57 13.4	+1.7
TATA	Tatamba Isabel	10.25	311	P	Pn	10 57 20.4	+2.0
EIDS	Eidsvold	18.48	234	P	Pn	10 59 02.1	-0.3
EIDS	Eidsvold	18.48	234	P	Pn	10 59 02.3	-0.1
CTAO	Charters Tower	20.92	254	P	P	10 59 26.1	-1.1
ARMA	Armidale	21.07	221	P	P	10 59 29.9	+1.2
ARMA	Armidale	21.07	221	P	P	10 59 30.1	+1.4
BKZ	Black Stump Fm	25.07	164	P	P	11 00 07.4	+0.3
CAN	Canberra	26.05	216	P	P	11 00 17.0	+0.9
INKA	Innaminka	27.86	239	P	P	11 00 31.8	-0.5
STKA	Stephens Creek	28.93	231	P	P	11 00 42.4	+0.7
	12nm,0.7s,baz=54,slow=7.6,SNR=20						
	12nm,0.7s						
TOO	Toolangi	29.65	217	P	P	11 00 48.5	+0.5
TOO				IAmb	IAmb	11 00 50.5	
	comp=Z,5.5nm,1.0s						
WB0	Warramunga Arr	31.98	257	P	P	11 01 07.2	-1.6
WB0				IAmb	IAmb	11 01 10.3	
	comp=Z,4.7nm,1.1s						
WRA	Warramunga Arr	32.04	257	P	P	11 01 07.1	-2.2
	comp=Z,1.0nm,0.6s,baz=84,slow=8.7,SNR=16						
WRA				ScP	ScP	11 07 27.1	-0.8
	comp=Z,1.6nm,1.2s,baz=85,slow=3.3,SNR=5.0						
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	32.04	257	P	P	11 01 07.6	-1.8
AS31	Alice Springs	32.82	250		P	11 01 15.0	-1.1
AS31				IAmb	IAmb	11 01 15.7	
	comp=Z,2.4nm,0.6s						
ASAR	Alice Springs	32.82	250	P	P	11 01 14.6	-1.5
	comp=Z,4.8nm,0.7s,baz=77,slow=9.0,SNR=88						
ASAR				ScP	ScP	11 07 29.8	-0.7
	comp=Z,0.6nm,0.9s,baz=104,slow=3.1,SNR=5.5						
	comp=Z,4.8nm,0.7s						
ASAR	Alice Springs	32.82	250	P	P	11 01 14.7	-1.4
BBOO	Buckleboo	33.54	233		P	11 01 22.6	+0.3
KNRA	Kununurra	37.43	264	P	P	11 01 53.3	-2.3
KNRA				IAmb	IAmb	11 02 10.5	
	comp=Z,9.2nm,1.1s						
FORT	Forrest	39.34	240	P	P	11 02 11.0	-0.4
FORT				IAmb	IAmb	11 02 16.2	
	comp=Z,6.8nm,0.9s						
BATI	Baumata	43.12	271	LR	LR	11 21 06.8	
	comp=Z,142nm,19.0s,baz=218,slow=36						
VNDA	Vanda	62.36	181	P	P	11 05 03.6	+0.6
	comp=Z,1.2nm,0.7s,baz=121,slow=7.5,SNR=2.5						
	comp=Z,1.2nm,0.7s						
VNDA	Vanda	62.36	181	P	P	11 05 03.2	+0.2
VNDA				IAmb	IAmb	11 05 04.5	
	comp=Z,4.6nm,1.1s						
SBA	Scott Base	62.62	180	P	P	11 05 05.8	+1.0
CASY	Casey	63.18	202	P	P	11 05 08.0	-0.6
CASY				IAmb	IAmb	11 05 14.2	
	comp=Z,2.9nm,0.8s						
USRK	Ussuriysk Ar.	67.50	333	P	P	11 05 37.4	+0.7
	comp=Z,4.0nm,0.8s,baz=132,slow=5.6,SNR=5.7						
	comp=Z,4.0nm,0.8s						
PETK	Petropavlovsk-	68.61	354	P	P	11 05 44.0	+0.5
	comp=Z,4.1nm,0.8s,baz=178,slow=5.5,SNR=2.0						
	comp=Z,4.1nm,0.8s						
QSPA	South Pole Qui	74.78	180	P	P	11 06 20.8	+0.3
	comp=Z,2.3nm,0.6s,baz=318,slow=3.4,SNR=6.8						
	comp=Z,2.3nm,0.6s						
QSPA	South Pole Qui	74.78	180	P	P	11 06 20.2	-0.3
QSPA				IAmb	IAmb	11 06 21.2	
	comp=Z,3.3nm,0.8s						
CMAR	Chiang Mai Arr	75.48	294	P	P	11 06 25.4	+0.2
	comp=Z,0.6nm,0.3s,baz=134,slow=4.7,SNR=6.3						
	comp=Z,0.6nm,0.3s						
HILR	Hailar Array B	77.10	330	P	P	11 06 33.1	-0.6
	comp=Z,2.4nm,0.7s,baz=134,slow=6.2,SNR=3.0						
	comp=Z,2.4nm,0.7s						
SONM	Songino Array	83.12	323	P	P	11 07 06.6	+0.4
	comp=Z,2.3nm,0.9s,baz=140,slow=4.9,SNR=11						
	comp=Z,2.3nm,0.9s						
SONM	Songino Array	83.12	323	P	P	11 07 05.9	-0.2
SONM				IAmb	IAmb	11 07 07.3	
	comp=Z,5.6nm,1.2s						
ILAR	Eielson Array	86.91	18	P	P	11 07 22.9	-1.7
	comp=Z,0.3nm,0.8s,baz=240,slow=5.1,SNR=5.4						
	comp=Z,0.3nm,0.8s						
MKAR	Makanchi Array	97.82	316	P	P	11 08 15.3	-0.1
	comp=Z,1.5nm,0.9s,baz=87,slow=6.2,SNR=6.0						
	comp=Z,1.5nm,0.9s						
MKAR	Makanchi Array	97.82	316	P	P	11 08 14.4	-1.0
ARCES	ARCESS Array B	120.84	345	PKP	PKPdf	11 13 29.9	-1.1
	comp=Z,2.3nm,0.9s,baz=336,slow=2.7,SNR=3.5						

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*UPP **06** 11:14:21.9±3.1, 64°.54N×31°.61E, h0^{km}, ML1.7, Presumed earthquake*

*IDC **06** 11:14:27.5±2.3, 64°.81N×31°.44E, h0^{km}, mbtmp3.3/4, ML2.0/4, Error ellipse: s-maj=31.4km s-min=9.8km az=102.0*

*KOLA **06** 11:14:27.6, 64°.74N×30°.86E, h0^{km}, ML2.2, Error ellipse: s-maj=14.1km s-min=11.4km az=170.0, Kostomuksha, Karelia*

*HEL **06** 11:14:27.1±0.1, 64°.78N×30°.75E, h0^{km}, ML2.0, Explosion*

ISC 06 11:14:26.6±0.9, 64°.83N±0°.02×30°.93E±0°.04, h0^{km}, n54, σ1^s.69/83, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RMF	Romuvaara	0.75	216	PG	Pg	11 14 39.5	-1.4
RMF				SG	Sg	11 14 44.7	-5.9
RMF				MSG		11 14 48.1	
	comp=Z,28nm,0.2s						
KU1	Kurvinen	0.94	323	PG	Pg	11 14 43.8	-0.8
KU6	Riekki	1.28	341	PG	Pg	11 14 50.3	-0.8
	baz=164						
KU6				MSG		11 15 06.2	
	comp=Z,10nm,0.2s						
KU6				SB	Sg	11 15 07.6	0.0
MSF	Maaselka	1.35	325	PG	Pg	11 14 50.9	-1.5
	baz=152						
MSF				SG	Sg	11 15 08.7	-1.1
KU2	Taivalkoski	1.44	309	PG	Pn	11 14 52.3	-1.7
	baz=126						
OLKF	Oulanka, Finla	1.63	338	PG	Pn	11 14 56.5	0.0
OLKF				MSG		11 15 16.4	
	comp=Z,11nm,0.2s						
OLKF				SN	Sn	11 15 18.5	+0.3
JOF	Joensuu	1.92	175	*e*P	Pn	11 15 00.5	0.0
JOF	Joensuu	1.92	175	PG	Pn	11 15 00.4	-0.2
NIF	Nilsia	1.99	225	PG	Pn	11 15 01.1	-0.4
NIF				MSG		11 15 23.6	
	comp=Z,12nm,0.2s						
NIF				SG	Sn	11 15 27.4	+0.3
KVDA	Kovda	2.04	22	P	Pb	11 15 03.6	-0.8
KVDA				S	Sb	11 15 30.5	+0.2
RANF	Ranua	2.10	306	PG	Pn	11 15 03.7	+0.7
RANF				SG	Sn	11 15 29.9	+0.1
OUL	Oulu	2.16	279	PG	Pn	11 15 04.0	+0.3
	baz=96						
OUL				SB	Sn	11 15 30.4	-0.8
OBF4	Vikkela, Lumij	2.49	272	PB	Pn	11 15 09.0	+0.7
	baz=89						
OBF4				MSG		11 15 38.4	
	comp=Z,8.4nm,0.2s						
OBF4				SG	Sn	11 15 41.2	+1.8
RNF	Rovaniemi	2.71	314	PN	Pn	11 15 11.6	+0.3
RNF				SB	Sb	11 15 47.7	-1.8
OUF	Merijarvi	2.71	263	PB	Pn	11 15 11.9	+0.5
OUF				MSG		11 15 44.6	
	comp=Z,12nm,0.2s						
OUF				SB	Sn	11 15 46.0	+1.2
OBF0	Syolatti, Pyha	2.90	266	PN	Pn	11 15 14.0	+0.1
OBF0				MSG		11 15 50.0	
	comp=Z,6.9nm,0.2s						
OBF0				SG	Sb	11 15 54.6	-0.4
APA0	Apatity Array	2.91	16	P	Pn	11 15 16.2	+2.1
APA0				S	Sn	11 15 51.2	+1.4
APA	Apatity	2.93	19	P	Pn	11 15 16.6	+2.2
APA				S	Sn	11 15 51.5	+1.3
VRF	Varrio	2.98	350	PB	Pn	11 15 16.7	+1.6
	baz=168						
VRF				MSG		11 15 55.7	
	comp=Z,3.4nm,0.2s						
VRF				SG	Sb	11 15 59.6	+2.2
SUF	Sumiainen	3.00	227	PB	Pn	11 15 17.0	+1.7
SUF				MSG		11 15 52.6	
	comp=Z,2.9nm,0.2s						
TOF	Tornio	3.03	297	PB	Pn	11 15 16.9	+1.1
TOF				MSG		11 15 54.7	
	comp=Z,2.9nm,0.2s						
TOF				SB	Sn	11 15 55.9	+3.2
KALU	Kalix	3.34	291	P	Pn	11 15 20.1	+0.2
KALU				S	Sn	11 16 03.9	+3.6
KALU	Kalix	3.34	291	PN	Pn	11 15 20.4	+0.4
KALU				SG	Sb	11 16 08.8	+1.1
LVZ	Lovozero	3.43	24	S	Sb	11 16 07.0	-3.3
LVZ	Lovozero	3.43	24	PN	Pn	11 15 23.4	+2.1
RUF	Ruokolahti	3.53	196	PN	Pn	11 15 23.6	+1.0
KLF	Kolari	3.73	313	PN	Pn	11 15 25.3	-0.1
KLF				SG	Sb	11 16 21.7	+2.7
KEF	Keuruu	3.81	228	*e*P	Pn	11 15 27.7	+1.2
KEF	Keuruu	3.81	228	PG	Pb	11 15 34.4	-0.2
KEF				SG	Sb	11 16 20.2	-1.0
RAJF	Raja-Jooseppi	3.81	345	PN	Pn	11 15 27.9	+1.4
PAJU	Pajala	3.89	308	P	Pn	11 15 27.6	0.0
PAJU	Pajala	3.89	308	PN	Pn	11 15 28.6	+1.0
PAJU				SG	Sb	11 16 24.7	+1.1
SJUU	Sjulsmark	3.99	284	P	Pn	11 15 28.8	-0.2
ERTU	Ertsjaerv	4.01	300	P	Pn	11 15 29.7	+0.5
ERTU	Ertsjaerv	4.01	300	PN	Pn	11 15 29.9	+0.7
FIA0	FINESS Array S	4.05	215	PN	Pn	11 15 29.6	-0.1
FIA0				SG	Sb	11 16 31.0	+2.9
FINES	FINESS Array B	4.05	215	Pn	Pn	11 15 30.4	+0.7
	comp=Z,0.1nm,0.3s,baz=33,slow=15,SNR=5.6						
FINES				Pg	Pb	11 15 40.5	+1.9
	comp=Z,0.2nm,0.3s,baz=30,slow=16,SNR=8.3						
FINES				Sn	Sn	11 16 20.8	+3.1
	comp=Z,0.2nm,0.3s,baz=31,slow=22,SNR=1.6						
FINES				Lg	Lg	11 16 31.5	
	comp=Z,1.3nm,0.3s,baz=22,slow=27,SNR=13						
	comp=Z,3.7nm,0.9s						
VAF	Ylistaro	4.06	248	*e*P	Pn	11 15 30.5	+0.6
VAF	Ylistaro	4.06	248	PB	Pn	11 15 34.4	+4.5
	baz=65						
VAF				SG	Sb	11 16 30.7	+2.2
BURU	Burvik	4.11	271	P	Pn	11 15 29.6	-1.0
BURU	Burvik	4.11	271	PN	Pn	11 15 29.7	-0.8
HARU	Harads	4.36	292	P	Pn	11 15 34.4	+0.4
ODEU	Stanfors	4.42	269	P	Pn	11 15 33.4	-1.4
UMAU	Umeaa	4.56	263	SG	Sb	11 16 45.2	+2.6
VJF	Virojoki	4.58	201	SG	Sb	11 16 46.4	+3.2
HEF	Hetta	4.62	324	PN	Pn	11 15 37.3	-0.2
HEF				SG	Sb	11 16 47.5	+3.1
ARCES	ARCESS Array B	5.18	338	Pn	Pn	11 15 45.0	-0.2
	comp=Z,0.3nm,0.3s,baz=155,slow=13,SNR=46						
ARCES				Sn	Sn	11 16 44.9	-0.7
	comp=Z,0.2nm,0.3s,baz=157,slow=25,SNR=3.6						
ARCES				Lg	Lg	11 17 04.8	
	comp=Z,0.5nm,0.3s,baz=152,slow=33,SNR=11						
	comp=Z,0.8nm,0.2s						
ARCES	ARCESS Array B	5.18	338	P	Pn	11 15 45.4	+0.2
ARCES				S	Sn	11 16 44.7	-0.9
VADS	Vadso	5.35	354	S	Sn	11 16 49.4	-0.4
MEF	Metsahovi	5.53	216	*e*P	Pn	11 15 49.3	-0.7
RAF	Rauma	5.66	232	*e*P	Pn	11 15 51.8	-0.1
AAL	Aland	6.88	232	*e*P	Pn	11 16 08.9	+0.3
HFS	Hagfors	9.25	247	Pn	Pn	11 16 40.7	-0.3
	comp=Z,0.1nm,0.3s,baz=59,slow=14,SNR=1.5						
HFS				Sn	Sn	11 18 21.9	-3.7
	comp=Z,0.1nm,0.3s,baz=47,slow=30,SNR=1.2						
	comp=Z,3.8nm,1.0s						
NOA	NORSAR Array B	9.74	256	Pn	Pn	11 16 47.7	-0.1
	baz=56,slow=13,SNR=1.5						
	comp=Z,0.6nm,0.8s						

IDC 06 11:23:46.6±2.4, 10°.52N×91°.83E, h0^{km}, mb3.4/4, mbtmp3.4/5, ML3.4/1, Error ellipse: s-maj=74.3km s-min=25.5km az=70.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.47	40	Pn	Pn	11 26 18.2	0.0
	0.1nm,0.3s,baz=231,slow=14,SNR=1.5						
	0.3nm,0.3s						
H08S3	Diego Garcia H	26.38	228	T	T	11 56 57.9	
	baz=47,slow=76						
H08S2	Diego Garcia H	26.38	228	T	T	11 56 58.0	
	baz=47,slow=76						
H08S1	Diego Carcia H	26.40	228	T	T	11 57 00.7	
	baz=47,slow=76						
MKAR	Makanchi Array	37.05	349	P	P	11 30 58.0	-0.3
	0.4nm,0.5s,baz=172,slow=7.8,SNR=1.9						
	0.4nm,0.5s						
SONM	Songino Array	39.17	16	P	P	11 31 15.8	-0.5
	0.3nm,0.4s,baz=216,slow=6.9,SNR=2.2						
	0.3nm,0.4s						
WRA	Warramunga Arr	51.65	126	P	P	11 32 55.4	-0.1
	0.3nm,0.7s,baz=300,slow=9.9,SNR=6.6						
	0.3nm,0.7s						
ASAR	Alice Springs	53.35	130	P	P	11 33 08.4	+0.3
	0.2nm,0.5s,baz=306,slow=7.3,SNR=7.1						
	0.2nm,0.5s						
H04N2	CROZET ISLANDS	66.86	209	T	T	12 47 33.9	
	baz=42,slow=75,SNR=38						
H04N1	CROZET ISLANDS	66.87	209	T	T	12 47 25.2	
	baz=42,slow=75,SNR=46						
H04N3	CROZET ISLANDS	66.88	209	T	T	12 47 24.0	
	baz=42,slow=75,SNR=40						

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*TIR **06** 11:31:56.5, 41°.38N×19°.59E, h30^{km}±5^{km}, Ml2.5/2*

*PDG **06** 11:31:57.8±0.1, 41°.38N×19°.50E, h22^{km}, ML2.4/9, Error ellipse: s-maj=0.4km s-min=0.8km az=0.0*

ISC 06 11:31:58.5±1.4, 41°.45N±0°.06×19°.61E±0°.06, h10^{km}±9^{km}, n13, σ0^s.71/26, 4C-5D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.22	118	Pg	Pg	11 32 03.0	+0.1
TIR				Sg	Sg	11 32 06.2	+0.1
TIR				AML	AML	11 32 06.3	
	3.0nm,0.3s						
ULC	Ulcinj	0.58	332	⇓*i*Pg	Pg	11 32 09.6	-0.1
ULC				*i* Sg	Sb	11 32 19.7	+0.6
SDA	Shkodra	0.61	352	Pg	Pg	11 32 09.8	-0.4
SDA				Sg	Sb	11 32 20.1	+0.3
PHP	Peshkopia	0.67	69	Pg	Pg	11 32 10.3	-1.1
PHP				Sg	Sg	11 32 20.4	+0.3
PHP				AML	AML	11 32 23.7	
	0.5nm,0.4s						
DRME	Dracevica, Mon	0.80	337	⇓*i*Pg	Pg	11 32 13.7	-0.2
DRME				*e*Sg	Sn	11 32 27.4	-0.5
OHR	Ohrid	0.96	110	*i* Pn	Pg	11 32 17.4	+0.4
OHR				*i* Sn	Sn	11 32 31.8	0.0
BUM	Brajici-Budva	1.00	328	⇓*i*Pg	Pg	11 32 17.3	-0.5
BUM				*i* Sg	Sn	11 32 33.3	+0.4
PDG	Podgorica	1.01	345	⇓*i*Pg	Pb	11 32 17.8	-0.3
PDG				*i* Sg	Sn	11 32 34.3	+1.2
CEME	Cevo	1.21	335	⇑*i*Pg	Pg	11 32 20.9	-0.8
CEME				*e*Sg	Sn	11 32 39.3	+1.3
NKME	Niksic	1.40	340	⇑*i*Pg	Pn	11 32 23.5	-0.7
NKME				*e*Sg	Sg	11 32 44.8	+1.2
IVA	Berane	1.44	8	⇑*i*Pg	Pn	11 32 24.7	0.0
IVA				*i* Sg	Sg	11 32 45.8	+1.2
BRY	Bratogost	1.65	332	⇓*i*Pn	Pn	11 32 26.9	-0.8
BRY				*i* Sn	Sb	11 32 50.1	0.0
UPM	Unac-Piva	1.83	344	⇑*i*Pn	Pn	11 32 29.7	-0.4
UPM				*i* Sn	Sb	11 32 54.6	-0.5

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*VIE **06** 11:41:00.3±0.1, 49°.41N×15°.27E, h0^{km}, mb2.6/1, ml2.2/5, Error ellipse: s-maj=1.1km s-min=1.0km az=14.0   55 km*

NNE of Litschau Suspected Mining explosion.

ISC 06 11:40:59.1±2.6**, 49°.5N**±0°.1×**15°.3E**±0°.1**, h0^{km}, n4, σ0^{s}.31**/6**,**
Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRUC	**Moravsky**	0.83	119	*e*PG	Pb	11 41 16.2	-0.2
VRAC	**Vranov**	0.87	100	*e*PG	Pb	11 41 17.0	0.0
CONA	**Conrad Observa**	1.59	166	*e*Pn	Pb	11 41 29.3	-0.1
	0.7nm,0.1s						
CONA				*e*Sn	Sg	11 41 50.3	+0.2
	0.4nm,0.1s						
MOA	**Molln**	1.76	203	Pn	Pn	11 41 31.0	+0.2
	1.3nm,0.3s						
MOA				Sn	Sn	11 41 53.5	-0.4
	0.7nm,0.2s						

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*NEIC **06** 11:45:51.8±1.4, 66°.31N±0°.02×157°.33W±0°.02, h10^{km}±1^{km}, Error ellipse: s-maj=3.0km s-min=2.6km az=345.0*

AEIC 06 11:45:51.5±1.4**, 66°.31N**±0°.02×**157°.36W**±0°.01**, h8**^{km}±5^{km}**, ML2.6, ML3.0**/114(NEIC)**, Error ellipse: s-maj=2.3km s-min=0.6km az=186.0, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
G19K	**Purcell Mounta**	0.20	146		Pg	11 45 55.6	+0.2
G19K					Sg	11 45 58.7	+0.6
G19K				IAML		11 45 59.5	
	comp=N,5μm,0.2s						
F19K	**Shaleruckik Mo**	0.56	343		Pg	11 46 01.7	-0.5
F19K					Sg	11 46 09.7	+0.1
G18K	**Tagagawik**	0.67	233		Pg	11 46 04.8	+0.4
H19K	**Roundabout Mou**	0.86	154		Pg	11 46 08.2	+0.1
H19K					Sg	11 46 19.8	+0.5
H19K				IAML		11 46 24.5	
	comp=N,714nm,0.5s						
F18K	**Selawik**	0.97	289		Pg	11 46 09.7	-0.4
F18K					Sb	11 46 23.8	+0.3
F20K	**Avaraart Lake**	0.99	40		Pg	11 46 09.6	-0.9
F20K					Sg	11 46 22.8	-0.5
E19K	**Redstone River**	1.16	2		Pg	11 46 13.1	-0.6
E19K				IAML		11 46 31.4	
	comp=N,377nm,0.5s						
E19K				IAML		11 46 31.5	
	comp=E,265nm,0.6s						
H18K	**Honhosa River**	1.23	200		Pb	11 46 14.7	-0.4
H18K					Sb	11 46 31.4	+0.4
H18K				IAML		11 46 34.1	
	comp=E,337nm,0.7s						
H20K	**Anotleneega Mo**	1.30	128		Pn	11 46 15.4	-0.7
H20K					Pb	11 46 16.1	-0.2
H20K					Sn	11 46 33.6	-0.1
IM04	**Indian Mountai**	1.49	101		Pn	11 46 18.4	-0.3
IMAR	**Indian Mountai**	1.50	101		Pn	11 46 18.3	-0.5
G21K	**Allakaket**	1.56	80	Pn	Pn	11 46 19.6	-0.1
F17K	**Baldwin Pennin**	1.57	277		Pn	11 46 19.9	+0.1
F17K				IAML		11 47 13.2	
	comp=E,190nm,1.1s						
F17K				IAML		11 47 13.7	
	comp=N,218nm,0.9s						
G17K	**Kiwalik Mounta**	1.57	241		Pn	11 46 19.5	-0.3
G17K					Pb	11 46 19.6	-1.3
GCSA	**Galena City Sc**	1.58	173		Pn	11 46 20.1	+0.3
E18K	**Tukpahlearik C**	1.70	313		Pb	11 46 23.0	-0.1
H17K	**Granite Mounta**	1.74	219	Pn	Pn	11 46 22.1	+0.1
H17K				IAML		11 47 19.1	
	comp=E,190nm,0.5s						
H17K				IAML		11 47 19.2	
	comp=N,206nm,0.7s						
F21K	**Alatna River**	1.79	57	Pn	Pn	11 46 23.2	+0.4
F21K				IAML		11 47 19.4	
	comp=N,205nm,0.7s						
E17K	**Hotham Inlet**	1.94	296		Pn	11 46 24.9	+0.1
H21K	**Melozitna Rive**	1.97	107		Pn	11 46 25.2	-0.1
E20K	**Nigu River**	2.01	12		Pn	11 46 26.9	+1.0
D19K	**Kuna River**	2.22	353		Pn	11 46 30.0	+1.3
D19K				IAML		11 47 35.5	
	comp=N,109nm,0.6s						
G16K	**Koyuk River**	2.25	248		Pn	11 46 28.4	-0.6
G16K				IAML		11 47 36.3	
	comp=E,77nm,0.5s						
J19K	**Poorman**	2.43	162	Pn	Pn	11 46 32.0	+0.4
J19K				IAML		11 47 41.1	
	comp=N,82nm,0.5s						
J19K				IAML		11 47 45.3	
	comp=E,65nm,0.8s						
D20K	**Etivluk River**	2.44	6		Pb	11 46 33.7	-1.9
D20K				IAML		11 47 42.0	
	comp=N,92nm,0.6s						
H22K	**Ishtalitna Cre**	2.47	97	Pn	Pn	11 46 32.5	+0.4
H22K				IAML		11 47 41.7	
	comp=E,64nm,0.6s						
E21K	**Killik River**	2.51	30		Pn	11 46 33.2	+0.5
E21K				IAML		11 47 48.1	
	comp=E,60nm,0.7s						
E21K				IAML		11 47 51.5	
	comp=N,61nm,0.6s						
J20K	**Nowinta River**	2.53	146		Pn	11 46 34.8	+2.0
J20K				IAML		11 47 48.8	
	comp=N,75nm,0.5s						
H16K	**Elim**	2.64	233		Pn	11 46 33.5	-0.8
D17K	**Noatak River**	2.65	305		Pn	11 46 34.6	+0.1
RDOG	**Red Dog Mine**	2.79	312	Pn	Pn	11 46 37.3	+0.9
E22K	**Anaktuvuk Pass**	2.83	47		Pn	11 46 38.6	+1.5
J18K	**Innoko River**	2.87	174		Pn	11 46 37.1	-0.4
J18K				IAML		11 47 57.0	
	comp=N,43nm,0.7s						
J18K				IAML		11 47 59.4	
	comp=E,58nm,0.8s						
COLD	**Coldfoot**	2.98	69		Pn	11 46 39.2	+0.1
COLD				IAML		11 47 59.3	
	comp=N,62nm,0.8s						
COLD				IAML		11 48 02.0	
	comp=E,49nm,0.7s						
J17K	**VABM Dome**	3.01	195		Pn	11 46 40.2	+0.6
MLY	**Manley**	3.02	112		Pn	11 46 40.6	+0.9
D22K	**Ayikyak River**	3.15	33		Pn	11 46 41.8	+0.4
H23K	**Yukon River**	3.22	95		Pn	11 46 43.0	+0.6
J16K	**Anvik River**	3.34	206		Pn	11 46 44.0	0.0
J16K				IAML		11 48 10.4	
	comp=N,49nm,0.7s						
BPAW	**Bear Paw Mtn.**	3.48	127	Pn	Pn	11 46 47.2	+1.2
I23K	**Minto, Yukon-K**	3.50	106		Pn	11 46 47.2	+1.0
K17K	**Iditarod**	3.63	187	Pn	Pn	11 46 48.1	+0.1
C16K	**Lisburne Hills**	3.67	306	Pn	Pn	11 46 49.5	+0.9
B20K	**Meade River**	3.72	1		Pn	11 46 49.5	+0.3
NEA2	**Nenana**	3.86	113	Pn	Pn	11 46 51.7	+0.5
NEA2				IAML		11 48 28.8	
	comp=E,24nm,0.9s						
H24K	**Noodor Dome**	3.89	93		Pn	11 46 51.5	-0.1
G24K	**Hadweenzic Riv**	3.98	80	Pn	Pn	11 46 53.5	+0.7
PPLA	**Purkeypile**	4.08	145	Pn	Pn	11 46 55.8	+1.4
L18K	**Granite Mounta**	4.11	176	Pn	Pn	11 46 56.3	+1.6
L18K				IAML		11 48 35.1	
	comp=N,19nm,0.8s						
TRF	**Thorofare Moun**	4.16	130		Pn	11 46 56.6	+1.2
L17K	**Donlin**	4.21	186		Pn	11 46 56.4	+0.5
POKR	**Poker Plat Res**	4.27	102	Pn	Pn	11 46 57.0	+0.2
WRH	**Wood River Hil**	4.29	111	Pn	Pn	11 46 56.8	-0.3
CCB	**Clear Creek Bu**	4.32	108		Pn	11 46 57.1	-0.3
MCK	**McKinley**	4.41	122	Pn	Pn	11 46 59.0	+0.3
IL31		4.62	105		Pn	11 47 01.7	+0.2
ILAR	**Eielson Array**	4.62	105	Pn	Pn	11 47 01.7	+0.2
RND	**Reindeer**	4.65	125		Pn	11 47 03.1	+1.1
L16K	**Owhat River**	4.71	192	Pn	Pn	11 47 03.0	+0.2
L22K	**Petersville**	4.75	140		Pn	11 47 05.4	+2.0
HDA	**Harding Lake**	4.75	109		Pn	11 47 04.3	+0.8
HDA				IAML		11 48 54.6	
	comp=E,12nm,0.5s						
HDA				IAML		11 48 56.4	
	comp=N,15nm,0.5s						
M20K	**Styx River**	4.81	155		Pn	11 47 06.0	+1.7
M20K				IAML		11 48 31.0	
	comp=E,12nm,1.1s						
M18K	**Stony River**	4.88	171		Pn	11 47 05.9	+0.7
PRP	**Porcupine Dome**	4.91	94	Pn	Pn	11 47 06.2	+0.5
M17K	**Holitna River**	4.92	180	Pn	Pn	11 47 07.2	+1.4
E25K	**Arctic Village**	4.93	63	Pn	Pn	11 47 05.3	-0.6
E25K				IAML		11 48 33.2	
	comp=N,14nm,0.9s						
E25K				IAML		11 49 06.5	
	comp=E,14nm,0.9s						
CUT	**Chulitna**	4.98	139	Pn	Pn	11 47 08.1	+1.6
SKT	**Skwentna**	5.03	147		Pn	11 47 09.1	+1.8
A21K	**Barrow**	5.05	3		Pn	11 47 06.8	-0.6
J25K	**Salcha River,**	5.28	103	Pn	Pn	11 47 10.3	-0.3
J25K				IAML		11 49 13.1	
	comp=E,9.7nm,0.5s						
M16K	**Timber Creek**	5.35	188	Pn	Pn	11 47 12.2	+0.5
M16K				IAML		11 48 46.9	
	comp=N,6.4nm,1.1s						
DHY	**Denali Highway**	5.37	123	Pn	Pn	11 47 13.2	+1.2
STLK	**Strandline Lak**	5.40	151	Pn	Pn	11 47 13.7	+1.3
SUA	**Susitna One**	5.67	146	Pn	Pn	11 47 17.8	+1.7
N18K	**Kilae Creek**	5.69	173	Pn	Pn	11 47 17.3	+1.1
N17K	**Nushagak Hills**	5.80	179	Pn	Pn	11 47 19.1	+1.3
GHO	**Glory Hole Cre**	5.86	137	Pn	Pn	11 47 18.6	-0.2
I26K	**Coal Creek Min**	5.92	93	Pn	Pn	11 47 19.2	-0.3
PMR	**Palmer**	5.96	139	Pn	Pn	11 47 22.4	+2.5
SML	**Sawmill**	6.00	135	Pn	Pn	11 47 21.7	+1.1
J26L	**Joseph Creek**	6.04	101	Pn	Pn	11 47 21.8	+0.7
SCRK	**Sand Creek**	6.10	106	Pn	Pn	11 47 21.4	-0.7
RED	**Redoubt Volcan**	6.26	159		Pn	11 47 24.4	+0.3
KNK	**Knik Glacier**	6.29	137	Pn	Pn	11 47 26.5	+2.0
M24K	**Tolsona, Glenn**	6.44	126	Pn	Pn	11 47 28.4	+1.8

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*NEIC **06** 11:46:20.6±1.4, 66°.33N±0°.02×157°.39W±0°.07, h5^{km}±7^{km}, Error ellipse: s-maj=3.8km s-min=3.5km az=92.0*

AEIC 06 11:46:20.7±2.1**, 66°.32N**±0°.02×**157°.32W**±0°.08**, h12**^{km}±6^{km}**, ML2.9, ML3.1**/54(NEIC)**, Error ellipse: s-maj=4.8km s-min=3.0km az=101.0, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
G19K	**Purcell Mounta**	0.20	152		Pg	11 46 25.0	-0.2
G19K					Sg	11 46 28.0	-0.2
F19K	**Shaleruckik Mo**	0.54	341		Pg	11 46 30.9	-0.4
G18K	**Tagagawik**	0.69	232		Pg	11 46 34.0	-0.2
H19K	**Roundabout Mou**	0.88	156		Pg	11 46 37.3	-0.3
H19K					Sg	11 46 49.2	+0.2
F20K	**Avaraart Lake**	0.97	40		Pg	11 46 38.7	-0.6
F20K					Sg	11 46 51.7	-0.3
F20K				IAML		11 46 55.6	
	comp=N,383nm,0.4s						
F18K	**Selawik**	0.98	288		Pb	11 46 39.1	-0.4
E19K	**Redstone River**	1.14	2		Pb	11 46 42.3	-0.1
H18K	**Honhosa River**	1.25	201		Pn	11 46 43.9	-0.1
H18K					Sg	11 47 00.9	-0.1
H20K	**Anotleneega Mo**	1.30	129		Pn	11 46 44.9	+0.2
H20K					Pb	11 46 45.3	+0.2
H20K					Sg	11 47 03.0	+0.3
IM02	**Indian Mountai**	1.47	101		Pn	11 46 46.6	-0.3
IM02					Pb	11 46 48.3	+0.4
IM02					Sg	11 47 07.8	-0.1
H16K	**Elim**	2.66	233		Pn	11 47 02.4	-0.9
MLY	**Manley**	3.02	112	Pn	Pn	11 47 09.4	+1.1
J17K	**VABM Dome**	3.03	195	Pn	Pn	11 47 09.2	+0.8
J17K				IAML		11 48 02.0	
	comp=E,59nm,0.8s						
J17K				IAML		11 48 06.3	
	comp=N,48nm,0.7s						
BPAW	**Bear Paw Mtn.**	3.48	127		Pn	11 47 16.1	+1.6
BPAW				IAML		11 47 57.9	
	comp=N,29nm,0.6s						
BPAW				IAML		11 48 13.7	
	comp=E,32nm,1.2s						
I23K	**Minto, Yukon-K**	3.49	106	Pn	Pn	11 47 16.3	+1.6
I23K				IAML		11 48 15.8	
	comp=N,48nm,0.8s						
K17K	**Iditarod**	3.65	187		Pn	11 47 17.1	+0.3
K17K				IAML		11 48 03.1	
	comp=N,26nm,0.8s						
K17K				IAML		11 48 24.0	
	comp=E,33nm,0.7s						
C16K	**Lisburne Hills**	3.68	306	Pn	Pn	11 47 18.7	+1.4
B20K	**Meade River**	3.70	1		Pn	11 47 18.9	+1.3
B20K				IAML		11 48 25.2	
	comp=N,32nm,1.1s						
B20K				IAML		11 48 33.0	
	comp=E,32nm,0.7s						
H24K	**Noodor Dome**	3.88	93	Pn	Pn	11 47 21.2	+1.1
H24K				IAML		11 48 34.9	
	comp=N,31nm,0.7s						
PPLA	**Purkeypile**	4.09	145		Pn	11 47 25.0	+1.9
PPLA				IAML		11 48 26.2	
	comp=N,16nm,1.2s						
PPLA				IAML		11 48 32.2	
	comp=E,22nm,0.8s						
TRF	**Thorofare Moun**	4.16	131		Pn	11 47 25.6	+1.6
TRF				IAML		11 48 16.2	
	comp=N,23nm,1.0s						
TRF				IAML		11 48 16.2	
	comp=E,20nm,1.1s						
COLA	**College**	4.19	106	Pn	Pn	11 47 25.3	+1.0
L17K	**Donlin**	4.23	186		Pn	11 47 25.7	+0.9
POKR	**Poker Plat Res**	4.26	102		Pn	11 47 26.2	+0.9
POKR				IAML		11 48 41.8	
	comp=N,24nm,1.0s						
POKR				IAML		11 48 42.0	
	comp=E,21nm,1.0s						
WRH	**Wood River Hil**	4.28	111		Pn	11 47 26.0	+0.4
WRH				IAML		11 48 08.9	
	comp=N,18nm,1.1s						
WRH				IAML		11 48 39.0	
	comp=E,16nm,1.1s						
CCB	**Clear Creek Bu**	4.31	109		Pn	11 47 26.3	+0.4
CCB				IAML		11 48 38.5	
	comp=E,20nm,0.8s						
CCB				IAML		11 48 41.0	
	comp=N,16nm,0.7s						
MCK	**McKinley**	4.40	122		Pn	11 47 28.2	+0.9
IL31		4.61	105		Pn	11 47 30.8	+0.8
RND	**Reindeer**	4.65	125	Pn	Pn	11 47 32.1	+1.4
L22K	**Petersville**	4.75	140	Pn	Pn	11 47 35.0	+2.9
L22K				IAML		11 48 30.9	
	comp=N,13nm,0.8s						
L22K				IAML		11 48 34.2	
	comp=E,9.9nm,0.7s						
PRP	**Porcupine Dome**	4.90	94		Pn	11 47 35.0	+0.8
PRP				IAML		11 49 01.5	
	comp=E,16nm,0.6s						
PRP				IAML		11 49 02.3	
	comp=N,14nm,0.6s						
SKT	**Skwentna**	5.04	147	Pn	Pn	11 47 38.0	+2.0
SKT				IAML		11 49 06.7	
	comp=N,8.0nm,0.7s						
SKT				IAML		11 49 09.0	
	comp=E,14nm,0.9s						
DHY	**Denali Highway**	5.37	123	Pn	Pn	11 47 42.2	+1.6
DHY				IAML		11 48 55.0	
	comp=E,6.9nm,1.1s						
N19K	**Bonanza Creek**	5.67	166	Pn	Pn	11 47 46.1	+1.3
N18K	**Kilae Creek**	5.70	173	Pn	Pn	11 47 46.6	+1.5
J26L	**Joseph Creek**	6.03	101	Pn	Pn	11 47 50.3	+0.7

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*LVSN **06** 11:57:43.2±2.9, 58°.52N×23°.09E, h0^{km}±16^{km}, ML2.1*

HEL 06 11:57:31.8±0.3**, 60°.93N×29°.18E, h0**^{km}**, ML1.4, Suspected explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUF	**Ruokolahti**	0.51	348	PG	Pg	11 57 41.6	0.0
RUF				SG	Sg	11 57 47.7	-0.4
RUF				MSG		11 57 48.4	
	comp=Z,7.0nm,0.2s						
VJF	**Virojoki**	0.89	245	PB	Pg	11 57 48.5	-0.3
	baz=64						
VJF				MSG		11 57 59.3	
	comp=Z,5.8nm,0.2s						
VJF				SB	Sg	11 58 00.5	+0.2
FIA0	**FINESS Array S**	1.59	290	PG	Pn	11 58 00.4	-0.7
	baz=108						
FIA0				MSG		11 58 19.5	
	comp=Z,2.4nm,0.2s						
FIA0				SN	Sn	11 58 21.5	-0.8
PVF	**Pernaja**	1.67	258	PG	Pn	11 58 01.9	-0.4
PVF				MSG		11 58 21.8	
	comp=Z,3.7nm,0.2s						
PVF				SN	Sg	11 58 26.7	+1.2
ARBE	**Arbavere**	2.19	228	*e*S	Sb	11 58 40.0	+0.2
ARBE				AML	AML	11 58 59.1	
	comp=E,76nm,0.6s						
ARBE				AML	AML	11 59 01.7	
	comp=Z,60nm,0.6s						
ARBE				AML	AML	11 59 02.7	
	comp=N,70nm,0.8s						
JOF	**Joensuu**	2.24	26	PG	Pb	11 58 11.9	-1.1
JOF				SG	Sb	11 58 39.8	-1.4
NUR	**Nurmijarvi**	2.27	261	PG	Pn	11 58 11.5	+1.1
NUR				MSG		11 58 38.9	
	comp=Z,1.2nm,0.2s						
SUF	**Sumiainen**	2.30	323	PG	Pb	11 58 13.7	-0.4
SUF				MSG		11 58 40.0	
	comp=Z,0.7nm,0.2s						
SUF				SG	Sb	11 58 43.5	+0.5
KEF	**Keuruu**	2.41	303	MSG		11 58 43.1	
	comp=Z,0.8nm,0.2s						
KEF				SG	Sb	11 58 46.6	+0.5
MEF	**Metsahovi**	2.47	255	*e*P	Pb	11 58 16.1	-0.8
MEF				AML	AML	11 58 30.7	
	comp=Z,6.5nm,0.8s						
MEF				*e*S	Sn	11 58 42.8	-1.1
MEF				AML	AML	11 58 50.1	
	comp=N,6.6nm,0.7s						
MEF				AML	AML	11 58 55.3	
	comp=E,7.0nm,1.0s						
MEF	**Metsahovi**	2.47	255	PB	Pn	11 58 14.3	+1.1
MEF				SN	Sn	11 58 42.8	-1.2
MEF				MSG		11 58 44.6	
	comp=Z,1.5nm,0.2s						
NIF	**Nilsia**	2.55	346	PG	Pb	11 58 16.9	-1.5
NIF				MSG		11 58 47.2	
	comp=Z,0.6nm,0.2s						
NIF				SG	Sb	11 58 49.6	-0.7
KPF	**Kankaanpaa**	3.54	288	PG	Pb	11 58 34.2	-1.0
VAF	**Ylistaro**	3.73	307	PB	Pn	11 58 33.9	+3.3

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*IDC **06** 12:06:42.8±14.0, 21°.54S×178°.57W, h551^{km}±149^{km}, mb2.9/2, mbtmp4.0/3, Error ellipse: s-maj=107.1km s-min=35.2km az=33.0*

ISC 06 12:06:41.3±1.5**, 21°.4S**±0°.3×**178°.6W**±0°.3**, h536**^{km}**, n9, σ0^{s}.58**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	17.18	192	P	**P**	**12 10 12.0**	**-0.1**
	4.5nm,0.7s,baz=286,slow=2.5,SNR=8.5						
ASAR	**Alice Springs**	43.81	258	P	**P**	**12 14 00.6**	**+0.5**
	1.5nm,0.6s,baz=95,slow=7.7,SNR=23						
ASAR				PcP	**PcP**	**12 15 34.8**	**-0.1**
	0.4nm,0.5s,baz=112,slow=4.0,SNR=5.9						
	1.5nm,0.6s						
WRA	**Warramunga Arr**	43.97	263	P	**P**	**12 14 01.1**	**-0.2**
	0.7nm,0.5s,baz=96,slow=7.5,SNR=41						
	0.7nm,0.5s						
ARCES	**ARCESS Array B**	129.74	349	PKP	**PKPdf**	**12 24 49.1**	**+0.2**
	20nm,1.3s,baz=40,slow=6.4,SNR=4.1						
FINES	**FINESS Array B**	136.52	343	PKP	**PKPdf**	**12 25 01.8**	**-0.1**
	3.6nm,0.9s,baz=22,slow=1.5,SNR=3.8						
HFS	**Hagfors**	140.38	350	PKhKP	PKPpre	12 25 03.1	
	4.9nm,1.0s,baz=57,slow=5.3,SNR=4.4						
AKASG	**Malin Array Be**	143.57	330	PKP	PKPab	12 25 13.1	-0.4
	1.3nm,0.5s,baz=44,slow=4.0,SNR=8.3						
BRTR	**Keskin Array B**	147.08	311	PKPbc	**PKPbc**	**12 25 23.6**	**-0.9**
	0.9nm,0.7s,baz=132,slow=3.7,SNR=4.6						
GERES	**GERESS Array B**	150.95	343	PKPbc	**PKiKP**	**12 25 34.6**	**+0.7**
	0.6nm,0.6s,baz=8.1,slow=3.6,SNR=3.8						

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*IDC **06** 12:07:51.6±2.4, 19°.20N×101°.39E, h0^{km}, mb3.6/2, mbtmp3.4/3, ML3.2/1, Error ellipse: s-maj=28.8km s-min=19.3km az=126.0*

*BKK **06** 12:07:52.3±0.5, 19°N±3°×10°1E±°, h1^{km}, M3.6/19, Mjma3.5/19, ML3.9/14, MLv3.6/18*

ISC 06 12:07:57.1±2.0**, 19°.3N**±0°.1×**101°.4E**±0°.2**, h35**^{km}**, n15, σ0^{s}.72**/15**, Laos**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UTTA	**Uttaradit**	1.72	206	P	**Pn**	**12 08 24.2**	**-0.3**
LAMP	**Lampang**	1.80	245	P	**Pn**	**12 08 25.8**	**+0.1**
CMAI	**Chiengmai2**	2.27	287	P	**Pn**	**12 08 31.3**	**-0.9**
CHTO	**Chiang Mai**	2.33	258	P	**Pn**	**12 08 34.3**	**+1.4**
CM09	**Chiang Mai Arr**	2.39	250	P	**Pn**	**12 08 34.2**	**+0.4**
CM04	**Chiang Mai Arr**	2.42	249	P	**Pn**	**12 08 33.4**	**-0.8**
CM01	**Chiang Mai Arr**	2.43	249	P	**Pn**	**12 08 34.2**	**-0.1**
CM31	**Chiang Mai Arr**	2.43	250	P	**Pn**	**12 08 33.9**	**-0.4**
CMAR	**Chiang Mai Arr**	2.43	250	Pn	**Pn**	**12 08 33.8**	**-0.5**
	1.6nm,0.3s,baz=66,slow=13,SNR=14						
CMAR				Lg	Lg	12 09 08.3	
	4.0nm,0.3s,baz=72,slow=31,SNR=6.2						
	3.2nm,0.3s						
CM02	**Chiang Mai Arr**	2.43	250	P	**Pn**	**12 08 33.9**	**-0.5**
CM05	**Chiang Mai Arr**	2.45	249	P	**Pn**	**12 08 34.3**	**-0.3**
CM15	**Chiang Mai Arr**	2.45	250	P	**Pn**	**12 08 34.8**	**+0.2**
CM13	**Chiang Mai Arr**	2.47	250	P	**Pn**	**12 08 33.7**	**-1.2**
MKAR	**Makanchi Array**	31.57	335	P	**P**	**12 14 16.3**	**+0.1**
	0.2nm,0.5s,baz=133,slow=10,SNR=1.8						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	36.85	344	P	**P**	**12 15 02.3**	**+0.5**
	1.3nm,0.8s,baz=162,slow=8.3,SNR=5.4						
	1.3nm,0.8s						

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*OSPL **06** 12:17:14.2±2.1, 18°.88N×70°.47W, h105^{km}±22^{km}, ML2.0, Presumed earthquake*

*SDD **06** 12:17:20.5±1.8, 18°.90N×70°.62W, h15^{km}±24^{km}, MD2.6, ML2.6, MW2.5, Presumed earthquake*

ISC 06 12:17:19.3±1.1**, 18°.89N**±0°.04×**70°.64W**±0°.04**, h16**^{km}±8^{km}**, n11, σ1^{s}.37**/15**, 4C-1D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABDR	**Alto Bandera**	0.08	169	⇑*e*Pg	**Pg**	**12 17 23.2**	**+0.3**
ABDR				IAML		12 17 45.8	
	comp=N,1.3nm,0.3s						
SC01	**Santiago de lo**	0.54	351	*i* P	**Pg**	**12 17 30.5**	**+0.4**
SC01				*e*S	**Sn**	**12 17 42.7**	**+1.5**
BANI	**BANI**	0.56	151	*e*Pg	**Pg**	**12 17 31.6**	**+1.1**
BANI				IAML		12 17 47.6	
	comp=N,921nm,0.2s						
DR08	**Loma La Naviza**	0.59	83	⇑*e*Pg	**Pg**	**12 17 30.7**	**-0.3**
DR08				IAML		12 17 43.1	
	comp=N,7μm,0.2s						
SDDR	**Presa de Saban**	0.62	279	⇓*e*Pg	**Pg**	**12 17 31.6**	**+0.1**
SDDR				IAML		12 17 46.4	
	comp=N,2μm,0.3s						
SDDR	**Presa de Saban**	0.62	279	*i* P	**Pg**	**12 17 32.1**	**+0.5**
SDDR				*e*S	**Sn**	**12 17 43.9**	**+0.7**
SDDR				IAML		12 17 47.2	
	comp=Z,27nm,0.6s						
LONE3	**El Aguacate, B**	0.82	250	*i* P	**Pg**	**12 17 33.9**	**-1.5**
LONE3				*e*S	**Sb**	**12 17 48.5**	**+2.2**
LONE3				IAML		12 17 48.8	
	comp=Z,20nm,1.6s						
PODR	**Polo**	0.94	220	*i* P	**Pb**	**12 17 36.1**	**-1.3**
PODR				*e*S	**Sn**	**12 17 53.2**	**+1.9**
LUDR	**Luperon**	1.04	344	⇑*e*Pg	**Pb**	**12 17 39.5**	**+0.5**
LOPP1	**Punta Rusia, P**	1.09	331	*i* P	Pb	12 17 36.4	-3.5
LOPP1				*e*S	**Sb**	**12 17 52.5**	**-1.4**
LOPP1				IAML		12 17 57.3	
	comp=Z,53nm,1.4s						
HATOM	**Hato Mayor del**	1.20	95	⇑*e*Pg	**Pn**	**12 17 40.2**	**-1.3**
HATOM				IAML		12 17 55.2	
	comp=N,374nm,0.2s						

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*KRNET **06** 13:02:43.1±0.1, 41°.59N×72°.60E, h28^{km}, mb3.7*

*SOME **06** 13:02:44.2, 41°.75N×72°.65E, h5^{km}*

*KNET **06** 13:02:45.9±0.5, 41°.70N×72°.80E, h3^{km}±2^{km}, ml3.3, Error ellipse: s-maj=4.9km s-min=2.9km az=122.0*

*NNC **06** 13:02:45.5±0.5, 41°.74N×72°.65E, h0^{km}, mb4.0, mpv3.8, Error ellipse: s-maj=4.4km s-min=2.4km az=1.0*

ISC 06 13:02:43.1±1.1**, 41°.51N**±0°.02×**72°.56E**±0°.02**, h10**^{km}±10^{km}**, n66, σ1^{s}.84**/113**, 37C-25D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	0.37	120	⇑*i*P	**Pb**	**13 02 51.5**	**-0.3**
ARSB				⇑*i*S	**Sb**	**13 02 57.7**	**+0.1**
ARK	**Arkit**	0.53	303	⇑*i*P	**Pg**	**13 02 53.6**	**+0.1**
ARK				⇑*i*S	**Sg**	**13 03 01.2**	**+0.6**
MNAS	**Manas**	0.98	357	⇓*i*P	**Pg**	**13 03 00.0**	**-1.9**
MNAS				⇓*i*S	**Sg**	**13 03 12.2**	**-2.5**
OHH	**Osh**	1.00	170	⇓*i*P	**Pn**	**13 03 02.9**	**-0.3**
OHH				⇓*i*S	**Sn**	**13 03 17.2**	**-0.2**

TRKS	Terek-Say	1.07	272	⇑*i*P	Pb	13 03 03.1	-0.7
TRKS				⇑*i*S	Sg	13 03 17.7	+0.2
SALK	Salom-Alik	1.14	123	⇓*i*P	Pb	13 03 04.6	-0.3
SALK				⇓*i*S	Sn	13 03 20.2	-0.8
MRKS	Merke	1.33	22	P	Pn	13 03 06.1	-1.7
	31nm,0.2s						
MRKS				S	Sb	13 03 22.1	-3.3
	77nm,0.2s						
MRKS	Merke	1.33	22	*e*P	Pn	13 03 06.1	-1.7
	31nm,0.2s						
MRKS				*e*S	Sb	13 03 21.9	-3.5
	104nm,0.2s						
ARLS	Aral	1.36	74	⇓*i*P	Pn	13 03 07.2	-1.2
ARLS				⇓*i*S	Sb	13 03 24.8	-1.6
EKS2	Erkin-Say	1.46	38	⇑P	Pn	13 03 08.8	-1.0
	20nm,0.2s,SNR=18						
EKS2				⇓S	Sn	13 03 27.3	-1.7
	82nm,0.3s						
EKS2	Erkin-Say	1.46	38	⇑*i*P	Pn	13 03 08.2	-1.5
EKS2				⇑*i*S	Sn	13 03 26.5	-2.5
UCH	Uchtor	1.62	63	⇑P	Pn	13 03 12.4	+0.2
	36nm,0.2s,SNR=98						
UCH				⇓S	Sn	13 03 33.5	+0.1
	241nm,0.3s						
UCH	Uchtor	1.62	63	⇑*i*P	Pn	13 03 11.5	-0.7
UCH				⇑*i*S	Sn	13 03 32.2	-1.2
SFK	Sufi-Kurgan	1.66	154	⇑*i*P	Pb	13 03 13.6	-0.2
SFK				⇑*i*S	Sg	13 03 35.7	-0.7
DZA	Taraz	1.66	327	*e*P	Pb	13 03 13.5	-0.2
	106nm,0.1s						
DZA				*e*S	Sn	13 03 34.0	+0.4
	285nm,0.2s						
AAK	Ala-Archa	1.83	51	⇑P	Pn	13 03 15.6	+0.8
	36nm,0.2s,SNR=45						
AAK				⇑S	Sn	13 03 38.3	+0.3
	205nm,0.5s						
AAK	Ala-Archa	1.83	51	⇓*i*P	Pn	13 03 14.1	-0.6
AAK				⇓*i*S	Sn	13 03 36.6	-1.4
AAK	Ala-Archa	1.83	51	⇓P	Pn	13 03 15.5	+0.8
	7.6nm,0.4s						
AAK				⇓S	Sn	13 03 38.0	0.0
	35nm,0.5s						
FRU1	Bishkek	2.01	49	⇑*i*P	Pn	13 03 16.7	-0.5
FRU1				⇑*i*S	Sn	13 03 41.1	-1.4
DRK	Karamyk	2.11	196	⇑*i*P	Pb	13 03 20.3	-1.3
DRK				⇑*i*S	Sb	13 03 47.3	-0.6
KBK	Karagaybulak	2.11	56	⇑P	Pb	13 03 21.7	0.0
	41nm,0.2s,SNR=60						
KBK				⇑S	Sb	13 03 48.4	+0.4
	256nm,0.4s						
KBK	Karagaybulak	2.11	56	⇓*i*P	Pn	13 03 18.2	-0.5
KBK				⇓*i*S	Sn	13 03 43.4	-1.7
KK31	Karatay Array	2.20	317	⇑Pg	Pb	13 03 23.1	+0.1
	18nm,0.3s,baz=127,slow=14,SNR=92						
KK31				⇑Lg	Lg	13 03 52.3	
	32nm,0.3s,baz=136,slow=26,SNR=14						
CHMS	Chumysh	2.20	47	⇓P	Pb	13 03 22.5	-0.6
	32nm,0.2s,SNR=29						
CHMS				⇑S	Sb	13 03 50.4	0.0
	347nm,0.6s						
CHMS	Chumysh	2.20	47	⇑*i*P	Pn	13 03 19.3	-0.5
CHMS				⇑*i*S	Sn	13 03 45.2	-1.9
USP	Ospenovka	2.27	39	⇑P	Pb	13 03 23.0	-1.2
	35nm,0.2s,SNR=68						
USP				⇓S	Sb	13 03 51.9	-0.4
	158nm,0.3s						
USP	Ospenovka	2.27	39	⇓*i*P	Pn	13 03 19.8	-0.9
USP				⇓*i*S	Sn	13 03 46.7	-2.0
CHM	Chimkent	2.35	291	*e*P	Pg	13 03 29.5	+1.3
	75nm,0.1s						
CHM				*e*S	Sg	13 04 01.2	+2.6
	903nm,0.3s						
JNKS	Jany-Kuch	2.37	100	⇑*e*P	Pn	13 03 22.6	+0.3
JNKS				⇑*e*S	Sn	13 03 51.6	0.0
SGDS	Sogindy	2.47	38	Pg	Pb	13 03 26.3	-1.3
	30nm,0.3s						
SGDS				Lg	Lg	13 03 56.6	
	180nm,0.4s						
BRLS	Borolday	2.53	308	*e*P	Pb	13 03 29.5	+0.9
	8.7nm,0.2s						
BRLS				*e*S	Sb	13 04 02.1	+2.3
	194nm,0.5s						
TKM2	Tokmak 2	2.66	57	⇓P	Pb	13 03 29.3	-1.6
	31nm,0.2s,SNR=49						
TKM2				⇓S	Sb	13 04 02.9	-0.8
	145nm,0.3s						
TKM2	Tokmak 2	2.66	57	⇓*i*P	Pn	13 03 25.8	-0.4
TKM2				⇓*i*S	Sn	13 03 56.9	-1.7
BOOM	Boomskoye usch	2.70	68	⇑*i*P	Pn	13 03 26.6	-0.2
BOOM				⇑*i*S	Sn	13 03 58.1	-1.5
DGS	Degeres	2.94	53	*e*P	Pb	13 03 36.3	+0.6
	7.7nm,0.1s						
DGS				*e*S	Sb	13 04 13.1	+1.3
	156nm,0.3s						
KST	Kastek	2.95	58	Pg	Pb	13 03 35.8	0.0
	23nm,0.3s						
KST				Lg	Lg	13 04 12.8	
	83nm,0.4s						
KST	Kastek	2.95	58	*e*P	Pb	13 03 35.8	0.0
	11nm,0.3s						
KST				*e*S	Sb	13 04 12.8	+0.7
	189nm,0.4s						
KRBS	Karabastau	3.17	45	Pg	Pb	13 03 39.8	+0.2
	15nm,0.5s						
KRBS				Lg	Lg	13 04 19.4	
	12nm,0.2s						
KRBS	Karabastau	3.17	45	*e*P	Pb	13 03 39.8	+0.2
	15nm,0.5s						
KRBS				*e*S	Sb	13 04 19.4	+1.1
	12nm,0.2s						
KSH	Kashi	3.27	126	Pn	Pb	13 03 39.2	-2.2
KSH				Sn	Sb	13 04 22.4	+1.1
KSH				smax	smax		
	comp=N,47nm,0.9s						
KSH				smax	smax		
	comp=E,30nm,0.6s						
MTBS	Maitube	3.29	59	Pg	Pb	13 03 42.8	+1.1
	comp=E,13nm,0.2s						
MTBS				Lg	Lg	13 04 24.3	
	comp=E,45nm,0.5s						
MTBS	Maitube	3.29	59	*e*P	Pb	13 03 42.8	+1.1
	comp=E,13nm,0.2s						
MTBS				*e*S	Sb	13 04 24.3	+2.4
	comp=E,45nm,0.5s						
IZV	Izvestkoviy	3.37	62	Pg	Pb	13 03 43.4	+0.4
	comp=E,10nm,0.2s						
IZV				Lg	Lg	13 04 25.4	
	comp=E,43nm,0.3s						
IZV	Izvestkoviy	3.37	62	*e*P	Pb	13 03 43.4	+0.4
	comp=E,10nm,0.2s						
IZV				*e*S	Sb	13 04 25.4	+1.3
	comp=E,43nm,0.3s						
KDJ	Kajisay	3.51	78	⇑*i*P	Pn	13 03 37.8	0.0
KDJ				⇑*i*S	Sn	13 04 17.8	-1.7
TNSS	Tian-Shan	3.59	63	Pg	Pb	13 03 48.7	+1.8
	comp=E,3.9nm,0.5s						
TNSS				Lg	Lg	13 04 34.4	
	comp=E,9.5nm,0.3s						
TNSS	Tian-Shan	3.59	63	*e*P	Pb	13 03 48.8	+1.8
	comp=E,3.9nm,0.5s						
TNSS				*e*S	Sb	13 04 34.4	+3.6
	comp=E,9.5nm,0.3s						
KUU	Kurty	3.66	48	Pg	Pb	13 03 48.8	+0.9
	comp=E,4.4nm,0.1s						
KUU				Lg	Lg	13 04 34.6	
	comp=E,41nm,0.4s						
KUU	Kurty	3.66	48	*e*P	Pb	13 03 48.8	+0.9
	comp=E,4.4nm,0.1s						
KUU				*e*S	Sb	13 04 34.6	+2.2
	comp=E,41nm,0.4s						
KNDC	Almaty	3.68	61	Pg	Pb	13 03 49.5	+1.2
	comp=E,37nm,0.7s						
KNDC				⇑Lg	Lg	13 04 36.6	
	comp=E,112nm,0.7s						
BTLS	Baital	3.69	17	Pg	Pb	13 03 48.7	+0.3
	comp=E,12nm,0.2s						
BTLS				Lg	Lg	13 04 34.5	
	comp=E,18nm,0.4s						
BTLS	Baital	3.69	17	*e*P	Pb	13 03 48.7	+0.3
	comp=E,12nm,0.2s						
BTLS				*e*S	Sb	13 04 34.5	+1.3
	comp=E,18nm,0.4s						
KTBS	Karatobe	3.75	53	Pg	Pb	13 03 50.6	+1.1
	comp=E,6.5nm,0.3s						
KTBS				Lg	Lg	13 04 38.0	
	comp=E,0.2nm,0.2s						
KOTS	Kotyrbulak	3.79	61	Pg	Pb	13 03 51.8	+1.7
	comp=E,18nm,0.5s						
KOTS				Lg	Lg	13 04 40.0	
	comp=E,54nm,0.5s						
KOTS	Kotyrbulak	3.79	61	*e*P	Pb	13 03 51.8	+1.7
	comp=E,18nm,0.5s						
KOTS				*e*S	Sb	13 04 40.0	+3.9
	comp=E,54nm,0.5s						
SATY	Saty	4.60	68	Pg	Pg	13 04 08.5	-2.7
	comp=E,4.2nm,0.3s						
SATY				Lg	Lg	13 05 08.4	
	comp=E,22nm,0.3s						
ARXS	Arharly	4.72	53	Pg	Pb	13 04 07.9	+2.0
	comp=E,13nm,0.6s						
ARXS				Lg	Lg	13 05 07.4	
	comp=E,25nm,0.4s						
ARXS	Arharly	4.72	53	*e*P	Pb	13 04 07.9	+2.0
	comp=E,13nm,0.6s						
ARXS				*e*S	Sb	13 05 07.4	+4.6
	comp=E,25nm,0.4s						
KPKS	Kokpek	4.93	65	Pg	Pb	13 04 12.3	+2.8
	comp=E,0.5nm,0.3s						
KPKS				Lg	Lg	13 05 15.1	
	comp=E,29nm,0.6s						
KPKS	Kokpek	4.93	65	*e*P	Pb	13 04 12.3	+2.8
	comp=E,0.5nm,0.3s						
KPKS				*e*S	Sb	13 05 15.1	+6.2
	comp=E,29nm,0.6s						
UZB	Uzynbulak	5.06	69	Pg	Pb	13 04 15.8	+4.0
	comp=E,7.8nm,0.3s						
UZB				Lg	Lg	13 05 20.6	
	comp=E,16nm,0.5s						
UZB	Uzynbulak	5.06	69	*e*P	Pb	13 04 15.8	+4.0
	comp=E,7.8nm,0.3s						
UZB				*e*S	Sg	13 05 20.6	-5.0
	comp=E,16nm,0.5s						
BLB	Baldybastay	5.06	57	Pg	Pb	13 04 15.0	+3.2
	comp=E,16nm,0.3s						
BLB				Lg	Lg	13 05 19.6	
	comp=E,29nm,0.5s						
SHLS	Shalkode	5.37	70	*e*P	Pg	13 04 26.9	+0.9
	comp=E,1.1nm,0.1s						
SHLS				*e*S	Sg	13 05 39.8	+4.3
	comp=E,16nm,0.5s						
PDGK	Podgornoye	5.44	68	⇑Pg	Pb	13 04 20.3	+2.0
	comp=E,4.9nm,0.7s						
PDGK				⇑Lg	Lg	13 05 33.1	
	comp=E,21nm,0.8s						
MK31	Makanchi Array	8.76	50	Pn	Pn	13 04 52.8	+3.0
	comp=E,2.0nm,0.7s,baz=234,slow=14,SNR=8.5						
MK31				⇓Lg	Lg	13 07 16.2	
	comp=E,2.6nm,0.8s						

NEIC ***06*** *13:04:46.6, 15°.27S×175°.11W, h10^{km}*

MOS ***06*** *13:04:46.7±1.6, 15°.43S×175°.41W, h10^{km}, mb5.7/26, MS6.1/20, Error ellipse: s-maj=10.0km s-min=8.6km az=88.2*

ISC-PP ***06*** *13:04:46, 15°.26S×175°.10W, h28^{km}, Mwppsm6.2, Moment Tensor Solution. s27 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.01±.05; M$_{\theta\theta}$0.68±.14; M$_{\phi\phi}$-0.66±.16; M$_{r\theta}$0.14±.27; M$_{\theta\phi}$0.13±.14; M$_{\phi r}$0.12±.16; Fault plane solution: M$_0$2.75000×10^{18} NP1:φ$_s$130.10000°,δ74.20000°,λ1.80000°. NP2:φ$_s$39.60000°,δ88.30000°,λ164.20000°.*

IDC ***06*** *13:04:46.4±0.4, 15°.39S×175°.47W, h0^{km}, mb4.8/23, mbtmp4.8/23, MS5.8/61 Error ellipse: s-maj=19.7km s-min=13.7km az=125.0*

IPGP ***06*** *13:04:46.0, 15°.28S×175°.12W, h13^{km}, Mw6.2, Fault plane solution: NP1:φ$_s$302.00000°,δ81.00000°,λ-8.00000°. NP2:φ$_s$33.00000°,δ82.00000°,λ-171.00000°.*

NEIC ***06*** *13:04:46.6, 15°.07S×175°.00W, h12^{km}, Moment Tensor Solution. Duration: 5^{s}3 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.17; M$_{\theta\theta}$1.14; M$_{\phi\phi}$-0.97; M$_{r\theta}$-0.26; M$_{\theta\phi}$0.44; M$_{\phi r}$-0.08; Fault plane solution: M$_0$1.18000×10^{18} NP1: φ$_s$304.13000°,δ81.25000°,λ6.25000°. NP2:φ$_s$213.18000°,δ83.82000°,λ171.20000°. Principal axes: T 1.2776, Plg11.0000°, Azm168.0000°; N -0.2158, Plg79.0000°, Azm358.0000°; P -1.0618, Plg2.0000°, Azm259.0000°;*

NEIC ***06*** *13:04:46.6, 15°.27S×175°.11W, h12^{km}*

NEIC ***06*** *13:04:46.5±1.1, 15°.26S±0°.07×175°.10W±0°.05, h10^{km}±1^{km}, mb5.8/186, Ms_20 5.9/741, Mwb6.0/91, Mww6.0/12, Error ellipse: s-maj=13.3km s-min=7.6km az=153.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.02; M$_{\theta\theta}$0.66; M$_{\phi\phi}$-0.68; M$_{r\theta}$-0.33; M$_{\theta\phi}$0.78; M$_{\phi r}$-0.26; Fault plane solution: M$_0$1.12000×10^{18} NP1: φ$_s$292.01000°,δ71.86000°,λ10.16000°. NP2: φ$_s$198.82000°,δ80.35000°,λ161.59000°. Principal axes: T 1.1703, Plg20.0000°, Azm154.0000°; N -0.1182, Plg69.0000°, Azm352.0000°; P -1.0520, Plg6.0000°, Azm246.0000°;*

PMR ***06*** *13:04:47.0, 15°.22S×175°.02W, h10^{km}*

BJI ***06*** *13:04:48.6, 15°.35S×175°.41W, h10^{km}, mB6.0/47, mb5.0/57, Ms6.1/76, Ms7 5.9/73*

NOU ***06*** *13:04:50.4, 15°.47S×175°.10W, h33^{km}, ML5.9/88, Tonga Islands*

GCMT ***06*** *13:04:53.5±0.1, 15°.33S×175°.28W, h14^{km}, MW6.1/167, Moment Tensor Solution. s159,c351; s167,c612; Duration: 2^{s}7 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.19±.01; M$_{\theta\theta}$1.51±.01; M$_{\phi\phi}$-1.32±.01; M$_{r\theta}$0.08±.02; M$_{\theta\phi}$0.96±.01; M$_{\phi r}$-0.19±.02; Best double couple: M$_0$1.72500×10^{18} NP1:φ$_s$28.00000°,δ84.00000°, λ-175.00000°. NP2:φ$_s$298.00000°,δ85.00000°, λ-6.00000°. Principal axes: T 1.8050, Plg1.0000°, Azm343.0000°; N -0.1570, Plg82.0000°, Azm78.0000°; P -1.6450, Plg8.0000°, Azm253.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 06 13:04:47.1±0.2**, 15°.42S**±0°.04×**175°.17W**±0°.04**, h10**^{km}**, n1235,** σ1^{s}76/833**, mb5.6**/219**, MS5.9**/482**, 56C-70D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.61	66		Pn	13 05 40.1	-3.1
AFI	Afiamalu	3.61	66	P	Pn	13 05 41.0	-2.2
AFI	Afiamalu	3.61	66	P	Pn	13 05 40.1	-3.1
AFI	Afiamalu	3.61	66	⇑P	Pn	13 05 39.9	-3.3
NIUE	Niue	6.19	127	P	Pn	13 06 18.8	+0.2
	comp=Z,2μm,1.0s,comp=Z,0.0nm						
NIUE	Niue	6.19	127		Pn	13 06 18.5	-0.1
NIUE	Niue	6.19	127	P	Pn	13 06 19.1	+0.5
NIUE	Niue	6.19	127	⇑P	Pn	13 06 17.5	-1.1
MSVF	Nonsavu	6.90	250		Pn	13 06 28.8	+0.5
MSVF	Nonsavu	6.90	250	P	Pn	13 06 29.8	+1.4
MSVF	Nonsavu	6.90	250	*d i*P	Pn	13 06 29.2	+0.8
MSVF				MLR	MLR		
	comp=Z,141μm,15.0s						
MSVF	Nonsavu	6.90	250	⇓P	Pn	13 06 28.9	+0.5
FUNA	Funafuti	8.79	321		Pn	13 06 52.2	-2.0
FUNA	Funafuti	8.79	321	⇓P	Pn	13 06 53.0	-1.3
RAO	Raoul Island	14.00	190	LR	LR	13 12 39.1	
	comp=Z,126μm,18.7s,baz=12,slow=34						
RAO	Raoul Island	14.00	190	Pn	Pn	13 08 07.2	+1.6
RAO	Raoul Island	14.00	190	P	Pn	13 08 07.2	+1.6
RAR	Rarotonga	15.71	114	Pn	Pn	13 08 27.6	-1.0
	comp=Z,1.1nm,0.3s,baz=229,slow=11,SNR=4.1						
RAR				LR	LR	13 13 18.9	
	comp=Z,11μm,19.9s,baz=291,slow=32						
RAR	Rarotonga	15.71	114		Pn	13 08 27.6	-1.0
RAR	Rarotonga	15.71	114	P	Pn	13 08 28.3	-0.3
RAR	Rarotonga	15.71	114	P	Pn	13 08 27.7	-1.0
RAR				pmax	pmax		
	comp=Z,122nm,1.0s						
RTV	Rentapao	15.90	259	P	P	13 08 33.3	-1.5
DVP	Devils Point	16.12	259	P	P	13 08 36.3	-0.9
SANVU	Saraoutou	16.99	268		P	13 08 45.6	-1.3
SANVU				IAmb	IAmb	13 08 53.9	
	comp=Z,1μm,2.0s						
SANVU	Saraoutou	16.99	268	P	P	13 08 46.6	-0.3
SANVU	Saraoutou	16.99	268	⇓P	P	13 08 46.6	-0.3
MARNC	Mare, Loyalty	17.03	247		P	13 08 45.9	-1.4
MARNC	Mare, Loyalty	17.03	247	P	P	13 08 47.1	-0.2
MARNC	Mare, Loyalty	17.03	247	⇓P	P	13 08 46.0	-1.4
PINNC	Pines Island,	17.92	244		P	13 08 56.9	-0.2
PINNC	Pines Island,	17.92	244	P	P	13 08 57.4	+0.3
YATNC	Mamie plateau,	18.22	246	P	P	13 09 02.5	+2.0
OUENC	Ouen Island, N	18.38	245	P	P	13 09 03.9	+1.7
DZM	Mont Dzumac	18.62	246	P	Pn	13 09 06.2	+1.0
	comp=Z,136nm,0.9s,baz=70,slow=18,SNR=64						
DZM				LR	LR	13 15 02.9	
	comp=Z,58μm,20.3s,baz=77,slow=34						
DZM	Mont Dzumac	18.62	246	*e*P	Pn	13 09 04.8	-0.4
	comp=Z,1μm,1.8s						
DZM				*e*S	Sn	13 12 27.2	-6.4
	comp=Z,14μm,28.2s						
DZM				*e*LR	LR	13 13 26.0	
	comp=Z,111μm,24.9s						
DZM	Mont Dzumac	18.62	246	P	Pn	13 09 04.9	-0.4
DZM				IAmb	IAmb	13 09 07.7	
	comp=Z,1μm,1.9s						
DZM	Mont Dzumac	18.62	246	P	Pn	13 09 06.3	+1.0
DZM	Mont Dzumac	18.62	246	⇑P	Pn	13 09 05.8	+0.5
ONTNC	Ouen Toro	18.68	246		Pn	13 09 06.1	+0.2
ONTNC				IAmb	IAmb	13 09 10.3	
	comp=Z,509nm,1.1s						
ONTNC	Ouen Toro	18.68	246	P	Pn	13 09 07.1	+1.2
ONTNC	Ouen Toro	18.68	246	⇑P	Pn	13 09 05.6	-0.2
KOUNC	Koumac, New Ca	20.19	252	P	Pn	13 09 23.2	-0.8
TARA	Tarawa	20.40	324	IAMs_20	IAMs_20	13 15 07.2	
	comp=Z,47μm,19.0s						
OUZ	Omahuta	22.15	205	⇓P	P	13 09 52.9	+10
TOZ	Tahuroa Road	23.71	199	P	P	13 09 59.9	+0.6
TOZ				IAmb	IAmb	13 10 22.2	
	comp=Z,416nm,1.7s						
TOZ				IAMs_20	IAMs_20	13 17 53.4	
	comp=Z,56μm,21.0s						
URZ	Urewera	23.75	195	LR	LR	13 18 47.8	
	comp=Z,57μm,18.9s,baz=17,slow=36						
URZ	Urewera	23.75	195	⇑P	P	13 10 00.8	+1.2
RTZ	Ruatahuna	24.12	195	P	P	13 10 03.1	-0.2
RTZ				IAMs_20	IAMs_20	13 19 50.2	
	comp=Z,35μm,21.0s						
PAE	Paea	24.63	99	*e*P	P	13 10 14.5	+6.6
	comp=Z,36nm,1.2s						
PAE				*e*S	S	13 14 18.2	-11
	comp=Z,764nm,22.0s						
PAE				*e*LR	LR	13 16 02.9	
	comp=Z,8μm,23.7s						
HIZ	Hauiti	24.63	199	IAMs_20	IAMs_20	13 18 34.7	
	comp=Z,40μm,20.0s						
PPT	Papeete	24.63	99	P	P	13 10 17.7	+10
	comp=Z,66nm,1.0s,baz=12,slow=12,SNR=5.3						
PPT				LR	LR	13 17 14.8	
	comp=Z,15μm,20.2s,baz=268,slow=30						
PPT2	Papeete2	24.63	99	*e*P	P	13 10 06.2	-1.9
	comp=Z,119nm,1.4s						
PPT2				*e*S	S	13 14 22.9	-6.7
	comp=Z,107μm,25.8s						
PPT2				*e*LR	LR	13 16 06.1	
	comp=Z,35μm,25.8s						
PPT2				*e*LR	LR	13 16 06.9	
	comp=Z,53μm,25.8s						
XMAS	Kiritimati	24.67	47	P	P	13 10 08.0	-0.3
BKZ	Black Stump Fm	24.77	196	IAMs_20	IAMs_20	13 20 14.3	
	comp=Z,33μm,19.0s						
BKZ	Black Stump Fm	24.77	196	P	P	13 10 10.7	+1.6
TIAR	Tiarei	24.85	99	*e*P	P	13 10 11.9	+1.9
	comp=Z,190nm,1.1s						
TIAR				*e*LR	LR	13 16 09.2	
	comp=Z,35μm,23.7s						
TVO	Taravao	24.94	99	*e*P	P	13 10 08.9	-2.0
	comp=Z,37nm,1.1s						
TVO				*e*S	S	13 14 26.4	-8.3
	comp=Z,1μm,25.0s						
TVO				*e*LR	LR	13 16 11.8	
	comp=Z,8μm,23.5s						
SAVO	Savo Central	25.21	281	P	P	13 10 13.9	+0.6
TATA	Tatamba Isabel	25.45	283	P	P	13 10 16.9	+1.5
TBI	Tubuai	25.48	112	*e*P	P	13 10 07.9	-7.7
	comp=Z,5μm,35.0s						
TBI				*e*S	S	13 14 42.4	-0.5
	comp=Z,514μm,27.0s						
TBI				*e*LR	LR	13 16 28.8	
	comp=Z,26μm,26.8s						
TBI				*e*LR	LR	13 16 34.5	
	comp=Z,136μm,28.0s						
PMOR	Pomariorio Ree	26.32	93	*e*P	P	13 10 25.3	+2.0
	comp=Z,393nm,1.1s						
PMOR				*e*S	S	13 14 46.8	-10
	comp=Z,4μm,24.8s						
PMOR				*e*LR	LR	13 16 48.6	
	comp=Z,46μm,22.8s						
MRZ	Mangatainoka R	26.41	196	IAMs_20	IAMs_20	13 20 23.1	
	comp=Z,32μm,20.0s						
VAH	Vaihoa	26.56	93	*e*P	P	13 10 23.7	-1.8
	comp=Z,2.6nm,1.1s						
SNZO	South Karori	27.25	197	IAMs_20	IAMs_20	13 20 01.7	
	comp=Z,30μm,21.0s						
QRZ	Quartz Range	27.48	201	IAMs_20	IAMs_20	13 20 26.8	
	comp=Z,37μm,20.0s						
NNZ	Nelson	27.56	199	IAMs_20	IAMs_20	13 21 38.8	
	comp=Z,32μm,21.0s						
THZ	Tophouse	28.20	199	IAMs_20	IAMs_20	13 22 08.9	
	comp=Z,40μm,19.0s						
LTZ	Lake Taylor	29.32	199	IAMs_20	IAMs_20	13 23 38.6	
	comp=Z,26μm,19.0s						
GC1S	Gold Coast 1 S	31.62	241	P	P	13 11 11.0	+0.6
AUBSH	Beerwah State	31.75	244	P	P	13 11 10.9	-0.6
AUWSH	Wavell State H	31.81	243	P	P	13 11 10.9	-1.2
WKZ	Wanaka	32.23	201	IAMs_20	IAMs_20	13 23 59.3	
	comp=Z,35μm,21.0s						
TW1H	Toowoomba 1 Ha	32.77	243	P	P	13 11 21.1	+0.5
MLZ	Mavora Lakes	33.01	202	IAMs_20	IAMs_20	13 23 37.1	
	comp=Z,23μm,19.0s						
EIDS	Eidsvold	33.06	247	P	P	13 11 22.4	-0.8
	comp=Z,20nm,1.1s						
EIDS	Eidsvold	33.06	247	P	P	13 11 22.0	-1.1
EIDS	Eidsvold	33.06	247	P	P	13 11 23.0	-0.1
EIDS	Eidsvold	33.06	247	⇓P	P	13 11 22.0	-1.1
WHZ	Wether Hill Ro	33.53	202	IAMs_20	IAMs_20	13 24 50.7	
	comp=Z,28μm,18.0s						
ARMA	Armidale	33.88	238	P	P	13 11 29.6	-0.7
	comp=Z,42nm,1.1s,comp=Z,0.0nm						
ARMA	Armidale	33.88	238	P	P	13 11 30.1	-0.2
ARMA	Armidale	33.88	238	P	P	13 11 29.8	-0.5
ARMA	Armidale	33.88	238	⇑P	P	13 11 29.9	-0.3
RABL	Rabaul	34.01	286	P	P	13 11 30.4	-1.1
RABL				IAmb	IAmb	13 12 18.5	
	comp=Z,71nm,0.5s						
PATS	Pohnpei	34.34	308	P	P	13 11 35.4	+1.1
AUPHS	Peel High Scho	34.70	237	P	P	13 11 36.8	-0.5
TAOE	Nuku Hiva Isla	34.82	83	*e*P	P	13 11 30.1	-8.5
	comp=Z,742nm,24.9s						
TAOE	Nuku Hiva Isla	34.82	83	*e*PP	PP	13 12 51.1	-6.5
	comp=Z,1μm,25.2s						
TAOE				*e*S	S	13 16 59.5	-10
	comp=Z,3μm,28.0s						
TAOE				*e*LQ	LQ	13 19 08.5	
	comp=Z,10μm,27.6s						
TAOE				*e*LR	LR	13 20 51.0	
	comp=Z,52μm,24.3s						
TV1H	Townsville Har	36.46	258	P	P	13 11 52.5	0.0
AULRC	Lightning Ridg	36.64	241	P	P	13 11 53.1	-0.8
AUDCS	Dubbo College	36.88	237	P	P	13 11 56.7	+0.7
CTA	Charters Tower	36.97	257	LR	LR	13 25 27.3	
	comp=Z,382nm,19.4s,baz=72,slow=34						
CTAO	Charters Tower	36.97	257	P	P	13 11 55.8	-1.1
CTAO	Charters Tower	36.97	257	P	P	13 11 56.4	-0.5
CTAO	Charters Tower	36.97	257	P	P	13 11 55.8	-1.1
CTAO				pmax	pmax		
	comp=Z,54nm,1.3s						
CTAO	Charters Tower	36.97	257	⇑P	P	13 11 55.5	-1.4
PMG	Port Moresby	37.23	275	LR	LR	13 23 38.5	
	comp=Z,19μm,22.0s,baz=80,slow=31						
PMG	Port Moresby	37.23	275	P	P	13 11 59.0	-0.2
PMG				IAmb	IAmb	13 12 07.4	
	comp=Z,261nm,1.2s						
PMG	Port Moresby	37.23	275	P	P	13 11 59.2	+0.1
PMG	Port Moresby	37.23	275	P	P	13 11 59.3	+0.1
PMG	Port Moresby	37.23	275	*d i*P	P	13 11 59.2	+0.1
PMG				pmax	pmax		
	comp=Z,231nm,1.2s						
PMG				MLR	MLR		
	comp=Z,16μm,17.0s						
PMG	Port Moresby	37.23	275	⇓P	P	13 11 59.2	+0.1
CNB	Canberra Magne	37.40	231	P	P	13 11 59.8	-0.7
	comp=Z,61nm,2.0s						
CNB	Canberra Magne	37.40	231	P	P	13 12 01.1	+0.7
AUSIS	Research Schoo	37.58	232	P	P	13 12 03.9	+2.0
AUMHS	Melrose High S	37.62	231	P	P	13 12 03.9	+1.6
CAN	Canberra	37.67	232	IAMs_20	IAMs_20	13 27 38.3	
	comp=Z,17μm,19.0s						
YNG	Young	37.76	233	P	P	13 12 02.4	-1.0

	comp=Z,19nm,2.0s						
H11S2	WAKE ISLAND Hy	38.13	331	T	T	13 52 31.7	
	baz=150,slow=75,SNR=36						
H11S3	WAKE ISLAND Hy	38.14	331	T	T	13 52 37.2	
	baz=150,slow=75,SNR=18						
H11S1	WAKE ISLAND Hy	38.15	331	T	T	13 52 30.0	
	baz=150,slow=75,SNR=14						
RKT	Rikitea	38.62	108	eP	P	13 12 02.6	-8.1
	comp=Z,2µm,28.2s						
RKT				eS	S	13 18 08.9	+1.6
	comp=Z,27µm,29.2s						
RKT				eSS	SS	13 20 58.4	+1.0
	comp=Z,72µm,26.0s						
RKT				eLR	LR	13 22 37.4	
	comp=Z,71µm,27.5s						
MTSU	Mount Surprise	38.83	260	P	P	13 12 11.5	-1.1
	comp=Z,30nm,0.9s						
MTSU	Mount Surprise	38.83	260	P	P	13 12 11.5	-1.1
CMSA	Cobar Meteorol	39.08	239	P	P	13 12 13.2	-1.3
	comp=Z,71nm,1.0s						
CMSA	Cobar Meteorol	39.08	239	P	P	13 12 13.9	-0.7
H11N3	WAKE ISLAND Hy	39.11	333	T	T	13 53 37.6	
	baz=152,slow=76,SNR=35						
H11N1	WAKE ISLAND Hy	39.11	333	T	T	13 53 44.3	
	baz=152,slow=76,SNR=59						
H11N2	WAKE ISLAND Hy	39.13	333	T	T	13 53 39.0	
	baz=152,slow=76,SNR=37						
QLP	Quilpie	39.34	247	P	P	13 12 15.4	-1.4
	comp=Z,93nm,1.4s,comp=Z,0.0nm						
QLP	Quilpie	39.34	247	P	P	13 12 15.6	-1.2
COEN	Coen	40.28	266	P	P	13 12 23.8	-0.9
	comp=Z,81nm,1.1s,comp=Z,0.0nm						
COEN	Coen	40.28	266	P	P	13 12 23.9	-0.9
COEN	Coen	40.28	266	P	P	13 12 24.2	-0.5
COEN	Coen	40.28	266	⇑P	P	13 12 23.7	-1.1
TOO	Toolangi	41.14	230	P	P	13 12 31.6	-0.1
	comp=Z,32nm,2.1s						
TOO	Toolangi	41.14	230	P	P	13 12 31.4	-0.2
TOO	Toolangi	41.14	230	⇓P	P	13 12 33.6	+1.9
BRAT	Ballarat	42.29	231	P	P	13 12 42.8	+1.8
AUMTC	Mt Clear Colle	42.35	231	P	P	13 12 42.3	+0.8
STKA	Stephens Creek	42.55	240	P	P	13 12 42.8	-0.4
	comp=Z,263nm,0.4s						
STKA	Stephens Creek	42.55	240	P	P	13 12 42.1	-1.1
	comp=Z,29nm,0.9s,baz=67,slow=8.4,SNR=25						
STKA				LR	LR	13 31 21.1	
	comp=Z,13µm,18.1s,baz=76,slow=38						
	comp=Z,29nm,0.9s						
STKA	Stephens Creek	42.55	240	P	P	13 12 42.6	-0.6
STKA	Stephens Creek	42.55	240	P	P	13 12 42.9	-0.4
STKA	Stephens Creek	42.55	240	d iP	P	13 12 42.0	-1.2
INKA	Innaminka	42.58	246	P	P	13 12 42.6	-0.8
QIS	Mount Isa	43.21	256	P	P	13 12 47.1	-1.6
QIS	Mount Isa	43.21	256	P	P	13 12 47.2	-1.6
MIDW	Midway	43.42	357	IAMs_20	IAMs_20	13 26 05.1	
	comp=Z,21µm,22.0s						
ARPS	Mount Arapiles	43.62	233	P	P	13 12 50.5	-1.3
	comp=Z,48nm,1.9s						
HTT	Hallett	45.08	238	P	P	13 13 03.0	-0.7
	comp=Z,28nm,2.0s						
HTT	Hallett	45.08	238	P	P	13 13 03.2	-0.4
HTT	Hallett	45.08	238	⇑P	P	13 13 03.2	-0.4
AUMBR	Murray Bridge	45.17	236	P	P	13 13 03.9	-0.3
AUJCS	Jamestown Cent	45.29	238	P	P	13 13 05.4	+0.1
JAY	Jayapura	45.32	282	LR	LR	13 30 26.5	
	comp=Z,7µm,21.0s,baz=92,slow=34						
AUMAR	Marden Senior	45.63	236	P	P	13 13 09.1	+1.2
GENI	Genyem	45.80	282	P	P	13 13 10.5	+1.0
GENI	Genyem	45.80	282	P	P	13 13 09.4	-0.1
	comp=Z,5µmcomp=Z,5µmcomp=Z,126nm,2.7s						
WHYH	Whyalla	46.11	239	P	P	13 13 13.2	+1.5
BBOO	Buckleboo	47.33	239	P	P	13 13 20.2	-1.1
	comp=Z,68nm,1.6s,comp=Z,0.0nm						
BBOO	Buckleboo	47.33	239	P	P	13 13 20.1	-1.1
BBOO				IAmb	IAmb	13 13 29.7	
	comp=Z,66nm,1.0s						
BBOO	Buckleboo	47.33	239	P	P	13 13 21.3	0.0
WR0	Warramunga Arr	47.99	257	P	P	13 13 24.1	-2.5
	comp=Z,53nm,1.6s						
WB0	Warramunga Arr	48.14	257	P	P	13 13 25.4	-2.3
WB0				IAmb	IAmb	13 13 28.4	
	comp=Z,92nm,1.2s						
WB9	Warramunga Arr	48.14	257	P	P	13 13 25.3	-2.5
	comp=Z,87nm,1.6s						
WB2	Warramunga Arr	48.16	257	P	P	13 13 26.0	-2.0
	comp=Z,85nm,1.6s						
WRAB	Tennant Creek	48.17	257	P	P	13 13 25.8	-2.2
WRAB	Tennant Creek	48.17	257	P	P	13 13 25.5	-2.5
WRAB	Tennant Creek	48.17	257	d iP	P	13 13 25.4	-2.5
WRAB				pmax	pmax		
	comp=Z,164nm,2.3s						
WB1	Warramunga Ar.	48.17	257	P	P	13 13 25.7	-2.3
WR1	Warramunga Arr	48.18	257	P	P	13 13 25.9	-2.1
	comp=Z,90nm,1.6s						
WRA	Warramunga Arr	48.18	257	P	P	13 13 25.7	-2.3
	comp=Z,28nm,0.9s,baz=91,slow=7.8,SNR=87						
WRA				LR	LR	13 32 27.7	
	comp=Z,5µm,18.7s,baz=97,slow=35						
	comp=Z,28nm,0.9s						
WRA	Warramunga Arr	48.18	257	P	P	13 13 25.1	-3.0
AS31	Alice Springs	48.48	252	P	P	13 13 29.1	-1.3
ASAR	Alice Springs	48.48	252	P	P	13 13 28.2	-2.2
	comp=Z,69nm,0.8s,baz=85,slow=7.9,SNR=269						
ASAR				PcP	PcP	13 14 57.1	+0.5
	comp=Z,4.7nm,0.9s,baz=89,slow=3.4,SNR=1.7						
ASAR				LR	LR	13 31 53.3	
	comp=Z,35µm,21.6s,baz=88,slow=34						
	comp=Z,69nm,0.8s						
ASAR	Alice Springs	48.48	252	P	P	13 13 28.5	-1.9
ASAR	Alice Springs	48.48	252	P	P	13 13 28.5	-1.9
AUALC	St Philip's Co	48.50	252	P	P	13 13 29.1	-1.4
GUMO	Guam	48.92	304	LR	LR	13 31 04.1	
	comp=Z,7µm,20.6s,baz=116,slow=32						
BAKI	Biak	50.09	282	P	P	13 13 42.9	+0.1
	comp=Z,3µmcomp=Z,89nm,1.1s						
KDU	Kakadu	50.77	266	P	P	13 13 47.3	-0.5
	comp=Z,29nm,2.8s						
MTN	Manton Dam	52.03	266	P	P	13 13 56.4	-0.9
	comp=Z,37nm,1.1s,comp=Z,0.0nm						
MTN	Manton Dam	52.03	266	P	P	13 13 55.9	-1.4
DRS	Darwin Rock St	52.32	266	P	P	13 14 00.6	+1.1
SAUI	Saumlaki	52.82	272	P	P	13 14 02.0	-1.3
SAUI				IAmb	IAmb	13 14 14.9	
	comp=Z,134nm,0.9s						
SAUI	Saumlaki	52.82	272	P	P	13 14 03.6	+0.3
SAUI	Saumlaki	52.82	272	P	P	13 14 03.1	-0.2
FAKI	Fak Fak	53.23	278	P	P	13 14 04.7	-1.6
FAKI	Fak Fak	53.23	278	P	P	13 14 06.8	+0.6
FAKI	Fak Fak	53.23	278	P	P	13 14 04.2	-2.0
	comp=Z,3µmcomp=Z,2µmcomp=Z,38nm,2.2s						
WRKA	Warakurna	53.58	250	P	P	13 14 07.4	-1.4
	comp=Z,28nm,1.5s						
KNRA	Kununurra	53.87	262	P	P	13 14 09.9	-1.0
	comp=Z,39nm,2.4s						
KNRA	Kununurra	53.87	262	P	P	13 14 09.3	-1.6
FORT	Forrest	53.89	243	P	P	13 14 08.8	-2.1
	comp=Z,40nm,1.6s,comp=Z,0.0nm						
FORT	Forrest	53.89	243	P	P	13 14 08.7	-2.1
SWI	Sorong	54.78	280	P	P	13 14 17.5	-0.1
	comp=Z,2µmcomp=Z,91nm,1.2s						
BNDI	Bandanaira	55.02	275	P	P	13 14 20.9	+1.6
BNDI	Bandanaira	55.02	275	P	P	13 14 19.0	-0.3
	comp=Z,3µmcomp=Z,111nm,1.3s						
MSAI	Masohi	56.28	276	P	P	13 14 29.0	+0.6
	comp=Z,52nm,0.9s						
FITZ	Fitzroy Crossi	56.53	258	P	P	13 14 29.3	-0.8
	comp=Z,9.2nm,2.2s						
FITZ	Fitzroy Crossi	56.53	258	LR	LR	13 36 15.7	
	comp=Z,21µm,21.8s,baz=100,slow=34						
FITZ	Fitzroy Crossi	56.53	258	P	P	13 14 29.2	-1.0
FITZ	Fitzroy Crossi	56.53	258	P	P	13 14 30.0	-0.1
FITZ	Fitzroy Crossi	56.53	258	⇓P	P	13 14 29.1	-1.0
KRAI	Karang Ratu	56.80	276	P	P	13 14 32.3	+0.2
	comp=Z,3µmcomp=Z,3µmcomp=Z,47nm,1.2s						
AAI	Ambon	56.89	276	P	P	13 14 32.6	-0.1
	comp=Z,2µmcomp=Z,71nm,1.2s						
NLAI	Namlea	58.06	276	P	P	13 14 39.7	-1.3
	comp=Z,3µmcomp=Z,2µmcomp=Z,67nm,1.3s						
TNTI	Ternate	58.99	280	P	P	13 14 46.4	-1.1
TNTI				IAmb	IAmb	13 15 19.8	
	comp=Z,155nm,1.7s						
TNTI	Ternate	58.99	280	P	P	13 14 47.8	+0.3
	comp=Z,2µmcomp=Z,41nm,1.6s						
JCJ	Chichijima	59.15	315	LR	LR	13 35 45.4	
	comp=Z,14µm,20.6s,baz=134,slow=32						
SOEI	Soe	59.22	268	P	P	13 14 49.2	0.0
SOEI	Soe	59.22	268	P	P	13 14 49.3	0.0
SOEI				IAMs_20	IAMs_20	13 38 11.7	
	comp=Z,10µm,21.0s						
SOEI	Soe	59.22	268	P	P	13 14 50.5	+1.3
SOEI	Soe	59.22	268	P	P	13 14 49.8	+0.6
SANI	Sanana	59.46	277	P	P	13 14 48.1	-2.7
SANI	Sanana	59.46	277	P	P	13 14 49.2	-1.6
SANI	Sanana	59.46	277	P	P	13 14 49.1	-1.7
	comp=Z,3µmcomp=Z,2µmcomp=Z,47nm,1.7s						
SANI	Sanana	59.46	277	⇑P	P	13 14 49.5	-1.2
BATI	Baumata	59.71	267	LR	LR	13 39 08.6	
	comp=Z,11µm,19.9s,baz=119,slow=35						
BATI	Baumata	59.71	267	P	P	13 14 52.9	+0.4
	comp=Z,57nm,1.5s						
MMRI	Maumere	61.42	268	P	P	13 15 03.2	-0.9
MMRI				IAmb	IAmb	13 15 30.4	
	comp=Z,123nm,1.5s						
MMRI	Maumere	61.42	268	P	P	13 15 04.9	+0.8
MMRI	Maumere	61.42	268	P	P	13 15 02.3	-1.8
	comp=Z,3µmcomp=Z,3µmcomp=Z,50nm,1.2s						
PSAC2	Pilbara Seismi	61.51	254	P	P	13 15 03.6	-1.1
	comp=Z,53nm,0.9s						
PSAB3	Pilbara Seismi	61.55	254	P	P	13 15 04.2	-0.7
	comp=Z,57nm,1.7s						
PSA00	Pilbara Seismi	61.56	254	P	P	13 15 04.0	-1.0
	comp=Z,63nm,0.9s						
PSA00	Pilbara Seismi	61.56	254	P	P	13 15 03.5	-1.6
PSA00	Pilbara Seismi	61.56	254	P	P	13 15 02.6	-2.4
PSAC1	Pilbara Seismi	61.60	254	P	P	13 15 04.6	-0.6
	comp=Z,56nm,0.8s						
MBWA	Marble Bar	61.72	254	P	P	13 15 05.3	-0.7
	comp=Z,48nm,2.3s,comp=Z,0.0nm						
MBWA	Marble Bar	61.72	254	P	P	13 15 04.2	-1.8
MBWA				IAmb	IAmb	13 15 13.5	
	comp=Z,123nm,1.7s						
MBWA	Marble Bar	61.72	254	P	P	13 15 04.9	-1.2
MBWA	Marble Bar	61.72	254	⇓P	P	13 15 04.6	-1.5
RPN	Rapa Nui	61.86	113	LR	LR	13 34 41.5	
	comp=Z,6µm,21.8s,baz=269,slow=29						
EDFI	Ende, Flores	61.92	268	P	P	13 15 06.2	-1.5
	comp=Z,3µmcomp=Z,2µmcomp=Z,56nm,1.0s						
MEEK	Meekatharra	62.23	248	P	P	13 15 05.4	-4.1
MEEK	Meekatharra	62.23	248	P	P	13 15 08.9	-0.6
BASI	Baing, Sumba	62.68	266	P	P	13 15 12.9	+0.3
KLBR	Kellerberrin	62.72	242	P	P	13 15 13.1	+0.4
	comp=Z,76nm,1.0s						
KLBR	Kellerberrin	62.72	242	P	P	13 15 12.0	-0.7
DAV	Davao City (W)	62.80	286	LR	LR	13 39 33.3	
	comp=Z,4µm,21.7s,baz=107,slow=33						
DAV	Davao City (W)	62.80	286	P	P	13 15 16.0	+2.6
LUWI	Luwuk	62.83	277	P	P	13 15 13.7	+0.1
LUWI	Luwuk	62.83	277	P	P	13 15 12.8	-0.8
LUWI				IAmb	IAmb	13 15 21.4	
	comp=Z,107nm,1.2s						
SBA	Scott Base	63.10	184	P	P	13 15 14.9	+0.6
SBA	Scott Base	63.10	184	P	P	13 15 14.9	+0.6
SBA				pmax	pmax		
	comp=Z,331nm,2.0s						
NWAO	Narrogin (SRO)	63.12	241	LR	LR	13 42 48.9	
	comp=Z,14µm,18.6s,baz=88,slow=36						
VNDA	Vanda	63.19	185	P	P	13 15 17.0	+2.0
	comp=Z,12nm,0.9s,baz=356,slow=7.7,SNR=13						
VNDA				LR	LR	13 39 10.9	
	comp=Z,3µm,19.6s,baz=34,slow=33						
	comp=Z,12nm,0.9s						
VNDA	Vanda	63.19	185	P	P	13 15 15.4	+0.5
VNDA				IAmb	IAmb	13 15 26.7	
	comp=Z,69nm,1.4s						
VNDA	Vanda	63.19	185	P	P	13 15 17.0	+2.0
BLDU	Ballidu	63.66	243	P	P	13 15 18.5	-0.4
LBFI	Labuhan Bajo,	63.72	268	P	P	13 15 17.5	-2.0
	comp=Z,2µmcomp=Z,65nm,1.3s						
APSI	Ampana	63.94	277	P	P	13 15 21.2	+0.2
	comp=Z,2µmcomp=Z,70nm,1.3s						
WBSI	Waikabubak, Su	63.94	267	P	P	13 15 19.9	-1.1
	comp=Z,2µmcomp=Z,2µmcomp=Z,52nm,1.0s						
MRSI	Marisa	64.07	278	P	P	13 15 20.8	-1.0
	comp=Z,3µmcomp=Z,2µmcomp=Z,28nm,1.1s						
BKSI	Bulukumba	64.24	271	P	P	13 15 21.5	-1.4
MORW	Morawa	64.33	245	P	P	13 15 23.2	-0.1
MORW	Morawa	64.33	245	P	P	13 15 22.0	-1.4
MORW				IAmb	IAmb	13 15 50.9	
	comp=Z,91nm,2.0s						
MORW	Morawa	64.33	245	P	P	13 15 22.4	-1.0
BNSI	Bone	64.48	272	P	P	13 15 24.1	-0.4
	comp=Z,2µmcomp=Z,41nm,2.1s						
JHJ	Hachijo jima 2	64.65	319	LR	LR	13 43 36.0	
	comp=Z,4µm,18.4s,baz=145,slow=36						
KAPI	Kappang	64.67	272	LR	LR	13 41 47.1	
	comp=Z,2µm,20.3s,baz=100,slow=34						
KAPI	Kappang	64.67	272	P	P	13 15 25.4	-0.4
KAPI	Kappang	64.67	272	P	P	13 15 26.8	+1.0
KAPI	Kappang	64.67	272	P	P	13 15 24.9	-0.9
KAPI	Kappang	64.67	272	d iP	P	13 15 24.8	-1.0
KAPI				pmax	pmax		
	comp=Z,99nm,4.3s						
SPSI	Sidrap Palu	64.92	273	P	P	13 15 26.5	-0.9
	comp=Z,1µmcomp=Z,23nm,1.0s						
TTSI	Tana Toraja	65.11	274	P	P	13 15 28.9	+0.2
	comp=Z,1µmcomp=Z,28nm,1.5s						
DBNI	Kabupaten Domp	65.23	268	P	P	13 15 27.1	-2.3
	comp=Z,1µmcomp=Z,35nm,1.3s						
TOLI2	Tolitoli	65.36	278	P	P	13 15 29.2	-1.0
TOLI2	Tolitoli	65.36	278	P	P	13 15 30.8	+0.5
PLAI	Plampang	65.67	267	P	P	13 15 33.2	+0.9
PLAI	Plampang	65.67	267	P	P	13 15 29.2	-3.1
	comp=Z,2µmcomp=Z,2µmcomp=Z,65nm,1.2s						
PCI	Palu	65.68	276	P	P	13 15 32.6	+0.2
	comp=Z,86nm,1.4s						
PMSI	Majene	65.86	273	P	P	13 15 33.7	+0.1
	comp=Z,2µmcomp=Z,2µmcomp=Z,61nm,1.8s						
MPSI	Mapaga	65.98	277	P	P	13 15 33.2	-1.0
	comp=Z,3µmcomp=Z,1µmcomp=Z,37nm,2.3s						
TWSI	Taliwang, Sumb	66.56	267	P	P	13 15 34.6	-3.4
	comp=Z,3µmcomp=Z,2µmcomp=Z,55nm,1.1s						
ATKA	Atka Island	67.34	1	IAMs_20	IAMs_20	13 37 59.4	
	comp=Z,10µm,21.0s						
KLNI	Mataram	67.39	267	P	P	13 15 41.1	-2.1
	comp=Z,2µmcomp=Z,39nm,2.1s						
MJAR	Matsushiro Arr	67.86	321	P	P	13 15 44.7	-1.1
	comp=Z,2.4nm,0.9s,baz=157,slow=6.8,SNR=4.4						
MJAR				LR	LR	13 39 42.4	
	comp=Z,8µm,22.0s,baz=126,slow=31						
	comp=Z,2.4nm,0.9s						
MJAR	Matsushiro Arr	67.86	321	P	P	13 15 43.3	-2.4
MAJO	Matsushiro	67.86	321	IAMs_20	IAMs_20	13 39 06.8	
	comp=Z,8µm,22.0s						
MAJO	Matsushiro	67.86	321	⇓eP	P	13 15 43.9	-1.9
MAJO				pmax	pmax		
	comp=Z,36nm,1.6s						
NIKH	Nikolski High	68.32	4	IAMs_20	IAMs_20	13 38 15.3	
	comp=Z,8µm,22.0s						
SHEM	Shemya Is, Ala	68.49	353	LR	LR	13 40 07.8	
	comp=Z,13µm,20.5s,baz=164,slow=31						
YUK	Yuzh-Kuril'sk	69.03	331	eP	P	13 15 44.2	-8.7
YUK				i		13 25 39.1	
YUK				pmax	pmax		
	comp=Z,289nm,2.0s						
YUK				pmax	pmax		
	comp=Z,310nm,1.5s						
YUK				pmax	pmax		
	comp=N,242nm,1.3s						
YUK				pmax	pmax		
	comp=E,113nm,0.9s						
JOW	Kunigami	69.12	307	LR	LR	13 40 43.2	
	comp=E,9µm,21.9s,baz=126,slow=31						
JAGI	Jajag, Banyuwa	69.25	267	P	P	13 15 53.8	-1.2
JAGI				IAmb	IAmb	13 16 13.4	
	comp=Z,52nm,1.0s						
JAGI	Jajag, Banyuwa	69.25	267	P	P	13 15 53.7	-1.2
JAGI	Jajag, Banyuwa	69.25	267	P	P	13 15 53.3	-1.6
	comp=Z,1µmcomp=Z,64nm,1.1s						
UNV	Unalaska Valle	69.38	5	IAMs_20	IAMs_20	13 38 32.3	
	comp=Z,7µm,21.0s						
UNV	Unalaska Valle	69.38	5	P	P	13 15 51.9	-2.9
	baz=189						
TGY	Tagaytay City	69.64	292	LR	LR	13 41 34.8	
	comp=Z,6µm,21.6s,baz=140,slow=32						
CASY	Casey	69.68	205	P	P	13 15 56.6	-0.1
BBKI	Banjar Baru	69.80	272	P	P	13 15 58.4	+0.1
SKR	Severo-Kuril's	70.47	341	eP	P	13 16 05.8	+4.2
SKR				eS	SKiKP	13 25 37.2	-9.1
SKR				eSSS	SSS	13 32 54.3	
SKR				pmax	pmax		
	comp=Z,523nm,3.6s						
SKR				smax	smax		
	comp=N,3µm,10.2s						
SKR				smax	smax		
	comp=E,4µm,10.4s						
SKR				pmax	pmax		
	comp=Z,8µm,16.2s						
JNU	Nakatsue	70.57	314	LR	LR	13 44 00.8	
	comp=Z,4µm,18.5s,baz=124,slow=34						
ASAJ	Asahikawa	70.67	329	LR	LR	13 42 17.7	
	comp=Z,9µm,20.7s,baz=164,slow=32						
FALS	False Pass	70.70	7	IAMs_20	IAMs_20	13 44 47.3	
	comp=Z,6µm,20.0s						
CNBA	Chernabura Isl	71.20	9	IAMs_20	IAMs_20	13 39 10.7	
	comp=Z,8µm,22.0s						
S12K	Black Hills	71.70	8	IAMs_20	IAMs_20	13 45 18.6	
	comp=Z,6µm,20.0s						
SNJI	Sawahan-Nganju	71.71	267	P	P	13 16 09.5	-0.7
	comp=Z,2µmcomp=Z,56nm,1.9s						
SJI	Sawahan	71.71	267	P	P	13 16 09.9	-0.2
	comp=Z,2µmcomp=Z,44nm,1.6s						
PET	Petropavlovsk	71.80	344	eP	P	13 16 11.8	+2.2
PET				eS	S	13 25 31.4	+1.5
PET				ePS	PnS	13 26 04.8	+5.5
PET				eSS	SS	13 30 09.9	+3.4
PET				pmax	pmax		
	comp=Z,49nm,1.3s						
P08K	Saint George I	71.90	3	IAMs_20	IAMs_20	13 40 36.9	
	comp=Z,11µm,22.0s						
PEA0B	Petropavlovsk-	72.14	343	⇑eP	P	13 16 11.7	0.0
PETK	Petropavlovsk-	72.14	343	P	P	13 16 11.8	+0.2
	comp=Z,35nm,0.9s,baz=137,slow=8.1,SNR=16						
PETK				LR	LR	13 41 46.7	
	comp=Z,12µm,21.8s,baz=149,slow=31						
	comp=Z,35nm,0.9s						
PETK	Petropavlovsk-	72.14	343	P	P	13 16 10.3	-1.4
PCJI	Pacitan	72.17	266	P	P	13 16 12.5	-0.2
HULI	Fort Hunter Li	72.20	43	IAMs_20	IAMs_20	13 40 36.8	
	comp=Z,6µm,21.0s						
FORD	Fort Ord Natur	72.23	43	IAMs_20	IAMs_20	13 40 58.4	
	comp=Z,5µm,19.0s						
SAO	San Andreas Ge	72.49	43	⇑sP	sP	13 16 19.8	+2.1
PKD	Bear Valley Ra	72.62	44	IAMs_20	IAMs_20	13 40 58.9	
	comp=Z,6µm,19.0s						
YSS	Yuzhno-Sakhali	72.66	331	IAMs_20	IAMs_20	13 46 11.9	
	comp=Z,5µm,19.0s						
YSS	Yuzhno-Sakhali	72.66	331	eP	P	13 16 17.6	+2.7
HOPS	Hopland Field	72.77	40	IAMs_20	IAMs_20	13 41 48.7	
	comp=Z,5µm,20.0s						
CHIR	Chirikof Islan	72.85	11	P	P	13 16 12.3	-3.5
	baz=200						
KCPM	Cahto Peak	72.88	39	IAMs_20	IAMs_20	13 42 50.5	
	comp=Z,6µm,19.0s						
KMRM	Mail Ridge	73.13	39	IAMs_20	IAMs_20	13 42 20.8	
	comp=Z,6µm,19.0s						
NACB	Ninganchiao	73.19	302	IAMs_20	IAMs_20	13 43 08.6	
	comp=Z,6µm,20.0s						
CPE	Camp Elliot	73.35	48	IAMs_20	IAMs_20	13 44 03.5	
	comp=Z,5µm,19.0s						
YHNB	Yeheng	73.59	302	IAMs_20	IAMs_20	13 44 59.1	
	comp=Z,7µm,21.0s						
O02D	Mt. Diablo Mer	73.66	39	IAMs_20	IAMs_20	13 42 29.2	
	comp=Z,7µm,19.0s						
ISA	Isabella, Lake	73.86	45	IAMs_20	IAMs_20	13 42 45.8	
	comp=Z,6µm,19.0s						
R16K	Pilot Point	74.16	10	IAMs_20	IAMs_20	13 40 39.8	
	comp=Z,6µm,21.0s						
PFO	Pinyon Flats O	74.19	48	LR	LR	13 43 10.9	
	comp=Z,6µm,18.5s,baz=242,slow=31						
PFO	Pinyon Flats O	74.19	48	IAMs_20	IAMs_20	13 43 35.7	
	comp=Z,7µm,18.0s						
PFO	Pinyon Flats O	74.19	48	⇑eP	P	13 16 24.4	0.0
PFO				pmax	pmax		
	comp=Z,82nm,1.5s						
LRMC	Laurel Mtn Rad	74.31	46	IAMs_20	IAMs_20	13 42 48.6	
	comp=Z,5µm,20.0s						
CTJI	Waduk Cacaban	74.37	267	P	P	13 16 26.3	+0.5
	comp=Z,4µmcomp=Z,53nm,2.7s						
R17L	Mt. Peulik Vol	74.43	10	P	P	13 16 21.9	-3.2
	baz=199						
PLK4	Peulik 4	74.43	10	IAMs_20	IAMs_20	13 42 08.8	
	comp=Z,8µm,21.0s						
WSHM	Spangler Hills	74.50	46	IAMs_20	IAMs_20	13 43 05.8	
	comp=Z,5µm,19.0s						
LPIG	La Paz	74.51	59	LR	LR	13 43 03.2	
	comp=Z,5µm,18.8s,baz=244,slow=31						
KPJI	Karang Pucung	74.54	267	P	P	13 16 26.8	+0.1
	comp=Z,2µmcomp=Z,65nm,1.5s						
UGL	Uglegorsk	74.54	332	eP	P	13 16 28.6	+2.7
UGL				eS	S	13 26 06.0	+4.9
UGL				pmax	pmax		
	comp=Z,2µm,8.8s						
UGL				smax	smax		
	comp=E,4µm,17.0s						
UGL				smax	smax		
	comp=N,2µm,19.0s						
UGL				MLR	MLR		
	comp=N,4µm,17.0s						
UGL				MLR	MLR		
	comp=E,4µm,17.0s						
UGL				MLR	MLR		
	comp=Z,5µm,18.0s						
CWC	Cottonwood Cre	74.55	45	IAMs_20	IAMs_20	13 43 28.1	
	comp=Z,6µm,20.0s						
OHAK	Old Harbor	74.62	12	P	P	13 16 26.7	+0.5
OHAK	Old Harbor	74.62	12	P	P	13 16 22.1	-4.1
	baz=202						
QSPA	South Pole Qui	74.63	180	P	P	13 16 27.9	+1.4
	comp=Z,26nm,0.9s,baz=44,slow=1.4,SNR=31						
QSPA				LR	LR	13 43 51.8	
	comp=Z,4µm,21.2s,baz=37,slow=31						
	comp=Z,26nm,0.9s						
QSPA	South Pole Qui	74.63	180	P	P	13 16 27.1	+0.6
QSPA				IAmb	IAmb	13 16 37.5	
	comp=Z,209nm,1.5s						
QSPA	South Pole Qui	74.63	180	IAMs_20	IAMs_20	13 47 29.7	
	comp=Z,6µm,19.0s						
QSPA	South Pole Qui	74.63	180	⇑P	P	13 16 27.4	+0.9
SLBS	Sierra La Lagu	74.64	60	IAMs_20	IAMs_20	13 43 39.1	
	comp=Z,5µm,18.0s						
YBH	Yreka Blue Hor	74.65	38	P	P	13 16 29.3	+2.5
	comp=Z,0.8nm,0.9s,baz=359,slow=3.4,SNR=12						
YBH				LR	LR	13 43 12.9	
	comp=Z,280nm,19.9s,baz=252,slow=31						
R18K	Karluk	74.72	11	IAMs_20	IAMs_20	13 43 59.3	
	comp=Z,6µm,19.0s						
KSRS	Korea Array	74.98	316	P	P	13 16 30.2	+1.5
	comp=Z,4.6nm,1.1s,baz=130,slow=6.9,SNR=11						
	comp=Z,4.6nm,1.1s						
KSAR	Wonju Array Be	75.00	316	P	P	13 16 27.4	-1.4
KSAR	Wonju Array Be	75.00	316	P	P	13 16 27.4	-1.4
GLA	Glamis	75.08	49	IAMs_20	IAMs_20	13 42 32.4	
	comp=Z,6µm,19.0s						
Q17K	Contact Creek	75.11	10	P	P	13 16 24.8	-4.4
	baz=199						
O14K	Tigyukauivet M	75.26	7	P	P	13 16 26.3	-3.5
	baz=194						
KDAK	Kodiak Island	75.29	12	P	P	13 16 31.7	+1.6
	comp=Z,30nm,1.2s,baz=280,slow=7.5,SNR=4.6						
KDAK				LR	LR	13 43 53.3	
	comp=Z,6µm,19.9s,baz=202,slow=31						
	comp=Z,30nm,1.2s						
KDAK	Kodiak Island	75.29	12	IAMs_20	IAMs_20	13 42 08.5	
	comp=Z,8µm,22.0s						
KDAK	Kodiak Island	75.29	12	IAmb	IAmb	13 16 40.3	
	comp=Z,116nm,1.3s						
KDAK	Kodiak Island	75.29	12	deP	P	13 16 29.3	-0.7
KDAK				pmax	pmax		
	comp=Z,212nm,2.0s						
KDAK	Kodiak Island	75.29	12	P	P	13 16 25.2	-4.8
	baz=202						
Q16K	King Salmon	75.37	10	P	P	13 16 27.7	-2.8
	baz=198						
O15K	Ungalikthiuk R	75.38	8	IAMs_20	IAMs_20	13 47 21.7	
	comp=Z,6µm,19.0s						
O15K	Ungalikthiuk R	75.38	8	P	P	13 16 28.0	-2.5
	baz=195						
FURC	Furnace Creek,	75.40	45	IAMs_20	IAMs_20	13 43 46.4	
	comp=Z,6µm,19.0s						
IRM	Iron Mountain	75.41	48	IAMs_20	IAMs_20	13 44 23.9	
	comp=Z,5µm,19.0s						
DANC	Danby, Needles	75.48	47	IAMs_20	IAMs_20	13 42 05.8	
	comp=Z,5µm,20.0s						
NVAR	Mina Array Bea	75.49	43	P	P	13 16 34.1	+2.1
	comp=Z,8.6nm,0.9s,baz=230,slow=9.3,SNR=26						
NVAR				LR	LR	13 43 17.6	
	comp=Z,5µm,19.8s,baz=238,slow=30						
	comp=Z,8.6nm,0.9s						
P16K	Nushagak River	75.50	9	P	P	13 16 28.5	-2.7
	baz=197						

Q18K	**Katmai Hardscr**	**75.63**	**11**	P	**P**	**13 16 28.3**	**-3.9**
	baz=200						
INCN	**Inchon**	**75.86**	**316**	IAMs_20	IAMs_20	13 46 26.0	
	comp=Z,6µm,20.0s						
N14K	**Kuskokwak Cree**	**75.87**	**7**	P	**P**	**13 16 30.7**	**-2.6**
	baz=193						
M11K	**Mekoryuk**	**75.88**	**5**	P	**P**	**13 16 30.4**	**-3.0**
	baz=189						
P17K	**Kvichak River**	**75.90**	**10**	IAMs_20	IAMs_20	13 47 35.5	
	comp=Z,5µm,19.0s						
P17K	**Kvichak River**	**75.90**	**10**	P	**P**	**13 16 30.2**	**-3.4**
	baz=198						
O16K	**Kokwok River B**	**76.02**	**9**	IAmb	IAmb	13 16 45.3	
	comp=Z,265nm,1.9s						
O16K				IAMs_20	IAMs_20	13 42 00.9	
	comp=Z,6µm,22.0s						
O16K	**Kokwok River B**	**76.02**	**9**	P	**P**	**13 16 31.6**	**-2.6**
	baz=197						
Q20K	**Shuyak Island**	**76.09**	**12**	P	**P**	**13 16 30.8**	**-3.9**
	baz=202						
SYI	**Shuyak Island**	**76.09**	**12**	IAMs_20	IAMs_20	13 41 59.7	
	comp=Z,6µm,22.0s						
PSTR	**Posyet**	**76.13**	**322**	⇑*e*P	**P**	**13 16 35.3**	**+0.1**
Q19K	**Cape Douglas,**	**76.14**	**11**	IAMs_20	IAMs_20	13 43 14.1	
	comp=Z,9µm,22.0s						
Q19K	**Cape Douglas,**	**76.14**	**11**	P	**P**	**13 16 31.5**	**-3.5**
	baz=201						
M13K	**Dall Lake**	**76.17**	**6**	P	**P**	**13 16 33.2**	**-1.8**
	baz=192						
P18K	**Big Mountain,**	**76.29**	**10**	IAmb	IAmb	13 16 45.3	
	comp=Z,150nm,1.3s						
P18K	**Big Mountain,**	**76.29**	**10**	P	**P**	**13 16 33.1**	**-2.8**
	baz=200						
N15K	**Kwethluk River**	**76.30**	**8**	IAMs_20	IAMs_20	13 42 13.3	
	comp=Z,7µm,22.0s						
N15K	**Kwethluk River**	**76.30**	**8**	P	**P**	**13 16 33.5**	**-2.3**
	baz=195						
O17K	**Koliganek Bris**	**76.35**	**9**	P	**P**	**13 16 33.0**	**-3.1**
	baz=198						
USRK	**Ussuriysk Ar.**	**76.38**	**324**	P	P	13 16 41.4	+4.8
	comp=Z,2.1nm,0.8s,baz=107,slow=6.6,SNR=4.9						
SSE	**Sheshan**	**76.61**	**308**	P	**P**	**13 16 38.9**	**+0.7**
SSE				S	**S**	**13 26 26.0**	**+1.1**
SSE				pmax	pmax		
	comp=Z,14nm,0.7s						
SSE				pmax	pmax		
	comp=Z,430nm,4.7s						
SSE				LR	LR		
	comp=Z,990nm,19.1s						
SSE				LR	LR		
	comp=Z,2µm,19.0s						
M14K	**Bethel**	**76.64**	**7**	P	**P**	**13 16 35.3**	**-2.4**
	baz=193,SNR=10						
O18K	**Koktuh Hills**	**76.73**	**10**	P	**P**	**13 16 36.1**	**-2.2**
O18K				IAmb	IAmb	13 16 48.3	
	comp=Z,167nm,1.3s						
O18K	**Koktuh Hills**	**76.73**	**10**	P	**P**	**13 16 35.9**	**-2.4**
	baz=200						
M15K	**Kasigluk River**	**76.74**	**7**	P	**P**	**13 16 36.4**	**-1.8**
	baz=194						
N16K	**Nishlik Lake**	**76.77**	**8**	P	**P**	**13 16 36.5**	**-2.0**
	baz=196						
P19K	**Oil Pt**	**76.90**	**11**	IAMs_20	IAMs_20	13 44 50.0	
	comp=Z,9µm,21.0s						
P19K	**Oil Pt**	**76.90**	**11**	P	**P**	**13 16 37.9**	**-1.3**
	baz=202						
N17K	**Nushagak Hills**	**77.05**	**9**	P	**P**	**13 16 38.0**	**-2.1**
	baz=198						
L14K	**Kuka Creek**	**77.14**	**6**	P	**P**	**13 16 39.6**	**-0.9**
	baz=192						
O19K	**Port Alsworth**	**77.21**	**11**	P	**P**	**13 16 38.4**	**-2.5**
	baz=200,SNR=7.1						
HOM	**Homer**	**77.21**	**12**	IAMs_20	IAMs_20	13 45 46.3	
	comp=Z,9µm,20.0s						
M16K	**Timber Creek**	**77.28**	**8**	IAMs_20	IAMs_20	13 46 42.0	
	comp=Z,6µm,20.0s						
M16K	**Timber Creek**	**77.28**	**8**	P	**P**	**13 16 39.4**	**-1.9**
	baz=196						
N18K	**Kilae Creek**	**77.40**	**10**	P	**P**	**13 16 40.0**	**-2.1**
	baz=199						
O20K	**Slope Mountain**	**77.41**	**11**	P	**P**	**13 16 40.9**	**-1.3**
	baz=202						
BRLK	**Bradley Lake**	**77.46**	**12**	IAMs_20	IAMs_20	13 45 21.5	
	comp=Z,8µm,19.0s						
BRSE	**Bradley Lake S**	**77.47**	**12**	P	**P**	**13 16 40.9**	**-1.6**
	baz=204						
K13K	**Kusilvak Mount**	**77.54**	**5**	IAMs_20	IAMs_20	13 43 18.1	
	comp=Z,6µm,22.0s						
K13K	**Kusilvak Mount**	**77.54**	**5**	P	**P**	**13 16 41.9**	**-0.8**
	baz=190						
L15K	**Ungalak Mounta**	**77.60**	**7**	P	**P**	**13 16 41.9**	**-1.2**
	baz=193,SNR=6.7						
RED	**Redoubt Volcan**	**77.70**	**11**	P	**P**	**13 16 42.2**	**-1.6**
RED				IAmb	IAmb	13 16 55.3	
	comp=Z,118nm,1.1s						
TUC	**Tucson**	**77.73**	**51**	IAMs_20	IAMs_20	13 43 12.5	
	comp=Z,8µm,20.0s						
N19K	**Bonanza Creek**	**77.76**	**10**	P	**P**	**13 16 42.6**	**-1.5**
	baz=200						
M17K	**Holitna River**	**77.85**	**9**	IAMs_20	IAMs_20	13 45 09.2	
	comp=Z,6µm,21.0s						
M17K	**Holitna River**	**77.85**	**9**	P	**P**	**13 16 43.9**	**-0.6**
	baz=197,SNR=6.4						
L16K	**Owhat River**	**77.87**	**8**	P	**P**	**13 16 44.1**	**-0.5**
	baz=195,SNR=8.8						
MDJ	**Mudanjiang**	**78.00**	**323**	P	**P**	**13 16 43.8**	**-1.9**
MDJ				S	**S**	**13 26 45.0**	**+5.5**
MDJ				pmax	pmax		
	comp=Z,13nm,1.8s						
MDJ				pmax	pmax		
	comp=Z,280nm,3.8s						
MDJ				LR	LR		
	comp=Z,7µm,17.9s						
MDJ				LR	LR		
	comp=Z,9µm,19.4s						
MDJ				LR	LR		
	comp=Z,18µm,23.4s						
SEW	**Seward**	**78.07**	**13**	IAMs_20	IAMs_20	13 44 04.1	
	comp=Z,5µm,21.0s						
SEW	**Seward**	**78.07**	**13**	P	**P**	**13 16 44.9**	**-0.8**
	baz=205						
MID	**Middleton Isla**	**78.18**	**15**	IAMs_20	IAMs_20	13 45 44.0	
	comp=Z,7µm,18.0s						
M18K	**Stony River**	**78.18**	**9**	P	**P**	**13 16 45.8**	**-0.5**
	baz=199						
K15K	**Wolf Creek Mou**	**78.20**	**6**	P	**P**	**13 16 45.9**	**-0.5**
	baz=193						
SLKM	**Skilak Lake**	**78.28**	**12**	IAmb	IAmb	13 16 56.8	
	comp=Z,109nm,1.1s						
SLKM				IAMs_20	IAMs_20	13 45 47.6	
	comp=Z,5µm,21.0s						
GRNR	**Gornyy**	**78.32**	**331**	⇑*i*P	**P**	**13 16 50.0**	**+2.7**
GRNR				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GRNR				MLR	MLR		
	comp=E,2µm,20.0s						
GRNR				MLR	MLR		
	comp=N,2µm,18.0s						
GRNR				MLR	MLR		
	comp=Z,2µm,17.0s						
O22K	**Cooper Landing**	**78.36**	**13**	IAMs_20	IAMs_20	13 44 35.7	
	comp=Z,6µm,22.0s						
O22K	**Cooper Landing**	**78.36**	**13**	P	**P**	**13 16 46.7**	**-0.6**
	baz=205						
P23K	**Montague Islan**	**78.43**	**14**	IAMs_20	IAMs_20	13 44 19.6	
	comp=Z,8µm,20.0s						
P23K	**Montague Islan**	**78.43**	**14**	P	**P**	**13 16 45.8**	**-1.9**
	baz=207						
L17K	**Donlin**	**78.44**	**8**	P	**P**	**13 16 47.0**	**-0.8**
	baz=196						
J14K	**Nanvaranak Lak**	**78.44**	**5**	IAMs_20	IAMs_20	13 44 06.9	
	comp=Z,5µm,21.0s						
J14K	**Nanvaranak Lak**	**78.44**	**5**	P	**P**	**13 16 47.3**	**-0.4**
	baz=191						
SPCR	**Spurr Chakacha**	**78.53**	**11**	P	**P**	**13 16 46.9**	**-1.5**
	baz=202						
SPU	**Mount Spurr**	**78.54**	**11**	IAmb	IAmb	13 16 59.7	
	comp=Z,141nm,1.9s						
BBB	**Bella Bella**	**78.67**	**27**	P	**P**	**13 16 50.2**	**+1.0**
	comp=Z,8.9nm,0.9s,baz=207,slow=6.8,SNR=1.5						
BBB				LR	LR	13 44 34.7	
	comp=Z,3µm,19.2s,baz=234,slow=30						
	comp=Z,8.9nm,0.9s						
ELK	**Elko**	**78.73**	**42**	LR	LR	13 44 58.4	
	comp=Z,4µm,20.3s,baz=246,slow=31						
ELK	**Elko**	**78.73**	**42**	⇓P	**P**	**13 16 53.0**	**+2.8**
L18K	**Granite Mounta**	**78.74**	**9**	IAMs_20	IAMs_20	13 49 06.8	
	comp=Z,6µm,19.0s						
L18K	**Granite Mounta**	**78.74**	**9**	P	**P**	**13 16 49.1**	**-0.3**
	baz=198						
WUAZ	**Wupatki**	**78.78**	**48**	IAMs_20	IAMs_20	13 46 30.1	
	comp=Z,5µm,18.0s						
WUAZ	**Wupatki**	**78.78**	**48**	⇑P	**P**	**13 16 54.7**	**+4.3**
NJ2	**Nanjing**	**78.82**	**308**	*e*P	**P**	**13 16 50.2**	**-0.3**
NJ2				S	**S**	**13 26 54.1**	**+5.4**
NJ2				SS	**SS**	**13 31 49.7**	**-4.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				LR	LR		
	comp=Z,3µm,20.8s						
NJ2				LR	LR		
	comp=Z,3µm,24.7s						
NJ2				LR	LR		
	comp=Z,7µm,22.1s						
RC01	**Rabbit Creek A**	**78.91**	**12**	IAmb	IAmb	13 17 05.6	
	comp=Z,277nm,2.0s						
RC01	**Rabbit Creek A**	**78.91**	**12**	P	**P**	**13 16 49.1**	**-1.2**
	baz=205						
GAMB	**Gambell**	**78.99**	**2**	IAMs_20	IAMs_20	13 44 23.4	
	comp=Z,9µm,22.0s						
GAMB	**Gambell**	**78.99**	**2**	P	**P**	**13 16 50.8**	**+0.1**
	baz=183						
L19K	**White Mountain**	**78.99**	**10**	P	**P**	**13 16 50.6**	**-0.2**
	baz=200						
K17K	**Iditarod**	**79.00**	**8**	IAmb	IAmb	13 17 01.4	
	comp=Z,129nm,1.2s						
K17K	**Iditarod**	**79.00**	**8**	P	**P**	**13 16 50.6**	**-0.2**
	baz=196,SNR=9.3						
M20K	**Styx River**	**79.00**	**10**	IAmb	IAmb	13 17 02.6	
	comp=Z,100nm,1.5s						
M20K				IAMs_20	IAMs_20	13 45 46.5	
	comp=Z,5µm,20.0s						
M20K	**Styx River**	**79.00**	**10**	P	**P**	**13 16 50.2**	**-0.7**
	baz=202						
PWL	**Port Wells**	**79.00**	**13**	IAmb	IAmb	13 17 02.6	
	comp=Z,108nm,1.3s						
PWL				IAMs_20	IAMs_20	13 45 42.5	
	comp=Z,6µm,20.0s						
PWL	**Port Wells**	**79.00**	**13**	P	**P**	**13 16 49.6**	**-1.3**
	baz=206,SNR=12						
CRAG	**Craig**	**79.01**	**23**	P	**P**	**13 16 48.8**	**-2.1**
	baz=221						
SUA	**Susitna One**	**79.05**	**12**	IAmb	IAmb	13 17 04.7	
	comp=Z,62nm,1.0s						
SUA	**Susitna One**	**79.05**	**12**	P	**P**	**13 16 50.6**	**-0.7**
	baz=204,SNR=15						
KAIM	**Kayak Island**	**79.09**	**15**	IAMs_20	IAMs_20	13 43 29.1	
	comp=Z,9µm,20.0s						
KAIM	**Kayak Island**	**79.09**	**15**	P	**P**	**13 16 50.4**	**-0.9**
	baz=210						
KASI	**Kota Agung**	**79.25**	**267**	P	**P**	**13 16 51.8**	**-1.5**
	comp=Z,1µmcomp=Z,56nm,1.1s						
J16K	**Anvik River**	**79.27**	**7**	IAmb	IAmb	13 17 02.9	
	comp=Z,132nm,1.1s						
J16K	**Anvik River**	**79.27**	**7**	P	**P**	**13 16 52.5**	**+0.3**
	baz=194,SNR=20						
HAWA	**Hanford**	**79.27**	**36**	⇑P	P	13 16 58.0	+5.3
GLI	**Glacier Island**	**79.29**	**14**	IAmb	IAmb	13 17 02.0	
	comp=Z,89nm,1.1s						
GLI				IAMs_20	IAMs_20	13 45 49.3	
	comp=Z,7µm,20.0s						
GLI	**Glacier Island**	**79.29**	**14**	P	**P**	**13 16 52.1**	**-0.4**
	baz=207						
EYAK	**Cordova Ski Ar**	**79.31**	**14**	P	**P**	**13 16 54.0**	**+1.5**
EYAK	**Cordova Ski Ar**	**79.31**	**14**	P	**P**	**13 16 51.7**	**-0.9**
	baz=209						
SKT	**Skwentna**	**79.37**	**11**	IAMs_20	IAMs_20	13 46 58.5	
	comp=Z,6µm,20.0s						
SKT	**Skwentna**	**79.37**	**11**	P	**P**	**13 16 52.4**	**-0.5**
	baz=203						
SIT	**Sitka**	**79.44**	**21**	P	**P**	**13 16 52.4**	**-0.8**
	baz=219						
M22K	**Willow**	**79.44**	**12**	IAmb	IAmb	13 17 09.9	
	comp=Z,164nm,1.1s						
M22K				IAMs_20	IAMs_20	13 46 30.1	
	comp=Z,7µm,19.0s						
M22K	**Willow**	**79.44**	**12**	P	**P**	**13 16 53.1**	**-0.1**
	baz=204,SNR=8.5						
KNK	**Knik Glacier**	**79.47**	**13**	IAmb	IAmb	13 17 05.5	
	comp=Z,87nm,1.2s						
KNK				IAMs_20	IAMs_20	13 44 57.0	
	comp=Z,6µm,20.0s						
KNK	**Knik Glacier**	**79.47**	**13**	P	**P**	**13 16 52.2**	**-1.3**
	baz=206						
V35K	**Ketchikan**	**79.48**	**24**	P	**P**	**13 16 50.9**	**-2.7**
	baz=222						
PMR	**Palmer**	**79.49**	**12**	IAmb	IAmb	13 17 05.5	
	comp=Z,109nm,1.4s						
PMR	**Palmer**	**79.49**	**12**	P	**P**	**13 16 54.1**	**+0.6**
PMR	**Palmer**	**79.49**	**12**	P	**P**	**13 16 53.6**	**+0.1**
	baz=205,SNR=7.5						
U33K	**Whale Pass**	**79.50**	**22**	IAMs_20	IAMs_20	13 43 48.9	
	comp=Z,6µm,21.0s						
U33K	**Whale Pass**	**79.50**	**22**	P	**P**	**13 16 53.2**	**-0.4**
	baz=221						
J17K	**VABM Dome**	**79.55**	**7**	IAMs_20	IAMs_20	13 49 10.2	
	comp=Z,5µm,19.0s						
J17K	**VABM Dome**	**79.55**	**7**	P	**P**	**13 16 53.5**	**-0.3**
	baz=196						
MA2	**Magadan**	**79.67**	**343**	LR	LR	13 46 10.0	
	comp=Z,10µm,21.8s,baz=154,slow=31						
MA2	**Magadan**	**79.67**	**343**	⇓*e*P	**P**	**13 16 53.6**	**-1.0**
MA2				pmax	pmax		
	comp=Z,253nm,2.8s						
BMO	**Blue Mountains**	**79.68**	**38**	⇓P	**P**	**13 16 57.5**	**+2.4**
DIV	**Divide**	**79.81**	**14**	IAmb	IAmb	13 17 05.2	
	comp=Z,79nm,1.0s						
DIV				IAMs_20	IAMs_20	13 44 51.1	
	comp=Z,8µm,21.0s						
I17K	**Unalakleet**	**79.84**	**6**	P	**P**	**13 16 55.5**	**+0.2**
	baz=194						
S31K	**Pelican**	**79.84**	**20**	P	**P**	**13 16 54.8**	**-0.7**
	baz=218						
SML	**Sawmill**	**79.85**	**13**	IAMs_20	IAMs_20	13 45 42.1	
	comp=Z,5µm,21.0s						
SML	**Sawmill**	**79.85**	**13**	P	**P**	**13 16 55.8**	**+0.3**
	baz=206						
BNX	**BinXian**	**79.92**	**323**	⇓P	**P**	**13 16 55.2**	**-1.0**
BNX				PcP	**PcP**	**13 17 02.7**	**-1.0**
BNX				S	**S**	**13 27 03.6**	**+3.8**
BNX				SS	**SS**	**13 32 12.8**	**+2.9**
BNX				pmax	pmax		
	comp=Z,19nm,1.6s						
BNX				pmax	pmax		
	comp=Z,1µm,7.3s						
BNX				LR	LR		
	comp=Z,4µm,24.9s						
BNX				LR	LR		
	comp=Z,9µm,23.9s						
BNX				LR	LR		
	comp=Z,14µm,21.7s						
J18K	**Innoko River**	**79.93**	**8**	IAmb	IAmb	13 17 09.5	
	comp=Z,183nm,1.4s						
J18K				IAMs_20	IAMs_20	13 50 05.1	
	comp=Z,7µm,20.0s						
J18K	**Innoko River**	**79.93**	**8**	P	**P**	**13 16 56.3**	**+0.4**
	baz=198						
BMRM	**Bremner River**	**79.95**	**15**	IAmb	IAmb	13 17 09.2	
	comp=Z,250nm,1.5s						
BMRM				IAMs_20	IAMs_20	13 44 42.8	
	comp=Z,7µm,20.0s						
BMRM	**Bremner River**	**79.95**	**15**	P	**P**	**13 16 55.4**	**-0.7**
	baz=210						
MESA	**MESA**	**79.95**	**16**	P	**P**	**13 16 55.2**	**-1.1**
	baz=212						
DL2	**Dalian**	**79.98**	**315**	P	**P**	**13 17 00.9**	**+4.2**
DL2				S	**S**	**13 27 04.2**	**+3.5**
DL2				pmax	pmax		
	comp=Z,51nm,1.5s						
DL2				pmax	pmax		
	comp=Z,2µm,5.4s						
DL2				LR	LR		
	comp=Z,4µm,18.1s						
DL2				LR	LR		
	comp=Z,4µm,22.7s						
DL2				LR	LR		
	comp=Z,7µm,23.5s						
CUT	**Chulitna**	**80.00**	**11**	P	**P**	**13 16 56.9**	**+0.6**
	baz=204,SNR=15						
CN2	**Changchun**	**80.01**	**321**	*e*P	**P**	**13 16 55.7**	**-1.1**
CN2				*e*S	**S**	**13 27 04.4**	**+3.5**
CN2				SS	**SS**	**13 32 07.8**	**-3.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CN2				pmax	pmax		
	comp=Z,1µm,8.1s						
CN2				LR	LR		
	comp=Z,2µm,22.0s						
CN2				LR	LR		
	comp=Z,4µm,22.0s						
CN2				LR	LR		
	comp=Z,5µm,24.6s						
WRAK	**Wrangell Islan**	**80.01**	**23**	IAMs_20	IAMs_20	13 44 37.5	
	comp=Z,5µm,20.0s						
WRAK	**Wrangell Islan**	**80.01**	**23**	P	**P**	**13 16 55.9**	**-0.6**
	baz=222						
S32K	**Killisnoo**	**80.01**	**21**	P	**P**	**13 16 55.6**	**-0.8**
	baz=220						
L22K	**Petersville**	**80.02**	**11**	P	**P**	**13 16 54.3**	**-2.2**
L22K				IAmb	IAmb	13 17 07.8	
	comp=Z,128nm,1.4s						
ANM	**Nome**	**80.09**	**4**	IAMs_20	IAMs_20	13 45 19.4	
	comp=Z,6µm,22.0s						
ANM	**Nome**	**80.09**	**4**	P	**P**	**13 16 56.8**	**+0.1**
	baz=189						
SCM	**Sheep Creek Mo**	**80.09**	**13**	P	**P**	**13 16 56.2**	**-0.7**
SCM				IAmb	IAmb	13 17 11.2	
	comp=Z,177nm,1.4s						
SCM				IAMs_20	IAMs_20	13 45 16.3	
	comp=Z,6µm,21.0s						
SCM	**Sheep Creek Mo**	**80.09**	**13**	P	**P**	**13 16 56.2**	**-0.7**
SCM				pmax	pmax		
	comp=Z,177nm,1.4s						
SCM	**Sheep Creek Mo**	**80.09**	**13**	P	**P**	**13 16 56.9**	**0.0**
	baz=207,SNR=8.5						
KLU	**Klutina**	**80.10**	**14**	IAMs_20	IAMs_20	13 46 03.7	
	comp=Z,8µm,20.0s						
KLU	**Klutina**	**80.10**	**14**	P	**P**	**13 16 56.7**	**-0.3**
	baz=208						
PPLA	**Purkeypile**	**80.10**	**10**	IAMs_20	IAMs_20	13 44 06.8	
	comp=Z,7µm,22.0s						
PPLA	**Purkeypile**	**80.10**	**10**	P	**P**	**13 16 56.1**	**-0.9**
	baz=202						
CRQM	**Cirque**	**80.13**	**15**	IAMs_20	IAMs_20	13 46 37.8	
	comp=Z,8µm,20.0s						
CRQE	**Cirque**	**80.14**	**15**	P	**P**	**13 16 56.6**	**-0.7**
	baz=211						
SNY	**Shenyang**	**80.14**	**318**	⇑P	P	13 17 02.2	+4.7
SNY				S	**SKSac**	**13 27 08.3**	**-6.9**
SNY				pmax	pmax		
	comp=Z,23nm,1.5s						
SNY				pmax	pmax		
	comp=Z,690nm,7.2s						
SNY				LR	LR		
	comp=Z,1µm,21.9s						
SNY				LR	LR		
	comp=Z,2µm,18.6s						
SNY				LR	LR		
	comp=Z,5µm,21.0s						
TGL	**Tana Glacier**	**80.21**	**15**	IAmb	IAmb	13 17 09.9	
	comp=Z,119nm,1.3s						
K20K	**Telida**	**80.22**	**9**	P	**P**	**13 16 57.8**	**+0.3**
	baz=200						
PINM	**Pinnacle**	**80.35**	**17**	P	**P**	**13 16 58.5**	**+0.1**
	baz=214						
BCPM	**Bancas Point**	**80.41**	**17**	IAMs_20	IAMs_20	13 44 01.8	
	comp=Z,9µm,21.0s						
H16K	**Elim**	**80.42**	**6**	P	**P**	**13 16 59.1**	**+0.6**
	baz=192,SNR=8.1						
VRDI	**Verde Repeater**	**80.46**	**15**	IAMs_20	IAMs_20	13 45 08.2	
	comp=Z,6µm,20.0s						
GRNC	**Granite Creek**	**80.47**	**16**	IAMs_20	IAMs_20	13 44 25.5	
	comp=Z,8µm,21.0s						
N25K	**Chitina, Valde**	**80.51**	**14**	IAmb	IAmb	13 17 11.4	
	comp=Z,76nm,1.1s						
N25K				IAMs_20	IAMs_20	13 44 40.5	
	comp=Z,7µm,21.0s						
N25K	**Chitina, Valde**	**80.51**	**14**	P	**P**	**13 16 59.4**	**+0.3**
	baz=210,SNR=17						
U35K	**Hyder**	**80.52**	**24**	IAMs_20	IAMs_20	13 43 33.0	
	comp=Z,6µm,22.0s						
GLB	**Gilahina Butte**	**80.56**	**15**	IAmb	IAmb	13 17 18.8	
	comp=Z,84nm,1.3s						
GLB				IAMs_20	IAMs_20	13 45 01.7	
	comp=Z,5µm,20.0s						
M24K	**Tolsona, Glenn**	**80.58**	**13**	IAMs_20	IAMs_20	13 47 18.5	
	comp=Z,5µm,20.0s						
M24K	**Tolsona, Glenn**	**80.58**	**13**	P	**P**	**13 16 59.5**	**0.0**
	baz=208						
J19K	**Poorman**	**80.59**	**9**	IAmb	IAmb	13 17 12.6	
	comp=Z,111nm,1.4s						
J19K				IAMs_20	IAMs_20	13 50 16.4	
	comp=Z,6µm,20.0s						
J19K	**Poorman**	**80.59**	**9**	P	**P**	**13 16 59.6**	**+0.2**
	baz=199						
G15K	**Niukluk**	**80.61**	**5**	P	**P**	**13 16 59.5**	**0.0**
	baz=191						
R32K	**Eaglecrest**	**80.66**	**20**	P	**P**	**13 16 59.1**	**-0.8**
	baz=219						
WAT6	**Susitna Watana**	**80.67**	**12**	P	**P**	**13 17 00.1**	**0.0**
	baz=207,SNR=23						
P29M	**Windy Craggy**	**80.70**	**18**	P	**P**	**13 16 59.1**	**-1.1**
	baz=216						
MCARA	**McCarthy VSAT**	**80.70**	**15**	IAMs_20	IAMs_20	13 44 22.6	
	comp=Z,6µm,21.0s						
MCARA	**McCarthy VSAT**	**80.70**	**15**	P	**P**	**13 16 59.3**	**-0.7**
	baz=211						
WAT1	**Susitna Watana**	**80.73**	**12**	P	**P**	**13 17 00.2**	**0.0**
	baz=206						
HLID	**Hailey**	**80.73**	**40**	⇑P	**P**	**13 17 03.0**	**+2.1**
EPT	**El Paso**	**80.77**	**53**	IAMs_20	IAMs_20	13 45 49.1	
	comp=Z,7µm,20.0s						
BARN	**Barnard Glacie**	**80.78**	**16**	IAmb	IAmb	13 17 16.1	
	comp=Z,102nm,1.2s						
BARN				IAMs_20	IAMs_20	13 47 08.5	
	comp=Z,8µm,21.0s						
CTG	**Chitna Glacier**	**80.78**	**16**	P	**P**	**13 17 00.1**	**-0.6**
	baz=213,SNR=7.7						
CTGM	**Chitina Glacie**	**80.78**	**16**	IAMs_20	IAMs_20	13 47 08.7	
	comp=Z,7µm,20.0s						
TNA	**Tin City**	**80.92**	**3**	IAMs_20	IAMs_20	13 47 53.4	
	comp=Z,8µm,21.0s						
TNA	**Tin City**	**80.92**	**3**	P	**P**	**13 17 01.2**	**+0.1**
	baz=187,SNR=6.0						
F14K	**Arctic Creek**	**80.92**	**4**	P	**P**	**13 17 01.4**	**+0.2**
	baz=188,SNR=6.9						
O28M	**Mount Upton**	**80.93**	**17**	IAMs_20	IAMs_20	13 44 28.6	
	comp=Z,9µm,21.0s						
O28M	**Mount Upton**	**80.93**	**17**	P	**P**	**13 17 00.7**	**-1.0**
	baz=214						
H17K	**Granite Mounta**	**80.95**	**7**	IAMs_20	IAMs_20	13 45 01.1	
	comp=Z,5µm,21.0s						
H17K	**Granite Mounta**	**80.95**	**7**	P	**P**	**13 17 01.2**	**-0.1**
	baz=195						
TRF	**Thorofare Moun**	**80.96**	**11**	IAmb	IAmb	13 17 13.1	
	comp=Z,156nm,1.4s						
TRF	**Thorofare Moun**	**80.96**	**11**	P	**P**	**13 17 01.0**	**-0.6**
	baz=204,SNR=12						
J20K	**Nowinta River**	**80.98**	**9**	IAmb	IAmb	13 17 14.1	
	comp=Z,164nm,1.6s						
J20K	**Nowinta River**	**80.98**	**9**	P	**P**	**13 17 00.8**	**-0.7**
	baz=200,SNR=10						
PLBC	**Pleasant Camp**	**80.98**	**19**	P	**P**	**13 17 00.4**	**-1.2**
	baz=218						
O29M	**Mount Kennedy**	**81.00**	**17**	P	**P**	**13 17 00.9**	**-1.0**
	baz=216						
CHUM	**Lake Minchumin**	**81.00**	**10**	P	**P**	**13 17 01.8**	**+0.2**
	baz=202,SNR=7.0						
HARP	**HAARP**	**81.07**	**14**	P	**P**	**13 17 01.0**	**-1.1**
	baz=209						
GCSA	**Galena City Sc**	**81.13**	**8**	P	**P**	**13 17 02.2**	**-0.1**
	baz=198,SNR=7.5						
G16K	**Koyuk River**	**81.15**	**5**	P	**P**	**13 17 02.0**	**-0.4**
	baz=192						
DHY	**Denali Highway**	**81.19**	**12**	P	**P**	**13 17 01.5**	**-1.3**
	baz=207						
RND	**Reindeer**	**81.19**	**12**	IAmb	IAmb	13 17 15.6	
	comp=Z,159nm,1.4s						
T35M	**Bob Quinn**	**81.21**	**23**	IAMs_20	IAMs_20	13 43 56.2	
	comp=Z,7µm,22.0s						
T35M	**Bob Quinn**	**81.21**	**23**	P	**P**	**13 17 01.2**	**-1.7**
	baz=223						
F15K	**North Star Dit**	**81.27**	**4**	IAMs_20	IAMs_20	13 45 21.6	
	comp=Z,7µm,22.0s						
F15K	**North Star Dit**	**81.27**	**4**	P	**P**	**13 17 01.9**	**-1.1**
	baz=190						
SKAG	**Skagway**	**81.31**	**19**	P	**P**	**13 17 03.4**	**+0.1**
SKAG	**Skagway**	**81.31**	**19**	P	**P**	**13 17 01.9**	**-1.4**
	baz=219						
P30M	**Million Dollar**	**81.33**	**18**	P	**P**	**13 17 01.0**	**-2.6**
	baz=217						
QIZ	**Qiongzhong**	**81.33**	**292**	IAMs_20	IAMs_20	13 46 52.0	
	comp=Z,6µm,22.0s						

QIZ	Qiongzhong	81.33	292	P	P	13 17 03.5	-0.9
QIZ				S	S	13 27 14.7	-1.0
QIZ				SS	SS	13 32 31.7	-0.3
QIZ				LR	LR		
	comp=Z,2µm,19.2s						
QIZ				LR	LR		
	comp=Z,3µm,20.6s						
QIZ				LR	LR		
	comp=Z,5µm,22.6s						
H18K	Honhosa River	81.33	7	P	P	13 17 02.9	-0.5
	baz=196						
G17K	Kiwalik Mounta	81.42	6	P	P	13 17 02.9	-0.9
	baz=194						
BPAW	Bear Paw Mtn.	81.43	10	IAMs_20	IAMs_20	13 44 46.7	
	comp=Z,6µm,22.0s						
BPAW	Bear Paw Mtn.	81.43	10	P	P	13 17 02.5	-1.5
	baz=203						
MCK	McKinley	81.47	11	P	P	13 17 03.1	-1.1
MCK				IAmb	IAmb	13 17 16.0	
	comp=Z,118nm,1.2s						
MCK	McKinley	81.47	11	P	P	13 17 03.1	-1.1
MCK				pmax	pmax		
	comp=Z,118nm,1.2s						
MCK	McKinley	81.47	11	P	P	13 17 03.0	-1.2
	baz=205,SNR=12						
YUK8	Steele Glacier	81.47	16	P	P	13 17 03.2	-1.3
	baz=214						
PAX	Paxson	81.50	13	IAMs_20	IAMs_20	13 45 58.7	
	comp=Z,7µm,21.0s						
PAX	Paxson	81.50	13	P	P	13 17 03.0	-1.4
	baz=209,SNR=6.1						
I20K	Naaghedeneel	81.51	9	P	P	13 17 03.4	-0.9
	baz=200						
HWUT	Hardware Ranch	81.56	43	IAMs_20	IAMs_20	13 46 48.4	
	comp=Z,5µm,20.0s						
HWUT	Hardware Ranch	81.56	43	⇓P	P	13 17 09.6	+4.2
S34M	Telegraph Cree	81.56	22	IAMs_20	IAMs_20	13 45 34.6	
	comp=Z,8µm,20.0s						
S34M	Telegraph Cree	81.56	22	P	P	13 17 03.2	-1.5
	baz=223						
M26K	Nabesna, AK	81.58	15	IAmb	IAmb	13 17 19.5	
	comp=Z,78nm,1.1s						
M26K				IAMs_20	IAMs_20	13 45 36.7	
	comp=Z,6µm,21.0s						
M26K	Nabesna, AK	81.58	15	P	P	13 17 03.2	-1.6
	baz=211,SNR=10						
YUK6	Outpost Mounta	81.58	17	P	P	13 17 02.9	-2.1
	baz=216						
MNTX	Cornudas Mount	81.61	54	IAMs_20	IAMs_20	13 45 55.5	
	comp=Z,5µm,20.0s						
NEW	Newport	81.69	35	⇑P	P	13 17 10.1	+4.4
YUK3	Moose Creek	81.69	16	P	P	13 17 03.9	-1.7
	baz=214,SNR=7.8						
WHN	Wuhan	81.69	305	*e*P	P	13 17 04.1	-1.9
WHN				S	S	13 27 14.6	-4.4
WHN				LR	LR		
	comp=Z,7µm,17.4s						
WHN				LR	LR		
	comp=Z,8µm,18.5s						
WHN				LR	LR		
	comp=Z,11µm,22.2s						
HYT	Haines Junctio	81.73	18	P	P	13 17 04.1	-1.7
	baz=216						
BWN	Browne	81.77	11	IAmb	IAmb	13 17 16.1	
	comp=Z,176nm,1.2s						
M27K	Edge Creek, AK	81.82	15	IAmb	IAmb	13 17 22.0	
	comp=Z,134nm,1.2s						
M27K				IAMs_20	IAMs_20	13 47 24.1	
	comp=Z,7µm,20.0s						
M27K	Edge Creek, AK	81.82	15	P	P	13 17 04.4	-1.8
	baz=212						
YUK4	Talbot Arm	81.83	17	P	P	13 17 05.0	-1.3
	baz=215						
MENT	Mentasta	81.87	14	P	P	13 17 07.4	+1.1
TIA	Tai'an	81.92	311	P	P	13 17 11.2	+4.0
TIA				S	SKSac	13 27 26.4	-1.3
TIA				pmax	pmax		
	comp=Z,11nm,1.9s						
TIA				pmax	pmax		
	comp=Z,1µm,7.7s						
TIA				LR	LR		
	comp=Z,4µm,18.5s						
TIA				LR	LR		
	comp=Z,4µm,21.3s						
TIA				LR	LR		
	comp=Z,7µm,20.3s						
H19K	Roundabout Mou	81.93	8	IAMs_20	IAMs_20	13 49 56.0	
	comp=Z,5µm,20.0s						
H19K	Roundabout Mou	81.93	8	P	P	13 17 06.3	-0.2
	baz=198,SNR=18						
P32M	Atlin	81.94	20	P	P	13 17 05.0	-1.7
	baz=220						
Q32M	Nakina River	81.94	21	P	P	13 17 05.5	-1.5
	baz=221						
G18K	Tagagawik	82.02	7	IAmb	IAmb	13 17 20.3	
	comp=Z,183nm,1.6s						
G18K	Tagagawik	82.02	7	P	P	13 17 07.0	0.0
	baz=196,SNR=8.8						
L26K	Log Cabin Wild	82.03	14	P	P	13 17 07.2	0.0
	baz=211,SNR=9.9						
MASI	Maura Aman, Be	82.03	269	P	P	13 17 07.2	-1.1
TXAR	Lajitas Array	82.04	57	P	P	13 17 11.9	+3.8
	comp=Z,9.1nm,1.2s,baz=226,slow=5.0,SNR=25						
TXAR				LR	LR	13 47 18.0	
	comp=Z,5µm,18.6s,baz=236,slow=31						
	comp=Z,9.1nm,1.2s						
SEY	Seymchan	82.10	346	LR	LR	13 49 07.1	
	comp=Z,8µm,20.4s,baz=157,slow=32						
SEY	Seymchan	82.10	346	⇓*e*P	P	13 17 07.9	+0.5
SEY				pmax	pmax		
	comp=Z,41nm,1.7s						
O30N	Mendenhall	82.11	18	P	P	13 17 06.5	-1.1
	baz=218						
H20K	Anotleneega Mo	82.11	8	P	P	13 17 07.7	+0.2
	baz=200,SNR=18						
BVCY	Beaver Creek	82.12	15	P	P	13 17 06.9	-0.7
	baz=213,SNR=9.6						
ANMO	Albuquerque	82.13	51	LR	LR	13 46 56.7	
	comp=Z,6µm,19.6s,baz=239,slow=31						
ANMO	Albuquerque	82.13	51	IAMs_20	IAMs_20	13 46 25.9	
	comp=Z,5µm,20.0s						
ANMO	Albuquerque	82.13	51	⇓P	P	13 17 11.9	+3.4
K24K	Donnelly Dome	82.17	13	IAMs_20	IAMs_20	13 48 32.4	
	comp=Z,6µm,20.0s						
K24K	Donnelly Dome	82.17	13	P	P	13 17 07.7	-0.2
	baz=208,SNR=11						
NEA2	Nenana	82.22	11	P	P	13 17 08.5	+0.4
	baz=205						
I21K	Tanana	82.26	10	IAMs_20	IAMs_20	13 47 17.5	
	comp=Z,5µm,21.0s						
I21K	Tanana	82.26	10	P	P	13 17 08.3	+0.1
	baz=202,SNR=8.1						
F17K	Baldwin Pennin	82.28	6	P	P	13 17 08.9	+0.6
	baz=193,SNR=23						
WRH	Wood River Hil	82.30	11	IAMs_20	IAMs_20	13 47 48.8	
	comp=Z,7µm,20.0s						
RIDG	Independent Ri	82.31	13	IAMs_20	IAMs_20	13 46 35.2	
	comp=Z,8µm,21.0s						
RIDG	Independent Ri	82.31	13	P	P	13 17 09.0	+0.4
	baz=209						
MLY	Manley	82.33	10	P	P	13 17 09.0	+0.4
	baz=204,SNR=11						
DLBC	Dease Lake	82.35	22	P	P	13 17 10.7	+1.7
	comp=Z,5.0nm,1.1s,baz=183,slow=13,SNR=4.6						
DLBC				LR	LR	13 46 11.2	
	comp=Z,7µm,21.2s,baz=217,slow=30						
	comp=Z,5.0nm,1.1s						
DLBC	Dease Lake	82.35	22	P	P	13 17 09.2	+0.2
	baz=224						
N30M	Aishikik Lake	82.36	17	IAMs_20	IAMs_20	13 46 51.6	
	comp=Z,8µm,20.0s						
N30M	Aishikik Lake	82.36	17	P	P	13 17 08.2	-0.8
	baz=217						
WHY	Whitehorse	82.39	19	P	P	13 17 09.0	-0.2
	baz=219						
DOT	Dot Lake	82.41	13	IAmb	IAmb	13 17 21.2	
	comp=Z,101nm,1.3s						
DOT				IAMs_20	IAMs_20	13 46 04.6	
	comp=Z,8µm,22.0s						
L27K	Beaver Creek,	82.43	15	IAmb	IAmb	13 17 21.8	
	comp=Z,145nm,1.9s						
L27K				IAMs_20	IAMs_20	13 46 35.1	
	comp=Z,6µm,21.0s						
L27K	Beaver Creek,	82.43	15	P	P	13 17 08.6	-0.6
	baz=212						
G19K	Purcell Mounta	82.44	7	IAmb	IAmb	13 17 22.8	
	comp=Z,157nm,1.4s						
G19K				IAMs_20	IAMs_20	13 51 55.4	
	comp=Z,5µm,20.0s						
G19K	Purcell Mounta	82.44	7	P	P	13 17 08.9	-0.2
	baz=197,SNR=10.0						
BCAR	Beaver Creek A	82.44	15	P	P	13 17 08.0	-1.3
HDA	Harding Lake	82.47	12	IAmb	IAmb	13 17 20.3	
	comp=Z,163nm,1.6s						
HDA				IAMs_20	IAMs_20	13 45 42.2	
	comp=Z,6µm,22.0s						
HDA	Harding Lake	82.47	12	P	P	13 17 09.2	-0.1
	baz=207,SNR=18						
HEH	HeiHe	82.48	327	*e*P	P	13 17 09.8	+0.1
HEH				pP	PcP	13 17 14.3	-0.5
HEH				S	SKSac	13 27 29.6	-1.1
HEH				pmax	pmax		
	comp=Z,23nm,1.5s						
HEH				pmax	pmax		
	comp=Z,1µm,6.1s						
HEH				LR	LR		
	comp=Z,8µm,19.8s						
HEH				LR	LR		
	comp=Z,7µm,21.0s						
HEH				LR	LR		
	comp=Z,16µm,23.7s						
CCB	Clear Creek Bu	82.51	12	IAmb	IAmb	13 17 21.3	
	comp=Z,153nm,1.4s						
CCB				IAMs_20	IAMs_20	13 47 35.4	
	comp=Z,7µm,20.0s						
H21K	Melozitna Rive	82.57	9	IAmb	IAmb	13 17 22.7	
	comp=Z,152nm,1.5s						
H21K				IAMs_20	IAMs_20	13 51 38.9	
	comp=Z,5µm,20.0s						
H21K	Melozitna Rive	82.57	9	P	P	13 17 10.3	+0.4
	baz=202						
F18K	Selawik	82.59	6	P	P	13 17 09.6	-0.3
	baz=195,SNR=7.9						
I23K	Minto, Yukon-K	82.67	11	IAmb	IAmb	13 17 23.2	
	comp=Z,211nm,1.8s						
I23K				IAMs_20	IAMs_20	13 49 12.7	
	comp=Z,7µm,20.0s						
I23K	Minto, Yukon-K	82.67	11	P	P	13 17 10.2	-0.2
	baz=205,SNR=8.8						
P33M	Teslin, Yukon	82.70	20	P	P	13 17 10.4	-0.4
	baz=221						
COLA	College	82.70	11	P	P	13 17 09.3	-1.3
COLA	College	82.70	11	IAMs_20	IAMs_20	13 48 12.5	
	comp=Z,8µm,20.0s						
COLA	College	82.70	11	P	P	13 17 11.2	+0.7
COLA	College	82.70	11	*d i*P	P	13 17 10.3	-0.2
COLA				pmax	pmax		
	comp=Z,156nm,1.4s						
COLA	College	82.70	11	⇑P	P	13 17 11.0	+0.5
COLA	College	82.70	11	P	P	13 17 10.8	+0.3
	baz=206						
SCRK	Sand Creek	82.71	13	IAmb	IAmb	13 17 23.1	
	comp=Z,234nm,2.0s						
SCRK				IAMs_20	IAMs_20	13 46 35.6	
	comp=Z,8µm,22.0s						
SCRK	Sand Creek	82.71	13	P	P	13 17 10.9	+0.1
	baz=210,SNR=28						
R33M	Jennings River	82.72	21	P	P	13 17 10.6	-0.3
	baz=223						
IMAR	Indian Mountai	82.74	9	P	P	13 17 09.3	-1.4
N31M	Braeburn, Yuko	82.77	18	P	P	13 17 10.9	-0.1
	baz=218						
M29M	Somme Creek	82.78	16	IAmb	IAmb	13 17 24.7	
	comp=Z,129nm,1.9s						
M29M				IAMs_20	IAMs_20	13 47 45.4	
	comp=Z,7µm,20.0s						
M29M	Somme Creek	82.78	16	P	P	13 17 11.0	-0.2
	baz=215						
IL31		82.80	12	IAmb	IAmb	13 17 23.8	
	comp=Z,169nm,1.5s						
ILAR	Eielson Array	82.80	12	P	P	13 17 11.6	+0.5
	comp=Z,10.0nm,1.1s,baz=226,slow=5.6,SNR=29						
ILAR				LR	LR	13 47 11.5	
	comp=Z,5µm,22.0s,baz=200,slow=31						
	comp=Z,10.0nm,1.1s						
ILAR	Eielson Array	82.80	12	P	P	13 17 10.2	-0.9
E17K	Hotham Inlet	82.85	5	P	P	13 17 11.8	+0.5
	baz=193,SNR=18						
J25K	Salcha River,	82.97	12	IAmb	IAmb	13 17 24.2	
	comp=Z,196nm,1.8s						
J25K	Salcha River,	82.97	12	P	P	13 17 12.2	+0.2
	baz=209,SNR=14						
POKR	Poker Plat Res	83.00	11	P	P	13 17 12.5	+0.3
	baz=207,SNR=19						
H22K	Ishtalitna Cre	83.02	10	IAmb	IAmb	13 17 24.5	
	comp=Z,155nm,1.6s						
H22K				IAMs_20	IAMs_20	13 48 09.6	
	comp=Z,5µm,20.0s						
H22K	Ishtalitna Cre	83.02	10	P	P	13 17 13.0	+0.8
	baz=203						
F19K	Shaleruckik Mo	83.02	7	P	P	13 17 13.5	+1.4
	baz=197						
O20A	White River Ci	83.10	45	IAMs_20	IAMs_20	13 46 57.3	
	comp=Z,5µm,20.0s						
K27K	Chicken	83.19	14	IAMs_20	IAMs_20	13 48 02.4	
	comp=Z,7µm,20.0s						
K27K	Chicken	83.19	14	P	P	13 17 14.9	+1.8
	baz=212						
J26L	Joseph Creek	83.26	13	IAMs_20	IAMs_20	13 47 14.2	
	comp=Z,7µm,21.0s						
J26L	Joseph Creek	83.26	13	P	P	13 17 14.6	+1.0
	baz=210,SNR=19						
H23K	Yukon River	83.26	10	IAMs_20	IAMs_20	13 49 34.2	
	comp=Z,5µm,20.0s						
H23K	Yukon River	83.26	10	P	P	13 17 14.4	+0.9
	baz=205						
G21K	Allakaket	83.27	9	IAMs_20	IAMs_20	13 52 17.5	
	comp=Z,4µm,19.0s						
G21K	Allakaket	83.27	9	P	P	13 17 15.3	+1.8
	baz=201						
E18K	Tukpahlearik C	83.29	6	P	P	13 17 15.2	+1.6
	baz=194,SNR=16						
N32M	Quiet Lake	83.33	19	P	P	13 17 16.0	+2.0
	baz=220						
M30M	Minto, Yukon	83.34	17	IAmb	IAmb	13 17 26.3	
	comp=Z,58nm,1.4s						
M30M	Minto, Yukon	83.34	17	P	P	13 17 15.5	+1.5
	baz=217,SNR=6.0						
D17K	Noatak River	83.35	5	P	P	13 17 15.8	+2.0
	baz=192,SNR=15						
L29M	L29M	83.41	16	IAMs_20	IAMs_20	13 47 56.1	
	comp=Z,8µm,20.0s						
L29M	L29M	83.41	16	P	P	13 17 15.7	+1.4
	baz=216,SNR=11						
BW06	Boulder Array	83.42	42	IAmb	IAmb	13 17 32.3	
	comp=Z,92nm,1.8s						
BW06	Boulder Array	83.42	42	⇑P	P	13 17 18.9	+3.8
PDAR	Pinedale Array	83.42	42	P	P	13 17 16.1	+1.0
	comp=Z,11nm,1.0s,baz=224,slow=4.1,SNR=32						
PDAR				LR	LR	13 48 10.3	
	comp=Z,2µm,20.0s,baz=234,slow=31						
	comp=Z,11nm,1.0s						
F20K	Avaraart Lake	83.47	8	P	P	13 17 12.8	-1.7
F20K				IAMs_20	IAMs_20	13 52 26.9	
	comp=Z,5µm,19.0s						
F20K	Avaraart Lake	83.47	8	P	P	13 17 16.1	+1.6
	baz=199						
BOZ	Bozeman (W)	83.48	39	⇓P	P	13 17 19.9	+4.7
BOZ				⇓P	pwP	13 17 27.4	+6.8
H24K	Noodor Dome	83.57	11	P	P	13 17 17.0	+1.9
	baz=206						
E19K	Redstone River	83.68	7	IAmb	IAmb	13 17 26.2	
	comp=Z,82nm,1.0s						
E19K				IAMs_20	IAMs_20	13 55 11.4	
	comp=Z,4µm,19.0s						
E19K	Redstone River	83.68	7	P	P	13 17 17.1	+1.6
	baz=197						
RDOG	Red Dog Mine	83.72	5	IAMs_20	IAMs_20	13 47 35.3	
	comp=Z,7µm,22.0s						
RDOG	Red Dog Mine	83.72	5	P	P	13 17 17.1	+1.4
	baz=192						
PRP	Porcupine Dome	83.73	12	IAMs_20	IAMs_20	13 46 44.7	
	comp=Z,6µm,22.0s						
PRP	Porcupine Dome	83.73	12	P	P	13 17 16.9	+0.8
	baz=209,SNR=41						
M31M	Drury Creek, Y	83.74	18	P	P	13 17 17.0	+0.9
	baz=219						
C16K	Lisburne Hills	83.76	4	P	P	13 17 17.5	+1.6
	baz=189						
DAWY	Dawson	83.87	15	IAmb	IAmb	13 17 29.3	
	comp=Z,84nm,1.3s						
DAWY	Dawson	83.87	15	P	P	13 17 18.0	+1.4
	baz=214,SNR=15						
F21K	Alatna River	83.94	8	IAMs_20	IAMs_20	13 53 60.0	
	comp=Z,5µm,19.0s						
F21K	Alatna River	83.94	8	P	P	13 17 18.4	+1.4
	baz=201,SNR=7.8						
G22K	Bettles	83.94	9	P	P	13 17 18.9	+1.9
	baz=203						
G23K	Bananza Creek	83.99	10	P	P	13 17 18.5	+1.3
	baz=204,SNR=12						
SDCO	Great Sand Dun	84.00	48	IAMs_20	IAMs_20	13 49 48.2	
	comp=Z,5µm,18.0s						
SDCO	Great Sand Dun	84.00	48	⇑P	P	13 17 21.5	+3.3
WTLY	Watson Lake, Y	84.00	21	P	P	13 17 19.2	+1.8
	baz=224						
I26K	Coal Creek Min	84.04	13	IAMs_20	IAMs_20	13 49 56.9	
	comp=Z,5µm,19.0s						
I26K	Coal Creek Min	84.04	13	P	P	13 17 19.2	+1.8
	baz=211						
FARO	Faro, Yukon	84.07	18	P	P	13 17 18.6	+0.9
	baz=220						
BKNI	Bangkinang	84.10	272	P	P	13 17 18.5	-0.5
C17K	DeLong Mountai	84.11	4	P	P	13 17 19.1	+1.4
	baz=192						
K29M	Barlow Dome	84.17	16	IAmb	IAmb	13 17 31.1	
	comp=Z,128nm,1.4s						
K29M				IAMs_20	IAMs_20	13 48 58.1	
	comp=Z,8µm,20.0s						
K29M	Barlow Dome	84.17	16	P	P	13 17 19.5	+1.2
	baz=216,SNR=12						
HNS	HongShan	84.18	311	⇑P	P	13 17 23.2	+4.4
HNS				S	S	13 27 52.5	+8.5
HNS				SS	SS	13 33 14.6	+1.0
HNS				pmax	pmax		
	comp=Z,21nm,1.4s						
HNS				pmax	pmax		
	comp=Z,930nm,6.4s						
HNS				LR	LR		
	comp=Z,1µm,20.7s						
HNS				LR	LR		
	comp=Z,6µm,19.6s						
HNS				LR	LR		
	comp=Z,7µm,19.9s						
BELA	Belgrano 2	84.22	172	P	P	13 17 18.8	+0.4
BJI	Beijing	84.25	314	P	P	13 17 20.1	+1.0
BJI				S	S	13 27 45.4	+0.8
BJI				SS	SS	13 33 15.0	+0.5
BJI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BJI				pmax	pmax		
	comp=Z,190nm,3.9s						
BJI				LR	LR		
	comp=Z,1µm,19.0s						
BJI				LR	LR		
	comp=Z,1µm,23.3s						
BJI				LR	LR		
	comp=Z,3µm,23.7s						
F22K	John River	84.39	9	P	P	13 17 21.0	+1.8
	baz=202						
MAYO	Mayo, Yukon	84.41	17	P	P	13 17 20.8	+1.4
	baz=218						
G24K	Hadweenzic Riv	84.42	11	IAMs_20	IAMs_20	13 48 24.7	
	comp=Z,8µm,21.0s						
G24K	Hadweenzic Riv	84.42	11	P	P	13 17 19.8	+0.4
	baz=207						
COLD	Coldfoot	84.43	10	IAMs_20	IAMs_20	13 49 24.2	
	comp=Z,5µm,21.0s						
COLD	Coldfoot	84.43	10	P	P	13 17 21.2	+1.8
	baz=204,SNR=36						
TOAD	Toad River Com	84.43	24	P	P	13 17 20.7	+1.1
	baz=228,SNR=8.7						
C18K	Utukok River	84.44	5	IAmb	IAmb	13 17 32.5	
	comp=Z,115nm,1.6s						
C18K				IAMs_20	IAMs_20	13 53 47.4	
	comp=Z,6µm,20.0s						
C18K	Utukok River	84.44	5	P	P	13 17 20.7	+1.2
	baz=193						
J29N	Klondike Camp	84.48	15	IAMs_20	IAMs_20	13 47 26.5	
	comp=Z,6µm,21.0s						
J29N	Klondike Camp	84.48	15	P	P	13 17 21.8	+1.9
	baz=216,SNR=10						
LIRD	Liard River Hi	84.48	23	P	P	13 17 21.7	+1.8
	baz=227						
ZEA	Zeya	84.57	330	*e*P	P	13 17 21.4	+1.0
ZEA				*e*S	S	13 27 50.8	+3.6
ZEA				*e*		13 28 45.5	
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,700nm,6.7s						
E20K	Nigu River	84.57	7	P	P	13 17 22.1	+1.9
	baz=198						
D19K	Kuna River	84.58	6	IAmb	IAmb	13 17 30.4	
	comp=Z,67nm,1.1s						
D19K	Kuna River	84.58	6	P	P	13 17 22.0	+1.8
	baz=196,SNR=20						
I27K	Kandik River	84.63	13	IAmb	IAmb	13 17 32.9	
	comp=Z,100nm,1.4s						
I27K				IAMs_20	IAMs_20	13 48 06.5	
	comp=Z,7µm,21.0s						
I27K	Kandik River	84.63	13	P	P	13 17 21.6	+1.1
	baz=212,SNR=8.0						
FYU	Fort Yukon	84.71	12	IAMs_20	IAMs_20	13 49 12.6	
	comp=Z,5µm,20.0s						
LYN	LuoYang	84.72	308	P	P	13 17 22.8	+1.2
LYN				pP	pwP	13 17 27.4	+0.5
LYN				sP	sP	13 17 31.4	+6.2
LYN				PP	PP	13 20 39.6	+1.7
LYN				S	S	13 27 49.7	+0.1
LYN				sS	ScS	13 27 58.6	-2.2
LYN				SS	SS	13 33 20.8	-0.9
LYN				pmax	pmax		
	comp=Z,30nm,1.4s						
LYN				pmax	pmax		
	comp=Z,1µm,5.4s						
LYN				LR	LR		
	comp=Z,4µm,17.9s						
LYN				LR	LR		
	comp=Z,6µm,20.6s						
LYN				LR	LR		
	comp=Z,10µm,22.7s						
G25K	Bearman Lake	84.72	11	P	P	13 17 22.2	+1.3
	baz=208						
PMSA	Palmer Station	84.85	156	LR	LR	13 47 01.4	
	comp=Z,7µm,21.0s,baz=242,slow=30						
PMSA	Palmer Station	84.85	156	IAMs_20	IAMs_20	13 46 49.2	
	comp=Z,7µm,20.0s						
I28M	Miner Creek	84.89	14	IAmb	IAmb	13 17 34.0	
	comp=Z,88nm,1.4s						
I28M	Miner Creek	84.89	14	P	P	13 17 23.2	+1.4
	baz=214						
COCO	West Island	84.93	259	IAMs_20	IAMs_20	13 54 08.2	
	comp=Z,6µm,20.0s						
D20K	Etivluk River	84.95	7	IAMs_20	IAMs_20	13 52 54.0	
	comp=Z,5µm,20.0s						
D20K	Etivluk River	84.95	7	P	P	13 17 23.8	+1.8
	baz=198,SNR=32						
E21K	Killik River	85.02	8	IAMs_20	IAMs_20	13 52 31.4	
	comp=Z,6µm,20.0s						
E21K	Killik River	85.02	8	P	P	13 17 24.0	+1.6
	baz=200						
E22K	Anaktuvuk Pass	85.02	9	P	P	13 17 24.2	+1.7
	baz=202,SNR=32						
C19K	Lookout Ridge	85.03	6	IAMs_20	IAMs_20	13 52 52.9	
	comp=Z,5µm,20.0s						
C19K	Lookout Ridge	85.03	6	P	P	13 17 24.3	+1.8
	baz=195						
J30M	Hart River	85.07	16	IAmb	IAmb	13 17 35.5	
	comp=Z,70nm,1.4s						
J30M				IAMs_20	IAMs_20	13 49 17.0	
	comp=Z,7µm,20.0s						
J30M	Hart River	85.07	16	P	P	13 17 24.3	+1.5
	baz=217,SNR=11						
F24K	Squaw Lake	85.08	10	IAMs_20	IAMs_20	13 50 31.2	
	comp=Z,7µm,21.0s						
F24K	Squaw Lake	85.08	10	P	P	13 17 24.6	+1.9
	baz=206						
B18K	Kokolik River	85.09	5	P	P	13 17 24.5	+1.8
	baz=193						
H27K	Steamboat Moun	85.18	13	IAMs_20	IAMs_20	13 48 46.0	
	comp=Z,5µm,21.0s						
H27K	Steamboat Moun	85.18	13	P	P	13 17 24.9	+1.6
	baz=212,SNR=14						
I29M	Ogilvie Camp,	85.20	15	IAmb	IAmb	13 17 36.2	
	comp=Z,147nm,1.6s						
I29M				IAMs_20	IAMs_20	13 50 21.6	
	comp=Z,6µm,20.0s						
I29M	Ogilvie Camp,	85.20	15	P	P	13 17 24.3	+1.0
	baz=215,SNR=10.0						
IPM	Ipoh	85.22	276	IAmb	IAmb	13 17 37.6	
	comp=Z,60nm,1.2s						
IPM	Ipoh	85.22	276	P	P	13 17 26.3	+1.7

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IPM   Ipoh             85.22 276  P        P        13 17 26.4 +1.8
      comp=Z,45nm,1.1s
E23K  Chandalar        85.28   9  IAmb     IAmb     13 17 36.4
      comp=Z,84nm,1.2s
E23K                              IAMs_20  IAMs_20  13 58 44.7
      comp=Z,4µm,18.0s
E23K  Chandalar        85.28   9  P        P        13 17 25.4 +1.5
      baz=204
G26K  Porcupine Rive   85.33  12  IAMs_20  IAMs_20  13 48 07.0
      comp=Z,6µm,22.0s
G26K  Porcupine Rive   85.33  12  P        P        13 17 25.6 +1.7
      baz=210,SNR=38
E24K  Your Creek       85.48  10  IAmb     IAmb     13 17 37.6
      comp=Z,66nm,1.4s
E24K  Your Creek       85.48  10  P        P        13 17 26.6 +1.9
      baz=206
ENH   Enshi            85.49 303  P        P        13 17 26.4 +0.8
CMIG  Matias Romero    85.50  71  LR       LR       13 46 53.4
      comp=Z,5µm,20.1s,baz=244,slow=30
F25K  Christian Rive   85.54  11  P        P        13 17 26.8 +1.7
      baz=208,SNR=14
SISI  Saibi            85.54 270  P        P        13 17 27.0 +0.8
      comp=Z,2µmcomp=Z,39nm,1.2s
I30M  Mount Dempster   85.57  15  IAmb     IAmb     13 17 37.6
      comp=Z,100nm,1.3s
I30M                              IAMs_20  IAMs_20  13 48 22.2
      comp=Z,6µm,22.0s
I30M  Mount Dempster   85.57  15  P        P        13 17 26.9 +1.5
      baz=217,SNR=19
C21K  Knifeblade Rid   85.59   7  P        P        13 17 26.6 +1.4
      baz=200
D22K  Ayikyak River    85.60   8  IAMs_20  IAMs_20  13 52 11.0
      comp=Z,6µm,20.0s
D22K  Ayikyak River    85.60   8  P        P        13 17 27.3 +2.1
      baz=202
G27K  Doyon Strip      85.65  13  IAmb     IAmb     13 17 38.3
      comp=Z,88nm,1.6s
G27K                              IAMs_20  IAMs_20  13 50 22.3
      comp=Z,4µm,20.0s
G27K  Doyon Strip      85.65  13  P        P        13 17 27.1 +1.6
      baz=212,SNR=15
MG05  Puerto Natales   85.70 142  IAMs_20  IAMs_20  13 47 09.6
      comp=Z,4µm,21.0s
KOTAN Kotaneelee Air   85.74  23  P        P        13 17 27.5 +1.4
      baz=229
KULM  Kulim            85.80 277  P        P        13 17 28.8 +1.3
TOLK  Toolik Lake Re   85.82   9  IAMs_20  IAMs_20  13 48 31.9
      comp=Z,5µm,22.0s
TOLK  Toolik Lake Re   85.82   9  P        P        13 17 27.9 +1.4
      baz=205,SNR=13
H29M  Whitestone       85.89  14  IAmb     IAmb     13 17 37.8
      comp=Z,140nm,1.6s
H29M  Whitestone       85.89  14  P        P        13 17 28.6 +1.8
      baz=215,SNR=13
F26K  Sheenjek River   85.91  11  IAmb     IAmb     13 17 40.0
      comp=Z,116nm,1.5s
F26K                              IAMs_20  IAMs_20  13 49 09.2
      comp=Z,7µm,21.0s
F26K  Sheenjek River   85.91  11  P        P        13 17 28.5 +1.7
      baz=210,SNR=34
D23K  Nanushuk River   85.96   9  IAMs_20  IAMs_20  13 48 16.5
      comp=Z,6µm,20.0s
D23K  Nanushuk River   85.96   9  P        P        13 17 28.4 +1.3
      baz=204
TIY   Taiyuan          85.96 311  P        P        13 17 29.2 +1.3
TIY                               S        S        13 28 02.6 +0.7
TIY                               SS       SS       13 33 35.8 -4.3
TIY                               pmax     pmax
      comp=Z,900nm,5.4s
TIY                               LR       LR
      comp=Z,2µm,20.6s
TIY                               LR       LR
      comp=Z,4µm,21.3s
TIY                               LR       LR
      comp=Z,5µm,19.9s
A19K  Wainwright       85.97   5  P        P        13 17 28.2 +1.2
      baz=194
XLT   XiLinHaoTe       85.98 318 eP        P        13 17 28.8 +1.0
XLT                               S        S        13 28 01.8  0.0
XLT                               pmax     pmax
      comp=Z,9.0nm,1.0s
XLT                               pmax     pmax
      comp=Z,460nm,3.8s
XLT                               LR       LR
      comp=Z,200nm,18.6s
XLT                               LR       LR
      comp=Z,2µm,19.6s
XLT                               LR       LR
      comp=Z,3µm,18.8s
E25K  Arctic Village   86.02  11  IAmb     IAmb     13 17 40.2
      comp=Z,200nm,1.9s
E25K  Arctic Village   86.02  11  P        P        13 17 29.1 +1.7
      baz=208,SNR=17
B21K  Ikpikpuk River   86.05   7  IAmb     IAmb     13 17 39.8
      comp=Z,188nm,1.8s
B21K                              IAMs_20  IAMs_20  13 52 14.9
      comp=Z,6µm,20.0s
B21K  Ikpikpuk River   86.05   7  P        P        13 17 29.4 +1.9
      baz=200
B20K  Meade River      86.14   6  P        P        13 17 29.2 +1.4
      baz=197,SNR=13
HILR  Hailar Array B   86.32 324  P        P        13 17 27.9 -1.4
      comp=Z,2.6nm,0.9s,baz=131,slow=17,SNR=1.0
HILR                              LR       LR       13 51 19.4
      comp=Z,12µm,20.6s,baz=90,slow=32
      comp=Z,2.6nm,0.9s
D24K  Happy Valley     86.40   9  IAMs_20  IAMs_20  13 58 13.3
      comp=Z,5µm,18.0s
D24K  Happy Valley     86.40   9  P        P        13 17 30.6 +1.4
      baz=205
EPYK  Eagle Plains     86.41  15  IAMs_20  IAMs_20  13 48 06.4
      comp=Z,6µm,22.0s
EPYK  Eagle Plains     86.41  15  P        P        13 17 30.3 +0.9
      baz=217,SNR=10
ABTX  Abilene, Hawle   86.47  55  IAMs_20  IAMs_20  13 49 03.1
      comp=Z,7µm,20.0s
G29M  Pine Creek       86.54  14  IAmb     IAmb     13 17 42.2
      comp=Z,113nm,1.5s
G29M                              IAMs_20  IAMs_20  13 49 25.8
      comp=Z,7µm,21.0s
G29M  Pine Creek       86.54  14  P        P        13 17 31.4 +1.4
      baz=216
GYA   Guiyang          86.55 298 ⇓P        P        13 17 32.1 +1.1
GYA                               SKS      SKSac    13 27 54.6 -3.7
GYA                               S        SKKSac   13 28 06.6 +0.3
GYA                               SS       SS       13 33 47.9 -1.3
GYA                               pmax     pmax
      comp=Z,8.0nm,1.1s
GYA                               pmax     pmax
      comp=Z,690nm,4.4s
GYA                               LR       LR
      comp=Z,2µm,15.4s
GYA                               LR       LR
      comp=Z,820nm,14.6s
GYA                               LR       LR
      comp=Z,1µm,21.0s
H31M  Peel River       86.56  16  IAmb     IAmb     13 17 43.1
      comp=Z,106nm,1.7s
H31M                              IAMs_20  IAMs_20  13 56 45.4
      comp=Z,6µm,18.0s
H31M  Peel River       86.56  16  P        P        13 17 31.0 +0.9
      baz=219
735A  Kenedy           86.66  59  IAMs_20  IAMs_20  13 52 42.6
      comp=Z,5µm,18.0s
F28M  Old Crow         86.70  13  IAmb     IAmb     13 17 43.2
      comp=Z,162nm,2.0s
F28M                              IAMs_20  IAMs_20  13 50 55.2
      comp=Z,5µm,20.0s
F28M  Old Crow         86.70  13  P        P        13 17 31.7 +1.0
      baz=214,SNR=16
C23K  Itkillik River   86.77   8  IAMs_20  IAMs_20  13 52 42.8
      comp=Z,6µm,20.0s
C23K  Itkillik River   86.77   8  P        P        13 17 32.5 +1.5
      baz=204
PSI   Prapat           86.79 274  LR       LR       13 57 32.5
      comp=Z,2µm,19.7s,baz=158,slow=37
PSI   Prapat           86.79 274  P        P        13 17 31.8 -0.7
E27K  Coleen River     86.83  12  IAmb     IAmb     13 17 44.2
      comp=Z,108nm,1.6s
E27K                              IAMs_20  IAMs_20  13 48 51.5
      comp=Z,5µm,22.0s
E27K  Coleen River     86.83  12  P        P        13 17 32.6 +1.2
      baz=212
USHA  Ushuaia          86.86 146  LR       LR       13 47 08.6
      comp=Z,4µm,19.8s,baz=240,slow=29
B22K  Teshekpuk Lake   86.87   7  IAmb     IAmb     13 17 43.7
      comp=Z,80nm,1.5s
B22K                              IAMs_20  IAMs_20  13 51 08.5
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      comp=Z,5µm,20.0s
B22K  Teshekpuk Lake   86.87   7  P        P        13 17 32.8 +1.3
      baz=201
C24K  Franklin Bluff   86.94   9  IAMs_20  IAMs_20  13 54 36.4
      comp=Z,5µm,19.0s
C24K  Franklin Bluff   86.94   9  P        P        13 17 33.1 +1.3
      baz=205
D25K  Kavik River      86.95  10  IAMs_20  IAMs_20  13 51 52.6
      comp=Z,6µm,20.0s
D25K  Kavik River      86.95  10  P        P        13 17 33.2 +1.3
      baz=208,SNR=7.9
G30M  tAoh Zraii Nji   87.01  14  IAMs_20  IAMs_20  13 48 46.4
      comp=Z,6µm,22.0s
G30M  tAoh Zraii Nji   87.01  14  P        P        13 17 33.2 +0.9
      baz=217,SNR=16
AY03  Cochrane         87.12 138  IAMs_20  IAMs_20  13 46 29.2
      comp=Z,6µm,22.0s
MG02  Cerro Sombrero   87.20 144  IAMs_20  IAMs_20  13 48 32.3
      comp=Z,6µm,19.0s
MAW   Mawson           87.23 199  P        P        13 17 32.9 -0.6
      comp=Z,3.6nm,0.6s,baz=109,slow=5.4,SNR=1.7
MAW                               LR       LR       13 55 55.9
      comp=Z,5µm,18.4s,baz=117,slow=35
      comp=Z,3.6nm,0.6s
XAN   Xi'an            87.26 306 ⇑P        P        13 17 34.7 +0.4
XAN                               pmax     pmax
      comp=Z,20nm,1.0s
A22K  Sinclair Lake    87.32   6  P        P        13 17 35.1 +1.6
      baz=199
SLVN  Son La           87.35 293  IAMs_20  IAMs_20  13 50 41.3
      comp=Z,5µm,21.0s
SLVN  Son La           87.35 293  P        P        13 17 36.1 +1.1
G31M  Satah River      87.44  15  IAMs_20  IAMs_20  13 48 37.8
      comp=Z,6µm,22.0s
G31M  Satah River      87.44  15  P        P        13 17 35.4 +1.1
      baz=219,SNR=12
A21K  Barrow           87.45   6  P        P        13 17 35.6 +1.3
      baz=198
E28M  Babbage River    87.60  12  P        P        13 17 37.0 +1.9
      baz=214,SNR=8.6
F30M  Barrier River    87.62  14  IAMs_20  IAMs_20  13 49 38.4
      comp=Z,5µm,21.0s
F30M  Barrier River    87.62  14  P        P        13 17 36.8 +1.7
      baz=218
C27K  Jago River       87.67  11  P        P        13 17 37.3 +2.0
      baz=210,SNR=14
GSI   Gunungsitoli     87.69 272  IAmb     IAmb     13 17 44.8
      comp=Z,60nm,1.0s
GSI                               IAMs_20  IAMs_20  13 57 01.1
      comp=Z,5µm,22.0s
GSI   Gunungsitoli     87.69 272  P        P        13 17 38.1 +1.3
GSI   Gunungsitoli     87.69 272  P        P        13 17 37.7 +0.9
      comp=Z,65nm,1.4s
GSI   Gunungsitoli     87.69 272 ⇑P        P        13 17 38.2 +1.4
C26K  Camden Bay       87.72  10  P        P        13 17 37.4 +1.9
      baz=209,SNR=19
GO07  Milladeo Hill,   87.76 134  IAMs_20  IAMs_20  13 47 24.3
      comp=Z,6µm,21.0s
E29M  Blow River       87.77  13  IAMs_20  IAMs_20  13 51 28.4
      comp=Z,7µm,20.0s
E29M  Blow River       87.77  13  P        P        13 17 36.5 +0.7
      baz=216
HHC   Hu-ho-hao-te     87.79 313 eP        P        13 17 35.7 -1.0
HHC                               sP       pwP      13 17 42.9 +0.9
HHC                               S        S        13 28 17.6 -2.0
HHC                               sS       ScS      13 28 25.3 -0.9
HHC                               SS       SS       13 34 04.9 -1.9
HHC                               pmax     pmax
      comp=Z,7.0nm,0.5s
HHC                               pmax     pmax
      comp=Z,290nm,5.1s
HHC                               LR       LR
      comp=Z,2µm,16.4s
HHC                               LR       LR
      comp=Z,2µm,16.8s
HHC                               LR       LR
      comp=Z,4µm,16.1s
D27M  Malcolm River    87.85  12  P        P        13 17 37.9 +1.6
      baz=213
WMOK  Wichita Mounta   87.88  53  IAMs_20  IAMs_20  13 50 45.3
      comp=Z,7µm,19.0s
F31M  Tsiigehtchic     87.98  15  IAMs_20  IAMs_20  13 49 36.9
      comp=Z,5µm,21.0s
F31M  Tsiigehtchic     87.98  15  P        P        13 17 38.2 +1.4
      baz=220,SNR=16
LL07  Hotel Espejo d   87.98 134  IAMs_20  IAMs_20  13 48 57.2
      comp=Z,4µm,20.0s
WHTX  Lake Whitney,    87.99  56  IAMs_20  IAMs_20  13 48 56.5
      comp=Z,6µm,21.0s
WRGLY Wrigley          87.99  21  P        P        13 17 38.2 +1.2
      baz=229
COYC  Coyhaique        88.02 137  IAMs_20  IAMs_20  13 48 11.0
      comp=Z,7µm,21.0s
D28M  Stokes Point     88.36  12  P        P        13 17 40.2 +1.6
      baz=215
YAK   Yakutsk          88.46 337 eP        P        13 17 38.4 -0.8
YAK                              e*PP      pwP      13 17 43.5 -1.0
YAK                              e                  13 21 08.4
YAK                              ePPP      PPP      13 23 01.2
YAK                              eS        SKSac    13 28 06.9 -1.1
YAK                              e                  13 28 29.6
YAK                              eSS       SS       13 34 15.5 +0.2
YAK                              eSSS      SSS      13 37 51.5
YAK                               pmax     pmax
      comp=Z,8.0nm,1.1s
YAK                               pmax     pmax
      comp=N,6.0nm,1.1s
YAK                               pmax     pmax
      comp=E,4.0nm,1.1s
YAK                               pmax     pmax
      comp=Z,665nm,5.4s
YAK                               pmax     pmax
      comp=N,291nm,3.0s
YAK                               pmax     pmax
      comp=E,803nm,4.4s
YAK                               smax     smax
      comp=N,611nm,5.7s
YAK                               smax     smax
      comp=E,292nm,4.3s
YAK                               MLR      MLR
      comp=Z,2µm,18.0s
YAK                               MLR      MLR
      comp=N,1µm,17.0s
YAK                               MLR      MLR
      comp=E,694nm,20.0s
OK038 West end E0370   88.51  52  IAMs_20  IAMs_20  13 50 49.9
      comp=Z,7µm,19.0s
CBKS  Cedar Bluff      88.59  49  IAMs_20  IAMs_20  13 51 29.9
      comp=Z,4µm,19.0s
HKT   Hockley          88.64  59  IAMs_20  IAMs_20  13 51 23.1
      comp=Z,6µm,19.0s
INK   Inuvik           88.70  14  LR       LR       13 50 32.6
      comp=Z,4µm,21.4s,baz=218,slow=31
INK   Inuvik           88.70  14  IAmb     IAmb     13 17 59.8
      comp=Z,137nm,2.0s
INK   Inuvik           88.70  14  P        P        13 17 41.3 +1.1
      baz=220,SNR=9.6
BTO   Baotou           88.79 313 eP        P        13 17 46.0 +4.5
BTO                               S        S        13 28 35.5 +6.5
BTO                               SS       SS       13 34 21.8 +0.4
BTO                               pmax     pmax
      comp=Z,28nm,0.9s
BTO                               pmax     pmax
      comp=Z,2µm,5.9s
BTO                               LR       LR
      comp=Z,4µm,17.6s
BTO                               LR       LR
      comp=Z,4µm,17.9s
BTO                               LR       LR
      comp=Z,6µm,20.1s
APG   El Apazote       88.97  74  LR       LR       13 47 52.5
      comp=Z,300nm,21.6s,baz=244,slow=29
LL02  Futaleuf         88.99 135  IAMs_20  IAMs_20  13 47 52.8
      comp=Z,5µm,20.0s
R32A  Long Quarter,    89.20  50  IAMs_20  IAMs_20  13 50 32.2
      comp=Z,5µm,20.0s
DGMT  Dagmar           89.31  39 ⇑P        P        13 17 48.9 +5.3
KMI   Kunming          89.50 296  P        P        13 17 47.5 +2.2
KMI                               SS       SS       13 34 36.2 +3.7
KMI                               pmax     pmax
      comp=Z,13nm,1.4s
KMI                               pmax     pmax
      comp=Z,950nm,5.5s
KMI                               LR       LR
      comp=Z,1µm,20.5s
KMI                               LR       LR
      comp=Z,4µm,23.6s
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KMI                               LR       LR
      comp=Z,6µm,24.0s
LR05  Currie           89.90 132  IAMs_20  IAMs_20  13 48 48.9
      comp=Z,6µm,22.0s
K30B  Basset           90.06  46  IAMs_20  IAMs_20  13 50 33.5
      comp=Z,5µm,21.0s
NATX  Nacogdoches      90.17  57  IAMs_20  IAMs_20  13 54 10.3
      comp=Z,4µm,18.0s
BI05  Punta Hualpn     90.20 128  IAMs_20  IAMs_20  13 51 17.8
      comp=Z,6µm,19.0s
CD2   Chengdu          90.36 302 eP        P        13 17 48.8 -0.2
CD2                               S        S        13 28 49.8 +5.7
CD2                               pmax     pmax
      comp=Z,20nm,0.5s
CD2                               pmax     pmax
      comp=Z,1µm,5.0s
CD2                               LR       LR
      comp=Z,3µm,17.6s
CD2                               LR       LR
      comp=Z,6µm,17.6s
TUL3  Leonard          90.57  53  IAMs_20  IAMs_20  13 52 01.6
      comp=Z,5µm,19.0s
BGNE  Belgrade         90.64  47  IAMs_20  IAMs_20  13 53 17.9
      comp=Z,6µm,19.0s
PZH   PanZhiHua        90.76 297  P        P        13 17 55.8 +4.8
PZH                               SKS      SKSac    13 28 24.6 +1.2
PZH                               S        S        13 28 48.2 +0.2
PZH                               SS       SS       13 34 51.2 +0.6
PZH                               pmax     pmax
      comp=Z,830nm,5.3s
PZH                               LR       LR
      comp=Z,1µm,20.9s
PZH                               LR       LR
      comp=Z,2µm,19.7s
PZH                               LR       LR
      comp=Z,2µm,20.1s
PLCA  Paso Flores      90.76 133  P        P        13 17 51.5 +0.7
      comp=Z,2.2nm,1.0s,baz=281,slow=9.2,SNR=3.4
PLCA                              LR       LR       13 50 27.8
      comp=Z,6µm,20.6s,baz=238,slow=30
      comp=Z,2.2nm,1.0s
YKA   Yellowknife Ar   90.80  24  P        P        13 17 51.8 +1.6
      comp=Z,3.4nm,1.0s,baz=249,slow=4.9,SNR=11
YKA                               LR       LR       13 51 16.4
      comp=Z,3µm,21.7s,baz=241,slow=31
      comp=Z,3.4nm,1.0s
YKA   Yellowknife Ar   90.80  24  P        P        13 17 49.4 -0.8
CIT   Chita            90.94 324 eP        P        13 17 53.8 +2.6
CIT                              e                  13 21 33.0
CIT                              e                  13 23 24.4
CIT                              e                  13 34 54.6
CIT                               pmax     pmax
      comp=Z,159nm,4.3s
KSU1  Kansas State U   90.98  50  IAMs_20  IAMs_20  13 51 38.2
      comp=Z,4µm,20.0s
CMAR  Chiang Mai Arr   91.00 289  P        P        13 17 53.8 +1.6
      comp=Z,1.7nm,0.8s,baz=105,slow=2.8,SNR=13
CMAR                              LR       LR       13 54 06.0
      comp=Z,2µm,21.8s,baz=90,slow=33
      comp=Z,1.7nm,0.8s
CHTO  Chiang Mai       91.10 289  P        P        13 17 54.0 +1.4
CHTO  Chiang Mai       91.10 289  P        P        13 17 54.7 +2.1
      comp=Z,14nm,1.2s
SUSD  Miller           91.13  44  IAMs_20  IAMs_20  13 53 06.8
      comp=Z,6µm,20.0s
BI02  San Fabin de     91.67 129  IAMs_20  IAMs_20  13 50 25.9
      comp=Z,4µm,21.0s
U38A  Gravette         91.82  53  IAMs_20  IAMs_20  13 53 17.6
      comp=Z,5µm,19.0s
C36M  Paulatuk         91.84  16  IAmb     IAmb     13 18 06.6
      comp=Z,110nm,1.6s
C36M                              IAMs_20  IAMs_20  13 57 55.0
      comp=Z,6µm,18.0s
C36M  Paulatuk         91.84  16  P        P        13 17 55.4 +0.5
      baz=229,SNR=11
LZH   Lanzhou          91.86 307 eP        P        13 18 02.4 +6.4
LZH                               sP       pwP      13 18 05.4 +4.1
LZH                               S        S        13 29 00.4 +2.7
LZH                               pmax     pmax
      comp=Z,21nm,1.2s
LZH                               pmax     pmax
      comp=Z,500nm,4.1s
LZH                               LR       LR
      comp=Z,3µm,20.6s
LZH                               LR       LR
      comp=Z,3µm,20.6s
LZH                               LR       LR
      comp=Z,4µm,19.9s
MIAR  Mount Ida        91.88  55  IAMs_20  IAMs_20  13 52 44.4
      comp=Z,4µm,20.0s
ML02  Panimavida       91.88 128  IAMs_20  IAMs_20  13 49 20.3
      comp=Z,4µm,22.0s
MDND  Maddock          91.91  41  IAMs_20  IAMs_20  13 54 47.1
      comp=Z,3µm,18.0s
LZDM  Lanzhou Array    91.94 307  P        P        13 17 57.8 +1.2
      comp=Z,0.9nm,0.3s,baz=82,slow=5.1,SNR=4.3
LZDM                              LR       LR       13 56 10.5
      comp=Z,3µm,20.7s,baz=90,slow=34
      comp=Z,0.9nm,0.3s
L34A  Svendsen Farm,   92.08  47  IAMs_20  IAMs_20  13 54 30.0
      comp=Z,4µm,19.0s
SYO   Syowa Base       92.24 192⇓iPcP      PcP      13 17 57.6 -0.1
SYO   Syowa Base       92.24 192⇓ePP       PP       13 21 35.2 -1.3
N35A  Tabor            92.25  48  IAMs_20  IAMs_20  13 53 04.6
      comp=Z,4µm,20.0s
ECSD  EROS Data Cent   92.48  45  IAMs_20  IAMs_20  13 52 18.6
      comp=Z,6µm,22.0s
BO01  Tunca            92.61 127  IAMs_20  IAMs_20  13 50 52.8
      comp=Z,4µm,20.0s
VA01  Torpederas       92.65 125  IAMs_20  IAMs_20  13 49 20.9
      comp=Z,4µm,21.0s
BO02  Sierra Bellavi   92.71 127  IAMs_20  IAMs_20  13 50 38.2
      comp=Z,5µm,21.0s
TROLL Troll, Antarti   92.77 179 ⇓P        P        13 18 00.0 +0.4
      comp=Z,490nm,0.8s
JTS   Las Juntas de    92.89  80  LR       LR       13 50 25.8
      comp=Z,9µm,20.1s,baz=260,slow=29
JTS   Las Juntas de    92.89  80⇑eP        P        13 18 01.1  0.0
JTS                               pmax     pmax
      comp=Z,31nm,1.2s
MT02  Curacav          92.97 126  IAMs_20  IAMs_20  13 49 44.2
      comp=Z,5µm,22.0s
SNAA  Sanae            92.97 178 ⇓P        P        13 18 02.4 +2.0
      comp=Z,161nm,1.1s
SNAA  Sanae            92.97 178  P        P        13 18 02.4 +2.0
      comp=Z,9.1nm,1.1s,baz=170,slow=2.2,SNR=7.6
SNAA                              LR       LR       13 54 29.8
      comp=Z,8µm,21.9s,baz=194,slow=32
      comp=Z,9.1nm,1.1s
SNAA  Sanae            92.97 178  P        P        13 17 59.7 -0.7
SNAA                              IAmb     IAmb     13 18 10.4
      comp=Z,50nm,1.5s
SNAA  Sanae            92.97 178⇓eP        P        13 18 00.4  0.0
SNAA                              pmax     pmax
      comp=Z,37nm,1.5s
VNA3  Neumayer Olymp   92.99 175 ⇓P        P        13 18 01.0 +0.6
      comp=Z,14nm,0.9s
143A  Socs Landing,    93.08  57  IAMs_20  IAMs_20  13 56 19.5
      comp=Z,4µm,18.0s
VA06  Catapilco        93.08 125  IAMs_20  IAMs_20  13 53 02.3
      comp=Z,3µm,18.0s
TNCH  TengChong        93.14 295 eP        P        13 18 01.8 -0.4
TNCH                              S        S        13 29 04.4 -5.3
TNCH                              LR       LR
      comp=Z,1µm,17.0s
TNCH                              LR       LR
      comp=Z,2µm,19.3s
TNCH                              LR       LR
      comp=Z,3µm,21.6s
ULN   Ulaanbaatar      93.31 319  P        P        13 18 03.9 +1.5
ULN   Ulaanbaatar      93.31 319⇑eP        P        13 18 02.8 +0.4
ULN                               pmax     pmax
      comp=Z,21nm,2.2s
A36M  Sachs Harbour    93.32  14  IAmb     IAmb     13 18 11.5
      comp=Z,55nm,0.9s
A36M  Sachs Harbour    93.32  14  P        P        13 18 02.8 +1.1
      baz=228
PEL   Peldehue         93.36 126  IAMs_20  IAMs_20  13 49 54.9
      comp=Z,4µm,22.0s
F33A  5 Mile Ranch,    93.37  43  IAMs_20  IAMs_20  13 54 16.0
      comp=Z,4µm,20.0s
P38A  Dawn             93.41  50  IAMs_20  IAMs_20  13 53 13.6
      comp=Z,4µm,20.0s
MT13  San Alfonso      93.46 126  IAMs_20  IAMs_20  13 50 31.3
      comp=Z,4µm,22.0s
CO06  Fray Jorge       93.46 123  IAMs_20  IAMs_20  13 52 38.3
      comp=Z,4µm,20.0s
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VNA2	Neumayer--Watz	93.46	176	⇓P	P	13 18 05.1	+2.5
	comp=Z,15nm,1.0s,baz=191,slow=1.6						
LMEL	Las Melosas	93.49	126	IAMs_20	IAMs_20	13 49 26.9	
	comp=Z,5µm,22.0s						
VA03	San Esteban	93.60	125	IAMs_20	IAMs_20	13 49 50.0	
	comp=Z,4µm,22.0s						
HDC	Heredia	93.62	81	IAMs_20	IAMs_20	13 50 15.6	
	comp=Z,5µm,20.0s						
VNA1	Neumayer--Stat	93.67	176	⇓P	P	13 18 05.9	+2.4
	comp=Z,28nm,1.1s						
SONM	Songino Array	93.72	319	P	P	13 18 04.3	0.0
	comp=Z,0.9nm,0.8s,baz=150,slow=4.1,SNR=6.0						
SONM				PP	PP	13 21 51.5	+1.8
	comp=Z,1.3nm,0.9s,baz=90,slow=4.4,SNR=4.8						
SONM				LR	LR	13 55 26.6	
	comp=Z,4µm,21.8s,baz=110,slow=32						
	comp=Z,0.9nm,0.8s						
MT08	Bocatoma Ro	93.78	126	IAMs_20	IAMs_20	13 50 19.6	
	comp=Z,4µm,21.0s						
EFI	East Falkland	93.84	146	IAMs_20	IAMs_20	13 50 58.9	
	comp=Z,4µm,22.0s						
NVL	N'lazarevskaya	93.90	182	eP	P	13 18 03.5	-1.1
NVL				e		13 21 48.4	
NVL				eS	SKSac	13 28 38.0	-1.2
NVL				eSS	SS	13 35 34.2	+2.2
NVL				eSSS	SSS	13 39 15.2	
NVL				pmax	pmax		
	comp=Z,43nm,1.5s						
NVL				MLR	MLR		
	comp=Z,3µm,18.0s						
N38A	Joes South For	93.97	49	IAMs_20	IAMs_20	13 55 34.1	
	comp=Z,4µm,18.0s						
CO03	El Pedregal	94.17	123	IAMs_20	IAMs_20	13 53 09.0	
	comp=Z,4µm,20.0s						
SCIA	State Center	94.30	48	IAMs_20	IAMs_20	13 55 43.0	
	comp=Z,5µm,20.0s						
AGMN	Agassiz Nation	94.43	41	IAMs_20	IAMs_20	13 55 30.7	
	comp=Z,4µm,19.0s						
P40A	Paris	94.48	50	IAMs_20	IAMs_20	13 54 18.0	
	comp=Z,4µm,20.0s						
TIXI	Tiksi	94.56	345	LR	LR	13 55 34.5	
	comp=Z,8µm,21.6s,baz=134,slow=32						
TIXI	Tiksi	94.56	345	P	P	13 18 05.9	-1.5
TIXI	Tiksi	94.56	345	⇓eP	P	13 18 07.5	+0.1
TIXI				pmax	pmax		
	comp=Z,29nm,2.4s						
ATAH	Atahualpa	94.61	99	LR	LR	13 50 43.7	
	comp=Z,7µm,20.8s,baz=251,slow=29						
CCM	Cathedral Cave	94.68	52	IAMs_20	IAMs_20	13 54 20.4	
	comp=Z,6µm,20.0s						
NNA	Nana	94.71	104	LR	LR	13 51 23.6	
	comp=Z,3µm,20.8s,baz=252,slow=29						
I37A	Lemond, Waseca	94.78	46	IAMs_20	IAMs_20	13 53 27.4	
	comp=Z,4µm,22.0s						
LCO	Las Campanas	94.80	122	IAMs_20	IAMs_20	13 54 29.7	
	comp=Z,4µm,18.0s						
ULM	Lac du Bonnet	95.02	39	LR	LR	13 55 08.6	
	comp=Z,3µm,20.5s,baz=256,slow=32						
ULM	Lac du Bonnet	95.02	39	⇑eP	P	13 18 09.2	-0.8
AC05	El Transito	95.21	122	IAMs_20	IAMs_20	13 54 41.6	
	comp=Z,4µm,19.0s						
SPMN	Marine on St.	95.53	45	IAMs_20	IAMs_20	13 55 43.2	
	comp=Z,4µm,20.0s						
AC06	Mina Casimiro	95.66	120	IAMs_20	IAMs_20	13 51 57.5	
	comp=Z,4µm,22.0s						
N41A	Harden Midland	95.68	49	IAMs_20	IAMs_20	13 56 17.6	
	comp=Z,4µm,19.0s						
L40A	Anamosa	95.78	48	IAMs_20	IAMs_20	13 55 03.0	
	comp=Z,4µm,20.0s						
CFA	Coronel Fontan	95.85	125	LR	LR	13 51 46.8	
	comp=Z,1µm,21.9s,baz=213,slow=29						
GTA	Gaotai	95.86	309	eP	P	13 18 15.3	+1.0
GTA				SS	SS	13 36 04.2	+1.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				LR	LR		
	comp=Z,3µm,19.3s						
GTA				LR	LR		
	comp=Z,6µm,23.3s						
GTA				LR	LR		
	comp=Z,9µm,24.1s						
S44A	Carbondale	96.11	53	IAMs_20	IAMs_20	13 54 55.1	
	comp=Z,4µm,20.0s						
PLAL	Pickwick Lake	96.35	56	IAMs_20	IAMs_20	13 56 36.9	
	comp=Z,3µm,20.0s						
T45A	Paducah	96.41	54	IAMs_20	IAMs_20	13 54 35.2	
	comp=Z,5µm,20.0s						
JFWS	Jewell Farm	96.69	47	IAMs_20	IAMs_20	13 57 53.2	
	comp=Z,4µm,19.0s						
E38A	The Farm, Brul	96.74	44	IAMs_20	IAMs_20	13 56 54.2	
	comp=Z,5µm,19.0s						
X48A	Hartselle	97.05	56	IAMs_20	IAMs_20	13 58 44.3	
	comp=Z,5µm,19.0s						
G40A	Rib Lake	97.31	45	IAMs_20	IAMs_20	13 55 28.4	
	comp=Z,4µm,20.0s						
Y49A	Blount Mountai	97.42	57	IAMs_20	IAMs_20	13 57 03.2	
	comp=Z,6µm,20.0s						
V48A	Smith Brothers	97.53	55	IAMs_20	IAMs_20	13 55 37.9	
	comp=Z,5µm,20.0s						
T47A	Sharon Grove	97.60	54	IAMs_20	IAMs_20	13 55 20.6	
	comp=Z,5µm,20.0s						
I42A	Draeger Farm,	97.87	47	IAMs_20	IAMs_20	13 57 09.3	
	comp=Z,4µm,20.0s						
M44A	Midewin, Midew	97.91	49	IAMs_20	IAMs_20	13 58 12.5	
	comp=Z,4µm,19.0s						
TRQA	Tornquist	97.91	133	IAMs_20	IAMs_20	13 54 28.0	
	comp=Z,4µm,21.0s						
PB03	IPOC Station P	98.01	115	IAMs_20	IAMs_20	13 52 15.7	
	comp=Z,4µm,22.0s						
K43A	Burlington	98.01	48	IAMs_20	IAMs_20	13 55 29.9	
	comp=Z,4µm,21.0s						
HQIL	Hanson Quary C	98.14	49	IAMs_20	IAMs_20	14 01 04.6	
	comp=Z,4µm,18.0s						
HMBC	Humberstone	98.49	114	IAMs_20	IAMs_20	13 52 35.6	
	comp=Z,4µm,22.0s						
WCI	Wyandotte Cave	98.51	53	IAMs_20	IAMs_20	13 56 30.5	
	comp=Z,5µm,20.0s						
U49A	Red Boiling Sp	98.53	55	IAMs_20	IAMs_20	13 56 58.2	
	comp=Z,6µm,20.0s						
152A	Waverly Hall	98.53	59	IAMs_20	IAMs_20	13 58 05.7	
	comp=Z,3µm,19.0s						
PB09	IPOC Station P	98.54	115	IAMs_20	IAMs_20	13 52 42.8	
	comp=Z,4µm,22.0s						
PB12	IPOC Station P	98.66	112	IAMs_20	IAMs_20	13 51 32.9	
	comp=Z,4µm,22.0s						
BRDH	Bariadhala	98.67	291	LR	LR	13 59 56.6	
	comp=Z,2µm,21.3s,baz=132,slow=34						
X51A	Calhoun	98.83	57	IAMs_20	IAMs_20	14 00 23.6	
	comp=Z,4µm,18.0s						
F42A	Maple Grove Fa	98.84	45	IAMs_20	IAMs_20	13 56 13.8	
	comp=Z,5µm,21.0s						
PB11	IPOC Station P	98.87	113	IAMs_20	IAMs_20	13 52 46.6	
	comp=Z,4µm,22.0s						
GOMU	GeErMu	98.95	305	P	P	13 18 26.7	-1.9
GOMU				S	S	13 29 56.4	-3.4
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.4s						
GOMU				LR	LR		
	comp=Z,1µm,19.0s						
GOMU				LR	LR		
	comp=Z,1µm,18.4s						
GO01	Chusmiza	99.31	113	IAMs_20	IAMs_20	13 53 12.3	
	comp=Z,4µm,22.0s						
Y52A	Lilburn	99.33	57	IAMs_20	IAMs_20	13 57 15.7	
	comp=Z,5µm,20.0s						
R49A	Shelbyville	99.38	53	IAMs_20	IAMs_20	13 55 33.8	
	comp=Z,6µm,22.0s						
N47A	Urbana	99.53	50	IAMs_20	IAMs_20	13 57 23.4	
	comp=Z,5µm,20.0s						
W52A	Murphy	99.69	56	IAMs_20	IAMs_20	13 57 42.3	
	comp=Z,3µm,20.0s						
PB18	Visviri	99.76	111	IAMs_20	IAMs_20	13 52 24.1	
	comp=Z,4µm,22.0s						
I45A	Fountain	99.79	47	IAMs_20	IAMs_20	13 58 44.1	
	comp=Z,5µm,19.0s						
154A	Montrose	99.85	59	IAMs_20	IAMs_20	13 58 18.6	
	comp=Z,4µm,20.0s						
R50A	Paris	100.03	53	IAMs_20	IAMs_20	13 57 27.9	
	comp=Z,5µm,20.0s						
061Z	Ochoppi	100.33	66	IAMs_20	IAMs_20	14 03 25.9	
	comp=Z,4µm,18.0s						
V53A	Saluda	100.70	56	IAMs_20	IAMs_20	13 56 54.9	
	comp=Z,4µm,21.0s						
Q51A	Peebles	100.93	52	IAMs_20	IAMs_20	13 56 32.7	
	comp=Z,5µm,22.0s						
060A	Indiantown	101.04	65	IAMs_20	IAMs_20	13 57 15.9	
	comp=Z,3µm,21.0s						
GLMI	Grayling	101.08	46	IAMs_20	IAMs_20	13 59 41.2	
	comp=Z,4µm,18.0s						
AAM	Ann Arbor	101.31	49	IAMs_20	IAMs_20	13 55 33.3	
	comp=Z,3µm,21.0s						
257A	Skidaway Islan	101.45	60	IAMs_20	IAMs_20	14 00 32.1	
	comp=Z,3µm,19.0s						
E46A	Sault Ste Mari	101.58	45	IAMs_20	IAMs_20	13 58 19.1	
	comp=Z,4µm,20.0s						
M50A	Fremont	101.59	50	IAMs_20	IAMs_20	13 58 47.1	
	comp=Z,4µm,20.0s						
Q52A	Bidwell	101.74	53	IAMs_20	IAMs_20	13 57 20.2	
	comp=Z,5µm,22.0s						
KMSC	Kings Mountain	101.79	57	IAMs_20	IAMs_20	14 01 49.8	
	comp=Z,4µm,18.0s						
V55A	Taylorsville	102.01	56	IAMs_20	IAMs_20	13 58 18.6	
	comp=Z,5µm,22.0s						
K50A	Casco	102.14	49	IAMs_20	IAMs_20	14 01 14.4	
	comp=Z,4µm,18.0s						
HOPE	Hope Point	102.17	157	IAMs_20	IAMs_20	13 56 33.0	
	comp=Z,5µm,20.0s						
I49A	Point Hope	102.19	48	IAMs_20	IAMs_20	13 59 19.6	
	comp=Z,4µm,20.0s						
O52A	Adamsville	102.27	52	IAMs_20	IAMs_20	13 59 06.3	
	comp=Z,5µm,20.0s						
Y57A	Sumter	102.35	58	IAMs_20	IAMs_20	13 59 36.8	
	comp=Z,4µm,20.0s						
P53A	Whipple	102.51	52	IAMs_20	IAMs_20	13 58 45.4	
	comp=Z,5µm,21.0s						
U56A	King	102.76	56	IAMs_20	IAMs_20	13 59 41.5	
	comp=Z,5µm,20.0s						
W57A	Gilead	102.87	57	IAMs_20	IAMs_20	14 00 28.5	
	comp=Z,4µm,20.0s						
BLA	Blacksburg	102.88	55	IAMs_20	IAMs_20	13 59 26.4	
	comp=Z,5µm,20.0s						
Y58A	Scranton	102.92	58	IAMs_20	IAMs_20	13 58 47.0	
	comp=Z,4µm,22.0s						
X58A	Rowland	103.30	58	IAMs_20	IAMs_20	14 00 04.9	
	comp=Z,4µm,20.0s						
V58A	Windy Hill, Pi	103.68	56	IAMs_20	IAMs_20	14 00 45.9	
	comp=Z,3µm,20.0s						
T57A	Hurt	103.76	55	IAMs_20	IAMs_20	14 00 11.9	
	comp=Z,5µm,20.0s						
ERPA	Erie	103.96	50	IAMs_20	IAMs_20	14 00 21.7	
	comp=Z,4µm,20.0s						
W59A	Clinton	104.12	57	IAMs_20	IAMs_20	13 59 58.7	
	comp=Z,3µm,21.0s						
Y60A	Bolivia	104.13	58	IAMs_20	IAMs_20	13 59 20.9	
	comp=Z,4µm,22.0s						
GTBY	Guantanamo Bay	104.36	73	IAMs_20	IAMs_20	13 59 01.5	
	comp=Z,3µm,20.0s						
P57A	Homestead Farm	105.09	53	IAMs_20	IAMs_20	14 00 06.8	
	comp=Z,5µm,20.0s						
T59A	Double "B" Far	105.10	55	IAMs_20	IAMs_20	14 02 42.5	
	comp=Z,5µm,19.0s						
PALK	Pallekele	105.47	273	IAMs_20	IAMs_20	14 11 34.3	
	comp=Z,3µm,19.0s						
WMQ	Urumqi	105.60	312	Pdif	Pdif	13 18 58.2	+0.6
WMQ				LR	LR		
	comp=Z,2µm,17.9s						
WMQ				LR	LR		
	comp=Z,2µm,21.9s						
WMQ				LR	LR		
	comp=Z,3µm,24.9s						
J55A	Hilton	105.70	49	IAMs_20	IAMs_20	13 59 56.6	
	comp=Z,3µm,21.0s						
SDV	Santo Domingo	106.25	85	IAMs_20	IAMs_20	13 58 57.3	
	comp=Z,3µm,19.0s						
K57A	Scipio Center	106.59	49	IAMs_20	IAMs_20	14 01 55.2	
	comp=Z,5µm,20.0s						
S61A	Accomac	106.68	55	IAMs_20	IAMs_20	14 02 11.2	
	comp=Z,5µm,20.0s						
J57A	Williamstown	107.03	49	IAMs_20	IAMs_20	14 01 29.9	
	comp=Z,4µm,20.0s						
LONY	Lake Ozonia	108.15	48	IAMs_20	IAMs_20	14 05 00.2	
	comp=Z,3µm,19.0s						
ZALV	Zalesovo Beam	108.19	322	PKiKP	PKiKP	13 23 14.3	-1.0
	comp=Z,1.3nm,0.7s,baz=116,slow=3.4,SNR=5.8						
TRY	Troy	108.68	50	IAMs_20	IAMs_20	14 03 07.6	
	comp=Z,4µm,20.0s						
TULEG	Thule	108.69	14	IAMs_20	IAMs_20	14 05 31.1	
	comp=Z,4µm,19.0s						
N62A	Caumsett State	108.70	52	IAMs_20	IAMs_20	14 03 16.3	
	comp=Z,5µm,20.0s						
VT1	Waterbury	109.44	48	IAMs_20	IAMs_20	14 03 02.6	
	comp=Z,3µm,21.0s						
MKAR	Makanchi Array	109.62	315	Pdiff	Pdif	13 19 15.8	+0.4
	comp=Z,0.6nm,0.9s,baz=68,slow=8.5,SNR=2.1						
MKAR				PKiKP	PKiKP	13 23 18.0	-0.3
	comp=Z,1.1nm,0.9s,baz=100,slow=1.6,SNR=3.8						
HYB	Hyderabad	109.67	283	ePKiKP	PKiKP	13 23 17.9	-1.3
HYB				ePP	PP	13 23 48.6	-2.0
HYB				eSKKSac	SKKSac	13 30 52.0	-2.3
K62A	Royalston	109.73	50	IAMs_20	IAMs_20	14 02 30.4	
	comp=Z,5µm,21.0s						
HNH	Hanover	109.75	49	IAMs_20	IAMs_20	14 04 20.6	
	comp=Z,3µm,20.0s						
M63A	Gales Ferry	109.80	51	IAMs_20	IAMs_20	14 05 58.4	
	comp=Z,4µm,19.0s						
MAKZ	Makanchi	109.84	315	IAMs_20	IAMs_20	14 06 38.2	
	comp=Z,3µm,20.0s						
LBNH	Lisbon	110.03	48	IAMs_20	IAMs_20	14 03 41.1	
	comp=Z,4µm,20.0s						
I62A	Tamworth	110.44	49	IAMs_20	IAMs_20	14 03 53.0	
	comp=Z,4µm,20.0s						
H62A	Milan	110.59	48	IAMs_20	IAMs_20	14 04 25.9	
	comp=Z,3µm,20.0s						
I63A	Otisfield	110.99	48	IAMs_20	IAMs_20	14 04 19.5	
	comp=Z,5µm,21.0s						
WVL	Waterville	111.66	48	IAMs_20	IAMs_20	14 05 25.2	
	comp=Z,3µm,20.0s						
E62A	Clayton Lake	111.76	46	IAMs_20	IAMs_20	14 04 37.6	
	comp=Z,4µm,21.0s						
PKME	Peaks-Kenny Pk	111.92	47	IAMs_20	IAMs_20	14 06 08.1	
	comp=Z,4µm,19.0s						
KURK	Kurchatov	112.03	319	⇑iPKIKP	PKiKP	13 23 24.7	+2.1
KURK				MLR	MLR		
	comp=Z,6µm,20.0s						
D62A	Allapoint, All	112.08	45	IAMs_20	IAMs_20	14 04 37.9	
	comp=Z,5µm,21.0s						
KURBB	Kurchatov Arra	112.09	319	PKiKP	PKiKP	13 23 23.1	+0.4
	comp=Z,2.2nm,0.9s,baz=115,slow=1.9,SNR=9.1						
KURBB				PP	PP	13 24 06.9	0.0
	comp=Z,0.9nm,0.9s,baz=88,slow=5.9,SNR=4.4						
SJG	San Juan	112.37	76	IAMs_20	IAMs_20	14 03 30.0	
	comp=Z,3µm,19.0s						
F64A	Sherman	112.58	46	IAMs_20	IAMs_20	14 06 42.4	
	comp=Z,4µm,18.0s						
HMDM	Hanimaadhoo	112.60	271	IAMs_20	IAMs_20	14 13 26.4	
	comp=Z,4µm,20.0s						
G65A	Princeton	113.15	47	IAMs_20	IAMs_20	14 08 08.4	
	comp=Z,3µm,19.0s						
KSH	Kashi	114.11	307	PKP	PKiKP	13 23 28.2	+1.1
KSH				SS	SS	13 40 20.4	+7.4
KSH				LR	LR		
	comp=Z,2µm,22.0s						
KSH				LR	LR		
	comp=Z,2µm,19.2s						
KSH				LR	LR		
	comp=Z,3µm,19.9s						
SABA	Saba	115.02	78	IAMs_20	IAMs_20	14 03 05.3	
	comp=Z,3µm,20.0s						
AAK	Ala-Archa	115.19	310	IAMs_20	IAMs_20	14 08 20.5	
	comp=Z,4µm,22.0s						
AAK	Ala-Archa	115.19	310	⇑iPKIKP	PKiKP	13 23 27.5	-1.7
SEUS	St. Eustatius	115.25	78	IAMs_20	IAMs_20	14 06 47.3	
	comp=Z,3µm,21.0s						
SPB	Sao Paulo	115.88	126	IAMs_20	IAMs_20	14 07 37.0	
	comp=Z,4µm,19.0s						
CBE	Ff, Capester	116.32	79	IAMs_20	IAMs_20	14 05 45.7	
	comp=Z,3µm,20.0s						
KBS	Kingsbay	116.37	358	IAMs_20	IAMs_20	14 16 20.4	
	comp=Z,4µm,20.0s						
ANWB	Willy Bob	116.40	78	IAMs_20	IAMs_20	14 05 35.9	
	comp=Z,3µm,22.0s						
ABD	La Joyeuse, An	116.50	79	IAMs_20	IAMs_20	14 02 29.6	
	comp=Z,3µm,22.0s						
BIM	Bigot	116.56	81	IAMs_20	IAMs_20	14 04 21.7	
	comp=Z,3µm,20.0s						
MAGL	Barre de l’ile	116.61	80	IAMs_20	IAMs_20	14 05 54.5	
	comp=Z,4µm,20.0s						
MPOM	Morne Pois Mar	116.75	81	IAMs_20	IAMs_20	14 04 57.6	
	comp=Z,3µm,20.0s						
ILAM	Ilet Lapin Mar	116.80	81	IAMs_20	IAMs_20	14 04 35.6	
	comp=Z,2µm,20.0s						
BVAR	Borovoye Array	116.84	322	PKP	PKPdf	13 23 30.9	-0.9
	comp=Z,6.3nm,0.9s,baz=90,slow=1.9,SNR=12						
BORK	Borovoye	116.88	322		PKiKP	13 23 32.2	+0.3
BORK	Borovoye	116.88	322	⇑iPKIKP	PKiKP	13 23 31.8	-0.1
BORK				MLR	MLR		
	comp=Z,7µm,20.0s						
KK31	Karatay Array	118.08	311	PKPdf	PKPdf	13 23 33.8	-0.7
KK31	Karatay Array	118.08	311	PKIKP	PKPdf	13 23 33.8	-0.7
KKAR	Karatay Array	118.08	311	PKPdf	PKPdf	13 23 34.0	-0.6
KKAR	Karatay Array	118.08	311	PKIKP	PKPdf	13 23 34.0	-0.6
FOMA	Nahampoana Res	122.55	226	IAMs_20	IAMs_20	14 15 26.7	
	comp=Z,4µm,18.0s						
ARTI	Arti	122.56	328		PKiKP	13 23 43.2	+0.3
ARTI	Arti	122.56	328	i PKIKP	PKiKP	13 23 43.2	+0.3
ARTI						13 25 21.6	
ARTI						13 30 54.8	
ARTI				SS	SS	13 41 57.6	-3.2
ARTI				MLR	MLR		
	comp=Z,9µm,21.0s						
ARCES	ARCESS Array B	124.38	351	PKP	PKPdf	13 23 45.7	-0.1
	comp=Z,8.2nm,0.9s,baz=25,slow=1.5,SNR=5.1						
VOI	Vohitsoka	124.61	229	IAMs_20	IAMs_20	14 11 20.5	
	comp=Z,4µm,21.0s						
APA	Apatity	124.68	347	i PKIKP	PKPdf	13 23 32.6	-14
KIRV	Kirov	125.79	333	⇓iPKIKP	PKiKP	13 23 49.2	+0.1
KLMR	Klimovskoe	128.21	339	ePKIKP	PKPdf	13 23 52.4	-0.9
KLMR				e		13 25 54.4	
KLMR				e		13 37 39.3	
KLMR				pmax	pmax		
	comp=Z,42nm,1.5s						
KLMR				MLR	MLR		
	comp=Z,3µm,16.0s						
BELG	Belogornoye	129.97	327	⇓iPKIKP	PKiKP	13 23 57.5	-0.2
BELG				MLR	MLR		
	comp=Z,1µm,20.0s						
SUR	Sutherland	130.07	198	IAMs_20	IAMs_20	14 21 00.3	
	comp=Z,3µm,18.0s						
MOS	Moscow	132.56	335	i PKIKP	PKiKP	13 24 04.1	+1.3
MOS				eSS	SS	13 44 11.8	+7.2
MOS				pmax	pmax		
	comp=Z,39nm,0.6s						
MOS				pmax	pmax		
	comp=N,44nm,0.6s						
OBN	Obninsk	133.43	335	i PKIKP	PKiKP	13 24 04.3	-0.3
OBN				i		13 26 32.6	
OBN				pmax	pmax		
	comp=Z,12nm,0.9s						
OBN				MLR	MLR		
	comp=Z,4µm,20.0s						
MAK	Makhachkala	134.42	316	deP	Pdif	13 21 04.4	-1.3
MAK				e		13 31 10.0	
MAK				eSS	SS	13 44 21.0	-7.3
MAK				pmax	pmax		
	comp=Z,20nm,0.3s						
AKT	Akhty	134.84	314	i PKIKP	PKiKP	13 24 07.6	-0.5
AKT				pmax	pmax		
	comp=Z,14nm,0.9s						
AKT				MLR	MLR		
	comp=Z,6µm,21.0s						
GOF	Gofitskoye	136.34	321	cePKIKP	PKiKP	13 24 17.3	+6.4
MNK	Minsk	137.07	340	i PKIKP	PKPdf	13 24 10.9	+0.7
MNK				i		13 27 02.4	
MNK				i PPP	PPP	13 29 51.8	
MNK				i SP	SP	13 37 23.5	+5.9
MNK				i SS	SS	13 45 00.0	+1.5
MNK				i SSS	SSS	13 50 05.4	
MNK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MNK				pmax	pmax		
	comp=E,42nm,0.9s						
MNK				pmax	pmax		
	comp=N,17nm,0.8s						
MNK				MLR	MLR		
	comp=N,4µm,21.0s						
MNK				MLR	MLR		
	comp=E,5µm,19.0s						
MNK				MLR	MLR		
	comp=Z,5µm,17.0s						
KIV	Kislovodsk	137.11	319	i PKIKP	PKiKP	13 24 12.9	+0.3
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,4µm,24.0s						
ERBR	Yeremizino-Bor	137.52	323	i PKIKP	PKPdf	13 24 11.4	0.0
ERBR				pmax	pmax		
	comp=Z,48nm,1.7s						
ERBR				MLR	MLR		
	comp=N,3µm,19.0s						
ERBR				MLR	MLR		
	comp=Z,4µm,19.0s						
ERBR				MLR	MLR		
	comp=E,4µm,22.0s						
LABN	Labinsk	137.97	321	i PKIKP	PKiKP	13 24 14.3	+0.1
LABN				pmax	pmax		
	comp=Z,26nm,0.6s						
LABN				MLR	MLR		
	comp=N,9µm,21.0s						
LABN				MLR	MLR		
	comp=Z,7µm,23.0s						
LABN				MLR	MLR		
	comp=E,4µm,22.0s						
SOC	Sochi	139.15	321	i PKIKP	PKiKP	13 24 16.6	0.0
SOC				ePPP	PPP	13 30 17.8	
SOC				eSS	SS	13 45 23.3	-1.0
SOC				eSSS	SSS	13 50 33.6	
SOC				MLR	MLR		
	comp=Z,5µm,19.0s						
AKASG	Malin Array Be	139.68	336	PKP	PKPdf	13 24 13.0	-2.1
	comp=Z,0.2nm,0.3s,baz=67,slow=1.7,SNR=2.2						
ANN	Anapa	139.81	324	i PKIKP	PKPdf	13 24 15.2	-0.3
ANN				pmax	pmax		
	comp=Z,21nm,1.0s						
ANN				MLR	MLR		
	comp=E,1µm,21.0s						
ANN				MLR	MLR		
	comp=N,3µm,19.0s						
RAYN	Ar Rayn	140.92	288	IAMs_20	IAMs_20	14 29 47.0	
	comp=Z,3µm,20.0s						
KIBK	Kibwezi	142.70	245	PKP	PKPdf	13 24 20.1	-1.8
MILM	Milestii Mici	142.79	333	ePKP	PKPdf	13 24 18.0	-2.8
MILM				eL	L	14 17 00.0	
MILM				LQM		14 20 20.0	
	comp=Z,3µm,23.5s						
MILM				LRM	MLR	14 24 15.0	
	comp=Z,4µm,22.0s						
ATD	Arta Tunnel	142.86	269	IAMs_20	IAMs_20	14 24 23.4	
	comp=Z,3µm,20.0s						
OJC	Ojcow	143.22	344	ePKP	PKiKP	13 24 27.0	+2.2
KSP	Ksiaz	143.47	348	ePKP	PKiKP	13 24 26.2	+0.9
STHS	Stebnicka Huta	143.54	342	ePKIKP	PKiKP	13 24 25.6	+0.1
CLL	Collm	143.60	351	ePKIKP	PKPdf	13 24 23.0	+0.9
OSTC	Ostas	143.76	348	AMS	AMS	14 26 20.0	
	comp=Z,7µm,20.6s						
CHVC	Chvalec	143.76	348	AMS	AMS	14 26 30.0	
	comp=Z,6µm,24.6s						
NIE	Niedzica	143.81	343	ePKP	PKiKP	13 24 28.0	+1.9
UPC	Upice	143.85	348	AMS	AMS	14 26 30.0	
	comp=Z,6µm,20.4s						
DPC	Dobruska-Polom	143.93	347	ePKIKP	PKiKP	13 24 25.4	-0.9
DPC				MLR	MLR		
	comp=Z,8µm,20.5s						
DPC	Dobruska-Polom	143.93	347	ePKP	PKiKP	13 24 25.4	-0.9
DPC				AMS	AMS	14 26 40.0	
	comp=Z,8µm,20.5s						
OKC	Ostrava-Krasne	144.00	345	AMS	AMS	14 25 20.0	
	comp=Z,6µm,20.0s						
TESR	Tescani	144.04	334	⇑P	PKiKP	13 24 27.4	+0.8
GAZ	Gaziantep	144.05	313		PKPab	13 24 20.5	-0.4
KRLC	Kraliky	144.09	347	AMS	AMS	14 26 20.0	
	comp=Z,8µm,21.2s						
PVCC	Panska Ves	144.10	349	AMS	AMS	14 27 10.0	
	comp=Z,6µm,22.8s						
BNN	Bunyan	144.14	317		PKPdf	13 24 22.8	-0.9
RICC	Richard	144.17	350	AMS	AMS	14 23 50.0	
	comp=Z,7µm,25.9s						
MORC	Moravsky Berou	144.20	346	ePKP	PKPdf	13 24 22.6	-0.7
HSKC	Hora Svate Kat	144.22	351	AMS	AMS	14 23 00.0	
	comp=Z,5µm,23.9s						
ILGA	Ilgaz	144.24	321		PKPab	13 24 21.1	-0.6
ONER	Baraj Valea Uz	144.29	334	⇓P	PKPdf	13 24 23.9	+0.3
CFR	Carcaliu	144.41	331	⇑P	PKiKP	13 24 29.5	+2.1
CFR	Carcaliu	144.41	331	⇑PKIKP	PKiKP	13 24 29.5	+2.1
MAUC	Maruska	144.51	345	ePKP	PKiKP	13 24 27.2	-0.3
VRI	Vrincioaia	144.52	333	⇑P	PKiKP	13 24 28.5	+0.8
VRI	Vrincioaia	144.52	333	⇑PKIKP	PKiKP	13 24 28.5	+0.8
TPGR	Topolog	144.52	331	⇑P	PKPdf	13 24 24.4	+0.4
PLOR	Plostina	144.56	333	⇑P	PKPab	13 24 20.7	-1.8
PLOR	Plostina	144.56	333	⇑PKHKP	PKPpre	13 24 20.7	
PRA	Prague	144.57	349	AMS	AMS	14 28 00.0	
	comp=Z,6µm,19.2s						

PRU	Pruhonice	144.63	349	AMS	AMS	14 27 50.0	
	comp=Z,6µm,26.5s						
TURR	Turia	144.67	334	⇑P	PKPdf	13 24 24.9	+0.6
UCC	Uccle	144.71	1	dPKP	PKPbc	13 24 23.0	+0.1
VRAC	Vranov	144.86	347	⇓P	PKPdf	13 24 24.6	+0.1
VRAC	Vranov	144.86	347	ePKP	PKPdf	13 24 23.8	-0.6
VRAC	Vranov	144.86	347	⇓PKIKP	PKPdf	13 24 24.6	+0.1
MEM	Membach	144.88	359	dPKP	PKPdf	13 24 24.2	-0.2
BTNL	Ternell	144.90	359	dPKP	PKPdf	13 24 24.7	+0.2
BSTI	Sart Tilman	144.92	359	dPKP	PKPdf	13 24 24.2	-0.2
DOPR	Dopca	145.00	335	⇓P	PKPdf	13 24 25.9	+1.1
JAVC	Velka Javorina	145.02	345	ePKP	PKPdf	13 24 25.7	+0.9
MFTR	Murfatlar	145.03	330	⇑P	PKPdf	13 24 25.2	+0.4
BR131	Keskin Array S	145.08	320	⇓ePKIKP	PKPbc	13 24 24.0	-0.7
BRTR	Keskin Array B	145.08	320	PKP	PKPab	13 24 24.6	-0.1
	comp=Z,36nm,0.9s,baz=121,slow=2.8,SNR=118						
BRTR	Keskin Array B	145.08	320		PKPbc	13 24 23.8	-0.9
BCLA	Clavier	145.09	359	dPKP	PKPdf	13 24 24.7	0.0
TREC	Trest	145.11	348	AMS	AMS	14 27 10.0	
	comp=Z,7µm,23.2s						
KRUC	Moravsky	145.13	347	ePKP	PKPdf	13 24 24.6	-0.3
BHOU	Houvegnez	145.14	359	dPKP	PKPdf	13 24 25.6	+0.7
MLR	Muntele Rosu	145.15	334	⇓P	PKPdf	13 24 25.9	+0.7
MLR	Muntele Rosu	145.15	334	⇓PKIKP	PKPdf	13 24 25.9	+0.7
BMRD	Maredsous	145.20	0	dPKP	PKPdf	13 24 25.9	+1.0
ZVC	Zvikov	145.22	349	ePKP	PKPdf	13 24 25.6	+0.6
ZVC				AMS	AMS	14 24 30.0	
	comp=Z,7µm,28.6s						
KIRS	Kirsehir-Merke	145.24	318	⇓P	PKPdf	13 24 25.9	+0.4
PSZ	Piszkesteto	145.28	342	⇓P	PKPdf	13 24 26.1	+0.8
PSZ	Piszkesteto	145.28	342	⇓PKIKP	PKPdf	13 24 26.1	+0.8
MARR	Marisel-Cluj	145.30	338	⇓P	PKPbc	13 24 24.2	-0.9
DRGR		145.35	338	⇓P	PKPdf	13 24 25.9	+0.5
RCHB	Rochefort	145.35	360	dPKP	PKiKP	13 24 27.5	-1.7
SMOL	Smolenice	145.40	345	ePKIKP	PKiKP	13 24 27.3	-2.1
SMOL				e		13 24 32.4	
DOU	Dourbes	145.41	0	dPKP	PKPbc	13 24 24.4	-0.8
GRF	Grafenberg Arr	145.42	353	ePKP	PKPdf	13 24 25.2	-0.2
	baz=11,slow=3.0						
ANTO	Ankara	145.52	320	IAMs_20	IAMs_20	14 41 38.2	
	comp=Z,2µm,20.0s						
ANTO	Ankara	145.52	320	⇑P	PKiKP	13 24 27.9	-2.0
MODS	Modra-Piesok	145.57	345	ePKIKP	PKPab	13 24 27.2	+1.1
MODS				e		13 24 33.0	
MODS	Modra-Piesok	145.57	345	ePKP	PKPab	13 24 27.2	+1.1
MODS				e		13 24 33.0	
KHC	Kasperske Hory	145.62	350	⇑ePKIKP	PKPdf	13 24 25.5	-0.3
KHC				MLR	MLR		
	comp=Z,5µm,21.0s						
KHC	Kasperske Hory	145.62	350	ePKP	PKPab	13 24 27.1	+0.8
KHC				ex	x	13 24 32.5	
KHC				AMS	AMS	14 29 50.0	
	comp=Z,5µm,19.9s						
TNR	Turnu Rosu	145.71	336	⇓P	PKPab	13 24 27.8	+1.1
TNR	Turnu Rosu	145.71	336	⇓PKIKP	PKPab	13 24 27.8	+1.1
MTUR	Matau	145.73	334	⇓P	PKiKP	13 24 30.5	+0.2
MTUR	Matau	145.73	334	⇓PKIKP	PKiKP	13 24 30.5	+0.2
CKRC	Cesky Krumlov	145.79	349	ePKP2	PKPab	13 24 27.7	+0.8
CKRC				MLR	MLR		
	comp=Z,4µm,20.8s						
CKRC	Cesky Krumlov	145.79	349	ePKP	PKPab	13 24 27.7	+0.8
CKRC				ex	x	13 24 32.6	
CKRC				AMS	AMS	14 27 40.0	
	comp=Z,4µm,20.8s						
ARR	Arges	145.80	335	⇓P	PKPab	13 24 28.3	+1.2
WLF	Walferdange	145.83	358	PKP	PKPdf	13 24 26.1	0.0
WLF	Walferdange	145.83	358	dPKP	PKPab	13 24 27.9	+1.0
GERES	GERESS Array B	145.88	350	PKPbc	PKPab	13 24 27.9	+0.6
	comp=Z,2.5nm,0.8s,baz=25,slow=4.7,SNR=13						
LOT	Lotru	146.08	336	⇓P	PKPbc	13 24 27.6	0.0
SIRR	Siria	146.17	339	⇑P	PKPab	13 24 27.9	-0.4
CONA	Conrad Observa	146.32	347	ePKP	PKPbc	13 24 28.1	-0.1
	comp=Z,72nm,1.2s						
RONA	Rosalia, Austr	146.44	346	epPKP	pPKPdf	13 24 30.2	+0.2
	comp=Z,58nm,1.3s						
GZR	Gura Zlata	146.51	337	⇑P	PKPbc	13 24 28.8	-0.1
GZR	Gura Zlata	146.51	337	⇑PKP2	PKPbc	13 24 28.8	-0.1
MOA	Molln	146.73	348	epPKP	PKPab	13 24 30.5	0.0
	comp=Z,25nm,1.0s						
BZS	Buzias	146.75	338	⇓P	PKPab	13 24 30.3	-0.3
BIOA	Bad Ischl, Aus	147.00	349	epPKP	PKPab	13 24 31.7	+0.2
	comp=Z,43nm,1.4s						
ARSA	Arzberg	147.04	347	epPKP	PKPbc	13 24 30.7	+0.4
	comp=Z,34nm,1.2s						
HERR	Herculane	147.08	337	⇑P	PKPbc	13 24 30.3	-0.1
ELND	Elena	147.18	331	⇑P	PKPbc	13 24 30.3	-0.5
MORH	Mrgy, Hungar	147.19	342	⇓P	PKPbc	13 24 31.2	+0.5
MMAI	Mount Meron Ar	147.24	308	PKPbc	PKiKP	13 24 33.4	-0.4
	comp=Z,25nm,1.0s,baz=77,slow=3.6,SNR=11						
LESA	Schwarzleotal	147.43	350	ePKP	PKPbc	13 24 31.9	+0.5
	comp=Z,44nm,1.4s						
MDVR	Moldovita	147.43	337	⇑P	PKPbc	13 24 31.5	0.0
KBA	Koelnbreinsper	147.65	349	ePKP	PKPdf	13 24 30.3	+0.9
	comp=Z,37nm,1.3s						
RETA	Reutte	147.65	352	ePKP	PKPbc	13 24 31.9	-0.1
	comp=Z,51nm,1.5s						
LODK	Lodwar	147.67	251		PKiKP	13 24 34.2	-0.9
WATA	Walderalm	147.68	351	ePKP	PKPdf	13 24 30.3	+0.8
	comp=Z,53nm,1.5s						
SOKA	Soboth	147.69	347	ePKP	PKPbc	13 24 32.2	0.0
	comp=Z,39nm,1.5s						
MOTA	Moosalm	147.74	352	ePKP	PKPbc	13 24 32.9	+0.5
	comp=Z,37nm,1.3s						
WTTA	Wattenberg	147.75	351	ePKP	PKPbc	13 24 32.8	+0.4
	comp=Z,30nm,1.0s						
GHAJ	Ghor Haditha	147.80	305	IAMs_20	IAMs_20	14 35 59.5	
	comp=Z,3µm,20.0s						
SQTA	Sankt Quirin	147.85	352	epPKP	pPKPdf	13 24 31.9	-0.6
	comp=Z,32nm,1.1s						
CSS	Mathiatis	147.87	313		PKiKP	13 24 33.7	-1.2
CSS				IAMs_20	IAMs_20	14 40 02.0	
	comp=Z,2µm,20.0s						
DAVA	Damuels	147.95	354	ePKP	PKPbc	13 24 33.6	+0.7
	comp=Z,53nm,1.2s						
OBKA	Obir	147.95	347	epPKP	PKiKP	13 24 34.5	-0.3
	comp=Z,11nm,0.9s						
MYKA	Terra Mystica	148.02	349	ePKP	PKPbc	13 24 33.1	0.0
	comp=Z,25nm,1.1s						
FETA	Feichten	148.11	352	epPKP	PKiKP	13 24 35.2	0.0
	comp=Z,41nm,1.4s						
ABTA	Abfaltersbach	148.11	350	epPKP	PKPbc	13 24 33.0	-0.3
	comp=Z,37nm,1.0s						
ISP	Isparta	148.16	319	⇑ePKIKP	PKPdf	13 24 30.2	-0.3
ISP				MLR	MLR		
	comp=Z,4µm,22.0s						
BOVS	Bovan	148.40	336	⇑P	PKPbc	13 24 34.5	+0.5
FUORN	Ofenpass-Fuorn	148.56	353		PKPbc	13 24 34.8	+0.1
RDO	Rodhopi	148.70	329		PKPbc	13 24 35.3	+0.5
MBAR	Mbarara	149.85	240		PKPab	13 24 43.1	-1.1
MBAR	Mbarara	149.85	240	⇑ePKIKP	PKPdf	13 24 31.9	-2.1
VAY	Valandovo	149.96	333	i P	PKPab	13 24 41.9	-1.7
ASCN	Ascension	150.00	139	IAMs_20	IAMs_20	14 26 46.5	
	comp=Z,2µm,19.0s						
BNI	Bardonecchia	150.42	357		PKiKP	13 24 41.4	+1.4
BNI	Bardonecchia	150.42	357	PKIKP	PKiKP	13 24 41.4	+1.4
OHR	Ohrid	150.89	335	i P	PKiKP	13 24 41.8	+0.8
PGAV	Gavieira, Arco	151.23	21	ePKPab	PKPab	13 24 49.8	+0.8
PGAV				eSS	SS	13 47 52.8	+11
PGAV				eLQ	LQ	14 07 38.3	
PGAV				eLR	LR	14 15 45.3	
PGAV				i IAMs_20	IAMs_20	14 30 14.3	
	comp=Z,4µm,18.0s						
PCAB	Cabril	151.54	20	ePKPab	PKPab	13 24 50.2	+0.1
ECAL	Calabor	151.75	18	PKP	PKPab	13 24 47.0	-4.0
POLO	Lamas de Olo	151.92	20	ePKPab	PKPab	13 24 50.9	-1.0
CESX	Cesi	152.09	348		PKPab	13 24 48.5	-3.8
SGRT	San Giovanni R	152.11	342		PKPab	13 24 49.0	-3.6
MVO	Moncorvo	152.36	20	ePKPab	PKPab	13 24 52.4	-1.2
MVO				eSS	SS	13 48 10.1	+16
MVO				eLQ	LQ	14 07 44.1	
MVO				eLR	LR	14 15 09.3	
MVO				i IAMs_20	IAMs_20	14 31 47.2	
	comp=Z,4µm,18.0s						
PVIS	Viseu	152.47	21	ePKPab	PKPab	13 24 52.8	-1.3
SACV	Santiago Islan	152.56	87	IAMs_20	IAMs_20	14 25 29.9	
	comp=Z,2µm,22.0s						
PCAS	Casmilo, Conde	152.84	23	ePKPab	PKPab	13 24 53.7	-1.9
MTE	Manteigas	152.87	21	ePKPab	PKPab	13 24 53.5	-2.3
MTE				eSS	SS	13 48 10.7	+11
MTE				eLQ	LQ	14 07 53.2	
MTE				eLR	LR	14 18 16.5	
MTE				i IAMs_20	IAMs_20	14 46 16.3	
	comp=Z,2µm,20.0s						
EJON	La Jonquera	153.01	3	PKP	PKiKP	13 24 47.4	+2.1
IDI	Anoyia	153.26	321	PKP	PKPdf	13 24 41.8	+3.4
PCBR	Castelo Branco	153.39	21	ePKPab	PKPab	13 24 55.3	-2.6
PMAFR	Mafra	153.47	25	ePKPab	PKPab	13 24 55.7	-2.6
PMOZ	Porto Moniz, M	153.55	45	eLR	LR	14 17 16.4	
PMOZ				i IAMs_20	IAMs_20	14 43 18.3	
	comp=Z,1µm,20.0s						
PMRV	Marv??o	153.79	22	ePKPab	PKPab	13 24 56.1	-3.5
PMRV				eLQ	LQ	14 07 53.2	
PMRV				eLR	LR	14 16 13.4	
PMRV				i IAMs_20	IAMs_20	14 41 33.6	
	comp=Z,3µm,20.0s						
EBAD	Badajoz	154.52	22	PKP	PKiKP	13 24 49.9	+1.5
ESDC	Sonseca Array	154.64	16	PKPbc	PKPbc	13 24 48.2	-0.5
	comp=Z,1.3nm,1.0s,baz=341,slow=2.6,SNR=5.2						
ESDC				PKPab	PKPab	13 25 03.1	-0.2
	comp=Z,3.3nm,1.0s,baz=332,slow=2.8,SNR=6.8						
PBAR	Barrancos	155.02	23	PKP	PKPdf	13 24 44.8	+4.0
PVAQ	Vaqueiros	155.44	25	eSS	SS	13 48 45.4	+18
PVAQ				eLQ	LQ	14 08 43.0	
PVAQ				eLR	LR	14 18 30.4	
PVAQ				i IAMs_20	IAMs_20	14 42 03.7	
	comp=Z,3µm,20.0s						
DBIC	Dimbokro	167.12	131	PKP	PKPdf	13 24 54.2	-0.1
	comp=Z,2.6nm,0.9s,baz=288,slow=3.2,SNR=2.0						

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*UPA **06** 13:09:39.1±1.0, 8°.36N×82°.95W, h17^{km}±3^{km}, MD3.8, MW3.9*

*CATAC **06** 13:09:40.0±0.4, 8°N±3°×8°3W±°, h2^{km}±1^{km}, M3.7/18, MLv3.7/18, Error ellipse: s-maj=6.1km s-min=3.4km az=177.2, confirmed*

*UCR **06** 13:09:39.2±1.0, 8°.34N×82°.95W, h9^{km}±2^{km}, MW3.8*

ISC 06 13:09:39.0±0.8, **8°.33N**±0°.03×**82°.96W**±0°.02, **h17**^{km}±6^{km}, **n78**, σ1^{s}**06**/94, **1C-5D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTPM	Petroterminale	0.14	148	⇑eP	Pg	13 09 43.4	+0.4
PTPM				i S	Sb	13 09 47.4	+1.3
PTPA	Petro Terminal	0.15	146	eP	Pg	13 09 43.4	+0.3
PTPA				eS	Sb	13 09 47.4	+1.1
LESP3	La Esperanza,	0.18	64	eP	Pg	13 09 43.4	-0.2
LPPC	Paso Canoas	0.24	30	eP	Pg	13 09 44.2	-0.2
LPPC				eS	Sg	13 09 48.5	+0.4
LIMO3	Limones	0.24	158	eP	Pg	13 09 45.2	+0.7
LMNES	Limones	0.24	157	eP	Pg	13 09 45.0	+0.5
CDITO	Canoas	0.26	19	P	Pg	13 09 44.5	-0.2
CDITO	Canoas	0.26	19	S	Sg	13 09 48.4	-0.3
NELY	Ciudad Neily	0.32	2	eP	Pg	13 09 45.8	-0.1
NELY				eS	Sb	13 09 51.2	-0.1
FITO	Golfito	0.35	327	eP	Pg	13 09 45.6	-0.9
FITO				eS	Sg	13 09 50.8	-0.7
DMCAL	E. de Neily	0.38	25	eP	Pg	13 09 46.9	0.0
PIRO	Carate, Puerto	0.38	282	eP	Pg	13 09 47.0	+0.1
PIRO	Carate, Puerto	0.38	282	P	Pg	13 09 46.8	-0.1
PIRO	Carate, Puerto	0.38	282	S	Sg	13 09 50.4	-1.9
PIRO	Carate, Puerto	0.38	282	eP	Pg	13 09 46.8	-0.1
EDAD	Golfito	0.38	327	eP	Pg	13 09 46.1	-0.9
PTJ1	Puerto Jimnez	0.40	301	eP	Pn	13 09 50.5	+0.5
PTJ1				eS	Sn	13 09 56.7	-0.4
PTJ1	Puerto Jimnez	0.40	301	S	Sg	13 09 52.0	-0.8
PTJ1	Puerto Jimnez	0.40	301	P	Pg	13 09 47.1	-0.1
PTJ1	Puerto Jimnez	0.40	301	eP	Pg	13 09 47.3	+0.1
BAGA3	Bagala, Chiriq	0.45	72	eP	Pg	13 09 48.2	+0.1
MLIR3	Monte Lirio, C	0.48	16	eP	Pb	13 09 49.4	+0.3
DVD	David	0.51	78	⇓eP	Pg	13 09 49.0	-0.3
DVD				i S	Sb	13 09 57.4	+0.7
PEDE3	Pedregal, Chir	0.53	84	⇓eP	Pg	13 09 49.2	-0.5
PEDE3				eS	Sb	13 09 57.9	+0.7
SCLRA	Santa Clara, W	0.53	19	eP	Pg	13 09 50.0	+0.3
BRU2	Volcan	0.53	29	⇓eP	Pg	13 09 49.8	0.0
BRU2				eS	Sb	13 09 57.8	+0.3
BRU2				i S	Sg	13 09 58.1	+1.2
BRU2				eS	Sg	13 09 58.1	+1.2
BRU2	Volcan	0.53	29	P	Pg	13 09 49.7	0.0
BRU2	Volcan	0.53	29	eP	Pg	13 09 49.6	-0.1
JEFFS	S de V. Baru	0.54	51	eP	Pg	13 09 49.9	+0.1
LOCO3	Loma Colorada,	0.54	81	eP	Pg	13 09 49.4	-0.4
LOCO3				eS	Sb	13 09 59.0	+1.6
LOMA3	Las Lomas, Chi	0.57	79	eP	Pg	13 09 50.1	-0.2
PTAR3	Potrerillos Ar	0.58	51	eP	Pg	13 09 50.3	-0.4
PTAR3				eS	Sb	13 09 59.0	+0.2
ALCO	Alturas Coton,	0.63	11	eP	Pg	13 09 50.8	-0.7
BQTLY	Boquete Panama	0.65	49	eP	Pg	13 09 51.2	-0.7
BQSF3	Alto Boquete,	0.66	51	⇓eP	Pg	13 09 51.5	-0.6
BQSF3				eS	Sg	13 10 00.7	-0.3
LNBQ3	Los Naranjos,	0.69	48	eP	Pg	13 09 45.1	-7.4
LNBQ3				eS	Sg	13 10 01.2	-0.5
EDP2	Potrero Grande	0.72	342	eP	Pg	13 09 52.8	-0.3
PSOM3	Paja de Sombre	0.72	60	⇓eP	Pg	13 09 52.2	-1.0
PSOM3				eS	Sg	13 10 02.3	-0.5
FIMO	Fila Mora	0.77	329	eP	Pg	13 09 53.2	-0.8
PBNVO	Pueblo Nuevo,	0.94	53	eP	Pb	13 09 55.6	-1.3
RBALA	Bur	0.97	55	eP	Pb	13 09 56.2	-1.1
DRK0	Durika	0.97	343	eP	Pb	13 09 56.6	-0.9
DRK0				eS	Sb	13 10 09.5	-0.7
DRK0	Durika	0.97	343	P	Pb	13 09 56.8	-0.7
DRK0	Durika	0.97	343	eP	Pb	13 09 56.3	-1.2
CHGR2	Aguacate	1.01	53	eP	Pb	13 09 57.0	-1.0
OCHAL	Ojochal	1.02	318	P	Pb	13 09 57.2	-1.1
OCHAL	Ojochal	1.02	318	S	Sb	13 10 12.1	+0.6
EDPE	Pejibaye, P	1.03	324	eP	Pb	13 09 57.3	-1.1
REME3	Remedios, Chir	1.12	95	eP	Pb	13 09 58.8	-1.1
NANC3	Nancito, Chiri	1.22	94	eP	Pn	13 10 00.1	-1.1
PDCAN	Manzana , Fuen	1.25	92	eP	Pn	13 10 00.3	-1.4
CEUA	Cerro Uatsi, L	1.29	1	eP	Pb	13 10 03.8	+1.0
BRIBI	Bribri	1.29	6	eP	Pn	13 10 03.1	+0.8
BUS1	Rivas	1.45	327	eP	Pn	13 10 04.6	-0.2
PIEC	Cerro El Cedra	1.62	323	eP	Pn	13 10 07.5	+0.4
LCR2	La Lucha 2	1.75	324	P	Pn	13 10 10.1	+1.4
VERB	Verbena	1.77	336	eP	Pn	13 10 09.7	+0.8
PICV	PH. Pirrs	1.78	317	eP	Pn	13 10 10.2	+1.2
GMAL	Guarumal, Vera	1.80	108	eP	Pn	13 10 06.6	-2.6
GMAL	Guarumal, Vera	1.80	108	eP	Pn	13 10 08.0	-1.2
VTCV	VTCV, Calle Va	1.81	335	eP	Pn	13 10 10.5	+0.8
RESJ	San Isidro (Tu	1.82	338	eP	Pn	13 10 10.9	+1.2
ABRB	Las Abras (San	1.83	336	eP	Pn	13 10 10.8	+0.9
CVTV	Tajo	1.84	335	eP	Pn	13 10 11.1	+1.0
CVTQ	Turrialba Volc	1.85	334	eP	Pn	13 10 11.4	+1.1
VTR0	Volcan Turrial	1.86	335	eP	Pn	13 10 11.2	+0.7
CVTR	Volcan Turrial	1.86	335	eP	Pn	13 10 11.5	+1.0
SAFE3	Santa Fe, Vera	1.87	84	eP	Pn	13 10 10.8	+0.6
ACOS	Acosta	1.89	321	eP	Pn	13 10 10.3	-0.3
TRT2	Tortugero	2.35	341	P	Pn	13 10 18.7	+1.9
TRT2	Tortugero	2.35	341	eP	Pn	13 10 18.1	+1.3
SOCE	Pocosol	2.62	321	P	Pn	13 10 23.2	+2.6
COVE	Coope Vega, Sa	2.77	329	P	Pn	13 10 24.4	+1.8
JTS	Las Juntas de	2.77	315	eP	Pb	13 10 26.5	-1.7
JTS	Las Juntas de	2.77	315	P	Pn	13 10 25.2	+2.5
CMARA	Lajas Hojancha	2.96	305	P	Pn	13 10 27.3	+2.0
BCIP	Isla Barro Col	3.19	75	P	Pn	13 10 31.9	+3.4
CARN	Rivas	3.80	319	P	Pn	13 10 38.8	+2.0

IDC 06 13:11:53.0±12.0, **15°.66S**×**175°.45W**, **h0**^{km}, **mb3.5**/2, **mbtmp3.5**/2, **Error ellipse: s-maj=561.7km s-min=67.1km az=140.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	47.86	257	P	P	13 20 33.0	-0.2
	0.5nm,0.9s,baz=90,slow=7.3,SNR=2.1						
	0.5nm,0.9s						
ASAR	Alice Springs	48.15	252	P	P	13 20 35.4	-0.1
	0.7nm,0.8s,baz=86,slow=7.8,SNR=5.5						
	0.7nm,0.8s						
BRTR	Keskin Array B	145.09	319	PKPbc	PKPbc	13 31 31.5	-0.9
	0.9nm,0.8s,baz=72,slow=0.5,SNR=4.7						

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*CATAC **06** 13:14:48.2±0.8, 8°N±4°×8°3W±°, h1^{km}±1^{km}, M3.5/7, MLv3.5/7, Error ellipse: s-maj=9.7km s-min=4.7km az=163.5, confirmed*

*UPA **06** 13:14:49.1±0.6, 8°.36N×82°.94W, h17^{km}±1^{km}, MW3.4*

*UCR **06** 13:14:49.1±1.2, 8°.35N×82°.94W, h5^{km}±6^{km}, MW3.6*

ISC 06 13:14:49.4±0.9, **8°.34N**±0°.02×**82°.94W**±0°.02, **h18**^{km}±3^{km}, **n74**, σ1^{s}**19**/82, **1C-1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTPM	Petroterminale	0.15	158	⇑eP	Pg	13 14 53.4	-0.2
PTPM				eS	Sg	13 14 57.3	+0.9
PTPA	Petro Terminal	0.15	155	eP	Pg	13 14 53.3	-0.4
PTPA				eS	Sg	13 14 57.3	+0.7
LESP3	La Esperanza,	0.16	65	eP	Pg	13 14 53.5	-0.3
LPPC	Paso Canoas	0.21	26	eP	Pg	13 14 54.2	-0.3
CDITO	Canoas	0.24	15	P	Pg	13 14 54.7	-0.3
CDITO	Canoas	0.24	15	S	Sg	13 14 58.5	-0.3
LIMO3	Limones	0.25	164	eP	Pb	13 14 55.4	+0.2
LMNES	Limones	0.25	163	eP	Pg	13 14 55.0	-0.1
NELY	Ciudad Neily	0.31	358	eP	Pg	13 14 55.6	-0.5
NELY				eS	Sb	13 15 01.1	0.0
DMCAL	E. de Neily	0.36	23	eP	Pg	13 14 56.8	-0.2
FITO	Golfito	0.36	323	eP	Pg	13 14 55.8	-1.1
FITO				eS	Sg	13 15 00.8	-1.2
EDAD	Golfito	0.39	324	eP	Pg	13 14 56.1	-1.3
PIRO	Carate, Puerto	0.40	279	eP	Pg	13 14 57.0	-0.7
PIRO	Carate, Puerto	0.40	279	P	Pg	13 14 56.9	-0.7
PIRO	Carate, Puerto	0.40	279	S	Sg	13 15 00.9	-2.4
PIRO	Carate, Puerto	0.40	279	eP	Pg	13 14 56.9	-0.9
PTJ1	Puerto Jimnez	0.41	298	P	Pg	13 14 57.3	-0.6
PTJ1	Puerto Jimnez	0.41	298	S	Sg	13 15 03.0	-0.6
BAGA3	Bagala, Chiriq	0.42	73	eP	Pg	13 14 58.2	+0.1
PEDE3	Pedregal, Chir	0.51	85	eP	Pg	13 14 59.0	-0.6
BRU2	Volcan	0.51	28	⇓iP	Pg	13 14 59.6	-0.1
BRU2				eS	Sb	13 15 08.0	+0.8
BRU2	Volcan	0.51	28	P	Pg	13 14 59.7	-0.1
BRU2	Volcan	0.51	28	S	Sb	13 15 08.1	+1.0
BRU2	Volcan	0.51	28	eP	Pg	13 14 59.6	-0.1
SCLRA	Santa Clara, W	0.51	17	eP	Pn	13 15 02.1	+0.1
JEFFS	S de V. Baru	0.52	50	eP	Pg	13 14 59.7	-0.1
LOCO3	Loma Colorada,	0.52	82	eP	Pg	13 14 59.5	-0.3
TBS2		0.53	31	eP	Pb	13 15 00.9	+0.7
LOMA3	Las Lomas, Chi	0.55	80	eP	Pg	13 15 00.0	-0.3
PTAR3	Potrerillos Ar	0.56	51	eP	Pg	13 15 00.5	-0.1
ALCO	Alturas Coton,	0.61	9	eP	Pg	13 15 00.9	-0.7
BQTLY	Boquete Panama	0.63	48	eP	Pg	13 15 01.4	-0.5
BQSF3	Alto Boquete,	0.64	51	eP	Pg	13 15 01.5	-0.5
PSOM3	Paja de Sombre	0.70	60	eP	Pg	13 15 01.9	-1.2
EDP2	Potrero Grande	0.71	340	eP	Pg	13 15 02.8	-0.6
FIMO	Fila Mora	0.77	327	eP	Pg	13 15 03.3	-1.1
PBNVO	Pueblo Nuevo,	0.92	53	eP	Pg	13 15 05.5	-1.7
RBALA	Bur	0.94	55	eP	Pg	13 15 06.1	-1.6
DRK0	Durika	0.97	342	eP	Pg	13 15 06.7	-1.6
DRK0	Durika	0.97	342	eP	Pg	13 15 06.6	-1.6
CHGR2	Aguacate	0.98	53	eP	Pg	13 15 07.0	-1.5
EDPE	Pejibaye, P	1.03	322	eP	Pg	13 15 07.3	-2.1
OCHAL	Ojochal	1.03	317	P	Pg	13 15 08.7	-0.7
OCHAL				S	Sb	13 15 23.4	+1.5
NANC3	Nancito, Chiri	1.20	95	eP	Pg	13 15 10.0	-2.5
PDCAN	Manzana , Fuen	1.23	92	eP	Pg	13 15 10.4	-2.7
CEUA	Cerro Uatsi, L	1.27	360	eP	Pn	13 15 13.9	+1.5
BRIBI	Bribri	1.28	5	eP	Pg	13 15 12.5	-1.6
BUS1	Rivas	1.45	326	eP	Pn	13 15 15.0	-0.1
PIEC	Cerro El Cedra	1.63	322	eP	Pn	13 15 17.7	+0.3
QUEP	Quepos	1.63	312	S	Sg	13 15 41.3	-0.7
LCR2	La Lucha 2	1.75	323	S	Sg	13 15 45.6	-0.3
VERB	Verbena	1.76	335	eP	Pn	13 15 20.6	+1.4
GMAL	Guarumal, Vera	1.78	109	eP	Pn	13 15 16.9	-2.4
PICV	PH. Pirrs	1.78	316	eP	Pn	13 15 20.7	+1.3
VTCV	VTCV, Calle Va	1.81	334	eP	Pn	13 15 20.7	+0.8
ABRB	Las Abras (San	1.83	335	eP	Pn	13 15 21.4	+1.2
RAFA	San Farael, Vo	1.83	332	eP	Pb	13 15 22.5	+0.1
CVTV	Tajo	1.84	334	eP	Pn	13 15 21.6	+1.2
CVTQ	Turrialba Volc	1.85	334	eP	Pn	13 15 21.7	+1.1
VTR0	Volcan Turrial	1.85	334	eP	Pn	13 15 21.4	+0.7
CVTR	Volcan Turrial	1.86	334	eP	Pn	13 15 20.8	+0.1
VICA	Volcano Irazu	1.86	331	eP	Pn	13 15 22.5	+1.7
HDC	Heredia	2.02	325	eP	Pb	13 15 25.5	-0.2
BELE	Belen	2.04	323	eP	Pb	13 15 25.9	-0.2
CACAO	El Cacao, Vera	2.28	116	eP	Pn	13 15 26.0	-0.1
CACAO				eS	Sn	13 15 53.5	-0.3
TRT2	Tortugero	2.34	340	P	Pn	13 15 27.9	+0.9
TRT2	Tortugero	2.34	340	S	Sb	13 15 59.7	+0.1
SOCE	Pocosol	2.62	321	P	Pn	13 15 33.4	+2.5
SOCE	Pocosol	2.62	321	eP	Pb	13 15 35.3	-0.6
AZU	Azuero	2.69	101	eP	Pn	13 15 33.7	+1.9
VACR	Volcan Arenal	2.73	321	eP	Pb	13 15 36.7	-1.0
ARE1	Arenal 1	2.75	320	eP	Pn	13 15 35.4	+2.8
CEDE	Laguna Cedeo	2.76	321	eP	Pb	13 15 36.4	-1.8
JTS	Las Juntas de	2.78	314	P	Pn	13 15 34.5	+1.4
JTS				S	Sn	13 16 08.8	+2.6

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*IDC **06** 13:17:27.9±0.8, 15°.60S×175°.51W, h0^{km}, mb4.1/11, mbtmp4.1/11, MS4.9/2, Error ellipse: s-maj=40.1km s-min=17.2km az=143.0*

*NOU **06** 13:17:29.1, 15°.21S×175°.14W, h10^{km}, mb5.2/7, Tonga Islands*

*NEIC **06** 13:17:29.4±1.9, 15°.60S±0°.10×175°.16W±0°.06, h10^{km}±1^{km}, mb5.0/129, Error ellipse: s-maj=16.8km s-min=10.0km az=169.0*

*GCMT **06** 13:17:34.4±0.2, 15°.27S±0°.01×175°.39W±0°.01, h17^{km}±1^{km}, MW5.3/107, Moment Tensor Solution. s2,c2; s107,c164; Duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.33±.04; $M_{\theta\theta}$0.85±.04; $M_{\phi\phi}$-0.52±.03; $M_{r\theta}$0.10±.09; $M_{\theta\phi}$0.90±.03; $M_{\phi r}$0.08±.09; Best double couple: $M_0$1.13800×10^{17} NP1:ϕ_s109.00000°, δ85.00000°, λ1.00000°. NP2:ϕ_s19.00000°, δ89.00000°, λ175.00000°. Principal axes: T 1.3080, Plg4.0000°, Azm334.0000°; N -0.3400, Plg85.0000°, Azm182.0000°; P -0.9690, Plg2.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 13:17:29.2±0.4, **15°.52S**±0°.09×**175°.20W**±0°.07, **h10**^{km}, **n133**, σ1^{s}**48**/72, **mb5.0**/65, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.68	65	Pn	Pn	13 18 23.9	-2.3
AFI	Afiamalu	3.68	65	P	Pn	13 18 23.6	-2.7
NIUE	Niue	6.15	126		Pn	13 18 58.7	-1.5
MSVF	Nonsavu	6.83	250	Pn	Pn	13 19 08.5	-1.1
MSVF	Nonsavu	6.83	250	P	Pn	13 19 11.7	+2.1
SANVU	Saraoutou	16.96	268	Pn	Pn	13 21 25.5	-1.2
PINNC	Pines Island,	17.84	244		P	13 21 39.0	+0.6
PINNC	Pines Island,	17.84	244	P	P	13 21 39.9	+1.5
	90nm,1.8s						
OUENC	Ouen Island, N	18.31	245	P	P	13 21 45.7	+2.2
	107nm,0.9s						
DZM	Mont Dzumac	18.55	247	LR	LR	13 27 55.7	
	comp=Z,3µm,18.1s,slow=34						
DZM	Mont Dzumac	18.55	247		Pn	13 21 47.5	+1.0
DZM	Mont Dzumac	18.55	247	P	Pn	13 21 47.7	+1.2
	102nm,2.7s						
ONTNC	Ouen Toro	18.61	246		P	13 21 46.3	-0.6
ONTNC				IAmb	IAmb	13 21 56.1	
	comp=Z,123nm,1.2s						
TARA	Tarawa	20.47	324	P	P	13 22 08.2	+0.9
URZ	Urewera	23.64	195	P	P	13 22 43.5	+2.9
H11S2	WAKE ISLAND Hy	38.21	332	T	T	14 05 17.3	
	baz=149						
H11S3	WAKE ISLAND Hy	38.22	332	T	T	14 05 26.4	
	baz=149,slow=74,SNR=3.8						
H11S1	WAKE ISLAND Hy	38.23	332	T	T	14 05 11.5	
	baz=149,slow=74,SNR=5.4						
H11N3	WAKE ISLAND Hy	39.19	333	T	T	14 06 23.1	
	baz=152,slow=76,SNR=18						
H11N1	WAKE ISLAND Hy	39.20	333	T	T	14 06 20.2	
	baz=152,slow=76,SNR=53						
H11N2	WAKE ISLAND Hy	39.21	333	T	T	14 06 23.1	
	baz=152,slow=76,SNR=20						
COEN	Coen	40.24	267	P	P	13 25 05.5	-1.1
STKA	Stephens Creek	42.47	240	P	P	13 25 23.1	-1.6
	comp=Z,3.2nm,0.9s,baz=48,slow=7.8,SNR=5.0						
	comp=Z,3.2nm,0.9s						
STKA	Stephens Creek	42.47	240		P	13 25 24.1	-0.6
BBOO	Buckleboo	47.25	240	P	P	13 26 01.2	-1.5
WB0	Warramunga Arr	48.08	257		P	13 26 06.9	-2.5
WRA	Warramunga Arr	48.12	257	P	P	13 26 06.8	-3.0
	comp=Z,1.3nm,0.9s,baz=90,slow=7.0,SNR=6.7						
	comp=Z,1.3nm,0.9s						
WRA	Warramunga Arr	48.12	257		P	13 26 08.2	-1.5
AS31	Alice Springs	48.42	252		P	13 26 10.0	-2.0
ASAR	Alice Springs	48.42	252	P	P	13 26 09.1	-3.0
	comp=Z,6.3nm,0.8s,baz=85,slow=8.1,SNR=45						
	comp=Z,6.3nm,0.8s						
ASAR	Alice Springs	48.42	252		P	13 26 10.3	-1.7
FAKI	Fak Fak	53.21	278	P	P	13 26 46.9	-1.3

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SOEI  Soe               59.19 268  P        P       13 27 30.6 -0.5
VNDA  Vanda             63.08 185  P        P       13 27 56.0 -0.4
      comp=Z,0.9nm,0.8s,baz=79,slow=5.2,SNR=1.4
      comp=Z,0.9nm,0.8s
VNDA  Vanda             63.08 185  P        P       13 27 56.0 -0.4
VNDA                               IAmb     IAmb    13 28 15.4
      comp=Z,22nm,1.7s
PETK  Petropavlovsk-    72.23 343  P        P       13 28 54.2 -0.2
      comp=Z,4.8nm,0.8s,baz=156,slow=5.5,SNR=2.2
      comp=Z,4.8nm,0.8s
PFO   Pinyon Flats O    74.28  48           P       13 29 06.4 -0.6
PFO                                IAmb     IAmb    13 29 17.0
      comp=Z,22nm,1.7s
LRMC  Laurel Mtn Rad    74.41  46  P        P       13 29 08.8 +1.0
QSPA  South Pole Qui    74.52 180  P        P       13 29 09.0 +1.1
LPIG  La Paz            74.59  59  LR       LR      13 55 07.2
      comp=Z,737nm,18.9s,baz=264,slow=30
YBH   Yreka Blue Hor    74.75  38  P        P       13 29 11.8 +2.2
      comp=Z,0.4nm,0.8s,baz=135,slow=5.7,SNR=8.8
YBH   Yreka Blue Hor    74.75  38  P        P       13 29 10.8 +1.1
YBH                                IAmb     IAmb    13 29 19.9
      comp=Z,34nm,1.7s
GSC   Goldstone, Bar    74.92  46  IAmb     IAmb    13 29 19.2
      comp=Z,22nm,1.5s
QSM   Queen of Sheba    75.22  46  IAmb     IAmb    13 29 21.5
      comp=Z,23nm,1.5s
DSP   Deep Springs      75.23  44  IAmb     IAmb    13 29 21.4
      comp=Z,20nm,1.5s
NVAR  Mina Array Bea    75.59  43  P        P       13 29 17.2 +2.5
      comp=Z,0.7nm,0.6s,baz=227,slow=8.4,SNR=18
      comp=Z,0.7nm,0.6s
NVAR  Mina Array Bea    75.59  43  P        P       13 29 14.6 -0.1
NV11  Mina Array Sit    75.69  43  IAmb     IAmb    13 29 23.1
      comp=Z,31nm,1.8s
BLYC  Blythe            75.74  49  IAmb     IAmb    13 29 23.5
      comp=Z,29nm,1.7s
V12A  Nelson            76.50  47  IAmb     IAmb    13 29 29.3
      comp=Z,18nm,1.5s
J05D  Fort Rock, OR     76.56  37  IAmb     IAmb    13 29 29.9
      comp=Z,12nm,1.0s
W13A  Hualapai Mount    76.87  48  IAmb     IAmb    13 29 30.9
      comp=Z,19nm,1.5s
ILSW  Iliamna Southw    77.33  11  IAmb     IAmb    13 29 30.3
      comp=Z,15nm,0.9s
X16A  Lo Mia Camp, P    78.31  49  IAmb     IAmb    13 29 40.0
      comp=Z,13nm,1.1s
U15A  North Rim         78.65  47  IAmb     IAmb    13 29 41.2
      comp=Z,34nm,1.6s
WUAZ  Wupatki           78.87  48  IAmb     IAmb    13 29 43.6
      comp=Z,32nm,1.5s
J16K  Anvik River       79.38   7  IAmb     IAmb    13 29 42.5
      comp=Z,17nm,0.8s
J18K  Innoko River      80.04   8  IAmb     IAmb    13 29 45.7
      comp=Z,10nm,0.8s
BMRM  Bremner River     80.06  15  P        P       13 29 39.8 +1.0
D08A  Wollman Farm,     80.11  35  IAmb     IAmb    13 29 59.8
      comp=Z,27nm,1.6s
L22K  Petersville       80.13  11  IAmb     IAmb    13 29 56.1
      comp=Z,40nm,1.8s
TRF   Thorofare Moun    81.07  11           P       13 29 44.4  0.0
TRF                                IAmb     IAmb    13 29 50.9
      comp=Z,10nm,0.9s
RND   Reindeer          81.30  12  IAmb     IAmb    13 29 51.9
      comp=Z,16nm,1.2s
MCK   McKinley          81.58  11  IAmb     IAmb    13 30 01.3
      comp=Z,15nm,1.2s
M26K  Nabesna, AK       81.69  15  IAmb     IAmb    13 29 54.2
      comp=Z,9.7nm,0.9s
PV19  Morning Glory     81.86  47  IAmb     IAmb    13 30 00.8
      comp=Z,21nm,1.3s
PV13  Radium Mtn., P    81.91  47  IAmb     IAmb    13 30 11.2
      comp=Z,33nm,1.9s
M27K  Edge Creek, AK    81.93  15  IAmb     IAmb    13 29 56.1
      comp=Z,12nm,1.0s
PV03  Paradox Valley    81.93  47  IAmb     IAmb    13 30 19.2
      comp=Z,20nm,1.7s
TX31  Lajitas Ar. Si    82.13  57  P        P       13 29 49.0 -1.6
TXAR  Lajitas Array     82.13  57  P        P       13 29 52.2 +1.6
      comp=Z,0.7nm,1.0s,baz=240,slow=2.5,SNR=5.5
      comp=Z,0.7nm,1.0s
TXAR  Lajitas Array     82.13  57  P        P       13 29 49.1 -1.6
TASM  ASL Pad, Albuq    82.21  51  IAmb     IAmb    13 30 00.1
      comp=Z,16nm,1.4s
TASM  ASL Pad, Albuq    82.21  51  IAmb     IAmb    13 30 00.1
      comp=Z,16nm,1.4s
TASM  ASL Pad, Albuq    82.21  51  IAmb     IAmb    13 30 00.1
      comp=Z,14nm,1.3s
TASM  ASL Pad, Albuq    82.21  51  IAmb     IAmb    13 30 00.1
      comp=Z,12nm,1.2s
ABQ   Albuquerque       82.22  51  IAmb     IAmb    13 30 00.1
      comp=Z,17nm,1.4s
ANMO  Albuquerque       82.22  51  P        P       13 29 51.1  0.0
ANMO                               IAmb     IAmb    13 30 00.1
      comp=Z,17nm,1.4s
BCAR  Beaver Creek A    82.55  15  P        P       13 29 52.6 +0.6
HDA   Harding Lake      82.58  12  IAmb     IAmb    13 29 59.1
      comp=Z,10nm,0.8s
CCB   Clear Creek Bu    82.62  12  IAmb     IAmb    13 29 58.3
      comp=Z,8.2nm,0.8s
COLA  College           82.82  11  P        P       13 29 54.0 +0.8
IMAR  Indian Mountai    82.85   9  P        P       13 29 54.2 +0.8
IL31                    82.91  12  IAmb     IAmb    13 29 55.7
      comp=Z,28nm,1.8s
ILAR  Eielson Array     82.91  12  P        P       13 29 53.5 -0.2
      comp=Z,2.4nm,0.9s,baz=240,slow=6.5,SNR=16
      comp=Z,2.4nm,0.9s
ILAR  Eielson Array     82.91  12  P        P       13 29 54.3 +0.5
J25K  Salcha River,     83.08  12  IAmb     IAmb    13 30 05.8
      comp=Z,12nm,1.4s
J26L  Joseph Creek      83.37  13  IAmb     IAmb    13 30 08.4
      comp=Z,12nm,1.2s
G21K  Allakaket         83.38   9  IAmb     IAmb    13 30 00.9
      comp=Z,25nm,1.6s
E18K  Tukpahlearik C    83.40   6  IAmb     IAmb    13 29 58.3
      comp=Z,21nm,1.4s
L29M  L29M              83.52  16  IAmb     IAmb    13 30 11.4
      comp=Z,11nm,1.1s
PDAR  Pinedale Array    83.52  42  P        P       13 29 58.7 +0.9
      comp=Z,1.8nm,0.9s,baz=226,slow=3.9,SNR=9.8
      comp=Z,1.8nm,0.9s
PDAR  Pinedale Array    83.52  42  P        P       13 29 58.8 +1.1
F20K  Avaraart Lake     83.58   8  IAmb     IAmb    13 30 04.3
      comp=Z,8.5nm,1.1s
E19K  Redstone River    83.79   7  IAmb     IAmb    13 30 05.3
      comp=Z,11nm,0.8s
BELA  Belgrano 2        84.11 172  P        P       13 29 59.0 -1.0
YNE   Yellowstone No    84.29  40  IAmb     IAmb    13 30 11.0
      comp=Z,12nm,1.3s
COLD  Coldfoot          84.54  10  IAmb     IAmb    13 30 10.0
      comp=Z,11nm,1.0s
J29N  Klondike Camp     84.59  15  IAmb     IAmb    13 30 10.6
      comp=Z,8.9nm,0.8s
D19K  Kuna River        84.69   6  IAmb     IAmb    13 30 09.6
      comp=Z,11nm,0.8s
I28M  Miner Creek       85.00  14  IAmb     IAmb    13 30 08.6
      comp=Z,17nm,1.8s
C19K  Lookout Ridge     85.14   6  IAmb     IAmb    13 30 12.1
      comp=Z,8.5nm,0.8s
H27K  Steamboat Moun    85.30  13  IAmb     IAmb    13 30 22.3
      comp=Z,18nm,1.5s
I29M  Ogilvie Camp,     85.31  15  IAmb     IAmb    13 30 12.1
      comp=Z,6.2nm,0.5s
E23K  Chandalar         85.39   9  IAmb     IAmb    13 30 16.1
      comp=Z,8.6nm,1.1s
D22K  Ayikyak River     85.71   8  IAmb     IAmb    13 30 15.2
      comp=Z,13nm,0.9s
H29M  Whitestone        86.00  14  IAmb     IAmb    13 30 16.3
      comp=Z,9.7nm,0.9s
D23K  Nanushuk River    86.07   9  IAmb     IAmb    13 30 16.8
      comp=Z,12nm,1.0s
E25K  Arctic Village    86.13  11  IAmb     IAmb    13 30 26.3
      comp=Z,15nm,1.5s
G31M  Satah River       87.56  15  IAmb     IAmb    13 30 25.1
      comp=Z,8.4nm,0.9s
YKA   Yellowknife Ar    90.91  24  P        P       13 30 34.4 +1.6
      comp=Z,0.6nm,0.9s,baz=249,slow=5.1,SNR=9.1
      comp=Z,0.6nm,0.9s
YKA   Yellowknife Ar    90.91  24  P        P       13 30 33.4 +0.6
CMAR  Chiang Mai Arr    91.01 289  P        P       13 30 35.2 +0.9
      comp=Z,0.4nm,0.6s,baz=96,slow=2.9,SNR=4.5
      comp=Z,0.4nm,0.6s
C36M  Paulatuk          91.95  16  IAmb     IAmb    13 30 41.5
      comp=Z,15nm,1.4s
BVAR  Borovoye Array   116.91 322  PKP      PKPdf   13 36 13.8 -0.3
      comp=Z,0.6nm,0.5s,baz=106,slow=3.1,SNR=2.6
CLL   Collm            143.70 351  ePKPdf   PKiKP   13 37 07.0 -0.9
BR131 Keskin Array S   145.14 319           PKPbc   13 37 06.5 -0.5
BRTR  Keskin Array B   145.14 319  PKPbc    PKPbc   13 37 06.8 -0.2
      comp=Z,8.2nm,0.8s,baz=97,slow=2.7,SNR=38
BRTR  Keskin Array B   145.14 319           PKPbc   13 37 06.1 -0.9
GERES GERESS Array B   145.98 349  PKPbc    PKPdf   13 37 09.0 +0.4
      comp=Z,1.2nm,0.9s,baz=27,slow=9.2,SNR=4.1
CONA  Conrad Observa   146.42 347  ePKP     PKPdf   13 37 10.1 +0.7
      comp=Z,1.0nm,0.7s
RONA  Rosalia, Austr   146.53 346  i PKP    PKPdf   13 37 10.5 +1.0
      comp=Z,1.4nm,0.6s
ARSA  Arzberg          147.13 346  ePKP     PKPdf   13 37 10.5  0.0
      comp=Z,1.0nm,0.7s
MMAI  Mount Meron Ar   147.28 308  PKPbc    PKPbc   13 37 13.0 -0.6
      comp=Z,3.2nm,0.5s,baz=64,slow=3.8,SNR=6.9
LESA  Schwarzleotal    147.53 350  ePKP     PKPdf   13 37 12.1 +0.9
      comp=Z,0.2nm,0.3s
SOKA  Soboth           147.78 347  ePKP     PKPdf   13 37 12.2 +0.5
      comp=Z,8.2nm,1.4s
MOTA  Moosalm          147.84 352  ePKP     PKPab   13 37 20.1 +2.9
      comp=Z,7.0nm,1.0s
WTTA  Wattenberg       147.85 351  ePKiKP   PKPab   13 37 20.0 +2.8
      comp=Z,0.9nm,0.5s
FETA  Feichten         148.21 352  ePKiKP   PKPab   13 37 21.1 +2.4
      comp=Z,12nm,1.4s
ABTA  Abfaltersbach    148.21 350  ePKiKP   PKPab   13 37 20.5 +1.9
      comp=Z,11nm,2.0s
RDO   Rodhopi          148.78 329           PKiKP   13 37 19.2 +0.6
BNI   Bardonecchia     150.52 357           PKPab   13 37 26.3 -1.7
ESDC  Sonseca Array    154.75  16  PKPab    PKPab   13 37 46.6 +0.7
      comp=Z,2.5nm,0.9s,baz=322,slow=4.1,SNR=8.3
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*NEIC **06** 13:28:08.6±1.4, 18.°94S±0.°02×169.°1E±0.°1, h132km±6km, mb4.5/25, Error ellipse: s-maj=15.0km s-min=2.1km az=91.0*

*IDC **06** 13:28:09.5±3.0, 18.°94S×168.°92E, h141km±24km, mb3.9/10, mbtmp4.3/11, Error ellipse: s-maj=23.2km s-min=18.0km az=47.0*

*NOU **06** 13:28:11.1, 19.°02S×168.°89E, h131km, MLv4.9/36, Vanuatu Islands*

ISC 06 13:28:10.0±0.5**, 18.°97S**±0.°04×**169.°03E**±0.°07**, h147km, n112,** σ1.ˢ34/107**, mb4.4**/20**, 3D, Vanuatu Islands**

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Code  Station Name        Δ°   AZ°   Phase ID        Time      Res
                                   Op       ISC     h  m  s    ISC
INH   Isangel            0.62 158  P        Pn      13 28 32.1 +0.4
RTV   Rentapao           1.30 334  P        Pn      13 28 37.1 -0.2
RTV   Rentapao           1.30 334  P        Sn      13 28 58.8 +0.7
DVP   Devils Point       1.47 327  P        Pn      13 28 39.2 +0.2
DVP   Devils Point       1.47 327  P        Sn      13 29 00.9 -0.3
MARNC Mare, Loyalty      2.67 200           Pn      13 28 51.8 -1.3
MARNC                              Sn       Sn      13 29 22.7 -3.7
YATNC Mamie plateau,     3.67 213  P        Pn      13 29 04.2 -1.7
YATNC Mamie plateau,     3.67 213  S        Sn      13 29 47.2 -2.1
SANVU Saraoutou          3.91 333           Pn      13 29 08.0 -1.0
SANVU                              Sn       Sn      13 29 51.3 -3.6
SANVU Saraoutou          3.91 333  P        Pn      13 29 08.2 -0.8
PINNC Pines Island,      3.92 202           Pn      13 29 08.9 -0.2
PINNC Pines Island,      3.92 202  P        Pn      13 29 08.7 -0.4
PINNC Pines Island,      3.92 202  S        Sn      13 29 53.2 -1.8
DZM   Mont Dzumac        3.93 218  P        Pn      13 29 09.0 -0.3
      81nm,0.3s,baz=281,slow=23,SNR=854
DZM                                S        Sn      13 29 53.0 -2.3
      94nm,0.4s,baz=4.0,slow=20,SNR=11
DZM   Mont Dzumac        3.93 218           Pn      13 29 09.1 -0.3
DZM   Mont Dzumac        3.93 218  P        Pn      13 29 08.7 -0.6
OUENC Ouen Island, N     4.00 210  P        Pn      13 29 10.0 -0.1
ONTNC Ouen Toro          4.11 216           Pn      13 29 11.6 +0.1
ONTNC Ouen Toro          4.11 216  P        Pn      13 29 12.0 +0.5
KOUNC Koumac, New Ca     4.74 250  P        Pn      13 29 19.2 -0.7
NGOA  Tingoa Renbel     11.36 309  P        Pn      13 30 49.4 +1.3
TATA  Tatamba Isabel    13.81 318  P        Pn      13 31 19.5 -0.2
OUZ   Omahuta           16.69 167  P        Pn      13 31 57.1 +1.9
WCZ   Waipu Caves       17.55 166  P        Pn      13 32 07.4 +1.9
EIDS  Eidsvold          17.79 246  Pn       Pn      13 32 09.6 +1.0
AFI   Afiamalu          19.08  78  P        P       13 32 15.7 -5.7
HIZ   Hauiti            20.13 167  P        Pn      13 32 35.2 -0.6
HIZ   Hauiti            20.13 167  P        Pn      13 32 34.8 -1.0
HAZ   Te Kaha           20.22 160  P        P       13 32 35.9 +2.4
MXZ   Matakaoa Point    20.23 158  P        Pn      13 32 36.9 -0.1
URZ   Urewera           20.47 162  P        P       13 32 38.5 +2.4
      14nm,0.8s,baz=248,slow=5.6,SNR=8.9
      14nm,0.8s
URZ   Urewera           20.47 162  P        P       13 32 38.3 +2.2
URZ   Urewera           20.47 162  P        Pn      13 32 38.8 -1.1
WMGZ  Waiomatatini S    20.50 158  P        P       13 32 38.2 +1.8
PUZ   Puketiti          20.67 159  P        P       13 32 39.4 +1.2
TWGZ  Tauwhareparae     20.67 160  P        P       13 32 40.4 +2.1
RAHZ  Arahi             21.07 162  P        P       13 32 44.1 +1.5
BKZ   Black Stump Fm    21.14 164  P        P       13 32 44.9 +1.5
BKZ   Black Stump Fm    21.14 164  P        P       13 32 44.7 +1.3
KNZ   Kokohu            21.34 161  P        P       13 32 45.7 +0.2
KWHZ  Kaweka Forest     21.37 164  P        P       13 32 47.3 +1.5
MCHZ  McNeill Hill      21.46 164  P        P       13 32 49.2 +2.5
CTAO  Charters Tower    21.49 263  P        P       13 32 48.3 +1.1
CTAO  Charters Tower    21.49 263  P        P       13 32 48.4 +1.1
KRHZ  Kereru            21.56 164  P        P       13 32 50.0 +2.2
TSZ   Takapari Road     21.85 166  P        P       13 32 53.0 +2.2
QRZ   Quartz Range      21.99 173  P        P       13 32 55.4 +3.1
QRZ   Quartz Range      21.99 173  P        P       13 32 55.3 +3.0
PXZ   Pawanui           22.05 164  P        P       13 32 53.1 +0.2
MRZ   Mangatainoka R    22.34 167  P        P       13 32 55.5 -0.2
MRZ                                IAmb     IAmb    13 33 23.0
      comp=Z,17nm,1.1s
MRZ   Mangatainoka R    22.34 167  P        P       13 32 55.6 -0.2
PMG   Port Moresby      23.21 291  P        P       13 33 04.0 -0.1
      comp=Z,9.7nm,0.8s,baz=123,slow=4.8,SNR=5.8
      comp=Z,9.7nm,0.8s
PMG   Port Moresby      23.21 291           P       13 33 04.5 +0.4
PMG                                IAmb     IAmb    13 33 06.5
      comp=Z,14nm,0.9s
MTSU  Mount Surprise    23.44 268  P        P       13 33 06.8 +0.6
KHZ   Kahutara          23.69 172  P        P       13 33 08.3 +0.2
CNB   Canberra Magne    23.83 223  P        P       13 33 11.1 +1.4
CAN   Canberra          24.07 223  P        P       13 33 13.0 +1.2
CAN   Canberra          24.07 223  P        P       13 33 13.9 +2.1
COEN  Coen              25.28 277  P        P       13 33 24.0 +1.1
LBZ   Lake Benmore      25.36 178  P        P       13 33 24.0 +0.6
STKA  Stephens Creek    27.82 237  P        P       13 33 46.0 +0.5
      comp=Z,1.9nm,0.5s,baz=71,slow=9.1,SNR=7.4
      comp=Z,1.9nm,0.5s
STKA  Stephens Creek    27.82 237  P        P       13 33 46.2 +0.6
WB0   Warramunga Arr    32.65 263  P        P       13 34 27.2 -1.1
WB0                                IAmb     IAmb    13 34 38.7
      comp=Z,7.8nm,1.4s
WRA   Warramunga Arr    32.69 262  P        P       13 34 27.4 -1.2
      comp=Z,1.5nm,0.8s,baz=88,slow=8.5,SNR=22
      comp=Z,1.5nm,0.8s
WRA   Warramunga Arr    32.69 262  IAmb     IAmb    13 34 27.8
      comp=Z,0.2nm,0.9s
AS31  Alice Springs     33.00 256  P        P       13 34 30.8 -0.5
ASAR  Alice Springs     33.00 256  P        P       13 34 31.1 -0.3
      comp=Z,5.7nm,0.4s,baz=84,slow=8.9,SNR=138
      comp=Z,5.7nm,0.4s
ASAR  Alice Springs     33.00 256  P        P       13 34 30.8 -0.5
MTN   Manton Dam        36.90 274  P        P       13 35 04.7  0.0
MTN                                IAmb     IAmb    13 35 18.6
      comp=Z,9.1nm,1.1s
KNRA  Kununurra         38.52 268  P        P       13 35 18.0 -0.4
KNRA                               IAmb     IAmb    13 35 33.5
      comp=Z,20nm,1.4s
FAKI  Fak Fak           39.34 289  P        P       13 35 24.7 -0.5
FAKI                               IAmb     IAmb    13 35 25.4
      comp=Z,8.0nm,0.8s
FITZ  Fitzroy Crossi    41.07 264  P        P       13 35 40.1 +0.6
MORW  Morawa            49.09 248  P        P       13 36 42.7  0.0
MORW                               IAmb     IAmb    13 36 43.7
      comp=Z,16nm,1.4s
VNDA  Vanda             58.70 182  P        P       13 37 52.0 +0.4
      comp=Z,1.1nm,0.6s,baz=1.5,slow=7.9,SNR=7.6
      comp=Z,1.1nm,0.6s
VNDA  Vanda             58.70 182  P        P       13 37 52.4 +0.8
VNDA                               IAmb     IAmb    13 37 53.2
      comp=Z,6.3nm,1.2s
QSPA  South Pole Qui    71.08 180  P        P       13 39 12.4 +0.4
      comp=Z,14nm,0.8s,baz=12,slow=1.8,SNR=36
      comp=Z,14nm,0.8s
QSPA  South Pole Qui    71.08 180  P        P       13 39 12.4 +0.4
ATKA  Atka Island       72.36  11  P        P       13 39 19.2 -0.3
BELA  Belgrano 2        82.39 175  P        P       13 40 14.7 -0.4
BELA                               IAmb     IAmb    13 40 15.2
      comp=Z,6.0nm,0.9s
J14K  Nanvaranak Lak    84.27  12  P        P       13 40 24.3 -0.4
J14K                               IAmb     IAmb    13 40 33.8
      comp=Z,15nm,1.1s
L19K  White Mountain    85.79  16  P        P       13 40 32.2 -0.2
L19K                               IAmb     IAmb    13 40 33.9
      comp=Z,14nm,1.4s
NVAR  Mina Array Bea    88.77  49  P        P       13 40 48.5 +1.0
      comp=Z,0.6nm,0.7s,baz=235,slow=9.3,SNR=4.8
      comp=Z,0.6nm,0.7s
TROLL Troll, Antarti    88.79 184  ⇓P       P       13 40 46.9 -0.1
      comp=Z,136nm,0.7s
SNAA  Sanae             89.42 183  ⇓P       P       13 40 49.2 -0.7
      comp=Z,25nm,0.5s
SNAA  Sanae             89.42 183  P        P       13 40 48.7 -1.2
      comp=Z,1.4nm,0.8s,baz=202,slow=10,SNR=10
      comp=Z,1.4nm,0.8s
SNAA  Sanae             89.42 183  P        P       13 40 50.1 +0.3
SNAA                               IAmb     IAmb    13 40 50.2
      comp=Z,4.7nm,1.2s
VNA3  Neumayer Olymp    90.02 180  ⇓P       P       13 40 51.9 -0.7
      comp=Z,4.7nm,0.8s
IL31                    90.03  17  P        P       13 40 52.2 -0.2
ILAR  Eielson Array     90.03  17  P        P       13 40 51.4 -1.1
      comp=Z,0.5nm,0.7s,baz=242,slow=5.1,SNR=11
      comp=Z,0.5nm,0.7s
ILAR  Eielson Array     90.03  17  P        P       13 40 52.2 -0.3
G30M  tAoh Zraii Nji    94.72  19  P        P       13 41 14.2 +0.1
G30M                               IAmb     IAmb    13 41 54.1
      comp=Z,2.2nm,1.1s
YKA   Yellowknife Ar   100.52  27  P        Pdif    13 41 41.4 +1.2
      comp=Z,0.2nm,0.7s,baz=245,slow=2.1,SNR=4.1
ARCES ARCESS Array B   124.75 345  PKP      PKPdf   13 46 51.0 -0.6
      comp=Z,4.1nm,0.9s,baz=96,slow=1.2,SNR=7.8
CONA  Conrad Observa   143.81 329  ePKP     PKPbc   13 47 27.1 +1.2
      comp=Z,0.9nm,0.7s
GERES GERESS Array B   144.16 332  PKP      PKPbc   13 47 27.4 +0.5
      comp=Z,1.0nm,0.7s,baz=35,slow=4.9,SNR=7.4
LIT   Litokhoron       144.38 313  PKPdf    PKPab   13 47 27.6 +0.2
MOA   Molln            144.63 330  ePKP     PKPdf   13 47 29.0 -0.1
      comp=Z,1.6nm,0.8s
BIOA  Bad Ischl, Aus   145.03 331  ePKP     PKPbc   13 47 29.6  0.0
      comp=Z,1.5nm,0.7s
SOKA  Soboth           145.08 328  ePKP     PKPbc   13 47 29.9 +0.1
      comp=Z,1.4nm,0.7s
RCBR  Riachuelo        145.21 133  PKPdf    PKPbc   13 47 30.7 -0.4
KBA   Koelnbreinsper   145.62 330  ePKP     PKPdf   13 47 31.3 +0.3
      comp=Z,1.0nm,0.7s
LESA  Schwarzleotal    145.67 331  ePKP     PKPdf   13 47 31.5 +0.5
      comp=Z,1.4nm,0.5s
MYKA  Terra Mystica    145.80 329  ePKP     PKPbc   13 47 32.1 +0.1
      comp=Z,0.6nm,0.6s
WATA  Walderalm        146.23 332  ePKP     PKPbc   13 47 33.3 -0.1
      comp=Z,1.7nm,0.6s
ABTA  Abfaltersbach    146.25 330  ePKP     PKPdf   13 47 32.8 +0.8
      comp=Z,1.8nm,0.6s
WTTA  Wattenberg       146.26 332  ePKiKP   PKPab   13 47 34.9 +0.4
      comp=Z,2.5nm,0.9s
MOTA  Moosalm          146.44 332  ePKP     PKPbc   13 47 33.7 -0.3
      comp=Z,3.4nm,0.7s
SQTA  Sankt Quirin     146.48 332  ePKP     PKPbc   13 47 33.7 -0.4
      comp=Z,2.0nm,0.8s
BFO   Black Forest     146.79 336  PKPbc    PKPbc   13 47 35.5 +0.7
FETA  Feichten         146.85 332  ePKP     PKPbc   13 47 35.5 +0.3
      comp=Z,1.2nm,0.6s
FUORN Ofenpass-Fuorn   147.36 332           PKPbc   13 47 37.9 +1.1
TUE   Stuetta          147.87 333  PKPbc    PKiKP   13 47 39.3 -0.5
```

IDC 06 13:56:13.6±4.4**, 10.°31N×125.°23E, h0km, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=390.1km s-min=28.4km az=65.0, Leyte**

```
Code  Station Name        Δ°   AZ°   Phase ID        Time      Res
                                   Op       ISC     h  m  s    ISC
WRA   Warramunga Arr    31.37 163  P        P       14 02 38.0 +1.7
      0.4nm,0.9s,baz=344,slow=9.2,SNR=2.1
      0.4nm,0.9s
ASAR  Alice Springs     34.81 166  P        P       14 03 05.2 -1.2
      0.1nm,0.3s,baz=345,slow=8.6,SNR=8.4
      0.1nm,0.3s
MKAR  Makanchi Array    51.38 323  P        P       14 05 20.2 -0.1
      0.5nm,0.6s,baz=118,slow=7.9,SNR=4.5
      0.5nm,0.6s
```

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*IDC **06** 14:00:34.8±0.7, 28.°20S×176.°46W, h0km, mb4.2/11, mbtmp4.2/11, MS4.0/1, Error ellipse: s-maj=25.9km s-min=19.9km az=134.0*

*NEIC **06** 14:00:37.0±0.9, 27.°8S±0.°1×176.°6W±0.°2, h35km±2km, mb4.7/12, Error ellipse: s-maj=33.4km s-min=10.8km az=129.0*

ISC 06 14:00:38.9±0.6**, 27.°8S**±0.°1×**176.°6W**±0.°1**, h37km, n36,** σ2.ˢ20/34**, mb4.3**/16**, Kermadec Islands region**

```
Code  Station Name        Δ°   AZ°   Phase ID        Time      Res
                                   Op       ISC     h  m  s    ISC
RAO   Raoul Island       1.83 219  Pn       Pn      14 01 06.4 -1.4
      195nm,0.3s,baz=116,slow=23,SNR=5.8
RAO                                Sn       Sn      14 01 32.6 +2.9
      195nm,0.3s,baz=87,slow=21,SNR=4.8
RAO   Raoul Island       1.83 219           Pn      14 01 06.4 -1.4
RAO                                Sn       Sn      14 01 30.8 +1.1
NIUE  Niue              10.65  36  Pn       Pn      14 03 04.6 -4.3
URZ   Urewera           11.65 205  Pn       Pn      14 03 11.9  -11
      0.3nm,0.3s,baz=280,slow=17,SNR=2.0
URZ                                Sn       Sn      14 05 16.5  -15
      1.0nm,0.3s,baz=182,slow=23,SNR=9.9
URZ                                LR       LR      14 06 59.8
      comp=Z,708nm,18.0s,baz=306,slow=34
DZM   Mont Dzumac       16.41 287  Pn       P       14 04 37.7 +8.6
      0.2nm,0.3s,baz=111,slow=12,SNR=3.8
TAU   Tasmania Unive    32.76 233  P        P       14 07 05.5 -2.8
STKA  Stephens Creek    36.33 253  P        P       14 07 39.5 +0.3
      2.2nm,0.8s,baz=325,slow=12,SNR=3.6
      2.2nm,0.8s
AS31  Alice Springs     44.54 264  P        P       14 08 44.8 -2.6
ASAR  Alice Springs     44.55 264  P        P       14 08 49.0 +1.6
      2.0nm,0.7s,baz=95,slow=7.1,SNR=34
      2.0nm,0.7s
ASAR  Alice Springs     44.55 264  P        P       14 08 44.4 -3.0
WR0   Warramunga Arr    45.12 269  P        P       14 08 50.4 -1.6
WR0                                IAmb     IAmb    14 09 15.9
      comp=Z,4.4nm,0.8s
WB2   Warramunga Arr    45.30 269  P        P       14 08 50.7 -2.6
WB2                                IAmb     IAmb    14 09 01.7
      comp=Z,11nm,0.9s
WRAB  Tennant Creek     45.30 269  P        P       14 08 51.0 -2.4
WRAB                               IAmb     IAmb    14 08 56.0
      comp=Z,11nm,1.0s
WRA   Warramunga Arr    45.31 269  P        P       14 08 54.7 +1.2
      comp=Z,2.7nm,0.8s,baz=107,slow=6.3,SNR=15
      comp=Z,2.7nm,0.8s
WRA   Warramunga Arr    45.31 269  P        P       14 08 51.2 -2.2
WB0   Warramunga Arr    45.32 269           P       14 08 51.5 -2.1
WB0                                IAmb     IAmb    14 09 06.7
      comp=Z,14nm,1.1s
FORT  Forrest           47.94 252  P        P       14 09 11.6 -2.3
FORT                               IAmb     IAmb    14 09 15.0
      comp=Z,9.0nm,0.8s
CASY  Casey             57.97 207  P        P       14 10 27.1 -0.2
QSPA  South Pole Qui    62.26 180  P        P       14 10 56.5 -0.5
      comp=Z,3.1nm,0.8s,baz=28,slow=2.9,SNR=9.6
      comp=Z,3.1nm,0.8s
QSPA  South Pole Qui    62.26 180  P        P       14 10 56.2 -0.8
QSPA                               IAmb     IAmb    14 11 15.0
      comp=Z,5.5nm,0.9s
MJAR  Matsushiro Arr    76.87 324  P        P       14 12 30.4 +3.3
      comp=Z,4.5nm,0.9s,baz=155,slow=5.4,SNR=8.6
      comp=Z,4.5nm,0.9s
MJAR  Matsushiro Arr    76.87 324  P        P       14 12 24.7 -2.5
MJAR                               IAmb     IAmb    14 12 38.3
      comp=Z,8.3nm,1.4s
MAJO  Matsushiro        76.87 324  P        P       14 12 25.6 -1.5
SNAA  Sanae             80.67 178  P        P       14 12 46.2 -1.4
      comp=Z,2.3nm,1.0s,baz=158,slow=11,SNR=4.0
      comp=Z,2.3nm,1.0s
KSRS  Korea Array       83.22 319  P        P       14 13 06.5 +5.2
      comp=Z,2.5nm,0.9s,baz=148,slow=6.6,SNR=7.2
      comp=Z,2.5nm,0.9s
NVAR  Mina Array Bea    85.52  42  P        P       14 13 15.9 +2.6
      comp=Z,1.3nm,1.0s,baz=250,slow=5.8,SNR=4.2
      comp=Z,1.3nm,1.0s
TXAR  Lajitas Array     89.96  57  P        P       14 13 37.3 +2.6
      comp=Z,0.4nm,0.8s,baz=264,slow=11,SNR=3.9
      comp=Z,0.4nm,0.8s
CMAR  Chiang Mai Arr    93.73 289  P        P       14 13 55.9 +3.6
      comp=Z,0.8nm,0.7s,baz=132,slow=3.6,SNR=4.2
      comp=Z,0.8nm,0.7s
ILAR  Eielson Array     95.17  12  P        P       14 14 00.0 +2.3
      comp=Z,0.6nm,1.0s,baz=219,slow=5.6,SNR=4.7
```

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,0.6nm,1.0s						
BOSA	Boshof	120.09	202	PKP	PKiKP	14 19 27.9	+1.4
	comp=Z,1.2nm,0.6s,baz=141,slow=2.7,SNR=5.0						
FINES	FINESS Array B	143.13	342	PKhKP	PKPpre	14 20 06.5	
	comp=Z,6.6nm,1.0s,baz=60,slow=3.4,SNR=4.2						
NB2	NORSAR Subarra	146.39	353	PKP	PKiKP	14 20 17.5	-0.8
	comp=Z,5.6nm,1.1s,baz=10,slow=3.2						
NOA	NORSAR Array B	146.39	353	PKPbc	PKiKP	14 20 17.2	-1.0
	comp=Z,6.1nm,1.0s,baz=13,slow=4.4,SNR=8.4						
HFS	Hagfors	146.96	351	PKPbc	PKiKP	14 20 18.8	-0.7
	comp=Z,6.0nm,0.7s,baz=81,slow=9.8,SNR=9.1						
AKASG	Malin Array Be	149.93	326	PKPbc	PKiKP	14 20 27.0	+1.2
	comp=Z,2.6nm,0.6s,baz=44,slow=2.9,SNR=12						
BRTR	Keskin Array B	152.35	303	PKPbc	PKiKP	14 20 32.9	+1.4
	comp=Z,2.4nm,1.1s,baz=126,slow=2.5,SNR=4.5						

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*DJA **06** 14:04:52.8±0.2, 3°S±2°×12°8E±°, h10km, M4.6/20, mb4.7/13, mB5.7/5, MLv4.3/20, Mw(mB)5.2/5*

*NEIC **06** 14:04:56.4±0.7, 3.°39S±0.°03×128.°47E±0.°08, h48km±12km, mb4.1/8, Error ellipse: s-maj=12.1km s-min=4.5km az=84.0*

*IDC **06** 14:04:58.1±5.5, 3.°64S×128.°24E, h72km±52km, mb3.7/6, mbtmp4.0/7, ML3.7/1, Error ellipse: s-maj=163.9km s-min=12.3km az=71.0*

ISC 06 14:04:51.3±0.6, **3.°45S**±0.°06×**128.°40E**±0.°06, **h10km, n41,** σ1.s73/44, **mb4.2**/7, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	0.31	222	P	Pb	14 04 59.4	+0.4
AAI				S	Sb	14 05 04.8	+0.6
MSAI	Masohi	0.54	79	P	Pg	14 05 02.1	+0.3
NLAI	Namlea	1.32	279	P	Pn	14 05 14.3	-1.5
BNDI	Bandanaira	1.84	125	P	Pn	14 05 23.3	+0.3
SANI	Sanana	2.79	300	P	Pn	14 05 35.8	-0.2
SWI	Sorong	3.84	48	P	Pn	14 05 52.1	+1.6
FAKI	Fak Fak	3.88	82		Pn	14 05 52.1	+1.1
FAKI	Fak Fak	3.88	82	P	Pn	14 05 52.8	+1.8
TNTI	Ternate	4.32	346		Pn	14 05 58.6	+1.5
TNTI	Ternate	4.32	346	P	Pn	14 05 57.4	+0.3
SAUI	Saumlaki	5.34	147		Pn	14 06 13.6	+2.3
SAUI	Saumlaki	5.34	147	P	Pn	14 06 14.8	+3.6
	141nm,0.7s						
RKPI	Ransiki, Papua	6.08	72	P	Pn	14 06 22.8	+1.4
	8µm141nm,0.7s						
LUWI	Luwuk	6.12	293		Pn	14 06 24.3	+2.5
LUWI	Luwuk	6.12	293	P	Pn	14 06 23.7	+1.9
MWPI	Manokwari, Pap	6.16	66	P	Pn	14 06 23.4	+0.9
	0.6nm87nm,1.1s						
APSI	Ampana	7.21	290	P	Pn	14 06 39.7	+2.9
MRSI	Marisa	7.55	301	P	Pn	14 06 42.7	+1.2
	0.2nm45nm,0.9s						
BAKI	Biak	8.02	74	P	Pn	14 06 49.5	+1.5
	57nm,0.9s						
TOLI2	Tolitoli	8.86	301		Pn	14 07 01.7	+2.1
MPSI	Mapaga	9.30	294	P	Pn	14 07 07.5	+2.0
KNRA	Kununurra	12.15	178	Pn	Pn	14 07 46.9	+2.3
WRA	Warramunga Arr	17.38	161	P	Pn	14 08 52.7	-1.5
	0.3nm,0.3s,baz=339,slow=12,SNR=14						
	5.6nm,1.0s						
COEN	Coen	17.93	126	P	Pn	14 09 02.1	+1.1
PSA00	Pilbara Seismi	19.84	204	P	Pn	14 09 24.0	-0.1
PSA00				IAmb	IAmb	14 09 24.6	
	comp=Z,7.1nm,0.6s						
PSA00	Pilbara Seismi	19.84	204	P	Pn	14 09 24.0	-0.1
PSA00				IAmb	IAmb	14 10 08.1	
	comp=Z,4.1nm,1.1s						
AS31	Alice Springs	20.79	166	P	P	14 09 34.4	+1.6
AS31				IAmb	IAmb	14 09 42.7	
	comp=Z,6.7nm,1.1s						
ASAR	Alice Springs	20.79	166	P	P	14 09 33.2	+0.4
	comp=Z,2.5nm,0.4s,baz=348,slow=12,SNR=48						
ASAR				S	S	14 13 19.4	-5.6
	comp=Z,1.3nm,0.9s,baz=350,slow=25,SNR=6.0						
ASAR				PcP	PcP	14 13 39.7	-2.4
	comp=Z,0.9nm,0.6s,baz=342,slow=1.5,SNR=12						
	comp=Z,2.5nm,0.4s						
ASAR	Alice Springs	20.79	166	P	P	14 09 33.7	+0.8
STKA	Stephens Creek	30.88	158	P	P	14 11 06.9	-1.2
	comp=Z,2.5nm,0.9s,baz=0.0,slow=9.1,SNR=3.1						
	comp=Z,2.5nm,0.9s						
SONM	Songino Array	54.60	342	P	P	14 14 20.2	+0.1
	comp=Z,1.1nm,0.8s,baz=157,slow=6.9,SNR=4.4						
	comp=Z,1.1nm,0.8s						
MK31	Makanchi Array	64.41	327	P	P	14 15 26.8	-1.0
MKAR	Makanchi Array	64.41	327	P	P	14 15 27.3	-0.5
	comp=Z,1.0nm,0.7s,baz=118,slow=8.0,SNR=7.6						
	comp=Z,1.0nm,0.7s						
MAKZ	Makanchi	64.59	327	P	P	14 15 28.9	0.0
ZALV	Zalesovo Beam	67.72	334	P	P	14 15 48.6	-0.3
	comp=Z,0.6nm,0.3s,baz=126,slow=7.3,SNR=4.1						
	comp=Z,0.6nm,0.3s						
ZALV	Zalesovo Beam	67.72	334	P	P	14 15 48.2	-0.7
KURBB	Kurchatov Arra	68.67	328	P	P	14 15 53.8	-1.1
	comp=Z,0.7nm,0.4s,baz=131,slow=5.2,SNR=4.9						
	comp=Z,0.7nm,0.4s						
KK31	Karatay Array	69.64	319	P	P	14 16 00.3	-0.9
KK31				IAmb	IAmb	14 16 10.9	
	comp=Z,2.9nm,0.9s						
KKAR	Karatay Array	69.64	319	P	P	14 16 00.5	-0.7
AB31	Akbulak array	78.76	322		P	14 16 52.9	-1.3
AB31				IAmb	IAmb	14 17 01.7	
	comp=Z,1.8nm,0.8s						
ABKAR	Akbulak array	78.76	322	P	P	14 16 52.5	-1.7

DJA 06 14:05:21.2±0.2, **8°S**±4°×**11°8E**±°, **h169km**±3km, **M4.0**/22, **mB5.2**/1, **mb4.0**/12, **MLv4.0**/22, **Mw(mB)4.6**/1, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBNI	Kabupaten Domp	0.45	145	P	Pn	14 05 46.0	+1.5
DBNI				S	Sn	14 06 04.1	+1.6
PLAI	Plampang	0.74	201	P	Pn	14 05 46.3	+0.3
PLAI				S	Sn	14 06 05.3	+0.1
TWSI	Taliwang, Sumb	1.30	242	P	Pn	14 05 50.3	-0.1
LBFI	Labuhan Bajo,	1.85	101	P	Pn	14 05 57.4	+1.5
LBFI				S	Sn	14 06 24.0	+1.3
KLNI	Mataram	1.96	261	P	Pn	14 05 57.0	0.0
WBSI	Waikabubak, Su	2.00	139	P	Pn	14 05 57.7	+0.1
KHKI	Kahang-Kahang	2.43	264	P	Pn	14 06 03.7	+1.3
WSI	Waingapu	2.70	125	P	Pn	14 06 05.1	-0.5
IGBI	Denpasar	2.95	256	P	Pn	14 06 08.5	-0.3
RTBI	Rangdo, Negare	3.09	264	P	Pn	14 06 11.0	+0.5
BASI	Baing, Sumba	3.25	130	P	Pn	14 06 12.7	+0.3
BKSI	Bulukumba	3.47	37	P	Pn	14 06 15.4	+0.2
EDFI	Ende, Flores	3.65	100	P	Pn	14 06 18.0	+0.3
JAGI	Jajag, Banyuwa	3.87	265	P	Pn	14 06 19.4	-1.0
MMRI	Maumere	4.17	97	P	Pn	14 06 24.6	+0.4
KMMI	Kalianget	4.19	285	P	Pn	14 06 25.7	+1.3
GMJI	Gumukmas	4.56	268	P	Pn	14 06 28.8	-0.4
BATI	Baumata	5.91	111	P	Pn	14 06 46.5	-0.5
SJI	Sawahan	6.24	273	P	Pn	14 06 51.8	+0.5
SNJI	Sawahan-Nganju	6.24	273	P	Pn	14 06 53.7	+2.2
	0.1nm14nm,0.5s						
SOEI	Soe	6.35	105	P	Pn	14 06 53.1	+0.2
	0.2nm36nm,0.6s						
PCJI	Pacitan	6.80	269	P	Pn	14 06 58.7	-0.1
	25nm,1.3s						
PCI	Palu	7.39	14	P	Pn	14 07 05.1	-1.5
UGM	Wanagama	7.46	271	P	Pn	14 07 07.2	-0.2
	60nm,1.6s						
BBJI	Bungbulang	10.33	273	P	Pn	14 07 44.6	-0.7
FAKI	Fak Fak	15.05	71	P	Pn	14 08 45.7	+0.2

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*NOU **06** 14:14:34.7, 10.°53S×162.°45E, h16km, MLv4.7/9, Solomon Islands*

*NEIC **06** 14:14:38.2±2.2, 10.°5S±0.°1×162.°5E±0.°1, h54km±9km, mb4.3/14, Error ellipse: s-maj=18.1km s-min=15.5km az=79.0*

*IDC **06** 14:14:40.1±10.0, 10.°70S×162.°42E, h75km±107km, mb3.5/5, mbtmp3.9/6, ML3.1/1, MS4.1/1, Error ellipse: s-maj=66.8km s-min=29.5km az=155.0*

ISC 06 14:14:36.7±0.7, **10.°51S**±0.°07×**162.°47E**±0.°08, **h39km, n41,** σ1.s15/35, **mb4.1**/10, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HURO	Huro Makira	0.56	274	P	Pn	14 14 45.9	-2.4
HURO	Huro Makira	0.56	274	S	Sn	14 14 55.1	-1.3
NGOA	Tingoa Renbel	2.58	246	P	Pn	14 15 15.0	-1.0
NGOA	Tingoa Renbel	2.58	246	S	Sn	14 15 47.1	+0.9
SAVO	Savo Central	2.95	297	P	Pn	14 15 21.7	+0.7
TATA	Tatamba Isabel	3.37	308	P	Pn	14 15 26.2	-0.6
SANVU	Saraoutou	6.74	137		Pn	14 16 12.7	-0.4
SANVU	Saraoutou	6.74	137	P	Pn	14 16 12.9	-0.2
RABL	Rabaul	11.99	301	Pn	Pn	14 17 26.5	+1.3
DZM	Mont Dzumac	12.11	162	P	Pn	14 17 27.6	+0.7
	0.1nm,0.3s,baz=25,slow=3.7,SNR=3.0						
DZM				S	Sn	14 19 41.0	+0.2
	3.4nm,0.8s,baz=158,slow=19,SNR=1.7						
	4.3nm,0.6s						
DZM	Mont Dzumac	12.11	162		Pn	14 17 27.3	+0.4
PATS	Pohnpei	17.72	346	P	P	14 18 42.7	+1.6
CTAO	Charters Tower	18.30	237		Pn	14 18 49.3	+1.6
CTAO				IAmb	IAmb	14 18 51.3	
	comp=Z,27nm,1.1s						
COEN	Coen	19.17	258		Pn	14 18 58.3	+0.1
COEN				IAmb	IAmb	14 19 03.1	
	comp=Z,15nm,1.0s						
ARMA	Armidale	22.23	205	P	P	14 19 31.6	+1.4
ARMA				IAmb	IAmb	14 19 51.1	
	comp=Z,9.7nm,1.1s						
INKA	Innaminka	26.66	227		P	14 20 12.8	+0.7
INKA				IAmb	IAmb	14 20 16.3	
	comp=Z,8.6nm,0.9s						
WB0	Warramunga Arr	28.59	248	P	P	14 20 29.4	0.0
WB0				IAmb	IAmb	14 20 43.6	
	comp=Z,9.0nm,1.4s						
WB2	Warramunga Arr	28.67	248	P	P	14 20 28.8	-1.4
WRA	Warramunga Arr	28.68	248	P	P	14 20 28.9	-1.3
	comp=Z,1.2nm,0.9s,baz=78,slow=9.2,SNR=11						
	comp=Z,1.2nm,0.9s						
WRA	Warramunga Arr	28.68	248	P	P	14 20 29.3	-1.0
H11S2	WAKE ISLAND Hy	29.11	8	T	T	14 51 12.0	
	baz=188,slow=76,SNR=135						
H11S3	WAKE ISLAND Hy	29.12	8	T	T	14 51 20.9	
	baz=188,slow=76,SNR=156						
H11S1	WAKE ISLAND Hy	29.13	8	T	T	14 51 12.4	
	baz=188,slow=76,SNR=114						
AS31	Alice Springs	30.20	241	P	P	14 20 42.3	-1.4
ASAR	Alice Springs	30.20	241	P	P	14 20 42.4	-1.4
	comp=Z,0.7nm,0.7s,baz=64,slow=9.8,SNR=10						
	comp=Z,0.7nm,0.7s						
ASAR	Alice Springs	30.20	241	P	P	14 20 41.8	-1.9
H11N1	WAKE ISLAND Hy	30.34	8	T	T	14 52 41.8	
	baz=188,slow=76,SNR=43						
H11N3	WAKE ISLAND Hy	30.35	8	T	T	14 52 45.7	
	baz=188,slow=76,SNR=58						
H11N2	WAKE ISLAND Hy	30.36	8	T	T	14 52 45.6	
	baz=188,slow=76,SNR=31						
KNRA	Kununurra	33.21	257	P	P	14 21 09.1	-1.1
LBZ	Lake Benmore	34.41	170	P	P	14 21 18.2	-2.1
BATI	Baumata	38.16	267	LR	LR	14 36 56.5	
	comp=Z,315nm,21.9s,baz=216,slow=35						
SONM	Songino Array	76.36	325	P	P	14 26 23.1	+1.2
	comp=Z,1.3nm,0.8s,baz=139,slow=4.2,SNR=6.8						
	comp=Z,1.3nm,0.8s						
SONM	Songino Array	76.36	325	P	P	14 26 22.8	+0.8
SONM				IAmb	IAmb	14 26 32.3	
	comp=Z,2.5nm,0.9s						
IMAR	Indian Mountai	82.80	17	P	P	14 26 56.9	+0.5
IL31		84.05	19	P	P	14 27 01.8	-1.0
IL31				IAmb	IAmb	14 27 13.0	
	comp=Z,6.1nm,1.4s						
ILAR	Eielson Array	84.05	19	P	P	14 27 02.4	-0.5
	comp=Z,0.3nm,0.8s,baz=214,slow=7.7,SNR=4.1						
	comp=Z,0.3nm,0.8s						
ILAR	Eielson Array	84.05	19	P	P	14 27 01.9	-1.0
MK31	Makanchi Array	90.94	317	P	P	14 27 36.4	-0.2
MK31				IAmb	IAmb	14 27 44.6	
	comp=Z,2.6nm,1.2s						
MKAR	Makanchi Array	90.94	317	P	P	14 27 36.4	-0.2
	comp=Z,0.4nm,0.6s,baz=86,slow=6.7,SNR=3.1						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	90.94	317	P	P	14 27 36.1	-0.5

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*IDC **06** 14:37:05.9±1.4, 1.°49N×126.°20E, h0km, mb3.9/4, mbtmp3.8/5, ML3.7/1, Error ellipse: s-maj=111.3km s-min=19.2km az=68.0*

*DJA **06** 14:37:09.8±0.2, 2°N±3°×12°6E±°, h10km, M4.0/13, mB4.9/1, mb4.2/6, MLv4.0/13, Mw(mB)4.2/1*

ISC 06 14:37:11.9±1.1, **1.°63N**±0.°10×**126.°46E**±0.°08, **h47km, n20,** σ1.s11/22, **mb4.0**/4, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.24	133	P	Pn	14 37 32.4	-0.5
MNI	Manado	1.63	263	P	Pn	14 37 36.3	-1.9
MNI				S	Sn	14 37 57.8	-0.2
SGSI	Sangihe	2.24	335	P	Pn	14 37 46.7	+0.1
GTOI	Gorontalo	3.59	254	P	Pn	14 38 06.1	+1.1
SANI	Sanana	3.69	187	P	Pn	14 38 06.1	-0.3
LUWI	Luwuk	4.55	234	P	Pn	14 38 18.1	-0.1
MRSI	Marisa	4.66	256	P	Pn	14 38 20.5	+0.7
NLAI	Namlea	4.88	172	P	Pn	14 38 23.6	+0.8
KRAI	Karang Ratu	5.28	159	P	Pn	14 38 30.9	+2.6
	9.7nm,0.6s						
APSI	Ampana	5.43	242	P	Pn	14 38 30.8	+0.4
	0.3nm37nm,1.1s						
MPSI	Mapaga	6.69	259	P	Pn	14 38 49.3	+1.7
TTSI	Tana Toraja	8.10	235	P	Pn	14 39 06.9	-0.1
	9.6nm,1.0s						
MYLDM	Lahad Datu	8.69	294	P	Pn	14 39 15.3	+0.2
SPSI	Sidrap Palu	8.70	230	P	Pn	14 39 15.6	+0.4
	640nm9.0nm,0.7s						
BNSI	Bone	8.73	227	P	Pn	14 39 16.0	+0.4
FITZ	Fitzroy Crossi	19.62	182	P	P	14 41 34.5	-2.1
	0.2nm,0.3s,baz=14,slow=11,SNR=1.7						
	1.4nm,0.8s						
WRA	Warramunga Arr	22.79	161	P	P	14 42 09.4	-1.3
	3.4nm,0.6s,baz=339,slow=10,SNR=49						
	3.4nm,0.6s						
ASAR	Alice Springs	26.17	164	P	P	14 42 42.0	0.0
	0.6nm,0.4s,baz=351,slow=15,SNR=28						
ASAR				PcP	PcP	14 46 09.2	+0.7
	0.3nm,0.5s,baz=344,slow=2.5,SNR=5.3						
	0.6nm,0.4s						
MKAR	Makanchi Array	59.13	326	P	P	14 47 08.2	+0.5
	0.6nm,0.5s,baz=120,slow=7.8,SNR=9.6						
	0.6nm,0.5s						
KURBB	Kurchatov Arra	63.36	328	P	P	14 47 36.8	+0.6
	0.7nm,0.5s,baz=132,slow=6.4,SNR=6.4						
	0.7nm,0.5s						

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*IDC **06** 14:53:11.7±3.0, 34.°98N×24.°09E, h0km, mb3.4/3, mbtmp3.4/6, ML2.9/3, Error ellipse: s-maj=69.7km s-min=18.2km az=175.0*

*ISK **06** 14:53:12.2, 35.°19N×23.°83E, h5km, ML3.3/16*

*THE **06** 14:53:12.7, 35.°2N±0.°9×23.°8E±0.°6, h1km±1km, M3.3/9, MLh3.3/9*

*ATH **06** 14:53:12.6, 35.°19N×23.°84E, h5km±1km, ML3.4/17, Manual Solution by A.Andreou First location: 2019/12/06 14:54:27, This location: 2020/09/02 14:40:53 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

ISC 06 14:53:12.9±1.0, **35.°20N**±0.°03×**23.°84E**±0.°02, **h5km**±8km, **n64,** σ0.s70/81, **mb3.3**/3, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDR	Palaiochora Ch	0.18	283	P	Pg	14 53 16.2	-0.2
KNDR				S	Sg	14 53 19.0	+0.3
KNDR	Palaiochora Ch	0.18	283	Pg	Pg	14 53 16.3	-0.2
KNDR				Sg	Sg	14 53 19.0	+0.3
KNDR	Palaiochora Ch	0.18	283	P	Pg	14 53 16.2	-0.2
KNDR				S	Sg	14 53 19.0	+0.3
IMMV	Iera Moni Meta	0.29	24	P	Pg	14 53 18.5	0.0
IMMV				S	Sg	14 53 23.0	+0.6
IMMV	Iera Moni Meta	0.29	24	Pg	Pg	14 53 18.6	0.0
IMMV				Sg	Sg	14 53 23.2	+0.8
IMMV	Iera Moni Meta	0.29	24	P	Pg	14 53 18.7	+0.1
IMMV				S	Sg	14 53 22.2	-0.3
CHAN	Chania	0.36	28	P	Pg	14 53 20.0	+0.1
CHAN				S	Sg	14 53 25.2	+0.3
CHAN	Chania	0.36	28	P	Pg	14 53 20.0	+0.1
CHAN				S	Sg	14 53 25.1	+0.3
VAM	Vamos	0.37	55	P	Pg	14 53 19.8	-0.2
VAM				S	Sg	14 53 25.0	+0.2
VAM	Vamos	0.37	55	P	Pg	14 53 19.8	-0.2
VAM				S	Sg	14 53 24.8	0.0
GVD	Gavdhos	0.41	150	P	Pg	14 53 20.6	-0.3
GVD	Gavdhos	0.41	150	Pg	Pg	14 53 20.4	-0.5
GVD				Sg	Sg	14 53 27.0	+0.8
GVD	Gavdhos	0.41	150	P	Pg	14 53 20.5	-0.3
GVD				S	Sg	14 53 26.4	+0.1
ANKY	Antikythira Is	0.80	327	P	Pg	14 53 27.9	-0.4
ANKY				S	Sb	14 53 39.5	-1.0
ANKY	Antikythira Is	0.80	327	P	Pg	14 53 27.8	-0.5
ANKY				S	Sg	14 53 38.9	+0.3
IDI	Anoyia	0.87	84	Pn	Pg	14 53 28.1	-1.6
	13nm,0.3s,baz=266,slow=12,SNR=34						
IDI				Sn	Sg	14 53 41.2	+0.3
	86nm,0.3s,baz=336,slow=20,SNR=15						
IDI	Anoyia	0.87	84	P	Pg	14 53 28.0	-1.6
IDI	Anoyia	0.87	84	Pg	Pg	14 53 28.3	-1.3
IDI				Sg	Sb	14 53 41.6	-0.9
IDI	Anoyia	0.87	84	P	Pg	14 53 29.4	-0.2
IACM	Heraklion	1.02	83	P	Pb	14 53 32.6	-0.4
KTHA	Kythira Island	1.23	330	P	Pg	14 53 35.7	-0.9
KTHA	Kythira Island	1.23	330	Pn	Pg	14 53 36.2	-0.3
KTHA				Sn	Sn	14 53 53.7	-0.2
NPS	Neapolis	1.46	87	P	Pn	14 53 39.3	-0.6
MHLO	Agia Marina, M	1.56	17	P	Pn	14 53 41.5	+0.1
MHLO	Agia Marina, M	1.56	17	P	Pb	14 53 41.8	-0.5
VLI	Veliai	1.69	335	P	Pn	14 53 42.8	-0.3
VLI	Veliai	1.69	335	P	Pn	14 53 42.9	-0.2
THR5	Thira Island,	1.73	45	P	Pn	14 53 43.6	-0.1
SAP3	Santorini-Thir	1.74	44	P	Pn	14 53 44.3	+0.4
SNT5	Nea Kammeni, S	1.75	46	P	Pn	14 53 43.7	-0.3
THERA	Ancient Thera,	1.77	48	P	Pn	14 53 44.1	-0.2
THERA	Ancient Thera,	1.77	48	P	Pn	14 53 44.3	0.0
THR8	Santorini-Mono	1.80	47	P	Pn	14 53 44.4	-0.3
ZKR	Zakros	1.95	92	Pn	Pn	14 53 47.1	+0.3
ZKR	Zakros	1.95	92	P	Pn	14 53 46.7	-0.1
APE	Apeiranthos	2.32	36	Pn	Pn	14 53 52.7	+0.9
APE	Apeiranthos	2.32	36	P	Pn	14 53 50.9	-1.0
PYL	PYLOS	2.40	316	P	Pn	14 53 52.9	0.0
MET2	Kameni Chora,	2.45	351	P	Pn	14 53 53.8	+0.2
MET4	Agioi Theodoro	2.45	352	P	Pn	14 53 53.9	+0.3
MET5	Makryloggos,Me	2.45	351	P	Pn	14 53 53.8	+0.2
ITM	Ithomi	2.51	323	P	Pn	14 53 54.6	+0.2
KARP	Karpathos	2.74	82	Pn	Pn	14 53 58.3	+0.7
KARP	Karpathos	2.74	82	P	Pn	14 53 56.4	-1.3
DION	Dionisos Attik	2.88	2	P	Pn	14 53 59.6	+0.1
DION	Dionisos Attik	2.88	2	P	Pn	14 53 58.3	-1.2
LTK	Loutraki	2.91	346	P	Pn	14 54 00.2	+0.3
LTK	Loutraki	2.91	346	P	Pn	14 53 58.8	-1.1
GUR	Goura	2.99	337	P	Pn	14 54 00.0	-1.1
VIL2	Platees	3.04	352	P	Pn	14 54 01.0	-0.8
DAT	Datca	3.40	62	Pn	Pn	14 54 08.0	+1.2
ARG	Arkhangelos	3.64	73	Pn	Pn	14 54 11.1	+1.2
CHOS	Chios island	3.65	29	Pn	Pn	14 54 11.3	+1.1
URLA	Izmir	3.86	34	Pn	Pn	14 54 14.1	+1.1
TURN	Turunc	3.91	65	Pn	Pn	14 54 14.7	+1.1
YER	Yerkesik	4.09	60	Pn	Pn	14 54 17.6	+1.5
DALY	Dalyan (Mula)	4.23	66	Pn	Pn	14 54 19.5	+1.5
AKAS	Kas	4.81	76	Pn	Pn	14 54 27.9	+1.8
BRTR	Keskin Array B	9.01	57	Pn	Pn	14 55 24.0	+0.2
	0.1nm,0.3s,baz=237,slow=16,SNR=8.3						
	1.5nm,0.8s						
GERES	GERESS Array B	15.56	334	Pn	P	14 56 57.3	-0.2
	baz=142,slow=11,SNR=4.9						
	0.4nm,0.5s						
KBZ	Khabaz	16.98	54	Pn	P	14 57 13.0	-0.1
	0.1nm,0.3s,baz=243,slow=12,SNR=4.7						
	2.2nm,0.9s						
ESDC	Sonseca Array	22.48	290	P	P	14 58 14.0	+0.8
	0.7nm,0.8s,baz=88,slow=9.0,SNR=4.4						
	0.7nm,0.8s						
KURBB	Kurchatov Arra	41.94	51	P	P	15 01 05.4	+0.9
	0.4nm,0.7s,baz=272,slow=8.6,SNR=4.1						
	0.4nm,0.7s						
MKAR	Makanchi Array	44.66	56	P	P	15 01 26.9	+0.3
	0.4nm,0.5s,baz=269,slow=7.8,SNR=5.8						
	0.4nm,0.5s						

MEX 06 14:56:26.1±0.4, **15.°53N**×**96.°56W, h5km**±18km, **MD3.6, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.49	62	*e*P	Pg	14 56 35.1	-0.5
HUIG				*e*S	Sg	14 56 42.5	+0.4
PEIG	Puerto Escondi	0.73	309	*e*P	Pg	14 56 39.1	-1.0
PEIG				*e*S	Sg	14 56 48.8	-0.9
YOIG	Yosondua	1.62	324	*e*P	Pn	14 56 51.1	-4.5
YOIG				*e*S	Sn	14 57 12.5	-4.7
PNIG	Pinotepa	1.73	300	*e*P	Pn	14 56 54.0	-2.9
TXIG	Tlaxiaco	2.07	326	*e*P	Pn	14 56 58.6	-3.1
TXIG				*e*S	Sn	14 57 23.1	-5.0

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*SKHL **06** 15:11:48.7±0.4, 45.°20N×150.°60E, h47km±7km, mb4.5/3*

*JMA **06** 15:11:49.5±0.9, 45°N±5°×15°1E±°, h30km, MV4.1/13, KURILE ISLANDS REGION*

ISC 06 15:11:47.1±2.2, **44.°9N**±0.°2×**150.°8E**±0.°1, **h50km, n16,** σ2.s50/26, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.13	279	*e*P	Pn	15 12 18.4	-1.7
KUR				AMB	AMB	15 12 19.3	
	130nm,0.5s						
KUR				*e*S	Sn	15 12 41.0	-4.3
KUR				A	A	15 12 43.4	
	220nm,0.3s						
KUR				A	A	15 12 43.4	
	230nm,0.3s						
YUK	Yuzh-Kuril'sk	3.67	258	*e*P	Pn	15 12 42.7	+1.4
YUK				AMB	AMB	15 12 45.2	
	80nm,0.3s						
YUK				*e*S	Sn	15 13 22.9	-0.3
YUK				A	A	15 13 34.8	
	120nm,0.6s						
YUK				A	A	15 13 34.8	
	270nm,0.6s						
NEM2	Nemuro 2	3.98	249	*e*P	Pn	15 12 47.2	+1.6
NEM2				*e*S	Sn	15 13 30.5	-0.5
NMR	Nemuro--Hokkai	3.99	249	*e*P	Pn	15 12 47.4	+1.7
NMR				*i* S	Sn	15 13 30.6	-0.5
GLVR	Golovnino	3.99	255	*e*P	Pn	15 12 48.2	+2.5
GLVR				AMB	AMB	15 12 50.3	
	30nm,0.2s						
GLVR				*i* S	Sn	15 13 31.1	-0.1
GLVR				A	A	15 13 36.1	
	90nm,0.3s						
GLVR				A	A	15 13 36.1	
	80nm,0.3s						
JRA	Rausu	4.21	258	*e*P	Pn	15 12 51.9	+3.3
JNK	Nakash	4.59	255	*e*P	Pn	15 12 56.7	+2.8
JNK				*e*S	Sn	15 13 45.9	-0.1
AKK	Akkeshi	4.73	248	*e*P	Pn	15 12 57.6	+1.8
JAK	Akkeshi	4.83	249	*e*P	Pn	15 12 58.9	+1.7
JAK				*e*S	Sn	15 13 50.0	-1.8
JTKR	Abashiri--Toko	5.05	262	*e*P	Pn	15 13 03.4	+3.2
JAR	Ashorobuto	5.34	255	*e*P	Pn	15 13 07.5	+3.2
JAR				*e*S	Sn	15 14 05.2	+0.8
JOB	Onbets	5.45	251	*e*P	Pn	15 13 08.2	+2.6
JOB				*e*S	Sn	15 14 06.1	-0.9
JCH	Churui	5.88	250	*e*P	Pn	15 13 13.4	+1.8
JCH				*e*S	Sn	15 14 16.0	-1.7
JNBK	Urakawa-nobuka	6.43	249	*e*P	Pn	15 13 20.7	+1.5
PAU	Pauzhetka	7.67	29	*e*P	Pn	15 13 36.7	+0.7
JANG	Nango	8.24	240	*e*S	Sn	15 15 09.0	-6.5

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*NEIC **06** 15:24:54.8±1.9, 18.°47N±0.°09×145.°6E±0.°2, h199km±9km, mb4.3/18, Error ellipse: s-maj=29.0km s-min=13.1km az=91.0*

*IDC **06** 15:24:55.2±3.4, 18.°60N×145.°68E, h206km±33km, mb3.4/10, mbtmp3.9/11, Error ellipse: s-maj=27.6km s-min=16.0km az=89.0*

ISC 06 15:24:54.5±0.7, **18.°45N**±0.°07×**145.°6E**±0.°2, **h200km, n32,** σ1.s21/34, **mb4.1**/19, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DPSS	Saipan	3.19	177	Pn	Pn	15 25 46.7	+0.3
DPSS				Sn	Sn	15 26 26.6	-0.6

GUMO	Guam	4.88	189	P	Pn	15 26 10.3	+2.8
	31nm,0.5s,baz=172,slow=19,SNR=1.5						
GUMO				S	Sn	15 27 02.3	-2.7
	57nm,0.4s,baz=355,slow=23,SNR=5.2						
JGF	Kuroka	18.59	338	P	P	15 28 56.5	-0.3
JGF				IAmb	IAmb	15 29 21.2	
	comp=Z,14nm,1.1s						
MANU	Manus Island	20.43	175	P	P	15 29 16.7	+0.1
COEN	Coen	32.29	184	P	P	15 31 03.3	-1.3
COEN				IAmb	IAmb	15 31 05.9	
	comp=Z,4.4nm,0.9s						
MTN	Manton Dam	34.22	206	P	P	15 31 21.9	+0.6
MTN				IAmb	IAmb	15 31 29.8	
	comp=Z,13nm,1.2s						
KNRA	Kununurra	37.75	207	P	P	15 31 49.6	-1.7
KNRA				IAmb	IAmb	15 32 14.9	
	comp=Z,10.0nm,1.1s						
WB0	Warramunga Arr	39.54	197	P	P	15 32 07.0	+0.8
WB0				IAmb	IAmb	15 32 08.6	
	comp=Z,12nm,1.1s						
WRAB	Tennant Creek	39.71	197	P	P	15 32 07.2	-0.4
WRAB				IAmb	IAmb	15 32 09.8	
	comp=Z,8.1nm,0.9s						
WRA	Warramunga Arr	39.72	197	P	P	15 32 09.2	+1.5
	comp=Z,3.4nm,0.4s,baz=14,slow=8.7,SNR=49						
	comp=Z,3.4nm,0.4s						
WRA	Warramunga Arr	39.72	197	P	P	15 32 06.9	-0.8
FITZ	Fitzroy Crossi	41.29	210	P	P	15 32 22.1	+1.5
AS31	Alice Springs	43.39	196	P	P	15 32 37.6	+0.2
ASAR	Alice Springs	43.39	196	P	P	15 32 38.5	+1.0
	comp=Z,0.9nm,0.4s,baz=13,slow=6.5,SNR=42						
	comp=Z,0.9nm,0.4s						
ASAR	Alice Springs	43.39	196	P	P	15 32 38.9	+1.4
CMAR	Chiang Mai Arr	44.18	278	P	P	15 32 45.5	+1.6
	comp=Z,0.3nm,0.4s,baz=89,slow=7.2,SNR=1.7						
	comp=Z,0.3nm,0.4s						
INKA	Innaminka	46.16	186	P	P	15 32 59.0	-0.2
MBWA	Marble Bar	46.82	214	P	P	15 33 04.7	+0.3
PSA00	Pilbara Seismi	47.10	214	P	P	15 33 05.0	-1.6
PSA00				IAmb	IAmb	15 33 15.6	
	comp=Z,19nm,1.4s						
GSI	Gunungsitoli	50.09	256	P	P	15 33 29.2	-0.4
ZALV	Zalesovo Beam	58.17	323	P	P	15 34 27.2	-0.1
	comp=Z,0.6nm,0.3s,baz=106,slow=9.2,SNR=2.0						
	comp=Z,0.6nm,0.3s						
MKAR	Makanchi Array	58.58	314	P	P	15 34 30.6	+0.3
	comp=Z,0.2nm,0.5s,baz=79,slow=9.9,SNR=2.6						
	comp=Z,0.2nm,0.5s						
KURBB	Kurchatov Arra	61.46	318	P	P	15 34 48.9	-0.9
	comp=Z,0.4nm,0.5s,baz=93,slow=7.4,SNR=6.8						
	comp=Z,0.4nm,0.5s						
C23K	Itkillik River	63.87	20	P	P	15 35 05.3	0.0
ILAR	Eielson Array	63.90	26	P	P	15 35 04.3	-1.3
	comp=Z,0.4nm,0.7s,baz=251,slow=5.0,SNR=6.4						
	comp=Z,0.4nm,0.7s						
D24K	Happy Valley	64.26	21	P	P	15 35 08.8	+0.8
D24K				IAmb	IAmb	15 35 09.8	
	comp=Z,8.0nm,1.3s						
D25K	Kavik River	65.15	21	P	P	15 35 13.2	-0.5
D25K				IAmb	IAmb	15 35 46.7	
	comp=Z,4.6nm,1.4s						
G26K	Porcupine Rive	65.59	24	P	P	15 35 16.7	+0.2
G26K				IAmb	IAmb	15 35 32.9	
	comp=Z,6.9nm,1.5s						
KHZ	Kahutara	65.81	158	P	P	15 35 18.7	+0.6
BVAR	Borovoye Array	66.62	320	P	P	15 35 22.1	-1.3
	comp=Z,1.0nm,0.5s,baz=75,slow=7.8,SNR=4.5						
	comp=Z,1.0nm,0.5s						
NVAR	Mina Array Bea	83.35	52	P	P	15 37 01.0	+1.4
	comp=Z,0.5nm,0.5s,baz=287,slow=7.7,SNR=2.9						
	comp=Z,0.5nm,0.5s						
FINES	FINESS Array B	87.08	335	P	P	15 37 15.8	-1.5
	comp=Z,4.3nm,1.1s,baz=11,slow=5.5,SNR=1.4						
	comp=Z,4.3nm,1.1s						

TIR 06 15:39:38.9, 41°.48N×19°.53E, h24^{km}, Md2.7/6, Ml2.8/4

PDG 06 15:39:39.2±0.3, 41°.45N×19°.56E, h16^{km}, ML2.8/13, Error ellipse: s-maj=1.0km s-min=1.8km az=0.0

THE 06 15:39:41.8, 41°N±21°×1°9E±1°7, h39^{km}±26^{km}, M2.7/16, MLh2.7/16

IDC 06 15:39:46.7±80.0, 42°.38N×20°.88E, h0^{km}, mb3.6/2, mbtmp3.7/3, ML2.7/1, Error ellipse: s-maj=1452.0km s-min=71.4km az=51.0

ISC 06 15:39:39.0±1.0, 41°.45N±0°.02×19°.62E±0°.03, h10^{km}±7^{km}, n55, σ1^s.33/77, 10C-10D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.21	120	Pg	Pg	15 39 42.8	-0.7
TIR				Sg	Sg	15 39 47.5	+1.0
TIR				AML	AML	15 39 48.1	
	5.3nm,0.3s						
ULC	Ulcinj	0.58	331	⇓*i*Pg	Pg	15 39 49.9	-0.5
ULC				*i* Sg	Sg	15 39 59.0	+1.0
SDA	Shkodra	0.60	351	Pg	Pg	15 39 50.3	-0.4
SDA				Sg	Sg	15 39 58.8	+0.1
SDA				AMd		15 40 38.4	
PHP	Peshkopia	0.66	69	Pg	Pb	15 39 52.0	-0.7
PHP				Sg	Sn	15 40 02.9	-2.1
PHP				AML	AML	15 40 07.7	
	2.0nm,0.4s						
PHP				AMd		15 40 34.0	
PHP	Peshkopia	0.66	69	P	Pb	15 39 51.9	-0.8
DRME	Dracevica, Mon	0.80	336	⇓*i*Pg	Pg	15 39 54.1	-0.4
DRME				*e*Sg	Sb	15 40 06.6	+0.6
OHR	Ohrid	0.95	111	*i* Pn	Pb	15 39 57.9	+0.1
OHR				*i* Sn	Sn	15 40 13.4	+1.1
VLO	Vlora	0.99	185	Pg	Pg	15 39 57.4	-0.6
VLO				AMd		15 40 50.7	
BUM	Brajici-Budva	1.00	328	⇑*i*Pg	Pg	15 39 57.9	-0.5
BUM				*i* Sg	Sg	15 40 12.6	+1.1
PDG	Podgorica	1.01	345	Pg	Pg	15 39 56.8	-1.7
PDG				Sg	Sg	15 40 11.2	-0.5
PDG				AMd		15 40 50.5	
PDG	Podgorica	1.01	345	⇑P	Pg	15 39 57.8	-0.7
PDG	Podgorica	1.01	345	⇑*i*Pg	Pg	15 39 57.7	-0.8
PDG				*i* Sg	Sb	15 40 13.7	+1.6
PVY	Plav	1.17	12	⇓*i*Pg	Pg	15 40 00.7	-0.8
PVY				*i* Sg	Sn	15 40 19.8	+2.1
CEME	Cevo	1.21	335	⇓*i*Pg	Pg	15 40 02.0	-0.3
CEME				*e*Sg	Sn	15 40 20.4	+1.7
KBN	Korca	1.21	133	Pn	Pn	15 40 02.4	+0.2
KBN				AML	AML	15 40 25.7	
	0.7nm,0.4s						
KBN				AMd		15 40 52.4	
KBN	Korca	1.21	133	P	Pn	15 40 03.0	+0.9
KBN				S	Sn	15 40 20.2	+1.5
HCY	Herceg Novi	1.30	320	⇑*i*Pg	Pn	15 40 02.9	-0.4
HCY				*i* Sg	Sg	15 40 22.5	+1.6
KOME	Kolasin	1.40	357	⇓*i*Pg	Pn	15 40 05.0	+0.2
KOME				*e*Sg	Sg	15 40 25.7	+1.7
NKME	Niksic	1.40	340	⇑*i*Pg	Pn	15 40 05.7	+0.9
NKME				*e*Sg	Sg	15 40 25.8	+1.6
IVA	Berane	1.43	8	⇑*i*Pg	Pn	15 40 05.3	+0.1
IVA				*i* Sg	Sg	15 40 27.3	+2.2
SKO	Skopje	1.46	69	*i* Pn	Pg	15 40 07.8	+0.8
SKO				*i* Sn	Sg	15 40 29.7	+3.8
NEST	Nestorio	1.50	133	P	Pg	15 40 07.6	-0.3
NEST				S	Sg	15 40 27.2	-0.1
BRY	Bratogost	1.66	331	⇓*i*Pn	Pn	15 40 08.8	+0.5
BRY				*i* Sn	Sn	15 40 31.5	+1.8
UPM	Unac-Piva	1.83	343	⇑*i*Pn	Pb	15 40 12.7	0.0
UPM				*i* Sn	Sb	15 40 36.5	+0.8
PLE	Pljevlja	1.88	355	⇓*i*Pn	Pb	15 40 13.5	-0.1
PLE				*i* Sn	Sb	15 40 37.8	+0.5
KZN	Kozani	1.99	124	P	Pb	15 40 14.9	-0.5
IGT	Igoumenitsa	2.00	164	Pn	Pn	15 40 14.9	+2.0
IGT				Sn	Sb	15 40 42.1	+1.7
IGT				AMd		15 41 26.2	
IGT	Igoumenitsa	2.00	164	P	Pn	15 40 13.3	+0.4
KPRO	Kipourio	2.00	138	P	Pn	15 40 13.9	+0.9
NOCI	Noci	2.04	252	Sn	Sn	15 40 40.8	+1.7
NOCI				AML	AML	15 40 42.5	
	0.2nm,0.1s						
VAY	Valandovo	2.22	92	*i* Pn	Pb	15 40 17.9	-1.5
PRMD	Pramanda	2.23	149	P	Pn	15 40 17.2	+1.1
TETR	Tetrakomo, Epi	2.46	149	P	Pn	15 40 20.3	+1.1
KNT	Kendrikon	2.49	96	P	Pb	15 40 21.7	-2.2
THL	Klokotos Trika	2.63	135	P	Pn	15 40 22.7	+1.2
BOVS	Bovan	2.67	35	⇑P	Pb	15 40 24.5	-2.5
TSLK	Tsoukalades, L	2.74	163	P	Pn	15 40 23.1	0.0
LKD2	Lefkada island	2.78	163	P	Pn	15 40 23.6	-0.1
AMPL	Ampelaki	2.81	154	P	Pn	15 40 25.0	+0.9
NYDR	Nydri-Lefkada	2.86	163	P	Pn	15 40 24.4	-0.4
DRAG	Dragano-Lefkad	2.86	165	P	Pn	15 40 24.3	-0.5
VTS	Vitosha	2.93	65	P	Pb	15 40 28.6	-3.0
EVGI	Lefkada island	2.94	164	P	Pn	15 40 25.8	0.0
EVR	Evrytania	3.04	146	P	Pn	15 40 28.5	+1.2
AGG	Agios Georgios	3.19	139	P	Pn	15 40 30.8	+1.4
ANX	Ano Chora	3.36	148	P	Pn	15 40 32.9	+1.2
EFP	Efpalio	3.50	149	P	Pn	15 40 34.8	+1.3
MDVR	Moldovita	3.66	24	⇓P	Pn	15 40 37.0	+1.1
HERR	Herculane	3.99	30	⇑P	Pn	15 40 41.8	+1.5
BZS	Buzias	4.41	19	⇓P	Pn	15 40 47.1	+1.1
GZR	Gura Zlata	4.56	29	⇑P	Pn	15 40 50.5	+2.3
SIRR	Siria	5.03	16	⇓P	Pn	15 40 55.8	+1.2
FINES	FINESS Array B	20.40	9	P	P	15 44 13.4	-2.5
	0.1nm,0.3s,baz=185,slow=9.8,SNR=2.0						
	3.9nm,0.9s						
ZALV	Zalesovo Beam	44.08	50	P	P	15 47 45.3	-1.7
	0.4nm,0.3s,baz=293,slow=7.4,SNR=1.4						
	0.4nm,0.3s						
MKAR	Makanchi Array	44.25	61	P	P	15 47 47.4	-1.1
	0.4nm,0.6s,baz=273,slow=8.6,SNR=5.0						
	0.4nm,0.6s						

BGSI 06 15:40:47.0±2.0, 22°.25S×24°.85E, h0^{km}±52^{km}, ML2.4

BUL 06 15:40:46.8±1.1, 23°.75S×27°.50E, h10^{km}, MD3.1, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPHEP	Lephephe	1.55	284	*i* P	Pn	15 41 11.6	-3.0
LPHEP				*i* S	Sn	15 41 31.5	-3.3
LPHEP				IAML		15 41 35.6	
	comp=E,79nm,0.6s						
LPHEP	Lephephe	1.55	284	*i* P	Pn	15 41 11.6	-3.0
	slow=16						
LPHEP				*i* S	Sn	15 41 31.5	-3.3
LPHEP				IAML		15 41 35.6	
	comp=E,79nm,0.6s						
LBTB	Lobatse	2.14	233	*i* P	Pn	15 41 21.8	-1.0
LBTB				*i* S	Sn	15 41 48.9	-0.6
KHWEE	KHWEE	2.60	313	*i* P	Pn	15 41 28.5	-0.6
MUSN	Musina, Limpop	2.62	57	*i* P	Pn	15 41 28.2	-1.0
MUSN				*i* S	Sn	15 42 00.1	-1.0
BROLN	Tlhalogang	2.64	357	*i* P	Pn	15 41 27.2	-2.3
BROLN				*i* S	Sn	15 41 59.5	-2.1
BROLN				IAML		15 42 11.2	
	comp=E,16nm,0.6s						
MAKGR	Makgori	3.20	229	*i* P	Pb	15 41 42.5	-1.4
MAKGR				IAML		15 42 30.1	
	comp=E,47nm,0.4s						
MOPA	Mopani	3.58	87	*i* P	Pn	15 41 41.1	-1.4
MOPA				*i* S	Sn	15 42 22.8	-2.1
BLWY	Bulawayo	3.73	16	*i* P	Pn	15 41 43.4	-1.3
BLWY				*i* S	Sn	15 42 25.8	-3.0
KGCAE	Kacgae	4.94	279	*i* P	Pn	15 42 01.3	0.0
KGCAE				*i* S	Sn	15 42 53.6	-5.0
BOSA	Boshof	5.25	202	*i* P	Pn	15 42 04.6	-0.9
BOSA				*i* S	Sn	15 43 02.4	-3.8

IDC 06 15:42:11.6±1.2, 59°.96S×32°.67W, h0^{km}, mb3.9/3, mbtmp3.8/4, ML3.7/1, MS3.8/1, Error ellipse: s-maj=69.7km s-min=24.4km az=64.0

ISC 06 15:42:12.8±0.9, 60°.0S±0°.2×32°.6W±0°.4, h10^{km}, n15, σ1^s.27/12, mb3.9/3, 1C-4D, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA3	Neumayer Olymp	14.61	150	⇓P	Pn	15 45 37.3	-1.9
	comp=Z,1.3nm,0.2s						
VNA1	Neumayer--Stat	14.62	147	⇓P	Pn	15 45 38.3	-1.1
	comp=Z,3.3nm,0.3s						
VNA2	Neumayer--Watz	15.02	147	⇓P	P	15 45 49.9	-0.2
	comp=Z,2.4nm,0.2s,baz=302,slow=16						
SNAA	Sanae	16.66	147	⇓P	Pn	15 46 06.9	+0.9
	comp=Z,22nm,0.5s						
SNAA	Sanae	16.66	147	Pn	Pn	15 46 06.7	+0.7
	comp=Z,0.3nm,0.3s,baz=289,slow=13,SNR=13						
SNAA				LR	LR	15 50 41.2	
	comp=Z,345nm,19.1s,baz=12,slow=30						
	comp=Z,1.3nm,0.6s						
TROLL	Troll, Antarti	18.32	145	⇑P	P	15 46 29.5	+2.7
	comp=Z,9.2nm,0.2s						
QSPA	South Pole Qui	30.27	180	P	P	15 48 24.0	+0.4
	comp=Z,1.4nm,0.7s,baz=192,slow=3.0,SNR=10						
	comp=Z,1.4nm,0.7s						
CPUP	Villa Florida	37.69	322	P	P	15 49 27.5	-0.6
	comp=Z,0.6nm,0.7s,baz=130,slow=20,SNR=4.3						
	comp=Z,0.6nm,0.7s						
H04S2	CROZET ISLANDS	48.58	114	T	T	16 44 17.5	
	baz=222,slow=75,SNR=37						
H04S3	CROZET ISLANDS	48.59	114	T	T	16 44 21.5	
	baz=222,slow=75,SNR=34						
H04S1	CROZET ISLANDS	48.60	114	T	T	16 44 21.5	
	baz=222,slow=75,SNR=35						
LPAZ	La Paz	50.65	314	P	P	15 51 13.2	+0.6
	comp=Z,1.5nm,0.7s,baz=184,slow=9.1,SNR=4.2						
	comp=Z,1.5nm,0.7s						
YKA	Yellowknife Ar	137.13	317	PKP	PKPdf	16 01 34.6	+0.2
	comp=Z,0.6nm,0.7s,baz=141,slow=1.7,SNR=7.2						
ZALV	Zalesovo Beam	146.53	72	PKPbc	PKPbc	16 01 52.5	-0.4
	comp=Z,1.0nm,0.6s,baz=219,slow=1.8,SNR=4.1						
ILAR	Eielson Array	150.40	308	PKPbc	PKiKP	16 02 02.9	-0.6
	comp=Z,3.9nm,0.8s,baz=143,slow=1.8,SNR=39						

NEIC 06 15:42:44.4, 15°.24S×174°.87W, h12^{km}, Moment Tensor Solution. Duration: 3^s.9 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.62; $M_{\theta\theta}$3.62; $M_{\phi\phi}$-3.00; $M_{r\theta}$1.16; $M_{\theta\phi}$3.86; $M_{\phi r}$-2.32; Fault plane solution: $M_0$5.73000×10^{17} NP1:ϕ_s23.32000°, δ71.53000°, λ-161.87000°. NP2:ϕ_s287.40000°, δ72.84000°, λ-19.37000°. Principal axes: T 5.3958, Plg1.0000°, Azm336.0000°; N 0.6180, Plg64.0000°, Azm67.0000°; P -6.0138, Plg26.0000°, Azm245.0000°;

MOS 06 15:42:44.8±2.9, 15°.25S×175°.17W, h16^{km}, mb5.5/19, MS5.8/13 Error ellipse: s-maj=12.5km s-min=10.0km az=169.2

BJI 06 15:42:44.3, 14°.90S×175°.10W, h10^{km}, mB5.7/15, mb4.9/28, Ms5.8/35, Ms7 5.6/35

NEIC 06 15:42:44.4±1.6, 15°.02S±0°.07×175°.08W±0°.07, h10^{km}±1^{km}, mb5.3/63, Ms_20 5.6/565, Mwb5.7/75, Mww5.8/10, Error ellipse: s-maj=12.3km s-min=10.6km az=164.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.20; $M_{\theta\theta}$2.80; $M_{\phi\phi}$-2.59; $M_{r\theta}$-0.84; $M_{\theta\phi}$3.50; $M_{\phi r}$-0.62; Fault plane solution: $M_0$4.55000×10^{17} NP1: ϕ_s289.39000°, δ79.86000°, λ6.55000°. NP2:ϕ_s198.23000°, δ83.55000°, λ169.79000°. Principal axes: T 4.7363, Plg12.0000°, Azm154.0000°; N -0.4094, Plg78.0000°, Azm346.0000°; P -4.3269, Plg3.0000°, Azm244.0000°;

NEIC 06 15:42:44.4, 15°.04S×175°.08W, h12^{km}

NEIC 06 15:42:44.4, 15°.04S×175°.08W, h10^{km}

IDC 06 15:42:46.6±0.5, 15°.37S×175°.39W, h0^{km}, mb4.6/15, mbtmp4.6/15, MS5.4/58, Error ellipse: s-maj=23.7km s-min=15.4km az=115.0

PMR 06 15:42:48.0, 15°.15S×175°.00W, h24^{km}

NOU 06 15:42:50.1, 15°.12S×175°.00W, h36^{km}, mb5.2/54, Tonga Islands

GCMT 06 15:42:54.4±0.1, 15°.20S×175°.26W, h15^{km}, MW5.8/166, Moment Tensor Solution. s144,c276; s166,c509; Duration: 2^s.0 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.02±.05; $M_{\theta\theta}$4.82±.06; $M_{\phi\phi}$-3.80±.06; $M_{r\theta}$0.47±.10; $M_{\theta\phi}$5.90±.05; $M_{\phi r}$-0.63±.10; Best double couple: $M_0$7.35900×10^{17} NP1:ϕ_s18.00000°, δ84.00000°, λ-175.00000°. NP2:ϕ_s288.00000°, δ85.00000°, λ-6.00000°. Principal axes: T 7.8190, Plg1.0000°, Azm333.0000°; N -0.9190, Plg82.0000°, Azm70.0000°; P -6.8990, Plg8.0000°, Azm243.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function

ISC 06 15:42:49.5±0.2, 15°.18S±0°.05×175°.08W±0°.04, h35^{km}, n921, σ2^s.18/585, mb5.2/103, MS5.6/373, 27C-24D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.44	69		Pn	15 43 38.5	-2.2
AFI				Sn	Sn	15 44 17.0	-3.3
AFI	Afiamalu	3.44	69	P	Pn	15 43 39.9	-0.8
NIUE	Niue	6.26	129	P	Pn	15 44 19.6	+0.1
	comp=Z,675nm,0.7s,comp=Z,0.0nm						
NIUE	Niue	6.26	129		Pn	15 44 18.7	-0.8
NIUE				Sn	Sn	15 45 31.0	+1.1
NIUE	Niue	6.26	129	P	Pn	15 44 19.8	+0.3
MSVF	Nonsavu	7.07	248		Pn	15 44 29.0	-1.6
MSVF	Nonsavu	7.07	248	P	Pn	15 44 31.6	+1.0
MSVF	Nonsavu	7.07	248	⇑*e*P	Pn	15 44 27.6	-3.0
MSVF				pmax	pmax		
	comp=Z,5.0nm,1.2s						
FUNA	Funafuti	8.67	319	Pn	Pn	15 44 48.7	-3.8
RAO	Raoul Island	14.25	190	LR	LR	15 50 03.1	
	comp=Z,12µm,19.7s,baz=5.5,slow=31						
RAR	Rarotonga	15.72	115	Pn	Pn	15 46 26.4	-2.1
RAR	Rarotonga	15.72	115	P	Pn	15 46 26.4	-2.1
RAR				pmax	pmax		
	comp=Z,67nm,1.4s						
DVP	Devils Point	16.25	259	P	P	15 46 36.6	-1.4
SANVU	Saraoutou	17.10	267		Pn	15 46 44.5	-1.5
SANVU				IAmb	IAmb	15 46 49.1	
	comp=Z,222nm,1.3s						
SANVU	Saraoutou	17.10	267	P	P	15 46 47.5	+0.1
MARNC	Mare, Loyalty	17.21	246		Pn	15 46 46.1	-1.2
MARNC				IAmb	IAmb	15 46 50.4	
	comp=Z,584nm,1.2s						
MARNC	Mare, Loyalty	17.21	246	P	P	15 46 49.7	+1.1
PINNC	Pines Island,	18.10	243		P	15 46 57.8	-0.7
PINNC				IAmb	IAmb	15 47 02.4	
	comp=Z,737nm,1.9s						
PINNC	Pines Island,	18.10	243	P	P	15 47 01.2	+2.8
YATNC	Mamie plateau,	18.40	245	P	Pn	15 47 04.6	+2.6
OUENC	Ouen Island, N	18.56	244	P	Pn	15 47 05.6	+1.7
DZM	Mont Dzumac	18.80	246	P	Pn	15 47 07.5	+0.6
	comp=Z,48nm,0.8s,baz=83,slow=12,SNR=28						
DZM				LR	LR	15 53 05.0	
	comp=Z,27µm,19.9s,baz=88,slow=34						
DZM	Mont Dzumac	18.80	246	*e*P	Pn	15 47 06.0	-0.9
	comp=Z,335nm,1.3s						
DZM				*e*S	Sn	15 50 27.1	-9.2
	comp=Z,5µm,23.4s						
DZM				*e*LR	LR	15 51 21.4	
	comp=Z,51µm,25.1s						
DZM	Mont Dzumac	18.80	246		P	15 47 05.5	-0.7
DZM				IAmb	IAmb	15 47 08.2	
	comp=Z,413nm,1.7s						
DZM	Mont Dzumac	18.80	246	P	Pn	15 47 07.9	+1.0
ONTNC	Ouen Toro	18.86	245		P	15 47 06.1	-0.7
ONTNC				IAmb	IAmb	15 47 17.4	
	comp=Z,208nm,1.0s						
ONTNC	Ouen Toro	18.86	245	P	Pn	15 47 08.7	+1.1
TARA	Tarawa	20.27	323	IAMs_20	IAMs_20	15 53 04.6	
	comp=Z,22µm,19.0s						
OUZ	Omahuta	22.40	205	IAMs_20	IAMs_20	15 55 56.6	
	comp=Z,19µm,18.0s						
MXZ	Matakaoa Point	23.05	194	P	P	15 47 50.9	-0.9
MXZ				IAmb	IAmb	15 47 57.4	
	comp=Z,244nm,1.7s						
MXZ				IAMs_20	IAMs_20	15 55 17.1	
	comp=Z,27µm,21.0s						
TOZ	Tahuroa Road	23.96	199		P	15 47 59.1	-1.5
TOZ				IAmb	IAmb	15 48 07.2	
	comp=Z,99nm,1.3s						
TOZ				IAMs_20	IAMs_20	15 55 56.2	
	comp=Z,19µm,20.0s						
URZ	Urewera	24.00	195	P	P	15 47 59.6	-1.4
	comp=Z,14nm,0.8s,baz=14,slow=3.7,SNR=11						
URZ				LR	LR	15 56 49.9	
	comp=Z,19µm,19.3s,baz=18,slow=36						
	comp=Z,14nm,0.8s						
RTZ	Ruatahuna	24.37	195		P	15 48 03.0	-1.5
RTZ				IAmb	IAmb	15 48 33.9	
	comp=Z,168nm,2.0s						
XMAS	Kiritimati	24.44	47	IAMs_20	IAMs_20	15 54 52.4	
	comp=Z,16µm,20.0s						
PAE	Paea	24.57	99	*e*LR	LR	15 54 02.7	
	comp=Z,2µm,22.6s						
PPT	Papeete	24.57	99	LR	LR	15 55 13.6	
	comp=Z,4µm,20.6s,baz=268,slow=30						
PPT2	Papeete2	24.57	99	*e*P	P	15 48 02.3	-4.3
	comp=Z,104nm,19.2s						
PPT2				*e*S	S	15 52 22.2	-3.3
	comp=Z,53µm,25.5s						
PPT2				*e*LR	LR	15 54 05.2	
	comp=Z,10µm,26.8s						
PPT2				*e*LR	LR	15 54 06.6	
	comp=Z,13µm,25.0s						
TIAR	Tiarei	24.79	99	*e*LR	LR	15 54 08.9	
	comp=Z,9µm,23.2s						
TVO	Taravao	24.89	100	*e*LR	LR	15 54 11.3	
	comp=Z,2µm,23.1s						
BKZ	Black Stump Fm	25.02	196	P	P	15 48 08.1	-2.2
TBI	Tubuai	25.48	113	*e*P	P	15 48 13.1	-1.5
	comp=Z,2µm,31.0s						
TBI				*e*S	S	15 52 41.0	+1.4
	comp=Z,222µm,27.2s						
TBI				*e*LR	LR	15 54 26.3	
	comp=Z,3µm,24.2s						
TBI				*e*LR	LR	15 54 30.8	
	comp=Z,13µm,25.2s						
PMOR	Pomariorio Ree	26.24	93	*e*P	P	15 48 26.0	+4.4
	comp=Z,96nm,0.9s						
PMOR				*e*LR	LR	15 54 47.6	
	comp=Z,15µm,22.5s						
QRZ	Quartz Range	27.73	200	IAMs_20	IAMs_20	16 00 20.7	
	comp=Z,11µm,18.0s						
THZ	Tophouse	28.45	199	IAMs_20	IAMs_20	15 59 19.8	
	comp=Z,14µm,18.0s						
DSZ	Denniston Nort	28.80	201	IAMs_20	IAMs_20	15 59 36.9	
	comp=Z,14µm,22.0s						
FOZ	Fox Glacier	31.07	202	IAMs_20	IAMs_20	16 01 06.7	
	comp=Z,18µm,18.0s						
LBZ	Lake Benmore	31.69	200	IAMs_20	IAMs_20	16 01 38.2	
	comp=Z,13µm,20.0s						
GC1S	Gold Coast 1 S	31.82	241	P	P	15 49 12.4	+1.3
AUBSH	Beerwah State	31.93	243	P	P	15 49 14.5	+2.4
AUWSH	Wavell State H	32.00	242	P	P	15 49 12.9	+0.2
WKZ	Wanaka	32.48	201	IAMs_20	IAMs_20	16 02 15.0	
	comp=Z,11µm,22.0s						
TW1H	Toowoomba 1 Ha	32.95	243	P	P	15 49 22.2	+1.0
MLZ	Mavora Lakes	33.26	202	IAMs_20	IAMs_20	16 01 39.8	
	comp=Z,9µm,19.0s						
WHZ	Wether Hill Ro	33.77	202	IAMs_20	IAMs_20	16 02 53.4	
	comp=Z,10µm,18.0s						
ARMA	Armidale	34.08	238		P	15 49 30.7	-0.3
ARMA				IAmb	IAmb	15 49 39.0	
	comp=Z,18nm,0.8s						
ARMA	Armidale	34.08	238	P	P	15 49 32.1	+1.1
PATS	Pohnpei	34.27	308	IAMs_20	IAMs_20	15 59 45.0	
	comp=Z,16µm,20.0s						
TAOE	Nuku Hiva Isla	34.70	84	*e*S	S	15 55 03.1	-1.5
	comp=Z,942nm,31.9s						
TAOE				*e*LQ	LQ	15 57 06.6	
	comp=Z,6µm,25.4s						
TAOE				*e*LR	LR	15 58 44.3	
	comp=Z,23µm,26.4s						
AUPHS	Peel High Scho	34.90	237	P	P	15 49 41.3	+3.3
TV1H	Townsville Har	36.60	258	P	P	15 49 56.0	+3.4
AULRC	Lightning Ridg	36.83	241	P	P	15 49 54.0	-0.5
AUDCS	Dubbo College	37.09	236	P	P	15 50 00.2	+3.5
CTA	Charters Tower	37.12	257	LR	LR	16 03 29.0	
	comp=Z,138nm,18.7s,baz=72,slow=34						
CTAO	Charters Tower	37.12	257	P	P	15 49 55.7	-1.4
CTAO	Charters Tower	37.12	257	P	P	15 49 57.0	-0.1
CTAO	Charters Tower	37.12	257	P	P	15 49 55.7	-1.4
CTAO				pmax	pmax		
	comp=Z,47nm,1.5s						
PMG	Port Moresby	37.31	274	LR	LR	16 03 03.5	
	comp=Z,8µm,19.5s,baz=75,slow=33						
PMG	Port Moresby	37.31	274	P	P	15 49 57.6	-1.1
PMG				IAmb	IAmb	15 50 16.5	
	comp=Z,66nm,1.1s						
PMG	Port Moresby	37.31	274	IAMs_20	IAMs_20	16 02 42.3	
	comp=Z,9µm,19.0s						
PMG	Port Moresby	37.31	274	P	P	15 49 59.2	+0.5
PMG	Port Moresby	37.31	274	P	P	15 49 58.2	-0.5
	comp=Z,1µmcomp=Z,53nm,1.1s						
PMG	Port Moresby	37.31	274	⇑*e*P	P	15 49 55.4	-3.3
PMG				pmax	pmax		
	comp=Z,74nm,1.3s						
CAN	Canberra	37.89	231	IAMs_20	IAMs_20	16 05 40.7	
	comp=Z,7µm,19.0s						
H11S2	WAKE ISLAND Hy	37.97	331	T	T	16 30 42.2	
	baz=150,slow=76,SNR=108						
H11S3	WAKE ISLAND Hy	37.98	331	T	T	16 30 34.4	
	baz=150,slow=76,SNR=54						

H11S1	WAKE ISLAND Hy	37.99	331	T	T	16 30 34.5	
	baz=150,slow=76,SNR=93						
RKT	Rikitea	38.60	108	*e*S	S	15 56 07.8	+4.1
	comp=Z,21µm,32.5s						
RKT				*e*SS	SS	15 58 58.2	+3.7
	comp=Z,33µm,26.0s						
RKT				*e*LR	LR	16 00 29.9	
	comp=Z,10µm,27.5s						
H11N3	WAKE ISLAND Hy	38.95	332	T	T	16 31 40.7	
	baz=151,slow=76,SNR=66						
H11N1	WAKE ISLAND Hy	38.95	332	T	T	16 31 54.8	
	baz=151,slow=76,SNR=70						
MTSU	Mount Surprise	38.96	260	P	P	15 50 12.9	+0.2
	comp=Z,26nm,0.8s						
MTSU	Mount Surprise	38.96	260	P	P	15 50 12.4	-0.3
H11N2	WAKE ISLAND Hy	38.96	332	T	T	16 31 51.8	
	baz=151,slow=76,SNR=52						
CMSA	Cobar Meteorol	39.28	239	P	P	15 50 14.4	-0.7
	comp=Z,51nm,0.8s						
CMSA	Cobar Meteorol	39.28	239	P	P	15 50 14.3	-0.9
QLP	Quilpie	39.52	247	P	P	15 50 16.7	-0.5
	comp=Z,51nm,0.7s						
QLP	Quilpie	39.52	247	P	P	15 50 16.7	-0.5
COEN	Coen	40.38	266	P	P	15 50 24.4	-0.1
	comp=Z,36nm,0.8s						
COEN	Coen	40.38	266	P	P	15 50 23.4	-1.1
COEN	Coen	40.38	266	P	P	15 50 24.9	+0.4
TOO	Toolangi	41.36	230	P	P	15 50 33.4	+1.1
	comp=Z,15nm,2.2s						
TOO	Toolangi	41.36	230	P	P	15 50 31.5	-0.9
TOO	Toolangi	41.36	230	P	P	15 50 31.5	-0.9
TOO				pmax	pmax		
	comp=Z,57nm,1.7s						
TAU	Tasmania Unive	42.39	222	IAMs_20	IAMs_20	16 04 38.7	
	comp=Z,11µm,20.0s						
BRAT	Ballarat	42.51	230	P	P	15 50 45.0	+3.4
AUMTC	Mt Clear Colle	42.57	230	P	P	15 50 45.4	+3.3
STKA	Stephens Creek	42.75	239	P	P	15 50 42.9	-0.8
	comp=Z,115nm,2.9s						
STKA	Stephens Creek	42.75	239	P	P	15 50 43.8	+0.1
	comp=Z,11nm,0.8s,baz=84,slow=9.0,SNR=17						
STKA				LR	LR	16 06 38.1	
	comp=Z,7µm,20.1s,baz=79,slow=34						
	comp=Z,11nm,0.8s						
STKA	Stephens Creek	42.75	239	P	P	15 50 42.4	-1.3
STKA	Stephens Creek	42.75	239	P	P	15 50 44.1	+0.4
STKA	Stephens Creek	42.75	239	*de*P	P	15 50 42.9	-0.8
INKA	Innaminka	42.76	245	P	P	15 50 42.3	-1.5
MIDW	Midway	43.20	357	P	P	15 50 44.2	-3.0
MIDW				IAMs_20	IAMs_20	16 03 49.7	
	comp=Z,8µm,22.0s						
QIS	Mount Isa	43.36	256	P	P	15 50 48.4	-0.4
	comp=Z,9.9nm,2.6s						
QIS	Mount Isa	43.36	256	P	P	15 50 51.3	+2.5
ARPS	Mount Arapiles	43.83	232	P	P	15 50 52.4	0.0
	comp=Z,23nm,1.5s						
HTT	Hallett	45.28	238	P	P	15 51 04.3	+0.2
	comp=Z,14nm,1.0s						
HTT	Hallett	45.28	238	P	P	15 51 04.4	+0.2
JAY	Jayapura	45.36	282	LR	LR	16 08 28.3	
	comp=Z,4µm,20.2s,baz=94,slow=34						
AUMBR	Murray Bridge	45.38	235	P	P	15 51 05.1	+0.4
AUJCS	Jamestown Cent	45.49	238	P	P	15 51 05.8	+0.1
AUMAR	Marden Senior	45.84	236	P	P	15 51 09.6	+1.2
GENI	Genyem	45.84	281	P	P	15 51 09.3	+0.6
	comp=Z,2µmcomp=Z,49nm,2.2s						
WHYH	Whyalla	46.31	239	P	P	15 51 13.0	+0.9
BBOO	Buckleboo	47.53	239	P	P	15 51 20.8	-0.9
BBOO				IAmb	IAmb	15 51 32.1	
	comp=Z,41nm,1.1s						
BBOO	Buckleboo	47.53	239	P	P	15 51 22.0	+0.3
WB0	Warramunga Arr	48.28	257	P	P	15 51 25.8	-1.9
WB0				IAmb	IAmb	15 51 36.6	
	comp=Z,92nm,1.8s						
WRAB	Tennant Creek	48.31	257	P	P	15 51 25.9	-2.0
WRAB	Tennant Creek	48.31	257	P	P	15 51 27.2	-0.7
WRAB	Tennant Creek	48.31	257	*d i*P	P	15 51 25.4	-2.5
WRAB				pmax	pmax		
	comp=Z,56nm,1.8s						
WRA	Warramunga Arr	48.32	257	P	P	15 51 26.7	-1.3
	comp=Z,12nm,1.0s,baz=91,slow=7.8,SNR=32						
WRA				LR	LR	16 10 25.0	
	comp=Z,3µm,20.0s,baz=95,slow=35						
	comp=Z,12nm,1.0s						
WRA	Warramunga Arr	48.32	257	P	P	15 51 25.6	-2.4
WRA	Warramunga Arr	48.32	257	P	P	15 51 25.6	-2.4
WRA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
AS31	Alice Springs	48.64	252	P	P	15 51 28.9	-1.6
ASAR	Alice Springs	48.64	252	P	P	15 51 29.1	-1.4
	comp=Z,37nm,0.8s,baz=85,slow=8.2,SNR=160						
ASAR				LR	LR	16 09 55.1	
	comp=Z,11µm,21.5s,baz=81,slow=34						
	comp=Z,37nm,0.8s						
ASAR	Alice Springs	48.64	252	P	P	15 51 27.4	-3.1
ASAR	Alice Springs	48.64	252	P	P	15 51 27.4	-3.1
AUALC	St Philip’s Co	48.66	252	P	P	15 51 29.9	-0.7
GUMO	Guam	48.86	304	LR	LR	16 09 03.3	
	comp=Z,4µm,20.1s,baz=125,slow=32						
KDU	Kakadu	50.87	266	P	P	15 51 47.5	0.0
	comp=Z,14nm,0.7s						
MTN	Manton Dam	52.14	265	P	P	15 51 58.2	+1.3
	comp=Z,22nm,0.7s						
MTN	Manton Dam	52.14	265	P	P	15 51 54.7	-2.3
SAUI	Saumlaki	52.91	271	P	P	15 51 59.4	-3.3
WRKA	Warakurna	53.75	250	P	P	15 52 07.8	-1.0
	comp=Z,26nm,0.9s						
KNRA	Kununurra	54.00	261	P	P	15 52 08.1	-2.6
FORT	Forrest	54.07	243	P	P	15 52 08.6	-2.4
	comp=Z,24nm,0.7s						
FORT	Forrest	54.07	243	P	P	15 52 09.2	-1.8
FORT				IAmb	IAmb	15 52 18.8	
	comp=Z,15nm,0.7s						
SWI	Sorong	54.84	280	P	P	15 52 16.5	-0.3
BNDI	Bandanaira	55.09	275	P	P	15 52 20.4	+1.8
BNDI	Bandanaira	55.09	275	P	P	15 52 18.7	+0.1
	comp=Z,2µmcomp=Z,64nm,1.4s						
FITZ	Fitzroy Crossi	56.67	258	P	P	15 52 30.8	+0.9
	comp=Z,6.2nm,2.7s						
FITZ	Fitzroy Crossi	56.67	258	LR	LR	16 14 17.5	
	comp=Z,6µm,21.5s,baz=100,slow=34						
FITZ	Fitzroy Crossi	56.67	258	P	P	15 52 28.1	-1.8
FITZ	Fitzroy Crossi	56.67	258	P	P	15 52 31.5	+1.6
KRAI	Karang Ratu	56.87	276	P	P	15 52 31.4	0.0
	comp=Z,809nmcomp=Z,41nm,1.4s						
NLAI	Namlea	58.13	276	P	P	15 52 41.3	+1.0
	comp=Z,898nmcomp=Z,37nm,1.4s						
TNTI	Ternate	59.04	280	P	P	15 52 44.9	-1.7
TNTI	Ternate	59.04	280	P	P	15 52 47.8	+1.2
	comp=Z,1µmcomp=Z,24nm,2.0s						
JCJ	Chichijima	59.05	315	LR	LR	16 13 53.9	
	comp=Z,7µm,20.2s,baz=140,slow=32						
SOEI	Soe	59.32	268	P	P	15 52 45.0	-3.7
SOEI				IAMs_20	IAMs_20	16 16 22.7	
	comp=Z,4µm,21.0s						
SOEI	Soe	59.32	268	P	P	15 52 50.8	+2.1
SOEI	Soe	59.32	268	P	P	15 52 50.5	+1.8
	comp=Z,1µmcomp=Z,56nm,1.4s						
SANI	Sanana	59.53	277	P	P	15 52 50.0	+0.1
SANI	Sanana	59.53	277	P	P	15 52 48.9	-1.0
	comp=Z,604nmcomp=Z,27nm,0.8s						
BATI	Baumata	59.81	267	LR	LR	16 17 09.0	
	comp=Z,4µm,20.4s,baz=116,slow=35						
BATI	Baumata	59.81	267	P	P	15 52 49.1	-2.9
	comp=Z,928nmcomp=Z,21nm,1.1s						
MMRI	Maumere	61.52	268	P	P	15 53 00.9	-2.6
MMRI	Maumere	61.52	268	P	P	15 53 02.1	-1.4
	comp=Z,43nm,1.9s						
PSAB3	Pilbara Seismi	61.71	253	P	P	15 53 04.5	-0.2
	comp=Z,35nm,1.2s						
PSA00	Pilbara Seismi	61.72	253	P	P	15 53 02.8	-2.0
PSA00				IAmb	IAmb	15 53 08.8	
	comp=Z,18nm,0.8s						
PSA00	Pilbara Seismi	61.72	253	P	P	15 53 02.9	-1.9
PSA00				IAmb	IAmb	15 53 17.8	
	comp=Z,14nm,1.1s						
PSA00	Pilbara Seismi	61.72	253	P	P	15 53 05.4	+0.6
RPN	Rapa Nui	61.86	113	LR	LR	16 14 10.2	
	comp=Z,2µm,20.0s,baz=280,slow=30						
MBWA	Marble Bar	61.87	254	P	P	15 53 05.0	-0.8
MBWA	Marble Bar	61.87	254	P	P	15 53 04.1	-1.7
MBWA				IAmb	IAmb	15 53 18.7	
	comp=Z,14nm,0.9s						
MBWA	Marble Bar	61.87	254	P	P	15 53 05.7	-0.1
EDFI	Ende, Flores	62.02	268	P	P	15 53 06.1	-1.0
	comp=Z,33nm,0.9s						
DAV	Davao City (W)	62.82	286	LR	LR	16 18 56.7	
	comp=Z,2µm,19.0s,baz=104,slow=35						
LUWI	Luwuk	62.89	277	P	P	15 53 10.2	-2.6
LUWI				IAmb	IAmb	15 53 27.1	
	comp=Z,39nm,1.0s						
KLBR	Kellerberrin	62.91	242	P	P	15 53 12.3	-0.3
	comp=Z,44nm,0.8s						
KLBR	Kellerberrin	62.91	242	P	P	15 53 13.5	+0.8
GTOI	Gorontalo	63.15	279	P	P	15 53 17.2	+2.7
	comp=Z,601nmcomp=Z,22nm,1.1s						
NWAO	Narrogin (SRO)	63.32	241	LR	LR	16 22 01.3	
	comp=Z,6µm,18.1s,baz=85,slow=37						
SBA	Scott Base	63.34	184	P	P	15 53 13.8	-0.8
SBA	Scott Base	63.34	184	P	P	15 53 13.9	-0.8
SBA				pmax	pmax		
	comp=Z,61nm,1.3s						
VNDA	Vanda	63.43	185	P	P	15 53 17.0	+1.7
	comp=Z,8.4nm,1.0s,baz=357,slow=8.2,SNR=8.1						
VNDA				LR	LR	16 16 05.5	
	comp=Z,1µm,21.6s,baz=35,slow=32						
	comp=Z,8.4nm,1.0s						
VNDA	Vanda	63.43	185	P	P	15 53 14.4	-0.9
VNDA				IAmb	IAmb	15 53 21.3	
	comp=Z,26nm,1.2s						
VNDA	Vanda	63.43	185	P	P	15 53 14.4	-0.9
VNDA				pmax	pmax		
	comp=Z,26nm,1.3s						
LBFI	Labuhan Bajo,	63.82	268	P	P	15 53 18.0	-0.9
	comp=Z,38nm,1.5s						
APSI	Ampana	64.01	277	P	P	15 53 19.8	-0.3
	comp=Z,765nmcomp=Z,45nm,1.6s						
JHJ	Hachijo jima 2	64.53	319	LR	LR	16 21 34.6	
	comp=Z,2µm,18.3s,baz=134,slow=36						
BNSI	Bone	64.57	272	P	P	15 53 21.5	-2.3
	comp=Z,15nm,1.3s						
KAPI	Kappang	64.75	272	LR	LR	16 20 00.2	
	comp=Z,956nm,21.6s,baz=100,slow=35						
KAPI	Kappang	64.75	272	P	P	15 53 22.9	-2.1
KAPI				IAmb	IAmb	15 53 40.8	
	comp=Z,42nm,1.9s						
KAPI	Kappang	64.75	272	⇑*e*P	P	15 53 22.6	-2.4
KAPI				pmax	pmax		
	comp=Z,23nm,1.9s						
TTSI	Tana Toraja	65.19	274	P	P	15 53 28.2	+0.3
DBNI	Kabupaten Domp	65.33	268	P	P	15 53 27.3	-1.5
	comp=Z,20nm,1.6s						
TOLI2	Tolitoli	65.42	278	P	P	15 53 26.5	-2.8
TOLI2				IAmb	IAmb	15 53 51.8	
	comp=Z,36nm,1.7s						
TOLI2	Tolitoli	65.42	278	P	P	15 53 31.1	+1.8
PCI	Palu	65.75	276	P	P	15 53 33.6	+2.1
	comp=Z,38nm,1.3s						
PLAI	Plampang	65.78	267	P	P	15 53 34.6	+2.9
PLAI	Plampang	65.78	267	P	P	15 53 32.3	+0.6
	comp=Z,703nmcomp=Z,46nm,1.4s						
MPSI	Mapaga	66.04	277	P	P	15 53 33.6	+0.3
TWSI	Taliwang, Sumb	66.66	267	P	P	15 53 36.7	-0.6
	comp=Z,41nm,1.1s						
MJAR	Matsushiro Arr	67.74	321	P	P	15 53 44.0	+0.3
	comp=Z,1.4nm,0.8s,baz=138,slow=6.4,SNR=2.5						
MJAR				LR	LR	16 17 51.5	
	comp=Z,4µm,21.9s,baz=138,slow=31						
	comp=Z,1.4nm,0.8s						
MJAR	Matsushiro Arr	67.74	321	P	P	15 53 40.9	-2.8
MJAR	Matsushiro Arr	67.74	321	P	P	15 53 40.9	-2.8
MJAR				pmax	pmax		
	comp=Z,15nm,1.5s						
MAJO	Matsushiro	67.74	321	IAMs_20	IAMs_20	16 16 53.7	
	comp=Z,4µm,22.0s						
SHEM	Shemya Is, Ala	68.28	353	LR	LR	16 17 03.5	
	comp=Z,5µm,21.9s,baz=152,slow=30						
MYLDM	Lahad Datu	68.82	282	P	P	15 53 47.3	-3.6
MYLDM				IAmb	IAmb	15 54 12.1	
	comp=Z,45nm,1.3s						
MYLDM	Lahad Datu	68.82	282	P	P	15 53 53.4	+2.5
JOW	Kunigami	69.06	307	LR	LR	16 18 41.7	
	comp=Z,5µm,21.9s,baz=122,slow=31						
UNV	Unalaska Valle	69.14	5	IAMs_20	IAMs_20	16 15 01.3	
	comp=Z,3µm,21.0s						
JAGI	Jajag, Banyuwa	69.35	267	P	P	15 53 50.1	-4.2
JAGI				IAmb	IAmb	15 54 01.4	
	comp=Z,24nm,1.1s						
TGY	Tagaytay City	69.64	292	LR	LR	16 19 48.3	
	comp=Z,3µm,21.7s,baz=117,slow=32						
BBKI	Banjar Baru	69.88	272	P	P	15 53 57.1	-0.5
CASY	Casey	69.93	205	P	P	15 53 56.2	-0.7
FALS	False Pass	70.46	7	P	P	15 54 02.2	+2.1
	baz=192						
JNU	Nakatsue	70.48	314	LR	LR	16 21 40.4	
	comp=Z,2µm,18.8s,baz=129,slow=33						
JKA	Kamikawa-asahi	70.51	329	P	P	15 53 57.7	-3.0
ASAJ	Asahikawa	70.51	329	P	P	15 53 57.7	-3.0
ASAJ				pmax	pmax		
	comp=Z,177nm,2.0s						
PET	Petropavlovsk	71.60	344	IAMs_20	IAMs_20	16 21 53.7	
	comp=Z,4µm,20.0s						
PET	Petropavlovsk	71.60	344	*e*P	P	15 54 15.6	+8.5
PET				*e*S	S	16 03 33.6	+10
PET				*e*PS	PnS	16 04 02.7	+6.2
PET				pmax	pmax		
	comp=Z,300nm,12.4s						
PET				MLR	MLR		
	comp=Z,3µm,18.0s						
PET				MLR	MLR		
	comp=Z,4µm,17.0s						
SNJI	Sawahan-Nganju	71.81	267	P	P	15 54 06.7	-2.8
	comp=Z,22nm,1.4s						
SJI	Sawahan	71.82	267	P	P	15 54 10.3	+0.9
	comp=Z,20nm,1.3s						
PETK	Petropavlovsk-	71.94	343	P	P	15 54 12.3	+3.2
	comp=Z,13nm,0.8s,baz=190,slow=7.4,SNR=4.7						
PETK				LR	LR	16 19 44.8	
	comp=Z,4µm,21.9s,baz=152,slow=31						
	comp=Z,13nm,0.8s						
PETK	Petropavlovsk-	71.94	343	P	P	15 54 06.6	-2.6
PETK	Petropavlovsk-	71.94	343	P	P	15 54 06.6	-2.6
HULI	Fort Hunter Li	71.97	43	IAMs_20	IAMs_20	16 19 12.0	
	comp=Z,3µm,20.0s						
JRSC	Jasper Ridge	72.12	42	IAMs_20	IAMs_20	16 23 27.7	
	comp=Z,3µm,20.0s						
SAO	San Andreas Ge	72.26	43	IAMs_20	IAMs_20	16 24 46.5	
	comp=Z,2µm,19.0s						
PCJI	Pacitan	72.28	266	P	P	15 54 12.7	+0.6
PMPB	Monarch Peak	72.37	44	P	P	15 54 08.8	-3.5
PKD	Bear Valley Ra	72.39	44	IAMs_20	IAMs_20	16 18 46.7	
	comp=Z,4µm,20.0s						
MHC	Mount Hamilton	72.47	42	IAMs_20	IAMs_20	16 18 05.6	
	comp=Z,2µm,19.0s						
YSS	Yuzhno-Sakhali	72.50	331	*e*P	P	15 54 17.9	+5.3
YSS				*e*PPS	PPS	16 04 13.0	
YSS				*e*SS	SS	16 08 18.5	+4.4
YSS				pmax	pmax		
	comp=Z,30nm,1.4s						
YSS				pmax	pmax		
	comp=Z,700nm,6.8s						
CHIR	Chirikof Islan	72.61	11	P	P	15 54 14.8	+1.8
	baz=200						
OSI	Osito Audit: C	72.90	46	IAMs_20	IAMs_20	16 20 07.6	
	comp=Z,3µm,18.0s						
PASC	Pasadena Art C	73.04	47	IAMs_20	IAMs_20	16 18 54.3	
	comp=Z,3µm,20.0s						
CPE	Camp Elliot	73.13	48	IAMs_20	IAMs_20	16 20 48.9	
	comp=Z,4µm,18.0s						
MWC	Mount Wilson	73.15	47	P	P	15 54 13.5	-3.5
MWC				IAmb	IAmb	15 54 26.6	
	comp=Z,39nm,1.1s						
MWC				IAMs_20	IAMs_20	16 18 58.4	
	comp=Z,3µm,21.0s						
MWC	Mount Wilson	73.15	47	P	P	15 54 13.5	-3.5
MWC				pmax	pmax		
	comp=Z,39nm,1.2s						
BAR	Barrett	73.34	49	IAMs_20	IAMs_20	16 18 09.4	
	comp=Z,4µm,22.0s						
O02D	Mt. Diablo Mer	73.42	39	IAMs_20	IAMs_20	16 18 08.1	
	comp=Z,3µm,22.0s						
ESJX	Sierra Juarez	73.52	50	P	P	15 54 16.0	-3.3
ESJX				IAmb	IAmb	15 54 29.4	
	comp=Z,32nm,1.3s						
ISA	Isabella, Lake	73.64	45	IAMs_20	IAMs_20	16 21 01.1	
	comp=Z,3µm,19.0s						
PFO	Pinyon Flats O	73.97	48	LR	LR	16 21 53.6	
	comp=Z,4µm,18.0s,baz=244,slow=32						
LRMC	Laurel Mtn Rad	74.08	46	IAMs_20	IAMs_20	16 20 45.9	
	comp=Z,4µm,20.0s						
R17L	Mt. Peulik Vol	74.19	10	P	P	15 54 24.0	+1.6
	baz=199						
WSHM	Spangler Hills	74.28	46	IAMs_20	IAMs_20	16 20 24.1	
	comp=Z,3µm,20.0s						
LPIG	La Paz	74.31	59	LR	LR	16 21 01.0	
	comp=Z,3µm,18.7s,baz=240,slow=31						
CWC	Cottonwood Cre	74.33	45	IAMs_20	IAMs_20	16 20 27.3	
	comp=Z,4µm,19.0s						
YBH	Yreka Blue Hor	74.41	38	LR	LR	16 19 22.0	
	comp=Z,43nm,19.9s,baz=252,slow=29						
SLBS	Sierra La Lagu	74.44	60	IAMs_20	IAMs_20	16 19 20.4	
	comp=Z,3µm,20.0s						
TIN	Tinemaha, Big	74.56	44	IAMs_20	IAMs_20	16 20 15.4	
	comp=Z,3µm,20.0s						
KPJI	Karang Pucung	74.64	266	P	P	15 54 25.9	-0.1
	comp=Z,29nm,0.8s						
QSPA	South Pole Qui	74.86	180	P	P	15 54 27.8	+1.3
	comp=Z,19nm,1.1s,baz=28,slow=1.9,SNR=19						
QSPA				LR	LR	16 23 02.1	
	comp=Z,1µm,19.8s,baz=37,slow=32						
	comp=Z,19nm,1.1s						
QSPA	South Pole Qui	74.86	180	P	P	15 54 27.8	+1.3
QSPA				IAmb	IAmb	15 54 32.1	
	comp=Z,49nm,1.2s						
GLA	Glamis	74.86	49	IAMs_20	IAMs_20	16 20 27.9	
	comp=Z,4µm,20.0s						
KSRS	Korea Array	74.88	316	P	P	15 54 29.9	+3.2
	comp=Z,1.1nm,0.8s,baz=143,slow=6.8,SNR=4.7						
	comp=Z,1.1nm,0.8s						
KSRS	Korea Array	74.88	316	P	P	15 54 30.0	+3.2
O14K	Tigyukauivet M	75.02	7	P	P	15 54 27.6	+0.4
	baz=194						
KDAK	Kodiak Island	75.04	12	LR	LR	16 21 41.4	
	comp=Z,1µm,20.4s,baz=202,slow=31						
O15K	Ungalikthiuk R	75.13	8	P	P	15 54 29.1	+1.3
	baz=195						
PIX	Pinacate	75.15	51	P	P	15 54 25.8	-2.7
FURC	Furnace Creek,	75.17	45	P	P	15 54 25.9	-2.6
FURC				IAMs_20	IAMs_20	16 21 02.7	
	comp=Z,4µm,19.0s						
IRM	Iron Mountain	75.18	48	P	P	15 54 26.0	-2.7
IRM				IAmb	IAmb	15 54 38.7	
	comp=Z,77nm,1.4s						
IRM				IAMs_20	IAMs_20	16 23 15.3	
	comp=Z,3µm,18.0s						
RYN	Ryan	75.22	43	P	P	15 54 25.6	-3.4
RYN				IAmb	IAmb	15 54 38.9	
	comp=Z,69nm,1.6s						
DANC	Danby, Needles	75.26	47	IAMs_20	IAMs_20	16 20 03.2	
	comp=Z,3µm,21.0s						
NVAR	Mina Array Bea	75.26	43	P	P	15 54 34.4	+5.1
	comp=Z,5.8nm,0.3s,baz=244,slow=8.0,SNR=15						
NVAR				LR	LR	16 21 23.8	
	comp=Z,2µm,19.6s,baz=240,slow=31						
	comp=Z,5.8nm,0.3s						
SHOC	Shoshone, Teco	75.28	46	IAMs_20	IAMs_20	16 22 20.6	
	comp=Z,3µm,18.0s						
Q18K	Katmai Hardscr	75.39	11	P	P	15 54 30.5	+1.1
	baz=200						
N14K	Kuskokwak Cree	75.63	7	P	P	15 54 31.9	+1.4
	baz=193						
P17K	Kvichak River	75.66	10	P	P	15 54 32.0	+1.2
	baz=198						
INCN	Inchon	75.76	316	IAMs_20	IAMs_20	16 24 04.3	
	comp=Z,3µm,20.0s						
O16K	Kokwok River B	75.78	9	P	P	15 54 32.8	+1.3
	baz=197						
NEE2	Needles Airpor	75.86	48	IAMs_20	IAMs_20	16 20 31.0	
	comp=Z,3µm,20.0s						
Q19K	Cape Douglas,	75.90	11	P	P	15 54 33.9	+1.7
	baz=201						
M13K	Dall Lake	75.92	6	P	P	15 54 34.8	+2.5
	baz=192						
P18K	Big Mountain,	76.05	10	P	P	15 54 35.1	+2.0
	baz=200						
O17K	Koliganek Bris	76.10	9	P	P	15 54 35.3	+2.0
	baz=198						
M14K	Bethel	76.40	7	P	P	15 54 36.7	+1.7
	baz=193						
O18K	Koktuh Hills	76.49	10	P	P	15 54 37.9	+2.4
	baz=200						
M15K	Kasigluk River	76.50	7	P	P	15 54 37.3	+1.8
	baz=194						
N16K	Nishlik Lake	76.53	8	P	P	15 54 37.6	+1.8
	baz=196						
SSE	Sheshan	76.54	308	P	P	15 54 33.8	-2.7
SSE				S	S	16 04 21.0	+0.8
SSE				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SSE				pmax	pmax		
	comp=Z,260nm,5.7s						
SSE				LR	LR		
	comp=Z,1µm,22.7s						
SSE				LR	LR		
	comp=Z,930nm,22.0s						
P19K	Oil Pt	76.65	11	P	P	15 54 38.3	+1.8
	baz=202						
PINE	Pine Mountain	76.69	37		P	15 54 33.8	-3.5
N17K	Nushagak Hills	76.81	9	P	P	15 54 39.5	+2.2
	baz=198						
L14K	Kuka Creek	76.90	6	P	P	15 54 40.1	+2.3
	baz=192						
CNPM	China Poot	76.93	12	IAMs_20	IAMs_20	16 23 10.7	
	comp=Z,3µm,18.0s						
O19K	Port Alsworth	76.96	10	P	P	15 54 40.5	+2.3
	baz=200						
HOM	Homer	76.97	12	P	P	15 54 40.3	+2.1
	baz=203						
M16K	Timber Creek	77.03	8	P	P	15 54 40.7	+2.1
	baz=196						
N18K	Kilae Creek	77.16	10	P	P	15 54 41.6	+2.3
	baz=199						
O20K	Slope Mountain	77.17	11	P	P	15 54 41.1	+1.7
	baz=202						
BRLK	Bradley Lake	77.22	12	IAMs_20	IAMs_20	16 20 49.0	
	comp=Z,3µm,22.0s						
BRSE	Bradley Lake S	77.23	12	P	P	15 54 41.8	+2.1
	baz=204						
K13K	Kusilvak Mount	77.30	5	P	P	15 54 42.1	+2.0
	baz=190						
L15K	Ungalak Mounta	77.36	7	P	P	15 54 42.6	+2.2
	baz=193						
N19K	Bonanza Creek	77.52	10	P	P	15 54 43.2	+1.8
	baz=200						
M17K	Holitna River	77.61	9	P	P	15 54 43.3	+1.5
	baz=197						
L16K	Owhat River	77.63	8	P	P	15 54 43.0	+1.1
	baz=195						
SEW	Seward	77.83	13	P	P	15 54 44.5	+1.5
	baz=205						
MDJ	Mudanjiang	77.87	323	P	P	15 54 42.8	-0.8
MDJ				PcP	PcP	15 54 49.3	-4.1
MDJ				S	S	16 04 37.1	+2.9
MDJ				sS	pS	16 04 47.3	+0.1
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,570nm,7.4s						
MDJ				LR	LR		
	comp=Z,3µm,22.7s						
MDJ				LR	LR		
	comp=Z,4µm,19.7s						
MDJ				LR	LR		
	comp=Z,8µm,23.5s						
M18K	Stony River	77.94	9	P	P	15 54 45.0	+1.4
	baz=199						
K15K	Wolf Creek Mou	77.96	6	P	P	15 54 45.6	+1.9
	baz=193						
CAPN	Captain Cook N	78.08	12	P	P	15 54 45.5	+1.1
	baz=204						
P23K	Montague Islan	78.19	14	P	P	15 54 46.5	+1.5
	baz=207						
L17K	Donlin	78.19	8	P	P	15 54 46.5	+1.5
	baz=196						
J14K	Nanvaranak Lak	78.20	5	P	P	15 54 46.8	+1.8
	baz=191						
SPCR	Spurr Chakacha	78.28	11	P	P	15 54 47.6	+1.9
	baz=202						
ELK	Elko	78.50	42	LR	LR	16 22 45.5	
	comp=Z,1µm,21.0s,baz=244,slow=30						
L18K	Granite Mounta	78.50	9	P	P	15 54 48.5	+1.8
	baz=198						
WUAZ	Wupatki	78.55	48	IAMs_20	IAMs_20	16 24 27.2	
	comp=Z,3µm,19.0s						
RC01	Rabbit Creek A	78.66	12	P	P	15 54 49.3	+1.6
	baz=205						
L19K	White Mountain	78.74	10	P	P	15 54 49.5	+1.4
	baz=200						
NJ2	Nanjing	78.75	308	*e*P	P	15 54 47.2	-1.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						

NJ2				LR	LR		
	comp=Z,1µm,22.5s						
NJ2				LR	LR		
	comp=Z,2µm,20.8s						
NJ2				LR	LR		
	comp=Z,3µm,23.5s						
PWL	Port Wells	78.75	13	P	P	15 54 49.7	+1.6
	baz=206						
M20K	Styx River	78.75	10	P	P	15 54 49.7	+1.4
	baz=202						
GAMB	Gambell	78.75	2	P	P	15 54 49.2	+1.2
	baz=183						
K17K	Iditarod	78.75	8	P	P	15 54 49.4	+1.3
	baz=196						
CRAG	Craig	78.76	23	P	P	15 54 49.5	+1.3
	baz=221						
SUA	Susitna One	78.80	12	P	P	15 54 49.8	+1.3
	baz=204						
LTY	Liberty	78.92	34	P	P	15 54 46.4	-3.0
LTY				IAmb	IAmb	15 55 18.4	
	comp=Z,71nm,1.9s						
J16K	Anvik River	79.02	7	P	P	15 54 50.9	+1.3
	baz=194						
HAWA	Hanford	79.03	36	IAMs_20	IAMs_20	16 23 51.8	
	comp=Z,2µm,20.0s						
GLI	Glacier Island	79.04	14	P	P	15 54 51.0	+1.3
	baz=207						
EYAK	Cordova Ski Ar	79.06	14	IAMs_20	IAMs_20	16 22 21.4	
	comp=Z,2µm,20.0s						
EYAK	Cordova Ski Ar	79.06	14	P	P	15 54 50.6	+0.8
	baz=209						
SKT	Skwentna	79.13	11	P	P	15 54 51.3	+1.1
	baz=203						
RAGM	Ragged Mountai	79.18	15	IAMs_20	IAMs_20	16 24 23.6	
	comp=Z,3µm,18.0s						
L20K	Farewell, AK	79.18	10	P	P	15 54 50.9	+0.4
	baz=201						
M22K	Willow	79.19	12	IAMs_20	IAMs_20	16 21 54.8	
	comp=Z,3µm,22.0s						
M22K	Willow	79.19	12	P	P	15 54 52.0	+1.6
	baz=204						
KNK	Knik Glacier	79.22	13	P	P	15 54 51.9	+1.1
	baz=206						
V35K	Ketchikan	79.23	24	P	P	15 54 51.4	+0.6
	baz=222						
HMT	Hamilton	79.24	15	IAMs_20	IAMs_20	16 22 00.1	
	comp=Z,3µm,20.0s						
PMR	Palmer	79.24	12	P	P	15 54 52.4	+1.7
	baz=205						
U33K	Whale Pass	79.25	22	P	P	15 54 52.3	+1.4
	baz=221						
BGLC	Bering Glacier	79.30	16	P	P	15 54 52.2	+1.0
	baz=211						
J17K	VABM Dome	79.31	7	P	P	15 54 52.4	+1.3
	baz=196						
KASI	Kota Agung	79.36	267	P	P	15 54 52.1	-0.4
	comp=Z,35nm,1.2s						
BERG	Berg Lake	79.43	15	IAMs_20	IAMs_20	16 23 01.2	
	comp=Z,2µm,20.0s						
SNH	Sunshine Point	79.47	16	IAMs_20	IAMs_20	16 21 25.2	
	comp=Z,3µm,19.0s						
MA2	Magadan	79.48	343	LR	LR	16 24 07.8	
	comp=Z,4µm,21.8s,baz=156,slow=31						
I17K	Unalakleet	79.60	6	P	P	15 54 54.5	+1.8
	baz=194						
SML	Sawmill	79.60	13	P	P	15 54 54.2	+1.3
	baz=206						
J18K	Innoko River	79.69	8	P	P	15 54 55.3	+2.1
	baz=198						
WAX	Waxell Ridge	79.70	16	IAMs_20	IAMs_20	16 22 48.2	
	comp=Z,3µm,19.0s						
BMRM	Bremner River	79.70	15	P	P	15 54 55.0	+1.6
	baz=210						
MESA	MESA	79.70	16	IAMs_20	IAMs_20	16 24 01.5	
	comp=Z,3µm,19.0s						
M23K	Glacier View	79.72	13	P	P	15 54 55.1	+1.7
	baz=207						
CUT	Chulitna	79.76	11	IAMs_20	IAMs_20	16 25 24.8	
	comp=Z,2µm,19.0s						
WRAK	Wrangell Islan	79.76	23	P	P	15 54 54.9	+1.2
	baz=222						
S32K	Killisnoo	79.76	21	P	P	15 54 54.6	+0.9
	baz=220						
DUG	Dugway, Tooele	79.81	44	IAMs_20	IAMs_20	16 24 34.1	
	comp=Z,2µm,18.0s						
SCM	Sheep Creek Mo	79.84	13	P	P	15 54 55.4	+1.3
	baz=207						
ANM	Nome	79.85	4	P	P	15 54 55.2	+1.2
	baz=189						
KLU	Klutina	79.85	14	P	P	15 54 55.8	+1.6
	baz=208						
PPLA	Purkeypile	79.86	10	P	P	15 54 54.9	+0.6
	baz=202						
DL2	Dalian	79.88	315	P	P	15 54 59.6	+4.8
DL2				pmax	pmax		
	comp=Z,49nm,1.7s						
DL2				pmax	pmax		
	comp=Z,640nm,5.0s						
DL2				LR	LR		
	comp=Z,2µm,18.5s						
DL2				LR	LR		
	comp=Z,2µm,24.0s						
DL2				LR	LR		
	comp=Z,3µm,22.0s						
CRQM	Cirque	79.89	15	IAMs_20	IAMs_20	16 22 32.5	
	comp=Z,2µm,20.0s						
CN2	Changchun	79.89	321	*e*P	P	15 54 54.3	-0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CN2				pmax	pmax		
	comp=Z,300nm,7.0s						
CN2				LR	LR		
	comp=Z,1µm,23.0s						
CN2				LR	LR		
	comp=Z,2µm,23.0s						
CN2				LR	LR		
	comp=Z,2µm,26.0s						
CRQE	Cirque	79.89	15	P	P	15 54 55.7	+1.1
	baz=211						
YAH	Yahtse	79.92	16	IAMs_20	IAMs_20	16 21 49.9	
	comp=Z,3µm,21.0s						
ISLE	Juniper Island	79.96	16	IAMs_20	IAMs_20	16 23 07.2	
	comp=Z,2µm,20.0s						
TGL	Tana Glacier	79.96	15	IAMs_20	IAMs_20	16 22 35.3	
	comp=Z,2µm,21.0s						
K20K	Telida	79.98	9	P	P	15 54 56.4	+1.6
	baz=200						
SNY	Shenyang	80.03	318	⇑P	P	15 55 02.9	+7.4
PCA	Pinnacle	80.10	17	IAMs_20	IAMs_20	16 23 54.0	
	comp=Z,2µm,21.0s						
TABL	Table Mountain	80.14	16	IAMs_20	IAMs_20	16 21 58.0	
	comp=Z,2µm,20.0s						
BCPM	Bancas Point	80.16	17	IAMs_20	IAMs_20	16 21 37.5	
	comp=Z,2µm,20.0s						
H16K	Elim	80.18	6	P	P	15 54 57.8	+2.0
	baz=192						
GRNC	Granite Creek	80.22	16	IAMs_20	IAMs_20	16 21 59.2	
	comp=Z,2µm,21.0s						
N25K	Chitina, Valde	80.26	14	P	P	15 54 58.2	+1.8
	baz=210						
M24K	Tolsona, Glenn	80.34	13	P	P	15 54 58.0	+1.1
	baz=208						
J19K	Poorman	80.34	9	IAMs_20	IAMs_20	16 28 13.1	
	comp=Z,2µm,20.0s						
J19K	Poorman	80.34	9	P	P	15 54 58.6	+1.9
	baz=199						
G15K	Niukluk	80.37	5	P	P	15 54 58.9	+2.1
	baz=191						
R32K	Eaglecrest	80.41	20	P	P	15 54 59.4	+2.3
	baz=219						
WAT6	Susitna Watana	80.42	12	P	P	15 54 59.0	+1.6
	baz=207						
P29M	Windy Craggy	80.45	18	IAMs_20	IAMs_20	16 22 08.3	
	comp=Z,2µm,22.0s						
P29M	Windy Craggy	80.45	18	P	P	15 54 59.1	+1.6
	baz=216						
MCARA	McCarthy VSAT	80.45	15	P	P	15 54 59.2	+1.9
	baz=211						
WAT1	Susitna Watana	80.48	12	P	P	15 54 59.7	+2.1
	baz=206						
CTG	Chitna Glacier	80.53	16	P	P	15 54 59.5	+1.6
	baz=213						
O28M	Mount Upton	80.68	17	IAMs_20	IAMs_20	16 22 26.3	
	comp=Z,2µm,20.0s						
O28M	Mount Upton	80.68	17	P	P	15 54 59.6	+0.7
	baz=214						
TNA	Tin City	80.68	3	IAMs_20	IAMs_20	16 26 12.0	
	comp=Z,2µm,20.0s						
TNA	Tin City	80.68	3	P	P	15 55 00.0	+1.6
	baz=187						
F14K	Arctic Creek	80.69	4	P	P	15 54 59.5	+1.0
	baz=188						
H17K	Granite Mounta	80.71	6	P	P	15 55 00.2	+1.6
	baz=195						
TRF	Thorofare Moun	80.71	11	IAMs_20	IAMs_20	16 28 52.9	
	comp=Z,2µm,19.0s						
TRF	Thorofare Moun	80.71	11	P	P	15 54 60.0	+1.1
	baz=204						
PLBC	Pleasant Camp	80.73	19	P	P	15 55 00.3	+1.4
	baz=218						
J20K	Nowinta River	80.73	9	P	P	15 55 00.2	+1.4
	baz=200						
O29M	Mount Kennedy	80.75	17	IAMs_20	IAMs_20	16 22 18.1	
	comp=Z,3µm,22.0s						
O29M	Mount Kennedy	80.75	17	P	P	15 54 59.3	+0.2
	baz=216						
CHUM	Lake Minchumin	80.75	10	P	P	15 55 00.3	+1.4
	baz=202						
HARP	HAARP	80.82	14	P	P	15 55 00.6	+1.2
	baz=209						
GCSA	Galena City Sc	80.89	8	P	P	15 55 01.2	+1.6
	baz=198						
G16K	Koyuk River	80.91	5	P	P	15 55 00.9	+1.2
	baz=192						
DHY	Denali Highway	80.94	12	P	P	15 55 02.0	+1.8
	baz=207						
RND	Reindeer	80.94	12	IAMs_20	IAMs_20	16 22 60.0	
	comp=Z,3µm,22.0s						
T35M	Bob Quinn	80.96	23	P	P	15 55 01.0	+0.8
	baz=224						
F15K	North Star Dit	81.03	4	P	P	15 55 02.4	+2.0
	baz=190						
SKAG	Skagway	81.06	19	P	P	15 55 02.2	+1.6
	baz=219						
P30M	Million Dollar	81.08	18	P	P	15 55 02.0	+1.1
	baz=217						
H18K	Honhosa River	81.09	7	P	P	15 55 02.3	+1.5
	baz=196						
G17K	Kiwalik Mounta	81.18	6	P	P	15 55 03.1	+1.9
	baz=194						
BPAW	Bear Paw Mtn.	81.18	10	P	P	15 55 03.3	+2.0
	baz=203						
YUK8	Steele Glacier	81.22	16	P	P	15 55 03.1	+1.3
	baz=214						
MCK	McKinley	81.22	11	IAMs_20	IAMs_20	16 23 21.4	
	comp=Z,3µm,22.0s						
MCK	McKinley	81.22	11	P	P	15 55 03.7	+2.2
	baz=205						
PAX	Paxson	81.25	13	P	P	15 55 02.4	+0.6
	baz=209						
I20K	Naaghedeneel	81.27	9	P	P	15 55 03.3	+1.7
	baz=200						
S34M	Telegraph Cree	81.32	22	P	P	15 55 03.5	+1.5
	baz=223						
QIZ	Qiongzhong	81.33	292	P	P	15 55 00.6	-2.4
QIZ				S	S	16 05 14.8	+3.0
QIZ				SS	SS	16 10 29.9	+1.4
QIZ				LR	LR		
	comp=Z,860nm,16.9s						
QIZ				LR	LR		
	comp=Z,2µm,18.4s						
QIZ				LR	LR		
	comp=Z,3µm,22.6s						
YUK6	Outpost Mounta	81.33	17	P	P	15 55 03.8	+1.4
	baz=216						
M26K	Nabesna, AK	81.33	14	P	P	15 55 04.3	+2.1
	baz=211						
MNTX	Cornudas Mount	81.40	54	IAMs_20	IAMs_20	16 23 53.0	
	comp=Z,3µm,20.0s						
YUK3	Moose Creek	81.44	16	P	P	15 55 04.8	+1.9
	baz=214						
NEW	Newport	81.45	35	LR	LR	16 24 57.4	
	comp=Z,2µm,20.4s,baz=230,slow=31						
HYT	Haines Junctio	81.48	18	P	P	15 55 04.2	+1.2
	baz=216						
BWN	Browne	81.52	11	IAMs_20	IAMs_20	16 29 20.2	
	comp=Z,3µm,20.0s						
M27K	Edge Creek, AK	81.57	15	P	P	15 55 04.7	+1.2
	baz=212						
YUK4	Talbot Arm	81.58	17	P	P	15 55 06.4	+2.8
	baz=215						
WHN	Wuhan	81.64	305	P	P	15 55 01.9	-2.5
WHN				sP	PcP	15 55 08.6	-1.6
P32M	Atlin	81.69	20	P	P	15 55 05.5	+1.4
	baz=220						
H19K	Roundabout Mou	81.69	8	P	P	15 55 05.6	+1.7
	baz=198						
Q32M	Nakina River	81.69	21	P	P	15 55 05.7	+1.4
	baz=221						
G18K	Tagagawik	81.77	7	P	P	15 55 06.0	+1.6
	baz=196						
L26K	Log Cabin Wild	81.79	14	P	P	15 55 06.3	+1.8
	baz=211						
TXAR	Lajitas Array	81.84	57	P	P	15 55 13.1	+7.4
	comp=Z,6.4nm,1.1s,baz=214,slow=4.2,SNR=19						
TXAR				LR	LR	16 23 37.4	
	comp=Z,3µm,21.9s,baz=233,slow=30						
O30N	Mendenhall	81.86	18	P	P	15 55 06.2	+1.2
	baz=218						
H20K	Anotleneega Mo	81.87	8	P	P	15 55 06.8	+2.0
	baz=200						
BVCY	Beaver Creek	81.87	15	P	P	15 55 06.3	+1.3
	baz=213						
SEY	Seymchan	81.90	346	LR	LR	16 27 04.9	
	comp=Z,3µm,19.9s,baz=158,slow=32						
SEY	Seymchan	81.90	346	⇑*e*P	P	15 55 02.9	-2.1
SEY				pmax	pmax		
	comp=Z,89nm,2.0s						
ANMO	Albuquerque	81.91	51	LR	LR	16 26 08.0	
	comp=Z,4µm,18.4s,baz=234,slow=32						
ANMO	Albuquerque	81.91	51	IAMs_20	IAMs_20	16 25 20.2	
	comp=Z,4µm,19.0s						
K24K	Donnelly Dome	81.92	13	P	P	15 55 06.9	+1.7
	baz=208						
NEA2	Nenana	81.98	11	IAMs_20	IAMs_20	16 26 45.4	
	comp=Z,2µm,20.0s						
NEA2	Nenana	81.98	11	P	P	15 55 07.0	+1.6
	baz=205						
I21K	Tanana	82.01	10	P	P	15 55 07.4	+1.9
	baz=202						
F17K	Baldwin Pennin	82.04	6	P	P	15 55 07.7	+2.1
	baz=193						
WRH	Wood River Hil	82.05	11	IAMs_20	IAMs_20	16 23 58.4	
	comp=Z,2µm,22.0s						
RIDG	Independent Ri	82.07	13	P	P	15 55 07.8	+1.8
	baz=209						
MLY	Manley	82.08	10	P	P	15 55 07.9	+1.9
	baz=204						
DLBC	Dease Lake	82.10	22	LR	LR	16 24 11.1	
	comp=Z,1µm,21.7s,baz=218,slow=30						
DLBC	Dease Lake	82.10	22	P	P	15 55 07.8	+1.5
	baz=224						
N30M	Aishikik Lake	82.11	17	P	P	15 55 08.0	+1.7
	baz=217						
WHY	Whitehorse	82.14	19	P	P	15 55 08.2	+1.7
	baz=219						
L27K	Beaver Creek,	82.18	15	P	P	15 55 08.8	+2.2
	baz=212						
G19K	Purcell Mounta	82.20	7	P	P	15 55 08.2	+1.7
	baz=197						
HDA	Harding Lake	82.22	12	P	P	15 55 09.0	+2.3
	baz=207						
H21K	Melozitna Rive	82.33	9	P	P	15 55 09.6	+2.4
	baz=202						
HEH	HeiHe	82.34	327	*e*P	P	15 55 10.3	+2.7
HEH				sP	pP	15 55 17.3	-0.6
HEH				S	SKSac	16 05 27.2	+1.6
HEH				pmax	pmax		
	comp=Z,10.0nm,1.7s						
HEH				LR	LR		
	comp=Z,3µm,19.6s						
HEH				LR	LR		
	comp=Z,3µm,21.0s						
HEH				LR	LR		
	comp=Z,6µm,22.0s						
F18K	Selawik	82.35	6	P	P	15 55 09.4	+2.2
	baz=195						
I23K	Minto, Yukon-K	82.43	11	P	P	15 55 10.0	+2.3
	baz=205						
P33M	Teslin, Yukon	82.45	20	P	P	15 55 10.2	+2.0
	baz=221						
COLA	College	82.46	11	IAMs_20	IAMs_20	16 24 09.1	
	comp=Z,3µm,22.0s						
COLA	College	82.46	11	⇑*e*P	P	15 55 06.9	-1.0
COLA				pmax	pmax		
	comp=Z,24nm,0.9s						
COLA	College	82.46	11	P	P	15 55 10.4	+2.5
	baz=206						
SCRK	Sand Creek	82.46	13	P	P	15 55 09.9	+1.8
	baz=210						
R33M	Jennings River	82.47	21	P	P	15 55 09.5	+1.3
	baz=223						
MSO	Missoula	82.48	37	IAMs_20	IAMs_20	16 26 34.3	
	comp=Z,2µm,20.0s						
N31M	Braeburn, Yuko	82.52	18	IAMs_20	IAMs_20	16 23 23.9	
	comp=Z,2µm,20.0s						
N31M	Braeburn, Yuko	82.52	18	P	P	15 55 10.0	+1.7
	baz=218						
M29M	Somme Creek	82.53	16	IAMs_20	IAMs_20	16 23 27.1	
	comp=Z,2µm,21.0s						
M29M	Somme Creek	82.53	16	P	P	15 55 09.8	+1.3
	baz=215						
ILAR	Eielson Array	82.56	12	P	P	15 55 11.7	+3.3
	comp=Z,3.9nm,1.0s,baz=220,slow=5.1,SNR=20						
ILAR				LR	LR	16 24 46.0	
	comp=Z,1µm,21.9s,baz=202,slow=30						
	comp=Z,3.9nm,1.0s						
ILAR	Eielson Array	82.56	12		P	15 55 05.9	-2.5
ILAR	Eielson Array	82.56	12	P	P	15 55 05.9	-2.5
E17K	Hotham Inlet	82.61	5	P	P	15 55 11.2	+2.6
	baz=193,SNR=7.5						
J25K	Salcha River,	82.72	12	P	P	15 55 11.4	+2.0
	baz=209						
POKR	Poker Plat Res	82.76	11	IAMs_20	IAMs_20	16 26 49.0	
	comp=Z,2µm,20.0s						
POKR	Poker Plat Res	82.76	11	P	P	15 55 11.7	+2.2
	baz=207						
H22K	Ishtalitna Cre	82.77	10	P	P	15 55 11.8	+2.2
	baz=203						
F19K	Shaleruckik Mo	82.78	7	P	P	15 55 12.0	+2.5
	baz=197						
O20A	White River Ci	82.87	45	IAMs_20	IAMs_20	16 24 12.2	
	comp=Z,3µm,21.0s						
K27K	Chicken	82.94	14	P	P	15 55 12.7	+2.3
	baz=212						
J26L	Joseph Creek	83.01	13	P	P	15 55 13.0	+2.1
	baz=210,SNR=9.2						
H23K	Yukon River	83.01	10	P	P	15 55 12.5	+1.6
	baz=205						
G21K	Allakaket	83.03	9	P	P	15 55 12.6	+1.7
	baz=201						
E18K	Tukpahlearik C	83.05	6	P	P	15 55 12.9	+2.0
	baz=194						
N32M	Quiet Lake	83.08	19	IAMs_20	IAMs_20	16 28 46.9	
	comp=Z,2µm,20.0s						
N32M	Quiet Lake	83.08	19	P	P	15 55 12.4	+1.1
	baz=220						
M30M	Minto, Yukon	83.09	17	IAMs_20	IAMs_20	16 23 54.1	
	comp=Z,3µm,22.0s						
M30M	Minto, Yukon	83.09	17	P	P	15 55 12.7	+1.4
	baz=217						
D17K	Noatak River	83.11	5	P	P	15 55 12.9	+1.7
	baz=192,SNR=9.6						
L29M	L29M	83.16	16	P	P	15 55 13.6	+2.0
	baz=216						
BW06	Boulder Array	83.19	42	IAMs_20	IAMs_20	16 25 24.4	
	comp=Z,2µm,21.0s						
PDAR	Pinedale Array	83.19	42	P	P	15 55 16.4	+3.9
	comp=Z,4.9nm,0.8s,baz=233,slow=3.0,SNR=34						
PDAR				LR	LR	16 25 36.1	
	comp=Z,1µm,21.3s,baz=230,slow=31						
	comp=Z,4.9nm,0.8s						
F20K	Avaraart Lake	83.23	8	P	P	15 55 14.2	+2.3
	baz=199,SNR=11						
H24K	Noodor Dome	83.32	11	IAMs_20	IAMs_20	16 28 31.9	
	comp=Z,2µm,19.0s						
H24K	Noodor Dome	83.32	11	P	P	15 55 14.3	+1.8
	baz=206						
E19K	Redstone River	83.44	7	P	P	15 55 14.9	+1.9
	baz=197						
RDOG	Red Dog Mine	83.48	5	IAMs_20	IAMs_20	16 25 30.9	
	comp=Z,2µm,20.0s						
RDOG	Red Dog Mine	83.48	5	P	P	15 55 15.2	+2.1
	baz=192						
PRP	Porcupine Dome	83.49	12	P	P	15 55 14.9	+1.4
	baz=209,SNR=14						
M31M	Drury Creek, Y	83.49	18	IAMs_20	IAMs_20	16 23 55.7	
	comp=Z,3µm,22.0s						
M31M	Drury Creek, Y	83.49	18	P	P	15 55 14.8	+1.5
	baz=219						
C16K	Lisburne Hills	83.53	4	IAMs_20	IAMs_20	16 28 08.2	
	comp=Z,3µm,20.0s						
C16K	Lisburne Hills	83.53	4	P	P	15 55 15.8	+2.5
	baz=189						
DAWY	Dawson	83.62	15	P	P	15 55 15.9	+1.8
	baz=214,SNR=11						
F21K	Alatna River	83.69	8	IAMs_20	IAMs_20	16 31 57.7	
	comp=Z,2µm,20.0s						
F21K	Alatna River	83.69	8	P	P	15 55 16.4	+2.1
	baz=201						
G22K	Bettles	83.70	9	P	P	15 55 16.1	+1.8
	baz=203						
G23K	Bananza Creek	83.74	10	P	P	15 55 16.4	+1.8
	baz=204						
WTLY	Watson Lake, Y	83.75	21	P	P	15 55 15.8	+1.1
	baz=224						
SDCO	Great Sand Dun	83.77	48	IAMs_20	IAMs_20	16 27 45.4	
	comp=Z,3µm,18.0s						
I26K	Coal Creek Min	83.80	13	P	P	15 55 17.0	+2.2
	baz=211						
FARO	Faro, Yukon	83.83	18	P	P	15 55 16.9	+1.8
	baz=220						
C17K	DeLong Mountai	83.87	4	P	P	15 55 17.0	+1.8
	baz=192						
K29M	Barlow Dome	83.92	16	IAMs_20	IAMs_20	16 26 33.8	
	comp=Z,2µm,20.0s						
HNS	HongShan	84.10	311	⇑P	P	15 55 22.9	+5.9
HNS	HongShan	84.10	311	SKS	S	16 05 43.9	+4.6
BJI	Beijing	84.15	314	P	P	15 55 20.0	+2.8
BJI				pmax	pmax		
	comp=Z,7.0nm,2.1s						
BJI				pmax	pmax		
	comp=Z,190nm,9.3s						
BJI				LR	LR		
	comp=Z,470nm,21.2s						
BJI				LR	LR		
	comp=Z,630nm,21.6s						
BJI				LR	LR		
	comp=Z,1µm,21.6s						
G24K	Hadweenzic Riv	84.17	11	IAMs_20	IAMs_20	16 30 59.3	
	comp=Z,2µm,20.0s						
G24K	Hadweenzic Riv	84.17	11	P	P	15 55 19.0	+2.3
	baz=207						
TOAD	Toad River Com	84.18	24	P	P	15 55 18.7	+1.7
	baz=228						
COLD	Coldfoot	84.19	9	P	P	15 55 18.4	+1.7
	baz=204,SNR=17						
C18K	Utukok River	84.20	5	IAMs_20	IAMs_20	16 25 33.9	
	comp=Z,2µm,21.0s						
C18K	Utukok River	84.20	5	P	P	15 55 18.8	+2.0
	baz=193						
J29N	Klondike Camp	84.23	15	P	P	15 55 19.1	+1.9
	baz=216						
T25A	Trinidad	84.32	49	IAMs_20	IAMs_20	16 24 39.9	
	comp=Z,2µm,22.0s						
E20K	Nigu River	84.33	7	P	P	15 55 19.4	+1.8
	baz=198						
D19K	Kuna River	84.34	6	P	P	15 55 19.4	+1.8
	baz=196						
I27K	Kandik River	84.39	13	P	P	15 55 19.9	+2.0
	baz=212						
ZEA	Zeya	84.41	330	*e*P	P	15 55 24.5	+6.3
BELA	Belgrano 2	84.43	172	P	P	15 55 16.1	-1.9
BELA				IAmb	IAmb	15 55 23.2	
	comp=Z,16nm,1.2s						
G25K	Bearman Lake	84.48	11	P	P	15 55 19.5	+1.3
	baz=208						
ISCO	Idaho Springs	84.55	46	IAMs_20	IAMs_20	16 29 01.0	
	comp=Z,2µm,18.0s						
I28M	Miner Creek	84.64	14	IAMs_20	IAMs_20	16 25 50.8	
	comp=Z,2µm,21.0s						
I28M	Miner Creek	84.64	14	P	P	15 55 20.8	+1.5
	baz=214						
LYN	LuoYang	84.65	308	SS	S	16 11 29.2	+1.6
LYN	LuoYang	84.65	308	LR	LR		
	comp=Z,4µm,19.2s						
LYN	LuoYang	84.65	308	LR	LR		
	comp=E,2µm,18.5s						
LYN	LuoYang	84.65	308	LR	LR		
	comp=N,3µm,19.9s						
LYN	LuoYang	84.65	308	pmax	pmax		
	comp=Z,940nm,5.3s						
LYN	LuoYang	84.65	308	pmax	pmax		
	comp=Z,19nm,1.3s						

LYN	**LuoYang**	**84.65**	**308**	P	P	15 55 25.3	+5.5
LYN				pP	pP	15 55 29.7	-0.5
LYN				sP	pwP	15 55 31.5	-1.5
LYN	**LuoYang**	**84.65**	**308**	S	**S**	**16 05 53.9**	**+9.0**
D20K	**Etivluk River**	**84.71**	**7**	P	**P**	**15 55 21.1**	**+1.7**
	baz=198						
E21K	**Killik River**	**84.77**	**8**	IAMs_20	IAMs_20	16 30 49.3	
	comp=Z,2µm,19.0s						
E21K	**Killik River**	**84.77**	**8**	P	**P**	**15 55 21.4**	**+1.6**
	baz=200						
E22K	**Anaktuvuk Pass**	**84.78**	**9**	P	**P**	**15 55 21.6**	**+1.8**
	baz=202,SNR=30						
C19K	**Lookout Ridge**	**84.79**	**6**	P	**P**	**15 55 21.5**	**+1.6**
	baz=195,SNR=12						
J30M	**Hart River**	**84.82**	**16**	IAMs_20	IAMs_20	16 27 13.6	
	comp=Z,2µm,20.0s						
J30M	**Hart River**	**84.82**	**16**	P	**P**	**15 55 19.8**	**-0.4**
	baz=217						
F24K	**Squaw Lake**	**84.83**	**10**	P	**P**	**15 55 20.8**	**+0.7**
	baz=206						
B18K	**Kokolik River**	**84.85**	**5**	P	**P**	**15 55 22.6**	**+2.5**
	baz=193						
H27K	**Steamboat Moun**	**84.94**	**13**	P	**P**	**15 55 22.8**	**+2.2**
	baz=212						
I29M	**Ogilvie Camp,**	**84.95**	**15**	P	**P**	**15 55 22.2**	**+1.4**
	baz=215,SNR=7.4						
PMSA	**Palmer Station**	**85.03**	**156**	LR	LR	16 24 52.6	
	comp=Z,3µm,21.2s,baz=238,slow=30						
E23K	**Chandalar**	**85.04**	**9**	P	**P**	**15 55 22.6**	**+1.5**
	baz=204,SNR=15						
COCO	**West Island**	**85.06**	**259**	IAMs_20	IAMs_20	16 32 07.9	
	comp=Z,2µm,20.0s						
G26K	**Porcupine Rive**	**85.09**	**12**	IAMs_20	IAMs_20	16 25 04.6	
	comp=Z,2µm,22.0s						
G26K	**Porcupine Rive**	**85.09**	**12**	P	**P**	**15 55 22.5**	**+1.2**
	baz=210						
E24K	**Your Creek**	**85.24**	**10**	P	**P**	**15 55 22.8**	**+0.6**
	baz=206						
F25K	**Christian Rive**	**85.30**	**11**	P	**P**	**15 55 20.3**	**-2.1**
F25K				IAmb	IAmb	15 55 50.2	
	comp=Z,21nm,1.2s						
F25K				IAMs_20	IAMs_20	16 31 45.1	
	comp=Z,2µm,20.0s						
F25K	**Christian Rive**	**85.30**	**11**	P	**P**	**15 55 23.3**	**+0.8**
	baz=208						
I30M	**Mount Dempster**	**85.32**	**15**	P	**P**	**15 55 24.0**	**+1.3**
	baz=217						
CMIG	**Matias Romero**	**85.34**	**71**	LR	LR	16 25 01.3	
	comp=Z,2µm,19.9s,baz=238,slow=30						
C21K	**Knifeblade Rid**	**85.35**	**7**	P	**P**	**15 55 23.7**	**+1.1**
	baz=200,SNR=9.9						
D22K	**Ayikyak River**	**85.36**	**8**	P	**P**	**15 55 20.9**	**-1.8**
D22K	**Ayikyak River**	**85.36**	**8**	P	**P**	**15 55 23.9**	**+1.3**
	baz=202						
JCT	**Junction City**	**85.38**	**57**	IAMs_20	IAMs_20	16 26 09.7	
	comp=Z,2µm,20.0s						
G27K	**Doyon Strip**	**85.40**	**13**	P	**P**	**15 55 19.7**	**-3.3**
G27K				IAmb	IAmb	15 55 33.4	
	comp=Z,17nm,1.4s						
G27K	**Doyon Strip**	**85.40**	**13**	P	**P**	**15 55 24.7**	**+1.7**
	baz=212						
HNDO	**Hondo**	**85.48**	**58**	P	**P**	**15 55 21.4**	**-2.7**
KOTAN	**Kotaneelee Air**	**85.49**	**23**	P	**P**	**15 55 24.4**	**+1.0**
	baz=229						
AMTX	**Amarillo**	**85.49**	**52**		**P**	**15 55 21.2**	**-3.0**
EGMT	**Eagleton**	**85.54**	**38**	IAMs_20	IAMs_20	16 28 40.2	
	comp=Z,2µm,19.0s						
TOLK	**Toolik Lake Re**	**85.58**	**9**		**P**	**15 55 21.3**	**-2.5**
TOLK				IAmb	IAmb	15 55 34.1	
	comp=Z,46nm,1.6s						
TOLK				IAMs_20	IAMs_20	16 32 15.5	
	comp=Z,2µm,19.0s						
TOLK	**Toolik Lake Re**	**85.58**	**9**	P	**P**	**15 55 24.9**	**+1.1**
	baz=205,SNR=8.9						
H29M	**Whitestone**	**85.64**	**14**	P	**P**	**15 55 25.5**	**+1.4**
	baz=215						
F26K	**Sheenjek River**	**85.66**	**11**	P	**P**	**15 55 26.2**	**+2.0**
	baz=210						
D23K	**Nanushuk River**	**85.71**	**9**	P	**P**	**15 55 26.4**	**+2.0**
	baz=204,SNR=18						
A19K	**Wainwright**	**85.73**	**5**	P	**P**	**15 55 26.4**	**+2.0**
	baz=194						
E25K	**Arctic Village**	**85.78**	**11**	P	**P**	**15 55 26.6**	**+1.8**
	baz=208,SNR=9.8						
B21K	**Ikpikpuk River**	**85.81**	**7**	P	**P**	**15 55 26.4**	**+1.6**
	baz=200						
TIY	**Taiyuan**	**85.88**	**311**	P	P	15 55 19.0	-7.0
TIY	**Taiyuan**	**85.88**	**311**	S	**S**	**16 05 55.7**	**-1.5**
TIY				pmax	pmax		
	comp=Z,440nm,6.3s						
TIY				LR	LR		
	comp=N,1µm,19.9s						
TIY				LR	LR		
	comp=E,2µm,20.6s						
TIY				LR	LR		
	comp=Z,2µm,19.9s						
B20K	**Meade River**	**85.89**	**6**	P	**P**	**15 55 27.4**	**+2.2**
	baz=197						
EPYK	**Eagle Plains**	**86.16**	**15**	P	**P**	**15 55 28.5**	**+1.8**
	baz=217						
D24K	**Happy Valley**	**86.16**	**9**	P	**P**	**15 55 29.2**	**+2.6**
	baz=205						
HILR	**Hailar Array B**	**86.19**	**324**	LR	LR	16 29 27.7	
	comp=Z,5µm,20.5s,baz=90,slow=32						
G29M	**Pine Creek**	**86.29**	**14**	P	**P**	**15 55 29.6**	**+2.3**
	baz=216						
H31M	**Peel River**	**86.31**	**16**	P	**P**	**15 55 29.0**	**+1.5**
	baz=219						
KSCO	**Kaye Shedlock'**	**86.35**	**48**	IAMs_20	IAMs_20	16 27 00.5	
	comp=Z,2µm,20.0s						
F28M	**Old Crow**	**86.46**	**13**	P	**P**	**15 55 30.0**	**+1.8**
	baz=214						
735A	**Kenedy**	**86.46**	**59**	IAMs_20	IAMs_20	16 25 44.5	
	comp=Z,3µm,21.0s						
GYA	**Guiyang**	**86.52**	**298**	⇓P	**P**	**15 55 28.4**	**-1.1**
GYA				SKS	**SKSac**	**16 05 50.2**	**-3.7**
GYA				S	**S**	**16 06 03.6**	**-0.3**
GYA				SS	**SS**	**16 11 47.5**	**+2.2**
GYA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
GYA				pmax	pmax		
	comp=Z,180nm,3.2s						
GYA				LR	LR		
	comp=Z,740nm,7.0s						
GYA				LR	LR		
	comp=Z,1µm,22.4s						
GYA				LR	LR		
	comp=Z,1µm,25.4s						
C23K	**Itkillik River**	**86.52**	**8**	P	**P**	**15 55 29.4**	**+1.1**
	baz=204						
E27K	**Coleen River**	**86.58**	**12**	P	**P**	**15 55 30.3**	**+1.5**
	baz=212						
B22K	**Teshekpuk Lake**	**86.63**	**7**	P	**P**	**15 55 30.7**	**+1.9**
	baz=201						
H03S2	**Juan Fernandez**	**86.67**	**124**	T	T	17 31 25.9	
	baz=251,slow=75,SNR=46						
H03S1	**Juan Fernandez**	**86.68**	**124**	T	T	17 31 33.2	
	baz=251,slow=75,SNR=64						
H03S3	**Juan Fernandez**	**86.68**	**124**	T	T	17 31 26.3	
	baz=251,slow=75,SNR=41						
C24K	**Franklin Bluff**	**86.69**	**9**	P	**P**	**15 55 30.1**	**+1.0**
	baz=205						
D25K	**Kavik River**	**86.70**	**10**	P	**P**	**15 55 30.9**	**+1.5**
	baz=208						
G30M	**tAoh Zraii Nji**	**86.77**	**14**	IAMs_20	IAMs_20	16 38 04.1	
	comp=Z,2µm,18.0s						
G30M	**tAoh Zraii Nji**	**86.77**	**14**	P	**P**	**15 55 29.6**	**-0.1**
	baz=217						
H03N2	**Juan Fernandez**	**86.77**	**124**	T	T	17 31 27.5	
	baz=255,slow=74,SNR=11						
H03N3	**Juan Fernandez**	**86.77**	**124**	T	T	17 31 28.4	
	baz=255,slow=74,SNR=12						
H03N1	**Juan Fernandez**	**86.79**	**124**	T	T	17 31 28.5	
	baz=255						
USHA	**Ushuaia**	**87.00**	**146**	LR	LR	16 25 11.4	
	comp=Z,2µm,21.5s,baz=246,slow=29						
A22K	**Sinclair Lake**	**87.08**	**6**	P	**P**	**15 55 31.7**	**+0.6**
	baz=199						
G31M	**Satah River**	**87.20**	**15**	P	**P**	**15 55 33.0**	**+1.3**
	baz=219						
A21K	**Barrow**	**87.21**	**6**	P	**P**	**15 55 33.2**	**+1.6**
	baz=198						
AY03	**Cochrane**	**87.23**	**138**	IAMs_20	IAMs_20	16 24 31.1	
	comp=Z,3µm,22.0s						
SLVN	**Son La**	**87.34**	**293**	IAMs_20	IAMs_20	16 28 31.4	
	comp=Z,3µm,22.0s						
E28M	**Babbage River**	**87.35**	**12**	P	**P**	**15 55 33.3**	**+0.8**
	baz=214						
F30M	**Barrier River**	**87.37**	**14**	IAMs_20	IAMs_20	16 27 01.0	
	comp=Z,2µm,19.0s						
F30M	**Barrier River**	**87.37**	**14**	P	**P**	**15 55 33.3**	**+0.8**
	baz=218						
C27K	**Jago River**	**87.42**	**11**	IAMs_20	IAMs_20	16 26 56.3	
	comp=Z,2µm,22.0s						
C27K	**Jago River**	**87.42**	**11**	P	**P**	**15 55 33.7**	**+1.0**
	baz=210						
C26K	**Camden Bay**	**87.47**	**10**	P	**P**	**15 55 34.3**	**+1.4**
	baz=209						
MAW	**Mawson**	**87.48**	**199**	LR	LR	16 34 33.8	
	comp=Z,2µm,18.1s,baz=117,slow=36						
OGNE	**Ogallala**	**87.51**	**46**	IAMs_20	IAMs_20	16 27 13.1	
	comp=Z,2µm,21.0s						
E29M	**Blow River**	**87.52**	**13**	P	**P**	**15 55 34.8**	**+1.5**
	baz=216						
D27M	**Malcolm River**	**87.60**	**12**	IAMs_20	IAMs_20	16 27 21.1	
	comp=Z,2µm,22.0s						
D27M	**Malcolm River**	**87.60**	**12**	P	**P**	**15 55 35.1**	**+1.4**
	baz=213						
HHC	**Hu-ho-hao-te**	**87.70**	**313**	*e*P	**P**	**15 55 33.3**	**-1.6**
HHC				SKS	**SKSac**	**16 06 01.9**	**+1.4**
HHC				S	**S**	**16 06 13.6**	**-1.1**
HHC				sS	ScS	16 06 22.2	+0.8
HHC				SS	**SS**	**16 12 03.5**	**+1.5**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,160nm,4.9s						
HHC				LR	LR		
	comp=Z,980nm,15.5s						
HHC				LR	LR		
	comp=Z,950nm,15.7s						
HHC				LR	LR		
	comp=Z,2µm,15.3s						
F31M	**Tsiigehtchic**	**87.73**	**15**	P	**P**	**15 55 35.7**	**+1.5**
	baz=220						
GSI	**Gunungsitoli**	**87.78**	**272**	P	**P**	**15 55 38.0**	**+2.2**
	comp=Z,40nm,1.6s						
GO07	**Milladeo Hill,**	**87.86**	**134**	IAMs_20	IAMs_20	16 27 00.9	
	comp=Z,3µm,20.0s						
LL07	**Hotel Espejo d**	**88.08**	**134**	IAMs_20	IAMs_20	16 26 39.7	
	comp=Z,2µm,19.0s						
D28M	**Stokes Point**	**88.12**	**12**	P	**P**	**15 55 37.9**	**+1.8**
	baz=215						
COYC	**Coyhaique**	**88.12**	**137**	IAMs_20	IAMs_20	16 26 11.7	
	comp=Z,3µm,21.0s						
YAK	**Yakutsk**	**88.28**	**337**	IAMs_20	IAMs_20	16 31 19.6	
	comp=Z,2µm,20.0s						
CBKS	**Cedar Bluff**	**88.37**	**49**	IAMs_20	IAMs_20	16 29 28.1	
	comp=Z,3µm,20.0s						
HKT	**Hockley**	**88.44**	**59**	IAMs_20	IAMs_20	16 29 11.0	
	comp=Z,3µm,20.0s						
INK	**Inuvik**	**88.45**	**14**	LR	LR	16 28 50.9	
	comp=Z,825nm,21.3s,baz=222,slow=31						
INK	**Inuvik**	**88.45**	**14**	P	**P**	**15 55 39.1**	**+1.5**
	baz=220						
BTO	**Baotou**	**88.70**	**313**	*e*P	**P**	**15 55 43.5**	**+3.9**
BTO				pmax	pmax		
	comp=Z,16nm,0.5s						
BTO				pmax	pmax		
	comp=Z,990nm,6.0s						
BTO				LR	LR		
	comp=Z,2µm,18.8s						
BTO				LR	LR		
	comp=Z,3µm,18.7s						
BTO				LR	LR		
	comp=Z,2µm,20.6s						
APG	**El Apazote**	**88.82**	**74**	LR	LR	16 28 06.9	
	comp=Z,115nm,19.4s,baz=244,slow=30						
R32A	**Long Quarter,**	**88.98**	**50**	IAMs_20	IAMs_20	16 29 08.5	
	comp=Z,3µm,20.0s						
LR04	**Corral**	**89.07**	**131**	IAMs_20	IAMs_20	16 28 41.1	
	comp=Z,2µm,19.0s						
LL02	**Futaleuf**	**89.09**	**135**	IAMs_20	IAMs_20	16 27 06.4	
	comp=Z,3µm,21.0s						
KMI	**Kunming**	**89.48**	**296**	P	**P**	**15 55 47.9**	**+4.1**
KMI				pmax	pmax		
	comp=Z,17nm,2.2s						
KMI				LR	LR		
	comp=Z,950nm,23.1s						
KMI				LR	LR		
	comp=Z,2µm,20.9s						
KMI				LR	LR		
	comp=Z,3µm,22.3s						
K30B	**Basset**	**89.83**	**46**	IAMs_20	IAMs_20	16 28 30.4	
	comp=Z,2µm,22.0s						
LR03	**Panguipulli**	**89.94**	**131**	IAMs_20	IAMs_20	16 25 29.0	
	comp=Z,2µm,21.0s						
NATX	**Nacogdoches**	**89.96**	**57**	IAMs_20	IAMs_20	16 29 52.1	
	comp=Z,2µm,20.0s						
LR05	**Currie**	**89.99**	**132**	IAMs_20	IAMs_20	16 27 01.2	
	comp=Z,3µm,22.0s						
BI05	**Punta Hualpn**	**90.27**	**128**	IAMs_20	IAMs_20	16 27 32.8	
	comp=Z,2µm,20.0s						
CD2	**Chengdu**	**90.32**	**302**	P	**P**	**15 55 46.7**	**-0.7**
CD2				LR	LR		
	comp=Z,3µm,17.5s						
CD2				LR	LR		
	comp=Z,3µm,18.6s						
E28A	**Huff**	**90.52**	**42**	IAMs_20	IAMs_20	16 32 25.3	
	comp=Z,2µm,18.0s						
YKA	**Yellowknife Ar**	**90.55**	**24**	P	**P**	**15 55 51.5**	**+3.9**
	comp=Z,1.2nm,0.7s,baz=249,slow=5.0,SNR=14						
YKA				LR	LR	16 29 39.9	
	comp=Z,743nm,20.6s,baz=246,slow=31						
	comp=Z,1.2nm,0.7s						
YKA	**Yellowknife Ar**	**90.55**	**24**	P	**P**	**15 55 44.9**	**-2.7**
YKA	**Yellowknife Ar**	**90.55**	**24**	P	**P**	**15 55 44.9**	**-2.7**
PZH	**PanZhiHua**	**90.73**	**297**	P	**P**	**15 55 47.9**	**-1.6**
KSU1	**Kansas State U**	**90.76**	**50**	IAMs_20	IAMs_20	16 31 01.4	
	comp=Z,3µm,19.0s						
PLCA	**Paso Flores**	**90.85**	**133**	LR	LR	16 28 28.9	
	comp=Z,3µm,20.0s,baz=236,slow=30						
441A	**DeRidder**	**90.86**	**58**	IAMs_20	IAMs_20	16 31 10.1	
	comp=Z,3µm,21.0s						
SUSD	**Miller**	**90.90**	**44**	IAMs_20	IAMs_20	16 31 12.6	
	comp=Z,3µm,19.0s						
CMAR	**Chiang Mai Arr**	**91.01**	**289**	P	**P**	**15 55 54.1**	**+3.3**
	comp=Z,0.5nm,0.3s,baz=119,slow=5.2,SNR=2.3						
CMAR				LR	LR	16 31 56.0	
	comp=Z,1µm,21.8s,baz=95,slow=32						
	comp=Z,0.5nm,0.3s						
CHTO	**Chiang Mai**	**91.11**	**289**	IAMs_20	IAMs_20	16 31 47.5	
	comp=Z,2µm,21.0s						
CHTO	**Chiang Mai**	**91.11**	**289**	P	**P**	**15 55 52.6**	**+1.4**
	comp=Z,14nm,2.1s						
TGUH	**Tegucigalpa,Un**	**91.54**	**76**	IAMs_20	IAMs_20	16 27 24.5	
	comp=Z,3µm,21.0s						
C36M	**Paulatuk**	**91.59**	**16**	P	**P**	**15 55 54.0**	**+1.7**
	baz=229						
U38A	**Gravette**	**91.60**	**53**	IAMs_20	IAMs_20	16 30 46.0	
	comp=Z,3µm,20.0s						
MIAR	**Mount Ida**	**91.67**	**55**	IAMs_20	IAMs_20	16 30 21.0	
	comp=Z,3µm,20.0s						
MDND	**Maddock**	**91.67**	**41**	IAMs_20	IAMs_20	16 33 28.8	
	comp=Z,2µm,19.0s						
LZH	**Lanzhou**	**91.80**	**307**	*e*P	**P**	**15 55 56.3**	**+2.0**
LZH				sP	pP	15 56 04.5	-0.2
LZH				pmax	pmax		
	comp=Z,9.0nm,1.3s						
LZH				LR	LR		
	comp=Z,1µm,16.8s						
LZH				LR	LR		
	comp=Z,2µm,16.8s						
LZH				LR	LR		
	comp=Z,2µm,15.5s						
L34A	**Svendsen Farm,**	**91.85**	**47**	IAMs_20	IAMs_20	16 32 27.0	
	comp=Z,2µm,19.0s						
LZDM	**Lanzhou Array**	**91.87**	**307**	LR	LR	16 34 29.9	
	comp=Z,1µm,20.5s,baz=85,slow=34						
ML02	**Panimavida**	**91.95**	**128**	IAMs_20	IAMs_20	16 27 54.3	
	comp=Z,2µm,20.0s						
N35A	**Tabor**	**92.02**	**48**	IAMs_20	IAMs_20	16 30 50.8	
	comp=Z,3µm,20.0s						
ECSD	**EROS Data Cent**	**92.25**	**45**	IAMs_20	IAMs_20	16 29 41.5	
	comp=Z,3µm,22.0s						
SYO	**Syowa Base**	**92.48**	**192**	⇑*e*PcP	**P**	**15 55 56.6**	**0.0**
SYO	**Syowa Base**	**92.48**	**192**	⇓*e*PP	PP	15 59 36.2	-1.1
VA05	**Santo Domingo**	**92.52**	**126**	IAMs_20	IAMs_20	16 27 28.4	
	comp=Z,2µm,21.0s						
BO01	**Tunca**	**92.68**	**127**	IAMs_20	IAMs_20	16 27 33.6	
	comp=Z,2µm,21.0s						
VA01	**Torpederas**	**92.71**	**125**	IAMs_20	IAMs_20	16 27 14.6	
	comp=Z,2µm,22.0s						
MT01	**Popeta**	**92.73**	**126**	IAMs_20	IAMs_20	16 27 46.0	
	comp=Z,2µm,20.0s						
JTS	**Las Juntas de**	**92.77**	**80**	LR	LR	16 28 24.0	
	comp=Z,4µm,20.0s,baz=258,slow=29						
BO02	**Sierra Bellavi**	**92.77**	**127**	IAMs_20	IAMs_20	16 28 39.1	
	comp=Z,2µm,21.0s						
143A	**Socs Landing,**	**92.88**	**57**	IAMs_20	IAMs_20	16 29 19.3	
	comp=Z,2µm,22.0s						
MT09	**Talagante**	**92.97**	**126**	IAMs_20	IAMs_20	16 27 53.3	
	comp=Z,2µm,21.0s						
TROLL	**Troll, Antarti**	**93.00**	**179**	⇑P	**P**	**15 55 59.9**	**+0.7**
	comp=Z,130nm,0.7s						
MT02	**Curacav**	**93.03**	**125**	IAMs_20	IAMs_20	16 27 44.9	
	comp=Z,3µm,22.0s						
A36M	**Sachs Harbour**	**93.07**	**14**	P	**P**	**15 56 00.4**	**+1.4**
	baz=228						
TNCH	**TengChong**	**93.13**	**295**	*e*P	**P**	**15 55 58.3**	**-2.4**
TNCH				S	**S**	**16 07 10.8**	**+5.3**
TNCH				LR	LR		
	comp=Z,580nm,17.9s						
TNCH				LR	LR		
	comp=Z,920nm,23.9s						
TNCH				LR	LR		
	comp=Z,3µm,31.1s						
F33A	**5 Mile Ranch,**	**93.14**	**43**	IAMs_20	IAMs_20	16 32 41.8	
	comp=Z,2µm,20.0s						
VA06	**Catapilco**	**93.14**	**125**	IAMs_20	IAMs_20	16 27 24.9	
	comp=Z,2µm,22.0s						
BO04	**La Punta**	**93.19**	**126**	IAMs_20	IAMs_20	16 27 50.1	
	comp=Z,2µm,21.0s						
P38A	**Dawn**	**93.19**	**50**	IAMs_20	IAMs_20	16 32 26.8	
	comp=Z,2µm,19.0s						
SNAA	**Sanae**	**93.20**	**178**	⇑P	**P**	**15 56 00.5**	**+0.5**
	comp=Z,27nm,0.8s						
SNAA	**Sanae**	**93.20**	**178**	P	**P**	**15 56 01.8**	**+1.8**
	comp=Z,1.4nm,1.0s,baz=211,slow=2.3,SNR=5.2						
SNAA				LR	LR	16 32 32.5	
	comp=Z,4µm,21.9s,baz=192,slow=32						
	comp=Z,1.4nm,1.0s						
SNAA	**Sanae**	**93.20**	**178**		**P**	**15 55 57.1**	**-2.9**
SNAA				IAmb	IAmb	15 56 07.0	
	comp=Z,33nm,2.0s						
SNAA				IAMs_20	IAMs_20	16 32 10.8	
	comp=Z,3µm,21.0s						
SNAA	**Sanae**	**93.20**	**178**	⇑*e*P	**P**	**15 56 01.8**	**+1.8**
SNAA				pmax	pmax		
	comp=Z,14nm,1.8s						
ULN	**Ulaanbaatar**	**93.20**	**319**	IAMs_20	IAMs_20	16 32 28.1	
	comp=Z,2µm,20.0s						
ULN	**Ulaanbaatar**	**93.20**	**319**	⇑*e*P	**P**	**15 55 58.0**	**-2.5**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.7s						
VNA3	**Neumayer Olymp**	**93.21**	**175**	⇑P	**P**	**15 56 04.2**	**+4.2**
	comp=Z,3.6nm,0.9s						
MT05	**Renca**	**93.30**	**126**	IAMs_20	IAMs_20	16 28 01.0	
	comp=Z,2µm,20.0s						
PEL	**Peldehue**	**93.42**	**126**	IAMs_20	IAMs_20	16 27 44.6	
	comp=Z,2µm,21.0s						
MT03	**Universidad Ad**	**93.44**	**126**	IAMs_20	IAMs_20	16 28 28.8	
	comp=Z,2µm,22.0s						
MT16	**CCHEN**	**93.45**	**126**	IAMs_20	IAMs_20	16 27 57.1	
	comp=Z,2µm,21.0s						
VBMS	**Vicksburg**	**93.47**	**58**	IAMs_20	IAMs_20	16 32 19.9	
	comp=Z,2µm,21.0s						
HDC	**Heredia**	**93.49**	**81**	IAMs_20	IAMs_20	16 28 14.6	
	comp=Z,2µm,20.0s						
CO06	**Fray Jorge**	**93.51**	**123**	IAMs_20	IAMs_20	16 30 26.8	
	comp=Z,2µm,20.0s						
MT13	**San Alfonso**	**93.52**	**126**	IAMs_20	IAMs_20	16 28 00.1	
	comp=Z,2µm,22.0s						
LMEL	**Las Melosas**	**93.55**	**126**	IAMs_20	IAMs_20	16 28 11.7	
	comp=Z,2µm,21.0s						
SONM	**Songino Array**	**93.61**	**319**	P	**P**	**15 56 05.4**	**+3.1**
	comp=Z,0.1nm,0.3s,baz=46,slow=8.3,SNR=2.1						
SONM				LR	LR	16 33 25.3	
	comp=Z,2µm,21.7s,baz=112,slow=32						
VA03	**San Esteban**	**93.66**	**125**	IAMs_20	IAMs_20	16 27 51.7	
	comp=Z,2µm,22.0s						
N38A	**Joes South For**	**93.75**	**49**	IAMs_20	IAMs_20	16 33 32.4	
	comp=Z,2µm,19.0s						
MT08	**Bocatoma Ro**	**93.84**	**126**	IAMs_20	IAMs_20	16 28 42.4	
	comp=Z,2µm,21.0s						
CO02	**Combarbal**	**93.84**	**124**	IAMs_20	IAMs_20	16 26 59.6	
	comp=Z,3µm,22.0s						
VNA1	**Neumayer--Stat**	**93.90**	**176**	⇑P	**P**	**15 56 06.4**	**+3.3**
	comp=Z,8.8nm,1.3s						
EFI	**East Falkland**	**93.98**	**146**	IAMs_20	IAMs_20	16 28 17.3	
	comp=Z,2µm,22.0s						
SCIA	**State Center**	**94.08**	**48**	IAMs_20	IAMs_20	16 31 25.1	
	comp=Z,3µm,21.0s						
NVL	**N'lazarevskaya**	**94.13**	**182**	*e*P	P	15 55 59.9	-4.3
NVL				*e*		15 59 45.6	
NVL				*e*S	**SKSac**	**16 06 34.9**	**-1.4**
NVL				*e*SS	**SS**	**16 13 35.2**	**+3.3**
NVL				*e*SSS	SSS	16 17 16.9	
NVL				pmax	pmax		
	comp=Z,21nm,1.3s						
NVL				MLR	MLR		
	comp=Z,2µm,18.0s						
AGMN	**Agassiz Nation**	**94.19**	**41**	IAMs_20	IAMs_20	16 36 00.4	
	comp=Z,2µm,19.0s						
P40A	**Paris**	**94.26**	**50**	IAMs_20	IAMs_20	16 31 54.2	
	comp=Z,2µm,20.0s						
TIXI	**Tiksi**	**94.36**	**345**	LR	LR	16 33 43.5	
	comp=Z,3µm,21.7s,baz=162,slow=32						
TIXI	**Tiksi**	**94.36**	**345**	IAMs_20	IAMs_20	16 31 43.1	
	comp=Z,3µm,22.0s						
ATAH	**Atahualpa**	**94.55**	**99**	LR	LR	16 28 32.0	
	comp=Z,3µm,21.9s,baz=253,slow=29						
I37A	**Lemond, Waseca**	**94.55**	**46**	IAMs_20	IAMs_20	16 31 34.4	
	comp=Z,3µm,21.0s						
NNA	**Nana**	**94.68**	**104**	LR	LR	16 30 40.6	
	comp=Z,924nm,20.4s,baz=251,slow=30						
146A	**Union**	**94.77**	**58**	IAMs_20	IAMs_20	16 36 29.4	
	comp=Z,2µm,18.0s						
ULM	**Lac du Bonnet**	**94.78**	**39**	LR	LR	16 34 26.6	
	comp=Z,1µm,19.1s,baz=246,slow=33						
ULM	**Lac du Bonnet**	**94.78**	**39**	⇑*e*P	**P**	**15 56 04.8**	**-2.7**
LCO	**Las Campanas**	**94.84**	**122**	IAMs_20	IAMs_20	16 30 29.1	
	comp=Z,2µm,20.0s						
CO01	**Juntas del Tor**	**95.00**	**123**	IAMs_20	IAMs_20	16 28 52.3	
	comp=Z,2µm,22.0s						
SPMN	**Marine on St.**	**95.30**	**45**	IAMs_20	IAMs_20	16 33 40.1	
	comp=Z,2µm,19.0s						
N41A	**Harden Midland**	**95.46**	**49**	IAMs_20	IAMs_20	16 33 55.8	
	comp=Z,3µm,20.0s						
L40A	**Anamosa**	**95.55**	**48**	IAMs_20	IAMs_20	16 33 10.1	
	comp=Z,3µm,20.0s						
AC06	**Mina Casimiro**	**95.70**	**120**	IAMs_20	IAMs_20	16 29 57.8	
	comp=Z,2µm,21.0s						
GO03	**Copiapo**	**95.72**	**120**	IAMs_20	IAMs_20	16 29 59.2	
	comp=Z,2µm,21.0s						
GTA	**Gaotai**	**95.79**	**309**	*e*P	P	15 56 18.8	+6.3
GTA	**Gaotai**	**95.79**	**309**	S	**S**	**16 07 36.2**	**+8.2**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				LR	LR		
	comp=N,1µm,19.6s						
GTA				LR	LR		
	comp=E,3µm,24.0s						
GTA				LR	LR		
	comp=Z,5µm,24.4s						
S44A	**Carbondale**	**95.89**	**53**	IAMs_20	IAMs_20	16 32 30.6	
	comp=Z,2µm,21.0s						
CFA	**Coronel Fontan**	**95.91**	**125**	LR	LR	16 29 26.5	
	comp=Z,1µm,21.9s,baz=271,slow=29						
PLAL	**Pickwick Lake**	**96.14**	**56**	IAMs_20	IAMs_20	16 34 34.6	
	comp=Z,2µm,19.0s						
I40A	**Norwalk**	**96.45**	**46**	IAMs_20	IAMs_20	16 35 12.8	
	comp=Z,2µm,19.0s						
JFWS	**Jewell Farm**	**96.47**	**47**	IAMs_20	IAMs_20	16 33 29.2	
	comp=Z,3µm,20.0s						
E38A	**The Farm, Brul**	**96.51**	**44**	IAMs_20	IAMs_20	16 35 01.0	
	comp=Z,3µm,19.0s						
LRAL	**Lakeview Retre**	**96.55**	**58**	IAMs_20	IAMs_20	16 34 54.5	
	comp=Z,2µm,19.0s						
L42A	**Oliver, Polo**	**96.66**	**48**	IAMs_20	IAMs_20	16 33 03.4	
	comp=Z,2µm,20.0s						
EYMN	**Ely**	**96.90**	**42**	IAMs_20	IAMs_20	16 33 12.1	
	comp=Z,2µm,22.0s						
AC02	**Maricunga**	**96.90**	**120**	IAMs_20	IAMs_20	16 28 49.7	
	comp=Z,2µm,20.0s						
G40A	**Rib Lake**	**97.09**	**45**	IAMs_20	IAMs_20	16 33 34.4	
	comp=Z,3µm,20.0s						
I42A	**Draeger Farm,**	**97.65**	**47**	IAMs_20	IAMs_20	16 36 00.4	
	comp=Z,2µm,18.0s						
M44A	**Midewin, Midew**	**97.69**	**49**	IAMs_20	IAMs_20	16 36 08.8	
	comp=Z,2µm,20.0s						
K43A	**Burlington**	**97.78**	**48**	IAMs_20	IAMs_20	16 33 38.2	
	comp=Z,3µm,21.0s						
HQIL	**Hanson Quary C**	**97.92**	**49**	IAMs_20	IAMs_20	16 38 52.9	

	comp=Z,2µm,18.0s						
PB06	IPOC Station P	97.96	116	IAMs_20	IAMs_20	16 30 14.7	
	comp=Z,2µm,21.0s						
L44A	Lake County Fo	97.97	49	IAMs_20	IAMs_20	16 34 34.0	
	comp=Z,2µm,20.0s						
TRQA	Tornquist	98.00	133	IAMs_20	IAMs_20	16 32 30.4	
	comp=Z,2µm,21.0s						
PB03	IPOC Station P	98.02	115	IAMs_20	IAMs_20	16 29 55.5	
	comp=Z,1µm,20.0s						
WCI	Wyandotte Cave	98.29	53	IAMs_20	IAMs_20	16 34 17.1	
	comp=Z,3µm,20.0s						
152A	Waverly Hall	98.33	58	IAMs_20	IAMs_20	16 36 12.8	
	comp=Z,2µm,20.0s						
W50A	Signal Mountai	98.40	56	IAMs_20	IAMs_20	16 33 14.3	
	comp=Z,2µm,22.0s						
PB09	IPOC Station P	98.56	115	IAMs_20	IAMs_20	16 30 32.6	
	comp=Z,2µm,22.0s						
H43A	Windswept, Lux	98.58	46	IAMs_20	IAMs_20	16 37 12.0	
	comp=Z,2µm,18.0s						
F42A	Maple Grove Fa	98.61	45	IAMs_20	IAMs_20	16 34 40.8	
	comp=Z,3µm,20.0s						
X51A	Calhoun	98.63	57	IAMs_20	IAMs_20	16 35 13.5	
	comp=Z,2µm,20.0s						
PB12	IPOC Station P	98.66	112	IAMs_20	IAMs_20	16 32 58.3	
	comp=Z,1µm,19.0s						
BRDH	Bariadhala	98.67	291	LR	LR	16 37 48.4	
	comp=Z,1µm,21.8s,baz=145,slow=34						
AF01	San Pedro de A	99.08	117	IAMs_20	IAMs_20	16 32 10.4	
	comp=Z,2µm,20.0s						
L46A	Eue Claire	99.10	49	IAMs_20	IAMs_20	16 37 01.2	
	comp=Z,2µm,19.0s						
PB16	IPOC Station P	99.48	112	IAMs_20	IAMs_20	16 33 54.3	
	comp=Z,1µm,20.0s						
W52A	Murphy	99.49	56	IAMs_20	IAMs_20	16 33 59.1	
	comp=Z,2µm,21.0s						
GOGA	Godfrey	99.52	58	IAMs_20	IAMs_20	16 34 50.1	
	comp=Z,2µm,22.0s						
154A	Montrose	99.65	59	IAMs_20	IAMs_20	16 36 15.7	
	comp=Z,2µm,20.0s						
J47A	Sunmer	100.42	48	IAMs_20	IAMs_20	16 36 16.8	
	comp=Z,2µm,20.0s						
V53A	Saluda	100.49	56	IAMs_20	IAMs_20	16 34 52.8	
	comp=Z,2µm,21.0s						
GLMI	Grayling	100.86	46	IAMs_20	IAMs_20	16 35 06.3	
	comp=Z,2µm,22.0s						
060A	Indiantown	100.86	65	IAMs_20	IAMs_20	16 35 25.5	
	comp=Z,2µm,22.0s						
AAM	Ann Arbor	101.08	49	IAMs_20	IAMs_20	16 35 58.6	
	comp=Z,2µm,21.0s						
257A	Skidaway Islan	101.25	60	IAMs_20	IAMs_20	16 38 29.2	
	comp=Z,2µm,19.0s						
E46A	Sault Ste Mari	101.35	45	IAMs_20	IAMs_20	16 35 33.1	
	comp=Z,3µm,22.0s						
M50A	Fremont	101.38	50	IAMs_20	IAMs_20	16 35 54.4	
	comp=Z,2µm,21.0s						
KMSC	Kings Mountain	101.58	57	IAMs_20	IAMs_20	16 36 26.7	
	comp=Z,2µm,20.0s						
MTDJ	Mount Denham	101.62	74	IAMs_20	IAMs_20	16 33 31.4	
	comp=Z,2µm,22.0s						
V55A	Taylorsville	101.81	56	IAMs_20	IAMs_20	16 36 16.5	
	comp=Z,3µm,21.0s						
K50A	Casco	101.92	49	IAMs_20	IAMs_20	16 36 14.7	
	comp=Z,2µm,21.0s						
I49A	Point Hope	101.97	48	IAMs_20	IAMs_20	16 37 43.8	
	comp=Z,3µm,20.0s						
Y57A	Sumter	102.15	58	IAMs_20	IAMs_20	16 37 34.8	
	comp=Z,3µm,20.0s						
NHSC	New Hope	102.16	59	IAMs_20	IAMs_20	16 40 03.3	
	comp=Z,2µm,19.0s						
HOPE	Hope Point	102.34	157	IAMs_20	IAMs_20	16 35 22.1	
	comp=Z,2µm,21.0s						
W57A	Gilead	102.67	57	IAMs_20	IAMs_20	16 38 26.4	
	comp=Z,2µm,19.0s						
Y58A	Scranton	102.72	58	IAMs_20	IAMs_20	16 36 55.0	
	comp=Z,2µm,21.0s						
X58A	Rowland	103.10	57	IAMs_20	IAMs_20	16 37 42.9	
	comp=Z,3µm,21.0s						
V58A	Windy Hill, Pi	103.48	56	IAMs_20	IAMs_20	16 38 53.8	
	comp=Z,2µm,20.0s						
ERPA	Erie	103.74	50	IAMs_20	IAMs_20	16 37 40.1	
	comp=Z,2µm,20.0s						
W59A	Clinton	103.92	57	IAMs_20	IAMs_20	16 37 56.7	
	comp=Z,2µm,20.0s						
Y60A	Bolivia	103.93	58	IAMs_20	IAMs_20	16 37 49.9	
	comp=Z,2µm,21.0s						
GTBY	Guantanamo Bay	104.20	73	IAMs_20	IAMs_20	16 36 58.8	
	comp=Z,2µm,20.0s						
J55A	Hilton	105.48	49	IAMs_20	IAMs_20	16 38 13.8	
	comp=Z,2µm,20.0s						
WMQ	Urumqi	105.52	312	Pdif	Pdif	15 56 55.7	-0.1
WMQ				LR	LR		
	comp=Z,1µm,21.5s						
WMQ				LR	LR		
	comp=Z,1µm,24.1s						
WMQ				LR	LR		
	comp=Z,1µm,24.1s						
V61A	Roper	105.52	57	IAMs_20	IAMs_20	16 39 28.9	
	comp=Z,2µm,20.0s						
SDV	Santo Domingo	106.14	85	IAMs_20	IAMs_20	16 36 55.9	
	comp=Z,1µm,20.0s						
J57A	Williamstown	106.81	49	IAMs_20	IAMs_20	16 39 27.2	
	comp=Z,2µm,20.0s						
LONY	Lake Ozonia	107.92	48	IAMs_20	IAMs_20	16 41 53.4	
	comp=Z,2µm,19.0s						
VT1	Waterbury	109.22	48	IAMs_20	IAMs_20	16 43 29.7	
	comp=Z,1µm,21.0s						
MKAR	Makanchi Array	109.52	315	PKiKP	PKiKP	16 01 18.3	+1.8
	comp=Z,0.5nm,0.7s,baz=85,slow=3.0,SNR=2.3						
HNH	Hanover	109.53	49	IAMs_20	IAMs_20	16 41 29.9	
	comp=Z,2µm,20.0s						
HYB	Hyderabad	109.71	283	*e*PKiKP	PKiKP	16 01 16.2	-1.5
HYB				*e*PP	PP	16 01 46.5	-3.1
HYB				*e*SKSdf	SKSdf	16 08 27.8	+0.2
MAKZ	Makanchi	109.74	315	IAMs_20	IAMs_20	16 44 47.1	
	comp=Z,1µm,20.0s						
LBNH	Lisbon	109.81	48	IAMs_20	IAMs_20	16 41 57.3	
	comp=Z,1µm,20.0s						
I62A	Tamworth	110.22	48	IAMs_20	IAMs_20	16 42 00.3	
	comp=Z,2µm,21.0s						
H62A	Milan	110.37	48	IAMs_20	IAMs_20	16 46 27.1	
	comp=Z,2µm,18.0s						
I63A	Otisfield	110.77	48	IAMs_20	IAMs_20	16 44 46.8	
	comp=Z,2µm,19.0s						
PKME	Peaks-Kenny Pk	111.70	47	IAMs_20	IAMs_20	16 43 57.3	
	comp=Z,2µm,20.0s						
KURK	Kurchatov	111.91	319	⇑*i*PKIKP	PKiKP	16 01 16.5	-4.3
KURBB	Kurchatov Arra	111.98	319	PKiKP	PKiKP	16 01 23.0	+2.0
	comp=Z,0.6nm,0.2s,baz=90,slow=2.1,SNR=6.6						
G65A	Princeton	112.92	47	IAMs_20	IAMs_20	16 44 24.6	
	comp=Z,2µm,20.0s						
SEUS	St. Eustatius	115.11	78	IAMs_20	IAMs_20	16 42 43.2	
	comp=Z,1µm,20.0s						
AAK	Ala-Archa	115.11	310	IAMs_20	IAMs_20	16 46 17.8	
	comp=Z,2µm,22.0s						
SPB	Sao Paulo	115.94	126	IAMs_20	IAMs_20	16 41 32.8	
	comp=Z,2µm,22.0s						
BIM	Bigot	116.44	81	IAMs_20	IAMs_20	16 42 30.9	
	comp=Z,1µm,20.0s						
MPOM	Morne Pois Mar	116.63	81	IAMs_20	IAMs_20	16 42 35.8	
	comp=Z,1µm,20.0s						
BVAR	Borovoye Array	116.72	322	PKP	PKiKP	16 01 32.8	+2.7
	comp=Z,2.1nm,0.7s,baz=127,slow=4.4,SNR=4.6						
GDSD	La Dsirade Is	116.74	79	IAMs_20	IAMs_20	16 47 20.5	
	comp=Z,1µm,19.0s						
BORK	Borovoye	116.76	322	⇑*i*PKIKP	PKPdf	16 01 26.7	-3.4
ARTI	Arti	122.41	328	PKP	PKiKP	16 01 43.0	+2.0
	comp=Z,1.4nm,0.5s,baz=141,slow=6.4,SNR=3.2						
ARTI	Arti	122.41	328	*i* PKIKP	PKiKP	16 01 47.7	+6.7
ARTI				MLR	MLR		
	comp=Z,4µm,20.0s						
APA	Apatity	124.47	347	*i* PKIKP	PKPdf	16 01 40.9	-3.6
APA				MLR	MLR		
	comp=Z,4µm,31.5s						
KLMR	Klimovskoe	128.03	339	*e*PKIKP	PKPdf	16 01 47.5	-4.0
KLMR				pmax	pmax		
	comp=Z,22nm,1.5s						
MAK	Makhachkala	134.32	316	*e*P	Pdif	15 58 49.9	-14
MAK				*e*		16 09 13.3	
MAK				*e*SS	SS	16 22 22.0	-1.3
MAK				pmax	pmax		
	comp=Z,22nm,0.4s						
RCBR	Riachuelo	134.48	114	IAMs_20	IAMs_20	16 56 52.6	
	comp=Z,2µm,20.0s						
AKT	Akhty	134.75	314	*i* PKIKP	PKPdf	16 02 05.8	+0.8
AKT				*e*PS	PS	16 14 56.3	-4.6
AKT				pmax	pmax		
	comp=Z,14nm,1.3s						
AKT				MLR	MLR		
	comp=Z,3µm,20.0s						
KBZ	Khabaz	136.97	319	⇑*i*PKIKP	PKPdf	16 02 07.8	-1.0
KIV	Kislovodsk	137.00	320	*i* PKIKP	PKPdf	16 02 06.4	-2.6
KIV				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,2µm,24.0s						
ERBR	Yeremizino-Bor	137.40	323	*i* PKIKP	PKiKP	16 02 14.0	+2.5
ERBR				pmax	pmax		
	comp=Z,14nm,1.0s						
ERBR				MLR	MLR		
	comp=Z,2µm,20.0s						
LABN	Labinsk	137.84	322	*i* PKIKP	PKPdf	16 02 07.3	-3.2
LABN				pmax	pmax		
	comp=Z,18nm,0.6s						
LABN				MLR	MLR		
	comp=Z,4µm,23.0s						
SOC	Sochi	139.03	321	*i* PKHKP	PKPpre	16 02 04.8	
SOC				*e*		16 17 23.4	
SOC				*e*SS	SS	16 23 19.2	+0.1
SOC				*e*SSS	SSS	16 28 37.3	
SOC				MLR	MLR		
	comp=Z,2µm,19.0s						
ANN	Anapa	139.68	324	*i* PKIKP	PKPdf	16 02 13.1	-0.7
ANN				pmax	pmax		
	comp=Z,16nm,0.8s						
ANN				MLR	MLR		
	comp=N,2µm,21.0s						
ANN				MLR	MLR		
	comp=Z,2µm,19.0s						
ANN				MLR	MLR		
	comp=E,695nm,19.0s						
RAYN	Ar Rayn	140.93	289	IAMs_20	IAMs_20	17 08 19.5	
	comp=Z,1µm,20.0s						
MILM	Milestii Mici	142.62	333	*e*PKP	PKPdf	16 02 15.0	-4.0
MILM				*e*L	L	16 56 49.0	
MILM				LQM		17 02 17.0	
	comp=Z,2µm,20.0s						
MILM				LRM	MLR	17 05 14.0	
	comp=Z,2µm,18.0s						
ATD	Arta Tunnel	142.96	269	IAMs_20	IAMs_20	17 02 54.0	
	comp=Z,1µm,21.0s						
CLL	Collm	143.38	351	*e*PKIKP	PKPdf	16 02 20.0	-0.2
OSTC	Ostas	143.55	348	AMS	AMS	17 03 40.0	
	comp=Z,3µm,21.8s						
CHVC	Chvalec	143.56	348	AMS	AMS	17 04 00.0	
	comp=Z,2µm,22.6s						
UPC	Upice	143.64	348	AMS	AMS	17 04 00.0	
	comp=Z,3µm,24.5s						
DPC	Dobruska-Polom	143.73	348	*e*PKIKP	PKiKP	16 02 27.5	+3.1
DPC				MLR	MLR		
	comp=Z,3µm,21.8s						
DPC	Dobruska-Polom	143.73	348	*e*PKP	PKiKP	16 02 27.5	+3.1
DPC				AMS	AMS	17 04 20.0	
	comp=Z,3µm,21.8s						
STEB	Steborice	143.80	346	*e*PKP	PKiKP	16 02 24.9	+0.4
OKC	Ostrava-Krasne	143.80	345	AMS	AMS	17 06 10.0	
	comp=Z,2µm,17.9s						
KRLC	Kraliky	143.89	347	AMS	AMS	17 04 00.0	
	comp=Z,3µm,21.0s						
PVCC	Panska Ves	143.89	350	AMS	AMS	17 05 20.0	
	comp=Z,2µm,18.5s						
RICC	Richard	143.96	350	AMS	AMS	17 01 20.0	
	comp=Z,2µm,18.6s						
MORC	Moravsky Berou	144.00	346	⇓P	PKiKP	16 02 28.5	+3.6
MORC	Moravsky Berou	144.00	346	⇓PKIKP	PKiKP	16 02 28.5	+3.6
HSKC	Hora Svate Kat	144.00	351	AMS	AMS	17 01 10.0	
	comp=Z,2µm,21.6s						
VRI	Vrincioaia	144.35	334	⇓P	PKiKP	16 02 30.7	+4.9
PRA	Prague	144.36	349	AMS	AMS	17 05 40.0	
	comp=Z,3µm,21.4s						
TPGR	Topolog	144.37	331	⇑P	PKiKP	16 02 26.1	+0.3
PRU	Pruhonice	144.41	349	AMS	AMS	17 05 40.0	
	comp=Z,2µm,19.9s						
VRAC	Vranov	144.65	347	*e*PKP	PKPab	16 02 20.8	-0.4
MEM	Membach	144.66	359	*d*PKP	PKPdf	16 02 24.2	+1.8
BTNL	Ternell	144.68	359	*d*PKP	PKiKP	16 02 27.1	+0.8
BSTI	Sart Tilman	144.69	359	PKP	PKPdf	16 02 24.4	+1.9
DOPR	Dopca	144.83	335	⇓P	PKPdf	16 02 24.6	+1.6
BCLA	Clavier	144.85	360	*d*PKP	PKPab	16 02 19.4	-2.5
BGES	Gesves	144.89	360	*d*PKP	PKiKP	16 02 27.6	+0.9
BHOU	Houvegnez	144.91	359	*d*PKP	PKPdf	16 02 25.6	+2.6
KRUC	Moravsky	144.93	347	*e*PKP	PKPab	16 02 22.1	-0.1
BR131	Keskin Array S	144.96	320	*d i*PKIKP	PKPdf	16 02 25.0	+1.4
BRTR	Keskin Array B	144.96	320	PKP	PKPdf	16 02 25.4	+1.9
	comp=Z,8.5nm,0.8s,baz=96,slow=2.5,SNR=46						
BRTR	Keskin Array B	144.96	320		PKPdf	16 02 25.2	+1.6
BRTR	Keskin Array B	144.96	320	PKIKP	PKPdf	16 02 25.2	+1.6
BMRD	Maredsous	144.97	0	*d*PKP	PKPdf	16 02 25.3	+2.3
MLR	Muntele Rosu	144.98	334	⇑P	PKPab	16 02 21.1	-1.6
MLR	Muntele Rosu	144.98	334	⇑PKP2	PKPab	16 02 21.1	-1.6
ZVC	Zvikov	145.01	349	*e*PKP	PKPdf	16 02 25.4	+2.3
ZVC				AMS	AMS	17 08 30.0	
	comp=Z,2µm,22.3s						
MARR	Marisel-Cluj	145.12	338	⇓P	PKPdf	16 02 25.3	+1.7
KIRS	Kirsehir-Merke	145.13	319	⇑P	PKPdf	16 02 26.1	+2.3
DOU	Dourbes	145.18	0	*d*PKP	PKiKP	16 02 29.4	+2.1
GRF	Grafenberg Arr	145.20	353	*e*PKP	PKPdf	16 02 24.5	+1.0
	baz=11,slow=2.9						
MODS	Modra-Piesok	145.37	345	*e*PKIKP	PKiKP	16 02 27.5	-0.3
MODS				*e*		16 02 33.8	
MODS	Modra-Piesok	145.37	345	*e*PKP	PKiKP	16 02 27.5	-0.3
MODS				*e*		16 02 33.8	
ANTO	Ankara	145.40	321	IAMs_20	IAMs_20	17 19 28.7	
	comp=Z,831nm,20.0s						
KHC	Kasperske Hory	145.41	350	⇓*i*PKIKP	PKPab	16 02 26.8	+2.8
KHC	Kasperske Hory	145.41	350	*e*PKP	PKPab	16 02 26.9	+2.9
KHC				AMS	AMS	17 02 40.0	
	comp=Z,2µm,20.0s						
CKRC	Cesky Krumlov	145.58	349	*e*PKIKP	PKiKP	16 02 35.1	+6.9
CKRC				*e*		16 02 41.3	
CKRC				MLR	MLR		
	comp=Z,2µm,20.9s						
CKRC	Cesky Krumlov	145.58	349	*e*PKP	PKiKP	16 02 35.1	+6.9
CKRC				*e*x	x	16 02 41.3	
CKRC				AMS	AMS	17 07 10.0	
	comp=Z,2µm,20.9s						
WLF	Walferdange	145.60	359	*d*PKP	PKiKP	16 02 27.7	-0.4
ARR	Arges	145.63	335	⇓P	PKiKP	16 02 28.3	-0.1
GERES	GERESS Array B	145.66	350	PKPbc	PKPab	16 02 27.4	+2.4
	comp=Z,1.2nm,0.8s,baz=35,slow=4.9,SNR=6.7						
SIRR	Siria	145.99	339	⇓P	PKPab	16 02 28.5	+2.3
CONA	Conrad Observa	146.12	347	*e*PKiKP	PKPab	16 02 29.0	+2.3
	comp=Z,34nm,1.2s						
RONA	Rosalia, Austr	146.23	346	*e*pPKiKP	PKiKP	16 02 29.8	+0.2
	comp=Z,44nm,1.5s						
SURR	Surduc	146.26	338	⇑P	PKiKP	16 02 29.7	0.0
STU	Stuttgart	146.32	355	IAMs_20	IAMs_20	17 07 22.6	
	comp=Z,1µm,21.0s						
GZR	Gura Zlata	146.33	337	⇑P	PKPab	16 02 29.2	+1.6
GZR	Gura Zlata	146.33	337	⇑PKP2	PKPab	16 02 29.2	+1.6
MOA	Molln	146.52	349	*e*PKiKP	PKPab	16 02 28.7	+0.5
	comp=Z,27nm,1.4s						
BZS	Buzias	146.56	339	⇓P	PKPab	16 02 29.7	+1.3
BIOA	Bad Ischl, Aus	146.79	349	*e*pPKP	PKPab	16 02 30.2	+0.9
	comp=Z,25nm,2.0s						
BFO	Black Forest	146.83	356	IAMs_20	IAMs_20	17 14 57.0	
	comp=Z,1µm,20.0s						
ARSA	Arzberg	146.83	347	*e*pPKP	PKPdf	16 02 27.7	+1.3
	comp=Z,13nm,1.4s						
HERR	Herculane	146.90	337	⇑P	PKPab	16 02 30.5	+0.8
MORH	Mrgy, Hungar	146.99	342	⇓P	PKPab	16 02 30.7	+0.7
ELND	Elena	147.03	331	⇓P	PKiKP	16 02 32.2	+0.9
MMAI	Mount Meron Ar	147.17	308	PKPbc	PKiKP	16 02 33.0	+0.9
	comp=Z,9.1nm,0.8s,baz=52,slow=5.4,SNR=7.9						
LESA	Schwarzleotal	147.21	350	*e*pPKP	PKPdf	16 02 28.0	+1.0
	comp=Z,28nm,1.7s						
RETA	Reutte	147.43	353	*e*pPKP	PKPab	16 02 32.9	+1.0
	comp=Z,21nm,1.5s						
KBA	Koelnbreinsper	147.43	349	*e*PKiKP	PKPbc	16 02 30.4	+0.3
	comp=Z,8.8nm,0.8s						
SOKA	Soboth	147.48	347	*e*pPKP	PKPbc	16 02 30.9	+0.8
	comp=Z,15nm,1.2s						
MOTA	Moosalm	147.52	352	*e*pPKP	PKPab	16 02 32.8	+0.4
	comp=Z,12nm,0.9s						
WTTA	Wattenberg	147.53	351	*e*pPKP	PKPab	16 02 32.8	+0.4
	comp=Z,35nm,1.7s						
SQTA	Sankt Quirin	147.63	352	*e*pPKP	PKPbc	16 02 31.4	+0.9
	comp=Z,12nm,1.0s						
DAVA	Damuels	147.73	354	*e*pPKP	PKiKP	16 02 32.9	0.0
	comp=Z,45nm,1.8s						
GHAJ	Ghor Haditha	147.74	305	IAMs_20	IAMs_20	17 09 05.3	
	comp=Z,1µm,21.0s						
OBKA	Obir	147.75	348	*e*pPKP	PKPbc	16 02 32.6	+1.8
	comp=Z,8.3nm,1.0s						
CSS	Mathiatis	147.78	313	IAMs_20	IAMs_20	17 11 33.1	
	comp=Z,956nm,21.0s						
MYKA	Terra Mystica	147.81	349	*e*PKP	PKPbc	16 02 30.8	-0.2
	comp=Z,34nm,1.5s						
FETA	Feichten	147.89	353	*e*pPKP	PKPbc	16 02 32.0	+0.7
	comp=Z,18nm,1.3s						
ABTA	Abfaltersbach	147.90	350	*e*pPKP	PKiKP	16 02 34.3	+1.1
	comp=Z,18nm,1.2s						
TUE	Stuetta	148.59	354	IAMs_20	IAMs_20	17 07 23.6	
	comp=Z,2µm,22.0s						
MBAR	Mbarara	150.05	241	IAMs_20	IAMs_20	17 09 13.8	
	comp=Z,1µm,20.0s						
PDG	Podgorica	150.18	338	⇑P	PKPdf	16 02 33.4	+1.5
BNI	Bardonecchia	150.19	357	IAMs_20	IAMs_20	17 22 18.9	
	comp=Z,1µm,19.0s						
PGAV	Gavieira, Arco	150.98	21	*e*PKPab	PKPab	16 02 49.8	+3.3
PGAV				*e*SS	SS	16 26 01.7	+27
PGAV				*e*tx	tx	16 45 47.8	
PGAV				*e*LR	LR	17 00 34.0	
PGAV				*i* IAMs_20	IAMs_20	17 08 03.2	
	comp=Z,2µm,20.0s						
PCAB	Cabril	151.29	20	*e*PKPab	PKPab	16 02 46.4	-1.3
KARP	Karpathos	151.58	320	IAMs_20	IAMs_20	17 13 01.4	
	comp=Z,1µm,21.0s						
PBRG	Braganca	151.62	19	*e*PKPab	PKPab	16 02 50.5	+1.4
POLO	Lamas de Olo	151.67	20	*e*PKPab	PKiKP	16 02 46.3	+5.2
MVO	Moncorvo	152.11	20	*e*PKPab	PKPab	16 02 48.0	-3.2
MVO				*e*tx	tx	16 45 56.6	
MVO				*e*LR	LR	16 58 07.5	
MVO				*i* IAMs_20	IAMs_20	17 09 35.0	
	comp=Z,2µm,20.0s						
PVIS	Viseu	152.22	21	*e*PKPab	PKPab	16 02 48.7	-2.9
MTE	Manteigas	152.62	21	*e*PKPab	PKPab	16 02 53.2	-0.1
MTE				*e*SS	SS	16 26 22.5	+30
MTE				*e*tx	tx	16 46 09.3	
MTE				*e*LR	LR	17 00 54.6	
MTE				*i* IAMs_20	IAMs_20	17 12 28.1	
	comp=Z,894nm,18.0s						
PMRV	Marv??o	153.54	22	*e*PKPab	PKPab	16 02 54.5	-2.6
PMRV				*e*tx	tx	16 46 26.8	
PMRV				*e*LR	LR	17 02 05.4	
PMRV				*i* IAMs_20	IAMs_20	17 07 07.5	
	comp=Z,1µm,20.0s						
ESDC	Sonseca Array	154.39	16	PKPbc	PKiKP	16 02 49.1	+2.4
	comp=Z,1.3nm,1.1s,baz=3.2,slow=1.3,SNR=4.7						
PVAQ	Vaqueiros	155.19	25	*e*SS	SS	16 26 47.3	+26
PVAQ				*e*LR	LR	16 59 56.8	
PVAQ				*i* IAMs_20	IAMs_20	17 08 08.6	
	comp=Z,2µm,20.0s						
MAHO	Mahon	155.37	1	IAMs_20	IAMs_20	17 11 50.1	
	comp=Z,1µm,21.0s						
CART	Cartagena	157.07	12	IAMs_20	IAMs_20	17 09 50.5	
	comp=Z,1µm,21.0s						

SJA ***06*** *15:44:14.6±0.8, 21.°95S×68.°62W, h133^{km}, ML3.3, MW3.6*

GUC ***06*** *15:44:15.7±0.8, 21.°97S×68.°64W, h130^{km}±4^{km}, ML3.7*

ISC 06 15:44:15.3±1.4**, 21.°99S**±0.°03×**68.°63W**±0.°05**,**
h129^{km}±10^{km}**, n30, σ1^{s}15**/55**, 7C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	0.60	288	⇑*i*P	Pn	15 44 35.1	+0.1
PB09				*e*S	Sn	15 44 49.6	-0.4
PB09	IPOC Station P	0.60	288	*e*P	Pn	15 44 35.2	+0.1
PB09				*e*S	Sn	15 44 50.2	+0.3
PB09				IAML		15 44 51.8	
	comp=Z,1µm,0.4s						
AF01	San Pedro de A	1.05	157	*e*P	Pn	15 44 38.9	0.0
AF01				*e*S	Sn	15 44 56.3	-0.5
AF01				IAML		15 45 14.7	
	comp=E,1µm,0.5s						
AF01	San Pedro de A	1.05	157	*e*P	Pn	15 44 40.2	+1.3
AF01				*e*S	Sn	15 44 51.5	-5.3
AF01				IAML		15 45 18.6	
	comp=Z,970nm,1.0s						
PB06	IPOC Station P	1.13	230	⇑*i*P	Pn	15 44 40.1	+0.6
PB06				*e*S	Sn	15 44 58.3	+0.4
PB06				IAML		15 44 59.4	
	comp=N,978nm,0.5s						
PB06	IPOC Station P	1.13	230	*e*P	Pn	15 44 40.1	+0.6
PB06				*e*S	Sn	15 44 59.9	+2.0
PB06				IAML		15 45 00.3	
	comp=Z,895nm,1.0s						
PB07	IPOC Station P	1.19	282	⇑*i*P	Pn	15 44 40.6	+0.4
PB07				*e*S	Sn	15 44 59.2	+0.2
PB07				IAML		15 45 00.1	
	comp=N,1µm,0.4s						
PB07	IPOC Station P	1.19	282	*e*P	Pn	15 44 40.7	+0.5
PB07				*e*S	Sn	15 45 00.3	+1.2
PB07				IAML		15 45 00.9	
	comp=Z,905nm,0.4s						
PB01	IPOC Station P	1.23	320	⇑*i*P	Pn	15 44 40.4	-0.1
PB01				*e*S	Sn	15 44 59.2	-0.4
PB01				IAML		15 45 00.9	
	comp=E,1µm,0.2s						
PB01	IPOC Station P	1.23	320	*e*P	Pn	15 44 40.5	0.0
PB01				*e*S	Sn	15 45 00.2	+0.6
PB01				IAML		15 45 01.1	
	comp=Z,799nm,0.2s						
PB02	IPOC Station P	1.35	299	⇑*i*P	Pn	15 44 41.9	+0.1
PB02				*e*S	Sn	15 45 01.8	-0.2
PB02				IAML		15 45 02.7	
	comp=N,2µm,0.5s						
PB02	IPOC Station P	1.35	299	*e*P	Pn	15 44 41.9	+0.1
PB02				*e*S	Sn	15 45 02.5	+0.5
PB02				IAML		15 45 04.5	
	comp=Z,2µm,0.3s						
PB05	IPOC Station P	1.69	239	⇑*i*P	Pn	15 44 46.0	+0.4
PB05				*e*S	Sn	15 45 08.8	+0.1
PB05	IPOC Station P	1.69	239	*e*P	Pn	15 44 46.3	+0.7
PB05				*e*S	Sn	15 45 05.3	-3.5
PB05				IAML		15 45 16.7	
	comp=Z,184nm,1.0s						
PATCX	Punta Patache	1.83	309	⇑*i*P	Pn	15 44 47.4	+0.1
PATCX				*e*S	Sn	15 45 11.4	-0.3
PATCX				IAML		15 45 12.8	
	comp=E,1µm,0.2s						
PATCX	Punta Patache	1.83	309	*e*P	Pn	15 44 47.5	+0.2
PATCX				*e*S	Sn	15 45 12.8	+1.1
PATCX				IAML		15 45 16.4	
	comp=Z,466nm,0.5s						
TA01	Diego Aracena	2.02	314	*e*P	Pn	15 44 49.4	0.0
TA01				*e*S	Sn	15 45 15.2	-0.5
TA01				IAML		15 45 16.9	
	comp=E,927nm,0.3s						
TA01	Diego Aracena	2.02	314	*e*P	Pn	15 44 49.5	0.0
TA01				*e*S	Sn	15 45 15.6	0.0
TA01				IAML		15 45 19.1	
	comp=Z,361nm,0.2s						
TA02	Huaiquique	2.21	320	*e*P	Pn	15 44 51.9	+0.1
TA02				*e*S	Sn	15 45 18.8	-1.0
TA02	Huaiquique	2.21	320	*e*P	Pn	15 44 51.5	-0.3
TA02				*e*S	Sn	15 45 20.7	+0.9
TA02				IAML		15 45 22.7	
	comp=Z,422nm,0.3s						
PB10	IPOC Station P	2.34	229	*e*P	Pn	15 44 54.4	+1.1
PB10				*e*S	Sn	15 45 20.5	-2.2
PB10				IAML		15 45 35.0	
	comp=Z,117nm,0.6s						
GO01	Chusmiza	2.37	347	*e*P	Pn	15 44 54.9	+0.6
GO01				*e*S	Sn	15 45 24.4	+0.4
GO01				IAML		15 45 31.7	
	comp=E,408nm,0.2s						
GO01	Chusmiza	2.37	347	*e*P	Pn	15 44 54.6	+0.3
GO01				IAML		15 45 27.9	
	comp=Z,105nm,0.6s						
PB11	IPOC Station P	2.41	336	*e*P	Pn	15 44 54.3	-0.2
PB11				*e*S	Sn	15 45 24.2	-0.4
PB11				IAML		15 45 29.1	
	comp=Z,228nm,0.2s						
YJA	Yavi	2.90	94	*e*P	Pn	15 45 02.5	+1.5
YJA				IAML		15 45 44.4	
	comp=Z,2.3nm,1.0s						
PB14	IPOC Station P	3.09	211	*e*P	Pn	15 45 03.8	+0.5
PB14				*e*S	Sn	15 45 41.0	+0.5
PB14				IAML		15 45 55.9	
	comp=Z,84nm,0.9s						
HJA	Humahuaca	3.22	113	*e*P	Pn	15 45 05.9	+0.8
HJA				IAML		15 45 51.1	
	comp=Z,6.3nm,2.3s						
GO02	Mina Guanaco	3.28	195	*e*P	Pn	15 45 06.3	+0.4
GO02				IAML		15 45 46.9	

	comp=Z,81nm,0.7s						
PB12	IPOC Station P	3.71	334	eP	Pn	15 45 10.3	-1.1
PB12				eS	Sn	15 45 53.3	-1.5
PB12				IAML		15 46 17.4	
	comp=Z,51nm,0.4s						
AZAP	Zapla	3.97	125	eP	Pn	15 45 15.6	+0.8
AZAP				IAML		15 46 12.7	
	comp=Z,19nm,4.1s						

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*TIF **06** 15:54:19.9, 39°.61N×42°.69E, h5km±2km*
*ISK **06** 15:54:20.7, 39°.62N×42°.74E, h7km, ML3.3/12*
*AFAD **06** 15:54:20.7, 39°.62N×42°.78E, h7km±2km, ML3.5*
ISC 06 15:54:20.4±1.0**, 39°.63N**±0°.02×**42°.75E**±0°.02**, h18**km±4km**,**
n49, σ0s.76/57**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGRB	Hanur-Agry	0.19	107	Pg	Pb	15 54 25.2	-0.1
AGRB				Sg	Sb	15 54 28.6	+0.2
DORK	Agr/Tutak/Do	0.24	175	P	Pg	15 54 26.1	-0.1
DORK				i IAML		15 54 30.0	
	comp=E,1µm,0.3s						
DORK				S	Sg	15 54 30.2	0.0
DORK				i IAML		15 54 31.0	
	comp=N,8µm,0.3s						
EATA	Eleskirt	0.31	319	P	Pg	15 54 26.9	-0.4
EATA				S	Sb	15 54 32.6	+0.3
EATA				i IAML		15 54 33.0	
	comp=E,7µm,0.5s						
EATA				i IAML		15 54 35.0	
	comp=N,3µm,0.4s						
KOTA	Agri, Merkez-K	0.39	64	P	Pg	15 54 28.8	+0.2
MLAZ	Malazgirt-MUS	0.52	198	Pg	Pg	15 54 30.6	-0.2
MLAZ				Sg	Sb	15 54 38.6	+0.4
DYDN	Diyadin	0.73	97	P	Pb	15 54 34.3	-0.4
DYDN				S	Sb	15 54 44.3	-0.1
ERCV	ERCIS-VAN	0.76	143	Pg	Pg	15 54 35.7	+0.3
ERCV				Sg	Sn	15 54 46.8	-0.8
HOMI	Horasan	0.77	303	P	Pg	15 54 35.8	+0.2
KOPR	Koprukoy-ERZUR	0.78	298	Pg	Pg	15 54 36.0	+0.2
ADCV	BITLIS_Adilcev	0.82	182	P	Pb	15 54 36.4	+0.1
ADCV				S	Sb	15 54 47.2	+0.1
VMUR	Van-Muradiye	0.90	135	P	Pg	15 54 38.0	0.0
VMUR				S	Sg	15 54 50.1	+0.1
VMUR				i IAML		15 54 56.0	
	comp=E,642nm,0.7s						
DIGO	Kars	0.92	31	P	Pb	15 54 38.3	+0.4
BOZK	Kars-Merkez-Bo	0.97	10	P	Pn	15 54 39.5	+0.1
SENK	Senkaya-Erzuru	0.98	342	Pg	Pn	15 54 39.5	0.0
KARS	Kars	1.02	14	Pg	Pg	15 54 41.1	+0.7
IGDI	IGDIR	1.05	77	P	Pn	15 54 40.5	+0.2
ERZM	Erzurum	1.10	285	P	Pg	15 54 42.8	+0.9
VRTB	Varto-Mus	1.11	245	P	Pn	15 54 41.4	+0.2
VRTB	Varto-Mus	1.11	245	Pn	Pg	15 54 42.2	+0.2
EJDE	Erzurum, Palan	1.14	281	P	Pb	15 54 41.4	-0.4
AKDA	Akdag	1.17	294	P	Pg	15 54 43.1	0.0
EKONA	Konakl - Erz	1.19	278	P	Pb	15 54 42.8	+0.2
TASB	TASBURUN-IGDIR	1.20	72	Pn	Pg	15 54 44.5	+0.9
GOLE	Ardahan-G¶le	1.21	354	P	Pb	15 54 43.3	+0.4
TVAN	Van	1.21	155	P	Pg	15 54 43.9	0.0
TVAN				S	Sg	15 55 00.7	+0.9
TVAN				i IAML		15 55 07.0	
	comp=E,430nm,0.4s						
GURO	Guroymak-BITLI	1.22	208	Pn	Pg	15 54 43.8	-0.2
EAK	Akyaka	1.24	32	P	Pg	15 54 46.3	+1.9
ETEKE	Tekederesi - E	1.26	278	P	Pg	15 54 50.0	+5.3
AKDM	Akdamar-Van	1.31	172	Pn	Pg	15 54 45.5	-0.3
BLIS	Bitlis-Merkez	1.31	202	P	Pg	15 54 45.3	-0.5
OZAP	Van, Ozalp-Mer	1.37	135	P	Pg	15 54 47.2	+0.4
ECAT	Cat-ERZURUM	1.38	269	P	Pn	15 54 45.3	+0.4
EMRE	Erzurum,Aziziy	1.43	287	P	Pb	15 54 46.4	-0.2
DDEM	Demirkent	1.47	329	P	Pg	15 54 48.3	-0.5
SLHN	Bingol, Solhan	1.50	244	P	Pn	15 54 46.7	+0.1
AHAN	Ardahan-Merkez	1.53	356	P	Pg	15 54 50.3	+0.3
KRIK	Erzurum-spir	1.57	297	P	Pg	15 54 50.8	+0.2
DBAD	Bademkaya	1.60	330	P	Pg	15 54 51.1	-0.2
AKH	Akhalkalaki	1.86	17	P	Pg	15 54 56.5	+0.2
EPOS	Posof	1.87	359	P	Pb	15 54 54.7	+0.6
DBOC	Borcka	1.90	335	P	Pb	15 54 55.8	+1.2
IZDR	Rize	2.04	305	P	Pg	15 54 58.9	-0.6
CHOM	Cayeli-Rize	2.11	315	Pn	Pb	15 54 58.2	0.0
BAYT	Aydıntepe-Bayb	2.15	292	Pn	Pb	15 54 58.2	-0.7
HAKT	HAKKARI	2.20	160	P	Pb	15 55 01.1	+1.3
DGRG	David-gareji	2.70	47	P	Pb	15 55 07.7	-0.5
CHRG	Chargali	3.16	31	P	Pb	15 55 13.0	-3.1
VSHL	Vashlovani	3.21	59	P	Pb	15 55 15.2	-1.7
SHTL	Shatili	3.52	30	P	Pb	15 55 20.4	-1.9

ISK 06 15:54:37.8, 38°.74N×40°.59E, h14km, ML3.3/3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNGB	Bingl	0.27	16	Pg	Pg	15 54 43.6	+0.1
BNGB				Sg	Sb	15 54 48.4	-0.6
KOVA	Elazig, Kovanc	0.61	267	P	Pg	15 54 49.5	-0.2
YEDI	Yedisu-Bingol	0.70	357	Pg	Pb	15 54 51.8	-0.2
YEDI				Sg	Sb	15 55 02.5	+0.9
DYBB	Diyarbakir	0.86	204	Pg	Pb	15 54 54.9	+0.4
DYBB				Sg	Sn	15 55 07.1	-0.8
TNCL	Tunceli-Merkez	0.90	295	S	Sg	15 55 05.6	-1.4
TNCL	Tunceli-Merkez	0.90	295	P	Pg	15 54 54.2	-1.0
BTMN	Batman	1.00	147	P	Pn	15 54 57.8	+0.3
BTMN	Batman	1.00	147	S	Sg	15 55 10.6	+0.4
SVRC	Sivrice-ELAZID	1.06	251	Pg	Pn	15 54 58.7	+0.2
SVRC				Sg	Sn	15 55 14.1	+0.9
ERZN	Erzincan	1.08	322	Pn	Pn	15 54 58.9	+0.2
ERZN				Sn	Sn	15 55 14.1	+0.5
EUZM	Uzumlu	1.19	325	P	Pg	15 55 01.4	+0.7
EUZM	Uzumlu	1.19	325	S	Sg	15 55 18.0	+1.7
EUZM	Uzumlu	1.19	325	i IAML		15 55 19.0	
	comp=E,452nm,0.4s						
EDAM	Erzurum-Paland	1.27	24	Pn	Pn	15 55 00.8	-0.6
SRTM	Siirt_Merkez	1.29	125	i IAML		15 55 25.0	
	comp=E,1µm,0.5s						
SRTM	Siirt_Merkez	1.29	125	P	Pg	15 55 03.1	+0.5
SRTM	Siirt_Merkez	1.29	125	S	Sg	15 55 20.6	+1.3
SRTM	Siirt_Merkez	1.29	125	i IAML		15 55 24.0	
	comp=N,887nm,0.7s						
MARD	Mardin	1.43	174	P	Pb	15 55 04.2	-0.1
MARD	Mardin	1.43	174	S	Sn	15 55 22.0	-0.1
MIDY	Mardin/Midyat-	1.47	154	P	Pb	15 55 04.8	-0.3
MIDY	Mardin/Midyat-	1.47	154	S	Sb	15 55 23.7	0.0
MIDY	Mardin/Midyat-	1.47	154	i IAML		15 55 27.0	
	comp=E,671nm,0.2s						
MIDY	Mardin/Midyat-	1.47	154	i IAML		15 55 28.0	
	comp=N,723nm,0.4s						
NARI	Adyaman-Kaht	1.67	240	i IAML		15 55 37.0	
	comp=N,299nm,0.7s						
NARI	Adyaman-Kaht	1.67	240	P	Pb	15 55 08.1	-0.3
NARI	Adyaman-Kaht	1.67	240	S	Sb	15 55 29.2	-0.1
NARI	Adyaman-Kaht	1.67	240	i IAML		15 55 32.0	
	comp=E,236nm,1.1s						
ILIC	ilic-Erzincan	1.73	295	Pn	Pn	15 55 08.4	+0.8
MAYA	Malatya/Merkez	1.74	257	P	Pb	15 55 09.8	+0.1
KELT	Kelkit	1.75	324	P	Pb	15 55 10.4	+0.7
HANM	anlurfa/Hi	1.77	230	i IAML		15 55 35.0	
	comp=E,207nm,0.5s						
HANM	anlurfa/Hi	1.77	230	P	Pn	15 55 08.6	+0.5
HANM	anlurfa/Hi	1.77	230	S	Sb	15 55 32.3	+0.1
SANL	SANLIURFA_Merk	2.01	219	S	Sn	15 55 37.3	+1.0
SANL	SANLIURFA_Merk	2.01	219	P	Pb	15 55 12.8	-1.4
ALUC	Giresun/Alucra	2.13	319	P	Pg	15 55 18.1	-0.6

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*MEX **06** 16:01:55.6±0.4, 14°.75N×92°.64W, h77km±9km, MD4.2*
*GCG **06** 16:01:55.6±0.4, 14°.79N×92°.56W, h75km±4km, MD3.6, ML3.4*
ISC 06 16:01:50.8±1.6**, 14°.7N**±0°.1×**92°.62W**±0°.07**, h98**km±12km**,**
n16, σ2s.13/29**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.41	58	eP	Pn	16 02 06.9	+1.1
THIG				eS	Sn	16 02 15.0	-2.0
THIG		0.41	58	i P	Pn	16 02 07.3	+1.5
THIG				IAML		16 02 18.5	
	comp=N,1µm,0.2s						
SMCA	Catarina	0.56	73	eP	Pn	16 02 08.8	+1.9
SMCA				i S	Sn	16 02 18.7	-0.2
SMCA				IAML		16 02 20.0	
	comp=E,2µm,0.1s						
PATR	El Naranjo	0.56	42	eP	Pn	16 02 08.0	+0.8
PATR				eS	Sn	16 02 18.0	-1.5
CHUJ	Union Juarez	0.64	51	eP	Pn	16 02 08.9	+1.1
CHUJ				eS	Sn	16 02 19.9	-0.6
PAVE	Pavencul	0.66	41	eP	Pn	16 02 09.1	+1.1
PAVE				eS	Sn	16 02 20.0	-0.8
RTAL	Retalhuleu	0.92	101	eP	Pn	16 02 10.7	+0.5
RTAL				eS	Sn	16 02 26.8	+1.9
PCIG		1.16	330	eP	Pn	16 02 14.4	+1.4
PCIG				eS	Sn	16 02 29.1	-0.4
STG2	El Palmar, Qui	1.23	102	eP	Pn	16 02 13.7	-0.3
STG2				eS	Sn	16 02 28.0	-3.4
STG8	El Palmar, Qui	1.26	101	eP	Pn	16 02 14.3	0.0
STG5	El Palmar, Qui	1.27	103	i P	Pn	16 02 14.3	0.0
STG5				eS	Sn	16 02 28.8	-3.2
APG	El Apazote	2.11	81	eP	Pn	16 02 29.0	+3.9
UXUV	UXUV	2.99	331	eP	Pn	16 02 37.3	+0.9
UXUV				eS	Sn	16 03 07.1	-4.5
CMIG	Matias Romero	3.23	318	eP	Pn	16 02 41.0	+1.4
CMIG				eS	Sn	16 03 17.7	+0.5
HUIG	Huatulco	3.53	288	eP	Pn	16 02 47.0	+3.3
HUIG				eS	Sn	16 03 21.5	-3.0
NEUV	Arroyo Zacate	4.28	315	eP	Pn	16 02 54.8	+1.0
NEUV				eS	Sn	16 03 39.8	-2.9

IDC 06 16:06:50.8±2.8**, 59°.36S**×**149°.45E, h0**km**, mb3.9**/4**,**
mbtmp3.9/5**, ML3.4**/1**, Error ellipse: s-maj=201.4km**
s-min=20.1km az=79.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	18.71	172	P	Pn	16 11 11.5	+0.9
	0.1nm,0.3s,baz=349,slow=9.2,SNR=7.2						
	3.0nm,0.8s						
QSPA	South Pole Qui	30.73	180	P	P	16 13 07.3	0.0
	2.6nm,1.0s,baz=356,slow=6.6,SNR=5.4						
	2.6nm,1.0s						
H01W1	Cape Leeuwin H	33.62	301	T	T	16 49 15.9	
	baz=146,slow=74,SNR=45						
H01W2	Cape Leeuwin H	33.63	301	T	T	16 49 13.3	
	baz=146,slow=74,SNR=42						
H01W3	Cape Leeuwin H	33.64	301	T	T	16 49 15.6	
	baz=146,slow=74,SNR=38						
ASAR	Alice Springs	37.32	336	P	P	16 14 04.9	+0.3
	0.7nm,0.6s,baz=162,slow=9.5,SNR=14						
	0.7nm,0.6s						
WRA	Warramunga Arr	40.86	338	P	P	16 14 33.8	-0.4
	1.4nm,1.0s,baz=161,slow=8.0,SNR=5.5						
	1.4nm,1.0s						
SNAA	Sanae	47.83	191	P	P	16 15 28.5	-1.0
	2.8nm,1.2s,baz=144,slow=14,SNR=3.4						
	2.8nm,1.2s						

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*SDD **06** 16:10:59.2±1.2, 18°.24N×70°.85W, h23km±16km, MD2.6, ML2.5, MW3.3, Presumed earthquake*
*OSPL **06** 16:10:59.1±0.4, 18°.24N×70°.81W, h0km±85km, ML1.6, Presumed earthquake*
ISC 06 16:10:58.2±1.2**, 18°.24N**±0°.04×**70°.81W**±0°.03**, h9**km±12km**,**
n13, σ0s.81/20**, 1C, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PODR	Polo	0.45	261	ePg	Pg	16 11 07.3	+0.2
PODR	Polo	0.45	261	i P	Pg	16 11 07.2	0.0
BANI	BANI	0.46	70⇑	ePg	Pg	16 11 08.2	+1.1
BANI				eSg	Sb	16 11 15.8	+0.3
BANI				IAML		16 11 18.4	
	comp=N,2µm,0.3s						
ABDR	Alto Bandera	0.60	17	ePg	Pg	16 11 09.9	0.0
ABDR				eSg	Sg	16 11 18.9	+1.1
ABDR				IAML		16 11 24.4	
	comp=N,1.2nm,0.3s						
LODU1	El Espartillar	0.64	280	i P	Pg	16 11 10.7	0.0
LODU1				IAML		16 11 22.6	
	comp=Z,51nm,1.2s						
LOVI	El Cajuil, Ovi	0.69	231	i P	Pg	16 11 11.3	-0.2
LOVI				eS	Sg	16 11 20.8	+0.3
LOVI				IAML		16 11 24.7	
	comp=Z,39nm,0.4s						
LONE3	El Aguacate, B	0.72	301	i P	Pg	16 11 11.8	-0.3
LONE3				eS	Sg	16 11 21.2	-0.3
LONE3				IAML		16 11 23.1	
	comp=Z,18nm,2.0s						
SDDR	Presa de Saban	0.87	329	ePg	Pg	16 11 14.8	-0.3
SDDR	Presa de Saban	0.87	329	i P	Pg	16 11 14.7	-0.3
SDDR				eS	Sg	16 11 26.0	-0.3
SDDR				IAML		16 11 28.4	
	comp=Z,11nm,0.2s						
DR08	Loma La Naviza	1.04	46	ePg	Pb	16 11 17.1	-1.4
DR08				eSg	Sg	16 11 30.6	-1.1
DR08				IAML		16 11 37.1	
	comp=N,864nm,0.2s						
REDR	Restauracion	1.08	329	ePg	Pn	16 11 21.5	+2.0
SC01	Santiago de lo	1.19	4	ePg	Pb	16 11 20.3	-0.7
HATOM	Hato Mayor del	1.46	68	ePg	Pn	16 11 24.7	-0.2
HATOM				eSg	Sn	16 11 44.0	-0.1
HATOM				IAML		16 11 45.3	
	comp=N,278nm,0.3s						

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*IDC **06** 16:27:29.7±20.0, 35°.56N×21°.71E, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=404.9km s-min=52.3km az=32.0*
*ATH **06** 16:27:39.7, 35°.96N×22°.02E, h14km±3km, ML2.9/18, Manual Solution by N.Liadopoulou First location: 2019/12/06 16:28:56, This location: 2020/07/03 10:15:33 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **06** 16:27:40.1, 36°N±4°×2°2E±°, h11km±13km, M2.7/20, MLh2.7/20*
ISC 06 16:27:40.6±1.3**, 35°.96N**±0°.06×**21°.98E**±0°.05**, h53**km±13km**,**
n81, σ0s.97/93**, mb3.8**/4**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTHA	Methoni	0.88	346	P	Pn	16 27 57.0	+0.1
MTHA				S	Sn	16 28 09.0	+0.2
KTHA	Kythira Island	0.92	71	P	Pn	16 27 57.0	-0.4
KTHA	Kythira Island	0.92	71	P	Pn	16 27 56.8	-0.6
PYL	PYLOS	0.95	348	P	Pn	16 27 56.5	-1.2
PYL				S	Sn	16 28 10.1	-0.2
PYL	PYLOS	0.95	348	P	Pn	16 27 56.7	-1.1
PYL				S	Sn	16 28 10.7	+0.3
PYL1	Pylos	0.98	346	P	Pn	16 27 57.0	-1.1
PYL1				S	Sn	16 28 10.1	-0.9
NPS1	Neapolis Lacon	1.03	58	P	Pn	16 27 59.1	+0.3
ANKY	Antikythira Is	1.08	95	P	Pn	16 27 59.8	+0.4
ANKY				S	Sn	16 28 15.0	+1.7
ANKY	Antikythira Is	1.08	95	P	Pn	16 28 00.3	+0.9
ANKY				S	Sn	16 28 13.3	0.0
VLI	Veliai	1.08	45	P	Pn	16 27 59.5	+0.1
VLI				S	Sn	16 28 14.4	+0.9
VLI	Veliai	1.08	45	P	Pn	16 27 59.5	+0.1
VLI				S	Sn	16 28 13.9	+0.5
MNVA	Monemvasia	1.12	49	P	Pn	16 28 00.4	+0.4
MNVA				S	Sn	16 28 14.6	+0.3
ITM	Ithomi	1.22	358	P	Pn	16 28 01.2	-0.2
ITM				S	Sn	16 28 17.7	+0.9
ITM	Ithomi	1.22	358	P	Pn	16 28 01.1	-0.3
ITM				S	Sn	16 28 18.9	+2.1
VLX	Vlachokerasia	1.44	13	P	Pn	16 28 04.9	+0.4
VLX				S	Sn	16 28 23.7	+1.4
AMT	Artemida-Makis	1.58	352	P	Pn	16 28 07.8	+1.5
IMMV	Iera Moni Meta	1.70	107	P	Pn	16 28 08.6	+0.7
IMMV	Iera Moni Meta	1.70	107	P	Pn	16 28 08.7	+0.7
CHAN	Chania	1.73	104	P	Pn	16 28 09.2	+0.9
VAM	Vamos	1.89	106	P	Pn	16 28 11.2	+0.7
LTHK	Lithakia	1.97	333	P	Pn	16 28 13.3	+1.7
MET2	Kameni Chora,	1.97	33	P	Pn	16 28 12.6	+1.0
MET5	Makryloggos,Me	1.99	33	P	Pn	16 28 13.4	+1.6
GUR	Goura	1.99	8	P	Pn	16 28 12.7	+0.7
GUR	Goura	1.99	8	P	Pn	16 28 13.1	+1.1
DRO	Drossia	2.00	354	P	Pn	16 28 12.1	+0.2
DRO	Drossia	2.00	354	P	Pn	16 28 13.4	+1.4
MET4	Agioi Theodoro	2.01	34	P	Pn	16 28 12.5	+0.4
GVD	Gavdhos	2.05	122	P	Pn	16 28 13.5	+0.8
KLV	Kalavryta, Ach	2.08	4	P	Pn	16 28 13.9	+0.7
KLV	Kalavryta, Ach	2.08	4	P	Pn	16 28 14.6	+1.4
MHLO	Agia Marina, M	2.08	69	P	Pn	16 28 13.3	+0.2
RLS	Riolos of Patr	2.13	349	P	Pn	16 28 15.1	+1.3
ORTH	Orthonies,Zaky	2.15	332	P	Pn	16 28 14.9	+0.8
ORTH	Orthonies,Zaky	2.15	332	P	Pn	16 28 15.2	+1.1
LTK	Loutraki	2.20	21	P	Pn	16 28 14.9	+0.2
LTK	Loutraki	2.20	21	P	Pn	16 28 16.2	+1.4
AXS	Araxos	2.28	348	P	Pn	16 28 16.6	+0.7
AXS	Araxos	2.28	348	P	Pn	16 28 16.9	+1.1
RTZL	Ratzakli, Kefa	2.32	336	P	Pn	16 28 17.4	+1.0
VLY	Voula,Athens	2.38	37	P	Pn	16 28 16.7	-0.5
KALE	Kalithea	2.43	3	P	Pn	16 28 19.3	+1.5
MAGU	Magoula	2.44	30	P	Pn	16 28 18.7	+0.7
SERG	Sergoula	2.45	1	P	Pn	16 28 20.0	+1.9
EFP	Efpalio	2.46	359	P	Pn	16 28 20.0	+1.7
IDI	Anoyia	2.46	105	P	Pn	16 28 18.8	+0.4
IDI	Anoyia	2.46	105	P	Pn	16 28 19.0	+0.6
ATHU	Athens Univers	2.47	35	P	Pn	16 28 19.1	+0.7
VIL2	Platees	2.47	24	P	Pn	16 28 19.0	+0.6
VLS	Valsamata	2.47	334	P	Pn	16 28 18.8	+0.3
VLS	Valsamata	2.47	334	P	Pn	16 28 18.1	-0.4
STFN	Stefani	2.54	29	P	Pn	16 28 20.5	+1.1
PTL	Penteli	2.57	35	P	Pn	16 28 20.9	+1.1
DMLN	Damoulianata-K	2.61	331	P	Pn	16 28 20.6	+0.2
ANX	Ano Chora	2.63	359	P	Pn	16 28 22.4	+1.8
DION	Dionisos Attik	2.63	36	P	Pn	16 28 19.9	-0.7
PVO	Paravola	2.67	352	P	Pn	16 28 22.6	+1.4
FSK	Fiskardo	2.74	336	P	Pn	16 28 22.9	+0.9
FSK	Fiskardo	2.74	336	P	Pn	16 28 23.2	+1.1
SNT5	Nea Kammeni, S	2.80	80	P	Pn	16 28 23.0	+0.2
LKR	Lokris	2.80	17	P	Pn	16 28 23.8	+0.8
ATAL	Atalanti	2.85	17	P	Pn	16 28 24.1	+0.5
AXAR	Agios Charalam	2.85	11	P	Pn	16 28 25.2	+1.6
KARY	Karystos	2.85	43	P	Pn	16 28 22.8	-0.8
EVGI	Lefkada island	2.86	339	P	Pn	16 28 25.1	+1.4
DRAG	Dragano-Lefkad	2.94	338	P	Pn	16 28 25.3	+0.4
AMPL	Ampelaki	3.02	349	P	Pn	16 28 27.0	+1.1
TSLK	Tsoukalades, L	3.04	340	P	Pn	16 28 26.7	+0.4
MAKR	Makrakomi, Fth	3.05	2	P	Pn	16 28 27.9	+1.6
APE	Apeiranthos	3.06	68	P	Pn	16 28 26.5	-0.1
AGG	Agios Georgios	3.07	5	P	Pn	16 28 27.8	+1.1
KYMI	Kymi, Euboea I	3.16	32	P	Pn	16 28 28.6	+0.8
TETR	Tetrakomo, Epi	3.42	351	P	Pn	16 28 32.1	+0.6
NEO	Neokhori	3.48	16	P	Pn	16 28 32.8	+0.5
AOS	Alonnisos	3.54	25	P	Pn	16 28 33.3	+0.3
THL	Klokotos Trika	3.59	0	P	Pn	16 28 34.9	+1.1
NEST	Nestorio	4.50	351	P	Pn	16 28 47.8	+1.4
HFS	Hagfors	24.77	350	P	P	16 32 56.1	-1.0
	2.3nm,0.8s,baz=166,slow=14,SNR=4.5						
	2.3nm,0.8s						
FINES	FINESS Array B	25.63	5	P	P	16 33 04.3	-0.6
	4.0nm,0.9s,baz=185,slow=14,SNR=1.9						
	4.0nm,0.9s						
ARCES	ARCESS Array B	33.68	2	P	P	16 34 15.7	-0.5
	5.4nm,1.1s,baz=186,slow=7.9,SNR=6.5						
	5.4nm,1.1s						
MKAR	Makanchi Array	45.50	57	P	P	16 35 53.9	-0.8
	0.5nm,0.6s,baz=275,slow=8.0,SNR=4.7						
	0.5nm,0.6s						

IDC 06 16:38:35.1±8.8**, 23°.73N**×**95°.08E, h0**km**, mb3.2**/3**,**
mbtmp3.2/3**, Error ellipse: s-maj=833.6km**
s-min=30.1km az=60.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	25.21	339	P	P	16 44 02.5	0.0
	0.5nm,0.7s,baz=151,slow=11,SNR=4.2						
	0.5nm,0.7s						
WRA	Warramunga Arr	57.87	135	P	P	16 48 28.8	-0.2
	0.3nm,1.0s,baz=318,slow=7.1,SNR=1.3						
	0.3nm,1.0s						
ASAR	Alice Springs	60.33	139	P	P	16 48 46.1	+0.1
	0.2nm,0.9s,baz=318,slow=6.4,SNR=4.1						
	0.2nm,0.9s						

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*IDC **06** 16:51:53.6±1.2, 10°.60N×91°.58E, h0km, mb3.7/6, mbtmp3.7/8, ML3.7/2, Error ellipse: s-maj=36.0km s-min=19.8km az=64.0*
ISC 06 16:51:56.1±1.1**, 10°.6N**±0°.2×**91°.6E**±0°.1**, h17**km**, n14,**
σ0s.45/8**, mb3.6**/6**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.56	42	Pn	Pn	16 54 26.2	-0.5
	0.2nm,0.3s,baz=231,slow=15,SNR=5.1						
	0.5nm,0.7s						
PALK	Pallekele	11.26	254	Pn	Pn	16 54 36.2	-0.2
	0.5nm,0.3s,baz=162,slow=16,SNR=1.8						
PALK				Sn	Sn	16 56 28.5	-13
	0.5nm,0.3s,baz=180,slow=19,SNR=1.6						
	4.1nm,0.6s						
H08S3	Diego Garcia H	26.27	227	T	T	17 25 01.6	
	baz=46,slow=75,SNR=67						
H08S2	Diego Garcia H	26.27	227	T	T	17 25 03.7	
	baz=46,slow=75,SNR=66						
H08S1	Diego Carcia H	26.29	227	T	T	17 25 02.8	
	baz=46,slow=75,SNR=59						
MKAR	Makanchi Array	36.91	349	P	P	16 59 04.1	+0.1
	0.6nm,0.6s,baz=161,slow=8.4,SNR=7.5						
	0.6nm,0.6s						
SONM	Songino Array	39.14	16	P	P	16 59 23.7	+0.7
	0.4nm,0.4s,baz=203,slow=9.4,SNR=6.5						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	41.32	347	P	P	16 59 40.4	-0.3
	0.2nm,0.5s,baz=171,slow=7.2,SNR=4.2						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	43.56	354	P	P	16 59 59.0	0.0
	0.5nm,0.4s,baz=161,slow=9.2,SNR=2.2						
	0.5nm,0.4s						
WRA	Warramunga Arr	51.89	126	P	P	17 01 04.3	+0.2
	0.8nm,0.6s,baz=300,slow=10.0,SNR=11						
	0.8nm,0.6s						
ASAR	Alice Springs	53.59	130	P	P	17 01 16.7	0.0
	0.8nm,0.5s,baz=305,slow=6.8,SNR=16						
	0.8nm,0.5s						
H04N2	CROZET ISLANDS	66.83	209	T	T	18 15 49.8	
	baz=43,slow=75,SNR=19						
H04N1	CROZET ISLANDS	66.84	209	T	T	18 15 48.5	
	baz=43,slow=75,SNR=21						
H04N3	CROZET ISLANDS	66.85	209	T	T	18 15 46.1	
	baz=43,slow=75,SNR=17						

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*PRE **06** 16:55:16.0±0.9, 26°.40S×27°.48E, h2km, ML2.4*
*BUL **06** 16:55:19.3±1.1, 26°.53S×27°.66E, h7km±11km, MD3.4*
*BGSI **06** 16:55:20.9±0.8, 26°.38S×27°.77E, h0km±21km, ML2.5*
ISC 06 16:55:16.4±1.2**, 26°.39S**±0°.03×**27°.47E**±0°.03**, h8**km±9km**,**
n22, σ1s.69/43**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HRAO	HartRAO	0.53	21	eP	Pg	16 55 26.7	0.0
HRAO				eS	Sg	16 55 33.5	-0.2
HRAO				IAML		16 55 37.1	
	comp=Z,240nm,0.3s						
PRYS	Parys	0.55	191	eP	Pg	16 55 27.2	+0.2
PRYS				eS	Sg	16 55 34.2	0.0
PRYS				IAML		16 55 38.8	
	comp=Z,143nm,0.4s						
SNKL	Senekal, Frees	1.90	172	eP	Pn	16 55 50.7	+1.4
SNKL				eS	Sn	16 56 14.7	+1.1
SNKL				IAML		16 56 16.8	
	comp=Z,172nm,0.2s						
SWZ	Schweizer	2.07	247	eP	Pn	16 55 52.6	+1.0
SWZ				eS	Sn	16 56 19.5	+1.7
SWZ				IAML		16 56 25.4	
	comp=Z,68nm,0.6s						
LBTB	Lobatse	2.18	308	i P	Pg	16 55 58.7	+0.5
LBTB				i S	Sg	16 56 27.2	+0.8
CRLN	Carolina, Mapu	2.32	81	eP	Pn	16 55 56.0	+0.8
CRLN				eS	Sn	16 56 25.1	+1.1
CRLN				IAML		16 56 29.6	
	comp=Z,12nm,0.2s						
MAKGR	Makgori	2.47	283	i P	Pg	16 56 04.0	+0.2
MAKGR				i S	Sg	16 56 36.5	+0.6
MAKGR				IAML		16 56 39.3	
	comp=E,94nm,0.4s						
LEPH	Lephalale, Lim	2.53	7	eP	Pn	16 55 59.2	+1.3
LEPH				eS	Sn	16 56 30.8	+1.7
LEPH				IAML		16 56 41.0	
	comp=Z,26nm,0.3s						
NWCL	Newcastle	2.54	122	eP	Pn	16 55 59.2	+1.1

NWCL				*e*S	Sn	16 56 30.5	+1.2
NWCL				IAML		16 56 35.0	
	comp=Z,30nm,0.4s						
BOSA	Boshof	2.97	221	*e*P	Pn	16 56 04.5	+0.6
BOSA				*e*S	Sn	16 56 40.5	+0.7
BOSA				IAML		16 56 59.5	
	comp=Z,10.0nm,0.3s						
BOSA	Boshof	2.97	221	*i* P	Pn	16 56 06.5	+2.5
BOSA				*i* S	Sn	16 56 41.2	+1.4
LPHEP	Lephephe	3.35	334	*i* P	Pb	16 56 14.4	-1.7
LPHEP				*i* S	Sb	16 56 53.8	-3.3
LPHEP				IAML		16 57 09.5	
	comp=N,19nm,0.2s						
SKOMA	Sekoma	3.70	299	*i* P	Pb	16 56 21.2	-1.0
SKOMA				*i* S	Sb	16 57 04.8	-2.5
SKOMA				IAML		16 57 18.9	
	comp=N,23nm,0.9s						
KSTD	Kokstad	4.51	159	*e*P	Pn	16 56 25.8	+0.6
KSTD				*e*S	Sn	16 57 17.5	-0.5
KSTD				IAML		16 57 41.2	
	comp=Z,7.1nm,0.3s						
MOPA	Mopani	4.56	52	*i* P	Pn	16 56 27.8	+1.9
MOPA				*i* S	Sn	16 57 16.9	-2.2
MUSN	Musina, Limpop	4.62	29	*e*P	Pn	16 56 28.6	+1.9
MUSN				*e*S	Sn	16 57 21.3	+0.7
MUSN				IAML		16 57 44.1	
	comp=Z,9.5nm,0.3s						
MUSN	Musina, Limpop	4.62	29	*i* P	Pn	16 56 30.5	+3.8
MUSN				*i* S	Sn	16 57 21.9	+1.3
BROLN	Tlhalogang	5.26	359	*i* P	Pn	16 56 38.5	+3.0
BROLN				*i* S	Sn	16 57 37.1	+0.6
BROLN				IAML		16 58 05.3	
	comp=E,15nm,0.8s						
ALKP	Alkanpan, Nort	5.82	231	*e*P	Pn	16 56 44.1	+1.0
ALKP				*e*S	Sn	16 57 48.3	-1.8
ALKP				IAML		16 58 23.0	
	comp=Z,8.6nm,0.6s						
BLWY	Bulawayo	6.30	10	*i* P	Pn	16 56 52.3	+2.4
BFON	Badsfontein, M	6.33	211	*e*P	Pn	16 56 50.6	+0.4
BFON				*e*S	Sn	16 58 00.6	-2.2
BFON				IAML		16 58 36.5	
	comp=Z,5.3nm,0.6s						
FRAZ	Fraserburg	7.66	222	*e*P	Pn	16 57 10.2	+1.8
FRAZ				*e*S	Sn	16 58 32.9	-2.5
FRAZ				IAML		16 59 25.7	
	comp=Z,2.9nm,0.4s						

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*NOU **06** 17:37:51.0, 12°.76S×169°.07E, h545^{km}, mb4.3/28, Santa Cruz Islands Region*

*NEIC **06** 17:37:52.7±1.9, 13°.1S±0°.1×168°.82E±0°.10, h529^{km}±8^{km}, mb4.4/61, Error ellipse: s-maj=16.3km s-min=14.1km az=175.0*

*IDC **06** 17:37:52.2±1.9, 13°.03S×168°.85E, h526^{km}±20^{km}, mb3.5/11, mbtmp4.3/12, Error ellipse: s-maj=23.3km s-min=16.4km az=131.0*

ISC 06 17:37:54.1±0.5**, 13°.20S**±0°.07×**168°.74E**±0°.09**, h550**^{km}**, n109, σ1s.28**/113**, mb4.4**/38**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	2.69	214	P	P	17 39 05.8	-1.4
SANVU				S	S	17 40 01.9	-4.9
SANVU	Saraoutou	2.69	214	P	P	17 39 06.6	-0.6
DVP	Devils Point	4.53	187	P	P	17 39 19.9	-0.1
MARNC	Mare, Loyalty	8.26	185	P	P	17 39 53.0	-1.3
MARNC				S	S	17 41 28.7	-4.3
MARNC	Mare, Loyalty	8.26	185	P	P	17 39 56.9	+2.5
YATNC	Mamie plateau,	8.98	191	P	P	17 40 03.3	+1.7
DZM	Mont Dzumac	9.09	194	P	P	17 40 04.3	+1.5
	7.1nm,0.7s,baz=52,slow=19,SNR=6.8						
DZM	Mont Dzumac	9.09	194	P	P	17 40 02.2	-0.6
ONTNC	Ouen Toro	9.31	193	P	P	17 40 02.2	-2.7
OUENC	Ouen Island, N	9.34	191	P	P	17 40 07.8	+2.5
PINNC	Pines Island,	9.44	187	P	P	17 40 04.0	-2.2
MSVF	Nonsavu	10.04	118	P	P	17 40 07.9	-4.7
EIDS	Eidsvold	20.57	231		P	17 41 55.2	-0.2
EIDS	Eidsvold	20.57	231	P	P	17 41 56.8	+1.4
PMG	Port Moresby	21.49	278	P	P	17 42 04.4	+0.6
	10.0nm,0.8s,baz=131,slow=9.0,SNR=4.7						
	10.0nm,0.8s						
PMG	Port Moresby	21.49	278	P	P	17 42 02.5	-1.4
PMG				IAmb	IAmb	17 42 05.8	
	comp=Z,11nm,0.9s						
TV1H	Townsville Har	21.91	251	P	P	17 42 08.5	+1.1
CTAO	Charters Tower	22.59	249	P	P	17 42 13.5	-0.1
CTAO				IAmb	IAmb	17 42 19.9	
	comp=Z,6.7nm,0.6s						
CTAO	Charters Tower	22.59	249	P	P	17 42 14.7	+1.1
ARMA	Armidale	23.31	220	P	P	17 42 21.0	+1.0
ARMA	Armidale	23.31	220	P	P	17 42 21.7	+1.7
COEN	Coen	24.86	265	P	P	17 42 33.2	-0.6
COEN	Coen	24.86	265	P	P	17 42 34.5	+0.7
RTZ	Ruatahuna	26.35	165	P	P	17 42 46.6	-0.1
BKZ	Black Stump Fm	26.76	167	P	P	17 42 50.7	+0.5
BKZ				IAmb	IAmb	17 42 58.0	
	comp=Z,19nm,1.5s						
QRZ	Quartz Range	27.72	174	P	P	17 42 58.6	0.0
CMSA	Cobar Meteorol	27.96	225	P	P	17 43 02.9	+2.1
MRZ	Mangatainoka R	28.00	169	P	P	17 43 01.3	+0.2
CNB	Canberra Magne	28.12	215	P	P	17 43 03.9	+1.6
BFZ	Birch Farm	28.16	168	P	P	17 43 02.5	+0.1
BFZ	Birch Farm	28.16	168	P	P	17 43 02.7	+0.3
CAN	Canberra	28.33	216	P	P	17 43 04.3	+0.2
QIS	Mount Isa	28.79	251	P	P	17 43 08.6	+0.3
KHZ	Kahutara	29.41	173	P	P	17 43 13.2	0.0
KHZ	Kahutara	29.41	173	P	P	17 43 13.9	+0.7
INKA	Innaminka	29.86	237		P	17 43 18.3	+1.0
STKA	Stephens Creek	31.07	229	P	P	17 43 29.4	+1.7
	comp=Z,8.3nm,0.3s,baz=50,slow=9.6,SNR=41						
	comp=Z,8.3nm,0.3s						
STKA	Stephens Creek	31.07	229		P	17 43 29.3	+1.5
STKA	Stephens Creek	31.07	229	P	P	17 43 29.5	+1.7
TOO	Toolangi	31.92	216	P	P	17 43 36.3	+1.3
WB0	Warramunga Arr	33.53	254		P	17 43 48.8	0.0
WRAB	Tennant Creek	33.59	254	P	P	17 43 48.3	-1.0
WRAB				IAmb	IAmb	17 43 49.8	
	comp=Z,8.2nm,0.8s						
WRAB	Tennant Creek	33.59	254	P	P	17 43 49.1	-0.2
WRA	Warramunga Arr	33.60	254	P	P	17 43 49.4	0.0
	comp=Z,8.5nm,0.5s,baz=82,slow=7.6,SNR=157						
WRA				ScP	ScP	17 49 09.8	+3.3
	comp=Z,0.4nm,0.7s,baz=90,slow=4.0,SNR=4.7						
	comp=Z,8.5nm,0.5s						
WRA	Warramunga Arr	33.60	254		P	17 43 48.1	-1.4
HTT	Hallett	33.80	228	P	P	17 43 52.5	+1.6
AS31	Alice Springs	34.56	247		P	17 43 57.8	+0.3
AS31				IAmb	IAmb	17 43 58.3	
	comp=Z,7.9nm,0.6s						
ASAR	Alice Springs	34.56	247	P	P	17 43 57.6	+0.1
	comp=Z,14nm,0.5s,baz=70,slow=9.7,SNR=333						
ASAR				ScP	ScP	17 49 13.2	+3.4
	comp=Z,2.2nm,0.8s,baz=87,slow=3.8,SNR=13						
	comp=Z,14nm,0.5s						
ASAR	Alice Springs	34.56	247		P	17 43 57.5	0.0
ASAR					ScP	17 49 12.7	+2.9
BBOO	Buckleboo	35.64	231	P	P	17 44 07.2	+0.9
BBOO	Buckleboo	35.64	231	P	P	17 44 07.4	+1.1
MTN	Manton Dam	36.62	266	P	P	17 44 14.4	-0.2
MTN				IAmb	IAmb	17 44 17.2	
	comp=Z,13nm,1.2s						
FAKI	Fak Fak	37.49	283	P	P	17 44 21.1	-0.6
FAKI				IAmb	IAmb	17 44 28.1	
	comp=Z,11nm,1.0s						
KNRA	Kununurra	38.76	261	P	P	17 44 32.0	+0.1
FORT	Forrest	41.31	238	P	P	17 44 52.9	+0.8
FORT				IAmb	IAmb	17 44 53.8	
	comp=Z,8.7nm,0.6s						
FITZ	Fitzroy Crossi	41.72	258	P	P	17 44 56.2	+0.6
FITZ	Fitzroy Crossi	41.72	258	P	P	17 44 56.2	+0.6
SOEI	Soe	43.68	270	P	P	17 45 11.0	-0.1
SOEI				IAmb	IAmb	17 45 13.2	
	comp=Z,11nm,1.1s						
MMRI	Maumere	45.84	271	P	P	17 45 28.5	+1.0
MMRI				IAmb	IAmb	17 46 02.9	
	comp=Z,8.6nm,1.0s						
PSA00	Pilbara Seismi	47.24	253	P	P	17 45 38.4	+0.3
PSA00	Pilbara Seismi	47.24	253	P	P	17 45 38.2	+0.1
PSA00				IAmb	IAmb	17 46 19.1	
	comp=Z,5.4nm,1.2s						
PSA00	Pilbara Seismi	47.24	253	P	P	17 45 39.0	+0.9
MBWA	Marble Bar	47.34	253	P	P	17 45 37.8	-1.0
MBWA				IAmb	IAmb	17 45 56.0	
	comp=Z,25nm,1.5s						
MEEK	Meekatharra	48.70	246	P	P	17 45 49.7	+0.8
PLAI	Plampang	50.15	269	P	P	17 45 59.6	-0.1
NWAO	Narrogin (SRO)	50.76	238	P	P	17 46 03.4	-0.5
NWAO				IAmb	IAmb	17 46 17.2	
	comp=Z,23nm,1.2s						
NWAO	Narrogin (SRO)	50.76	238	P	P	17 46 04.4	+0.5
MORW	Morawa	51.22	243	P	P	17 46 06.9	-0.4
MORW				IAmb	IAmb	17 46 12.4	
	comp=Z,13nm,1.3s						
JAGI	Jajag, Banyuwa	53.74	269	P	P	17 46 24.2	-1.4
MJAR	Matsushiro Arr	57.24	331	P	P	17 46 48.9	-0.5
	comp=Z,1.3nm,0.8s,baz=166,slow=8.6,SNR=4.1						
	comp=Z,1.3nm,0.8s						
MAJO	Matsushiro	57.25	331	P	P	17 46 48.7	-0.8
MAJO				IAmb	IAmb	17 47 05.6	
	comp=Z,19nm,1.4s						
PET	Petropavlovsk	66.52	353	P	P	17 47 49.2	-0.2
UNV	Unalaska Valle	70.05	15	P	P	17 48 09.8	-0.9
N14K	Kuskokwak Cree	76.67	15	P	P	17 48 48.2	-0.1
QSPA	South Pole Qui	76.82	180	P	P	17 48 49.8	+0.5
	comp=Z,1.4nm,0.9s,baz=37,slow=2.5,SNR=3.8						
	comp=Z,1.4nm,0.9s						
QSPA	South Pole Qui	76.82	180	P	P	17 48 49.9	+0.5
OHAK	Old Harbor	76.87	20	P	P	17 48 49.7	+0.2
OHAK				IAmb	IAmb	17 48 54.9	
	comp=Z,30nm,1.4s						
N15K	Kwethluk River	77.28	15	P	P	17 48 52.0	+0.3
N15K				IAmb	IAmb	17 49 07.8	
	comp=Z,20nm,1.1s						
L16K	Owhat River	78.76	15	P	P	17 48 59.6	0.0
L16K				IAmb	IAmb	17 49 16.2	
	comp=Z,24nm,1.5s						
K15K	Wolf Creek Mou	78.77	14	P	P	17 49 00.4	+0.8
K15K				IAmb	IAmb	17 49 22.3	
	comp=Z,20nm,1.4s						
CNPM	China Poot	79.34	19	P	P	17 49 02.8	0.0
J16K	Anvik River	79.85	14	P	P	17 49 06.5	+1.2
J16K				IAmb	IAmb	17 49 35.1	
	comp=Z,14nm,1.3s						
STLK	Strandline Lak	80.69	18	P	P	17 49 08.7	-1.2
SUA	Susitna One	81.00	18	P	P	17 49 11.2	-0.3
SUA				IAmb	IAmb	17 49 15.4	
	comp=Z,24nm,1.4s						
PPLA	Purkeypile	81.69	17	P	P	17 49 14.3	-0.7
PPLA				IAmb	IAmb	17 49 30.4	
	comp=Z,19nm,1.4s						
SONM	Songino Array	82.13	323	P	P	17 49 17.9	+0.3
	comp=Z,0.6nm,0.5s,baz=148,slow=6.0,SNR=4.4						
	comp=Z,0.6nm,0.5s						
J20K	Nowinta River	82.17	15	P	P	17 49 18.3	+1.1
M02C	Callahan	83.09	45	P	P	17 49 24.1	+1.6
M02C				IAmb	IAmb	17 49 30.2	
	comp=Z,14nm,1.3s						
GRNC	Granite Creek	83.50	22	P	P	17 49 24.5	+0.2
GRNC				IAmb	IAmb	17 49 41.6	
	comp=Z,15nm,1.2s						
E19K	Redstone River	84.16	13	P	P	17 49 27.7	+0.6
E19K				IAmb	IAmb	17 49 29.1	
	comp=Z,4.7nm,0.7s						
P29M	Windy Craggy	84.33	24	P	P	17 49 28.7	+0.5
P29M				IAmb	IAmb	17 49 35.4	
	comp=Z,11nm,1.1s						
HDA	Harding Lake	84.36	18	P	P	17 49 27.4	-0.8
HDA				IAmb	IAmb	17 49 29.2	
	comp=Z,6.0nm,0.8s						
IL31		84.64	18		P	17 49 28.5	-1.0
ILAR	Eielson Array	84.64	18	P	P	17 49 28.6	-0.9
	comp=Z,2.6nm,0.7s,baz=237,slow=5.1,SNR=38						
	comp=Z,2.6nm,0.7s						
ILAR	Eielson Array	84.64	18	P	P	17 49 28.4	-1.2
D19K	Kuna River	84.85	12	P	P	17 49 31.4	+0.9
J05D	Fort Rock, OR	84.95	44	P	P	17 49 33.1	+1.3
J05D				IAmb	IAmb	17 49 33.8	
	comp=Z,4.6nm,0.7s						
CPBX	Cerro Prieto	85.48	55	P	P	17 49 33.8	-0.5
I07A	Izee	86.42	43	P	P	17 49 39.7	+1.0
I07A				IAmb	IAmb	17 49 40.4	
	comp=Z,7.8nm,1.3s						
W13A	Hualapai Mount	87.44	53	P	P	17 49 42.9	-0.9
PDAR	Pinedale Array	92.87	47	P	P	17 50 06.5	-2.3
	comp=Z,0.1nm,0.6s,baz=247,slow=4.2,SNR=2.1						
	comp=Z,0.1nm,0.6s						
A36M	Sachs Harbour	95.31	17	P	P	17 50 18.9	0.0
YKA	Yellowknife Ar	95.54	27	P	P	17 50 20.4	+0.2
	comp=Z,0.9nm,0.8s,baz=262,slow=5.6,SNR=6.9						
	comp=Z,0.9nm,0.8s						
YKA	Yellowknife Ar	95.54	27	P	P	17 50 19.0	-1.1
MKAR	Makanchi Array	97.09	316	P	P	17 50 27.1	-0.4
	comp=Z,0.4nm,0.7s,baz=84,slow=7.3,SNR=4.2						
	comp=Z,0.4nm,0.7s						
MKAR	Makanchi Array	97.09	316	P	P	17 50 26.6	-1.0
LPAZ	La Paz	116.61	116	PKP	PKiKP	17 55 38.2	+0.6
	comp=Z,0.6nm,0.5s,baz=333,slow=2.3,SNR=1.9						
ARCES	ARCESS Array B	119.13	346	PKP	PKPdf	17 55 40.2	0.0
	comp=Z,5.0nm,0.9s,baz=54,slow=2.1,SNR=9.0						
FINES	FINESS Array B	124.83	339	PKP	PKiKP	17 55 51.6	-0.1
	comp=Z,5.5nm,1.0s,baz=110,slow=2.8,SNR=5.4						

KRSC 06 17:39:43.3±1.3**, 48°.81N**×**156°.74E, h40**^{km}±22^{km}**, Ml4.0, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.92	348	*e*P	Pn	17 40 14.5	+1.2
SKR				*e*S	Sn	17 40 37.8	+1.6
PAU	Pauzhetka	2.66	1	*e*P	Pn	17 40 26.5	+3.0
PAU				*e*S	Sn	17 40 58.1	+3.7
KDTR	Khodutka, Kamc	3.12	15	*e*P	Pn	17 40 34.2	+4.3
KDTR				*e*S	Sn	17 41 11.0	+5.1
MTVR	Mutnovka	3.79	14	*e*P	Pn	17 40 44.0	+4.8
MTVR				*e*S	Sn	17 41 27.8	+5.3
RUS	Russkaya	3.80	17	*e*S	Sn	17 41 26.7	+4.2
GRL	Gorelyy	3.84	12	*e*S	Sn	17 41 29.3	+5.5
KRMR	Karymshinskiy	4.12	12	*e*S	Sn	17 41 36.3	+5.9
PET	Petropavlovsk	4.39	15	*e*S	Sn	17 41 41.5	+4.5
DALK	Dalny	4.41	16	*e*S	Sn	17 41 42.2	+4.5
KOK	Koryaka	4.64	14	*e*P	Pn	17 40 55.4	+4.6
KRX	Arik	4.71	14	*e*P	Pn	17 40 55.9	+4.1
MKZ	Mys Kozlova	6.53	26	*e*P	Pn	17 41 21.3	+4.6

IDC 06 17:47:46.0±6.2**, 6°.40S**×**150°.24E, h62**^{km}±58^{km}**, mb3.5**/4**, mbtmp3.9**/5**, ML2.6**/1**, Error ellipse: s-maj=102.1km s-min=31.8km az=119.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.27	225	P	Pn	17 48 48.7	+0.1
	28nm,0.3s,baz=47,slow=5.7,SNR=73						
PMG				S	Sn	17 49 32.4	-4.6
	124nm,0.4s,baz=56,slow=20,SNR=14						
	52nm,0.3s						
WRA	Warramunga Arr	20.48	227	P	P	17 52 19.1	+0.1
	1.2nm,0.3s,baz=53,slow=11,SNR=28						
	1.2nm,0.3s						
ASAR	Alice Springs	23.27	221	P	P	17 52 48.5	+0.1
	0.5nm,0.5s,baz=55,slow=9.1,SNR=11						
	0.5nm,0.5s						
PETK	Petropavlovsk-	59.62	5	P	P	17 57 43.9	+0.5
	11nm,1.1s,baz=187,slow=6.9,SNR=4.3						
	11nm,1.1s						
ILAR	Eielson Array	84.60	23	P	P	18 00 11.8	-0.5
	0.3nm,0.9s,baz=246,slow=5.8,SNR=3.2						
	0.3nm,0.9s						

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*IDC **06** 18:01:21.3±0.9, 67°.13N×21°.11E, h0^{km}, mbtmp3.1/4, ML2.2/4, Error ellipse: s-maj=17.8km s-min=7.5km az=114.0*

*UPP **06** 18:01:21.4±0.1, 67°.05N×20°.97E, h0^{km}, ML2.6, Suspected explosion*

ISC 06 18:01:21.1±0.9**, 67°.05N**±0°.04×**20°.95E**±0°.03**, h0**^{km}**, n19, σ0s.91**/22**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.17	297	P	Pg	18 01 25.0	+0.8
DUNU				S	Sg	18 01 27.4	+1.0
MASU	Masugnsbyn	0.58	44	P	Pg	18 01 32.4	+0.3
ERTU	Ertsjaerv	0.69	135	P	Pg	18 01 34.4	+0.1
PAJU	Pajala	0.85	90	P	Pg	18 01 37.2	-0.1
HARU	Harads	0.89	179	P	Pg	18 01 38.1	+0.1
RATU	Laukkuluspa	0.94	327	P	Pg	18 01 38.8	-0.3
KUA	Kurravaara	0.94	346	P	Pg	18 01 38.8	-0.3
SALU	Saltoluokta	1.01	291	P	Pg	18 01 40.3	-0.1
SALU	Saltoluokta	1.01	291	*e*P	Pg	18 01 40.7	+0.3
LANU	Lannavaara	1.08	21	P	Pg	18 01 41.3	-0.5
NIKU	Nikkaluokta	1.11	319	P	Pg	18 01 42.0	-0.3
KALU	Kalix	1.53	140	P	Pn	18 01 49.5	-0.1
SJUU	Sjulsmark	1.57	170	P	Pn	18 01 50.1	0.0
KIF	Kilpisjarvi	1.97	358	*e*P	Pb	18 01 57.5	-0.2
ARCES	ARCESS Array B	3.02	32	Pn	Pn	18 02 10.7	+0.6
	0.3nm,0.3s,baz=216,slow=13,SNR=64						
ARCES				Lg	Lg	18 02 50.6	
	0.6nm,0.3s,baz=221,slow=26,SNR=6.8						
	1.1nm,0.2s						
FINES	FINESS Array B	6.05	156	Pn	Pn	18 02 53.1	+1.5
	0.2nm,0.3s,baz=346,slow=12,SNR=24						
FINES				Sn	Sn	18 04 02.0	+0.5
	0.3nm,0.3s,baz=347,slow=23,SNR=6.9						
	1.1nm,0.2s						
NOA	NORSAR Array B	7.38	220	Pn	Pn	18 03 09.7	-0.2
	baz=26,slow=11,SNR=10.0						
	0.5nm,0.8s						
HFS	Hagfors	7.65	208	Pn	Pn	18 03 13.3	-0.3
	0.2nm,0.3s,baz=29,slow=12,SNR=21						
	1.8nm,0.7s						
STRU	Stroemstad	9.17	213	*i* P	Pn	18 03 35.1	+0.8
STRU				*i* S	Sn	18 05 15.0	-3.1

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*NOU **06** 18:03:01.0, 11°.71S×167°.79E, h264^{km}, mb4.0/7, Santa Cruz Islands*

*NEIC **06** 18:03:04.6±0.7, 12°.1S±0°.1×167°.3E±0°.1, h265^{km}±9^{km}, mb4.2/21, Error ellipse: s-maj=20.1km s-min=16.0km az=92.0*

*IDC **06** 18:03:09.2±4.8, 11°.97S×166°.92E, h310^{km}±47^{km}, mb3.2/5, mbtmp3.9/6, Error ellipse: s-maj=34.9km s-min=27.1km az=158.0*

ISC 06 18:03:04.5±1.1**, 12°.1S**±0°.1×**167°.3E**±0°.1**, h265**^{km}**, n37, σ0s.97**/26**, mb4.0**/14**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.34	181		Pn	18 04 01.9	+0.4
SANVU	Saraoutou	3.34	181	P	Pn	18 04 02.4	+0.9
DVP	Devils Point	5.67	171	P	Pn	18 04 29.9	+1.0
SAVO	Savo Central	7.89	291	P	Pn	18 04 57.4	+0.9
TATA	Tatamba Isabel	8.22	296	P	Pn	18 05 01.5	+0.9
MARNC	Mare, Loyalty	9.37	176	Pn	Pn	18 05 14.3	-0.7
MARNC	Mare, Loyalty	9.37	176	P	Pn	18 05 14.9	0.0
DZM	Mont Dzumac	9.96	184	P	Pn	18 05 27.8	+5.3
	3.8nm,0.9s,baz=119,slow=18,SNR=12						
DZM	Mont Dzumac	9.96	184		Pn	18 05 24.7	+2.2
DZM	Mont Dzumac	9.96	184	P	Pn	18 05 24.9	+2.5
EIDS	Eidsvold	20.20	227	P	P	18 07 19.1	-0.7
EIDS				IAmb	IAmb	18 07 20.8	
	comp=Z,8.1nm,0.7s						
CTAO	Charters Tower	21.68	246	P	P	18 07 34.1	-0.4
CTAO				IAmb	IAmb	18 08 03.7	
	comp=Z,11nm,1.2s						
NIUE	Niue	23.02	110	P	P	18 07 45.8	-0.9
ARMA	Armidale	23.30	216	P	P	18 07 49.4	+0.2
COEN	Coen	23.55	263	P	P	18 07 51.7	+0.2
COEN				IAmb	IAmb	18 07 53.3	
	comp=Z,3.9nm,0.9s						
BKZ	Black Stump Fm	28.18	165	P	P	18 08 32.6	-0.2
INKA	Innaminka	29.30	234	P	P	18 08 42.2	-0.5
INKA				IAmb	IAmb	18 08 43.5	
	comp=Z,2.4nm,0.9s						
MSWZ	Moikau Station	30.04	168	P	P	18 08 48.1	-1.0
STKA	Stephens Creek	30.75	226	P	P	18 08 55.7	+0.2
	comp=Z,1.3nm,0.5s,baz=61,slow=13,SNR=3.5						
	comp=Z,1.3nm,0.5s						
STKA	Stephens Creek	30.75	226	P	P	18 08 55.6	+0.1
WB0	Warramunga Arr	32.48	252	P	P	18 09 08.7	-2.0
WB0				IAmb	IAmb	18 09 14.0	
	comp=Z,4.7nm,1.1s						
WRA	Warramunga Arr	32.55	252	P	P	18 09 09.9	-1.5
	comp=Z,0.3nm,0.3s,baz=80,slow=8.1,SNR=7.1						
	comp=Z,0.3nm,0.3s						
WRA	Warramunga Arr	32.55	252	P	P	18 09 09.8	-1.6
AS31	Alice Springs	33.69	245	P	P	18 09 18.9	-2.3
ASAR	Alice Springs	33.69	245	P	P	18 09 19.5	-1.6
	comp=Z,0.7nm,0.6s,baz=74,slow=8.9,SNR=11						
	comp=Z,0.7nm,0.6s						
BBOO	Buckleboo	35.24	229	P	P	18 09 33.6	-0.7
MTN	Manton Dam	35.27	265	P	P	18 09 34.3	-0.5
MTN				IAmb	IAmb	18 09 42.5	
	comp=Z,12nm,1.1s						
KNRA	Kununurra	37.52	260	P	P	18 09 52.9	-0.7
KNRA				IAmb	IAmb	18 10 05.7	
	comp=Z,16nm,1.3s						
FITZ	Fitzroy Crossi	40.57	256	P	P	18 10 18.3	-0.4
FORT	Forrest	40.69	237	P	P	18 10 19.1	-0.5
FORT				IAmb	IAmb	18 10 53.3	
	comp=Z,11nm,1.0s						
MORW	Morawa	50.45	242	P	P	18 11 34.9	-0.9
MORW				IAmb	IAmb	18 11 42.3	
	comp=Z,20nm,1.4s						
JKA	Kamikawa-asahi	60.27	340	P	P	18 12 45.9	+0.7
VNDA	Vanda	65.48	181	P	P	18 13 18.5	-0.5
VNDA				IAmb	IAmb	18 13 38.8	
	comp=Z,6.4nm,1.4s						
CASY	Casey	65.96	202	P	P	18 13 21.3	-0.8
QSPA	South Pole Qui	77.92	180	P	P	18 14 33.6	+0.5
	comp=Z,0.4nm,0.5s,baz=103,slow=2.4,SNR=5.7						
	comp=Z,0.4nm,0.5s						
QSPA	South Pole Qui	77.92	180	P	P	18 14 33.1	0.0
ILAR	Eielson Array	84.03	18	P	P	18 15 05.0	+0.1
	comp=Z,1.7nm,0.6s,baz=246,slow=5.7,SNR=36						
	comp=Z,1.7nm,0.6s						

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*IDC **06** 18:14:08.2±21.0, 54°.73S×133°.19W, h0^{km}, mb3.8/3, mbtmp3.8/3, MS3.7/5, Error ellipse: s-maj=1426.0km s-min=46.2km az=143.0*

*NEIC **06** 18:14:09.3±1.5, 55°.0S±0°.1×133°.1W±0°.2, h10^{km}±1^{km}, mb4.6/10, Error ellipse: s-maj=24.6km s-min=19.8km az=38.0*

ISC 06 18:14:09.0±0.7**, 55°.0S**±0°.2×**133°.0W**±0°.1**, h10**^{km}**, n28, σ1s.05**/17**, mb4.4**/7**, MS3.8**/5**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WKZ	Wanaka	37.67	261	P	P	18 21 22.8	-1.4
H03S2	Juan Fernandez	42.74	83	T	T	19 08 29.0	
	baz=223,slow=74,SNR=11						
H03S1	Juan Fernandez	42.75	83	T	T	19 08 30.1	
	baz=223,slow=74,SNR=14						
H03S3	Juan Fernandez	42.76	83	T	T	19 08 29.2	
	baz=223,slow=74,SNR=16						
H03N3	Juan Fernandez	43.02	83	T	T	19 08 46.8	
	baz=226,slow=71,SNR=79						
H03N2	Juan Fernandez	43.03	83	T	T	19 08 43.9	
	baz=226,slow=71,SNR=126						
H03N1	Juan Fernandez	43.04	83	T	T	19 08 45.0	
	baz=226,slow=71,SNR=106						
SNAA	Sanae	48.88	161	LR	LR	18 41 24.0	
	comp=Z,143nm,21.3s,baz=193,slow=33						
CO02	Combarbal	49.22	88	P	P	18 22 55.9	-1.7
CASY	Casey	49.95	208	P	P	18 23 03.5	+1.0
CASY				IAmb	IAmb	18 23 07.8	
	comp=Z,9.0nm,1.1s						
HOPE	Hope Point	51.42	132	P	P	18 23 13.9	+0.3
CPUP	Villa Florida	60.76	95	LR	LR	18 45 55.4	
	comp=Z,19nm,18.9s,baz=47,slow=31						
AS31	Alice Springs	72.69	254	P	P	18 25 35.6	-1.4
ASAR	Alice Springs	72.69	254	P	P	18 25 37.5	+0.5
	comp=Z,0.8nm,0.9s,baz=145,slow=5.7,SNR=5.1						
	comp=Z,0.8nm,0.9s						
ASAR	Alice Springs	72.69	254	P	P	18 25 36.1	-1.0
WRA	Warramunga Arr	75.41	256	P	P	18 25 52.6	-0.4
	comp=Z,1.0nm,0.8s,baz=136,slow=6.2,SNR=4.2						
	comp=Z,1.0nm,0.8s						
WB0	Warramunga Arr	75.52	256	P	P	18 25 52.5	-1.1
WB0				IAmb	IAmb	18 26 11.6	
	comp=Z,4.4nm,1.1s						
JTS	Las Juntas de	76.46	49	LR	LR	18 51 27.4	
	comp=Z,45nm,19.9s,baz=156,slow=29						
TXAR	Lajitas Array	87.68	25	P	P	18 26 57.0	-0.4
	comp=Z,0.5nm,0.8s,baz=176,slow=6.3,SNR=3.4						
	comp=Z,0.5nm,0.8s						
TXAR	Lajitas Array	87.68	25	P	P	18 26 57.9	+0.4
MDP	Montagnes des	88.63	79	LR	LR	19 00 27.0	
	comp=Z,42nm,21.2s,baz=336,slow=31						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SAND	Sanderson	88.66	26	P	P	18 27 03.0	+0.9
IRM	Iron Mountain	90.10	15	P	P	18 27 09.4	+0.7
IRM				IAmb	IAmb	18 27 13.8	
	comp=Z,4.3nm,1.3s						
U15A	North Rim	92.77	17	P	P	18 27 21.6	+0.2
U15A				IAmb	IAmb	18 27 31.4	
	comp=Z,4.3nm,1.1s						
BOSA	Boshof	94.67	161	LR	LR	19 07 09.7	
	comp=Z,59nm,18.3s,baz=192,slow=34						
A36M	Sachs Harbour	126.79	3		PKiKP	18 33 12.2	+0.7
MKAR	Makanchi Array	156.49	264	PKPab	PKPab	18 34 33.8	+1.7
	comp=Z,1.3nm,1.0s,baz=106,slow=5.1,SNR=5.4						
MKAR	Makanchi Array	156.49	264	PKPdf	PKPdf	18 34 03.5	+0.3

SDD ***06*** *18:18:00.4±2.2, 18°.98N×70°.31W, h99^{km}±14^{km}, MD2.8, ML3.0, MW2.9, Presumed earthquake*
OSPL ***06*** *18:18:00.7±1.3, 18°.90N×70°.31W, h105^{km}±15^{km}, ML2.3, Presumed earthquake*
ISC 06 18:17:59.9±2.0**, 18°.86N**±0°.06×**70°.26W**±0°.04**, h95**^{km}±14^{km}**, n16, σ1^{s}.42**/26**, 1C-2D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DR08	Loma La Naviza	0.25	66	⇓ePg	Pn	18 18 13.4	-0.3
DR08				eSg	Sn	18 18 23.2	-0.9
DR08				IAML		18 18 23.9	
	comp=E,3µm,0.2s						
DR08				IAML		18 18 25.2	
	comp=N,5µm,0.2s						
ABDR	Alto Bandera	0.35	262	⇑eSg	Sn	18 18 24.5	-1.1
ABDR				IAML		18 18 26.0	
	comp=E,7.5nm,0.3s						
ABDR				IAML		18 18 37.7	
	comp=N,1.3nm,0.3s						
BANI	BANI	0.48	191	⇓ePg	Pn	18 18 15.7	+0.5
BANI				eSg	Sn	18 18 28.2	+1.7
BANI				IAML		18 18 30.5	
	comp=N,2µm,0.2s						
BANI				IAML		18 18 30.7	
	comp=E,1µm,0.3s						
SC01	Santiago de lo	0.71	322	iP	Pn	18 18 17.2	+0.2
SC01				eS	Sn	18 18 29.8	0.0
HATOM	Hato Mayor del	0.84	95	ePg	Pn	18 18 18.4	+0.2
HATOM				eSg	Sn	18 18 32.5	+0.6
HATOM				IAML		18 18 35.3	
	comp=E,409nm,0.3s						
HATOM				IAML		18 18 36.9	
	comp=N,384nm,0.2s						
SDDR	Presa de Saban	0.98	277	ePg	Pn	18 18 19.2	-0.6
SDDR				eSg	Sn	18 18 33.0	-1.7
SDDR				IAML		18 18 39.6	
	comp=N,980nm,0.3s						
SDDR	Presa de Saban	0.98	277	iP	Pn	18 18 19.8	0.0
SDDR				eS	Sn	18 18 32.8	-1.9
SDDR				IAML		18 18 38.5	
	comp=Z,22nm,0.9s						
SMDR	Samana, DR	1.10	67	IAML		18 18 44.6	
	comp=E,996nm,0.3s						
SMDR				IAML		18 18 44.6	
	comp=N,827nm,0.3s						
REDR	Restauracion	1.11	286	ePg	Pn	18 18 23.7	+2.5
REDR				eSg	Sn	18 18 41.5	+4.2
REDR				IAML		18 18 53.7	
	comp=N,142nm,0.2s						
MIDR	Miches	1.15	84	ePg	Pn	18 18 20.3	-1.4
MIDR				eSg	Sn	18 18 39.8	+1.7
MIDR				IAML		18 18 40.8	
	comp=E,79nm,0.3s						
MIDR				IAML		18 18 41.6	
	comp=N,57nm,0.4s						
MIDR				IAML		18 18 46.2	
	comp=N,19nm,1.4s						
PODR	Polo	1.19	235	ePg	Pn	18 18 22.0	-0.4
PODR				IAML		18 18 41.2	
	comp=E,616nm,0.2s						
PODR				IAML		18 18 42.4	
	comp=N,403nm,0.3s						
PODR	Polo	1.19	235	iP	Pn	18 18 22.0	-0.4
PODR				eS	Sn	18 18 38.9	-0.3
LUDR	Luperon	1.22	328	IAML		18 18 45.5	
	comp=E,2µm,0.3s						
LODU1	El Espartillar	1.26	246	iP	Pn	18 18 23.0	+0.1
LODU1				eS	Sn	18 18 40.0	-0.3
LODU1				IAML		18 18 42.3	
	comp=Z,32nm,2.4s						
LOPP1	Punta Rusia, P	1.33	318	iP	Pn	18 18 23.5	-0.3
LOPP1				eS	Sn	18 18 40.6	-1.2
LOPP1				IAML		18 18 48.2	
	comp=Z,71nm,1.9s						
LOVI	El Cajuil, Ovi	1.49	225	iP	Pn	18 18 25.9	+0.1
LOVI				eS	Sn	18 18 44.5	-0.9
LOVI				IAML		18 18 47.5	
	comp=Z,40nm,0.7s						

IDC 06 18:23:55.6±2.4**, 37°.97N×100°.79E, h0**^{km}**, mb3.2**/2**, mbtmp3.4**/4**, ML3.6**/2**, Error ellipse: s-maj=39.2km s-min=23.5km az=52.0, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZDM	Lanzhou Array	3.08	130	Pn	Pn	18 24 45.8	0.0
	baz=308,slow=12						
LZDM				Sn	Sn	18 25 24.1	+0.6
	baz=310,slow=16 4.7nm,0.3s						
SONM	Songino Array	10.68	21	Pn	Pn	18 26 31.8	+1.9
	0.4nm,0.3s,baz=203,slow=15,SNR=5.1						
SONM				Lg	Lg	18 29 32.1	
	0.3nm,0.3s,baz=206,slow=29,SNR=8.0 0.5nm,0.3s						
KURBB	Kurchatov Arra	20.25	316	P	P	18 28 32.0	-0.3
	0.6nm,0.7s,baz=114,slow=13,SNR=7.3 0.6nm,0.7s						
KSRS	Korea Array	21.45	83	P	P	18 28 45.0	-0.4
	1.3nm,0.7s,baz=275,slow=8.2,SNR=5.8 1.3nm,0.7s						

IDC ***06*** *19:01:01.9±1.2, 35°.12N×23°.94E, h0^{km}, mb3.7/7, mbtmp3.6/12, ML3.1/5, MS2.9/2, Error ellipse: s-maj=25.3km s-min=14.0km az=178.0*
ISK ***06*** *19:01:03.4, 35°.21N×23°.82E, h5^{km}, ML3.3/16*
THE ***06*** *19:01:03.9, 35°.2N±0°.7×23°.8E±0°.8, h0^{km}±1^{km}, M3.3/13, MLh3.3/13*
ATH ***06*** *19:01:03.5, 35°.20N×23°.84E, h13^{km}±1^{km}, ML3.6/13, Manual Solution by A.Andreou First location: 2019/12/06 19:01:56, This location: 2020/09/02 15:29:08 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*
AFAD ***06*** *19:01:05.0, 35°.10N×23°.72E, h59^{km}, ML3.1*
ISC 06 19:01:03.9±0.8**, 35°.20N**±0°.03×**23°.83E**±0°.02**, h11**^{km}±6^{km}**, n88, σ1^{s}.64**/105**, mb3.6**/6**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDR	Palaiochora Ch	0.17	283	S	Sg	19 01 10.3	+0.1
KNDR	Palaiochora Ch	0.17	283	Pg	Pg	19 01 07.3	-0.3
KNDR				Sg	Sg	19 01 10.1	-0.1
KNDR	Palaiochora Ch	0.17	283	P	Pg	19 01 07.3	-0.3
KNDR				S	Sg	19 01 10.6	+0.3
IMMV	Iera Moni Meta	0.29	26	P	Pg	19 01 09.5	-0.4
IMMV				S	Sg	19 01 14.1	+0.2
IMMV	Iera Moni Meta	0.29	26	Pg	Pg	19 01 09.3	-0.5
IMMV				Sg	Sg	19 01 13.8	0.0
IMMV	Iera Moni Meta	0.29	26	P	Pg	19 01 09.3	-0.5
IMMV				S	Sg	19 01 14.3	+0.5
CHAN	Chania	0.37	29	P	Pg	19 01 11.0	-0.2
CHAN				S	Sg	19 01 16.8	+0.7
CHAN	Chania	0.37	29	P	Pg	19 01 10.8	-0.3
VAM	Vamos	0.37	56	P	Pg	19 01 10.9	-0.4
VAM	Vamos	0.37	56	P	Pg	19 01 10.8	-0.5
VAM				S	Sg	19 01 15.7	-0.5
GVD	Gavdhos	0.42	149	P	Pg	19 01 11.9	-0.2
GVD				S	Sb	19 01 18.5	-1.1
GVD	Gavdhos	0.42	149	Pg	Pg	19 01 12.3	+0.2
GVD				Sg	Sb	19 01 18.8	-0.7
GVD	Gavdhos	0.42	149	P	Pg	19 01 11.9	-0.2
GVD				S	Sg	19 01 17.4	-0.2
ANKY	Antikythira Is	0.79	328	P	Pg	19 01 19.0	-0.2
ANKY				S	Sb	19 01 30.7	+0.3
ANKY	Antikythira Is	0.79	328	P	Pg	19 01 19.0	-0.2
ANKY				S	Sg	19 01 29.1	-0.5
IDI	Anoyia	0.88	84	Pn	Pg	19 01 19.4	-1.3
	13nm,0.3s,baz=264,slow=9.1,SNR=74						
IDI				Sn	Sb	19 01 32.6	-0.2
	104nm,0.3s,baz=307,slow=18,SNR=19						
IDI	Anoyia	0.88	84	P	Pg	19 01 19.1	-1.6
IDI	Anoyia	0.88	84	Pg	Pg	19 01 19.6	-1.2
IDI	Anoyia	0.88	84	P	Pg	19 01 19.6	-1.2
IACM	Heraklion	1.02	84	P	Pg	19 01 22.4	-1.2
IACM				S	Sb	19 01 36.8	-0.2
KTHA	Kythira Island	1.23	330	P	Pg	19 01 26.9	-0.5
NPS	Neapolis	1.47	87	P	Pn	19 01 30.4	+0.2
NPS				S	Sg	19 01 51.5	+0.5
NPS	Neapolis	1.47	87	P	Pn	19 01 30.2	-0.1
MHLO	Agia Marina, M	1.56	17	P	Pn	19 01 32.3	+0.7
MHLO				S	Sg	19 01 53.7	-0.5
MHLO	Agia Marina, M	1.56	17	P	Pn	19 01 30.8	-0.7
VLI	Veliai	1.68	335	P	Pn	19 01 33.9	+0.7
VLI	Veliai	1.68	335	P	Pn	19 01 32.8	-0.4
THR5	Thira Island,	1.74	45	P	Pn	19 01 34.8	+0.8
SAP3	Santorini-Thir	1.75	45	P	Pn	19 01 34.7	+0.6
SAP3	Santorini-Thir	1.75	45	P	Pn	19 01 33.4	-0.7
SNT5	Nea Kammeni, S	1.75	46	P	Pn	19 01 34.6	+0.4
THR3	Thira Island,	1.76	46	P	Pn	19 01 35.0	+0.7
THERA	Ancient Thera,	1.78	48	P	Pn	19 01 34.7	+0.2
THERA	Ancient Thera,	1.78	48	P	Pn	19 01 34.0	-0.5
THR8	Santorini-Mono	1.81	48	P	Pn	19 01 35.2	+0.3
ZKR	Zakros	1.96	92	Pn	Pn	19 01 38.3	+1.3
ZKR	Zakros	1.96	92	P	Pn	19 01 36.2	-0.8
APE	Apeiranthos	2.32	36	P	Pn	19 01 44.0	+1.9
APE	Apeiranthos	2.32	36	Pn	Pn	19 01 43.4	+1.3
APE	Apeiranthos	2.32	36	P	Pn	19 01 41.5	-0.5
MET2	Kameni Chora,	2.44	351	P	Pn	19 01 43.0	-0.7
MET4	Agioi Theodoro	2.44	352	P	Pn	19 01 43.2	-0.5
MET5	Makryloggos,Me	2.45	351	P	Pn	19 01 43.1	-0.6
KARP	Karpathos	2.75	82	Pn	Pn	19 01 49.4	+1.5
DION	Dionisos Attik	2.88	2	P	Pn	19 01 50.7	+1.0
LTK	Loutraki	2.90	346	P	Pn	19 01 51.0	+1.0
GUR	Goura	2.98	337	P	Pn	19 01 52.2	+1.0
VILL	Villia	2.99	352	P	Pn	19 01 52.4	+1.2
KLV	Kalavryta, Ach	3.14	335	P	Pn	19 01 54.4	+1.1
YAZI	Mula-Dat§a-	3.29	62	P	Pn	19 01 55.4	+0.1
YAZI				iIAML		19 03 00.0	
	comp=E,20nm,1.6s						
YAZI				iIAML		19 03 25.0	
	comp=N,19nm,1.5s						
BODT	Bodrum	3.38	56	Pn	Pn	19 01 58.7	+2.1
DAT	Datca	3.41	62	Pn	Pn	19 01 58.7	+1.7
ARG	Arkhangelos	3.65	73	Pn	Pn	19 02 02.1	+1.9
CHOS	Chios island	3.65	29	Pn	Pn	19 02 02.5	+2.1
URLA	Izmir	3.86	34	P	Pn	19 02 04.7	+1.6
URLA				iIAML		19 03 35.0	
	comp=E,56nm,1.6s						
URLA				iIAML		19 04 13.0	
	comp=N,47nm,1.4s						
TURN	Turunc	3.91	65	P	Pn	19 02 08.0	+4.2
TURN	Turunc	3.91	65	Pn	Pn	19 02 06.2	+2.3
AGG	Agios Georgios	4.00	343	P	Pn	19 02 05.3	+0.2
YER	Yerkesik	4.09	61	P	Pn	19 02 07.5	+1.1
YER	Yerkesik	4.09	61	Pn	Pn	19 02 08.4	+2.0
DALY	Dalyan (Mula)	4.24	66	Pn	Pn	19 02 10.4	+2.1
ESEN	Aydn-Nazilli	4.47	53	P	Pn	19 02 15.1	+3.6
FETY	Fethiye	4.50	70	P	Pn	19 02 03.6	-8.4
IZZE	Mula-Seydike	4.56	73	P	Pn	19 02 13.5	+0.7
IZZE				S	Sn	19 03 07.1	+1.4
IZZE				iIAML		19 03 11.0	
	comp=E,26nm,0.4s						
IZZE				iIAML		19 03 20.0	
	comp=N,32nm,0.6s						
TAVA	DENIZLI_Tavas	4.69	60	P	Pn	19 02 13.5	-1.2
CAME	Cameli-Denizli	4.77	67	Pn	Pn	19 02 18.1	+2.4
AKAS	Kas	4.81	76	P	Pn	19 02 17.3	+0.9
AKAS				iIAML		19 03 18.0	
	comp=N,45nm,0.6s						
AKAS				iIAML		19 03 36.0	
	comp=E,30nm,0.8s						
AKAS	Kas	4.81	76	Pn	Pn	19 02 18.9	+2.5
CAEL	Denizli, Camel	4.84	65	P	Pn	19 02 19.0	+2.2
CAEL				iIAML		19 03 36.0	
	comp=N,78nm,1.4s						
CAEL				iIAML		19 03 36.0	
	comp=E,69nm,1.0s						
KNIK	Mula-Seydike	4.94	69	P	Pn	19 02 19.5	+1.4
KNIK				S	Sn	19 03 16.9	+1.7
KNIK				iIAML		19 03 25.0	
	comp=N,12nm,0.7s						
KNIK				iIAML		19 03 26.0	
	comp=E,12nm,0.8s						
APMY	Acipayam-Deniz	4.97	61	Pn	Pn	19 02 21.0	+2.5
GOLH	Golhisar	5.06	65	P	Pn	19 02 21.7	+1.9
GOLH				iIAML		19 03 32.0	
	comp=E,24nm,1.0s						
GOLH				iIAML		19 03 41.0	
	comp=N,30nm,1.3s						
ELL	Elmali	5.17	71	Pn	Pn	19 02 24.2	+2.9
PASA	Karahalli, USA	5.53	54	P	Pn	19 02 26.6	+0.5
PASA				iIAML		19 04 49.0	
	comp=N,6.1nm,2.1s						
DBRK	Dubrovnik	8.67	331	Sg	Sg	19 05 34.9	-7.2
BRTR	Keskin Array B	9.02	57	Pn	Pn	19 03 16.0	+1.9
	0.1nm,0.3s,baz=243,slow=13,SNR=8.4						
BRTR				LR	LR	19 07 35.0	
	comp=Z,46nm,18.7s,baz=120,slow=44 1.6nm,0.9s						
MMAI	Mount Meron Ar	9.84	99	Pn	Pn	19 03 23.4	-2.0
	0.7nm,0.3s,baz=307,slow=12,SNR=5.0						
MMAI				Sn	Sn	19 05 08.7	-7.3
	0.3nm,0.3s,baz=291,slow=34,SNR=1.7 1.1nm,0.5s						
EIL	Elat	10.89	117	Pn	Pn	19 03 38.5	-1.2
	0.4nm,0.3s,baz=324,slow=14,SNR=2.0						
EIL				Sn	Sn	19 05 31.1	-10
	0.6nm,0.3s,baz=344,slow=15,SNR=6.4 2.5nm,0.5s						
VRAC	Vranov	15.07	342	LR	LR	19 11 22.3	
	comp=Z,67nm,20.4s,baz=160,slow=41						
GERES	GERESS Array B	15.55	334	Pn	Pn	19 04 45.6	+2.5
	baz=143,slow=10.0,SNR=5.0 0.4nm,0.8s						
KBZ	Khabaz	16.99	54	Pn	P	19 05 04.1	+0.9
	0.1nm,0.3s,baz=232,slow=9.4,SNR=4.5 1.1nm,0.7s						
ESDC	Sonseca Array	22.47	290	P	P	19 06 03.8	+0.7
	1.1nm,0.9s,baz=89,slow=9.1,SNR=6.5 1.1nm,0.9s						
HFS	Hagfors	25.80	348	P	P	19 06 33.4	-1.3
	2.9nm,0.9s,baz=133,slow=15,SNR=5.2 2.9nm,0.9s						
FINES	FINESS Array B	26.30	2	P	P	19 06 40.2	+1.0
	2.8nm,0.9s,baz=186,slow=13,SNR=1.9 2.8nm,0.9s						
TORD	Torodi Ar. Bea	29.69	228	P	P	19 07 09.7	-0.2
	0.6nm,0.5s,baz=37,slow=11,SNR=6.1 0.6nm,0.5s						
KURBB	Kurchatov Arra	41.95	51	P	P	19 08 53.2	-1.2
	0.3nm,0.5s,baz=274,slow=8.7,SNR=4.9 0.3nm,0.5s						
MKAR	Makanchi Array	44.66	56	P	P	19 09 17.0	+0.5
	0.2nm,0.4s,baz=271,slow=7.7,SNR=7.0 0.2nm,0.4s						
ZALV	Zalesovo Beam	45.77	46	P	P	19 09 26.2	+1.1
	0.4nm,0.3s,baz=268,slow=10,SNR=2.0 0.4nm,0.3s						

CATAC ***06*** *19:04:35.2±0.3, 10°N±1°×8°3W±°, h8^{km}±1^{km}, M3.6/14, MLv3.6/14, Error ellipse: s-maj=5.3km s-min=2.6km az=67.0, confirmed*
UCR ***06*** *19:04:35.9±0.8, 10°.14N×83°.52W, h15^{km}±1^{km}, MW3.7, Fault plane solution: NP1:ϕ_s149.06000°, δ48.28000°, λ81.95000°.*
ISC 06 19:04:35.6±0.9**, 10°.12N**±0°.03×**83°.47W**±0°.03**, h18**^{km}±3^{km}**, n62, σ0^{s}.63**/73**, 6C-15D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRES	Siquirres	0.04	232	⇑eP	Pg	19 04 39.1	+0.3
IRES				eS	Sg	19 04 41.7	+0.6
LCOCO	El Coco	0.09	246	⇑eP	Pg	19 04 39.5	+0.2
LCOCO				eS	Sg	19 04 42.2	+0.5
RVLA	Villa Bonita	0.12	264	⇑eP	Pg	19 04 39.7	+0.2
RVLA				eS	Sg	19 04 43.0	+0.9
EGUB	Earth Gu¡pi	0.15	308	⇑eP	Pg	19 04 40.1	+0.2
EGUB				eS	Sg	19 04 43.4	+0.6
RESJ	San Isidro (Tu	0.19	242	⇓eP	Pb	19 04 40.8	+0.5
VERB	Verbena	0.28	231	⇓eP	Pg	19 04 42.0	0.0
VTCV	VTCV, Calle Va	0.29	241	⇓eP	Pb	19 04 42.1	-0.2
CVTV	Tajo	0.30	247	⇓eP	Pg	19 04 42.3	0.0
CVTG	V. Turrialba,	0.30	275	eP	Pg	19 04 42.3	+0.1
CVTR	Volcan Turrial	0.30	250	⇓eP	Pg	19 04 42.1	-0.3
VTR0	Volcan Turrial	0.30	250	⇓eP	Pg	19 04 42.2	-0.3
VTR0				eS	Sb	19 04 46.9	-0.4
CVTQ	Turrialba Volc	0.31	248	⇓eP	Pg	19 04 42.5	-0.2
PILE	Guapiles	0.33	287	eP	Pg	19 04 42.7	0.0
PILE				eS	Sg	19 04 47.9	+0.5
VINA	Juan Vinas	0.35	230	⇓eP	Pg	19 04 43.0	-0.1
CARI	Cariari	0.35	313	⇓eP	Pg	19 04 43.1	-0.1
CARI				eS	Sg	19 04 49.0	+0.8
RAFA	San Farael, Vo	0.37	244	eP	Pg	19 04 43.2	-0.4
PCAYA	Pacayas	0.39	239	⇓eP	Pg	19 04 43.7	-0.2
PCAYA				eS	Sg	19 04 49.5	0.0
VICA	Volcano Irazu	0.39	250	⇓eP	Pg	19 04 43.6	-0.4
CVIMO	Finca Echandi	0.47	258	⇓eP	Pg	19 04 45.0	-0.4
REPA	Paraso	0.49	233	eP	Pg	19 04 44.2	-1.3
TRT2	Tortugero	0.51	329	P	Pb	19 04 45.2	-0.8
TRT2	Tortugero	0.51	329	⇓eP	Pb	19 04 45.2	-0.8
TRT2				eS	Sg	19 04 52.5	-0.2
BUS1	Rivas	0.63	206	⇓eP	Pb	19 04 47.5	-0.7
BUS1				eS	Sb	19 04 56.1	-0.7
HDC	Heredia	0.64	259	eP	Pb	19 04 47.7	-0.7
LCR2	La Lucha 2	0.65	234	P	Pb	19 04 48.0	-0.5
LCR2	La Lucha 2	0.65	234	S	Sb	19 04 56.2	-1.0
PIEC	Cerro El Cedra	0.69	224	eP	Pb	19 04 48.4	-0.9
BELE	Belen	0.72	258	eP	Pb	19 04 48.9	-0.8
CEUA	Cerro Uatsi, L	0.72	133	eP	Pn	19 04 50.4	-0.6
ACOS	Acosta	0.76	245	eP	Pb	19 04 49.4	-0.9
ARTO	Ro Cuarto	0.77	287	eS	Sb	19 04 59.4	-1.1
SAJE	San Jernim	0.77	183	⇓eP	Pb	19 04 49.9	-0.8
TCS1	Tacares	0.82	265	P	Pb	19 04 51.2	-0.2
DRK0	Durika	0.88	165	P	Pb	19 04 51.9	-0.6
DRK0	Durika	0.88	165	S	Sb	19 05 04.3	+0.2
DRK0	Durika	0.88	165	⇑eP	Pb	19 04 51.8	-0.8
EDPE	Pejibaye, P	0.96	186	eP	Pb	19 04 53.2	-0.6
QUEP	Quepos	0.97	225	P	Pg	19 04 54.8	+0.3
OCHAL	Ojochal	1.03	190	P	Pn	19 04 55.5	+0.2
OCHAL	Ojochal	1.03	190	S	Sg	19 05 09.7	+0.5
COVE	Coope Vega, Sa	1.09	303	S	Sb	19 05 10.1	+0.2
COVE	Coope Vega, Sa	1.09	303	P	Pn	19 04 55.0	-1.1
FIMO	Fila Mora	1.13	174	eP	Pn	19 04 56.8	+0.1
EDP2	Potrero Grande	1.14	165	eP	Pn	19 04 56.3	-0.4
SOCE	Pocosol	1.16	283	P	Pn	19 04 56.9	-0.1
SOCE	Pocosol	1.16	283	eP	Pn	19 04 56.6	-0.4
ARE1	Arenal 1	1.27	285	eP	Pn	19 04 58.4	-0.2
VARE2	V. Arenal	1.27	285	eP	Pn	19 04 58.4	-0.3
CASO	Castillo	1.28	284	eP	Pn	19 04 59.3	+0.6
ALCO	Alturas Coton,	1.32	152	⇑eP	Pn	19 04 59.3	-0.1
JTS	Las Juntas de	1.47	277	P	Pn	19 05 01.6	+0.4
JTS				S	Sb	19 05 21.9	+1.1
JTS	Las Juntas de	1.47	277	eP	Pn	19 05 01.7	+0.4
BRU2	Volcan	1.53	150	P	Pn	19 05 02.2	0.0
BRU2	Volcan	1.53	150	S	Sb	19 05 23.4	+0.7
JCR1	Jicaral	1.64	261	eP	Pn	19 05 04.1	+0.5
CDITO	Canoas	1.65	159	P	Pb	19 05 05.0	-0.5
CDITO	Canoas	1.65	159	S	Sb	19 05 27.3	+1.4
PIRO	Carate, Puerto	1.71	176	P	Pn	19 05 05.4	+0.9
JEFFS	S de V. Baru	1.71	147	eP	Pb	19 05 06.3	-0.4
VMAR	Armenia, Volca	1.75	293	eP	Pn	19 05 05.3	+0.1
CARN	Rivas	2.28	298	P	Pn	19 05 13.7	+1.4
CONN	Concepcion	2.56	304	P	Pn	19 05 17.5	+1.3

NEIC ***06*** *19:32:32.8±1.7, 24°.59N±0°.06×122°.68E±0°.07, h101^{km}±5^{km}, mb4.5/99, Error ellipse: s-maj=9.7km s-min=8.3km az=107.0*
IDC ***06*** *19:32:33.8±2.6, 24°.60N×122°.75E, h118^{km}±24^{km}, mb3.8/20, mbtmp4.2/23, MS3.0/3, Error ellipse: s-maj=17.3km s-min=13.0km az=70.0*
TAP ***06*** *19:32:33.2, 24°.56N×122°.68E, h100^{km}, ML5.1, B*
JMA ***06*** *19:32:33.2±0.2, 24°N±1°×122°.6E±0°.5, h100^{km}±1^{km}, MD3.9/18, MV4.6/18, NW OFF ISHIGAKIJIMA IS*
ISC 06 19:32:32.5±0.5**, 24°.54N**±0°.03×**122°.69E**±0°.02**, h105**^{km}±3^{km}**, n376, σ1^{s}.04**/539**, mb4.4**/71**, 63C-2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.25	112	iP	Pn	19 32 47.9	+0.5
JYNG				S	Sn	19 32 58.5	-0.2
JYNG	Yonagunijimaku	0.25	112	A	A	19 32 47.9	
	comp=N,21nm,1.3s,comp=E,32nm,0.7s						
YOJ	Yonaguni jima	0.30	106		Pn	19 32 48.0	+0.3
YOJ				Sn	Sn	19 32 56.4	-2.7
YOJ	Yonaguni jima	0.30	106	P	Pn	19 32 47.9	+0.3
YOJ	Yonaguni jima	0.30	106	S	Sn	19 32 58.8	-0.3
YOJ	Yonaguni jima	0.30	106	⇓iP	Pn	19 32 48.1	+0.4
YOJ				iS	Sn	19 32 58.6	-0.4
YOJ	Yonaguni jima	0.30	106	P	Pn	19 32 48.1	+0.4
YOJ				S	Sn	19 32 58.8	-0.3
YOJ	Yonaguni jima	0.30	106	A	A	19 32 48.1	
	comp=N,9.0nm,1.4s,comp=E,10.0nm,0.6s						
EOS3	EOS3	0.43	233	⇑iP	Pn	19 32 49.0	+0.9
EOS3				S	Sn	19 33 01.5	+1.6
EOS2	EOS2	0.44	253	⇑iP	Pn	19 32 48.9	+0.7
EOS2				S	Sn	19 33 01.0	+1.0
EOS4	EOS4	0.54	219	⇑P	Pn	19 32 48.9	+0.3
EOS4				S	Sn	19 33 01.6	+0.8
EGS		0.75	294	eP	Pn	19 32 51.4	+0.6
EGS				S	Sn	19 33 04.0	-0.7
TWC	Suao	0.77	275	⇑iP	Pn	19 32 50.9	0.0
TWC				S	Sn	19 33 03.5	-1.3
ESAO	Su ao	0.77	273	eP	Pn	19 32 51.1	+0.1
ESAO				eS	Sn	19 33 04.1	-0.8
TWB1	Santiao Chiao	0.79	306	⇑iP	Pn	19 32 51.5	+0.3
TWB1				eS	Sn	19 33 04.5	-0.8
NTC	Toucheng	0.84	292	P	Pn	19 32 52.2	+0.5
NTC				eS	Sn	19 33 05.8	-0.4
ENA	Nanau	0.87	263	⇑P	Pn	19 32 52.1	+0.1
ENA				S	Sn	19 33 06.2	-0.5
ILA	Ilan	0.89	285	⇑P	Pn	19 32 52.2	+0.1
ILA				S	Sn	19 33 06.6	-0.3
NDS	Dongshan	0.89	276	⇑P	Pn	19 32 52.4	+0.2
NDS				eS	Sn	19 33 06.3	-0.8
EAHA	Aohua	0.89	256	⇑P	Pn	19 32 52.5	+0.3
EAHA				eS	Sn	19 33 07.2	+0.1
TIPB	Shuangxi	0.89	299	⇑iP	Pn	19 32 52.6	+0.4
TIPB				eS	Sn	19 33 06.0	-1.2
EHP	Heping Village	0.90	255	P	Pn	19 32 52.5	+0.3
EHP				eS	Sn	19 33 07.3	+0.2
SXI1	Grass Mountain	0.92	307	⇑iP	Pn	19 32 53.2	+0.6
SXI1				eS	Sn	19 33 06.6	-1.1
TWE	Neicheng	0.95	281	⇑iP	Pn	19 32 53.1	+0.4
TWE				S	Sn	19 33 07.1	-0.9
IRIF	Iriomote-Funau	0.97	102	P	Pn	19 32 53.8	+0.9
IRIF				eS	Sn	19 33 08.8	+0.4
IRIF	Iriomote-Funau	0.97	102	A	A	19 32 53.8	
	comp=N,14nm,0.6s,comp=E,10.0nm,0.2s						
NWF	Wu-fen Shan	0.98	303	⇑iP	Pn	19 32 53.9	+0.7
NWF				S	Sn	19 33 08.5	-0.2
WFSB	Wu-fen Shan	0.98	303	⇑iP	Pn	19 32 53.9	+0.9
WFSB				iS	Sn	19 33 08.3	-0.2
FUSB	Fushanzhiwuyua	1.03	282	⇑iP	Pn	19 32 54.2	+0.6
FUSB				S	Sn	19 33 08.7	-0.9
ENTT	Nioudou	1.03	276	⇑iP	Pn	19 32 54.2	+0.7
ENTT				S	Sn	19 33 09.2	-0.3
TNOU	National Taiwa	1.03	306	P	Pn	19 32 54.1	+0.5
TNOU				S	Sn	19 33 09.1	-0.4
ETL	Fush Village	1.05	249	⇑iP	Pn	19 32 53.7	-0.1
ETL				eS	Sn	19 33 09.0	-0.9
LATG	Datong	1.06	270	⇑iP	Pn	19 32 54.6	+0.5
LATG				eS	Sn	19 33 09.5	-0.8
NACB	Ninganchiao	1.06	250		Pn	19 32 53.6	-0.4
NACB				Sn	Sn	19 33 08.8	-1.5
NACB	Ninganchiao	1.06	250	P	Pn	19 32 53.5	-0.4
NACB	Ninganchiao	1.06	250	S	Sn	19 33 09.6	-0.6
NACB	Ninganchiao	1.06	250	⇑iP	Pn	19 32 53.7	-0.4
NACB				S	Sn	19 33 09.0	-1.2
TWA	Mucha	1.10	294	⇑iP	Pn	19 32 54.8	+0.5
TWA				S	Sn	19 33 09.8	-1.1
TWD	Chiawan	1.10	245	⇑iP	Pn	19 32 54.2	-0.1
TWD				S	Sn	19 33 09.8	-1.1
HATJ	Hateruma jima	1.13	115	eP	Pn	19 32 55.6	+0.9
HATJ				eS	Sn	19 33 11.5	+0.1
NHY	Taipei	1.13	296	P	Pn	19 32 55.3	+0.6

NHY				S	Sn	19 33 11.5	0.0
NHDH	Xindian Distri	1.14	292	⇑iP	Pn	19 32 55.3	+0.6
NHDH				iS	Sn	19 33 10.9	-0.7
HWA	Hwalien	1.14	241	⇑iP	Pn	19 32 55.1	+0.3
HWA				eS	Sn	19 33 11.7	0.0
NWRT	Kuosheng	1.14	305	eP	Pn	19 32 55.4	+0.6
NWRT				eS	Sn	19 33 11.2	-0.5
ETLH	Xiulin Townshi	1.15	253	⇑P	Pn	19 32 55.1	+0.1
ETLH				eS	Sn	19 33 11.4	-0.7
TATO	Taipei	1.18	292		Pn	19 32 55.4	+0.2
TATO				Sn	Sn	19 33 10.7	-1.6
TATO	Taipei	1.18	292	P	Pn	19 32 55.2	0.0
TATO	Taipei	1.18	292	eP	Pn	19 32 55.2	0.0
TATO				eS	Sn	19 33 10.7	-1.6
YM01	YM01	1.18	301	⇑P	Pn	19 32 55.9	+0.6
YM01				S	Sn	19 33 12.2	-0.4
YM08	YM08	1.19	303	⇑iP	Pn	19 32 55.8	+0.4
YM08				eS	Sn	19 33 12.1	-0.6
NNSB	Datong	1.20	265	iP	Pn	19 32 55.9	+0.3
NNSB				eS	Sn	19 33 12.6	-0.5
TEYL	Yanliau Villag	1.20	236	⇑P	Pn	19 32 55.6	+0.1
TEYL				iS	Sn	19 33 12.5	-0.4
YHNB	Yeheng	1.20	276		Pn	19 32 56.3	+0.7
YHNB				Sn	Sn	19 33 12.3	-0.8
YHNB	Yeheng	1.20	276	P	Pn	19 32 55.5	-0.1
YHNB	Yeheng	1.20	276	S	Sn	19 33 12.5	-0.6
YHNB	Yeheng	1.20	276	⇑P	Pn	19 32 56.5	+0.8
YHNB				iS	Sn	19 33 12.8	-0.3
NNS	Nan Shan	1.21	265	iP	Pn	19 32 56.0	+0.3
NNS				S	Sn	19 33 12.8	-0.4
ZUZH	Zhuzihu	1.21	301	iP	Pn	19 32 56.1	+0.5
ZUZH				S	Sn	19 33 12.5	-0.7
PCYT	Pengchaiyu	1.22	333	eP	Pn	19 32 56.9	+1.2
NSK	Sanguang	1.22	276	⇑iP	Pn	19 32 56.5	+0.7
NSK				S	Sn	19 33 13.0	-0.4
BACT	New Taipei Cit	1.22	292	⇑P	Pn	19 32 56.2	+0.5
TWY	Chenhua	1.23	307	eP	Pn	19 32 56.9	+1.1
TWY				iS	Sn	19 33 14.1	+0.6
ETM	Tongmen	1.24	242	⇑P	Pn	19 32 55.8	-0.1
ETM				S	Sn	19 33 12.2	-1.4
JKRS	Kuro-shima	1.24	104	P	Pn	19 32 57.2	+1.3
JKRS				eS	Sn	19 33 14.6	+0.9
ANP	Anpu	1.24	301	eP	Pn	19 32 56.5	+0.5
SHUL	Shoufeng	1.28	234	iP	Pn	19 32 56.5	+0.2
SHUL				iS	Sn	19 33 14.2	-0.2
TWS1	Kuangyinshan	1.28	296	⇑iP	Pn	19 32 57.1	+0.7
TWS1				iS	Sn	19 33 14.2	-0.3
NTST	Danshui	1.29	299	P	Pn	19 32 57.2	+0.8
NTST				S	Sn	19 33 14.2	-0.4
JIJ	Ishigaki jima	1.34	97	P	Pn	19 32 57.9	+0.8
JIJ				eS	Sn	19 33 15.5	-0.2
JIJ	Ishigaki jima	1.34	97	A	A	19 32 57.9	
	comp=N,4.0nm,0.3s,comp=E,3.0nm,0.6s						
TEGC	Jichi Village	1.34	232	⇑P	Pn	19 32 57.4	+0.3
TEGC				eS	Sn	19 33 15.4	-0.3
NTY	Taoyuan	1.34	290	eP	Pn	19 32 57.7	+0.5
FUSS	Fushou	1.35	258	P	Pn	19 32 58.3	+0.8
FUSS				eS	Sn	19 33 15.9	-0.6
ESL	Shilin	1.36	238	P	Pn	19 32 57.2	-0.1
ESL				eS	Sn	19 33 15.1	-1.0
WHF	Hehuan Shan	1.36	253	iP	Pn	19 32 58.0	+0.3
WHF				iS	Sn	19 33 15.6	-1.3
KSHI	Guanxi Townshi	1.40	280	iP	Pn	19 32 58.9	+1.1
KSHI				S	Sn	19 33 17.6	+0.7
TWT	Tachien	1.41	258	iP	Pn	19 32 59.3	+1.2
TWT				iS	Sn	19 33 17.1	-0.4
TDCB	Techi	1.43	259	⇑P	Pn	19 32 59.3	+1.0
TDCB				iS	Sn	19 33 17.6	-0.3
NCU	National Centr	1.43	288	⇑eP	Pn	19 32 57.6	-0.6
NCU				eS	Sn	19 33 16.8	-0.9
NCUH	Zhongli	1.43	287	iP	Pn	19 32 59.1	+0.9
NCUH				iS	Sn	19 33 17.7	0.0
NFF	Wufeng Townshi	1.44	274	⇑P	Pn	19 32 59.1	+0.8
NFF				S	Sn	19 33 17.6	-0.3
EGFH	Guangfu	1.45	233	eP	Pn	19 32 58.3	0.0
WARBT	Fenglin Townsh	1.45	236	⇑P	Pn	19 32 58.1	-0.3
WARBT				iS	Sn	19 33 16.4	-1.6
NJD	Zhudong	1.47	278	⇑eP	Pn	19 32 59.7	+1.1
NJD				eS	Sn	19 33 19.0	+0.5
JISG	Ishigakijimahi	1.48	88	P	Pn	19 32 59.6	+1.0
JISG				eS	Sn	19 33 18.6	0.0
JISG	Ishigakijimahi	1.48	88	A	A	19 32 59.6	
	comp=N,11nm,0.4s,comp=E,9.0nm,0.6s						
OWD	Renai	1.50	247	⇑P	Pn	19 32 59.5	+0.4
OWD				S	Sn	19 33 18.2	-1.3
LIOB	Emei	1.53	274	iP	Pn	19 33 00.2	+0.9
LIOB				S	Sn	19 33 20.0	+0.2
WUSB	Renai	1.54	249	⇑P	Pn	19 33 00.3	+0.7
WUSB				S	Sn	19 33 19.9	-0.3
HSN1	Hsinchu	1.54	279	⇑P	Pn	19 33 00.4	+0.9
HSN1				S	Sn	19 33 20.3	+0.3
NSTT	Nanjuang	1.54	274	⇑P	Pn	19 33 00.3	+0.8
NSTT				iS	Sn	19 33 19.8	-0.3
HGSD	Ruisui	1.56	228	⇑P	Pn	19 32 59.8	0.0
HGSD				iS	Sn	19 33 19.9	-0.6
NHW	Xinwu Township	1.56	287	⇑P	Pn	19 33 00.7	+0.9
NHW				eS	Sn	19 33 20.9	+0.3
SBCB	Hsinchu	1.57	279	⇑P	Pn	19 33 00.8	+1.0
SBCB				S	Sn	19 33 20.5	-0.2
HSN	Hsinchu	1.59	280	⇑P	Pn	19 33 00.6	+0.5
HSN				eS	Sn	19 33 19.4	-1.6
WHP	Taichung City	1.61	261	⇑P	Pn	19 33 02.1	+1.7
WHP				iS	Sn	19 33 22.5	+0.7
EHYH	Wanrong	1.61	230	⇓P	Pn	19 33 00.4	0.0
EHYH				eS	Sn	19 33 19.6	-2.1
VWDT	VWDT	1.62	241	⇑P	Pn	19 33 01.2	+0.7
VWDT				iS	Sn	19 33 21.4	-0.4
EHY	Hungye	1.62	231	iP	Pn	19 33 00.3	-0.3
EHY				eS	Sn	19 33 20.1	-1.8
NJN	Zhunan	1.66	275	eP	Pn	19 33 02.0	+1.0
NJN				eS	Sn	19 33 23.0	+0.4
ECBN	Changbin	1.67	223	⇑P	Pn	19 33 01.2	+0.1
ECBN				eS	Sn	19 33 21.3	-1.5
WPL	Puli Township	1.67	252	eP	Pn	19 33 02.1	+1.0
DPDB	Guoxing	1.69	253	⇑P	Pn	19 33 02.6	+1.2
WCS	Beigang Elemen	1.69	254	iP	Pn	19 33 02.7	+1.3
YULB	Yu-li	1.71	228		Pn	19 33 01.4	-0.3
YULB				Sn	Sn	19 33 21.8	-2.1
YULB	Yu-li	1.71	228	P	Pn	19 33 01.3	-0.3
YULB	Yu-li	1.71	228	S	Sn	19 33 22.7	-1.2
YULB	Yu-li	1.71	228	⇑P	Pn	19 33 01.5	-0.2
YULB				iS	Sn	19 33 22.8	-1.1
EYUL	Yuli	1.73	227	P	Pn	19 33 02.2	+0.3
EYUL				S	Sn	19 33 23.9	-0.3
NMLH	Miaoli	1.73	270	iP	Pn	19 33 02.9	+1.0
NMLH				eS	Sn	19 33 23.9	-0.3
TWF1	Yuli	1.74	227	⇑iP	Pn	19 33 02.0	0.0
TWF1				eS	Sn	19 33 23.2	-1.3
SSLB	Suanglung	1.76	245	Pn	Pn	19 33 02.6	+0.4
SSLB				Sn	Sn	19 33 23.8	-1.1
SSLB	Suanglung	1.76	245	P	Pn	19 33 02.7	+0.4
SSLB	Suanglung	1.76	245	S	Sn	19 33 24.4	-0.5
SSLB	Suanglung	1.76	245	⇑P	Pn	19 33 02.8	+0.6
SSLB				S	Sn	19 33 24.6	-0.2
TWQ1	Liyutan	1.76	264	⇑P	Pn	19 33 03.2	+1.0
TWQ1				eS	Sn	19 33 25.2	+0.4
SMLT	Sun Moon Lake	1.76	248	iP	Pn	19 33 03.3	+0.9
SMLT				eS	Sn	19 33 25.6	+0.4
NSY	Sanyi	1.76	266	⇑iP	Pn	19 33 03.7	+1.5
NSY				iS	Sn	19 33 26.0	+1.0
TYC	Yuchr	1.79	250	iP	Pn	19 33 03.8	+1.2
TYC				iS	Sn	19 33 26.1	+0.5
CHKH	Chenggong	1.79	222	eP	Pn	19 33 02.6	-0.1
CHKH				eS	Sn	19 33 24.1	-1.5
JTJ	Tarama	1.83	87	eP	Pn	19 33 04.3	+1.2
JTJ				eS	Sn	19 33 27.0	+0.5
FULB	Fuli	1.85	224	iP	Pn	19 33 03.4	-0.1
FULB				iS	Sn	19 33 26.5	-0.5
TCU	Taichung	1.88	258	eP	Pn	19 33 05.0	+1.3
TCU				S	Sn	19 33 27.8	+0.3
WHYT	Xinyi Township	1.88	244	iP	Pn	19 33 05.1	+1.3
WHYT				eS	Sn	19 33 29.3	+1.7
CHKT	Chengkung	1.88	220	iP	Pn	19 33 03.4	-0.4
CHKT				iS	Sn	19 33 25.4	-2.3
WWF	Wufeng	1.89	255	⇑P	Pn	19 33 05.1	+1.3
WWF				eS	Sn	19 33 28.3	+0.7
YUS	Yu-Shan	1.91	237	iP	Pn	19 33 05.3	+0.7
YUS				S	Sn	19 33 28.6	-0.3
WJS	Zhushan	1.93	249	P	Pn	19 33 06.1	+1.7
WJS				iS	Sn	19 33 30.8	+2.1
WNT1	Nantou City	1.94	251	eP	Pn	19 33 05.8	+1.3
WNT1				eS	Sn	19 33 29.8	+0.8
EHD	Haiduan	1.94	225	eP	Pn	19 33 05.8	+1.2
EHD				eS	Sn	19 33 28.8	-0.3
WNT	Mingjian	1.95	251	iP	Pn	19 33 06.1	+1.5
WNT				S	Sn	19 33 30.9	+1.8
ECS	Chishang	1.97	223	P	Pn	19 33 05.5	+0.5
ECS				S	Sn	19 33 30.4	+0.7
WCHH	Zhanghua	2.00	257	eP	Pn	19 33 06.2	+1.0
WCHH				iS	Sn	19 33 30.7	+0.4
ALS	Alishan	2.01	240	⇑P	Pn	19 33 06.8	+1.1
ALS				eS	Sn	19 33 30.9	-0.1
WCH1	Changhua City	2.01	257	eP	Pn	19 33 06.4	+1.0
WCH1				iS	Sn	19 33 30.4	-0.1
WYL	Yuanlin Townsh	2.01	254	eP	Pn	19 33 06.4	+1.0
WYL				eS	Sn	19 33 31.4	+0.9
EDH	Donghe	2.02	219	iP	Pn	19 33 05.4	-0.1
EDH				eS	Sn	19 33 29.2	-1.4
ELDTW	Lidau	2.04	229	iP	Pn	19 33 06.0	0.0
ELDTW				iS	Sn	19 33 30.2	-1.2
CHN5	Tsauling	2.07	243	P	Pn	19 33 07.6	+1.4
CHN5				eS	Sn	19 33 34.0	+2.0
WGK	Gukeng	2.12	247	eP	Pn	19 33 08.5	+1.6
WGK				eS	Sn	19 33 35.9	+2.7
WDL	Douliou City	2.13	248	eP	Pn	19 33 08.7	+1.7
WDL				eS	Sn	19 33 36.0	+2.6
WDLH	Douliu	2.14	247	P	Pn	19 33 08.6	+1.5
WDLH				iS	Sn	19 33 34.8	+1.2
LONT	Longtian	2.17	222	iP	Pn	19 33 07.4	-0.1
LONT				iS	Sn	19 33 32.6	-1.6
LDUT	Ludao	2.17	211	eP	Pn	19 33 07.2	-0.3
LDUT				S	Sn	19 33 32.8	-1.4
WCKO	Fanlu	2.20	240	iP	Pn	19 33 09.6	+1.7
WCKO				iS	Sn	19 33 36.9	+1.9
STYH	Taoyuan	2.22	232	iP	Pn	19 33 09.5	+1.4
STYH				S	Sn	19 33 35.8	+0.3
RLNB	Erlin	2.23	253	eP	Pn	19 33 09.0	+0.9
RLNB				eS	Sn	19 33 35.6	+0.2
STYT	Tauyuan	2.24	233	⇑P	Pn	19 33 09.6	+1.1
STYT				eS	Sn	19 33 36.5	+0.6
TPUB	Ta-pu	2.26	237		Pn	19 33 09.6	+1.0
TPUB				Sn	Sn	19 33 36.6	+0.3
TPUB	Ta-pu	2.26	237	P	Pn	19 33 09.8	+1.2
TPUB	Ta-pu	2.26	237	S	Sn	19 33 36.8	+0.5
TPUB	Ta-pu	2.26	237	iP	Pn	19 33 10.1	+1.5
TPUB				iS	Sn	19 33 38.2	+1.9
CHN4	Tsaushan	2.26	239	⇑P	Pn	19 33 09.9	+1.3
CHN4				eS	Sn	19 33 37.4	+1.1
CHN2	Minshiung	2.26	244	eP	Pn	19 33 10.7	+2.0
CHN2				eS	Sn	19 33 38.8	+2.5
TWGBT	Beinan	2.27	221	P	Pn	19 33 08.5	-0.2
TWGBT	Beinan	2.27	221	S	Sn	19 33 35.5	-1.0
TWGBT	Beinan	2.27	221	iP	Pn	19 33 08.6	-0.2
TWGBT				iS	Sn	19 33 35.5	-1.0
TWG	Pinlang	2.27	221		Pn	19 33 08.4	-0.3
TWG	Pinlang	2.27	221	iP	Pn	19 33 08.4	-0.3
TWG				iS	Sn	19 33 34.5	-2.0
JIRB	Irabujima	2.28	82	eP	Pn	19 33 09.9	+1.1
JIRB				eS	Sn	19 33 36.7	+0.1
TTN	Taitung	2.28	219	eP	Pn	19 33 09.7	+0.9
TTN				iS	Sn	19 33 36.9	+0.3
WTP	Ta-pu	2.30	236	iP	Pn	19 33 10.6	+1.4
WTP				S	Sn	19 33 38.7	+1.4
WTCT	Ta-ch'eng	2.30	253	P	Pn	19 33 09.9	+0.8
WTCT				iS	Sn	19 33 37.3	0.0
CHY	Chiayi	2.32	244	iP	Pn	19 33 10.9	+1.5
CHY				S	Sn	19 33 39.1	+1.4
JIKM	Ikemajima	2.36	80	eP	Pn	19 33 11.2	+1.4
JIKM				eS	Sn	19 33 39.1	+0.7
WMLT	Mailiao	2.37	252	eP	Pn	19 33 10.9	+0.9
JMJ	Miyako jima 2	2.38	83	P	Pn	19 33 12.4	+2.2
JMJ	Miyako jima 2	2.38	83	S	Sn	19 33 40.1	+1.0
JMJ	Miyako jima 2	2.38	83	eP	Pn	19 33 11.9	+1.7
JMJ				eS	Sn	19 33 39.5	+0.4
TWK	Hsinying	2.38	238	P	Pn	19 33 11.6	+1.3
TWK				iS	Sn	19 33 40.5	+1.2
CHN1	Nanshi	2.40	236	eP	Pn	19 33 12.0	+1.6
CHN1				iS	Sn	19 33 41.0	+1.4
SNST	Tainan City	2.40	237	eP	Pn	19 33 11.9	+1.4
SNST				S	Sn	19 33 40.7	+1.1
JMJ2	Miyako jima3	2.41	85	P	Pn	19 33 12.2	+1.6
JMJ2				eS	Sn	19 33 40.6	+0.9
SGST	Jiashian	2.42	233	eP	Pn	19 33 11.2	+0.5
SGST				eS	Sn	19 33 40.2	+0.2
WSF	Szhu	2.43	249	iP	Pn	19 33 11.9	+1.1
WSF				iS	Sn	19 33 40.9	+0.6
WSL	Shuilin Townsh	2.47	246	iP	Pn	19 33 12.3	+1.0
WSL				S	Sn	19 33 42.1	+0.9
JOGS	Gusukube	2.48	84	eS	Sn	19 33 41.4	-0.1
ECL	Taimali	2.51	220	P	Pn	19 33 11.4	-0.4
ECL				S	Sn	19 33 40.2	-1.9
CHN8	Yiju	2.56	243	eP	Pn	19 33 13.8	+1.2
CHN8				iS	Sn	19 33 44.4	+1.0
CHN3	Shinhua	2.58	236	eP	Pn	19 33 15.2	+2.3
SSD	Sandimen	2.60	227	P	Pn	19 33 14.6	+1.5
SSD				eS	Sn	19 33 46.0	+1.7
SSHA	Shanhua	2.61	238	eP	Pn	19 33 14.5	+1.3
SSHA				eS	Sn	19 33 45.0	+0.6
SCLT	Jiali	2.66	240	eP	Pn	19 33 15.4	+1.6
SCLT				iS	Sn	19 33 47.1	+1.5
TWM1	Shoushan	2.69	231	eP	Pn	19 33 17.8	+3.4
MASBT	Mashibuluo	2.69	225	⇑eP	Pn	19 33 15.5	+1.2
MASBT				eS	Sn	19 33 46.5	0.0
LAY	Lan-yu	2.71	203	eP	Pn	19 33 14.2	-0.3
TAI1	Yung-k'ang	2.71	237	eS	Sn	19 33 49.1	+2.4
SGLT	Jiouru	2.71	229	eP	Pn	19 33 17.3	+2.8
LYUB	Lan-yu	2.73	202	P	Pn	19 33 14.1	-0.7
LYUB				eS	Sn	19 33 45.7	-1.6
TAW	Tawu	2.73	217	eS	Sn	19 33 45.3	-2.0
EAST	Anshuo	2.74	219	eP	Pn	19 33 15.0	+0.1
EAST				iS	Sn	19 33 46.6	-0.9
TAWH	Dawu Township	2.75	217	eP	Pn	19 33 15.2	+0.2
TAWH				eS	Sn	19 33 45.2	-2.5
SCZT	Fangliau	2.88	222	P	Pn	19 33 18.1	+1.3
SCZT				eS	Sn	19 33 52.7	+1.9
SLIU	Shizi	2.90	217	eP	Pn	19 33 17.2	+0.2
MATB	Ma-tsu	2.96	303	eP	Pn	19 33 18.6	+0.8
PNG	Penghu	3.03	252	eS	Sn	19 33 52.4	-2.0
PHUB	P'eng-hu	3.03	251	iP	Pn	19 33 18.6	-0.1
PHUB				iS	Sn	19 33 52.5	-1.9
SMST	Manzhou Townsh	3.04	215	eP	Pn	19 33 19.3	+0.4
WDGT	Dungji	3.05	246	eP	Pn	19 33 20.1	+1.0
WDGT				iS	Sn	19 33 54.3	-0.7
HEN	Hengchun	3.10	216	eP	Pn	19 33 22.1	+2.4
HEN				eS	Sn	19 33 57.5	+1.4
TWKBT	Hengchun	3.11	214	eP	Pn	19 33 20.6	+0.7
TWKBT				eS	Sn	19 33 55.8	-0.7
TWK1	Hengchun	3.12	214	eP	Pn	19 33 20.2	+0.3
TWK1				eS	Sn	19 33 56.2	-0.3
VCHM	Qimei	3.27	247	eP	Pn	19 33 22.6	+0.7
VCHM				S	Sn	19 33 58.9	-1.2
XPSS	Dashiqiu	3.28	317	eP	Pn	19 33 22.1	+0.1
PTMZ	Houxiangcun	3.28	279	iP	Pn	19 33 22.3	+0.2
LYJJ	Jianjiangzhen	3.32	308	eP	Pn	19 33 22.8	+0.2
MHZQ	Yeshan	3.66	296	eP	Pn	19 33 27.7	+0.6
QZH	Quanzhou	3.75	277	⇑iPn	Pn	19 33 28.2	-0.1
QZH				Sn	Sn	19 34 08.0	-3.6
QZH				smax	smax		
	comp=N,800nm,0.7s						
QZH				smax	smax		
	comp=E,380nm,0.8s						
KNM	Kinmen	3.88	269	eP	Pn	19 33 32.0	+1.8
KNMB	Chin-men Tao	3.92	270		Pn	19 33 30.4	-0.3
KNMB	Chin-men Tao	3.92	270	iP	Pn	19 33 30.6	-0.1
AXDP	Jialang	4.31	276	eP	Pn	19 33 36.3	+0.5
ZPLA	Ao Xicun	4.55	263	eP	Pn	19 33 39.3	+0.1
DSXP	Dongshan	4.88	261	⇑eP	Pn	19 33 43.6	0.0
SXFK	Yanhouchang	4.92	293	eP	Pn	19 33 44.6	+0.4
JOW	Kunigami	5.53	64	P	Pn	19 33 51.8	-0.6
	comp=E,92nm,0.4s,baz=347,slow=30,SNR=20						
JOW				S	Sn	19 34 51.9	-2.8
	comp=E,139nm,0.2s,baz=126,slow=25,SNR=12						
JOW	Kunigami	5.53	64	Pn	Pn	19 33 51.5	-0.9
JOW	Kunigami	5.53	64	P	Pn	19 33 51.8	-0.6
JOW	Kunigami	5.53	64	eP	Pn	19 33 51.6	-0.8
HKPS	Hong Kong Po S	8.17	256	Pn	Pn	19 34 29.1	+0.8
NJ2	Nanjing	8.21	337	eP	Pn	19 34 29.3	+0.6
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
JNU	Nakatsue	11.16	38	P	Pn	19 35 10.2	+1.4
	comp=Z,14nm,1.0s,baz=200,slow=14,SNR=6.5						
JNU	Nakatsue	11.16	38	Pn	Pn	19 35 07.5	-1.3
JNU	Nakatsue	11.16	38	P	Pn	19 35 10.6	+1.8
JMN	Monobe	13.38	44	Pn	Pn	19 35 33.0	-5.2
KSRS	Korea Array	13.62	18	P	P	19 35 44.6	-1.8
	comp=Z,37nm,0.6s,baz=198,slow=12,SNR=4.3						
KS19	Wonju Array Si	13.65	18		Pn	19 35 43.8	+2.1
JGF	Kuroka	16.79	46	Pn	Pn	19 36 19.0	-2.2
JGF				IAmb	IAmb	19 36 26.8	
	comp=Z,33nm,1.5s						
JHJ	Hachijo jima 2	17.23	56	LR	LR	19 41 57.8	
	comp=Z,26nm,18.9s,baz=308,slow=33						
MJAR	Matsushiro Arr	17.91	44	P	P	19 36 33.5	-0.4
	comp=Z,0.6nm,0.4s,baz=236,slow=8.1,SNR=5.2						
MJAR				LR	LR	19 44 49.3	
	comp=Z,20nm,18.1s,baz=203,slow=41						
MJAR	Matsushiro Arr	17.91	44	P	P	19 36 32.9	-1.0
HHC	Hu-ho-hao-te	18.73	333	eP	Pn	19 36 46.1	+1.4
HHC				pmax	pmax		
	comp=Z,15nm,0.5s						
HHC				pmax	pmax		
	comp=Z,140nm,4.5s						
PZH	PanZhiHua	19.01	280	P	Pn	19 36 48.0	0.0
CN2	Changchun	19.34	6	eP	P	19 36 50.4	+0.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KKM	Kota Kinabalu	19.42	200	P	P	19 36 51.8	+1.2
KKM				IAmb	IAmb	19 37 09.5	
	comp=Z,53nm,1.3s						
KKM	Kota Kinabalu	19.42	200	P	P	19 36 52.7	+2.0
MYLDM	Lahad Datu	19.67	192	P	P	19 36 54.9	+1.6
MYLDM				IAmb	IAmb	19 37 01.2	
	comp=Z,17nm,1.0s						
USRK	Ussuriysk Ar.	21.03	19	P	P	19 37 07.8	+0.1
	comp=Z,6.9nm,0.7s,baz=206,slow=10,SNR=13						
	comp=Z,6.9nm,0.7s						
BNX	BinXian	21.49	9	⇑P	P	19 37 14.2	+1.6
BNX				pmax	pmax		
	comp=Z,7.0nm,0.7s						
JTM	Tenmabayashi	22.33	39	P	P	19 37 17.8	-3.7
CHTO	Chiang Mai	22.78	260	P	P	19 37 27.0	+0.7
CMAR	Chiang Mai Arr	22.89	259	P	P	19 37 29.1	+1.7
	comp=Z,1.3nm,0.8s,baz=64,slow=6.9,SNR=9.0						
	comp=Z,1.3nm,0.8s						
CMAR	Chiang Mai Arr	22.89	259	P	P	19 37 28.9	+1.5
TOLI2	Tolitoli	23.37	185	P	P	19 37 32.5	+0.6
TNTI	Ternate	24.06	168	P	P	19 37 38.1	0.0
TNTI				IAmb	IAmb	19 37 48.9	
	comp=Z,17nm,1.0s						
SBUM	Sibu	24.18	206	P	P	19 37 38.6	-0.5
SBUM				IAmb	IAmb	19 37 41.1	
	comp=Z,22nm,1.3s						
SBUM	Sibu	24.18	206	P	P	19 37 40.1	+0.9
ERM	Erimo	24.32	39	P	P	19 37 37.6	-2.6
ERM				IAmb	IAmb	19 37 41.5	
	comp=Z,35nm,1.1s						
ERM	Erimo	24.32	39	P	P	19 37 40.7	+0.5
JEM	Erimo	24.32	39	P	P	19 37 40.6	+0.4
GTA	Gaotai	24.32	313	eP	P	19 37 41.3	+0.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
JKA	Kamikawa-asahi	25.41	35	P	P	19 37 48.5	-1.6
JKA				IAmb	IAmb	19 38 19.6	
	comp=Z,47nm,1.4s						
LUWI	Luwuk	25.43	180	P	P	19 37 51.1	+0.6
LUWI				IAmb	IAmb	19 38 00.2	
	comp=Z,20nm,1.0s						
HEH	HeiHe	25.93	7	eP	P	19 37 55.6	+0.9
HEH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BKB	Balikpapan	26.26	193	P	P	19 37 58.3	+0.3
SONM	Songino Array	26.60	335	P	P	19 38 01.0	+0.1
	comp=Z,4.1nm,0.7s,baz=148,slow=9.5,SNR=21						
	comp=Z,4.1nm,0.7s						
SONM	Songino Array	26.60	335	P	P	19 38 00.6	-0.4
SANI	Sanana	26.63	173	P	P	19 38 01.4	+0.1
SOEI	Soe	34.12	177	P	P	19 39 06.4	-1.1
SOEI				IAmb	IAmb	19 39 22.7	
	comp=Z,7.7nm,0.9s						
YAK	Yakutsk	37.77	5	P	P	19 39 35.6	-2.4
MTN	Manton Dam	38.06	167	P	P	19 39 38.4	-2.6
PETK	Petropavlovsk-	38.81	33	P	P	19 39 46.4	-0.5
	comp=Z,5.7nm,0.9s,baz=234,slow=8.0,SNR=2.1						
	comp=Z,5.7nm,0.9s						
PETK	Petropavlovsk-	38.81	33	P	P	19 39 46.0	-0.9
MK31	Makanchi Array	39.05	315	P	P	19 39 48.7	-0.3
MKAR	Makanchi Array	39.05	315	P	P	19 39 49.2	+0.2
	comp=Z,1.1nm,0.6s,baz=100,slow=9.2,SNR=22						
	comp=Z,1.1nm,0.6s						
MKAR	Makanchi Array	39.05	315	P	P	19 39 49.0	0.0
MAKZ	Makanchi	39.25	315	P	P	19 39 50.4	-0.3
KNRA	Kununurra	40.41	171	P	P	19 40 00.5	0.0
ZAA0	Zalesovo Array	40.70	326	P	P	19 40 00.3	-2.2
ZALV	Zalesovo Beam	40.70	326	P	P	19 40 01.6	-0.8
	comp=Z,2.8nm,0.6s,baz=107,slow=8.4,SNR=11						
	comp=Z,2.8nm,0.6s						
ZALV	Zalesovo Beam	40.70	326	P	P	19 40 00.3	-2.2
FITZ	Fitzroy Crossi	42.48	176	P	P	19 40 16.8	-0.6
KURK	Kurchatov	42.71	319	P	P	19 40 17.9	-1.0
KURK	Kurchatov	42.71	319		PcP	19 42 07.6	-1.1
KURBB	Kurchatov Arra	42.73	319	P	P	19 40 18.6	-0.5
	comp=Z,0.6nm,0.2s,baz=114,slow=9.3,SNR=14						
KURBB				PcP	PcP	19 42 07.6	-1.2
	comp=Z,0.3nm,0.4s,baz=115,slow=3.2,SNR=4.4						
	comp=Z,0.6nm,0.2s						
COEN	Coen	43.18	150	P	P	19 40 23.4	+0.3
COEN				IAmb	IAmb	19 40 25.5	
	comp=Z,4.1nm,0.8s						
COEN	Coen	43.18	150	P	P	19 40 24.6	+1.5
WB0	Warramunga Arr	45.49	164	P	P	19 40 41.6	+0.2
WB0				IAmb	IAmb	19 40 43.8	
	comp=Z,4.9nm,0.6s						
MBWA	Marble Bar	45.52	184	P	P	19 40 41.7	+0.1
MBWA				IAmb	IAmb	19 41 19.8	
	comp=Z,16nm,1.3s						
WRAB	Tennant Creek	45.64	165	P	P	19 40 42.6	0.0
WRAB				IAmb	IAmb	19 40 44.9	
	comp=Z,4.9nm,0.8s						
WRAB	Tennant Creek	45.64	165	P	P	19 40 43.5	+0.9
WRA	Warramunga Arr	45.65	165	P	P	19 40 42.0	-0.6
	comp=Z,4.1nm,0.5s,baz=346,slow=8.6,SNR=33						
	comp=Z,4.1nm,0.5s						
WRA	Warramunga Arr	45.65	165	P	P	19 40 41.8	-0.9
WB2	Warramunga Arr	45.65	165	P	P	19 40 42.6	-0.1
WB2				IAmb	IAmb	19 40 45.0	
	comp=Z,11nm,1.1s						
WR0	Warramunga Arr	45.72	164	P	P	19 40 43.7	+0.5
WR0				IAmb	IAmb	19 40 45.8	
	comp=Z,8.2nm,0.6s						
KK31	Karatay Array	46.35	307	P	P	19 40 48.2	+0.2
KKAR	Karatay Array	46.35	307	P	P	19 40 48.3	+0.2
KKAR				PcP	PcP	19 42 21.2	-0.3
TIXI	Tiksi	47.27	3	LR	LR	20 02 54.6	
	comp=Z,53nm,19.3s,baz=345,slow=39						
TIXI	Tiksi	47.27	3	P	P	19 40 53.4	-1.3
TIXI				IAmb	IAmb	19 40 54.3	
	comp=Z,3.5nm,0.7s						
BVAR	Borovoye Array	48.27	320	P	P	19 41 02.7	-0.1
	comp=Z,1.2nm,0.5s,baz=115,slow=7.5,SNR=7.8						
BVAR				PcP	PcP	19 42 28.1	0.0
	comp=Z,0.8nm,0.4s,baz=113,slow=3.4,SNR=4.6						
	comp=Z,1.2nm,0.5s						
BORK	Borovoye	48.32	320	P	P	19 41 02.0	-1.1
ASAR	Alice Springs	49.14	166	P	P	19 41 10.6	+0.9
	comp=Z,1.1nm,0.7s,baz=345,slow=6.6,SNR=13						
	comp=Z,1.1nm,0.7s						
ASAR	Alice Springs	49.14	166	P	P	19 41 09.6	-0.2
AB31	Akbulak array	54.18	314		P	19 41 46.2	-0.7
AB31				IAmb	IAmb	19 41 48.2	
	comp=Z,5.1nm,1.4s						
AB31				PcP	PcP	19 42 48.0	-2.2
ABKAR	Akbulak array	54.18	314	P	P	19 41 46.2	-0.7
ABKAR				PcP	PcP	19 42 48.3	-1.8
FORT	Forrest	55.25	174	P	P	19 41 55.5	+0.8
FORT				IAmb	IAmb	19 42 33.7	
	comp=Z,10nm,1.1s						
ARTI	Arti	55.74	323	P	P	19 41 57.0	-1.1
ARTI				IAmb	IAmb	19 41 59.7	
	comp=Z,3.7nm,0.5s						
BBOO	Buckleboo	58.44	167	P	P	19 42 18.4	+1.1
G16K	Koyuk River	61.70	27	P	P	19 42 39.5	+0.4
C19K	Lookout Ridge	62.93	23	P	P	19 42 47.9	+0.5
J17K	VABM Dome	63.10	30	P	P	19 42 48.4	-0.1
G18K	Tagagawik	63.24	27	P	P	19 42 49.7	+0.2

D19K	**Kuna River**	**63.45**	**24**	P	**P**	**19 42 51.2**	**+0.4**
D19K				IAmb	IAmb	19 42 53.7	
	comp=Z,3.2nm,0.7s						
D19K				PcP	**sP**	**19 43 27.5**	**-0.2**
E19K	**Redstone River**	**63.79**	**25**	P	**P**	**19 42 53.6**	**+0.6**
E19K				PcP	**PcP**	**19 43 29.2**	**+1.2**
E19K				IAmb	IAmb	19 43 30.0	
	comp=Z,3.9nm,0.9s						
B20K	**Meade River**	**63.80**	**22**	P	**P**	**19 42 53.4**	**+0.4**
B20K				IAmb	IAmb	19 43 02.9	
	comp=Z,6.8nm,1.4s						
D20K	**Etivluk River**	**64.00**	**24**	P	**P**	**19 42 55.3**	**+0.9**
D20K				PcP	**PcP**	**19 43 29.6**	**+0.6**
D20K				IAmb	IAmb	19 43 30.8	
	comp=Z,5.3nm,0.9s						
H19K	**Roundabout Mou**	**64.16**	**27**	P	**P**	**19 42 56.8**	**+1.4**
H19K				IAmb	IAmb	19 43 33.8	
	comp=Z,8.2nm,1.4s						
L18K	**Granite Mounta**	**64.25**	**31**	P	**P**	**19 42 56.5**	**+0.4**
L18K				IAmb	IAmb	19 43 35.9	
	comp=Z,8.1nm,1.3s						
J19K	**Poorman**	**64.61**	**29**	P	**P**	**19 42 59.9**	**+1.4**
J19K				IAmb	IAmb	19 43 09.1	
	comp=Z,8.9nm,1.4s						
B21K	**Ikpikpuk River**	**64.69**	**23**	P	**P**	**19 42 59.4**	**+0.6**
E21K	**Killik River**	**64.98**	**24**	P	**P**	**19 43 01.0**	**+0.1**
E21K				IAmb	IAmb	19 43 26.9	
	comp=Z,7.9nm,1.4s						
B22K	**Teshekpuk Lake**	**65.07**	**22**	P	**P**	**19 43 00.7**	**-0.6**
B22K				IAmb	IAmb	19 43 04.5	
	comp=Z,3.4nm,0.9s						
J20K	**Nowinta River**	**65.24**	**29**	P	**P**	**19 43 04.1**	**+1.7**
J20K				IAmb	IAmb	19 43 30.2	
	comp=Z,9.6nm,1.4s						
IMAR	**Indian Mountai**	**65.25**	**27**	P	**P**	**19 43 03.2**	**+0.7**
IMAR				PcP	**PcP**	**19 43 35.3**	**+1.2**
G21K	**Allakaket**	**65.30**	**26**	P	**P**	**19 43 03.6**	**+0.7**
G21K				PcP	**PcP**	**19 43 34.8**	**+0.5**
D22K	**Ayikyak River**	**65.42**	**23**	P	**P**	**19 43 04.6**	**+0.9**
D22K				IAmb	IAmb	19 43 06.2	
	comp=Z,5.1nm,0.9s						
H21K	**Melozitna Rive**	**65.66**	**27**	P	**P**	**19 43 06.4**	**+1.2**
E22K	**Anaktuvuk Pass**	**65.81**	**24**	P	**P**	**19 43 07.6**	**+1.4**
E22K				IAmb	IAmb	19 43 37.7	
	comp=Z,4.7nm,1.3s						
M20K	**Styx River**	**65.95**	**31**	P	**P**	**19 43 08.4**	**+1.2**
H22K	**Ishtalitna Cre**	**66.22**	**27**	P	**P**	**19 43 10.4**	**+1.6**
H22K				IAmb	IAmb	19 43 11.2	
	comp=Z,3.8nm,0.4s						
PPLA	**Purkeypile**	**66.25**	**30**	P	**P**	**19 43 10.0**	**+0.8**
PPLA				IAmb	IAmb	19 43 44.6	
	comp=Z,14nm,1.4s						
OHAK	**Old Harbor**	**66.53**	**36**	P	**P**	**19 43 10.9**	**0.0**
SPU	**Mount Spurr**	**66.56**	**32**	P	**P**	**19 43 11.9**	**+0.8**
SPU				IAmb	IAmb	19 43 44.5	
	comp=Z,9.1nm,1.3s						
STLK	**Strandline Lak**	**66.61**	**31**	P	**P**	**19 43 12.2**	**+0.8**
STLK				IAmb	IAmb	19 43 40.8	
	comp=Z,8.1nm,1.4s						
SKT	**Skwentna**	**66.69**	**31**	P	**P**	**19 43 12.1**	**+0.3**
SKT				IAmb	IAmb	19 43 26.4	
	comp=Z,8.5nm,1.3s						
C24K	**Franklin Bluff**	**66.74**	**22**	P	**P**	**19 43 12.6**	**+0.6**
C24K				IAmb	IAmb	19 43 16.0	
	comp=Z,6.2nm,1.1s						
LVZ	**Lovozero**	**66.79**	**336**	P	**P**	**19 43 13.7**	**+1.4**
KDAK	**Kodiak Island**	**66.82**	**35**	P	**P**	**19 43 13.1**	**+0.4**
L22K	**Petersville**	**66.95**	**30**	P	**P**	**19 43 14.6**	**+1.0**
E24K	**Your Creek**	**67.05**	**24**	IAmb	IAmb	19 43 16.5	
	comp=Z,2.7nm,0.7s						
SUA	**Susitna One**	**67.14**	**31**	P	**P**	**19 43 15.4**	**+0.6**
F24K	**Squaw Lake**	**67.37**	**25**	P	**P**	**19 43 17.1**	**+1.1**
F24K				IAmb	IAmb	19 43 18.0	
	comp=Z,2.8nm,0.7s						
G24K	**Hadweenzic Riv**	**67.66**	**25**	P	**P**	**19 43 19.2**	**+1.3**
G24K				IAmb	IAmb	19 43 20.6	
	comp=Z,8.6nm,1.3s						
ILAR	**Eielson Array**	**68.26**	**27**	P	**P**	**19 43 20.7**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=270,slow=5.8,SNR=5.7						
	comp=Z,0.2nm,0.3s						
PWL	**Port Wells**	**68.39**	**32**	P	**P**	**19 43 22.6**	**0.0**
C27K	**Jago River**	**68.47**	**22**	P	**P**	**19 43 23.5**	**+0.6**
C27K					**pP**	**19 43 49.1**	**+0.4**
C27K				IAmb	IAmb	19 43 49.6	
	comp=Z,3.4nm,0.8s						
SCM	**Sheep Creek Mo**	**68.67**	**31**	P	**P**	**19 43 24.9**	**+0.5**
SCM				IAmb	IAmb	19 43 56.5	
	comp=Z,11nm,1.2s						
F26K	**Sheenjek River**	**68.74**	**24**	P	**P**	**19 43 26.2**	**+1.5**
KLU	**Klutina**	**69.40**	**31**	P	**P**	**19 43 29.6**	**+0.7**
KLU				IAmb	IAmb	19 43 57.9	
	comp=Z,14nm,1.4s						
SPB2	**Spitsbergen Ar**	**69.42**	**348**	P	**P**	**19 43 28.1**	**-0.5**
SPITS	**Spitsbergen Ar**	**69.42**	**348**	P	**P**	**19 43 27.7**	**-1.0**
	comp=Z,12nm,1.0s,baz=75,slow=9.6,SNR=10						
	comp=Z,12nm,1.0s						
SCRK	**Sand Creek**	**69.67**	**28**	P	**P**	**19 43 30.1**	**-0.5**
I26K	**Coal Creek Min**	**69.69**	**27**	P	**P**	**19 43 30.5**	**0.0**
I26K				IAmb	IAmb	19 43 33.2	
	comp=Z,8.0nm,1.4s						
ARCES	**ARCESS Array B**	**69.72**	**338**	P	**P**	**19 43 30.4**	**-0.2**
	comp=Z,3.4nm,0.8s,baz=58,slow=5.8,SNR=9.8						
	comp=Z,3.4nm,0.8s						
ARCES	**ARCESS Array B**	**69.72**	**338**	P	**P**	**19 43 30.3**	**-0.3**
KBS	**Kingsbay**	**69.94**	**349**	P	**P**	**19 43 32.1**	**+0.3**
H27K	**Steamboat Moun**	**70.10**	**25**	P	**P**	**19 43 34.0**	**+1.0**
E28M	**Babbage River**	**70.18**	**23**	P	**P**	**19 43 34.3**	**+0.8**
F28M	**Old Crow**	**70.34**	**24**	P	**P**	**19 43 35.1**	**+0.6**
GLB	**Gilahina Butte**	**70.39**	**31**	P	**P**	**19 43 35.1**	**+0.2**
GLB				IAmb	IAmb	19 44 03.0	
	comp=Z,13nm,1.4s						
M26K	**Nabesna, AK**	**70.51**	**30**	P	**P**	**19 43 36.6**	**+0.9**
VRDI	**Verde Repeater**	**70.62**	**31**	P	**P**	**19 43 37.2**	**+0.8**
VRDI				IAmb	IAmb	19 44 05.3	
	comp=Z,14nm,1.4s						
BCAR	**Beaver Creek A**	**70.86**	**29**	P	**P**	**19 43 39.1**	**+1.4**
FIA1	**FINESS Array S**	**71.83**	**330**	P	**P**	**19 43 43.2**	**-0.3**
FINES	**FINESS Array B**	**71.83**	**330**	P	**P**	**19 43 43.5**	**0.0**
	comp=Z,2.1nm,0.3s,baz=52,slow=5.7,SNR=56						
	comp=Z,2.1nm,0.3s						
FINES	**FINESS Array B**	**71.83**	**330**	P	**P**	**19 43 43.3**	**-0.2**
BRTR	**Keskin Array B**	**74.06**	**307**	P	**P**	**19 43 57.2**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=50,slow=9.0,SNR=2.0						
	comp=Z,0.4nm,0.6s						
WHY	**Whitehorse**	**74.75**	**30**	P	**P**	**19 44 01.8**	**+0.9**
WHY				IAmb	IAmb	19 44 03.1	
	comp=Z,7.2nm,0.9s						
PABE	**Paberze**	**74.86**	**324**	P	**P**	**19 44 01.5**	**+0.1**
HFS	**Hagfors**	**77.92**	**331**	P	**P**	**19 44 18.1**	**-0.5**
	comp=Z,1.3nm,0.4s,baz=79,slow=7.7,SNR=14						
	comp=Z,1.3nm,0.4s						
AKAS	**Kas**	**78.26**	**304**	P	**P**	**19 44 19.6**	**-1.5**
NC405	**NORSAR Array S**	**78.30**	**332**	P	**P**	**19 44 19.9**	**-0.8**
WRGLY	**Wrigley**	**78.37**	**25**	P	**P**	**19 44 21.5**	**+0.4**
WRGLY				IAmb	IAmb	19 44 29.9	
	comp=Z,9.1nm,0.6s						
NB2	**NORSAR Subarra**	**78.55**	**332**	P	**P**	**19 44 21.1**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=54,slow=5.9						
NOA	**NORSAR Array B**	**78.55**	**332**	P	**P**	**19 44 21.2**	**-0.9**
	comp=Z,1.4nm,0.6s,baz=57,slow=5.7,SNR=7.7						
	comp=Z,1.4nm,0.6s						
NC204	**NORSAR Array S**	**78.61**	**333**	P	**P**	**19 44 22.0**	**-0.5**
YKAW3	**Yellowknife Wh**	**82.06**	**23**	IAmb	IAmb	19 44 41.9	
	comp=Z,3.6nm,0.7s						
YKA	**Yellowknife Ar**	**82.10**	**23**	P	**P**	**19 44 41.0**	**-0.1**
	comp=Z,2.0nm,0.8s,baz=311,slow=5.6,SNR=26						
	comp=Z,2.0nm,0.8s						
CLL	**Collm**	**82.59**	**323**	*e*P	**P**	**19 44 45.0**	**+1.2**
GERES	**GERESS Array B**	**83.43**	**321**	P	**P**	**19 44 49.0**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=48,slow=5.1,SNR=2.3						
	comp=Z,0.4nm,0.5s						
LTY	**Liberty**	**88.61**	**38**	P	**P**	**19 45 15.1**	**+1.3**
LTY				IAmb	IAmb	19 45 15.6	
	comp=Z,6.5nm,0.8s						
G06A	**Carlson Farm,**	**89.80**	**39**	P	**P**	**19 45 20.7**	**+1.3**
J08A	**Circle Bar Ran**	**92.16**	**40**		**P**	**19 45 31.1**	**+0.6**
FFC	**Flin Flon**	**92.25**	**24**		**P**	**19 45 30.3**	**-0.2**
PLID	**Pearl Lake**	**92.50**	**37**	P	**P**	**19 45 33.5**	**+1.3**
PLID				IAmb	IAmb	19 45 36.4	
	comp=Z,2.2nm,0.8s						
PDAR	**Pinedale Array**	**97.53**	**36**	P	**P**	**19 45 56.0**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=80,slow=1.3,SNR=3.7						
	comp=Z,0.3nm,0.6s						

SJA ***06*** *20:00:37.9±0.7, 24°.19S×66°.94W, h210^{km}±6^{km}, ML3.7, MW3.6*

GUC ***06*** *20:00:39.7±0.5, 24°.18S×67°.00W, h196^{km}±4^{km}, ML4.2*

ISC 06 20:00:37.1±1.8**, 24°.18S**±0°.04×**66°.96W**±0°.05**, h217**^{km}±13^{km}**, n37,** σ**1^{s}46**/59**, 6C-2D, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALTA		**0.57**	**95**⇓	*e*P	**Pn**	**20 01 07.1**	**0.0**
SALTA				*e*S	**S**	**20 01 28.6**	**-1.8**
SALTA		**0.57**	**95**	*e*P	**Pn**	**20 01 07.1**	**0.0**
SALTA				*e*P		20 01 07.2	
SLA	**San Lorenzo**	**1.43**	**112**⇓	*e*P	**Pn**	**20 01 12.5**	**+0.5**
SLA				*e*S	**S**	**20 01 37.8**	**-1.2**
SLA	**San Lorenzo**	**1.43**	**112**	*e*P	**Pn**	**20 01 12.7**	**+0.7**
AF01	**San Pedro de A**	**1.66**	**317**	*e*P	Pn	20 01 00.8	-13
AF01				*e*S	**S**	**20 01 44.9**	**+2.2**
AF01				IAML		20 02 04.4	
	comp=Z,146nm,0.2s						
AZAP	**Zapla**	**1.73**	**92**	*e*P	**Pn**	**20 01 15.0**	**+0.3**
FSA	**Cafayete**	**2.12**	**155**	*e*P	**Pn**	**20 01 18.9**	**+0.5**
YJA	**Yavi**	**2.40**	**34**	*e*P	**Pn**	**20 01 23.2**	**+1.7**
YJA				*e*S	**S**	**20 01 55.5**	**-0.4**
YJA	**Yavi**	**2.40**	**34**	*e*P	**Pn**	**20 01 23.5**	**+2.0**
GO02	**Mina Guanaco**	**2.58**	**247**⇑	*e*P	**Pn**	**20 01 24.5**	**+1.1**
GO02				*e*S	**S**	**20 01 59.0**	**-0.2**
GO02				IAML		20 02 00.7	
	comp=E,665nm,0.1s						
GO02	**Mina Guanaco**	**2.58**	**247**	*e*P	**Pn**	**20 01 24.5**	**+1.1**
GO02				*e*S	**S**	**20 01 59.3**	**+0.1**
GO02				IAML		20 02 00.4	
	comp=Z,156nm,0.1s						
ALOL	**LOMAS DE OLMED**	**2.75**	**83**	*e*P	Pn	20 01 31.7	+6.8
ALOL				*e*S	S	20 02 11.1	+9.2
PB06	**IPOC Station P**	**2.81**	**301**⇑	*i*P	**Pn**	**20 01 27.2**	**+1.4**
PB06				*e*S	**S**	**20 02 02.3**	**-1.1**
PB06				IAML		20 02 04.8	
	comp=E,883nm,0.1s						
PB06	**IPOC Station P**	**2.81**	**301**	*e*P	**Pn**	**20 01 27.1**	**+1.4**
PB06				*e*S	**S**	**20 02 02.4**	**-1.0**
PB06				IAML		20 02 04.9	
	comp=Z,375nm,0.1s						
AHML	**Horco Molle**	**2.98**	**151**	*e*P	Pn	20 01 13.3	-14
PB09	**IPOC Station P**	**3.17**	**318**	*e*P	**Pn**	**20 01 32.0**	**+2.2**
PB09				*e*S	**S**	**20 02 10.9**	**0.0**
PB09				IAML		20 02 12.4	
	comp=N,183nm,0.5s						
PB09	**IPOC Station P**	**3.17**	**318**	*e*P	**Pn**	**20 01 31.6**	**+1.8**
PB09				*e*S	**S**	**20 02 11.1**	**+0.2**
PB09				IAML		20 02 13.9	
	comp=Z,122nm,0.4s						
PB14	**IPOC Station P**	**3.17**	**261**⇑	*e*P	**Pn**	**20 01 30.8**	**+0.8**
PB14				*e*S	**S**	**20 02 09.5**	**-1.6**
PB14	**IPOC Station P**	**3.17**	**261**	*e*P	**Pn**	**20 01 30.9**	**+0.9**
PB14				*e*S	**S**	**20 02 10.3**	**-0.8**
PB14				IAML		20 02 15.5	
	comp=Z,64nm,0.3s						
PB05	**IPOC Station P**	**3.26**	**293**⇑	*e*P	**Pn**	**20 01 32.0**	**+1.2**
PB05				*e*S	**S**	**20 02 10.4**	**-2.2**
PB05	**IPOC Station P**	**3.26**	**293**	*e*P	**Pn**	**20 01 32.0**	**+1.2**
PB05				*e*S	**S**	**20 02 11.8**	**-0.7**
PB05				IAML		20 02 19.0	
	comp=Z,105nm,0.3s						
AC02	**Maricunga**	**3.29**	**216**⇑	*e*P	**Pn**	**20 01 33.0**	**+1.5**
AC02	**Maricunga**	**3.29**	**216**	*e*P	**Pn**	**20 01 33.0**	**+1.5**
AC02				IAML		20 02 01.9	
	comp=Z,216nm,1.2s						
AC02				*e*S	S	20 02 02.2	-12
PB03	**IPOC Station P**	**3.33**	**309**	*e*P	**Pn**	**20 01 33.1**	**+1.3**
PB03				*e*S	**S**	**20 02 12.6**	**-1.7**
PB03	**IPOC Station P**	**3.33**	**309**	*e*P	**Pn**	**20 01 33.2**	**+1.5**
PB03				*e*S	S	20 01 54.8	-20
PB03				IAML		20 02 14.2	
	comp=Z,334nm,0.2s						
PB10	**IPOC Station P**	**3.36**	**281**⇑	*e*P	**Pn**	**20 01 33.2**	**+1.3**
PB10				*e*S	**S**	**20 02 13.9**	**-0.6**
PB10	**IPOC Station P**	**3.36**	**281**	*e*P	**Pn**	**20 01 33.1**	**+1.3**
PB10				*e*S	**S**	**20 02 13.9**	**-0.6**
PB10				IAML		20 02 15.8	
	comp=Z,51nm,0.1s						
PB07	**IPOC Station P**	**3.64**	**312**	*e*P	**Pn**	**20 01 36.7**	**+1.3**
PB07				*e*S	**S**	**20 02 18.9**	**-1.9**
PB07				IAML		20 02 23.7	
	comp=Z,201nm,0.4s						
AC01	**Pan de Azucar**	**3.83**	**239**	*e*P	**Pn**	**20 01 37.8**	**+0.3**
AC01				*e*S	**S**	**20 02 23.7**	**-1.1**
AC01				IAML		20 02 25.5	
	comp=Z,46nm,0.3s						
PB01	**IPOC Station P**	**3.90**	**323**	*e*P	**Pn**	**20 01 39.7**	**+1.2**
PB01				*e*S	**S**	**20 02 25.6**	**-0.8**
PB01				IAML		20 02 28.8	
	comp=Z,94nm,0.1s						
TINO	**Tinogasta**	**3.91**	**188**	*e*P	**Pn**	**20 01 40.9**	**+2.3**
PB02	**IPOC Station P**	**3.93**	**316**	*e*P	**Pn**	**20 01 39.9**	**+1.1**
PB02				*e*S	**S**	**20 02 25.4**	**-1.7**
PB02				IAML		20 02 28.6	
	comp=Z,210nm,0.1s						
CYA	**Choya**	**4.37**	**166**	*e*P	**Pn**	**20 01 45.7**	**+1.6**
PATCX	**Punta Patache**	**4.46**	**318**	*e*P	**Pn**	**20 01 46.6**	**+1.3**
PATCX				*e*S	**S**	**20 02 35.2**	**-3.7**
PATCX				IAML		20 02 42.4	
	comp=Z,45nm,0.3s						
GO03	**Copiapo**	**4.50**	**220**	*e*P	**Pn**	**20 01 46.0**	**+0.3**
GO03				*e*S	**S**	**20 02 37.5**	**-2.3**
GO03				IAML		20 02 40.9	
	comp=Z,49nm,0.3s						
HMBC	**Humberstone**	**4.74**	**324**	*e*P	**Pn**	**20 01 49.1**	**+0.2**
HMBC				*e*S	**S**	**20 02 42.4**	**-2.9**
HMBC				IAML		20 02 48.3	
	comp=Z,96nm,0.3s						
PB11	**IPOC Station P**	**5.06**	**330**	*e*P	**Pn**	**20 01 53.5**	**+0.6**
PB11				*e*S	**S**	**20 02 50.6**	**-2.1**
PB11				IAML		20 03 37.1	
	comp=Z,50nm,2.0s						

SDD ***06*** *20:02:50.1±2.5, 20°.10N×70°.42W, h15^{km}±56^{km}, MD3.0, ML2.9, MW3.0, Presumed earthquake*

OSPL ***06*** *20:02:52.5±1.9, 19°.98N×70°.49W, h5^{km}±10^{km}, ML2.0, Presumed earthquake*

ISC 06 20:02:50.3±1.5**, 20°.02N**±0°.05×**70°.43W**±0°.05**, h12**^{km}±10^{km}**, n12,** σ**1^{s}19**/20**, 13C, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SODR	**Sosua Marina B**	**0.30**	**207**⇑	*e*Pg	**Pg**	**20 02 56.0**	**-0.4**
SODR				⇑*e*Sg	**Sg**	**20 03 02.4**	**+1.8**
SODR				IAML		20 03 05.6	
	comp=N,508nm,0.6s						
LUDR	**Luperon**	**0.51**	**255**⇑	*e*Pg	**Pb**	**20 03 01.6**	**+0.5**
LUDR				⇑*e*Sg	**Sg**	**20 03 07.5**	**+0.5**
SC01	**Santiago de lo**	**0.66**	**205**⇑	*e*Sg	**Sg**	**20 03 12.6**	**+0.9**
SC01				IAML		20 03 22.5	
	comp=N,118nm,0.8s						
SC01	**Santiago de lo**	**0.66**	**205**	*e*S	**Sg**	**20 03 11.9**	**+0.3**
LOPP1	**Punta Rusia, P**	**0.74**	**257**	*i* P	**Pg**	**20 03 04.1**	**-0.6**
LOPP1				*e*S	**Sg**	**20 03 13.9**	**-0.4**
LOPP1				IAML		20 03 17.9	
	comp=Z,72nm,0.6s						
DR08	**Loma La Naviza**	**1.12**	**160**⇑	*e*Pg	**Pb**	**20 03 10.8**	**-1.0**
DR08				⇑*e*Sg	**Sb**	**20 03 25.6**	**-0.8**
DR08				IAML		20 03 28.7	
	comp=N,1µm,0.3s						
SDDR	**Presa de Saban**	**1.31**	**218**	*e*S	**Sb**	**20 03 29.8**	**-2.0**
HATOM	**Hato Mayor del**	**1.58**	**141**⇑	*e*Pg	**Pn**	**20 03 17.6**	**-0.6**
HATOM				⇑*e*Sg	**Sn**	**20 03 40.0**	**+1.3**
HATOM				IAML		20 03 40.5	
	comp=N,295nm,0.3s						
GRTK	**Grand Turk**	**1.62**	**336**	*e*S	**Sb**	**20 03 40.9**	**+0.3**
MIDR	**Miches**	**1.67**	**128**⇑	*e*Pg	**Pn**	**20 03 18.6**	**-0.8**
MIDR				⇑*e*Sg	**Sn**	**20 03 42.9**	**+2.2**
MIDR				IAML		20 04 07.4	
	comp=N,20nm,2.2s						
LONE3	**El Aguacate, B**	**1.71**	**215**	*i* P	**Pn**	**20 03 19.4**	**-0.7**
LONE3				*e*S	**Sn**	**20 03 41.6**	**-0.5**
LONE3				IAML		20 03 44.6	
	comp=Z,19nm,0.9s						
PODR	**Polo**	**2.02**	**204**⇑	*e*Pg	**Pn**	**20 03 25.2**	**+0.9**
PODR				⇑*e*Sg	**Sb**	**20 03 53.8**	**+1.6**
PODR				IAML		20 03 55.3	
	comp=N,322nm,0.3s						

IDC ***06*** *20:04:12.5±3.0, 6°.33S×102°.65E, h0^{km}, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=117.8km s-min=20.3km az=48.0*

DJA ***06*** *20:04:19.1±0.3, 6°S±3°×10°3E±°, h10^{km}, M4.1/16, mB5.1/1, mb4.2/9, MLv4.0/16, Mw(mB)4.4/1*

ISC 06 20:04:21.2±1.0**, 5°.83S**±0°.09×**103°.40E**±0°.08**, h38**^{km}**, n39,** σ**1^{s}19**/36**, mb3.5**/6**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LWLI	**Liwa**	**1.03**	**39**	P	**Pn**	**20 04 38.1**	**-1.2**
LWLI				S	**Sn**	**20 04 51.2**	**-1.4**
KASI	**Kota Agung**	**1.13**	**75**	P	**Pn**	**20 04 39.5**	**-1.0**
KASI				S	**Sn**	**20 04 53.9**	**-0.9**
MNAI	**Manna**	**1.52**	**343**	P	**Pn**	**20 04 46.3**	**+0.4**
MNAI				S	**Sn**	**20 05 05.7**	**+1.2**
MDSI	**Maura Dua**	**1.54**	**30**	P	**Pn**	**20 04 45.6**	**-0.5**
MDSI				S	**Sn**	**20 05 05.5**	**+0.6**
KLI	**Kotabumi**	**1.74**	**57**	P	**Pn**	**20 04 48.5**	**-0.4**
KLSI		**1.74**	**50**	P	**Pn**	**20 04 49.6**	**+0.7**
BLSI	**Bandar Lampung**	**1.89**	**76**	P	**Pn**	**20 04 51.2**	**+0.2**
KSI	**Kapahiang**	**2.30**	**340**	P	**Pn**	**20 04 57.2**	**+0.5**
MASI	**Maura Aman, Be**	**2.91**	**336**	P	**Pn**	**20 05 05.0**	**0.0**
DBJI	**Dramaga**	**3.41**	**102**	P	**Pn**	**20 05 12.9**	**+1.0**
CNJI	**Cibinong**	**3.99**	**112**	P	**Pn**	**20 05 19.6**	**-0.2**
KRJI	**Kerinci**	**4.18**	**332**	P	**Pn**	**20 05 24.1**	**+1.5**
BBJI	**Bungbulang**	**4.52**	**111**	P	**Pn**	**20 05 27.8**	**+0.5**
PPSI	**Pulau Pagai**	**4.55**	**312**	P	**Pn**	**20 05 27.1**	**-0.5**
TPI	**Tanjungpandan**	**5.22**	**54**	P	**Pn**	**20 05 35.5**	**-1.3**
	0.2nm30nm,1.0s						
KPJI	**Karang Pucung**	**5.69**	**106**	P	**Pn**	**20 05 43.2**	**-0.1**
PDSI	**Padang**	**5.70**	**329**	P	**Pn**	**20 05 42.0**	**-1.3**
	0.1nm16nm,0.5s						
PPI	**Padang Panjang**	**6.12**	**331**	P	**Pn**	**20 05 52.3**	**+3.2**
SISI	**Saibi**	**6.20**	**316**	P	**Pn**	**20 05 48.6**	**-1.7**
	0.2nm26nm,1.0s						
UGM	**Wanagama**	**7.37**	**107**	P	**Pn**	**20 06 08.1**	**+1.7**
	29nm,1.7s						
PCJI	**Pacitan**	**8.07**	**107**	P	**Pn**	**20 06 16.9**	**+1.0**
	18nm,2.4s						
SNJI	**Sawahan-Nganju**	**8.52**	**104**	P	**Pn**	**20 06 24.4**	**+2.1**
	8.4nm,0.6s						
GMJI	**Gumukmas**	**10.26**	**104**	P	**Pn**	**20 06 45.5**	**-0.5**
	10nm,1.0s						
JAGI	**Jajag, Banyuwa**	**10.99**	**104**	P	**Pn**	**20 06 56.6**	**+0.6**
	642nm15nm,0.9s						
TWSI	**Taliwang, Sumb**	**13.68**	**103**	P	**Pn**	**20 07 34.1**	**+1.3**
BATI	**Baumata**	**20.53**	**104**	P	Pn	20 08 59.3	+0.4
	7.1nm,0.3s,baz=284,slow=12,SNR=4.1						
	7.1nm,0.3s						
H08S2	**Diego Garcia H**	**30.74**	**265**	T	T	20 42 01.8	
	baz=88,slow=74						
H08S3	**Diego Garcia H**	**30.75**	**265**	T	T	20 42 05.1	
	baz=88,slow=74						
H08S1	**Diego Carcia H**	**30.76**	**265**	T	T	20 42 02.5	
	baz=88						
WRA	**Warramunga Arr**	**33.18**	**118**	P	**P**	**20 10 54.4**	**-0.1**
	0.4nm,0.7s,baz=287,slow=10.0,SNR=5.2						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**34.29**	**124**	P	**P**	**20 11 04.0**	**-0.2**
	0.3nm,0.4s,baz=305,slow=7.2,SNR=5.7						
	0.3nm,0.4s						
SONM	**Songino Array**	**53.49**	**3**	P	**P**	**20 13 38.8**	**+0.9**
	0.2nm,0.5s,baz=178,slow=6.9,SNR=2.0						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**55.64**	**343**	P	**P**	**20 13 52.2**	**-1.2**
	0.5nm,0.4s,baz=153,slow=8.2,SNR=14						
	0.5nm,0.4s						
H04N2	**CROZET ISLANDS**	**59.87**	**219**	T	T	21 18 59.7	
	baz=65,slow=74						
H04N1	**CROZET ISLANDS**	**59.88**	**219**	T	T	21 18 59.4	
	baz=65						
H04N3	**CROZET ISLANDS**	**59.88**	**219**	T	T	21 19 03.1	
	baz=65,slow=74						
KURBB	**Kurchatov Arra**	**60.18**	**342**	P	**P**	**20 14 23.0**	**-2.1**
	0.2nm,0.6s,baz=167,slow=5.7,SNR=2.8						
	0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**61.57**	**348**	P	**P**	**20 14 33.8**	**-0.7**
	0.7nm,0.4s,baz=161,slow=5.4,SNR=2.4						
	0.7nm,0.4s						
TXAR	**Lajitas Array**	**145.36**	**44**	PKPbc	**PKPab**	**20 23 55.8**	**-0.2**
	0.1nm,0.4s,baz=287,slow=2.0,SNR=4.1						

HEL 06 20:05:31.9±0.3**, 67°.87N**×**33°.27E, h0**^{km}**, ML1.1, Suspected explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVZ	**Lovozero**	**0.52**	**86**	PG	Pg	20 05 41.4	-0.5
VRF	**Varrio**	**1.40**	**267**	PG	Pn	20 05 57.0	-1.6
	baz=83						
VRF				MSG		20 06 13.9	
	comp=Z,1.7nm,0.2s						
VRF				SG	Sg	20 06 16.6	-0.1
RAJF	**Raja-Jooseppi**	**1.95**	**290**	PG	Pn	20 06 06.5	+0.3
RAJF				SG	Sb	20 06 33.3	+0.2
OLKF	**Oulanka, Finla**	**2.17**	**226**	PN	Pn	20 06 07.4	-1.9
	baz=41						
OLKF				MSG		20 06 36.2	
	comp=Z,1.0nm,0.2s						
OLKF				SN	Sn	20 06 36.8	0.0
KU6	**Riekki**	**2.28**	**217**	SN	Sn	20 06 37.8	-1.7
KU6				MSG		20 06 39.5	
	comp=Z,0.5nm,0.2s						
MSF	**Maaselka**	**2.58**	**222**	SN	Sn	20 06 47.2	+0.3
KALU	**Kalix**	**4.40**	**247**	PN	Pn	20 06 38.2	-1.6

DNK ***06*** *20:05:43.2±0.5, 67°.19N×20°.67E, h0^{km}, ML2.9(UPP), Suspected explosion*

HEL ***06*** *20:05:43.0±0.3, 67°.17N×20°.60E, h0^{km}, ML1.3, Suspected explosion*

UPP 06 20:05:42.8±0.0**, 67°.19N**×**20°.66E, h0**^{km}**, ML2.9, Confirmed Induced event, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.08**	**206**	P	Pg	20 05 44.6	+0.4
DUNU				S	Sg	20 05 45.9	+0.6
DUNU	**Dundret**	**0.08**	**206**	P	Pg	20 05 44.6	+0.4
DUNU				S	Sg	20 05 45.9	+0.6
MASU	**Masugnsbyn**	**0.58**	**62**	P	Pg	20 05 54.1	+0.1
MASU	**Masugnsbyn**	**0.58**	**62**	P	Pg	20 05 54.1	+0.1
RATU	**Laukkuluspa**	**0.76**	**328**	P	Pg	20 05 57.0	-0.3
RATU	**Laukkuluspa**	**0.76**	**328**	P	Pg	20 05 57.0	-0.3
KUA	**Kurravaara**	**0.78**	**351**	P	Pg	20 05 57.4	-0.2
KUA	**Kurravaara**	**0.78**	**351**	P	Pg	20 05 57.4	-0.2
SALU	**Saltoluokta**	**0.86**	**284**	P	Pg	20 05 58.9	-0.2
SALU	**Saltoluokta**	**0.86**	**284**	P	Pg	20 05 58.9	-0.2
ERTU	**Ertsjaerv**	**0.88**	**136**	P	Pg	20 05 58.9	-0.7
ERTU	**Ertsjaerv**	**0.88**	**136**	P	Pg	20 05 58.9	-0.7
ERTU	**Ertsjaerv**	**0.88**	**136**	PG	Pg	20 05 59.0	-0.7
	baz=314						
ERTU				SB	Sg	20 06 10.7	-0.3
NIKU	**Nikkaluokta**	**0.92**	**318**	P	Pg	20 06 00.0	-0.4
NIKU	**Nikkaluokta**	**0.92**	**318**	P	Pg	20 06 00.0	-0.4
PAJU	**Pajala**	**0.97**	**99**	P	Pg	20 06 01.0	-0.5
PAJU	**Pajala**	**0.97**	**99**	P	Pg	20 06 01.0	-0.5
PAJU	**Pajala**	**0.97**	**99**	PG	Pg	20 06 00.9	-0.5
PAJU				SG	Sg	20 06 14.1	0.0
LANU	**Lannavaara**	**1.00**	**30**	P	Pg	20 06 01.4	-0.5
LANU	**Lannavaara**	**1.00**	**30**	P	Pg	20 06 01.4	-0.5
LANU	**Lannavaara**	**1.00**	**30**	PG	Pg	20 06 01.4	-0.6
LANU				SB	Sb	20 06 16.7	0.0
HARU	**Harads**	**1.04**	**173**	P	Pg	20 06 01.8	-0.9
HARU	**Harads**	**1.04**	**173**	P	Pg	20 06 01.8	-0.9
KLF	**Kolari**	**1.29**	**87**	PG	Pg	20 06 06.3	-1.1
KLF				MSG		20 06 22.7	
	comp=Z,0.9nm,0.2s						
KLF				SG	Sg	20 06 23.6	-0.6
HEF	**Hetta**	**1.67**	**42**	PG	Pn	20 06 13.3	0.0
HEF				MSG		20 06 34.1	
	comp=Z,1.7nm,0.2s						
HEF				SG	Sn	20 06 35.1	-0.3
KALU	**Kalix**	**1.72**	**140**	P	Pn	20 06 14.1	+0.2
KALU	**Kalix**	**1.72**	**140**	P	Pn	20 06 14.1	+0.2
KALU	**Kalix**	**1.72**	**140**	PG	Pn	20 06 14.3	+0.4
KALU				SG	Sn	20 06 32.8	-3.7
SJUU	**Sjulsmark**	**1.73**	**167**	P	Pn	20 06 14.1	0.0
SJUU	**Sjulsmark**	**1.73**	**167**	P	Pn	20 06 14.1	0.0
KIF	**Kilpisjarvi**	**1.82**	**2**	PG	Pb	20 06 17.0	0.0
KIF				MSG		20 06 39.2	

	comp=Z,2.8nm,0.2s						
KIF				SG	Sg	20 06 42.0	+0.8
TOF	Tornio	1.84	126	PG	Pn	20 06 15.9	+0.4
TOF				MSG		20 06 37.9	
	comp=Z,1.3nm,0.2s						
TOF				SG	Sb	20 06 40.8	+0.1
RNF	Rovaniemi	2.19	103	PG	Pn	20 06 21.8	+1.4
RNF				SG	Sb	20 06 51.2	+0.3
TRO	Tromso	2.54	346	SG	Sb	20 07 02.4	+1.7
BURU	Burvik	2.64	173	PB	Pn	20 06 27.9	+1.4
RANF	Ranua	2.72	113	SG	Sb	20 07 05.6	-0.4
MSF	Maaselka	3.59	107	SG	Sg	20 07 34.9	-3.0

NEIC ***06*** *20:07:14.9±2.2, 19°.3N±0°.1×64°.47W±0°.04, h35km±2km, ML3.4/26, Md3.6/15(RSPR), Error ellipse: s-maj=18.0km s-min=3.3km az=198.0*

TRN ***06*** *20:07:16.9, 19°.04N×64°.82W, h21km, MD0.0, North of the British Virgin Islands.*

RSPR ***06*** *20:07:17.2, 19°.41N×64°.65W, h16km±6km, MD3.6/15*

ISC 06 20:07:11.7±1.4**, 19°.35N**±0°.09×**64°.48W**±0°.05**, h27km, n79, σ2s.78**/87**, 5C-7D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUMP	Col San Antoni	1.77	228		Sn	20 08 03.6	+1.4
HUMP	Col San Antoni	1.77	228		Pn	20 07 43.1	+2.6
HUMP				IAML		20 08 04.4	
	342nm,0.2s						
HUMP				IAML		20 08 05.0	
	393nm,0.2s						
HUMP	Col San Antoni	1.77	228	⇑iP	Pn	20 07 43.3	+2.8
HUMP	Col San Antoni	1.77	228	eS	Sn	20 08 03.6	+1.4
GCPR	Guaynabo City	1.84	236		Sn	20 08 03.7	-0.2
GCPR	Guaynabo City	1.84	236		Pn	20 07 43.4	+1.9
GCPR	Guaynabo City	1.84	236	⇓iP	Pn	20 07 43.6	+2.1
GCPR	Guaynabo City	1.84	236	eS	Sn	20 08 03.7	-0.2
SJG	San Juan	2.01	232		Pn	20 07 45.4	+1.6
SJG				IAML		20 08 12.2	
	153nm,0.2s						
SJG	San Juan	2.01	232	⇑iP	Pn	20 07 46.9	+3.1
SJG	San Juan	2.01	232	eS	Sn	20 08 08.4	+0.3
SJG	San Juan	2.01	232	eP	Pn	20 07 45.4	+1.6
SJG				eS	Sn	20 08 04.9	-3.2
ECPR	Experimental S	2.06	240	⇑iP	Pn	20 07 46.8	+2.3
ECPR	Experimental S	2.06	240	eS	Sn	20 08 10.0	+0.6
SABA	Saba	2.08	146	Pn	Pn	20 07 46.5	+1.7
SABA				IAML		20 08 39.7	
	comp=N,204nm,0.5s						
SABA				IAML		20 08 41.2	
	comp=E,349nm,0.8s						
EMPR	Esperanza - Ma	2.13	246		Pn	20 07 48.1	+2.6
EMPR					Sn	20 08 11.9	+0.8
EMPR	Esperanza - Ma	2.13	246	IAML		20 08 20.4	
	comp=E,284nm,0.6s						
EMPR				IAML		20 08 22.9	
	comp=E,232nm,0.6s						
EMPR	Esperanza - Ma	2.13	246	⇓iP	Pn	20 07 48.1	+2.6
EMPR	Esperanza - Ma	2.13	246	eS	Sn	20 08 11.9	+0.8
AOPR	Arecibo Observ	2.38	246		Pn	20 07 50.8	+1.9
AOPR					Sn	20 08 17.2	0.0
AOPR				IAML		20 08 34.5	
	comp=N,356nm,0.3s						
AOPR				IAML		20 08 34.5	
	comp=E,517nm,0.3s						
AOPR	Arecibo Observ	2.38	246	⇑eP	Pn	20 07 51.1	+2.2
AOPR	Arecibo Observ	2.38	246	eS	Sn	20 08 18.6	+1.3
AOPR	Arecibo Observ	2.38	246	eP	Pn	20 07 51.1	+2.2
AOPR				eS	Sn	20 08 16.4	-0.8
UUPR	Utuado, UPR, P	2.39	243		Pn	20 07 52.1	+3.0
UUPR					Sn	20 08 20.8	+3.3
UUPR	Utuado, UPR, P	2.39	243	⇑eP	Pn	20 07 52.1	+3.0
UUPR	Utuado, UPR, P	2.39	243	eS	Sn	20 08 20.8	+3.3
OBIP	Obispado Ponce	2.40	238		Pn	20 07 50.3	+1.1
OBIP					Sn	20 08 17.4	-0.4
OBIP				IAML		20 08 21.4	
	comp=E,140nm,0.5s						
OBIP	Obispado Ponce	2.40	238	⇓eP	Pn	20 07 52.2	+2.9
OBIP	Obispado Ponce	2.40	238	eS	Sn	20 08 18.1	+0.3
SKI	Saint Kitts	2.60	140	eP	Pb	20 07 59.7	+2.2
SKI				eS	Sb	20 08 30.6	+1.5
SKOC	St. Kitts, UWI	2.63	141	eS	Sb	20 08 32.6	+2.5
AGPR	Aguadilla, PR	2.65	251	⇓eP	Pn	20 07 54.9	+2.4
AGPR	Aguadilla, PR	2.65	251	eS	Sn	20 08 24.2	+0.4
LSP	Las Mesas	2.74	245		Pn	20 07 56.8	+3.0
LSP					Sn	20 08 27.3	+1.2
LSP	Las Mesas	2.74	245	⇑eP	Pn	20 07 56.8	+3.0
LSP	Las Mesas	2.74	245	eS	Sn	20 08 27.3	+1.2
MLPR	Magueyes Islan	2.80	241	⇑eP	Pn	20 07 57.3	+2.7
MLPR	Magueyes Islan	2.80	241	eS	Sn	20 08 27.9	+0.4
CRPR	Cabo Rojo, PR	2.83	242		Sn	20 08 29.7	+1.3
CRPR	Cabo Rojo, PR	2.83	242		Pn	20 07 57.1	+2.0
CRPR				IAML		20 08 38.0	
	comp=E,74nm,0.4s						
CRPR	Cabo Rojo, PR	2.83	242	⇓eP	Pn	20 07 58.2	+3.0
CRPR	Cabo Rojo, PR	2.83	242	eS	Sn	20 08 29.7	+1.3
IDE	Isla Desecheo	3.00	252		Pn	20 07 59.4	+2.0
IDE					Sn	20 08 31.3	-1.2
IDE	Isla Desecheo	3.00	252	⇓iP	Pn	20 07 59.4	+2.0
IDE	Isla Desecheo	3.00	252	eS	Sn	20 08 31.3	-1.2
ANWB	Willy Bob	3.05	123	Pn	Pn	20 07 59.0	+0.8
ANWB				IAML		20 08 31.3	
	comp=E,57nm,3.1s						
ANWB	Willy Bob	3.05	123	eP	Pb	20 08 07.3	+2.0
ANWB				eS	Sb	20 08 45.4	+3.2
DHSZ	Broadband at M	4.00	139	eP	Pb	20 08 20.0	-1.6
DHSZ				eS	Sb	20 09 05.4	-4.2
DHSZ	Broadband at M	4.00	139	eS	Sb	20 09 05.4	-4.2
GDHS	Morne Mazeau,	4.00	139	Pn	Pn	20 08 12.2	+0.9
GDHS				IAML		20 09 11.1	
	comp=N,98nm,0.6s						
GDHS				IAML		20 09 30.8	
	comp=E,116nm,0.7s						
ABD	La Joyeuse, An	4.03	135	Pn	Pn	20 08 12.1	+0.4
ABD	La Joyeuse, An	4.03	135	eS	Sb	20 09 05.9	-4.5
ATGZ	Broadband at L	4.16	141	eP	Pb	20 08 22.4	-1.9
ATGZ				eS	Sb	20 09 09.4	-4.7
ATGZ	Broadband at L	4.16	141	eS	Sb	20 09 09.4	-4.7
MMLZ	Guadeloupe Bro	4.24	140	eP	Pb	20 08 21.9	-3.6
MMLZ				eS	Sb	20 09 10.8	-5.5
MMLZ	Guadeloupe Bro	4.24	140	eS	Sb	20 09 10.8	-5.5
CBE	Ff, Capester	4.26	140		Sb	20 09 12.4	-4.4
CBE	Ff, Capester	4.26	140	Pn	Pn	20 08 15.9	+1.1
CBE	Ff, Capester	4.26	140	eS	Sb	20 09 12.4	-4.4
MIDR	Miches	4.34	266	⇓eP	Pn	20 08 18.7	+2.8
MIDR	Miches	4.34	266	eS	Sn	20 09 04.8	-0.9
DSDZ	La Diserade, G	4.43	132	eP	Pb	20 08 25.6	-3.2
DSDZ				eS	Sb	20 09 16.2	-5.7
DSDZ	La Diserade, G	4.43	132	eS	Sb	20 09 16.2	-5.7
DR12	Loma Pena Alta	4.67	264	Pn	Pn	20 08 21.1	+0.6
DSLB	Salisbury	4.86	143	eP	Pn	20 08 30.7	+7.6
DSLB				eS	Sn	20 09 24.9	+6.3
DSLB	Salisbury	4.86	143	eS	Sn	20 09 24.9	+6.3
BANI	BANI	5.65	261	Pn	Pn	20 08 37.3	+3.3
SC01	Santiago de lo	5.90	272	Pn	Pn	20 08 38.7	+1.3
SDDR	Presa de Saban	6.45	268		Pn	20 08 47.9	+2.9
SDDR	Presa de Saban	6.45	268	⇑eP	Pn	20 08 48.2	+3.2
SDDR	Presa de Saban	6.45	268	eS	Sn	20 09 59.1	+1.3
SDDR	Presa de Saban	6.45	268	eP	Pn	20 08 48.0	+3.1
GRTK	Grand Turk	6.60	290	eP	Pn	20 08 46.6	-0.4
MASC	Masc	9.22	277	eP	Pn	20 09 21.3	-1.7
QMBU	Quimbuelo	9.77	277	eP	Pn	20 09 28.2	-2.3
MOAC	Moa	9.94	279	eP	Pn	20 09 30.5	-2.4
NMDO	Nuevo Mundo	9.96	279	eP	Pn	20 09 30.9	-2.1
RCC	Rio Carpintero	10.59	275	eP	Pn	20 09 39.5	-2.3
PINC	Pinares de May	10.71	278	eP	Pn	20 09 40.3	-3.0

DJA ***06*** *20:30:05.4±2.1, 19°N±9°×14°6E±°, h96km±18km, M5.2/51, mb5.2/51, mB5.7/6, Mw(mB)5.2/6*

BJI ***06*** *20:30:10.9, 18°.17N×146°.24E, h160km, mB4.8/1, mb4.3/22*

IDC ***06*** *20:30:17.9±0.4, 18°.57N×145°.71E, h168km±3km, mb3.9/29, mbtmp4.4/31, MS3.0/5, Error ellipse: s-maj=12.0km s-min=6.7km az=96.0*

NEIC ***06*** *20:30:18.5±1.8, 18°.63N±0°.05×145°.64E±0°.10, h167km±5km, mb4.6/140, Error ellipse: s-maj=13.6km s-min=6.5km az=77.0*

ISC 06 20:30:18.3±0.4**, 18°.59N**±0°.04×**145°.71E**±0°.07**, h171**km±4km**, n263, σ1s.12**/244**, mb4.6**/126**, 1C-4D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DPSS	Saipan	3.33	179	Pn	Pn	20 31 10.0	-0.6
DPSS				Sn	Sn	20 31 48.1	-3.2
GUMO	Guam	5.03	189	P	Pn	20 31 33.8	+1.2
	120nm,0.3s,baz=110,slow=4.5,SNR=24						
GUMO				S	Sn	20 32 31.1	+0.3
	306nm,0.3s,baz=183,slow=23,SNR=8.2						
GUMO				LR	LR	20 32 55.2	
	comp=Z,90nm,20.4s,baz=7.0,slow=31						
GUMO	Guam	5.03	189		Pn	20 31 32.1	-0.4
JCJ	Chichijima	9.07	340	P	Pn	20 32 15.0	-11
	68nm,0.4s,baz=109,slow=23,SNR=9.9						
JCJ				S	Sn	20 33 51.9	-15
	70nm,0.4s,baz=284,slow=22,SNR=8.1						
JCJ	Chichijima	9.07	340	Pn	Pn	20 32 24.4	-1.3
JCJ				Sn	Sn	20 34 02.6	-4.2
JHJ2	Mitsune	15.40	341		P	20 33 49.0	+1.6
PATS	Pohnpei	16.94	132	Pn	Pn	20 34 09.6	+4.1
INU	Inuyama	18.39	337	P	P	20 34 20.7	+0.4
INU				IAmb	IAmb	20 34 28.2	
	comp=Z,23nm,1.2s						
JGF	Kuroka	18.49	338	P	P	20 34 20.5	-0.9
JGF				IAmb	IAmb	20 34 29.1	
	comp=Z,13nm,0.8s						
MJAR	Matsushiro Arr	19.07	341	P	P	20 34 27.6	0.0
	comp=Z,1.8nm,0.5s,baz=169,slow=9.2,SNR=12						
MJAR				LR	LR	20 41 09.4	
	comp=Z,29nm,21.6s,baz=114,slow=34						
MJAR	Matsushiro Arr	19.07	341		P	20 34 26.7	-1.0
MAJO	Matsushiro	19.07	341		P	20 34 26.6	-1.1
MAJO				IAmb	IAmb	20 34 47.1	
	comp=Z,12nm,0.7s						
MJB9	Matsu-Tunnel	19.07	341		P	20 34 26.6	-1.1
MJB9				IAmb	IAmb	20 34 48.0	
	comp=Z,12nm,0.7s						
H11S3	WAKE ISLAND Hy	19.89	87	T	T	20 55 44.6	
	baz=274,slow=75,SNR=3.6						
H11S1	WAKE ISLAND Hy	19.91	87	T	T	20 55 50.8	
	baz=274,slow=75,SNR=3.8						
H11S2	WAKE ISLAND Hy	19.91	87	T	T	20 55 40.2	
	baz=274,slow=75,SNR=4.8						
H11N1	WAKE ISLAND Hy	20.05	83	T	T	20 56 10.7	
	baz=267						
H11N2	WAKE ISLAND Hy	20.05	83	T	T	20 56 21.6	
	baz=267						
H11N3	WAKE ISLAND Hy	20.06	83	T	T	20 56 17.4	
	baz=267						
MANU	Manus Island	20.56	175		P	20 34 43.4	-0.4
JAY	Jayapura	21.54	194	P	P	20 34 54.0	-0.2
	comp=Z,27nm,0.7s,baz=235,slow=4.8,SNR=10						
	comp=Z,27nm,0.7s						
JAY	Jayapura	21.54	194	P	P	20 34 53.5	-0.8
GENI	Genyem	21.74	195	P	P	20 34 56.8	+0.5
GENI	Genyem	21.74	195	P	P	20 34 56.4	+0.1
	comp=Z,123nm,0.8s						
BAKI	Biak	21.80	207	P	P	20 34 57.5	+0.5
	comp=Z,111nm,0.8s						
SRPI	Serui, Papua	22.36	206	P	P	20 35 03.6	+1.2
	comp=Z,3μmcomp=Z,54nm,0.4s						
JTM	Tenmabayashi	22.48	351	P	P	20 35 01.8	-1.5
MWPI	Manokwari, Pap	22.53	212	P	P	20 35 05.7	+1.7
	comp=Z,86nm,1.3s						
YULB	Yu-li	23.27	286	P	P	20 35 10.7	-0.1
YHNB	Yeheng	23.40	289	P	P	20 35 11.8	-0.2
TWG	Pinlang	23.42	285	P	P	20 35 11.7	-0.3
ERM	Erimo	23.46	355	P	P	20 35 13.0	+0.8
RABL	Rabaul	23.51	164	P	P	20 35 12.3	-0.6
SSLB	Suanglung	23.64	287	P	P	20 35 14.9	+0.8
TPUB	Ta-pu	23.87	286	P	P	20 35 16.7	+0.5
SWI	Sorong	23.98	218	P	P	20 35 18.7	+1.5
	comp=Z,44nm,0.6s						
FAKI	Fak Fak	25.14	213		P	20 35 28.1	+0.3
FAKI	Fak Fak	25.14	213	P	P	20 35 29.0	+1.2
FAKI	Fak Fak	25.14	213	P	P	20 35 28.4	+0.6
	comp=Z,30nm,0.9s						
JKA	Kamikawa-asahi	25.59	355	P	P	20 35 32.9	+1.4
ASAJ	Asahikawa	25.59	355	P	P	20 35 33.2	+1.8
	comp=Z,3.8nm,0.4s,baz=135,slow=5.7,SNR=6.5						
	comp=Z,3.8nm,0.4s						
NJ2	Nanjing	27.64	304	eP	P	20 35 50.9	+0.9
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
KRAI	Karang Ratu	27.65	220	P	P	20 35 51.4	+1.2
	comp=Z,18nm,1.0s						
PMG	Port Moresby	27.85	177		P	20 35 50.7	-1.2
PMG	Port Moresby	27.85	177	P	P	20 35 51.5	-0.5
PMG	Port Moresby	27.85	177	P	P	20 35 50.3	-1.7
	comp=Z,43nm,0.7s						
SANI	Sanana	28.23	225	P	P	20 35 55.3	-0.1
SANI	Sanana	28.23	225	P	P	20 35 54.2	-1.2
MRSI	Marisa	29.46	235	P	P	20 36 07.3	+1.0
	comp=Z,27nm,1.0s						
LUWI	Luwuk	29.81	232	P	P	20 36 09.1	-0.3
LUWI	Luwuk	29.81	232	P	P	20 36 09.7	+0.3
LUWI	Luwuk	29.81	232	P	P	20 36 09.7	+0.3
	comp=Z,4μmcomp=Z,18nm,0.9s						
SAUI	Saumlaki	29.98	210		P	20 36 11.2	+0.4
SAUI	Saumlaki	29.98	210	P	P	20 36 12.9	+2.0
SAUI	Saumlaki	29.98	210	P	P	20 36 12.2	+1.3
	comp=Z,50nm,0.7s						
TOLI2	Tolitoli	29.99	237		P	20 36 11.0	0.0
TOLI2				IAmb	IAmb	20 36 13.4	
	comp=Z,12nm,0.8s						
TOLI2	Tolitoli	29.99	237	P	P	20 36 12.1	+1.1
WHN	Wuhan	30.80	299	P	P	20 36 21.1	+3.2
MPSI	Mapaga	31.16	237	P	P	20 36 22.3	+1.0
	comp=Z,13nm,1.0s						
KKM	Kota Kinabalu	31.33	250	P	P	20 36 23.6	+0.8
COEN	Coen	32.43	185	P	P	20 36 31.7	-0.6
COEN				IAmb	IAmb	20 36 32.9	
	comp=Z,11nm,0.6s						
COEN	Coen	32.43	185	P	P	20 36 32.8	+0.5
HNS	HongShan	32.96	311	⇑P	P	20 36 38.9	+2.2
TTSI	Tana Toraja	33.34	232	P	P	20 36 42.0	+1.7
MMSI	Mamuju	33.80	234	P	P	20 36 45.1	+0.8
	comp=Z,15nm,0.5s						
SPSI	Sidrap Palu	33.98	231	P	P	20 36 46.1	+0.2
	comp=Z,35nm,0.9s						
BNSI	Bone	34.03	230	P	P	20 36 48.0	+1.8
	comp=Z,44nm,1.4s						
MTN	Manton Dam	34.38	206		P	20 36 49.3	+0.1
BKSI	Bulukumba	34.65	229	P	P	20 36 52.4	+0.9
	comp=Z,19nm,1.0s						
KAPI	Kappang	34.70	230	P	P	20 36 52.4	+0.3
KAPI				IAmb	IAmb	20 36 54.4	
	comp=Z,13nm,0.8s						
KAPI	Kappang	34.70	230	P	P	20 36 53.6	+1.6
KAPI	Kappang	34.70	230	P	P	20 36 53.0	+1.0
	comp=Z,13nm,0.8s						
HEH	HeiHe	34.81	339	eP	P	20 36 53.2	+0.6
HEH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SOEI	Soe	35.22	219		P	20 36 55.9	-0.7
SOEI	Soe	35.22	219	P	P	20 36 55.9	-0.7
SOEI	Soe	35.22	219	P	P	20 36 55.1	-1.5
	comp=Z,50nm,0.8s						
MMRI	Maumere	35.61	223	P	P	20 36 59.1	-0.6
MMRI	Maumere	35.61	223	P	P	20 37 00.0	+0.3
MMRI	Maumere	35.61	223	P	P	20 36 59.1	-0.6
	comp=Z,39nm,0.9s						
PETK	Petropavlovsk-	35.70	12	P	P	20 36 59.5	-0.6
	comp=Z,1.6nm,0.8s,baz=221,slow=5.7,SNR=0.7						
	comp=Z,1.6nm,0.8s						
PETK	Petropavlovsk-	35.70	12	P	P	20 37 01.5	+1.4
BATI	Baumata	35.94	219	P	P	20 37 01.3	-1.3
	comp=Z,65nm,0.7s						
XAN	Xi'an	36.17	303	P	P	20 37 04.8	+0.4
SBUM	Sibu	36.51	248	P	P	20 37 09.1	+1.7
SBUM				IAmb	IAmb	20 37 10.6	
	comp=Z,25nm,1.2s						
MTSU	Mount Surprise	36.52	182	P	P	20 37 07.8	+0.4
HHC	Hu-ho-hao-te	36.69	315	eP	P	20 37 09.1	+0.3
HHC				pmax	pmax		
	comp=Z,4.0nm,0.5s						
LBFI	Labuhan Bajo,	37.04	226	P	P	20 37 11.9	0.0
	comp=Z,44nm,0.7s						
HILR	Hailar Array B	37.27	332	P	P	20 37 14.5	+1.0
	comp=Z,20nm,0.6s,baz=132,slow=8.6,SNR=10						
	comp=Z,20nm,0.6s						
WSI	Waingapu	37.64	224	P	P	20 37 15.4	-1.5
BASI	Baing, Sumba	37.87	223	P	P	20 37 16.9	-1.9
	comp=Z,93nm,1.1s						
KNRA	Kununurra	37.91	207	P	P	20 37 19.8	+0.6
DBNI	Kabupaten Domp	38.14	227	P	P	20 37 20.0	-1.2
WBSI	Waikabubak, Su	38.22	225	P	P	20 37 19.3	-2.6
	comp=Z,58nm,0.7s						
CTAO	Charters Tower	38.44	179	P	P	20 37 23.1	-0.4
CTAO				IAmb	IAmb	20 37 24.8	
	comp=Z,18nm,1.4s						
KSM	Kuching	38.65	248	P	P	20 37 24.2	-1.2
PLAI	Plampang	38.75	228	P	P	20 37 26.9	+0.7
PLAI	Plampang	38.75	228	P	P	20 37 26.5	+0.3
	comp=Z,41nm,0.7s						
TWSI	Taliwang, Sumb	39.32	229	P	P	20 37 31.1	+0.1
	comp=Z,70nm,0.7s						
QIS	Mount Isa	39.36	189	P	P	20 37 31.8	+0.6
KLNI	Mataram	39.67	230	P	P	20 37 34.8	+0.9
WB0	Warramunga Arr	39.70	197	P	P	20 37 33.8	-0.2
WRAB	Tennant Creek	39.87	197	P	P	20 37 35.2	-0.2
WRAB	Tennant Creek	39.87	197	P	P	20 37 36.3	+0.9
WRA	Warramunga Arr	39.88	197	P	P	20 37 35.6	+0.1
	comp=Z,15nm,0.4s,baz=14,slow=8.5,SNR=168						
WRA				PcP	PcP	20 39 37.6	-0.3
	comp=Z,4.5nm,0.4s,baz=18,slow=3.5,SNR=9.5						
WRA				ScP	ScP	20 43 08.0	-2.8
	comp=Z,1.3nm,0.8s,baz=22,slow=4.0,SNR=6.4						
WRA				S	S	20 43 26.3	-1.2
	comp=Z,0.8nm,1.1s,baz=27,slow=16,SNR=3.2						
WRA	Warramunga Arr	39.88	197	P	P	20 37 34.6	-0.9
SANVU	Saraoutou	39.90	147	P	P	20 37 34.7	-1.0
SANVU	Saraoutou	39.90	147	P	P	20 37 37.0	+1.3
KHKI	Kahang-Kahang	39.98	231	P	P	20 37 37.9	+1.4
	comp=Z,75nm,1.0s						
KMMI	Kalianget	40.36	234	P	P	20 37 41.0	+1.5
	comp=Z,36nm,1.1s						
RTBI	Rangdo, Negare	40.54	231	P	P	20 37 41.8	+0.7
LZDM	Lanzhou Array	40.80	304	P	P	20 37 44.0	+0.7
	comp=Z,4.3nm,0.4s,baz=134,slow=8.5,SNR=5.0						
	comp=Z,4.3nm,0.4s						
JAGI	Jajag, Banyuwa	41.13	232	P	P	20 37 44.8	-1.1
JAGI	Jajag, Banyuwa	41.13	232	P	P	20 37 46.3	+0.4
JAGI	Jajag, Banyuwa	41.13	232	P	P	20 37 45.6	-0.3
	comp=Z,34nm,1.0s						
PZH	PanZhiHua	41.20	289	P	P	20 37 49.0	+2.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
FITZ	Fitzroy Crossi	41.45	210	P	P	20 37 48.6	+0.3
FITZ	Fitzroy Crossi	41.45	210	P	P	20 37 48.6	+0.3
GMJI	Gumukmas	41.54	233	P	P	20 37 49.0	-0.2
AUNRC	North Rockhamp	41.95	173	P	P	20 37 51.7	-0.6
SJI	Sawahan	42.48	235	P	P	20 37 57.7	+0.7
	comp=Z,59nm,0.8s						
SNJI	Sawahan-Nganju	42.52	235	P	P	20 37 59.1	+1.8
PCJI	Pacitan	43.23	235	P	P	20 38 03.1	+0.3
	comp=Z,48nm,0.7s						
SONM	Songino Array	43.24	321	P	P	20 38 02.5	-0.2
	comp=Z,1.3nm,0.6s,baz=137,slow=8.9,SNR=10						
	comp=Z,1.3nm,0.6s						
AS31	Alice Springs	43.54	196	P	P	20 38 04.5	-0.8
AS31				IAmb	IAmb	20 38 08.9	
	comp=Z,5.7nm,0.6s						
ASAR	Alice Springs	43.55	196	P	P	20 38 05.2	-0.1
	comp=Z,7.2nm,0.5s,baz=21,slow=8.0,SNR=85						
ASAR				PcP	PcP	20 39 49.8	-0.2
	comp=Z,3.0nm,0.6s,baz=23,slow=3.0,SNR=9.1						
ASAR				ScP	ScP	20 43 23.0	-2.4
	comp=Z,0.7nm,0.7s,baz=16,slow=5.2,SNR=5.0						
ASAR				S	S	20 44 21.6	+0.1
	comp=Z,0.4nm,0.8s,baz=15,slow=13,SNR=2.7						
ASAR				LR	LR	20 56 22.5	
	comp=Z,28nm,18.3s,baz=341,slow=36						
	comp=Z,7.2nm,0.5s						
ASAR	Alice Springs	43.55	196	P	P	20 38 04.6	-0.6
EIDS	Eidsvold	44.00	173	P	P	20 38 08.0	-0.8
KIWB	Kanaga Island	44.16	33	P	P	20 38 11.5	+1.7
CMAR	Chiang Mai Arr	44.24	278	P	P	20 38 12.3	+1.4
	comp=Z,1.6nm,0.6s,baz=67,slow=7.7,SNR=14						
CMAR				pP	pP	20 38 48.7	+1.4
	comp=Z,2.3nm,0.8s,baz=65,slow=7.0,SNR=3.7						
CMAR				LR	LR	20 55 17.6	
	comp=Z,13nm,21.0s,baz=125,slow=34						
	comp=Z,1.6nm,0.6s						
CMAR	Chiang Mai Arr	44.24	278	P	P	20 38 11.5	+0.5
MYKOM	Kota Tinggi	44.28	253	P	P	20 38 12.3	+1.1
ADK	Adak	44.41	33	P	P	20 38 13.3	+1.5
KPJI	Karang Pucung	44.48	238	P	P	20 38 14.0	+1.1
	comp=Z,42nm,1.0s						
SEY	Seymchan	44.55	4	P	P	20 38 13.8	+1.1
	comp=Z,2.6nm,0.6s,baz=172,slow=14,SNR=2.6						
	comp=Z,2.6nm,0.6s						
YAK	Yakutsk	44.83	349	P	P	20 38 14.3	-0.6
QLP	Quilpie	44.92	182	P	P	20 38 14.7	-1.4
DZM	Mont Dzumac	45.21	152	P	P	20 38 18.3	-0.2
DZM				IAmb	IAmb	20 38 19.8	
	comp=Z,16nm,0.6s						
DZM	Mont Dzumac	45.21	152	P	P	20 38 18.6	0.0
OUENC	Ouen Island, N	45.69	152	P	P	20 38 23.5	+1.3
KULM	Kulim	45.88	259	P	P	20 38 26.0	+2.1
KULM				IAmb	IAmb	20 38 27.8	
	comp=Z,29nm,1.0s						
ATKA	Atka Island	45.88	34	P	P	20 38 24.2	+0.9
PINNC	Pines Island,	46.13	152	P	P	20 38 26.0	+0.4
INKA	Innaminka	46.30	186	P	P	20 38 25.9	-1.0
TLY	Talaya	46.66	325	P	P	20 38 28.7	-0.8
TLY				IAmb	IAmb	20 39 09.8	
	comp=Z,13nm,1.1s						
MBWA	Marble Bar	46.98	214	P	P	20 38 32.4	+0.1
MBWA				IAmb	IAmb	20 38 33.6	
	comp=Z,18nm,0.7s						
KASI	Kota Agung	47.16	243	P	P	20 38 33.0	-0.8
	comp=Z,41nm,0.5s						
PSA00	Pilbara Seismi	47.26	214	P	P	20 38 34.4	0.0
PSA00				PcP	PcP	20 40 03.1	+0.2
PSA00	Pilbara Seismi	47.26	214	P	P	20 38 34.0	-0.5
PSA00				IAmb	IAmb	20 38 35.9	
	comp=Z,35nm,1.4s						
AULRC	Lightning Ridg	47.78	177	P	P	20 38 37.4	-0.9
KSI	Kapahiang	47.86	247	P	P	20 38 38.9	-0.4
MNAI	Manna	47.89	246	P	P	20 38 38.6	-0.9
GOMU	GeErMu	47.92	302	P	P	20 38 42.1	+2.2
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MSVF	Nonsavu	48.10	137	P	P	20 38 41.9	+0.8
MSVF				IAmb	IAmb	20 38 43.5	
	comp=Z,29nm,1.2s						
MNSI	Mandailing Nat	48.57	254	P	P	20 38 46.2	+1.5
	comp=Z,47nm,0.9s						
ARMA	Armidale	49.05	173	P	P	20 38 47.6	-0.6
ARMA				IAmb	IAmb	20 38 48.9	
	comp=Z,26nm,1.4s						
STKA	Stephens Creek	50.33	185	P	P	20 38 57.2	-0.4
	comp=Z,3.8nm,0.4s,baz=0.8,slow=9.0,SNR=17						
	comp=Z,3.8nm,0.4s						
STKA	Stephens Creek	50.33	185	P	P	20 38 56.8	-0.9
STKA	Stephens Creek	50.33	185	P	P	20 38 57.6	0.0
LSA	Lhasa	50.60	293	P	P	20 39 00.3	-0.2
LSA	Lhasa	50.60	293	P	P	20 38 58.9	-1.6
UNV	Unalaska Valle	50.74	35	P	P	20 39 00.5	0.0
LVA	Lava Point	51.13	34	P	P	20 39 04.7	+1.3
GIRL	Giralia	51.24	218	P	P	20 39 06.5	+1.9
AKUT	Akutan	51.26	34	P	P	20 39 05.0	+0.7
BBOO	Buckleboo	51.93	190	P	P	20 39 08.8	-0.8
BBOO				IAmb	IAmb	20 39 12.3	
	comp=Z,21nm,1.2s						
BBOO				PcP	PcP	20 40 18.2	-1.5
FORT	Forrest	51.93	199	P	P	20 39 10.5	+0.9
FORT				IAmb	IAmb	20 39 11.3	
	comp=Z,8.2nm,0.7s						
MEEK	Meekatharra	52.08	211	P	P	20 39 11.3	+0.4
CAN	Canberra	53.70	177	P	P	20 39 23.3	+0.8
S12K	Black Hills	53.84	34	P	P	20 39 23.9	+0.5
TIXI	Tiksi	53.98	353	P	P	20 39 23.7	-0.3
WMQ	Urumqi	54.39	311	eP	P	20 39 29.3	+1.7
WMQ				pmax	pmax		
	comp=Z,12nm,1.1s						
MORW	Morawa	55.36	212		P	20 39 34.9	+0.3
MORW	Morawa	55.36	212	P	P	20 39 35.0	+0.4
BLDU	Ballidu	56.31	210	P	P	20 39 41.6	+0.3
KLBR	Kellerberrin	56.64	209	P	P	20 39 43.3	-0.4
MUN	Mundaring	57.68	210	P	P	20 39 50.7	-0.2
ZALV	Zalesovo Beam	58.11	323	P	P	20 39 52.5	-1.1
	comp=Z,1.4nm,0.5s,baz=102,slow=8.7,SNR=5.3						
ZALV				pP	pP	20 40 32.7	+0.7
	comp=Z,3.0nm,0.7s,baz=105,slow=6.7,SNR=3.1						
	comp=Z,1.4nm,0.5s						
ZALV	Zalesovo Beam	58.11	323	P	P	20 39 52.2	-1.4
MKAR	Makanchi Array	58.55	314	P	P	20 39 56.4	-0.5
	comp=Z,1.6nm,0.5s,baz=91,slow=7.5,SNR=30						
MKAR				pP	pP	20 40 36.0	+0.7

	comp=Z,3.2nm,0.8s,baz=89,slow=9.8,SNR=2.3						
	comp=Z,1.6nm,0.5s						
MAKZ	Makanchi	58.76	314	P	P	20 39 57.4	-1.0
C19K	Lookout Ridge	60.51	20	P	P	20 40 11.1	+1.2
C19K				IAmb	IAmb	20 40 12.8	
	comp=Z,12nm,1.1s						
D19K	Kuna River	60.72	21	IAmb	IAmb	20 40 13.7	
	comp=Z,6.8nm,0.9s						
D20K	Etivluk River	61.31	21	IAmb	IAmb	20 40 18.2	
	comp=Z,7.2nm,0.7s						
KURK	Kurchatov	61.36	318	P	P	20 40 15.2	-0.7
KURBB	Kurchatov Arra	61.41	318	P	P	20 40 15.5	-0.8
	comp=Z,1.5nm,0.4s,baz=93,slow=7.5,SNR=37						
KURBB				pP	PcP	20 40 55.6	-1.1
	comp=Z,3.0nm,0.6s,baz=93,slow=7.5,SNR=4.1						
	comp=Z,1.5nm,0.4s						
B20K	Meade River	61.67	19	IAmb	IAmb	20 40 20.1	
	comp=Z,7.2nm,0.7s						
NRIK	Noril'sk	61.72	340	P	P	20 40 17.9	-0.1
	comp=Z,3.7nm,0.5s,baz=100,slow=12,SNR=8.1						
	comp=Z,3.7nm,0.5s						
NRIK	Noril'sk	61.72	340	P	P	20 40 17.0	-1.0
NRIK				IAmb	IAmb	20 40 23.1	
	comp=Z,10nm,1.2s						
D22K	Ayikyak River	62.70	21	IAmb	IAmb	20 40 27.2	
	comp=Z,7.2nm,0.8s						
KSH	Kashi	62.94	305	P	P	20 40 30.0	+3.2
KSH				pP	pP	20 41 10.2	+4.4
KSH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
E23K	Chandalar	63.51	22	IAmb	IAmb	20 40 35.6	
	comp=Z,15nm,1.4s						
TOLK	Toolik Lake Re	63.70	22	P	P	20 40 32.8	+1.6
TOLK				IAmb	IAmb	20 41 15.4	
	comp=Z,4.3nm,0.6s						
C23K	Itkillik River	63.71	20	IAmb	IAmb	20 40 34.5	
	comp=Z,8.6nm,0.9s						
IL31		63.74	26	P	P	20 40 31.2	-0.2
IL31				IAmb	IAmb	20 40 35.2	
	comp=Z,6.5nm,1.1s						
ILAR	Eielson Array	63.74	26	P	P	20 40 31.1	-0.4
	comp=Z,2.2nm,0.6s,baz=257,slow=5.9,SNR=28						
ILAR				pP	pP	20 41 09.7	-1.0
	comp=Z,2.2nm,0.7s,baz=264,slow=4.7,SNR=4.4						
	comp=Z,2.2nm,0.6s						
E24K	Your Creek	63.92	22	IAmb	IAmb	20 40 39.7	
	comp=Z,8.3nm,1.4s						
PAX	Paxson	64.00	28	P	P	20 40 34.1	+0.8
PAX				IAmb	IAmb	20 40 38.3	
	comp=Z,3.7nm,0.7s						
D24K	Happy Valley	64.10	21	IAmb	IAmb	20 40 37.0	
	comp=Z,7.2nm,0.8s						
QRZ	Quartz Range	64.15	158	P	P	20 40 33.2	-1.2
DOT	Dot Lake	64.74	28	P	P	20 40 38.5	+0.5
DOT				IAmb	IAmb	20 41 18.2	
	comp=Z,5.1nm,0.9s						
SCRK	Sand Creek	64.83	27	P	P	20 40 39.4	+0.6
SCRK				IAmb	IAmb	20 40 40.5	
	comp=Z,6.4nm,1.1s						
F25K	Christian Rive	64.85	23	IAmb	IAmb	20 40 42.2	
	comp=Z,4.9nm,1.0s						
D25K	Kavik River	64.99	21	IAmb	IAmb	20 40 42.1	
	comp=Z,6.5nm,0.9s						
J26L	Joseph Creek	65.10	27	IAmb	IAmb	20 41 24.0	
	comp=Z,6.8nm,1.0s						
G26K	Porcupine Rive	65.43	24	IAmb	IAmb	20 40 53.1	
	comp=Z,14nm,1.4s						
H27K	Steamboat Moun	66.20	25	IAmb	IAmb	20 40 49.6	
	comp=Z,5.6nm,0.9s						
MANEM	Manem	66.44	304	IAmb	IAmb	20 40 52.0	
	comp=Z,5.0nm,0.9s						
BVAR	Borovoye Array	66.57	320	P	P	20 40 49.5	-0.4
	comp=Z,4.0nm,0.4s,baz=97,slow=7.6,SNR=26						
BVAR				pP	pP	20 41 29.3	+0.1
	comp=Z,3.1nm,0.6s,baz=91,slow=7.4,SNR=2.4						
	comp=Z,4.0nm,0.4s						
BORK	Borovoye	66.61	320	P	P	20 40 49.4	-0.7
BORK				IAmb	IAmb	20 40 51.8	
	comp=Z,5.0nm,0.6s						
KK31	Karatay Array	66.85	310	P	P	20 40 51.0	-0.9
KKAR	Karatay Array	66.85	310		P	20 40 51.5	-0.4
L29M	L29M	67.34	29	IAmb	IAmb	20 41 39.8	
	comp=Z,6.2nm,0.8s						
HYT	Haines Junctio	67.52	31	P	P	20 40 56.4	+0.5
HYT				IAmb	IAmb	20 41 01.2	
	comp=Z,10nm,1.2s						
CHGR	Chuyangaron	68.30	305	P	P	20 41 00.2	-0.9
CHGR				IAmb	IAmb	20 41 03.5	
	comp=Z,7.7nm,0.9s						
F30M	Barrier River	68.59	24	IAmb	IAmb	20 41 47.5	
	comp=Z,6.2nm,0.7s						
H31M	Peel River	69.09	26	IAmb	IAmb	20 41 50.3	
	comp=Z,7.1nm,1.1s						
G31M	Satah River	69.15	25	IAmb	IAmb	20 41 14.8	
	comp=Z,19nm,1.4s						
INK	Inuvik	69.47	23	P	P	20 41 08.2	+0.5
	comp=Z,3.1nm,0.7s,baz=278,slow=5.6,SNR=13						
INK				pP	pP	20 41 47.1	-0.4
	comp=Z,4.1nm,0.8s,baz=266,slow=9.0,SNR=4.3						
	comp=Z,3.1nm,0.7s						
INK	Inuvik	69.47	23	IAmb	IAmb	20 41 52.2	
	comp=Z,7.4nm,1.1s						
DLBC	Dease Lake	71.38	34	P	P	20 41 21.4	+1.9
	comp=Z,1.6nm,0.6s,baz=307,slow=5.1,SNR=4.7						
	comp=Z,1.6nm,0.6s						
ARTI	Arti	73.27	325	P	P	20 41 29.7	-0.9
ARTI				IAmb	IAmb	20 41 30.9	
	comp=Z,6.2nm,0.8s						
ABKAR	Akbulak array	73.43	317	P	P	20 41 30.8	-0.9
WRGLY	Wrigley	73.97	28	IAmb	IAmb	20 41 37.0	
	comp=Z,9.2nm,1.0s						
YKA	Yellowknife Ar	78.08	28	P	P	20 41 58.0	+0.1
	comp=Z,1.4nm,0.7s,baz=291,slow=6.1,SNR=22						
YKA				pP	pP	20 42 37.0	-1.6
	comp=Z,1.9nm,0.9s,baz=291,slow=6.0,SNR=2.7						
	comp=Z,1.4nm,0.7s						
YKA	Yellowknife Ar	78.08	28	P	P	20 41 57.4	-0.5
SPITS	Spitsbergen Ar	79.28	351	P	P	20 42 04.1	-0.1
	comp=Z,4.9nm,0.7s,baz=68,slow=5.4,SNR=5.4						
	comp=Z,4.9nm,0.7s						
RES	Resolute Bay	79.53	14	P	P	20 42 06.2	+0.7
	comp=Z,4.1nm,0.7s,baz=310,slow=6.2,SNR=12						
RES				pP	pP	20 42 46.4	-0.2
	comp=Z,1.8nm,0.7s,baz=296,slow=1.1,SNR=1.8						
	comp=Z,4.1nm,0.7s						
RES	Resolute Bay	79.53	14	P	P	20 42 05.8	+0.2
BEKR	Beckworth	81.25	51	P	P	20 42 16.2	+0.5
ARCES	ARCESS Array B	82.60	342	P	P	20 42 20.9	-1.0
	comp=Z,7.6nm,1.0s,baz=58,slow=5.6,SNR=13						
	comp=Z,7.6nm,1.0s						
ARCES	ARCESS Array B	82.60	342	P	P	20 42 21.3	-0.6
ARCES				IAmb	IAmb	20 43 02.8	
	comp=Z,7.7nm,0.9s						
NVAR	Mina Array Bea	83.20	52	P	P	20 42 26.7	+0.8
	comp=Z,1.4nm,0.5s,baz=266,slow=5.4,SNR=10						
NVAR				pP	pP	20 43 07.1	+0.1
	comp=Z,5.2nm,0.8s,baz=256,slow=5.3,SNR=2.7						
	comp=Z,1.4nm,0.5s						
YHL	Hebgen Lake	86.01	44	IAmb	IAmb	20 42 42.5	
	comp=Z,5.6nm,0.8s						
ILON	Igloolik, Nuna	86.03	15	IAmb	IAmb	20 42 39.9	
	comp=Z,10nm,1.0s						
HVU	Hansel Valley	86.06	47	IAmb	IAmb	20 43 27.1	
	comp=Z,11nm,1.1s						
YMR	Madison River	86.22	44	P	P	20 42 41.7	+0.8
KBZ	Khabaz	86.23	315	P	P	20 42 40.6	+0.1
	comp=Z,1.6nm,1.0s,baz=94,slow=15,SNR=3.6						
	comp=Z,1.6nm,1.0s						
PSUT	Pine Spring	86.46	51	IAmb	IAmb	20 43 28.8	
	comp=Z,11nm,1.3s						
FINES	FINESS Array B	86.99	335	P	P	20 42 42.5	-1.4
	comp=Z,1.6nm,0.4s,baz=69,slow=5.2,SNR=22						
FINES				pP	pP	20 43 24.7	-0.7
	comp=Z,2.4nm,0.5s,baz=70,slow=5.1,SNR=2.3						
	comp=Z,1.6nm,0.4s						
KNB	Kanab	87.77	52	IAmb	IAmb	20 42 51.0	
	comp=Z,6.5nm,1.0s						
PDAR	Pinedale Array	87.90	45	P	P	20 42 49.2	+0.2
	comp=Z,0.2nm,0.4s,baz=305,slow=7.4,SNR=4.0						
PDAR				pP	pP	20 43 32.1	+1.6
	comp=Z,0.8nm,0.5s,baz=226,slow=1.8,SNR=6.3						
	comp=Z,0.2nm,0.4s						
WUAZ	Wupatki	89.42	53	IAmb	IAmb	20 42 59.7	
	comp=Z,5.7nm,1.1s						
PV23	Carpenter Ridg	90.01	49	IAmb	IAmb	20 43 00.8	
	comp=Z,8.2nm,0.8s						
PV20	West Nyswonger	90.08	49	IAmb	IAmb	20 43 01.4	
	comp=Z,10nm,1.0s						
PV19	Morning Glory	90.08	49	P	P	20 43 00.0	+0.7
PV16	Nyswonger Mesa	90.13	49	P	P	20 42 59.5	0.0
PV16				IAmb	IAmb	20 43 01.2	
	comp=Z,3.4nm,0.7s						
PV18	Skein Mesa, Pa	90.16	49	IAmb	IAmb	20 43 01.6	
	comp=Z,10.0nm,1.0s						
PV03	Paradox Valley	90.20	49	IAmb	IAmb	20 43 01.9	
	comp=Z,5.2nm,1.1s						
PV12	Saucer Basin,	90.21	49	IAmb	IAmb	20 43 04.9	
	comp=Z,6.8nm,0.8s						
PV13	Radium Mtn., P	90.26	49	IAmb	IAmb	20 43 02.1	
	comp=Z,3.2nm,0.7s						
PV02	Paradox Valley	90.30	49	P	P	20 43 00.1	-0.3
PV02				IAmb	IAmb	20 43 01.9	
	comp=Z,6.2nm,0.7s						
HFS	Hagfors	92.49	338	P	P	20 43 07.8	-1.9
	comp=Z,2.3nm,0.9s,baz=76,slow=6.4,SNR=5.4						
	comp=Z,2.3nm,0.9s						
BRTR	Keskin Array B	94.20	314	P	P	20 43 16.8	-1.4
	comp=Z,1.1nm,0.9s,baz=79,slow=3.1,SNR=6.2						
	comp=Z,1.1nm,0.9s						
LPIG	La Paz	94.64	63	LR	LR	21 17 27.1	
	comp=Z,20nm,20.9s,baz=44,slow=30						
TXAR	Lajitas Array	97.89	56	P	Pdif	20 43 35.3	+0.1
	comp=Z,0.3nm,0.9s,baz=319,slow=5.6,SNR=2.0						
TXAR				pP	pP	20 44 17.7	+0.8
	comp=Z,0.4nm,0.7s,baz=326,slow=7.0,SNR=1.9						
	comp=Z,0.3nm,0.9s						
TROLL	Troll, Antarti	122.48	193	⇓PKPdf	PKPdf	20 48 52.2	-0.5
	comp=Z,95nm,0.5s						
SNAA	Sanae	123.81	191	⇓PKPdf	PKPdf	20 48 54.1	-1.1
	comp=Z,42nm,0.5s						
VNA2	Neumayer--Watz	125.26	190	⇓PKPdf	PKPdf	20 48 57.4	-0.4
	comp=Z,9.7nm,0.5s,baz=344,slow=9.3						
VNA3	Neumayer Olymp	125.36	190	⇓PKPdf	PKPdf	20 48 57.5	-0.6
	comp=Z,2.8nm,0.6s						
PLCA	Paso Flores	141.92	133	PKhKP	PKPpre	20 49 25.5	
	comp=Z,2.0nm,0.8s,baz=212,slow=4.3,SNR=3.4						
LPAZ	La Paz	147.66	91	PKPbc	PKPdf	20 49 41.9	+0.6
	comp=Z,6.1nm,0.6s,baz=300,slow=3.6,SNR=20						
LPAZ	La Paz	147.66	91		PKPbc	20 49 42.2	-2.0
MDP	Montagnes des	150.32	39	PKPbc	PKiKP	20 49 50.2	-0.8
	comp=Z,8.5nm,0.8s,baz=305,slow=4.8,SNR=6.6						

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*RSPR **06** 20:43:10.0, 19°.74N×64°.41W, h39^{km}±26^{km}, MD3.5/6*

*NEIC **06** 20:43:10.3±1.3, 19°.50N±0°.08×64°.62W±0°.06, h10^{km}±2^{km}, ML2.9/22, Md3.5/6(RSPR), Error ellipse: s-maj=15.7km s-min=5.4km az=327.0*

ISC 06 20:43:04.3±1.9**, 19°.77N**±0°.10×**64°.51W**±0°.07**, h13^{km}, n52, σ2^{s}.09**/56**, 9C-6D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUMP	Col San Antoni	2.06	218		Sn	20 44 05.4	+1.3
HUMP	Col San Antoni	2.06	218		Pb	20 43 41.2	-0.4
HUMP				IAML		20 44 06.8	
	65nm,0.4s						
HUMP	Col San Antoni	2.06	218	⇓*i*P	Pb	20 43 41.5	-0.1
HUMP	Col San Antoni	2.06	218	*e*S	Sn	20 44 05.4	+1.3
GCPR	Guaynabo City	2.08	226		Sb	20 44 06.7	-1.1
GCPR	Guaynabo City	2.08	226		Pb	20 43 41.0	-0.9
GCPR					Sn	20 44 02.6	-2.1
GCPR	Guaynabo City	2.08	226	⇑*e*P	Pb	20 43 42.1	+0.2
GCPR	Guaynabo City	2.08	226	*e*S	Sb	20 44 06.7	-1.1
SJG	San Juan	2.27	224		Pb	20 43 43.5	-1.7
SJG					Sn	20 44 10.5	+1.2
SJG				IAML		20 44 19.2	
	49nm,0.5s						
SJG	San Juan	2.27	224	⇑*e*P	Pb	20 43 44.8	-0.3
SJG	San Juan	2.27	224	*e*S	Sb	20 44 11.3	-1.8
ECPR	Experimental S	2.27	231	Pn	Pb	20 43 44.5	-0.7
ECPR				IAML		20 44 15.6	
	101nm,0.3s						
ECPR				IAML		20 44 18.4	
	106nm,0.2s						
ECPR	Experimental S	2.27	231	⇓*e*P	Pb	20 43 44.9	-0.3
ECPR	Experimental S	2.27	231	*e*S	Sb	20 44 11.8	-1.5
EMPR	Esperanza - Ma	2.31	236		Sb	20 44 13.3	-0.9
EMPR	Esperanza - Ma	2.31	236	Pn	Pb	20 43 44.9	-0.9
EMPR				IAML		20 44 18.0	
	122nm,1.2s						
EMPR				IAML		20 44 19.2	
	120nm,1.0s						
EMPR	Esperanza - Ma	2.31	236	⇑*e*P	Pb	20 43 45.6	-0.1
EMPR	Esperanza - Ma	2.31	236	*e*S	Sb	20 44 13.3	-0.9
AOPR	Arecibo Observ	2.55	237		Sb	20 44 19.0	-2.4
AOPR	Arecibo Observ	2.55	237		Pb	20 43 48.4	-1.6
AOPR				IAML		20 44 25.4	
	comp=E,158nm,0.4s						
AOPR	Arecibo Observ	2.55	237	⇑*e*P	Pb	20 43 49.3	-0.7
AOPR	Arecibo Observ	2.55	237	*e*S	Sb	20 44 19.0	-2.4
UUPR	Utuado, UPR, P	2.58	235		Sb	20 44 20.1	-2.1
UUPR	Utuado, UPR, P	2.58	235	Pn	Pb	20 43 48.7	-1.8
UUPR	Utuado, UPR, P	2.58	235	⇓*e*P	Pb	20 43 49.6	-0.9
UUPR	Utuado, UPR, P	2.58	235	*e*S	Sb	20 44 20.1	-2.1
OBIP	Obispado Ponce	2.63	229		Sn	20 44 20.4	+2.1
OBIP	Obispado Ponce	2.63	229		Pb	20 43 49.5	-1.8
OBIP				IAML		20 44 42.2	
	comp=N,35nm,0.9s						
OBIP	Obispado Ponce	2.63	229	⇓*e*P	Pb	20 43 49.7	-1.5
OBIP	Obispado Ponce	2.63	229	*e*S	Sn	20 44 20.4	+2.1
AGPR	Aguadilla, PR	2.78	243	Pn	Pb	20 43 51.6	-2.3
AGPR				IAML		20 44 11.0	
	comp=N,62nm,2.3s						
AGPR				IAML		20 44 44.6	
	comp=N,74nm,2.0s						
AGPR	Aguadilla, PR	2.78	243	⇓*e*P	Pb	20 43 51.9	-2.0
AGPR	Aguadilla, PR	2.78	243	*e*S	Sb	20 44 27.1	-0.8
GBPR	Guanica, Bosqu	2.87	232		Pb	20 43 54.1	-1.3
GBPR	Guanica, Bosqu	2.87	232	⇑*e*P	Pb	20 43 54.1	-1.3
LSP	Las Mesas	2.91	237		Pb	20 43 54.6	-1.5
LSP					Sn	20 44 28.0	+2.8
LSP	Las Mesas	2.91	237	⇑*e*P	Pb	20 43 54.6	-1.5
LSP	Las Mesas	2.91	237	*e*S	Sn	20 44 28.0	+2.8
MLPR	Magueyes Islan	3.00	234	⇓*e*P	Pb	20 43 55.2	-2.4
MLPR	Magueyes Islan	3.00	234	*e*S	Sb	20 44 31.0	-3.1
CRPR	Cabo Rojo, PR	3.02	235		Sb	20 44 31.7	-3.2
CRPR	Cabo Rojo, PR	3.02	235		Pb	20 43 55.1	-2.9
CRPR				IAML		20 44 43.6	
	comp=N,33nm,1.5s						
CRPR				IAML		20 44 45.1	
	comp=N,36nm,1.5s						
CRPR	Cabo Rojo, PR	3.02	235	⇑*e*P	Pb	20 43 55.6	-2.4
CRPR	Cabo Rojo, PR	3.02	235	*e*S	Sb	20 44 31.7	-3.2
IDE	Isla Desecheo	3.12	244		Pb	20 43 57.3	-2.5
IDE					Sn	20 44 33.7	+3.2
IDE	Isla Desecheo	3.12	244	⇑*e*P	Pb	20 43 57.3	-2.5
IDE	Isla Desecheo	3.12	244	*e*S	Sn	20 44 33.7	+3.2
MIDR	Miches	4.36	260	⇑*e*P	Pb	20 44 16.0	-4.8
MIDR	Miches	4.36	260	*e*S	Sn	20 45 03.4	+2.5
CBE	Ff, Capester	4.60	143	Pn	Pn	20 44 13.7	0.0
DR12	Loma Pena Alta	4.71	259	Pn	Pn	20 44 18.5	+3.4
SDDR	Presa de Saban	6.45	264		Pn	20 44 42.1	+3.1

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*NEIC **06** 20:48:17.2±1.4, 59°.07N±0°.03×154°.04W±0°.07, h119^{km}±4^{km}, Error ellipse: s-maj=5.3km s-min=4.6km az=73.0*

*AEIC **06** 20:48:19.6±2.0, 59°.07N±0°.03×154°.00W±0°.06, h102^{km}±4^{km}, ML3.1, ML3.2/148(NEIC), Error ellipse: s-maj=5.1km s-min=3.4km az=130.0*

*IDC **06** 20:48:26.1±8.5, 59°.84N×153°.65W, h170^{km}±78^{km}, mb3.0/3, mbtmp3.5/4, Error ellipse: s-maj=85.3km s-min=74.8km az=132.0*

ISC 06 20:48:17.2±0.9**, 59°.08N**±0°.04×**153°.97W**±0°.04**, h120^{km}**±6^{km}**, n162, σ1^{s}.00**/174**, mb3.3**/3**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
Q19K	Cape Douglas,	0.23	132		Pn	20 48 33.5	-0.4
Q19K				Sn	Sn	20 48 45.0	-1.5
Q19K				IAML		20 48 49.8	
	comp=N,937nm,0.8s						
AUW	Augustine West	0.39	41		Pn	20 48 34.8	+0.3
AUCH	Augustine Cone	0.39	43		Pn	20 48 35.0	+0.4
AGU	Augustine-Summ	0.39	44		Pn	20 48 35.0	+0.3
AUJK	Augustine Jueg	0.40	46		Pn	20 48 34.7	+0.2
AUJK					Sn	20 48 46.9	-0.7
AUF	Augustine Flow	0.41	40		Pn	20 48 35.0	+0.5
AUF					Sn	20 48 47.6	-0.1
AUL	Augustine Lava	0.41	42		Pn	20 48 35.2	+0.6
AU22	Augustine Moun	0.43	47		Pn	20 48 34.8	+0.2
AU22					Sn	20 48 47.5	-0.4
KAPH	Katmai Pasha	0.52	202		Pn	20 48 35.3	-0.1
KAPH					Sn	20 48 47.8	-1.3
KAHG	Katmai Hook Gl	0.66	207		Pn	20 48 36.2	-0.1
KAHG					Sn	20 48 49.5	-1.2
P19K	Oil Pt	0.69	33		Pn	20 48 36.9	+0.5
P19K				Sn	Sn	20 48 50.0	-1.0
KAHC	Katmai Hardscr	0.69	232		Sn	20 48 49.4	-1.8
P18K	Big Mountain,	0.72	296		Pn	20 48 36.0	-0.7
P18K				Sn	Sn	20 48 49.4	-2.1
P18K				IAML		20 48 50.1	
	comp=N,501nm,0.7s						
P18K				IAML		20 48 50.1	
	comp=E,433nm,0.5s						
KAWH	Katmai	0.82	212		Pn	20 48 37.3	-0.3
KAWH					Sn	20 48 51.6	-1.4
SYI	Shuyak Island	0.94	119		Pn	20 48 38.9	+0.3
SYI				Sn	Sn	20 48 53.8	-1.0
SYI				IAML		20 48 54.5	
	comp=N,256nm,0.8s						
SYI				IAML		20 48 55.8	
	comp=E,224nm,0.3s						
KAKN	Katmai Knife C	0.97	217		Sn	20 48 53.9	-1.6
KVTA	Katmai Vly 10	0.98	225		Pn	20 48 39.1	0.0
ILS	Iliamna Low So	0.99	27		Sn	20 48 55.6	-0.3
ILSW	Iliamna Southw	1.00	25		Pn	20 48 39.6	+0.3
ILSW				Sn	Sn	20 48 55.3	-0.8
ILSW				IAML		20 48 56.2	
	comp=E,319nm,0.5s						
ILSW				IAML		20 48 56.6	
	comp=N,458nm,1.1s						
O18K	Koktuh Hills	1.00	321		Pn	20 48 39.0	-0.2
O18K				Sn	Sn	20 48 54.6	-1.3
O18K				IAML		20 48 55.1	
	comp=N,169nm,0.7s						
IVE	Iliamna Volcan	1.06	27		Sn	20 48 56.6	-0.4
KABU	Katmai Buttres	1.06	221		Pn	20 48 40.0	+0.1
O19K	Port Alsworth	1.13	351		Pn	20 48 40.5	0.0
O19K				IAML		20 48 58.7	
	comp=E,418nm,0.5s						
O19K				IAML		20 49 11.0	
	comp=N,286nm,0.4s						
CAHL	Cahill	1.25	215		Pn	20 48 41.9	+0.1
P17K	Kvichak River	1.28	276	Pn	Pn	20 48 42.1	+0.1
P17K				IAML		20 49 01.1	
	comp=N,471nm,0.6s						
P17K				IAML		20 49 05.3	
	comp=E,352nm,0.8s						
P17K	Kvichak River	1.28	276		Sn	20 49 00.1	-0.8
CNTC	Contact Creek	1.29	232		Pn	20 48 42.2	-0.1
CNPM	China Poot	1.47	71		Pn	20 48 44.7	+0.5
CNPM				IAML		20 49 06.7	
	comp=N,347nm,0.6s						
CNPM				IAML		20 49 08.7	
	comp=E,283nm,0.7s						
CNPM	China Poot	1.47	71		Sn	20 49 04.5	-0.3
RED	Redoubt Volcan	1.47	24		Pn	20 48 44.9	+0.6
RED				IAML		20 49 05.8	
	comp=N,102nm,0.8s						
RED				IAML		20 49 06.3	
	comp=E,110nm,0.7s						
RED	Redoubt Volcan	1.47	24		Sn	20 49 05.3	+0.2
KDAK	Kodiak Island	1.49	150		Pn	20 48 44.3	-0.1
KDAK				IAML		20 49 05.8	
	comp=E,442nm,0.5s						
KDAK				IAML		20 49 08.4	
	comp=E,482nm,0.4s						
BRLK	Bradley Lake	1.72	65		Pn	20 48 47.4	+0.3
BRLK				IAML		20 49 11.5	
	comp=E,253nm,0.6s						
BRLK				IAML		20 49 13.0	
	comp=N,350nm,0.6s						
O17K	Koliganek Bris	1.74	295		Pn	20 48 47.7	+0.3
N19K	Bonanza Creek	1.76	352		Pn	20 48 48.1	+0.4
BRSE	Bradley Lake S	1.78	67		Pn	20 48 48.2	+0.4
PLK3	Peulik 3	1.85	222		Pn	20 48 49.4	+0.7
N18K	Kilae Creek	1.88	330		Pn	20 48 49.5	+0.4
OHAK	Old Harbor	1.90	169		Pn	20 48 49.2	-0.1
PLK4	Peulik 4	1.92	222		Pn	20 48 50.2	+0.5
PLK4				IAML		20 49 18.3	
	comp=E,152nm,0.8s						
PLK4				IAML		20 49 19.1	
	comp=N,143nm,1.1s						
P16K	Nushagak River	2.08	270	Pn	Pn	20 48 52.2	+0.7
P16K				IAML		20 49 19.3	
	comp=N,75nm,0.6s						
P16K				IAML		20 49 35.6	
	comp=E,110nm,1.1s						
O16K	Kokwok River B	2.18	285		Pn	20 48 53.1	+0.3
O16K				IAML		20 49 20.5	
	comp=E,48nm,0.6s						
O16K				IAML		20 49 20.9	
	comp=N,53nm,0.7s						
N17K	Nushagak Hills	2.18	313		Pn	20 48 53.2	+0.4
N17K				IAML		20 49 20.1	
	comp=N,47nm,1.1s						
N17K				IAML		20 49 21.1	
	comp=E,68nm,0.8s						
SPCR	Spurr Chakacha	2.30	22		Pn	20 48 55.4	+1.0
SPU	Mount Spurr	2.32	24		Pn	20 48 55.3	+0.7
SPCN	Chakachatna No	2.33	22		Pn	20 48 56.1	+1.4
SLKM	Skilak Lake	2.38	51		Pn	20 48 55.7	+0.4
SLKM				IAML		20 49 26.6	
	comp=N,170nm,0.5s						
SLKM				IAML		20 49 26.9	
	comp=E,116nm,0.4s						
R16K	Pilot Point	2.43	233	Pn	Pn	20 48 56.3	+0.3
R16K				IAML		20 49 52.7	
	comp=E,117nm,1.2s						
R16K				IAML		20 49 56.4	
	comp=N,180nm,1.2s						
SEW	Seward	2.52	64	Pn	Pn	20 48 58.0	+1.0
SEW				IAML		20 49 29.2	
	comp=N,80nm,0.9s						
SEW				IAML		20 49 36.6	
	comp=E,103nm,0.7s						
SII	Sitkinak Islan	2.53	183		Pn	20 48 57.2	-0.1
O22K	Cooper Landing	2.57	55	Pn	Pn	20 48 55.9	-1.8
M18K	Stony River	2.59	340		Pn	20 48 58.9	+0.9
STLK	Strandline Lak	2.65	23		Pn	20 48 59.9	+1.0
N16K	Nishlik Lake	2.80	302		Pn	20 49 01.8	+1.0
M20K	Styx River	2.84	8		Pn	20 49 02.5	+1.1
SUA	Susitna One	2.88	32		Pn	20 49 03.0	+1.1
SUA				IAML		20 49 40.5	
	comp=E,161nm,1.1s						
SUA				IAML		20 49 42.3	
	comp=N,77nm,0.9s						
M17K	Holitna River	2.90	325		Pn	20 49 02.6	+0.6
M17K				IAML		20 49 39.6	
	comp=E,69nm,0.8s						
RC01	Rabbit Creek A	2.92	45	Pn	Pn	20 49 03.1	+0.7
RC01				IAML		20 49 37.4	
	comp=N,123nm,0.8s						
RC01				IAML		20 49 40.7	
	comp=E,117nm,0.6s						
O15K	Ungalikthiuk R	3.02	274	Pn	Pn	20 49 04.0	+0.4
O15K				IAML		20 49 41.7	
	comp=N,22nm,0.9s						
O15K				IAML		20 49 41.9	
	comp=E,30nm,0.8s						
L19K	White Mountain	3.14	352		Pn	20 49 05.9	+0.6
SKT	Skwentna	3.15	21		Pn	20 49 05.8	+0.4
SKT				IAML		20 50 16.9	
	comp=E,26nm,0.7s						
M16K	Timber Creek	3.17	310	Pn	Pn	20 49 06.3	+0.7
M22K	Willow	3.29	34		Pn	20 49 08.0	+0.8
N15K	Kwethluk River	3.30	292		Pn	20 49 07.8	+0.5
N15K				IAML		20 49 48.5	
	comp=N,46nm,1.1s						
N15K				IAML		20 49 48.8	
	comp=E,49nm,0.7s						
PWL	Port Wells	3.35	55	Pn	Pn	20 49 07.9	-0.1
CHIR	Chirikof Islan	3.39	196	Pn	Pn	20 49 07.6	-0.9
CHIR				IAML		20 50 19.1	
	comp=E,66nm,1.0s						
L20K	Farewell, AK	3.41	1	Pn	Pn	20 49 08.2	-0.6
L18K	Granite Mounta	3.42	338		Pn	20 49 08.4	-0.5
P23K	Montague Islan	3.47	72	Pn	Pn	20 49 09.5	0.0
P23K				IAML		20 50 10.6	
	comp=N,76nm,1.1s						
PMR	Palmer	3.48	42		Pn	20 49 08.7	-1.0
PMR				IAML		20 49 50.0	
	comp=N,31nm,0.5s						
PMR				IAML		20 49 51.4	

	comp=E,45nm,0.7s						
KNK	**Knik Glacier**	**3.61**	**47**		**Pn**	**20 49 10.2**	**-1.2**
GHO	**Glory Hole Cre**	**3.68**	**41**		**Pn**	**20 49 11.5**	**-0.9**
L17K	**Donlin**	**3.73**	**327**		**Pn**	**20 49 13.9**	**+0.8**
M15K	**Kasigluk River**	**3.75**	**298**		**Pn**	**20 49 14.2**	**+0.8**
O14K	**Tigyukauivet M**	**3.76**	**276**	Pn	**Pn**	**20 49 12.9**	**-0.5**
O14K				IAML		20 50 26.0	
	comp=E,18nm,1.0s						
O14K				IAML		20 50 30.0	
	comp=N,13nm,1.0s						
L22K	**Petersville**	**3.80**	**23**		**Pn**	**20 49 13.8**	**-0.1**
L22K				IAML		20 50 03.0	
	comp=E,20nm,0.3s						
L22K				IAML		20 50 06.2	
	comp=N,17nm,1.0s						
CUT	**Chulitna**	**3.80**	**27**	Pn	**Pn**	**20 49 14.2**	**+0.3**
CUT				IAML		20 50 02.2	
	comp=N,74nm,0.4s						
CUT				IAML		20 50 03.1	
	comp=E,57nm,0.7s						
L16K	**Owhat River**	**3.80**	**316**		**Pn**	**20 49 13.4**	**-0.5**
GLI	**Glacier Island**	**3.90**	**59**	Pn	**Pn**	**20 49 15.0**	**-0.2**
SML	**Sawmill**	**3.91**	**43**		**Pn**	**20 49 15.1**	**-0.4**
SML				IAML		20 49 59.8	
	comp=E,55nm,0.7s						
SML				IAML		20 50 01.6	
	comp=N,50nm,0.7s						
PPLA	**Purkeypile**	**3.93**	**12**		**Pn**	**20 49 15.8**	**+0.1**
MID	**Middleton Isla**	**3.93**	**82**	Pn	**Pn**	**20 49 16.1**	**+0.4**
HIN	**Hinchinbrook I**	**4.00**	**68**	Pn	**Pn**	**20 49 16.7**	**0.0**
N14K	**Kuskokwak Cree**	**4.02**	**285**	Pn	**Pn**	**20 49 17.1**	**+0.2**
N14K				IAML		20 50 37.8	
	comp=N,37nm,1.2s						
N14K				IAML		20 51 33.9	
	comp=E,30nm,1.0s						
FID	**Port Fidalgo**	**4.12**	**63**	Pn	**Pn**	**20 49 17.3**	**-0.9**
K17K	**Iditarod**	**4.22**	**332**		**Pn**	**20 49 19.0**	**-0.5**
K17K				IAML		20 50 50.6	
	comp=E,11nm,0.9s						
K20K	**Telida**	**4.29**	**359**		**Pn**	**20 49 20.3**	**-0.2**
SCM	**Sheep Creek Mo**	**4.29**	**47**	Pn	**Pn**	**20 49 20.8**	**+0.2**
M14K	**Bethel**	**4.36**	**296**	Pn	**Pn**	**20 49 21.6**	**+0.2**
EYAK	**Cordova Ski Ar**	**4.40**	**67**	Pn	**Pn**	**20 49 21.6**	**-0.4**
EYAK				IAML		20 50 11.2	
	comp=E,22nm,0.7s						
EYAK				IAML		20 50 11.4	
	comp=N,30nm,0.7s						
DIV	**Divide**	**4.59**	**60**	Pn	**Pn**	**20 49 25.1**	**+0.5**
DIV				IAML		20 50 17.0	
	comp=N,45nm,0.5s						
DIV				IAML		20 50 17.1	
	comp=E,43nm,0.5s						
J18K	**Innoko River**	**4.60**	**344**		**Pn**	**20 49 24.0**	**-0.6**
WAT1	**Susitna Watana**	**4.60**	**33**		**Pn**	**20 49 24.8**	**+0.2**
WAT6	**Susitna Watana**	**4.65**	**38**		**Pn**	**20 49 25.3**	**-0.1**
KLU	**Klutina**	**4.68**	**55**		**Pn**	**20 49 25.6**	**-0.2**
TRF	**Thorofare Moun**	**4.73**	**20**		**Pn**	**20 49 26.5**	**0.0**
TRF				IAML		20 50 23.6	
	comp=N,19nm,0.8s						
TRF				IAML		20 50 48.6	
	comp=E,11nm,1.1s						
RAGM	**Ragged Mountai**	**4.88**	**70**	Pn	**Pn**	**20 49 29.2**	**+0.7**
M24K	**Tolsona, Glenn**	**4.89**	**48**		**Pn**	**20 49 28.8**	**+0.2**
L14K	**Kuka Creek**	**4.90**	**301**		**Pn**	**20 49 28.2**	**-0.4**
L14K				IAML		20 50 54.6	
	comp=E,12nm,1.1s						
L14K				IAML		20 52 02.4	
	comp=N,14nm,1.1s						
K15K	**Wolf Creek Mou**	**4.92**	**314**	Pn	**Pn**	**20 49 29.6**	**+0.7**
M13K	**Dall Lake**	**4.93**	**290**	Pn	**Pn**	**20 49 30.4**	**+1.4**
M13K				IAML		20 50 46.9	
	comp=N,13nm,1.0s						
KAIM	**Kayak Island**	**4.94**	**76**	Pn	**Pn**	**20 49 29.6**	**+0.4**
J17K	**VABM Dome**	**4.99**	**333**		**Pn**	**20 49 29.8**	**0.0**
RND	**Reindeer**	**4.99**	**27**		**Pn**	**20 49 29.4**	**-0.6**
RND				IAML		20 50 26.9	
	comp=E,12nm,0.9s						
RND				IAML		20 50 30.0	
	comp=N,13nm,0.7s						
J19K	**Poorman**	**5.00**	**352**	Pn	**Pn**	**20 49 30.4**	**+0.5**
J20K	**Nowinta River**	**5.12**	**359**		**Pn**	**20 49 31.8**	**+0.3**
DHY	**Denali Highway**	**5.13**	**36**		**Pn**	**20 49 31.6**	**-0.2**
DHY				IAML		20 50 31.3	
	comp=E,17nm,1.0s						
DHY				IAML		20 50 32.7	
	comp=N,11nm,0.4s						
N25K	**Chitina, Valde**	**5.30**	**57**		**Pn**	**20 49 34.9**	**+0.8**
N25K				IAML		20 50 36.3	
	comp=E,22nm,0.5s						
J16K	**Anvik River**	**5.30**	**326**		**Pn**	**20 49 35.1**	**+1.1**
J16K	**Anvik River**	**5.30**	**326**	IAML		20 51 54.3	
	comp=N,4.4nm,1.2s						
HARP	**HAARP**	**5.45**	**49**		**Pn**	**20 49 36.7**	**+0.6**
GRIN	**Grindle Hills**	**5.53**	**73**		**Pn**	**20 49 38.1**	**+0.9**
WACK	**Wrangell Chich**	**5.58**	**54**		**Pn**	**20 49 39.0**	**+1.0**
GLB	**Gilahina Butte**	**5.58**	**61**		**Pn**	**20 49 38.7**	**+0.8**
KHIT	**Khitrov Hills**	**5.59**	**71**		**Pn**	**20 49 38.6**	**+0.6**
VRDI	**Verde Repeater**	**5.68**	**63**		**Pn**	**20 49 39.6**	**+0.4**
PAX	**Paxson**	**5.68**	**43**		**Pn**	**20 49 39.2**	**-0.1**
CRQM	**Cirque**	**5.70**	**68**		**Pn**	**20 49 40.4**	**+0.8**
SNH	**Sunshine Point**	**5.75**	**74**		**Pn**	**20 49 41.5**	**+1.3**
WAX	**Waxell Ridge**	**5.78**	**72**		**Pn**	**20 49 41.2**	**+0.6**
TGL	**Tana Glacier**	**5.85**	**69**		**Pn**	**20 49 42.3**	**+0.8**
BARK	**Barkley Ridge**	**5.95**	**72**		**Pn**	**20 49 44.0**	**+1.1**
KIAG	**Kiagna River**	**6.11**	**67**		**Pn**	**20 49 45.6**	**+0.5**
PTPK	**Patty Peak**	**6.12**	**65**		**Pn**	**20 49 46.4**	**+1.1**
BALM	**Baldy**	**6.14**	**66**		**Pn**	**20 49 46.2**	**+0.8**
K24K	**Donnelly Dome**	**6.15**	**36**		**Pn**	**20 49 45.6**	**+0.1**
BAGL	**Bagley Icefiel**	**6.16**	**72**		**Pn**	**20 49 46.2**	**+0.6**
HDA	**Harding Lake**	**6.30**	**29**		**Pn**	**20 49 46.9**	**-0.6**
CCB	**Clear Creek Bu**	**6.30**	**25**		**Pn**	**20 49 46.1**	**-1.3**
YAH	**Yahtse**	**6.32**	**73**		**Pn**	**20 49 49.1**	**+1.1**
M26K	**Nabesna, AK**	**6.33**	**54**		**Pn**	**20 49 48.2**	**+0.3**
GRNC	**Granite Creek**	**6.36**	**70**		**Pn**	**20 49 49.7**	**+1.2**
I23K	**Minto, Yukon-K**	**6.46**	**18**		**Pn**	**20 49 49.6**	**0.0**
BARN	**Barnard Glacie**	**6.47**	**67**		**Pn**	**20 49 51.2**	**+1.2**
H17K	**Granite Mounta**	**6.51**	**337**		**Pn**	**20 49 51.9**	**+1.6**
CHX	**Chaix Hills**	**6.60**	**76**		**Pn**	**20 49 53.2**	**+1.5**
IL31		**6.61**	**27**		**Pn**	**20 49 51.0**	**-0.7**
ILAR	**Eielson Array**	**6.61**	**27**	P	**Pn**	**20 49 51.2**	**-0.5**
	comp=N,1.7nm,0.4s,baz=216,slow=14,SNR=43						
ILAR				S	**Sn**	**20 50 58.0**	**-7.5**
	comp=N,0.9nm,0.4s,baz=291,slow=32,SNR=11						
TABL	**Table Mountain**	**6.62**	**73**		**Pn**	**20 49 53.0**	**+1.0**
H21K	**Melozitna Rive**	**6.62**	**4**		**Pn**	**20 49 52.9**	**+1.0**
LOGN	**Logan Glacier**	**6.74**	**69**		**Pn**	**20 49 54.7**	**+1.1**
SAMH	**Samovar Hills**	**6.78**	**75**		**Pn**	**20 49 55.6**	**+1.5**
SCRK	**Sand Creek**	**6.84**	**40**		**Pn**	**20 49 54.3**	**-0.6**
J25K	**Salcha River,**	**6.88**	**33**		**Pn**	**20 49 55.1**	**-0.2**
PCA	**Pinnacle**	**7.04**	**76**		**Pn**	**20 49 58.6**	**+1.1**
YUK2	**White River**	**7.04**	**62**		**Pn**	**20 49 58.7**	**+1.1**
BC01	**Beaver Creek A**	**7.11**	**51**		**Pn**	**20 49 59.5**	**+1.1**
L27K	**Beaver Creek,**	**7.11**	**51**		**Pn**	**20 49 59.1**	**+0.6**
O28M	**Mount Upton**	**7.13**	**70**		**Pn**	**20 50 00.2**	**+1.3**
G18K	**Tagagawik**	**7.17**	**344**		**Pn**	**20 50 01.6**	**+2.3**
YUK3	**Moose Creek**	**7.21**	**62**		**Pn**	**20 50 01.5**	**+1.5**
J26L	**Joseph Creek**	**7.33**	**38**		**Pn**	**20 50 02.0**	**+0.5**
PRP	**Porcupine Dome**	**7.56**	**28**		**Pn**	**20 50 04.6**	**0.0**
O29M	**Mount Kennedy**	**7.88**	**74**		**Pn**	**20 50 10.0**	**+1.0**
M29M	**Somme Creek**	**8.30**	**59**		**Pn**	**20 50 15.5**	**+0.9**
P29M	**Windy Craggy**	**8.31**	**79**		**Pn**	**20 50 15.8**	**+1.1**
DAWY	**Dawson**	**8.55**	**48**		**Pn**	**20 50 18.6**	**+0.7**
N30M	**Aishikik Lake**	**8.72**	**67**		**Pn**	**20 50 20.7**	**+0.6**
SONM	**Songino Array**	**54.93**	**306**	P	**P**	**20 57 37.1**	**+1.8**
	comp=N,1.4nm,0.7s,baz=41,slow=6.1,SNR=8.5						
	comp=N,1.4nm,0.7s						
SONM	**Songino Array**	**54.93**	**306**	P	**P**	**20 57 37.3**	**+2.1**
KURBB	**Kurchatov Arra**	**62.62**	**325**	P	**P**	**20 58 27.9**	**-0.2**
	comp=N,0.1nm,0.6s,baz=28,slow=7.3,SNR=1.5						
	comp=N,0.1nm,0.6s						
MKAR	**Makanchi Array**	**64.84**	**321**	P	**P**	**20 58 42.7**	**-0.2**
	comp=N,0.3nm,0.8s,baz=28,slow=7.0,SNR=1.5						
	comp=N,0.3nm,0.8s						

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*UPP **06** 21:02:57.1±0.0, 67°.90N×20°.16E, h0^{km}, ML2.6, Confirmed Induced event*

*HEL **06** 21:02:57.9±0.3, 67°.77N×20°.27E, h0^{km}, ML1.4, Suspected explosion*

ISC 06 21:02:56.9±0.8**, 67°.83N**±0°.02×**20°.26E**±0°.03**, h0**^{km}**, n26, σ0^{s}.98**/40**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.13**	**14**	P	**Pg**	**21 02 58.8**	**-0.6**
KUA				S	**Sg**	**21 03 00.5**	**-0.4**
RATU	**Laukkuluspa**	**0.25**	**268**	P	**Pg**	**21 03 01.6**	**-0.1**
RATU				S	**Sg**	**21 03 04.3**	**-0.7**
KOVU	**Salmi**	**0.39**	**355**	P	**Pg**	**21 03 03.8**	**-0.7**
NIKU	**Nikkaluokta**	**0.47**	**275**	P	**Pg**	**21 03 05.2**	**-0.6**
LANU	**Lannavaara**	**0.69**	**71**	P	**Pb**	**21 03 11.2**	**-0.6**
LANU				S	**Sb**	**21 03 21.0**	**-0.9**
LANU	**Lannavaara**	**0.69**	**71**	PG	**Pg**	**21 03 10.2**	**+0.1**
LANU				SG	**Sb**	**21 03 21.1**	**-0.9**
DUNU	**Dundret**	**0.72**	**170**	P	**Pb**	**21 03 12.3**	**0.0**
MASU	**Masugnsbyn**	**0.77**	**119**	P	**Pb**	**21 03 12.6**	**-0.5**
SALU	**Saltoluokta**	**0.81**	**237**	P	**Pg**	**21 03 12.1**	**-0.3**
SALU	**Saltoluokta**	**0.81**	**237**	*e*P	**Pg**	**21 03 11.8**	**-0.6**
KIF	**Kilpisjarvi**	**1.20**	**9**	*e*P	**Pn**	**21 03 21.3**	**+0.5**
KIF	**Kilpisjarvi**	**1.20**	**9**	PG	**Pn**	**21 03 21.5**	**+0.7**
KIF				MSG		21 03 37.0	
	comp=Z,5.2nm,0.2s						
KIF				SG	**Sn**	**21 03 38.7**	**+1.0**
PAJU	**Pajala**	**1.37**	**125**	P	**Pg**	**21 03 22.4**	**-0.7**
PAJU	**Pajala**	**1.37**	**125**	PG	**Pg**	**21 03 22.0**	**-1.1**
	baz=301						
PAJU				SN	**Sn**	**21 03 42.6**	**+0.5**
HEF	**Hetta**	**1.40**	**64**	PN	**Pb**	**21 03 23.8**	**-0.1**
	baz=246						
HEF				SG	**Sg**	**21 03 38.6**	**-3.2**
HEF				MSG		21 03 40.9	
	comp=Z,1.9nm,0.2s						
ERTU	**Ertsjaerv**	**1.49**	**149**	P	**Pb**	**21 03 25.0**	**-0.4**
ERTU	**Ertsjaerv**	**1.49**	**149**	PN	**Pb**	**21 03 25.2**	**-0.2**
ERTU				SN	**Sn**	**21 03 46.5**	**+1.5**
KLF	**Kolari**	**1.55**	**111**	PN	**Pg**	**21 03 26.0**	**-0.5**
	baz=290						
KLF				MSG		21 03 43.5	
	comp=Z,2.4nm,0.2s						
KLF				SN	**Sg**	**21 03 48.3**	**+1.8**
KTK1	**Kautokeino**	**1.62**	**42**	PG	**Pg**	**21 03 28.3**	**+0.4**
KTK1				SN	**Sg**	**21 03 50.7**	**+1.8**
TRO	**Tromso**	**1.87**	**346**	PG	**Pg**	**21 03 32.5**	**-0.2**
TRO				SG	**Sg**	**21 03 57.0**	**0.0**
KALU	**Kalix**	**2.33**	**147**	PG	**Pb**	**21 03 39.4**	**-0.3**
KALU				SB	**Sn**	**21 04 06.2**	**+0.6**
TOF	**Tornio**	**2.38**	**136**	PG	**Pb**	**21 03 39.5**	**-1.1**
TOF				MSG		21 04 06.8	
	comp=Z,1.1nm,0.2s						
RNF	**Rovaniemi**	**2.56**	**116**	PG	**Pb**	**21 03 42.5**	**-1.0**
RNF				SG	**Sb**	**21 04 15.8**	**+0.4**
ARA0	**ARCESS Array S**	**2.57**	**46**	PB	**Pb**	**21 03 43.3**	**-0.6**
ARA0				SG	**Sg**	**21 04 17.9**	**-1.5**
RAJF	**Raja-Jooseppi**	**3.08**	**74**	SG	**Sb**	**21 04 32.1**	**+1.5**
KEV	**Kevo**	**3.12**	**49**	SG	**Sb**	**21 04 32.4**	**+0.6**

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*SNET **06** 21:15:00.7±1.8, 12°.64N×88°.02W, h62^{km}, ML4.0*

*CATAC **06** 21:15:01.0±0.4, 13°N±3°×8°8W±°, h30^{km}±3^{km}, M4.0/36, MLv4.0/36, Error ellipse: s-maj=7.1km s-min=2.2km az=26.9, confirmed*

ISC 06 21:15:01.5±1.3**, 12°.60N**±0°.08×**88°.04W**±0°.04**, h47**^{km}±28^{km}**, n62, σ0^{s}.65**/72**, 1C-23D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.60**	**51**	⇓P	**Pn**	**21 15 13.5**	**-0.4**
CSGN				S	**Sn**	**21 15 22.1**	**-0.7**
POTN	**Potosi Cosigui**	**0.66**	**52**	⇓P	**Pn**	**21 15 14.2**	**-0.3**
POTN				S	**Sn**	**21 15 23.9**	**0.0**
CNCH	**Conchagua**	**0.70**	**16**	⇓*i*P	**Pn**	**21 15 15.1**	**-0.2**
CNCH				*e*S	**Sn**	**21 15 26.4**	**+1.1**
CNCH	**Conchagua**	**0.70**	**16**	S	**Sn**	**21 15 25.9**	**+0.6**
CNCH	**Conchagua**	**0.70**	**16**	⇓P	**Pn**	**21 15 15.1**	**-0.2**
LCND	**La Caada**	**0.72**	**11**	*e*P	**Pn**	**21 15 15.2**	**-0.3**
LCND	**La Caada**	**0.72**	**11**	⇓P	**Pn**	**21 15 15.2**	**-0.3**
BLLM	**Bellamira**	**0.86**	**347**	*e*P	**Pn**	**21 15 17.0**	**-0.4**
CNRM	**Centro Naciona**	**0.88**	**352**	P	**Pn**	**21 15 18.1**	**+0.5**
PACA	**Pacayal**	**0.91**	**342**	*e*P	**Pn**	**21 15 17.9**	**-0.2**
PACA				*e*S	**Sn**	**21 15 31.4**	**+1.2**
PACA	**Pacayal**	**0.91**	**342**	P	**Pn**	**21 15 18.1**	**0.0**
CRIN	**San Cristobal**	**0.97**	**84**	S	**Sn**	**21 15 32.2**	**+0.7**
CRIN	**San Cristobal**	**0.97**	**84**	⇓P	**Pn**	**21 15 18.8**	**0.0**
TECA	**Tecapa**	**1.00**	**333**	*e*P	**Pn**	**21 15 19.0**	**-0.4**
PKGN	**Cerro Pekin**	**1.04**	**86**	⇓P	**Pn**	**21 15 19.2**	**-0.5**
ALEN	**Leon**	**1.15**	**97**	P	**Pn**	**21 15 21.3**	**+0.2**
QUEN	**Al S del Volca**	**1.16**	**90**	⇓P	**Pn**	**21 15 21.0**	**-0.3**
TEL3	**Telica 3**	**1.16**	**91**	⇓P	**Pn**	**21 15 20.6**	**-0.8**
TECO	**Alcaldia de Te**	**1.18**	**322**	S	**Sn**	**21 15 36.4**	**-0.3**
TECO	**Alcaldia de Te**	**1.18**	**322**	⇓P	**Pn**	**21 15 21.2**	**-0.5**
POLN	**Al Sur del Vol**	**1.20**	**87**	⇓P	**Pn**	**21 15 21.2**	**-0.6**
POLN				S	**Sn**	**21 15 37.2**	**+0.3**
UESV	**Universidad de**	**1.27**	**325**	*e*P	**Pn**	**21 15 22.6**	**-0.2**
UESV	**Universidad de**	**1.27**	**325**	P	**Pn**	**21 15 22.8**	**0.0**
SCLA	**Alcaldia de Sa**	**1.29**	**329**	P	**Pn**	**21 15 23.4**	**+0.3**
ILCN	**San Idelfonso**	**1.30**	**91**	⇓P	**Pn**	**21 15 22.6**	**-0.7**
ILCN				S	**Sn**	**21 15 39.8**	**+0.2**
CNGA	**Al SSO del Vol**	**1.31**	**94**	⇓P	**Pn**	**21 15 22.6**	**-0.7**
CNGA				S	**Sn**	**21 15 39.7**	**-0.1**
CNGN	**Cerro Negro**	**1.31**	**94**	S	**Sn**	**21 15 40.7**	**+1.0**
CNGN	**Cerro Negro**	**1.31**	**94**	⇓P	**Pn**	**21 15 22.6**	**-0.8**
PAVA	**Las Pavas**	**1.42**	**322**	P	**Pn**	**21 15 25.5**	**+0.6**
LFRS	**El Faro**	**1.43**	**316**	*e*P	**Pn**	**21 15 24.8**	**-0.3**
COPN	**Copaltepe**	**1.47**	**106**	⇓P	**Pn**	**21 15 24.7**	**-0.9**
MOM3	**MOM3**	**1.49**	**93**	⇓P	**Pn**	**21 15 25.2**	**-0.6**
LOMA	**Loma Larga**	**1.52**	**313**	*e*P	**Pn**	**21 15 24.7**	**-1.7**
LOMA				*e*S	**Sn**	**21 15 43.5**	**-1.6**
LOMA	**Loma Larga**	**1.52**	**313**	P	**Pn**	**21 15 25.4**	**-0.9**
MOM2	**El Cardon**	**1.52**	**96**	⇓P	**Pn**	**21 15 25.8**	**-0.5**
LFU	**La Fuente**	**1.55**	**318**	*e*P	**Pn**	**21 15 26.9**	**+0.1**
LFU				*e*S	**Sn**	**21 15 46.6**	**+0.8**
IGN	**Direccin Gen**	**1.57**	**315**	P	**Pn**	**21 15 27.5**	**+0.6**
UEES	**Universidad Ev**	**1.62**	**314**	P	**Pn**	**21 15 28.2**	**+0.5**
BOQS	**Boqueron**	**1.66**	**313**	*e*P	**Pn**	**21 15 28.7**	**+0.4**
PMON	**Piamonte**	**1.67**	**312**	P	**Pn**	**21 15 28.4**	**+0.1**
PMON	**Piamonte**	**1.67**	**312**	S	**Sn**	**21 15 48.8**	**+0.2**
APYN	**Apoyeque**	**1.69**	**102**	P	**Pn**	**21 15 29.2**	**+0.6**
LIMN	**Finca el Limon**	**1.69**	**74**	P	**Pn**	**21 15 28.1**	**-0.7**
APQ2	**Apoyeque**	**1.72**	**103**	P	**Pn**	**21 15 29.3**	**+0.4**
JAYA	**Jayaque - finc**	**1.73**	**308**	*e*P	**Pn**	**21 15 28.6**	**-0.6**
JAYA				*e*S	**Sn**	**21 15 49.0**	**-1.3**
JAYA	**Jayaque - finc**	**1.73**	**308**	⇓P	**Pn**	**21 15 28.6**	**-0.6**
YUSH	**Yuscaran**	**1.78**	**41**	⇓P	**Pn**	**21 15 29.5**	**-0.4**
TISN	**Laguna Tiscapa**	**1.79**	**104**	P	**Pn**	**21 15 29.5**	**-0.4**
MAS3	**Al N del Volca**	**1.91**	**107**	⇓P	**Pn**	**21 15 30.9**	**-0.6**
CEVE	**Cerro Verde**	**1.97**	**309**	P	**Pn**	**21 15 33.1**	**+0.4**
CEVE	**Cerro Verde**	**1.97**	**309**	S	**Sn**	**21 15 57.1**	**+0.8**
RCFN	**Al S de San Ju**	**2.01**	**62**	⇓P	**Pn**	**21 15 32.9**	**-0.2**
RCON	**San Juan de Ri**	**2.04**	**64**	P	**Pn**	**21 15 33.4**	**0.0**
RCVN	**Varillal2**	**2.05**	**61**	P	**Pn**	**21 15 33.5**	**-0.1**
MATN	**Matagalpa**	**2.09**	**81**	⇓P	**Pn**	**21 15 32.4**	**-1.7**
RCPN	**Sur Rio San Ju**	**2.11**	**64**	P	**Pn**	**21 15 34.5**	**+0.1**
FAME	**Alcaldia de Sa**	**2.29**	**303**	S	**Sn**	**21 16 03.8**	**0.0**
FAME	**Alcaldia de Sa**	**2.29**	**303**	⇑P	**Pn**	**21 15 36.6**	**-0.2**
BOAB	**BOACO BROADBAN**	**2.32**	**93**	S	**Sn**	**21 16 04.6**	**+0.1**
BOAB	**BOACO BROADBAN**	**2.32**	**93**	⇓P	**Pn**	**21 15 36.2**	**-1.0**
CARN	**Rivas**	**2.83**	**119**	P	**Pn**	**21 15 44.5**	**+0.3**
JTS	**Las Juntas de**	**3.79**	**127**	P	**Pn**	**21 15 58.4**	**+0.9**

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*IDC **06** 21:15:51.0±2.4, 43°.32N×105°.12W, h0^{km}, mbtmp3.5/3, ML3.4/3, Error ellipse: s-maj=56.0km s-min=8.6km az=154.0*

*NEIC **06** 21:15:52.1±2.1, 43°.58N±0°.08×105°.4W±0°.1, h0^{km}±1^{km}, ML3.4/74, Error ellipse: s-maj=18.4km s-min=2.6km az=43.0*

ISC 06 21:15:51.6±1.0**, 43°.71N**±0°.06×**105°.27W**±0°.05**, h0**^{km}**, n33, σ1^{s}.16**/28**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.98**	**65**		**Pn**	**21 16 12.7**	**-0.2**
RSSD	**Black Hills**	**0.98**	**65**		**Pb**	**21 16 12.5**	**+0.9**
RSSD				IAML		21 16 40.7	
	240nm,0.5s						
RSSD				IAML		21 16 41.2	
	243nm,0.5s						
K22A	**Casper**	**1.40**	**221**		**Pg**	**21 16 17.1**	**-1.4**
K22A				IAML		21 16 44.2	
	912nm,0.3s						
K22A				IAML		21 16 46.4	
	708nm,0.3s						
RLMT	**Red Lodge**	**3.19**	**298**	Pn	**Pn**	**21 16 44.0**	**+0.7**
RLMT				IAML		21 17 43.8	
	100nm,0.4s						
RLMT				IAML		21 17 45.2	
	101nm,0.6s						
BW06	**Boulder Array**	**3.27**	**255**		**Pn**	**21 16 45.0**	**+0.6**
BW06				IAML		21 17 37.5	
	94nm,0.3s						
BW06				IAML		21 17 46.2	
	64nm,1.2s						
PD31	**Pinedale Array**	**3.27**	**255**		**Pn**	**21 16 45.0**	**+0.6**
PDAR	**Pinedale Array**	**3.27**	**255**	Pn	**Pn**	**21 16 45.9**	**+1.5**
	3.1nm,0.3s,baz=70,slow=15,SNR=68						
PDAR				Pg	**Pg**	**21 16 54.3**	**0.0**
	12nm,0.3s,baz=61,slow=18,SNR=28						
PDAR				Lg	Lg	21 17 33.8	
	26nm,0.3s,baz=71,slow=33,SNR=8.7						
	4.0nm,0.4s						
PDAR	**Pinedale Array**	**3.27**	**255**		**Pn**	**21 16 45.5**	**+1.1**
HAYD	**Hayden**	**3.52**	**206**		**Pn**	**21 16 48.3**	**+0.6**
HAYD				IAML		21 17 57.9	
	comp=E,78nm,0.7s						
HAYD				IAML		21 18 28.1	
	comp=N,83nm,1.1s						
YNE	**Yellowstone No**	**3.64**	**293**		**Pn**	**21 16 50.3**	**+0.9**
YNE				IAML		21 17 53.8	
	comp=E,94nm,0.6s						
YNE				IAML		21 17 55.6	
	comp=N,79nm,0.7s						
YMP	**Mirror Lake Pl**	**3.66**	**288**		**Pn**	**21 16 51.3**	**+1.5**
YMP				IAML		21 17 57.5	
	comp=E,114nm,0.8s						
YMP				IAML		21 17 57.8	
	comp=N,120nm,1.1s						
OGNE	**Ogallala**	**3.66**	**138**		**Pn**	**21 16 51.0**	**+1.4**
OGNE				IAML		21 18 08.4	
	comp=N,112nm,1.0s						
LOHW	**Long Hollow**	**3.87**	**270**		**Pn**	**21 16 52.8**	**+0.2**
H17A	**Grant Village**	**3.88**	**282**		**Pn**	**21 16 52.6**	**-0.2**
H17A				IAML		21 18 09.8	
	comp=N,42nm,1.2s						
ISCO	**Idaho Springs**	**3.92**	**184**	Pn	**Pn**	**21 16 52.6**	**-0.7**
MOOW	**Moose Ponds**	**3.97**	**272**		**Pn**	**21 16 55.1**	**+1.2**
SNOW	**Snow King Moun**	**3.99**	**268**		**Pn**	**21 16 54.2**	**-0.1**
SNOW				IAML		21 18 11.7	
	comp=N,60nm,1.5s						
SNOW				IAML		21 18 14.3	
	comp=N,72nm,1.1s						
YNR	**Norris Junctio**	**4.02**	**286**	Pn	**Pn**	**21 16 52.7**	**-1.9**
YNR					**Pg**	**21 17 07.0**	**-1.6**
YPP	**Pitchstone Pla**	**4.03**	**280**		**Pg**	**21 17 07.9**	**-1.0**
YFT	**Old Faithful**	**4.08**	**282**		**Pn**	**21 16 54.5**	**-1.0**
YFT				IAML		21 18 12.0	
	comp=E,53nm,0.9s						
YHH	**Holmes Hill**	**4.15**	**287**		**Pn**	**21 16 56.8**	**+0.3**
FXWY	**Fox Creek**	**4.18**	**271**		**Pn**	**21 16 57.7**	**+0.9**
YMR	**Madison River**	**4.21**	**285**		**Pn**	**21 16 57.3**	**+0.1**
YHB	**Horse Butte**	**4.38**	**286**		**Pn**	**21 16 59.1**	**-0.5**
YHB				IAML		21 18 30.8	
	comp=N,27nm,1.1s						
YHL	**Hebgen Lake**	**4.40**	**287**	IAML		21 18 27.8	
	comp=E,50nm,1.0s						
YHL				IAML		21 18 35.1	
	comp=N,39nm,1.2s						
RDMU	**Red Mountain**	**4.48**	**227**	IAML		21 18 19.0	
	comp=E,40nm,0.8s						
RDMU				IAML		21 18 27.1	
	comp=N,39nm,1.1s						
BOZ	**Bozeman (W)**	**4.91**	**295**	IAML		21 18 29.6	
	comp=N,25nm,1.4s						
BOZ				IAML		21 18 31.0	
	comp=N,26nm,1.0s						
HWUT	**Hardware Ranch**	**5.09**	**248**	IAML		21 18 35.6	
	comp=N,43nm,0.9s						
HWUT				IAML		21 18 45.5	
	comp=N,36nm,1.0s						
BSUT	**Blindstream Ca**	**5.17**	**234**	IAML		21 18 49.1	
	comp=N,20nm,1.1s						
BSUT				IAML		21 18 59.0	
	comp=E,19nm,2.4s						
P18A	**Preston Nutter**	**5.52**	**224**	IAML		21 19 02.5	
	comp=E,32nm,1.3s						
ELK	**Elko**	**7.97**	**252**	Pn	**Pn**	**21 17 52.0**	**+3.1**
	comp=E,0.1nm,0.3s,baz=79,slow=15,SNR=2.2						
	comp=E,0.3nm,0.3s						
I10CA	**LAC DU BONNET**	**9.06**	**41**	I	I	22 11 28.3	
	baz=223,slow=284,SNR=1.1						
ULM	**Lac du Bonnet**	**9.16**	**41**	Pn	**Pn**	**21 18 05.1**	**+0.1**
	comp=E,2.2nm,0.3s,baz=229,slow=13,SNR=10						
ULM				Lg	Lg	21 20 40.4	
	comp=E,0.4nm,0.3s,baz=135,slow=21,SNR=3.6						
	comp=E,4.2nm,0.3s						

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*ATH **06** 21:17:12.2, 37°.52N×20°.76E, h11^{km}±1^{km}, ML2.5/9, Manual Solution by S.Koutrakis First location: 2019/12/06 21:18:12, This location: 2019/12/06 21:35:52 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*THE **06** 21:17:13.5, 38°N±2°×2°1E±°, h8^{km}±2^{km}, M2.4/12, MLh2.4/12*

ISC 06 21:17:12.5±1.5**, 37°.56N**±0°.06×**20°.75E**±0°.04**, h12**^{km}±7^{km}**, n40, σ0^{s}.40**/58**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTHK	**Lithakia**	**0.17**	**25**	P	**Pg**	**21 17 16.2**	**-0.1**
LTHK				S	**Sg**	**21 17 18.1**	**-0.8**
ZAK2	**Zakynthos**	**0.26**	**28**	P	**Pg**	**21 17 18.1**	**+0.3**
ZAK2				S	**Sg**	**21 17 21.2**	**-0.2**
KYPS	**Kipseli, Zakin**	**0.27**	**13**	P	**Pb**	**21 17 18.6**	**-0.6**
KYPS				S	**Sg**	**21 17 22.7**	**+1.0**
ORTH	**Orthonies,Zaky**	**0.29**	**352**	P	**Pb**	**21 17 19.8**	**0.0**
ORTH				S	**Sg**	**21 17 23.2**	**+0.6**
ORTH	**Orthonies,Zaky**	**0.29**	**352**	P	**Pb**	**21 17 19.7**	**0.0**
ORTH				S	**Sb**	**21 17 23.8**	**-0.8**
CLEM	**Kyllini,Ilia,G**	**0.45**	**43**	P	**Pg**	**21 17 21.7**	**+0.4**
CLEM				S	**Sg**	**21 17 28.0**	**+0.7**
RTZL	**Ratzakli, Kefa**	**0.52**	**2**	P	**Pg**	**21 17 22.6**	**0.0**
RTZL				S	**Sg**	**21 17 29.8**	**+0.3**
RTZL	**Ratzakli, Kefa**	**0.52**	**2**	P	**Pg**	**21 17 22.6**	**0.0**
RTZL				S	**Sg**	**21 17 29.7**	**+0.3**
VLS	**Valsamata**	**0.63**	**348**	P	**Pg**	**21 17 24.6**	**-0.2**
VLS				S	**Sg**	**21 17 33.7**	**+0.6**
VLS	**Valsamata**	**0.63**	**348**	P	**Pg**	**21 17 24.8**	**0.0**
VLS				S	**Sb**	**21 17 34.0**	**-0.2**
KFL1	**Kefalonia,Entr**	**0.64**	**342**	P	**Pb**	**21 17 25.3**	**-0.3**
KFL1				S	**Sb**	**21 17 34.7**	**+0.3**
ARG2	**Argostoli**	**0.65**	**342**	P	**Pg**	**21 17 25.2**	**0.0**
LXR1	**Lixouri, Cepha**	**0.69**	**339**	P	**Pb**	**21 17 26.3**	**-0.1**
DMLN	**Damoulianata-K**	**0.74**	**336**	P	**Pb**	**21 17 27.1**	**-0.2**
DMLN	**Damoulianata-K**	**0.74**	**336**	P	**Pb**	**21 17 27.5**	**+0.2**
DMLN				S	**Sb**	**21 17 38.4**	**+1.0**
RLS	**Riolos of Patr**	**0.76**	**49**	P	**Pg**	**21 17 26.8**	**-0.3**
RLS	**Riolos of Patr**	**0.76**	**49**	P	**Pg**	**21 17 26.8**	**-0.3**
RLS				S	**Sg**	**21 17 37.1**	**+0.1**
AXS	**Araxos**	**0.81**	**38**	P	**Pg**	**21 17 27.7**	**-0.4**
AXS	**Araxos**	**0.81**	**38**	P	**Pg**	**21 17 28.1**	**0.0**
AXS				S	**Sb**	**21 17 39.4**	**+0.1**
DRO	**Drossia**	**0.86**	**62**	P	**Pg**	**21 17 28.6**	**-0.4**
DRO	**Drossia**	**0.86**	**62**	P	**Pg**	**21 17 28.9**	**-0.1**
DRO				S	**Sb**	**21 17 41.2**	**+0.4**
FSK	**Fiskardo**	**0.91**	**351**	P	**Pg**	**21 17 29.2**	**-0.9**
FSK	**Fiskardo**	**0.91**	**351**	P	**Pg**	**21 17 30.0**	**0.0**
FSK				S	**Sb**	**21 17 42.9**	**+0.6**
ITM	**Ithomi**	**1.01**	**112**	P	**Pn**	**21 17 32.4**	**-0.1**
PYL	**PYLOS**	**1.03**	**130**	P	**Pn**	**21 17 32.7**	**-0.1**
EVGI	**Lefkada island**	**1.06**	**356**	P	**Pb**	**21 17 32.0**	**-0.8**
EVGI	**Lefkada island**	**1.06**	**356**	P	**Pb**	**21 17 32.4**	**-0.4**
EVGI				S	**Sn**	**21 17 47.9**	**0.0**
DRAG	**Dragano-Lefkad**	**1.13**	**353**	P	**Pg**	**21 17 34.5**	**+0.2**
DRAG				S	**Sn**	**21 17 49.7**	**+0.1**
KLV	**Kalavryta, Ach**	**1.21**	**66**	P	**Pn**	**21 17 34.9**	**-0.4**
KLV	**Kalavryta, Ach**	**1.21**	**66**	P	**Pn**	**21 17 35.2**	**-0.1**
PVO	**Paravola**	**1.22**	**30**	P	**Pn**	**21 17 35.4**	**0.0**
PVO	**Paravola**	**1.22**	**30**	P	**Pb**	**21 17 35.7**	**+0.2**
LKD2	**Lefkada island**	**1.23**	**357**	P	**Pn**	**21 17 35.1**	**-0.5**
LKD2	**Lefkada island**	**1.23**	**357**	P	**Pn**	**21 17 35.3**	**-0.2**
EFP	**Efpalio**	**1.26**	**46**	P	**Pb**	**21 17 36.1**	**-0.1**
TSLK	**Tsoukalades, L**	**1.27**	**357**	P	**Pg**	**21 17 36.7**	**-0.1**
GUR	**Goura**	**1.32**	**73**	P	**Pb**	**21 17 37.4**	**+0.2**
SERG	**Sergoula**	**1.34**	**50**	P	**Pn**	**21 17 36.6**	**-0.4**

ANX	Ano Chora	1.39	42	P	Pn	21 17 37.7	0.0
ANX	Ano Chora	1.39	42	P	Pb	21 17 38.4	0.0

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*SJA **06** 21:19:03.8±0.7, 24°.19S×67°.19W, h196km±3km, ML3.8, MW3.7*
*IDC **06** 21:19:03.5±1.7, 24°.25S×67°.20W, h163km±17km, mb3.2/1, mbtmp3.6/6, Error ellipse: s-maj=28.3km s-min=13.9km az=95.0*
*GUC **06** 21:19:04.8±0.7, 24°.20S×67°.25W, h179km±8km, ML4.2*
*NEIC **06** 21:19:04.9±2.1, 24°.23S±0°.06×67°.23W±0°.07, h178km±15km, mb4.4/5, ML4.2(GUC), Error ellipse: s-maj=10.1km s-min=8.0km az=67.0*
ISC 06 21:19:04.6±0.7**, 24°.21S**±0°.03×**67°.26W**±0°.04**, h186**km±7km**, n85, σ1ˢ.15**/122**, 4C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALTA		0.84	91	eP	Pn	21 19 32.3	-0.1
SALTA		0.84	91	eP	Pn	21 19 32.3	-0.1
SALTA				eS	Sn	21 19 53.6	-0.2
AF01	San Pedro de A	1.51	326	Pn	Pn	21 19 38.1	+0.6
AF01					Sn	21 20 01.6	-1.4
AF01	San Pedro de A	1.51	326	eP	Pn	21 19 38.1	+0.6
AF01				eS	Sn	21 20 03.9	+0.9
AF01				IAML		21 20 23.9	
	comp=Z,286nm,1.1s						
SLA	San Lorenzo	1.68	108	eP	Pn	21 19 39.4	+0.5
SLA	San Lorenzo	1.68	108	eP	Pn	21 19 39.4	+0.5
SLA				eS	Sn	21 20 05.3	-0.2
HJA	Humahuaca	1.96	60	eP	Pn	21 19 42.9	+0.8
AZAP	Zapla	2.00	91	eP	Pn	21 19 42.3	+0.1
FSA	Cafayete	2.22	149	eP	Pn	21 19 45.1	+0.5
GO02	Mina Guanaco	2.33	245		Pn	21 19 46.9	+1.0
GO02				Sn	Sn	21 20 18.2	+0.1
GO02	Mina Guanaco	2.33	245	eP	Pn	21 19 46.9	+1.0
GO02				eS	Sn	21 20 19.0	+0.9
GO02				IAML		21 20 19.7	
	comp=N,799nm,0.6s						
GO02	Mina Guanaco	2.33	245	eP	Pn	21 19 47.0	+1.1
GO02				IAML		21 20 20.9	
	comp=Z,409nm,0.4s						
PB06	IPOC Station P	2.60	305		Pn	21 19 50.0	+1.1
PB06				Sn	Sn	21 20 23.1	-0.3
PB06	IPOC Station P	2.60	305	eP	Pn	21 19 50.1	+1.1
PB06				eS	Sn	21 20 23.4	-0.1
PB06				IAML		21 20 25.6	
	comp=N,817nm,0.1s						
PB06	IPOC Station P	2.60	305	eP	Pn	21 19 50.1	+1.1
PB06				eS	Sn	21 20 23.9	+0.4
PB06				IAML		21 20 26.2	
	comp=Z,362nm,0.3s						
PB14	IPOC Station P	2.90	261		Pn	21 19 52.7	+0.1
PB14	IPOC Station P	2.90	261	eP	Pn	21 19 53.2	+0.7
PB14				eS	Sn	21 20 29.3	-0.7
PB14	IPOC Station P	2.90	261	eP	Pn	21 19 53.3	+0.7
PB14				eS	Sn	21 20 31.0	+1.0
PB09	IPOC Station P	3.02	322		Pn	21 19 54.8	+0.9
PB09				Sn	Sn	21 20 32.5	+0.1
PB09	IPOC Station P	3.02	322	eP	Pn	21 19 55.4	+1.5
PB09				eS	Sn	21 20 33.0	+0.5
PB09				IAML		21 20 34.1	
	comp=N,331nm,0.6s						
PB09	IPOC Station P	3.02	322	eP	Pn	21 19 55.5	+1.5
PB09				eS	Sn	21 20 33.2	+0.8
PB09				IAML		21 20 33.7	
	comp=Z,263nm,0.8s						
PB05	IPOC Station P	3.02	296		Pn	21 19 54.4	+0.5
PB05				Sn	Sn	21 20 31.8	-0.6
PB05	IPOC Station P	3.02	296	⇑eP	Pn	21 19 54.7	+0.8
PB05				eS	Sn	21 20 30.9	-1.4
PB05				IAML		21 20 35.3	
	comp=E,173nm,0.6s						
PB05	IPOC Station P	3.02	296	eP	Pn	21 19 54.7	+0.8
PB05				eS	Sn	21 20 32.7	+0.3
PB05				IAML		21 20 34.5	
	comp=Z,115nm,0.4s						
AHML	Horco Molle	3.10	146	eP	Pn	21 19 40.2	-15
AHML				eS	Sn	21 20 23.0	-11
PB10	IPOC Station P	3.10	282		Pn	21 19 55.6	+1.0
PB10	IPOC Station P	3.10	282	eP	Pn	21 19 55.5	+0.8
PB10				eS	Sn	21 20 34.5	+0.7
PB10	IPOC Station P	3.10	282	eP	Pn	21 19 55.9	+1.2
PB10				eS	Sn	21 20 35.1	+1.3
PB10				IAML		21 20 37.7	
	comp=Z,111nm,0.8s						
AC02	Maricunga	3.12	213		Pn	21 19 54.5	-0.9
AC02				Sn	Sn	21 20 35.2	+0.1
AC02	Maricunga	3.12	213	⇑eP	Pn	21 19 56.3	+1.0
AC02	Maricunga	3.12	213	eP	Pn	21 19 56.5	+1.1
AC02				eS	Sn	21 20 39.3	+4.2
AC02				IAML		21 20 46.1	
	comp=Z,254nm,0.8s						
PB03	IPOC Station P	3.15	313		Pn	21 19 55.6	+0.1
PB03	IPOC Station P	3.15	313	⇑eP	Pn	21 19 56.3	+0.9
PB03				eS	Sn	21 20 34.4	-0.7
PB03				IAML		21 20 37.5	
	comp=E,399nm,0.1s						
PB03	IPOC Station P	3.15	313	eP	Pn	21 19 56.3	+0.9
PB03				eS	Sn	21 20 35.2	0.0
PB03				IAML		21 20 37.0	
	comp=Z,232nm,0.1s						
PB07	IPOC Station P	3.46	315		Pn	21 19 59.2	-0.2
PB07				Sn	Sn	21 20 41.0	-1.1
PB07	IPOC Station P	3.46	315	eP	Pn	21 20 00.1	+0.7
PB07				eS	Sn	21 20 40.2	-1.9
PB07				IAML		21 20 42.5	
	comp=N,314nm,0.5s						
PB07	IPOC Station P	3.46	315	eS	Sn	21 20 41.1	-1.0
PB07				IAML		21 20 44.5	
	comp=Z,208nm,0.3s						
AC01	Pan de Azucar	3.59	237		Pn	21 19 59.9	-0.9
AC01				Sn	Sn	21 20 42.1	-2.6
AC01	Pan de Azucar	3.59	237	⇑eP	Pn	21 20 00.4	-0.4
AC01				eS	Sn	21 20 42.6	-2.2
AC01				IAML		21 20 46.2	
	comp=N,290nm,0.3s						
AC01	Pan de Azucar	3.59	237	eP	Pn	21 20 00.4	-0.4
AC01				eS	Sn	21 20 43.3	-1.4
AC01				IAML		21 20 44.2	
	comp=Z,113nm,0.3s						
PB01	IPOC Station P	3.77	326		Pn	21 20 03.3	+0.3
PB01				Sn	Sn	21 20 47.4	-1.4
PB01	IPOC Station P	3.77	326	eP	Pn	21 20 03.4	+0.4
PB01				eS	Sn	21 20 47.9	-0.9
PB01				IAML		21 20 50.4	
	comp=Z,123nm,0.2s						
PB02	IPOC Station P	3.77	319		Pn	21 20 03.4	+0.2
PB02	IPOC Station P	3.77	319	eP	Pn	21 20 03.3	+0.2
PB02	IPOC Station P	3.77	319	eP	Pn	21 20 03.5	+0.4
PB02				eS	Sn	21 20 47.4	-1.5
PB02				IAML		21 20 53.4	
	comp=Z,249nm,0.3s						
TINO	Tinogasta	3.85	184	eP	Pn	21 20 05.5	+1.4
AC06	Mina Casimiro	4.20	221		Pn	21 20 07.3	-1.1
AC06	Mina Casimiro	4.20	221	eP	Pn	21 20 07.5	-0.9
PATCX	Punta Patache	4.31	321		Pn	21 20 10.3	+0.5
PATCX	Punta Patache	4.31	321	eP	Pn	21 20 10.2	+0.3
PATCX				eS	Sn	21 20 57.3	-3.8
PATCX				IAML		21 21 13.7	
	comp=Z,60nm,0.4s						
GO03	Copiapo	4.31	218		Pn	21 20 08.7	-1.1
GO03					Sn	21 20 59.2	-1.8
GO03	Copiapo	4.31	218	eP	Pn	21 20 08.8	-1.1
GO03	Copiapo	4.31	218	eP	Pn	21 20 09.3	-0.5
GO03				eS	Sn	21 20 58.9	-2.1
GO03				IAML		21 21 01.9	
	comp=Z,136nm,0.4s						
PB08	IPOC Station P	4.41	336		Pn	21 20 12.8	+1.3
PB08	IPOC Station P	4.41	336	eP	Pn	21 20 12.8	+1.3
PB08				eS	Sn	21 21 02.3	-1.7
TA01	Diego Aracena	4.52	323	Pn	Pn	21 20 12.5	-0.1
TA01	Diego Aracena	4.52	323	eP	Pn	21 20 12.7	+0.2
TA01				eS	Sn	21 21 04.5	-1.4
TA01				IAML		21 21 07.1	
	comp=Z,42nm,2.1s						
HMBC	Humberstone	4.61	328		Pn	21 20 12.6	-1.2
HMBC	Humberstone	4.61	328	eP	Pn	21 20 13.6	-0.2
HMBC				eS	Sn	21 21 06.1	-2.0
HMBC				IAML		21 21 11.5	
	comp=Z,76nm,0.4s						
GO01	Chusmiza	4.86	338		Pn	21 20 17.9	+0.5
GO01	Chusmiza	4.86	338	eP	Pn	21 20 00.9	-17
GO01				IAML		21 21 17.4	
	comp=Z,25nm,0.7s						
PB11	IPOC Station P	4.96	333		Pn	21 20 18.9	+0.6
PB11	IPOC Station P	4.96	333	eP	Pn	21 20 17.3	-1.0
ACLC	CERRO LA CRUZ	5.20	177	eP	Pn	21 20 21.9	+0.5
AC05	El Transito	5.34	210	Pn	Pn	21 20 23.8	+0.6
AC05	El Transito	5.34	210	eP	Pn	21 20 23.2	0.0
LCO	Las Campanas	5.69	212	Pn	Pn	21 20 27.5	-0.4
PB12	IPOC Station P	6.26	332	Pn	Pn	21 20 34.6	-0.6
CO01	Juntas del Tor	6.28	203	Pn	Pn	21 20 36.1	+0.6
CFA	Coronel Fontan	7.42	187	P	Pn	21 20 49.4	-0.8
	comp=Z,0.5nm,0.3s,baz=7.6,slow=15,SNR=1.9						
CFA				S	Sn	21 22 09.4	-4.5
	comp=Z,1.3nm,0.3s,baz=122,slow=19,SNR=6.8						
LPAZ	La Paz	7.92	354	P	Pn	21 20 58.1	+0.6
	comp=Z,3.0nm,0.4s,baz=163,slow=11,SNR=14						
LPAZ				S	Sn	21 22 25.5	-1.4
	comp=Z,1.6nm,0.9s,baz=190,slow=22,SNR=1.5						
LPAZ	La Paz	7.92	354		Pn	21 20 58.2	+0.8
CPUP	Villa Florida	9.23	105	P	Pn	21 21 13.7	-0.3
	comp=Z,0.3nm,0.8s,baz=137,slow=11,SNR=3.8						
TRQA	Tornquist	14.52	163	Pn	Pn	21 22 21.4	0.0
PLCA	Paso Flores	16.71	189	P	Pn	21 22 48.5	+0.4
	comp=Z,2.2nm,0.9s,baz=15,slow=11,SNR=6.9						
PLCA	Paso Flores	16.71	189	P	Pn	21 22 48.9	+0.8
CZSB	Cruzeiro do Su	17.20	341		Pn	21 22 54.3	+0.3
VAO	Valinhos	18.64	90	P	P	21 23 07.9	-0.5
VAO				IAmb	IAmb	21 23 09.2	
	comp=Z,18nm,0.9s						
LL02	Futaleuf	19.31	190	P	Pn	21 23 17.2	-1.4
LL02				IAmb	IAmb	21 23 20.8	
	comp=Z,11nm,0.8s						
BDFB	Brasilia	19.98	68	P	P	21 23 22.6	-0.3
	comp=Z,6.4nm,0.7s,baz=229,slow=9.2,SNR=9.7						
BDFB	Brasilia	19.98	68	P	P	21 23 22.7	-0.3
BDFB				IAmb	IAmb	21 23 23.3	
	comp=Z,8.4nm,0.8s						
SNAA	Sanae	59.23	161	P	P	21 28 46.6	+0.6
	comp=Z,0.7nm,0.9s,baz=260,slow=13,SNR=12						
	comp=Z,0.7nm,0.9s						
ASAR	Alice Springs	128.17	205	PKP	PKiKP	21 37 51.0	+1.0
	comp=Z,0.1nm,0.3s,baz=141,slow=9.5,SNR=2.4						
WRA	Warramunga Arr	131.33	207	PKP	PKiKP	21 37 57.6	+1.2
	comp=Z,0.3nm,0.7s,baz=142,slow=1.9,SNR=2.3						
MKAR	Makanchi Array	146.83	40	PKPbc	PKPbc	21 38 25.0	+0.2
	comp=Z,0.2nm,0.6s,baz=276,slow=2.8,SNR=2.5						

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*NEIC **06** 21:19:17.9±1.5, 19°.09N±0°.02×67°.15W±0°.02, h10km±1km, ML2.1/10, Md2.9/12(RSPR), Error ellipse: s-maj=4.9km s-min=3.1km az=216.0*
*SDD **06** 21:19:19.1±2.5, 19°.07N×67°.12W, h23km±92km, MD3.1, ML2.9, MW2.8, Presumed earthquake*
*RSPR **06** 21:19:19.6, 19°.06N×67°.29W, h10km±31km, MD2.9/12*
ISC 06 21:19:16.3±1.5**, 19°.09N**±0°.05×**67°.15W**±0°.03**, h2**km±11km**, n45, σ0ˢ.56**/58**, 18C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	0.62	177		Pb	21 19 30.3	+0.3
AGPR					Sb	21 19 39.1	0.0
AGPR	Aguadilla, PR	0.62	177	⇓iP	Pb	21 19 30.3	+0.3
AGPR	Aguadilla, PR	0.62	177	eS	Sb	21 19 39.1	0.0
AGPR	Aguadilla, PR	0.62	177	⇑ePg	Pb	21 19 30.1	+0.2
AGPR				⇑eSg	Sb	21 19 38.8	-0.3
AGPR				IAML		21 19 41.8	
	comp=N,2μm,0.2s						
IDE	Isla Desecheo	0.77	204		Pb	21 19 32.4	0.0
IDE					Sb	21 19 42.9	-0.3
IDE	Isla Desecheo	0.77	204	⇑iP	Pb	21 19 32.4	0.0
IDE	Isla Desecheo	0.77	204	eS	Sb	21 19 42.9	-0.3
AOPR	Arecibo Observ	0.83	153		Sb	21 19 44.8	-0.4
AOPR	Arecibo Observ	0.83	153		Pb	21 19 33.5	-0.1
AOPR	Arecibo Observ	0.83	153	⇑eP	Pb	21 19 33.4	-0.1
AOPR	Arecibo Observ	0.83	153	eS	Sb	21 19 44.8	-0.4
AOPR	Arecibo Observ	0.83	153	⇑ePg	Pb	21 19 33.4	-0.1
AOPR				⇑eSg	Sb	21 19 44.8	-0.4
AOPR				IAML		21 19 54.4	
	comp=N,906nm,0.3s						
EMPR	Esperanza - Ma	0.85	136		Pn	21 19 36.8	+1.5
EMPR					Sn	21 19 47.9	-0.4
EMPR	Esperanza - Ma	0.85	136	⇑eP	Pn	21 19 36.8	+1.5
EMPR	Esperanza - Ma	0.85	136	eS	Sn	21 19 47.9	-0.4
LSP	Las Mesas	0.91	176		Pb	21 19 34.9	-0.1
LSP					Sb	21 19 47.8	+0.3
LSP	Las Mesas	0.91	176	⇓eP	Pb	21 19 34.9	-0.1
LSP	Las Mesas	0.91	176	eS	Sb	21 19 47.8	+0.3
UUPR	Utuado, UPR, P	0.93	154		Pn	21 19 36.4	-0.1
UUPR					Sg	21 19 47.0	+0.8
UUPR	Utuado, UPR, P	0.93	154	⇑eP	Pn	21 19 36.4	-0.1
UUPR	Utuado, UPR, P	0.93	154	eS	Sg	21 19 47.0	+0.8
ECPR	Experimental S	1.07	136	⇓eP	Pn	21 19 38.1	-0.2
ECPR	Experimental S	1.07	136	eS	Sn	21 19 53.1	-0.8
CRPR	Cabo Rojo, PR	1.08	178		Sg	21 19 51.2	+0.2
CRPR	Cabo Rojo, PR	1.08	178		Pb	21 19 37.4	-0.4
CRPR				IAML		21 19 52.7	
	comp=N,44nm,0.4s						
CRPR				IAML		21 19 52.8	
	comp=E,55nm,1.2s						
CRPR	Cabo Rojo, PR	1.08	178	⇑eP	Pb	21 19 37.5	-0.2
CRPR	Cabo Rojo, PR	1.08	178	eS	Sg	21 19 51.2	+0.2
CRPR	Cabo Rojo, PR	1.08	178	⇑ePg	Pg	21 19 37.0	0.0
CRPR				⇑eSg	Sg	21 19 51.4	+0.4
CRPR				IAML		21 19 52.9	
	comp=N,355nm,0.3s						
MLPR	Magueyes Islan	1.12	175	⇑iP	Pg	21 19 37.8	0.0
MLPR	Magueyes Islan	1.12	175	eS	Sg	21 19 52.4	+0.1
MLPR	Magueyes Islan	1.12	175	⇑ePg	Pg	21 19 37.8	0.0
MLPR				⇑eSg	Sg	21 19 50.4	-2.0
MLPR				IAML		21 19 53.1	
	comp=N,313nm,0.4s						
OBIP	Obispado Ponce	1.16	154		Sg	21 19 54.2	+0.4
OBIP	Obispado Ponce	1.16	154		Pb	21 19 38.8	-0.4
OBIP				IAML		21 19 56.4	
	comp=E,42nm,0.3s						
OBIP				IAML		21 19 59.0	
	comp=N,35nm,0.2s						
OBIP	Obispado Ponce	1.16	154	⇓eP	Pb	21 19 39.0	-0.2
OBIP	Obispado Ponce	1.16	154	eS	Sg	21 19 54.2	+0.4
GCPR	Guaynabo City	1.28	127	Pn	Pn	21 19 41.9	+0.7
PCDR	Punta Cana, DR	1.30	244	⇑ePg	Pb	21 19 41.6	+0.1
PCDR				⇑eSg	Sg	21 19 57.4	-0.8
PCDR				IAML		21 20 16.6	
	comp=N,108nm,1.7s						
SJG	San Juan	1.36	136	eS	Sn	21 20 01.2	+0.3
HUMP	Col San Antoni	1.55	127	Pn	Pb	21 19 45.4	-0.4
HUMP					Pg	21 19 45.6	-0.5
HUMP				IAML		21 20 12.8	
	comp=E,31nm,0.2s						
HUMP				IAML		21 20 15.0	
	comp=N,31nm,0.2s						
HUMP	Col San Antoni	1.55	127	⇓iP	Pg	21 19 45.9	-0.2
HUMP	Col San Antoni	1.55	127	eS	Sg	21 20 06.2	-0.1
MIDR	Miches	1.80	267	⇑eP	Pb	21 19 49.7	-0.4
MIDR	Miches	1.80	267	⇑ePg	Pb	21 19 49.7	-0.4
MIDR				⇑eSg	Sg	21 20 14.7	+0.5
MIDR				IAML		21 20 17.4	
	comp=N,17nm,0.3s						
DR12	Loma Pena Alta	2.13	262	Pn	Pn	21 19 53.8	+0.8
HATOM	Hato Mayor del	2.13	262	⇑ePg	Pn	21 19 53.9	+0.9
HATOM				eSg	Sb	21 20 22.3	-0.4
HATOM				IAML		21 20 28.7	
	comp=N,128nm,0.3s						

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*NOU **06** 21:37:53.9, 39°.41S×177°.68E, h4km, ML3.8/9, Off E. Coast of N. Island, N.Z.*
*WEL **06** 21:37:54.5±0.4, 39°S±4°×17°8E±°, h27km±4km, M3.4/18, ML3.5/19, MLv3.4/18, Error ellipse: s-maj=5.1km s-min=4.0km az=147.6, confirmed*
ISC 06 21:37:53.7±1.4**, 39°.41S**±0°.03×**177°.76E**±0°.03**, h17**km±10km**, n83, σ0ˢ.92**/92**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MHGZ	Mahia Peninsul	0.28	24	P	Pn	21 38 03.0	0.0
MHGZ				S	Sn	21 38 09.6	+0.7
KNZ	Kokohu	0.39	350	P	Pb	21 38 02.8	+0.6
KNZ				S	Sb	21 38 08.8	+0.9
WFSS	Wairoa Fire St	0.46	325	P	Pb	21 38 03.6	+0.4
PRGZ	Paritu Road	0.50	11	P	Pn	21 38 05.5	-0.5
WHHZ	Waihua	0.53	309	P	Pb	21 38 04.8	+0.3
WHHZ				S	Sb	21 38 12.5	+0.7
CKHZ	Cape Kidnapper	0.58	245	P	Pn	21 38 07.6	+0.5
CKHZ				S	Sn	21 38 17.3	+1.0
ARHZ	Aropaoanui	0.61	284	P	Pb	21 38 06.6	+0.8
ARHZ				S	Sn	21 38 15.7	-1.3
NGHS	Napier Girls H	0.66	263	P	Pn	21 38 08.4	+0.2
RIGZ	Rimuhau	0.70	0	P	Pb	21 38 08.3	+0.8
RIGZ				S	Sn	21 38 18.5	-0.8
SNGZ	Shannon Statio	0.71	332	P	Pb	21 38 07.6	+0.1
SNGZ				S	Sb	21 38 17.1	+0.2
RAHZ	Arahi	0.72	313	P	Pb	21 38 07.8	0.0
RAHZ				S	Sb	21 38 17.3	-0.1
KAHZ	Kahuranaki	0.78	240	P	Pn	21 38 10.7	+0.7
NMHZ	Naumai	0.80	293	P	Pb	21 38 09.6	+0.4
MCHZ	McNeill Hill	0.82	267	P	Pn	21 38 10.7	+0.2
MTHZ	Maungataniwha	0.91	308	P	Pb	21 38 10.6	-0.3
PXZ	Pawanui	0.93	228	P	Pn	21 38 12.3	+0.4
RAGZ	Rawiri	0.95	344	P	Pb	21 38 11.7	-0.1
TKGZ	Te Karaka	0.97	4	P	Pg	21 38 12.6	0.0
CNGZ	Carnagh Statio	0.99	21	P	Pg	21 38 13.2	+0.3
RTZ	Ruatahuna	1.00	322	P	Pb	21 38 12.1	-0.4
BKZ	Black Stump Fm	1.01	284	P	Pg	21 38 12.8	-0.5
BKZ	Black Stump Fm	1.01	284	S	Sg	21 38 25.5	-1.1
BKZ	Black Stump Fm	1.01	284	P	Pb	21 38 12.6	-0.1
KWHZ	Kaweka Forest	1.03	269	P	Pb	21 38 13.2	+0.1
KRHZ	Kereru	1.10	257	P	Pb	21 38 14.2	0.0
MRHZ	Matea Rd	1.19	298	P	Pb	21 38 15.0	-0.8
WPHZ	Waipukurau	1.21	237	P	Pn	21 38 16.0	+0.2
PRHZ	Porangahau	1.22	225	P	Pn	21 38 16.0	+0.1
TWGZ	Tauwhareparae	1.24	8	P	Pn	21 38 15.9	-0.4
URZ	Urewera	1.26	336	P	Pn	21 38 15.6	-0.8
URZ	Urewera	1.26	336	P	Pn	21 38 15.5	-0.8
PNHZ	Pukenui	1.30	247	P	Pn	21 38 17.2	0.0
ALRZ	Allen Road	1.39	307	P	Pn	21 38 18.4	+0.1
PUZ	Puketiti	1.39	16	P	Pn	21 38 17.6	-0.7
PRRZ	Plateau Road	1.40	310	P	Pb	21 38 19.3	0.0
RRRZ	Republican Roa	1.44	317	P	Pb	21 38 20.0	-0.1
RUGZ	Raukumara Rang	1.44	357	P	Pn	21 38 19.2	+0.1
DVHZ	Dannevirke	1.51	234	P	Pn	21 38 19.8	-0.2
EDRZ	Edgecumbe	1.53	328	P	Pb	21 38 21.7	+0.2
TARZ	Mount Tarawera	1.53	320	P	Pn	21 38 19.9	-0.3
WPRZ	Whakapapatarin	1.53	305	P	Pg	21 38 22.1	-1.0
HRRZ	Handcock Road	1.54	311	P	Pb	21 38 22.0	+0.3
RITZ	Rihia Road	1.54	286	P	Pb	21 38 21.5	-0.3
MOVZ	Moawhango	1.55	269	P	Pb	21 38 22.1	+0.1
PKGZ	Pakihiroa	1.56	9	P	Pn	21 38 19.8	-0.8
WHTZ	Whakaora	1.59	297	P	Pg	21 38 23.8	-0.5
HSRZ	Hossack Road	1.61	312	P	Pb	21 38 23.4	+0.4
TMVZ	Te Maari	1.62	280	P	Pb	21 38 22.9	-0.3
RATZ	Rangitukua	1.64	289	P	Pb	21 38 23.8	+0.4
OTVZ	Oturere	1.64	278	P	Pg	21 38 25.3	0.0
NTVZ	North Tongarir	1.65	280	P	Pb	21 38 23.6	0.0
HAZ	Te Kaha	1.65	1	P	Pn	21 38 21.0	-0.9
SNVZ	South Ngauruho	1.66	277	P	Pb	21 38 24.2	+0.4
KATZ	Kakaramea	1.66	285	P	Pb	21 38 24.2	+0.3
WMGZ	Waiomatatini S	1.67	18	P	Pn	21 38 22.0	-0.1
KRVZ	Karewarewa	1.67	280	P	Pb	21 38 23.8	-0.3
WNVZ	Wahianoa	1.68	272	P	Pb	21 38 24.7	+0.5
NNVZ	North Ngauruho	1.69	279	P	Pb	21 38 24.4	+0.1
WHVZ	Whangaehu Hut	1.69	274	P	Pg	21 38 25.6	-0.5
NGZ	Ngauruhoe	1.69	277	P	Pb	21 38 24.4	0.0
WTVZ	West Tongariro	1.71	279	P	Pb	21 38 24.9	+0.2
MAVZ	Matarangi	1.71	274	P	Pb	21 38 24.5	-0.4
FWVZ	Far West T-bar	1.72	274	P	Pb	21 38 24.7	-0.2
BFZ	Birch Farm	1.72	222	P	Pn	21 38 22.7	-0.1
BFZ	Birch Farm	1.72	222	P	Pn	21 38 22.4	-0.4
WATZ	Wairara	1.73	293	P	Pg	21 38 28.8	+2.0
COVZ	Chateau Observ	1.73	276	P	Pg	21 38 28.5	+1.5
PKVZ	Pokaka	1.87	273	P	Pn	21 38 23.0	-1.9
TGRZ	Tauranga	2.05	325	P	Pg	21 38 34.4	+1.4
MRZ	Mangatainoka R	2.09	233	P	Pn	21 38 27.6	-0.3
TMWZ	Te Maipa	2.22	220	P	Pn	21 38 28.7	-1.0
HOWZ	Holdsworth Sta	2.27	228	P	Pn	21 38 29.8	-0.7
OGWZ	Otaki Gorge	2.43	234	P	Pn	21 38 32.8	+0.2
HIZ	Hauiti	2.43	291	P	Pn	21 38 33.3	+0.7
MTW	Mount Morrison	2.46	224	P	Pn	21 38 32.0	-1.0
TRWZ	Traveller	2.54	218	P	Pn	21 38 32.5	-1.6
MSWZ	Moikau Station	2.77	223	P	Pn	21 38 35.8	-1.5
TUWZ	Tuamarina	3.54	234	P	Pn	21 38 47.3	-0.5
QRZ	Quartz Range	4.25	249	P	Pn	21 38 56.8	-0.8
KHZ	Kahutara	4.39	225	P	Pn	21 39 02.3	+2.9
OUZ	Omahuta	5.34	320	P	Pn	21 39 15.3	+2.8
CTZ	Chatham Island	6.04	138	P	Pn	21 39 24.8	+2.7
CTZ	Chatham Island	6.04	138	P	Pn	21 39 24.6	+2.4
CTZ				S	Sn	21 40 28.2	-2.6

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*PDG **06** 21:53:26.4±0.2, 41°.36N×19°.67E, h11km, ML2.7/12, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*
*TIR **06** 21:53:28.0, 41°.47N×19°.78E, h48km±1km, Md2.7/5, Ml2.8/6*
ISC 06 21:53:28.3±0.9**, 41°.39N**±0°.03×**19°.67E**±0°.03**, h15**km±7km**, n35, σ1ˢ.07**/62**, 17C-14D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.16	106	Pg	Pg	21 53 32.4	+0.2
TIR				Sg	Sg	21 53 34.9	0.0
TIR				AML	AML	21 53 37.1	
	2.0nm,0.5s						
PHP	Peshkopia	0.65	63	Pg	Pb	21 53 39.9	-1.6
PHP				Sg	Sb	21 53 48.8	-1.6
PHP				AML	AML	21 53 53.4	
	1.4nm,0.4s						
PHP				AMd		21 54 19.8	
ULC	Ulcinj	0.65	331	⇓iPg	Pb	21 53 38.9	-2.6
ULC				i Sg	Sb	21 53 49.8	-0.6
SDA	Shkodra	0.67	349	Pg	Pb	21 53 39.5	-2.3
SDA				Sg	Sg	21 53 51.3	+0.9
SDA				AMd		21 54 26.8	
DRME	Dracevica, Mon	0.87	336	⇓iPg	Pb	21 53 43.2	-2.0
DRME				eSg	Sn	21 53 57.9	-0.7
OHR	Ohrid	0.90	108	i Pg	Pg	21 53 45.8	+0.1
OHR				i Sg	Sn	21 54 00.3	+1.0
VLO	Vlora	0.93	188	Pg	Pg	21 53 47.5	+1.3
VLO				Sg	Sn	21 54 00.6	+0.6
VLO				AML	AML	21 54 10.3	
	1.9nm,0.2s						
VLO				AMd		21 54 32.8	
BUM	Brajici-Budva	1.08	328	⇓iPg	Pb	21 53 47.5	-1.2
BUM				i Sg	Sg	21 54 04.0	+0.8
PDG	Podgorica	1.08	344	Pg	Pb	21 53 47.6	-1.2
PDG				Sg	Sb	21 54 02.4	-0.3
PDG				AMd		21 54 35.5	
PDG	Podgorica	1.08	344	⇑S	Sg	21 54 03.9	+0.6
PDG	Podgorica	1.08	344	⇑iPg	Pb	21 53 47.1	-1.7
PDG				i Sg	Sg	21 54 05.0	+1.6
KBN	Korca	1.14	132	Sn	Sb	21 54 04.0	-0.5
KBN				AML	AML	21 54 12.5	
	0.8nm,0.6s						
PVY	Plav	1.22	10	⇓iPg	Pn	21 53 49.2	-1.9
PVY				i Sg	Sg	21 54 09.0	+1.1
CEME	Cevo	1.28	335	⇓iPg	Pn	21 53 50.7	-1.1
CEME				eSg	Sb	21 54 09.0	+0.4
HCY	Herceg Novi	1.37	321	⇑iPg	Pn	21 53 52.4	-0.6
HCY				i Sg	Sb	21 54 12.0	+0.9
SKO	Skopje	1.45	66	i Pn	Pn	21 53 53.6	-0.5
SKO				i Sn	Sg	21 54 14.8	-0.2
KOME	Kolasin	1.46	356	⇑iPg	Pn	21 53 54.3	0.0
KOME				eSg	Sg	21 54 16.1	+0.6
NKME	Niksic	1.47	339	⇑iPg	Pn	21 53 54.1	-0.3
NKME				eSg	Sg	21 54 16.7	+0.8
IVA	Berane	1.49	6	⇑iPg	Pn	21 53 54.4	-0.3
IVA				i Sg	Sg	21 54 17.0	+0.6
BRY	Bratogost	1.73	331	⇓iPn	Pn	21 53 58.3	+0.3
BRY				i Sn	Sb	21 54 22.5	+1.1
IGT	Igoumenitsa	1.92	164	Sn	Sb	21 54 26.4	-0.6
PLE	Pljevlja	1.95	354	⇑iPn	Pn	21 54 00.9	-0.1
PLE				i Sn	Sb	21 54 28.2	+0.4
NOCI	Noci	2.06	254	Pn	Pn	21 54 01.9	-0.5
NOCI				Sn	Sb	21 54 30.9	+0.2
NOCI				AML	AML	21 54 34.3	
	0.4nm,0.3s						
NOCI				AMd		21 55 09.6	
VAY	Valandovo	2.19	91	i Pn	Pn	21 54 05.3	+1.1
BOVS	Bovan	2.70	33	⇓P	Pn	21 54 12.1	+0.8
BOVS				⇑S	Sn	21 54 44.7	+1.0
BLKB	Belogradchik	3.15	44	⇑S	Sn	21 54 56.1	+1.2
MDVR	Moldovita	3.71	23	⇑P	Pn	21 54 25.7	+0.6

MDVR				⇓S	**Sn**	**21 55 07.8**	**-0.8**
HERR	**Herculane**	**4.03**	**29**	⇑P	**Pn**	**21 54 30.0**	**+0.6**
HERR				⇓S	**Sn**	**21 55 16.4**	**0.0**
BANR	**Banloc**	**4.13**	**15**	⇓P	**Pn**	**21 54 32.6**	**+1.7**
BZS	**Buzias**	**4.46**	**18**	⇓P	**Pn**	**21 54 36.4**	**+1.0**
BZS				⇑S	**Sn**	**21 55 27.4**	**+0.4**
GZR	**Gura Zlata**	**4.60**	**28**	⇑P	**Pn**	**21 54 38.5**	**+1.1**
GZR				⇓S	**Sn**	**21 55 32.2**	**+1.6**
SURR	**Surduc**	**4.71**	**21**	⇑P	**Pn**	**21 54 40.2**	**+1.3**
SURR				⇑S	**Sn**	**21 55 32.9**	**-0.4**
SIRR	**Siria**	**5.08**	**16**	⇑P	**Pn**	**21 54 45.2**	**+1.2**
SIRR				⇓S	**Sn**	**21 55 42.7**	**+0.3**
DRGR		**5.83**	**21**	⇓S	**Sn**	**21 56 00.7**	**-0.1**
MLR	**Muntele Rosu**	**6.14**	**46**	⇑P	**Pn**	**21 55 00.0**	**+1.4**

RSNC 06 22:14:40.5±1.3**,5°S**±10°×**7°7W**±°**,h0^{km},mb4.4,mB5.2, ML2.6,Mw(mB)4.5,Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COHC	**Cochancay**	**3.29**	**322**	P	Pn	22 15 33.4	+0.1
COHC				S	Sn	22 16 13.0	-0.2
CASC	**Dorado de Casc**	**5.18**	**359**	P	Pn	22 15 59.4	-0.1
CASC				S	Sn	22 17 00.7	+0.6
PTLC	**Puerto Leguiza**	**5.75**	**25**	P	Pn	22 16 05.0	-2.3
	4µm35nm,0.9s						
FLOC	**Florencia**	**6.80**	**13**	P	Pn	22 16 21.7	0.0
	362nm12nm,0.5s						
GARC	**Garzon, Huila**	**7.42**	**14**	P	Pn	22 16 29.5	-0.9

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*ISK **06** 22:16:15.6, 35°.42N×26°.23E, h17^{km}, ML3.3/16*
*ATH **06** 22:16:16.2, 35°.33N×26°.28E, h27^{km}±2^{km}, ML3.3/6, Manual Solution by S.Koutrakis First location: 2019/12/06 22:17:24, This location: 2019/12/06 22:58:30 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*THE **06** 22:16:17.0, 35°N±3°×2°6E±°, h25^{km}±4^{km}, M3.2/9, MLh3.2/9*
*AFAD **06** 22:16:17.0, 35°.36N×26°.22E, h70^{km}±33^{km}, ML3.0*
*IDC **06** 22:16:18.7±1.1, 35°.53N×26°.12E, h80^{km}±13^{km}, mb3.8/8, mbtmp4.0/9, Error ellipse: s-maj=37.7km s-min=15.3km az=163.0*
ISC 06 22:16:14.6±0.9**,35°.30N**±0°.04×**26°.29E**±0°.02**,h34**^{km}±2^{km}**, n99,**σ**2^{s}.24**/123**,mb4.0**/9**,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.20**	**197**	P	**Pb**	**22 16 22.6**	**+1.4**
ZKR				S	**Sb**	**22 16 27.8**	**+2.0**
ZKR	**Zakros**	**0.20**	**197**	Pg	**Pb**	**22 16 22.4**	**+1.1**
ZKR				Sg	**Sb**	**22 16 27.7**	**+2.0**
ZKR	**Zakros**	**0.20**	**197**	P	**Pb**	**22 16 22.4**	**+1.1**
ZKR				S	**Sb**	**22 16 27.2**	**+1.5**
NPS	**Neapolis**	**0.55**	**266**	P	**Pn**	**22 16 27.4**	**+1.4**
NPS				S	**Sn**	**22 16 35.9**	**+1.8**
NPS	**Neapolis**	**0.55**	**266**	P	**Pn**	**22 16 27.4**	**+1.4**
NPS				S	**Sn**	**22 16 35.5**	**+1.4**
KARP	**Karpathos**	**0.75**	**71**	P	**Pb**	**22 16 31.5**	**+2.1**
KARP	**Karpathos**	**0.75**	**71**	Pg	**Pb**	**22 16 31.1**	**+1.7**
KARP				Sg	**Sb**	**22 16 42.4**	**+3.0**
KARP	**Karpathos**	**0.75**	**71**	P	**Pb**	**22 16 31.4**	**+2.1**
KARP				S	**Sb**	**22 16 40.9**	**+1.5**
IACM	**Heraklion**	**1.00**	**271**	P	**Pb**	**22 16 34.3**	**+0.9**
IACM				S	**Sb**	**22 16 47.7**	**+1.6**
IACM	**Heraklion**	**1.00**	**271**	P	**Pb**	**22 16 34.6**	**+1.3**
IACM				S	**Sb**	**22 16 47.8**	**+1.6**
IDI	**Anoyia**	**1.14**	**270**	P	**Pb**	**22 16 36.5**	**+0.6**
	87nm,0.3s,baz=95,slow=16,SNR=85						
IDI				S	**Sb**	**22 16 53.3**	**+2.8**
	238nm,0.4s,baz=333,slow=19,SNR=13						
IDI	**Anoyia**	**1.14**	**270**	P	**Pn**	**22 16 36.3**	**+2.1**
IDI	**Anoyia**	**1.14**	**270**	Pn	**Pb**	**22 16 36.7**	**+0.8**
IDI				Sn	**Sb**	**22 16 52.3**	**+1.8**
IDI	**Anoyia**	**1.14**	**270**	P	**Pb**	**22 16 36.7**	**+0.8**
IDI				S	**Sb**	**22 16 51.8**	**+1.3**
THERA	**Ancient Thera,**	**1.25**	**328**	P	**Pn**	**22 16 37.3**	**+1.6**
THERA				S	**Sb**	**22 16 53.7**	**+0.2**
THERA	**Ancient Thera,**	**1.25**	**328**	P	**Pn**	**22 16 37.6**	**+2.0**
THERA				S	**Sb**	**22 16 54.4**	**+0.8**
THR6	**Thira Island,**	**1.28**	**326**	P	**Pn**	**22 16 38.0**	**+2.0**
THR8	**Santorini-Mono**	**1.28**	**329**	P	**Pn**	**22 16 38.0**	**+1.8**
THR9	**Santorini-Faro**	**1.30**	**325**	P	**Pn**	**22 16 38.5**	**+2.2**
SNT5	**Nea Kammeni, S**	**1.32**	**327**	P	**Pn**	**22 16 38.5**	**+1.9**
THR3	**Thira Island,**	**1.32**	**327**	P	**Pn**	**22 16 38.7**	**+2.1**
THR2	**Thira island,**	**1.34**	**329**	P	**Pn**	**22 16 38.9**	**+2.0**
THR5	**Thira Island,**	**1.35**	**326**	P	**Pn**	**22 16 39.1**	**+2.0**
SAP3	**Santorini-Thir**	**1.37**	**326**	P	**Pn**	**22 16 39.3**	**+2.1**
YAZI	**Mula-Dat§a-**	**1.67**	**34**	P	**Pn**	**22 16 43.2**	**+1.7**
YAZI				S	**Sb**	**22 17 04.8**	**-0.6**
VAM	**Vamos**	**1.71**	**274**	P	**Pn**	**22 16 43.8**	**+1.8**
ARG	**Arkhangelos**	**1.75**	**58**	P	**Pb**	**22 16 45.5**	**-0.6**
ARG	**Arkhangelos**	**1.75**	**58**	Pn	**Pb**	**22 16 45.5**	**-0.6**
ARG	**Arkhangelos**	**1.75**	**58**	P	**Pb**	**22 16 45.6**	**-0.6**
DAT	**Datca**	**1.77**	**36**	Pn	**Pn**	**22 16 45.1**	**+2.2**
GVD	**Gavdhos**	**1.86**	**256**	Pn	**Pn**	**22 16 47.3**	**+3.2**
APE	**Apeiranthos**	**1.87**	**341**	P	**Pn**	**22 16 46.4**	**+2.2**
APE				S	**Sn**	**22 17 09.2**	**+2.5**
APE	**Apeiranthos**	**1.87**	**341**	P	**Pn**	**22 16 46.2**	**+2.0**
APE	**Apeiranthos**	**1.87**	**341**	Pn	**Pn**	**22 16 46.1**	**+2.0**
APE				Sn	**Sn**	**22 17 08.4**	**+1.8**
APE	**Apeiranthos**	**1.87**	**341**	P	**Pn**	**22 16 46.3**	**+2.0**
APE				S	**Sn**	**22 17 09.4**	**+2.8**
IMMV	**Iera Moni Meta**	**1.89**	**275**	Pn	**Pn**	**22 16 47.3**	**+2.8**
BODT	**Bodrum**	**1.94**	**25**	P	**Pb**	**22 16 50.4**	**+1.0**
BDRM	**Kayabasi**	**1.99**	**28**	P	**Pn**	**22 16 48.9**	**+3.0**
TURN	**Turunc**	**2.16**	**47**	P	**Pn**	**22 16 50.9**	**+2.7**
TURN				S	**Sn**	**22 17 16.2**	**+2.4**
TURN				*i* IAML		22 17 21.0	
	comp=E,113nm,0.3s						
TURN	**Turunc**	**2.16**	**47**	Pn	**Pn**	**22 16 50.9**	**+2.7**
KNDR	**Palaiochora Ch**	**2.18**	**269**	Pn	**Pn**	**22 16 51.6**	**+3.2**
MLSB	**Milas**	**2.33**	**31**	P	**Pn**	**22 16 52.9**	**+2.4**
MLSB				S	**Sn**	**22 17 21.1**	**+3.2**
MLSB				*i* IAML		22 17 30.0	
	comp=E,64nm,0.5s						
MLSB	**Milas**	**2.33**	**31**	Pn	**Pn**	**22 16 53.6**	**+3.1**
YER	**Yerkesik**	**2.44**	**41**	P	**Pn**	**22 16 55.3**	**+3.2**
YER	**Yerkesik**	**2.44**	**41**	P	**Pn**	**22 16 55.2**	**+3.2**
YER	**Yerkesik**	**2.44**	**41**	Pn	**Pn**	**22 16 55.1**	**+3.0**
DALY	**Dalyan (Mula)**	**2.44**	**51**	Pn	**Pn**	**22 16 55.2**	**+3.2**
SMG	**Samos**	**2.44**	**10**	P	**Pn**	**22 16 54.1**	**+2.0**
ANKY	**Antikythira Is**	**2.50**	**284**	P	**Pn**	**22 16 54.9**	**+2.1**
GCAM	**G?zelcaml?**	**2.51**	**17**	P	**Pn**	**22 16 55.3**	**+2.3**
GCAM				S	**Sn**	**22 17 24.7**	**+2.3**
GCAM				*i* IAML		22 17 28.0	
	comp=E,75nm,0.4s						
GCAM	**G?zelcaml?**	**2.51**	**17**	Pn	**Pn**	**22 16 55.6**	**+2.6**
MULA	**Mugla, Merkez-**	**2.55**	**39**	P	**Pn**	**22 16 57.2**	**+3.6**
FETY	**Fethiye**	**2.63**	**59**	P	Pn	22 16 48.4	-6.2
IZZE	**Mula-Seydike**	**2.64**	**64**	P	**Pn**	**22 16 56.2**	**+1.4**
KTHA	**Kythira Island**	**2.79**	**291**	P	**Pn**	**22 16 58.7**	**+1.8**
KTHA	**Kythira Island**	**2.79**	**291**	Pn	**Pn**	**22 16 59.1**	**+2.2**
ZEYE	**Izmir, Urla-Ze**	**2.94**	**3**	P	**Pn**	**22 16 60.0**	**+1.1**
ZEYE				S	**Sn**	**22 17 34.1**	**+1.2**
AYDB	**Zeytinkoy-Aydi**	**2.94**	**26**	Pn	**Pn**	**22 17 02.4**	**+3.4**
CAME	**Cameli-Denizli**	**2.94**	**55**	Pn	**Pn**	**22 17 01.6**	**+2.6**
ESEN	**Aydn-Nazilli**	**2.99**	**33**	P	**Pn**	**22 17 02.5**	**+2.9**
TAVA	**DENIZLI_Tavas**	**3.02**	**44**	P	**Pn**	**22 17 03.0**	**+2.9**
CAEL	**Denizli, Camel**	**3.05**	**53**	P	**Pn**	**22 17 03.2**	**+2.6**
URLA	**Izmir**	**3.06**	**5**	P	**Pn**	**22 17 01.9**	**+1.3**
VLI	**Veliai**	**3.06**	**298**	P	**Pn**	**22 17 02.4**	**+1.8**
VLI	**Veliai**	**3.06**	**298**	P	**Pn**	**22 17 02.5**	**+2.0**
KNIK	**Mula-Seydike**	**3.08**	**59**	P	**Pn**	**22 17 03.6**	**+2.7**
CHOS	**Chios island**	**3.09**	**357**	P	**Pn**	**22 17 03.2**	**+2.2**
KARY	**Karystos**	**3.11**	**332**	P	**Pn**	**22 17 03.8**	**+2.6**
KARY	**Karystos**	**3.11**	**332**	P	**Pn**	**22 17 04.1**	**+2.9**
BLCB	**Balcova**	**3.14**	**11**	P	**Pn**	**22 17 04.1**	**+2.5**
DNIZ	**Denizli-Tavas-**	**3.21**	**43**	P	**Pn**	**22 17 04.8**	**+2.2**
VLY	**Voula,Athens**	**3.24**	**322**	P	**Pn**	**22 17 06.2**	**+3.1**
GOLH	**Golhisar**	**3.27**	**53**	P	**Pn**	**22 17 06.8**	**+3.2**
GOLH				S	**Sb**	**22 17 50.9**	**-0.6**
GOLH				*i* IAML		22 18 01.0	
	comp=N,124nm,1.1s						
KIRA	**zmir-Kiraz**	**3.35**	**30**	P	**Pn**	**22 17 07.4**	**+2.7**
DION	**Dionisos Attik**	**3.36**	**326**	P	**Pn**	**22 17 07.3**	**+2.7**
KARB	**zmir-Karabur**	**3.36**	**2**	P	**Pn**	**22 17 05.0**	**+0.4**
INCE	**Denizli-Bozkur**	**3.58**	**47**	P	**Pn**	**22 17 10.1**	**+2.4**
MANT	**Manisa**	**3.67**	**29**	P	**Pn**	**22 17 11.3**	**+2.3**
ZEDA	**zmir-Bergama**	**3.71**	**10**	P	**Pn**	**22 17 11.9**	**+2.4**
KULA	**Kula-Manisa**	**3.73**	**30**	P	**Pn**	**22 17 12.1**	**+2.3**
USAK	**Uak-Merkez**	**4.05**	**32**	P	**Pn**	**22 17 16.6**	**+2.4**
KOCA	**Canakkale, Ayv**	**4.20**	**358**	P	**Pn**	**22 17 17.3**	**+1.2**
BUHA	**Balikesir, Bur**	**4.24**	**8**	P	**Pn**	**22 17 18.6**	**+1.8**
BAYC	**CANAKKALE_Bayr**	**4.44**	**3**	P	**Pn**	**22 17 21.1**	**+1.6**
BOZC	**Bozcaada**	**4.54**	**358**	P	**Pn**	**22 17 21.6**	**+0.8**
AGG	**Agios Georgios**	**4.88**	**321**	P	**Pn**	**22 17 26.7**	**+1.2**
BRTR	**Keskin Array B**	**7.32**	**51**	P	**Pn**	**22 18 00.9**	**+1.7**
	0.8nm,0.6s,baz=217,slow=14,SNR=7.3						
BRTR				S	**Sn**	**22 19 25.7**	**+4.5**
	0.3nm,0.7s,baz=233,slow=30,SNR=1.9						
MMAI	**Mount Meron Ar**	**7.89**	**104**	P	**Pn**	**22 18 04.3**	**-2.7**
	0.9nm,0.4s,baz=311,slow=13,SNR=13						
MMAI				S	**Sn**	**22 19 29.9**	**-5.2**
	1.3nm,0.3s,baz=302,slow=30,SNR=9.1						
EIL	**Elat**	**9.22**	**125**	P	**Pn**	**22 18 21.9**	**-3.2**
	2.5nm,0.4s,baz=251,slow=2.2,SNR=16						
EIL				S	Sn	22 19 58.5	-9.2
	5.6nm,0.4s,baz=200,slow=5.3,SNR=7.2						
KBZ	**Khabaz**	**15.31**	**52**	P	**P**	**22 19 54.4**	**+1.9**
	0.8nm,0.8s,baz=239,slow=13,SNR=7.9						
ESDC	**Sonseca Array**	**24.34**	**289**	P	**P**	**22 21 26.3**	**-2.9**
	0.2nm,0.6s,baz=90,slow=9.4,SNR=1.5						
HFS	**Hagfors**	**26.16**	**346**	P	**P**	**22 21 42.9**	**-2.5**
	7.3nm,1.2s,baz=154,slow=8.0,SNR=1.5 7.3nm,1.2s						
FINES	**FINESS Array B**	**26.16**	**360**	P	**P**	**22 21 43.5**	**-1.9**
	1.4nm,0.8s,baz=190,slow=9.6,SNR=3.4 1.4nm,0.8s						
ARCES	**ARCESS Array B**	**34.29**	**360**	P	**P**	**22 22 54.7**	**-2.6**
	5.7nm,1.0s,baz=182,slow=7.9,SNR=6.9 5.7nm,1.0s						
KURBB	**Kurchatov Arra**	**40.31**	**51**	P	**P**	**22 23 48.2**	**-0.3**
	2.1nm,0.4s,baz=276,slow=8.8,SNR=12 2.1nm,0.4s						
MKAR	**Makanchi Array**	**42.92**	**57**	P	**P**	**22 24 09.6**	**-0.5**
	1.1nm,0.3s,baz=267,slow=8.6,SNR=30 1.1nm,0.3s						
ZALV	**Zalesovo Beam**	**44.24**	**46**	P	**P**	**22 24 18.8**	**-1.6**
	1.2nm,0.4s,baz=265,slow=7.4,SNR=4.3 1.2nm,0.4s						
SONM	**Songino Array**	**58.68**	**51**	P	**P**	**22 26 08.3**	**-0.4**
	0.4nm,0.3s,baz=285,slow=7.9,SNR=4.7 0.4nm,0.3s						
USRK	**Ussuriysk Ar.**	**76.08**	**46**	P	**P**	**22 27 57.1**	**-1.6**
	1.0nm,0.4s,baz=304,slow=3.5,SNR=4.3 1.0nm,0.4s						

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*ATH **06** 22:29:40.4, 35°.21N×23°.78E, h28^{km}±5^{km}, ML2.7/4, Manual Solution by S.Koutrakis First location: 2019/12/06 22:31:11, This location: 2019/12/06 23:10:32 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*
*THE **06** 22:29:42.2, 35°N±1°×23°.8E±0°.7, h3^{km}±2^{km}, M2.4/5, MLh2.4/5*
ISC 06 22:29:41.4±1.1**,35°.19N**±0°.04×**23°.82E**±0°.03**,h16**^{km}±10^{km}**, n14,**σ**0^{s}.82**/23**,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	**0.16**	**285**	P	**Pb**	**22 29 45.7**	**-0.4**
KNDR				S	**Sb**	**22 29 48.4**	**-0.8**
KNDR	**Palaiochora Ch**	**0.16**	**285**	P	**Pb**	**22 29 45.7**	**-0.4**
KNDR				S	**Sb**	**22 29 48.4**	**-0.8**
IMMV	**Iera Moni Meta**	**0.30**	**27**	P	**Pb**	**22 29 47.9**	**-0.5**
IMMV				S	**Sg**	**22 29 52.2**	**+0.1**
IMMV	**Iera Moni Meta**	**0.30**	**27**	P	**Pb**	**22 29 48.0**	**-0.5**
IMMV				S	**Sb**	**22 29 52.6**	**-0.6**
CHAN	**Chania**	**0.37**	**29**	P	**Pb**	**22 29 49.3**	**-0.4**
CHAN				S	**Sb**	**22 29 54.7**	**-0.6**
CHAN	**Chania**	**0.37**	**29**	P	**Pb**	**22 29 49.6**	**-0.2**
CHAN				S	**Sb**	**22 29 55.4**	**0.0**
VAM	**Vamos**	**0.38**	**56**	P	**Pg**	**22 29 49.1**	**0.0**
VAM				S	**Sg**	**22 29 54.6**	**+0.1**
VAM	**Vamos**	**0.38**	**56**	P	**Pg**	**22 29 49.1**	**0.0**
VAM				S	**Sb**	**22 29 55.2**	**-0.3**
GVD	**Gavdhos**	**0.42**	**148**	P	**Pg**	**22 29 50.0**	**+0.2**
GVD				S	**Sb**	**22 29 56.8**	**+0.2**
ANKY	**Antikythira Is**	**0.79**	**328**	P	**Pn**	**22 29 57.3**	**-0.7**
IDI	**Anoyia**	**0.88**	**84**	P	**Pb**	**22 29 57.5**	**-1.0**
IDI	**Anoyia**	**0.88**	**84**	P	**Pb**	**22 29 57.7**	**-0.8**
KTHA	**Kythira Island**	**1.23**	**330**	P	**Pg**	**22 30 05.2**	**+0.1**
GUR	**Goura**	**2.98**	**337**	P	**Pn**	**22 30 30.9**	**+2.6**

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*IDC **06** 22:36:14.7±1.2, 40°.72N×31°.51E, h0^{km}, mb3.9/1, mbtmp3.6/4, ML3.4/3, MS2.8/3, Error ellipse: s-maj=25.5km s-min=7.7km az=47.0*
*ISK **06** 22:36:15.2, 40°.77N×31°.51E, h5^{km}, ML3.6/36*
*AFAD **06** 22:36:16.0, 40°.78N×31°.52E, h10^{km}±1^{km}, MW3.6*
ISC 06 22:36:16.4±1.0**,40°.79N**±0°.02×**31°.56E**±0°.02**,h8**^{km}±8^{km}**, n151,**σ**1^{s}.17**/187**,16C-22D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLU	**Bolu-Merkez-Mu**	**0.09**	**94**	P	**Pg**	**22 36 19.1**	**+0.3**
BCAM	**Yenicaga**	**0.39**	**85**	P	**Pb**	**22 36 24.5**	**-1.1**
YUVA	**Yuva-Kibriscik**	**0.41**	**166**	Pg	**Pg**	**22 36 24.5**	**+0.1**
YUVA				Sg	**Sb**	**22 36 30.9**	**-1.5**
MDUB	**Mudurnu**	**0.42**	**221**	Pg	**Pg**	**22 36 24.0**	**-0.6**
MDUB				Sg	**Sg**	**22 36 30.3**	**+0.2**
KIBS	**BOLU**	**0.43**	**148**	P	**Pb**	**22 36 25.2**	**-1.1**
KIBS				S	**Sb**	**22 36 31.2**	**-1.8**
KIBS				*i* IAML		22 36 32.0	
	comp=N,4µm,0.4s						
KIBS				*i* IAML		22 36 32.0	
	comp=E,5µm,0.6s						
BTAS	**Taskesti**	**0.47**	**243**	P	**Pg**	**22 36 24.9**	**-0.7**
DEVR	**Zonguldak/Devr**	**0.47**	**41**	P	**Pg**	**22 36 25.8**	**+0.1**
DEVR				S	**Sg**	**22 36 31.2**	**-0.7**
DEVR				*i* IAML		22 36 32.0	
	comp=E,1µm,0.2s						
SAHE	**Sakarya_HENDEK**	**0.54**	**277**	P	**Pg**	**22 36 26.4**	**-0.4**
SUSU	**Bolu-G¶ynk-**	**0.70**	**231**	P	**Pg**	**22 36 29.6**	**-0.4**
CMDR	**Camlidere-ANKA**	**0.76**	**112**	P	**Pb**	**22 36 31.2**	**-0.8**
CMDR				S	**Sb**	**22 36 42.1**	**-0.4**
CMDR				*i* IAML		22 36 43.0	
	comp=N,2µm,0.5s						
DERS	**Karabk-Eskip**	**0.76**	**85**	P	**Pb**	**22 36 31.5**	**-0.5**
GULT	**Gulveren**	**0.87**	**246**	Pg	**Pg**	**22 36 32.3**	**-0.8**
KBUK	**KARABUK-Merkez**	**0.93**	**61**	P	**Pb**	**22 36 34.2**	**-0.6**
SAUV	**Serdivan-Sakar**	**0.94**	**268**	Pg	**Pg**	**22 36 33.3**	**-1.1**
KAYN	**Sakarya, Kayna**	**0.94**	**281**	P	**Pg**	**22 36 33.4**	**-1.1**
SAFT	**Safranbolu**	**0.97**	**62**	Pg	**Pb**	**22 36 35.3**	**-0.2**
BTIN	**Bartın**	**1.00**	**31**	P	**Pg**	**22 36 35.0**	**-0.6**
GEYV	**SAKARYA_Geyve**	**1.01**	**253**	P	**Pg**	**22 36 34.8**	**-0.9**
GPA	**Golpazari**	**1.07**	**243**	Pg	**Pg**	**22 36 35.9**	**-1.1**
KAND	**Kocaeli-Kandir**	**1.08**	**287**	P	**Pg**	**22 36 35.7**	**-1.4**
POLA	**Polatl-ANKAR**	**1.18**	**156**	Pn	**Pb**	**22 36 38.8**	**-0.4**
BORA	**Eskisehir**	**1.24**	**223**	P	**Pg**	**22 36 39.1**	**-1.1**
HISA	**Bilecik-Osmane**	**1.28**	**256**	P	**Pg**	**22 36 39.0**	**-2.0**
HISA				S	**Sg**	**22 36 58.0**	**+0.3**
HISA				*i* IAML		22 37 01.0	
	comp=N,973nm,0.6s						
LOD	**Lodumlu**	**1.29**	**134**	Pn	**Pn**	**22 36 40.9**	**+0.1**
ANTO	**Ankara**	**1.32**	**134**	Pn	**Pn**	**22 36 42.1**	**+0.9**
SVRH	**Sivrihisar-ESK**	**1.34**	**181**	Pn	**Pg**	**22 36 41.5**	**-0.6**
AUSIV	**SIVRIHISAR**	**1.34**	**181**	P	**Pg**	**22 36 41.2**	**-1.0**
AUSIV				S	**Sb**	**22 36 60.0**	**+0.6**
AUSIV				*i* IAML		22 37 06.0	
	comp=E,277nm,0.5s						
SGAZ	**Eskisehir, Sey**	**1.37**	**204**	P	**Pn**	**22 36 42.1**	**+0.1**
SGAZ				S	**Sg**	**22 37 00.2**	**-0.3**
SGAZ				*i* IAML		22 37 03.0	
	comp=N,521nm,0.6s						
SEMS	**Kocaeli-K¶rfe**	**1.38**	**274**	P	**Pn**	**22 36 41.2**	**-0.8**
SEMS				S	**Sg**	**22 36 59.4**	**-1.4**
SEMS				*i* IAML		22 37 02.0	
	comp=N,740nm,0.4s						
KURC	**Kurucasile-Bar**	**1.39**	**40**	Pn	**Pb**	**22 36 43.2**	**+0.6**
OSMT	**Osmaniye**	**1.42**	**263**	Pn	**Pn**	**22 36 42.4**	**-0.3**
BILE	**Bilecik/Merkez**	**1.43**	**245**	P	**Pn**	**22 36 42.1**	**-0.7**
BILE				S	**Sg**	**22 37 01.9**	**-0.4**
BILE				*i* IAML		22 37 08.0	
	comp=E,847nm,0.7s						
ADVT	**Abdulvahap**	**1.43**	**256**	Pn	**Pn**	**22 36 42.1**	**-0.6**
CAVI	**Cavuskoy**	**1.43**	**247**	Pn	**Pn**	**22 36 42.3**	**-0.4**
HRT	**Hereke**	**1.43**	**272**	Pn	**Pn**	**22 36 42.8**	**0.0**
ELDT	**Eldivan**	**1.45**	**101**	P	**Pb**	**22 36 43.7**	**-0.1**
ELDT				S	**Sn**	**22 37 04.4**	**+1.8**
ELDT				*i* IAML		22 37 07.0	
	comp=N,729nm,1.1s						
ELDT				*i* IAML		22 37 13.0	
	comp=E,555nm,1.2s						
CIFT	**Cifteler, Eski**	**1.47**	**195**	Pn	**Pb**	**22 36 44.3**	**+0.2**
CIDE	**Kastamonu/Cide**	**1.52**	**43**	P	**Pb**	**22 36 44.3**	**-0.5**
GOKD	**Ankara-Kalecik**	**1.63**	**115**	P	**Pg**	**22 36 47.3**	**-0.4**
GOKD				S	**Sg**	**22 37 10.2**	**+1.4**
GOKD				*i* IAML		22 37 17.0	
	comp=N,395nm,1.2s						
ILGA	**Ilgaz**	**1.66**	**80**	P	**Pb**	**22 36 47.0**	**-0.4**
YLVH	**Yalova**	**1.66**	**268**	Pn	**Pn**	**22 36 46.9**	**+1.0**
LAFA	**Gebze-Kocaeli**	**1.67**	**270**	Pn	**Pn**	**22 36 46.4**	**+0.4**
YLV	**Yalova**	**1.68**	**263**	Pn	**Pn**	**22 36 46.2**	**+0.1**
BBAL	**Bala**	**1.73**	**135**	P	**Pb**	**22 36 48.4**	**-0.1**
BBAL				S	**Sg**	**22 37 13.6**	**+1.7**
BBAL				*i* IAML		22 37 15.0	
	comp=N,512nm,0.6s						
DOMA	**Ktahya-Doman**	**1.74**	**236**	P	**Pn**	**22 36 47.6**	**+0.5**
DOMA				S	**Sn**	**22 37 10.2**	**+0.8**
DOMA				*i* IAML		22 37 17.0	
	comp=N,641nm,0.7s						
TUZL	**Tuzla-Istanbul**	**1.74**	**272**	Pn	**Pn**	**22 36 47.5**	**+0.6**
YENC	**ankr-Yen**	**1.74**	**93**	P	**Pg**	**22 36 49.0**	**-0.8**
AFSR	**Afar-Bala (An**	**1.77**	**139**	Pn	**Pb**	**22 36 48.9**	**-0.3**
KMON	**Kastamonu**	**1.78**	**70**	Pn	**Pg**	**22 36 49.8**	**-0.8**
KURT	**Yalova, Merkez**	**1.79**	**265**	P	**Pn**	**22 36 48.2**	**+0.5**
KURT				*i* IAML		22 37 06.0	
	comp=N,310nm,1.6s						
KURT				S	**Sn**	**22 37 12.0**	**+1.3**
KURT				S	**Sb**	**22 37 13.0**	**+0.8**
ANDZ	**Kutahya, Merke**	**1.80**	**225**	P	**Pn**	**22 36 47.8**	**-0.1**
ANDZ				S	**Sn**	**22 37 09.9**	**-1.1**
ANDZ				*i* IAML		22 37 15.0	
	comp=E,347nm,0.9s						
BUYA	**Buyukada-Istan**	**1.84**	**273**	Pn	**Pn**	**22 36 49.4**	**+1.0**
SEYI	**Kastamonu-Seyd**	**1.85**	**62**	P	**Pg**	**22 36 50.7**	**-1.3**
HYBA	**Heybeliada-Ist**	**1.88**	**274**	Pn	**Pn**	**22 36 49.3**	**+0.5**
BYAT	**Afyon-Bayat**	**1.89**	**194**	P	**Pn**	**22 36 50.3**	**+1.2**
BYAT				S	**Sb**	**22 37 15.1**	**+0.1**
BYAT				*i* IAML		22 37 21.0	
	comp=N,534nm,0.4s						
BRGA	**Burgazada-Ista**	**1.89**	**274**	Pn	**Pn**	**22 36 49.8**	**+0.8**
ISK	**Istanbul-Kandi**	**1.91**	**279**	Pn	**Pn**	**22 36 49.9**	**+0.6**
BR131	**Keskin Array S**	**1.91**	**123**	Pn	**Pb**	**22 36 50.6**	**-1.1**
BRTR	**Keskin Array B**	**1.91**	**123**	Pg	**Pb**	**22 36 50.6**	**-1.1**
	6.3nm,0.3s,baz=301,slow=14,SNR=107						
BRTR				Lg	Lg	22 37 17.8	
	20nm,0.3s,baz=302,slow=26,SNR=8.5						
KIZT	**Kizilcal**	**1.92**	**172**	Pn	**Pn**	**22 36 49.6**	**0.0**
KKUL	**Konya-Kulu**	**1.92**	**147**	P	**Pg**	**22 36 53.6**	**+0.3**
KESK	**Krkkale-Ke**	**1.93**	**126**	P	**Pb**	**22 36 51.6**	**-0.3**
ULDT	**Uludag**	**1.96**	**252**	P	**Pn**	**22 36 50.0**	**-0.1**
KLYT	**Kilyos**	**1.96**	**285**	Pn	**Pn**	**22 36 50.6**	**+0.6**
DELI	**KIRIKKALE**	**1.97**	**113**	P	**Pb**	**22 36 52.4**	**-0.2**
BLVD	**Bolvadin-AFYON**	**2.02**	**190**	Pn	**Pn**	**22 36 51.5**	**+0.6**
ARMT	**Armutlu**	**2.06**	**265**	Pn	**Pn**	**22 36 53.3**	**+1.9**
HVHR	**Bakirkoy-Istan**	**2.06**	**276**	Pn	**Pn**	**22 36 53.2**	**+1.8**
KULU	**Kulu**	**2.07**	**147**	Pn	**Pb**	**22 36 53.1**	**-1.2**
MDNY	**Mudanya-Bursa**	**2.08**	**259**	Pn	**Pn**	**22 36 52.3**	**+0.7**
TVSB	**Tavsanli**	**2.09**	**231**	Pn	**Pn**	**22 36 52.2**	**+0.3**
SUNG	**orum-Sungurl**	**2.14**	**105**	P	**Pb**	**22 36 53.9**	**-1.5**
BGKT	**Bogazkoy**	**2.14**	**282**	Pn	**Pn**	**22 36 53.4**	**+0.9**
UCKU	**Afyonkarahisar**	**2.15**	**183**	P	**Pn**	**22 36 53.2**	**+0.5**
AVCI	**Avcilar-stanb**	**2.16**	**276**	Pn	**Pn**	**22 36 53.1**	**+0.4**
ORLT	**Orhaneli**	**2.16**	**251**	Pn	**Pn**	**22 36 53.6**	**+0.8**
KAMT	**Kaman**	**2.18**	**130**	Pn	**Pb**	**22 36 54.9**	**-1.3**
YKBL	**Yakuplu-Istanb**	**2.20**	**276**	Pn	**Pn**	**22 36 53.9**	**+0.6**
AFYO	**Afyonkarahisar**	**2.22**	**206**	P	**Pb**	**22 36 56.8**	**-0.1**
EMET	**Ktahya-Emet**	**2.22**	**231**	P	**Pb**	**22 36 56.3**	**-0.6**
KAGI	**orum-Kargı**	**2.24**	**80**	P	**Pb**	**22 36 57.5**	**+0.3**
AKPI	**Kirsehir/Akpin**	**2.27**	**124**	S	**Sg**	**22 37 27.6**	**-1.7**
KDHN	**Kadinhani**	**2.30**	**169**	P	**Pn**	**22 36 54.9**	**+0.1**
CTKS	**Kestanelik-??a**	**2.35**	**282**	Pn	**Pn**	**22 36 55.7**	**+0.4**
ELBA	**Catalca**	**2.39**	**280**	P	**Pn**	**22 36 56.5**	**+0.5**
ELBA				S	**Sn**	**22 37 25.6**	**+0.1**
ELBA				*i* IAML		22 37 30.0	
	comp=N,271nm,0.5s						
SDAG	**Sultandagi-AFY**	**2.40**	**192**	Pn	**Pn**	**22 36 56.9**	**+0.8**
CDAG	**Cicekdag**	**2.45**	**117**	P	**Pb**	**22 37 01.2**	**+0.4**
KIRS	**Kirsehir-Merke**	**2.45**	**132**	P	**Pb**	**22 37 00.9**	**0.0**
KIRS				S	**Sg**	**22 37 33.5**	**-1.7**
KIRS				*i* IAML		22 37 36.0	
	comp=N,114nm,0.6s						
KIRS	**Kirsehir-Merke**	**2.45**	**132**	⇑S	**Sg**	**22 37 36.6**	**+1.3**
BOYA	**Sinop/Boyabat-**	**2.47**	**71**	P	**Pb**	**22 37 00.5**	**-0.6**
KCTX	**Karacabey (Bur**	**2.49**	**259**	Pn	**Pn**	**22 36 58.2**	**+0.8**
AYAZ	**Ayas K¶y, M**	**2.51**	**91**	P	**Pn**	**22 36 59.2**	**+1.6**
YVAC	**Isparta, Yalva**	**2.52**	**186**	P	**Pn**	**22 36 58.4**	**+0.6**
AFYN	**Afyon-Dinar-K**	**2.64**	**198**	P	**Pn**	**22 37 01.7**	**+2.2**
DURS	**Dursunbey**	**2.64**	**244**	P	**Pn**	**22 36 59.1**	**-0.4**
BAND	**Balkesir-Ban**	**2.67**	**262**	P	**Pn**	**22 36 59.2**	**-0.5**
BAND	**Balkesir-Ban**	**2.67**	**262**	⇑S	**Sg**	**22 37 43.9**	**+1.7**
COAL	**Corum-Alaca**	**2.67**	**100**	P	**Pn**	**22 37 01.3**	**+1.5**
YOZG	**Bozok Univ. Me**	**2.67**	**111**	P	**Pb**	**22 37 03.6**	**-1.0**
YOZG				S	**Sg**	**22 37 41.5**	**-0.9**
YOZG				*i* IAML		22 37 43.0	
	comp=N,99nm,0.8s						
DOGA	**KONYA_Doganhis**	**2.68**	**178**	P	**Pn**	**22 37 00.2**	**+0.2**
ALIN	**Konya, Altinte**	**2.69**	**157**	P	**Pn**	**22 37 01.0**	**+0.9**
KZIL	**AFYON_Kizioren**	**2.75**	**204**	P	**Pn**	**22 37 02.0**	**+1.0**
DEMI	**Demirci**	**2.79**	**232**	P	**Pn**	**22 37 01.7**	**+0.1**
DEMI				S	**Sg**	**22 37 45.2**	**-1.0**
DEMI				*i* IAML		22 37 52.0	
	comp=N,120nm,0.6s						
USAK	**Uak-Merkez**	**2.85**	**224**	S	**Sg**	**22 37 47.5**	**-0.4**
KONT	**Konya--Tatoy**	**2.90**	**167**	P	**Pn**	**22 37 03.0**	**-0.1**
PASA	**Karahalli, USA**	**2.91**	**214**	P	**Pb**	**22 37 09.8**	**+1.1**
VIZE	**Kirklareli, Vi**	**2.91**	**287**	P	**Pn**	**22 37 03.9**	**+0.8**
BKES	**Balkesir-Mer**	**2.97**	**250**	P	**Pn**	**22 37 04.1**	**+0.2**
BKES				S	**Sg**	**22 37 50.1**	**-1.7**
BKES				*i* IAML		22 37 57.0	
	comp=N,222nm,0.9s						
BKES				*i* IAML		22 38 00.0	
	comp=E,169nm,0.6s						
CKRK	**Yozgat, Cekere**	**3.09**	**102**	P	**Pn**	**22 37 08.0**	**+2.3**
SIRC	**Yozgat**	**3.11**	**117**	P	**Pn**	**22 37 08.1**	**+2.2**
MANT	**Manisa**	**3.26**	**226**	P	**Pb**	**22 37 16.6**	**+1.9**
SEDI	**Konya, Seydise**	**3.33**	**177**	P	**Pn**	**22 37 08.5**	**-0.5**
HACI	**Hacifakili, Ak**	**3.37**	**107**	P	**Pn**	**22 37 11.4**	**+1.9**
MANR	**Mangalia**	**3.74**	**325**	⇑P	**Pn**	**22 37 14.8**	**+0.3**
PSN	**Preselentsi**	**3.82**	**319**	P	**Pn**	**22 37 15.8**	**+0.3**
PRD	**Provadia**	**3.90**	**309**	*e*P	**Pn**	**22 37 17.5**	**+0.9**
MFTR	**Murfatlar**	**4.11**	**327**	⇓P	**Pn**	**22 37 20.2**	**+0.7**
MFTR				⇑S	**Sn**	**22 38 06.7**	**-1.0**
JMB	**Yambol**	**4.13**	**296**	*e*P	**Pn**	**22 37 21.2**	**+1.3**
TIRR	**Tirgusor**	**4.34**	**329**	⇑P	**Pn**	**22 37 23.6**	**+0.9**
TIRR				⇑S	**Sn**	**22 38 13.2**	**-0.3**
CVDA	**Cernavoda**	**4.40**	**325**	⇓P	**Pn**	**22 37 24.4**	**+1.0**
CVDA				⇓S	**Sn**	**22 38 16.2**	**+1.4**
TLBR	**Topalu**	**4.56**	**327**	⇓P	**Pn**	**22 37 26.1**	**+0.4**
TLBR				⇑S	**Sn**	**22 38 19.8**	**+0.9**
DIM	**Dimitrovgrad**	**4.67**	**288**	P	**Pn**	**22 37 28.2**	**+1.0**
TPGR	**Topolog**	**4.68**	**331**	⇓P	**Pn**	**22 37 28.3**	**+1.0**
TPGR				⇓S	**Sn**	**22 38 19.6**	**-2.2**
KDZ	**Kurdzhali**	**4.76**	**282**	P	**Pn**	**22 37 28.3**	**-0.3**
CFR	**Carcaliu**	**5.06**	**331**	⇑P	**Pn**	**22 37 32.9**	**+0.4**
CFR				⇓S	**Sn**	**22 38 30.1**	**-1.0**
RZN	**Rozhen**	**5.22**	**282**	P	**Pn**	**22 37 35.1**	**+0.1**
ISR	**Istrita**	**5.68**	**321**	⇓P	**Pn**	**22 37 42.8**	**+1.6**
ISR				⇓S	**Sn**	**22 38 48.4**	**+1.8**
PLVB	**Pleven**	**5.78**	**299**	⇓P	**Pn**	**22 37 46.5**	**+4.0**
MMB	**Musomishta**	**5.94**	**280**	*e*P	**Pn**	**22 37 46.3**	**+1.6**
NEHR	**Nehoiu**	**6.03**	**322**	⇓P	**Pn**	**22 37 47.2**	**+1.3**
NEHR				⇓S	**Sn**	**22 38 56.1**	**+1.0**
VRI	**Vrincioaia**	**6.18**	**327**	⇓P	**Pn**	**22 37 49.7**	**+1.7**
PLOR	**Plostina**	**6.20**	**326**	⇑P	**Pn**	**22 37 49.9**	**+1.6**
PLOR				⇓S	**Sn**	**22 39 00.5**	**+1.1**
MLR	**Muntele Rosu**	**6.24**	**321**	Pn	**Pn**	**22 37 49.5**	**+0.5**
	0.4nm,0.3s,baz=137,slow=18,SNR=15						
MLR				Sn	**Sn**	**22 39 00.7**	**+0.2**
	0.6nm,0.3s,baz=143,slow=20,SNR=3.0						
MLR				LR	LR	22 40 41.1	
	comp=Z,75nm,19.9s,baz=140,slow=42 1.1nm,0.3s						
MLR	**Muntele Rosu**	**6.24**	**321**	⇓P	**Pn**	**22 37 50.3**	**+1.3**
MLR				⇓S	**Sn**	**22 39 03.2**	**+2.7**
COVR	**Voineasa-Covas**	**6.39**	**324**	⇓P	**Pn**	**22 37 52.3**	**+1.4**
COVR				⇓S	**Sn**	**22 39 05.4**	**+1.4**

KKB	Krupnik	6.43	282	P	Pn	22 37 51.9	+0.4
VTS	Vitosha	6.49	289	P	Pn	22 37 52.8	+0.4
TURR	Turia	6.63	324	⇑P	Pn	22 37 55.7	+1.5
TURR				⇓S	Sn	22 39 11.0	+0.9
OZUR		6.77	324	⇑P	Pn	22 37 57.1	+1.0
OZUR				⇑S	Sn	22 39 14.1	+0.8
ARR	Arges	6.83	314	⇑P	Pn	22 37 59.2	+2.3
DOPR	Dopca	6.86	321	⇓P	Pn	22 37 58.3	+1.0
DOPR				⇑S	Sn	22 39 15.8	+0.3
LOT	Lotru	7.36	312	⇓P	Pn	22 38 05.8	+1.5
MDB	Medias	7.47	318	⇑P	Pn	22 38 07.6	+1.8
MMAI	Mount Meron Ar	8.34	157	Pn	Pn	22 38 16.3	-1.4
	0.2nm,0.3s,baz=344,slow=9.8,SNR=1.6						
	1.9nm,0.8s						
MARR	Marisel-Cluj	8.48	317	⇓P	Pn	22 38 22.5	+2.9
DRGR		8.77	316	⇑P	Pn	22 38 26.2	+2.6
AKASG	Malin Array Be	10.05	351	Pn	Pn	22 38 38.7	-2.3
	1.2nm,0.3s,baz=164,slow=15,SNR=5.2						
AKASG				Sn	Sn	22 40 29.0	-4.9
	0.5nm,0.3s,baz=174,slow=27,SNR=1.6						
	0.5nm,0.3s						
VRAC	Vranov	13.56	314	LR	LR	22 46 10.5	
	comp=Z,58nm,19.8s,baz=137,slow=44						
FINES	FINESS Array B	20.95	353	P	P	22 41 00.5	+0.9
	6.1nm,1.1s,baz=178,slow=10.0,SNR=5.8						
	6.1nm,1.1s						
NOA	NORSAR Array B	23.80	335	LR	LR	22 51 47.1	
	comp=Z,16nm,21.8s,baz=355,slow=39						
TGY	Tagaytay City	80.47	80	LR	LR	23 27 12.0	
	comp=Z,193nm,19.5s,baz=255,slow=38						

NEIC ***06*** *23:04:17.7±2.4, 44°.86N±0°.05×106°.82W±0°.05, h0^{km}±1^{km}, ML3.0/66, Error ellipse: s-maj=9.2km s-min=5.1km az=341.0*

IDC ***06*** *23:04:17.7±1.4, 44°.64N×106°.39W, h0^{km}, mbtmp3.4/2, ML2.0/1, Error ellipse: s-maj=64.7km s-min=9.5km az=140.0*

ISC 06 23:04:16.8±1.0**, 44°.88N**±0°.08×**106°.73W**±0°.04**, h0^{km}, n31, σ0^{s}.96**/22**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLMT	Red Lodge	1.82	279		Pn	23 04 49.5	0.0
RLMT				IAML		23 05 19.6	
	86nm,0.6s						
RSSD	Black Hills	2.07	110		Pn	23 04 53.1	+0.1
RSSD	Black Hills	2.07	110		Sg	23 05 25.2	+1.9
RSSD				IAML		23 05 34.9	
	89nm,0.5s						
RSSD				IAML		23 05 39.5	
	109nm,0.6s						
K22A	Casper	2.23	176	Pn	Pb	23 04 57.5	-0.6
K22A				IAML		23 05 33.9	
	98nm,0.5s						
K22A				IAML		23 05 35.6	
	109nm,0.6s						
YNE	Yellowstone No	2.33	274	Pn	Pn	23 04 57.9	+1.3
YNE				IAML		23 05 34.8	
	comp=E,96nm,0.6s						
YNE				IAML		23 05 35.2	
	comp=N,89nm,0.7s						
YMP	Mirror Lake Pl	2.44	268		Pn	23 04 58.8	+0.6
LKWY	Lake	2.63	265	Pg	Pg	23 05 08.6	+1.3
LKWY				IAML		23 05 47.6	
	comp=N,80nm,0.6s						
H17A	Grant Village	2.79	261		Pn	23 05 03.4	+0.5
H17A				Pg	Pg	23 05 09.3	-0.9
YNR	Norris Junctio	2.81	268		Pb	23 05 08.5	+0.4
YNR				IAML		23 05 48.0	
	comp=N,36nm,0.6s						
YNM	Yellowstone No	2.83	268	Pn	Pn	23 05 01.9	-1.6
YNM				IAML		23 06 01.3	
	comp=E,74nm,0.1s						
YHH	Holmes Hill	2.93	270		Pb	23 05 10.2	+0.1
BW06	Boulder Array	2.94	225		Pb	23 05 10.9	+0.7
BW06				IAML		23 05 53.7	
	comp=E,28nm,0.7s						
PD31	Pinedale Array	2.94	225		Pb	23 05 11.0	+0.9
PDAR	Pinedale Array	2.94	225	Pn	Pb	23 05 09.3	-0.8
	comp=E,5.6nm,0.5s,baz=42,slow=15,SNR=93						
PDAR				Lg	Lg	23 05 49.8	
	comp=E,5.8nm,0.3s,baz=55,slow=31,SNR=13						
PDAR	Pinedale Array	2.94	225		Pn	23 05 04.7	-0.2
YFT	Old Faithful	2.96	263		Pn	23 05 04.1	-1.2
YFT				IAML		23 05 25.3	
	comp=E,27nm,0.5s						
YPP	Pitchstone Pla	2.97	260		Pb	23 05 11.2	+0.4
YMR	Madison River	3.02	268		Pb	23 05 11.4	-0.2
YMR				IAML		23 06 19.3	
	comp=E,49nm,1.1s						
LOHW	Long Hollow	3.06	247		Pg	23 05 14.8	-0.6
MOOW	Moose Ponds	3.09	250		Pn	23 05 08.0	+0.9
YHL	Hebgen Lake	3.17	271	IAML		23 06 05.0	
	comp=E,48nm,0.8s						
YHL				IAML		23 06 11.5	
	comp=N,40nm,0.7s						
YHB	Horse Butte	3.18	269	IAML		23 06 03.5	
	comp=N,29nm,0.8s						
YHB				IAML		23 06 06.6	
	comp=E,37nm,1.1s						
SNOW	Snow King Moun	3.22	245	IAML		23 06 26.2	
	comp=E,28nm,2.5s						
SNOW				IAML		23 06 26.6	
	comp=E,25nm,1.8s						
DLMT	Dillon	4.18	279	IAML		23 06 33.6	
	comp=E,25nm,3.2s						
DLMT				IAML		23 06 34.3	
	comp=E,22nm,1.0s						
HAYD	Hayden	4.37	185	IAML		23 06 43.6	
	comp=N,23nm,0.9s						
HAYD				IAML		23 06 45.9	
	comp=E,20nm,0.7s						
RDMU	Red Mountain	4.78	207	IAML		23 07 16.1	
	comp=E,12nm,1.5s						
RDMU				IAML		23 07 60.0	
	comp=N,9.8nm,4.7s						
HWUT	Hardware Ranch	4.81	229	IAML		23 06 55.8	
	comp=N,13nm,0.9s						
HWUT				IAML		23 07 07.5	
	comp=N,14nm,1.0s						
BSUT	Blindstream Ca	5.25	216	IAML		23 07 43.4	
	comp=N,12nm,4.5s						
BSUT				IAML		23 08 52.2	
	comp=E,11nm,4.8s						
MSO	Missoula	5.40	294	IAML		23 07 06.5	
	comp=E,11nm,4.7s						
I10CA	LAC DU BONNET	8.99	50	I	I	23 59 00.0	
	baz=236,slow=272,SNR=2.5						
ULM	Lac du Bonnet	9.09	50	Pn	Pn	23 06 28.1	-1.1
	comp=E,0.3nm,0.3s,baz=217,slow=10,SNR=2.0						
ULM				Lg	Lg	23 08 55.3	
	comp=E,0.3nm,0.3s,baz=152,slow=21,SNR=3.6						
	comp=E,2.2nm,0.7s						

IDC ***06*** *23:07:12.2±1.6, 1°.64N×126°.70E, h0^{km}, mb3.8/4, mbtmp3.8/5, ML3.4/1, Error ellipse: s-maj=121.2km s-min=19.5km az=69.0*

DJA ***06*** *23:07:17.3±0.2, 2°N±3°×12°6E±°, h10^{km}, M4.0/13, mB5.7/1, mb4.5/1, MLv3.8/13, Mw(mB)5.2/1*

ISC 06 23:07:19.0±1.0**, 1°.56N**±0°.06×**126°.49E**±0°.05**, h35^{km}, n15, σ1^{s}.81**/17**, mb3.9**/4**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.17	132	P	Pn	23 07 39.2	+0.3
GAMI	Galela, Maluku	1.32	78	P	Pn	23 07 42.2	+1.2
GAMI				S	Sn	23 08 00.2	+2.8
MNI	Manado	1.66	266	P	Pn	23 07 45.6	0.0
MNI				S	Sn	23 08 06.3	+0.6
SGSI	Sangihe	2.32	335	P	Pn	23 07 55.9	+1.2
GTOI	Gorontalo	3.60	255	P	Pn	23 08 13.7	+1.4
SANI	Sanana	3.62	188	P	Pn	23 08 14.0	+1.4
LUWI	Luwuk	4.53	235	P	Pn	23 08 28.7	+3.6
NLAI	Namlea	4.81	173	P	Pn	23 08 30.8	+1.9
KRAI	Karang Ratu	5.21	159	P	Pn	23 08 35.3	+0.9
APSI	Ampana	5.43	243	P	Pn	23 08 39.2	+1.7
FITZ	Fitzroy Crossi	19.55	182	P	P	23 11 42.0	-1.8
	0.1nm,0.3s,baz=7.1,slow=8.1,SNR=2.2						
	2.0nm,0.8s						
WRA	Warramunga Arr	22.71	161	P	P	23 12 16.0	-1.9
	2.0nm,0.4s,baz=341,slow=11,SNR=24						
	2.0nm,0.4s						
ASAR	Alice Springs	26.09	164	P	P	23 12 48.4	-1.2
	0.7nm,0.4s,baz=345,slow=8.2,SNR=17						
	0.7nm,0.4s						
MKAR	Makanchi Array	59.20	326	P	P	23 17 15.5	-1.1
	0.6nm,0.6s,baz=119,slow=8.1,SNR=10						
	0.6nm,0.6s						
KURBB	Kurchatov Arra	63.43	328	P	P	23 17 44.1	-1.1
	0.5nm,0.3s,baz=134,slow=6.2,SNR=4.5						
	0.5nm,0.3s						

PRU ***06*** *23:18:39.4, 41°.17N×19°.72E, h10^{km}*

TIR ***06*** *23:18:41.2, 41°.54N×19°.35E, h25^{km}±2^{km}, Ml3.6/6*

PDG ***06*** *23:18:42.3±0.4, 41°.50N×19°.35E, h12^{km}, MD3.6/7, ML3.5/13, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*

BEO ***06*** *23:18:43.6±0.6, 41°.55N×19°.53E, h5^{km}±2^{km}, ML3.3/22*

IDC ***06*** *23:18:47.9±2.1, 41°.63N×19°.35E, h55^{km}±22^{km}, mb3.5/9, mbtmp3.7/16, ML3.3/6, MS2.4/2, Error ellipse: s-maj=17.4km s-min=14.1km az=8.0*

ISC 06 23:18:42.5±1.1**, 41°.53N**±0°.02×**19°.39E**±0°.02**, h6^{km}**±**8^{km}, n176, σ1^{s}.44**/231**, mb4.0**/5**, 21C-30D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.40	116	⇓Pg	Pg	23 18 50.2	-0.1
TIR				Sg	Sg	23 18 55.9	+0.3
TIR				AML	AML	23 18 57.0	
	16nm,0.4s						
TIR				AML	AML	23 18 57.2	
	26nm,0.4s						
ULC	Ulcinj	0.45	347	⇓*i*Pg	Pg	23 18 51.0	-0.2
ULC				*i* Sg	Sb	23 18 59.0	-0.9
SDA	Shkodra	0.53	9	Pg	Pg	23 18 52.4	-0.4
SDA				Sg	Sg	23 18 59.3	-0.4
DRME	Dracevica, Mon	0.68	347	⇑*i*Pg	Pg	23 18 55.4	-0.2
DRME				*e*Sg	Sb	23 19 06.3	-0.1
PHP	Peshkopia	0.81	78	Pg	Pg	23 18 56.4	-1.6
PHP				Sg	Sg	23 19 08.5	-0.1
PHP				AML	AML	23 19 10.7	
	14nm,0.2s						
BUM	Brajici-Budva	0.86	335	⇓*i*Pg	Pg	23 18 58.7	-0.3
BUM				*i* Sg	Sb	23 19 12.4	+0.8
PDG	Podgorica	0.91	354	⇑Pg	Pg	23 18 58.7	-1.3
PDG				Sg	Sb	23 19 14.3	+1.2
PDG	Podgorica	0.91	354	⇑P	Pg	23 18 59.1	-0.9
PDG				⇓S	Sg	23 19 11.8	0.0
PDG	Podgorica	0.91	354	*e*Pg	Pg	23 18 59.4	-0.6
PDG				*e*Sg	Sn	23 19 15.5	+0.2
PDG	Podgorica	0.91	354	⇑*i*Pg	Pg	23 18 59.7	-0.3
PDG				*i* Sg	Sb	23 19 13.8	+0.7
VLO	Vlora	1.06	175	Pg	Pn	23 19 05.5	+1.6
VLO				Sg	Sg	23 19 16.1	-0.5
VLO				AML	AML	23 19 21.1	
	13nm,0.4s						
VLO	Vlora	1.06	175	P	Pn	23 19 05.3	+1.4
VLO				S	Sg	23 19 14.2	-2.4
CEME	Cevo	1.08	341	⇓*i*Pg	Pg	23 19 02.6	-0.6
CEME				*e*Sg	Sn	23 19 19.9	+0.3
HCY	Herceg Novi	1.14	324	⇑*i*Pg	Pg	23 19 04.0	-0.3
HCY				*i* Sg	Sb	23 19 20.3	+0.7
OHR	Ohrid	1.14	111	*i* Pg	Pg	23 19 03.2	-1.2
OHR				*i* Sg	Sn	23 19 22.4	+1.3
PVY	Plav	1.15	22	⇑*i*Pg	Pg	23 19 02.7	-1.9
PVY				*i* Sg	Sn	23 19 22.8	+1.4
NKME	Niksic	1.28	346	⇓*i*Pg	Pg	23 19 06.9	-0.2
NKME				*e*Sg	Sn	23 19 26.1	+1.5
KOME	Kolasin	1.33	4	⇑*i*Pg	Pg	23 19 07.7	-0.3
KOME				*e*Sg	Sn	23 19 28.1	+2.3
KBN	Korca	1.39	130	Pn	Pb	23 19 09.7	+0.7
KBN				Sn	Sg	23 19 26.8	-0.5
KBN	Korca	1.39	130	P	Pb	23 19 09.7	+0.7
IVA	Berane	1.40	15	⇑*i*Pg	Pg	23 19 07.6	-1.7
IVA				*i* Sg	Sn	23 19 30.5	+3.0
TREB	Trebinje	1.42	327	*e*Pn	Pn	23 19 09.4	+0.6
BRY	Bratogost	1.51	336	⇓*i*Pg	Pn	23 19 10.7	+0.4
BRY				*i* Sg	Sn	23 19 32.9	+2.5
SKO	Skopje	1.60	73	*i* Pn	Pn	23 19 10.8	-0.5
SKO				*i* Sn	Sg	23 19 33.6	-0.4
NEST	Nestorio	1.68	131	Pn	Pb	23 19 14.3	+0.4
NEST				Sn	Sb	23 19 35.9	+0.6
NEST				AML	AML	23 19 40.2	
	1.7nm,0.5s						
NEST	Nestorio	1.68	131	P	Pb	23 19 14.3	+0.4
UPM	Unac-Piva	1.71	348	⇑*i*Pn	Pn	23 19 14.1	+1.0
UPM				*i* Sn	Sg	23 19 38.1	+0.5
KLINJ	Klinje	1.75	340	*e*Pn	Pn	23 19 14.6	+1.1
SJES	Sjenica	1.79	14	*e*Pg	Pg	23 19 16.5	-0.3
SJES				*e*Sg	Sg	23 19 39.3	-0.7
PLE	Pljevlja	1.80	0	⇑*i*Pn	Pn	23 19 15.3	+1.0
PLE				*i* Sn	Sg	23 19 40.1	-0.4
STON	Ston	1.84	318	*e*Pn	Pb	23 19 16.6	+0.1
STON				*e*Sn	Sg	23 19 42.4	+0.8
PENT	Pentalofos	1.88	134	P	Pn	23 19 16.5	+1.3
NOCI	Noci	1.90	248	Pn	Pn	23 19 15.3	-0.2
NOCI				Sn	Sn	23 19 40.4	+0.6
NOCI				AML	AML	23 19 51.4	
	3.2nm,0.5s						
RUDO	Rudo	2.09	360	*e*Pn	Pn	23 19 18.9	+0.8
IGT	Igoumenitsa	2.12	160	Pn	Pn	23 19 19.3	+0.9
IGT				Sn	Sn	23 19 47.0	+1.9
IGT	Igoumenitsa	2.12	160	P	Pn	23 19 19.2	+0.7
SELS	Selova	2.12	37	*e*Pg	Pn	23 19 19.5	+0.9
SELS				*e*Sg	Sn	23 19 46.8	+1.5
IVAS	Ivanjica	2.13	15	*e*Pn	Pn	23 19 19.2	+0.5
JAN	Janina	2.17	149	P	Pn	23 19 20.6	+1.4
MATE	Matera	2.21	248	⇓P	Pn	23 19 19.8	+0.2
MATE				⇓S	Sn	23 19 46.3	-1.0
BARS	Barje	2.22	54	*e*Pn	Pn	23 19 20.4	+0.5
BARS				*e*Sn	Sn	23 19 49.1	+1.5
GOCS	Kraljevo Serbi	2.31	28	*e*Pn	Pn	23 19 22.1	+0.8
BBLS	Lazi&#263i	2.34	0	*e*Pn	Pn	23 19 23.2	+1.6
BBLS				*e*Sn	Sn	23 19 52.6	+1.9
PRMD	Pramanda	2.38	146	P	Pn	23 19 24.2	+2.0
VAY	Valandovo	2.40	94	*i* Pn	Pn	23 19 23.5	+1.1
VAY				*i* Sn	Sn	23 19 53.7	+1.6
BOSS	Bosilegrad	2.50	66	*e*Pn	Pn	23 19 24.3	+0.5
BOSS				*e*Sn	Sn	23 19 52.0	-2.6
GRUS	Gruza	2.56	22	*e*Pn	Pn	23 19 25.3	+0.8
DIVS	Divibare	2.61	10	*e*Pn	Pn	23 19 26.0	+0.7
BOVS	Bovan	2.72	38	⇓P	Pn	23 19 27.3	+0.6
BOVS	Bovan	2.72	38	*e*Pn	Pn	23 19 27.2	+0.5
SGRT	San Giovanni R	2.74	276	Pn	Pn	23 19 26.4	-0.7
TRAN	Tran	2.76	61	*e*P	Pn	23 19 27.9	+0.6
TRUS	Trudelj	2.80	15	*e*Pn	Pn	23 19 28.6	+0.8
THL	Klokotos Trika	2.80	133	Pn	Pn	23 19 28.0	+0.2
KKB	Krupnik	2.82	82	P	Pn	23 19 29.5	+1.3
LKD2	Lefkada island	2.90	160	P	Pn	23 19 29.3	+0.1
AMPL	Ampelaki	2.95	151	P	Pn	23 19 31.0	+1.1
ZAPS	Zavoj	2.97	53	*e*Pn	Pn	23 19 31.0	+0.7
ZAPS				*e*Sn	Sn	23 20 03.5	-2.8
DRAG	Dragano-Lefkad	2.98	162	P	Pn	23 19 29.9	-0.4
NYDR	Nydri-Lefkada	2.98	160	P	Pn	23 19 30.4	+0.1
TEKS	Tekeris	3.02	2	*e*Pn	Pn	23 19 31.1	+0.2
EVGI	Lefkada island	3.06	161	P	Pn	23 19 31.3	-0.1
VTS	Vitosha	3.07	68	P	Pn	23 19 32.4	+0.7
VTS	Vitosha	3.07	68	*e*Pn	Pn	23 19 32.4	+0.7
TIP	Timpagrande	3.09	221	Pn	Pn	23 19 32.0	+0.1
TIP				Sn	Sn	23 20 09.8	+0.7
TIP	Timpagrande	3.09	221	⇓P	Pn	23 19 31.9	+0.1
ZAGS	Zajecar	3.10	42	*e*Pn	Pn	23 19 32.6	+0.6
ZAGS				*e*Sn	Sn	23 20 07.7	-1.7
CUC	Castrocucco	3.11	242	Pn	Pn	23 19 33.4	+1.2
CUC				Sn	Sn	23 20 11.7	+2.0
PLNA	Plana	3.16	71	P	Pn	23 19 34.7	+1.8
BLSH	Balsha	3.19	64	*e*P	Pn	23 19 35.7	+2.5
FSK	Fiskardo	3.19	163	P	Pn	23 19 32.4	-0.8
EVR	Evrytania	3.20	144	P	Pn	23 19 34.9	+1.5
BLKB	Belogradchik	3.21	48	*e*Pn	Pn	23 19 34.7	+1.2
BORS2	Bor- Borsko je	3.21	36	*e*Pn	Pn	23 19 32.7	-0.8
BORS2				*e*Sn	Sn	23 20 09.7	-2.4
MAKR	Makrakomi, Fth	3.27	139	P	Pn	23 19 35.8	+1.4
AVAS	Avala Beograd	3.27	14	*e*Pn	Pn	23 19 34.7	+0.3
MMB	Musomishta	3.28	88	P	Pn	23 19 35.3	+0.9
PLG	Polygyros	3.28	109	P	Pn	23 19 34.7	+0.2
PVO	Paravola	3.34	150	P	Pn	23 19 36.5	+1.2
KUBS	Kucevo	3.34	29	*e*Pn	Pn	23 19 34.5	-0.8
DMLN	Damoulianata-K	3.37	167	P	Pn	23 19 34.5	-1.1
VLS	Valsamata	3.47	164	P	Pn	23 19 35.8	-1.3
ANX	Ano Chora	3.52	146	P	Pn	23 19 39.4	+1.6
BLY	Banja Luka	3.60	334	*e*Pn	Pn	23 19 39.8	+0.9
BLY	Banja Luka	3.60	334	⇑P	Pn	23 19 39.7	+0.8
BLY	Banja Luka	3.60	334	*e*Pn	Pn	23 19 40.4	+1.5
RTZL	Ratzakli, Kefa	3.61	162	P	Pn	23 19 38.6	-0.3
FRGS	Fruska Gora	3.64	5	*e*Pn	Pn	23 19 39.3	-0.2
AXS	Araxos	3.66	155	P	Pn	23 19 39.6	0.0
MDVR	Moldovita	3.67	27	⇓P	Pn	23 19 40.3	+0.4
MDVR	Moldovita	3.67	27	*e*Pn	Pn	23 19 40.3	+0.4
MPEP	Malo Peshtene	3.71	59	*e*P	Pn	23 19 41.9	+1.6
ORTH	Orthonies,Zaky	3.81	164	P	Pn	23 19 41.7	0.0
VRSS	Vrsac	3.86	21	*e*Pn	Pn	23 19 33.5	-9.0
LTHK	Lithakia	3.97	163	P	Pn	23 19 43.0	-0.9
RZN	Rozhen	4.02	86	P	Pn	23 19 45.8	+1.1
HERR	Herculane	4.02	32	⇑P	Pn	23 19 45.0	+0.4
PLD	Plovdiv	4.05	79	P	Pn	23 19 46.5	+1.4
PLD	Plovdiv	4.05	79	*e*Pn	Pn	23 19 46.0	+0.9
BANR	Banloc	4.06	18	⇑P	Pn	23 19 46.0	+0.8
KLV	Kalavryta, Ach	4.08	148	P	Pn	23 19 46.2	+0.7
SRE	Strehaia	4.20	40	⇓P	Pn	23 19 48.2	+1.1
PLVB	Pleven	4.30	63	⇑P	Pn	23 19 49.9	+1.5
BZS	Buzias	4.40	21	⇑P	Pn	23 19 50.2	+0.4
KDZ	Kurdzhali	4.47	87	P	Pn	23 19 52.2	+1.4
AQU	L'Aquila	4.54	282	*e*Pn	Pn	23 19 52.1	+0.3
GZR	Gura Zlata	4.59	31	⇓P	Pn	23 19 53.9	+1.5
RDO	Rodhopi	4.65	93	Pn	Pn	23 19 53.7	+0.5
RDO				Sn	Sn	23 20 52.8	+5.3
SURR	Surduc	4.67	24	⇓P	Pn	23 19 54.2	+0.7
MORH	Mrgy, Hungar	4.72	354	*e*Pn	Pn	23 19 53.8	-0.4
MORH	Mrgy, Hungar	4.72	354	⇓P	Pn	23 19 54.2	0.0
BOJS	Bojanci	4.98	324	*e*Pn	Pn	23 19 58.2	+0.4
SIRR	Siria	5.02	18	⇓P	Pn	23 19 58.6	+0.3
SIRR	Siria	5.02	18	*e*Pn	Pn	23 19 58.4	+0.1
COPA	Copaceanca	5.02	57	⇓P	Pn	23 19 59.7	+1.4
ELND	Elena	5.02	72	⇓P	Pn	23 19 59.6	+1.3
LOT	Lotru	5.05	38	⇑P	Pn	23 20 00.4	+1.5
HUMR	Humele	5.08	52	⇑P	Pn	23 20 00.4	+1.2
BEHE	Becsehely	5.29	340	*e*Pn	Pn	23 20 02.7	+0.7
JMB	Yambol	5.41	77	P	Pn	23 20 04.5	+0.8
ARR	Arges	5.42	43	⇑P	Pn	23 20 05.8	+2.0
TNR	Turnu Rosu	5.44	39	⇑P	Pn	23 20 06.2	+2.1
CEY	Cerknica	5.54	321	*e*Pn	Pn	23 20 06.0	+0.5
SKDS	Skadanscina	5.60	318	*e*Pn	Pn	23 20 07.0	+0.6
LJU	Ljubljana	5.72	324	*e*Pn	Pn	23 20 08.9	+0.9
DRGR		5.78	23	⇓P	Pn	23 20 10.4	+1.5
MARR	Marisel-Cluj	5.81	26	⇓P	Pn	23 20 11.1	+1.9
SOKA	Soboth	6.03	330	*i* Pn	Pn	23 20 10.5	-1.8
	2.8nm,0.5s,SNR=12						
OBKA	Obir	6.08	327	*i* Pn	Pn	23 20 13.5	+0.5
	0.5nm,0.4s,SNR=7.2						
OBKA				*e*Sn	Sn	23 21 23.8	+0.9
	7.8nm,0.7s						
MLR	Muntele Rosu	6.20	48	P	Pn	23 20 16.6	+1.9
	1.8nm,0.3s,baz=190,slow=8.3,SNR=19						
MLR				S	Sn	23 21 26.9	+1.0
	5.0nm,0.7s,baz=169,slow=22,SNR=3.2						
	3.6nm,0.3s						
MLR	Muntele Rosu	6.20	48	⇓P	Pn	23 20 16.8	+2.1
DOPR	Dopca	6.21	42	⇓P	Pn	23 20 16.8	+2.0
ISR	Istrita	6.34	53	⇓P	Pn	23 20 18.3	+1.9
ARSA	Arzberg	6.36	336	*e*Pn	Pn	23 20 17.5	+0.7
	3.1nm,0.6s,SNR=5.2						
ARSA	Arzberg	6.36	336	*e*Pn	Pn	23 20 18.6	+1.9
PSZ	Piszkesteto	6.40	3	⇑P	Pn	23 20 18.7	+1.3
RONA	Rosalia, Austr	6.55	341	*i* Pn	Pn	23 20 21.8	+2.4
	1.8nm,0.9s						
RONA				*i* Sn	Sn	23 21 32.2	-2.3
	2.1nm,0.7s						
COVR	Voineasa-Covas	6.56	47	⇓P	Pn	23 20 21.3	+1.7
MYKA	Terra Mystica	6.57	323	*e*Pn	Pn	23 20 19.6	-0.1
	2.8nm,0.8s						
MYKA				*e*Sn	Sn	23 21 35.1	+0.2
	1.2nm,0.6s						
TURR	Turia	6.60	44	⇑P	Pn	23 20 21.5	+1.5
ICOR	Ion Corvin	6.71	64	⇓P	Pn	23 20 22.8	+1.3
PLOR	Plostina	6.81	48	⇓P	Pn	23 20 24.9	+1.9
VRI	Vrincioaia	6.86	48	⇓P	Pn	23 20 25.7	+2.0
CONA	Conrad Observa	6.88	340	*e*Pn	Pn	23 20 26.5	+2.6
	0.5nm,0.4s						
KECS	Kecovo	7.00	6	*e*PN	Pn	23 20 29.9	+4.4
KECS				*e*SN	Sn	23 21 42.8	-2.6
MODS	Modra-Piesok	7.01	348	*e*PN	Pn	23 20 32.2	+6.5
MODS				*e*SN	Sn	23 21 42.5	-3.1
KBA	Koelnbreinsper	7.04	324	*i* Pn	Pn	23 20 26.5	+0.3
	0.4nm,0.2s						
KBA				*i* Sn	Sn	23 21 46.4	-0.3
	0.5nm,0.4s						
ABTA	Abfaltersbach	7.19	319	*e*Pn	Pn	23 20 28.3	+0.1
	3.6nm,0.6s,SNR=9.2						
CFR	Carcaliu	7.35	57	⇓P	Pn	23 20 31.0	+0.8
BIOA	Bad Ischl, Aus	7.40	328	*i* Pn	Pn	23 20 30.9	-0.2
	3.7nm,0.4s,SNR=5.4						
IDI	Anoyia	7.58	143	P	Pn	23 20 36.5	+2.9
	4.8nm,0.7s,baz=170,slow=19,SNR=1.2						
LESA	Schwarzleotal	7.60	323	*i* Pn	Pn	23 20 34.7	+0.8
	1.8nm,0.5s,SNR=9.8						
LESA				*e*Sn	Sn	23 22 04.0	+3.7
	2.3nm,0.7s						
TLCR		7.78	59	⇓P	Pn	23 20 38.5	+2.3
WTTA	Wattenberg	7.98	319	*i* Pn	Pn	23 20 39.0	-0.1
	1.7nm,0.2s,SNR=6.7						
WTTA				*e*Sn	Sn	23 22 05.7	-4.0
	4.6nm,0.7s						
WATA	Walderalm	8.06	319	*i* Pn	Pn	23 20 41.5	+1.3
	2.8nm,0.5s,SNR=4.5						
WATA				*i* Sn	Sn	23 22 10.2	-1.4
	3.5nm,0.7s						
CKRC	Cesky Krumlov	8.13	336	*e*PN	Pn	23 20 41.8	+0.8
FETA	Feichten	8.29	314	*i* Pn	Pn	23 20 43.1	-0.2
	2.4nm,0.7s						
FETA				*i* Sn	Sn	23 22 20.9	+3.6
	1.8nm,0.6s						
MOTA	Moosalm	8.30	317	*i* Pn	Pn	23 20 43.6	+0.1
	2.0nm,0.7s,SNR=4.9						
MOTA				*e*Sn	Sn	23 22 17.7	+0.1
	0.7nm,0.7s						
GERES	GERESS Array B	8.35	333	P	Pn	23 20 43.6	-0.4
	baz=156,slow=13,SNR=8.0						
GERES				S	Sn	23 22 16.7	-1.9
	0.6nm,0.6s,baz=149,slow=26,SNR=1.9						
	0.9nm,0.6s						
RETA	Reutte	8.57	317	*i* Pn	Pn	23 20 48.1	+1.0
	0.2nm,0.5s						
RETA				*i* Sn	Sn	23 22 21.9	-2.3
	0.7nm,0.5s						
DAVOX	Davos/Dischmat	8.62	311	P	Pn	23 20 49.1	+1.3
	0.9nm,0.3s,baz=121,slow=15,SNR=14						
DAVOX				S	Sn	23 22 24.1	-1.3
	2.7nm,0.6s,baz=162,slow=20,SNR=2.2						
DAVOX				LR	LR	23 25 42.8	
	comp=Z,23nm,18.7s,baz=152,slow=49						
	3.1nm,0.5s						
KHC	Kasperske Hory	8.63	334	*e*PN	Pn	23 20 48.2	+0.2
KHC				*e*SN	Sn	23 22 27.4	+1.8
DAVA	Damuels	8.91	313	*i* Pn	Pn	23 20 50.7	-1.2
	2.1nm,0.5s						
DAVA				*e*Sn	Sn	23 22 26.7	-5.9
	5.6nm,1.0s						
BRTR	Keskin Array B	10.98	95	LR	LR	23 25 18.2	
	comp=Z,19nm,19.6s,baz=310,slow=35						
MMAI	Mount Meron Ar	15.30	119	P	Pn	23 22 22.2	+3.1
	0.5nm,0.3s,baz=307,slow=11,SNR=6.7						
	3.5nm,0.9s						
ESDC	Sonseca Array	17.82	272	P	P	23 22 53.0	+1.1
	baz=80,slow=12,SNR=2.2						
	0.3nm,0.7s						
HFS	Hagfors	18.96	351	P	P	23 23 04.0	-0.2
	0.1nm,0.3s,baz=163,slow=12,SNR=5.5						
	2.3nm,0.8s						
NOA	NORSAR Array B	20.17	348	P	P	23 23 16.8	-0.6
	0.9nm,0.8s,baz=156,slow=10,SNR=1.7						
	0.9nm,0.8s						
EKA	Eskdalemuir Ar	20.24	321	P	P	23 23 17.5	-0.7
	3.4nm,0.9s,baz=116,slow=9.4,SNR=4.2						
	3.4nm,0.9s						
FINES	FINESS Array B	20.36	9	P	P	23 23 17.6	-1.8
	3.1nm,0.9s,baz=181,slow=10,SNR=7.8						
	3.1nm,0.9s						
TORD	Torodi Ar. Bea	32.21	214	P	P	23 25 11.4	-0.1
	0.9nm,1.0s,baz=24,slow=13,SNR=3.3						
	0.9nm,1.0s						
BVAR	Borovoye Array	35.73	54	P	P	23 25 40.8	-1.0
	1.4nm,0.6s,baz=286,slow=5.6,SNR=9.8						
	1.4nm,0.6s						
KURBB	Kurchatov Arra	41.02	56	P	P	23 26 24.6	-1.6
	0.2nm,0.5s,baz=286,slow=9.7,SNR=2.4						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	44.17	50	P	P	23 26 50.6	-1.2
	2.8nm,0.5s,baz=279,slow=8.9,SNR=11						

	2.8nm,0.5s						
MKAR	**Makanchi Array**	**44.37**	**61**	P	**P**	**23 26 52.2**	**-1.4**
	1.9nm,0.5s,baz=281,slow=8.0,SNR=34						
	1.9nm,0.5s						
SONM	**Songino Array**	**59.04**	**52**	P	**P**	**23 28 42.2**	**-1.1**
	0.4nm,0.8s,baz=282,slow=6.8,SNR=3.0						
	0.4nm,0.8s						

*IDC **06** 23:22:55.7±2.6, 9°.64S×114°.34E, h0^{km}, mb3.4/3, mbtmp3.4/3, MS3.1/1, Error ellipse: s-maj=140.7km s-min=25.4km az=47.0*

*DJA **06** 23:23:06.6±1.0, 10°S±4°×11°5E±°, h27^{km}±10^{km}, M4.0/21, mb4.1/7, MLv4.0/21*

ISC 06 23:23:07.0±1.2, **9°.5S**±0°.1×**115°.11E**±0°.05, **h35**^{km}**, n32,** σ**0^s.87**/30**, mb3.4**/3**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**0.67**	**3**	P	**Pn**	**23 23 20.7**	**+0.6**
DNP	**Denpasar**	**0.82**	**7**	P	**Pn**	**23 23 22.7**	**+0.6**
RTBI	**Rangdo, Negare**	**1.04**	**351**	P	**Pn**	**23 23 25.0**	**-0.2**
KHKI	**Kahang-Kahang**	**1.23**	**24**	P	**Pn**	**23 23 28.4**	**+0.7**
JAGI	**Jajag, Banyuwa**	**1.39**	**317**	P	**Pn**	**23 23 29.6**	**-0.3**
KLNI	**Mataram**	**1.44**	**43**	P	**Pn**	**23 23 30.8**	**+0.1**
ABJI	**Asem Bagus**	**1.90**	**333**	P	**Pn**	**23 23 37.1**	**+0.2**
TWSI	**Taliwang, Sumb**	**1.91**	**67**	P	**Pn**	**23 23 37.7**	**+0.7**
GMJI	**Gumukmas**	**2.04**	**306**	P	**Pn**	**23 23 39.5**	**+0.6**
BLJI	**Banyuglugur**	**2.29**	**319**	P	**Pn**	**23 23 42.9**	**+0.5**
KMMI	**Kalianget**	**2.68**	**335**	P	**Pn**	**23 23 48.2**	**+0.5**
PLAI	**Plampang**	**2.72**	**76**	P	**Pn**	**23 23 49.7**	**+1.5**
DBNI	**Kabupaten Domp**	**3.31**	**73**	P	**Pn**	**23 23 58.2**	**+1.8**
GRJI	**Gresik**	**3.65**	**314**	P	**Pn**	**23 24 01.5**	**+0.4**
SNJI	**Sawahan-Nganju**	**3.72**	**297**	P	**Pn**	**23 24 03.6**	**+1.4**
SJI	**Sawahan**	**3.74**	**298**	P	**Pn**	**23 24 03.4**	**+1.1**
PCJI	**Pacitan**	**4.09**	**288**	P	**Pn**	**23 24 08.1**	**+1.0**
WBSI	**Waikabubak, Su**	**4.23**	**92**	P	**Pn**	**23 24 09.7**	**+0.7**
UGM	**Wanagama**	**4.80**	**289**	P	**Pn**	**23 24 18.1**	**+1.2**
LBFI	**Labuhan Bajo,**	**4.83**	**78**	P	**Pn**	**23 24 17.9**	**+0.6**
KAPI	**Kappang**	**6.41**	**46**	P	**Pn**	**23 24 38.1**	**-0.8**
	0.0nm5.3nm,1.1s						
BKSI	**Bulukumba**	**6.47**	**51**	P	**Pn**	**23 24 39.7**	**-0.2**
	0.0nm9.2nm,0.5s						
KPJI	**Karang Pucung**	**6.48**	**289**	P	**Pn**	**23 24 40.6**	**+0.7**
	0.1nm13nm,0.7s						
EDFI	**Ende, Flores**	**6.54**	**84**	P	**Pn**	**23 24 41.4**	**+0.5**
PMSI	**Majene**	**7.05**	**33**	P	**Pn**	**23 24 47.5**	**-0.4**
	28nm,0.6s						
BBJI	**Bungbulang**	**7.65**	**285**	P	**Pn**	**23 24 56.4**	**+0.3**
	0.0nm5.3nm,1.1s						
LBMI	**Labuha**	**15.15**	**55**	P	**Pn**	**23 26 39.2**	**+0.7**
PDSI	**Padang**	**16.88**	**299**	P	**Pn**	**23 27 00.7**	**-0.1**
WRA	**Warramunga Arr**	**21.28**	**121**	P	**P**	**23 27 49.2**	**-1.5**
	0.5nm,0.4s,baz=295,slow=12,SNR=9.0						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**22.83**	**130**	P	**P**	**23 28 06.2**	**-1.0**
	0.6nm,0.4s,baz=304,slow=9.2,SNR=10.0						
	0.6nm,0.4s						
NWAO	**Narrogin (SRO)**	**23.40**	**175**	LR	LR	23 37 22.8	
	comp=Z,38nm,18.0s,baz=219,slow=37						
MKAR	**Makanchi Array**	**63.22**	**335**	P	P	23 33 24.9	-6.9
	0.2nm,0.4s,baz=144,slow=7.8,SNR=6.5						
	0.2nm,0.4s						

*IDC **06** 23:26:16.9±1.1, 15°.11N×123°.07E, h0^{km}, mb3.9/11, mbtmp3.9/12, ML4.7/1, Error ellipse: s-maj=27.3km s-min=19.2km az=80.0*

ISC 06 23:26:21.1±1.0**, 15°.1N**±0°.1×**123°.1E**±0°.1**, h28**^{km}**, n15,** σ**0^s.65**/13**, mb3.8**/11**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**2.29**	**244**	Pn	**Pn**	**23 26 57.0**	**-0.1**
	204nm,0.3s,baz=129,slow=4.0,SNR=9.8						
TGY				Sn	**Sn**	**23 27 24.8**	**+0.4**
	214nm,0.3s,baz=14,slow=18,SNR=6.3						
	439nm,0.3s						
CMAR	**Chiang Mai Arr**	**23.33**	**282**	P	**P**	**23 31 26.5**	**-0.7**
	1.1nm,0.3s,baz=92,slow=8.1,SNR=11						
	1.1nm,0.3s						
SONM	**Songino Array**	**35.44**	**341**	P	**P**	**23 33 15.6**	**+0.6**
	0.6nm,0.6s,baz=160,slow=10,SNR=5.6						
	0.6nm,0.6s						
WRA	**Warramunga Arr**	**36.55**	**162**	P	**P**	**23 33 23.9**	**-0.7**
	1.1nm,1.1s,baz=344,slow=8.6,SNR=2.7						
	1.1nm,1.1s						
ASAR	**Alice Springs**	**39.96**	**164**	P	**P**	**23 33 54.3**	**+1.0**
	0.2nm,0.5s,baz=344,slow=7.6,SNR=1.6						
	0.2nm,0.5s						
H11S3	**WAKE ISLAND Hy**	**41.82**	**79**	T	T	00 19 14.5	
	baz=272,slow=74,SNR=7.2						
H11S1	**WAKE ISLAND Hy**	**41.83**	**79**	T	T	00 19 15.2	
	baz=272,slow=74,SNR=4.7						
H11S2	**WAKE ISLAND Hy**	**41.84**	**79**	T	T	00 19 15.0	
	baz=272,slow=74,SNR=5.4						
MKAR	**Makanchi Array**	**46.31**	**322**	P	**P**	**23 34 44.9**	**+0.4**
	0.6nm,0.6s,baz=117,slow=9.9,SNR=7.7						
	0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**48.91**	**331**	P	**P**	**23 35 04.5**	**+0.1**
	0.6nm,0.4s,baz=111,slow=8.1,SNR=3.7						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**50.34**	**325**	P	**P**	**23 35 15.7**	**+0.2**
	2.2nm,0.6s,baz=120,slow=8.4,SNR=26						
	2.2nm,0.6s						
BVAR	**Borovoye Array**	**55.94**	**325**	P	**P**	**23 35 57.3**	**+0.7**
	0.5nm,0.5s,baz=130,slow=7.8,SNR=3.7						
	0.5nm,0.5s						
NRIK	**Noril'sk**	**58.59**	**346**	P	**P**	**23 36 15.0**	**0.0**
	2.1nm,0.7s,baz=136,slow=5.2,SNR=5.5						
	2.1nm,0.7s						
FINES	**FINESS Array B**	**80.18**	**331**	P	**P**	**23 38 27.8**	**-0.8**
	3.0nm,0.9s,baz=81,slow=11,SNR=1.9						
	3.0nm,0.9s						
HFS	**Hagfors**	**86.34**	**332**	P	**P**	**23 38 59.8**	**-0.6**
	2.9nm,0.8s,baz=97,slow=4.8,SNR=4.9						
	2.9nm,0.8s						

*NEIC **06** 23:32:34.6±1.1, 44°.2N±0°.2×149°.4E±0°.1, h10^{km}±2^{km}, mb4.4/10, Error ellipse: s-maj=26.2km s-min=17.3km az=167.0*

*JMA **06** 23:32:35.9±0.6, 44°N±3°×14°9E±°, h30^{km}, MV4.3/13, SE OFF ETOROFU*

*NIED **06** 23:32:35.9, 44°.44N×149°.25E, h30^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}6.17; $M_{\theta\theta}$-1.50; $M_{\phi\phi}$-4.67; $M_{r\theta}$4.48; $M_{\theta\phi}$-2.51; $M_{\phi r}$4.00; Fault plane solution: $M_0$8.56000×10^{14} NP1: ϕ_s198.00000°, δ24.00000°, λ68.00000°. NP2: ϕ_s42.00000°, δ67.00000°, λ100.00000°.*

*SKHL **06** 23:32:36.2±0.1, 44°.00N×149°.40E, h46^{km}±4^{km}, mb5.1/4*

*MOS **06** 23:32:37.1±1.1, 44°.21N×149°.15E, h37^{km}, mb4.4/9, Error ellipse: s-maj=9.6km s-min=9.2km az=70.6*

*IDC **06** 23:32:42.0±3.4, 44°.54N×148°.93E, h50^{km}±27^{km}, mb3.7/17, mbtmp3.9/19, ML3.3/2, MS3.5/4, Error ellipse: s-maj=51.2km s-min=17.1km az=167.0*

ISC 06 23:32:38.2±0.8**, 44°.05N**±0°.07×**149°.15E**±0°.08**, h37**^{km}±2^{km}**, n110,** σ**1^s.61**/116**, mb4.1**/37**, MS3.5**/3**, 8C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.50**	**323** *c*	*i*PN	**Pn**	**23 33 00.6**	**-1.9**
KUR				*i* S	**Sn**	**23 33 20.2**	**-0.6**
KUR				pmax	pmax		
	comp=Z,1µm,0.4s						
KUR				pmax	pmax		
	comp=E,176nm,0.2s						
KUR				pmax	pmax		
	comp=N,384nm,0.5s						
KUR				smax	smax		
	comp=N,2µm,0.3s						
KUR				smax	smax		
	comp=E,659nm,0.3s						
KUR	**Kuril'sk**	**1.50**	**323**	*i* P	**Pn**	**23 33 01.9**	**-0.6**
KUR				AMB	AMB	23 33 03.2	
	comp=E,1µm,0.5s						
KUR				*i* S	**Sn**	**23 33 21.1**	**+0.3**
KUR				A	A	23 33 24.4	
	comp=E,2µm,0.3s						
KUR				A	A	23 33 24.4	
	comp=E,1µm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.37**	**271**	PN	**Pn**	**23 33 12.3**	**-2.2**
YUK				S	**Sn**	**23 33 39.5**	**-2.7**
YUK				pmax	pmax		
	comp=E,53nm,0.1s						
YUK				pmax	pmax		
	comp=Z,269nm,0.1s						
YUK				smax	smax		
	comp=E,494nm,0.5s						
YUK				smax	smax		
	comp=N,290nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**2.37**	**271**	*e*P	**Pn**	**23 33 14.0**	**-0.5**
YUK				AMB	AMB	23 33 16.8	
	comp=N,260nm,0.3s						
YUK				*e*S	**Sn**	**23 33 43.2**	**+1.0**
YUK				A	A	23 33 52.2	
	comp=N,500nm,0.4s						
YUK				A	A	23 33 52.2	
	comp=N,1µm,0.4s						
NEM2	**Nemuro 2**	**2.56**	**256**	*e*P	**Pn**	**23 33 17.0**	**0.0**
NEM2				*e*S	**Sn**	**23 33 47.3**	**+0.3**
NMR	**Nemuro--Hokkai**	**2.57**	**256** ⇑	*i*PN	**Pn**	**23 33 17.1**	**-0.1**
NMR				*i* S	**Sn**	**23 33 45.4**	**-1.8**
NMR	**Nemuro--Hokkai**	**2.57**	**256**	*i* P	**Pn**	**23 33 16.9**	**-0.3**
NMR				*i* S	**Sn**	**23 33 47.6**	**+0.4**
GLVR	**Golovnino**	**2.64**	**265**	*e*PN	**Pn**	**23 33 18.8**	**+0.6**
GLVR				*i* S	**Sn**	**23 33 51.7**	**+2.8**
GLVR				pmax	pmax		
	comp=Z,428nm,0.4s						
GLVR				pmax	pmax		
	comp=N,46nm,0.3s						
GLVR				pmax	pmax		
	comp=E,75nm,0.2s						
GLVR				smax	smax		
	comp=N,600nm,0.3s						
GLVR				smax	smax		
	comp=E,549nm,0.3s						
GLVR	**Golovnino**	**2.64**	**265**	*e*P	**Pn**	**23 33 18.8**	**+0.6**
GLVR				AMB	AMB	23 33 19.7	
	comp=E,430nm,0.4s						
GLVR				*i* S	**Sn**	**23 33 51.7**	**+2.8**
GLVR				A	A	23 33 59.0	
	comp=E,600nm,0.3s						
GLVR				A	A	23 33 59.0	
	comp=E,550nm,0.3s						
RUSJ	**Misakicho**	**2.81**	**273**	*e*PN	**Pn**	**23 33 21.7**	**+1.2**
RUSJ				*i* S	**Sn**	**23 33 56.9**	**+3.8**
JRA	**Rausu**	**2.91**	**269**	*e*P	**Pn**	**23 33 23.0**	**+1.2**
JRA				*e*S	**Sn**	**23 33 57.8**	**+2.3**
JNK	**Nakash**	**3.24**	**263**	P	**Pn**	**23 33 27.2**	**+0.8**
AKK	**Akkeshi**	**3.29**	**253**	*e*P	**Pn**	**23 33 26.7**	**-0.5**
JAK	**Akkeshi**	**3.40**	**254**	*e*P	**Pn**	**23 33 28.7**	**0.0**
JAK				*e*S	**Sn**	**23 34 08.5**	**+0.7**
JTKR	**Abashiri--Toko**	**3.78**	**271**	*e*P	**Pn**	**23 33 35.6**	**+1.7**
JAR	**Ashorobuto**	**3.97**	**261**	*e*P	**Pn**	**23 33 37.9**	**+1.3**
JOB	**Onbets**	**4.03**	**255**	*e*P	**Pn**	**23 33 38.2**	**+0.9**
JOB				*e*S	**Sn**	**23 34 24.1**	**+0.8**
JCH	**Churui**	**4.46**	**253**	*e*P	**Pn**	**23 33 44.2**	**+1.1**
JCH				*e*S	**Sn**	**23 34 35.7**	**+2.0**
JKA	**Kamikawa-asahi**	**4.72**	**273**		**Pn**	**23 33 48.1**	**+1.4**
JKA	**Kamikawa-asahi**	**4.72**	**273**	*e*P	**Pn**	**23 33 48.2**	**+1.4**
ASAJ	**Asahikawa**	**4.72**	**273**	P	**Pn**	**23 33 48.5**	**+1.8**
	comp=E,3.1nm,0.3s,baz=64,slow=6.8,SNR=7.6						
ASAJ				S	**Sn**	**23 34 35.0**	**-5.3**
	comp=E,16nm,0.7s,baz=170,slow=30,SNR=1.9						
ASAJ				LR	LR	23 35 53.2	
	comp=E,342nm,18.4s,baz=128,slow=42						
	comp=E,3.1nm,0.3s						
ASAJ	**Asahikawa**	**4.72**	**273**	PN	**Pn**	**23 33 48.2**	**+1.4**
ERM	**Erimo**	**4.84**	**247**	Pn	**Pn**	**23 33 50.8**	**+2.4**
ERM	**Erimo**	**4.84**	**247**	PN	**Pn**	**23 33 50.8**	**+2.4**
JNBK	**Urakawa-nobuka**	**5.00**	**252**	*e*P	**Pn**	**23 33 51.4**	**+0.8**
YSS	**Yuzhno-Sakhali**	**5.35**	**305**	*e*PN	**Pn**	**23 33 57.1**	**+1.7**
YSS	**Yuzhno-Sakhali**	**5.35**	**305**	*e*P	**Pn**	**23 33 56.9**	**+1.5**
JANG	**Nango**	**6.75**	**240**	*e*P	**Pn**	**23 34 14.1**	**-0.6**
JANG				*e*S	**Sn**	**23 35 25.8**	**-4.4**
JTM	**Tenmabayashi**	**6.81**	**244**	Pn	**Pn**	**23 34 16.0**	**+0.6**
TYV	**Tymovskoe**	**8.11**	**329**	*e*P	**Pn**	**23 34 33.9**	**+0.6**
SKR	**Severo-Kuril's**	**8.15**	**33**	*e*P	**Pn**	**23 34 33.3**	**-0.5**
PAU	**Pauzhetka**	**9.04**	**32**	*e*P	**Pn**	**23 34 46.7**	**+0.7**
PETK	**Petropavlovsk-**	**10.68**	**29**	P	**Pn**	**23 35 07.8**	**-0.8**
	comp=E,0.2nm,0.3s,baz=216,slow=14,SNR=1.5						
	comp=E,5.3nm,1.0s						
PET	**Petropavlovsk**	**10.96**	**32** ⇑	*e*PN	**Pn**	**23 35 12.6**	**+0.3**
PET	**Petropavlovsk**	**10.96**	**32**	*e*P	**Pn**	**23 35 12.6**	**+0.3**
MJAR	**Matsushiro Arr**	**11.21**	**232**	Pn	**Pn**	**23 35 18.8**	**+2.9**
MJAR	**Matsushiro Arr**	**11.21**	**232**	PN	**Pn**	**23 35 18.8**	**+2.9**
MAJO	**Matsushiro**	**11.22**	**232** ⇓	*e*PN	**Pn**	**23 35 11.5**	**-4.4**
JGF	**Kuroka**	**12.37**	**231**	Pn	**Pn**	**23 35 33.5**	**+1.8**
PSTR	**Posyet**	**13.43**	**270** ⇑	*e*PN	**Pn**	**23 35 42.0**	**-4.0**
SEY	**Seymchan**	**19.02**	**5** ⇑	*e*P	**P**	**23 36 55.2**	**-1.3**
SEY				pmax	pmax		
	comp=Z,4.0nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**28.42**	**143**	T	T	00 09 27.9	
	baz=333,slow=75,SNR=26						
H11N1	**WAKE ISLAND Hy**	**28.43**	**143**	T	T	00 09 28.9	
	baz=333,slow=75,SNR=24						
H11N3	**WAKE ISLAND Hy**	**28.44**	**143**	T	T	00 09 30.4	
	baz=333,slow=75,SNR=29						
H11S1	**WAKE ISLAND Hy**	**29.42**	**144**	T	T	00 10 48.0	
	baz=334,slow=76,SNR=42						
H11S3	**WAKE ISLAND Hy**	**29.43**	**144**	T	T	00 10 49.5	
	baz=334,slow=76,SNR=39						
H11S2	**WAKE ISLAND Hy**	**29.44**	**144**	T	T	00 10 47.8	
	baz=334,slow=76,SNR=35						
SONM	**Songino Array**	**29.69**	**293**	P	**P**	**23 38 39.7**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=82,slow=8.3,SNR=6.1						
	comp=Z,0.8nm,0.6s						
SONM	**Songino Array**	**29.69**	**293**	P	**P**	**23 38 40.9**	**+0.3**
SONM	**Songino Array**	**29.69**	**293**	*e*P	**P**	**23 38 41.1**	**+0.6**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TLY	**Talaya**	**31.04**	**301** ⇑	*e*P	**P**	**23 38 48.6**	**-3.7**
TLY				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LZDM	**Lanzhou Array**	**35.37**	**273**	P	**P**	**23 39 31.5**	**+1.0**
	comp=Z,0.9nm,0.3s,baz=87,slow=7.4,SNR=4.2						
	comp=Z,0.9nm,0.3s						
L20K	**Farewell, AK**	**37.24**	**40**	P	**P**	**23 39 45.4**	**-0.4**
ILAR	**Eielson Array**	**40.39**	**36**	P	**P**	**23 40 12.5**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=278,slow=8.1,SNR=4.0						
	comp=Z,0.5nm,0.8s						
GRNC	**Granite Creek**	**43.13**	**42**	P	**P**	**23 40 32.7**	**-2.1**
GRNC				IAmb	IAmb	23 40 51.2	
	comp=Z,14nm,1.2s						
MK31	**Makanchi Array**	**45.72**	**298** *c*	*i*P	**P**	**23 40 55.4**	**-0.1**
MKAR	**Makanchi Array**	**45.72**	**298**	P	**P**	**23 40 54.9**	**-0.6**
	comp=Z,1.8nm,0.8s,baz=76,slow=8.7,SNR=19						
MKAR				LR	LR	00 01 39.0	
	comp=Z,55nm,20.6s,baz=50,slow=38						
	comp=Z,1.8nm,0.8s						
MKAR	**Makanchi Array**	**45.72**	**298**		**P**	**23 40 55.9**	**+0.3**
MKAR	**Makanchi Array**	**45.72**	**298**	*e*P	**P**	**23 40 55.6**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	**45.72**	**298**	*e*P	**P**	**23 40 55.6**	**+0.1**
MAKZ	**Makanchi**	**45.92**	**298**	P	**P**	**23 40 57.4**	**+0.4**
MAKZ				IAmb	IAmb	23 40 58.4	
	comp=Z,3.3nm,1.1s						
MAKZ	**Makanchi**	**45.92**	**298**	P	**P**	**23 40 57.4**	**+0.4**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KURK	**Kurchatov**	**46.56**	**304**	P	**P**	**23 41 01.7**	**-0.3**
KURK	**Kurchatov**	**46.56**	**304**	*e*P	**P**	**23 41 01.7**	**-0.3**
KURBB	**Kurchatov Arra**	**46.65**	**304**	P	**P**	**23 41 01.7**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=70,slow=9.0,SNR=2.4						
	comp=Z,0.5nm,0.3s						
EVN	**Everest**	**51.73**	**274**	P	**P**	**23 41 43.7**	**+1.1**
EVN				IAmb	IAmb	23 41 44.4	
	comp=Z,2.7nm,0.7s						
AAK	**Ala-Archa**	**52.53**	**296** ⇑	*e*P	**P**	**23 41 44.6**	**-3.2**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.7s						
YKA	**Yellowknife Ar**	**54.75**	**34**	P	**P**	**23 42 04.0**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=266,slow=5.8,SNR=4.6						
	comp=Z,0.1nm,0.3s						
YKA	**Yellowknife Ar**	**54.75**	**34**	P	**P**	**23 42 04.0**	**+0.5**
AB31	**Akbulak array**	**58.00**	**309**		**P**	**23 42 27.0**	**+0.1**
AB31				IAmb	IAmb	23 42 27.5	
	comp=Z,3.3nm,0.6s						
CHGR	**Chuyangaron**	**58.05**	**295**	P	**P**	**23 42 27.9**	**+0.4**
CHGR				IAmb	IAmb	23 42 42.1	
	comp=Z,5.4nm,0.8s						
CHGR	**Chuyangaron**	**58.05**	**295**	P	**P**	**23 42 28.0**	**+0.4**
CHGR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
FINES	**FINESS Array B**	**65.26**	**334**	P	**P**	**23 43 14.4**	**-1.1**
	comp=Z,1.8nm,0.6s,baz=51,slow=7.9,SNR=16						
	comp=Z,1.8nm,0.6s						
PDAR	**Pinedale Array**	**68.61**	**51**	P	**P**	**23 43 39.4**	**+1.8**
	comp=Z,0.2nm,0.6s,baz=315,slow=6.4,SNR=1.9						
	comp=Z,0.2nm,0.6s						
NB2	**NORSAR Subarra**	**69.84**	**340**	P	**P**	**23 43 44.4**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=29,slow=6.5						
NOA	**NORSAR Array B**	**69.84**	**340**	P	**P**	**23 43 43.5**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=31,slow=6.7,SNR=15						
	comp=Z,1.2nm,0.6s						
NOA	**NORSAR Array B**	**69.84**	**340**	*e*P	**P**	**23 43 44.3**	**-0.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HFS	**Hagfors**	**69.97**	**338**	P	**P**	**23 43 44.2**	**-1.1**
	comp=Z,2.2nm,0.5s,baz=51,slow=5.9,SNR=16						
	comp=Z,2.2nm,0.5s						
ULM	**Lac du Bonnet**	**70.38**	**38**	LR	LR	00 17 13.4	
	comp=Z,43nm,18.4s,baz=8.0,slow=38						
KIV	**Kislovodsk**	**70.63**	**313**	*e*P	**P**	**23 43 46.7**	**-3.1**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KIV	**Kislovodsk**	**70.63**	**313**	*e*P	**P**	**23 43 47.5**	**-2.3**
KBZ	**Khabaz**	**70.67**	**312**	P	**P**	**23 43 50.7**	**+0.8**
	comp=Z,2.3nm,0.9s,baz=50,slow=8.0,SNR=4.4						
	comp=Z,2.3nm,0.9s						
KBZ	**Khabaz**	**70.67**	**312**	*e*P	**P**	**23 43 51.8**	**+1.9**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KBZ	**Khabaz**	**70.67**	**312**	*e*P	**P**	**23 43 51.8**	**+1.9**
BC3	**Big Chuckawall**	**71.00**	**61**		P	23 43 46.8	-5.4
BORG	**Borgarnes**	**71.29**	**356**	LR	LR	00 13 33.3	
	comp=Z,24nm,19.1s,baz=358,slow=35						
AKASG	**Malin Array Be**	**72.19**	**325**	P	**P**	**23 43 58.4**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=40,slow=5.8,SNR=5.9						
	comp=Z,1.1nm,0.5s						
AKASG	**Malin Array Be**	**72.19**	**325**	*i* P	**P**	**23 43 58.7**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BUR08	**Bucovina Ar. S**	**76.23**	**325**	IAmb	IAmb	23 44 44.3	
	comp=Z,2.5nm,0.9s						
BURAR	**Bucovina Array**	**76.24**	**325**	P	**P**	**23 44 23.2**	**+0.4**
EKA	**Eskdalemuir Ar**	**78.24**	**344**	P	**P**	**23 44 33.5**	**-0.2**
	comp=Z,2.0nm,0.9s,baz=17,slow=5.4,SNR=1.7						
	comp=Z,2.0nm,0.9s						
BRTR	**Keskin Array B**	**78.37**	**315**	P	**P**	**23 44 35.3**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=37,slow=6.4,SNR=3.7						
	comp=Z,0.6nm,0.6s						
BRTR	**Keskin Array B**	**78.37**	**315**	P	**P**	**23 44 34.6**	**-0.3**
BRTR	**Keskin Array B**	**78.37**	**315**	*e*P	**P**	**23 44 35.9**	**+1.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES	**GERESS Array B**	**79.59**	**332**	P	**P**	**23 44 41.1**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=31,slow=5.4,SNR=3.6						
	comp=Z,0.6nm,0.5s						
GERES	**GERESS Array B**	**79.59**	**332**	*e*P	**P**	**23 44 43.0**	**+1.7**
CONA	**Conrad Observa**	**79.62**	**330**	*e*P	**P**	**23 44 41.1**	**-0.3**
	comp=Z,1.7nm,0.8s						
RONA	**Rosalia, Austr**	**79.66**	**330**	*e*P	**P**	**23 44 42.3**	**+0.7**
	comp=Z,0.5nm,0.6s						
BIOA	**Bad Ischl, Aus**	**80.60**	**331**	*e*P	**P**	**23 44 47.0**	**+0.2**
	comp=Z,1.0nm,0.7s						
SOKA	**Soboth**	**80.98**	**330**	*e*P	**P**	**23 44 48.9**	**+0.1**
	comp=Z,1.6nm,0.8s						
LESA	**Schwarzleotal**	**81.17**	**332**	*e*P	**P**	**23 44 50.2**	**+0.4**
	comp=Z,1.2nm,0.9s						
KBA	**Koelnbreinsper**	**81.23**	**331**	*e*P	**P**	**23 44 50.6**	**+0.3**
	comp=Z,0.8nm,0.5s						
TXAR	**Lajitas Array**	**81.28**	**58**	P	**P**	**23 44 51.6**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=331,slow=6.5,SNR=6.9						
	comp=Z,0.5nm,0.5s						
WATA	**Walderalm**	**81.61**	**332**	*e*P	**P**	**23 44 52.5**	**+0.2**
	comp=Z,1.9nm,0.6s						
WTTA	**Wattenberg**	**81.66**	**332**	*e*P	**P**	**23 44 53.5**	**+1.0**
	comp=Z,0.6nm,0.5s						
RETA	**Reutte**	**81.75**	**333**	*e*P	**P**	**23 44 53.9**	**+1.0**
	comp=Z,1.0nm,0.9s						
MOTA	**Moosalm**	**81.76**	**333**	*e*P	**P**	**23 44 54.3**	**+1.2**
	comp=Z,2.4nm,0.9s						
BFO	**Black Forest**	**81.78**	**335**	*i* P	**P**	**23 44 50.1**	**-2.9**
SQTA	**Sankt Quirin**	**81.84**	**333**	*i* P	**P**	**23 44 54.8**	**+1.4**
	comp=Z,1.5nm,0.7s						
MMAI	**Mount Meron Ar**	**82.43**	**309**	P	**P**	**23 44 57.9**	**+1.2**
	comp=Z,1.9nm,0.9s,baz=356,slow=4.3,SNR=1.4						
	comp=Z,1.9nm,0.9s						

*IDC **06** 23:38:54.3±1.6, 3°.03S×129°.28E, h0^{km}, mb3.6/3, mbtmp3.7/5, ML3.5/2, Error ellipse: s-maj=109.1km s-min=23.4km az=72.0*

*DJA **06** 23:38:58.3±0.3, 3°S±3°×12°8E±°, h10^{km}, M4.1/12, mB5.1/1, mb4.5/3, MLv3.8/12, Mw(mB)4.5/1*

ISC 06 23:38:57.0±1.6**, 3°.44S**±0°.06×**128°.33E**±0°.05**, h5**^{km}±12^{km}**, n15,** σ**1^s.32**/17**, mb3.9**/3**, 1C, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRAI	**Karang Ratu**	**0.14**	**29**	P	**Pg**	**23 38 59.2**	**-0.6**
AAI	**Ambon**	**0.28**	**208**	P	**Pb**	**23 39 05.6**	**+1.1**
MSAI	**Masohi**	**0.61**	**81**	P	**Pg**	**23 39 08.1**	**-0.6**
NLAI	**Namlea**	**1.24**	**279**	P	**Pn**	**23 39 20.2**	**-0.8**
BNDI	**Bandanaira**	**1.91**	**124**	P	**Pn**	**23 39 31.0**	**+0.8**
SANI	**Sanana**	**2.71**	**301**	P	**Pn**	**23 39 42.2**	**+0.9**
SANI				S	**Sn**	**23 40 14.7**	**+0.1**
SWI	**Sorong**	**3.89**	**49**	P	**Pn**	**23 39 58.4**	**+0.8**
FAKI	**Fak Fak**	**3.95**	**83**	P	**Pn**	**23 39 59.5**	**+1.1**
LUWI	**Luwuk**	**6.04**	**293**	P	**Pn**	**23 40 29.7**	**+2.6**
	2µm92nm,0.8s						
FITZ	**Fitzroy Crossi**	**14.80**	**190**	Pn	**P**	**23 42 33.9**	**+0.6**
	0.1nm,0.3s,baz=15,slow=11,SNR=2.3						
	1.9nm,0.7s						
WRA	**Warramunga Arr**	**17.42**	**161**	P	**Pn**	**23 42 58.9**	**-2.1**
	0.2nm,0.3s,baz=346,slow=12,SNR=8.1						
	1.7nm,0.9s						
ASAR	**Alice Springs**	**20.82**	**165**	P	**P**	**23 43 39.7**	**+0.1**
	3.0nm,0.8s,baz=346,slow=11,SNR=23						
ASAR				PcP	**PcP**	**23 47 47.1**	**-1.6**
	0.3nm,0.6s,baz=338,slow=1.9,SNR=4.9						
	3.0nm,0.8s						
BNX	**BinXian**	**48.97**	**359**	⇑P	**P**	**23 47 45.4**	**+0.9**
BNX				pmax	pmax		
	comp=Z,11nm,2.3s						
MKAR	**Makanchi Array**	**64.36**	**327**	P	**P**	**23 49 33.2**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=113,slow=8.4,SNR=5.0						
	comp=Z,0.6nm,0.8s						
KURBB	**Kurchatov Arra**	**68.62**	**329**	P	**P**	**23 50 00.2**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=132,slow=5.7,SNR=4.2						
	comp=Z,0.3nm,0.5s						

*MOS **07** 00:10:24.4±0.9, 43°.16N×146°.66E, h54^{km}, mb4.7/12, Error ellipse: s-maj=11.2km s-min=7.4km az=124.5*

MOS Felt (III) at Yuzhno-Kuril'sk, (II-III) at Goryachiy Plyazh.

*NEIC **07** 00:10:25.1±2.2, 43°.2N±0°.1×146°.6E±0°.1, h35^{km}±2^{km}, mb4.6/14, Error ellipse: s-maj=18.5km s-min=13.6km az=149.0*

*SKHL **07** 00:10:25.5±0.5, 43°.20N×146°.70E, h50^{km}±1^{km}, mb5.5/3*

*IDC **07** 00:10:25.8±0.7, 43°.22N×146°.76E, h51^{km}±5^{km}, mb3.8/19, mbtmp4.0/23, MS3.2/2, Error ellipse: s-maj=18.6km s-min=10.2km az=2.0*

*JMA **07** 00:10:26.3±0.2, 43°.2N±0°.7×14°7E±°, h50^{km}±1^{km}, MD4.0/38, MV4.3/38, OFF NEMURO PENINSULA*

JMA Felt I J1 at OFF NEMURO PENINSULA .

*NIED **07** 00:10:26.3, 43°.21N×146°.55E, h50^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.38; $M_{\theta\theta}$-0.34; $M_{\phi\phi}$-0.04; $M_{r\theta}$0.66; $M_{\theta\phi}$-0.36; $M_{\phi r}$0.66; Fault plane solution: $M_0$1.05000×10^{15} NP1: ϕ_s256.00000°, δ15.00000°, λ120.00000°. NP2: ϕ_s45.00000°, δ77.00000°, λ82.00000°.*

ISC 07 00:10:25.8±0.5**, 43°.17N**±0°.04×**146°.58E**±0°.04**, h48**^{km}±4^{km}**, n124,** σ**1^s.41**/143**, mb4.2**/36**, 3C-7D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.64**	**288**	*i* P	**Pn**	**00 10 38.9**	**+0.2**
NEM2				S	**Sn**	**00 10 47.8**	**-0.1**
NEM2	**Nemuro 2**	**0.64**	**288**	A	A	00 10 38.9	
	comp=N,21nm,0.5s,comp=E,20nm,0.3s						
NMR	**Nemuro--Hokkai**	**0.65**	**288** ⇓	*i*PN	**Pn**	**00 10 38.9**	**+0.1**
NMR				*i* S	**Sn**	**00 10 47.8**	**-0.4**
NMR	**Nemuro--Hokkai**	**0.65**	**288**	*i* P	**Pn**	**00 10 38.9**	**+0.1**
NMR				*i* S	**Sn**	**00 10 47.8**	**-0.4**
SHO	**Shikotan**	**0.72**	**14**	*e*P	Pn	00 10 47.4	+7.7
SHO				AMB	AMB	00 10 48.0	
	comp=E,1µm,0.2s						
SHO				*e*S	**Sn**	**00 10 56.5**	**+6.8**
SHO				A	A	00 10 57.6	

	comp=E,4µm,0.2s						
SHO				A	A	00 10 57.6	
	comp=E,5µm,0.2s						
GLVR	**Golovnino**	**0.96**	**306**	⇓*i*PN	**Pn**	**00 10 42.9**	**+0.1**
GLVR				*i*S	**Sn**	**00 10 55.3**	**-0.1**
GLVR				pmax	pmax		
	comp=Z,2µm,0.2s						
GLVR				pmax	pmax		
	comp=N,382nm,0.3s						
GLVR				pmax	pmax		
	comp=E,358nm,0.1s						
GLVR				smax	smax		
	comp=N,17µm,0.3s						
GLVR				smax	smax		
	comp=E,21µm,0.3s						
GLVR	**Golovnino**	**0.96**	**306**	*i*P	**Pn**	**00 10 42.9**	**+0.1**
GLVR				AMB	AMB	00 10 43.3	
	comp=E,2µm,0.4s						
GLVR				*i*S	**Sn**	**00 10 55.3**	**-0.1**
GLVR				A	A	00 10 56.0	
	comp=E,17µm,0.5s						
GLVR				A	A	00 10 56.0	
	comp=E,21µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.01**	**329**	*d* *i*PN	**Pn**	**00 10 43.1**	**-0.4**
YUK				*i*S	**Sn**	**00 10 55.2**	**-1.4**
YUK				pmax	pmax		
	comp=Z,3µm,0.2s						
YUK				pmax	pmax		
	comp=N,1µm,0.1s						
YUK				pmax	pmax		
	comp=E,1µm,0.1s						
YUK				smax	smax		
	comp=N,7µm,0.3s						
YUK				smax	smax		
	comp=E,9µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.01**	**329**	*i*P	**Pn**	**00 10 42.9**	**-0.6**
YUK				AMB	AMB	00 10 43.8	
	comp=E,3µm,0.4s						
YUK				*i*S	**Sn**	**00 10 55.6**	**-1.0**
YUK				A	A	00 10 58.5	
	comp=E,15µm,0.5s						
YUK				A	A	00 10 58.5	
	comp=E,9µm,0.5s						
JKHN	**Kushirohamanak**	**1.04**	**265**	*i*P	**Pn**	**00 10 44.9**	**+0.9**
JKHN				S	**Sn**	**00 10 58.9**	**+1.4**
JKHN	**Kushirohamanak**	**1.04**	**265**	A	A	00 10 44.9	
	comp=N,6.0nm,1.4s,comp=E,8.0nm,2.2s						
AKK	**Akkeshi**	**1.28**	**264**	*e*P	**Pn**	**00 10 47.6**	**+0.3**
JNSB	**Nemuroshibetsu**	**1.30**	**298**	P	**Pn**	**00 10 47.7**	**+0.2**
JNSB				S	**Sn**	**00 11 03.5**	**-0.2**
JNSB	**Nemuroshibetsu**	**1.30**	**298**	A	A	00 10 47.7	
	comp=N,6.0nm,3.4s,comp=E,6.0nm,3.4s						
JRA	**Rausu**	**1.31**	**306**	*i*P	**Pn**	**00 10 48.0**	**+0.4**
JRA				S	**Sn**	**00 11 03.9**	**0.0**
JRA	**Rausu**	**1.31**	**306**	A	A	00 10 48.0	
	comp=N,8.0nm,0.6s,comp=E,7.0nm,1.3s						
RUSJ	**Misakicho**	**1.34**	**314**	⇓*i*PN	**Pn**	**00 10 48.6**	**+0.5**
RUSJ				*i*S	**Sn**	**00 11 05.7**	**+0.9**
JAK	**Akkeshi**	**1.39**	**263**	*e*P	**Pn**	**00 10 49.2**	**+0.5**
JAK				S	**Sn**	**00 11 06.5**	**+0.6**
JNK	**Nakash**	**1.42**	**287**	*i*P	**Pn**	**00 10 49.2**	**+0.1**
JNK				S	**Sn**	**00 11 05.9**	**-0.7**
JOB	**Onbets**	**2.03**	**263**	P	**Pn**	**00 10 58.2**	**+0.8**
JOB				*e*S	**Sn**	**00 11 22.4**	**+0.8**
JAR	**Ashorobuto**	**2.06**	**274**	P	**Pn**	**00 10 58.7**	**+0.8**
JAR				S	**Sn**	**00 11 22.6**	**+0.2**
JTKR	**Abashiri--Toko**	**2.10**	**293**	P	**Pn**	**00 10 59.7**	**+1.2**
JTKR				*e*S	**Sn**	**00 11 24.4**	**+1.1**
KUR	**Kuril'sk**	**2.26**	**24**	*e*PN	**Pn**	**00 10 59.0**	**-1.6**
KUR				*e*S	**Sn**	**00 11 28.1**	**+0.9**
KUR				pmax	pmax		
	comp=Z,124nm,0.6s						
KUR				smax	smax		
	comp=N,289nm,0.4s						
KUR				smax	smax		
	comp=E,198nm,0.4s						
KUR	**Kuril'sk**	**2.26**	**24**	*e*P	**Pn**	**00 10 59.5**	**-1.1**
KUR				AMB	AMB	00 11 00.6	
	comp=E,180nm,0.5s						
KUR				*e*S	**Sn**	**00 11 24.0**	**-3.2**
KUR				A	A	00 11 28.8	
	comp=E,300nm,0.5s						
KUR				A	A	00 11 28.8	
	comp=E,280nm,0.5s						
JCH	**Churui**	**2.43**	**258**	P	**Pn**	**00 11 03.9**	**+0.9**
JCH				*e*S	**Sn**	**00 11 32.4**	**+0.9**
JMP	**Maruseppu**	**2.48**	**291**	P	**Pn**	**00 11 05.2**	**+1.5**
ERM	**Erimo**	**2.78**	**247**	Pn	**Pn**	**00 11 09.1**	**+1.3**
ERM				Sn	**Sn**	**00 11 39.4**	**-0.7**
ERM	**Erimo**	**2.78**	**247**	PN	**Pn**	**00 11 09.1**	**+1.3**
ERM						00 11 39.4	
JKA	**Kamikawa-asahi**	**3.04**	**289**	Pn	**Pn**	**00 11 12.5**	**+1.2**
JKA	**Kamikawa-asahi**	**3.04**	**289**	*e*P	**Pn**	**00 11 13.9**	**+2.6**
ASAJ	**Asahikawa**	**3.04**	**289**	P	**Pn**	**00 11 13.9**	**+2.5**
	comp=E,76nm,0.4s,baz=100,slow=13,SNR=70						
ASAJ				S	**Sn**	**00 11 52.2**	**+5.7**
	comp=E,116nm,0.5s,baz=29,slow=19,SNR=10						
ASAJ				LR	LR	00 12 38.8	
	comp=E,220nm,19.8s,baz=299,slow=42						
YSS	**Yuzhno-Sakhali**	**4.65**	**326**	*e*PN	**Pn**	**00 11 37.2**	**+3.8**
YSS				*e*S	**Sn**	**00 12 30.5**	**+4.4**
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				smax	smax		
	comp=E,30nm,0.7s						
YSS	**Yuzhno-Sakhali**	**4.65**	**326**	*e*P	**Pn**	**00 11 35.2**	**+1.8**
YSS				*e*S	**Sn**	**00 12 25.5**	**-0.6**
JTM	**Tenmabayashi**	**4.75**	**242**	Pn	**Pn**	**00 11 36.0**	**+1.2**
JTM				Sn	**Sn**	**00 12 27.0**	**-1.5**
TEY	**Ternei**	**7.42**	**288**	*e*PN	Pn	00 12 22.9	+12
TYV	**Tymovskoe**	**8.14**	**342**	*e*P	**Pn**	**00 12 22.4**	**+1.1**
MJAR	**Matsushiro Arr**	**9.23**	**227**	P	**Pn**	**00 12 36.7**	**+0.4**
	comp=E,0.8nm,0.5s,baz=32,slow=15,SNR=2.6						
SKR	**Severo-Kuril's**	**9.94**	**38**	*e*P	**Pn**	**00 12 45.3**	**-0.5**
PAU	**Pauzhetka**	**10.81**	**36**	*e*P	**Pn**	**00 12 56.9**	**-0.8**
BNX	**BinXian**	**13.94**	**287**	⇑P	**Pn**	**00 13 41.0**	**+0.6**
BNX				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KSRS	**Korea Array**	**15.33**	**254**	P	**Pn**	**00 13 60.0**	**+1.2**
	comp=Z,0.8nm,0.4s,baz=64,slow=14,SNR=1.5						
KSRS	**Korea Array**	**15.33**	**254**	P	**Pn**	**00 14 00.0**	**+1.2**
JCJ	**Chichijima**	**16.44**	**194**	LR	LR	00 19 16.3	
	comp=Z,111nm,19.2s,baz=125,slow=32						
HILR	**Hailar Array B**	**19.52**	**298**	P	**P**	**00 14 48.0**	**-1.1**
	comp=Z,2.1nm,0.3s,baz=98,slow=10,SNR=4.1						
ULN	**Ulaanbaatar**	**27.87**	**294**	⇓*e*P	**P**	**00 16 11.6**	**+0.6**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	**Songino Array**	**28.32**	**294**	P	**P**	**00 16 15.0**	**+0.1**
	comp=Z,1.7nm,0.5s,baz=91,slow=8.6,SNR=18						
	comp=Z,1.7nm,0.5s						
SONM	**Songino Array**	**28.32**	**294**	P	**P**	**00 16 15.1**	**+0.1**
SONM	**Songino Array**	**28.32**	**294**	*e*P	**P**	**00 16 15.5**	**+0.6**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**28.95**	**137**	T	T	00 47 08.4	
	baz=329,slow=76,SNR=281						
H11N1	**WAKE ISLAND Hy**	**28.96**	**138**	T	T	00 47 11.4	
	baz=329,slow=76,SNR=334						
H11N3	**WAKE ISLAND Hy**	**28.96**	**137**	T	T	00 47 14.4	
	baz=329,slow=76,SNR=299						
KNMB	**Chin-men Tao**	**29.73**	**240**	P	**P**	**00 16 25.5**	**-2.0**
TIXI	**Tiksi**	**29.84**	**349**	*i*P	**P**	**00 16 25.1**	**-2.9**
TIXI				pmax	pmax		
	comp=Z,9.0nm,2.1s						
H11S1	**WAKE ISLAND Hy**	**29.89**	**139**	T	T	00 48 13.3	
	baz=330,slow=76,SNR=631						
H11S3	**WAKE ISLAND Hy**	**29.90**	**139**	T	T	00 48 15.1	
	baz=330,slow=76,SNR=431						
H11S2	**WAKE ISLAND Hy**	**29.91**	**139**	T	T	00 48 16.2	
	baz=330,slow=76,SNR=315						
LZDM	**Lanzhou Array**	**33.55**	**272**	P	**P**	**00 17 01.6**	**+0.3**
	comp=Z,0.6nm,0.2s,baz=72,slow=4.7,SNR=1.6						
	comp=Z,0.6nm,0.2s						
H19K	**Roundabout Mou**	**38.20**	**34**	P	**P**	**00 17 41.3**	**+1.0**
H19K				IAmb	IAmb	00 17 42.5	
	comp=Z,5.8nm,0.7s						
J19K	**Poorman**	**38.39**	**37**	P	**P**	**00 17 42.0**	**0.0**
ZALV	**Zalesovo Beam**	**41.02**	**307**	P	**P**	**00 18 03.9**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=83,slow=9.1,SNR=2.7						
	comp=Z,0.8nm,0.3s						
ILAR	**Eielson Array**	**42.20**	**36**	P	**P**	**00 18 12.5**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=273,slow=7.2,SNR=7.7						
ILAR				pP	**pP**	**00 18 26.1**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=276,slow=8.7,SNR=4.3						
	comp=Z,0.4nm,0.6s						
ILAR	**Eielson Array**	**42.20**	**36**	*e*P	**P**	**00 18 13.1**	**-0.4**
MK31	**Makanchi Array**	**44.49**	**298**	*e*P	**P**	**00 18 32.2**	**0.0**
MKAR	**Makanchi Array**	**44.49**	**298**	P	**P**	**00 18 31.8**	**-0.4**
	comp=Z,1.5nm,0.5s,baz=81,slow=8.9,SNR=52						
MKAR				pP	**pP**	**00 18 44.9**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=77,slow=9.7,SNR=2.9						
	comp=Z,1.5nm,0.5s						
MKAR	**Makanchi Array**	**44.49**	**298**	*e*P	**P**	**00 18 32.2**	**0.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR	**Makanchi Array**	**44.49**	**298**	*e*P	**P**	**00 18 32.2**	**0.0**
KURK	**Kurchatov**	**45.51**	**304**	P	**P**	**00 18 40.5**	**+0.3**
KURK	**Kurchatov**	**45.51**	**304**	*e*P	**P**	**00 18 40.5**	**+0.3**
KURBB	**Kurchatov Arra**	**45.59**	**304**	P	**P**	**00 18 40.5**	**-0.4**
	comp=Z,2.2nm,0.4s,baz=68,slow=8.7,SNR=32						
	comp=Z,2.2nm,0.4s						
BVAR	**Borovoye Array**	**49.55**	**310**	P	**P**	**00 19 11.0**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=73,slow=9.2,SNR=5.5						
	comp=Z,0.6nm,0.3s						
BVAR	**Borovoye Array**	**49.55**	**310**	P	**P**	**00 19 11.0**	**-0.5**
BVAR	**Borovoye Array**	**49.55**	**310**	P	**P**	**00 19 11.0**	**-0.5**
EVN	**Everest**	**49.92**	**273**	P	**P**	**00 19 16.4**	**+1.0**
EVN				IAmb	IAmb	00 19 17.4	
	comp=Z,5.7nm,0.6s						
BOOM	**Boomskoye usch**	**50.34**	**295**	P	**P**	**00 19 18.9**	**+1.0**
BOOM	**Boomskoye usch**	**50.34**	**295**	P	**P**	**00 19 18.9**	**+1.0**
BOOM				pmax	pmax		
	comp=Z,19nm,1.2s						
AAK	**Ala-Archa**	**51.23**	**296**	⇑*e*P	**P**	**00 19 24.9**	**+0.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.7s						
AAK	**Ala-Archa**	**51.23**	**296**	*e*P	**P**	**00 19 24.9**	**+0.3**
KSH	**Kashi**	**51.69**	**292**	P	**P**	**00 19 31.9**	**+3.9**
KSH				pP	sP	00 19 43.7	-3.0
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARSB	**Arslanbob**	**52.84**	**295**	P	**P**	**00 19 37.6**	**+1.0**
ARSB				IAmb	IAmb	00 19 38.3	
	comp=Z,7.6nm,0.7s						
ARSB	**Arslanbob**	**52.84**	**295**	P	**P**	**00 19 37.6**	**+1.0**
ARSB				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KK31	**Karatay Array**	**53.62**	**298**	P	**P**	**00 19 42.2**	**+0.1**
KK31				IAmb	IAmb	00 19 43.0	
	comp=Z,4.0nm,0.8s						
KK31	**Karatay Array**	**53.62**	**298**	*i*P	**P**	**00 19 41.7**	**-0.4**
KKAR	**Karatay Array**	**53.62**	**298**	P	**P**	**00 19 42.2**	**+0.1**
KKAR	**Karatay Array**	**53.62**	**298**	P	**P**	**00 19 42.2**	**+0.1**
ARTI	**Arti**	**54.59**	**317**	P	**P**	**00 19 48.8**	**-0.1**
ARTI				IAmb	IAmb	00 19 49.5	
	comp=Z,4.8nm,0.7s						
ARTI	**Arti**	**54.59**	**317**	*c* *i*P	**P**	**00 19 48.3**	**-0.6**
ARTI				S	**S**	**00 27 26.3**	**+1.6**
ARTI				SS	**SS**	**00 31 02.1**	**-5.2**
ARTI				pmax	pmax		
	comp=Z,25nm,3.5s						
RES	**Resolute Bay**	**55.64**	**16**	P	**P**	**00 19 56.3**	**+0.1**
RES				IAmb	IAmb	00 19 57.2	
	comp=Z,4.1nm,0.8s						
RES	**Resolute Bay**	**55.64**	**16**	P	**P**	**00 19 56.3**	**+0.1**
RES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GAR	**Garm**	**55.76**	**294**	P	**P**	**00 19 57.6**	**-0.2**
GAR				IAmb	IAmb	00 19 59.2	
	comp=Z,9.9nm,1.3s						
YKAW3	**Yellowknife Wh**	**56.47**	**33**	P	**P**	**00 20 03.3**	**+1.0**
YKA	**Yellowknife Ar**	**56.51**	**33**	P	**P**	**00 20 03.3**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=298,slow=7.5,SNR=6.1						
YKA				pP	**pP**	**00 20 15.5**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=302,slow=8.0,SNR=6.1						
	comp=Z,0.5nm,0.8s						
YKA	**Yellowknife Ar**	**56.51**	**33**	*e*P	**P**	**00 20 04.0**	**+1.4**
CHGR	**Chuyangaron**	**56.71**	**294**	P	**P**	**00 20 05.2**	**+0.6**
CHGR	**Chuyangaron**	**56.71**	**294**	P	**P**	**00 20 05.2**	**+0.6**
CHGR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
AB31	**Akbulak array**	**57.10**	**309**	P	**P**	**00 20 07.2**	**+0.1**
AB31				IAmb	IAmb	00 20 08.0	
	comp=Z,4.3nm,0.5s						
AB31	**Akbulak array**	**57.10**	**309**	P	**P**	**00 20 07.1**	**+0.1**
ABKAR	**Akbulak array**	**57.10**	**309**	P	**P**	**00 20 07.3**	**+0.3**
WRAB	**Tennant Creek**	**63.79**	**193**	*d* *e*P	**pP**	**00 21 08.9**	**+3.4**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.5s						
FINES	**FINESS Array B**	**65.20**	**333**	P	**P**	**00 21 00.4**	**-1.2**
	comp=Z,3.5nm,0.7s,baz=52,slow=5.4,SNR=12						
	comp=Z,3.5nm,0.7s						
FINES	**FINESS Array B**	**65.20**	**333**	P	**P**	**00 21 00.5**	**-1.1**
FINES	**FINESS Array B**	**65.20**	**333**	*e*P	**P**	**00 21 00.9**	**-0.7**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ASAR	**Alice Springs**	**67.53**	**193**	P	**P**	**00 21 17.5**	**+0.6**
	comp=Z,0.5nm,1.0s,baz=7.0,slow=5.9,SNR=4.5						
ASAR				pP	**pwP**	**00 21 32.2**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=8.8,slow=6.6,SNR=2.0						
	comp=Z,0.5nm,1.0s						
KIV	**Kislovodsk**	**69.84**	**312**	*e*P	**P**	**00 21 30.9**	**-0.4**
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
KIV	**Kislovodsk**	**69.84**	**312**	*e*P	**P**	**00 21 32.4**	**+1.1**
KBZ	**Khabaz**	**69.87**	**311**	P	**P**	**00 21 31.7**	**+0.4**
	comp=Z,4.2nm,0.8s,baz=44,slow=4.6,SNR=14						
KBZ				pP	**pP**	**00 21 44.6**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=70,slow=6.1,SNR=4.0						
	comp=Z,4.2nm,0.8s						
KBZ	**Khabaz**	**69.87**	**311**	*e*P	**P**	**00 21 32.7**	**+1.3**
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBZ	**Khabaz**	**69.87**	**311**	*e*P	**P**	**00 21 32.7**	**+1.3**
NOA	**NORSAR Array B**	**69.99**	**339**	P	**P**	**00 21 31.3**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=33,slow=6.2,SNR=7.6						
NOA				pP	**pP**	**00 21 44.5**	**-1.1**
	comp=Z,0.7nm,0.8s,baz=31,slow=6.7,SNR=1.8						
	comp=Z,1.5nm,0.6s						
NOA	**NORSAR Array B**	**69.99**	**339**	*e*P	**P**	**00 21 31.7**	**-0.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HFS	**Hagfors**	**70.06**	**337**	P	**P**	**00 21 31.4**	**-0.8**
	comp=Z,2.6nm,0.4s,baz=45,slow=8.4,SNR=17						
	comp=Z,2.6nm,0.4s						
PDAR	**Pinedale Array**	**70.60**	**49**	pP	pP	00 21 49.2	-0.1
	comp=Z,0.4nm,0.6s,baz=283,slow=2.7,SNR=4.0						
AKASG	**Malin Array Be**	**71.80**	**324**	P	**P**	**00 21 42.7**	**-0.3**
	comp=Z,2.1nm,0.5s,baz=42,slow=6.1,SNR=11						
AKASG				pP	**pP**	**00 21 55.7**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=44,slow=6.3,SNR=2.0						
	comp=Z,2.1nm,0.5s						
AKBB	**Malin Array Si**	**71.80**	**324**	⇓*e*P	**P**	**00 21 42.8**	**-0.1**
BRTR	**Keskin Array B**	**77.64**	**313**	P	**P**	**00 22 17.4**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=76,slow=4.1,SNR=5.3						
	comp=Z,0.7nm,0.7s						
BRTR	**Keskin Array B**	**77.64**	**313**	*e*P	**P**	**00 22 17.8**	**+0.6**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
EKA	**Eskdalemuir Ar**	**78.55**	**343**	P	**P**	**00 22 22.0**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=20,slow=5.3,SNR=1.6						
	comp=Z,0.5nm,0.5s						
MMAI	**Mount Meron Ar**	**81.51**	**308**	P	**P**	**00 22 39.5**	**+1.3**
	comp=Z,1.7nm,0.7s,baz=35,slow=5.3,SNR=8.8						
	comp=Z,1.7nm,0.7s						
TXAR	**Lajitas Array**	**83.31**	**56**	P	**P**	**00 22 48.3**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=319,slow=8.2,SNR=4.9						
TXAR				pP	**pP**	**00 23 02.0**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=313,slow=4.6,SNR=3.9						
	comp=Z,0.3nm,0.7s						
TXAR	**Lajitas Array**	**83.31**	**56**	P	**P**	**00 22 48.1**	**+0.4**
ESDC	**Sonseca Array**	**93.33**	**338**	P	**P**	**00 23 35.0**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=14,slow=4.7,SNR=4.6						
ESDC				pP	**pP**	**00 23 48.5**	**-0.9**
	comp=Z,0.7nm,1.0s,baz=32,slow=3.4,SNR=2.8						
	comp=Z,0.4nm,0.7s						
H03N2	**Juan Fernandez**	**143.38**	**90**	T	T	03 10 24.4	
	baz=302						
H03N3	**Juan Fernandez**	**143.39**	**90**	T	T	03 10 28.7	
	baz=302						
H03N1	**Juan Fernandez**	**143.39**	**90**	T	T	03 10 31.3	
	baz=302						
BELA	**Belgrano 2**	**145.18**	**180**	PKPbc	**PKPdf**	**00 29 57.8**	**+1.3**

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*HEL **07** 00:18:53.3±0.2, 67°.85N×20°.26E, h0^{km}, ML1.7, Explosion*

UPP 07 00:18:52.4±0.0**, 67°.85N×20°.20E, h0^{km}, ML2.6,**
Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.12**	**25**	P	Pg	00 18 54.9	+0.2
	baz=234						
KUA				S	Sg	00 18 56.6	+0.4
RATU	**Laukkuluspa**	**0.23**	**264**	P	Pg	00 18 57.0	+0.2
RATU				S	Sg	00 19 00.5	+0.6
KOVU	**Salmi**	**0.38**	**358**	S	Sg	00 19 04.9	+0.4
KOVU	**Salmi**	**0.38**	**358**	P	Pn	00 19 04.8	-0.4
KOVU	**Salmi**	**0.38**	**358**	P	Pn	00 19 04.8	-0.4
NIKU	**Nikkaluokta**	**0.44**	**273**	P	Pg	00 19 00.9	0.0
LANU	**Lannavaara**	**0.71**	**73**	P	Pg	00 19 05.8	-0.1
LANU				S	Sg	00 19 15.3	+0.3
LANU	**Lannavaara**	**0.71**	**73**	PG	Pg	00 19 05.8	-0.1
LANU				SG	Sg	00 19 13.5	-1.5
DUNU	**Dundret**	**0.74**	**169**	P	Pg	00 19 06.3	-0.3
DUNU				S	Sg	00 19 16.5	+0.3
MASU	**Masugnsbyn**	**0.79**	**119**	P	Pg	00 19 07.3	-0.2
SALU	**Saltoluokta**	**0.80**	**235**	P	Pg	00 19 07.5	-0.3
SALU	**Saltoluokta**	**0.80**	**235**	*e*P	Pg	00 19 07.6	-0.2
KIF	**Kilpisjarvi**	**1.18**	**10**	*e*P	Pb	00 19 15.4	-0.3
KIF	**Kilpisjarvi**	**1.18**	**10**	PG	Pg	00 19 15.3	+0.2
KIF				MSG		00 19 30.1	
	comp=Z,10nm,0.2s						
KIF				SG	Sg	00 19 30.8	+0.5
PAJU	**Pajala**	**1.40**	**125**	P	Pg	00 19 17.9	-1.2
PAJU	**Pajala**	**1.40**	**125**	PG	Pg	00 19 17.8	-1.2
PAJU				SG	Sg	00 19 36.5	-0.6
HEF	**Hetta**	**1.41**	**65**	PG	Pn	00 19 18.5	-0.8
	baz=252						
HEF				MSG		00 19 35.3	
	comp=Z,6.8nm,0.2s						
HEF				SG	Sg	00 19 36.9	-0.8
ERTU	**Ertsjaerv**	**1.51**	**148**	P	Pn	00 19 20.1	-0.5
ERTU	**Ertsjaerv**	**1.51**	**148**	PG	Pn	00 19 20.1	-0.6
ERTU				SN	Sn	00 19 41.4	+0.4
KLF	**Kolari**	**1.57**	**111**	PG	Pn	00 19 21.0	-0.4
	baz=299						
KLF				MSG		00 19 39.7	
	comp=Z,4.2nm,0.2s						
KLF				SN	Sg	00 19 43.2	+0.4
KTK1	**Kautokeino**	**1.62**	**42**	PG	Pn	00 19 22.1	-0.1
KTK1				SN	Sg	00 19 46.2	+1.8
HARU	**Harads**	**1.72**	**169**	P	Pn	00 19 23.6	+0.1
TRO	**Tromso**	**1.85**	**346**	PG	Pb	00 19 26.3	-0.8
TRO				SG	Sb	00 19 50.8	0.0
KALU	**Kalix**	**2.35**	**147**	PB	Pn	00 19 33.3	+1.1
KALU				SG	Sb	00 20 05.1	0.0
TOF	**Tornio**	**2.40**	**136**	PB	Pn	00 19 34.4	+1.5
	baz=317						
TOF				MSG		00 20 04.0	
	comp=Z,2.7nm,0.2s						
TOF				SG	Sb	00 20 07.1	+0.5
ARA0	**ARCESS Array S**	**2.57**	**46**	PB	Pn	00 19 36.6	+1.4
ARA0				SG	Sb	00 20 10.7	-0.8
RNF	**Rovaniemi**	**2.58**	**116**	PB	Pn	00 19 37.3	+2.0
RNF				SG	Sb	00 20 11.8	+0.1
RAJF	**Raja-Jooseppi**	**3.10**	**75**	PN	Pn	00 19 43.4	+0.9
RAJF				SB	Sb	00 20 26.2	-0.3
KEV	**Kevo**	**3.13**	**49**	SN	Sn	00 20 22.0	+1.2
RANF	**Ranua**	**3.18**	**122**	PG	Pb	00 19 50.9	+1.2
RANF				SG	Sb	00 20 30.9	+2.0
VRF	**Varrio**	**3.57**	**87**	PG	Pb	00 19 56.8	+0.4
OUL	**Oulu**	**3.59**	**138**	SG	Sb	00 20 42.2	+1.4
KU2	**Taivalkoski**	**3.83**	**120**	PN	Pn	00 19 54.0	+1.4
OLKF	**Oulanka, Finla**	**3.91**	**109**	PN	Pn	00 19 54.7	+1.1
MSF	**Maaselka**	**3.99**	**115**	PN	Pn	00 19 56.5	+1.8
	baz=304						
KU6	**Riekki**	**4.23**	**111**	PG	Pb	00 20 08.4	+0.9
KU1	**Kurvinen**	**4.36**	**117**	PN	Pn	00 20 01.4	+1.6

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*DNK **07** 00:18:57.1±1.1, 67°.83N×20°.47E, h0^{km}, ML2.8(UPP),*
Explosion

UPP 07 00:18:56.9±0.1**, 67°.82N×20°.39E, h0^{km}, ML2.8,**
Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.13**	**351**	P	Pg	00 18 59.7	+0.2
	baz=154						
KUA				S	Sg	00 19 01.7	+0.5
KUA	**Kurravaara**	**0.13**	**351**	P	Pg	00 18 59.7	+0.2
	baz=154						
KUA				S	Sg	00 19 01.7	+0.5
RATU	**Laukkuluspa**	**0.30**	**271**	P	Pg	00 19 02.9	+0.2
RATU				S	Sg	00 19 07.0	+0.4
RATU	**Laukkuluspa**	**0.30**	**271**	P	Pg	00 19 02.9	+0.2
RATU				S	Sg	00 19 07.0	+0.4
KOVU	**Salmi**	**0.41**	**348**	S	Sg	00 19 10.5	+0.4
KOVU	**Salmi**	**0.41**	**348**	S	Sg	00 19 10.5	+0.4
NIKU	**Nikkaluokta**	**0.52**	**276**	P	Pg	00 19 06.6	-0.2
NIKU	**Nikkaluokta**	**0.52**	**276**	P	Pg	00 19 06.6	-0.2
LANU	**Lannavaara**	**0.65**	**69**	P	Pg	00 19 09.1	-0.2
LANU	**Lannavaara**	**0.65**	**69**	P	Pg	00 19 09.1	-0.2
SALU	**Saltoluokta**	**0.85**	**239**	P	Pg	00 19 12.7	-0.4
SALU	**Saltoluokta**	**0.85**	**239**	P	Pg	00 19 12.7	-0.4
PAJU	**Pajala**	**1.32**	**126**	P	Pg	00 19 21.3	-0.9
PAJU	**Pajala**	**1.32**	**126**	P	Pg	00 19 21.3	-0.9
KALU	**Kalix**	**2.29**	**148**	P	Pn	00 19 36.1	+0.2
KALU	**Kalix**	**2.29**	**148**	P	Pn	00 19 36.1	+0.2

UPP 07 00:19:00.3±0.1**, 67°.87N×20°.19E, h0^{km}, ML2.6,**
Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.10**	**35**	P	Pg	00 19 02.6	+0.4
	baz=212						
KUA				S	Sg	00 19 04.1	+0.6
RATU	**Laukkuluspa**	**0.23**	**258**	P	Pg	00 19 04.8	+0.1
KOVU	**Salmi**	**0.35**	**358**	P	Pg	00 19 07.0	-0.1
NIKU	**Nikkaluokta**	**0.44**	**270**	P	Pg	00 19 08.9	+0.2
MASU	**Masugnsbyn**	**0.81**	**120**	P	Pg	00 19 15.4	-0.3
SALU	**Saltoluokta**	**0.81**	**233**	P	Pg	00 19 15.8	0.0

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*NNC **07** 01:08:54.5±0.4, 44°.18N×75°.69E, h2^{km}±2^{km}, mb3.6,*
mpv3.7, Error ellipse: s-maj=2.9km s-min=2.2km az=174.0
*SOME **07** 01:08:56.3, 44°.17N×75°.68E, h20^{km}*
*KRNET **07** 01:08:58.0±0.1, 43°.98N×75°.74E, mb3.1*
*KNET **07** 01:08:57.3±0.4, 44°.02N×75°.66E, h26^{km}±1^{km}, ml2.7, Error*
ellipse: s-maj=2.5km s-min=1.9km az=22.0

ISC 07 01:08:55.5±1.1**, 44°.15N**±0°.02×**75°.68E**±0°.02**, h10^{km}**±9^{km}**,**
n58, σ**1^{s}.01**/108**, 29C-13D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBS	**Karabastau**	**0.46**	**180**	P	**Pg**	**01 09 04.6**	**+0.1**
	89nm,0.1s						
KRBS				S	**Sg**	**01 09 10.9**	**+0.5**
	222nm,0.2s						
KUU	**Kurty**	**0.54**	**118**	P	**Pg**	**01 09 06.0**	**-0.1**
	86nm,0.1s						
KUU				S	**Sg**	**01 09 13.4**	**+0.1**
	227nm,0.1s						
KUU	**Kurty**	**0.54**	**118**	*e*P	**Pg**	**01 09 06.0**	**-0.1**
	86nm,0.1s						
KUU				*e*S	**Sg**	**01 09 13.4**	**+0.1**
	227nm,0.1s						
KTBS	**Karatobe**	**0.85**	**121**	P	**Pg**	**01 09 11.4**	**-0.5**
	267nm,0.2s						
KTBS				S	**Sg**	**01 09 22.7**	**-0.2**
	131nm,0.2s						
DGS	**Degeres**	**0.91**	**176**	P	**Pg**	**01 09 12.6**	**-0.4**
	117nm,0.2s						
DGS				S	**Sg**	**01 09 24.7**	**-0.3**
	283nm,0.2s						
CHKK	**Chushkaly**	**0.99**	**107**	*e*P	**Pg**	**01 09 13.7**	**-1.0**
	28nm,0.1s						
CHKK				*e*S	**Sg**	**01 09 26.7**	**-0.9**
	147nm,0.2s						
SGDS	**Sogindy**	**1.03**	**228**	P	**Pg**	**01 09 14.8**	**-0.5**
	68nm,0.1s						
SGDS				S	**Sg**	**01 09 28.4**	**-0.3**
	233nm,0.1s						
MTBS	**Maitube**	**1.16**	**152**	P	**Pg**	**01 09 17.1**	**-0.7**
	28nm,0.2s						
MTBS				S	**Sg**	**01 09 32.4**	**-0.4**
	301nm,0.3s						
MTBS	**Maitube**	**1.16**	**152**	*e*P	**Pg**	**01 09 17.1**	**-0.7**
	28nm,0.2s						
MTBS				*e*S	**Sg**	**01 09 32.4**	**-0.4**
	301nm,0.3s						

USP	**Ospenovka**	**1.23**	**224**	⇑P	**Pn**	**01 09 18.2**	**-0.6**
	66nm,0.2s						
USP				⇓S	**Sb**	**01 09 34.2**	**-0.6**
	315nm,0.2s						
TKM2	**Tokmak 2**	**1.23**	**183**	⇑P	**Pn**	**01 09 18.0**	**-1.1**
	72nm,0.1s						
TKM2				⇑S	**Sb**	**01 09 33.7**	**-1.3**
	207nm,0.1s						
AAA	**Alma-Ata**	**1.30**	**136**	P	**Pn**	**01 09 19.4**	**-0.5**
	58nm,0.2s						
AAA				S	**Sb**	**01 09 36.4**	**-0.6**
	16nm,0.2s						
AAA	**Alma-Ata**	**1.30**	**136**	*e*P	**Pn**	**01 09 19.4**	**-0.5**
	58nm,0.2s						
AAA				*e*S	**Sb**	**01 09 36.4**	**-0.6**
	16nm,0.2s						
IZV	**Izvestkoviy**	**1.31**	**148**	P	**Pn**	**01 09 19.7**	**-0.3**
	74nm,0.2s						
IZV				S	**Sb**	**01 09 36.8**	**-0.4**
	584nm,0.1s						
IZV	**Izvestkoviy**	**1.31**	**148**	*e*P	**Pn**	**01 09 19.7**	**-0.3**
	74nm,0.2s						
IZV				*e*S	**Sb**	**01 09 36.8**	**-0.4**
	584nm,0.1s						
KNDC	**Almaty**	**1.32**	**134**	⇑P	**Pn**	**01 09 19.6**	**-0.5**
	15nm,0.2s						
KNDC				⇑S	**Sn**	**01 09 38.2**	**+0.3**
	196nm,0.6s						
CHMS	**Chumysh**	**1.33**	**211**	⇓P	**Pn**	**01 09 20.0**	**-0.3**
	20nm,0.1s						
CHMS				⇑S	**Sb**	**01 09 37.5**	**-0.3**
	53nm,0.1s						
KOTS	**Kotyrbulak**	**1.39**	**131**	P	**Pn**	**01 09 20.9**	**-0.3**
	40nm,0.2s						
KOTS				S	**Sb**	**01 09 38.7**	**-0.8**
	336nm,0.2s						
KOTS	**Kotyrbulak**	**1.39**	**131**	*e*P	**Pn**	**01 09 20.9**	**-0.3**
	40nm,0.2s						
KOTS				*e*S	**Sb**	**01 09 38.8**	**-0.8**
	336nm,0.2s						
MDOK	**Medeo**	**1.40**	**134**	Pg	**Pn**	**01 09 21.4**	**0.0**
	19nm,0.2s						
MDOK				Lg	Lg	01 09 39.6	
	104nm,0.4s						
TNSS	**Tian-Shan**	**1.45**	**140**	P	**Pn**	**01 09 21.9**	**-0.3**
	6.5nm,0.2s						
TNSS				S	**Sn**	**01 09 40.4**	**-1.0**
	50nm,0.3s						
TNSS	**Tian-Shan**	**1.45**	**140**	*e*P	**Pn**	**01 09 21.9**	**-0.3**
	6.5nm,0.2s						
TNSS				*e*S	**Sn**	**01 09 40.4**	**-1.0**
	50nm,0.3s						
BTLS	**Baital**	**1.47**	**308**	P	**Pn**	**01 09 21.8**	**-0.3**
	55nm,0.1s						
BTLS				S	**Sn**	**01 09 40.5**	**-0.8**
	104nm,0.2s						
BTLS	**Baital**	**1.47**	**308**	*e*P	**Pn**	**01 09 21.8**	**-0.3**
	55nm,0.1s						
BTLS				*e*S	**Sn**	**01 09 40.5**	**-0.8**
	104nm,0.2s						
ARXS	**Arharly**	**1.55**	**87**	P	**Pb**	**01 09 23.6**	**-0.8**
	24nm,0.1s						
ARXS				S	**Sb**	**01 09 43.6**	**-0.5**
	361nm,0.3s						
ARXS	**Arharly**	**1.55**	**87**	*e*P	**Pb**	**01 09 23.6**	**-0.8**
ARXS				*e*S	**Sb**	**01 09 43.6**	**-0.5**
KBK	**Karagaybulak**	**1.59**	**200**	⇑P	**Pn**	**01 09 24.4**	**+0.6**
	26nm,0.1s						
KBK				⇓S	**Sn**	**01 09 45.4**	**+0.9**
	148nm,0.2s						
BOOM	**Boomskoye usch**	**1.67**	**173**	⇑*i*P	**Pn**	**01 09 26.0**	**+0.9**
BOOM				⇑*e*S	**Sn**	**01 09 46.9**	**+0.2**
AAK	**Ala-Archa**	**1.74**	**210**	⇑P	**Pn**	**01 09 26.9**	**+0.9**
	27nm,0.2s						
AAK				⇓S	**Sb**	**01 09 50.2**	**+0.5**
	78nm,0.4s						
AAK	**Ala-Archa**	**1.74**	**210**	⇓P	**Pn**	**01 09 26.5**	**+0.5**
	8.7nm,0.6s						
AAK				⇑S	**Sb**	**01 09 50.3**	**+0.7**
	101nm,0.3s						
KURS	**Kuram**	**1.92**	**109**	P	**Pb**	**01 09 30.4**	**-0.4**
	27nm,0.3s						
KURS				S	**Sb**	**01 09 55.0**	**+0.2**
	50nm,0.3s						
ULHL	**Ulahol**	**1.95**	**168**	⇑P	**Pn**	**01 09 30.0**	**+1.1**
	8.0nm,0.1s						
ULHL				⇓S	**Sb**	**01 09 55.6**	**-0.1**
	31nm,0.2s						
EKS2	**Erkin-Say**	**2.03**	**224**	⇑P	**Pn**	**01 09 31.6**	**+1.6**
	11nm,0.2s						
EKS2				⇓S	**Sb**	**01 09 57.9**	**-0.1**
	52nm,0.2s						
UCH	**Uchtor**	**2.10**	**204**	⇑P	**Pn**	**01 09 32.5**	**+1.2**
	11nm,0.2s						
UCH				⇑S	**Sb**	**01 09 60.0**	**-0.4**
	17nm,0.2s						
TDK	**Taldyqorghan**	**2.13**	**65**	Pg	**Pb**	**01 09 33.7**	**-0.5**
	44nm,0.2s						
TDK				Lg	Lg	01 10 00.4	
	389nm,0.6s						
TDK	**Taldyqorghan**	**2.13**	**65**	*e*P	**Pb**	**01 09 33.8**	**-0.5**
	44nm,0.2s						
TDK				*e*S	**Sb**	**01 10 00.4**	**-0.4**
	389nm,0.6s						
SATY	**Saty**	**2.26**	**118**	Pg	**Pb**	**01 09 36.5**	**-0.1**
	36nm,0.3s						
SATY				Lg	Lg	01 10 05.2	
	202nm,0.1s						
MRKS	**Merke**	**2.27**	**233**	Pg	**Pb**	**01 09 36.7**	**0.0**
	10nm,0.3s						
MRKS				Lg	Lg	01 10 05.7	
	102nm,0.3s						
MRKS	**Merke**	**2.27**	**233**	*e*P	**Pb**	**01 09 36.7**	**0.0**
	10nm,0.3s						
MRKS				*e*S	**Sb**	**01 10 05.7**	**+0.8**
	102nm,0.3s						
KPKS	**Kokpek**	**2.28**	**106**	Pg	**Pb**	**01 09 36.9**	**0.0**
	24nm,0.4s						
KPKS				Lg	Lg	01 10 05.6	
	48nm,0.3s						
KDJ	**Kajisay**	**2.30**	**151**	⇑*e*P	**Pb**	**01 09 36.9**	**-0.4**
KDJ				⇑*e*S	**Sb**	**01 10 05.5**	**-0.3**
ARLS	**Aral**	**2.50**	**204**	⇓*e*P	**Pb**	**01 09 40.1**	**-0.5**
ARLS				⇓*e*S	**Sb**	**01 10 10.9**	**-0.5**
KNOS	**Konyrlen**	**2.53**	**84**	Pg	**Pb**	**01 09 41.2**	**+0.2**
	16nm,0.3s						
KNOS				Lg	Lg	01 10 13.2	
	19nm,0.3s						
PRZ	**Przheval'sk**	**2.59**	**129**	⇑*e*P	**Pb**	**01 09 41.3**	**-1.0**
PRZ				⇑*e*S	**Sb**	**01 10 12.8**	**-1.5**
UZB	**Uzynbulak**	**2.63**	**111**	Pg	**Pb**	**01 09 43.1**	**+0.3**
	15nm,0.2s						
UZB				Lg	Lg	01 10 16.3	
	14nm,0.2s						
UZB	**Uzynbulak**	**2.63**	**111**	*e*P	**Pb**	**01 09 43.1**	**+0.3**
	15nm,0.2s						
UZB				*e*S	**Sb**	**01 10 16.3**	**+1.1**
	14nm,0.2s						
KAPS	**Kapalarasan**	**2.86**	**65**	Pg	**Pb**	**01 09 47.0**	**+0.3**
	7.2nm,0.1s						
KAPS				Lg	Lg	01 10 22.6	
	137nm,0.1s						
PDGK	**Podgornoye**	**2.88**	**105**	⇑Pn	**Pn**	**01 09 40.9**	**-0.8**
	1.9nm,0.8s						
PDGK				⇑Pg	**Pb**	**01 09 46.1**	**-1.1**
	6.1nm,0.6s						
PDGK				⇓Sn	**Sn**	**01 10 18.0**	**+1.4**
	16nm,0.9s						
PDGK				⇑Lg	Lg	01 10 25.9	
	11nm,0.5s						
SHLS	**Shalkode**	**2.92**	**109**	Pg	**Pg**	**01 09 53.7**	**+2.2**
	14nm,0.4s						
SHLS				Lg	Lg	01 10 34.3	
	32nm,0.6s						
SHLS	**Shalkode**	**2.92**	**109**	*e*P	**Pg**	**01 09 53.7**	**+2.2**
	14nm,0.4s						
SHLS				*e*S	**Sg**	**01 10 34.3**	**+4.9**
	32nm,0.6s						
JNKS	**Jany-Kuch**	**3.09**	**180**	⇑*e*P	**Pb**	**01 09 48.1**	**-2.7**
JNKS				⇑*e*S	**Sn**	**01 10 24.2**	**+2.4**
KTMS	**Ketmen**	**3.46**	**100**	Pg	**Pb**	**01 09 57.7**	**+0.8**
	2.0nm,0.2s						
KTMS				Lg	Lg	01 10 41.3	
	6.1nm,0.2s						
KTMS	**Ketmen**	**3.46**	**100**	*e*P	**Pb**	**01 09 57.7**	**+0.8**
	2.0nm,0.2s						
KTMS				*e*S	**Sb**	**01 10 41.3**	**+2.2**
	6.1nm,0.2s						
KK31	**Karatay Array**	**3.89**	**256**	⇑Pn	**Pn**	**01 09 55.2**	**-0.3**
	0.2nm,0.2s,baz=79,slow=12,SNR=7.9						
KK31				⇑Pg	**Pb**	**01 10 05.5**	**+1.2**
	2.5nm,0.5s,baz=73,slow=14,SNR=4.1						
KK31				Lg	Lg	01 10 57.0	
	4.6nm,0.2s,baz=70,slow=25,SNR=22						
BRLS	**Borolday**	**4.39**	**257**	Pg	**Pg**	**01 10 19.2**	**-0.4**
	1.3nm,0.2s						
BRLS				Lg	Lg	01 11 18.1	
	12nm,0.5s						
BRLS	**Borolday**	**4.39**	**257**	*e*P	**Pg**	**01 10 19.2**	**-0.4**
	1.3nm,0.2s						
BRLS				*e*S	**Sg**	**01 11 18.1**	**+1.8**
	12nm,0.5s						
MAKZ	**Makanchi**	**5.17**	**57**	⇓Pn	**Pn**	**01 10 13.0**	**+0.1**
	0.1nm,0.1s						
MAKZ				⇑Pg	**Pb**	**01 10 26.3**	**+0.3**
	1.8nm,1.1s						
MAKZ				⇓Sn	**Sn**	**01 11 09.9**	**-2.8**
	1.3nm,0.4s						
MAKZ				⇑Lg	Lg	01 11 35.3	
	5.3nm,0.7s						
MK31	**Makanchi Array**	**5.35**	**58**	Pn	**Pn**	**01 10 14.9**	**-0.6**
	0.5nm,0.5s,baz=237,slow=12,SNR=23						
MK31				⇓Pg	**Pb**	**01 10 28.9**	**-0.2**
	0.4nm,0.3s						
MK31				⇑Sn	**Sn**	**01 11 15.2**	**-2.0**
	0.9nm,0.3s,baz=236,slow=25,SNR=8.2						

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*MOS **07** 01:15:31.8±1.1, 43˚.58N×145˚.28E, h143^{km}, mb3.9/1, Error ellipse: s-maj=19.0km s-min=16.4km az=88.2*
*NEIC **07** 01:15:33.2±1.6, 43˚.5N±0˚.1×145˚.3E±0˚.2, h138^{km}±10^{km}, mb4.0/5, Error ellipse: s-maj=16.6km s-min=16.4km az=113.0*
*SKHL **07** 01:15:33.8±0.0, 43˚.60N×145˚.30E, h128^{km}±2^{km}, mb4.7/4, msha5.4/4*
*JMA **07** 01:15:33.3±0.2, 43˚.5N±0˚.6×145˚.3E±1˚.0, h133^{km}±1^{km}, MV3.2/40, NEMURO REGION*
JMA Felt I J1 at NEMURO REGION .
*IDC **07** 01:15:41.8±10.0, 44˚.40N×144˚.83E, h171^{km}±94^{km}, mb3.4/8, mbtmp3.9/9, MS3.3/1, Error ellipse: s-maj=182.8km s-min=26.9km az=167.0*
ISC 07 01:15:32.8±0.7, **43˚.53N**±0˚.06×**145˚.23E**±0˚.05, **h134**^{km}±5^{km}, **n57**, σ1^{s}**15**/75, **mb3.8**/10, **4C, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNSB	**Nemuroshibetsu**	**0.30**	**327**	P	**Pn**	**01 15 52.0**	**+0.6**
JNSB				S	**Sn**	**01 16 06.2**	**+0.6**
GLVR	**Golovnino**	**0.30**	**45**	⇑*i*PN	**Pn**	**01 15 51.9**	**+0.5**
GLVR				*i* S	**Sn**	**01 16 06.0**	**+0.5**
GLVR				pmax	pmax		
	comp=N,90nm,0.1s						
GLVR				pmax	pmax		
	comp=E,140nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,737nm,0.1s						
GLVR				smax	smax		
	comp=N,4µm,0.2s						
GLVR				smax	smax		
	comp=E,5µm,0.2s						
GLVR	**Golovnino**	**0.30**	**45**	*i* P	**Pn**	**01 15 51.9**	**+0.5**
GLVR				AMB	AMB	01 15 52.5	
	comp=E,740nm,0.5s						
GLVR				*i* S	**Sn**	**01 16 06.0**	**+0.5**
GLVR				A	A	01 16 07.1	
	comp=E,3µm,0.5s						
GLVR				A	A	01 16 07.1	
	comp=E,4µm,0.5s						
JNK	**Nakash**	**0.37**	**279**	*i* P	**Pn**	**01 15 52.2**	**+0.6**
JNK				*e*S	**Sn**	**01 16 06.1**	**+0.1**
NMR	**Nemuro--Hokkai**	**0.40**	**113**	⇑*i*PN	**Pn**	**01 15 52.0**	**+0.2**
NMR				*i* S	**Sn**	**01 16 05.5**	**-0.6**
NMR	**Nemuro--Hokkai**	**0.40**	**113**	*i* P	**Pn**	**01 15 52.0**	**+0.2**
NMR				*i* S	**Sn**	**01 16 05.6**	**-0.6**
NEM2	**Nemuro 2**	**0.41**	**113**	*i* P	**Pn**	**01 15 52.0**	**+0.1**
NEM2				S	**Sn**	**01 16 05.6**	**-0.6**
JRA	**Rausu**	**0.42**	**350**	P	**Pn**	**01 15 52.2**	**+0.3**
JRA				*e*S	**Sn**	**01 16 06.3**	**-0.1**
JKHN	**Kushirohamanak**	**0.45**	**186**	*i* P	**Pn**	**01 15 52.6**	**+0.6**
JKHN				*e*S	**Sn**	**01 16 07.2**	**+0.7**
RUSJ	**Misakicho**	**0.58**	**2**	⇑*i*PN	**Pn**	**01 15 53.2**	**+0.5**
RUSJ				*i* S	**Sn**	**01 16 08.2**	**+0.3**
AKK	**Akkeshi**	**0.58**	**209**	*e*P	**Pn**	**01 15 53.4**	**+0.6**
AKK				*e*S	**Sn**	**01 16 07.6**	**-0.3**
JAK	**Akkeshi**	**0.66**	**216**	*i* P	**Pn**	**01 15 54.0**	**+0.7**
JAK				*e*S	**Sn**	**01 16 09.2**	**+0.4**
YUK	**Yuzh-Kuril'sk**	**0.69**	**42**	*c* *i*PN	**Pn**	**01 15 53.7**	**+0.3**
YUK				*i* S	**Sn**	**01 16 09.4**	**+0.2**
YUK				pmax	pmax		
	comp=Z,309nm,0.2s						
YUK				pmax	pmax		
	comp=N,66nm,0.1s						
YUK				pmax	pmax		
	comp=E,59nm,0.1s						
YUK				smax	smax		
	comp=N,476nm,0.2s						
YUK				smax	smax		
	comp=E,625nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**0.69**	**42**	*i* P	**Pn**	**01 15 53.8**	**+0.3**
YUK				AMB	AMB	01 15 53.9	
	comp=E,450nm,0.4s						
YUK				*i* S	**Sn**	**01 16 08.8**	**-0.4**
YUK				A	A	01 16 10.6	
	comp=E,740nm,0.4s						
YUK				A	A	01 16 10.6	
	comp=E,770nm,0.4s						
JTKR	**Abashiri--Toko**	**1.05**	**295**	*i* P	**Pn**	**01 15 57.0**	**+0.5**
JAR	**Ashorobuto**	**1.08**	**258**	*i* P	**Pn**	**01 15 57.9**	**+1.1**
JAR				S	**Sn**	**01 16 16.0**	**+0.9**
JOB	**Onbets**	**1.19**	**239**	*i* P	**Pn**	**01 15 59.0**	**+1.2**
JOB				S	**Sn**	**01 16 17.6**	**+0.7**
SHO	**Shikotan**	**1.21**	**73**	*e*P	Pn	01 16 06.0	+7.9
SHO				AMB	AMB	01 16 06.4	
	comp=E,200nm,0.4s						
SHO				*e*S	**Sn**	**01 16 23.8**	**+6.5**
SHO				A	A	01 16 25.0	
	comp=E,830nm,0.4s						
SHO				A	A	01 16 25.0	
	comp=E,600nm,0.4s						
JMP	**Maruseppu**	**1.43**	**290**	P	**Pn**	**01 16 01.0**	**+0.5**
JCH	**Churui**	**1.64**	**237**	P	**Pn**	**01 16 03.6**	**+0.9**
JCH				S	**Sn**	**01 16 25.4**	**-0.2**
JKK2	**Kamakawa 2**	**1.83**	**282**	P	**Pn**	**01 16 05.8**	**+0.9**
JFR	**Furan**	**1.95**	**260**	*e*P	**Pn**	**01 16 07.3**	**+0.9**
JKA	**Kamikawa-asahi**	**1.99**	**288**		**Pn**	**01 16 08.2**	**+1.4**
JKA	**Kamikawa-asahi**	**1.99**	**288**	*e*P	**Pn**	**01 16 08.2**	**+1.4**
ASAJ	**Asahikawa**	**1.99**	**288**	PN	**Pn**	**01 16 08.2**	**+1.3**
ASAJ	**Asahikawa**	**1.99**	**288**	*i* P	**Pn**	**01 16 08.1**	**+1.3**
JEM	**Erimo**	**2.14**	**226**	*e*P	**Pn**	**01 16 10.7**	**+2.1**
ERM	**Erimo**	**2.15**	**226**		**Pn**	**01 16 10.7**	**+2.0**
ERM	**Erimo**	**2.15**	**226**	PN	**Pn**	**01 16 10.7**	**+2.0**
JAB	**Ashibetsu**	**2.18**	**270**	*e*P	**Pn**	**01 16 11.2**	**+2.0**
KUR	**Kuril'sk**	**2.55**	**47**	PN	**Pn**	**01 16 14.6**	**+0.9**
KUR				*e*S	**Sn**	**01 16 47.0**	**+1.8**
KUR				smax	smax		
	comp=E,98nm,0.5s						
KUR				smax	smax		
	comp=N,57nm,0.2s						
KUR	**Kuril'sk**	**2.55**	**47**	*e*P	**Pn**	**01 16 14.9**	**+1.2**
KUR				AMB	AMB	01 16 16.6	
	comp=N,70nm,0.5s						
KUR				*e*S	**Sn**	**01 16 45.0**	**-0.2**
KUR				A	A	01 16 46.5	
	comp=N,100nm,0.5s						
KUR				A	A	01 16 46.5	
	comp=N,110nm,0.5s						
JTM	**Tenmabayashi**	**4.13**	**230**		**Pn**	**01 16 34.0**	**-0.3**
HILR	**Hailar Array B**	**18.48**	**298**	P	**P**	**01 19 37.5**	**-0.7**
	comp=N,1.5nm,0.4s,baz=97,slow=12,SNR=2.3						
SONM	**Songino Array**	**27.27**	**293**	P	**P**	**01 21 04.8**	**+0.4**
	comp=N,3.1nm,0.7s,baz=85,slow=8.5,SNR=15						
	comp=N,3.1nm,0.7s						
SONM	**Songino Array**	**27.27**	**293**	P	**P**	**01 21 04.4**	**0.0**
SONM				IAmb	IAmb	01 21 07.0	
	comp=Z,3.1nm,1.0s						
TIXI	**Tiksi**	**29.31**	**350**	LR	LR	01 34 29.6	
	comp=Z,68nm,21.5s,baz=0.0,slow=40						
D20K	**Etivluk River**	**38.83**	**30**	P	**P**	**01 22 43.1**	**-1.1**
D20K				IAmb	IAmb	01 23 16.3	
	comp=Z,2.7nm,1.1s						
IMAR	**Indian Mountai**	**39.62**	**34**	P	**P**	**01 22 50.9**	**+0.2**
ILAR	**Eielson Array**	**42.49**	**36**	P	**P**	**01 23 15.3**	**+1.0**
	comp=Z,0.3nm,0.9s,baz=271,slow=8.6,SNR=4.6						
	comp=Z,0.3nm,0.9s						
MKAR	**Makanchi Array**	**43.45**	**297**	P	**P**	**01 23 22.3**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=78,slow=9.3,SNR=8.4						
	comp=Z,0.5nm,0.7s						
MKAR	**Makanchi Array**	**43.45**	**297**	P	**P**	**01 23 22.7**	**+0.5**
MKAR	**Makanchi Array**	**43.45**	**297**	P	**P**	**01 23 22.7**	**+0.5**
MKAR	**Makanchi Array**	**43.45**	**297**	*e*P	**P**	**01 23 22.7**	**+0.5**
C27K	**Jago River**	**43.49**	**29**	P	**P**	**01 23 22.3**	**+0.1**
KURK	**Kurchatov**	**44.49**	**304**	P	**P**	**01 23 30.8**	**+0.4**
KURK	**Kurchatov**	**44.49**	**304**	*e*P	**P**	**01 23 30.8**	**+0.4**
KURBB	**Kurchatov Arra**	**44.58**	**304**	P	**P**	**01 23 30.8**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=74,slow=8.7,SNR=3.1						
	comp=Z,0.8nm,0.4s						
BVAR	**Borovoye Array**	**48.56**	**309**	P	**P**	**01 24 01.7**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=78,slow=9.1,SNR=4.1						
	comp=Z,0.5nm,0.3s						
AB31	**Akbulak array**	**56.11**	**308**	P	**P**	**01 24 57.9**	**+0.1**
AB31				IAmb	IAmb	01 24 59.3	
	comp=Z,3.7nm,1.3s						
ABKAR	**Akbulak array**	**56.11**	**308**	P	**P**	**01 24 57.9**	**+0.1**
NLWA	**Neilton Lookou**	**60.28**	**51**	P	**P**	**01 25 25.1**	**-1.8**
FINES	**FINESS Array B**	**64.43**	**332**	P	**P**	**01 25 53.4**	**-0.8**
	comp=Z,1.3nm,0.5s,baz=45,slow=7.2,SNR=14						
	comp=Z,1.3nm,0.5s						
FINES	**FINESS Array B**	**64.43**	**332**	P	**P**	**01 25 53.6**	**-0.5**
FINES	**FINESS Array B**	**64.43**	**332**	P	**P**	**01 25 53.6**	**-0.5**
NOA	**NORSAR Array B**	**69.30**	**338**	P	**P**	**01 26 24.6**	**-0.5**
	comp=Z,1.1nm,1.0s,baz=33,slow=6.4,SNR=4.1						
	comp=Z,1.1nm,1.0s						
HFS	**Hagfors**	**69.34**	**336**	P	**P**	**01 26 24.5**	**-0.8**
	comp=Z,0.9nm,0.4s,baz=40,slow=7.5,SNR=8.5						
	comp=Z,0.9nm,0.4s						

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*IDC **07** 01:17:55.2±1.6, 42˚.92N×45˚.66E, h0^{km}, mb3.6/4, mbtmp3.5/10, ML2.9/5, Error ellipse: s-maj=31.5km s-min=10.5km az=3.0*
*NORS **07** 01:17:57.5, 42˚.94N×45˚.91E, h10^{km}, MPVA4.3*
*TIF **07** 01:17:57.3, 43˚.03N×45˚.84E, h8^{km}±1^{km}*
*MOS **07** 01:17:57.2, 42˚.97N×45˚.91E, h15^{km}, MPVA4.2*
*DRS **07** 01:17:58.9, 42˚.89N×45˚.91E, h18^{km}*
*NNC **07** 01:18:05.5±4.1, 43˚.65N×46˚.45E, h0^{km}, mb3.5, Error ellipse: s-maj=69.4km s-min=31.4km az=125.0*
ISC 07 01:17:57.6±0.5, **42˚.96N**±0˚.02×**45˚.91E**±0˚.01, **h12**^{km}, **n105**, σ1^{s}**99**/184, **mb3.4**/5, **9C-7D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVE	**Vedeno**	**0.16**	**91**	*e*Pg	**Pb**	**01 18 03.0**	**+0.3**
DVE				*e*Sg	**Sg**	**01 18 06.4**	**+2.3**
DVE	**Vedeno**	**0.16**	**91**	*e*PG	**Pb**	**01 18 02.9**	**+0.3**
DVE				*e*S	**Sg**	**01 18 06.3**	**+2.3**
DVE				pmax	pmax		
	comp=Z,953nm,0.2s						
GROC	**Groznyy**	**0.26**	**342**	*e*Pg	**Pb**	**01 18 04.5**	**+0.4**
GROC				*e*Sg	**Sg**	**01 18 09.9**	**+3.4**
GROC	**Groznyy**	**0.26**	**342**	⇓*i*PG	**Pb**	**01 18 04.6**	**+0.4**
GROC				*e*S	**Sg**	**01 18 10.0**	**+3.4**
BTLR	**Botlikh**	**0.38**	**141**	*e*Pg	**Pb**	**01 18 07.2**	**+0.9**
BTLR				*e*Sg	**Sb**	**01 18 12.6**	**+0.6**
BTLR	**Botlikh**	**0.38**	**141**	*d* *i*PG	**Pb**	**01 18 06.3**	**+0.1**
DLMR	**Dylym**	**0.54**	**78**	*e*Pg	**Pb**	**01 18 09.9**	**+0.9**
DLMR				*e*Sg	**Sb**	**01 18 18.2**	**+1.4**
DLMR	**Dylym**	**0.54**	**78**	*e*PG	**Pb**	**01 18 09.9**	**+0.9**
DLMR				*e*S	**Sb**	**01 18 18.2**	**+1.4**
DLMR				pmax	pmax		
	comp=Z,487nm,0.3s						
UNCR	**Uncukul**	**0.70**	**110**	*e*Pg	**Pn**	**01 18 12.8**	**-0.5**
UNCR				*e*Sg	**Sn**	**01 18 23.1**	**-1.1**
UNCR	**Uncukul**	**0.70**	**110**	*e*PG	**Pn**	**01 18 12.8**	**-0.5**
UNCR				*e*S	**Sn**	**01 18 23.0**	**-1.1**
UNCR				pmax	pmax		
	comp=Z,96nm,0.2s						
HNZR	**Khunzah**	**0.72**	**124**	*e*PG	**Pn**	**01 18 13.4**	**-0.3**
HNZR				*e*S	**Sb**	**01 18 23.4**	**+1.3**
HNZR				pmax	pmax		
	comp=Z,90nm,0.3s						
XNZR	**Khunzakh**	**0.72**	**125**	*e*Pg	**Pn**	**01 18 13.4**	**-0.3**
XNZR				*e*Sg	**Sb**	**01 18 23.4**	**+1.3**
KRNR	**Karanay**	**0.75**	**100**	*e*Pg	**Pn**	**01 18 13.8**	**-0.3**
KRNR				*e*Sg	**Sn**	**01 18 24.6**	**-0.9**
KRNR	**Karanay**	**0.75**	**100**	*e*PG	**Pn**	**01 18 13.8**	**-0.3**
KRNR				*e*S	**Sn**	**01 18 24.5**	**-0.9**
KRNR				pmax	pmax		
	comp=Z,62nm,0.2s						
KMGR	**Komgaron**	**0.77**	**278**	*e*Pg	**Pn**	**01 18 14.6**	**+0.3**
KMGR				*e*Sg	**Sn**	**01 18 27.2**	**+1.4**
KMGR	**Komgaron**	**0.77**	**278**	*e*PG	**Pn**	**01 18 14.6**	**+0.3**
KMGR				*e*S	**Sn**	**01 18 27.2**	**+1.4**
ARKR	**Arakani**	**0.88**	**114**	*e*Pg	**Pn**	**01 18 15.7**	**-0.1**
ARKR				*e*Sg	**Sn**	**01 18 28.5**	**-0.1**
ARKR	**Arakani**	**0.88**	**114**	*e*PG	**Pn**	**01 18 15.7**	**-0.1**
ARKR				*e*S	**Sn**	**01 18 28.4**	**-0.1**
ARKR				pmax	pmax		
	comp=Z,61nm,0.2s						
BUJR	**Buynaksk**	**0.90**	**98**	*e*Pg	**Pn**	**01 18 17.1**	**+1.1**
BUJR				*e*Sg	**Sn**	**01 18 30.7**	**+1.7**
BUJR	**Buynaksk**	**0.90**	**98**	*e*PG	**Pn**	**01 18 17.1**	**+1.1**
BUJR				*e*S	**Sn**	**01 18 30.6**	**+1.7**
BUJR				pmax	pmax		
	comp=Z,156nm,0.2s						
VLKR	**Vladikavkaz**	**0.91**	**276**	*e*Pg	**Pn**	**01 18 16.8**	**+0.6**
VLKR				*e*Sg	**Sn**	**01 18 31.0**	**+1.8**
VLKR	**Vladikavkaz**	**0.91**	**276**	*e*PG	**Pn**	**01 18 16.8**	**+0.6**
VLKR				*e*S	**Sn**	**01 18 31.0**	**+1.8**
TLTR	**Tlyarata**	**0.92**	**159**	*e*Pg	**Pn**	**01 18 16.2**	**-0.2**
TLTR				*e*Sg	**Sn**	**01 18 29.0**	**-0.6**
TLTR	**Tlyarata**	**0.92**	**159**	*e*PG	**Pn**	**01 18 16.2**	**-0.2**
TLTR				*e*S	**Sn**	**01 18 28.9**	**-0.6**
TLTR				pmax	pmax		
	comp=Z,91nm,0.2s						
CHRG	**Chargali**	**0.96**	**229**	P	**Pb**	**01 18 16.5**	**+0.3**
CHRG				S	**Sg**	**01 18 28.0**	**-0.5**
BTKR	**Batakoyurt**	**1.08**	**293**	*e*Pg	**Pn**	**01 18 20.1**	**+1.5**
BTKR				*e*Sg	**Sn**	**01 18 36.4**	**+2.9**
BTKR	**Batakoyurt**	**1.08**	**293**	*e*PG	**Pn**	**01 18 20.1**	**+1.5**
BTKR				*e*S	**Sn**	**01 18 36.4**	**+2.9**
TRKR	**Terskaya**	**1.15**	**312**	*e*Pg	**Pg**	**01 18 20.9**	**+1.3**
TRKR				*e*Sg	**Sn**	**01 18 37.2**	**+2.1**
TRKR	**Terskaya**	**1.15**	**312**	*e*PG	**Pg**	**01 18 21.0**	**+1.3**
TRKR				*e*S	**Sn**	**01 18 38.0**	**+2.9**
GUDG	**Gudauri**	**1.16**	**245**	P	**Pb**	**01 18 19.9**	**+0.1**
GUDG	**Gudauri**	**1.16**	**245**	PG	**Pb**	**01 18 19.8**	**+0.1**
MAK	**Makhachkala**	**1.18**	**89**	*e*Pg	**Pg**	**01 18 21.2**	**+1.0**
MAK				*e*Sg	**Sn**	**01 18 37.9**	**+2.1**
MAK	**Makhachkala**	**1.18**	**89**	*e*PG	**Pg**	**01 18 21.2**	**+1.0**
MAK				*e*S	**Sn**	**01 18 37.8**	**+2.1**
MAK				pmax	pmax		
	comp=Z,123nm,0.4s						
KANR	**Karaman**	**1.19**	**78**	*e*Pg	**Pg**	**01 18 23.5**	**+3.1**
KANR				*e*Sg	**Sn**	**01 18 39.9**	**+3.9**
KANR	**Karaman**	**1.19**	**78**	*e*PG	**Pg**	**01 18 23.5**	**+3.1**
KANR				*e*S	**Sn**	**01 18 39.9**	**+3.9**
LACR	**Lac**	**1.19**	**264**	*i* Pg	**Pg**	**01 18 20.6**	**+0.1**
LACR				*e*Sg	**Sn**	**01 18 36.7**	**+0.4**
LACR	**Lac**	**1.19**	**264**	⇓*i*PG	**Pg**	**01 18 20.6**	**+0.1**
LACR				*e*S	**Sn**	**01 18 36.7**	**+0.4**
ARNR	**Ardon**	**1.21**	**281**	*e*Pg	**Pg**	**01 18 21.7**	**+0.9**
ARNR				*e*Sg	**Sn**	**01 18 39.8**	**+3.2**
ARNR	**Ardon**	**1.21**	**281**	*e*PG	**Pg**	**01 18 21.7**	**+0.9**
ARNR				*e*S	**Sn**	**01 18 39.8**	**+3.2**
KORR	**Kora**	**1.35**	**276**	*e*Pg	**Pg**	**01 18 23.7**	**+0.1**
KORR				*e*Sg	**Sg**	**01 18 44.2**	**+3.0**
KORR	**Kora**	**1.35**	**276**	*e*PG	**Pg**	**01 18 24.0**	**+0.4**
KORR				*e*S	**Sg**	**01 18 44.2**	**+3.0**
SGKR	**Sergokala**	**1.39**	**111**	*e*Pg	**Pg**	**01 18 25.1**	**+0.9**
SGKR				*e*Sg	**Sg**	**01 18 44.3**	**+2.1**
SGKR	**Sergokala**	**1.39**	**111**	*e*PG	**Pg**	**01 18 25.1**	**+0.9**
SGKR				*e*S	**Sg**	**01 18 44.3**	**+2.1**
SGKR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
STDR	**Stavd-Durt**	**1.41**	**288**	⇑*i*PG	**Pg**	**01 18 25.2**	**+0.6**
STDR				*e*S	**Sg**	**01 18 46.0**	**+3.1**
PRTR	**Priterechnaya**	**1.42**	**304**	*e*Pg	**Pg**	**01 18 25.7**	**+0.7**
PRTR				*e*Sg	**Sg**	**01 18 46.3**	**+2.8**
PRTR	**Priterechnaya**	**1.42**	**304**	*e*PG	**Pg**	**01 18 25.7**	**+0.7**
PRTR				*e*S	**Sg**	**01 18 46.3**	**+2.8**
SEAG	**Tbilisi Sea**	**1.45**	**215**	P	**Pg**	**01 18 26.2**	**+0.8**
SEAG				S	**Sg**	**01 18 46.9**	**+2.8**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEAG	Tbilisi Sea	1.45	215	PG	Pg	01 18 26.2	+0.8
SEAG				S	Sg	01 18 46.9	+2.8
URKR	Urkarakh	1.50	121	ePg	Pg	01 18 27.6	+1.1
URKR				eSg	Sg	01 18 47.8	+1.8
URKR	Urkarakh	1.50	121	ePG	Pg	01 18 27.5	+1.1
URKR				eS	Sg	01 18 47.7	+1.8
URKR				pmax	pmax		
	comp=Z,78nm,0.3s						
BTNK	Botanikuri	1.52	213	PN	Pg	01 18 27.0	+0.3
LSNR	Lesken	1.56	283	ePg	Pg	01 18 27.1	-0.4
LSNR				eSg	Sg	01 18 49.5	+1.9
LSNR	Lesken	1.56	283	ePG	Pg	01 18 27.4	0.0
LSNR				eS	Sg	01 18 49.5	+1.9
DGRG	David-gareji	1.56	195	P	Pg	01 18 28.9	+1.4
DGRG				S	Sg	01 18 53.2	+5.5
DGRG	David-gareji	1.56	195	i Pg	Pg	01 18 28.9	+1.4
DGRG				eSg	Sg	01 18 53.2	+5.5
DGRG	David-gareji	1.56	195	i PN	Pg	01 18 28.9	+1.4
DGRG				eS	Sg	01 18 53.2	+5.5
DIGR	Digorskoe uzhe	1.71	269	ePg	Pb	01 18 29.3	+0.2
DIGR				eSg	Sg	01 18 51.8	-0.8
DIGR	Digorskoe uzhe	1.71	269	ePN	Pb	01 18 29.3	+0.2
DIGR				eS	Sg	01 18 51.8	-0.8
VSHL	Vashlovani	1.77	168	P	Pg	01 18 32.8	+1.4
NCK	Nalchik	1.77	288	ePg	Pb	01 18 29.9	-0.1
NCK				eSg	Sg	01 18 54.6	+0.1
NCK	Nalchik	1.77	288	ePN	Pb	01 18 29.9	-0.1
NCK				eS	Sg	01 18 55.2	+0.7
ALIG	Mtskhetisjvari	1.87	244	P	Pb	01 18 32.0	+0.3
ALIG				S	Sb	01 18 56.3	+1.1
ALIG	Mtskhetisjvari	1.87	244	ePg	Pb	01 18 32.0	+0.3
ALIG				eSg	Sb	01 18 56.3	+1.1
ALIG	Mtskhetisjvari	1.87	244	ePN	Pb	01 18 32.0	+0.3
KZR	Kazreti	1.93	216	P	Pn	01 18 31.3	+1.1
KZR				S	Sb	01 18 56.5	-0.2
KZRT	Kazreti	1.93	216	PN	Pn	01 18 31.3	+1.0
TRLG	Trialeti	1.95	224	P	Pb	01 18 33.7	+0.5
TRLG				S	Sg	01 19 00.1	-0.2
TRLG	Trialeti	1.95	224	PN	Pb	01 18 33.6	+0.5
AKT	Akhty	2.00	137	ePg	Pb	01 18 34.9	+0.8
AKT				eSg	Sg	01 19 01.0	-1.0
AKT	Akhty	2.00	137	ePN	Pb	01 18 34.8	+0.8
AKT				eS	Sg	01 19 01.0	-1.0
AKT				pmax	pmax		
	comp=Z,57nm,0.3s						
KBTC	Kuba-Taba	2.01	296	ePg	Pn	01 18 32.1	+0.7
KBTC				eSg	Sg	01 19 01.5	-0.8
KBTC	Kuba-Taba	2.01	296	ePN	Pn	01 18 32.1	+0.7
KBTC				eS	Sg	01 19 01.5	-0.8
DRN	Derbent	2.02	117	ePg	Pb	01 18 34.6	+0.4
DRN				eSg	Sg	01 19 02.3	-0.2
DRN	Derbent	2.02	117	⇑ePN	Pb	01 18 35.1	+0.9
KSMR	Kasumkent	2.13	129	ePg	Pb	01 18 36.3	+0.1
KSMR				eSg	Sb	01 19 04.5	+1.7
KSMR	Kasumkent	2.13	129	ePN	Pb	01 18 36.3	+0.1
KSMR				eS	Sb	01 19 04.4	+1.7
KSMR				pmax	pmax		
	comp=Z,73nm,0.4s						
PYA1	Pyatigorsk	2.32	299	ePN	Pn	01 18 35.7	0.0
PYA1				eS	Sb	01 19 07.3	-0.8
KBZ	Khabaz	2.33	290	Pn	Pn	01 18 35.7	+0.1
	comp=Z,0.8nm,0.3s,baz=112,slow=5.4,SNR=23						
KBZ				Lg	Lg	01 19 03.2	
	comp=Z,2.9nm,0.3s,baz=112,slow=19,SNR=6.2						
	comp=Z,1.5nm,0.3s						
KBZ	Khabaz	2.33	290	i Pn	Pn	01 18 35.3	-0.3
KBZ				eSn	Sb	01 19 07.7	-0.4
NEUR	Neytrino	2.37	278	⇑ePN	Pn	01 18 37.8	+1.4
AKH	Akhalkalaki	2.37	230	P	Pb	01 18 40.0	-0.3
AKH				S	Sb	01 19 11.8	+2.3
AKH	Akhalkalaki	2.37	230	PN	Pb	01 18 40.0	-0.3
AKH				S	Sb	01 19 11.8	+2.3
SHA1	Shidzhatmaz	2.49	289	ePN	Pn	01 18 40.1	+1.9
SHA1				eS	Sb	01 19 12.3	-0.9
KVAR	Kislovodsk Arr	2.54	294	Pn	Pn	01 18 38.9	+0.2
	baz=90,slow=20						
KVAR				Lg	Lg	01 19 09.0	
	baz=131,slow=9.3						
	comp=Z,3.4nm,0.7s						
GOF	Gofitskoye	2.94	316	cePN	Pn	01 18 45.8	+1.6
GOF				eS	Sn	01 19 21.3	+1.9
ARXR	Arkhyz	3.44	282	⇑ePN	Pn	01 18 50.9	-0.2
BELG	Belogornoye	9.51	6	Pn	Pn	01 20 13.9	-0.4
	comp=Z,0.6nm,0.3s,baz=195,slow=20,SNR=1.1						
BELG				Sn	Sn	01 21 54.9	-6.0
	comp=Z,0.5nm,0.3s,baz=180,slow=20,SNR=1.3						
	comp=Z,1.7nm,0.3s						
AKTO	Aktyubinsk	11.17	44	Pn	Pn	01 20 37.0	-0.1
	comp=Z,0.3nm,0.3s,baz=232,slow=13,SNR=2.8						
AKTO				Sn	Sn	01 22 33.7	-8.1
	comp=Z,0.3nm,0.3s,baz=232,slow=19,SNR=2.4						
	comp=Z,0.9nm,0.4s						
AKTO	Aktyubinsk	11.17	44	⇓Pn	Pn	01 20 34.7	-2.3
	comp=Z,3.1nm,1.4s						
AKTO				⇓Sn	Sn	01 22 33.1	-8.8
	comp=Z,3.5nm,1.1s						
AKTO	Aktyubinsk	11.17	44	P	Pn	01 20 37.0	-0.1
AB31	Akbulak array	11.59	52	⇓Pn	Pn	01 20 42.7	-0.1
	comp=Z,0.4nm,0.4s,baz=240,slow=12,SNR=16						
AB31				⇑Sn	Sn	01 22 46.6	-5.5
	comp=Z,0.6nm,0.3s,baz=230,slow=17,SNR=9.4						
AB31	Akbulak array	11.59	52	P	Pn	01 20 42.7	-0.1
AB31				S	Sn	01 22 46.6	-5.5
MMAI	Mount Meron Ar	12.92	223	Pn	Pn	01 20 56.9	-4.1
	comp=Z,0.5nm,0.6s,baz=40,slow=14,SNR=1.3						
OBN	Obninsk	13.60	337	⇑iP	Pn	01 21 12.4	+2.3
OBN				S	Sn	01 23 38.0	-3.0
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KK31	Karatay Array	17.98	81	⇓P	P	01 22 10.1	+2.3
	comp=Z,0.3nm,0.5s,baz=273,slow=15,SNR=5.8						
KK31	Karatay Array	17.98	81	P	P	01 22 10.6	+2.8
BVA0	Borovoye Array	19.14	50	P	Pn	01 22 22.2	+0.9
	comp=Z,3.2nm,1.2s,baz=229,slow=9.9,SNR=4.3						
BVA0	Borovoye Array	19.14	50	P	Pn	01 22 22.2	+0.9
BVAR	Borovoye Array	19.14	50	P	P	01 22 20.3	-0.2
	baz=243,slow=9.5,SNR=5.4						
	comp=Z,0.7nm,0.5s						
AAK	Ala-Archa	20.94	81	⇑eP	P	01 22 39.5	-0.9
AAK				pmax	pmax		
	comp=Z,9.0nm,2.6s						
FINES	FINESS Array B	21.98	334	P	P	01 22 50.0	-1.0
	comp=Z,2.4nm,0.9s,baz=140,slow=8.3,SNR=4.8						
	comp=Z,2.4nm,0.9s						
KURBB	Kurchatov Arra	23.47	60	P	P	01 23 07.4	+0.6
	comp=Z,0.3nm,0.2s,baz=266,slow=9.4,SNR=1.8						
	comp=Z,0.3nm,0.2s						
KURK	Kurchatov	23.54	59	⇑eP	P	01 23 09.4	+1.9
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	25.92	69	P	P	01 23 29.8	+0.3
	comp=Z,0.2nm,0.4s,baz=267,slow=9.7,SNR=7.6						
	comp=Z,0.2nm,0.4s						
HFS	Hagfors	26.01	323	P	P	01 23 29.9	-0.2
	comp=Z,2.6nm,0.9s,baz=124,slow=8.9,SNR=1.5						
	comp=Z,2.6nm,0.9s						

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*IDC **07** 01:40:45.8±1.2, 15.°39N×94.°68W, h0^{km}, mb3.6/10, mbtmp3.6/13, ML3.2/4, MS3.2/13, Error ellipse: s-maj=22.9km s-min=14.8km az=68.0*

*NEIC **07** 01:40:46.6±1.3, 15.°22N±0.°06×94.°69W±0.°04, h10^{km}±1^{km}, mb4.1/20, Md4.5/105(MEX), Error ellipse: s-maj=11.2km s-min=4.7km az=24.0*

*GCG **07** 01:40:48.6±2.7, 15.°13N×94.°78W, h37^{km}±913^{km}, MD4.5, ML4.8, MW3.8*

*MEX **07** 01:40:49.9±1.1, 15.°26N×94.°70W, h29^{km}±14^{km}, MD4.5*

*CATAC **07** 01:40:51.6±0.5, 15°N±3°×9°5W±°, h30^{km}, M5.0/13, mb5.3/4, mB5.3/2, MLv4.8/13, Mw(mB)4.7/2, Error ellipse: s-maj=8.1km s-min=4.4km az=52.3, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.64; $M_{\theta\theta}$-0.61; $M_{\phi\phi}$-0.02; $M_{r\theta}$0.72; $M_{\theta\phi}$0.38; $M_{\phi r}$-0.91; Fault plane solution: $M_0$1.36993×10^{15} NP1:ϕ_s137.99326°, δ75.33275°, λ104.43830°. NP2:ϕ_s272.51486°, δ20.46948°, λ46.38953°. Principal axes: T 1.3552, Plg57.2991°, Azm67.0402°; N 0.0290, Plg13.9581°, Azm314.2633°; P -1.3842, Plg28.9088°, Azm216.3741°; confirmed*

ISC 07 01:40:48.4±1.8**, 15.°21N**±0.°04×**94.°72W**±0.°03**, h24**^{km}±14^{km}**, n171, **σ**2.**^{s}**31**/228**, mb3.7**/12**, MS3.2**/13**, 1C, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.45	293		Pn	01 41 12.7	-0.4
HUIG					Sn	01 41 28.9	-2.5
HUIG	Huatulco	1.45	293	eP	Pn	01 41 12.7	-0.4
HUIG				eS	Sn	01 41 28.9	-2.5
HUIG	Huatulco	1.45	293	i P	Pn	01 41 12.9	-0.2
HUIG				eS	Sn	01 41 28.4	-2.9
PCIG		1.53	71		Pn	01 41 12.4	-1.9
PCIG					Sn	01 41 29.5	-3.9
PCIG		1.53	71	eP	Pn	01 41 12.4	-1.9
PCIG				eS	Sn	01 41 29.5	-3.9
PANG	Puerto Angel	1.75	285		Pn	01 41 16.9	-0.4
PANG					Sn	01 41 36.1	-2.7
PANG	Puerto Angel	1.75	285	eP	Pn	01 41 16.9	-0.4
PANG				eS	Sn	01 41 36.1	-2.7
CMIG	Matias Romero	1.88	355	Pg	Pn	01 41 17.9	-1.2
	86nm,0.3s,baz=168,slow=13,SNR=318						
CMIG				Lg	Lg	01 41 38.7	
	240nm,0.3s,baz=90,slow=20,SNR=32						
CMIG				LR	LR	01 42 11.5	
	comp=Z,485nm,21.1s,baz=162,slow=50						
CMIG	Matias Romero	1.88	355	eP	Pn	01 41 17.6	-1.4
CMIG				eS	Sn	01 41 38.6	-3.3
UXUV	UXUV	2.17	15		Pn	01 41 22.4	-0.7
UXUV					Sn	01 41 46.0	-3.2
UXUV	UXUV	2.17	15	eP	Pn	01 41 22.4	-0.7
UXUV				eS	Sn	01 41 46.0	-3.2
TGBT	Tuxtla Gutierr	2.21	45		Pn	01 41 22.9	-0.7
TGBT					Sn	01 41 48.5	-1.7
TGBT	Tuxtla Gutierr	2.21	45	eP	Pn	01 41 22.9	-0.7
TGBT				eS	Sn	01 41 48.5	-1.7
THIG		2.40	97		Pn	01 41 26.0	-0.1
THIG					Sn	01 41 52.2	-2.6
THIG		2.40	97	eP	Pn	01 41 26.0	-0.1
THIG				eS	Sn	01 41 52.2	-2.6
THIG		2.40	97	eP	Pn	01 41 26.3	+0.1
THIG				eS	Sn	01 41 52.3	-2.4
THIG				IAML		01 41 57.2	
	comp=E,3µm,0.5s						
PATR	El Naranjo	2.41	92		Pn	01 41 25.4	-1.1
PATR					Sn	01 41 52.5	-2.9
PATR	El Naranjo	2.41	92	eP	Pn	01 41 25.4	-1.1
PATR				eS	Sn	01 41 52.5	-2.9
PAVE	Pavencul	2.46	90		Pn	01 41 26.8	-0.5
PAVE					Sn	01 41 54.3	-2.4
PAVE	Pavencul	2.46	90	eP	Pn	01 41 26.8	-0.5
PAVE				eS	Sn	01 41 54.3	-2.4
PEIG	Puerto Escondi	2.46	289		Pn	01 41 27.2	+0.1
PEIG					Sn	01 41 53.2	-3.3
PEIG	Puerto Escondi	2.46	289	eP	Pn	01 41 27.2	+0.1
PEIG				eS	Sn	01 41 53.2	-3.3
CHUJ	Union Juarez	2.53	92	eP	Pn	01 41 27.3	-1.0
CHUJ				eS	Sn	01 41 55.7	-2.7
SMCA	Catarina	2.58	97	eP	Pn	01 41 28.2	-0.6
SMCA				IAML		01 42 01.3	
	comp=E,1µm,0.4s						
OXLC	Oaxaca	2.65	314		Pn	01 41 30.1	+0.3
OXLC					Sn	01 42 02.3	+1.0
OXLC	Oaxaca	2.65	314	eP	Pn	01 41 30.1	+0.3
OXLC				eS	Sn	01 42 02.3	+1.0
OXBJ	Oaxaca	2.67	314		Sb	01 42 05.2	-2.8
OXBJ	Oaxaca	2.67	314	eS	Sb	01 42 05.2	-2.8
OXIG	Oaxaca	2.67	314		Pn	01 41 32.4	+2.1
OXIG					Sn	01 42 02.6	+0.6
VHO	Vista Hermosa	2.67	314	eP	Pn	01 41 32.4	+2.2
VHO				eS	Sn	01 42 02.6	+0.6
NEUV	Arroyo Zacate	2.69	338		Pn	01 41 29.2	-1.1
NEUV					Sn	01 42 02.2	+0.1
NEUV	Arroyo Zacate	2.69	338	eP	Pn	01 41 29.2	-1.1
NEUV				eS	Sn	01 42 02.2	+0.1
CCIG	Comitan	2.71	67		Pn	01 41 30.7	+0.1
CCIG	Comitan	2.71	67	eP	Pn	01 41 30.7	+0.1
CCIG				eS	Sn	01 42 02.1	-0.6
CCIG	Comitan	2.71	67	eP	Pn	01 41 31.3	+0.6
CCIG	Comitan	2.71	67	S	Sn	01 42 01.9	-0.9
CCIG	Comitan	2.71	67	P	Pn	01 41 31.3	+0.6
TUIG	Tuzandepetl	2.82	6		Pn	01 41 31.4	-0.7
TUIG					Sn	01 42 03.7	-1.6
TUIG	Tuzandepetl	2.82	6	eP	Pn	01 41 31.4	-0.7
TUIG				eS	Sn	01 42 03.7	-1.6
RTAL	Retalhuleu	3.01	103		Pn	01 41 35.7	+1.1
RTAL	Retalhuleu	3.01	103	eP	Pn	01 41 34.5	-0.1
RTAL				eS	Sn	01 42 08.1	-1.8
RTAL	Retalhuleu	3.01	103	P	Pn	01 41 36.4	+1.8
RTAL	Retalhuleu	3.01	103	S	Sn	01 42 12.4	+2.5
HUEH	Huehuetenango	3.11	88		Pn	01 41 37.6	+1.4
HUEH	Huehuetenango	3.11	88	eP	Pn	01 41 37.6	+1.4
HUEH				eS	Sn	01 42 13.8	+1.1
HUEH	Huehuetenango	3.11	88	eP	Pn	01 41 38.4	+2.1
HUEH				eS	Sn	01 42 14.6	+1.8
HUEH				IAML		01 42 27.8	
	comp=N,7µm,0.6s						
HUEH	Huehuetenango	3.11	88	P	Pn	01 41 38.2	+2.0
YOIG	Yosondua	3.17	301		Pn	01 41 38.7	+1.6
YOIG					Sn	01 42 14.1	-0.1
YOIG	Yosondua	3.17	301	eP	Pn	01 41 38.7	+1.6
YOIG				eS	Sn	01 42 14.1	-0.1
SOKI	Kika Raxquin	3.23	96	eP	Pn	01 41 38.2	+0.1
SOKI				IAML		01 42 41.0	
	comp=N,1µm,0.9s						
STG2	El Palmar, Qui	3.33	103	eP	Pn	01 41 34.3	-4.9
STG2				eS	Sn	01 42 07.5	-11
PMUV	Sontecomapan	3.34	353		Pn	01 41 35.6	-3.6
PMUV					Sn	01 42 15.5	-2.6
PMUV	Sontecomapan	3.34	353	eP	Pn	01 41 35.6	-3.6
PMUV				eS	Sn	01 42 15.5	-2.6
STG8	El Palmar, Qui	3.35	103	eP	Pn	01 41 35.2	-4.3
STG8				eS	Sn	01 42 08.7	-10
STG8				IAML		01 42 11.8	
	comp=N,2µm,0.2s						
STG5	El Palmar, Qui	3.36	103	eP	Pn	01 41 35.3	-4.3
PNIG	Pinotepa	3.48	290		Pn	01 41 42.0	+0.9
PNIG					Sn	01 42 17.5	-4.1
PNIG	Pinotepa	3.48	290	eP	Pn	01 41 42.0	+0.9
PNIG				eS	Sn	01 42 17.5	-4.1
QUIS	Sacapulas	3.51	88	eP	Pn	01 41 44.3	+2.7
QUIS				IAML		01 42 30.2	
	comp=E,3µm,0.4s						
TXIG	Tlaxiaco	3.56	305		Pn	01 41 44.2	+1.8
TXIG					Sn	01 42 24.1	+0.2
TXIG	Tlaxiaco	3.56	305	eP	Pn	01 41 44.2	+1.8
TXIG				eS	Sn	01 42 24.1	+0.2
TOIG	Toxpalan	3.64	322		Pn	01 41 46.4	+3.0
TOIG					Sn	01 42 26.3	+0.6
TOIG	Toxpalan	3.64	322	eP	Pn	01 41 46.4	+3.0
TOIG				eS	Sn	01 42 26.3	+0.6
HLIG	Huajuapan de L	3.94	312		Pn	01 41 49.6	+2.0
HLIG					Sn	01 42 33.4	+0.2
HLIG	Huajuapan de L	3.94	312	eP	Pn	01 41 49.6	+2.0
HLIG				eS	Sn	01 42 33.4	+0.2
TPIG	Tehuac#an	4.07	322		Pn	01 41 53.1	+3.7
TPIG					Sb	01 42 44.2	-4.2
TPIG	Tehuac#an	4.07	322	eP	Pn	01 41 53.1	+3.7
TPIG				eS	Sb	01 42 44.2	-4.2
APG	El Apazote	4.12	92	Pn	Pn	01 41 50.9	+0.8
	comp=E,1.0nm,0.3s,baz=227,slow=19,SNR=37						
APG				Sn	Sn	01 42 36.0	-1.6
	comp=E,2.3nm,0.3s,baz=240,slow=20,SNR=6.1						
	comp=E,3.8nm,0.5s						
APG	El Apazote	4.12	92	eP	Pn	01 41 51.1	+1.0
FTIG	Fresnillo de T	4.23	310		Pn	01 41 54.5	+3.0
FTIG					Sn	01 42 38.5	-1.7
FTIG	Fresnillo de T	4.23	310	eP	Pn	01 41 54.5	+3.0
FTIG				eS	Sn	01 42 38.5	-1.7
MGIG	Malinaltepec	4.26	299		Pn	01 41 54.5	+2.5
MGIG					Sn	01 42 41.1	0.0
MGIG	Malinaltepec	4.26	299	eP	Pn	01 41 54.5	+2.5
MGIG				eS	Sn	01 42 41.1	0.0
CRIG	Cruz Grande	4.50	290		Pn	01 41 55.5	+0.4
CRIG					Sn	01 42 41.7	-5.1
CRIG	Cruz Grande	4.50	290	eP	Pn	01 41 55.5	+0.4
CRIG				eS	Sn	01 42 41.7	-5.1
JAUV	Jalcomulco	4.58	335		Pn	01 41 54.9	-1.5
JAUV					Sn	01 42 44.2	-4.7
JAUV	Jalcomulco	4.58	335	eP	Pn	01 41 54.9	-1.5
JAUV				eS	Sn	01 42 44.2	-4.7
FAME	Alcaldia de Sa	4.76	106	P	Pn	01 42 00.6	+1.8
FAME	Alcaldia de Sa	4.76	106	S	Sn	01 42 56.9	+3.7
LVIG	Laguna Verde	4.77	340		Pn	01 41 58.1	-0.7
LVIG					Sn	01 42 51.5	-1.9
LVIG	Laguna Verde	4.77	340	eP	Pn	01 41 58.1	-0.7
LVIG				eS	Sn	01 42 51.5	-1.9
SLOZ	Alcaldia de Sa	4.92	103	P	Pn	01 42 03.5	+2.5
NUBE	Las Nubes	4.96	105	eP	Pn	01 42 02.8	+1.2
NUBE	Las Nubes	4.96	105	P	Pn	01 42 04.3	+2.7
NUBE	Las Nubes	4.96	105	S	Sn	01 43 00.6	+2.3
PETF	Flores	4.97	69		Pn	01 42 01.6	0.0
PETF	Flores	4.97	69	eP	Pn	01 42 01.6	0.0
PETF				eS	Sn	01 42 54.6	-3.7
PETF	Flores	4.97	69	eP	Pn	01 42 01.6	0.0
PETF				IAML		01 43 07.1	
	comp=E,2µm,0.6s						
PETF	Flores	4.97	69	P	Pn	01 42 02.6	+1.1
SCIG	Sabancuy	5.04	42		Pn	01 42 01.9	-0.7
SCIG					Sn	01 42 54.4	-5.7
SCIG	Sabancuy	5.04	42	eP	Pn	01 42 01.9	-0.7
SCIG				eS	Sn	01 42 54.4	-5.7
SCIG	Sabancuy	5.04	42	P	Pn	01 42 02.2	-0.3
SCIG	Sabancuy	5.04	42	S	Sn	01 42 57.5	-2.6
DAIG	Los Arroyos	5.07	291		Pn	01 41 57.4	-5.6
DAIG					Sn	01 42 55.1	-5.7
DAIG	Los Arroyos	5.07	291	eP	Pn	01 41 57.4	-5.6
DAIG				eS	Sn	01 42 55.1	-5.7
CEVE	Cerro Verde	5.13	105	S	Sn	01 43 06.4	+3.9
CEVE	Cerro Verde	5.13	105	P	Pn	01 42 06.0	+2.0
PPCL	Tochimilco	5.24	315	eP	Pn	01 42 09.0	+3.5
PPCL				eS	Sn	01 43 06.0	+0.7
MTO3	Montecristo	5.25	98		Pn	01 42 07.2	+1.6
PPPT	Popocatepetl	5.28	316	eP	Pn	01 42 10.5	+4.2
PPPT				eS	Sn	01 43 07.2	+0.4
PPSX	Xalitzintla	5.29	317	eP	Pn	01 42 11.6	+5.3
PPSX				eS	Sn	01 43 07.0	+0.4
PBXN	Popocatepetl	5.33	316	eP	Pn	01 42 11.8	+4.8
PBXN				eS	Sn	01 43 07.6	-0.3
PBPN	Popocatepetl	5.33	316	eP	Pn	01 42 11.3	+4.2
PBPN				eS	Sn	01 43 12.0	+4.0
JAYA	Jayaque - finc	5.34	106	P	Pn	01 42 09.7	+2.8
PPM	Popocatepetl	5.35	316	eP	Pn	01 42 12.6	+5.3
PPM				eS	Sn	01 43 10.0	+1.6
PPIG	Popocatepetl	5.35	316		Pn	01 42 12.6	+5.3
PPIG					Sn	01 43 10.0	+1.6
MEIG	Mezcala	5.42	301		Pn	01 42 11.4	+3.6
MEIG					Sn	01 43 08.5	-0.9
MEIG	Mezcala	5.42	301	eP	Pn	01 42 11.4	+3.6
MEIG				eS	Sn	01 43 08.5	-0.9
YAIG	Yautepec	5.52	312		Pn	01 42 12.5	+3.3
YAIG					Sn	01 43 11.1	-1.0
YAIG	Yautepec	5.52	312	eP	Pn	01 42 12.5	+3.3
YAIG				eS	Sn	01 43 11.1	-1.0
CAIG	El Cayaco	5.63	290		Pn	01 42 12.7	+2.0
CAIG					Sn	01 43 08.5	-6.1
CAIG	El Cayaco	5.63	290	eP	Pn	01 42 12.7	+2.0
CAIG				eS	Sn	01 43 08.5	-6.1
CXUV	Coxquihui	5.64	331		Pn	01 42 07.4	-3.4
CXUV					Sn	01 43 17.5	+2.6
CXUV	Coxquihui	5.64	331	eP	Pn	01 42 07.4	-3.4
CXUV				eS	Sn	01 43 17.5	+2.6
MZVM		5.85	313		Pn	01 42 19.1	+5.5
MZVM					Sn	01 43 21.4	+1.5
MZVM		5.85	313	eP	Pn	01 42 19.1	+5.5
MZVM				eS	Sn	01 43 21.4	+1.5
MAVM	Malinalco, Edo	5.89	310		Pn	01 42 16.7	+2.3
MAVM					Sn	01 43 22.0	+0.7
MAVM	Malinalco, Edo	5.89	310	eP	Pn	01 42 16.7	+2.3
MAVM				eS	Sn	01 43 22.0	+0.7
AOVM	Tlapan	5.96	313		Pn	01 42 20.2	+4.5
AOVM					Sn	01 43 24.4	+0.9
AOVM	Tlapan	5.96	313	eP	Pn	01 42 20.2	+4.5
AOVM				eS	Sn	01 43 24.4	+0.9
ARIG	Puente Sto Nin	6.19	300		Pn	01 42 19.5	+1.1
ARIG					Sn	01 43 26.2	-2.3
ARIG	Puente Sto Nin	6.19	300	eP	Pn	01 42 19.5	+1.1
ARIG				eS	Sn	01 43 26.2	-2.3
ZIIG	Zihuatanejo	6.89	291		Pn	01 42 27.4	-0.6
ZIIG					Sn	01 43 41.5	-4.3
ZIIG	Zihuatanejo	6.89	291	eP	Pn	01 42 27.4	-0.6
ZIIG				eS	Sn	01 43 41.5	-4.3
CNCH	Conchagua	6.95	105	S	Sn	01 43 51.6	+4.2
CNCH	Conchagua	6.95	105	P	Pn	01 42 30.8	+1.9
YUSH	Yuscaran	7.73	98	P	Pn	01 42 41.9	+2.2
TEIG	Tepich	7.91	50	Pn	Pn	01 42 40.3	-1.7
	baz=307,slow=20,SNR=19						
TEIG				Sn	Sn	01 44 04.5	-6.3
	baz=308,slow=20,SNR=8.1						
TEIG	Tepich	7.91	50	P	Pn	01 42 40.4	-1.7
TEIG				S	Sn	01 44 07.9	-2.9
MMIG	Aquila	8.81	292		Pn	01 42 57.2	+2.9
MMIG	Aquila	8.81	292	eP	Pn	01 42 57.2	+2.9
MNGA	Volcan de Coli	9.49	298	eP	Pn	01 43 09.0	+5.1
INCO	Volcan de Coli	9.50	298	eP	Pn	01 43 12.0	+7.8
SOMAC	Volcano de Col	9.52	298	eP	Pn	01 43 10.2	+5.7
CEGR	Campo Tres	9.66	297	eP	Pn	01 43 11.9	+5.7
CEGR				eS	Sn	01 44 57.9	+3.8
JTS	Las Juntas de	10.71	116	Pn	Pn	01 43 22.6	+2.1
	comp=E,1.3nm,0.3s,baz=308,slow=18,SNR=4.4						
	comp=E,1.9nm,0.3s						
SOR	Soroa	13.40	54	eP	Pn	01 43 59.6	+2.5
LCCY	Blossom Villag	14.66	70	eP	Pn	01 44 14.1	-0.2
CBCY	The Bluff, Cay	14.97	70	eP	Pn	01 44 19.9	+1.4
MGV	Manicaragua	15.56	62	⇑eP	P	01 44 28.9	-1.5
TXAR	Lajitas Array	16.30	331	Pn	Pn	01 44 36.2	+0.3
	baz=146,slow=13,SNR=9.5						
	comp=E,0.8nm,0.8s						
BRDY	Brady	16.47	347	IAmb	IAmb	01 45 00.3	
	comp=Z,6.4nm,0.7s						
OZNA	Ozona	16.70	341		P	01 44 43.2	0.0
OZNA				IAmb	IAmb	01 44 56.4	
	comp=Z,12nm,0.7s						
SGCY	Sterling City	17.62	342		Pn	01 44 51.1	-1.4
SGCY				IAmb	IAmb	01 45 04.7	
	comp=Z,7.2nm,0.6s						
PLPT	Palo Pinto	17.82	350	P	P	01 44 57.9	+2.4
PLPT				IAmb	IAmb	01 45 13.1	
	comp=Z,11nm,0.9s						
ABTX	Abilene, Hawle	17.90	346	IAmb	IAmb	01 45 09.3	
	comp=Z,8.3nm,0.8s						
APMT	Aspermont	18.69	346		Pn	01 45 06.6	+1.1
DKNS	Dickens	19.21	344	P	P	01 45 10.4	-0.4
DKNS				IAmb	IAmb	01 45 13.3	
	comp=Z,8.3nm,0.9s						
MIAR	Mount Ida	19.28	3	P	Pn	01 45 12.3	-0.3
OK052	Battle Ridge R	20.78	355	P	Pn	01 45 30.1	-0.2
OK052				IAmb	IAmb	01 45 35.2	
	comp=Z,14nm,1.0s						
ANMO	Albuquerque	22.30	334	P	P	01 45 45.0	+0.6
	comp=Z,0.9nm,0.9s,baz=139,slow=11,SNR=2.6						
ANMO				LR	LR	01 55 51.7	
	comp=Z,37nm,21.1s,baz=258,slow=41						
	comp=Z,0.9nm,0.9s						
TKL	Tuckaleechee C	22.60	24	P	P	01 45 46.1	-1.3
	comp=Z,3.7nm,1.0s,baz=201,slow=15,SNR=2.4						
TKL				S	S	01 49 54.9	+1.1
	comp=Z,1.6nm,0.7s,baz=312,slow=12,SNR=1.6						
TKL				LR	LR	01 57 09.7	
	comp=Z,60nm,18.0s,baz=186,slow=44						
	comp=Z,3.7nm,1.0s						
RUSC	La Rusia	23.18	111		P	01 45 53.3	-0.8
T25A	Trinidad	23.48	340	IAmb	IAmb	01 46 08.8	
	comp=Z,6.6nm,1.0s						
SDCO	Great Sand Dun	24.39	339	IAmb	IAmb	01 46 17.5	
	comp=Z,5.1nm,1.2s						
PFO	Pinyon Flats O	26.87	317	LR	LR	01 58 04.0	
	comp=Z,81nm,21.0s,baz=287,slow=39						
ATAH	Atahualpa	27.48	143	LR	LR	01 55 23.8	
	comp=Z,37nm,19.6s,baz=338,slow=32						
PCRV	Puerto La Cruz	29.76	96	LR	LR	02 00 21.4	
	comp=Z,29nm,19.8s,slow=40						
PDAR	Pinedale Array	30.27	338	P	P	01 46 58.2	+0.3
	comp=Z,0.2nm,0.6s,baz=145,slow=8.2,SNR=2.0						
	comp=Z,0.2nm,0.6s						
ELK	Elko	31.07	329	LR	LR	02 01 50.6	
	comp=Z,67nm,21.9s,baz=164,slow=41						
NVAR	Mina Array Bea	31.09	323	P	P	01 47 04.6	-0.6
	comp=Z,0.7nm,0.8s,baz=136,slow=5.3,SNR=2.7						
NVAR				LR	LR	02 00 00.7	
	comp=Z,86nm,19.1s,baz=171,slow=37						
	comp=Z,0.7nm,0.8s						
SADO	Sadowa	32.29	21	LR	LR	02 03 53.4	
	comp=Z,43nm,18.0s,baz=210,slow=43						
NEW	Newport	37.78	335	LR	LR	02 06 38.7	
	comp=Z,53nm,18.3s,baz=254,slow=41						
MDP	Montagnes des	42.55	99	LR	LR	02 07 01.1	

	comp=Z,20nm,21.4s,baz=276,slow=37						
SCHQ	Schefferville	45.06	22	LR	LR	02 10 03.3	
	comp=Z,72nm,18.2s,baz=159,slow=39						
YKA	Yellowknife Ar	49.27	348	P	P	01 49 34.7	-0.3
	comp=Z,0.4nm,0.8s,baz=160,slow=7.0,SNR=5.7						
	comp=Z,0.4nm,0.8s						
INK	Inuvik	58.55	344	P	P	01 50 42.5	-0.2
	comp=Z,0.8nm,0.8s,baz=132,slow=6.2,SNR=3.9						
	comp=Z,0.8nm,0.8s						
ILAR	Eielson Array	60.70	337	P	P	01 50 58.0	+0.4
	comp=Z,0.3nm,0.8s,baz=121,slow=6.1,SNR=4.7						
	comp=Z,0.3nm,0.8s						
RAR	Rarotonga	73.37	242	LR	LR	02 15 33.6	
	comp=Z,12nm,21.0s,baz=118,slow=28						
EKA	Eskdalemuir Ar	78.53	36	P	P	01 52 47.3	-0.4
	comp=Z,2.6nm,0.9s,baz=277,slow=6.3,SNR=5.2						
	comp=Z,2.6nm,0.9s						
ESDC	Sonseca Array	81.03	51	P	P	01 53 00.8	-0.8
	comp=Z,0.7nm,1.0s,baz=299,slow=5.8,SNR=1.9						
	comp=Z,0.7nm,1.0s						
NOA	NORSAR Array B	84.33	28	P	P	01 53 19.2	+0.8
	comp=Z,0.9nm,0.8s,baz=285,slow=5.1,SNR=2.0						
NOA				LR	LR	02 30 00.2	
	comp=Z,12nm,18.1s,baz=5.0,slow=35						
	comp=Z,0.9nm,0.8s						

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*IDC **07** 01:52:38.5±3.2, 22°.99N×142°.94E, h49^{km}±30^{km}, mb3.6/10, mbtmp3.9/12, ML4.1/2, Error ellipse: s-maj=29.8km s-min=17.5km az=89.0*

*NEIC **07** 01:52:47.1±0.8, 23°.0N±0°.1×142°.8E±0°.1, h119^{km}±9^{km}, mb4.3/11, Error ellipse: s-maj=19.8km s-min=15.2km az=82.0*

*JMA **07** 01:52:50.5±0.3, 23°N±1°×14°2E±°, h172^{km}±3^{km}, MV5.3/15, IOTO ISLANDS REGION*

ISC 07 01:52:44.3±0.8**, 22°.91N**±0°.08×**142°.9E**±0°.2**, h100^{km}, n35, σ1^{s}.24**/35**, mb4.0**/17**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHH2	Haha-jima-NKT2	3.76	351	eP	Pn	01 53 42.9	+2.7
JHH2				eS	Sn	01 54 23.7	+0.2
JCJ	Chichijima	4.21	352	P	Pn	01 53 38.3	-8.1
	62nm,0.3s,baz=112,slow=19,SNR=66						
JCJ				S	Sn	01 54 22.8	-12
	454nm,0.4s,baz=253,slow=19,SNR=26						
	126nm,0.3s						
JCJ	Chichijima	4.21	352		Pn	01 53 48.5	+2.1
CBIJ	Chichi jima	4.21	352	eP	Pn	01 53 48.7	+2.4
CBIJ				eS	Sn	01 54 33.2	-1.2
BSO1	Boso 1	11.82	352	eP	Pn	01 55 28.0	-1.0
BSO3	Boso 3	12.03	351	eP	Pn	01 55 30.2	-1.8
BSO4	Boso 4	12.24	350	eP	Pn	01 55 34.5	-0.4
JOD2	Odawara 2	12.74	346	eP	Pn	01 55 40.2	-1.6
MJAR	Matsushiro Arr	14.17	345	P	Pn	01 55 56.5	-3.8
	0.2nm,0.3s,baz=162,slow=9.5,SNR=5.3						
	1.2nm,0.4s						
MJAR	Matsushiro Arr	14.17	345		Pn	01 56 01.1	+0.7
KSRS	Korea Array	19.38	322	P	P	01 57 05.0	+2.8
	2.1nm,0.5s,baz=136,slow=12,SNR=6.4						
SONM	Songino Array	38.22	320	P	P	01 59 53.8	-0.8
	0.7nm,0.5s,baz=125,slow=6.3,SNR=5.6						
	0.7nm,0.5s						
SONM	Songino Array	38.22	320	P	P	01 59 54.0	-0.6
WB2	Warramunga Arr	43.40	192	P	P	02 00 37.7	+0.6
WB2				IAmb	IAmb	02 01 10.2	
	comp=Z,11nm,1.5s						
WRA	Warramunga Arr	43.40	192	P	P	02 00 37.4	+0.3
	comp=Z,0.7nm,0.3s,baz=14,slow=7.5,SNR=15						
	comp=Z,0.7nm,0.3s						
FITZ	Fitzroy Crossi	44.10	204	P	P	02 00 42.9	+0.2
ASAR	Alice Springs	47.11	191	P	P	02 01 06.1	-0.3
	comp=Z,0.2nm,0.3s,baz=9.8,slow=6.9,SNR=5.9						
	comp=Z,0.2nm,0.3s						
NIKH	Nikolski High	47.20	38	P	P	02 01 06.0	-0.8
EVN	Everest	50.50	288	P	P	02 01 33.1	-0.1
EVN				IAmb	IAmb	02 01 40.0	
	comp=Z,4.6nm,1.3s						
MKAR	Makanchi Array	53.67	312	P	P	02 01 55.8	+0.1
	comp=Z,0.4nm,0.5s,baz=90,slow=8.6,SNR=12						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	53.67	312	P	P	02 01 55.3	-0.4
KURBB	Kurchatov Arra	56.44	316	P	P	02 02 15.2	-0.3
	comp=Z,0.8nm,0.6s,baz=94,slow=8.1,SNR=16						
	comp=Z,0.8nm,0.6s						
L22K	Petersville	59.04	30	P	P	02 02 34.2	+0.5
L22K				IAmb	IAmb	02 02 59.1	
	comp=Z,6.1nm,1.2s						
KNK	Knik Glacier	59.96	31	P	P	02 02 40.3	+0.4
ILAR	Eielson Array	61.10	27	P	P	02 02 47.7	+0.1
	comp=Z,0.2nm,0.4s,baz=260,slow=6.4,SNR=11						
	comp=Z,0.2nm,0.4s						
BVAR	Borovoye Array	61.56	319	P	P	02 02 50.1	-0.8
	comp=Z,1.8nm,0.4s,baz=93,slow=7.2,SNR=12						
	comp=Z,1.8nm,0.4s						
BORK	Borovoye	61.60	319	P	P	02 02 51.1	-0.1
BORK				IAmb	IAmb	02 02 51.8	
	comp=Z,4.5nm,1.2s						
F30M	Barrier River	65.75	25	P	P	02 03 20.5	+2.3
F30M				IAmb	IAmb	02 03 52.2	
	comp=Z,5.9nm,1.4s						
INK	Inuvik	66.58	24	P	P	02 03 24.5	+1.1
INK				IAmb	IAmb	02 04 06.9	
	comp=Z,5.9nm,1.4s						
AB31	Akbulak array	68.48	316	P	P	02 03 35.5	-0.2
AB31				IAmb	IAmb	02 03 52.9	
	comp=Z,3.7nm,1.4s						
ABKAR	Akbulak array	68.48	316	P	P	02 03 34.5	-1.2
YKA	Yellowknife Ar	75.53	28	P	P	02 04 16.1	-1.4
	comp=Z,0.5nm,0.6s,baz=293,slow=6.7,SNR=9.2						
	comp=Z,0.5nm,0.6s						
YKA	Yellowknife Ar	75.53	28	P	P	02 04 18.2	+0.7
ARCES	ARCESS Array B	77.68	341	P	P	02 04 29.3	-0.3
	comp=Z,1.9nm,0.8s,baz=51,slow=6.5,SNR=1.2						
	comp=Z,1.9nm,0.8s						
FINES	FINESS Array B	81.96	334	P	P	02 04 51.8	-1.0
	comp=Z,2.3nm,0.9s,baz=59,slow=4.2,SNR=7.5						
	comp=Z,2.3nm,0.9s						

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*IDC **07** 01:54:17.4±7.1, 10°.22S×161°.27E, h75^{km}±66^{km}, mb3.3/7, mbtmp3.7/8, Error ellipse: s-maj=40.8km s-min=28.5km az=157.0*

*NOU **07** 01:54:17.4, 10°.39S×161°.40E, h19^{km}, MLv4.7/15, Solomon Islands*

ISC 07 01:54:16.5±0.7**, 10°.39S**±0°.06×**161°.50E**±0°.06**, h61^{km}, n21, σ2^{s}.49**/22**, mb3.5**/7**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HURO	Huro Makira	0.40	101	P	Pn	01 54 27.6	0.0
HURO	Huro Makira	0.40	101	S	Sn	01 54 37.3	+1.7
ALEG	Aligegeo Malai	1.81	334	P	Pn	01 54 46.7	+1.3
ALEG	Aligegeo Malai	1.81	334	S	Sn	01 55 09.2	+1.9
NGOA	Tingoa Renbel	1.83	231	P	Pn	01 54 46.4	+0.8
NGOA	Tingoa Renbel	1.83	231	S	Sn	01 55 08.7	+1.0
SAVO	Savo Central	2.07	306	P	Pn	01 54 50.7	+1.7
TATA	Tatamba Isabel	2.60	320	P	Pn	01 54 57.3	+1.1
TATA	Tatamba Isabel	2.60	320	S	Sn	01 55 29.3	+2.7
SANVU	Saraoutou	7.49	133	P	Pn	01 56 06.6	+3.4
DZM	Mont Dzumac	12.54	158	P	Pn	01 57 15.9	+3.6
	1.8nm,0.3s,baz=331,slow=19						
DZM				S	Sn	01 59 27.1	-3.4
	2.3nm,0.4s,baz=330,slow=20,SNR=6.3						
DZM	Mont Dzumac	12.54	158	P	Pn	01 57 15.6	+3.3
MARNC	Mare, Loyalty	12.69	151	P	Pn	01 57 17.8	+3.7
OUENC	Ouen Island, N	13.01	158	P	Pn	01 57 22.1	+3.6
WRA	Warramunga Arr	27.84	247	P	P	01 59 59.4	-1.1
	0.8nm,0.5s,baz=73,slow=9.3,SNR=12						
	0.8nm,0.5s						
ASAR	Alice Springs	29.43	240	P	P	02 00 13.3	-1.4
	0.3nm,0.7s,baz=59,slow=9.6,SNR=2.7						
	0.3nm,0.7s						
SONM	Songino Array	75.71	325	P	P	02 05 53.8	-1.9
	0.5nm,0.8s,baz=134,slow=6.3,SNR=2.9						
	0.5nm,0.8s						
QSPA	South Pole Qui	79.61	180	P	P	02 06 16.9	-0.2
	0.4nm,0.4s,baz=0.0,slow=0.1,SNR=1.6						
	0.4nm,0.4s						
ILAR	Eielson Array	84.26	20	P	P	02 06 39.4	-1.9
	0.3nm,0.7s,baz=235,slow=5.1,SNR=5.2						
	0.3nm,0.7s						
NVAR	Mina Array Bea	88.82	51	P	P	02 07 05.8	+1.5
	0.1nm,0.4s,baz=258,slow=4.7,SNR=2.0						
	0.1nm,0.4s						
MKAR	Makanchi Array	90.21	318	P	P	02 07 07.0	-3.4
	0.1nm,0.4s,baz=97,slow=4.3,SNR=2.7						
	0.1nm,0.4s						

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*KRSC **07** 02:04:20.4±0.4, 55°.19N×162°.55E, h73^{km}±12^{km}, Ml5.0, Felt [III] at kordon Kronoki; [II] at Ust-Kamchatsk.*

*MOS **07** 02:04:22.1±1.0, 55°.28N×162°.39E, h84^{km}, mb4.3/20, Error ellipse: s-maj=7.1km s-min=4.1km az=76.1*

*IDC **07** 02:04:23.5±0.5, 55°.40N×161°.98E, h70^{km}±4^{km}, mb4.0/32, mbtmp4.4/34, MS3.4/28, Error ellipse: s-maj=12.5km s-min=7.5km az=144.0*

*NEIC **07** 02:04:24.6±1.4, 55°.4N±0°.1×162°.0E±0°.2, h80^{km}±4^{km}, mb4.6/214, Error ellipse: s-maj=17.8km s-min=8.0km az=141.0*

ISC 07 02:04:22.3±0.4**, 55°.26N**±0°.03×**162°.33E**±0°.03**, h66^{km}**±3^{km}**, h67^{km}:pP-P, n563, σ1^{s}.64**/489**, mb4.5**/141**, 15C-6D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	Mys Kozlova	0.78	207	PN	Pn	02 04 37.9	+0.1
MKZ				S	Sn	02 04 49.8	+0.5
MKZ	Mys Kozlova	0.78	207	eP	Pn	02 04 38.0	+0.1
MKZ				eS	Sn	02 04 49.9	+0.5
KBTR	Krutoberegovo	0.99	16	PN	Pn	02 04 40.9	+0.4
KBTR	Krutoberegovo	0.99	16	eP	Pn	02 04 40.9	+0.4
KBG	Krutoberegovo	1.02	12	PN	Pn	02 04 41.5	+0.6
KBG				S	Sn	02 04 55.8	+1.1
KBG	Krutoberegovo	1.02	12	i P	Pn	02 04 41.5	+0.6
KBG				eS	Sn	02 04 55.9	+1.1
TUMD	Tumrok D	1.11	268	PN	Pn	02 04 43.2	+1.2
TUMD				S	Sn	02 04 59.5	+2.9
TUMD	Tumrok D	1.11	268	eP	Pn	02 04 43.3	+1.2
TUMD				eS	Sn	02 04 59.6	+2.9
BZGR	Bezymyannyi-Gr	1.16	307	PN	Pn	02 04 44.5	+1.8
BZGR	Bezymyannyi-Gr	1.16	307	eP	Pn	02 04 44.5	+1.8
ZLN	Zelenaya	1.16	312	PN	Pn	02 04 44.8	+2.1
ZLN	Zelenaya	1.16	312	eP	Pn	02 04 44.8	+2.1
KZV	Kizimen	1.18	264	PN	Pn	02 04 44.3	+1.3
KZV	Kizimen	1.18	264	i P	Pn	02 04 44.3	+1.3
BZP	Bezymyannyi-Pe	1.21	304	PN	Pn	02 04 44.8	+1.3
BZP	Bezymyannyi-Pe	1.21	304	eP	Pn	02 04 44.9	+1.3
CIRR	Tsirk	1.24	315	PN	Pn	02 04 46.0	+2.1
CIRR	Tsirk	1.24	315	eP	Pn	02 04 46.0	+2.1
BZMR	Bezymyannaya	1.25	304	PN	Pn	02 04 45.4	+1.5
BZMR	Bezymyannaya	1.25	304	eP	Pn	02 04 45.4	+1.5
KMNR	Kamenistaya	1.29	294	PN	Pn	02 04 46.5	+2.0
KMNR	Kamenistaya	1.29	294	eP	Pn	02 04 46.5	+2.0
SMKR	Semkarok	1.42	340	PN	Pn	02 04 47.5	+1.4
SMKR	Semkarok	1.42	340	eP	Pn	02 04 47.5	+1.4
KLY	Klyuchi	1.42	319	PN	Pn	02 04 46.9	+0.8
KLY				S	Sn	02 05 05.5	+1.5
KLY	Klyuchi	1.42	319	eP	Pn	02 04 46.9	+0.8
KLY				eS	Sn	02 05 05.5	+1.5
SRKR	Sorokina	1.55	335	PN	Pn	02 04 49.6	+1.8
SRKR	Sorokina	1.55	335	eP	Pn	02 04 49.7	+1.8
KOZ	Kozyrevsk	1.61	301	PN	Pn	02 04 51.0	+2.4
KOZ	Kozyrevsk	1.61	301	eP	Pn	02 04 51.0	+2.4
KII	Karymskiy	2.07	235	PN	Pn	02 04 56.5	+1.6
KII	Karymskiy	2.07	235	i P	Pn	02 04 56.6	+1.6
BKI	Bering	2.09	90	PN	Pn	02 04 54.3	-0.6
BKI				S	Sn	02 05 17.5	-2.4
BKI	Bering	2.09	90	eP	Pn	02 04 54.4	-0.6
BKI				eS	Sn	02 05 17.5	-2.4
ESO	Esso	2.17	290	PN	Pn	02 04 57.7	+1.6
ESO	Esso	2.17	290	eP	Pn	02 04 57.7	+1.6
SPN	Mys Shipunski	2.55	213	PN	Pn	02 05 01.1	-0.2
SPN				S	Sn	02 05 29.5	-1.7
SPN	Mys Shipunski	2.55	213	eP	Pn	02 05 01.2	-0.2
SPN				eS	Sn	02 05 29.5	-1.7
NLC	Nalytchevo	2.73	221	PN	Pn	02 05 04.7	+1.1
NLC				S	Sn	02 05 36.7	+1.3
NLC	Nalytchevo	2.73	221	eP	Pn	02 05 04.8	+1.1
NLC				eS	Sn	02 05 36.8	+1.3
SDLR	Sedlovina	2.83	227	PN	Pn	02 05 07.1	+1.9
SDLR	Sedlovina	2.83	227	eP	Pn	02 05 07.1	+1.9
KRER	Koryakskii	2.87	229	PN	Pn	02 05 07.8	+2.0
KRER	Koryakskii	2.87	229	eP	Pn	02 05 07.8	+2.0
KRX	Arik	2.87	230	PN	Pn	02 05 07.6	+1.8
KRX	Arik	2.87	230	eP	Pn	02 05 07.7	+1.8
AVH	Avacha	2.90	228	PN	Pn	02 05 08.3	+2.2
AVH	Avacha	2.90	228	eP	Pn	02 05 08.3	+2.2
UGLR	Uglovaya	2.91	227	PN	Pn	02 05 08.1	+1.9
UGLR	Uglovaya	2.91	227	eP	Pn	02 05 08.2	+1.9
KOK	Koryaka	2.93	229	PN	Pn	02 05 08.5	+2.0
KOK	Koryaka	2.93	229	eP	Pn	02 05 08.5	+2.0
GNL	Ganaly	3.00	240	PN	Pn	02 05 09.8	+2.3
GNL	Ganaly	3.00	240	eP	Pn	02 05 09.9	+2.3
DALK	Dalny	3.06	225	PN	Pn	02 05 09.7	+1.5
DALK				S	Sn	02 05 44.6	+0.9
DALK	Dalny	3.06	225	eP	Pn	02 05 09.8	+1.5
DALK				eS	Sn	02 05 44.6	+0.9
INSR	Institute	3.10	226	PN	Pn	02 05 10.7	+1.9
INSR	Institute	3.10	226	eP	Pn	02 05 10.7	+1.9
PET	Petropavlovsk	3.11	226		Pn	02 05 10.7	+1.8
PET	Petropavlovsk	3.11	226	cePN	Pn	02 05 10.7	+1.8
PET				pmax	pmax		
	comp=Z,350nm,1.3s						
PET	Petropavlovsk	3.11	226	eP	Pn	02 05 10.8	+1.9
PET				eS	Sn	02 05 46.3	+1.4
KRMR	Karymshinskiy	3.47	227	PN	Pn	02 05 16.7	+2.9
KRMR				S	Sn	02 05 56.1	+2.5
KRMR	Karymshinskiy	3.47	227	eP	Pn	02 05 16.7	+2.9
KRMR				eS	Sn	02 05 56.2	+2.5
PEA0B	Petropavlovsk-	3.47	234		Pn	02 05 16.1	+2.3
PEA0B	Petropavlovsk-	3.47	234	cePN	Pn	02 05 16.3	+2.5
PETK	Petropavlovsk-	3.47	234	P	Pn	02 05 15.2	+1.3
	comp=Z,50nm,0.6s,baz=65,slow=18,SNR=112						
PETK				S	Sn	02 05 54.2	+0.5
	comp=Z,76nm,0.6s,baz=70,slow=22,SNR=6.0						
PETK				LR	LR	02 06 26.7	
	comp=Z,306nm,20.9s,baz=51,slow=36						
PETK	Petropavlovsk-	3.47	234		Pn	02 05 15.3	+1.5
RUS	Russkaya	3.62	220	PN	Pn	02 05 17.0	+1.2
RUS				S	Sn	02 05 58.1	+0.8
RUS	Russkaya	3.62	220	eP	Pn	02 05 17.1	+1.2
RUS				eS	Sn	02 05 58.2	+0.8
GRL	Gorelyy	3.70	225	PN	Pn	02 05 20.1	+3.1
GRL	Gorelyy	3.70	225	eP	Pn	02 05 20.2	+3.1
MTVR	Mutnovka	3.71	223	PN	Pn	02 05 19.2	+2.0
MTVR	Mutnovka	3.71	223	eP	Pn	02 05 19.2	+2.0
APC	Apacha	3.84	235	PN	Pn	02 05 21.6	+2.8
APC	Apacha	3.84	235	eP	Pn	02 05 21.6	+2.8
ASAK	Asacha	3.90	224	PN	Pn	02 05 22.7	+3.0
ASAK	Asacha	3.90	224	eP	Pn	02 05 22.8	+3.0
OSSR	Ossora	4.03	5	PN	Pn	02 05 22.2	+0.9
OSSR	Ossora	4.03	5	eP	Pn	02 05 22.2	+0.9
PALN	Palana	4.05	342	PN	Pn	02 05 24.2	+2.5
PALN	Palana	4.05	342	eP	Pn	02 05 24.3	+2.5
KDTR	Khodutka, Kamc	4.28	218	PN	Pn	02 05 26.1	+1.2
KDTR	Khodutka, Kamc	4.28	218	eP	Pn	02 05 26.1	+1.2
MIPR	Malaya Ipel'ka	4.45	230	PN	Pn	02 05 30.5	+3.2
MIPR	Malaya Ipel'ka	4.45	230	eP	Pn	02 05 30.5	+3.2
PAU	Pauzhetka	5.03	223	PN	Pn	02 05 37.4	+2.3
PAU	Pauzhetka	5.03	223	eP	Pn	02 05 37.4	+2.3
TILK	Tilichiki	5.59	20	PN	Pn	02 05 44.4	+1.7
TILK				S	Sn	02 06 46.2	+0.8
TILK	Tilichiki	5.59	20	eP	Pn	02 05 44.4	+1.7
TILK				eS	Sn	02 06 46.2	+0.8
SKR	Severo-Kuril's	5.92	222	ePN	Pn	02 05 49.3	+2.0
SKR				pmax	pmax		
	comp=Z,72nm,0.3s						
SKR				pmax	pmax		
	comp=Z,1µm,6.6s						
SKR				MLR	MLR		
	comp=Z,2µm,19.0s						
SKR	Severo-Kuril's	5.92	222	eP	Pn	02 05 49.0	+1.8
SKR				eS	Sn	02 06 54.3	+0.6
SHEM	Shemya Is, Ala	7.38	105	P	Pn	02 06 07.2	-0.1
	comp=Z,32nm,0.3s,baz=270,slow=20,SNR=6.3						
SHEM				S	Sn	02 07 24.3	-5.2
	comp=Z,91nm,0.8s,baz=231,slow=18,SNR=2.8						
SHEM				LR	LR	02 09 02.9	
	comp=Z,93nm,18.3s,baz=256,slow=37						
SMY	Shemya	7.38	105	Pn	Pn	02 06 06.4	-0.9
SMY	Shemya	7.38	105	PN	Pn	02 06 07.4	+0.1
YSS	Yuzhno-Sakhali	14.80	244	eP	P	02 07 53.7	+1.7
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YSS				MLR	MLR		
	comp=Z,600nm,16.0s						
YSS				MLR	MLR		
	comp=N,500nm,17.0s						
YSS				MLR	MLR		
	comp=E,500nm,17.0s						
YUK	Yuzh-Kuril'sk	15.44	230	⇑eP	Pn	02 07 58.7	+2.8
GAMB	Gambell	15.59	46	P	Pn	02 08 00.3	+2.7
	baz=250						
P08K	Saint George I	15.77	74	P	Pn	02 08 03.3	+3.3
	baz=277						
JKA	Kamikawa-asahi	16.88	237		Pn	02 08 13.6	-0.4
JKA				IAmb	IAmb	02 08 17.9	
	comp=Z,46nm,0.9s						
ASAJ	Asahikawa	16.88	237	P	Pn	02 08 13.9	-0.2
	comp=Z,28nm,0.7s,baz=40,slow=4.3,SNR=11						
ASAJ				LR	LR	02 13 57.1	
	comp=Z,217nm,21.3s,baz=349,slow=34						
NIKH	Nikolski High	16.99	86	P	Pn	02 08 19.0	+3.7
	baz=290						
M11K	Mekoryuk	17.42	60	P	P	02 08 23.5	+2.7
	baz=267						
TNA	Tin City	17.75	43	P	P	02 08 26.3	+1.7
	baz=249						
UNV	Unalaska Valle	18.06	82	P	P	02 08 31.4	+3.4
	baz=287						
YAK	Yakutsk	18.14	305	eP	P	02 08 29.0	+0.2
YAK				eS	S	02 11 49.9	-2.2
YAK				pmax	pmax		
	comp=Z,21nm,0.9s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				smax	smax		
	comp=N,397nm,3.6s						
YAK				smax	smax		
	comp=E,209nm,3.2s						
ERM	Erimo	18.25	231	P	P	02 08 27.4	-2.7
ERM	Erimo	18.25	231	P	P	02 08 27.4	-2.7
ERM				pmax	pmax		
	comp=Z,46nm,0.6s						
K13K	Kusilvak Mount	18.30	55	P	Pn	02 08 33.4	+2.2
	baz=264						
F14K	Arctic Creek	18.35	44	P	Pn	02 08 33.0	+1.2
	baz=252						
ANM	Nome	18.47	47	P	Pn	02 08 34.7	+1.5
	baz=256						
M13K	Dall Lake	18.83	60	P	Pn	02 08 39.5	+1.9
	baz=270						
J14K	Nanvaranak Lak	18.91	53	P	Pn	02 08 39.5	+1.1
	baz=263						
F15K	North Star Dit	19.09	44	P	Pn	02 08 42.4	+1.8
F15K				IAmb	IAmb	02 08 43.3	
	comp=Z,41nm,1.1s						
F15K	North Star Dit	19.09	44	P	Pn	02 08 41.9	+1.3
	baz=253,SNR=6.8						
G15K	Niukluk	19.13	46	P	Pn	02 08 41.9	+0.7
	baz=256						
L14K	Kuka Creek	19.19	57		Pn	02 08 43.2	+1.4
L14K				IAmb	IAmb	02 08 44.1	
	comp=Z,54nm,1.1s						
L14K	Kuka Creek	19.19	57	P	Pn	02 08 43.2	+1.4
	baz=268						
FALS	False Pass	19.51	77	P	P	02 08 47.4	+3.6
	baz=286						
M14K	Bethel	19.52	59		P	02 08 46.5	+2.6
M14K	Bethel	19.52	59	P	P	02 08 46.8	+2.8
	baz=270,SNR=7.1						
N14K	Kuskokwak Cree	19.67	62	P	P	02 08 48.2	+2.6
N14K	Kuskokwak Cree	19.67	62	P	P	02 08 48.0	+2.4
	baz=273						
C16K	Lisburne Hills	19.77	36		Pn	02 08 48.3	-0.3
C16K				IAmb	IAmb	02 08 49.1	
	comp=Z,29nm,0.8s						
C16K	Lisburne Hills	19.77	36	P	P	02 08 48.0	+1.4
	baz=245						
L15K	Ungalak Mounta	19.77	56	P	P	02 08 49.4	+2.7
	baz=268						
K15K	Wolf Creek Mou	19.79	54		P	02 08 49.5	+2.5
K15K	Wolf Creek Mou	19.79	54	P	P	02 08 49.4	+2.5
	baz=266,SNR=12						
H16K	Elim	19.80	47	P	P	02 08 49.2	+2.3
	baz=259,SNR=12						
G16K	Koyuk River	19.92	45	P	P	02 08 49.8	+1.6
G16K				IAmb	IAmb	02 08 55.2	
	comp=Z,31nm,1.3s						
G16K	Koyuk River	19.92	45	P	P	02 08 50.2	+2.0
	baz=257						
O14K	Tigyukauivet M	19.92	63	P	P	02 08 50.4	+2.1
	baz=275						
S12K	Black Hills	20.05	74	P	P	02 08 53.2	+3.4
	baz=284						
M15K	Kasigluk River	20.15	59	P	P	02 08 53.3	+2.6
	baz=271						
J16K	Anvik River	20.31	52		Pn	02 08 55.5	+0.5
J16K				IAmb	IAmb	02 08 56.0	
	comp=Z,32nm,0.9s						
J16K	Anvik River	20.31	52	P	P	02 08 54.9	+2.5
	baz=264,SNR=8.4						
D17K	Noatak River	20.33	39	P	P	02 08 54.3	+1.7
	baz=250						
I17K	Unalakleet	20.34	50		P	02 08 55.3	+2.6
I17K	Unalakleet	20.34	50	P	P	02 08 55.1	+2.3
	baz=263,SNR=11						
N15K	Kwethluk River	20.46	61		P	02 08 57.1	+3.0
N15K	Kwethluk River	20.46	61	P	P	02 08 57.1	+3.0
	baz=273,SNR=10						
RDOG	Red Dog Mine	20.52	38	P	P	02 08 56.6	+1.9
RDOG				IAmb	IAmb	02 09 01.7	
	comp=Z,20nm,0.8s						
RDOG	Red Dog Mine	20.52	38	P	P	02 08 56.5	+1.9
	baz=249						
C17K	DeLong Mountai	20.58	36	P	P	02 08 57.2	+1.8
	baz=248,SNR=11						
E17K	Hotham Inlet	20.58	41	P	P	02 08 57.4	+2.0
	baz=253,SNR=25						
F17K	Baldwin Pennin	20.62	43	P	P	02 08 58.3	+2.5
F17K				IAmb	IAmb	02 08 59.1	
	comp=Z,33nm,0.8s						
F17K	Baldwin Pennin	20.62	43	P	P	02 08 57.8	+2.1
	baz=255,SNR=8.7						
G17K	Kiwalik Mounta	20.64	45	P	P	02 08 57.9	+1.9
	baz=258						
O15K	Ungalikthiuk R	20.67	64	P	P	02 08 58.4	+2.1
O15K	Ungalikthiuk R	20.67	64	P	P	02 08 59.3	+3.0
	baz=276,SNR=5.6						
L16K	Owhat River	20.73	56	P	P	02 08 59.6	+2.5
	baz=270						
H17K	Granite Mounta	20.84	47	IAmb	IAmb	02 09 01.4	
	comp=Z,32nm,1.1s						
H17K	Granite Mounta	20.84	47	P	P	02 09 00.4	+2.3
	baz=261						
M16K	Timber Creek	20.99	58	IAmb	IAmb	02 09 03.7	
	comp=Z,52nm,1.2s						
M16K	Timber Creek	20.99	58	P	P	02 09 02.5	+2.8
	baz=272						
J17K	VABM Dome	21.00	52	IAmb	IAmb	02 09 03.3	
	comp=Z,28nm,1.0s						
J17K	VABM Dome	21.00	52	P	P	02 09 02.3	+2.4
	baz=266,SNR=5.8						
SDPT	Sand Point	21.01	74	P	P	02 09 02.8	+2.7
	baz=286						
N16K	Nishlik Lake	21.10	60	P	P	02 09 03.8	+2.8
	baz=274						
E18K	Tukpahlearik C	21.14	40		P	02 09 03.3	+2.0
E18K				IAmb	IAmb	02 09 09.8	
	comp=Z,33nm,1.3s						
E18K	Tukpahlearik C	21.14	40	P	P	02 09 02.5	+1.2
	baz=254,SNR=9.4						
F18K	Selawik	21.28	43	P	P	02 09 04.4	+1.5
	baz=257						
S14K	Fog Glacier	21.29	71	P	P	02 09 06.3	+3.2
	baz=284						
L17K	Donlin	21.30	55	P	P	02 09 05.5	+2.4
	baz=270						
K17K	Iditarod	21.31	54	IAmb	IAmb	02 09 06.4	
	comp=Z,41nm,1.1s						
K17K	Iditarod	21.31	54	P	P	02 09 05.3	+2.0
	baz=268						
C18K	Utukok River	21.32	37		P	02 09 04.6	+1.2
C18K	Utukok River	21.32	37	P	P	02 09 04.1	+0.7
	baz=250,SNR=7.0						
B18K	Kokolik River	21.39	35	P	P	02 09 04.8	+0.8
	baz=247						
O16K	Kokwok River B	21.51	62	P	P	02 09 07.8	+2.5
	baz=276						
H18K	Honhosa River	21.52	47	IAmb	IAmb	02 09 13.4	

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      comp=Z,36nm,1.4s
H18K  Honhosa River   21.52  47 P      P      02 09 07.3 +1.9
      baz=262
G18K  Tagagawik       21.53  45 P      P      02 09 07.4 +1.9
      baz=260
HEH   HeiHe           21.56 271 eP     P      02 09 03.1 -2.9
HEH                             pmax   pmax
      comp=Z,19nm,0.7s
M17K  Holitna River   21.71  57 P      P      02 09 09.6 +2.0
M17K                            IAmb   IAmb   02 09 11.8
      comp=Z,32nm,1.1s
M17K  Holitna River   21.71  57 P      P      02 09 09.5 +2.0
      baz=272
TIXI  Tiksi           21.73 332 P      P      02 09 07.9 +0.4
      comp=Z,12nm,0.6s,baz=128,slow=11,SNR=27
TIXI                            S      S      02 12 57.6 -6.4
      comp=Z,3.7nm,0.3s,baz=52,slow=19,SNR=2.3
      comp=Z,12nm,0.6s
TIXI  Tiksi           21.73 332 P      P      02 09 08.4 +0.8
TIXI                            IAmb   IAmb   02 09 10.3
      comp=Z,15nm,0.7s
TIXI  Tiksi           21.73 332⇑eP     P      02 09 08.7 +1.2
TIXI                            pmax   pmax
      comp=Z,13nm,0.9s
A19K  Wainwright      21.96  33 P      P      02 09 11.2 +1.1
      baz=246,SNR=6.4
O17K  Koliganek Bris  21.99  61 P      P      02 09 12.9 +2.4
      baz=276
C19K  Lookout Ridge   22.03  36 IAmb   IAmb   02 09 13.1
      comp=Z,28nm,0.8s
C19K  Lookout Ridge   22.03  36 P      P      02 09 12.2 +1.3
      baz=251,SNR=16
L18K  Granite Mounta  22.05  55 P      P      02 09 13.4 +2.3
      baz=271
F19K  Shaleruckik Mo  22.06  43 P      P      02 09 12.5 +1.3
      baz=258,SNR=13
J18K  Innoko River    22.07  52 IAmb   IAmb   02 09 14.6
      comp=Z,15nm,0.9s
J18K  Innoko River    22.07  52 P      P      02 09 13.2 +1.8
      baz=268,SNR=7.5
GCSA  Galena City Sc  22.09  48 P      P      02 09 13.4 +1.9
      baz=264
G19K  Purcell Mounta  22.20  44 P      P      02 09 14.2 +1.4
      baz=261,SNR=9.3
D19K  Kuna River      22.35  38 IAmb   IAmb   02 09 18.7
      comp=Z,16nm,0.8s
D19K  Kuna River      22.35  38 P      P      02 09 15.0 +0.7
      baz=254
Q16K  King Salmon     22.36  64 P      P      02 09 16.6 +2.2
      baz=279
H19K  Roundabout Mou  22.37  46 IAmb   IAmb   02 09 17.4
      comp=Z,22nm,0.8s
H19K  Roundabout Mou  22.37  46 P      P      02 09 16.3 +1.8
      baz=263
P17K  Kvichak River   22.40  63 P      P      02 09 16.4 +1.6
      baz=278
E19K  Redstone River  22.41  41 IAmb   IAmb   02 09 17.4
      comp=Z,11nm,0.7s
E19K  Redstone River  22.41  41 P      P      02 09 16.0 +1.1
      baz=257
M18K  Stony River     22.48  57 P      P      02 09 17.1 +1.3
      baz=273
N18K  Kilae Creek     22.51  59 P      P      02 09 18.0 +1.9
      baz=275
J19K  Poorman         22.58  50 P      P      02 09 18.2 +1.4
      baz=267
R17L  Mt. Peulik Vol  22.71  67 P      P      02 09 20.5 +2.3
      baz=282
F20K  Avaraart Lake   22.90  42 IAmb   IAmb   02 09 21.9
      comp=Z,25nm,1.4s
F20K  Avaraart Lake   22.90  42 P      P      02 09 20.8 +0.7
      baz=260
L19K  White Mountain  22.91  55 P      P      02 09 21.8 +1.4
      baz=272
O18K  Koktuh Hills    22.93  61 P      P      02 09 21.9 +1.4
      baz=278
D20K  Etivluk River   22.94  38 P      P      02 09 21.1 +0.5
      baz=255
E20K  Nigu River      22.98  39 P      P      02 09 21.5 +0.6
      baz=257
P18K  Big Mountain,   22.98  62 P      P      02 09 22.9 +1.8
      baz=279
H20K  Anotleneega Mo  23.01  46 P      P      02 09 22.1 +0.8
      baz=265,SNR=10
I20K  Naaghedeneel    23.12  48 P      P      02 09 23.3 +1.0
      baz=267
B20K  Meade River     23.14  35 P      P      02 09 22.8 +0.4
      baz=252,SNR=25
N19K  Bonanza Creek   23.18  58 P      P      02 09 24.5 +1.4
      baz=276
Q18K  Katmai Hardscr  23.22  64 P      P      02 09 25.2 +1.8
      baz=281
J20K  Nowinta River   23.23  50 P      P      02 09 24.3 +0.9
      baz=268,SNR=11
K20K  Telida          23.25  52 IAmb   IAmb   02 09 25.2
      comp=Z,15nm,0.8s
K20K  Telida          23.25  52 P      P      02 09 25.0 +1.3
      baz=270
IMAR  Indian Mountai  23.53  45 P      P      02 09 26.7 +0.6
CHIR  Chirikof Islan  23.54  71 P      P      02 09 28.7 +2.4
      baz=287
G21K  Allakaket       23.69  44 P      P      02 09 28.9 +1.4
      baz=264
C21K  Knifeblade Rid  23.69  37 P      P      02 09 28.5 +0.9
      baz=256
M20K  Styx River      23.74  56 IAmb   IAmb   02 09 31.2
      comp=Z,16nm,1.0s
M20K  Styx River      23.74  56 P      P      02 09 29.9 +1.7
      baz=274
A21K  Barrow          23.75  32 P      P      02 09 28.5 +0.4
      baz=249
F21K  Alatna River    23.79  42 IAmb   IAmb   02 09 31.0
      comp=Z,26nm,0.9s
F21K  Alatna River    23.79  42 P      P      02 09 29.8 +1.3
      baz=262,SNR=14
E21K  Killik River    23.82  39 IAmb   IAmb   02 09 31.3
      comp=Z,23nm,1.1s
E21K  Killik River    23.82  39 P      P      02 09 29.9 +1.1
      baz=259
B21K  Ikpikpuk River  23.87  36 P      P      02 09 30.1 +1.0
      baz=256
H21K  Melozitna Rive  23.89  46 P      P      02 09 30.6 +1.2
      baz=266
CHUM  Lake Minchumin  24.04  51 P      P      02 09 32.4 +1.7
      baz=271,SNR=9.0
RED   Redoubt Volcan  24.07  59 P      P      02 09 33.4 +2.3
RED                             IAmb   IAmb   02 09 34.3
      comp=Z,36nm,1.0s
PPLA  Purkeypile      24.12  53        P      02 09 32.6 +0.9
PPLA  Purkeypile      24.12  53 P      P      02 09 33.4 +1.8
      baz=273
A22K  Sinclair Lake   24.15  33 P      P      02 09 32.4 +0.7
      baz=252
O20K  Slope Mountain  24.19  60 P      P      02 09 34.7 +2.5
      baz=279
I21K  Tanana          24.20  47 P      P      02 09 34.0 +1.8
      baz=268
SPCR  Spurr Chakacha  24.24  57 P      P      02 09 34.5 +1.8
      baz=277
SPU   Mount Spurr     24.32  57 P      P      02 09 34.5 +1.1
SPU                             IAmb   IAmb   02 09 37.4
      comp=Z,19nm,1.0s
F22K  John River      24.33  42 P      P      02 09 35.0 +1.6
      baz=263
D22K  Ayikyak River   24.37  38 IAmb   IAmb   02 09 36.8
      comp=Z,22nm,0.9s
D22K  Ayikyak River   24.37  38 P      P      02 09 34.6 +0.9
      baz=259
STLK  Strandline Lak  24.39  56 P      P      02 09 35.8 +1.7
OHAK  Old Harbor      24.42  67 P      P      02 09 35.6 +1.4
      baz=285
B22K  Teshekpuk Lake  24.45  35 P      P      02 09 35.2 +0.8
      baz=255
SKT   Skwentna        24.49  55        P      02 09 36.0 +1.1
SKT                             IAmb   IAmb   02 09 38.8
      comp=Z,27nm,1.2s
SKT   Skwentna        24.49  55 P      P      02 09 36.5 +1.7
      baz=276
H22K  Ishtalitna Cre  24.49  46 IAmb   IAmb   02 09 39.7
      comp=Z,28nm,1.5s
H22K  Ishtalitna Cre  24.49  46 P      P      02 09 35.9 +1.0
      baz=267
G22K  Bettles         24.52  43 P      P      02 09 35.6 +0.5
      baz=265
E22K  Anaktuvuk Pass  24.55  40 P      P      02 09 36.3 +0.9
      baz=262,SNR=16
Q20K  Shuyak Island   24.57  63 P      P      02 09 37.8 +2.3
      baz=282
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BPAW  Bear Paw Mtn.   24.62  50 P      P      02 09 37.3 +1.3
      baz=271
KDAK  Kodiak Island   24.65  65 LR     LR     02 18 41.2
      comp=Z,114nm,19.1s,baz=277,slow=35
KDAK  Kodiak Island   24.65  65 P      P      02 09 38.6 +2.3
      baz=284
MLY   Manley          24.73  48 P      P      02 09 37.7 +0.7
MLY                             IAmb   IAmb   02 09 40.5
      comp=Z,26nm,1.5s
MLY   Manley          24.73  48 P      P      02 09 38.6 +1.6
      baz=270
HOM   Homer           24.74  61 P      P      02 09 39.1 +1.9
      baz=280
SUA   Susitna One     24.91  56 P      P      02 09 40.5 +1.6
      baz=277
MAJO  Matsushiro      24.93 231        P      02 09 40.1 +1.1
MAJO  Matsushiro      24.93 231⇑eP     P      02 09 39.6 +0.5
MAJO                            pmax   pmax
      comp=Z,55nm,1.0s
MJAR  Matsushiro Arr  24.93 231 P      P      02 09 39.6 +0.5
      comp=Z,39nm,0.9s,baz=24,slow=8.4,SNR=54
MJAR                            LR     LR     02 20 54.6
      comp=Z,64nm,20.6s,baz=36,slow=40
      comp=Z,39nm,0.9s
MJAR  Matsushiro Arr  24.93 231        P      02 09 40.3 +1.2
TRF   Thorofare Moun  24.95  52 IAmb   IAmb   02 09 43.7
      comp=Z,14nm,0.8s
TRF   Thorofare Moun  24.95  52 P      P      02 09 40.7 +1.4
      baz=273
COLD  Coldfoot        25.06  43        P      02 09 39.9 -0.1
COLD  Coldfoot        25.06  43 P      P      02 09 41.1 +1.2
      baz=265,SNR=9.3
G23K  Bananza Creek   25.09  44 P      P      02 09 41.5 +1.2
      baz=267
D23K  Nanushuk River  25.10  38 P      P      02 09 41.2 +0.9
      baz=261
BRSE  Bradley Lake S  25.18  60 P      P      02 09 42.7 +1.5
      baz=281
H23K  Yukon River     25.24  46 IAmb   IAmb   02 09 45.7
      comp=Z,24nm,1.1s
H23K  Yukon River     25.24  46 P      P      02 09 42.6 +0.9
      baz=269
C23K  Itkillik River  25.27  36 IAmb   IAmb   02 09 47.1
      comp=Z,25nm,1.0s
C23K  Itkillik River  25.27  36 P      P      02 09 43.0 +1.1
      baz=259
I23K  Minto, Yukon-K  25.31  48 P      P      02 09 43.4 +1.2
      baz=271
E23K  Chandalar       25.36  41 IAmb   IAmb   02 09 44.5
      comp=Z,13nm,0.7s
E23K  Chandalar       25.36  41 P      P      02 09 43.5 +0.7
      baz=264,SNR=12
RC01  Rabbit Creek A  25.45  57 P      P      02 09 45.1 +1.6
      baz=279
TOLK  Toolik Lake Re  25.45  39 P      P      02 09 44.3 +0.7
TOLK                            IAmb   IAmb   02 10 04.7
      comp=Z,15nm,0.9s
TOLK  Toolik Lake Re  25.45  39 P      P      02 09 44.3 +0.7
      baz=263,SNR=9.8
MCK   McKinley        25.54  51 P      P      02 09 45.9 +1.5
      baz=274
D24K  Happy Valley    25.79  38 IAmb   IAmb   02 10 07.2
      comp=Z,12nm,0.9s
D24K  Happy Valley    25.79  38 P      P      02 09 47.5 +0.9
      baz=263
E24K  Your Creek      25.79  41 IAmb   IAmb   02 09 51.0
      comp=Z,11nm,0.7s
E24K  Your Creek      25.79  41 P      P      02 09 47.5 +0.9
      baz=265
WAT1  Susitna Watana  25.79  53 P      P      02 09 47.9 +1.3
      baz=276
WRH   Wood River Hil  25.87  49 IAmb   IAmb   02 09 49.2
      comp=Z,13nm,0.8s
C24K  Franklin Bluff  25.91  37 IAmb   IAmb   02 10 05.7
      comp=Z,21nm,1.1s
C24K  Franklin Bluff  25.91  37 P      P      02 09 48.0 +0.4
      baz=262
H24K  Noodor Dome     25.93  46 P      P      02 09 49.0 +1.1
      baz=270
COLA  College         25.96  48⇓eP     P      02 09 47.0 -1.1
COLA                            pmax   pmax
      comp=Z,5.0nm,1.0s
F24K  Squaw Lake      25.97  42 P      P      02 09 49.1 +0.9
      baz=267,SNR=7.7
CCB   Clear Creek Bu  25.99  49        P      02 09 49.0 +0.6
CCB                             IAmb   IAmb   02 10 09.4
      comp=Z,19nm,1.5s
KNK   Knik Glacier    26.01  56 P      P      02 09 50.1 +1.4
      baz=279
SML   Sawmill         26.01  55 P      P      02 09 50.4 +1.6
      baz=278
JGF   Kuroka          26.09 231 IAmb   IAmb   02 09 52.1
      comp=Z,21nm,0.8s
G24K  Hadweenzic Riv  26.10  44 IAmb   IAmb   02 09 51.5
      comp=Z,17nm,0.7s
G24K  Hadweenzic Riv  26.10  44 P      P      02 09 50.4 +1.0
      baz=269,SNR=14
POKR  Poker Plat Res  26.13  48 P      P      02 09 50.5 +0.9
      baz=272
PWL   Port Wells      26.16  57 P      P      02 09 50.8 +0.8
      baz=280
WAT6  Susitna Watana  26.19  53 P      P      02 09 51.5 +1.0
      baz=277
HILR  Hailar Array B  26.27 275 P      P      02 09 49.4 -1.7
      comp=Z,0.9nm,0.3s,baz=62,slow=10,SNR=3.5
      comp=Z,0.9nm,0.3s
DHY   Denali Highway  26.30  52 P      P      02 09 52.3 +0.9
      baz=277
M23K  Glacier View    26.30  55 P      P      02 09 52.3 +1.0
      baz=279
HDA   Harding Lake    26.37  49 P      P      02 09 52.6 +0.7
      baz=274
ILAR  Eielson Array   26.37  48 P      P      02 09 52.3 +0.4
      comp=Z,3.7nm,0.7s,baz=269,slow=9.5,SNR=40
ILAR                            LR     LR     02 20 28.3
      comp=Z,86nm,20.1s,baz=271,slow=36
      comp=Z,3.7nm,0.7s
INU   Inuyama         26.45 232        P      02 09 53.7 +0.8
INU                             IAmb   IAmb   02 09 56.8
      comp=Z,19nm,0.8s
SCM   Sheep Creek Mo  26.48  55 P      P      02 09 53.8 +0.8
      baz=279
G25K  Bearman Lake    26.65  44 P      P      02 09 55.0 +0.7
      baz=270
D25K  Kavik River     26.67  38 IAmb   IAmb   02 09 55.8
      comp=Z,16nm,0.6s
D25K  Kavik River     26.67  38 P      P      02 09 55.2 +0.6
      baz=265,SNR=20
F25K  Christian Rive  26.84  42 P      P      02 09 56.8 +0.7
      baz=269
E25K  Arctic Village  26.88  41 P      P      02 09 57.4 +0.9
      baz=268
PRP   Porcupine Dome  26.91  47        P      02 09 56.9  0.0
PRP   Porcupine Dome  26.91  47 P      P      02 09 57.8 +0.9
      baz=273,SNR=7.5
K24K  Donnelly Dome   26.93  50 P      P      02 09 57.9 +0.9
      baz=276
M24K  Tolsona, Glenn  26.98  54 P      P      02 09 58.3 +0.9
      baz=279
FYU   Fort Yukon      26.99  44 IAmb   IAmb   02 10 11.3
      comp=Z,28nm,1.4s
J25K  Salcha River,   27.04  49 P      P      02 09 57.9  0.0
      baz=275
KLU   Klutina         27.20  56 P      P      02 10 00.6 +1.2
      baz=281
C26K  Camden Bay      27.24  37 P      P      02 10 00.1 +0.6
      baz=265
RIDG  Independent Ri  27.35  50 P      P      02 10 01.9 +1.2
      baz=277
HARP  HAARP           27.40  53 P      P      02 10 02.0 +0.9
      baz=280
F26K  Sheenjek River  27.41  42 P      P      02 10 01.8 +0.6
      baz=270
G26K  Porcupine Rive  27.56  43 P      P      02 10 03.1 +0.6
      baz=272
C27K  Jago River      27.63  38 P      P      02 10 03.5 +0.3
      baz=267,SNR=5.7
SCRK  Sand Creek      27.70  50 IAmb   IAmb   02 10 05.5
      comp=Z,13nm,1.4s
SCRK  Sand Creek      27.70  50 P      P      02 10 04.7 +0.8
      baz=278
J26L  Joseph Creek    27.82  49 P      P      02 10 05.9 +0.9
      baz=277
I26K  Coal Creek Min  27.91  47 P      P      02 10 06.8 +1.1
      baz=276
BMRM  Bremner River   27.93  56 P      P      02 10 07.0 +1.1
      baz=283
L26K  Log Cabin Wild  28.12  52 P      P      02 10 08.7 +1.1
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      baz=280
KAIM  Kayak Island    28.26  58 P      P      02 10 10.5 +1.8
      baz=285
E27K  Coleen River    28.37  41 P      P      02 10 10.2 +0.5
      baz=272
M26K  Nabesna, AK     28.39  53 P      P      02 10 11.5 +1.4
      baz=281
G27K  Doyon Strip     28.41  44 P      P      02 10 10.9 +0.8
      baz=274
H27K  Steamboat Moun  28.50  45 IAmb   IAmb   02 10 30.6
      comp=Z,15nm,1.5s
H27K  Steamboat Moun  28.50  45 P      P      02 10 11.9 +1.0
      baz=275,SNR=5.6
I27K  Kandik River    28.52  46 P      P      02 10 12.3 +1.2
      baz=276
K27K  Chicken         28.53  50 P      P      02 10 12.1 +1.0
      baz=279
D27M  Malcolm River   28.59  39 P      P      02 10 12.3 +0.6
      baz=270
CRQE  Cirque          28.70  56 P      P      02 10 13.9 +1.1
      baz=284
L27K  Beaver Creek,   28.80  51 IAmb   IAmb   02 10 34.0
      comp=Z,13nm,1.2s
L27K  Beaver Creek,   28.80  51 P      P      02 10 14.6 +1.0
      baz=281
M27K  Edge Creek, AK  28.91  53 IAmb   IAmb   02 10 41.1
      comp=Z,9.5nm,1.0s
M27K  Edge Creek, AK  28.91  53 P      P      02 10 16.1 +1.4
      baz=282
F28M  Old Crow        29.05  42 P      P      02 10 16.7 +1.0
      baz=274
E28M  Babbage River   29.12  40 P      P      02 10 17.1 +0.8
      baz=273
I28M  Miner Creek     29.24  46 P      P      02 10 18.5 +1.0
      baz=278
KSRS  Korea Array     29.26 247 P      P      02 10 17.6 -0.3
      comp=Z,2.0nm,0.9s,baz=52,slow=10,SNR=4.1
      comp=Z,2.0nm,0.9s
BVCY  Beaver Creek    29.36  53 P      P      02 10 19.9 +1.3
      baz=283
D28M  Stokes Point    29.38  38 P      P      02 10 19.4 +0.8
      baz=272
CTG   Chitna Glacier  29.48  56 P      P      02 10 21.3 +1.5
      baz=285
DAWY  Dawson          29.69  49 P      P      02 10 22.6 +1.2
      baz=281
YUK3  Moose Creek     29.69  54 P      P      02 10 22.5 +0.8
      baz=284
E29M  Blow River      29.73  40 P      P      02 10 22.8 +1.0
      baz=275
H29M  Whitestone      29.77  45 P      P      02 10 23.0 +0.8
      baz=278
G29M  Pine Creek      29.83  43 IAmb   IAmb   02 10 25.2
      comp=Z,8.0nm,0.8s
G29M  Pine Creek      29.83  43 P      P      02 10 23.7 +1.1
      baz=277
O28M  Mount Upton     30.07  56 P      P      02 10 26.0 +0.9
      baz=286
J29N  Klondike Camp   30.12  48 P      P      02 10 26.3 +1.0
      baz=281
YUK8  Steele Glacier  30.13  55 P      P      02 10 26.6 +0.9
      baz=285
PINM  Pinnacle        30.23  57 P      P      02 10 27.6 +1.3
      baz=287
EPYK  Eagle Plains    30.41  44 P      P      02 10 28.6 +0.8
      baz=279
L29M  L29M            30.44  51 IAmb   IAmb   02 10 30.7
      comp=Z,6.8nm,0.7s
L29M  L29M            30.44  51 P      P      02 10 29.3 +1.2
      baz=283,SNR=6.5
M29M  Somme Creek     30.44  52 P      P      02 10 29.3 +1.1
      baz=284
G30M  tAoh Zraii Nji  30.52  43 P      P      02 10 29.3 +0.5
      baz=278
K29M  Barlow Dome     30.54  49 P      P      02 10 30.0 +0.9
      baz=283
F30M  Barrier River   30.60  42 P      P      02 10 30.5 +1.0
      baz=278
YUK4  Talbot Arm      30.64  54 P      P      02 10 31.9 +1.8
      baz=286
I30M  Mount Dempster  30.75  46 P      P      02 10 32.1 +1.2
      baz=281,SNR=5.7
YUK6  Outpost Mounta  30.88  55 P      P      02 10 33.9 +1.6
      baz=287
J30M  Hart River      30.90  48 P      P      02 10 33.1 +0.9
      baz=282
O29M  Mount Kennedy   30.97  56 P      P      02 10 34.2 +1.3
      baz=288
JNU   Nakatsue        31.16 238 P      P      02 10 34.8  0.0
      comp=Z,4.3nm,0.5s,baz=53,slow=12,SNR=2.7
JNU                             LR     LR     02 23 07.2
      comp=Z,99nm,18.1s,baz=42,slow=36
      comp=Z,4.3nm,0.5s
M30M  Minto, Yukon    31.16  51 P      P      02 10 35.5 +1.0
      baz=285
G31M  Satah River     31.29  43 P      P      02 10 36.1 +0.7
      baz=280
HYT   Haines Junctio  31.32  55 P      P      02 10 37.9 +1.9
      baz=288
N30M  Aishikik Lake   31.33  54 P      P      02 10 37.1 +1.1
      baz=287
INK   Inuvik          31.36  40 LR     LR     02 24 16.2
      comp=Z,78nm,19.8s,baz=312,slow=38
INK   Inuvik          31.36  40 IAmb   IAmb   02 10 37.6
      comp=Z,5.8nm,0.8s
INK   Inuvik          31.36  40 P      P      02 10 37.0 +0.9
      baz=278,SNR=6.0
F31M  Tsiigehtchic    31.41  42 IAmb   IAmb   02 10 38.1
      comp=Z,6.6nm,0.9s
F31M  Tsiigehtchic    31.41  42 P      P      02 10 37.3 +0.8
      baz=280
H31M  Peel River      31.47  45 P      P      02 10 38.5 +1.4
      baz=282
P29M  Windy Craggy    31.58  57 P      P      02 10 40.2 +2.1
      baz=289
P30M  Million Dollar  31.79  56 P      P      02 10 42.0 +2.0
      baz=289
N31M  Braeburn, Yuko  31.92  53 P      P      02 10 42.7 +1.5
      baz=288
O30N  Mendenhall      32.00  55 P      P      02 10 43.4 +1.6
      baz=288
PLBC  Pleasant Camp   32.30  57 P      P      02 10 46.1 +1.7
      baz=290
M31M  Drury Creek, Y  32.34  52 P      P      02 10 46.3 +1.5
      baz=287
WHY   Whitehorse      32.59  54 P      P      02 10 48.8 +1.6
      baz=289
SKAG  Skagway         32.79  57 P      P      02 10 50.2 +1.5
      baz=291
FARO  Faro, Yukon     32.80  51 P      P      02 10 50.1 +1.3
      baz=288
S31K  Pelican         32.90  60 P      P      02 10 51.1 +1.5
      baz=292
A36M  Sachs Harbour   33.59  32 P      P      02 10 56.0 +0.5
      baz=280,SNR=15
R32K  Eaglecrest      33.62  58 P      P      02 10 57.7 +1.7
      baz=293
P33M  Teslin, Yukon   33.71  55 P      P      02 10 58.2 +1.4
      baz=291
ULN   Ulaanbaatar     34.34 281⇓eP     P      02 11 02.6 +0.1
ULN                             pmax   pmax
      comp=Z,4.0nm,1.3s
Q32M  Nakina River    34.44  56 P      P      02 11 04.2 +1.0
      baz=293
C36M  Paulatuk        34.52  37 P      P      02 11 04.3 +0.8
      baz=285,SNR=21
SONM  Songino Array   34.72 282 P      P      02 11 04.0 -1.8
      comp=Z,0.9nm,0.6s,baz=61,slow=7.9,SNR=6.8
SONM                            PcP    PcP    02 13 38.2 +0.2
      comp=Z,1.9nm,0.7s,baz=82,slow=1.6,SNR=11
SONM                            LR     LR     02 25 47.4
      comp=Z,76nm,18.3s,baz=80,slow=37
      comp=Z,0.9nm,0.6s
SONM  Songino Array   34.72 282 IAmb   IAmb   02 11 09.9
      comp=Z,2.4nm,1.2s
R33M  Jennings River  34.88  55 P      P      02 11 08.6 +1.6
      baz=294
S34M  Telegraph Cree  35.41  58 P      P      02 11 13.1 +1.7
      baz=295
WRAK  Wrangell Islan  35.46  60 P      P      02 11 13.7 +1.9
      baz=297
CRAG  Craig           35.50  62 P      P      02 11 14.2 +2.0
      baz=297
WTLY  Watson Lake, Y  35.61  53 P      P      02 11 14.8 +1.7
      baz=294
H11N2 WAKE ISLAND Hy  35.63 173 T      T      02 48 39.3
      baz=354,slow=76
H11N3 WAKE ISLAND Hy  35.65 173 T      T      02 48 40.4
      baz=354,slow=76
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H11N1	**WAKE ISLAND Hy**	**35.65**	**173**	T	T	02 48 40.6	
	baz=354,slow=76						
DLBC	**Dease Lake**	**35.72**	**56**	P	**P**	**02 11 16.1**	**+1.9**
	comp=Z,3.8nm,0.9s,baz=286,slow=16,SNR=7.2						
DLBC				pP	**pwP**	**02 11 32.4**	**-2.3**
	comp=Z,2.5nm,1.0s,baz=264,slow=13,SNR=3.1						
DLBC				LR	LR	02 25 36.8	
	comp=Z,79nm,18.9s,baz=280,slow=36						
	comp=Z,3.8nm,0.9s						
DLBC	**Dease Lake**	**35.72**	**56**	P	**P**	**02 11 16.1**	**+1.9**
	baz=295						
HHC	**Hu-ho-hao-te**	**36.01**	**268**	*e*P	**P**	**02 11 16.2**	**-0.7**
HHC				pmax	pmax		
	comp=Z,15nm,0.6s						
HHC				pmax	pmax		
	comp=Z,200nm,5.2s						
T35M	**Bob Quinn**	**36.25**	**59**	P	**P**	**02 11 20.8**	**+2.2**
	baz=297						
V35K	**Ketchikan**	**36.33**	**62**	P	**P**	**02 11 21.6**	**+2.4**
	baz=298						
WRGLY	**Wrigley**	**36.72**	**47**	P	**P**	**02 11 24.2**	**+1.7**
	baz=293						
H11S1	**WAKE ISLAND Hy**	**36.83**	**173**	T	T	02 50 11.8	
	baz=352						
H11S3	**WAKE ISLAND Hy**	**36.84**	**173**	T	T	02 50 13.3	
	baz=352						
H11S2	**WAKE ISLAND Hy**	**36.85**	**173**	T	T	02 50 12.7	
	baz=352						
LIRD	**Liard River Hi**	**37.14**	**53**	P	**P**	**02 11 28.2**	**+2.1**
	baz=296						
KOTAN	**Kotaneelee Air**	**37.76**	**52**	P	**P**	**02 11 33.5**	**+2.2**
	baz=296						
TOAD	**Toad River Com**	**37.79**	**54**	P	**P**	**02 11 34.1**	**+2.4**
	baz=297,SNR=13						
NJ2	**Nanjing**	**38.21**	**251**	*e*P	**P**	**02 11 34.5**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,16nm,0.6s						
BBB	**Bella Bella**	**39.72**	**65**	LR	LR	02 26 49.6	
	comp=Z,52nm,19.0s,baz=282,slow=34						
YKAW3	**Yellowknife Wh**	**40.65**	**45**		**P**	**02 11 56.8**	**+1.4**
YKAW3				IAmb	IAmb	02 11 57.5	
	comp=Z,8.4nm,0.7s						
YKA	**Yellowknife Ar**	**40.69**	**45**	P	**P**	**02 11 56.9**	**+1.2**
	comp=Z,5.3nm,0.7s,baz=300,slow=8.7,SNR=62						
YKA				pP	**pP**	**02 12 14.2**	**+3.2**
	comp=Z,1.5nm,0.7s,baz=300,slow=8.8,SNR=5.8						
YKA				LR	LR	02 31 00.5	
	comp=Z,40nm,18.6s,baz=358,slow=39						
	comp=Z,5.3nm,0.7s						
YKA	**Yellowknife Ar**	**40.69**	**45**		**P**	**02 11 57.0**	**+1.3**
YKA	**Yellowknife Ar**	**40.69**	**45**	*ce*P	**P**	**02 11 56.9**	**+1.2**
YKA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
YKAW1	**Yellowknife Wh**	**40.74**	**45**		**P**	**02 11 57.5**	**+1.3**
YKAW1				IAmb	IAmb	02 11 58.3	
	comp=Z,6.2nm,0.7s						
RES	**Resolute Bay**	**40.82**	**23**	LR	LR	02 30 09.3	
	comp=Z,25nm,19.8s,baz=12,slow=38						
GTA	**Gaotai**	**43.69**	**276**	*e*P	**P**	**02 12 20.0**	**-0.5**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DGZ	**Jazzator, Alta**	**43.91**	**295**	⇑*e*P	**P**	**02 12 19.0**	**-3.3**
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SPITS	**Spitsbergen Ar**	**45.22**	**351**	P	**P**	**02 12 31.6**	**-0.5**
	comp=Z,19nm,1.1s,baz=17,slow=10,SNR=2.6						
	comp=Z,19nm,1.1s						
EDM	**Edmonton**	**46.43**	**56**	IAmb	IAmb	02 13 04.1	
	comp=Z,13nm,1.1s						
KURK	**Kurchatov**	**47.72**	**301**		**P**	**02 12 49.9**	**-2.1**
KURK				IAmb	IAmb	02 12 52.3	
	comp=Z,6.8nm,0.7s						
KURK	**Kurchatov**	**47.72**	**301**	*ce*P	**P**	**02 12 50.0**	**-2.0**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KURBB	**Kurchatov Arra**	**47.82**	**301**	P	**P**	**02 12 51.0**	**-1.7**
	comp=Z,4.5nm,0.6s,baz=55,slow=7.8,SNR=47						
KURBB				PcP	**PcP**	**02 14 19.1**	**-1.5**
	comp=Z,0.8nm,0.8s,baz=39,slow=2.8,SNR=4.1						
KURBB				ScP	**ScP**	**02 18 08.1**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=62,slow=3.3,SNR=4.2						
	comp=Z,4.5nm,0.6s						
MK31	**Makanchi Array**	**48.41**	**295**	*d i*P	**P**	**02 12 55.8**	**-1.6**
MKAR	**Makanchi Array**	**48.41**	**295**	P	**P**	**02 12 55.5**	**-1.9**
	comp=Z,1.2nm,0.5s,baz=56,slow=8.0,SNR=18						
MKAR				LR	LR	02 34 30.3	
	comp=Z,39nm,18.0s,baz=36,slow=38						
	comp=Z,1.2nm,0.5s						
MKAR	**Makanchi Array**	**48.41**	**295**	P	**P**	**02 12 55.8**	**-1.7**
MKAR	**Makanchi Array**	**48.41**	**295**	*i* P	**P**	**02 12 56.0**	**-1.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MAKZ	**Makanchi**	**48.57**	**295**		**P**	**02 12 57.3**	**-1.3**
MAKZ	**Makanchi**	**48.57**	**295**	P	**P**	**02 12 57.3**	**-1.3**
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GOMU	**GeErMu**	**48.76**	**276**	P	**P**	**02 12 59.2**	**-1.5**
GOMU				pP	pP	02 13 18.8	+1.2
GOMU				S	**S**	**02 19 54.6**	**-4.2**
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BVAR	**Borovoye Array**	**50.08**	**308**	P	**P**	**02 13 08.6**	**-1.5**
	comp=Z,1.3nm,0.4s,baz=63,slow=7.3,SNR=9.0						
BVAR				PcP	**PcP**	**02 14 27.5**	**-1.2**
	comp=Z,0.7nm,0.4s,baz=61,slow=2.3,SNR=4.8						
	comp=Z,1.3nm,0.4s						
BORK	**Borovoye**	**50.10**	**308**		**P**	**02 13 09.1**	**-1.1**
BORK	**Borovoye**	**50.10**	**308**	⇓*e*P	**P**	**02 13 08.8**	**-1.4**
BORK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PLID	**Pearl Lake**	**50.40**	**65**	IAmb	IAmb	02 13 15.1	
	comp=Z,3.3nm,0.9s						
FCC	**Fort Churchill**	**50.97**	**41**	IAmb	IAmb	02 13 44.3	
	comp=Z,6.8nm,1.2s						
ARCES	**ARCESS Array B**	**51.63**	**342**	P	**P**	**02 13 20.7**	**-0.8**
	comp=Z,5.4nm,1.1s,baz=16,slow=9.3,SNR=1.6						
	comp=Z,5.4nm,1.1s						
PZH	**PanZhiHua**	**51.99**	**262**	P	**P**	**02 13 25.1**	**+0.3**
ARTI	**Arti**	**52.80**	**317**	*c i*P	**P**	**02 13 28.9**	**-1.3**
ARTI				*PP	**pP**	**02 13 47.7**	**+0.5**
ARTI						02 14 37.9	
ARTI						02 15 32.1	
ARTI				S	**S**	**02 20 54.2**	**+0.9**
ARTI				SS	**SS**	**02 24 27.4**	**-4.5**
ARTI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
YHL	**Hebgen Lake**	**53.04**	**63**	IAmb	IAmb	02 13 35.7	
	comp=Z,3.4nm,0.9s						
YHB	**Horse Butte**	**53.10**	**63**	IAmb	IAmb	02 13 35.6	
	comp=Z,5.1nm,0.7s						
YNE	**Yellowstone No**	**53.53**	**62**	IAmb	IAmb	02 13 38.6	
	comp=Z,5.1nm,0.8s						
H17A	**Grant Village**	**53.67**	**63**	IAmb	IAmb	02 13 41.3	
	comp=Z,9.4nm,1.1s						
NVAR	**Mina Array Bea**	**53.81**	**73**	P	**P**	**02 13 40.5**	**+2.2**
	comp=Z,3.3nm,0.7s,baz=295,slow=6.6,SNR=22						
NVAR				pP	**pwP**	**02 13 57.5**	**-2.2**
	comp=Z,0.9nm,0.7s,baz=294,slow=7.3,SNR=2.6						
	comp=Z,3.3nm,0.7s						
ELK	**Elko**	**53.82**	**69**	LR	LR	02 34 59.6	
	comp=Z,33nm,18.9s,baz=315,slow=34						
ELK	**Elko**	**53.82**	**69**	IAmb	IAmb	02 13 41.4	
	comp=Z,4.7nm,1.1s						
WUS	**Wushi**	**53.86**	**292**	IAmb	IAmb	02 13 39.9	
	comp=Z,5.3nm,1.1s						
FXWY	**Fox Creek**	**53.97**	**64**	IAmb	IAmb	02 13 42.3	
	comp=Z,4.4nm,0.8s						
LOHW	**Long Hollow**	**54.21**	**63**	IAmb	IAmb	02 13 44.1	
	comp=Z,4.2nm,0.8s						
KIRV	**Kirov**	**54.43**	**324**	⇑*e*P	**P**	**02 13 41.6**	**-0.5**
FRB	**Frobisher Bay**	**54.99**	**25**	LR	LR	02 38 52.4	
	comp=Z,29nm,20.9s,baz=346,slow=38						
HWUT	**Hardware Ranch**	**55.14**	**66**	IAmb	IAmb	02 13 51.0	
	comp=Z,5.9nm,0.9s						
AAK	**Ala-Archa**	**55.30**	**296**	P	**P**	**02 13 48.0**	**-0.8**
AAK				IAmb	IAmb	02 13 49.9	
	comp=Z,3.3nm,0.8s						
AAK	**Ala-Archa**	**55.30**	**296**	*ce*P	**P**	**02 13 49.1**	**+0.2**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BW06	**Boulder Array**	**55.35**	**63**	IAmb	IAmb	02 13 52.0	
	comp=Z,6.0nm,0.9s						
PD31	**Pinedale Array**	**55.35**	**63**	IAmb	IAmb	02 13 52.0	
	comp=Z,5.7nm,0.9s						
PDAR	**Pinedale Array**	**55.35**	**63**	P	**P**	**02 13 50.9**	**+1.6**
	comp=Z,3.2nm,0.7s,baz=333,slow=2.6,SNR=32						
PDAR				pP	**sP**	**02 14 09.5**	**-2.6**
	comp=Z,1.0nm,0.8s,baz=357,slow=3.3,SNR=3.1						
	comp=Z,3.2nm,0.7s						
PDAR	**Pinedale Array**	**55.35**	**63**	P	**P**	**02 13 51.1**	**+1.8**
R11B	**Troy Canyon, C**	**55.35**	**71**	IAmb	IAmb	02 14 12.6	
	comp=Z,5.8nm,1.4s						
DUG	**Dugway, Tooele**	**55.50**	**68**	IAmb	IAmb	02 13 53.5	
	comp=Z,8.2nm,0.9s						
SFJD	**Kangerlussuaq**	**55.59**	**15**	LR	LR	02 41 08.7	
	comp=Z,20nm,19.1s,baz=6.0,slow=40						
CTU	**Camp Tracy**	**55.70**	**67**	IAmb	IAmb	02 13 54.6	
	comp=Z,5.9nm,0.9s						
KLMR	**Klimovskoe**	**55.73**	**330**	*e*P	**P**	**02 13 49.6**	**-1.9**
KLMR				pmax	pmax		
	comp=Z,19nm,1.6s						
TPNV	**Topopah Spring**	**56.00**	**73**	IAmb	IAmb	02 13 57.3	
	comp=Z,4.5nm,1.0s						
PSUT	**Pine Spring**	**56.15**	**70**	IAmb	IAmb	02 13 57.6	
	comp=Z,4.1nm,1.2s						
MPU	**Maple Canyon**	**56.25**	**67**	IAmb	IAmb	02 13 59.0	
	comp=Z,7.2nm,0.9s						
LRMC	**Laurel Mtn Rad**	**56.29**	**75**	IAmb	IAmb	02 13 58.7	
	comp=Z,3.4nm,0.9s						
WSHM	**Spangler Hills**	**56.31**	**75**	IAmb	IAmb	02 13 59.4	
	comp=Z,4.6nm,1.0s						
PRN	**Pahroc Range**	**56.32**	**72**	IAmb	IAmb	02 13 60.0	
	comp=Z,4.9nm,1.0s						
GWY	**Greenwater Val**	**56.33**	**74**	IAmb	IAmb	02 13 59.3	
	comp=Z,4.7nm,0.9s						
BSUT	**Blindstream Ca**	**56.33**	**66**	IAmb	IAmb	02 13 59.9	
	comp=Z,6.6nm,0.8s						
ULM	**Lac du Bonnet**	**56.39**	**49**	P	**P**	**02 13 57.1**	**+0.7**
	comp=Z,4.3nm,0.5s,baz=316,slow=7.0,SNR=5.6						
ULM				LR	LR	02 39 38.7	
	comp=Z,22nm,19.0s,baz=8.0,slow=38						
	comp=Z,4.3nm,0.5s						
KSH	**Kashi**	**56.79**	**293**	P	**P**	**02 14 02.1**	**+2.6**
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GSC	**Goldstone, Bar**	**56.90**	**75**	IAmb	IAmb	02 14 03.8	
	comp=Z,4.9nm,0.9s						
KK31	**Karatay Array**	**56.98**	**299**	IAmb	IAmb	02 14 26.3	
	comp=Z,3.4nm,1.1s						
KKAR	**Karatay Array**	**56.98**	**299**	P	**P**	**02 13 59.3**	**-1.4**
KKAR	**Karatay Array**	**56.98**	**299**	P	**P**	**02 13 59.3**	**-1.4**
TMUT	**Trail Mountain**	**57.00**	**67**	IAmb	IAmb	02 14 04.4	
	comp=Z,4.4nm,0.9s						
CCUT	**Cedar City**	**57.13**	**70**	IAmb	IAmb	02 14 05.2	
	comp=Z,4.9nm,1.2s						
RSSD	**Black Hills**	**57.13**	**59**	P	**P**	**02 14 03.6**	**+1.6**
RSSD	**Black Hills**	**57.13**	**59**	P	**P**	**02 14 03.6**	**+1.6**
RSSD				pmax	pmax		
	comp=Z,11nm,0.9s						
P18A	**Preston Nutter**	**57.27**	**67**	IAmb	IAmb	02 14 28.5	
	comp=Z,4.1nm,1.0s						
AB31	**Akbulak array**	**57.39**	**311**	P	**P**	**02 14 02.8**	**-0.6**
AB31				IAmb	IAmb	02 14 04.6	
	comp=Z,2.5nm,0.5s						
ABKAR	**Akbulak array**	**57.39**	**311**	P	**P**	**02 14 02.8**	**-0.6**
LCMT	**Little Creek M**	**57.59**	**71**	IAmb	IAmb	02 14 08.4	
	comp=Z,4.5nm,1.2s						
HAYD	**Hayden**	**58.16**	**64**	IAmb	IAmb	02 14 15.2	
	comp=Z,2.8nm,0.8s						
PFO	**Pinyon Flats O**	**58.35**	**76**	LR	LR	02 36 31.1	
	comp=Z,30nm,20.3s,baz=301,slow=33						
FINES	**FINESS Array B**	**58.65**	**337**	P	**P**	**02 14 11.5**	**-0.5**
	comp=Z,3.6nm,0.5s,baz=37,slow=8.2,SNR=49						
FINES				pP	**pP**	**02 14 28.0**	**-1.1**
	comp=Z,3.3nm,0.7s,baz=355,slow=6.3,SNR=3.7						
	comp=Z,3.6nm,0.5s						
FINES	**FINESS Array B**	**58.65**	**337**	*i* P	**P**	**02 14 11.8**	**-0.2**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.5s						
IRM	**Iron Mountain**	**58.67**	**74**	IAmb	IAmb	02 14 16.4	
	comp=Z,7.6nm,1.4s						
PV16	**Nyswonger Mesa**	**58.94**	**67**	IAmb	IAmb	02 14 17.1	
	comp=Z,4.6nm,0.9s						
PV03	**Paradox Valley**	**59.02**	**67**	IAmb	IAmb	02 14 18.0	
	comp=Z,3.0nm,0.8s						
EVN	**Everest**	**59.40**	**276**	P	**P**	**02 14 15.6**	**-2.9**
EVN				IAmb	IAmb	02 14 18.6	
	comp=Z,4.4nm,1.0s						
WUAZ	**Wupatki**	**59.71**	**71**	IAmb	IAmb	02 14 23.3	
	comp=Z,9.7nm,1.4s						
CMAR	**Chiang Mai Arr**	**59.91**	**259**	P	**P**	**02 14 21.1**	**-0.2**
	comp=Z,3.0nm,0.5s,baz=24,slow=7.0,SNR=10						
CMAR				LR	LR	02 43 07.5	
	comp=Z,35nm,20.6s,baz=55,slow=39						
	comp=Z,3.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**59.91**	**259**	*ce*P	**P**	**02 14 21.3**	**0.0**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
GAR	**Garm**	**60.12**	**296**	P	**P**	**02 14 21.6**	**-1.0**
GAR				IAmb	IAmb	02 14 23.3	
	comp=Z,4.9nm,0.7s						
BRDH	**Bariadhala**	**60.71**	**268**	LR	LR	02 42 12.2	
	comp=Z,42nm,18.2s,baz=166,slow=38						
CHGR	**Chuyangaron**	**60.97**	**297**	P	**P**	**02 14 27.5**	**-0.9**
CHGR	**Chuyangaron**	**60.97**	**297**	P	**P**	**02 14 27.5**	**-0.9**
CHGR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SDCO	**Great Sand Dun**	**61.14**	**65**	P	**P**	**02 14 32.0**	**+2.1**
OBN	**Obninsk**	**61.39**	**328**	⇑*e*P	**P**	**02 14 30.9**	**+0.1**
OBN				*SP	**sP**	**02 14 53.0**	**-2.5**
OBN				*e**SS	**sS**	**02 23 15.7**	**-0.1**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,54nm,15.0s						
NB2	**NORSAR Subarra**	**61.82**	**345**	P	**P**	**02 14 34.0**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=20,slow=6.9						
NOA	**NORSAR Array B**	**61.82**	**345**	P	**P**	**02 14 34.1**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=19,slow=6.1,SNR=1.6						
NOA				pP	**pP**	**02 14 51.3**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=18,slow=6.7,SNR=3.6						
	comp=Z,0.3nm,0.6s						
HFS	**Hagfors**	**62.28**	**343**	P	**P**	**02 14 36.6**	**-0.2**
	comp=Z,2.2nm,0.7s,baz=90,slow=1.5,SNR=5.3						
	comp=Z,2.2nm,0.7s						
TASM	**ASL Pad, Albuq**	**62.77**	**67**	IAmb	IAmb	02 14 43.4	
	comp=Z,1.7nm,0.9s						
TASM	**ASL Pad, Albuq**	**62.77**	**67**	IAmb	IAmb	02 14 43.4	
	comp=Z,1.8nm,0.9s						
TASM	**ASL Pad, Albuq**	**62.77**	**67**	IAmb	IAmb	02 14 43.0	
	comp=Z,1.6nm,0.7s						
ANMO	**Albuquerque**	**62.77**	**67**	P	**P**	**02 14 42.6**	**+1.9**
ANMO	**Albuquerque**	**62.77**	**67**	⇑*e*P	P	02 14 38.1	-2.6
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SCHQ	**Schefferville**	**63.12**	**29**	LR	LR	02 44 05.1	
	comp=Z,19nm,20.3s,baz=75,slow=38						
PMG	**Port Moresby**	**65.66**	**196**	LR	LR	02 46 01.2	
	comp=Z,6.0nm,18.8s,baz=328,slow=38						
MNTX	**Cornudas Mount**	**65.84**	**69**	IAmb	IAmb	02 15 25.8	
	comp=Z,6.8nm,1.2s						
AKASG	**Malin Array Be**	**67.42**	**330**	P	**P**	**02 15 09.6**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=30,slow=6.7,SNR=5.3						
	comp=Z,0.7nm,0.3s						
AKASG	**Malin Array Be**	**67.42**	**330**	*ce*P	**P**	**02 15 10.3**	**0.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TXAR	**Lajitas Array**	**68.61**	**69**	P	**P**	**02 15 19.7**	**+1.4**
	comp=Z,1.7nm,0.6s,baz=295,slow=4.7,SNR=19						
TXAR				pP	**pwP**	**02 15 39.4**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=295,slow=4.1,SNR=3.6						
	comp=Z,1.7nm,0.6s						
KIV	**Kislovodsk**	**68.74**	**318**	*e*P	**P**	**02 15 18.1**	**-0.7**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KBZ	**Khabaz**	**68.85**	**317**	P	**P**	**02 15 19.2**	**-0.2**
	comp=Z,3.3nm,0.9s,baz=103,slow=1.0,SNR=7.3						
	comp=Z,3.3nm,0.9s						
KBZ	**Khabaz**	**68.85**	**317**	⇓*e*P	**P**	**02 15 20.2**	**+0.9**
EKA	**Eskdalemuir Ar**	**69.14**	**351**	P	**P**	**02 15 18.9**	**-2.1**
	comp=Z,4.3nm,1.1s,baz=50,slow=13,SNR=3.4						
	comp=Z,4.3nm,1.1s						
STHS	**Stebnicka Huta**	**70.73**	**334**	*e*P	**P**	**02 15 31.3**	**+0.4**
STHS	**Stebnicka Huta**	**70.73**	**334**	*e*P	**P**	**02 15 31.3**	**+0.4**
BUR08	**Bucovina Ar. S**	**71.32**	**331**	P	**P**	**02 15 34.0**	**-0.5**
BURAR	**Bucovina Array**	**71.34**	**331**	P	**P**	**02 15 34.6**	**-0.1**
LANS	**Liptovska Anna**	**71.41**	**335**	*e*P	**P**	**02 15 36.5**	**+1.5**
LANS	**Liptovska Anna**	**71.41**	**335**	*e*P	**P**	**02 15 36.5**	**+1.5**
PSI	**Prapat**	**72.80**	**249**	LR	LR	02 52 43.6	
	comp=Z,30nm,18.7s,baz=36,slow=40						
GERES	**GERESS Array B**	**72.99**	**339**	P	**P**	**02 15 44.3**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=332,slow=8.2,SNR=1.8						
	comp=Z,0.6nm,0.7s						
TKL	**Tuckaleechee C**	**73.32**	**51**	LR	LR	02 49 15.5	
	comp=Z,40nm,19.1s,baz=346,slow=37						
ILGA	**Ilgaz**	**74.56**	**322**	P	**P**	**02 15 54.9**	**+0.9**
ILGA				IAmb	IAmb	02 15 55.8	
	comp=Z,10nm,1.0s						
BR131	**Keskin Array S**	**75.77**	**322**	P	**P**	**02 16 00.7**	**-0.1**
BR131	**Keskin Array S**	**75.77**	**322**	*de*P	**P**	**02 16 01.0**	**+0.2**
BRTR	**Keskin Array B**	**75.77**	**322**	P	**P**	**02 16 01.1**	**+0.3**
	comp=Z,2.0nm,0.7s,baz=59,slow=3.9,SNR=13						
	comp=Z,2.0nm,0.7s						
WB0	**Warramunga Arr**	**78.42**	**207**	P	**P**	**02 16 16.4**	**+0.8**
WB0				IAmb	IAmb	02 16 17.3	
	comp=Z,11nm,1.1s						
WRA	**Warramunga Arr**	**78.60**	**207**	P	**P**	**02 16 17.4**	**+0.8**
	comp=Z,5.9nm,1.0s,baz=17,slow=6.0,SNR=20						
	comp=Z,5.9nm,1.0s						
WRA	**Warramunga Arr**	**78.60**	**207**	P	**P**	**02 16 16.8**	**+0.2**
NRCA	**Norcia**	**78.84**	**337**	IAmb	IAmb	02 16 19.9	
	comp=Z,6.0nm,0.8s						
PALK	**Pallekele**	**79.29**	**267**	LR	LR	02 56 35.4	
	comp=Z,29nm,19.3s,baz=112,slow=40						
MMAI	**Mount Meron Ar**	**81.05**	**317**	P	**P**	**02 16 30.1**	**+0.1**
	comp=Z,6.1nm,0.8s,baz=30,slow=6.8,SNR=12						
	comp=Z,6.1nm,0.8s						
BALJ	**Balqa**	**81.78**	**317**	P	**P**	**02 16 34.2**	**+0.5**
AS31	**Alice Springs**	**82.28**	**206**	P	**P**	**02 16 37.2**	**+0.9**
ASAR	**Alice Springs**	**82.28**	**206**	P	**P**	**02 16 37.5**	**+1.3**
	comp=Z,6.4nm,0.8s,baz=15,slow=5.8,SNR=57						
ASAR				LR	LR	02 56 11.1	
	comp=Z,12nm,18.0s,baz=290,slow=38						
	comp=Z,6.4nm,0.8s						
ESDC	**Sonseca Array**	**84.72**	**349**	P	**P**	**02 16 49.5**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=356,slow=7.7,SNR=7.4						
	comp=Z,1.0nm,0.8s						
RAYN	**Ar Rayn**	**84.94**	**305**	P	**P**	**02 16 49.6**	**-0.6**
RAYN	**Ar Rayn**	**84.94**	**305**	P	**P**	**02 16 49.6**	**-0.6**
RAYN				pmax	pmax		
	comp=Z,16nm,0.6s						
STKA	**Stephens Creek**	**88.59**	**198**	P	**P**	**02 17 08.2**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=325,slow=11,SNR=2.3						
	comp=Z,1.5nm,0.7s						
STKA	**Stephens Creek**	**88.59**	**198**	IAmb	IAmb	02 17 13.5	
	comp=Z,25nm,1.2s						
SJG	**San Juan**	**96.18**	**46**	LR	LR	03 03 31.2	
	comp=Z,16nm,20.4s,baz=296,slow=37						
QSPA	**South Pole Qui**	**145.00**	**180**	PKPbc	**PKPbc**	**02 23 49.5**	**-0.4**
	comp=Z,9.4nm,0.7s,baz=336,slow=1.3,SNR=34						
QSPA	**South Pole Qui**	**145.00**	**180**		**PKPbc**	**02 23 49.9**	**0.0**

IDC 07 02:06:50.0±2.6,**3°.04N×126°.52E,h0km,mb3.3**/3,
mbtmp3.3/3,**Error ellipse: s-maj=231.2km**
s-min=29.3km az=66.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.09**	**162**	P	P	02 12 07.4	-0.1
	0.3nm,0.3s,baz=341,slow=10.0,SNR=3.7						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**27.50**	**165**	P	P	02 12 38.6	+0.2
	0.1nm,0.4s,baz=345,slow=9.3,SNR=4.3						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**58.00**	**326**	P	P	02 16 44.6	-0.1
	0.3nm,0.8s,baz=116,slow=8.4,SNR=1.6						
	0.3nm,0.8s						

GCG 07 02:10:42.5±1.6,**13°.79N×90°.98W,h63km**±19km,**MD3.5,**
Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESSJ	**San Jos, E**	**0.52**	**116**	*e*P	Pn	02 10 52.8	-2.1
ESSG	**Sabana Grande**	**0.60**	**14**	*e*P	Pn	02 10 56.0	+0.1
FG16	**Alotenango, Sa**	**0.66**	**43**	*i* P	Pn	02 10 57.7	+1.1
STG2	**El Palmar, Qui**	**0.75**	**329**	*e*P	Pn	02 11 02.7	+5.0
STG2				*i* S	Sn	02 11 17.9	+9.1
STG8	**El Palmar, Qui**	**0.75**	**331**	*e*P	Pn	02 11 02.7	+4.9
STG8				*e*S	Sn	02 11 17.9	+9.0
SOKI	**Kika Raxquin**	**1.10**	**338**	*e*P	Pn	02 11 03.8	+1.3
SOKI				*e*S	Sn	02 11 19.6	+2.5
NUBE	**Las Nubes**	**1.17**	**85**	*e*P	Pn	02 11 02.9	-0.1
NUBE				*e*S	Sn	02 11 18.3	0.0
APG	**El Apazote**	**1.30**	**22**	*e*P	Pn	02 11 06.8	+1.9
JAYA	**Jayaque - finc**	**1.49**	**95**	*e*P	Pn	02 11 07.2	-0.1

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*SOME **07** 02:20:14.1, 41°.23N×78°.80E, h15km*
*KRNET **07** 02:20:15.6±0.1, 41°.35N×78°.76E, h14km, mb3.4*
*NNC **07** 02:20:16.3±0.8, 41°.34N×78°.76E, h0km, mb4.2, mpv3.9,*
Error ellipse: s-maj=5.2km s-min=3.1km az=164.0
ISC 07 02:20:18.2±1.3,**41°.43N**±0°.06×**78°.67E**±0°.04,**h10km,n51,**
σ**1s.25**/76,**17C-17D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.71**	**295**	⇑*i*P	**Pg**	**02 20 31.0**	**-1.0**
TARG				⇑*i*S	**Sb**	**02 20 42.4**	**-0.6**
PRZ	**Przheval'sk**	**1.07**	**349**	⇑*i*P	**Pg**	**02 20 37.6**	**-1.3**
PRZ				⇑*i*S	**Sn**	**02 20 54.1**	**-0.5**
KDJ	**Kajisay**	**1.31**	**303**	⇑*i*P	**Pn**	**02 20 41.9**	**-0.9**
KDJ				⇑*i*S	**Sg**	**02 21 00.8**	**+0.3**
UZB	**Uzynbulak**	**1.74**	**9**	P	**Pn**	**02 20 48.5**	**-0.1**
	54nm,0.4s						
UZB				S	**Sg**	**02 21 13.8**	**-0.4**
	135nm,0.2s						
UZB	**Uzynbulak**	**1.74**	**9**	*e*P	**Pn**	**02 20 48.5**	**-0.1**
	54nm,0.4s						
UZB				*e*S	**Sg**	**02 21 13.8**	**-0.4**
	135nm,0.2s						
SHLS	**Shalkode**	**1.83**	**19**	Pg	**Pg**	**02 20 52.4**	**-0.9**
	90nm,0.3s						
SHLS				Lg	Lg	02 21 20.3	
	268nm,0.6s						
SHLS	**Shalkode**	**1.83**	**19**	*e*P	**Pg**	**02 20 52.4**	**-0.9**
	90nm,0.3s						
SHLS				*e*S	**Sg**	**02 21 20.3**	**+3.4**
	268nm,0.6s						
PDGK	**Podgornoye**	**2.00**	**18**	⇑Pn	**Pb**	**02 20 53.0**	**-1.7**
	28nm,0.4s						
PDGK				⇓Sn	**Sb**	**02 21 19.8**	**+0.2**
	342nm,1.0s						
KPKS	**Kokpek**	**2.04**	**0**	Pg	**Pb**	**02 20 54.2**	**-1.2**
	63nm,0.5s						
KPKS				Lg	Lg	02 21 23.3	
	130nm,0.5s						
TNSS	**Tian-Shan**	**2.05**	**322**	Pg	**Pb**	**02 20 55.7**	**-0.1**
	18nm,0.4s						
TNSS				Lg	Lg	02 21 25.9	
	78nm,0.3s						
TNSS	**Tian-Shan**	**2.05**	**322**	*e*P	**Pb**	**02 20 55.7**	**-0.1**
	18nm,0.4s						
TNSS				*e*S	**Sg**	**02 21 25.9**	**+1.7**
	78nm,0.3s						
KURS	**Kuram**	**2.09**	**350**	Pg	**Pb**	**02 20 56.3**	**0.0**
	32nm,0.4s						
KURS				Lg	Lg	02 21 26.9	
	75nm,0.4s						
MDOK	**Medeo**	**2.11**	**326**	Pg	**Pb**	**02 20 56.4**	**-0.2**
	60nm,0.4s						
MDOK				Lg	Lg	02 21 27.1	
	219nm,0.5s						
KOTS	**Kotyrbulak**	**2.14**	**328**	Pg	**Pb**	**02 20 57.1**	**-0.1**
	63nm,0.2s						
KOTS				Lg	Lg	02 21 28.4	
	453nm,0.3s						
KOTS	**Kotyrbulak**	**2.14**	**328**	*e*P	**Pb**	**02 20 57.1**	**-0.1**
	63nm,0.2s						
KOTS				*e*S	**Sg**	**02 21 28.4**	**+1.3**
	453nm,0.3s						
KNDC	**Almaty**	**2.19**	**325**	⇑Pn	**Pb**	**02 20 56.3**	**-1.6**
	53nm,0.5s						
KNDC				⇓Sn	**Sg**	**02 21 27.2**	**-1.3**
	404nm,0.4s						
AAA	**Alma-Ata**	**2.20**	**324**	Pg	**Pb**	**02 20 58.4**	**+0.2**
	145nm,0.3s						
AAA				Lg	Lg	02 21 30.4	
	45nm,0.3s						
AAA	**Alma-Ata**	**2.20**	**324**	*e*P	**Pb**	**02 20 58.4**	**+0.2**
	145nm,0.3s						
AAA				*e*S	**Sg**	**02 21 30.4**	**+1.4**
	45nm,0.3s						
IZV	**Izvestkoviy**	**2.21**	**317**	Pg	**Pb**	**02 20 58.0**	**-0.4**
	57nm,0.5s						
IZV				Lg	Lg	02 21 29.9	
	217nm,0.5s						
IZV	**Izvestkoviy**	**2.21**	**317**	*e*P	**Pb**	**02 20 58.0**	**-0.4**
	57nm,0.5s						

IZV				*e*S	**Sg**	**02 21 29.9**	**+0.5**
	217nm,0.5s						
BOOM	**Boomskoye usch**	**2.29**	**298**	⇓*i*P	**Pb**	**02 20 57.5**	**-2.3**
BOOM				⇓*i*S	**Sb**	**02 21 28.2**	**0.0**
JNKS	**Jany-Kuch**	**2.30**	**262**	⇓*e*P	**Pn**	**02 20 56.9**	**+0.5**
JNKS				⇓*e*S	**Sb**	**02 21 27.1**	**-1.4**
KTMS	**Ketmen**	**2.37**	**31**	Pg	**Pb**	**02 21 00.1**	**-1.0**
	12nm,0.2s						
KTMS				Lg	Lg	02 21 33.3	
	42nm,0.2s						
KTMS	**Ketmen**	**2.37**	**31**	*e*P	**Pb**	**02 21 00.1**	**-1.0**
	12nm,0.2s						
KTMS				*e*S	**Sg**	**02 21 33.3**	**-1.2**
	42nm,0.2s						
MTBS	**Maitube**	**2.38**	**316**	Pg	**Pb**	**02 21 00.7**	**-0.5**
	51nm,0.5s						
MTBS				Lg	Lg	02 21 34.5	
	95nm,0.3s						
MTBS	**Maitube**	**2.38**	**316**	*e*P	**Pb**	**02 21 00.7**	**-0.5**
	51nm,0.5s						
MTBS				*e*S	**Sg**	**02 21 34.5**	**-0.1**
	95nm,0.3s						
KTBS	**Karatobe**	**2.71**	**328**	Pg	**Pb**	**02 21 07.1**	**+0.2**
	50nm,0.3s						
KTBS				Lg	Lg	02 21 45.5	
	175nm,0.6s						
CHKK	**Chushkaly**	**2.72**	**334**	*e*P	**Pb**	**02 21 06.4**	**-0.6**
	11nm,0.2s						
CHKK				*e*S	**Sg**	**02 21 43.8**	**-1.8**
	326nm,0.3s						
DGS	**Degeres**	**2.81**	**311**	Pg	**Pb**	**02 21 08.4**	**-0.1**
	40nm,0.5s						
DGS				Lg	Lg	02 21 47.4	
	96nm,0.5s						
ARXS	**Arharly**	**2.85**	**348**	Pg	**Pb**	**02 21 09.5**	**+0.2**
	27nm,0.3s						
ARXS				Lg	Lg	02 21 49.3	
	334nm,0.5s						
ARXS	**Arharly**	**2.85**	**348**	*e*P	**Pb**	**02 21 09.5**	**+0.2**
ARXS				*e*S	**Sg**	**02 21 49.3**	**-0.5**
KNOS	**Konyrlen**	**2.95**	**7**	Pg	**Pb**	**02 21 11.1**	**0.0**
	16nm,0.4s						
KNOS				Lg	Lg	02 21 51.9	
	204nm,0.3s						
KUU	**Kurty**	**3.00**	**326**	Pg	**Pb**	**02 21 12.0**	**+0.3**
	5.5nm,0.0s						
KUU				Lg	Lg	02 21 53.8	
	106nm,0.6s						
KUU	**Kurty**	**3.00**	**326**	*e*P	**Pb**	**02 21 12.0**	**+0.3**
	5.5nm,0.0s						
KUU				*e*S	**Sg**	**02 21 53.8**	**-0.8**
	106nm,0.6s						
KRBS	**Karabastau**	**3.17**	**317**	Pg	**Pb**	**02 21 14.9**	**+0.3**
	13nm,0.4s						
KRBS				Lg	Lg	02 21 58.8	
	44nm,0.4s						
ARLS	**Aral**	**3.28**	**279**	⇑*e*P	**Pn**	**02 21 11.1**	**+1.3**
ARLS				⇑*e*S	**Sn**	**02 21 50.9**	**+1.9**
AAK	**Ala-Archa**	**3.33**	**293**	⇓Pn	**Pn**	**02 21 11.4**	**+0.8**
	1.3nm,0.4s						
AAK				⇓Lg	Lg	02 22 05.3	
	95nm,0.5s						
AAK	**Ala-Archa**	**3.33**	**293**	⇓Pn	**Pn**	**02 21 11.4**	**+0.8**
	1.3nm,0.4s						
AAK				⇓Sn	**Sg**	**02 22 05.3**	**+0.1**
	95nm,0.5s						
TDK	**Taldyqorghan**	**3.58**	**357**	Pg	**Pb**	**02 21 22.5**	**+0.9**
	22nm,0.3s						
TDK				Lg	Lg	02 22 11.6	
	152nm,0.5s						
TDK	**Taldyqorghan**	**3.58**	**357**	*e*P	**Pb**	**02 21 22.5**	**+0.9**
	22nm,0.3s						
TDK				*e*S	**Sg**	**02 22 11.6**	**-1.5**
	152nm,0.5s						
SALK	**Salom-Alik**	**3.70**	**263**	⇑*e*P	**Pn**	**02 21 16.3**	**+0.8**
SALK				⇑*e*S	**Sn**	**02 22 00.9**	**+1.6**
KAPS	**Kapalarasan**	**3.89**	**7**	Pg	**Pb**	**02 21 27.7**	**+0.8**
	13nm,0.4s						
KAPS				Lg	Lg	02 22 20.2	
	92nm,0.2s						
MRKS	**Merke**	**4.26**	**290**	*e*P	**Pb**	**02 21 35.2**	**+2.0**
	10nm,0.4s						
MRKS				*e*S	**Sg**	**02 22 33.2**	**-1.6**
	11nm,0.4s						
ARSB	**Arslanbob**	**4.28**	**270**	⇑*e*P	**Pn**	**02 21 24.5**	**+1.0**
ARSB				⇑*e*S	**Sn**	**02 22 14.7**	**+1.2**
BTLS	**Baital**	**4.94**	**318**	Pg	**Pb**	**02 21 48.1**	**+3.3**
	3.5nm,0.3s						
BTLS				Lg	Lg	02 22 55.7	
	14nm,0.7s						
BTLS	**Baital**	**4.94**	**318**	*e*P	**Pb**	**02 21 48.1**	**+3.3**
	3.5nm,0.3s						
BTLS				*e*S	**Sg**	**02 22 55.7**	**-1.1**
	14nm,0.7s						
MAKZ	**Makanchi**	**5.88**	**23**	⇓Pn	**Pn**	**02 21 46.4**	**+1.0**
	3.5nm,1.2s						
MAKZ				⇓Lg	Lg	02 23 23.1	
	5.6nm,0.8s						
MK31	**Makanchi Array**	**5.96**	**25**	⇓Pn	**Pn**	**02 21 47.5**	**+0.9**
	0.2nm,0.3s,baz=205,slow=12,SNR=26						
MK31				⇓Pg	Pg	02 22 06.8	-5.5
	0.3nm,0.2s,baz=211,slow=14,SNR=4.7						
MK31				⇑Sn	**Sn**	**02 22 57.5**	**+2.6**
	2.7nm,0.6s						
MK31				⇑Lg	Lg	02 23 25.7	
	2.9nm,0.6s,baz=203,slow=23,SNR=4.1						
KK31	**Karatay Array**	**6.28**	**288**	⇓Pg	**Pg**	**02 22 15.2**	**-3.1**
	1.5nm,0.6s,baz=105,slow=16,SNR=15						
KK31				⇓Lg	Lg	02 23 41.5	
	2.8nm,0.6s,baz=102,slow=29,SNR=9.8						
KURBB	**Kurchatov Arra**	**9.20**	**359**	⇓Lg	Lg	02 25 09.6	
	18nm,0.8s						
KURK	**Kurchatov**	**9.29**	**360**	⇑Lg	Lg	02 25 13.3	
	4.8nm,0.8s						

BEO ***07*** *02:29:09.8±0.4, 43°.09N×18°.03E, h17^{km}±3^{km}, ML2.0/9*
RHSSO ***07*** *02:29:09.7±0.5, 43°.11N×18°.09E, h8^{km}, ML2.4/3*
ISC 07 02:29:09.5±1.0**, 43°.11N**±0°.03×**18°.06E**±0°.02**, h14**^{km}±9^{km}**,**
n21, σ**0$\overset{s}{.}$78**/41**, 1C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STON	**Ston**	**0.36**	**228**	*e*Pg	**Pg**	**02 29 16.8**	**0.0**
STON				Sg	**Sb**	**02 29 22.8**	**-0.3**
STON	**Ston**	**0.36**	**228**	*e*Pg	**Pg**	**02 29 16.6**	**-0.2**
STON				*e*Sg	**Sb**	**02 29 22.8**	**-0.3**
KLINJ	**Klinje**	**0.39**	**82**	*e*Pg	**Pg**	**02 29 16.7**	**-0.7**
KLINJ				*e*Sg	**Sg**	**02 29 23.1**	**+0.3**
DBRK	**Dubrovnik**	**0.45**	**172**	*i* Pg	**Pg**	**02 29 18.4**	**0.0**
DBRK				Sg	**Sb**	**02 29 25.1**	**-0.6**
TREB	**Trebinje**	**0.45**	**152**	⇑*i*Pg	**Pg**	**02 29 17.9**	**-0.6**
TREB				*e*Sg	**Sb**	**02 29 25.1**	**-0.7**
RICI	**Ricice**	**0.78**	**300**	*i* Pg	**Pg**	**02 29 23.8**	**-0.9**
RICI				Sg	**Sg**	**02 29 34.7**	**-0.1**
MAKA	**Makarska**	**0.78**	**283**	*e*Pg	**Pg**	**02 29 23.6**	**-1.1**
MAKA				Sg	**Sb**	**02 29 35.7**	**+0.4**
LSTV	**Lastovo**	**0.92**	**249**	*e*Pg	**Pg**	**02 29 27.0**	**-0.4**
LSTV				Sg	**Sb**	**02 29 40.1**	**+0.6**
RUDO	**Rudo**	**1.08**	**62**	*e*Pg	**Pb**	**02 29 28.6**	**-1.4**
RUDO				*e*Sg	**Sb**	**02 29 43.2**	**-0.8**
PDG	**Podgorica**	**1.11**	**127**	*e*Pg	**Pb**	**02 29 29.7**	**-0.8**
PDG				*e*Sg	**Sb**	**02 29 45.2**	**+0.3**
BBLS	**Lazi&#263i**	**1.23**	**52**	*e*Pg	**Pn**	**02 29 32.2**	**-0.2**
BBLS				*e*Sg	**Sn**	**02 29 49.5**	**+0.6**
SJES	**Sjenica**	**1.41**	**83**	*e*Pg	**Pb**	**02 29 35.9**	**+0.3**
SJES				*e*Sg	**Sg**	**02 29 55.7**	**+0.7**
KIJV	**Kijevo**	**1.50**	**307**	*e*Pn	**Pn**	**02 29 37.0**	**+1.0**
KIJV				Sg	**Sg**	**02 29 57.8**	**+0.1**
IVAS	**Ivanjica**	**1.60**	**72**	*e*Pg	**Pb**	**02 29 38.8**	**0.0**
IVAS				*e*Sg	**Sg**	**02 30 01.0**	**+0.1**
DIVS	**Divibare**	**1.71**	**54**	*e*Pn	**Pn**	**02 29 38.9**	**-0.1**
DIVS				*e*Sg	**Sg**	**02 30 05.1**	**+0.4**
BLY	**Banja Luka**	**1.75**	**339**	*e*Pn	**Pn**	**02 29 40.1**	**+0.6**
BLY				*e*Sn	**Sb**	**02 30 03.4**	**+0.1**
TEKS	**Tekeris**	**1.79**	**36**	*e*Pg	**Pb**	**02 29 43.1**	**+1.0**
TEKS				*e*Sg	**Sg**	**02 30 08.0**	**+1.0**
MORI	**Morici**	**1.87**	**295**	*e*Pn	**Pb**	**02 29 43.1**	**-0.3**
MORI				Sn	**Sb**	**02 30 06.4**	**-0.3**
GOCS	**Kraljevo Serbi**	**2.10**	**77**	*e*Pn	**Pn**	**02 29 45.2**	**+0.8**
GOCS				*e*Sg	**Sg**	**02 30 18.6**	**+1.5**
SELS	**Selova**	**2.24**	**86**	*e*Pn	**Pn**	**02 29 46.9**	**+0.7**
BARS	**Barje**	**2.77**	**95**	*e*Pn	**Pn**	**02 29 55.4**	**+1.9**
BARS				*e*Sn	**Sn**	**02 30 25.1**	**-1.7**

ROM ***07*** *02:29:59.2±0.1, 45°.313N±0°.004×10°.949E±0°.006, h8^{km}, ML3.2/238, Error ellipse: s-maj=0.5km s-min=0.2km az=261.0*
PRU ***07*** *02:30:00.8, 45°.39N×10°.99E, h10^{km}*
VIE ***07*** *02:30:00.8±0.5, 45°.42N×11°.08E, h4^{km}, mb2.7/19, ml3.4/21, Error ellipse: s-maj=3.6km s-min=2.5km az=31.0 72 km S of Trento*
LDG ***07*** *02:30:00.5±0.2, 45°.31N×10°.89E, h10^{km}, Ml3.2/37, Error ellipse: s-maj=4.6km s-min=3.0km az=84.0*
BGR ***07*** *02:30:03.3±0.9, 45°.47N×11°.09E, h10^{km}, ML3.0/7, Error ellipse: s-maj=25.6km s-min=11.1km az=79.0*
ISC 07 02:29:59.5±0.8**, 45°.33N**±0°.01×**10°.91E**±0°.01**, h19**^{km}±1^{km}**,**
n236, σ**1$\overset{s}{.}$70**/363**, 6C-12D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPPE	**Oppeano**	**0.18**	**96**	⇓P	**Pb**	**02 30 03.4**	**0.0**
OPPE				S	**Sb**	**02 30 06.9**	**+1.0**
OPPE				AML	AML		
	comp=E,6335µm,0.6s						
OPPE				AML	AML		
	comp=N,13250µm,0.6s						
OPPE				AML	AML		
	comp=E,6340µm,0.6s						
MNTV	**Mantova**	**0.20**	**206**	⇑P	**Pb**	**02 30 03.7**	**-0.1**
MNTV				S	**Sg**	**02 30 08.2**	**+0.3**
GAZZ	**Gazzo Veronese**	**0.25**	**149**	⇓*e*Pg	**Pg**	**02 30 04.3**	**-0.9**
GAZZ				*e*Sg	**Sg**	**02 30 08.5**	**-0.7**
TREG	**Tregnago**	**0.26**	**42**	P	**Pg**	**02 30 05.2**	**-0.3**
TREG				S	**Sg**	**02 30 09.6**	**0.0**
TREG				AML	AML		
	comp=E,5945µm,1.3s						
TREG				AML	AML		
	comp=N,6750µm,0.5s						
TREG				AML	AML		
	comp=N,6745µm,0.5s						
TREG				AML	AML		
	comp=N,6750µm,1.5s						
TREG				AML	AML		
	comp=E,5950µm,1.3s						
SBPO	**S.Benedetto Po**	**0.28**	**179**	P	**Pg**	**02 30 04.9**	**-0.8**
SBPO				S	**Sg**	**02 30 10.2**	**+0.3**
ZEN8	**San Zeno di Mo**	**0.33**	**338**	P	**Pg**	**02 30 06.4**	**-0.3**
ZEN8				S	**Sg**	**02 30 12.4**	**+0.7**
ROVR	**Rover Verones**	**0.34**	**20**	P	**Pg**	**02 30 06.6**	**-0.2**
ROVR				S	**Sg**	**02 30 12.3**	**+0.5**
ROVR				AML	AML		
	comp=E,1230µm,0.4s						
ROVR				AML	AML		
	comp=E,3185µm,0.9s						
ROVR				AML	AML		
	comp=N,7280µm,0.4s						
ROVR				AML	AML		
	comp=N,3140µm,0.4s						
ROVR				AML	AML		
	comp=E,3185µm,1.1s						
ROVR				AML	AML		
	comp=N,7280µm,1.6s						
ROVR				AML	AML		
	comp=E,1230µm,1.6s						
ROVR				AML	AML		
	comp=N,3140µm,1.6s						
BALD	**Monte Baldo**	**0.36**	**350**	⇑*e*Pg	**Pg**	**02 30 07.2**	**-0.1**
BALD				*e*Sg	**Sg**	**02 30 12.8**	**+0.2**
BALD	**Monte Baldo**	**0.36**	**350**	P	**Pg**	**02 30 07.1**	**-0.2**
BALD				S	**Sg**	**02 30 13.8**	**+1.3**
BALD	**Monte Baldo**	**0.36**	**350**	P	**Pg**	**02 30 07.2**	**-0.1**
BALD				S	**Sg**	**02 30 13.6**	**+1.1**
MBAL	**Monte Baldo -**	**0.37**	**354**	⇓P	**Pg**	**02 30 07.2**	**-0.2**
MBAL				S	**Sg**	**02 30 13.6**	**+0.8**
MBAL				AML	AML		
	comp=N,3905µm,0.8s						
MBAL				AML	AML		
	comp=N,3930µm,1.5s						
MBAL				AML	AML		
	comp=E,4305µm,0.9s						
MBAL				AML	AML		
	comp=E,3795µm,0.6s						
MBAL				AML	AML		
	comp=N,3925µm,1.5s						
MBAL				AML	AML		
	comp=E,4305µm,1.1s						
MBAL				AML	AML		
	comp=N,3925µm,0.5s						
MARN	**Marana (Italy)**	**0.37**	**34**	P	**Pg**	**02 30 07.0**	**-0.4**
MARN				S	**Sg**	**02 30 12.8**	**+0.1**
BOZZ	**Bozzolo**	**0.38**	**234**	AML	AML		
	comp=N,11515µm,0.4s						
BOZZ				AML	AML		
	comp=E,6955µm,0.9s						
SALO	**Salr**	**0.40**	**317**	⇓P	**Pg**	**02 30 07.9**	**+0.1**
SALO				S	**Sb**	**02 30 15.8**	**+1.9**
SALO				AML	AML		
	comp=N,2500µm,0.6s						
SALO				AML	AML		
	comp=E,1880µm,1.2s						
SALO				AML	AML		
	comp=N,2495µm,0.6s						
SALO				AML	AML		
	comp=N,2655µm,0.6s						
SALO				AML	AML		
	comp=E,1755µm,1.2s						
SALO				AML	AML		
	comp=N,2495µm,1.4s						
SALO				AML	AML		
	comp=N,2655µm,1.4s						
SERM	**Sermide**	**0.42**	**139**	P	**Pg**	**02 30 07.3**	**-0.8**
SERM				S	**Sg**	**02 30 13.9**	**0.0**
SERM	**Sermide**	**0.42**	**139**	P	**Pg**	**02 30 07.1**	**-1.0**
SERM				S	**Sg**	**02 30 13.9**	**0.0**
SERM				AML	AML		
	comp=N,5820µm,0.8s						
SERM				AML	AML		
	comp=E,1445µm,0.8s						
SERM				AML	AML		
	comp=E,3750µm,0.6s						
SERM				AML	AML		
	comp=N,5815µm,0.8s						
SERM				AML	AML		
	comp=E,1440µm,0.8s						
SERM				AML	AML		
	comp=N,1730µm,0.4s						
SERM				AML	AML		
	comp=N,5825µm,0.8s						
SERM				AML	AML		
	comp=E,1445µm,1.2s						
SERM				AML	AML		
	comp=N,1735µm,0.4s						
SERM				AML	AML		
	comp=E,3755µm,0.6s						
VOBA	**Vobarno**	**0.42**	**318**	P	**Pg**	**02 30 08.3**	**0.0**
VOBA				S	**Sb**	**02 30 15.9**	**+1.3**
ZOVE	**Zovencedo**	**0.42**	**73**	⇑P	**Pg**	**02 30 07.7**	**-0.5**
ZOVE				S	**Sg**	**02 30 13.6**	**-0.6**
ZOVE				AML	AML		
	comp=E,2580µm,0.3s						
ZOVE				AML	AML		
	comp=N,2480µm,1.1s						
ZOVE				AML	AML		
	comp=N,2480µm,0.9s						
ZOVE				AML	AML		
	comp=E,2580µm,1.7s						
NDIM	**Novi di Modena**	**0.44**	**181**	P	**Pg**	**02 30 07.8**	**-0.7**
NDIM				S	**Sg**	**02 30 14.9**	**+0.3**
NDIM				AML	AML		
	comp=E,11900µm,0.6s						
NDIM				AML	AML		
	comp=E,13600µm,0.6s						
NDIM				AML	AML		
	comp=N,8745µm,0.5s						
NDIM				AML	AML		
	comp=N,7975µm,0.4s						
CAVE	**Cavezzo**	**0.47**	**172**	P	**Pg**	**02 30 08.3**	**-0.7**
CAVE				S	**Sg**	**02 30 15.9**	**+0.5**
CAVE	**Cavezzo**	**0.47**	**172**	⇓P	**Pg**	**02 30 08.3**	**-0.7**
CAVE				S	**Sg**	**02 30 15.6**	**+0.2**
CAVE				AML	AML		
	comp=N,11480µm,0.3s						
CAVE				AML	AML		
	comp=E,17900µm,0.3s						
MAGA	**Magasa**	**0.49**	**336**	⇓P	**Pg**	**02 30 09.1**	**-0.4**
MAGA				S	**Sb**	**02 30 17.8**	**+1.4**
MAGA				AML	AML		
	comp=E,5035µm,1.4s						
MAGA				AML	AML		
	comp=N,4845µm,0.2s						
MAGA				AML	AML		
	comp=E,5035µm,0.6s						
VARA	**Varagna**	**0.50**	**359**	⇓P	**Pg**	**02 30 09.6**	**-0.1**
VARA				S	**Sg**	**02 30 17.8**	**+1.3**
VARA				AML	AML		
	comp=E,12850µm,0.2s						
VARA				AML	AML		
	comp=N,5855µm,0.8s						
VARA				AML	AML		
	comp=E,5545µm,0.7s						
VARA				AML	AML		
	comp=N,12650µm,0.2s						
VARA				AML	AML		
	comp=E,5545µm,1.3s						
VARA				AML	AML		
	comp=N,5855µm,1.2s						
TEOL	**Teolo**	**0.54**	**86**	⇓*e*Pg	**Pg**	**02 30 09.7**	**-0.6**
TEOL				*e*Sg	**Sg**	**02 30 16.7**	**-0.9**
TEOL	**Teolo**	**0.54**	**86**	⇓P	**Pg**	**02 30 09.7**	**-0.6**
TEOL				S	**Sg**	**02 30 17.0**	**-0.5**
TEOL				AML	AML		
	comp=N,8605µm,0.2s						
TEOL				AML	AML		
	comp=E,16150µm,0.2s						
CNCS	**Concesio**	**0.56**	**300**	P	**Pg**	**02 30 10.5**	**-0.2**
CNCS				S	**Sb**	**02 30 19.5**	**+1.3**
CADC	**Capriano del C**	**0.57**	**283**	P	**Pb**	**02 30 11.8**	**+1.1**
SANR	**Sandrigo**	**0.58**	**57**	P	**Pb**	**02 30 10.9**	**-0.1**
BAG8	**Bagolino**	**0.58**	**328**	P	**Pg**	**02 30 10.8**	**-0.4**
BAG8				S	**Sg**	**02 30 19.9**	**+0.8**
DOSS	**Dosso del Somm**	**0.58**	**19**	⇑*e*Pg	**Pg**	**02 30 10.9**	**-0.4**
DOSS				*e*Sg	**Sg**	**02 30 19.4**	**+0.2**
DOSS	**Dosso del Somm**	**0.58**	**19**	P	**Pg**	**02 30 10.9**	**-0.4**
DOSS				S	**Sg**	**02 30 18.9**	**-0.2**
DOSS	**Dosso del Somm**	**0.58**	**19**	P	**Pg**	**02 30 10.9**	**-0.4**
DOSS				S	**Sg**	**02 30 19.8**	**+0.6**
DOSS				AML	AML		
	comp=E,4225µm,1.1s						
DOSS				AML	AML		
	comp=N,3550µm,0.2s						
DOSS				AML	AML		
	comp=E,3830µm,0.2s						
DOSS				AML	AML		
	comp=N,4320µm,1.1s						
DOSS				AML	AML		
	comp=N,4320µm,0.9s						
DOSS				AML	AML		
	comp=E,4225µm,0.9s						
DOSS				AML	AML		
	comp=E,3830µm,1.8s						
DOSS				AML	AML		
	comp=N,3550µm,1.8s						
RAVA	**Ravarino**	**0.59**	**166**	P	**Pb**	**02 30 10.8**	**-0.3**
RAVA				S	**Sb**	**02 30 20.5**	**+1.5**
RAVA	**Ravarino**	**0.59**	**166**	P	**Pb**	**02 30 10.9**	**-0.2**
RAVA				S	**Sb**	**02 30 20.4**	**+1.5**
RAVA				AML	AML		
	comp=E,4755µm,1.3s						
RAVA				AML	AML		
	comp=N,6785µm,0.2s						
RAVA				AML	AML		
	comp=E,4760µm,1.3s						
RAVA				AML	AML		
	comp=N,6780µm,0.2s						
RAVA				AML	AML		
	comp=E,4760µm,0.7s						
RAVA				AML	AML		
	comp=N,6780µm,1.8s						
FERS	**Ferrara-Casagl**	**0.62**	**133**	P	**Pb**	**02 30 11.0**	**-0.6**
FERS				AML	AML		
	comp=E,4100µm,1.5s						
FERS				AML	AML		
	comp=N,4650µm,0.2s						
FERS				AML	AML		
	comp=N,4645µm,0.2s						
FERS				AML	AML		
	comp=E,4100µm,0.5s						
FERS				AML	AML		
	comp=N,4645µm,1.8s						
QUINZ	**Quinzano d'Ogl**	**0.62**	**267**	*e*Pg	**Pg**	**02 30 12.8**	**+1.0**
QUINZ				*e*Sg	**Sn**	**02 30 22.7**	**+0.1**
LUSI	**Trento, Gardas**	**0.63**	**2**	P	**Pb**	**02 30 11.7**	**-0.2**
LUSI				S	**Sb**	**02 30 21.6**	**+1.3**
LUSI				AML	AML		
	comp=E,3995µm,1.2s						
LUSI				AML	AML		
	comp=E,3995µm,0.8s						
LUSI				AML	AML		
	comp=N,8410µm,0.3s						
GAVI	**Passo Gaver BS**	**0.67**	**332**	*e*Pg	**Pb**	**02 30 13.0**	**+0.4**
GAVI				*e*Sg	**Sg**	**02 30 23.4**	**+1.6**
RONC	**Roncone**	**0.68**	**343**	*e*Pg	**Pb**	**02 30 13.2**	**+0.3**
RONC				*e*Sg	**Sg**	**02 30 23.6**	**+1.4**
RONC	**Roncone**	**0.68**	**343**	⇓P	**Pb**	**02 30 12.6**	**-0.3**
RONC				S	**Sb**	**02 30 23.3**	**+1.3**
RONC				AML	AML		
	comp=N,4425µm,0.5s						
RONC				AML	AML		
	comp=E,5190µm,0.4s						
RONC				AML	AML		
	comp=N,4430µm,0.5s						
RONC				AML	AML		
	comp=E,3910µm,0.2s						
RONC				AML	AML		
	comp=N,5765µm,0.3s						
RONC				AML	AML		
	comp=N,4430µm,1.5s						
CEKR	**Cima Ekar Asia**	**0.69**	**41**	⇑*e*Pg	**Pb**	**02 30 12.8**	**-0.2**
CEKR				*e*Sg	**Sb**	**02 30 22.8**	**+0.5**
ORZI	**Orzinuovi**	**0.69**	**277**	P	**Pg**	**02 30 14.2**	**+1.0**
ORZI				S	**Sn**	**02 30 25.3**	**+0.8**
ORZI				AML	AML		
	comp=N,1525µm,0.5s						
ORZI				AML	AML		
	comp=E,1905µm,0.4s						
MODE	**Modena**	**0.70**	**178**	P	**Pb**	**02 30 13.5**	**+0.5**
PRMA	**PARMA**	**0.71**	**217**	P	**Pb**	**02 30 13.8**	**+0.7**
PRMA				S	**Sn**	**02 30 25.4**	**+0.6**
PRMA	**PARMA**	**0.71**	**217**	P	**Pb**	**02 30 13.6**	**+0.5**
PRMA				S	**Sn**	**02 30 25.0**	**+0.2**
PRMA				AML	AML		
	comp=E,2170µm,0.3s						
PRMA				AML	AML		
	comp=N,2345µm,0.3s						
ZONE	**Zone**	**0.71**	**308**	⇓P	**Pb**	**02 30 13.0**	**-0.2**
ZONE				S	**Sg**	**02 30 24.1**	**+1.1**
ZONE				AML	AML		
	comp=E,1035µm,0.8s						
ZONE				AML	AML		
	comp=N,3695µm,0.2s						
ZONE				AML	AML		
	comp=E,3705µm,0.8s						
ZONE				AML	AML		
	comp=N,910µm,0.2s						
CAPR	**Capriolo**	**0.75**	**294**	P	**Pb**	**02 30 13.9**	**-0.1**
CAPR				S	**Sn**	**02 30 26.7**	**+0.7**
CAPR				AML	AML		
	comp=E,1465µm,0.8s						
CAPR				AML	AML		
	comp=N,1310µm,0.5s						
GAGG	**Gaggia**	**0.76**	**3**	*e*Pg	**Pb**	**02 30 14.3**	**+0.2**
GAGG	**Gaggia**	**0.76**	**3**	P	**Pb**	**02 30 14.0**	**-0.1**
GAGG				S	**Sb**	**02 30 25.5**	**+1.4**
GAGG	**Gaggia**	**0.76**	**3**	P	**Pb**	**02 30 14.0**	**-0.1**
GAGG				S	**Sb**	**02 30 25.8**	**+1.6**
GAGG				AML	AML		
	comp=E,3645µm,0.2s						
GAGG				AML	AML		
	comp=N,2410µm,0.2s						
GAGG				AML	AML		
	comp=E,2295µm,0.2s						
GAGG				AML	AML		
	comp=N,3445µm,0.2s						
MABI	**Malga Bissina**	**0.78**	**339**	P	**Pb**	**02 30 14.5**	**-0.1**
MABI				S	**Sb**	**02 30 25.6**	**+0.9**
MABI				AML	AML		
	comp=E,1775µm,0.2s						
MABI				AML	AML		
	comp=N,1490µm,0.4s						
PANI	**Panarotta**	**0.78**	**22**	*e*Pg	**Pb**	**02 30 14.9**	**+0.3**
PANI				*e*Sg	**Sb**	**02 30 26.0**	**+1.1**
PANI	**Panarotta**	**0.78**	**22**	P	**Pb**	**02 30 14.9**	**+0.3**

PANI				S	**Sb**	**02 30 25.9**	**+1.0**
PANI				AML	AML		
	comp=E,1575µm,0.5s						
PANI				AML	AML		
	comp=E,1575µm,1.5s						
PANI				AML	AML		
	comp=N,2280µm,0.6s						
FIU	**Minerbio Fiu**	**0.80**	**149**	P	**Pb**	**02 30 14.7**	**-0.1**
FIU				S	**Sg**	**02 30 26.7**	**+0.9**
FIU				AML	AML		
	comp=E,5120µm,0.7s						
FIU				AML	AML		
	comp=E,5125µm,0.7s						
FIU				AML	AML		
	comp=N,3560µm,0.2s						
FIU				AML	AML		
	comp=E,5125µm,1.3s						
ADRI	**Adria, Italy**	**0.83**	**110**	⇓*e*Pg	**Pb**	**02 30 15.4**	**0.0**
ADRI				*e*Sg	**Sb**	**02 30 26.8**	**+0.7**
ASOL	**Asolo**	**0.84**	**56**	P	**Pb**	**02 30 15.9**	**+0.5**
CTI	**Castel Tesino**	**0.89**	**35**	P	**Pb**	**02 30 16.1**	**-0.3**
CTI	**Castel Tesino**	**0.89**	**35**	P	**Pb**	**02 30 16.1**	**-0.3**
CTI				S	**Sb**	**02 30 28.5**	**+0.7**
CTI				AML	AML		
	comp=N,4365µm,0.5s						
CTI				AML	AML		
	comp=E,4435µm,0.1s						
CTI				AML	AML		
	comp=N,4365µm,1.5s						
PCN	**Piacenza**	**0.89**	**251**	P	**Pg**	**02 30 17.5**	**+0.7**
PCN				AML	AML		
	comp=N,1615µm,0.3s						
PCN				AML	AML		
	comp=E,1142µm,0.4s						
PCN				AML	AML		
	comp=E,1078µm,0.4s						
PCN				AML	AML		
	comp=N,1695µm,0.3s						
MDI	**Monti di Nese**	**0.95**	**298**	P	**Pb**	**02 30 17.2**	**-0.3**
MDI				S	**Sn**	**02 30 32.4**	**+1.3**
MDI	**Monti di Nese**	**0.95**	**298**	P	**Pb**	**02 30 17.1**	**-0.3**
MDI				S	**Sg**	**02 30 31.2**	**+0.5**
MDI				AML	AML		
	comp=E,2430µm,0.2s						
MDI				AML	AML		
	comp=E,2460µm,0.2s						
MDI				AML	AML		
	comp=N,1795µm,0.2s						
MDI				AML	AML		
	comp=N,2070µm,0.2s						
CRND	**Cornuda**	**0.96**	**58**	P	**Pb**	**02 30 17.3**	**-0.2**
CRND				S	**Sb**	**02 30 31.0**	**+1.1**
CRND				AML	AML		
	comp=E,2690µm,0.3s						
CRND				AML	AML		
	comp=N,3215µm,0.2s						
ZCCA	**Zocca**	**0.98**	**177**	P	**Pb**	**02 30 18.9**	**+0.9**
ZCCA	**Zocca**	**0.98**	**177**	P	**Pb**	**02 30 18.8**	**+0.9**
ZCCA				AML	AML		
	comp=E,688µm,1.0s						
ZCCA				AML	AML		
	comp=N,769µm,1.0s						
ZCCA				AML	AML		
	comp=E,651µm,1.0s						
ZCCA				AML	AML		
	comp=N,831µm,1.0s						
GSCL	**Gusciola**	**1.00**	**193**	P	**Pb**	**02 30 19.2**	**+0.9**
GSCL				S	**Sn**	**02 30 35.2**	**+3.0**
GSCL	**Gusciola**	**1.00**	**193**	P	**Pb**	**02 30 18.9**	**+0.6**
GSCL				AML	AML		
	comp=N,704µm,0.7s						
GSCL				AML	AML		
	comp=E,884µm,0.4s						
GRAM	**Graiana**	**1.03**	**216**	P	**Pb**	**02 30 19.4**	**+0.6**
GRAM				S	**Sn**	**02 30 35.3**	**+2.3**
GRAM	**Graiana**	**1.03**	**216**	P	**Pb**	**02 30 18.9**	**+0.1**
GRAM				AML	AML		
	comp=N,918µm,1.1s						
GRAM				AML	AML		
	comp=E,1170µm,0.2s						
MTRZ	**Monterenzio**	**1.03**	**157**	P	**Pg**	**02 30 21.4**	**+1.9**
MTRZ	**Monterenzio**	**1.03**	**157**	P	**Pg**	**02 30 21.1**	**+1.6**
MTRZ				AML	AML		
	comp=N,814µm,0.9s						
MTRZ				AML	AML		
	comp=E,1082µm,0.9s						
MTRZ				AML	AML		
	comp=N,832µm,0.9s						
MTRZ				AML	AML		
	comp=E,1098µm,0.5s						
MTRZ				AML	AML		
	comp=N,832µm,1.1s						
MTRZ				AML	AML		
	comp=N,814µm,1.1s						
MTRZ				AML	AML		
	comp=E,1082µm,1.1s						
VENL	**Venezia Lido**	**1.04**	**85**	P	**Pb**	**02 30 19.4**	**+0.6**
ZIAN	**Ziano**	**1.05**	**25**	P	**Pb**	**02 30 19.3**	**+0.2**
ZIAN				S	**Sb**	**02 30 33.7**	**+1.1**
ZIAN				AML	AML		
	comp=E,1710µm,0.5s						
ZIAN				AML	AML		
	comp=N,1695µm,0.5s						
ZIAN				AML	AML		
	comp=E,1810µm,0.6s						
ZIAN				AML	AML		
	comp=N,1765µm,0.3s						
OZOL	**Ozolo**	**1.08**	**5**	P	**Pb**	**02 30 20.3**	**+0.7**
OZOL				S	**Sn**	**02 30 35.8**	**+1.6**
OZOL				AML	AML		
	comp=E,3505µm,0.5s						
OZOL				AML	AML		
	comp=N,2290µm,0.5s						
OZOL				AML	AML		
	comp=E,3740µm,0.5s						
OZOL				AML	AML		
	comp=E,3740µm,1.5s						
OZOL				AML	AML		
	comp=E,3505µm,1.5s						
OZOL				AML	AML		
	comp=N,2090µm,0.5s						
CARE	**Lago del Cares**	**1.11**	**352**	P	**Pb**	**02 30 20.6**	**+0.4**
CARE				S	**Sn**	**02 30 36.3**	**+1.1**
CARE				AML	AML		
	comp=E,1106µm,0.9s						
CARE				AML	AML		
	comp=N,1195µm,1.0s						
CARE				AML	AML		
	comp=N,1270µm,0.9s						
CARE				AML	AML		
	comp=E,1086µm,0.4s						
IMOL	**Imola, Italy**	**1.14**	**148**	P	**Pb**	**02 30 21.6**	**+1.1**
IMOL	**Imola, Italy**	**1.14**	**148**	P	**Pn**	**02 30 21.0**	**+0.6**
IMOL				AML	AML		
	comp=E,1260µm,0.8s						
IMOL				AML	AML		
	comp=N,1145µm,1.0s						
IMOL				AML	AML		
	comp=N,1145µm,1.0s						
IMOL				AML	AML		
	comp=E,1260µm,1.2s						
APPI	**Appiano**	**1.17**	**11**	⇑P	**Pn**	**02 30 22.0**	**+1.0**
APPI				S	**Sn**	**02 30 38.0**	**+1.6**
APPI				AML	AML		
	comp=E,4290µm,0.3s						
APPI				AML	AML		
	comp=N,3855µm,0.2s						
BOB	**Bobbio (Coli)**	**1.18**	**242**	P	**Pg**	**02 30 22.8**	**+0.4**
BOSI	**Bolzano**	**1.20**	**14**	P	**Pn**	**02 30 22.4**	**+1.1**
BOSI				S	**Sn**	**02 30 39.3**	**+2.3**
BOSI				AML	AML		
	comp=N,4750µm,0.5s						
BOSI				AML	AML		
	comp=E,3570µm,0.6s						
SARO	**Sassorosso**	**1.20**	**198**	P	**Pn**	**02 30 22.0**	**+0.6**
BRMO	**Bormio**	**1.21**	**342**	P	**Pn**	**02 30 22.3**	**+0.8**
BRMO	**Bormio**	**1.21**	**342**	P	**Pn**	**02 30 22.1**	**+0.6**
BRMO				S	**Sg**	**02 30 39.6**	**+0.8**
BRMO				AML	AML		
	comp=E,3075µm,0.5s						
BRMO				AML	AML		
	comp=N,1075µm,0.5s						
VLC	**Villacollemand**	**1.23**	**198**	P	**Pb**	**02 30 23.2**	**+1.1**
VLC	**Villacollemand**	**1.23**	**198**	P	**Pn**	**02 30 22.5**	**+0.8**
VLC				AML	AML		
	comp=E,285µm,1.2s						
VLC				AML	AML		
	comp=N,270µm,0.4s						
VLC				AML	AML		
	comp=E,270µm,0.8s						
VLC				AML	AML		
	comp=E,285µm,0.8s						
VLC				AML	AML		
	comp=N,280µm,0.4s						
BERNI	**Berninapass**	**1.25**	**331**	P	**Pn**	**02 30 23.0**	**+0.8**
BERNI	**Berninapass**	**1.25**	**331**	P	**Pn**	**02 30 22.8**	**+0.6**
BERNI				S	**Sn**	**02 30 40.4**	**+1.7**
BERNI				AML	AML		
	comp=N,683µm,1.1s						
BERNI				AML	AML		
	comp=E,716µm,0.2s						
BERNI				AML	AML		
	comp=N,683µm,0.9s						
BRIS	**BRISIGHELLA**	**1.25**	**160**	P	**Pn**	**02 30 22.4**	**+0.4**
BRIS				AML	AML		
	comp=E,724µm,0.4s						
BRIS				AML	AML		
	comp=N,574µm,0.3s						
BDI	**Bagni Di Lucca**	**1.29**	**190**	P	**Pn**	**02 30 23.3**	**+0.8**
BDI	**Bagni Di Lucca**	**1.29**	**190**	P	**Pn**	**02 30 23.0**	**+0.5**
BDI				AML	AML		
	comp=N,501µm,1.0s						
BDI				AML	AML		
	comp=N,480µm,0.3s						
BDI				AML	AML		
	comp=E,646µm,0.4s						
BDI				AML	AML		
	comp=E,584µm,0.4s						
BDI				AML	AML		
	comp=N,501µm,1.0s						
MOSI	**Grossmontoni**	**1.31**	**349**	P	**Pn**	**02 30 24.4**	**+1.3**
MOSI				S	**Sg**	**02 30 42.9**	**+0.9**
MOSI				AML	AML		
	comp=E,2970µm,0.9s						
MOSI				AML	AML		
	comp=N,3155µm,0.9s						
MOSI				AML	AML		
	comp=N,3155µm,1.1s						
MOSI				AML	AML		
	comp=E,2970µm,1.1s						
SEI	**Scarperia**	**1.31**	**166**	P	**Pn**	**02 30 22.0**	**-0.8**
SEI	**Scarperia**	**1.31**	**166**	P	**Pn**	**02 30 21.8**	**-1.0**
SEI				AML	AML		
	comp=E,900µm,0.4s						
SEI				AML	AML		
	comp=N,1520µm,0.5s						
BRSN	**Barisano**	**1.33**	**141**	P	**Pn**	**02 30 24.1**	**+1.1**
BRSN				AML	AML		
	comp=E,1155µm,1.1s						
BRSN				AML	AML		
	comp=N,1189µm,0.6s						
BRSN				AML	AML		
	comp=E,1085µm,1.1s						
BRSN				AML	AML		
	comp=N,1143µm,0.6s						
BRSN				AML	AML		
	comp=N,1189µm,1.4s						
BRSN				AML	AML		
	comp=N,1143µm,1.4s						
BRSN				AML	AML		
	comp=E,1155µm,0.9s						
BRSN				AML	AML		
	comp=E,1085µm,0.9s						
CARD	**Cardoso**	**1.34**	**193**	P	**Pn**	**02 30 24.4**	**+1.3**
CARD	**Cardoso**	**1.34**	**193**	P	**Pn**	**02 30 24.2**	**+1.0**
CARD				AML	AML		
	comp=N,538µm,0.4s						
CARD				AML	AML		
	comp=E,421µm,0.5s						
MOCL	**Monte Cuccoli**	**1.34**	**172**	P	**Pn**	**02 30 24.0**	**+0.8**
GORR	**Gorreto**	**1.36**	**238**	P	**Pb**	**02 30 25.1**	**+0.8**
GORR	**Gorreto**	**1.36**	**238**	P	**Pn**	**02 30 24.5**	**+1.1**
GORR				AML	AML		
	comp=N,460µm,0.4s						
GORR				AML	AML		
	comp=E,466µm,0.4s						
FUORN	**Ofenpass-Fuorn**	**1.37**	**341**	P	**Pn**	**02 30 25.1**	**+1.2**
FUORN				AML	AML		
	comp=E,1001µm,0.5s						
FUORN				AML	AML		
	comp=E,1001µm,1.5s						
FUORN				AML	AML		
	comp=N,838µm,0.5s						
LMD	**Lutirano**	**1.37**	**155**	P	**Pn**	**02 30 23.9**	**+0.3**
LMD	**Lutirano**	**1.37**	**155**	P	**Pn**	**02 30 23.8**	**+0.1**
LMD				AML	AML		
	comp=E,398µm,0.4s						
LMD				AML	AML		
	comp=N,428µm,0.5s						
LMD				AML	AML		
	comp=N,428µm,1.5s						
LMD				AML	AML		
	comp=E,398µm,1.6s						
MSSA	**Maissana**	**1.42**	**225**	P	**Pb**	**02 30 26.0**	**+0.6**
MSSA	**Maissana**	**1.42**	**225**	P	**Pn**	**02 30 25.7**	**+1.4**
MSSA				AML	AML		
	comp=E,223µm,0.5s						
MSSA				AML	AML		
	comp=N,252µm,1.5s						
MUGIO	**Muggio**	**1.44**	**295**	P	**Pn**	**02 30 25.0**	**+0.4**
MUGIO	**Muggio**	**1.44**	**295**	P	**Pn**	**02 30 26.0**	**+1.4**
MUGIO				AML	AML		
	comp=E,436µm,0.2s						
MUGIO				AML	AML		
	comp=N,557µm,0.3s						
MUGIO				AML	AML		
	comp=E,436µm,1.8s						
CIMO	**Cimolais**	**1.45**	**47**	P	**Pn**	**02 30 24.8**	**+0.1**
CIMO				AML	AML		
	comp=N,324µm,1.1s						
CIMO				AML	AML		
	comp=E,412µm,0.4s						
CIMO				AML	AML		
	comp=N,330µm,1.1s						
CIMO				AML	AML		
	comp=N,330µm,0.9s						
CIMO				AML	AML		
	comp=E,400µm,0.3s						
CIMO				AML	AML		
	comp=N,324µm,0.9s						
BRES	**Bressanone**	**1.48**	**22**	P	**Pn**	**02 30 27.0**	**+1.6**
BRES				AML	AML		
	comp=N,1855µm,0.3s						
BRES				AML	AML		
	comp=E,1500µm,0.8s						
PLMA	**Palmaria, Port**	**1.49**	**211**	P	**Pb**	**02 30 26.8**	**+0.3**
PLMA	**Palmaria, Port**	**1.49**	**211**	P	**Pb**	**02 30 26.8**	**+0.3**
PLMA				AML	AML		
	comp=N,361µm,1.4s						
PLMA				AML	AML		
	comp=N,361µm,0.6s						
PLMA				AML	AML		
	comp=E,316µm,0.3s						
STAL	**STALIGIAL**	**1.57**	**53**	P	**Pn**	**02 30 26.4**	**0.0**
STAL				AML	AML		
	comp=E,1345µm,0.7s						
STAL				AML	AML		
	comp=N,1745µm,0.2s						
STAL				AML	AML		
	comp=N,1360µm,0.2s						
STAL				AML	AML		
	comp=E,1780µm,0.2s						
SFI	**Santa Sofia**	**1.57**	**155**	P	**Pn**	**02 30 26.8**	**+0.3**
SFI				AML	AML		
	comp=E,282µm,0.8s						
SFI				AML	AML		
	comp=N,474µm,0.8s						
SFI				AML	AML		
	comp=N,474µm,1.2s						
SFI				AML	AML		
	comp=E,282µm,1.2s						
TUE	**Stuetta**	**1.58**	**317**	P	**Pb**	**02 30 29.1**	**+0.8**
TUE				S	**Sb**	**02 30 49.4**	**+1.5**
TUE				AML	AML		
	comp=E,530µm,0.4s						
TUE				AML	AML		
	comp=E,536µm,0.5s						
TUE				AML	AML		
	comp=N,652µm,0.2s						
TUE				AML	AML		
	comp=E,536µm,1.5s						
TUE				AML	AML		
	comp=E,530µm,1.6s						
TUE				AML	AML		
	comp=N,650µm,0.9s						
VARE	**Varese**	**1.60**	**290**	P	**Pn**	**02 30 27.6**	**+0.7**
VARE				AML	AML		
	comp=E,772µm,1.1s						
VARE				AML	AML		
	comp=N,763µm,0.2s						
VARE				AML	AML		
	comp=E,772µm,0.9s						
DAVOX	**Davos/Dischmat**	**1.62**	**334**	P	**Pb**	**02 30 29.7**	**+0.8**
DAVOX				AML	AML		
	comp=N,1775µm,1.2s						
DAVOX				AML	AML		
	comp=E,2325µm,0.5s						
DAVOX				AML	AML		
	comp=N,1775µm,0.8s						
PII	**Pisa**	**1.63**	**190**	P	**Pn**	**02 30 27.4**	**+0.2**
PII				AML	AML		
	comp=N,884µm,0.6s						
PII				AML	AML		
	comp=E,724µm,0.8s						
PII				AML	AML		
	comp=N,884µm,1.4s						
ROSI	**Rosskopf**	**1.64**	**12**	P	**Pn**	**02 30 28.4**	**+0.9**
ROSI				S	**Sb**	**02 30 51.6**	**+2.1**
ROSI				AML	AML		
	comp=E,1650µm,0.4s						
ROSI				AML	AML		
	comp=N,1850µm,1.3s						
ASQU	**Asqua**	**1.66**	**157**	P	**Pn**	**02 30 28.5**	**+0.9**
ASQU				AML	AML		
	comp=E,220µm,1.5s						
ASQU				AML	AML		
	comp=E,220µm,0.5s						
ASQU				AML	AML		
	comp=N,216µm,0.9s						
FETA	**Feichten**	**1.70**	**356**	*e*Pn	**Pb**	**02 30 30.6**	**+0.4**
	comp=N,7.9nm,0.2s,SNR=24						
FETA				*i* Sg	**Sb**	**02 30 53.7**	**+2.4**
	comp=N,42nm,0.2s						
MPRI	**Monte Prat**	**1.72**	**57**	P	**Pn**	**02 30 28.7**	**+0.3**
MPRI				AML	AML		
	comp=N,872µm,0.4s						
MPRI				AML	AML		
	comp=E,685µm,1.2s						
MPRI				AML	AML		
	comp=N,1127µm,0.4s						
MPRI				AML	AML		
	comp=E,527µm,1.2s						
MPRI				AML	AML		
	comp=N,872µm,1.6s						
MPRI				AML	AML		
	comp=N,1127µm,1.6s						
CLUD	**Cludinico**	**1.78**	**50**	P	**Pn**	**02 30 29.7**	**+0.4**
CLUD				AML	AML		
	comp=N,323µm,0.5s						
CLUD				AML	AML		
	comp=E,268µm,0.3s						
CLUD				AML	AML		
	comp=N,315µm,0.5s						
CLUD				AML	AML		
	comp=E,256µm,0.5s						
CLUD				AML	AML		
	comp=N,315µm,1.5s						
CLUD				AML	AML		
	comp=N,323µm,1.5s						
ABTA	**Abfaltersbach**	**1.80**	**38**	*e*Pn	**Pn**	**02 30 31.3**	**+1.7**
	comp=N,24nm,0.2s,SNR=23						
ABTA				*e*Sg	**Sb**	**02 30 56.7**	**+2.5**
	comp=N,67nm,0.4s						
FVI	**Forni Avoltri**	**1.82**	**45**	P	**Pn**	**02 30 30.8**	**+1.0**
FVI				AML	AML		
	comp=N,353µm,0.5s						
FVI				AML	AML		
	comp=E,427µm,0.9s						
FUSE	**Fusea**	**1.82**	**53**	P	**Pn**	**02 30 29.9**	**+0.1**
OSSC	**Osservatorio P**	**1.82**	**172**	P	**Pn**	**02 30 29.9**	**+0.1**
OSSC				AML	AML		
	comp=E,220µm,1.0s						
OSSC				AML	AML		
	comp=N,286µm,0.7s						
OSSC				AML	AML		
	comp=E,170µm,1.1s						
OSSC				AML	AML		
	comp=E,170µm,0.9s						
OSSC				AML	AML		
	comp=N,286µm,1.3s						
OSSC				AML	AML		
	comp=N,152µm,1.1s						
OSSC				AML	AML		
	comp=E,220µm,1.0s						
CPGN	**Carpegna, Ital**	**1.83**	**146**	P	**Pb**	**02 30 34.1**	**+1.7**
PCP	**Piancastagn**	**1.86**	**246**	P	**Pn**	**02 30 32.3**	**+2.0**
PCP				AML	AML		
	comp=E,222µm,0.4s						
PCP				AML	AML		
	comp=E,222µm,1.6s						
PCP				AML	AML		
	comp=N,268µm,0.4s						
CRE	**Caprese Michel**	**1.86**	**156**	P	**Pn**	**02 30 31.4**	**+0.9**
CRE				AML	AML		
	comp=E,182µm,1.0s						
CRE				AML	AML		
	comp=N,214µm,1.5s						
CRE				AML	AML		
	comp=N,214µm,0.5s						
CRE				AML	AML		
	comp=E,182µm,1.0s						
CSNT	**Castellina Chi**	**1.88**	**172**	P	**Pn**	**02 30 30.4**	**-0.2**
CSNT				AML	AML		
	comp=E,116µm,0.4s						
CSNT				AML	AML		
	comp=N,183µm,0.6s						
SQTA	**Sankt Quirin**	**1.90**	**6**	*e*Pn	**Pn**	**02 30 33.2**	**+2.1**
	comp=N,9.8nm,0.2s,SNR=22						
SQTA				*e*Sg	**Sb**	**02 30 59.3**	**+2.2**
	comp=N,454nm,0.4s						
FUSIO	**Fusio**	**1.93**	**306**	P	**Pn**	**02 30 33.2**	**+1.7**
FUSIO				AML	AML		
	comp=E,292µm,0.6s						
FUSIO				AML	AML		
	comp=N,226µm,1.0s						
FUSIO				AML	AML		
	comp=N,226µm,1.0s						
FUSIO				AML	AML		
	comp=E,292µm,1.4s						
PE3	**Peglio**	**1.99**	**145**	P	**Pb**	**02 30 34.9**	**-0.1**
PE3				AML	AML		
	comp=N,702µm,0.4s						
PE3				AML	AML		
	comp=E,582µm,1.2s						
WTTA	**Wattenberg**	**2.00**	**14**	*e*Pn	**Pn**	**02 30 34.3**	**+1.9**
	comp=E,24nm,0.3s,SNR=14						
WTTA				*e*Sg	**Sb**	**02 31 02.3**	**+2.4**
	comp=E,237nm,0.5s						
PTCC	**Patocco-Chiusa**	**2.02**	**57**	P	**Pn**	**02 30 32.5**	**-0.1**
MOTA	**Moosalm**	**2.02**	**4**	*e*Pn	**Pn**	**02 30 35.4**	**+2.7**
	comp=E,10nm,0.2s						
MOTA				*e*Sg	**Sb**	**02 31 03.9**	**+3.4**
	comp=E,74nm,0.3s						
WATA	**Walderalm**	**2.06**	**13**	*e*Pn	**Pn**	**02 30 35.2**	**+2.0**
	comp=E,13nm,0.2s,SNR=12						
WATA				*e*Sg	**Sb**	**02 31 05.1**	**+3.5**
	comp=E,157nm,0.3s						
APEC	**Apecchio**	**2.07**	**148**	P	**Pn**	**02 30 34.0**	**+0.7**
DAVA	**Damuels**	**2.08**	**340**	*e*Pn	**Pb**	**02 30 36.7**	**-0.1**
	comp=E,1.7nm,0.1s,SNR=12						
DAVA				*i* Sn	**Sb**	**02 31 04.9**	**+2.6**
	comp=E,37nm,0.3s						
QLNO	**Quiliano**	**2.08**	**242**	P	**Pn**	**02 30 34.3**	**+0.9**
QLNO				AML	AML		
	comp=E,106µm,1.0s						
QLNO				AML	AML		
	comp=N,135µm,1.4s						
QLNO				AML	AML		
	comp=N,135µm,0.6s						
QLNO				AML	AML		
	comp=E,106µm,1.0s						
ZUGS	**Zugspitze, Sch**	**2.09**	**1**	*e*Pn	**Pb**	**02 30 36.7**	**-0.2**
ZUGS				*e*Sg	**Sb**	**02 31 06.1**	**+3.5**
DRE	**Drenchia**	**2.09**	**65**	P	**Pn**	**02 30 33.4**	**-0.1**
MPAG	**Monte Paganucc**	**2.15**	**141**	P	**Pn**	**02 30 34.6**	**+0.2**
RETA	**Reutte**	**2.16**	**357**	*i* Pn	**Pn**	**02 30 37.4**	**+2.9**
	comp=E,5.2nm,0.3s						
RETA				*e*Sn	**Sb**	**02 31 05.6**	**+1.1**
	comp=E,31nm,0.3s						
CADS	**Cadrg**	**2.17**	**65**	*i* Pn	**Pn**	**02 30 34.1**	**-0.5**

CADS				i		02 30 38.7	
CADS				i Sn	Sn	02 31 01.1	+0.1
CADS				e		02 31 07.8	
PART	Garmisch-Parte	2.17	4	ePn	Pn	02 30 37.4	+2.7
PART				eSg	Sb	02 31 06.8	+2.0
ACOM	Acomizza, Ital	2.19	55	P	Pn	02 30 35.8	+0.8
ACOM				AML	AML		
	comp=E,809µm,0.4s						
ACOM				AML	AML		
	comp=N,628µm,0.4s						
ACOM				AML	AML		
	comp=E,848µm,0.4s						
ACOM				AML	AML		
	comp=N,668µm,0.6s						
CANO	Canova, Maglio	2.21	240	P	Pn	02 30 35.9	+0.7
CANO				AML	AML		
	comp=E,542µm,1.6s						
CANO				AML	AML		
	comp=N,359µm,1.5s						
CANO				AML	AML		
	comp=N,359µm,0.5s						
CANO				AML	AML		
	comp=E,542µm,0.4s						
TRAV	Traversella	2.24	276	P	Pn	02 30 38.3	+2.7
TRAV				AML	AML		
	comp=E,398µm,0.3s						
TRAV				AML	AML		
	comp=N,450µm,0.7s						
MYKA	Terra Mystica	2.31	55	ePn	Pn	02 30 37.6	+1.1
	comp=N,1.3nm,0.2s,SNR=9.7						
MYKA				i Pg	Pb	02 30 42.6	+2.1
	comp=N,24nm,0.2s						
MYKA				eSg	Sb	02 31 12.9	+4.2
	comp=N,86nm,0.3s						
BNALP	Bannalp	2.32	313	P	Pn	02 30 39.8	+3.0
BNALP				AML	AML		
	comp=E,210µm,1.6s						
BNALP				AML	AML		
	comp=N,276µm,0.5s						
BNALP				AML	AML		
	comp=E,210µm,0.4s						
BNALP				AML	AML		
	comp=N,276µm,1.5s						
ARVD	Arcevia	2.34	141	P	Pn	02 30 37.1	+0.1
ARVD				AML	AML		
	comp=E,79µm,0.7s						
ARVD				AML	AML		
	comp=N,70µm,0.4s						
ARVD				AML	AML		
	comp=E,79µm,1.3s						
MURB	Monte Urbino	2.37	150	P	Pn	02 30 38.4	+1.0
MURB				AML	AML		
	comp=E,258µm,1.5s						
MURB				AML	AML		
	comp=N,243µm,0.2s						
MURB				AML	AML		
	comp=E,258µm,0.5s						
UBR	Ueberruh	2.42	347	ePg	Pg	02 30 46.6	+0.7
LESA	Schwarzleotal	2.43	30	ePn	Pn	02 30 40.6	+2.4
	comp=E,11nm,0.2s,SNR=12						
LESA				eSg	Sb	02 31 14.9	+2.8
	comp=E,41nm,0.2s						
FOSV	Fossato di Vic	2.43	146	P	Pn	02 30 38.3	+0.1
FOSV				AML	AML		
	comp=E,67µm,0.8s						
FOSV				AML	AML		
	comp=N,128µm,0.5s						
FOSV				AML	AML		
	comp=N,128µm,1.5s						
FOSV				AML	AML		
	comp=E,67µm,1.2s						
KBA	Koelnbreinsper	2.43	43	ePn	Pn	02 30 39.9	+1.5
	comp=E,5.9nm,0.2s,SNR=12						
KBA				ePg	Pb	02 30 45.1	+2.4
	comp=E,20nm,0.2s						
KBA				i Sg	Sg	02 31 17.0	-0.7
	comp=E,20nm,0.2s						
CASP	Castiglione de	2.54	181	P	Pn	02 30 39.3	-0.3
CASP				AML	AML		
	comp=N,66µm,0.6s						
CASP				AML	AML		
	comp=E,43µm,1.0s						
BE1	Monatshausen	2.59	5	ePn	Pn	02 30 42.4	+2.0
ENR	Entracque	2.72	247	P	Pn	02 30 42.6	+0.4
ENR				AML	AML		
	comp=N,95µm,0.5s						
ENR				AML	AML		
	comp=E,88µm,0.8s						
MRGE	Morge	2.74	281	P	Pb	02 30 46.5	-1.5
FDMO	Fiordimonte	2.77	145	P	Pn	02 30 43.2	+0.3
FDMO				AML	AML		
	comp=E,62µm,0.6s						
FDMO				AML	AML		
	comp=N,53µm,0.5s						
FDMO				AML	AML		
	comp=E,62µm,1.4s						
FDMO				AML	AML		
	comp=N,53µm,1.5s						
CSP1	Cessapalombo	2.78	143	P	Pn	02 30 43.3	+0.2
CSP1				AML	AML		
	comp=E,137µm,0.6s						
CSP1				AML	AML		
	comp=E,137µm,1.4s						
CSP1				AML	AML		
	comp=N,150µm,0.5s						
OBKA	Obir	2.80	64	i Pn	Pn	02 30 43.9	+0.6
	comp=N,1.9nm,0.1s						
OBKA				i Pg	Pb	02 30 50.7	+1.7
	comp=N,3.5nm,0.2s						
OBKA				eSg	Sb	02 31 27.4	+4.5
	comp=N,62nm,0.3s						
SBF	Sospel	2.88	241	ePn	Pn	02 30 46.7	+2.2
SBF				eSn	Sn	02 31 17.2	-1.4
	comp=N,49nm,0.3s						
MC2	Monte Cornacci	2.92	145	P	Pn	02 30 45.5	+0.4
LPG	La Plagne	2.94	275	ePn	Pn	02 30 45.8	+0.4
LPG	La Plagne	2.94	275	ePg	Pb	02 30 52.0	+0.7
LPG				eSn	Sn	02 31 19.2	-1.0
	comp=N,22nm,0.4s						
LPL	La Plagne	2.95	275	ePn	Pn	02 30 46.0	+0.5
LPL	La Plagne	2.95	275	ePg	Pb	02 30 52.5	+1.0
LPL				eSn	Sn	02 31 18.8	-1.7
	comp=N,20nm,0.5s						
NRCA	Norcia	2.96	147	P	Pn	02 30 45.6	+0.2
NRCA				AML	AML		
	comp=E,80µm,0.4s						
NRCA				AML	AML		
	comp=N,116µm,0.1s						
MF5	Montefalcone A	2.97	141	P	Pn	02 30 45.8	+0.1
MF5				AML	AML		
	comp=E,145µm,0.8s						
MF5				AML	AML		
	comp=N,148µm,0.5s						
MF5				AML	AML		
	comp=N,148µm,1.5s						
MF5				AML	AML		
	comp=E,145µm,1.2s						
MNTT	Montottone	2.98	139	P	Pn	02 30 46.0	+0.3
MNTT				AML	AML		
	comp=E,206µm,0.4s						
MNTT				AML	AML		
	comp=N,270µm,0.9s						
MNTT				AML	AML		
	comp=E,206µm,1.6s						
MMO1	Montemonaco	2.99	144	P	Pn	02 30 46.2	+0.3
MBDF	Montbardon	3.00	260	ePn	Pn	02 30 45.1	-1.0
MBDF				eSn	Sn	02 31 19.0	-2.6
MBDF				eSg	Sb	02 31 31.1	+2.5
	comp=E,31nm,0.6s						
GAVE	Gavelli	3.00	151	P	Pn	02 30 46.0	-0.1
BIOA	Bad Ischl, Aus	3.02	38	ePn	Pn	02 30 47.9	+1.6
	comp=E,4.8nm,0.3s						
BIOA				eSg	Sg	02 31 36.1	-0.5
	comp=E,30nm,0.4s						
KW1	Garching a.d.	3.02	22	ePg	Pg	02 30 58.2	+0.8
BOJS	Bojanci	3.06	85	AML	AML		
	comp=N,480µm,1.4s						
BOJS				AML	AML		
	comp=E,308µm,0.8s						
PGF	Pioggiola	3.10	207	ePn	Pn	02 30 49.5	+2.0
PGF				eSn	Sn	02 31 22.4	-1.7
	comp=E,13nm,0.3s						
SOKA	Soboth	3.17	63	i Pn	Pn	02 30 49.0	+0.5
	comp=E,0.5nm,0.1s,SNR=5.8						
SOKA				ePg	Pb	02 30 57.2	+1.9
	comp=E,3.7nm,0.2s						
SOKA				eSg	Sb	02 31 37.5	+3.9
	comp=E,22nm,0.4s						
RM33	Pellescritta (	3.27	149	P	Pn	02 30 50.0	+0.1
RM33				AML	AML		
	comp=E,64µm,1.6s						
RM33				AML	AML		
	comp=N,59µm,0.8s						
RM33				AML	AML		
	comp=E,64µm,0.4s						
TERO	Teramo	3.33	143	P	Pn	02 30 50.9	+0.3
TERO				AML	AML		
	comp=N,63µm,0.7s						
TERO				AML	AML		
	comp=N,63µm,1.3s						
TERO				AML	AML		
	comp=E,58µm,0.4s						
MOA	Molln	3.42	41	i Pn	Pn	02 30 53.3	+1.5
	comp=E,5.6nm,0.2s,SNR=6.1						
MOA				i Sn	Sn	02 31 31.3	-0.5
	comp=E,6.1nm,0.2s						
MOA				i Sg	Sg	02 31 47.2	-2.1
	comp=E,5.8nm,0.3s						
ORIF	Oris-en-Rattie	3.58	265	ePn	Pn	02 30 55.8	+1.7
ORIF				eSn	Sn	02 31 33.0	-3.0
	comp=E,7.5nm,0.3s						
CABF	La Chapelle	3.60	293	ePn	Pn	02 30 55.4	+1.1
CABF				eSn	Sn	02 31 34.3	-2.0
	comp=E,9.5nm,0.4s						
ARSA	Arzberg	3.73	57	i Pn	Pn	02 30 56.3	+0.3
	comp=E,5.3nm,0.3s						
LMR	La Mourre	3.73	239	ePn	Pn	02 30 55.8	-0.3
LMR				eSn	Sn	02 31 36.4	-3.1
	comp=E,12nm,0.4s						
HINF	Hinteralfeld	3.75	313	ePn	Pn	02 30 57.1	+0.8
HINF	Hinteralfeld	3.75	313	ePg	Pb	02 31 08.9	+3.9
HINF				eSn	Sn	02 31 37.4	-2.5
	comp=E,11nm,0.2s						
CDF	Champ du Feu	3.97	322	ePn	Pn	02 31 00.3	+0.9
CDF	Champ du Feu	3.97	322	ePg	Pg	02 31 13.8	-1.6
CDF				eSn	Sn	02 31 43.7	-1.7
	comp=E,15nm,0.3s						
CDF				eSg	Sg	02 32 05.7	-1.1
	comp=E,21nm,0.5s						
GEC2	GERESS Array S	4.00	27	ePn	Pn	02 31 00.2	+0.3
SMRF	Simiane la Rot	4.04	252	ePn	Pn	02 31 01.2	+0.9
SMRF				eSn	Sn	02 31 46.4	-0.8
	comp=E,8.0nm,0.5s						
WET	Wettzell	4.04	19	ePn	Pn	02 31 01.4	+1.0
HAU	Haudompre	4.13	312	ePn	Pn	02 31 02.5	+1.0
HAU	Haudompre	4.13	312	ePg	Pg	02 31 16.7	-1.8
HAU				eSn	Sn	02 31 46.6	-2.6
	comp=E,47nm,0.3s						
CKRC	Cesky Krumlov	4.19	32	eSG	Sg	02 32 10.4	-3.7
	comp=E,8.5nm,0.3s						
KHC	Kasperske Hory	4.21	25	ePN	Pn	02 31 03.3	+0.6
KHC				ePG	Pb	02 31 13.3	+0.3
KHC				eSN	Sn	02 31 52.0	+0.6
KHC				eSG	Sg	02 32 12.3	-2.5
	comp=E,16nm,0.4s						
CONA	Conrad Observa	4.29	51	i Pn	Pn	02 31 04.8	+1.0
	comp=E,1.6nm,0.2s						
CONA				i Sn	Sn	02 31 54.4	+1.1
	comp=E,1.4nm,0.2s						
RONA	Rosalia, Austr	4.41	56	i Pn	Pn	02 31 05.8	+0.4
	comp=E,1.3nm,0.1s						
RONA				i Sn	Sn	02 31 56.4	+0.2
	comp=E,2.1nm,0.3s						
VIVF	Saint-Julien-l	4.44	266	ePn	Pn	02 31 05.2	-0.7
VIVF				eSn	Sn	02 31 54.1	-3.0
	comp=E,2.4nm,0.3s						
ROTZ	Rotzenmuhle	4.53	11	ePn	Pn	02 31 06.7	-0.3
ZVC	Zvikov	4.68	27	ePN	Pn	02 31 11.0	+2.0
ZVC				ePG	Pb	02 31 21.6	+0.8
MANZ	Manzenberg	4.73	9	ePn	Pn	02 31 09.9	+0.1
PAGF	Fort de Pagny	4.80	314	ePn	Pn	02 31 12.1	+1.4
PAGF	Fort de Pagny	4.80	314	ePg	Pg	02 31 28.6	-2.7
PAGF				eSn	Sn	02 32 02.5	-3.2
	comp=E,3.8nm,0.2s						
SFTF	Sexfontaines	4.96	308	ePn	Pn	02 31 14.1	+1.2
SFTF				eSn	Sn	02 32 06.9	-2.7
	comp=E,6.1nm,0.2s						
TREC	Trest	5.04	36	ePN	Pn	02 31 14.5	+0.4
SMF	Signal de Mont	5.10	287	ePn	Pn	02 31 16.0	+1.1
SMF				eSn	Sn	02 32 10.3	-2.9
	comp=E,6.3nm,0.2s						
MEZF	Maizieres J'vi	5.12	310	eP	Pn	02 31 18.4	+3.3
MEZF				eSn	Sn	02 32 11.6	-2.0
	comp=E,4.2nm,0.3s						
SAVF	Savonnieres en	5.15	312	ePg	Pg	02 31 34.6	-3.4
SAVF				eSn	Sn	02 32 10.3	-4.0
	comp=E,4.8nm,0.3s						
LASF	Ste Croix	5.18	259	ePn	Pn	02 31 14.6	-1.4
LASF				eSn	Sn	02 32 13.1	-2.2
	comp=E,5.3nm,0.3s						
LOR	Lormes	5.26	294	ePn	Pn	02 31 17.6	+0.6
LOR				eSn	Sn	02 32 13.2	-3.9
	comp=E,10nm,0.2s						
PRU	Pruhonice	5.27	26	eSG	Sg	02 32 45.7	-2.7
KRUC	Moravsky	5.28	43	ePN	Pn	02 31 17.2	-0.1
KRUC				eSG	Sg	02 32 48.4	-0.5
MODS	Modra-Piesok	5.32	53	ePN	Pn	02 31 18.5	+0.6
MODS				eSG	Sg	02 32 47.9	-2.3
SSF	Saint Saulge	5.42	291	ePn	Pn	02 31 19.4	+0.1
SSF	Saint Saulge	5.42	291	ePg	Pb	02 31 39.2	+5.6
SSF				eSn	Sn	02 32 16.9	-4.3
	comp=E,1.7nm,0.2s						
AVF	Avril sur Loir	5.46	288	ePn	Pn	02 31 20.4	+0.6
AVF				eSn	Sn	02 32 17.4	-4.6
	comp=E,3.0nm,0.3s						
HSKC	Hora Svate Kat	5.55	17	eSG	Sg	02 32 54.1	-3.3
VRAC	Vranov	5.55	42	ePN	Pn	02 31 20.9	-0.1
VRAC				eSG	Sg	02 32 55.2	-2.2
BGF	Bois d'Agland	5.76	285	ePn	Pn	02 31 23.9	0.0
BGF				eSn	Sn	02 32 24.1	-5.3
	comp=E,6.2nm,0.3s						
DBRK	Dubrovnik	5.86	114	Sg	Sg	02 33 05.4	-1.9
HYF	Humbligny	6.05	292	eP	Pn	02 31 31.3	+3.4
TCF	Toulx Ste Croi	6.16	282	ePn	Pn	02 31 29.5	+0.1
TCF				eSn	Sn	02 32 36.0	-3.3
	comp=E,3.1nm,0.4s						
KRLC	Kraliky	6.18	38	eSG	Sg	02 33 15.6	-2.2
DPC	Dobruska-Polom	6.20	34	eSG	Sg	02 33 14.3	-4.1
CAF	Calviac	6.27	269	eP	Pn	02 31 33.9	+2.9
CAF				eSn	Sn	02 32 36.4	-5.7
	comp=E,0.7nm,0.2s						
OSTC	Ostas	6.33	32	eSG	Sg	02 33 19.6	-2.8
BAIF	Baives	6.54	319	ePn	Pn	02 31 36.3	+1.6
BAIF				eSn	Sn	02 32 46.0	-2.7
	comp=E,2.4nm,0.4s						
RJF	Les Rejaudoux	6.62	273	eP	Pn	02 31 40.7	+4.9
RJF				eSn	Sn	02 32 46.9	-3.9
	comp=E,0.3nm,0.2s						
MFF	Saint Martin d	7.81	283	ePn	Pn	02 31 52.4	+0.4
MFF				eSn	Sn	02 33 16.5	-3.4
	comp=E,1.4nm,0.4s						
EPF	Esparros	7.94	257	ePn	Pn	02 31 52.7	-1.2
FLN	La Foliniere	8.50	298	ePn	Pn	02 32 01.1	-0.4
FLN				eSn	Sn	02 33 29.4	-7.5
	comp=E,2.3nm,0.3s						
GRR	Gorron	8.63	295	ePn	Pn	02 32 03.1	-0.1
GRR				eSn	Sn	02 33 33.3	-6.6
	comp=E,1.7nm,0.3s						
SGMF	Saint Gilles	9.69	292	ePn	Pn	02 32 18.3	+0.5
SGMF				eSn	Sn	02 34 00.5	-5.5
	comp=E,2.7nm,0.3s						
QUIF	Quistinic	10.03	290	ePn	Pn	02 32 22.3	-0.1
QUIF				eSn	Sn	02 34 07.6	-6.6
	comp=E,2.1nm,0.3s						

SJA ***07*** *02:34:04.4±0.7, 24.°08S×67.°05W, h214^{km}, ML4.5, MW4.2*

NEIC ***07*** *02:34:05.8±2.4, 24.°10S±0.°06×66.°99W±0.°04, h182^{km}±6^{km}, mb4.3/14, ML4.5(GUC), Error ellipse: s-maj=10.1km s-min=3.4km az=154.0*

IDC ***07*** *02:34:05.8±1.9, 24.°06S×66.°93W, h177^{km}±17^{km}, mb3.5/9, mbtmp4.0/14, MS3.5/1, Error ellipse: s-maj=18.9km s-min=14.0km az=94.0*

GUC ***07*** *02:34:06.7±0.7, 24.°11S×67.°13W, h197^{km}±7^{km}, ML4.5*

VAO ***07*** *02:34:07.0±1.0, 23.°97S×66.°96W, h195^{km}±6^{km}, mb4.3, Presumed earthquake*

ISC 07 02:34:05.9±0.6**, 24.°07S**±0.°03×**67.°09W**±0.°03**, h188**^{km}±6^{km}**, n144, σ1^{s}.32**/162**, mb4.1**/13**, 15C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALTA		0.70	103	eP	Pn	02 34 22.3	-11
SALTA				eP	Pn	02 34 24.5	-8.7
SALTA				eP	Pn	02 34 34.2	+1.1
AF01	San Pedro de A	1.50	318		Pn	02 34 40.7	+1.8
AF01	San Pedro de A	1.50	318	eP	Pn	02 34 40.4	+1.5
AF01				IAML		02 35 13.6	
	comp=N,2µm,0.2s						
AF01	San Pedro de A	1.50	318	eP	Pn	02 34 40.7	+1.8
AF01				eS	Sn	02 35 07.5	+3.1
AF01				IAML		02 35 11.0	
	comp=Z,870nm,0.2s						
SLA	San Lorenzo	1.58	115	⇓eP	Pn	02 34 40.7	+1.2
SLA				eS	Sn	02 35 06.6	+1.0
SLA	San Lorenzo	1.58	115	eP	Pn	02 34 40.7	+1.2
SLA				eS	Sn	02 35 01.4	-4.2
HJA	Humahuaca	1.76	61	eP	Pn	02 34 42.5	+0.9
HJA				eS	Sn	02 35 11.1	+2.1
AZAP	Zapla	1.85	95	eP	Pn	02 34 43.0	+0.7
FSA	Cafayete	2.27	154	eP	Pn	02 34 47.6	+1.0
FSA				eS	Sn	02 35 13.3	-5.2
YJA	Yavi	2.38	38	eP	Pn	02 34 48.7	+0.5
YJA	Yavi	2.38	38	eP	Pn	02 34 49.6	+1.5
YJA				eS	Sn	02 35 21.7	+0.7
GO02	Mina Guanaco	2.53	244		Pn	02 34 50.8	+1.2
GO02	Mina Guanaco	2.53	244	⇑iP	Pn	02 34 50.8	+1.2
GO02				eS	Sn	02 35 24.3	+0.6
GO02	Mina Guanaco	2.53	244	eP	Pn	02 34 50.9	+1.2
GO02				eS	Sn	02 35 24.7	+0.9
GO02				IAML		02 35 25.7	
	comp=Z,2µm,0.1s						
PB06	IPOC Station P	2.66	300		Pn	02 34 52.1	+1.1
PB06	IPOC Station P	2.66	300	⇑iP	Pn	02 34 52.1	+1.1
PB06				eS	Sn	02 35 25.6	-0.6
PB06	IPOC Station P	2.66	300	eP	Pn	02 34 52.1	+1.1
PB06				eS	Sn	02 35 25.8	-0.4
PB06				IAML		02 35 28.1	
	comp=Z,3µm,0.2s						
PB09	IPOC Station P	3.01	318		Pn	02 34 56.5	+1.2
PB09	IPOC Station P	3.01	318	⇑eP	Pn	02 34 56.5	+1.2
PB09				eS	Sn	02 35 33.9	+0.1
PB09				IAML		02 35 35.1	
	comp=N,1µm,0.5s						
PB09	IPOC Station P	3.01	318	eP	Pn	02 34 56.5	+1.2
PB09				eS	Sn	02 35 34.4	+0.6
PB09				IAML		02 35 36.5	
	comp=Z,993nm,0.8s						
PB14	IPOC Station P	3.08	259		Pn	02 34 56.6	+0.5
PB14	IPOC Station P	3.08	259	⇑eP	Pn	02 34 56.6	+0.5
PB14				IAML		02 35 36.8	
	comp=N,319nm,0.3s						
PB14	IPOC Station P	3.08	259	eP	Pn	02 34 56.6	+0.5
PB14				eS	Sn	02 35 34.9	-0.4
PB14				IAML		02 35 38.2	
	comp=Z,398nm,0.5s						
PB05	IPOC Station P	3.11	292		Pn	02 34 56.8	+0.4
PB05	IPOC Station P	3.11	292	⇑eP	Pn	02 34 56.8	+0.4
PB05				IAML		02 35 38.6	
	comp=E,1µm,0.3s						
PB05	IPOC Station P	3.11	292	eP	Pn	02 34 56.8	+0.4
PB05				eS	Sn	02 35 34.8	-1.0
PB05				IAML		02 35 39.8	
	comp=Z,625nm,0.4s						
AHML	Horco Molle	3.13	150	⇑eP	Pn	02 34 47.3	-9.2
AHML	Horco Molle	3.13	150	eP	Pn	02 34 42.9	-14
AHML				eS	Sn	02 35 25.7	-11
PB03	IPOC Station P	3.17	309		Pn	02 34 57.7	+0.5
PB03	IPOC Station P	3.17	309	eP	Pn	02 34 57.8	+0.5
PB03				eS	Sn	02 35 35.9	-1.4
PB03	IPOC Station P	3.17	309	eP	Pn	02 34 57.6	+0.4
PB03				eS	Sn	02 35 36.0	-1.2
PB03				IAML		02 35 37.1	
	comp=Z,2µm,0.4s						
PB10	IPOC Station P	3.23	279		Pn	02 34 58.5	+0.8
PB10	IPOC Station P	3.23	279	⇑iP	Pn	02 34 58.5	+0.8
PB10				eS	Sn	02 35 37.2	-0.9
PB10	IPOC Station P	3.23	279	eP	Pn	02 34 58.5	+0.8
PB10				eS	Sn	02 35 37.0	-1.1
PB10				IAML		02 35 39.3	
	comp=Z,603nm,0.2s						
AC02	Maricunga	3.32	213		Pn	02 35 00.5	+1.2
AC02	Maricunga	3.32	213	⇑iP	Pn	02 35 00.4	+1.2
AC02				eS	Sn	02 35 41.8	+0.9
AC02				IAML		02 35 49.0	
	comp=E,265nm,0.3s						
AC02	Maricunga	3.32	213	eP	Pn	02 34 59.7	+0.5
AC02				eS	Sn	02 35 42.9	+1.9
PB07	IPOC Station P	3.48	312		Pn	02 35 01.4	+0.4
PB07	IPOC Station P	3.48	312	eP	Pn	02 35 01.1	+0.2
PB07				eS	Sn	02 35 41.6	-2.4
PB07				IAML		02 35 43.1	
	comp=Z,1µm,0.5s						
PB01	IPOC Station P	3.74	323		Pn	02 35 04.2	+0.1
PB01	IPOC Station P	3.74	323	eP	Pn	02 35 04.1	0.0
PB01	IPOC Station P	3.74	323	eP	Pn	02 35 04.3	+0.1
PB01				eS	Sn	02 35 48.2	-1.5
PB01				IAML		02 35 52.7	
	comp=Z,494nm,0.2s						
PB02	IPOC Station P	3.77	316		Pn	02 35 04.4	-0.1
PB02	IPOC Station P	3.77	316	⇑eP	Pn	02 35 04.5	-0.1
PB02	IPOC Station P	3.77	316	eP	Pn	02 35 04.6	+0.1
PB02				eS	Sn	02 35 48.5	-1.9
PB02				IAML		02 35 57.4	
	comp=Z,2µm,0.4s						
AC01	Pan de Azucar	3.80	236		Pn	02 35 04.3	-0.4
AC01	Pan de Azucar	3.80	236	⇑eP	Pn	02 35 04.3	-0.4
AC01	Pan de Azucar	3.80	236	eP	Pn	02 35 04.3	-0.4
AC01				eS	Sn	02 35 49.4	-1.4
AC01				IAML		02 35 50.5	
	comp=Z,332nm,0.7s						
TINO	Tinogasta	4.00	186	eP	Pn	02 35 09.3	+2.0
PATCX	Punta Patache	4.30	318		Pn	02 35 11.0	-0.2
PATCX	Punta Patache	4.30	318	eP	Pn	02 35 10.6	-0.6
PATCX	Punta Patache	4.30	318	eP	Pn	02 35 10.7	-0.5
PATCX				eS	Sn	02 36 02.7	+0.3
PATCX				IAML		02 36 04.2	
	comp=Z,404nm,0.3s						
PB08	IPOC Station P	4.35	333		Pn	02 35 12.9	+0.8
PB08	IPOC Station P	4.35	333	eP	Pn	02 35 13.0	+0.8
PB08				eS	Sn	02 36 03.9	-0.2
AC06	Mina Casimiro	4.41	221		Pn	02 35 11.7	-0.7
AC06	Mina Casimiro	4.41	221	⇑eP	Pn	02 35 11.6	-0.7
CYA	Choya	4.50	165	eP	Pn	02 35 14.7	+1.0
CYA				eS	Sn	02 36 06.1	-0.9
GO03	Copiapo	4.51	218		Pn	02 35 13.0	-0.8
GO03	Copiapo	4.51	218	eP	Pn	02 35 12.9	-0.8
GO03	Copiapo	4.51	218	IAML		02 36 08.1	
	comp=Z,344nm,0.3s						
TA01	Diego Aracena	4.51	320	eP	Pn	02 35 12.6	-1.2
TA01	Diego Aracena	4.51	320	eS	Sn	02 36 03.0	-4.1
TA01				IAML		02 36 14.0	
	comp=Z,234nm,0.4s						
TA02	Huaiquique	4.72	323	eP	Pn	02 35 16.0	-0.4
GO01	Chusmiza	4.80	336	eS	Sn	02 36 14.2	-0.2
GO01				IAML		02 36 18.9	
	comp=Z,176nm,0.3s						
PB11	IPOC Station P	4.91	330	eS	Sn	02 36 06.9	-10
PB11				IAML		02 36 16.8	
	comp=Z,260nm,0.2s						
ACLC	CERRO LA CRUZ	5.34	179	eP	Pn	02 35 24.7	+0.2
AC04	Llanos de Chal	5.46	220		Pn	02 35 24.3	-1.6
LCO	Las Campanas	5.89	213		Pn	02 35 30.3	-1.5
PB12	IPOC Station P	6.21	330		Pn	02 35 34.2	-1.7
CFA	Coronel Fontan	7.58	187	P	Pn	02 35 52.9	-0.7
	comp=Z,1.5nm,0.4s,baz=51,slow=19,SNR=27						
CFA				S	Sn	02 37 15.0	-4.0
	comp=Z,5.1nm,0.3s,baz=288,slow=18,SNR=8.5						
LPAZ	La Paz	7.80	353	P	Pn	02 35 57.8	+0.5
	comp=Z,8.9nm,0.4s,baz=149,slow=7.4,SNR=62						
LPAZ				S	Sn	02 37 22.0	-3.4
	comp=Z,4.4nm,0.6s,baz=67,slow=13,SNR=4.9						
LPAZ	La Paz	7.80	353	eP	Pn	02 35 57.3	+0.1
MURT	Porto Murtinho	9.06	77	eP	Pn	02 36 12.4	-0.7
CPUP	Villa Florida	9.12	106	P	Pn	02 36 12.5	-1.3
	comp=Z,0.9nm,0.6s,baz=144,slow=10,SNR=6.9						
CPUP	Villa Florida	9.12	106		Pn	02 36 12.6	-1.2
PSAL	Palomas, Salto	10.93	132	eP	Pn	02 36 37.1	-0.2
PTLB	Pontes e Lacer	11.38	43		Pn	02 36 41.0	-2.2
PTLB	Pontes e Lacer	11.38	43	eP	Pn	02 36 41.3	-1.9
VILB	Vilhena	12.84	32	P	Pn	02 37 02.6	+0.8

VILB	Vilhena	12.84	32	eP	Pn	02 37 02.2	+0.4
BI02	San Fabin de	13.06	195		Pn	02 36 56.8	-7.7
PP1B	Ponte de Pedra	13.10	63	eP	Pn	02 37 03.1	-2.0
SALV	Santo Antonio	13.44	55	eP	Pn	02 37 05.9	-3.4
CPSB	Cacapava Do Su	13.68	120	eP	Pn	02 37 13.0	+0.8
PTGB	Pitanga	13.70	96	eP	Pn	02 37 12.7	-0.1
C2SB	Chapadao do Su	14.28	71	eP	Pn	02 37 20.4	+0.6
TRQA	Tornquist	14.61	164	P	Pn	02 37 22.7	-1.1
PDRB	Porto dos Gac	15.82	40	eP	Pn	02 37 37.7	-1.1
FRTB	Fartura	16.07	91	eP	P	02 37 41.2	-0.2
ITRB	Iturama	16.12	78	eP	Pn	02 37 42.3	0.0
ARAG	Araguaiana, MT	16.59	63	eP	P	02 37 46.8	-0.3
PLCA	Paso Flores	16.87	189	P	Pn	02 37 51.1	0.0
	comp=Z,2.8nm,0.6s,baz=13,slow=17,SNR=6.4						
PLCA	Paso Flores	16.87	189	P	Pn	02 37 51.3	+0.1
PLCA				IAmb	IAmb	02 37 59.3	
	comp=Z,5.6nm,0.8s						
CLDB	Colider	16.96	41	eP	P	02 37 50.5	-0.7
BB19B	Bebedouro	17.40	84	eP	P	02 37 56.7	+0.6
RCLB	Rio Claro- Sao	18.05	89	eP	P	02 38 02.5	-0.6
VAO	Valinhos	18.48	91	P	P	02 38 07.3	-0.6
VAO	Valinhos	18.48	91	eP	P	02 38 06.9	-1.0
IPMB	Ipameri, GO	18.62	75	eP	P	02 38 09.2	-0.3
SNDB	Serra Nova Dou	19.22	54	eP	P	02 38 14.3	-1.5
LL02	Futaleuf	19.47	190	P	Pn	02 38 21.6	-0.1
BDFB	Brasilia	19.78	68	P	P	02 38 21.5	-0.5
	comp=Z,50nm,0.8s,baz=242,slow=11,SNR=74						
BDFB	Brasilia	19.78	68	P	P	02 38 22.0	-0.1
PMNB	Patos De Minas	20.00	78	eP	P	02 38 23.2	-1.1
TEFE	Tefe	20.58	7	eP	P	02 38 29.9	-0.5
MACA	Manacapuru-AM	21.69	18	P	P	02 38 40.7	-1.3
MACA				IAmb	IAmb	02 39 01.6	
	comp=Z,18nm,1.4s						
ITTB	Itaituba	22.44	31	eP	P	02 38 47.6	-1.7
DIAM	Diamantina, MG	22.56	80	eP	P	02 38 49.6	-1.0
JANB	Januaria	23.23	71	eP	P	02 38 55.6	-0.9
SMTB	Santa Maria do	24.00	54	eP	P	02 39 02.9	-0.6
SDBA	SAO DESIDERIO	24.01	65	eP	P	02 39 02.8	-0.9
MAL2	Monte Alegre,	25.23	32	P	P	02 39 12.8	-1.8
MAL2				IAmb	IAmb	02 39 28.9	
	comp=Z,8.3nm,0.8s						
GUA01	Guaratinga, BA	26.61	79	eP	P	02 39 26.3	-0.8
CMC01	Camacan, BA	27.32	77	eP	P	02 39 32.3	-1.1
NBIT	Itapeh - BA	27.56	76	eP	P	02 39 35.0	-0.5
PCRV	Puerto La Cruz	34.12	4	LR	LR	02 54 15.1	
	comp=Z,77nm,21.7s,slow=36						
NBPV	Pedro Velho	35.20	65	eP	P	02 40 41.6	-0.7
VNA3	Neumayer Olymp	57.11	161	⇑P	P	02 43 33.3	+1.1
	comp=Z,2.6nm,0.7s						
VNA2	Neumayer--Watz	57.68	160	⇑P	P	02 43 37.8	+1.6
	comp=Z,3.2nm,0.7s,baz=283,slow=7.0						
SNAA	Sanae	59.31	161	⇑P	P	02 43 49.3	+1.7
	comp=Z,40nm,0.7s						
SNAA	Sanae	59.31	161	P	P	02 43 48.8	+1.3
	comp=Z,1.7nm,0.8s,baz=237,slow=13,SNR=6.0						
	comp=Z,1.7nm,0.8s						
SNAA	Sanae	59.31	161	P	P	02 43 47.0	-0.5
SNAA				IAmb	IAmb	02 43 49.6	
	comp=Z,2.0nm,0.8s						
TROLL	Troll, Antarti	61.03	161	⇑P	P	02 43 59.9	+0.7
	comp=Z,77nm,0.4s						
TXAR	Lajitas Array	63.69	325	P	P	02 44 19.1	+1.7
	comp=Z,0.2nm,0.7s,baz=152,slow=5.7,SNR=2.5						
	comp=Z,0.2nm,0.7s						
VHRN	Van Horn	65.53	324	P	P	02 44 31.3	+1.9
QSPA	South Pole Qui	66.14	180	P	P	02 44 34.2	+1.4
	comp=Z,2.6nm,0.5s,baz=197,slow=0.6,SNR=16						
	comp=Z,2.6nm,0.5s						
QSPA	South Pole Qui	66.14	180	IAmb	IAmb	02 44 35.4	
	comp=Z,3.4nm,0.6s						
DBIC	Dimbokro	67.90	72	P	P	02 44 44.8	+0.2
	comp=Z,2.2nm,0.5s,baz=286,slow=10.0,SNR=4.3						
	comp=Z,2.2nm,0.5s						
DBIC	Dimbokro	67.90	72	IAmb	IAmb	02 44 48.1	
	comp=Z,21nm,1.4s						
TORD	Torodi Ar. Bea	76.67	69	P	P	02 45 36.4	-0.1
	comp=Z,0.9nm,0.5s,baz=289,slow=4.2,SNR=17						
	comp=Z,0.9nm,0.5s						
TORD	Torodi Ar. Bea	76.67	69	IAmb	IAmb	02 45 36.5	
	comp=Z,1.0nm,0.8s						
PDAR	Pinedale Array	77.17	329	P	P	02 45 40.5	+1.5
	comp=Z,0.2nm,0.5s,baz=135,slow=8.3,SNR=4.0						
	comp=Z,0.2nm,0.5s						
BOSA	Boshof	80.77	117	P	P	02 45 59.4	+0.5
	comp=Z,0.7nm,0.4s,baz=249,slow=5.2,SNR=7.5						
	comp=Z,0.7nm,0.4s						
BOSA	Boshof	80.77	117	IAmb	IAmb	02 46 20.0	
	comp=Z,9.9nm,1.3s						
PLID	Pearl Lake	81.99	327	P	P	02 46 07.1	+2.2
PLID				IAmb	IAmb	02 46 07.8	
	comp=Z,1.9nm,0.7s						
ESDC	Sonseca Array	86.50	44	P	P	02 46 27.6	+0.1
	comp=Z,0.3nm,0.9s,baz=238,slow=7.4,SNR=4.2						
	comp=Z,0.3nm,0.9s						
YKA	Yellowknife Ar	94.16	340	P	P	02 47 03.9	+1.3
	comp=Z,0.7nm,0.9s,baz=77,slow=12,SNR=6.8						
	comp=Z,0.7nm,0.9s						
ASAR	Alice Springs	128.36	205	PKP	PKiKP	02 52 51.6	+0.2
	comp=Z,0.9nm,0.7s,baz=148,slow=2.4,SNR=8.8						
WRA	Warramunga Arr	131.53	207	PKP	PKiKP	02 52 58.0	+0.2
	comp=Z,0.7nm,0.5s,baz=156,slow=1.7,SNR=8.8						
KURK	Kurchatov	142.48	36		PKPdf	02 53 14.9	-1.0
KURBB	Kurchatov Arra	142.48	36	PKP	PKPdf	02 53 14.9	-1.0
	comp=Z,0.2nm,0.2s,baz=264,slow=0.9,SNR=2.3						
ZALV	Zalesovo Beam	143.49	28	PKP	PKPbc	02 53 16.5	+1.0
	comp=Z,0.8nm,0.3s,baz=291,slow=4.0,SNR=2.1						
MKAR	Makanchi Array	146.63	40	PKPbc	PKPab	02 53 26.7	0.0
	comp=Z,0.7nm,0.4s,baz=336,slow=2.4,SNR=10						
PZH	PanZhiHua	169.60	74	PKP	PKPdf	02 53 49.3	-2.1

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*JMA **07** 02:36:40.7±0.2, 24°N±3°×122°.8E±0°.6, h91^{km}±1^{km}, MV2.2/10, NW OFF ISHIGAKIJIMA IS*

*TAP **07** 02:36:41.0, 24°.43N×122°.75E, h98^{km}, ML2.6, B*

ISC 07 02:36:40.3±1.5**, 24°.44N**±0°.05×**122°.83E**±0°.03**, h98**^{km}±9^{km}**, n64,** σ0^{s}.**77**/110**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.10	81	P	Pn	02 36 53.7	-0.2
JYNG				S	Sn	02 37 03.2	-0.9
YOJ	Yonaguni jima	0.16	81	P	Pn	02 36 55.2	+1.2
YOJ				S	Sn	02 37 05.3	+1.0
YOJ	Yonaguni jima	0.16	81	P	Pn	02 36 53.8	-0.2
EOS3	EOS3	0.49	253	i P	Pn	02 36 56.2	+0.7
EOS3				i S	Sn	02 37 08.2	+1.2
EOS2	EOS2	0.55	268	P	Pn	02 36 56.1	+0.1
EOS2				S	Sn	02 37 08.1	+0.3
EOS4	EOS4	0.57	236	i P	Pn	02 36 56.2	+0.4
EOS4				i S	Sn	02 37 07.9	+0.4
IRIF	Iriomote-Funau	0.82	97	P	Pn	02 36 58.7	+0.1
IRIF				S	Sn	02 37 12.1	-0.3
ESAO	Su ao	0.91	279	eP	Pn	02 36 59.9	+0.4
ENA	Nanau	1.00	270	P	Pn	02 37 00.6	+0.2
ENA				eS	Sn	02 37 14.7	-0.9
TIPB	Shuangxi	1.06	300	eP	Pn	02 37 01.1	-0.1
TIPB				eS	Sn	02 37 16.2	-0.8
JKRS	Kuro-shima	1.09	100	P	Pn	02 37 02.2	+0.7
JKRS				S	Sn	02 37 18.0	+0.5
SXI1	Grass Mountain	1.09	307	eP	Pn	02 37 01.9	+0.3
SXI1				eS	Sn	02 37 16.5	-1.1
TWE	Neicheng	1.10	285	eP	Pn	02 37 01.4	-0.1
TWE				eS	Sn	02 37 16.7	-1.0
ETL	Fush Village	1.14	256	eP	Pn	02 37 01.8	-0.3
ETL				eS	Sn	02 37 18.3	-0.2
NWF	Wu-fen Shan	1.15	304	eP	Pn	02 37 02.0	-0.2
WFSB	Wu-fen Shan	1.15	304	eP	Pn	02 37 02.2	+0.1
WFSB				eS	Sn	02 37 18.3	-0.4
NACB	Ninganchiao	1.16	257	i P	Pn	02 37 02.0	-0.3
NACB				S	Sn	02 37 17.8	-1.2
ENTT	Nioudou	1.17	280	eP	Pn	02 37 02.9	+0.4
ENTT				eS	Sn	02 37 18.7	-0.5
FUSB	Fushanzhiwuyua	1.18	286	eP	Pn	02 37 02.6	0.0
LATG	Datong	1.20	275	eP	Pn	02 37 02.9	+0.1
LATG				eS	Sn	02 37 19.9	0.0
JIJ	Ishigaki jima	1.20	93	P	Pn	02 37 02.9	+0.2
JIJ				S	Sn	02 37 18.6	-1.0
ETLH	Xiulin Townshi	1.25	260	eP	Pn	02 37 03.8	+0.3
ETLH				eS	Sn	02 37 20.1	-1.0
NWLT	Wulai	1.26	286	eP	Pn	02 37 03.7	+0.2
NWLT				eS	Sn	02 37 20.1	-0.9
ETM	Tongmen	1.31	249	eP	Pn	02 37 03.9	-0.2
NNSB	Datong	1.32	270	eP	Pn	02 37 04.4	+0.1
NNSB				eS	Sn	02 37 21.9	-0.7
NNSH	Datong	1.32	270	eP	Pn	02 37 04.2	-0.1
TATO	Taipei	1.34	294	eP	Pn	02 37 04.1	-0.3
TATO				eS	Sn	02 37 22.6	0.0
YHNB	Yeheng	1.35	280	P	Pn	02 37 04.9	+0.3
YHNB				eS	Sn	02 37 22.3	-0.7
JISG	Ishigakijimahi	1.35	83	S	Sn	02 37 21.7	-1.3
NSK	Sanguang	1.36	280	eP	Pn	02 37 05.1	+0.3
NSK				eS	Sn	02 37 22.6	-0.8
ZUZH	Zhuzihu	1.38	302	eP	Pn	02 37 05.0	+0.1
ZUZH				eS	Sn	02 37 22.6	-1.0
TWY	Chenhua	1.40	307	eS	Sn	02 37 24.4	+0.4
TWS1	Kuangyinshan	1.45	298	eP	Pn	02 37 05.8	+0.1
TWS1				eS	Sn	02 37 24.4	-0.6
WHF	Hehuan Shan	1.46	259	eP	Pn	02 37 06.5	+0.1
FUSS	Fushou	1.46	263	eP	Pn	02 37 06.8	+0.6
WARBT	Fenglin Townsh	1.50	242	eP	Pn	02 37 06.3	-0.2
WARBT				eS	Sn	02 37 25.3	-1.0
TWT	Tachien	1.52	263	eP	Pn	02 37 07.8	+1.0
TWT				eS	Sn	02 37 26.8	-0.2
TDCB	Techi	1.54	264	eP	Pn	02 37 07.6	+0.6
TDCB				eS	Sn	02 37 27.0	-0.3
KSHI	Guanxi Townshi	1.55	283	eS	Sn	02 37 26.8	-0.4
NFF	Wufeng Townshi	1.57	277	eP	Pn	02 37 08.1	+0.7
NFF				eS	Sn	02 37 27.9	0.0
OWD	Renai	1.59	253	P	Pn	02 37 07.7	+0.1
OWD				S	Sn	02 37 27.3	-1.1
HGSD	Ruisui	1.60	234	eP	Pn	02 37 07.8	+0.2
HGSD				eS	Sn	02 37 27.5	-0.8
WUSB	Renai	1.63	255	eP	Pn	02 37 08.6	+0.5
WUSB				eS	Sn	02 37 28.3	-0.9
EHYH	Wanrong	1.65	236	eP	Pn	02 37 08.7	+0.4
EHYH				eS	Sn	02 37 28.8	-0.8
LIOB	Emei	1.67	278	eP	Pn	02 37 09.3	+0.8
LIOB				eS	Sn	02 37 30.1	+0.1
NSTT	Nanjuang	1.68	277	eP	Pn	02 37 09.8	+1.2
NSTT				eS	Sn	02 37 30.1	-0.1
VWDT	VWDT	1.69	247	eP	Pn	02 37 09.3	+0.6
VWDT				eS	Sn	02 37 29.9	-0.5
WHP	Taichung City	1.73	265	P	Pn	02 37 10.6	+1.3
WHP				eS	Sn	02 37 32.0	+0.5
YULB	Yu-li	1.75	234	eP	Pn	02 37 09.4	-0.1
YULB				eS	Sn	02 37 30.5	-1.3
TWF1	Yuli	1.77	233	P	Pn	02 37 10.0	+0.2
TWF1				eS	Sn	02 37 31.9	-0.5
SSLB	Suanglung	1.83	250	eP	Pn	02 37 11.0	+0.4
SSLB				eS	Sn	02 37 32.3	-1.5
SMLT	Sun Moon Lake	1.85	253	eP	Pn	02 37 11.9	+1.0
TYC	Yuchr	1.88	254	eP	Pn	02 37 12.4	+1.2
EHD	Haiduan	1.97	230	eP	Pn	02 37 11.6	-0.7
EHD				eS	Sn	02 37 36.1	-0.7
WNT	Mingjian	2.04	255	eP	Pn	02 37 15.2	+2.0
ALS	Alishan	2.07	244	eP	Pn	02 37 14.3	+0.3
ALS				eS	Sn	02 37 39.0	-0.7
ELDTW	Lidau	2.08	234	eP	Pn	02 37 14.0	+0.2
ELDTW				eS	Sn	02 37 37.3	-2.2
CHN5	Tsauling	2.14	247	eP	Pn	02 37 16.5	+1.8
LDUT	Ludao	2.15	216	eP	Pn	02 37 15.1	+0.4
STYH	Taoyuan	2.27	237	eP	Pn	02 37 17.6	+1.4
STYH				eS	Sn	02 37 43.3	-0.4
WCKO	Fanlu	2.27	244	eP	Pn	02 37 17.8	+1.5
STYT	Tauyuan	2.29	237	eP	Pn	02 37 17.3	+0.8
STYT				eS	Sn	02 37 44.5	+0.2
TPUB	Ta-pu	2.31	241	eP	Pn	02 37 17.9	+1.1
TPUB				eS	Sn	02 37 44.4	-0.5
CHN4	Tsaushan	2.32	243	eP	Pn	02 37 18.9	+2.0

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*IDC **07** 02:48:33.8±1.4, 1°.31N×99°.38E, h173^{km}±7^{km}, mb3.6/13, mbtmp4.1/13, Error ellipse: s-maj=40.9km s-min=13.7km az=52.0*

*DJA **07** 02:48:34.1±0.3, 2°N±3°×10°0E±°, h184^{km}±4^{km}, M4.3/19, mB5.2/4, mb4.1/7, MLv4.4/19, Mw(mB)4.6/4, MwMwp5.0/1, Mwp5.3/1*

ISC 07 02:48:34.0±0.6**, 1°.54N**±0°.07×**99°.67E**±0°.08**, h166**^{km}**, n47,** σ**1^{s}.69**/42**, mb3.8**/13**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNSI	Mandailing Nat	0.74	187	P	Pn	02 49 01.7	+3.2
MNSI				S	Sn	02 49 21.3	+3.9
PSI	Prapat	1.46	329	P	Pn	02 49 05.9	+1.4
	97nm,0.3s,baz=149,slow=9.2,SNR=57						
PSI				S	Sn	02 49 28.6	+0.5
	38nm,0.5s,baz=162,slow=20,SNR=12						
PSI	Prapat	1.46	329	P	Pn	02 49 06.0	+1.4
PSI				S	Sn	02 49 28.4	+0.3
PBSI	Pulau Batu	2.11	221	P	Pn	02 49 13.2	+1.9
TSI	Tuntungan	2.24	330	P	Pn	02 49 15.2	+2.4
PDSI	Padang	2.56	162	P	Pn	02 49 19.4	+2.7
KCSI	Kotacane, Aceh	2.73	316	P	Pn	02 49 20.0	+1.2
SISI	Saibi	2.91	191	P	Pn	02 49 21.1	+0.2
TPTI		3.02	305	P	Pn	02 49 23.6	+1.4
SNSI	Sinabang, Aceh	3.45	285	P	Pn	02 49 29.0	+1.4
KULM	Kulim	3.85	15	P	Pn	02 49 34.4	+1.6
KRJI	Kerinci	4.03	154	P	Pn	02 49 37.6	+2.4
MLSI	Meulaboh, Aceh	4.24	310	P	Pn	02 49 38.7	+0.9
PPSI	Pulau Pagai	4.29	175	P	Pn	02 49 38.1	-0.3
MASI	Maura Aman, Be	5.31	151	P	Pn	02 49 54.2	+2.3
	0.7nm3μm74nm,0.8s						
KSI	Kapahiang	5.93	150	P	Pn	02 50 01.3	+1.3
	60nm,0.4s						
MNAI	Manna	6.72	151	P	Pn	02 50 11.1	+0.7
	0.5nm81nm,1.3s						
PMBI	Palembang	6.76	131	P	Pn	02 50 11.3	+0.3
PPBI	Pangkal Pinang	7.44	120	P	Pn	02 50 21.3	+1.3
LWLI	Liwa	7.85	146	P	Pn	02 50 26.6	+1.0
BBJI	Bungbulang	11.97	138	P	Pn	02 51 17.4	-2.2
	4.7nm,1.6s						
CMJI	Cimerak	12.75	137	P	Pn	02 51 26.5	-3.0
	25nm,1.3s						
PCJI	Pacitan	15.01	130	P	Pn	02 51 57.0	-0.9
	13nm,0.9s						
GMJI	Gumukmas	16.84	126	P	P	02 52 17.0	-2.6
PCI	Palu	20.31	97	P	P	02 52 55.5	-1.8
H08S2	Diego Garcia H	28.60	251	T	T	03 22 06.8	
	baz=72,slow=76,SNR=22						
H08S3	Diego Garcia H	28.61	251	T	T	03 22 03.4	
	baz=72,slow=76,SNR=28						
H08S1	Diego Carcia H	28.62	251	T	T	03 22 02.7	
	baz=72,slow=76,SNR=16						
WRA	Warramunga Arr	40.15	124	P	P	02 55 53.8	-0.3
	0.8nm,0.6s,baz=304,slow=8.9,SNR=8.1						
	0.8nm,0.6s						
ASAR	Alice Springs	41.66	129	P	P	02 56 05.9	-0.6
	0.2nm,0.3s,baz=301,slow=7.4,SNR=8.0						
	0.2nm,0.3s						
SONM	Songino Array	46.48	6	P	P	02 56 44.7	+0.2
	0.8nm,0.4s,baz=181,slow=13,SNR=7.4						
SONM				PcP	PcP	02 58 16.0	-0.3
	0.4nm,0.4s,baz=168,slow=4.6,SNR=2.1						
	0.8nm,0.4s						
MKAR	Makanchi Array	47.56	344	P	P	02 56 53.0	+0.3
	1.0nm,0.3s,baz=157,slow=8.4,SNR=32						
	1.0nm,0.3s						
MJAR	Matsushiro Arr	49.80	41	P	P	02 57 13.6	+3.6
	0.4nm,0.3s,baz=283,slow=8.0,SNR=2.7						
	0.4nm,0.3s						
KURBB	Kurchatov Arra	52.09	343	P	P	02 57 26.7	-0.1
	0.5nm,0.5s,baz=163,slow=6.9,SNR=4.0						
	0.5nm,0.5s						
ZALV	Zalesovo Beam	53.65	349	P	P	02 57 38.1	-0.1
	3.2nm,0.4s,baz=178,slow=5.2,SNR=10.0						
	3.2nm,0.4s						
BVAR	Borovoye Array	56.77	339	P	P	02 58 00.1	-0.5
	1.3nm,0.6s,baz=140,slow=8.6,SNR=7.0						
	1.3nm,0.6s						
H04N2	CROZET ISLANDS	63.45	215	T	T	04 06 04.5	
	baz=55,slow=75,SNR=4.0						
H04N1	CROZET ISLANDS	63.47	215	T	T	04 06 21.8	
	baz=55,slow=75,SNR=4.1						
H04N3	CROZET ISLANDS	63.47	215	T	T	04 06 19.3	
	baz=55,slow=75,SNR=4.2						
H04S1	CROZET ISLANDS	63.77	215	T	T	04 05 59.6	
	baz=55						
H04S3	CROZET ISLANDS	63.78	215	T	T	04 06 13.1	
	baz=55						
H04S2	CROZET ISLANDS	63.79	215	T	T	04 06 22.2	
	baz=55						
BRTR	Keskin Array B	70.72	312	P	P	02 59 31.3	-1.1
	0.5nm,0.7s,baz=136,slow=8.7,SNR=3.3						
	0.5nm,0.7s						
FINES	FINESS Array B	80.84	332	P	P	03 00 28.4	-0.7
	2.0nm,0.9s,baz=101,slow=7.2,SNR=5.9						
	2.0nm,0.9s						
ARCES	ARCESS Array B	83.05	340	P	P	03 00 40.4	-0.1
	2.0nm,0.9s,baz=89,slow=5.2,SNR=6.7						
	2.0nm,0.9s						
HFS	Hagfors	86.66	330	P	P	03 00 58.6	-0.1
	6.4nm,1.1s,baz=108,slow=4.8,SNR=5.9						
	6.4nm,1.1s						
SPITS	Spitsbergen Ar	87.12	348	P	P	03 01 00.3	-0.3
	12nm,1.0s,baz=111,slow=11,SNR=1.7						
	12nm,1.0s						

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*IDC **07** 02:57:52.8±11.0, 24°.07S×179°.74W, h440^{km}±109^{km}, mb3.1/4, mbtmp4.0/5, Error ellipse: s-maj=88.5km s-min=29.4km az=39.0*

*NEIC **07** 02:58:01.8±1.2, 24°.5S±0°.2×180°.0W±0°.2, h526^{km}±19^{km}, mb4.0/10, Error ellipse: s-maj=29.0km s-min=11.9km az=223.0*

ISC 07 02:58:00.3±1.2**, 24°.6S**±0°.1×**180°.0W**±0°.2**, h500**^{km}**, n22,** σ**1^{s}.19**/22**, mb3.9**/10**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINNC	Pines Island,	11.68	277	P	P	03 00 36.7	+1.2
DZM	Mont Dzumac	12.71	279	P	P	03 00 49.1	+2.6
URZ	Urewera	13.88	190	P	P	03 00 57.9	-0.5
	2.8nm,0.6s,baz=355,slow=11,SNR=1.4						
URZ				S	S	03 03 25.0	-0.5
	7.0nm,0.9s,baz=0.8,slow=7.1,SNR=3.1						
FUNA	Funafuti	15.97	357	P	P	03 01 19.9	-0.8
TUWZ	Tuamarina	17.56	195	P	P	03 01 37.4	+0.9
CTAO	Charters Tower	31.49	271	P	P	03 03 40.7	+0.1
CTAO				IAmb	IAmb	03 03 41.1	
	comp=Z,5.6nm,0.5s						
STKA	Stephens Creek	34.49	249	P	P	03 04 04.8	-1.1
	comp=Z,1.3nm,0.7s,baz=98,slow=10,SNR=3.3						
	comp=Z,1.3nm,0.7s						
STKA	Stephens Creek	34.49	249	P	P	03 04 05.0	-1.0
BBOO	Buckleboo	39.19	248	P	P	03 04 43.9	-0.8
BBOO				IAmb	IAmb	03 04 47.8	
	comp=Z,15nm,1.1s						
AS31	Alice Springs	41.94	261	P	P	03 05 06.0	-0.9
ASAR	Alice Springs	41.94	261	P	P	03 05 06.0	-0.8
	comp=Z,0.6nm,0.5s,baz=96,slow=6.9,SNR=13						
	comp=Z,0.6nm,0.5s						
ASAR	Alice Springs	41.94	261	P	P	03 05 05.2	-1.6
WB0	Warramunga Arr	42.37	267	P	P	03 05 09.0	-1.3
WB0				IAmb	IAmb	03 05 09.6	
	comp=Z,2.9nm,0.6s						
WRA	Warramunga Arr	42.37	267	P	P	03 05 09.0	-1.3
	comp=Z,2.2nm,0.5s,baz=103,slow=8.3,SNR=22						
	comp=Z,2.2nm,0.5s						
WRA	Warramunga Arr	42.37	267	P	P	03 05 09.3	-1.0
KNRA	Kununurra	48.69	270	P	P	03 05 58.1	-0.6
KNRA				IAmb	IAmb	03 05 58.7	
	comp=Z,7.7nm,1.1s						
FITZ	Fitzroy Crossi	50.79	266	P	P	03 06 13.6	-0.5
FITZ				IAmb	IAmb	03 06 37.7	
	comp=Z,1.3nm,1.2s						
VNDA	Vanda	53.72	185	P	P	03 06 35.0	+0.6
VNDA				IAmb	IAmb	03 07 11.5	
	comp=Z,7.7nm,1.3s						
QSPA	South Pole Qui	65.52	180	P	P	03 07 54.3	+0.7
	comp=Z,1.0nm,0.6s,baz=41,slow=1.3,SNR=3.8						
	comp=Z,1.0nm,0.6s						
HFS	Hagfors	143.19	349	PKP	PKPab	03 16 32.6	-1.6
	comp=Z,3.7nm,1.0s,baz=61,slow=9.0,SNR=4.6						
MMAI	Mount Meron Ar	147.97	293	PKPbc	PKPdf	03 16 47.2	+1.6
	comp=Z,2.0nm,0.8s,baz=62,slow=3.4,SNR=2.4						
BRTR	Keskin Array B	147.98	306	PKPbc	PKPbc	03 16 48.3	-1.0
	comp=Z,0.3nm,0.8s,baz=77,slow=2.2,SNR=1.8						

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*GII **07** 03:14:33.2±0.0, 33°.561N±0°.004×35°.779E±0°.001, h1^{km}, Mws1.5, confirmed*

*GRAL **07** 03:14:34.6±0.3, 33°.52N×35°.70E, h1^{km}±3^{km}, MD2.5*

ISC 07 03:14:34.3±1.1**, 33°.54N**±0°.03×**35°.73E**±0°.04**, h2**^{km}±9^{km}**, n21,** σ**0^{s}.67**/23**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QRWL	Qaraoun	0.04	282	eP	Pg	03 14 35.2	0.0
QRWL				eS	Sg	03 14 35.7	-0.1
RCY	Rachaya	0.10	115	eP	Pg	03 14 36.6	+0.3
SHBL	Chebaa	0.19	176	eP	Pg	03 14 37.8	-0.2
SHBL				eS	Sg	03 14 40.3	-0.3
DQRL	Deir Qamar	0.21	322	eP	Pg	03 14 38.4	0.0
NATI	Neve Ativ	0.28	178	P	Pg	03 14 40.0	+0.4
NATI	Neve Ativ	0.28	178	S	Sg	03 14 44.8	+1.6
GEM	Giv'at Ha'Em	0.33	189	P	Pg	03 14 41.0	+0.3
GEM	Giv'at Ha'Em	0.33	189	S	Sb	03 14 47.3	-1.3
ZAHL	Zahle	0.34	23	eP	Pg	03 14 41.3	+0.4
BHL	Bhannes	0.37	351	eP	Pg	03 14 41.5	+0.1
KSHT	Keshet	0.56	173	P	Pb	03 14 45.7	-1.1
KSHT	Keshet	0.56	173	S	Sb	03 14 54.8	-0.5
MMC7	Mount Meron ar	0.59	209	P	Pb	03 14 46.9	-0.4
MMA0B	Mount Meron ar	0.59	207	P	Pg	03 14 46.0	+0.5
MMA0B	Mount Meron ar	0.59	207	S	Sb	03 14 56.6	+0.5
HNTI	Hanita	0.65	226	P	Pg	03 14 46.8	+0.1
HNTI	Hanita	0.65	226	S	Sb	03 14 58.6	+0.8
MMLI	Mount Malkishu	1.13	193	P	Pb	03 14 56.5	0.0
MMLI	Mount Malkishu	1.13	193	S	Sn	03 15 13.1	-0.1
HMDT	Nahal Hemdat	1.29	188	P	Pg	03 14 58.6	-0.5
HMDT	Nahal Hemdat	1.29	188	S	Sn	03 15 17.9	+0.7

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*IDC **07** 03:25:00.3±2.4, 20°.22N×93°.83E, h0^{km}, mb3.9/8, mbtmp3.9/9, ML4.0/1, Error ellipse: s-maj=69.2km s-min=24.4km az=33.0*

*NEIC **07** 03:25:06.7±1.8, 19°.9N±0°.1×94°.3E±0°.1, h66^{km}±7^{km}, mb4.1/4, Error ellipse: s-maj=17.6km s-min=11.9km az=223.0*

ISC 07 03:25:04.8±1.7**, 20°.6N**±0°.3×**94°.2E**±0°.2**, h10**^{km}**, n18,** σ**1^{s}.07**/14**, mb4.0**/10**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	5.00	115	Pn	Pn	03 26 19.0	-0.9
	1.2nm,0.3s,baz=292,slow=12,SNR=7.6						
CMAR				Pg	Pb	03 26 34.0	+1.6
	0.7nm,0.3s,baz=286,slow=18,SNR=8.9						
CMAR				Lg	Lg	03 27 33.6	
	2.1nm,0.3s,baz=325,slow=30,SNR=4.8						
	2.8nm,0.3s						
SHL	Shillong	5.36	337		Pn	03 26 33.4	+8.4
EVN	Everest	9.91	319		Pn	03 27 29.0	+1.1
MKAR	Makanchi Array	27.86	342	P	P	03 30 54.7	+0.2
	0.3nm,0.5s,baz=148,slow=9.2,SNR=3.9						
	0.3nm,0.5s						
MKAR	Makanchi Array	27.86	342	P	P	03 30 55.6	+1.1
SONM	Songino Array	28.91	17	P	P	03 31 04.6	+0.5
	0.2nm,0.5s,baz=207,slow=16,SNR=1.4						
	0.2nm,0.5s						
ULN	Ulaanbaatar	29.13	18	P	P	03 31 06.7	+0.7
ULN				IAmb	IAmb	03 31 09.0	
	comp=Z,2.4nm,0.9s						
KURBB	Kurchatov Arra	32.39	341	P	P	03 31 34.4	-0.2
	comp=Z,0.3nm,0.4s,baz=161,slow=7.4,SNR=4.1						
	comp=Z,0.3nm,0.4s						
KURK	Kurchatov	32.45	342	P	P	03 31 35.9	+0.9
ZALV	Zalesovo Beam	34.04	350	P	P	03 31 48.9	0.0
	comp=Z,0.6nm,0.3s,baz=158,slow=12,SNR=1.4						
	comp=Z,0.6nm,0.3s						
ARTI	Arti	44.48	332	P	P	03 33 16.8	+0.7
ARTI				IAmb	IAmb	03 33 21.8	
	comp=Z,7.8nm,1.4s						
JKA	Kamikawa-asahi	46.35	48	P	P	03 33 26.6	-4.5
PETK	Petropavlovsk-	57.95	40	P	P	03 34 55.6	-1.6
FINES	FINESS Array B	61.65	330	P	P	03 35 20.6	-1.9
	comp=Z,3.5nm,1.1s,baz=13,slow=13,SNR=3.6						
	comp=Z,3.5nm,1.1s						
FINES	FINESS Array B	61.65	330	P	P	03 35 20.4	-2.1
ARCES	ARCESS Array B	63.42	339	P	P	03 35 33.4	-0.9
	comp=Z,8.7nm,1.2s,baz=112,slow=7.8,SNR=1.9						
	comp=Z,8.7nm,1.2s						
HFS	Hagfors	67.63	328	P	P	03 36 00.5	-1.2
	comp=Z,4.2nm,1.0s,baz=68,slow=3.9,SNR=4.9						
	comp=Z,4.2nm,1.0s						
NOA	NORSAR Array B	68.80	329	P	P	03 36 06.1	-3.0
	comp=Z,1.1nm,1.0s,baz=98,slow=5.7,SNR=1.4						
	comp=Z,1.1nm,1.0s						

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*IDC **07** 03:33:45.2±0.6, 37°.38N×141°.79E, h0^{km}, mb4.4/28,* *mbtmp4.4/33, ML4.2/4, MS3.6/18, Error ellipse: s-maj=14.1km s-min=12.8km az=141.0*

*BJI **07** 03:33:48.8, 37°.39N×141°.80E, h39^{km}, mB4.9/11, mb4.5/43, Ms4.3/2, Ms7 4.1/4*

*JMA **07** 03:33:49.2±0.2, 37°.4N±0°.4×141°.8E±0°.9, h41^{km}±2^{km}, MD4.6/38, MW4.4/38, E OFF FUKUSHIMA PREF*

JMA Felt III J1 at E OFF FUKUSHIMA PREF .

*NIED **07** 03:33:49.2, 37°.38N×141°.78E, h41^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.74; M$_{\theta\theta}$-2.06; M$_{\phi\phi}$0.32; M$_{r\theta}$-0.08; M$_{\theta\phi}$-2.50; M$_{\phi r}$-1.17; Fault plane solution: M$_0$3.26000×10^{15} NP1:ϕ_s95.00000°, δ55.00000°, λ151.00000°. NP2:ϕ_s203.00000°, δ67.00000°, λ39.00000°.*

*NEIC **07** 03:33:51.5±1.2, 37°.46N±0°.05×141°.78E±0°.08, h35^{km}±1^{km}, mb4.7/180 Error ellipse: s-maj=11.7km s-min=8.7km az=114.0*

*MOS **07** 03:33:51.2±0.9, 37°.69N×141°.69E, h43^{km}, mb4.6/23, Error ellipse: s-maj=8.4km s-min=5.6km az=93.7*

ISC 07 03:33:50.2±1.2, **37°.40N**±0°.04×**141°.85E**±0°.04, **h31**^{km}±8^{km}, **n530**, σ1^{s}.**63**/416, **mb4.7**/138, **MS3.7**/17, **10C-21D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.78**	**268**	eP	**Pn**	**03 34 03.1**	**-2.0**
JFK				eS	**Sn**	**03 34 12.3**	**-3.4**
JFK	**Kawauchi**	**0.78**	**268**	A	A	03 34 03.1	
	comp=N,49nm,0.3s,comp=E,89nm,0.5s						
JMST	**Minamisoumatoc**	**0.83**	**293**	⇓iP	**Pn**	**03 34 04.0**	**-1.8**
JMST				⇓eS	**Sn**	**03 34 14.0**	**-2.9**
JMST	**Minamisoumatoc**	**0.83**	**293**	A	A	03 34 04.0	
	comp=N,87nm,0.3s,comp=E,47nm,0.5s						
ONAJ	**Iwakimizuishiy**	**0.89**	**251**	eP	**Pn**	**03 34 04.6**	**-2.0**
ONAJ				eS	**Sn**	**03 34 15.0**	**-3.5**
ONAJ	**Iwakimizuishiy**	**0.89**	**251**	A	A	03 34 04.6	
	comp=N,106nm,0.3s,comp=E,128nm,0.3s						
JIKH	**Ishinomakikobu**	**0.96**	**342**	A	A	03 34 06.5	
	comp=N,13nm,0.4s,comp=E,26nm,0.8s						
JMM	**Marumori**	**0.96**	**299**	⇓eP	**Pn**	**03 34 06.0**	**-1.5**
JMM				⇓eS	**Sn**	**03 34 17.7**	**-2.4**
JMM	**Marumori**	**0.96**	**299**	A	A	03 34 06.0	
	comp=N,66nm,0.4s,comp=E,47nm,0.3s						
JFFD	**Fukushimafurud**	**1.07**	**254**	A	A	03 34 07.2	
	comp=N,10.0nm,0.9s,comp=E,16nm,0.8s						
JIO	**Ouri**	**1.13**	**340**	⇓eP	**Pn**	**03 34 08.6**	**-1.2**
JOTO	**OTAMA OYAMA**	**1.22**	**278**	i P	**Pn**	**03 34 10.3**	**-0.8**
JOTO				eS	**Sn**	**03 34 24.7**	**-1.9**
JOTO	**OTAMA OYAMA**	**1.22**	**278**	A	A	03 34 10.3	
	comp=N,72nm,1.3s,comp=E,54nm,0.4s						
JHO	**Hitachi**	**1.29**	**233**	eP	**Pn**	**03 34 09.5**	**-2.6**
JHO	**Hitachi**	**1.29**	**233**	A	A	03 34 09.5	
	comp=N,10.0nm,0.2s,comp=E,8.0nm,0.7s						
JOU	**Okura**	**1.35**	**316**	⇓eP	**Pn**	**03 34 12.1**	**-0.8**
JOU				⇓eS	**Sn**	**03 34 28.8**	**-0.9**
JOU	**Okura**	**1.35**	**316**	A	A	03 34 12.1	
	comp=N,25nm,1.1s,comp=E,20nm,0.8s						
JOFO	**Osakifurukawao**	**1.41**	**329**	A	A	03 34 12.9	
	comp=N,33nm,1.7s,comp=E,23nm,1.9s						
JYAR	**Yonezawaarcadi**	**1.45**	**291**	A	A	03 34 12.9	
	comp=N,51nm,1.1s,comp=E,51nm,0.9s						
JHYU	**Hitachinakayam**	**1.46**	**224**	A	A	03 34 13.1	
	comp=N,11nm,0.2s,comp=E,7.0nm,2.6s						
JSB	**Shiboa**	**1.60**	**255**	A	A	03 34 15.0	
	comp=N,18nm,0.8s,comp=E,20nm,1.2s						
JMK	**Ichinoseki**	**1.63**	**342**	⇓eP	**Pn**	**03 34 16.2**	**-0.5**
JMK	**Ichinoseki**	**1.63**	**342**	A	A	03 34 16.2	
	comp=N,6.0nm,2.2s,comp=E,8.0nm,0.8s						
JYS	**Shirataka**	**1.64**	**301**	⇓eP	**Pn**	**03 34 16.2**	**-0.6**
JYS				⇓eS	**Sn**	**03 34 35.7**	**-1.1**
JYS	**Shirataka**	**1.64**	**301**	A	A	03 34 16.2	
	comp=N,24nm,1.4s,comp=E,27nm,1.2s						
JFY	**Yanaizu**	**1.71**	**271**	eP	**Pn**	**03 34 17.1**	**-0.8**
JFY				eS	**Sn**	**03 34 37.1**	**-1.6**
JFY	**Yanaizu**	**1.71**	**271**	A	A	03 34 17.1	
	comp=N,7.0nm,0.3s,comp=E,8.0nm,0.7s						
JYT	**Yasato**	**1.77**	**229**	A	A	03 34 17.5	
	comp=N,15nm,0.3s,comp=E,22nm,0.4s						
JIHU	**Itakohorinouch**	**1.78**	**217**	A	A	03 34 17.7	
	comp=N,21nm,4.4s,comp=E,31nm,1.8s						
JCAJ	**Choshiashikaji**	**1.85**	**206**	A	A	03 34 18.9	
	comp=N,9.0nm,0.5s,comp=E,10.0nm,1.8s						
JYK	**Kaneyama**	**1.92**	**323**	A	A	03 34 20.2	
	comp=N,4.0nm,2.0s,comp=E,3.0nm,6.2s						
JNS	**Sasagawa**	**2.06**	**283**	A	A	03 34 21.6	
	comp=N,3.0nm,3.7s,comp=E,3.0nm,4.9s						
JYA	**Atsumi**	**2.07**	**306**	A	A	03 34 22.1	
	comp=N,6.0nm,1.9s,comp=E,9.0nm,0.9s						
JSMT	**Sammumatsuo**	**2.08**	**213**	A	A	03 34 22.1	
	comp=N,15nm,6.8s,comp=E,15nm,5.2s						
JOM	**Ohasama**	**2.12**	**348**	A	A	03 34 23.4	
	comp=N,6.0nm,1.7s,comp=E,7.0nm,0.4s						
JRG	**Rokugo**	**2.21**	**335**	A	A	03 34 24.5	
	comp=N,6.0nm,0.5s,comp=E,7.0nm,0.5s						
JCCN	**Chibachonan**	**2.40**	**213**	A	A	03 34 26.6	
	comp=N,10.0nm,3.2s,comp=E,9.0nm,6.9s						
TOK	**Tokyo**	**2.40**	**225**	A	A	03 34 26.5	
	comp=N,10.0nm,3.0s,comp=E,11nm,1.7s						
JIZZ	**Izumozaki**	**2.50**	**274**	A	A	03 34 28.0	
	comp=N,10.0nm,2.9s,comp=E,14nm,0.8s						
JKEN	**Kujiedanarisaw**	**2.81**	**358**	A	A	03 34 33.3	
	comp=N,15nm,0.9s,comp=E,10.0nm,1.4s						
JSD	**Sado**	**2.92**	**284**		**Pn**	**03 34 33.5**	**-0.9**
MJAR	**Matsushiro Arr**	**3.04**	**255**	Pn	**Pn**	**03 34 35.5**	**-0.6**
	comp=E,5.2nm,0.3s,baz=86,slow=16,SNR=74						
MJAR				Sn	**Sn**	**03 35 11.4**	**0.0**
	comp=E,9.1nm,0.3s,baz=62,slow=17,SNR=4.7						
MJAR				LR	LR	03 36 05.7	
	comp=E,693nm,19.5s,baz=3.5,slow=47						
	comp=E,32nm,0.3s						
MJAR	**Matsushiro Arr**	**3.04**	**255**		**Pn**	**03 34 36.4**	**+0.3**
MAJO	**Matsushiro**	**3.04**	**255**		**Pn**	**03 34 36.2**	**+0.1**
MAJO	**Matsushiro**	**3.04**	**255**	c iP	**Pn**	**03 34 36.1**	**-0.1**
MJB9	**Matsu-Tunnel**	**3.04**	**255**		**Pn**	**03 34 37.2**	**+1.1**
JTM	**Tenmabayashi**	**3.44**	**350**		**Pn**	**03 34 42.2**	**+0.6**
JSG	**Sagara**	**4.03**	**229**		**Pn**	**03 34 51.6**	**+2.0**
JGF	**Kuroka**	**4.04**	**245**		**Pn**	**03 34 50.4**	**+0.5**
INU	**Inuyama**	**4.40**	**244**		**Pn**	**03 34 55.8**	**+0.9**
JHJ	**Hachijo jima 2**	**4.59**	**202**	Pn	**Pn**	**03 34 56.4**	**-1.0**
	comp=E,80nm,0.3s,baz=60,slow=20,SNR=22						
JHJ				Sn	**Sn**	**03 35 45.6**	**-4.1**
	comp=E,208nm,0.3s,baz=90,slow=20,SNR=11						
	comp=E,163nm,0.3s						
ERM	**Erimo**	**4.72**	**12**		**Pn**	**03 34 59.4**	**+0.2**
ERM	**Erimo**	**4.72**	**12**	P	**Pn**	**03 34 59.4**	**+0.2**
NMR	**Nemuro--Hokkai**	**6.66**	**25**	eP	**Pn**	**03 35 23.1**	**-2.7**
NMR				eS	**Sn**	**03 36 33.2**	**-7.4**
ASAJ	**Asahikawa**	**6.74**	**5**	Pn	**Pn**	**03 35 26.3**	**-0.6**
	comp=E,6.6nm,0.3s,baz=199,slow=15,SNR=15						
ASAJ				Sn	**Sn**	**03 36 41.1**	**-1.4**
	comp=E,5.0nm,0.3s,baz=154,slow=33,SNR=9.2						
	comp=E,20nm,0.4s						
JKA	**Kamikawa-asahi**	**6.74**	**5**		**Sn**	**03 36 41.1**	**-1.4**
JKA	**Kamikawa-asahi**	**6.74**	**5**		**Pn**	**03 35 26.2**	**-0.7**
GLVR	**Golovnino**	**6.92**	**23**	eP	**Pn**	**03 35 28.0**	**-1.4**
GLVR				eS	**Sn**	**03 36 42.4**	**-4.7**
GLVR				pmax	pmax		
	comp=Z,56nm,0.2s						
RUSJ	**Misakicho**	**7.18**	**20**	eP	**Pn**	**03 35 32.2**	**-0.7**
RUSJ				eS	**Sn**	**03 36 49.4**	**-4.0**
YUK	**Yuzh-Kuril'sk**	**7.29**	**23**	P	**Pn**	**03 35 32.9**	**-1.6**
YUK				eS	**Sn**	**03 36 51.4**	**-4.8**
YUK				pmax	pmax		
	comp=Z,165nm,0.3s						
YUK				pmax	pmax		
	comp=N,59nm,0.2s						
YUK				pmax	pmax		
	comp=E,66nm,0.2s						
TEY	**Ternei**	**8.59**	**334**	eP	**Pn**	**03 35 56.1**	**+3.8**
YSS	**Yuzhno-Sakhali**	**9.57**	**4**		**Pn**	**03 36 04.2**	**-1.6**
YSS	**Yuzhno-Sakhali**	**9.57**	**4**	eP	**Pn**	**03 36 04.7**	**-1.1**
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
JNU	**Nakatsue**	**9.93**	**248**	Pn	**Pn**	**03 36 12.0**	**+1.2**
	baz=74,slow=12						
JNU				LR	LR	03 40 16.3	
	comp=Z,133nm,19.0s,baz=51,slow=40						
PSTR	**Posyet**	**9.96**	**305**	ceP	**Pn**	**03 36 10.1**	**-1.0**
USRK	**Ussuriysk Ar.**	**10.10**	**315**	Pn	**Pn**	**03 36 12.8**	**-0.1**
	comp=Z,1.3nm,0.3s,baz=124,slow=14,SNR=12						
	comp=Z,2.6nm,0.3s						
JCJ	**Chichijima**	**10.28**	**178**	Pn	Pn	03 36 01.1	-14
	comp=Z,27nm,0.3s,baz=360,slow=22,SNR=9.9						
JCJ				Sn	Sn	03 37 48.4	-21
	comp=Z,26nm,0.3s,baz=292,slow=19,SNR=6.7						
JCJ	**Chichijima**	**10.28**	**178**		**Pn**	**03 36 13.4**	**-2.1**
KSRS	**Korea Array**	**11.08**	**275**	Pn	**Pn**	**03 36 27.7**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=88,slow=15,SNR=4.1						
MDJ	**Mudanjiang**	**11.73**	**312**		**Pn**	**03 36 38.5**	**+3.2**
MDJ	**Mudanjiang**	**11.73**	**312**	P	Pn	03 36 40.3	+5.0
MDJ				pmax	pmax		
	comp=Z,15nm,0.9s						
TYV	**Tymovskoe**	**13.47**	**2**	eP	**P**	**03 37 08.1**	**+0.1**
TYV				pmax	pmax		
	comp=Z,11nm,1.1s						
TYV				pmax	pmax		
	comp=Z,200nm,2.0s						
BNX	**BinXian**	**13.64**	**312**	⇑P	**Pn**	**03 37 02.2**	**+0.8**
BNX				pmax	pmax		
	comp=Z,10.0nm,1.9s						
HEH	**HeiHe**	**16.50**	**326**	eP	**Pn**	**03 37 37.9**	**-1.3**
PETK	**Petropavlovsk-**	**19.20**	**30**	P	**P**	**03 38 10.0**	**-1.3**
	comp=Z,6.5nm,0.9s,baz=231,slow=7.4,SNR=2.0						
ZEA	**Zeya**	**19.21**	**333**	eP	**P**	**03 38 10.9**	**-0.5**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2	**Nanjing**	**19.62**	**261**	eP	**P**	**03 38 15.9**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
HILR	**Hailar Array B**	**20.04**	**314**	P	**P**	**03 38 17.5**	**-3.0**
	comp=Z,10.0nm,0.5s,baz=121,slow=11,SNR=7.3						
	comp=Z,10.0nm,0.5s						
XLT	**XiLinHaoTe**	**20.56**	**296**	eP	**P**	**03 38 24.7**	**-1.6**
XLT				pP	Pn	03 38 31.1	+2.5
XLT				pmax	pmax		
	comp=Z,18nm,0.7s						
XLT				pmax	pmax		
	comp=Z,130nm,5.2s						
HNS	**HongShan**	**21.54**	**278**	⇓P	**P**	**03 38 33.9**	**-2.9**
HNS				pmax	pmax		
	comp=Z,14nm,1.0s						
MA2	**Magadan**	**22.93**	**12**	P	**P**	**03 38 50.6**	**-0.8**
	comp=Z,9.5nm,0.7s,baz=194,slow=14,SNR=2.4						
	comp=Z,9.5nm,0.7s						
HHC	**Hu-ho-hao-te**	**23.69**	**288**	eP	**P**	**03 38 56.7**	**-2.6**
HHC				pmax	pmax		
	comp=Z,11nm,0.5s						
HHC				pmax	pmax		
	comp=Z,93nm,4.8s						
LYN	**LuoYang**	**23.91**	**272**	P	**P**	**03 39 00.0**	**-1.2**
LYN				pmax	pmax		
	comp=Z,22nm,0.6s						
BTO	**Baotou**	**24.87**	**287**	eP	**P**	**03 39 09.4**	**-0.7**
BTO				S	**S**	**03 43 30.1**	**-1.1**
BTO				pmax	pmax		
	comp=Z,12nm,0.6s						
BTO				pmax	pmax		
	comp=Z,230nm,5.2s						
BTO				LR	LR		
	comp=Z,360nm,6.5s						
BTO				LR	LR		
	comp=Z,600nm,7.3s						
BTO				LR	LR		
	comp=Z,500nm,5.9s						
YAK	**Yakutsk**	**25.79**	**347**	P	**P**	**03 39 16.9**	**-1.2**
	comp=Z,26nm,0.4s,baz=149,slow=5.9,SNR=4.2						
	comp=Z,26nm,0.4s						
YAK	**Yakutsk**	**25.79**	**347**	IAmb	IAmb	03 39 20.0	
	comp=Z,31nm,0.6s						
YAK	**Yakutsk**	**25.79**	**347**	c iP	**P**	**03 39 17.4**	**-0.7**
YAK				pmax	pmax		
	comp=Z,25nm,0.9s						
SEY	**Seymchan**	**26.37**	**11**	P	**P**	**03 39 23.2**	**-0.1**
	comp=Z,4.8nm,0.7s,baz=184,slow=8.5,SNR=9.5						
	comp=Z,4.8nm,0.7s						
SEY	**Seymchan**	**26.37**	**11**	⇓eP	**P**	**03 39 25.0**	**+1.7**
SEY				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XAN	**Xi'an**	**26.87**	**273**	⇓P	**P**	**03 39 27.4**	**-0.8**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ULN	**Ulaanbaatar**	**27.44**	**304**	deP	**P**	**03 39 33.7**	**+0.4**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
SONM	**Songino Array**	**27.87**	**303**	P	**P**	**03 39 36.4**	**-0.7**
	comp=Z,4.4nm,0.5s,baz=102,slow=9.2,SNR=28						
SONM				LR	LR	03 50 03.4	
	comp=Z,70nm,18.3s,baz=94,slow=35						
	comp=Z,4.4nm,0.5s						
SONM	**Songino Array**	**27.87**	**303**	P	**P**	**03 39 36.4**	**-0.7**
H11N2	**WAKE ISLAND Hy**	**28.04**	**122**	T	T	04 09 03.6	
	baz=314,slow=75,SNR=232						
H11N1	**WAKE ISLAND Hy**	**28.05**	**122**	T	T	04 09 19.0	
	baz=314,slow=75,SNR=270						
H11N3	**WAKE ISLAND Hy**	**28.06**	**122**	T	T	04 09 11.5	
	baz=314,slow=75,SNR=365						
H11S1	**WAKE ISLAND Hy**	**28.77**	**124**	T	T	04 10 10.7	
	baz=316,slow=76,SNR=315						
H11S3	**WAKE ISLAND Hy**	**28.77**	**124**	T	T	04 10 10.9	
	baz=316,slow=76,SNR=240						
H11S2	**WAKE ISLAND Hy**	**28.79**	**124**	T	T	04 10 05.2	
	baz=316,slow=76,SNR=221						
LZDM	**Lanzhou Array**	**30.50**	**279**	P	**P**	**03 39 59.8**	**-1.1**
	comp=Z,1.4nm,0.3s,baz=115,slow=9.7,SNR=1.6						
	comp=Z,1.4nm,0.3s						
KNGR	**Kungurtug, Tuv**	**34.00**	**307**	⇓eP	**P**	**03 40 31.3**	**+0.2**
KNGR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI	**Kunming**	**35.36**	**261**	P	P	03 40 49.1	+5.9
KMI				pmax	pmax		
	comp=Z,17nm,1.0s						
PZH	**PanZhiHua**	**35.49**	**264**	P	**P**	**03 40 45.3**	**+1.1**
SPIA	**Saint Paul Isl**	**37.06**	**42**	P	**P**	**03 40 59.0**	**+1.9**
	baz=259						
NIKH	**Nikolski High**	**37.27**	**49**	P	**P**	**03 41 01.3**	**+2.3**
	baz=266						
P08K	**Saint George I**	**37.33**	**43**	P	**P**	**03 41 02.1**	**+2.7**
	baz=260						
GOMU	**GeErMu**	**37.38**	**283**	P	**P**	**03 40 58.9**	**-1.6**
GOMU				pP	pP	03 41 09.0	-0.5
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GAMB	**Gambell**	**38.22**	**31**	P	**P**	**03 41 08.4**	**+1.5**
	baz=249						
UNV	**Unalaska Valle**	**38.74**	**48**	P	**P**	**03 41 13.6**	**+2.3**
	baz=266						
M11K	**Mekoryuk**	**39.76**	**38**	P	**P**	**03 41 21.9**	**+2.2**
	baz=259						
TNA	**Tin City**	**40.37**	**30**	P	**P**	**03 41 26.6**	**+1.9**
	baz=251						
DGZ	**Jazzator, Alta**	**40.46**	**306**	d iP	**P**	**03 41 26.4**	**+0.5**
DGZ				pmax	pmax		
	comp=Z,26nm,0.9s						
FALS	**False Pass**	**40.60**	**47**	P	**P**	**03 41 28.9**	**+2.2**
	baz=268						
K13K	**Kusilvak Mount**	**40.81**	**36**	P	**P**	**03 41 30.0**	**+1.6**
	baz=258						
F14K	**Arctic Creek**	**40.97**	**30**	P	**P**	**03 41 31.1**	**+1.3**
	baz=253						
WMQ	**Urumqi**	**40.99**	**297**	eP	**P**	**03 41 31.0**	**+0.7**
WMQ				pP	sP	03 41 43.5	+0.6
WMQ				PP	**PnPn**	**03 43 09.3**	**0.0**
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
ANM	**Nome**	**41.10**	**32**	P	**P**	**03 41 32.5**	**+1.7**
	baz=255						
M13K	**Dall Lake**	**41.16**	**38**	P	**P**	**03 41 33.5**	**+2.1**
	baz=262						
S12K	**Black Hills**	**41.41**	**45**	P	**P**	**03 41 35.2**	**+1.7**
	baz=268						
J14K	**Nanvaranak Lak**	**41.47**	**35**	P	**P**	**03 41 34.6**	**+0.8**
	baz=259						
G15K	**Niukluk**	**41.77**	**31**	P	**P**	**03 41 37.2**	**+1.0**
	baz=256						
M14K	**Bethel**	**41.89**	**38**	P	**P**	**03 41 38.4**	**+1.1**
	baz=262						
CMAR	**Chiang Mai Arr**	**41.93**	**255**	LR	LR	04 01 28.7	
	comp=Z,33nm,18.1s,baz=140,slow=40						
ZAA0	**Zalesovo Array**	**41.93**	**312**	P	**P**	**03 41 37.0**	**-0.7**
ZALV	**Zalesovo Beam**	**41.93**	**312**	P	**P**	**03 41 37.5**	**-0.2**
	comp=Z,3.5nm,0.4s,baz=91,slow=7.8,SNR=13						
	comp=Z,3.5nm,0.4s						
ZALV	**Zalesovo Beam**	**41.93**	**312**	P	**P**	**03 41 37.1**	**-0.6**
C16K	**Lisburne Hills**	**42.22**	**26**	IAmb	IAmb	03 41 42.0	
	comp=Z,12nm,0.8s						
C16K	**Lisburne Hills**	**42.22**	**26**	P	**P**	**03 41 41.6**	**+1.7**
	baz=251						
SDPT	**Sand Point**	**42.30**	**46**	P	**P**	**03 41 42.6**	**+1.9**
	baz=270						
K15K	**Wolf Creek Mou**	**42.32**	**35**	P	**P**	**03 41 42.6**	**+1.8**
	baz=261						
H16K	**Elim**	**42.44**	**32**	P	**P**	**03 41 43.5**	**+1.8**
	baz=258						
M15K	**Kasigluk River**	**42.50**	**38**	P	**P**	**03 41 44.3**	**+2.0**
	baz=264						
LSA	**Lhasa**	**42.52**	**275**	P	**P**	**03 41 43.2**	**-0.2**
G16K	**Koyuk River**	**42.55**	**31**	P	**P**	**03 41 43.8**	**+1.2**
	baz=257						
N15K	**Kwethluk River**	**42.74**	**39**	P	**P**	**03 41 45.4**	**+1.1**
	baz=265						
O15K	**Ungalikthiuk R**	**42.80**	**40**	P	**P**	**03 41 46.5**	**+1.7**
	baz=266						
CHNA	**Chernabura Isl**	**42.81**	**47**	P	**P**	**03 41 46.6**	**+1.8**
	baz=271						
D17K	**Noatak River**	**42.86**	**27**	P	**P**	**03 41 46.5**	**+1.4**
	baz=254,SNR=5.1						
I17K	**Unalakleet**	**42.95**	**33**	P	**P**	**03 41 47.2**	**+1.3**
	baz=260						
RDOG	**Red Dog Mine**	**43.02**	**27**	P	**P**	**03 41 46.8**	**+0.4**
	baz=254						
C17K	**DeLong Mountai**	**43.05**	**26**	P	**P**	**03 41 48.0**	**+1.3**
	baz=253						
NRIK	**Noril'sk**	**43.08**	**335**	P	**P**	**03 41 46.5**	**-0.4**
	comp=Z,3.8nm,0.5s,baz=124,slow=6.0,SNR=6.7						
NRIK				LR	LR	04 01 06.3	
	comp=Z,71nm,18.7s,baz=64,slow=38						
	comp=Z,3.8nm,0.5s						
NRIK	**Noril'sk**	**43.08**	**335**	P	**P**	**03 41 46.5**	**-0.4**
E17K	**Hotham Inlet**	**43.16**	**28**	P	**P**	**03 41 48.6**	**+1.0**
	baz=256						
L16K	**Owhat River**	**43.20**	**36**	P	**P**	**03 41 49.0**	**+1.1**
	baz=264						
F17K	**Baldwin Pennin**	**43.23**	**29**	P	**P**	**03 41 49.2**	**+1.1**
	baz=257						
G17K	**Kiwalik Mounta**	**43.27**	**31**	P	**P**	**03 41 49.7**	**+1.2**
	baz=259						
M16K	**Timber Creek**	**43.38**	**38**	P	**P**	**03 41 50.9**	**+1.5**
	baz=265						
N16K	**Nishlik Lake**	**43.42**	**38**	P	**P**	**03 41 51.7**	**+1.9**
	baz=266						
H17K	**Granite Mounta**	**43.47**	**32**	P	**P**	**03 41 51.2**	**+1.1**
	baz=260						
J17K	**VABM Dome**	**43.59**	**34**	P	**P**	**03 41 52.2**	**+1.2**
	baz=262						
E18K	**Tukpahlearik C**	**43.71**	**28**	P	**P**	**03 41 54.1**	**+2.1**
	baz=257						
O16K	**Kokwok River B**	**43.71**	**40**	P	**P**	**03 41 54.2**	**+2.2**
	baz=267						
B18K	**Kokolik River**	**43.78**	**25**	P	**P**	**03 41 54.4**	**+1.9**
	baz=253						
C18K	**Utukok River**	**43.80**	**26**	IAmb	IAmb	03 41 54.8	
	comp=Z,17nm,0.9s						
C18K	**Utukok River**	**43.80**	**26**	P	**P**	**03 41 54.0**	**+1.3**
	baz=255						
L17K	**Donlin**	**43.80**	**36**	P	**P**	**03 41 53.6**	**+0.9**
	baz=264						
K17K	**Iditarod**	**43.86**	**35**	P	**P**	**03 41 54.6**	**+1.4**
	baz=264						
F18K	**Selawik**	**43.89**	**29**	P	**P**	**03 41 54.6**	**+1.2**
	baz=258						
M17K	**Holitna River**	**44.14**	**37**	P	**P**	**03 41 57.2**	**+1.6**
	baz=266						
H18K	**Honhosa River**	**44.15**	**32**	P	**P**	**03 41 57.1**	**+1.5**
	baz=261						
G18K	**Tagagawik**	**44.16**	**31**	P	**P**	**03 41 57.1**	**+1.5**
	baz=260						
N17K	**Nushagak Hills**	**44.21**	**38**	P	**P**	**03 41 58.4**	**+2.4**
	baz=267						
O17K	**Koliganek Bris**	**44.22**	**39**	P	**P**	**03 41 58.3**	**+2.2**
	baz=268						
MK31	**Makanchi Array**	**44.22**	**302**	d iP	**P**	**03 41 55.7**	**-0.7**
MKAR	**Makanchi Array**	**44.22**	**302**	P	**P**	**03 41 55.9**	**-0.5**
	comp=Z,6.1nm,0.6s,baz=86,slow=9.8,SNR=88						
MKAR				LR	LR	03 59 15.3	
	comp=Z,55nm,19.1s,baz=92,slow=35						
	comp=Z,6.1nm,0.6s						
MKAR	**Makanchi Array**	**44.22**	**302**	P	**P**	**03 41 56.1**	**-0.3**
A19K	**Wainwright**	**44.27**	**24**	P	**P**	**03 41 58.5**	**+2.1**
	baz=253						
MAKZ	**Makanchi**	**44.43**	**302**	P	**P**	**03 41 57.7**	**-0.4**
MAKZ				IAmb	IAmb	03 41 58.3	
	comp=Z,7.1nm,0.8s						
MAKZ	**Makanchi**	**44.43**	**302**	P	**P**	**03 41 57.7**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
C19K	**Lookout Ridge**	**44.48**	**26**	IAmb	IAmb	03 42 01.2	
	comp=Z,12nm,0.8s						
C19K	**Lookout Ridge**	**44.48**	**26**	P	**P**	**03 41 59.9**	**+1.8**
	baz=256,SNR=7.7						
P17K	**Kvichak River**	**44.54**	**40**	P	**P**	**03 42 00.7**	**+2.0**
	baz=269						
L18K	**Granite Mounta**	**44.56**	**36**	P	**P**	**03 41 59.8**	**+1.0**
	baz=266						
R17L	**Mt. Peulik Vol**	**44.58**	**42**	P	**P**	**03 42 00.8**	**+1.7**
	baz=271						
J18K	**Innoko River**	**44.65**	**34**	P	**P**	**03 41 59.9**	**+0.3**
	baz=264						
F19K	**Shaleruckik Mo**	**44.67**	**29**	P	**P**	**03 42 00.4**	**+0.7**
	baz=260						
G19K	**Purcell Mounta**	**44.83**	**30**	P	**P**	**03 42 02.4**	**+1.5**
	baz=261						
N18K	**Kilae Creek**	**44.85**	**38**	P	**P**	**03 42 03.1**	**+1.8**
	baz=268						
D19K	**Kuna River**	**44.86**	**27**	IAmb	IAmb	03 42 04.4	
	comp=Z,20nm,1.4s						
D19K	**Kuna River**	**44.86**	**27**	P	**P**	**03 42 02.8**	**+1.6**
	baz=258						
M18K	**Stony River**	**44.92**	**37**	P	**P**	**03 42 03.8**	**+2.1**
	baz=267						
E19K	**Redstone River**	**44.99**	**28**	IAmb	IAmb	03 42 05.2	
	comp=Z,6.1nm,0.8s						
E19K	**Redstone River**	**44.99**	**28**	P	**P**	**03 42 03.9**	**+1.7**
	baz=260						
H19K	**Roundabout Mou**	**45.00**	**31**	P	**P**	**03 42 04.1**	**+1.8**
	baz=263						
CHIR	**Chirikof Islan**	**45.04**	**45**	P	**P**	**03 42 06.0**	**+3.3**
	baz=273						
P18K	**Big Mountain,**	**45.16**	**40**	P	**P**	**03 42 06.4**	**+2.7**
	baz=270						
O18K	**Koktuh Hills**	**45.18**	**39**	P	**P**	**03 42 05.3**	**+1.5**
	baz=270						
J19K	**Poorman**	**45.19**	**33**	P	**P**	**03 42 05.2**	**+1.4**
	baz=265						
Q18K	**Katmai Hardscr**	**45.28**	**41**	P	**P**	**03 42 06.3**	**+1.5**
	baz=271						
L19K	**White Mountain**	**45.41**	**36**	P	**P**	**03 42 06.8**	**+1.1**
	baz=268						
D20K	**Etivluk River**	**45.44**	**27**	IAmb	IAmb	03 42 10.1	
	comp=Z,9.1nm,1.0s						
D20K	**Etivluk River**	**45.44**	**27**	P	**P**	**03 42 07.5**	**+1.6**
	baz=259						
F20K	**Avaraart Lake**	**45.50**	**29**	P	**P**	**03 42 07.8**	**+1.6**
	baz=262						
B20K	**Meade River**	**45.52**	**25**	P	**P**	**03 42 08.3**	**+2.0**
	baz=258						
E20K	**Nigu River**	**45.52**	**27**	P	**P**	**03 42 08.7**	**+2.2**
	baz=260						
R18K	**Karluk**	**45.60**	**43**	P	**P**	**03 42 09.0**	**+1.8**
	baz=272						
H20K	**Anotleneega Mo**	**45.65**	**31**	P	**P**	**03 42 08.9**	**+1.5**
	baz=264						
I20K	**Naaghedeneel**	**45.75**	**32**	P	**P**	**03 42 09.7**	**+1.5**
	baz=265						
K20K	**Telida**	**45.83**	**34**	P	**P**	**03 42 10.2**	**+1.2**
	baz=267						
J20K	**Nowinta River**	**45.85**	**33**	P	**P**	**03 42 10.3**	**+1.3**
	baz=266						
KURK	**Kurchatov**	**45.98**	**308**	P	**P**	**03 42 09.8**	**-0.5**
KURK	**Kurchatov**	**45.98**	**308**	d iP	**P**	**03 42 09.3**	**-1.0**
KURK				pmax	pmax		
	comp=Z,21nm,1.0s						
A21K	**Barrow**	**45.99**	**23**	P	**P**	**03 42 11.3**	**+1.3**
	baz=257,SNR=9.9						
KURBB	**Kurchatov Arra**	**46.05**	**308**	P	**P**	**03 42 10.2**	**-0.7**
	comp=Z,8.4nm,0.4s,baz=81,slow=7.8,SNR=111						
	comp=Z,8.4nm,0.4s						
IMAR	**Indian Mountai**	**46.16**	**31**	P	**P**	**03 42 12.5**	**+1.0**
C21K	**Knifeblade Rid**	**46.17**	**26**	P	**P**	**03 42 13.6**	**+2.0**
	baz=261						
P19K	**Oil Pt**	**46.18**	**40**	P	**P**	**03 42 13.4**	**+1.7**
	baz=271						
M20K	**Styx River**	**46.22**	**36**	P	**P**	**03 42 13.4**	**+1.3**
	baz=269						
B21K	**Ikpikpuk River**	**46.31**	**26**	IAmb	IAmb	03 42 18.3	
	comp=Z,15nm,1.2s						
B21K	**Ikpikpuk River**	**46.31**	**26**	P	**P**	**03 42 14.1**	**+1.5**
	baz=260						
G21K	**Allakaket**	**46.31**	**30**	P	**P**	**03 42 13.8**	**+1.1**
	baz=264						

E21K	Killik River	46.36	27	IAmb	IAmb	03 42 18.2	
	comp=Z,14nm,1.4s						
E21K	Killik River	46.36	27	P	P	03 42 14.7	+1.7
	baz=262						
F21K	Alatna River	46.39	29	P	P	03 42 14.6	+1.3
	baz=264						
A22K	Sinclair Lake	46.44	24	P	P	03 42 15.2	+1.6
	baz=259						
O20K	Slope Mountain	46.47	39	P	P	03 42 16.1	+2.0
	baz=272						
H21K	Melozitna Rive	46.52	31	P	P	03 42 15.9	+1.5
	baz=266						
KDAK	Kodiak Island	46.60	42	LR	LR	04 02 06.6	
	comp=Z,50nm,21.2s,baz=260,slow=36						
KDAK	Kodiak Island	46.60	42	P	P	03 42 14.8	-0.2
KDAK	Kodiak Island	46.60	42	P	P	03 42 14.8	-0.2
KDAK				pmax	pmax		
	comp=Z,78nm,1.5s						
KDAK	Kodiak Island	46.60	42	P	P	03 42 17.4	+2.4
	baz=274						
CHUM	Lake Minchumin	46.64	34	P	P	03 42 17.1	+1.8
	baz=268						
Q20K	Shuyak Island	46.65	41	P	P	03 42 16.4	+1.0
	baz=273						
SPCR	Spurr Chakacha	46.66	37	P	P	03 42 17.5	+2.0
	baz=271						
PPLA	Purkeypile	46.67	35	P	P	03 42 17.6	+1.9
	baz=269						
EVN	Everest	46.70	275	P	P	03 42 16.8	-0.3
EVN				IAmb	IAmb	03 42 31.4	
	comp=Z,18nm,1.4s						
B22K	Teshekpuk Lake	46.83	25	IAmb	IAmb	03 42 18.9	
	comp=Z,9.9nm,0.8s						
B22K	Teshekpuk Lake	46.83	25	P	P	03 42 18.5	+1.8
	baz=261						
I21K	Tanana	46.84	32	P	P	03 42 17.8	+1.0
	baz=267						
D22K	Ayikyak River	46.88	27	IAmb	IAmb	03 42 19.8	
	comp=Z,6.5nm,0.8s						
D22K	Ayikyak River	46.88	27	P	P	03 42 18.6	+1.5
	baz=263						
F22K	John River	46.92	29	P	P	03 42 19.1	+1.6
	baz=265						
KAPI	Kappang	46.95	211	P	P	03 42 21.1	+2.9
	comp=Z,5.5nm,0.6s,baz=34,slow=9.1,SNR=5.6						
SKT	Skwentna	46.97	36	P	P	03 42 20.2	+2.2
	baz=271						
HOM	Homer	46.98	40	P	P	03 42 20.3	+2.3
	baz=273						
E22K	Anaktuvuk Pass	47.12	28	P	P	03 42 20.5	+1.5
	baz=265						
H22K	Ishtalitna Cre	47.12	31	P	P	03 42 20.7	+1.7
	baz=267						
G22K	Bettles	47.14	30	P	P	03 42 20.5	+1.4
	baz=266						
BPAW	Bear Paw Mtn.	47.23	33	P	P	03 42 21.7	+1.7
	baz=269						
MLY	Manley	47.36	32	P	P	03 42 21.6	+0.7
	baz=268						
SUA	Susitna One	47.36	37	P	P	03 42 22.3	+1.3
	baz=272						
BRSE	Bradley Lake S	47.44	39	P	P	03 42 23.6	+2.0
	baz=273						
TRF	Thorofare Moun	47.53	34	P	P	03 42 23.8	+1.4
	baz=270						
CUT	Chulitna	47.56	36	P	P	03 42 23.8	+1.3
	baz=271						
D23K	Nanushuk River	47.61	27	P	P	03 42 24.2	+1.4
	baz=265						
COLD	Coldfoot	47.67	29	P	P	03 42 24.8	+1.5
	baz=267						
WUS	Wushi	47.69	295	IAmb	IAmb	03 42 24.8	
	comp=Z,6.9nm,0.8s						
G23K	Bananza Creek	47.71	30	P	P	03 42 25.2	+1.5
	baz=268						
C23K	Itkillik River	47.72	26	P	P	03 42 25.4	+1.9
	baz=264						
RC01	Rabbit Creek A	47.86	38	P	P	03 42 26.2	+1.4
	baz=273						
H23K	Yukon River	47.88	31	IAmb	IAmb	03 42 27.7	
	comp=Z,5.6nm,0.8s						
H23K	Yukon River	47.88	31	P	P	03 42 26.9	+1.9
	baz=269						
O22K	Cooper Landing	47.90	38	P	P	03 42 25.8	+0.7
	baz=274						
E23K	Chandalar	47.94	28	IAmb	IAmb	03 42 28.4	
	comp=Z,6.3nm,0.9s						
E23K	Chandalar	47.94	28	P	P	03 42 26.7	+1.2
	baz=267						
I23K	Minto, Yukon-K	47.94	32	P	P	03 42 25.8	+0.4
	baz=270						
TOLK	Toolik Lake Re	47.99	27	P	P	03 42 26.3	+0.5
	baz=266						
SEW	Seward	48.06	39	P	P	03 42 28.2	+1.9
	baz=274						
PMR	Palmer	48.13	37	P	P	03 42 27.9	+1.0
	baz=273						
MCK	McKinley	48.14	34	P	P	03 42 28.0	+1.1
	baz=271						
D24K	Happy Valley	48.29	27	P	P	03 42 29.0	+1.0
	baz=267,SNR=5.3						
WAT1	Susitna Watana	48.34	35	P	P	03 42 29.6	+1.0
	baz=272						
E24K	Your Creek	48.36	28	IAmb	IAmb	03 42 31.3	
	comp=Z,3.8nm,0.8s						
E24K	Your Creek	48.36	28	P	P	03 42 29.8	+1.2
	baz=268						
C24K	Franklin Bluff	48.37	26	P	P	03 42 29.8	+1.2
	baz=266						
KNK	Knik Glacier	48.46	37	P	P	03 42 30.5	+1.1
	baz=274						
SML	Sawmill	48.49	37	P	P	03 42 30.6	+0.9
	baz=274						
TARG	Taragay, Kyrgy	48.55	296	IAmb	IAmb	03 42 32.3	
	comp=Z,8.2nm,0.8s						
PWL	Port Wells	48.56	38	P	P	03 42 31.7	+1.5
	baz=274						
H24K	Noodor Dome	48.56	31	P	P	03 42 31.8	+1.6
	baz=270						
F24K	Squaw Lake	48.57	29	P	P	03 42 31.1	+0.8
	baz=269						
COLA	College	48.59	32	⇑eP	P	03 42 32.1	+1.8
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
COLA	College	48.59	32	P	P	03 42 31.6	+1.2
	baz=271						
G24K	Hadweenzic Riv	48.72	30	P	P	03 42 32.8	+1.4
	baz=270						
WAT6	Susitna Watana	48.73	35	P	P	03 42 32.2	+0.5
	baz=273						
POKR	Poker Plat Res	48.76	32	P	P	03 42 33.0	+1.3
	baz=271						
M23K	Glacier View	48.78	37	P	P	03 42 33.2	+1.3
	baz=274						
DHY	Denali Highway	48.86	35	P	P	03 42 33.7	+1.0
	baz=273						
SCM	Sheep Creek Mo	48.97	36	P	P	03 42 34.2	+0.7
	baz=274						
HDA	Harding Lake	48.99	33	IAmb	IAmb	03 42 34.7	
	comp=Z,8.8nm,0.8s						
HDA	Harding Lake	48.99	33	P	P	03 42 34.4	+0.9
	baz=272						
IL31		49.00	33		P	03 42 34.3	+0.8
IL31				IAmb	IAmb	03 42 35.2	
	comp=Z,8.4nm,0.8s						
ILAR	Eielson Array	49.00	33	P	P	03 42 33.8	+0.2
	comp=Z,5.3nm,0.7s,baz=270,slow=6.4,SNR=58						
ILAR				PcP	PcP	03 43 55.8	-1.3
	comp=Z,0.8nm,0.8s,baz=268,slow=5.1,SNR=1.6						
	comp=Z,5.3nm,0.7s						
P23K	Montague Islan	49.09	39	P	P	03 42 35.2	+0.9
	baz=276						
GLI	Glacier Island	49.16	38	P	P	03 42 36.1	+1.3
	baz=275						
D25K	Kavik River	49.17	26	IAmb	IAmb	03 42 37.0	
	comp=Z,5.3nm,0.7s						
D25K	Kavik River	49.17	26	P	P	03 42 35.8	+1.0
	baz=269						
G25K	Bearman Lake	49.27	30	P	P	03 42 36.7	+1.1
	baz=271						
F25K	Christian Rive	49.43	29	P	P	03 42 38.1	+1.2
	baz=271						
E25K	Arctic Village	49.46	28	P	P	03 42 38.3	+1.2
	baz=270						
M24K	Tolsona, Glenn	49.49	36	P	P	03 42 38.7	+1.3
	baz=275						
K24K	Donnelly Dome	49.53	34	P	P	03 42 38.6	+0.9
	baz=274						
PRP	Porcupine Dome	49.54	32		P	03 42 39.0	+1.1
PRP				IAmb	IAmb	03 42 40.0	
	comp=Z,5.6nm,0.9s						
PRP	Porcupine Dome	49.54	32	P	P	03 42 39.0	+1.1
	baz=273						
BOOM	Boomskoye usch	49.65	298	P	P	03 42 38.6	-0.5
BOOM	Boomskoye usch	49.65	298	P	P	03 42 38.6	-0.5
BOOM				pmax	pmax		
	comp=Z,10.0nm,0.7s						
J25K	Salcha River,	49.66	33	P	P	03 42 39.0	+0.3
	baz=274						
KLU	Klutina	49.66	37	P	P	03 42 40.0	+1.3
	baz=276						
C26K	Camden Bay	49.69	26	P	P	03 42 40.3	+1.6
	baz=270						
PAX	Paxson	49.74	35	P	P	03 42 40.1	+0.7
	baz=275						
EYAK	Cordova Ski Ar	49.85	38	P	P	03 42 41.0	+1.0
	baz=277						
HARP	HAARP	49.94	36	P	P	03 42 42.1	+1.3
	baz=276						
F26K	Sheenjek River	50.00	29	IAmb	IAmb	03 42 44.4	
	comp=Z,6.6nm,0.8s						
F26K	Sheenjek River	50.00	29	P	P	03 42 42.5	+1.3
	baz=272,SNR=7.4						
C27K	Jago River	50.11	26	P	P	03 42 43.0	+1.0
	baz=271						
G26K	Porcupine Rive	50.18	30	P	P	03 42 43.4	+0.9
	baz=273						
DOT	Dot Lake	50.31	34	IAmb	IAmb	03 42 45.2	
	comp=Z,3.9nm,0.7s						
SCRK	Sand Creek	50.31	33		P	03 42 44.6	+0.9
SCRK				IAmb	IAmb	03 42 45.2	
	comp=Z,5.6nm,0.7s						
SCRK	Sand Creek	50.31	33	P	P	03 42 44.6	+0.9
	baz=276,SNR=6.2						
BMRM	Bremner River	50.36	37	P	P	03 42 44.9	+0.9
	baz=277						
J26L	Joseph Creek	50.45	33	P	P	03 42 45.8	+1.1
	baz=275						
I26K	Coal Creek Min	50.55	32	P	P	03 42 46.9	+1.6
	baz=275						
KSH	Kashi	50.58	294	P	P	03 42 49.5	+3.4
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BVAR	Borovoye Array	50.59	312	P	P	03 42 45.3	-0.5
	comp=Z,3.8nm,0.5s,baz=72,slow=7.6,SNR=26						
	comp=Z,3.8nm,0.5s						
KAIM	Kayak Island	50.59	39	P	P	03 42 47.0	+1.3
	baz=278						
BORK	Borovoye	50.62	312	P	P	03 42 45.5	-0.5
BORK				IAmb	IAmb	03 42 47.6	
	comp=Z,3.8nm,0.5s						
BORK	Borovoye	50.62	312	⇑eP	P	03 42 45.7	-0.3
BORK				pmax	pmax		
	comp=Z,15nm,2.5s						
AAK	Ala-Archa	50.62	298	LR	LR	04 05 21.2	
	comp=Z,101nm,18.2s,baz=82,slow=38						
AAK	Ala-Archa	50.62	298	P	P	03 42 46.1	-0.3
AAK				IAmb	IAmb	03 42 47.3	
	comp=Z,8.7nm,1.4s						
AAK	Ala-Archa	50.62	298	ceP	P	03 42 46.0	-0.4
AAK				pmax	pmax		
	comp=Z,10.0nm,2.5s						
L26K	Log Cabin Wild	50.70	35	IAmb	IAmb	03 42 49.1	
	comp=Z,8.4nm,0.8s						
L26K	Log Cabin Wild	50.70	35	P	P	03 42 48.5	+2.0
	baz=277,SNR=6.7						
M26K	Nabesna, AK	50.93	35	P	P	03 42 50.0	+1.7
	baz=278						
E27K	Coleen River	50.94	28	P	P	03 42 49.7	+1.4
	baz=274						
G27K	Doyon Strip	51.03	30	P	P	03 42 50.9	+2.0
	baz=275						
MCARA	McCarthy VSAT	51.06	37	P	P	03 42 50.8	+1.6
	baz=278						
D27M	Malcolm River	51.10	27	P	P	03 42 51.7	+2.3
	baz=274						
CRQE	Cirque	51.12	38	P	P	03 42 51.4	+1.5
	baz=279						
H27K	Steamboat Moun	51.13	30	P	P	03 42 51.4	+1.7
	baz=276						
K27K	Chicken	51.14	33	IAmb	IAmb	03 42 52.2	
	comp=Z,6.0nm,0.9s						
K27K	Chicken	51.14	33	P	P	03 42 51.6	+1.8
	baz=277						
I27K	Kandik River	51.16	31	P	P	03 42 51.4	+1.4
	baz=276						
L27K	Beaver Creek,	51.38	35	IAmb	IAmb	03 42 54.3	
	comp=Z,7.9nm,1.1s						
L27K	Beaver Creek,	51.38	35	P	P	03 42 53.3	+1.6
	baz=278						
M27K	Edge Creek, AK	51.46	35	P	P	03 42 54.3	+1.9
	baz=279						
F28M	Old Crow	51.64	29	P	P	03 42 55.0	+1.5
	baz=276						
E28M	Babbage River	51.66	27	P	P	03 42 54.9	+1.2
	baz=276						
I28M	Miner Creek	51.87	31	IAmb	IAmb	03 42 57.8	
	comp=Z,5.5nm,0.7s						
I28M	Miner Creek	51.87	31	P	P	03 42 56.3	+0.9
	baz=278						
D28M	Stokes Point	51.88	26	P	P	03 42 56.9	+1.8
	baz=276						
BVCY	Beaver Creek	51.92	35	P	P	03 42 57.5	+1.8
	baz=279						
CTG	Chitna Glacier	51.93	37	P	P	03 42 57.3	+1.4
	baz=280						
ARSB	Arslanbob	52.12	297	IAmb	IAmb	03 42 58.5	
	comp=Z,7.0nm,0.8s						
YUK3	Moose Creek	52.21	36	P	P	03 42 59.8	+1.7
	baz=280						
E29M	Blow River	52.29	27	IAmb	IAmb	03 43 01.2	
	comp=Z,5.3nm,0.9s						
E29M	Blow River	52.29	27	P	P	03 43 00.0	+1.8
	baz=277						
DAWY	Dawson	52.31	33	P	P	03 43 00.4	+1.8
	baz=279						
H29M	Whitestone	52.40	30	P	P	03 43 00.9	+1.8
	baz=278						
G29M	Pine Creek	52.44	29	P	P	03 43 01.4	+2.0
	baz=278,SNR=5.6						
O28M	Mount Upton	52.52	37	P	P	03 43 02.2	+1.7
	baz=281						
I29M	Ogilvie Camp,	52.56	31	IAmb	IAmb	03 43 02.8	
	comp=Z,11nm,0.8s						
I29M	Ogilvie Camp,	52.56	31	P	P	03 43 02.0	+1.6
	baz=279,SNR=7.7						
YUK8	Steele Glacier	52.63	37	P	P	03 43 03.0	+1.8
	baz=281						
J29N	Klondike Camp	52.75	32	P	P	03 43 03.4	+1.6
	baz=280						
M29M	Somme Creek	53.01	35	IAmb	IAmb	03 43 06.7	
	comp=Z,4.7nm,0.7s						
M29M	Somme Creek	53.01	35	P	P	03 43 05.8	+1.9
	baz=281						
L29M	L29M	53.03	34	IAmb	IAmb	03 43 07.2	
	comp=Z,10nm,0.8s						
L29M	L29M	53.03	34	P	P	03 43 05.5	+1.6
	baz=281,SNR=7.2						
EPYK	Eagle Plains	53.04	30	P	P	03 43 05.1	+1.2
	baz=280,SNR=12						
G30M	tAoh Zraii Nji	53.13	29	P	P	03 43 06.5	+1.9
	baz=280,SNR=5.9						
YUK4	Talbot Arm	53.14	36	P	P	03 43 06.7	+1.7
	baz=282						
K29M	Barlow Dome	53.16	33	IAmb	IAmb	03 43 08.1	
	comp=Z,7.8nm,0.8s						
K29M	Barlow Dome	53.16	33	P	P	03 43 06.3	+1.4
	baz=281						
F30M	Barrier River	53.19	28	IAmb	IAmb	03 43 08.5	
	comp=Z,12nm,1.0s						
F30M	Barrier River	53.19	28	P	P	03 43 06.8	+1.9
	baz=280						
KK31	Karatay Array	53.24	300		P	03 43 05.2	-0.6
KK31	Karatay Array	53.24	300	P	P	03 43 05.2	-0.6
KK31				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KKAR	Karatay Array	53.24	300	P	P	03 43 05.2	-0.6
KKAR	Karatay Array	53.24	300	P	P	03 43 05.2	-0.6
YUK6	Outpost Mounta	53.36	37	P	P	03 43 08.1	+1.4
	baz=282						
I30M	Mount Dempster	53.38	31	P	P	03 43 07.9	+1.3
	baz=281,SNR=24						
O29M	Mount Kennedy	53.40	38	P	P	03 43 09.1	+2.3
	baz=283						
J30M	Hart River	53.53	32	P	P	03 43 09.5	+1.8
	baz=282						
M30M	Minto, Yukon	53.74	35	P	P	03 43 10.9	+1.8
	baz=283						
HYT	Haines Junctio	53.80	37	IAmb	IAmb	03 43 13.5	
	comp=Z,9.0nm,1.0s						
HYT	Haines Junctio	53.80	37	P	P	03 43 11.6	+1.9
	baz=283						
N30M	Aishikik Lake	53.85	36	P	P	03 43 12.0	+2.1
	baz=283						
G31M	Satah River	53.90	29	IAmb	IAmb	03 43 11.7	
	comp=Z,5.5nm,0.7s						
G31M	Satah River	53.90	29	P	P	03 43 11.3	+1.2
	baz=282,SNR=5.0						
INK	Inuvik	53.90	27	IAmb	IAmb	03 43 12.2	
	comp=Z,6.1nm,1.1s						
INK	Inuvik	53.90	27	P	P	03 43 12.0	+1.9
	baz=281,SNR=5.8						
P29M	Windy Craggy	53.97	38	P	P	03 43 12.9	+2.1
	baz=284						
F31M	Tsiigehtchic	53.99	28	P	P	03 43 12.1	+1.3
	baz=282						
H31M	Peel River	54.10	30	P	P	03 43 13.4	+1.7
	baz=282						
P30M	Million Dollar	54.23	38	P	P	03 43 15.0	+2.3
	baz=284						
MANEM	Manem	54.43	293	IAmb	IAmb	03 43 16.5	
	comp=Z,9.6nm,0.9s						
N31M	Braeburn, Yuko	54.46	36	P	P	03 43 16.8	+2.4
	baz=284						
O30N	Mendenhall	54.48	37	P	P	03 43 16.3	+1.7
	baz=284						
PLBC	Pleasant Camp	54.69	38	P	P	03 43 18.1	+2.1
	baz=285						
M31M	Drury Creek, Y	54.92	35	IAmb	IAmb	03 43 20.2	
	comp=Z,4.2nm,0.8s						
M31M	Drury Creek, Y	54.92	35	P	P	03 43 19.2	+1.5
	baz=285						
WHY	Whitehorse	55.09	37	P	P	03 43 21.0	+2.0
	baz=285						
SVE	Sverdlovsk	55.11	319	eP	P	03 43 19.2	+0.1
S31K	Pelican	55.15	40	P	P	03 43 21.9	+2.5
	baz=286						
SKAG	Skagway	55.20	38	P	P	03 43 21.8	+2.1
	baz=286						
R31K	City Hall, Gus	55.28	39	P	P	03 43 22.3	+2.1
	baz=286						
FARO	Faro, Yukon	55.38	35	P	P	03 43 22.3	+1.3
	baz=286						
A36M	Sachs Harbour	55.79	22	IAmb	IAmb	03 43 26.5	
	comp=Z,8.3nm,0.8s						
A36M	Sachs Harbour	55.79	22	P	P	03 43 25.2	+1.4
	baz=286,SNR=8.8						
R32K	Eaglecrest	55.94	39	P	P	03 43 27.8	+2.8
	baz=287						
P32M	Atlin	55.95	38	P	P	03 43 27.3	+2.1
	baz=287						
S32K	Killisnoo	56.15	40	P	P	03 43 28.8	+2.4
	baz=288						
P33M	Teslin, Yukon	56.20	37	IAmb	IAmb	03 43 29.8	
	comp=Z,7.1nm,0.9s						
P33M	Teslin, Yukon	56.20	37	P	P	03 43 28.9	+1.9
	baz=287						
ARTI	Arti	56.43	318	LR	LR	04 09 57.2	
	comp=Z,93nm,18.6s,baz=182,slow=38						
ARTI	Arti	56.43	318	P	P	03 43 28.1	-0.4
ARTI	Arti	56.43	318	d iP	P	03 43 27.9	-0.6
ARTI				*PP	pP	03 43 38.0	+0.2
ARTI				S	S	03 51 17.3	+0.2
ARTI				SS	SS	03 54 58.0	-5.9
ARTI				pmax	pmax		
	comp=Z,14nm,0.6s						
Q32M	Nakina River	56.85	38	P	P	03 43 33.8	+2.0
	baz=288						
C36M	Paulatuk	56.95	25	IAmb	IAmb	03 43 33.4	
	comp=Z,5.7nm,0.8s						
C36M	Paulatuk	56.95	25	P	P	03 43 34.2	+2.2
	baz=289,SNR=5.4						
SHAA	Shahritus	57.01	295		P	03 43 33.3	+0.2
SHAA				IAmb	IAmb	03 43 33.9	
	comp=Z,24nm,0.7s						
WB0	Warramunga Arr	57.29	188	P	P	03 43 34.2	-0.8
U33K	Whale Pass	57.34	42	P	P	03 43 37.9	+2.9
	baz=290						
R33M	Jennings River	57.34	37	P	P	03 43 37.0	+1.9
	baz=289						
WRA	Warramunga Arr	57.47	188	P	P	03 43 35.2	-1.0
	comp=Z,2.9nm,0.4s,baz=346,slow=7.9,SNR=48						
	comp=Z,2.9nm,0.4s						
WRA	Warramunga Arr	57.47	188	P	P	03 43 35.2	-1.0
CRAG	Craig	57.56	42	P	P	03 43 39.9	+3.4
	baz=290						
WRAK	Wrangell Islan	57.64	41	P	P	03 43 39.8	+2.7
	baz=290						
S34M	Telegraph Cree	57.76	39	P	P	03 43 40.4	+2.5
	baz=290						
AB31	Akbulak array	57.97	310		P	03 43 38.9	-0.7
AB31				IAmb	IAmb	03 43 39.5	
	comp=Z,4.1nm,0.6s						
ABKAR	Akbulak array	57.97	310	P	P	03 43 38.9	-0.7
DLBC	Dease Lake	58.12	38	P	P	03 43 43.0	+2.4
	baz=290						
WTLY	Watson Lake, Y	58.13	36	P	P	03 43 42.5	+1.9
	baz=290						
V35K	Ketchikan	58.41	42	P	P	03 43 45.4	+2.9
	baz=291						
T35M	Bob Quinn	58.53	40	P	P	03 43 46.2	+2.8
	baz=291						
WRGLY	Wrigley	59.36	32	P	P	03 43 51.7	+2.7
	baz=293						
LIRD	Liard River Hi	59.66	36	P	P	03 43 54.0	+2.9
	baz=293						
KIRV	Kirov	60.17	323	LR	LR	04 11 15.2	
	comp=Z,53nm,18.4s,baz=76,slow=37						
SPITS	Spitsbergen Ar	60.23	349	P	P	03 43 55.4	+0.6
	comp=Z,11nm,0.9s,baz=59,slow=8.6,SNR=1.7						
	comp=Z,11nm,0.9s						
TOAD	Toad River Com	60.29	37	P	P	03 43 58.1	+2.5
	baz=294						
KOTAN	Kotaneelee Air	60.33	35	P	P	03 43 58.4	+2.7
	baz=294						
ASAR	Alice Springs	61.20	188	P	P	03 44 01.4	-0.6
	comp=Z,0.6nm,0.6s,baz=350,slow=3.8,SNR=13						
	comp=Z,0.6nm,0.6s						
ASAR	Alice Springs	61.20	188	P	P	03 44 01.9	-0.1
APA	Apatity	62.50	336	⇓eP	P	03 44 09.8	-0.4
APA				MLR	MLR		
	comp=Z,2µm,5.4s						
PALK	Pallekele	62.79	258	i P	P	03 44 13.2	+0.2
YKAW3	Yellowknife Wh	63.28	30	P	P	03 44 16.0	+0.5
YKA	Yellowknife Ar	63.32	30	P	P	03 44 16.4	+0.6
	comp=Z,1.7nm,0.7s,baz=304,slow=7.5,SNR=20						
	comp=Z,1.7nm,0.7s						
DZM	Mont Dzumac	63.53	154	eLR	LR	04 03 14.4	
	comp=Z,64nm,21.9s						
KLMR	Klimovskoe	63.63	328	eP	P	03 44 13.9	-4.0
KLMR				e*PP	pP	03 44 26.0	-1.3
KLMR				e		03 46 34.5	
KLMR				pmax	pmax		
	comp=Z,24nm,1.5s						
ARCES	ARCESS Array B	63.78	339	P	P	03 44 18.2	-0.5
	comp=Z,9.4nm,1.1s,baz=54,slow=8.2,SNR=10						
	comp=Z,9.4nm,1.1s						
ARCES	ARCESS Array B	63.78	339	P	P	03 44 18.3	-0.5
POIN	Pond Inlet	66.79	12	P	P	03 44 38.8	+0.6
POIN				IAmb	IAmb	03 44 54.1	
	comp=Z,7.8nm,1.2s						
H04A	Detroit Lake	68.61	50	IAmb	IAmb	03 44 52.7	
	comp=Z,7.2nm,0.9s						
FIA1	FINESS Array S	68.65	332	P	P	03 44 49.5	-0.5
FINES	FINESS Array B	68.66	332	P	P	03 44 49.1	-0.9
	comp=Z,2.9nm,0.7s,baz=31,slow=9.2,SNR=14						
FINES				LR	LR	04 15 44.8	
	comp=Z,26nm,18.1s,baz=246,slow=37						
	comp=Z,2.9nm,0.7s						
FINES	FINESS Array B	68.66	332	P	P	03 44 49.5	-0.5
FINES	FINESS Array B	68.66	332	i P	P	03 44 50.4	+0.3
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
EDM	Edmonton	68.84	39	P	P	03 44 51.6	+0.1
EDM	Edmonton	68.84	39	P	P	03 44 51.6	+0.1
EDM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BLKN	Baker Lake	68.92	23	P	P	03 44 52.0	+0.4
PINE	Pine Mountain	69.84	50	P	P	03 44 60.0	+2.0
K05A	Summer Lake	70.44	51	P	P	03 45 03.5	+1.8
O02D	Mt. Diablo Mer	70.63	54	P	P	03 45 04.0	+1.3
O02D				IAmb	IAmb	03 45 05.7	
	comp=Z,8.9nm,0.9s						

KBZ	**Khabaz**	**70.93**	**311**	P	**P**	**03 45 04.0**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=57,slow=6.0,SNR=5.3						
	comp=Z,2.1nm,0.8s						
KBZ	**Khabaz**	**70.93**	**311**	⇑*e*P	**P**	**03 45 04.5**	**+0.1**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KIV	**Kislovodsk**	**70.93**	**311**	*e*P	**P**	**03 45 04.1**	**-0.4**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,30nm,18.0s						
BMO	**Blue Mountains**	**71.43**	**47**	IAmb	IAmb	03 45 09.4	
	comp=Z,4.5nm,0.8s						
J08A	**Circle Bar Ran**	**71.57**	**49**	IAmb	IAmb	03 45 10.8	
	comp=Z,9.2nm,1.1s						
MFID	**Camas Ranch**	**73.12**	**48**	IAmb	IAmb	03 45 19.7	
	comp=Z,4.6nm,0.8s						
FFC	**Flin Flon**	**73.21**	**33**	P	**P**	**03 45 18.7**	**+0.8**
FFC				IAmb	IAmb	03 45 19.2	
	comp=Z,6.3nm,0.8s						
FFC	**Flin Flon**	**73.21**	**33**	P	**P**	**03 45 18.7**	**+0.8**
FFC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FCC	**Fort Churchill**	**73.52**	**27**	P	**P**	**03 45 19.6**	**+0.1**
FCC	**Fort Churchill**	**73.52**	**27**	P	**P**	**03 45 19.6**	**+0.1**
FCC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
EGMT	**Eagleton**	**73.77**	**42**	IAmb	IAmb	03 45 23.0	
	comp=Z,6.3nm,0.8s						
DLMT	**Dillon**	**73.84**	**45**	IAmb	IAmb	03 45 23.9	
	comp=Z,8.4nm,0.8s						
HFS	**Hagfors**	**73.90**	**336**	P	**P**	**03 45 21.8**	**0.0**
	comp=Z,3.1nm,0.8s,baz=38,slow=5.6,SNR=10.0						
HFS				LR	LR	04 20 06.9	
	comp=Z,66nm,18.2s,baz=58,slow=38						
	comp=Z,3.1nm,0.8s						
NB2	**NORSAR Subarra**	**73.98**	**337**	P	**P**	**03 45 22.5**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=40,slow=6.2						
NOA	**NORSAR Array B**	**73.98**	**337**	P	**P**	**03 45 22.3**	**0.0**
	comp=Z,1.6nm,0.8s,baz=39,slow=5.9,SNR=6.3						
NOA				LR	LR	04 20 19.1	
	comp=Z,68nm,21.5s,baz=25,slow=38						
	comp=Z,1.6nm,0.8s						
AKASG	**Malin Array Be**	**74.22**	**322**	P	**P**	**03 45 22.6**	**-1.2**
	comp=Z,0.8nm,0.4s,baz=48,slow=6.0,SNR=11						
	comp=Z,0.8nm,0.4s						
AKASG	**Malin Array Be**	**74.22**	**322**	c*e*P	**P**	**03 45 23.2**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BOZ	**Bozeman (W)**	**74.24**	**44**	IAmb	IAmb	03 45 26.2	
	comp=Z,6.9nm,0.9s						
NVAR	**Mina Array Bea**	**74.49**	**53**	P	**P**	**03 45 26.7**	**+0.7**
	comp=Z,3.1nm,0.7s,baz=283,slow=5.8,SNR=18						
	comp=Z,3.1nm,0.7s						
NVAR	**Mina Array Bea**	**74.49**	**53**	P	**P**	**03 45 27.6**	**+1.7**
YHL	**Hebgen Lake**	**74.94**	**45**	IAmb	IAmb	03 45 31.1	
	comp=Z,5.7nm,0.8s						
YHB	**Horse Butte**	**75.00**	**45**	IAmb	IAmb	03 45 31.3	
	comp=Z,5.2nm,0.8s						
YMR	**Madison River**	**75.18**	**45**	IAmb	IAmb	03 45 32.5	
	comp=Z,4.7nm,0.8s						
H17A	**Grant Village**	**75.57**	**45**	IAmb	IAmb	03 45 35.9	
	comp=Z,8.9nm,0.8s						
FXWY	**Fox Creek**	**75.78**	**46**	IAmb	IAmb	03 45 35.9	
	comp=Z,5.6nm,1.0s						
GRAC	**Grapevine Rang**	**75.93**	**54**	IAmb	IAmb	03 45 35.9	
	comp=Z,6.9nm,0.9s						
R11B	**Troy Canyon, C**	**76.26**	**52**	IAmb	IAmb	03 45 38.2	
	comp=Z,6.7nm,1.1s						
FURC	**Furnace Creek,**	**76.57**	**54**	IAmb	IAmb	03 45 39.7	
	comp=Z,9.1nm,1.0s						
TPNV	**Topopah Spring**	**76.68**	**54**	IAmb	IAmb	03 45 40.4	
	comp=Z,5.9nm,0.9s						
DUG	**Dugway, Tooele**	**76.85**	**49**	IAmb	IAmb	03 45 41.5	
	comp=Z,3.8nm,0.7s						
PDAR	**Pinedale Array**	**77.16**	**46**	P	**P**	**03 45 41.6**	**+0.5**
	comp=Z,2.4nm,0.7s,baz=271,slow=2.4,SNR=32						
	comp=Z,2.4nm,0.7s						
PSUT	**Pine Spring**	**77.23**	**51**	IAmb	IAmb	03 45 43.6	
	comp=Z,5.3nm,1.1s						
LCMT	**Little Creek M**	**78.55**	**52**	IAmb	IAmb	03 45 51.3	
	comp=Z,5.0nm,1.0s						
RDMU	**Red Mountain**	**78.55**	**47**	IAmb	IAmb	03 45 51.0	
	comp=Z,8.8nm,0.9s						
P17A	**Butcher Ranch,**	**78.55**	**49**	IAmb	IAmb	03 45 51.0	
	comp=Z,6.0nm,0.8s						
P18A	**Preston Nutter**	**78.75**	**49**	IAmb	IAmb	03 45 52.6	
	comp=Z,10nm,1.5s						
BRTR	**Keskin Array B**	**78.87**	**312**	P	**P**	**03 45 50.5**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=72,slow=4.7,SNR=4.2						
	comp=Z,0.5nm,0.6s						
SRU	**San Rafael Swe**	**78.91**	**49**	IAmb	IAmb	03 45 52.7	
	comp=Z,5.2nm,0.9s						
ULM	**Lac du Bonnet**	**79.01**	**34**	P	**P**	**03 45 50.5**	**-0.4**
	comp=Z,2.3nm,0.4s,baz=329,slow=5.8,SNR=3.9						
	comp=Z,2.3nm,0.4s						
ULM	**Lac du Bonnet**	**79.01**	**34**	IAmb	IAmb	03 45 51.2	
	comp=Z,3.7nm,0.6s						
ULM	**Lac du Bonnet**	**79.01**	**34**	⇓*e*P	**P**	**03 45 51.2**	**+0.3**
RSSD	**Black Hills**	**79.33**	**42**		**P**	**03 45 54.0**	**+1.0**
RSSD	**Black Hills**	**79.33**	**42**	P	**P**	**03 45 54.1**	**+1.0**
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MLR	**Muntele Rosu**	**79.33**	**320**	LR	LR	04 24 16.0	
	comp=Z,58nm,19.1s,baz=35,slow=38						
ESJX	**Sierra Juarez**	**79.86**	**58**	IAmb	IAmb	03 45 58.6	
	comp=Z,7.3nm,1.0s						
PV14	**Lion Creek, Pa**	**80.28**	**49**	IAmb	IAmb	03 45 60.0	
	comp=Z,6.4nm,0.7s						
EPLO	**Experimental L**	**80.37**	**33**	IAmb	IAmb	03 45 59.0	
	comp=Z,6.9nm,0.8s						
PV16	**Nyswonger Mesa**	**80.39**	**49**	IAmb	IAmb	03 46 00.9	
	comp=Z,4.9nm,0.8s						
PV11	**David Mesa, Pa**	**80.42**	**49**	IAmb	IAmb	03 46 04.7	
	comp=Z,6.7nm,0.6s						
PV05	**Paradox Valley**	**80.43**	**49**	IAmb	IAmb	03 46 01.4	
	comp=Z,7.9nm,0.8s						
PV18	**Skein Mesa, Pa**	**80.43**	**49**	IAmb	IAmb	03 46 01.2	
	comp=Z,10nm,0.9s						
PV13	**Radium Mtn., P**	**80.54**	**49**	IAmb	IAmb	03 46 01.9	
	comp=Z,6.0nm,0.9s						
PV02	**Paradox Valley**	**80.56**	**49**	IAmb	IAmb	03 46 02.6	
	comp=Z,5.2nm,0.7s						
MMAI	**Mount Meron Ar**	**82.04**	**306**	P	**P**	**03 46 07.8**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=38,slow=9.7,SNR=5.1						
MMAI				LR	LR	04 26 16.1	
	comp=Z,38nm,18.0s,baz=60,slow=38						
	comp=Z,1.4nm,0.6s						
BALJ	**Balqa**	**82.47**	**305**	P	**P**	**03 46 10.1**	**+0.2**
ECSD	**EROS Data Cent**	**83.42**	**38**	IAmb	IAmb	03 46 15.4	
	comp=Z,5.0nm,0.8s						
T25A	**Trinidad**	**83.84**	**47**	IAmb	IAmb	03 46 18.9	
	comp=Z,5.3nm,0.8s						
TASM	**ASL Pad, Albuq**	**84.08**	**50**	IAmb	IAmb	03 46 20.1	
	comp=Z,3.3nm,1.2s						
TASM	**ASL Pad, Albuq**	**84.08**	**50**	IAmb	IAmb	03 46 21.0	
	comp=Z,2.5nm,1.1s						
TASM	**ASL Pad, Albuq**	**84.08**	**50**	IAmb	IAmb	03 46 21.0	
	comp=Z,2.1nm,0.9s						
ANMO	**Albuquerque**	**84.09**	**50**	⇑*e*P	**P**	**03 46 18.9**	**+0.6**
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
EIL	**Elat**	**84.47**	**303**	LR	LR	04 25 59.3	
	comp=Z,33nm,18.0s,baz=267,slow=37						
TAOE	**Nuku Hiva Isla**	**85.92**	**104**	*e*LR	LR	04 13 43.0	
	comp=Z,313nm,28.1s						
SGCY	**Sterling City**	**89.40**	**49**	IAmb	IAmb	03 46 46.8	
	comp=Z,5.4nm,1.0s						
TX31	**Lajitas Ar. Si**	**89.62**	**53**	IAmb	IAmb	03 46 46.3	
	comp=Z,1.6nm,0.6s						
TXAR	**Lajitas Array**	**89.62**	**53**	P	**P**	**03 46 45.7**	**+0.5**
	comp=Z,1.6nm,0.7s,baz=302,slow=3.2,SNR=24						
	comp=Z,1.6nm,0.7s						
HHAR	**Hobbs**	**90.31**	**42**	IAmb	IAmb	03 46 48.4	
	comp=Z,7.4nm,1.3s						
FCAR	**Ozark Folk Cen**	**91.57**	**41**	IAmb	IAmb	03 46 54.5	
	comp=Z,3.3nm,0.7s						
TKL	**Tuckaleechee C**	**95.89**	**36**	LR	LR	04 34 45.0	
	comp=Z,19nm,18.9s,baz=357,slow=38						
ESDC	**Sonseca Array**	**97.12**	**334**	LR	LR	04 37 02.7	
	comp=Z,72nm,18.9s,baz=8.0,slow=39						
KMBO	**Kilima Mbogo**	**102.27**	**278**	*i* P	**Pdif**	**03 47 42.9**	**-0.2**
KMBO				pmax	pmax		
	comp=Z,358nm,0.7s						
SNAA	**Sanae**	**141.20**	**197**	PKhKP	PKPpre	03 53 09.0	
	comp=Z,0.8nm,0.8s,baz=38,slow=13,SNR=2.7						
LPAZ	**La Paz**	**146.21**	**60**	PKPbc	**PKPdf**	**03 53 27.9**	**+0.3**
	comp=Z,2.3nm,0.5s,baz=0.2,slow=4.0,SNR=13						
H03N2	**Juan Fernandez**	**146.71**	**96**	T	T	06 37 31.9	
	baz=292,slow=76,SNR=15						
H03N3	**Juan Fernandez**	**146.72**	**96**	T	T	06 37 41.9	
	baz=292,slow=76,SNR=18						
H03N1	**Juan Fernandez**	**146.73**	**96**	T	T	06 37 39.2	
	baz=292,slow=76,SNR=20						

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*KRSC **07** 03:39:43.6±1.2, 53°.21N×170°.40E, h61^{km}±38^{km}, Ml4.4*

*MOS **07** 03:39:44.8±0.9, 53°.27N×170°.51E, h58^{km}, mb4.0/1, Error ellipse: s-maj=13.4km s-min=6.3km az=22.0*

*IDC **07** 03:39:46.7±4.0, 53°.44N×170°.37E, h48^{km}±37^{km}, mb3.3/9, mbtmp3.6/10, ML3.4/1, Error ellipse: s-maj=35.1km s-min=23.4km az=170.0*

*NEIC **07** 03:39:46.6±1.1, 53°.5N±0°.2×170°.6E±0°.1, h35^{km}±2^{km}, ML3.3/4, Error ellipse: s-maj=35.7km s-min=3.3km az=198.0*

ISC 07 03:39:43.8±0.7**, 53°.26N**±0°.09×**170°.45E**±0°.05**, h24^{km}, n83, σ2^{s}.30**/90**, mb3.5**/10**, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHEM	**Shemya Is, Ala**	**2.27**	**102**	Pn	**Pn**	**03 40 21.0**	**+1.3**
SHEM				Sn	**Sn**	**03 40 47.7**	**+0.8**
SHEM				IAML		03 40 52.2	
	comp=E,140nm,0.7s						
SMY	**Shemya**	**2.27**	**102**	Pn	**Pn**	**03 40 21.1**	**+1.3**
SMY				IAML		03 40 51.6	
	comp=N,192nm,0.4s						
SMY	**Shemya**	**2.27**	**102**	P	**Pn**	**03 40 20.8**	**+1.1**
SMY				S	**Sn**	**03 40 47.9**	**+1.0**
BKI	**Bering**	**3.27**	**308**	*e*S	**Sn**	**03 41 11.0**	**-0.7**
MKZ	**Mys Kozlova**	**5.32**	**288**	P	**Pn**	**03 41 03.4**	**+1.8**
MKZ	**Mys Kozlova**	**5.32**	**288**	*e*P	**Pn**	**03 41 03.5**	**+1.8**
KBTR	**Krutoberegovo**	**5.32**	**307**	P	**Pn**	**03 41 03.4**	**+1.8**
KBTR	**Krutoberegovo**	**5.32**	**307**	*e*P	**Pn**	**03 41 03.5**	**+1.8**
AMKA	**Amchitka**	**5.75**	**106**	Pn	**Pn**	**03 41 07.6**	**+0.1**
SMKR	**Semkarok**	**6.16**	**306**	P	**Pn**	**03 41 15.4**	**+2.2**
SMKR	**Semkarok**	**6.16**	**306**	*e*P	**Pn**	**03 41 15.4**	**+2.2**
TUMD	**Tumrok D**	**6.21**	**292**	P	**Pn**	**03 41 16.4**	**+2.6**
TUMD				S	**Sn**	**03 42 24.7**	**+0.7**
TUMD	**Tumrok D**	**6.21**	**292**	*e*P	**Pn**	**03 41 16.5**	**+2.6**
TUMD				*e*S	**Sn**	**03 42 24.7**	**+0.7**
KZV	**Kizimen**	**6.25**	**291**	P	**Pn**	**03 41 17.0**	**+2.5**
KZV	**Kizimen**	**6.25**	**291**	*e*P	**Pn**	**03 41 17.1**	**+2.5**
BZGR	**Bezymyannyi-Gr**	**6.27**	**299**	P	**Pn**	**03 41 18.2**	**+3.4**
BZGR	**Bezymyannyi-Gr**	**6.27**	**299**	*e*P	**Pn**	**03 41 18.2**	**+3.4**
SPN	**Mys Shipunski**	**6.27**	**273**	P	**Pn**	**03 41 15.4**	**+0.7**
SPN				S	**Sn**	**03 42 24.7**	**-0.8**
SPN	**Mys Shipunski**	**6.27**	**273**	*e*P	**Pn**	**03 41 15.5**	**+0.7**
SPN				*e*S	**Sn**	**03 42 24.8**	**-0.8**
SRKR	**Sorokina**	**6.34**	**306**	P	**Pn**	**03 41 19.7**	**+4.0**
SRKR	**Sorokina**	**6.34**	**306**	*e*P	**Pn**	**03 41 19.7**	**+4.0**
KLY	**Klyuchi**	**6.44**	**302**	P	**Pn**	**03 41 19.1**	**+2.1**
KLY				S	**Sn**	**03 42 29.3**	**-0.4**
KLY	**Klyuchi**	**6.44**	**302**	*e*P	**Pn**	**03 41 19.1**	**+2.1**
KLY				*e*S	**Sn**	**03 42 29.3**	**-0.4**
KMNR	**Kamenistaya**	**6.45**	**297**	P	**Pn**	**03 41 20.0**	**+2.7**
KMNR				S	**Sn**	**03 42 30.5**	**+0.4**
KMNR	**Kamenistaya**	**6.45**	**297**	*e*P	**Pn**	**03 41 20.0**	**+2.7**
KMNR				*e*S	**Sn**	**03 42 30.6**	**+0.4**
KII	**Karymskiy**	**6.59**	**281**	P	**Pn**	**03 41 21.7**	**+2.6**
KII	**Karymskiy**	**6.59**	**281**	*e*P	**Pn**	**03 41 21.8**	**+2.6**
NLC	**Nalytchevo**	**6.67**	**274**	P	**Pn**	**03 41 22.6**	**+2.4**
NLC	**Nalytchevo**	**6.67**	**274**	*e*P	**Pn**	**03 41 22.6**	**+2.4**
SDLR	**Sedlovina**	**6.94**	**275**	P	**Pn**	**03 41 26.7**	**+2.7**
SDLR	**Sedlovina**	**6.94**	**275**	*e*P	**Pn**	**03 41 26.7**	**+2.7**
UGLR	**Uglovaya**	**6.98**	**274**	P	**Pn**	**03 41 27.5**	**+3.0**
UGLR	**Uglovaya**	**6.98**	**274**	*e*P	**Pn**	**03 41 27.5**	**+3.0**
KRER	**Koryakskii**	**7.02**	**275**	P	**Pn**	**03 41 28.0**	**+2.9**
KRER	**Koryakskii**	**7.02**	**275**	*e*P	**Pn**	**03 41 28.1**	**+2.9**
DALK	**Dalny**	**7.04**	**273**	P	**Pn**	**03 41 28.2**	**+3.0**
DALK	**Dalny**	**7.04**	**273**	*e*P	**Pn**	**03 41 28.2**	**+3.0**
KRX	**Arik**	**7.07**	**276**	P	**Pn**	**03 41 28.3**	**+2.4**
KRX	**Arik**	**7.07**	**276**	*e*P	**Pn**	**03 41 28.3**	**+2.4**
KOK	**Koryaka**	**7.09**	**275**	P	**Pn**	**03 41 28.8**	**+2.8**
KOK	**Koryaka**	**7.09**	**275**	*e*P	**Pn**	**03 41 28.9**	**+2.8**
PET	**Petropavlovsk**	**7.10**	**273**	P	**Pn**	**03 41 29.2**	**+3.1**
PET	**Petropavlovsk**	**7.10**	**273**	*e*P	**Pn**	**03 41 29.3**	**+3.1**
RUS	**Russkaya**	**7.28**	**268**	P	**Pn**	**03 41 30.9**	**+2.4**
RUS	**Russkaya**	**7.28**	**268**	*e*P	**Pn**	**03 41 31.0**	**+2.4**
KRMR	**Karymshinskiy**	**7.44**	**272**	P	**Pn**	**03 41 32.8**	**+2.1**
KRMR				S	**Sn**	**03 42 53.9**	**-0.4**
KRMR	**Karymshinskiy**	**7.44**	**272**	*e*P	**Pn**	**03 41 32.8**	**+2.1**
KRMR				*e*S	**Sn**	**03 42 54.0**	**-0.4**
MTVR	**Mutnovka**	**7.47**	**269**	P	**Pn**	**03 41 34.3**	**+3.1**
MTVR	**Mutnovka**	**7.47**	**269**	*e*P	**Pn**	**03 41 34.4**	**+3.1**
GNL	**Ganaly**	**7.48**	**278**	P	**Pn**	**03 41 34.7**	**+3.3**
GNL	**Ganaly**	**7.48**	**278**	*e*P	**Pn**	**03 41 34.8**	**+3.3**
GRL	**Gorelyy**	**7.52**	**270**	P	**Pn**	**03 41 35.5**	**+3.6**
GRL	**Gorelyy**	**7.52**	**270**	*e*P	**Pn**	**03 41 35.6**	**+3.6**
ASAK	**Asacha**	**7.66**	**268**	P	**Pn**	**03 41 37.1**	**+3.3**
ASAK	**Asacha**	**7.66**	**268**	*e*P	**Pn**	**03 41 37.1**	**+3.3**
PEA0B	**Petropavlovsk-**	**7.67**	**274**	Pn	**Pn**	**03 41 37.3**	**+3.5**
PEA0B	**Petropavlovsk-**	**7.67**	**274**	P	**Pn**	**03 41 37.0**	**+3.1**
PETK	**Petropavlovsk-**	**7.67**	**274**	P	**Pn**	**03 41 36.6**	**+2.7**
	comp=N,2.8nm,0.3s,baz=91,slow=20,SNR=44						
PETK				S	**Sn**	**03 42 58.7**	**-1.2**
	comp=N,1.8nm,0.4s,baz=57,slow=9.2,SNR=4.3						
	comp=N,3.8nm,0.3s						
PETK	**Petropavlovsk-**	**7.67**	**274**		**Pn**	**03 41 36.7**	**+2.9**
KDTR	**Khodutka, Kamc**	**7.69**	**264**	P	**Pn**	**03 41 36.2**	**+2.1**
KDTR				S	Sn	03 42 55.9	-4.4
KDTR	**Khodutka, Kamc**	**7.69**	**264**	*e*P	**Pn**	**03 41 36.2**	**+2.1**
KDTR				*e*S	Sn	03 42 55.9	-4.4
KIWB	**Kanaga Island**	**7.69**	**96**	Pn	**Pn**	**03 41 35.5**	**+1.4**
ADK	**Adak**	**7.96**	**95**	Pn	**Pn**	**03 41 38.8**	**+0.9**
ADK	**Adak**	**7.96**	**95**	P	**Pn**	**03 41 38.8**	**+0.9**
ATKA	**Atka Island**	**9.38**	**90**	Pn	**Pn**	**03 41 58.4**	**+1.1**
ILAR	**Eielson Array**	**24.27**	**45**	P	**P**	**03 44 56.6**	**-2.1**
	comp=N,0.2nm,0.4s,baz=254,slow=7.2,SNR=5.0						
	comp=N,0.2nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**33.58**	**186**	T	T	04 21 41.4	
	baz=4.4,slow=76,SNR=12						
H11N3	**WAKE ISLAND Hy**	**33.59**	**186**	T	T	04 21 42.8	
	baz=4.4,slow=76,SNR=18						
H11N1	**WAKE ISLAND Hy**	**33.59**	**186**	T	T	04 21 43.2	
	baz=4.4,slow=76,SNR=17						
H11S1	**WAKE ISLAND Hy**	**34.80**	**186**	T	T	04 23 13.5	
	baz=6.2,slow=74						
H11S3	**WAKE ISLAND Hy**	**34.82**	**186**	T	T	04 23 14.6	
	baz=6.2						
H11S2	**WAKE ISLAND Hy**	**34.82**	**186**	T	T	04 23 14.9	
	baz=6.2,slow=74						
SPITS	**Spitsbergen Ar**	**47.87**	**353**	P	**P**	**03 48 18.1**	**-1.0**
	comp=N,8.4nm,0.8s,baz=66,slow=11,SNR=1.2						
KURK	**Kurchatov**	**52.78**	**307**	P	**P**	**03 48 56.0**	**-0.5**
KURBB	**Kurchatov Arra**	**52.88**	**307**	P	**P**	**03 48 56.0**	**-1.3**
	comp=N,0.4nm,0.5s,baz=54,slow=6.9,SNR=4.1						
	comp=N,0.4nm,0.5s						
MKAR	**Makanchi Array**	**53.55**	**301**	P	**P**	**03 49 00.7**	**-1.7**
	comp=N,0.2nm,0.3s,baz=54,slow=5.9,SNR=4.2						
	comp=N,0.2nm,0.3s						
MKAR	**Makanchi Array**	**53.55**	**301**	P	**P**	**03 48 59.9**	**-2.4**
BVAR	**Borovoye Array**	**54.99**	**313**	P	**P**	**03 49 11.9**	**-0.8**
	comp=N,0.6nm,0.4s,baz=46,slow=8.3,SNR=2.0						
	comp=N,0.6nm,0.4s						
TXAR	**Lajitas Array**	**64.70**	**74**	P	**P**	**03 50 20.4**	**+0.5**
	comp=N,0.3nm,0.7s,baz=273,slow=4.5,SNR=2.8						
	comp=N,0.3nm,0.7s						
NOA	**NORSAR Array B**	**64.86**	**349**	P	**P**	**03 50 19.1**	**-1.2**
	comp=N,0.3nm,0.6s,baz=0.5,slow=3.3,SNR=1.2						
	comp=N,0.3nm,0.6s						
HFS	**Hagfors**	**65.43**	**347**	P	**P**	**03 50 22.5**	**-1.5**
	comp=N,3.7nm,1.1s,baz=101,slow=4.7,SNR=4.3						
	comp=N,3.7nm,1.1s						
AKASG	**Malin Array Be**	**71.39**	**335**	P	**P**	**03 51 00.8**	**-0.6**
	comp=N,0.1nm,0.3s,baz=27,slow=6.5,SNR=3.2						
	comp=N,0.1nm,0.3s						
ASAR	**Alice Springs**	**82.91**	**213**	P	**P**	**03 52 06.4**	**+0.2**
	comp=N,0.2nm,0.6s,baz=18,slow=6.4,SNR=2.5						
	comp=N,0.2nm,0.6s						

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*IDC **07** 03:46:00.6±1.3, 7°.33N×124°.63E, h0^{km}, mb3.5/4, mbtmp3.5/4, MS3.3/2, Error ellipse: s-maj=30.9km s-min=12.2km az=23.0*

ISC 07 03:46:03.4±1.2**, 7°.3N**±0°.2×**124°.6E**±0°.1**, h19^{km}, n8, σ2^{s}.34**/6**, mb3.4**/4**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.98**	**104**	Pg	**Pb**	**03 46 19.0**	**-2.8**
	159nm,0.3s,baz=255,slow=12,SNR=13						
DAV				Lg	Lg	03 46 33.1	
	422nm,0.3s,baz=319,slow=19,SNR=7.9						
DAV	**Davao City (W)**	**0.98**	**104**	P	**Pg**	**03 46 25.0**	**+2.5**
I39PW	**PALAU INFRASON**	**9.85**	**88**	I	I	04 50 40.0	
	baz=271,slow=314,SNR=1.5						
WRA	**Warramunga Arr**	**28.72**	**161**	P	**P**	**03 51 59.2**	**-0.6**
	0.6nm,0.8s,baz=341,slow=8.6,SNR=2.5						
	0.6nm,0.8s						
MJAR	**Matsushiro Arr**	**31.63**	**21**	LR	LR	04 05 14.0	
	comp=Z,36nm,19.1s,baz=330,slow=36						
ASAR	**Alice Springs**	**32.09**	**164**	P	**P**	**03 52 30.5**	**+0.9**
	0.3nm,0.6s,baz=345,slow=6.7,SNR=5.4						
	0.3nm,0.6s						
SONM	**Songino Array**	**43.26**	**342**	P	**P**	**03 54 04.7**	**+0.8**
	0.3nm,0.5s,baz=157,slow=7.8,SNR=1.7						
SONM				LR	LR	04 15 05.3	
	comp=Z,46nm,21.8s,baz=43,slow=40						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**53.44**	**325**	P	**P**	**03 55 21.5**	**-0.7**
	0.6nm,0.8s,baz=126,slow=9.2,SNR=4.3						
	0.6nm,0.8s						

IDC 07 04:02:39.7±3.3**, 4°.67S**×**133°.68E, h0^{km}, mb3.2**/1**, mbtmp3.4**/4**, ML3.5**/3**, Error ellipse: s-maj=135.6km s-min=30.8km az=81.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.19**	**178**	Pn	Pn	04 06 17.6	+1.9
	0.2nm,0.3s,baz=358,slow=12,SNR=9.5						
WRA				Sn	Sn	04 08 46.1	-19
	baz=358,slow=23,SNR=1.7						
	0.4nm,0.4s						
FITZ	**Fitzroy Crossi**	**15.49**	**210**	Pn	Pn	04 06 19.1	-0.6
	0.2nm,0.3s,baz=39,slow=12,SNR=2.3						
FITZ				Sn	Sn	04 08 58.9	-13
	0.1nm,0.3s,baz=75,slow=14,SNR=2.3						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**18.88**	**179**	P	P	04 07 01.2	-0.6
	0.1nm,0.3s,baz=4.5,slow=11,SNR=9.9						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**68.38**	**325**	P	P	04 13 43.2	0.0
	0.1nm,0.3s,baz=130,slow=5.6,SNR=3.7						
	0.1nm,0.3s						

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*SDD **07** 04:08:38.5±1.5, 20°.12N×70°.93W, h0^{km}±12^{km}, MD3.1, ML3.1, MW2.5, Presumed earthquake*

*OSPL **07** 04:08:40.5±1.5, 20°.24N×70°.75W, h4^{km}±7^{km}, ML2.1, Presumed earthquake*

ISC 07 04:08:37.8±1.6**, 20°.21N**±0°.04×**70°.73W**±0°.05**, h1^{km}**±13^{km}**, n10, σ0^{s}.79**/18**, 3C-1D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOPP1	**Punta Rusia, P**	**0.57**	**231**	*i* P	**Pb**	**04 08 49.7**	**-0.8**
LOPP1				*e*S	**Sb**	**04 08 58.9**	**-0.1**
LOPP1				IAML		04 09 03.4	
	comp=Z,82nm,0.4s						
SC01	**Santiago de lo**	**0.78**	**180**	*e*S	**Sb**	**04 09 06.2**	**+1.0**
SC01				IAML		04 09 08.5	
	comp=Z,40nm,0.2s						
SDDR	**Presa de Saban**	**1.33**	**203**	*i* P	**Pg**	**04 09 03.4**	**+0.1**
SDDR				IAML		04 09 24.2	
	comp=Z,33nm,0.4s						
GRTK	**Grand Turk**	**1.35**	**344**	*i* P	**Pn**	**04 09 04.3**	**+0.6**
GRTK				*e*S	**Sg**	**04 09 21.1**	**-0.1**
DR08	**Loma La Naviza**	**1.41**	**152**	⇓*e*Pg	**Pn**	**04 09 03.6**	**-1.1**
DR08				⇑*e*Sg	**Sg**	**04 09 23.4**	**+0.4**
DR08				IAML		04 09 26.2	
	comp=N,1μm,0.3s						
LONE3	**El Aguacate, B**	**1.74**	**203**	*i* P	**Pn**	**04 09 09.6**	**+0.4**
LONE3				*e*S	**Sn**	**04 09 31.4**	**-0.7**
LONE3				IAML		04 09 34.3	
	comp=Z,23nm,1.2s						
BANI	**BANI**	**1.84**	**169**	⇑*e*Pg	**Pn**	**04 09 11.6**	**+0.9**
BANI				⇑*e*Sg	**Sn**	**04 09 34.6**	**0.0**
BANI				IAML		04 09 40.1	
	comp=N,476nm,0.3s						
HATOM	**Hato Mayor del**	**1.90**	**138**	*i* P	**Pn**	**04 09 11.3**	**-0.1**
HATOM				*i* S	**Sn**	**04 09 34.8**	**-1.2**
HATOM				IAML		04 09 44.2	
	comp=N,14nm,1.7s						
LODU1	**El Espartillar**	**1.98**	**201**	*i* P	**Pn**	**04 09 13.3**	**+0.9**
LODU1				*e*S	**Sn**	**04 09 37.7**	**-0.1**
LODU1				IAML		04 09 40.0	
	comp=Z,44nm,0.4s						
MIDR	**Miches**	**2.00**	**127**	*i* P	**Pn**	**04 09 12.7**	**+0.1**
MIDR				*i* S	**Sn**	**04 09 39.5**	**+1.2**

RSNC 07 04:24:23.2±0.0**, 7°N**±1°×**7°3W**±°**, h147^{km}**±2^{km}**, M3.0, mb3.5, mB5.0, ML2.6, Mw(mB)4.3, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.24**	**183**	P	Pn	04 24 43.0	-0.5
BARC				S	Sn	04 24 58.1	-0.9
BRJC	**Barrancabermej**	**0.59**	**284**	P	Pn	04 24 44.6	-0.1
BRJC				S	Sn	04 25 01.8	+0.8
PAMC	**Pamplona, Colo**	**0.69**	**43**	P	Pn	04 24 45.8	-0.1
PAMC				S	Sn	04 25 02.6	-0.5
RUSC	**La Rusia**	**0.94**	**175**	P	Pn	04 24 46.8	-0.9
RUSC				S	Sn	04 25 05.7	-0.7
PTBC	**PUERTO BERRIO,**	**1.31**	**257**	P	Pn	04 24 49.5	-1.1
PTBC				S	Sn	04 25 10.1	-1.4
OCAC	**Ocana**	**1.41**	**354**	P	Pn	04 24 51.2	-0.6
OCAC				S	Sn	04 25 13.0	-0.6
SPBC	**San Pablo de B**	**1.47**	**218**	P	Pn	04 24 51.7	-0.7
SPBC				S	Sn	04 25 13.8	-0.9
CHIC	**Chingaza**	**2.26**	**194**	P	Pn	04 25 01.1	-0.6
CHIC				S	Sn	04 25 30.4	-0.8
ROSC	**El Rosal**	**2.28**	**210**	P	Pn	04 25 02.6	+0.6
ROSC				S	Sn	04 25 32.9	+1.2
BOG	**Bogota**	**2.37**	**202**	P	Pn	04 25 04.6	+1.7
CVER	**Cruz Verde, Cu**	**2.46**	**201**	P	Pn	04 25 04.4	+0.2
CVER				S	Sn	04 25 35.8	0.0
UREC	**San Jos de Ur**	**2.52**	**291**	P	Pn	04 25 02.5	-1.9
UREC				S	Sn	04 25 33.3	-2.8
GUY2C	**Guyana, Caldas**	**2.70**	**234**	P	Pn	04 25 06.9	-0.3
GUY2C				S	Sn	04 25 45.0	+4.0
VILC	**Villavicencio,**	**2.75**	**191**	P	Pn	04 25 06.6	-0.9
VILC				S	Sn	04 25 40.5	-1.1
CBOC	**Ciudad Bolivar**	**2.98**	**251**	P	Pn	04 25 10.2	-0.2
CBOC				S	Sn	04 25 47.8	+0.9
DBBC	**Dabeiba**	**3.02**	**274**	P	Pn	04 25 10.5	-0.3
DBBC				S	Sn	04 25 46.6	-1.0
ARGC	**Ariguani, Magd**	**3.19**	**341**	P	Pn	04 25 12.6	-0.3
ARGC				S	Sn	04 25 52.8	+1.4
SDV	**Santo Domingo**	**3.24**	**51**	P	Pn	04 25 12.5	-1.2
SDV				S	Sn	04 25 50.6	-2.2
PRAC	**Prado**	**3.54**	**209**	P	Pn	04 25 16.7	-0.7
PRAC				S	Sn	04 25 58.7	-0.7
ORTC	**Ortega, Tolima**	**3.56**	**216**	P	Pn	04 25 17.2	-0.6
ORTC				S	Sn	04 26 00.7	+0.6
SJCC	**San Jacinto, C**	**3.64**	**327**	P	Pn	04 25 16.6	-2.1
SJCC				S	Sn	04 25 58.6	-3.2
PLMC	**San Jos del P**	**3.64**	**238**	P	Pn	04 25 18.3	-0.5
PLMC				S	Sn	04 26 00.9	-0.9
URMC	**La Uribe, Meta**	**3.76**	**199**	P	Pn	04 25 19.8	-0.5
URMC				S	Sn	04 26 04.0	-0.7
YOTC	**Yotoco, Valle**	**4.24**	**228**	P	Pn	04 25 25.8	-0.9
MACC	**Macarena, Meta**	**4.70**	**188**	P	Pn	04 25 29.7	-3.0
MACC				S	Sn	04 26 22.4	-4.5
URIC	**Uribia, Colomb**	**4.98**	**13**	P	Pn	04 25 33.3	-3.0
URIC				S	Sn	04 26 30.8	-2.5
JAMC	**Jamundi, Valle**	**5.01**	**224**	P	Pn	04 25 37.7	+0.8
	598nm9.0nm,1.7s						
JAMC				S	Sn	04 26 33.3	-1.1
	598nm9.0nm,1.7s						
GARC	**Garzon, Huila**	**5.16**	**207**	P	Pn	04 25 37.0	-2.0
GARC				S	Sn	04 26 34.7	-3.4
POPC	**Popayan, Colom**	**5.51**	**220**	P	Pn	04 25 42.7	-0.9
	2.6nm,0.6s						
BBAC	**Balboa, Cauca**	**6.27**	**221**	P	Pn	04 25 53.4	-0.4
	5.5nm,0.8s						
CRUC	**La Cruz**	**6.45**	**216**	P	Pn	04 25 58.6	+2.4

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*UPP **07** 05:00:50.9±0.3, 67°.86N×20°.20E, h0^{km}±2^{km}, ML2.5, Confirmed Induced event*

*HEL **07** 05:00:51.4±0.5, 67°.80N×20°.26E, h0^{km}, ML1.0, Suspected* *explosion*

ISC 07 05:00:50.7±0.9**,67°.83N**±0°.03×**20°.23E**±0°.02**,h0^{km},n19,**
σ0^{s}.75/31**,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.14	18	P	Pg	05 00 53.2	-0.1
KUA				S	Sg	05 00 54.8	-0.3
RATU	Laukkuluspa	0.24	270	P	Pg	05 00 55.4	+0.1
RATU				S	Sg	05 00 58.8	+0.4
KOVU	Salmi	0.40	356	P	Pg	05 00 57.9	-0.4
KOVU				S	Sg	05 01 03.2	-0.3
NIKU	Nikkaluokta	0.46	276	P	Pg	05 00 59.3	-0.1
NIKU				S	Sg	05 01 05.5	+0.2
LANU	Lannavaara	0.70	71	P	Pg	05 01 04.2	0.0
LANU				S	Sg	05 01 13.5	+0.2
LANU	Lannavaara	0.70	71	PB	Pg	05 01 04.7	+0.5
LANU				SG	Sg	05 01 13.4	+0.1
MASU	Masugnsbyn	0.77	118	P	Pg	05 01 05.7	+0.2
SALU	Saltoluokta	0.80	237	P	Pg	05 01 06.0	0.0
KIF	Kilpisjarvi	1.20	10	PG	Pg	05 01 13.8	+0.1
	baz=188						
KIF				SG	Sg	05 01 29.2	-0.1
KIF				MSG		05 01 29.8	
	comp=Z,1.2nm,0.2s						
PAJU	Pajala	1.37	125	PN	Pg	05 01 16.3	-0.7
	baz=305						
PAJU				SN	Sg	05 01 34.6	-0.2
HEF	Hetta	1.41	64	PG	Pn	05 01 16.9	-0.8
	baz=245						
HEF				MSG		05 01 33.9	
	comp=Z,0.6nm,0.2s						
HEF				SB	Sg	05 01 35.3	-0.8
ERTU	Ertsjaerv	1.49	148	PN	Pg	05 01 19.3	+0.1
ERTU				SN	Sn	05 01 39.6	+0.7
KLF	Kolari	1.55	111	MSG		05 01 37.3	
	comp=Z,1.0nm,0.2s						
KLF				SN	Sg	05 01 40.7	+0.2
KTK1	Kautokeino	1.63	42	PG	Pb	05 01 21.4	-0.3
KTK1				SN	Sg	05 01 44.5	+1.4
TRO	Tromso	1.88	346	SG	Sg	05 01 51.0	+0.1
TOF	Tornio	2.38	136	MSG		05 02 01.1	
	comp=Z,0.5nm,0.2s						
TOF				SG	Sb	05 02 05.7	+1.4
RNF	Rovaniemi	2.56	116	PG	Pb	05 01 36.3	-1.2
RNF				SG	Sb	05 02 09.5	0.0
ARA0	ARCESS Array S	2.58	46	SG	Sb	05 02 09.6	-0.5
KEV	Kevo	3.13	49	SB	Sn	05 02 21.9	+2.6

IDC 07 05:03:29.6±6.5**,7°.23S**×**129°.74E,h177^{km}**±65^{km}**,mb3.0**/1**,**
mbtmp3.5/4**,MS2.5**/1**,Error ellipse: s-maj=82.3km**
s-min=30.6km az=66.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.52	200	P	Pn	05 06 09.0	+0.1
	0.7nm,0.3s,baz=36,slow=11,SNR=6.1						
FITZ				S	Sn	05 08 11.7	-5.2
	0.6nm,0.3s,baz=61,slow=20,SNR=1.7						
WRA	Warramunga Arr	13.40	161	P	Pn	05 06 31.6	-1.4
	0.3nm,0.3s,baz=342,slow=12,SNR=4.9						
WRA				S	Sn	05 08 51.8	-10
	0.5nm,0.4s,baz=359,slow=23,SNR=6.5						
ASAR	Alice Springs	16.83	167	P	Pn	05 07 16.2	+1.2
	0.4nm,0.5s,baz=340,slow=11,SNR=8.6						
ASAR				S	S	05 10 20.4	-0.2
	0.2nm,0.3s,baz=351,slow=14,SNR=5.7						
CMAR	Chiang Mai Arr	39.68	310	LR	LR	05 29 01.8	
	comp=Z,6.7nm,20.0s,baz=105,slow=39						
MKAR	Makanchi Array	68.27	327	P	P	05 14 11.2	-0.1
	0.2nm,0.4s,baz=124,slow=8.2,SNR=3.0						
	0.2nm,0.4s						

IDC ***07*** *05:23:57.3±0.9,2°.57S×138°.40E,h0^{km},mb3.7/6,*
mbtmp3.8/9,ML4.0/3,Error ellipse: s-maj=23.3km
s-min=20.9km az=100.0
DJA ***07*** *05:24:01.6±0.3,3°S±3°×13°9E±°,h10^{km},M4.2/7,mb4.3/7,*
mB4.8/2,MLv4.1/6,Mw(mB)4.1/2
ISC 07 05:24:01.7±0.6**,2°.73S**±0°.07×**138°.50E**±0°.04**,h32^{km},n19,**
σ2^{s}.63/22**,mb3.7**/6**,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.76	16	P	Pb	05 24 14.4	-2.1
GENI	Genyem	1.67	85	P	Pb	05 24 30.7	-1.1
JAY	Jayapura	2.21	85	Pn	Pn	05 24 37.5	+1.2
	14nm,0.3s,baz=235,slow=9.6,SNR=26						
JAY				Sn	Sb	05 25 07.2	-0.8
	15nm,0.3s,baz=311,slow=20,SNR=4.3						
	43nm,0.4s						
JAY	Jayapura	2.21	85	P	Pn	05 24 37.4	+1.2
SRPI	Serui, Papua	2.42	291	P	Pb	05 24 41.7	-2.8
BAKI	Biak	2.84	302	P	Pb	05 24 48.5	-3.2
FAKI	Fak Fak	6.25	268	P	Pn	05 25 36.2	+4.5
	0.1nm13nm,0.8s						
SWI	Sorong	7.47	284	P	Pn	05 25 51.1	+2.6
	1µm27nm,0.5s						
BATI	Baumata	16.50	243	P	P	05 27 56.8	+3.5
	51nm,0.9s						
MMRI	Maumere	17.21	249	P	P	05 28 01.8	+0.6
WRA	Warramunga Arr	17.59	193	P	Pn	05 28 04.1	-0.4
	0.7nm,0.3s,baz=18,slow=12,SNR=14						
WRA				S	Sn	05 31 08.1	-11
	1.6nm,1.1s,baz=14,slow=23,SNR=2.8						
	0.9nm,0.3s						
FITZ	Fitzroy Crossi	19.81	219	P	P	05 28 30.1	+0.4
	0.3nm,0.3s,baz=49,slow=12,SNR=8.0						
FITZ				S	S	05 32 04.5	-6.8
	6.6nm,1.0s,baz=0.0,slow=20,SNR=3.5						
	2.2nm,0.9s						
ASAR	Alice Springs	21.29	192	P	P	05 28 47.0	+1.2
	6.8nm,0.7s,baz=19,slow=10,SNR=48						
ASAR				S	S	05 32 37.6	-3.0
	1.9nm,0.9s,baz=13,slow=26,SNR=5.4						
	6.8nm,0.7s						
MKAR	Makanchi Array	69.68	322	P	P	05 35 09.2	+0.8
	0.1nm,0.4s,baz=116,slow=6.9,SNR=5.5						
	0.1nm,0.4s						
KURBB	Kurchatov Arra	73.62	325	P	P	05 35 30.2	-1.7
	0.2nm,0.5s,baz=116,slow=6.4,SNR=4.2						
	0.2nm,0.5s						
BVAR	Borovoye Array	79.21	325	P	P	05 36 03.7	+0.2
	0.3nm,0.4s,baz=111,slow=6.5,SNR=5.1						
	0.3nm,0.4s						
ILAR	Eielson Array	85.94	24	P	P	05 36 37.5	-0.9
	0.6nm,0.9s,baz=269,slow=4.0,SNR=6.1						
	0.6nm,0.9s						
QSPA	South Pole Qui	87.22	180	P	P	05 36 46.3	+1.5
	0.5nm,0.3s,baz=7.6,slow=5.7,SNR=2.6						
	0.5nm,0.3s						
LPAZ	La Paz	147.60	127	PKPbc	PKPbc	05 43 45.7	+1.0
	0.7nm,0.7s,baz=270,slow=1.0,SNR=2.3						

TAP ***07*** *05:24:20.9,24°.27N×121°.81E,h61^{km},ML4.0,B*
JMA ***07*** *05:24:20.5±0.1,24°.2N±0°.5×121°.8E±0°.6,h64^{km}±1^{km},*
MV3.4/15,TAIWAN REGION
ISC 07 05:24:21.5±1.2**,24°.25N**±0°.02×**121°.86E**±0°.02**,h59^{km}**±5^{km}**,**
n125,σ0^{s}.69/183**,9C-8D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.13	299	eP	Pn	05 24 30.3	-0.2
EHP				S	Sn	05 24 37.5	+0.6
EAHA	Aohua	0.14	306	P	Pn	05 24 30.3	-0.3
EAHA				eS	Sn	05 24 37.1	+0.1
ENA	Nanau	0.21	328	⇑iP	Pn	05 24 30.5	-0.4
ENA				S	Sn	05 24 37.9	+0.2
EWUT	Wuta	0.21	338	i P	Pn	05 24 30.6	-0.3
EWUT				i S	Sn	05 24 37.9	+0.2
ETL	Fush Village	0.24	248	P	Pn	05 24 30.7	-0.4
ETL				S	Sn	05 24 38.1	+0.1
NACB	Ninganchiao	0.26	253	P	Pn	05 24 30.6	-0.5
NACB	Ninganchiao	0.26	253	S	Sn	05 24 38.1	0.0
NACB	Ninganchiao	0.26	253	⇓iP	Pn	05 24 30.7	-0.5
NACB				eS	Sn	05 24 38.0	-0.2
TWD	Chiawan	0.30	236	⇓iP	Pn	05 24 31.1	-0.3
TWD				i S	Sn	05 24 38.4	-0.2
ESAO	Su ao	0.33	357	⇑P	Pn	05 24 31.6	-0.1
ESAO				i S	Sn	05 24 39.9	+0.8
ETLH	Xiulin Townshi	0.35	263	P	Pn	05 24 31.5	-0.5
ETLH				eS	Sn	05 24 39.2	-0.4
HWA	Hwalien	0.36	221	i P	Pn	05 24 32.2	+0.2
HWA				eS	Sn	05 24 41.5	+2.0
TWC	Suao	0.36	358	⇑iP	Pn	05 24 31.9	-0.1
TWC				i S	Sn	05 24 39.3	-0.3
EOS2	EOS2	0.38	63	eP	Pn	05 24 32.8	+0.8
NDS	Dongshan	0.41	341	P	Pn	05 24 32.4	-0.1
NDS				eS	Sn	05 24 41.0	+0.6
LATG	Datong	0.42	313	⇑iP	Pn	05 24 32.1	-0.6
LATG				eS	Sn	05 24 40.5	-0.3
ETM	Tongmen	0.44	230	⇓P	Pn	05 24 32.0	-0.8
ETM				S	Sn	05 24 40.6	-0.3
TEYL	Yanliau Villag	0.45	213	eP	Pn	05 24 32.6	-0.3
TEYL				eS	Sn	05 24 41.8	+0.7
NNSB	Datong	0.47	292	P	Pn	05 24 32.7	-0.6
NNSB				S	Sn	05 24 41.5	-0.3
ENTT	Nioudou	0.48	325	i P	Pn	05 24 32.7	-0.5
ENTT				i S	Sn	05 24 41.4	-0.2
NNS	Nan Shan	0.49	293	P	Pn	05 24 32.9	-0.5
NNS				S	Sn	05 24 41.7	-0.3
TWE	Neicheng	0.51	339	P	Pn	05 24 33.3	-0.2
TWE				eS	Sn	05 24 42.7	+0.6
ILA	Ilan	0.53	348	eP	Pn	05 24 33.1	-0.6
ILA				eS	Sn	05 24 43.3	+0.8
SHUL	Shoufeng	0.54	211	P	Pn	05 24 33.8	0.0
SHUL				eS	Sn	05 24 43.7	+1.1
WHF	Hehuan Shan	0.56	260	⇓P	Pn	05 24 33.9	-0.5
WHF				S	Sn	05 24 43.0	-0.9
FUSS	Fushou	0.57	270	P	Pn	05 24 34.2	-0.2
FUSS				eS	Sn	05 24 43.3	-0.4
FUSB	Fushanzhiwuyua	0.57	334	⇑iP	Pn	05 24 33.9	-0.4
FUSB				S	Sn	05 24 43.7	+0.2
EGS		0.60	6	eP	Pn	05 24 34.8	+0.3
NTC	Toucheng	0.60	357	eP	Pn	05 24 35.4	+0.8
NTC				eS	Sn	05 24 45.2	+1.1
YHNB	Yeheng	0.61	313	P	Pn	05 24 34.3	-0.4
YHNB	Yeheng	0.61	313	S	Sn	05 24 43.3	-1.1
YHNB	Yeheng	0.61	313	⇑P	Pn	05 24 34.3	-0.4
YHNB				eS	Sn	05 24 44.1	-0.3
TEGC	Jichi Village	0.61	209	eP	Pn	05 24 34.5	-0.2
TEGC				eS	Sn	05 24 45.2	+1.0
NWLT	Wulai	0.62	328	i P	Pn	05 24 34.5	-0.4
NWLT				i S	Sn	05 24 43.5	-1.0
NSK	Sanguang	0.63	313	i P	Pn	05 24 34.4	-0.5
NSK				S	Sn	05 24 43.6	-1.0
TWT	Tachien	0.63	271	⇓iP	Pn	05 24 35.2	+0.1
TWT				i S	Sn	05 24 44.9	0.0
TDCB	Techi	0.65	271	⇓P	Pn	05 24 35.1	0.0
TDCB				S	Sn	05 24 44.8	-0.3
WARBT	Fenglin Townsh	0.69	220	⇓P	Pn	05 24 34.2	-1.4
OWD	Renai	0.69	245	P	Pn	05 24 35.3	-0.5
EGFH	Guangfu	0.70	215	eP	Pn	05 24 34.4	-1.3
TIPB	Shuangxi	0.72	357	⇑P	Pn	05 24 36.3	+0.3
TIPB				i S	Sn	05 24 46.6	0.0
WUSB	Renai	0.73	250	⇓P	Pn	05 24 36.0	-0.2
WUSB				eS	Sn	05 24 46.5	-0.3
TWB1	Santiao Chiao	0.77	8	i P	Pn	05 24 36.2	-0.3
TWB1				S	Sn	05 24 48.0	+0.5
TWA	Mucha	0.77	341	⇑P	Pn	05 24 36.4	-0.3
TWA				eS	Sn	05 24 48.5	+0.8
NHDH	Xindian Distri	0.78	337	P	Pn	05 24 36.3	-0.4
NHDH				S	Sn	05 24 47.5	-0.2
NFF	Wufeng Townshi	0.78	300	P	Pn	05 24 36.9	+0.2
NFF				S	Sn	05 24 47.6	-0.3
TATO	Taipei	0.80	335	P	Pn	05 24 36.2	-0.8
KSHI	Guanxi Townshi	0.82	310	eP	Pn	05 24 37.3	+0.1
KSHI				eS	Sn	05 24 49.7	+1.0
NWF	Wu-fen Shan	0.82	355	eP	Pn	05 24 36.8	-0.5
NWF				eS	Sn	05 24 49.5	+0.6
WFSB	Wu-fen Shan	0.82	355	⇑P	Pn	05 24 37.5	+0.3
WFSB				S	Sn	05 24 49.2	+0.5
VWDT	VWDT	0.82	234	P	Pn	05 24 37.2	0.0
VWDT				S	Sn	05 24 47.6	-1.1
WHP	Taichung City	0.84	272	P	Pn	05 24 38.1	+0.6
WHP				S	Sn	05 24 49.5	+0.2
SXI1	Grass Mountain	0.84	1	P	Pn	05 24 37.3	-0.3
SXI1				S	Sn	05 24 50.0	+0.7
HGSD	Ruisui	0.85	208	P	Pn	05 24 37.5	-0.2
HGSD				S	Sn	05 24 51.2	+1.7
LIOB	Emei	0.87	297	eP	Pn	05 24 37.5	-0.3
LIOB				eS	Sn	05 24 50.6	+0.8
NSTT	Nanjuang	0.88	296	P	Pn	05 24 37.6	-0.3
NSTT				S	Sn	05 24 49.5	-0.4
EHYH	Wanrong	0.89	212	eP	Pn	05 24 37.8	-0.3
EHYH				eS	Sn	05 24 49.1	-1.1
EHY	Hungye	0.89	214	P	Pn	05 24 37.0	-1.1
EHY				S	Sn	05 24 48.1	-2.2
WCS	Beigang Elemen	0.89	258	eP	Pn	05 24 38.8	+0.7
TNOU	National Taiwa	0.90	355	eP	Pn	05 24 38.4	+0.1
TNOU				eS	Sn	05 24 50.2	-0.4
YM01	YM01	0.93	343	P	Pn	05 24 38.5	-0.2
YM01				S	Sn	05 24 50.5	-0.9
TWS1	Kuangyinshan	0.94	335	i P	Pn	05 24 38.1	-0.7
TWS1				i S	Sn	05 24 51.2	-0.3
NCUH	Zhongli	0.95	319	eP	Pn	05 24 38.8	0.0
SSLB	Suanglung	0.95	241	P	Pn	05 24 38.5	-0.4
SSLB	Suanglung	0.95	241	eP	Pn	05 24 38.5	-0.4
SMLT	Sun Moon Lake	0.95	248	eP	Pn	05 24 39.5	+0.4
ZUZH	Zhuzihu	0.96	342	P	Pn	05 24 38.4	-0.6
ZUZH				S	Sn	05 24 51.1	-0.8
SBCB	Hsinchu	0.97	304	eP	Pn	05 24 39.1	0.0
YM08	YM08	0.97	345	eP	Pn	05 24 38.4	-0.8
TYC	Yuchr	0.98	250	P	Pn	05 24 39.5	+0.2
HSN	Hsinchu	0.98	304	eP	Pn	05 24 39.8	+0.5
NTST	Danshui	0.99	338	eP	Pn	05 24 38.4	-1.0
YULB	Yu-li	1.00	211	P	Pn	05 24 38.2	-1.3
YULB	Yu-li	1.00	211	eP	Pn	05 24 38.3	-1.2
ECBN	Changbin	1.00	202	eP	Pn	05 24 39.0	-0.5
TWQ1	Liyutan	1.00	276	eP	Pn	05 24 39.7	+0.1
JYNG	Yonagunijimaku	1.01	78	eP	Pn	05 24 39.6	0.0
JYNG				eS	Sn	05 24 53.1	+0.2
NMLH	Miaoli	1.02	287	eP	Pn	05 24 39.8	0.0
NSY	Sanyi	1.02	280	P	Pn	05 24 40.4	+0.6
EYUL	Yuli	1.03	209	eP	Pn	05 24 39.0	-0.8
TWF1	Yuli	1.03	210	P	Pn	05 24 39.5	-0.5
TWY	Chenhua	1.05	347	P	Pn	05 24 40.3	+0.1
YOJ	Yonaguni jima	1.07	78	eP	Pn	05 24 40.2	-0.1
YOJ	Yonaguni jima	1.07	78	eP	Pn	05 24 40.3	-0.1
YOJ				eS	Sn	05 24 54.1	-0.3
WHYT	Xinyi Township	1.08	240	eP	Pn	05 24 41.5	+0.9
TCU	Taichung	1.09	265	eP	Pn	05 24 40.2	-0.5
WJS	Zhushan	1.12	248	eP	Pn	05 24 41.5	+0.3
YUS	Yu-Shan	1.13	228	P	Pn	05 24 42.3	+0.7
WNT	Mingjian	1.14	251	P	Pn	05 24 42.3	+1.0
FULB	Fuli	1.17	207	eP	Pn	05 24 41.9	+0.1
WCHH	Zhanghua	1.21	262	eP	Pn	05 24 42.0	-0.2
ALS	Alishan	1.22	233	eP	Pn	05 24 43.3	+0.6
WCH1	Changhua City	1.22	262	eP	Pn	05 24 41.6	-0.8
EHD	Haiduan	1.25	209	eP	Pn	05 24 42.0	-0.8
CHN5	Tsauling	1.26	239	P	Pn	05 24 43.3	+0.2
ECS	Chishang	1.29	207	eP	Pn	05 24 44.1	+0.7
ELDTW	Lidau	1.31	217	eP	Pn	05 24 42.7	-1.0
WGK	Gukeng	1.32	245	eP	Pn	05 24 44.7	+1.0
WDLH	Douliu	1.33	246	eP	Pn	05 24 44.5	+0.5
EDH	Donghe	1.37	202	eP	Pn	05 24 43.6	-0.8
WCKO	Fanlu	1.41	235	eP	Pn	05 24 45.9	+1.0
STYH	Taoyuan	1.47	223	eP	Pn	05 24 46.5	+0.8
TPUB	Ta-pu	1.47	230	P	Pn	05 24 46.3	+0.4
TPUB	Ta-pu	1.47	230	S	Sn	05 25 05.8	+1.7
TPUB	Ta-pu	1.47	230	eP	Pn	05 24 46.5	+0.6
LONT	Longtian	1.50	207	eP	Pn	05 24 44.4	-1.8
WTCT	Ta-ch'eng	1.50	256	eP	Pn	05 24 45.3	-0.8
CHY	Chiayi	1.52	241	eP	Pn	05 24 47.2	+0.8
WTP	Ta-pu	1.52	229	eP	Pn	05 24 47.3	+0.8
TWGBT	Beinan	1.59	207	P	Pn	05 24 45.6	-1.9
TWK	Hsinying	1.59	233	P	Pn	05 24 48.7	+1.1
CHN1	Nanshi	1.62	229	eP	Pn	05 24 48.7	+0.8
WSF	Szhu	1.62	248	eP	Pn	05 24 48.1	+0.3
SGST	Jiashian	1.65	226	P	Pn	05 24 48.4	+0.2
WSL	Shuilin Townsh	1.66	245	eP	Pn	05 24 48.1	-0.3
IRIF	Iriomote-Funau	1.71	87	eP	Pn	05 24 48.6	-0.4
IRIF				eS	Sn	05 25 09.1	-0.6
SSD	Sandimen	1.88	217	eP	Pn	05 24 52.8	+1.5
JKRS	Kuro-shima	1.96	90	eP	Pn	05 24 52.7	+0.3
JKRS				eS	Sn	05 25 16.4	+0.6
MASBT	Mashibuluo	1.98	215	eP	Pn	05 24 53.2	+0.5
JIJ	Ishigaki jima	2.08	86	eP	Pn	05 24 53.6	-0.5
JIJ				eS	Sn	05 25 17.7	-1.2
SCZT	Fangliau	2.19	212	eP	Pn	05 24 56.9	+1.3
JISG	Ishigakijimahi	2.26	81	eP	Pn	05 24 55.9	-0.5
JISG				eS	Sn	05 25 22.0	-1.1
JTJ	Tarama	2.62	81	eP	Pn	05 25 01.6	+0.2
JIRB	Irabujima	3.07	78	eP	Pn	05 25 07.8	+0.3
JMJ2	Miyako jima3	3.19	80	eP	Pn	05 25 09.7	+0.4

IDC 07 05:41:18.5±2.7**,7°.27S**×**128°.40E,h0^{km},mb3.5**/1**,**
mbtmp3.3/3**,ML3.5**/2**,Error ellipse: s-maj=302.3km**
s-min=32.4km az=66.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.85	156	Pn	Pn	05 44 35.0	-1.2
	0.3nm,0.3s,baz=332,slow=13,SNR=8.8						
WRA				Sn	Sn	05 46 54.6	-16
	0.2nm,0.3s,baz=333,slow=22,SNR=4.8						
	0.3nm,0.3s						
ASAR	Alice Springs	17.14	163	P	P	05 45 20.6	-0.7
	0.1nm,0.3s,baz=345,slow=10,SNR=9.3						
ASAR				S	Sn	05 48 22.9	-8.1
	0.3nm,0.9s,baz=332,slow=30,SNR=1.6						
	0.2nm,0.5s						
MKAR	Makanchi Array	67.59	328	P	P	05 52 17.0	0.0
	0.2nm,0.4s,baz=116,slow=6.1,SNR=4.7						
	0.2nm,0.4s						

NEIC ***07*** *05:43:45.3±1.0,18°.1N±0°.1×68°.62W±0°.03,h10^{km}±2^{km},*
ML2.1/12,Md2.8/5(RSPR),Error ellipse: s-maj=23.5km
s-min=3.0km az=191.0
RSPR ***07*** *05:43:45.6,17°.69N×68°.76W,h8^{km}±4^{km},MD2.8/5*
SDD ***07*** *05:43:46.3±2.5,17°.77N×68°.68W,h80^{km}±40^{km},MD3.1,*
ML2.8,Presumed earthquake
ISC 07 05:43:44.6±2.1**,17°.75N**±0°.08×**68°.70W**±0°.04**,h17^{km}**±12^{km}**,**
n26,σ0^{s}.80/31**,15C-3D,Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.82	22	⇑ePg	Pg	05 44 00.8	+0.2
PCDR				⇑eSg	Sn	05 44 14.4	+1.2
PCDR				IAML		05 44 18.6	
	comp=N,10nm,0.3s						
HIDR	Higuey Centro	0.84	359	⇑eP	Pg	05 44 01.3	+0.4
HIDR	Higuey Centro	0.84	359	eS	Sb	05 44 13.1	+1.3
HIDR	Higuey Centro	0.84	359	⇑ePg	Pg	05 44 00.5	-0.5
HIDR				⇑eSg	Sn	05 44 14.7	+1.0
HIDR				IAML		05 44 17.2	
	comp=N,95nm,0.3s						
HIDR				IAML		05 44 17.5	
	comp=N,369nm,0.3s						
DR12	Loma Pena Alta	1.22	328		Pn	05 44 05.6	-1.4
HATOM	Hato Mayor del	1.22	328	⇑ePg	Pn	05 44 06.0	-1.0
HATOM				IAML		05 44 06.8	
	comp=N,533nm,0.2s						
HATOM				⇑eSg	Sb	05 44 22.1	-0.7
HATOM				IAML		05 44 24.6	
	comp=N,47nm,0.5s						
MIDR	Miches	1.27	345	⇑eP	Pn	05 44 07.0	-0.7
MIDR	Miches	1.27	345	eS	Sb	05 44 24.3	+0.1
MIDR	Miches	1.27	345	⇓ePg	Pn	05 44 07.2	-0.5
MIDR				⇑eSg	Sb	05 44 24.3	+0.1
MIDR				IAML		05 44 25.6	
	comp=N,157nm,0.3s						
CRPR	Cabo Rojo, PR	1.54	80		Sn	05 44 30.9	0.0
CRPR	Cabo Rojo, PR	1.54	80		Pn	05 44 10.5	-0.8
CRPR				IAML		05 44 46.3	
	comp=N,18nm,1.5s						
CRPR				IAML		05 44 49.5	
	comp=N,18nm,1.3s						
CRPR	Cabo Rojo, PR	1.54	80	⇑eP	Pn	05 44 11.0	-0.4
CRPR	Cabo Rojo, PR	1.54	80	eS	Sn	05 44 30.9	0.0
CRPR	Cabo Rojo, PR	1.54	80	⇓ePg	Pn	05 44 10.9	-0.4
CRPR				⇑eSg	Sn	05 44 30.3	-0.7
CRPR				IAML		05 44 40.0	
	comp=N,38nm,0.3s						
CRPR				IAML		05 44 50.0	
	comp=N,34nm,3.4s						
LSP	Las Mesas	1.60	74		Pn	05 44 12.4	+0.2
LSP	Las Mesas	1.60	74	⇑eP	Pn	05 44 12.4	+0.2
SMDR	Samana, DR	1.60	343	⇑ePg	Pn	05 44 12.2	0.0
SMDR				IAML		05 44 34.1	
	comp=N,282nm,0.3s						
SMDR				IAML		05 44 51.6	
	comp=N,52nm,0.7s						
BANI	BANI	1.70	292	Pn	Pn	05 44 15.1	+1.4
BANI	BANI	1.70	292	⇑ePg	Pn	05 44 14.8	+1.2
BANI				⇓eSg	Sn	05 44 34.3	-0.8
BANI				IAML		05 44 46.1	
	comp=N,436nm,0.3s						
BANI				IAML		05 44 53.2	
	comp=N,52nm,1.6s						
DR08	Loma La Naviza	1.74	314	⇑ePg	Pn	05 44 13.1	-1.0
DR08				IAML		05 44 41.3	
	comp=N,1µm,0.2s						
DR08				IAML		05 44 44.0	
	comp=N,190nm,0.2s						
AOPR	Arecibo Observ	1.95	72	Pn	Pn	05 44 15.9	-1.1
OBIP	Obispado Ponce	2.02	81	Pn	Pn	05 44 18.4	+0.4
SJG	San Juan	2.46	81	Pn	Pn	05 44 23.6	-0.4
SJG				IAML		05 44 58.8	
	comp=N,15nm,0.2s						
SJG				IAML		05 45 16.3	
	comp=N,14nm,0.8s						
SC01	Santiago de lo	2.54	311	Pn	Pn	05 44 24.5	-0.7
HUMP	Col San Antoni	2.75	81	Pn	Pn	05 44 27.8	-0.1
HUMP	Col San Antoni	2.75	81	IAML		05 45 05.9	
	comp=N,9.6nm,1.1s						
HUMP				IAML		05 46 01.8	
	comp=N,9.5nm,1.2s						

ROM 07 05:53:47.4±0.2**,45°.304N**±0°.007×**10°.96E**±0°.01**,h11^{km}**±1^{km}**,**
ML1.6/23**,1D,Error ellipse: s-maj=0.9km s-min=0.6km**
az=234.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPPE	Oppeano	0.15	88	P	Pb	05 53 51.7	-0.6
OPPE				S	Sg	05 53 54.5	+1.3
GAZZ	Gazzo Veronese	0.21	153	ePg	Pg	05 53 52.3	+0.5
GAZZ				eSg	Sg	05 53 56.0	+1.2
SBPO	S.Benedetto Po	0.26	186	P	Pb	05 53 53.6	-0.4
SBPO				S	Sb	05 53 57.9	-0.6
TREG	Tregnago	0.26	33	P	Pb	05 53 53.5	-0.7
TREG				S	Sg	05 53 57.5	+1.2
ROVR	Rover Verones	0.35	13	P	Pg	05 53 54.4	0.0
ROVR				S	Sg	05 53 59.9	+0.7
ROVR				AML	AML		
	comp=E,189µm,1.1s						
ROVR				AML	AML		
	comp=N,276µm,1.2s						
ROVR				AML	AML		
	comp=N,51µm,0.4s						
ROVR				AML	AML		
	comp=E,21µm,0.5s						
ROVR				AML	AML		
	comp=N,51µm,0.4s						
MARN	Marana (Italy)	0.38	28	ePg	Pg	05 53 54.7	-0.2
MARN				eSg	Sg	05 53 59.7	-0.3
MARN	Marana (Italy)	0.38	28	P	Pg	05 53 55.0	0.0
MARN				S	Sg	05 54 01.0	+1.1
BALD	Monte Baldo	0.39	346	ePg	Pg	05 53 54.6	-0.6
BALD				eSg	Sg	05 54 00.2	-0.3
BALD	Monte Baldo	0.39	346	P	Pg	05 53 55.3	+0.1
BALD				S	Sg	05 54 01.3	+0.8
MBAL	Monte Baldo -	0.40	350	P	Pg	05 53 55.3	0.0
MBAL				S	Sg	05 54 01.5	+0.8
MBAL				AML	AML		
	comp=E,107µm,0.1s						
MBAL				AML	AML		
	comp=N,99µm,0.9s						
MBAL				AML	AML		
	comp=N,125µm,0.1s						
MBAL				AML	AML		
	comp=E,143µm,0.1s						
MBAL				AML	AML		
	comp=N,125µm,0.1s						
ZOVE	Zovencedo	0.40	68	P	Pg	05 53 55.5	+0.1
SALO	Salr	0.44	316	P	Pg	05 53 55.9	-0.2
TEOL	Teolo	0.51	83	⇓ePg	Pg	05 53 57.4	+0.1
TEOL				eSg	Sg	05 54 04.7	+0.7
TEOL	Teolo	0.51	83	P	Pg	05 53 57.3	0.0
TEOL				S	Sb	05 54 04.9	-0.8
VARA	Varagna	0.52	355	P	Pg	05 53 57.3	-0.4
VARA				AML	AML		

	comp=E,200µm,0.2s						
VARA				AML	AML		
	comp=N,123µm,1.5s						
VARA				AML	AML		
	comp=N,105µm,0.1s						
VARA				AML	AML		
	comp=E,100µm,0.1s						
VARA				AML	AML		
	comp=N,194µm,0.1s						
MAGA	Magasa	0.52	334	P	Pg	05 53 56.9	-0.8
MAGA				S	Sg	05 54 05.2	+0.6
MAGA				AML	AML		
	comp=E,83µm,0.5s						
MAGA				AML	AML		
	comp=N,77µm,0.3s						
MAGA				AML	AML		
	comp=E,66µm,0.2s						
MAGA				AML	AML		
	comp=N,76µm,0.2s						
DOSS	Dosso del Somm	0.60	16	ePg	Pg	05 53 58.8	-0.3
DOSS				eSg	Sg	05 54 06.9	-0.1
DOSS	Dosso del Somm	0.60	16	P	Pg	05 53 58.6	-0.5
DOSS				S	Sg	05 54 07.4	+0.4
DOSS				AML	AML		
	comp=E,64µm,1.5s						
DOSS				AML	AML		
	comp=N,60µm,0.8s						
DOSS				AML	AML		
	comp=E,64µm,1.5s						
DOSS				AML	AML		
	comp=N,60µm,0.8s						
DOSS				AML	AML		
	comp=N,70µm,0.2s						
DOSS				AML	AML		
	comp=N,42µm,0.2s						
DOSS				AML	AML		
	comp=E,62µm,0.2s						
DOSS				AML	AML		
	comp=N,42µm,1.8s						
LUSI	Trento, Gardas	0.66	359	P	Pg	05 53 59.7	-0.5
LUSI				S	Sg	05 54 09.3	+0.5
LUSI				AML	AML		
	comp=E,67µm,0.1s						
LUSI				AML	AML		
	comp=N,84µm,0.4s						
LUSI				AML	AML		
	comp=E,73µm,0.1s						
LUSI				AML	AML		
	comp=N,101µm,0.9s						
LUSI				AML	AML		
	comp=E,73µm,0.1s						
CEKR	Cima Ekar Asia	0.69	38	ePg	Pg	05 54 00.5	-0.4
CEKR				eSg	Sg	05 54 10.6	+0.6
GAGG	Gaggia	0.78	0	ePg	Pg	05 54 02.2	-0.3
GAGG				eSg	Sb	05 54 13.5	-0.3
GAGG	Gaggia	0.78	0	P	Pg	05 54 02.7	+0.2
GAGG				S	Sb	05 54 13.5	-0.3
GAGG				AML	AML		
	comp=E,56µm,0.2s						
GAGG				AML	AML		
	comp=N,86µm,0.7s						
GAGG				AML	AML		
	comp=N,36µm,0.2s						
GAGG				AML	AML		
	comp=E,56µm,1.8s						
PANI	Panarotta	0.79	19	ePg	Pg	05 54 02.7	0.0
PANI				eSg	Sg	05 54 13.4	+0.4
PANI	Panarotta	0.79	19	P	Pg	05 54 02.6	-0.1
PANI				S	Sb	05 54 13.7	-0.5
PANI				AML	AML		
	comp=E,16µm,0.2s						
PANI				AML	AML		
	comp=N,24µm,0.2s						
ZIAN	Ziano	1.06	23	P	Pg	05 54 07.1	-0.7
ZIAN				S	Sg	05 54 21.4	-0.2
ZIAN				AML	AML		
	comp=N,17µm,0.1s						
ZIAN				AML	AML		
	comp=E,25µm,0.2s						
OZOL	Ozolo	1.10	3	P	Pb	05 54 08.6	0.0
OZOL				S	Sb	05 54 23.6	+0.5
OZOL				AML	AML		
	comp=E,58µm,0.1s						
OZOL				AML	AML		
	comp=N,26µm,0.3s						
CARE	Lago del Cares	1.14	351	P	Pb	05 54 08.7	-0.6
CARE				S	Sb	05 54 24.4	+0.2
CARE				AML	AML		
	comp=E,16µm,0.2s						
APPI	Appiano	1.19	9	P	Pb	05 54 09.9	-0.1
APPI				S	Sg	05 54 25.8	+0.1
APPI				AML	AML		
	comp=E,52µm,0.2s						
APPI				AML	AML		
	comp=N,55µm,0.1s						
APPI				AML	AML		
	comp=N,55µm,0.1s						
APPI				AML	AML		
	comp=N,55µm,1.9s						
APPI				AML	AML		
	comp=E,52µm,0.2s						
BRMO	Bormio	1.24	341	P	Pb	05 54 11.1	+0.1
BRMO				S	Sn	05 54 27.7	0.0
BRMO				AML	AML		
	comp=E,43µm,0.5s						
BRMO				AML	AML		
	comp=N,18µm,1.5s						
BRMO				AML	AML		
	comp=N,15µm,0.3s						
BRMO				AML	AML		
	comp=E,28µm,0.2s						
FETA	Feichten	1.73	355	eSg	Sb	05 54 41.7	+0.8
	comp=E,0.8nm,0.2s						
ABTA	Abfaltersbach	1.81	36	i Sg	Sg	05 54 45.4	0.0
	comp=E,0.6nm,0.1s						
WTTA	Wattenberg	2.02	13	ePg	Pb	05 54 24.7	+0.5
	comp=E,0.4nm,0.2s						
WTTA				i Sg	Sg	05 54 51.5	-0.7
	comp=E,1.4nm,0.3s						
WATA	Walderalm	2.08	12	eSg	Sg	05 54 53.0	-1.1
	comp=E,3.1nm,0.3s						

ROM 07 05:54:29.0±0.1**, 43°.804N**±0°.004×**11°.988E**±0°.006**,**
h10^{km}, ML2.1/13**, 1C-2D, Error ellipse: s-maj=0.5km**
s-min=0.4km az=238.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFI	Santa Sofia	0.14	315	⇓P	Pg	05 54 32.6	+0.4
SFI				S	Sg	05 54 35.6	+1.0
SFI				AML	AML		
	comp=E,1750µm,0.2s						
SFI				AML	AML		
	comp=N,1295µm,0.3s						
SFI				AML	AML		
	comp=E,1750µm,0.2s						
SFI				AML	AML		
	comp=E,1795µm,0.4s						
SFI				AML	AML		
	comp=N,1315µm,0.3s						
SFI				AML	AML		
	comp=N,1030µm,0.2s						
SFI				AML	AML		
	comp=E,1749µm,0.2s						
SFI				AML	AML		
	comp=N,1036µm,0.1s						
SFI				AML	AML		
	comp=E,1779µm,0.2s						
ASQU	Asqua	0.14	267	⇓P	Pg	05 54 32.8	+0.5
ASQU				S	Sg	05 54 35.8	+1.1
CRE	Caprese Michel	0.19	188	⇑P	Pg	05 54 33.6	+0.6
CRE				S	Sg	05 54 37.3	+1.5
PARC	Parchiule	0.24	130	P	Pg	05 54 34.2	+0.3
PARC				S	Sg	05 54 38.6	+1.3
CPGN	Carpegna, Ital	0.24	91	P	Pb	05 54 34.8	-0.7
CPGN				S	Sg	05 54 39.2	+1.9
SSP9	Sansepolcro	0.25	156	P	Pg	05 54 34.6	+0.5
SSP9				S	Sb	05 54 39.0	-1.1
LMD	Lutirano	0.34	324	P	Pg	05 54 35.7	-0.1
LMD				S	Sg	05 54 41.1	+0.8
LMD				AML	AML		
	comp=E,604µm,0.2s						
LMD				AML	AML		
	comp=N,672µm,1.3s						
LMD				AML	AML		
	comp=E,604µm,0.2s						
LMD				AML	AML		
	comp=N,545µm,0.2s						
BADI	Badiali	0.35	148	P	Pg	05 54 36.1	+0.2
RSM	Repubblica di	0.36	69	P	Pg	05 54 36.0	-0.1
PE3	Peglio	0.38	106	P	Pg	05 54 36.8	+0.3
PE3				S	Sb	05 54 43.9	0.0
ATMC	Monte Cedrone	0.39	157	P	Pg	05 54 36.9	+0.3
ATMC				S	Sb	05 54 43.0	-0.9
APEC	Apecchio	0.40	128	P	Pg	05 54 37.1	+0.3
APEC				S	Sb	05 54 44.5	+0.3
ATPI	Pietralunga -	0.46	139	P	Pg	05 54 38.0	0.0
ATPI				S	Sb	05 54 45.7	-0.5
ATPC	Poggio Castell	0.47	133	P	Pg	05 54 38.2	0.0
ATPC				S	Sb	05 54 46.3	0.0
BRSN	Barisano	0.48	8	P	Pb	05 54 39.7	+0.1
BRIS	BRISIGHELLA	0.49	315	P	Pg	05 54 38.2	-0.3
BRIS				S	Sg	05 54 45.7	+0.8
BRIS				AML	AML		
	comp=E,334µm,0.5s						
BRIS				AML	AML		
	comp=N,285µm,0.8s						
BRIS				AML	AML		
	comp=E,322µm,0.2s						
BRIS				AML	AML		
	comp=N,265µm,0.3s						
ATMI	Monte Miggiano	0.51	156	P	Pg	05 54 39.3	+0.3
ATMI				S	Sb	05 54 47.0	-0.5
ATMI				AML	AML		
	comp=E,372µm,0.4s						
ATMI				AML	AML		
	comp=N,373µm,0.3s						
ATMI				AML	AML		
	comp=E,372µm,0.4s						
SEI	Scarperia	0.52	299	AML	AML		
	comp=E,126µm,1.1s						
SEI				AML	AML		
	comp=N,252µm,0.9s						
IMOL	Imola, Italy	0.58	342	P	Pb	05 54 41.1	-0.2
CSNT	Castellina Chi	0.60	237	P	Pg	05 54 41.0	+0.3
CSNT				S	Sg	05 54 49.2	+0.5
CSNT				AML	AML		
	comp=E,156µm,0.8s						
CSNT				AML	AML		
	comp=N,97µm,0.5s						
CSNT				AML	AML		
	comp=N,96µm,0.2s						
OSSC	Osservatorio P	0.61	243	P	Pg	05 54 41.0	+0.2
OSSC				S	Sb	05 54 50.0	-0.3
OSSC				AML	AML		
	comp=E,152µm,0.5s						
OSSC				AML	AML		
	comp=N,202µm,0.7s						
OSSC				AML	AML		
	comp=E,152µm,0.5s						
OSSC				AML	AML		
	comp=N,160µm,0.5s						
MOCL	Monte Cuccoli	0.62	289	P	Pg	05 54 40.9	-0.1
MOCL				S	Sb	05 54 50.2	-0.5
MOCL				AML	AML		
	comp=E,49µm,1.6s						
MOCL				AML	AML		
	comp=N,52µm,1.5s						
MOCL				AML	AML		
	comp=E,49µm,1.6s						
MOCL				AML	AML		
	comp=N,52µm,1.5s						

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*DJA **07** 05:56:22.9±0.2, 4°S±3°×13°8E±°, h65^{km}±6^{km}, M4.3/9, mB4.8/1, mb4.3/6, MLv4.4/9, Mw(mB)4.0/1*
*IDC **07** 05:56:23.9±2.6, 3°.63S×138°.48E, h106^{km}±30^{km}, mb3.5/5, mbtmp3.9/9, MS2.9/1, Error ellipse: s-maj=34.0km s-min=15.0km az=110.0*
ISC 07 05:56:21.6±0.7**, 3°.71S**±0°.07×**138°.33E**±0°.06**, h71^{km}, n19,**
σ1^{s}.86/21**, mb3.5**/4**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	1.75	13	P	Pn	05 56 51.2	+1.2
GENI	Genyem	2.14	59	P	Pn	05 56 57.1	+1.8
JAY	Jayapura	2.65	64	P	Pn	05 57 03.3	+1.1
	12nm,0.3s,baz=219,slow=10,SNR=24						
JAY				S	Sn	05 57 33.3	0.0
	95nm,0.3s,baz=270,slow=20,SNR=12						
JAY	Jayapura	2.65	64	P	Pn	05 57 03.3	+1.1
SRPI	Serui, Papua	2.77	311	P	Pn	05 57 05.6	+1.8
BAKI	Biak	3.34	318	P	Pn	05 57 13.3	+1.7
KMPI	Kaimana, Papua	4.62	270	P	Pn	05 57 31.0	+2.1
MWPI	Manokwari, Pap	5.10	303	P	Pn	05 57 37.3	+1.8
FAKI	Fak Fak	6.12	277	P	Pn	05 57 50.8	+1.2
	0.1nm14nm,0.6s						
SWI	Sorong	7.61	292	P	Pn	05 58 12.0	+2.1
PMG	Port Moresby	10.44	123	P	Pn	05 58 50.5	+2.0
	4.4nm,0.3s,baz=311,slow=9.0,SNR=5.0						
PMG				S	Sn	06 00 44.5	+0.6
	6.0nm,0.3s,baz=226,slow=16,SNR=2.3						
WRA	Warramunga Arr	16.60	193	P	Pn	06 00 10.0	0.0
	6.2nm,0.6s,baz=17,slow=12,SNR=31						
WRA				S	Sn	06 03 01.2	-13
	6.8nm,0.9s,baz=10,slow=22,SNR=6.3						
FITZ	Fitzroy Crossi	18.95	220	P	P	06 00 37.6	+0.4
	0.7nm,0.3s,baz=52,slow=13,SNR=6.1						
FITZ				S	S	06 03 57.3	-11
	5.8nm,0.6s,baz=45,slow=19,SNR=10						
ASAR	Alice Springs	20.30	192	P	P	06 00 53.1	+1.2
	9.9nm,0.5s,baz=18,slow=10,SNR=185						
ASAR				S	S	06 04 31.3	-4.4
	8.1nm,1.0s,baz=13,slow=21,SNR=14						
	9.9nm,0.5s						
JHJ	Hachijo jima 2	36.65	2	LR	LR	06 15 25.4	
	comp=Z,17nm,21.5s,baz=72,slow=31						
MKAR	Makanchi Array	70.34	323	P	P	06 07 26.4	-1.5
	0.2nm,0.5s,baz=100,slow=6.9,SNR=2.2						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	74.32	325	P	P	06 07 49.8	-1.6
	0.5nm,0.9s,baz=103,slow=4.0,SNR=4.3						
	0.5nm,0.9s						
BVAR	Borovoye Array	79.91	325	P	P	06 08 21.6	-1.2
	1.1nm,0.7s,baz=104,slow=6.3,SNR=4.3						
	1.1nm,0.7s						
ILAR	Eielson Array	86.89	24	P	P	06 08 56.4	-2.0
	0.3nm,0.6s,baz=264,slow=4.7,SNR=4.3						
	0.3nm,0.6s						

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*AZER **07** 06:06:48.5, 38°.45N×44°.50E, h5^{km}, ml2.7*
*TEH **07** 06:06:52.0, 38°.50N×44°.49E, h10^{km}*
*AFAD **07** 06:06:52.0, 38°.44N×44°.42E, h9^{km}±2^{km}, ML2.8*
*ISK **07** 06:06:53.9, 38°.41N×44°.59E, h24^{km}, ML2.7/6*
ISC 07 06:06:51.8±1.1**, 38°.44N**±0°.02×**44°.49E**±0°.02**, h6^{km}**±10^{km}**,**
n29, σ1^{s}.01/48**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	Van, Ozalp-Mer	0.45	300	P	Pg	06 06 59.9	-0.5
OZAP				S	Sg	06 07 04.6	-1.7
TVAN	Van	0.85	276	P	Pg	06 07 07.2	-0.9
TVAN				S	Sg	06 07 19.1	-0.2
YOVA	Hakkari_Yksek	0.87	190	P	Pg	06 07 09.0	+0.6
YOVA				S	Sg	06 07 20.8	+1.1
VANB	Van	0.88	280	Pg	Pn	06 07 12.2	+1.5
VANB				Sg	Sn	06 07 25.1	+1.2
VMUR	Van-Muradiye	0.90	308	P	Pg	06 07 08.6	-0.5
VMUR				S	Sg	06 07 21.4	+0.6
MAKU	Maku	0.93	9	Pg	Pg	06 07 08.9	-0.6
IMRD	Marand	0.99	74	Pg	Pg	06 07 10.8	0.0
IMRD				Sg	Sn	06 07 25.5	-1.3
NAX	Nakhchivan	1.07	47	P	Pg	06 07 12.1	-0.3
NAX				S	Sn	06 07 28.1	-0.6
HAKT	HAKKARI	1.08	215	P	Pg	06 07 11.7	-0.7
HAKT				S	Sn	06 07 28.3	-0.7
HAKT	HAKKARI	1.08	215	P	Pg	06 07 11.6	-0.8
HAKT				S	Sn	06 07 29.3	+0.3
SBZ	Shahbuz	1.27	41	P	Pn	06 07 15.4	-0.8
SBZ				S	Sn	06 07 33.9	+0.4
ORD	Ordubad	1.27	67	P	Pn	06 07 15.7	-0.6
ORD				S	Sn	06 07 34.2	+0.5
HYR	Heyderabad	1.31	12	P	Pn	06 07 16.0	-0.6
HYR				S	Sg	06 07 36.3	+2.5
CUKT	Cukurca	1.38	211	P	Pg	06 07 18.5	+0.2
CUKT				S	Sg	06 07 36.9	+0.8
CUKT				i IAML		06 07 42.0	
	comp=E,201nm,0.6s						
CUKT	Cukurca	1.38	211	Pn	Pg	06 07 18.4	+0.2
CUKT				Sn	Sg	06 07 36.7	+0.6
IAZR	Azarshahr	1.40	122	Pg	Pg	06 07 18.8	+0.1
IGDI	IGDIR	1.46	348	P	Pg	06 07 20.2	+0.4
IGDI	IGDIR	1.46	348	P	Pb	06 07 19.2	-0.2
IGDI				S	Sg	06 07 40.0	+1.3
TASB	TASBURUN-IGDIR	1.55	353	Pn	Pg	06 07 21.3	-0.2
PERV	Siirt/Pervari-	1.61	253	P	Pg	06 07 23.0	+0.4
PERV				S	Sg	06 07 44.0	+0.5
PERV				i IAML		06 07 49.0	
	comp=E,112nm,0.5s						
PERV				i IAML		06 07 53.0	
	comp=N,171nm,0.6s						
AGRB	Hanur-Agry	1.62	315	Pn	Pg	06 07 23.2	+0.3
DORK	Agr/Tutak/Do	1.63	306	P	Pg	06 07 23.2	+0.1
MLAZ	Malazgirt-MUS	1.67	295	Pn	Pg	06 07 23.9	+0.2
KOTA	Agri, Merkez-K	1.69	324	P	Pb	06 07 23.8	+0.4
IHRS	Heris	2.01	93	Pn	Pb	06 07 28.6	-0.2
SRTM	Siirt_Merkez	2.07	258	P	Pn	06 07 25.6	-1.5
SRTM				S	Sb	06 07 57.1	+1.3
SRTM				i IAML		06 08 04.0	
	comp=E,75nm,0.6s						
SRTM				i IAML		06 08 07.0	
	comp=N,99nm,0.6s						
GDB	GEDABAY	2.48	23	P	Pn	06 07 34.0	+1.2
GDB				S	Sb	06 08 08.8	+1.1
KOPR	Koprukoy-ERZUR	2.57	308	Pn	Pb	06 07 36.4	-1.9
YRD	Yardimli	2.98	80	P	Pn	06 07 40.8	+1.1
YRD				S	Sb	06 08 19.3	-2.7

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*PDG **07** 06:18:36.0±0.2, 41°.43N×19°.52E, h20^{km}, ML2.6/11, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*
*TIR **07** 06:18:36.1, 41°.50N×19°.67E, h34^{km}±2^{km}, Ml2.9/6*
ISC 07 06:18:35.7±1.0**, 41°.44N**±0°.02×**19°.60E**±0°.02**, h12^{km}**±8^{km}**,**
n33, σ0^{s}.86/62**, 22C-9D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.22	116	⇓Pg	Pg	06 18 40.2	-0.2
TIR				Sg	Sg	06 18 43.3	-0.3
TIR				AML	AML	06 18 43.8	
	5.4nm,0.3s						
TIR				AML	AML	06 18 45.0	
	5.1nm,0.4s						
ULC	Ulcinj	0.58	333	⇓iPg	Pg	06 18 46.9	-0.2
ULC				i Sg	Sb	06 18 56.6	+0.3
SDA	Shkodra	0.61	353	Pg	Pg	06 18 46.9	-0.7
SDA				Sg	Sb	06 18 57.0	-0.1
PHP	Peshkopia	0.67	69	Pg	Pg	06 18 47.1	-1.8
PHP				Sg	Sg	06 18 57.5	-0.2
PHP				AML	AML	06 19 01.5	
	1.0nm,0.2s						
DRME	Dracevica, Mon	0.81	337	⇑iPg	Pb	06 18 51.1	-0.6
DRME				eSg	Sn	06 19 04.0	-0.9
OHR	Ohrid	0.96	110	i Pg	Pb	06 18 53.1	-1.3
VLO	Vlora	0.98	185	⇑Pg	Pb	06 18 55.5	+0.9
VLO				Sg	Sn	06 19 09.5	+0.4
VLO				AML	AML	06 19 12.4	
	1.5nm,0.3s						
BUM	Brajici-Budva	1.01	329	⇑iPg	Pb	06 18 54.9	-0.3
BUM				i Sg	Sn	06 19 10.3	+0.3
PDG	Podgorica	1.02	345	⇑Pg	Pb	06 18 55.1	-0.2
PDG				Sg	Sg	06 19 09.1	+0.4
PDG	Podgorica	1.02	345	⇑P	Pb	06 18 55.1	-0.2
PDG				⇓S	Sn	06 19 09.6	-0.5
PDG	Podgorica	1.02	345	⇑iPg	Pb	06 18 55.0	-0.3
PDG				i Sg	Sn	06 19 11.3	+1.1
PVY	Plav	1.18	13	⇑iPg	Pg	06 18 58.5	0.0
PVY				i Sg	Sg	06 19 17.0	+3.2
KBN	Korca	1.21	132	Pn	Pb	06 18 59.0	+0.3
KBN				Sn	Sn	06 19 15.0	-0.1
HCY	Herceg Novi	1.30	321	⇑iPg	Pn	06 18 59.7	-0.1
HCY				i Sg	Sg	06 19 18.7	+1.1
KOME	Kolasin	1.41	357	⇑iPg	Pb	06 19 01.9	-0.1
KOME				eSg	Sg	06 19 21.8	+0.7
NKME	Niksic	1.41	340	⇑iPg	Pn	06 19 00.9	-0.4
NKME				eSg	Sg	06 19 21.5	+0.4
IVA	Berane	1.44	9	⇑iPg	Pb	06 19 02.2	-0.4
IVA				i Sg	Sg	06 19 23.2	+1.0
SKO	Skopje	1.47	68	i Pn	Pb	06 19 03.2	+0.1
SKO				i Sn	Sg	06 19 25.0	+1.9
NEST	Nestorio	1.50	133	Pn	Pb	06 19 03.9	+0.3
NEST				Sn	Sb	06 19 23.5	+0.8
NEST				AML	AML	06 19 29.4	
	0.2nm,0.4s						
BRY	Bratogost	1.66	332	⇑iPn	Pn	06 19 05.1	+0.3
BRY				i Sn	Sb	06 19 27.6	+0.4
UPM	Unac-Piva	1.83	344	⇓iPn	Pn	06 19 07.5	+0.2
UPM				i Sn	Sb	06 19 32.3	0.0
IGT	Igoumenitsa	1.99	164	Pn	Pb	06 19 12.1	+0.2
IGT				Sn	Sb	06 19 37.0	+0.4
NOCI	Noci	2.03	252	Pn	Pn	06 19 09.0	-0.7
NOCI				Sn	Sb	06 19 38.9	+1.2
NOCI				AML	AML	06 19 41.5	
	0.3nm,0.3s						
VAY	Valandovo	2.24	92	i Pn	Pn	06 19 14.0	+1.4
VAY				i Sn	Sb	06 19 41.5	-2.2
MATE	Matera	2.33	251	⇓P	Pn	06 19 14.1	+0.2
MATE				⇑S	Sn	06 19 41.2	-1.3
BOVS	Bovan	2.69	35	⇑P	Pn	06 19 18.9	+0.1
BOVS				⇑S	Sn	06 19 51.7	+0.4
SGRT	San Giovanni R	2.91	277	⇓Pn	Pn	06 19 20.8	-1.2
SGRT				AML	AML	06 19 56.6	
	0.2nm,0.3s						
TIP	Timpagrande	3.14	225	⇑P	Pn	06 19 24.2	-0.9
TIP				⇓S	Sn	06 20 02.1	-0.5
BLKB	Belogradchik	3.15	45	⇓S	Sn	06 20 02.4	-0.3
MDVR	Moldovita	3.68	24	⇑P	Pn	06 19 32.5	0.0
MDVR				⇑S	Sn	06 20 15.8	0.0
HERR	Herculane	4.00	30	⇑P	Pn	06 19 37.2	+0.2
BZS	Buzias	4.42	19	⇑P	Pn	06 19 42.3	-0.3
BZS				⇑S	Sn	06 20 32.9	-1.1
GZR	Gura Zlata	4.58	29	⇓P	Pn	06 19 45.5	+0.6
GZR				⇑S	Sn	06 20 38.4	+0.4

IDC 07 06:39:36.2±12.0**, 24°.73S**×**178°.66E, h545^{km}**±87^{km}**,**
mb2.9/3**, mbtmp3.9**/4**, Error ellipse: s-maj=146.9km**
s-min=90.8km az=119.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.53	281	P	P	06 42 10.1	+0.1
	3.8nm,0.6s,baz=92,slow=16,SNR=2.6						
STKA	Stephens Creek	33.28	249	P	P	06 45 28.6	-0.4
	1.0nm,0.4s,baz=96,slow=9.8,SNR=5.9						
	1.0nm,0.4s						
ASAR	Alice Springs	40.70	262	P	P	06 46 29.9	-0.1
	0.6nm,0.3s,baz=96,slow=7.6,SNR=29						
ASAR				PcP	PcP	06 48 18.0	-0.3
	0.1nm,0.4s,baz=102,slow=3.8,SNR=1.9						
	0.6nm,0.3s						
WRA	Warramunga Arr	41.14	268	P	P	06 46 33.2	-0.2
	0.8nm,0.5s,baz=102,slow=7.7,SNR=6.1						
	0.8nm,0.5s						

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*SOME **07** 06:45:37.9, 39°.42N×73°.30E, h10^{km}*
*KRNET **07** 06:45:40.0±0.1, 39°.64N×73°.17E, h16^{km}, mb3.4*
*NNC **07** 06:45:42.3±1.3, 39°.61N×73°.32E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=9.9km s-min=5.2km az=177.0*
ISC 07 06:45:40.4±1.0**, 39°.61N**±0°.04×**73°.22E**±0°.03**, h10^{km}, n47,**
σ2^{s}.10/81**, 35C-21D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	0.46	29	⇑iP	Pg	06 45 48.9	-0.5
SFK				⇑iS	Sg	06 45 55.5	+0.1
OHH	Osh	0.97	340	⇑iP	Pg	06 45 57.6	-1.5
OHH				⇑iS	Sg	06 46 10.7	-1.0
DRK	Karamyk	1.10	264	⇑iP	Pg	06 46 00.3	-1.4
DRK				⇑iS	Sg	06 46 14.9	-1.2
SALK	Salom-Alik	1.35	20	⇓iP	Pn	06 46 04.8	-0.7
SALK				⇓iS	Sb	06 46 23.1	-0.2
ARSB	Arslanbob	1.72	354	⇑iP	Pn	06 46 11.2	+0.7
ARSB				⇑iS	Sb	06 46 33.9	0.0
GAR	Garm	2.33	256	⇓iP	Pn	06 46 20.0	+1.0
GAR				⇓iS	Sn	06 46 49.4	+1.6
JNKS	Jany-Kuch	2.35	51	⇑eP	Pb	06 46 21.2	-1.9
JNKS				⇑eS	Sb	06 46 51.3	-1.0
ARK	Arkit	2.38	337	⇓iP	Pn	06 46 20.7	+1.1

ARK				⇓iS	Sn	06 46 50.5	+1.5
ARLS	Aral	2.40	20	⇑iP	Pn	06 46 21.2	+1.3
ARLS				⇑iS	Sn	06 46 51.3	+1.9
TRKS	Terek-Say	2.48	321	⇑iP	Pn	06 46 21.1	0.0
TRKS				⇑iS	Sn	06 46 51.1	-0.4
UCH	Uchtor	2.79	20	⇑iP	Pn	06 46 27.0	+1.5
UCH				⇑iS	Sn	06 47 01.3	+1.8
MNAS	Manas	2.92	350	⇑iP	Pn	06 46 28.4	+1.3
MNAS				⇑iS	Sn	06 47 03.7	+1.4
EKS2	Erkin-Say	3.08	8	⇑iP	Pn	06 46 30.6	+1.5
EKS2				⇑iS	Sn	06 47 07.5	+1.5
MRKS	Merke	3.13	0	Pg	Pg	06 46 38.6	-1.8
	10nm,0.4s						
MRKS				Lg	Lg	06 47 22.3	
	56nm,0.5s						
MRKS	Merke	3.13	0	eP	Pg	06 46 38.6	-1.8
	10nm,0.4s						
MRKS				eS	Sg	06 47 22.3	+1.4
	56nm,0.5s						
AAK	Ala-Archa	3.17	17	⇑iP	Pn	06 46 32.1	+1.6
AAK				⇑iS	Sn	06 47 10.1	+1.6
AAK	Ala-Archa	3.17	17	⇑Pn	Pb	06 46 33.8	-3.1
	9.6nm,0.9s						
AAK				⇓Lg	Lg	06 47 19.2	
	17nm,0.7s						
CHGR	Chuyangaron	3.30	254	⇑iP	Pn	06 46 33.6	+1.4
CHGR				⇑iS	Sn	06 47 12.6	+1.1
KBK	Karagaybulak	3.31	23	⇑iP	Pn	06 46 34.1	+1.7
KBK				⇑iS	Sn	06 47 13.5	+1.6
FRU1	Bishkek	3.37	18	⇑iP	Pn	06 46 34.9	+1.8
FRU1				⇑iS	Sn	06 47 15.0	+1.8
ULHL	Ulahol	3.49	40	⇓iP	Pn	06 46 36.7	+1.8
ULHL				⇓iS	Sn	06 47 18.1	+1.8
BOOM	Boomskoye usch	3.53	35	⇑iP	Pn	06 46 37.3	+1.8
BOOM				⇑iS	Sn	06 47 19.0	+1.6
CHMS	Chumysh	3.57	18	⇓iP	Pn	06 46 37.5	+1.6
CHMS				⇓iS	Sn	06 47 19.5	+1.3
TKM2	Tokmak 2	3.76	28	⇓iP	Pn	06 46 40.3	+1.7
TKM2				⇓iS	Sn	06 47 24.4	+1.4
USP	Ospenovka	3.77	14	⇓iP	Pn	06 46 40.3	+1.6
USP				⇓iS	Sn	06 47 24.4	+1.2
KDJ	Kajisay	3.92	49	⇑iP	Pn	06 46 42.8	+2.0
KDJ				⇑iS	Sn	06 47 28.6	+1.7
SGDS	Sogindy	3.98	15	Pg	Pb	06 46 53.4	+2.8
	2.1nm,0.4s						
SGDS				Lg	Lg	06 47 47.8	
	9.4nm,0.8s						
KK31	Karatay Array	4.04	331	⇓Pn	Pn	06 46 46.9	+4.6
	1.0nm,0.5s,baz=136,slow=11,SNR=11						
KK31				⇓Pg	Pg	06 46 56.7	-1.1
	2.2nm,0.3s,baz=170,slow=17,SNR=14						
KK31				⇓Sn	Sb	06 47 36.3	-4.2
	4.1nm,0.3s,baz=155,slow=25,SNR=6.3						
KK31				⇓Lg	Lg	06 47 51.5	
	14nm,0.6s,baz=155,slow=25,SNR=6.3						
TARG	Taragay, Kyrgy	4.08	57	⇓iP	Pn	06 46 45.1	+1.9
TARG				⇓iS	Sn	06 47 32.6	+1.4
DGS	Degeres	4.10	27	Pg	Pb	06 46 55.5	+2.7
	5.7nm,0.5s						
DGS				Lg	Lg	06 47 51.6	
	13nm,0.6s						
BRLS	Borolday	4.26	324	Pg	Pb	06 46 56.6	+1.2
	4.6nm,0.4s						
BRLS				Lg	Lg	06 47 53.4	
	17nm,0.3s						
BRLS	Borolday	4.26	324	eP	Pb	06 46 56.6	+1.2
	4.6nm,0.4s						
BRLS				eS	Sg	06 47 53.4	-3.7
	17nm,0.3s						
MTBS	Maitube	4.26	33	Pg	Pg	06 46 59.5	-2.6
	5.6nm,0.6s						
MTBS				Lg	Lg	06 47 58.3	
	9.3nm,0.3s						
MTBS	Maitube	4.26	33	eP	Pg	06 46 59.5	-2.6
	5.6nm,0.6s						
MTBS				eS	Sg	06 47 58.3	+1.0
	9.3nm,0.3s						
IZV	Izvestkoviy	4.27	36	Pg	Pb	06 46 58.2	+2.6
	4.8nm,0.2s						
IZV				Lg	Lg	06 47 56.2	
	18nm,1.0s						
IZV	Izvestkoviy	4.27	36	eP	Pb	06 46 58.2	+2.6
	4.8nm,0.2s						
IZV				eS	Sg	06 47 56.2	-1.3
	18nm,1.0s						
TNSS	Tian-Shan	4.42	38	Pg	Pg	06 47 02.0	-3.2
	1.2nm,0.3s						
TNSS				Lg	Lg	06 48 02.7	
	3.3nm,0.4s						
TNSS	Tian-Shan	4.42	38	eP	Pg	06 47 02.0	-3.2
	1.2nm,0.3s						
TNSS				eS	Sg	06 48 02.7	+0.2
	3.3nm,0.4s						
KRBS	Karabastau	4.47	23	Pg	Pg	06 47 03.4	-2.7
	5.9nm,0.7s						
KRBS				Lg	Lg	06 48 05.0	
	10nm,0.7s						
MDOK	Medeo	4.57	38	Pg	Pg	06 47 04.9	-3.0
	3.6nm,0.4s						
MDOK				Lg	Lg	06 48 07.7	
	8.6nm,0.7s						
KOTS	Kotyrbulak	4.65	38	Pg	Pg	06 47 06.0	-3.5
	5.0nm,0.5s						
KOTS				Lg	Lg	06 48 09.5	
	28nm,0.7s						
KOTS	Kotyrbulak	4.65	38	eP	Pg	06 47 06.0	-3.5
	5.0nm,0.5s						
KOTS				eS	Sg	06 48 09.5	-0.3
	28nm,0.7s						
KTBS	Karatobe	4.85	31	Pg	Pg	06 47 09.8	-3.4
	3.3nm,0.6s						
KTBS				Lg	Lg	06 48 16.4	
	7.3nm,1.0s						
PRZ	Przheval'sk	4.85	52	⇑iP	Pn	06 46 55.8	+2.1
PRZ				⇑iS	Sn	06 47 51.1	+1.1
SATY	Saty	5.21	47	Pg	Pg	06 47 15.9	-4.1
	4.2nm,0.9s						
SATY				Lg	Lg	06 48 26.4	
	11nm,0.6s						
ARXS	Arharly	5.74	35	Pg	Pg	06 47 26.2	-4.1
	2.0nm,0.5s						
ARXS				Lg	Lg	06 48 44.3	
	10nm,0.9s						
ARXS	Arharly	5.74	35	eP	Pg	06 47 26.2	-4.1
ARXS				eS	Sg	06 48 44.3	-0.3

SVSA 07 07:06:19.1±1.4**,37°.74N×25°.24W,h9**km±7km**,**
ML2.1(INMG)**,1C-1D,Error ellipse: s-maj=6.3km**
s-min=3.3km az=9.0,#DIST_RANGE: LOCAL
#IPMA_REGION: Macio da Povoao,Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BART	Pico Bartolome	0.07	58	⇑iP	Pg	07 06 21.6	+0.4
BART				eS	Sg	07 06 23.6	+0.9
BART				i IAML		07 06 24.1	
BART				i IAML		07 06 24.1	
BART				i IAML		07 06 24.7	
PGRON	Lagoa das Cont	0.11	285	eP	Pg	07 06 22.1	+0.3
PGRON				i IAML		07 06 25.2	
PGRON				i IAML		07 06 26.5	
PGRON				i IAML		07 06 26.6	
PCALD	Caldeiras da R	0.20	286	eP	Pg	07 06 23.6	+0.3
PCALD				eS	Sg	07 06 26.5	+0.4
CMLA	Cha da Macela	0.23	276	eP	Pg	07 06 23.6	-0.1
CMLA				eS	Sg	07 06 27.6	+0.8
CMLA				i IAML		07 06 29.1	
CMLA				i IAML		07 06 33.7	
CMLA				i IAML		07 06 33.8	
PDA	Ponta Delgada	0.34	271	⇓iP	Pg	07 06 25.8	+0.1
PDA				eS	Sg	07 06 30.6	+0.5
PDA				i IAML		07 06 32.3	
PDA				i IAML		07 06 32.9	
PDA				i IAML		07 06 39.4	
PSMN	Pico do Norte,	0.75	169	eP	Pg	07 06 31.7	-1.9
PSMN				eS	Sg	07 06 41.0	-2.3
PSMN				i IAML		07 06 41.3	
PSMN				i IAML		07 06 41.8	
PSMN				i IAML		07 06 42.1	

SVSA 07 07:06:43.2±1.2**,37°.76N×25°.24W,h12**km±7km**,**
ML2.0(INMG)**,1C,Error ellipse: s-maj=8.2km**
s-min=4.2km az=177.0,#DIST_RANGE: LOCAL
#IPMA_REGION: Macio da Povoao,Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPOV	Povoa§£o	0.01	197	eP	Pg	07 06 50.8	+5.6
PPOV				eS	Sg	07 06 51.9	+5.3
PPOV				i IAML		07 06 52.3	
PPOV				i IAML		07 06 52.8	
PPOV				i IAML		07 06 53.2	
BART	Pico Bartolome	0.06	69	⇑iP	Pg	07 06 46.0	+0.4
BART				eS	Sg	07 06 48.1	+0.7
BART				i IAML		07 06 48.6	
BART				i IAML		07 06 48.6	
BART				i IAML		07 06 49.1	
PGRON	Lagoa das Cont	0.11	278	eP	Pg	07 06 46.4	+0.3
PGRON				eS	Sg	07 06 48.7	+0.5
PGRON				i IAML		07 06 49.6	
PGRON				i IAML		07 06 49.9	
PGRON				i IAML		07 06 50.9	

IDC ***07*** *07:14:21.6±0.9,35°.16N×23°.83E,h0km,mb4.0/12,*
mbtmp3.9/24,ML3.8/10,MS3.3/12,Error ellipse:
s-maj=17.8km s-min=8.6km az=5.0
ISK ***07*** *07:14:22.8,35°.19N×23°.84E,h4km,ML3.9/21*
THE ***07*** *07:14:23.5,35°.2N±0°.9×23°.8E±0°.7,h0km±1km,M4.0/12,*
MLh4.0/12
ATH ***07*** *07:14:23.9,35°.19N×23°.83E,h7km,ML3.9/12,Manual*
Solution by A.Papageorgiou First location: 2019/12/07
07:15:26, This location: 2019/12/07 07:20:39 ML
Amplitudes are expressed in micrometers, All distances
are expressed in degrees Latitude uncertainty: 0 km;
Longitude uncertainty: 0 km
AFAD ***07*** *07:14:29.1,35°.29N×24°.31E,h10km±5km,MW3.9*
ISC 07 07:14:23.6±0.8**,35°.17N**±0°.02×**23°.84E**±0°.02**,h14**km±5km**,**
n144,σ**2ˢ09**/167**,mb4.0**/12**,MS3.3**/7**,2C-3D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNDR	Palaiochora Ch	0.19	289	P	Pg	07 14 27.1	-0.9
KNDR				S	Sg	07 14 30.1	-1.0
KNDR	Palaiochora Ch	0.19	289	Pg	Pg	07 14 27.2	-0.8
KNDR				Sg	Sg	07 14 30.2	-0.8
KNDR	Palaiochora Ch	0.19	289	P	Pg	07 14 27.1	-0.9
KNDR				S	Sg	07 14 30.0	-1.0
IMMV	Iera Moni Meta	0.31	21	P	Pg	07 14 29.4	-0.6
IMMV				S	Sg	07 14 34.0	-0.5
IMMV	Iera Moni Meta	0.31	21	Pg	Pg	07 14 29.4	-0.6
IMMV				Sg	Sg	07 14 34.2	-0.2
IMMV	Iera Moni Meta	0.31	21	P	Pg	07 14 29.5	-0.6
IMMV				S	Sg	07 14 33.8	-0.6
VAM	Vamos	0.37	51	P	Pg	07 14 30.7	-0.5
VAM				S	Sg	07 14 37.0	+0.6
VAM	Vamos	0.37	51	P	Pg	07 14 30.6	-0.6
VAM				S	Sg	07 14 36.2	-0.1
CHAN	Chania	0.38	25	P	Pg	07 14 30.8	-0.6
CHAN				S	Sg	07 14 37.0	+0.4
CHAN	Chania	0.38	25	P	Pg	07 14 31.1	-0.2
CHAN				S	Sg	07 14 36.3	-0.3
GVD	Gavdhos	0.39	149	P	Pg	07 14 31.4	0.0
GVD				S	Sb	07 14 38.3	+0.2
GVD	Gavdhos	0.39	149	Pg	Pg	07 14 31.2	-0.2
GVD				Sg	Sg	07 14 38.0	+1.3
GVD	Gavdhos	0.39	149	P	Pg	07 14 31.4	0.0
GVD				S	Sg	07 14 37.3	+0.6
ANKY	Antikythira Is	0.82	328	P	Pg	07 14 38.5	-1.1
ANKY				S	Sb	07 14 50.4	-0.2
ANKY	Antikythira Is	0.82	328	P	Pg	07 14 38.8	-0.8
ANKY				S	Sg	07 14 49.9	-0.5
IDI	Anoyia	0.86	82	Pg	Pg	07 14 39.1	-1.2
	44nm,0.3s,baz=261,slow=11,SNR=14						
IDI				Lg	Lg	07 14 51.3	
	218nm,0.3s,baz=346,slow=23,SNR=10.0						
IDI				LR	LR	07 14 56.8	
	comp=Z,211nm,18.2s,baz=160,slow=40						
IDI	Anoyia	0.86	82	P	Pg	07 14 38.8	-1.6
IDI	Anoyia	0.86	82	Pg	Pg	07 14 38.8	-1.6
IDI				Sg	Sg	07 14 52.1	+0.4
IDI	Anoyia	0.86	82	P	Pg	07 14 40.0	-0.4
IDI				S	Sg	07 14 52.2	+0.5
IACM	Heraklion	1.01	82	P	Pg	07 14 42.3	-0.8
IACM				S	Sb	07 14 57.9	+1.9
IACM	Heraklion	1.01	82	P	Pg	07 14 42.6	-0.6
IACM				S	Sb	07 14 58.0	+1.9
KTHA	Kythira Island	1.26	330	P	Pg	07 14 46.9	-0.9
KTHA	Kythira Island	1.26	330	Pn	Pg	07 14 46.9	-0.9
KTHA	Kythira Island	1.26	330	P	Pg	07 14 46.6	-1.2
NPS	Neapolis	1.45	86	P	Pn	07 14 50.4	+1.0
NPS				S	Sg	07 15 11.7	+1.3
NPS	Neapolis	1.45	86	P	Pn	07 14 50.4	+1.0
NPS				S	Sg	07 15 10.7	+0.4
NPS1	Neapolis Lacon	1.48	335	P	Pn	07 14 49.9	0.0
NPS1				S	Sb	07 15 09.8	+0.2
MHLO	Agia Marina, M	1.58	16	P	Pn	07 14 52.0	+0.7
MHLO				S	Sg	07 15 13.7	-0.9
MHLO	Agia Marina, M	1.58	16	P	Pn	07 14 52.1	+0.9
MHLO				S	Sn	07 15 12.2	+0.7
MNVA	Monemvasia	1.65	337	P	Pn	07 14 52.9	+0.8
THR9	Santorini-Faro	1.71	46	P	Pn	07 14 53.8	+0.9
VLI	Veliai	1.71	335	P	Pn	07 14 54.3	+1.3
VLI	Veliai	1.71	335	P	Pn	07 14 54.0	+1.0
VLI				S	Sn	07 15 15.6	+0.9
THR6	Thira Island,	1.73	46	P	Pn	07 14 54.4	+1.2
SAP3	Santorini-Thir	1.75	44	P	Pn	07 14 55.2	+1.6
SNT5	Nea Kammeni, S	1.76	45	P	Pn	07 14 54.6	+0.9
SNT5	Nea Kammeni, S	1.76	45	P	Pn	07 14 54.6	+0.9
THR3	Thira Island,	1.77	45	P	Pn	07 14 54.9	+1.1
THR3	Thira Island,	1.77	45	P	Pn	07 14 54.8	+1.1
THERA	Ancient Thera,	1.78	48	P	Pn	07 14 54.8	+0.7
THERA	Ancient Thera,	1.78	48	P	Pn	07 14 54.7	+0.7
THERA				S	Sn	07 15 18.0	+1.5
ZKR	Zakros	1.94	91	Pn	Pn	07 14 57.8	+1.5
ZKR	Zakros	1.94	91	P	Pn	07 14 57.7	+1.5
APE	Apeiranthos	2.33	35	Pn	Pn	07 15 03.0	+1.4
PYL	PYLOS	2.42	316	P	Pn	07 15 03.0	+0.2
MET4	Agioi Theodoro	2.47	352	P	Pn	07 15 04.3	+0.9
ITM	Ithomi	2.53	323	Pn	Pn	07 15 06.3	+2.0
ITM	Ithomi	2.53	323	P	Pn	07 15 05.3	+1.0
VLY	Voula,Athens	2.68	359	P	Pn	07 15 06.4	+0.1
KARP	Karpathos	2.74	81	Pn	Pn	07 15 08.6	+1.5
KARP	Karpathos	2.74	81	P	Pn	07 15 08.4	+1.2
YAZI	Mula-Dat§a-	3.29	62	P	Pn	07 15 17.2	+2.4
BODT	Bodrum	3.38	55	Pn	Pn	07 15 18.4	+2.4
DAT	Datca	3.41	62	P	Pn	07 15 19.3	+3.0
DAT				S	Sn	07 15 57.3	+0.7
DAT				i IAML		07 16 14.0	
	comp=N,87nm,0.9s						
DAT				i IAML		07 16 15.0	
	comp=E,53nm,1.2s						
DAT	Datca	3.41	62	Pn	Pn	07 15 18.7	+2.3
ARG	Arkhangelos	3.64	72	Pn	Pn	07 15 22.2	+2.7
CHOS	Chios island	3.67	28	Pn	Pn	07 15 21.9	+1.9
GCAM	G?zelcaml?	3.72	46	Pn	Pn	07 15 23.1	+2.5
MLSB	Milas	3.82	55	Pn	Pn	07 15 24.2	+2.2
URLA	Izmir	3.87	34	P	Pb	07 15 29.9	-1.8
URLA	Izmir	3.87	34	Pn	Pn	07 15 25.0	+2.2
TURN	Turunc	3.91	65	P	Pn	07 15 27.2	+4.0
TURN				S	Sn	07 16 13.0	+4.1
TURN				i IAML		07 16 22.0	
	comp=N,58nm,0.8s						
TURN				i IAML		07 16 25.0	
	comp=E,60nm,0.9s						
TURN	Turunc	3.91	65	Pn	Pn	07 15 25.9	+2.7
KARB	zmir-Karabur	4.05	30	P	Pn	07 15 29.1	+4.0
YER	Yerkesik	4.09	60	Pn	Pn	07 15 28.3	+2.5
MULA	Mugla, Merkez-	4.17	59	P	Pn	07 15 30.3	+3.3
DALY	Dalyan (Mula)	4.23	66	Pn	Pn	07 15 30.4	+2.8
AYDB	Zeytinkoy-Aydi	4.28	48	Pn	Pn	07 15 30.9	+2.5
SIGR	SIGRI	4.34	21	Pn	Pn	07 15 31.5	+2.4
IZMR	zmir-demi	4.43	47	P	Pn	07 15 33.0	+2.6
IZMR				S	Sb	07 16 35.1	+0.5
IZMR				i IAML		07 16 57.0	
	comp=E,32nm,1.1s						
IZMR				i IAML		07 17 00.0	
	comp=N,40nm,2.8s						
ESEN	Aydn-Nazilli	4.48	53	P	Pn	07 15 36.2	+5.2
FETY	Fethiye	4.50	70	P	Pn	07 15 28.7	-2.6
NAZL	Nazilli-Aydin	4.54	51	Pn	Pn	07 15 34.7	+2.8
IZZE	Mula-Seydike	4.55	72	P	Pn	07 15 34.8	+2.7
ODEM	Odemis-Izmir	4.60	46	Pn	Pn	07 15 35.4	+2.6
DNZT	Denizli-Tavas-	4.69	62	P	Pn	07 15 38.5	+4.5
DNZT				S	Sn	07 16 24.6	-3.6
DNZT				i IAML		07 16 44.0	
	comp=N,41nm,0.9s						
DNZT				i IAML		07 16 44.0	
	comp=E,35nm,1.1s						
TAVA	DENIZLI_Tavas	4.69	59	P	Pn	07 15 38.3	+4.3
KIRA	zmir-Kiraz	4.75	49	P	Pn	07 15 41.0	+6.2
CAME	Cameli-Denizli	4.76	67	Pn	Pn	07 15 37.6	+2.5
AKAS	Kas	4.81	76	P	Pn	07 15 38.9	+3.2
AKAS	Kas	4.81	76	Pn	Pn	07 15 38.6	+2.9
CAEL	Denizli, Camel	4.84	65	P	Pn	07 15 40.1	+4.0
DNIZ	Denizli-Tavas-	4.85	58	P	Pn	07 15 41.7	+5.4
KNIK	Mula-Seydike	4.94	69	P	Pn	07 15 40.4	+3.0
APMY	Acipayam-Deniz	4.97	61	Pn	Pn	07 15 40.6	+2.7
MANT	Manisa	5.03	47	P	Pn	07 15 43.4	+4.6
BUHA	Balikesir, Bur	5.03	30	P	Pn	07 15 40.5	+1.9
BAYC	CANAKKALE_Bayr	5.04	24	P	Pn	07 15 44.0	+5.2
GOLH	Golhisar	5.06	64	P	Pn	07 15 43.2	+4.0
KULA	Kula-Manisa	5.10	48	Pn	Pn	07 15 42.7	+3.0
OUR	Ouranopolis	5.16	1	Pn	Pn	07 15 43.5	+3.2
INCE	Denizli-Bozkur	5.27	60	P	Pn	07 15 46.0	+4.0
AKUM	Antalya-Kumluc	5.41	76	P	Pn	07 15 46.8	+3.0
USAK	Uak-Merkez	5.45	48	P	Pn	07 15 49.1	+4.7
PASA	Karahalli, USA	5.53	53	P	Pn	07 15 50.0	+4.4
KORT	Korkueli	5.58	69	P	Pn	07 15 49.7	+3.5
GELI	Tayfur-Gelibol	5.62	21	Pn	Pn	07 15 50.0	+3.3
DURS	Dursunbey	5.76	38	P	Pn	07 15 53.3	+4.6
ERIK	Erikli-Kesan	5.88	20	Pn	Pn	07 15 53.6	+3.3
KZIL	AFYON_Kizioren	5.92	57	P	Pn	07 15 55.5	+4.5
AFYN	Afyon-Dinar-K	6.18	58	P	Pn	07 15 57.8	+3.3
YVAC	Isparta, Yalva	6.70	60	P	Pn	07 16 04.5	+2.9
TIP	Timpagrande	6.93	307	⇑P	Pn	07 16 05.1	+0.4
TIP				⇓S	Sn	07 17 03.5	-20
VAE	Valguarnera	7.95	290	Pn	Pn	07 16 20.2	+1.4
	7.7nm,0.5s,baz=94,slow=11,SNR=1.8						
VAE				Sn	Sn	07 17 52.5	+3.9
	1.9nm,0.3s,baz=54,slow=19,SNR=4.3						
BOVS	Bovan	8.61	350	⇓P	Pn	07 16 21.7	-6.1
BRTR	Keskin Array B	9.02	57	Pn	Pn	07 16 36.1	+2.6
	0.3nm,0.3s,baz=243,slow=14,SNR=25						
	5.4nm,0.7s						
MMAI	Mount Meron Ar	9.82	99	Pn	Pn	07 16 43.0	-1.5
	2.0nm,0.3s,baz=298,slow=11,SNR=8.5						
MMAI				Sn	Sn	07 18 29.2	-5.5
	1.4nm,0.3s,baz=288,slow=29,SNR=2.6						
	1.4nm,0.4s						
GZR	Gura Zlata	10.24	356	⇑P	Pn	07 16 45.3	-4.8
MLR	Muntele Rosu	10.43	8	Pn	Pn	07 16 52.6	-0.2
	0.2nm,0.3s,baz=169,slow=12,SNR=4.5						
MLR				LR	LR	07 20 51.3	
	comp=Z,34nm,18.1s,baz=180,slow=37						
	1.4nm,0.4s						
MLR	Muntele Rosu	10.43	8	⇓P	Pn	07 16 51.0	-1.9
EIL	Elat	10.87	117	Pn	Pn	07 16 57.3	-1.4
	1.1nm,0.3s,baz=227,slow=1.0,SNR=11						
EIL				Sn	Sn	07 18 54.7	-5.5
	1.1nm,0.3s,baz=0.4,slow=10,SNR=6.1						
	3.6nm,0.4s						
KEST	Kesra	11.84	277	Pn	Pn	07 17 11.0	-1.1
	0.2nm,0.3s,baz=358,slow=18,SNR=2.0						
	1.9nm,0.8s						
OBKA	Obir	13.32	331	ePn	Pn	07 17 34.8	+2.5
	4.3nm,1.1s						
RONA	Rosalia, Austr	13.73	338	i Pn	Pn	07 17 39.5	+1.7
	2.5nm,0.6s						
ABTA	Abfaltersbach	14.37	327	i Pn	Pn	07 17 48.1	+1.5
	7.0nm,1.0s						
LESA	Schwarzleotal	14.82	329	i Pn	Pn	07 17 54.6	+1.8
	4.9nm,0.7s						
VRAC	Vranov	15.10	342	Pn	Pn	07 17 57.1	+0.7
	0.3nm,0.3s,baz=143,slow=4.1,SNR=2.0						
VRAC				LR	LR	07 25 16.6	
	comp=Z,138nm,19.1s,baz=164,slow=43						
	1.0nm,0.3s						
WTTA	Wattenberg	15.15	327	ePn	Pn	07 17 59.3	+2.0
	2.8nm,0.7s						
FETA	Feichten	15.40	324	i P	P	07 18 04.0	-1.1
	4.3nm,1.1s						
MOTA	Moosalm	15.46	326	i Pn	Pn	07 18 04.0	+2.8
	2.8nm,0.7s						
GERES	GERESS Array B	15.58	334	Pn	Pn	07 18 05.7	+2.8
	baz=134,slow=11,SNR=8.7						
GERES				LR	LR	07 25 47.8	
	comp=Z,107nm,19.5s,baz=243,slow=44						
	1.9nm,0.8s						
DAVOX	Davos/Dischmat	15.65	322	Pn	Pn	07 18 05.4	+1.7
	0.2nm,0.3s,baz=138,slow=11,SNR=5.0						
DAVOX				LR	LR	07 25 08.2	
	comp=Z,66nm,19.4s,baz=104,slow=41						
	0.8nm,0.5s						
AKASG	Malin Array Be	16.01	12	Pn	Pn	07 18 08.5	+0.4
	1.4nm,0.3s,baz=202,slow=10,SNR=4.2						
AKASG				LR	LR	07 24 20.7	
	comp=Z,36nm,20.5s,baz=172,slow=37						
	0.2nm,0.3s						
KVAR	Kislovodsk Arr	16.95	53	Pn	P	07 18 23.2	+0.9
	2.0nm,0.3s,baz=256,slow=12,SNR=1.2						
KBZ	Khabaz	16.99	54	Pn	P	07 18 24.0	+1.4
	0.2nm,0.3s,baz=221,slow=11,SNR=9.3						
	4.5nm,0.7s						
CLL	Collm	17.93	337	eP	P	07 18 34.0	+1.1
ESDC	Sonseca Array	22.50	290	P	P	07 19 24.7	+2.0
	2.7nm,0.8s,baz=81,slow=9.9,SNR=14						
	2.7nm,0.8s						
MDT	Midelt	23.68	272	LR	LR	07 29 28.9	
	comp=Z,63nm,18.9s,baz=76,slow=38						
HFS	Hagfors	25.83	348	P	P	07 19 54.5	+0.2
	2.2nm,0.4s,baz=153,slow=10.0,SNR=12						
HFS				LR	LR	07 33 01.6	
	comp=Z,89nm,18.4s,baz=209,slow=43						
	2.2nm,0.4s						
FINES	FINESS Array B	26.33	2	P	P	07 19 57.2	-1.5
	1.2nm,0.7s,baz=182,slow=11,SNR=3.6						
FINES				PcP	PcP	07 23 24.2	-0.1
	6.0nm,1.0s,baz=199,slow=2.9,SNR=4.5						
	1.2nm,0.7s						
NOA	NORSAR Array B	27.12	347	P	P	07 20 05.7	-0.3
	0.8nm,0.8s,baz=151,slow=11,SNR=4.2						
NOA				LR	LR	07 32 01.6	
	comp=Z,56nm,19.6s,baz=165,slow=39						
	0.8nm,0.8s						
EKA	Eskdalemuir Ar	27.42	326	P	P	07 20 08.5	-0.1
	0.2nm,0.3s,baz=130,slow=7.9,SNR=4.7						
	0.2nm,0.3s						
ARCES	ARCESS Array B	34.43	1	P	P	07 21 08.8	-1.5
	7.5nm,1.1s,baz=191,slow=9.7,SNR=5.7						
	7.5nm,1.1s						
MBAR	Mbarara	36.17	168	LR	LR	07 37 25.9	
	comp=Z,75nm,18.3s,baz=317,slow=38						
BVAR	Borovoye Array	37.12	47	P	P	07 21 34.4	+0.9
	0.8nm,0.8s,baz=279,slow=7.9,SNR=2.4						
	0.8nm,0.8s						
BORG	Borgarnes	40.03	332	LR	LR	07 41 33.9	
	comp=Z,22nm,19.3s,baz=43,slow=41						
KURBB	Kurchatov Arra	41.95	51	P	P	07 22 13.2	-0.6
	1.3nm,0.5s,baz=278,slow=8.7,SNR=9.3						
	1.3nm,0.5s						
MKAR	Makanchi Array	44.67	56	P	P	07 22 35.4	-0.4
	0.7nm,0.3s,baz=270,slow=7.3,SNR=15						
	0.7nm,0.3s						
ZALV	Zalesovo Beam	45.77	46	P	P	07 22 45.8	+1.3
	0.9nm,0.4s,baz=258,slow=7.2,SNR=4.0						
ZALV				LR	LR	07 46 32.4	
	comp=Z,65nm,18.5s,baz=43,slow=42						
	0.9nm,0.4s						
LBTB	Lobatse	59.88	178	LR	LR	07 51 04.1	
	comp=Z,54nm,18.4s,baz=46,slow=37						
SCHQ	Schefferville	62.48	319	P	P	07 24 47.2	+0.9
	2.7nm,0.7s,baz=51,slow=13,SNR=1.3						
	2.7nm,0.7s						
BOSA	Boshof	63.46	179	P	P	07 24 53.5	+0.5
	1.6nm,0.7s,baz=338,slow=6.3,SNR=3.8						
	1.6nm,0.7s						
WRA	Warramunga Arr	117.66	96	PKP	PKPdf	07 33 09.6	-0.1
	0.7nm,0.8s,baz=311,slow=2.8,SNR=3.8						
ASAR	Alice Springs	119.11	100	PKP	PKPdf	07 33 12.2	-0.2
	0.4nm,0.6s,baz=325,slow=2.2,SNR=4.4						

IDC ***07*** *07:15:39.1±0.6,52°.23N×173°.89E,h0km,mb4.2/29,*
mbtmp4.2/31,ML4.2/2,MS3.6/33,Error ellipse:
s-maj=15.7km s-min=10.7km az=150.0
MOS ***07*** *07:15:42.0±0.9,52°.24N×173°.79E,h30km,mb4.6/21,Error*
ellipse: s-maj=8.0km s-min=5.1km az=36.2

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*KRSC **07** 07:15:43.5±1.9, 52.°36N×173.°38E, h33km±19km, Ml4.8*
*AEIC **07** 07:15:43.7±3.7, 52.°18N±0.°04×174.°17E±0.°09, h10km±4km,*
Error ellipse: s-maj=8.1km s-min=5.9km az=109.0
*NEIC **07** 07:15:46.1±1.5, 52.°38N±0.°06×173.°9E±0.°1, h43km±7km,*
mb4.7/41, ML4.0(AEIC), Error ellipse: s-maj=9.9km
s-min=9.3km az=112.0
ISC 07 07:15:43.3±0.7, **52.°21N**±0.°06×**173.°82E**±0.°03, **h26**km±4km,
n493, σ**1.°26**/476, **mb4.5**/64, **MS3.5**/30, **7C, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHEM	Shemya Is, Ala	0.55	18	Pn	Pb	07 15 54.5	+0.2
	4µm,0.3s,baz=156,slow=4.5,SNR=1371						
SHEM				Sn	Sb	07 16 01.4	-0.4
	3µm,0.3s,baz=192,slow=5.6,SNR=35						
SMY	Shemya	0.55	18		Pb	07 15 54.4	0.0
SMY				Sn	Sn	07 16 02.4	-1.3
SMY	Shemya	0.55	18	P	Pb	07 15 54.4	0.0
SMY				S	Sn	07 16 02.3	-1.4
LSNW	Little Sitkin	2.91	93		Pn	07 16 29.4	+1.5
LSNW					Sn	07 17 04.2	+2.3
LSPA	Little Sitkin	2.94	93		Pn	07 16 29.7	+1.4
LSPA					Sn	07 17 05.5	+2.6
LSSE	Little Sitkin	2.94	94		Pn	07 16 29.6	+1.2
AMKA	Amchitka	3.50	102		Pn	07 16 37.7	+1.6
CESW	Semis' Southwe	3.56	93		Pn	07 16 38.1	+1.3
CEPE	Semis' Perret	3.60	92		Pn	07 16 39.2	+1.8
GANO	Gareloi North	4.57	92		Pn	07 16 51.8	+1.0
GANE	Gareloi Northe	4.59	92		Pn	07 16 51.9	+0.9
TASE	Tanaga Southea	5.04	91		Pn	07 16 58.5	+1.2
TAFP	Tanaga Falls P	5.07	90		Pn	07 16 58.5	+1.0
KIMD	Kanaga Island	5.55	91		Pn	07 17 05.2	+1.2
KIWB	Kanaga Island	5.58	90	Pn	Pn	07 17 05.6	+1.0
ADK	Adak	5.87	89		Pn	07 17 10.0	+1.5
ADK	Adak	5.87	89	P	Pn	07 17 09.4	+0.9
ADK	Adak	5.87	89	S	Sb	07 18 26.2	-8.4
ADK	Adak	5.87	89	P	Pn	07 17 10.0	+1.5
GSTR	Great Sitkin T	6.23	87	Pn	Pn	07 17 14.4	+0.9
ATKA	Atka Island	7.37	85	Pn	Pn	07 17 29.9	+0.8
ATKA	Atka Island	7.37	85	P	Pn	07 17 31.5	+2.5
KBTR	Krutoberegovo	7.59	306	P	Pn	07 17 33.7	+1.6
KBTR	Krutoberegovo	7.59	306	*e*P	Pn	07 17 33.7	+1.6
SMKR	Semkarok	8.43	306	P	Pn	07 17 44.3	+0.6
SMKR	Semkarok	8.43	306	*e*P	Pn	07 17 44.3	+0.6
SPN	Mys Shipunski	8.44	281	P	Pn	07 17 43.7	0.0
SPN				S	Sn	07 19 12.1	-6.0
SPN	Mys Shipunski	8.44	281	*e*P	Pn	07 17 43.8	0.0
SPN				*e*S	Sn	07 19 12.1	-6.0
KZV	Kizimen	8.54	295	P	Pn	07 17 46.8	+1.5
KZV	Kizimen	8.54	295	*e*P	Pn	07 17 46.9	+1.5
BZGR	Bezymyannyi-Gr	8.57	301	P	Pn	07 17 44.2	-1.4
BZGR	Bezymyannyi-Gr	8.57	301	*e*P	Pn	07 17 44.3	-1.4
SRKR	Sorokina	8.61	306	P	Pn	07 17 48.1	+1.9
SRKR	Sorokina	8.61	306	*e*P	Pn	07 17 48.1	+1.9
KLY	Klyuchi	8.73	303	P	Pn	07 17 48.2	+0.5
KLY	Klyuchi	8.73	303	*e*P	Pn	07 17 48.3	+0.5
KMNR	Kamenistaya	8.76	299	P	Pn	07 17 49.0	+0.8
KMNR	Kamenistaya	8.76	299	*e*P	Pn	07 17 49.0	+0.8
KII	Karymskiy	8.84	288	P	Pn	07 17 49.8	+0.5
KII	Karymskiy	8.84	288	*e*P	Pn	07 17 49.9	+0.5
NLC	Nalytchevo	8.85	282	P	Pn	07 17 50.2	+0.9
NLC				S	Sn	07 19 22.2	-5.8
NLC	Nalytchevo	8.85	282	*e*P	Pn	07 17 50.2	+0.9
NLC				*e*S	Sn	07 19 22.3	-5.8
KOZ	Kozyrevsk	9.05	301	P	Pn	07 17 52.3	+0.2
KOZ	Kozyrevsk	9.05	301	*e*P	Pn	07 17 52.3	+0.2
SDLR	Sedlovina	9.13	283	P	Pn	07 17 53.7	+0.4
SDLR	Sedlovina	9.13	283	*e*P	Pn	07 17 53.8	+0.4
UGLR	Uglovaya	9.16	282	P	Pn	07 17 54.5	+0.7
UGLR	Uglovaya	9.16	282	*e*P	Pn	07 17 54.6	+0.7
DALK	Dalny	9.21	281	P	Pn	07 17 54.2	0.0
DALK	Dalny	9.21	281	*e*P	Pn	07 17 54.2	0.0
KRER	Koryakskii	9.21	283	P	Pn	07 17 55.3	+0.8
KRER	Koryakskii	9.21	283	*e*P	Pn	07 17 55.4	+0.8
AVH	Avacha	9.21	283	P	Pn	07 17 56.3	+1.9
AVH	Avacha	9.21	283	*e*P	Pn	07 17 56.4	+1.9
PET	Petropavlovsk	9.27	281	Pn	Pn	07 17 56.6	+1.6
PET	Petropavlovsk	9.27	281	P	Pn	07 17 56.5	+1.4
PET	Petropavlovsk	9.27	281	*e*P	Pn	07 17 56.5	+1.4
KRX	Arik	9.27	283	P	Pn	07 17 55.7	+0.4
KRX	Arik	9.27	283	*e*P	Pn	07 17 55.8	+0.4
KOK	Koryaka	9.28	283	P	Pn	07 17 55.8	+0.5
KOK	Koryaka	9.28	283	*e*P	Pn	07 17 55.8	+0.5
RUS	Russkaya	9.38	277	P	Pn	07 17 57.6	+1.0
RUS				S	Sn	07 19 35.9	-5.3
RUS	Russkaya	9.38	277	*e*P	Pn	07 17 57.6	+1.0
RUS				*e*S	Sn	07 19 35.9	-5.3
MTVR	Mutnovka	9.58	278	P	Pn	07 18 01.1	+1.6
MTVR	Mutnovka	9.58	278	*e*P	Pn	07 18 01.1	+1.6
KRMR	Karymshinskiy	9.59	280	P	Pn	07 17 59.9	+0.4
KRMR	Karymshinskiy	9.59	280	*e*P	Pn	07 17 59.9	+0.4
ESO	Esso	9.63	299	P	Pn	07 18 02.1	+2.0
ESO	Esso	9.63	299	*e*P	Pn	07 18 02.1	+2.0
GRL	Gorelyy	9.64	278	P	Pn	07 18 02.3	+2.0
GRL	Gorelyy	9.64	278	*e*P	Pn	07 18 02.3	+2.0
GNL	Ganaly	9.70	285	P	Pn	07 18 02.6	+1.4
GNL	Ganaly	9.70	285	*e*P	Pn	07 18 02.6	+1.4
KDTR	Khodutka, Kamc	9.72	274	P	Pn	07 18 00.7	-0.6
KDTR	Khodutka, Kamc	9.72	274	*e*P	Pn	07 18 00.8	-0.6
ASAK	Asacha	9.76	277	P	Pn	07 18 04.1	+2.2
ASAK	Asacha	9.76	277	*e*P	Pn	07 18 04.1	+2.2
PEA0B	Petropavlovsk-	9.84	282	Pn	Pn	07 18 04.2	+1.3
PEA0B	Petropavlovsk-	9.84	282	*i* P	Pn	07 18 04.4	+1.4
PETK	Petropavlovsk-	9.84	282	Pn	Pn	07 18 04.2	+1.2
	2.3nm,0.3s,baz=88,slow=18,SNR=36						
PETK				Sn	Sn	07 19 47.2	-5.2
	2.1nm,0.3s,baz=186,slow=28,SNR=5.4						
PETK				LR	LR	07 21 47.7	
	comp=Z,257nm,20.3s,baz=92,slow=37						
	15nm,0.8s						
APC	Apacha	10.17	281	P	Pn	07 18 09.1	+1.6
APC				S	Sn	07 19 55.8	-4.8
APC	Apacha	10.17	281	*e*P	Pn	07 18 09.1	+1.6
APC				*e*S	Sn	07 19 55.8	-4.8
SPIA	Saint Paul Isl	10.47	55	Pn	Pn	07 18 12.4	+0.9
SPIA	Saint Paul Isl	10.47	55	P	Pn	07 18 14.3	+2.8
SPIA	Saint Paul Isl	10.47	55	P	Pn	07 18 10.6	-0.9
	baz=249						
NIKH	Nikolski High	10.57	79	P	Pn	07 18 17.4	+4.5
NIKH	Nikolski High	10.57	79	P	Pn	07 18 12.9	0.0
	baz=274						
P08K	Saint George I	10.64	59	Pn	Pn	07 18 14.0	+0.2
P08K	Saint George I	10.64	59	P	Pn	07 18 13.3	-0.5
	baz=253						
SKR	Severo-Kuril's	11.16	269	*i* P	Pn	07 18 21.2	+0.3
UNV	Unalaska Valle	11.96	74	Pn	Pn	07 18 33.5	+1.6
UNV	Unalaska Valle	11.96	74	P	Pn	07 18 36.1	+4.2
UNV	Unalaska Valle	11.96	74	P	Pn	07 18 31.9	0.0
	baz=271						
M11K	Mekoryuk	13.74	46	Pn	Pn	07 18 57.8	+1.7
M11K	Mekoryuk	13.74	46	P	Pn	07 18 55.6	-0.5
	baz=243						
FALS	False Pass	13.78	70	P	Pn	07 18 57.0	+0.3
	baz=269						
GAMB	Gambell	13.86	28	P	Pn	07 18 57.7	0.0
	baz=220						
S12K	Black Hills	14.60	67	P	Pn	07 19 08.2	+0.3
	baz=267						
MA2	Magadan	14.83	309	Pn	P	07 19 17.6	+1.0
	1.4nm,0.3s,baz=106,slow=11,SNR=3.7						
MA2				LR	LR	07 25 01.7	
	comp=Z,130nm,20.2s,baz=110,slow=38						
M13K	Dall Lake	15.03	48	P	Pn	07 19 13.7	0.0
	baz=247						
K13K	Kusilvak Mount	15.14	42	P	Pn	07 19 14.2	-1.0
	baz=240						
SDPT	Sand Point	15.48	68	P	Pn	07 19 19.8	+0.2
	baz=270						
N14K	Kuskokwak Cree	15.63	51	P	Pn	07 19 21.8	+0.2
	baz=252						
O14K	Tigyukauivet M	15.63	53	P	Pn	07 19 21.9	+0.2
	baz=254						
SEY	Seymchan	15.64	322	Pn	P	07 19 28.2	+2.6
	0.6nm,0.3s,baz=119,slow=11,SNR=10						
SEY				LR	LR	07 24 33.9	
	comp=Z,60nm,20.6s,baz=130,slow=34						
L14K	Kuka Creek	15.71	45	P	Pn	07 19 22.6	+0.1
	baz=245						
M14K	Bethel	15.79	48		P	07 19 26.6	-0.6
M14K	Bethel	15.79	48	P	Pn	07 19 23.2	-0.4
	baz=248,SNR=7.0						
CHNA	Chernabura Isl	15.99	70	P	Pn	07 19 26.8	+0.5
	baz=272						
J14K	Nanvaranak Lak	16.00	40	P	Pn	07 19 26.1	-0.2
	baz=239						
S14K	Fog Glacier	16.04	65	P	Pn	07 19 27.8	+0.8
	baz=267						
TNA	Tin City	16.27	28	P	Pn	07 19 30.0	+0.2
	baz=224						
O15K	Ungalikthiuk R	16.33	54	P	Pn	07 19 31.0	+0.4
	baz=257						
M15K	Kasigluk River	16.36	49	P	Pn	07 19 30.9	+0.1
	baz=250,SNR=6.7						
L15K	Ungalak Mounta	16.37	45	P	Pn	07 19 30.9	-0.1
	baz=246						
ANM	Nome	16.39	33		P	07 19 32.4	-1.4
ANM	Nome	16.39	33	P	P	07 19 32.4	-1.4
ANM				pmax	pmax		
	comp=Z,22nm,0.8s						
ANM	Nome	16.39	33	P	Pn	07 19 31.7	+0.4
	baz=231						
N15K	Kwethluk River	16.47	51	P	P	07 19 33.0	-1.8
	baz=253,SNR=5.9						
K15K	Wolf Creek Mou	16.61	43	P	P	07 19 34.7	-1.6
	baz=244						
F14K	Arctic Creek	16.68	30	P	Pn	07 19 34.5	-0.5
	baz=227						
G15K	Niukluk	17.10	33	P	Pn	07 19 39.8	-0.4
	baz=232						
N16K	Nishlik Lake	17.19	51	P	Pn	07 19 41.0	-0.3
	baz=254						
P16K	Nushagak River	17.22	56	P	Pn	07 19 41.3	-0.5
	baz=259						
M16K	Timber Creek	17.26	49	P	P	07 19 42.8	-0.7
	baz=252						
L16K	Owhat River	17.26	46	P	Pn	07 19 42.2	0.0
	baz=249						
O16K	Kokwok River B	17.29	54	P	P	07 19 43.7	-0.1
	baz=257						
F15K	North Star Dit	17.36	31	P	Pn	07 19 42.5	-0.9
	baz=229						
J16K	Anvik River	17.44	41	P	Pn	07 19 44.0	-0.5
	baz=243						
H16K	Elim	17.52	35	P	P	07 19 45.4	-0.9
	baz=236						
I17K	Unalakleet	17.69	39		P	07 19 48.4	+0.1
I17K				IAmb	IAmb	07 19 54.2	
	comp=Z,27nm,0.6s						
I17K	Unalakleet	17.69	39	P	P	07 19 47.4	-0.9
	baz=241,SNR=5.8						
O17K	Koliganek Bris	17.82	53	P	Pn	07 19 48.1	-1.1
	baz=258						
Q16K	King Salmon	17.85	57	P	Pn	07 19 48.1	-1.4
	baz=262						
R17L	Mt. Peulik Vol	17.88	61	P	P	07 19 50.5	0.0
	baz=266						
G16K	Koyuk River	17.91	33	P	P	07 19 50.8	+0.1
	baz=234						
L17K	Donlin	17.94	46	P	P	07 19 50.5	-0.5
	baz=249						
N17K	Nushagak Hills	17.95	51	P	P	07 19 51.2	-0.1
	baz=256						
P17K	Kvichak River	18.04	56	P	P	07 19 51.7	-0.4
	baz=261						
M17K	Holitna River	18.08	48	P	P	07 19 52.5	-0.1
	baz=253						
J17K	VABM Dome	18.11	41	P	P	07 19 53.0	+0.1
	baz=245						
K17K	Iditarod	18.15	44	P	P	07 19 53.2	-0.2
	baz=248						
CHIR	Chirikof Islan	18.23	66	P	P	07 19 54.8	+0.5
	baz=272						
H17K	Granite Mounta	18.52	36	P	Pn	07 19 57.1	-0.5
	baz=239						
G17K	Kiwalik Mounta	18.56	34	P	P	07 19 57.2	-0.6
	baz=237						
N18K	Kilae Creek	18.61	51	P	Pn	07 19 58.2	-0.7
	baz=257						
L18K	Granite Mounta	18.68	46	P	Pn	07 20 00.2	+0.6
L18K	Granite Mounta	18.68	46	P	Pn	07 19 59.0	-0.6
	baz=251						
P18K	Big Mountain,	18.69	55	P	P	07 19 58.8	-0.5
	baz=261						
Q18K	Katmai Hardscr	18.70	58	P	P	07 19 58.8	-0.8
	baz=264						
O18K	Koktuh Hills	18.77	54	P	P	07 19 59.9	-0.4
	baz=260						
M18K	Stony River	18.85	49	P	Pn	07 20 01.5	-0.2
	baz=255						
F17K	Baldwin Pennin	18.90	32	P	Pn	07 20 01.6	-0.6
	baz=233,SNR=7.2						
R18K	Karluk	18.90	61	P	Pn	07 20 01.5	-0.8
	baz=268						
C16K	Lisburne Hills	18.97	24	P	Pn	07 20 02.4	-0.6
	baz=222						
SII	Sitkinak Islan	19.03	64	P	P	07 20 02.7	-0.3
	baz=271						
J18K	Innoko River	19.11	42	P	P	07 20 03.1	-0.8
	baz=248,SNR=8.9						
E17K	Hotham Inlet	19.12	30	P	P	07 20 03.6	-0.3
	baz=231,SNR=8.2						
D17K	Noatak River	19.16	27	P	P	07 20 04.1	-0.2
	baz=228,SNR=6.4						
H18K	Honhosa River	19.20	37	P	Pn	07 20 05.4	-0.4
	baz=241						
O19K	Port Alsworth	19.27	53	P	Pn	07 20 06.0	-0.8
	baz=260						
N19K	Bonanza Creek	19.32	51	P	P	07 20 05.9	-0.3
	baz=258						
TYV	Tymovskoe	19.36	278	*e*P	Pn	07 20 14.2	+6.3
TYV				pmax	pmax		
	comp=Z,400nm,2.4s						
TYV				pmax	pmax		
	comp=Z,11nm,1.0s						
Q19K	Cape Douglas,	19.43	57	P	Pn	07 20 07.6	-1.2
	baz=264						
RDOG	Red Dog Mine	19.45	26		Pn	07 20 08.2	-0.6
RDOG				IAmb	IAmb	07 20 15.8	
	comp=Z,21nm,0.7s						
RDOG	Red Dog Mine	19.45	26	P	P	07 20 07.1	-0.5
	baz=227						
G18K	Tagagawik	19.47	35	P	Pn	07 20 07.8	-1.3
	baz=239						
L19K	White Mountain	19.48	47	P	Pn	07 20 08.2	-1.2
	baz=254						
F18K	Selawik	19.51	32	P	Pn	07 20 08.4	-1.2
	baz=236,SNR=12						
OHAK	Old Harbor	19.52	62	P	Pn	07 20 09.1	-0.6
	baz=270						
GCSA	Galena City Sc	19.57	39	P	Pn	07 20 09.1	-1.2
	baz=244,SNR=8.4						
C17K	DeLong Mountai	19.67	25	P	Pn	07 20 10.4	-1.1
	baz=226						
E18K	Tukpahlearik C	19.70	30	P	Pn	07 20 11.1	-0.7
	baz=232						
P19K	Oil Pt	19.73	55	P	Pn	07 20 11.3	-1.0
	baz=263						
J19K	Poorman	19.76	42	P	Pn	07 20 11.4	-1.2
	baz=248,SNR=14						
KDAK	Kodiak Island	19.92	60	P	P	07 20 12.0	-0.7
	comp=Z,2.5nm,0.3s,baz=234,slow=3.6,SNR=27						
KDAK				LR	LR	07 28 24.0	
	comp=Z,334nm,19.6s,baz=249,slow=38						
	comp=Z,18nm,0.6s						
KDAK	Kodiak Island	19.92	60	*i* P	P	07 20 12.5	-0.2
KDAK				pmax	pmax		
	comp=Z,139nm,1.4s						
KDAK	Kodiak Island	19.92	60	P	P	07 20 12.2	-0.5
	baz=269						
Q20K	Shuyak Island	20.06	58	P	P	07 20 14.4	+0.1
	baz=266						
H19K	Roundabout Mou	20.08	37	P	Pn	07 20 14.8	-1.5
	baz=243						
O20K	Slope Mountain	20.09	54	P	P	07 20 14.9	+0.2
	baz=262						
G19K	Purcell Mounta	20.14	35	P	P	07 20 15.2	0.0
	baz=240						
K20K	Telida	20.18	44	P	P	07 20 15.5	-0.1
	baz=252						
M20K	Styx River	20.19	48	P	P	07 20 15.4	-0.4
	baz=257						
F19K	Shaleruckik Mo	20.27	33	P	P	07 20 16.4	-0.1
	baz=238						
C18K	Utukok River	20.32	26	P	Pn	07 20 17.7	-1.5
C18K	Utukok River	20.32	26	P	P	07 20 17.0	-0.1
	baz=229,SNR=5.9						
J20K	Nowinta River	20.43	42	P	Pn	07 20 18.7	-1.7
J20K	Nowinta River	20.43	42	P	P	07 20 18.2	0.0
	baz=250,SNR=61						
SPCR	Spurr Chakacha	20.48	51	P	P	07 20 19.3	+0.5
	baz=260						
I20K	Naaghedeneel	20.52	40	P	P	07 20 17.7	-1.5
	baz=248						
HOM	Homer	20.53	55	P	P	07 20 19.1	-0.3
	baz=264						
SPU	Mount Spurr	20.55	51	P	Pn	07 20 20.7	-1.2
SPU				IAmb	IAmb	07 20 31.0	
	comp=Z,27nm,1.0s						
B18K	Kokolik River	20.65	25	P	Pn	07 20 21.4	-1.5
	baz=226						
H20K	Anotleneega Mo	20.65	38	P	Pn	07 20 21.5	-1.5
	baz=245,SNR=38						
STLK	Strandline Lak	20.71	50	P	Pn	07 20 22.4	-1.5
STLK				IAmb	IAmb	07 20 28.2	
	comp=Z,29nm,0.7s						
CNPM	China Poot	20.73	56	P	Pn	07 20 22.2	-1.8
E19K	Redstone River	20.78	32	P	P	07 20 22.6	+0.5
	baz=237						
PPLA	Purkeypile	20.87	46		P	07 20 23.6	+0.5
PPLA				IAmb	IAmb	07 20 38.4	
	comp=Z,76nm,1.3s						
PPLA	Purkeypile	20.87	46	P	P	07 20 22.9	-0.3
	baz=255						
CAPN	Captain Cook N	20.91	52	P	Pn	07 20 24.2	-1.9
	baz=262						
SKT	Skwentna	20.95	49	P	P	07 20 24.4	+0.5
	baz=258,SNR=8.2						
BRSE	Bradley Lake S	21.00	55	P	Pn	07 20 25.3	-1.8
	baz=265						
C19K	Lookout Ridge	21.06	27	P	P	07 20 24.7	-0.3
	baz=230,SNR=9.3						
F20K	Avaraart Lake	21.07	34	P	P	07 20 25.6	+0.5
	baz=240						
CHUM	Lake Minchumin	21.09	43	P	P	07 20 26.0	+0.6
	baz=253,SNR=9.9						
D19K	Kuna River	21.10	29	P	P	07 20 25.9	+0.4
	baz=234						
SUA	Susitna One	21.22	50	P	P	07 20 26.8	-0.1
	baz=260						
L22K	Petersville	21.41	47		P	07 20 29.4	+0.5
A19K	Wainwright	21.42	23	P	P	07 20 29.6	+0.8
	baz=226						
H21K	Melozitna Rive	21.51	38	P	P	07 20 30.1	+0.2
	baz=248,SNR=7.8						
E20K	Nigu River	21.55	30	P	P	07 20 30.6	+0.2
	baz=237						
M22K	Willow	21.56	50	P	P	07 20 31.1	+0.7
	baz=260						
O22K	Cooper Landing	21.58	53	P	P	07 20 30.5	-0.1
	baz=264						
G21K	Allakaket	21.60	36	P	P	07 20 29.6	-1.3
	baz=245						
RC01	Rabbit Creek A	21.64	51	P	P	07 20 31.7	+0.4
	baz=263						
I21K	Tanana	21.65	40	P	P	07 20 31.7	+0.3
	baz=250						
SEW	Seward	21.68	54	P	P	07 20 32.5	+0.8
	baz=265						
D20K	Etivluk River	21.68	29	P	P	07 20 32.2	+0.5
	baz=235						
BPAW	Bear Paw Mtn.	21.72	43	P	P	07 20 32.6	+0.5
	baz=254						
TRF	Thorofare Moun	21.84	45		P	07 20 33.8	+0.2
TRF				IAmb	IAmb	07 20 38.2	
	comp=Z,42nm,1.0s						
TRF	Thorofare Moun	21.84	45	P	P	07 20 34.0	+0.4
	baz=256,SNR=11						
F21K	Alatna River	21.92	34	P	P	07 20 34.2	-0.1
	baz=243,SNR=14						
PMR	Palmer	22.00	50	P	P	07 20 37.3	+2.1
PMR	Palmer	22.00	50	P	P	07 20 34.7	-0.5
	baz=262						
MLY	Manley	22.10	41	P	P	07 20 36.5	+0.3
	baz=252,SNR=8.9						
GHO	Glory Hole Cre	22.13	50	P	P	07 20 36.8	+0.2
GHO				IAmb	IAmb	07 20 57.0	
	comp=Z,29nm,1.1s						
H22K	Ishtalitna Cre	22.14	38	P	P	07 20 37.2	+0.5
	baz=249,SNR=7.9						
ASAJ	Asahikawa	22.21	261	LR	LR	07 28 47.7	
	comp=Z,119nm,21.2s,baz=355,slow=35						
B20K	Meade River	22.30	26		P	07 20 37.8	-0.4
B20K	Meade River	22.30	26	P	P	07 20 38.9	+0.7
	baz=232,SNR=17						
PWL	Port Wells	22.30	52	P	P	07 20 37.5	-0.9
	baz=265						
KNK	Knik Glacier	22.30	51	P	P	07 20 38.7	+0.3
KNK				IAmb	IAmb	07 20 41.5	
	comp=Z,30nm,0.8s						
KNK	Knik Glacier	22.30	51	P	P	07 20 38.4	0.0
	baz=263,SNR=5.8						
E21K	Killik River	22.35	31	P	P	07 20 38.6	-0.3
	baz=240,SNR=8.5						
SML	Sawmill	22.41	50	P	P	07 20 39.4	-0.2
	baz=262,SNR=24						
RND	Reindeer	22.46	46	P	P	07 20 40.1	-0.1
RND				IAmb	IAmb	07 20 43.8	
	comp=Z,16nm,0.6s						
RND	Reindeer	22.46	46	P	P	07 20 40.1	-0.1
RND				pmax	pmax		
	comp=Z,16nm,0.6s						
C21K	Knifeblade Rid	22.48	29	P	P	07 20 38.7	-1.5
	baz=237						
WAT1	Susitna Watana	22.48	47	P	P	07 20 40.4	+0.1
	baz=260						
G22K	Bettles	22.49	36	P	P	07 20 39.9	-0.4
	baz=246						
MCK	McKinley	22.50	45	P	P	07 20 40.0	-0.5
	baz=257,SNR=9.9						
NEA2	Nenana	22.66	43	P	P	07 20 41.4	-0.7
	baz=255,SNR=8.1						
I23K	Minto, Yukon-K	22.69	41	P	P	07 20 42.1	-0.4
	baz=253,SNR=9.2						
P23K	Montague Islan	22.69	55	P	P	07 20 42.3	-0.3
	baz=268						
M23K	Glacier View	22.70	50	P	P	07 20 42.7	+0.1
	baz=263,SNR=5.9						
B21K	Ikpikpuk River	22.78	28	P	P	07 20 43.1	-0.3
	baz=236,SNR=25						
WAT6	Susitna Watana	22.80	48	P	P	07 20 43.1	-0.8
	baz=261,SNR=13						
H23K	Yukon River	22.83	39	P	P	07 20 43.8	-0.2
	baz=251						
SCM	Sheep Creek Mo	22.89	50	P	P	07 20 44.2	-0.5
	baz=263,SNR=10						
GLI	Glacier Island	22.90	52	P	P	07 20 44.2	-0.6
	baz=266						
E22K	Anaktuvuk Pass	22.91	33	P	P	07 20 44.2	-0.6
	baz=243,SNR=30						
G23K	Bananza Creek	22.95	37	P	P	07 20 45.0	-0.2
	baz=249,SNR=8.8						
D22K	Ayikyak River	22.98	31	P	P	07 20 45.4	-0.1
	baz=241,SNR=9.6						
DHY	Denali Highway	23.05	47	P	P	07 20 46.1	-0.4
DHY	Denali Highway	23.05	47	P	P	07 20 46.5	+0.1
	baz=260						
COLD	Coldfoot	23.08	36	P	P	07 20 46.2	-0.4
	baz=247,SNR=6.7						
GRNR	Gornyy	23.17	281	*e*P	P	07 20 48.6	+1.0
CCB	Clear Creek Bu	23.20	43	P	P	07 20 46.8	-0.9
COLA	College	23.23	42	P	P	07 20 48.9	+0.9
COLA	College	23.23	42	*e*P	P	07 20 48.0	0.0
COLA				pmax	pmax		
	comp=Z,74nm,0.9s						
COLA	College	23.23	42	P	P	07 20 48.1	+0.1
	baz=256						
A21K	Barrow	23.27	24	P	P	07 20 48.4	+0.1
	baz=230						
M24K	Tolsona, Glenn	23.46	49	P	P	07 20 50.6	+0.1
	baz=264						
POKR	Poker Plat Res	23.47	42	P	P	07 20 50.4	0.0
POKR	Poker Plat Res	23.47	42	P	P	07 20 50.0	-0.4
	baz=256,SNR=17						
H24K	Noodor Dome	23.48	40	P	P	07 20 50.5	-0.1
	baz=253,SNR=31						
A22K	Sinclair Lake	23.49	25	P	P	07 20 51.1	+0.6
	baz=233						
HDA	Harding Lake	23.50	44	P	P	07 20 51.5	+0.7
	baz=258						
KLU	Klutina	23.52	51	P	P	07 20 50.0	-1.0
	baz=265						
B22K	Teshekpuk Lake	23.52	27		P	07 20 50.3	-0.6
B22K				IAmb	IAmb	07 20 53.5	
	comp=Z,15nm,0.7s						
B22K	Teshekpuk Lake	23.52	27	P	P	07 20 49.8	-1.1
	baz=237,SNR=8.2						
EYAK	Cordova Ski Ar	23.54	53	P	P	07 20 50.8	-0.4

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      baz=268
ILAR  Eielson Array     23.61  43   P      P      07 20 50.8 -1.0
      comp=Z,9.1nm,0.7s,baz=242,slow=8.3,SNR=96
ILAR                                PcP    PcP    07 24 34.9 -0.8
      comp=Z,0.5nm,0.7s,baz=269,slow=3.2,SNR=3.0
ILAR                                LR     LR     07 31 38.6
      comp=Z,75nm,18.6s,baz=263,slow=41
      comp=Z,9.1nm,0.7s
ILAR  Eielson Array     23.61  43   P      P      07 20 51.1 -0.7
ILAR  Eielson Array     23.61  43   P      P      07 20 51.1 -0.7
E23K  Chandalar         23.62  34   P      P      07 20 51.7 -0.3
      baz=246,SNR=12
D23K  Nanushuk River    23.66  31   P      P      07 20 51.6 -0.6
      baz=243
TOLK  Toolik Lake Re    23.88  33   P      P      07 20 53.7 -0.6
      baz=245,SNR=42
K24K  Donnelly Dome     23.89  45   P      P      07 20 54.6 +0.1
      baz=260,SNR=17
PAX   Paxson            23.89  47   P      P      07 20 54.4 -0.3
      baz=262,SNR=21
G24K  Hadweenzic Riv    23.90  38   P      P      07 20 54.5 -0.1
      baz=252,SNR=12
HARP  HAARP             23.97  49   P      P      07 20 55.5 +0.2
      baz=264
E24K  Your Creek        24.02  34   P      P      07 20 55.8 +0.2
      baz=248
F24K  Squaw Lake        24.02  36   P      P      07 20 55.7  0.0
      baz=250,SNR=9.9
C23K  Itkillik River    24.09  30   P      P      07 20 55.4 -0.8
      baz=241
BMRM  Bremner River     24.12  52   P      P      07 20 56.6 -0.2
      baz=268
N25K  Chitina, Valde    24.16  51   P      P      07 20 56.6 -0.5
      baz=266
J25K  Salcha River,     24.21  43   P      P      07 20 57.6 +0.1
      baz=259,SNR=11
RIDG  Independent Ri    24.28  46   P      P      07 20 58.1 -0.1
      baz=261
D24K  Happy Valley      24.34  32   P      P      07 20 58.5  0.0
      baz=245,SNR=12
PRP   Porcupine Dome    24.34  41   P      P      07 20 58.5 -0.3
      baz=257,SNR=40
G25K  Bearman Lake      24.44  38   P      P      07 20 59.9 +0.4
      baz=253
C24K  Franklin Bluff    24.62  31   P      P      07 21 01.2 +0.1
      baz=244
SCRK  Sand Creek        24.70  45   P      P      07 21 01.5 -0.5
      baz=262,SNR=17
FYU   Fort Yukon        24.72  39          P      07 21 02.1 +0.1
CRQE  Cirque            24.86  53   P      P      07 21 03.2 -0.2
      baz=270
F25K  Christian Rive    24.86  36   P      P      07 21 03.9 +0.5
      baz=252,SNR=18
L26K  Log Cabin Wild    24.86  48   P      P      07 21 04.0 +0.6
      baz=264,SNR=16
MCARA McCarthy VSAT     24.90  51   P      P      07 21 03.4 -0.3
      baz=268,SNR=8.0
J26L  Joseph Creek      24.96  44   P      P      07 21 04.3 -0.1
      baz=261,SNR=30
M26K  Nabesna, AK       24.97  49   P      P      07 21 04.7 +0.3
      baz=266
E25K  Arctic Village    25.06  35   P      P      07 21 05.7 +0.6
      baz=251,SNR=30
D25K  Kavik River       25.21  32   P      P      07 21 07.2 +0.7
      baz=248,SNR=18
I26K  Coal Creek Min    25.27  42   P      P      07 21 07.4 +0.4
      baz=260
G26K  Porcupine Rive    25.37  38   P      P      07 21 08.3 +0.4
      baz=256,SNR=31
YAK   Yakutsk           25.40 310   LR     LR     07 32 38.6
      comp=Z,94nm,18.3s,baz=92,slow=40
YAK   Yakutsk           25.40 310  eP      P      07 21 07.9 -0.3
YAK                                e*PP    sP     07 21 18.7 -0.3
YAK                                e              07 21 45.4
YAK                                e              07 24 39.9
YAK                                eS      S      07 25 32.1 -0.8
YAK                                eSS     SnSn   07 26 27.6 +2.0
YAK                                e              07 32 04.4
YAK                                 pmax   pmax
      comp=N,3.0nm,1.0s
YAK                                 pmax   pmax
      comp=Z,18nm,1.0s
YAK                                 pmax   pmax
      comp=E,9.0nm,1.1s
YAK                                 pmax   pmax
      comp=Z,520nm,5.8s
YAK                                 pmax   pmax
      comp=N,435nm,4.9s
YAK                                 pmax   pmax
      comp=E,415nm,4.2s
YAK                                 smax   smax
      comp=N,325nm,3.3s
YAK                                 smax   smax
      comp=E,178nm,3.1s
MESA  MESA              25.43  54   P      P      07 21 09.2 +0.5
      baz=272
F26K  Sheenjek River    25.44  37   P      P      07 21 09.0 +0.4
      baz=254,SNR=29
M27K  Edge Creek, AK    25.49  49   P      P      07 21 09.5 +0.3
      baz=267,SNR=13
K27K  Chicken           25.54  45   P      P      07 21 09.9 +0.4
      baz=264
L27K  Beaver Creek,     25.56  48   P      P      07 21 10.0 +0.3
      baz=266,SNR=15
CTG   Chitna Glacier    25.71  52   P      P      07 21 11.1 -0.1
      baz=271
C26K  Camden Bay        25.91  31   P      P      07 21 13.3 +0.5
      baz=248,SNR=22
I27K  Kandik River      25.95  42   P      P      07 21 13.7 +0.4
      baz=261
BVCY  Beaver Creek      25.96  49   P      P      07 21 14.0 +0.6
      baz=268
H27K  Steamboat Moun    26.10  40   P      P      07 21 14.7 +0.1
      baz=260
YUK3  Moose Creek       26.14  51   P      P      07 21 14.9 -0.3
      baz=270,SNR=10
G27K  Doyon Strip       26.16  39   P      P      07 21 15.3 +0.1
      baz=258
C27K  Jago River        26.19  32   P      P      07 21 15.6 +0.2
      baz=250,SNR=11
PINM  Pinnacle          26.28  54   P      P      07 21 15.9 -0.4
      baz=273
O28M  Mount Upton       26.28  53   P      P      07 21 15.8 -0.8
      baz=272,SNR=7.2
YUK8  Steele Glacier    26.48  52   P      P      07 21 19.2 +0.9
      baz=271
E27K  Coleen River      26.50  36   P      P      07 21 18.9 +0.7
      baz=256,SNR=26
I28M  Miner Creek       26.62  42   P      P      07 21 18.9 -0.5
      baz=263
DAWY  Dawson            26.72  45   P      P      07 21 20.1 -0.1
      baz=266,SNR=22
D27M  Malcolm River     27.00  34   P      P      07 21 23.3 +0.6
      baz=254
F28M  Old Crow          27.00  38   P      P      07 21 22.7  0.0
      baz=259,SNR=6.4
YUK4  Talbot Arm        27.01  52   P      P      07 21 23.8 +0.7
      baz=272
M29M  Somme Creek       27.08  49   P      P      07 21 23.0 -0.6
      baz=270,SNR=12
O29M  Mount Kennedy     27.10  54   P      P      07 21 23.6 -0.2
      baz=274
YUK6  Outpost Mounta    27.17  52   P      P      07 21 23.5 -1.0
      baz=273
L29M  L29M              27.24  48   P      P      07 21 24.5 -0.4
      baz=269,SNR=7.2
J29N  Klondike Camp     27.25  45   P      P      07 21 24.8 -0.2
      baz=266
I29M  Ogilvie Camp,     27.29  43   P      P      07 21 25.4 +0.1
      baz=265
E28M  Babbage River     27.34  36   P      P      07 21 25.6 -0.1
      baz=257
H29M  Whitestone        27.36  41   P      P      07 21 25.6 -0.3
      baz=263
K29M  Barlow Dome       27.53  46   P      P      07 21 27.9 +0.3
      baz=268
P29M  Windy Craggy      27.58  55   P      P      07 21 28.6 +0.6
      baz=276
G29M  Pine Creek        27.59  39   P      P      07 21 27.4 -0.6
      baz=262,SNR=7.7
HYT   Haines Junctio    27.59  53   P      P      07 21 27.5 -0.7
      baz=274,SNR=8.9
TIXI  Tiksi             27.67 331   LR     LR     07 31 46.3
      comp=E,65nm,20.1s,baz=200,slow=35
TIXI  Tiksi             27.67 331  iP      P      07 21 29.2 +0.6
TIXI                                pmax   pmax
      comp=Z,50nm,6.2s
N30M  Aishikik Lake     27.76  51   P      P      07 21 29.6 +0.1
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      baz=273
D28M  Stokes Point      27.79  34   P      P      07 21 28.4 -1.2
      baz=257
M30M  Minto, Yukon      27.85  49   P      P      07 21 30.7 +0.3
      baz=271
E29M  Blow River        27.89  36   P      P      07 21 30.8 +0.2
      baz=259,SNR=8.1
P30M  Million Dollar    27.92  54   P      P      07 21 30.8 -0.2
      baz=276
EPYK  Eagle Plains      28.04  41   P      P      07 21 32.6 +0.5
      baz=264,SNR=5.3
J30M  Hart River        28.08  45   P      P      07 21 32.8 +0.4
      baz=268
I30M  Mount Dempster    28.09  43   P      P      07 21 32.3 -0.2
      baz=267
MAYO  Mayo, Yukon       28.25  47   P      P      07 21 34.7 +0.8
      baz=270
O30N  Mendenhall        28.29  53   P      P      07 21 35.2 +0.9
      baz=275
PLBC  Pleasant Camp     28.30  55   P      P      07 21 35.6 +1.3
      baz=278
G30M  tAoh Zraii Nji    28.30  39   P      P      07 21 35.2 +0.9
      baz=264
N31M  Braeburn, Yuko    28.38  51   P      P      07 21 35.5 +0.4
      baz=274
F30M  Barrier River     28.55  38   P      P      07 21 37.4 +0.9
      baz=263
USRK  Ussuriysk Ar.     28.67 271   P      P      07 21 37.3 -0.4
      comp=Z,1.6nm,0.8s,baz=56,slow=12,SNR=2.3
      comp=Z,1.6nm,0.8s
R31K  City Hall, Gus    28.77  57   P      P      07 21 39.5 +1.0
      baz=280
WHY   Whitehorse        28.89  53   P      P      07 21 39.3 -0.5
      baz=277
H31M  Peel River        28.96  42   P      P      07 21 40.2  0.0
      baz=268
M31M  Drury Creek, Y    28.99  49   P      P      07 21 40.9 +0.4
      baz=274
G31M  Satah River       29.06  40   P      P      07 21 41.0  0.0
      baz=266,SNR=8.1
SIT   Sitka             29.25  60   P      P      07 21 43.4 +0.6
      baz=283
F31M  Tsiigehtchic      29.31  39   P      P      07 21 43.7 +0.5
      baz=265
R32K  Eaglecrest        29.43  58   P      P      07 21 45.2 +0.8
      baz=281
INK   Inuvik            29.48  37   P      P      07 21 45.2 +0.6
      baz=264
JIS   Juneau Island     29.50  57   P      P      07 21 46.1 +1.1
MJAR  Matsushiro Arr    29.52 252   P      P      07 21 46.5 +1.1
      comp=Z,1.1nm,0.6s,baz=0.2,slow=12,SNR=4.5
MJAR                                LR     LR     07 32 38.3
      comp=Z,55nm,21.9s,baz=58,slow=34
      comp=Z,1.1nm,0.6s
MAJO  Matsushiro        29.52 252  iP      P      07 21 44.4 -1.0
MAJO                                pmax   pmax
      comp=Z,7.0nm,0.9s
MJB9  Matsu-Tunnel      29.52 252   P      P      07 21 47.1 +1.6
S32K  Killisnoo         29.56  59   P      P      07 21 46.0 +0.5
      baz=282
P32M  Atlin             29.61  55   P      P      07 21 46.3 +0.2
P32M  Atlin             29.61  55   P      P      07 21 47.2 +1.2
      baz=279
N32M  Quiet Lake        29.71  51   P      P      07 21 46.9  0.0
      baz=277
P33M  Teslin, Yukon     29.96  53   P      P      07 21 49.8 +0.6
      baz=279
Q32M  Nakina River      30.46  56   P      P      07 21 53.3 -0.3
      baz=281
U33K  Whale Pass        30.67  61   P      P      07 21 55.8 +0.5
      baz=286
JGF   Kuroka            30.67 252   P      P      07 21 56.4 +0.8
JGF                                 IAmb   IAmb   07 21 58.4
      comp=Z,17nm,1.0s
BNX   BinXian           30.71 277  ⇑P      P      07 21 54.3 -1.5
BNX                                 pmax   pmax
      comp=Z,8.0nm,0.9s
CRAG  Craig             30.84  63   P      P      07 21 59.2 +2.4
CRAG  Craig             30.84  63   P      P      07 21 57.3 +0.5
      baz=287
WRAK  Wrangell Islan    31.00  61   P      P      07 21 58.9 +0.7
      baz=286
R33M  Jennings River    31.03  55   P      P      07 21 58.1 -0.5
      baz=282
INU   Inuyama           31.04 252   P      P      07 22 00.7 +1.9
INU                                 IAmb   IAmb   07 22 37.3
      comp=Z,22nm,1.5s
JHJ   Hachijo jima 2    31.07 246   LR     LR     07 32 35.1
      comp=Z,74nm,19.6s,baz=91,slow=33
S34M  Telegraph Cree    31.27  57   P      P      07 22 01.2 +0.6
S34M  Telegraph Cree    31.27  57   P      P      07 22 01.3 +0.6
      baz=284
V35K  Ketchikan         31.71  62   P      P      07 22 04.3 -0.1
      baz=288
DLBC  Dease Lake        31.71  56   LR     LR     07 35 22.5
      comp=Z,214nm,18.7s,baz=270,slow=37
DLBC  Dease Lake        31.71  56   P      P      07 22 04.8 +0.2
      baz=284
WTLY  Watson Lake, Y    31.96  53   P      P      07 22 06.5 -0.3
      baz=282
T35M  Bob Quinn         31.97  59   P      P      07 22 06.4 -0.4
      baz=286
A36M  Sachs Harbour     32.63  30   P      P      07 22 12.8 +0.4
      baz=266,SNR=17
H11N2 WAKE ISLAND Hy    32.86 192   T      T      07 57 09.1
      baz=7.7,slow=76,SNR=154
H11N3 WAKE ISLAND Hy    32.88 192   T      T      07 57 10.1
      baz=7.7,slow=76,SNR=169
H11N1 WAKE ISLAND Hy    32.88 192   T      T      07 57 16.4
      baz=7.7,slow=76,SNR=206
C36M  Paulatuk          32.95  35   P      P      07 22 15.4 +0.2
      baz=271,SNR=14
LIRD  Liard River Hi    33.45  54   P      P      07 22 21.0 +1.2
      baz=285
WRGLY Wrigley           33.85  46   P      P      07 22 22.8 -0.3
      baz=281
TOAD  Toad River Com    34.03  54   P      P      07 22 25.6 +0.8
      baz=286
H11S1 WAKE ISLAND Hy    34.09 192   T      T      07 58 44.7
      baz=7.4,slow=76,SNR=185
H11S3 WAKE ISLAND Hy    34.11 192   T      T      07 58 37.6
      baz=7.4,slow=76,SNR=135
H11S2 WAKE ISLAND Hy    34.11 192   T      T      07 58 48.8
      baz=7.4,slow=76,SNR=83
KOTAN Kotaneelee Air    34.27  52   P      P      07 22 27.1 +0.3
      baz=285
BBB   Bella Bella       34.76  66   LR     LR     07 34 53.2
      comp=Z,73nm,20.7s,baz=265,slow=33
KSRS  Korea Array       35.10 264   P      P      07 22 35.9 +1.7
      comp=Z,2.7nm,0.8s,baz=51,slow=8.0,SNR=4.6
      comp=Z,2.7nm,0.8s
JNU   Nakatsue          36.23 255   LR     LR     07 36 43.4
      comp=Z,93nm,21.7s,baz=52,slow=35
YKA   Yellowknife Ar    37.96  46   P      P      07 22 58.1 -0.2
      comp=Z,1.7nm,0.5s,baz=289,slow=8.3,SNR=19
      comp=Z,1.7nm,0.5s
NRIK  Noril'sk          41.31 328  iP      P      07 23 25.8 -0.3
NRIK                                pmax   pmax
      comp=Z,12nm,2.8s
SONM  Songino Array     42.13 292   P      P      07 23 33.8 +0.6
      comp=Z,0.8nm,0.5s,baz=60,slow=8.9,SNR=5.0
SONM                                LR     LR     07 41 07.6
      comp=Z,95nm,21.6s,baz=69,slow=36
      comp=Z,0.8nm,0.5s
NEW   Newport           42.82  67   LR     LR     07 40 07.9
      comp=Z,53nm,18.8s,baz=306,slow=34
HHC   Hu-ho-hao-te      43.04 280  eP      P      07 23 41.4 +0.7
HHC                                 pmax   pmax
      comp=Z,6.0nm,0.6s
HHC                                 pmax   pmax
      comp=Z,240nm,4.6s
YBH   Yreka Blue Hor    43.24  78   LR     LR     07 38 05.3
      comp=Z,5.9nm,21.8s,baz=287,slow=31
HNS   HongShan          43.26 274  ⇑P      P      07 23 44.4 +2.1
HNS                                 pmax   pmax
      comp=Z,13nm,0.9s
NJ2   Nanjing           44.25 265  eP      P      07 23 52.0 +1.6
NJ2                                 pmax   pmax
      comp=Z,8.0nm,0.5s
BLKN  Baker Lake        44.87  38   P      P      07 23 54.1 -0.8
BLKN                                IAmb   IAmb   07 23 57.8
      comp=Z,6.7nm,0.8s
GUMO  Guam              44.96 222   LR     LR     07 41 18.8
      comp=Z,72nm,19.1s,baz=62,slow=34
LYMT  Lyon Mountain     46.26  66   P      P      07 24 05.6 -0.8
NVAR  Mina Array Bea    47.94  79   P      P      07 24 19.1 -0.5
      comp=Z,1.6nm,0.8s,baz=297,slow=8.2,SNR=6.0
NVAR                                LR     LR     07 41 20.3
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      comp=Z,66nm,21.9s,baz=270,slow=32
      comp=Z,1.6nm,0.8s
FCC   Fort Churchill    48.62  44          P      07 24 24.3  0.0
FCC                                 IAmb   IAmb   07 24 27.3
      comp=Z,6.0nm,0.6s
FCC   Fort Churchill    48.62  44   P      P      07 24 24.3  0.0
FCC                                 pmax   pmax
      comp=Z,6.0nm,0.6s
RLMT  Red Lodge         49.05  66   P      P      07 24 28.0 -0.2
RLMT                                IAmb   IAmb   07 24 39.6
      comp=Z,14nm,1.4s
SPITS Spitsbergen Ar    49.15 354   P      P      07 24 28.0 -0.2
      comp=Z,2.4nm,0.4s,baz=54,slow=8.4,SNR=14
      comp=Z,2.4nm,0.4s
SPITS Spitsbergen Ar    49.15 354   P      P      07 24 28.0 -0.2
ZALV  Zalesovo Beam     50.05 310   P      P      07 24 36.7 +1.4
      comp=Z,0.6nm,0.3s,baz=51,slow=9.6,SNR=1.9
      comp=Z,0.6nm,0.3s
PDAR  Pinedale Array    50.34  69   P      P      07 24 37.5 -0.5
      comp=Z,2.0nm,0.7s,baz=317,slow=2.5,SNR=13
      comp=Z,2.0nm,0.7s
LZDM  Lanzhou Array     50.91 281   LR     LR     07 46 46.7
      comp=Z,113nm,21.7s,baz=75,slow=37
GTA   Gaotai            50.97 287  eP      P      07 24 43.5 +0.9
GTA                                 pP     pP     07 24 50.9 +0.6
GTA                                 pmax   pmax
      comp=Z,5.0nm,0.7s
DGZ   Jazzator, Alta    51.34 304  iP      P      07 24 43.5 -1.8
DGZ                                 pmax   pmax
      comp=Z,6.0nm,2.1s
RSSD  Black Hills       52.59  64          P      07 24 54.0 -0.8
RSSD  Black Hills       52.59  64   P      P      07 24 54.0 -0.8
RSSD                                pmax   pmax
      comp=Z,4.0nm,1.0s
U15A  North Rim         52.86  76   P      P      07 24 56.9  0.0
ULM   Lac du Bonnet     52.97  54   P      P      07 24 56.3 -0.8
      comp=Z,6.9nm,0.6s,baz=307,slow=6.0,SNR=8.0
ULM                                 LR     LR     07 48 11.0
      comp=Z,72nm,18.1s,baz=328,slow=37
      comp=Z,6.9nm,0.6s
PV12  Saucer Basin,     53.66  72   P      P      07 25 01.9 -0.8
PV12                                IAmb   IAmb   07 25 18.3
      comp=Z,16nm,1.4s
AGMN  Agassiz Nation    54.23  55          P      07 25 05.8 -0.7
AGMN                                IAmb   IAmb   07 25 06.7
      comp=Z,6.1nm,0.8s
KURK  Kurchatov         55.04 309          P      07 25 11.8 -0.4
KURK                                IAmb   IAmb   07 25 20.5
      comp=Z,7.9nm,0.6s
KURK  Kurchatov         55.04 309  iP      P      07 25 11.2 -1.1
KURK                                pmax   pmax
      comp=Z,6.0nm,0.8s
KURBB Kurchatov Arra    55.14 309   P      P      07 25 13.0  0.0
      comp=Z,3.5nm,0.7s,baz=49,slow=6.9,SNR=30
      comp=Z,3.5nm,0.7s
GYA   Guiyang           55.70 270  ⇑P      P      07 25 18.5 +0.9
GYA                                 pmax   pmax
      comp=Z,22nm,0.5s
OGNE  Ogallala          55.80  66   P      P      07 25 18.5 +0.5
MK31  Makanchi Array    55.84 304  iP      P      07 25 16.6 -1.6
MKAR  Makanchi Array    55.84 304   P      P      07 25 17.4 -0.8
      comp=Z,1.5nm,0.5s,baz=53,slow=7.0,SNR=18
MKAR                                LR     LR     07 50 03.0
      comp=Z,98nm,20.4s,baz=52,slow=37
      comp=Z,1.5nm,0.5s
MKAR  Makanchi Array    55.84 304ceP       P      07 25 17.3 -0.9
MKAR                                pmax   pmax
      comp=Z,2.0nm,0.5s
MAKZ  Makanchi          55.99 304          P      07 25 18.1 -1.1
MAKZ                                IAmb   IAmb   07 25 30.7
      comp=Z,5.2nm,0.8s
MAKZ  Makanchi          55.99 304   P      P      07 25 18.1 -1.1
MAKZ                                pmax   pmax
      comp=Z,5.0nm,0.9s
GOMU  GeErMu            56.05 287   P      P      07 25 19.0 -1.2
GOMU                                pP     sP     07 25 31.3 +0.1
GOMU                                sP     pP     07 25 36.1 +7.9
GOMU                                pmax   pmax
      comp=Z,7.0nm,0.8s
ARCES ARCESS Array B    56.38 347   P      P      07 25 20.6 -1.0
      comp=Z,3.1nm,1.0s,baz=31,slow=7.2,SNR=4.3
      comp=Z,3.1nm,1.0s
BVAR  Borovoye Array    57.19 316   P      P      07 25 27.1 -0.6
      comp=Z,2.1nm,0.6s,baz=49,slow=7.0,SNR=10
BVAR                                LR     LR     07 52 23.6
      comp=Z,89nm,18.9s,baz=46,slow=38
      comp=Z,2.1nm,0.6s
BORK  Borovoye          57.20 316  iP      P      07 25 27.5 -0.2
BORK                                pmax   pmax
      comp=Z,10.0nm,2.5s
ARTI  Arti              59.46 324   LR     LR     07 53 38.4
      comp=Z,61nm,18.2s,baz=229,slow=38
ARTI  Arti              59.46 324c iP      P      07 25 44.2 +0.8
ARTI                                              07 26 25.6
ARTI                                S      S      07 33 52.5 +1.8
ARTI                                SS     SS     07 37 44.8 -0.2
ARTI                                pmax   pmax
      comp=Z,11nm,2.6s
KIRV  Kirov             60.70 330   LR     LR     07 56 40.9
      comp=Z,34nm,18.4s,baz=360,slow=40
KLMR  Klimovskoe        61.51 337  eP      P      07 25 55.7 -1.6
KLMR                               e*PP    sP     07 26 09.3 +0.8
KLMR                                pmax   pmax
      comp=Z,18nm,1.7s
SCHQ  Schefferville     62.06  35   P      P      07 26 00.2 -1.0
      comp=Z,6.9nm,0.6s,baz=324,slow=8.6,SNR=8.0
      comp=Z,6.9nm,0.6s
AAK   Ala-Archa         62.72 305   LR     LR     07 54 01.6
      comp=Z,72nm,20.4s,baz=64,slow=37
AAK   Ala-Archa         62.72 305  iP      P      07 26 04.5 -1.4
AAK                                 pmax   pmax
      comp=Z,3.0nm,0.9s
TXAR  Lajitas Array     62.98  76   P      P      07 26 07.9 +0.1
      comp=Z,4.1nm,0.7s,baz=305,slow=4.0,SNR=44
      comp=Z,4.1nm,0.7s
FINES FINESS Array B    63.81 343   P      P      07 26 12.0 -0.6
      comp=Z,3.9nm,1.0s,baz=8.4,slow=6.8,SNR=7.3
FINES                               LR     LR     07 58 35.1
      comp=Z,32nm,18.3s,baz=344,slow=40
      comp=Z,3.9nm,1.0s
FINES FINESS Array B    63.81 343  iP      P      07 26 11.5 -1.1
FINES                               pmax   pmax
      comp=Z,4.0nm,1.0s
AKTO  Aktyubinsk        64.23 320   LR     LR     07 58 08.3
      comp=Z,54nm,18.9s,baz=41,slow=40
KSH   Kashi             64.24 302   P      P      07 26 19.7 +3.7
KSH                                 pmax   pmax
      comp=Z,3.0nm,0.8s
BRDY  Brady             64.32  72   P      P      07 26 15.9 -0.7
BRDY                                IAmb   IAmb   07 26 16.8
      comp=Z,4.1nm,0.8s
KK31  Karatay Array     64.34 308   P      P      07 26 16.3 -0.2
KK31  Karatay Array     64.34 308   P      P      07 26 16.3 -0.2
KK31                                pmax   pmax
      comp=Z,3.0nm,0.9s
KKAR  Karatay Array     64.34 308   P      P      07 26 15.7 -0.8
KKAR  Karatay Array     64.34 308   P      P      07 26 15.7 -0.8
AB31  Akbulak array     64.39 318   P      P      07 26 16.4 -0.2
AB31                                IAmb   IAmb   07 26 25.8
      comp=Z,3.3nm,0.5s
ABKAR Akbulak array     64.39 318   P      P      07 26 16.4 -0.2
FCAR  Ozark Folk Cen    64.87  63   P      P      07 26 18.4 -1.5
NB2   NORSAR Subarra    66.25 351   P      P      07 26 28.1 -0.4
      comp=Z,1.3nm,0.6s,baz=12,slow=6.5
NOA   NORSAR Array B    66.25 351   P      P      07 26 28.2 -0.3
      comp=Z,1.2nm,0.6s,baz=3.9,slow=5.6,SNR=9.0
NOA                                 LR     LR     07 57 39.3
      comp=Z,21nm,18.5s,baz=275,slow=38
      comp=Z,1.2nm,0.6s
CMAR  Chiang Mai Arr    66.39 270   P      P      07 26 29.9 -0.1
      comp=Z,1.5nm,0.4s,baz=25,slow=7.6,SNR=4.9
CMAR                                LR     LR     07 56 34.4
      comp=Z,22nm,20.0s,baz=35,slow=37
      comp=Z,1.5nm,0.4s
CMAR  Chiang Mai Arr    66.39 270ceP       P      07 26 30.2 +0.2
CMAR                                pmax   pmax
      comp=Z,1.0nm,0.4s
HFS   Hagfors           66.87 349   P      P      07 26 31.5 -0.9
      comp=Z,2.1nm,0.5s,baz=15,slow=7.4,SNR=20
      comp=Z,2.1nm,0.5s
BRDH  Bariadhala        67.70 279   LR     LR     07 57 46.6
      comp=Z,37nm,20.0s,baz=148,slow=37
M65A  Busby, Falmout    71.22  46   P      P      07 27 02.0 +2.2
      baz=324
EKA   Eskdalemuir Ar    72.79 358   P      P      07 27 08.9 -0.1
      comp=Z,1.6nm,0.6s,baz=359,slow=5.6,SNR=7.0
      comp=Z,1.6nm,0.6s
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AKASG	Malin Array Be	73.18	337	P	P	07 27 11.1	-0.2
	comp=Z,1.3nm,0.5s,baz=26,slow=6.4,SNR=4.4						
AKASG				LR	LR	08 01 56.8	
	comp=Z,34nm,18.4s,baz=11,slow=38						
	comp=Z,1.3nm,0.5s						
KBZ	Khabaz	75.48	326	P	P	07 27 25.5	+0.7
	comp=Z,1.6nm,0.8s,baz=45,slow=2.9,SNR=2.4						
	comp=Z,1.6nm,0.8s						
CLL	Collm	75.59	348	ePx	Px	07 27 23.0	
LANS	Liptovska Anna	76.68	343	eP	P	07 27 39.8	+8.2
GERES	GERESS Array B	77.91	347	P	P	07 27 38.3	-0.3
	comp=Z,0.4nm,0.6s,baz=30,slow=5.7,SNR=2.6						
	comp=Z,0.4nm,0.6s						
PSI	Prapat	78.56	260	LR	LR	08 00 55.0	
	comp=Z,25nm,21.9s,baz=30,slow=34						
WRA	Warramunga Arr	79.66	217	P	P	07 27 47.9	-0.5
	comp=Z,2.2nm,0.7s,baz=32,slow=6.4,SNR=12						
	comp=Z,2.2nm,0.7s						
WRA	Warramunga Arr	79.66	217	i P	P	07 27 47.4	-0.9
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRTR	Keskin Array B	82.11	330	P	P	07 28 00.9	-0.6
	comp=Z,0.9nm,0.8s,baz=45,slow=6.3,SNR=4.3						
	comp=Z,0.9nm,0.8s						
BRTR	Keskin Array B	82.11	330	ceP	P	07 28 01.7	+0.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	83.22	216	P	P	07 28 07.8	+0.6
	comp=Z,1.1nm,0.8s,baz=17,slow=5.7,SNR=13						
ASAR				LR	LR	08 02 45.2	
	comp=Z,42nm,19.3s,baz=348,slow=34						
	comp=Z,1.1nm,0.8s						
PALK	Pallekele	86.22	277	LR	LR	08 10 33.7	
	comp=Z,26nm,20.3s,baz=28,slow=38						
STKA	Stephens Creek	88.36	207	P	P	07 28 32.6	+0.3
	comp=Z,1.8nm,0.7s,baz=20,slow=12,SNR=3.9						
	comp=Z,1.8nm,0.7s						
MAW	Mawson	144.33	218	PKP	PKPbc	07 35 14.0	+0.2
	comp=Z,4.7nm,1.1s,baz=6.8,slow=2.8,SNR=1.8						

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*SOME **07** 07:34:24.1, 44.°75N×82.°07E, h15^{km}*

*NNC **07** 07:34:26.7±0.9, 44.°75N×81.°84E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=11.8km s-min=3.5km az=120.0, Suspected Mining explosion.*

ISC 07 07:34:23.3±1.5**, 44.°67N**±0.°07×**82.°1E**±0.°1**, h0^{km}, n18, σ0.^{s}76**/26**, 3C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	1.77	227	P	Pg	07 34 57.4	+0.2
	2.6nm,0.1s						
KTMS				S	Sg	07 35 21.7	+1.6
	19nm,0.3s						
KTMS	Ketmen	1.77	227	eP	Pg	07 34 57.4	+0.2
	2.6nm,0.1s						
KTMS				eS	Sg	07 35 21.7	+1.6
	19nm,0.3s						
KAPS	Kapalarasan	2.06	288	Pg	Pb	07 35 01.3	-0.4
	4.0nm,0.1s						
KAPS				Lg	Lg	07 35 28.2	
	30nm,0.1s						
MK31	Makanchi Array	2.13	3	Pn	Pb	07 35 02.8	0.0
	3.3nm,0.3s,baz=184,slow=15,SNR=230						
MK31				⇑Sn	Sb	07 35 30.3	+0.5
	6.6nm,0.4s,baz=188,slow=27,SNR=28						
KNOS	Konyrlen	2.13	263	Pg	Pb	07 35 02.6	-0.3
	18nm,0.3s						
KNOS				Lg	Lg	07 35 30.2	
	24nm,0.3s						
MAKZ	Makanchi	2.15	357	⇓Pn	Pb	07 35 02.3	-0.7
	2.2nm,0.3s						
MAKZ				⇑Sn	Sb	07 35 30.2	+0.1
	6.5nm,0.4s						
PDGK	Podgornoye	2.33	236	⇓Pn	Pb	07 35 05.2	-1.0
	4.7nm,0.4s						
PDGK				⇑Sn	Sb	07 35 35.0	-0.5
	9.7nm,0.5s						
SHLS	Shalkode	2.45	233	Pg	Pn	07 35 04.5	-0.1
	15nm,0.3s						
SHLS				Lg	Lg	07 35 33.7	
	43nm,0.3s						
SHLS	Shalkode	2.45	233	eP	Pn	07 35 04.5	-0.1
	15nm,0.3s						
SHLS				eS	Sn	07 35 33.7	-1.6
	43nm,0.3s						
BLB	Baldybastay	2.68	259	Pg	Pb	07 35 11.6	-0.6
	14nm,0.2s						
BLB				Lg	Lg	07 35 45.9	
	19nm,0.2s						
UZB	Uzynbulak	2.71	237	Pg	Pb	07 35 12.4	-0.4
	8.3nm,0.3s						
UZB				Lg	Lg	07 35 47.2	
	5.6nm,0.2s						
UZB	Uzynbulak	2.71	237	eP	Pb	07 35 12.4	-0.4
	8.3nm,0.3s						
UZB				eS	Sb	07 35 47.2	+0.6
	5.6nm,0.2s						
KPKS	Kokpek	2.76	245	Pg	Pb	07 35 13.1	-0.4
	0.3nm,0.1s						
KPKS				Lg	Lg	07 35 48.4	
	8.1nm,0.2s						
ARXS	Arharly	3.12	263	Pg	Pb	07 35 18.7	-0.9
	5.0nm,0.3s						
ARXS				Lg	Lg	07 35 58.0	
	14nm,0.6s						
ARXS	Arharly	3.12	263	eP	Pb	07 35 18.7	-0.9
ARXS				eS	Sb	07 35 58.0	-0.2
SATY	Saty	3.14	240	Pg	Pb	07 35 19.6	-0.4
	2.6nm,0.2s						
SATY				Lg	Lg	07 35 59.6	
	20nm,0.2s						
KTBS	Karatobe	4.03	258	Pg	Pb	07 35 35.1	-0.2
	0.9nm,0.3s						
KTBS				Lg	Lg	07 36 25.8	
	0.2nm,0.1s						
KRBS	Karabastau	4.74	260	Pg	Pb	07 35 48.1	+0.7
	0.3nm,0.2s						
KRBS				Lg	Lg	07 36 48.2	
	1.1nm,0.3s						

NOU 07 07:39:23.5, 16.°72S×167.°66E, h88^{km}, ML3.9/10**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	1.12	153	P	Pn	07 39 45.6	+1.1
RTV	Rentapao	1.29	146	P	Pn	07 39 46.5	-0.1
YATNC	Mamie plateau,	5.36	188	P	Pn	07 40 39.7	-1.3
DZM	Mont Dzumac	5.45	192	P	Pn	07 40 41.8	-0.5

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*IDC **07** 07:40:39.8±0.6, 7.°12N×79.°82W, h0^{km}, mb4.3/19, mbtmp4.3/23, ML3.9/5, MS4.0/36, Error ellipse: s-maj=21.5km s-min=11.7km az=58.0*

*NEIC **07** 07:40:42.7±1.6, 7.°29N±0.°07×79.°70W±0.°07, h10^{km}±1^{km}, mb4.9/77, Error ellipse: s-maj=12.9km s-min=9.7km az=221.0*

*UPA **07** 07:40:42.1±2.3, 7.°30N×79.°75W, h0^{km}±5^{km}, MD4.9, MW5.0*

*CATAC **07** 07:40:42.8±0.6, 7°N±2°×8°0W±°, h11^{km}±4^{km}, M5.0/28, mb5.4/14, mB5.4/13, MLv5.4/28, Mw(mB)4.8/13, MwMwp4.5/3, Mwp4.9/3, Error ellipse: s-maj=4.2km s-min=2.7km az=25.1, confirmed*

*GCMT **07** 07:40:44.7±0.2, 7.°27N±0.°01×79.°71W±0.°02, h16^{km}±1^{km}, MW4.9/101, Moment Tensor Solution. s28,c32; s101,c142; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.59±.09; M$_{\theta\theta}$-0.18±.07; M$_{\phi\phi}$0.76±.09; M$_{r\theta}$0.60±.24; M$_{\theta\phi}$2.35±.07; M$_{\phi r}$-0.81±.25; Best double couple: M$_0$2.64700×10^{16} NP1:φ$_s$261.00000°, δ68.00000°, λ-16.00000°. NP2:φ$_s$357.00000°, δ75.00000°, λ-158.00000°. Principal axes: T 2.7100, Plg5.0000°, Azm128.0000°; N -0.1260, Plg63.0000°, Azm29.0000°; P -2.5840, Plg26.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*RSNC **07** 07:40:45.6±0.0, 7°N±7°×7°9W±°, h0^{km}±7^{km}, M4.7, mb5.5, mB5.6, ML4.2, Mw(mB)5.1, MwMwp4.6, Mwp5.0*

ISC 07 07:40:40.7±1.1**, 7.°18N**±0.°03×**79.°67W**±0.°02**, h6^{km}**±7^{km}**, n393, σ1.^{s}86**/436**, mb4.8**/59**, MS4.0**/33**, 30C-24D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACHO3	Achotines, Los	0.55	295	⇑eP	Pg	07 40 51.6	+0.2
ACHO3				i S	Sg	07 40 59.1	+0.5
PCRI3	Pocri, Los San	0.65	317	⇑eP	Pg	07 40 53.1	-0.2
TOSI3	Tonosi	0.80	286	⇑iP	Pg	07 40 55.7	-0.4
TOSI3				i S	Sg	07 41 06.7	+0.1
AZU	Azuero	0.86	315	⇑eP	Pg	07 40 56.4	-0.8
CHIT3	Chitre	1.07	316	⇑iP	Pg	07 40 59.8	-1.5
CHIT3				i S	Sg	07 41 14.2	-1.0
PESE3	Pese, Herrera	1.19	308	⇑iP	Pg	07 41 02.0	-1.5
CACAO	El Cacao, Vera	1.20	278	⇓iP	Pg	07 41 01.3	-2.4
CACAO				i S	Sg	07 41 18.1	-1.1
MARI3	Mariato, Verag	1.39	290	⇓iP	Pn	07 41 05.5	-1.2
MARI3				i S	Sg	07 41 26.3	+0.8
CRIS3	El Cristo, Coc	1.42	319	eP	Pn	07 41 05.7	-1.4
PNME	Penonome	1.45	333	⇑iP	Pn	07 41 06.4	-1.1
PNME				eS	Sn	07 41 24.3	-2.6
STIA3	Santiago, Vera	1.58	305	⇑iP	Pn	07 41 08.3	-1.0
STIA3				i S	Sn	07 41 28.5	-1.7
TABO3	Taboga, Panama	1.61	4	⇑iP	Pn	07 41 09.1	-0.5
TABO3				i S	Sn	07 41 29.3	-1.4
GMAL	Guarumal, Vera	1.66	291	⇓eP	Pn	07 41 09.2	-1.1
GMAL				i S	Sn	07 41 32.0	+0.1
SFRA3	San Francisco,	1.67	309	⇑iP	Pn	07 41 09.7	-0.8
SFRA3				i S	Sn	07 41 30.9	-1.4
CHOR3	La Chorrera	1.71	357	⇓eP	Pb	07 41 11.9	-0.7
CHOR3				eS	Sn	07 41 32.8	-0.4
FLAM	Flamenco Islan	1.73	4	⇑eP	Pn	07 41 11.1	-0.2
FLAM				i S	Sn	07 41 33.4	-0.2
ARRA3	Arraijan, Pana	1.77	0	⇓iP	Pn	07 41 11.6	-0.4
ARRA3				eS	Sn	07 41 34.0	-0.8
ZANG	Zanguenga, Cho	1.77	354	⇓eP	Pn	07 41 11.8	-0.1
ZANG				i S	Sn	07 41 35.3	+0.4
MESA3	La Mesa, Verag	1.79	303	⇑iP	Pn	07 41 11.6	-0.5
MESA3				eS	Sb	07 41 36.5	0.0
UPA	Univ. de Panam	1.79	4	⇓iP	Pn	07 41 11.9	-0.2
UPA				i S	Sn	07 41 35.2	-0.1
PTAC	Punta Ardita,	1.84	91	⇑iP	Pn	07 41 11.4	-1.5
PTAC				i S	Sn	07 41 30.9	-5.6
PTAC	Punta Ardita,	1.84	91	P	Pn	07 41 11.3	-1.6
PTAC				S	Sn	07 41 29.8	-6.7
GAMB1	Gamboa	1.93	359	⇑eP	Pn	07 41 14.1	+0.1
GAMB1				i S	Sn	07 41 38.6	0.0
SAFE3	Santa Fe, Vera	1.93	314	eP	Pn	07 41 13.9	-0.2
BCIP	Isla Barro Col	1.98	355		Pn	07 41 14.6	-0.2
BCIP	Isla Barro Col	1.98	355	⇓iP	Pn	07 41 15.2	+0.5
BCIP				⇓iP	Pn	07 41 15.3	+0.5
BCIP				eS	Sn	07 41 39.9	0.0
BCIP				i S	Sb	07 41 40.3	-1.8
BCIP	Isla Barro Col	1.98	355	⇓P	Pn	07 41 15.3	+0.6
BCIP				S	Sn	07 41 40.5	+0.6
BCIP	Isla Barro Col	1.98	355	P	Pn	07 41 15.1	+0.3
BCIP				S	Sn	07 41 39.8	-0.1
FRIJ	El Hiral	2.03	358	⇓iP	Pn	07 41 15.7	+0.3
FRIJ				i S	Sn	07 41 40.9	-0.2
UPD2	Meteti	2.13	50	⇓iP	Pb	07 41 18.5	-1.1
UPD2				i S	Sn	07 41 44.5	+1.0
CNTA3	Canitas, Panam	2.17	21	⇑eP	Pn	07 41 17.9	+0.6
CNTA3				eS	Sn	07 41 42.8	-1.7
TOTI	Torti	2.20	38	⇓iP	Pn	07 41 18.2	+0.5
TOTI				eS	Sn	07 41 42.2	-3.0
PDCAN	Manzana , Fuen	2.29	299	eP	Pn	07 41 19.9	+0.7
RMDIO	Remedios, Chir	2.38	296	eP	Pn	07 41 21.0	+0.7
SOLC	Bahia Solano	2.43	113	P	Pn	07 41 19.4	-1.6
CAPC	Capurgana	2.71	58	P	Pn	07 41 25.6	+0.8
CAPC				S	Sb	07 42 01.0	-2.1
CAP2	Capurgana	2.71	57	⇓eP	Pn	07 41 24.8	0.0
CAP2				i S	Sb	07 42 02.4	-0.8
CAP2	Capurgana	2.71	57	P	Pn	07 41 25.8	+0.9
CAP2				S	Sn	07 41 59.0	+1.0
CHIR3	Chiriqui UPA,	2.90	295	⇑eP	Pn	07 41 28.4	+1.0
LOMA3	Las Lomas, Chi	2.97	295	⇑eP	Pn	07 41 29.4	+0.9
PEDE3	Pedregal, Chir	2.98	294	eP	Pn	07 41 29.1	+0.6
RBALA	Bur	2.99	305	⇑eP	Pn	07 41 29.5	+0.9
LOCO3	Loma Colorada,	2.99	294	⇓eP	Pn	07 41 29.2	+0.6
CHGR2	Aguacate	3.01	306	eP	Pn	07 41 30.8	+1.8
CHGR2				eS	Sn	07 42 05.1	-0.3
PSOM3	Paja de Sombre	3.03	300	⇓eP	Pn	07 41 30.6	+1.4
PSOM3				eS	Sb	07 42 10.3	-1.9
DVD	David	3.03	295	eP	Pn	07 41 29.8	+0.6
DVD				i S	Sg	07 42 21.4	+3.4
BAGA3	Bagala, Chiriq	3.11	294	eP	Pn	07 41 30.9	+0.6
BAGA3				eS	Sn	07 42 08.1	+0.2
BQSF3	Alto Boquete,	3.15	300	⇓eP	Pn	07 41 33.4	+2.4
PIZC	Pizarro, Choco	3.18	134	P	Pn	07 41 29.8	-1.4
PIZC				S	Sn	07 42 08.4	-1.1
LNBQ3	Los Naranjos,	3.18	300	eP	Pn	07 41 33.1	+1.7
PTAR3	Potrerillos Ar	3.18	298	⇑eP	Pn	07 41 32.2	+0.8
LMNES	Limones	3.29	286	⇓iP	Pn	07 41 32.7	-0.2
LESP3	La Esperanza,	3.33	292	⇓eP	Pn	07 41 34.1	+0.9
PTPM	Petroterminale	3.34	288	⇓iP	Pn	07 41 33.5	0.0
PTPM				i S	Sb	07 42 21.3	-0.1
BRU2	Volcan	3.40	298		Pn	07 41 34.7	+0.3
BRU2	Volcan	3.40	298	i P	Pn	07 41 35.1	+0.7
BRU2				⇑eP	Pn	07 41 35.1	+0.7
BRU2				i S	Sb	07 42 21.0	-2.1
BRU2				eS	Sg	07 42 24.3	-5.6
BRU2	Volcan	3.40	298	S	Sn	07 42 16.3	+1.1
BRU2	Volcan	3.40	298	⇑P	Pn	07 41 35.1	+0.7
DBBC	Dabeiba	3.43	92	P	Pn	07 41 35.5	+0.6
DBBC				S	Sn	07 42 15.2	-0.8
CDITO	Canoas	3.46	294	⇑P	Pn	07 41 35.3	+0.1
CNI2	El Empalme, Bo	3.56	309	⇓eP	Pn	07 41 39.0	+2.5
LCBC	Los crdobas,	3.67	63	P	Pn	07 41 41.2	+3.2
LCBC				S	Sn	07 42 25.1	+3.5
MAPC	Malpelo	3.70	212	P	Pn	07 41 37.0	-1.4
MAPC				S	Sn	07 42 17.0	-5.4
PIRO	Carate, Puerto	3.83	289		Pn	07 41 39.7	-0.6
PIRO	Carate, Puerto	3.83	289	⇓eP	Pn	07 41 39.5	-0.7
PTJ1	Puerto Jimnez	3.85	291	eP	Pn	07 41 40.9	+0.4
PTJ1	Puerto Jimnez	3.85	291	P	Pn	07 41 41.3	+0.8
CBOC	Ciudad Bolivar	3.86	110	P	Pn	07 41 40.2	-0.6
CBOC				S	Sn	07 42 23.6	-3.0
PLMC	San Jos del P	4.05	124	P	Pn	07 41 42.0	-1.4
PLMC				S	Sn	07 42 28.7	-2.5
DRK0	Durika	4.10	301	⇑iP	Pn	07 41 45.1	+1.0
DRK0	Durika	4.10	301	⇑P	Pn	07 41 45.2	+1.0
DRK0	Durika	4.10	301	eP	Pn	07 41 45.0	+0.8
UREC	San Jos de Ur	4.14	82	⇑iP	Pn	07 41 46.1	+1.6
UREC				i S	Sn	07 42 29.4	-3.8
UREC	San Jos de Ur	4.14	82	P	Pn	07 41 45.9	+1.4
UREC				S	Sn	07 42 31.3	-1.9
MEDEC	Medelln, Ant	4.15	102	P	Pn	07 41 46.6	+1.8
PANP	Palmar Norte	4.15	295	eP	Pn	07 41 45.7	+1.1
GR1C	Gorgona, Isla	4.41	160	P	Pn	07 41 47.8	-0.4
GR1C				S	Sn	07 42 35.8	-4.1
YOTC	Yotoco, Valle	4.58	134	P	Pn	07 41 49.5	-1.2
YOTC				S	Sn	07 42 43.1	-1.3
NIZA	Niza - Manizal	4.67	117	P	Pn	07 41 53.3	+1.2
NIZA				S	Sn	07 42 47.3	+0.4
BUS1	Rivas	4.68	301	eP	Pn	07 41 53.0	+0.8
GUY2C	Guyana, Caldas	4.70	114	P	Pn	07 41 53.0	+0.4
GUY2C				S	Sn	07 42 49.1	+1.4
PIEC	Cerro El Cedra	4.89	300	eP	Pn	07 41 56.1	+1.0
ABRB	Las Abras (San	4.89	305	eP	Pn	07 41 56.8	+1.7
EGUB	Earth Gu¡pi	4.91	308		Pn	07 41 56.7	+1.6
CVTV	Tajo	4.92	305	eP	Pn	07 41 56.9	+1.4
PCAYA	Pacayas	4.92	304	eP	Pn	07 41 57.1	+1.7
REPA	Paraso	4.92	303	eP	Pn	07 41 57.7	+2.3
CVTQ	Turrialba Volc	4.93	305	eP	Pn	07 41 57.2	+1.5
CVTR	Volcan Turrial	4.93	305	eP	Pn	07 41 57.1	+1.3
JAMC	Jamundi, Valle	4.94	143	P	Pn	07 41 54.6	-1.1
JAMC				S	Sn	07 42 51.6	-1.7
RAFA	San Farael, Vo	4.94	304	Pn	Pn	07 41 58.5	+2.7
RAZU	San Marcos de	4.96	300	eP	Pn	07 41 57.8	+1.8
PITB	Pirrs, San	4.97	300	eP	Pn	07 41 57.7	+1.7
QUEP	Quepos	4.98	297	S	Sn	07 42 56.2	+2.2
QUEP	Quepos	4.98	297	P	Pn	07 41 58.1	+2.0
CVIMO	Finca Echandi	5.09	304	eP	Pn	07 41 59.7	+2.0
PICV	PH. Pirrs	5.10	299	eP	Pn	07 41 59.4	+1.7
AMPA	Desamparados	5.12	302	eP	Pn	07 41 59.8	+1.7
CARI	Cariari	5.12	308	eP	Pn	07 41 59.0	+1.0
ECI	Escuela Centro	5.13	303	eP	Pn	07 42 00.1	+1.9
SJS3	Mercedes San J	5.13	303	eP	Pn	07 42 01.0	+2.7
SJS	Escuela Geolog	5.13	303	eP	Pn	07 42 01.0	+2.7
CENT	San Jose	5.15	302	eP	Pn	07 42 01.7	+3.2
ACOS	Acosta	5.15	301	eP	Pn	07 41 59.5	+0.9
SJCC	San Jacinto, C	5.19	58	⇓eP	Pn	07 42 01.5	+2.4
SJCC	San Jacinto, C	5.19	58	P	Pn	07 42 01.5	+2.4
SJCC				S	Sn	07 43 00.6	+1.2
SJCC	San Jacinto, C	5.19	58	P	Pn	07 42 01.3	+2.3
	2µm169nm,0.8s						
SJCC				S	Sn	07 43 00.4	+1.0
	2µm169nm,0.8s						
PTBC	PUERTO BERRIO,	5.21	97	P	Pn	07 42 00.4	+1.1
PTBC				S	Sn	07 42 59.4	-0.4
HDC	Heredia	5.21	303		Pn	07 42 00.8	+1.3
HDC	Heredia	5.21	303	eP	Pn	07 42 01.0	+1.5
HDC	Heredia	5.21	303	eP	Pn	07 42 01.1	+1.7
HEME	Heredia, Merce	5.23	303	eP	Pn	07 42 03.0	+3.4
TRT2	Tortugero	5.24	310	S	Sn	07 43 01.4	+1.0
TRT2	Tortugero	5.24	310	P	Pn	07 41 59.9	+0.4
TRT2	Tortugero	5.24	310	eP	Pn	07 41 60.0	+0.4
SANTA	Santa Ana	5.24	302	eP	Pn	07 42 01.5	+1.8
BELE	Belen	5.26	302	eP	Pn	07 42 01.7	+1.7
PURI	Puriscal	5.30	300	eP	Pn	07 42 02.1	+1.5
ORTC	Ortega, Tolima	5.47	126	P	Pn	07 42 03.4	+0.6
	3µm12µm914nm,0.7s						
ORTC				S	Sn	07 43 06.8	+0.7
	3µm12µm914nm,0.7s						
ARTO	Ro Cuarto	5.49	305	eP	Pn	07 42 04.6	+1.6
POPC	Popayan, Colom	5.49	147	P	Pn	07 42 02.4	-0.9
	1µm153nm,0.6s						
POPC				S	Sn	07 43 04.7	-2.2
	1µm153nm,0.6s						
ITAL	Pital	5.59	306	eP	Pn	07 42 06.5	+2.0
QUEU	Ciudad Quesada	5.65	304	eP	Pn	07 42 08.2	+2.8
BBAC	Balboa, Cauca	5.66	155	P	Pn	07 42 06.0	+0.4
	1µm172nm,0.7s						
BBAC				S	Sn	07 43 02.4	-8.8
	1µm172nm,0.7s						
SAIC	Isla e San And	5.69	339	P	Pn	07 42 05.4	-0.4
SAIC				S	Sn	07 43 08.3	-3.2
SPBC	San Pablo de B	5.76	105	P	Pn	07 42 08.6	+1.7
	2µm4µm226nm,0.6s						
ROSC	El Rosal	5.80	113	Pn	Pn	07 42 11.1	+3.3
	94nm,0.3s,baz=306,slow=14,SNR=119						
ROSC				LR	LR	07 44 43.4	
	comp=Z,2µm,18.0s,baz=297,slow=41						
	578nm,0.6s						
ROSC	El Rosal	5.80	113		Pn	07 42 10.7	+3.0
ROSC	El Rosal	5.80	113	P	Pn	07 42 10.8	+3.1
	4µm7µm961nm,0.7s						
SOCE	Pocosol	5.84	303		Pn	07 42 09.6	+1.7
SOCE	Pocosol	5.84	303	P	Pn	07 42 10.0	+2.1
PRAC	Prado	5.87	126	⇑P	Pn	07 42 10.1	+1.7
PRAC				S	Sn	07 43 18.6	+2.5
PRAC	Prado	5.87	126	P	Pn	07 42 10.2	+1.8
	11µm601nm,0.5s						
PRAC				S	Sn	07 43 18.6	+2.5
	11µm601nm,0.5s						
BRJC	Barrancabermej	5.88	92	P	Pn	07 42 10.4	+2.0
	8µm541nm,0.7s						
ARE1	Arenal 1	5.96	303	eP	Pn	07 42 11.3	+1.7
ARGC	Ariguani, Magd	5.98	63	P	Pn	07 42 12.3	+2.4
	3µm2µm171nm,0.6s						
TABAC	Tabacon	6.02	304	eP	Pn	07 42 13.0	+2.5
JTS	Las Juntas de	6.07	301	Pn	Pn	07 42 12.2	+1.1
	5.1nm,0.3s,baz=103,slow=6.5,SNR=62						
JTS				Lg	Lg	07 43 43.5	
	baz=141,slow=14						
JTS	Las Juntas de	6.07	301	⇑eP	Pn	07 42 13.3	+2.2
JTS				i S	Sb	07 43 31.7	-8.3
JTS	Las Juntas de	6.07	301	⇑P	Pn	07 42 13.4	+2.2
JTS	Las Juntas de	6.07	301	eP	Pn	07 42 13.0	+1.9
BETC	Betania	6.14	137	P	Pn	07 42 14.6	+2.6
BETC				S	Sn	07 43 26.1	+3.4
CVER	Cruz Verde, Cu	6.16	115	P	Pn	07 42 16.3	+3.6
	8µm607nm,0.7s						
TILA	Tilaran	6.18	302	eP	Pn	07 42 15.5	+2.9
CRUC	La Cruz	6.20	154	P	Pn	07 42 15.0	+1.9
CRUC				S	Sn	07 43 22.9	-1.6
INVE	Universidad In	6.26	302	eP	Pn	07 42 15.4	+1.7
CMARA	Lajas Hojancha	6.35	297	P	Pn	07 42 15.9	+0.9
CMARA	Lajas Hojancha	6.35	297	eP	Pn	07 42 14.3	-0.7
MOTZ	Rio Naranjo	6.38	303	eP	Pn	07 42 18.2	+2.9
OCAC	Ocana	6.38	80	P	Pn	07 42 16.7	+1.3
	10µm518nm,0.5s						
PRVC	Isla de Provid	6.38	345		Pn	07 42 14.5	-0.7
PRVC	Isla de Provid	6.38	345	⇓iP	Pn	07 42 14.2	-1.1
PRVC				eS	Sn	07 43 21.4	-7.1
PRVC	Isla de Provid	6.38	345	P	Pn	07 42 15.9	+0.6
PRVC	Isla de Provid	6.38	345	P	Pn	07 42 14.6	-0.7
CHIC	Chingaza	6.42	113	P	Pn	07 42 19.5	+3.2
	3µm4µm336nm,0.6s						
NICO	Nicoya	6.42	298	eP	Pn	07 42 15.0	-0.9
CUI	Cuipilapa	6.44	303	eP	Pn	07 42 17.9	+1.8
UPAL	Upala	6.44	305	P	Pn	07 42 17.8	+1.7
BAGA	Bagaces	6.45	301	eP	Pn	07 42 19.2	+2.9
BARC	Barichara	6.46	95	P	Pn	07 42 18.8	+2.1
	11µm583nm,0.6s						
CMBC	Cumbal	6.46	163	P	Pn	07 42 19.0	+2.1
GARC	Garzon, Huila	6.47	140	P	Pn	07 42 18.6	+1.8
	4µm21µm1µm,0.5s						
VMAR	Armenia, Volca	6.48	304	eP	Pn	07 42 18.4	+1.7
JUD3	Juan Diaz 3	6.52	297		Pn	07 42 17.8	+0.5
JUD3	Juan Diaz 3	6.52	297	eP	Pn	07 42 17.4	+0.1
URMC	La Uribe, Meta	6.56	126	P	Pn	07 42 18.3	+0.5
	6µm475nm,0.7s						
SAJU	San Juanillo,	6.63	296	eP	Pn	07 42 18.7	0.0
RUSC	La Rusia	6.66	101		Pn	07 42 22.2	+2.6
RUSC	La Rusia	6.66	101	⇑P	Pn	07 42 21.8	+2.2
RUSC	La Rusia	6.66	101	P	Pn	07 42 21.3	+1.7
	2µm2µm253nm,0.9s						
RUSC				S	Sn	07 43 37.3	+1.1
	2µm2µm253nm,0.9s						
VILC	Villavicencio,	6.68	117	P	Pn	07 42 22.9	+3.4
	532nm48µm3µm,0.5s						
TULM	Tulcn-Chalpat	6.69	164	P	Pn	07 42 23.7	+3.7
	774nm86nm,0.9s						
LAPC	Finca la Perla	6.72	302	eP	Pn	07 42 23.7	+3.7
ALIBA	Liberia Airpor	6.73	301	eP	Pn	07 42 21.6	+1.5
FLOC	Florencia	6.85	144		Pn	07 42 24.3	+2.5
FLOC	Florencia	6.85	144	⇑P	Pn	07 42 24.3	+2.5
FLOC	Florencia	6.85	144	P	Pn	07 42 23.2	+1.4
	3µm5µm482nm,1.0s						
PAMC	Pamplona, Colo	6.91	88	P	Pn	07 42 25.2	+2.1
	5µm189nm,0.5s						
OTAV	Otavalo	7.00	170	Pn	Pn	07 42 26.6	+2.3
MACC	Macarena, Meta	7.66	131	P	Pn	07 42 33.4	+0.5
	6µm880nm,0.8s						
BILN	Bilwi Airport	7.74	332		Pn	07 42 33.2	-0.7
BILN	Bilwi Airport	7.74	332	P	Pn	07 42 34.1	+0.1
BOAB	BOACO BROADBAN	7.90	312		Pn	07 42 36.6	+0.4
BOAB	BOACO BROADBAN	7.90	312	P	Pn	07 42 37.9	+1.8
BOAB	BOACO BROADBAN	7.90	312	S	Sn	07 44 07.9	+2.0
SLOR	San Lorenzo -	7.94	172		Pn	07 42 39.7	+2.5
MGAN	Managua	8.15	308	P	Pn	07 42 41.6	+2.0
SIUN	Universidad Ur	8.21	323		Pn	07 42 41.0	+0.6
PTLC	Puerto Leguiza	8.49	145	P	Pn	07 42 49.6	+5.3
	2µm200nm,0.8s						
URIC	Uribia, Colomb	8.80	59	P	Pn	07 42 49.8	+1.2
	1µm2µm188nm,1.0s						
SDV	Santo Domingo	9.10	79	Pn	Pn	07 42 54.6	+1.7
	23nm,0.3s,baz=258,slow=8.4,SNR=87						
SDV				Sn	Sn	07 44 31.0	-4.9
	17nm,0.3s,baz=285,slow=12,SNR=3.0						
SDV				LR	LR	07 46 48.9	
	comp=Z,2µm,21.7s,baz=253,slow=40						
	74nm,0.4s						
SDV	Santo Domingo	9.10	79		Pn	07 42 55.0	+2.1
SDV	Santo Domingo	9.10	79	eP	Pn	07 42 54.2	+1.3
SDV	Santo Domingo	9.10	79	P	Pn	07 42 54.7	+1.8
	2µm241nm,0.8s						
TGUH	Tegucigalpa,Un	10.13	313		Pn	07 43 07.5	+0.7
TGUH	Tegucigalpa,Un	10.13	313	P	Pn	07 43 11.1	+4.2
MTDJ	Mount Denham	11.17	11	Pn	Pn	07 43 21.5	+0.3
MTDJ	Mount Denham	11.17	11	i P	Pn	07 43 21.6	+0.3
MTDJ	Mount Denham	11.17	11	i P	Pn	07 43 21.4	+0.3
STH	Stony Hill	11.18	14	i P	Pn	07 43 23.7	+2.4
MTO3	Montecristo	11.92	308		Pn	07 43 31.4	-0.1
LCCY	Blossom Villag	12.42	358	Pn	Pn	07 43 37.6	-0.5
LCCY	Blossom Villag	12.42	358	i P	Pn	07 43 39.2	+1.1
CBCY	The Bluff, Cay	12.48	360	i P	Pn	07 43 38.8	-0.2
LMGC	Las Mercedes	13.06	11	i P	P	07 43 52.8	-4.6
APG	El Apazote	13.14	307	Pn	Pn	07 43 49.5	+1.3
	baz=136,slow=6.9,SNR=8.8						
MARVS	Santiago de Cu	13.26	16	i P	Pn	07 43 51.0	+1.4
RCC	Rio Carpintero	13.31	16	i P	Pn	07 43 51.9	+1.6
GTBY	Guantanamo Bay	13.42	19	i P	Pn	07 43 54.6	+2.8
GTBY	Guantanamo Bay	13.42	19	P	Pn	07 43 53.7	+1.9
	57nm,0.8s						

PINC	Pinares de May	13.75	15	i P	Pn	07 43 58.0	+1.7
QMBU	Quimbuelo	13.77	20	i P	Pn	07 43 57.9	+1.3
PETF	Flores	13.89	315		Pn	07 43 57.2	-1.0
MASC	Masc	13.95	22	i P	Pn	07 44 00.9	+1.9
NMDO	Nuevo Mundo	14.05	18		Pn	07 44 01.0	+0.6
NMDO	Nuevo Mundo	14.05	18	i P	Pn	07 44 02.7	+2.2
HLGC	Holguin	14.07	14	i P	Pn	07 44 02.9	+2.2
MOAC	Moa	14.15	18	i P	Pn	07 44 05.4	+3.6
ATAH	Atahualpa	14.28	175	Pn	Pn	07 44 04.1	+0.1
	0.2nm,0.3s,baz=29,slow=4.4,SNR=4.9						
	5.7nm,0.7s						
SDDR	Presa de Saban	14.28	34		Pn	07 44 04.2	+0.5
BANI	BANI	14.36	38		Pn	07 44 04.2	-0.6
SGC2	Sao Gabriel da	14.60	119	P	Pn	07 44 05.3	-2.7
	649nm58nm,1.0s						
MGV	Manicaragua	14.85	359	i P	Pn	07 44 11.9	+0.6
SC01	Santiago de lo	14.95	35	Pn	Pn	07 44 11.5	-1.3
PCRV	Puerto La Cruz	15.15	78	LR	LR	07 51 16.2	
	comp=Z,35nm,18.1s,slow=41						
CCIG	Comitan	15.19	308	Pn	Pn	07 44 15.2	-0.8
DR12	Loma Pena Alta	15.27	40		Pn	07 44 16.3	-0.7
TEIG	Tepich	15.42	328	Pn	Pn	07 44 20.2	+1.2
	0.1nm,0.3s,baz=129,slow=20,SNR=1.4						
SOR	Soroa	15.85	349	i P	P	07 44 32.7	+4.3
CAMR	Camarioca	15.87	354	i P	P	07 44 33.4	+4.8
AOPR	Arecibo Observ	16.77	47		Pn	07 44 34.7	-1.7
AOPR				IAmb	IAmb	07 44 45.9	
	comp=Z,50nm,0.6s						
SJG	San Juan	17.07	49	P	Pn	07 44 38.2	-2.0
	comp=Z,16nm,0.5s,baz=217,slow=16,SNR=8.0						
SJG				Sn	Sn	07 47 40.3	-10
	comp=Z,0.7nm,0.3s,baz=213,slow=21,SNR=2.2						
SJG				LR	LR	07 51 56.3	
	comp=Z,488nm,21.0s,baz=228,slow=39						
SJG	San Juan	17.07	49	Pn	Pn	07 44 39.7	-0.5
GCPR	Guaynabo City	17.24	49	Pn	Pn	07 44 41.6	-0.7
HUMP	Col San Antoni	17.32	50		Pn	07 44 41.2	-2.0
CMIG	Matias Romero	17.83	305	P	Pn	07 44 46.1	-3.5
	comp=Z,1.9nm,0.7s,baz=168,slow=16,SNR=2.7						
TEFE	Tefe	18.38	125	eP	Pn	07 44 55.6	-0.8
NNA	Nana	19.25	172	P	P	07 45 05.5	-0.6
	comp=Z,1.2nm,0.3s,baz=346,slow=13,SNR=2.4						
	comp=Z,4.9nm,0.3s						
BIM	Bigot	19.65	67	P	P	07 45 10.7	+0.3
BIM				IAmb	IAmb	07 45 15.4	
	comp=Z,86nm,1.1s						
BOAV	Boa Vista	19.66	103		Pn	07 45 11.3	-0.5
BOAV				IAmb	IAmb	07 45 15.2	
	comp=Z,63nm,1.1s						
BOAV	Boa Vista	19.66	103	eP	P	07 45 11.1	+0.6
BOAV	Boa Vista	19.66	103	P	P	07 45 10.3	-0.2
MPOM	Morne Pois Mar	19.82	67	P	Pn	07 45 13.8	0.0
ANWB	Willy Bob	20.32	57	P	P	07 45 17.0	-0.6
GDSD	La Dsirade Is	20.33	62	P	P	07 45 17.0	-0.8
MACA	Manacapuru-AM	21.55	118		P	07 45 31.9	+0.8
MACA	Manacapuru-AM	21.55	118	eP	P	07 45 31.2	+0.2
JRQG	Juriquilla Cam	24.19	306	P	P	07 45 58.1	-0.4
JRQG				IAmb	IAmb	07 46 19.5	
	comp=Z,12nm,0.4s						
TIGA	Tifton	24.41	352	P	P	07 46 00.2	+0.2
TIGA				IAmb	IAmb	07 46 06.6	
	comp=Z,20nm,0.8s						
250A	Grady	25.43	347		P	07 46 09.2	0.0
250A				IAmb	IAmb	07 46 14.4	
	comp=Z,27nm,1.0s						
154A	Montrose	25.51	353	P	P	07 46 10.9	+1.0
152A	Waverly Hall	25.79	350	P	P	07 46 12.7	+0.1
152A				IAmb	IAmb	07 46 18.5	
	comp=Z,29nm,1.1s						
LPAZ	La Paz	25.96	154	P	P	07 46 16.3	+1.4
	comp=Z,3.7nm,0.6s,baz=340,slow=11,SNR=22						
LPAZ				LR	LR	07 57 47.4	
	comp=Z,337nm,20.3s,baz=312,slow=40						
	comp=Z,3.7nm,0.6s						
LPAZ	La Paz	25.96	154		P	07 46 16.3	+1.4
LPAZ	La Paz	25.96	154	eP	P	07 46 14.2	-0.7
ITTB	Itaituba	26.50	115	eP	P	07 46 19.2	0.0
PB18	Visviri	26.59	158		P	07 46 22.0	+1.5
PB18				IAmb	IAmb	07 46 45.3	
	comp=Z,32nm,1.0s						
LRAL	Lakeview Retre	26.61	346		P	07 46 20.1	+0.2
Y60A	Bolivia	26.73	3	P	P	07 46 20.7	-0.3
Y52A	Lilburn	26.86	352	P	P	07 46 21.9	-0.3
Y52A				IAmb	IAmb	07 46 39.7	
	comp=Z,15nm,0.9s						
VBMS	Vicksburg	26.89	339	P	P	07 46 22.9	+0.4
MDP	Montagnes des	26.95	93	P	P	07 46 25.6	+2.4
	comp=Z,7.8nm,0.8s,baz=270,slow=4.0,SNR=2.2						
MDP				LR	LR	07 57 34.0	
	comp=Z,733nm,18.6s,baz=272,slow=37						
	comp=Z,7.8nm,0.8s						
JSC	Jenkinsville	27.01	357	P	P	07 46 23.3	-0.3
MAL2	Monte Alegre,	27.02	109	P	P	07 46 24.6	+0.7
Z47A	Carrollton	27.04	344	P	P	07 46 24.4	+0.5
Z47A				IAmb	IAmb	07 46 32.4	
	comp=Z,24nm,0.8s						
PB12	IPOC Station P	27.24	160	P	P	07 46 27.8	+2.0
PB12				IAmb	IAmb	07 46 46.5	
	comp=Z,16nm,0.8s						
PB16	IPOC Station P	27.26	159	P	P	07 46 28.2	+1.6
PB16				IAmb	IAmb	07 46 33.5	
	comp=Z,20nm,0.8s						
Y49A	Blount Mountai	27.27	348	P	P	07 46 26.0	+0.1
Y49A				IAmb	IAmb	07 46 47.6	
	comp=Z,15nm,1.0s						
FPAL	Fort Paine	27.77	349	P	P	07 46 30.5	+0.1
MLDN	Muldoon	27.81	326	P	P	07 46 30.2	-0.6
MLDN				IAmb	IAmb	07 46 41.2	
	comp=Z,20nm,0.8s						
VILB	Vilhena	27.82	136		P	07 46 31.8	+0.7
VILB	Vilhena	27.82	136	eP	P	07 46 31.0	-0.1
NPGB	Novo Progresso	28.06	120	eP	P	07 46 33.1	-0.1
W50A	Signal Mountai	28.36	350	P	P	07 46 36.0	+0.2
W50A				IAmb	IAmb	07 46 59.6	
	comp=Z,16nm,0.9s						
CPCT	Cooper Cave	28.49	352	P	P	07 46 36.9	+0.1
CPCT				IAmb	IAmb	07 46 51.2	
	comp=Z,13nm,1.0s						
SWET	Sewanee	28.49	349	P	P	07 46 36.2	-0.6
SWET				IAmb	IAmb	07 46 44.8	
	comp=Z,17nm,1.2s						
V53A	Saluda	28.50	355	P	P	07 46 37.7	+0.7
PB11	IPOC Station P	28.53	160	P	P	07 46 39.1	+1.7
PB11				IAmb	IAmb	07 47 02.9	
	comp=Z,16nm,0.7s						
GO01	Chusmiza	28.60	159	P	P	07 46 40.5	+2.0
GO01				IAmb	IAmb	07 46 42.7	
	comp=Z,18nm,0.8s						
V48A	Smith Brothers	29.17	348	P	P	07 46 42.5	-0.4
V48A				IAmb	IAmb	07 46 50.9	
	comp=Z,13nm,0.8s						
PDRB	Porto dos Gac	29.48	129	eP	P	07 46 45.1	-0.7
WVT	Waverly	29.77	347	P	P	07 46 47.7	-0.4
CLDB	Colider	29.77	127	eP	P	07 46 48.4	0.0
BRDY	Brady	30.03	326		P	07 46 48.8	-1.8
T50A	Nancy	30.07	352		P	07 46 49.5	-1.4
WHAR	Wooly Hollow	30.29	339	P	P	07 46 52.2	-0.5
WHAR				IAmb	IAmb	07 46 58.9	
	comp=Z,20nm,1.1s						
PTLB	Pontes e Lacer	30.32	138	eP	P	07 46 53.2	0.0
S51A	Beattyville	30.53	354	P	P	07 46 55.3	+0.4
S51A				IAmb	IAmb	07 47 03.0	
	comp=Z,19nm,1.1s						
PLPT	Palo Pinto	30.83	328	P	P	07 46 56.8	-0.8
PBMO	Poplar Bluff	31.05	343	P	P	07 46 58.8	-0.7
PBMO				IAmb	IAmb	07 47 05.9	
	comp=Z,18nm,1.3s						
WCI	Wyandotte Cave	31.49	350	P	P	07 47 03.3	0.0
USIN	University of	31.49	348	P	P	07 47 03.1	-0.3
TXAR	Lajitas Array	31.57	317	P	P	07 47 02.9	-1.4
	comp=Z,0.5nm,0.7s,baz=123,slow=9.2,SNR=6.3						
TXAR				PcP	PcP	07 49 56.3	-0.7
	comp=Z,0.7nm,0.8s,baz=130,slow=5.1,SNR=4.7						
TXAR				LR	LR	08 00 51.3	
	comp=Z,107nm,21.3s,baz=118,slow=38						
	comp=Z,0.5nm,0.7s						
TX31	Lajitas Ar. Si	31.57	317		P	07 47 03.0	-1.3
TX31				IAmb	IAmb	07 47 28.0	
	comp=Z,20nm,2.0s						
S44A	Carbondale	31.60	345	P	P	07 47 03.2	-1.1
S44A				IAmb	IAmb	07 47 11.5	
	comp=Z,16nm,1.1s						
Q52A	Bidwell	31.73	356	P	P	07 47 06.0	+0.6
FVM	French Village	32.18	344	P	P	07 47 09.1	-0.3
FVM				IAmb	IAmb	07 47 15.2	
	comp=Z,24nm,1.3s						
MNHN	Monahans	32.30	321	P	P	07 47 09.6	-1.1
CCM	Cathedral Cave	32.48	343	P	P	07 47 11.4	-0.7
P48A	Milroy	32.55	352	P	P	07 47 12.6	-0.1
P48A				IAmb	IAmb	07 47 16.9	
	comp=Z,16nm,0.9s						
WMOK	Wichita Mounta	32.59	330	P	P	07 47 11.7	-1.4
PRPB	Parauapebas	32.60	113	eP	P	07 47 13.5	+0.1
OK052	Battle Ridge R	32.69	334	P	P	07 47 12.8	-1.1
OK052				IAmb	IAmb	07 47 22.4	
	comp=Z,11nm,0.6s						
POST	Post	32.77	325	P	P	07 47 13.6	-1.1
POST				IAmb	IAmb	07 47 33.6	
	comp=Z,16nm,1.3s						
O52A	Adamsville	32.85	357	P	P	07 47 14.6	-0.7
SALV	Santo Antonio	33.01	134	eP	P	07 47 16.8	-0.1
O49A	Covington	33.13	353	P	P	07 47 17.2	-0.5
SMWD	Samnorwood	33.62	329	P	P	07 47 21.0	-1.1
SMWD				IAmb	IAmb	07 47 28.6	
	comp=Z,12nm,1.0s						
LPIG	La Paz	33.84	303	LR	LR	08 01 47.7	
	comp=Z,156nm,19.0s,baz=108,slow=38						
SNDB	Serra Nova Dou	34.03	124	eP	P	07 47 25.9	0.0
AC02	Maricunga	35.32	164		P	07 47 39.2	+1.8
AC02				IAmb	IAmb	07 47 41.5	
	comp=Z,13nm,0.8s						
SMTB	Santa Maria do	35.72	116	eP	P	07 47 40.6	+0.1
MURT	Porto Murtinho	35.91	143	eP	P	07 47 40.4	-1.6
AQDB	Aquidauana	36.20	140		P	07 47 44.2	-0.2
Y22A	Socorro	36.67	320		P	07 47 47.7	-1.0
Y22A				IAmb	IAmb	07 47 55.6	
	comp=Z,33nm,1.8s						
AC05	El Transito	36.94	166	P	P	07 47 53.0	+2.2
AC05				IAmb	IAmb	07 48 03.0	
	comp=Z,28nm,1.3s						
ANMO	Albuquerque	37.02	322	LR	LR	08 05 03.7	
	comp=Z,120nm,21.5s,baz=126,slow=40						
AMBA	Amambai (Brazi	38.45	142	eP	P	07 48 02.8	-0.7
BDFB	Brasilia	38.69	126	P	P	07 48 06.2	+0.3
	comp=Z,9.2nm,0.8s,baz=292,slow=10,SNR=12						
BDFB				LR	LR	08 04 49.3	
	comp=Z,392nm,19.1s,baz=320,slow=37						
	comp=Z,9.2nm,0.8s						
BDFB	Brasilia	38.69	126		P	07 48 06.2	+0.3
BDFB				IAmb	IAmb	07 48 07.6	
	comp=Z,37nm,1.4s						
ITRB	Iturama	39.32	133	eP	P	07 48 10.9	-0.1
CPUP	Villa Florida	39.75	148	P	P	07 48 13.4	-1.0
	comp=Z,0.6nm,0.8s,baz=292,slow=0.8,SNR=4.5						
CPUP				LR	LR	08 05 18.2	
	comp=Z,43nm,20.5s,baz=184,slow=37						
	comp=Z,0.6nm,0.8s						
NBPS	Pedro II - PI	39.84	106	eP	P	07 48 15.4	0.0
IPMB	Ipameri, GO	39.87	129	eP	P	07 48 15.4	-0.2
NBMO	Morrinhos-CE	40.90	103	eP	P	07 48 24.5	+0.4
BB19B	Bebedouro	41.51	133	eP	P	07 48 28.7	-0.4
PMNB	Patos De Minas	41.56	128	eP	P	07 48 29.4	-0.2
PTGB	Pitanga	41.58	141	eP	P	07 48 27.8	-1.9
FRTB	Fartura	42.26	137	eP	P	07 48 34.5	-0.7
PFO	Pinyon Flats O	42.99	313	LR	LR	08 07 54.7	
	comp=Z,180nm,20.3s,baz=134,slow=38						
RCLB	Rio Claro- Sao	43.08	134	eP	P	07 48 41.7	-0.2
VAO	Valinhos	43.85	134		P	07 48 47.7	-0.4
VAO	Valinhos	43.85	134	eP	P	07 48 47.8	-0.4
PDAR	Pinedale Array	44.15	328	P	P	07 48 50.4	-0.1
	comp=Z,1.0nm,0.6s,baz=134,slow=10.0,SNR=9.7						
	comp=Z,1.0nm,0.6s						
PET01	Itanhaem-SP	44.46	136	eP	P	07 48 51.9	-1.0
NBTA	Tacaratu-PE	44.51	111	eP	P	07 48 53.6	+0.1
RPN	Rapa Nui	44.59	219	LR	LR	08 02 31.7	
	comp=Z,243nm,21.5s,baz=7.0,slow=30						
ULM	Lac du Bonnet	45.02	345	P	P	07 48 57.5	+0.6
	comp=Z,6.9nm,0.6s,baz=156,slow=11,SNR=6.9						
	comp=Z,6.9nm,0.6s						
PARB	Paraibuna	45.02	133	eP	P	07 48 57.3	-0.2
NVAR	Mina Array Bea	46.72	318	P	P	07 49 11.2	+0.2
	comp=Z,1.2nm,0.6s,baz=148,slow=6.7,SNR=8.1						
	comp=Z,1.2nm,0.6s						
CAM01	Campos-RJ	47.11	129	eP	P	07 49 13.9	0.0
PLCA	Paso Flores	48.41	171	P	P	07 49 24.2	+0.4
	comp=Z,2.7nm,0.8s,baz=358,slow=10,SNR=8.9						
	comp=Z,2.7nm,0.8s						
SCHQ	Schefferville	48.62	10	P	P	07 49 26.4	+1.2
	comp=Z,5.1nm,0.7s,baz=217,slow=7.0,SNR=8.3						
SCHQ				LR	LR	08 12 53.8	
	comp=Z,81nm,18.1s,baz=155,slow=40						
	comp=Z,5.1nm,0.7s						
NEW	Newport	51.78	329	LR	LR	08 14 47.0	
	comp=Z,66nm,19.1s,baz=140,slow=40						
HOOD	Mount Hood Mea	52.53	324	P	P	07 49 54.7	-0.3
HOOD				IAmb	IAmb	07 50 04.7	
	comp=Z,20nm,0.9s						
LLLB	Lillooet	55.67	329	P	P	07 50 17.6	-0.2
LLLB				IAmb	IAmb	07 50 42.6	
	comp=Z,17nm,1.3s						
FRB	Frobisher Bay	57.03	6	LR	LR	08 16 28.4	
	comp=Z,135nm,19.4s,baz=243,slow=38						
BBB	Bella Bella	59.80	328	LR	LR	08 19 21.0	
	comp=Z,70nm,19.4s,baz=147,slow=39						
YKA	Yellowknife Ar	60.81	342	P	P	07 50 52.8	-0.7
	comp=Z,2.5nm,0.7s,baz=141,slow=6.3,SNR=37						
	comp=Z,2.5nm,0.7s						
SFJD	Kangerlussuaq	62.93	12	LR	LR	08 18 53.7	
	comp=Z,94nm,20.8s,baz=190,slow=36						
DLBC	Dease Lake	63.99	333	LR	LR	08 23 27.0	
	comp=Z,115nm,18.7s,baz=84,slow=40						
RES	Resolute Bay	68.03	356	LR	LR	08 23 34.2	
	comp=Z,84nm,18.1s,baz=164,slow=38						
SUMG	Summit	69.92	12	P	P	07 51 52.3	-0.5
BORG	Borgarnes	70.39	23	LR	LR	08 20 36.4	
	comp=Z,85nm,20.1s,baz=216,slow=34						
PPT	Papeete	73.27	249	LR	LR	08 15 41.8	
	comp=Z,112nm,21.1s,baz=63,slow=29						
MDT	Midelt	73.60	58	LR	LR	08 22 21.5	
	comp=Z,57nm,18.4s,baz=272,slow=34						
ILAR	Eielson Array	73.93	336	P	P	07 52 17.6	+1.0
	comp=Z,1.7nm,0.8s,baz=111,slow=4.5,SNR=4.7						
ILAR				LR	LR	08 28 58.1	
	comp=Z,55nm,20.0s,baz=94,slow=39						
	comp=Z,1.7nm,0.8s						
DBIC	Dimbokro	74.18	85	P	P	07 52 19.5	+0.5
	comp=Z,8.2nm,0.7s,baz=291,slow=6.0,SNR=12						
DBIC				LR	LR	08 22 39.8	
	comp=Z,100nm,19.7s,baz=256,slow=34						
	comp=Z,8.2nm,0.7s						
DBIC	Dimbokro	74.18	85		P	07 52 19.3	+0.3
DBIC				IAmb	IAmb	07 52 20.4	
	comp=Z,9.3nm,0.8s						
ESDC	Sonseca Array	74.45	51	P	P	07 52 20.8	+0.6
	comp=Z,2.7nm,0.9s,baz=268,slow=6.2,SNR=16						
	comp=Z,2.7nm,0.9s						
ESDC	Sonseca Array	74.45	51		P	07 52 21.1	+1.0
TBI	Tubuai	74.57	243	eLR	LR	08 15 27.7	
	comp=Z,2µm,26.2s						
KDAK	Kodiak Island	74.87	328	LR	LR	08 27 39.5	
	comp=Z,45nm,19.8s,baz=82,slow=38						
EKA	Eskdalemuir Ar	76.46	35	P	P	07 52 33.9	+2.6
	comp=Z,2.3nm,0.8s,baz=267,slow=5.1,SNR=3.6						
EKA				LR	LR	08 21 04.6	
	comp=Z,96nm,21.7s,baz=212,slow=32						
	comp=Z,2.3nm,0.8s						
TAM	Tamanrasset	82.84	68		P	07 53 07.4	+0.5
RAR	Rarotonga	83.43	248	LR	LR	08 23 12.0	
	comp=Z,80nm,18.0s,baz=211,slow=31						
NOA	NORSAR Array B	84.20	29	P	P	07 53 13.7	+0.8
	comp=Z,1.8nm,0.9s,baz=275,slow=5.0,SNR=3.7						
NOA				LR	LR	08 27 00.3	
	comp=Z,57nm,21.0s,baz=265,slow=33						
	comp=Z,1.8nm,0.9s						
SPITS	Spitsbergen Ar	84.26	12	LR	LR	08 32 13.5	
	comp=Z,74nm,19.7s,baz=278,slow=37						
DAVOX	Davos/Dischmat	84.51	44	LR	LR	08 25 07.3	
	comp=Z,64nm,20.4s,baz=260,slow=32						
KEST	Kesra	85.06	55	P	P	07 53 19.0	+1.1
	comp=Z,3.2nm,0.9s,baz=213,slow=14,SNR=2.7						
	comp=Z,3.2nm,0.9s						
FETA	Feichten	85.07	43	i P	P	07 53 20.4	+2.6
	comp=Z,4.8nm,0.9s						
HFS	Hagfors	85.50	30	LR	LR	08 26 06.5	
	comp=Z,88nm,21.2s,baz=258,slow=32						
ABTA	Abfaltersbach	86.32	44	eP	P	07 53 25.3	+1.4
	comp=Z,8.1nm,1.1s						
LESA	Schwarzleotal	86.35	43	eP	P	07 53 28.0	+3.9
	comp=Z,6.2nm,1.0s						
GERES	GERESS Array B	86.86	41	P	P	07 53 26.0	-0.5
	comp=Z,0.2nm,0.3s,baz=273,slow=9.6,SNR=1.4						
GERES				LR	LR	08 28 25.7	
	comp=Z,101nm,18.9s,baz=256,slow=33						
	comp=Z,0.2nm,0.3s						
MYKA	Terra Mystica	87.10	44	i P	P	07 53 28.9	+1.2
	comp=Z,5.0nm,1.0s						
MOA	Molln	87.37	42	eP	P	07 53 30.9	+2.0
	comp=Z,4.2nm,1.1s						
SOKA	Soboth	88.05	43	eP	P	07 53 33.2	+0.9
	comp=Z,6.0nm,1.8s						
CONA	Conrad Observa	88.42	42	eP	P	07 53 35.6	+1.6
	comp=Z,3.8nm,0.9s						
VRAC	Vranov	88.68	41	LR	LR	08 29 44.0	
	comp=Z,157nm,19.5s,baz=286,slow=33						
RONA	Rosalia, Austr	88.74	42	eP	P	07 53 37.0	+1.5
	comp=Z,4.4nm,1.0s						
VAE	Valguarnera	88.91	53	LR	LR	08 28 28.5	
	comp=Z,108nm,21.6s,baz=299,slow=32						
SNAA	Sanae	92.65	162	P	P	07 53 52.1	-1.0
	comp=Z,2.2nm,1.0s,baz=312,slow=7.8,SNR=4.9						
	comp=Z,2.2nm,1.0s						
MLR	Muntele Rosu	95.71	43	LR	LR	08 33 49.6	
	comp=Z,63nm,19.5s,baz=318,slow=33						
TSUM	Tsumeb	99.14	108	LR	LR	08 35 50.5	
	comp=Z,136nm,21.4s,baz=328,slow=33						
HHC	Hu-ho-hao-te	131.10	349	eP	PKPdf	07 59 49.4	-4.7
NJ2	Nanjing	137.17	337	eP	PKPdf	08 00 05.2	-0.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WHN	Wuhan	140.16	341	PKP	PKiKP	08 00 14.0	+0.5
CD2	Chengdu	141.99	355	PKP	PKPdf	08 00 13.0	-1.5
ASAR	Alice Springs	143.86	239	PKhKP	PKPpre	08 00 14.7	
	comp=Z,1.8nm,0.6s,baz=116,slow=3.7,SNR=23						
WRA	Warramunga Arr	144.68	246	PKP	PKPab	08 00 17.7	-0.4
	comp=Z,6.7nm,0.6s,baz=104,slow=3.2,SNR=45						
PZH	PanZhiHua	146.49	358	PKPbc	PKPdf	08 00 21.6	-0.9
CMAR	Chiang Mai Arr	154.49	3	PKPbc	PKiKP	08 00 44.0	+0.7
	comp=Z,1.7nm,0.2s,baz=331,slow=3.1,SNR=5.7						

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*IDC **07** 07:50:33.6±1.7, 32°.53S×178°.20W, h0^{km}, mb3.9/2, mbtmp4.0/3, ML4.0/1, Error ellipse: s-maj=55.8km s-min=31.0km az=131.0*

*WEL **07** 07:50:37.7±1.1, 33°S±21°×17°8W±4°8, h129^{km}±73^{km}, M4.2/8, mB4.6/6, ML4.3/7, MLv4.4/8, Mw(mB)3.8/6, Error ellipse: s-maj=67.8km s-min=5.7km az=113.4, confirmed*

ISC 07 07:50:35.5±1.4**, 32°.5S**±0°.1×**178°.2W**±0°.3**, h20**^{km}**, n21, σ**1^{s}**05**/29**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.19	4	P	Pn	07 51 24.5	-0.1
RIZ	Raoul Island	3.21	4	P	Pb	07 51 30.6	-1.3
WMGZ	Waiomatatini S	6.03	207	P	Pn	07 52 05.2	+1.5
HAZ	Te Kaha	6.24	211	P	Pn	07 52 07.4	+1.0
HAZ				S	Sn	07 53 18.4	+1.3
PUZ	Puketiti	6.32	207	P	Pn	07 52 06.7	-0.8
PUZ				S	Sn	07 53 17.7	-1.4
RUGZ	Raukumara Rang	6.46	211	P	Pn	07 52 09.1	-0.5
RUGZ				S	Sn	07 53 22.4	-0.4
TWGZ	Tauwhareparae	6.51	208	P	Pn	07 52 10.0	-0.3
TWGZ				S	Sn	07 53 23.5	-0.5
CNGZ	Carnagh Statio	6.70	205	P	Pn	07 52 13.2	+0.5
TKGZ	Te Karaka	6.79	207	S	Sn	07 53 30.4	-0.4
URZ	Urewera	6.95	212	Pn	Pn	07 52 15.6	-0.6
	2.9nm,0.3s,baz=315,slow=4.3,SNR=12						
URZ				Sn	Sn	07 53 33.1	-1.5
	2.5nm,0.3s,baz=66,slow=20,SNR=8.2						
	5.4nm,0.3s						
URZ	Urewera	6.95	212	P	Pn	07 52 15.7	-0.6
URZ				S	Sn	07 53 32.8	-1.9
RIGZ	Rimuhau	7.06	207	P	Pn	07 52 17.3	-0.4
RIGZ				S	Sn	07 53 35.6	-1.8
SNGZ	Shannon Statio	7.29	209	P	Pn	07 52 21.8	+0.9
SNGZ				S	Sn	07 53 42.0	-1.1
KNZ	Kokohu	7.37	206	P	Pn	07 52 21.4	-0.5
BKZ	Black Stump Fm	7.97	211	P	Pn	07 52 30.3	0.0
ASAR	Alice Springs	42.89	269	P	P	07 58 33.9	+1.0
	0.5nm,0.4s,baz=110,slow=7.4,SNR=13						
	0.5nm,0.4s						
WRA	Warramunga Arr	44.07	274	P	P	07 58 43.2	+0.9
	1.1nm,0.3s,baz=114,slow=8.2,SNR=14						
	1.1nm,0.3s						
KURBB	Kurchatov Arra	122.39	313	PKP	PKiKP	08 09 29.7	+0.7
	0.2nm,0.5s,baz=110,slow=1.9,SNR=2.7						
FINES	FINESS Array B	147.01	339	PKPbc	PKPab	08 10 17.0	-0.6
	1.9nm,0.6s,baz=48,slow=3.9,SNR=18						
HFS	Hagfors	151.22	348	PKPbc	PKiKP	08 10 27.3	0.0
	2.1nm,0.8s,baz=90,slow=2.9,SNR=1.6						
MMAI	Mount Meron Ar	151.82	280	PKPbc	PKiKP	08 10 31.2	+1.8
	0.5nm,0.3s,baz=58,slow=6.0,SNR=2.2						

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*JMA **07** 07:51:13.6±0.5, 43°N±1°×14°7E±°, h35^{km}±4^{km}, MD4.3/40, MV4.4/40, E OFF HOKKAIDO*

JMA Felt I J1 at E OFF HOKKAIDO .

*NIED **07** 07:51:13.6, 43°.28N×147°.03E, h35^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.50; $M_{\theta\theta}$-0.40; $M_{\phi\phi}$-1.10; $M_{r\theta}$0.21; $M_{\theta\phi}$-0.78; $M_{\phi r}$1.08; Fault plane solution: $M_0$1.91000×10^{15} NP1: ϕ_s226.00000°, δ30.00000°, λ112.00000°. NP2: ϕ_s20.00000°, δ63.00000°, λ78.00000°.*

*MOS **07** 07:51:13.7±0.9, 43°.21N×147°.02E, h42^{km}, mb4.8/24 Error ellipse: s-maj=8.4km s-min=6.0km az=108.4*

*SKHL **07** 07:51:14.0±0.5, 43°.20N×147°.10E, h44^{km}±4^{km}, mb5.2/4*

*NEIC **07** 07:51:16.0±1.5, 43°.2N±0°.1×147°.00E±0°.07, h46^{km}±9^{km}, mb4.6/36, Error ellipse: s-maj=16.6km s-min=2.0km az=154.0*

*IDC **07** 07:51:16.6±2.2, 43°.30N×146°.93E, h48^{km}±20^{km}, mb3.9/25, mbtmp4.1/31, ML3.6/5, MS3.2/8, Error ellipse: s-maj=18.6km s-min=13.9km az=159.0*

ISC 07 07:51:14.8±0.6**, 43°.19N**±0°.06×**147°.01E**±0°.06**, h38**^{km}±1^{km}**, n207, σ**1^{s}**12**/214**, mb4.5**/62**, MS3.5**/9**, 8C-4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.69	349	eP	Pn	07 51 34.4	+6.3
SHO				AMB	AMB	07 51 35.5	
	2µm,0.3s						
SHO				eS	Sn	07 51 41.8	+4.2
SHO				A	A	07 51 43.3	
	17µm,0.4s						
SHO				A	A	07 51 43.3	
	18µm,0.4s						
NEM2	Nemuro 2	0.94	281	P	Pn	07 51 30.7	-0.7
NEM2				eS	Sn	07 51 43.5	-0.1
NMR	Nemuro--Hokkai	0.95	281	⇓iPN	Pn	07 51 30.7	-0.9
NMR				eS	Sn	07 51 43.0	-0.9
NMR	Nemuro--Hokkai	0.95	281	i P	Pn	07 51 30.7	-0.9
NMR				eS	Sn	07 51 42.5	-1.4
YUK	Yuzh-Kuril'sk	1.19	316	d iPN	Pn	07 51 33.5	-1.3
YUK				i S	Sn	07 51 47.6	-2.1
YUK				pmax	pmax		
	comp=E,561nm,0.2s						
YUK				pmax	pmax		
	comp=Z,3µm,0.2s						
YUK				smax	smax		
	comp=N,11µm,0.4s						
YUK				smax	smax		
	comp=E,17µm,0.7s						
YUK	Yuzh-Kuril'sk	1.19	316	i P	Pn	07 51 33.5	-1.3
YUK				AMB	AMB	07 51 33.9	
	comp=E,3µm,0.4s						
YUK				i S	Sn	07 51 47.7	-2.0
YUK				A	A	07 51 48.5	
	comp=E,11µm,0.6s						
YUK				A	A	07 51 48.5	
	comp=E,14µm,0.6s						
GLVR	Golovnino	1.21	297	ePN	Pn	07 51 34.5	-0.7
GLVR				eS	Sn	07 51 49.3	-1.0
GLVR				pmax	pmax		
	comp=Z,551nm,0.4s						
GLVR				pmax	pmax		
	comp=N,359nm,0.3s						
GLVR				pmax	pmax		
	comp=E,361nm,0.2s						
GLVR				smax	smax		
	comp=E,4µm,0.4s						
GLVR				smax	smax		
	comp=N,5µm,0.3s						
GLVR	Golovnino	1.21	297	eP	Pn	07 51 34.5	-0.7
GLVR				AMB	AMB	07 51 37.1	
	comp=N,550nm,0.4s						

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GLVR                            eS     Sn     07 51 49.3  -1.0
GLVR                             A      A     07 51 52.5
         comp=N,5µm,0.4s
GLVR                             A      A     07 51 52.5
         comp=N,4µm,0.4s
JKHN   Kushirohamanak   1.35 266 eP     Pn     07 51 37.2  +0.1
JRA    Rausu            1.56 299  P     Pn     07 51 39.4  -0.5
JNSB   Nemuroshibetsu   1.57 293  P     Pn     07 51 39.6  -0.5
JNSB   Nemuroshibetsu   1.57 293  A     A      07 51 39.6
         comp=N,6.0nm,1.6s,comp=E,6.0nm,1.2s
RUSJ   Misakicho        1.57 306⇓iPN    Pn     07 51 39.6  -0.5
RUSJ                             eS     Sn     07 51 58.7  -0.4
AKK    Akkeshi          1.59 265 i P    Pn     07 51 40.8  +0.4
AKK                              eP            07 51 41.1
AKK                              eS     Sn     07 52 00.1  +0.4
JAK    Akkeshi          1.70 264 eP     Pn     07 51 41.7  -0.2
JNK    Nakash           1.71 284  P     Pn     07 51 41.4  -0.6
JNK                              eS     Sn     07 52 02.4  -0.3
KUR    Kuril'sk         2.14  17 i PN   Pn     07 51 46.6  -1.2
KUR    Kuril'sk         2.14  17 eP     Pn     07 51 46.6  -1.2
KUR                               AMB   AMB    07 51 48.4
         comp=E,170nm,0.5s
KUR                              eS     Sn     07 52 10.4  -2.7
KUR                               A     A      07 52 15.2
         comp=E,840nm,0.4s
KUR                               A     A      07 52 15.2
         comp=E,2µm,0.4s
JOB    Onbets           2.34 264  P     Pn     07 51 51.7  +1.0
JAR    Ashorobuto       2.37 274  P     Pn     07 51 51.6  +0.6
JTKR   Abashiri--Toko   2.38 290  P     Pn     07 51 51.9  +0.7
JCH    Churui           2.74 259  P     Pn     07 51 57.4  +1.3
JMP    Maruseppu        2.77 288  P     Pn     07 51 58.1  +1.5
ERM    Erimo            3.07 249        Pn     07 52 03.1  +2.4
ERM    Erimo            3.07 249  PN    Pn     07 52 03.1  +2.4
JNBK   Urakawa-nobuka   3.26 255  A     A      07 52 04.9
         comp=N,3.0nm,0.5s,comp=E,3.0nm,2.3s
JKA    Kamikawa-asahi   3.33 288        Pn     07 52 06.1  +1.9
ASAJ   Asahikawa        3.33 288  P     Pn     07 52 06.7  +2.4
         comp=E,15nm,0.3s,baz=95,slow=10,SNR=34
ASAJ                              S     Sn     07 52 48.0  +5.4
         comp=E,84nm,0.6s,baz=87,slow=18,SNR=4.1
ASAJ                              LR    LR     07 53 27.7
         comp=E,519nm,20.3s,baz=162,slow=40
         comp=E,40nm,0.6s
YSS    Yuzhno-Sakhali   4.82 323        Pn     07 52 25.5  +0.8
YSS    Yuzhno-Sakhali   4.82 323 ePN    Pn     07 52 26.5  +1.8
YSS                              eS     Sn     07 53 20.7  +1.5
YSS                               pmax  pmax
         comp=Z,30nm,0.9s
YSS                               smax  smax
         comp=N,20nm,0.7s
YSS                               smax  smax
         comp=E,30nm,0.7s
YSS                               MLR   MLR
         comp=Z,600nm,15.0s
YSS                               MLR   MLR
         comp=N,600nm,16.0s
YSS                               MLR   MLR
         comp=E,700nm,16.0s
YSS    Yuzhno-Sakhali   4.82 323 eP     Pn     07 52 26.2  +1.5
JTM    Tenmabayashi     5.03 244        Pn     07 52 28.4  +0.7
TYV    Tymovskoe        8.23 340 ePN    Pn     07 53 13.9  +2.4
TYV                               pmax  pmax
         comp=Z,400nm,2.2s
TYV                               pmax  pmax
         comp=Z,11nm,1.3s
TYV    Tymovskoe        8.23 340 eP     Pn     07 53 12.7  +1.2
JSD    Sado             8.41 235  Pn    Pn     07 53 14.7  +0.7
MAJO   Matsushiro       9.47 228  Pn    Pn     07 53 29.5  +0.9
MAJO   Matsushiro       9.47 228 i PN   Pn     07 53 29.3  +0.7
MJAR   Matsushiro Arr   9.47 228  P     Pn     07 53 29.6  +0.9
         comp=Z,0.2nm,0.3s,baz=26,slow=15,SNR=11
MJAR                              S     Sn     07 55 13.1  -0.6
         comp=Z,0.9nm,0.5s,baz=166,slow=36,SNR=1.9
MJAR                              LR    LR     07 57 41.1
         comp=Z,134nm,18.8s,baz=44,slow=40
         comp=Z,1.1nm,0.4s
MJAR   Matsushiro Arr   9.47 228  Pn    Pn     07 53 28.4  -0.2
MJB9   Matsu-Tunnel     9.47 228  Pn    Pn     07 53 29.9  +1.3
PAU    Pauzhetka       10.62  35 eP     Pn     07 53 44.0  -0.1
JGF    Kuroka          10.63 228  Pn    Pn     07 53 45.5  +1.0
NKL    Nikolayevsk     10.82 339 eP     Pn     07 53 46.8  -0.1
PEA0B  Petropavlovsk-  12.21  32 i PN   Pn     07 54 08.0  +2.0
PETK   Petropavlovsk-  12.21  32  P     Pn     07 54 07.2  +1.2
         comp=Z,0.2nm,0.3s,baz=188,slow=9.0,SNR=4.9
         comp=Z,2.8nm,0.7s
PETK   Petropavlovsk-  12.21  32  Pn    Pn     07 54 06.9  +0.9
KSRS   Korea Array     15.63 255  P     P      07 54 54.3  -1.6
         comp=Z,0.2nm,0.3s,baz=58,slow=14,SNR=1.7
         comp=Z,0.8nm,0.5s
JNU    Nakatsue        16.16 237  LR    LR     08 01 19.7
         comp=Z,129nm,19.8s,baz=20,slow=37
HILR   Hailar Array B  19.79 298  P     P      07 55 39.9  -1.7
         comp=Z,3.5nm,0.4s,baz=91,slow=9.2,SNR=6.8
SEY    Seymchan        20.03   7  P     P      07 55 42.3  -1.8
         comp=Z,0.3nm,0.3s,baz=183,slow=9.5,SNR=7.9
SEY                               LR    LR     08 03 59.7
         comp=Z,96nm,19.1s,baz=148,slow=38
         comp=Z,5.0nm,0.8s
SEY    Seymchan        20.03   7 i P    P      07 55 43.5  -0.6
SEY    Seymchan        20.03   7 eP     P      07 55 43.5  -0.6
YAK    Yakutsk         21.47 337  LR    LR     08 03 36.6
         comp=Z,75nm,18.1s,baz=134,slow=35
BJI    Beijing         23.20 273  P     P      07 56 19.5  +1.4
BJI                               pmax  pmax
         comp=Z,4.0nm,0.7s
TIA    Tai'an          23.94 263  P     P      07 56 25.7  +0.4
TIA                               pmax  pmax
         comp=Z,14nm,0.9s
NJ2    Nanjing         24.80 253 eP     P      07 56 34.5  +1.3
NJ2                               pmax  pmax
         comp=Z,13nm,0.9s
HNS    HongShan        25.20 268 ⇓P     P      07 56 38.0  +1.2
HNS                               pmax  pmax
         comp=Z,10.0nm,1.0s
HHC    Hu-ho-hao-te    26.32 277 eP     P      07 56 47.8  +0.8
HHC                               pmax  pmax
         comp=Z,10.0nm,0.5s
HHC                               pmax  pmax
         comp=Z,67nm,5.1s
ULN    Ulaanbaatar     28.15 294  P     P      07 57 02.5  -0.9
ULN    Ulaanbaatar     28.15 294ceP     P      07 57 03.5  +0.1
ULN                               pmax  pmax
         comp=Z,11nm,1.3s
ULN    Ulaanbaatar     28.15 294 eP     P      07 57 03.5  +0.1
SONM   Songino Array   28.59 294  P     P      07 57 07.5  +0.1
         comp=Z,3.8nm,0.6s,baz=92,slow=8.3,SNR=14
SONM                              LR    LR     08 09 05.5
         comp=Z,110nm,20.5s,baz=98,slow=38
         comp=Z,3.8nm,0.6s
SONM   Songino Array   28.59 294  P     P      07 57 08.2  +0.9
SONM   Songino Array   28.59 294  P     P      07 57 08.2  +0.9
SONM                              pmax  pmax
         comp=Z,3.0nm,0.6s
H11N2  WAKE ISLAND Hy  28.75 138  T     T      08 27 48.0
         baz=330,slow=75,SNR=81
H11N1  WAKE ISLAND Hy  28.76 138  T     T      08 27 56.9
         baz=330,slow=75,SNR=85
H11N3  WAKE ISLAND Hy  28.77 138  T     T      08 28 02.6
         baz=330,slow=75,SNR=56
GUMO   Guam            29.55 184  LR    LR     08 07 41.3
         comp=Z,13nm,20.0s,baz=86,slow=33
H11S1  WAKE ISLAND Hy  29.70 140  T     T      08 29 04.6
         baz=331,slow=76,SNR=478
H11S3  WAKE ISLAND Hy  29.71 140  T     T      08 28 56.6
         baz=331,slow=76,SNR=211
H11S2  WAKE ISLAND Hy  29.72 140  T     T      08 29 06.0
         baz=331,slow=76,SNR=257
TIXI   Tiksi           29.89 349  LR    LR     08 08 57.7
         comp=Z,29nm,19.9s,baz=200,slow=36
LZDM   Lanzhou Array   33.85 273  P     P      07 57 54.1  +0.1
         comp=Z,1.1nm,0.3s,baz=357,slow=3.0,SNR=4.0
         comp=Z,1.1nm,0.3s
L16K   Owhat River     36.22  40  P     P      07 58 13.2  -0.5
C18K   Utukok River    36.85  29  P     P      07 58 18.4  -0.6
C18K                              IAmb  IAmb   07 58 33.9
         comp=Z,14nm,1.5s
C19K   Lookout Ridge   37.54  28  P     P      07 58 24.4  -0.4
B20K   Meade River     38.59  27  P     P      07 58 32.8  -0.8
H21K   Melozitna Rive  39.53  34  P     P      07 58 42.5  +0.9
H21K                              IAmb  IAmb   07 58 43.5
         comp=Z,9.5nm,1.3s
E22K   Anaktuvuk Pass  40.15  31        P      07 58 47.0  +0.3
E22K                              IAmb  IAmb   07 58 48.0
         comp=Z,5.5nm,0.7s
GOMU   GeErMu          40.21 278  P     P      07 58 47.8  -0.2
GOMU                              pP    pP     07 58 58.2   0.0
GOMU                              S     S      08 04 50.0  -2.6
GOMU                              pmax  pmax
         comp=Z,19nm,0.8s
DGZ    Jazzator, Alta  40.61 301 i P    P      07 58 49.3  -1.6
DGZ                               pmax  pmax
         comp=Z,3.0nm,1.1s
ZALV   Zalesovo Beam   41.26 308  P     P      07 58 55.9   0.0
         comp=Z,0.7nm,0.3s,baz=87,slow=5.9,SNR=1.4
         comp=Z,0.7nm,0.3s
COLA   College         41.59  36 i P    P      07 58 59.3  +0.8
COLA                              pmax  pmax
         comp=Z,28nm,2.6s
ILAR   Eielson Array   42.00  36  P     P      07 59 01.9  +0.1
         comp=Z,1.3nm,1.0s,baz=281,slow=9.8,SNR=11
         comp=Z,1.3nm,1.0s
ILAR   Eielson Array   42.00  36  P     P      07 59 02.0  +0.1
E25K   Arctic Village  42.48  31  P     P      07 59 06.8  +1.0
L27K   Beaver Creek,   44.38  38  P     P      07 59 21.8  +0.6
F28M   Old Crow        44.66  31        P      07 59 24.0  +0.7
F28M                              IAmb  IAmb   07 59 26.1
         comp=Z,9.0nm,1.3s
MK31   Makanchi Array  44.75 298ceP     P      07 59 24.7  +0.3
MKAR   Makanchi Array  44.75 298  P     P      07 59 24.5  +0.1
         comp=Z,3.7nm,0.5s,baz=82,slow=8.9,SNR=46
         comp=Z,3.7nm,0.5s
MKAR   Makanchi Array  44.75 298        P      07 59 24.0  -0.3
I28M   Miner Creek     44.88  35  P     P      07 59 26.3  +1.1
I28M                              IAmb  IAmb   07 59 39.2
         comp=Z,5.7nm,1.0s
MAKZ   Makanchi        44.95 298  P     P      07 59 25.4  -0.5
MAKZ                              IAmb  IAmb   07 59 27.5
         comp=Z,7.2nm,1.0s
MAKZ   Makanchi        44.95 298  P     P      07 59 25.4  -0.5
MAKZ                              pmax  pmax
         comp=Z,7.0nm,1.0s
KURK   Kurchatov       45.76 304ceP     P      07 59 32.6  +0.4
KURK                              pmax  pmax
         comp=Z,3.0nm,0.6s
KURK   Kurchatov       45.76 304 eP     P      07 59 32.6  +0.4
KURBB  Kurchatov Arra  45.84 304  P     P      07 59 32.5  -0.4
         comp=Z,1.7nm,0.5s,baz=75,slow=8.5,SNR=15
         comp=Z,1.7nm,0.5s
G31M   Satah River     46.91  32        P      07 59 42.0  +1.0
G31M                              IAmb  IAmb   08 00 02.3
         comp=Z,11nm,1.4s
INK    Inuvik          46.94  30        P      07 59 41.7  +0.5
INK                               IAmb  IAmb   07 59 42.6
         comp=Z,6.6nm,1.1s
INK    Inuvik          46.94  30  P     P      07 59 41.7  +0.5
INK                               pmax  pmax
         comp=Z,7.0nm,1.1s
F31M   Tsiigehtchic    47.02  31        P      07 59 42.6  +0.8
F31M                              IAmb  IAmb   07 59 44.8
         comp=Z,16nm,1.4s
TARG   Taragay, Kyrgy  49.71 293  P     P      08 00 04.3  +0.9
TARG                              IAmb  IAmb   08 00 05.3
         comp=Z,8.8nm,1.4s
TARG   Taragay, Kyrgy  49.71 293  P     P      08 00 04.4  +0.9
TARG                              pmax  pmax
         comp=Z,9.0nm,1.4s
BVAR   Borovoye Array  49.78 310  P     P      08 00 03.2  -0.2
         comp=Z,0.6nm,0.4s,baz=88,slow=9.0,SNR=4.2
         comp=Z,0.6nm,0.4s
BORK   Borovoye        49.81 310 i P    P      08 00 04.3  +0.7
BORK                              pmax  pmax
         comp=Z,20nm,4.5s
C36M   Paulatuk        50.02  28  P     P      08 00 05.0  +0.1
C36M                              IAmb  IAmb   08 00 20.6
         comp=Z,14nm,1.4s
EVN    Everest         50.23 273  P     P      08 00 08.1  +0.3
BOOM   Boomskoye usch  50.62 295  P     P      08 00 10.4  +0.3
BOOM   Boomskoye usch  50.62 295  P     P      08 00 10.4  +0.3
BOOM                              pmax  pmax
         comp=Z,12nm,0.8s
AAK    Ala-Archa       51.51 296        P      08 00 16.8  +0.1
AAK                               IAmb  IAmb   08 00 17.5
         comp=Z,3.9nm,0.5s
AAK    Ala-Archa       51.51 296ceP     P      08 00 17.4  +0.7
AAK                               pmax  pmax
         comp=Z,6.0nm,1.3s
AAK    Ala-Archa       51.51 296 eP     P      08 00 17.4  +0.7
ARSB   Arslanbob       53.12 295  P     P      08 00 29.2  +0.6
ARSB   Arslanbob       53.12 295  P     P      08 00 29.3  +0.6
ARSB                              pmax  pmax
         comp=Z,11nm,0.7s
KK31   Karatay Array   53.88 298  P     P      08 00 33.8  -0.3
KK31                              IAmb  IAmb   08 00 35.0
         comp=Z,7.2nm,0.8s
KK31   Karatay Array   53.88 298  P     P      08 00 33.8  -0.3
KK31                              pmax  pmax
         comp=Z,7.0nm,0.8s
KKAR   Karatay Array   53.88 298  P     P      08 00 34.2  +0.1
KKAR   Karatay Array   53.88 298  P     P      08 00 34.2  +0.1
ARTI   Arti            54.79 317  P     P      08 00 33.7  -6.7
SPITS  Spitsbergen Ar  55.31 349  P     P      08 00 43.9  -0.1
         comp=Z,6.6nm,0.9s,baz=29,slow=9.9,SNR=1.2
         comp=Z,6.6nm,0.9s
YKA    Yellowknife Ar  56.33  34  P     P      08 00 51.9  +0.5
         comp=Z,0.6nm,0.6s,baz=303,slow=7.4,SNR=11
         comp=Z,0.6nm,0.6s
CHGR   Chuyangaron     56.99 294  P     P      08 00 56.6   0.0
CHGR   Chuyangaron     56.99 294  P     P      08 00 56.6   0.0
CHGR                              pmax  pmax
         comp=Z,14nm,0.7s
AB31   Akbulak array   57.33 309  P     P      08 00 58.6  -0.1
AB31                              IAmb  IAmb   08 00 59.8
         comp=Z,5.7nm,1.2s
ABKAR  Akbulak array   57.33 309  P     P      08 00 58.5  -0.2
SHAA   Shahritus       58.26 294  P     P      08 01 06.0  +0.5
SHAA                              IAmb  IAmb   08 01 06.8
         comp=Z,13nm,0.5s
ARCES  ARCESS Array B  59.74 340  P     P      08 01 14.7  -0.4
         comp=Z,5.9nm,1.0s,baz=48,slow=5.2,SNR=16
         comp=Z,5.9nm,1.0s
ARCES  ARCESS Array B  59.74 340  P     P      08 01 15.1  -0.1
ARCES  ARCESS Array B  59.74 340  P     P      08 01 15.1  -0.1
ARCES                             pmax  pmax
         comp=Z,1.0nm,0.9s
KLMR   Klimovskoe      60.85 328 eP     P      08 01 20.0  -2.9
KLMR                              pmax  pmax
         comp=Z,18nm,1.6s
ILON   Igloolik, Nuna  62.16  18  P     P      08 01 30.5  -1.1
ILON                              IAmb  IAmb   08 01 33.9
         comp=Z,11nm,1.5s
WRA    Warramunga Arr  63.89 193  P     P      08 01 44.2  +0.6
         comp=Z,0.7nm,0.8s,baz=107,slow=2.9,SNR=1.6
         comp=Z,0.7nm,0.8s
SUMG   Summit          64.47   2  P     P      08 01 46.9  -0.4
SUMG   Summit          64.47   2  P     P      08 01 46.9  -0.4
SUMG                              pmax  pmax
         comp=Z,15nm,1.5s
FIA1   FINESS Array S  65.33 333  P     P      08 01 51.8  -0.7
FINES  FINESS Array B  65.33 333  P     P      08 01 52.3  -0.3
         comp=Z,9.2nm,0.6s,baz=42,slow=7.5,SNR=47
         comp=Z,9.2nm,0.6s
FINES  FINESS Array B  65.33 333  P     P      08 01 52.0  -0.5
FINES  FINESS Array B  65.33 333 i P    P      08 01 52.0  -0.5
FINES                             pmax  pmax
         comp=Z,9.0nm,0.6s
OBN    Obninsk         65.70 324⇑eP     P      08 01 53.9  -1.1
OBN                               *PP   sP     08 02 09.0  -1.8
OBN                                            08 02 27.0
OBN                              e             08 11 11.0
OBN                               pmax  pmax
         comp=Z,17nm,1.1s
OBN                               MLR   MLR
         comp=Z,94nm,18.0s
FFC    Flin Flon       66.21  36  P     P      08 01 58.9  +0.5
FFC                               IAmb  IAmb   08 02 20.3
         comp=Z,6.6nm,1.4s
FFC    Flin Flon       66.21  36  P     P      08 01 58.9  +0.5
FFC                               pmax  pmax
         comp=Z,7.0nm,1.5s
FCC    Fort Churchill  66.56  30  P     P      08 02 00.5   0.0
FCC                               IAmb  IAmb   08 02 17.3
         comp=Z,4.2nm,1.0s
FCC    Fort Churchill  66.56  30  P     P      08 02 00.5   0.0
FCC                               pmax  pmax
         comp=Z,4.0nm,1.0s
ASAR   Alice Springs   67.61 193  P     P      08 02 08.6  +1.1
         comp=Z,0.4nm,0.6s,baz=21,slow=5.4,SNR=1.2
         comp=Z,0.4nm,0.6s
NVAR   Mina Array Bea  67.97  58  P     P      08 02 11.1  +1.0
         comp=Z,0.5nm,0.5s,baz=318,slow=7.1,SNR=1.9
         comp=Z,0.5nm,0.5s
MNK    Minsk           69.74 327 i P    P      08 02 21.0  +0.5
MNK                              i *PP  pwP    08 02 33.1  -0.6
MNK                              i *SP  sP     08 02 37.5  +1.2
MNK                              i             08 04 55.6
MNK                              i PPP  PPP    08 06 37.6
MNK                              i S    S      08 11 27.8  +1.4
MNK                              i *SS  sS     08 11 48.2  +2.8
MNK                              i SS   SS     08 15 59.3  +5.1
MNK                               pmax  pmax
         comp=Z,18nm,0.8s
MNK                               pmax  pmax
         comp=E,35nm,0.8s
MNK                               pmax  pmax
         comp=N,17nm,0.9s
MNK                               MLR   MLR
         comp=E,223nm,22.0s
MNK                               MLR   MLR
         comp=Z,77nm,19.0s
MNK                               MLR   MLR
         comp=N,183nm,26.0s
NACGM  Naroch          69.87 328 eP     P      08 02 21.8  +0.4
         comp=Z,27nm,0.8s,baz=42
NC405  NORSAR Array S  69.89 339  P     P      08 02 21.2  -0.2
KIV    Kislovodsk      70.06 312 eP     P      08 02 24.0  +1.2
KIV                               pmax  pmax
         comp=Z,15nm,1.1s
KIV                               MLR   MLR
         comp=Z,49nm,17.0s
KIV    Kislovodsk      70.06 312 eP     P      08 02 24.0  +1.2
NB2    NORSAR Subarra  70.09 339  P     P      08 02 22.4  -0.2
         comp=Z,8.3nm,0.7s,baz=32,slow=6.5
NOA    NORSAR Array B  70.09 339  P     P      08 02 22.3  -0.3
         comp=Z,8.4nm,0.8s,baz=34,slow=6.2,SNR=22
         comp=Z,8.4nm,0.8s
KBZ    Khabaz          70.09 312  P     P      08 02 23.4  +0.6
         comp=Z,5.3nm,0.8s,baz=90,slow=8.1,SNR=9.5
         comp=Z,5.3nm,0.8s
KBZ    Khabaz          70.09 312ceP     P      08 02 24.6  +1.8
KBZ                               pmax  pmax
         comp=Z,7.0nm,0.9s
KBZ    Khabaz          70.09 312 eP     P      08 02 24.6  +1.8
HFS    Hagfors         70.17 337  P     P      08 02 22.5  -0.5
         comp=Z,9.1nm,0.6s,baz=52,slow=5.8,SNR=29
         comp=Z,9.1nm,0.6s
PDAR   Pinedale Array  70.35  50  P     P      08 02 25.4  +0.6
         comp=Z,0.3nm,0.6s,baz=149,slow=0.9,SNR=4.5
         comp=Z,0.3nm,0.6s
AK03   Malin Array Si  71.95 324  P     P      08 02 34.1  +0.1
AK23   Malin Array Si  71.97 324  P     P      08 02 34.2  +0.1
AKASG  Malin Array Be  71.97 324  P     P      08 02 33.9  -0.2
         comp=Z,3.9nm,0.6s,baz=41,slow=6.0,SNR=16
         comp=Z,3.9nm,0.6s
AKASG  Malin Array Be  71.97 324 i P    P      08 02 33.9  -0.2
AKASG                             pmax  pmax
         comp=Z,5.0nm,0.6s
AKBB   Malin Array Si  71.97 324  P     P      08 02 33.8  -0.3
AKBB                              IAmb  IAmb   08 02 34.4
         comp=Z,6.7nm,0.8s
AKBB   Malin Array Si  71.97 324ceP     P      08 02 34.1   0.0
AKBB                              pmax  pmax
         comp=Z,7.0nm,0.8s
AKBB   Malin Array Si  71.97 324  P     P      08 02 34.2  +0.1
AK04   Malin Array Si  71.98 324  P     P      08 02 34.1  -0.1
AK01   Malin Array Si  71.98 324  P     P      08 02 34.1  -0.1
KIEV   Kiev            71.98 324  P     P      08 02 34.2   0.0
AK22   Malin Array Si  71.99 324  P     P      08 02 34.2   0.0
AK21   Malin Array Si  71.99 324  P     P      08 02 34.1  -0.2
AK08   Malin Array Si  72.01 324  P     P      08 02 34.2  -0.1
AK09   Malin Array Si  72.01 324  P     P      08 02 34.4  +0.1
AK02   Malin Array Si  72.01 324  P     P      08 02 34.3  -0.1
AK11   Malin Array Si  72.01 324  P     P      08 02 34.3  -0.1
AK18   Malin Array Si  72.02 324  P     P      08 02 34.3  -0.1
AK20   Malin Array Si  72.03 324  P     P      08 02 34.3  -0.2
AK05   Malin Array Si  72.04 324  P     P      08 02 34.4  -0.1
AK12   Malin Array Si  72.04 324  P     P      08 02 34.5  -0.1
AK16   Malin Array Si  72.04 324  P     P      08 02 34.5  -0.1
AK19   Malin Array Si  72.05 324  P     P      08 02 34.5  -0.1
AK17   Malin Array Si  72.05 324  P     P      08 02 34.7  +0.1
AK06   Malin Array Si  72.07 324  P     P      08 02 34.6  -0.1
AK14   Malin Array Si  72.07 324  P     P      08 02 34.8  +0.1
RNPP9  Sopachiv        72.85 326  P     P      08 02 39.4  +0.1
CCX    Cicese          73.16  62  P     P      08 02 40.6  -0.9
KMPD   K-Podol'skiy    74.76 324  P     P      08 02 50.4  -0.2
STNU   Starunia        75.49 325  P     P      08 02 54.9  +0.1
KSV    Kosov           75.55 324  P     P      08 02 55.2   0.0
RAKU   Rahkiv          76.16 324  P     P      08 02 58.1  -0.6
STHS   Stebnicka Huta  76.27 327 eP     P      08 03 00.4  +1.1
STHS   Stebnicka Huta  76.27 327 eP     P      08 03 00.4  +1.1
LANS   Liptovska Anna  77.19 328 eP     P      08 03 06.3  +1.8
LANS   Liptovska Anna  77.19 328 eP     P      08 03 06.3  +1.8
CLL    Collm           77.76 332 i P    P      08 03 07.8  +0.2
CLL    Collm           77.76 332 i P    P      08 03 07.8  +0.2
CLL                               AMS   AMS    08 27 00.0
         comp=Z,100nm,19.7s
BRTR   Keskin Array B  77.86 314  P     P      08 03 08.8  +0.2
         comp=Z,1.0nm,0.8s,baz=68,slow=3.9,SNR=5.1
         comp=Z,1.0nm,0.8s
BRTR   Keskin Array B  77.86 314 i P    P      08 03 09.3  +0.8
BRTR                              pmax  pmax
         comp=Z,1.0nm,0.7s
EKA    Eskdalemuir Ar  78.63 343  P     P      08 03 12.7  +0.3
         comp=Z,1.9nm,0.6s,baz=19,slow=5.3,SNR=9.8
         comp=Z,1.9nm,0.6s
MODS   Modra-Piesok    78.67 328 eP     P      08 03 15.4  +2.7
MODS   Modra-Piesok    78.67 328 eP     P      08 03 15.4  +2.7
SRO    Srobarova       78.72 328 eP     P      08 03 13.8  +0.9
SRO    Srobarova       78.72 328 eP     P      08 03 13.8  +0.9
KHC    Kasperske Hory  79.40 331  P     P      08 03 16.9  +0.2
KHC    Kasperske Hory  79.40 331ceP     P      08 03 18.0  +1.3
KHC                               pmax  pmax
         comp=Z,9.0nm,2.5s
GERES  GERESS Array B  79.60 331  P     P      08 03 18.1  +0.2
         comp=Z,0.8nm,0.7s,baz=29,slow=3.0,SNR=3.7
         comp=Z,0.8nm,0.7s
MMAI   Mount Meron Ar  81.75 308  P     P      08 03 30.5  +0.9
         comp=Z,3.6nm,0.5s,baz=34,slow=6.1,SNR=8.0
         comp=Z,3.6nm,0.5s
TXAR   Lajitas Array   83.05  56  P     P      08 03 37.6  +1.1
         comp=Z,0.5nm,0.5s,baz=300,slow=2.6,SNR=16
         comp=Z,0.5nm,0.5s
ESDC   Sonseca Array   93.44 338  P     P      08 04 25.9  -0.4
         comp=Z,0.3nm,0.7s,baz=34,slow=3.8,SNR=2.0
         comp=Z,0.3nm,0.7s
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*RSPR **07** 07:52:51.1, 19°.36N×67°.55W, h10^{km}±16^{km}, MD3.4/13*
*SDD **07** 07:52:52.6±2.0, 19°.29N×67°.22W, h16^{km}±76^{km}, MD3.2, ML3.3, MW3.0, Presumed earthquake*
*NEIC **07** 07:52:53.4±1.2, 19°.08N±0°.04×67°.28W±0°.02, h10^{km}±2^{km}, ML2.8/26, Md3.4/13(RSPR), Error ellipse: s-maj=7.1km s-min=3.0km az=16.0*
*OSPL **07** 07:52:53.4±0.4, 19°.20N×67°.36W, h6^{km}±3^{km}, ML2.5, Presumed earthquake*
ISC 07 07:52:51.2±1.5**, 19°.27N**±0°.07×**67°.40W**±0°.04**, h19**^{km}±3^{km}**, n56, σ1^{s}.27**/65**, 22C-4D, Mona Passage**

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Code   Station Name      Δ°   AZ°    Phase ID        Time       Res
                                   Op    ISC      h  m  s     ISC
AGPR   Aguadilla, PR    0.84 161  Pg    Pg     07 53 06.9  -0.8
AGPR                              IAML         07 53 19.6
         314nm,0.4s
AGPR                              IAML         07 53 22.6
         311nm,0.4s
AGPR   Aguadilla, PR    0.84 161⇑eP     Pg     07 53 07.7  -0.1
AGPR   Aguadilla, PR    0.84 161⇓ePg    Pg     07 53 07.5  -0.2
AGPR                            ⇓eSg    Sg     07 53 18.7  -0.3
AGPR                              IAML         07 53 19.8
         comp=N,348nm,0.2s
AGPR   Aguadilla, PR    0.84 161 i P    Pg     07 53 07.0  -0.7
AGPR                             eS     Sg     07 53 17.5  -1.4
AGPR                              IAML         07 53 25.4
         comp=Z,192nm,0.2s
IDE    Isla Desecheo    0.88 185 eS     Sg     07 53 20.3  +0.1
PRSN   Puerto Rico Se   1.07 167        Pb     07 53 10.5  -0.7
PRSN   Puerto Rico Se   1.07 167  Pg    Pb     07 53 10.3  -0.8
PRSN                              IAML         07 53 26.5
         comp=Z,838nm,0.3s
PRSN                              IAML         07 53 31.9
         comp=Z,642nm,0.3s
PRSN   Puerto Rico Se   1.07 167⇑eP     Pb     07 53 10.5  -0.7
PRSN   Puerto Rico Se   1.07 167 eS     Sb     07 53 26.6  +1.8
AOPR   Arecibo Observ   1.10 146        Pn     07 53 10.6  -1.0
AOPR                                    Sb     07 53 24.4  -1.3
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AOPR                               IAML             07 53 31.1
        comp=E,562nm,0.3s
AOPR                               IAML             07 53 34.4
        comp=N,320nm,0.3s
AOPR  Arecibo Observ    1.10 146⇑eP        Pn       07 53 11.0 -0.7
AOPR  Arecibo Observ    1.10 146 eS        Sb       07 53 27.0 +1.3
AOPR  Arecibo Observ    1.10 146⇓ePg       Pn       07 53 10.9 -0.7
AOPR                            ⇑eSg       Sb       07 53 25.5 -0.2
AOPR                               IAML             07 53 34.6
        comp=N,2µm,0.2s
LSP   Las Mesas         1.13 165           Pn       07 53 12.0  0.0
LSP                                        Sb       07 53 27.6 +1.2
LSP   Las Mesas         1.13 165⇑eP        Pn       07 53 12.0  0.0
LSP   Las Mesas         1.13 165 eS        Sb       07 53 27.6 +1.2
EMPR  Esperanza - Ma    1.14 134           Sb       07 53 28.3 +1.6
EMPR  Esperanza - Ma    1.14 134  Pg       Pn       07 53 10.9 -1.2
EMPR                               IAML             07 53 31.6
        comp=N,160nm,0.4s
EMPR  Esperanza - Ma    1.14 134⇑eP        Pn       07 53 12.2 +0.1
EMPR  Esperanza - Ma    1.14 134 eS        Sb       07 53 28.3 +1.6
UUPR  Utuado, UPR, P    1.20 148           Sb       07 53 29.7 +1.3
UUPR  Utuado, UPR, P    1.20 148  Pg       Pn       07 53 11.6 -1.3
UUPR  Utuado, UPR, P    1.20 148⇑eP        Pn       07 53 12.3 -0.6
UUPR  Utuado, UPR, P    1.20 148 eS        Sb       07 53 29.7 +1.3
CRPR  Cabo Rojo, PR     1.29 168           Pn       07 53 14.1  0.0
CRPR                               IAML             07 53 34.1
        comp=N,132nm,0.6s
CRPR                               IAML             07 53 34.5
        comp=N,242nm,0.5s
CRPR  Cabo Rojo, PR     1.29 168           Sn       07 53 29.9 -0.9
CRPR  Cabo Rojo, PR     1.29 168⇑eP        Pn       07 53 14.1  0.0
CRPR  Cabo Rojo, PR     1.29 168 eS        Sn       07 53 31.1 +0.3
CRPR  Cabo Rojo, PR     1.29 168⇑ePg       Pn       07 53 14.3 +0.2
CRPR                            ⇑eSg       Sn       07 53 30.6 -0.2
CRPR                               IAML             07 53 35.1
        comp=N,1µm,0.3s
CRPR  Cabo Rojo, PR     1.29 168 i P       Pn       07 53 14.9 +0.8
CRPR                             eS        Sn       07 53 30.6 -0.2
CRPR                               IAML             07 53 34.4
        comp=Z,195nm,0.4s
MLPR  Magueyes Islan    1.34 165⇑eP        Pn       07 53 14.7 -0.1
MLPR  Magueyes Islan    1.34 165 eS        Sn       07 53 32.1  0.0
MLPR  Magueyes Islan    1.34 165⇑ePg       Pn       07 53 15.0 +0.2
MLPR                            ⇑eSg       Sn       07 53 31.8 -0.2
MLPR                               IAML             07 53 36.3
        comp=N,636nm,0.4s
ECPR  Experimental S    1.36 134           Pn       07 53 14.2 -1.0
ECPR                               IAML             07 53 36.0
        comp=N,391nm,0.2s
ECPR                               IAML             07 53 37.2
        comp=N,332nm,0.2s
ECPR  Experimental S    1.36 134⇑eP        Pn       07 53 15.2  0.0
ECPR  Experimental S    1.36 134 eS        Sn       07 53 34.8 +2.1
HIDR  Higuey Centro     1.42 242⇑ePg       Pg       07 53 19.0 +0.3
HIDR                            ⇑eSg       Sg       07 53 39.7 +2.4
HIDR                               IAML             07 53 47.3
        comp=N,470nm,0.3s
OBIP  Obispado Ponce    1.43 148           Pn       07 53 16.1  0.0
OBIP  Obispado Ponce    1.43 148           Sn       07 53 32.8 -1.6
OBIP                               IAML             07 53 37.0
        comp=E,130nm,0.2s
OBIP  Obispado Ponce    1.43 148⇑eP        Pn       07 53 16.1  0.0
OBIP  Obispado Ponce    1.43 148 eS        Sn       07 53 36.1 +1.7
GCPR  Guaynabo City     1.57 127           Pn       07 53 17.9 -0.1
GCPR  Guaynabo City     1.57 127⇑eP        Pn       07 53 17.9 -0.1
MIDR  Miches            1.59 260⇓ePg       Pg       07 53 23.1 +1.3
MIDR                            ⇑eSg       Sg       07 53 46.7 +4.1
MIDR                               IAML             07 53 47.7
        comp=N,46nm,0.3s
MIDR                               IAML             07 53 48.0
        comp=N,211nm,0.3s
SJG   San Juan          1.65 134           Pn       07 53 19.5 +0.3
SJG                                IAML             07 53 44.2
        comp=N,86nm,0.3s
SJG   San Juan          1.65 134⇑eP        Pn       07 53 20.1 +0.9
SJG   San Juan          1.65 134 eS        Sn       07 53 42.0 +2.1
SJG   San Juan          1.65 134 i P       Pn       07 53 20.0 +0.9
SJG                                IAML             07 53 46.7
        comp=Z,43nm,0.5s
HUMP  Col San Antoni    1.85 127           Pn       07 53 21.7 -0.2
HUMP  Col San Antoni    1.85 127   IAML             07 53 51.3
        comp=Z,66nm,0.2s
HUMP  Col San Antoni    1.85 127⇑eP        Pn       07 53 22.2 +0.4
DR12  Loma Pena Alta    1.94 256  Pn       Pg       07 53 27.3 -1.2
HATOM Hato Mayor del    1.94 256⇑ePg       Pg       07 53 28.3 -0.2
HATOM                              IAML             07 53 57.8
        comp=N,228nm,0.3s
BANI  BANI              2.94 253  Pn       Pb       07 53 40.4 -2.6
SDDR  Presa de Saban    3.69 266  Pn       Pb       07 53 51.7 -4.2
SDDR                               IAML             07 54 59.8
        comp=N,25nm,1.3s
SDDR                               IAML             07 55 04.9
        comp=N,21nm,1.5s
SEUS  St. Eustatius     4.55 112  Pn       Pn       07 53 60.0 +0.9
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*IDC **07** 07:58:57.5±1.7, 34.°98N×141.°22E, h0km, mb3.5/3, mbtmp3.6/6, ML3.2/3, Error ellipse: s-maj=37.9km s-min=19.9km az=80.0*

*JMA **07** 07:59:02.9±0.2, 35.°1N±0.°5×141.°0E±0.°8, h49km±3km, MV2.9/31, E OFF BOSO PENINSULA*

ISC 07 07:58:59.8±2.3**, 35.°06N**±0.°06×**140.°98E**±0.°08**, h10**km±13km**, n22, σ1.§34**/21**, mb3.8**/3**, Near east coast of eastern Honshu**

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Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                                  Op      ISC      h  m  s     ISC
BSO2  Boso 2            0.36 211 eX                 07 59 20.5
BSO1  Boso 1            0.41 180  P       Pn        07 59 13.3 +2.0
BSO1                              X                 07 59 22.2
BSO3  Boso 3            0.46 236  P       Pn        07 59 14.2 +1.9
BSO4  Boso 4            0.53 262  P       Pn        07 59 15.2 +1.9
BSO4                             eX                 07 59 23.5
KTR   Katsuura          0.55 279  P       Pn        07 59 14.9 +1.1
KTR                               S       Sn        07 59 23.6 +0.7
JKUC  kamogawauchiur    0.64 279  P       Pn        07 59 16.2 +1.1
JKUC                              S       Sn        07 59 26.1 +0.8
JCCN  Chibachonan       0.69 298  P       Pn        07 59 17.2 +1.6
JSMT  Sammumatsuo       0.72 324  P       Pn        07 59 17.5 +1.4
JIM2  Oshima 3          1.31 255  P       Pg        07 59 24.9 -0.2
JIM2                             eS       Sg        07 59 41.8 -0.4
JOD2  Odawara 2         1.56 278  P       Pn        07 59 28.3 +0.6
JOD2                             eS       Sn        07 59 46.5 -1.4
JHJ   Hachijo jima 2    2.17 207  Pn      Pn        07 59 36.1  0.0
      17nm,0.3s,baz=58,slow=19,SNR=13
JHJ                               Sn      Sn        08 00 02.5 -0.7
      48nm,0.3s,baz=72,slow=23,SNR=6.6
      51nm,0.3s
MJAR  Matsushiro Arr    2.69 304  Pn      Pn        07 59 44.5 +1.3
      0.6nm,0.3s,baz=110,slow=8.3,SNR=21
MJAR                              Sn      Sb        08 00 20.4 -0.8
      0.6nm,0.3s,baz=146,slow=13,SNR=3.5
      2.1nm,0.3s
ASAJ  Asahikawa         9.13   7  Pn      Pn        08 01 10.8 -0.8
      0.8nm,0.3s,baz=226,slow=12,SNR=6.1
      20nm,1.1s
H11N2 WAKE ISLAND Hy   27.51 117  T       T         08 34 01.3
      baz=308
H11N1 WAKE ISLAND Hy   27.52 117  T       T         08 33 59.7
      baz=308
H11N3 WAKE ISLAND Hy   27.53 117  T       T         08 34 00.5
      baz=308
H11S1 WAKE ISLAND Hy   28.15 119  T       T         08 34 39.7
      baz=309
H11S3 WAKE ISLAND Hy   28.15 119  T       T         08 34 48.1
      baz=309
H11S2 WAKE ISLAND Hy   28.16 119  T       T         08 34 47.4
      baz=309
KURBB Kurchatov Arra   46.95 309  P       P         08 07 31.8 +1.1
      0.4nm,0.5s,baz=75,slow=7.4,SNR=5.6
      0.4nm,0.5s
WRA   Warramunga Arr   55.06 188  P       P         08 08 30.3 -1.6
      0.6nm,0.6s,baz=3.1,slow=7.3,SNR=6.5
      0.6nm,0.6s
ASAR  Alice Springs    58.79 188  P       P         08 08 57.3 -1.1
      0.3nm,0.8s,baz=9.7,slow=9.2,SNR=2.2
      0.3nm,0.8s
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*SJA **07** 08:05:03.6±0.7, 37.°90S×72.°36W, h12km±4km, ML3.6, MW3.3*

*GUC **07** 08:05:07.2±0.8, 37.°95S×72.°53W, h39km±3km, ML3.8*

ISC 07 08:05:03.8±1.5**, 37.°95S**±0.°02×**72.°51W**±0.°04**, h4**km±12km**, n33, σ1.§65**/56**, 2C-2D, Central Chile**

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Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                                  Op      ISC      h  m  s     ISC
LC01  Cunco             1.07 153⇑iP       Pn        08 05 25.7 +0.1
LC01                             i S      Sn        08 05 39.5 -1.4
LC02  Puerto Saavedr    1.09 219 i P      Pb        08 05 25.4 +0.2
LC02                             i S      Sb        08 05 41.0 +1.3
LC02                               IAML             08 05 50.8
        comp=E,7µm,0.3s
CANA  Caviahue          1.15  88 eP       Pb        08 05 23.6 -2.6
CANA                             eS       Sn        08 05 47.0 +4.0
BI04  Isla Mocha        1.18 246⇓iP       Pn        08 05 26.7 -0.3
BI04                             i S      Sb        08 05 42.7 +0.3
BI04                               IAML             08 05 51.7
        comp=E,3µm,0.2s
BI05  Punta Hualpn      1.31 335⇑iP       Pb        08 05 29.2 +0.2
BI05                             i S      Sb        08 05 46.5 +0.3
BI05                               IAML             08 05 50.2
        comp=N,2µm,0.2s
BI05  Punta Hualpn      1.31 335 eP       Pn        08 05 28.9  0.0
BI05                               IAML             08 05 50.5
        comp=Z,910nm,0.1s
BI02  San Fabin de      1.61  38⇓iP       Pg        08 05 34.1 -0.7
BI02                             i S      Sg        08 05 54.5 -1.2
BI02  San Fabin de      1.61  38 eP       Pb        08 05 33.5 -0.7
LR03  Panguipulli       1.69 176 i P      Pb        08 05 34.7 -0.7
LR03                             i S      Sb        08 05 56.1 -0.9
LR03                               IAML             08 06 01.0
        comp=E,3µm,0.8s
LR03  Panguipulli       1.69 176 eP       Pb        08 05 34.9 -0.5
LR03                             eS       Sb        08 05 57.7 +0.7
LR03                               IAML             08 06 01.3
        comp=Z,1µm,0.3s
GO06  Curarrehue        1.82 154 i P      Pb        08 05 36.9 -0.9
GO06                             i S      Sb        08 05 59.9 -1.2
GO06  Curarrehue        1.82 154 eP       Pb        08 05 36.9 -0.9
LR05  Currie            2.31 170 eP       Pn        08 05 43.6 +0.9
LR05                             eS       Sn        08 06 10.9 -0.7
LR05                               IAML             08 06 18.0
        comp=N,364nm,0.3s
LR05  Currie            2.31 170 eP       Pb        08 05 44.5 -1.6
LR05                             eS       Sb        08 06 14.8 -0.2
LR05                               IAML             08 06 18.6
        comp=Z,125nm,0.2s
ML02  Panimavida        2.35  22 eP       Pn        08 05 43.6 +0.5
ML02                             eS       Sn        08 06 09.0 -3.4
ML02                               IAML             08 06 21.4
        comp=E,566nm,0.4s
ML02  Panimavida        2.35  22 eP       Pn        08 05 44.0 +0.9
ML02                             eS       Sn        08 06 12.1 -0.3
ML02                               IAML             08 06 23.1
        comp=Z,290nm,0.3s
LL04  Puerto Octay      2.96 179 eS       Sb        08 06 33.1 -0.5
GO05  Hualane           2.97   9 i P      Pn        08 05 51.5 -0.1
GO05                             i S      Sn        08 06 26.9 -0.8
GO05  Hualane           2.97   9 eP       Pn        08 05 51.6 -0.1
GO05                               IAML             08 06 39.2
        comp=Z,171nm,0.2s
PLCA  Paso Flores       3.17 152 eP       Pn        08 05 55.8 +1.3
PLCA                             eS       Sg        08 06 49.2 +3.6
EDS3  Malargue          3.31  50 eP       Pn        08 05 45.3  -11
BO02  Sierra Bellavi    3.44  24 eP       Pn        08 05 58.9 +0.7
BO02                             eS       Sn        08 06 38.4 -1.1
BO02  Sierra Bellavi    3.44  24 eP       Pn        08 05 59.2 +0.9
BO02                               IAML             08 06 49.1
        comp=Z,330nm,0.1s
BO03  Pichilemu         3.47   7 eP       Pn        08 05 57.4 -1.2
BO01  Tunca             3.73  18 eP       Pn        08 06 01.5 -0.6
BO01                             eS       Sn        08 06 42.6 -3.9
BO01  Tunca             3.73  18 eP       Pn        08 06 01.7 -0.4
BO01                               IAML             08 06 58.4
        comp=Z,93nm,0.2s
MT01  Popeta            4.20  14   IAML   Sb        08 07 12.5 +3.3
        comp=Z,130nm,0.2s
MT01                             eS       Sb        08 07 12.5 +3.3
LMEL  Las Melosas       4.50  25 eP       Pn        08 06 13.8 +1.0
LMEL                             eS       Sn        08 07 06.7 +1.1
LMEL                               IAML             08 07 25.9
        comp=Z,46nm,0.2s
MT13  San Alfonso       4.56  24 eP       Pn        08 06 14.6 +0.9
MT13                             eS       Sn        08 07 08.5 +1.3
MT13                               IAML             08 07 24.0
        comp=Z,38nm,0.2s
MT03  Universidad Ad    4.73  21 eP       Pn        08 06 16.9 +0.9
MT03                             eS       Sn        08 07 12.6 +1.3
MT03                               IAML             08 07 26.6
        comp=Z,75nm,0.2s
MT05  Renca             4.77  18 eP       Pn        08 06 16.1 -0.4
MT05                             eS       Sn        08 07 14.1 +1.9
MT05                               IAML             08 07 28.1
        comp=Z,63nm,0.3s
MT02  Curacav           4.81  14 eP       Pn        08 06 15.7 -1.3
MT02                             eS       Sn        08 07 08.8 -4.3
MT02                               IAML             08 07 25.5
        comp=Z,48nm,0.8s
MT04  Ro Olivares       4.92  24 eP       Pn        08 06 19.6 +0.9
MT04                             eS       Sn        08 07 17.6 +1.3
MT04                               IAML             08 07 32.4
        comp=Z,40nm,0.7s
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*IDC **07** 08:08:30.7±0.5, 57.°35S×24.°83W, h0km, mb4.4/11, mbtmp4.4/12, ML4.2/1, MS3.7/14, Error ellipse: s-maj=20.9km s-min=16.5km az=67.0*

*NEIC **07** 08:08:31.9±2.2, 57.°4S±0.°1×24.°8W±0.°2, h10km±1km, mb4.9/41, Error ellipse: s-maj=19.8km s-min=15.6km az=207.0*

ISC 07 08:08:32.4±0.4**, 57.°45S**±0.°07×**24.°77W**±0.°08**, h15**km**, n88, σ1.§27**/75**, mb4.8**/26**, MS3.8**/13**, 5C-1D, South Sandwich Islands region**

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Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                                  Op      ISC      h  m  s     ISC
HOPE  Hope Point        7.31 291          Pn        08 10 19.2 +0.6
VNA1  Neumayer--Stat   15.00 159 ⇑P       Pn        08 12 05.1 +1.5
      comp=Z,45nm,0.8s
VNA3  Neumayer Olymp   15.23 161 ⇑P       Pn        08 12 06.9 +0.3
      comp=Z,35nm,0.9s
VNA2  Neumayer--Watz   15.39 158 ⇑P       Pn        08 12 08.8 +0.1
      comp=Z,21nm,0.6s,baz=323,slow=15
SNAA  Sanae            16.92 156 ⇑P       Pn        08 12 29.9 +1.6
      comp=Z,281nm,0.7s
SNAA  Sanae            16.92 156  P       Pn        08 12 29.7 +1.3
      comp=Z,0.9nm,0.3s,baz=323,slow=16,SNR=23
SNAA                              S       Sn        08 15 30.4 -5.4
      comp=Z,1.0nm,0.7s,baz=338,slow=19,SNR=1.1
SNAA                              PcP     PcP       08 17 15.3 +1.2
      comp=Z,0.6nm,0.5s,baz=56,slow=5.8,SNR=1.9
SNAA                              LR      LR        08 17 30.9
      comp=Z,210nm,19.5s,baz=12,slow=32
      comp=Z,8.3nm,0.6s
SNAA  Sanae            16.92 156          Pn        08 12 29.8 +1.4
TROLL Troll, Antarti   18.40 153 ⇑P       Pn        08 12 48.9 +2.3
      comp=Z,344nm,0.7s
EFI   East Falkland    20.01 272  P       P         08 13 03.9 -0.3
PMSA  Palmer Station   20.04 232  P       P         08 13 05.0 +0.5
      comp=Z,8.4nm,0.8s,baz=72,slow=7.7,SNR=4.9
      comp=Z,8.4nm,0.8s
BELA  Belgrano 2       20.80 186          P         08 13 13.2 +0.6
MG02  Cerro Sombrero   25.49 261  P       P         08 14 00.5 +0.9
SYO   Syowa Base       29.65 139⇓eP       P         08 14 33.2 -3.6
TRQA  Tornquist        31.09 292  P       P         08 14 49.0 -0.9
TRQA                              IAmb    IAmb      08 15 13.0
      comp=Z,17nm,1.3s
PLTB  Pedras Altas     32.42 310  P       P         08 15 01.7  0.0
PLTB                              IAmb    IAmb      08 15 50.7
      comp=Z,22nm,1.2s
QSPA  South Pole Qui   32.80 180  P       P         08 15 06.5 +1.7
      comp=Z,3.4nm,0.6s,baz=206,slow=2.3,SNR=26
QSPA                              PcP     PcP       08 17 50.6 +1.3
      comp=Z,1.7nm,0.7s,baz=104,slow=3.1,SNR=2.3
      comp=Z,3.4nm,0.6s
QSPA  South Pole Qui   32.80 180          P         08 15 06.2 +1.4
QSPA                              IAmb    IAmb      08 15 10.7
      comp=Z,42nm,1.9s
PLCA  Paso Flores      33.55 280  P       P         08 15 11.2 -0.3
      comp=Z,2.1nm,0.7s,baz=147,slow=8.0,SNR=5.9
PLCA                              LR      LR        08 27 49.4
      comp=Z,116nm,21.8s,baz=120,slow=35
      comp=Z,2.1nm,0.7s
PLCA  Paso Flores      33.55 280  P       P         08 15 10.2 -1.4
ITAB  Concordia        35.86 316  P       P         08 15 31.6 +0.2
SPB   Sao Paulo        37.58 325  P       P         08 15 45.5 -0.6
SPB                               IAmb    IAmb      08 16 16.8
      comp=Z,56nm,1.7s
VAO   Valinhos         37.99 326  P       P         08 15 51.2 +1.5
CPUP  Villa Florida    38.73 309  P       P         08 15 55.3 -0.5
      comp=Z,3.0nm,0.9s,baz=127,slow=8.5,SNR=13
CPUP                              LR      LR        08 29 18.5
      comp=Z,20nm,20.4s,baz=12,slow=32
      comp=Z,3.0nm,0.9s
CPUP  Villa Florida    38.73 309          P         08 15 55.0 -0.8
MT09  Talagante        39.00 287  P       P         08 15 56.2 -2.0
MT09                              IAmb    IAmb      08 16 19.9
      comp=Z,47nm,1.8s
MT02  Curacav          39.49 288  P       P         08 16 00.0 -2.1
SUR   Sutherland       39.78  71  P       P         08 16 05.4 +0.7
SUR                               IAmb    IAmb      08 17 01.3
      comp=Z,56nm,1.6s
VA06  Catapilco        40.12 288  P       P         08 16 06.1 -1.2
VA06                              IAmb    IAmb      08 17 20.8
      comp=Z,40nm,1.4s
CO01  Juntas del Tor   41.58 292  P       P         08 16 18.4 -1.3
CO01                              IAmb    IAmb      08 17 06.5
      comp=Z,36nm,1.9s
AQDB  Aquidauana       43.33 315          P         08 16 33.1 -0.7
AC02  Maricunga        43.69 295  P       P         08 16 36.9 -0.3
BOSA  Boshof           45.08  72  P       P         08 16 47.8  0.0
      comp=Z,3.3nm,0.9s,baz=303,slow=2.6,SNR=3.5
BOSA                              LR      LR        08 31 16.0
      comp=Z,126nm,19.8s,baz=218,slow=30
      comp=Z,3.3nm,0.9s
BOSA  Boshof           45.08  72  P       P         08 16 48.1 +0.3
BOSA                              IAmb    IAmb      08 16 51.1
      comp=Z,39nm,1.9s
VNDA  Vanda            45.23 182  P       P         08 16 50.5 +2.2
      comp=Z,1.8nm,0.6s,baz=188,slow=5.6,SNR=18
VNDA                              LR      LR        08 34 41.3
      comp=Z,50nm,18.7s,baz=160,slow=35
      comp=Z,1.8nm,0.6s
VNDA  Vanda            45.23 182          P         08 16 50.4 +2.1
BDFB  Brasilia         45.25 328  P       P         08 16 50.6 +1.3
      comp=Z,1.4nm,0.3s,baz=148,slow=5.8,SNR=4.8
      comp=Z,1.4nm,0.3s
BDFB  Brasilia         45.25 328  P       P         08 16 50.1 +0.9
H04S2 CROZET ISLANDS   45.78 111  T       T         09 07 37.8
      baz=226
H04S3 CROZET ISLANDS   45.79 111  T       T         09 07 39.1
      baz=226
H04S1 CROZET ISLANDS   45.80 111  T       T         09 07 38.4
      baz=226
PB09  IPOC Station P   48.00 299  P       P         08 17 09.3 -1.6
LBTB  Lobatse          48.19  70  LR      LR        08 33 47.1
      comp=Z,114nm,18.7s,baz=242,slow=32
H10S2 ASCENSION HYDR   49.01  13  T       T         09 10 15.8
      baz=187,slow=74,SNR=20
H10S3 ASCENSION HYDR   49.01  13  T       T         09 10 17.0
      baz=33,slow=74,SNR=23
PTLB  Pontes e Lacer   49.23 314          P         08 17 19.8 -0.3
PTLB                              IAmb    IAmb      08 17 22.3
      comp=Z,12nm,0.8s
GO01  Chusmiza         49.81 300  P       P         08 17 23.9 -1.1
GO01                              IAmb    IAmb      08 17 28.8
      comp=Z,7.1nm,0.5s
H10N1 ASCENSION HYDR   50.12  13  T       T         09 11 39.3
      baz=188,slow=76,SNR=8.3
H10N3 ASCENSION HYDR   50.13  13  T       T         09 11 33.5
      baz=188,slow=76,SNR=18
H10N2 ASCENSION HYDR   50.14  13  T       T         09 11 42.7
      baz=188,slow=76,SNR=14
QNGWA Qangwa           50.65  61          P         08 17 31.2 +0.3
QNGWA                             IAmb    IAmb      08 17 33.1
      comp=Z,20nm,1.6s
PB16  IPOC Station P   51.11 301  P       P         08 17 33.6 -1.4
PB16                              IAmb    IAmb      08 17 50.5
      comp=Z,26nm,1.9s
PB12  IPOC Station P   51.25 300  P       P         08 17 34.2 -1.4
PB12                              IAmb    IAmb      08 19 18.8
      comp=Z,15nm,1.2s
PB18  Visviri          51.74 301  P       P         08 17 39.2 -0.5
VILB  Vilhena          51.91 314          P         08 17 40.5 +0.1
VILB                              IAmb    IAmb      08 17 44.6
      comp=Z,13nm,0.7s
LPAZ  La Paz           52.27 304  P       P         08 17 43.5 -0.2
      comp=Z,8.4nm,0.5s,baz=103,slow=4.2,SNR=41
      comp=Z,8.4nm,0.5s
LPAZ  La Paz           52.27 304          P         08 17 43.5 -0.2
LPAZ                              IAmb    IAmb      08 17 48.7
      comp=Z,9.1nm,0.6s
MAL2  Monte Alegre,    59.99 325  P       P         08 18 38.9 +0.7
RPN   Rapa Nui         64.71 259  LR      LR        08 40 14.8
      comp=Z,66nm,21.2s,baz=9.5,slow=29
DBIC  Dimbokro         65.93  22  P       P         08 19 18.1 +0.5
      comp=Z,5.2nm,1.0s,baz=237,slow=3.4,SNR=3.6
DBIC                              LR      LR        08 43 25.7
      comp=Z,48nm,18.8s,baz=166,slow=32
      comp=Z,5.2nm,1.0s
DBIC  Dimbokro         65.93  22  P       P         08 19 17.8 +0.1
DBIC                              IAmb    IAmb      08 19 29.7
      comp=Z,20nm,1.5s
BOAV  Boa Vista        66.20 320          P         08 19 18.8 -0.7
BOAV                              IAmb    IAmb      08 19 21.7
      comp=Z,6.8nm,0.7s
FLOC  Florencia        71.46 305  P       P         08 19 50.9 -1.4
FLOC                              IAmb    IAmb      08 20 02.7
      comp=Z,10nm,1.2s
OTAV  Otavalo          71.53 302  P       P         08 19 51.7 -1.5
TORD  Torodi Ar. Bea   73.66  27  P       P         08 20 06.2 +1.1
      comp=Z,4.3nm,0.4s,baz=188,slow=5.7,SNR=2.5
      comp=Z,4.3nm,0.4s
TORD  Torodi Ar. Bea   73.66  27  P       P         08 20 04.7 -0.4
TORD                              IAmb    IAmb      08 20 07.0
      comp=Z,16nm,1.4s
KIBK  Kibwezi          73.69  68  P       P         08 20 05.4 -0.2
ROSC  El Rosal         73.80 308  LR      LR        08 54 25.7
      comp=Z,58nm,19.3s,baz=117,slow=37
ROSC  El Rosal         73.80 308  P       P         08 20 05.4 -1.2
SDV   Santo Domingo    75.94 313  LR      LR        08 53 11.5
      comp=Z,82nm,21.6s,baz=48,slow=35
SDV   Santo Domingo    75.94 313  P       P         08 20 17.9 -0.8
SDV                               IAmb    IAmb      08 20 22.1
      comp=Z,10nm,1.1s
OXZ   Oxford           78.61 192  P       P         08 20 33.6 +0.4
SJG   San Juan         82.77 321  LR      LR        08 57 30.6
      comp=Z,30nm,21.2s,baz=164,slow=36
JTS   Las Juntas de    83.38 301  LR      LR        09 00 18.9
      comp=Z,22nm,19.7s,baz=284,slow=37
MDT   Midelt           91.51  17  LR      LR        08 57 50.8
      comp=Z,45nm,18.6s,baz=141,slow=32
PPT   Papeete          92.41 232  LR      LR        08 54 23.6
      comp=Z,53nm,20.3s,baz=150,slow=30
ASAR  Alice Springs    97.24 160  P       P         08 22 04.8 +0.2
      comp=Z,1.2nm,0.7s,baz=180,slow=4.1,SNR=20
      comp=Z,1.2nm,0.7s
WRA   Warramunga Arr  100.95 160  P       Pdif      08 22 21.8 +0.6
      comp=Z,0.3nm,0.6s,baz=185,slow=4.1,SNR=2.5
CMAR  Chiang Mai Arr  123.34 109  PKP     PKiKP     08 27 29.4 +0.5
      comp=Z,1.5nm,0.3s,baz=232,slow=4.9,SNR=4.1
FINES FINESS Array B  125.01  27  PKP     PKiKP     08 27 30.6 -0.1
      comp=Z,1.5nm,0.5s,baz=194,slow=0.5,SNR=12
NEW   Newport         129.84 300  PKP     PKiKP     08 27 40.4 -0.6
      comp=Z,0.6nm,0.6s,baz=90,slow=5.1,SNR=2.1
ARCES ARCESS Array B  131.76  21  PKP     PKiKP     08 27 43.4 -0.7
      comp=Z,5.3nm,1.0s,baz=204,slow=2.0,SNR=6.3
BVAR  Borovoye Array  134.41  57  PKP     PKPdf     08 27 49.0 +0.4
      comp=Z,1.0nm,0.5s,baz=215,slow=1.8,SNR=5.6
MKAR  Makanchi Array  136.07  71  PKP     PKPdf     08 27 51.3 -0.6
      comp=Z,0.6nm,0.8s,baz=248,slow=2.0,SNR=4.5
YKA   Yellowknife Ar  138.10 316  PKhKP   PKPpre    08 27 49.5
      comp=Z,0.2nm,0.7s,baz=148,slow=2.0,SNR=2.0
YKA                               PKP     PKPdf     08 27 54.9 -0.2
      comp=Z,0.8nm,0.8s,baz=140,slow=1.2,SNR=8.0
ZALV  Zalesovo Beam   141.78  64  PKP     PKPdf     08 28 01.8 -0.2
      comp=Z,0.6nm,0.3s,baz=259,slow=1.5,SNR=2.2
NRIK  Noril'sk        149.25  40  PKPbc   PKPbc     08 28 18.9 +0.3
      comp=Z,1.2nm,0.4s,baz=214,slow=3.6,SNR=4.4
SONM  Songino Array   149.48  87  PKPbc   PKPbc     08 28 20.2 +0.2
      comp=Z,2.4nm,0.6s,baz=234,slow=3.1,SNR=13
ILAR  Eielson Array   152.04 309  PKPbc   PKiKP     08 28 25.4 -0.3
      comp=Z,1.6nm,0.6s,baz=135,slow=2.2,SNR=40
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NOU 07 08:17:40.6, 17.°91S×168.°18E, h27km**, MLv4.5**/21**, Vanuatu Islands, Vanuatu Islands**

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Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                                  Op      ISC      h  m  s     ISC
DVP   Devils Point      0.18   2  P       Pn        08 17 48.2 +0.6
DVP   Devils Point      0.18   2  P       Sb        08 17 53.9 +3.8
RTV   Rentapao          0.26  63  P       Pn        08 17 48.8 +0.1
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RTV	Rentapao	0.26	63	S	Sn	08 17 55.0	+1.2
INH	Isangel	1.93	148	P	Pn	08 18 12.0	+0.3
SANVU	Saraoutou	2.62	339	P	Pn	08 18 20.4	-0.8
MARNC	Mare, Loyalty	3.56	182	P	Pn	08 18 32.7	-1.3
YATNC	Mamie plateau,	4.30	196	P	Pn	08 18 44.2	-0.1
DZM	Mont Dzumac	4.45	201	P	Pn	08 18 46.8	+0.4
KOUNC	Koumac, New Ca	4.52	234	P	Pn	08 18 47.2	-0.1
OUENC	Ouen Island, N	4.66	195	P	Pn	08 18 50.9	+1.7
ONTNC	Ouen Toro	4.67	200	P	Pn	08 18 49.6	+0.3
PINNC	Pines Island,	4.73	188	P	Pn	08 18 51.0	+0.8
NGOA	Tingoa Renbel	10.08	308	P	Pn	08 20 04.2	+0.6

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*SSNC **07** 08:38:47.5±0.8, 18.°05N×77.°08W, h75^{km}±10^{km}, MD2.9, ML1.8*

*JSN **07** 08:38:48.2±0.5, 18.°01N×76.°89W, h18^{km}±5^{km}, MD2.3*

ISC 07 08:38:46.8±1.5**, 18.°2N**±0.°2×**77.°0W**±0.°1**, h15**^{km}±21^{km}**, n8,** σ**0^{s}.50**/14**, 1C-3D, Jamaica region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STH	Stony Hill	0.18	121	⇓*i*P	Pg	08 38 51.5	+0.3
HOJ	Hope	0.27	128	⇓*i*P	Pg	08 38 52.1	-0.5
MTDJ	Mount Denham	0.54	276	⇑*i*P	Pn	08 39 00.0	0.0
MTDJ				⇓*i*S	Sn	08 39 09.3	+0.4
MTDJ	Mount Denham	0.54	276	*e*P	Pn	08 38 59.9	-0.1
MTDJ				*e*S	Sn	08 39 09.2	+0.4
MTDJ				IAML		08 39 09.6	
	comp=Z,75nm,0.2s						
MTDJ				IAML		08 39 10.1	
	79nm,0.1s						
LMGC	Las Mercedes	1.88	359	*e*P	Pn	08 39 18.6	+0.2
LMGC				*e*S	Sn	08 39 41.2	-0.7
LMGC				IAML		08 39 43.7	
	comp=E,7.9nm,0.1s						
LMGC				IAML		08 39 45.1	
	comp=N,12nm,0.1s						
MARVS	Santiago de Cu	2.08	29	*e*P	Pn	08 39 21.5	+0.3
MARVS				*e*S	Sn	08 39 46.2	-0.6
MARVS				IAML		08 39 47.7	
	comp=N,4.3nm,0.1s						
MARVS				IAML		08 39 48.5	
	comp=E,3.1nm,0.1s						
RCC	Rio Carpintero	2.18	33	*e*P	Pn	08 39 23.2	+0.6
RCC				*e*S	Sn	08 39 49.8	+0.6
RCC				IAML		08 39 50.3	
	comp=N,1.1nm,0.1s						
RCC				IAML		08 39 50.4	
	comp=E,1.2nm,0.1s						
PINC	Pinares de May	2.56	26	*e*P	Pn	08 39 27.9	+0.1
PINC				*e*S	Sn	08 39 58.2	-0.4
PINC				IAML		08 40 00.3	
	comp=N,7.6nm,0.1s						
PINC				IAML		08 40 00.5	
	comp=E,4.3nm,0.1s						

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*TAP **07** 08:38:58.1, 24.°52N×122.°67E, h92^{km}, ML3.8, C*

*JMA **07** 08:38:58.3±0.2, 24°N±1°×122.°6E±0.°5, h89^{km}±1^{km}, MV2.3/14, NW OFF ISHIGAKIJIMA IS*

ISC 07 08:38:58.8±1.3**, 24.°48N**±0.°03×**122.°66E**±0.°02**, h87**^{km}±6^{km}**, n112,** σ**0^{s}.95**/204**, 17C-5D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.26	95	P	Pn	08 39 11.8	+0.1
JYNG				S	Sn	08 39 21.4	+0.1
YOJ	Yonaguni jima	0.32	92	*i* P	Pn	08 39 12.1	0.0
YOJ				*i* S	Sn	08 39 21.9	+0.1
YOJ	Yonaguni jima	0.32	92	P	Pn	08 39 12.1	0.0
YOJ				S	Sn	08 39 21.7	-0.1
EOS3	EOS3	0.36	239	*i* P	Pn	08 39 12.9	+0.8
EOS3				S	Sn	08 39 24.2	+2.2
EOS2	EOS2	0.40	262	*i* P	Pn	08 39 12.7	+0.3
EOS2				*e*S	Sn	08 39 23.7	+1.3
EOS4	EOS4	0.47	222	*i* P	Pn	08 39 12.8	+0.2
EOS4				*i* S	Sn	08 39 24.2	+1.3
ESAO	Su ao	0.75	278	*i* P	Pn	08 39 15.3	-0.3
ESAO				*i* S	Sn	08 39 28.0	-0.1
TWC	Suao	0.75	280	⇑*i*P	Pn	08 39 15.0	-0.6
TWC				*i* S	Sn	08 39 27.0	-1.1
EWUT	Wuta	0.81	268	*e*S	Sn	08 39 28.7	-0.4
TWB1	Santiao Chiao	0.81	311	*e*S	Sn	08 39 28.0	-1.2
ENA	Nanau	0.84	267	*i* P	Pn	08 39 16.3	-0.2
ENA				S	Sn	08 39 30.2	+0.4
EAHA	Aohua	0.85	260	*i* P	Pn	08 39 16.5	-0.2
EAHA				S	Sn	08 39 30.2	+0.2
EHP	Heping Village	0.85	259	*e*S	Sn	08 39 29.4	-0.7
NDS	Dongshan	0.88	281	*e*P	Pn	08 39 16.9	0.0
NDS				S	Sn	08 39 29.7	-0.8
ILA	Ilan	0.88	289	*e*P	Pn	08 39 17.1	+0.2
ILA				S	Sn	08 39 30.3	-0.2
TIPB	Shuangxi	0.91	303	*e*P	Pn	08 39 16.9	-0.4
TIPB				*i* S	Sn	08 39 29.8	-1.4
TWE	Neicheng	0.94	285	P	Pn	08 39 17.4	-0.2
TWE				*i* S	Sn	08 39 31.1	-0.6
SXI1	Grass Mountain	0.94	311	P	Pn	08 39 17.4	-0.4
SXI1				S	Sn	08 39 32.1	+0.2
IRIF	Iriomote-Funau	0.98	98	P	Pn	08 39 18.4	+0.3
IRIF				S	Sn	08 39 32.6	0.0
NWF	Wu-fen Shan	1.00	307	⇑*i*P	Pn	08 39 18.2	-0.1
NWF				*e*S	Sn	08 39 32.5	-0.6
WFSB	Wu-fen Shan	1.00	307	⇑*i*P	Pn	08 39 18.3	0.0
WFSB				S	Sn	08 39 32.0	-0.8
ETL	Fush Village	1.00	252	*e*P	Pn	08 39 17.8	-0.5
ENTT	Nioudou	1.01	280	⇑*i*P	Pn	08 39 18.7	+0.2
ENTT				S	Sn	08 39 33.3	+0.1
FUSB	Fushanzhiwuyua	1.02	286	P	Pn	08 39 18.4	-0.2
FUSB				*e*S	Sn	08 39 33.5	0.0
NACB	Ninganchiao	1.02	253	⇑*i*P	Pn	08 39 17.9	-0.6
NACB				S	Sn	08 39 32.8	-0.5
LATG	Datong	1.03	274	P	Pn	08 39 18.7	-0.1
LATG				*i* S	Sn	08 39 33.9	+0.1
TWD	Chiawan	1.05	248	⇓*i*P	Pn	08 39 18.4	-0.5
TWD				*e*S	Sn	08 39 33.1	-0.8
HWA	Hwalien	1.08	243	⇓*i*P	Pn	08 39 19.2	-0.1
HWA				*e*S	Sn	08 39 35.5	+0.9
NWLT	Wulai	1.10	286	*i* P	Pn	08 39 19.5	0.0
NWLT				S	Sn	08 39 33.9	-1.1
TWA	Mucha	1.10	297	⇑*i*P	Pn	08 39 19.3	-0.3
TWA				*i* S	Sn	08 39 33.9	-1.2
ETLH	Xiulin Townshi	1.11	256	⇓P	Pn	08 39 19.3	-0.4
ETLH				*e*S	Sn	08 39 35.1	-0.3
NHDH	Xindian Distri	1.14	295	P	Pn	08 39 19.8	-0.1
NHDH				*e*S	Sn	08 39 34.8	-1.1
TEYL	Yanliau Villag	1.14	238	*e*P	Pn	08 39 19.8	-0.2
NNSB	Datong	1.17	268	*i* P	Pn	08 39 20.2	-0.3
NNSB				*e*S	Sn	08 39 36.5	-0.1
NNS	Nan Shan	1.17	269	*i* P	Pn	08 39 20.3	-0.2
NNS				*e*S	Sn	08 39 36.9	+0.1
ETM	Tongmen	1.18	245	⇑P	Pn	08 39 19.9	-0.6
ETM				*i* S	Sn	08 39 35.9	-0.9
YHNB	Yeheng	1.19	280	⇑P	Pn	08 39 20.7	+0.1
YHNB				*i* S	Sn	08 39 36.7	-0.3
YM01	YM01	1.20	304	⇑P	Pn	08 39 20.4	-0.3
YM01				*i* S	Sn	08 39 36.9	-0.2
NSK	Sanguang	1.20	280	⇑*i*P	Pn	08 39 20.8	-0.1
NSK				*i* S	Sn	08 39 36.8	-0.5
YM08	YM08	1.21	306	*e*P	Pn	08 39 20.4	-0.4
YM08				S	Sn	08 39 36.6	-0.7
SHUL	Shoufeng	1.21	236	P	Pn	08 39 20.6	-0.3
SHUL				S	Sn	08 39 37.5	0.0
ZUZH	Zhuzihu	1.22	304	*i* P	Pn	08 39 20.8	-0.3
ZUZH				*i* S	Sn	08 39 36.4	-1.4
JKRS	Kuro-shima	1.25	101	S	Sn	08 39 39.5	+1.2
ANP	Anpu	1.26	305	*e*P	Pn	08 39 21.4	-0.1
ANP				*e*S	Sn	08 39 37.7	-0.8
PCYT	Pengchaiyu	1.27	335	*e*P	Pn	08 39 21.6	0.0
TEGC	Jichi Village	1.28	234	*e*P	Pn	08 39 21.4	-0.3
TWS1	Kuangyinshan	1.29	299	*i* P	Pn	08 39 21.6	-0.2
TWS1				S	Sn	08 39 38.4	-0.8
FUSS	Fushou	1.31	260	⇓P	Pn	08 39 22.7	+0.4
FUSS				*e*S	Sn	08 39 39.5	-0.5
WHF	Hehuan Shan	1.31	256	P	Pn	08 39 22.2	-0.3
WHF				S	Sn	08 39 39.3	-1.1
JIJ	Ishigaki jima	1.36	94	P	Pn	08 39 22.4	-0.2
JIJ				S	Sn	08 39 40.2	-0.4
TWT	Tachien	1.37	261	⇓*i*P	Pn	08 39 23.5	+0.5
TWT				S	Sn	08 39 40.4	-0.8
EGFH	Guangfu	1.38	235	*e*P	Pn	08 39 22.4	-0.5
EGFH				*e*S	Sn	08 39 40.1	-1.1
KSHI	Guanxi Townshi	1.38	283	P	Pn	08 39 23.4	+0.4
KSHI				*e*S	Sn	08 39 40.6	-0.7
WARBT	Fenglin Townsh	1.39	237	⇑P	Pn	08 39 22.3	-0.8
WARBT				*i* S	Sn	08 39 40.0	-1.3
TDCB	Techi	1.39	261	⇑P	Pn	08 39 23.5	+0.3
TDCB				*i* S	Sn	08 39 41.0	-0.5
NFF	Wufeng Townshi	1.41	277	P	Pn	08 39 23.7	+0.2
NFF				*i* S	Sn	08 39 40.8	-1.2
NCU	National Centr	1.43	291	P	Pn	08 39 22.4	-1.1
NCU				S	Sn	08 39 40.6	-1.6
NCUH	Zhongli	1.43	290	*e*P	Pn	08 39 23.9	+0.3
NCUH				*i* S	Sn	08 39 41.9	-0.3
OWD	Renai	1.45	249	⇑P	Pn	08 39 23.7	-0.3
OWD				S	Sn	08 39 41.3	-1.6
WUSB	Renai	1.49	251	⇑P	Pn	08 39 24.5	+0.1
WUSB				*i* S	Sn	08 39 43.7	0.0
HGSD	Ruisui	1.50	229	⇑P	Pn	08 39 23.9	-0.5
HGSD				*i* S	Sn	08 39 42.3	-1.4
JISG	Ishigakijimahi	1.51	85	P	Pn	08 39 24.5	-0.1
JISG				S	Sn	08 39 43.1	-0.8
LIOB	Emei	1.51	277	*e*P	Pn	08 39 24.8	+0.2
LIOB				*i* S	Sn	08 39 43.7	-0.3
NSTT	Nanjuang	1.52	276	⇑P	Pn	08 39 24.8	+0.1
NSTT				*i* S	Sn	08 39 43.8	-0.5
EHYH	Wanrong	1.55	231	*i* P	Pn	08 39 24.6	-0.5
EHYH				*i* S	Sn	08 39 43.7	-1.2
SBCB	Hsinchu	1.56	282	*e*P	Pn	08 39 25.5	+0.4
SBCB				*e*S	Sn	08 39 44.8	-0.3
EHY	Hungye	1.56	232	*i* P	Pn	08 39 24.4	-0.8
EHY				*i* S	Sn	08 39 42.6	-2.6
HSN	Hsinchu	1.57	282	*e*S	Sn	08 39 44.4	-1.1
WHP	Taichung City	1.58	263	P	Pn	08 39 26.6	+1.1
WHP				*i* S	Sn	08 39 46.0	+0.3
ECBN	Changbin	1.60	224	*e*P	Pn	08 39 23.9	-1.8
ECBN				*e*S	Sn	08 39 45.6	-0.5
YULB	Yu-li	1.65	229	*i* P	Pn	08 39 25.7	-0.7
YULB				S	Sn	08 39 46.0	-1.2
WCS	Beigang Elemen	1.65	256	P	Pn	08 39 27.0	+0.7
WCS				*e*S	Sn	08 39 49.3	+2.0
EYUL	Yuli	1.66	228	P	Pn	08 39 28.0	+1.4
EYUL				*i* S	Sn	08 39 48.9	+1.3
TWF1	Yuli	1.68	228	⇑*i*P	Pn	08 39 26.2	-0.5
TWF1				*e*S	Sn	08 39 46.9	-1.0
SSLB	Suanglung	1.70	247	*i* P	Pn	08 39 27.2	+0.1
SSLB				*e*S	Sn	08 39 48.6	0.0
NMLH	Miaoli	1.70	272	*i* P	Pn	08 39 27.7	+0.6
NMLH				*e*S	Sn	08 39 48.3	-0.2
SMLT	Sun Moon Lake	1.71	250	P	Pn	08 39 28.1	+0.8
SMLT				*i* S	Sn	08 39 50.5	+1.6
CHKH	Chenggong	1.72	222	*e*S	Sn	08 39 47.1	-1.9
TWQ1	Liyutan	1.73	266	*e*P	Pn	08 39 28.1	+0.7
FULB	Fuli	1.78	225	P	Pn	08 39 27.8	-0.3
FULB				*i* S	Sn	08 39 49.5	-1.0
CHKT	Chengkung	1.81	221	*e*P	Pn	08 39 27.0	-1.5
CHKT				*e*S	Sn	08 39 48.7	-2.3
WHYT	Xinyi Township	1.82	245	P	Pn	08 39 29.7	+1.0
WHYT				*i* S	Sn	08 39 51.8	+0.4
TCU	Taichung	1.84	260	*e*P	Pn	08 39 30.6	+1.8
TCU				*e*S	Sn	08 39 51.6	-0.1
YUS	Yu-Shan	1.84	238	*i* P	Pn	08 39 29.6	+0.2
YUS				S	Sn	08 39 51.4	-1.2
JTJ	Tarama	1.87	84	P	Pn	08 39 29.5	+0.4
JTJ				*e*S	Sn	08 39 52.6	+0.4
EHD	Haiduan	1.88	226	*e*P	Pn	08 39 29.5	+0.2
EHD				*e*S	Sn	08 39 51.9	-0.6
WJS	Zhushan	1.88	250	*i* P	Pn	08 39 30.8	+1.4
WJS				S	Sn	08 39 54.3	+1.7
WNT	Mingjian	1.90	252	P	Pn	08 39 30.9	+1.3
ECS	Chishang	1.91	224	*e*P	Pn	08 39 29.4	-0.4
EDH	Donghe	1.94	220	*e*P	Pn	08 39 28.2	-2.0
EDH				*e*S	Sn	08 39 52.4	-1.8
ALS	Alishan	1.95	241	*e*P	Pn	08 39 31.3	+0.8
ELDTW	Lidau	1.98	230	*i* P	Pn	08 39 30.3	-0.4
ELDTW				*e*S	Sn	08 39 53.7	-1.3
CHN5	Tsauling	2.01	245	P	Pn	08 39 32.6	+1.4
CHN5				S	Sn	08 39 57.4	+1.5
WGK	Gukeng	2.07	248	*e*P	Pn	08 39 34.1	+2.2
WDLH	Douliu	2.09	248	*e*P	Pn	08 39 33.4	+1.2
WDLH				S	Sn	08 39 59.6	+2.1
LONT	Longtian	2.10	222	*e*P	Pn	08 39 31.8	-0.5
LONT				S	Sn	08 39 56.6	-1.2
LDUT	Ludao	2.10	212	*e*P	Pn	08 39 31.0	-1.3
LDUT				*i* S	Sn	08 39 56.1	-1.6
WCKO	Fanlu	2.15	242	*e*P	Pn	08 39 34.1	+1.2
STYH	Taoyuan	2.16	233	P	Pn	08 39 34.1	+1.0
STYH				S	Sn	08 39 59.9	+0.7
TPUB	Ta-pu	2.20	238	*i* P	Pn	08 39 35.0	+1.4
TPUB				*e*S	Sn	08 40 01.7	+1.6
TWGBT	Beinan	2.20	222	*e*P	Pn	08 39 33.0	-0.6
TWGBT				*e*S	Sn	08 39 59.0	-1.1
TWG	Pinlang	2.20	222	*e*P	Pn	08 39 32.9	-0.7
TWG				*e*S	Sn	08 39 58.4	-1.8
WTP	Ta-pu	2.24	237	*e*P	Pn	08 39 35.4	+1.3
WTP				*e*S	Sn	08 40 03.0	+1.8
CHY	Chiayi	2.27	245	*e*P	Pn	08 39 36.8	+2.4
CHY				*e*S	Sn	08 40 03.8	+2.1
TWK	Hsinying	2.32	239	*e*P	Pn	08 39 36.9	+1.6
CHN1	Nanshi	2.34	237	*e*P	Pn	08 39 36.1	+0.6
SNST	Tainan City	2.34	238	*e*P	Pn	08 39 36.2	+0.7
SNST				*e*S	Sn	08 40 04.8	+1.3
SGST	Jiashian	2.35	234	*e*P	Pn	08 39 36.3	+0.6
SGST				*e*S	Sn	08 40 05.3	+1.4
WSL	Shuilin Townsh	2.42	247	*e*P	Pn	08 39 37.4	+0.9
WSL				*e*S	Sn	08 40 07.2	+1.9
JMJ2	Miyako jima3	2.44	83	S	Sn	08 40 05.7	-0.3
SSD	Sandimen	2.53	228	*e*P	Pn	08 39 38.5	+0.4
MASBT	Mashibuluo	2.63	226	*e*P	Pn	08 39 40.3	+1.0
MASBT				*e*S	Sn	08 40 10.8	+0.5

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*IDC **07** 08:50:10.7±2.1, 17.°62S×178.°90W, h552^{km}±22^{km}, mb3.2/11, mbtmp4.1/12, Error ellipse: s-maj=25.6km s-min=11.4km az=148.0*

ISC 07 08:50:09.2±0.7**, 17.°6S**±0.°2×**178.°9W**±0.°1**, h539**^{km}**, n29,** σ**0^{s}.61**/34**, mb3.6**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.50	250	P	P	08 53 13.9	+0.1
	2.8nm,0.5s,baz=82,slow=15,SNR=5.6						
STKA	Stephens Creek	38.38	241	P	P	08 56 45.5	+0.9
	2.2nm,0.5s,baz=93,slow=8.3,SNR=8.9						
	2.2nm,0.5s						
WRA	Warramunga Arr	44.24	259	P	P	08 57 31.1	0.0
	0.9nm,0.4s,baz=89,slow=7.7,SNR=28						
WRA				PcP	PcP	08 59 04.1	+0.2
	0.4nm,0.5s,baz=92,slow=3.3,SNR=5.7						
WRA				S	S	09 03 24.4	-1.4
	0.4nm,0.8s,baz=98,slow=14,SNR=2.3						
	0.9nm,0.4s						
ASAR	Alice Springs	44.44	254	P	P	08 57 33.4	+0.7
	10.0nm,0.5s,baz=88,slow=8.2,SNR=235						
ASAR				PcP	PcP	08 59 04.8	+0.1
	0.4nm,0.4s,baz=106,slow=4.1,SNR=4.6						
ASAR				ScP	ScP	09 02 04.9	-0.6
	0.3nm,0.7s,baz=84,slow=3.4,SNR=2.3						
ASAR				S	S	09 03 28.0	-0.5
	0.5nm,0.8s,baz=93,slow=13,SNR=5.2						
	10.0nm,0.5s						
MJAR	Matsushiro Arr	67.38	324	P	P	09 00 11.8	+0.8
	1.9nm,0.6s,baz=158,slow=6.3,SNR=9.2						
	1.9nm,0.6s						
QSPA	South Pole Qui	72.46	180	P	P	09 00 40.4	-0.5
	1.2nm,1.0s,baz=73,slow=3.5,SNR=3.1						
	1.2nm,1.0s						
PETK	Petropavlovsk-	73.26	346	P	P	09 00 45.8	+0.4
	1.8nm,0.6s,baz=160,slow=5.4,SNR=7.5						
	1.8nm,0.6s						
NVAR	Mina Array Bea	79.51	44	P	P	09 01 21.1	+0.6
	0.4nm,0.4s,baz=250,slow=5.8,SNR=1.8						
	0.4nm,0.4s						
ILAR	Eielson Array	85.68	13	P	P	09 01 49.8	-0.8
	0.7nm,0.5s,baz=225,slow=5.2,SNR=23						
	0.7nm,0.5s						
TXAR	Lajitas Array	86.21	58	P	P	09 01 54.9	+0.8
	0.5nm,0.7s,baz=221,slow=5.0,SNR=7.7						
	0.5nm,0.7s						
PDAR	Pinedale Array	87.44	44	P	P	09 01 59.6	-0.1
	0.7nm,0.5s,baz=199,slow=3.1,SNR=14						
	0.7nm,0.5s						
YKA	Yellowknife Ar	94.24	25	P	P	09 02 29.0	-1.3
	0.1nm,0.5s,baz=248,slow=6.1,SNR=2.7						
	0.1nm,0.5s						
BVAR	Borovoye Array	116.31	321	PKP	PKPdf	09 07 50.7	-0.6
	0.8nm,0.4s,baz=113,slow=1.4,SNR=4.7						
ARCES	ARCESS Array B	125.92	350	PKP	PKPdf	09 08 09.4	+0.1
	3.7nm,1.0s,baz=39,slow=1.8,SNR=1.3						
FINES	FINESS Array B	132.76	344	PKP	PKPdf	09 08 22.4	-0.1
	1.6nm,0.9s,baz=70,slow=2.1,SNR=4.6						
BRTR	Keskin Array B	144.24	315	PKP	PKPdf	09 08 44.5	+0.2
	1.0nm,0.6s,baz=107,slow=2.9,SNR=5.9						
MMAI	Mount Meron Ar	145.59	303	PKPbc	PKPab	09 08 49.1	-0.4
	2.4nm,0.6s,baz=63,slow=5.9,SNR=4.7						
GERES	GERESS Array B	147.19	345	PKPbc	PKPbc	09 08 52.3	+0.2
	1.4nm,0.5s,baz=36,slow=3.4,SNR=10						
CONA	Conrad Observa	147.42	341	*i* PKP	PKPbc	09 08 53.5	+0.8
	1.6nm,0.6s						
RONA	Rosalia, Austr	147.49	341	*i* PKP	PKPbc	09 08 53.2	+0.4
	2.1nm,0.6s						
ARSA	Arzberg	148.13	341	*i* PKP	PKPbc	09 08 54.0	-0.4
	0.9nm,0.4s						
LESA	Schwarzleotal	148.76	345	*i* PKP	PKPbc	09 08 56.5	+0.5
	1.9nm,0.4s						
SOKA	Soboth	148.79	341	*i* PKP	PKPbc	09 08 55.8	-0.4
	0.7nm,0.4s						
WATA	Walderalm	149.11	346	*i* PKP	PKPbc	09 08 57.3	+0.3
	2.2nm,0.4s						
WTTA	Wattenberg	149.16	346	*i* PKP	PKPbc	09 08 57.2	+0.1
	2.8nm,0.4s						
MOTA	Moosalm	149.21	347	*i* PKP	PKPbc	09 08 57.7	+0.5
	7.2nm,1.5s						
MYKA	Terra Mystica	149.24	343	*i* PKP	PKPbc	09 08 56.6	-0.6
	2.0nm,0.5s						
SQTA	Sankt Quirin	149.30	346	*i* PKP	PKPbc	09 08 57.5	+0.1
	2.7nm,0.5s						
ABTA	Abfaltersbach	149.43	344	*i* PKP	PKPbc	09 08 57.2	-0.5
	2.5nm,0.6s						

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*IDC **07** 09:28:19.7±0.6, 54.°31N×169.°49E, h0^{km}, mb4.0/24, mbtmp4.0/26, ML4.3/2, MS3.2/12, Error ellipse: s-maj=18.5km s-min=11.9km az=169.0*

*NEIC **07** 09:28:21.2±1.4, 54.°0N±0.°1×169.°5E±0.°1, h10^{km}±1^{km}, mb4.3/39, Error ellipse: s-maj=20.5km s-min=10.7km az=182.0*

*MOS **07** 09:28:22.0±0.8, 53.°97N×169.°41E, h43^{km}, mb4.4/4, Error ellipse: s-maj=7.8km s-min=5.4km az=19.3*

*KRSC **07** 09:28:23.9±1.3, 53.°92N×168.°83E, h41^{km}±31^{km}, Ml4.8*

ISC 07 09:28:21.6±0.4**, 53.°97N**±0.°06×**169.°34E**±0.°04**, h17**^{km}**, n185,** σ**1^{s}.46**/177**, mb4.2**/33**, MS3.1**/10**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	2.32	304	PN	Pn	09 28 58.2	-0.7
BKI				S	Sn	09 29 26.7	-0.3
BKI	Bering	2.32	304	*e*P	Pn	09 28 58.2	-0.7
SHEM	Shemya Is, Ala	3.11	112	Pn	Pn	09 29 09.5	-0.3
	43nm,0.3s,baz=26,slow=3.5,SNR=16						
SHEM				Sn	Sn	09 29 47.1	+0.6
	26nm,0.3s,baz=168,slow=5.3,SNR=3.5						
	226nm,0.5s						
SMY	Shemya	3.11	112		Pn	09 29 08.7	-1.0
SMY	Shemya	3.11	112	PN	Pn	09 29 09.4	-0.4
SMY				S	Sn	09 29 46.0	-0.5
KBTR	Krutoberegovo	4.37	304	PN	Pn	09 29 28.2	+1.1
KBTR	Krutoberegovo	4.37	304	*e*P	Pn	09 29 28.5	+1.5
KBTR				*e*S	Sn	09 30 17.2	-0.4
KBG	Krutoberegovo	4.45	304	PN	Pn	09 29 29.2	+1.1
KBG	Krutoberegovo	4.45	304	*e*P	Pn	09 29 29.2	+1.1
MKZ	Mys Kozlova	4.50	281	PN	Pn	09 29 30.1	+1.2
MKZ	Mys Kozlova	4.50	281	*e*P	Pn	09 29 29.8	+0.9
SMKR	Semkarok	5.21	303	PN	Pn	09 29 40.8	+2.1
SMKR	Semkarok	5.21	303	*e*P	Pn	09 29 40.6	+1.9
TUMD	Tumrok D	5.35	287	PN	Pn	09 29 42.4	+1.9
TUMD	Tumrok D	5.35	287	*e*P	Pn	09 29 42.0	+1.5
TUMD				*e*S	Sn	09 30 40.3	-1.3
BZGR	Bezymyannyi-Gr	5.36	295	PN	Pn	09 29 43.8	+3.0
SRKR	Sorokina	5.39	303	PN	Pn	09 29 42.2	+1.1
SRKR	Sorokina	5.39	303	*e*P	Pn	09 29 42.2	+1.1
KZV	Kizimen	5.39	286	PN	Pn	09 29 42.4	+1.2
KZV	Kizimen	5.39	286	*e*P	Pn	09 29 42.5	+1.2
KLY	Klyuchi	5.51	299	PN	Pn	09 29 44.0	+1.3
KLY	Klyuchi	5.51	299	*e*P	Pn	09 29 44.0	+1.3
KMNR	Kamenistaya	5.56	292	PN	Pn	09 29 45.5	+2.0
KMNR	Kamenistaya	5.56	292	*e*P	Pn	09 29 45.2	+1.7
SPN	Mys Shipunski	5.63	265	PN	Pn	09 29 44.9	+0.6
SPN	Mys Shipunski	5.63	265	*e*P	Pn	09 29 44.9	+0.6
SPN				*e*S	Sn	09 30 45.4	-3.1
KII	Karymskiy	5.84	275	PN	Pn	09 29 48.7	+1.4
KII	Karymskiy	5.84	275	*e*P	Pn	09 29 48.6	+1.4
KOZ	Kozyrevsk	5.84	295	PN	Pn	09 29 49.7	+2.5
KOZ	Kozyrevsk	5.84	295	*e*P	Pn	09 29 49.6	+2.3
NLC	Nalytchevo	6.01	266	PN	Pn	09 29 50.6	+1.0
NLC	Nalytchevo	6.01	266	*e*P	Pn	09 29 50.6	+1.0
NLC				*e*S	Sn	09 30 54.1	-3.8
SDLR	Sedlovina	6.26	268	PN	Pn	09 29 54.4	+1.2
SDLR	Sedlovina	6.26	268	*e*P	Pn	09 29 54.1	+1.0
UGLR	Uglovaya	6.31	267	PN	Pn	09 29 55.3	+1.5
UGLR	Uglovaya	6.31	267	*e*P	Pn	09 29 55.4	+1.6
OSSR	Ossora	6.33	329	PN	Pn	09 29 55.3	+1.4
KRER	Koryakskii	6.34	268	PN	Pn	09 29 55.7	+1.4
KRER	Koryakskii	6.34	268	*e*P	Pn	09 29 55.8	+1.4
AVH	Avacha	6.35	268	PN	Pn	09 29 55.9	+1.6
AVH	Avacha	6.35	268	*e*P	Pn	09 29 56.0	+1.6
KRX	Arik	6.39	269	PN	Pn	09 29 56.1	+1.2
KRX	Arik	6.39	269	*e*P	Pn	09 29 56.1	+1.2
DALK	Dalny	6.39	266	PN	Pn	09 29 56.1	+1.3
DALK	Dalny	6.39	266	*e*P	Pn	09 29 56.2	+1.4
KOK	Koryaka	6.41	268	PN	Pn	09 29 56.3	+1.2
KOK	Koryaka	6.41	268	*e*P	Pn	09 29 56.4	+1.3
ESO	Esso	6.44	292	PN	Pn	09 29 56.7	+1.2
ESO	Esso	6.44	292	*e*P	Pn	09 29 56.9	+1.4
PET	Petropavlovsk	6.45	266		Pn	09 29 56.8	+1.2
PET	Petropavlovsk	6.45	266	PN	Pn	09 29 57.0	+1.4
PET	Petropavlovsk	6.45	266	*e*P	Pn	09 29 56.7	+1.1
INSR	Institute	6.47	266	PN	Pn	09 29 57.4	+1.5
INSR	Institute	6.47	266	*e*P	Pn	09 29 57.4	+1.5
AMKA	Amchitka	6.59	109	Pn	Pn	09 29 57.5	0.0
RUS	Russkaya	6.69	261	PN	Pn	09 30 00.4	+1.5
RUS	Russkaya	6.69	261	*e*P	Pn	09 30 00.1	+1.3
TILK	Tilichiki	6.72	346	PN	Pn	09 29 59.8	+0.5
GNL	Ganaly	6.76	272	PN	Pn	09 30 01.8	+1.8
GNL	Ganaly	6.76	272	*e*P	Pn	09 30 01.5	+1.5
KRMR	Karymshinskiy	6.80	265	PN	Pn	09 30 01.8	+1.3
KRMR	Karymshinskiy	6.80	265	*e*P	Pn	09 30 01.4	+1.0
KRMR				*e*S	Sn	09 31 14.4	-3.1
MTVR	Mutnovka	6.87	262	PN	Pn	09 30 02.8	+1.3
MTVR	Mutnovka	6.87	262	*e*P	Pn	09 30 02.8	+1.3
GRL	Gorelyy	6.91	263	PN	Pn	09 30 04.1	+2.1
GRL	Gorelyy	6.91	263	*e*P	Pn	09 30 04.1	+2.1
PEA0B	Petropavlovsk-	7.00	268		Pn	09 30 04.7	+1.6
PEA0B	Petropavlovsk-	7.00	268	PN	Pn	09 30 04.7	+1.6
PETK	Petropavlovsk-	7.00	268	Pn	Pn	09 30 04.2	+1.0
	24nm,0.3s,baz=93,slow=20,SNR=242						
	26nm,0.4s						
PETK	Petropavlovsk-	7.00	268		Pn	09 30 04.5	+1.3
PETK	Petropavlovsk-	7.00	268	PN	Pn	09 30 04.5	+1.3
ASAK	Asacha	7.06	262	PN	Pn	09 30 05.7	+1.6
ASAK	Asacha	7.06	262	*e*P	Pn	09 30 05.5	+1.4
KDTR	Khodutka, Kamc	7.15	257	PN	Pn	09 30 06.0	+0.8
KDTR	Khodutka, Kamc	7.15	257	*e*P	Pn	09 30 06.1	+0.8
KDTR				*e*S	Sn	09 31 21.9	-4.1
PALN	Palana	7.29	318	PN	Pn	09 30 09.3	+2.2
APC	Apacha	7.35	267	PN	Pn	09 30 10.1	+2.1
APC	Apacha	7.35	267	*e*P	Pn	09 30 09.3	+1.3
MIPR	Malaya Ipel'ka	7.76	262	PN	Pn	09 30 16.1	+2.5
MIPR	Malaya Ipel'ka	7.76	262	*e*P	Pn	09 30 16.2	+2.6
PAU	Pauzhetka	8.01	257	PN	Pn	09 30 18.9	+1.8
KIWB	Kanaga Island	8.44	99	Pn	Pn	09 30 22.2	-0.7
ADK	Adak	8.70	98	Pn	Pn	09 30 25.3	-1.2
ADK	Adak	8.70	98	PN	Pn	09 30 25.3	-1.2
SKR	Severo-Kuril’s	8.74	253	PN	Pn	09 30 28.5	+1.4
SKR	Severo-Kuril’s	8.74	253	*e*P	Pn	09 30 27.8	+0.7
ATKA	Atka Island	10.06	93	Pn	Pn	09 30 44.8	-0.4
SEY	Seymchan	12.59	322	LR	LR	09 35 06.7	
	comp=Z,54nm,18.7s,baz=170,slow=33						
NIKH	Nikolski High	13.02	86	Pn	Pn	09 31 26.2	+0.6
UNV	Unalaska Valle	14.22	81	Pn	Pn	09 31 41.6	-0.4
AKUT	Akutan	14.60	79	Pn	Pn	09 31 46.5	-0.6
M11K	Mekoryuk	14.68	54	Pn	Pn	09 31 49.9	+1.8
K13K	Kusilvak Mount	15.84	49	Pn	Pn	09 32 03.6	+0.1
K13K				IAmb	IAmb	09 32 04.4	

	comp=Z,19nm,1.1s						
M13K	**Dall Lake**	**16.06**	**55**		**P**	**09 32 08.2**	**-1.4**
N14K	**Kuskokwak Cree**	**16.80**	**58**		**P**	**09 32 16.3**	**-1.4**
M14K	**Bethel**	**16.80**	**55**		**P**	**09 32 18.2**	**+0.4**
O14K	**Tigyukauivet M**	**16.93**	**60**	P	**P**	**09 32 18.0**	**-1.2**
O14K				IAmb	IAmb	09 32 47.4	
	comp=Z,33nm,1.4s						
O15K	**Ungalikthiuk R**	**17.66**	**60**	P	**P**	**09 32 28.0**	**+0.6**
O15K				IAmb	IAmb	09 32 50.3	
	comp=Z,53nm,1.5s						
J16K	**Anvik River**	**18.04**	**47**		**P**	**09 32 33.5**	**+2.0**
G16K	**Koyuk River**	**18.11**	**40**		**P**	**09 32 32.4**	**+0.2**
L16K	**Owhat River**	**18.16**	**52**	P	**P**	**09 32 33.7**	**+0.8**
L16K				IAmb	IAmb	09 33 00.3	
	comp=Z,24nm,1.4s						
M16K	**Timber Creek**	**18.29**	**55**	P	**P**	**09 32 34.6**	**+0.4**
M16K				IAmb	IAmb	09 32 50.2	
	comp=Z,49nm,1.4s						
J17K	**VABM Dome**	**18.73**	**47**	P	**Pn**	**09 32 39.9**	**+0.4**
J17K				IAmb	IAmb	09 32 52.5	
	comp=Z,28nm,1.3s						
K17K	**Iditarod**	**18.91**	**50**	P	**Pn**	**09 32 42.4**	**+0.7**
K17K				IAmb	IAmb	09 32 45.8	
	comp=Z,28nm,1.4s						
M17K	**Holitna River**	**19.07**	**54**	P	**Pn**	**09 32 44.6**	**+0.9**
M17K				IAmb	IAmb	09 32 45.1	
	comp=Z,42nm,1.5s						
H18K	**Honhosa River**	**19.56**	**42**	P	**Pn**	**09 32 49.9**	**+0.3**
G18K	**Tagagawik**	**19.71**	**40**	P	**Pn**	**09 32 51.6**	**+0.2**
JKA	**Kamikawa-asahi**	**20.00**	**251**	P	**P**	**09 32 54.8**	**+1.7**
ASAJ	**Asahikawa**	**20.00**	**251**	P	Pn	09 32 55.5	+0.6
	comp=Z,8.5nm,0.8s,baz=90,slow=5.1,SNR=5.3						
ASAJ				LR	LR	09 41 55.5	
	comp=Z,48nm,18.1s,baz=164,slow=40						
	comp=Z,8.5nm,0.8s						
ASAJ	**Asahikawa**	**20.00**	**251**	P	**P**	**09 32 54.8**	**+1.7**
ASAJ				pmax	pmax		
	comp=Z,33nm,1.1s						
L19K	**White Mountain**	**20.40**	**52**	P	Pn	09 32 58.7	-0.7
L19K				IAmb	IAmb	09 33 13.4	
	comp=Z,22nm,1.1s						
D19K	**Kuna River**	**21.00**	**34**	IAmb	IAmb	09 33 18.2	
	comp=Z,16nm,1.4s						
KDAK	**Kodiak Island**	**21.50**	**64**	P	**P**	**09 33 06.4**	**-2.7**
	comp=Z,11nm,0.8s,baz=270,slow=9.1,SNR=2.0						
KDAK				LR	LR	09 42 10.8	
	comp=Z,70nm,18.4s,baz=250,slow=39						
	comp=Z,11nm,0.8s						
KDAK	**Kodiak Island**	**21.50**	**64**	P	**P**	**09 33 06.7**	**-2.4**
B20K	**Meade River**	**22.02**	**30**		**P**	**09 33 15.8**	**+1.1**
B20K				IAmb	IAmb	09 33 37.3	
	comp=Z,21nm,1.5s						
YAK	**Yakutsk**	**22.19**	**307**	LR	LR	09 41 03.9	
	comp=Z,55nm,18.5s,baz=278,slow=35						
I23K	**Minto, Yukon-K**	**23.25**	**45**	P	**P**	**09 33 27.9**	**+0.3**
I23K				IAmb	IAmb	09 33 52.0	
	comp=Z,12nm,1.5s						
CCB	**Clear Creek Bu**	**23.84**	**46**		**P**	**09 33 33.5**	**+0.1**
TOLK	**Toolik Lake Re**	**23.96**	**36**		**P**	**09 33 34.6**	**0.0**
TOLK				IAmb	IAmb	09 33 45.9	
	comp=Z,6.8nm,0.7s						
ILAR	**Eielson Array**	**24.25**	**46**	P	**P**	**09 33 35.2**	**-2.0**
	comp=Z,0.8nm,0.4s,baz=255,slow=7.6,SNR=33						
	comp=Z,0.8nm,0.4s						
ILAR	**Eielson Array**	**24.25**	**46**	P	**P**	**09 33 35.9**	**-1.3**
G24K	**Hadweenzic Riv**	**24.27**	**41**	P	**P**	**09 33 36.4**	**-1.1**
G24K				IAmb	IAmb	09 33 59.1	
	comp=Z,4.6nm,0.8s						
TIXI	**Tiksi**	**24.82**	**331**	P	**P**	**09 33 41.3**	**-1.0**
	comp=Z,8.7nm,0.4s,baz=116,slow=8.6,SNR=18						
	comp=Z,8.7nm,0.4s						
TIXI	**Tiksi**	**24.82**	**331**		**P**	**09 33 43.5**	**+1.1**
USRK	**Ussuriysk Ar.**	**26.06**	**263**	P	**P**	**09 33 55.4**	**+1.6**
	comp=Z,3.6nm,0.7s,baz=67,slow=8.9,SNR=3.6						
	comp=Z,3.6nm,0.7s						
L27K	**Beaver Creek,**	**26.44**	**50**	P	**P**	**09 33 56.2**	**-0.9**
L27K				IAmb	IAmb	09 34 15.2	
	comp=Z,7.9nm,1.1s						
BCAR	**Beaver Creek A**	**26.46**	**50**	P	**P**	**09 33 57.2**	**-0.1**
DAWY	**Dawson**	**27.48**	**48**	P	**P**	**09 34 06.2**	**-0.3**
MJAR	**Matsushiro Arr**	**27.68**	**244**	P	**P**	**09 34 11.6**	**+3.1**
	comp=Z,0.7nm,0.5s,baz=48,slow=9.9,SNR=2.2						
	comp=Z,0.7nm,0.5s						
MJAR	**Matsushiro Arr**	**27.68**	**244**	P	**P**	**09 34 09.3**	**+0.8**
MJAR				IAmb	IAmb	09 34 34.7	
	comp=Z,6.2nm,1.5s						
MJAR	**Matsushiro Arr**	**27.68**	**244**	P	**P**	**09 34 09.3**	**+0.8**
MJAR				pmax	pmax		
	comp=Z,6.0nm,1.5s						
G29M	**Pine Creek**	**28.02**	**42**	P	**P**	**09 34 11.4**	**+0.2**
G29M				IAmb	IAmb	09 34 24.9	
	comp=Z,5.8nm,1.1s						
K29M	**Barlow Dome**	**28.32**	**48**	IAmb	IAmb	09 34 29.5	
	comp=Z,7.1nm,1.1s						
HYT	**Haines Junctio**	**28.73**	**55**	P	**P**	**09 34 18.0**	**+0.3**
JHJ	**Hachijo jima 2**	**29.54**	**237**	LR	LR	09 52 07.3	
	comp=Z,7.4nm,18.0s,baz=96,slow=48						
INK	**Inuvik**	**29.75**	**39**	P	**P**	**09 34 26.7**	**+0.2**
INK				IAmb	IAmb	09 34 41.4	
	comp=Z,3.5nm,1.1s						
INK	**Inuvik**	**29.75**	**39**	P	**P**	**09 34 26.7**	**+0.2**
INK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KSRS	**Korea Array**	**32.74**	**257**	P	**P**	**09 34 56.6**	**+3.4**
	comp=Z,2.8nm,0.8s,baz=42,slow=8.9,SNR=7.2						
	comp=Z,2.8nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**34.23**	**184**	T	T	10 11 27.9	
	baz=2.6,slow=76,SNR=758						
H11N3	**WAKE ISLAND Hy**	**34.24**	**184**	T	T	10 11 28.8	
	baz=2.6,slow=76,SNR=707						
H11N1	**WAKE ISLAND Hy**	**34.24**	**184**	T	T	10 11 31.9	
	baz=2.6,slow=76,SNR=931						
H11S1	**WAKE ISLAND Hy**	**35.45**	**184**	T	T	10 13 05.5	
	baz=2.9,slow=76,SNR=1112						
H11S3	**WAKE ISLAND Hy**	**35.47**	**184**	T	T	10 12 57.7	
	baz=2.9,slow=76,SNR=358						
H11S2	**WAKE ISLAND Hy**	**35.47**	**184**	T	T	10 13 05.2	
	baz=2.9,slow=76,SNR=785						
BBB	**Bella Bella**	**36.54**	**67**	LR	LR	09 48 21.2	
	comp=Z,41nm,21.6s,baz=238,slow=33						
NRIK	**Noril'sk**	**38.35**	**326**	P	**P**	**09 35 39.5**	**-1.5**
	comp=Z,0.9nm,0.4s,baz=79,slow=5.2,SNR=1.7						
NRIK				LR	LR	09 53 07.3	
	comp=Z,29nm,20.7s,baz=306,slow=39						
	comp=Z,0.9nm,0.4s						
NRIK	**Noril'sk**	**38.35**	**326**	P	**P**	**09 35 40.0**	**-1.0**
NRIK				IAmb	IAmb	09 35 51.4	
	comp=Z,5.7nm,1.4s						
YKAW3	**Yellowknife Wh**	**38.65**	**46**	P	**P**	**09 35 43.4**	**-0.1**
YKA	**Yellowknife Ar**	**38.68**	**46**	P	**P**	**09 35 42.8**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=295,slow=9.1,SNR=6.1						
	comp=Z,0.3nm,0.6s						
YKA	**Yellowknife Ar**	**38.68**	**46**	P	**P**	**09 35 43.4**	**-0.4**
SONM	**Songino Array**	**38.99**	**288**	P	**P**	**09 35 47.9**	**+1.0**
	comp=Z,0.9nm,0.5s,baz=66,slow=8.9,SNR=5.7						
SONM				LR	LR	09 52 48.6	
	comp=Z,61nm,18.2s,baz=38,slow=38						
	comp=Z,0.9nm,0.5s						
SONM	**Songino Array**	**38.99**	**288**	P	**P**	**09 35 47.5**	**+0.7**
SONM	**Songino Array**	**38.99**	**288**	P	**P**	**09 35 47.5**	**+0.7**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**40.12**	**275**	*e*P	**P**	**09 35 55.7**	**-0.6**
HHC				pmax	pmax		
	comp=Z,19nm,0.6s						
HHC				pmax	pmax		
	comp=Z,150nm,4.9s						
EDM	**Edmonton**	**43.72**	**58**	P	**P**	**09 36 25.6**	**+0.2**
EDM				IAmb	IAmb	09 36 36.6	
	comp=Z,4.0nm,0.7s						
EDM	**Edmonton**	**43.72**	**58**	P	**P**	**09 36 25.6**	**+0.2**
EDM				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NEW	**Newport**	**44.59**	**66**	LR	LR	09 54 06.0	
	comp=Z,38nm,18.5s,baz=317,slow=35						
NVAR	**Mina Array Bea**	**50.20**	**77**	P	**P**	**09 37 15.4**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=296,slow=7.6,SNR=2.2						
	comp=Z,0.6nm,0.5s						
NVAR	**Mina Array Bea**	**50.20**	**77**	P	**P**	**09 37 14.9**	**-1.6**
PMPB	**Monarch Peak**	**50.27**	**81**	P	**P**	**09 37 17.1**	**+0.2**
KURK	**Kurchatov**	**51.83**	**306**	P	**P**	**09 37 28.1**	**-0.2**
KURK	**Kurchatov**	**51.83**	**306**	P	**P**	**09 37 28.0**	**-0.2**
KURBB	**Kurchatov Arra**	**51.93**	**306**	P	**P**	**09 37 28.0**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=50,slow=7.5,SNR=7.7						
	comp=Z,0.9nm,0.8s						
PDAR	**Pinedale Array**	**52.18**	**67**	P	**P**	**09 37 29.9**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=327,slow=2.1,SNR=5.1						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**52.62**	**300**	P	**P**	**09 37 32.3**	**-2.0**
	comp=Z,0.5nm,0.6s,baz=30,slow=4.9,SNR=5.0						
	comp=Z,0.5nm,0.6s						
MKAR	**Makanchi Array**	**52.62**	**300**	P	**P**	**09 37 31.9**	**-2.3**
MKAR	**Makanchi Array**	**52.62**	**300**	P	**P**	**09 37 31.9**	**-2.3**
ARCES	**ARCESS Array B**	**54.02**	**345**	P	**P**	**09 37 42.1**	**-2.0**
	comp=Z,2.3nm,0.9s,baz=22,slow=6.6,SNR=5.7						
	comp=Z,2.3nm,0.9s						
ARCES	**ARCESS Array B**	**54.02**	**345**	P	**P**	**09 37 43.9**	**-0.3**
BVAR	**Borovoye Array**	**54.02**	**312**	P	**P**	**09 37 43.5**	**-0.9**
	comp=Z,2.1nm,0.5s,baz=46,slow=8.6,SNR=12						
	comp=Z,2.1nm,0.5s						
PZH	**PanZhiHua**	**55.95**	**269**	P	**P**	**09 38 01.6**	**+2.7**
ARTI	**Arti**	**56.43**	**321**	P	**P**	**09 38 01.1**	**-0.6**
	comp=Z,1.8nm,0.5s,baz=32,slow=7.8,SNR=4.1						
	comp=Z,1.8nm,0.5s						
CMAR	**Chiang Mai Arr**	**63.77**	**265**	P	**P**	**09 38 54.5**	**+2.0**
	comp=Z,0.7nm,0.3s,baz=194,slow=21,SNR=2.7						
CMAR				LR	LR	10 08 18.0	
	comp=Z,9.3nm,18.3s,baz=100,slow=38						
	comp=Z,0.7nm,0.3s						
NOA	**NORSAR Array B**	**64.03**	**348**	P	**P**	**09 38 52.8**	**-0.9**
	comp=Z,0.9nm,0.8s,baz=3.4,slow=3.4,SNR=3.4						
	comp=Z,0.9nm,0.8s						
HFS	**Hagfors**	**64.59**	**347**	P	**P**	**09 38 57.3**	**0.0**
	comp=Z,7.6nm,1.1s,baz=77,slow=6.5,SNR=1.8						
	comp=Z,7.6nm,1.1s						
TXAR	**Lajitas Array**	**65.14**	**74**	P	**P**	**09 39 02.0**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=302,slow=4.9,SNR=31						
	comp=Z,1.9nm,0.7s						
TXAR	**Lajitas Array**	**65.14**	**74**	P	**P**	**09 39 01.9**	**+0.4**
TXAR	**Lajitas Array**	**65.14**	**74**	P	**P**	**09 39 01.9**	**+0.4**
AKASG	**Malin Array Be**	**70.47**	**334**	P	**P**	**09 39 34.2**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=29,slow=6.3,SNR=1.7						
	comp=Z,0.6nm,0.5s						
TKL	**Tuckaleechee C**	**70.82**	**56**	LR	LR	10 11 23.5	
	comp=Z,24nm,18.8s,baz=332,slow=37						
GNI	**Garni**	**74.87**	**319**	LR	LR	10 18 17.8	
	comp=Z,28nm,18.4s,baz=17,slow=40						
WRA	**Warramunga Arr**	**79.53**	**213**	P	**P**	**09 40 30.9**	**+3.7**
	comp=Z,0.4nm,0.8s,baz=26,slow=5.8,SNR=4.7						
	comp=Z,0.4nm,0.8s						
ASAR	**Alice Springs**	**83.15**	**212**	P	**P**	**09 40 48.2**	**+1.9**
	comp=Z,0.7nm,1.0s,baz=24,slow=5.4,SNR=5.1						
	comp=Z,0.7nm,1.0s						
ASAR	**Alice Springs**	**83.15**	**212**	P	**P**	**09 40 46.4**	**+0.1**
ASAR	**Alice Springs**	**83.15**	**212**	P	**P**	**09 40 46.4**	**+0.1**

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*IDC **07** 09:53:30.0±1.5, 0°.89N×127°.51E, h0^{km}, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=147.2km s-min=19.9km az=69.0*

*DJA **07** 09:53:37.3±0.2, 0°N±2°×12°6E±°, h10^{km}, M4.1/19, mB5.1/2, mb4.1/7, MLv4.0/19, Mw(mB)4.4/2*

ISC 07 09:53:38.6±1.0**, 0°.14N**±0°.07×**126°.05E**±0°.06**, h35^{km}, n24,** σ1^{s}**78**/23**, mb3.6**/5**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.46**	**65**	P	**Pn**	**09 54 03.9**	**+1.4**
MNI	**Manado**	**1.77**	**317**	P	**Pn**	**09 54 07.7**	**+0.9**
SANI	**Sanana**	**2.18**	**182**	P	**Pn**	**09 54 11.7**	**-0.6**
GAMI	**Galela, Maluku**	**2.42**	**46**	P	**Pn**	**09 54 18.1**	**+2.3**
GTOI	**Gorontalo**	**3.08**	**279**	P	**Pn**	**09 54 28.3**	**+3.6**
LUWI	**Luwuk**	**3.48**	**250**	P	**Pn**	**09 54 31.4**	**+1.1**
NLAI	**Namlea**	**3.52**	**163**	P	**Pn**	**09 54 31.4**	**+0.6**
SGSI	**Sangihe**	**3.56**	**352**	P	**Pn**	**09 54 33.2**	**+1.8**
MRSI	**Marisa**	**4.12**	**275**	P	**Pn**	**09 54 39.4**	**+0.3**
AAI	**Ambon**	**4.37**	**151**	P	**Pn**	**09 54 44.1**	**+1.6**
MSAI	**Masohi**	**4.50**	**140**	P	**Pn**	**09 54 45.4**	**+1.0**
APSI	**Ampana**	**4.52**	**257**	P	**Pn**	**09 54 45.2**	**+0.6**
SWI	**Sorong**	**5.31**	**101**	P	**Pn**	**09 54 57.8**	**+2.4**
	0.1nm1µm9.5nm,0.9s						
MPSI	**Mapaga**	**6.15**	**272**	P	**Pn**	**09 55 09.1**	**+2.1**
	6.6nm,0.8s						
FAKI	**Fak Fak**	**6.91**	**116**	P	**Pn**	**09 55 18.3**	**+0.9**
	0.1nm13nm,1.3s						
TTSI	**Tana Toraja**	**6.98**	**243**	P	**Pn**	**09 55 19.2**	**+0.7**
	0.1nm16nm,0.5s						
SPSI	**Sidrap Palu**	**7.48**	**237**	P	**Pn**	**09 55 27.2**	**+1.9**
EDFI	**Ende, Flores**	**9.84**	**206**	P	**Pn**	**09 55 59.6**	**+1.8**
	7.4nm,0.7s						
PCJI	**Pacitan**	**16.98**	**240**	P	**P**	**09 57 36.7**	**+1.6**
WRA	**Warramunga Arr**	**21.55**	**158**	P	**P**	**09 58 22.9**	**-2.2**
	2.1nm,0.7s,baz=340,slow=11,SNR=13						
	2.1nm,0.7s						
ASAR	**Alice Springs**	**24.86**	**163**	P	**P**	**09 58 57.7**	**-0.4**
	0.4nm,0.3s,baz=345,slow=12,SNR=29						
	0.4nm,0.3s						
SONM	**Songino Array**	**50.48**	**343**	P	P	10 02 27.1	-6.2
	0.2nm,0.4s,baz=166,slow=8.6,SNR=2.7						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**60.13**	**327**	P	**P**	**10 03 41.0**	**-1.7**
	0.5nm,0.4s,baz=125,slow=7.7,SNR=6.4						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**64.40**	**329**	P	**P**	**10 04 09.2**	**-2.0**
	0.3nm,0.5s,baz=132,slow=6.8,SNR=5.8						
	0.3nm,0.5s						

NOU 07 09:55:32.2, 18°.45S×168°.17E, h4^{km}, MLv4.5/19**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	**Rentapao**	**0.70**	**20**	P	Pg	09 55 46.1	+0.5
RTV	**Rentapao**	**0.70**	**20**	S	Sg	09 55 55.2	+0.5
DVP	**Devils Point**	**0.72**	**1**	P	Pb	09 55 46.9	-0.4
DVP	**Devils Point**	**0.72**	**1**	S	Sg	09 55 56.4	+1.0
INH	**Isangel**	**1.51**	**136**	P	Pn	09 56 00.0	-0.1
MARNC	**Mare, Loyalty**	**3.02**	**182**	P	Pn	09 56 19.7	-1.1
SANVU	**Saraoutou**	**3.13**	**343**	P	Pn	09 56 20.5	-1.8
YATNC	**Mamie plateau,**	**3.79**	**198**	P	Pn	09 56 31.5	+0.1
DZM	**Mont Dzumac**	**3.95**	**204**	P	Pn	09 56 34.5	+0.8
OUENC	**Ouen Island, N**	**4.14**	**197**	P	Pn	09 56 36.8	+0.6
ONTNC	**Ouen Toro**	**4.16**	**202**	P	Pn	09 56 37.4	+0.9
KOUNC	**Koumac, New Ca**	**4.22**	**240**	P	Pn	09 56 38.5	+1.2
NGOA	**Tingoa Renbel**	**10.41**	**310**	P	Pn	09 58 02.3	0.0

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*NEIC **07** 10:27:20.6±0.8, 58°.94N±0°.02×154°.39W±0°.07, h130^{km}±4^{km}, Error ellipse: s-maj=5.7km s-min=2.0km az=108.0*

*AEIC **07** 10:27:22.3±0.7, 58°.94N±0°.03×154°.35W±0°.06, h118^{km}±4^{km}, ML3.3, mb3.6/2(NEIC), ML3.4/137(NEIC), Error ellipse: s-maj=5.6km s-min=1.6km az=130.0*

ISC 07 10:27:19.9±0.9**, 58°.95N**±0°.05×**154°.37W**±0°.05**, h132^{km}**±7^{km}**, n207,** σ**0^{s}83**/221**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPH	**Katmai Pasha**	**0.35**	**178**		**Pn**	**10 27 38.9**	**+0.3**
KAPH					**Sn**	**10 27 52.7**	**0.0**
Q19K	**Cape Douglas,**	**0.38**	**92**		**Pn**	**10 27 38.8**	**+0.2**
Q19K					**Sn**	**10 27 52.5**	**-0.4**
Q19K				IAML		10 27 55.0	
	comp=E,639nm,1.1s						
Q19K				IAML		10 27 55.4	
	comp=N,1µm,0.7s						
KAHC	**Katmai Hardscr**	**0.45**	**228**		**Pn**	**10 27 39.1**	**+0.1**
KAHC					**Sn**	**10 27 52.7**	**-0.9**
KAHG	**Katmai Hook Gl**	**0.46**	**191**		**Pn**	**10 27 39.4**	**+0.3**
KAHG					**Sn**	**10 27 53.5**	**-0.1**
KARR	**Katmai Rainbow**	**0.48**	**201**		**Pn**	**10 27 39.4**	**+0.3**
KARR					**Sn**	**10 27 53.7**	**0.0**
KAWH	**Katmai**	**0.61**	**202**		**Pn**	**10 27 40.0**	**0.0**
KAWH					**Sn**	**10 27 54.4**	**-0.6**
AUI	**Augustine Isla**	**0.62**	**51**		**Pn**	**10 27 40.7**	**+0.7**
AUI					**Sn**	**10 27 55.2**	**0.0**
AUW	**Augustine West**	**0.63**	**47**		**Pn**	**10 27 40.6**	**+0.7**
AUW	**Augustine West**	**0.63**	**47**		**Pn**	**10 27 40.7**	**+0.7**
AUW					**Sn**	**10 27 55.4**	**+0.2**
P18K	**Big Mountain,**	**0.63**	**316**	Pn	**Pn**	**10 27 39.9**	**-0.2**
P18K					**Sn**	**10 27 54.3**	**-1.0**
P18K				IAML		10 27 54.6	
	comp=E,364nm,1.0s						
P18K				IAML		10 27 54.7	
	comp=N,315nm,0.5s						
AUCH	**Augustine Cone**	**0.64**	**48**		**Pn**	**10 27 40.2**	**+0.1**
KAKN	**Katmai Knife C**	**0.74**	**209**		**Pn**	**10 27 41.2**	**+0.2**
KABU	**Katmai Buttres**	**0.83**	**215**		**Pn**	**10 27 42.0**	**+0.4**
KABU					**Sn**	**10 27 58.0**	**0.0**
P19K	**Oil Pt**	**0.92**	**39**		**Pn**	**10 27 43.0**	**+0.8**
P19K					**Sn**	**10 28 00.0**	**+0.7**
P19K				IAML		10 28 00.5	
	comp=E,900nm,0.7s						
P19K				IAML		10 28 00.5	
	comp=N,625nm,0.6s						
ANCK	**Angle Creek**	**0.95**	**219**		**Pn**	**10 27 43.1**	**+0.5**
O18K	**Koktuh Hills**	**1.01**	**335**		**Pn**	**10 27 43.4**	**+0.4**
O18K				IAML		10 28 00.6	
	comp=E,325nm,0.7s						
CNTC	**Contact Creek**	**1.05**	**230**		**Pn**	**10 27 43.8**	**+0.3**
SYI	**Shuyak Island**	**1.08**	**107**		**Pn**	**10 27 44.7**	**+1.0**
SYI					**Sn**	**10 28 01.4**	**-0.5**
KJL	**Kejulik**	**1.09**	**216**		**Pn**	**10 27 44.6**	**+0.7**
P17K	**Kvichak River**	**1.10**	**284**	Pn	**Pn**	**10 27 44.2**	**+0.4**
P17K				IAML		10 28 02.5	
	comp=E,476nm,0.7s						
ILS	**Iliamna Low So**	**1.21**	**33**		**Pn**	**10 27 45.7**	**+0.6**
ILSW	**Iliamna Southw**	**1.22**	**31**		**Pn**	**10 27 45.7**	**+0.5**
ILSW				IAML		10 28 05.4	
	comp=E,373nm,0.9s						
ILSW				IAML		10 28 05.4	
	comp=N,238nm,0.7s						
Q16K	**King Salmon**	**1.22**	**258**		**Pn**	**10 27 45.7**	**+0.7**
O19K	**Port Alsworth**	**1.25**	**1**		**Pn**	**10 27 45.6**	**+0.2**
O19K				IAML		10 28 04.9	
	comp=N,449nm,0.5s						
O19K				IAML		10 28 05.7	
	comp=E,702nm,0.5s						
IVE	**Iliamna Volcan**	**1.28**	**32**		**Pn**	**10 27 46.4**	**+0.6**
KDAK	**Kodiak Island**	**1.50**	**140**		**Pn**	**10 27 48.3**	**+0.2**
KDAK				IAML		10 28 11.0	
	comp=E,402nm,0.4s						
KDAK				IAML		10 28 11.9	
	comp=E,493nm,0.3s						
HOM	**Homer**	**1.57**	**62**	Pn	**Pn**	**10 27 49.8**	**+0.9**
PLK3	**Peulik 3**	**1.61**	**219**		**Pn**	**10 27 50.1**	**+0.8**
O17K	**Koliganek Bris**	**1.62**	**302**		**Pn**	**10 27 49.8**	**+0.4**
O17K					**Sn**	**10 28 11.7**	**-0.3**
PLK4	**Peulik 4**	**1.68**	**219**		**Pn**	**10 27 51.2**	**+0.9**
PLK4				IAML		10 28 14.4	
	comp=E,207nm,0.9s						
PLK4				IAML		10 28 14.8	
	comp=N,217nm,0.8s						
RED	**Redoubt Volcan**	**1.69**	**28**		**Pn**	**10 27 51.2**	**+0.9**
CNPM	**China Poot**	**1.71**	**69**		**Pn**	**10 27 51.1**	**+0.6**
CNPM					**Sn**	**10 28 13.4**	**-0.6**
CNPM				IAML		10 28 15.9	
	comp=E,348nm,0.3s						
CNPM				IAML		10 28 16.0	
	comp=N,300nm,0.5s						
RDSO	**Redoubt South**	**1.72**	**28**		**Pn**	**10 27 51.4**	**+0.6**
RDWB	**Redoubt West**	**1.73**	**26**		**Pn**	**10 27 51.4**	**+0.6**
PLBL	**Peulik Blue Cr**	**1.80**	**227**		**Pn**	**10 27 52.4**	**+0.9**
OHAK	**Old Harbor**	**1.82**	**161**		**Pn**	**10 27 51.6**	**-0.2**
OHAK				IAML		10 28 15.7	
	comp=N,444nm,0.4s						
OHAK				IAML		10 28 16.9	
	comp=E,256nm,0.3s						
OHAK	**Old Harbor**	**1.82**	**161**	P	**Pn**	**10 27 51.4**	**-0.4**
RDJH	**Redoubt Jeurge**	**1.83**	**25**		**Pn**	**10 27 52.6**	**+0.6**
DFR	**Drift River**	**1.86**	**27**		**Pn**	**10 27 52.9**	**+0.6**
N19K	**Bonanza Creek**	**1.87**	**358**		**Pn**	**10 27 53.4**	**+0.9**
N19K				IAML		10 28 18.1	
	comp=N,138nm,0.6s						
N19K				IAML		10 28 18.1	
	comp=E,154nm,0.8s						
P16K	**Nushagak River**	**1.88**	**274**	Pn	**Pn**	**10 27 53.3**	**+0.9**
P16K				IAML		10 28 19.1	
	comp=N,392nm,1.1s						
N18K	**Kilae Creek**	**1.90**	**337**		**Pn**	**10 27 53.5**	**+0.8**
RDT	**Redoubt**	**1.91**	**31**		**Pn**	**10 27 53.4**	**+0.5**
BRLK	**Bradley Lake**	**1.96**	**64**		**Pn**	**10 27 54.0**	**+0.4**
BRLK				IAML		10 28 20.8	
	comp=E,262nm,0.4s						
BRLK				IAML		10 28 21.0	
	comp=N,326nm,0.6s						
O16K	**Kokwok River B**	**2.02**	**290**		**Pn**	**10 27 55.0**	**+0.9**
O16K				IAML		10 28 20.7	
	comp=E,172nm,0.6s						
O16K				IAML		10 28 21.0	
	comp=N,137nm,0.7s						
BRSE	**Bradley Lake S**	**2.02**	**65**		**Pn**	**10 27 54.6**	**+0.4**
N17K	**Nushagak Hills**	**2.13**	**319**		**Pn**	**10 27 56.3**	**+0.8**
R16K	**Pilot Point**	**2.19**	**232**	Pn	**Pn**	**10 27 57.0**	**+0.9**
R16K				IAML		10 28 21.8	
	comp=N,103nm,1.2s						
R16K				IAML		10 28 55.2	
	comp=E,119nm,1.2s						
SII	**Sitkinak Islan**	**2.40**	**178**	Pn	**Pn**	**10 27 58.6**	**-0.3**
CKL	**Chakachamna La**	**2.48**	**23**		**Pn**	**10 28 00.8**	**+0.9**
SPWE	**Spurr West**	**2.51**	**20**		**Pn**	**10 28 01.4**	**+1.1**
SPCR	**Spurr Chakacha**	**2.51**	**25**		**Pn**	**10 28 01.0**	**+0.7**
SPU	**Mount Spurr**	**2.53**	**26**		**Pn**	**10 28 01.1**	**+0.7**
SPBG	**Spurr Blockage**	**2.53**	**23**		**Pn**	**10 28 01.6**	**+1.1**
SPCN	**Chakachatna No**	**2.54**	**25**		**Pn**	**10 28 01.5**	**+0.9**
SPNN	**North Nagishla**	**2.57**	**18**		**Pn**	**10 28 02.0**	**+0.9**
SLKM	**Skilak Lake**	**2.62**	**52**		**Pn**	**10 28 02.0**	**+0.4**
SLKM				IAML		10 28 37.5	
	comp=N,103nm,0.2s						
SLKM				IAML		10 28 37.5	
	comp=E,111nm,0.3s						
SPCG	**Spurr Capps Gl**	**2.63**	**26**		**Pn**	**10 28 02.5**	**+0.7**
M18K	**Stony River**	**2.65**	**345**		**Pn**	**10 28 03.1**	**+1.1**
N16K	**Nishlik Lake**	**2.70**	**306**		**Pn**	**10 28 04.0**	**+1.2**
SEW	**Seward**	**2.76**	**63**		**Pn**	**10 28 04.0**	**+0.7**
SEW				IAML		10 28 37.2	
	comp=E,138nm,0.3s						
SEW				IAML		10 28 39.0	
	comp=N,87nm,0.6s						
O22K	**Cooper Landing**	**2.81**	**55**	Pn	**Pn**	**10 28 04.9**	**+0.9**
O15K	**Ungalikthiuk R**	**2.83**	**277**		**Pn**	**10 28 05.2**	**+0.9**
O15K				IAML		10 28 39.4	
	comp=N,50nm,0.8s						
O15K				IAML		10 28 39.9	
	comp=E,54nm,1.0s						
STLK	**Strandline Lak**	**2.86**	**25**		**Pn**	**10 28 05.9**	**+1.2**
M17K	**Holitna River**	**2.90**	**329**		**Pn**	**10 28 06.2**	**+1.0**
M17K				IAML		10 28 43.2	
	comp=N,95nm,1.1s						
ANPB	**Aniakchak Plen**	**3.00**	**226**		**Pn**	**10 28 07.1**	**+0.6**
M20K	**Styx River**	**3.01**	**11**		**Pn**	**10 28 07.5**	**+0.9**
M16K	**Timber Creek**	**3.11**	**314**		**Pn**	**10 28 09.2**	**+1.3**
SUA	**Susitna One**	**3.11**	**34**		**Pn**	**10 28 08.8**	**+0.9**
SUA				IAML		10 28 45.3	
	comp=E,56nm,0.9s						
SUA				IAML		10 28 46.8	
	comp=N,84nm,1.1s						
N15K	**Kwethluk River**	**3.16**	**295**		**Pn**	**10 28 10.1**	**+1.5**
N15K				IAML		10 28 48.5	
	comp=N,67nm,0.8s						
N15K				IAML		10 28 51.0	
	comp=E,39nm,1.0s						
RC01	**Rabbit Creek A**	**3.17**	**45**		**Pn**	**10 28 09.0**	**+0.4**
RC01				IAML		10 28 47.3	
	comp=N,122nm,0.4s						
RC01				IAML		10 28 47.4	
	comp=E,88nm,0.3s						
CHIR	**Chirikof Islan**	**3.21**	**193**	Pn	**Pn**	**10 28 08.6**	**-0.5**
CHIR	**Chirikof Islan**	**3.21**	**193**	P	**Pn**	**10 28 08.2**	**-1.0**
L19K	**White Mountain**	**3.25**	**356**		**Pn**	**10 28 10.6**	**+0.8**
SKT	**Skwentna**	**3.35**	**24**		**Pn**	**10 28 11.9**	**+0.8**
SKT				IAML		10 28 55.4	
	comp=E,38nm,0.3s						
L18K	**Granite Mounta**	**3.48**	**342**		**Pn**	**10 28 13.8**	**+1.1**
M22K	**Willow**	**3.52**	**35**		**Pn**	**10 28 14.0**	**+0.8**
PWL	**Port Wells**	**3.59**	**55**		**Pn**	**10 28 14.2**	**0.0**
PWL				IAML		10 28 55.8	
	comp=E,93nm,0.7s						
M15K	**Kasigluk River**	**3.64**	**301**		**Pn**	**10 28 16.0**	**+1.2**
P23K	**Montague Islan**	**3.71**	**71**	Pn	**Pn**	**10 28 16.2**	**+0.5**
PMR	**Palmer**	**3.72**	**42**		**Pn**	**10 28 15.3**	**-0.5**
PMR				IAML		10 28 58.6	
	comp=E,31nm,0.4s						
PMR				IAML		10 29 00.7	
	comp=N,35nm,0.4s						
PMR	**Palmer**	**3.72**	**42**	P	**Pn**	**10 28 15.0**	**-0.9**
L17K	**Donlin**	**3.74**	**330**		**Pn**	**10 28 17.1**	**+0.9**
L16K	**Owhat River**	**3.76**	**320**		**Pn**	**10 28 17.6**	**+1.3**
KNK	**Knik Glacier**	**3.85**	**48**		**Pn**	**10 28 17.4**	**-0.3**
KNK				IAML		10 29 01.3	
	comp=N,64nm,0.6s						
KNK				IAML		10 29 02.2	
	comp=E,74nm,0.5s						
GHO	**Glory Hole Cre**	**3.92**	**41**		**Pn**	**10 28 18.0**	**-0.5**
GHO				IAML		10 29 08.7	

	comp=E,41nm,0.4s						
GHO				IAML		10 29 11.4	
	comp=N,45nm,0.9s						
VNKR	**Veniaminof 5**	**3.98**	**225**		**Pn**	**10 28 20.0**	**+0.7**
L22K	**Petersville**	**4.00**	**25**		**Pn**	**10 28 20.2**	**+0.6**
L22K				IAML		10 29 07.0	
	comp=N,51nm,0.2s						
L22K				IAML		10 29 10.2	
	comp=E,40nm,0.3s						
CUT	**Chulitna**	**4.01**	**28**		**Pn**	**10 28 21.0**	**+1.3**
GLI	**Glacier Island**	**4.14**	**59**	Pn	**Pn**	**10 28 21.3**	**-0.2**
GLI				IAML		10 29 08.7	
	comp=N,72nm,0.6s						
SML	**Sawmill**	**4.15**	**44**		**Pn**	**10 28 21.1**	**-0.5**
SML				IAML		10 29 15.5	
	comp=N,25nm,0.6s						
SML				IAML		10 29 21.3	
	comp=E,28nm,1.1s						
MID	**Middleton Isla**	**4.16**	**80**	Pn	**Pn**	**10 28 22.1**	**+0.5**
M14K	**Bethel**	**4.23**	**299**		**Pn**	**10 28 24.3**	**+1.7**
K17K	**Iditarod**	**4.24**	**335**		**Pn**	**10 28 24.2**	**+1.4**
HIN	**Hinchinbrook I**	**4.25**	**67**	Pn	**Pn**	**10 28 23.4**	**+0.5**
FID	**Port Fidalgo**	**4.37**	**62**	Pn	**Pn**	**10 28 23.9**	**-0.6**
L15K	**Ungalak Mounta**	**4.47**	**311**		**Pn**	**10 28 27.0**	**+1.2**
SCM	**Sheep Creek Mo**	**4.54**	**47**	Pn	**Pn**	**10 28 26.6**	**-0.2**
SCM				IAML		10 29 17.7	
	comp=E,33nm,1.0s						
SCM				IAML		10 29 22.4	
	comp=N,44nm,0.8s						
EYAK	**Cordova Ski Ar**	**4.65**	**66**	Pn	**Pn**	**10 28 28.3**	**+0.2**
EYAK				IAML		10 29 19.6	
	comp=N,46nm,0.8s						
EYAK				IAML		10 29 20.6	
	comp=E,47nm,0.5s						
M13K	**Dall Lake**	**4.78**	**292**		**Pn**	**10 28 32.3**	**+2.3**
L14K	**Kuka Creek**	**4.80**	**304**		**Pn**	**10 28 32.2**	**+2.1**
WAT1	**Susitna Watana**	**4.82**	**34**		**Pn**	**10 28 29.8**	**-0.7**
DIV	**Divide**	**4.84**	**59**		**Pn**	**10 28 31.3**	**+0.6**
DIV				IAML		10 29 26.7	
	comp=E,39nm,0.9s						
K15K	**Wolf Creek Mou**	**4.87**	**317**		**Pn**	**10 28 33.2**	**+2.1**
SDPT	**Sand Point**	**4.90**	**225**		**Pn**	**10 28 31.5**	**-0.1**
SDPT				IAML		10 29 29.4	
	comp=E,39nm,0.8s						
SDPT				IAML		10 30 47.7	
	comp=N,36nm,1.1s						
SDPT	**Sand Point**	**4.90**	**225**	P	**Pn**	**10 28 31.5**	**-0.1**
KTH	**Kantishna Hill**	**4.91**	**18**		**Pn**	**10 28 32.1**	**+0.3**
KTH				IAML		10 29 29.5	
	comp=N,24nm,0.4s						
KTH				IAML		10 29 29.5	
	comp=E,18nm,0.4s						
TRF	**Thorofare Moun**	**4.93**	**22**	Pn	**Pn**	**10 28 31.9**	**-0.2**
TRF				IAML		10 29 28.6	
	comp=E,26nm,0.5s						
J17K	**VABM Dome**	**5.01**	**335**		**Pn**	**10 28 34.2**	**+1.2**
J19K	**Poorman**	**5.10**	**354**	Pn	**Pn**	**10 28 34.6**	**+0.4**
GOAT	**Goat Mountain**	**5.14**	**67**		**Pn**	**10 28 35.1**	**+0.2**
KAIM	**Kayak Island**	**5.17**	**75**	Pn	**Pn**	**10 28 36.4**	**+1.2**
RND	**Reindeer**	**5.21**	**28**		**Pn**	**10 28 35.1**	**-0.6**
RND				IAML		10 29 37.5	
	comp=E,20nm,0.4s						
RND				IAML		10 29 41.0	
	comp=N,17nm,1.1s						
J16K	**Anvik River**	**5.30**	**328**		**Pn**	**10 28 37.9**	**+1.1**
BMRM	**Bremner River**	**5.31**	**63**		**Pn**	**10 28 37.4**	**+0.4**
HMT	**Hamilton**	**5.32**	**70**	Pn	**Pn**	**10 28 37.6**	**+0.5**
DHY	**Denali Highway**	**5.36**	**36**	Pn	**Pn**	**10 28 37.2**	**-0.6**
DHY				IAML		10 29 40.1	
	comp=E,23nm,0.8s						
DHY				IAML		10 29 40.4	
	comp=N,27nm,0.5s						
BPAW	**Bear Paw Mtn.**	**5.42**	**16**	Pn	**Pn**	**10 28 38.6**	**+0.1**
MCK	**McKinley**	**5.47**	**26**		**Pn**	**10 28 39.0**	**-0.1**
N25K	**Chitina, Valde**	**5.55**	**57**		**Pn**	**10 28 40.8**	**+0.6**
BERG	**Berg Lake**	**5.60**	**70**	Pn	**Pn**	**10 28 41.1**	**+0.3**
HARP	**HAARP**	**5.70**	**49**		**Pn**	**10 28 42.3**	**0.0**
WACK	**Wrangell Chich**	**5.83**	**54**		**Pn**	**10 28 44.2**	**0.0**
GLB	**Gilahina Butte**	**5.83**	**60**		**Pn**	**10 28 44.4**	**+0.4**
PAX	**Paxson**	**5.92**	**43**		**Pn**	**10 28 45.4**	**+0.2**
VRDI	**Verde Repeater**	**5.92**	**63**		**Pn**	**10 28 46.0**	**+0.5**
CRQM	**Cirque**	**5.95**	**67**		**Pn**	**10 28 46.3**	**+0.6**
SNH	**Sunshine Point**	**5.99**	**73**		**Pn**	**10 28 47.2**	**+1.0**
WAX	**Waxell Ridge**	**6.03**	**71**		**Pn**	**10 28 47.5**	**+0.9**
TGL	**Tana Glacier**	**6.09**	**68**		**Pn**	**10 28 48.2**	**+0.6**
MCARA	**McCarthy VSAT**	**6.17**	**62**		**Pn**	**10 28 49.2**	**+0.7**
BARK	**Barkley Ridge**	**6.19**	**71**		**Pn**	**10 28 49.7**	**+0.8**
NEA2	**Nenana**	**6.20**	**22**		**Pn**	**10 28 47.8**	**-1.0**
WRH	**Wood River Hil**	**6.29**	**26**		**Pn**	**10 28 49.2**	**-1.0**
ISLE	**Juniper Island**	**6.30**	**70**	Pn	**Pn**	**10 28 51.1**	**+0.7**
I21K	**Tanana**	**6.36**	**9**	Pn	**Pn**	**10 28 51.5**	**+0.5**
K24K	**Donnelly Dome**	**6.38**	**37**		**Pn**	**10 28 52.5**	**+1.1**
FALS	**False Pass**	**6.43**	**234**	P	**Pn**	**10 28 53.3**	**+1.3**
MESA	**MESA**	**6.43**	**74**	Pn	**Pn**	**10 28 53.3**	**+1.1**
CCB	**Clear Creek Bu**	**6.51**	**26**	Pn	**Pn**	**10 28 51.8**	**-1.2**
HDA	**Harding Lake**	**6.52**	**30**		**Pn**	**10 28 52.4**	**-0.8**
YAH	**Yahtse**	**6.56**	**72**		**Pn**	**10 28 55.2**	**+1.3**
GRNC	**Granite Creek**	**6.61**	**69**		**Pn**	**10 28 55.6**	**+1.0**
RIDG	**Independent Ri**	**6.64**	**40**	Pn	**Pn**	**10 28 55.4**	**+0.6**
I23K	**Minto, Yukon-K**	**6.65**	**19**		**Pn**	**10 28 54.7**	**-0.3**
COLA	**College**	**6.70**	**25**	Pn	**Pn**	**10 28 54.5**	**-1.0**
COLA	**College**	**6.70**	**25**	P	**Pn**	**10 28 54.5**	**-1.0**
BARN	**Barnard Glacie**	**6.72**	**66**		**Pn**	**10 28 57.1**	**+1.0**
L26K	**Log Cabin Wild**	**6.74**	**48**	Pn	**Pn**	**10 28 57.0**	**+0.7**
H21K	**Melozitna Rive**	**6.78**	**6**		**Pn**	**10 28 57.3**	**+0.6**
IL31		**6.83**	**28**	Pn	**Pn**	**10 28 56.3**	**-1.1**
CHX	**Chaix Hills**	**6.84**	**75**		**Pn**	**10 28 59.0**	**+1.4**
DOT	**Dot Lake**	**6.84**	**42**	Pn	**Pn**	**10 28 57.5**	**-0.1**
LOGN	**Logan Glacier**	**6.99**	**69**	Pn	**Pn**	**10 29 00.8**	**+1.1**
SAMH	**Samovar Hills**	**7.01**	**74**		**Pn**	**10 29 01.2**	**+1.3**
SCRK	**Sand Creek**	**7.08**	**40**		**Pn**	**10 29 00.0**	**-0.8**
J25K	**Salcha River,**	**7.10**	**33**		**Pn**	**10 29 00.2**	**-0.9**
H23K	**Yukon River**	**7.26**	**16**	Pn	**Pn**	**10 29 02.6**	**-0.6**
PCA	**Pinnacle**	**7.27**	**75**		**Pn**	**10 29 04.5**	**+1.1**
YUK2	**White River**	**7.29**	**61**		**Pn**	**10 29 04.7**	**+1.0**
BC01	**Beaver Creek A**	**7.36**	**51**		**Pn**	**10 29 04.6**	**+0.1**
L27K	**Beaver Creek,**	**7.36**	**51**	Pn	**Pn**	**10 29 05.4**	**+0.9**
O28M	**Mount Upton**	**7.37**	**70**		**Pn**	**10 29 06.4**	**+1.4**
BCAR	**Beaver Creek A**	**7.38**	**51**	Pn	**Pn**	**10 29 05.2**	**+0.4**
G16K	**Koyuk River**	**7.46**	**333**	Pn	**Pn**	**10 29 07.5**	**+1.6**
BVCY	**Beaver Creek**	**7.49**	**57**		**Pn**	**10 29 07.4**	**+1.2**
H24K	**Noodor Dome**	**7.54**	**21**	Pn	**Pn**	**10 29 06.1**	**-0.8**
J26L	**Joseph Creek**	**7.57**	**38**	Pn	**Pn**	**10 29 06.8**	**-0.6**
YUK8	**Steele Glacier**	**7.66**	**66**		**Pn**	**10 29 10.6**	**+1.8**
G23K	**Bananza Creek**	**8.04**	**12**	Pn	**Pn**	**10 29 14.0**	**+0.3**
O29M	**Mount Kennedy**	**8.12**	**74**	Pn	**Pn**	**10 29 16.7**	**+1.8**
I26K	**Coal Creek Min**	**8.26**	**35**		**Pn**	**10 29 15.9**	**-0.6**
G24K	**Hadweenzic Riv**	**8.39**	**19**	Pn	**Pn**	**10 29 17.2**	**-1.1**
UNV	**Unalaska Valle**	**8.45**	**238**		**Pn**	**10 29 18.8**	**-0.3**
UNV	**Unalaska Valle**	**8.45**	**238**	P	**Pn**	**10 29 18.6**	**-0.5**
MNAT	**Makushin Natee**	**8.50**	**239**		**Pn**	**10 29 19.8**	**0.0**
P29M	**Windy Craggy**	**8.54**	**78**	Pn	**Pn**	**10 29 21.7**	**+1.2**
M29M	**Somme Creek**	**8.55**	**59**	Pn	**Pn**	**10 29 22.0**	**+1.4**
MREP	**Makushin Rep't**	**8.57**	**238**		**Pn**	**10 29 21.1**	**+0.2**
DAWY	**Dawson**	**8.80**	**48**		**Pn**	**10 29 24.4**	**+0.5**
L29M	**L29M**	**8.91**	**55**		**Pn**	**10 29 26.1**	**+0.7**
I27K	**Kandik River**	**8.93**	**36**	Pn	**Pn**	**10 29 24.7**	**-0.8**
N30M	**Aishikik Lake**	**8.96**	**66**		**Pn**	**10 29 26.2**	**+0.1**
F24K	**Squaw Lake**	**9.08**	**16**		**Pn**	**10 29 26.8**	**-0.9**
E22K	**Anaktuvuk Pass**	**9.29**	**6**	Pn	**Pn**	**10 29 31.4**	**+0.9**
M30M	**Minto, Yukon**	**9.33**	**60**	Pn	**Pn**	**10 29 31.4**	**+0.4**
OKFG	**Magazine Ridge**	**9.36**	**240**		**Pn**	**10 29 30.8**	**-0.6**
I28M	**Miner Creek**	**9.36**	**40**	Pn	**Pn**	**10 29 31.2**	**-0.3**
O30N	**Mendenhall**	**9.37**	**71**	Pn	**Pn**	**10 29 32.0**	**+0.4**
H27K	**Steamboat Moun**	**9.39**	**34**		**Pn**	**10 29 30.7**	**-1.0**
K29M	**Barlow Dome**	**9.44**	**52**	Pn	**Pn**	**10 29 33.6**	**+1.1**
F25K	**Christian Rive**	**9.52**	**21**	Pn	**Pn**	**10 29 31.8**	**-1.7**
E24K	**Your Creek**	**9.53**	**13**	Pn	**Pn**	**10 29 34.0**	**+0.3**
E21K	**Killik River**	**9.54**	**1**	Pn	**Pn**	**10 29 33.4**	**-0.3**
N31M	**Braeburn, Yuko**	**9.59**	**67**	Pn	**Pn**	**10 29 35.6**	**+1.2**
WHY	**Whitehorse**	**9.96**	**72**	Pn	**Pn**	**10 29 40.6**	**+1.1**
E25K	**Arctic Village**	**10.00**	**19**	Pn	**Pn**	**10 29 38.2**	**-1.6**
H29M	**Whitestone**	**10.34**	**39**	Pn	**Pn**	**10 29 44.7**	**+0.2**
I30M	**Mount Dempster**	**10.49**	**46**	Pn	**Pn**	**10 29 47.7**	**+1.1**
G30M	**tAoh Zraii Nji**	**11.49**	**38**	Pn	**Pn**	**10 29 59.8**	**+0.1**
H31M	**Peel River**	**11.52**	**45**	Pn	**Pn**	**10 30 00.3**	**+0.2**
D27M	**Malcolm River**	**11.84**	**24**	Pn	**Pn**	**10 30 04.5**	**+0.2**
E29M	**Blow River**	**11.91**	**31**	Pn	**Pn**	**10 30 04.8**	**-0.4**
G31M	**Satah River**	**12.10**	**40**	Pn	**Pn**	**10 30 07.2**	**-0.4**
INK	**Inuvik**	**13.10**	**36**	Pn	**Pn**	**10 30 20.7**	**+0.1**
C36M	**Paulatuk**	**16.60**	**39**	Pn	**Pn**	**10 31 03.7**	**-0.7**
C36M				IAmb	IAmb	10 31 05.3	
	comp=Z,4.1nm,1.0s						
A36M	**Sachs Harbour**	**17.52**	**30**	P	**P**	**10 31 14.5**	**-0.2**
A36M				IAmb	IAmb	10 31 50.1	
	comp=Z,4.6nm,1.2s						

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*IDC **07** 10:36:33.3±2.4, 24.°39S×68.°96W, h85^{km}±23^{km}, mb3.6/4, mbtmp3.8/7, Error ellipse: s-maj=30.5km s-min=15.8km az=88.0*

*SJA **07** 10:36:34.0±0.7, 24.°31S×69.°01W, h119^{km}±7^{km}, ML4.0, MW3.9*

*NEIC **07** 10:36:34.1±1.4, 24.°32S±0.°04×69.°02W±0.°06, h123^{km}±10^{km}, mb4.3/8, ML4.2(GUC), Error ellipse: s-maj=8.9km s-min=4.4km az=119.0*

*GUC **07** 10:36:35.3±0.8, 24.°30S×68.°98W, h108^{km}±4^{km}, ML4.2*

*VAO **07** 10:36:49.4±1.7, 23.°84S×67.°83W, h166^{km}±15^{km}, mb4.2, Presumed earthquake*

ISC 07 10:36:34.1±0.7, **24.°34S**±0.°03×**69.°01W**±0.°04, **h116**^{km}±7^{km}, **n118**, σ**1^{s}38**/133, **mb3.9**/5, **6C-2D**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO02	**Mina Guanaco**	**0.97**	**213**		**Pn**	**10 36 57.2**	**+1.4**
GO02				Sn	**Sn**	**10 37 13.3**	**+1.1**
GO02	**Mina Guanaco**	**0.97**	**213**	⇑ *i*P	**Pn**	**10 36 57.1**	**+1.3**
GO02				*e*S	**Sn**	**10 37 13.3**	**+1.1**
GO02				IAML		10 37 14.6	
	comp=E,14µm,0.3s						
GO02	**Mina Guanaco**	**0.97**	**213**	*e*P	**Pn**	**10 36 56.7**	**+0.9**
GO02				IAML		10 37 15.8	
	comp=Z,7µm,0.3s						
PB14	**IPOC Station P**	**1.30**	**257**		**Pn**	**10 37 00.3**	**+1.0**
PB14				Sn	**Sn**	**10 37 19.2**	**+0.9**
PB14	**IPOC Station P**	**1.30**	**257**	⇑ *i*P	**Pn**	**10 37 00.3**	**+1.0**
PB14				*e*S	**Sn**	**10 37 19.3**	**+0.9**
PB14	**IPOC Station P**	**1.30**	**257**	*e*P	**Pn**	**10 37 00.3**	**+1.0**
PB14				*e*S	**Sn**	**10 37 20.3**	**+1.9**
PB14				IAML		10 37 22.0	
	comp=Z,762nm,0.2s						
AF01	**San Pedro de A**	**1.58**	**29**		**Pn**	**10 37 03.2**	**+0.7**
AF01				Sn	**Sn**	**10 37 24.1**	**+0.1**
AF01	**San Pedro de A**	**1.58**	**29**	*e*P	**Pn**	**10 37 03.1**	**+0.7**
AF01				IAML		10 37 25.4	
	comp=N,8µm,0.3s						
AF01	**San Pedro de A**	**1.58**	**29**	*e*P	**Pn**	**10 37 03.3**	**+0.8**
AF01				*e*S	**Sn**	**10 37 24.9**	**+0.8**
AF01				IAML		10 37 33.1	
	comp=Z,3µm,0.5s						
PB10	**IPOC Station P**	**1.63**	**300**		**Pn**	**10 37 03.8**	**+1.0**
PB10				Sn	**Sn**	**10 37 25.2**	**+0.5**
PB10	**IPOC Station P**	**1.63**	**300**	⇑ *e*P	**Pn**	**10 37 03.9**	**+1.0**
PB10				*e*S	**Sn**	**10 37 25.1**	**+0.4**
PB10				IAML		10 37 28.4	
	comp=E,1µm,0.2s						
PB10	**IPOC Station P**	**1.63**	**300**	*e*P	**Pn**	**10 37 03.9**	**+1.0**
PB10				*e*S	**Sn**	**10 37 25.8**	**+1.0**
PB10				IAML		10 37 30.7	
	comp=Z,934nm,0.3s						
PB06	**IPOC Station P**	**1.71**	**342**		**Pn**	**10 37 04.5**	**+0.6**
PB06	**IPOC Station P**	**1.71**	**342**	*e*P	**Pn**	**10 37 04.5**	**+0.6**
PB06				*e*S	**Sn**	**10 37 26.1**	**-0.5**
PB06				IAML		10 37 26.8	
	comp=N,4µm,0.2s						
PB06	**IPOC Station P**	**1.71**	**342**	*e*P	**Pn**	**10 37 04.5**	**+0.6**
PB06				*e*S	**Sn**	**10 37 26.3**	**-0.2**
PB06				IAML		10 37 26.6	
	comp=Z,2µm,0.2s						
PB05	**IPOC Station P**	**1.84**	**323**		**Pn**	**10 37 06.4**	**+0.9**
PB05	**IPOC Station P**	**1.84**	**323**	⇑ *e*P	**Pn**	**10 37 06.4**	**+0.9**
PB05				*e*S	**Sn**	**10 37 29.2**	**-0.2**
PB05				IAML		10 37 31.5	
	comp=E,2µm,0.4s						
PB05	**IPOC Station P**	**1.84**	**323**	*e*P	**Pn**	**10 37 06.4**	**+0.9**
PB05				*e*S	**Sn**	**10 37 29.4**	**0.0**
PB05				IAML		10 37 31.8	
	comp=Z,2µm,0.4s						
AC01	**Pan de Azucar**	**2.30**	**218**		**Pn**	**10 37 12.3**	**+1.1**
AC01	**Pan de Azucar**	**2.30**	**218**	⇑ *e*P	**Pn**	**10 37 11.7**	**+0.5**
AC01	**Pan de Azucar**	**2.30**	**218**	*e*P	**Pn**	**10 37 11.7**	**+0.5**
AC01				*e*S	**Sn**	**10 37 38.4**	**-1.3**
AC01				IAML		10 37 42.9	
	comp=Z,544nm,0.3s						
PB03	**IPOC Station P**	**2.38**	**343**		**Pn**	**10 37 12.6**	**+0.3**
PB03	**IPOC Station P**	**2.38**	**343**	*e*P	**Pn**	**10 37 12.7**	**+0.3**
PB03				IAML		10 37 42.1	
	comp=E,1µm,0.1s						
PB03	**IPOC Station P**	**2.38**	**343**	*e*P	**Pn**	**10 37 12.6**	**+0.3**
PB03				*e*S	**Sn**	**10 37 39.9**	**-1.7**
PB03				IAML		10 37 43.2	
	comp=Z,1µm,0.2s						
SALTA		**2.44**	**88**	⇑ *e*P	**Pn**	**10 37 14.3**	**+1.0**
SALTA		**2.44**	**88**	*e*P	**Pn**	**10 37 14.4**	**+1.0**
AC02	**Maricunga**	**2.49**	**182**		**Pn**	**10 37 15.9**	**+2.0**
AC02	**Maricunga**	**2.49**	**182**	*e*P	**Pn**	**10 37 16.0**	**+2.0**
AC02	**Maricunga**	**2.49**	**182**	*e*P	**Pn**	**10 37 15.9**	**+2.0**
AC02				IAML		10 37 49.1	
	comp=Z,238nm,0.3s						
PB09	**IPOC Station P**	**2.54**	**355**		**Pn**	**10 37 15.4**	**+1.0**
PB09	**IPOC Station P**	**2.54**	**355**	*e*P	**Pn**	**10 37 15.5**	**+1.0**
PB09				IAML		10 37 47.0	
	comp=N,704nm,0.4s						
PB09	**IPOC Station P**	**2.54**	**355**	*e*P	**Pn**	**10 37 15.5**	**+1.0**
PB09				*e*S	**Sn**	**10 37 46.8**	**+1.4**
PB09				IAML		10 37 47.3	
	comp=Z,491nm,0.3s						
PB07	**IPOC Station P**	**2.72**	**343**		**Pn**	**10 37 16.9**	**0.0**
PB07	**IPOC Station P**	**2.72**	**343**	*e*P	**Pn**	**10 37 16.8**	**0.0**
PB07				IAML		10 37 52.8	
	comp=E,654nm,0.2s						
PB07	**IPOC Station P**	**2.72**	**343**	*e*P	**Pn**	**10 37 16.7**	**0.0**
PB07				*e*S	Sn	10 37 37.8	-12
PB07				IAML		10 37 45.8	
	comp=Z,666nm,0.6s						
PB02	**IPOC Station P**	**3.12**	**345**		**Pn**	**10 37 21.6**	**-0.3**
PB02	**IPOC Station P**	**3.12**	**345**	⇓ *e*P	**Pn**	**10 37 21.7**	**-0.2**
PB02	**IPOC Station P**	**3.12**	**345**	*e*P	Pn	10 37 16.1	-5.8
PB02				*e*S	Sn	10 37 44.1	-15
PB02				IAML		10 38 26.1	
	comp=Z,943nm,0.5s						
SLA	**San Lorenzo**	**3.22**	**97**	*e*P	**Pn**	**10 37 24.8**	**+1.5**
SLA	**San Lorenzo**	**3.22**	**97**	*e*P	**Pn**	**10 37 25.4**	**+2.1**
AC06	**Mina Casimiro**	**3.24**	**202**		**Pn**	**10 37 23.6**	**+0.2**
AC06	**Mina Casimiro**	**3.24**	**202**	*e*P	**Pn**	**10 37 23.2**	**-0.2**
FSA	**Cafayete**	**3.26**	**123**	*e*P	**Pn**	**10 37 25.7**	**+1.8**
FSA				*e*S	Sn	10 37 53.3	-9.0
PB01	**IPOC Station P**	**3.31**	**352**		**Pn**	**10 37 24.3**	**-0.2**
PB01	**IPOC Station P**	**3.31**	**352**	⇓ *e*P	**Pn**	**10 37 24.3**	**-0.2**
PB01	**IPOC Station P**	**3.31**	**352**	*e*P	**Pn**	**10 37 22.6**	**-1.9**
PB01				*e*S	Sn	10 37 48.6	-15
PB01				IAML		10 37 57.4	
	comp=Z,284nm,0.2s						
GO03	**Copiapo**	**3.42**	**199**		**Pn**	**10 37 26.2**	**+0.4**
GO03	**Copiapo**	**3.42**	**199**	*e*P	**Pn**	**10 37 25.9**	**0.0**
GO03	**Copiapo**	**3.42**	**199**	*e*P	**Pn**	**10 37 26.4**	**+0.4**
HJA	**Humahuaca**	**3.49**	**72**	*e*P	**Pn**	**10 37 29.6**	**+2.5**
PATCX	**Punta Patache**	**3.66**	**343**		**Pn**	**10 37 28.0**	**-1.0**
PATCX	**Punta Patache**	**3.66**	**343**	*e*P	**Pn**	**10 37 27.9**	**-1.2**
PATCX	**Punta Patache**	**3.66**	**343**	*e*P	**Pn**	**10 37 28.1**	**-1.0**
PATCX				*e*S	Sn	10 37 53.2	-18
PATCX				IAML		10 38 30.7	
	comp=Z,185nm,0.8s						
YJA	**Yavi**	**3.87**	**57**	*e*P	**Pn**	**10 37 33.9**	**+1.7**
TA01	**Diego Aracena**	**3.91**	**344**		**Pn**	**10 37 30.8**	**-1.5**
TA01	**Diego Aracena**	**3.91**	**344**	*e*P	Pn	10 37 16.7	-16
TA01				IAML		10 38 35.9	
	comp=Z,104nm,0.6s						
TINO	**Tinogasta**	**3.93**	**161**	*e*P	**Pn**	**10 37 34.4**	**+1.8**
TINO				*e*S	Sn	10 38 09.2	-8.9
AHML	**Horco Molle**	**4.12**	**127**	*e*P	Pn	10 37 27.1	-8.0
PB08	**IPOC Station P**	**4.18**	**358**		**Pn**	**10 37 35.8**	**-0.5**
PB08	**IPOC Station P**	**4.18**	**358**	*e*P	**Pn**	**10 37 35.8**	**-0.5**
PB08				*e*S	Sn	10 38 03.5	-21
PB08				IAML		10 38 52.2	
	comp=Z,106nm,0.6s						
TA02	**Huaiquique**	**4.18**	**345**	*e*P	**Pn**	**10 37 34.2**	**-1.8**
AC04	**Llanos de Chal**	**4.27**	**205**		**Pn**	**10 37 35.9**	**-1.3**
AC04	**Llanos de Chal**	**4.27**	**205**	*e*P	**Pn**	**10 37 35.7**	**-1.4**
AC04	**Llanos de Chal**	**4.27**	**205**	*e*P	**Pn**	**10 37 35.8**	**-1.3**
AC04				IAML		10 38 40.5	
	comp=Z,145nm,0.5s						
VCA	**Vinchina**	**4.44**	**171**	*e*P	**Pn**	**10 37 42.4**	**+2.8**
VCA				*e*P		10 37 42.6	
PB11	**IPOC Station P**	**4.60**	**352**		**Pn**	**10 37 40.3**	**-1.5**
PB11	**IPOC Station P**	**4.60**	**352**	*e*P	**Pn**	**10 37 40.1**	**-1.6**
PB11				IAML		10 39 03.9	
	comp=Z,105nm,0.7s						
AC05	**El Transito**	**4.62**	**194**		**Pn**	**10 37 42.2**	**+0.3**
AC05	**El Transito**	**4.62**	**194**	*e*P	**Pn**	**10 37 42.6**	**+0.7**
GO01	**Chusmiza**	**4.65**	**358**		**Pn**	**10 37 42.2**	**-0.6**
GO01	**Chusmiza**	**4.65**	**358**	*e*P	**Pn**	**10 37 42.0**	**-0.7**
GO01				*e*S	Sn	10 38 15.2	-21
GO01				IAML		10 38 27.2	
	comp=Z,79nm,0.5s						
LCO	**Las Campanas**	**4.89**	**198**		**Pn**	**10 37 45.0**	**-0.8**
LCO	**Las Campanas**	**4.89**	**198**	*e*P	**Pn**	**10 37 45.4**	**-0.3**
LCO				IAML		10 39 12.6	
	comp=Z,179nm,0.7s						
PB12	**IPOC Station P**	**5.83**	**348**		**Pn**	**10 37 55.6**	**-2.7**
GO04	**Tololo Observa**	**6.02**	**195**	Pn	**Pn**	**10 37 59.6**	**-1.4**
CO06	**Fray Jorge**	**6.72**	**200**	Pn	**Pn**	**10 38 06.9**	**-3.3**
CO02	**Combarbal**	**7.06**	**194**	Pn	**Pn**	**10 38 12.6**	**-2.4**
CFA	**Coronel Fontan**	**7.27**	**175**	P	**Pn**	**10 38 17.6**	**-0.1**
	comp=Z,5.3nm,0.2s,baz=39,slow=18,SNR=73						
CFA				S	**Sn**	**10 39 33.3**	**-5.4**
	comp=Z,1.6nm,0.4s,baz=305,slow=18,SNR=1.2						
LPAZ	**La Paz**	**8.05**	**6**	P	**Pn**	**10 38 29.4**	**+0.6**
	comp=Z,1.7nm,0.3s,baz=178,slow=4.6,SNR=24						
LPAZ	**La Paz**	**8.05**	**6**		**Pn**	**10 38 29.3**	**+0.4**
MT02	**Curacav**	**9.08**	**191**	Pn	**Pn**	**10 38 38.4**	**-3.8**
CPUP	**Villa Florida**	**10.75**	**103**	P	**Pn**	**10 39 04.1**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=288,slow=14,SNR=2.9						
CPUP	**Villa Florida**	**10.75**	**103**	Pn	**Pn**	**10 39 04.2**	**-0.5**
AQDB	**Aquidauana**	**12.90**	**75**	Pn	**Pn**	**10 39 32.6**	**-0.6**
VILB	**Vilhena**	**14.06**	**38**	Pn	**Pn**	**10 39 45.7**	**-2.6**
TRQA	**Tornquist**	**14.93**	**158**	Pn	**Pn**	**10 39 57.4**	**-1.7**
SALV	**Santo Antonio**	**15.05**	**59**	*e*P	**Pn**	**10 39 59.4**	**-1.5**
CPSB	**Cacapava Do Su**	**15.09**	**117**	*e*P	**P**	**10 40 04.0**	**+0.3**
PTGB	**Pitanga**	**15.43**	**95**	*e*P	**P**	**10 40 07.0**	**-0.6**
PLTB	**Pedras Altas**	**15.47**	**122**	Pn	**Pn**	**10 40 04.1**	**-1.9**
ITAB	**Concordia**	**15.48**	**104**		**Pn**	**10 40 05.8**	**-0.3**
ITAB				IAmb	IAmb	10 40 08.7	
	comp=Z,9.9nm,0.6s						
PDRB	**Porto dos Gac**	**17.21**	**45**	*e*P	**P**	**10 40 25.3**	**-1.9**
ITRB	**Iturama**	**17.89**	**79**	*e*P	**Pn**	**10 40 34.8**	**-1.0**
ARAG	**Araguaiana, MT**	**18.29**	**65**	*e*P	**P**	**10 40 38.4**	**-0.6**
CLDB	**Colider**	**18.36**	**45**	*e*P	**P**	**10 40 39.6**	**-0.3**
SPB	**Sao Paulo**	**19.73**	**92**	P	**P**	**10 40 55.1**	**+0.3**
SPB				IAmb	IAmb	10 40 58.5	
	comp=Z,10.0nm,1.1s						
VAO	**Valinhos**	**20.23**	**91**	P	**P**	**10 40 59.5**	**-0.8**
VAO	**Valinhos**	**20.23**	**91**	*e*P	**P**	**10 40 59.2**	**-1.0**
IPMB	**Ipameri, GO**	**20.39**	**76**	*e*P	**P**	**10 41 01.9**	**-0.1**
SNDB	**Serra Nova Dou**	**20.82**	**57**	*e*P	**P**	**10 41 05.8**	**-0.7**
PARB	**Paraibuna**	**21.42**	**92**	*e*P	**P**	**10 41 14.2**	**+1.3**
BDFB	**Brasilia**	**21.52**	**70**	P	**P**	**10 41 14.8**	**+0.6**
	comp=Z,8.1nm,0.5s,baz=243,slow=11,SNR=12						
	comp=Z,8.1nm,0.5s						
BDFB	**Brasilia**	**21.52**	**70**	P	**P**	**10 41 13.5**	**-0.6**
BDFB				IAmb	IAmb	10 41 15.4	
	comp=Z,9.5nm,0.6s						
NPGB	**Novo Progresso**	**21.61**	**40**	*e*P	**P**	**10 41 14.1**	**-0.9**
MACA	**Manacapuru-AM**	**22.54**	**22**	P	**P**	**10 41 22.9**	**-1.7**
MACA				IAmb	IAmb	10 41 27.3	
	comp=Z,8.6nm,0.6s						
ITTB	**Itaituba**	**23.62**	**35**	*e*P	**P**	**10 41 34.7**	**-0.1**
JANB	**Januaria**	**24.98**	**73**	*e*P	**P**	**10 41 47.0**	**-0.3**
SDBA	**SAO DESIDERIO**	**25.72**	**67**	*e*P	**P**	**10 41 53.4**	**-0.5**
PRPB	**Parauapebas**	**25.80**	**49**	*e*P	**P**	**10 41 55.6**	**+1.0**
MAL2	**Monte Alegre,**	**26.42**	**35**	P	**P**	**10 41 59.0**	**-1.1**
BSFB	**Barra de Sao F**	**26.73**	**84**	*e*P	**P**	**10 42 03.8**	**+0.9**
SNAA	**Sanae**	**59.64**	**160**	P	**P**	**10 46 25.9**	**+0.2**
TXAR	**Lajitas Array**	**62.91**	**326**	P	**P**	**10 46 51.0**	**+2.8**
	comp=Z,0.5nm,0.6s,baz=152,slow=8.3,SNR=12						
	comp=Z,0.5nm,0.6s						
QSPA	**South Pole Qui**	**65.86**	**180**	P	**P**	**10 47 10.3**	**+3.2**
	comp=Z,0.8nm,0.5s,baz=227,slow=1.5,SNR=14						
	comp=Z,0.8nm,0.5s						
PDAR	**Pinedale Array**	**76.52**	**331**	P	**P**	**10 48 14.0**	**+2.4**
	comp=Z,0.2nm,0.5s,baz=128,slow=7.8,SNR=3.5						
	comp=Z,0.2nm,0.5s						
ASAR	**Alice Springs**	**127.35**	**207**	PKP	**PKiKP**	**10 55 28.4**	**+2.0**
	comp=Z,0.4nm,0.7s,baz=123,slow=1.5,SNR=6.5						
WRA	**Warramunga Arr**	**130.46**	**209**	PKP	**PKiKP**	**10 55 34.4**	**+1.7**
	comp=Z,0.6nm,0.8s,baz=154,slow=1.7,SNR=7.5						
ZALV	**Zalesovo Beam**	**144.54**	**27**	PKP	**PKiKP**	**10 55 58.3**	**-1.9**
	comp=Z,0.5nm,0.3s,baz=310,slow=5.6,SNR=6.0						

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*IDC **07** 10:38:10.2±0.9, 14.°89N×122.°85E, h0^{km}, mb3.8/11, mbtmp3.8/12, ML4.4/1, MS3.0/4, Error ellipse: s-maj=24.8km s-min=17.7km az=71.0*

*NEIC **07** 10:38:11.7±1.0, 14.°83N±0.°08×122.°7E±0.°2, h10^{km}±1^{km}, mb4.1/9, Error ellipse: s-maj=28.3km s-min=13.2km az=86.0*

ISC 07 10:38:14.4±0.8, **14.°82N**±0.°08×**122.°71E**±0.°09, **h32**^{km}, **n36**, σ**0^{s}90**/28, **mb4.0**/16, **MS3.3**/3, **Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**1.86**	**248**	Pn	**Pb**	**10 38 46.9**	**-0.8**
	137nm,0.3s,baz=296,slow=19,SNR=8.4						
TGY				Sn	**Sb**	**10 39 12.2**	**+1.7**
	438nm,0.3s,baz=212,slow=23,SNR=23						
	334nm,0.3s						
YULB	**Yu-li**	**8.63**	**351**	Pn	**Pn**	**10 40 16.9**	**-0.2**
TPUB	**Ta-pu**	**8.66**	**347**	Pn	**Pn**	**10 40 16.1**	**-1.4**
MYLDM	**Lahad Datu**	**10.43**	**204**	Pn	**Pn**	**10 40 41.5**	**-0.4**
KAPI	**Kappang**	**19.92**	**189**	LR	LR	10 50 55.7	
	comp=Z,29nm,18.1s,baz=5.5,slow=38						
CMAR	**Chiang Mai Arr**	**23.05**	**282**	P	**P**	**10 43 18.2**	**+1.0**
	1.9nm,0.7s,baz=92,slow=7.3,SNR=14						
CMAR				LR	LR	10 52 20.0	
	comp=Z,22nm,20.2s,baz=120,slow=37						
	1.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**23.05**	**282**	P	**P**	**10 43 16.9**	**-0.3**
KS19	**Wonju Array Si**	**23.05**	**11**	P	**P**	**10 43 16.7**	**-0.4**
ULN	**Ulaanbaatar**	**35.41**	**342**	P	**P**	**10 45 07.1**	**-0.4**
ULN				IAmb	IAmb	10 45 09.8	
	comp=Z,3.8nm,1.1s						
SONM	**Songino Array**	**35.59**	**341**	P	**P**	**10 45 09.4**	**+0.4**
	comp=Z,1.1nm,0.8s,baz=169,slow=10,SNR=6.0						
	comp=Z,1.1nm,0.8s						
SONM	**Songino Array**	**35.59**	**341**	P	**P**	**10 45 09.5**	**+0.5**
EVN	**Everest**	**35.74**	**297**	P	**P**	**10 45 09.6**	**-1.6**
EVN				IAmb	IAmb	10 45 12.8	
	comp=Z,4.3nm,1.1s						
WB0	**Warramunga Arr**	**36.24**	**161**	P	**P**	**10 45 13.4**	**-1.3**
WB0				IAmb	IAmb	10 45 20.8	
	comp=Z,2.8nm,0.9s						
WRAB	**Tennant Creek**	**36.38**	**161**	P	**P**	**10 45 15.5**	**-0.5**
WRAB				IAmb	IAmb	10 45 22.4	
	comp=Z,2.1nm,0.9s						
WRA	**Warramunga Arr**	**36.39**	**161**	P	**P**	**10 45 16.1**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=340,slow=9.4,SNR=6.5						
	comp=Z,0.6nm,0.8s						
ASAR	**Alice Springs**	**39.79**	**164**	P	**P**	**10 45 45.1**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=340,slow=8.2,SNR=6.5						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**39.79**	**164**	P	**P**	**10 45 43.5**	**-1.2**
H11S3	**WAKE ISLAND Hy**	**42.22**	**79**	T	T	11 31 05.8	
	baz=272,slow=75,SNR=55						
H11S1	**WAKE ISLAND Hy**	**42.23**	**79**	T	T	11 31 12.2	
	baz=272,slow=75,SNR=36						
H11S2	**WAKE ISLAND Hy**	**42.24**	**79**	T	T	11 31 07.7	
	baz=272,slow=75,SNR=45						
H11N1	**WAKE ISLAND Hy**	**42.39**	**77**	T	T	11 31 27.6	
	baz=270,slow=75,SNR=12						
H11N2	**WAKE ISLAND Hy**	**42.39**	**77**	T	T	11 31 35.8	
	baz=270,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy**	**42.40**	**77**	T	T	11 31 27.9	
	baz=270,slow=75,SNR=9.8						
INKA	**Innaminka**	**45.78**	**157**	P	**P**	**10 46 33.3**	**+0.2**
INKA				IAmb	IAmb	10 46 42.1	
	comp=Z,1.7nm,0.8s						
MKAR	**Makanchi Array**	**46.32**	**322**	P	**P**	**10 46 37.6**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=123,slow=8.8,SNR=7.3						
	comp=Z,0.8nm,0.8s						
MAKZ	**Makanchi**	**46.52**	**322**	P	**P**	**10 46 38.7**	**-0.1**
ZALV	**Zalesovo Beam**	**48.99**	**331**	P	**P**	**10 46 58.2**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=118,slow=12,SNR=4.4						
	comp=Z,0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**48.99**	**331**	P	**P**	**10 46 57.5**	**-0.3**
KURK	**Kurchatov**	**50.37**	**325**	P	**P**	**10 47 08.6**	**+0.2**
KURBB	**Kurchatov Arra**	**50.37**	**325**	P	**P**	**10 47 09.2**	**+0.8**
	comp=Z,2.3nm,0.7s,baz=123,slow=8.1,SNR=15						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,2.3nm,0.7s						
BVAR	Borovoye Array	55.97	325	P	P	10 47 49.8	+0.2
	comp=Z,0.7nm,0.7s,baz=113,slow=15,SNR=3.9						
	comp=Z,0.7nm,0.7s						
AKTO	Aktyubinsk	62.62	319	LR	LR	11 18 35.2	
	comp=Z,18nm,18.4s,baz=120,slow=39						
ARCES	ARCESS Array B	78.74	339	P	P	10 50 15.3	+1.9
	comp=Z,2.8nm,0.9s,baz=82,slow=8.3,SNR=1.2						
	comp=Z,2.8nm,0.9s						
FINES	FINESS Array B	80.25	331	P	P	10 50 22.0	+0.2
	comp=Z,3.7nm,1.1s,baz=99,slow=12,SNR=3.5						
	comp=Z,3.7nm,1.1s						
NOA	NORSAR Array B	87.16	333	LR	LR	11 33 22.6	
	comp=Z,12nm,19.7s,baz=265,slow=38						
YKA	Yellowknife Ar	91.00	23	P	P	10 51 16.6	+1.4
	comp=Z,0.2nm,0.6s,baz=303,slow=6.5,SNR=3.8						
	comp=Z,0.2nm,0.6s						

KRNET ***07*** *10:40:05.0±0.1, 40°.57N×69°.23E, h35km, mb2.7*

ISC 07 10:40:08.5±1.9**, 40°.57N**±0°.07×**69°.2E**±0°.1**, h31**km±25km**, n7, σ1ˢ.01**/14**, 6C-7D, Tajikistan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TRKS	Terek-Say	1.74	56	⇑eP	Pn	10 40 35.8	-0.9
TRKS				⇑eS	Sn	10 40 58.5	+0.5
GAR	Garm	1.79	151	⇑eP	Pn	10 40 36.8	-0.5
GAR				⇑eS	Sn	10 41 00.1	+1.1
CHGR	Chuyangaron	1.92	181	⇓eP	Pn	10 40 38.4	-0.7
CHGR				⇓eS	Sn	10 41 03.1	+0.9
DRK	Karamyk	2.27	118	⇑eP	Pn	10 40 43.5	-0.6
DRK				⇑eS	Sn	10 41 11.1	0.0
ARK	Arkit	2.41	59	⇓eP	Pn	10 40 45.4	-0.4
ARK				⇓eS	Sn	10 41 14.9	+0.6
KK31	Karatay Array	2.71	21	Pn	Pb	10 40 55.3	-0.9
	0.4nm,0.3s,baz=195,slow=16,SNR=6.9						
KK31				⇓Sn	Sb	10 41 31.1	+2.2
	0.9nm,0.3s,baz=195,slow=30,SNR=10.0						
MNAS	Manas	3.12	51	⇓eP	Pn	10 40 55.3	-0.4
MNAS				⇓eS	Sn	10 41 32.0	0.0

NOU 07 11:00:57.6, 16°.65S×167°.60E, h0km**, MLv4.1**/12**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DVP	Devils Point	1.21	152	P	Pg	11 01 21.0	+0.2
SANVU	Saraoutou	1.25	342	P	Pg	11 01 21.2	-0.5
RTV	Rentapao	1.38	145	P	Pg	11 01 23.2	-0.9
MARNC	Mare, Loyalty	4.82	175	P	Pn	11 02 12.4	+0.9
YATNC	Mamie plateau,	5.42	187	P	Pn	11 02 18.4	-1.4
DZM	Mont Dzumac	5.50	191	P	Pn	11 02 20.2	-0.7
OUENC	Ouen Island, N	5.78	187	P	Pn	11 02 25.4	+0.7

HEL ***07*** *11:12:35.7±0.4, 67°.57N×30°.32E, h0km, ML1.9, Explosion*

KOLA ***07*** *11:12:36.4, 67°.56N×30°.56E, h0km, ML2.3, Error ellipse: s-maj=3.5km s-min=2.1km az=30.0, Kovdor City, Mines*

ISC 07 11:12:34.0±0.8**, 67°.63N**±0°.03×**30°.53E**±0°.02**, h0**km**, n22, σ1ˢ.18**/33**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VRF	Varrio	0.37	290	PG	Pg	11 12 41.4	+0.2
	baz=121						
VRF				SG	Sg	11 12 46.7	+0.8
APA0	Apatity Array	0.94	90	P	Pg	11 12 52.5	+0.5
APA0				S	Sg	11 13 05.0	+0.6
APA	Apatity	1.10	92	S	Sg	11 13 10.1	+0.6
RAJF	Raja-Jooseppi	1.19	317	PG	Pb	11 12 56.8	-0.6
RAJF				SG	Sb	11 13 12.5	-0.9
KVDA	Kovda	1.31	135	P	Pg	11 12 58.0	-1.1
KVDA				S	Sg	11 13 15.2	-0.9
OLKF	Oulanka, Finla	1.38	199	MSG		11 13 15.1	
	comp=Z,10nm,0.2s						
OLKF				SN	Sg	11 13 19.3	+0.9
LVZ	Lovozero	1.59	78	P	Pb	11 13 04.4	+0.1
LVZ				S	Sg	11 13 25.4	+0.2
LVZ	Lovozero	1.59	78	SG	Sg	11 13 25.5	+0.4
KU6	Riekki	1.63	189	PG	Pn	11 13 04.1	+0.2
KU6				MSG		11 13 22.4	
	comp=Z,8.6nm,0.2s						
KU6				SN	Sn	11 13 24.7	-0.8
MSF	Maaselka	1.82	200	PG	Pn	11 13 07.3	+0.7
	baz=20						
MSF				SG	Sn	11 13 29.2	-1.1
KU2	Taivalkoski	2.13	206	SG	Sn	11 13 38.5	+0.6
RANF	Ranua	2.19	224	PG	Pn	11 13 12.6	+1.0
RANF				SG	Sn	11 13 40.2	+0.8
TERR	Teriberka	2.32	45	S	Sb	11 13 45.3	-0.5
KEV	Kevo	2.50	331	SB	Sb	11 13 50.1	-0.8
VADS	Vadso	2.54	351	P	Pb	11 13 20.5	+0.1
VADS				S	Sb	11 13 50.4	-1.9
KLF	Kolari	2.56	264	MSG		11 13 48.8	
	comp=Z,6.3nm,0.2s						
KLF				SG	Sb	11 13 52.1	-0.7
ARA0	ARCESS Array S	2.66	318	SG	Sb	11 13 55.9	+0.2
ARCES	ARCESS Array B	2.66	318	P	Pb	11 13 21.1	-1.4
ARCES				S	Sb	11 13 53.8	-1.9
HEF	Hetta	2.70	290	MSG		11 13 53.7	
	comp=Z,6.1nm,0.2s						
HEF				SG	Sb	11 13 55.8	-1.0
PAJU	Pajala	2.94	262	SG	Sb	11 14 03.2	-0.3
RMF	Romuvaara	3.43	184	PN	Pn	11 13 30.6	+2.0
	baz=3.0						
FAUS	Fauske	5.86	275	P	Pn	11 14 05.0	+3.1
FAUS				S	Sn	11 15 07.1	-2.5

SNET ***07*** *11:52:22.9±1.0, 12°.88N×89°.48W, h20km, ML4.0*

CATAC ***07*** *11:52:22.4±0.4, 13°N±2°×8°9W±°, h17km±2km, M4.0/29, MLv4.0/29, Error ellipse: s-maj=4.0km s-min=2.3km az=33.8, confirmed*

GCG ***07*** *11:52:24.6±1.1, 13°.00N×89°.62W, h22km±9km, MD4.1, ML3.8*

ISC 07 11:52:23.4±2.7**, 12°.90N**±0°.05×**89°.46W**±0°.03**, h19**km±7km**, n90, σ0ˢ.76**/96**, 2D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.60	13	⇓iP	Pb	11 52 35.6	+0.4
LALI	Alcalda de L	0.60	13	iP	Pb	11 52 35.7	+0.4
LALI				eS	Sb	11 52 43.4	+0.2
LALI	Alcalda de L	0.60	13	P	Pb	11 52 35.7	+0.4
LALI	Alcalda de L	0.60	13	S	Sn	11 52 45.9	-0.2
JAYA	Jayaque - finc	0.75	1	iP	Pb	11 52 37.5	-0.5
JAYA	Jayaque - finc	0.75	1	P	Pb	11 52 37.6	-0.3
JAYA	Jayaque - finc	0.75	1	S	Sn	11 52 49.0	-1.0
PANCS	Alcalda de	0.76	21	P	Pb	11 52 38.0	-0.1
PANCS	Alcalda de	0.76	21	S	Sn	11 52 49.1	-1.0
LOMA	Loma Larga	0.79	21	S	Sn	11 52 49.9	-1.1
LFRS	El Faro	0.82	29	eP	Pb	11 52 38.8	-0.3
PMON	Piamonte	0.82	10	P	Pb	11 52 38.8	-0.3
PMON	Piamonte	0.82	10	S	Sn	11 52 51.0	-0.7
UTEC	Universidad Te	0.83	18	P	Pb	11 52 39.1	-0.2
UTEC	Universidad Te	0.83	18	S	Sn	11 52 51.8	-0.3
UEES	Universidad Ev	0.84	15	⇓iP	Pb	11 52 39.0	-0.4
UEES	Universidad Ev	0.84	15	P	Pb	11 52 39.3	-0.2
UEES	Universidad Ev	0.84	15	S	Sn	11 52 51.9	-0.2
BOQS	Boqueron	0.85	12	iP	Pb	11 52 39.4	-0.3
IGN	Direccin Gen	0.85	20	P	Pb	11 52 39.5	-0.2
IGN	Direccin Gen	0.85	20	S	Sn	11 52 52.5	-0.1
UDBS	Universidad Do	0.86	20	P	Pb	11 52 39.7	-0.1
UDBS	Universidad Do	0.86	20	S	Sn	11 52 52.6	-0.1
CEDA	San Andres	0.90	4	S	Sn	11 52 53.3	-0.3
CEDA	San Andres	0.90	4	P	Pb	11 52 40.0	-0.4
TECO	Alcaldia de Te	0.92	46	P	Pb	11 52 40.2	-0.6
TECO	Alcaldia de Te	0.92	46	S	Sn	11 52 54.0	0.0
CEVE	Cerro Verde	0.93	350	iP	Pb	11 52 40.3	-0.8
CEVE	Cerro Verde	0.93	350	P	Pb	11 52 40.5	-0.7
CEVE	Cerro Verde	0.93	350	S	Sn	11 52 54.0	-0.7
SNVI	San Vicente	0.93	41	eP	Pb	11 52 40.7	-0.4
SBLS	San Blas	0.94	351	iP	Pb	11 52 40.5	-0.8
PAVA	Las Pavas	0.95	32	P	Pb	11 52 41.2	-0.2
PAVA	Las Pavas	0.95	32	S	Sn	11 52 55.3	+0.3
UESV	Universidad de	0.98	42	eP	Pb	11 52 41.1	-0.8
UESV	Universidad de	0.98	42	P	Pb	11 52 41.3	-0.6
UESV	Universidad de	0.98	42	S	Sn	11 52 55.2	-0.4
NUBE	Las Nubes	1.04	343	iP	Pb	11 52 41.6	-1.4
NUBE				eS	Sb	11 52 55.3	-0.9
NUBE	Las Nubes	1.04	343	P	Pb	11 52 41.6	-1.4
SCLA	Alcaldia de Sa	1.07	42	P	Pb	11 52 43.0	-0.4
SCLA	Alcaldia de Sa	1.07	42	S	Sn	11 52 58.3	+0.5
UNIC	Universidad Ca	1.07	356	eP	Pb	11 52 42.7	-0.8
UNIC	Universidad Ca	1.07	356	P	Pb	11 52 42.6	-0.8
UNIC	Universidad Ca	1.07	356	S	Sn	11 52 58.0	0.0
FAME	Alcaldia de Sa	1.08	330	P	Pb	11 52 41.9	-1.6
FAME	Alcaldia de Sa	1.08	330	S	Sb	11 52 57.0	-0.1
SLOZ	Alcaldia de Sa	1.16	344	S	Sb	11 52 59.5	-0.1
PACA	Pacayal	1.25	63	eP	Pn	11 52 45.3	-0.6
PACA	Pacayal	1.25	63	P	Pn	11 52 45.9	-0.1
PACA	Pacayal	1.25	63	S	Sn	11 53 02.2	-0.1
LCY	Lacayo	1.25	65	eP	Pn	11 52 45.0	-1.1
LLGN	La Laguna	1.35	22	eP	Pn	11 52 47.6	+0.2
LLGN	La Laguna	1.35	22	P	Pn	11 52 47.5	+0.2
LLGN	La Laguna	1.35	22	S	Sb	11 53 05.5	+0.3
CNRM	Centro Naciona	1.38	66	S	Sb	11 53 06.3	+0.3
CNRM	Centro Naciona	1.38	66	P	Pn	11 52 47.3	-0.4
JUAM	Asuncion Mita	1.44	351	iP	Pn	11 52 48.3	-0.3
JUAM				IAML		11 53 11.8	
	comp=N,1μm,0.3s						
MTO3	Montecristo	1.49	4	iP	Pn	11 52 49.3	-0.1
MTO3	Montecristo	1.49	4	S	Sb	11 53 09.5	+0.2
MTO3	Montecristo	1.49	4	P	Pn	11 52 49.3	-0.1
LCND	La Caada	1.59	75	iP	Pn	11 52 49.9	-0.7
LCND	La Caada	1.59	75	P	Pn	11 52 49.9	-0.7
CNCH	Conchagua	1.63	77	P	Pn	11 52 50.9	-0.3
CNCH	Conchagua	1.63	77	S	Sb	11 53 12.5	-0.7
ESQI	Esquipulas	1.65	4	P	Pn	11 52 51.9	+0.4
ESQI	Esquipulas	1.65	4	S	Sb	11 53 13.3	-0.5
ZAFR2	Estanzuela, Za	1.67	4	iP	Pb	11 52 57.1	+3.5
FG16	Alotenango, Sa	1.70	323	iP	Pb	11 52 55.4	+1.2
CSGN	Cosiguina Volc	1.86	88	P	Pn	11 52 54.1	-0.3
CSGN				S	Sn	11 53 17.9	+0.6
POTN	Potosi Cosigui	1.91	87	P	Pn	11 52 55.4	+0.5
POTN				S	Sn	11 53 19.0	+0.4
APG	El Apazote	2.30	335	iP	Pn	11 53 00.1	-0.5
STG5	El Palmar, Qui	2.36	309	iP	Pb	11 53 05.9	+0.4
CRIN	San Cristobal	2.36	95	S	Sn	11 53 31.3	+1.4
TGUH	Tegucigalpa,Un	2.42	61	P	Pn	11 53 01.5	-0.6
POLN	Al Sur del Vol	2.60	95	P	Pn	11 53 03.1	-1.4
POLN				S	Sn	11 53 35.1	-0.4
RTAL	Retalhuleu	2.70	307	P	Pn	11 53 05.6	-0.3
RTAL	Retalhuleu	2.70	307	S	Sn	11 53 39.5	+1.5
CNGA	Al SSO del Vol	2.73	98	P	Pn	11 53 05.0	-1.2
CNGN	Cerro Negro	2.73	98	P	Pn	11 53 04.7	-1.6
CNGN	Cerro Negro	2.73	98	S	Sn	11 53 39.9	+1.1
YUSH	Yuscaran	2.76	67	P	Pn	11 53 06.4	-0.3
YUSH	Yuscaran	2.76	67	S	Sn	11 53 40.5	+1.0
COPN	Copaltepe	2.90	104	P	Pn	11 53 08.0	-0.5
MOM3	MOM3	2.90	97	P	Pn	11 53 08.6	0.0
MOM3				S	Sn	11 53 43.2	+0.2
MOM2	El Cardon	2.94	99	S	Sn	11 53 44.3	+0.3
LIMN	Finca el Limon	3.02	87	P	Pn	11 53 10.0	-0.4
RCON	San Juan de Ri	3.27	79	S	Sn	11 53 52.8	+0.4
RCON	San Juan de Ri	3.27	79	P	Pn	11 53 13.5	-0.3
MATN	Matagalpa	3.45	89	P	Pn	11 53 15.2	-1.0
MATN	Matagalpa	3.45	89	S	Sn	11 53 56.6	-0.1

IDC 07 12:25:26.0±1.5**, 4°.45S×145°.34E, h0**km**, mb3.7**/3**, mbtmp3.7**/5**, ML3.6**/1**, Error ellipse: s-maj=46.7km s-min=24.6km az=118.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.25	160	Pn	Pn	12 26 44.9	-0.9
	5.6nm,0.3s,baz=301,slow=11,SNR=7.8						
PMG				Sn	Sn	12 27 32.7	-14
	12nm,0.3s,baz=164,slow=19,SNR=27						
WRA	Warramunga Arr	18.77	214	P	P	12 29 46.2	-0.6
	0.2nm,0.3s,baz=34,slow=10,SNR=23						
	0.7nm,0.6s						
ASAR	Alice Springs	22.07	209	P	P	12 30 21.5	-1.2
	0.8nm,0.7s,baz=41,slow=7.5,SNR=16						
	0.8nm,0.7s						
FITZ	Fitzroy Crossi	23.57	233	P	P	12 30 39.2	+0.8
	1.4nm,0.5s,baz=42,slow=12,SNR=11						
	1.4nm,0.5s						
ILAR	Eielson Array	84.72	23	P	P	12 38 02.2	+0.5
	0.8nm,0.6s,baz=251,slow=5.1,SNR=12						
	0.8nm,0.6s						

CNRM ***07*** *12:34:12.9, 34°.85N×5°.94W, h44km*

MDD ***07*** *12:34:13.7±1.7, 35°.31N×5°.79W, h0km, mb_Lg2.4/4, Error ellipse: s-maj=14.3km s-min=6.3km az=171.0*

SFS ***07*** *12:34:14.7, 35°.23N×5°.72W, h16km, ML3.1/4, ML2.3/6, MLv1.9/6*

INMG ***07*** *12:34:14.5±1.1, 35°.12N×5°.70W, h40km, ML1.6, Error ellipse: s-maj=4.5km s-min=2.7km az=89.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Tetuan (MARR)*

IGIL ***07*** *12:34:14.6, 35°.15N×5°.72W, h18km, ML1.4*

ISC 07 12:34:12.8±1.4**, 35°.07N**±0°.06×**5°.73W**±0°.05**, h56**km±10km**, n37, σ1ˢ.70**/49**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RSA	Sarsar	0.20	202	P	Pn	12 34 20.8	-1.0
RSA	Sarsar	0.20	202	S	Sn	12 34 25.2	-3.2
CHEFC	Chefchaouen	0.32	84	P	Pn	12 34 24.9	+2.1
CHEFC	Chefchaouen	0.32	84	S	Sn	12 34 32.8	+2.9
SFS	San Fernando	1.44	345	P	Pn	12 34 39.6	+3.0
LCRM	LCR	1.56	152	P	Pn	12 34 38.1	-0.3
LCRM	LCR	1.56	152	S	Sn	12 34 57.0	-0.5
AKLM	AKL	1.63	110	P	Pn	12 34 39.7	+0.4
AKLM	AKL	1.63	110	S	Sn	12 34 59.7	+0.4
MD31	MD31	2.34	160	P	Pn	12 34 47.4	-1.6
MD31	MD31	2.34	160	S	Sn	12 35 13.7	-2.9
MDT	Midelt	2.44	157	P	Pn	12 34 49.1	-1.1
MDT	Midelt	2.44	157	S	Sn	12 35 16.2	-2.7
PBDV	Barranco-do-Ve	2.81	321	Sn	Sn	12 35 26.7	-1.1
PBDV				Pn	Pn	12 34 56.0	+0.8
PBDV	Barranco-do-Ve	2.81	321	eP	Pn	12 34 56.2	+1.0
PBDV				eS	Sn	12 35 26.9	-0.9
PBDV				i IAML		12 35 27.9	
PBDV				i IAML		12 35 28.1	
PVAQ	Vaqueiros	2.83	326	Pn	Pn	12 34 56.4	+0.9
PVAQ	Vaqueiros	2.83	326	eP	Pn	12 34 56.5	+1.0
PVAQ				eS	Sn	12 35 27.0	-1.3
PVAQ				i IAML		12 35 27.7	
PVAQ				i IAML		12 35 27.8	
PVAQ				i IAML		12 35 28.5	
PVAQ	Vaqueiros	2.83	326	P	Pn	12 34 56.7	+1.2
PVAQ	Vaqueiros	2.83	326	S	Sn	12 35 31.1	+2.8
EGRO	El Granado	2.84	331	Pn	Pn	12 34 56.6	+1.0
EGRO				Sn	Sn	12 35 27.5	-1.0
EGRO	El Granado	2.84	331	Pn	Pn	12 34 56.7	+1.0
EGRO				Sn	Sn	12 35 26.9	-1.6
EGRO				i IVmb_Lg		12 35 30.3	
ECAB	El Cabril	3.01	5	Pn	Pn	12 34 58.8	+0.8
ECAB				Sn	Sn	12 35 30.7	-2.1
ECAB	El Cabril	3.01	5	Pn	Pn	12 34 59.0	+1.0
ECAB				i IVmb_Lg		12 35 29.6	
ECAB				Sn	Sn	12 35 31.5	-1.3
PCVE	Castro Verde	3.16	325	Pn	Pn	12 35 00.9	+0.8
PCVE				Sn	Sn	12 35 35.9	-0.7
PCVE	Castro Verde	3.16	325	eP	Pn	12 35 01.5	+1.4
PCVE				eS	Sn	12 35 35.8	-0.8
PCVE				i IAML		12 35 36.2	
PCVE				i IAML		12 35 37.3	
EADA	Adamuz	3.23	16	Pn	Pn	12 35 01.4	+0.4
EADA				Sn	Sn	12 35 32.4	-5.8
EADA				i IVmb_Lg		12 35 34.1	
PFVI	Vila Bisbo	3.24	310	eS	Sn	12 35 37.9	-0.7
PBAR	Barrancos	3.27	342	Sn	Sn	12 35 37.1	-2.2
PBAR	Barrancos	3.27	342	eP	Pn	12 35 02.7	+1.1
PBAR				eS	Sn	12 35 38.8	-0.4
MESJ	Messejana	3.42	325	eP	Pn	12 35 04.6	+1.1
MESJ				eS	Sn	12 35 41.2	-1.6
MESJ				IAML		12 35 42.6	
	comp=E,1.2nm,0.1s						
MESJ	Messejana	3.42	325	eP	Pn	12 35 04.6	+1.1
MESJ				eS	Sn	12 35 42.1	-0.6
MESJ				i IAML		12 35 43.0	
MESJ				i IAML		12 35 43.0	
PTEO	Sao Teotonio	3.46	316	eS	Sn	12 35 42.9	-0.9
EVO	Evora	3.91	333	eS	Sn	12 35 53.9	-1.0
MOE	Montemor	4.04	329	eP	Pn	12 35 13.6	+1.6
MOE				eS	Sn	12 35 57.2	-0.8
MOE				i IAML		12 35 58.2	
MOE				i IAML		12 35 58.8	
PSIM	Granatula de C	4.06	22	Pn	Pn	12 35 12.5	0.0
PSIM				Sn	Sn	12 35 56.6	-2.2
PARRA	Arraiolos	4.17	334	eP	Pn	12 35 15.3	+1.4
PARRA				eS	Sn	12 36 00.4	-0.9
PMTG	Montargil	4.46	334	eP	Pn	12 35 20.0	+2.2
PMTG				eS	Sn	12 36 08.1	-0.4

SJA ***07*** *12:34:54.6±1.4, 23°.32S×68°.59W, h130km, ML3.3, MW3.5*

GUC ***07*** *12:34:55.6±0.9, 23°.32S×68°.51W, h115km±6km, ML3.5*

ISC 07 12:34:54.7±1.6**, 23°.28S**±0°.04×**68°.58W**±0°.05**, h139**km±13km**, n31, σ1ˢ.52**/38**, 6C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AF01	San Pedro de A	0.49	49	⇓iP	Pn	12 35 13.1	-2.1
AF01				eS	Sn	12 35 25.9	-4.8
PB06	IPOC Station P	1.07	302	⇑iP	Pn	12 35 20.1	+0.7
PB06				eS	Sn	12 35 38.0	0.0
PB06				IAML		12 35 39.9	
	comp=E,2μm,0.3s						
PB06	IPOC Station P	1.07	302	iP	Pn	12 35 19.3	0.0
PB06				IAML		12 35 39.1	
	comp=Z,1μm,0.1s						
PB05	IPOC Station P	1.55	285	⇑iP	Pn	12 35 25.0	+0.8
PB05				eS	Sn	12 35 47.1	+0.5
PB05	IPOC Station P	1.55	285	iP	Pn	12 35 24.4	+0.3
PB05				IAML		12 36 04.8	
	comp=Z,202nm,0.4s						
PB09	IPOC Station P	1.59	337	⇑iP	Pn	12 35 26.2	+1.5
PB09				eS	Sn	12 35 48.4	+0.8
PB09	IPOC Station P	1.59	337	iP	Pn	12 35 25.7	+1.0
PB09				eS	Sn	12 35 49.2	+1.6
PB09				IAML		12 35 52.7	
	comp=Z,284nm,0.5s						
PB03	IPOC Station P	1.63	318	⇑iP	Pn	12 35 26.2	+1.0
PB03				IAML		12 35 50.7	
	comp=N,444nm,0.3s						
PB03	IPOC Station P	1.63	318	iP	Pn	12 35 25.6	+0.5
PB03				IAML		12 35 53.5	
	comp=Z,465nm,0.2s						
PB10	IPOC Station P	1.83	262	⇑iP	Pn	12 35 28.3	+1.2
PB10				IAML		12 35 57.5	
	comp=N,366nm,0.6s						
PB10	IPOC Station P	1.83	262	iP	Pn	12 35 27.8	+0.6
PB10				IAML		12 36 00.3	
	comp=Z,212nm,0.7s						
PB07	IPOC Station P	1.96	322	⇑iP	Pn	12 35 30.3	+1.4
PB07				IAML		12 35 57.0	
	comp=E,387nm,0.2s						
PB07	IPOC Station P	1.96	322	iP	Pn	12 35 29.6	+0.7
PB07				eS	Sn	12 35 55.0	-0.1
PB07				IAML		12 35 56.9	
	comp=Z,276nm,0.3s						
GO02	Mina Guanaco	2.09	206	eP	Pn	12 35 31.4	+0.8
GO02				eS	Sn	12 35 58.7	+0.6
GO02				IAML		12 35 59.5	
	comp=E,583nm,0.1s						
GO02	Mina Guanaco	2.09	206	iP	Pn	12 35 31.0	+0.4
GO02				IAML		12 36 05.6	
	comp=Z,351nm,0.4s						
PB14	IPOC Station P	2.14	231	eP	Pn	12 35 32.0	+0.8
PB14				IAML		12 36 08.7	
	comp=Z,222nm,0.2s						
PB14	IPOC Station P	2.14	231	iP	Pn	12 35 31.5	+0.3
PB14				IAML		12 36 06.8	
	comp=Z,286nm,0.2s						
SALTA		2.26	115	eP	Pn	12 35 33.0	+0.2
SALTA		2.26	115	iP	Pn	12 35 33.5	+0.7
SALTA				IAML		12 36 04.5	
	comp=Z,34nm,1.4s						
PB02	IPOC Station P	2.30	328	iP	Pn	12 35 33.7	+0.8
PB02				IAML		12 36 10.0	
	comp=Z,634nm,0.3s						
PB01	IPOC Station P	2.38	339	iP	Pn	12 35 34.9	+1.0
PB01				IAML		12 36 06.8	
	comp=Z,152nm,0.3s						
PATCX	Punta Patache	2.84	329	iP	Pn	12 35 40.3	+0.5
PATCX				IAML		12 36 19.3	
	comp=Z,93nm,0.4s						
HJA	Humahuaca	2.92	89	iP	Pn	12 35 42.3	+1.3
HJA				IAML		12 36 30.6	
	comp=Z,4.0nm,0.9s						
TA01	Diego Aracena	3.08	331	iP	Pn	12 35 43.0	+0.3
TA01				eS	Sn	12 36 12.8	-6.9
TA01				IAML		12 36 40.3	
	comp=Z,59nm,0.6s						
PB08	IPOC Station P	3.17	350	iP	Pn	12 35 45.4	+1.3
PB08				IAML		12 36 57.9	
	comp=Z,31nm,0.6s						
HMBC	Humberstone	3.22	338	iP	Pn	12 35 45.8	+1.2
HMBC				IAML		12 36 46.9	
	comp=Z,111nm,0.5s						
AZAP	Zapla	3.36	107	iP	Pn	12 35 47.3	+0.8
AZAP				IAML		12 36 37.4	
	comp=Z,18nm,1.6s						
AC01	Pan de Azucar	3.40	212	iP	Pn	12 35 45.9	-0.9
AC01				IAML		12 36 41.1	
	comp=Z,54nm,0.2s						
AC02	Maricunga	3.58	188	iP	Pn	12 35 50.4	+0.7
AC02				IAML		12 37 05.2	
	comp=Z,38nm,0.8s						
PB11	IPOC Station P	3.64	344	iP	Pn	12 35 50.1	0.0
PB11				IAML		12 37 03.4	
	comp=Z,57nm,0.9s						
GO03	Copiapo	4.55	199	iP	Pn	12 36 00.8	-1.2
GO03				IAML		12 37 36.3	
	comp=Z,37nm,0.7s						

IDC ***07*** *12:47:58.6±0.9, 2°.80S×129°.48E, h0km, mb4.0/12, mbtmp4.1/15, ML4.0/3, MS3.3/5, Error ellipse: s-maj=39.6km s-min=15.5km az=72.0*

NEIC ***07*** *12:48:01.0±1.4, 2°.74S±0°.06×129°.43E±0°.05, h10km±1km, mb4.3/13, Error ellipse: s-maj=10.8km s-min=7.4km az=137.0*

DJA ***07*** *12:48:02.9±0.5, 3°S±2°×12°9E±°, h13km±4km, M4.5/19, mB5.3/5, mb4.7/9, MLv4.4/19, Mw(mB)4.7/5*

ISC 07 12:48:00.4±0.5**, 2°.77S**±0°.04×**129°.41E**±0°.04**, h10**km**, n60, σ1ˢ.64**/61**, mb4.2**/19**, MS3.1**/3**, Seram**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSAI	Masohi	0.74	220	P	Pg	12 48 15.0	+0.2
MSAI				S	Sg	12 48 24.9	+0.4
KRAI	Karang Ratu	1.15	242	P	Pb	12 48 22.0	-0.4
AAI	Ambon	1.52	233	P	Pn	12 48 28.8	+1.2
BNDI	Bandanaira	1.81	164	P	Pn	12 48 33.2	+1.6
NLAI	Namlea	2.35	259	P	Pn	12 48 39.5	+0.4
SWI	Sorong	2.65	44	P	Pb	12 48 46.9	-1.1
SWI				S	Sb	12 49 20.4	-0.2
FAKI	Fak Fak	2.84	93		Pn	12 48 46.8	+1.0
FAKI	Fak Fak	2.84	93	P	Pb	12 48 49.4	-1.8
SANI	Sanana	3.49	282	P	Pn	12 48 52.1	-2.7
TNTI	Ternate	4.07	330	Pn	Pn	12 49 03.5	+0.7
TNTI				Sn	Sn	12 49 50.8	+0.2
TNTI	Ternate	4.07	330	P	Pn	12 49 04.2	+1.4
KMPI	Kaimana, Papua	4.38	102	P	Pn	12 49 11.6	+4.6
RKPI	Ransiki, Papua	4.93	75	P	Pn	12 49 18.3	+3.8
	3μm114nm,0.7s						
MWPI	Manokwari, Pap	4.98	69	P	Pn	12 49 21.0	+5.8
	0.7nm123nm,0.6s						
LUWI	Luwuk	6.85	284	Pn	Pn	12 49 40.2	-0.9
LUWI	Luwuk	6.85	284	P	Pn	12 49 39.4	-1.6
	0.5nm79nm,0.7s						
BAKI	Biak	6.88	77	P	Pn	12 49 45.7	+4.4
	0.3nm43nm,0.9s						
APSI	Ampana	7.97	283	P	Pn	12 49 56.1	-0.3
SOEI	Soe	8.62	216		Pn	12 50 08.3	+3.0
BATI	Baumata	9.33	217	LR	LR	12 53 45.5	
	comp=Z,286nm,19.0s,baz=40,slow=37						
TOLI2	Tolitoli	9.45	294	Pn	Pn	12 50 16.2	-0.5
KAPI	Kappang	9.89	257	Pn	Pn	12 50 24.5	+1.8
	1.3nm,0.3s,baz=81,slow=7.6,SNR=9.5						
KAPI				LR	LR	12 54 46.0	
	comp=Z,169nm,21.3s,baz=78,slow=41						
	19nm,0.8s						
KAPI	Kappang	9.89	257		Pn	12 50 23.2	+0.5
MTN	Manton Dam	10.15	170		Pn	12 50 27.7	+1.4

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KNRA  Kununurra          12.84 183         Pn      12 51 03.9 +0.8
FITZ  Fitzroy Crossi     15.67 193   Pn    Pn      12 51 39.1 -2.3
      0.8nm,0.3s,baz=27,slow=12,SNR=19
      2.2nm,0.7s
FITZ  Fitzroy Crossi     15.67 193         Pn      12 51 41.8 +0.3
WRAB  Tennant Creek      17.73 165         Pn      12 52 05.0 -2.5
WRA   Warramunga Arr     17.73 165   P     Pn      12 52 04.8 -2.8
      0.5nm,0.3s,baz=344,slow=12,SNR=32
WRA                                  S     Sn      12 55 12.8  -13
      0.6nm,0.7s,baz=345,slow=21,SNR=2.3
      5.6nm,0.8s
AS31  Alice Springs      21.22 169         P       12 52 46.5 -0.1
AS31                                 IAmb  IAmb    12 52 52.5
      comp=Z,5.6nm,0.6s
ASAR  Alice Springs      21.22 169   P     P       12 52 46.6  0.0
      comp=Z,12nm,0.6s,baz=350,slow=11,SNR=262
ASAR                                 S     S       12 56 36.7 -5.9
      comp=Z,2.7nm,0.8s,baz=349,slow=19,SNR=8.3
      comp=Z,12nm,0.6s
ASAR  Alice Springs      21.22 169         P       12 52 46.7 +0.1
BBOO  Buckleboo          30.52 169   P     P       12 54 13.2 -0.8
STKA  Stephens Creek     31.14 160   P     P       12 54 18.6 -0.8
      comp=Z,1.9nm,0.7s,baz=327,slow=12,SNR=4.1
STKA                                 LR    LR      13 07 31.2
      comp=Z,38nm,18.0s,baz=45,slow=38
      comp=Z,1.9nm,0.7s
CMAR  Chiang Mai Arr     36.67 306   P     P       12 55 07.5 -0.1
      comp=Z,0.7nm,0.7s,baz=125,slow=6.7,SNR=5.0
CMAR                                 LR    LR      13 11 23.4
      comp=Z,22nm,21.9s,baz=125,slow=38
      comp=Z,0.7nm,0.7s
PZH   PanZhiHua          39.52 319   P     P       12 55 33.6 +1.8
PALK  Pallekele          49.62 282   LR    LR      13 19 59.8
      comp=Z,46nm,18.4s,baz=150,slow=39
EVN   Everest            51.09 310   P     P       12 57 03.5 -0.7
EVN                                  IAmb  IAmb    12 57 05.5
      comp=Z,5.6nm,0.7s
SONM  Songino Array      54.27 341   P     P       12 57 26.8  0.0
      comp=Z,0.3nm,0.6s,baz=157,slow=8.0,SNR=3.8
      comp=Z,0.3nm,0.6s
MKAR  Makanchi Array     64.40 326   P     P       12 58 36.8  0.0
      comp=Z,1.3nm,0.7s,baz=122,slow=8.0,SNR=14
      comp=Z,1.3nm,0.7s
MKAR  Makanchi Array     64.40 326   P     P       12 58 37.1 +0.3
KSH   Kashi              64.54 317   P     P       12 58 37.1 -0.9
KSH                                  pmax  pmax
      comp=Z,2.0nm,0.6s
MAKZ  Makanchi           64.58 326   P     P       12 58 38.5 +0.5
MAKZ                                 IAmb  IAmb    12 59 01.2
      comp=Z,2.5nm,1.1s
CASY  Casey              64.77 188   P     P       12 58 38.6 -0.1
AAK   Ala-Archa          66.97 319   P     P       12 58 53.9 +0.3
      comp=Z,0.7nm,0.5s,baz=258,slow=7.7,SNR=3.7
      comp=Z,0.7nm,0.5s
ZAA0  Zalesovo Array     67.56 333   P     P       12 58 57.2 +0.3
ZAA0                                 IAmb  IAmb    12 59 10.6
      comp=Z,1.5nm,0.9s
ZALV  Zalesovo Beam      67.56 333   P     P       12 58 56.8 -0.1
      comp=Z,1.5nm,0.8s,baz=96,slow=4.6,SNR=6.9
      comp=Z,1.5nm,0.8s
ZALV  Zalesovo Beam      67.56 333   P     P       12 58 57.3 +0.3
KURBB Kurchatov Arra     68.63 328   P     P       12 59 04.2 +0.5
      comp=Z,2.4nm,0.7s,baz=129,slow=5.6,SNR=36
      comp=Z,2.4nm,0.7s
KURK  Kurchatov          68.63 328         P       12 59 04.3 +0.6
KK31  Karatay Array      69.81 318   P     P       12 59 11.2  0.0
KKAR  Karatay Array      69.81 318   P     P       12 59 11.2  0.0
BVAR  Borovoye Array     74.20 327   P     P       12 59 37.5 +0.1
      comp=Z,1.7nm,0.8s,baz=123,slow=7.1,SNR=7.3
      comp=Z,1.7nm,0.8s
VNDA  Vanda              76.69 173   P     P       12 59 51.7 +0.5
      comp=Z,0.5nm,0.6s,baz=294,slow=5.1,SNR=2.1
      comp=Z,0.5nm,0.6s
VNDA  Vanda              76.69 173   P     P       12 59 51.2  0.0
VNDA                                 IAmb  IAmb    13 00 05.2
      comp=Z,2.3nm,1.1s
NRIK  Noril'sk           77.34 346   P     P       12 59 56.0 +1.0
      comp=Z,1.1nm,0.5s,baz=163,slow=11,SNR=1.7
      comp=Z,1.1nm,0.5s
AB31  Akbulak array      78.86 321   P     P       13 00 03.4 -0.4
AB31                                 IAmb  IAmb    13 00 16.0
      comp=Z,1.8nm,0.8s
ABKAR Akbulak array      78.86 321   P     P       13 00 03.3 -0.5
OPO   Ambohidratompo     81.75 252   P     P       13 00 20.3 +0.1
      comp=Z,2.5nm,0.6s,baz=100,slow=5.4,SNR=5.9
      comp=Z,2.5nm,0.6s
QSPA  South Pole Qui     87.17 180   P     P       13 00 46.5 -0.2
QSPA                                 IAmb  IAmb    13 01 04.8
      comp=Z,4.9nm,1.4s
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*NNC **07** 12:53:17.1±0.7, 45°.87N×81°.56E, h0^{km}, mb3.6, mpv2.7, Error ellipse: s-maj=12.1km s-min=2.8km az=125.0*

*SOME **07** 12:53:18.6, 45°.82N×81°.50E, h20^{km}*

ISC 07 12:53:17.7±1.1**, 45°.86N**±0°.06×**81°.53E**±0°.08**, h9**^{km}**, n9, σ1^{s}03**/14**, 3C, Kazakhstan-Xinjiang border region**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time       Res
                                    Op     ISC        h  m  s     ISC
MAKZ  Makanchi           1.00  18  ⇑P     Pg      12 53 36.8  0.0
      0.6nm,0.7s
MAKZ                               ⇑S     Sg      12 53 49.6 -0.2
      0.6nm,0.2s
MK31  Makanchi Array     1.07  29  ⇑P     Pg      12 53 37.4 -0.9
      0.1nm,0.1s,baz=202,slow=18,SNR=18
MK31                                S     Sg      12 53 51.8 -0.5
      0.4nm,0.3s,baz=208,slow=31,SNR=9.8
KAPS  Kapalarasan        1.63 250   P     Pb      12 53 48.2 +0.2
      2.4nm,0.1s
KAPS                                S     Sg      12 54 09.3 -0.8
      8.4nm,0.1s
KNOS  Konyrlen           2.24 229   Pg    Pb      12 53 58.8 +0.4
      2.0nm,0.2s
KNOS                                Lg    Lg      12 54 27.9
      0.8nm,0.2s
KTMS  Ketmen             2.56 200   Pg    Pb      12 54 04.7 +0.8
      0.4nm,0.1s
KTMS                                Lg    Lg      12 54 37.6
      7.0nm,0.1s
KTMS  Ketmen             2.56 200  eP     Pb      12 54 04.7 +0.8
      0.4nm,0.1s
KTMS                               eS     Sg      12 54 37.6 -2.2
      7.0nm,0.1s
BLB   Baldybastay        2.79 232   Pg    Pb      12 54 08.2 +0.4
      4.2nm,0.3s
BLB                                 Lg    Lg      12 54 43.7
      3.6nm,0.2s
UZB   Uzynbulak          3.25 214   Pg    Pb      12 54 16.1 +0.4
      4.0nm,0.3s
UZB                                 Lg    Lg      12 54 57.2
      0.5nm,0.1s
UZB   Uzynbulak          3.25 214  eP     Pb      12 54 16.1 +0.4
      4.0nm,0.3s
UZB                                eS     Sb      12 54 57.2 +1.7
      0.5nm,0.1s
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*SKO **07** 12:56:39.0, 41°.37N×19°.34E, h6^{km}, ML2.9*

*THE **07** 12:56:40.9, 42°N±11°×2°0E±°, h5^{km}±22^{km}, M2.8/5, MLh2.8/5*

*TIR **07** 12:56:40.8, 41°.48N×19°.41E, h37^{km}±4^{km}, Ml3.3/7*

*PDG **07** 12:56:40.0±0.5, 41°.37N×19°.38E, h13^{km}±1^{km}, MD3.5/4, ML3.4/13, Error ellipse: s-maj=1.4km s-min=2.4km az=0.0*

*BEO **07** 12:56:41.8±0.6, 41°.45N×19°.38E, h21^{km}±3^{km}, ML2.9/11*

*IDC **07** 12:56:57.5±45.0, 43°.02N×22°.12E, h0^{km}, mb3.9/2, mbtmp3.9/3, ML2.9/1, MS3.0/2, Error ellipse: s-maj=811.0km s-min=67.3km az=52.0*

ISC 07 12:56:40.6±1.0**, 41°.43N**±0°.02×**19°.50E**±0°.02**, h10**^{km}±8^{km}**, n78, σ1^{s}24**/128**, 19C-13D, Albania**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time       Res
                                    Op     ISC        h  m  s     ISC
TIR   Tirane             0.28 107   Pg    Pg      12 56 46.1 -0.3
TIR                                 Sg    Sg      12 56 48.5 -1.7
TIR                                 AML   AML     12 56 50.2
      15nm,0.2s
TIR                                 AML   AML     12 56 51.3
      15nm,0.2s
TIR   Tirane             0.28 107  i Pg   Pg      12 56 46.1 -0.3
ULC   Ulcinj             0.56 340⇓ iPg    Pg      12 56 51.5 -0.1
ULC                                i Sg   Sb      12 57 01.1 +0.3
SDA   Shkodra            0.62 360   Pg    Pg      12 56 52.6  0.0
SDA                                 Sg    Sg      12 57 01.5 +0.8
SDA                                 AML   AML     12 57 06.7
      1.7nm,0.2s
PHP   Peshkopia          0.75  70   Pg    Pg      12 56 53.5 -1.6
PHP                                 Sg    Sg      12 57 03.1 -1.7
PHP                                 AML   AML     12 57 12.7
      2.4nm,0.4s
PHP   Peshkopia          0.75  70   P     Pg      12 56 53.5 -1.6
PHP                                 S     Sg      12 57 04.5 -0.3
DRME  Dracevica, Mon     0.79 343⇓ iPg    Pg      12 56 55.2 -0.7
DRME                               eSg    Sb      12 57 08.2 +0.9
VLO   Vlora              0.96 180   Pg    Pn      12 57 01.1 +0.8
VLO                                 Sg    Sn      12 57 14.8 +0.8
VLO                                 AML   AML     12 57 20.1
      5.0nm,0.3s
VLO   Vlora              0.96 180   P     Pn      12 57 01.1 +0.8
VLO                                 S     Sn      12 57 16.9 +2.9
BUM   Brajici-Budva      0.98 333⇓ iPg    Pn      12 57 01.3 +0.7
BUM                                i Sg   Sb      12 57 13.5 +0.7
PDG   Podgorica          1.01 350   Pg    Pg      12 56 59.7 -0.4
PDG                                 Sg    Sb      12 57 15.2 +1.5
PDG   Podgorica          1.01 350  ⇑P     Pb      12 57 01.1 +0.8
PDG                                ⇑S     Sb      12 57 14.8 +1.1
PDG   Podgorica          1.01 350  ePg    Pg      12 56 59.7 -0.4
PDG                                eSg    Sg      12 57 13.9 +0.6
PDG   Podgorica          1.01 350⇑ iPg    Pg      12 56 59.5 -0.6
PDG                                i Sg   Sn      12 57 16.8 +1.5
OHR   Ohrid              1.03 108  i Pg   Pg      12 56 59.4 -1.0
OHR                                i Sg   Sb      12 57 15.0 +0.8
OHR                                eLg    Lg      12 57 15.8
      comp=N,348nm,0.7s
OHR                                eLg    Lg      12 57 19.1
      comp=E,246nm,0.5s
CEME  Cevo               1.20 339⇑ iPg    Pb      12 57 04.2 +0.8
CEME                               eSg    Sn      12 57 21.5 +1.6
PVY   Plav               1.21  16⇓ iPg    Pg      12 57 02.9 -1.0
PVY                                i Sg   Sn      12 57 24.6 +4.3
HCY   Herceg Novi        1.26 324⇑ iPg    Pn      12 57 04.8 +0.4
HCY                                i Sg   Sn      12 57 23.3 +1.9
KBN   Korca              1.26 129   Pn    Pg      12 57 05.3 +0.4
KBN                                 Sn    Sn      12 57 23.4 +1.8
KBN                                 AML   AML     12 57 26.2
      comp=E,1.5nm,0.6s
KBN   Korca              1.26 129   P     Pg      12 57 05.4 +0.5
KBN                                 S     Sn      12 57 24.2 +2.7
NKME  Niksic             1.39 343⇑ iPg    Pn      12 57 06.9 +0.7
NKME                               eSg    Sg      12 57 28.2 +2.7
KOME  Kolasin            1.42   0⇑ iPg    Pb      12 57 07.9 +0.7
KOME                               eSg    Sg      12 57 28.3 +2.1
IVA   Berane             1.47  11⇑ iPg    Pn      12 57 08.3 +1.0
IVA                                i Sg   Sg      12 57 30.8 +3.0
SKO   Skopje             1.55  69  i Pn   Pn      12 57 08.9 +0.6
SKO                                i Sn   Sg      12 57 31.7 +1.3
NEST  Nestorio           1.55 130   Pn    Pb      12 57 09.8 +0.3
NEST                                Sn    Sg      12 57 31.3 +0.8
NEST                                AML   AML     12 57 35.8
      comp=E,0.7nm,0.6s
NEST  Nestorio           1.55 130   P     Pn      12 57 09.3 +0.8
NEST                                S     Sg      12 57 30.5  0.0
BRY   Bratogost          1.63 334⇑ iPn    Pn      12 57 10.9 +1.3
BRY                                i Sn   Sg      12 57 33.8 +0.6
KEK   Kerkira            1.73 172   P     Pg      12 57 15.4 +1.6
UPM   Unac-Piva          1.82 346⇓ iPn    Pn      12 57 12.8 +0.5
UPM                                i Sn   Sb      12 57 38.5 +1.3
SJES  Sjenica            1.86  11  ePg    Pb      12 57 14.9 +0.1
SJES                               eSg    Sg      12 57 39.9 -0.5
PLE   Pljevlja           1.90 357⇓ iPn    Pn      12 57 14.8 +1.6
PLE                                i Sn   Sb      12 57 41.1 +1.8
NOCI  Noci               1.95 252   Pn    Pn      12 57 12.5 -1.3
NOCI                                Sn    Sn      12 57 33.3 -5.1
NOCI                                AML   AML     12 57 51.8
      comp=E,0.8nm,0.2s
STON  Ston               1.97 318  ePg    Pn      12 57 14.1 +0.1
STON                               eSg    Sn      12 57 40.1 +1.4
IGT   Igoumenitsa        2.00 161   P     Pn      12 57 15.4 +0.8
IGT                                 S     Sb      12 57 42.7 +0.6
IGT   Igoumenitsa        2.00 161  i Pn   Pn      12 57 15.2 +0.7
IGT                                i Sn   Sb      12 57 43.6 +1.5
KPRO  Kipourio           2.04 136   P     Pn      12 57 16.9 +1.7
KPRO                                S     Sb      12 57 44.7 +1.2
KZN   Kozani             2.06 122   P     Pn      12 57 16.7 +1.4
KZN                                 S     Sb      12 57 43.5 -0.3
SELS  Selova             2.15  33  ePn    Pn      12 57 17.4 +0.8
SELS                               eSn    Sn      12 57 42.2 -1.2
IVAS  Ivanjica           2.19  12  ePn    Pn      12 57 17.6 +0.3
IVAS                               eSn    Sn      12 57 44.3 -0.2
BARS  Barje              2.21  50  i Pn   Pn      12 57 18.1 +0.7
BARS  Barje              2.21  50  ePn    Pn      12 57 17.9 +0.5
MATE  Matera             2.26 251  ⇓P     Pn      12 57 17.4 -0.6
VAY   Valandovo          2.31  92  i Pn   Pn      12 57 19.3 +0.5
VAY                                i Sn   Sn      12 57 47.9 +0.6
VAY                                eLg    Lg      12 57 48.6
      comp=N,26nm,0.6s
VAY                                eLg    Lg      12 57 50.4
      comp=E,18nm,0.5s
GOCS  Kraljevo Serbi     2.36  25  ePn    Pn      12 57 20.3 +0.8
GOCS                               eSn    Sn      12 57 48.1 -0.5
BBLS  Lazi&#263i         2.43 358  ePn    Pn      12 57 22.1 +1.6
BBLS                               eSn    Sn      12 57 50.2 -0.2
BOSS  Bosilegrad         2.46  63  ePn    Pn      12 57 21.2 +0.3
KNT   Kendrikon          2.57  95  i Pn   Pn      12 57 23.0 +0.6
KNT                                i Sn   Sn      12 57 53.3 -0.5
GRUS  Gruza              2.61  20  ePn    Pn      12 57 24.0 +1.1
LIT   Litokhoron         2.63 119  i Pn   Pn      12 57 24.6 +1.4
DIVS  Divibare           2.69   8  ePn    Pn      12 57 24.7 +0.6
DIVS                               eSn    Sn      12 57 56.1 -0.6
BOVS  Bovan              2.74  36  ⇑P     Pn      12 57 25.4 +0.7
BOVS                               ⇑S     Sn      12 57 58.6 +0.8
BOVS  Bovan              2.74  36  ePn    Pn      12 57 25.6 +1.0
THE   Thessaloniki       2.74 106  i Pn   Pn      12 57 24.7 +0.1
THE                                i Sn   Sn      12 57 57.7 -0.1
SGRT  San Giovanni R     2.84 278   Pn    Pn      12 57 25.5 -0.6
TRUS  Trudelj            2.87  13  ePn    Pn      12 57 27.5 +1.1
ZAPS  Zavoj              2.96  51  ePn    Pn      12 57 28.9 +1.1
ZAPS                               eSn    Sn      12 58 05.0 +1.6
SOH   Sokhos             2.97 101  i Pn   Pn      12 57 28.9 +0.9
SOH                                i Sn   Sn      12 58 04.2 +0.5
TIP   Timpagrande        3.08 224  ⇑P     Pn      12 57 28.7 -0.7
TIP                                ⇑S     Sn      12 58 06.3 -0.1
SRS   Serrai             3.10  95  i Pn   Pn      12 57 29.8 +0.2
TEKS  Tekeris            3.12   0  ePn    Pn      12 57 31.0 +1.1
ZAGS  Zajecar            3.12  39  ePn    Pn      12 57 30.5 +0.6
BLKB  Belogradchik       3.21  46  ⇑S     Sn      12 58 10.5 +1.1
BORS2 Bor- Borsko je     3.24  34  ePn    Pn      12 57 30.3 -1.2
BORS2                              eSn    Sn      12 58 09.6 -0.6
KUBS  Kucevo             3.38  27  ePn    Pn      12 57 32.6 -0.9
KUBS                               eSn    Sn      12 58 11.7 -1.9
MDVR  Moldovita          3.72  25  ⇓P     Pn      12 57 38.6 +0.5
MDVR                               ⇑S     Sn      12 58 21.2 -0.8
FRGS  Fruska Gora        3.73   3  ePn    Pn      12 57 38.4 +0.1
HERR  Herculane          4.05  31  ⇑P     Pn      12 57 43.2 +0.5
HERR                               ⇑S     Sn      12 58 30.1 -0.1
BZS   Buzias             4.46  19  ⇓P     Pn      12 57 48.3  0.0
GZR   Gura Zlata         4.62  30  ⇓P     Pn      12 57 51.0 +0.4
GZR                                ⇓S     Sn      12 58 44.2 -0.2
SURR  Surduc             4.72  23  ⇓P     Pn      12 57 51.5 -0.4
MORH  Mrgy, Hungar       4.82 353  ⇓P     Pn      12 57 52.6 -0.7
SIRR  Siria              5.08  17  ⇑P     Pn      12 57 57.1 +0.2
DRGR                     5.83  22  ⇑P     Pn      12 58 07.4 +0.1
KBZ   Khabaz            17.37  75   LR    LR      13 08 24.1
      comp=E,42nm,18.1s,baz=140,slow=45
FINES FINESS Array B    20.43   9   P     P       13 01 15.8 -2.0
      comp=E,0.1nm,0.3s,baz=182,slow=11,SNR=4.3
      comp=E,2.6nm,0.8s
AAK   Ala-Archa         40.25  69   LR    LR      13 21 34.5
      comp=E,22nm,19.1s,baz=72,slow=39
ZALV  Zalesovo Beam     44.16  50   P     P       13 04 47.4 -1.9
      comp=E,1.0nm,0.3s,baz=286,slow=8.7,SNR=4.5
      comp=E,1.0nm,0.3s
MKAR  Makanchi Array    44.34  61   P     P       13 04 49.1 -1.7
      comp=E,0.7nm,0.5s,baz=284,slow=7.0,SNR=8.8
      comp=E,0.7nm,0.5s
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*SNET **07** 12:59:35.7±1.0, 13°.75N×90°.31W, h72^{km}, ML3.3*

*GCG **07** 12:59:35.7±0.8, 13°.84N×90°.30W, h77^{km}±6^{km}, MD3.9, ML4.2, MW3.2*

*CATAC **07** 12:59:37.6±0.3, 14°N±4°×9°0W±°, h56^{km}±4^{km}, M3.4/16, MLv3.4/16, Error ellipse: s-maj=9.8km s-min=2.6km az=27.2, confirmed*

ISC 07 12:59:37.1±1.5**, 13°.86N**±0°.08×**90°.24W**±0°.04**, h77**^{km}±9^{km}**, n48, σ0^{s}87**/54**, Near coast of Guatemala**

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Code  Station Name        Δ°   AZ°    Phase ID          Time       Res
                                    Op     ISC        h  m  s     ISC
FAME  Alcaldia de Sa     0.21  93   P     Pn      12 59 47.6 -1.0
FAME  Alcaldia de Sa     0.21  93   S     Sn      12 59 57.6 +0.5
ESSJ  San Jos, E         0.39 222  i P    Pn      12 59 50.1 +0.4
NUBE  Las Nubes          0.44  84  eP     Pn      12 59 49.4 -0.8
NUBE  Las Nubes          0.44  84  i P    Pn      12 59 49.6 -0.7
NUBE                               eS     Sn      13 00 00.6 +0.6
NUBE  Las Nubes          0.44  84   P     Pn      12 59 49.6 -0.7
FG16  Alotenango, Sa     0.49 327  i P    Pn      12 59 53.1 +2.3
FG16                                IAML          13 00 11.0
      comp=N,11µm,0.2s
RTR   El Retiro          0.57  86  eP     Pn      12 59 51.1 -0.3
RBDL  Robledal           0.59  64  eP     Pn      12 59 51.2 -0.4
CEVE  Cerro Verde        0.59  93  eP     Pn      12 59 51.3 -0.5
CEVE  Cerro Verde        0.59  93   P     Pn      12 59 51.3 -0.5
CEVE  Cerro Verde        0.59  93   S     Sn      13 00 02.2 -0.4
SBLS  San Blas           0.59  92  eP     Pn      12 59 50.9 -0.8
SBLS                               eS     Sn      13 00 02.9 +0.4
SNJE  San Jose           0.61  89  eP     Pn      12 59 51.2 -0.7
UNIC  Universidad Ca     0.68  79   P     Pn      12 59 52.2 -0.2
ESSG  Sabana Grande      0.78 312  eP     Pn      12 59 51.6 -1.9
JAYA  Jayaque - finc     0.79 105  eP     Pn      12 59 52.6 -1.0
JAYA  Jayaque - finc     0.79 105  i P    Pn      12 59 52.7 -1.0
JAYA                               eS     Sn      13 00 05.9 -0.1
JAYA  Jayaque - finc     0.79 105   P     Pn      12 59 53.5 -0.2
PMON  Piamonte           0.91  99  eP     Pn      12 59 54.1 -0.9
PMON  Piamonte           0.91  99   P     Pn      12 59 54.8 -0.2
PMON  Piamonte           0.91  99   S     Sn      13 00 08.1 -0.2
LALI  Alcalda de L       0.96 112  eP     Pn      12 59 54.9 -0.6
LALI  Alcalda de L       0.96 112  eP     Pn      12 59 55.0 -0.5
LALI                               eS     Sn      13 00 10.0 +0.7
LALI  Alcalda de L       0.96 112   P     Pn      12 59 56.7 +1.2
UEES  Universidad Ev     0.98  98   P     Pn      12 59 56.1 +0.3
UEES  Universidad Ev     0.98  98   S     Sn      13 00 09.3 -0.5
MTO3  Montecristo        1.00  57   P     Pn      12 59 56.4 +0.1
LOMA  Loma Larga         1.05 101  eP     Pn      12 59 55.7 -1.1
LOMA                               eS     Sn      13 00 11.6 +0.1
LOMA  Loma Larga         1.05 101   S     Sn      13 00 10.6 -0.9
LOMA  Loma Larga         1.05 101   P     Pn      12 59 56.8 -0.1
ESQI  Esquipulas         1.11  51  eP     Pn      12 59 57.8 +0.3
APG   El Apazote         1.16 349  i P    Pn      12 59 58.3  0.0
LFRS  El Faro            1.16 101  eP     Pn      12 59 57.7 -0.4
LFRS                               eS     Sn      13 00 14.6 +0.8
STG5  El Palmar, Qui     1.21 297  eP     Pn      13 00 01.0 +2.3
STG8  El Palmar, Qui     1.23 299  eS     Sn      13 00 22.9 +7.3
STG8                                IAML          13 00 25.6
      comp=E,3µm,0.2s
PAVA  Las Pavas          1.27  96   P     Pn      13 00 00.3 +0.8
TECO  Alcaldia de Te     1.45 102   P     Pn      13 00 02.1 +0.4
TECO  Alcaldia de Te     1.45 102   S     Sn      13 00 20.6 +0.4
SOKI  Kika Raxquin       1.48 310  eP     Pn      13 00 01.6 -1.0
SOKI                                IAML          13 00 26.4
      comp=E,774nm,0.4s
RTAL  Retalhuleu         1.56 295   S     Sn      13 00 22.5 -0.4
TECA  Tecapa             1.72 102  eP     Pn      13 00 04.9 -0.6
HUEH  Huehuetenango      1.90 320   P     Pn      13 00 07.8 -0.1
SMCA  Catarina           2.04 299  eP     Pn      13 00 07.6 -2.0
CNCH  Conchagua          2.41 104  eP     Pn      13 00 13.8 -0.7
CNCH  Conchagua          2.41 104   S     Sn      13 00 44.0 +0.8
CNCH  Conchagua          2.41 104   P     Pn      13 00 14.2 -0.3
CSGN  Cosiguina Volc     2.75 108   P     Pn      13 00 19.3 +0.2
CSGN                                S     Sn      13 00 52.6 +1.2
```

IDC 07 13:09:09.1±0.7**, 27°.67N**×**139°.99E, h420**^{km}±21^{km}**, mb3.1**/7**, mbtmp3.9**/8**, Error ellipse: s-maj=56.7km s-min=14.9km az=76.0, Bonin Islands region**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time       Res
                                    Op     ISC        h  m  s     ISC
JCJ   Chichijima         2.04 106   P     P       13 10 06.6 -0.5
      41nm,0.3s,baz=275,slow=23,SNR=24
JCJ                                 S     S       13 10 54.4 +0.3
      132nm,0.5s,baz=286,slow=23,SNR=9.8
WRA   Warramunga Arr    47.65 187   P     P       13 17 05.8 +0.1
      0.2nm,0.3s,baz=14,slow=9.0,SNR=11
      0.2nm,0.3s
ZALV  Zalesovo Beam     47.78 319   P     P       13 17 04.3 -1.9
      0.6nm,0.3s,baz=113,slow=6.6,SNR=3.0
      0.6nm,0.3s
MKAR  Makanchi Array    48.60 309   P     P       13 17 12.5 -0.1
      0.3nm,0.3s,baz=86,slow=7.2,SNR=9.8
      0.3nm,0.3s
KURBB Kurchatov Arra    51.24 314   P     P       13 17 32.2 +0.2
      2.0nm,0.5s,baz=91,slow=8.2,SNR=31
      2.0nm,0.5s
ASAR  Alice Springs     51.37 187   P     P       13 17 33.5 +0.2
      0.1nm,0.3s,baz=354,slow=7.7,SNR=1.8
      0.1nm,0.3s
BVAR  Borovoye Array    56.30 317   P     P       13 18 08.5 +0.4
      2.4nm,0.4s,baz=88,slow=7.1,SNR=20
      2.4nm,0.4s
FINES FINESS Array B    76.56 333   P     P       13 20 13.9 -0.6
      4.9nm,1.1s,baz=80,slow=5.0,SNR=10
      4.9nm,1.1s
```

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*IDC **07** 14:18:21.1±1.8, 45°.00N×152°.16E, h0^{km}, mb3.3/2, mbtmp3.7/4, ML3.7/2, Error ellipse: s-maj=53.0km s-min=35.0km az=117.0*

*SKHL **07** 14:18:28.5±0.4, 45°.20N×152°.10E, h43^{km}±2^{km}, mb4.5/3*

*JMA **07** 14:18:38.4±0.8, 46°N±4°×15°0E±°, h204^{km}, MV3.3/12, KURILE ISLANDS REGION*

ISC 07 14:18:27.3±1.3**, 45°.1N**±0°.1×**152°.0E**±0°.1**, h41**^{km}**, n21, σ3^{s}03**/27**, Kuril Islands**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time       Res
                                    Op     ISC        h  m  s     ISC
KUR   Kuril'sk           2.93 275  eP     Pn      14 19 13.5 +2.3
KUR                                 AMB   AMB     14 19 14.1
      110nm,0.6s
KUR                                eS     Sn      14 19 46.9 +1.8
KUR                                 A     A       14 19 48.2
      140nm,0.5s
KUR                                 A     A       14 19 48.2
      160nm,0.5s
SHO   Shikotan           3.89 254  eP     Pn      14 19 38.2  +14
SHO                                 AMB   AMB     14 19 39.5
      50nm,0.3s
SHO                                eS     Sn      14 20 19.5  +11
SHO                                 A     A       14 20 26.0
      100nm,0.3s
SHO                                 A     A       14 20 26.0
      80nm,0.3s
YUK   Yuzh-Kuril'sk      4.51 259  i P    Pn      14 19 36.7 +3.8
YUK                                 AMB   AMB     14 19 37.0
      90nm,0.8s
YUK                                eS     Sn      14 20 26.0 +2.0
YUK                                 A     A       14 20 34.5
      70nm,0.7s
YUK                                 A     A       14 20 34.5
      90nm,0.7s
NEM2  Nemuro 2           4.81 251  eP     Pn      14 19 41.0 +3.9
NEM2                               eS     Sn      14 20 30.0 -1.5
NMR   Nemuro--Hokkai     4.82 252  eP     Pn      14 19 41.3 +4.1
NMR                                eS     Sn      14 20 34.0 +2.3
GLVR  Golovnino          4.83 256  eP     Pn      14 19 41.0 +3.6
JRA   Rausu              5.05 259  eP     Pn      14 19 42.7 +2.3
JNK   Nakash             5.43 257  eP     Pn      14 19 48.1 +2.5
AKK   Akkeshi            5.55 251  eP     Pn      14 19 51.3 +4.0
JAK   Akkeshi            5.66 251  eP     Pn      14 19 51.5 +2.7
JAK                                eS     Sn      14 20 49.1 -3.3
JTKR  Abashiri--Toko     5.89 262  eP     Pn      14 19 52.1 +0.2
JAR   Ashorobuto         6.18 256  eP     Pn      14 19 57.7 +1.8
SKR   Severo-Kuril’s     6.26  25  eP     Pn      14 19 58.7 +1.7
JOB   Onbets             6.28 253  eP     Pn      14 19 59.2 +1.9
JOB                                eS     Sn      14 21 02.2 -5.4
JCH   Churui             6.71 252  eP     Pn      14 20 04.5 +1.3
JCH                                eS     Sn      14 21 11.5 -6.8
JKK2  Kamakawa 2         6.73 263  eP     Pn      14 20 02.7 -0.7
ASAJ  Asahikawa          6.78 265   Pn    Pn      14 20 03.5 -0.6
      3.8nm,0.3s,baz=70,slow=12,SNR=39
      18nm,0.5s
PAU   Pauzhetka          7.16  25  eP     Pn      14 20 10.0 +0.7
PETK  Petropavlovsk-     8.87  23   Pn    Pn      14 20 30.6 -2.1
      0.4nm,0.3s,baz=184,slow=9.8,SNR=10
      4.5nm,0.9s
WRA   Warramunga Arr    66.67 198   P     P       14 29 12.6 -1.2
      0.3nm,0.8s,baz=16,slow=6.6,SNR=2.2
      0.3nm,0.8s
ASAR  Alice Springs     70.37 198   P     P       14 29 37.1 +0.3
      0.2nm,0.6s,baz=9.7,slow=6.2,SNR=4.9
      0.2nm,0.6s
```

IDC ***07*** *14:23:25.6±7.3, 23°.54N×143°.67E, h126km±79km, mb3.3/6, mbtmp3.7/7, MS2.3/1, Error ellipse: s-maj=160.6km s-min=17.1km az=75.0*

JMA ***07*** *14:23:31.2±0.2, 24°N±1°×14°2E±°, h173km±2km, MV4.6/12, IOTO ISLANDS REGION*

ISC 07 14:23:28.3±1.8**, 23°.6N**±0°.1×**143°.5E**±0°.6**, h150km, n12, σ0s.91**/11**, mb3.7**/6**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	3.28	338	eP	Pn	14 24 20.0	+0.8
JHH2				eS	Sn	14 24 57.7	-1.0
CBIJ	Chichi jima	3.71	341	eP	Pn	14 24 25.7	+1.0
CBIJ				eS	Sn	14 25 07.8	-0.8
JCJ	Chichijima	3.71	341	P	Pn	14 24 15.4	-9.3
	69nm,0.4s,baz=276,slow=22,SNR=23						
JCJ				S	Sn	14 24 57.5	-11
	106nm,0.3s,baz=78,slow=23,SNR=15						
GUMO	Guam	10.02	172	LR	LR	14 28 22.0	
	comp=Z,16nm,18.1s,baz=58,slow=30						
JHO	Hitachi	13.24	350	eP	Pn	14 26 30.0	-0.5
MJAR	Matsushiro Arr	13.71	342	P	Pn	14 26 35.8	-0.7
	1.2nm,0.8s,baz=160,slow=11,SNR=6.1						
WRA	Warramunga Arr	44.17	192	P	P	14 31 21.4	-0.9
	1.2nm,0.5s,baz=16,slow=8.9,SNR=25 1.2nm,0.5s						
ASAR	Alice Springs	47.88	192	P	P	14 31 51.4	0.0
	0.2nm,0.5s,baz=11,slow=8.3,SNR=9.0 0.2nm,0.5s						
MKAR	Makanchi Array	53.67	312	P	P	14 32 34.5	0.0
	0.3nm,0.6s,baz=95,slow=7.7,SNR=2.6 0.3nm,0.6s						
STKA	Stephens Creek	55.17	182	P	P	14 32 45.2	-0.2
	0.9nm,0.5s,baz=354,slow=9.2,SNR=3.1 0.9nm,0.5s						
KURBB	Kurchatov Arra	56.38	316	P	P	14 32 54.4	+0.5
	0.5nm,0.5s,baz=93,slow=8.1,SNR=6.2 0.5nm,0.5s						
BVAR	Borovoye Array	61.46	319	P	P	14 33 30.0	+1.2
	0.7nm,0.6s,baz=93,slow=9.4,SNR=4.8 0.7nm,0.6s						

IDC ***07*** *14:34:55.0±0.7, 35°.10N×23°.88E, h0km, mb4.1/20, mbtmp4.2/25, ML4.1/5, MS3.3/8, Error ellipse: s-maj=17.0km s-min=12.7km az=5.0*

ISK ***07*** *14:34:56.8, 35°.18N×23°.84E, h1km, ML4.1/25*

THE ***07*** *14:34:57.8, 35°N±2°×2°4E±°, h0km±3km, M4.1/15, MLh4.1/15*

ATH ***07*** *14:34:57.1, 35°.09N×23°.85E, h4km, Mw4.1, Moment Tensor Solution. s4 Moment tensor: Mrr-0.54; Mθθ-0.32; Mφφ0.86; Mrθ0.58; Mθφ-1.37; Mφr0.59; Fault plane solution: NP1:φs287.00000°, δ63.00000°, λ-158.00000°. NP2:φs187.00000°, δ71.00000°, λ-28.00000°.*

HLW ***07*** *14:34:59.1, 35°.12N×24°.59E, h0km±10km, Md4.2, Ml3.9*

MOS ***07*** *14:35:01.2±1.3, 35°.19N×23°.87E, h52km, mb4.4/12, Error ellipse: s-maj=8.3km s-min=4.5km az=65.2*

NEIC ***07*** *14:35:01.4±2.4, 35°.17N±0°.09×23°.93E±0°.06, h35km±2km, mb4.4/21, Error ellipse: s-maj=14.8km s-min=8.0km az=184.0*

GII ***07*** *14:35:02.7±0.0, 34°.985N±0°.004×24°.372E±0°.001, h20km, Mws4.2, confirmed*

AFAD ***07*** *14:35:04.4, 35°.31N×24°.43E, h7km±3km, MW4.2*

NAO ***07*** *14:35:10.7, 35°.18N×23°.79E, h10km, MB3.7*

ISC 07 14:34:57.7±0.8**, 35°.12N**±0°.02×**23°.81E**±0°.02**, h15km**±4km**, n358, σ2s.05**/416**, mb4.2**/41**, MS3.2**/3**, 18C-9D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDR	Palaiochora Ch	0.19	307	P	Pg	14 35 01.4	-0.8
KNDR				S	Sg	14 35 04.4	-0.8
KNDR	Palaiochora Ch	0.19	307	Pg	Pg	14 35 01.4	-0.8
KNDR				Sg	Sg	14 35 04.2	-1.0
KNDR	Palaiochora Ch	0.19	307	P	Pg	14 35 01.6	-0.5
KNDR				S	Sg	14 35 04.4	-0.8
GVD	Gavdhos	0.36	141	P	Pg	14 35 05.7	+0.6
GVD				S	Sg	14 35 12.3	+2.2
GVD	Gavdhos	0.36	141	Pg	Pg	14 35 05.7	+0.6
GVD				Sg	Sg	14 35 12.2	+2.0
GVD	Gavdhos	0.36	141	P	Pg	14 35 03.5	-1.6
GVD				S	Sg	14 35 07.9	-2.2
IMMV	Iera Moni Meta	0.37	23	P	Pg	14 35 03.8	-1.4
IMMV				S	Sg	14 35 08.8	-1.5
IMMV	Iera Moni Meta	0.37	23	Pg	Pg	14 35 03.7	-1.5
IMMV				Sg	Sg	14 35 08.9	-1.5
VAM	Vamos	0.43	48	P	Pg	14 35 05.0	-1.4
VAM				S	Sg	14 35 11.8	-0.4
VAM	Vamos	0.43	48	P	Pg	14 35 05.4	-0.9
VAM				S	Sg	14 35 11.6	-0.6
CHAN	Chania	0.44	26	P	Pg	14 35 05.2	-1.4
CHAN				S	Sg	14 35 11.3	-1.3
CHAN	Chania	0.44	26	P	Pg	14 35 06.4	-0.2
CHAN				S	Sg	14 35 12.3	-0.3
ANKY	Antikythira Is	0.85	331	P	Pg	14 35 12.2	-2.0
ANKY				S	Sg	14 35 22.9	-2.5
ANKY	Antikythira Is	0.85	331	P	Pg	14 35 13.5	-0.7
ANKY				S	Sg	14 35 25.2	-0.2
IDI	Anoyia	0.90	79	Pn	Pg	14 35 13.1	-2.1
	82nm,0.3s,baz=252,slow=9.7,SNR=344						
IDI				Sn	Sg	14 35 25.6	-1.4
	620nm,0.3s,baz=315,slow=20,SNR=21						
IDI				LR	LR	14 35 30.8	
	comp=Z,438nm,18.3s,baz=160,slow=42						
IDI	Anoyia	0.90	79	P	Pg	14 35 12.9	-2.3
IDI				S	Sb	14 35 28.3	+1.4
IDI	Anoyia	0.90	79		Pg	14 35 13.2	-2.0
IDI				Sn	Sg	14 35 26.1	-1.0
IDI	Anoyia	0.90	79	Pg	Pg	14 35 13.1	-2.0
IDI				Sg	Sb	14 35 27.3	+0.4
IDI	Anoyia	0.90	79	P	Pg	14 35 13.8	-1.4
IDI				S	Sg	14 35 26.8	-0.3
IACM	Heraklion	1.05	80	P	Pg	14 35 16.6	-1.4
IACM				S	Sn	14 35 34.0	+1.8
IACM	Heraklion	1.05	80	P	Pg	14 35 16.5	-1.5
IACM				S	Sg	14 35 29.8	-1.9
KTHA	Kythira Island	1.28	332	P	Pg	14 35 20.5	-2.0
KTHA	Kythira Island	1.28	332	Pn	Pg	14 35 21.4	-1.1
KTHA				Sn	Sg	14 35 39.6	+0.4
NPS	Neapolis	1.48	84	P	Pn	14 35 24.2	+0.4
NPS	Neapolis	1.48	84	P	Pn	14 35 22.7	-1.1
NPS				S	Sb	14 35 40.8	-2.8
MHLO	Agia Marina, M	1.64	17	P	Pn	14 35 26.5	+0.5
MHLO	Agia Marina, M	1.64	17	P	Pn	14 35 24.8	-1.1
MHLO				S	Sn	14 35 46.9	+0.2
VLI	Veliai	1.74	336	P	Pn	14 35 28.0	+0.6
VLI	Veliai	1.74	336	P	Pn	14 35 27.2	-0.2
VLI				S	Sn	14 35 49.2	-0.2
SAP3	Santorini-Thir	1.81	43	P	Pn	14 35 27.6	-0.7
SAP3				S	Sn	14 35 51.2	+0.1
SNT5	Nea Kammeni, S	1.82	45	P	Pn	14 35 28.9	+0.5
THERA	Ancient Thera,	1.84	47	P	Pn	14 35 28.9	+0.2
ZKR	Zakros	1.98	90	P	Pb	14 35 34.4	+1.1
ZKR	Zakros	1.98	90	Pn	Pn	14 35 32.5	+1.9
ZKR	Zakros	1.98	90	P	Pn	14 35 29.5	-1.1
ZKR				S	Sn	14 35 53.9	-1.2
APE	Apeiranthos	2.39	35	P	Pn	14 35 36.5	+0.1
APE	Apeiranthos	2.39	35	Pn	Pn	14 35 35.9	-0.5
APE				Sn	Sn	14 36 07.5	+2.1
APE	Apeiranthos	2.39	35	⇑P	Pn	14 35 35.7	-0.7
APE				⇑S	Sg	14 36 14.0	-0.7
APE	Apeiranthos	2.39	35	i P	Pn	14 35 36.4	0.0
APE	Apeiranthos	2.39	35	P	Pn	14 35 35.9	-0.5
APE	Apeiranthos	2.39	35	P	Pn	14 35 35.6	-0.7
APE				S	Sn	14 36 05.5	0.0
PYL	PYLOS	2.44	317	P	Pn	14 35 37.7	+0.7
PYL	PYLOS	2.44	317	P	Pn	14 35 35.8	-1.1
PYL				S	Sn	14 36 05.5	-1.0
MET2	Kameni Chora,	2.52	351	P	Pn	14 35 37.1	-0.9
MET2				S	Sn	14 36 09.0	+0.5
MET4	Agioi Theodoro	2.52	353	P	Pn	14 35 37.5	-0.5
MET4				S	Sn	14 36 08.2	-0.3
MET5	Makryloggos,Me	2.52	352	P	Pn	14 35 37.3	-0.8
MET5				S	Sn	14 36 07.6	-1.0
ITM	Ithomi	2.56	324		Pn	14 35 40.7	+2.1
ITM	Ithomi	2.56	324	Pn	Pn	14 35 40.6	+2.0
ITM	Ithomi	2.56	324	P	Pn	14 35 37.8	-0.8
ITM				S	Sn	14 36 09.8	+0.3
VLY	Voula,Athens	2.73	360	P	Pn	14 35 40.2	-0.7
VLY				S	Sn	14 36 13.7	+0.1
KARP	Karpathos	2.77	80		Pn	14 35 43.6	+2.0
KARP	Karpathos	2.77	80	Pn	Pn	14 35 43.2	+1.6
KARP	Karpathos	2.77	80	P	Pn	14 35 41.0	-0.6
ATH	Athens Observa	2.85	359	P	Pn	14 35 41.7	-0.9
ATH				S	Sn	14 36 17.1	+0.5
PTL	Penteli	2.92	1	P	Pn	14 35 42.8	-0.8
PTL				S	Sn	14 36 17.6	-0.9
KARY	Karystos	2.95	10	P	Pn	14 35 43.6	-0.4
KARY				S	Sn	14 36 18.3	-0.8
DION	Dionisos Attik	2.95	2	P	Pn	14 35 43.5	-0.6
DION				S	Sn	14 36 19.7	+0.4
MAGU	Magoula	2.96	355	P	Pn	14 35 43.9	-0.2
MAGU				S	Sn	14 36 19.9	+0.5
LTK	Loutraki	2.97	347	P	Pn	14 35 43.4	-1.0
LTK				S	Sn	14 36 20.3	+0.5
GUR	Goura	3.05	338	P	Pn	14 35 44.0	-1.4
GUR				S	Sn	14 36 21.8	+0.1
STFN	Stefani	3.06	356	P	Pn	14 35 45.0	-0.6
STFN				S	Sn	14 36 21.9	+0.1
NISR	Nisiros	3.08	60	P	Pn	14 35 43.7	-2.0
VIL2	Platees	3.12	352	P	Pn	14 35 44.8	-1.5
VIL2				S	Sn	14 36 21.2	-2.0
KLV	Kalavryta, Ach	3.21	336	P	Pn	14 35 47.0	-0.6
KLV				S	Sn	14 36 26.0	+0.4
DRO	Drossia	3.29	330	P	Pn	14 35 47.6	-1.1
DRO				S	Sn	14 36 26.6	-1.0
YAZI	Mula-Dat§a-	3.34	61	P	Pn	14 35 52.6	+3.2
BODT	Bodrum	3.43	55	Pn	Pn	14 35 52.7	+2.0
DAT	Datca	3.45	61	P	Pn	14 35 54.1	+3.1
DAT				S	Sn	14 36 33.1	+1.4
DAT				i IAML		14 36 50.0	
	comp=N,115nm,1.5s						
DAT				i IAML		14 36 50.0	
	comp=E,102nm,1.1s						
DAT	Datca	3.45	61	Pn	Pn	14 35 52.8	+1.8
RLS	Riolos of Patr	3.48	328	P	Pn	14 35 50.0	-1.4
RLS				S	Sn	14 36 31.4	-0.9
KYMI	Kymi, Euboea I	3.51	4	P	Pn	14 35 51.2	-0.6
KYMI				S	Sn	14 36 33.6	+0.6
KALE	Kalithea	3.53	338	P	Pn	14 35 51.4	-0.6
KALE				S	Sn	14 36 33.5	0.0
SMG	Samos	3.55	43	P	Pn	14 35 51.5	-0.8
LKR	Lokris	3.58	350	P	Pn	14 35 51.6	-1.0
LKR				S	Sn	14 36 33.8	-0.9
ATAL	Atalanti	3.62	350	P	Pn	14 35 52.0	-1.2
ATAL				S	Sn	14 36 35.8	+0.2
EFP	Efpalio	3.63	336	P	Pn	14 35 52.5	-0.9
EFP				S	Sn	14 36 35.6	-0.4
AXS	Araxos	3.64	328	P	Pn	14 35 52.5	-1.0
AXS				S	Sn	14 36 36.2	+0.1
ARG	Arkhangelos	3.68	71		Pn	14 35 56.1	+2.1
ARG	Arkhangelos	3.68	71	Pn	Pn	14 35 56.3	+2.3
ARG	Arkhangelos	3.68	71	P	Pn	14 35 56.1	+2.1
ARG	Arkhangelos	3.68	71	P	Pn	14 35 52.4	-1.7
ARG				S	Sn	14 36 35.7	-1.5
ORTH	Orthonies,Zaky	3.70	318	P	Pn	14 35 52.8	-1.6
ORTH				S	Sn	14 36 37.8	+0.1
CHOS	Chios island	3.73	28	Pn	Pn	14 35 56.0	+1.3
CHOS	Chios island	3.73	28	P	Pn	14 35 53.6	-1.1
AXAR	Agios Charalam	3.75	346	P	Pn	14 35 54.3	-0.7
GCAM	G?zelcaml?	3.78	46	P	Pn	14 35 56.2	+0.9
GCAM	G?zelcaml?	3.78	46	Pn	Pn	14 35 57.4	+2.1
ANX	Ano Chora	3.78	337	P	Pn	14 35 54.7	-0.8
ANX				S	Sn	14 36 39.0	-0.8
SKY	Skiros Island	3.80	9	P	Pn	14 35 54.5	-1.1
SKY				S	Sn	14 36 40.0	0.0
SLUM	Salum	3.81	162	P	Pn	14 35 57.0	+1.2
SLUM				S	Sn	14 36 38.5	-1.7
RTZL	Ratzakli, Kefa	3.83	321	P	Pn	14 35 54.3	-1.7
RTZL				S	Sn	14 36 40.9	+0.1
MLSB	Milas	3.87	55	Pn	Pn	14 35 58.6	+1.9
URLA	Izmir	3.93	34	Pn	Pn	14 35 58.6	+1.1
PVO	Paravola	3.94	333	P	Pn	14 35 56.8	-0.8
PVO				S	Sn	14 36 43.7	+0.2
TURN	Turunc	3.96	64	P	Pn	14 36 00.9	+3.1
TURN				S	Sn	14 36 43.6	-0.4
TURN				i IAML		14 37 03.0	
	comp=E,124nm,1.0s						
TURN				i IAML		14 37 06.0	
	comp=N,116nm,0.8s						
TURN	Turunc	3.96	64	Pn	Pn	14 36 00.3	+2.5
VLS	Valsamata	4.00	321	P	Pn	14 35 56.8	-1.6
VLS				S	Sn	14 36 45.0	0.0
AOS2	Alonissos-2	4.02	0	P	Pn	14 35 57.5	-1.2
AOS2				S	Sn	14 36 45.8	+0.3
AGG	Agios Georgios	4.07	344	P	Pn	14 35 58.5	-1.0
AGG				S	Sn	14 36 47.0	+0.2
MAKR	Makrakomi, Fth	4.11	341	P	Pn	14 35 58.9	-1.1
MAKR				S	Sn	14 36 48.3	+0.5
EVR	Evrytania	4.11	338	P	Pn	14 35 58.9	-1.1
EVR				S	Sn	14 36 48.2	+0.3
YER	Yerkesik	4.14	60	Pn	Pn	14 36 02.9	+2.5
BLCB	Balcova	4.17	38	Pn	Pn	14 36 03.0	+2.3
NEO	Neokhori	4.20	354	P	Pn	14 35 59.4	-1.9
MULA	Mugla, Merkez-	4.23	58	P	Pn	14 36 05.7	+4.1
MULA				S	Sn	14 36 50.2	-0.6
MULA				i IAML		14 37 03.0	
	comp=N,69nm,1.0s						
MULA				i IAML		14 37 16.0	
	comp=E,77nm,1.0s						
FSK	Fiskardo	4.23	323	P	Pn	14 36 00.8	-0.8
FSK				S	Sn	14 36 50.7	0.0
DALY	Dalyan (Mula)	4.28	65	Pn	Pn	14 36 04.9	+2.7
AYDB	Zeytinkoy-Aydi	4.33	48	Pn	Pn	14 36 05.5	+2.4
SIGR	SIGRI	4.40	21	Pn	Pn	14 36 06.4	+2.5
IZMR	zmir-demi	4.49	47	P	Pn	14 36 09.4	+4.3
ESEN	Aydn-Nazilli	4.53	53	P	Pn	14 36 09.1	+3.4
FETY	Fethiye	4.54	69	P	Pn	14 36 01.9	-4.0
IZZE	Mula-Seydike	4.60	72	P	Pn	14 36 08.9	+2.2
ODEM	Odemis-Izmir	4.65	46	Pn	Pn	14 36 10.2	+2.7
THL	Klokotos Trika	4.66	343	P	Pn	14 36 06.1	-1.4
THL				S	Sn	14 37 01.2	0.0
TETR	Tetrakomo, Epi	4.67	335	P	Pn	14 36 05.6	-2.2
TETR				S	Sn	14 37 01.6	-0.2
DNZT	Denizli-Tavas-	4.74	61	P	Pn	14 36 12.6	+4.0
TAVA	DENIZLI_Tavas	4.74	59	P	Pn	14 36 12.4	+3.8
KIRA	zmir-Kiraz	4.80	49	P	Pn	14 36 13.0	+3.5
CAME	Cameli-Denizli	4.81	66	Pn	Pn	14 36 12.3	+2.6
AKAS	Kas	4.85	75	P	Pn	14 36 12.2	+2.0
AKAS	Kas	4.85	75		Pn	14 36 11.9	+1.7
AKAS	Kas	4.85	75	Pn	Pn	14 36 13.2	+3.0
CAEL	Denizli, Camel	4.89	64	P	Pn	14 36 14.6	+3.9
LIA	Limnos Island	4.89	13	P	Pn	14 36 08.8	-1.9
LIA				S	Sn	14 37 06.0	-0.9
DNIZ	Denizli-Tavas-	4.90	58	P	Pn	14 36 14.9	+4.0
KNIK	Mula-Seydike	4.98	68	P	Pn	14 36 14.9	+2.9
APMY	Acipayam-Deniz	5.02	61	Pn	Pn	14 36 15.4	+2.9
LIT	Litokhoron	5.08	349		Pn	14 36 14.3	+1.0
LIT	Litokhoron	5.08	349	P	Pn	14 36 14.3	+1.0
MANT	Manisa	5.08	47	P	Pn	14 36 17.7	+4.2
MANT	Manisa	5.08	47		Pn	14 36 16.5	+3.0
GOLH	Golhisar	5.11	64	P	Pn	14 36 17.4	+3.6
GORD	Gordes-Manisa	5.15	41	Pn	Pn	14 36 17.1	+2.8
KULA	Kula-Manisa	5.16	48	Pn	Pn	14 36 17.2	+2.8
ELL	Elmali	5.21	70		Pn	14 36 17.9	+2.7
ELL	Elmali	5.21	70	Pn	Pn	14 36 18.0	+2.8
ELL	Elmali	5.21	70	P	Pn	14 36 17.9	+2.7
PLG	Polygyros	5.25	357	P	Pn	14 36 15.4	-0.2
AKUM	Antalya-Kumluc	5.45	75	P	Pn	14 36 20.7	+2.4
PENT	Pentalofos	5.49	338	P	Pn	14 36 17.6	-1.4
SMTH	Samothraki Isl	5.51	14	P	Pn	14 36 18.3	-0.9
PASA	Karahalli, USA	5.58	53	P	Pn	14 36 24.0	+3.7
KEK	Kerkira	5.58	326	P	Pn	14 36 18.9	-1.2
BRDR	BURDUR-Merkez	5.66	61	P	Pn	14 36 23.7	+2.4
ANTB	Antalya	5.83	70	Pn	Pn	14 36 27.3	+3.8
SWA2		6.03	166	P	Pn	14 36 27.4	+1.1
ISP	Isparta	6.04	62	i P	Pn	14 36 27.9	+1.3
TIP	Timpagrande	6.93	308		Pn	14 36 39.0	+0.2
TIP	Timpagrande	6.93	308	⇑P	Pn	14 36 37.9	-0.9
AKMS	Akamas	6.99	88	P	Pn	14 36 37.6	-2.0
CEL	Celeste	7.09	299		Pn	14 36 39.6	-1.3
BORA	Eskisehir	7.10	46		Pn	14 36 45.3	+4.2
ALFC	Alefka	7.20	87	P	Pn	14 36 41.9	-0.6
ASGA	Asgata	7.76	90	P	Pn	14 36 49.7	-0.4
CSS	Mathiatis	7.81	88		Pn	14 36 49.5	-1.4
CSS	Mathiatis	7.81	88	P	Pn	14 36 49.4	-1.4
CSS	Mathiatis	7.81	88	S	Sn	14 38 13.7	-5.3
CSS	Mathiatis	7.81	88	P	Pn	14 36 50.1	-0.7
MATE	Matera	7.87	317	⇓P	Pn	14 36 52.0	+0.5
ELND	Elena	7.96	11	⇑P	Pn	14 36 56.8	+4.0
CUC	Castrocucco	7.99	310		Pn	14 36 55.1	+1.8
PDG	Podgorica	8.12	335	⇓P	Pn	14 36 57.3	+2.4
RYAN	Fayoum	8.14	136	P	Pn	14 36 53.1	-2.2
PLVB	Pleven	8.28	4	⇑P	Pn	14 37 01.2	+4.1
ANTO	Ankara	8.57	54	⇑P	Pn	14 37 05.6	+4.4
ANTO	Ankara	8.57	54	P	Pn	14 37 05.6	+4.4
BOVS	Bovan	8.66	350	⇓P	Pn	14 37 05.1	+2.7
BR131	Keskin Array S	9.07	57	i P	Pn	14 37 11.1	+3.0
BRTR	Keskin Array B	9.07	57	Pn	Pn	14 37 10.8	+2.7
	0.4nm,0.3s,baz=234,slow=13,SNR=66						
BRTR				LR	LR	14 41 31.3	
	comp=Z,154nm,19.4s,baz=240,slow=44 15nm,0.8s						
BRTR	Keskin Array B	9.07	57		Pn	14 37 09.2	+1.1
BRTR	Keskin Array B	9.07	57	P	Pn	14 37 09.2	+1.1
NBNS	Bani Suef	9.08	133	P	Pn	14 37 06.0	-2.2
SGRT	San Giovanni R	9.15	319		Pn	14 37 07.5	-1.8
MDVR	Moldovita	9.78	351	⇑P	Pn	14 37 21.0	+3.2
SLTI	Sal'it	9.79	104	P	Pn	14 37 16.1	-1.8
SLTI	Sal'it	9.79	104	S	Sn	14 39 01.2	-6.4
HERR	Herculane	9.81	354	⇓P	Pn	14 37 21.3	+3.2
KZIT	Kziot	9.83	112	P	Pn	14 37 17.5	-1.0
KZIT	Kziot	9.83	112	S	Sn	14 39 00.7	-7.9
MMA0B	Mount Meron ar	9.85	99	P	Pn	14 37 17.0	-1.8
MMA0B	Mount Meron ar	9.85	99	S	Sn	14 39 01.7	-7.3
MMAI	Mount Meron Ar	9.85	99	Pn	Pn	14 37 16.3	-2.4
	2.0nm,0.3s,baz=293,slow=13,SNR=7.7						
MMAI				Sn	Sn	14 39 03.9	-5.2
	1.3nm,0.3s,baz=225,slow=16,SNR=2.5 2.5nm,0.4s						
AMAZ	Amatzia	9.96	108	P	Pn	14 37 19.0	-1.2
AMAZ	Amatzia	9.96	108	S	Sn	14 39 04.5	-7.3
SALP	Salfit	9.97	105	P	Pn	14 37 18.3	-2.1
SALP	Salfit	9.97	105	S	Sn	14 39 04.7	-7.3
GEM	Giv'at Ha'Em	10.01	98	P	Pn	14 37 18.5	-2.4
GEM	Giv'at Ha'Em	10.01	98	S	Sn	14 39 05.7	-7.2
MMLI	Mount Malkishu	10.03	102	P	Pn	14 37 19.6	-1.7
MMLI	Mount Malkishu	10.03	102	S	Sn	14 39 06.5	-7.1
NATI	Neve Ativ	10.05	97	P	Pn	14 37 19.6	-1.9
NATI	Neve Ativ	10.05	97	S	Sn	14 39 07.5	-6.5
HMDT	Nahal Hemdat	10.17	103	P	Pn	14 37 21.8	-1.3
HMDT	Nahal Hemdat	10.17	103	S	Sn	14 39 10.5	-6.5
YTIR	Yattir	10.18	108	P	Pn	14 37 21.5	-1.9
YTIR	Yattir	10.18	108	S	Sn	14 39 09.7	-7.6
KSHT	Keshet	10.19	99	P	Pn	14 37 21.5	-1.9
KSHT	Keshet	10.19	99	S	Sn	14 39 11.5	-5.9
ARR	Arges	10.25	3	⇑P	Pn	14 37 27.7	+3.4
GZR	Gura Zlata	10.29	356	⇓P	Pn	14 37 28.6	+3.8
GZR	Gura Zlata	10.29	356	P	Pn	14 37 28.5	+3.8
DSI	Dead Sea	10.31	107	P	Pn	14 37 23.1	-1.9
DSI	Dead Sea	10.31	107	S	Sn	14 39 13.0	-7.3
LOT	Lotru	10.31	360	⇑P	Pn	14 37 28.9	+3.8
MSBI	Mazada	10.39	108	P	Pn	14 37 24.1	-2.0
MSBI	Mazada	10.39	108	S	Sn	14 39 15.5	-6.8
KRMI	Paran Flat	10.47	115	P	Pn	14 37 26.0	-1.3
KRMI	Paran Flat	10.47	115	S	Sn	14 39 16.7	-7.6
MLR	Muntele Rosu	10.48	8	Pn	Pn	14 37 29.2	+1.7
	0.5nm,0.3s,baz=161,slow=7.5,SNR=6.3						
MLR				LR	LR	14 41 22.5	
	comp=Z,43nm,18.1s,baz=206,slow=37 4.9nm,0.7s						
MLR	Muntele Rosu	10.48	8		Pn	14 37 28.1	+0.6
MLR	Muntele Rosu	10.48	8	⇓P	Pn	14 37 31.7	+4.2
MLR	Muntele Rosu	10.48	8	P	Pn	14 37 28.1	+0.6
PRNI	Paran	10.56	114	P	Pn	14 37 27.1	-1.4
PRNI	Paran	10.56	114	S	Sn	14 39 19.0	-7.5
GHAJ	Ghor Haditha	10.56	108		Pn	14 37 27.0	-1.4
GHAJ	Ghor Haditha	10.56	108	P	Pn	14 37 27.6	-0.8
GHAJ	Ghor Haditha	10.56	108	S	Sn	14 39 20.0	-6.4
ZFRI	Zfri	10.59	112	P	Pn	14 37 27.1	-1.8
ZFRI	Zfri	10.59	112	S	Sn	14 39 19.0	-8.2
HRFI	Mount Harif	10.74	115	P	Pn	14 37 30.1	-0.9
HRFI	Mount Harif	10.74	115	S	Sn	14 39 23.2	-7.8
DEV	Deva	10.77	357	⇓P	Pn	14 37 34.1	+2.7
DEV	Deva	10.77	357	P	Pn	14 37 34.0	+2.7
MBRI	Mt Berech	10.78	116	P	Pn	14 37 30.3	-1.2
MBRI	Mt Berech	10.78	116	S	Sn	14 39 24.7	-7.2
EIL	Elat	10.87	117	Pn	Pn	14 37 32.2	-0.6
	0.9nm,0.3s,baz=278,slow=2.5,SNR=18						
EIL				Sn	Sn	14 39 26.5	-7.6
	1.2nm,0.3s,baz=298,slow=17,SNR=3.6 12nm,0.7s						
EIL	Elat	10.87	117	P	Pn	14 37 31.5	-1.3
EIL	Elat	10.87	117	S	Sn	14 39 26.2	-7.9
DOPR	Dopca	10.90	6	⇑P	Pn	14 37 37.0	+3.9
PLOR	Plostina	10.93	11	⇓P	Pn	14 37 38.0	+4.5
PLOR	Plostina	10.93	11	P	Pn	14 37 38.0	+4.5
VRI	Vrincioaia	10.96	11	⇑P	Pn	14 37 38.2	+4.2
VRI	Vrincioaia	10.96	11	P	Pn	14 37 38.1	+4.2
HBST	Basata	10.97	119	P	Pn	14 37 31.0	-3.1
HDHB	Dhahab	11.18	122	P	Pn	14 37 34.2	-2.8
NRCA	Norcia	11.33	316		Pn	14 37 39.5	+0.4
FDMO	Fiordimonte	11.48	317		Pn	14 37 39.0	-2.0
MORH	Mrgy, Hungar	11.75	342	⇓P	Pn	14 37 46.9	+2.3
SOKA	Soboth	13.30	333	i Pn	Pn	14 38 07.4	+1.4
	0.7nm,0.3s						
OBKA	Obir	13.35	331	i Pn	Pn	14 38 07.7	+1.0
	0.5nm,0.3s						
OBKA				i Sn	Sn	14 40 27.6	-7.1
	1.2nm,0.5s						
MODS	Modra-Piesok	14.10	342	eP	P	14 38 27.6	+3.1
MODS	Modra-Piesok	14.10	342	eP	P	14 38 27.6	+3.1
ABTA	Abfaltersbach	14.39	327	i Pn	Pn	14 38 23.0	+2.1
	3.1nm,0.5s						
ABTA				i Sn	Sn	14 40 56.5	-3.8
	5.9nm,0.8s						
MOA	Molln	14.57	334	i Pn	Pn	14 38 23.7	+0.4
	2.4nm,0.6s						
LESA	Schwarzleotal	14.85	329	i Pn	Pn	14 38 30.0	+2.9
	2.4nm,0.5s						
LESA				i Sn	Sn	14 41 04.9	-6.4
	0.3nm,0.2s						
MAUC	Maruska	14.90	345	eP	P	14 38 36.8	+3.4
KRUC	Moravsky	14.97	341	eP	P	14 38 35.8	+1.8
VRAC	Vranov	15.14	342	Pn	Pn	14 38 32.8	+1.9
	0.4nm,0.3s,baz=174,slow=8.2,SNR=6.1						
VRAC				LR	LR	14 46 10.6	
	comp=Z,266nm,19.8s,baz=160,slow=44 2.3nm,0.5s						
VRAC	Vranov	15.14	342	⇑P	Pn	14 38 33.4	+2.5
VRAC	Vranov	15.14	342	eP	P	14 38 36.7	+0.7
WTTA	Wattenberg	15.18	327	ePn	Pn	14 38 32.4	+0.8
	1.1nm,0.5s						
WTTA				i Sn	Sn	14 41 14.0	-5.5
	2.3nm,0.6s						
WATA	Walderalm	15.26	327	i Pn	Pn	14 38 34.7	+2.0
	2.0nm,0.5s						
FUORN	Ofenpass-Fuorn	15.37	322		P	14 38 41.5	+2.7
CKRC	Cesky Krumlov	15.38	336	eP	P	14 38 40.0	+1.3
CKRC	Cesky Krumlov	15.38	336	eP	P	14 38 40.0	+1.3
FETA	Feichten	15.42	324	ePn	Pn	14 38 37.1	+2.4
	2.9nm,0.6s						
TREC	Trest	15.43	339	eP	P	14 38 40.8	+1.6
TREC				MLR	MLR		
	comp=Z,300nm,13.7s						
TREC	Trest	15.43	339	eP	P	14 38 40.8	+1.6
TREC				AMS	AMS	14 46 00.0	
	comp=Z,300nm,13.7s						
MOTA	Moosalm	15.48	326	i Pn	Pn	14 38 38.6	+3.1
	comp=Z,1.6nm,0.4s						
MOTA				i Sn	Sn	14 41 21.1	-5.7
	comp=Z,1.4nm,0.5s						
GERES	GERESS Array B	15.62	334	Pn	P	14 38 43.0	+1.6
	comp=Z,0.1nm,0.3s,baz=158,slow=9.5,SNR=8.0						
GERES				LR	LR	14 46 31.7	
	comp=Z,161nm,19.1s,baz=252,slow=44						
DAVOX	Davos/Dischmat	15.67	322	Pn	Pn	14 38 42.0	+4.0
	comp=Z,0.2nm,0.3s,baz=100,slow=13,SNR=4.3						
DAVOX				LR	LR	14 47 31.7	
	comp=Z,127nm,18.1s,baz=108,slow=48						
TUE	Stuetta	15.73	320		P	14 38 45.8	+3.0
RETA	Reutte	15.74	326	i Pn	Pn	14 38 42.0	+3.2
	comp=Z,2.2nm,0.5s						
RETA				i Sn	Sn	14 41 28.5	-4.5
	comp=Z,1.0nm,0.5s						
KHC	Kasperske Hory	15.90	335	P	P	14 38 45.9	+1.5
KHC	Kasperske Hory	15.90	335	ceP	P	14 38 46.4	+1.9
KHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KHC	Kasperske Hory	15.90	335	eP	P	14 38 45.6	+1.1
ZVC	Zvikov	15.96	337	eP	Pn	14 38 45.8	+4.3

DAVA	Damuels	16.02	324	i Pn	Pn	14 38 45.6	+3.1
	comp=Z,5.8nm,0.6s						
KIEV	Kiev	16.05	13	⇑P	P	14 38 46.7	+0.6
KIEV	Kiev	16.05	13	P	P	14 38 46.7	+0.6
AKASG	Malin Array Be	16.06	13	Pn	Pn	14 38 45.7	+2.8
	comp=Z,1.7nm,0.3s,baz=203,slow=11,SNR=8.7						
AKASG				LR	LR	14 44 34.7	
	comp=Z,84nm,18.7s,baz=179,slow=36						
AKBB	Malin Array Si	16.06	13	i P	Pn	14 38 45.5	+2.7
DPC	Dobruska-Polom	16.17	343	eP	P	14 38 50.2	+2.8
DPC	Dobruska-Polom	16.17	343	eP	P	14 38 50.2	+2.8
SHA1	Shidzhatmaz	16.89	54	ceP	P	14 38 56.7	+1.0
KIV	Kislovodsk	17.00	53	⇑P	P	14 38 58.7	+2.0
KIV	Kislovodsk	17.00	53	eP	Pn	14 38 56.3	+1.4
KIV				pmax	pmax		
	comp=Z,20nm,1.1s						
KIV				MLR	MLR		
	comp=Z,29nm,14.0s						
KBZ	Khabaz	17.04	54	P	Pn	14 38 58.1	+2.8
	comp=Z,12nm,0.8s,baz=271,slow=4.8,SNR=15						
NCK	Nalchik	17.42	55	i P	Pn	14 39 02.0	+1.9
CLL	Collm	17.96	338	eP	P	14 39 10.0	+2.8
CLL	Collm	17.96	338	ePx	Px	14 39 10.0	
CEST	Esterri de Car	19.05	300	P	P	14 39 22.3	+2.9
VORD	Divnogorie	19.40	31	eP	P	14 39 22.5	-0.5
VORD				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VSR	Storozhevoye	19.54	30	eP	P	14 39 23.6	-0.9
VSR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
AKT	Akhty	19.79	64	eP	P	14 39 28.2	+0.7
AKT				pmax	pmax		
	comp=Z,23nm,0.9s						
NACGM	Naroch	19.89	5	eP	P	14 39 31.0	+2.7
	comp=Z,28nm,0.8s,baz=187						
PABE	Paberze	20.39	0		P	14 39 31.5	-2.1
LPSR	Galich'ya Gora	20.52	27	eP	P	14 39 34.0	-1.2
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VRH	Novokhopyorsk	20.62	33	eP	P	14 39 35.1	-1.2
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
OBN	Obninsk	21.86	20	⇑eP	P	14 39 54.3	+4.8
OBN				PPP	PPP	14 40 22.0	
OBN				SS	Sn	14 44 25.0	+25
OBN				SSS	SSS	14 44 36.0	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,44nm,13.0s						
RAYN	Ar Rayn	22.12	116	P	P	14 39 52.6	-0.1
ESDC	Sonseca Array	22.48	290	P	P	14 39 57.0	+0.4
	comp=Z,2.4nm,0.8s,baz=84,slow=9.8,SNR=20						
	comp=Z,2.4nm,0.8s						
ESDC	Sonseca Array	22.48	290	P	P	14 39 55.7	-0.9
PAB	San Pablo	22.78	290	P	P	14 40 01.0	+1.3
PAB				IAmb	IAmb	14 40 05.4	
	comp=Z,15nm,1.2s						
PAB	San Pablo	22.78	290	P	P	14 40 01.0	+1.3
PAB				pmax	pmax		
	comp=Z,15nm,1.2s						
MDT	Midelt	23.65	273	LR	LR	14 51 59.0	
	comp=Z,82nm,18.1s,baz=120,slow=43						
PESTR	Estremoz	25.29	288	P	P	14 40 23.6	+0.1
PESTR				IAmb	IAmb	14 40 45.3	
	comp=Z,18nm,1.4s						
HFS	Hagfors	25.88	348	P	P	14 40 28.1	-0.5
	comp=Z,2.3nm,0.4s,baz=154,slow=11,SNR=18						
	comp=Z,2.3nm,0.4s						
FINES	FINESS Array B	26.38	2	P	P	14 40 31.4	-1.7
	comp=Z,5.1nm,1.0s,baz=157,slow=10,SNR=6.1						
FINES				PcP	PcP	14 43 58.2	-0.1
	comp=Z,2.9nm,0.8s,baz=132,slow=2.8,SNR=5.0						
	comp=Z,5.1nm,1.0s						
NC602	NORSAR Array S	26.82	347	P	P	14 40 36.7	-0.4
NAO01	NORSAR Array S	27.05	346	P	P	14 40 38.6	-0.5
NAO01				IAmb	IAmb	14 41 00.4	
	comp=Z,30nm,1.5s						
NB2	NORSAR Subarra	27.17	347	P	P	14 40 41.9	+1.6
	comp=Z,1.0nm,0.8s,baz=157,slow=9.3						
NOA	NORSAR Array B	27.17	347	P	P	14 40 39.9	-0.4
	comp=Z,0.6nm,0.6s,baz=155,slow=8.5,SNR=4.0						
NOA				LR	LR	14 52 37.2	
	comp=Z,96nm,19.1s,baz=160,slow=39						
	comp=Z,0.6nm,0.6s						
EKA	Eskdalemuir Ar	27.44	326	P	P	14 40 42.6	-0.1
	comp=Z,2.6nm,0.7s,baz=149,slow=11,SNR=1.7						
	comp=Z,2.6nm,0.7s						
KLMR	Klimovskoe	27.66	17	eP	P	14 40 45.4	+0.8
KLMR				pmax	pmax		
	comp=Z,17nm,1.5s						
TORD	Torodi Ar. Bea	29.63	228	P	P	14 41 01.7	-0.9
	comp=Z,2.8nm,0.5s,baz=46,slow=6.6,SNR=2.8						
	comp=Z,2.8nm,0.5s						
AB31	Akbulak array	29.95	51		P	14 41 05.0	-0.1
AB31				IAmb	IAmb	14 41 17.3	
	comp=Z,6.9nm,1.5s						
ABKAR	Akbulak array	29.95	51	P	P	14 41 04.2	-0.9
ARTI	Arti	31.64	37	P	P	14 41 21.6	+1.6
ARTI				S	S	14 46 33.7	+5.3
ARTI				SS	SnSn	14 48 19.1	+4.7
ARCES	ARCESS Array B	34.48	1	P	P	14 41 44.0	-0.7
	comp=Z,3.3nm,0.9s,baz=174,slow=3.7,SNR=8.2						
	comp=Z,3.3nm,0.9s						
ARCES	ARCESS Array B	34.48	1	P	P	14 41 43.8	-0.8
ARCES	ARCESS Array B	34.48	1	P	P	14 41 43.8	-0.8
ARCES				pmax	pmax		
	comp=Z,25nm,1.5s						
CHGR	Chuyangaron	36.16	71		P	14 41 59.1	-0.5
CHGR	Chuyangaron	36.16	71	P	P	14 41 59.1	-0.5
CHGR				pmax	pmax		
	comp=Z,15nm,0.7s						
KK31	Karatay Array	36.71	63	IAmb	IAmb	14 42 09.8	
	comp=Z,3.2nm,0.7s						
KKAR	Karatay Array	36.71	63		P	14 42 04.0	-0.1
KKAR	Karatay Array	36.71	63	P	P	14 42 04.0	-0.1
GAR	Garm	37.00	70	P	P	14 42 06.9	+0.1
GAR				IAmb	IAmb	14 42 13.8	
	comp=Z,8.3nm,0.7s						
BORK	Borovoye	37.14	47	i P	P	14 42 08.8	+1.2
BORK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVAR	Borovoye Array	37.18	47	P	P	14 42 06.9	-1.0
	comp=Z,1.4nm,0.6s,baz=261,slow=6.0,SNR=7.3						
	comp=Z,1.4nm,0.6s						
DBIC	Dimbokro	38.69	230	P	P	14 42 21.7	+0.7
	comp=Z,3.5nm,0.9s,baz=17,slow=4.6,SNR=3.4						
	comp=Z,3.5nm,0.9s						
AAK	Ala-Archa	39.67	63	ceP	P	14 42 30.6	+1.4
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BOOM	Boomskoye usch	40.74	63	P	P	14 42 38.6	+0.5
BOOM				IAmb	IAmb	14 42 51.5	
	comp=Z,3.3nm,0.8s						
BOOM	Boomskoye usch	40.74	63	P	P	14 42 38.7	+0.5
BOOM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KSH	Kashi	41.24	68	P	P	14 42 40.2	-2.0
KSH				sP	sP	14 42 46.6	-1.7
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KDJ	Kajisay	41.70	64		P	14 42 45.4	-0.7
KDJ				IAmb	IAmb	14 42 48.7	
	comp=Z,6.5nm,0.8s						
KDJ	Kajisay	41.70	64	P	P	14 42 45.4	-0.7
KDJ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KURBB	Kurchatov Arra	42.01	51	P	P	14 42 47.6	-0.6
	comp=Z,1.5nm,0.5s,baz=275,slow=8.6,SNR=15						
	comp=Z,1.5nm,0.5s						
KURK	Kurchatov	42.06	51	i P	P	14 42 49.4	+0.8
KURK				pmax	pmax		
	comp=Z,7.0nm,2.0s						
TARG	Taragay, Kyrgy	42.23	64	P	P	14 42 51.6	+1.0
TARG				IAmb	IAmb	14 43 16.4	
	comp=Z,3.8nm,1.1s						
TARG	Taragay, Kyrgy	42.23	64	P	P	14 42 51.6	+1.0
TARG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SPITS	Spitsbergen Ar	43.28	358	P	P	14 42 57.6	-0.6
	comp=Z,16nm,1.0s,baz=142,slow=12,SNR=2.3						
	comp=Z,16nm,1.0s						
MK31	Makanchi Array	44.72	56	i P	P	14 43 09.7	-0.5
MKAR	Makanchi Array	44.72	56	P	P	14 43 09.8	-0.4
	comp=Z,2.9nm,0.6s,baz=274,slow=7.8,SNR=21						
	comp=Z,2.9nm,0.6s						
MKAR	Makanchi Array	44.72	56		P	14 43 10.2	0.0
ZALV	Zalesovo Beam	45.83	46	P	P	14 43 19.1	+0.3
	comp=Z,1.1nm,0.4s,baz=266,slow=9.8,SNR=9.2						
	comp=Z,1.1nm,0.4s						
DGZ	Jazzator, Alta	47.77	52	i P	P	14 43 33.9	-0.4
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.4s						
LSA	Lhasa	56.15	75	P	P	14 44 33.8	-3.6
LSA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GOMU	GeErMu	56.46	67	P	P	14 44 38.9	-0.5
GOMU				sP	sP	14 44 44.0	-1.5
GOMU				PcP	PcP	14 45 35.2	-1.0
GOMU				pmax	pmax		
	comp=Z,230nm,1.1s						
LPHEP	Lephephe	58.20	178		P	14 44 51.0	-0.2
GTA	Gaotai	58.95	61	eP	P	14 44 56.6	0.0
GTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SONM	Songino Array	60.36	50	P	P	14 45 06.2	0.0
	comp=Z,0.8nm,0.6s,baz=281,slow=7.4,SNR=5.0						
	comp=Z,0.8nm,0.6s						
SONM	Songino Array	60.36	50	P	P	14 45 05.1	-1.1
SONM				IAmb	IAmb	14 45 41.4	
	comp=Z,4.3nm,1.4s						
SONM	Songino Array	60.36	50	P	P	14 45 05.1	-1.1
SONM				pmax	pmax		
	comp=Z,4.0nm,1.4s						
SCHQ	Schefferville	62.49	319	P	P	14 45 20.4	+0.1
	comp=Z,3.6nm,0.7s,baz=52,slow=7.4,SNR=3.7						
	comp=Z,3.6nm,0.7s						
PZH	PanZhiHua	65.94	74	P	P	14 45 44.7	+1.2
HHC	Hu-ho-hao-te	66.58	56	eP	P	14 45 47.1	-0.3
HHC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,71nm,4.2s						
CMAR	Chiang Mai Arr	67.68	83	P	P	14 45 53.9	-0.6
	comp=Z,2.0nm,0.8s,baz=302,slow=9.0,SNR=12						
	comp=Z,2.0nm,0.8s						
E29M	Blow River	75.90	353	P	P	14 46 43.8	+0.7
E29M				IAmb	IAmb	14 46 45.1	
	comp=Z,6.2nm,1.3s						
YKA	Yellowknife Ar	77.14	342	P	P	14 46 50.4	+0.2
	comp=Z,0.7nm,0.9s,baz=29,slow=5.2,SNR=5.7						
	comp=Z,0.7nm,0.9s						
USRK	Ussuriysk Ar.	77.65	44	P	P	14 46 53.0	-0.4
	comp=Z,3.1nm,0.7s,baz=266,slow=6.3,SNR=5.9						
	comp=Z,3.1nm,0.7s						
USRK	Ussuriysk Ar.	77.65	44	P	P	14 46 53.0	-0.4
KSRS	Korea Array	79.18	52	P	P	14 47 02.1	+0.1
	comp=Z,1.6nm,0.8s,baz=309,slow=5.0,SNR=5.0						
	comp=Z,1.6nm,0.8s						
ILAR	Eielson Array	80.17	356	P	P	14 47 07.2	+0.3
	comp=Z,0.4nm,0.6s,baz=347,slow=4.1,SNR=7.1						
	comp=Z,0.4nm,0.6s						
WRA	Warramunga Arr	117.69	96	PKP	PKPdf	14 53 42.7	-0.9
	comp=Z,0.8nm,0.8s,baz=300,slow=1.8,SNR=6.7						
ASAR	Alice Springs	119.13	100	PKP	PKPdf	14 53 46.0	-0.4
	comp=Z,1.0nm,0.7s,baz=327,slow=1.8,SNR=15						
ASAR	Alice Springs	119.13	100	PKIKP	PKPdf	14 53 46.0	-0.4

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*THE **07** 14:41:13.3, 35°N±9°×2°4E±1°7, h3^{km}±9^{km}*

*IDC **07** 14:41:13.0±1.7, 35°.08N×23°.98E, h0^{km}, mb3.8/6, mbtmp3.8/11, ML3.3/5, Error ellipse: s-maj=34.4km s-min=16.2km az=16.0*

*ATH **07** 14:41:14.8, 35°.07N×23°.83E, h11^{km}±1^{km}, ML3.5/30, Manual Solution by D.Makaris First location: 2019/12/07 14:42:25, This location: 2020/10/07 13:44:03 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*

*ISK **07** 14:41:15.5, 35°.21N×23°.85E, h5^{km}, ML3.5/16*

ISC 07 14:41:14.7±0.9, **35°.15N**±0°.03×**23°.88E**±0°.02, **h9**^{km}±7^{km}, **n96**, σ**1^{s}.84**/121, **mb3.8**/7, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDR	Palaiochora Ch	0.22	292	P	Pg	14 41 16.8	-2.4
KNDR	Palaiochora Ch	0.22	292	Pg	Pg	14 41 19.7	+0.5
KNDR				Sg	Sg	14 41 22.9	+0.7
KNDR	Palaiochora Ch	0.22	292	P	Pg	14 41 19.8	+0.6
KNDR				S	Sg	14 41 23.0	+0.7
IMMV	Iera Moni Meta	0.32	16	P	Pg	14 41 19.2	-1.8
GVD	Gavdhos	0.36	151	P	Pg	14 41 21.0	-0.8
GVD	Gavdhos	0.36	151	Pg	Pb	14 41 24.4	+1.1
GVD				Sg	Sb	14 41 30.5	+1.4
GVD	Gavdhos	0.36	151	P	Pg	14 41 20.6	-1.2
GVD				S	Sg	14 41 25.3	-1.3
VAM	Vamos	0.37	46	P	Pb	14 41 23.6	+0.2
VAM				S	Sb	14 41 30.1	+0.8
CHAN	Chania	0.39	21	P	Pg	14 41 20.8	-1.6
CHAN	Chania	0.39	21	P	Pb	14 41 24.3	+0.5
CHAN				S	Sb	14 41 31.7	+1.8
IDI	Anoyia	0.84	81	Pn	Pg	14 41 29.1	-1.8
	38nm,0.3s,baz=264,slow=15,SNR=30						
IDI	Anoyia	0.84	81	P	Pg	14 41 28.9	-2.1
IDI	Anoyia	0.84	81	Pg	Pb	14 41 32.0	+0.4
IDI	Anoyia	0.84	81	P	Pb	14 41 32.3	+0.7
IDI				S	Sb	14 41 44.2	+1.1
ANKY	Antikythira Is	0.85	327	P	Pg	14 41 28.7	-2.4
ANKY	Antikythira Is	0.85	327	P	Pb	14 41 31.9	+0.2
ANKY				S	Sn	14 41 44.5	-1.0
IACM	Heraklion	0.99	81	P	Pb	14 41 35.1	+1.0
IACM	Heraklion	0.99	81	P	Pb	14 41 35.1	+1.0
IACM				S	Sn	14 41 49.7	+0.7
KTHA	Kythira Island	1.28	329	P	Pg	14 41 36.4	-3.0
KTHA	Kythira Island	1.28	329	Pn	Pn	14 41 39.2	+0.3
KTHA				Sn	Sn	14 41 56.9	+0.7
NPS	Neapolis	1.43	85	P	Pb	14 41 42.3	+0.8
NPS	Neapolis	1.43	85	P	Pn	14 41 40.5	-0.3
NPS				S	Sg	14 42 01.6	+1.0
MHLO	Agia Marina, M	1.59	15	P	Pb	14 41 44.0	-0.3
MHLO				S	Sb	14 42 04.9	+0.3
VLI	Veliai	1.74	334	P	Pn	14 41 45.1	0.0
VLI				S	Sb	14 42 08.6	-0.2
SAP3	Santorini-Thir	1.75	43	P	Pn	14 41 46.3	+1.0
ZKR	Zakros	1.92	91	Pn	Pb	14 41 50.2	+0.3
ZKR	Zakros	1.92	91	P	Pn	14 41 48.3	+0.7
APE	Apeiranthos	2.33	35	Pn	Pn	14 41 55.2	+1.8
APE	Apeiranthos	2.33	35	P	Pn	14 41 53.9	+0.5
PYL	PYLOS	2.45	316	P	Pn	14 41 56.0	+1.1
PYL				S	Sn	14 42 25.5	+0.5
MET2	Kameni Chora,	2.49	350	P	Pn	14 41 56.1	+0.6
MET2				S	Sn	14 42 27.9	+1.8
MET4	Agioi Theodoro	2.49	351	P	Pn	14 41 57.2	+1.7
MET4				S	Sn	14 42 27.0	+1.0
MET5	Makryloggos,Me	2.50	351	P	Pn	14 41 56.7	+1.1
ITM	Ithomi	2.56	323	Pn	Pn	14 41 58.1	+1.6
ITM	Ithomi	2.56	323	P	Pn	14 41 57.7	+1.2
ITM				S	Sn	14 42 29.1	+1.2
VLY	Voula,Athens	2.69	359	P	Pn	14 42 00.0	+1.7
VLY				S	Sn	14 42 32.5	+1.5
KARP	Karpathos	2.71	81	Pn	Pn	14 42 00.6	+2.0
KARP	Karpathos	2.71	81	P	Pn	14 41 58.6	0.0
PTL	Penteli	2.89	360	P	Pn	14 42 01.5	+0.5
PTL				S	Sn	14 42 37.4	+1.5
KARY	Karystos	2.91	9	P	Pn	14 42 01.5	+0.3
KARY				S	Sn	14 42 38.7	+2.4
DION	Dionisos Attik	2.92	1	P	Pn	14 42 03.0	+1.7
DION				S	Sn	14 42 38.2	+1.6
MAGU	Magoula	2.93	354	P	Pn	14 42 02.5	+0.9
LTK	Loutraki	2.96	346	P	Pn	14 42 03.5	+1.7
LTK				S	Sn	14 42 38.9	+1.4
STFN	Stefani	3.03	355	P	Pn	14 42 03.0	+0.1
STFN				S	Sn	14 42 40.6	+1.3
GUR	Goura	3.04	336	P	Pn	14 42 04.4	+1.3
VIL2	Platees	3.09	351	P	Pn	14 42 05.0	+1.3
VIL2				S	Sn	14 42 41.1	+0.3
KLV	Kalavryta, Ach	3.20	335	P	Pn	14 42 06.4	+1.1
DRO	Drossia	3.29	329	P	Pn	14 42 07.8	+1.3
DRO				S	Sn	14 42 47.9	+2.1
BODT	Bodrum	3.37	55	Pn	Pn	14 42 10.0	+2.4
DAT	Datca	3.39	61	Pn	Pn	14 42 11.1	+3.1
KYMI	Kymi, Euboea I	3.48	3	P	Pn	14 42 10.6	+1.6
SMG	Samos	3.49	42	P	Pn	14 42 10.8	+1.5
LKR	Lokris	3.56	349	P	Pn	14 42 12.1	+1.9
ARG	Arkhangelos	3.62	72	Pn	Pn	14 42 13.8	+2.8
ARG	Arkhangelos	3.62	72	P	Pn	14 42 12.6	+1.6
AXS	Araxos	3.64	327	P	Pn	14 42 12.9	+1.7
CHOS	Chios island	3.67	28	Pn	Pn	14 42 14.7	+2.9
AXAR	Agios Charalam	3.73	345	P	Pn	14 42 14.0	+1.4
ANX	Ano Chora	3.77	336	P	Pn	14 42 14.0	+0.8
URLA	Izmir	3.87	34	Pn	Pn	14 42 17.6	+3.1
TURN	Turunc	3.90	64	Pn	Pn	14 42 17.9	+3.1
PVO	Paravola	3.94	332	P	Pn	14 42 16.4	+1.0
YER	Yerkesik	4.08	60	Pn	Pn	14 42 20.5	+3.1
MAKR	Makrakomi, Fth	4.10	341	P	Pn	14 42 19.5	+2.0
EVR	Evrytania	4.10	337	P	Pn	14 42 19.4	+1.7
DALY	Dalyan (Mula)	4.21	65	Pn	Pn	14 42 22.4	+3.2
ODEM	Odemis-Izmir	4.59	46	Pn	Pn	14 42 27.6	+3.2
THL	Klokotos Trika	4.64	342	P	Pn	14 42 26.9	+1.9
TETR	Tetrakomo, Epi	4.67	334	P	Pn	14 42 26.5	+1.0
CAME	Cameli-Denizli	4.75	66	Pn	Pn	14 42 29.8	+3.2
AKAS	Kas	4.79	75	Pn	Pn	14 42 30.2	+3.0
APMY	Acipayam-Deniz	4.96	61	Pn	Pn	14 42 32.6	+3.2
ELL	Elmali	5.15	70	Pn	Pn	14 42 35.7	+3.6
PLG	Polygyros	5.22	356	P	Pn	14 42 34.7	+1.6
KORT	Korkueli	5.56	69	Pn	Pn	14 42 41.7	+3.9
KEK	Kerkira	5.59	326	P	Pn	14 42 39.1	+1.1
ALFC	Alefka	7.15	87	P	Pn	14 43 00.2	+0.7
MESG	Mesagne	7.22	320	P	Pn	14 43 01.4	+1.0
ASGA	Asgata	7.70	90	P	Pn	14 43 08.2	+1.0
CSS	Mathiatis	7.76	89	P	Pn	14 43 08.9	+1.0
BRTR	Keskin Array B	9.00	57	Pn	Pn	14 43 26.9	+1.9
	0.2nm,0.3s,baz=238,slow=11,SNR=9.6						
	1.5nm,0.8s						
MMAI	Mount Meron Ar	9.80	99	Pn	Pn	14 43 34.4	-1.5
	1.1nm,0.3s,baz=310,slow=12,SNR=5.6						
MMAI				Sn	Sn	14 45 24.3	-1.7
	1.3nm,0.3s,baz=271,slow=30,SNR=3.0						
	0.6nm,0.3s						
EIL	Elat	10.84	117	Pn	Pn	14 43 48.5	-1.5
	0.3nm,0.3s,baz=357,slow=18,SNR=2.1						
EIL				Sn	Sn	14 45 44.3	-7.2
	0.8nm,0.3s,baz=304,slow=14,SNR=3.5						
	2.7nm,0.6s						
MODS	Modra-Piesok	14.09	342	ePN	Pn	14 44 29.9	-4.5
MODS	Modra-Piesok	14.09	342	eP	P	14 44 47.6	+5.3
STHS	Stebnicka Huta	14.38	353	eP	P	14 44 51.1	+5.6
GERES	GERESS Array B	15.61	334	Pn	P	14 44 57.9	-1.4
	baz=129,slow=12,SNR=4.3						
	0.9nm,0.7s						
KBZ	Khabaz	16.98	54	Pn	P	14 45 14.6	+0.2
	0.1nm,0.3s,baz=288,slow=8.2,SNR=4.5						
	2.0nm,0.8s						
ESDC	Sonseca Array	22.52	290	P	P	14 46 14.9	0.0
	0.5nm,0.6s,baz=90,slow=11,SNR=6.1						
	0.5nm,0.6s						
HFS	Hagfors	25.86	348	P	P	14 46 45.6	-0.8
	8.0nm,1.1s,baz=141,slow=11,SNR=7.1						
	8.0nm,1.1s						
FINES	FINESS Array B	26.35	2	P	P	14 46 49.8	-1.0
	2.8nm,0.9s,baz=179,slow=11,SNR=1.6						
	2.8nm,0.9s						
EKA	Eskdalemuir Ar	27.44	326	P	P	14 47 04.2	+3.4
	1.3nm,0.7s,baz=122,slow=9.0,SNR=2.3						
ARCES	ARCESS Array B	34.45	1	P	P	14 48 03.6	+1.3
	2.1nm,0.8s,baz=170,slow=9.2,SNR=3.9						
	2.1nm,0.8s						
KURBB	Kurchatov Arra	41.94	51	P	P	14 49 06.2	+0.6
	0.4nm,0.5s,baz=274,slow=8.6,SNR=5.9						
	0.4nm,0.5s						
MKAR	Makanchi Array	44.66	56	P	P	14 49 28.6	+1.0
	0.6nm,0.4s,baz=268,slow=7.8,SNR=14						
	0.6nm,0.4s						
ASAR	Alice Springs	119.09	100	PKP	PKPdf	15 00 03.9	-0.5
	0.4nm,0.7s,baz=323,slow=1.2,SNR=6.6						

IDC 07 14:41:36.9±5.1, **8°.99S**×**121°.80E**, **h195**^{km}±23^{km}, **mb3.3**/1, **mbtmp3.4**/5, **Error ellipse: s-maj=67.3km s-min=48.4km az=76.0**, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.20	124	P	Pn	14 42 16.8	-0.4
	8.9nm,0.3s,baz=320,slow=7.9,SNR=1.7						
BATI				S	Sn	14 42 49.0	+0.4
	14nm,0.3s,baz=280,slow=6.1,SNR=3.2						
FITZ	Fitzroy Crossi	9.80	158	P	Pn	14 43 54.0	+0.4
	0.5nm,0.5s,baz=347,slow=12,SNR=0.9						
FITZ				S	Sn	14 45 43.9	+0.9
	1.4nm,0.6s,baz=208,slow=15,SNR=1.6						
WRA	Warramunga Arr	16.30	133	P	P	14 45 14.4	-0.1
	0.4nm,0.7s,baz=309,slow=12,SNR=10						
WRA				S	S	14 48 14.3	-1.0
	0.3nm,0.7s,baz=305,slow=24,SNR=2.2						
ASAR	Alice Springs	18.64	143	P	P	14 45 40.6	+0.6
	0.8nm,0.5s,baz=327,slow=14,SNR=22						
STKA	Stephens Creek	29.27	144	P	P	14 47 20.6	-0.4
	1.2nm,0.8s,baz=333,slow=9.0,SNR=1.6						
	1.2nm,0.8s						

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*IDC **07** 14:46:55.6±0.6, 35°.18N×23°.87E, h0^{km}, mb4.2/23, mbtmp4.3/29, ML4.3/6, MS3.7/45, Error ellipse: s-maj=13.8km s-min=11.8km az=179.0*

*NAO **07** 14:46:55.6, 34°.95N×24°.51E, h10^{km}, MB4.1*

*ISK **07** 14:46:56.8, 35°.19N×23°.85E, h5^{km}, ML4.5/34*

*MCSM **07** 14:46:57.5±0.5, 35°N±5°×2°4E±°, h5^{km}, mb4.5, mB4.6, MLv4.6, Mw(mB)3.8*

*THE **07** 14:46:58.0, 35°N±1°×23°.8E±0°.9, h0^{km}±2^{km}, M4.5/11, MLh4.5/11*

*MED_RC **07** 14:46:57.0±0.4, 35°.05N×23°.81E, h20^{km}±1^{km}, MW4.7/24, Moment Tensor Solution. Body waves: s1,c1;Mantle waves: s24,c31; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.02±.07; M$_{\theta\theta}$-1.04±.06; M$_{\phi\phi}$1.03±.05; M$_{r\theta}$0.17±.08; M$_{\theta\phi}$-0.33±.05; M$_{\phi r}$0.40±.09; Best double couple: M$_0$1.17000×10^{16} NP1:ϕ_s305.00000°, δ69.00000°, λ176.00000°. NP2:ϕ_s37.00000°, δ86.00000°, λ21.00000°. Principal axes: T 1.2000, Plg18.0000°, Azm263.0000°; N -0.0500, Plg68.0000°, Azm47.0000°; P -1.1400, Plg12.0000°, Azm169.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

*HLW **07** 14:46:58.9, 35°.23N×24°.15E, h22^{km}±4^{km}, Md4.5, Ml4.1*

*ATH **07** 14:46:58.8, 35°.18N×23°.85E, h6^{km}, Mw4.3, Moment Tensor Solution. s5 Moment tensor: M$_{rr}$-0.56; M$_{\theta\theta}$-2.54; M$_{\phi\phi}$3.09; M$_{r\theta}$0.89; M$_{\theta\phi}$-1.36; M$_{\phi r}$0.57; Fault plane solution: NP1:ϕ_s304.00000°, δ72.00000°, λ-169.00000°. NP2:ϕ_s210.00000°, δ80.00000°, λ-19.00000°.*

*MOS **07** 14:47:00.1±1.3, 35°.16N×23°.75E, h41^{km}, mb4.6/17 Error ellipse: s-maj=8.0km s-min=4.2km az=65.1*

*NEIC **07** 14:47:00.8±2.5, 35°.1N±0°.1×23°.91E±0°.06, h35^{km}±2^{km}, mb4.3/21, Error ellipse: s-maj=21.2km s-min=8.2km az=183.0*

*PDG **07** 14:47:00.3±0.6, 35°.48N×23°.35E, h10^{km}±11^{km}, ML4.5/10, Error ellipse: s-maj=62.0km s-min=53.5km az=90.0*

*GII **07** 14:47:01.7±0.0, 34°.930N±0°.003×24°.236E±0°.001, h20^{km}, Mws4.5, confirmed*

*AFAD **07** 14:47:03.2, 35°.29N×24°.29E, h8^{km}±6^{km}, MW4.3*

ISC 07 14:46:57.9±0.7, **35°.14N**±0°.02×**23°.83E**±0°.02, **h13**^{km}±4^{km}, **n503**, σ**2^{s}.46**/558, **mb4.5**/47, **MS3.8**/36, **29C-22D**, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDR	Palaiochora Ch	0.20	299	P	Pg	14 47 01.5	-0.9
KNDR				S	Sg	14 47 04.4	-0.9
KNDR	Palaiochora Ch	0.20	299	Pg	Pg	14 47 01.4	-0.9
KNDR	Palaiochora Ch	0.20	299	P	Pg	14 47 03.2	+0.9
KNDR				S	Sg	14 47 04.5	-0.9
IMMV	Iera Moni Meta	0.34	21	P	Pg	14 47 04.0	-0.9
IMMV				S	Sg	14 47 08.9	-0.6
IMMV	Iera Moni Meta	0.34	21	Pg	Pg	14 47 03.8	-1.1
IMMV				Sg	Sg	14 47 08.8	-0.8
IMMV	Iera Moni Meta	0.34	21	P	Pg	14 47 05.1	+0.2
IMMV				S	Sg	14 47 08.9	-0.6
GVD	Gavdhos	0.37	145	P	Pg	14 47 05.8	+0.5
GVD				S	Sg	14 47 12.5	+2.2
GVD	Gavdhos	0.37	145	Pg	Pg	14 47 05.6	+0.3
GVD				Sg	Sg	14 47 12.4	+2.1
VAM	Vamos	0.40	48	P	Pg	14 47 05.2	-0.7
VAM				S	Sg	14 47 11.5	+0.2
CHAN	Chania	0.41	24	P	Pg	14 47 05.4	-0.9
CHAN				S	Sg	14 47 11.6	-0.2
CHAN	Chania	0.41	24	P	Pb	14 47 07.2	+0.1
CHAN				S	Sg	14 47 11.7	-0.2
ANKY	Antikythira Is	0.84	329	P	Pg	14 47 12.7	-1.6
ANKY				S	Sg	14 47 25.2	-0.2
ANKY	Antikythira Is	0.84	329	P	Pg	14 47 14.4	+0.1

ANKY				S	Sg	14 47 25.4	0.0
IDI	Anoyia	0.88	80	Pn	Pg	14 47 13.3	-1.6
	121nm,0.3s,baz=253,slow=11,SNR=110						
IDI				Sn	Sg	14 47 25.3	-1.1
	1µm,0.3s,baz=322,slow=19,SNR=24						
IDI				LR	LR	14 47 47.6	
	comp=Z,4µm,19.5s,baz=166,slow=62						
IDI	Anoyia	0.88	80	P	Pg	14 47 13.3	-1.6
IDI				S	Sg	14 47 26.9	+0.5
IDI	Anoyia	0.88	80		Pg	14 47 13.0	-1.9
IDI				Sn	Sg	14 47 26.3	-0.1
IDI	Anoyia	0.88	80	Pg	Pg	14 47 13.4	-1.6
IDI				Sg	Sb	14 47 27.2	+0.5
IDI	Anoyia	0.88	80	P	Pg	14 47 15.1	+0.2
IDI				S	Sg	14 47 26.2	-0.1
IACM	Heraklion	1.03	80	P	Pg	14 47 16.6	-1.1
IACM				S	Sn	14 47 33.4	+1.2
IACM	Heraklion	1.03	80	P	Pg	14 47 18.2	+0.5
IACM				S	Sg	14 47 30.7	-0.4
KTHA	Kythira Island	1.28	331	P	Pn	14 47 20.7	-0.8
KTHA	Kythira Island	1.28	331	Pn	Pn	14 47 21.6	+0.1
KTHA				Sn	Sn	14 47 39.9	+1.4
NPS	Neapolis	1.46	85	P	Pn	14 47 24.6	+0.6
NPS				S	Sg	14 47 46.6	+1.6
NPS	Neapolis	1.46	85	P	Pg	14 47 26.6	+0.5
NPS				S	Sg	14 47 45.3	+0.3
MHLO	Agia Marina, M	1.61	16	P	Pn	14 47 26.4	+0.3
MHLO				S	Sb	14 47 48.1	+0.3
MHLO	Agia Marina, M	1.61	16	P	Pn	14 47 26.6	+0.6
MHLO				S	Sb	14 47 48.1	+0.3
VLI	Veliai	1.73	335	P	Pn	14 47 28.3	+0.6
VLI				S	Sg	14 47 52.8	-0.9
VLI	Veliai	1.73	335	P	Pn	14 47 28.9	+1.2
VLI				S	Sn	14 47 50.9	+1.2
THERA	Ancient Thera,	1.81	47	P	Pn	14 47 29.6	+0.8
ZKR	Zakros	1.95	90	Pn	Pn	14 47 32.9	+2.2
ZKR	Zakros	1.95	90	P	Pn	14 47 32.2	+1.4
ZKR				S	Sb	14 47 57.8	+0.2
APE	Apeiranthos	2.36	35	Pn	Pn	14 47 36.4	0.0
APE				Sn	Sn	14 48 07.1	+1.8
APE	Apeiranthos	2.36	35	*i* P	Pn	14 47 36.9	+0.5
APE	Apeiranthos	2.36	35	P	Pn	14 47 36.5	0.0
APE				S	Sb	14 48 10.8	+1.3
APE	Apeiranthos	2.36	35	P	Pn	14 47 37.8	+1.4
PYL	PYLOS	2.44	317	P	Pn	14 47 38.3	+0.9
PYL				S	Sn	14 48 09.1	+2.0
MET4	Agioi Theodoro	2.50	352	P	Pn	14 47 39.1	+0.9
MET4				S	Sn	14 48 10.5	+1.9
MET5	Makryloggos,Me	2.50	351	P	Pn	14 47 39.5	+1.1
MET5				S	Sn	14 48 09.6	+0.9
ITM	Ithomi	2.55	323		Pn	14 47 41.0	+1.9
ITM	Ithomi	2.55	323	Pn	Pn	14 47 41.1	+2.1
ITM	Ithomi	2.55	323	P	Pn	14 47 41.2	+2.2
VLY	Voula,Athens	2.71	359	P	Pn	14 47 42.0	+0.9
VLY				S	Sn	14 48 14.4	+0.7
KARP	Karpathos	2.75	81		Pn	14 47 43.8	+2.1
KARP	Karpathos	2.75	81	Pn	Pn	14 47 43.8	+2.1
KARP	Karpathos	2.75	81	Pn	Pn	14 47 43.6	+1.9
KARP	Karpathos	2.75	81	P	Pn	14 47 43.9	+2.1
KARP				S	Sn	14 48 16.9	+2.1
ATH	Athens Observa	2.83	358	P	Pn	14 47 43.2	+0.5
ATH				S	Sn	14 48 18.5	+1.9
PTL	Penteli	2.90	0	P	Pn	14 47 44.5	+0.7
PTL				S	Sn	14 48 20.4	+1.9
KARY	Karystos	2.93	9	P	Pn	14 47 45.1	+1.0
KARY				S	Sn	14 48 20.6	+1.6
DION	Dionisos Attik	2.93	2	P	Pn	14 47 45.3	+1.1
DION				S	Sn	14 48 21.0	+1.7
MAGU	Magoula	2.94	355	P	Pn	14 47 45.1	+0.8
MAGU				S	Sn	14 48 20.1	+0.6
LTK	Loutraki	2.96	347	P	Pn	14 47 46.5	+1.9
LTK				S	Sn	14 48 21.6	+1.6
GUR	Goura	3.04	337	P	Pn	14 47 48.1	+2.3
GUR				S	Sn	14 48 23.7	+1.7
STFN	Stefani	3.04	356	P	Pn	14 47 46.8	+1.1
STFN				S	Sn	14 48 23.4	+1.5
VIL2	Platees	3.10	352	P	Pn	14 47 46.7	+0.2
VIL2				S	Sn	14 48 24.1	+0.8
KLV	Kalavryta, Ach	3.20	335	P	Pn	14 47 50.0	+2.0
KLV				S	Sn	14 48 27.8	+1.9
DRO	Drossia	3.29	329	P	Pn	14 47 50.7	+1.6
YAZI	Mula-Dat§a-	3.31	61	P	Pn	14 47 51.1	+1.6
YAZI				S	Sn	14 48 30.4	+1.7
YAZI				*i* IAML		14 48 47.0	
	comp=E,156nm,1.1s						
YAZI				*i* IAML		14 49 08.0	
	comp=N,182nm,1.7s						
BODT	Bodrum	3.41	55	Pn	Pn	14 47 52.5	+1.8
YKAV	Yalikavak-Bodr	3.42	54	Pn	Pn	14 47 52.9	+2.0
DAT	Datca	3.43	61	P	Pn	14 47 54.4	+3.3
DAT				S	Sn	14 48 31.4	-0.2
DAT				*i* IAML		14 48 49.0	
	comp=N,273nm,1.2s						
DAT				*i* IAML		14 48 50.0	
	comp=E,208nm,1.2s						
DAT	Datca	3.43	61	Pn	Pn	14 47 53.0	+1.9
KYMI	Kymi, Euboea I	3.49	3	P	Pn	14 47 53.4	+1.5
KYMI				S	Sn	14 48 35.5	+2.5
BDRM	Kayabasi	3.50	56	P	Pn	14 47 53.8	+1.9
KALE	Kalithea	3.52	338	P	Pn	14 47 54.1	+1.8
KALE				S	Sn	14 48 35.5	+1.7
LTHK	Lithakia	3.52	318	P	Pn	14 47 54.0	+1.7
LTHK				S	Sn	14 48 35.0	+1.2
SMG	Samos	3.52	43	P	Pn	14 47 54.3	+1.9
SMG				S	Sn	14 48 34.5	+0.6
DIDI	Didim-Aydin	3.54	50	Pn	Pn	14 47 54.3	+1.7
LKR	Lokris	3.57	349	P	Pn	14 47 54.2	+1.3
LKR				S	Sn	14 48 35.4	+0.5
DDIM	Aydin, Didim	3.59	49	P	Pn	14 47 56.4	+3.1
EFP	Efpalio	3.63	335	P	Pn	14 47 55.6	+1.9
EFP				S	Sn	14 48 38.4	+2.0
AXS	Araxos	3.63	328	P	Pn	14 47 55.2	+1.4
AXS				S	Sn	14 48 38.6	+2.1
ARG	Arkhangelos	3.66	72		Pn	14 47 56.4	+2.3
ARG	Arkhangelos	3.66	72	Pn	Pn	14 47 56.2	+2.1
ARG	Arkhangelos	3.66	72	P	Pn	14 47 56.4	+2.3
ARG	Arkhangelos	3.66	72	P	Pn	14 47 55.5	+1.3
ARG				S	Sn	14 48 38.1	+1.1
CHOS	Chios island	3.70	28	Pn	Pn	14 47 56.2	+1.4
ORTH	Orthonies,Zaky	3.70	318	P	Pn	14 47 56.1	+1.3
ORTH				S	Sn	14 48 40.3	+2.1
AXAR	Agios Charalam	3.74	346	P	Pn	14 47 57.6	+2.3
AXAR				S	Sn	14 48 40.9	+1.7
GCAM	G?zelcaml?	3.75	46	P	Pb	14 48 00.9	-3.0
GCAM				S	Sg	14 48 56.3	-2.0
GCAM				*i* IAML		14 49 09.0	
	comp=N,297nm,1.1s						
GCAM				*i* IAML		14 49 22.0	
	comp=E,368nm,1.0s						
GCAM	G?zelcaml?	3.75	46	Pn	Pn	14 47 57.1	+1.7
ZEYE	Izmir, Urla-Ze	3.76	34	P	Pn	14 47 56.9	+1.3
ANX	Ano Chora	3.77	337	P	Pn	14 47 58.1	+2.3
ANX				S	Sn	14 48 41.8	+1.7
SKY	Skiros Island	3.77	9	P	Pn	14 47 56.6	+0.8
SKY				S	Sn	14 48 42.0	+2.0
SLUM	Salum	3.82	162	P	Pn	14 47 56.3	0.0
GMLD	Gumuldur	3.84	39	Pn	Pn	14 47 58.3	+1.7
MLSB	Milas	3.84	55	Pn	Pn	14 47 58.5	+1.7
URLA	Izmir	3.90	34	P	Pn	14 47 57.4	-0.2
URLA	Izmir	3.90	34	Pn	Pn	14 47 59.5	+1.9
PVO	Paravola	3.93	333	P	Pn	14 47 59.9	+2.0
TURN	Turunc	3.93	64	P	Pn	14 48 00.7	+2.8
TURN				S	Sn	14 48 46.7	+2.9
TURN				*i* IAML		14 48 55.0	
	comp=E,128nm,0.4s						
TURN				*i* IAML		14 49 02.0	
	comp=N,139nm,0.6s						
TURN	Turunc	3.93	64	Pn	Pn	14 48 00.5	+2.6
VLS	Valsamata	4.00	320	P	Pn	14 48 00.5	+1.6
VLS				S	Sn	14 48 47.1	+1.6
KARB	zmir-Karabur	4.08	30	P	Pn	14 48 01.8	+1.9
EVR	Evrytania	4.10	337	P	Pn	14 48 01.5	+1.1
EVR				S	Sn	14 48 50.7	+2.5
YER	Yerkesik	4.11	60	Pn	Pn	14 48 02.9	+2.4
BLCB	Balcova	4.14	38	Pn	Pn	14 48 03.1	+2.4
NEO	Neokhori	4.19	353	P	Pn	14 48 03.3	+1.8
NEO				S	Sn	14 48 51.5	+1.2
MULA	Mugla, Merkez-	4.20	59	P	Pn	14 48 06.3	+4.7
DALY	Dalyan (Mula)	4.25	65	Pn	Pn	14 48 04.9	+2.6
AYDB	Zeytinkoy-Aydi	4.30	48	Pn	Pn	14 48 05.5	+2.4
SIGR	SIGRI	4.37	21	Pn	Pn	14 48 06.6	+2.6
IZMR	zmir-demi	4.46	47	P	Pn	14 48 10.1	+4.9
ESEN	Aydn-Nazilli	4.50	53	P	Pn	14 48 10.8	+5.0
FETY	Fethiye	4.51	69	P	Pn	14 48 02.4	-3.5
NAZL	Nazilli-Aydin	4.56	51	Pn	Pn	14 48 09.0	+2.4
IZZE	Mula-Seydike	4.57	72	P	Pn	14 48 09.2	+2.5
IZZE				S	Sn	14 48 53.3	-6.3
IZZE				*i* IAML		14 49 13.0	
	comp=E,239nm,0.5s						
IZZE				*i* IAML		14 49 15.0	
	comp=N,323nm,0.5s						
ZEDA	zmir-Bergama	4.62	33	P	Pn	14 48 08.4	+1.0
ODEM	Odemis-Izmir	4.62	46	Pn	Pn	14 48 10.2	+2.7
DKL	Dikili	4.63	31	Pn	Pn	14 48 09.8	+2.3
DNZT	Denizli-Tavas-	4.71	62	P	Pn	14 48 12.8	+4.1
DNZT				S	Sn	14 49 03.1	-0.1
DNZT				*i* IAML		14 49 19.0	
	comp=N,124nm,1.0s						
DNZT				*i* IAML		14 49 19.0	
	comp=E,118nm,0.8s						
TAVA	DENIZLI_Tavas	4.71	59	P	Pn	14 48 12.6	+3.9
KIRA	zmir-Kiraz	4.77	49	P	Pn	14 48 13.7	+4.2
CAME	Cameli-Denizli	4.78	66	Pn	Pn	14 48 12.6	+2.8
AKAS	Kas	4.82	75	P	Pn	14 48 12.8	+2.5
AKAS	Kas	4.82	75		Pn	14 48 12.6	+2.3
AKAS	Kas	4.82	75	Pn	Pn	14 48 12.8	+2.5
CAEL	Denizli, Camel	4.86	64	P	Pn	14 48 14.7	+3.9
DNIZ	Denizli-Tavas-	4.88	58	P	Pn	14 48 15.6	+4.6
KNIK	Mula-Seydike	4.95	68	P	Pn	14 48 14.9	+2.8
SOMA	Soma-Manisa	4.98	35	Pn	Pn	14 48 15.4	+3.1
APMY	Acipayam-Deniz	4.99	61	Pn	Pn	14 48 15.2	+2.6
MANT	Manisa	5.05	47	P	Pn	14 48 17.1	+3.6
MANT	Manisa	5.05	47		Pn	14 48 16.5	+3.0
LIT	Litokhoron	5.07	348		Pn	14 48 14.6	+1.0
LIT	Litokhoron	5.07	348	P	Pn	14 48 14.6	+1.0
GOLH	Golhisar	5.08	64	P	Pn	14 48 17.1	+3.3
GORD	Gordes-Manisa	5.12	41	Pn	Pn	14 48 17.2	+2.9
KULA	Kula-Manisa	5.13	48	Pn	Pn	14 48 17.0	+2.5
ELL	Elmali	5.18	70		Pn	14 48 18.1	+2.8
ELL	Elmali	5.18	70	Pn	Pn	14 48 17.8	+2.6
ELL	Elmali	5.18	70	P	Pn	14 48 18.1	+2.8
INCE	Denizli-Bozkur	5.29	59	P	Pn	14 48 19.9	+3.2
BALB	Balikesir	5.53	34		Pn	14 48 23.3	+3.5
KEK	Kerkira	5.58	326		Pn	14 48 25.3	+4.8
KORT	Korkueli	5.59	69	Pn	Pn	14 48 24.1	+3.2
ANTB	Antalya	5.80	70	Pn	Pn	14 48 26.9	+3.3
CAVK	Edirne/Enez-Ca	5.84	18	⇓P	Pn	14 48 28.0	+3.8
ISP	Isparta	6.02	62		Pn	14 48 27.8	+1.1
ISP	Isparta	6.02	62	*i* P	Pn	14 48 29.8	+3.1
SWA2		6.04	166	P	Pn	14 48 27.7	+0.8
RDO	Rodhopi	6.14	12		Pn	14 48 29.6	+1.3
BAND	Balkesir-Ban	6.21	32	⇓P	Pn	14 48 33.5	+4.3
VAY	Valandovo	6.25	351	*i* Pn	Pn	14 48 31.8	+2.1
MMB	Musomishta	6.40	359	*e*P	Pn	14 48 35.1	+3.3
OHR	Ohrid	6.42	339	*i* Pn	Pn	14 48 34.4	+2.2
RZN	Rozhen	6.58	6	*e*P	Pn	14 48 38.4	+3.9
KKB	Krupnik	6.71	355	*e*P	Pn	14 48 39.6	+3.4
TIP	Timpagrande	6.94	308		Pn	14 48 38.8	-0.5
TIP	Timpagrande	6.94	308	⇑P	Pn	14 48 38.1	-1.2
TIP	Timpagrande	6.94	308	Pn	Pn	14 48 39.1	-0.2
	0.1nm495nm23nm,0.7s						
PLD	Plovdiv	7.03	6	*e*P	Pn	14 48 43.8	+3.3
SKO	Skopje	7.07	345	*i* Pn	Pn	14 48 48.6	+7.6
CEL	Celeste	7.10	298		Pn	14 48 39.9	-1.6
CEL	Celeste	7.10	298	Pn	Pn	14 48 40.6	-0.9
	0.2nm514nm33nm,1.0s						
VTS	Vitosha	7.48	357	*e*P	Pn	14 48 50.1	+3.3
ULC	Ulcinj	7.70	334	⇓*i*Pn	Pn	14 48 47.7	-2.0
ULC				*i* Sn	Sn	14 50 08.1	-8.7
BLSH	Balsha	7.72	357	*e*P	Pn	14 48 53.3	+3.3
CSS	Mathiatis	7.79	89		Pn	14 48 49.7	-1.3
CSS	Mathiatis	7.79	89	P	Pn	14 48 49.9	-1.0
CSS	Mathiatis	7.79	89	S	Sn	14 50 15.4	-3.6
MATE	Matera	7.87	316	⇑P	Pn	14 48 50.8	-1.2
MATE				⇑S	Sn	14 50 18.0	-2.9
DRME	Dracevica, Mon	7.92	334	⇑*i*Pn	Pn	14 48 50.8	-1.9
DRME				*e*Sn	Sn	14 50 12.8	-9.3
RAFF	Raffo Rosso	7.94	288		Pn	14 48 51.9	-1.1
ELND	Elena	7.94	11	⇑P	Pn	14 48 56.0	+3.1
SAHE	Sakarya_HENDEK	7.95	42	⇓P	Pn	14 48 57.6	+4.5
VAE	Valguarnera	7.96	290	LR	LR	14 52 24.2	
	comp=Z,384nm,19.3s,baz=87,slow=41						
CUC	Castrocucco	8.00	310		Pn	14 48 54.0	+0.2
PVY	Plav	8.03	339	⇑*i*Pn	Pn	14 48 53.5	-0.9
PVY				*i* Sn	Sn	14 50 16.5	-8.6
PDG	Podgorica	8.11	335		Pn	14 48 55.6	+0.4
PDG	Podgorica	8.11	335	⇑P	Pn	14 48 54.8	-0.5
PDG				⇑S	Sn	14 50 25.9	-0.8
PDG	Podgorica	8.11	335	⇑*i*Pn	Pn	14 48 53.4	-1.8
PDG				*i* Sn	Sn	14 50 18.8	-7.9
BUM	Brajici-Budva	8.12	333	⇓*i*Pn	Pn	14 48 53.8	-1.8
BUM				*i* Sn	Sn	14 50 19.4	-7.8
RYAN	Fayoum	8.14	136	P	Pn	14 48 54.4	-1.4
MPEP	Malo Peshtene	8.20	360	*e*P	Pn	14 48 58.7	+2.1
PLVB	Pleven	8.26	4	⇓P	Pn	14 48 59.5	+2.2
IVA	Berane	8.30	340	⇓*i*Pn	Pn	14 48 56.3	-1.8
IVA				*i* Sn	Sn	14 50 22.8	-8.9
CEME	Cevo	8.33	334	⇓*i*Pn	Pn	14 48 55.0	-3.4
CEME				*e*Sn	Sn	14 50 24.5	-7.8
KOME	Kolasin	8.40	338	⇑*i*Pn	Pn	14 48 58.9	-0.5
KOME				*e*Sn	Sn	14 50 32.4	-1.6
ACER	Acerenza	8.40	314		Pn	14 48 58.6	-0.7
ANTO	Ankara	8.54	54	⇓P	Pn	14 49 05.5	+4.2
ANTO	Ankara	8.54	54	P	Pn	14 49 05.4	+4.2
ANTO	Ankara	8.54	54	Pn	Pn	14 49 04.4	+3.1
	319nm29nm,0.7s						
BOVS	Bovan	8.64	350	⇓P	Pn	14 49 04.0	+1.4
BRY	Bratogost	8.77	334	⇑*i*Pn	Pn	14 49 01.4	-3.1
BRY				*i* Sn	Sn	14 50 34.8	-8.5
UPM	Unac-Piva	8.91	336	⇓*i*Pn	Pn	14 49 04.9	-1.6
UPM				*i* Sn	Sn	14 50 37.6	-9.2
BR105	Keskin Array S	9.02	57	Pn	Pn	14 49 09.9	+1.9
	223nm32nm,0.9s						
BR106	Keskin Array S	9.03	57	Pn	Pn	14 49 10.0	+1.9
	255nm32nm,0.9s						
BR104	Keskin Array S	9.03	57	Pn	Pn	14 49 10.0	+1.9
	266nm39nm,0.9s						
BR131	Keskin Array S	9.04	57	*i* P	Pn	14 49 11.0	+2.8
BRTR	Keskin Array B	9.04	57	Pn	Pn	14 49 10.8	+2.5
	1.2nm,0.3s,baz=238,slow=14,SNR=94						
BRTR				LR	LR	14 53 31.4	
	comp=Z,252nm,19.9s,baz=236,slow=44						
	24nm,0.8s						
BRTR	Keskin Array B	9.04	57		Pn	14 49 11.1	+2.8
NBNS	Bani Suef	9.08	134	P	Pn	14 49 08.3	-0.3
SUZ	Suez	9.25	122	P	Pn	14 49 10.1	-1.0
ZAF	Zafarana	9.41	126	P	Pn	14 49 12.1	-1.1
OFRI	`Ofer	9.61	102	P	Pn	14 49 14.6	-1.3
OFRI	`Ofer	9.61	102	S	Sn	14 50 57.7	-6.0
HNTI	Hanita	9.62	99	P	Pn	14 49 15.4	-0.7
HNTI	Hanita	9.62	99	S	Sn	14 50 59.0	-5.1
MDVR	Moldovita	9.77	351	⇓P	Pn	14 49 19.8	+1.8
ILGA	Ilgaz	9.77	50		Pn	14 49 21.9	+3.6
SLTI	Sal'it	9.77	104	P	Pn	14 49 16.4	-1.8
SLTI	Sal'it	9.77	104	S	Sn	14 51 01.7	-6.1
HERR	Herculane	9.79	354	⇓P	Pn	14 49 19.9	+1.6
KZIT	Kziot	9.82	113	P	Pn	14 49 17.6	-1.2
KZIT	Kziot	9.82	113	S	Sn	14 51 01.7	-7.2
MMA0B	Mount Meron ar	9.83	99	P	Pn	14 49 16.9	-2.1
MMA0B	Mount Meron ar	9.83	99	S	Sn	14 51 04.0	-5.2
MMAI	Mount Meron Ar	9.83	99	Pn	Pn	14 49 16.8	-2.2
	5.9nm,0.3s,baz=290,slow=12,SNR=25						
MMAI				Sn	Sn	14 51 04.5	-4.7
	3.0nm,0.3s,baz=296,slow=18,SNR=2.7						
	3.0nm,0.3s						
AMAZ	Amatzia	9.94	108	P	Pn	14 49 18.6	-1.9
AMAZ	Amatzia	9.94	108	S	Sn	14 51 05.7	-6.2
SALP	Salfit	9.96	105	P	Pn	14 49 18.5	-2.2
SALP	Salfit	9.96	105	S	Sn	14 51 06.7	-5.5
GEM	Giv'at Ha'Em	9.99	98	P	Pn	14 49 19.0	-2.1
GEM	Giv'at Ha'Em	9.99	98	S	Sn	14 51 08.2	-4.8
MMLI	Mount Malkishu	10.01	102	P	Pn	14 49 19.9	-1.5
MMLI	Mount Malkishu	10.01	102	S	Sn	14 51 08.0	-5.7
NATI	Neve Ativ	10.04	97	P	Pn	14 49 20.1	-1.6
NATI	Neve Ativ	10.04	97	S	Sn	14 51 08.5	-5.6
HMDT	Nahal Hemdat	10.16	103	P	Pn	14 49 21.7	-1.7
HMDT	Nahal Hemdat	10.16	103	S	Sn	14 51 12.0	-5.2
KSHT	Keshet	10.17	99	P	Pn	14 49 22.4	-1.2
KSHT	Keshet	10.17	99	S	Sn	14 51 12.2	-5.3
YTIR	Yattir	10.17	109	P	Pn	14 49 22.0	-1.7
YTIR	Yattir	10.17	109	S	Sn	14 51 11.0	-6.6
UJAP	Al Uja	10.21	105	P	Pn	14 49 22.1	-2.1
ARR	Arges	10.23	3	⇓P	Pn	14 49 26.9	+2.4
GZR	Gura Zlata	10.27	356	⇓P	Pn	14 49 26.9	+1.8
GZR	Gura Zlata	10.27	356	P	Pn	14 49 26.8	+1.8
DSI	Dead Sea	10.29	107	P	Pn	14 49 23.7	-1.6
DSI	Dead Sea	10.29	107	S	Sn	14 51 15.0	-5.5
BNN	Bunyan	10.29	65		Pn	14 49 28.6	+3.2
LOT	Lotru	10.30	360	⇓P	Pn	14 49 28.2	+2.9
TPGR	Topolog	10.32	19	⇓P	Pn	14 49 29.4	+3.8
MSBI	Mazada	10.38	108	P	Pn	14 49 24.4	-2.0
MSBI	Mazada	10.38	108	S	Sn	14 51 16.2	-6.3
NEHR	Nehoiu	10.44	10	⇓P	Pn	14 49 30.0	+2.7
KRMI	Paran Flat	10.46	116	P	Pn	14 49 26.1	-1.4
KRMI	Paran Flat	10.46	116	S	Sn	14 51 17.0	-7.6
MLR	Muntele Rosu	10.46	8	Pn	Pn	14 49 28.6	+1.0
	0.6nm,0.3s,baz=185,slow=6.5,SNR=10						
MLR				LR	LR	14 53 24.4	
	comp=Z,122nm,20.2s,baz=200,slow=37						
	8.1nm,0.9s						
MLR	Muntele Rosu	10.46	8		Pn	14 49 29.1	+1.5
MLR	Muntele Rosu	10.46	8	⇑P	Pn	14 49 30.7	+3.1
MLR	Muntele Rosu	10.46	8	P	Pn	14 49 29.7	+2.0
	21nm,0.8s						
IDAN	Idan	10.52	111	P	Pn	14 49 26.3	-2.1
IDAN	Idan	10.52	111	S	Sn	14 51 19.5	-6.6
GHAJ	Ghor Haditha	10.54	108		Pn	14 49 27.5	-1.2
GHAJ	Ghor Haditha	10.54	108	S	Sn	14 51 20.7	-5.9
PRNI	Paran	10.55	114	P	Pn	14 49 26.8	-2.0
PRNI	Paran	10.55	114	S	Sn	14 51 20.7	-6.0
ZFRI	Zfri	10.58	112	P	Pn	14 49 27.0	-2.2
ZFRI	Zfri	10.58	112	S	Sn	14 51 20.0	-7.5
BZS	Buzias	10.60	352	⇑P	Pn	14 49 31.5	+2.1
BZS	Buzias	10.60	352	P	Pn	14 49 31.5	+2.1
HRFI	Mount Harif	10.73	115	P	Pn	14 49 30.1	-1.2
HRFI	Mount Harif	10.73	115	S	Sn	14 51 25.0	-6.3
MBRI	Mt Berech	10.77	117	P	Pn	14 49 30.6	-1.2
MBRI	Mt Berech	10.77	117	S	Sn	14 51 25.5	-6.8
EIL	Elat	10.86	117	Pn	Pn	14 49 31.4	-1.7
	4.8nm,0.3s,baz=316,slow=3.5,SNR=38						
EIL				Sn	Sn	14 51 28.7	-5.7
	3.4nm,0.3s,baz=176,slow=3.4,SNR=6.5						
	12nm,0.4s						
EIL	Elat	10.86	117	P	Pn	14 49 31.6	-1.4
EIL	Elat	10.86	117	S	Sn	14 51 27.0	-7.5
VRI	Vrincioaia	10.94	11	P	Pn	14 49 36.2	+2.2
	16nm,1.3s						
HBST	Basata	10.96	120	P	Pn	14 49 32.4	-2.0
CAMP	Campotosto	10.98	315		Pn	14 49 35.8	+1.1
NUB	Nuweibaa	11.01	121	P	Pn	14 49 33.3	-1.7
TURR	Turia	11.03	8	⇑P	Pn	14 49 38.2	+2.9
ASF	Jabal al Asfar	11.28	102	Pn	Pn	14 49 36.7	-2.2
	baz=252,slow=9.6						
ASF				Sn	Sn	14 51 40.8	-4.0
	baz=322,slow=19						
NRCA	Norcia	11.33	316		Pn	14 49 39.7	+0.2
FDMO	Fiordimonte	11.48	317		Pn	14 49 41.3	-0.1
MARR	Marisel-Cluj	11.54	358	⇓P	Pn	14 49 44.3	+2.0
TESR	Tescani	11.56	10	P	Pn	14 49 44.7	+2.2
	20nm,2.5s						
GBRS	Gornja Briga	12.44	329	*i* Pn	Pn	14 49 53.1	-1.6
BURAR	Bucovina Array	12.51	4	⇑P	Pn	14 49 59.1	+3.5
BURAR	Bucovina Array	12.51	4	P	Pn	14 49 59.1	+3.5
PDKS	Podkum	12.80	331	*i* Pn	Pn	14 49 57.8	-1.7
MPLH	Magyarpolny	12.91	340	P	Pn	14 50 02.9	+1.9
	25nm,0.8s						
SOKA	Soboth	13.30	333	*i* Pn	Pn	14 50 04.7	-1.7
	1.2nm,0.3s						
SOKA				*e*Sn	Sn	14 52 26.1	-7.9
	2.5nm,0.6s						
SABO	M.te Sabotino	13.32	327		Pn	14 50 05.3	-1.3
OBKA	Obir	13.34	331	*i* Pn	Pn	14 50 05.9	-1.1
	0.6nm,0.2s						
OBKA				*e*Sn	Sn	14 52 26.2	-9.0
	6.0nm,0.5s						
SORM	Soroca	13.41	13	⇓P	Pn	14 50 11.4	+3.6
SORM	Soroca	13.41	13	P	Pn	14 50 11.4	+3.6
ARSA	Arzberg	13.61	335	*e*Pn	Pn	14 50 09.1	-1.4
	1.8nm,0.3s						
ARSA				*i* Sn	Sn	14 52 38.3	-3.2
	1.4nm,0.5s						
RONA	Rosalia, Austr	13.75	338	*i* Pn	Pn	14 50 13.0	+0.4
	2.4nm,0.5s						
CONA	Conrad Observa	14.09	337	*e*Pn	Pn	14 50 18.5	+1.3
	1.0nm,0.4s						
CONA				*e*Sn	Sn	14 52 47.2	-6.2
	2.0nm,0.6s						
MODS	Modra-Piesok	14.09	342	*e*P	P	14 50 25.2	+0.4
MODS	Modra-Piesok	14.09	342	*e*P	P	14 50 25.2	+0.4
ANN	Anapa	14.19	43	*e*P	Pn	14 50 17.2	-1.2
ANN				pmax	pmax		
	comp=Z,16nm,0.7s						
ANN				MLR	MLR		
	comp=Z,264nm,17.0s						
ABTA	Abfaltersbach	14.39	327	*i* Pn	Pn	14 50 21.3	0.0
	comp=Z,3.4nm,0.6s						
ABTA				*i* Sn	Sn	14 52 50.7	-10
	comp=Z,7.7nm,0.9s						
STHS	Stebnicka Huta	14.39	353	*e*P	P	14 50 29.1	+0.9
STHS	Stebnicka Huta	14.39	353	*e*P	P	14 50 29.1	+0.9
NIE	Niedzica	14.50	351	*e*P	P	14 50 32.2	+2.8
MOA	Molln	14.56	334	*e*Pn	Pn	14 50 23.1	-0.5
	comp=Z,2.4nm,0.4s						
MOA				*i* Sn	Sn	14 52 57.7	-7.1
	comp=Z,1.8nm,0.7s						
BIOA	Bad Ischl, Aus	14.67	332	*i* Pn	Pn	14 50 25.2	+0.2
	comp=Z,2.4nm,0.5s						
LESA	Schwarzleotal	14.84	329	*e*Pn	Pn	14 50 27.1	-0.3
	comp=Z,8.1nm,0.5s						
LESA				*e*Sn	Sn	14 53 02.4	-9.3
	comp=Z,5.0nm,0.7s						
SOC	Sochi	14.88	51	*e*P	Pn	14 50 30.0	+2.1
SOC				*e*S	Sn	14 53 14.0	+1.4
SOC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SOC				MLR	MLR		
	comp=Z,203nm,14.0s						
MAUC	Maruska	14.89	345	*e*P	P	14 50 37.9	+4.2
KRUC	Moravsky	14.95	341	*e*P	P	14 50 35.3	+0.9
LUBAR	Lubar, Ukraine	15.05	10	P	Pn	14 50 32.9	+2.8
VRAC	Vranov	15.13	342	Pn	P	14 50 35.0	-1.4
	comp=Z,0.5nm,0.3s,baz=169,slow=8.9,SNR=8.4						
VRAC				LR	LR	14 58 10.2	
	comp=Z,642nm,19.8s,baz=164,slow=45						
VRAC	Vranov	15.13	342	⇑P	Pn	14 50 32.6	+1.3
VRAC	Vranov	15.13	342	*e*P	P	14 50 36.8	+0.5
VRAC	Vranov	15.13	342	P	Pn	14 50 32.5	+1.3
WTTA	Wattenberg	15.17	327	*i* Pn	Pn	14 50 31.6	-0.4
	comp=Z,2.0nm,0.3s						
WTTA				*e*Sn	Sn	14 53 09.5	-10
	comp=Z,8.0nm,0.7s						
WATA	Walderalm	15.25	327	*e*Pn	Pn	14 50 33.9	+0.9
	comp=Z,3.7nm,0.4s,SNR=6.4						
MORC	Moravsky Berou	15.34	344	*e*P	P	14 50 39.7	+1.0
SQTA	Sankt Quirin	15.34	326	*i* Pn	Pn	14 50 35.3	+1.3
	comp=Z,0.7nm,0.2s						
OJC	Ojcow	15.36	350	*e*P	P	14 50 38.0	-0.9
FUORN	Ofenpass-Fuorn	15.36	322		P	14 50 41.5	+2.3
FUORN				IAmb	IAmb	14 50 55.7	
	comp=Z,19nm,0.8s						
CKRC	Cesky Krumlov	15.38	336	*e*P	P	14 50 40.0	+0.9
CKRC				MLR	MLR		
	comp=Z,600nm,12.3s						
CKRC	Cesky Krumlov	15.38	336	*e*P	P	14 50 40.0	+0.9
CKRC				AMS	AMS	14 57 30.0	
	comp=Z,600nm,12.3s						
FETA	Feichten	15.42	324	*e*Pn	Pn	14 50 38.5	+3.3
	comp=Z,3.9nm,0.8s,SNR=6.4						
FETA				*e*Sn	Sn	14 53 19.4	-6.4
	comp=Z,1.6nm,0.6s						
STEB	Steborice	15.44	345	*e*P	P	14 50 43.1	+3.4
MOTA	Moosalm	15.48	326	*e*Pn	Pn	14 50 37.0	+1.1
	comp=Z,1.8nm,0.4s,SNR=4.8						
MOTA				*i* Sn	Sn	14 53 17.0	-10
	comp=Z,6.2nm,0.8s						
GEC2	GERESS Array S	15.61	334		P	14 50 42.8	+1.0
GEC2				IAmb	IAmb	14 50 55.1	
	comp=Z,12nm,0.8s						
GERES	GERESS Array B	15.61	334	Pn	P	14 50 42.2	+0.4
	comp=Z,0.1nm,0.3s,baz=138,slow=11,SNR=14						
GERES				LR	LR	14 57 19.9	
	comp=Z,227nm,21.9s,baz=185,slow=40						
DAVOX	Davos/Dischmat	15.67	322	Pn	P	14 50 41.9	-0.6
	comp=Z,0.6nm,0.3s,baz=133,slow=15,SNR=8.1						
DAVOX				LR	LR	14 59 21.8	
	comp=Z,341nm,20.2s,baz=108,slow=48						

TUE	Stuetta	15.73	320		P	14 50 45.5	+2.2
TUE				IAmb	IAmb	14 50 57.9	
	comp=Z,14nm,0.8s						
TUE	Stuetta	15.73	320	P	Pn	14 50 40.5	+1.2
	comp=Z,83nm,0.8s						
RETA	Reutte	15.74	326	*i* Pn	Pn	14 50 41.6	+2.3
	comp=Z,2.3nm,0.6s						
RETA				*i* Sn	Sn	14 53 27.2	-6.3
	comp=Z,0.7nm,0.3s						
KRLC	Kraliky	15.79	343	*e*P	P	14 50 44.9	+1.2
KRLC	Kraliky	15.79	343	*e*P	P	14 50 44.9	+1.2
AK07	Malin Array Si	15.89	13	P	Pn	14 50 43.0	+1.9
KHC	Kasperske Hory	15.89	335		Pn	14 50 43.6	+2.4
KHC	Kasperske Hory	15.89	335	*i* P	Pn	14 50 42.5	+1.3
KHC	Kasperske Hory	15.89	335	*e*P	P	14 50 45.3	+0.4
KHC				AMS	AMS	14 58 00.0	
	comp=Z,700nm,12.2s						
KHC	Kasperske Hory	15.89	335	P	Pn	14 50 43.1	+1.9
	comp=Z,12nm,0.7s						
AK06	Malin Array Si	15.92	13	P	Pn	14 50 43.6	+2.1
AK13	Malin Array Si	15.92	12	P	Pn	14 50 43.8	+2.3
AK10	Malin Array Si	15.94	13	P	Pn	14 50 44.1	+2.3
AK14	Malin Array Si	15.95	12	P	Pn	14 50 44.1	+2.2
ZVC	Zvikov	15.95	337	*e*P	Pn	14 50 43.9	+2.0
AK05	Malin Array Si	15.96	13	P	Pn	14 50 44.2	+2.3
AK09	Malin Array Si	15.96	13	P	Pn	14 50 44.3	+2.2
AK12	Malin Array Si	15.97	12	P	Pn	14 50 44.4	+2.3
AK08	Malin Array Si	15.98	13	P	Pn	14 50 44.5	+2.3
AK11	Malin Array Si	16.00	12	P	Pn	14 50 44.9	+2.3
DAVA	Damuels	16.01	323	*i* Pn	Pn	14 50 45.3	+2.4
	comp=Z,2.9nm,0.4s						
AK01	Malin Array Si	16.03	12	P	Pn	14 50 45.2	+2.4
KIEV	Kiev	16.03	12		Pn	14 50 44.4	+1.5
KIEV	Kiev	16.03	12	⇑P	Pn	14 50 45.1	+2.3
KIEV	Kiev	16.03	12	P	Pn	14 50 44.4	+1.5
KIEV				pmax	pmax		
	comp=Z,13nm,0.9s						
KIEV	Kiev	16.03	12	P	Pn	14 50 45.0	+2.1
	comp=Z,66nm,0.9s						
AKASG	Malin Array Be	16.04	12	Pn	Pn	14 50 45.0	+2.0
	comp=Z,3.2nm,0.3s,baz=203,slow=11,SNR=11						
AKASG				LR	LR	14 56 35.5	
	comp=Z,181nm,19.8s,baz=189,slow=36						
AKASG	Malin Array Be	16.04	12	*ce*P	Pn	14 50 45.2	+2.2
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.5s						
AKBB	Malin Array Si	16.04	12		Pn	14 50 43.6	+0.6
AKBB	Malin Array Si	16.04	12	*ce*P	Pn	14 50 43.3	+0.3
AKBB	Malin Array Si	16.04	12	P	Pn	14 50 45.0	+2.0
LABN	Labinsk	16.04	49	*e*P	P	14 50 47.4	+0.9
LABN				pmax	pmax		
	comp=Z,18nm,0.6s						
AK22	Malin Array Si	16.07	12	P	Pn	14 50 45.8	+2.4
RNPP5	Staryi Chortor	16.15	5	P	Pn	14 50 46.7	+2.3
DPC	Dobruska-Polom	16.16	342	*e*P	P	14 50 49.9	+2.1
DPC				MLR	MLR		
	comp=Z,700nm,13.4s						
DPC	Dobruska-Polom	16.16	342	*e*P	P	14 50 49.9	+2.1
DPC				AMS	AMS	14 58 20.0	
	comp=Z,700nm,13.4s						
PRU	Pruhonice	16.32	338	AMS	AMS	14 58 30.0	
	comp=Z,800nm,10.1s						
RNPP9	Sopachiv	16.33	5	P	Pn	14 50 49.1	+2.4
OSTC	Ostas	16.37	343	*e*P	P	14 50 51.2	+1.0
OSTC	Ostas	16.37	343	*e*P	P	14 50 51.2	+1.0
ERBR	Yeremizino-Bor	16.47	45	*e*P	Pn	14 50 49.0	+0.5
ERBR				pmax	pmax		
	comp=Z,48nm,0.7s						
KSP	Ksiaz	16.62	343	*e*P	P	14 50 55.1	+2.2
NEUR	Neytrino	16.70	55	*i* P	Pn	14 50 52.0	+0.3
SENIN	Lac Senin/Sane	16.77	317		Pn	14 50 53.6	+0.9
BEL	Belsk	16.83	353	*e*P	P	14 50 58.7	+3.5
SHA1	Shidzhatmaz	16.86	54	*ce*P	P	14 50 56.7	+0.9
KIV	Kislovodsk	16.97	53	⇓P	P	14 50 58.8	+2.0
KIV	Kislovodsk	16.97	53	*e*P	Pn	14 50 56.0	+1.0
KIV				pmax	pmax		
	comp=Z,33nm,1.1s						
KIV				MLR	MLR		
	comp=Z,62nm,14.0s						
KIV	Kislovodsk	16.97	53	P	P	14 50 57.3	+0.4
KVAR	Kislovodsk Arr	16.97	53	Pn	P	14 50 58.0	+1.0
	baz=258,slow=20						
KVAR				LR	LR	14 58 11.0	
	comp=Z,166nm,20.5s,baz=95,slow=40						
	comp=Z,6.4nm,0.6s						
KBZ	Khabaz	17.01	54	Pn	Pn	14 50 57.4	+1.9
	comp=Z,0.5nm,0.3s,baz=254,slow=8.3,SNR=23						
KBZ				LR	LR	14 58 50.7	
	comp=Z,124nm,21.9s,baz=259,slow=42						
	comp=Z,20nm,0.9s						
KBZ	Khabaz	17.01	54	*ce*P	Pn	14 50 57.2	+1.8
GRF	Grafenberg Arr	17.23	331	*e*P	P	14 51 00.9	+1.2
	comp=Z,25nm,1.4s,baz=143,slow=11						
NCK	Nalchik	17.39	55	*i* P	P	14 51 04.1	+2.6
CLL	Collm	17.95	337	*i* P	P	14 51 09.4	+1.8
CLL				pmax	pmax		
	comp=Z,34nm,1.5s						
CLL	Collm	17.95	337	P	Pn	14 51 08.3	+1.3
	comp=Z,18nm,1.0s						
CLL	Collm	17.95	337	*i* P	P	14 51 09.4	+1.8
	comp=Z,34nm,1.5s						
CLL				*i* x	x	14 51 13.1	
CLL				*e*PP	PnPn	14 51 21.0	+3.1
CLL				*e*PPP	PPP	14 51 27.0	
SUW	Suwalki	18.88	359	*e*P	P	14 51 18.1	+0.4
SUW	Suwalki	18.88	359	*e*P	P	14 51 18.1	+0.4
VSR	Storozhevoye	19.51	30	*e*P	P	14 51 22.7	-2.0
VSR				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MNK	Minsk	19.57	7	*i* P	P	14 51 21.2	-4.0
	comp=E,18nm,1.0s						
MNK				*i* P	P	14 51 21.2	-4.0
	comp=N,21nm,1.1s						
MNK				*i* P	P	14 51 21.2	-4.0
	comp=Z,12nm,0.8s,baz=190						
MNK				*i* PP	PnPn	14 51 35.8	-4.2
MNK				*i* PPP	PPP	14 51 43.5	
MNK				*i* S	Sn	14 55 00.6	-5.3
MNK				*i* SS	SnSn	14 55 16.7	-3.4
MNK				*i* LR	LR	14 57 27.3	
MNK				*i* LRM	MLR	14 59 38.4	
	comp=Z,195nm,14.9s						
MNK				*i* LRM	MLR	14 59 49.9	
	comp=E,215nm,15.1s						
MNK				*i* LRM	MLR	15 01 39.1	
	comp=N,321nm,19.6s						
MNK	Minsk	19.57	7	*i* P	P	14 51 21.2	-4.0
MNK				*i* S	Sn	14 55 00.6	-5.3
MNK				pmax	pmax		
	comp=E,18nm,1.0s						
MNK				pmax	pmax		
	comp=N,21nm,1.1s						
MNK				pmax	pmax		
	comp=Z,12nm,0.8s						
MNK				MLR	MLR		
	comp=Z,195nm,15.0s						
MNK				MLR	MLR		
	comp=E,215nm,15.0s						
MNK				MLR	MLR		
	comp=N,321nm,20.0s						
AKT	Akhty	19.76	64	*e*P	Pn	14 51 30.3	+1.1
AKT				pmax	pmax		
	comp=Z,33nm,1.0s						
NACGM	Naroch	19.87	5	*e*P	Pn	14 51 31.1	+0.9
	comp=Z,16nm,0.7s,baz=187						
MAK	Makhachkala	19.93	60	*e*P	P	14 51 22.3	-7.0
MAK				*e*S	S	14 55 04.1	-9.1
MAK				pmax	pmax		
	comp=Z,168nm,1.1s						
MAK				MLR	MLR		
	comp=Z,117nm,13.0s						
PABE	Paberze	20.36	0		P	14 51 32.6	-1.4
PABE	Paberze	20.36	0	*e*P	P	14 51 32.8	-1.1
LPSR	Galich'ya Gora	20.49	27	*e*P	P	14 51 34.5	-0.9
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
VRH	Novokhopyorsk	20.60	33	*e*P	P	14 51 36.4	-0.1
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSVD	Vaisvydziai	20.84	0	*e*P	P	14 51 38.8	-0.3
OBN	Obninsk	21.83	20	LR	LR	15 00 08.0	
	comp=Z,183nm,18.9s,baz=184,slow=36						
OBN	Obninsk	21.83	20	⇓*i*P	P	14 51 51.6	+1.9
OBN				*i*		14 52 08.0	
OBN						14 52 14.0	
OBN				PPP	PPP	14 52 24.0	
OBN				*e*S	S	14 55 54.9	+4.3
OBN				SS	SnSn	14 56 25.0	+9.3
OBN				SSS	SSS	14 56 38.0	
OBN				pmax	pmax		
	comp=Z,19nm,0.9s						
OBN				MLR	MLR		
	comp=Z,99nm,14.0s						
ESBB	Sonseca Array	22.50	290		P	14 51 55.1	-2.1
ESBB				IAmb	IAmb	14 52 00.0	
	comp=Z,12nm,0.8s						
ESDC	Sonseca Array	22.50	290	P	P	14 51 56.9	-0.3
	comp=Z,9.1nm,0.9s,baz=81,slow=9.4,SNR=39						
ESDC				LR	LR	15 02 23.5	
	comp=Z,84nm,18.8s,baz=104,slow=41						
	comp=Z,9.1nm,0.9s						
ESDC	Sonseca Array	22.50	290		P	14 51 54.8	-2.4
SLIT	Slitere, Latvi	22.52	358	*e*P	P	14 51 54.5	-2.6
MOS	Moscow	22.68	20	*e*P	P	14 52 01.6	+2.8
MOS				*e*		14 52 14.3	
PAB	San Pablo	22.79	289		P	14 51 58.5	-1.7
PAB				IAmb	IAmb	14 52 03.0	
	comp=Z,21nm,1.1s						
PAB	San Pablo	22.79	289	P	P	14 51 58.6	-1.7
PAB				pmax	pmax		
	comp=Z,21nm,1.2s						
MDT	Midelt	23.67	273	LR	LR	15 03 58.9	
	comp=Z,168nm,18.4s,baz=83,slow=43						
PBRG	Braganca	24.76	295	*e*P	P	14 52 19.9	+0.7
PBAR	Barrancos	24.89	286	*e*P	P	14 52 21.1	+0.7
PBAR				*i* IAmb	IAmb	14 52 25.5	
	comp=Z,25nm,1.8s						
MVO	Moncorvo	24.92	293	*e*P	P	14 52 21.1	+0.3
MVO				*i* IAmb	IAmb	14 52 22.0	
	comp=Z,41nm,1.8s						
PMRV	Marv??o	25.14	289	*e*P	P	14 52 22.6	-0.1
PCBR	Castelo Branco	25.21	290	*e*P	P	14 52 25.7	+2.4
MTE	Manteigas	25.27	291	*e*P	P	14 52 23.8	-0.1
PESTR	Estremoz	25.30	288		P	14 52 22.2	-1.9
PESTR				IAmb	IAmb	14 52 24.8	
	comp=Z,14nm,1.0s						
PESTR	Estremoz	25.30	288	*e*P	P	14 52 24.3	+0.1
PVAQ	Vaqueiros	25.48	284	*e*P	P	14 52 27.3	+1.6
POLO	Lamas de Olo	25.51	294	*e*P	P	14 52 26.7	+0.6
EVO	Evora	25.64	287	*e*P	P	14 52 28.3	+1.1
PARRA	Arraiolos	25.66	288	*e*P	P	14 52 27.5	+0.2
PBDV	Barranco-do-Ve	25.66	284	*e*P	P	14 52 27.4	0.0
PCAB	Cabril	25.71	294	*e*P	P	14 52 28.8	+1.0
PCVE	Castro Verde	25.72	285	*e*P	P	14 52 29.6	+1.7
PSARD	Sardoal	25.74	289	*e*P	P	14 52 28.2	+0.2
PMTG	Montargil	25.79	288	*e*P	P	14 52 29.8	+1.3
MESJ	Messejana	25.84	285	*e*P	P	14 52 29.0	0.0
HFS	Hagfors	25.86	348	P	P	14 52 27.4	-1.5
	comp=Z,4.9nm,0.5s,baz=152,slow=9.8,SNR=24						
HFS				LR	LR	15 04 46.9	
	comp=Z,204nm,19.0s,baz=164,slow=42						
	comp=Z,4.9nm,0.5s						
MOE	Montemor	25.91	287	*e*P	P	14 52 30.3	+0.7
MOE				*i* IAmb	IAmb	14 52 39.5	
	comp=Z,35nm,1.6s						
PGAV	Gavieira, Arco	25.91	295	*e*P	P	14 52 30.8	+1.1
PTO	Porto	26.11	293	*e*P	P	14 52 32.5	+1.1
FINES	FINESS Array B	26.36	2	P	P	14 52 31.2	-2.2
	comp=Z,3.9nm,0.8s,baz=163,slow=11,SNR=17						
FINES				PcP	PcP	14 55 58.5	-0.3
	comp=Z,2.0nm,0.7s,baz=202,slow=1.5,SNR=3.6						
	comp=Z,3.9nm,0.8s						
FINES	FINESS Array B	26.36	2	*i* P	P	14 52 33.5	+0.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NB2	NORSAR Subarra	27.15	347	P	P	14 52 41.0	+0.4
	comp=Z,2.2nm,0.7s,baz=156,slow=9.3						
NOA	NORSAR Array B	27.15	347	P	P	14 52 39.2	-1.5
	comp=Z,1.5nm,0.8s,baz=160,slow=9.1,SNR=3.5						
NOA				LR	LR	15 04 36.8	
	comp=Z,239nm,19.7s,baz=165,slow=39						
	comp=Z,1.5nm,0.8s						
EKA	Eskdalemuir Ar	27.44	326	P	P	14 52 43.1	-0.1
	comp=Z,0.8nm,0.3s,baz=122,slow=9.5,SNR=3.7						
	comp=Z,0.8nm,0.3s						
KLMR	Klimovskoe	27.64	17	*e*P	P	14 52 45.4	+0.5
KLMR				pmax	pmax		
	comp=Z,12nm,1.1s						
AKTO	Aktyubinsk	29.06	48	LR	LR	15 09 03.6	
	comp=Z,104nm,19.7s,baz=226,slow=46						
TORD	Torodi Ar. Bea	29.66	228	P	P	14 53 03.4	+0.1
	comp=Z,1.6nm,0.3s,baz=38,slow=12,SNR=1.5						
	comp=Z,1.6nm,0.3s						
AB31	Akbulak array	29.92	51		P	14 53 04.4	-1.0
AB31				IAmb	IAmb	14 53 30.7	
	comp=Z,5.0nm,1.1s						
ABKAR	Akbulak array	29.92	51		P	14 53 04.9	-0.5
ARTI	Arti	31.61	37	*c i*P	P	14 53 23.8	+3.6
ARTI						14 54 24.4	
ARTI						14 56 08.8	
ARTI				S	S	14 58 35.7	+7.1
ARTI				SS	SnSn	15 00 18.1	+3.8
ARTI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ARCES	ARCESS Array B	34.46	1	P	P	14 53 42.7	-2.2
	comp=Z,2.6nm,0.6s,baz=168,slow=6.2,SNR=13						
ARCES				LR	LR	15 09 22.4	
	comp=Z,154nm,19.8s,baz=173,slow=39						
	comp=Z,2.6nm,0.6s						
CHGR	Chuyangaron	36.14	71		P	14 53 58.1	-1.8
CHGR	Chuyangaron	36.14	71	P	P	14 53 58.1	-1.8
CHGR				pmax	pmax		
	comp=Z,20nm,0.7s						
MBAR	Mbarara	36.14	168	LR	LR	15 09 24.3	
	comp=Z,152nm,19.8s,baz=351,slow=37						
KK31	Karatay Array	36.68	63		P	14 54 03.5	-0.9
KK31				IAmb	IAmb	14 54 13.1	
	comp=Z,3.9nm,0.8s						
KK31	Karatay Array	36.68	63	P	P	14 54 03.5	-0.9
KK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KKAR	Karatay Array	36.68	63		P	14 54 05.2	+0.8
KKAR	Karatay Array	36.68	63	P	P	14 54 05.2	+0.8
BORK	Borovoye	37.11	47	*ce*P	P	14 54 09.0	+1.1
BORK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BVAR	Borovoye Array	37.15	47	P	P	14 54 08.0	-0.2
	comp=Z,1.5nm,0.6s,baz=264,slow=5.9,SNR=8.9						
	comp=Z,1.5nm,0.6s						
DBIC	Dimbokro	38.72	230	P	P	14 54 21.8	0.0
	comp=Z,1.2nm,0.3s,baz=51,slow=10,SNR=2.2						
	comp=Z,1.2nm,0.3s						
AAK	Ala-Archa	39.64	63		P	14 54 28.4	-1.0
AAK				IAmb	IAmb	14 54 54.5	
	comp=Z,5.9nm,1.0s						
AAK	Ala-Archa	39.64	63	*ce*P	P	14 54 30.0	+0.5
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BORG	Borgarnes	40.05	332	LR	LR	15 13 10.0	
	comp=Z,102nm,20.0s,baz=111,slow=39						
NIL	Nilore	40.47	77		P	14 54 35.3	-1.0
NIL	Nilore	40.47	77	P	P	14 54 35.3	-1.0
NIL				pmax	pmax		
	comp=Z,19nm,1.1s						
KSH	Kashi	41.22	68	P	P	14 54 41.8	-0.7
KSH				sP	pP	14 54 46.8	+0.5
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KURBB	Kurchatov Arra	41.98	51	P	P	14 54 47.6	-0.8
	comp=Z,4.9nm,0.5s,baz=274,slow=8.6,SNR=27						
	comp=Z,4.9nm,0.5s						
KURK	Kurchatov	42.03	51		P	14 54 48.5	-0.4
KURK				IAmb	IAmb	14 54 53.2	
	comp=Z,3.2nm,0.6s						
KURK	Kurchatov	42.03	51	*ce*P	P	14 54 48.1	-0.8
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SPITS	Spitsbergen Ar	43.26	358	P	P	14 54 58.4	-0.1
	comp=Z,10nm,1.1s,baz=143,slow=13,SNR=5.1						
	comp=Z,10nm,1.1s						
MK31	Makanchi Array	44.69	56	*ce*P	P	14 55 10.2	-0.3
MKAR	Makanchi Array	44.69	56	P	P	14 55 10.4	-0.1
	comp=Z,5.2nm,0.6s,baz=272,slow=9.7,SNR=32						
MKAR				LR	LR	15 16 23.6	
	comp=Z,45nm,20.4s,baz=312,slow=40						
	comp=Z,5.2nm,0.6s						
MKAR	Makanchi Array	44.69	56		P	14 55 10.2	-0.2
MKAR	Makanchi Array	44.69	56	*ce*P	P	14 55 10.6	+0.1
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ZAA0	Zalesovo Array	45.80	46		P	14 55 18.8	-0.3
ZAA0				IAmb	IAmb	14 55 21.9	
	comp=Z,13nm,1.4s						
ZALV	Zalesovo Beam	45.80	46	P	P	14 55 17.9	-1.3
	comp=Z,3.5nm,0.5s,baz=268,slow=8.4,SNR=15						
	comp=Z,3.5nm,0.5s						
ZALV	Zalesovo Beam	45.80	46		P	14 55 19.5	+0.4
ZALV	Zalesovo Beam	45.80	46	*i* P	P	14 55 19.2	+0.1
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.5s						
DGZ	Jazzator, Alta	47.75	52	*i* P	P	14 55 35.3	+0.7
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.4s						
NRIK	Noril'sk	48.36	25	P	P	14 55 40.7	+1.9
	comp=Z,1.8nm,0.5s,baz=246,slow=8.7,SNR=5.6						
LSZ	Lusaka	50.31	175	LR	LR	15 17 00.1	
	comp=Z,90nm,18.0s,baz=340,slow=36						
SFJD	Kangerlussuaq	52.18	331	LR	LR	15 19 35.9	
	comp=Z,64nm,18.9s,baz=128,slow=38						
EVN	Everest	53.38	79		P	14 56 17.3	-0.8
TSUM	Tsumeb	54.37	187	LR	LR	15 23 41.8	
	comp=Z,244nm,19.1s,baz=340,slow=40						
LSA	Lhasa	56.12	75	P	P	14 56 30.7	-7.0
GOMU	GeErMu	56.43	67	P	P	14 56 40.4	+0.7
GOMU				PcP	PcP	14 57 35.2	-1.5
GOMU				pmax	pmax		
	comp=Z,370nm,1.2s						
OPO	Ambohidratompo	57.84	154	LR	LR	15 23 27.5	
	comp=Z,118nm,18.1s,baz=191,slow=38						
GTA	Gaotai	58.93	61	*e*P	P	14 56 56.7	-0.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
FRB	Frobisher Bay	60.13	329	LR	LR	15 24 58.2	
	comp=Z,72nm,18.2s,baz=102,slow=38						
SONM	Songino Array	60.34	50	P	P	14 57 06.1	-0.4
	comp=Z,1.3nm,0.6s,baz=295,slow=7.5,SNR=8.3						
	comp=Z,1.3nm,0.6s						
ULN	Ulaanbaatar	60.74	50	*ce*P	P	14 57 12.0	+2.7
ULN				pmax	pmax		
	comp=Z,8.0nm,1.7s						
TIXI	Tiksi	61.56	20	LR	LR	15 25 40.2	
	comp=Z,57nm,18.1s,baz=14,slow=38						
SCHQ	Schefferville	62.49	319	P	P	14 57 20.9	+0.1
	comp=Z,2.7nm,0.4s,baz=65,slow=5.7,SNR=11						
SCHQ				LR	LR	15 23 54.8	
	comp=Z,49nm,19.1s,baz=126,slow=36						
	comp=Z,2.7nm,0.4s						
LZDM	Lanzhou Array	63.13	64	P	P	14 57 24.4	-1.4
	comp=Z,1.6nm,0.3s,baz=306,slow=5.3,SNR=4.3						
	comp=Z,1.6nm,0.3s						
LZH	Lanzhou	63.18	63	*e*P	P	14 57 30.1	+4.2
LZH				sP	sP	14 57 37.2	+5.9
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
RES	Resolute Bay	63.40	345	LR	LR	15 25 21.2	
	comp=Z,55nm,18.2s,baz=14,slow=36						
BOSA	Boshof	63.43	179	P	P	14 57 27.7	+0.4
	comp=Z,1.3nm,0.4s,baz=5.3,slow=7.5,SNR=12						
BOSA				LR	LR	15 28 41.7	
	comp=Z,102nm,18.3s,baz=18,slow=40						
	comp=Z,1.3nm,0.4s						
HHC	Hu-ho-hao-te	66.55	56	*e*P	P	14 57 47.1	-0.6
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,97nm,4.4s						
CMAR	Chiang Mai Arr	67.65	83	P	P	14 57 55.1	+0.2
	comp=Z,1.9nm,0.8s,baz=304,slow=8.5,SNR=8.7						
	comp=Z,1.9nm,0.8s						
CMAR	Chiang Mai Arr	67.65	83	*ce*P	P	14 57 58.2	+3.3
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SEY	Seymchan	73.98	22	LR	LR	15 36 10.5	
	comp=Z,83nm,18.1s,baz=317,slow=40						
SADO	Sadowa	74.27	314	LR	LR	15 30 58.0	
	comp=Z,33nm,18.0s,baz=80,slow=36						
MA2	Magadan	75.96	25	LR	LR	15 34 17.9	
	comp=Z,57nm,19.0s,baz=293,slow=37						
YKA	Yellowknife Ar	77.13	342	P	P	14 58 50.3	-0.4
	comp=Z,0.3nm,0.7s,baz=25,slow=5.3,SNR=4.6						
YKA				LR	LR	15 34 32.4	
	comp=Z,60nm,18.3s,baz=342,slow=37						
	comp=Z,0.3nm,0.7s						
USRK	Ussuriysk Ar.	77.62	44	P	P	14 58 53.3	-0.5
	comp=Z,2.3nm,0.5s,baz=287,slow=4.7,SNR=9.2						
	comp=Z,2.3nm,0.5s						
KSRS	Korea Array	79.15	52	P	P	14 59 03.0	+0.6
	comp=Z,3.6nm,0.8s,baz=306,slow=4.3,SNR=9.3						
	comp=Z,3.6nm,0.8s						
KSRS	Korea Array	79.15	52	P	P	14 59 03.0	+0.6
ULM	Lac du Bonnet	79.71	325	LR	LR	15 35 01.2	
	comp=Z,66nm,19.1s,baz=11,slow=36						
SJG	San Juan	79.79	285	LR	LR	15 32 22.3	
	comp=Z,21nm,19.6s,baz=151,slow=34						
ILAR	Eielson Array	80.15	356	P	P	14 59 07.3	0.0
	comp=Z,0.2nm,0.6s,baz=335,slow=4.1,SNR=7.2						
ILAR				LR	LR	15 37 39.4	
	comp=Z,37nm,18.1s,baz=54,slow=38						
	comp=Z,0.2nm,0.6s						
TKL	Tuckaleechee C	82.49	308	LR	LR	15 37 34.8	
	comp=Z,27nm,18.3s,baz=14,slow=37						
PETK	Petropavlovsk-	83.41	26	LR	LR	15 38 49.9	
	comp=Z,72nm,18.2s,baz=355,slow=37						
JNU	Nakatsue	83.68	54	LR	LR	15 44 02.2	
	comp=Z,37nm,19.2s,baz=310,slow=41						
MJAR	Matsushiro Arr	86.14	47	P	P	14 59 40.7	+1.8
	comp=Z,0.5nm,0.6s,baz=297,slow=5.2,SNR=1.8						
	comp=Z,0.5nm,0.6s						
KDAK	Kodiak Island	87.38	358	LR	LR	15 44 16.9	
	comp=Z,33nm,18.6s,baz=348,slow=39						
NEW	Newport	89.94	335	LR	LR	15 41 18.2	
	comp=Z,41nm,21.4s,baz=24,slow=36						
PDAR	Pinedale Array	91.54	328	LR	LR	15 43 43.7	
	comp=Z,44nm,19.3s,baz=24,slow=37						
ROSC	El Rosal	93.89	279	LR	LR	15 40 51.3	
	comp=Z,37nm,18.8s,baz=141,slow=34						
ANMO	Albuquerque	96.24	321	LR	LR	15 43 38.3	
	comp=Z,42nm,21.9s,baz=39,slow=35						
NVAR	Mina Array Bea	98.83	331	LR	LR	15 47 19.8	
	comp=Z,51nm,18.2s,baz=80,slow=37						
JTS	Las Juntas de	99.09	289	LR	LR	15 45 39.6	
	comp=Z,9.5nm,18.0s,baz=72,slow=36						
WRA	Warramunga Arr	117.67	96	PKP	PKPdf	15 05 43.6	-0.5
	comp=Z,0.2nm,0.4s,baz=350,slow=1.1,SNR=4.8						
ASAR	Alice Springs	119.12	100	PKP	PKPdf	15 05 46.1	-0.8
	comp=Z,0.3nm,0.4s,baz=330,slow=1.6,SNR=9.4						
QSPA	South Pole Qui	125.00	180	PKP	PKPdf	15 05 56.7	-0.1
	comp=Z,1.0nm,0.8s,baz=72,slow=1.1,SNR=6.3						

ISN ***07*** *15:08:05.2±1.1, 32°.78N×47°.56E, h7^{km}±5^{km}, ML2.9*

TEH ***07*** *15:08:05.8, 32°.86N×47°.57E, h10^{km}±274^{km}*

ISC 07 15:08:07.7±2.1**, 32°.82N**±0°.07×**47°.6E**±0°.1**, h15^{km}, n10,** σ**0^{s}.82**/14**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBDR	Badra	1.45	282	*e*Pg	Pn	15 08 32.5	-0.8
IBDR				*e*Sg	Sn	15 08 52.0	0.0
KCHF	Cheshme Sefid,	1.53	342	Pg	Pn	15 08 33.4	-1.2
IBZA	Bozab	1.66	7	Pg	Pn	15 08 35.7	-0.8
RAFI	Al-Rafai	1.68	230	*e*Pn	Pn	15 08 36.0	-0.5
RAFI				*e*Sn	Sn	15 08 59.0	+1.2
IGHG	Ghaleghazi	1.74	330	Pg	Pn	15 08 37.2	-0.4
GLG1	Gilan-e-Gharb	1.92	313	Pn	Pn	15 08 40.0	0.0
SNQR	Sonqor, Kerman	2.03	0	Pn	Pn	15 08 42.2	+0.6
IDHR	Dehrash	2.13	332	Pn	Pn	15 08 42.3	-0.7
BHD	Baghdad	2.75	280	*e*Pn	Pn	15 08 51.0	-0.3
BHD				*e*Sn	Sn	15 09 24.0	-0.3
IKRK	Kirkuk	3.74	314	*e*Pn	Pn	15 09 05.0	+0.1
IKRK				*e*Sn	Sn	15 09 50.0	+1.3

DJA 07 15:16:54.8±0.3**, 1°S**±3°×**12°8E**±°**, h10^{km}, M4.0**/13**, mB5.1**/2**, mb4.5**/1**, MLv3.8**/13**, Mw(mB)4.5**/2**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.77	333	P	Pn	15 17 25.6	+0.1
KRAI	Karang Ratu	2.50	175	P	Pn	15 17 36.2	+0.6
SANI	Sanana	2.51	241	P	Pn	15 17 34.9	-0.8
MSAI	Masohi	2.63	163	P	Pn	15 17 38.5	+1.2
NLAI	Namlea	2.64	204	P	Pn	15 17 37.3	-0.2
AAI	Ambon	2.86	180	P	Pn	15 17 41.1	+0.6
SWI	Sorong	3.08	91	P	Pn	15 17 43.2	-0.3
FAKI	Fak Fak	4.58	117	P	Pn	15 18 02.1	-2.0
GTOI	Gorontalo	5.37	286	P	Pb	15 18 29.5	+0.8
LUWI	Luwuk	5.41	268	P	Pn	15 18 15.4	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	1µm55nm,1.1s						
APSI	Ampana	6.53	269	P	Pn	15 18 31.5	+0.5
BKSI	Bulukumba	9.21	241	P	Pn	15 19 16.7	+8.9

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*IDC **07** 15:30:41.8±8.8, 23°.67S×179°.94W, h491^{km}±45^{km}, mb3.3/5, mbtmp4.2/6, Error ellipse: s-maj=138.1km s-min=29.4km az=41.0*

*NEIC **07** 15:30:43.5±2.1, 24°.0S±0°.1×179°.5E±0°.3, h461^{km}±26^{km}, mb4.1/16, Error ellipse: s-maj=38.4km s-min=9.2km az=67.0*

ISC 07 15:30:44.6±1.5, **23°.8S**±0°.1×**179°.5E**±0°.2, **h500**^{km}, **n24**, σ**1^{s}61**/25, **mb4.0**/11, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.21	347	P	P	15 32 23.2	0.0
PINNC	Pines Island,	11.14	274	P	P	15 33 10.3	-3.7
URZ	Urewera	14.53	187	P	P	15 33 48.8	-0.9
	4.5nm,0.4s,baz=17,slow=1.1,SNR=9.3						
BKZ	Black Stump Fm	15.50	189	P	P	15 33 58.2	-1.6
BKZ				IAmb	IAmb	15 34 13.8	
	comp=Z,4.5nm,1.0s						
QRZ	Quartz Range	17.93	197	P	P	15 34 22.6	-1.5
LTZ	Lake Taylor	19.83	196	P	P	15 34 41.1	-0.4
CTAO	Charters Tower	31.01	270	P	P	15 36 20.0	-0.8
TOO	Toolangi	32.10	237	P	P	15 36 31.8	+1.9
TAU	Tasmania Unive	32.65	226	P	P	15 36 35.8	+1.4
STKA	Stephens Creek	34.32	248	P	P	15 36 51.5	+2.7
	comp=Z,1.2nm,0.5s,baz=90,slow=12,SNR=2.9						
	comp=Z,1.2nm,0.5s						
STKA	Stephens Creek	34.32	248	P	P	15 36 49.6	+0.8
STKA				IAmb	IAmb	15 36 55.2	
	comp=Z,13nm,1.1s						
BBOO	Buckleboo	39.04	247	P	P	15 37 27.9	+0.1
BBOO				IAmb	IAmb	15 37 29.2	
	comp=Z,6.0nm,1.1s						
AS31	Alice Springs	41.59	261	P	P	15 37 50.2	+1.8
ASAR	Alice Springs	41.59	261	P	P	15 37 50.3	+1.9
	comp=Z,3.9nm,0.8s,baz=97,slow=7.4,SNR=90						
ASAR				ScP	ScP	15 42 36.6	+0.2
	comp=Z,0.5nm,0.8s,baz=102,slow=3.9,SNR=5.9						
	comp=Z,3.9nm,0.8s						
WB0	Warramunga Arr	41.94	266	P	P	15 37 51.9	+0.7
WB0				IAmb	IAmb	15 37 53.1	
	comp=Z,6.4nm,0.7s						
WRAB	Tennant Creek	41.94	266	P	P	15 37 51.7	+0.5
WRAB				IAmb	IAmb	15 37 53.1	
	comp=Z,3.9nm,0.8s						
WRA	Warramunga Arr	41.95	266	P	P	15 37 52.8	+1.6
	comp=Z,3.7nm,0.5s,baz=103,slow=8.1,SNR=102						
	comp=Z,3.7nm,0.5s						
FORT	Forrest	45.90	250	P	P	15 38 22.7	+1.0
FORT				IAmb	IAmb	15 38 24.2	
	comp=Z,14nm,0.9s						
MTN	Manton Dam	46.98	275	P	P	15 38 30.9	+0.7
MTN				IAmb	IAmb	15 38 43.1	
	comp=Z,5.0nm,1.0s						
KNRA	Kununurra	48.22	270	P	P	15 38 40.9	+1.4
KNRA				IAmb	IAmb	15 38 41.0	
	comp=Z,12nm,1.1s						
FITZ	Fitzroy Crossi	50.37	266	P	P	15 38 57.5	+2.1
	comp=Z,2.3nm,0.6s,baz=115,slow=7.1,SNR=8.6						
	comp=Z,2.3nm,0.6s						
FITZ	Fitzroy Crossi	50.37	266	P	P	15 38 57.4	+2.1
MORW	Morawa	56.46	250	P	P	15 39 38.7	+0.1
QSPA	South Pole Qui	66.25	180	P	P	15 40 41.6	-0.8
	comp=Z,0.5nm,0.7s,baz=30,slow=2.7,SNR=2.0						
	comp=Z,0.5nm,0.7s						

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*IDC **07** 15:32:15.5±0.7, 26°.72N×67°.25E, h0^{km}, mb4.2/23, mbtmp4.2/23, MS3.4/23, Error ellipse: s-maj=19.8km s-min=13.4km az=20.0*

*MOS **07** 15:32:19.5±1.2, 27°.05N×67°.40E, h27^{km}, mb4.6/22, Error ellipse: s-maj=7.7km s-min=4.5km az=99.0*

*NEIC **07** 15:32:21.2±2.1, 26°.9N±0°.1×67°.19E±0°.09, h34^{km}±6^{km}, mb4.5/21, Error ellipse: s-maj=16.7km s-min=11.4km az=160.0*

ISC 07 15:32:18.2±0.4, **26°.95N**±0°.04×**67°.23E**±0°.03, **h10**^{km}, **n222**, σ**1^{s}64**/213, **mb4.4**/64, **MS3.4**/24, **17C-4D**, **Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JASL	Jaisalmer	3.28	90	eP	Pb	15 33 16.8	+0.3
BHUJ	Bhuj	4.28	149	eP	Pn	15 33 25.7	+2.3
BHUJ				eS	Sn	15 34 09.8	-3.7
BHUJ				IAML		15 34 13.1	
	comp=E,650nm,0.3s						
BHUJ				IAML		15 34 13.2	
	comp=N,400nm,0.5s						
BKNR	BIKANER	5.48	77	eP	Pn	15 33 47.4	+7.5
BKNR				eS	Sn	15 34 46.1	+3.1
BKNR				IAML		15 35 21.8	
	comp=E,410nm,0.8s						
BKNR				IAML		15 35 33.9	
	comp=N,587nm,1.4s						
NGCH	Negor - Chabah	5.70	255	P	Pn	15 33 43.7	+0.8
	SNR=18						
NGCH				S	Sn	15 34 47.7	-0.7
UDPR	Udaipur	6.30	111	eP	Pn	15 33 56.4	+5.1
UDPR				eS	Sn	15 35 01.7	-1.7
KBL	Kabul	7.73	11	P	Pn	15 34 13.2	+2.2
KBL				S	Sn	15 35 40.3	+1.6
KBL	Kabul	7.73	11	Pn	Pn	15 34 12.3	+1.3
KBL	Kabul	7.73	11	P	Pn	15 34 12.3	+1.3
NIL	Nilore	8.47	36		Pn	15 34 20.1	-0.8
NIL	Nilore	8.47	36	P	Pn	15 34 20.2	-0.8
HRA	Herat	8.57	331		Pn	15 34 23.7	+1.2
JLN	Jalan Bani Buh	8.57	238	P	Pn	15 34 19.5	-2.9
WBK	Wadi Bani Khal	8.66	242	P	Pn	15 34 21.9	-1.7
JMU	Jammu	8.79	47	eP	Pn	15 34 32.4	+6.9
JMU				eS	Sn	15 36 04.8	+0.1
JMU				IAML		15 36 05.3	
	comp=E,278nm,0.3s						
JMU				IAML		15 36 06.0	
	comp=N,240nm,0.6s						
AYAN	Aya Nagar	8.90	78	eP	Pn	15 34 34.1	+7.2
AYAN				eS	Sn	15 36 06.4	-0.9
BIDO	Bidbid	8.92	250	P	Pn	15 34 25.6	-1.6
NDI	New Delhi	9.01	77	eP	Pn	15 34 35.3	+6.9
NDI				eS	Sn	15 36 08.8	-1.2
NDI				IAML		15 37 28.2	
	comp=E,62nm,2.3s						
NDI				IAML		15 37 34.6	
	comp=N,65nm,0.8s						
SMDO	Samad	9.18	247	P	Pn	15 34 29.5	-1.4
SMDO				P	Pn	15 34 29.5	-1.4
BHK	Bhakra	9.18	59	eP	Pn	15 34 41.2	+10
BHK				IAML		15 36 10.5	
	comp=E,214nm,0.7s						
BHK				IAML		15 36 11.3	
	comp=N,315nm,0.7s						
BHK				eS	Sn	15 36 22.0	+7.8
JMDO	Jabal Madar	9.47	243	P	Pn	15 34 34.2	-0.5
JMDO				S	Sn	15 36 18.7	-2.5
DHRM	DHARAMSHALA	9.50	54	eP	Pn	15 34 41.2	+5.9
DHRM				eS	Sn	15 36 21.5	-0.8
DHRM				IAML		15 36 22.9	
	comp=E,687nm,0.7s						
DHRM				IAML		15 36 22.9	
	comp=N,508nm,0.3s						
SRNI	Srinagar	9.63	41	eP	Pn	15 34 44.1	+6.4
SRNI				eS	Sn	15 36 25.5	-1.2
SMLA	Simla	9.64	62	eP	Pn	15 34 43.6	+6.6
SMLA				eS	Sn	15 36 22.3	-3.1
SMLA				IAML		15 36 22.4	
	comp=E,462nm,0.8s						
SMLA				IAML		15 36 23.5	
	comp=N,364nm,0.4s						
BANOM	Banah	9.85	267	P	Pn	15 34 39.5	-0.4
BANOM	Banah	9.85	267	P	Pn	15 34 39.0	-0.9
BANOM				S	Sn	15 36 22.6	-8.0
BHPL	Bhopal	9.95	110	eP	Pn	15 34 43.7	+2.4
MDH	Madha	9.96	263	P	Pn	15 34 40.8	-0.6
MDH	Madha	9.96	263	P	Pn	15 34 40.5	-0.9
SHME	Shamm	9.97	267	P	Pn	15 34 42.2	+0.6
SHME	Shamm	9.97	267	i P	Pn	15 34 41.7	+0.1
	SNR=8.9						
BSY	Bisya	10.02	248	P	Pn	15 34 42.9	+0.6
BSY				S	Sn	15 36 31.6	-3.2
SOHO	SOHO	10.06	256	P	Pn	15 34 41.4	-1.3
SOHO	SOHO	10.06	256	P	Pn	15 34 41.4	-1.3
MASF	Masafi	10.07	264	P	Pn	15 34 43.1	+0.1
MSFE	Esma-Masafi	10.07	263	P	Pn	15 34 42.6	-0.4
UOSS	Minazif	10.12	261	P	Pn	15 34 42.4	-1.3
UOSS				P	Pn	15 34 42.4	-1.3
UOSS	Minazif	10.12	261		Pn	15 34 42.3	-1.3
HATD	Hatta, Dubai	10.21	261	P	Pn	15 34 46.1	+1.2
HATD				P	Pn	15 34 46.1	+1.2
HATD	Hatta, Dubai	10.21	261	P	Pn	15 34 43.5	-1.4
ASHO	Ashiyiah	10.31	260	P	Pn	15 34 48.4	+2.1
	SNR=20						
ASHO	Ashiyiah	10.31	260	i P	Pn	15 34 46.0	-0.3
	SNR=20						
MHTO	MHTO	10.34	237	P	Pn	15 34 44.5	-2.0
ARQ	Araqi	10.34	252	P	Pn	15 34 48.5	+1.8
	SNR=14						
FAQ	Al Faqa, Dubai	10.71	261	P	Pn	15 34 54.5	+2.8
ALNE	Al Ain	10.76	257	P	Pn	15 34 53.9	+1.5
	SNR=14						
ALNE	Al Ain	10.76	257	i P	Pn	15 34 52.5	+0.1
	SNR=14						
ASUD	Al Ashush, Dub	10.97	260	P	Pn	15 34 55.2	-0.1
ALCI	Alchi Leh	11.22	47	eP	Pn	15 35 07.1	+8.0
ALCI				eS	Sn	15 37 02.3	-2.5
ALCI				IAML		15 37 04.6	
	comp=E,47nm,0.2s						
ALCI				IAML		15 37 04.7	
	comp=N,45nm,0.2s						
JOSI	Joshimath	11.40	69	eP	Pn	15 35 08.3	+6.9
JOSI				eS	Sn	15 37 04.3	-4.6
JOSI				IAML		15 37 06.4	
	comp=N,137nm,0.5s						
JOSI				IAML		15 37 07.6	
	comp=E,135nm,0.7s						
LGTI	Lohaghat	11.61	75	eP	Pn	15 35 08.4	+2.5
LGTI				eS	Sn	15 37 09.1	-8.0
LGTI				IAML		15 37 14.4	
	comp=E,32nm,0.3s						
LGTI				IAML		15 37 15.8	
	comp=N,39nm,0.7s						
CHGR	Chuyangaron	11.79	7		Pn	15 35 05.9	-0.6
CHGR	Chuyangaron	11.79	7	P	Pn	15 35 05.9	-0.6
GAR	Garm	12.30	11		Pn	15 35 14.2	+0.7
HYB	Hyderabad	14.13	130	eP	P	15 35 46.0	-0.2
KSH	Kashi	14.50	28	Pn	Pn	15 35 37.6	-6.1
KSH				Sn	Sn	15 38 10.2	-14
KSH				smax	smax		
	comp=N,64nm,0.8s						
KSH				smax	smax		
	comp=E,51nm,1.1s						
TRKS	Terek-Say	14.90	11	P	Pn	15 35 46.8	-2.3
ARSB	Arslanbob	15.11	17		Pn	15 35 50.1	-1.7
ARSB	Arslanbob	15.11	17	P	Pn	15 35 50.1	-1.7
ARSB				pmax	pmax		
	comp=Z,58nm,1.2s						
ARLS	Aral	15.98	20	P	Pn	15 36 02.5	-0.7
KKAR	Karatay Array	16.34	9		Pn	15 36 04.5	-3.2
KKAR	Karatay Array	16.34	9	P	Pn	15 36 04.5	-3.2
UCH	Uchtor	16.37	20	P	Pn	15 36 05.9	-2.7
	SNR=21						
EKS2	Erkin-Say	16.57	17	P	Pn	15 36 07.6	-3.1
	SNR=7.9						
AAK	Ala-Archa	16.74	19	P	Pn	15 36 11.5	-1.5
	SNR=7.2						
AAK	Ala-Archa	16.74	19	Pn	Pn	15 36 11.7	-1.2
	comp=Z,0.6nm,0.3s,baz=196,slow=7.5,SNR=23						
AAK				Sn	Sn	15 39 17.5	-1.5
	comp=Z,0.2nm,0.3s,baz=342,slow=20,SNR=2.9						
AAK				LR	LR	15 43 51.0	
	comp=Z,105nm,19.6s,baz=170,slow=41						
AAK	Ala-Archa	16.74	19		Pn	15 36 11.2	-1.8
AAK	Ala-Archa	16.74	19	i P	Pn	15 36 10.3	-2.6
	SNR=18						
AAK	Ala-Archa	16.74	19	ceP	Pn	15 36 10.6	-2.4
AAK				pmax	pmax		
	comp=Z,16nm,1.7s						
KBK	Karagaybulak	16.89	20	P	Pn	15 36 14.2	-0.6
	SNR=5.0						
BOOM	Boomskoye usch	17.06	22		Pn	15 36 15.5	-1.5
BOOM				IAmb	IAmb	15 36 20.1	
	comp=Z,80nm,1.5s						
BOOM	Boomskoye usch	17.06	22	P	Pn	15 36 15.5	-1.5
BOOM				pmax	pmax		
	comp=Z,80nm,1.5s						
TARG	Taragay, Kyrgy	17.12	28		Pn	15 36 16.4	-1.5
TARG	Taragay, Kyrgy	17.12	28	P	Pn	15 36 16.4	-1.5
TARG				pmax	pmax		
	comp=Z,15nm,0.9s						
CHMS	Chumysh	17.15	19	P	Pn	15 36 16.1	-1.8
	SNR=6.6						
KDJ	Kajisay	17.20	26		Pn	15 36 17.3	-1.5
KDJ	Kajisay	17.20	26	P	Pn	15 36 17.3	-1.5
KDJ				pmax	pmax		
	comp=Z,15nm,0.9s						
TKM2	Tokmak 2	17.34	21	P	Pn	15 36 18.9	-1.5
	SNR=17						
EVN	Everest	17.42	82		Pn	15 36 16.6	-5.4
LKRN	Lenkeran, Azer	19.40	312	P	P	15 36 46.2	+1.8
RAYN	Ar Rayn	19.94	265		P	15 36 47.6	-2.9
RAYN				IAmb	IAmb	15 36 52.6	
	comp=Z,18nm,1.0s						
RAYN	Ar Rayn	19.94	265	P	P	15 36 47.6	-2.9
RAYN				pmax	pmax		
	comp=Z,18nm,1.0s						
MNGR	Mingechevir, A	21.61	315	P	P	15 37 10.2	+1.9
AKT	Akhty	21.61	317	eP	P	15 37 08.8	+0.3
AKT				e		15 37 28.7	
AKT				pmax	pmax		
	comp=Z,43nm,1.0s						
SEKA	Sheki	21.79	316	P	P	15 37 11.8	+1.5
NAX	Nakhchivan	21.86	309	P	P	15 37 12.7	+1.6
GANJ	Ganja	22.03	314	P	P	15 37 14.6	+1.7
BRDH	Bariadhala	22.55	96	LR	LR	15 45 37.9	
	comp=Z,128nm,18.7s,baz=350,slow=36						
AB31	Akbulak array	22.98	348	P	P	15 37 23.6	+0.8
AB31				IAmb	IAmb	15 37 29.8	
	comp=Z,10.0nm,0.9s						
ABKAR	Akbulak array	22.98	348		P	15 37 21.9	-0.9
MAKZ	Makanchi	23.00	27		P	15 37 20.8	-2.3
MAKZ				IAmb	IAmb	15 37 37.5	
	comp=Z,14nm,1.1s						
MAKZ	Makanchi	23.00	27	P	P	15 37 20.8	-2.3
MAKZ				pmax	pmax		
	comp=Z,14nm,1.1s						
MK31	Makanchi Array	23.11	27	ceP	P	15 37 24.1	-0.2
MKAR	Makanchi Array	23.11	27	P	P	15 37 25.1	+0.8
	comp=Z,5.0nm,0.8s,baz=209,slow=9.4,SNR=29						
	comp=Z,5.0nm,0.8s						
MKAR	Makanchi Array	23.11	27		P	15 37 22.3	-2.0
MKAR	Makanchi Array	23.11	27	P	P	15 37 22.3	-2.0
PALK	Pallekele	23.38	144	LR	LR	15 46 43.0	
	comp=Z,83nm,18.9s,baz=326,slow=37						
WMQ	Urumqi	23.60	39	eP	P	15 37 26.8	-2.5
AKTO	Aktyubinsk	24.49	346	LR	LR	15 48 24.2	
	comp=Z,42nm,19.3s,baz=162,slow=39						
KURBB	Kurchatov Arra	25.17	17	P	P	15 37 44.0	+0.4
	comp=Z,5.0nm,0.6s,baz=209,slow=8.8,SNR=23						
	comp=Z,5.0nm,0.6s						
GOMU	GeErMu	25.18	62	P	P	15 37 39.6	-4.7
GOMU				S	S	15 42 04.2	-5.5
GOMU				pmax	pmax		
	comp=Z,480nm,1.2s						
NCK	Nalchik	25.27	317	i P	P	15 37 48.0	+3.3
KURK	Kurchatov	25.28	17		P	15 37 43.6	-1.0
KURK				IAmb	IAmb	15 37 49.9	
	comp=Z,13nm,1.2s						
KURK	Kurchatov	25.28	17	ceP	P	15 37 43.8	-0.8
KURK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
NEUR	Neytrino	25.70	316	i P	P	15 37 51.0	+2.3
NEUR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KBZ	Khabaz	25.83	317	P	P	15 37 51.1	+1.5
	comp=Z,3.4nm,0.9s,baz=152,slow=10,SNR=6.5						
	comp=Z,3.4nm,0.9s						
KBZ	Khabaz	25.83	317	ceP	P	15 37 51.4	+1.8
KBZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SHA1	Shidzhatmaz	25.98	317	ceP	P	15 37 54.8	+3.5
KIV	Kislovodsk	26.08	317	eP	P	15 37 54.0	+2.0
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,17nm,15.0s						
BVAR	Borovoye Array	26.16	4	P	P	15 37 54.1	+1.6
	comp=Z,5.1nm,0.7s,baz=175,slow=8.3,SNR=24						
	comp=Z,5.1nm,0.7s						
BORK	Borovoye	26.17	4	P	P	15 37 50.5	-2.2
BORK	Borovoye	26.17	4	ceP	P	15 37 54.2	+1.5
BORK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
DGZ	Jazzator, Alta	27.53	29	i P	P	15 38 06.5	+1.3
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.3s						
MMAI	Mount Meron Ar	28.16	290	LR	LR	15 51 36.3	
	comp=Z,75nm,18.2s,baz=84,slow=41						
EIL	Elat	28.50	283	LR	LR	15 52 12.1	
	comp=Z,124nm,18.9s,baz=168,slow=42						
GTA	Gaotai	29.81	57	eP	P	15 38 26.7	+1.2
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ZALV	Zalesovo Beam	29.94	21	P	P	15 38 26.0	-0.3
	comp=Z,1.1nm,0.4s,baz=224,slow=7.9,SNR=5.3						
	comp=Z,1.1nm,0.4s						
ZALV	Zalesovo Beam	29.94	21	P	P	15 38 23.9	-2.4
ARTI	Arti	30.10	350	LR	LR	15 51 52.7	
	comp=Z,59nm,20.5s,baz=249,slow=39						
CMAR	Chiang Mai Arr	30.39	99	P	P	15 38 29.7	-1.0
	comp=Z,1.7nm,0.7s,baz=299,slow=8.7,SNR=12						
CMAR				LR	LR	15 53 16.8	
	comp=Z,49nm,18.1s,baz=280,slow=42						
	comp=Z,1.7nm,0.7s						
BRTR	Keskin Array B	30.64	303	P	P	15 38 32.4	-0.5
	comp=Z,1.1nm,0.8s,baz=108,slow=7.9,SNR=5.6						
BRTR				PcP	PcP	15 41 30.6	-0.5
	comp=Z,0.8nm,1.0s,baz=137,slow=5.3,SNR=3.9						
BRTR				LR	LR	15 50 58.8	
	comp=Z,27nm,18.7s,baz=106,slow=36						
	comp=Z,1.1nm,0.8s						
BRTR	Keskin Array B	30.64	303	i P	P	15 38 34.7	+1.8
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
PZH	PanZhiHua	30.77	83	P	P	15 38 29.5	-4.7
KNGR	Kungurtug, Tuv	33.01	36	i P	P	15 38 54.5	+0.9
KNGR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KIRV	Kirov	33.99	343	LR	LR	15 54 38.2	
	comp=Z,57nm,19.8s,baz=158,slow=39						
KIRV	Kirov	33.99	343	ceP	P	15 39 02.3	+0.5
OBN	Obninsk	35.90	330	⇑eP	P	15 39 19.5	+1.2
OBN				*SP	pP	15 39 24.0	+2.5
OBN				i		15 39 34.5	
OBN				eS	S	15 44 57.8	+1.7
OBN				SSS	SSS	15 47 38.0	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,42nm,15.0s						
SONM	Songino Array	36.93	45	P	P	15 39 27.2	-0.2
	comp=Z,2.9nm,1.0s,baz=241,slow=6.4,SNR=12						
SONM				LR	LR	15 57 13.7	
	comp=Z,65nm,18.7s,baz=135,slow=40						
	comp=Z,2.9nm,1.0s						
VRI	Vrincioaia	37.18	311	⇑P	P	15 39 31.2	+1.7
VRI	Vrincioaia	37.18	311	P	P	15 39 31.1	+1.7
PLOR	Plostina	37.23	311	⇑P	P	15 39 31.3	+1.4
PLOR	Plostina	37.23	311	P	P	15 39 31.2	+1.4
AKASG	Malin Array Be	37.33	320	P	P	15 39 30.5	-0.1
	comp=Z,3.0nm,0.7s,baz=112,slow=7.0,SNR=10						
	comp=Z,3.0nm,0.7s						
AKASG	Malin Array Be	37.33	320	i P	P	15 39 30.6	0.0
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKBB	Malin Array Si	37.33	320		P	15 39 29.4	-1.2
AKBB	Malin Array Si	37.33	320	i P	P	15 39 30.5	-0.1
AKBB				pmax	pmax		
	comp=Z,16nm,0.9s						
KIEV	Kiev	37.34	320		P	15 39 29.4	-1.2
KIEV	Kiev	37.34	320	P	P	15 39 29.4	-1.2
KIEV				pmax	pmax		
	comp=Z,11nm,0.9s						
ULN	Ulaanbaatar	37.36	45	ceP	P	15 39 32.0	+0.9
ULN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
COVR	Voineasa-Covas	37.53	311	⇑P	P	15 39 33.9	+1.5
MLR	Muntele Rosu	37.61	310	LR	LR	15 58 02.2	
	comp=Z,49nm,18.9s,baz=103,slow=41						
MLR	Muntele Rosu	37.61	310	⇓P	P	15 39 34.7	+1.5
MLR	Muntele Rosu	37.61	310	P	P	15 39 34.7	+1.5
TURR	Turia	37.71	311	⇑P	P	15 39 35.0	+1.0
DOPR	Dopca	38.11	311	⇓P	P	15 39 37.3	0.0
ARR	Arges	38.47	310	⇑P	P	15 39 40.8	+0.4
BURAR	Bucovina Array	38.68	314		P	15 39 42.2	0.0
BURAR				IAmb	IAmb	15 39 44.2	
	comp=Z,7.1nm,0.8s						
BURAR	Bucovina Array	38.68	314	⇑P	P	15 39 42.6	+0.4
BURAR	Bucovina Array	38.68	314	P	P	15 39 42.5	+0.4
PSI	Prapat	38.69	123	LR	LR	15 56 40.5	
	comp=Z,59nm,18.2s,baz=312,slow=38						
BUR08	Bucovina Ar. S	38.70	314		P	15 39 42.2	-0.1
BUR08				IAmb	IAmb	15 39 44.0	
	comp=Z,6.7nm,0.8s						
KLMR	Klimovskoe	38.75	339	eP	P	15 39 41.2	-1.2
KLMR				e		15 41 09.6	
KLMR				pmax	pmax		
	comp=Z,12nm,1.3s						
HHC	Hu-ho-hao-te	38.92	58	eP	P	15 39 40.2	-4.1
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,40nm,4.7s						
MDVR	Moldovita	40.37	308	⇓P	P	15 39 56.6	+0.4
BZS	Buzias	40.60	310	⇓P	P	15 39 58.1	0.0
BZS	Buzias	40.60	310	P	P	15 39 58.0	0.0
XLT	XiLinHaoTe	42.60	54	eP	P	15 40 19.2	+4.6
XLT				pmax	pmax		
	comp=Z,13nm,1.1s						
LANS	Liptovska Anna	42.78	314	eP	P	15 40 17.5	+1.6
LANS	Liptovska Anna	42.78	314	eP	P	15 40 17.5	+1.6
MODS	Modra-Piesok	44.04	313	eP	P	15 40 27.1	+1.0
MODS	Modra-Piesok	44.04	313	eP	P	15 40 27.1	+1.0
MODS				e		16 02 06.3	
NRIK	Noril'sk	44.07	10	P	P	15 40 27.1	+1.1
	comp=Z,3.1nm,0.7s,baz=209,slow=12,SNR=7.6						
NRIK				LR	LR	16 03 26.1	
	comp=Z,40nm,18.2s,baz=165,slow=42						
	comp=Z,3.1nm,0.7s						
FINES	FINESS Array B	44.09	333	P	P	15 40 26.6	+0.3
	comp=Z,2.1nm,0.6s,baz=135,slow=9.9,SNR=11						
FINES				LR	LR	16 02 30.1	
	comp=Z,65nm,18.1s,baz=210,slow=41						
	comp=Z,2.1nm,0.6s						
RONA	Rosalia, Austr	44.57	312	i P	P	15 40 30.6	+0.2
	comp=Z,1.9nm,0.7s						
NJ2	Nanjing	44.88	71	eP	P	15 40 27.8	-5.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CRES	Cresnjevec Ost	44.89	309	i P	P	15 40 33.3	+0.4
ARSA	Arzberg	45.02	311	eP	P	15 40 34.4	+0.4
	comp=Z,4.7nm,1.2s						
DPC	Dobruska-Polom	45.03	315	eP	P	15 40 34.9	+0.9
DPC	Dobruska-Polom	45.03	315	eP	P	15 40 34.9	+0.9
OSTC	Ostas	45.14	316	eP	P	15 40 35.2	+0.3
OSTC	Ostas	45.14	316	eP	P	15 40 35.2	+0.3
CHVC	Chvalec	45.25	316	eP	P	15 40 37.0	+1.3
CHVC	Chvalec	45.25	316	eP	P	15 40 37.0	+1.3
SOKA	Soboth	45.28	310	i P	P	15 40 36.4	+0.3
	comp=Z,5.1nm,1.7s						
APA	Apatity	45.51	343	eP	P	15 40 36.3	-1.2
APA				MLR	MLR		
	comp=Z,1µm,4.3s						
OBKA	Obir	45.59	310	i P	P	15 40 39.0	+0.4
	comp=Z,6.0nm,1.7s						
CEY	Cerknica	45.60	309	i P	P	15 40 38.9	+0.3
CKRC	Cesky Krumlov	46.05	313	eP	P	15 40 41.6	-0.5
CKRC	Cesky Krumlov	46.05	313	eP	P	15 40 41.6	-0.5
CADS	Cadrg	46.12	309	i P	P	15 40 42.5	-0.2
ZVC	Zvikov	46.23	314	eP	P	15 40 43.7	+0.3
GERES	GERESS Array B	46.46	313	P	P	15 40 45.4	0.0
	comp=Z,2.0nm,0.7s,baz=79,slow=6.9,SNR=8.7						
GERES				PcP	PcP	15 42 20.1	+0.1
	comp=Z,1.7nm,0.8s,baz=74,slow=4.9,SNR=4.3						
	comp=Z,2.0nm,0.7s						
KHC	Kasperske Hory	46.58	313	eP	P	15 40 46.5	+0.3
KHC	Kasperske Hory	46.58	313	eP	P	15 40 46.5	+0.3
LESA	Schwarzleotal	46.97	311	eP	P	15 40 49.1	-0.3
	comp=Z,7.4nm,0.6s,SNR=12						
ABTA	Abfaltersbach	47.02	310	eP	P	15 40 49.8	0.0
	comp=Z,6.1nm,1.2s,SNR=4.2						
CLL	Collm	47.28	316	i P	P	15 40 52.0	+0.4
CLL				pmax	pmax		

	comp=Z,5.0nm,0.6s						
CLL	**Collm**	**47.28**	**316**	*i* P	**P**	**15 40 52.0**	**+0.4**
	comp=Z,5.0nm,0.6s						
WTTA	**Wattenberg**	**47.66**	**311**	*e*P	**P**	**15 40 54.0**	**-0.8**
	comp=Z,4.2nm,0.6s,SNR=5.2						
WATA	**Walderalm**	**47.70**	**311**	*i* P	**P**	**15 40 54.1**	**-1.1**
	comp=Z,2.7nm,0.7s						
SQTA	**Sankt Quirin**	**47.94**	**310**	*i* P	**P**	**15 40 55.9**	**-1.1**
	comp=Z,3.0nm,0.5s						
MOTA	**Moosalm**	**48.02**	**311**	*i* P	**P**	**15 40 56.6**	**-1.1**
	comp=Z,6.5nm,0.8s,SNR=5.9						
FETA	**Feichten**	**48.26**	**310**	*i* P	**P**	**15 40 58.7**	**-0.7**
	comp=Z,6.6nm,0.8s						
RETA	**Reutte**	**48.27**	**311**	*i* P	**P**	**15 40 58.5**	**-1.0**
	comp=Z,3.8nm,0.6s,SNR=5.2						
DAVA	**Damuels**	**48.85**	**310**	*i* P	**P**	**15 41 02.9**	**-1.2**
	comp=Z,6.5nm,0.6s						
ARCES	**ARCESS Array B**	**48.98**	**342**	P	**P**	**15 41 05.1**	**+0.5**
	comp=Z,7.4nm,0.7s,baz=123,slow=8.8,SNR=25						
ARCES				LR	LR	16 03 20.9	
	comp=Z,49nm,18.4s,baz=152,slow=38						
	comp=Z,7.4nm,0.7s						
HFS	**Hagfors**	**49.02**	**328**	P	**P**	**15 41 04.9**	**-0.1**
	comp=Z,4.7nm,0.7s,baz=116,slow=6.8,SNR=7.8						
HFS				LR	LR	16 04 35.4	
	comp=Z,45nm,18.2s,baz=82,slow=39						
	comp=Z,4.7nm,0.7s						
TUE	**Stuetta**	**49.17**	**309**		**P**	**15 41 05.2**	**-1.4**
TUE				IAmb	IAmb	15 41 08.1	
	comp=Z,4.0nm,0.7s						
KEST	**Kesra**	**49.59**	**295**	P	**P**	**15 41 11.0**	**+1.2**
	comp=Z,7.2nm,0.8s,baz=119,slow=0.9,SNR=8.7						
KEST				LR	LR	16 05 58.1	
	comp=Z,19nm,19.4s,baz=354,slow=41						
	comp=Z,7.2nm,0.8s						
NB2	**NORSAR Subarra**	**50.46**	**328**	P	**P**	**15 41 15.3**	**-0.7**
	comp=Z,3.4nm,0.8s,baz=109,slow=7.4						
NOA	**NORSAR Array B**	**50.46**	**328**	P	**P**	**15 41 15.1**	**-0.9**
	comp=Z,1.5nm,0.7s,baz=108,slow=7.1,SNR=5.8						
	comp=Z,1.5nm,0.7s						
KSRS	**Korea Array**	**51.64**	**62**	P	**P**	**15 41 24.9**	**-0.2**
	comp=Z,2.9nm,0.9s,baz=269,slow=7.6,SNR=5.1						
	comp=Z,2.9nm,0.9s						
YAK	**Yakutsk**	**53.69**	**31**	*ce*P	**P**	**15 41 40.4**	**+0.5**
YAK				pmax	pmax		
	comp=Z,11nm,1.3s						
JNU	**Nakatsue**	**54.72**	**67**	LR	LR	16 09 01.0	
	comp=Z,45nm,18.6s,baz=282,slow=40						
TIXI	**Tiksi**	**55.82**	**20**	LR	LR	16 08 28.8	
	comp=Z,54nm,21.4s,baz=206,slow=39						
TIXI	**Tiksi**	**55.82**	**20**	*i* P	**P**	**15 41 54.7**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
EKA	**Eskdalemuir Ar**	**57.24**	**320**	P	**P**	**15 42 05.2**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=107,slow=9.1,SNR=4.2						
	comp=Z,1.4nm,0.6s						
DAV	**Davao City (W)**	**58.67**	**98**	LR	LR	16 10 39.4	
	comp=Z,33nm,20.0s,baz=330,slow=39						
ESDC	**Sonseca Array**	**59.42**	**302**	P	**P**	**15 42 20.2**	**-1.0**
	comp=Z,1.4nm,0.8s,baz=74,slow=6.7,SNR=13						
	comp=Z,1.4nm,0.8s						
MJAR	**Matsushiro Arr**	**59.90**	**62**	LR	LR	16 08 33.4	
	comp=Z,39nm,20.8s,baz=292,slow=36						
JHJ	**Hachijo jima 2**	**61.98**	**65**	LR	LR	16 12 44.5	
	comp=Z,41nm,20.0s,baz=98,slow=39						
TORD	**Torodi Ar. Bea**	**62.48**	**271**	P	**P**	**15 42 41.3**	**-1.0**
	comp=Z,5.6nm,0.3s,baz=58,slow=7.6,SNR=4.6						
	comp=Z,5.6nm,0.3s						
WRA	**Warramunga Arr**	**79.99**	**118**	P	**P**	**15 44 26.0**	**-2.1**
	comp=Z,4.3nm,1.1s,baz=318,slow=4.7,SNR=10						
	comp=Z,4.3nm,1.1s						
WRAB	**Tennant Creek**	**79.99**	**118**	*ce*P	**P**	**15 44 29.4**	**+1.3**
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
D25K	**Kavik River**	**80.95**	**11**	P	**P**	**15 44 32.2**	**-0.4**
D25K				IAmb	IAmb	15 44 34.2	
	comp=Z,6.1nm,0.9s						
ASAR	**Alice Springs**	**81.71**	**122**	P	**P**	**15 44 35.0**	**-2.3**
	comp=Z,1.0nm,0.9s,baz=307,slow=5.4,SNR=14						
	comp=Z,1.0nm,0.9s						
ASAR	**Alice Springs**	**81.71**	**122**	P	**P**	**15 44 35.0**	**-2.3**
E28M	**Babbage River**	**82.71**	**10**	P	**P**	**15 44 41.4**	**-0.4**
E28M				IAmb	IAmb	15 44 43.7	
	comp=Z,3.1nm,0.8s						
INK	**Inuvik**	**83.80**	**8**	P	**P**	**15 44 47.2**	**-0.1**
INK				IAmb	IAmb	15 45 06.6	
	comp=Z,7.3nm,1.3s						
INK	**Inuvik**	**83.80**	**8**	P	**P**	**15 44 47.2**	**-0.1**
INK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
F31M	**Tsiigehtchic**	**84.59**	**8**	P	**P**	**15 44 51.5**	**+0.1**
YKA	**Yellowknife Ar**	**90.86**	**1**	P	**P**	**15 45 22.1**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=346,slow=4.5,SNR=5.8						
	comp=Z,0.4nm,0.8s						
TXAR	**Lajitas Array**	**123.36**	**350**	PKP	**PKPdf**	**15 51 15.6**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=344,slow=1.6,SNR=3.8						

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*GUC **07** 15:56:10.9±0.7,29°.71S×72°.00W,h34^{km}±5^{km},ML3.7*
*SJA **07** 15:56:10.6±1.8,29°.71S×71°.99W,h10^{km},ML3.7,MW3.6*
ISC 07 15:56:06.8±1.8**,29°.75S**±0°.03×**72°.06W**±0°.07**,h2**^{km}±12^{km}**,**
n24,σ1§32/32**,1C-1D,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.99**	**158**	*e*P	**Pn**	**15 56 29.1**	**+1.4**
CO06				*e*S	**Sn**	**15 56 42.2**	**-0.1**
GO04	**Tololo Observa**	**1.17**	**111**	⇓*i*P	**Pn**	**15 56 31.4**	**+1.0**
GO04				*e*S	**Sn**	**15 56 46.5**	**-0.6**
GO04	**Tololo Observa**	**1.17**	**111**	*e*S	**Sn**	**15 56 47.7**	**+0.5**
GO04				IAML		15 56 50.4	
	comp=Z,4µm,0.5s						
LCO	**Las Campanas**	**1.40**	**58**	*e*P	**Pg**	**15 56 34.3**	**+0.7**
LCO				*e*S	**Sn**	**15 56 52.2**	**-0.5**
CO03	**El Pedregal**	**1.60**	**133**	*e*P	**Pg**	**15 56 38.5**	**+0.9**
CO03				*e*S	**Sg**	**15 56 59.0**	**+0.6**
CO03				IAML		15 57 05.5	
	comp=N,860nm,0.3s						
CO02	**Combarbal**	**1.71**	**148**	⇑*i*P	**Pg**	**15 56 40.4**	**+0.8**
CO02				*e*S	**Sg**	**15 57 02.2**	**+0.4**
CO02				IAML		15 57 10.1	
	comp=N,2µm,0.7s						
CO01	**Juntas del Tor**	**1.72**	**98**	*e*P	**Pg**	**15 56 40.3**	**+0.5**
CO01				*e*S	**Sb**	**15 57 01.5**	**0.0**
CO01				IAML		15 57 05.8	
	comp=N,848nm,0.4s						
AC04	**Llanos de Chal**	**1.77**	**29**	*e*P	**Pn**	**15 56 38.8**	**+0.4**
AC05	**El Transito**	**1.81**	**60**	*i* P	**Pb**	**15 56 40.7**	**0.0**
AC05				*e*S	**Sb**	**15 57 03.8**	**-0.1**
AC05				IAML		15 57 05.6	
	comp=N,1µm,0.7s						
AROD	**Rodeo**	**2.28**	**101**	*e*P	**Pg**	**15 56 50.1**	**-0.4**
AROD				*e*S	**Sg**	**15 57 19.6**	**-0.5**
CO04	**Los Peladeros**	**2.47**	**158**	*e*P	**Pb**	**15 56 51.7**	**-0.4**
CO04				IAML		15 57 33.9	
	comp=N,402nm,0.4s						
GO03	**Copiapo**	**2.68**	**37**	*e*P	**Pn**	**15 56 52.5**	**+1.5**
GO03				IAML		15 57 40.0	
	comp=N,249nm,0.3s						
GO03	**Copiapo**	**2.68**	**37**	*e*P	**Pb**	**15 56 55.5**	**-0.1**
GO03				IAML		15 57 40.4	
	comp=Z,212nm,0.6s						
ACCO	**Cerro Coronel**	**2.72**	**109**	*e*P	**Pb**	**15 56 57.2**	**+0.8**
ACCO				*e*S	**Sg**	**15 57 33.1**	**-1.2**
AC06	**Mina Casimiro**	**2.82**	**33**	*e*P	**Pn**	**15 56 54.7**	**+1.8**
AC06				IAML		15 57 39.6	
	comp=E,219nm,0.4s						
VA06	**Catapilco**	**2.88**	**167**	*e*P	**Pb**	**15 56 56.4**	**-2.4**
VA06				IAML		15 57 54.1	
	comp=N,345nm,0.5s						
RTLS	**Leoncito**	**3.13**	**131**	*e*P	**Pb**	**15 57 03.2**	**-0.2**
RTLS				IAML		15 57 58.0	
	comp=Z,500nm,0.8s						
VA03	**San Esteban**	**3.27**	**157**	*e*P	**Pb**	**15 57 04.0**	**-1.6**
VA03				IAML		15 57 57.8	
	comp=Z,152nm,0.9s						
AUSP	**Uspallata**	**3.37**	**138**	*e*P	**Pb**	**15 57 06.2**	**-1.2**
AC01	**Pan de Azucar**	**3.81**	**20**	*e*P	**Pn**	**15 57 06.4**	**-0.3**
AC02	**Maricunga**	**3.89**	**42**	*e*P	**Pn**	**15 57 09.9**	**+1.9**
TINO	**Tinogasta**	**4.28**	**68**	*e*P	**Pb**	**15 57 18.8**	**-4.0**
AAGR	**Agrelo**	**4.32**	**141**	*e*P	**Pb**	**15 57 21.6**	**-2.0**
AAGR				IAML		15 58 55.5	
	comp=Z,68nm,0.9s						
ACLC	**CERRO LA CRUZ**	**4.46**	**87**	*e*P	Pn	15 57 20.3	+4.7
ACLC				IAML		15 58 33.5	
	comp=Z,52nm,0.8s						

DJA 07 16:03:20.6±0.2**,9°S**±3°×**11°8E**±°**,h114**^{km}±3^{km}**,M4.1**/24**,**
mb4.2/7**,MLv4.0**/24**,Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBNI	**Kabupaten Domp**	**0.19**	**346**	P	Pn	16 03 37.4	+0.9
DBNI				S	Sn	16 03 50.2	+1.8
PLAI	**Plampang**	**0.59**	**257**	P	Pn	16 03 39.7	+1.2
PLAI				S	Sn	16 03 54.3	+2.3
WBSI	**Waikabubak, Su**	**1.39**	**133**	P	Pn	16 03 46.5	+0.1
WBSI				S	Sn	16 04 06.7	+0.7
TWSI	**Taliwang, Sumb**	**1.46**	**268**	P	Pn	16 03 47.6	+0.4
LBFI	**Labuhan Bajo,**	**1.53**	**82**	P	Pn	16 03 47.8	-0.2
WSI	**Waingapu**	**2.15**	**117**	P	Pn	16 03 56.1	+0.5
KLNI	**Mataram**	**2.26**	**277**	P	Pn	16 03 56.6	-0.4
BASI	**Baing, Sumba**	**2.66**	**125**	P	Pn	16 04 02.8	+0.5
KHKI	**Kahang-Kahang**	**2.74**	**277**	P	Pn	16 04 04.1	+0.8
IGBI	**Denpasar**	**3.18**	**267**	P	Pn	16 04 09.6	+0.5
EDFI	**Ende, Flores**	**3.29**	**91**	P	Pn	16 04 11.0	+0.3
RTBI	**Rangdo, Negare**	**3.39**	**274**	P	Pn	16 04 12.0	+0.1
MKS	**Makassar**	**3.62**	**18**	P	Pn	16 04 14.8	-0.2
BKSI	**Bulukumba**	**3.78**	**28**	P	Pn	16 04 16.4	-0.7
MMRI	**Maumere**	**3.83**	**89**	P	Pn	16 04 18.2	+0.4
KAPI	**Kappang**	**3.91**	**21**	P	Pn	16 04 18.2	-0.6
JAGI	**Jajag, Banyuwa**	**4.17**	**273**	P	Pn	16 04 20.6	-1.7
ABJI	**Asem Bagus**	**4.18**	**282**	P	Pn	16 04 23.4	+1.0
BNSI	**Bone**	**4.60**	**22**	P	Pn	16 04 28.4	+0.3
KMMI	**Kalianget**	**4.65**	**290**	P	Pn	16 04 30.4	+1.7
BLJI	**Banyuglugur**	**4.81**	**281**	P	Pn	16 04 31.6	+0.7
GMJI	**Gumukmas**	**4.88**	**275**	P	Pn	16 04 30.7	-1.2
BATI	**Baumata**	**5.45**	**106**	P	Pn	16 04 39.2	-0.3
	0.2nm28nm,0.5s						
TTSI	**Tana Toraja**	**5.79**	**15**	P	Pn	16 04 43.8	-0.4
SOEI	**Soe**	**5.93**	**101**	P	Pn	16 04 45.4	-0.7
	0.1nm24nm,0.6s						
SNJI	**Sawahan-Nganju**	**6.60**	**277**	P	Pn	16 04 55.3	+0.1
PCJI	**Pacitan**	**7.12**	**273**	P	Pn	16 05 01.6	-0.6
	13nm,1.1s						
UGM	**Wanagama**	**7.79**	**275**	P	Pn	16 05 11.9	+0.5
APSI	**Ampana**	**8.39**	**23**	P	Pn	16 05 18.9	-0.6
	20nm,0.8s						
KPJI	**Karang Pucung**	**9.44**	**278**	P	Pn	16 05 34.0	+0.4

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*IDC **07** 16:15:08.8±0.8,15°.65N×147°.97E,h0^{km},mb4.1/18,*
mbtmp4.1/19,ML4.1/1,MS3.1/6,Error ellipse:
s-maj=23.7km s-min=16.3km az=101.0
*NEIC **07** 16:15:09.8±2.4,15°.61N±0°.09×148°.03E±0°.08,h10^{km}±1^{km},*
mb4.5/11,Error ellipse: s-maj=15.6km s-min=12.8km
az=177.0
ISC 07 16:15:13.1±0.7**,15°.60N**±0°.09×**147°.85E**±0°.10**,h29**^{km}**,n49,**
σ1§11/41**,mb4.1**/24**,MS3.4**/5**,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DPSS	**Saipan**	**2.02**	**260**		**Pn**	**16 15 45.0**	**-0.2**
DPSS				Sn	**Sn**	**16 16 09.8**	**+0.3**
GUMO	**Guam**	**3.51**	**236**	Pn	**Pn**	**16 16 06.7**	**+1.0**
	17nm,0.3s,baz=118,slow=9.2,SNR=8.5						
GUMO				Sn	**Sn**	**16 16 44.0**	**-2.3**
	38nm,0.3s,baz=29,slow=20,SNR=6.5						
GUMO				LR	LR	16 17 00.8	
	comp=Z,51nm,21.9s,baz=108,slow=31						
	37nm,0.3s						
GUMO	**Guam**	**3.51**	**236**	Pn	**Pn**	**16 16 06.3**	**+0.6**
PATS	**Pohnpei**	**13.45**	**129**		Pn	16 18 15.6	-6.5
H11S3	**WAKE ISLAND Hy**	**18.24**	**78**	T	T	16 37 41.9	
	baz=263,slow=74,SNR=26						
H11S1	**WAKE ISLAND Hy**	**18.25**	**78**	T	T	16 37 41.6	
	baz=263,slow=74,SNR=23						
H11S2	**WAKE ISLAND Hy**	**18.25**	**78**	T	T	16 37 40.2	
	baz=263,slow=74,SNR=23						
H11N1	**WAKE ISLAND Hy**	**18.60**	**75**	T	T	16 38 14.9	
	baz=260,slow=74,SNR=4.4						
H11N2	**WAKE ISLAND Hy**	**18.61**	**74**	T	T	16 38 13.0	
	baz=260,slow=74,SNR=3.8						
H11N3	**WAKE ISLAND Hy**	**18.62**	**75**	T	T	16 38 14.6	
	baz=260,slow=74,SNR=3.8						
JSG	**Sagara**	**20.89**	**337**	P	**P**	**16 19 49.1**	**-4.0**
MJAR	**Matsushiro Arr**	**22.56**	**339**	P	**P**	**16 20 09.6**	**-1.3**
	4.4nm,0.8s,baz=167,slow=9.8,SNR=11						
	4.4nm,0.8s						
JNU	**Nakatsue**	**23.25**	**322**	LR	LR	16 28 25.5	
	comp=Z,30nm,21.1s,baz=72,slow=34						
KSRS	**Korea Array**	**28.02**	**325**	P	**P**	**16 21 01.1**	**-0.6**
	1.0nm,0.8s,baz=150,slow=9.5,SNR=4.8						
	1.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**31.53**	**338**	P	**P**	**16 21 34.0**	**+1.3**
	1.8nm,0.7s,baz=141,slow=7.0,SNR=4.3						
	1.8nm,0.7s						
WRAB	**Tennant Creek**	**37.72**	**201**	P	**P**	**16 22 26.0**	**-0.4**
WRAB				IAmb	IAmb	16 22 38.6	
	comp=Z,7.5nm,0.8s						
WRA	**Warramunga Arr**	**37.73**	**201**	P	**P**	**16 22 26.6**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=25,slow=9.3,SNR=9.4						
	comp=Z,1.8nm,0.7s						
PETK	**Petropavlovsk-**	**38.23**	**10**	LR	LR	16 37 47.1	
	comp=Z,16nm,19.4s,baz=5.1,slow=36						
AS31	**Alice Springs**	**41.34**	**200**	P	**P**	**16 22 56.9**	**+0.4**
ASAR	**Alice Springs**	**41.34**	**200**	P	**P**	**16 22 57.0**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=24,slow=8.2,SNR=31						
	comp=Z,1.5nm,0.6s						
ASAR	**Alice Springs**	**41.34**	**200**	P	**P**	**16 22 54.7**	**-1.9**
DZM	**Mont Dzumac**	**41.63**	**154**	LR	LR	16 39 04.5	
	comp=Z,80nm,19.5s,baz=14,slow=34						
LZDM	**Lanzhou Array**	**44.18**	**306**	P	**P**	**16 23 21.3**	**+1.4**
	comp=Z,2.3nm,0.3s,baz=138,slow=7.2,SNR=4.3						
	comp=Z,2.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**46.74**	**281**	P	**P**	**16 23 41.6**	**+1.6**
	comp=Z,1.0nm,0.4s,baz=78,slow=5.7,SNR=7.2						
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**46.74**	**281**	P	**P**	**16 23 40.8**	**+0.7**
SONM	**Songino Array**	**46.84**	**322**	P	**P**	**16 23 40.8**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=140,slow=11,SNR=4.1						
SONM				LR	LR	16 43 37.2	
	comp=Z,45nm,18.9s,baz=236,slow=36						
	comp=Z,0.8nm,0.7s						
SONM	**Songino Array**	**46.84**	**322**	P	**P**	**16 23 40.0**	**-0.6**
SONM				IAmb	IAmb	16 23 55.0	
	comp=Z,5.3nm,1.5s						
BBOO	**Buckleboo**	**49.44**	**193**	P	**P**	**16 24 00.6**	**0.0**
BBOO				IAmb	IAmb	16 24 12.8	
	comp=Z,13nm,1.0s						
BILL	**Bilibino**	**53.74**	**8**	P	**P**	**16 24 33.6**	**+1.3**
BILL				IAmb	IAmb	16 24 34.1	
	comp=Z,5.6nm,0.9s						
ZALV	**Zalesovo Beam**	**61.72**	**323**	P	**P**	**16 25 28.0**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=99,slow=9.3,SNR=2.6						
ZALV				PcP	**PcP**	**16 26 09.6**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=116,slow=4.2,SNR=6.4						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**62.09**	**315**	P	**P**	**16 25 32.0**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=91,slow=6.6,SNR=7.4						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**62.09**	**315**	P	**P**	**16 25 31.0**	**-0.3**
D20K	**Etivluk River**	**63.39**	**20**	P	**P**	**16 25 39.4**	**-0.2**
KURK	**Kurchatov**	**64.94**	**319**	P	**P**	**16 25 50.1**	**+0.1**
KURK				IAmb	IAmb	16 26 06.7	
	comp=Z,2.2nm,0.8s						
KURBB	**Kurchatov Arra**	**64.99**	**319**	P	**P**	**16 25 50.5**	**+0.2**
	comp=Z,2.7nm,0.7s,baz=98,slow=6.9,SNR=28						
	comp=Z,2.7nm,0.7s						
NRIK	**Noril'sk**	**65.21**	**340**	P	**P**	**16 25 51.9**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=121,slow=9.6,SNR=4.4						
	comp=Z,1.3nm,0.5s						
NRIK	**Noril'sk**	**65.21**	**340**	P	**P**	**16 25 50.6**	**-0.8**
D23K	**Nanushuk River**	**65.46**	**20**	P	**P**	**16 25 53.7**	**+0.6**
D23K				IAmb	IAmb	16 26 10.9	
	comp=Z,3.9nm,1.2s						
ILAR	**Eielson Array**	**65.53**	**25**	P	**P**	**16 25 52.9**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=251,slow=5.6,SNR=12						
	comp=Z,0.9nm,0.7s						
ILAR	**Eielson Array**	**65.53**	**25**	P	**P**	**16 25 52.3**	**-1.3**
BVAR	**Borovoye Array**	**70.17**	**321**	P	**P**	**16 26 23.5**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=113,slow=6.8,SNR=3.9						
	comp=Z,1.1nm,0.7s						
AKTO	**Aktyubinsk**	**78.04**	**319**	LR	LR	17 01 52.9	
	comp=Z,19nm,21.3s,baz=148,slow=36						
YKA	**Yellowknife Ar**	**79.75**	**28**	P	**P**	**16 27 18.4**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=288,slow=6.3,SNR=9.6						
	comp=Z,0.9nm,0.6s						
YKA	**Yellowknife Ar**	**79.75**	**28**	P	**P**	**16 27 17.0**	**-1.2**
BMO	**Blue Mountains**	**82.53**	**46**	P	**P**	**16 27 32.6**	**-0.9**
BMO				IAmb	IAmb	16 27 34.6	
	comp=Z,3.4nm,1.1s						
NVAR	**Mina Array Bea**	**83.42**	**52**	P	**P**	**16 27 39.2**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=296,slow=6.4,SNR=4.8						
	comp=Z,0.9nm,0.6s						
ARCES	**ARCESS Array B**	**86.05**	**343**	P	**P**	**16 27 51.0**	**+0.3**
	comp=Z,1.8nm,0.6s,baz=28,slow=5.5,SNR=11						
	comp=Z,1.8nm,0.6s						
FINES	**FINESS Array B**	**90.54**	**336**	P	**P**	**16 28 11.0**	**-1.2**
	comp=Z,3.4nm,0.5s,baz=68,slow=4.3,SNR=46						
	comp=Z,3.4nm,0.5s						
DBIC	**Dimbokro**	**145.07**	**307**	PKPbc	**PKPab**	**16 34 48.2**	**+0.1**
	comp=Z,10nm,0.8s,baz=78,slow=1.8,SNR=12						

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*SKO **07** 16:51:32.2,41°.48N×19°.32E,h0^{km},ML3.0*
*PDG **07** 16:51:33.5±0.3,41°.45N×19°.43E,h19^{km},MD3.1/1,*
ML3.0/13,Error ellipse: s-maj=0.9km s-min=1.7km az=0.0
*BEO **07** 16:51:34.6±0.7,41°.47N×19°.58E,h10^{km}±4^{km},ML2.9/10*
*TIR **07** 16:51:34.5,41°.59N×19°.64E,h31^{km}±1^{km},Ml3.1/5*
ISC 07 16:51:34.5±0.9**,41°.50N**±0°.02×**19°.57E**±0°.02**,h11**^{km}±8^{km}**,**
n63,σ1§11/112**,21C-18D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.27**	**124**	P	**Pg**	**16 51 40.1**	**+0.1**
TIR				Sg	**Sg**	**16 51 43.9**	**+0.3**
TIR				AML	AML	16 51 46.3	
	21nm,0.5s						
TIR	**Tirane**	**0.27**	**124**	*i* Pg	**Pg**	**16 51 40.1**	**+0.1**
TIR				*i* Sg	**Sg**	**16 51 45.4**	**+1.7**
ULC	**Ulcinj**	**0.53**	**332**	⇓*i*Pg	**Pg**	**16 51 43.6**	**-1.2**
ULC				*i* Sg	**Sg**	**16 51 52.0**	**+0.2**
SDA	**Shkodra**	**0.56**	**354**	Pg	**Pg**	**16 51 44.4**	**-1.0**
SDA				S	**Sg**	**16 51 52.4**	**-0.4**
SDA				AML	AML	16 51 56.5	
	2.2nm,0.3s						
PHP	**Peshkopia**	**0.68**	**74**	P	**Pg**	**16 51 46.6**	**-1.1**
PHP				Sg	**Sg**	**16 51 55.7**	**-0.9**
PHP				AML	AML	16 52 00.9	
	2.7nm,0.3s						
DRME	**Dracevica, Mon**	**0.75**	**337**	⇑*i*Pg	**Pg**	**16 51 47.8**	**-1.2**
DRME				*e*Sg	**Sg**	**16 51 59.8**	**+1.0**
BUM	**Brajici-Budva**	**0.95**	**328**	⇓*i*Pg	**Pg**	**16 51 51.2**	**-1.6**
BUM				*i* Sg	**Sb**	**16 52 06.7**	**+1.0**
PDG	**Podgorica**	**0.96**	**346**	⇑P	**Pg**	**16 51 51.8**	**-1.2**
PDG				⇑S	**Sg**	**16 52 04.2**	**-1.3**
PDG	**Podgorica**	**0.96**	**346**	*e*Pg	**Pg**	**16 51 52.1**	**-1.0**
PDG				*e*Sg	**Sb**	**16 52 07.1**	**+1.1**
PDG	**Podgorica**	**0.96**	**346**	⇑*i*Pg	**Pg**	**16 51 51.8**	**-1.2**
PDG				*i* Sg	**Sb**	**16 52 07.5**	**+1.5**
OHR	**Ohrid**	**1.00**	**112**	*i* Pg	**Pg**	**16 51 53.0**	**-0.9**
OHR				*i* Sg	**Sn**	**16 52 09.8**	**+1.0**
OHR				*e*Lg	Lg	16 52 10.8	
	comp=N,430nm,0.8s						
OHR				*e*Lg	Lg	16 52 11.1	
	comp=E,281nm,0.6s						
VLO	**Vlora**	**1.03**	**183**	P	**Pn**	**16 51 55.3**	**+0.3**
VLO				Sg	**Sn**	**16 52 10.3**	**+0.9**
VLO				AML	AML	16 52 16.6	
	comp=E,4.0nm,0.4s						
PVY	**Plav**	**1.13**	**15**	⇑*i*Pg	**Pg**	**16 51 53.8**	**-2.5**
PVY				*i* Sg	**Sn**	**16 52 14.8**	**+2.6**
CEME	**Cevo**	**1.16**	**335**	⇑*i*Pg	**Pg**	**16 51 55.4**	**-1.4**
CEME				*e*Sg	**Sn**	**16 52 13.5**	**+0.9**
HCY	**Herceg Novi**	**1.24**	**320**	⇓*i*Pg	**Pn**	**16 51 57.8**	**-0.1**
HCY				*i* Sg	**Sb**	**16 52 14.8**	**+0.7**
KBN	**Korca**	**1.27**	**133**	P	**Pn**	**16 51 58.0**	**-0.3**
KBN				Sg	**Sn**	**16 52 15.9**	**+0.6**
NKME	**Niksic**	**1.35**	**340**	⇓*i*Pg	**Pn**	**16 51 58.1**	**-1.3**
NKME				*e*Sg	**Sb**	**16 52 18.1**	**+0.9**
KOME	**Kolasin**	**1.35**	**358**	⇓*i*Pg	**Pn**	**16 51 59.4**	**-0.1**
KOME				*e*Sg	**Sg**	**16 52 19.5**	**+1.4**
IVA	**Berane**	**1.39**	**10**	⇓*i*Pg	**Pn**	**16 51 59.5**	**-0.6**
IVA				*i* Sg	**Sg**	**16 52 21.5**	**+2.1**
SKO	**Skopje**	**1.48**	**71**	*i* Pg	**Pg**	**16 52 02.0**	**-0.9**
SKO				*i* Sg	**Sg**	**16 52 23.5**	**+1.5**
NEST	**Nestorio**	**1.56**	**134**	Pn	**Pg**	**16 52 03.6**	**-0.8**
NEST				Sn	**Sg**	**16 52 24.5**	**-0.1**
NEST				AML	AML	16 52 30.0	
	comp=E,0.8nm,0.7s						
BRY	**Bratogost**	**1.60**	**332**	⇑*i*Pn	**Pn**	**16 52 01.5**	**-1.4**
BRY				*i* Sn	**Sn**	**16 52 24.4**	**+0.7**
UPM	**Unac-Piva**	**1.77**	**344**	⇑*i*Pn	**Pn**	**16 52 05.1**	**-0.3**
UPM				*i* Sn	**Sn**	**16 52 29.0**	**+0.9**
SJES	**Sjenica**	**1.79**	**9**	*e*Pg	**Pn**	**16 52 06.5**	**+1.0**
SJES				*e*Sg	**Sb**	**16 52 31.5**	**+1.6**
PLE	**Pljevlja**	**1.84**	**356**	⇓*i*Pn	**Pn**	**16 52 06.0**	**-0.2**
PLE				*i* Sn	**Sn**	**16 52 30.9**	**+1.4**
STON	**Ston**	**1.95**	**315**	*e*Pg	**Pb**	**16 52 09.7**	**-0.5**
STON				*e*Sg	**Sb**	**16 52 35.3**	**+0.8**
IGT	**Igoumenitsa**	**2.05**	**163**	Pn	**Pb**	**16 52 10.3**	**-1.5**
IGT				Sn	**Sg**	**16 52 38.8**	**-1.6**
IGT	**Igoumenitsa**	**2.05**	**163**	*i* Pn	**Pn**	**16 52 09.5**	**+0.5**
IGT				*i* Sn	**Sg**	**16 52 38.4**	**-1.9**
SELS	**Selova**	**2.07**	**33**	*e*Pn	**Pn**	**16 52 09.9**	**+0.6**
SELS				*e*Sn	**Sn**	**16 52 35.4**	**+0.3**
IVAS	**Ivanjica**	**2.12**	**11**	*e*Pn	**Pn**	**16 52 10.5**	**+0.5**
IVAS				*e*Sn	**Sb**	**16 52 38.9**	**-0.5**
BARS	**Barje**	**2.12**	**51**	*i* Pn	**Pn**	**16 52 10.2**	**+0.2**
BARS				*i* Sn	**Sn**	**16 52 36.6**	**+0.2**
BARS	**Barje**	**2.12**	**51**	*e*Pn	**Pn**	**16 52 10.8**	**+0.8**
BARS				*e*Sn	**Sn**	**16 52 36.7**	**+0.2**
VAY	**Valandovo**	**2.26**	**93**	*i* Pn	**Pn**	**16 52 12.6**	**+0.7**
VAY				*i* Sn	**Sb**	**16 52 41.4**	**-2.0**
VAY				*e*Lg	Lg	16 52 42.9	
	comp=E,36nm,0.7s						
VAY				*e*Lg	Lg	16 52 44.4	
	comp=N,105nm,1.1s						
GOCS	**Kraljevo Serbi**	**2.28**	**25**	*e*Pn	**Pn**	**16 52 13.4**	**+1.2**
GOCS				*e*Sn	**Sn**	**16 52 39.9**	**-0.4**
MATE	**Matera**	**2.33**	**250**	⇑P	**Pb**	**16 52 17.6**	**+1.1**
MATE				⇑S	**Sg**	**16 52 49.1**	**-0.2**
BBLS	**Lazi&#263i**	**2.37**	**357**	*e*Pn	**Pn**	**16 52 15.4**	**+1.9**
BOSS	**Bosilegrad**	**2.39**	**64**	*e*Pn	**Pn**	**16 52 14.1**	**+0.5**
BOSS				*e*Sn	**Sn**	**16 52 41.8**	**-1.1**
KNT	**Kendrikon**	**2.53**	**97**	*i* Pn	**Pn**	**16 52 16.2**	**+0.6**
GRUS	**Gruza**	**2.53**	**19**	*e*Pn	**Pn**	**16 52 16.3**	**+0.7**
DIVS	**Divibare**	**2.62**	**7**	*e*Pn	**Pn**	**16 52 18.6**	**+1.7**
LIT	**Litokhoron**	**2.62**	**121**	*i* Pn	**Pn**	**16 52 17.4**	**+0.6**
LIT				*i* Sn	**Sn**	**16 52 49.6**	**+1.0**
BOVS	**Bovan**	**2.65**	**36**	⇓P	**Pn**	**16 52 18.6**	**+1.3**
BOVS				⇓S	**Sn**	**16 52 48.8**	**-0.7**
BOVS	**Bovan**	**2.65**	**36**	*e*Pn	**Pn**	**16 52 18.4**	**+1.1**
BOVS				*e*Sn	**Sn**	**16 52 49.2**	**-0.3**
KKB	**Krupnik**	**2.69**	**81**	*i* Pn	**Pn**	**16 52 18.5**	**+0.8**
KKB				*i* Sn	**Sn**	**16 52 52.2**	**+1.9**
TRUS	**Trudelj**	**2.79**	**12**	*e*Pn	**Pn**	**16 52 19.8**	**+0.6**
ZAPS	**Zavoj**	**2.88**	**51**	*e*Pn	**Pn**	**16 52 21.7**	**+1.3**
ZAPS				*e*Sn	**Sn**	**16 52 55.3**	**+0.2**
ZAGS	**Zajecar**	**3.03**	**39**	*e*Pn	**Pn**	**16 52 23.9**	**+1.4**
TEKS	**Tekeris**	**3.05**	**359**	*e*Pn	**Pn**	**16 52 22.9**	**+0.1**
BLKB	**Belogradchik**	**3.12**	**46**	⇓S	**Sn**	**16 53 00.7**	**-0.5**
TIP	**Timpagrande**	**3.16**	**224**	⇑P	**Pb**	**16 52 30.7**	**0.0**
KUBS	**Kucevo**	**3.30**	**27**	*e*Pn	**Pn**	**16 52 25.0**	**-1.1**
MDVR	**Moldovita**	**3.64**	**25**	⇑P	**Pn**	**16 52 31.6**	**+0.8**
MDVR				⇑S	**Sn**	**16 53 11.6**	**-2.2**
BLY	**Banja Luka**	**3.69**	**333**	⇑P	**Pn**	**16 52 33.1**	**+1.6**
BLY				⇑S	**Sn**	**16 53 14.0**	**-1.0**
HERR	**Herculane**	**3.97**	**31**	⇑P	**Pn**	**16 52 36.2**	**+0.8**
HERR				⇑S	**Sn**	**16 53 21.2**	**-0.7**
BZS	**Buzias**	**4.38**	**19**	⇓P	**Pn**	**16 52 41.8**	**+0.9**
BZS				⇓S	**Sn**	**16 53 29.8**	**-2.1**
GZR	**Gura Zlata**	**4.54**	**30**	⇑P	**Pn**	**16 52 44.0**	**+0.7**
GZR				⇓S	**Sn**	**16 53 34.7**	**-1.3**
MORH	**Mrgy, Hungar**	**4.76**	**352**	⇓P	**Pn**	**16 52 47.5**	**+1.2**
LOT	**Lotru**	**4.99**	**36**	⇑P	**Pn**	**16 52 50.6**	**+1.1**
LOT				⇑S	**Sn**	**16 53 47.3**	**0.0**
SIRR	**Siria**	**5.00**	**17**	⇑P	**Pn**	**16 52 49.9**	**+0.3**
ARR	**Arges**	**5.34**	**42**	⇓P	**Pn**	**16 52 55.4**	**+1.1**
ARR				⇓S	**Sn**	**16 53 54.9**	**-0.9**
DRGR		**5.75**	**22**	⇓P	**Pn**	**16 53 00.9**	**+1.0**
MARR	**Marisel-Cluj**	**5.77**	**25**	⇓P	**Pn**	**16 53 00.8**	**+0.5**
OBKA	**Obir**	**6.18**	**326**	*i* Pn	**Pn**	**16 53 07.0**	**+1.2**
	comp=N,0.4nm,0.2s						
OBKA				*i* Sn	**Sn**	**16 54 16.8**	**+0.3**
	comp=N,1.5nm,0.3s						

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*IDC **07** 16:53:54.7±1.8,17°.23S×174°.39W,h0^{km},mb4.0/8,*
mbtmp4.0/9,ML3.6/1,MS3.8/33,Error ellipse:
s-maj=113.8km s-min=20.0km az=152.0

*GCMT **07** 16:54:02.0±0.4,15°.91S±0°.03×174°.78W±0°.02,h15^{km}±2^{km}, MW4.7/64,Moment Tensor Solution. s11,c13; s64,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.32±.11; $M_{\theta\theta}$-0.74±.09; $M_{\phi\phi}$1.06±.09; $M_{r\theta}$-0.07±.26; $M_{\theta\phi}$-1.03±.06; $M_{\phi r}$0.62±.26; Best double couple: $M_0$1.47800×10^{16} NP1:ϕ_s289.00000°,δ69.00000°,λ178.00000°. NP2: ϕ_s20.00000°,δ88.00000°,λ21.00000°. Principal axes: T 1.7040, Plg16.0000°, Azm247.0000°; N -0.4530, Plg68.0000°, Azm25.0000°; P -1.2510, Plg14.0000°, Azm153.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 07 16:54:16.7±0.9,**17°.7S**±0°.3×**174°.3W**±0°.1,**h200**^{km}**,n48,**σ**2**^{s}**.12**/14,**mb3.7**/8,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**14.17**	**107**	LR	LR	17 01 48.9	
	comp=Z,179nm,18.0s,baz=282,slow=33						
DZM	**Mont Dzumac**	**18.59**	**253**	P	**P**	**16 58 15.6**	**-3.5**
	0.2nm,0.3s,baz=96,slow=18,SNR=9.1						
	11nm,0.9s						
DZM	**Mont Dzumac**	**18.59**	**253**	*e*P	**P**	**16 58 17.6**	**-1.5**
	102nm,1.2s						
DZM				*e*S	**S**	**17 01 45.4**	**+4.8**
	77nm,27.6s						
DZM				*e*LR	LR	17 02 54.7	
	1µm,25.8s						
PPT	**Papeete**	**23.59**	**93**	LR	LR	17 05 57.9	
	comp=Z,142nm,21.7s,baz=267,slow=30						
TBI	**Tubuai**	**23.95**	**108**	*e*S	**S**	**17 03 14.7**	**+0.1**
	3µm,27.2s						
TBI				*e*LR	LR	17 05 04.3	
	1µm,32.5s						
TAOE	**Nuku Hiva Isla**	**34.36**	**80**	*e*LR	LR	17 09 25.1	
	467nm,28.4s						
CTA	**Charters Tower**	**37.31**	**260**	LR	LR	17 14 47.6	
	comp=Z,4.8nm,18.4s,baz=80,slow=34						
PMG	**Port Moresby**	**38.27**	**277**	LR	LR	17 13 42.5	
	comp=Z,97nm,21.2s,baz=14,slow=31						
STKA	**Stephens Creek**	**42.14**	**242**	LR	LR	17 17 26.8	
	comp=Z,142nm,20.3s,baz=33,slow=33						
WRA	**Warramunga Arr**	**48.48**	**259**	P	**P**	**17 02 39.0**	**-0.7**
	0.9nm,1.1s,baz=95,slow=8.2,SNR=2.0						
	0.9nm,1.1s						
ASAR	**Alice Springs**	**48.58**	**254**	P	**P**	**17 02 40.5**	**+0.2**
	3.8nm,0.8s,baz=86,slow=8.3,SNR=34						
ASAR				LR	LR	17 21 32.3	
	comp=Z,396nm,21.1s,baz=94,slow=34						
	3.8nm,0.8s						
GUMO	**Guam**	**50.87**	**305**	LR	LR	17 20 54.2	
	comp=Z,19nm,20.1s,baz=60,slow=32						
FITZ	**Fitzroy Crossi**	**56.89**	**260**	LR	LR	17 26 17.9	
	comp=Z,209nm,19.9s,baz=124,slow=34						
BATI	**Baumata**	**60.42**	**268**	LR	LR	17 29 13.8	
	comp=Z,53nm,19.0s,baz=108,slow=35						
KAPI	**Kappang**	**65.56**	**273**	LR	LR	17 32 41.4	
	comp=Z,19nm,18.9s,baz=92,slow=36						
QSPA	**South Pole Qui**	**72.35**	**180**	LR	LR	17 32 45.6	
	comp=Z,55nm,21.3s,baz=30,slow=32						
JNU	**Nakatsue**	**72.73**	**314**	LR	LR	17 29 00.9	
	comp=Z,51nm,20.9s,baz=55,slow=29						
PETK	**Petropavlovsk-**	**74.55**	**343**	LR	LR	17 30 04.8	
	comp=Z,70nm,21.4s,baz=114,slow=29						
LPIG	**La Paz**	**75.00**	**58**	LR	LR	17 29 33.2	
	comp=Z,117nm,20.2s,baz=235,slow=29						
PFO	**Pinyon Flats O**	**75.14**	**47**	LR	LR	17 31 54.1	
	comp=Z,152nm,18.1s,baz=232,slow=30						
YBH	**Yreka Blue Hor**	**75.97**	**37**	LR	LR	17 30 25.9	
	comp=Z,7.6nm,20.1s,baz=254,slow=29						
NVAR	**Mina Array Bea**	**76.63**	**42**	P	**P**	**17 05 45.3**	**-0.4**
	3.0nm,0.8s,baz=251,slow=4.5,SNR=3.6						
NVAR				LR	LR	17 34 01.2	
	comp=Z,73nm,18.9s,baz=269,slow=32						
	3.0nm,0.8s						
ELK	**Elko**	**79.89**	**41**	P	**P**	**17 06 05.9**	**+2.4**
	1.3nm,0.8s,baz=184,slow=3.5,SNR=4.8						
	1.3nm,0.8s						
BBB	**Bella Bella**	**80.34**	**27**	LR	LR	17 31 54.6	
	comp=Z,54nm,21.6s,baz=228,slow=28						
MA2	**Magadan**	**82.08**	**343**	LR	LR	17 36 02.0	
	comp=Z,71nm,20.9s,baz=127,slow=31						
PMSA	**Palmer Station**	**82.44**	**156**	LR	LR	17 35 18.4	
	comp=Z,22nm,21.6s,baz=355,slow=30						
TXAR	**Lajitas Array**	**82.63**	**56**	P	**P**	**17 06 18.1**	**+0.1**
	0.5nm,1.0s,baz=248,slow=5.3,SNR=8.5						
TXAR				LR	LR	17 35 38.0	
	comp=Z,82nm,21.2s,baz=230,slow=30						
	0.5nm,1.0s						
ANMO	**Albuquerque**	**82.96**	**50**	LR	LR	17 34 21.5	
	comp=Z,121nm,20.4s,baz=240,slow=29						
NEW	**Newport**	**83.11**	**34**	LR	LR	17 38 04.3	
	comp=Z,68nm,18.3s,baz=228,slow=32						
SEY	**Seymchan**	**84.50**	**345**	LR	LR	17 38 23.3	
	comp=Z,34nm,20.4s,baz=86,slow=32						
PDAR	**Pinedale Array**	**84.57**	**42**	P	**P**	**17 06 29.4**	**+1.7**
	1.5nm,0.9s,baz=242,slow=3.2,SNR=8.3						
	1.5nm,0.9s						
H03S2	**Juan Fernandez**	**84.68**	**124**	T	T	18 41 39.6	
	baz=251,slow=75,SNR=10						
H03S1	**Juan Fernandez**	**84.69**	**124**	T	T	18 41 42.9	
	baz=251,slow=75,SNR=10.0						
H03S3	**Juan Fernandez**	**84.69**	**124**	T	T	18 41 41.6	
	baz=251,slow=75,SNR=11						
ILAR	**Eielson Array**	**84.87**	**11**	P	**P**	**17 06 27.9**	**-0.5**
	0.6nm,0.6s,baz=233,slow=5.5,SNR=12						
	0.6nm,0.6s						
MAW	**Mawson**	**85.33**	**199**	LR	LR	17 43 25.1	
	comp=Z,73nm,18.2s,baz=94,slow=35						
CMIG	**Matias Romero**	**85.49**	**71**	LR	LR	17 36 15.4	
	comp=Z,92nm,20.1s,baz=188,slow=30						
PSI	**Prapat**	**87.74**	**274**	LR	LR	17 46 22.9	
	comp=Z,47nm,19.7s,baz=112,slow=36						
PLCA	**Paso Flores**	**88.63**	**132**	LR	LR	17 38 43.5	
	comp=Z,28nm,20.1s,baz=236,slow=30						
YAK	**Yakutsk**	**90.87**	**337**	LR	LR	17 39 56.7	
	comp=Z,26nm,21.0s,baz=100,slow=30						
JTS	**Las Juntas de**	**92.49**	**80**	LR	LR	17 39 25.8	
	comp=Z,69nm,20.9s,baz=288,slow=30						
YKA	**Yellowknife Ar**	**92.56**	**24**	P	**P**	**17 07 05.3**	**+0.4**
	0.7nm,1.0s,baz=241,slow=5.0,SNR=7.1						
	0.7nm,1.0s						
ATAH	**Atahualpa**	**93.47**	**99**	LR	LR	17 39 37.7	
	comp=Z,72nm,21.7s,baz=252,slow=29						
SONM	**Songino Array**	**95.96**	**318**	LR	LR	17 42 30.0	
	comp=Z,30nm,21.5s,baz=124,slow=30						
ULM	**Lac du Bonnet**	**96.28**	**39**	LR	LR	17 44 35.3	
	comp=Z,82nm,18.4s,baz=189,slow=32						
TIXI	**Tiksi**	**96.97**	**345**	LR	LR	17 45 14.3	
	comp=Z,48nm,21.5s,baz=204,slow=32						
BRTR	**Keskin Array B**	**147.32**	**318**	PKPbc	**PKiKP**	**17 13 38.5**	**-0.7**
	1.8nm,0.8s,baz=119,slow=1.5,SNR=9.8						
MMAI	**Mount Meron Ar**	**149.24**	**305**	PKPbc	**PKPab**	**17 13 46.1**	**-1.3**
	3.6nm,0.8s,baz=98,slow=3.1,SNR=4.5						

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*IDC **07** 17:07:07.8±1.0,43°.44N×147°.73E,h0^{km},mb4.0/14, mbtmp3.9/16,ML2.6/2,MS3.3/3,Error ellipse: s-maj=25.3km s-min=19.9km az=130.0*

*SKHL **07** 17:07:08.8±0.2,43°.10N×148°.10E,h41^{km}±8^{km},mb5.2/3*

*NEIC **07** 17:07:08.6±1.5,43°.28N±0°.05×147°.8E±0°.1,h10^{km}±1^{km}, mb4.3/36,Error ellipse: s-maj=13.2km s-min=9.1km az=91.0*

*JMA **07** 17:07:09.8±0.4,43°N±1°×14°8E±°,h14^{km},MV4.0/28,E OFF HOKKAIDO*

*MOS **07** 17:07:12.5±0.7,43°.50N×147°.62E,h44^{km},mb4.5/19,Error ellipse: s-maj=12.9km s-min=8.4km az=42.1*

ISC 07 17:07:07.6±1.8,**43°.27N**±0°.05×**147°.87E**±0°.05,**h7**^{km}±10^{km}, **n143,**σ**1**^{s}**.56**/146,**mb4.3**/38,**MS3.6**/3,**5C,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.96**	**309**	*e*P	Pn	17 07 35.6	+8.1
SHO				AMB	AMB	17 07 36.7	
	2µm,0.4s						
SHO				*e*S	**Sn**	**17 07 49.4**	**+8.0**
SHO				A	A	17 07 51.3	
	14µm,0.5s						
SHO				A	A	17 07 51.3	
	13µm,0.5s						
NEM2	**Nemuro 2**	**1.55**	**274**	*e*P	**Pn**	**17 07 35.7**	**+0.1**
NEM2				*e*S	**Sn**	**17 07 54.5**	**-1.4**
NMR	**Nemuro--Hokkai**	**1.56**	**274**	*e*PN	**Pn**	**17 07 35.6**	**-0.1**
NMR				*e*S	**Sg**	**17 07 57.2**	**-0.6**
NMR	**Nemuro--Hokkai**	**1.56**	**274**	*e*P	**Pn**	**17 07 35.8**	**+0.1**
NMR				*e*S	**Sb**	**17 07 56.2**	**-0.5**
YUK	**Yuzh-Kuril'sk**	**1.65**	**298**	PN	**Pn**	**17 07 36.4**	**-0.4**
YUK				*e*S	**Sb**	**17 07 58.8**	**-0.3**
YUK				pmax	pmax		
	comp=Z,685nm,0.2s						
YUK				pmax	pmax		
	comp=E,163nm,0.1s						
YUK				smax	smax		
	comp=N,3µm,0.4s						
YUK				smax	smax		
	comp=E,2µm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.65**	**298**	*e*P	**Pn**	**17 07 37.4**	**+0.6**
YUK				AMB	AMB	17 07 40.7	
	comp=E,610nm,0.3s						
YUK				*e*S	**Sb**	**17 07 58.8**	**-0.3**
YUK				A	A	17 08 02.3	
	comp=E,3µm,0.5s						
YUK				A	A	17 08 02.3	
	comp=E,4µm,0.5s						
GLVR	**Golovnino**	**1.77**	**286**	*e*PN	**Pn**	**17 07 38.7**	**+0.1**
GLVR	**Golovnino**	**1.77**	**286**	*e*P	**Pn**	**17 07 38.7**	**+0.1**
GLVR				*e*S	**Sg**	**17 08 05.3**	**+0.8**
GLVR				A	A	17 08 13.6	
	comp=E,1µm,0.3s						
GLVR				A	A	17 08 13.6	
	comp=E,2µm,0.3s						
KUR	**Kuril'sk**	**1.97**	**0**	*e*PN	**Pn**	**17 07 40.4**	**-0.8**
KUR				*i* S	**Sn**	**17 08 03.9**	**-2.2**
KUR				pmax	pmax		
	comp=Z,116nm,0.3s						
KUR				smax	smax		
	comp=N,453nm,0.4s						
KUR				smax	smax		
	comp=E,306nm,0.4s						
KUR	**Kuril'sk**	**1.97**	**0**	*e*P	**Pn**	**17 07 40.6**	**-0.6**
KUR				AMB	AMB	17 07 41.9	
	comp=E,150nm,0.3s						
KUR				*e*S	**Sn**	**17 08 04.4**	**-1.7**
KUR				A	A	17 08 08.8	
	comp=E,480nm,0.4s						
KUR				A	A	17 08 08.8	
	comp=E,380nm,0.4s						
JKHN	**Kushirohamanak**	**1.99**	**266**	*e*P	**Pn**	**17 07 42.8**	**+1.2**
JKHN				*e*S	**Sn**	**17 08 06.4**	**-0.2**
JRA	**Rausu**	**2.10**	**290**	*e*P	**Pn**	**17 07 43.8**	**+0.7**
JNSB	**Nemuroshibetsu**	**2.14**	**285**	*e*P	**Pn**	**17 07 44.4**	**+0.7**
AKK	**Akkeshi**	**2.23**	**265**	*e*P	**Pn**	**17 07 45.6**	**+0.8**
JNK	**Nakash**	**2.31**	**279**	*e*P	**Pn**	**17 07 46.5**	**+0.4**
JAK	**Akkeshi**	**2.34**	**264**	*e*P	**Pn**	**17 07 47.1**	**+0.7**
JAK				*e*S	**Sn**	**17 08 14.4**	**-0.8**
JTKR	**Abashiri--Toko**	**2.96**	**285**	*e*P	**Pn**	**17 07 56.4**	**+1.5**
JAR	**Ashorobuto**	**2.99**	**272**	P	**Pn**	**17 07 56.5**	**+1.1**
JCH	**Churui**	**3.37**	**260**	*e*P	**Pn**	**17 08 02.0**	**+1.5**
ERM	**Erimo**	**3.69**	**252**	Pn	**Pn**	**17 08 06.6**	**+1.6**
ERM	**Erimo**	**3.69**	**252**	PN	**Pn**	**17 08 06.6**	**+1.6**
JEM	**Erimo**	**3.69**	**252**	*e*P	**Pn**	**17 08 07.7**	**+2.8**
JFR	**Furan**	**3.85**	**270**	*e*P	**Pn**	**17 08 09.1**	**+1.8**
JNBK	**Urakawa-nobuka**	**3.89**	**257**	*e*P	**Pn**	**17 08 09.1**	**+1.4**
JKA	**Kamikawa-asahi**	**3.91**	**284**		**Pn**	**17 08 09.3**	**+1.3**
ASAJ	**Asahikawa**	**3.91**	**284**	Pn	**Pn**	**17 08 11.2**	**+3.1**
	comp=E,4.3nm,0.3s,baz=138,slow=9.5,SNR=22						
ASAJ	**Asahikawa**	**3.91**	**284**	PN	**Pn**	**17 08 09.3**	**+1.3**
YSS	**Yuzhno-Sakhali**	**5.16**	**317**	Pn	**Pn**	**17 08 25.6**	**+0.4**
YSS	**Yuzhno-Sakhali**	**5.16**	**317**	*e*PN	**Pb**	**17 08 35.8**	**-2.3**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YSS				MLR	MLR		
	comp=Z,700nm,17.0s						
YSS	**Yuzhno-Sakhali**	**5.16**	**317**	*e*P	**Pn**	**17 08 28.5**	**+3.3**
YSS				*e*S	**Sn**	**17 09 27.3**	**+2.3**
JTM	**Tenmabayashi**	**5.64**	**246**	Pn	**Pn**	**17 08 32.0**	**+0.3**
JTM				Sn	**Sn**	**17 09 32.1**	**-4.6**
TEY	**Ternei**	**8.29**	**286**	*e*PN	**Pn**	**17 09 03.7**	**-4.4**
TYV	**Tymovskoe**	**8.39**	**337**	*e*P	**Pn**	**17 09 12.7**	**+3.3**
MAJO	**Matsushiro**	**10.00**	**231**	Pn	**Pn**	**17 09 30.7**	**-0.9**
MAJO	**Matsushiro**	**10.00**	**231**	*i* PN	**Pn**	**17 09 31.5**	**-0.1**
MJAR	**Matsushiro Arr**	**10.00**	**231**	Pn	**Pn**	**17 09 32.1**	**+0.4**
	baz=25,slow=14,SNR=9.3						
MJAR				Sn	**Sn**	**17 11 27.4**	**+3.3**
	comp=Z,0.1nm,0.3s,baz=25,slow=20,SNR=4.8						
	comp=Z,0.9nm,0.7s						
MJAR	**Matsushiro Arr**	**10.00**	**231**	Pn	**Pn**	**17 09 30.6**	**-1.0**
NKL	**Nikolayevsk**	**10.98**	**337**	*e*P	**Pn**	**17 09 48.0**	**+3.1**
JGF	**Kuroka**	**11.16**	**230**	Pn	**Pn**	**17 09 46.6**	**-0.9**
INU	**Inuyama**	**11.53**	**230**	Pn	**Pn**	**17 09 52.7**	**+0.2**
PETK	**Petropavlovsk-**	**11.82**	**30**	Pn	**Pn**	**17 09 56.5**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=210,slow=8.3,SNR=4.5						
	comp=Z,3.2nm,0.9s						
MA2	**Magadan**	**16.43**	**5**	LR	LR	17 17 01.7	
	comp=Z,40nm,20.0s,baz=52,slow=36						
YAK	**Yakutsk**	**21.65**	**336**	LR	LR	17 20 34.8	
	comp=Z,62nm,18.4s,baz=110,slow=38						
HHC	**Hu-ho-hao-te**	**26.93**	**277**	*e*P	**P**	**17 12 48.6**	**-0.8**
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,5.2s						
H11N2	**WAKE ISLAND Hy**	**28.40**	**140**	T	T	17 43 57.6	
	baz=330,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**28.41**	**140**	T	T	17 43 47.8	
	baz=330,slow=75,SNR=20						
H11N3	**WAKE ISLAND Hy**	**28.41**	**140**	T	T	17 43 55.5	
	baz=330,slow=75,SNR=16						
ULN	**Ulaanbaatar**	**28.70**	**294**	P	**P**	**17 13 05.7**	**+0.4**
ULN				IAmb	IAmb	17 13 06.9	
	comp=Z,2.2nm,0.6s						
ULN	**Ulaanbaatar**	**28.70**	**294**	*ce*P	**P**	**17 13 04.6**	**-0.6**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ULN	**Ulaanbaatar**	**28.70**	**294**	*e*P	**P**	**17 13 04.6**	**-0.6**
SONM	**Songino Array**	**29.14**	**294**	P	**P**	**17 13 10.0**	**+0.9**
	comp=Z,2.3nm,0.6s,baz=86,slow=8.8,SNR=14						
	comp=Z,2.3nm,0.6s						
SONM	**Songino Array**	**29.14**	**294**	P	**P**	**17 13 09.8**	**+0.6**
SONM	**Songino Array**	**29.14**	**294**	P	**P**	**17 13 09.8**	**+0.6**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
H11S1	**WAKE ISLAND Hy**	**29.36**	**141**	T	T	17 44 54.6	
	baz=331,slow=75,SNR=15						
H11S3	**WAKE ISLAND Hy**	**29.37**	**141**	T	T	17 44 59.3	
	baz=331,slow=75,SNR=9.9						
H11S2	**WAKE ISLAND Hy**	**29.38**	**141**	T	T	17 44 57.7	
	baz=331,slow=75,SNR=9.2						
YULB	**Yu-li**	**29.56**	**236**	S	**S**	**17 18 08.3**	**+0.3**
TIXI	**Tiksi**	**29.94**	**348**	*i* P	**P**	**17 13 15.0**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,15nm,2.4s						
TIXI	**Tiksi**	**29.94**	**348**	*e*P	**P**	**17 13 15.0**	**-0.8**
TPUB	**Ta-pu**	**30.03**	**237**	S	**S**	**17 18 16.7**	**+1.2**
C18K	**Utukok River**	**36.48**	**29**		**P**	**17 14 13.6**	**+0.8**
C18K				IAmb	IAmb	17 14 26.5	
	comp=Z,11nm,1.4s						
C19K	**Lookout Ridge**	**37.17**	**28**	P	**P**	**17 14 19.6**	**+0.8**
C19K				IAmb	IAmb	17 14 25.6	
	comp=Z,11nm,1.4s						
D19K	**Kuna River**	**37.53**	**29**	P	**P**	**17 14 22.3**	**+0.6**
D19K				IAmb	IAmb	17 14 32.5	
	comp=Z,7.6nm,1.2s						
IMAR	**Indian Mountai**	**38.75**	**34**	P	**P**	**17 14 32.7**	**+0.6**
E22K	**Anaktuvuk Pass**	**39.76**	**31**	P	**P**	**17 14 41.5**	**+0.9**
GOMU	**GeErMu**	**40.82**	**279**	P	**P**	**17 14 49.7**	**-0.4**
GOMU				pP	pP	17 14 51.9	+0.7
GOMU				pmax	pmax		
	comp=Z,240nm,0.9s						
DGZ	**Jazzator, Alta**	**41.11**	**301**	*i* P	**P**	**17 14 51.3**	**-0.8**
DGZ				pmax	pmax		
	comp=Z,5.0nm,2.6s						
DHY	**Denali Highway**	**41.42**	**38**	P	**P**	**17 14 54.5**	**+0.1**
ILAR	**Eielson Array**	**41.57**	**36**	P	**P**	**17 14 56.4**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=285,slow=10,SNR=5.0						
	comp=Z,0.2nm,0.6s						
ZAA0	**Zalesovo Array**	**41.70**	**308**	P	**P**	**17 14 55.5**	**-1.1**
ZALV	**Zalesovo Beam**	**41.70**	**308**	P	**P**	**17 14 57.8**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=74,slow=11,SNR=4.5						
	comp=Z,0.9nm,0.6s						
ZALV	**Zalesovo Beam**	**41.70**	**308**	P	**P**	**17 14 55.2**	**-1.5**
ZALV	**Zalesovo Beam**	**41.70**	**308**	P	**P**	**17 14 55.2**	**-1.5**
D25K	**Kavik River**	**41.84**	**29**	P	**P**	**17 14 58.7**	**+1.0**
D25K				IAmb	IAmb	17 15 11.7	
	comp=Z,2.8nm,0.7s						
F25K	**Christian Rive**	**42.06**	**32**	P	**P**	**17 14 59.3**	**-0.2**
E28M	**Babbage River**	**44.32**	**30**	P	**P**	**17 15 18.9**	**+1.2**
MK31	**Makanchi Array**	**45.27**	**298**	*ce*P	**P**	**17 15 25.9**	**+0.3**
MKAR	**Makanchi Array**	**45.27**	**298**	P	**P**	**17 15 26.2**	**+0.6**
	comp=Z,1.3nm,0.5s,baz=79,slow=9.0,SNR=17						
	comp=Z,1.3nm,0.5s						
MKAR	**Makanchi Array**	**45.27**	**298**		**P**	**17 15 25.6**	**0.0**
MKAR	**Makanchi Array**	**45.27**	**298**	*e*P	**P**	**17 15 26.0**	**+0.4**
MAKZ	**Makanchi**	**45.47**	**298**		**P**	**17 15 27.1**	**0.0**
MAKZ				IAmb	IAmb	17 15 29.2	
	comp=Z,7.6nm,1.4s						
MAKZ	**Makanchi**	**45.47**	**298**	P	**P**	**17 15 27.1**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.4s						
G30M	**tAoh Zraii Nji**	**45.74**	**32**	P	**P**	**17 15 29.7**	**+0.6**
G30M				IAmb	IAmb	17 15 47.9	
	comp=Z,2.2nm,0.9s						
KURK	**Kurchatov**	**46.23**	**305**		**P**	**17 15 32.9**	**-0.2**
KURK				IAmb	IAmb	17 15 33.8	
	comp=Z,2.0nm,0.6s						
KURK	**Kurchatov**	**46.23**	**305**	*i* P	**P**	**17 15 32.3**	**-0.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	**Kurchatov**	**46.23**	**305**	*e*P	**P**	**17 15 32.3**	**-0.7**
KURBB	**Kurchatov Arra**	**46.32**	**304**	P	**P**	**17 15 33.8**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=75,slow=8.6,SNR=12						
	comp=Z,0.9nm,0.4s						
INK	**Inuvik**	**46.56**	**30**	P	**P**	**17 15 36.5**	**+1.1**
INK				IAmb	IAmb	17 16 01.4	
	comp=Z,7.0nm,1.5s						
INK	**Inuvik**	**46.56**	**30**	P	**P**	**17 15 36.5**	**+1.1**
INK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
C36M	**Paulatuk**	**49.66**	**28**	P	**P**	**17 15 59.5**	**+0.2**
C36M				IAmb	IAmb	17 16 44.0	
	comp=Z,7.8nm,1.5s						
TARG	**Taragay, Kyrgy**	**50.26**	**294**	P	**P**	**17 16 05.3**	**+0.5**
TARG	**Taragay, Kyrgy**	**50.26**	**294**	P	**P**	**17 16 05.3**	**+0.5**
TARG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KDJ	**Kajisay**	**50.49**	**295**	P	**P**	**17 16 06.4**	**+0.1**
KDJ				IAmb	IAmb	17 16 36.6	
	comp=Z,2.3nm,0.8s						
KDJ	**Kajisay**	**50.49**	**295**	P	**P**	**17 16 06.4**	**+0.1**
KDJ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
EVN	**Everest**	**50.85**	**274**		**P**	**17 16 09.0**	**-0.8**
BOOM	**Boomskoye usch**	**51.15**	**295**	P	**P**	**17 16 11.7**	**+0.4**
BOOM				IAmb	IAmb	17 16 14.1	
	comp=Z,3.2nm,0.7s						
BOOM	**Boomskoye usch**	**51.15**	**295**	P	**P**	**17 16 11.7**	**+0.4**
BOOM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AAK	**Ala-Archa**	**52.04**	**296**	*i* P	**P**	**17 16 17.4**	**-0.4**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.8s						
AAK	**Ala-Archa**	**52.04**	**296**	*e*P	**P**	**17 16 17.4**	**-0.4**
ARSB	**Arslanbob**	**53.65**	**295**	P	**P**	**17 16 30.3**	**+0.6**
ARSB				IAmb	IAmb	17 16 33.2	
	comp=Z,4.7nm,1.0s						
ARSB	**Arslanbob**	**53.65**	**295**	P	**P**	**17 16 30.3**	**+0.6**
ARSB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KK31	**Karatay Array**	**54.40**	**298**		**P**	**17 16 35.1**	**+0.1**
KK31				IAmb	IAmb	17 16 36.1	
	comp=Z,2.0nm,0.8s						
KK31	**Karatay Array**	**54.40**	**298**	P	**P**	**17 16 35.1**	**+0.1**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KKAR	**Karatay Array**	**54.40**	**298**	P	**P**	**17 16 34.7**	**-0.3**
KKAR	**Karatay Array**	**54.40**	**298**	P	**P**	**17 16 34.7**	**-0.3**
ARTI	**Arti**	**55.16**	**317**	P	**P**	**17 16 39.8**	**-0.5**
ARTI	**Arti**	**55.16**	**317**	*c i*P	**P**	**17 16 40.0**	**-0.3**
ARTI						17 18 38.0	
ARTI				S	**S**	**17 24 24.2**	**+0.8**
ARTI				SS	**SS**	**17 27 58.0**	**-8.7**
ARTI				pmax	pmax		
	comp=Z,9.0nm,1.5s						
CHGR	**Chuyangaron**	**57.53**	**294**		**P**	**17 16 57.9**	**+0.3**
CHGR	**Chuyangaron**	**57.53**	**294**	P	**P**	**17 16 57.9**	**+0.3**
CHGR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AB31	**Akbulak array**	**57.77**	**309**	P	**P**	**17 16 58.8**	**-0.3**
ABKAR	**Akbulak array**	**57.77**	**309**	P	**P**	**17 16 59.1**	**0.0**
TULEG	**Thule**	**58.22**	**9**	P	**P**	**17 17 02.0**	**+0.3**
SHAA	**Shahritus**	**58.80**	**294**	P	**P**	**17 17 06.8**	**+0.3**
SHAA				IAmb	IAmb	17 17 07.7	
	comp=Z,8.3nm,0.5s						
ARCES	**ARCESS Array B**	**59.88**	**340**	P	**P**	**17 17 12.2**	**-1.2**
	comp=Z,3.2nm,0.9s,baz=53,slow=6.3,SNR=5.2						
	comp=Z,3.2nm,0.9s						
ARCES	**ARCESS Array B**	**59.88**	**340**	P	**P**	**17 17 13.3**	**-0.1**
ILON	**Igloolik, Nuna**	**61.89**	**18**	P	**P**	**17 17 27.5**	**+0.5**
FIA1	**FINESS Array S**	**65.54**	**333**	P	**P**	**17 17 50.9**	**-0.3**
FINES	**FINESS Array B**	**65.54**	**333**	P	**P**	**17 17 50.5**	**-0.7**
	comp=Z,3.0nm,0.8s,baz=64,slow=5.8,SNR=10						
	comp=Z,3.0nm,0.8s						
FINES	**FINESS Array B**	**65.54**	**333**	P	**P**	**17 17 50.7**	**-0.5**
FINES	**FINESS Array B**	**65.54**	**333**	*i* P	**P**	**17 17 50.7**	**-0.5**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ASAR	**Alice Springs**	**67.83**	**194**	P	**P**	**17 18 08.3**	**+2.1**
	comp=Z,0.2nm,0.7s,baz=357,slow=6.4,SNR=3.3						
	comp=Z,0.2nm,0.7s						
SPG2	**Springville 2**	**68.48**	**60**	P	**P**	**17 18 07.8**	**-2.6**
NC303	**NORSAR Array S**	**70.04**	**339**	P	**P**	**17 18 19.4**	**-0.3**
NC405	**NORSAR Array S**	**70.05**	**339**		**P**	**17 18 19.5**	**-0.2**
NB201	**NORSAR Array S**	**70.21**	**339**	P	**P**	**17 18 20.4**	**-0.3**
NB2	**NORSAR Subarra**	**70.24**	**339**	P	**P**	**17 18 21.0**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**70.24**	**339**	P	**P**	**17 18 20.6**	**-0.2**
	comp=Z,1.5nm,0.6s,baz=31,slow=6.4,SNR=5.9						
	comp=Z,1.5nm,0.6s						
HFS	**Hagfors**	**70.33**	**338**	P	**P**	**17 18 21.5**	**+0.1**
	comp=Z,2.1nm,0.4s,baz=46,slow=6.4,SNR=15						
	comp=Z,2.1nm,0.4s						
KIV	**Kislovodsk**	**70.47**	**312**	*e*P	**P**	**17 18 23.3**	**+0.6**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,29nm,18.0s						
KIV	**Kislovodsk**	**70.47**	**312**	*e*P	**P**	**17 18 23.3**	**+0.6**
KBZ	**Khabaz**	**70.51**	**312**	P	**P**	**17 18 23.7**	**+1.0**
	comp=Z,3.2nm,1.0s,baz=343,slow=1.4,SNR=5.6						
	comp=Z,3.2nm,1.0s						
KBZ	**Khabaz**	**70.51**	**312**	*ce*P	**P**	**17 18 23.1**	**+0.4**
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KBZ	**Khabaz**	**70.51**	**312**	*e*P	**P**	**17 18 23.1**	**+0.4**
AKASG	**Malin Array Be**	**72.28**	**324**	P	**P**	**17 18 33.3**	**0.0**
	comp=Z,0.9nm,0.4s,baz=40,slow=6.5,SNR=5.8						
	comp=Z,0.9nm,0.4s						
AKASG	**Malin Array Be**	**72.28**	**324**	IAmb	IAmb	17 18 58.3	
	comp=Z,3.6nm,1.3s						
AKASG	**Malin Array Be**	**72.28**	**324**	*ce*P	**P**	**17 18 33.2**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BUR08	**Bucovina Ar. S**	**76.32**	**324**	P	**P**	**17 18 57.8**	**+0.7**
BUR08				IAmb	IAmb	17 18 58.9	
	comp=Z,2.1nm,1.0s						
BURAR	**Bucovina Array**	**76.33**	**324**	P	**P**	**17 18 57.6**	**+0.5**
SCHQ	**Schefferville**	**77.90**	**20**	LR	LR	17 56 06.0	
	comp=Z,42nm,18.5s,baz=314,slow=38						
BRTR	**Keskin Array B**	**78.25**	**314**	P	**P**	**17 19 07.8**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=56,slow=3.6,SNR=3.1						
	comp=Z,0.6nm,0.8s						
KHC	**Kasperske Hory**	**79.63**	**331**	*e*P	P	17 19 04.5	-11
KHC	**Kasperske Hory**	**79.63**	**331**	*e*P	P	17 19 04.5	-11
TXAR	**Lajitas Array**	**82.48**	**57**	P	**P**	**17 19 34.2**	**+3.3**
	comp=Z,0.2nm,0.6s,baz=332,slow=7.9,SNR=2.3						
	comp=Z,0.2nm,0.6s						

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*IDC **07** 17:08:45.0±3.7,24°.98N×123°.21E,h122^{km}±36^{km},mb3.2/7, mbtmp3.7/8,Error ellipse: s-maj=28.7km s-min=17.9km az=71.0*

*JMA **07** 17:08:46.7±0.3,25°N±2°×123°.2E±0°.7,h125^{km}±3^{km}, MV3.5/17,NW OFF ISHIGAKIJIMA IS*

ISC 07 17:08:45.2±0.9,**25°.0N**±0°.1×**123°.13E**±0°.08,**h125**^{km}±9^{km}, **n20,**σ**0**^{s}**.97**/28,**mb3.4**/7,**Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.56**	**191**	P	**Pn**	**17 09 04.9**	**+0.8**
JYNG	**Yonagunijimaku**	**0.58**	**196**	P	**Pn**	**17 09 05.0**	**+0.9**
IRIF	**Iriomote-Funau**	**0.87**	**141**	*i* P	**Pn**	**17 09 06.8**	**+0.3**
IRIF				*e*S	**Sn**	**17 09 21.6**	**-0.8**
JKRS	**Kuro-shima**	**1.11**	**134**	*i* P	**Pn**	**17 09 09.5**	**+0.8**
JIJ	**Ishigaki jima**	**1.13**	**125**	*i* P	**Pn**	**17 09 09.3**	**+0.4**
JIJ				S	**Sn**	**17 09 25.4**	**-1.4**

HATJ	Hateruma jima	1.13	147	*e*P	Pn	17 09 09.4	+0.5
HATJ				*e*S	Sn	17 09 26.1	-0.8
JISG	Ishigakijimahi	1.16	111	P	Pn	17 09 09.9	+0.8
JISG				S	Sn	17 09 27.1	-0.3
JTJ	Tarama	1.48	104	P	Pn	17 09 13.8	+1.2
JTJ				*e*S	Sn	17 09 33.7	+0.2
JIRB	Irabujima	1.87	95	*e*P	Pn	17 09 18.3	+1.0
JIKM	Ikemajima	1.93	92	*e*P	Pn	17 09 19.4	+1.5
JIKM				S	Sn	17 09 43.6	+0.5
JMJ2	Miyako jima3	2.02	97	*e*P	Pn	17 09 20.6	+1.5
JMJ2				*e*S	Sn	17 09 45.3	+0.3
JOW	Kunigami	4.98	68	P	Pn	17 09 58.4	+0.4
	23nm,0.5s,baz=333,slow=2.3,SNR=2.0						
JOW				S	Sn	17 10 52.5	-2.1
	14nm,0.3s,baz=125,slow=19,SNR=1.6						
KSRS	Korea Array	13.06	17	P	P	17 11 50.1	-1.4
	2.1nm,0.4s,baz=197,slow=11,SNR=13						
MKAR	Makanchi Array	39.00	314	P	P	17 15 60.0	+0.6
	0.8nm,0.4s,baz=98,slow=9.3,SNR=7.9						
	0.8nm,0.4s						
ZALV	Zalesovo Beam	40.54	326	P	P	17 16 11.7	-0.2
	0.6nm,0.4s,baz=127,slow=10,SNR=2.6						
	0.6nm,0.4s						
WRA	Warramunga Arr	45.99	165	P	P	17 16 55.2	-0.9
	0.7nm,0.5s,baz=348,slow=8.7,SNR=5.7						
	0.7nm,0.5s						
ASAR	Alice Springs	49.50	167	P	P	17 17 22.9	-0.2
	0.3nm,0.5s,baz=354,slow=7.1,SNR=8.9						
	0.3nm,0.5s						
ILAR	Eielson Array	67.67	28	P	P	17 19 28.3	-0.2
	0.2nm,0.5s,baz=273,slow=6.1,SNR=4.2						
	0.2nm,0.5s						
BRTR	Keskin Array B	74.10	307	P	P	17 20 08.8	+0.8
	0.4nm,0.7s,baz=61,slow=6.3,SNR=2.5						
	0.4nm,0.7s						
YKA	Yellowknife Ar	81.52	23	P	P	17 20 49.1	+0.7
	0.2nm,0.5s,baz=314,slow=6.0,SNR=5.5						
	0.2nm,0.5s						

*IDC **07** 17:09:35.4±1.8, 57.°39S×28.°01W, h0^{km}, mb4.3/3, mbtmp4.2/4, ML4.2/1, Error ellipse: s-maj=120.6km s-min=32.4km az=75.0*

*NEIC **07** 17:09:46.3±1.3, 57.°4S±0.°2×26.°5W±0.°2, h93^{km}±3^{km}, mb4.6/12, Error ellipse: s-maj=24.4km s-min=16.6km az=205.0*

ISC 07 17:09:46.4±0.8, **57.°5S**±0.°1×**26.°6W**±0.°1, **h100**^{km}, **n30**, σ**0**^{s}**94**/24, **mb4.5**/6, **4C**, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	6.42	295	Pn	Pn	17 11 17.3	-1.0
VNA1	Neumayer--Stat	15.37	157	⇑P	Pn	17 13 15.7	-1.7
	comp=Z,2.9nm,0.3s						
VNA3	Neumayer Olymp	15.55	159	⇑P	Pn	17 13 18.5	-1.3
	comp=Z,2.4nm,0.2s						
VNA2	Neumayer--Watz	15.76	157	⇑P	Pn	17 13 20.4	-1.9
	comp=Z,4.2nm,0.4s,baz=316,slow=13						
SNAA	Sanae	17.32	155	⇑P	Pn	17 13 42.5	+0.9
	comp=Z,83nm,0.5s						
SNAA	Sanae	17.32	155	P	Pn	17 13 42.5	+0.9
	comp=Z,0.8nm,0.3s,baz=320,slow=14,SNR=35						
	comp=Z,2.2nm,0.4s						
SNAA	Sanae	17.32	155	P	Pn	17 13 41.8	+0.2
PMSA	Palmer Station	19.27	232	P	Pn	17 14 05.5	+0.8
PMSA				IAmb	IAmb	17 14 18.9	
	comp=Z,83nm,1.4s						
BELA	Belgrano 2	20.70	185	P	P	17 14 17.3	-0.8
LL01	San Ignacio de	32.44	278	P	P	17 16 07.6	+1.0
QSPA	South Pole Qui	32.79	180	P	P	17 16 10.4	+0.6
	comp=Z,4.6nm,0.5s,baz=17,slow=1.3,SNR=76						
	comp=Z,4.6nm,0.5s						
QSPA	South Pole Qui	32.79	180	P	P	17 16 10.3	+0.6
QSPA				IAmb	IAmb	17 16 11.1	
	comp=Z,6.2nm,0.6s						
CO03	El Pedregal	40.28	292	P	P	17 17 12.3	-1.3
CO03				IAmb	IAmb	17 17 16.0	
	comp=Z,10nm,1.2s						
GO02	Mina Guanaco	44.45	298	P	P	17 17 47.8	+0.2
GO02				IAmb	IAmb	17 17 48.1	
	comp=Z,7.5nm,0.8s						
VNDA	Vanda	45.18	183	P	P	17 17 53.3	+0.8
	comp=Z,1.2nm,0.6s,baz=188,slow=6.9,SNR=10						
	comp=Z,1.2nm,0.6s						
VNDA	Vanda	45.18	183	P	P	17 17 53.4	+0.8
PB09	IPOC Station P	47.16	301	P	P	17 18 09.4	+0.6
PB09				IAmb	IAmb	17 18 20.1	
	comp=Z,15nm,1.4s						
H10S2	ASCENSION HYDR	49.26	16	T	T	18 12 15.7	
	baz=188,slow=74,SNR=11						
H10S3	ASCENSION HYDR	49.26	16	T	T	18 12 16.4	
	baz=32,slow=74,SNR=9.6						
H10N1	ASCENSION HYDR	50.37	16	T	T	18 13 43.4	
	baz=188						
H10N3	ASCENSION HYDR	50.38	16	T	T	18 13 43.8	
	baz=188,slow=74,SNR=5.1						
H10N2	ASCENSION HYDR	50.39	16	T	T	18 13 42.4	
	baz=188,slow=74,SNR=3.4						
FOMA	Nahampoana Res	60.51	91	P	P	17 19 45.5	-0.4
ABPO	Ambohimpanom	65.47	87	P	P	17 20 19.5	+0.6
ABPO				IAmb	IAmb	17 20 31.6	
	comp=Z,5.5nm,1.1s						
DSZ	Denniston Nort	79.97	194	P	P	17 21 43.5	-0.7
ASAR	Alice Springs	97.55	162	P	Pdif	17 23 13.4	+4.1
	comp=Z,0.2nm,0.4s,baz=184,slow=2.8,SNR=4.7						
	comp=Z,0.2nm,0.4s						
ASAR	Alice Springs	97.55	162	P	P	17 23 09.1	-0.2
YKA	Yellowknife Ar	137.44	317	PKP	PKiKP	17 28 58.2	-0.4
	comp=Z,0.1nm,0.4s,baz=125,slow=2.7,SNR=4.4						
YKA	Yellowknife Ar	137.44	317		PKPdf	17 28 57.3	+0.6
ILAR	Eielson Array	151.29	310	PKPbc	PKiKP	17 29 27.0	-0.1
	comp=Z,1.4nm,0.8s,baz=114,slow=5.8,SNR=15						

*KRSC **07** 17:18:15.0±1.8, 54.°84N×165.°57E, h30^{km}±13^{km}, Ml4.0*

*IDC **07** 17:18:15.0±2.1, 55.°17N×165.°67E, h0^{km}, mb3.4/5, mbtmp3.4/6, ML2.7/1, Error ellipse: s-maj=73.3km s-min=22.9km az=169.0*

ISC 07 17:18:18.4±1.0, **54.°92N**±0.°06×**165.°76E**±0.°06, **h35**^{km}, **n35**, σ**1**^{s}**71**/37, **mb3.5**/5, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	0.31	23	*i* P	Pn	17 18 24.6	-1.9
BKI				*e*S	Sn	17 18 29.5	-2.4
KBTR	Krutoberegovo	2.11	309	*e*P	Pn	17 18 48.8	-2.4
KBTR				*e*S	Sn	17 19 13.9	-2.3
KBG	Krutoberegovo	2.19	309	*e*S	Sn	17 19 19.3	+1.2
SMKR	Semkarok	2.94	306	*e*P	Pn	17 19 02.5	-0.2
BZGR	Bezymyannyi-Gr	3.06	292	*e*P	Pn	17 19 04.0	-0.4
SRKR	Sorokina	3.12	306	*e*P	Pn	17 19 05.1	-0.1
KZV	Kizimen	3.15	276	*e*P	Pn	17 19 05.4	-0.2
KLY	Klyuchi	3.22	298	*e*P	Pn	17 19 06.4	0.0
KLY				*e*S	Sn	17 19 41.9	-1.5
KMNR	Kamenistaya	3.27	287	*e*P	Pn	17 19 07.7	+0.5
SPN	Mys Shipunski	3.85	244	*e*P	Pn	17 19 14.1	-0.9
SPN				*e*S	Sn	17 19 55.3	-3.6
ESO	Esso	4.15	287	*e*P	Pn	17 19 19.4	+0.2
NLC	Nalytchevo	4.17	248	*e*S	Sn	17 20 04.2	-2.6
SDLR	Sedlovina	4.37	251	*e*P	Pn	17 19 23.3	+1.0
UGLR	Uglovaya	4.43	250	*e*P	Pn	17 19 23.7	+0.5
KRER	Koryakskii	4.43	251	*e*P	Pn	17 19 24.0	+0.7
AVH	Avacha	4.46	251	*e*P	Pn	17 19 24.2	+0.7
KRX	Arik	4.47	252	*e*P	Pn	17 19 24.2	+0.5
KOK	Koryaka	4.50	252	*e*P	Pn	17 19 24.5	+0.4
DALK	Dalny	4.55	248	*e*P	Pn	17 19 24.7	0.0
PET	Petropavlovsk	4.61	249	*e*P	Pn	17 19 25.9	+0.5
GNL	Ganaly	4.74	258	*e*P	Pn	17 19 28.6	+1.2
KRMR	Karymshinskiy	4.98	248	*e*S	Sn	17 20 25.2	-1.6
RUS	Russkaya	4.98	243	*e*S	Sn	17 20 24.2	-2.6
PETK	Petropavlovsk-	5.09	252	Pn	Pn	17 19 32.8	+0.6
	1.4nm,0.3s,baz=73,slow=17,SNR=42						
PETK				Sn	Sn	17 20 27.8	-1.8
	0.9nm,0.3s,baz=311,slow=20,SNR=5.6						
	1.6nm,0.4s						
MTVR	Mutnovka	5.12	245	*e*P	Pn	17 19 33.0	+0.3
GRL	Gorelyy	5.14	246	*e*P	Pn	17 19 34.2	+1.3
KDTR	Khodutka, Kamc	5.56	239	*e*S	Sn	17 20 35.9	-5.2
ILAR	Eielson Array	25.13	48	P	P	17 23 40.4	+0.8
	0.6nm,0.8s,baz=266,slow=9.1,SNR=5.3						
	0.6nm,0.8s						
H11N2	WAKE ISLAND Hy	35.14	178	T	T	18 02 37.5	
	baz=360,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	35.15	178	T	T	18 02 39.2	
	baz=360,slow=76,SNR=9.6						
H11N1	WAKE ISLAND Hy	35.16	178	T	T	18 02 37.7	
	baz=360,slow=76,SNR=12						
SONM	Songino Array	36.72	284	P	P	17 25 24.0	+2.0
	0.3nm,0.4s,baz=61,slow=10,SNR=2.4						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	49.67	303	P	P	17 27 06.6	+0.4
	0.5nm,0.4s,baz=55,slow=7.7,SNR=5.8						
	0.5nm,0.4s						
MKAR	Makanchi Array	50.33	298	P	P	17 27 10.6	-0.8
	0.2nm,0.4s,baz=46,slow=6.4,SNR=2.1						
	0.2nm,0.4s						
TXAR	Lajitas Array	66.86	72	P	P	17 29 08.3	+1.5
	0.2nm,0.6s,baz=318,slow=11,SNR=2.0						
	0.2nm,0.6s						

*NEIC **07** 17:22:06.9±2.2, 32.°44N±0.°07×140.°8E±0.°1, h49^{km}±7^{km}, mb4.5/27, Error ellipse: s-maj=14.3km s-min=8.1km az=55.0*

*IDC **07** 17:22:08.0±2.0, 32.°48N×140.°80E, h66^{km}±16^{km}, mb3.8/12, mbtmp4.0/14, MS3.7/6, Error ellipse: s-maj=21.9km s-min=15.0km az=77.0*

*JMA **07** 17:22:08.4±0.2, 32.°6N±0.°6×14°1E±°, h55^{km}, MD4.2/38, MV4.5/38, E OFF HACHIJOJIMA ISLAND*

*NIED **07** 17:22:08.4, 32.°62N×140.°86E, h55^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.47; $M_{\theta\theta}$0.37; $M_{\phi\phi}$-2.84; $M_{r\theta}$2.03; $M_{\theta\phi}$-6.78; $M_{\phi r}$2.16; Fault plane solution: $M_0$7.36000×10^{14} NP1: ϕ_s172.00000°, δ76.00000°, λ-6.00000°. NP2: ϕ_s264.00000°, δ84.00000°, λ-166.00000°.*

ISC 07 17:22:06.6±0.5, **32.°50N**±0.°05×**140.°95E**±0.°06, **h55**^{km}, **n115**, σ**1**^{s}**54**/108, **mb4.4**/27, **MS3.9**/6, **1C**, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	Aogashimamukai	1.00	268	P	Pn	17 22 25.7	+1.2
JAOM				*e*S	Sn	17 22 38.1	+0.3
JAOM	Aogashimamukai	1.00	268	A	A	17 22 25.7	
	comp=N,33nm,0.5s,comp=E,22nm,0.5s						
JHCJ	Hachijojimakas	1.13	301	P	Pn	17 22 26.4	+0.2
JHCJ	Hachijojimakas	1.13	301	A	A	17 22 26.4	
	comp=N,7.0nm,1.5s,comp=E,6.0nm,3.0s						
JHJ2	Mitsune	1.14	303		Pn	17 22 26.7	+0.5
JHJ2				Sn	Sn	17 22 39.2	-1.6
JHJ2	Mitsune	1.14	303	P	Pn	17 22 26.6	+0.3
JHJ2	Mitsune	1.14	303	P	Pn	17 22 26.8	+0.5
JHJ2	Mitsune	1.14	303	A	A	17 22 26.8	
	comp=N,9.0nm,0.5s,comp=E,12nm,0.3s						
JHJ	Hachijo jima 2	1.16	303	P	Pn	17 22 26.9	+0.2
	comp=E,3µm,0.3s,baz=88,slow=22,SNR=659						
JHJ				S	Sn	17 22 38.4	-3.2
	comp=E,4µm,0.3s,baz=168,slow=23,SNR=26						
JMKN	Mikurajimanish	1.80	321	P	Pn	17 22 35.6	+0.4
JMYK	Miyake Tsubota	1.95	323	P	Pn	17 22 38.0	+0.6
JMYK				*e*S	Sn	17 22 60.0	-0.7
BSO1	Boso 1	2.15	1	*e*P	Pn	17 22 40.4	+0.8
BSO3	Boso 3	2.33	351	*e*P	Pn	17 22 43.1	+0.9
JIM2	Oshima 3	2.55	331	*i* P	Pn	17 22 46.0	+0.4
JIM2	Oshima 3	2.55	331	A	A	17 22 46.0	
	comp=N,5.0nm,2.7s,comp=E,4.0nm,4.1s						
JIZS	Izushimoda	2.81	323	*i* P	Pn	17 22 50.3	+1.2
TK02	Tokai 2	3.04	299	P	Pn	17 22 53.6	+1.6
JOD2	Odawara 2	3.16	331	*i* P	Pn	17 22 54.6	+0.7
JOD2				*e*S	Sn	17 23 27.9	-2.6
JSG	Sagara	3.17	314		Pn	17 22 55.9	+1.9
JSG	Sagara	3.17	314	P	Pn	17 22 56.1	+2.1
SHZ3	Shizuoka 3	3.43	319	*e*P	Pn	17 22 59.8	+2.1
JYN	Shimob	3.60	327	*e*P	Pn	17 23 02.1	+2.1
JRY	Ryogami san	3.90	335	P	Pn	17 23 05.2	+1.1
JIE	Ise	4.02	299	*i* P	Pn	17 23 06.9	+1.2
JAG	Ashikaga	4.11	343	P	Pn	17 23 06.8	-0.1
JGF	Kuroka	4.30	317		Pn	17 23 11.5	+1.9
JGF	Kuroka	4.30	317	P	Pn	17 23 11.9	+2.4
INU	Inuyama	4.33	312		Pn	17 23 11.8	+1.8
INU	Inuyama	4.33	312	P	Pn	17 23 12.0	+2.0
MJAR	Matsushiro Arr	4.63	331	P	Pn	17 23 14.1	+0.1
	comp=E,9.6nm,0.4s,baz=154,slow=10.0,SNR=112						
MJAR				S	Sn	17 24 06.6	+0.2
	comp=E,17nm,0.6s,baz=272,slow=30,SNR=6.4						
MJAR	Matsushiro Arr	4.63	331		Pn	17 23 15.3	+1.3
MAJO	Matsushiro	4.63	331		Pn	17 23 15.4	+1.3
MAJO	Matsushiro	4.63	331	P	Pn	17 23 15.6	+1.6
JCJ	Chichijima	5.49	168	P	Pn	17 23 15.9	-10
	comp=E,55nm,0.4s,baz=286,slow=23,SNR=14						
JCJ				S	Sn	17 24 12.6	-15
	comp=E,157nm,0.3s,baz=283,slow=22,SNR=8.7						
JCJ	Chichijima	5.49	168	Pn	Pn	17 23 26.1	+0.2
JCJ					Sn	17 24 23.3	-4.3
JCJ	Chichijima	5.49	168	P	Pn	17 23 27.4	+1.6
JSD	Sado	5.95	339	Pn	Pn	17 23 30.3	-1.8
JMN	Monobe	6.06	284		Pn	17 23 35.9	+2.2
JMN	Monobe	6.06	284	P	Pn	17 23 35.7	+2.0
JTM	Tenmabayashi	8.27	1	Pn	Pn	17 24 02.8	-1.1
JTM	Tenmabayashi	8.27	1	P	Pn	17 24 03.2	-0.7
JNU	Nakatsue	8.50	277	P	Pn	17 24 09.8	+2.7
	comp=E,7.9nm,0.5s,baz=44,slow=6.0,SNR=20						
JNU	Nakatsue	8.50	277	P	Pn	17 24 09.8	+2.7
ERM	Erimo	9.66	10	Pn	Pn	17 24 20.3	-2.6
JTU	Tsushima	9.86	285	P	Pn	17 24 27.6	+2.0
JKA	Kamikawa-asahi	11.67	6	Pn	Pn	17 24 48.2	-2.2
ASAJ	Asahikawa	11.67	6	P	Pn	17 24 48.7	-1.7
	comp=E,10nm,0.7s,baz=214,slow=11,SNR=24						
ASAJ				S	Sn	17 26 48.4	-11
	comp=E,17nm,1.0s,baz=214,slow=15,SNR=2.5						
KSRS	Korea Array	11.77	298	P	Pn	17 24 55.9	+4.1
	comp=E,1.8nm,0.4s,baz=118,slow=14,SNR=9.3						
USRK	Ussuriysk Ar.	13.62	332	P	Pn	17 25 17.3	+0.3
	comp=E,1.9nm,0.8s,baz=121,slow=11,SNR=4.6						
NJ2	Nanjing	18.69	275	*e*P	P	17 26 19.2	-1.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HEH	HeiHe	20.39	334	*e*P	P	17 26 38.8	+0.1
HNS	HongShan	22.03	290	⇑P	P	17 26 56.1	-0.4
HHC	Hu-ho-hao-te	24.91	298	*e*P	P	17 27 24.3	-0.3
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,160nm,4.5s						
H11N2	WAKE ISLAND Hy	26.46	112	T	T	17 56 49.3	
	baz=304,slow=75,SNR=43						
H11N1	WAKE ISLAND Hy	26.46	112	T	T	17 56 45.6	
	baz=304,slow=75,SNR=25						
H11N3	WAKE ISLAND Hy	26.48	112	T	T	17 56 48.3	
	baz=304,slow=75,SNR=30						
H11S3	WAKE ISLAND Hy	27.00	115	T	T	17 56 56.0	
	baz=305,slow=75,SNR=9.6						
H11S1	WAKE ISLAND Hy	27.00	115	T	T	17 56 59.9	
	baz=305,slow=75,SNR=13						
H11S2	WAKE ISLAND Hy	27.02	115	T	T	17 56 57.0	
	baz=305,slow=75,SNR=8.3						
ULN	Ulaanbaatar	29.82	311	P	P	17 28 07.3	-1.2
ULN				IAmb	IAmb	17 28 09.2	
	comp=Z,3.7nm,0.6s						
SONM	Songino Array	30.23	311	P	P	17 28 12.2	0.0
	comp=Z,2.6nm,0.6s,baz=110,slow=8.4,SNR=8.7						
	comp=Z,2.6nm,0.6s						
SONM	Songino Array	30.23	311	P	P	17 28 11.3	-0.8
PZH	PanZhiHua	34.51	270	P	P	17 28 50.3	+0.5
ZAA0	Zalesovo Array	44.79	316	P	P	17 30 13.3	-1.4
ZALV	Zalesovo Beam	44.79	316	P	P	17 30 14.1	-0.7
	comp=Z,1.3nm,0.4s,baz=102,slow=8.2,SNR=8.1						
	comp=Z,1.3nm,0.4s						
ZALV	Zalesovo Beam	44.79	316	P	P	17 30 13.6	-1.1
MKAR	Makanchi Array	46.33	306	P	P	17 30 26.6	-0.5
	comp=Z,3.8nm,0.6s,baz=92,slow=9.8,SNR=44						
	comp=Z,3.8nm,0.6s						
MKAR	Makanchi Array	46.33	306		P	17 30 26.2	-0.8
MAKZ	Makanchi	46.55	306		P	17 30 28.2	-0.5
MAKZ				IAmb	IAmb	17 30 28.8	
	comp=Z,4.0nm,0.7s						
EVN	Everest	46.58	279	P	P	17 30 28.4	-1.6
EVN				IAmb	IAmb	17 30 29.3	
	comp=Z,5.5nm,1.2s						
NRIK	Noril'sk	47.26	337	LR	LR	17 51 08.2	
	comp=Z,22nm,18.3s,baz=132,slow=37						
KURK	Kurchatov	48.53	311		P	17 30 43.0	-1.0
KURBB	Kurchatov Arra	48.59	311	P	P	17 30 43.4	-1.1
	comp=Z,4.4nm,0.6s,baz=89,slow=6.9,SNR=44						
	comp=Z,4.4nm,0.6s						
H18K	Honhosa River	48.74	29	P	P	17 30 46.8	+1.3
C19K	Lookout Ridge	49.22	24	P	P	17 30 51.5	+2.4
KDAK	Kodiak Island	50.78	39	P	P	17 31 02.4	+1.4
KDAK				PcP	PcP	17 32 17.7	+0.5
B21K	Ikpikpuk River	51.06	24	P	P	17 31 05.2	+2.3
B22K	Teshekpuk Lake	51.60	23	P	P	17 31 08.9	+2.0
B22K				IAmb	IAmb	17 31 25.2	
	comp=Z,9.0nm,1.4s						
KSH	Kashi	52.02	297	P	P	17 31 13.3	+2.5
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WB0	Warramunga Arr	52.35	188	P	P	17 31 12.9	-0.1
WB0				IAmb	IAmb	17 31 21.6	
	comp=Z,7.6nm,1.4s						
C23K	Itkillik River	52.47	24	P	P	17 31 15.4	+2.0
C23K				IAmb	IAmb	17 31 24.9	
	comp=Z,5.8nm,1.3s						
WRA	Warramunga Arr	52.52	188	P	P	17 31 13.9	-0.5
	comp=Z,0.5nm,0.4s,baz=6.8,slow=7.5,SNR=12						
	comp=Z,0.5nm,0.4s						
TOLK	Toolik Lake Re	52.70	26	P	P	17 31 17.2	+2.0
TOLK				PcP	PcP	17 32 25.7	+1.4
BVAR	Borovoye Array	53.42	315	P	P	17 31 21.2	+0.5
	comp=Z,1.8nm,0.3s						
	comp=Z,1.8nm,0.3s						
BORK	Borovoye	53.46	315	P	P	17 31 20.9	0.0
BORK				IAmb	IAmb	17 31 22.2	
	comp=Z,3.0nm,0.5s						
IL31		53.56	30	P	P	17 31 22.1	+0.6
IL31				IAmb	IAmb	17 31 23.8	
	comp=Z,10.0nm,1.5s						
ILAR	Eielson Array	53.56	30	P	P	17 31 22.6	+1.0
	comp=Z,1.8nm,0.8s,baz=261,slow=6.8,SNR=14						
	comp=Z,1.8nm,0.8s						
ILAR	Eielson Array	53.56	30	P	P	17 31 22.1	+0.6
ARSB	Arslanbob	53.81	300	P	P	17 31 23.4	-0.6
ARSB				IAmb	IAmb	17 31 28.1	
	comp=Z,4.9nm,1.4s						
E25K	Arctic Village	54.14	26	P	P	17 31 28.2	+2.4
SCRK	Sand Creek	54.84	31	P	P	17 31 32.3	+1.3
SCRK				IAmb	IAmb	17 31 38.6	
	comp=Z,4.3nm,1.1s						
KK31	Karatay Array	55.16	303		P	17 31 32.5	-1.1
KK31				IAmb	IAmb	17 31 33.4	
	comp=Z,2.8nm,0.6s						
KKAR	Karatay Array	55.16	303	P	P	17 31 32.7	-0.8
BCAR	Beaver Creek A	55.88	32	P	P	17 31 40.5	+2.0
ASAR	Alice Springs	56.25	188	P	P	17 31 41.5	+0.1
	comp=Z,0.5nm,0.8s,baz=355,slow=4.9,SNR=7.1						
	comp=Z,0.5nm,0.8s						
GAR	Garm	56.40	298		P	17 31 41.5	-1.0
CHGR	Chuyangaron	57.36	298		P	17 31 48.5	-0.9
F30M	Barrier River	57.87	27	P	P	17 31 54.8	+2.5
ARTI	Arti	59.66	320	P	P	17 32 05.5	+0.6
INKA	Innaminka	59.91	180	P	P	17 32 07.6	+0.8
AB31	Akbulak array	60.63	312	P	P	17 32 11.1	-0.6
AB31				IAmb	IAmb	17 32 12.9	
	comp=Z,1.8nm,0.5s						
ABKAR	Akbulak array	60.63	312	P	P	17 32 10.7	-1.0
YKA	Yellowknife Ar	67.93	29	P	P	17 32 58.7	-0.5
	comp=Z,0.1nm,0.6s,baz=302,slow=6.6,SNR=2.1						
	comp=Z,0.1nm,0.6s						
FINES	FINESS Array B	72.66	333	P	P	17 33 27.8	-0.3
	comp=Z,3.6nm,0.9s,baz=74,slow=6.8,SNR=7.1						
FINES				LR	LR	18 06 53.8	
	comp=Z,33nm,18.0s,baz=53,slow=37						
	comp=Z,3.6nm,0.9s						
FINES	FINESS Array B	72.66	333	P	P	17 33 27.5	-0.6
BMO	Blue Mountains	75.31	46	P	P	17 33 45.5	+1.4
AKASG	Malin Array Be	77.66	323	LR	LR	18 11 12.4	
	comp=Z,42nm,18.1s,baz=45,slow=38						
HFS	Hagfors	78.06	336	P	P	17 34 02.0	+2.9
	comp=Z,1.7nm,0.6s,baz=72,slow=4.7,SNR=4.0						
PDAR	Pinedale Array	81.14	45	P	P	17 34 17.3	+0.8
	comp=Z,0.4nm,0.6s,baz=290,slow=5.4,SNR=3.7						
	comp=Z,0.4nm,0.6s						
VRAC	Vranov	84.71	327	LR	LR	18 15 29.5	
	comp=Z,59nm,18.9s,baz=16,slow=38						
GERES	GERESS Array B	86.36	328	LR	LR	18 15 23.1	
	comp=Z,47nm,19.8s,baz=263,slow=37						
TXAR	Lajitas Array	93.19	52	P	P	17 35 17.1	+1.8
	comp=Z,1.3nm,0.7s,baz=300,slow=3.2,SNR=16						
	comp=Z,1.3nm,0.7s						
TXAR	Lajitas Array	93.19	52	P	P	17 35 15.7	+0.3
KEST	Kesra	98.38	322	LR	LR	18 23 48.8	
	comp=Z,60nm,19.4s,baz=339,slow=38						
LPAZ	La Paz	149.12	65	PKPbc	PKPbc	17 41 49.0	-1.1
	comp=Z,1.1nm,0.6s,baz=214,slow=4.9,SNR=4.8						

JMA 07 17:22:09.4±0.1, **35.°6N**±0.°1×**138.°1E**±0.°2, **h13**^{km}±1^{km}, **MV0.1**/24, **AKAISHI MOUNTAINS REG**, **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNT	Takato	0.25	4	*e*P	Pg	17 22 14.5	-0.3
JNT				S	Sg	17 22 18.1	-0.3
JNY	Yasuok	0.34	218	*e*P	Pg	17 22 16.2	-0.2
JNY				*e*S	Sg	17 22 21.2	+0.2
JYN	Shimob	0.37	110	*e*P	Pg	17 22 16.9	0.0

*SKO **07** 17:38:13.9, 41.°51N×19.°34E, h0^{km}, ML2.7*

*TIR **07** 17:38:15.0, 41.°61N×19.°61E, h13^{km}±1^{km}, Ml2.6/3*

*PDG **07** 17:38:15.2±0.4, 41.°65N×19.°53E, h16^{km}±1^{km}, ML2.8/13, Error ellipse: s-maj=1.0km s-min=1.5km az=0.0*

ISC 07 17:38:14.7±1.1, **41.°62N**±0.°03×**19.°55E**±0.°03, **h8**^{km}±9^{km}, **n45**, σ**1**^{s}**02**/68, **19C-12D**, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.36	139	P	Pg	17 38 21.3	-0.4
TIR				Sg	Sg	17 38 26.7	+0.3
TIR				AML	AML	17 38 26.9	
	4.2nm,0.2s						
TIR				AML	AML	17 38 27.3	
	2.5nm,0.2s						
TIR	Tirane	0.36	139	*i* Pg	Pg	17 38 21.6	-0.1
TIR				*i* Sg	Sg	17 38 27.4	+1.0
ULC	Ulcinj	0.42	326	⇑*i*Pg	Pg	17 38 22.5	-0.4
ULC				*i* Sg	Sg	17 38 29.1	+0.7
SDA	Shkodra	0.44	355	P	Pg	17 38 23.3	0.0
SDA				Sg	Sb	17 38 30.8	-0.7
SDA				AML	AML	17 38 33.4	
	1.2nm,0.3s						
DRME	Dracevica, Mon	0.63	334	⇑*i*Pg	Pg	17 38 26.4	-0.6
DRME				*e*Sg	Sb	17 38 36.2	-0.9
PHP	Peshkopia	0.67	84	Pg	Pg	17 38 26.9	-0.8
PHP				S	Sg	17 38 36.3	-0.1
PHP				AML	AML	17 38 40.6	
	1.9nm,0.5s						
BUM	Brajici-Budva	0.84	324	⇑*i*Pg	Pg	17 38 30.8	-0.1
BUM				*i* Sg	Sb	17 38 42.9	-0.3
PDG	Podgorica	0.84	345	⇓P	Pn	17 38 33.0	+0.1
PDG				⇓S	Sn	17 38 46.8	+1.2
PDG	Podgorica	0.84	345	⇓*i*Pg	Pg	17 38 29.0	-1.9
PDG				*i* Sg	Sb	17 38 43.5	+0.4
PVY	Plav	1.02	17	⇑*i*Pg	Pb	17 38 33.3	-1.5
PVY				*i* Sg	Sn	17 38 50.1	-0.1
CEME	Cevo	1.04	333	⇓*i*Pg	Pb	17 38 35.0	-0.1
CEME				*e*Sg	Sn	17 38 49.9	-0.7
OHR	Ohrid	1.06	118	*i* Pg	Pb	17 38 35.0	-0.5
OHR				*i* Sg	Sn	17 38 51.3	+0.2
OHR				*e*Lg	Lg	17 38 52.0	
	comp=N,185nm,0.9s						
OHR				*e*Lg	Lg	17 38 54.2	
	comp=E,108nm,0.6s						
HCY	Herceg Novi	1.15	317	⇓*i*Pg	Pb	17 38 36.1	-0.7
HCY				*i* Sg	Sn	17 38 53.4	+0.4
NKME	Niksic	1.23	339	⇑*i*Pg	Pg	17 38 38.6	+0.2
NKME				*e*Sg	Sg	17 38 56.3	+1.9
KOME	Kolasin	1.23	359	⇑*i*Pg	Pb	17 38 38.4	0.0
KOME				*e*Sg	Sg	17 38 56.6	+2.2
IVA	Berane	1.28	11	⇓*i*Pg	Pn	17 38 38.4	-0.7
IVA				*i* Sg	Sg	17 38 57.8	+1.9
TREB	Trebinje	1.42	321	*e*Pn	Pn	17 38 40.4	-0.5
SKO	Skopje	1.46	75	*i* Pg	Pg	17 38 43.2	+0.6
SKO				*i* Sg	Sg	17 39 04.4	+2.9
BRY	Bratogost	1.49	330	⇑*i*Pg	Pb	17 38 42.3	-0.5
BRY				*i* Sg	Sg	17 39 03.0	+0.4
UPM	Unac-Piva	1.66	343	⇓*i*Pn	Pb	17 38 44.8	-0.8
UPM				*i* Sn	Sb	17 39 05.9	-0.9
KLINJ	Klinje	1.71	336	*e*Pn	Pn	17 38 44.5	-0.5
PLE	Pljevlja	1.72	356	⇑*i*Pn	Pn	17 38 43.7	-1.4
PLE				*i* Sn	Sb	17 39 08.7	+0.3
RUDO	Rudo	2.00	356	*e*Pn	Pn	17 38 49.7	+0.8
BARS	Barje	2.06	54	*i* Pn	Pn	17 38 50.3	+0.5
BARS				*i* Sn	Sg	17 39 21.2	+0.2

VAY	**Valandovo**	**2.29**	**96**	*i* Pn	**Pn**	**17 38 53.3**	**+0.5**
VAY				*i* Sn	**Sn**	**17 39 21.6**	**+0.5**
VAY				*e*Lg	Lg	17 39 22.2	
	comp=E,34nm,0.8s						
VAY				*e*Lg	Lg	17 39 22.6	
	comp=N,16nm,0.6s						
MATE	**Matera**	**2.36**	**247**	⇓P	**Pn**	**17 38 55.0**	**+1.3**
KNT	**Kendrikon**	**2.56**	**99**	*i* Pn	**Pn**	**17 38 57.0**	**+0.5**
KNT				*i* Sn	**Sn**	**17 39 29.8**	**+1.9**
BOVS	**Bovan**	**2.57**	**38**	⇓P	**Pn**	**17 38 56.5**	**-0.1**
LIT	**Litokhoron**	**2.69**	**123**	*i* Pn	**Pb**	**17 39 00.8**	**-2.4**
BLKB	**Belogradchik**	**3.05**	**48**	⇑P	**Pn**	**17 39 02.0**	**-1.4**
TIP	**Timpagrande**	**3.24**	**222**	⇑P	**Pn**	**17 39 04.9**	**-1.0**
MDVR	**Moldovita**	**3.54**	**26**	⇑P	**Pn**	**17 39 09.8**	**-0.2**
BLY	**Banja Luka**	**3.58**	**332**	*e*Pn	**Pg**	**17 39 21.9**	**-1.4**
BLY	**Banja Luka**	**3.58**	**332**	⇑P	**Pn**	**17 39 12.5**	**+2.0**
HERR	**Herculane**	**3.88**	**32**	⇑P	**Pn**	**17 39 15.2**	**+0.6**
BZS	**Buzias**	**4.27**	**20**	⇑P	**Pn**	**17 39 20.2**	**+0.2**
GZR	**Gura Zlata**	**4.44**	**31**	⇑P	**Pn**	**17 39 23.4**	**+0.9**
MORH	**Mrgy, Hungar**	**4.64**	**352**	*e*Pn	**Pn**	**17 39 24.1**	**-1.1**
MORH	**Mrgy, Hungar**	**4.64**	**352**	⇑P	**Pn**	**17 39 26.6**	**+1.5**
SIRR	**Siria**	**4.89**	**17**	⇑P	**Pn**	**17 39 28.9**	**+0.3**
LOT	**Lotru**	**4.91**	**37**	⇓P	**Pn**	**17 39 29.6**	**+0.7**
DRGR		**5.65**	**23**	⇓P	**Pn**	**17 39 39.8**	**+0.7**
DOPR	**Dopca**	**6.06**	**42**	⇑P	**Pn**	**17 39 44.7**	**0.0**
NEHR	**Nehoiu**	**6.21**	**50**	⇑P	**Pn**	**17 39 45.5**	**-1.2**
VRI	**Vrincioaia**	**6.71**	**48**	⇓P	**Pn**	**17 39 53.6**	**0.0**

ROM 07 17:42:26.4±0.1**, 43°.102N**±0°.003×**13°.283E**±0°.005**,**
h22^{km}, ML2.1/76**, 4C-1D, Error ellipse: s-maj=0.4km**
s-min=0.1km az=243.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMA	**Gualdo di Mace**	**0.06**	**135**	⇑P	Pb	17 42 30.2	-0.1
GUMA				S	Sb	17 42 33.5	+0.5
GUMA				AML	AML		
	comp=E,1085µm,0.2s						
GUMA				AML	AML		
	comp=N,1031µm,0.5s						
CSP1	**Cessapalombo**	**0.06**	**260**	P	Pb	17 42 30.2	-0.3
CSP1				S	Sb	17 42 33.3	+0.1
CSP1				AML	AML		
	comp=E,1385µm,0.7s						
CSP1				AML	AML		
	comp=N,1155µm,0.3s						
CSP1				AML	AML		
	comp=E,1385µm,1.3s						
PF6	**Pievefavera**	**0.08**	**306**	P	Pb	17 42 30.0	-0.4
PF6				S	Sb	17 42 33.1	-0.1
SAP2	**Sant’Angelo in**	**0.09**	**93**	P	Pb	17 42 30.4	-0.1
SAP2				S	Sb	17 42 33.7	+0.4
SAP2				AML	AML		
	comp=E,683µm,0.3s						
SAP2				AML	AML		
	comp=N,3295µm,0.2s						
MDAR	**Monte D'Aria**	**0.14**	**312**	P	Pb	17 42 30.7	-1.3
MDAR				S	Sb	17 42 34.2	-1.8
MNTP	**Montappone**	**0.14**	**75**	P	Pb	17 42 30.9	-1.1
MNTP				S	Sb	17 42 35.1	-0.8
MNTP				AML	AML		
	comp=E,1660µm,0.1s						
MNTP				AML	AML		
	comp=N,814µm,1.5s						
MNTP				AML	AML		
	comp=E,1660µm,0.1s						
SSM1	**San Severino M**	**0.15**	**329**	P	Pb	17 42 30.9	-1.0
SSM1				S	Sb	17 42 34.6	-1.2
FDMO	**Fiordimonte**	**0.16**	**246**	P	Pb	17 42 31.0	-0.9
FDMO				S	Sb	17 42 34.8	-1.0
FDMO				AML	AML		
	comp=N,636µm,0.1s						
FDMO				AML	AML		
	comp=E,858µm,0.4s						
FDMO				AML	AML		
	comp=N,636µm,0.1s						
FDMO				AML	AML		
	comp=E,858µm,1.6s						
MF5	**Montefalcone A**	**0.17**	**131**	P	Pb	17 42 31.5	-0.6
MF5				S	Sb	17 42 35.5	-0.4
MF5				AML	AML		
	comp=N,1820µm,0.1s						
MF5				AML	AML		
	comp=E,1310µm,0.1s						
MC2	**Monte Cornacci**	**0.20**	**200**	P	Pb	17 42 31.7	-0.6
MC2				S	Sb	17 42 36.0	-0.5
MMO1	**Montemonaco**	**0.20**	**171**	⇑P	Pb	17 42 31.6	-0.6
MMO1				S	Sb	17 42 35.7	-0.6
TRE1	**Treia**	**0.21**	**6**	P	Pb	17 42 31.8	-0.3
TRE1				S	Sb	17 42 36.8	+0.6
FEMA	**Monte Fema**	**0.22**	**231**	P	Pb	17 42 32.2	-0.2
MML1	**Montelago di S**	**0.23**	**273**	⇓P	Pb	17 42 32.0	-0.3
MML1				S	Sb	17 42 36.8	+0.3
MNTT	**Montottone**	**0.23**	**100**	P	Pb	17 42 32.3	-0.1
MNTT				S	Sb	17 42 36.8	+0.2
MNTT				AML	AML		
	comp=E,670µm,0.3s						
MNTT				AML	AML		
	comp=N,1078µm,0.7s						
MNTT				AML	AML		
	comp=N,1077µm,0.7s						
MNTT				AML	AML		
	comp=N,1077µm,1.3s						
EL6	**Elcito**	**0.26**	**330**	P	Pb	17 42 32.4	-0.3
EL6				S	Sb	17 42 37.5	+0.3
EL6				AML	AML		
	comp=E,822µm,0.1s						
EL6				AML	AML		
	comp=N,741µm,0.7s						
EL6				AML	AML		
	comp=N,741µm,1.3s						
FIU1	**Fiuminata**	**0.27**	**289**	P	Pb	17 42 32.6	-0.2
FIU1				S	Sb	17 42 37.4	+0.2
CING	**Cingoli**	**0.28**	**347**	⇑P	Pb	17 42 32.6	-0.4
CING				S	Sb	17 42 37.8	+0.4
CESI	**CESI - Serrava**	**0.29**	**251**	P	Pb	17 42 33.1	0.0
CESI				S	Sb	17 42 38.7	+1.0
CESI				AML	AML		
	comp=N,801µm,0.1s						
CESI				AML	AML		
	comp=E,439µm,0.3s						
SNTG	**Esanatoglia**	**0.29**	**302**	P	Pb	17 42 32.9	-0.2
SNTG				S	Sb	17 42 38.4	+0.7
SNTG				AML	AML		
	comp=N,609µm,0.2s						
SNTG				AML	AML		
	comp=E,472µm,0.1s						
SNTG				AML	AML		
	comp=E,467µm,0.1s						
SNTG				AML	AML		
	comp=N,628µm,0.2s						
NRCA	**Norcia**	**0.29**	**205**	⇑P	Pb	17 42 32.9	-0.2
NRCA				S	Sb	17 42 38.3	+0.6
NRCA				AML	AML		
	comp=E,914µm,0.7s						
NRCA				AML	AML		
	comp=N,772µm,1.5s						
NRCA				AML	AML		
	comp=N,766µm,0.4s						
NRCA				AML	AML		
	comp=E,948µm,0.1s						
NRCA				AML	AML		
	comp=E,914µm,0.7s						
NRCA				AML	AML		
	comp=N,766µm,1.6s						
NRCA				AML	AML		
	comp=N,772µm,0.5s						
OFFI	**Offida**	**0.34**	**119**	P	Pb	17 42 34.2	+0.5
OFFI				S	Sn	17 42 41.6	-0.6
OFFI				AML	AML		
	comp=N,336µm,1.6s						
OFFI				AML	AML		
	comp=E,473µm,0.5s						
OFFI				AML	AML		
	comp=N,336µm,0.4s						
CIMA	**Civitanova Mar**	**0.35**	**54**	P	Pb	17 42 34.3	+0.4
CIMA				S	Sn	17 42 41.6	-0.8
MTRA	**Matera**	**0.35**	**166**	P	Pb	17 42 33.5	-0.4
MTRA				S	Sb	17 42 39.8	+0.7
MTRA				AML	AML		
	comp=E,260µm,0.3s						
MTRA				AML	AML		
	comp=N,200µm,0.5s						
CADA	**Capodarco di F**	**0.36**	**75**	P	Pb	17 42 34.7	+0.6
PP3	**Marolino**	**0.36**	**41**	P	Pb	17 42 34.5	+0.4
PP3				S	Sn	17 42 41.7	-1.1
FOSV	**Fossato di Vic**	**0.43**	**297**	P	Pb	17 42 35.0	-0.2
FOSV				S	Sb	17 42 42.5	+1.2
FOSV				AML	AML		
	comp=E,161µm,0.6s						
FOSV				AML	AML		
	comp=N,400µm,0.7s						
FOSV				AML	AML		
	comp=N,400µm,1.3s						
FOSV				AML	AML		
	comp=E,161µm,1.4s						
ASSB	**Assisi San Ben**	**0.46**	**263**	P	Pb	17 42 35.5	-0.3
ARVD	**Arcevia**	**0.47**	**328**	P	Pb	17 42 35.6	-0.3
ARVD				S	Sb	17 42 43.4	+1.0
ARVD				AML	AML		
	comp=N,116µm,0.9s						
ARVD				AML	AML		
	comp=E,112µm,0.3s						
ARVD				AML	AML		
	comp=N,116µm,1.1s						
SMA1	**SAN MARTINO**	**0.47**	**175**	P	Pb	17 42 35.4	-0.6
SMA1				S	Sb	17 42 43.6	+1.0
SMA1				AML	AML		
	comp=N,162µm,0.5s						
SMA1				AML	AML		
	comp=E,122µm,0.6s						
SMA1				AML	AML		
	comp=N,162µm,1.5s						
SSFR	**Montelago di S**	**0.50**	**313**	P	Pb	17 42 36.3	-0.1
SSFR				S	Sb	17 42 44.5	+1.3
SSFR				AML	AML		
	comp=N,1006µm,0.2s						
SSFR				AML	AML		
	comp=E,864µm,0.2s						
SSFR				AML	AML		
	comp=E,806µm,0.2s						
SSFR				AML	AML		
	comp=N,1024µm,0.2s						
GAVE	**Gavelli**	**0.50**	**215**	P	Pb	17 42 36.3	-0.2
GAVE				S	Sb	17 42 44.3	+1.0
GAVE				AML	AML		
	comp=E,540µm,1.1s						
GAVE				AML	AML		
	comp=N,458µm,0.2s						
GAVE				AML	AML		
	comp=E,540µm,0.9s						
AOI	**Ancona**	**0.51**	**27**	P	Pb	17 42 36.2	-0.4
AOI				S	Sb	17 42 44.1	+0.6
LNSS	**Leonessa**	**0.53**	**200**	P	Pb	17 42 36.7	-0.4
LNSS				S	Sn	17 42 45.7	-1.3
LNSS				AML	AML		
	comp=N,142µm,0.9s						
LNSS				AML	AML		
	comp=E,149µm,1.1s						
LNSS				AML	AML		
	comp=N,142µm,1.1s						
TERO	**Teramo**	**0.53**	**154**	P	Pb	17 42 36.7	-0.4
TERO				S	Sb	17 42 45.5	+1.1
TERO				AML	AML		
	comp=E,142µm,0.5s						
TERO				AML	AML		
	comp=N,126µm,0.4s						
CAMP	**Campotosto**	**0.57**	**171**	P	Pb	17 42 37.0	-0.8
CAMP				S	Sb	17 42 46.6	+1.0
CAMP				AML	AML		
	comp=E,64µm,0.5s						
CAMP				AML	AML		
	comp=N,78µm,0.5s						
CAMP				AML	AML		
	comp=E,64µm,1.5s						
MURB	**Monte Urbino**	**0.58**	**286**	P	Pb	17 42 37.7	-0.2
MURB				S	Sn	17 42 47.4	-0.7
MURB				AML	AML		
	comp=E,454µm,0.4s						
MURB				AML	AML		
	comp=N,400µm,0.2s						
MURB				AML	AML		
	comp=E,538µm,0.2s						
MURB				AML	AML		
	comp=N,380µm,0.2s						
MURB				AML	AML		
	comp=E,454µm,1.6s						
FRON	**Frontone**	**0.58**	**316**	P	Pb	17 42 37.9	-0.1
FRON				S	Sn	17 42 47.1	-1.2
FRON				AML	AML		
	comp=E,145µm,0.6s						
FRON				AML	AML		
	comp=N,131µm,0.7s						
FRON				AML	AML		
	comp=E,145µm,0.6s						
RM33	**Pellescritta (**	**0.59**	**185**	P	Pb	17 42 37.6	-0.6
RM33				S	Sb	17 42 47.4	+1.2
RM33				AML	AML		
	comp=E,96µm,0.7s						
RM33				AML	AML		
	comp=N,92µm,0.7s						
MOMA	**Monte Martano**	**0.60**	**241**	P	Pb	17 42 38.1	-0.2
MOMA				S	Sb	17 42 47.6	+1.1
MOMA				AML	AML		
	comp=N,202µm,0.4s						
MOMA				AML	AML		
	comp=E,160µm,0.2s						
SENI	**Senigallia**	**0.60**	**357**	P	Pb	17 42 38.9	+0.6
MPAG	**Monte Paganucc**	**0.65**	**324**	P	Pb	17 42 39.0	-0.2
MPAG				S	Sn	17 42 49.1	-0.9
MPAG				AML	AML		
	comp=E,86µm,0.9s						
MPAG				AML	AML		
	comp=N,81µm,0.3s						
GIGS	**Gran Sasso**	**0.68**	**162**	P	Pb	17 42 39.0	-0.7
GIGS				S	Sb	17 42 49.6	+0.9
GIGS				AML	AML		
	comp=N,25µm,1.5s						
GIGS				AML	AML		
	comp=E,41µm,0.3s						
GIGS				AML	AML		
	comp=N,25µm,0.5s						
ATTE	**AVT- Monte Tez**	**0.69**	**278**	P	Pb	17 42 40.3	+0.5
ATTE				AML	AML		
	comp=E,33µm,0.7s						
ATTE				AML	AML		
	comp=N,38µm,0.2s						
PIEI	**Pieia**	**0.70**	**309**	P	Pb	17 42 39.5	-0.3
PIEI				S	Sb	17 42 49.8	+0.7
PIEI				AML	AML		
	comp=E,164µm,1.2s						
PIEI				AML	AML		
	comp=N,160µm,0.2s						
CESX	**Cesi**	**0.71**	**227**	P	Pb	17 42 40.5	+0.4
CESX				S	Sn	17 42 51.0	-0.4
CESX				AML	AML		
	comp=E,88µm,0.6s						
CESX				AML	AML		
	comp=N,144µm,0.4s						
ATPI	**Pietralunga -**	**0.73**	**299**	P	Pb	17 42 40.2	-0.2
ATPI				S	Sb	17 42 50.5	+0.5
ATPI				AML	AML		
	comp=E,114µm,0.4s						
ATPI				AML	AML		
	comp=N,116µm,0.5s						
VCEL	**Villa Celiera**	**0.82**	**150**	P	Pb	17 42 41.9	0.0
VCEL				AML	AML		
	comp=N,72µm,0.4s						
VCEL				AML	AML		
	comp=E,83µm,1.3s						
VCEL				AML	AML		
	comp=N,72µm,0.4s						
VCEL				AML	AML		
	comp=E,83µm,0.7s						
BADI	**Badiali**	**0.86**	**299**	P	Pb	17 42 42.8	+0.2
BADI				AML	AML		
	comp=N,60µm,0.9s						
BADI				AML	AML		
	comp=E,58µm,0.2s						
T0110	**Collepietro**	**0.95**	**157**	P	Pb	17 42 43.8	-0.3
T0110				AML	AML		
	comp=E,50µm,0.8s						
T0110				AML	AML		
	comp=N,72µm,1.5s						
T0110				AML	AML		
	comp=N,72µm,0.5s						
T0110				AML	AML		
	comp=E,50µm,1.2s						

ROM 07 17:43:11.3±0.1**, 43°.122N**±0°.008×**13°.272E**±0°.010**,**
h24^{km}, ML0.9/2**, 1D, Error ellipse: s-maj=0.9km**
s-min=0.4km az=31.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSP1	**Cessapalombo**	**0.06**	**239**	P	Pb	17 43 15.7	0.0
CSP1				S	Sb	17 43 18.8	+0.2
PF6	**Pievefavera**	**0.06**	**295**	P	Pb	17 43 15.5	-0.1
PF6				S	Sb	17 43 18.7	+0.3
GUMA	**Gualdo di Mace**	**0.07**	**142**	P	Pb	17 43 15.5	-0.2
GUMA				S	Sb	17 43 19.1	+0.5
FDMO	**Fiordimonte**	**0.16**	**238**	⇓P	Pb	17 43 16.6	+0.2
FDMO				S	Sb	17 43 20.3	+0.5
MF5	**Montefalcone A**	**0.19**	**134**	P	Pb	17 43 16.9	+0.2
MF5				S	Sb	17 43 21.1	+0.6
MMO1	**Montemonaco**	**0.23**	**170**	P	Pb	17 43 17.1	-0.1
MMO1				S	Sb	17 43 21.4	+0.1
NRCA	**Norcia**	**0.31**	**202**	P	Pb	17 43 18.6	+0.2
NRCA				S	Sb	17 43 23.8	+0.5
NRCA				AML	AML		
	comp=E,35µm,0.1s						
NRCA				AML	AML		
	comp=N,27µm,0.1s						
MMUR	**Monte Murano**	**0.38**	**328**	AML	AML		
	comp=E,498µm,1.6s						
MMUR				AML	AML		
	comp=N,608µm,1.4s						
MMUR				AML	AML		
	comp=E,575µm,1.2s						
MMUR				AML	AML		
	comp=N,700µm,1.6s						
STN3	**Satriano di Lu**	**3.14**	**145**	AML	AML		
	comp=E,12250µm,0.0s						
STN3				AML	AML		
	comp=N,10400µm,0.1s						

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*SKO **07** 17:44:12.9, 41°.56N×19°.32E, h0^{km}, ML3.3*
*IDC **07** 17:44:12.9±9.6, 41°.77N×19°.71E, h0^{km}, mb3.6/3,*
mbtmp3.5/4, ML2.3/1, MS2.7/3, Error ellipse:
s-maj=182.5km s-min=28.3km az=31.0
*BEO **07** 17:44:14.4±0.6, 41°.53N×19°.44E, h19^{km}±4^{km}, ML3.1/9*
*TIR **07** 17:44:14.9, 41°.64N×19°.59E, h32^{km}±1^{km}, Ml3.4/5*
*PDG **07** 17:44:14.1±0.4, 41°.57N×19°.55E, h7^{km}±1^{km}, MD3.2/4,*
ML3.1/13, Error ellipse: s-maj=1.3km s-min=1.7km az=0.0
ISC 07 17:44:14.7±0.9**, 41°.59N**±0°.02×**19°.53E**±0°.02**, h16**^{km}±7^{km}**,**
n136, σ1^{s}.13/186**, 27C-18D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.35**	**134**	Pg	**Pg**	**17 44 21.5**	**-0.5**
TIR				S	**Sg**	**17 44 26.4**	**-0.6**
TIR				AML	AML	17 44 26.6	
	12nm,0.2s						
TIR	**Tirane**	**0.35**	**134**	*i* Pg	**Pg**	**17 44 21.4**	**-0.5**
TIR				*i* Sg	**Sb**	**17 44 27.4**	**-0.6**
ULC	**Ulcinj**	**0.43**	**330**	⇓*i*Pg	**Pg**	**17 44 22.8**	**-0.6**
ULC				*i* Sg	**Sb**	**17 44 29.9**	**-0.3**
SDA	**Shkodra**	**0.46**	**357**	Pg	**Pg**	**17 44 23.3**	**-0.7**
SDA				Sg	**Sb**	**17 44 31.5**	**+0.4**
DRME	**Dracevica, Mon**	**0.65**	**337**	⇑*i*Pg	**Pg**	**17 44 27.1**	**-0.4**
DRME				*e*Sg	**Sb**	**17 44 37.3**	**+0.8**
PHP	**Peshkopia**	**0.69**	**82**	Pg	**Pg**	**17 44 26.8**	**-1.5**
PHP				Sg	**Sg**	**17 44 37.1**	**-0.4**
PHP				AML	AML	17 44 40.8	
	6.1nm,0.5s						
PHP	**Peshkopia**	**0.69**	**82**	P	**Pg**	**17 44 27.0**	**-1.3**
PHP				S	**Sb**	**17 44 37.5**	**-0.3**
BUM	**Brajici-Budva**	**0.85**	**326**	⇑*i*Pg	**Pg**	**17 44 29.6**	**-1.7**
BUM				*i* Sg	**Sn**	**17 44 45.0**	**+0.6**
PDG	**Podgorica**	**0.86**	**346**	⇓P	**Pg**	**17 44 30.8**	**-0.7**
PDG				⇑S	**Sg**	**17 44 42.9**	**0.0**
PDG	**Podgorica**	**0.86**	**346**	*e*Pg	**Pg**	**17 44 30.1**	**-1.4**
PDG				*e*Sg	**Sn**	**17 44 45.5**	**+1.0**
PDG	**Podgorica**	**0.86**	**346**	⇑*i*Pg	**Pg**	**17 44 30.7**	**-0.8**
PDG				*i* Sg	**Sn**	**17 44 44.5**	**0.0**
PVY	**Plav**	**1.05**	**18**	⇑*i*Pg	**Pb**	**17 44 33.3**	**-1.4**
PVY				*i* Sg	**Sn**	**17 44 51.3**	**+1.9**
CEME	**Cevo**	**1.06**	**335**	⇓*i*Pg	**Pg**	**17 44 35.2**	**0.0**
CEME				*e*Sg	**Sn**	**17 44 51.1**	**+1.7**
OHR	**Ohrid**	**1.07**	**116**	*i* Pg	**Pb**	**17 44 34.4**	**-0.6**
OHR				*i* Sg	**Sn**	**17 44 51.4**	**+1.7**
OHR				*e*Lg	Lg	17 44 53.8	
	comp=N,528nm,0.5s						
OHR				*e*Lg	Lg	17 44 55.0	
	comp=E,720nm,0.6s						
VLO	**Vlora**	**1.12**	**181**	Pg	**Pg**	**17 44 36.2**	**-0.2**
VLO				Sg	**Sn**	**17 44 52.2**	**+1.3**
VLO				AML	AML	17 44 56.1	
	comp=E,9.9nm,0.5s						
VLO	**Vlora**	**1.12**	**181**	P	**Pg**	**17 44 36.3**	**-0.2**
VLO				S	**Sn**	**17 44 53.8**	**+2.9**
HCY	**Herceg Novi**	**1.15**	**318**	⇑*i*Pg	**Pn**	**17 44 36.1**	**-0.1**
HCY				*i* Sg	**Sg**	**17 44 54.4**	**+2.4**
NKME	**Niksic**	**1.25**	**340**	⇓*i*Pg	**Pn**	**17 44 37.7**	**+0.1**
NKME				*e*Sg	**Sg**	**17 44 57.8**	**+2.6**
KOME	**Kolasin**	**1.26**	**360**	⇑*i*Pg	**Pn**	**17 44 37.9**	**+0.1**
KOME				*e*Sg	**Sg**	**17 44 57.8**	**+2.4**
IVA	**Berane**	**1.31**	**12**	⇑*i*Pg	**Pn**	**17 44 38.3**	**-0.2**
IVA				*i* Sg	**Sg**	**17 44 59.9**	**+2.9**
KBN	**Korca**	**1.36**	**135**	P	**Pb**	**17 44 39.9**	**+0.1**
KBN				S	**Sg**	**17 44 58.3**	**-0.3**
KBN				AML	AML	17 45 02.4	
	comp=E,1.9nm,0.6s						
KBN	**Korca**	**1.36**	**135**	S	**Sg**	**17 45 00.5**	**+2.0**
KBN	**Korca**	**1.36**	**135**	P	**Pg**	**17 44 40.6**	**-0.3**
TREB	**Trebinje**	**1.43**	**322**	*e*Pn	**Pn**	**17 44 40.5**	**+0.5**
SKO	**Skopje**	**1.48**	**74**	*i* Pg	**Pb**	**17 44 42.2**	**+0.4**
SKO				*i* Sg	**Sg**	**17 45 03.6**	**+1.1**
BRY	**Bratogost**	**1.50**	**331**	⇑*i*Pg	**Pb**	**17 44 42.3**	**0.0**
BRY				*i* Sg	**Sg**	**17 45 05.3**	**+2.1**
NEST	**Nestorio**	**1.65**	**135**	P	**Pb**	**17 44 44.7**	**0.0**
NEST				S	**Sg**	**17 45 07.5**	**-0.2**
UPM	**Unac-Piva**	**1.68**	**344**	⇓*i*Pn	**Pb**	**17 44 45.7**	**+0.4**
UPM				*i* Sn	**Sg**	**17 45 10.3**	**+1.6**
SJES	**Sjenica**	**1.70**	**11**	*e*Pg	**Pb**	**17 44 45.8**	**+0.1**
SJES				*e*Sg	**Sg**	**17 45 10.0**	**+0.5**
KLINJ	**Klinje**	**1.72**	**336**	*e*Pn	**Pn**	**17 44 44.6**	**+0.4**
PLE	**Pljevlja**	**1.74**	**357**	⇓*i*Pn	**Pb**	**17 44 46.5**	**+0.1**
PLE				*i* Sn	**Sg**	**17 45 12.1**	**+1.3**
STON	**Ston**	**1.86**	**314**	*e*Pg	**Pn**	**17 44 46.5**	**+0.5**
STON				*e*Sg	**Sb**	**17 45 11.9**	**+0.4**
KEK	**Kerkira**	**1.89**	**174**	P	**Pg**	**17 44 50.9**	**-0.1**
KEK				S	**Sg**	**17 45 15.1**	**-0.4**
SELS	**Selova**	**2.01**	**35**	*e*Pn	**Pn**	**17 44 49.3**	**+1.3**
SELS				*e*Sn	**Sn**	**17 45 13.7**	**+0.8**
NOCI	**Noci**	**2.02**	**247**	Pn	**Pb**	**17 44 51.2**	**0.0**
RUDO	**Rudo**	**2.03**	**357**	*e*Pn	**Pb**	**17 44 50.7**	**-0.5**
IVAS	**Ivanjica**	**2.04**	**13**	*e*Pn	**Pn**	**17 44 49.4**	**+0.9**
IVAS				*e*Sn	**Sb**	**17 45 16.4**	**-0.1**
BARS	**Barje**	**2.09**	**53**	*i* Pn	**Pn**	**17 44 50.3**	**+1.1**
BARS				*i* Sn	**Sb**	**17 45 20.0**	**+1.9**
BARS	**Barje**	**2.09**	**53**	*e*Pn	**Pn**	**17 44 50.3**	**+1.1**
KZN	**Kozani**	**2.13**	**126**	P	**Pb**	**17 44 52.8**	**-0.2**
IGT	**Igoumenitsa**	**2.15**	**163**	Pn	**Pn**	**17 44 50.7**	**+0.8**
IGT				Sn	**Sb**	**17 45 20.0**	**+0.3**
IGT	**Igoumenitsa**	**2.15**	**163**	P	**Pn**	**17 44 50.0**	**+0.1**
KPRO	**Kipourio**	**2.15**	**139**	P	**Pb**	**17 44 52.0**	**-1.3**
JAN	**Janina**	**2.18**	**152**	P	**Pb**	**17 44 53.8**	**-0.1**
GOCS	**Kraljevo Serbi**	**2.21**	**26**	*e*Pn	**Pn**	**17 44 52.0**	**+1.2**
GOCS				*e*Sn	**Sb**	**17 45 20.2**	**-1.2**
GRG	**Griva**	**2.26**	**105**	P	**Pn**	**17 44 53.1**	**+1.6**
BBLS	**Lazi&#263i**	**2.27**	**358**	*e*Pn	**Pn**	**17 44 52.5**	**+0.8**
VAY	**Valandovo**	**2.30**	**96**	*i* Pn	**Pn**	**17 44 53.2**	**+1.2**
VAY				*i* Sn	**Sn**	**17 45 21.6**	**+1.6**
VAY				*e*Lg	Lg	17 45 22.0	
	comp=N,78nm,0.8s						
VAY				*e*Lg	Lg	17 45 22.1	
	comp=E,136nm,0.8s						
BOSS	**Bosilegrad**	**2.38**	**67**	*e*Pn	**Pn**	**17 44 54.2**	**+1.1**
PRMD	**Pramanda**	**2.38**	**149**	P	**Pn**	**17 44 54.9**	**+1.7**
GRUS	**Gruza**	**2.46**	**20**	*e*Pn	**Pn**	**17 44 55.7**	**+1.5**
GRUS				*e*Sn	**Sn**	**17 45 26.2**	**+2.3**
DIVS	**Divibare**	**2.53**	**8**	*e*Pn	**Pn**	**17 44 55.9**	**+0.7**
KNT	**Kendrikon**	**2.57**	**99**	P	**Pn**	**17 44 57.0**	**+1.3**
KNT	**Kendrikon**	**2.57**	**99**	*i* Pn	**Pn**	**17 44 57.1**	**+1.3**
KNT				*i* Sn	**Sn**	**17 45 28.1**	**+1.4**
BOVS	**Bovan**	**2.60**	**37**	⇓S	**Sn**	**17 45 28.5**	**+1.2**
BOVS	**Bovan**	**2.60**	**37**	*e*Pn	**Pn**	**17 44 56.9**	**+0.8**

BOVS				eSn	Sn	17 45 27.0	-0.4
BOVS	Bovan	2.60	37	⇑P	Pn	17 44 57.1	+1.0
TETR	Tetrakomo, Epi	2.61	149	P	Pn	17 44 58.3	+1.9
LIT	Litokhoron	2.70	123	P	Pn	17 44 58.6	+1.1
LIT	Litokhoron	2.70	123	i Pn	Pn	17 44 58.5	+1.1
KKB	Krupnik	2.71	84	P	Pn	17 44 59.1	+1.4
KKB	Krupnik	2.71	84	i Pn	Pn	17 44 59.2	+1.6
KKB				i Sn	Sn	17 45 32.4	+2.4
TRUS	Trudelj	2.71	13	ePn	Pb	17 45 00.4	-2.4
THE	Thessaloniki	2.77	109	P	Pn	17 44 59.6	+1.2
THE	Thessaloniki	2.77	109	i Pn	Pn	17 44 59.7	+1.2
THE				i Sn	Sn	17 45 32.5	+1.0
THL	Klokotos Trika	2.77	136	P	Pn	17 44 59.6	+1.1
ZAPS	Zavoj	2.85	53	ePn	Pn	17 45 01.1	+1.5
ZAPS				eSn	Sn	17 45 33.3	-0.3
TSLK	Tsoukalades, L	2.90	162	P	Pn	17 45 00.3	+0.1
LKD2	Lefkada island	2.93	162	P	Pn	17 45 00.3	-0.5
TEKS	Tekeris	2.96	0	ePn	Pn	17 45 02.4	+1.3
AMPL	Ampelaki	2.96	154	P	Pn	17 45 01.8	+0.7
ZAGS	Zajecar	2.98	41	ePn	Pn	17 45 02.8	+1.4
SOH	Sokhos	2.99	104	P	Pn	17 45 03.2	+1.7
SOH	Sokhos	2.99	104	i Pn	Pn	17 45 03.0	+1.5
NYDR	Nydri-Lefkada	3.01	162	P	Pn	17 45 01.3	-0.5
DRAG	Dragano-Lefkad	3.01	164	P	Pn	17 45 01.0	-0.8
BLKB	Belogradchik	3.08	48	⇓S	Sn	17 45 39.9	+0.5
EVGI	Lefkada island	3.09	163	P	Pn	17 45 02.1	-0.8
BORS2	Bor- Borsko je	3.10	35	ePn	Pn	17 45 02.9	-0.1
BORS2				eSn	Sn	17 45 39.3	-0.4
SRS	Serrai	3.10	97	P	Pn	17 45 03.6	+0.6
SRS	Serrai	3.10	97	i Pn	Pn	17 45 04.1	+1.1
MMB	Musomishta	3.17	89	P	Pn	17 45 05.8	+1.8
EVR	Evrytania	3.19	146	P	Pn	17 45 05.8	+1.4
PLG	Polygyros	3.21	111	P	Pn	17 45 05.6	+1.1
KUBS	Kucevo	3.23	28	ePn	Pn	17 45 04.4	-0.4
MAKR	Makrakomi, Fth	3.25	141	P	Pn	17 45 06.1	+0.9
AGG	Agios Georgios	3.34	139	P	Pn	17 45 07.0	+0.6
PVO	Paravola	3.34	152	P	Pn	17 45 08.1	+1.7
ANX	Ano Chora	3.51	148	P	Pn	17 45 10.8	+2.0
MDVR	Moldovita	3.57	26	⇑P	Pn	17 45 10.3	+0.9
MDVR				⇑S	Sn	17 45 52.5	+1.2
FRGS	Fruska Gora	3.57	3	ePn	Pn	17 45 10.5	+1.0
BLY	Banja Luka	3.59	332	ePn	Pb	17 45 18.7	+0.8
OUR	Ouranopolis	3.60	109	P	Pn	17 45 11.2	+1.4
AXAR	Agios Charalam	3.70	139	P	Pn	17 45 12.6	+1.2
VRSS	Vrsac	3.76	20	ePn	Pn	17 45 13.7	+1.6
VRSS				eSn	Sn	17 45 56.2	+0.1
KAVA	Kavala	3.80	97	P	Pn	17 45 14.0	+1.4
HERR	Herculane	3.91	32	⇑P	Pn	17 45 15.4	+1.3
HERR				⇑S	Sn	17 46 00.4	+0.8
ATAL	Atalanti	3.94	136	P	Pn	17 45 15.2	+0.5
KLV	Kalavryta, Ach	4.08	149	P	Pn	17 45 17.7	+1.1
PLVB	Pleven	4.17	63	⇓P	Pn	17 45 18.4	+0.7
BZS	Buzias	4.30	20	⇓P	Pn	17 45 20.4	+0.9
BZS				⇑S	Sn	17 46 10.5	+1.2
GZR	Gura Zlata	4.47	31	⇑P	Pn	17 45 23.3	+1.4
GZR				⇑S	Sn	17 46 14.3	+0.6
MORH	Mrgy, Hungar	4.67	352	ePn	Pn	17 45 22.9	-1.6
MORH	Mrgy, Hungar	4.67	352	⇓P	Pn	17 45 25.5	+1.0
ELND	Elena	4.90	72	⇑P	Pn	17 45 28.4	+0.7
ELND				⇓S	Sn	17 46 24.3	+0.3
SIRR	Siria	4.92	18	⇑P	Pn	17 45 28.3	+0.3
SIRR				⇓S	Sn	17 46 25.2	+0.6
LOT	Lotru	4.94	37	⇑S	Sn	17 46 26.0	+0.9
LOT	Lotru	4.94	37	⇑P	Pn	17 45 29.4	+1.1
BOJS	Bojanci	4.99	323	i Pn	Pn	17 45 29.6	+0.6
ARR	Arges	5.29	43	⇑S	Sn	17 46 34.4	+0.4
ARR	Arges	5.29	43	⇓P	Pn	17 45 34.2	+0.9
KNDS	Knezji Dol	5.43	318	i Pn	Pn	17 45 35.0	0.0
CEY	Cerknica	5.55	320	i Pn	Pn	17 45 37.2	+0.5
DRGR		5.68	23	⇓P	Pn	17 45 39.9	+1.4
MARR	Marisel-Cluj	5.70	26	⇑P	Pn	17 45 40.2	+1.4
SOKA	Soboth	6.03	329	ePn	Pn	17 45 43.7	+0.4
	comp=E,1.1nm,0.4s,SNR=4.2						
SOKA	Soboth	6.03	329	i Sn	Sn	17 46 49.8	-2.1
	comp=E,2.9nm,0.8s						
MLR	Muntele Rosu	6.08	48	LR	LR	17 48 34.4	
	comp=E,69nm,18.9s,baz=289,slow=45						
MLR	Muntele Rosu	6.08	48	⇑P	Pn	17 45 43.9	-0.2
OBKA	Obir	6.08	326	i Pn	Pn	17 45 45.1	+1.0
	comp=E,0.7nm,0.2s						
OBKA				i Sn	Sn	17 46 54.0	+0.6
	comp=E,3.9nm,0.4s						
DOPR	Dopca	6.09	42	⇓P	Pn	17 45 44.9	+0.7
OZUR		6.38	43	⇓P	Pn	17 45 48.8	+0.6
COVR	Voineasa-Covas	6.44	46	⇑P	Pn	17 45 48.7	-0.3
TURR	Turia	6.47	44	⇑P	Pn	17 45 49.8	+0.5
PLOR	Plostina	6.69	48	⇑P	Pn	17 45 52.7	+0.3
VRI	Vrincioaia	6.74	48	⇓P	Pn	17 45 53.1	+0.1
LESA	Schwarzleotal	7.61	322	i Pn	Pn	17 46 05.1	+0.1
	comp=E,1.4nm,0.4s						
LESA				i Sn	Sn	17 47 29.8	-1.2
	comp=E,1.4nm,0.4s						
WTTA	Wattenberg	8.00	318	i Pn	Pn	17 46 11.5	+1.1
	comp=E,0.5nm,0.2s						
WTTA				eSn	Sn	17 47 38.8	-1.9
	comp=E,2.5nm,0.4s						
WATA	Walderalm	8.08	318	i Pn	Pn	17 46 12.7	+1.2
	comp=E,1.7nm,0.4s						
MOTA	Moosalm	8.33	317	i Pn	Pn	17 46 15.6	+0.7
	comp=E,0.5nm,0.3s						
MOTA				i Sn	Sn	17 47 47.7	-1.0
	comp=E,1.6nm,0.5s						
GERES	GERESS Array B	8.34	332	Pn	Pn	17 46 15.1	+0.1
	baz=166,slow=16,SNR=1.7						
	comp=E,0.2nm,0.3s						
BRTR	Keskin Array B	10.88	95	LR	LR	17 50 44.4	
	comp=E,28nm,19.0s,baz=318,slow=36						
AKASG	Malin Array Be	11.31	33	LR	LR	17 51 55.0	
	comp=E,60nm,18.4s,baz=325,slow=42						
FINES	FINESS Array B	20.27	9	P	P	17 48 47.8	-1.6
	comp=E,3.0nm,0.9s,baz=195,slow=10,SNR=4.1						
	comp=E,3.0nm,0.9s						
ZALV	Zalesovo Beam	44.05	51	P	P	17 52 19.7	-1.8
	comp=E,0.7nm,0.4s,baz=282,slow=7.2,SNR=4.5						
	comp=E,0.7nm,0.4s						
MKAR	Makanchi Array	44.24	61	P	P	17 52 22.6	-0.7
	comp=E,0.5nm,0.7s,baz=273,slow=6.6,SNR=5.3						
	comp=E,0.5nm,0.7s						

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*NEIC **07** 17:51:59.7±1.5, 2°.88S±0°.02×129°.22E±0°.05, h21^{km}±5^{km}, mb4.4/49, Error ellipse: s-maj=8.1km s-min=2.5km az=109.0*

*DJA **07** 17:52:01.3±0.2, 3°S±2°×12°9E±°, h10^{km}, M4.6/30, mb4.7/30, mB5.2/6, MLv4.5/21, Mw(mB)4.5/6*

*IDC **07** 17:52:05.3±3.7, 2°.94S×129°.26E, h66^{km}±34^{km}, mb4.0/12, mbtmp4.4/15, ML4.3/2, MS3.5/7, Error ellipse: s-maj=29.1km s-min=14.0km az=67.0*

ISC 07 17:52:01.2±0.4, **2°.93S**±0°.04×**129°.23E**±0°.04, **h33**^{km}, **n145**, σ1^{s}.**64**/129, **mb4.5**/30, **MS3.6**/3, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.51	216	P	Pn	17 52 13.2	+0.9
MSAI				S	Sn	17 52 24.6	+4.7
KRAI	Karang Ratu	0.92	245	P	Pb	17 52 18.7	-0.1
AAI	Ambon	1.28	234	P	Pb	17 52 26.3	+1.5
BNDI	Bandanaira	1.72	157	P	Pb	17 52 31.2	-1.1
BNDI	Bandanaira	1.72	157	P	Pb	17 52 33.1	+0.8
NLAI	Namlea	2.15	262	P	Pb	17 52 37.5	-2.0
SWI	Sorong	2.88	45	P	Pn	17 52 45.1	+0.2
FAKI	Fak Fak	3.02	90		Pn	17 52 46.6	-0.1
FAKI				Sn	Sn	17 53 18.0	-3.7
FAKI	Fak Fak	3.02	90	P	Pn	17 52 47.1	+0.4
FAKI	Fak Fak	3.02	90	P	Pn	17 52 46.7	-0.1
SANI	Sanana	3.35	285	P	Pn	17 52 49.7	-1.6
SANI	Sanana	3.35	285	S	Sn	17 53 28.5	-1.5
SANI	Sanana	3.35	285	P	Pn	17 52 49.4	-1.9
TNTI	Ternate	4.12	333	Pn	Pn	17 52 60.0	-1.9
TNTI	Ternate	4.12	333	P	Pn	17 53 01.1	-0.8
TNTI	Ternate	4.12	333	P	Pn	17 53 01.4	-0.5
KMPI	Kaimana, Papua	4.53	99	P	Pn	17 53 09.9	+2.4
RKPI	Ransiki, Papua	5.14	74	P	Pn	17 53 16.7	+0.7
MWPI	Manokwari, Pap	5.20	68	P	Pn	17 53 20.8	+4.0
SAUI	Saumlaki	5.43	158		Pn	17 53 19.4	-0.6
SAUI	Saumlaki	5.43	158	P	Pn	17 53 24.5	+4.6
	0.5nm109nm,0.7s						
MNI	Manado	6.17	315	P	Pn	17 53 29.1	-1.0
LUWI	Luwuk	6.72	286		Pn	17 53 36.7	-0.9
LUWI	Luwuk	6.72	286	P	Pn	17 53 37.3	-0.3
LUWI	Luwuk	6.72	286	P	Pn	17 53 36.9	-0.7
	0.3nm966nm48nm,0.4s						
BAKI	Biak	7.09	76	P	Pn	17 53 43.4	+0.7
	0.4nm86nm,0.7s						
GTOI	Gorontalo	7.15	300	P	Pn	17 53 45.5	+1.9
APSI	Ampana	7.83	285	P	Pn	17 53 53.9	+0.9
SOEI	Soe	8.39	216	Pn	Pn	17 53 60.0	-0.7
SOEI	Soe	8.39	216	P	Pn	17 54 08.3	+7.6
	869nm68nm,0.8s						
MMRI	Maumere	8.97	230	Pn	Pn	17 54 07.9	-0.8
MMRI	Maumere	8.97	230	P	Pn	17 54 14.5	+5.9
	38nm,0.9s						
BATI	Baumata	9.10	217	P	Pn	17 54 18.5	+8.1
	19nm,0.6s,baz=70,slow=4.2,SNR=9.7						
BATI				LR	LR	17 57 52.5	
	comp=Z,402nm,20.8s,baz=38,slow=38						
BATI	Baumata	9.10	217	P	Pn	17 54 17.3	+6.9
	34nm,1.1s						
BNSI	Bone	9.22	261	P	Pn	17 54 16.3	+4.3
	20nm,0.9s						
TOLI2	Tolitoli	9.35	295		Pn	17 54 11.8	-1.9
TOLI2	Tolitoli	9.35	295	P	Pn	17 54 12.7	-1.1
BKSI	Bulukumba	9.39	255	P	Pn	17 54 19.4	+5.1
	35nm,1.4s						
TTSI	Tana Toraja	9.40	269	P	Pn	17 54 18.6	+4.2
	18nm,0.7s						
EDFI	Ende, Flores	9.47	232	P	Pn	17 54 21.7	+6.2
	18nm,0.7s						
SPSI	Sidrap Palu	9.50	263	P	Pn	17 54 20.8	+5.0
	25nm,0.7s						
SMPI	Sarmi	9.52	85	P	Pn	17 54 18.8	+2.7
	19nm,1.0s						
DRS	Darwin Rock St	9.59	170	P	Pn	17 54 18.7	+1.7
PCI	Palu	9.60	282	P	Pn	17 54 20.5	+3.3
	51nm,0.9s						
KAPI	Kappang	9.68	257	P	Pn	17 54 23.7	+5.4
	1.7nm,0.3s,baz=91,slow=6.5,SNR=25						
KAPI				LR	LR	17 58 32.0	
	comp=Z,301nm,21.2s,baz=74,slow=40						
	29nm,0.8s						
KAPI	Kappang	9.68	257		Pn	17 54 18.0	-0.3
KAPI	Kappang	9.68	257	P	Pn	17 54 22.5	+4.2
	26nm,1.3s						
MPSI	Mapaga	9.87	289	P	Pn	17 54 21.8	+0.8
	16nm,0.8s						
MKS	Makassar	10.00	257	P	Pn	17 54 27.0	+4.4
	30nm,0.8s						
MTN	Manton Dam	10.03	169		Pn	17 54 23.4	+0.2
MMSI	Mamuju	10.31	271	P	Pn	17 54 29.6	+2.6
	16nm,0.8s						
DAV	Davao City (W)	10.58	340	LR	LR	17 59 33.4	
	comp=Z,263nm,18.8s,baz=360,slow=42						
LBFI	Labuhan Bajo,	10.80	239	P	Pn	17 54 37.9	+4.2
	22nm,0.9s						
GENI	Genyem	10.93	89	P	Pn	17 54 38.1	+2.6
	52nm,0.9s						
WBSI	Waikabubak, Su	11.83	235	P	Pn	17 54 52.6	+4.7
	32nm,0.7s						
DBNI	Kabupaten Domp	12.19	243	P	Pn	17 54 57.5	+4.8
KNRA	Kununurra	12.68	182		Pn	17 54 58.8	-0.5
PLAI	Plampang	12.81	242	P	Pn	17 55 00.9	-0.2
TWSI	Taliwang, Sumb	13.57	244	P	P	17 55 15.4	-4.7
KHKI	Kahang-Kahang	14.59	248	P	P	17 55 29.3	-2.2
	22nm,0.8s						
FITZ	Fitzroy Crossi	15.48	193	P	Pn	17 55 37.8	+0.4
	1.5nm,0.3s,baz=22,slow=9.1,SNR=29						
	15nm,0.7s						
FITZ	Fitzroy Crossi	15.48	193		Pn	17 55 37.4	+0.1
KMMI	Kalianget	15.74	254	P	P	17 55 45.2	+0.9
	28nm,1.3s						
JAGI	Jajag, Banyuwa	15.98	249	Pn	Pn	17 55 42.7	-1.0
WB0	Warramunga Arr	17.48	164	P	Pn	17 56 00.3	-2.4
WB0				IAmb	IAmb	17 56 05.8	
	comp=Z,14nm,0.7s						
COEN	Coen	17.60	129	P	Pn	17 56 03.1	-1.1
COEN	Coen	17.60	129	P	P	17 56 05.9	+0.9
WRAB	Tennant Creek	17.63	164	P	Pn	17 56 02.4	-2.1
WRA	Warramunga Arr	17.63	164	P	Pn	17 56 02.3	-2.2
	comp=Z,8.2nm,0.7s,baz=338,slow=12,SNR=33						
WRA				S	Sn	17 59 15.2	-4.9
	comp=Z,1.5nm,0.8s,baz=353,slow=20,SNR=3.5						
WRA	Warramunga Arr	17.63	164	P	Pn	17 56 01.4	-3.1
MANU	Manus Island	18.14	88	P	Pn	17 56 08.5	-2.4
PMG	Port Moresby	18.95	111	P	P	17 56 20.1	+0.4
	comp=Z,7.9nm,0.8s,baz=301,slow=18,SNR=3.0						
PMG				LR	LR	18 03 59.4	
	comp=Z,89nm,21.3s,baz=341,slow=38						
PMG	Port Moresby	18.95	111	P	P	17 56 17.5	-2.2
QIS	Mount Isa	20.24	151	P	P	17 56 34.7	+0.9
MBWA	Marble Bar	20.35	206	P	P	17 56 33.9	-1.0
MBWA				IAmb	IAmb	17 56 50.3	
	comp=Z,17nm,1.2s						
MBWA	Marble Bar	20.35	206	P	P	17 56 34.7	-0.3
PSA00	Pilbara Seismi	20.66	205	P	P	17 56 37.0	-1.4
PSA00	Pilbara Seismi	20.66	205	P	P	17 56 37.3	-1.0
PSA00				IAmb	IAmb	17 56 42.8	
	comp=Z,11nm,0.8s						
PSA00	Pilbara Seismi	20.66	205	P	P	17 56 37.7	-0.7
AS31	Alice Springs	21.11	168	P	P	17 56 42.4	-0.9
AS31				IAmb	IAmb	17 56 45.6	
	comp=Z,8.6nm,0.7s						
ASAR	Alice Springs	21.11	168	P	P	17 56 44.0	+0.8
	comp=Z,24nm,0.7s,baz=350,slow=10,SNR=337						
	comp=Z,24nm,0.7s						
ASAR	Alice Springs	21.11	168	P	P	17 56 43.0	-0.2
MTSU	Mount Surprise	21.15	137	P	P	17 56 45.6	+1.9
BBJI	Bungbulang	21.95	257	P	P	17 56 51.0	-1.4
CTAO	Charters Tower	23.81	137	P	P	17 57 11.6	+0.2
CTAO				IAmb	IAmb	17 57 25.5	
	comp=Z,12nm,1.1s						
MEEK	Meekatharra	25.68	202	P	P	17 57 28.2	-0.2
INKA	Innaminka	27.02	157	P	P	17 57 40.6	+0.2
FORT	Forrest	27.73	182	P	P	17 57 46.0	-0.7
FORT				IAmb	IAmb	17 57 56.4	
	comp=Z,12nm,0.9s						
IPM	Ipoh	29.12	285	P	P	17 57 58.9	-0.5
KULM	Kulim	29.69	286	P	P	17 58 04.2	-0.3
BBOO	Buckleboo	30.41	169	P	P	17 58 10.1	-0.5
STKA	Stephens Creek	31.06	159	P	P	17 58 16.9	+0.5
	comp=Z,1.8nm,0.6s,baz=345,slow=13,SNR=4.2						
	comp=Z,1.8nm,0.6s						
STKA	Stephens Creek	31.06	159	P	P	17 58 16.5	+0.2
NWAO	Narrogin (SRO)	31.89	199	P	P	17 58 22.7	-0.9
NJ2	Nanjing	36.15	345	eP	P	17 59 03.4	+2.8
NJ2				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CMAR	Chiang Mai Arr	36.62	307	P	P	17 59 06.2	+1.4
	comp=Z,1.2nm,0.8s,baz=134,slow=7.5,SNR=9.5						
CMAR				LR	LR	18 16 10.8	
	comp=Z,29nm,18.3s,baz=120,slow=39						
	comp=Z,1.2nm,0.8s						
CAN	Canberra	37.09	153	P	P	17 59 11.5	+2.9
PZH	PanZhiHua	39.52	319	P	P	17 59 31.3	+2.0
MJAR	Matsushiro Arr	40.15	11	P	P	17 59 36.2	+2.0
	comp=Z,2.8nm,1.0s,baz=191,slow=10,SNR=5.0						
	comp=Z,2.8nm,1.0s						
XAN	Xi'an	41.45	334	P	P	17 59 45.4	+0.3
XAN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SHL	Shillong	45.94	310	P	P	18 00 20.3	-1.2
HHC	Hu-ho-hao-te	46.46	341	eP	P	18 00 27.2	+2.0
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,5.4s						
LSA	Lhasa	48.78	314	P	P	18 00 40.9	-3.0
LSA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
EVN	Everest	51.05	310	P	P	18 01 00.7	-0.7
SONM	Songino Array	54.36	341	P	P	18 01 25.2	+0.3
	comp=Z,0.3nm,0.3s,baz=140,slow=7.0,SNR=2.0						
	comp=Z,0.3nm,0.3s						
SONM	Songino Array	54.36	341	IAmb	IAmb	18 01 33.9	
	comp=Z,3.8nm,1.4s						
LBZ	Lake Benmore	54.82	145	P	P	18 01 29.7	+1.5
THZ	Tophouse	54.97	141	P	P	18 01 31.5	+2.2
LTZ	Lake Taylor	55.13	142	P	P	18 01 31.9	+1.4
TUWZ	Tuamarina	55.45	140	P	P	18 01 34.3	+1.5
TCW	Tory Channel	55.55	140	P	P	18 01 34.3	+0.8
KHZ	Kahutara	55.72	141		P	18 01 35.6	+1.0
BHW	Baring Head	56.04	140	P	P	18 01 37.2	+0.3
MK31	Makanchi Array	64.43	326	P	P	18 02 34.4	+0.1
MK31				IAmb	IAmb	18 02 35.3	
	comp=Z,2.9nm,0.8s						
MKAR	Makanchi Array	64.43	326	P	P	18 02 34.6	+0.2
	comp=Z,3.8nm,0.8s,baz=123,slow=7.9,SNR=35						
	comp=Z,3.8nm,0.8s						
KSH	Kashi	64.53	317	P	P	18 02 36.7	+1.4
KSH				sP	pP	18 02 44.8	-0.7
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MAKZ	Makanchi	64.61	326		P	18 02 35.3	-0.3
MAKZ				IAmb	IAmb	18 02 36.3	
	comp=Z,2.8nm,0.7s						
YAK	Yakutsk	64.78	0		P	18 02 35.9	-0.4
KDJ	Kajisay	64.98	320	P	P	18 02 37.9	-0.4
KDJ				IAmb	IAmb	18 03 03.6	
	comp=Z,2.5nm,0.8s						
ARSB	Arslanbob	67.38	317	P	P	18 02 53.4	-0.2
ARSB				IAmb	IAmb	18 03 02.6	
	comp=Z,7.8nm,1.2s						
ZAA0	Zalesovo Array	67.61	333		P	18 02 53.9	-0.8
ZAA0				IAmb	IAmb	18 02 54.9	
	comp=Z,4.0nm,0.9s						
ZALV	Zalesovo Beam	67.61	333	P	P	18 02 54.2	-0.4
	comp=Z,3.1nm,0.7s,baz=104,slow=6.3,SNR=15						
	comp=Z,3.1nm,0.7s						
ZALV	Zalesovo Beam	67.61	333		P	18 02 54.1	-0.5
KURBB	Kurchatov Arra	68.66	328	P	P	18 03 01.3	0.0
	comp=Z,4.5nm,0.7s,baz=128,slow=5.7,SNR=33						
	comp=Z,4.5nm,0.7s						
KURK	Kurchatov	68.67	328		P	18 03 00.8	-0.5
KK31	Karatay Array	69.80	318	P	P	18 03 07.6	-0.9
KK31				IAmb	IAmb	18 03 09.3	
	comp=Z,2.0nm,0.9s						
KKAR	Karatay Array	69.80	318	P	P	18 03 07.9	-0.7
BVAR	Borovoye Array	74.23	328	P	P	18 03 35.4	+0.6
	comp=Z,4.6nm,0.9s,baz=123,slow=7.3,SNR=20						
	comp=Z,4.6nm,0.9s						
BORK	Borovoye	74.28	328	P	P	18 03 34.4	-0.8
BORK				IAmb	IAmb	18 03 36.6	
	comp=Z,4.6nm,0.9s						
TIXI	Tiksi	74.44	360	LR	LR	18 39 49.1	
	comp=Z,29nm,18.0s,baz=207,slow=38						
TIXI	Tiksi	74.44	360	P	P	18 03 35.4	-0.3
TIXI				IAmb	IAmb	18 03 36.6	
	comp=Z,6.9nm,1.4s						
VNDA	Vanda	76.56	173	P	P	18 03 47.6	-0.1
NRIK	Noril'sk	77.45	346	P	P	18 03 54.0	+1.1
	comp=Z,1.0nm,0.3s,baz=147,slow=7.7,SNR=3.6						
	comp=Z,1.0nm,0.3s						
NRIK	Noril'sk	77.45	346	IAmb	IAmb	18 04 04.3	
	comp=Z,2.8nm,0.7s						
MAW	Mawson	78.44	201	P	P	18 03 59.0	+0.6
	comp=Z,4.0nm,0.8s,baz=79,slow=4.6,SNR=4.6						
	comp=Z,4.0nm,0.8s						
AB31	Akbulak array	78.86	321	P	P	18 03 60.0	-1.2
AB31				IAmb	IAmb	18 04 06.0	
	comp=Z,2.2nm,0.7s						
ABKAR	Akbulak array	78.86	321	P	P	18 04 00.7	-0.5
VOI	Vohitsoka	81.90	248	P	P	18 04 18.1	-0.1
L18K	Granite Mounta	85.21	27	P	P	18 04 35.1	+0.9
RAYN	Ar Rayn	85.41	294	P	P	18 04 36.2	+0.1
RAYN				IAmb	IAmb	18 04 37.8	
	comp=Z,4.2nm,0.8s						
QSPA	South Pole Qui	87.02	180	P	P	18 04 43.5	+0.3
	comp=Z,1.3nm,0.9s,baz=288,slow=2.1,SNR=7.5						
	comp=Z,1.3nm,0.9s						
QSPA	South Pole Qui	87.02	180	P	P	18 04 43.0	-0.2
QSPA				IAmb	IAmb	18 05 20.8	
	comp=Z,2.3nm,1.0s						
KTH	Kantishna Hill	88.08	26	P	P	18 04 48.3	0.0
LSZ	Lusaka	99.86	254	LR	LR	18 49 04.7	
	comp=Z,37nm,20.1s,baz=326,slow=34						
CPUP	Villa Florida	150.23	168	PKPbc	PKiKP	18 11 50.3	-0.3
	comp=Z,0.4nm,0.9s,baz=27,slow=3.5,SNR=4.8						

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*SKO **07** 18:05:25.4, 41°.57N×19°.27E, h0^{km}, ML2.6*

*TIR **07** 18:05:27.4, 41°.57N×19°.56E, h7^{km}, Ml2.5/2*

*PDG **07** 18:05:27.9±0.4, 41°.60N×19°.57E, h18^{km}, ML2.8/13, Error ellipse: s-maj=1.7km s-min=1.9km az=0.0*

*IDC **07** 18:05:32.9±87.0, 42°.28N×20°.60E, h0^{km}, mb3.4/2, mbtmp3.6/3, ML2.9/1, MS3.1/1, Error ellipse: s-maj=1582.0km s-min=69.9km az=51.0*

ISC 07 18:05:25.9±1.1, **41°.49N**±0°.02×**19°.38E**±0°.03, **h10**^{km}±8^{km}, **n45**, σ1^{s}.**19**/70, **18C-13D**, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.39	112	Pg	Pg	18 05 34.4	+0.7
TIR				Sg	Sg	18 05 38.6	-0.3
TIR				AML	AML	18 05 39.6	
	2.4nm,0.2s						
TIR	Tirane	0.39	112	i Pg	Pg	18 05 34.5	+0.8
TIR				i Sg	Sg	18 05 40.8	+2.0
ULC	Ulcinj	0.48	348	⇑iPg	Pb	18 05 36.3	-0.2
ULC				i Sg	Sb	18 05 44.6	+0.9
SDA	Shkodra	0.56	9	Pg	Pg	18 05 37.0	+0.1
SDA				Sg	Sg	18 05 44.2	-0.1
DRME	Dracevica, Mon	0.71	348	⇓iPg	Pg	18 05 39.9	+0.3
DRME				eSg	Sb	18 05 50.9	+0.7
PHP	Peshkopia	0.82	76	Pg	Pg	18 05 40.2	-1.5
PHP				S	Sg	18 05 49.9	-2.5
PHP				AML	AML	18 05 58.3	
	1.4nm,0.3s						
BUM	Brajici-Budva	0.88	336	⇓iPg	Pn	18 05 44.6	+0.1
BUM				i Sg	Sn	18 05 58.5	+1.0
PDG	Podgorica	0.94	354	⇓P	Pg	18 05 43.9	-0.2
PDG				⇓S	Sg	18 05 55.8	-0.4
PDG	Podgorica	0.94	354	⇑iPg	Pb	18 05 44.2	-0.1
PDG				i Sg	Sb	18 05 57.7	+0.9
CEME	Cevo	1.11	342	⇑iPg	Pn	18 05 47.7	+0.1
CEME				eSg	Sn	18 06 05.0	+2.0
OHR	Ohrid	1.14	109	i Pg	Pg	18 05 47.8	+0.1
OHR				i Sg	Sn	18 06 05.3	+1.7
OHR				eLg	Lg	18 06 06.4	
	comp=N,140nm,0.8s						
OHR				eLg	Lg	18 06 06.7	
	comp=E,126nm,0.5s						
HCY	Herceg Novi	1.16	326	⇑iPg	Pn	18 05 49.6	+1.4
HCY				i Sg	Sn	18 06 07.5	+3.3
PVY	Plav	1.18	21	⇑iPg	Pg	18 05 47.3	-1.3
PVY				i Sg	Sg	18 06 04.2	+0.2
NKME	Niksic	1.31	346	⇑iPg	Pg	18 05 51.7	+0.6
NKME				eSg	Sn	18 06 10.1	+2.1
KOME	Kolasin	1.36	4	⇑iPg	Pn	18 05 51.2	+0.1
KOME				eSg	Sn	18 06 10.4	+1.2
IVA	Berane	1.43	15	⇑iPg	Pn	18 05 51.3	-0.7
IVA				i Sg	Sb	18 06 11.5	+0.5
BRY	Bratogost	1.54	336	⇓iPg	Pg	18 05 55.8	+0.3
BRY				i Sg	Sg	18 06 16.9	+1.4
SKO	Skopje	1.61	72	i Pg	Pn	18 05 55.3	+0.8
SKO				i Sg	Sn	18 06 17.4	+2.0
UPM	Unac-Piva	1.74	349	⇓iPn	Pn	18 05 56.6	+0.1
UPM				i Sn	Sb	18 06 20.4	+0.2
PLE	Pljevlja	1.83	0	⇓iPn	Pn	18 05 57.7	+0.1
PLE				i Sn	Sb	18 06 22.5	-0.2
IGT	Igoumenitsa	2.09	159	i Pn	Pb	18 06 03.4	-0.5
IGT				i Sn	Sg	18 06 35.5	+2.5
MATE	Matera	2.19	248	⇑P	Pb	18 06 04.4	-1.3
MATE				⇓S	Sb	18 06 31.6	-1.3
BARS	Barje	2.24	53	i Pn	Pn	18 06 03.5	+0.4
VAY	Valandovo	2.41	93	i Pn	Pn	18 06 05.9	+0.6
VAY				i Sn	Sn	18 06 34.9	0.0
VAY				eLg	Lg	18 06 35.2	
	comp=E,11nm,0.6s						
VAY				eLg	Lg	18 06 37.0	
	comp=N,30nm,0.8s						
KNT	Kendrikon	2.67	96	i Pn	Pn	18 06 10.4	+1.4
KNT				i Sn	Sn	18 06 41.9	+0.5
LIT	Litokhoron	2.74	120	i Pn	Pn	18 06 11.5	+1.5
BOVS	Bovan	2.74	38	⇓P	Pn	18 06 09.9	-0.2
KKB	Krupnik	2.83	82	i Pn	Pn	18 06 12.3	+1.1
KKB				i Sn	Sn	18 06 46.1	+0.8
TIP	Timpagrande	3.06	222	⇑P	Pn	18 06 16.2	+1.8
TIP				⇓S	Sb	18 06 54.7	-3.3
SRS	Serrai	3.19	95	i Pn	Pn	18 06 17.8	+1.6
MDVR	Moldovita	3.70	27	⇑P	Pn	18 06 23.2	0.0
HERR	Herculane	4.05	32	⇑P	Pn	18 06 27.7	-0.2
BZS	Buzias	4.43	21	⇓P	Pn	18 06 33.6	+0.4
GZR	Gura Zlata	4.62	31	⇓P	Pn	18 06 36.2	+0.4
MORH	Mrgy, Hungar	4.75	354	⇓P	Pn	18 06 37.6	+0.1
SIRR	Siria	5.05	18	⇑P	Pn	18 06 42.0	+0.3
LOT	Lotru	5.08	37	⇑P	Pn	18 06 42.6	+0.4
ARR	Arges	5.44	43	⇑P	Pn	18 06 48.1	+1.0
DRGR		5.81	23	⇑P	Pn	18 06 52.4	+0.2
MLR	Muntele Rosu	6.22	48	⇑P	Pn	18 06 58.9	+0.9
VRI	Vrincioaia	6.89	48	⇑P	Pn	18 07 07.6	+0.7
FINES	FINESS Array B	20.39	9	P	P	18 10 01.1	-1.5

	comp=N,0.1nm,0.3s,baz=186,slow=9.8,SNR=4.7						
	comp=N,2.3nm,0.7s						
AAK	**Ala-Archa**	**40.31**	**69**	LR	LR	18 34 53.1	
	comp=N,22nm,18.1s,baz=110,slow=45						
ZALV	**Zalesovo Beam**	**44.20**	**50**	P	**P**	**18 13 33.5**	**-1.3**
	comp=N,0.4nm,0.5s,baz=286,slow=10,SNR=2.1						
	comp=N,0.4nm,0.5s						
MKAR	**Makanchi Array**	**44.39**	**61**	P	**P**	**18 13 35.5**	**-1.0**
	comp=N,0.2nm,0.5s,baz=287,slow=6.8,SNR=4.4						
	comp=N,0.2nm,0.5s						

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*SKO **07** 18:16:12.9,41°.45N×19°.35E,h0^{km},ML2.5*
*THE **07** 18:16:13.6,42°N±5°×1°9E±°,h12^{km},M2.6/5,MLh2.6/5*
*TIR **07** 18:16:15.2,41°.51N×19°.64E,h2^{km},Ml3.1/3*
*PDG **07** 18:16:15.1±0.4,41°.52N×19°.44E,h24^{km},ML2.7/12,Error ellipse: s-maj=1.0km s-min=1.9km az=0.0*
ISC 07 18:16:14.6±1.0,41°.52N±0°.02×19°.54E±0°.03,h10^{km}±8^{km}, n47,σ0^{s}78/83,22C-8D,Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.30**	**124**	Pg	**Pg**	**18 16 20.3**	**-0.3**
TIR				Sg	**Sg**	**18 16 23.8**	**-0.8**
TIR				AML	AML	18 16 24.5	
	30nm,0.2s						
TIR				AML	AML	18 16 24.6	
	18nm,0.1s						
TIR	**Tirane**	**0.30**	**124**	*i* Pg	**Pg**	**18 16 20.3**	**-0.3**
TIR				*i* Sg	**Sg**	**18 16 25.6**	**+0.9**
ULC	**Ulcinj**	**0.50**	**334**	⇑*i*Pg	**Pg**	**18 16 24.5**	**+0.2**
ULC				*i* Sg	**Sb**	**18 16 32.7**	**-0.1**
SDA	**Shkodra**	**0.54**	**357**	P	**Pg**	**18 16 25.7**	**+0.7**
SDA				Sg	**Sb**	**18 16 35.1**	**+1.2**
PHP	**Peshkopia**	**0.70**	**76**	P	**Pg**	**18 16 27.5**	**-0.6**
PHP				Sg	**Sg**	**18 16 36.8**	**-0.5**
PHP				AML	AML	18 16 42.0	
	1.2nm,0.2s						
PHP	**Peshkopia**	**0.70**	**76**	P	**Pg**	**18 16 27.3**	**-0.9**
PHP				S	**Sb**	**18 16 38.6**	**0.0**
DRME	**Dracevica, Mon**	**0.72**	**339**	⇑*i*Pg	**Pg**	**18 16 28.3**	**-0.2**
DRME				*e*Sg	**Sb**	**18 16 40.2**	**+1.0**
BUM	**Brajici-Budva**	**0.92**	**329**	⇑*i*Pg	**Pg**	**18 16 32.6**	**+0.3**
BUM				*i* Sg	**Sn**	**18 16 46.3**	**-0.7**
PDG	**Podgorica**	**0.94**	**347**	⇓P	**Pb**	**18 16 33.2**	**+0.2**
PDG				⇑S	**Sn**	**18 16 47.6**	**+0.3**
PDG	**Podgorica**	**0.94**	**347**	⇓*i*Pg	**Pg**	**18 16 32.3**	**-0.3**
PDG				*i* Sg	**Sn**	**18 16 47.0**	**-0.3**
OHR	**Ohrid**	**1.03**	**113**	*i* Pg	**Pg**	**18 16 33.3**	**-1.2**
OHR				*i* Sg	**Sb**	**18 16 49.4**	**+1.1**
OHR				*e*Lg	Lg	18 16 50.0	
	comp=N,114nm,0.6s						
OHR				*e*Lg	Lg	18 16 51.0	
	comp=E,95nm,0.4s						
VLO	**Vlora**	**1.05**	**182**	P	**Pn**	**18 16 35.8**	**+0.4**
VLO				Sg	**Sn**	**18 16 50.0**	**0.0**
VLO				AML	AML	18 16 53.6	
	comp=E,1.4nm,0.4s						
VLO	**Vlora**	**1.05**	**182**	P	**Pn**	**18 16 35.6**	**+0.3**
VLO				S	**Sn**	**18 16 51.5**	**+1.5**
PVY	**Plav**	**1.12**	**16**	⇓*i*Pg	**Pb**	**18 16 36.5**	**+0.3**
PVY				*i* Sg	**Sn**	**18 16 53.9**	**+1.8**
CEME	**Cevo**	**1.13**	**336**	⇑*i*Pg	**Pn**	**18 16 36.7**	**+0.2**
CEME				*e*Sg	**Sn**	**18 16 53.0**	**+0.9**
HCY	**Herceg Novi**	**1.21**	**321**	⇑*i*Pg	**Pn**	**18 16 36.9**	**-0.7**
HCY				*i* Sg	**Sn**	**18 16 54.3**	**+0.2**
KBN	**Korca**	**1.30**	**133**	P	**Pn**	**18 16 39.2**	**+0.2**
KBN				S	**Sg**	**18 16 57.2**	**+0.7**
KBN	**Korca**	**1.30**	**133**	P	**Pn**	**18 16 38.1**	**-0.8**
KBN				S	**Sg**	**18 16 58.1**	**+1.7**
NKME	**Niksic**	**1.32**	**341**	⇑*i*Pg	**Pn**	**18 16 39.2**	**0.0**
NKME				*e*Sg	**Sg**	**18 16 57.6**	**+0.5**
KOME	**Kolasin**	**1.33**	**359**	⇑*i*Pg	**Pn**	**18 16 39.6**	**+0.2**
KOME				*e*Sg	**Sg**	**18 16 58.0**	**+0.5**
IVA	**Berane**	**1.38**	**11**	⇑*i*Pg	**Pn**	**18 16 40.2**	**+0.2**
IVA				*i* Sg	**Sg**	**18 16 59.2**	**+0.2**
SKO	**Skopje**	**1.50**	**72**	*i* Pg	**Pb**	**18 16 42.5**	**0.0**
SKO				*i* Sg	**Sb**	**18 17 02.4**	**+0.9**
BRY	**Bratogost**	**1.57**	**332**	⇓*i*Pg	**Pn**	**18 16 41.8**	**-0.9**
BRY				*i* Sg	**Sn**	**18 17 02.2**	**-1.0**
NEST	**Nestorio**	**1.59**	**133**	P	**Pn**	**18 16 43.6**	**+0.7**
UPM	**Unac-Piva**	**1.75**	**345**	⇑*i*Pn	**Pn**	**18 16 45.7**	**+0.5**
UPM				*i* Sn	**Sn**	**18 17 06.8**	**-0.8**
IGT	**Igoumenitsa**	**2.07**	**163**	P	**Pn**	**18 16 49.0**	**-0.4**
IGT				S	**Sb**	**18 17 17.0**	**-1.1**
IGT	**Igoumenitsa**	**2.07**	**163**	*i* Pn	**Pn**	**18 16 49.5**	**0.0**
IGT				*i* Sn	**Sn**	**18 17 15.1**	**-0.2**
KZN	**Kozani**	**2.08**	**125**	P	**Pn**	**18 16 48.8**	**-0.9**
KZN				S	**Sn**	**18 17 16.4**	**+0.8**
KPRO	**Kipourio**	**2.09**	**138**	P	**Pn**	**18 16 50.9**	**+1.2**
BARS	**Barje**	**2.14**	**52**	*i* Pn	**Pn**	**18 16 50.8**	**+0.5**
BARS				*i* Sn	**Sb**	**18 17 18.8**	**-1.2**
VAY	**Valandovo**	**2.29**	**94**	*i* Pn	**Pn**	**18 16 52.5**	**+0.1**
VAY				*i* Sn	**Sb**	**18 17 23.0**	**-1.4**
VAY				*e*Lg	Lg	18 17 23.4	
	comp=E,21nm,1.1s						
VAY				*e*Lg	Lg	18 17 28.0	
	comp=N,25nm,1.0s						
MATE	**Matera**	**2.31**	**249**	⇑P	**Pn**	**18 16 50.9**	**-1.7**
KNT	**Kendrikon**	**2.56**	**97**	P	**Pn**	**18 16 56.4**	**+0.2**
KNT	**Kendrikon**	**2.56**	**97**	*i* Pn	**Pn**	**18 16 56.5**	**+0.4**
KNT				*i* Sn	**Sn**	**18 17 27.0**	**-0.3**
LIT	**Litokhoron**	**2.65**	**121**	*i* Pn	**Pn**	**18 16 58.4**	**+0.9**
BOVS	**Bovan**	**2.66**	**36**	⇑P	**Pn**	**18 16 55.9**	**-1.6**
BOVS				⇑S	**Sn**	**18 17 30.0**	**+0.3**
KKB	**Krupnik**	**2.71**	**82**	*i* Pn	**Pn**	**18 16 58.6**	**+0.3**
KKB				*i* Sn	**Sn**	**18 17 32.7**	**+1.5**
SRS	**Serrai**	**3.08**	**96**	*i* Pn	**Pn**	**18 17 03.7**	**+0.3**
BLKB	**Belogradchik**	**3.13**	**47**	⇓S	**Sn**	**18 17 41.7**	**+0.1**
MDVR	**Moldovita**	**3.63**	**25**	⇑P	**Pn**	**18 17 09.9**	**-1.0**
MDVR				⇑S	**Sn**	**18 17 53.5**	**-0.4**
HERR	**Herculane**	**3.97**	**31**	⇑P	**Pn**	**18 17 14.7**	**-0.8**
HERR				⇑S	**Sn**	**18 18 01.9**	**-0.2**
BZS	**Buzias**	**4.37**	**20**	⇑P	**Pn**	**18 17 20.5**	**-0.5**
GZR	**Gura Zlata**	**4.54**	**30**	⇑P	**Pn**	**18 17 22.5**	**-0.9**
GZR				⇓S	**Sn**	**18 18 16.6**	**+0.3**
MORH	**Mrgy, Hungar**	**4.74**	**352**	⇑P	**Pn**	**18 17 25.1**	**-1.0**
SIRR	**Siria**	**4.99**	**17**	⇓P	**Pn**	**18 17 28.9**	**-0.6**
LOT	**Lotru**	**4.99**	**37**	⇓S	**Sn**	**18 18 26.8**	**-0.8**
DRGR		**5.75**	**22**	⇑P	**Pn**	**18 17 39.4**	**-0.6**
DRGR				⇑S	**Sn**	**18 18 46.3**	**+0.3**

IDC 07 18:22:02.1±5.2,30°.53N×141°.88E,h0^{km},mb3.3/4, mbtmp3.3/5,ML2.5/1,Error ellipse: s-maj=207.7km s-min=24.1km az=72.0,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**6.74**	**334**	Pn	Pn	18 23 41.9	-0.3
	0.1nm,0.3s,baz=154,slow=11,SNR=14						
	2.1nm,0.8s						
MKAR	**Makanchi Array**	**48.14**	**307**	P	P	18 30 43.7	-0.2
	0.3nm,0.7s,baz=99,slow=8.6,SNR=3.9						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**50.49**	**312**	P	P	18 31 01.8	0.0
	0.3nm,0.6s,baz=84,slow=7.3,SNR=4.2						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**50.70**	**189**	P	P	18 31 05.2	+1.6
	0.2nm,0.4s,baz=6.9,slow=7.3,SNR=1.7						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**54.43**	**189**	P	P	18 31 29.9	-1.3
	0.2nm,0.6s,baz=16,slow=11,SNR=4.2						
	0.2nm,0.6s						

NOU 07 18:28:03.7,16°.11S×167°.70E,h57^{km},MLv3.9/10, Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.81**	**324**	P	Pn	18 28 20.0	+0.8
DVP	**Devils Point**	**1.67**	**164**	P	Pn	18 28 32.0	+1.3
RTV	**Rentapao**	**1.81**	**158**	P	Pn	18 28 32.8	+0.2
YATNC	**Mamie plateau,**	**5.97**	**187**	P	Pn	18 29 29.2	-0.3
DZM	**Mont Dzumac**	**6.05**	**191**	P	Pn	18 29 30.8	+0.1
OUENC	**Ouen Island, N**	**6.33**	**187**	P	Pn	18 29 34.7	+0.3
NGOA	**Tingoa Renbel**	**8.69**	**300**	P	Pn	18 30 07.2	+0.4

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*NEIC **07** 18:37:13.3±2.9,60°.37N±0°.08×60°.22E±0°.07,h10^{km}±2^{km}, mb4.5/7,Error ellipse: s-maj=13.4km s-min=5.6km az=1.0*
*MIRAS **07** 18:37:16.7,60°.17N×59°.99E,h1^{km},ML3.5/8*
*IDC **07** 18:37:16.5±1.0,60°.18N×59°.94E,h0^{km},mb3.6/2, mbtmp3.8/13,ML3.3/11,MS3.6/2,Error ellipse: s-maj=19.8km s-min=9.4km az=34.0*
ISC 07 18:37:12.5±0.6,60°.36N±0°.04×60°.15E±0°.04,h10^{km},n42, σ2^{s}46/67,mb3.9/3,3C-1D,Ural Mountains region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVUR	**Severouralsk**	**0.18**	**208**	*i* P	**Pg**	**18 37 16.8**	**+0.4**
SVUR				*i* S	**Sg**	**18 37 17.9**	**-1.2**
SVUR				*i* S	**Sg**	**18 37 17.9**	**-1.2**
SVUR				*i* S	**Sg**	**18 37 17.9**	**-1.2**
SVUR				*i* AML	AML	18 37 18.2	
	10µm,0.8s						
PR7R	**Sarany**	**1.95**	**202**	*i* P	**Pb**	**18 37 49.5**	**+1.4**
PR7R				*i* S	**Sn**	**18 38 12.1**	**+2.0**
PR7R				*i* S	**Sn**	**18 38 12.1**	**+2.0**
PR7R				*i* S	**Sn**	**18 38 12.1**	**+2.0**
PR7R				*i* AML	AML	18 38 18.6	
	2µm,0.5s						
PR1R	**Pomanovo**	**2.09**	**237**	*i* P	**Pb**	**18 37 52.9**	**+2.5**
PR1R				*i* S	**Sb**	**18 38 17.8**	**+1.4**
PR1R				*i* S	**Sb**	**18 38 17.8**	**+1.4**
PR1R				*i* S	**Sg**	**18 38 18.4**	**-1.1**
PR1R				*i* AML	AML	18 38 20.9	
	896nm,0.4s						
PR0R	**Verkhnechusovs**	**2.66**	**217**	*i* P	**Pb**	**18 37 59.2**	**-1.0**
PR0R				*i* S	**Sn**	**18 38 29.6**	**+1.9**
PR0R				*i* S	**Sb**	**18 38 30.1**	**-2.8**
PR0R				*i* S	**Sb**	**18 38 30.1**	**-2.8**
PR0R				*i* AML	AML	18 38 35.9	
	2µm,0.3s						
PR6R	**Ekimyata**	**3.03**	**225**	*i* P	**Pn**	**18 38 03.1**	**+2.6**
PR6R				*i* S	**Sn**	**18 38 39.0**	**+2.2**
PR6R				*i* S	**Sn**	**18 38 39.0**	**+2.2**
PR6R				*i* S	**Sn**	**18 38 39.0**	**+2.2**
PR6R				*i* AML	AML	18 38 55.0	
	261nm,0.3s						
PR3R	**Kungur**	**3.35**	**210**	*i* P	**Pn**	**18 38 06.7**	**+1.9**
PR3R				*i* S	**Sn**	**18 38 44.9**	**+0.3**
PR3R				*i* S	**Sn**	**18 38 44.9**	**+0.3**
PR3R				*i* S	Sb	18 38 45.1	-7.5
PR3R				*i* AML	AML	18 38 56.7	
	180nm,0.3s						
PR4R	**Vlasy**	**3.37**	**225**	*i* P	**Pn**	**18 38 05.0**	**-0.1**
PR4R				*i* S	**Sn**	**18 38 43.7**	**-1.3**
PR4R				*i* S	**Sn**	**18 38 43.7**	**-1.3**
PR4R				*i* S	**Sn**	**18 38 43.7**	**-1.3**
PR4R				*i* AML	AML	18 38 53.3	
	424nm,0.2s						
ARTI	**Arti**	**4.09**	**194**	Pn	**Pn**	**18 38 18.4**	**+3.3**
	1.4nm,0.3s,baz=7.9,slow=8.7,SNR=13						
ARTI				Lg	Lg	18 39 10.9	
	6.8nm,0.3s,baz=1.8,slow=23,SNR=8.7						
	2.7nm,0.3s						
ARTI	**Arti**	**4.09**	**194**		**Pn**	**18 38 15.9**	**+0.9**
ARTI	**Arti**	**4.09**	**194**	*i* P	**Pn**	**18 38 19.5**	**+4.4**
ARTI				*i* S	**Sn**	**18 39 04.5**	**+1.6**
ARTI				*i* S	**Sn**	**18 39 04.5**	**+1.6**
ARTI				*i* S	**Sn**	**18 39 04.5**	**+1.6**
ARTI				*i* AML	AML	18 39 16.2	
	154nm,0.6s						
KIRV	**Kirov**	**5.75**	**257**	Pn	**Pn**	**18 38 41.4**	**+3.6**
	2.4nm,0.3s,baz=235,slow=0.2,SNR=1.2						
KIRV				Lg	Lg	18 40 07.0	
	2.6nm,0.3s,baz=187,slow=23,SNR=7.8						
	7.1nm,0.4s						
BORK	**Borovoye**	**9.21**	**138**		**Pn**	**18 39 27.7**	**+2.4**
BVAR	**Borovoye Array**	**9.25**	**138**	Pn	**Pn**	**18 39 29.2**	**+3.3**
	0.3nm,0.3s,baz=330,slow=15,SNR=49						
BVAR				Sn	**Sn**	**18 41 04.4**	**-5.5**
	0.6nm,0.3s,baz=322,slow=25,SNR=12						
	9.3nm,0.6s						
AKTO	**Aktyubinsk**	**10.02**	**188**	Pn	**Pn**	**18 39 37.8**	**+1.4**
	0.4nm,0.3s,baz=359,slow=12,SNR=3.8						
AKTO				Sn	**Sn**	**18 41 27.0**	**-1.8**
	0.6nm,0.3s,baz=198,slow=21,SNR=8.3						
AKTO				Lg	Lg	18 42 26.8	
	0.3nm,0.3s,baz=166,slow=14,SNR=3.5						
	0.9nm,0.3s						
BELG	**Belogornoye**	**10.56**	**226**	Pn	**Pn**	**18 39 44.4**	**+0.6**
	1.3nm,0.3s,baz=21,slow=13,SNR=4.6						
BELG				Sn	**Sn**	**18 41 36.5**	**-5.5**
	0.6nm,0.3s,baz=210,slow=20,SNR=1.5						
	12nm,0.7s						
AB31	**Akbulak array**	**11.13**	**181**		**Pn**	**18 39 52.4**	**+0.9**
ABKAR	**Akbulak array**	**11.13**	**181**		**Pn**	**18 39 52.6**	**+1.1**
LVZ	**Lovozero**	**13.35**	**315**	Pn	**Pn**	**18 40 21.1**	**-0.7**
KURK	**Kurchatov**	**14.18**	**125**		**Pn**	**18 40 32.1**	**-1.1**
KURK	**Kurchatov**	**14.18**	**125**	⇓Lg	Lg	18 41 33.7	
	1.2nm,0.7s						
KURK	**Kurchatov**	**14.18**	**125**	⇑Pn	**Pn**	**18 40 32.9**	**-0.3**
	1.2nm,0.7s						
KURBB	**Kurchatov Arra**	**14.22**	**125**	Pn	**Pn**	**18 40 34.2**	**+0.5**
	baz=320,slow=13,SNR=19						
KURBB				Sn	**Sn**	**18 43 08.7**	**-2.6**
	0.1nm,0.3s,baz=316,slow=26,SNR=5.6						
	1.3nm,0.7s						
KURBB	**Kurchatov Arra**	**14.22**	**125**	⇑Lg	Lg	18 41 34.9	
	3.9nm,0.5s						
KURBB	**Kurchatov Arra**	**14.22**	**125**	⇑Pn	**Pn**	**18 40 33.9**	**+0.2**
	2.8nm,1.1s						
NRIK	**Noril'sk**	**14.57**	**40**	Pn	**Pn**	**18 40 39.6**	**+1.2**
ZALV	**Zalesovo Beam**	**14.78**	**105**	Pn	**P**	**18 40 46.8**	**-0.7**
	0.2nm,0.3s,baz=310,slow=18,SNR=3.2						
ZALV				Sn	**Sn**	**18 43 27.4**	**+2.3**
	0.9nm,0.3s,baz=309,slow=25,SNR=6.9						
	0.6nm,0.3s						
FIA1	**FINESS Array S**	**16.50**	**289**	Pn	**Pn**	**18 41 03.9**	**+0.1**
FIA1				IAmb	IAmb	18 41 27.5	
	comp=Z,97nm,1.4s						
FINES	**FINESS Array B**	**16.50**	**289**	Pn	**Pn**	**18 41 04.1**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=86,slow=12,SNR=9.4						
FINES				Sn	Sn	18 43 55.1	-12
	comp=Z,0.3nm,0.3s,baz=77,slow=26,SNR=6.0						
	comp=Z,2.7nm,0.8s						
KEV	**Kevo**	**16.60**	**318**	Pn	**Pn**	**18 41 05.0**	**+0.1**
KEV				IAmb	IAmb	18 41 40.8	
	comp=Z,51nm,1.5s						
ARCES	**ARCESS Array B**	**17.04**	**317**	Pn	**Pn**	**18 41 11.8**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=110,slow=14,SNR=9.4						
ARCES				Sn	**Sn**	**18 44 11.7**	**-8.0**
	comp=Z,0.1nm,0.3s,baz=107,slow=28,SNR=2.3						
	comp=Z,3.4nm,0.8s						
ARCES	**ARCESS Array B**	**17.04**	**317**	IAmb	IAmb	18 41 26.9	
	comp=Z,40nm,1.5s						
MKAR	**Makanchi Array**	**18.77**	**126**	P	**Pn**	**18 41 35.5**	**+3.5**
	baz=332,slow=7.4,SNR=5.5						
MKAR				S	**Sn**	**18 44 57.0**	**-4.8**
	comp=Z,0.2nm,0.4s,baz=322,slow=30,SNR=3.2						
	comp=Z,1.2nm,0.8s						
MKAR	**Makanchi Array**	**18.77**	**126**	P	**P**	**18 41 32.2**	**+0.6**
KBZ	**Khabaz**	**19.64**	**220**	P	**P**	**18 41 42.8**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=358,slow=8.6,SNR=5.0						
	comp=Z,1.1nm,0.5s						
HFS	**Hagfors**	**22.69**	**290**	P	**P**	**18 42 16.8**	**+3.0**
	comp=Z,4.0nm,0.9s,baz=79,slow=12,SNR=7.7						
	comp=Z,4.0nm,0.9s						
NC602	**NORSAR Array S**	**23.47**	**292**	P	**P**	**18 42 18.3**	**-3.6**
NC602				IAmb	IAmb	18 42 46.5	
	comp=Z,24nm,1.4s						
NOA	**NORSAR Array B**	**23.52**	**293**	P	**P**	**18 42 26.8**	**+4.5**
	comp=Z,1.2nm,0.9s,baz=72,slow=12,SNR=1.7						
	comp=Z,1.2nm,0.9s						
BURAR	**Bucovina Array**	**23.84**	**253**	P	**P**	**18 42 22.9**	**-2.7**
JOW	**Kunigami**	**56.29**	**95**	LR	LR	19 13 31.1	
	comp=Z,136nm,20.4s,baz=341,slow=39						
BOZ	**Bozeman (W)**	**74.19**	**354**	P	**P**	**18 48 48.3**	**-0.8**
BUCK	**Buck Mountain**	**75.77**	**2**	P	**P**	**18 48 58.3**	**+0.1**
PDAR	**Pinedale Array**	**76.89**	**352**	LR	LR	19 26 42.4	
	comp=Z,16nm,19.2s,baz=34,slow=38						

IDC 07 18:38:00.8±12.0,7°.09S×128°.72E,h192^{km}±142^{km}, mb3.1/1,mbtmp3.5/4,Error ellipse: s-maj=96.1km s-min=51.8km az=35.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.35**	**195**	P	Pn	18 40 38.7	+1.0
	4.3nm,1.0s,baz=21,slow=9.5,SNR=9.8						
FITZ				S	Sn	18 42 43.8	-0.3
	2.0nm,0.8s,baz=132,slow=18,SNR=2.0						
WRA	**Warramunga Arr**	**13.89**	**157**	P	Pn	18 41 08.4	-1.4
	0.2nm,0.5s,baz=327,slow=14,SNR=7.3						
WRA				S	Sn	18 43 35.7	-9.3
	0.5nm,0.9s,baz=337,slow=22,SNR=2.2						
ASAR	**Alice Springs**	**17.22**	**164**	P	P	18 41 49.2	+0.4
	0.6nm,0.6s,baz=337,slow=9.0,SNR=17						
MKAR	**Makanchi Array**	**67.61**	**327**	P	P	18 48 36.8	-0.1
	0.5nm,0.9s,baz=142,slow=10,SNR=3.0						
	0.5nm,0.9s						

MEX 07 18:40:12.2±0.4,15°.40N×96°.56W,h16^{km}±20^{km},MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PANG	**Puerto Angel**	**0.28**	**18**	*i* P	Pg	18 40 15.2	-3.1
PANG				*i* S	Sg	18 40 17.1	-5.4
HUIG	**Huatulco**	**0.57**	**50**	*e*P	Pg	18 40 21.6	-2.0
HUIG				*e*S	Sg	18 40 29.1	-2.2
PEIG	**Puerto Escondi**	**0.82**	**317**	*e*P	Pb	18 40 25.4	-2.8
PEIG				*e*S	Sb	18 40 35.3	-3.7
VHO	**Vista Hermosa**	**1.68**	**354**	*e*S	Sn	18 40 57.8	-4.6
YOIG	**Yosondua**	**1.73**	**327**	*e*P	Pn	18 40 38.8	-3.1
YOIG				*e*S	Sn	18 40 59.0	-4.9
PNIG	**Pinotepa**	**1.80**	**304**	*e*P	Pn	18 40 41.0	-1.7
PNIG				*e*S	Sn	18 41 01.8	-3.4
TXIG	**Tlaxiaco**	**2.18**	**328**	*e*S	Sn	18 41 10.6	-4.3
CMIG	**Matias Romero**	**2.33**	**44**	*e*P	Pn	18 40 49.8	-0.2
CMIG				*e*S	Sn	18 41 14.5	-3.8
NEUV	**Arroyo Zacate**	**2.42**	**17**	*e*P	Pn	18 40 51.0	-0.1
NEUV				*e*S	Sn	18 41 16.8	-3.5
HLIG	**Huajuapan de L**	**2.70**	**334**	*e*P	Pb	18 40 59.5	-0.7
HLIG				*e*S	Sn	18 41 20.9	-6.7
TOIG	**Toxpalan**	**2.73**	**350**	*e*P	Pn	18 40 53.9	-1.6
TOIG				*e*S	Sn	18 41 23.2	-5.0

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*THE **07** 19:03:29.2,38°N±1°×2°1E±°,h0^{km}±3^{km},M2.9/16, MLh2.9/16*
*ATH **07** 19:03:29.7,37°.72N×20°.71E,h18^{km},ML3.0/13,Manual Solution by A.Agalos First location: 2019/12/07 19:04:26, This location: 2019/12/07 20:45:31 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*IDC **07** 19:03:31.1±20.0,37°.98N×21°.21E,h0^{km},mb3.6/5, mbtmp3.7/5,Error ellipse: s-maj=392.3km s-min=42.0km az=37.0*
ISC 07 19:03:29.6±1.1,37°.69N±0°.03×20°.71E±0°.04,h10^{km}±5^{km}, n56,σ1^{s}00/74,mb3.7/5,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LTHK	**Lithakia**	**0.10**	**80**	P	**Pg**	**19 03 31.5**	**-0.7**
LTHK				S	**Sg**	**19 03 32.5**	**-1.6**
LTHK	**Lithakia**	**0.10**	**80**	P	**Pg**	**19 03 31.5**	**-0.7**
KYPS	**Kipseli, Zakin**	**0.15**	**35**	P	**Pg**	**19 03 33.5**	**+0.4**
KYPS				S	**Sg**	**19 03 36.5**	**+1.1**
ORTH	**Orthonies,Zaky**	**0.16**	**355**	P	**Pg**	**19 03 34.4**	**+1.2**
ORTH				S	**Sg**	**19 03 36.7**	**+1.0**
RTZL	**Ratzakli, Kefa**	**0.39**	**7**	P	**Pg**	**19 03 37.4**	**+0.2**
RTZL				S	**Sb**	**19 03 43.9**	**-0.6**
RTZL	**Ratzakli, Kefa**	**0.39**	**7**	P	**Pg**	**19 03 37.5**	**+0.2**
CLEM	**Kyllini,Ilia,G**	**0.39**	**59**	P	**Pg**	**19 03 37.6**	**+0.3**
CLEM				S	**Sg**	**19 03 43.4**	**+0.9**
VLS	**Valsamata**	**0.49**	**349**	P	**Pg**	**19 03 39.2**	**-0.1**
VLS				S	**Sb**	**19 03 47.4**	**-0.3**
VLS	**Valsamata**	**0.49**	**349**	P	**Pg**	**19 03 39.2**	**-0.1**
LCHA	**Lechaina**	**0.50**	**61**	P	**Pb**	**19 03 40.2**	**-0.3**
KFL1	**Kefalonia,Entr**	**0.50**	**340**	P	**Pg**	**19 03 39.1**	**-0.4**
ARG2	**Argostoli**	**0.52**	**340**	P	**Pg**	**19 03 39.9**	**+0.2**
KRT2	**Ano Kourtesi L**	**0.56**	**61**	P	**Pg**	**19 03 40.8**	**+0.3**
DMLN	**Damoulianata-K**	**0.61**	**334**	P	**Pg**	**19 03 41.7**	**+0.2**
DMLN				S	**Sb**	**19 03 51.6**	**+0.6**
DMLN	**Damoulianata-K**	**0.61**	**334**	P	**Pg**	**19 03 41.6**	**+0.2**
YRMI	**Loutra Irminis**	**0.65**	**51**	P	**Pg**	**19 03 41.9**	**-0.3**
RLS	**Riolos of Patr**	**0.70**	**58**	P	**Pg**	**19 03 43.0**	**-0.2**
RLS				S	**Sb**	**19 03 53.7**	**+0.1**
RLS	**Riolos of Patr**	**0.70**	**58**	P	**Pg**	**19 03 43.0**	**-0.2**
VSK1	**VASILIKIADES**	**0.72**	**351**	P	**Pg**	**19 03 43.5**	**-0.2**
VSK1				S	**Sb**	**19 03 55.0**	**+0.6**
AXS	**Araxos**	**0.73**	**46**	P	**Pg**	**19 03 43.3**	**-0.3**
AXS				S	**Sb**	**19 03 54.3**	**-0.1**
AXS	**Araxos**	**0.73**	**46**	P	**Pg**	**19 03 43.3**	**-0.3**
ZARO	**Zacharo**	**0.77**	**105**	P	**Pg**	**19 03 45.1**	**+0.6**
FSK	**Fiskardo**	**0.78**	**351**	P	**Pg**	**19 03 43.8**	**-0.8**
FSK				S	**Sb**	**19 03 56.6**	**+0.8**
FSK	**Fiskardo**	**0.78**	**351**	P	**Pg**	**19 03 44.1**	**-0.5**
AMT	**Artemida-Makis**	**0.81**	**101**	P	**Pg**	**19 03 44.9**	**-0.3**
DRO	**Drossia**	**0.83**	**72**	P	**Pg**	**19 03 45.4**	**-0.2**
DRO				S	**Sb**	**19 03 58.3**	**+0.9**
DRO	**Drossia**	**0.83**	**72**	P	**Pg**	**19 03 45.5**	**-0.2**
EVGI	**Lefkada island**	**0.93**	**357**	P	**Pg**	**19 03 46.8**	**-0.7**
EVGI				S	**Sb**	**19 04 01.5**	**+1.3**
EVGI	**Lefkada island**	**0.93**	**357**	P	**Pg**	**19 03 46.7**	**-0.8**
DRAG	**Dragano-Lefkad**	**1.00**	**354**	P	**Pg**	**19 03 47.5**	**-1.3**
NYDR	**Nydri-Lefkada**	**1.02**	**359**	P	**Pg**	**19 03 48.2**	**-1.0**
NYDR				S	**Sn**	**19 04 04.8**	**+0.5**
NYDR	**Nydri-Lefkada**	**1.02**	**359**	P	**Pg**	**19 03 48.0**	**-1.2**
ITM	**Ithomi**	**1.09**	**118**	P	**Pg**	**19 03 49.9**	**-0.7**
ITM				S	**Sb**	**19 04 07.4**	**+2.5**
ITM	**Ithomi**	**1.09**	**118**	P	**Pg**	**19 03 50.6**	**0.0**
LKD2	**Lefkada island**	**1.10**	**358**	P	**Pg**	**19 03 49.5**	**-1.2**
LKD2	**Lefkada island**	**1.10**	**358**	P	**Pg**	**19 03 49.8**	**-0.9**
PVO	**Paravola**	**1.12**	**35**	P	**Pg**	**19 03 50.7**	**-0.5**
PVO	**Paravola**	**1.12**	**35**	P	**Pg**	**19 03 50.7**	**-0.5**
TSLK	**Tsoukalades, L**	**1.13**	**358**	P	**Pg**	**19 03 50.4**	**-0.9**
TSLK	**Tsoukalades, L**	**1.13**	**358**	P	**Pg**	**19 03 50.5**	**-0.9**
PYL	**PYLOS**	**1.14**	**134**	P	**Pg**	**19 03 50.6**	**-1.1**
PYL				S	**Sg**	**19 04 07.3**	**+0.9**
PYL	**PYLOS**	**1.14**	**134**	P	**Pg**	**19 03 50.5**	**-1.1**
KLV	**Kalavryta, Ach**	**1.19**	**72**	P	**Pg**	**19 03 51.7**	**-0.8**
KLV				S	**Sn**	**19 04 12.0**	**+3.4**
KLV	**Kalavryta, Ach**	**1.19**	**72**	P	**Pg**	**19 03 51.4**	**-1.1**
EFP	**Efpalio**	**1.19**	**52**	P	**Pg**	**19 03 51.8**	**-0.8**
EFP				S	**Sn**	**19 04 10.9**	**+2.3**
EFP	**Efpalio**	**1.19**	**52**	P	**Pg**	**19 03 51.3**	**-1.3**
SERG	**Sergoula**	**1.28**	**55**	P	**Pg**	**19 03 52.6**	**-1.6**
AMPL	**Ampelaki**	**1.29**	**18**	P	**Pg**	**19 03 52.4**	**-2.0**
ANX	**Ano Chora**	**1.31**	**46**	P	**Pg**	**19 03 53.4**	**-1.4**
GUR	**Goura**	**1.31**	**79**	P	**Pg**	**19 03 53.7**	**-1.1**
EVR	**Evrytania**	**1.50**	**35**	P	**Pn**	**19 03 55.5**	**-1.1**
HFS	**Hagfors**	**22.90**	**351**	P	**P**	**19 08 33.8**	**+0.5**
	1.4nm,0.6s,baz=163,slow=11,SNR=6.6						
	1.4nm,0.6s						
FINES	**FINESS Array B**	**24.01**	**6**	P	**P**	**19 08 44.3**	**+0.1**
	3.9nm,1.1s,baz=188,slow=10,SNR=4.0						
	3.9nm,1.1s						
KURBB	**Kurchatov Arra**	**42.40**	**53**	P	**P**	**19 11 23.2**	**-0.8**
	0.3nm,0.4s,baz=280,slow=9.2,SNR=4.1						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**45.43**	**58**	P	**P**	**19 11 47.5**	**-1.0**
	0.2nm,0.5s,baz=280,slow=7.8,SNR=4.2						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**45.90**	**48**	P	**P**	**19 11 51.1**	**-0.9**
	1.0nm,0.5s,baz=279,slow=9.6,SNR=4.8						
	1.0nm,0.5s						

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*NOU **07** 19:10:28.2,38°.50S×177°.63E,h30^{km},MLv3.5/12,North Island, New Zealand*
*WEL **07** 19:10:28.6±0.8,38°S±3°×17°7E±°,h50^{km}±8^{km},M3.2/12, ML3.3/12,MLv3.2/12,Error ellipse: s-maj=4.5km s-min=4.4km az=82.5,confirmed*
ISC 07 19:10:28.8±1.4,38°.38S±0°.04×177°.51E±0°.04,h66^{km}±8^{km}, n34,σ0^{s}82/44,North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAGZ	**Rawiri**	**0.13**	**213**	P	**Pn**	**19 10 38.5**	**-0.2**
RAGZ				S	**Sn**	**19 10 45.6**	**-0.3**
TKGZ	**Te Karaka**	**0.27**	**102**	P	**Pn**	**19 10 39.0**	**-0.3**
URZ	**Urewera**	**0.34**	**292**	P	**Pn**	**19 10 39.3**	**-0.4**
URZ	**Urewera**	**0.34**	**292**	S	**Sn**	**19 10 47.3**	**-0.4**
URZ	**Urewera**	**0.34**	**292**	P	**Pn**	**19 10 39.4**	**-0.3**
URZ				S	**Sn**	**19 10 47.0**	**-0.7**
RIGZ	**Rimuhau**	**0.38**	**148**	P	**Pn**	**19 10 40.3**	**+0.1**
RIGZ				S	**Sn**	**19 10 49.8**	**+1.4**
OPCS	**Opotiki Colleg**	**0.41**	**335**	P	**Pn**	**19 10 39.9**	**-0.4**
SNGZ	**Shannon Statio**	**0.42**	**198**	P	**Pn**	**19 10 40.6**	**+0.1**
SNGZ				S	**Sn**	**19 10 50.1**	**+1.1**
TWGZ	**Tauwhareparae**	**0.43**	**61**	P	**Pn**	**19 10 40.4**	**-0.1**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
TWGZ				S	Sn	19 10 49.6	+0.4
RUGZ	Raukumara Rang	0.44	18	P	Pn	19 10 40.3	-0.5
RUGZ				S	Sn	19 10 49.0	-0.5
RTZ	Ruatahuna	0.47	241	P	Pn	19 10 41.1	+0.1
GISS	Gisborne 2ZG	0.49	125	S	Sn	19 10 51.3	+1.2
GKBS	Kaiti Beach	0.51	126	P	Pn	19 10 41.3	+0.1
GKBS				S	Sn	19 10 51.7	+1.3
CNGZ	Carnagh Statio	0.56	100	P	Pn	19 10 42.0	+0.2
MUGZ	Murupara	0.59	261	P	Pn	19 10 41.9	-0.2
WKHS	Whakatane High	0.59	316	P	Pn	19 10 41.6	-0.5
WKHS				S	Sn	19 10 51.3	-0.5
TBAS	Tolaga Bay Are	0.62	89	P	Pn	19 10 42.9	+0.4
RAHZ	Arahi	0.62	212	P	Pn	19 10 43.1	+0.5
HAZ	Te Kaha	0.66	19	P	Pn	19 10 42.5	-0.4
HAZ				S	Sn	19 10 52.8	-0.5
EDRZ	Edgecumbe	0.67	294	P	Pn	19 10 42.9	-0.1
PUZ	Puketiti	0.67	62	P	Pn	19 10 42.6	-0.4
WHRZ	Whale Island	0.67	321	P	Pn	19 10 43.0	-0.1
PKGZ	Pakihiroa	0.69	41	P	Pn	19 10 42.9	-0.4
PKGZ				S	Sn	19 10 53.6	-0.3
KAFS	Kawerau Fire S	0.70	295	P	Pn	19 10 43.5	+0.2
MXZ	Matakaoa Point	1.04	38	P	Pn	19 10 47.7	+0.2
MXZ	Matakaoa Point	1.04	38	S	Sn	19 11 01.8	+0.4
BKZ	Black Stump Fm	1.11	225	P	Pn	19 10 48.9	+0.3
BKZ	Black Stump Fm	1.11	225	S	Sn	19 11 03.8	+0.5
HIZ	Hauiti	2.09	266	P	Pn	19 11 02.6	+1.1
HIZ	Hauiti	2.09	266	S	Sn	19 11 28.6	+2.2
BFZ	Birch Farm	2.49	203	P	Pn	19 11 05.1	-1.9
BFZ	Birch Farm	2.49	203	S	Sn	19 11 34.7	-1.6
OUZ	Omahuta	4.45	314	P	Pn	19 11 34.8	+1.1
KHZ	Kahutara	5.04	216	P	Pn	19 11 40.0	-1.7

GCG 07 19:13:40.3±0.6, 13°.83N×91°.19W, h32^{km}±5^{km}, MD3.5, ML3.5, MW2.7, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG8	El Palmar, Qui	0.64	346	*e*P	Pn	19 13 58.6	+5.2
ESSG	Sabana Grande	0.65	32	*e*P	Pb	19 13 53.1	-0.2
FG16	Alotenango, Sa	0.79	56	*i* P	Pn	19 13 54.3	-1.2
FG16				*e*S	Sb	19 14 05.3	-1.0
FG16				IAML		19 14 06.9	
	comp=E,2μm,0.2s						
SOKI	Kika Raxquin	1.01	348	*e*P	Pb	19 13 59.8	+0.3
APG	El Apazote	1.36	31	*e*P	Pn	19 14 04.0	+0.6

IDC 07 19:26:18.1±1.9, 9°.34S×113°.93E, h0^{km}, mb3.7/5, mbtmp3.7/6, ML3.4/1, MS2.7/1, Error ellipse: s-maj=103.6km s-min=19.1km az=51.0

DJA 07 19:26:23.1±0.4, 10°S±4°×11°4E±°, h10^{km}, M4.2/21, mB5.0/1, mb4.2/7, MLv4.2/21, Mw(mB)4.3/1

ISC 07 19:26:23.5±0.8, 9°.60S±0°.06×113°.99E±0°.05, h31^{km}, n41, σ1^{s}.83/42, mb4.1/5, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	1.13	8	P	Pn	19 26 43.4	+0.2
JAGI	Jajag, Banyuwa	1.13	8	P	Pn	19 26 43.5	+0.2
IGBI	Denpasar	1.38	56	P	Pn	19 26 47.2	+0.5
GMJI	Gumukmas	1.42	338	P	Pn	19 26 47.7	+0.5
GMJI				S	Sn	19 27 03.8	-1.0
RTBI	Rangdo, Negare	1.47	40	P	Pn	19 26 49.0	+1.1
DNP	Denpasar	1.51	53	P	Pn	19 26 50.4	+1.9
DNP				S	Sb	19 27 10.1	+0.3
ABJI	Asem Bagus	1.81	8	P	Pn	19 26 55.0	+2.5
BLJI	Banyuglugur	1.88	348	P	Pn	19 26 55.4	+1.9
KHKI	Kahang-Kahang	2.02	53	P	Pb	19 26 58.9	-0.6
KLNI	Mataram	2.39	61	P	Pn	19 27 02.2	+1.7
KMMI	Kalianget	2.53	360	P	Pn	19 27 05.4	+2.9
SNJI	Sawahan-Nganju	2.85	309	P	Pn	19 27 10.3	+3.3
SJI	Sawahan	2.87	310	P	Pn	19 27 09.3	+2.0
TWSI	Taliwang, Sumb	2.98	74	P	Pn	19 27 10.9	+2.2
PCJI	Pacitan	3.11	296	P	Pn	19 27 11.8	+1.4
NGJI	Ngawi	3.34	311	P	Pn	19 27 16.9	+3.3
UGM	Wanagama	3.81	296	P	Pn	19 27 22.6	+2.4
UGM	Wanagama	3.81	296	P	Pn	19 27 21.4	+1.2
PLAI	Plampang	3.82	79	P	Pn	19 27 22.6	+2.4
PLAI	Plampang	3.82	79	S	Sn	19 28 05.4	+1.3
PLAI	Plampang	3.82	79	P	Pn	19 27 22.0	+1.8
DBNI	Kabupaten Domp	4.41	76	P	Pn	19 27 31.3	+3.0
WBSI	Waikabubak, Su	5.33	91	P	Pn	19 27 41.2	+0.1
	0.2nm30nm,0.9s						
KPJI	Karang Pucung	5.48	294	P	Pn	19 27 45.1	+2.0
	0.1nm19nm,0.9s						
LBFI	Labuhan Bajo,	5.94	80	P	Pn	19 27 50.5	+1.2
	0.2nm38nm,0.6s						
BBJI	Bungbulang	6.62	288	P	Pn	19 28 02.1	+3.3
BBJI	Bungbulang	6.62	288	P	Pn	19 28 00.2	+1.4
	0.1nm9.3nm,0.8s						
KAPI	Kappang	7.31	52	LR	LR	19 31 34.0	
	comp=Z,50nm,18.1s,baz=203,slow=44						
BKSI	Bulukumba	7.42	56	P	Pn	19 28 11.5	+1.8
	0.0nm5.8nm,0.6s						
EDFI	Ende, Flores	7.65	84	P	Pn	19 28 14.2	+1.2
PMSI	Majene	7.79	39	P	Pn	19 28 16.4	+1.6
MBWA	Marble Bar	12.76	155	P	Pn	19 29 20.9	-2.0
FITZ	Fitzroy Crossi	14.12	128	Pn	Pn	19 29 40.5	-0.9
	0.1nm,0.3s,baz=310,slow=11,SNR=2.3						
FITZ				Sn	Sn	19 32 08.7	-8.5
	0.1nm,0.3s,baz=120,slow=20,SNR=1.2						
	1.5nm,0.8s						
MEEK	Meekatharra	17.51	166	P	Pn	19 30 25.9	+0.5
FAKI	Fak Fak	19.32	71	P	P	19 30 45.8	-0.5
BLDU	Ballidu	21.07	173	P	P	19 31 06.9	+1.7
WRA	Warramunga Arr	22.18	120	P	P	19 31 16.7	-0.6
	0.4nm,0.7s,baz=296,slow=10,SNR=6.6						
	0.4nm,0.7s						
ASAR	Alice Springs	23.62	129	P	P	19 31 33.6	+1.6
	0.7nm,0.5s,baz=303,slow=8.9,SNR=16						
ASAR				PcP	PcP	19 35 17.2	+0.6
	0.4nm,0.5s,baz=289,slow=1.6,SNR=5.5						
	0.7nm,0.5s						
SONM	Songino Array	57.57	354	P	P	19 36 08.5	-1.9
	0.8nm,0.4s,baz=174,slow=8.0,SNR=8.1						
	0.8nm,0.4s						
MKAR	Makanchi Array	62.86	336	P	P	19 36 44.6	-1.9
	1.1nm,0.5s,baz=150,slow=7.2,SNR=25						
	1.1nm,0.5s						
ZALV	Zalesovo Beam	67.95	342	P	P	19 37 15.4	-3.8
	0.6nm,0.3s,baz=142,slow=5.8,SNR=3.8						
	0.6nm,0.3s						

RSNC 07 19:32:35.4±0.0, 8°N±1°×7°7W±°, h37^{km}±8^{km}, M3.3, mb4.4, mB4.7, ML2.8, MLv3.7, Mw(mB)3.9

ISC 07 19:32:35.6±1.0, 8°.31N±0°.03×76°.60W±0°.04, h54^{km}±18^{km}, n35, σ1^{s}.56/49, Near north coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCBC	Los crdobas,	0.59	23	P	Pn	19 32 48.4	+0.2
LCBC				S	Sn	19 32 59.7	+2.4
CAPC	Capurgana	0.81	294	P	Pn	19 32 49.5	-1.5
CAPC				S	Sn	19 32 59.7	-2.6
UREC	San Jos de Ur	1.19	118	P	Pn	19 32 55.2	-0.8
UREC				S	Sn	19 33 09.7	-1.5
DBBC	Dabeiba	1.34	163	P	Pn	19 32 56.8	-1.3
DBBC				S	Sn	19 33 12.6	-2.3
PTAC	Punta Ardita,	1.67	226	P	Pn	19 33 01.6	-0.8
PTAC				S	Sn	19 33 20.7	-2.0
SJCC	San Jacinto, C	2.11	41	P	Pn	19 33 08.1	-0.5
SJCC				S	Sn	19 33 33.0	-0.7
SOLC	Bahia Solano	2.22	201	P	Pn	19 33 09.3	-0.7
SOLC				S	Sn	19 33 38.1	+1.8
HELC	Santa Helena	2.36	153	P	Pn	19 33 11.4	-0.8
HELC				S	Sn	19 33 38.3	-1.8
CBOC	Ciudad Bolivar	2.50	167	P	Pn	19 33 14.4	+0.4
PTBC	PUERTO BERRIO,	2.76	129	P	Pn	19 33 16.7	-0.7
PTBC				S	Sn	19 33 47.3	-2.2
BRJC	Barrancabermej	3.12	115	P	Pn	19 33 23.0	+0.6
BRJC				S	Sn	19 33 58.2	-0.3
OCAC	Ocana	3.25	91	P	Pn	19 33 24.5	+0.3
OCAC				S	Sn	19 34 00.6	-1.1
GUY2C	Guyana, Caldas	3.30	158	P	Pn	19 33 25.5	+0.3
BCIP	Isla Barro Col	3.31	285	P	Pn	19 33 25.0	0.0
PLMC	San Jos del P	3.40	175	P	Pn	19 33 25.4	-0.8
SPBC	San Pablo de B	3.64	136	P	Pn	19 33 29.2	-0.4
SPBC				S	Sn	19 34 09.6	-1.7
SMRC	Santa Marta, M	3.68	39	P	Pn	19 33 31.5	+1.5
SMRC				S	Sn	19 34 11.1	-1.0
BARC	Barichara	3.79	117	P	Pn	19 33 32.6	+0.8
PAMC	Pamplona, Colo	3.98	104	P	Pn	19 33 35.3	+0.7
PAMC				S	Sn	19 34 18.6	-1.6
RUSC	La Rusia	4.23	124	P	Pn	19 33 37.4	-0.7
RUSC				S	Sn	19 34 24.5	-2.0
YOTC	Yotoco, Valle	4.30	177	P	Pn	19 33 37.1	-1.6
YOTC				S	Sn	19 34 27.7	0.0
ORTC	Ortega, Tolima	4.57	163	P	Pn	19 33 45.4	+3.1
CHIC	Chingaza	4.63	142	P	Pn	19 33 44.1	+0.6
CHIC				S	Sn	19 34 35.9	-0.3
VILC	Villavicencio,	5.07	145	P	Pn	19 33 50.6	+1.4
VILC				S	Sn	19 34 50.5	+3.9
URMC	La Uribe, Meta	5.49	156	P	Pn	19 33 56.3	+1.3
URIC	Uribia, Colomb	5.65	53	P	Pn	19 33 53.1	-3.9
URIC				S	Sn	19 34 57.4	-3.3
SDV	Santo Domingo	5.93	84	P	Pn	19 34 01.2	+0.2
SDV				S	Sn	19 35 05.7	-2.0
CHIV	Chivirico	11.60	1	*e*P	Pn	19 35 18.1	-0.4
GTBY	Guantanamo Bay	11.64	7	*e*P	Pn	19 35 20.7	+1.7
MARVS	Santiago de Cu	11.64	3	*e*P	Pn	19 35 20.5	+1.4
RCC	Rio Carpintero	11.65	4	*e*P	Pn	19 35 20.4	+1.2
QMBU	Quimbuelo	11.95	8	*e*P	Pn	19 35 21.3	-1.9
YAR	Yar	11.99	1	*e*P	Pn	19 35 22.6	-1.3
PINC	Pinares de May	12.13	4	*e*P	Pn	19 35 26.1	+0.3
NMDO	Nuevo Mundo	12.28	7	*e*P	Pn	19 35 29.2	+1.5

IDC 07 19:37:29.4±68.0, 20°.45S×174°.91W, h0^{km}, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=1281.0km s-min=202.2km az=84.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.42	245	P	P	19 45 09.4	-0.2
	1.4nm,0.7s,baz=82,slow=15,SNR=3.0						
	1.4nm,0.7s						
ASAR	Alice Springs	47.35	256	P	P	19 46 05.2	-0.3
	1.0nm,0.7s,baz=93,slow=8.0,SNR=11						
	1.0nm,0.7s						
WRA	Warramunga Arr	47.48	261	P	P	19 46 06.7	+0.1
	0.7nm,0.8s,baz=97,slow=8.0,SNR=3.3						
	0.7nm,0.8s						

KOLA 07 20:07:05.8, 67°.63N×33°.79E, h0^{km}, ML1.4, Error ellipse: s-maj=5.1km s-min=1.4km az=140.0, Khibiny, mines Rasvumchorr, Central, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA	Apatity	0.16	246	P	Pg	20 07 08.6	-0.2
APA				S	Sg	20 07 11.0	+0.2
APA0	Apatity Array	0.31	265	P	Pg	20 07 10.9	-0.7
APA0				S	Sg	20 07 14.9	-0.6
LVZ	Lovozero	0.42	51	S	Sg	20 07 19.4	+0.2
LVZ	Lovozero	0.42	51	S	Sg	20 07 19.2	0.0
KVDA	Kovda	1.01	201	S	Sg	20 07 38.0	-0.2
TERR	Teriberka	1.65	17	S	Sn	20 07 55.8	-2.0
VADS	Vadso	2.97	329	S	Sn	20 08 30.1	-0.2

NIED 07 20:37:10.0, 28°.07N×127°.97E, h4^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.43; $M_{\theta\theta}$3.30; $M_{\phi\phi}$-1.87; $M_{r\theta}$-1.65; $M_{\theta\phi}$4.33; $M_{\phi r}$-0.39; Fault plane solution: $M_0$5.26000×10^{14} NP1: ϕ_s195.00000°, δ74.00000°, λ178.00000°. NP2: ϕ_s285.00000°, δ88.00000°, λ16.00000°.

IDC 07 20:37:10.5±5.1, 28°.68N×128°.80E, h0^{km}, mb3.4/4, mbtmp3.4/4 Error ellipse: s-maj=268.6km s-min=29.9km az=64.0

JMA 07 20:37:10.0±0.2, 28°.1N±0°.6×128°.0E±0°.8, h4^{km}, MV3.5/10, NW OFF OKINAWAJIMA IS

ISC 07 20:37:11.4±1.0, 28°.02N±0°.05×128°.03E±0°.06, h10^{km}, n13, σ0^{s}.85/16, mb3.4/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOKE	Okinoerabujima	0.81	143	S	Sg	20 37 38.7	+1.1
JTK	Tokunoshima	0.85	105	S	Sg	20 37 39.5	+0.7
JIH	Iheya	0.98	183	P	Pg	20 37 29.3	-0.9
JIH				S	Sb	20 37 43.9	+0.5
JAMN	Amaminishikomi	1.04	77	P	Pg	20 37 30.7	-0.6
JAMN				S	Sb	20 37 45.1	0.0
JYRO	Yoronjima	1.06	159	P	Pn	20 37 31.8	-0.4
JYRO				*e*S	Sg	20 37 46.8	+1.4
JOW	Kunigami	1.20	169	LR	LR	20 38 32.5	
	comp=Z,96nm,21.0s,baz=114,slow=43						
JOW	Kunigami	1.20	169	P	Pn	20 37 33.7	-0.5
JOW				S	Sn	20 37 50.9	+0.4
JAM	Amami Oshima	1.45	74	*e*P	Pn	20 37 36.9	-0.7
JNTH	Nagotoyohara	1.49	180	P	Pb	20 37 38.3	-0.9
JNTH				*e*S	Sg	20 37 59.4	+0.1
SONM	Songino Array	25.97	325	P	P	20 42 44.6	+0.3
	0.4nm,0.6s,baz=125,slow=9.0,SNR=3.0						
	0.4nm,0.6s						
MKAR	Makanchi Array	40.23	310	P	P	20 44 48.2	0.0
	0.3nm,0.6s,baz=103,slow=9.8,SNR=7.2						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	43.45	315	P	P	20 45 16.0	+1.6
	0.6nm,0.5s,baz=102,slow=9.1,SNR=4.1						
	0.6nm,0.5s						
WRA	Warramunga Arr	48.06	172	P	P	20 45 56.3	+5.1
	0.4nm,0.7s,baz=359,slow=7.5,SNR=1.6						
	0.4nm,0.7s						

CATAC 07 20:40:56.1±0.4, 14°N±2°×9°1W±°, h12^{km}±2^{km}, M4.3/28, MLv4.3/28, Error ellipse: s-maj=5.3km s-min=2.1km az=29.1, confirmed

GCG 07 20:40:57.4±2.3, 13°.62N×90°.80W, h45^{km}±27^{km}, MD4.2, ML4.6, MW3.6

SNET 07 20:40:59.0±1.9, 13°.75N×90°.69W, h46^{km}, ML4.2

ISC 07 20:40:55.9±1.7, 13°.56N±0°.07×90°.74W±0°.04, h11^{km}±10^{km}, n97, σ0^{s}.88/105, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESSJ	San Jos, E	0.23	89	*e*P	Pb	20 41 07.8	+5.6
PCG5	San Vicente Pa	0.74	28	*i* P	Pb	20 41 11.7	+0.7
FG16	Alotenango, Sa	0.74	17	*i* P	Pn	20 41 13.0	+0.3
FG16				IAML		20 41 30.3	
	comp=N,55μm,0.2s						
FAME	Alcaldia de Sa	0.76	68	P	Pb	20 41 11.6	+0.4
ESSG	Sabana Grande	0.82	354	*i* P	Pg	20 41 11.5	-0.3
ESSG				IAML		20 41 22.5	
	comp=N,10μm,0.2s						
NUBE	Las Nubes	0.99	70	*e*P	Pg	20 41 15.1	+0.1
NUBE				*e*S	Sn	20 41 29.6	-0.5
NUBE	Las Nubes	0.99	70	*i* P	Pg	20 41 15.2	+0.1
NUBE	Las Nubes	0.99	70	P	Pg	20 41 15.4	+0.3
STG5	El Palmar, Qui	1.03	325	*e*P	Pn	20 41 18.8	+2.5
STG5				*e*S	Sn	20 41 33.2	+2.4
SLOZ	Alcaldia de Sa	1.04	63	P	Pb	20 41 12.8	-3.2
SLOZ	Alcaldia de Sa	1.04	63	S	Sn	20 41 31.0	-0.2
STG8	El Palmar, Qui	1.07	326	*e*P	Pn	20 41 19.9	+2.8
STG8				IAML		20 41 42.0	
	comp=E,9μm,0.1s						
STG2	El Palmar, Qui	1.07	325	*e*P	Pn	20 41 20.0	+3.0
RTR	El Retiro	1.12	72	*e*P	Pb	20 41 17.5	+0.1
CEVE	Cerro Verde	1.12	76	*e*P	Pb	20 41 17.4	-0.1
CEVE				*e*S	Sn	20 41 34.2	+0.8
CEVE	Cerro Verde	1.12	76	P	Pb	20 41 17.4	-0.1
CEVE	Cerro Verde	1.12	76	S	Sg	20 41 32.6	+0.6
SBLS	San Blas	1.12	75	*e*P	Pb	20 41 17.2	-0.3
SNJE	San Jose	1.15	74	*e*P	Pb	20 41 17.7	-0.2
RBDL	Robledal	1.16	62⇑	*e*P	Pb	20 41 18.3	+0.1
UNIC	Universidad Ca	1.23	70	*e*P	Pn	20 41 18.8	-0.4
UNIC	Universidad Ca	1.23	70	P	Pn	20 41 19.0	-0.2
UNIC	Universidad Ca	1.23	70	S	Sb	20 41 35.8	+0.5
JAYA	Jayaque - finc	1.26	86	*e*P	Pn	20 41 19.0	-0.7
JAYA				*e*S	Sb	20 41 36.4	+0.2
JAYA	Jayaque - finc	1.26	86	*i* P	Pn	20 41 19.1	-0.5
JAYA				*e*S	Sb	20 41 35.7	-0.5
JAYA	Jayaque - finc	1.26	86	P	Pn	20 41 19.1	-0.5
JUAM	Asuncion Mita	1.27	52	*i* P	Pn	20 41 19.4	-0.3
CEDA	San Andres	1.33	79	*e*P	Pn	20 41 20.2	-0.3
CEDA	San Andres	1.33	79	P	Pn	20 41 20.6	+0.1
CEDA	San Andres	1.33	79	S	Sb	20 41 38.1	0.0
RTAL	Retalhuleu	1.33	316	*e*P	Pn	20 41 18.1	-2.5
RTAL	Retalhuleu	1.33	316	P	Pn	20 41 20.1	-0.5
LALI	Alcalda de L	1.38	93	*e*P	Pn	20 41 20.8	-0.4
LALI	Alcalda de L	1.38	93	*i* P	Pn	20 41 20.9	-0.2
LALI				*e*S	Sn	20 41 38.4	-1.1
LALI				IAML		20 41 40.0	
	comp=E,728nm,0.2s						
LALI	Alcalda de L	1.38	93	P	Pn	20 41 21.0	-0.2
LALI	Alcalda de L	1.38	93	S	Sn	20 41 39.1	-0.4
PMON	Piamonte	1.40	84	*e*P	Pn	20 41 21.2	-0.3
PMON	Piamonte	1.40	84	P	Pn	20 41 21.0	-0.5
PMON	Piamonte	1.40	84	S	Sn	20 41 40.0	0.0
SOKI	Kika Raxquin	1.41	333	*e*P	Pn	20 41 20.7	-1.2
BOQS	Boqueron	1.43	83	*e*P	Pn	20 41 22.1	0.0
PIC2	El Picacho	1.46	83	*e*P	Pn	20 41 22.3	-0.1
APG	El Apazote	1.46	11	*i* P	Pn	20 41 22.2	-0.3
APG				*e*S	Sn	20 41 40.9	-0.9
UEES	Universidad Ev	1.47	84	*e*P	Pn	20 41 22.6	+0.1
UEES	Universidad Ev	1.47	84	P	Pn	20 41 22.5	+0.1
UEES	Universidad Ev	1.47	84	S	Sn	20 41 42.0	+0.3
UTEC	Universidad Te	1.50	84	P	Pn	20 41 23.1	+0.2
UTEC	Universidad Te	1.50	84	S	Sn	20 41 42.8	+0.1
UESS	Universidad de	1.51	84	*e*P	Pn	20 41 23.2	+0.2
PANCS	Alcalda de	1.52	88	*e*P	Pn	20 41 23.0	-0.2
PANCS	Alcalda de	1.52	88	P	Pn	20 41 23.0	-0.2
PANCS	Alcalda de	1.52	88	S	Sn	20 41 42.7	-0.3
LOMA	Loma Larga	1.53	87	P	Pn	20 41 21.9	-1.4
LOMA	Loma Larga	1.53	87	S	Sn	20 41 42.8	-0.5
IGN	Direccin Gen	1.54	84	*e*P	Pn	20 41 23.8	+0.4
IGN	Direccin Gen	1.54	84	P	Pn	20 41 23.6	+0.3
IGN	Direccin Gen	1.54	84	S	Sn	20 41 44.0	+0.6
UDBS	Universidad Do	1.55	84	*e*P	Pn	20 41 23.9	+0.3
MTO3	Montecristo	1.58	58	*e*P	Pn	20 41 23.5	-0.6
MTO3	Montecristo	1.58	58	*i* P	Pn	20 41 23.7	-0.4
MTO3	Montecristo	1.58	58	P	Pn	20 41 23.5	-0.6
MTO3	Montecristo	1.58	58	S	Sn	20 41 45.2	+0.5
LFU	La Fuente	1.59	83	*e*P	Pn	20 41 24.4	+0.3
LFRS	El Faro	1.63	88	*e*P	Pn	20 41 24.9	+0.1
LBRS	Las Brisas	1.66	84	*e*P	Pn	20 41 25.3	+0.2
ESQI	Esquipulas	1.68	54	*e*P	Pn	20 41 24.9	-0.5
ESQI	Esquipulas	1.68	54	P	Pn	20 41 25.4	0.0
QUIS	Sacapulas	1.75	349	*e*P	Pn	20 41 26.6	+0.1
QUIS				*e*S	Sn	20 41 48.0	-1.0
QUIS				IAML		20 41 50.8	
	comp=E,3μm,0.3s						
PAVA	Las Pavas	1.76	85	*e*P	Pn	20 41 26.4	-0.1
PAVA				*e*S	Sn	20 41 49.3	+0.3
PAVA	Las Pavas	1.76	85	P	Pn	20 41 27.0	+0.4
SMCA	Catarina	1.83	315	*e*P	Pn	20 41 25.3	-2.0
LLGN	La Laguna	1.84	71	*e*P	Pn	20 41 27.1	-0.5
LLGN	La Laguna	1.84	71	P	Pn	20 41 27.4	-0.2
SNVI	San Vicente	1.85	88	*e*P	Pn	20 41 28.2	+0.4
HUEH	Huehuetenango	1.90	337	*e*P	Pn	20 41 28.5	-0.1
HUEH				*e*S	Sb	20 41 53.3	-1.3
HUEH	Huehuetenango	1.90	337	P	Pn	20 41 28.7	+0.2
UESV	Universidad de	1.90	87	P	Pn	20 41 29.5	+1.2
TECO	Alcaldia de Te	1.91	90	*e*P	Pn	20 41 28.5	+0.1
TECO	Alcaldia de Te	1.91	90	P	Pn	20 41 28.6	+0.1
TECO	Alcaldia de Te	1.91	90	S	Sn	20 41 52.7	+0.2
AVCB	Coban	1.93	10	IAML		20 41 58.4	
	comp=N,6μm,0.4s						
SCLA	Alcaldia de Sa	1.96	86	*e*P	Pn	20 41 29.6	+0.4
SCLA	Alcaldia de Sa	1.96	86	P	Pn	20 41 29.8	+0.6
SCLA	Alcaldia de Sa	1.96	86	S	Sn	20 41 55.0	+1.1
THIG		2.00	312	*e*P	Pn	20 41 27.7	-1.9
TECA	Tecapa	2.18	91	*e*P	Pn	20 41 32.5	+0.1
PACA	Pacayal	2.35	92	P	Pn	20 41 35.8	+1.1
LCY	Lacayo	2.38	93	*e*P	Pn	20 41 35.3	+0.2
RANC	El Ranchito	2.39	93	*e*P	Pn	20 41 35.5	+0.3
BLLM	Bellamira	2.44	92	*e*P	Pn	20 41 36.3	+0.5
LCND	La Caada	2.79	95	P	Pn	20 41 41.2	+0.7
CNCH	Conchagua	2.84	95	*e*P	Pn	20 41 41.3	-0.1
CNCH	Conchagua	2.84	95	S	Sn	20 42 16.8	+1.0
CNCH	Conchagua	2.84	95	P	Pn	20 41 41.5	+0.1
CCIG	Comitan	3.02	334	*e*P	Pn	20 41 44.3	+0.4
CCIG	Comitan	3.02	334	S	Sn	20 42 21.1	+0.8
CCIG	Comitan	3.02	334	P	Pn	20 41 44.6	+0.6

IDC 07 20:52:51.0±0.7, 7°.44S×68°.15E, h0^{km}, mb4.1/12, mbtmp4.1/12, MS3.4/14, Error ellipse: s-maj=23.5km s-min=19.3km az=84.0

NEIC 07 20:52:52.5±0.8, 7°.5S±0°.1×68°.1E±0°.1, h10^{km}±1^{km}, mb4.6/19, Error ellipse: s-maj=21.0km s-min=18.8km az=160.0

ISC 07 20:52:52.4±0.6, 7°.5S±0°.1×68°.2E±0°.1, h12^{km}, n62, σ0^{s}.65/45, mb4.4/19, MS3.4/14, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGAR	Diego Garcia	4.17	89	Pn	Pn	20 53 54.4	-1.6
H08S1	Diego Carcia H	4.20	93	T	T	20 58 50.3	
	baz=276,slow=72,SNR=4.3						
H08S3	Diego Garcia H	4.21	92	T	T	20 58 48.8	
	baz=276,slow=72,SNR=6.1						
H08S2	Diego Garcia H	4.22	93	T	T	20 58 52.2	
	baz=276,slow=72,SNR=5.7						
MBAR	Mbarara	38.01	279	LR	LR	21 13 19.3	
	comp=Z,44nm,19.4s,baz=109,slow=32						
EVN	Everest	39.54	26	P	P	21 00 24.2	0.0
CMAR	Chiang Mai Arr	39.77	49	P	P	21 00 26.6	+1.0
	1.6nm,0.9s,baz=246,slow=9.3,SNR=8.9						
CMAR				PcP	PcP	21 02 31.9	-0.1
	1.0nm,0.9s,baz=256,slow=4.6,SNR=4.6						
	1.6nm,0.9s						
CMAR	Chiang Mai Arr	39.77	49	P	P	21 00 25.0	-0.5
SHL	Shillong	40.09	34	P	P	21 00 28.3	0.0
H04N2	CROZET ISLANDS	41.07	197	T	T	21 44 15.0	
	baz=26,slow=75,SNR=73						
H04N1	CROZET ISLANDS	41.07	197	T	T	21 44 16.0	
	baz=26,slow=75,SNR=68						
H04N3	CROZET ISLANDS	41.09	197	T	T	21 44 15.2	
	baz=26,slow=75,SNR=79						
KBL	Kabul	41.80	1	P	P	21 00 41.9	-0.4
KBL				IAmb	IAmb	21 00 45.1	
	comp=Z,4.7nm,0.6s						
LSA	Lhasa	43.03	30		P	21 00 52.7	0.0
LBTB	Lobatse	44.27	242	LR	LR	21 17 39.7	
	comp=Z,81nm,18.7s,baz=71,slow=34						
MANEM	Manem	44.90	4	P	P	21 01 07.2	-0.1
MANEM				IAmb	IAmb	21 01 09.7	
	comp=Z,9.5nm,0.8s						
BOSA	Boshof	45.63	237	P	P	21 01 13.2	0.0
	comp=Z,3.7nm,0.8s,baz=88,slow=7.9,SNR=6.2						
	comp=Z,3.7nm,0.8s						
BOSA	Boshof	45.63	237	P	P	21 01 11.7	-1.5
BOSA				IAmb	IAmb	21 01 25.8	
	comp=Z,12nm,1.4s						
GAR	Garm	46.28	2	P	P	21 01 18.0	-0.1
EIL	Elat	48.87	321	LR	LR	21 19 28.0	
	comp=Z,46nm,18.3s,baz=174,slow=33						
H01W3	Cape Leeuwin H	50.13	130	T	T	21 55 34.9	
	baz=292,slow=75,SNR=54						
H01W2	Cape Leeuwin H	50.14	130	T	T	21 55 35.3	
	baz=292,slow=75,SNR=57						
H01W1	Cape Leeuwin H	50.15	130	T	T	21 55 36.2	
	baz=292,slow=75,SNR=62						
AAK	Ala-Archa	50.20	6	LR	LR	21 22 08.7	
	comp=Z,47nm,21.5s,baz=196,slow=35						
KKAR	Karatay Array	50.38	2	P	P	21 01 50.5	+1.0
KAPI	Kappang	51.24	90	LR	LR	21 22 46.5	
	comp=Z,26nm,18.2s,baz=280,slow=35						
SOEI	Soe	55.39	97	P	P	21 02 28.2	+0.9
MKAR	Makanchi Array	55.46	12	P	P	21 02 26.5	-0.5
	comp=Z,0.6nm,0.5s,baz=200,slow=7.6,SNR=7.2						
MKAR				PcP	PcP	21 03 27.5	+0.4
	comp=Z,0.7nm,0.7s,baz=235,slow=4.3,SNR=4.4						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	55.46	12	P	P	21 02 25.9	-1.1
BRTR	Keskin Array B	56.83	328	LR	LR	21 25 01.9	
	comp=Z,14nm,19.7s,baz=164,slow=34						
AB31	Akbulak array	56.96	354	P	P	21 02 37.1	-0.5
AB31				IAmb	IAmb	21 02 50.6	
	comp=Z,7.7nm,1.5s						
ABKAR	Akbulak array	56.96	354	P	P	21 02 37.4	-0.2
KURBB	Kurchatov Arra	58.55	8	P	P	21 02 48.9	+0.1
	comp=Z,1.2nm,0.7s,baz=205,slow=7.3,SNR=12						
KURBB				PcP	PcP	21 03 39.1	+0.1
	comp=Z,0.1nm,0.3s,baz=206,slow=3.8,SNR=4.6						
	comp=Z,1.2nm,0.7s						
KURK	Kurchatov	58.65	8	P	P	21 02 49.3	-0.1
KURK				IAmb	IAmb	21 02 50.5	
	comp=Z,3.0nm,0.8s						
MAW	Mawson	60.15	182	LR	LR	21 25 03.8	

	comp=Z,33nm,19.2s,baz=320,slow=32						
BVAR	Borovoye Array	60.29	1	P	P	21 03 00.7	-0.2
	comp=Z,0.7nm,0.6s,baz=147,slow=8.3,SNR=5.7						
BVAR				PcP	PcP	21 03 46.3	+0.4
	comp=Z,0.7nm,0.7s,baz=204,slow=3.3,SNR=3.8						
BVAR				LR	LR	21 29 00.2	
	comp=Z,25nm,18.4s,baz=192,slow=36						
	comp=Z,0.7nm,0.6s						
ZALV	Zalesovo Beam	62.77	11	P	P	21 03 17.2	-0.3
	comp=Z,0.4nm,0.3s,baz=209,slow=12,SNR=5.1						
	comp=Z,0.4nm,0.3s						
ZALV	Zalesovo Beam	62.77	11	P	P	21 03 16.6	-0.9
ARTI	Arti	64.16	354	P	P	21 03 25.8	-0.8
ARTI				IAmb	IAmb	21 03 27.5	
	comp=Z,5.1nm,0.6s						
SONM	Songino Array	64.54	27	P	P	21 03 30.8	+1.3
	comp=Z,3.4nm,0.8s,baz=216,slow=6.7,SNR=21						
	comp=Z,3.4nm,0.8s						
SONM	Songino Array	64.54	27	P	P	21 03 30.1	+0.5
SONM				IAmb	IAmb	21 03 32.0	
	comp=Z,5.1nm,1.0s						
ASAR	Alice Springs	64.77	113	P	P	21 03 32.1	+0.7
	comp=Z,2.1nm,0.8s,baz=280,slow=6.2,SNR=19						
	comp=Z,2.1nm,0.8s						
ASAR	Alice Springs	64.77	113	P	P	21 03 31.4	0.0
WRA	Warramunga Arr	65.05	108	P	P	21 03 34.5	+1.2
	comp=Z,6.0nm,1.1s,baz=281,slow=6.4,SNR=21						
	comp=Z,6.0nm,1.1s						
WRA	Warramunga Arr	65.05	108	P	P	21 03 33.8	+0.5
WB0	Warramunga Arr	65.10	108	P	P	21 03 33.7	+0.1
WB0				IAmb	IAmb	21 03 35.7	
	comp=Z,4.8nm,0.8s						
DBIC	Dimbokro	74.25	279	LR	LR	21 35 39.8	
	comp=Z,15nm,18.2s,baz=184,slow=35						
CTAO	Charters Tower	76.25	109	P	P	21 04 41.5	-0.1
CTAO				IAmb	IAmb	21 04 43.9	
	comp=Z,12nm,1.1s						
NRIK	Noril'sk	77.80	7	LR	LR	21 39 41.9	
	comp=Z,25nm,19.8s,baz=138,slow=36						
GUMO	Guam	78.88	75	LR	LR	21 42 46.1	
	comp=Z,5.4nm,18.5s,baz=68,slow=38						
ESDC	Sonseca Array	81.28	312	P	P	21 05 08.8	-0.1
	comp=Z,0.7nm,0.9s,baz=89,slow=2.7,SNR=5.1						
	comp=Z,0.7nm,0.9s						
NOA	NORSAR Array B	81.39	336	LR	LR	21 41 50.4	
	comp=Z,16nm,18.9s,baz=280,slow=36						
ARCES	ARCESS Array B	82.23	346	P	P	21 05 13.6	+0.4
	comp=Z,1.5nm,0.7s,baz=150,slow=3.8,SNR=4.8						
	comp=Z,1.5nm,0.7s						
ARCES	ARCESS Array B	82.23	346	P	P	21 05 13.4	+0.2
QSPA	South Pole Qui	82.56	180	P	P	21 05 16.0	+0.8
	comp=Z,1.6nm,0.8s,baz=265,slow=4.0,SNR=5.9						
QSPA				LR	LR	21 38 04.6	
	comp=Z,36nm,18.1s,baz=244,slow=33						
	comp=Z,1.6nm,0.8s						
QSPA	South Pole Qui	82.56	180	P	P	21 05 15.2	-0.1
QSPA				IAmb	IAmb	21 05 17.8	
	comp=Z,2.7nm,1.0s						
TIXI	Tiksi	88.20	16	LR	LR	21 46 11.9	
	comp=Z,38nm,19.2s,baz=190,slow=36						
YKA	Yellowknife Ar	125.05	2	PKP	PKiKP	21 11 52.5	-0.2
	comp=Z,0.7nm,0.8s,baz=344,slow=2.0,SNR=5.7						
PDAR	Pinedale Array	144.80	357	PKP	PKPab	21 12 28.1	-0.7
	comp=Z,0.9nm,0.8s,baz=85,slow=1.8,SNR=6.7						
PDAR	Pinedale Array	144.80	357		PKPab	21 12 28.6	-0.2
NVAR	Mina Array Bea	148.62	10	PKPbc	PKiKP	21 12 42.0	+0.2
	comp=Z,2.9nm,0.8s,baz=276,slow=1.0,SNR=11						
NVAR	Mina Array Bea	148.62	10		PKPbc	21 12 40.5	+0.3

*SJA **07** 20:59:03.2±0.7, 22°.32S×68°.99W, h124km±4km, ML4.1, MW4.1*
*VAO **07** 20:59:03.1±0.9, 22°.44S×68°.95W, h104km±7km, mb4.3, Presumed earthquake*
*NEIC **07** 20:59:04.5±1.4, 22°.33S±0°.04×68°.97W±0°.06, h116km±6km, mb4.3/10, ML4.1(GUC), Error ellipse: s-maj=8.4km s-min=6.0km az=80.0*
*IDC **07** 20:59:04.3±2.6, 22°.35S×68°.76W, h105km±23km, mb3.5/3, mbtmp4.0/7, MS3.0/2, Error ellipse: s-maj=36.8km s-min=20.3km az=100.0*
*GUC **07** 20:59:05.3±0.8, 22°.30S×68°.98W, h115km±3km, ML4.1*
ISC 07 20:59:04.0±0.6**, 22°.32S**±0°.03×**68°.99W**±0°.04**, h122**km±5km**, n130,** σ1§**72**/161**, mb4.1**/3**, 16C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.57	336		Pn	20 59 23.2	+0.4
PB09				Sn	Sn	20 59 36.7	-0.3
PB09	IPOC Station P	0.57	336	⇑ *i*P	Pn	20 59 23.2	+0.4
PB09				*i* S	Sn	20 59 36.9	-0.1
PB09				IAML		20 59 37.9	
	comp=N,18µm,0.7s						
PB09	IPOC Station P	0.57	336	*e*P	Pn	20 59 22.7	-0.1
PB09				IAML		20 59 40.2	
	comp=Z,5µm,0.5s						
PB06	IPOC Station P	0.66	234		Pn	20 59 23.8	+0.3
PB06				Sn	Sn	20 59 37.7	-0.5
PB06	IPOC Station P	0.66	234	⇑ *i*P	Pn	20 59 23.8	+0.3
PB06				*e*S	Sn	20 59 38.4	+0.3
PB06				IAML		20 59 38.9	
	comp=N,5µm,0.1s						
PB06	IPOC Station P	0.66	234	*e*P	Pn	20 59 23.8	+0.3
PB06				*e*S	Sn	20 59 38.6	+0.4
PB06				IAML		20 59 43.6	
	comp=Z,2µm,0.3s						
PB03	IPOC Station P	0.76	290		Pn	20 59 24.6	+0.5
PB03	IPOC Station P	0.76	290	⇑ *i*P	Pn	20 59 24.7	+0.5
PB03				*e*S	Sn	20 59 39.1	-0.3
PB03				IAML		20 59 40.0	
	comp=N,9µm,0.6s						
PB03	IPOC Station P	0.76	290	*e*P	Pn	20 59 24.6	+0.5
PB03				*e*S	Sn	20 59 39.5	+0.1
PB03				IAML		20 59 40.2	
	comp=Z,5µm,0.1s						
AF01	San Pedro de A	0.98	130		Pn	20 59 26.8	+0.5
AF01	San Pedro de A	0.98	130	⇑ *i*P	Pn	20 59 26.8	+0.5
AF01				*e*S	Sn	20 59 43.4	+0.1
AF01	San Pedro de A	0.98	130	*e*P	Pn	20 59 26.0	-0.3
PB07	IPOC Station P	1.02	305		Pn	20 59 27.2	+0.6
PB07	IPOC Station P	1.02	305	*e*P	Pn	20 59 27.0	+0.5
PB07				*i* S	Sn	20 59 43.5	-0.1
PB07				IAML		20 59 45.0	
	comp=N,7µm,0.4s						
PB07	IPOC Station P	1.02	305	*e*P	Pn	20 59 26.9	+0.5
PB07				*e*S	Sn	20 59 44.3	+0.7
PB07				IAML		20 59 44.5	
	comp=Z,2µm,0.5s						
PB05	IPOC Station P	1.24	244		Pn	20 59 29.4	+0.7
PB05	IPOC Station P	1.24	244	⇓ *i*P	Pn	20 59 29.4	+0.7
PB05				*e*S	Sn	20 59 47.4	-0.2
PB05	IPOC Station P	1.24	244	*e*P	Pn	20 59 23.8	-5.0
PB05				*e*P		20 59 29.2	
PB05				*e*S	Sn	20 59 44.5	-3.1
PB05				IAML		20 59 48.8	
	comp=Z,984nm,0.8s						
PB02	IPOC Station P	1.30	319		Pn	20 59 30.0	+0.6
PB02	IPOC Station P	1.30	319	⇑ *i*P	Pn	20 59 29.9	+0.4
PB02				*e*S	Sn	20 59 48.2	-0.5
PB02				IAML		20 59 53.1	
	comp=E,3µm,0.5s						
PB02	IPOC Station P	1.30	319	*e*P	Pn	20 59 29.2	-0.2
PB02				*e*S	Sn	20 59 49.5	+0.7
PB02				IAML		20 59 50.9	
	comp=Z,2µm,0.2s						
PB01	IPOC Station P	1.35	340		Pn	20 59 30.1	+0.2
PB01	IPOC Station P	1.35	340	⇑ *i*P	Pn	20 59 30.2	+0.2
PB01				*e*S	Sn	20 59 49.1	-0.5
PB01	IPOC Station P	1.35	340	*e*P	Pn	20 59 30.1	+0.2
PB01				*e*S	Sn	20 59 44.9	-4.7
PB01				IAML		20 59 50.8	
	comp=Z,2µm,0.5s						
PATCX	Punta Patache	1.84	324		Pn	20 59 35.9	+0.3
PATCX	Punta Patache	1.84	324	⇑ *i*P	Pn	20 59 35.7	+0.1
PATCX				*e*S	Sn	20 59 59.4	-0.4
PATCX				IAML		21 00 09.6	
	comp=E,1µm,0.4s						
PATCX	Punta Patache	1.84	324	*e*P	Pn	20 59 35.8	+0.1
PATCX				*e*S	Sn	20 59 54.2	-5.6
PATCX				IAML		21 00 05.8	
	comp=Z,932nm,0.7s						
PB10	IPOC Station P	1.87	230		Pn	20 59 36.0	+0.1
PB10	IPOC Station P	1.87	230	*e*P	Pn	20 59 36.5	+0.5
PB10				*e*S	Sn	20 59 59.9	-0.5
PB10	IPOC Station P	1.87	230	*e*P	Pn	20 59 36.3	+0.4
PB10				*e*S	Sn	21 00 00.3	-0.1
PB10				IAML		21 00 02.6	
	comp=Z,634nm,0.6s						
PX03	IPOC Station P	1.99	342	*e*P	Pn	20 59 37.1	-0.5
PX03				*e*S	Sn	21 00 03.2	-0.1
PX03				IAML		21 00 05.0	
	comp=N,2µm,0.6s						
TA01	Diego Aracena	2.06	327		Pn	20 59 38.2	-0.2
TA01	Diego Aracena	2.06	327	⇑ *i*P	Pn	20 59 38.1	-0.2
TA01				*e*S	Sn	21 00 03.9	-0.8
TA01				IAML		21 00 10.1	
	comp=E,1µm,0.4s						
TA01	Diego Aracena	2.06	327	*e*P	Pn	20 59 38.1	-0.2
TA01				*e*S	Sn	21 00 01.8	-2.9
TA01				IAML		21 00 09.5	
	comp=Z,871nm,0.6s						
PB08	IPOC Station P	2.17	356		Pn	20 59 40.7	+0.7
PB08	IPOC Station P	2.17	356	⇑ *i*P	Pn	20 59 40.7	+0.7
PB08				*e*S	Sn	21 00 08.2	+0.6
PB08				IAML		21 00 12.4	
	comp=E,792nm,0.6s						
PB08	IPOC Station P	2.17	356	*e*P	Pn	20 59 40.8	+0.7
PB08				*e*S	Sn	21 00 04.7	-2.9
PB08				IAML		21 00 11.9	
	comp=Z,714nm,1.3s						
HMBC	Humberstone	2.19	337		Pn	20 59 39.9	-0.2
HMBC	Humberstone	2.19	337	⇑ *i*P	Pn	20 59 39.8	-0.2
HMBC				*e*S	Sn	21 00 07.5	-0.2
HMBC				IAML		21 00 14.5	
	comp=E,2µm,0.4s						
HMBC	Humberstone	2.19	337	*e*P	Pn	20 59 39.9	-0.2
HMBC				*e*S	Sn	21 00 02.7	-5.0
HMBC				IAML		21 00 12.0	
	comp=Z,1µm,0.5s						
TA02	Huaiquique	2.30	332	*e*P	Pn	20 59 40.7	-0.5
TA02				*e*S	Sn	21 00 08.9	-0.9
PB11	IPOC Station P	2.62	346		Pn	20 59 45.4	-0.1
PB11	IPOC Station P	2.62	346	⇑ *i*P	Pn	20 59 45.1	-0.4
PB11				*e*S	Sn	21 00 16.6	-0.8
PB11				IAML		21 00 20.6	
	comp=N,1µm,0.5s						
PB11	IPOC Station P	2.62	346	*e*P	Pn	20 59 45.3	-0.2
PB11				*e*S	Sn	21 00 10.2	-7.3
PB11				IAML		21 00 20.6	
	comp=Z,871nm,0.5s						
GO01	Chusmiza	2.64	356		Pn	20 59 46.4	+0.2
GO01	Chusmiza	2.64	356	⇑ *i*P	Pn	20 59 46.6	+0.4
GO01				*e*S	Sn	21 00 18.7	+0.3
GO01				IAML		21 00 20.5	
	comp=E,882nm,0.3s						
GO01	Chusmiza	2.64	356	*e*P	Pn	20 59 46.7	+0.6
GO01				*e*S	Sn	21 00 13.4	-5.1
GO01				IAML		21 00 21.2	
	comp=Z,741nm,0.6s						
PB14	IPOC Station P	2.64	209		Pn	20 59 46.5	+0.5
PB14	IPOC Station P	2.64	209	*e*P	Pn	20 59 46.5	+0.5
PB14	IPOC Station P	2.64	209	*e*P	Pn	20 59 46.4	+0.4
PB14				*e*S	Sn	21 00 15.1	-3.1
PB14				IAML		21 00 18.9	
	comp=Z,733nm,0.3s						
GO02	Mina Guanaco	2.89	191		Pn	20 59 49.6	+0.5
GO02	Mina Guanaco	2.89	191	⇑ *i*P	Pn	20 59 49.5	+0.4
GO02	Mina Guanaco	2.89	191	*e*P	Pn	20 59 49.5	+0.4
GO02				*e*S	Sn	21 00 23.6	-0.3
GO02				IAML		21 00 24.8	
	comp=Z,1µm,0.7s						
SALTA		3.09	128	⇑ *e*P	Pn	20 59 53.5	+1.6
SALTA		3.09	128	*e*P	Pn	20 59 53.6	+1.7
SALTA				*e*P		20 59 53.7	
YJA	Yavi	3.22	88	*e*P	Pn	20 59 56.5	+2.8
YJA	Yavi	3.22	88	*e*P	Pn	20 59 52.1	-1.6
YJA				*e*S	Sn	21 00 30.1	-1.9
HJA	Humahuaca	3.42	106	*e*P	Pn	20 59 53.5	-2.7
PB12	IPOC Station P	3.89	341		Pn	21 00 00.9	-1.3
PB12	IPOC Station P	3.89	341	⇑ *e*P	Pn	21 00 00.5	-1.7
PB12	IPOC Station P	3.89	341	*e*P	Pn	21 00 01.0	-1.3
PB12				*e*S	Sn	21 00 56.6	+9.3
PB12				IAML		21 01 06.9	
	comp=Z,282nm,0.9s						
SLA	San Lorenzo	4.00	127	⇑ *e*P	Pn	21 00 05.7	+2.1
SLA	San Lorenzo	4.00	127	*e*P	Pn	21 00 00.7	-3.0
AZAP	Zapla	4.08	119	*e*P	Pn	21 00 05.8	+1.0
AC01	Pan de Azucar	4.09	201		Pn	21 00 03.8	-0.9
AC01	Pan de Azucar	4.09	201	*e*P	Pn	21 00 03.9	-0.8
AC01				*e*S	Sn	21 00 49.7	-2.2
AC01				IAML		21 00 52.9	
	comp=Z,268nm,0.3s						
AC02	Maricunga	4.50	182		Pn	21 00 11.2	+0.5
AC02	Maricunga	4.50	182	*e*P	Pn	20 59 59.0	-12
AC02				IAML		21 01 38.9	
	comp=Z,199nm,0.8s						
PB18	Visviri	4.72	354		Pn	21 00 15.6	+1.8
PB18	Visviri	4.72	354	*e*P	Pn	21 00 16.5	+2.8
AC06	Mina Casimiro	5.17	194		Pn	21 00 17.6	-1.6
GO03	Copiapo	5.38	192		Pn	21 00 20.8	-1.3
LPAZ	La Paz	6.05	8	P	Pn	21 00 33.4	+1.6
	comp=Z,19nm,0.5s,baz=193,slow=6.7,SNR=52						
LPAZ				LR	LR	21 02 45.7	
	comp=Z,26nm,18.1s,baz=202,slow=36						
LPAZ	La Paz	6.05	8		Pn	21 00 33.0	+1.3
LPAZ	La Paz	6.05	8	*e*P	Pn	21 00 32.7	+1.0
AC05	El Transito	6.60	190		Pn	21 00 36.8	-1.8
LCO	Las Campanas	6.84	193		Pn	21 00 39.2	-2.8
CFA	Coronel Fontan	9.28	176	P	Pn	21 01 12.5	-2.2
	comp=Z,17nm,0.5s,baz=357,slow=13,SNR=66						
CFA				S	Sn	21 02 49.5	-7.8
	comp=Z,7.7nm,0.3s,baz=154,slow=20,SNR=9.7						
MURT	Porto Murtinho	10.58	89	*e*P	Pn	21 01 29.4	-2.8
MT08	Bocatoma Ro	11.12	184		Pn	21 01 36.7	-3.0
CPUP	Villa Florida	11.36	113	P	Pn	21 01 39.9	-2.7
	comp=Z,1.1nm,0.7s,baz=154,slow=14,SNR=8.4						
CPUP	Villa Florida	11.36	113	*e*P	Pn	21 01 40.2	-2.4
MT13	San Alfonso	11.44	185		Pn	21 01 40.5	-3.3
BDQN	Bodoquena, MS	11.55	83	*e*P	Pn	21 01 44.1	-1.1
PTLB	Pontes e Lacer	11.56	55		Pn	21 01 43.0	-2.3
PTLB	Pontes e Lacer	11.56	55	*e*P	Pn	21 01 43.0	-2.3
AQDB	Aquidauana	12.52	84	Pn	Pn	21 01 58.2	+0.4
AQDB	Aquidauana	12.52	84	*e*P	Pn	21 01 58.6	+0.8
VILB	Vilhena	12.52	43	*e*P	Pn	21 01 59.5	+1.5
PSAL	Palomas, Salto	13.40	133	*e*P	Pn	21 02 08.0	-1.3
ML02	Panimavida	13.57	188		Pn	21 02 10.4	-0.9
SALV	Santo Antonio	14.09	65	*e*P	Pn	21 02 18.7	+0.5
BI02	San Fabin de	14.44	187		Pn	21 02 21.9	-0.7
CZSB	Cruzeiro do Su	14.94	346		Pn	21 02 28.9	0.0
CZSB	Cruzeiro do Su	14.94	346	*e*P	P	21 02 30.5	-1.0
PTGB	Pitanga	15.71	102	*e*P	Pn	21 02 39.0	+0.4
PDRB	Porto dos Gac	15.82	50	*e*P	P	21 02 41.6	+0.2
ITAB	Concordia	16.07	111		Pn	21 02 42.8	-0.2
ITAB				IAmb	IAmb	21 02 58.6	
	comp=Z,14nm,1.1s						
ITAB	Concordia	16.07	111	*e*P	Pn	21 02 42.6	-0.4
CPSB	Cacapava Do Su	16.09	123	*e*P	Pn	21 02 41.4	-1.8
PLTB	Pedras Altas	16.61	128	Pn	Pn	21 02 48.0	-1.6
PLTB				IAmb	IAmb	21 02 48.7	
	comp=Z,17nm,1.1s						
TRQA	Tornquist	16.81	161		Pn	21 02 51.1	-0.9
CLDB	Colider	16.99	50	*e*P	Pn	21 02 55.5	+1.1
ARAG	Araguaiana, MT	17.52	71	*e*P	Pn	21 03 01.2	+0.5
FRTB	Fartura	17.94	97	*e*P	P	21 03 04.4	-0.3
PLCA	Paso Flores	18.41	184	P	Pn	21 03 10.8	-0.4
	comp=Z,2.0nm,0.7s,baz=2.7,slow=9.3,SNR=9.9						
PLCA	Paso Flores	18.41	184	P	P	21 03 10.3	+0.6
SNDB	Serra Nova Dou	19.77	62	*e*P	P	21 03 24.5	-0.1
SPB	Sao Paulo	19.89	98	*e*P	P	21 03 26.5	+0.6
VAO	Valinhos	20.34	96		P	21 03 30.1	-0.7
VAO				IAmb	IAmb	21 03 31.8	
	comp=Z,17nm,0.8s						
VAO	Valinhos	20.34	96	*e*P	P	21 03 31.1	+0.4
MACA	Manacapuru-AM	20.68	24	P	P	21 03 34.5	+0.2
BDFB	Brasilia	20.91	75	P	P	21 03 37.1	+0.1
	comp=Z,1.8nm,0.4s,baz=206,slow=10,SNR=4.4						
	comp=Z,1.8nm,0.4s						
BDFB	Brasilia	20.91	75	P	P	21 03 36.5	-0.5
ITTB	Itaituba	21.98	38	*e*P	P	21 03 48.5	+0.2
JANB	Januaria	24.45	77	*e*P	P	21 04 11.6	-0.1
PRPB	Parauapebas	24.50	52	*e*P	P	21 04 13.0	+0.9
SMTB	Santa Maria do	24.53	60	*e*P	P	21 04 14.0	+1.7
BOAV	Boa Vista	25.91	20	P	P	21 04 26.5	+1.6
BOAV				IAmb	IAmb	21 04 53.1	
	comp=Z,7.9nm,1.3s						
TXAR	Lajitas Array	61.25	325	LR	LR	21 35 54.0	
	comp=Z,45nm,19.2s,baz=78,slow=36						
SNAA	Sanae	61.54	161	P	P	21 09 09.6	+1.9
	comp=Z,0.6nm,0.7s,baz=186,slow=10,SNR=1.7						
	comp=Z,0.6nm,0.7s						
SNAA	Sanae	61.54	161	P	P	21 09 09.1	+1.3
SNAA				IAmb	IAmb	21 09 53.5	
	comp=Z,6.5nm,1.2s						
QSPA	South Pole Qui	67.88	180	P	P	21 09 52.3	+3.2
	comp=Z,1.3nm,0.6s,baz=138,slow=1.0,SNR=18						
	comp=Z,1.3nm,0.6s						
QSPA	South Pole Qui	67.88	180	P	P	21 09 52.0	+2.9
QSPA				IAmb	IAmb	21 10 29.8	
	comp=Z,6.1nm,1.4s						
H11N3	WAKE ISLAND Hy	128.00	278	T	T	23 38 24.6	
	baz=104,slow=75,SNR=3.8						
H11N2	WAKE ISLAND Hy	128.02	278	T	T	23 38 20.7	
	baz=104,slow=75,SNR=4.4						
H11N1	WAKE ISLAND Hy	128.02	278	T	T	23 38 21.0	
	baz=104,slow=75,SNR=3.5						
ASAR	Alice Springs	129.16	207	PKP	PKiKP	21 17 59.7	+0.5
	comp=Z,0.7nm,1.1s,baz=144,slow=1.7,SNR=6.9						
WRA	Warramunga Arr	132.22	210	PKP	PKiKP	21 18 06.8	+1.4
	comp=Z,0.4nm,0.6s,baz=152,slow=2.2,SNR=5.3						
MKAR	Makanchi Array	146.33	37	PKPbc	PKPbc	21 18 29.9	-0.6
	comp=Z,0.5nm,0.8s,baz=316,slow=3.3,SNR=4.2						

*IDC **07** 21:07:00.0±6.8, 34°.67N×24°.09E, h0km, mb3.1/2, mbtmp3.1/3, ML2.6/1, Error ellipse: s-maj=204.5km s-min=30.2km az=173.0*
*ISK **07** 21:07:01.9, 35°.19N×23°.83E, h4km, ML3.3/20*
*THE **07** 21:07:02.7, 35°N±1°×23°.8E±0°.8, h0km±2km, M3.1/11, MLh3.1/11*
*ATH **07** 21:07:02.5, 35°.20N×23°.84E, h10km±1km, ML3.1/10, Manual Solution by A.Agalos First location: 2019/12/07 21:08:03, This location: 2019/12/07 21:35:00 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
*AFAD **07** 21:07:08.4, 35°.55N×24°.07E, h6km±4km, ML2.7*
ISC 07 21:07:02.9±0.9**, 35°.20N**±0°.02×**23°.85E**±0°.02**, h12**km±6km**, n76,** σ1§**79**/103**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDR	Palaiochora Ch	0.19	280	P	Pg	21 07 06.3	-0.7
KNDR				S	Sg	21 07 09.3	-0.6
KNDR	Palaiochora Ch	0.19	280	Pg	Pg	21 07 06.3	-0.7
KNDR				Sg	Sg	21 07 09.5	-0.4
KNDR	Palaiochora Ch	0.19	280	P	Pg	21 07 06.4	-0.7
KNDR				S	Sg	21 07 09.1	-0.8
IMMV	Iera Moni Meta	0.28	22	P	Pg	21 07 08.3	-0.3
IMMV				S	Sg	21 07 13.1	+0.7
IMMV	Iera Moni Meta	0.28	22	Pg	Pg	21 07 08.4	-0.3
IMMV				Sg	Sg	21 07 13.3	+0.8
IMMV	Iera Moni Meta	0.28	22	P	Pg	21 07 08.4	-0.3
IMMV				S	Sg	21 07 12.5	0.0
VAM	Vamos	0.35	54	P	Pg	21 07 09.7	-0.2
VAM				S	Sg	21 07 15.4	+0.7
CHAN	Chania	0.35	26	P	Pg	21 07 09.8	-0.3
CHAN				S	Sb	21 07 16.0	-0.6
CHAN	Chania	0.35	26	P	Pg	21 07 09.7	-0.3
CHAN				S	Sg	21 07 14.9	+0.2
GVD	Gavdhos	0.41	152	P	Pg	21 07 10.7	-0.3
GVD				S	Sb	21 07 17.5	-0.8
GVD	Gavdhos	0.41	152	Pg	Pg	21 07 10.7	-0.3
GVD				Sg	Sg	21 07 16.9	+0.4
GVD	Gavdhos	0.41	152	P	Pg	21 07 10.7	-0.3
GVD				S	Sg	21 07 16.5	0.0
ANKY	Antikythira Is	0.80	326	P	Pg	21 07 18.2	-0.3
ANKY				S	Sg	21 07 28.8	-0.1
ANKY	Antikythira Is	0.80	326	P	Pg	21 07 18.1	-0.3
ANKY				S	Sg	21 07 28.7	-0.2
IDI	Anoyia	0.85	84	P	Pg	21 07 17.9	-1.4
IDI				S	Sb	21 07 31.7	+0.6
IDI	Anoyia	0.85	84	Pg	Pg	21 07 18.0	-1.4
IDI	Anoyia	0.85	84	P	Pg	21 07 17.7	-1.7
IACM	Heraklion	1.00	84	P	Pg	21 07 21.1	-1.1
IACM				S	Sb	21 07 36.7	+1.3
IACM	Heraklion	1.00	84	P	Pg	21 07 21.2	-1.0
IACM				S	Sb	21 07 36.0	+0.7
KTHA	Kythira Island	1.23	329	P	Pg	21 07 25.7	-0.9
KTHA	Kythira Island	1.23	329	Pn	Pg	21 07 26.1	-0.5
NPS	Neapolis	1.44	87	P	Pn	21 07 28.5	-0.4
NPS				S	Sn	21 07 49.1	+1.4
NPS	Neapolis	1.44	87	P	Pn	21 07 28.5	-0.4
MHLO	Agia Marina, M	1.55	17	P	Pn	21 07 30.7	+0.4
MHLO				S	Sn	21 07 51.8	+1.4
VLI	Veliai	1.69	334	P	Pn	21 07 33.2	+1.0
VLI	Veliai	1.69	334	P	Pn	21 07 32.7	+0.5
SAP3	Santorini-Thir	1.73	44	P	Pn	21 07 33.6	+0.8
THR3	Thira Island,	1.74	46	P	Pn	21 07 33.6	+0.6
THERA	Ancient Thera,	1.76	48	P	Pn	21 07 33.7	+0.5
THERA	Ancient Thera,	1.76	48	P	Pn	21 07 32.8	-0.4
ZKR	Zakros	1.94	92	Pn	Pn	21 07 36.9	+1.2
APE	Apeiranthos	2.31	36	P	Pn	21 07 41.6	+0.8
APE	Apeiranthos	2.31	36	Pn	Pn	21 07 42.4	+1.6
APE	Apeiranthos	2.31	36	P	Pn	21 07 40.8	0.0
APE				S	Sn	21 08 10.2	+1.1
MET2	Kameni Chora,	2.44	350	P	Pn	21 07 43.3	+0.7
MET4	Agioi Theodoro	2.44	352	P	Pn	21 07 43.3	+0.7
MET5	Makryloggos,Me	2.45	351	P	Pn	21 07 42.9	+0.2
VLY	Voula,Athens	2.65	359	P	Pn	21 07 46.0	+0.6
KARP	Karpathos	2.73	82	Pn	Pn	21 07 48.4	+1.9
KARP	Karpathos	2.73	82	P	Pn	21 07 47.3	+0.7
DION	Dionisos Attik	2.87	1	P	Pn	21 07 48.9	+0.4
GUR	Goura	2.99	336	P	Pn	21 07 50.7	+0.5
VIL2	Platees	3.04	351	P	Pn	21 07 51.2	+0.3
KLV	Kalavryta, Ach	3.15	335	P	Pn	21 07 53.4	+1.0
YAZI	Mula-Dat§a-	3.27	62	P	Pn	21 07 56.6	+2.6
YAZI				S	Sn	21 08 31.8	-1.1
BODT	Bodrum	3.36	55	Pn	Pn	21 07 57.4	+2.2
DAT	Datca	3.38	62	P	Pn	21 07 56.4	+0.8
DAT				S	Sn	21 08 33.1	-2.7
DAT	Datca	3.38	62	Pn	Pn	21 07 57.7	+2.0
BDRM	Kayabasi	3.45	56	P	Pn	21 07 58.2	+1.7
ARG	Arkhangelos	3.62	73	Pn	Pn	21 08 01.1	+2.3
CHOS	Chios island	3.64	28	Pn	Pn	21 08 01.7	+2.6
ZEYE	Izmir, Urla-Ze	3.70	34	P	Pn	21 08 00.3	+0.4
URLA	Izmir	3.84	34	P	Pn	21 08 02.5	+0.6
URLA				S	Sn	21 08 43.3	-3.8
URLA				*i* IAML		21 09 18.0	
	comp=E,22nm,1.3s						
URLA				*i* IAML		21 09 22.0	
	comp=N,19nm,0.8s						
URLA	Izmir	3.84	34	Pn	Pn	21 08 03.7	+1.8
TURN	Turunc	3.89	65	P	Pn	21 08 04.6	+2.1
TURN				S	Sn	21 08 43.1	-5.0
TURN				*i* IAML		21 08 54.0	
	comp=N,13nm,0.8s						
TURN				*i* IAML		21 09 02.0	
	comp=E,12nm,0.8s						
TURN	Turunc	3.89	65	Pn	Pn	21 08 05.1	+2.6
YER	Yerkesik	4.07	60	Pn	Pn	21 08 08.2	+3.2
IZMR	zmir-demi	4.41	47	P	Pn	21 08 11.1	+1.5
IZMR				S	Sb	21 09 10.6	-2.8
ESEN	Aydn-Nazilli	4.45	53	P	Pn	21 08 13.8	+3.6
FETY	Fethiye	4.48	70	P	Pn	21 08 05.8	-4.8
FETY				S	Sn	21 08 50.7	-12
IZZE	Mula-Seydike	4.54	73	P	Pn	21 08 13.4	+2.0
IZZE				S	Sn	21 08 57.0	-7.1
IZZE				*i* IAML		21 09 07.0	
	comp=E,18nm,0.4s						
IZZE				*i* IAML		21 09 18.0	
	comp=N,18nm,0.4s						
DNZT	Denizli-Tavas-	4.67	62	P	Pn	21 08 16.2	+2.9
DNZT				S	Sn	21 09 04.8	-2.6
TAVA	DENIZLI_Tavas	4.67	60	P	Pn	21 08 15.4	+2.1
TAVA				S	Sn	21 09 06.1	-1.3
TAVA				*i* IAML		21 10 16.0	
	comp=N,7.5nm,2.6s						
CAME	Cameli-Denizli	4.74	67	Pn	Pn	21 08 16.9	+2.5
AKAS	Kas	4.79	76	P	Pn	21 08 16.0	+0.9
AKAS				S	Sn	21 09 02.6	-8.0
AKAS	Kas	4.79	76	Pn	Pn	21 08 17.9	+2.9
CAEL	Denizli, Camel	4.82	65	P	Pn	21 08 16.7	+1.3
DNIZ	Denizli-Tavas-	4.83	58	P	Pn	21 08 14.4	-1.1
DNIZ				*i* IAML		21 09 20.0	
	comp=N,8.9nm,0.7s						
DNIZ				*i* IAML		21 09 27.0	
	comp=E,11nm,0.5s						
KNIK	Mula-Seydike	4.92	69	P	Pn	21 08 19.7	+2.9

APMY	**Acipayam-Deniz**	**4.95**	**61**	Pn	**Pn**	**21 08 20.1**	**+3.0**
GOLH	**Golhisar**	**5.04**	**65**	P	**Pn**	**21 08 21.0**	**+2.6**
GOLH				*i* IAML		21 09 37.0	
	comp=E,14nm,1.8s						
GOLH				*i* IAML		21 10 06.0	
	comp=N,5.8nm,1.2s						
ELL	**Elmali**	**5.15**	**71**	Pn	**Pn**	**21 08 22.9**	**+3.0**
KORT	**Korkueli**	**5.56**	**69**	Pn	**Pn**	**21 08 28.7**	**+3.1**
BRTR	**Keskin Array B**	**8.99**	**57**	Pn	**Pn**	**21 09 15.1**	**+2.3**
	0.1nm,0.3s,baz=234,slow=12,SNR=5.1						
	0.7nm,0.8s						
ESDC	**Sonseca Array**	**22.49**	**290**	P	**P**	**21 12 05.0**	**+2.8**
	0.6nm,0.9s,baz=88,slow=11,SNR=4.9						
	0.6nm,0.9s						
MKAR	**Makanchi Array**	**44.64**	**56**	P	**P**	**21 15 15.2**	**-0.1**
	0.1nm,0.3s,baz=280,slow=8.6,SNR=3.5						
	0.1nm,0.3s						

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*NNC **07** 21:07:57.6±0.6, 42°.87N×78°.63E, h0^{km}, mpv2.7, Error ellipse: s-maj=4.5km s-min=1.9km az=13.0*
*SOME **07** 21:07:58.3, 42°.92N×78°.55E, h15^{km}*
ISC 07 21:07:58.2±1.7, **42°.92N**±0°.07×**78°.54E**±0°.03, **h1**^{km}±12^{km}, **n13**, σ**0^{s}.99**/26, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**0.17**	**326**	P	**Pg**	**21 08 02.5**	**+0.9**
	7.3nm,0.1s						
SATY				S	**Sg**	**21 08 05.7**	**+1.9**
	149nm,0.1s						
UZB	**Uzynbulak**	**0.42**	**57**	P	**Pg**	**21 08 05.7**	**-0.6**
	9.1nm,0.1s						
UZB				S	**Sg**	**21 08 11.2**	**-0.7**
	21nm,0.1s						
UZB	**Uzynbulak**	**0.42**	**57**	*e*P	**Pg**	**21 08 05.7**	**-0.6**
	9.1nm,0.1s						
UZB				*e*S	**Sg**	**21 08 11.2**	**-0.7**
	21nm,0.1s						
KPKS	**Kokpek**	**0.56**	**11**	P	**Pg**	**21 08 09.0**	**0.0**
	0.6nm,0.2s						
KPKS				S	**Sg**	**21 08 16.8**	**+0.6**
	30nm,0.1s						
KPKS	**Kokpek**	**0.56**	**11**	*e*P	**Pg**	**21 08 09.0**	**0.0**
	0.6nm,0.2s						
KPKS				*e*S	**Sg**	**21 08 16.8**	**+0.6**
	30nm,0.1s						
SHLS	**Shalkode**	**0.72**	**70**	P	**Pn**	**21 08 16.3**	**+0.6**
	1.8nm,0.1s						
SHLS				S	**Sn**	**21 08 29.3**	**+1.9**
	5.3nm,0.2s						
SHLS	**Shalkode**	**0.72**	**70**	*e*P	**Pn**	**21 08 16.3**	**+0.6**
	1.8nm,0.1s						
SHLS				*e*S	**Sn**	**21 08 29.3**	**+1.9**
	5.3nm,0.2s						
KOTS	**Kotyrbulak**	**1.09**	**287**	*e*P	**Pb**	**21 08 19.1**	**-1.0**
	3.2nm,0.2s						
KOTS				*e*S	**Sb**	**21 08 33.9**	**-1.0**
	7.4nm,0.3s						
TNSS	**Tian-Shan**	**1.17**	**276**	*e*P	**Pb**	**21 08 20.7**	**-0.9**
	0.2nm,0.1s						
TNSS				*e*S	**Sb**	**21 08 36.7**	**-0.8**
	0.7nm,0.2s						
ARXS	**Arharly**	**1.40**	**338**	*e*P	**Pn**	**21 08 24.2**	**-0.8**
	1.9nm,0.1s						
ARXS				*e*S	**Sn**	**21 08 42.6**	**-1.4**
	4.6nm,0.2s						
IZV	**Izvestkoviy**	**1.42**	**275**	*e*P	**Pb**	**21 08 25.2**	**-0.4**
	0.5nm,0.1s						
IZV				*e*S	**Sb**	**21 08 44.3**	**+0.1**
	6.8nm,0.4s						
CHKK	**Chushkaly**	**1.47**	**310**	*e*P	**Pb**	**21 08 25.7**	**-0.6**
	3.4nm,0.1s						
CHKK				*e*S	**Sb**	**21 08 45.4**	**-0.2**
	5.5nm,0.2s						
MTBS	**Maitube**	**1.56**	**279**	*e*P	**Pb**	**21 08 27.8**	**-0.2**
	0.6nm,0.1s						
MTBS				*e*S	**Sb**	**21 08 48.9**	**+0.6**
	1.7nm,0.2s						

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*IDC **07** 21:19:28.5±1.6, 84°.27N×0°.64W, h0^{km}, mb3.4/3, mbtmp3.5/5, ML3.4/2, MS3.0/1, Error ellipse: s-maj=139.3km s-min=22.1km az=63.0*
*BER **07** 21:19:33.6±1.8, 84°.12N×1°.22E, h10^{km}, Mw3.6, ML2.3(DNK), Confirmed Earthquake*
*DNK **07** 21:19:35.2±0.7, 84°.12N×0°.70E, h36^{km}±99^{km}, ML1.5, Presumed earthquake*
ISC 07 21:19:28.4±1.0, **84°.24N**±0°.08×**2°.40E**±0°.06, **h10**^{km}, **n18**, σ**2^{s}.93**/23, **mb3.4**/3, **North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NOR	**Nord**	**3.53**	**231**	*e*P	**Pn**	**21 20 23.8**	**+0.8**
NOR				*e*S	**Sn**	**21 21 01.7**	**-3.0**
NOR	**Nord**	**3.53**	**231**	*i* P	**Pn**	**21 20 23.4**	**+0.3**
NOR				*i* S	**Sn**	**21 20 58.8**	**-5.9**
NOR				IAML		21 21 21.0	
	comp=Z,3.0nm,0.7s						
KBS	**Kingsbay**	**5.52**	**161**	*e*P	**Pn**	**21 20 51.0**	**+0.6**
KBS				IAML		21 20 53.2	
	comp=Z,9.7nm,0.4s						
KBS	**Kingsbay**	**5.52**	**161**	*i* P	**Pn**	**21 20 52.1**	**+1.8**
KBS				*i* S	**Sn**	**21 21 50.0**	**-3.7**
BRBB	**Barentsburg B**	**6.42**	**158**	*e*P	**Pn**	**21 21 05.7**	**+2.9**
SPA0	**Spitsbergen Ar**	**6.43**	**154**	*e*P	**Pn**	**21 21 04.7**	**+1.8**
SPA0				IAML		21 21 12.2	
	comp=Z,3.1nm,0.4s						
SPITS	**Spitsbergen Ar**	**6.43**	**154**	Pn	**Pn**	**21 21 04.0**	**+1.1**
	baz=341,slow=8.3						
SPITS				Sn	**Sn**	**21 22 13.0**	**-3.2**
	baz=5.6,slow=22						
	comp=Z,1.5nm,0.3s						
BRBA	**Barentsburg A**	**6.46**	**158**	*e*P	**Pn**	**21 21 06.3**	**+3.0**
ZFI2	**Zemlya Franca-**	**6.60**	**96**	*e*P	**Pn**	**21 21 06.4**	**+1.2**
ZFI2				*e*S	**Sn**	**21 22 15.3**	**-5.0**
OMEGA	**Omega**	**6.63**	**97**	*e*P	**Pn**	**21 21 06.7**	**+1.1**
OMEGA				*e*S	**Sn**	**21 22 15.5**	**-5.5**
	comp=Z,28nm,0.3s						
DAG	**Danmarks Havn**	**8.17**	**216**	*e*P	**Pn**	**21 21 26.9**	**+0.2**
DAG	**Danmarks Havn**	**8.17**	**216**	*i* P	**Pn**	**21 21 25.9**	**-0.9**
HOPEN	**Hopen**	**8.52**	**142**	*e*P	**Pn**	**21 21 32.5**	**+1.0**
ARCES	**ARCESS Array B**	**15.42**	**149**	Pn	**Pn**	**21 23 06.6**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=350,slow=9.4,SNR=1.8						
ARCES				Sn	Sn	21 25 45.1	-11
	baz=357,slow=16,SNR=1.4						
	comp=Z,4.3nm,0.9s						
NOA	**NORSAR Array B**	**23.41**	**169**	P	**P**	**21 24 38.3**	**+1.3**
	comp=Z,0.5nm,0.9s,baz=355,slow=8.6,SNR=3.2						
	comp=Z,0.5nm,0.9s						
ILAR	**Eielson Array**	**30.49**	**334**	P	**P**	**21 25 41.0**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=3.1,slow=7.4,SNR=6.7						
	comp=Z,0.5nm,0.8s						
GERES	**GERESS Array B**	**35.68**	**167**	P	**P**	**21 26 30.2**	**+3.8**
	comp=Z,0.4nm,0.5s,baz=352,slow=6.4,SNR=2.8						
	comp=Z,0.4nm,0.5s						
AKTO	**Aktyubinsk**	**36.74**	**118**	LR	LR	21 43 14.4	
	comp=Z,26nm,21.3s,baz=158,slow=38						

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*NEIC **07** 21:28:05.8±0.6, 57°.26N±0°.03×154°.68W±0°.06, h69^{km}±12^{km}, Error ellipse: s-maj=5.0km s-min=3.7km az=47.0*
*AEIC **07** 21:28:07.0±0.7, 57°.27N±0°.03×154°.66W±0°.02, h58^{km}±8^{km}, ML2.7, ML2.9/82(NEIC), Error ellipse: s-maj=4.5km s-min=1.8km az=183.0*
*IDC **07** 21:28:12.3±9.9, 57°.87N×154°.55W, h115^{km}±89^{km}, mb3.1/2, mbtmp3.3/3, ML3.0/1, Error ellipse: s-maj=106.9km s-min=74.8km az=124.0*
ISC 07 21:28:04.8±0.8, **57°.23N**±0°.05×**154°.61W**±0°.05, **h73**^{km}±14^{km}, **n65**, σ**1^{s}.39**/33, **Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SII	**Sitkinak Islan**	**0.71**	**160**		Pn	21 28 21.4	+1.3
SII				Sn	**Sn**	**21 28 32.6**	**+1.3**
OHAK	**Old Harbor**	**0.72**	**90**		Pn	21 28 21.1	+1.0
OHAK				Sn	**Sn**	**21 28 32.3**	**+0.9**
OHAK				IAML		21 28 33.0	
	comp=E,463nm,0.4s						
MGLS	**Mageik Landsli**	**0.96**	**342**		Pn	21 28 22.9	0.0
PLK3	**Peulik 3**	**1.01**	**298**		Pn	21 28 24.1	+0.6
PLK4	**Peulik 4**	**1.03**	**294**		Pn	21 28 24.2	+0.3
PLK4					**Sn**	**21 28 37.4**	**-0.7**
PLK4				IAML		21 28 39.2	
	comp=N,353nm,0.3s						
ACHA	**Angle Creek He**	**1.06**	**339**		Pn	21 28 24.4	+0.2
ACHA				Sn	**Sn**	**21 28 37.3**	**-1.4**
ANCK	**Angle Creek**	**1.08**	**335**		Pn	21 28 24.7	+0.1
KAKN	**Katmai Knife C**	**1.10**	**348**		Pn	21 28 24.9	+0.1
KABU	**Katmai Buttres**	**1.11**	**341**		Pn	21 28 25.1	+0.2
KABU					**Sn**	**21 28 38.8**	**-1.0**
KAWH	**Katmai**	**1.17**	**355**		Pn	21 28 25.6	0.0
PLK1	**Peulik 1**	**1.22**	**299**		Pn	21 28 26.8	+0.6
PLK1					**Sn**	**21 28 42.9**	**+0.7**
KDAK	**Kodiak Island**	**1.23**	**62**		Pn	21 28 27.0	+0.7
KDAK				Sn	**Sn**	**21 28 42.7**	**+0.2**
CNTC	**Contact Creek**	**1.25**	**327**		Pn	21 28 26.5	-0.1
KAHG	**Katmai Hook Gl**	**1.27**	**2**		Pn	21 28 27.8	+0.9
KARR	**Katmai Rainbow**	**1.28**	**358**		Pn	21 28 27.4	+0.5
KARR					**Sn**	**21 28 44.3**	**+0.7**
KAPH	**Katmai Pasha**	**1.38**	**6**		Pn	21 28 29.0	+0.7
KAHC	**Katmai Hardscr**	**1.44**	**352**		Pn	21 28 29.5	+0.3
KAHC					**Sn**	**21 28 47.2**	**-0.3**
CHIR	**Chirikof Islan**	**1.52**	**202**	Pn	**Pn**	**21 28 30.7**	**+0.7**
CHIR				Sn	**Sn**	**21 28 49.2**	**+0.1**
CHIR				IAML		21 28 50.3	
	comp=N,207nm,0.4s						
CHIR				IAML		21 29 10.3	
	comp=E,97nm,1.1s						
R16K	**Pilot Point**	**1.64**	**283**	Pn	Pn	21 28 32.0	+0.4
R16K				IAML		21 28 50.6	
	comp=E,84nm,1.0s						
R16K				IAML		21 29 02.7	
	comp=N,91nm,0.9s						
Q19K	**Cape Douglas,**	**1.78**	**16**		Pn	21 28 34.5	+0.9
Q19K				IAML		21 29 18.1	
	comp=N,164nm,1.2s						
Q19K				IAML		21 29 42.9	
	comp=E,165nm,1.1s						
SYI	**Shuyak Island**	**1.82**	**40**	Pn	Pn	21 28 35.1	+1.0
SYI				IAML		21 28 57.6	
	comp=E,97nm,1.1s						
P18K	**Big Mountain,**	**2.20**	**352**	Pn	Pn	21 28 39.2	0.0
P18K				IAML		21 29 04.8	
	comp=N,38nm,1.1s						
P17K	**Kvichak River**	**2.20**	**335**	Pn	Pn	21 28 39.3	+0.2
P16K	**Nushagak River**	**2.55**	**317**		Pn	21 28 44.0	+0.2
O18K	**Koktuh Hills**	**2.66**	**353**	Pn	Pn	21 28 45.9	+0.6
O18K				IAML		21 29 17.8	
	comp=E,23nm,0.9s						
O18K				IAML		21 29 48.0	
	comp=N,26nm,1.1s						
VNSG	**Veniaminof 6**	**2.70**	**248**		Pn	21 28 47.3	+1.3
ILSW	**Iliamna Southw**	**2.87**	**15**	Pn	Pn	21 28 49.1	+0.8
VNKR	**Veniaminof 5**	**2.89**	**247**		Pn	21 28 49.8	+1.3
CNPM	**China Poot**	**2.91**	**36**	Pn	Pn	21 28 49.8	+1.0
CNPM				IAML		21 29 22.8	
	comp=N,32nm,0.6s						
CNPM				IAML		21 29 26.5	
	comp=E,30nm,1.1s						
O16K	**Kokwok River B**	**3.00**	**324**	Pn	**Pn**	**21 28 50.0**	**+0.1**
O16K				IAML		21 29 24.5	
	comp=N,24nm,0.8s						
BRLK	**Bradley Lake**	**3.21**	**36**	Pn	**Pn**	**21 28 53.1**	**+0.2**
BRLK				IAML		21 29 32.8	
	comp=E,45nm,1.1s						
BRLK				IAML		21 31 02.8	
	comp=N,50nm,1.2s						
O15K	**Ungalikthiuk R**	**3.38**	**308**	Pn	**Pn**	**21 28 55.4**	**+0.2**
O15K				IAML		21 29 30.7	
	comp=N,18nm,1.2s						
O15K				IAML		21 29 53.6	
	comp=E,15nm,1.1s						
N18K	**Kilae Creek**	**3.53**	**350**	Pn	Pn	21 28 57.7	+0.6
N18K				IAML		21 29 52.5	
	comp=N,15nm,1.2s						
N17K	**Nushagak Hills**	**3.57**	**339**	Pn	Pn	21 28 58.4	+0.7
N19K	**Bonanza Creek**	**3.60**	**1**	Pn	Pn	21 28 59.1	+0.9
SDPT	**Sand Point**	**3.77**	**243**	Pn	**Pn**	**21 29 01.3**	**+0.8**
SDPT				IAML		21 29 55.8	
	comp=N,27nm,1.0s						
SEW	**Seward**	**3.95**	**41**	Pn	**Pn**	**21 29 02.6**	**-0.2**
SEW				IAML		21 29 44.7	
	comp=E,13nm,1.0s						
SEW				IAML		21 30 57.8	
	comp=N,11nm,1.2s						
SLKM	**Skilak Lake**	**4.00**	**33**	Pn	Pn	21 29 04.1	+0.4
SLKM				IAML		21 30 00.8	
	comp=N,19nm,1.0s						
SLKM				IAML		21 31 40.0	
	comp=E,18nm,1.1s						
O14K	**Tigyukauivet M**	**4.06**	**303**	Pn	**Pn**	**21 29 04.5**	**+0.1**
O14K				IAML		21 29 45.2	
	comp=E,14nm,1.1s						
O14K				IAML		21 30 27.9	
	comp=N,15nm,1.1s						
N15K	**Kwethluk River**	**4.11**	**318**	Pn	Pn	21 29 05.7	+0.6
N15K				IAML		21 29 50.9	
	comp=E,15nm,1.2s						
N15K				IAML		21 30 04.7	
	comp=N,15nm,1.0s						
SPU	**Mount Spurr**	**4.18**	**17**		Pn	21 29 06.9	+0.8
SPNN	**North Nagishla**	**4.27**	**12**		Pn	21 29 08.1	+0.7
S12K	**Black Hills**	**4.40**	**253**	Pn	**Pn**	**21 29 10.0**	**+0.9**
M16K	**Timber Creek**	**4.42**	**331**	Pn	Pn	21 29 09.8	+0.6
M16K				IAML		21 30 26.6	
	comp=N,7.0nm,1.1s						
M16K				IAML		21 30 38.2	
	comp=E,6.0nm,1.2s						
M17K	**Holitna River**	**4.43**	**342**	Pn	Pn	21 29 10.2	+0.8
M17K				IAML		21 30 17.7	
	comp=E,18nm,0.9s						
M17K				IAML		21 31 31.9	
	comp=N,16nm,1.1s						
STLK	**Strandline Lak**	**4.52**	**17**	Pn	Pn	21 29 11.6	+0.9
N14K	**Kuskokwak Cree**	**4.58**	**309**	Pn	**Pn**	**21 29 11.9**	**+0.4**
N14K				IAML		21 30 37.1	
	comp=E,19nm,1.2s						
RC01	**Rabbit Creek A**	**4.62**	**31**	Pn	**Pn**	**21 29 12.2**	**+0.3**
RC01				IAML		21 30 30.2	
	comp=N,11nm,1.1s						
RC01				IAML		21 32 12.8	
	comp=E,10nm,1.0s						
SUA	**Susitna One**	**4.69**	**23**	Pn	Pn	21 29 13.8	+0.7
SUA				IAML		21 30 10.1	
	comp=N,15nm,0.7s						
SUA				IAML		21 30 46.8	
	comp=E,18nm,1.1s						
M20K	**Styx River**	**4.73**	**9**	Pn	Pn	21 29 14.8	+1.2
PWL	**Port Wells**	**4.88**	**39**	Pn	**Pn**	**21 29 15.4**	**-0.1**
L19K	**White Mountain**	**4.97**	**359**	Pn	Pn	21 29 18.0	+1.1
SKT	**Skwentna**	**5.02**	**17**	Pn	**Pn**	**21 29 17.6**	**+0.1**
SKT				IAML		21 30 19.9	
	comp=N,7.3nm,1.1s						
L18K	**Granite Mounta**	**5.12**	**349**	Pn	Pn	21 29 19.6	+0.8
L18K				IAML		21 30 48.5	
	comp=N,8.2nm,1.2s						
KNK	**Knik Glacier**	**5.25**	**34**	Pn	**Pn**	**21 29 20.3**	**-0.3**
KNK				IAML		21 32 31.7	
	comp=N,9.7nm,1.0s						
KNK				IAML		21 32 33.0	
	comp=E,5.9nm,1.2s						
HIN	**Hinchinbrook I**	**5.28**	**50**	Pn	**Pn**	**21 29 21.2**	**+0.2**
GLI	**Glacier Island**	**5.33**	**43**	Pn	**Pn**	**21 29 21.3**	**-0.4**
FID	**Port Fidalgo**	**5.49**	**47**	Pn	**Pn**	**21 29 23.2**	**-0.7**
L22K	**Petersville**	**5.66**	**18**	Pn	**Pn**	**21 29 26.4**	**+0.1**
KLU	**Klutina**	**6.17**	**42**	Pn	**Pn**	**21 29 33.6**	**+0.4**
TGL	**Tana Glacier**	**7.04**	**55**	Pn	**Pn**	**21 29 45.9**	**+0.8**
UNV	**Unalaska Valle**	**7.55**	**248**	Pn	**Pn**	**21 29 52.0**	**0.0**
ILAR	**Eielson Array**	**8.44**	**23**	P	**Pn**	**21 30 03.0**	**-1.1**
	comp=E,0.2nm,0.3s,baz=213,slow=14,SNR=12						
ILAR				S	**Sn**	**21 31 31.2**	**-6.5**
	comp=E,0.3nm,0.5s,baz=212,slow=27,SNR=5.8						
	comp=E,0.4nm,0.3s						
SONM	**Songino Array**	**55.75**	**306**	P	**P**	**21 37 34.7**	**+1.0**
	comp=E,0.4nm,0.7s,baz=38,slow=7.7,SNR=3.7						
	comp=E,0.4nm,0.7s						
MKAR	**Makanchi Array**	**66.07**	**321**	P	P	21 38 42.9	-0.6
	comp=E,0.2nm,0.5s,baz=44,slow=8.1,SNR=4.2						
	comp=E,0.2nm,0.5s						

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*SKO **07** 21:28:31.9, 41°.47N×19°.45E, h1^{km}, ML2.3*
*TIR **07** 21:28:33.5, 41°.56N×19°.71E, h33^{km}±2^{km}, Ml2.9/2*
ISC 07 21:28:32.8±1.1, **41°.52N**±0°.03×**19°.59E**±0°.03, **h10**^{km}±9^{km}, **n23**, σ**0^{s}.80**/36, **5C-6D**, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.27**	**130**	P	**Pg**	**21 28 37.7**	**-0.5**
TIR				AML	AML	21 28 41.6	
	6.7nm,0.3s						
TIR				AML	AML	21 28 41.7	
	5.0nm,0.5s						
TIR				Sg	**Sg**	**21 28 41.7**	**-0.1**
TIR	**Tirane**	**0.27**	**130**	*i* Pg	**Pg**	**21 28 37.7**	**-0.5**
TIR				*i* Sg	**Sg**	**21 28 42.7**	**+0.9**
SDA	**Shkodra**	**0.54**	**353**	P	**Pg**	**21 28 43.1**	**-0.1**
SDA				S	**Sb**	**21 28 52.6**	**+0.5**
PHP	**Peshkopia**	**0.66**	**75**	P	**Pg**	**21 28 44.4**	**-1.1**
PHP				Sg	**Sg**	**21 28 53.8**	**-0.4**
PHP				AML	AML	21 29 01.6	
	1.0nm,0.5s						
PDG	**Podgorica**	**0.94**	**345**	Pn	**Pn**	**21 28 51.6**	**-0.5**
PDG				Sn	**Sn**	**21 29 04.3**	**-1.4**
PDG	**Podgorica**	**0.94**	**345**	⇑P	**Pn**	**21 28 53.3**	**+1.2**
PDG				⇓S	**Sn**	**21 29 06.2**	**+0.5**
OHR	**Ohrid**	**1.00**	**114**	*i* Pg	**Pb**	**21 28 51.4**	**-0.8**
OHR				*i* Sg	**Sn**	**21 29 06.1**	**-1.0**
OHR				*e*Lg	Lg	21 29 07.3	
	comp=N,71nm,0.6s						
OHR				*e*Lg	Lg	21 29 07.7	
	comp=E,43nm,0.7s						
VLO	**Vlora**	**1.05**	**184**	Pg	**Pg**	**21 28 53.9**	**+0.9**
VLO				S	**Sn**	**21 29 08.2**	**-0.1**
SKO	**Skopje**	**1.46**	**71**	*i* Pg	**Pb**	**21 29 00.0**	**0.0**
SKO				*i* Sg	**Sg**	**21 29 20.9**	**+1.3**
NOCI	**Noci**	**2.04**	**250**	Pn	**Pg**	**21 29 10.7**	**-1.2**
IGT	**Igoumenitsa**	**2.06**	**164**	Pn	**Pb**	**21 29 10.2**	**-0.2**
IGT				Sn	**Sb**	**21 29 35.6**	**-0.5**
BARS	**Barje**	**2.10**	**51**	*i* Pn	**Pn**	**21 29 08.5**	**+0.4**
BARS				*i* Sn	**Sb**	**21 29 38.1**	**+0.9**
VAY	**Valandovo**	**2.25**	**94**	*i* Pn	**Pn**	**21 29 10.3**	**+0.2**
VAY				*i* Sn	**Sb**	**21 29 41.7**	**+0.3**
VAY				*e*Lg	Lg	21 29 42.1	
	comp=E,12nm,0.6s						
VAY				*e*Lg	Lg	21 29 44.4	
	comp=N,17nm,0.7s						
MATE	**Matera**	**2.35**	**249**	⇓P	**Pb**	**21 29 15.1**	**-0.1**
KNT	**Kendrikon**	**2.52**	**97**	*i* Pn	**Pn**	**21 29 14.6**	**+0.8**
BOVS	**Bovan**	**2.63**	**36**	⇓P	**Pn**	**21 29 16.2**	**+0.9**
BOVS				⇓S	**Sn**	**21 29 47.0**	**-0.3**
KKB	**Krupnik**	**2.67**	**82**	*i* Pn	**Pn**	**21 29 17.2**	**+1.3**
BLKB	**Belogradchik**	**3.10**	**46**	⇑S	**Sn**	**21 29 57.6**	**-1.3**
MDVR	**Moldovita**	**3.61**	**25**	⇑P	**Pn**	**21 29 29.2**	**+0.3**
BZS	**Buzias**	**4.35**	**19**	⇑P	**Pn**	**21 29 39.5**	**+0.5**
GZR	**Gura Zlata**	**4.51**	**30**	⇓P	**Pn**	**21 29 42.1**	**+0.9**
SIRR	**Siria**	**4.97**	**17**	⇓P	**Pn**	**21 29 48.2**	**+0.6**
RAZG	**Razgrad**	**5.50**	**66**	⇑P	**Pn**	**21 29 55.1**	**+0.3**

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*SOME **07** 21:28:32.3, 42°.98N×75°.98E, h10^{km}*
*NNC **07** 21:28:33.2±1.4, 43°.03N×76°.02E, h0^{km}, mb3.6, mpv2.7, Error ellipse: s-maj=14.6km s-min=3.5km az=19.0*
ISC 07 21:28:33.7±1.4, **43°.06N**±0°.08×**76°.03E**±0°.04, **h12**^{km}±10^{km}, **n16**, σ**0^{s}.76**/29, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGS	**Degeres**	**0.26**	**314**	P	**Pg**	**21 28 38.6**	**-0.6**
	18nm,0.1s						
DGS				S	**Sg**	**21 28 43.2**	**+0.4**
	16nm,0.1s						
DGS	**Degeres**	**0.26**	**314**	*e*P	**Pg**	**21 28 38.6**	**-0.6**
	18nm,0.1s						
DGS				*e*S	**Sg**	**21 28 43.2**	**+0.4**
	16nm,0.1s						
MTBS	**Maitube**	**0.30**	**77**	P	**Pg**	**21 28 39.6**	**-0.4**
	6.1nm,0.2s						
MTBS				S	**Sg**	**21 28 44.9**	**+0.7**
	2.4nm,0.1s						
MTBS	**Maitube**	**0.30**	**77**	*e*P	**Pg**	**21 28 39.6**	**-0.4**
	6.1nm,0.2s						
MTBS				*e*S	**Sg**	**21 28 44.9**	**+0.7**
	2.4nm,0.1s						
TNSS	**Tian-Shan**	**0.68**	**92**	P	**Pg**	**21 28 46.1**	**-0.9**
	0.2nm,0.1s						
TNSS				S	**Sg**	**21 28 55.9**	**0.0**
	1.5nm,0.2s						
TNSS	**Tian-Shan**	**0.68**	**92**	*e*P	**Pg**	**21 28 46.1**	**-0.9**
	0.2nm,0.1s						
TNSS				*e*S	**Sg**	**21 28 56.0**	**0.0**
	1.5nm,0.2s						
KRBS	**Karabastau**	**0.68**	**338**	*e*P	**Pg**	**21 28 46.0**	**-0.9**
	1.5nm,0.1s						
KRBS				*e*S	**Sg**	**21 28 55.8**	**-0.2**
	2.1nm,0.1s						
MDOK	**Medeo**	**0.76**	**82**	Pg	**Pg**	**21 28 47.3**	**-1.0**
	1.0nm,0.1s						
MDOK				Lg	Lg	21 28 58.1	
	1.5nm,0.1s						
KOTS	**Kotyrbulak**	**0.81**	**78**	P	**Pg**	**21 28 48.4**	**-1.1**
	1.5nm,0.1s						
KOTS				S	**Sg**	**21 28 59.9**	**-0.2**
	3.8nm,0.2s						
KOTS	**Kotyrbulak**	**0.81**	**78**	*e*P	**Pg**	**21 28 48.4**	**-1.1**
	1.5nm,0.1s						
KOTS				*e*S	**Sg**	**21 28 59.9**	**-0.2**
	3.8nm,0.2s						
CHKK	**Chushkaly**	**1.06**	**41**	*e*P	**Pg**	**21 28 53.3**	**-0.8**
	0.8nm,0.1s						
CHKK				*e*S	**Sg**	**21 29 08.2**	**+0.4**
	4.5nm,0.2s						
SATY	**Saty**	**1.75**	**89**	P	**Pb**	**21 29 06.0**	**+0.3**
	0.7nm,0.1s						
SATY				S	**Sg**	**21 29 30.2**	**+0.3**
	3.6nm,0.1s						
UZB	**Uzynbulak**	**2.20**	**87**	Pg	**Pb**	**21 29 13.1**	**-0.3**
	2.9nm,0.2s						
UZB				Lg	Lg	21 29 42.3	
	1.1nm,0.2s						
UZB	**Uzynbulak**	**2.20**	**87**	*e*P	**Pb**	**21 29 13.1**	**-0.3**
	2.9nm,0.2s						
UZB				*e*S	**Sb**	**21 29 42.3**	**+1.6**
	1.1nm,0.2s						
BTLS	**Baital**	**2.44**	**325**	Pg	**Pb**	**21 29 18.1**	**+0.7**
	0.5nm,0.2s						
BTLS				Lg	Lg	21 29 50.8	
	1.0nm,0.1s						
BTLS	**Baital**	**2.44**	**325**	*e*P	**Pb**	**21 29 18.1**	**+0.7**
	0.5nm,0.2s						
BTLS				*e*S	**Sg**	**21 29 50.8**	**-1.2**
	1.0nm,0.1s						

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*ROM **07** 21:55:38.1±0.0, 42°.463N±0°.001×13°.263E±0°.002, h14^{km}, ML3.7/306, Mw3.8, Error ellipse: s-maj=0.2km s-min=0.0km az=57.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-3.63; $M_{\theta\theta}$-0.48; $M_{\phi\phi}$4.12; $M_{r\theta}$1.62; $M_{\theta\phi}$-4.29; $M_{\phi r}$1.89; Fault plane solution: $M_0$6.24790×10^{14} NP1:ϕ_s182.00000°, δ62.00000°, λ-42.00000°. NP2:ϕ_s295.00000°, δ54.00000°, λ-144.00000°.*
*LDG **07** 21:55:39.9±0.1, 42°.46N×13°.35E, h5^{km}, Ml3.2/25 Error ellipse: s-maj=2.7km s-min=2.1km az=41.0*
*IDC **07** 21:55:39.2±1.2, 42°.63N×13°.01E, h0^{km}, mb3.6/4, mbtmp3.6/9, ML3.2/5, MS3.0/9, Error ellipse: s-maj=19.5km s-min=13.9km az=94.0*
*BEO **07** 21:55:40.5±0.5, 42°.55N×13°.28E, h11^{km}, ML3.7/18*
*PRU **07** 21:55:41.1, 42°.49N×13°.48E, h15^{km}*
ISC 07 21:55:39.5±0.8, **42°.48N**±0°.02×**13°.25E**±0°.02, **h10**^{km}±4^{km}, **n199**, σ**1^{s}.83**/273, **mb3.6**/3, **MS3.2**/4, **23C-16D**, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.04**	**322**	⇓P	**Pg**	**21 55 41.1**	**-0.5**
RM33				S	**Sg**	**21 55 43.0**	**-0.1**
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
	comp=N,92100μm,0.3s						
RM33				AML	AML		
	comp=N,92400μm,0.3s						
RM33				AML	AML		
	comp=N,92100μm,0.3s						
RM33				AML	AML		
	comp=N,92387μm,0.3s						
RM33				AML	AML		
	comp=N,92097μm,0.3s						
RM33				AML	AML		

	comp=E,95721µm,0.4s						
RM33				AML	AML		
	comp=E,94771µm,0.4s						
CAMP	**Campotosto**	**0.13**	**63**	⇑P	**Pg**	**21 55 41.9**	**-0.8**
CAMP				S	**Sg**	**21 55 44.4**	**-0.5**
CAMP				AML	AML		
	comp=E,43350µm,0.7s						
CAMP				AML	AML		
	comp=N,53100µm,0.5s						
CAMP				AML	AML		
	comp=E,43361µm,0.7s						
CAMP				AML	AML		
	comp=N,53074µm,0.5s						
CAMP				AML	AML		
	comp=N,53074µm,1.5s						
CAMP				AML	AML		
	comp=E,43361µm,1.3s						
AQU	**L'Aquila**	**0.17**	**137**	*e*Pg	**Pg**	**21 55 42.1**	**-1.0**
AQU	**L'Aquila**	**0.17**	**137**	⇑P	**Pg**	**21 55 42.3**	**-0.9**
AQU				S	**Sg**	**21 55 45.3**	**-0.4**
SMA1	**SAN MARTINO**	**0.17**	**22**	⇑P	**Pg**	**21 55 42.7**	**-0.5**
SMA1				S	**Sg**	**21 55 46.0**	**+0.2**
SMA1				AML	AML		
SMA1				AML	AML		
SMA1				AML	AML		
SMA1				AML	AML		
LNSS	**Leonessa**	**0.20**	**309**	⇓P	**Pg**	**21 55 43.4**	**-0.4**
LNSS				S	**Sg**	**21 55 46.8**	**+0.1**
LNSS				AML	AML		
LNSS				AML	AML		
LNSS				AML	AML		
LNSS				AML	AML		
LNSS				AML	AML		
LNSS				AML	AML		
LNSS				AML	AML		
LNSS				AML	AML		
LNSS				AML	AML		
FIAM	**Fiamignano**	**0.23**	**205**	⇑P	**Pg**	**21 55 43.5**	**-0.7**
FIAM				S	**Sg**	**21 55 47.2**	**-0.3**
FIAM				AML	AML		
	comp=E,18350µm,1.3s						
FIAM				AML	AML		
	comp=N,15850µm,0.8s						
FIAM				AML	AML		
	comp=N,28750µm,0.8s						
FIAM				AML	AML		
	comp=E,18400µm,1.3s						
FIAM				AML	AML		
	comp=E,8590µm,1.3s						
FIAM				AML	AML		
	comp=E,8084µm,0.6s						
FIAM				AML	AML		
	comp=N,22009µm,0.8s						
FIAM				AML	AML		
	comp=N,11234µm,0.7s						
FIAM				AML	AML		
	comp=E,16238µm,0.9s						
GIGS	**Gran Sasso**	**0.24**	**96**	⇑P	**Pg**	**21 55 43.2**	**-1.2**
GIGS				S	**Sg**	**21 55 47.0**	**-0.7**
GIGS				AML	AML		
	comp=E,5840µm,1.6s						
GIGS				AML	AML		
	comp=N,16150µm,0.8s						
GIGS				AML	AML		
	comp=N,15995µm,0.7s						
GIGS				AML	AML		
	comp=N,15995µm,1.3s						
GIGS				AML	AML		
	comp=E,3933µm,0.2s						
TERO	**Teramo**	**0.30**	**61**	⇑P	**Pg**	**21 55 44.2**	**-1.3**
TERO				S	**Sg**	**21 55 49.0**	**-0.6**
TERO				AML	AML		
	comp=N,17750µm,1.0s						
TERO				AML	AML		
	comp=E,13550µm,0.6s						
TERO				AML	AML		
	comp=N,13064µm,0.3s						
TERO				AML	AML		
	comp=N,13064µm,1.7s						
TERO				AML	AML		
	comp=E,10980µm,0.3s						
MTRA	**Matera**	**0.30**	**21**	⇑P	**Pg**	**21 55 44.6**	**-1.0**
MTRA				S	**Sg**	**21 55 49.2**	**-0.5**
MTRA				AML	AML		
MTRA				AML	AML		
MTRA				AML	AML		
MTRA				AML	AML		
MTRA				AML	AML		
MTRA				AML	AML		
MTRA				AML	AML		
MTRA				AML	AML		
MTRA				AML	AML		
MTRA				AML	AML		
MTRA				AML	AML		
MTRA				AML	AML		
FAGN	**Fagnano**	**0.32**	**130**	⇑P	**Pg**	**21 55 44.8**	**-1.2**
FAGN				S	**Sg**	**21 55 50.4**	**+0.1**
FAGN				AML	AML		
	comp=E,29950µm,0.5s						
FAGN				AML	AML		
	comp=N,30250µm,0.3s						
FAGN				AML	AML		
	comp=E,29942µm,0.5s						
FAGN				AML	AML		
	comp=E,29942µm,1.5s						
FAGN				AML	AML		
	comp=N,30251µm,0.3s						
GAVE	**Gavelli**	**0.34**	**310**	P	**Pg**	**21 55 45.6**	**-0.7**
GAVE				S	**Sg**	**21 55 50.9**	**0.0**
GAVE				AML	AML		
	comp=E,41200µm,0.5s						
GAVE				AML	AML		
	comp=N,11700µm,0.5s						
GAVE				AML	AML		
	comp=E,41200µm,0.5s						
GAVE				AML	AML		
	comp=E,40700µm,0.5s						
GAVE				AML	AML		
	comp=N,41700µm,0.5s						
GAVE				AML	AML		
	comp=E,38578µm,0.4s						
GAVE				AML	AML		
	comp=N,10652µm,0.3s						
GAVE				AML	AML		
	comp=E,39203µm,0.4s						
GAVE				AML	AML		
	comp=N,38538µm,0.4s						
GAVE				AML	AML		
	comp=N,10652µm,1.6s						
GAVE				AML	AML		
	comp=N,38538µm,1.6s						
NRCA	**Norcia**	**0.37**	**344**	⇓P	**Pg**	**21 55 46.0**	**-0.9**
NRCA				S	**Sg**	**21 55 51.9**	**+0.1**
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,51350µm,0.2s						
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,54700µm,1.3s						
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,52712µm,0.2s						
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,51305µm,0.1s						
NRCA				AML	AML		
	comp=N,51305µm,1.9s						
ARRO	**Arrone**	**0.37**	**286**	P	**Pg**	**21 55 46.1**	**-0.7**
ARRO				S	**Sg**	**21 55 51.3**	**-0.5**
ARRO				AML	AML		
	comp=N,31650µm,0.7s						
ARRO				AML	AML		
	comp=E,29700µm,0.2s						
ARRO				AML	AML		
	comp=E,29711µm,0.2s						
ARRO				AML	AML		
	comp=N,25394µm,0.2s						
MMO1	**Montemonaco**	**0.43**	**8**	⇑P	**Pg**	**21 55 46.9**	**-1.0**
MMO1				S	**Sg**	**21 55 53.6**	**0.0**
MC2	**Monte Cornacci**	**0.44**	**354**	P	**Pg**	**21 55 47.3**	**-0.9**
MC2				S	**Sg**	**21 55 54.5**	**+0.5**
VCEL	**Villa Celiera**	**0.45**	**100**	P	**Pg**	**21 55 46.7**	**-1.5**
VCEL				AML	AML		
	comp=E,21550µm,0.8s						
VCEL				AML	AML		
	comp=N,29050µm,0.8s						
VCEL				AML	AML		
	comp=N,29034µm,0.8s						
VCEL				AML	AML		
	comp=N,29034µm,1.2s						
VCEL				AML	AML		
	comp=E,21520µm,0.8s						
T0110	**Collepietro**	**0.47**	**122**	P	**Pg**	**21 55 47.1**	**-1.5**
T0110				S	**Sg**	**21 55 54.4**	**-0.3**
T0110				AML	AML		
	comp=E,14750µm,1.6s						
T0110				AML	AML		
	comp=N,14750µm,0.9s						
T0110				AML	AML		
	comp=N,12913µm,0.5s						
T0110				AML	AML		
	comp=N,12913µm,1.5s						
T0110				AML	AML		
	comp=E,12766µm,0.6s						
PTQR	**Pietraquaria**	**0.47**	**166**	⇑P	**Pg**	**21 55 47.1**	**-1.5**
PTQR				S	**Sg**	**21 55 54.0**	**-0.8**
PTQR				AML	AML		
	comp=N,2275µm,1.5s						
PTQR				AML	AML		
	comp=E,3135µm,0.8s						
PTQR				AML	AML		
	comp=E,2629µm,0.3s						
PTQR				AML	AML		
	comp=E,2629µm,1.7s						
PTQR				AML	AML		
	comp=N,2070µm,0.5s						
FEMA	**Monte Fema**	**0.51**	**343**	P	**Pg**	**21 55 48.9**	**-0.6**
FEMA				AML	AML		
	comp=E,45600µm,0.2s						
FEMA				AML	AML		
	comp=N,26800µm,1.0s						
FEMA				AML	AML		
	comp=E,45609µm,0.2s						
FEMA				AML	AML		
	comp=N,23432µm,0.4s						
CESX	**Cesi**	**0.51**	**285**	P	**Pg**	**21 55 48.4**	**-1.1**
CESX				S	**Sg**	**21 55 56.4**	**+0.1**
CESX				AML	AML		
	comp=E,11550µm,1.6s						
CESX				AML	AML		
	comp=N,15600µm,0.3s						
CESX				AML	AML		
	comp=E,11088µm,0.2s						
CESX				AML	AML		
	comp=N,15618µm,0.3s						
MF5	**Montefalcone A**	**0.54**	**17**	P	**Pg**	**21 55 49.1**	**-0.8**
MF5				AML	AML		
	comp=E,26200µm,0.4s						
MF5				AML	AML		
	comp=N,30000µm,0.5s						
MF5				AML	AML		
	comp=E,26150µm,0.4s						
MF5				AML	AML		
	comp=N,30026µm,0.5s						
MF5				AML	AML		
	comp=E,26183µm,0.4s						
OFFI	**Offida**	**0.56**	**35**	P	**Pg**	**21 55 49.8**	**-0.6**
OFFI				AML	AML		
	comp=E,21850µm,0.6s						
OFFI				AML	AML		
	comp=N,31150µm,0.8s						
OFFI				AML	AML		
	comp=E,21855µm,0.6s						
OFFI				AML	AML		
	comp=N,31198µm,0.8s						
CERT	**Cerreto**	**0.56**	**201**	⇑P	**Pg**	**21 55 49.0**	**-1.5**
CERT				AML	AML		
	comp=E,5080µm,0.3s						
CERT				AML	AML		
	comp=N,4510µm,1.3s						
CERT				AML	AML		
	comp=E,5078µm,0.3s						
CERT				AML	AML		
	comp=N,4414µm,0.8s						
FDMO	**Fiordimonte**	**0.57**	**348**	P	**Pg**	**21 55 49.6**	**-1.1**
FDMO				AML	AML		
	comp=E,17050µm,1.6s						
FDMO				AML	AML		
	comp=N,17750µm,1.1s						
FDMO				AML	AML		
	comp=E,14976µm,0.2s						
FDMO				AML	AML		
	comp=N,15821µm,0.2s						
CESI	**CESI - Serrava**	**0.59**	**334**	⇓P	**Pg**	**21 55 49.9**	**-1.0**
CESI				AML	AML		
	comp=E,15250µm,0.3s						
CESI				AML	AML		
	comp=N,23700µm,0.8s						
CESI				AML	AML		
	comp=E,16100µm,0.2s						
CESI				AML	AML		
	comp=N,24800µm,0.8s						
CESI				AML	AML		
	comp=N,22270µm,0.3s						
CESI				AML	AML		
	comp=N,23138µm,0.2s						
CESI				AML	AML		
	comp=N,23138µm,1.8s						
CESI				AML	AML		
	comp=E,16121µm,0.2s						
CESI				AML	AML		
	comp=E,15210µm,0.2s						
MTCE	**Montecelio**	**0.59**	**220**	⇑P	**Pg**	**21 55 49.3**	**-1.6**
MTCE				AML	AML		
	comp=N,3465µm,0.7s						
MTCE				AML	AML		
	comp=E,7265µm,0.7s						
MTCE				AML	AML		
	comp=E,7267µm,0.7s						
MTCE				AML	AML		
	comp=N,2885µm,1.0s						
GUMA	**Gualdo di Mace**	**0.59**	**6**	⇑P	**Pg**	**21 55 50.0**	**-0.9**
GUMA				AML	AML		
	comp=E,90800µm,0.3s						
GUMA				AML	AML		
	comp=N,78850µm,0.6s						
GUMA				AML	AML		
	comp=E,90645µm,0.3s						
GUMA				AML	AML		
	comp=N,78865µm,0.6s						
TRTR	**Tortoreto Alta**	**0.59**	**56**	⇑P	**Pg**	**21 55 50.3**	**-0.7**
TRTR				AML	AML		
	comp=N,20600µm,0.5s						
TRTR				AML	AML		
	comp=E,18300µm,1.4s						
TRTR				AML	AML		
	comp=E,14021µm,0.9s						
TRTR				AML	AML		
	comp=N,20606µm,0.5s						
TRTR				AML	AML		
	comp=N,20606µm,1.5s						
SRES	**S.Oreste - Sor**	**0.60**	**247**	P	**Pg**	**21 55 49.7**	**-1.4**
SRES				AML	AML		
	comp=N,4815µm,0.8s						
SRES				AML	AML		
	comp=E,3375µm,0.9s						
SRES				AML	AML		
	comp=E,2742µm,1.1s						
SRES				AML	AML		
	comp=N,4524µm,0.5s						
SRES				AML	AML		
	comp=E,2742µm,0.9s						
MOMA	**Monte Martano**	**0.60**	**303**	P	**Pg**	**21 55 50.3**	**-0.8**
MOMA				AML	AML		
	comp=E,14200µm,0.7s						
MOMA				AML	AML		
	comp=N,12800µm,0.9s						
MOMA				AML	AML		
	comp=E,14300µm,0.7s						
MOMA				AML	AML		
	comp=N,13550µm,0.9s						
MOMA				AML	AML		
	comp=E,14200µm,0.6s						
MOMA				AML	AML		
	comp=N,12800µm,0.9s						
MOMA				AML	AML		
	comp=E,14191µm,0.7s						
MOMA				AML	AML		
	comp=E,14336µm,0.7s						
MOMA				AML	AML		
	comp=N,12662µm,0.4s						
MOMA				AML	AML		
	comp=N,11425µm,0.4s						
MOMA				AML	AML		
	comp=E,14336µm,1.3s						
MOMA				AML	AML		
	comp=E,14191µm,1.4s						
CSP1	**Cessapalombo**	**0.62**	**357**	P	**Pg**	**21 55 50.2**	**-1.2**
SAP2	**Sant’Angelo in**	**0.63**	**10**	P	**Pg**	**21 55 50.8**	**-0.9**
SAP2				AML	AML		
	comp=E,14050µm,1.3s						
SAP2				AML	AML		
	comp=N,98950µm,0.5s						
SAP2				AML	AML		
	comp=N,98840µm,0.5s						
SAP2				AML	AML		
	comp=E,13526µm,0.5s						
MNTT	**Montottone**	**0.64**	**23**	⇑P	**Pg**	**21 55 51.3**	**-0.6**
MNTT				AML	AML		
	comp=E,26600µm,0.5s						
MNTT				AML	AML		
	comp=N,32400µm,0.4s						
MNTT				AML	AML		
	comp=N,32350µm,0.4s						
MNTT				AML	AML		
	comp=E,26619µm,0.5s						
MNTT				AML	AML		
	comp=N,32361µm,0.4s						
VVLD	**Villa Vallelon**	**0.66**	**155**	P	**Pg**	**21 55 51.4**	**-1.0**
VVLD				AML	AML		
	comp=N,2500µm,0.8s						
VVLD				AML	AML		
	comp=N,2535µm,0.8s						
VVLD				AML	AML		
	comp=E,3705µm,1.1s						
VVLD				AML	AML		
	comp=E,3785µm,1.1s						
VVLD				AML	AML		
	comp=E,3787µm,1.1s						
VVLD				AML	AML		
	comp=N,2537µm,0.8s						
VVLD				AML	AML		
	comp=N,2498µm,0.8s						
VVLD				AML	AML		
	comp=E,3088µm,0.7s						
VVLD				AML	AML		
	comp=E,3787µm,0.9s						
VVLD				AML	AML		
	comp=N,2537µm,1.2s						
VVLD				AML	AML		
	comp=N,2498µm,1.2s						
RCAV	**Rocca di Cave**	**0.67**	**200**	P	**Pg**	**21 55 50.8**	**-1.6**
RCAV				AML	AML		
	comp=E,5300µm,0.6s						
RCAV				AML	AML		
	comp=E,5295µm,0.6s						
RCAV				AML	AML		
	comp=N,5020µm,0.8s						
RCAV				AML	AML		
	comp=E,5296µm,0.6s						
RCAV				AML	AML		
	comp=N,5020µm,0.8s						
RCAV				AML	AML		
	comp=E,5296µm,1.4s						
MML1	**Montelago di S**	**0.67**	**342**	P	**Pg**	**21 55 51.1**	**-1.3**
PF6	**Pievefavera**	**0.67**	**356**	P	**Pg**	**21 55 50.9**	**-1.6**
MNTP	**Montappone**	**0.68**	**14**	P	**Pg**	**21 55 52.1**	**-0.6**
MNTP				AML	AML		
	comp=E,23250µm,0.5s						
MNTP				AML	AML		
	comp=N,19450µm,1.0s						
MNTP				AML	AML		
	comp=N,17143µm,0.2s						
MNTP				AML	AML		
	comp=E,19411µm,0.2s						
GUAR	**Guarcino**	**0.68**	**176**	P	**Pg**	**21 55 51.0**	**-1.7**
GUAR				AML	AML		
	comp=N,5400µm,1.4s						
GUAR				AML	AML		
	comp=E,4175µm,0.8s						
GUAR				AML	AML		
	comp=E,3413µm,0.7s						
GUAR				AML	AML		
	comp=N,4937µm,0.6s						
GUAR				AML	AML		
	comp=E,3413µm,1.3s						
SEF1	**Sefro**	**0.71**	**342**	P	**Pg**	**21 55 52.3**	**-0.9**
ASSB	**Assisi San Ben**	**0.71**	**323**	P	**Pg**	**21 55 52.0**	**-1.3**
MDAR	**Monte D'Aria**	**0.72**	**354**	P	**Pg**	**21 55 52.3**	**-1.2**
PIO1	**Pioraco**	**0.73**	**345**	P	**Pg**	**21 55 52.4**	**-1.2**
FIU1	**Fiuminata**	**0.75**	**342**	P	**Pg**	**21 55 53.0**	**-0.9**
SSM1	**San Severino M**	**0.76**	**356**	P	**Pg**	**21 55 52.9**	**-1.2**
GAG1	**Gagliole**	**0.77**	**350**	P	**Pg**	**21 55 53.4**	**-1.1**
MTL1	**Matelica**	**0.80**	**347**	P	**Pg**	**21 55 53.9**	**-1.0**
VIVA	**Pratoni del Vi**	**0.81**	**206**	P	**Pg**	**21 55 53.0**	**-2.1**
CADA	**Capodarco di F**	**0.81**	**27**	P	**Pg**	**21 55 54.8**	**-0.3**
CADA				AML	AML		
	comp=E,15500µm,1.1s						
CADA				AML	AML		
	comp=N,17200µm,1.1s						
CADA				AML	AML		
	comp=E,15484µm,0.5s						
CADA				AML	AML		
	comp=N,14383µm,0.4s						
CADA				AML	AML		
	comp=N,14063µm,0.5s						
SNTG	**Esanatoglia**	**0.81**	**344**	P	**Pg**	**21 55 53.9**	**-1.3**
SNTG				AML	AML		
	comp=N,7920µm,0.3s						
SNTG				AML	AML		
	comp=E,6510µm,1.6s						
SNTG				AML	AML		
	comp=E,6885µm,0.4s						
SNTG				AML	AML		
	comp=N,8040µm,0.2s						
SNTG				AML	AML		
	comp=E,6882µm,0.5s						
SNTG				AML	AML		
	comp=E,6470µm,0.5s						
SNTG				AML	AML		
	comp=N,7922µm,0.3s						
SNTG				AML	AML		
	comp=N,8042µm,0.2s						
LPEL	**Lama dei Pelig**	**0.81**	**121**	P	**Pg**	**21 55 52.6**	**-2.6**
LPEL				AML	AML		
	comp=E,3750µm,0.3s						
LPEL				AML	AML		
	comp=N,3190µm,0.5s						
LPEL				AML	AML		
	comp=E,4075µm,0.3s						
LPEL				AML	AML		
	comp=N,3250µm,0.5s						
LPEL				AML	AML		
	comp=E,3750µm,0.2s						
LPEL				AML	AML		
	comp=N,3190µm,0.4s						
LPEL				AML	AML		
	comp=E,4074µm,0.3s						
LPEL				AML	AML		
	comp=N,2798µm,0.1s						
LPEL				AML	AML		
	comp=E,3748µm,0.2s						
LPEL				AML	AML		
	comp=N,2798µm,1.9s						
LPEL				AML	AML		
	comp=N,2509µm,0.8s						
RDP	**Rocca di Papa**	**0.82**	**209**	P	**Pg**	**21 55 53.5**	**-1.8**
RDP				AML	AML		
	comp=N,8715µm,1.1s						
RDP				AML	AML		
	comp=E,8655µm,0.8s						
RDP				AML	AML		
	comp=E,8652µm,0.8s						
RDP				AML	AML		
	comp=N,8096µm,0.6s						
MA9	**Marino**	**0.83**	**212**	P	**Pg**	**21 55 54.5**	**-1.0**
POFI	**Posta Fibreno**	**0.83**	**155**	P	**Pg**	**21 55 54.0**	**-1.6**
POFI				AML	AML		
	comp=E,2010µm,1.0s						
POFI				AML	AML		
	comp=N,1380µm,0.8s						
POFI				AML	AML		
	comp=N,1725µm,0.8s						
POFI				AML	AML		
	comp=E,1585µm,1.0s						
POFI				AML	AML		
	comp=E,1584µm,1.0s						
POFI				AML	AML		
	comp=N,1729µm,0.8s						
POFI				AML	AML		

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             comp=E,2009µm,1.0s
POFI                                 AML        AML
             comp=N,1381µm,0.8s
TRE1  Treia             0.84    3    P          Pg         21 55 54.8  -0.8
ROM9  Roma              0.85  220    P          Pg         21 55 54.8  -1.0
SAMA  S.Maria delle     0.85  215    P          Pg         21 55 53.9  -1.9
LRP   Arpino            0.86  163    P          Pg         21 55 54.3  -1.9
LRP                                  AML        AML
             comp=E,2500µm,0.7s
LRP                                  AML        AML
             comp=N,562µm,0.6s
LRP                                  AML        AML
             comp=E,2505µm,0.7s
LRP                                  AML        AML
             comp=N,563µm,0.6s
LRP                                  AML        AML
             comp=E,2501µm,0.7s
SMPL  Sampolo           2.97  264    AML        AML
             comp=E,53µm,2.2s
SMPL                                 AML        AML
             comp=E,45µm,0.9s
SMPL                                 AML        AML
             comp=N,53µm,1.3s
SMPL                                 AML        AML
             comp=N,53µm,1.3s
SMPL                                 AML        AML
             comp=E,53µm,0.2s
SMPL                                 AML        AML
             comp=N,53µm,0.7s
RIY   Rijeka            2.98   17   ePn         Pn         21 56 26.4  -0.4
RIY                                 eSn         Sn         21 57 02.6  -0.1
SKDS  Skadanscina       3.12   10   ePn         Pn         21 56 27.4  -1.3
SKDS                                eSn         Sn         21 57 05.3  -0.8
SKDS  Skadanscina       3.12   10   i Pn        Pn         21 56 27.4  -1.3
SKDS                                i Sn        Sn         21 57 05.2  -0.8
PGF   Pioggiola         3.14  273   ePn         Pn         21 56 29.1   0.0
PGF                                 eSn         Sn         21 57 05.5  -1.3
             comp=N,18nm,0.4s
PGF   Pioggiola         3.14  273    AML        AML
             comp=N,66µm,1.2s
PGF                                  AML        AML
             comp=E,85µm,0.9s
PGF                                  AML        AML
             comp=N,66µm,1.2s
PGF                                  AML        AML
             comp=E,79µm,0.8s
MATE  Matera            3.17  124   ⇑P          Pn         21 56 30.5  +1.2
KNYS  Krupa na Uni      3.28   42   ePn         Pn         21 56 31.1  +0.1
STON  Ston              3.31   82   ePn         Pn         21 56 31.1  -0.1
STON                                eSn         Sn         21 57 08.9  -1.6
STON  Ston              3.31   82    AML        AML
             comp=N,141µm,0.8s
STON                                 AML        AML
             comp=E,126µm,0.7s
STON                                 AML        AML
             comp=N,173µm,0.8s
STON                                 AML        AML
             comp=N,141µm,1.2s
STON                                 AML        AML
             comp=E,127µm,0.7s
AGLI  Aglientu          3.33  248    AML        AML
             comp=E,68µm,1.2s
AGLI                                 AML        AML
             comp=N,58µm,1.1s
AGLI                                 AML        AML
             comp=E,63µm,1.6s
AGLI                                 AML        AML
             comp=N,58µm,1.1s
AGLI                                 AML        AML
             comp=N,58µm,0.9s
AGLI                                 AML        AML
             comp=E,63µm,0.3s
BOJS  Bojanci           3.35   25   ePn         Pn         21 56 31.7  -0.2
BOJS                                eSn         Sn         21 57 09.9  -1.9
CEY   Cerknica          3.37   14   ePn         Pn         21 56 31.5  -0.7
CEY                                 eSn         Sn         21 57 10.8  -1.5
AJAC  Base Areonaval    3.38  262    AML        AML
             comp=N,126µm,0.7s
AJAC                                 AML        AML
             comp=E,171µm,0.7s
AJAC                                 AML        AML
             comp=E,139µm,0.3s
AJAC                                 AML        AML
             comp=N,112µm,0.6s
AJAC                                 AML        AML
             comp=E,92µm,0.3s
AJAC                                 AML        AML
             comp=N,112µm,1.4s
BLY   Banja Luka        3.65   50   ePn         Pn         21 56 36.8  +0.7
BLY   Banja Luka        3.65   50   ⇓P          Pn         21 56 36.7  +0.7
BLY   Banja Luka        3.65   50   ePn         Pn         21 56 36.7  +0.7
LJU   Ljubljana         3.68   14   ePn         Pn         21 56 36.3  -0.2
LJU   Ljubljana         3.68   14    AML        AML
             comp=E,1590µm,0.6s
LJU                                  AML        AML
             comp=E,1590µm,0.6s
LJU                                  AML        AML
             comp=N,2220µm,0.6s
LJU                                  AML        AML
             comp=N,2217µm,0.6s
TREB  Trebinje          3.77   85   ePn         Pn         21 56 37.6  -0.1
TREB  Trebinje          3.77   85   ePn         Pn         21 56 37.6  -0.1
TREB                                eSn         Sn         21 57 19.5  -2.6
ZAG   Zagreb            3.89   30    AML        AML
             comp=E,482µm,0.8s
ZAG                                  AML        AML
             comp=N,492µm,1.1s
KLINJ Klinje            3.98   78   ePn         Pn         21 56 40.8  +0.1
OBKA  Obir              4.14   13   i Pn        Pn         21 56 42.4  -0.4
             comp=N,7.0nm,0.4s,SNR=7.6
OBKA                                eSn         Sn         21 57 30.4  -0.9
             comp=N,24nm,0.4s
MYKA  Terra Mystica     4.16    4   i Pn        Pn         21 56 43.2  +0.1
             comp=N,6.5nm,0.4s
MYKA                                i Sn        Sn         21 57 29.3  -2.6
             comp=N,13nm,0.3s
TIP   Timpagrande       4.23  140   ⇓P          Pn         21 56 47.0  +2.9
ABTA  Abfaltersbach     4.30  353   i Pn        Pn         21 56 45.1   0.0
             comp=N,27nm,0.5s,SNR=36
ABTA                                i Sn        Sn         21 57 33.9  -1.4
             comp=N,50nm,0.6s
SOKA  Soboth            4.39   16   i Pn        Pn         21 56 45.8  -0.5
             comp=N,2.1nm,0.2s
SOKA                                eSn         Sn         21 57 36.2  -1.2
             comp=N,7.1nm,0.3s
PDG   Podgorica         4.44   89   ⇓P          Pn         21 56 47.9  +1.0
PDG                                 ⇓S          Sn         21 57 37.5  -1.1
PDG   Podgorica         4.44   89   ePn         Pn         21 56 47.7  +0.8
PDG                                 eSn         Sn         21 57 37.2  -1.4
SBF   Sospel            4.47  290   ePn         Pn         21 56 47.2  -0.2
SBF                                 eSn         Sn         21 57 37.8  -1.7
             comp=N,16nm,0.3s
KBA   Koelnbreinsper    4.60    1   i Pn        Pn         21 56 49.7  +0.4
             comp=N,5.5nm,0.3s,SNR=11
KBA                                 i Sn        Sn         21 57 41.9  -0.9
             comp=N,56nm,0.6s
RUDO  Rudo              4.63   74   ePn         Pn         21 56 49.5   0.0
BBLS  Lazi&#263i        4.71   71   ePn         Pn         21 56 51.1  +0.5
BBLS                                eSn         Sn         21 57 44.0  -1.4
BEHE  Becsehely         4.72   31   ePn         Pn         21 56 55.5  +4.8
FETA  Feichten          4.89  339   i Pn        Pn         21 56 54.2  +1.1
             comp=N,9.3nm,0.4s,SNR=6.6
FETA                                i Sn        Sn         21 57 48.3  -1.5
             comp=N,19nm,0.5s
WTTA  Wattenberg        4.92  347   i Pn        Pn         21 56 55.0  +1.3
             comp=N,5.6nm,0.2s,SNR=9.3
WTTA                                i Sn        Sn         21 57 50.4  -0.3
             comp=N,50nm,0.5s
DAVOX Davos/Dischmat    4.93  332    Pn         Pn         21 56 56.5  +2.7
             comp=N,3.0nm,0.3s,baz=158,slow=19,SNR=29
DAVOX                                Sn         Sn         21 57 50.9   0.0
             comp=N,4.3nm,0.3s,baz=151,slow=22,SNR=3.9
SQTA  Sankt Quirin      4.96  344   i Pn        Pn         21 56 55.0  +0.9
             comp=N,7.9nm,0.2s
SQTA                                i Sn        Sn         21 57 51.2  -0.4
             comp=N,20nm,0.3s
LESA  Schwarzleotal     4.96  356   i Pn        Pn         21 56 54.9  +0.7
             comp=N,4.7nm,0.2s,SNR=13
LESA                                i Sn        Sn         21 57 51.6   0.0
             comp=N,25nm,0.4s
WATA  Walderalm         5.00  347   i Pn        Pn         21 56 55.7  +1.0
             comp=N,5.6nm,0.2s,SNR=9.9
WATA                                i Sn        Sn         21 57 51.6  -1.1
             comp=N,35nm,0.3s
SJES  Sjenica           5.00   79   ePn         Pn         21 56 55.5  +0.8
SJES                                eSn         Sn         21 57 50.2  -2.4
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TEKS  Tekeris           5.01   63   ePn         Pn         21 56 53.8  -1.0
LMR   La Mourre         5.03  282   ePn         Pn         21 56 54.1  -0.8
LMR                                 eSn         Sn         21 57 50.3  -2.7
             comp=N,1.7nm,0.3s
ARSA  Arzberg           5.04   18   i Pn        Pn         21 56 54.3  -0.8
             comp=N,1.0nm,0.3s
ARSA                                i Sn        Sn         21 57 50.2  -3.2
             comp=N,9.9nm,0.4s
ARSA  Arzberg           5.04   18   ePn         Pn         21 56 53.7  -1.4
MOTA  Moosalm           5.10  343   ePn         Pn         21 56 57.0  +0.9
             comp=N,6.2nm,0.4s,SNR=9.4
MOTA                                i Sn        Sn         21 57 56.3  +1.3
             comp=N,11nm,0.3s
IVAS  Ivanjica          5.18   75   ePn         Pn         21 56 56.9  -0.2
IVAS                                eSn         Sn         21 57 54.2  -2.7
DIVS  Divibare          5.18   69   ePn         Pn         21 56 56.5  -0.6
DIVS                                eSn         Sn         21 57 55.4  -1.6
MBDF  Montbardon        5.21  298   ePn         Pn         21 56 58.4  +0.8
MBDF                                eSn         Sn         21 57 55.1  -2.8
             comp=N,10nm,0.6s
BIOA  Bad Ischl, Aus    5.22    3   i Pn        Pn         21 56 57.8  +0.2
             comp=N,5.0nm,0.3s,SNR=7.0
BIOA                                eSn         Sn         21 57 58.0  +0.1
             comp=N,35nm,0.4s
RETA  Reutte            5.31  341   i Pn        Pn         21 56 59.9  +1.0
             comp=N,4.5nm,0.3s
RETA                                eSn         Sn         21 57 59.3  -0.9
             comp=N,6.8nm,0.4s
DAVA  Damuels           5.37  335   i Pn        Pn         21 57 00.5  +0.7
             comp=N,8.5nm,0.4s
DAVA                                i Sn        Sn         21 58 01.5  -0.3
             comp=N,21nm,0.4s
MORH  Mrgy, Hungar      5.38   44   ePn         Pn         21 56 58.7  -1.0
MORH  Mrgy, Hungar      5.38   44   ⇓P          Pn         21 57 01.5  +1.8
MOA   Molln             5.42    7   i Pn        Pn         21 57 00.6  +0.2
             comp=N,3.2nm,0.2s
MOA                                 i Sn        Sn         21 58 01.6  -1.2
             comp=N,17nm,0.4s
MOA   Molln             5.42    7   ePn         Pn         21 56 59.8  -0.6
FRGS  Fruska Gora       5.45   58   ePn         Pn         21 56 59.0  -1.8
TRUS  Trudelj           5.50   69   ePn         Pn         21 57 01.0  -0.5
TRUS                                eSn         Sn         21 58 02.6  -2.2
LPG   La Plagne         5.58  305   ePn         Pn         21 57 03.5  +0.8
LPG                                 eSn         Sn         21 58 03.6  -3.4
             comp=N,11nm,0.5s
LPL   La Plagne         5.60  305   ePn         Pn         21 57 03.3  +0.3
LPL                                 eSn         Sn         21 58 03.8  -3.6
             comp=N,3.0nm,0.3s
GRUS  Gruza             5.64   73   ePn         Pn         21 57 03.3   0.0
GRUS                                eSn         Sn         21 58 05.7  -2.4
RONA  Rosalia, Austr    5.65   21   i Pn        Pn         21 57 02.9  -0.6
             comp=N,2.0nm,0.2s
RONA                                i Sn        Sn         21 58 05.2  -3.2
             comp=N,3.0nm,0.3s
GOCS  Kraljevo Serbi    5.69   76   ePn         Pn         21 57 04.3  +0.1
GOCS                                eSn         Sn         21 58 06.1  -3.5
AVAS  Avala Beograd     5.72   65   ePn         Pn         21 57 03.2  -1.3
CONA  Conrad Observa    5.76   18   i Pn        Pn         21 57 04.5  -0.5
             comp=N,3.8nm,0.3s
CONA                                eSn         Sn         21 58 07.4  -3.7
             comp=N,9.4nm,0.4s
OHR   Ohrid             5.80  101   i Pn        Pn         21 57 07.2  +1.5
OHR                                 i Sn        Sn         21 58 11.4  -0.9
SMRF  Simiane la Rot    5.80  288   ePn         Pn         21 57 06.1  +0.5
SMRF                                eSn         Sn         21 58 10.2  -2.1
             comp=N,2.3nm,0.4s
SELS  Selova            5.83   80   ePn         Pn         21 57 06.1  +0.1
SELS                                eSn         Sn         21 58 10.4  -2.5
ORIF  Oris-en-Rattie    5.87  297   ePn         Pn         21 57 06.7  +0.1
SKO   Skopje            6.10   92   i Pn        Pn         21 57 10.3  +0.6
BOVS  Bovan             6.30   77   ⇓P          Pn         21 57 12.5  +0.1
BOVS                                ⇓S          Sn         21 58 19.9  -4.6
BOVS  Bovan             6.30   77   ePn         Pn         21 57 11.9  -0.5
BARS  Barje             6.33   84   ePn         Pn         21 57 12.8   0.0
GERES GERESS Array B    6.38    3    Pn         Pn         21 57 12.6  -1.0
             comp=N,0.1nm,0.3s,baz=178,slow=13,SNR=10
GERES                                Sn         Sn         21 58 24.2  -2.2
             comp=N,0.4nm,0.3s,baz=193,slow=29,SNR=9.9
             comp=N,1.0nm,0.4s
CKRC  Cesky Krumlov     6.39    6   ePN         Pn         21 57 12.9  -0.7
CKRC                                eSN         Sn         21 58 23.1  -3.5
VRSS  Vrsac             6.41   63   ePn         Pn         21 57 12.8  -1.2
MODS  Modra-Piesok      6.54   24   ePN         Pn         21 57 17.0  +1.3
MODS                                eSN         Sn         21 58 27.1  -3.3
MDVR  Moldovita         6.56   67   ⇑P          Pn         21 57 15.7  -0.3
MDVR  Moldovita         6.56   67   ePn         Pn         21 57 15.1  -0.9
BORS2 Bor- Borsko je    6.60   73   ePn         Pn         21 57 14.9  -1.6
KHC   Kasperske Hory    6.66    2   ePN         Pn         21 57 16.2  -1.2
KHC                                 eSN         Sn         21 58 29.7  -3.6
VIVF  Saint-Julien-l    6.66  294   ePn         Pn         21 57 17.6  +0.2
ZAGS  Zajecar           6.71   75   ePn         Pn         21 57 17.7  -0.3
ZAGS                                eSn         Sn         21 58 31.1  -3.3
BZS   Buzias            6.80   60   ⇓P          Pn         21 57 19.1  -0.1
BOSS  Bosilegrad        6.82   87   ePn         Pn         21 57 19.5  -0.1
ZAPS  Zavoj             6.94   80   ePn         Pn         21 57 21.6  +0.4
KRUC  Moravsky          6.94   17   ePN         Pn         21 57 20.3  -0.9
KRUC                                eSN         Sn         21 58 36.8  -3.4
HINF  Hinteralfeld      7.00  322   ePn         Pn         21 57 20.8  -1.2
HINF                                eSn         Sn         21 58 38.2  -3.4
             comp=N,19nm,0.5s
TREC  Trest             7.00   12   ePN         Pn         21 57 21.2  -0.8
TREC                                eSN         Sn         21 58 37.8  -3.7
ZVC   Zvikov            7.00    5   ePN         Pn         21 57 21.0  -0.9
ZVC                                 eSN         Sn         21 58 37.7  -3.8
BLKB  Belogradchik      7.00   77   ⇓P          Pn         21 57 23.2  +1.2
BLKB  Belogradchik      7.00   77   ePn         Pn         21 57 21.8  -0.2
LASF  Ste Croix         7.04  286   ePn         Pn         21 57 21.8  -0.8
VAY   Valandovo         7.05   96   i Pn        Pn         21 57 23.1  +0.5
VAY                                 i Sn        Sn         21 58 39.5  -3.3
HERR  Herculane         7.07   67   ⇓P          Pn         21 57 22.9   0.0
SIRR  Siria             7.12   55   ⇑P          Pn         21 57 24.2  +0.6
VRAC  Vranov            7.22   18    LR         LR         22 00 56.4
             comp=N,76nm,19.1s,baz=214,slow=44
VRAC  Vranov            7.22   18   ePN         Pn         21 57 24.1  -0.9
VRAC                                eSN         Sn         21 58 43.4  -3.6
CDF   Champ du Feu      7.27  327   ePn         Pn         21 57 25.1  -0.7
CDF                                 eSn         Sn         21 58 43.4  -5.0
HAU   Haudompre         7.37  321   ePn         Pn         21 57 26.7  -0.4
HAU                                 eSn         Sn         21 58 46.1  -4.6
             comp=N,22nm,0.3s
VTS   Vitosha           7.38   86   ePn         Pn         21 57 27.1  -0.2
KEST  Kesra             7.38  206    Pn         Pn         21 57 30.6  +3.2
             comp=N,0.6nm,0.3s,baz=345,slow=5.2,SNR=13
             comp=N,3.5nm,0.6s
GZR   Gura Zlata        7.47   64   ⇑P          Pn         21 57 28.3  -0.2
PRU   Pruhonice         7.57    6   ePN         Pn         21 57 30.8  +1.0
PRU                                 eSN         Sn         21 58 50.5  -5.0
DEV   Deva              7.73   61   ⇑P          Pn         21 57 32.0   0.0
KECS  Kecovo            7.87   38   ePN         Pn         21 57 36.0  +2.1
SMF   Signal de Mont    7.91  305   ePn         Pn         21 57 33.8  -0.6
SMF                                 eSn         Sn         21 58 59.9  -4.0
             comp=N,0.9nm,0.3s
DRGR                    8.01   54   ⇑P          Pn         21 57 36.3  +0.4
PAGF  Fort de Pagny     8.05  322   ePn         Pn         21 57 36.0  -0.4
PAGF                                eSn         Sn         21 59 02.8  -4.7
             comp=N,4.5nm,0.4s
SFTF  Sexfontaines      8.14  318   ePn         Pn         21 57 37.6   0.0
SFTF                                eSn         Sn         21 59 05.9  -3.7
             comp=N,2.7nm,0.3s
DPC   Dobruska-Polom    8.16   14   ePN         Pn         21 57 38.0  +0.1
MARR  Marisel-Cluj      8.20   56   ⇓P          Pn         21 57 39.8  +1.3
LOR   Lormes            8.21  309   ePn         Pn         21 57 37.3  -1.3
             baz=122
LOR                                 eSn         Sn         21 59 06.7  -4.7
             comp=N,1.6nm,0.3s
AVF   Avril sur Loir    8.27  305   ePn         Pn         21 57 39.4   0.0
AVF                                 eSn         Sn         21 59 08.3  -4.5
             comp=N,0.1nm,0.1s
SSF   Saint Saulge      8.31  307   ePn         Pn         21 57 38.2  -1.8
SSF                                 eSn         Sn         21 59 08.7  -5.1
             comp=N,2.2nm,0.4s
MEZF  Maizieres J'vi    8.33  319   ePn         Pn         21 57 40.4  +0.1
             baz=133
MEZF                                eSn         Sn         21 59 08.8  -5.5
             comp=N,4.5nm,0.5s
OSTC  Ostas             8.34   13   ePN         Pn         21 57 39.3  -1.1
SAVF  Savonnieres en    8.38  320   ePn         Pn         21 57 40.2  -0.7
SAVF  Savonnieres en    8.38  320   ePn         Pn         21 57 40.5  -0.4
SAVF                                eSn         Sn         21 59 08.9  -6.5
             comp=N,1.1nm,0.2s
SAVF                                eSn         Sb         21 59 10.1  -34
             comp=N,2.5nm,0.3s
CAF   Calviac           8.47  291   ePn         Pn         21 57 41.8  -0.4
CAF                                 eSn         Sn         21 59 12.7  -5.0
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             comp=N,0.6nm,0.2s
BGF   Bois d'Agland     8.48  302   ePn         Pn         21 57 41.1  -1.2
BGF                                 eSn         Sn         21 59 13.5  -4.5
             comp=N,4.0nm,0.4s
ARR   Arges             8.71   67   ⇑P          Pn         21 57 46.7  +1.2
CLL   Collm             8.84  359   ePn         Pn         21 57 48.0  +0.8
CLL                                 ex          x          21 58 10.0
CLL                                 ex          x          21 59 23.0
CLL                                 eSb         Sn         21 59 50.0  +23
CLL                                 ex          x          22 00 07.0
CLL                                 eSg         Sg         22 00 18.0  -4.9
RJF   Les Rejaudoux     8.93  292   ePn         Pn         21 57 48.0  -0.5
ELND  Elena             9.31   83   ⇑P          Pn         21 57 54.2  +0.5
DOPR  Dopca             9.39   64   ⇓P          Pn         21 57 56.0  +1.2
MLR   Muntele Rosu      9.63   67    Pn         Pn         21 58 00.3  +2.1
             comp=N,0.3nm,0.3s,baz=233,slow=9.0,SNR=4.8
MLR                                  LR         LR         22 02 56.2
             comp=N,108nm,19.0s,baz=258,slow=45
             comp=N,5.4nm,0.9s
ESDC  Sonseca Array    13.29  264    Pn         Pn         21 58 46.7  -1.4
             baz=67,slow=14,SNR=7.0
             comp=N,0.7nm,0.8s
AKASG Malin Array Be   13.70   48    LR         LR         22 05 54.7
             comp=N,31nm,18.5s,baz=252,slow=45
BRTR  Keskin Array B   15.61   93    Pn         P          21 59 24.0  +0.1
             baz=298,slow=9.3,SNR=4.2
             comp=N,0.6nm,0.7s
HFS   Hagfors          17.68    1    LR         LR         22 07 21.9
             comp=N,54nm,20.0s,baz=192,slow=40
NOA   NORSAR Array B   18.63  357    LR         LR         22 06 44.2
             comp=N,22nm,18.6s,baz=175,slow=36
FINES FINESS Array B   20.50   18    LR         LR         22 08 14.8
             comp=N,31nm,19.1s,baz=158,slow=37
KBZ   Khabaz           21.64   77    P          P          22 00 33.7  +4.0
             comp=N,2.2nm,0.9s,baz=320,slow=12,SNR=4.1
             comp=N,2.2nm,0.9s
TORD  Torodi Ar. Bea   30.89  202    P          P          22 01 56.6  +0.4
             comp=N,1.3nm,0.4s,baz=8.9,slow=11,SNR=3.5
             comp=N,1.3nm,0.4s
AAK   Ala-Archa        44.22   68    LR         LR         22 25 05.5
             comp=N,34nm,18.8s,baz=282,slow=40
MKAR  Makanchi Array   47.88   60    P          P          22 04 20.2  +2.7
             comp=N,0.2nm,0.6s,baz=270,slow=10,SNR=2.4
MKAR                                 LR         LR         22 28 51.2
             comp=N,28nm,18.7s,baz=316,slow=42
             comp=N,0.2nm,0.6s
SONM  Songino Array    61.98   50    P          P          22 06 03.1  +3.4
             comp=N,0.3nm,0.4s,baz=302,slow=8.3,SNR=3.7
             comp=N,0.3nm,0.4s
APG   El Apazote       89.79  290    LR         LR         22 43 36.0
             comp=N,8.6nm,21.9s,baz=254,slow=32
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*NIED **07** 22:14:06.5, 37°.80N×141°.73E, h51^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.00; $M_{\theta\theta}$-0.93; $M_{\phi\phi}$-1.07; $M_{r\theta}$-0.82; $M_{\theta\phi}$-1.34; $M_{\phi r}$-1.12; Fault plane solution: $M_0$2.58000×10^{14} NP1: ϕ_s49.00000°, δ29.00000°, λ99.00000°. NP2:ϕ_s219.00000°, δ61.00000°, λ85.00000°.*

*JMA **07** 22:14:06.5±0.1, 37°.8N±0°.2×141°.7E±0°.5, h51^{km}±1^{km}, MD3.6/40, MV3.8/40, SE OFF MIYAGI PREF*

JMA Felt I J1 at SE OFF MIYAGI PREF .

*IDC **07** 22:14:07.9±4.4, 37°.66N×141°.81E, h67^{km}±38^{km}, mb3.2/5, mbtmp3.5/7, ML2.9/2, MS2.0/1, Error ellipse: s-maj=33.6km s-min=22.2km az=61.0*

ISC 07 22:14:04.9±1.3**, 37°.75N**±0°.04×**141°.89E**±0°.09**, h38**^{km}±3^{km}**, n31, σ0^{s}.91**/36**, mb3.5**/5**, 7D, Near east coast of eastern Honshu**

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Code  Station Name       Δ°    AZ°     Phase ID               Time      Res
                                      Op         ISC        h  m  s     ISC
JIKH  Ishinomakikobu    0.65  329   i P         Pn         22 14 18.5  +0.8
JIKH                                  S         Sn         22 14 26.9  +0.1
JIKH  Ishinomakikobu    0.65  329     A         A          22 14 18.5
             comp=N,7.0nm,0.2s,comp=E,7.0nm,0.3s
JMST  Minamisoumatoc    0.79  269   i P         Pn         22 14 20.0  +0.5
JMST                                  S         Sn         22 14 29.7  -0.4
JMST  Minamisoumatoc    0.79  269     A         A          22 14 20.0
             comp=N,7.0nm,0.5s,comp=E,6.0nm,1.4s
JIO   Ouri              0.82  329  ⇓iP          Pn         22 14 20.6  +0.6
JIO                                 ⇓S          Sn         22 14 30.4  -0.5
JMM   Marumori          0.88  278   i P         Pn         22 14 20.9  +0.3
JMM                                   S         Sn         22 14 31.3  -0.9
JFK   Kawauchi          0.89  245   i P         Pn         22 14 21.6  +0.7
JFK                                   S         Sn         22 14 32.3  -0.3
ONAJ  Iwakimizuishiy    1.08  234   i P         Pn         22 14 24.4  +0.9
ONAJ                                  S         Sn         22 14 37.6  +0.3
JOU   Okura             1.15  303  ⇓iP          Pn         22 14 24.6  +0.2
JOU                                 ⇓S          Sn         22 14 38.2  -0.6
JOU   Okura             1.15  303     A         A          22 14 24.6
             comp=N,3.0nm,0.4s,comp=E,4.0nm,0.7s
JOTO  OTAMA OYAMA       1.25  262   i P         Pn         22 14 26.8  +1.0
JOTO                                  S         Sn         22 14 41.8  +0.4
JMK   Ichinoseki        1.31  337  ⇓iP          Pn         22 14 27.4  +0.8
JMK                                 ⇓S          Sn         22 14 42.7  -0.2
JYS   Shirataka         1.52  289   i P         Pn         22 14 29.9  +0.5
JYS                                  eS         Sn         22 14 47.3  -0.6
JYK   Kaneyama          1.68  315   i P         Pn         22 14 32.2  +0.5
JYK                                   S         Sn         22 14 51.1  -0.8
JFY   Yanaizu           1.77  260   i P         Pn         22 14 34.0  +1.0
JFY                                   S         Sn         22 14 54.1  -0.1
JOM   Ohasama           1.78  345   i P         Pn         22 14 34.4  +1.3
JYA   Atsumi            1.91  297     P         Pn         22 14 35.2  +0.3
JRG   Rokugo            1.92  330  ⇓iP          Pn         22 14 36.1  +1.2
MJAR  Matsushiro Arr    3.18  249     P         Pn         22 14 54.4  +2.1
             comp=E,0.3nm,0.3s,baz=67,slow=20,SNR=19
MJAR                                  S         Sn         22 15 30.3  +1.4
             comp=E,3.0nm,0.3s,baz=77,slow=27,SNR=5.0
MJAR                                  LR        LR         22 15 58.2
             comp=E,25nm,19.0s,baz=67,slow=36
             comp=E,1.4nm,0.3s
JHJ   Hachijo jima 2    4.93  201     P         Pn         22 15 16.8  +0.5
             comp=E,7.4nm,0.3s,baz=272,slow=18,SNR=1.4
JHJ                                   S         Sn         22 16 09.8  -2.3
             comp=E,112nm,0.7s,baz=45,slow=8.7,SNR=1.4
             comp=E,102nm,0.8s
H11N2 WAKE ISLAND Hy   28.20  123     T         T          22 50 09.2
             baz=315,slow=75,SNR=18
H11N1 WAKE ISLAND Hy   28.21  123     T         T          22 50 19.0
             baz=315,slow=75,SNR=26
H11N3 WAKE ISLAND Hy   28.22  123     T         T          22 50 13.7
             baz=315,slow=75,SNR=18
H11S1 WAKE ISLAND Hy   28.94  125     T         T          22 51 14.4
             baz=318,slow=76,SNR=15
H11S3 WAKE ISLAND Hy   28.94  125     T         T          22 51 16.3
             baz=318,slow=76,SNR=17
H11S2 WAKE ISLAND Hy   28.96  125     T         T          22 51 17.5
             baz=318,slow=76,SNR=15
MKAR  Makanchi Array   44.06  302     P         P          22 22 07.9  -0.9
             comp=E,0.1nm,0.4s,baz=78,slow=8.3,SNR=1.6
             comp=E,0.1nm,0.4s
KURBB Kurchatov Arra   45.86  308     P         P          22 22 22.4  -0.7
             comp=E,0.7nm,0.4s,baz=82,slow=7.8,SNR=6.4
             comp=E,0.7nm,0.4s
WRA   Warramunga Arr   57.82  188     P         P          22 23 52.2  -0.2
             comp=E,0.4nm,0.6s,baz=7.5,slow=7.0,SNR=4.9
             comp=E,0.4nm,0.6s
ASAR  Alice Springs    61.55  188     P         P          22 24 17.9  -0.1
             comp=E,0.3nm,0.9s,baz=11,slow=7.8,SNR=2.3
             comp=E,0.3nm,0.9s
PDAR  Pinedale Array   76.90   46     P         P          22 25 54.2  +0.9
             comp=E,0.4nm,0.7s,baz=295,slow=4.6,SNR=2.8
             comp=E,0.4nm,0.7s
```

ROM 07 22:16:42.0±0.1**, 42°.475N**±0°.004×**13°.268E**±0°.005**, h12**^{km}**, ML1.5**/13**, 3C, Error ellipse: s-maj=0.4km s-min=0.0km az=48.0, Central Italy**

```
Code  Station Name       Δ°    AZ°     Phase ID               Time      Res
                                      Op         ISC        h  m  s     ISC
RM33  Pellescritta (    0.05  310     P         Pg         22 16 44.8  +0.3
RM33                                  S         Sg         22 16 46.6  +0.3
RM33                                  AML       AML
             comp=E,386µm,0.2s
RM33                                  AML       AML
             comp=N,484µm,1.6s
RM33                                  AML       AML
             comp=E,386µm,0.2s
RM33                                  AML       AML
             comp=N,522µm,1.6s
RM33                                  AML       AML
             comp=E,364µm,0.2s
RM33                                  AML       AML
             comp=E,386µm,0.2s
```

RM33				AML	AML		
	comp=E,364µm,0.2s						
RM33				AML	AML		
	comp=N,440µm,0.1s						
RM33				AML	AML		
	comp=N,457µm,0.1s						
CAMP	**Campotosto**	**0.12**	**60**	⇑P	Pg	22 16 45.6	+0.3
CAMP				S	Sg	22 16 48.0	+0.4
CAMP				AML	AML		
	comp=E,112µm,0.7s						
CAMP				AML	AML		
	comp=N,152µm,0.5s						
CAMP				AML	AML		
	comp=E,96µm,0.3s						
CAMP				AML	AML		
	comp=N,152µm,0.5s						
AQU	**L'Aquila**	**0.16**	**141**	P	Pg	22 16 46.2	+0.5
AQU				S	Sg	22 16 49.3	+0.9
SMA1	**SAN MARTINO**	**0.16**	**18**	⇑P	Pg	22 16 46.3	+0.5
SMA1				S	Sg	22 16 49.7	+1.1
SMA1				AML	AML		
	comp=E,1590µm,0.4s						
SMA1				AML	AML		
	comp=N,1080µm,0.3s						
SMA1				AML	AML		
	comp=N,1084µm,0.3s						
SMA1				AML	AML		
	comp=E,1589µm,0.4s						
LNSS	**Leonessa**	**0.21**	**307**	P	Pg	22 16 47.1	+0.4
LNSS				S	Sg	22 16 50.8	+0.9
LNSS				AML	AML		
	comp=E,3530µm,0.9s						
LNSS				AML	AML		
	comp=N,3825µm,0.5s						
LNSS				AML	AML		
	comp=N,4130µm,0.5s						
LNSS				AML	AML		
	comp=E,3525µm,0.9s						
LNSS				AML	AML		
	comp=N,4225µm,0.4s						
LNSS				AML	AML		
	comp=E,3700µm,0.9s						
LNSS				AML	AML		
	comp=N,4535µm,0.4s						
GIGS	**Gran Sasso**	**0.22**	**96**	P	Pg	22 16 46.9	+0.1
GIGS				S	Sg	22 16 50.6	+0.5
GIGS				AML	AML		
	comp=E,4760µm,0.4s						
GIGS				AML	AML		
	comp=N,3485µm,0.3s						
GIGS				AML	AML		
	comp=E,13µm,0.3s						
FIAM	**Fiamignano**	**0.23**	**208**	P	Pg	22 16 47.3	+0.3
FIAM				S	Sg	22 16 51.4	+0.9
TERO	**Teramo**	**0.29**	**59**	P	Pg	22 16 48.0	0.0
TERO				S	Sg	22 16 52.6	+0.6
TERO				AML	AML		
	comp=E,6205µm,0.4s						
TERO				AML	AML		
	comp=N,4375µm,0.5s						
TERO				AML	AML		
	comp=E,7770µm,0.8s						
TERO				AML	AML		
	comp=N,4795µm,1.3s						
TERO				AML	AML		
	comp=E,26µm,0.1s						
MTRA	**Matera**	**0.30**	**19**	⇑P	Pg	22 16 48.2	+0.1
MTRA				S	Sg	22 16 52.8	+0.6
MTRA				AML	AML		
	comp=E,2520µm,0.8s						
MTRA				AML	AML		
	comp=N,2910µm,0.4s						
MTRA				AML	AML		
	comp=E,2540µm,0.8s						
MTRA				AML	AML		
	comp=N,2920µm,0.4s						
MTRA				AML	AML		
	comp=E,27250µm,0.4s						
MTRA				AML	AML		
	comp=N,45950µm,0.4s						
MTRA				AML	AML		
	comp=E,27600µm,0.4s						
MTRA				AML	AML		
	comp=N,45900µm,0.4s						
MTRA				AML	AML		
	comp=E,173µm,0.1s						
MTRA				AML	AML		
	comp=N,244µm,0.1s						
FAGN	**Fagnano**	**0.31**	**132**	P	Pg	22 16 49.0	+0.6
FAGN				S	Sb	22 16 54.8	+0.1
FAGN				AML	AML		
	comp=E,34650µm,1.2s						
FAGN				AML	AML		
	comp=N,31150µm,0.4s						
FAGN				AML	AML		
	comp=E,24350µm,0.3s						
FAGN				AML	AML		
	comp=N,21500µm,0.4s						
GAVE	**Gavelli**	**0.35**	**308**	P	Pg	22 16 49.3	+0.2
GAVE				S	Sg	22 16 54.7	+0.8
GAVE				AML	AML		
	comp=E,12650µm,0.9s						
GAVE				AML	AML		
	comp=N,11620µm,0.6s						
NRCA	**Norcia**	**0.38**	**342**	P	Pg	22 16 49.7	+0.1
NRCA				S	Sg	22 16 55.5	+0.9
NRCA				AML	AML		
	comp=E,22400µm,0.1s						
NRCA				AML	AML		
	comp=N,12400µm,0.1s						
NRCA				AML	AML		
	comp=E,23800µm,0.1s						
NRCA				AML	AML		
	comp=N,14100µm,0.1s						
NRCA				AML	AML		
	comp=N,121µm,0.3s						
ARRO	**Arrone**	**0.39**	**286**	P	Pg	22 16 49.8	+0.1
ARRO				S	Sb	22 16 55.9	-0.8
ARRO				AML	AML		
	comp=E,14100µm,0.7s						
ARRO				AML	AML		
	comp=N,13950µm,1.0s						
MMO1	**Montemonaco**	**0.43**	**6**	P	Pg	22 16 50.5	0.0
MMO1				S	Sb	22 16 57.1	-0.9
VCEL	**Villa Celiera**	**0.43**	**101**	P	Pg	22 16 51.0	+0.4
VCEL				S	Sb	22 16 57.9	-0.3
VCEL				AML	AML		
	comp=E,15100µm,1.1s						
VCEL				AML	AML		
	comp=E,14800µm,1.1s						
VCEL				AML	AML		
	comp=N,29400µm,0.5s						
MC2	**Monte Cornacci**	**0.44**	**353**	P	Pg	22 16 51.3	+0.5
MC2				S	Sb	22 16 58.4	-0.1
T0110	**Collepietro**	**0.45**	**123**	P	Pg	22 16 51.1	+0.1
T0110				S	Sb	22 16 58.1	-0.6
T0110				AML	AML		
	comp=E,25100µm,0.5s						
T0110				AML	AML		
	comp=N,20450µm,0.3s						
CESX	**Cesi**	**0.53**	**285**	P	Pg	22 16 52.2	-0.2
CESX				S	Sb	22 17 00.2	-0.6
CESX				AML	AML		
	comp=E,4290µm,0.3s						
CESX				AML	AML		
	comp=N,4985µm,0.5s						
MF5	**Montefalcone A**	**0.53**	**15**	P	Pg	22 16 52.7	+0.3
MF5				S	Sb	22 17 01.4	+0.4
MF5				AML	AML		
	comp=E,7480µm,0.7s						
MF5				AML	AML		
	comp=N,8185µm,0.5s						
FDMO	**Fiordimonte**	**0.58**	**347**	P	Pg	22 16 53.3	0.0
FDMO				AML	AML		
	comp=E,3250µm,1.2s						
FDMO				AML	AML		
	comp=N,4095µm,1.1s						

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*ROM **07** 22:16:54.6±0.0, 42.°460N±0.°002×13.°261E±0.°004, h11^{km}, ML3.4/193, Mw3.4, Error ellipse: s-maj=0.2km s-min=0.1km az=73.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.87; $M_{\theta\theta}$-0.20; $M_{\phi\phi}$1.08; $M_{r\theta}$0.37; $M_{\theta\phi}$-0.94; $M_{\phi r}$0.47; Fault plane solution: $M_0$1.47532×10^{14} NP1:ϕ_s184.00000°, δ62.00000°, λ-44.00000°. NP2:ϕ_s299.00000°, δ52.00000°, λ-144.00000°.*

*IDC **07** 22:16:55.4±1.8, 42.°64N×13.°60E, h0^{km}, mb3.1/1, mbtmp3.3/5, ML2.9/4, MS2.5/2 Error ellipse: s-maj=28.8km s-min=16.2km az=74.0*

*LDG **07** 22:16:56.4±0.1, 42.°44N×13.°34E, h5^{km}, Ml3.0/15, Error ellipse: s-maj=3.5km s-min=2.8km az=55.0*

*BEO **07** 22:16:57.5±0.6, 42.°53N×13.°23E, h21^{km}±6^{km}, ML3.4/16*

*PRU **07** 22:16:59.3, 42.°55N×13.°84E, h15^{km}*

ISC 07 22:16:55.1±0.7**, 42.°48N**±0.°02×**13.°27E**±0.°02**, h14**^{km}±4^{km}**, n176,** σ1.^{s}**52**/251**, 31C-13D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.05**	**310**	⇓P	**Pg**	**22 16 57.5**	**-0.4**
RM33				S	**Sg**	**22 16 59.4**	**-0.4**
RM33				AML	AML		
	comp=E,74250µm,1.1s						
RM33				AML	AML		
	comp=N,44800µm,0.3s						
RM33				AML	AML		
	comp=N,44250µm,0.3s						
RM33				AML	AML		
	comp=E,74300µm,1.1s						
RM33				AML	AML		
	comp=E,58152µm,0.3s						
RM33				AML	AML		
	comp=E,57880µm,0.3s						
CAMP	**Campotosto**	**0.12**	**60**	⇑P	**Pg**	**22 16 58.3**	**-0.3**
CAMP				S	**Sg**	**22 17 00.8**	**-0.2**
AQU	**L'Aquila**	**0.16**	**141**	*e*Pg	**Pg**	**22 16 58.8**	**-0.2**
AQU	**L'Aquila**	**0.16**	**141**	⇑P	**Pg**	**22 16 58.9**	**-0.2**
AQU				S	**Sg**	**22 17 01.6**	**0.0**
SMA1	**SAN MARTINO**	**0.16**	**18**	⇑P	**Pg**	**22 16 59.1**	**-0.1**
SMA1				S	**Sg**	**22 17 02.2**	**+0.3**
SMA1				AML	AML		
SMA1				AML	AML		
SMA1				AML	AML		
SMA1				AML	AML		
SMA1				AML	AML		
LNSS	**Leonessa**	**0.21**	**307**	⇓P	**Pg**	**22 16 59.8**	**-0.1**
LNSS				S	**Sg**	**22 17 03.4**	**+0.2**
LNSS				AML	AML		
	comp=N,62500µm,0.4s						
LNSS				AML	AML		
	comp=N,66950µm,0.4s						
LNSS				AML	AML		
	comp=E,49550µm,0.8s						
LNSS				AML	AML		
	comp=E,50100µm,0.8s						
LNSS				AML	AML		
	comp=E,42318µm,0.4s						
LNSS				AML	AML		
	comp=N,62517µm,0.5s						
LNSS				AML	AML		
	comp=E,39720µm,0.4s						
LNSS				AML	AML		
	comp=N,66977µm,0.5s						
LNSS				AML	AML		
	comp=E,39720µm,1.6s						
LNSS				AML	AML		
	comp=E,42318µm,1.6s						
LNSS				AML	AML		
	comp=N,66977µm,1.6s						
LNSS				AML	AML		
	comp=N,62517µm,1.6s						
GIGS	**Gran Sasso**	**0.22**	**96**	⇑P	**Pg**	**22 16 59.7**	**-0.4**
GIGS				S	**Sg**	**22 17 03.5**	**+0.1**
GIGS				AML	AML		
	comp=E,6225µm,0.4s						
GIGS				AML	AML		
	comp=N,13450µm,0.6s						
GIGS				AML	AML		
	comp=N,13467µm,0.6s						
FIAM	**Fiamignano**	**0.24**	**208**	⇑P	**Pg**	**22 17 00.1**	**-0.2**
FIAM				S	**Sg**	**22 17 04.0**	**+0.3**
FIAM				AML	AML		
	comp=E,45750µm,0.5s						
FIAM				AML	AML		
	comp=N,34250µm,0.5s						
FIAM				AML	AML		
	comp=N,19600µm,0.4s						
FIAM				AML	AML		
	comp=E,45750µm,0.6s						
FIAM				AML	AML		
	comp=N,34250µm,0.4s						
FIAM				AML	AML		
	comp=E,21500µm,0.5s						
FIAM				AML	AML		
	comp=E,37870µm,0.6s						
FIAM				AML	AML		
	comp=N,34249µm,0.5s						
FIAM				AML	AML		
	comp=E,17514µm,0.6s						
FIAM				AML	AML		
	comp=N,19609µm,0.4s						
TERO	**Teramo**	**0.29**	**59**	⇓P	**Pg**	**22 17 00.8**	**-0.4**
TERO				S	**Sg**	**22 17 05.1**	**-0.1**
TERO				AML	AML		
	comp=E,6205µm,0.4s						
TERO				AML	AML		
	comp=E,7770µm,0.8s						
TERO				AML	AML		
	comp=N,12175µm,0.4s						
TERO				AML	AML		
	comp=E,6551µm,0.6s						
TERO				AML	AML		
	comp=N,12191µm,0.4s						
MTRA	**Matera**	**0.30**	**19**	⇑P	**Pg**	**22 17 00.9**	**-0.4**
MTRA				S	**Sg**	**22 17 05.5**	**0.0**
MTRA				AML	AML		
	comp=E,38450µm,1.2s						
MTRA				AML	AML		
	comp=N,45900µm,0.4s						
MTRA				AML	AML		
	comp=E,38450µm,1.2s						
MTRA				AML	AML		
	comp=N,45900µm,0.4s						
MTRA				AML	AML		
	comp=E,38650µm,1.2s						
MTRA				AML	AML		
	comp=N,45950µm,0.4s						
MTRA				AML	AML		
	comp=N,45900µm,0.4s						
MTRA				AML	AML		
	comp=E,37218µm,0.2s						
MTRA				AML	AML		
	comp=N,36259µm,0.3s						
MTRA				AML	AML		
	comp=N,36295µm,0.3s						
MTRA				AML	AML		
	comp=E,36908µm,0.2s						
FAGN	**Fagnano**	**0.31**	**132**	⇑P	**Pg**	**22 17 01.4**	**-0.2**
FAGN				S	**Sg**	**22 17 06.3**	**+0.3**
FAGN				AML	AML		
	comp=E,53100µm,0.6s						
FAGN				AML	AML		
	comp=N,53050µm,0.4s						
FAGN				AML	AML		
	comp=N,53061µm,0.4s						
FAGN				AML	AML		
	comp=E,53090µm,0.6s						
FAGN				AML	AML		
	comp=N,53061µm,1.6s						
GAVE	**Gavelli**	**0.35**	**308**	P	**Pg**	**22 17 02.1**	**-0.2**
GAVE				S	**Sg**	**22 17 07.6**	**+0.4**
GAVE				AML	AML		
	comp=N,14400µm,0.7s						
GAVE				AML	AML		
	comp=E,14250µm,1.4s						
GAVE				AML	AML		
GAVE				AML	AML		
	comp=N,34711µm,52.6s						
GAVE				AML	AML		
	comp=E,13289µm,0.4s						
GAVE				AML	AML		
	comp=N,11843µm,0.5s						
GAVE				AML	AML		
	comp=N,34711µm,0.6s						
GAVE				AML	AML		
GAVE				AML	AML		
	comp=E,13289µm,1.6s						
NRCA	**Norcia**	**0.38**	**342**	⇓P	**Pg**	**22 17 02.4**	**-0.3**
NRCA				S	**Sg**	**22 17 08.3**	**+0.4**
NRCA				AML	AML		
	comp=E,22400µm,0.1s						
NRCA				AML	AML		
	comp=N,12400µm,0.1s						
NRCA				AML	AML		
	comp=E,23800µm,0.1s						
NRCA				AML	AML		
	comp=N,14100µm,0.1s						
NRCA				AML	AML		
	comp=N,14089µm,0.1s						
NRCA				AML	AML		
	comp=E,22398µm,0.1s						
NRCA				AML	AML		
	comp=E,23803µm,0.1s						
NRCA				AML	AML		
	comp=N,12373µm,0.1s						
ARRO	**Arrone**	**0.39**	**286**	⇑P	**Pg**	**22 17 02.6**	**-0.3**
ARRO				S	**Sg**	**22 17 08.1**	**-0.1**
ARRO				AML	AML		
	comp=E,14100µm,0.7s						
ARRO				AML	AML		
	comp=N,13950µm,1.0s						
ARRO				AML	AML		
	comp=E,14050µm,0.7s						
ARRO				AML	AML		
	comp=N,12799µm,0.2s						
ARRO				AML	AML		
	comp=E,14014µm,0.2s						
MMO1	**Montemonaco**	**0.43**	**6**	P	**Pg**	**22 17 03.3**	**-0.4**
MMO1				S	**Sg**	**22 17 09.9**	**+0.5**
VCEL	**Villa Celiera**	**0.43**	**101**	P	**Pg**	**22 17 03.2**	**-0.5**
VCEL				S	**Sg**	**22 17 10.0**	**+0.4**
VCEL				AML	AML		
	comp=E,21750µm,1.6s						
VCEL				AML	AML		
	comp=N,29400µm,0.5s						
VCEL				AML	AML		
	comp=E,17218µm,0.4s						
VCEL				AML	AML		
	comp=N,29401µm,0.5s						
MC2	**Monte Cornacci**	**0.44**	**353**	⇓P	**Pg**	**22 17 03.7**	**-0.2**
MC2				S	**Sb**	**22 17 11.1**	**-0.3**
T0110	**Collepietro**	**0.45**	**123**	⇑P	**Pg**	**22 17 03.7**	**-0.4**
T0110				S	**Sg**	**22 17 10.7**	**+0.5**
T0110				AML	AML		
	comp=E,25100µm,0.5s						
T0110				AML	AML		
	comp=N,20450µm,0.3s						
T0110				AML	AML		
	comp=E,25093µm,0.5s						
T0110				AML	AML		
	comp=N,20450µm,0.3s						
T0110				AML	AML		
	comp=E,25093µm,1.5s						
PTQR	**Pietraquaria**	**0.46**	**168**	⇑P	**Pg**	**22 17 03.8**	**-0.5**
PTQR				S	**Sg**	**22 17 10.8**	**+0.3**
PTQR				AML	AML		
	comp=E,3820µm,0.4s						
PTQR				AML	AML		
	comp=N,2405µm,0.4s						
PTQR				AML	AML		
	comp=E,3821µm,0.4s						
PTQR				AML	AML		
	comp=N,2405µm,0.4s						
PTQR				AML	AML		
	comp=E,3821µm,1.6s						
PTQR				AML	AML		
	comp=N,2405µm,1.6s						
FEMA	**Monte Fema**	**0.51**	**342**	P	**Pg**	**22 17 05.0**	**-0.3**
FEMA				S	**Sb**	**22 17 13.2**	**-0.2**
CESX	**Cesi**	**0.53**	**285**	⇑P	**Pg**	**22 17 04.8**	**-0.7**
CESX				AML	AML		
	comp=E,4290µm,0.3s						
CESX				AML	AML		
	comp=N,4985µm,0.5s						
CESX				AML	AML		
	comp=N,4984µm,0.5s						
CESX				AML	AML		
	comp=E,4290µm,0.3s						
MF5	**Montefalcone A**	**0.53**	**15**	⇑P	**Pg**	**22 17 05.5**	**-0.1**
MF5				S	**Sb**	**22 17 13.8**	**-0.1**
OFFI	**Offida**	**0.55**	**34**	⇑P	**Pg**	**22 17 06.2**	**+0.2**
OFFI				S	**Sb**	**22 17 15.8**	**+1.4**
OFFI				AML	AML		
	comp=E,9960µm,0.6s						
OFFI				AML	AML		
	comp=N,11650µm,0.8s						
OFFI				AML	AML		
	comp=N,11614µm,0.8s						
OFFI				AML	AML		
	comp=E,9950µm,0.6s						
CERT	**Cerreto**	**0.57**	**202**	⇑P	**Pg**	**22 17 05.5**	**-0.7**
CERT				S	**Sg**	**22 17 13.3**	**-0.5**
CERT				AML	AML		
	comp=E,6970µm,0.4s						
CERT				AML	AML		
	comp=N,6110µm,0.3s						
CERT				AML	AML		
	comp=E,6967µm,0.4s						
CERT				AML	AML		
	comp=N,6109µm,0.3s						
FDMO	**Fiordimonte**	**0.58**	**347**	⇓P	**Pg**	**22 17 05.8**	**-0.6**
FDMO				S	**Sb**	**22 17 15.2**	**+0.1**
FDMO				AML	AML		
	comp=E,3250µm,1.2s						
FDMO				AML	AML		
	comp=N,4095µm,1.1s						
TRTR	**Tortoreto Alta**	**0.58**	**55**	⇑P	**Pb**	**22 17 06.8**	**-0.3**
TRTR				AML	AML		
	comp=N,11900µm,0.6s						
TRTR				AML	AML		
	comp=E,8855µm,1.0s						
TRTR				AML	AML		
	comp=N,11906µm,0.6s						
TRTR				AML	AML		
	comp=E,8851µm,1.0s						
TRTR				AML	AML		
	comp=N,11906µm,1.4s						
GUMA	**Gualdo di Mace**	**0.59**	**5**	⇑P	**Pg**	**22 17 06.4**	**-0.3**
GUMA				S	**Sb**	**22 17 15.7**	**+0.2**
GUMA				AML	AML		
	comp=E,11300µm,0.4s						
GUMA				AML	AML		
	comp=N,22550µm,0.7s						
GUMA				AML	AML		
	comp=E,16900µm,0.3s						
GUMA				AML	AML		
	comp=N,19250µm,0.6s						
GUMA				AML	AML		
	comp=E,16921µm,0.3s						
GUMA				AML	AML		
	comp=N,19253µm,0.6s						
GUMA				AML	AML		
	comp=N,22525µm,0.7s						
GUMA				AML	AML		
	comp=E,9222µm,0.3s						
CESI	**CESI - Serrava**	**0.59**	**333**	⇓P	**Pg**	**22 17 06.3**	**-0.5**
CESI				S	**Sb**	**22 17 15.5**	**-0.2**
CESI				AML	AML		
	comp=N,5465µm,0.3s						
CESI				AML	AML		
	comp=E,3055µm,0.4s						
CESI				AML	AML		
	comp=E,2760µm,0.8s						
CESI				AML	AML		
	comp=N,5590µm,0.3s						
CESI				AML	AML		
	comp=E,2676µm,0.4s						
CESI				AML	AML		
	comp=N,5465µm,0.3s						
CESI				AML	AML		
	comp=E,2831µm,0.4s						
CESI				AML	AML		
	comp=N,5591µm,0.3s						
CESI				AML	AML		
	comp=E,2831µm,1.6s						
CESI				AML	AML		
	comp=E,2676µm,1.6s						
MTCE	**Montecelio**	**0.60**	**221**	⇑P	**Pg**	**22 17 05.9**	**-0.9**
MTCE				AML	AML		
	comp=E,7095µm,0.5s						
MTCE				AML	AML		
	comp=N,3100µm,0.3s						
MTCE				AML	AML		
	comp=E,7095µm,0.5s						
MTCE				AML	AML		
	comp=E,7095µm,1.5s						
MTCE				AML	AML		
	comp=N,3098µm,0.3s						

MOMA	**Monte Martano**	0.61	303	P	Pg	22 17 06.5	-0.6
MOMA				AML	AML		
	comp=E,4080µm,0.2s						
MOMA				AML	AML		
	comp=N,5075µm,1.4s						
MOMA				AML	AML		
	comp=E,3740µm,0.2s						
MOMA				AML	AML		
	comp=N,4585µm,1.4s						
MOMA				AML	AML		
	comp=N,4174µm,0.5s						
MOMA				AML	AML		
	comp=E,4075µm,0.2s						
MOMA				AML	AML		
	comp=E,3740µm,0.2s						
MOMA				AML	AML		
	comp=N,4368µm,0.5s						
SRES	**S.Oreste - Sor**	0.61	247	⇑P	Pg	22 17 06.1	-1.0
SRES				AML	AML		
	comp=E,2770µm,0.3s						
SRES				AML	AML		
	comp=N,2930µm,0.4s						
SRES				AML	AML		
	comp=E,2769µm,0.3s						
SRES				AML	AML		
	comp=N,2926µm,0.4s						
CSP1	**Cessapalombo**	0.62	356	P	Pg	22 17 06.7	-0.6
CSP1				AML	AML		
	comp=E,4975µm,0.9s						
CSP1				AML	AML		
	comp=N,5335µm,0.9s						
CSP1				AML	AML		
	comp=E,4008µm,0.3s						
CSP1				AML	AML		
	comp=N,4484µm,0.5s						
SAP2	**Sant'Angelo in**	0.63	9	P	Pg	22 17 07.4	0.0
SAP2				S	Sb	22 17 17.5	+0.9
SAP2				AML	AML		
	comp=E,4735µm,0.7s						
SAP2				AML	AML		
	comp=N,20000µm,0.6s						
SAP2				AML	AML		
	comp=N,17849µm,0.3s						
SAP2				AML	AML		
	comp=E,3554µm,0.1s						
MNTT	**Montottone**	0.63	22	⇑P	Pg	22 17 07.6	+0.1
MNTT				S	Sn	22 17 19.0	-0.8
MNTT				AML	AML		
	comp=E,9481µm,0.5s						
MNTT				AML	AML		
	comp=N,7608µm,0.3s						
VVLD	**Villa Vallelon**	0.66	156	P	Pg	22 17 07.1	-0.9
VVLD				AML	AML		
	comp=E,3275µm,0.7s						
VVLD				AML	AML		
	comp=N,2595µm,0.6s						
VVLD				AML	AML		
	comp=E,3325µm,0.7s						
VVLD				AML	AML		
	comp=N,2740µm,0.6s						
VVLD				AML	AML		
	comp=E,3276µm,0.7s						
VVLD				AML	AML		
	comp=E,3323µm,0.7s						
VVLD				AML	AML		
	comp=N,2741µm,0.6s						
VVLD				AML	AML		
	comp=N,2597µm,0.6s						
RCAV	**Rocca di Cave**	0.67	201	⇑P	Pg	22 17 07.3	-0.9
RCAV				AML	AML		
	comp=E,6110µm,0.5s						
RCAV				AML	AML		
	comp=N,4725µm,0.5s						
RCAV				AML	AML		
	comp=N,4726µm,0.5s						
RCAV				AML	AML		
	comp=E,6110µm,0.5s						
MML1	**Montelago di S**	0.67	341	⇓P	Pg	22 17 07.5	-0.8
MML1				S	Sb	22 17 18.4	+0.4
PF6	**Pievefavera**	0.68	355	P	Pg	22 17 07.3	-0.9
PF6				S	Sb	22 17 17.7	-0.2
MNTP	**Montappone**	0.68	13	P	Pb	22 17 08.7	-0.1
MNTP				S	Sn	22 17 19.7	-1.0
MNTP				AML	AML		
	comp=E,5210µm,0.9s						
MNTP				AML	AML		
	comp=N,4450µm,0.8s						
MNTP				AML	AML		
	comp=E,5210µm,0.9s						
MNTP				AML	AML		
	comp=N,4450µm,0.8s						
MNTP				AML	AML		
	comp=N,4009µm,0.4s						
MNTP				AML	AML		
	comp=E,4453µm,0.7s						
GUAR	**Guarcino**	0.68	177	P	Pg	22 17 07.6	-0.8
GUAR				AML	AML		
	comp=E,3760µm,0.6s						
GUAR				AML	AML		
	comp=N,4780µm,0.6s						
GUAR				AML	AML		
	comp=N,4775µm,0.6s						
GUAR				AML	AML		
	comp=E,3758µm,0.6s						
SEF1	**Sefro**	0.71	341	P	Pg	22 17 08.6	-0.4
SEF1				S	Sb	22 17 19.4	+0.4
ASSB	**Assisi San Ben**	0.72	322	⇓P	Pg	22 17 08.4	-0.8
MDAR	**Monte D'Aria**	0.72	353	P	Pg	22 17 08.5	-0.7
MDAR				S	Sb	22 17 19.8	+0.3
FIU1	**Fiuminata**	0.75	341	P	Pg	22 17 09.4	-0.4
SSM1	**San Severino M**	0.76	355	P	Pg	22 17 09.2	-0.6
SSM1				S	Sb	22 17 21.2	+0.9
GAG1	**Gagliole**	0.78	349	P	Pg	22 17 09.6	-0.6
LPEL	**Lama dei Pelig**	0.80	122	P	Pg	22 17 09.2	-1.5
LPEL				S	Sg	22 17 20.9	-0.4
LPEL				AML	AML		
	comp=E,5450µm,1.1s						
LPEL				AML	AML		
	comp=N,3725µm,0.5s						
LPEL				AML	AML		
	comp=E,5805µm,0.2s						
LPEL				AML	AML		
	comp=N,3630µm,0.2s						
LPEL				AML	AML		
	comp=N,3727µm,0.5s						
LPEL				AML	AML		
	comp=N,3630µm,0.2s						
LPEL				AML	AML		
	comp=N,3630µm,1.8s						
LPEL				AML	AML		
	comp=E,5802µm,0.2s						
LPEL				AML	AML		
	comp=E,5339µm,0.2s						
CADA	**Capodarco di F**	0.80	27	P	Pb	22 17 11.1	+0.2
MTL1	**Matelica**	0.80	346	P	Pg	22 17 09.9	-0.8
VIVA	**Pratoni del Vi**	0.81	207	P	Pg	22 17 09.8	-1.1
VIVA				AML	AML		
	comp=N,9345µm,0.5s						
VIVA				AML	AML		
	comp=E,8755µm,0.6s						
VIVA				AML	AML		
	comp=E,8779µm,0.6s						
VIVA				AML	AML		
	comp=N,9359µm,0.5s						
SNTG	**Esanatoglia**	0.81	343	P	Pg	22 17 10.1	-0.9
SNTG				AML	AML		
	comp=N,1350µm,0.5s						
SNTG				AML	AML		
	comp=E,1360µm,0.6s						
SNTG				AML	AML		
	comp=E,1365µm,0.6s						
SNTG				AML	AML		
	comp=N,1350µm,0.6s						
SNTG				AML	AML		
	comp=N,1345µm,0.6s						
SNTG				AML	AML		
	comp=N,1258µm,0.4s						
SNTG				AML	AML		
	comp=N,1239µm,0.3s						
SNTG				AML	AML		
	comp=E,1154µm,0.2s						
SNTG				AML	AML		
	comp=E,1093µm,0.2s						
POFI	**Posta Fibreno**	0.83	156	P	Pg	22 17 10.2	-1.0
RDP	**Rocca di Papa**	0.83	210	P	Pg	22 17 10.0	-1.1
RDP				AML	AML		
	comp=E,12550µm,0.5s						
RDP				AML	AML		
	comp=N,9690µm,0.4s						
RDP				AML	AML		
	comp=E,12554µm,0.5s						
RDP				AML	AML		
	comp=N,9689µm,0.4s						
TRE1	**Treia**	0.84	2	P	Pg	22 17 11.3	-0.1
MA9	**Marino**	0.84	213	P	Pg	22 17 11.3	0.0
SAMA	**S.Maria delle**	0.86	216	P	Pg	22 17 10.2	-1.5
LRP	**Arpino**	0.86	164	P	Pb	22 17 11.9	+0.1
LRP				AML	AML		
	comp=E,2390µm,1.2s						
LRP				AML	AML		
	comp=N,522µm,0.7s						
LRP				AML	AML		
	comp=E,2279µm,0.5s						
LRP				AML	AML		
	comp=N,494µm,0.5s						
EL6	**Elcito**	0.86	352	P	Pg	22 17 10.9	-0.9
EL6				AML	AML		
	comp=E,2800µm,1.4s						
EL6				AML	AML		
	comp=E,2795µm,1.4s						
EL6				AML	AML		
	comp=N,3015µm,0.3s						
EL6				AML	AML		
	comp=N,3018µm,0.3s						
EL6				AML	AML		
	comp=E,2560µm,0.6s						
CIMA	**Civitanova Mar**	0.88	19	P	Pn	22 17 12.6	-0.5
CIMA				AML	AML		
	comp=E,4485µm,1.2s						
CIMA				AML	AML		
	comp=N,4380µm,0.7s						
CIMA				AML	AML		
	comp=E,4422µm,0.8s						
CIMA				AML	AML		
	comp=N,4383µm,0.7s						
CIMA				AML	AML		
	comp=N,4383µm,1.3s						
FOSV	**Fossato di Vic**	0.90	336	P	Pb	22 17 11.4	-1.1
FOSV				AML	AML		
	comp=E,1250µm,0.5s						
FOSV				AML	AML		
	comp=N,1550µm,0.9s						
FOSV				AML	AML		
	comp=N,1460µm,0.3s						
FOSV				AML	AML		
	comp=E,1250µm,0.5s						
CING	**Cingoli**	0.90	357	P	Pb	22 17 11.7	-0.9
GIUL	**Giuliano Di Ro**	0.92	181	P	Pb	22 17 12.1	-0.8
GIUL				AML	AML		
	comp=N,2495µm,0.8s						
GIUL				AML	AML		
	comp=E,2625µm,0.6s						
GIUL				AML	AML		
	comp=E,2626µm,0.6s						
GIUL				AML	AML		
	comp=N,2494µm,0.8s						
BARO	**Barbarano Roma**	0.93	256	P	Pb	22 17 12.1	-0.9
BARO				AML	AML		
	comp=N,2135µm,1.1s						
BARO				AML	AML		
	comp=N,12535µm,1.6s						
BARO				AML	AML		
	comp=E,3415µm,0.6s						
BARO				AML	AML		
	comp=N,2135µm,1.1s						
BARO				AML	AML		
	comp=E,16250µm,1.4s						
BARO				AML	AML		
	comp=N,12530µm,1.6s						
BARO				AML	AML		
	comp=E,3414µm,0.6s						
BARO				AML	AML		
	comp=N,1938µm,0.4s						
BARO				AML	AML		
	comp=E,16251µm,1.4s						
BARO				AML	AML		
	comp=N,14129µm,2.2s						
BARO				AML	AML		
	comp=E,16251µm,0.6s						
BARO				AML	AML		
	comp=N,14129µm,0.2s						
PP3	**Marolino**	0.94	15	P	Pb	22 17 12.9	-0.3
MURB	**Monte Urbino**	0.96	325	P	Pb	22 17 12.6	-1.0
MURB				AML	AML		
	comp=E,5090µm,0.3s						
MURB				AML	AML		
	comp=E,4735µm,1.1s						
MURB				AML	AML		
	comp=N,3875µm,0.4s						
MURB				AML	AML		
	comp=N,4310µm,0.4s						
MURB				AML	AML		
	comp=E,5092µm,0.3s						
MURB				AML	AML		
	comp=N,4311µm,0.4s						
MURB				AML	AML		
	comp=E,4642µm,0.3s						
MURB				AML	AML		
	comp=N,3876µm,0.4s						
MMUR	**Monte Murano**	0.99	348	P	Pb	22 17 13.5	-0.6
ATTE	**AVT- Monte Tez**	0.99	317	P	Pb	22 17 13.8	-0.3
ATTE				AML	AML		
	comp=E,1205µm,1.3s						
ATTE				AML	AML		
	comp=N,1270µm,0.9s						
ATTE				AML	AML		
	comp=E,1202µm,1.3s						
ATTE				AML	AML		
	comp=N,1227µm,0.6s						
ATTE				AML	AML		
	comp=E,1202µm,0.7s						
LIK	**San Giovanni I**	0.99	167	P	Pg	22 17 14.3	0.0
LATB	**Latina**	1.01	193	P	Pb	22 17 12.5	-1.8
LATB				AML	AML		
	comp=E,452µm,0.7s						
LATB				AML	AML		
	comp=N,720µm,0.6s						
LATB				AML	AML		
	comp=E,452µm,0.7s						
LATB				AML	AML		
	comp=N,720µm,0.6s						
RNI2	**Rionero Sannit**	1.01	139	P	Pb	22 17 13.8	-0.7
RNI2				AML	AML		
	comp=E,2425µm,1.3s						
RNI2				AML	AML		
	comp=N,2400µm,0.6s						
RNI2				AML	AML		
	comp=E,2425µm,1.3s						
RNI2				AML	AML		
	comp=N,2430µm,0.6s						
RNI2				AML	AML		
	comp=E,2094µm,0.5s						
RNI2				AML	AML		
	comp=E,2137µm,0.5s						
RNI2				AML	AML		
	comp=N,2400µm,0.6s						
RNI2				AML	AML		
	comp=N,2434µm,0.6s						
SSFR	**Montelago di S**	1.02	340	P	Pb	22 17 13.9	-0.8
SSFR				AML	AML		
	comp=E,2110µm,0.3s						
SSFR				AML	AML		
	comp=N,1965µm,0.3s						
SSFR				AML	AML		
	comp=E,2060µm,1.4s						
SSFR				AML	AML		
	comp=N,1825µm,0.6s						
SSFR				AML	AML		
	comp=N,1747µm,0.2s						
SSFR				AML	AML		
	comp=N,1962µm,0.3s						
SSFR				AML	AML		
	comp=E,1956µm,0.3s						
SSFR				AML	AML		
	comp=E,2110µm,0.3s						
TOLF	**Tolfa**	1.03	247	P	Pb	22 17 13.7	-1.0
TOLF				AML	AML		
	comp=E,1865µm,0.6s						
TOLF				AML	AML		
	comp=N,2130µm,0.5s						
TOLF				AML	AML		
	comp=E,1863µm,0.6s						
TOLF				AML	AML		
	comp=N,2132µm,0.5s						
TOLF				AML	AML		
	comp=E,1863µm,1.4s						
CERA	**Filignano**	1.04	147	P	Pb	22 17 14.2	-0.8
CERA				AML	AML		
	comp=E,2705µm,0.9s						
CERA				AML	AML		
	comp=N,2285µm,0.8s						
CERA				AML	AML		
	comp=E,2775µm,0.9s						
CERA				AML	AML		
	comp=N,2380µm,0.8s						
CERA				AML	AML		
	comp=E,2775µm,0.9s						
CERA				AML	AML		
	comp=N,2381µm,0.8s						
CERA				AML	AML		
	comp=E,2706µm,0.9s						
CERA				AML	AML		
	comp=N,2288µm,0.8s						
CERA				AML	AML		
	comp=N,2381µm,1.2s						
CERA				AML	AML		
	comp=N,2288µm,1.2s						
CERA				AML	AML		
	comp=E,2775µm,1.1s						
CERA				AML	AML		
	comp=E,2706µm,1.1s						
RIY	**Rijeka**	2.98	17	*e*Pn	Pn	22 17 42.7	+0.7
RIY				*e*Sn	Sn	22 18 17.1	-0.4
SKDS	**Skadanscina**	3.12	10	*e*Pn	Pn	22 17 44.1	+0.2
SKDS				*e*Sn	Sn	22 18 20.2	-0.8
SKDS	**Skadanscina**	3.12	10	*i* Pn	Pn	22 17 44.1	+0.2
SKDS				*i* Sn	Sn	22 18 21.6	+0.7
PGF	**Pioggiola**	3.16	273	*e*Pn	Pn	22 17 45.6	+1.1
PGF				*e*Sn	Sn	22 18 23.0	+0.9
	comp=E,13nm,0.4s						
MATE	**Matera**	3.16	124	⇑P	Pn	22 17 46.1	+1.7
MATE				⇑S	Sn	22 18 24.3	+2.4
KNYS	**Krupa na Uni**	3.27	41	*e*Pn	Pn	22 17 47.4	+1.3
STON	**Ston**	3.29	82	*e*Pn	Pn	22 17 47.3	+1.1
STON				*e*Sn	Sn	22 18 25.6	+0.4
STON	**Ston**	3.29	82	AML	AML		
	comp=E,65µm,0.6s						
STON				AML	AML		
	comp=E,71µm,1.1s						
STON				AML	AML		
	comp=N,84µm,0.3s						
STON				AML	AML		
	comp=N,84µm,0.3s						
BOJS	**Bojanci**	3.35	25	*e*Pn	Pn	22 17 48.4	+1.3
BOJS	**Bojanci**	3.35	25	AML	AML		
	comp=E,242µm,1.0s						
BOJS				AML	AML		
	comp=N,142µm,1.5s						
BOJS				AML	AML		
	comp=E,182µm,0.9s						
BOJS				AML	AML		
	comp=N,141µm,1.0s						
BOJS				AML	AML		
	comp=E,182µm,1.1s						
CEY	**Cerknica**	3.37	14	*e*Pn	Pn	22 17 48.6	+1.3
CEY				*e*Sn	Sn	22 18 27.5	+0.4
BLY	**Banja Luka**	3.64	50	*e*Pn	Pb	22 17 56.9	-2.3
BLY	**Banja Luka**	3.64	50	⇑P	Pb	22 17 55.4	-3.8
BLY				⇓S	Sb	22 18 39.1	-4.1
BLY	**Banja Luka**	3.64	50	*e*Pn	Pn	22 17 52.9	+1.9
LJU	**Ljubljana**	3.68	14	*e*Pn	Pn	22 17 53.3	+1.7
TREB	**Trebinje**	3.76	85	*e*Pn	Pn	22 17 53.5	+0.8
TREB	**Trebinje**	3.76	85	*e*Pn	Pn	22 17 54.0	+1.3
KLINJ	**Klinje**	3.97	78	*e*Pn	Pn	22 17 56.6	+0.9
OBKA	**Obir**	4.14	12	*e*Pn	Pn	22 17 59.0	+1.0
	comp=E,7.6nm,0.6s,SNR=5.4						
MYKA	**Terra Mystica**	4.16	4	*i* Pn	Pn	22 18 00.0	+1.7
	comp=E,6.1nm,0.4s						
MYKA				*e*Sn	Sn	22 18 48.5	+1.7
	comp=E,7.7nm,0.4s						
TIP	**Timpagrande**	4.22	140	⇓P	Pn	22 18 00.8	+1.6
ABTA	**Abfaltersbach**	4.30	353	*i* Pn	Pn	22 18 01.4	+1.2
	comp=E,24nm,0.5s						
ABTA				*i* Sn	Sn	22 18 50.8	+0.4
	comp=E,16nm,0.5s						
SOKA	**Soboth**	4.39	16	*i* Pn	Pn	22 18 03.8	+2.4
	comp=E,2.5nm,0.5s						
SOKA				*i* Sn	Sn	22 18 52.9	+0.5
	comp=E,5.7nm,0.7s						
PDG	**Podgorica**	4.43	89	⇑P	Pn	22 18 04.0	+2.1
PDG				⇑S	Sn	22 18 57.2	+4.0
PDG	**Podgorica**	4.43	89	*e*Pn	Pn	22 18 03.7	+1.8
PDG				*e*Sn	Sn	22 18 52.4	-0.9
SBF	**Sospel**	4.49	290	*e*Pn	Pn	22 18 02.9	+0.1
SBF				*e*Sn	Sn	22 18 55.8	+1.0
	comp=E,8.9nm,0.5s						
KBA	**Koelnbreinsper**	4.60	1	*i* Pn	Pn	22 18 05.9	+1.4
	comp=E,9.7nm,0.6s,SNR=5.7						
KBA				*i* Sn	Sn	22 18 58.9	+1.1
	comp=E,9.8nm,0.4s						
RUDO	**Rudo**	4.62	74	*e*Pn	Pn	22 18 05.9	+1.4
RUDO	**Rudo**	4.62	74	*e*Pn	Pn	22 18 06.1	+1.6
RUDO				*e*Sn	Sn	22 18 57.9	0.0
BBLS	**Lazi&#263i**	4.70	71	*e*Pn	Pn	22 18 07.6	+1.9
BEHE	**Becsehely**	4.72	31	*e*Pn	Pn	22 18 06.5	+0.7
FETA	**Feichten**	4.89	339	*i* Pn	Pn	22 18 11.1	+2.7
	comp=E,5.5nm,0.6s,SNR=7.6						
FETA				*i* Sn	Sn	22 19 05.0	+0.1
	comp=E,7.8nm,0.8s						
WTTA	**Wattenberg**	4.93	347	*e*Pn	Pn	22 18 12.1	+3.2
	comp=E,3.4nm,0.3s,SNR=8.3						
WTTA				*i* Sn	Sn	22 19 06.7	+0.9
	comp=E,5.9nm,0.4s						
DAVOX	**Davos/Dischmat**	4.94	332	Pn	Pn	22 18 11.2	+2.2
	comp=E,1.6nm,0.3s,baz=140,slow=22,SNR=26						
DAVOX				Sn	Sn	22 19 09.2	+3.1
	comp=E,0.6nm,0.3s,baz=358,slow=19,SNR=4.4						
DAVOX				LR	LR	22 20 23.3	
	comp=E,49nm,18.5s,baz=78,slow=42						
	comp=E,7.8nm,0.5s						
SQTA	**Sankt Quirin**	4.96	344	*i* Pn	Pn	22 18 12.6	+3.2
	comp=E,10nm,0.7s						
SQTA				*i* Sn	Sn	22 19 07.7	+1.0
	comp=E,4.9nm,0.5s						
LESA	**Schwarzleotal**	4.97	355	*e*Pn	Pn	22 18 11.8	+2.5
	comp=E,5.6nm,0.4s,SNR=6.4						
LESA				*e*Sn	Sn	22 19 06.9	+0.3
	comp=E,4.9nm,0.3s						
SJES	**Sjenica**	4.99	79	*e*Pn	Pn	22 18 12.1	+2.4
SJES				*e*Sn	Sn	22 19 07.0	-0.3
TEKS	**Tekeris**	5.00	63	*e*Pn	Pn	22 18 09.8	0.0
WATA	**Walderalm**	5.01	347	*e*Pn	Pn	22 18 12.6	+2.7
	comp=E,2.1nm,0.2s,SNR=9.8						
WATA				*i* Sn	Sn	22 19 09.3	+1.6
	comp=E,6.6nm,0.3s						
ARSA	**Arzberg**	5.04	18	*i* Pn	Pn	22 18 10.9	+0.6
	comp=E,2.6nm,0.4s						
ARSA				*e*Sg	Sn	22 19 08.0	-0.3
	comp=E,3.2nm,0.6s						
LMR	**La Mourre**	5.04	282	*e*Pn	Pn	22 18 10.1	-0.2
MOTA	**Moosalm**	5.11	343	*e*Pn	Pn	22 18 13.7	+2.3
	comp=E,5.0nm,0.6s,SNR=7.3						
MOTA				*i* Sn	Sn	22 19 12.4	+2.3
	comp=E,9.6nm,0.6s						
IVAS	**Ivanjica**	5.17	75	*e*Pn	Pn	22 18 13.3	+1.2
IVAS				*e*Sn	Sn	22 19 10.8	-0.7
DIVS	**Divibare**	5.17	69	*e*Pn	Pn	22 18 13.0	+0.9
DIVS				*e*Sn	Sn	22 19 11.4	-0.2
BIOA	**Bad Ischl, Aus**	5.22	3	*e*Pn	Pn	22 18 14.7	+1.8
	comp=E,5.1nm,0.4s,SNR=4.5						
BIOA				*e*Sn	Sn	22 19 14.0	+1.1
	comp=E,5.1nm,0.4s						
MBDF	**Montbardon**	5.23	298	*e*Pn	Pn	22 18 14.9	+1.9
MBDF				*e*Sn	Sn	22 19 11.2	-2.0
	comp=E,1.0nm,0.4s						
RETA	**Reutte**	5.32	341	*i* Pn	Pn	22 18 17.0	+2.8
	comp=E,1.2nm,0.2s,SNR=4.9						
RETA				*i* Sn	Sn	22 19 16.4	+1.1
	comp=E,5.3nm,0.7s						
MORH	**Mrgy, Hungar**	5.37	44	*e*Pn	Pn	22 18 16.7	+1.9
MORH	**Mrgy, Hungar**	5.37	44	⇓P	Pn	22 18 19.1	+4.3
DAVA	**Damuels**	5.38	335	*i* Pn	Pn	22 18 18.4	+3.3
	comp=E,8.4nm,0.5s,SNR=8.8						
DAVA				*i* Sn	Sn	22 19 18.4	+1.5
	comp=E,6.5nm,0.5s						
MOA	**Molln**	5.42	7	*e*Pn	Pn	22 18 16.9	+1.3
	comp=E,1.6nm,0.3s,SNR=5.1						
MOA				*e*Sg	Sn	22 19 17.7	0.0
	comp=E,4.3nm,0.5s						
MOA	**Molln**	5.42	7	*e*Pn	Pn	22 18 16.3	+0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FRGS	Fruska Gora	5.44	58	*e*Pn	Pn	22 18 16.3	+0.5
TRUS	Trudelj	5.49	69	*e*Pn	Pn	22 18 17.4	+0.9
TRUS				*e*Sn	Sn	22 19 19.5	+0.1
LPG	La Plagne	5.59	305	*e*Pn	Pn	22 18 20.5	+2.4
LPL	La Plagne	5.61	305	*e*Pn	Pn	22 18 20.1	+1.8
LPL				*e*Sn	Sn	22 19 21.3	-1.4
	comp=E,2.1nm,0.4s						
GRUS	Gruza	5.62	73	*e*Pn	Pn	22 18 19.1	+0.8
RONA	Rosalia, Austr	5.65	21	*i* Pn	Pn	22 18 17.5	-1.2
	comp=E,0.9nm,0.2s						
GOCS	Kraljevo Serbi	5.68	76	*e*Pn	Pn	22 18 19.9	+0.7
GOCS				*e*Sn	Sn	22 19 22.2	-2.0
AVAS	Avala Beograd	5.71	65	*e*Pn	Pn	22 18 19.8	+0.3
CONA	Conrad Observa	5.75	18	*i* Pn	Pn	22 18 20.6	+0.4
	comp=E,1.5nm,0.2s						
CONA				*i* Sn	Sn	22 19 23.5	-2.5
	comp=E,2.8nm,0.4s						
OHR	Ohrid	5.79	101	*i* Pn	Pn	22 18 23.3	+2.6
SMRF	Simiane la Rot	5.82	288	*e*Pn	Pn	22 18 21.7	+0.7
SELS	Selova	5.82	80	*e*Pn	Pn	22 18 22.4	+1.4
ORIF	Oris-en-Rattie	5.89	297	*e*Pn	Pn	22 18 24.2	+2.2
ORIF				*e*Sn	Sn	22 19 26.6	-2.7
	comp=E,1.5nm,0.3s						
BOVS	Bovan	6.29	77	*e*Pn	Pn	22 18 28.6	+1.2
BARS	Barje	6.31	84	*e*Pn	Pn	22 18 29.1	+1.3
GERES	GERESS Array B	6.38	3	Pn	Pn	22 18 28.5	-0.3
	comp=E,0.1nm,0.3s,baz=173,slow=12,SNR=5.1						
GERES				Sn	Sn	22 19 39.7	-1.7
	comp=E,0.1nm,0.3s,baz=180,slow=26,SNR=4.0						
GERES				Lg	Lg	22 20 12.9	
	baz=181,slow=29,SNR=3.6						
	comp=E,0.7nm,0.5s						
CKRC	Cesky Krumlov	6.39	6	*e*PN	Pn	22 18 30.0	+1.2
CKRC				*e*SN	Sn	22 19 39.7	-1.8
VRSS	Vrsac	6.40	63	*e*Pn	Pn	22 18 29.1	+0.1
MODS	Modra-Piesok	6.54	24	*e*PN	Pn	22 18 36.5	+5.6
KHC	Kasperske Hory	6.66	2	*e*PN	Pn	22 18 35.3	+2.7
KHC				*e*SN	Sn	22 19 46.7	-1.6
VIVF	Saint-Julien-l	6.67	294	*e*Pn	Pn	22 18 34.4	+1.7
ZAGS	Zajecar	6.69	75	*e*Pn	Pn	22 18 34.3	+1.3
BZS	Buzias	6.79	60	⇑P	Pn	22 18 37.2	+3.0
BOSS	Bosilegrad	6.81	87	*e*Pn	Pn	22 18 36.0	+1.4
ZAPS	Zavoj	6.93	80	*e*Pn	Pn	22 18 37.7	+1.5
ZVC	Zvikov	6.99	5	*e*PN	Pn	22 18 39.0	+1.9
ZVC				*e*SN	Sn	22 19 54.8	-1.6
HINF	Hinteralfeld	7.00	322	*e*Pn	Pn	22 18 38.8	+1.5
HINF				*e*Sn	Sn	22 19 52.6	-4.2
	comp=E,3.6nm,0.4s						
VAY	Valandovo	7.04	96	*i* Pn	Pn	22 18 40.6	+2.9
LASF	Ste Croix	7.05	286	*e*Pn	Pn	22 18 38.9	+0.9
HERR	Herculane	7.05	67	⇑P	Pn	22 18 41.7	+3.7
VRAC	Vranov	7.22	18	LR	LR	22 21 08.4	
	comp=E,37nm,20.0s,baz=316,slow=36						
CDF	Champ du Feu	7.28	327	*e*Pn	Pn	22 18 41.5	+0.4
CDF				*e*Sn	Sn	22 20 01.3	-2.3
	comp=E,1.5nm,0.3s						
VTS	Vitosha	7.36	86	*e*Pn	Pn	22 18 43.6	+1.3
HAU	Haudompre	7.38	321	*e*Pn	Pn	22 18 43.9	+1.5
HAU				*e*Sn	Sn	22 20 02.5	-3.4
	comp=E,6.0nm,0.4s						
KEST	Kesra	7.39	206	Pn	Pn	22 18 47.8	+5.1
	comp=E,0.6nm,0.3s,baz=17,slow=5.5,SNR=12						
KEST				Sn	Sn	22 20 06.6	+0.2
	comp=E,0.1nm,0.3s,baz=242,slow=16,SNR=1.2						
	comp=E,2.8nm,0.5s						
GZR	Gura Zlata	7.46	64	⇑P	Pn	22 18 47.3	+3.8
SMF	Signal de Mont	7.92	305	*e*Pn	Pn	22 18 51.1	+1.3
SMF	Signal de Mont	7.92	305	*e*P	Pn	22 18 56.3	+6.5
SMF				*e*Sn	Sn	22 20 15.3	-3.9
	comp=E,0.9nm,0.3s						
DRGR		8.00	54	⇓P	Pn	22 18 54.4	+3.4
LOT	Lotru	8.14	65	⇑P	Pn	22 18 56.1	+3.2
MARR	Marisel-Cluj	8.19	56	⇑P	Pn	22 18 56.7	+3.1
LOR	Lormes	8.22	309	*e*Pn	Pn	22 18 55.8	+1.8
LOR	Lormes	8.22	309	*e*P	Pn	22 19 01.0	+7.0
LOR				*e*Sn	Sn	22 20 23.1	-3.5
	comp=E,0.6nm,0.3s						
SSF	Saint Saulge	8.32	307	*e*Pn	Pn	22 18 56.2	+0.9
SSF				*e*Sn	Sn	22 20 26.0	-3.1
	comp=E,0.9nm,0.3s						
CAF	Calviac	8.48	291	*e*Pn	Pn	22 19 00.2	+2.7
BGF	Bois d'Agland	8.49	302	*e*Pn	Pn	22 18 59.6	+1.9
CLL	Collm	8.84	359	*e*Sg	Sg	22 21 35.0	-3.4
ELND	Elena	9.29	83	⇑P	Pn	22 19 11.2	+2.5
ESDC	Sonseca Array	13.30	264	Pn	Pn	22 20 03.0	-0.6
	comp=E,0.1nm,0.3s,baz=63,slow=14,SNR=2.5						
BRTR	Keskin Array B	15.60	93	Pn	Pn	22 20 34.6	-0.1
	baz=291,slow=12,SNR=2.9						
	comp=E,0.6nm,0.8s						
MKAR	Makanchi Array	47.87	60	P	P	22 25 33.0	+0.5
	comp=E,0.1nm,0.5s,baz=273,slow=8.5,SNR=2.1						
	comp=E,0.1nm,0.5s						

IDC ***07*** *22:23:08.9±0.5, 18°.93N×64°.34W, h0^{km}, mb4.1/19, mbtmp4.2/22, ML3.4/3, MS3.4/27, Error ellipse: s-maj=13.2km s-min=12.5km az=119.0*

TRN ***07*** *22:23:11.5, 18°.97N×64°.25W, h60^{km}, MD0.0, North of Anegada, V.I.*

NEIC ***07*** *22:23:13.4±1.3, 18°.81N±0°.07×64°.28W±0°.03, h28^{km}±4^{km}, mb4.6/80, ML4.6/50, Mwr4.3/42, ML4.4/16(RSPR), Error ellipse: s-maj=11.0km s-min=3.7km az=193.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.23; M$_{\theta\theta}$-2.76; M$_{\phi\phi}$0.54; M$_{r\theta}$0.86; M$_{\theta\phi}$-0.50; M$_{\phi r}$1.61; Fault plane solution: M$_0$3.17000×10^{15} NP1: ϕ_s287.30000°, δ39.81000°, λ135.08000°. NP2: ϕ_s54.75000°, δ63.12000°, λ59.45000°. Principal axes: T 3.2366, Plg60.0000°, Azm279.0000°; N -0.1475, Plg27.0000°, Azm70.0000°; P -3.0892, Plg13.0000°, Azm166.0000°;*

OSPL ***07*** *22:23:14.5±3.0, 18°.89N×64°.39W, h1^{km}±129^{km}, ML4.4, Presumed earthquake*

NEIC ***07*** *22:23:16, 18°.84N×64°.35W, h19^{km}*

RSPR ***07*** *22:23:16.0, 18°.84N×64°.35W, h19^{km}±5^{km}, MD4.0/16*

ISC 07 22:23:10.7±1.4, **18°.84N**±0°.04×**64°.42W**±0°.03, **h15**^{km}±8^{km}, **n277**, σ1^s**92**/304, **mb4.5**/50, **MS3.5**/24, **7C-9D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUMP	Col San Antoni	1.53	243		Pg	22 23 39.9	-0.3
HUMP				Sn	Sg	22 24 00.4	+0.3
HUMP	Col San Antoni	1.53	243	⇓*i*P	Pg	22 23 40.0	-0.1
HUMP	Col San Antoni	1.53	243	*e*S	Sg	22 24 00.2	+0.1
SABA	Saba	1.65	137		Pn	22 23 39.2	0.0
SABA				Sn	Sn	22 23 57.8	-2.3
SABA				IAML		22 24 09.4	
	comp=N,9µm,0.6s						
SABA	Saba	1.65	137	⇑*e*P	Pb	22 23 40.4	-0.5
SABA	Saba	1.65	137	*e*S	Sn	22 23 59.2	-0.9
GCPR	Guaynabo City	1.67	252		Pb	22 23 41.6	+0.4
GCPR				Sn	Sb	22 24 02.5	+0.5
GCPR	Guaynabo City	1.67	252	⇑*i*P	Pb	22 23 41.8	+0.6
GCPR	Guaynabo City	1.67	252	*e*S	Sb	22 24 02.8	+0.8
SJG	San Juan	1.80	246	Pn	Pb	22 23 43.5	+0.1
	comp=N,95nm,0.3s,baz=71,slow=11,SNR=91						
SJG				Sn	Sb	22 24 07.6	+1.8
	comp=N,292nm,0.3s,baz=77,slow=23,SNR=8.2						
SJG				LR	LR	22 24 38.2	
	comp=N,1µm,18.5s,baz=74,slow=47						
SJG	San Juan	1.80	246	Pn	Pb	22 23 43.6	+0.1
SJG				IAML		22 24 17.8	
	comp=N,4µm,0.7s						
SJG	San Juan	1.80	246	⇓*i*P	Pb	22 23 44.2	+0.8
SJG	San Juan	1.80	246	*e*S	Sg	22 24 07.8	-1.0
SJG	San Juan	1.80	246	*e*P	Pb	22 23 43.7	+0.3
SJG				*e*S	Sg	22 24 09.3	+0.6
SJG	San Juan	1.80	246	*i* P	Pb	22 23 43.8	+0.4
SJG				*e*S	Sg	22 24 08.1	-0.7
SJG				IAML		22 24 17.7	
	comp=Z,2µm,0.7s						
SEUS	St. Eustatius	1.91	134		Pn	22 23 42.3	-0.5
SEUS				Sn	Sn	22 24 03.6	-3.0
SEUS				IAML		22 24 20.4	
	comp=N,6µm,0.6s						
ECPR	Experimental S	1.92	255	Pn	Pb	22 23 45.5	0.0
ECPR				IAML		22 24 12.7	
	comp=N,6µm,0.3s						
ECPR				IAML		22 24 17.0	
	comp=N,5µm,0.2s						
ECPR	Experimental S	1.92	255	⇑*i*P	Pb	22 23 45.5	0.0
ECPR	Experimental S	1.92	255	*e*S	Sb	22 24 09.1	-0.1
EMPR	Esperanza - Ma	2.04	260		Sb	22 24 13.4	+0.8
EMPR	Esperanza - Ma	2.04	260	Pn	Pb	22 23 47.7	+0.2
EMPR				IAML		22 24 17.1	
	comp=N,5µm,0.7s						
EMPR	Esperanza - Ma	2.04	260	⇓*i*P	Pb	22 23 47.9	+0.4
EMPR	Esperanza - Ma	2.04	260	*e*S	Sb	22 24 13.4	+0.8
SKI	Saint Kitts	2.19	133	*e*P	Pn	22 23 46.8	+0.2
SKI				*e*S	Sn	22 24 12.7	-0.8
SKOC	St. Kitts, UWI	2.22	134	*e*P	Pn	22 23 47.5	+0.4
SKOC				*e*S	Sn	22 24 13.9	-0.4
OBIP	Obispado Ponce	2.23	249		Pb	22 23 50.0	-0.7
OBIP				Sn	Sb	22 24 16.9	-1.2
OBIP				IAML		22 24 20.8	
	comp=N,3µm,0.7s						
OBIP				IAML		22 24 23.9	
	comp=E,3µm,0.7s						
OBIP	Obispado Ponce	2.23	249	⇓*i*P	Pb	22 23 50.6	-0.1
OBIP	Obispado Ponce	2.23	249	*e*S	Sb	22 24 17.2	-0.9
UUPR	Utuado, UPR, P	2.27	255		Pb	22 23 50.8	-0.6
UUPR					Sn	22 24 16.5	+1.2
UUPR	Utuado, UPR, P	2.27	255	⇓*e*P	Pb	22 23 50.8	-0.6
UUPR	Utuado, UPR, P	2.27	255	*e*S	Sn	22 24 16.5	+1.2
AOPR	Arecibo Observ	2.27	258		Pb	22 23 50.3	-1.2
AOPR					Sb	22 24 19.7	+0.2
AOPR				IAML		22 24 34.6	
	comp=N,6µm,0.5s						
AOPR	Arecibo Observ	2.27	258	⇑*e*P	Pb	22 23 51.1	-0.4
AOPR	Arecibo Observ	2.27	258	*e*S	Sb	22 24 20.0	+0.6
AOPR	Arecibo Observ	2.27	258	*e*P	Pb	22 23 50.5	-1.0
AOPR				*e*S	Sb	22 24 19.5	+0.1
GBPR	Guanica, Bosqu	2.49	250		Pb	22 23 55.1	-0.2
GBPR	Guanica, Bosqu	2.49	250	⇓*i*P	Pb	22 23 55.1	-0.2
AGPR	Aguadilla, PR	2.58	262	Pn	Pb	22 23 54.9	-1.9
AGPR				IAML		22 24 29.6	
	comp=N,2µm,0.9s						
AGPR				IAML		22 24 48.0	
	comp=N,2µm,0.6s						
AGPR	Aguadilla, PR	2.58	262	⇓*i*P	Pb	22 23 55.1	-1.7
AGPR	Aguadilla, PR	2.58	262	*e*S	Sb	22 24 26.2	-2.1
AGPR	Aguadilla, PR	2.58	262	*i* P	Pb	22 23 54.9	-1.9
AGPR				*e*S	Sn	22 24 25.9	+2.7
AGPR				IAML		22 24 38.8	
	comp=Z,926nm,1.6s						
LSP	Las Mesas	2.62	256		Pb	22 23 56.1	-1.3
LSP					Sn	22 24 26.5	+2.4
LSP	Las Mesas	2.62	256	⇑*i*P	Pb	22 23 56.1	-1.3
LSP	Las Mesas	2.62	256	*e*S	Sn	22 24 26.5	+2.4
MLPR	Magueyes Islan	2.64	251	⇓*i*P	Pb	22 23 56.5	-1.3
MLPR	Magueyes Islan	2.64	251	*e*S	Sb	22 24 28.8	-1.3
PRSN	Puerto Rico Se	2.66	257		Sb	22 24 29.2	-1.5
PRSN	Puerto Rico Se	2.66	257	Pn	Pb	22 23 56.2	-1.9
PRSN				IAML		22 24 37.3	
	comp=Z,4µm,0.3s						
PRSN				IAML		22 24 37.7	
	comp=Z,4µm,0.6s						
PRSN	Puerto Rico Se	2.66	257	⇑*e*P	Pb	22 23 56.5	-1.6
PRSN	Puerto Rico Se	2.66	257	*e*S	Sb	22 24 29.2	-1.5
CRPR	Cabo Rojo, PR	2.69	252		Pb	22 23 56.9	-1.6
CRPR					Sn	22 24 28.6	+2.8
CRPR	Cabo Rojo, PR	2.69	252	IAML		22 24 34.8	
	comp=Z,2µm,0.7s						
CRPR				IAML		22 24 38.9	
	comp=Z,2µm,0.7s						
CRPR	Cabo Rojo, PR	2.69	252	⇑*i*P	Pb	22 23 57.0	-1.6
CRPR	Cabo Rojo, PR	2.69	252	*e*S	Sb	22 24 29.1	-2.3
CRPR	Cabo Rojo, PR	2.69	252	*i* P	Pb	22 23 56.9	-1.7
CRPR				*e*S	Sb	22 24 29.6	-1.8
CRPR				IAML		22 24 35.0	
	comp=Z,1µm,0.9s						
ANWB	Willy Bob	2.76	115		Pn	22 23 53.4	-0.9
ANWB	Willy Bob	2.76	115	*e*P	Pn	22 23 53.5	-0.9
ANWB				*e*S	Sn	22 24 25.4	-2.1
IDE	Isla Desecheo	2.94	262		Pn	22 23 60.0	+3.1
IDE					Sn	22 24 34.8	+2.9
IDE	Isla Desecheo	2.94	262	⇑*i*P	Pn	22 23 60.0	+3.1
IDE	Isla Desecheo	2.94	262	*e*S	Sn	22 24 34.8	+2.9
MBFL	Flemmings, Mon	2.96	134	*e*P	Pn	22 23 58.0	+0.8
MBWH	Windy Hill	2.98	134	*e*P	Pn	22 23 57.6	+0.1
MBWH				*e*S	Sn	22 24 30.9	-2.0
MLYT	Lee's Yard	2.99	135	*e*P	Pn	22 23 58.7	+1.1
MLYT				*e*S	Sn	22 24 31.6	-1.7
DHSZ	Broadband at M	3.59	135	*e*P	Pn	22 24 06.5	+0.6
DHSZ				*e*S	Sn	22 24 47.6	-0.5
GDHS	Morne Mazeau,	3.59	135		Pn	22 24 06.1	+0.1
ABD	La Joyeuse, An	3.65	130		Pn	22 24 06.4	-0.3
ABD				IAML		22 25 15.4	
	comp=E,2µm,1.1s						
ABD				IAML		22 25 16.0	
	comp=N,1µm,0.7s						
ABD	La Joyeuse, An	3.65	130	⇑*e*P	Pn	22 24 07.1	+0.4
ABD	La Joyeuse, An	3.65	130	*e*S	Sn	22 24 49.5	-0.1
ATGZ	Broadband at L	3.75	136	*e*P	Pn	22 24 09.1	+1.1
MMLZ	Guadeloupe Bro	3.82	136	*e*P	Pn	22 24 10.2	+1.1
MMLZ				*e*S	Sn	22 24 51.6	-2.2
CBE	Ff, Capester	3.85	135		Pn	22 24 09.8	+0.4
CBE	Ff, Capester	3.85	135	⇑*i*P	Pn	22 24 11.8	+2.3
CBE	Ff, Capester	3.85	135	*e*S	Sn	22 24 55.2	+0.8
TBG	Guadaloupe-3	3.98	138	*e*P	Pn	22 24 11.7	+0.5
TBG				*e*S	Sn	22 24 55.4	-2.2
TDBA	Terre de Bas,	3.99	138		Pn	22 24 11.8	+0.4
TDBA				IAML		22 25 31.5	
	comp=N,782nm,0.8s						
TDBA				IAML		22 25 32.3	
	comp=E,1µm,0.7s						
DSDZ	La Diserade, G	4.07	128	*e*P	Pn	22 24 12.8	+0.4
DSDZ				*e*S	Sn	22 24 56.4	-3.4
GDSD	La Dsirade Is	4.07	128		Pn	22 24 11.8	-0.7
H05N1	Guadeloupe/Mar	4.07	128	Pn	Pn	22 24 12.1	-0.4
H05N1				Sn	Sn	22 24 58.7	-1.3
HIDR	Higuey Centro	4.08	267	⇓*e*P	Pn	22 24 16.6	+3.9
HIDR	Higuey Centro	4.08	267	*e*S	Sn	22 25 04.1	+3.9
MAGL	Barre de l'ile	4.15	133		Pn	22 24 14.0	+0.4
MAGL				IAML		22 25 17.1	
	comp=E,997nm,0.8s						
MAGL				IAML		22 25 18.9	
	comp=N,1µm,1.1s						
MIDR	Miches	4.39	273	⇑*e*P	Pn	22 24 20.2	+3.4
MIDR	Miches	4.39	273	*e*S	Sn	22 25 08.7	+1.0
DWS	Wesley	4.41	137	*e*P	Pn	22 24 17.5	+0.4
DWS				*e*S	Sn	22 25 06.4	-1.8
DSLB	Salisbury	4.43	139	*e*P	Pn	22 24 18.3	+0.8
DSLB				*e*S	Sn	22 25 07.3	-1.6
SMDR	Samana, DR	4.54	276	⇑*e*P	Pn	22 24 23.1	+4.2
SMDR	Samana, DR	4.54	276	*e*S	Sn	22 25 13.2	+1.8
DLPL	La Plaine	4.62	139	*e*P	Pn	22 24 20.9	+0.8
DLPL				*e*S	Sn	22 25 10.3	-3.3
DR12	Loma Pena Alta	4.70	270		Pn	22 24 24.1	+2.9
SVN	Savane Anatole	5.05	142		Pn	22 24 25.9	-0.1
SVN	Savane Anatole	5.05	142	*e*P	Pn	22 24 27.6	+1.6
SVN				*e*S	Sn	22 25 22.9	-1.3
CXM	Morne La Croix	5.07	142		Pn	22 24 26.3	-0.1
CXM				IAML		22 25 34.0	
	comp=E,390nm,0.7s						
CXM				IAML		22 26 29.5	
	comp=N,844nm,0.8s						
ILAM	Ilet Lapin Mar	5.28	140	Pn	Pn	22 24 29.7	+0.6
ILAM				IAML		22 25 51.1	
	comp=N,277nm,1.2s						
ILAM	Ilet Lapin Mar	5.28	140	*e*P	Pn	22 24 29.5	+0.4
BIM	Bigot	5.36	143		Pn	22 24 30.5	+0.2
BIM				IAML		22 25 47.6	
	comp=N,235nm,1.1s						
BIM				IAML		22 25 59.6	
	comp=E,298nm,0.9s						
BIM	Bigot	5.36	143	*e*P	Pn	22 24 30.6	+0.3
MPOM	Morne Pois Mar	5.54	142		Pn	22 24 32.9	+0.1
H05S1	Guadeloupe/Mar	5.57	141	Pn	Pn	22 24 34.2	+1.1
H05S1				Sn	Sn	22 25 35.1	-1.9
BANI	BANI	5.65	266		Pn	22 24 39.1	+4.8
SLBI	Saint Lucia, B	5.82	145	*e*P	Pn	22 24 37.1	+0.5
SC01	Santiago de lo	6.00	277		Pn	22 24 42.5	+3.5
SC01	Santiago de lo	6.00	277	⇑*e*P	Pn	22 24 43.1	+4.1
SC01	Santiago de lo	6.00	277	*e*S	Sn	22 25 52.2	+4.8
SC01	Santiago de lo	6.00	277	*i* P	Pn	22 24 42.9	+4.0
LOPP1	Punta Rusia, P	6.48	280	*i* P	Pn	22 24 48.9	+3.3
LOPP1				IAML		22 25 02.2	
	comp=Z,262nm,0.5s						
LOPP1				*e*S	Sn	22 26 00.3	+0.9
SDDR	Presa de Saban	6.51	272		Pn	22 24 49.7	+3.6
SDDR	Presa de Saban	6.51	272	⇑*i*P	Pn	22 24 51.5	+5.4
SDDR	Presa de Saban	6.51	272	*e*S	Sn	22 26 04.3	+4.3
SDDR	Presa de Saban	6.51	272	*i* P	Pn	22 24 51.5	+5.5
SDDR				IAmb	IAmb	22 25 10.8	
	comp=Z,250nm,0.8s						
SDDR	Presa de Saban	6.51	272	*i* P	Pn	22 24 50.3	+4.2
SDDR				IAML		22 26 39.7	
	comp=Z,103nm,1.1s						
LONE3	El Aguacate, B	6.68	269	*i* P	Pn	22 24 53.1	+4.7
LOVI	El Cajuil, Ovi	6.69	262	*i* P	Pn	22 24 52.6	+4.1
GRTK	Grand Turk	6.84	294	*i* P	Pn	22 24 52.4	+1.8
GRTK				IAmb	IAmb	22 25 02.8	
	comp=Z,140nm,0.5s						
GRTK				*i* S	Sn	22 26 04.8	-3.5
GRTK				IAML		22 26 06.8	
	comp=Z,500nm,1.0s						
GRTK	Grand Turk	6.84	294	*i* P	Pn	22 24 52.2	+1.6
GRTK				*e*S	Sn	22 26 04.7	-3.5
GRTK				IAML		22 26 06.8	
	comp=Z,217nm,1.2s						
MASC	Masc	9.35	280	*i* P	Pn	22 25 24.6	-0.4
MASC				IAmb	IAmb	22 25 28.4	
	comp=Z,39nm,0.7s						
MASC				*i* S	Sn	22 27 05.8	-4.2
QMBU	Quimbuelo	9.90	280	*i* P	Pn	22 25 32.5	0.0
QMBU				IAmb	IAmb	22 25 41.6	
	comp=Z,45nm,0.8s						
QMBU				*i* S	Sn	22 27 17.5	-5.9
MOAC	Moa	10.09	282	*i* P	Pn	22 25 34.6	-0.6
MOAC				IAmb	IAmb	22 25 46.4	
	comp=Z,51nm,0.7s						
MOAC				*i* S	Sn	22 27 22.8	-5.4
NMDO	Nuevo Mundo	10.10	281		Pn	22 25 33.4	-1.8
NMDO	Nuevo Mundo	10.10	281	*i* P	Pn	22 25 34.0	-1.3
NMDO				IAmb	IAmb	22 25 34.8	
	comp=Z,30nm,0.6s						
NMDO				*i* S	Sn	22 27 22.3	-6.1
GTBY	Guantanamo Bay	10.15	278	*i* P	Pn	22 25 37.1	+1.1
GTBY				IAmb	IAmb	22 26 00.7	
	comp=Z,34nm,0.8s						
GTBY				*i* S	Sn	22 27 25.1	-4.6
RCC	Rio Carpintero	10.71	278	*i* P	Pn	22 25 43.9	+0.3
RCC				IAmb	IAmb	22 25 55.7	
	comp=Z,18nm,0.8s						
RCC				*i* S	Sn	22 27 38.9	-4.4
PINC	Pinares de May	10.84	281	*i* P	Pn	22 25 43.7	-1.8
PINC				IAmb	IAmb	22 25 44.6	
	comp=Z,17nm,0.5s						
PINC				*i* S	Sn	22 27 40.2	-6.4
MARVS	Santiago de Cu	10.90	278	*i* P	Pn	22 25 43.6	-2.6
MARVS				IAmb	IAmb	22 26 03.7	
	comp=Z,20nm,1.3s						
MARVS				*i* S	Sn	22 27 39.2	-8.8
HLGC	Holguin	11.14	282	*i* P	Pn	22 25 49.6	0.0
HLGC				IAmb	IAmb	22 25 52.6	
	comp=Z,18nm,0.5s						
HLGC				*i* S	Sn	22 27 52.1	-2.0
YAR	Yar	11.36	280	*i* P	Pn	22 25 51.8	-0.8
YAR				IAmb	IAmb	22 26 04.0	
	comp=Z,21nm,0.9s						
YAR				*i* S	Sn	22 27 53.7	-5.6
CHIV	Chivirico	11.38	278	Pn	Pn	22 25 51.9	-0.8
CHIV	Chivirico	11.38	278	*i* P	Pn	22 25 52.0	-0.8
CHIV				IAmb	IAmb	22 26 13.8	
	comp=Z,13nm,0.8s						
CHIV				*i* S	Sn	22 27 50.1	-10
SDV	Santo Domingo	11.59	212	Pn	Pn	22 25 58.7	+2.8
	comp=Z,1.4nm,0.3s,baz=50,slow=12,SNR=5.6						
SDV				Sn	Sn	22 27 59.4	-5.8
	comp=Z,0.8nm,0.3s,baz=20,slow=23,SNR=1.8						
SDV				LR	LR	22 30 33.3	
	comp=Z,135nm,20.6s,baz=24,slow=38						
	comp=Z,2.2nm,0.4s						
SDV	Santo Domingo	11.59	212		Pn	22 25 56.5	+0.6
LMGC	Las Mercedes	11.94	278	*i* P	Pn	22 26 00.0	-0.5
LMGC				IAmb	IAmb	22 26 19.6	
	comp=Z,14nm,1.0s						
LMGC				*i* S	Sn	22 27 59.9	-14
MTDJ	Mount Denham	12.46	269	Pn	Pn	22 26 09.7	+2.0
BBSR	BB Station	13.47	359	Pn	Pn	22 26 18.8	-2.6
OCAC	Ocana	13.63	221	P	P	22 26 29.9	-2.8
PAMC	Pamplona, Colo	13.99	216	P	Pn	22 26 30.9	+1.9
BARC	Barichara	14.87	216	P	Pn	22 26 41.3	+0.5
MGV	Manicaragua	14.94	285	*i* P	Pn	22 26 37.5	-4.0
MGV				IAmb	IAmb	22 26 51.1	
	comp=Z,15nm,0.8s						
RUSC	La Rusia	15.40	214		Pn	22 26 49.0	+1.0
RUSC				IAmb	IAmb	22 27 18.0	
	comp=Z,34nm,0.9s						
RUSC	La Rusia	15.40	214	P	Pn	22 26 49.0	+1.0
PTBC	PUERTO BERRIO,	15.66	220	P	P	22 26 53.3	-1.8
SPBC	San Pablo de B	16.14	217	P	Pn	22 26 58.6	+1.3
CAMR	Camarioca	16.38	288	Pn	Pn	22 27 01.2	+1.0
CAMR				IAmb	IAmb	22 27 07.6	
	comp=Z,50nm,0.9s						
DBBC	Dabeiba	16.43	226	P	P	22 27 06.5	+2.8
HELC	Santa Helena	16.59	222	P	P	22 27 07.0	+1.2
NORC	Norcasia	16.68	219	P	P	22 27 06.8	+0.4
061Z	Ochoppi	16.77	298	Pn	Pn	22 27 06.2	+1.1
061Z				IAmb	IAmb	22 27 21.1	
	comp=Z,83nm,1.1s						
061Z	Ochoppi	16.77	298	*i* P	P	22 27 07.6	+0.3
061Z				IAmb	IAmb	22 27 21.2	
	comp=Z,63nm,1.1s						
BOAV	Boa Vista	16.79	166		Pn	22 27 04.2	-1.2
CHIC	Chingaza	16.80	214	P	P	22 27 07.8	-0.4
ROSC	El Rosal	16.95	216	P	P	22 27 10.8	+1.0
	comp=Z,0.8nm,0.3s,baz=222,slow=23,SNR=5.3						
ROSC				LR	LR	22 34 29.0	
	comp=Z,164nm,19.5s,baz=58,slow=40						
	comp=Z,10nm,0.6s						
ROSC	El Rosal	16.95	216		P	22 27 09.0	-0.7
ROSC	El Rosal	16.95	216	P	P	22 27 11.4	+1.6
CBOC	Ciudad Bolivar	17.15	223	P	P	22 27 15.9	+4.1
	comp=Z,17nm,0.9s						
VILC	Villavicencio,	17.22	213	P	P	22 27 12.9	+0.4
	comp=Z,35nm,0.6s						
GUY2C	Guyana, Caldas	17.25	220	P	P	22 27 13.9	+0.8
	comp=Z,368nmcomp=Z,40nm,0.7s						
SOR	Soroa	17.82	286		P	22 27 19.4	+0.4
MDP	Montagnes des	17.85	138	P	P	22 27 19.2	-0.1
	comp=Z,1.2nm,0.3s,baz=325,slow=11,SNR=21						
MDP				LR	LR	22 34 37.5	
	comp=Z,101nm,21.0s,baz=2.0,slow=38						
	comp=Z,11nm,0.6s						
DWPF	Disney Wildern	18.11	304		P	22 27 23.7	+1.5
DWPF				IAmb	IAmb	22 27 37.1	
	comp=Z,34nm,0.7s						
Y60A	Bolivia	19.48	324	P	P	22 27 36.8	-0.3
V61A	Roper	20.01	330	P	Pn	22 27 44.3	-0.3
BRU2	Volcan	20.34	243		Pn	22 27 48.9	-0.1
BRU2				IAmb	IAmb	22 27 55.0	
	comp=Z,47nm,0.9s						
W57A	Gilead	21.32	323		P	22 27 58.1	+1.1
W57A				IAmb	IAmb	22 28 26.6	
	comp=Z,16nm,0.6s						
TIGA	Tifton	21.37	310	P	P	22 27 59.2	+1.5
T59A	Double "B" Far	21.43	330	P	P	22 27 58.3	+0.1
JTS	Las Juntas de	21.60	250	P	P	22 28 01.4	+1.1
	comp=Z,7.5nm,0.8s,baz=45,slow=18,SNR=3.8						
	comp=Z,7.5nm,0.8s						
JTS	Las Juntas de	21.60	250	P	P	22 28 02.1	+1.8
JTS				IAmb	IAmb	22 28 18.4	
	comp=Z,29nm,1.1s						
154A	Montrose	21.67	313	P	P	22 28 02.9	+2.0
HODGE	Hodges	22.07	318	P	P	22 28 06.8	+1.6
HODGE				IAmb	IAmb	22 28 39.0	
	comp=Z,13nm,0.5s						
JUD3	Juan Diaz 3	22.18	250	P	P	22 28 06.7	+0.1
GOGA	Godfrey	22.37	314	P	P	22 28 11.0	+2.6
GOGA				IAmb	IAmb	22 28 13.1	
	comp=Z,16nm,1.0s						
TEIG	Tepich	22.53	277	P	P	22 28 10.4	+0.3
TEIG				IAmb	IAmb	22 28 25.1	
	comp=Z,13nm,0.8s						
OTAV	Otavalo	23.06	218	P	P	22 28 17.0	+0.7
OTAV				IAmb	IAmb	22 28 30.4	
	comp=Z,10nm,0.8s						
SLOR	San Lorenzo -	23.87	217	P	P	22 28 26.1	+1.8
TKL	Tuckaleechee C	23.94	318	LR	LR	22 37 49.0	
	comp=Z,79nm,20.6s,baz=140,slow=37						
TKL	Tuckaleechee C	23.94	318	P	P	22 28 25.6	+1.3
PETF	Flores	24.29	269	P	P	22 28 29.7	+2.0
PETF				IAmb	IAmb	22 28 31.3	
	comp=Z,23nm,0.8s						
MTO3	Montecristo	24.30	263	P	P	22 28 30.2	+2.1

MTO3				IAmb	IAmb	22 28 45.1	
	comp=Z,19nm,1.1s						
FPAL	Fort Paine	24.48	314	P	P	22 28 30.6	+1.3
SSPA	Standing Stone	24.61	335	P	P	22 28 31.7	+1.3
SSPA				IAmb	IAmb	22 29 08.5	
	comp=Z,11nm,0.7s						
LRAL	Lakeview Retre	24.67	309		P	22 28 32.9	+1.9
LRAL				IAmb	IAmb	22 28 35.8	
	comp=Z,16nm,0.9s						
WVT	Waverly	26.87	315	P	P	22 28 52.4	+1.4
CZSB	Cruzeiro do Su	27.64	198	P	P	22 28 57.5	-0.5
SADO	Sadowa	28.62	338	LR	LR	22 39 18.9	
	comp=Z,119nm,21.9s,baz=174,slow=34						
CMIG	Matias Romero	29.02	271	LR	LR	22 40 49.4	
	comp=Z,65nm,21.7s,baz=14,slow=36						
ATAH	Atahualpa	29.26	209	LR	LR	22 42 55.9	
	comp=Z,61nm,20.5s,baz=37,slow=40						
WHAR	Wooly Hollow	29.60	309		P	22 29 16.9	+1.6
WHAR				IAmb	IAmb	22 29 30.4	
	comp=Z,9.3nm,1.0s						
X40A	Basin Creek Fa	29.66	307	P	P	22 29 17.4	+1.5
CCM	Cathedral Cave	30.21	315	P	P	22 29 21.6	+0.9
CCM				IAmb	IAmb	22 29 23.2	
	comp=Z,12nm,1.1s						
MGMO	Mountain Grove	30.45	313	P	P	22 29 24.3	+1.4
MGMO				IAmb	IAmb	22 29 25.6	
	comp=Z,10nm,0.9s						
HHAR	Hobbs	31.24	310		P	22 29 30.2	+0.4
HHAR				IAmb	IAmb	22 29 33.9	
	comp=Z,5.1nm,0.8s						
DEOK	Depew	32.95	307	P	P	22 29 45.8	+1.0
OK052	Battle Ridge R	33.24	308	P	P	22 29 49.1	+1.7
WMOK	Wichita Mounta	34.32	304	P	P	22 29 57.9	+1.1
WMOK				IAmb	IAmb	22 29 59.9	
	comp=Z,3.3nm,0.6s						
DRIO	Del Rio	34.55	295		P	22 29 59.3	+0.4
DRIO				IAmb	IAmb	22 30 01.1	
	comp=Z,5.4nm,0.9s						
LPAZ	La Paz	35.10	186	P	P	22 30 05.2	+0.9
	comp=Z,2.1nm,0.8s,baz=4.5,slow=9.0,SNR=7.1						
	comp=Z,2.1nm,0.8s						
LPAZ	La Paz	35.10	186	P	P	22 30 03.6	-0.7
LPAZ				IAmb	IAmb	22 30 19.8	
	comp=Z,4.9nm,0.8s						
SCHQ	Schefferville	35.97	358	P	P	22 30 11.4	+0.6
	comp=Z,5.6nm,0.8s,baz=173,slow=7.3,SNR=5.8						
SCHQ				LR	LR	22 43 17.2	
	comp=Z,48nm,19.2s,baz=250,slow=34						
	comp=Z,5.6nm,0.8s						
CBKS	Cedar Bluff	36.48	311		P	22 30 16.4	+1.0
ECSD	EROS Data Cent	36.67	320		P	22 30 17.6	+0.7
ECSD				IAmb	IAmb	22 30 19.3	
	comp=Z,4.2nm,0.7s						
TXAR	Lajitas Array	37.17	294	P	P	22 30 23.1	+1.6
	comp=Z,3.5nm,0.8s,baz=116,slow=11,SNR=34						
TXAR				PcP	PcP	22 32 42.6	+1.1
	comp=Z,0.6nm,0.6s,baz=112,slow=4.4,SNR=3.7						
	comp=Z,3.5nm,0.8s						
TXAR	Lajitas Array	37.17	294		P	22 30 22.2	+0.7
BDFB	Brasilia	37.88	154	P	P	22 30 28.5	+1.0
	comp=Z,1.9nm,0.6s,baz=339,slow=7.7,SNR=3.9						
BDFB				LR	LR	22 46 32.0	
	comp=Z,77nm,20.6s,baz=342,slow=37						
	comp=Z,1.9nm,0.6s						
BDFB	Brasilia	37.88	154	P	P	22 30 27.0	-0.5
BDFB				IAmb	IAmb	22 30 36.5	
	comp=Z,6.9nm,1.1s						
VHRN	Van Horn	38.50	296		P	22 30 34.3	+1.6
VHRN				IAmb	IAmb	22 30 36.0	
	comp=Z,11nm,0.9s						
GO01	Chusmiza	38.56	187	P	P	22 30 33.2	-0.4
GO01				IAmb	IAmb	22 30 44.9	
	comp=Z,7.8nm,0.6s						
EPLO	Experimental L	38.69	329	P	P	22 30 34.4	+0.6
T25A	Trinidad	39.39	306		P	22 30 41.5	+1.3
ULM	Lac du Bonnet	40.11	329	P	P	22 30 45.5	-0.2
	comp=Z,2.8nm,0.6s,baz=123,slow=9.7,SNR=4.5						
ULM				LR	LR	22 46 38.2	
	comp=Z,92nm,21.7s,baz=186,slow=35						
	comp=Z,2.8nm,0.6s						
ULM	Lac du Bonnet	40.11	329	P	P	22 30 45.5	-0.2
SDCO	Great Sand Dun	40.40	306		P	22 30 49.8	+1.2
ANMO	Albuquerque	40.46	302	LR	LR	22 51 08.2	
	comp=Z,62nm,18.6s,baz=99,slow=42						
PB07	IPOC Station P	40.67	188	P	P	22 30 49.3	-1.5
PB07				IAmb	IAmb	22 31 06.5	
	comp=Z,9.2nm,0.8s						
RSSD	Black Hills	41.57	316		P	22 30 59.0	+0.8
TUC	Tucson	43.60	297		P	22 31 15.9	+1.3
RDMU	Red Mountain	44.21	309	P	P	22 31 21.0	+1.4
RDMU				IAmb	IAmb	22 31 22.4	
	comp=Z,7.9nm,1.0s						
PD31	Pinedale Array	44.84	312		P	22 31 26.2	+1.5
PDAR	Pinedale Array	44.84	312	P	P	22 31 25.8	+1.2
	comp=Z,17nm,0.9s,baz=114,slow=9.0,SNR=92						
PDAR				PcP	PcP	22 33 06.7	+0.3
	comp=Z,1.7nm,0.7s,baz=107,slow=3.7,SNR=5.0						
PDAR				LR	LR	22 51 54.8	
	comp=Z,38nm,19.5s,baz=90,slow=38						
PDAR	Pinedale Array	44.84	312	P	P	22 31 26.1	+1.5
PDAR					PcP	22 33 06.3	-0.1
FRB	Frobisher Bay	44.96	357	LR	LR	22 48 18.7	
	comp=Z,51nm,19.1s,baz=118,slow=34						
BSUT	Blindstream Ca	45.08	309		P	22 31 28.1	+1.4
BSUT				IAmb	IAmb	22 31 30.0	
	comp=Z,7.0nm,0.9s						
CPUP	Villa Florida	45.43	171	LR	LR	22 53 30.5	
	comp=Z,7.2nm,19.1s,baz=212,slow=40						
CPUP	Villa Florida	45.43	171	P	P	22 31 27.8	-1.2
PIX	Pinacate	45.80	296	P	P	22 31 33.8	+1.6
LOHW	Long Hollow	45.82	313	P	P	22 31 33.7	+1.3
LOHW				IAmb	IAmb	22 31 35.3	
	comp=Z,9.9nm,0.7s						
HWUT	Hardware Ranch	45.94	310		P	22 31 33.8	+0.4
HWUT				IAmb	IAmb	22 31 36.0	
	comp=Z,7.9nm,0.8s						
YHH	Holmes Hill	46.36	315		P	22 31 38.5	+1.8
QLMT	Earthquake Lak	46.76	314	P	P	22 31 42.2	+2.4
BOZ	Bozeman (W)	47.13	315	P	P	22 31 43.9	+1.3
BOZ				IAmb	IAmb	22 31 45.8	
	comp=Z,8.3nm,0.8s						
MCMT	McKenzie Canyo	47.72	314	P	P	22 31 49.0	+1.7
BCYI	Bear Canyon	47.96	313		P	22 31 51.3	+2.1
BCYI				IAmb	IAmb	22 31 52.2	
	comp=Z,7.7nm,1.1s						
HLID	Hailey	48.47	312	P	P	22 31 54.8	+1.7
HLID				IAmb	IAmb	22 31 56.4	
	comp=Z,5.2nm,0.8s						
PFO	Pinyon Flats O	48.47	298	LR	LR	22 55 19.7	
	comp=Z,16nm,20.2s,baz=208,slow=40						
SFJD	Kangerlussuaq	48.95	7	LR	LR	22 51 10.4	
	comp=Z,30nm,19.9s,baz=176,slow=34						
JTMT	Jette	49.54	317		P	22 32 02.5	+1.4
PLID	Pearl Lake	49.95	314		P	22 32 04.8	+0.5
PLID				IAmb	IAmb	22 32 06.7	
	comp=Z,7.8nm,0.9s						
NVAR	Mina Array Bea	50.42	305	P	P	22 32 07.3	-0.8
	comp=Z,1.1nm,0.7s,baz=85,slow=6.3,SNR=4.6						
NVAR				LR	LR	22 54 53.6	
	comp=Z,64nm,20.8s,baz=90,slow=38						
	comp=Z,1.1nm,0.7s						
NVAR	Mina Array Bea	50.42	305	P	P	22 32 09.4	+1.3
BMO	Blue Mountains	50.80	313		P	22 32 11.5	+0.9
NEW	Newport	51.52	317	LR	LR	22 55 17.9	
	comp=Z,83nm,19.9s,baz=98,slow=38						
NEW	Newport	51.52	317		P	22 32 16.8	+0.8
VA03	San Esteban	51.65	187	P	P	22 32 17.0	0.0
MT03	Universidad Ad	52.37	186	P	P	22 32 22.8	+0.4
MT13	San Alfonso	52.59	186	P	P	22 32 24.3	+0.2
LMEL	Las Melosas	52.69	186	P	P	22 32 24.9	+0.1
LMEL				IAmb	IAmb	22 32 40.4	
	comp=Z,9.2nm,0.8s						
BO04	La Punta	52.87	186	P	P	22 32 25.5	-0.5
EPH	Ephrata	52.91	316		P	22 32 26.6	+0.3
EPH				IAmb	IAmb	22 32 28.6	
	comp=Z,5.2nm,0.9s						
WIFE	Three Sisters-	53.82	311		P	22 32 35.0	+1.7
L04D	Klamath Falls	53.92	309	P	P	22 32 34.7	+0.8
L04D				IAmb	IAmb	22 32 57.5	
	comp=Z,8.9nm,1.1s						
MDT	Midelt	54.95	63	LR	LR	22 50 44.7	
	comp=Z,37nm,21.7s,baz=282,slow=30						
YKA	Yellowknife Ar	55.54	334	P	P	22 32 44.8	-0.3
	comp=Z,3.1nm,0.8s,baz=113,slow=6.7,SNR=28						
YKA				LR	LR	22 55 08.7	
	comp=Z,72nm,21.7s,baz=93,slow=35						
	comp=Z,3.1nm,0.8s						
YKA	Yellowknife Ar	55.54	334	P	P	22 32 45.2	+0.1
ESDC	Sonseca Array	55.62	54	P	P	22 32 46.5	+0.3
	comp=Z,0.9nm,0.8s,baz=272,slow=7.3,SNR=7.2						
	comp=Z,0.9nm,0.8s						
RES	Resolute Bay	58.24	351	LR	LR	22 58 42.1	
	comp=Z,40nm,18.9s,baz=27,slow=37						
DBIC	Dimbokro	59.09	93	LR	LR	22 54 39.1	
	comp=Z,64nm,20.6s,baz=292,slow=32						
BBB	Bella Bella	59.25	320	LR	LR	23 00 45.3	
	comp=Z,40nm,18.3s,baz=90,slow=38						
PLCA	Paso Flores	59.54	185	P	P	22 33 14.8	+1.2
	comp=Z,1.1nm,0.7s,baz=289,slow=6.6,SNR=3.9						
PLCA				LR	LR	23 02 11.9	
	comp=Z,26nm,19.4s,baz=42,slow=39						
	comp=Z,1.1nm,0.7s						
PLCA	Paso Flores	59.54	185	P	P	22 33 13.5	-0.1
DLBC	Dease Lake	61.40	327	LR	LR	23 02 22.0	
	comp=Z,48nm,18.5s,baz=95,slow=38						
TORD	Torodi Ar. Bea	63.50	84	P	P	22 33 40.1	-0.7
	comp=Z,2.0nm,0.3s,baz=290,slow=7.1,SNR=5.0						
	comp=Z,2.0nm,0.3s						
M31M	Drury Creek, Y	64.18	331	P	P	22 33 45.9	+1.3
M31M				IAmb	IAmb	22 33 47.2	
	comp=Z,8.0nm,0.9s						
NOA	NORSAR Array B	66.74	31	P	P	22 34 01.1	-0.1
	comp=Z,1.1nm,0.7s,baz=268,slow=6.5,SNR=5.0						
	comp=Z,1.1nm,0.7s						
BCAR	Beaver Creek A	67.66	331	P	P	22 34 08.0	+1.0
HFS	Hagfors	67.94	32	P	P	22 34 08.6	-0.2
	comp=Z,1.5nm,0.7s,baz=232,slow=7.1,SNR=1.1						
	comp=Z,1.5nm,0.7s						
MCARA	McCarthy VSAT	68.19	329	P	P	22 34 11.6	+1.3
GERES	GERESS Array B	68.29	44	P	P	22 34 11.4	+0.1
	comp=Z,0.6nm,0.7s,baz=263,slow=6.7,SNR=1.8						
	comp=Z,0.6nm,0.7s						
J25K	Salcha River,	69.28	333	P	P	22 34 17.2	+0.1
ILAR	Eielson Array	69.92	333	P	P	22 34 21.1	+0.1
	comp=Z,3.4nm,0.7s,baz=102,slow=4.1,SNR=59						
ILAR				LR	LR	23 04 11.0	
	comp=Z,51nm,21.9s,baz=100,slow=35						
	comp=Z,3.4nm,0.7s						
ARCES	ARCESS Array B	72.48	22	P	P	22 34 36.1	-0.4
	comp=Z,2.3nm,0.7s,baz=339,slow=5.7,SNR=4.4						
	comp=Z,2.3nm,0.7s						
ARCES	ARCESS Array B	72.48	22	P	P	22 34 36.7	+0.3
FINES	FINESS Array B	73.88	30	P	P	22 34 44.8	0.0
	comp=Z,3.3nm,0.7s,baz=289,slow=5.8,SNR=10						
	comp=Z,3.3nm,0.7s						
FINES	FINESS Array B	73.88	30	P	P	22 34 44.5	-0.2
FIA1	FINESS Array S	73.88	30	P	P	22 34 44.4	-0.4
AKASG	Malin Array Be	77.90	40	P	P	22 35 08.5	+0.5
	comp=Z,0.2nm,0.4s,baz=283,slow=4.7,SNR=1.5						
	comp=Z,0.2nm,0.4s						
BRTR	Keskin Array B	84.14	50	P	P	22 35 42.0	+0.3
	comp=Z,0.6nm,0.8s,baz=297,slow=4.5,SNR=3.9						
	comp=Z,0.6nm,0.8s						
BRTR	Keskin Array B	84.14	50	P	P	22 35 40.2	-1.5
MA2	Magadan	96.75	343	LR	LR	23 21 37.1	
	comp=Z,29nm,21.6s,baz=98,slow=36						
ASAR	Alice Springs	162.27	251	PKPab	PKPab	22 43 59.2	-0.4
	comp=Z,1.9nm,0.6s,baz=110,slow=4.6,SNR=14						
WRA	Warramunga Arr	162.27	263	PKPab	PKPab	22 43 59.3	-0.5
	comp=Z,0.7nm,0.8s,baz=85,slow=4.3,SNR=5.5						

TRN ***07*** *22:26:32.7, 19°.01N×64°.24W, h26^{km}, MD0.0, North of Anegada, V.I.*

OSPL ***07*** *22:26:36.4±1.9, 19°.27N×64°.37W, h31^{km}±999^{km}, ML3.3, Presumed earthquake*

NEIC ***07*** *22:26:40.1±2.4, 18°.5N±0°.1×64°.56W±0°.03, h23^{km}±14^{km}, ML3.3/18, Md3.5/14(RSPR), Error ellipse: s-maj=15.8km s-min=1.3km az=193.0*

RSPR ***07*** *22:26:40.1, 18°.69N×64°.44W, h10^{km}±31^{km}, MD3.5/14*

ISC 07 22:26:34.6±2.0**, 19°.0N**±0°.1×**64°.32W**±0°.04**, h26**^{km}±17^{km}**, n60,** $\sigma 1^{s}.$**30**/75**, 4C-10D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUMP	Col San Antoni	1.67	241		Pn	22 27 02.1	-0.1
HUMP					Sn	22 27 20.6	-2.1
HUMP				IAML		22 27 26.1	
	comp=N,399nm,0.2s						
HUMP				IAML		22 27 26.8	
	comp=E,361nm,0.4s						
HUMP	Col San Antoni	1.67	241	⇓iP	Pn	22 27 02.3	+0.1
HUMP	Col San Antoni	1.67	241	eS	Sn	22 27 21.6	-1.1
SABA	Saba	1.69	143		Pb	22 27 05.1	+0.1
SABA					Sn	22 27 24.0	+0.7
SABA				IAML		22 27 31.3	
	comp=N,457nm,0.6s						
SABA	Saba	1.69	143	⇑eP	Pb	22 27 07.2	+2.1
SABA	Saba	1.69	143	eS	Sn	22 27 24.2	+0.9
GCPR	Guaynabo City	1.80	249		Pn	22 27 03.6	-0.4
GCPR					Sn	22 27 23.6	-2.4
GCPR	Guaynabo City	1.80	249	⇑eP	Pn	22 27 04.3	+0.3
GCPR	Guaynabo City	1.80	249	eS	Sn	22 27 24.9	-1.1
SJG	San Juan	1.94	244		Pn	22 27 05.9	+0.1
SJG	San Juan	1.94	244	⇓eP	Pn	22 27 06.9	+1.1
SJG	San Juan	1.94	244	eS	Sn	22 27 28.9	-0.4
SJG	San Juan	1.94	244	eP	Pn	22 27 07.0	+1.2
SJG				eS	Sn	22 27 30.1	+0.7
SJG	San Juan	1.94	244	i P	Pn	22 27 06.4	+0.6
SJG				IAML		22 27 39.5	
	comp=Z,116nm,0.5s						
SEUS	St. Eustatius	1.94	139	Pn	Pb	22 27 10.2	+0.9
SEUS				IAML		22 27 36.7	
	comp=E,332nm,0.5s						
SEUS				IAML		22 27 49.6	
	comp=N,566nm,0.1s						
ECPR	Experimental S	2.04	252	⇑iP	Pn	22 27 09.0	+1.6
ECPR	Experimental S	2.04	252	eS	Sn	22 27 32.2	+0.2
EMPR	Esperanza - Ma	2.15	257		Pb	22 27 11.6	-1.3
EMPR					Sn	22 27 34.4	-0.2
EMPR	Esperanza - Ma	2.15	257	⇓eP	Pb	22 27 11.6	-1.3
EMPR	Esperanza - Ma	2.15	257	eS	Sn	22 27 34.4	-0.2
SKI	Saint Kitts	2.22	137	eP	Pn	22 27 08.9	-0.9
SKI				eS	Sn	22 27 33.5	-2.8
OBIP	Obispado Ponce	2.36	247		Pn	22 27 12.4	+0.7
OBIP					Sn	22 27 38.4	-1.4
OBIP				IAML		22 27 40.1	
	comp=E,204nm,0.4s						
OBIP				IAML		22 27 40.1	
	comp=N,292nm,0.5s						
OBIP	Obispado Ponce	2.36	247	⇑eP	Pn	22 27 12.7	+1.0
OBIP	Obispado Ponce	2.36	247	eS	Sn	22 27 39.5	-0.3
UUPR	Utuado, UPR, P	2.38	253		Pb	22 27 15.2	-1.6
UUPR					Sn	22 27 41.1	+0.7
UUPR	Utuado, UPR, P	2.38	253	⇓iP	Pb	22 27 15.2	-1.6
UUPR	Utuado, UPR, P	2.38	253	eS	Sn	22 27 41.1	+0.7
AOPR	Arecibo Observ	2.39	255		Pn	22 27 12.9	+0.8
AOPR					Sn	22 27 41.1	+0.5
AOPR				IAML		22 27 56.8	
	comp=N,398nm,0.4s						
AOPR	Arecibo Observ	2.39	255	⇓eP	Pn	22 27 13.6	+1.5
AOPR	Arecibo Observ	2.39	255	eS	Sn	22 27 43.0	+2.4
AOPR	Arecibo Observ	2.39	255	eP	Pn	22 27 13.2	+1.1
GBPR	Guanica, Bosqu	2.62	248		Pn	22 27 18.0	+2.7
GBPR	Guanica, Bosqu	2.62	248	⇓eP	Pn	22 27 18.0	+2.7
AGPR	Aguadilla, PR	2.69	260	Pn	Pn	22 27 17.0	+0.8
AGPR	Aguadilla, PR	2.69	260	⇓eP	Pn	22 27 17.4	+1.1
AGPR	Aguadilla, PR	2.69	260	eS	Sn	22 27 48.1	+0.1
AGPR	Aguadilla, PR	2.69	260	i P	Pn	22 27 17.1	+0.9
AGPR				eS	Sn	22 27 45.7	-2.3
AGPR				IAML		22 28 00.3	
	comp=Z,149nm,2.0s						
ANWB	Willy Bob	2.73	118	eP	Pn	22 27 15.9	-1.0
ANWB				eS	Sn	22 27 48.0	-1.1
LSP	Las Mesas	2.74	254		Pn	22 27 18.1	+1.2
LSP					Sn	22 27 49.0	-0.3
LSP	Las Mesas	2.74	254	⇓eP	Pn	22 27 18.1	+1.2
LSP	Las Mesas	2.74	254	eS	Sn	22 27 49.0	-0.3
MLPR	Magueyes Islan	2.77	249	⇓eP	Pn	22 27 18.8	+1.5
MLPR	Magueyes Islan	2.77	249	eS	Sn	22 27 51.0	+1.0
CRPR	Cabo Rojo, PR	2.81	251		Pn	22 27 18.8	+0.9
CRPR					Sn	22 27 50.1	-1.0
CRPR				IAML		22 28 00.9	
	comp=N,88nm,0.6s						
CRPR				IAML		22 28 11.6	
	comp=E,90nm,0.8s						
CRPR	Cabo Rojo, PR	2.81	251	⇓eP	Pn	22 27 19.1	+1.1
CRPR	Cabo Rojo, PR	2.81	251	eS	Sn	22 27 50.7	-0.4
CRPR	Cabo Rojo, PR	2.81	251	i P	Pn	22 27 19.7	+1.7
CRPR				eS	Sn	22 27 51.4	+0.4
CRPR				IAML		22 27 54.1	
	comp=Z,91nm,0.5s						
MBWH	Windy Hill	3.00	137	eP	Pn	22 27 19.6	-1.0
MLYT	Lee's Yard	3.02	137	eP	Pn	22 27 20.5	-0.3
IDE	Isla Desecheo	3.04	259		Pn	22 27 22.6	+1.5
IDE					Sn	22 27 55.8	-1.0
IDE	Isla Desecheo	3.04	259	⇑eP	Pn	22 27 22.6	+1.5
IDE	Isla Desecheo	3.04	259	eS	Sn	22 27 55.8	-1.0
DHSZ	Broadband at M	3.62	137	eP	Pn	22 27 29.2	+0.2
ATGZ	Broadband at L	3.78	139	eP	Pn	22 27 30.4	-0.8
MMLZ	Guadeloupe Bro	3.86	139	eP	Pn	22 27 32.9	+0.6
CBE	Ff, Capester	3.88	138	Pn	Pn	22 27 35.6	+3.0
TBG	Guadaloupe-3	4.02	140	eP	Pn	22 27 34.4	-0.1
DSDZ	La Diserade, G	4.08	130	eP	Pn	22 27 35.9	+0.6
DSLB	Salisbury	4.47	141	eP	Pn	22 27 41.0	+0.2
DR12	Loma Pena Alta	4.79	269	Pn	Pn	22 27 47.7	+2.5

IDC ***07*** *22:33:00.8±3.1, 35°.30S×178°.79E, h200^{km}±24^{km}, mb3.9/4, mbtmp4.5/6, Error ellipse: s-maj=36.8km s-min=19.6km az=50.0*

NEIC ***07*** *22:33:02.7±1.8, 35°.36S±0°.09×178°.6E±0°.1, h203^{km}±7^{km}, mb4.3/16, Error ellipse: s-maj=17.6km s-min=13.2km az=101.0*

WEL ***07*** *22:33:04.3±1.4, 35°S±15°×17°9E±1°3, h161^{km}±25^{km}, M4.9/85, ML4.8/9, MLv4.9/85, Error ellipse: s-maj=24.8km s-min=8.2km az=37.8, confirmed*

NOU ***07*** *22:33:06.7, 35°.79S×178°.14E, h222^{km}, mb4.5/22, Off E. Coast of N. Island, N.Z.*

ISC 07 22:33:04.2±1.0**, 35°.61S**±0°.08×**178°.46E**±0°.09**, h226**^{km}±8^{km}**, n186,** $\sigma 1^{s}.$**51**/185**, mb4.1**/12**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	1.96	184		Pn	22 33 43.9	-0.3
MXZ				Sn	Sn	22 34 13.8	-2.0
MXZ	Matakaoa Point	1.96	184	P	Pn	22 33 43.7	-0.5
MXZ	Matakaoa Point	1.96	184	S	Sn	22 34 14.7	-1.0
MXZ	Matakaoa Point	1.96	184	P	Pn	22 33 44.0	-0.2
MXZ				S	Sn	22 34 14.0	-1.7
WMGZ	Waiomatatini S	2.21	181	P	Pn	22 33 47.2	+0.5
WMGZ				S	Sn	22 34 20.6	+0.4
HAZ	Te Kaha	2.21	194	P	Pn	22 33 46.6	-0.1
PKGZ	Pakihiroa	2.28	188	P	Pn	22 33 47.7	+0.3
PKGZ				S	Sn	22 34 21.0	-0.5
RUGZ	Raukumara Rang	2.44	195	P	Pn	22 33 48.7	-0.5
RUGZ				S	Sn	22 34 23.1	-1.5
MYRZ	Mayor Island	2.45	226	P	Pn	22 33 49.7	+0.6
PUZ	Puketiti	2.47	184	P	Pn	22 33 49.2	-0.2
PUZ				S	Sn	22 34 23.9	-1.1
GRZ	Great Barrier	2.52	254	P	Pn	22 33 48.4	-1.5
WHRZ	Whale Island	2.54	208	P	Pn	22 33 51.4	+1.2
WHRZ				S	Sn	22 34 27.9	+1.5
TWGZ	Tauwhareparae	2.59	188	P	Pn	22 33 51.3	+0.5
OPRZ	Ohinepanea	2.71	214	P	Pn	22 33 53.2	+1.3
TGRZ	Tauranga	2.76	219	P	Pn	22 33 54.1	+1.6
MARZ	Manawahe	2.77	211	P	Pn	22 33 54.1	+1.4
EDRZ	Edgecumbe	2.85	208	P	Pn	22 33 54.5	+0.9
URZ	Urewera	2.86	202	P	Pn	22 33 53.3	-0.2
	265nm,0.3s,baz=250,slow=3.5,SNR=517						
URZ				S	Sn	22 34 29.0	-3.5
	664nm,0.3s,baz=308,slow=1.9,SNR=20						
URZ	Urewera	2.86	202	P	Pn	22 33 53.2	-0.4
URZ	Urewera	2.86	202	S	Sn	22 34 29.6	-3.0
URZ	Urewera	2.86	202	P	Pn	22 33 53.5	-0.1
TKGZ	Te Karaka	2.87	190	P	Pn	22 33 53.8	+0.1
CNGZ	Carnagh Statio	2.88	184	P	Pn	22 33 54.2	+0.4
LIRZ	Lichensteins R	2.92	214	P	Pn	22 33 56.2	+1.9
WIAZ	Waiheke Island	2.94	245	P	Pn	22 33 54.4	-0.1
KARZ	Kaharoa	2.99	216	P	Pn	22 33 57.1	+2.0
RAGZ	Rawiri	3.00	196	P	Pn	22 33 55.7	+0.4
OMRZ	Omania	3.00	213	P	Pn	22 33 56.7	+1.5
KMRZ	Kaimai	3.01	221	P	Pn	22 33 57.3	+1.9
MKAZ	Moumakai	3.05	240	P	Pn	22 33 55.9	+0.2
TARZ	Mount Tarawera	3.06	210	P	Pn	22 33 57.6	+1.7
NGRZ	Ngongotaha	3.09	215	P	Pn	22 33 58.6	+2.4
ABAZ	Army Bay	3.10	250	P	Pn	22 33 56.3	0.0
MBAZ	Motutapu North	3.10	247	P	Pn	22 33 56.4	0.0
HLRZ	Highlands Stat	3.13	212	P	Pn	22 33 58.3	+1.6
RRRZ	Republican Roa	3.14	209	P	Pn	22 33 57.8	+1.0
UTU	Utuhina	3.14	215	P	Pn	22 34 00.1	+3.3
RIGZ	Rimuhau	3.14	190	P	Pn	22 33 56.7	-0.1
ETAZ	East Tamaki Re	3.15	244	P	Pn	22 33 57.2	+0.3
MUGZ	Murupara	3.17	205	P	Pn	22 33 57.4	+0.3
TOZ	Tahuroa Road	3.19	227	Pn	Pn	22 33 58.1	+0.8
TOZ	Tahuroa Road	3.19	227	P	Pn	22 33 58.4	+1.2
RTZ	Ruatahuna	3.23	201		Pn	22 33 57.4	-0.4
RTZ	Ruatahuna	3.23	201	P	Pn	22 33 57.7	-0.2
HSRZ	Hossack Road	3.23	213	P	Pn	22 34 00.3	+2.5
EPAZ	Eden Park BICE	3.26	246	P	Pn	22 33 58.6	+0.4
HBAZ	Herne Bay Bore	3.26	247	P	Pn	22 33 58.7	+0.6
HRRZ	Handcock Road	3.28	211	P	Pn	22 33 59.7	+1.3
SNGZ	Shannon Statio	3.29	195	P	Pn	22 33 59.1	+0.6
PRRZ	Plateau Road	3.33	209	P	Pn	22 33 59.6	+0.7
PRGZ	Paritu Road	3.34	188	P	Pn	22 33 58.7	-0.4
RVAZ	Riverhead Bore	3.35	249	P	Pn	22 33 59.4	+0.3
WCZ	Waipu Caves	3.36	263	P	Pn	22 33 58.1	-1.2
ALRZ	Allen Road	3.40	209	P	Pn	22 34 00.5	+0.7
AWAZ	Awhitu Peninsu	3.41	244	P	Pn	22 34 00.3	+0.5
WTAZ	Waiatarua	3.41	246	P	Pn	22 34 00.4	+0.5
WPRZ	Whakapapatarin	3.44	212	P	Pn	22 34 01.5	+1.3
KNZ	Kokohu	3.47	190	P	Pn	22 33 59.9	-0.6
RAHZ	Arahi	3.48	198	P	Pn	22 34 00.7	0.0
MTHZ	Maungataniwha	3.49	201	P	Pn	22 34 00.7	-0.1
KUTZ	Kaahu Road	3.57	215	P	Pn	22 34 03.5	+1.8
MHGZ	Mahia Peninsul	3.57	187	P	Pn	22 34 01.5	-0.2
TLZ	Tolley Road	3.59	220	P	Pn	22 34 04.3	+2.3
WHHZ	Waihua	3.60	195	P	Pn	22 34 02.3	+0.2
MRHZ	Matea Rd	3.61	206	P	Pn	22 34 02.2	0.0
WHTZ	Whakaora	3.65	212	P	Pn	22 34 04.4	+1.7
NMHZ	Naumai	3.73	200	P	Pn	22 34 04.0	+0.3
HATZ	Hinemaiaia	3.78	209	P	Pn	22 34 04.5	+0.2
WATZ	Wairara	3.79	214	P	Pn	22 34 05.7	+1.3
ARHZ	Aropaoanui	3.83	197	P	Pn	22 34 04.6	-0.2
BKZ	Black Stump Fm	3.88	203	P	Pn	22 34 05.2	-0.3
BKZ	Black Stump Fm	3.88	203	S	Sn	22 34 50.7	-3.4
BKZ	Black Stump Fm	3.88	203	P	Pn	22 34 05.3	-0.3
RATZ	Rangitukua	3.90	213	P	Pn	22 34 06.5	+0.8
RITZ	Rihia Road	3.95	211	P	Pn	22 34 07.0	+0.7
OUZ	Omahuta	3.99	274	P	Pn	22 34 05.1	-1.7
OUZ	Omahuta	3.99	274	P	Pn	22 34 05.2	-1.7
KATZ	Kakaramea	4.02	212	P	Pn	22 34 07.9	+0.6
MCHZ	McNeill Hill	4.08	200	P	Pn	22 34 07.7	-0.2
HIZ	Hauiti	4.09	224	P	Pn	22 34 10.2	+2.2
HIZ	Hauiti	4.09	224	P	Pn	22 34 10.1	+2.2
NTVZ	North Tongarir	4.13	212	P	Pn	22 34 09.1	+0.5
TMVZ	Te Maari	4.13	211	P	Pn	22 34 08.9	+0.3
KWHZ	Kaweka Forest	4.14	202	P	Pn	22 34 08.2	-0.4
KRVZ	Karewarewa	4.14	212	P	Pn	22 34 09.3	+0.5
ETVZ	East Tongariro	4.15	211	P	Pn	22 34 09.0	+0.2
WTVZ	West Tongariro	4.18	212	P	Pn	22 34 09.6	+0.4
NNVZ	North Ngauruho	4.18	212	P	Pn	22 34 09.8	+0.6
OTVZ	Oturere	4.19	211	P	Pn	22 34 09.6	+0.2
CKHZ	Cape Kidnapper	4.19	195	P	Pn	22 34 08.4	-0.8
SNVZ	South Ngauruho	4.22	211	P	Pn	22 34 10.0	+0.2
NGZ	Ngauruhoe	4.23	212	P	Pn	22 34 10.3	+0.5
COVZ	Chateau Observ	4.27	212	P	Pn	22 34 10.9	+0.6
FWVZ	Far West T-bar	4.31	212	P	Pn	22 34 11.0	+0.1
MAVZ	Matarangi	4.32	211	P	Pn	22 34 11.1	0.0
WHVZ	Whangaehu Hut	4.32	211	P	Pn	22 34 10.9	-0.1
TRVZ	Turoa	4.35	211	P	Pn	22 34 11.3	-0.1
WNVZ	Wahianoa	4.36	211	P	Pn	22 34 11.1	-0.3
KRHZ	Kereru	4.36	202	P	Pn	22 34 10.3	-1.0
MOVZ	Moawhango	4.36	209	P	Pn	22 34 10.4	-0.9
KAHZ	Kahuranaki	4.37	196	P	Pn	22 34 10.7	-0.6
VRZ	Vera Road	4.58	219	P	Pn	22 34 15.5	+1.5
PXZ	Pawanui	4.59	195	P	Pn	22 34 12.9	-1.3
PNHZ	Pukenui	4.66	202	P	Pn	22 34 13.4	-1.5
WPHZ	Waipukurau	4.73	199	P	Pn	22 34 14.8	-1.0
TSZ	Takapari Road	4.87	203	P	Pn	22 34 15.8	-1.8
PRHZ	Porangahau	4.87	197	P	Pn	22 34 16.4	-1.1
WAZ	Wanganui	4.97	213	P	Pn	22 34 18.9	0.0
DVHZ	Dannevirke	5.02	200	P	Pn	22 34 17.7	-1.7
PKE	Pukeiti	5.05	223	P	Pn	22 34 22.1	+2.3
ANWZ	Angora Road	5.09	197	P	Pn	22 34 19.2	-1.1
KHEZ	Kahui Hut	5.10	223	P	Pn	22 34 22.4	+1.8
POWZ	Post Office Ro	5.23	203	P	Pn	22 34 20.7	-1.3
PRWZ	Pori Road	5.32	201	P	Pn	22 34 21.8	-1.3

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BFZ   Birch Farm         5.36 198          Pn       22 34 22.0  -1.6
BFZ   Birch Farm         5.36 198   P      Pn       22 34 21.9  -1.8
BFZ   Birch Farm         5.36 198   P      Pn       22 34 22.0  -1.6
MRZ   Mangatainoka R     5.53 203   P      Pn       22 34 23.5  -2.4
TIWZ  Tintock            5.54 201   P      Pn       22 34 24.5  -1.6
OGWZ  Otaki Gorge        5.81 205   P      Pn       22 34 27.0  -2.4
TMWZ  Te Maipa           5.85 199   P      Pn       22 34 28.1  -1.8
KIW   Kapiti Island      5.94 207   P      Pn       22 34 28.7  -2.3
MTW   Mount Morrison     6.01 202   P      Pn       22 34 29.1  -2.8
CAW   Cannon Point       6.11 205   P      Pn       22 34 30.5  -2.5
TRWZ  Traveller          6.18 200   P      Pn       22 34 31.7  -2.3
PAWZ  Paruwai Farm       6.24 201   P      Pn       22 34 32.3  -2.5
DUWZ  D'Urville Isla     6.30 213   P      Pn       22 34 33.5  -2.1
MSWZ  Moikau Station     6.32 202   P      Pn       22 34 32.9  -3.0
WEL   Wellington         6.37 206   P      Pn       22 34 34.2  -2.1
SNZO  South Karori       6.41 206   P      Pn       22 34 34.4  -2.5
BHW   Baring Head        6.44 205   P      Pn       22 34 34.3  -3.0
QRZ   Quartz Range       7.00 220   P      Pn       22 34 42.6  -1.8
THZ   Tophouse           7.53 214   P      Pn       22 34 48.8  -2.5
KHZ   Kahutara           7.80 208   P      Pn       22 34 51.6  -3.1
LTZ   Lake Taylor        8.62 212   P      Pn       22 35 02.1  -3.3
CTZ   Chatham Island     8.96 156   Pn     Pn       22 35 12.7  +3.1
CTZ   Chatham Island     8.96 156   P      Pn       22 35 13.1  +3.5
CTZ   Chatham Island     8.96 156   P      Pn       22 35 13.2  +3.6
OXZ   Oxford             9.17 211   P      Pn       22 35 08.8  -3.5
ODZ   Otahua Downs      11.15 210   P      Pn       22 35 35.3  -2.2
SYZ   Scrubby Hill      12.98 210   P      Pn       22 35 59.6  -0.7
DZM   Mont Dzumac       17.09 319   P      Pn       22 36 47.6  -2.7
      14nm,0.8s,baz=352,slow=24,SNR=9.1
DZM   Mont Dzumac       17.09 319   P      P        22 36 45.8  -2.7
DZM                                 IAmb   IAmb     22 36 51.2
      comp=Z,18nm,0.9s
ARMA  Armidale          23.05 275   P      P        22 37 50.7  +0.8
ARMA                                IAmb   IAmb     22 38 03.9
      comp=Z,6.2nm,1.1s
EIDS  Eidsvold          25.63 286   P      P        22 38 13.0  -0.1
EIDS                                IAmb   IAmb     22 38 28.0
      comp=Z,3.5nm,1.0s
CTA   Charters Tower    32.22 290   P      P        22 39 13.1  +1.7
CTAO  Charters Tower    32.22 290   P      P        22 39 12.2  +0.8
CTAO  Charters Tower    32.22 290   P      P        22 39 13.1  +1.7
INKA  Innaminka         32.88 273   P      P        22 39 17.9  +0.9
INKA                                IAmb   IAmb     22 39 19.8
      comp=Z,2.3nm,0.6s
MTSU  Mount Surprise    34.85 291   P      P        22 39 35.4  +1.3
QIS   Mount Isa         37.15 283   P      P        22 39 54.7  +1.1
COEN  Coen              38.30 295   P      P        22 40 03.5  +0.3
COEN                                IAmb   IAmb     22 40 04.9
      comp=Z,16nm,0.8s
COEN  Coen              38.30 295   P      P        22 40 04.0  +0.8
PMG   Port Moresby      38.63 305   P      P        22 40 06.4  +0.5
RABL  Rabaul            39.58 316   P      P        22 40 13.9  +0.1
AS31  Alice Springs     40.20 275   P      P        22 40 18.9   0.0
ASAR  Alice Springs     40.20 275   P      P        22 40 19.6  +0.8
      comp=Z,4.1nm,0.7s,baz=112,slow=7.9,SNR=49
      comp=Z,4.1nm,0.7s
ASAR  Alice Springs     40.20 275   P      P        22 40 19.2  +0.3
WRAB  Tennant Creek     41.68 280   P      P        22 40 31.2  +0.3
WRA   Warramunga Arr    41.68 280   P      P        22 40 31.2  +0.3
      comp=Z,6.8nm,0.5s,baz=119,slow=7.8,SNR=62
      comp=Z,6.8nm,0.5s
WRA   Warramunga Arr    41.68 280          P        22 40 30.7  -0.3
WB0   Warramunga Arr    41.73 280   P      P        22 40 31.5  +0.2
WB0                                 IAmb   IAmb     22 40 32.5
      comp=Z,11nm,1.1s
FORT  Forrest           42.08 262   P      P        22 40 34.4  +0.4
FORT                                IAmb   IAmb     22 41 03.0
      comp=Z,11nm,1.0s
FITZ  Fitzroy Crossi    49.66 276   P      P        22 41 33.7  +0.5
QSPA  South Pole Qui    54.52 180   P      P        22 42 13.4  +5.0
      comp=Z,3.6nm,0.6s,baz=12,slow=0.9,SNR=45
QSPA  South Pole Qui    54.52 180   P      P        22 42 13.1  +4.6
QSPA                                IAmb   IAmb     22 42 14.4
      comp=Z,4.2nm,0.7s
SNAA  Sanae             73.02 180   P      P        22 44 11.2  +2.4
      comp=Z,0.7nm,0.7s,baz=220,slow=6.2,SNR=7.9
      comp=Z,0.7nm,0.7s
SNAA  Sanae             73.02 180   P      P        22 44 11.4  +2.6
H03S2 Juan Fernandez    80.03 124   T      T        00 12 25.1
      baz=230
H03S1 Juan Fernandez    80.04 124   T      T        00 12 16.2
      baz=230
H03S3 Juan Fernandez    80.05 124   T      T        00 12 31.8
      baz=230
H03N3 Juan Fernandez    80.26 124   T      T        00 12 32.3
      baz=234,slow=72,SNR=7.3
H03N2 Juan Fernandez    80.26 124   T      T        00 12 30.6
      baz=234,slow=72,SNR=5.4
H03N1 Juan Fernandez    80.27 124   T      T        00 12 32.2
      baz=234,slow=72,SNR=6.3
PEA0B Petropavlovsk-    90.17 348   P      P        22 45 38.2   0.0
PETK  Petropavlovsk-    90.17 348   P      P        22 45 38.1  -0.2
      comp=Z,1.3nm,0.5s,baz=173,slow=6.9,SNR=1.2
      comp=Z,1.3nm,0.5s
PETK  Petropavlovsk-    90.17 348   P      P        22 45 38.6  +0.4
HHC   Hu-ho-hao-te      97.76 315  eP      Pdif     22 46 16.3  +2.8
HHC                                 pmax   pmax
      comp=Z,9.0nm,0.6s
HHC                                 pmax   pmax
      comp=Z,51nm,4.4s
ARCES ARCESS Array B   142.92 345   PKP    PKPdf    22 52 07.0  -2.7
      comp=Z,3.2nm,0.9s,baz=5.2,slow=2.4,SNR=5.8
FINES FINESS Array B   148.79 335   PKPbc  PKPbc    22 52 23.3  -0.7
      comp=Z,2.1nm,0.5s,baz=43,slow=4.7,SNR=22
MMAI  Mount Meron Ar   149.49 276   PKPbc  PKPbc    22 52 26.0  -0.7
      comp=Z,0.6nm,0.4s,baz=71,slow=5.7,SNR=2.0
DBIC  Dimbokro         151.04 173   PKPbc  PKPbc    22 52 29.9  -1.0
      comp=Z,1.1nm,0.4s,baz=221,slow=2.8,SNR=4.3
BRTR  Keskin Array B   151.96 289   PKPbc  PKPbc    22 52 31.6  -0.7
      comp=Z,0.6nm,0.6s,baz=146,slow=3.8,SNR=4.5
AKASG Malin Array Be   153.20 314   PKPbc  PKPbc    22 52 34.1  -0.4
      comp=Z,1.2nm,0.8s,baz=60,slow=0.7,SNR=1.7
HFS   Hagfors          153.55 343   PKPbc  PKPbc    22 52 33.1  -1.9
      comp=Z,4.0nm,1.0s,baz=316,slow=4.0,SNR=1.5
TORD  Torodi Ar. Bea   157.45 188   PKPab  PKPab    22 53 07.0  +0.7
      comp=Z,3.0nm,0.5s,baz=171,slow=4.5,SNR=3.7
```

IDC 07 22:49:16.9±6.5**, 20°.44S**×**177°.31E, h0**^{km}**, mb3.7**/3**, mbtmp3.7**/3**, MS2.5**/1**, Error ellipse: s-maj=277.6km s-min=41.5km az=147.0, South of Fiji Islands**

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Code  Station Name       Δ°   AZ°    Phase ID            Time     Res
                                    Op     ISC       h  m  s     ISC
RAR   Rarotonga         21.43  96   LR     LR       23 00 30.9
      comp=Z,12nm,20.4s,baz=68,slow=31
ASAR  Alice Springs     40.25 257   P      P        22 56 56.0  +0.1
      1.2nm,0.6s,baz=99,slow=8.0,SNR=14
      1.2nm,0.6s
WRA   Warramunga Arr    40.25 263   P      P        22 56 55.4  -0.4
      0.4nm,0.6s,baz=97,slow=7.8,SNR=6.7
      0.4nm,0.6s
ILAR  Eielson Array     89.29  15   P      P        23 02 14.5   0.0
      0.3nm,0.7s,baz=224,slow=3.8,SNR=2.3
      0.3nm,0.7s
```

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*IDC **07** 22:49:47.9±0.8, 26°.78N×67°.42E, h0^{km}, mb3.8/16, mbtmp3.8/17, ML3.9/1, MS3.3/4, Error ellipse: s-maj=19.8km s-min=18.1km az=33.0*

ISC 07 22:49:49.4±0.7**, 26°.86N**±0°.09×**67°.44E**±0°.09**, h10**^{km}**, n51, σ1**^{s}**40**/42**, mb3.7**/16**, MS3.3**/4**, Pakistan**

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Code  Station Name       Δ°   AZ°    Phase ID            Time     Res
                                    Op     ISC       h  m  s     ISC
NGCH  Negor - Chabah     5.86 257   P      Pn       22 51 15.8  -0.6
      SNR=12
JLN   Jalan Bani Buh     8.68 239   P      Pn       22 51 52.7  -2.4
JLN                                 S      Sn       22 53 17.1   -16
WSAR  Wadi Sarin         8.76 248   P      Pn       22 51 54.2  -2.1
WSAR                                S      Sn       22 53 13.4   -22
WBK   Wadi Bani Khal     8.78 243   P      Pn       22 51 55.0  -1.6
WBK                                 S      Sn       22 53 18.2   -17
BIDO  Bidbid             9.07 251   P      Pn       22 52 00.4   0.0
BIDO                                S      Sn       22 53 23.3   -19
SMDO  Samad              9.32 248   P      Pn       22 52 04.5  +0.4
SMDO                                S      Sn       22 53 34.2   -15
JMDO  Jabal Madar        9.60 244   P      Pn       22 52 07.1  -0.6
JMDO                                S      Sn       22 53 39.4   -16
BANOM Banah             10.04 267   P      Pn       22 52 13.4  -0.3
BANOM                               S      Sn       22 53 54.3   -12
BANOM Banah             10.04 267   P      Pn       22 52 11.8  -2.0
MDH   Madha             10.14 264   P      Pn       22 52 13.8  -1.4
MDH                                 S      Sn       22 53 55.8   -13
SHME  Shamm             10.16 268   P      Pn       22 52 16.4  +1.0
SHME  Shamm             10.16 268   P      Pn       22 52 14.5  -0.9
SHME                                S      Sn       22 53 56.9   -13
BSY   Bisya             10.16 248   P      Pn       22 52 15.0  -0.5
BSY                                 S      Sn       22 53 53.3   -16
SOHO  SOHO              10.22 257   P      Pn       22 52 14.2  -2.0
SOHO                                S      Sn       22 53 54.8   -16
SOHO  SOHO              10.22 257   P      Pn       22 52 13.8  -2.5
MASF  Masafi            10.25 264   P      Pn       22 52 17.1  +0.4
MASF                                S      Sn       22 53 59.6   -12
MSFE  Esma-Masafi       10.25 264   P      Pn       22 52 14.5  -2.2
UOSS  Minazif           10.30 262   P      Pn       22 52 18.2  +0.9
UOSS                                S      Sn       22 53 55.2   -18
HATD  Hatta, Dubai      10.39 261   P      Pn       22 52 18.6  +0.1
HATD                                S      Sn       22 54 03.2   -12
HATD  Hatta, Dubai      10.39 261   P      Pn       22 52 17.4  -1.2
MHTO  MHTO              10.45 238   P      Pn       22 52 17.1  -2.3
ASHO  Ashiyiah          10.49 261   P      Pn       22 52 21.2  +1.3
      SNR=5.4
ASHO  Ashiyiah          10.49 261   P      Pn       22 52 18.9  -1.0
ARQ   Araqi             10.50 253   P      Pn       22 52 21.0  +0.9
      SNR=25
NAZ   Nazwa, Dubai      10.77 263   P      Pn       22 52 25.3  +1.6
ALNE  Al Ain            10.93 258   P      Pn       22 52 26.2  +0.3
      SNR=8.1
UMZA  Um Al Zommool     11.89 252   P      Pn       22 52 38.5  -0.7
AAK   Ala-Archa         16.77  18   Pn     Pn       22 53 44.9  +0.4
      0.4nm,0.3s,baz=200,slow=5.3,SNR=8.7
AAK                                 Sn     Sn       22 56 46.9  -4.0
      0.1nm,0.3s,baz=336,slow=20,SNR=1.8
      3.2nm,0.6s
AAK   Ala-Archa         16.77  18   P      Pn       22 53 42.6  -1.9
RAYN  Ar Rayn           20.13 265   P      P        22 54 22.2  -1.5
MKAR  Makanchi Array    23.11  27   P      P        22 54 56.9  +1.5
      0.4nm,0.6s,baz=207,slow=11,SNR=7.4
      0.4nm,0.6s
KURBB Kurchatov Arra    25.20  17   P      P        22 55 16.4  +1.3
      1.0nm,0.2s,baz=5.3,slow=15,SNR=5.3
      1.0nm,0.2s
KBZ   Khabaz            26.02 317   P      P        22 55 24.3  +1.7
      1.2nm,0.7s,baz=232,slow=5.2,SNR=4.8
      1.2nm,0.7s
BVAR  Borovoye Array    26.23   4   P      P        22 55 26.6  +2.1
      1.5nm,0.9s,baz=176,slow=10,SNR=5.6
      1.5nm,0.9s
ZALV  Zalesovo Beam     29.96  21   P      P        22 56 02.4  +4.7
      0.3nm,0.3s,baz=207,slow=9.0,SNR=2.2
CMAR  Chiang Mai Arr    30.18  99   P      P        22 55 59.2  -0.9
      0.4nm,0.3s,baz=298,slow=9.3,SNR=1.1
CMAR                                LR     LR       23 11 47.2
      comp=Z,11nm,18.5s,baz=285,slow=44
      0.4nm,0.3s
ARTI  Arti              30.22 350   LR     LR       23 10 08.3
      comp=Z,41nm,19.3s,baz=218,slow=40
SONM  Songino Array     36.86  45   P      P        22 56 57.9  -0.2
      0.2nm,0.7s,baz=244,slow=6.3,SNR=4.3
      0.2nm,0.7s
FINES FINESS Array B    44.26 333   P      P        22 57 58.9  +0.1
      2.6nm,0.7s,baz=131,slow=9.8,SNR=7.3
      2.6nm,0.7s
DAVOX Davos/Dischmat    49.03 310   LR     LR       23 22 22.6
      comp=Z,115nm,18.1s,baz=114,slow=40
ARCES ARCESS Array B    49.13 342   P      P        22 58 37.6  +0.7
      5.4nm,0.9s,baz=134,slow=5.2,SNR=6.4
      5.4nm,0.9s
HFS   Hagfors           49.20 328   P      P        22 58 36.8  -0.8
      4.5nm,1.0s,baz=106,slow=11,SNR=2.2
      4.5nm,1.0s
KEST  Kesra             49.81 295   P      P        22 58 43.2  +0.5
      1.7nm,0.7s,baz=15,slow=4.7,SNR=3.5
      1.7nm,0.7s
NOA   NORSAR Array B    50.64 328   P      P        22 58 47.9  -0.6
      0.4nm,0.7s,baz=104,slow=7.3,SNR=2.5
      0.4nm,0.7s
ESDC  Sonseca Array     59.63 302   P      P        22 59 52.6  -1.3
      0.3nm,0.7s,baz=91,slow=7.1,SNR=4.9
      0.3nm,0.7s
TORD  Torodi Ar. Bea    62.68 271   P      P        23 00 14.3  -0.5
      1.3nm,0.3s,baz=42,slow=8.9,SNR=3.6
      1.3nm,0.3s
BOSA  Boshof            68.41 219   P      P        23 00 52.5  +0.9
      1.2nm,0.7s,baz=148,slow=17,SNR=1.7
      1.2nm,0.7s
WRA   Warramunga Arr    79.78 118   P      P        23 01 58.6  +0.4
      0.6nm,0.8s,baz=317,slow=4.7,SNR=5.3
      0.6nm,0.8s
ASAR  Alice Springs     81.50 122   P      P        23 02 07.2  -0.2
      0.2nm,0.3s,baz=307,slow=5.8,SNR=2.1
      0.2nm,0.3s
STKA  Stephens Creek    91.64 125   LR     LR       23 48 44.7
      comp=Z,14nm,18.1s,baz=23,slow=39
TXAR  Lajitas Array    123.48 351   PKP    PKPdf    23 08 47.5  -0.2
      0.2nm,0.8s,baz=352,slow=3.9,SNR=1.8
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*NNC **07** 23:04:56.2±4.1, 36°.49N×71°.17E, h106^{km}±58^{km}, mb3.5, mpv4.1, Error ellipse: s-maj=32.6km s-min=30.8km az=65.0*

*IDC **07** 23:04:58.0±12.0, 36°.30N×71°.77E, h163^{km}±93^{km}, mb3.3/5, mbtmp3.7/9, MS3.5/1, Error ellipse: s-maj=162.4km s-min=50.8km az=155.0*

ISC 07 23:04:55.0±0.9**, 36°.41N**±0°.07×**71°.40E**±0°.10**, h114**^{km}**, n28, σ1**^{s}**89**/34**, mb3.7**/5**, 3C-2D, Afghanistan-Tajikistan border region**

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Code  Station Name       Δ°   AZ°    Phase ID            Time     Res
                                    Op     ISC       h  m  s     ISC
SRNI  Srinagar           3.65 129  eP      Pn       23 05 50.7  +1.1
SRNI                               eS      Sn       23 06 32.8  +0.9
SRNI                                IAML            23 07 13.3
      comp=N,735nm,0.4s
SRNI                                IAML            23 07 13.3
      comp=E,736nm,0.4s
DHRM  DHARAMSHALA        5.80 134  eP      Pn       23 06 20.5  +1.6
DHRM                               eS      Sn       23 07 24.0  -0.3
DHRM                                IAML            23 07 27.5
      comp=E,274nm,0.3s
DHRM                                IAML            23 07 29.0
      comp=N,231nm,0.3s
UCH   Uchtor             6.29  22   P      Pn       23 06 26.9  +1.2
      SNR=20
EKS2  Erkin-Say          6.51  16   P      Pn       23 06 29.7  +1.3
      SNR=9.4
AAK   Ala-Archa          6.67  20   P      Pn       23 06 32.1  +1.6
      SNR=28
AAK   Ala-Archa          6.67  20  ⇑P      Pn       23 06 31.9  +1.5
      comp=N,3.1nm,0.4s
AAK                                ⇑S      Sn       23 07 45.5  +0.4
      comp=N,15nm,1.0s
KK31  Karatay Array      6.72 354  ⇓P      Pn       23 06 30.5  -0.6
      comp=N,11nm,0.3s,baz=179,slow=12,SNR=251
KK31                               ⇓S      Sn       23 07 46.6  +0.4
      comp=N,2.1nm,0.3s,baz=156,slow=21,SNR=5.0
KBK   Karagaybulak       6.82  23   P      Pn       23 06 35.0  +2.5
      SNR=5.6
ULHL  Ulahol             6.94  31   P      Pn       23 06 35.6  +1.4
      SNR=7.1
CHMS  Chumysh            7.07  20   P      Pn       23 06 37.0  +1.1
      SNR=9.0
SMLA  Simla              7.13 136  eP      Pn       23 06 37.6  +1.0
SMLA                               eS      Sn       23 07 55.2  -0.8
SMLA                                IAML            23 07 56.9
      comp=N,55nm,0.3s
SMLA                                IAML            23 07 58.4
      comp=E,67nm,0.6s
USP   Ospenovka          7.26  18   P      Pn       23 06 39.6  +1.2
      SNR=9.3
TKM2  Tokmak 2           7.27  25   P      Pn       23 06 40.1  +1.4
      SNR=12
LGTI  Lohaghat          10.11 131  eP      Pn       23 07 18.0  +0.3
LGTI                               eS      Sn       23 09 03.4  -6.4
LGTI                                IAML            23 09 08.0
      comp=E,6.6nm,0.3s
LGTI                                IAML            23 09 08.2
      comp=N,13nm,0.4s
MK31  Makanchi Array    13.18  35   P      P        23 08 02.6  -0.8
      comp=N,2.4nm,1.1s,baz=210,slow=9.1,SNR=12
MKAR  Makanchi Array    13.18  35   P      Pn       23 07 58.6  +1.0
      comp=N,0.2nm,0.6s,baz=222,slow=13,SNR=4.9
KURBB Kurchatov Arra    15.11  18   P      Pn       23 08 24.2  +1.9
      comp=N,0.6nm,0.3s,baz=207,slow=10,SNR=2.0
AB31  Akbulak array     15.32 331   P      Pn       23 08 23.2  -1.7
      comp=N,1.9nm,0.4s,baz=141,slow=13,SNR=118
AB31                                S      Sn       23 11 09.2  -5.1
      comp=N,1.0nm,0.5s,baz=159,slow=22,SNR=6.6
BVA0  Borovoye Array    16.63 358   P      P        23 08 42.7  +1.1
      comp=N,3.7nm,1.4s,baz=162,slow=12,SNR=6.5
BVAR  Borovoye Array    16.63 358   P      Pn       23 08 41.4  +0.3
      comp=N,1.1nm,0.4s,baz=162,slow=11,SNR=10
AKTO  Aktyubinsk        17.02 330  ⇑P      Pn       23 08 46.1  +0.3
      comp=N,3.6nm,0.7s
ZALV  Zalesovo Beam     19.87  24   P      P        23 09 15.3  -1.6
      comp=N,1.4nm,0.4s,baz=209,slow=12,SNR=6.7
KBZ   Khabaz            22.93 297   P      P        23 09 50.5  +1.4
      comp=N,1.4nm,0.8s,baz=120,slow=23,SNR=2.0
      comp=N,1.4nm,0.8s
MMAI  Mount Meron Ar    29.67 274   LR     LR       23 25 10.0
      comp=N,87nm,18.2s,baz=282,slow=40
FINES FINESS Array B    37.74 326   P      P        23 11 59.9  +0.5
      comp=N,1.0nm,0.7s,baz=108,slow=7.5,SNR=0.9
      comp=N,1.0nm,0.7s
ARCES ARCESS Array B    41.35 338   P      P        23 12 30.0  +0.8
      comp=N,0.5nm,0.4s,baz=117,slow=8.6,SNR=1.4
      comp=N,0.5nm,0.4s
HFS   Hagfors           43.34 322   P      P        23 12 45.3  -0.1
      comp=N,1.5nm,0.8s,baz=96,slow=15,SNR=1.2
      comp=N,1.5nm,0.8s
NOA   NORSAR Array B    44.65 323   P      P        23 12 55.7  -0.2
      comp=N,0.7nm,0.8s,baz=93,slow=7.7,SNR=1.5
      comp=N,0.7nm,0.8s
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*NAO **07** 23:14:23.4, 40°.76N×17°.88E, h33^{km}, MB3.9*

*BGR **07** 23:14:24.6±1.0, 41°.22N×19°.85E, h5^{km}, Error ellipse: s-maj=30.0km s-min=13.3km az=43.0*

*BJI **07** 23:14:25.1, 41°.90N×19°.46E, h4^{km}, mB4.9/1, mb4.4/15*

*SKO **07** 23:14:25.2, 41°.62N×19°.25E, h0^{km}, ML4.2*

*PDG **07** 23:14:26.9±0.3, 41°.48N×19°.56E, h13^{km}, MD4.4/13, ML4.3/13, Error ellipse: s-maj=0.8km s-min=1.4km az=0.0*

*MOS **07** 23:14:26.7±1.2, 41°.47N×19°.38E, h23^{km}, mb4.5/9, Error ellipse: s-maj=5.6km s-min=3.6km az=82.6*

*NEIC **07** 23:14:27.8±2.2, 41°.55N±0°.04×19°.49E±0°.07, h10^{km}±1^{km}, mb4.1/25, Error ellipse: s-maj=8.9km s-min=6.1km az=258.0*

*VIE **07** 23:14:28.6, 41°.63N×19°.46E, h0^{km}, mb3.6/11, ms4.2/11 37 km N of Durres*

*MCSM **07** 23:14:28.0±0.4, 42°N±4°×1°9E±°, h10^{km}, mb4.6, mB4.6, MLv4.6, Mw(mB)3.9*

*MED_RC **07** 23:14:28.0±0.5, 41°.56N×19°.48E, h18^{km}±3^{km}, MW4.4/16, Moment Tensor Solution.Mantle waves: s16,c18; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}1.70±.74; $M_{\theta\theta}$0.85±.44; $M_{\phi\phi}$-2.54±.48; $M_{r\theta}$3.07±.63; $M_{\theta\phi}$1.49±.23; $M_{\phi r}$-2.75±.58; Best double couple: $M_0$4.89000×10^{15} NP1:ϕ_s14.00000°, δ24.00000°, λ149.00000°. NP2:ϕ_s133.00000°, δ78.00000°, λ69.00000°. Principal axes: T 4.5800, Plg53.0000°, Azm18.0000°; N 0.6300, Plg21.0000°, Azm138.0000°; P -5.2000, Plg30.0000°, Azm240.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*TIR **07** 23:14:29.2, 41°.62N×19°.61E, h26^{km}±2^{km}, Ml4.1/8*

*PRU **07** 23:14:29.7, 41°.44N×19°.31E, h10^{km}, M4.4*

*BEO **07** 23:14:29.4±0.4, 41°.57N×19°.51E, h13^{km}±2^{km}, ML4.1/27*

*IDC **07** 23:14:31.3±1.3, 41°.58N×19°.46E, h42^{km}±13^{km}, mb3.7/18, mbtmp3.9/30, ML3.6/11, MS3.7/38, Error ellipse: s-maj=13.0km s-min=9.4km az=145.0*

ISC 07 23:14:28.1±0.9**, 41°.55N**±0°.02×**19°.50E**±0°.02**, h15**^{km}±6^{km}**, n458, σ1**^{s}**64**/528**, mb4.2**/32**, MS3.8**/31**, 48C-34D, Albania**

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Code  Station Name       Δ°   AZ°    Phase ID            Time     Res
                                    Op     ISC       h  m  s     ISC
TIR   Tirane             0.35 126  ⇓Pg     Pg       23 14 35.4  +0.2
TIR                                 Sg     Sg       23 14 39.7  -0.4
TIR                                 AML    AML      23 14 40.2
      66nm,0.5s
TIR                                 AML    AML      23 14 40.4
      36nm,0.4s
TIR   Tirane             0.35 126  i Pg    Pg       23 14 35.4  +0.2
TIR                                i Sg    Sb       23 14 41.2  -0.1
ULC   Ulcinj             0.45 336⇑iPg     Pb       23 14 37.3  -0.5
ULC                                i Sg    Sb       23 14 45.8  +1.4
SDA   Shkodra            0.50   0  ⇓Pg     Pg       23 14 37.7  -0.4
SDA                                 Sg     Sb       23 14 45.6  -0.1
DRME  Dracevica, Mon     0.67 340⇓iPg     Pg       23 14 41.1  -0.2
DRME                               eSg     Sn       23 14 52.7  -0.7
PHP   Peshkopia          0.72  79   Pg     Pg       23 14 40.9  -1.3
PHP                                 Sg     Sg       23 14 50.6  -1.1
PHP                                 AML    AML      23 14 56.8
      37nm,0.7s
BUM   Brajici-Budva      0.87 329⇓iPg     Pb       23 14 45.5  +0.5
BUM                                i Sg    Sn       23 14 59.5  +1.1
PDG   Podgorica          0.90 349   Pg     Pg       23 14 44.7  -0.8
PDG                                 Sg     Sn       23 14 58.5  -0.4
PDG   Podgorica          0.90 349          Pg       23 14 44.6  -0.9
PDG                                 Sg     Sb       23 14 57.4  +0.3
PDG   Podgorica          0.90 349  ⇓P      Pb       23 14 45.4  +0.1
PDG                                ⇑S      Sb       23 14 57.8  +0.7
PDG   Podgorica          0.90 349  ePg     Pb       23 14 45.4  +0.1
PDG                                eSg     Sn       23 14 59.2  +0.4
PDG   Podgorica          0.90 349⇑iPg     Pg       23 14 45.2  -0.3
PDG                                i Sg    Sn       23 15 00.3  +1.5
OHR   Ohrid              1.08 114  i Pg    Pg       23 14 47.6  -1.3
OHR                                i Sg    Sn       23 15 06.9  +3.5
OHR                                eLg     Lg       23 15 08.1
      comp=N,9μm,1.0s
OHR                                eLg     Lg       23 15 09.0
      comp=E,3μm,0.6s
CEME  Cevo               1.08 337⇑iPg     Pb       23 14 48.7  +0.1
CEME                               eSg     Sn       23 15 06.5  +2.9
VLO   Vlora              1.08 180   Pg     Pn       23 14 50.4  +1.6
VLO                                 Sg     Sn       23 15 05.2  +1.8
VLO                                 AML    AML      23 15 08.4
      comp=E,36nm,0.7s
VLO                                 AML    AML      23 15 11.3
      comp=E,33nm,0.5s
PVY   Plav               1.10  18⇑iPg     Pg       23 14 47.7  -1.6
PVY                                i Sg    Sn       23 15 06.7  +2.7
HCY   Herceg Novi        1.16 320⇑iPg     Pn       23 14 50.7  +0.8
HCY                                i Sg    Sn       23 15 08.8  +3.3
NKME  Niksic             1.28 342⇓iPg     Pg       23 14 52.2  -0.6
NKME                               eSg     Sn       23 15 13.2  +4.8
KOME  Kolasin            1.30   1⇑iPg     Pb       23 14 52.5  +0.2
KOME                               eSg     Sn       23 15 13.4  +4.5
KBN   Korca              1.35 133   Pn     Pg       23 14 54.3  +0.2
KBN                                 Sn     Sg       23 15 13.6  +2.0
IVA   Berane             1.35  13⇑iPg     Pn       23 14 52.6  +0.1
IVA                                i Sg    Sg       23 15 14.4  +2.6
TREB  Trebinje           1.44 324  ePn     Pb       23 14 55.0  +0.3
TREB  Trebinje           1.44 324  ePg     Pb       23 14 54.9  +0.3
TREB                               eSg     Sg       23 15 15.4  +0.8
SKO   Skopje             1.51  73  i Pg    Pn       23 14 55.0  +0.3
SKO                                i Sg    Sg       23 15 18.1  +1.2
BRY   Bratogost          1.52 333⇓iPn     Pb       23 14 56.6  +0.4
BRY                                i Sn    Sg       23 15 19.1  +1.8
NEST  Nestorio           1.64 134   Pn     Pb       23 14 58.8  +0.8
NEST                                Sn     Sg       23 15 21.1  +0.2
NEST                                AML    AML      23 15 26.7
      comp=E,1.6nm,0.4s
NEST                                AML    AML      23 15 26.9
      comp=E,6.9nm,0.4s
UPM   Unac-Piva          1.71 345⇓iPn     Pb       23 14 59.4  +0.1
UPM                                i Sn    Sg       23 15 23.4  +0.3
SJES  Sjenica            1.74  12  ePn     Pb       23 15 00.0  +0.1
SJES                               eSn     Sb       23 15 22.9  +1.3
KLINJ Klinje             1.75 338  ePn     Pb       23 14 59.9  -0.1
PLE   Pljevlja           1.78 358⇑iPn     Pb       23 15 00.1  -0.4
PLE                                i Sn    Sg       23 15 25.0  -0.4
KEK   Kerkira            1.85 173          Pg       23 15 04.9  +1.2
STON  Ston               1.88 315  ePn     Pn       23 15 00.4  +0.8
STON                               eSn     Sb       23 15 25.1  -0.2
NOCI  Noci               1.99 248   Pn     Pn       23 15 01.7  +0.5
NOCI                                Sn     Sg       23 15 33.3  +1.2
NOCI                                AML    AML      23 15 40.9
      comp=E,19nm,0.4s
SELS  Selova             2.05  35  ePn     Pn       23 15 03.4  +1.2
SELS                               eSn     Sn       23 15 29.0  +1.5
RUDO  Rudo               2.07 357  ePn     Pn       23 15 03.8  +1.5
RUDO  Rudo               2.07 357  ePn     Pb       23 15 04.4  -0.9
RUDO                               eSn     Sb       23 15 30.5  -0.3
IVAS  Ivanjica           2.08  13  ePn     Pn       23 15 03.7  +1.2
IVAS                               eSn     Sn       23 15 28.6  +0.4
IGT   Igoumenitsa        2.12 162   Pn     Pn       23 15 04.8  +1.8
IGT                                 Sn     Sg       23 15 34.7  -1.4
IGT   Igoumenitsa        2.12 162  i Pn    Pn       23 15 04.2  +1.2
IGT                                i Sn    Sb       23 15 34.5  +2.3
BARS  Barje              2.14  53  i Pn    Pn       23 15 04.2  +0.9
BARS                               i Sn    Sg       23 15 35.4  -1.5
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BARS	Barje	2.14	53	ePn	Pn	23 15 04.1	+0.8
GOCS	Kraljevo Serbi	2.25	26	ePn	Pn	23 15 06.3	+1.4
GOCS				eSn	Sn	23 15 33.4	+0.9
MATE	Matera	2.29	248	eP	Pn	23 15 04.3	-1.1
MATE	Matera	2.29	248	⇓P	Pn	23 15 05.6	+0.3
MATE				⇓S	Sn	23 15 32.9	-0.4
BBLS	Lazi&#263i	2.31	358	ePn	Pn	23 15 07.7	+2.0
BBLS				eSn	Sn	23 15 35.9	+1.9
VAY	Valandovo	2.32	95	i Pn	Pn	23 15 07.0	+1.2
VAY				i Sn	Sb	23 15 38.1	-0.1
VAY				eLg	Lg	23 15 39.1	
	comp=N,2µm,0.9s						
VAY				eLg	Lg	23 15 40.6	
	comp=E,728nm,0.8s						
BOSS	Bosilegrad	2.42	66	ePn	Pn	23 15 08.2	+1.1
BOSS				eSn	Sn	23 15 37.8	+1.4
GRUS	Gruza	2.50	21	ePn	Pn	23 15 09.9	+1.6
DIVS	Divibare	2.57	8	ePn	Pn	23 15 10.3	+1.0
KNT	Kendrikon	2.59	98	i Pn	Pn	23 15 11.1	+1.6
KNT				i Sg	Sb	23 15 46.1	+0.2
BOVS	Bovan	2.65	37	⇓P	Pn	23 15 11.6	+1.4
BOVS	Bovan	2.65	37	ePn	Pn	23 15 11.1	+0.9
BOVS				eSn	Sn	23 15 42.2	+0.2
LIT	Litokhoron	2.70	122		Pn	23 15 11.8	+0.8
LIT	Litokhoron	2.70	122	i Pn	Pn	23 15 12.0	+1.0
LIT	Litokhoron	2.70	122	P	Pn	23 15 11.8	+0.8
KKB	Krupnik	2.74	83	i Pn	Pn	23 15 13.1	+1.6
KKB				i Sn	Sn	23 15 47.0	+2.7
TRUS	Trudelj	2.75	14	ePn	Pn	23 15 12.9	+1.2
THE	Thessaloniki	2.78	108	i Pn	Pn	23 15 13.0	+1.0
THE				i Sn	Sn	23 15 47.2	+1.9
ACER	Acerenza	2.79	255		Pn	23 15 13.1	+0.8
SGRT	San Giovanni R	2.82	275	Pn	Pn	23 15 12.8	0.0
SGRT				Sn	Sb	23 15 54.5	+2.0
SGRT				AML	AML	23 15 57.4	
	comp=E,2.4nm,0.6s						
SGRT	San Giovanni R	2.82	275		Pn	23 15 12.7	0.0
ZAPS	Zavoj	2.89	52	ePn	Pn	23 15 15.0	+1.3
ZAPS				eSn	Sn	23 15 50.6	+2.4
LKD2	Lefkada island	2.90	162	Pn	Pn	23 15 14.6	+0.8
VTS	Vitosha	2.98	68	ePn	Pn	23 15 16.1	+1.1
VTS				eSn	Sn	23 15 51.2	+0.7
SVIS	Svilajnac	2.99	24	ePn	Pn	23 15 17.4	+2.4
SVIS				eSn	Sn	23 15 51.4	+0.9
TEKS	Tekeris	3.00	0	ePn	Pn	23 15 15.7	+0.6
SOH	Sokhos	3.00	103	i Pn	Pn	23 15 16.5	+1.3
SOH				i Sn	Sn	23 15 52.8	+1.8
ZAGS	Zajecar	3.03	41	ePn	Pn	23 15 16.7	+1.2
ZAGS				eSn	Sn	23 15 52.0	+0.5
SRS	Serrai	3.12	97	i Pn	Pn	23 15 18.5	+1.8
SRS				i Sn	Sn	23 15 54.8	+1.1
BLKB	Belogradchik	3.13	48	ePn	Pn	23 15 18.7	+1.8
BLKB				eSn	Sn	23 15 54.8	+0.8
BORS2	Bor- Borsko je	3.14	35	ePn	Pn	23 15 16.9	-0.2
BORS2				eSn	Sn	23 15 53.3	-1.0
TIP	Timpagrande	3.16	222		Pn	23 15 17.5	+0.1
TIP	Timpagrande	3.16	222	⇑P	Pn	23 15 18.0	+0.6
TIP	Timpagrande	3.16	222	Pn	Pn	23 15 17.5	+0.1
MMB	Musomishta	3.19	89	i Pn	Pn	23 15 19.6	+1.8
CUC	Castrocucco	3.20	242		Pn	23 15 18.6	+0.7
AVAS	Avala Beograd	3.23	13	ePn	Pn	23 15 19.0	+0.7
AVAS				eSn	Sn	23 15 56.3	-0.2
KUBS	Kucevo	3.27	29	ePn	Pn	23 15 18.7	-0.2
KUBS				eSn	Sn	23 15 56.7	-0.9
OUR	Ouranopolis	3.61	108	eP	Pn	23 15 24.8	+1.3
FRGS	Fruska Gora	3.61	4	ePn	Pn	23 15 24.2	+0.7
MDVR	Moldovita	3.61	26	⇓P	Pn	23 15 24.7	+1.2
MDVR	Moldovita	3.61	26	ePn	Pn	23 15 24.5	+0.9
MDVR				eSn	Sn	23 16 05.6	-0.4
BLY	Banja Luka	3.61	333	ePn	Pn	23 15 25.4	+1.8
BLY	Banja Luka	3.61	333	ePn	Pn	23 15 25.1	+1.5
PUNG	Punghina	3.71	42	ePn	Pn	23 15 26.4	+1.5
PAOL	Paolisi	3.75	264		Pn	23 15 27.0	+1.6
VRSS	Vrsac	3.81	20	ePn	Pn	23 15 26.8	+0.6
VRSS				eSn	Sn	23 16 09.7	-1.1
DJES	Djerdap	3.82	34	ePn	Pn	23 15 27.4	+1.0
DJES				eSn	Sn	23 16 10.8	-0.2
HERR	Herculane	3.95	32	⇑P	Pn	23 15 29.4	+1.3
PLD	Plovdiv	3.97	80	eP	Pn	23 15 30.1	+1.7
PLD	Plovdiv	3.97	80	i Pn	Pn	23 15 30.1	+1.7
PLD				i Sn	Sn	23 16 15.7	+1.0
PLD	Plovdiv	3.97	80	ePn	Pn	23 15 30.1	+1.7
PLD				eSn	Sn	23 16 15.1	+0.4
BANR	Banloc	4.01	17	ePn	Pn	23 15 29.9	+0.9
KNYS	Krupa na Uni	4.06	326	ePn	Pn	23 15 31.6	+1.9
CEL	Celeste	4.30	221		Pn	23 15 33.1	0.0
CEL	Celeste	4.30	221	Pn	Pn	23 15 32.8	-0.2
BZS	Buzias	4.34	20	eP	Pn	23 15 34.2	+0.6
BZS	Buzias	4.34	20	⇑P	Pn	23 15 34.8	+1.2
BZS	Buzias	4.34	20	P	Pn	23 15 34.8	+1.2
KDZ	Kurdzhali	4.38	87	eP	Pn	23 15 35.8	+1.7
GZR	Gura Zlata	4.52	31	⇑P	Pn	23 15 38.0	+1.9
GZR	Gura Zlata	4.52	31	P	Pn	23 15 38.0	+1.9
RDO	Rodhopi	4.57	93		Pn	23 15 38.1	+1.4
RDO	Rodhopi	4.57	93	eP	Pn	23 15 37.9	+1.3
AQU	L'Aquila	4.61	282	ePn	Pn	23 15 38.4	+1.1
AQU	L'Aquila	4.61	282	Pn	Pn	23 15 37.9	+0.6
CAMP	Campotosto	4.64	284		Pn	23 15 38.8	+1.0
MORH	Mrgy, Hungar	4.70	353	ePn	Pn	23 15 38.9	+0.4
MORH	Mrgy, Hungar	4.70	353	⇓P	Pn	23 15 39.5	+1.0
MORH	Mrgy, Hungar	4.70	353	Pn	Pn	23 15 39.3	+0.8
ITM	Ithomi	4.76	156	Pn	Pn	23 15 40.0	+0.7
ITM	Ithomi	4.76	156		Pn	23 15 40.0	+0.7
ITM	Ithomi	4.76	156	eP	Pn	23 15 39.9	+0.6
NRCA	Norcia	4.91	287		Pn	23 15 42.7	+1.2
ELND	Elena	4.93	72	⇑P	Pn	23 15 43.6	+1.9
SIRR	Siria	4.96	18	ePn	Pn	23 15 42.9	+0.8
SIRR				eSn	Sn	23 16 39.1	-0.2
FDMO	Fiordimonte	4.98	289		Pn	23 15 43.3	+0.9
LOT	Lotru	4.98	37	eP	Pn	23 15 43.9	+1.4
LOT	Lotru	4.98	37	⇓P	Pn	23 15 44.1	+1.6
BOJS	Bojanci	5.01	323	ePn	Pn	23 15 43.8	+1.1
BOJS				eSn	Sn	23 16 39.2	-1.2
BOJS	Bojanci	5.01	323	i Pn	Pn	23 15 43.9	+1.1
BOJS				i Sn	Sn	23 16 39.4	-0.9
BOJS				e		23 17 00.7	
BOJS				e		23 17 12.8	
GADA	Gvkgeada	5.04	104	eP	Pn	23 15 44.4	+1.2
ENEZ	Enez	5.09	97	eP	Pn	23 15 46.7	+2.8
RIY	Rijeka	5.25	318	ePn	Pn	23 15 46.9	+0.9
CESX	Cesi	5.25	284		Pn	23 15 47.0	+0.9
BOZC	Bozcaada	5.27	107	eP	Pn	23 15 48.1	+1.8
BEHE	Becsehely	5.29	339		Pn	23 15 47.8	+1.2
BEHE	Becsehely	5.29	339	ePn	Pn	23 15 47.9	+1.3
ARR	Arges	5.34	43	⇓P	Pn	23 15 49.3	+2.0
TNR	Turnu Rosu	5.37	39	⇑P	Pn	23 15 49.7	+2.0
TNR	Turnu Rosu	5.37	39	P	Pn	23 15 49.7	+2.0
SIGR	SIGRI	5.39	114	eP	Pn	23 15 49.6	+1.7
KOGS	Kog	5.42	336	i Pn	Pn	23 15 49.2	+0.8
KOGS				i Sn	Sn	23 16 49.6	-0.9
KOGS				i		23 17 16.2	
KOGS				e		23 17 27.3	
MURB	Monte Urbino	5.44	291		Pn	23 15 49.9	+1.3
SGRR	Singureni	5.46	59	⇓P	Pn	23 15 51.6	+2.8
LOZB	Loznitsa	5.55	69	⇓P	Pn	23 15 52.4	+2.1
RAZG	Razgrad	5.56	66	⇑P	Pn	23 15 52.7	+2.4
CEY	Cerknica	5.57	320	ePn	Pn	23 15 51.7	+1.3
SKDS	Skadanscina	5.64	317	ePn	Pn	23 15 51.5	+0.1
SKDS				eSn	Sn	23 16 54.0	-1.9
SKDS	Skadanscina	5.64	317	ePn	Pn	23 15 51.4	+0.1
SKDS				i Sn	Sn	23 16 53.0	-2.8
VAE	Valguarnera	5.66	226	P	Pn	23 15 53.4	+1.7
	comp=E,6.8nm,0.6s,baz=63,slow=4.0,SNR=6.0						
VAE				S	Sn	23 16 56.6	+0.2
	comp=E,28nm,0.7s,baz=288,slow=11,SNR=3.8						
DRGR		5.72	23	⇓P	Pn	23 15 54.0	+1.4
DRGR		5.72	23	P	Pn	23 15 54.0	+1.4
MARR	Marisel-Cluj	5.75	26	⇑P	Pn	23 15 54.5	+1.6
LJU	Ljubljana	5.75	323	ePn	Pn	23 15 54.1	+1.2
BORR	Bors	5.77	16	⇑P	Pn	23 15 55.4	+2.2
MPLH	Magyarpolny	5.79	347	Pn	Pn	23 15 54.3	+0.9
	comp=E,0.9nmcomp=E,235nm,0.9s						
SULR		5.85	55	⇓P	Pn	23 15 56.7	+2.4
RAFF	Raffo Rosso	5.87	224		Pn	23 15 53.7	-0.9
TRI	Trieste	5.88	317		Pn	23 15 54.8	+0.2
TRI	Trieste	5.88	317	P	Pn	23 15 54.8	+0.2
CJR	Cluj-Napoca	5.94	28	⇑P	Pn	23 15 58.3	+2.7
CJR	Cluj-Napoca	5.94	28	P	Pn	23 15 58.3	+2.7
CHOS	Chios island	5.95	120	eP	Pn	23 15 57.2	+1.5
CBBR	Cluj-Babes-Bol	5.97	28	⇓P	Pn	23 15 57.9	+2.0
KTHA	Kythira Island	5.97	151	eP	Pn	23 15 57.2	+1.2
SOKA	Soboth	6.05	329	i Pn	Pn	23 15 57.7	+0.7
	comp=E,9.2nm,0.2s,SNR=19						
SOKA				i Sn	Sn	23 17 03.2	-2.8
	comp=E,26nm,0.6s						
LTVH	Ltavrtes, Hu	6.08	16	⇓P	Pn	23 15 59.7	+2.3
OBKA	Obir	6.10	326	i Pn	Pn	23 15 59.0	+1.1
	comp=E,16nm,0.2s,SNR=67						
OBKA				eSn	Sn	23 17 05.3	-2.1
	comp=E,61nm,0.6s						
OBKA	Obir	6.10	326	ePn	Pn	23 15 59.1	+1.3
LEHL	Lehliu	6.11	59	⇑P	Pn	23 15 59.9	+2.0
MESR	Meseseni	6.12	23	⇑P	Pn	23 16 00.6	+2.7
MLR	Muntele Rosu	6.12	48	P	Pn	23 16 00.3	+2.2
	comp=E,24nm,0.4s,baz=226,slow=4.2,SNR=41						
MLR				S	Sn	23 17 10.3	+2.4
	comp=E,8.1nm,0.5s,baz=287,slow=19,SNR=3.4						
MLR				LR	LR	23 18 48.8	
	comp=E,591nm,19.1s,baz=213,slow=42						
MLR	Muntele Rosu	6.12	48		Pn	23 15 59.6	+1.5
MLR	Muntele Rosu	6.12	48	eP	Pn	23 16 00.5	+2.4
MLR	Muntele Rosu	6.12	48	⇓P	Pn	23 16 00.2	+2.1
CICN	Ciocanesti	6.13	62	⇑P	Pn	23 16 00.7	+2.6
DOPR	Dopca	6.14	42	⇑P	Pn	23 16 00.7	+2.5
SABO	M.te Sabotino	6.15	318		Pn	23 15 58.6	+0.3
TGMR	Targu Mures	6.15	34	⇓P	Pn	23 16 00.8	+2.4
ISR	Istrita	6.25	53	⇑P	Pn	23 16 02.7	+2.8
ISR	Istrita	6.25	53	P	Pn	23 16 02.7	+2.8
ISR	Istrita	6.25	53	Pn	Pn	23 16 01.4	+1.5
	comp=E,0.4nmcomp=E,71nm,0.6s						
SRO	Srobarova	6.32	353	eP	Pn	23 16 05.9	+5.3
SRO				e		23 17 15.5	
SRO	Srobarova	6.32	353	ePN	Pn	23 16 05.8	+5.2
SRO				eSN	Sn	23 17 15.5	+3.0
BOSR	Bodos	6.35	43	⇑P	Pn	23 16 03.6	+2.5
ARSA	Arzberg	6.37	335		Pn	23 16 01.8	+0.5
ARSA	Arzberg	6.37	335	ePn	Pn	23 16 02.4	+1.0
	comp=E,13nm,0.4s,SNR=12						
ARSA	Arzberg	6.37	335	ePn	Pn	23 16 01.7	+0.3
ARSA	Arzberg	6.37	335	ePn	Pn	23 16 01.9	+0.5
PSZ	Piszkesteto	6.37	2		Pn	23 16 02.3	+0.8
PSZ	Piszkesteto	6.37	2	⇑P	Pn	23 16 02.7	+1.2
PSZ	Piszkesteto	6.37	2	P	Pn	23 16 02.6	+1.2
OSSC	Osservatorio P	6.40	291		Pn	23 16 03.3	+1.4
PGOR	Pogoanele	6.42	56	⇑P	Pn	23 16 05.2	+3.2
OZUR		6.43	43	⇓P	Pn	23 16 05.0	+2.7
APE	Apeiranthos	6.48	132	eP	Pn	23 16 02.9	0.0
APE	Apeiranthos	6.48	132	i P	Pn	23 16 03.0	0.0
COVR	Voineasa-Covas	6.48	46	⇑P	Pn	23 16 05.5	+2.5
CEI	Carei	6.49	18	⇑P	Pn	23 16 05.4	+2.5
CEI	Carei	6.49	18	P	Pn	23 16 05.4	+2.5
TURR	Turia	6.52	44	⇓P	Pn	23 16 05.9	+2.5
CASP	Castiglione de	6.53	284		Pn	23 16 03.6	0.0
RONA	Rosalia, Austr	6.55	341	i Pn	Pn	23 16 05.7	+1.7
	comp=E,3.6nm,0.4s						
RONA				i Sn	Sn	23 17 17.5	-1.0
	comp=E,26nm,0.9s						
BISRR	Bisoca	6.59	50	Pn	Pn	23 16 04.9	+0.4
	comp=E,0.9nmcomp=E,271nm,1.1s						
MYKA	Terra Mystica	6.59	322	i Pn	Pn	23 16 04.8	+0.3
	comp=E,9.4nm,0.3s,SNR=16						
MYKA				i Sn	Sn	23 17 17.8	-1.7
	comp=E,24nm,0.4s						
ICOR	Ion Corvin	6.62	64	⇓P	Pn	23 16 07.2	+2.3
GRER		6.65	52	⇑P	Pn	23 16 07.9	+2.7
BALB	Balikesir	6.66	104		Pn	23 16 07.0	+1.6
PLOR	Plostina	6.73	48	⇓P	Pn	23 16 09.2	+2.7
PLOR	Plostina	6.73	48	P	Pn	23 16 09.1	+2.7
VRI	Vrincioaia	6.78	48	⇓P	Pn	23 16 10.3	+3.2
VRI	Vrincioaia	6.78	48	P	Pn	23 16 10.3	+3.2
VRI	Vrincioaia	6.78	48	Pn	Pn	23 16 08.6	+1.5
	comp=E,0.2nmcomp=E,72nm,0.6s						
STAL	STALIGIAL	6.79	316		Pn	23 16 06.9	-0.3
TEOL	Teolo	6.85	306		Pn	23 16 08.3	+0.4
ZCCA	Zocca	6.85	297		Pn	23 16 09.3	+1.3
CONA	Conrad Observa	6.88	339	i Pn	Pn	23 16 10.2	+1.7
	comp=E,2.9nm,0.3s						
ONER	Baraj Valea Uz	6.90	44	⇓P	Pn	23 16 11.8	+3.1
WDD	Wied Dalam	6.90	216	Pn	Pn	23 16 05.7	-3.1
ODBI	Odobesti	6.91	50	⇑P	Pn	23 16 11.5	+2.7
TLBR	Topalu	6.94	62	⇑P	Pn	23 16 11.6	+2.4
KECS	Kecovo	6.96	5	eP	Pn	23 16 12.9	+3.3
KECS				e		23 17 27.1	
KECS	Kecovo	6.96	5	ePN	Pn	23 16 12.8	+3.2
KECS				eSN	Sn	23 17 27.1	-1.4
MODS	Modra-Piesok	7.00	348	eP	Pn	23 16 14.2	+4.2
MODS				e		23 17 28.9	
MODS	Modra-Piesok	7.00	348	ePN	Pn	23 16 14.2	+4.2
MODS				eSN	Sn	23 17 28.9	-0.4
PANC	Panciu	7.03	50	⇑P	Pn	23 16 12.8	+2.4
BERU	Beregovo	7.04	17	Pn	Pn	23 16 12.2	+1.6
MFTR	Murfatlar	7.06	65	⇑P	Pn	23 16 13.1	+2.2
KBA	Koelnbreinsper	7.07	323	ePn	Pn	23 16 12.2	+1.1
	comp=E,12nm,0.4s,SNR=15						
KBA				i Sn	Sn	23 17 29.5	-1.8
	comp=E,38nm,0.7s						
KBA	Koelnbreinsper	7.07	323	ePn	Pn	23 16 12.1	+0.9
KBA				eSn	Sn	23 17 29.0	-2.2
TESR	Tescani	7.15	44	⇑P	Pn	23 16 15.0	+2.9
TESR	Tescani	7.15	44	Pn	Pn	23 16 13.2	+1.1
	comp=E,0.2nmcomp=E,19nm,2.5s						
TIRR	Tirgusor	7.15	63	Pn	Pn	23 16 12.7	+0.6
TIRR	Tirgusor	7.15	63	P	Pn	23 16 12.7	+0.6
ABTA	Abfaltersbach	7.22	318	i Pn	Pn	23 16 13.3	+0.2
	comp=E,9.4nm,0.3s,SNR=37						
ABTA				i Sn	Sn	23 17 30.9	-4.0
	comp=E,41nm,0.4s						
BRIU	Brid	7.23	19	Pn	Pn	23 16 14.5	+1.3
CTI	Castel Tesino	7.24	311		Pn	23 16 13.6	+0.2
CTI	Castel Tesino	7.24	311	P	Pn	23 16 13.6	+0.2
MUKU	Mukachevo	7.26	17	Pn	Pn	23 16 15.3	+1.7
CFR	Carcaliu	7.26	57	⇑P	Pn	23 16 15.4	+1.8
CFR	Carcaliu	7.26	57	P	Pn	23 16 15.4	+1.8
GHRR		7.28	49	⇑P	Pn	23 16 16.4	+2.5
GHRR		7.28	49	Pn	Pn	23 16 15.4	+1.5
BURAR	Bucovina Array	7.31	32		Pn	23 16 15.6	+1.2
BURAR	Bucovina Array	7.31	32	⇑P	Pn	23 16 17.5	+3.2
BURAR	Bucovina Array	7.31	32	P	Pn	23 16 17.5	+3.2
TPGR	Topolog	7.31	60	⇓P	Pn	23 16 16.2	+1.9
MOA	Molln	7.31	331	ePn	Pn	23 16 16.0	+1.6
	comp=E,5.4nm,0.3s,SNR=6.5						
MOA				i Sn	Sn	23 17 37.0	0.0
	comp=E,20nm,0.5s						
MOA	Molln	7.31	331	ePn	Pn	23 16 15.9	+1.6
MOA	Molln	7.31	331	ePn	Pn	23 16 15.6	+1.2
MOA				eSn	Sn	23 17 37.4	+0.3
BUR08	Bucovina Ar. S	7.32	32		Pn	23 16 16.6	+2.0
JAVC	Velka Javorina	7.42	351	ePN	Pn	23 16 17.5	+1.7
BIOA	Bad Ischl, Aus	7.42	328	i Pn	Pn	23 16 17.4	+1.5
	comp=E,11nm,0.3s,SNR=14						
BIOA				i Sn	Sn	23 17 39.3	-0.5
	comp=E,23nm,0.5s						
PRMA	PARMA	7.44	299	Pn	Pn	23 16 16.3	+0.3
IDI	Anoyia	7.55	144	P	Pn	23 16 16.7	-1.0
	comp=E,3.0nm,0.4s,baz=55,slow=2.0,SNR=9.3						
IDI				S	Sn	23 17 37.8	-5.2
	comp=E,9.0nm,0.3s,baz=301,slow=20,SNR=5.9						
IDI	Anoyia	7.55	144	eP	Pn	23 16 15.7	-2.0
VLDR	Vladesti	7.55	53	⇑P	Pn	23 16 20.7	+3.1
MANT	Manisa	7.60	111		Pn	23 16 20.2	+1.8
LANS	Liptovska Anna	7.60	360	eP	Pn	23 16 23.3	+5.0
LANS				e		23 17 47.2	
LANS	Liptovska Anna	7.60	360	ePN	Pn	23 16 23.3	+5.0
LANS				eSN	Sn	23 17 47.2	+3.1
LESA	Schwarzleotal	7.63	323	i Pn	Pn	23 16 19.6	+0.8
	comp=E,11nm,0.3s,SNR=12						
LESA				i Sn	Sn	23 17 42.7	-2.2
	comp=E,21nm,0.5s						
SALO	Salr	7.67	305		Pn	23 16 19.5	+0.2
TLCR		7.70	59	⇓P	Pn	23 16 22.3	+2.6
TLCR		7.70	59	P	Pn	23 16 22.2	+2.6
KRUC	Moravsky	7.82	345	ePN	Pn	23 16 23.1	+1.8
MSSA	Maissana	7.82	294	Pn	Pn	23 16 21.2	-0.3
KSV	Kosov	7.83	28	Pn	Pn	23 16 21.9	+0.5
NIE	Niedzica	7.89	4	Pn	Pn	23 16 22.9	+0.7
	comp=E,0.1nmcomp=E,9.1nm,1.3s						
MAUC	Maruska	7.90	352	ePN	Pn	23 16 25.2	+2.8
STHS	Stebnicka Huta	7.96	8	eP	Pn	23 16 26.8	+3.6
STHS				e		23 17 52.8	
STHS	Stebnicka Huta	7.96	8	ePN	Pn	23 16 26.8	+3.6
STHS				eSN	Sn	23 17 52.8	-0.2
VSL	Villasalto	7.98	258		Pn	23 16 22.7	-0.8
WTTA	Wattenberg	8.01	318	i Pn	Pn	23 16 24.6	+0.5
	comp=E,14nm,0.2s,SNR=40						
WTTA				i Sn	Sn	23 17 52.6	-1.9
	comp=E,66nm,0.5s						
WTTA	Wattenberg	8.01	318	ePn	Pn	23 16 24.5	+0.4
VRAC	Vranov	8.02	346	P	Pn	23 16 25.3	+1.3
	comp=E,0.3nm,0.3s,baz=167,slow=10,SNR=4.0						
VRAC				S	Sn	23 17 54.1	-0.3
	comp=E,5.4nm,0.8s,baz=189,slow=10.0,SNR=2.0						
VRAC				LR	LR	23 20 28.9	
	comp=E,545nm,18.5s,baz=164,slow=45						
	comp=E,1.8nm,0.6s						
VRAC	Vranov	8.02	346	ePN	Pn	23 16 25.3	+1.3
WATA	Walderalm	8.09	318	i Pn	Pn	23 16 25.8	+0.6
	comp=E,8.0nm,0.2s,SNR=47						
WATA				i Sn	Sn	23 17 53.9	-2.5
	comp=E,29nm,0.3s						
CKRC	Cesky Krumlov	8.13	335	eP	Pn	23 16 27.1	+1.5
CKRC	Cesky Krumlov	8.13	335	ePN	Pn	23 16 27.1	+1.5
SQTA	Sankt Quirin	8.20	316	i Pn	Pn	23 16 28.0	+1.3
	comp=E,6.3nm,0.2s,SNR=6.5						
SQTA				i Sn	Sn	23 17 56.7	-2.4
	comp=E,34nm,0.5s						
FETA	Feichten	8.33	314	i Pn	Pn	23 16 29.6	+1.1
	comp=E,2.5nm,0.3s,SNR=8.6						
FETA				eSn	Sn	23 18 00.5	-1.7
	comp=E,32nm,0.8s						
MORC	Moravsky Berou	8.34	351	Pn	Pn	23 16 29.0	+0.6
MORC	Moravsky Berou	8.34	351	⇑P	Pn	23 16 30.6	+2.1
MORC	Moravsky Berou	8.34	351	ePN	Pn	23 16 29.0	+0.6
MORC	Moravsky Berou	8.34	351	P	Pn	23 16 30.5	+2.1
MOTA	Moosalm	8.34	317	i Pn	Pn	23 16 29.5	+1.0
	comp=E,7.0nm,0.4s,SNR=19						
MOTA				i Sn	Sn	23 18 00.2	-2.2
	comp=E,41nm,0.7s						
FUORN	Ofenpass-Fuorn	8.35	310		Pn	23 16 29.8	+1.0
GEC2	GERESS Array S	8.36	333	Pn	Pn	23 16 29.0	+0.3
GEC2	GERESS Array S	8.36	333	ePn	Pn	23 16 29.1	+0.4
GERES	GERESS Array B	8.36	333	P	Pn	23 16 29.6	+0.8
	comp=E,0.2nm,0.3s,baz=151,slow=13,SNR=29						
GERES				S	Sn	23 18 03.6	+0.8
	comp=E,7.1nm,0.5s,baz=150,slow=22,SNR=9.1						
GERES				LR	LR	23 20 24.1	
	comp=E,306nm,20.1s,baz=94,slow=42						
	comp=E,2.2nm,0.3s						
PART	Garmisch-Parte	8.43	318	eSn	Sn	23 18 01.8	-2.8
ZUGS	Zugspitze, Sch	8.45	317	ePn	Pn	23 16 31.3	+1.1
KARP	Karpathos	8.48	132	Pn	Pn	23 16 30.5	+0.1
BORA	Eskisehir	8.49	98		Pn	23 16 32.1	+1.6
MILM	Milestii Mici	8.57	48	⇑P	Pn	23 16 33.0	+1.4
MILM	Milestii Mici	8.57	48	P	Pn	23 16 32.9	+1.4
MILM	Milestii Mici	8.57	48	eP	Pn	23 16 32.0	+0.4
	comp=E,14nm,0.5s						
MILM				eL	L	23 19 53.0	
MILM				LRM	MLR	23 20 36.0	
	comp=E,1µm,16.5s						
ARG	Arkhangelos	8.58	126	Pn	Pn	23 16 32.8	+1.0
ARG	Arkhangelos	8.58	126	P	Pn	23 16 32.8	+1.0
RETA	Reutte	8.61	317	i Pn	Pn	23 16 32.6	+0.5
	comp=E,3.2nm,0.3s,SNR=13						
RETA				i Sn	Sn	23 18 07.0	-2.0
	comp=E,14nm,0.4s						
KHC	Kasperske Hory	8.64	333		Pn	23 16 32.9	+0.2
KHC	Kasperske Hory	8.64	333	ceP	Pn	23 16 32.8	+0.2
KHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KHC	Kasperske Hory	8.64	333	ePN	Pn	23 16 33.7	+1.1
KHC				eSN	Sn	23 18 08.6	-1.2
KHC				ex	x	23 18 30.5	
KHC	Kasperske Hory	8.64	333	P	Pn	23 16 33.2	+0.6
	comp=Z,16nm,1.0s						
DAVOX	Davos/Dischmat	8.66	310	P	Pn	23 16 34.0	+1.0
	comp=Z,3.0nm,0.3s,baz=323,slow=13,SNR=30						
DAVOX				S	Sn	23 18 04.9	-5.5
	comp=Z,7.7nm,0.6s,baz=46,slow=14,SNR=3.0						
	comp=Z,5.2nm,0.3s						
DAVOX	Davos/Dischmat	8.66	310	P	Pn	23 16 34.0	+1.0
OJC	Ojcow	8.67	1	Pn	Pn	23 16 33.1	+0.1
OJC	Ojcow	8.67	1	P	Pn	23 16 33.1	+0.1
OJC	Ojcow	8.67	1	P	Pn	23 16 33.6	+0.6
	comp=Z,9.9nm,0.7s						
ZVC	Zvikov	8.72	337	ePN	Pn	23 16 34.7	+1.1
KRLC	Kraliky	8.73	348	AMS	AMS	23 20 30.0	
	comp=Z,1µm,9.2s						
TUE	Stuetta	8.81	307		Pn	23 16 35.9	+0.8
TUE	Stuetta	8.81	307	P	Pn	23 16 35.8	+0.8
	comp=Z,61nm,0.7s						
WET	Wettzell	8.90	331	ePn	Pn	23 16 35.9	-0.3
DAVA	Damuels	8.95	313	i Pn	Pn	23 16 38.3	+1.4
	comp=Z,2.4nm,0.2s,SNR=6.7						
DAVA				i Sn	Sn	23 18 16.1	-1.5
	comp=Z,14nm,0.4s						
DAVA	Damuels	8.95	313	ePn	Pn	23 16 38.1	+1.2
DAVA				eSn	Sn	23 18 14.1	-3.4
PURM	Purcari	8.97	53	⇑P	Pn	23 16 39.3	+2.2
DPC	Dobruska-Polom	9.07	347	eP	Pn	23 16 41.8	+3.3
DPC				MLR	MLR		
	comp=Z,1µm,13.8s						
DPC	Dobruska-Polom	9.07	347	ePN	Pn	23 16 41.8	+3.3
DPC				AMS	AMS	23 20 50.0	
	comp=Z,1µm,13.8s						
SORM	Soroca	9.10	41	⇓P	Pn	23 16 41.3	+2.4
SORM	Soroca	9.10	41	P	Pn	23 16 41.2	+2.4
PRU	Pruhonice	9.12	339	eP	Pn	23 16 41.0	+2.0
PRU	Pruhonice	9.12	339	ePN	Pn	23 16 41.0	+2.0
OSTC	Ostas	9.29	347	AMS	AMS	23 21 00.0	
	comp=Z,1µm,10.1s						
ELL	Elmali	9.40	117	Pn	Pn	23 16 44.6	+1.5
ELL	Elmali	9.40	117	P	Pn	23 16 44.6	+1.5
ROTZ	Rotzenmuhle	9.66	331	ePn	Pn	23 16 46.2	-0.4
KEST	Kesra	9.84	237	P	Pn	23 16 50.4	+1.4
	comp=Z,0.2nm,0.3s,baz=310,slow=5.1,SNR=11						
KEST				LR	LR	23 21 57.1	
	comp=Z,508nm,18.0s,baz=34,slow=45						
	comp=Z,4.5nm,0.7s						
KEST	Kesra	9.84	237		Pn	23 16 49.4	+0.4
MANZ	Manzenberg	9.88	331	ePn	Pn	23 16 50.6	+1.0
BNI	Bardonecchia	9.97	295	Pn	Pn	23 16 50.6	-0.4
BNI	Bardonecchia	9.97	295	P	Pn	23 16 50.6	-0.4
SENIN	Lac Senin/Sane	10.02	303		Pn	23 16 51.8	+0.2
LUBAR	Lubar, Ukraine	10.16	32	P	Pn	23 16 54.3	+0.9
ANTO	Ankara	10.24	95	Pn	Pn	23 16 53.0	-1.5
ANTO	Ankara	10.24	95	P	Pn	23 16 53.0	-1.5
BFO	Black Forest	10.41	314		Pn	23 16 56.0	-0.9
BFO	Black Forest	10.41	314	P	Pn	23 16 56.0	-0.9
CLL	Collm	10.73	338	eP	Pn	23 16 56.0	-5.1
CLL	Collm	10.73	338	ePn	Pn	23 16 56.0	-5.1
CLL				eSn	Sn	23 18 47.0	-14
CLL				eSb		23 19 25.0	
CLL				ex	x	23 19 49.0	
CLL				AMS	AMS	23 20 00.0	
	comp=N,300nm,19.1s						
CLL				AMS	AMS	23 20 00.0	
	comp=E,500nm,18.8s						
CLL				eSg		23 20 06.0	
CLL				AMS	AMS	23 22 00.0	
BR131	Keskin Array S	10.90	95	i P	Pn	23 17 05.5	+1.8
BRTR	Keskin Array B	10.90	95	P	Pn	23 17 05.5	+1.8
	comp=E,0.1nm,0.3s,baz=58,slow=17,SNR=5.9						
BRTR				LR	LR	23 22 09.3	
	comp=E,276nm,19.6s,baz=287,slow=42						
	comp=E,0.3nm,0.4s						
ECH	Echery	10.99	311		Pn	23 17 03.2	-1.6
ECH	Echery	10.99	311	P	Pn	23 17 03.2	-1.6
AKASG	Malin Array Be	11.36	33	P	Pn	23 17 10.2	+0.5
	comp=E,0.5nm,0.3s,baz=220,slow=13,SNR=5.4						
AKASG				LR	LR	23 22 09.3	
	comp=E,292nm,18.6s,baz=220,slow=40						
	comp=E,1.8nm,0.7s						
SSB	Saint Sauveur	11.49	294	Pn	Pn	23 17 09.5	-2.2
SSB	Saint Sauveur	11.49	294	P	Pn	23 17 09.5	-2.2
MNK	Minsk	14.11	20	i P	Pn	23 17 40.5	-6.7
	comp=E,10.0nm,0.9s						
MNK				i P	Pn	23 17 40.5	-6.7
	comp=N,22nm,1.0s						
MNK				i P	Pn	23 17 40.5	-6.7
	comp=Z,9.0nm,1.1s,baz=207						
MNK				i PP	P	23 17 48.6	-6.3
MNK				i PPP	PPP	23 17 56.2	
MNK				i S	Sn	23 20 18.3	-5.1
MNK				i SS	SnSn	23 20 35.8	0.0
MNK				i LR	LR	23 22 34.6	
MNK				i LRM	MLR	23 23 14.1	
	comp=N,552nm,17.8s						
MNK				i LRM	MLR	23 23 20.4	

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             comp=E,880nm,22.2s
MNK                                 i LRM   MLR      23 23 49.7
             comp=Z,394nm,15.9s
MNK    Minsk              14.11  20 i P     Pn       23 17 40.4  -6.8
MNK                                 i S     Sn       23 20 18.2  -5.1
MNK                                   pmax  pmax
             comp=N,22nm,1.0s
MNK                                   pmax  pmax
             comp=Z,9.0nm,1.1s
MNK                                   pmax  pmax
             comp=E,10.0nm,0.9s
MNK                                   MLR   MLR
             comp=N,552nm,18.0s
MNK                                   MLR   MLR
             comp=E,880nm,22.0s
MNK                                   MLR   MLR
             comp=Z,394nm,16.0s
NACGM  Naroch             14.20  17 eP      Pn       23 17 51.5  +2.9
PABE   Paberze            14.27  10   Pn    Pn       23 17 50.1  +0.7
MMAI   Mount Meron Ar     15.25 119   P     Pn       23 18 03.8  +0.9
             comp=Z,1.1nm,0.3s,baz=304,slow=11,SNR=8.1
             comp=Z,1.7nm,0.5s
BALJ   Balqa              15.99 121   Pn    Pn       23 18 12.0  -0.5
SHA1   Shidzhatmaz        17.17  75 i P     P        23 18 29.1  -0.1
KIV    Kislovodsk         17.19  74 eP      Pn       23 18 26.0  -1.7
KIV                                   pmax  pmax
             comp=Z,3.0nm,1.1s
KIV                                   MLR   MLR
             comp=Z,32nm,14.0s
KVAR   Kislovodsk Arr     17.20  74   P     Pn       23 18 28.8  +0.9
             baz=286,slow=18
             comp=Z,3.3nm,1.0s
KBZ    Khabaz             17.35  75   P     P        23 18 30.9  +0.1
             comp=Z,0.1nm,0.3s,baz=289,slow=8.7,SNR=5.5
KBZ                                   LR    LR       23 28 10.1
             comp=Z,60nm,18.7s,baz=280,slow=47
             comp=Z,2.9nm,0.9s
KBZ    Khabaz             17.35  75 i P     Pn       23 18 30.1  +0.6
OBN    Obninsk            17.62  34   LR    LR       23 25 38.6
             comp=Z,266nm,18.2s,baz=168,slow=38
OBN    Obninsk            17.62  34⇑eP      Pn       23 18 32.9   0.0
OBN                                   pmax  pmax
             comp=Z,65nm,4.5s
OBN                                   MLR   MLR
             comp=Z,197nm,17.0s
NCK    Nalchik            17.86  76 i P     P        23 18 37.0  +0.4
ESBB   Sonseca Array      17.90 272         Pn       23 18 36.7  +0.1
ESDC   Sonseca Array      17.90 272   P     P        23 18 37.5  +0.4
             baz=76,slow=11,SNR=11
ESDC                                  LR    LR       23 24 47.9
             comp=Z,83nm,21.4s,baz=91,slow=34
             comp=Z,0.9nm,0.8s
ESDC   Sonseca Array      17.90 272   P     Pn       23 18 36.1  -0.4
PAB    San Pablo          18.22 272         Pn       23 18 40.7  +0.2
PAB    San Pablo          18.22 272   P     Pn       23 18 40.7  +0.2
PAB                                   pmax  pmax
             comp=Z,6.0nm,1.2s
MOS    Moscow             18.49  34 eP      Pn       23 18 46.3  +2.8
HFS    Hagfors            18.95 351   P     P        23 18 47.2  -1.2
             comp=Z,0.6nm,0.3s,baz=168,slow=12,SNR=16
HFS                                   LR    LR       23 27 20.6
             comp=Z,177nm,18.0s,baz=191,slow=41
             comp=Z,6.3nm,0.7s
NC405  NORSAR Array S     20.15 349   P     P        23 19 01.0  -0.6
NC405                                 IAmb  IAmb     23 19 02.0
             comp=Z,21nm,1.1s
NB2    NORSAR Subarra     20.16 348   P     P        23 19 00.7  -0.9
             comp=Z,7.4nm,1.0s,baz=166,slow=11
NOA    NORSAR Array B     20.16 348   P     P        23 19 00.6  -1.1
             comp=Z,1.7nm,0.8s,baz=150,slow=9.7,SNR=7.7
NOA                                   LR    LR       23 28 04.7
             comp=Z,147nm,19.0s,baz=170,slow=40
             comp=Z,1.7nm,0.8s
EKA    Eskdalemuir Ar     20.27 321   P     P        23 19 02.9   0.0
             comp=Z,4.5nm,0.6s,baz=116,slow=8.9,SNR=8.2
             comp=Z,4.5nm,0.6s
ESK    Eskdalemuir        20.28 320   P     P        23 19 02.3  -0.7
ESK                                   IAmb  IAmb     23 19 46.3
             comp=Z,14nm,1.1s
ESK    Eskdalemuir        20.28 320   P     P        23 19 02.3  -0.7
ESK                                   pmax  pmax
             comp=Z,14nm,1.1s
EKB    Eskdalemuir        20.28 321   P     P        23 19 03.0   0.0
EKB                                   IAmb  IAmb     23 19 15.2
             comp=Z,8.5nm,0.9s
FINES  FINESS Array B     20.32   9   P     P        23 19 02.5  -0.8
             comp=Z,1.9nm,0.3s,baz=187,slow=10,SNR=29
FINES                                 LR    LR       23 27 26.8
             comp=Z,193nm,18.5s,baz=219,slow=38
             comp=Z,1.9nm,0.3s
FINES  FINESS Array B     20.32   9   P     P        23 19 02.1  -1.2
FIA1   FINESS Array S     20.32   9   P     P        23 19 02.4  -0.9
PMRV   Marv??o            20.53 273 eP      Pn       23 19 10.4  +2.3
PBAR   Barrancos          20.62 269 eP      Pn       23 19 08.4  -0.6
PBAR                                i IAmb  IAmb     23 19 11.6
             comp=Z,21nm,1.2s
MAK    Makhachkala        20.75  77 eP      P        23 19 01.6  -6.5
MAK                                 eS      S        23 22 48.5   -11
MAK                                   pmax  pmax
             comp=Z,439nm,1.1s
MAK                                   MLR   MLR
             comp=Z,152nm,12.0s
PESTR  Estremoz           20.83 272 eP      P        23 19 07.6  -1.5
PESTR                               i IAmb  IAmb     23 19 11.8
             comp=Z,22nm,1.7s
MDT    Midelt             21.04 253   P     P        23 19 11.4   0.0
             comp=Z,2.8nm,0.8s,baz=77,slow=10,SNR=7.0
MDT                                   LR    LR       23 26 54.2
             comp=Z,96nm,18.8s,baz=68,slow=35
             comp=Z,2.8nm,0.8s
PSARD  Sardoal            21.07 274 eP      P        23 19 12.8  +1.1
MD01   Midelt array s     21.12 254   P     P        23 19 11.5  -0.9
MD31   MD31               21.12 254   P     P        23 19 11.0  -1.3
MD31                                  IAmb  IAmb     23 19 14.7
             comp=Z,5.7nm,1.1s
PARRA  Arraiolos          21.18 272 eP      P        23 19 14.2  +1.3
EVO    Evora              21.24 271 eP      P        23 19 17.3  +3.8
PMTG   Montargil          21.25 272 eP      P        23 19 14.4  +0.8
PMTG                                i IAmb  IAmb     23 19 21.7
             comp=Z,14nm,1.3s
PVAQ   Vaqueiros          21.37 268   P     P        23 19 15.1  +0.1
PVAQ                                  IAmb  IAmb     23 19 44.3
             comp=Z,9.9nm,1.1s
PVAQ   Vaqueiros          21.37 268 eP      P        23 19 16.7  +1.8
PCVE   Castro Verde       21.54 269 eP      P        23 19 18.5  +1.8
PBDV   Barranco-do-Ve     21.59 268 eP      P        23 19 21.1  +3.9
MESJ   Messejana          21.61 269 eP      P        23 19 18.7  +1.3
BELG   Belogornoye        21.90  51   P     P        23 19 19.1  -1.3
             comp=Z,24nm,0.8s,baz=276,slow=0.6,SNR=7.8
             comp=Z,24nm,0.8s
BELG   Belogornoye        21.90  51 i P     P        23 19 18.9  -1.6
BELG                                  pmax  pmax
             comp=Z,4.0nm,0.9s
TAM    Tamanrasset        22.08 216   P     P        23 19 23.2  +0.5
TAM    Tamanrasset        22.08 216   P     P        23 19 23.2  +0.5
TAM                                   pmax  pmax
             comp=Z,53nm,0.2s
KLMR   Klimovskoe         22.86  26 eP      P        23 19 28.6  -2.0
KLMR                                  pmax  pmax
             comp=Z,28nm,1.3s
KLMR                                  MLR   MLR
             comp=Z,590nm,18.0s
KIRV   Kirov              25.36  38   LR    LR       23 30 20.9
             comp=Z,264nm,19.2s,baz=235,slow=38
KIRV   Kirov              25.36  38ceP      P        23 19 55.3  +1.1
AKTO   Aktyubinsk         27.93  58   LR    LR       23 33 36.7
             comp=Z,127nm,18.5s,baz=67,slow=41
ARCES  ARCESS Array B     28.22   4   P     P        23 20 17.8  -2.2
             comp=Z,2.6nm,1.0s,baz=185,slow=9.4,SNR=1.6
ARCES                                 LR    LR       23 33 18.3
             comp=Z,140nm,20.1s,baz=198,slow=40
             comp=Z,2.6nm,1.0s
ARTI   Arti               29.06  46   LR    LR       23 33 06.9
             comp=Z,243nm,18.9s,baz=237,slow=38
ARTI   Arti               29.06  46         P        23 20 25.7  -1.9
ARTI   Arti               29.06  46d iP     P        23 20 26.7  -0.9
ARTI                                  S     S        23 25 20.7  +2.3
ARTI                                  pmax  pmax
             comp=Z,6.0nm,0.8s
AB31   Akbulak array      29.14  61   P     P        23 20 27.7  -0.7
ABKAR  Akbulak array      29.14  61   P     P        23 20 27.3  -1.1
SVE    Sverdlovsk         30.38  46 eP      P        23 20 37.9  -1.3
SVE                                   MLR   MLR
             comp=Z,415nm,17.0s
TORD   Torodi Ar. Bea     32.28 214   P     P        23 20 56.9  +0.6
             comp=Z,1.9nm,0.3s,baz=31,slow=9.6,SNR=3.5
             comp=Z,1.9nm,0.3s
BORG   Borgarnes          32.80 329   LR    LR       23 35 43.0
             comp=Z,78nm,19.1s,baz=124,slow=39
BORK   Borovoye           35.61  54ceP      P        23 21 26.4  +1.5
BORK                                  pmax  pmax
             comp=Z,4.0nm,0.8s
BVAR   Borovoye Array     35.65  54   P     P        23 21 24.7  -0.6
             comp=Z,2.1nm,0.8s,baz=270,slow=5.9,SNR=8.7
BVAR                                  LR    LR       23 39 29.6
             comp=Z,44nm,18.5s,baz=253,slow=42
             comp=Z,2.1nm,0.8s
SPITS  Spitsbergen Ar     36.76 359   LR    LR       23 38 47.4
             comp=Z,133nm,18.1s,baz=166,slow=40
AAK    Ala-Archa          40.21  69   LR    LR       23 41 38.8
             comp=Z,54nm,18.0s,baz=302,slow=40
DBIC   Dimbokro           40.94 219   LR    LR       23 40 56.5
             comp=Z,40nm,19.6s,baz=32,slow=39
DBIC   Dimbokro           40.94 219   P     P        23 22 09.7  -0.4
DBIC                                  IAmb  IAmb     23 22 10.9
             comp=Z,5.0nm,1.1s
DBIC   Dimbokro           40.94 219   P     P        23 22 09.7  -0.4
DBIC                                  pmax  pmax
             comp=Z,5.0nm,1.1s
KURBB  Kurchatov Arra     40.94  56   P     P        23 22 09.2  -0.6
             comp=Z,0.2nm,0.4s,baz=286,slow=7.0,SNR=5.1
KURBB                                 LR    LR       23 42 56.2
             comp=Z,94nm,18.2s,baz=188,slow=42
             comp=Z,0.2nm,0.4s
KURK   Kurchatov          40.98  56   P     P        23 22 09.6  -0.5
KURK   Kurchatov          40.98  56   P     P        23 22 09.6  -0.5
KURK                                  pmax  pmax
             comp=Z,1.0nm,0.9s
MAKZ   Makanchi           44.07  61   P     P        23 22 34.8  -0.6
MAKZ                                  IAmb  IAmb     23 22 37.0
             comp=Z,1.8nm,0.9s
MAKZ   Makanchi           44.07  61   P     P        23 22 34.8  -0.6
MAKZ                                  pmax  pmax
             comp=Z,2.0nm,0.9s
ZAA0   Zalesovo Array     44.09  51         P        23 22 34.2  -1.2
ZAA0                                  IAmb  IAmb     23 22 36.6
             comp=Z,4.5nm,0.8s
ZALV   Zalesovo Beam      44.09  51   P     P        23 22 34.6  -0.7
             comp=Z,2.7nm,0.4s,baz=284,slow=8.4,SNR=25
ZALV                                  LR    LR       23 43 10.9
             comp=Z,228nm,18.2s,baz=316,slow=39
             comp=Z,2.7nm,0.4s
ZALV   Zalesovo Beam      44.09  51         P        23 22 34.3  -1.0
ZALV   Zalesovo Beam      44.09  51 i P     P        23 22 34.5  -0.9
ZALV                                  pmax  pmax
             comp=Z,4.0nm,0.5s
NRIK   Noril'sk           44.17  28   LR    LR       23 43 01.8
             comp=Z,122nm,18.7s,baz=286,slow=39
MK31   Makanchi Array     44.28  61   P     P        23 22 36.5  -0.5
MK31                                  IAmb  IAmb     23 22 38.9
             comp=Z,3.1nm,0.8s
MK31   Makanchi Array     44.28  61ceP      P        23 22 37.4  +0.3
MKAR   Makanchi Array     44.28  61   P     P        23 22 36.6  -0.5
             comp=Z,2.8nm,0.7s,baz=282,slow=6.0,SNR=27
MKAR                                  LR    LR       23 44 06.3
             comp=Z,85nm,19.8s,baz=279,slow=40
             comp=Z,2.8nm,0.7s
MKAR   Makanchi Array     44.28  61         P        23 22 36.4  -0.6
SFJD   Kangerlussuaq      44.93 328   LR    LR       23 42 48.7
             comp=Z,65nm,20.1s,baz=140,slow=38
DGZ    Jazzator, Alta     46.72  56 i P     P        23 22 54.8  -1.6
DGZ                                   pmax  pmax
             comp=Z,15nm,3.7s
WMQ    Urumqi             48.88  63 eP      P        23 23 14.6  +1.4
WMQ                                   pmax  pmax
             comp=Z,9.0nm,1.3s
SCHQ   Schefferville      55.47 316   LR    LR       23 48 54.9
             comp=Z,38nm,18.8s,baz=76,slow=37
EVN    Everest            55.66  81         P        23 24 02.4  -2.0
TIXI   Tiksi              56.77  21   LR    LR       23 51 52.2
             comp=Z,129nm,18.1s,baz=114,slow=40
SONM   Songino Array      58.96  52   P     P        23 24 26.8   0.0
             comp=Z,1.4nm,0.8s,baz=288,slow=8.3,SNR=11
SONM                                  LR    LR       23 52 05.4
             comp=Z,161nm,20.0s,baz=334,slow=38
             comp=Z,1.4nm,0.8s
SONM   Songino Array      58.96  52   P     P        23 24 26.4  -0.5
SONM                                  IAmb  IAmb     23 24 28.7
             comp=Z,1.6nm,0.9s
YAK    Yakutsk            62.57  30   LR    LR       23 54 43.3
             comp=Z,108nm,18.8s,baz=284,slow=39
HHC    Hu-ho-hao-te       65.80  56 eP      P        23 25 13.0  +0.3
HHC                                   pmax  pmax
             comp=Z,9.0nm,0.6s
HHC                                   pmax  pmax
             comp=Z,79nm,5.2s
PZH    PanZhiHua          67.42  74   P     P        23 25 25.1  +1.8
SADO   Sadowa             67.45 310   LR    LR       23 53 25.5
             comp=Z,31nm,18.4s,baz=59,slow=35
XAN    Xi'an              68.01  64   P     P        23 25 27.4  +0.6
XAN                                   pmax  pmax
             comp=Z,7.0nm,0.7s
C27K   Jago River         68.45 354   P     P        23 25 29.3  +0.3
C27K                                  IAmb  IAmb     23 25 29.9
             comp=Z,2.8nm,0.9s
C23K   Itkillik River     68.69 356   P     P        23 25 31.0  +0.6
C23K                                  IAmb  IAmb     23 25 54.9
             comp=Z,0.6nm,0.7s
B21K   Ikpikpuk River     69.06 358   P     P        23 25 35.1  +2.4
SEY    Seymchan           69.27  21   LR    LR       00 00 55.0
             comp=Z,71nm,19.2s,baz=318,slow=40
F31M   Tsiigehtchic       69.45 349         P        23 25 36.5  +1.3
HNS    HongShan           69.80  58 ⇓P      P        23 25 41.9  +4.1
YKA    Yellowknife Ar     69.95 339   P     P        23 25 38.1  -0.3
             comp=Z,0.4nm,0.8s,baz=31,slow=5.5,SNR=4.8
             comp=Z,0.4nm,0.8s
YKA    Yellowknife Ar     69.95 339ceP      P        23 25 38.0  -0.3
YKA                                   pmax  pmax
             comp=Z,1.0nm,0.7s
CMAR   Chiang Mai Arr     70.22  83   P     P        23 25 40.4  -0.3
             comp=Z,0.6nm,0.3s,baz=322,slow=5.9,SNR=1.8
             comp=Z,0.6nm,0.3s
MA2    Magadan            71.53  24   LR    LR       00 01 14.5
             comp=Z,114nm,18.8s,baz=280,slow=39
ULM    Lac du Bonnet      72.53 323   P     P        23 25 53.8  -0.3
             comp=Z,1.5nm,0.4s,baz=128,slow=5.9,SNR=2.0
             comp=Z,1.5nm,0.4s
ILAR   Eielson Array      73.48 354   P     P        23 25 59.6  +0.1
             comp=Z,0.3nm,0.7s,baz=5.9,slow=6.7,SNR=4.3
             comp=Z,0.3nm,0.7s
ILAR   Eielson Array      73.48 354   P     P        23 25 59.4  -0.1
NJ2    Nanjing            75.80  60 eP      P        23 26 14.1  +0.6
NJ2                                   pmax  pmax
             comp=Z,12nm,1.0s
PETK   Petropavlovsk-     79.06  24   LR    LR       00 05 18.0
             comp=Z,101nm,18.7s,baz=328,slow=38
NEW    Newport            82.69 332   LR    LR       00 05 55.8
             comp=Z,37nm,18.8s,baz=35,slow=37
MJAR   Matsushiro Arr     84.18  45   LR    LR       00 07 54.8
             comp=Z,62nm,18.1s,baz=2.5,slow=38
PDAR   Pinedale Array     84.33 325   P     P        23 26 59.9  +0.1
             comp=Z,0.3nm,0.8s,baz=27,slow=7.4,SNR=2.1
             comp=Z,0.3nm,0.8s
NVAR   Mina Array Bea     91.58 328   LR    LR       00 11 48.4
             comp=Z,60nm,19.4s,baz=271,slow=38
TXAR   Lajitas Array      92.09 313   P     P        23 27 35.4  -1.6
             comp=Z,0.4nm,0.8s,baz=60,slow=3.0,SNR=4.2
             comp=Z,0.4nm,0.8s
ASAR   Alice Springs     123.24  93   PKP   PKPdf    23 33 23.1  -1.4
             comp=Z,0.3nm,0.7s,baz=335,slow=4.2,SNR=2.7
QSPA   South Pole Qui    131.40 180   PKP   PKPdf    23 33 37.4  -1.4
             comp=Z,0.7nm,0.9s,baz=203,slow=3.8,SNR=1.8
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*SKO **07** 23:32:48.4, 41.°60N×19.°34E, h0km, ML2.8*
*IDC **07** 23:32:48.0±10.0, 41.°72N×19.°67E, h0km, mb3.6/3, mbtmp3.5/4, ML2.6/1, Error ellipse: s-maj=189.4km s-min=28.9km az=31.0*
*TIR **07** 23:32:50.0, 41.°58N×19.°57E, h9km±2km, Ml2.7/5*
*PDG **07** 23:32:53.1±0.2, 41.°73N×19.°52E, h10km±1km, ML2.7/13, Error ellipse: s-maj=1.0km s-min=0.9km az=90.0*
ISC 07 23:32:49.5±1.0**, 41.°58N**±0.°02×**19.°47E**±0.°02**, h11**km±8km**,**
n62, σ1.°20/95**, 20C-19D, Albania**

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Code   Station Name        Δ°    AZ°  Phase ID          Time       Res
                                      Op    ISC       h  m  s      ISC
TIR    Tirane              0.38 127 ⇓Pg     Pg       23 32 56.7  -0.3
TIR                                   Sg    Sg       23 33 01.3  -0.7
TIR                                   AML   AML      23 33 01.4
             4.5nm,0.3s
TIR                                   AML   AML      23 33 03.5
             2.6nm,0.3s
TIR    Tirane              0.38 127 i Pg    Pg       23 32 56.7  -0.3
TIR                                 i Sg    Sg       23 33 02.7  +0.7
ULC    Ulcinj              0.42 337⇑iPg     Pb       23 32 59.1  +0.1
ULC                                 i Sg    Sb       23 33 04.4  -1.0
SDA    Shkodra             0.48   3   Pg    Pb       23 32 59.5  -0.4
SDA                                   Sg    Sb       23 33 07.2  +0.3
DRME   Dracevica, Mon      0.65 341⇓iPg     Pb       23 33 02.6  -0.2
DRME                                eSg     Sb       23 33 11.9  +0.1
PHP    Peshkopia           0.74  81   Pg    Pg       23 33 02.4  -1.4
PHP                                   Sg    Sg       23 33 12.4  -1.1
PHP                                   AML   AML      23 33 17.4
             2.3nm,0.4s
BUM    Brajici-Budva       0.84 330⇓iPg     Pn       23 33 06.7  -0.6
BUM                                 i Sg    Sn       23 33 18.9  -0.8
PDG    Podgorica           0.87 350   Pg    Pb       23 33 06.5  -0.1
PDG                                   Sg    Sn       23 33 19.8  -0.5
PDG    Podgorica           0.87 350 ⇓P      Pn       23 33 06.9  -0.8
PDG                                 ⇑S      Sn       23 33 20.3   0.0
PDG    Podgorica           0.87 350⇓iPg     Pb       23 33 06.4  -0.1
PDG                                 i Sg    Sb       23 33 18.7  +0.5
CEME   Cevo                1.05 337⇓iPg     Pn       23 33 10.3   0.0
CEME                                eSg     Sn       23 33 25.0   0.0
PVY    Plav                1.08  20⇓iPg     Pg       23 33 09.7  -0.6
PVY                                 i Sg    Sg       23 33 24.7  +0.3
OHR    Ohrid               1.11 114 i Pg    Pg       23 33 10.0  -0.8
OHR                                 i Sg    Sn       23 33 27.4  +1.1
OHR                                 eLg     Lg       23 33 28.1
             comp=N,166nm,0.4s
OHR                                 eLg     Lg       23 33 28.6
             comp=E,175nm,0.4s
VLO    Vlora               1.11 179   Pg    Pn       23 33 13.2  +2.3
VLO                                   Sg    Sn       23 33 26.7  +0.6
VLO                                   AML   AML      23 33 31.8
             comp=E,2.8nm,0.4s
HCY    Herceg Novi         1.13 321⇑iPg     Pn       23 33 12.5  +1.2
HCY                                 i Sg    Sn       23 33 29.0  +2.2
NKME   Niksic              1.25 342⇑iPg     Pg       23 33 13.6  +0.1
NKME                                eSg     Sn       23 33 31.7  +1.9
KOME   Kolasin             1.27   2⇑iPg     Pg       23 33 14.2  +0.2
KOME                                eSg     Sn       23 33 31.7  +1.2
IVA    Berane              1.33  14⇓iPg     Pg       23 33 14.9  -0.2
IVA                                 i Sg    Sg       23 33 33.8  +1.3
KBN    Korca               1.38 133   Pn    Pg       23 33 17.1  +1.1
KBN                                   Sn    Sb       23 33 33.4  +0.4
BRY    Bratogost           1.49 333⇑iPg     Pg       23 33 18.7  +0.5
BRY                                 i Sg    Sg       23 33 39.7  +2.1
SKO    Skopje              1.53  74 i Pg    Pn       23 33 17.5  +0.8
SKO                                 i Sg    Sb       23 33 39.2  +2.0
NEST   Nestorio            1.67 134   Pn    Pb       23 33 20.6  +0.3
NEST                                  Sn    Sg       23 33 43.1   0.0
NEST                                  AML   AML      23 33 46.0
             comp=E,0.2nm,0.8s
NEST                                  AML   AML      23 33 49.8
             comp=E,0.3nm,0.5s
UPM    Unac-Piva           1.68 346⇑iPg     Pg       23 33 21.6  -0.1
UPM                                 i Sg    Sg       23 33 44.6  +1.1
PLE    Pljevlja            1.75 358⇑iPn     Pb       23 33 21.8   0.0
PLE                                 i Sn    Sg       23 33 45.3  -0.6
NOCI   Noci                1.98 247   Pn    Pg       23 33 27.6  +0.3
NOCI                                  Sn    Sg       23 33 55.9  +2.9
NOCI                                  AML   AML      23 34 02.4
             comp=E,0.8nm,0.6s
BARS   Barje               2.14  54 i Pn    Pn       23 33 26.2  +1.0
BARS                                i Sn    Sb       23 33 55.3  +0.4
IGT    Igoumenitsa         2.15 162 ⇑Pn     Pg       23 33 31.3  +0.7
IGT                                   Sn    Sg       23 33 58.1  -0.3
MATE   Matera              2.28 247 ⇑P      Pg       23 33 31.0  -2.2
MATE                                ⇑S      Sg       23 34 00.0  -2.8
VAY    Valandovo           2.35  95 i Pn    Pn       23 33 28.7  +0.7
VAY                                 i Sn    Sn       23 33 57.0  +0.2
VAY                                 eLg     Lg       23 33 57.5
             comp=E,35nm,0.8s
VAY                                 eLg     Lg       23 34 05.9
             comp=N,83nm,1.4s
KNT    Kendrikon           2.62  98 i Pn    Pn       23 33 32.4  +0.7
BOVS   Bovan               2.64  38 ⇓P      Pn       23 33 33.0  +1.0
LIT    Litokhoron          2.73 122 i Pn    Pn       23 33 35.6  +2.3
KKB    Krupnik             2.75  83 i Pn    Pn       23 33 34.8  +1.1
KKB                                 i Sn    Sn       23 34 06.6  -0.3
SGRT   San Giovanni R      2.79 275   Pn    Pn       23 33 34.2   0.0
THE    Thessaloniki        2.81 108 i Pn    Pn       23 33 33.5  -0.8
THE                                 i Sn    Sn       23 34 08.9  +0.8
LKD2   Lefkada island      2.93 161   Pn    Pn       23 33 36.3  +0.3
SOH    Sokhos              3.03 103 i Pn    Pn       23 33 39.3  +1.9
SRS    Serrai              3.14  97 i Pn    Pn       23 33 39.5  +0.6
SRS                                 i Sn    Sn       23 34 15.2  -1.2
MMB    Musomishta          3.21  89 i Pn    Pn       23 33 41.3  +1.4
MMB                                 i Sn    Sn       23 34 19.4  +1.1
BLY    Banja Luka          3.58 333 ⇓P      Pn       23 33 47.8  +2.8
MDVR   Moldovita           3.60  26 ⇑P      Pn       23 33 46.0  +0.8
HERR   Herculane           3.94  32 ⇑P      Pn       23 33 50.5  +0.5
BZS    Buzias              4.33  20 ⇓P      Pn       23 33 56.6  +1.4
GZR    Gura Zlata          4.51  31 ⇓P      Pn       23 33 59.3  +1.5
MORH   Mrgy, Hungar        4.68 353 ⇑P      Pn       23 34 02.1  +2.1
SIRR   Siria               4.95  18 ⇑P      Pn       23 34 05.4  +1.6
LOT    Lotru               4.98  38 ⇑P      Pn       23 34 04.8  +0.6
ARR    Arges               5.34  43 ⇓P      Pn       23 34 10.5  +1.3
RAZG   Razgrad             5.57  67 ⇑P      Pn       23 34 12.8  +0.6
DRGR                       5.71  23 ⇓P      Pn       23 34 15.4  +1.1
MARR   Marisel-Cluj        5.74  26 ⇓P      Pn       23 34 15.6  +1.0
MLR    Muntele Rosu        6.12  48 ⇓P      Pn       23 34 21.3  +1.3
DOPR   Dopca               6.14  42 ⇑P      Pn       23 34 21.4  +1.4
BOSR   Bodos               6.35  43 ⇑P      Pn       23 34 24.8  +1.9
COVR   Voineasa-Covas      6.48  47 ⇑P      Pn       23 34 26.1  +1.3
TURR   Turia               6.52  44 ⇓P      Pn       23 34 26.5  +1.2
PLOR   Plostina            6.73  48 ⇓P      Pn       23 34 30.0  +1.7
VRI    Vrincioaia          6.79  48 ⇓P      Pn       23 34 30.6  +1.6
GERES  GERESS Array B      8.33 333   Pn    Pn       23 34 50.5  +0.3
             baz=130,slow=15,SNR=2.4
             comp=N,0.5nm,0.7s
FINES  FINESS Array B     20.30   9   P     P        23 37 23.3  -1.7
             comp=N,3.2nm,0.9s,baz=195,slow=10,SNR=1.7
             comp=N,3.2nm,0.9s
ZALV   Zalesovo Beam      44.09  51   P     P        23 40 55.5  -1.9
             comp=N,0.4nm,0.4s,baz=280,slow=8.6,SNR=2.3
             comp=N,0.4nm,0.4s
MKAR   Makanchi Array     44.29  61   P     P        23 40 57.8  -1.3
             comp=N,0.3nm,0.5s,baz=287,slow=7.2,SNR=4.5
             comp=N,0.3nm,0.5s
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*SKO **07** 23:34:49.4, 41.°56N×19.°31E, h0km, ML3.0*
*IDC **07** 23:34:50.9±7.6, 41.°87N×19.°82E, h0km, mb3.8/3, mbtmp3.7/6, ML2.5/3, MS2.6/1, Error ellipse: s-maj=141.8km s-min=25.2km az=31.0*
*TIR **07** 23:34:50.3, 41.°68N×19.°47E, h44km±2km, Ml3.1/6*
*PDG **07** 23:34:50.6±0.3, 41.°60N×19.°62E, h9km, MD3.2/5, ML3.1/13, Error ellipse: s-maj=1.2km s-min=1.3km az=0.0*
*BEO **07** 23:34:51.4±0.4, 41.°59N×19.°53E, h9km±2km, ML2.9/20*
*THE **07** 23:34:51.1, 42°N±30°×1°9E±2°1, h2km±24km, M2.8/7, MLh2.8/7*
*VIE **07** 23:34:55.3±0.8, 41.°99N×19.°53E, h8km, mb3.0/9, ms3.8/7, Error ellipse: s-maj=18.4km s-min=5.6km az=40.0 43 km E of Shkoder*
ISC 07 23:34:51.0±1.0**, 41.°61N**±0.°02×**19.°51E**±0.°02**, h12**km±7km**,**
n124, σ1.°24/191**, mb3.7**/3**, 22C-22D, Albania**

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Code   Station Name        Δ°    AZ°  Phase ID          Time       Res
                                      Op    ISC       h  m  s      ISC
TIR    Tirane              0.38 134 ⇓Pg     Pg       23 34 58.0  -0.6
TIR                                   Sg    Sg       23 35 03.0  -0.6
TIR                                   AML   AML      23 35 03.2
             12nm,0.2s
TIR                                   AML   AML      23 35 03.5
             6.5nm,0.6s
TIR    Tirane              0.38 134 i Pg    Pg       23 34 58.0  -0.6
TIR                                 i Sg    Sg       23 35 04.2  +0.6
ULC    Ulcinj              0.40 331⇑iPg     Pg       23 34 59.2  +0.2
ULC                                 i Sg    Sb       23 35 06.1  -0.1
SDA    Shkodra             0.44 359   Pg    Pg       23 34 59.8  +0.1
SDA                                   Sg    Sb       23 35 06.8  -0.4
SDA                                   AML   AML      23 35 10.5
             2.4nm,0.2s
DRME   Dracevica, Mon      0.62 337⇓iPg     Pg       23 35 02.4  -0.7
DRME                                eSg     Sb       23 35 14.0  +1.5
PHP    Peshkopia           0.70  84 ⇓Pg     Pg       23 35 03.5  -1.2
PHP                                   Sg    Sb       23 35 15.5  +0.6
PHP                                   AML   AML      23 35 17.8
             3.7nm,0.5s
PHP    Peshkopia           0.70  84   P     Pg       23 35 03.5  -1.2
PHP                                   S     Sn       23 35 17.0  -0.6
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BUM	Brajici-Budva	0.82	327	⇓iPg	Pg	23 35 06.7	-0.3
BUM				iSg	Sn	23 35 20.3	-0.3
PDG	Podgorica	0.84	347	Pg	Pg	23 35 06.8	-0.5
PDG				Sg	Sg	23 35 17.6	-0.6
PDG	Podgorica	0.84	347	⇑P	Pb	23 35 07.7	+0.2
PDG				⇓S	Sb	23 35 19.1	+0.4
PDG	Podgorica	0.84	347	ePg	Pg	23 35 06.6	-0.6
PDG				eSg	Sn	23 35 20.7	-0.1
PDG	Podgorica	0.84	347	⇑iPg	Pg	23 35 07.2	0.0
PDG				iSg	Sn	23 35 21.1	+0.3
CEME	Cevo	1.03	335	⇑iPg	Pg	23 35 10.3	-0.6
CEME				eSg	Sn	23 35 27.5	+1.8
PVY	Plav	1.04	19	⇓iPg	Pg	23 35 09.4	-1.6
PVY				iSg	Sb	23 35 25.4	+0.8
OHR	Ohrid	1.09	117	iPg	Pg	23 35 10.9	-1.2
OHR				iSg	Sn	23 35 27.9	+0.6
OHR				eLg	Lg	23 35 28.7	
	comp=N,215nm,0.5s						
OHR				eLg	Lg	23 35 31.8	
	comp=E,293nm,0.6s						
HCY	Herceg Novi	1.12	318	⇑iPg	Pb	23 35 12.8	+0.4
HCY				iSg	Sn	23 35 31.5	+3.6
VLO	Vlora	1.14	180	Pg	Pg	23 35 12.7	-0.3
VLO				Sg	Sg	23 35 27.7	-0.1
VLO	Vlora	1.14	180	P	Pg	23 35 12.9	-0.1
VLO				S	Sn	23 35 29.7	+1.4
NKME	Niksic	1.23	341	⇓iPg	Pb	23 35 13.6	-0.5
NKME				eSg	Sn	23 35 33.9	+3.4
KOME	Kolasin	1.24	0	⇓iPg	Pb	23 35 13.4	-1.0
KOME				eSg	Sn	23 35 33.3	+2.5
IVA	Berane	1.29	13	⇑iPg	Pn	23 35 14.6	-0.3
IVA				iSg	Sn	23 35 34.4	+2.2
KBN	Korca	1.38	135	⇓Pn	Pg	23 35 17.4	-0.2
KBN				Sn	Sb	23 35 33.9	-0.5
KBN	Korca	1.38	135	P	Pg	23 35 17.4	-0.2
KBN				S	Sg	23 35 38.8	+3.2
TREB	Trebinje	1.40	322	ePn	Pn	23 35 16.8	+0.5
TREB	Trebinje	1.40	322	ePg	Pn	23 35 16.9	+0.6
TREB				eSg	Sg	23 35 36.8	+0.7
BRY	Bratogost	1.48	331	⇑iPg	Pn	23 35 18.2	+0.7
BRY				iSg	Sg	23 35 41.4	+2.9
SKO	Skopje	1.49	75	iPg	Pg	23 35 18.9	-0.7
SKO				iSg	Sg	23 35 39.4	+0.4
UPM	Unac-Piva	1.65	345	⇓iPn	Pb	23 35 21.5	0.0
UPM				iSn	Sg	23 35 45.5	+1.3
NEST	Nestorio	1.67	135	Pn	Pb	23 35 21.6	-0.1
NEST				Sn	Sb	23 35 43.2	+0.4
NEST				AML	AML	23 35 45.1	
	comp=E,0.4nm,0.6s						
NEST	Nestorio	1.67	135	P	Pb	23 35 21.7	-0.1
SJES	Sjenica	1.68	12	ePn	Pb	23 35 22.3	+0.3
SJES				eSn	Sg	23 35 45.0	-0.2
KLINJ	Klinje	1.70	337	ePn	Pb	23 35 21.7	-0.5
PLE	Pljevlja	1.72	357	⇑iPn	Pb	23 35 22.3	-0.3
PLE				iSn	Sg	23 35 46.8	+0.5
STON	Ston	1.84	314	ePn	Pb	23 35 24.7	+0.2
STON				eSn	Sn	23 35 47.0	+1.5
KEK	Kerkira	1.91	173	P	Pg	23 35 27.3	-0.4
SELS	Selova	2.00	36	ePn	Pn	23 35 25.9	+1.3
SELS				eSn	Sb	23 35 52.0	-0.2
RUDO	Rudo	2.01	357	ePn	Pb	23 35 26.5	-0.9
RUDO	Rudo	2.01	357	ePn	Pn	23 35 25.7	+1.0
RUDO				eSn	Sb	23 35 52.5	+0.1
NOCI	Noci	2.02	247	Pn	Pn	23 35 24.0	-0.8
NOCI				Sn	Sn	23 35 50.9	+0.9
NOCI				AML	AML	23 35 55.7	
	comp=E,0.6nm,0.3s						
IVAS	Ivanjica	2.02	13	ePn	Pn	23 35 25.8	+0.9
IVAS				eSn	Sb	23 35 51.7	-1.1
BARS	Barje	2.10	54	iPn	Pn	23 35 26.9	+1.0
BARS				iSn	Sg	23 35 58.5	+0.1
BARS	Barje	2.10	54	ePn	Pn	23 35 26.7	+0.8
BARS				eSn	Sb	23 35 54.4	-0.5
KZN	Kozani	2.15	126	P	Pn	23 35 28.4	+1.6
KZN				S	Sb	23 35 58.0	+1.3
IGT	Igoumenitsa	2.17	163	⇓Pn	Pn	23 35 27.6	+0.6
IGT				Sn	Sn	23 35 56.2	+2.5
IGT	Igoumenitsa	2.17	163	P	Pn	23 35 26.8	-0.1
IGT	Igoumenitsa	2.17	163	iPn	Pn	23 35 27.0	+0.1
IGT				iSn	Sn	23 35 55.8	+2.1
KPRO	Kipourio	2.17	139	P	Pn	23 35 28.7	+1.6
KPRO				S	Sb	23 35 58.4	+1.2
GOCS	Kraljevo Serbi	2.19	27	ePn	Pn	23 35 28.2	+0.8
GOCS				eSn	Sn	23 35 55.9	+1.4
BBLS	Lazi&#263i	2.25	358	ePn	Pn	23 35 29.6	+1.5
VAY	Valandovo	2.32	96	iPn	Pn	23 35 29.7	+0.7
VAY				iSn	Sn	23 35 58.7	+1.3
VAY				eLg	Lg	23 35 59.0	
	comp=E,64nm,0.7s						
VAY				eLg	Lg	23 36 02.0	
	comp=N,114nm,1.2s						
MATE	Matera	2.32	246	⇑P	Pb	23 35 32.3	-0.5
BOSS	Bosilegrad	2.38	67	ePn	Pn	23 35 30.6	+0.7
GRUS	Gruza	2.44	21	ePn	Pn	23 35 32.2	+1.5
DIVS	Divibare	2.51	8	ePn	Pn	23 35 32.0	+0.3
DIVS				eSn	Sn	23 36 03.5	+1.3
MRVN	Minervino Murg	2.55	259	Pn	Pn	23 35 31.5	-0.7
KNT	Kendrikon	2.59	99	iPn	Pn	23 35 33.7	+1.0
KNT				iSn	Sn	23 36 05.0	+0.9
BOVS	Bovan	2.59	38	⇑P	Pn	23 35 33.7	+1.0
BOVS	Bovan	2.59	38	ePn	Pn	23 35 33.2	+0.5
BOVS				eSn	Sn	23 36 03.8	-0.3
TRUS	Trudelj	2.69	14	ePn	Pn	23 35 35.3	+1.2
LIT	Litokhoron	2.72	123	iPn	Pn	23 35 36.5	+1.9
LIT				iSn	Sn	23 36 10.3	+2.9
KKB	Krupnik	2.72	84	iPn	Pn	23 35 35.7	+1.2
KKB				iSn	Sn	23 36 10.1	+2.8
THE	Thessaloniki	2.79	109	iPn	Pn	23 35 36.4	+0.9
THE				iSn	Sn	23 36 09.4	+0.4
SGRT	San Giovanni R	2.82	274	Pn	Pn	23 35 34.9	-1.0
ZAPS	Zavoj	2.85	53	ePn	Pn	23 35 37.3	+1.0
ZAPS				eSn	Sn	23 36 12.8	+2.3
TEKS	Tekeris	2.94	0	ePn	Pn	23 35 37.9	+0.4
TEKS				eSn	Sn	23 36 14.1	+1.5
VTS	Vitosha	2.95	69	ePn	Pn	23 35 38.6	+0.8
ZAGS	Zajecar	2.98	42	ePn	Pn	23 35 38.6	+0.6
ZAGS				eSn	Sn	23 36 14.7	+1.1
SOH	Sokhos	3.01	104	iPn	Pn	23 35 40.3	+1.8
SOH				iSn	Sn	23 36 15.8	+1.4
BLKB	Belogradchik	3.08	48	ePn	Pn	23 35 41.1	+1.6
BLKB				eSn	Sn	23 36 16.3	0.0
BORS2	Bor- Borsko je	3.09	36	ePn	Pn	23 35 39.1	-0.5
BORS2				eSn	Sn	23 36 15.6	-0.8
SRS	Serrai	3.12	98	iPn	Pn	23 35 40.6	+0.7
AVAS	Avala Beograd	3.17	13	ePn	Pn	23 35 41.0	+0.3
MMB	Musomishta	3.19	90	iPn	Pn	23 35 42.4	+1.5
KUBS	Kucevo	3.22	29	ePn	Pn	23 35 40.6	-0.7
KUBS				eSn	Sn	23 36 19.1	-0.5
FRGS	Fruska Gora	3.55	3	ePn	Pn	23 35 45.8	-0.1
MDVR	Moldovita	3.56	26	⇑P	Pn	23 35 47.1	+1.1
MDVR				⇑S	Sn	23 36 28.7	+0.8
MDVR	Moldovita	3.56	26	ePn	Pn	23 35 46.8	+0.8
MDVR				eSn	Sn	23 36 27.5	-0.4
BLY	Banja Luka	3.56	332	ePn	Pn	23 35 47.4	+1.3
BLY	Banja Luka	3.56	332	⇓P	Pn	23 35 47.6	+1.6
BLY	Banja Luka	3.56	332	ePn	Pn	23 35 47.3	+1.2
VRSS	Vrsac	3.75	20	ePn	Pn	23 35 48.6	0.0
VRSS				eSn	Sn	23 36 31.6	-1.1
HERR	Herculane	3.90	32	⇑P	Pn	23 35 51.9	+1.3
HERR				⇓S	Sn	23 36 37.3	+1.0
PLD	Plovdiv	3.95	80	ePn	Pn	23 35 52.4	+1.0
KNYS	Krupa na Uni	4.02	326	ePn	Pn	23 35 53.8	+1.5
SRE	Strehaia	4.08	40	⇑P	Pn	23 35 54.6	+1.4
BZS	Buzias	4.29	20	⇓P	Pn	23 35 56.9	+0.9
GZR	Gura Zlata	4.47	31	⇑P	Pn	23 35 59.9	+1.4
GZR				⇓S	Sn	23 36 51.4	+1.0
AQU	L'Aquila	4.61	281	ePn	Pn	23 35 59.6	-0.9
MORH	Mrgy, Hungar	4.64	353	ePn	Pn	23 36 01.3	+0.4
MORH	Mrgy, Hungar	4.64	353	⇑P	Pn	23 36 02.2	+1.4
ELND	Elena	4.91	72	⇓P	Pn	23 36 06.3	+1.8
SIRR	Siria	4.91	18	⇓P	Pn	23 36 05.9	+1.4
SIRR	Siria	4.91	18	ePn	Pn	23 36 05.3	+0.8
LOT	Lotru	4.93	38	⇓P	Pn	23 36 06.2	+1.3
BOJS	Bojanci	4.97	323	ePn	Pn	23 36 06.1	+0.8
ARR	Arges	5.29	43	⇑P	Pn	23 36 11.8	+1.9
CEY	Cerknica	5.53	320	ePn	Pn	23 36 13.8	+0.7
DRGR		5.67	23	⇓P	Pn	23 36 16.3	+1.3
MARR	Marisel-Cluj	5.69	26	⇑P	Pn	23 36 16.0	+0.6
SOKA	Soboth	6.00	329	iPn	Pn	23 36 20.2	+0.6
	comp=N,1.9nm,0.5s						
SOKA				iSn	Sn	23 37 25.8	-2.4
	comp=N,0.9nm,0.4s						
OBKA	Obir	6.06	326	iPn	Pn	23 36 21.0	+0.5
	comp=N,1.4nm,0.2s						
OBKA				iSn	Sn	23 37 29.4	-0.2
	comp=N,2.4nm,0.3s						
MLR	Muntele Rosu	6.08	48	LR	LR	23 38 30.6	
	comp=N,48nm,18.3s,baz=308,slow=38						
MLR	Muntele Rosu	6.08	48	⇑P	Pn	23 36 22.7	+2.1
DOPR	Dopca	6.09	42	⇓P	Pn	23 36 22.3	+1.6
OZUR		6.38	43	⇓P	Pn	23 36 26.1	+1.3
COVR	Voineasa-Covas	6.44	47	⇑P	Pn	23 36 27.2	+1.6
TURR	Turia	6.47	44	⇑P	Pn	23 36 27.6	+1.6
PLOR	Plostina	6.69	48	⇑P	Pn	23 36 30.7	+1.7
VRI	Vrincioaia	6.74	48	⇓P	Pn	23 36 31.2	+1.6
CONA	Conrad Observa	6.83	339	iPn	Pn	23 36 31.4	+0.5
	comp=N,0.9nm,0.5s						
KECS	Kecovo	6.91	5	ePN	Pn	23 36 36.0	+4.0
KECS				eSN	Sn	23 37 50.7	+0.3
KBA	Koelnbreinsper	7.02	323	iPn	Pn	23 36 34.5	+0.8
	comp=N,2.1nm,0.4s						
MOA	Molln	7.26	331	iPn	Pn	23 36 38.6	+1.7
	comp=N,0.7nm,0.2s						
MOA				iSn	Sn	23 37 58.9	-0.4
	comp=N,1.2nm,0.4s						
BIOA	Bad Ischl, Aus	7.38	327	iPn	Pn	23 36 39.9	+1.4
	comp=N,1.1nm,0.3s						
BIOA				iSn	Sn	23 38 01.1	-0.9
	comp=N,1.6nm,0.5s						
WTTA	Wattenberg	7.97	318	iPn	Pn	23 36 48.8	+2.0
	comp=N,1.3nm,0.2s						
WTTA				eSn	Sn	23 38 14.4	-2.5
	comp=N,3.2nm,0.5s						
WATA	Walderalm	8.05	318	iPn	Pn	23 36 48.9	+1.1
	comp=N,1.4nm,0.3s						
SQTA	Sankt Quirin	8.16	316	ePn	Pn	23 36 49.6	+0.3
	comp=N,0.5nm,0.3s						
SQTA				eSn	Sn	23 38 19.1	-2.5
	comp=N,2.6nm,0.4s						
MOTA	Moosalm	8.30	316	eSn	Sn	23 38 23.6	-1.3
	comp=N,3.2nm,0.7s						
GERES	GERESS Array B	8.31	332	Pn	Pn	23 36 52.5	+1.2
	baz=150,slow=13,SNR=2.0						
	comp=N,0.3nm,0.3s						
HFS	Hagfors	18.89	351	P	P	23 39 09.9	-1.1
	baz=168,slow=15,SNR=1.5						
	comp=N,3.6nm,1.0s						
FINES	FINESS Array B	20.26	9	P	P	23 39 24.3	-1.6
	comp=N,0.2nm,0.3s,baz=181,slow=11,SNR=6.8						
	comp=N,3.1nm,0.8s						
BVAR	Borovoye Array	35.61	54	P	P	23 41 47.8	-0.4
	comp=N,0.5nm,0.4s,baz=267,slow=6.4,SNR=3.6						
	comp=N,0.5nm,0.4s						
ZALV	Zalesovo Beam	44.05	51	P	P	23 42 56.8	-1.5
	comp=N,0.9nm,0.3s,baz=269,slow=8.6,SNR=4.5						
	comp=N,0.9nm,0.3s						
MKAR	Makanchi Array	44.25	61	P	P	23 42 59.0	-1.1
	comp=N,0.5nm,0.5s,baz=280,slow=8.5,SNR=8.1						
	comp=N,0.5nm,0.5s						

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*IDC **07** 23:36:12.4±2.2, 42°.49N×142°.26E, h0^{km}, mb3.7/7, mbtmp3.6/9, ML2.8/2, Error ellipse: s-maj=53.7km s-min=26.6km az=80.0*

*JMA **07** 23:36:16.7±0.2, 42°.0N±0°.9×142°.6E±0°.8, h65^{km}±1^{km}, MV3.4/40, S OFF URAKAWA*

ISC 07 23:36:17.1±0.9**, 42°.03N**±0°.04×**142°.53E**±0°.04**, h61**^{km}±7^{km}**, n33, σ0^{s}.74**/38**, mb3.8**/7**, 10D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.30	33	iP	Pn	23 36 27.0	-0.3
JNBK				S	Sn	23 36 35.0	+0.3
JSHD	Hidakashinhida	0.38	352	iP	Pn	23 36 28.1	+0.2
JEM	Erimo	0.47	92	iP	Pn	23 36 28.8	0.0
JEM				eS	Sn	23 36 37.5	+0.2
JTHR	Tokachihiroo	0.62	65	P	Pn	23 36 30.4	-0.1
JTHR				eS	Sn	23 36 40.8	+0.5
JIAM	Iburiatsuma	0.74	323	⇓iP	Pn	23 36 32.7	+0.8
JBT2	Biratori 2	0.76	350	⇓iP	Pn	23 36 31.9	-0.2
JBT2				⇓eS	Sn	23 36 43.2	+0.1
JCH	Churui	0.85	46	iP	Pn	23 36 33.0	-0.2
JKB	Kayabe	1.13	263	⇓iP	Pn	23 36 36.7	-0.1
JKB				⇓S	Sn	23 36 51.4	-0.1
JFR	Furan	1.13	2	P	Pn	23 36 36.6	-0.3
JEW	Eniwo	1.14	316	⇓iP	Pn	23 36 37.2	+0.3
JEW				⇓S	Sn	23 36 52.8	+1.0
JNB	Noboribetsu	1.19	292	iP	Pn	23 36 37.1	-0.6
JNB				S	Sn	23 36 52.7	-0.3
JOT	Ohata	1.29	240	⇓iP	Pn	23 36 38.8	-0.1
JOT				⇓eS	Sn	23 36 55.4	+0.1
JOB	Onbets	1.30	47	eP	Pn	23 36 39.9	+0.8
JAB	Ashibetsu	1.49	351	iP	Pn	23 36 42.0	+0.4
JAB				eS	Sn	23 37 02.0	+2.0
JISS	Ishikarishitsu	1.49	327	P	Pn	23 36 42.0	+0.3
JISS				eS	Sn	23 37 00.8	+0.7
JAR	Ashorobuto	1.56	35	eP	Pn	23 36 42.6	0.0
JAR				eS	Sn	23 37 02.0	+0.3
JYM2	Yakumo 2	1.61	274	⇓iP	Pn	23 36 43.3	0.0
JTM	Tenmabayashi	1.66	222	P	Pn	23 36 44.6	+0.6
JTM				eS	Sn	23 37 05.8	+1.5
MJAR	Matsushiro Arr	6.43	213	Pn	Pn	23 37 51.0	+1.9
	0.1nm,0.3s,baz=26,slow=15,SNR=4.0						
	1.1nm,0.8s						
KSRS	Korea Array	12.14	253	Pn	Pn	23 39 05.7	-1.4
	0.2nm,0.3s,baz=64,slow=15,SNR=2.9						
	1.0nm,0.8s						
SONM	Songino Array	26.07	295	P	P	23 41 45.2	+0.4
	0.2nm,0.5s,baz=76,slow=7.1,SNR=2.3						
	0.2nm,0.5s						
H11N2	WAKE ISLAND Hy	30.33	130	T	T	00 13 58.5	
	baz=323,slow=75						
H11N1	WAKE ISLAND Hy	30.34	130	T	T	00 13 58.9	
	baz=323,slow=75						
H11N3	WAKE ISLAND Hy	30.34	130	T	T	00 13 57.5	
	baz=323,slow=75						
H11S1	WAKE ISLAND Hy	31.19	131	T	T	00 14 59.4	
	baz=325,slow=76						
H11S3	WAKE ISLAND Hy	31.19	131	T	T	00 14 53.6	
	baz=325,slow=76						
H11S2	WAKE ISLAND Hy	31.21	131	T	T	00 15 04.6	
	baz=325,slow=76						
ZALV	Zalesovo Beam	39.35	308	P	P	23 43 39.1	-1.1
	0.4nm,0.4s,baz=92,slow=8.1,SNR=2.5						
	0.4nm,0.4s						
MKAR	Makanchi Array	42.38	298	P	P	23 44 04.6	-0.6
	0.7nm,0.9s,baz=83,slow=8.1,SNR=4.7						
	0.7nm,0.9s						
KURBB	Kurchatov Arra	43.76	304	P	P	23 44 15.7	-0.5
	0.7nm,0.4s,baz=77,slow=9.0,SNR=4.1						
	0.7nm,0.4s						
BVAR	Borovoye Array	47.96	309	P	P	23 44 49.5	+0.1
	0.6nm,0.4s,baz=70,slow=7.7,SNR=6.3						
	0.6nm,0.4s						
WRA	Warramunga Arr	62.13	189	P	P	23 46 38.5	+6.8
	0.9nm,1.0s,baz=7.9,slow=7.2,SNR=2.4						
	0.9nm,1.0s						
FINES	FINESS Array B	64.82	332	P	P	23 46 48.4	-0.6
	2.8nm,0.9s,baz=39,slow=5.3,SNR=3.9						
	2.8nm,0.9s						

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*TIR **07** 23:50:06.1, 41°.65N×19°.62E, h28^{km}±2^{km}, Ml2.7/6*

*PDG **07** 23:50:07.6±0.2, 41°.74N×19°.55E, h13^{km}, ML2.5/13, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*

ISC 07 23:50:05.1±1.1**, 41°.61N**±0°.02×**19°.47E**±0°.03**, h8**^{km}±9^{km}**, n33, σ1^{s}.36**/55**, 19C-11D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.39	132	⇑Pg	Pg	23 50 12.4	-0.4
TIR				Sg	Sg	23 50 17.0	-1.0
TIR				AML	AML	23 50 17.5	
	2.4nm,0.3s						
TIR				AML	AML	23 50 17.6	
	1.6nm,0.2s						
ULC	Ulcinj	0.39	334	⇑iPg	Pb	23 50 13.9	-0.5
ULC				iSg	Sb	23 50 19.3	-1.4
SDA	Shkodra	0.44	2	Pg	Pg	23 50 15.0	+1.2
SDA				Sg	Sb	23 50 21.8	-0.2
SDA				AML	AML	23 50 24.5	
	0.8nm,0.3s						
DRME	Dracevica, Mon	0.62	340	⇓iPg	Pb	23 50 17.7	-0.5
DRME				eSg	Sb	23 50 25.9	-1.1
PHP	Peshkopia	0.73	84	Pg	Pg	23 50 17.9	-1.3
PHP				Sg	Sg	23 50 27.1	-1.5
PHP				AML	AML	23 50 32.5	
	1.7nm,0.4s						
BUM	Brajici-Budva	0.81	328	⇓iPg	Pb	23 50 21.4	-0.2
BUM				iSg	Sn	23 50 33.2	-2.2
PDG	Podgorica	0.84	349	⇓Pg	Pb	23 50 22.2	+0.2
PDG				Sg	Sn	23 50 34.0	-1.7
PDG	Podgorica	0.84	349	⇓P	Pb	23 50 22.0	+0.1
PDG				⇑S	Sn	23 50 34.3	-1.5
PDG	Podgorica	0.84	349	⇑iPg	Pg	23 50 21.3	+0.1
PDG				iSg	Sb	23 50 32.5	-0.9
CEME	Cevo	1.02	336	⇓iPg	Pg	23 50 25.0	+0.2
CEME				eSg	Sn	23 50 39.7	-0.8
PVY	Plav	1.05	20	⇑iPg	Pb	23 50 24.5	-1.1
PVY				iSg	Sb	23 50 38.8	-0.8
HCY	Herceg Novi	1.11	319	⇑iPg	Pn	23 50 27.6	+0.5
HCY				iSg	Sn	23 50 44.6	+2.0
VLO	Vlora	1.14	179	⇓Pg	Pg	23 50 28.4	+1.4
VLO				Sg	Sn	23 50 43.3	+0.1
VLO				AML	AML	23 50 48.8	
	1.2nm,0.4s						
NKME	Niksic	1.22	342	⇓iPg	Pb	23 50 28.2	-0.3
NKME				eSg	Sg	23 50 45.3	+0.9
KOME	Kolasin	1.24	1	⇑iPg	Pn	23 50 28.0	-0.9
KOME				eSg	Sg	23 50 46.5	+1.4
IVA	Berane	1.30	14	⇑iPg	Pn	23 50 29.3	-0.4
IVA				iSg	Sn	23 50 47.5	+0.1
BRY	Bratogost	1.47	332	⇑iPg	Pg	23 50 33.3	0.0
BRY				iSg	Sg	23 50 54.2	+1.9
UPM	Unac-Piva	1.65	345	⇓iPg	Pb	23 50 36.2	+0.3
UPM				iSg	Sg	23 50 58.2	+0.1
NEST	Nestorio	1.69	135	⇑Pn	Pn	23 50 36.3	+1.2
NEST				Sn	Sn	23 50 58.2	+1.3
NEST				AML	AML	23 51 01.7	
	0.3nm,0.3s						
PLE	Pljevlja	1.72	358	⇓iPn	Pb	23 50 36.7	-0.4
PLE				iSn	Sb	23 50 59.5	+0.6
NOCI	Noci	2.00	247	Pn	Pg	23 50 43.6	+0.2
NOCI				Sn	Sg	23 51 10.2	+1.0
NOCI				AML	AML	23 51 11.1	
	0.2nm,0.3s						
IGT	Igoumenitsa	2.17	162	⇓Pn	Pn	23 50 42.4	+0.8
IGT				Sn	Sb	23 51 12.2	+0.3
MATE	Matera	2.30	246	⇑P	Pg	23 50 48.7	-0.5
BOVS	Bovan	2.61	38	⇑P	Pn	23 50 48.7	+1.0
SGRT	San Giovanni R	2.80	274	Pn	Pn	23 50 48.8	-1.5
BLY	Banja Luka	3.56	333	⇓P	Pb	23 51 04.3	-4.0
MDVR	Moldovita	3.57	27	⇑P	Pn	23 51 02.1	+1.2
HERR	Herculane	3.91	32	⇑P	Pn	23 51 07.1	+1.5
BZS	Buzias	4.30	21	⇑P	Pn	23 51 12.2	+1.3
GZR	Gura Zlata	4.48	31	⇑P	Pn	23 51 15.8	+2.4
MORH	Mrgy, Hungar	4.64	353	⇑P	Pn	23 51 18.5	+2.9
SIRR	Siria	4.92	18	⇑P	Pn	23 51 21.9	+2.6
DRGR		5.68	23	⇑P	Pn	23 51 32.1	+2.2

IDC 07 23:51:12.9±8.3**, 7°.80S**×**128°.25E, h186**^{km}±89^{km}**, mb3.0**/2**, mbtmp3.5**/6**, Error ellipse: s-maj=90.6km s-min=23.4km az=40.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	5.13	242	P	Pn	23 52 29.6	+0.9
	9.2nm,0.4s,baz=213,slow=2.2,SNR=1.9						
BATI				S	Sn	23 53 28.6	+0.3
	7.0nm,0.4s,baz=20,slow=23,SNR=1.7						
FITZ	Fitzroy Crossi	10.55	194	P	Pn	23 53 38.5	-1.0
	2.7nm,0.9s,baz=13,slow=13,SNR=13						
FITZ				S	Sn	23 55 31.8	-5.2
	1.0nm,0.3s,baz=322,slow=19,SNR=1.9						
WRA	Warramunga Arr	13.43	155	P	Pn	23 54 15.9	-0.6
	0.2nm,0.3s,baz=329,slow=14,SNR=8.3						
WRA				S	Sn	23 56 37.8	-8.4
	0.3nm,0.3s,baz=324,slow=24,SNR=8.3						
ASAR	Alice Springs	16.68	162	P	Pn	23 54 57.0	+0.7
	0.3nm,0.5s,baz=338,slow=11,SNR=9.7						
MKAR	Makanchi Array	67.96	328	P	P	00 01 52.0	+0.1
	0.6nm,1.0s,baz=114,slow=6.9,SNR=4.1						
	0.6nm,1.0s						
KURBB	Kurchatov Arra	72.30	329	P	P	00 02 17.9	-0.2
	0.3nm,0.6s,baz=117,slow=4.9,SNR=2.4						
	0.3nm,0.6s						

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*IDC **07** 23:55:37.9±1.6, 3°.77S×12°.41W, h0^{km}, mb4.1/8, mbtmp4.1/8, MS3.5/37, Error ellipse: s-maj=113.2km s-min=21.0km az=107.0*

*NEIC **07** 23:55:40.5±1.8, 4°.12S±0°.05×11°.5W±0°.1, h10^{km}±1^{km}, mb4.5/11, Error ellipse: s-maj=21.8km s-min=7.6km az=255.0*

ISC 07 23:55:40.3±0.7**, 4°.1S**±0°.1×**11°.4W**±0°.2**, h10**^{km}**, n66, σ1^{s}.32**/26**, mb4.4**/13**, MS3.5**/37**, 2C, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	4.81	219	T	T	00 01 25.0	
	baz=33,slow=74,SNR=573						
H10N1	ASCENSION HYDR	4.82	219	T	T	00 01 26.2	
	baz=33,slow=74,SNR=583						
H10N3	ASCENSION HYDR	4.83	219	T	T	00 01 18.7	
	baz=33,slow=74,SNR=548						
H10S2	ASCENSION HYDR	5.81	213	T	T	00 02 47.5	
	baz=28,slow=74,SNR=309						
H10S3	ASCENSION HYDR	5.82	213	T	T	00 02 41.6	
	baz=192,slow=74,SNR=367						
DBIC	Dimbokro	12.53	32	LR	LR	00 02 40.6	
	comp=Z,156nm,19.9s,baz=206,slow=33						
DBIC	Dimbokro	12.53	32	Pn	Pn	23 58 37.5	-1.2
TORD	Torodi Ar. Bea	21.51	37	P	P	00 00 31.6	+2.0
	2.2nm,0.3s,baz=219,slow=10.0,SNR=6.6						
	2.2nm,0.3s						
EDA	Edea	22.94	70	P	P	00 00 44.3	-0.6
EDA				IAmb	IAmb	00 00 59.7	
	comp=Z,18nm,1.3s						
TSUM	Tsumeb	32.07	120	LR	LR	00 12 38.2	
	comp=Z,116nm,21.5s,baz=354,slow=31						
MDT	Midelt	37.25	10	LR	LR	00 17 41.1	
	comp=Z,52nm,18.3s,baz=195,slow=36						
BDFB	Brasilia	37.76	250	LR	LR	00 16 39.2	
	comp=Z,49nm,18.6s,baz=42,slow=34						
LBTB	Lobatse	41.23	124	LR	LR	00 19 02.9	
	comp=Z,47nm,18.9s,baz=294,slow=33						
MDP	Montagnes des	42.16	282	LR	LR	00 17 22.8	
	comp=Z,43nm,19.0s,baz=63,slow=32						
MBAR	Mbarara	42.27	86	LR	LR	00 19 39.7	
	comp=Z,159nm,20.4s,baz=248,slow=33						
BOSA	Boshof	42.54	129	LR	LR	00 19 35.3	
	comp=Z,46nm,21.3s,baz=356,slow=33						
BOSA	Boshof	42.54	129	P	P	00 03 34.8	-1.8
BOSA				IAmb	IAmb	00 04 00.2	
	comp=Z,8.6nm,1.3s						
ESDC	Sonseca Array	44.07	8	LR	LR	00 22 13.9	
	comp=Z,36nm,19.1s,baz=172,slow=36						
KEST	Kesra	44.12	24	LR	LR	00 21 28.3	
	comp=Z,42nm,18.2s,baz=342,slow=35						
POGA	Pongola	47.19	124	P	P	00 04 12.6	-0.9
CPUP	Villa Florida	49.15	238	LR	LR	00 21 45.9	
	comp=Z,18nm,21.8s,baz=277,slow=32						
CPUP	Villa Florida	49.15	238	P	P	00 04 27.0	-1.7
SIV	San Ignacio	50.16	253	LR	LR	00 23 43.8	
	comp=Z,68nm,20.5s,baz=115,slow=34						
DAVOX	Davos/Dischmat	54.02	18	LR	LR	00 27 50.3	
	comp=Z,41nm,18.4s,baz=214,slow=36						
LPAZ	La Paz	56.93	253	LR	LR	00 28 24.2	
	comp=Z,48nm,20.7s,baz=69,slow=35						
GEC2	GERESS Array S	57.07	20	P	P	00 05 27.2	+0.5
GERES	GERESS Array B	57.07	20	P	P	00 05 26.4	-0.3
	comp=Z,1.0nm,0.8s,baz=219,slow=7.5,SNR=2.8						
GERES				LR	LR	00 32 12.2	
	comp=Z,21nm,18.1s,baz=270,slow=38						
	comp=Z,1.0nm,0.8s						
MMAI	Mount Meron Ar	57.65	47	LR	LR	00 32 05.5	
	comp=Z,33nm,19.1s,baz=210,slow=38						
SJG	San Juan	58.25	294	LR	LR	00 24 51.0	
	comp=Z,47nm,20.3s,baz=94,slow=31						
ASF	Jabal al Asfar	58.33	48	LR	LR	00 30 56.5	
	comp=Z,5µm,18.1s,baz=237,slow=36						
VRAC	Vranov	58.46	21	LR	LR	00 29 54.9	
	comp=Z,30nm,21.7s,baz=220,slow=35						
MLR	Muntele Rosu	59.50	30	LR	LR	00 32 39.5	
	comp=Z,42nm,19.1s,baz=260,slow=37						
BRTR	Keskin Array B	60.10	39	P	P	00 05 51.2	+3.0
	comp=Z,1.1nm,1.0s,baz=235,slow=5.1,SNR=5.2						
BRTR				LR	LR	00 34 17.0	

	comp=Z,18nm,18.4s,baz=267,slow=38						
	comp=Z,1.1nm,1.0s						
BRTR	**Keskin Array B**	**60.10**	**39**	P	**P**	**00 05 48.3**	**+0.2**
SDV	**Santo Domingo**	**60.40**	**283**	LR	LR	00 27 25.6	
	comp=Z,22nm,20.4s,baz=82,slow=32						
BNN	**Bunyan**	**61.03**	**41**		**P**	**00 05 54.5**	**0.0**
BNN				IAmb	IAmb	00 05 59.0	
	comp=Z,6.2nm,1.0s						
ROSC	**El Rosal**	**63.44**	**277**	LR	LR	00 31 14.6	
	comp=Z,44nm,19.4s,baz=177,slow=34						
PLCA	**Paso Flores**	**64.22**	**226**	LR	LR	00 32 27.9	
	comp=Z,19nm,18.1s,baz=72,slow=35						
AKASG	**Malin Array Be**	**64.73**	**27**	P	**P**	**00 06 19.1**	**+0.5**
	comp=Z,1.7nm,0.9s,baz=232,slow=7.0,SNR=6.3						
	comp=Z,1.7nm,0.9s						
NNA	**Nana**	**65.12**	**259**	LR	LR	00 34 30.7	
	comp=Z,60nm,18.7s,baz=88,slow=36						
ATAH	**Atahualpa**	**66.66**	**264**	LR	LR	00 34 08.8	
	comp=Z,61nm,20.3s,baz=91,slow=35						
VNA2	**Neumayer--Watz**	**66.82**	**179**	⇑P	**P**	**00 06 33.6**	**+1.8**
	comp=Z,5.0nm,0.7s,baz=352,slow=8.0						
HFS	**Hagfors**	**66.98**	**13**	LR	LR	00 36 44.1	
	comp=Z,23nm,19.7s,baz=258,slow=37						
NOA	**NORSAR Array B**	**67.26**	**12**	LR	LR	00 36 36.3	
	comp=Z,8.4nm,18.2s,baz=200,slow=37						
SNAA	**Sanae**	**67.73**	**177**	⇑P	**P**	**00 06 39.0**	**+1.2**
	comp=Z,59nm,0.9s						
SNAA	**Sanae**	**67.73**	**177**	P	**P**	**00 06 39.0**	**+1.2**
	comp=Z,2.7nm,0.9s,baz=346,slow=8.6,SNR=7.0						
	comp=Z,2.7nm,0.9s						
SNAA	**Sanae**	**67.73**	**177**	P	**P**	**00 06 35.7**	**-2.0**
SNAA				IAmb	IAmb	00 06 40.4	
	comp=Z,4.0nm,1.0s						
FINES	**FINESS Array B**	**71.43**	**18**	P	**P**	**00 06 59.6**	**-1.0**
	comp=Z,2.1nm,0.8s,baz=222,slow=5.1,SNR=5.2						
	comp=Z,2.1nm,0.8s						
FINES	**FINESS Array B**	**71.43**	**18**	P	**P**	**00 06 59.9**	**-0.6**
JTS	**Las Juntas de**	**74.57**	**282**	LR	LR	00 40 19.6	
	comp=Z,21nm,18.0s,baz=338,slow=36						
BELA	**Belgrano 2**	**74.77**	**185**	P	**P**	**00 07 21.0**	**+0.9**
BELA				IAmb	IAmb	00 07 21.8	
	comp=Z,4.0nm,1.0s						
SADO	**Sadowa**	**77.28**	**317**	LR	LR	00 34 04.5	
	comp=Z,46nm,19.5s,baz=118,slow=30						
TKL	**Tuckaleechee C**	**78.14**	**308**	LR	LR	00 36 03.7	
	comp=Z,43nm,19.6s,baz=30,slow=31						
CMIG	**Matias Romero**	**84.94**	**287**	LR	LR	00 45 56.2	
	comp=Z,13nm,18.5s,baz=12,slow=36						
QSPA	**South Pole Qui**	**86.03**	**180**	P	**P**	**00 08 21.9**	**+0.9**
	comp=Z,4.7nm,0.8s,baz=193,slow=1.3,SNR=17						
	comp=Z,4.7nm,0.8s						
QSPA	**South Pole Qui**	**86.03**	**180**	P	**P**	**00 08 21.7**	**+0.7**
ARSB	**Arslanbob**	**88.47**	**49**	P	**P**	**00 08 33.7**	**+0.3**
ARSB				IAmb	IAmb	00 08 37.4	
	comp=Z,4.9nm,1.0s						
ULM	**Lac du Bonnet**	**89.54**	**320**	LR	LR	00 39 47.5	
	comp=Z,35nm,21.1s,baz=62,slow=30						
AAK	**Ala-Archa**	**89.73**	**47**	LR	LR	00 52 57.3	
	comp=Z,27nm,18.5s,baz=250,slow=38						
PALK	**Pallekele**	**92.62**	**83**	LR	LR	00 45 55.0	
	comp=Z,43nm,21.7s,baz=258,slow=32						
MKAR	**Makanchi Array**	**95.49**	**44**	P	**P**	**00 09 06.3**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=270,slow=2.9,SNR=4.8						
MKAR				LR	LR	00 59 29.4	
	comp=Z,21nm,18.3s,baz=170,slow=40						
	comp=Z,0.6nm,0.8s						
MKAR	**Makanchi Array**	**95.49**	**44**	P	**P**	**00 09 04.1**	**-1.5**
ANMO	**Albuquerque**	**96.42**	**305**	LR	LR	00 46 39.9	
	comp=Z,41nm,19.5s,baz=56,slow=32						
PDAR	**Pinedale Array**	**98.71**	**312**	LR	LR	00 46 34.3	
	comp=Z,30nm,19.4s,baz=44,slow=31						
ASAR	**Alice Springs**	**136.40**	**131**	PKhKP	PKPpre	00 14 51.8	
	comp=Z,0.3nm,0.7s,baz=211,slow=3.2,SNR=2.8						
ASAR				PKP	**PKiKP**	**00 15 04.4**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=241,slow=1.0,SNR=6.1						
WRA	**Warramunga Arr**	**138.77**	**127**	PKhKP	PKPpre	00 14 58.8	
	comp=Z,0.2nm,0.7s,baz=233,slow=2.4,SNR=1.6						
WRA				PKP	**PKPdf**	**00 15 08.6**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=247,slow=2.6,SNR=2.6						

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*NEIC **08** 00:10:04.9±1.1, 19°.10N±0°.02×67°.08W±0°.03, h10^{km}±1^{km}, ML3.2/18, Md3.3/9(RSPR), Error ellipse: s-maj=5.8km s-min=3.4km az=240.0*

*SDD **08** 00:10:05.5±2.2, 19°.14N×67°.10W, h27^{km}±83^{km}, MD3.9, ML3.3, MW3.6, Presumed earthquake*

*OSPL **08** 00:10:05.2±0.5, 19°.14N×67°.25W, h16^{km}±3^{km}, ML3.1, Presumed earthquake*

*RSPR **08** 00:10:09.0, 18°.87N×67°.19W, h67^{km}±2^{km}, MD3.2/9*

ISC 08 00:10:04.0±1.3**, 19°.17N**±0°.05×**67°.12W**±0°.03**, h28**^{km}±12^{km}**, n72, σ2^{s}.29**/95**, 17C-12D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.70**	**179**	⇑*e*Pg	**Pb**	**00 10 17.8**	**+0.1**
AGPR				⇑*e*Sg	**Sb**	**00 10 26.2**	**-0.9**
AGPR				IAML		00 10 33.0	
	comp=N,1µm,0.3s						
AGPR	**Aguadilla, PR**	**0.70**	**179**	*i* P	**Pb**	**00 10 17.6**	**-0.2**
AGPR				*e*S	**Sb**	**00 10 26.3**	**-0.9**
AGPR				IAML		00 10 33.0	
	comp=Z,962nm,0.2s						
IDE	**Isla Desecheo**	**0.85**	**203**		**Sb**	**00 10 31.0**	**-0.4**
IDE	**Isla Desecheo**	**0.85**	**203**	*e*S	**Sb**	**00 10 31.0**	**-0.4**
EMPR	**Esperanza - Ma**	**0.89**	**141**		**Sn**	**00 10 35.1**	**+2.5**
EMPR	**Esperanza - Ma**	**0.89**	**141**	*e*S	**Sn**	**00 10 35.1**	**+2.5**
AOPR	**Arecibo Observ**	**0.89**	**157**		**Pn**	**00 10 20.7**	**0.0**
AOPR					**Sb**	**00 10 32.1**	**-0.4**
AOPR				IAML		00 10 41.7	
	comp=E,1µm,0.3s						
AOPR				IAML		00 10 41.8	
	comp=N,1µm,0.4s						
AOPR	**Arecibo Observ**	**0.89**	**157**	*e*S	**Sb**	**00 10 32.5**	**0.0**
AOPR	**Arecibo Observ**	**0.89**	**157**	⇑*e*Pg	**Pn**	**00 10 20.7**	**0.0**
AOPR				⇓*e*Sg	**Sb**	**00 10 32.5**	**0.0**
AOPR				IAML		00 10 39.5	
	comp=N,959nm,0.6s						
PRSN	**Puerto Rico Se**	**0.95**	**182**		**Sb**	**00 10 33.0**	**-1.2**
PRSN	**Puerto Rico Se**	**0.95**	**182**	*e*S	**Sb**	**00 10 33.0**	**-1.2**
PRSN	**Puerto Rico Se**	**0.95**	**182**	⇑*e*Pg	**Pn**	**00 10 21.5**	**0.0**
PRSN				*e*Sg	**Sb**	**00 10 32.1**	**-2.1**
PRSN				IAML		00 10 38.0	
	comp=N,1µm,0.2s						
UUPR	**Utuado, UPR, P**	**0.99**	**158**		**Sb**	**00 10 34.4**	**-1.0**
UUPR	**Utuado, UPR, P**	**0.99**	**158**	*e*S	**Sb**	**00 10 34.4**	**-1.0**
LSP	**Las Mesas**	**0.99**	**178**		**Sb**	**00 10 34.5**	**-0.9**
LSP	**Las Mesas**	**0.99**	**178**	*e*S	**Sb**	**00 10 34.5**	**-0.9**
ECPR	**Experimental S**	**1.11**	**140**	*e*S	**Sb**	**00 10 39.8**	**+1.0**
CRPR	**Cabo Rojo, PR**	**1.16**	**180**		**Pn**	**00 10 24.6**	**+0.2**
CRPR					**Sn**	**00 10 39.0**	**-0.4**
CRPR				IAML		00 10 45.2	
	comp=E,439nm,0.6s						
CRPR				IAML		00 10 50.2	
	comp=N,544nm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.16**	**180**	*e*S	**Sn**	**00 10 39.1**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.16**	**180**	⇓*e*Pg	**Pn**	**00 10 24.6**	**+0.2**
CRPR				⇓*e*Sg	**Sn**	**00 10 37.6**	**-1.7**
CRPR				IAML		00 10 50.1	
	comp=N,611nm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.16**	**180**	*i* P	**Pn**	**00 10 24.6**	**+0.2**
CRPR				*e*S	**Sn**	**00 10 39.4**	**0.0**
CRPR				IAML		00 10 40.9	
	comp=Z,495nm,0.3s						
MLPR	**Magueyes Islan**	**1.20**	**177**	⇓*i*P	**Pn**	**00 10 25.3**	**+0.3**
MLPR	**Magueyes Islan**	**1.20**	**177**	*e*S	**Sn**	**00 10 40.1**	**-0.1**
MLPR	**Magueyes Islan**	**1.20**	**177**	⇑*e*Pg	**Pn**	**00 10 25.2**	**+0.3**
MLPR				⇑*e*Sg	**Sn**	**00 10 39.5**	**-0.7**
MLPR				IAML		00 10 40.6	
	comp=N,128nm,0.6s						
OBIP	**Obispado Ponce**	**1.23**	**157**		**Pn**	**00 10 26.2**	**+0.9**
OBIP					**Sn**	**00 10 40.6**	**-0.3**
OBIP				IAML		00 10 50.1	
	comp=N,401nm,0.5s						
OBIP	**Obispado Ponce**	**1.23**	**157**	⇓*i*P	**Pn**	**00 10 26.4**	**+1.1**
OBIP	**Obispado Ponce**	**1.23**	**157**	*e*S	**Sn**	**00 10 40.7**	**-0.3**
GCPR	**Guaynabo City**	**1.30**	**131**		**Pn**	**00 10 28.0**	**+1.6**
GCPR					**Sb**	**00 10 44.9**	**+0.7**
GCPR	**Guaynabo City**	**1.30**	**131**	⇓*e*P	**Pb**	**00 10 28.6**	**+0.7**
GCPR	**Guaynabo City**	**1.30**	**131**	*e*S	**Sb**	**00 10 45.3**	**+1.0**
SJG	**San Juan**	**1.40**	**139**		**Pb**	**00 10 29.5**	**0.0**
SJG				IAML		00 10 58.2	
	comp=N,452nm,0.2s						
SJG	**San Juan**	**1.40**	**139**	⇓*e*P	**Pb**	**00 10 29.9**	**+0.4**
SJG	**San Juan**	**1.40**	**139**	*e*S	**Sb**	**00 10 46.8**	**-0.2**
SJG	**San Juan**	**1.40**	**139**	⇓*e*Pg	**Pb**	**00 10 29.6**	**+0.1**
SJG	**San Juan**	**1.40**	**139**	*i* P	**Pn**	**00 10 29.3**	**+1.6**
SJG				IAML		00 10 52.9	
	comp=Z,155nm,0.6s						
HUMP	**Col San Antoni**	**1.58**	**130**		**Pn**	**00 10 31.5**	**+1.3**
HUMP					**Sb**	**00 10 52.5**	**+0.3**
HUMP				IAML		00 10 57.6	
	comp=N,361nm,0.2s						
HUMP				IAML		00 11 03.3	
	comp=E,318nm,0.2s						
HUMP	**Col San Antoni**	**1.58**	**130**	⇑*e*P	**Pb**	**00 10 32.4**	**-0.3**
HUMP	**Col San Antoni**	**1.58**	**130**	*e*S	**Sb**	**00 10 52.9**	**+0.7**
HIDR	**Higuey Centro**	**1.62**	**249**	⇑*e*P	**Pn**	**00 10 32.4**	**+1.7**
HIDR	**Higuey Centro**	**1.62**	**249**	*e*S	**Sn**	**00 10 53.4**	**+2.7**
HIDR	**Higuey Centro**	**1.62**	**249**	⇓*e*Pg	**Pn**	**00 10 32.2**	**+1.5**
HIDR				⇓*e*Sg	**Sn**	**00 10 53.8**	**+3.1**
HIDR				IAML		00 10 57.8	
	comp=N,981nm,0.3s						
MIDR	**Miches**	**1.84**	**264**	⇓*i*P	**Pn**	**00 10 37.0**	**+3.3**
MIDR	**Miches**	**1.84**	**264**	*e*S	**Sb**	**00 11 01.8**	**+2.3**
MIDR	**Miches**	**1.84**	**264**	⇑*e*Pg	**Pn**	**00 10 35.8**	**+2.2**
MIDR				⇑*e*Sg	**Sb**	**00 11 00.3**	**+0.8**
MIDR				IAML		00 11 04.4	
	comp=N,227nm,0.6s						
SMDR	**Samana, DR**	**1.96**	**274**	⇑*e*P	**Pn**	**00 10 36.9**	**+1.5**
SMDR	**Samana, DR**	**1.96**	**274**	*e*S	**Sb**	**00 11 06.2**	**+3.1**
SMDR	**Samana, DR**	**1.96**	**274**	⇑*e*Pg	**Pn**	**00 10 36.8**	**+1.5**
SMDR				IAML		00 11 11.0	
	comp=N,228nm,0.4s						
DR12	**Loma Pena Alta**	**2.17**	**260**		**Pn**	**00 10 40.9**	**+2.4**
HATOM	**Hato Mayor del**	**2.17**	**260**	⇑*e*Pg	**Pn**	**00 10 40.9**	**+2.5**
HATOM				⇑*e*Sg	**Sn**	**00 11 08.1**	**+3.6**
HATOM				IAML		00 11 18.2	
	comp=N,250nm,0.4s						
SDD	**Santo Domingo**	**2.74**	**255**		**Pn**	**00 10 49.8**	**+3.6**
SDD				IAML		00 11 36.8	
	comp=E,132nm,0.4s						
SDD				IAML		00 11 46.4	
	comp=N,109nm,1.0s						
SDD	**Santo Domingo**	**2.74**	**255**	⇑*e*P	**Pb**	**00 10 51.8**	**-0.6**
SDD	**Santo Domingo**	**2.74**	**255**	*e*S	**Sn**	**00 11 22.6**	**+4.3**
DR08	**Loma La Naviza**	**2.75**	**266**	⇑*e*Pg	**Pn**	**00 10 49.9**	**+3.5**
BANI	**BANI**	**3.17**	**256**		**Pn**	**00 10 55.1**	**+3.0**
SC01	**Santiago de lo**	**3.42**	**275**		**Pn**	**00 10 58.5**	**+3.0**
SC01	**Santiago de lo**	**3.42**	**275**	⇓*e*P	**Pb**	**00 11 05.6**	**+1.7**
SC01	**Santiago de lo**	**3.42**	**275**	*e*S	**Sb**	**00 11 46.7**	**+1.6**
SDDR	**Presa de Saban**	**3.95**	**268**		**Pn**	**00 11 06.0**	**+3.2**
SDDR	**Presa de Saban**	**3.95**	**268**	⇑*e*P	**Pb**	**00 11 11.8**	**-1.2**
SDDR	**Presa de Saban**	**3.95**	**268**	*e*S	**Sn**	**00 11 56.4**	**+8.1**
SDDR	**Presa de Saban**	**3.95**	**268**	*i* S	**Sb**	**00 11 57.5**	**-2.9**
GRTK	**Grand Turk**	**4.43**	**302**	*i* P	**Pn**	**00 11 09.9**	**+0.6**
GRTK				*i* S	**Sn**	**00 11 59.2**	**-0.7**
GRTK				IAML		00 12 26.5	
	comp=Z,150nm,1.0s						
MASC	**Masc**	**6.78**	**280**	*i* P	**Pn**	**00 11 41.2**	**-0.4**
MASC				IAmb	IAmb	00 12 04.6	
	comp=Z,14nm,0.8s						
MASC				*i* S	**Sn**	**00 12 54.1**	**-3.8**
MASC				IAML		00 13 35.3	
	comp=Z,57nm,1.0s						
QMBU	**Quimbuelo**	**7.32**	**279**	*i* P	**Pn**	**00 11 47.7**	**-1.4**
QMBU				IAmb	IAmb	00 12 17.2	
	comp=Z,15nm,1.5s						
QMBU				*i* S	**Sn**	**00 13 06.0**	**-5.3**
MOAC	**Moa**	**7.52**	**283**	*i* S	Sn	00 13 08.6	-7.7
NMDO	**Nuevo Mundo**	**7.53**	**282**	*i* P	**Pn**	**00 11 50.3**	**-1.7**
NMDO				IAmb	IAmb	00 12 16.0	
	comp=Z,13nm,1.8s						
NMDO				*i* S	**Sn**	**00 13 11.4**	**-5.0**
NMDO				IAML		00 14 02.0	
	comp=Z,28nm,1.0s						
GTBY	**Guantanamo Bay**	**7.57**	**277**	*i* P	**Pn**	**00 11 53.2**	**+0.6**
GTBY				IAmb	IAmb	00 12 21.0	
	comp=Z,51nm,1.7s						
GTBY				*i* S	**Sn**	**00 13 13.3**	**-4.2**
RCC	**Rio Carpintero**	**8.13**	**277**	*i* P	**Pn**	**00 11 59.6**	**-0.6**
RCC				IAmb	IAmb	00 12 09.2	
	comp=Z,9.5nm,1.5s						
RCC				*i* S	**Sn**	**00 13 25.0**	**-6.2**
RCC				IAML		00 13 36.1	
	comp=Z,27nm,1.0s						
PINC	**Pinares de May**	**8.27**	**281**	*i* P	**Pn**	**00 11 59.4**	**-2.7**
PINC				IAmb	IAmb	00 12 27.1	
	comp=Z,5.9nm,1.5s						
PINC				*i* S	Sn	00 13 27.3	-7.3
MARVS	**Santiago de Cu**	**8.32**	**277**	*i* P	**Pn**	**00 12 01.8**	**-1.0**
MARVS				IAmb	IAmb	00 12 18.3	
	comp=Z,10.0nm,2.1s						
MARVS				*i* S	**Sn**	**00 13 29.7**	**-6.2**
HLGC	**Holguin**	**8.58**	**283**	*i* P	**Pn**	**00 12 08.0**	**+1.6**
HLGC				IAmb	IAmb	00 12 08.6	
	comp=Z,19nm,1.3s						
HLGC				*i* S	**Sn**	**00 13 40.4**	**-1.9**
LMGC	**Las Mercedes**	**9.36**	**277**	*i* P	**Pn**	**00 12 17.1**	**0.0**
LMGC				IAmb	IAmb	00 12 41.1	
	comp=Z,11nm,1.4s						
LMGC				*i* S	**Sn**	**00 13 57.3**	**-4.2**

OSPL 08 00:10:54.0±2.4**, 19°.35N**×**71°.65W, h59**^{km}±999^{km}**, ML2.1, Presumed earthquake, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDDR	**Presa de Saban**	**0.50**	**137**	*i* P	Pn	00 11 06.9	+0.9
SDDR				*e*S	Sn	00 11 12.8	-1.8
SDDR				IAML		00 11 13.2	
	comp=Z,75nm,0.7s						
SDDR	**Presa de Saban**	**0.50**	**137**	*i* P	Pn	00 11 07.3	+1.3
LOPP1	**Punta Rusia, P**	**0.65**	**40**	*i* P	Pn	00 11 05.7	-1.9
LOPP1				*e*S	Sn	00 11 16.9	-0.6
LOPP1				IAML		00 11 20.6	
	comp=Z,82nm,0.4s						
LODU1	**El Espartillar**	**1.01**	**171**	*i* P	Pn	00 11 11.0	-1.1

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*HEL **08** 00:18:24.9±0.1, 67°.84N×20°.15E, h0^{km}, ML1.7, Suspected explosion*

UPP 08 00:18:24.8±0.1**, 67°.85N**×**20°.21E, h0**^{km}±7^{km}**, ML2.2, Suspected explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.11**	**25**	P	Pg	00 18 27.1	+0.1
KUA				S	Sg	00 18 28.7	+0.3
KUA	**Kurravaara**	**0.11**	**25**	P	Pg	00 18 27.4	+0.4
	baz=229						
KUA				S	Sg	00 18 29.0	+0.6
RATU	**Laukkuluspa**	**0.24**	**263**	P	Pg	00 18 29.4	+0.1
RATU				S	Sg	00 18 32.6	+0.3
RATU	**Laukkuluspa**	**0.24**	**263**	P	Pg	00 18 29.7	+0.4
RATU				S	Sg	00 18 33.1	+0.8
KOVU	**Salmi**	**0.37**	**357**	P	Pg	00 18 31.9	-0.1
KOVU				S	Sg	00 18 37.0	+0.2
KOVU	**Salmi**	**0.37**	**357**	P	Pg	00 18 32.2	+0.3
KOVU				S	Sg	00 18 37.3	+0.6
NIKU	**Nikkaluokta**	**0.45**	**273**	P	Pg	00 18 33.2	-0.1
NIKU	**Nikkaluokta**	**0.45**	**273**	P	Pg	00 18 33.5	+0.3
LANU	**Lannavaara**	**0.70**	**73**	P	Pg	00 18 38.0	-0.3
LANU	**Lannavaara**	**0.70**	**73**	P	Pg	00 18 38.5	+0.2
LANU				S	Sg	00 18 47.7	+0.4
LANU	**Lannavaara**	**0.70**	**73**	PG	Pg	00 18 38.0	-0.2
LANU				SG	Sg	00 18 47.3	0.0
DUNU	**Dundret**	**0.75**	**169**	P	Pg	00 18 38.6	-0.4
DUNU	**Dundret**	**0.75**	**169**	P	Pg	00 18 39.3	+0.2
MASU	**Masugnsbyn**	**0.79**	**119**	P	Pg	00 18 39.6	-0.3
MASU	**Masugnsbyn**	**0.79**	**119**	P	Pg	00 18 40.4	+0.5
SALU	**Saltoluokta**	**0.81**	**235**	P	Pg	00 18 39.8	-0.4
SALU	**Saltoluokta**	**0.81**	**235**	*e*P	Pg	00 18 40.0	-0.2
KIF	**Kilpisjarvi**	**1.18**	**10**	*e*P	Pg	00 18 47.6	+0.3
KIF	**Kilpisjarvi**	**1.18**	**10**	PG	Pg	00 18 47.1	-0.3
	baz=192						
KIF				MSG		00 19 02.2	
	comp=Z,13nm,0.2s						
KIF				SG	Sg	00 19 02.9	+0.3
PAJU	**Pajala**	**1.40**	**125**	PG	Pn	00 18 50.3	-1.2
	baz=303						
PAJU				SB	Sg	00 19 09.0	-0.6
HEF	**Hetta**	**1.41**	**65**	PG	Pn	00 18 50.6	-1.0
	baz=251						
HEF				MSG		00 19 07.9	
	comp=Z,5.3nm,0.2s						
HEF				SG	Sg	00 19 09.4	-0.6
ERTU	**Ertsjaerv**	**1.52**	**148**	PG	Pn	00 18 52.3	-0.8
ERTU				SN	Sg	00 19 13.3	-0.1
KLF	**Kolari**	**1.57**	**112**	PG	Pn	00 18 53.5	-0.3
	baz=297						
KLF				MSG		00 19 12.3	
	comp=Z,5.1nm,0.2s						
KLF				SN	Sg	00 19 15.2	+0.1
KTK1	**Kautokeino**	**1.62**	**42**	PG	Pn	00 18 54.5	0.0
KTK1				SN	Sg	00 19 18.0	+1.4
TRO	**Tromso**	**1.85**	**346**	PG	Pn	00 18 58.2	+0.5
TRO				SG	Sb	00 19 23.5	+0.5
KALU	**Kalix**	**2.36**	**147**	PB	Pn	00 19 05.7	+1.1
	baz=324						
KALU				SG	Sb	00 19 37.2	-0.4
TOF	**Tornio**	**2.41**	**136**	PG	Pn	00 19 06.8	+1.5
TOF				MSG		00 19 36.4	
	comp=Z,3.0nm,0.2s						
TOF				SG	Sb	00 19 39.2	+0.2
ARA0	**ARCESS Array S**	**2.57**	**46**	PB	Pn	00 19 08.9	+1.4
ARA0				SB	Sb	00 19 42.2	-1.5
RNF	**Rovaniemi**	**2.58**	**116**	PB	Pn	00 19 09.6	+1.9
	baz=304						
RNF				SG	Sb	00 19 43.6	-0.5
RAJF	**Raja-Jooseppi**	**3.09**	**75**	PB	Pn	00 19 16.9	+2.1
RAJF				SB	Sb	00 19 58.4	-0.3
KEV	**Kevo**	**3.12**	**49**	PB	Pn	00 19 17.4	+2.3
KEV				SN	Sn	00 19 54.2	+1.2
RANF	**Ranua**	**3.18**	**122**	PB	Pn	00 19 17.4	+1.4
RANF				SG	Sb	00 20 02.4	+1.1
BURU	**Burvik**	**3.32**	**171**	PB	Pn	00 19 20.0	+2.2
BURU				SB	Sn	00 20 00.5	+2.7
VRF	**Varrio**	**3.57**	**87**	PG	Pb	00 19 28.7	0.0
OUL	**Oulu**	**3.59**	**138**	SG	Sb	00 20 13.8	+0.7
OBF0	**Syolatti, Pyha**	**3.74**	**152**	PG	Pb	00 19 30.2	-1.4
OBF8	**Ulkokalla**	**3.77**	**158**	PB	Pb	00 19 29.5	-2.7
KU2	**Taivalkoski**	**3.84**	**120**	PN	Pn	00 19 26.3	+1.3
OLKF	**Oulanka, Finla**	**3.91**	**109**	PN	Pn	00 19 27.0	+1.0
OLKF				SG	Sg	00 20 26.6	-3.6
OUF	**Merijarvi**	**3.95**	**150**	PB	Pn	00 19 29.8	+3.3
MSF	**Maaselka**	**3.99**	**115**	PN	Pn	00 19 28.7	+1.6
UMAU	**Umeaa**	**3.99**	**177**	PN	Pn	00 19 29.0	+1.9
	baz=355						
KU6	**Riekki**	**4.23**	**111**	PG	Pb	00 19 40.6	+0.8
	baz=295						
KU1	**Kurvinen**	**4.36**	**117**	PN	Pn	00 19 34.1	+1.9

UPP 08 00:18:31.6±0.1**, 67°.87N**×**20°.10E, h0**^{km}**, ML2.5, Suspected explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.12**	**47**	P	Pg	00 18 34.2	+0.3
	baz=228						
KUA				S	Sg	00 18 36.1	+0.6
RATU	**Laukkuluspa**	**0.20**	**256**	P	Pg	00 18 35.5	+0.1
RATU				S	Sg	00 18 38.4	+0.4
KOVU	**Salmi**	**0.35**	**4**	P	Pg	00 18 38.4	0.0
KOVU				S	Sg	00 18 43.1	+0.2
NIKU	**Nikkaluokta**	**0.40**	**270**	P	Pg	00 18 39.5	+0.2
NIKU				S	Sg	00 18 44.9	+0.4
LANU	**Lannavaara**	**0.74**	**75**	S	Sg	00 18 55.4	+0.2

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*UPP **08** 00:19:27.3±0.0, 67°.86N×20°.21E, h0^{km}, ML2.2, Suspected explosion*

*IDC **08** 00:19:28.3±1.4, 67°.82N×20°.69E, h0^{km}, mbtmp3.0/3, ML2.0/3, Error ellipse: s-maj=19.4km s-min=7.8km az=116.0*

ISC 08 00:19:26.8±0.8**, 67°.81N**±0°.03×**20°.26E**±0°.03**, h0**^{km}**, n15, σ1^{s}.13**/22**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.15**	**11**	P	**Pg**	**00 19 29.7**	**0.0**
	baz=224						
KUA				S	**Sg**	**00 19 31.3**	**-0.4**
RATU	**Laukkuluspa**	**0.26**	**275**	P	**Pg**	**00 19 32.0**	**+0.4**
RATU				S	**Sg**	**00 19 35.2**	**+0.3**
KOVU	**Salmi**	**0.42**	**355**	P	**Pg**	**00 19 34.3**	**-0.5**
KOVU				S	**Sg**	**00 19 39.5**	**-0.7**
NIKU	**Nikkaluokta**	**0.47**	**278**	P	**Pg**	**00 19 35.8**	**0.0**
NIKU				S	**Sg**	**00 19 41.9**	**+0.1**
DUNU	**Dundret**	**0.70**	**170**	P	**Pb**	**00 19 41.4**	**-0.3**
DUNU				S	**Sb**	**00 19 51.4**	**-0.6**
LANU	**Lannavaara**	**0.70**	**69**	P	**Pg**	**00 19 40.5**	**+0.4**
LANU				S	**Sg**	**00 19 49.8**	**+0.6**
MASU	**Masugnsbyn**	**0.75**	**117**	P	**Pb**	**00 19 42.2**	**-0.5**
SALU	**Saltoluokta**	**0.80**	**238**	P	**Pg**	**00 19 42.3**	**+0.3**
PAJU	**Pajala**	**1.35**	**124**	P	**Pg**	**00 19 52.7**	**0.0**
ERTU	**Ertsjaerv**	**1.46**	**148**	P	**Pb**	**00 19 55.3**	**+0.5**
HARU	**Harads**	**1.67**	**170**	P	**Pb**	**00 19 58.5**	**+0.1**
ARCES	**ARCESS Array B**	**2.59**	**45**	Pn	**Pn**	**00 20 11.4**	**+1.6**
	0.9nm,0.3s,baz=228,slow=15,SNR=8.6						
ARCES				Lg	Lg	00 20 44.4	
	2.4nm,0.3s,baz=228,slow=26,SNR=10						
	1.9nm,0.3s						
FINES	**FINESS Array B**	**6.86**	**156**	Pn	**Pn**	**00 21 10.2**	**+1.9**
	0.1nm,0.3s,baz=348,slow=11,SNR=4.3						
FINES				Sn	**Sn**	**00 22 23.7**	**-3.3**
	0.2nm,0.3s,baz=342,slow=25,SNR=1.8						
FINES				Lg	Lg	00 23 04.2	
	0.5nm,0.3s,baz=338,slow=25,SNR=4.5						
	2.3nm,0.8s						
NOA	**NORSAR Array B**	**7.83**	**214**	Pn	**Pn**	**00 21 22.6**	**+0.8**
	baz=23,slow=12,SNR=3.3						
NOA				Sn	Sn	00 22 35.5	-16
	baz=327,slow=17,SNR=2.4						
NOA				Lg	Lg	00 23 35.1	
	baz=25,slow=18,SNR=4.8						
	1.3nm,1.1s						
HFS	**Hagfors**	**8.22**	**204**	Sn	**Sn**	**00 22 58.6**	**-1.9**
	0.2nm,0.3s,baz=14,slow=24,SNR=2.0						
HFS				Lg	Lg	00 23 45.0	
	0.2nm,0.3s,baz=23,slow=27,SNR=1.7						

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*JMA **08** 00:26:42.4±0.3, 43°N±2°×14°8E±°, h15^{km}, MV3.7/25, E OFF HOKKAIDO*

*SKHL **08** 00:26:43.6±0.3, 43°.20N×148°.00E, h38^{km}±2^{km}, mb4.5/3*

*IDC **08** 00:27:41.0±13.0, 45°.06N×143°.93E, h324^{km}±131^{km}, mb3.0/5, mbtmp3.7/6, Error ellipse: s-maj=198.5km s-min=36.4km az=2.0*

ISC 08 00:26:44.5±1.6**, 43°.14N**±0°.09×**147°.94E**±0°.10**, h34**^{km}**, n22, σ1^{s}.41**/31**, mb3.7**/5**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.62**	**279**	*e*P	**Pn**	**00 27 09.6**	**-1.0**
NEM2				*e*S	**Sn**	**00 27 28.8**	**-1.5**
NMR	**Nemuro--Hokkai**	**1.63**	**279**	*e*P	**Pn**	**00 27 09.6**	**-1.2**
NMR				*e*S	**Sn**	**00 27 28.9**	**-1.7**
YUK	**Yuzh-Kuril'sk**	**1.75**	**301**	*e*P	**Pn**	**00 27 11.6**	**-0.9**
YUK				AMB	AMB	00 27 17.9	
	290nm,0.5s						
YUK				*e*S	**Sn**	**00 27 32.8**	**-0.8**
YUK				A	A	00 27 35.0	
	870nm,0.6s						
YUK				A	A	00 27 35.0	
	1µm,0.6s						
GLVR	**Golovnino**	**1.86**	**289**	*e*P	**Pn**	**00 27 13.9**	**0.0**
GLVR				AMB	AMB	00 27 16.8	
	120nm,0.3s						
GLVR				*e*S	**Sn**	**00 27 34.2**	**-2.0**
GLVR				A	A	00 27 39.7	
	400nm,0.5s						
GLVR				A	A	00 27 39.7	
	810nm,0.5s						
JKHN	**Kushirohamanak**	**2.03**	**269**	*e*S	**Sn**	**00 27 40.0**	**-0.5**
KUR	**Kuril'sk**	**2.09**	**359**	*e*P	**Pn**	**00 27 15.7**	**-1.4**
KUR				AMB	AMB	00 27 17.0	
	100nm,0.5s						
KUR				*e*S	**Sn**	**00 27 39.4**	**-2.5**
KUR				A	A	00 27 47.7	
	170nm,0.5s						
KUR				A	A	00 27 47.7	
	230nm,0.5s						
JRA	**Rausu**	**2.20**	**292**	*e*P	**Pn**	**00 27 17.9**	**-0.7**
JRA				*e*S	**Sn**	**00 27 44.5**	**-0.1**
JNSB	**Nemuroshibetsu**	**2.23**	**287**	*e*P	**Pn**	**00 27 18.4**	**-0.6**
JNSB				*e*S	**Sn**	**00 27 44.5**	**-0.8**
AKK	**Akkeshi**	**2.27**	**268**	*e*P	**Pn**	**00 27 19.3**	**-0.3**
JAK	**Akkeshi**	**2.38**	**268**	*e*P	**Pn**	**00 27 20.7**	**-0.4**
JAK				*e*S	**Sn**	**00 27 47.7**	**-1.3**

JNK	Nakash	2.39	282	eS	Sn	00 27 48.0	-1.3
JTKR	Abashiri--Toko	3.04	287	eP	Pn	00 27 29.9	-0.3
JTKR				eS	Sn	00 28 05.5	+0.1
JAR	Ashorobuto	3.05	274	eS	Sn	00 28 05.0	-0.6
JCH	Churui	3.40	263	eP	Pn	00 27 35.0	-0.2
JCH				eS	Sn	00 28 12.6	-1.8
JNBK	Urakawa-nobuka	3.92	259	eP	Pn	00 27 42.2	0.0
JANG	Nango	5.54	242	eS	Sn	00 29 02.6	-4.5
HILR	Hailar Array B	20.41	298	P	P	00 31 17.9	-0.6
	1.3nm,0.3s,baz=90,slow=12,SNR=2.0						
SONM	Songino Array	29.24	294	P	P	00 32 44.1	+0.9
	1.1nm,0.7s,baz=87,slow=8.5,SNR=7.4 1.1nm,0.7s						
MKAR	Makanchi Array	45.38	298	P	P	00 35 00.3	+0.9
	0.8nm,0.7s,baz=80,slow=8.5,SNR=11 0.8nm,0.7s						
KURBB	Kurchatov Arra	46.43	305	P	P	00 35 08.9	+1.2
	0.4nm,0.4s,baz=77,slow=8.2,SNR=5.7 0.4nm,0.4s						
BVAR	Borovoye Array	50.33	310	P	P	00 35 39.2	+1.5
	0.3nm,0.3s,baz=88,slow=8.8,SNR=3.1 0.3nm,0.3s						
NVAR	Mina Array Bea	67.41	58	P	P	00 38 11.1	+34
	0.6nm,0.5s,baz=315,slow=5.0,SNR=3.7 0.6nm,0.5s						

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*SKO **08** 00:44:38.8, 41°.63N×19°.37E, h0km, ML2.5*
*TIR **08** 00:44:39.9, 41°.63N×19°.50E, h34km±3km, Ml2.5/5*
*PDG **08** 00:44:41.7±0.2, 41°.63N×19°.54E, h10km, ML2.4/13, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
ISC 08 00:44:40.0±1.1**, 41°.61N**±0°.02×**19°.51E**±0°.02**, h6**km±9km**, n40,** σ**1s.28**/67**, 20C-12D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.38	134	⇑Pg	Pg	00 44 47.3	0.0
TIR				Sg	Sg	00 44 51.6	-0.6
TIR				AML	AML	00 44 52.3	
	1.7nm,0.2s						
TIR	Tirane	0.38	134	⇓iPg	Pg	00 44 47.3	0.0
TIR				i Sg	Sg	00 44 53.2	+1.0
ULC	Ulcinj	0.40	331	⇑iPg	Pb	00 44 49.3	-0.3
ULC				i Sg	Sb	00 44 55.8	-0.2
SDA	Shkodra	0.44	359	Pg	Pb	00 44 49.8	-0.3
SDA				Sg	Sb	00 44 56.8	-0.2
DRME	Dracevica, Mon	0.62	337	⇓iPg	Pb	00 44 53.2	-0.1
DRME				eSg	Sn	00 45 03.1	-2.6
PHP	Peshkopia	0.70	84	Pg	Pg	00 44 52.8	-0.7
PHP				Sg	Sb	00 45 04.0	-0.6
PHP				AML	AML	00 45 06.4	
	0.8nm,0.3s						
BUM	Brajici-Budva	0.83	327	⇑iPg	Pn	00 44 57.2	-1.0
BUM				i Sg	Sn	00 45 10.0	-0.8
PDG	Podgorica	0.84	347	Pg	Pn	00 44 57.4	-0.9
PDG				Sg	Sg	00 45 06.2	-0.9
PDG	Podgorica	0.84	347	⇑P	Pn	00 44 58.2	-0.1
PDG				⇓S	Sn	00 45 13.2	+2.2
PDG	Podgorica	0.84	347	⇑iPg	Pn	00 44 57.4	-0.9
PDG				i Sg	Sn	00 45 11.1	+0.1
CEME	Cevo	1.03	335	⇓iPg	Pn	00 45 00.9	-0.2
CEME				eSg	Sn	00 45 16.9	+1.0
PVY	Plav	1.04	19	⇓iPg	Pn	00 45 00.6	-0.6
PVY				i Sg	Sn	00 45 16.6	+0.5
OHR	Ohrid	1.09	117	⇑iPg	Pb	00 45 00.6	-0.7
OHR				i Sg	Sn	00 45 17.2	0.0
OHR				eLg	Lg	00 45 19.3	
	comp=N,51nm,0.4s						
OHR				eLg	Lg	00 45 20.7	
	comp=E,82nm,0.6s						
HCY	Herceg Novi	1.13	318	⇓iPg	Pn	00 45 02.8	+0.5
HCY				i Sg	Sn	00 45 20.6	+2.5
VLO	Vlora	1.14	180	Pg	Pg	00 45 03.1	+1.3
VLO				Sn	Sb	00 45 16.9	-0.2
VLO				AML	AML	00 45 20.1	
	comp=E,0.6nm,0.5s						
NKME	Niksic	1.23	341	⇑iPg	Pg	00 45 04.2	+0.7
NKME				eSg	Sn	00 45 22.6	+2.0
KOME	Kolasin	1.24	0	⇑iPg	Pg	00 45 04.1	+0.3
KOME				eSg	Sn	00 45 23.5	+2.5
IVA	Berane	1.29	13	⇑iPg	Pg	00 45 04.9	+0.1
IVA				i Sg	Sn	00 45 24.8	+2.5
BRY	Bratogost	1.48	331	⇑iPg	Pg	00 45 08.5	+0.2
BRY				i Sg	Sg	00 45 31.1	+3.6
SKO	Skopje	1.49	75	i Pn	Pg	00 45 08.6	0.0
UPM	Unac-Piva	1.65	345	⇑iPn	Pg	00 45 11.9	+0.2
UPM				i Sn	Sg	00 45 35.4	+2.2
NEST	Nestorio	1.67	135	⇓Pn	Pb	00 45 11.0	-0.2
NEST				Sn	Sb	00 45 32.2	-0.2
NEST				AML	AML	00 45 38.3	
	comp=E,0.1nm,0.3s						
PLE	Pljevlja	1.72	357	⇑iPn	Pg	00 45 13.0	0.0
PLE				i Sn	Sg	00 45 36.7	+1.4
NOCI	Noci	2.02	247	⇓Pn	Pn	00 45 14.4	-0.2
NOCI				AML	AML	00 45 50.7	
	comp=E,0.2nm,0.4s						
BARS	Barje	2.10	54	i Pn	Pn	00 45 16.4	+0.8
BARS				i Sg	Sg	00 45 47.4	+0.1
IGT	Igoumenitsa	2.17	163	⇑Pn	Pn	00 45 17.6	+1.0
IGT				Sn	Sb	00 45 45.7	-1.0
VAY	Valandovo	2.32	96	i Pn	Pn	00 45 19.1	+0.5
MATE	Matera	2.32	247	⇑P	Pb	00 45 21.9	-0.4
MATE				⇑S	Sg	00 45 53.9	-0.8
KNT	Kendrikon	2.59	99	i Pn	Pn	00 45 22.9	+0.5
KNT				eSn	Sb	00 45 57.1	-1.8
BOVS	Bovan	2.59	38	⇑P	Pn	00 45 22.5	0.0
THE	Thessaloniki	2.79	109	ePn	Pn	00 45 25.3	+0.2
SGRT	San Giovanni R	2.82	274	Pn	Pn	00 45 24.5	-1.2
BLKB	Belogradchik	3.08	48	⇑S	Sn	00 46 05.4	-1.0
SRS	Serrai	3.11	98	ePn	Pn	00 45 30.4	+0.8
MDVR	Moldovita	3.56	26	⇓P	Pn	00 45 36.6	+0.9
BLY	Banja Luka	3.57	332	⇓P	Pb	00 45 39.3	-4.2
BLY				⇑S	Sb	00 46 25.2	-1.8
HERR	Herculane	3.90	32	⇑P	Pn	00 45 40.3	-0.1
BZS	Buzias	4.29	20	⇑P	Pn	00 45 46.7	+1.0
GZR	Gura Zlata	4.47	31	⇓P	Pn	00 45 48.6	+0.4
SIRR	Siria	4.91	18	⇓P	Pn	00 45 56.2	+1.9

IDC 08 00:50:32.7±2.3**, 6°.53S**×**147°.70E, h166**km±17km**, mb3.4**/3**, mbtmp3.8**/6**, Error ellipse: s-maj=30.4km s-min=17.6km az=70.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	2.91	191	P	Pn	00 51 18.1	-1.5
	20nm,0.3s,baz=16,slow=12,SNR=10.0						
PMG				S	Sn	00 51 56.9	+0.8
	36nm,0.5s,baz=15,slow=20,SNR=8.8						
JAY	Jayapura	8.04	299	P	Pn	00 52 25.4	-1.3
	7.8nm,0.9s,baz=150,slow=20,SNR=1.8						
JAY				S	Sn	00 54 00.1	+3.5
	20nm,0.9s,baz=130,slow=7.9,SNR=4.1						
WRA	Warramunga Arr	18.61	223	P	P	00 54 37.6	0.0
	1.6nm,0.7s,baz=42,slow=12,SNR=8.7						
ASAR	Alice Springs	21.59	216	P	P	00 55 09.9	+0.3
	0.8nm,0.6s,baz=48,slow=9.3,SNR=14 0.8nm,0.6s						
FITZ	Fitzroy Crossi	24.39	240	P	P	00 55 35.6	-0.3
	5.1nm,0.6s,baz=78,slow=10.0,SNR=24 5.1nm,0.6s						
ILAR	Eielson Array	85.69	23	P	P	01 02 53.0	+0.4
	0.4nm,0.9s,baz=250,slow=5.5,SNR=3.1 0.4nm,0.9s						

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*IDC **08** 00:52:33.0±0.8, 9°.32N×126°.15E, h0km, mb4.0/16, mbtmp4.0/16, MS3.2/4, Error ellipse: s-maj=41.4km s-min=17.9km az=72.0*
ISC 08 00:52:41.6±0.8**, 9°.3N**±0°.1×**126°.1E**±0°.3**, h67**km**, n26,** σ**0s.81**/18**, mb4.1**/16**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	Korea Array	28.07	3	P	P	00 58 26.7	-0.1
	0.5nm,0.5s,baz=182,slow=13,SNR=2.3						
KSRS				LR	LR	01 12 46.4	
	comp=Z,6μm,18.0s,baz=150,slow=43 0.5nm,0.5s						
MJAR	Matsushiro Arr	29.25	20	LR	LR	01 10 52.1	
	comp=Z,13nm,19.0s,baz=206,slow=38						
WRA	Warramunga Arr	30.16	165	P	P	00 58 44.6	-0.9
	0.3nm,0.7s,baz=345,slow=9.0,SNR=1.5 0.3nm,0.7s						
LZDM	Lanzhou Array	33.49	326	P	P	00 59 14.1	-0.9
	0.9nm,0.3s,baz=100,slow=17,SNR=1.8 0.9nm,0.3s						
ASAR	Alice Springs	33.63	167	P	P	00 59 15.2	-0.8
	0.2nm,0.3s,baz=346,slow=9.1,SNR=5.1 0.2nm,0.3s						
H11S3	WAKE ISLAND Hy	40.32	72	T	T	01 43 13.1	
	baz=262,slow=75,SNR=40						
H11S1	WAKE ISLAND Hy	40.34	72	T	T	01 43 15.8	
	baz=262,slow=75,SNR=46						
H11S2	WAKE ISLAND Hy	40.34	72	T	T	01 43 16.5	
	baz=262,slow=75,SNR=50						
H11N1	WAKE ISLAND Hy	40.69	71	T	T	01 43 36.6	
	baz=262,slow=75,SNR=20						
H11N2	WAKE ISLAND Hy	40.69	71	T	T	01 43 37.0	
	baz=262,slow=75,SNR=22						
H11N3	WAKE ISLAND Hy	40.70	71	T	T	01 43 36.5	
	baz=262,slow=75,SNR=26						
SONM	Songino Array	41.88	340	P	P	01 00 24.6	-0.8
	0.2nm,0.7s,baz=132,slow=2.1,SNR=2.1 0.2nm,0.7s						
PALK	Pallekele	44.99	271	LR	LR	01 20 42.0	
	comp=Z,43nm,18.4s,baz=138,slow=38						
PETK	Petropavlovsk-	50.57	24	P	P	01 01 32.4	-0.9
	3.5nm,0.9s,baz=217,slow=11,SNR=2.5 3.5nm,0.9s						
MKAR	Makanchi Array	52.72	323	P	P	01 01 49.9	+0.4
	1.1nm,0.5s,baz=122,slow=7.4,SNR=21						
MKAR				PcP	PcP	01 02 59.5	+1.0
	0.5nm,0.7s,baz=120,slow=5.2,SNR=4.1						
MKAR				LR	LR	01 25 24.6	
	comp=Z,22nm,18.2s,baz=123,slow=37 1.1nm,0.5s						
ZALV	Zalesovo Beam	55.41	332	P	P	01 02 08.1	-0.8
	0.3nm,0.2s,baz=116,slow=9.8,SNR=1.5 0.3nm,0.2s						
AAK	Ala-Archa	55.92	316	LR	LR	01 27 44.6	
	comp=Z,35nm,18.8s,baz=77,slow=38						
KURBB	Kurchatov Arra	56.79	326	P	P	01 02 18.9	0.0
	0.8nm,0.3s,baz=124,slow=6.5,SNR=11 0.8nm,0.3s						
TIXI	Tiksi	62.31	1	P	P	01 02 57.2	+0.8
	4.9nm,0.3s,baz=221,slow=4.5,SNR=8.3 4.9nm,0.3s						
BVAR	Borovoye Array	62.39	326	P	P	01 02 57.6	+0.3
	1.0nm,0.6s,baz=140,slow=5.7,SNR=5.0 1.0nm,0.6s						
NRIK	Noril'sk	64.92	346	P	P	01 03 13.7	0.0
	0.6nm,0.3s,baz=146,slow=10,SNR=1.7 0.6nm,0.3s						
ILAR	Eielson Array	80.36	26	P	P	01 04 45.6	+0.2
	0.3nm,0.7s,baz=269,slow=5.3,SNR=1.5 0.3nm,0.7s						
SPITS	Spitsbergen Ar	84.93	349	P	P	01 05 09.4	+0.4
	6.7nm,0.9s,baz=90,slow=7.2,SNR=5.6 6.7nm,0.9s						
ARCES	ARCESS Array B	85.05	340	P	P	01 05 10.4	+0.8
	1.3nm,0.6s,baz=83,slow=4.8,SNR=11 1.3nm,0.6s						
FINES	FINESS Array B	86.68	332	P	P	01 05 18.1	+0.3
	4.6nm,1.0s,baz=111,slow=3.1,SNR=4.3 4.6nm,1.0s						
PLCA	Paso Flores	145.37	157	PKPbc	PKPab	01 12 14.2	+1.7
	1.2nm,0.7s,baz=235,slow=2.6,SNR=3.7						

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*SDD **08** 01:08:54.6±2.0, 19°.15N×67°.10W, h31km±47km, MD3.7, ML3.3, MW3.5, Presumed earthquake*
*NEIC **08** 01:08:54.5±1.5, 19°.06N±0°.03×67°.13W±0°.01, h10km±2km, ML3.2/26, Md2.9/18(RSPR), Error ellipse: s-maj=5.8km s-min=3.0km az=348.0*
*OSPL **08** 01:08:56.8±0.9, 19°.02N×67°.17W, h26km±6km, ML2.7, Presumed earthquake*
*RSPR **08** 01:08:58.5, 18°.88N×67°.24W, h10km±31km, MD2.9/18*
ISC 08 01:08:52.1±1.3**, 19°.11N**±0°.04×**67°.14W**±0°.02**, h1**km±10km**, n79,** σ**1s.20**/100**, 19C-21D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	0.64	177		Pb	01 09 06.5	+0.4
AGPR				IAML		01 09 18.6	
	1μm,0.3s						
AGPR				IAML		01 09 22.5	
	1μm,0.4s						
AGPR	Aguadilla, PR	0.64	177	⇓iP	Pb	01 09 06.5	+0.4
AGPR	Aguadilla, PR	0.64	177	eS	Sb	01 09 14.6	-0.9
AGPR	Aguadilla, PR	0.64	177	⇑ePg	Pb	01 09 06.7	+0.6
AGPR				⇑eSg	Sb	01 09 15.4	-0.1
AGPR				IAML		01 09 22.0	
	comp=N,1μm,0.4s						
AGPR	Aguadilla, PR	0.64	177	i P	Pb	01 09 06.5	+0.4
AGPR				eS	Sb	01 09 15.1	-0.5
AGPR				IAML		01 09 16.6	
	comp=Z,457nm,0.2s						
IDE	Isla Desecheo	0.79	204		Pb	01 09 09.0	+0.4
IDE					Sb	01 09 19.1	-0.7
IDE	Isla Desecheo	0.79	204	⇓iP	Pb	01 09 09.0	+0.4
IDE	Isla Desecheo	0.79	204	eS	Sb	01 09 19.1	-0.7
AOPR	Arecibo Observ	0.85	154		Pb	01 09 09.9	+0.4
AOPR					Sb	01 09 20.8	-0.7
AOPR	Arecibo Observ	0.85	154	IAML		01 09 28.7	
	comp=E,1μm,0.5s						
AOPR				IAML		01 09 32.8	
	comp=N,927nm,0.3s						
AOPR	Arecibo Observ	0.85	154	⇑eP	Pb	01 09 09.9	+0.4
AOPR	Arecibo Observ	0.85	154	eS	Sb	01 09 20.8	-0.7
AOPR	Arecibo Observ	0.85	154	⇑ePg	Pb	01 09 10.0	+0.4
AOPR				⇑eSg	Sn	01 09 22.8	-1.4
AOPR				IAML		01 09 32.7	
	comp=N,854nm,0.3s						
EMPR	Esperanza - Ma	0.86	137		Pn	01 09 12.2	+0.9
EMPR					Sn	01 09 23.3	-1.1
EMPR	Esperanza - Ma	0.86	137	IAML		01 09 29.2	
	comp=N,606nm,0.4s						
EMPR	Esperanza - Ma	0.86	137	⇑iP	Pn	01 09 12.2	+0.9
EMPR	Esperanza - Ma	0.86	137	eS	Sn	01 09 23.3	-1.1
PRSN	Puerto Rico Se	0.89	180		Pb	01 09 10.5	+0.2
PRSN					Sb	01 09 21.8	-0.9
PRSN	Puerto Rico Se	0.89	180	IAML		01 09 25.6	
	comp=N,2μm,0.2s						
PRSN	Puerto Rico Se	0.89	180	⇑iP	Pb	01 09 10.5	+0.2
PRSN	Puerto Rico Se	0.89	180	eS	Sb	01 09 21.8	-0.9
PRSN	Puerto Rico Se	0.89	180	⇓ePg	Pb	01 09 10.5	+0.2
PRSN				⇓eSg	Sb	01 09 21.9	-0.7
PRSN				IAML		01 09 25.7	
	comp=N,1μm,0.2s						
LSP	Las Mesas	0.93	177		Pb	01 09 11.4	+0.3
LSP					Sb	01 09 23.2	-0.8
LSP	Las Mesas	0.93	177	⇑iP	Pb	01 09 11.4	+0.3
LSP	Las Mesas	0.93	177	eS	Sb	01 09 23.2	-0.8
UUPR	Utuado, UPR, P	0.94	155		Pn	01 09 11.9	-0.5
UUPR					Sb	01 09 23.7	-0.6
UUPR	Utuado, UPR, P	0.94	155	⇓eP	Pn	01 09 11.9	-0.5
UUPR	Utuado, UPR, P	0.94	155	eS	Sb	01 09 23.7	-0.6
ECPR	Experimental S	1.08	137	Pg	Pb	01 09 13.6	0.0
ECPR				IAML		01 09 34.6	
	comp=N,766nm,0.2s						
ECPR				IAML		01 09 39.2	
	comp=N,837nm,0.2s						
ECPR	Experimental S	1.08	137	⇓eP	Pb	01 09 13.8	+0.2
ECPR	Experimental S	1.08	137	eS	Sb	01 09 28.7	+0.5
CRPR	Cabo Rojo, PR	1.10	178		Pg	01 09 13.6	+0.4
CRPR					Sg	01 09 27.8	+0.3
CRPR	Cabo Rojo, PR	1.10	178	IAML		01 09 29.3	
	comp=N,417nm,0.3s						
CRPR				IAML		01 09 39.1	
	comp=N,418nm,0.4s						
CRPR	Cabo Rojo, PR	1.10	178	⇑iP	Pg	01 09 13.6	+0.4
CRPR	Cabo Rojo, PR	1.10	178	eS	Sg	01 09 27.8	+0.3
CRPR	Cabo Rojo, PR	1.10	178	ePg	Pg	01 09 13.6	+0.4
CRPR				⇓eSg	Sg	01 09 27.2	-0.3
CRPR				IAML		01 09 39.0	
	comp=N,411nm,0.4s						
CRPR	Cabo Rojo, PR	1.10	178	i P	Pg	01 09 13.6	+0.3
CRPR				eS	Sg	01 09 26.2	-1.2
CRPR				IAML		01 09 29.6	
	comp=Z,319nm,0.2s						
MLPR	Magueyes Islan	1.14	175	⇑iP	Pg	01 09 14.3	+0.3
MLPR	Magueyes Islan	1.14	175	eS	Sg	01 09 28.7	-0.1
MLPR	Magueyes Islan	1.14	175	⇑ePg	Pg	01 09 14.3	+0.3
MLPR				⇓eSg	Sb	01 09 29.3	-0.6
MLPR				IAML		01 09 29.3	
	comp=N,125nm,0.3s						
GBPR	Guanica, Bosqu	1.16	168		Pn	01 09 15.3	-0.1
GBPR	Guanica, Bosqu	1.16	168	⇓iP	Pn	01 09 15.3	-0.1
OBIP	Obispado Ponce	1.18	154		Pb	01 09 15.4	+0.1
OBIP					Sg	01 09 30.0	0.0
OBIP	Obispado Ponce	1.18	154	IAML		01 09 31.5	
	comp=N,313nm,0.6s						
OBIP				IAML		01 09 38.9	
	comp=E,350nm,0.5s						
OBIP	Obispado Ponce	1.18	154	⇑iP	Pb	01 09 15.4	+0.1
OBIP	Obispado Ponce	1.18	154	eS	Sg	01 09 30.0	0.0
GCPR	Guaynabo City	1.28	128		Pg	01 09 17.1	+0.4
GCPR					Sg	01 09 33.2	-0.1
GCPR	Guaynabo City	1.28	128	⇓eP	Pg	01 09 17.1	+0.4
GCPR	Guaynabo City	1.28	128	eS	Sg	01 09 33.2	-0.1
PCDR	Punta Cana, DR	1.32	243	⇓ePg	Pn	01 09 17.3	-0.2
PCDR				IAML		01 09 40.3	
	comp=N,499nm,0.5s						
SJG	San Juan	1.37	136		Pb	01 09 18.5	0.0
SJG				IAML		01 09 44.3	
	comp=N,270nm,0.3s						
SJG	San Juan	1.37	136	⇓iP	Pg	01 09 19.6	+1.2
SJG	San Juan	1.37	136	eS	Sg	01 09 35.6	-0.5
SJG	San Juan	1.37	136	⇑ePg	Pn	01 09 18.4	+0.1
SJG				⇑eSg	Sg	01 09 35.3	-0.9
SJG	San Juan	1.37	136	i P	Pn	01 09 18.4	0.0
SJG				IAML		01 09 41.1	
	comp=Z,138nm,0.3s						
HUMP	Col San Antoni	1.56	128		Sb	01 09 41.6	-0.4
HUMP	Col San Antoni	1.56	128		Pn	01 09 20.4	-0.5
HUMP	Col San Antoni	1.56	128	⇑iP	Pg	01 09 22.5	+0.4
HUMP	Col San Antoni	1.56	128	eS	Sb	01 09 41.6	-0.4
HGY1	Higuey	1.58	251	⇓ePg	Pb	01 09 22.4	+0.3
HGY1				IAML		01 09 46.6	
	comp=N,277nm,0.3s						
HIDR	Higuey Centro	1.58	251	⇓iP	Pn	01 09 21.0	-0.2
HIDR	Higuey Centro	1.58	251	eS	Sb	01 09 42.9	+0.3
HIDR	Higuey Centro	1.58	251	⇓ePg	Pn	01 09 21.1	-0.1
HIDR				⇑eSg	Sn	01 09 42.0	-0.3
HIDR				IAML		01 09 46.5	
	comp=N,657nm,0.2s						
MIDR	Miches	1.81	266	⇓iP	Pb	01 09 25.8	-0.2
MIDR	Miches	1.81	266	eS	Sb	01 09 49.3	+0.1
MIDR	Miches	1.81	266	⇑ePg	Pn	01 09 24.9	+0.6
MIDR				⇑ePg	Pb	01 09 26.0	0.0
MIDR				IAML		01 09 53.8	
	comp=N,48nm,0.2s						
MIDR				IAML		01 09 53.8	
	comp=N,101nm,0.2s						
SMDR	Samana, DR	1.94	276	⇓eP	Pn	01 09 26.3	+0.1
SMDR	Samana, DR	1.94	276	eS	Sg	01 09 54.7	+0.1
SMDR	Samana, DR	1.94	276	⇓ePg	Pn	01 09 25.8	-0.4
SMDR				⇑eSg	Sn	01 09 52.0	+0.8
SMDR				IAML		01 09 59.9	
	comp=N,131nm,0.4s						
DR12	Loma Pena Alta	2.14	262		Pn	01 09 29.7	+0.7
HATOM	Hato Mayor del	2.14	262	⇓ePg	Pn	01 09 30.0	+1.0
HATOM				⇑eSg	Sn	01 09 57.0	+0.8
HATOM				IAML		01 10 06.4	
	comp=N,119nm,0.3s						
DR08	Loma La Naviza	2.73	267	ePg	Pn	01 09 38.9	+1.8
DR08				⇑eSg	Sb	01 10 14.5	-1.2
DR08				IAML		01 10 19.0	
	comp=N,3μm,0.2s						
SFDR	San Fco. de Ma	2.93	274	⇑ePg	Pn	01 09 42.1	+2.2
SFDR				⇑eSg	Sn	01 10 18.4	+2.6
SFDR				IAML		01 10 32.6	
	comp=N,336nm,0.4s						
BANI	BANI	3.13	257	ePg	Pn	01 09 45.3	+2.7
BANI				⇑eSg	Sn	01 10 23.5	+2.8
BANI				IAML		01 10 38.1	
	comp=N,151nm,0.6s						
SC01	Santiago de lo	3.40	276		Pn	01 09 47.6	+1.3
LOPP1	Punta Rusia, P	3.90	282	i P	Pn	01 09 53.7	+0.6
SDDR	Presa de Saban	3.92	269		Pn	01 09 55.3	+1.8
SDDR				IAML		01 11 01.1	
	comp=N,84nm,1.1s						
PODR	Polo	4.04	257	⇑ePg	Pn	01 09 59.2	+4.0
PODR				⇓eSg	Sb	01 10 49.7	-3.8
PODR				IAML		01 10 59.9	
	comp=N,64nm,0.5s						
JIDR	Jimani	4.50	263	⇑ePg	Pb	01 10 07.8	-4.2
JIDR				⇓eSg	Sb	01 11 01.6	-5.1

IDC 08 01:13:30.4±8.6**, 6°.82S**×**129°.63E, h126**km±89km**, mb3.0**/1**, mbtmp3.5**/5**, ML3.6**/4**, Error ellipse: s-maj=72.6km s-min=28.8km az=36.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	6.79	240	P	Pn	01 15 09.5	+1.9
	4.8nm,0.3s,baz=139,slow=14,SNR=2.8						
BATI				S	Sn	01 16 23.3	-0.3
	23nm,0.7s,baz=82,slow=23,SNR=4.4 15nm,0.5s						
FITZ	Fitzroy Crossi	11.86	199	P	Pn	01 16 14.1	-1.5
	0.3nm,0.3s,baz=24,slow=13,SNR=22						
FITZ				S	Sn	01 18 16.5	-10
	1.7nm,0.3s,baz=54,slow=19,SNR=5.6 0.7nm,0.3s						
WRA	Warramunga Arr	13.82	161	P	Pn	01 16 40.1	-1.0
	0.2nm,0.3s,baz=344,slow=14,SNR=8.2						
WRA				S	Sn	01 19 06.4	-7.3
	0.7nm,0.4s,baz=335,slow=23,SNR=7.0 0.3nm,0.3s						
ASAR	Alice Springs	17.25	167	P	Pn	01 17 25.0	+1.4
	0.1nm,0.3s,baz=336,slow=9.3,SNR=9.2						
ASAR				S	Sn	01 20 27.9	-8.3
	0.3nm,0.4s,baz=348,slow=26,SNR=5.1 0.2nm,0.5s						
MKAR	Makanchi Array	67.87	327	P	P	01 24 15.0	-0.2
	0.1nm,0.3s,baz=115,slow=8.1,SNR=2.2 0.1nm,0.3s						

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*CATAC **08** 01:34:08.3±0.5, 12°N±3°×8°8W±°, h1km, M3.8/14, MLv3.8/14, Error ellipse: s-maj=6.9km s-min=4.6km az=24.7, confirmed*
*SNET **08** 01:34:15.7±0.8, 12°.13N×88°.20W, h20km±11km, ML3.3*
*NEIC **08** 01:34:16.2±1.8, 12°.05N±0°.07×87°.94W±0°.08, h35km±2km, mb4.2/18, Error ellipse: s-maj=14.8km s-min=9.2km az=233.0*
*IDC **08** 01:34:19.1±2.7, 12°.14N×87°.70W, h74km±29km, mb3.2/5, mbtmp3.5/6, MS2.6/1, Error ellipse: s-maj=78.4km s-min=25.7km az=37.0*
ISC 08 01:34:13.9±1.4**, 11°.94N**±0°.05×**88°.10W**±0°.04**, h32**km±10km**, n73,** σ**1s.79**/81**, mb4.1**/13**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	Cosiguina Volc	1.16	27	P	Pb	01 34 33.9	-1.5
CSGN				S	Sn	01 34 52.2	+3.4
POTN	Potosi Cosigui	1.20	29	P	Pn	01 34 34.0	-0.5
CRIN	San Cristobal	1.27	54		Pb	01 34 35.6	-1.8
CRIN	San Cristobal	1.27	54	P	Pb	01 34 35.7	-1.6
CRIN	San Cristobal	1.27	54	S	Sb	01 34 59.4	+5.9
PKGN	Cerro Pekin	1.32	56	P	Pn	01 34 35.8	-0.3
PKGN				S	Sb	01 34 53.3	-1.2
CNCH	Conchagua	1.35	11	eP	Pb	01 34 37.2	-1.6
CNCH				eS	Sn	01 34 53.9	+0.2
LCND	La Caada	1.38	9	eP	Pb	01 34 37.5	-1.6
LCND				IAML		01 34 58.7	
	comp=Z,424nm,0.4s						
POLN	Al Sur del Vol	1.44	61	P	Pn	01 34 37.2	-0.6
CNGA	Al SSO del Vol	1.47	68	P	Pn	01 34 38.0	-0.3
CNGA				S	Sb	01 35 01.0	+1.9
CNGN	Cerro Negro	1.48	68		Pn	01 34 37.5	-1.0
CNGN	Cerro Negro	1.48	68	P	Pn	01 34 38.3	-0.1
LCY	Lacayo	1.49	353	eP	Pn	01 34 39.2	+0.7
COPN	Copaltepe	1.50	81	P	Pn	01 34 38.4	-0.2
BLLM	Bellamira	1.50	355	eP	Pn	01 34 39.0	+0.3
PACA	Pacayal	1.54	352	P	Pb	01 34 40.2	-1.7
PACA	Pacayal	1.54	352	S	Sb	01 35 04.7	+3.7
MOM3	MOM3	1.65	70	P	Pn	01 34 40.4	-0.3
MOM3				S	Sb	01 35 07.1	+3.0
MOM2	El Cardon	1.66	72	P	Pb	01 34 41.3	-2.5
MOM2				S	Sb	01 35 05.6	+1.4
UNAN	Cigeo UNAN	1.80	84	P	Pb	01 34 45.1	-1.1
UNAN				S	Sb	01 35 11.4	+3.0
ALLN	Telcor Managua	1.80	83	P	Pb	01 34 53.0	+6.8
TISN	Laguna Tiscapa	1.80	83	P	Pn	01 34 41.9	-0.9
MGAN	Managua	1.82	83		Pn	01 34 42.8	-0.3
SCLA	Alcaldia de Sa	1.85	341	P	Pn	01 34 44.6	+1.0
SCLA	Alcaldia de Sa	1.85	341	S	Sb	01 35 10.4	+0.4

MAS3	Al N del Volca	1.89	87	P	Pb	01 34 45.7	-2.0
LFRS	El Faro	1.92	331	*e*S	Sn	01 35 07.2	-0.5
LIMN	Finca el Limon	2.03	56	P	Pn	01 34 45.5	-0.5
LIMN				S	Sb	01 35 14.9	-0.1
JAYA	Jayaque - finc	2.15	322	*e*P	Pn	01 34 46.9	-0.9
JAYA				*e*S	Sn	01 35 12.3	-1.2
TGUH	Tegucigalpa,Un	2.25	21		Pn	01 34 49.3	+0.1
MATN	Matagalpa	2.34	65	P	Pn	01 34 49.5	-0.8
MATN	Matagalpa	2.34	65	S	Sb	01 35 21.8	-2.3
YUSH	Yuscaran	2.35	31	P	Pn	01 34 51.2	+0.8
CEVE	Cerro Verde	2.39	322	IAML		01 35 30.1	
	comp=Z,296nm,0.2s						
RCFN	Al S de San Ju	2.43	49	P	Pb	01 34 54.8	-2.3
BOAB	BOACO BROADBAN	2.43	78		Pn	01 34 50.3	-1.2
BOAB	BOACO BROADBAN	2.43	78	P	Pn	01 34 51.7	+0.2
RCON	San Juan de Ri	2.44	51	P	Pn	01 34 52.4	+0.7
RCVN	Varillal2	2.48	49	P	Pn	01 34 52.7	+0.5
RCPN	Sur Rio San Ju	2.51	51	P	Pb	01 34 55.0	-3.5
NUBE	Las Nubes	2.55	320	P	Pn	01 34 55.9	+2.7
NUBE	Las Nubes	2.55	320	S	Sb	01 35 27.4	-2.6
MTO3	Montecristo	2.73	333		Pn	01 34 57.4	+1.5
JUD3	Juan Diaz 3	3.07	125		Pn	01 35 00.6	+0.2
JTS	Las Juntas de	3.50	118	P	Pn	01 35 07.9	+1.7
	comp=Z,2.3nm,0.3s,baz=327,slow=18,SNR=4.7						
JTS				S	Sn	01 35 43.5	-3.0
	comp=Z,8.6nm,0.3s,baz=229,slow=19,SNR=3.6						
JTS	Las Juntas de	3.50	118		Pn	01 35 08.1	+1.9
APG	El Apazote	3.82	323	P	Pb	01 35 17.3	-3.4
	comp=Z,0.2nm,0.5s,baz=74,slow=18,SNR=3.7						
APG				S	Sn	01 35 53.9	-0.8
	comp=Z,0.6nm,0.6s,baz=145,slow=11,SNR=3.8						
PIRO	Carate, Puerto	5.86	126		Pn	01 35 41.1	+2.5
CMIG	Matias Romero	8.33	309	P	Pn	01 36 15.8	+3.3
	comp=Z,0.7nm,0.3s,baz=153,slow=8.0,SNR=1.2						
HBVL	Hebbronville	18.03	328		P	01 38 23.2	+0.9
833A	Chaparral WMA,	19.42	329	P	P	01 38 37.6	0.0
833A				IAmb	IAmb	01 38 40.8	
	comp=Z,24nm,0.8s						
HNDO	Hondo	20.36	331	P	P	01 38 48.4	+0.5
HNDO				IAmb	IAmb	01 38 49.6	
	comp=Z,8.8nm,0.7s						
BRDY	Brady	21.73	334		P	01 39 03.6	+0.9
GOGA	Godfrey	21.79	10	P	P	01 39 04.6	+1.4
GOGA				IAmb	IAmb	01 39 06.7	
	comp=Z,5.7nm,0.7s						
Y49A	Blount Mountai	21.87	4	P	P	01 39 05.1	+0.9
Y49A				IAmb	IAmb	01 39 05.6	
	comp=Z,5.2nm,0.7s						
TX31	Lajitas Ar. Si	22.57	322		P	01 39 14.0	+2.2
TXAR	Lajitas Array	22.57	322	P	P	01 39 13.7	+1.8
	comp=Z,1.2nm,0.6s,baz=136,slow=10,SNR=20						
	comp=Z,1.2nm,0.6s						
TXAR	Lajitas Array	22.57	322	P	P	01 39 14.2	+2.4
MIAR	Mount Ida	23.05	348		P	01 39 16.6	0.0
MIAR				IAmb	IAmb	01 39 19.4	
	comp=Z,14nm,0.8s						
TKL	Tuckaleechee C	23.94	9	LR	LR	01 48 26.3	
	comp=Z,12nm,18.1s,baz=140,slow=36						
V53A	Saluda	24.11	11	P	P	01 39 27.8	+1.0
V53A				IAmb	IAmb	01 39 46.8	
	comp=Z,7.6nm,1.2s						
LCAR	Lake Charles	24.18	354	P	P	01 39 27.1	-0.4
LCAR				IAmb	IAmb	01 39 32.3	
	comp=Z,4.2nm,1.1s						
FNO	Franklin	24.70	342	P	P	01 39 33.0	+0.8
PDAR	Pinedale Array	35.92	333	P	P	01 41 14.5	+2.8
	comp=Z,0.2nm,0.6s,baz=138,slow=7.5,SNR=2.6						
	comp=Z,0.2nm,0.6s						
EPLO	Experimental L	37.91	354	P	P	01 41 26.4	-1.8
SCHQ	Schefferville	45.95	17	P	P	01 42 31.9	-1.9
	comp=Z,2.8nm,0.8s,baz=234,slow=8.7,SNR=1.4						
	comp=Z,2.8nm,0.8s						
FCC	Fort Churchill	46.95	356	P	P	01 42 40.2	-1.3
FCC				IAmb	IAmb	01 43 00.3	
	comp=Z,3.7nm,1.2s						
YKA	Yellowknife Ar	53.94	345	P	P	01 43 33.9	-0.3
	comp=Z,0.4nm,0.8s,baz=140,slow=7.3,SNR=6.0						
	comp=Z,0.4nm,0.8s						
YKAW3	Yellowknife Wh	53.99	345	P	P	01 43 35.6	+1.0
YKAW3				IAmb	IAmb	01 44 13.7	
	comp=Z,3.7nm,1.4s						
ILON	Igloolik, Nuna	57.52	3	P	P	01 43 58.6	-1.2
F28M	Old Crow	65.05	341	P	P	01 44 52.0	+1.1
F28M				IAmb	IAmb	01 45 25.5	
	comp=Z,5.9nm,1.3s						
ILAR	Eielson Array	66.23	336	P	P	01 44 58.3	-0.3
	comp=Z,0.3nm,0.9s,baz=125,slow=8.9,SNR=2.2						
	comp=Z,0.3nm,0.9s						
ASAR	Alice Springs	138.49	248	PKP	PKPdf	01 53 37.9	+0.7
	comp=Z,0.2nm,0.5s,baz=59,slow=2.1,SNR=1.6						

*IDC **08** 01:52:41.1±0.9, 3°.82S×102°.50W, h0km, mb3.9/7, mbtmp3.9/7, MS3.4/22, Error ellipse: s-maj=55.5km s-min=20.5km az=66.0*

ISC 08 01:52:42.4±0.9, **3°.9S**±0°.2×**102°.5W**±0°.3, **h10km, n41, σ0s.69**/14, **mb4.0**/7, **MS3.4**/22, **Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	22.13	20	LR	LR	02 04 16.2	
	comp=Z,59nm,20.1s,baz=209,slow=32						
JTS	Las Juntas de	22.44	51	LR	LR	02 04 04.4	
	comp=Z,197nm,20.5s,baz=239,slow=30						
ATAH	Atahualpa	24.23	99	LR	LR	02 05 34.9	
	comp=Z,84nm,19.4s,baz=269,slow=32						
LPIG	La Paz	28.80	345	LR	LR	02 07 13.1	
	comp=Z,92nm,18.4s,baz=182,slow=30						
ROSC	El Rosal	29.47	73	LR	LR	02 07 29.4	
	comp=Z,68nm,18.0s,baz=242,slow=30						
TXAR	Lajitas Array	33.01	358	P	P	01 59 19.1	+1.1
	0.6nm,1.0s,baz=163,slow=9.1,SNR=5.1						
TXAR				PcP	PcP	02 02 03.4	+1.5
	0.4nm,0.8s,baz=171,slow=4.8,SNR=5.1						
	0.6nm,1.0s						
SDV	Santo Domingo	34.22	68	LR	LR	02 11 07.4	
	comp=Z,42nm,19.8s,baz=258,slow=32						
LPAZ	La Paz	35.97	113	P	P	01 59 44.4	0.0
	0.9nm,0.5s,baz=211,slow=1.4,SNR=5.9						
LPAZ				LR	LR	02 12 01.5	
	comp=Z,53nm,18.8s,baz=304,slow=32						
	0.9nm,0.5s						
H03N2	Juan Fernandez	36.76	146	T	T	02 39 06.6	
	baz=322,slow=77,SNR=10.0						
H03N1	Juan Fernandez	36.77	146	T	T	02 38 58.3	
	baz=322,slow=77,SNR=12						
H03N3	Juan Fernandez	36.78	146	T	T	02 39 02.7	
	baz=322,slow=77,SNR=11						
ANMO	Albuquerque	38.76	355	LR	LR	02 12 52.0	
	comp=Z,41nm,21.2s,baz=179,slow=31						
PFO	Pinyon Flats O	39.52	342	LR	LR	02 12 28.0	
	comp=Z,74nm,19.9s,baz=245,slow=30						
SJG	San Juan	41.97	57	LR	LR	02 15 33.9	
	comp=Z,24nm,19.5s,baz=274,slow=33						
NVAR	Mina Array Bea	44.53	342	LR	LR	02 15 38.0	
	comp=Z,93nm,19.7s,baz=86,slow=31						
ELK	Elko	45.88	347	LR	LR	02 18 07.3	
	comp=Z,53nm,20.5s,baz=150,slow=33						
PLCA	Paso Flores	46.64	146	P	P	02 01 11.1	-0.1
	3.0nm,1.0s,baz=338,slow=9.8,SNR=3.5						
PLCA				LR	LR	02 16 03.0	
	comp=Z,75nm,18.6s,baz=294,slow=30						
	3.0nm,1.0s						
PDAR	Pinedale Array	46.83	353	P	P	02 01 12.5	-0.3
	0.3nm,0.6s,baz=180,slow=8.9,SNR=4.0						
	0.3nm,0.6s						
PPT	Papeete	48.05	250	LR	LR	02 15 27.8	
	comp=Z,21nm,21.8s,baz=34,slow=28						
CPUP	Villa Florida	48.67	122	LR	LR	02 18 56.1	
	comp=Z,8.9nm,20.2s,baz=155,slow=32						
NEW	Newport	53.45	348	LR	LR	02 22 37.7	
	comp=Z,34nm,18.0s,baz=176,slow=34						
ULM	Lac du Bonnet	54.19	5	LR	LR	02 23 46.1	
	comp=Z,39nm,18.1s,baz=122,slow=34						
RAR	Rarotonga	58.16	247	LR	LR	02 22 12.8	
	comp=Z,16nm,20.0s,baz=304,slow=30						
SCHQ	Schefferville	65.51	22	LR	LR	02 30 34.3	
	comp=Z,49nm,21.1s,baz=188,slow=35						
DLBC	Dease Lake	65.87	345	LR	LR	02 28 05.5	
	comp=Z,30nm,20.3s,baz=270,slow=32						
YKA	Yellowknife Ar	66.80	354	P	P	02 03 33.0	-0.8
	0.9nm,0.9s,baz=172,slow=5.8,SNR=8.4						
YKA				LR	LR	02 31 53.6	
	comp=Z,30nm,18.7s,baz=344,slow=35						
	0.9nm,0.9s						
ILAR	Eielson Array	75.79	342	P	P	02 04 27.8	-0.5
	1.8nm,0.9s,baz=143,slow=4.0,SNR=14						
	1.8nm,0.9s						
URZ	Urewera	80.06	232	LR	LR	02 33 30.2	
	comp=Z,39nm,20.1s,baz=14,slow=31						
QSPA	South Pole Qui	86.21	180	P	P	02 05 24.4	+0.4
	2.6nm,1.0s,baz=140,slow=1.8,SNR=6.6						
	2.6nm,1.0s						
H11N3	WAKE ISLAND Hy	91.81	290	T	T	03 47 22.5	
	baz=94						
H11N2	WAKE ISLAND Hy	91.83	290	T	T	03 47 16.6	
	baz=94						
H11N1	WAKE ISLAND Hy	91.83	290	T	T	03 47 25.7	
	baz=94						
H11S2	WAKE ISLAND Hy	91.94	288	T	T	03 47 21.3	
	baz=94,slow=75,SNR=6.2						
H11S1	WAKE ISLAND Hy	91.94	288	T	T	03 47 32.4	
	baz=94,slow=75,SNR=6.0						
H11S3	WAKE ISLAND Hy	91.95	288	T	T	03 47 23.7	
	baz=94,slow=75,SNR=6.8						
BRTR	Keskin Array B	126.69	42	PKP	PKiKP	02 11 46.8	-0.4
	0.9nm,0.9s,baz=352,slow=4.4,SNR=3.9						
SONM	Songino Array	129.62	335	PKP	PKiKP	02 11 53.1	+0.3
	0.4nm,0.9s,baz=15,slow=6.1,SNR=1.8						
ZALV	Zalesovo Beam	129.70	354	PKP	PKiKP	02 11 52.4	-0.2
	0.7nm,0.6s,baz=77,slow=3.2,SNR=3.8						
BVAR	Borovoye Array	130.63	6	PKP	PKiKP	02 11 54.2	-0.3
	0.6nm,0.7s,baz=309,slow=4.6,SNR=3.7						
KURBB	Kurchatov Arra	133.38	359	PKP	PKiKP	02 11 60.0	-0.2
	0.5nm,0.7s,baz=7.9,slow=1.4,SNR=5.7						
MKAR	Makanchi Array	137.02	355	PKP	PKPdf	02 12 05.5	-0.4
	1.0nm,0.9s,baz=29,slow=2.8,SNR=5.2						

*TEH **08** 02:09:06.1, 38°.06N×48°.01E, h10km±86km*
*AZER **08** 02:09:07.5, 38°.21N×48°.08E, h2km, ml2.8*

ISC 08 02:09:06.5±0.9, **38°.05N**±0°.03×**48°.01E**±0°.03, **h10km, n33, σ1s.44**/59, **Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISRB	Sarab	0.35	231	Pg	Pb	02 09 13.9	-1.1
LRK	Lerik	0.65	23	P	Pg	02 09 18.7	-0.5
LRK				S	Sb	02 09 28.1	-1.2
GAS1	Astara - Iran	0.73	62	Pg	Pg	02 09 20.3	-0.4
GAS1				Sg	Sb	02 09 31.0	-0.5
ASTR	Astara	0.80	50	P	Pg	02 09 21.5	-0.4
ASTR				S	Sb	02 09 33.0	-0.3
IHRS	Heris	0.81	290	Pg	Pg	02 09 21.8	-0.4
YRD	Yardimli	0.89	11	P	Pg	02 09 23.3	-0.4
YRD				S	Sb	02 09 36.1	-0.1
LKRN	Lenkeran, Azer	0.90	42	P	Pg	02 09 23.4	-0.4
LKRN				S	Sb	02 09 36.4	+0.3
IHSH	Hashtrud	0.95	219	Pg	Pg	02 09 24.4	-0.4
CSN1	Caspian	0.98	119	Pg	Pn	02 09 25.8	-0.5
GLBA	Clilabad	1.23	14	P	Pg	02 09 30.3	+0.1
GLBA				S	Sn	02 09 48.7	+2.2
ZNJK	Zanjan	1.47	159	Pg	Pb	02 09 33.8	-0.4
QRD	Qoradiz	1.52	339	P	Pg	02 09 35.0	-0.5
QRD				S	Sg	02 09 56.0	+0.7
IAZR	Azarshahr	1.65	258	Pg	Pg	02 09 37.9	-0.4
BLQ	Beylaqan	1.71	348	P	Pg	02 09 38.8	-0.6
BLQ				S	Sg	02 10 01.8	+0.2
ORD	Ordubad	1.81	300	Pg	Pg	02 09 40.0	-1.3
ORD				Sg	Sg	02 10 04.2	-0.6
SAAT	Saatly	1.84	10	S	Sg	02 10 06.3	+0.6
AGDM	Agdam	2.18	341	P	Pb	02 09 46.0	0.0
AGDM				S	Sg	02 10 16.0	-0.5
ZRD	Zardab	2.25	354	P	Pb	02 09 46.5	-0.7
ZRD				S	Sg	02 10 18.5	-0.2
NAX	Nakhchivan	2.27	301	P	Pg	02 09 49.0	-1.1
NAX				S	Sg	02 10 19.5	0.0
BRDA	Brd	2.31	344	P	Pg	02 09 49.2	-1.6
BRDA				S	Sg	02 10 21.1	+0.4
KDMR	Kurdemir	2.33	3	P	Pb	02 09 48.4	-0.2
KDMR				S	Sg	02 10 20.5	-0.9
SBZ	Shahbuz	2.35	306	P	Pg	02 09 50.0	-1.6
SBZ				S	Sg	02 10 22.0	0.0
IML	Ismayilli	2.75	3	P	Pb	02 09 53.5	-2.3
IML				S	Sb	02 10 28.3	-1.2
PQL	Pirkuli	2.78	9	P	Pb	02 09 54.5	-1.9
PQL				S	Sb	02 10 31.0	+0.6
QBL	Gabala	2.90	357	P	Pb	02 09 55.2	-3.1
QBL				S	Sb	02 10 32.8	-1.1
GANJ	Ganja	2.91	334	P	Pb	02 09 57.0	-1.5
GANJ				S	Sb	02 10 35.8	+1.6
HYR	Heyderabad	2.98	305	P	Pb	02 09 59.9	+0.2
HYR				S	Sg	02 10 39.6	-2.6
SIZA	Siyzn	3.10	12	P	Pb	02 10 01.2	-0.6
SIZA				S	Sb	02 10 40.8	+1.0
XNQ	Khinaliq	3.12	2	P	Pn	02 09 58.1	+2.1
XNQ				S	Sb	02 10 38.5	-2.0
GDB	GEDABAY	3.19	327	P	Pb	02 10 02.1	-1.4
GDB				S	Sb	02 10 44.9	+2.4
SEKA	Sheki	3.22	349	P	Pn	02 09 59.9	+2.6
SEKA				S	Sb	02 10 42.0	-1.2
IGDI	IGDIR	3.57	302	P	Pb	02 10 08.8	-0.9
IGDI				S	Sn	02 10 47.7	+3.5
ZKTA	Zakatala	3.75	344	P	Pb	02 10 09.7	-3.0
ZKTA				S	Sb	02 10 54.4	-3.8

*IDC **08** 02:24:45.6±0.6, 9°.66S×75°.64W, h104km±5km, mb3.7/13, mbtmp4.1/17, MS2.5/1, Error ellipse: s-maj=13.8km s-min=8.6km az=99.0*
*NEIC **08** 02:24:46.2±2.3, 9°.70S±0°.06×75°.53W±0°.02, h99km±6km, mb4.7/92, Error ellipse: s-maj=8.7km s-min=3.2km az=191.0*
*VAO **08** 02:24:50.4±0.9, 9°.65S×75°.25W, h121km±5km, mb4.5, Presumed earthquake*

ISC 08 02:24:45.6±0.4, **9°.64S**±0°.04×**75°.53W**±0°.06, **h100km, n169, σ1s.39**/152, **mb4.7**/50, **Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	2.67	209	P	Pn	02 25 27.7	+0.7
	132nm,0.2s,baz=29,slow=6.2,SNR=78						
NNA				S	Sn	02 25 58.3	-0.5
	1µm,0.3s,baz=322,slow=19,SNR=29						
NNA	Nana	2.67	209		Pn	02 25 28.1	+1.1
NNA	Nana	2.67	209	P	Pn	02 25 27.8	+0.8
NNA				S	Sn	02 25 58.3	-0.5
ATAH	Atahualpa	3.77	311	P	Pn	02 25 44.8	+2.8
	106nm,0.4s,baz=143,slow=4.6,SNR=142						
ATAH				S	Sn	02 26 27.9	+2.3
	83nm,0.4s,baz=127,slow=20,SNR=6.2						
ATAH				LR	LR	02 26 47.8	
	comp=Z,63nm,21.2s,baz=74,slow=33						
MCRA	Macar, Loja	6.83	320	P	Pn	02 26 22.1	-1.2
	2µm58nm,0.5s						
MCRA				S	Sn	02 27 28.5	-11
	2µm58nm,0.5s						
COHC	Cochancay	8.03	332	P	Pn	02 26 40.6	+1.1
COHC				S	Sn	02 28 04.5	-4.2
PPLP	Puerto Lpez	9.58	327	P	Pn	02 27 00.1	-0.6
PTLC	Puerto Leguiza	9.77	4	P	Pn	02 26 59.1	-4.2
PTLC				S	Sn	02 28 39.9	-11
LPAZ	La Paz	9.78	133	P	Pn	02 27 04.8	+0.8
	3.5nm,0.6s,baz=310,slow=11,SNR=17						
LPAZ				S	Sn	02 28 51.5	-0.8
	6.5nm,0.6s,baz=330,slow=16,SNR=1.6						
LPAZ	La Paz	9.78	133		Pn	02 27 04.5	+0.6
LPAZ	La Paz	9.78	133	*e*P	Pn	02 27 04.8	+0.8
LPAZ	La Paz	9.78	133	P	Pn	02 27 04.4	+0.5
CASC	Dorado de Casc	9.88	349	P	Pn	02 27 06.0	+1.2
	940nm40nm,0.5s						
CASC				S	Sn	02 28 50.1	-3.8
	940nm40nm,0.5s						
FLF1	Flavio Alfaro-	10.17	335	P	Pn	02 27 08.2	-0.5
BONI	La Bonita	10.22	349	P	Pn	02 27 10.7	+1.1
PB12	IPOC Station P	10.25	151	Pn	Pn	02 27 09.4	-0.5
CUSE	Cuicocha Este	10.28	344	P	Pn	02 27 11.6	+1.0
PAC1	Pacto, Paraso	10.36	342	P	Pn	02 27 14.3	+2.9
TULM	Tulcn-Chalpat	10.53	348	P	Pn	02 27 15.9	+1.9
TULM				S	Sn	02 29 08.2	-2.1
FLOC	Florencia	11.15	359		Pn	02 27 22.6	+0.6
FLOC	Florencia	11.15	359	P	Pn	02 27 22.6	+0.6
	621nm48nm,0.6s						
FLOC				S	Sn	02 29 18.4	-6.3
	621nm48nm,0.6s						
CRUC	La Cruz	11.22	353	P	Pn	02 27 24.1	+0.8
PB11	IPOC Station P	11.56	151	Pn	Pn	02 27 28.3	+0.7
BBAC	Balboa, Cauca	11.71	352	P	Pn	02 27 30.6	+0.9
	321nm30nm,0.8s						
GARC	Garzon, Huila	11.75	0	P	Pn	02 27 30.5	+0.3
MACC	Macarena, Meta	11.82	8	P	Pn	02 27 30.2	-0.8
	18nm,0.7s						
POPC	Popayan, Colom	12.15	355	P	Pn	02 27 34.1	-1.5
	9.1nm,0.8s						
POPC				S	Sn	02 29 45.6	-3.8
	9.1nm,0.8s						
BETC	Betania	12.24	0	P	Pn	02 27 38.4	+1.8
TEFE	Tefe	12.42	61	*e*P	Pn	02 27 39.1	+0.2
SGC2	Sao Gabriel da	12.70	43	P	Pn	02 27 41.2	-1.4
JAMC	Jamundi, Valle	12.82	355	P	Pn	02 27 46.2	+1.8
	8.3nm,0.7s						
URMC	La Uribe, Meta	12.85	5	P	Pn	02 27 45.5	+0.8
	419nm15nm,0.8s						
PRAC	Prado	13.28	3	P	Pn	02 27 52.0	+1.7
	22nm,0.8s						
ORTC	Ortega, Tolima	13.46	1	P	Pn	02 27 54.9	+2.3
	28nm,1.0s						
YOTC	Yotoco, Valle	13.55	357	P	Pn	02 27 55.7	+1.7
	8.1nm,0.7s						
VILC	Villavicencio,	13.78	8	P	Pn	02 27 59.1	+2.2
	691nm31nm,0.5s						
CHIC	Chingaza	14.29	7	P	P	02 28 06.2	-1.7
	9.1nm,0.6s						
ROSC	El Rosal	14.43	5	P	P	02 28 08.8	-0.8
	5.5nm,0.4s,baz=148,slow=13,SNR=2.0						
PLMC	San Jos del P	14.47	357	P	Pn	02 28 07.2	+1.5
	9.1nm,0.5s						
GUY2C	Guyana, Caldas	14.76	1	P	P	02 28 12.4	-0.9
	12nm,1.2s						
SPBC	San Pablo de B	15.26	6	P	P	02 28 18.8	+0.4
	6.5nm,0.7s						
VILB	Vilhena	15.39	104		Pn	02 28 18.4	+1.0
VILB	Vilhena	15.39	104	*e*P	Pn	02 28 18.1	+0.6
CBOC	Ciudad Bolivar	15.41	358	P	P	02 28 20.7	+0.6
	17nm,0.9s						
SIV	San Ignacio	15.45	116	P	P	02 28 20.1	-0.3
	17nm,0.5s,baz=274,slow=11						
RUSC	La Rusia	15.62	9		P	02 28 24.1	+1.3
RUSC	La Rusia	15.62	9	P	P	02 28 25.2	+2.4
RUSC				S	Sn	02 31 16.1	+2.4
MACA	Manacapuru-AM	16.09	67	P	Pn	02 28 26.2	+0.1
MACA	Manacapuru-AM	16.09	67	*e*P	Pn	02 28 26.8	+0.7
PTBC	PUERTO BERRIO,	16.11	4	P	P	02 28 28.5	+0.8
	23nm,0.9s						
DBBC	Dabeiba	16.56	358	P	P	02 28 35.3	+2.5
PTLB	Pontes e Lacer	17.01	111		P	02 28 37.8	+0.1
PTLB	Pontes e Lacer	17.01	111	*e*P	P	02 28 38.2	+0.5
PAMC	Pamplona, Colo	17.10	10	P	P	02 28 40.8	+1.6
	180nm24nm,1.0s						
UREC	San Jos de Ur	17.27	0	P	Pn	02 28 41.7	+1.0
	586nm27nm,0.9s						
PDRB	Porto dos Gac	18.59	98	*e*P	P	02 28 55.9	+0.8
SDV	Santo Domingo	19.04	15	P	Pn	02 29 01.5	-0.4
	12nm,0.5s,baz=176,slow=15,SNR=14						
SDV	Santo Domingo	19.04	15	P	Pn	02 29 01.6	-0.3
SDV	Santo Domingo	19.04	15	*e*P	Pn	02 29 02.9	+0.9
SDV	Santo Domingo	19.04	15	P	Pn	02 29 02.2	+0.2
	18nm,0.7s						
BOAV	Boa Vista	19.14	52		Pn	02 29 03.8	+0.8
BOAV	Boa Vista	19.14	52	*e*P	Pn	02 29 03.6	+0.6
BOAV	Boa Vista	19.14	52	P	Pn	02 29 03.4	+0.3
	14nm,1.0s						
SJCC	San Jacinto, C	19.41	1	P	Pn	02 29 06.6	+0.4
NPGB	Novo Progresso	20.13	84	*e*P	P	02 29 11.1	-0.7
SALV	Santo Antonio	20.32	110	*e*P	P	02 29 14.1	+0.2
ITTB	Itaituba	20.33	76	*e*P	P	02 29 14.1	+0.1
SMRC	Santa Marta, M	20.71	4	P	P	02 29 17.6	-0.4
MURT	Porto Murtinho	20.96	127	*e*P	P	02 29 20.2	-0.5
BDQN	Bodoquena, MS	21.06	123	*e*P	P	02 29 21.8	0.0
URIC	Uribia, Colomb	21.49	10	P	P	02 29 25.2	-1.2
PP1B	Ponte de Pedra	21.56	114	*e*P	P	02 29 27.7	+0.5
ARAG	Araguaiana, MT	23.90	107	*e*P	P	02 29 50.5	+0.1
SNDB	Serra Nova Dou	23.92	98	*e*P	P	02 29 50.8	+0.3
CPUP	Villa Florida	23.93	136	P	P	02 29 50.3	-0.2
	2.2nm,0.8s,baz=55,slow=4.7,SNR=18						
	2.2nm,0.8s						
CPUP	Villa Florida	23.93	136	P	P	02 29 50.7	+0.2
CPUP	Villa Florida	23.93	136	*e*P	P	02 29 50.5	0.0
PRPB	Parauapebas	25.70	84	*e*P	P	02 30 07.7	+1.0
ITRB	Iturama	26.29	115	*e*P	P	02 30 13.7	+1.6
PTGB	Pitanga	26.91	127	*e*P	P	02 30 17.3	-0.2
LDASE	Londrina, Braz	27.05	123	*e*P	P	02 30 20.9	+2.1
BDFB	Brasilia	27.49	105	P	P	02 30 23.2	+0.3
	3.0nm,0.7s,baz=282,slow=7.8,SNR=6.5						
	3.0nm,0.7s						
BDFB	Brasilia	27.49	105	P	P	02 30 23.2	+0.3
SMTB	Santa Maria do	27.59	91	*e*P	P	02 30 24.6	+0.9
MTDJ	Mount Denham	27.76	356	P	P	02 30 28.1	+3.0
ITAB	Concordia	28.18	132	P	P	02 30 27.8	-1.0
ITAB				IAmb	IAmb	02 30 34.6	
	comp=Z,18nm,1.4s						
SDBA	SAO DESIDERIO	30.18	98	*e*P	P	02 30 47.3	+0.5
JANB	Januaria	30.95	103	*e*P	P	02 30 53.8	+0.2
CAMR	Camarioca	32.99	350	P	P	02 31 14.0	+2.9
CAMR				IAmb	IAmb	02 31 45.5	
	comp=Z,138nm,1.4s						
NBPS	Pedro II - PI	34.22	84	*e*P	P	02 31 22.1	0.0
ABR01	Abrolhos, BA	36.66	107	*e*P	P	02 31 43.3	+0.4
BRAL	Brewton	42.05	345	P	P	02 32 28.4	+1.0
LRAL	Lakeview Retre	43.82	346	P	P	02 32 41.6	0.0
LRAL				IAmb	IAmb	02 32 42.3	
	comp=Z,8.6nm,1.1s						
Z47A	Carrollton	44.24	345	P	P	02 32 44.8	-0.2
Y49A	Blount Mountai	44.47	347	P	P	02 32 46.4	-0.5
Y49A				IAmb	IAmb	02 32 47.1	
	comp=Z,6.7nm,0.8s						
W57A	Gilead	44.74	355	P	P	02 32 49.6	+0.6
W57A				IAmb	IAmb	02 32 50.5	
	comp=Z,11nm,0.9s						
FPAL	Fort Paine	44.96	348	P	P	02 32 50.8	0.0
HNDO	Hondo	45.16	330	P	P	02 32 54.2	+1.7
HNDO				IAmb	IAmb	02 32 54.6	
	comp=Z,10nm,0.8s						
W50A	Signal Mountai	45.54	349	P	P	02 32 55.5	0.0
W50A				IAmb	IAmb	02 33 08.1	
	comp=Z,6.9nm,0.9s						
SWET	Sewanee	45.68	348	P	P	02 32 55.9	-0.6
DRIO	Del Rio	45.75	329	P	P	02 32 56.7	-0.4
V48A	Smith Brothers	46.37	347	P	P	02 33 01.6	-0.3
SAND	Sanderson	46.95	328	P	P	02 33 07.7	+1.1
WVT	Waverly	46.97	346	P	P	02 33 05.4	-1.2
WVT				IAmb	IAmb	02 33 05.5	
	comp=Z,4.2nm,0.5s						
TXAR	Lajitas Array	47.30	326	P	P	02 33 09.3	0.0
	comp=Z,1.5nm,0.8s,baz=147,slow=8.5,SNR=18						
TXAR				pP	pP	02 33 33.9	+0.6
	comp=Z,0.1nm,0.4s,baz=132,slow=10,SNR=1.7						
TXAR				PcP	PcP	02 34 38.6	-0.3
	comp=Z,0.8nm,0.6s,baz=154,slow=6.9,SNR=9.4						
	comp=Z,1.5nm,0.8s						
TXAR	Lajitas Array	47.30	326	P	P	02 33 10.0	+0.7
WHAR	Wooly Hollow	47.41	341	P	P	02 33 10.0	0.0
WHAR				IAmb	IAmb	02 33 10.5	
	comp=Z,11nm,1.1s						
FCAR	Ozark Folk Cen	47.91	342	IAmb	IAmb	02 33 14.0	
	comp=Z,6.9nm,0.6s						
ABTX	Abilene, Hawle	47.91	332	IAmb	IAmb	02 33 15.4	
	comp=Z,6.1nm,0.6s						
CGM3	Cape Girardeau	48.53	345	IAmb	IAmb	02 33 18.1	
	comp=Z,6.6nm,0.6s						
APMT	Aspermont	48.72	332	IAmb	IAmb	02 33 21.7	
	comp=Z,8.0nm,0.9s						
HHAR	Hobbs	48.85	340	IAmb	IAmb	02 33 21.9	
	comp=Z,7.4nm,0.6s						
RLO	Rose Lookout	49.12	339	IAmb	IAmb	02 33 24.8	
	comp=Z,9.1nm,0.7s						
MGMO	Mountain Grove	49.12	342	IAmb	IAmb	02 33 23.7	
	comp=Z,10nm,0.8s						
U38A	Gravette	49.15	340	IAmb	IAmb	02 33 24.1	
	comp=Z,6.2nm,0.9s						
Q44A	Meyer Farm, Va	49.90	346	P	P	02 33 28.5	-0.5
NCB	Newcomb	53.37	1	P	P	02 33 55.7	+1.0
NCB				IAmb	IAmb	02 34 22.1	
	comp=Z,16nm,1.5s						
T25A	Trinidad	53.84	331	IAmb	IAmb	02 34 00.1	
	comp=Z,6.9nm,1.0s						
BUKO	Buck Lake	54.93	357	P	P	02 34 05.7	-0.4
ECSD	EROS Data Cent	56.47	342	IAmb	IAmb	02 34 17.3	
	comp=Z,5.4nm,0.7s						
PV02	Paradox Valley	56.80	329	IAmb	IAmb	02 34 21.3	
	comp=Z,8.7nm,1.0s						
PV13	Radium Mtn., P	56.81	329	IAmb	IAmb	02 34 21.3	
	comp=Z,5.4nm,1.1s						
PV18	Skein Mesa, Pa	56.92	329	P	P	02 34 20.7	0.0

RDMU	**Red Mountain**	**59.02**	**330**	IAmb	IAmb	02 34 36.6	
	comp=Z,4.4nm,0.7s						
TCRU	**Three Creeks R**	**59.05**	**327**	IAmb	IAmb	02 34 48.4	
	comp=Z,5.0nm,0.5s						
R11B	**Troy Canyon, C**	**60.61**	**325**	P	**P**	**02 34 47.3**	**+1.1**
PDAR	**Pinedale Array**	**60.71**	**332**	P	**P**	**02 34 46.6**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=131,slow=8.4,SNR=6.1						
PDAR				pP	**pP**	**02 35 10.3**	**-1.6**
	comp=Z,0.1nm,0.5s,baz=120,slow=10,SNR=1.3						
	comp=Z,0.7nm,0.8s						
PDAR	**Pinedale Array**	**60.71**	**332**	P	**P**	**02 34 46.3**	**-0.5**
DRLN	**Deer Lake**	**60.74**	**13**	P	**P**	**02 34 47.3**	**+0.7**
ULM	**Lac du Bonnet**	**62.22**	**345**	P	**P**	**02 34 55.5**	**-1.1**
	comp=Z,5.3nm,0.6s,baz=150,slow=8.4,SNR=7.1						
	comp=Z,5.3nm,0.6s						
ULM	**Lac du Bonnet**	**62.22**	**345**	IAmb	IAmb	02 34 56.6	
	comp=Z,7.5nm,0.9s						
NVAR	**Mina Array Bea**	**62.25**	**323**	P	**P**	**02 34 55.3**	**-2.0**
	comp=Z,0.4nm,0.5s,baz=86,slow=8.2,SNR=2.3						
	comp=Z,0.4nm,0.5s						
YNE	**Yellowstone No**	**62.65**	**333**	P	**P**	**02 35 00.3**	**+0.4**
YHL	**Hebgen Lake**	**63.06**	**332**	IAmb	IAmb	02 35 04.6	
	comp=Z,5.9nm,0.7s						
I07A	**Izee**	**66.66**	**327**	P	**P**	**02 35 27.1**	**+1.3**
EDM	**Edmonton**	**70.40**	**337**	IAmb	IAmb	02 35 49.0	
	comp=Z,11nm,0.8s						
DBIC	**Dimbokro**	**72.25**	**80**	P	**P**	**02 36 02.3**	**+1.7**
	comp=Z,0.8nm,0.3s,baz=282,slow=5.1,SNR=4.2						
	comp=Z,0.8nm,0.3s						
DBIC	**Dimbokro**	**72.25**	**80**	IAmb	IAmb	02 36 45.7	
	comp=Z,10nm,1.2s						
SNAA	**Sanae**	**75.49**	**162**	P	**P**	**02 36 16.7**	**-1.9**
	comp=Z,0.6nm,0.8s,baz=225,slow=19,SNR=2.0						
SNAA				pP	**pP**	**02 36 43.5**	**-0.9**
	comp=Z,1.3nm,0.9s,baz=267,slow=7.2,SNR=3.8						
	comp=Z,0.6nm,0.8s						
YKA	**Yellowknife Ar**	**77.99**	**343**	P	**P**	**02 36 31.4**	**-1.2**
	comp=Z,0.7nm,0.7s,baz=146,slow=5.4,SNR=8.9						
YKA				pP	**pP**	**02 36 58.4**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=143,slow=5.8,SNR=4.8						
	comp=Z,0.7nm,0.7s						
YKA	**Yellowknife Ar**	**77.99**	**343**	P	**P**	**02 36 31.7**	**-0.9**
TORD	**Torodi Ar. Bea**	**79.94**	**75**	P	**P**	**02 36 44.2**	**-0.1**
	comp=Z,3.1nm,0.6s,baz=308,slow=7.1,SNR=1.2						
	comp=Z,3.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**79.94**	**75**	IAmb	IAmb	02 37 13.3	
	comp=Z,7.7nm,0.9s						
QSPA	**South Pole Qui**	**80.48**	**180**	P	**P**	**02 36 45.8**	**-0.6**
	comp=Z,0.7nm,0.9s,baz=149,slow=5.9,SNR=1.8						
	comp=Z,0.7nm,0.9s						
ESDC	**Sonseca Array**	**82.25**	**48**	P	**P**	**02 36 56.5**	**+0.4**
	comp=Z,1.4nm,1.1s,baz=256,slow=4.5,SNR=5.3						
ESDC				pP	**pP**	**02 37 24.2**	**+2.0**
	comp=Z,0.5nm,0.9s,baz=252,slow=6.5,SNR=2.1						
	comp=Z,1.4nm,1.1s						
ESDC	**Sonseca Array**	**82.25**	**48**	IAmb	IAmb	02 36 58.4	
	comp=Z,4.8nm,1.4s						
M29M	**Somme Creek**	**86.48**	**335**	IAmb	IAmb	02 37 18.4	
	comp=Z,5.9nm,0.8s						
H31M	**Peel River**	**86.62**	**339**	IAmb	IAmb	02 37 18.6	
	comp=Z,10nm,1.2s						
L29M	**L29M**	**86.66**	**336**	IAmb	IAmb	02 37 19.0	
	comp=Z,9.7nm,0.8s						
A36M	**Sachs Harbour**	**87.69**	**346**	IAmb	IAmb	02 37 22.7	
	comp=Z,6.8nm,0.9s						
INK	**Inuvik**	**87.71**	**342**	IAmb	IAmb	02 37 23.4	
	comp=Z,7.2nm,0.9s						
I29M	**Ogilvie Camp,**	**87.81**	**338**	IAmb	IAmb	02 37 24.1	
	comp=Z,8.7nm,1.1s						
H29M	**Whitestone**	**88.25**	**339**	IAmb	IAmb	02 37 26.1	
	comp=Z,5.4nm,0.7s						
G29M	**Pine Creek**	**88.46**	**340**	IAmb	IAmb	02 37 26.9	
	comp=Z,8.5nm,0.8s						
K27K	**Chicken**	**88.65**	**336**	IAmb	IAmb	02 37 29.4	
	comp=Z,7.1nm,0.9s						
E29M	**Blow River**	**89.14**	**341**	IAmb	IAmb	02 37 30.0	
	comp=Z,7.3nm,0.8s						
D27M	**Malcolm River**	**90.53**	**341**	IAmb	IAmb	02 37 37.0	
	comp=Z,3.7nm,0.8s						
ILAR	**Eielson Array**	**90.87**	**336**	P	**P**	**02 37 36.0**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=139,slow=2.2,SNR=8.8						
	comp=Z,0.5nm,0.7s						
D25K	**Kavik River**	**92.32**	**340**	IAmb	IAmb	02 37 45.6	
	comp=Z,4.1nm,1.1s						
STKA	**Stephens Creek**	**125.55**	**219**	PKP	**PKPdf**	**02 43 34.3**	**-1.5**
	comp=Z,0.8nm,0.3s,baz=88,slow=14,SNR=2.8						
BVAR	**Borovoye Array**	**128.75**	**26**	PKP	**PKPdf**	**02 43 40.5**	**-0.8**
	comp=Z,0.8nm,0.9s,baz=302,slow=6.8,SNR=3.5						
ZALV	**Zalesovo Beam**	**133.09**	**16**	PKP	**PKPdf**	**02 43 48.9**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=309,slow=1.4,SNR=8.1						
KURK	**Kurchatov**	**133.83**	**23**		**PKPdf**	**02 43 51.0**	**+0.2**
KURBB	**Kurchatov Arra**	**133.87**	**23**	PKP	**PKPdf**	**02 43 51.0**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=289,slow=2.2,SNR=5.7						
ASAR	**Alice Springs**	**136.14**	**221**	PKP	**PKPdf**	**02 43 55.1**	**-1.0**
	comp=Z,0.9nm,0.9s,baz=139,slow=2.6,SNR=6.9						
WRA	**Warramunga Arr**	**138.42**	**225**	PKP	**PKPdf**	**02 43 59.4**	**-1.0**
	comp=Z,1.1nm,0.8s,baz=130,slow=1.8,SNR=5.6						
MKAR	**Makanchi Array**	**138.44**	**23**	PKP	**PKPdf**	**02 43 58.8**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=280,slow=3.3,SNR=3.3						
SONM	**Songino Array**	**141.90**	**358**	PKhKP	PKPpre	02 44 01.2	
	comp=Z,0.4nm,0.5s,baz=23,slow=1.6,SNR=2.3						
KSRS	**Korea Array**	**145.14**	**326**	PKPbc	**PKPbc**	**02 44 11.2**	**-0.3**
	comp=Z,6.3nm,0.8s,baz=46,slow=4.3,SNR=19						

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*IDC **08** 02:48:47.9±1.4, 26°.53S×175°.37W, h0^{km}, mb3.9/4, mbtmp4.0/5, ML4.6/1, MS3.2/3, Error ellipse: s-maj=65.5km s-min=24.3km az=142.0*

ISC 08 02:48:53.2±1.1**, 26°.5S**±0°.2×**175°.4W**±0°.3**, h35**^{km}**, n14, σ1**^{s}**.48**/11**, mb4.0**/4**, MS3.2**/3**, South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.54**	**218**	Pn	**Pn**	**02 49 43.3**	**-2.3**
	57nm,0.3s,baz=54,slow=19,SNR=2.0						
RAO				Sn	**Sn**	**02 50 28.8**	**+2.6**
	63nm,0.3s,baz=56,slow=23,SNR=2.2						
	213nm,0.4s						
PPT	**Papeete**	**25.50**	**75**	LR	LR	03 01 10.8	
	comp=Z,25nm,20.7s,baz=338,slow=29						
ASAR	**Alice Springs**	**45.75**	**262**	P	**P**	**02 57 12.6**	**+1.2**
	1.8nm,0.8s,baz=89,slow=7.4,SNR=17						
ASAR				LR	LR	03 14 37.1	
	comp=Z,30nm,19.4s,baz=296,slow=34						
	1.8nm,0.8s						
WRA	**Warramunga Arr**	**46.40**	**267**	P	**P**	**02 57 14.8**	**-1.7**
	1.1nm,0.7s,baz=106,slow=7.6,SNR=5.3						
	1.1nm,0.7s						
H03S2	**Juan Fernandez**	**80.71**	**123**	T	T	04 29 20.0	
	baz=243,slow=74,SNR=6.4						
H03S1	**Juan Fernandez**	**80.72**	**123**	T	T	04 29 19.2	
	baz=243,slow=74,SNR=5.4						
H03S3	**Juan Fernandez**	**80.72**	**123**	T	T	04 29 22.6	
	baz=243,slow=74,SNR=5.7						
TXAR	**Lajitas Array**	**88.34**	**56**	P	**P**	**03 01 41.3**	**-0.3**
	0.5nm,0.9s,baz=219,slow=3.2,SNR=4.4						
TXAR				LR	LR	03 30 15.4	
	comp=Z,24nm,21.9s,baz=198,slow=28						
	0.5nm,0.9s						
ILAR	**Eielson Array**	**93.63**	**12**	P	**P**	**03 02 05.9**	**+0.7**
	0.7nm,1.1s,baz=214,slow=6.4,SNR=2.2						
	0.7nm,1.1s						
MKAR	**Makanchi Array**	**116.96**	**311**	PKP	**PKPdf**	**03 07 34.3**	**+0.3**
	0.2nm,0.6s,baz=72,slow=4.7,SNR=3.6						
BVAR	**Borovoye Array**	**125.12**	**318**	PKP	**PKiKP**	**03 07 50.3**	**+0.4**
	0.4nm,0.7s,baz=90,slow=1.4,SNR=3.7						
HFS	**Hagfors**	**145.78**	**352**	PKPbc	**PKPdf**	**03 08 27.9**	**+0.5**
	0.8nm,0.4s,baz=106,slow=9.2,SNR=1.1						
AKASG	**Malin Array Be**	**149.35**	**329**	PKPbc	**PKPbc**	**03 08 37.9**	**-0.1**
	0.8nm,0.6s,baz=44,slow=2.4,SNR=2.2						
BRTR	**Keskin Array B**	**152.44**	**306**	PKPbc	**PKiKP**	**03 08 46.5**	**+0.3**
	0.5nm,0.8s,baz=96,slow=2.9,SNR=3.0						

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*ISK **08** 02:55:54.3, 36°.38N×27°.60E, h70^{km}, ML2.0/18*

*ATH **08** 02:55:55.4, 36°.17N×27°.79E, h76^{km}±3^{km}, ML2.6/2, Manual Solution by A.Papageorgiou First location: 2019/12/08 02:57:39, This location: 2019/12/08 08:11:37 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 5 km; Longitude uncertainty: 4 km*

*AFAD **08** 02:55:57.2, 36°.43N×27°.69E, h58^{km}±1^{km}, ML1.8*

ISC 08 02:55:54.9±1.3**, 36°.35N**±0°.03×**27°.65E**±0°.03**, h70**^{km}±7^{km}**, n53, σ1**^{s}**.01**/72**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YAZI	**Mula-Dat§a-**	**0.37**	**335**	P	**Pn**	**02 56 06.8**	**+0.1**
YAZI				S	**Sn**	**02 56 13.9**	**-1.4**
YAZI				*i* IAML		02 56 15.0	
	comp=E,52nm,0.3s						
DAT	**Datca**	**0.38**	**352**	P	**Pn**	**02 56 07.7**	**+0.7**
DAT				S	**Sn**	**02 56 14.7**	**-1.0**
DAT	**Datca**	**0.38**	**352**	Pg	**Pn**	**02 56 06.6**	**-0.3**
DAT				Sg	**Sn**	**02 56 15.0**	**-0.7**
RGE1	**Gennadi, Rhode**	**0.40**	**144**	P	**Pn**	**02 56 06.6**	**-0.2**
RGE1				S	**Sn**	**02 56 14.8**	**-0.8**
ARG	**Arkhangelos**	**0.41**	**109**	P	**Pn**	**02 56 07.5**	**+0.5**
ARG	**Arkhangelos**	**0.41**	**109**	Pg	**Pn**	**02 56 07.4**	**+0.5**
ARG				Sg	**Sn**	**02 56 16.5**	**+0.7**
ARG	**Arkhangelos**	**0.41**	**109**	P	**Pn**	**02 56 07.3**	**+0.3**
ARG				S	**Sn**	**02 56 16.1**	**+0.3**
RDI1	**Rhodes Town Ha**	**0.48**	**77**	P	**Pn**	**02 56 07.6**	**+0.1**
RDI1				S	**Sn**	**02 56 17.8**	**+1.0**
TURN	**Turunc**	**0.64**	**48**	P	**Pn**	**02 56 09.4**	**+0.2**
TURN				S	**Sn**	**02 56 17.9**	**-1.9**
TURN				*i* IAML		02 56 20.0	
	comp=E,36nm,0.6s						
TURN	**Turunc**	**0.64**	**48**	Pg	**Pn**	**02 56 09.5**	**+0.2**
TURN				Sg	**Sn**	**02 56 20.1**	**+0.3**
BDRM	**Kayabasi**	**0.73**	**347**	P	**Pn**	**02 56 10.2**	**-0.1**
BDRM				*i* IAML		02 56 22.0	
	comp=E,35nm,0.2s						
BODT	**Bodrum**	**0.76**	**339**	P	**Pn**	**02 56 14.4**	**+3.8**
KLNA	**Kalymnos**	**0.81**	**319**	P	**Pn**	**02 56 14.6**	**+3.4**
KARP	**Karpathos**	**0.89**	**206**	P	**Pn**	**02 56 12.4**	**+0.3**
KARP	**Karpathos**	**0.89**	**206**	Pg	**Pn**	**02 56 12.2**	**0.0**
KARP				Sg	**Sn**	**02 56 25.2**	**+0.3**
KARP	**Karpathos**	**0.89**	**206**	P	**Pn**	**02 56 12.0**	**-0.1**
KARP				S	**Sn**	**02 56 24.4**	**-0.5**
DALY	**Dalyan (Mula)**	**0.94**	**60**	Pg	**Pn**	**02 56 13.7**	**+1.1**
YER	**Yerkesik**	**0.94**	**33**	P	**Pn**	**02 56 13.3**	**+0.5**
YER	**Yerkesik**	**0.94**	**33**	Pg	**Pn**	**02 56 12.9**	**+0.2**
YER				Sg	**Sn**	**02 56 25.9**	**-0.1**
MLSB	**Milas**	**0.95**	**6**	Pg	**Pn**	**02 56 12.4**	**-0.5**
MULA	**Mugla, Merkez-**	**1.06**	**31**	P	**Pn**	**02 56 14.6**	**+0.4**
MULA				S	**Sn**	**02 56 27.7**	**-0.9**
MULA				*i* IAML		02 56 31.0	
	comp=E,24nm,0.1s						
KSS1	**Kassos Island**	**1.10**	**213**	P	**Pn**	**02 56 14.7**	**+0.1**
KSS1				S	**Sn**	**02 56 29.2**	**-0.1**
FETY	**Fethiye**	**1.19**	**76**	P	Pn	02 56 08.7	-7.2
IZZE	**Mula-Seydike**	**1.28**	**86**	P	**Pn**	**02 56 16.5**	**-0.5**
IZZE				S	**Sn**	**02 56 30.7**	**-2.8**
IZZE				*i* IAML		02 56 41.0	
	comp=E,18nm,0.5s						
GCAM	**G?zelcaml?**	**1.39**	**346**	P	**Pn**	**02 56 18.7**	**+0.3**
GCAM				*i* IAML		02 56 36.0	
	comp=N,19nm,0.6s						
GCAM	**G?zelcaml?**	**1.39**	**346**	Pn	**Pn**	**02 56 18.3**	**-0.1**
DNZT	**Denizli-Tavas-**	**1.45**	**50**	P	**Pn**	**02 56 20.2**	**+1.0**
DNZT				S	**Sn**	**02 56 37.7**	**+0.1**
DNZT				*i* IAML		02 56 42.0	
	comp=N,18nm,0.6s						
DNZT				*i* IAML		02 56 43.0	
	comp=E,11nm,1.3s						
CAME	**Cameli-Denizli**	**1.46**	**65**	Pn	**Pn**	**02 56 19.9**	**+0.4**
SMG	**Samos**	**1.50**	**335**	P	**Pn**	**02 56 20.0**	**+0.1**
TAVA	**DENIZLI_Tavas**	**1.51**	**42**	P	**Pn**	**02 56 20.9**	**+0.8**
TAVA				S	**Sn**	**02 56 38.9**	**-0.2**
TAVA				*i* IAML		02 56 42.0	
	comp=N,9.8nm,0.1s						
CAEL	**Denizli, Camel**	**1.55**	**60**	P	**Pn**	**02 56 21.9**	**+1.2**
CAEL				S	**Sn**	**02 56 43.0**	**+2.9**
CAEL				*i* IAML		02 56 51.0	
	comp=N,18nm,0.8s						
ESEN	**Aydn-Nazilli**	**1.55**	**21**	P	**Pn**	**02 56 21.2**	**+0.6**
ESEN				S	**Sn**	**02 56 37.7**	**-2.2**
AKAS	**Kas**	**1.59**	**94**	Pn	**Pn**	**02 56 21.7**	**+0.5**
AYDB	**Zeytinkoy-Aydi**	**1.61**	**7**	Pn	**Pn**	**02 56 21.3**	**-0.2**
NAZL	**Nazilli-Aydin**	**1.69**	**18**	Pn	**Pn**	**02 56 22.7**	**+0.2**
ZKR	**Zakros**	**1.69**	**224**	Pn	**Pn**	**02 56 23.2**	**+0.7**
ZKR	**Zakros**	**1.69**	**224**	P	**Pn**	**02 56 22.7**	**+0.3**
ZKR				S	**Sn**	**02 56 43.7**	**+0.3**
DNIZ	**Denizli-Tavas-**	**1.69**	**41**	P	**Pn**	**02 56 23.5**	**+0.9**
DNIZ				*i* IAML		02 57 03.0	
	comp=N,11nm,0.4s						
STIA	**Sitia Lasithi**	**1.71**	**228**	P	**Pn**	**02 56 22.5**	**-0.1**
APMY	**Acipayam-Deniz**	**1.74**	**49**	Pn	**Pn**	**02 56 23.5**	**+0.4**
THERA	**Ancient Thera,**	**1.75**	**271**	P	**Pn**	**02 56 23.8**	**+0.5**
THR2	**Thira island,**	**1.79**	**274**	P	**Pn**	**02 56 24.5**	**+0.8**
IZMR	**zmir-demi**	**1.80**	**8**	P	**Pn**	**02 56 23.6**	**-0.3**
APE	**Apeiranthos**	**1.85**	**294**	Pn	**Pn**	**02 56 24.1**	**-0.4**
ELL	**Elmali**	**1.86**	**77**	Pn	**Pn**	**02 56 25.7**	**+0.8**
KIRA	**zmir-Kiraz**	**1.94**	**18**	P	**Pn**	**02 56 26.3**	**+0.4**
KIRA				*i* IAML		02 56 49.0	
	comp=E,8.1nm,0.5s						
ODEM	**Odemis-Izmir**	**1.96**	**10**	Pn	**Pn**	**02 56 26.2**	**+0.2**
NPS	**Neapolis**	**1.98**	**237**	P	**Pn**	**02 56 26.5**	**+0.2**
BLCB	**Balcova**	**2.09**	**347**	P	**Pn**	**02 56 27.5**	**-0.2**
BLCB	**Balcova**	**2.09**	**347**	Pn	**Pn**	**02 56 27.8**	**0.0**
ZEYE	**Izmir, Urla-Ze**	**2.10**	**335**	P	**Pn**	**02 56 27.4**	**-0.4**
ZEYE				*i* IAML		02 56 56.0	
	comp=E,7.2nm,0.9s						
IDI	**Anoyia**	**2.48**	**246**	P	**Pn**	**02 56 33.1**	**0.0**
GORD	**Gordes-Manisa**	**2.59**	**9**	Pn	**Pn**	**02 56 34.7**	**+0.1**

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*IDC **08** 03:07:53.7±3.0, 23°.57S×179°.77W, h488^{km}±26^{km}, mb3.4/7, mbtmp4.2/8, Error ellipse: s-maj=32.2km s-min=19.8km az=45.0*

*NEIC **08** 03:07:57.5±2.6, 23°.9S±0°.1×179°.9W±0°.1, h512^{km}±11^{km}, mb4.2/17, Error ellipse: s-maj=21.6km s-min=19.2km az=205.0*

ISC 08 03:07:57.4±0.6**, 23°.71S**±0°.08×**179°.81W**±0°.10**, h532**^{km}**, n63, σ1**^{s}**.60**/64**, mb4.1**/12**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.77**	**163**	P	**P**	**03 09 29.1**	**-3.9**
MSVF	**Nonsavu**	**6.28**	**341**	P	**P**	**03 09 37.1**	**-0.9**
NIUE	**Niue**	**10.29**	**65**	P	**P**	**03 10 20.4**	**+2.1**
MARNC	**Mare, Loyalty**	**11.46**	**279**	P	**P**	**03 10 29.9**	**-0.4**
PINNC	**Pines Island,**	**11.78**	**273**	P	**P**	**03 10 34.2**	**+0.6**
DZM	**Mont Dzumac**	**12.78**	**275**	P	**P**	**03 10 41.8**	**-2.4**
	3.2nm,0.9s,baz=133,slow=19,SNR=1.6						
OUZ	**Omahuta**	**12.82**	**205**	P	**P**	**03 10 45.3**	**+1.0**
TOZ	**Tahuroa Road**	**14.54**	**195**	P	**P**	**03 11 05.4**	**+3.2**
KMRZ	**Kaimai**	**14.55**	**194**	P	**P**	**03 11 05.2**	**+2.8**
URZ	**Urewera**	**14.74**	**190**	P	P	03 10 59.1	-5.1
	5.4nm,0.3s,baz=348,slow=14,SNR=7.9						
URZ				S	**S**	**03 13 38.0**	**-0.3**
	4.3nm,0.4s,baz=30,slow=20,SNR=5.6						
URZ	**Urewera**	**14.74**	**190**	P	**P**	**03 11 01.9**	**-2.4**
BFZ	**Birch Farm**	**17.24**	**190**	P	**P**	**03 11 26.7**	**-2.3**
MRZ	**Mangatainoka R**	**17.34**	**192**	P	**P**	**03 11 27.1**	**-2.8**
TCW	**Tory Channel**	**18.14**	**194**	P	**P**	**03 11 35.1**	**-2.2**
TCW	**Tory Channel**	**18.14**	**194**	P	**P**	**03 11 34.8**	**-2.5**
QRZ	**Quartz Range**	**18.24**	**199**	P	**P**	**03 11 38.3**	**+0.1**
QRZ	**Quartz Range**	**18.24**	**199**	P	**P**	**03 11 38.0**	**-0.1**
TKNZ	**Takaka Hill**	**18.31**	**198**	P	**P**	**03 11 38.2**	**-0.7**
NNZ	**Nelson**	**18.37**	**197**	P	**P**	**03 11 38.3**	**-1.0**
TUWZ	**Tuamarina**	**18.43**	**195**	P	**P**	**03 11 38.7**	**-1.1**
MRNZ	**Matariki Terra**	**18.70**	**198**	P	**P**	**03 11 41.8**	**-0.6**
THZ	**Tophouse**	**19.00**	**197**	P	**P**	**03 11 44.0**	**-1.2**
DSZ	**Denniston Nort**	**19.30**	**199**	P	**P**	**03 11 48.0**	**+0.1**
KHZ	**Kahutara**	**19.46**	**195**	P	**P**	**03 11 47.5**	**-1.7**
GVZ	**Greta Valley S**	**20.10**	**195**	P	**P**	**03 11 53.2**	**-1.9**
LTZ	**Lake Taylor**	**20.12**	**197**	P	**P**	**03 11 53.0**	**-2.3**
INZ	**Inchbonnie**	**20.30**	**199**	P	**P**	**03 11 56.2**	**-0.7**
WVZ	**Waitaha Valley**	**20.84**	**200**	P	**P**	**03 12 01.1**	**-0.6**
MQZ	**McQueen's Vall**	**20.89**	**195**	P	**P**	**03 12 01.9**	**-0.3**
JCZ	**Jackson Bay**	**22.37**	**202**	P	**P**	**03 12 14.5**	**-1.2**
ARMA	**Armidale**	**26.25**	**249**	P	**P**	**03 12 51.4**	**+1.1**
ARMA				IAmb	IAmb	03 13 26.7	
	comp=Z,11nm,1.1s						
CAN	**Canberra**	**29.39**	**240**	P	**P**	**03 13 18.5**	**+0.8**
CTAO	**Charters Tower**	**31.65**	**270**	P	**P**	**03 13 38.0**	**+0.7**
CTAO				IAmb	IAmb	03 13 39.5	
	comp=Z,6.1nm,0.5s						
TOO	**Toolangi**	**32.70**	**237**	P	**P**	**03 13 46.6**	**+0.6**
TOO				IAmb	IAmb	03 14 11.7	
	comp=Z,6.5nm,1.3s						
TAU	**Tasmania Unive**	**33.19**	**227**	P	**P**	**03 13 50.1**	**+0.1**
STKA	**Stephens Creek**	**34.96**	**248**	P	**P**	**03 14 04.9**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=99,slow=9.5,SNR=3.8						
	comp=Z,0.9nm,0.3s						
STKA	**Stephens Creek**	**34.96**	**248**	P	**P**	**03 14 05.0**	**-0.1**
STKA				IAmb	IAmb	03 14 41.2	
	comp=Z,25nm,1.2s						
BBOO	**Buckleboo**	**39.68**	**247**	P	**P**	**03 14 43.2**	**-0.5**
AS31	**Alice Springs**	**42.24**	**260**	P	**P**	**03 15 03.9**	**-0.3**
ASAR	**Alice Springs**	**42.24**	**260**	P	**P**	**03 15 04.0**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=98,slow=7.4,SNR=38						
ASAR				ScP	**ScP**	**03 19 50.5**	**+4.5**
	comp=Z,0.4nm,0.8s,baz=87,slow=3.6,SNR=2.3						
	comp=Z,2.2nm,0.6s						
ASAR	**Alice Springs**	**42.24**	**260**	P	**P**	**03 15 03.4**	**-0.8**
WB0	**Warramunga Arr**	**42.59**	**266**	P	**P**	**03 15 06.2**	**-0.7**
WRA	**Warramunga Arr**	**42.60**	**266**	P	**P**	**03 15 06.2**	**-0.9**
	comp=Z,2.1nm,0.5s,baz=94,slow=8.5,SNR=33						
WRA				ScP	**ScP**	**03 19 51.9**	**+4.5**
	comp=Z,0.6nm,0.9s,baz=98,slow=4.9,SNR=3.0						
	comp=Z,2.1nm,0.5s						
WRA	**Warramunga Arr**	**42.60**	**266**	P	**P**	**03 15 06.4**	**-0.6**
FORT	**Forrest**	**46.54**	**249**	P	**P**	**03 15 36.6**	**-0.7**
FORT				IAmb	IAmb	03 15 59.6	
	comp=Z,25nm,1.4s						
FITZ	**Fitzroy Crossi**	**51.02**	**265**	P	**P**	**03 16 10.9**	**+0.3**
VNDA	**Vanda**	**54.58**	**185**	P	**P**	**03 16 36.5**	**+1.4**
	comp=Z,1.7nm,0.8s,baz=22,slow=4.4,SNR=2.1						
	comp=Z,1.7nm,0.8s						
VNDA	**Vanda**	**54.58**	**185**	P	**P**	**03 16 36.5**	**+1.4**
VNDA				IAmb	IAmb	03 17 16.6	
	comp=Z,6.5nm,1.2s						
MORW	**Morawa**	**57.11**	**250**	P	**P**	**03 16 53.3**	**-0.1**
MORW				IAmb	IAmb	03 16 55.7	
	comp=Z,16nm,1.3s						
QSPA	**South Pole Qui**	**66.37**	**180**	P	**P**	**03 17 54.6**	**+1.3**
	comp=Z,3.4nm,0.6s,baz=52,slow=0.9,SNR=12						
	comp=Z,3.4nm,0.6s						
QSPA	**South Pole Qui**	**66.37**	**180**	P	**P**	**03 17 55.1**	**+1.8**
QSPA				IAmb	IAmb	03 17 55.3	
	comp=Z,3.5nm,0.7s						
MAW	**Mawson**	**77.99**	**200**	P	**P**	**03 19 01.2**	**+0.9**
	comp=Z,2.7nm,0.6s,baz=156,slow=10.0,SNR=2.6						
	comp=Z,2.7nm,0.6s						
SNAA	**Sanae**	**84.85**	**179**	P	**P**	**03 19 35.3**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=193,slow=10,SNR=12						
	comp=Z,1.0nm,0.6s						
SNAA	**Sanae**	**84.85**	**179**	P	**P**	**03 19 35.5**	**-0.1**
SNAA				IAmb	IAmb	03 19 44.9	
	comp=Z,3.1nm,1.2s						
MKAR	**Makanchi Array**	**112.16**	**313**	PKiKP	**PKiKP**	**03 25 31.9**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=64,slow=3.4,SNR=4.0						
MKAR	**Makanchi Array**	**112.16**	**313**		**PKiKP**	**03 25 31.5**	**-0.9**
FINES	**FINESS Array B**	**138.33**	**342**	PKP	**PKiKP**	**03 26 22.7**	**-1.1**
	comp=Z,4.3nm,1.0s,baz=48,slow=2.1,SNR=1.7						
HFS	**Hagfors**	**142.40**	**349**	PKhKP	PKPpre	03 26 26.0	
	comp=Z,0.9nm,0.3s,baz=63,slow=3.6,SNR=15						
AKASG	**Malin Array Be**	**144.91**	**328**	PKP	**PKPab**	**03 26 34.1**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=47,slow=3.9,SNR=2.4						
BRTR	**Keskin Array B**	**147.61**	**307**	PKPbc	**PKPbc**	**03 26 41.8**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=131,slow=4.4,SNR=1.8						
MMAI	**Mount Meron Ar**	**147.79**	**295**	PKPbc	**PKiKP**	**03 26 43.6**	**-0.7**
	comp=Z,1.6nm,0.4s,baz=83,slow=4.5,SNR=6.8						
EKA	**Eskdalemuir Ar**	**148.32**	**4**	PKPbc	**PKiKP**	**03 26 43.5**	**-1.1**
	comp=Z,4.7nm,1.1s,baz=354,slow=2.5,SNR=1.9						
BURAR	**Bucovina Array**	**148.91**	**326**	PKPbc	**PKiKP**	**03 26 46.9**	**+0.7**

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*IDC **08** 03:08:38.0±0.8, 13°.49S×112°.11W, h0^{km}, mb3.8/12, mbtmp3.8/12, MS3.9/38, Error ellipse: s-maj=35.0km s-min=17.7km az=67.0*

*NEIC **08** 03:08:42.4±2.6, 13°.8S±0°.1×111°.78W±0°.07, h10^{km}±1^{km}, mb4.7/93, Error ellipse: s-maj=24.6km s-min=8.0km az=203.0*

*GCMT **08** 03:08:44.4±0.3, 13°.41S±0°.02×111°.99W±0°.02, h23^{km}±1^{km}, MW4.9/106, Moment Tensor Solution. s25,c30; s106,c144; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.15±.15; $M_{\theta\theta}$0.56±.12; $M_{\phi\phi}$0.59±.13; $M_{r\theta}$-0.42±.16; $M_{\theta\phi}$3.12±.09; $M_{\phi r}$0.54±.18; Best double couple: $M_0$3.25900×10^{16} NP1:ϕ_s88.00000°,δ74.00000°, λ-15.00000°. NP2:ϕ_s182.00000°,δ75.00000°, λ-163.00000°. Principal axes: T 3.6960, Plg1.0000°, Azm315.0000°; N -0.8750, Plg68.0000°, Azm222.0000°; P -2.8220, Plg22.0000°, Azm45.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 03:08:40.8±0.7**, 13°.6S**±0°.1×**111°.9W**±0°.2**, h10**^{km}**, n130, σ1**^{s}**.87**/51**, mb4.7**/52**, MS4.0**/37**, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**13.71**	**170**	LR	LR	03 15 56.1	
	comp=Z,838nm,19.1s,baz=332,slow=32						
TAOE	**Nuku Hiva Isla**	**28.10**	**277**	*e*LR	LR	03 21 28.5	
	575nm,24.2s						
H06S1	**SOCORRO T**	**32.10**	**2**	T	T	03 48 47.6	
	SNR=8.1						
H06E1	**SOCORRO T-PHAS**	**32.15**	**2**	T	T	03 48 51.4	
	SNR=3.1						
ATAH	**Atahualpa**	**33.54**	**82**	LR	LR	03 24 56.4	
	comp=Z,82nm,18.1s,baz=255,slow=29						
NNA	**Nana**	**34.20**	**91**	LR	LR	03 25 37.3	
	comp=Z,236nm,21.2s,baz=254,slow=30						
CMIG	**Matias Romero**	**34.78**	**29**	LR	LR	03 26 46.3	
	comp=Z,217nm,21.0s,baz=218,slow=31						
JTS	**Las Juntas de**	**35.73**	**50**	LR	LR	03 26 30.8	
	comp=Z,263nm,21.1s,baz=242,slow=30						
H03N2	**Juan Fernandez**	**35.90**	**129**	T	T	03 54 04.0	
	baz=300,slow=77,SNR=122						
H03N3	**Juan Fernandez**	**35.91**	**129**	T	T	03 54 11.6	
	baz=300,slow=77,SNR=114						
H03N1	**Juan Fernandez**	**35.91**	**129**	T	T	03 54 04.5	
	baz=300,slow=77,SNR=144						
PPT	**Papeete**	**36.48**	**259**	LR	LR	03 26 41.1	
	comp=Z,90nm,21.5s,baz=90,slow=30						
BOAB	**BOACO BROADBAN**	**36.66**	**46**	P	**P**	**03 15 50.1**	**+2.2**
TBI	**Tubuai**	**36.84**	**249**	*e*LR	LR	03 25 44.4	
	1μm,26.2s						
FLOC	**Florencia**	**38.95**	**70**	P	**P**	**03 16 06.9**	**-0.6**
FLOC				IAmb	IAmb	03 16 18.1	
	comp=Z,18nm,1.4s						
PB08	**IPOC Station P**	**41.34**	**105**	P	**P**	**03 16 27.3**	**-0.4**
ROSC	**El Rosal**	**41.54**	**66**	LR	LR	03 29 41.6	
	comp=Z,120nm,21.6s,baz=199,slow=30						
LPAZ	**La Paz**	**42.32**	**99**	P	**P**	**03 16 36.6**	**+0.7**
	comp=Z,1.8nm,1.0s,baz=263,slow=5.7,SNR=5.3						
LPAZ				LR	LR	03 30 14.9	
	comp=Z,328nm,20.7s,baz=261,slow=30						
	comp=Z,1.8nm,1.0s						
LPAZ	**La Paz**	**42.32**	**99**		**P**	**03 16 38.0**	**+2.1**
833A	**Chaparral WMA,**	**43.36**	**16**	P	**P**	**03 16 42.2**	**-1.2**
TX31	**Lajitas Ar. Si**	**43.38**	**10**		**P**	**03 16 43.8**	**+0.1**
TXAR	**Lajitas Array**	**43.38**	**10**	P	**P**	**03 16 43.3**	**-0.4**
	comp=Z,0.5nm,1.0s,baz=190,slow=6.0,SNR=5.8						
TXAR				PcP	**PcP**	**03 18 30.9**	**-1.4**
	comp=Z,0.3nm,0.8s,baz=194,slow=4.6,SNR=3.7						
	comp=Z,0.5nm,1.0s						
TXAR	**Lajitas Array**	**43.38**	**10**	P	**P**	**03 16 44.2**	**+0.5**
SAND	**Sanderson**	**44.28**	**12**		**P**	**03 16 50.1**	**-0.7**
SAND				IAmb	IAmb	03 16 57.2	
	comp=Z,9.7nm,1.1s						
PLCA	**Paso Flores**	**45.07**	**135**	P	**P**	**03 16 58.8**	**+1.6**
	comp=Z,1.8nm,0.8s,baz=279,slow=6.1,SNR=4.4						
	comp=Z,1.8nm,0.8s						
PLCA	**Paso Flores**	**45.07**	**135**	IAmb	IAmb	03 17 36.0	
	comp=Z,12nm,1.5s						
JCT	**Junction City**	**45.31**	**15**	P	**P**	**03 16 57.9**	**-1.1**
JCT				IAmb	IAmb	03 17 05.1	
	comp=Z,10nm,0.9s						
MNTX	**Cornudas Mount**	**45.43**	**8**		**P**	**03 16 58.7**	**-1.3**
MNTX				IAmb	IAmb	03 17 05.8	
	comp=Z,9.8nm,1.1s						
DUN6	**Lazy B Ranch**	**45.93**	**3**	P	**P**	**03 17 06.1**	**+2.0**
113A	**Mohawk Valley,**	**46.10**	**358**		**P**	**03 17 02.4**	**-2.8**
YUH	**Yuha Desert**	**46.11**	**355**	P	**P**	**03 17 05.6**	**+0.3**
YUH				IAmb	IAmb	03 17 10.7	
	comp=Z,6.9nm,1.1s						
RAR	**Rarotonga**	**46.18**	**254**	LR	LR	03 31 41.8	
	comp=Z,67nm,18.2s,baz=123,slow=30						
BAR	**Barrett**	**46.21**	**354**		P	03 17 10.7	+4.6
BAR				IAmb	IAmb	03 17 12.1	
	comp=Z,9.5nm,1.0s						
BRDY	**Brady**	**46.28**	**15**		**P**	**03 17 02.7**	**-4.0**
BRDY				IAmb	IAmb	03 17 12.4	
	comp=Z,11nm,1.0s						
SDV	**Santo Domingo**	**46.64**	**64**	LR	LR	03 32 50.5	
	comp=Z,71nm,19.4s,baz=250,slow=31						
SDV	**Santo Domingo**	**46.64**	**64**	P	**P**	**03 17 09.8**	**-0.3**
PFO	**Pinyon Flats O**	**47.11**	**355**	LR	LR	03 31 56.6	

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      comp=Z,169nm,20.1s,baz=217,slow=30
LENM  Lemitar            47.69   6 P      P       03 17 20.1 +2.2
X18A  Snowflake          47.86   2 P      P       03 17 20.9 +1.7
X18A                               IAmb   IAmb    03 17 25.6
      comp=Z,5.3nm,0.9s
PLPT  Palo Pinto         47.90  15 P      P       03 17 18.7 -0.7
MSTX  Muleshoe           48.06  10 P      P       03 17 23.9 +3.3
W13A  Hualapai Mount     48.43 358        P       03 17 24.9 +1.2
W13A                               IAmb   IAmb    03 17 29.3
      comp=Z,7.9nm,1.0s
GSC   Goldstone, Bar     48.82 355 P      P       03 17 31.3 +4.8
GSC                                IAmb   IAmb    03 17 32.0
      comp=Z,8.5nm,1.1s
SIV   San Ignacio        49.10  99 LR     LR      03 34 44.9
      comp=Z,221nm,19.7s,baz=286,slow=32
QSM   Queen of Sheba     49.48 355 P      P       03 17 35.5 +4.1
QSM                                IAmb   IAmb    03 17 36.9
      comp=Z,6.8nm,1.1s
SHPR  Sheep Range        49.89 357        P       03 17 35.3 +0.6
CCUT  Cedar City         50.86 358        P       03 17 47.4 +5.3
PTLB  Pontes e Lacer     51.01  99        P       03 17 43.6 +0.2
PTLB                               IAmb   IAmb    03 17 51.0
      comp=Z,12nm,1.2s
SDCO  Great Sand Dun     51.38   6 IAmb   IAmb    03 17 52.1
      comp=Z,11nm,1.3s
PV02  Paradox Valley     51.58   3 IAmb   IAmb    03 17 53.2
      comp=Z,9.5nm,1.2s
PV23  Carpenter Ridg     51.81   3 IAmb   IAmb    03 17 57.6
      comp=Z,6.8nm,0.9s
NV11  Mina Array Sit     52.05 354 IAmb   IAmb    03 18 01.5
      comp=Z,22nm,1.5s
NVAR  Mina Array Bea     52.06 354 P      P       03 17 49.8 -1.4
      comp=Z,1.4nm,0.6s,baz=173,slow=9.3,SNR=11
NVAR                               LR     LR      03 34 40.8
      comp=Z,210nm,20.8s,baz=93,slow=30
      comp=Z,1.4nm,0.6s
NVAR  Mina Array Bea     52.06 354 P      P       03 17 51.3 +0.1
Q16A  Castle Valley      52.21   1 IAmb   IAmb    03 17 59.2
      comp=Z,11nm,1.2s
SRU   San Rafael Swe     52.41   1 IAmb   IAmb    03 17 59.3
      comp=Z,9.8nm,1.2s
CPUP  Villa Florida      52.50 113 P      P       03 17 54.3 -0.1
      comp=Z,0.4nm,0.8s,baz=270,slow=4.0,SNR=2.9
CPUP                               LR     LR      03 35 52.5
      comp=Z,68nm,21.9s,baz=131,slow=31
      comp=Z,0.4nm,0.8s
CPUP  Villa Florida      52.50 113 IAmb   IAmb    03 18 02.7
      comp=Z,3.2nm,1.4s
P17A  Butcher Ranch,     52.77   1 IAmb   IAmb    03 18 02.1
      comp=Z,11nm,1.1s
PNTR  Pine Nut           52.87 352 IAmb   IAmb    03 18 02.8
      comp=Z,13nm,1.0s
P18A  Preston Nutter     52.94   2 IAmb   IAmb    03 18 07.6
      comp=Z,6.6nm,1.0s
KSCO  Kaye Shedlock'     53.01   9 IAmb   IAmb    03 18 17.1
      comp=Z,8.5nm,0.7s
DUG   Dugway, Tooele     53.49 359 IAmb   IAmb    03 18 13.5
      comp=Z,8.3nm,1.1s
BSUT  Blindstream Ca     53.83   1 IAmb   IAmb    03 18 10.0
      comp=Z,11nm,1.2s
CTU   Camp Tracy         53.98   0 IAmb   IAmb    03 18 11.1
      comp=Z,6.5nm,1.0s
ELK   Elko               54.12 357 IAmb   IAmb    03 18 12.5
      comp=Z,7.5nm,1.0s
TCUT  Toone Canyon       54.40   0 IAmb   IAmb    03 18 15.8
      comp=Z,12nm,1.3s
SJG   San Juan           55.01  56 LR     LR      03 36 58.3
      comp=Z,52nm,21.9s,baz=201,slow=31
TKL   Tuckaleechee C     55.72  28 LR     LR      03 40 14.2
      comp=Z,42nm,19.9s,baz=208,slow=34
YBH   Yreka Blue Hor     55.91 350 LR     LR      03 36 53.0
      comp=Z,18nm,18.4s,baz=172,slow=30
WVOR  Wild Horse Val     56.06 354 IAmb   IAmb    03 18 26.4
      comp=Z,12nm,1.1s
PDAR  Pinedale Array     56.09   2 P      P       03 18 17.7 -2.8
      comp=Z,0.5nm,0.7s,baz=178,slow=7.3,SNR=6.2
PDAR                               LR     LR      03 38 30.2
      comp=Z,62nm,18.3s,baz=182,slow=32
      comp=Z,0.5nm,0.7s
PDAR  Pinedale Array     56.09   2 P      P       03 18 17.9 -2.5
K22A  Casper             56.15   5 IAmb   IAmb    03 18 25.8
      comp=Z,6.8nm,1.0s
MFID  Camas Ranch        56.81 357 IAmb   IAmb    03 18 31.1
      comp=Z,12nm,1.0s
J05D  Fort Rock, OR      57.21 352 IAmb   IAmb    03 18 34.4
      comp=Z,15nm,1.2s
I07A  Izee               57.78 354 IAmb   IAmb    03 18 38.6
      comp=Z,11nm,1.0s
YHL   Hebgen Lake        58.14   1 IAmb   IAmb    03 18 40.8
      comp=Z,8.1nm,1.2s
BMO   Blue Mountains     58.34 355 IAmb   IAmb    03 18 41.3
      comp=Z,8.4nm,1.1s
G08A  Pilot Rock         58.92 354 IAmb   IAmb    03 18 46.4
      comp=Z,7.4nm,0.9s
YPT   Yellepit           59.67 354 IAmb   IAmb    03 18 51.0
      comp=Z,8.1nm,1.0s
PMSA  Palmer Station     60.65 159 LR     LR      03 38 08.0
      comp=Z,144nm,20.8s,baz=292,slow=29
D05A  Enumclaw           61.14 352 P      P       03 19 00.3 +5.0
C09A  Chrisman Ranch     61.35 355        P       03 19 01.4 +4.7
BDFB  Brasilia           61.65 101 P      P       03 18 57.9 -1.7
      comp=Z,0.6nm,0.3s,baz=194,slow=16,SNR=3.3
BDFB                               LR     LR      03 44 03.2
      comp=Z,80nm,18.6s,baz=217,slow=34
      comp=Z,0.6nm,0.3s
MDP   Montagnes des      61.66  77 LR     LR      03 42 49.9
      comp=Z,44nm,19.4s,baz=253,slow=33
NEW   Newport            61.72 356 LR     LR      03 41 04.3
      comp=Z,79nm,19.6s,baz=178,slow=32
A04D  Lummi Island       62.74 352 P      P       03 19 10.3 +4.3
ULM   Lac du Bonnet      65.08  11 LR     LR      03 44 34.0
      comp=Z,55nm,19.9s,baz=188,slow=33
SADO  Sadowa             65.23  25 LR     LR      03 47 10.2
      comp=Z,79nm,18.3s,baz=254,slow=35
EDM   Edmonton           66.52 359 P      P       03 19 34.0 +3.3
URZ   Urewera            66.86 234 LR     LR      03 43 37.4
      comp=Z,94nm,18.1s,baz=106,slow=32
BBB   Bella Bella        66.96 349 LR     LR      03 41 38.9
      comp=Z,78nm,18.6s,baz=215,slow=30
DLBC  Dease Lake         73.27 350 LR     LR      03 46 44.4
      comp=Z,98nm,18.3s,baz=80,slow=31
YKA   Yellowknife Ar     75.84 359 P      P       03 20 25.3 -1.6
      comp=Z,0.2nm,0.7s,baz=183,slow=5.4,SNR=11
YKA                                LR     LR      03 50 27.6
      comp=Z,162nm,18.8s,baz=279,slow=33
      comp=Z,0.2nm,0.7s
VNDA  Vanda              76.04 193 LR     LR      03 46 46.2
      comp=Z,74nm,20.9s,baz=108,slow=30
QSPA  South Pole Qui     76.54 180 P      P       03 20 31.3 +0.1
      comp=Z,1.2nm,0.6s,baz=94,slow=4.1,SNR=4.4
QSPA                               LR     LR      03 48 17.4
      comp=Z,46nm,21.3s,baz=104,slow=31
      comp=Z,1.2nm,0.6s
QSPA  South Pole Qui     76.54 180 P      P       03 20 32.1 +0.9
QSPA                               IAmb   IAmb    03 20 54.8
      comp=Z,13nm,1.4s
WRGLY Wrigley            77.07 355 IAmb   IAmb    03 20 39.5
      comp=Z,11nm,1.0s
DZM   Mont Dzumac        77.42 250 eLR    LR      03 44 40.0
      comp=Z,75nm,24.1s
SCHQ  Schefferville      78.03  25 P      P       03 20 39.1 -0.4
      comp=Z,7.4nm,0.9s,baz=225,slow=0.2,SNR=3.9
SCHQ                               LR     LR      03 53 31.6
      comp=Z,98nm,20.0s,baz=234,slow=34
      comp=Z,7.4nm,0.9s
L27K  Beaver Creek,      79.84 347 IAmb   IAmb    03 20 54.2
      comp=Z,5.9nm,0.9s
ILAR  Eielson Array      82.48 346 P      P       03 21 01.4 -1.8
      comp=Z,0.3nm,0.6s,baz=151,slow=5.0,SNR=5.5
      comp=Z,0.3nm,0.6s
SNAA  Sanae              83.08 162 P      P       03 21 06.0 -0.4
      comp=Z,1.7nm,0.9s,baz=296,slow=3.5,SNR=4.4
SNAA                               LR     LR      03 51 17.4
      comp=Z,113nm,21.8s,baz=347,slow=31
      comp=Z,1.7nm,0.9s
SNAA  Sanae              83.08 162 IAmb   IAmb    03 21 06.5
      comp=Z,7.1nm,1.4s
G26K  Porcupine Rive     83.63 348 IAmb   IAmb    03 21 16.0
      comp=Z,8.5nm,1.2s
FRB   Frobisher Bay      83.92  18 LR     LR      03 55 21.0
      comp=Z,73nm,18.2s,baz=82,slow=33
H22K  Ishtalitna Cre     84.50 345 IAmb   IAmb    03 21 18.5
      comp=Z,7.4nm,1.0s
E25K  Arctic Village     84.99 348        P       03 21 20.7 +4.7
COLD  Coldfoot           85.27 346        P       03 21 20.1 +2.7
H11S2 WAKE ISLAND Hy     86.30 290 T      T       04 56 22.9
      baz=107,slow=74,SNR=25
H11S1 WAKE ISLAND Hy     86.31 290 T      T       04 56 23.9
      baz=107,slow=74,SNR=8.5
H11S3 WAKE ISLAND Hy     86.32 290 T      T       04 56 23.3
      baz=107,slow=74,SNR=10
H11N3 WAKE ISLAND Hy     86.44 291 T      T       04 56 45.6
      baz=107
H11N2 WAKE ISLAND Hy     86.46 291 T      T       04 56 41.6
      baz=107
H11N1 WAKE ISLAND Hy     86.46 291 T      T       04 56 44.0
      baz=107
RES   Resolute Bay       88.71   4 LR     LR      03 59 05.6
      comp=Z,92nm,18.3s,baz=6.0,slow=34
SHEM  Shemya Is, Ala     91.26 324 LR     LR      03 53 40.3
      comp=Z,110nm,21.3s,baz=98,slow=30
SFJD  Kangerlussuaq      91.75  20 LR     LR      04 00 43.3
      comp=Z,97nm,18.2s,baz=177,slow=34
STKA  Stephens Creek     96.47 235 LR     LR      03 57 28.9
      comp=Z,67nm,20.4s,baz=31,slow=30
PMG   Port Moresby       98.30 258 LR     LR      03 57 37.7
      comp=Z,22nm,18.1s,baz=153,slow=30
BRTR  Keskin Array B    140.05  43 PKP    PKPdf   03 28 08.9 -1.2
      comp=Z,0.8nm,0.7s,baz=330,slow=1.7,SNR=4.9
BVAR  Borovoye Array    140.59 358 PKP    PKPdf   03 28 08.5 -2.0
      comp=Z,0.9nm,0.7s,baz=90,slow=0.3,SNR=4.3
KURK  Kurchatov         141.97 349        PKPdf   03 28 11.1 -1.9
KURBB Kurchatov Arra    142.08 349 PKP    PKPdf   03 28 11.1 -2.1
      comp=Z,0.4nm,0.2s,baz=14,slow=3.0,SNR=6.1
KBZ   Khabaz            142.97  31 PKP    PKPdf   03 28 13.2 -1.8
      comp=Z,1.3nm,0.8s,baz=356,slow=0.7,SNR=5.1
MMAI  Mount Meron Ar    144.48  51 PKP    PKPab   03 28 16.1 -0.3
      comp=Z,0.4nm,0.4s,baz=270,slow=4.3,SNR=1.9
MKAR  Makanchi Array    144.79 343 PKP    PKPab   03 28 15.8 -1.2
      comp=Z,1.9nm,0.9s,baz=31,slow=2.8,SNR=10
MKAR  Makanchi Array    144.79 343        PKPab   03 28 16.7 -0.3
CMAR  Chiang Mai Arr    149.99 283 PKPbc  PKPdf   03 28 29.1 +1.5
      comp=Z,1.0nm,0.3s,baz=90,slow=2.3,SNR=4.5
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*MOS **08** 03:22:48.9±0.9, 39°.41N×142°.86E, h37^{km}, mb4.6/18, Error ellipse: s-maj=9.7km s-min=6.2km az=91.3*

*NIED **08** 03:22:50.2, 39°.45N×142°.73E, h32^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.52; $M_{\theta\theta}$0.04; $M_{\phi\phi}$1.48; $M_{r\theta}$0.78; $M_{\theta\phi}$-0.39; $M_{\phi r}$-0.50; Fault plane solution: $M_0$1.80000×10^{15} NP1: ϕ_s183.00000°, δ36.00000°, λ-59.00000°. NP2: ϕ_s327.00000°, δ60.00000°, λ-110.00000°.*

*JMA **08** 03:22:50.2±0.1, 39°.5N±0°.2×142°.7E±0°.5, h32^{km}±1^{km}, MD4.4/40, MV4.5/40, E OFF IWATE PREF*

JMA Felt II J1 at E OFF IWATE PREF .

*IDC **08** 03:22:53.9±2.4, 39°.27N×142°.61E, h65^{km}±21^{km}, mb3.7/25, mbtmp4.0/30, MS3.3/12, Error ellipse: s-maj=16.9km s-min=12.3km az=81.0*

*NEIC **08** 03:22:53.3±1.5, 39°.45N±0°.06×142°.7E±0°.1, h51^{km}±7^{km}, mb4.6/26, Error ellipse: s-maj=11.8km s-min=8.0km az=114.0*

ISC 08 03:22:50.4±0.9**, 39°.45N**±0°.04×**142°.74E**±0°.05**, h30**^{km}±5^{km}**, n147, σ1^s.45**/146**, mb4.3**/45**, MS3.2**/9**, 6C, Near east coast of eastern Honshu**

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Code  Station Name        Δ°   AZ°    Phase ID       Time      Res
                                  Op     ISC      h  m  s     ISC
MIYJ  Miyakonagasawa      0.72 281 i P    Pb      03 23 03.8 -0.6
MIYJ                               eS     Sb      03 23 13.3 -0.7
JTH   Tanohata            0.83 306 eP     Pb      03 23 05.4 -1.0
JTH                                eS     Sb      03 23 16.6 -0.7
JTH   Tanohata            0.83 306 A      A       03 23 05.4
      comp=N,7.0nm,0.5s,comp=E,10.0nm,0.2s
OFUJ  Ofunato             0.91 247 eP     Pn      03 23 06.5 -0.5
OFUJ                               eS     Sb      03 23 18.5 -0.8
JKEN  Kujiedanarisaw      1.10 314 A      A       03 23 09.5
      comp=N,14nm,0.5s,comp=E,12nm,0.8s
JOM   Ohasama             1.12 272 eP     Pn      03 23 10.1 +0.1
JOM                                eS     Sn      03 23 24.1 -0.3
JOM   Ohasama             1.12 272 A      A       03 23 10.1
      comp=N,12nm,0.7s,comp=E,24nm,0.3s
JKMT  Kesennumamotoy      1.17 238 i P    Pn      03 23 10.5 -0.2
JKMT                               eS     Sn      03 23 25.3 -0.3
JKZ   Kuzumaki            1.21 297 eP     Pn      03 23 11.5 +0.2
JKZ                                eS     Sn      03 23 26.7  0.0
JKZ   Kuzumaki            1.21 297 A      A       03 23 11.5
      comp=N,14nm,0.5s,comp=E,16nm,0.2s
JMK   Ichinoseki          1.28 248 eP     Pn      03 23 12.3 +0.2
JMK                                eS     Sn      03 23 28.4 +0.1
JANG  Nango               1.32 315 eP     Pn      03 23 12.5 -0.2
JANG                               eS     Sn      03 23 29.2 -0.2
JSZI  Iwateshizukuis      1.41 283 A      A       03 23 14.2
      comp=N,19nm,3.0s,comp=E,30nm,0.5s
JIO   Ouri                1.47 228 eP     Pn      03 23 14.7 -0.1
JIO                                eS     Sn      03 23 33.0 +0.1
JRG   Rokugo              1.63 269 eP     Pn      03 23 17.8 +0.8
JRG                                eS     Sn      03 23 38.2 +1.2
JRG   Rokugo              1.63 269 A      A       03 23 17.8
      comp=N,7.0nm,0.8s,comp=E,10.0nm,1.1s
JAH   Hinai               1.78 295 eP     Pn      03 23 20.1 +1.0
JAH                                eS     Sn      03 23 41.6 +1.0
JTM   Tenmabayashi        1.85 317        Pn      03 23 21.0 +0.9
JTM   Tenmabayashi        1.85 317 eP     Pn      03 23 20.8 +0.8
JTM                                eS     Sn      03 23 43.3 +0.8
JYK   Kaneyama            1.92 255 eP     Pn      03 23 22.2 +1.1
JYK                                eS     Sn      03 23 45.3 +1.1
JYK   Kaneyama            1.92 255 A      A       03 23 22.2
      comp=N,3.0nm,5.2s,comp=E,3.0nm,2.2s
JYW   Yuwa                1.96 274 A      A       03 23 22.3
      comp=N,16nm,8.6s,comp=E,15nm,0.8s
JAHD  Aomorihigashid      2.11 330 A      A       03 23 24.4
      comp=N,7.0nm,0.4s,comp=E,7.0nm,1.0s
JYYZ  Yamagatayuza        2.22 260 A      A       03 23 26.0
      comp=N,14nm,2.8s,comp=E,14nm,3.1s
ERM   Erimo               2.59   7        Pn      03 23 29.9 -0.2
ERM   Erimo               2.59   7 P      Pn      03 23 29.9 -0.2
JSD   Sado                3.77 250        Pn      03 23 48.2 +1.7
NMR   Nemuro--Hokkai      4.52  29 eP     Pn      03 23 54.7 -2.0
NMR                                eS     Sn      03 24 43.3 -4.9
MAJO  Matsushiro          4.61 232        Pn      03 24 01.2 +3.2
MAJO  Matsushiro          4.61 232 i P    Pn      03 24 00.1 +2.2
MJAR  Matsushiro Arr      4.61 232 P      Pn      03 24 00.1 +2.1
      comp=E,54nm,0.8s,baz=34,slow=12,SNR=115
MJAR                               S      Sn      03 24 46.9 -3.5
      comp=E,5.9nm,0.6s,baz=32,slow=14,SNR=0.6
MJAR  Matsushiro Arr      4.61 232        Pn      03 24 01.1 +3.1
MJB9  Matsu-Tunnel        4.61 232        Pn      03 24 01.1 +3.1
JKA   Kamikawa-asahi      4.67 359        Pn      03 24 01.2 +2.5
JKA                                       Sn      03 24 52.3 +0.5
ASAJ  Asahikawa           4.67 359 P      Pn      03 24 01.2 +2.5
      comp=E,6.8nm,0.3s,baz=210,slow=14,SNR=15
ASAJ                               S      Sn      03 24 52.3 +0.4
      comp=E,30nm,0.6s,baz=260,slow=29,SNR=3.8
ASAJ                               LR     LR      03 26 26.9
      comp=E,413nm,20.0s,baz=158,slow=44
GLVR  Golovnino           4.77  25 eP     Pn      03 23 59.8 -0.3
GLVR                               eS     Sn      03 24 50.9 -3.4
GLVR                               smax   smax
      comp=N,871nm,0.3s
GLVR                               smax   smax
      comp=E,635nm,0.3s
RUSJ  Misakicho           5.02  21 eP     Pn      03 24 03.1 -0.4
RUSJ                               eS     Sn      03 24 57.8 -2.7
YUK   Yuzh-Kuril'sk       5.14  26 eP     Pn      03 24 03.7 -1.6
YUK                                eS     Sn      03 24 59.0 -4.6
YUK                                pmax   pmax
      comp=Z,143nm,0.2s
YUK                                pmax   pmax
      comp=E,61nm,0.1s
YUK                                smax   smax
      comp=E,552nm,0.3s
YUK                                smax   smax
      comp=N,766nm,0.4s
JGF   Kuroka              5.75 230        Pn      03 24 16.2 +2.5
INU   Inuyama             6.12 230        Pn      03 24 21.5 +2.7
JHJ   Hachijo jima 2      6.75 202 P      Pn      03 24 26.6 -0.7
      comp=N,118nm,0.7s,baz=80,slow=22,SNR=1.7
JHJ                                S      Sn      03 25 38.5 -4.8
      comp=N,92nm,0.7s,baz=330,slow=17,SNR=1.3
USRK  Ussuriysk Ar.       9.32 304 P      Pn      03 25 06.4 +3.8
      comp=N,2.9nm,0.7s,baz=100,slow=16,SNR=4.9
MDJ   Mudanjiang         11.05 302 P      Pn      03 25 27.8 +1.5
MDJ                                S      Sn      03 27 24.7 -4.2
MDJ                                sS             03 27 30.2
MDJ                                SS     SnSn    03 27 41.6 +1.0
MDJ                                PcP    PcP     03 31 30.4 +7.7
MDJ                                LR     LR
      comp=N,390nm,5.2s
MDJ                                LR     LR
      comp=Z,260nm,7.1s
JNU   Nakatsue           11.46 240 P      Pn      03 25 32.6 +0.7
      comp=Z,9.9nm,1.1s,baz=45,slow=16,SNR=1.9
KSRS  Korea Array        11.79 265 P      Pn      03 25 38.0 +1.6
      comp=Z,2.0nm,0.7s,baz=69,slow=14,SNR=7.2
KSRS                               S      Sn      03 27 44.1 -2.7
      comp=Z,1.2nm,0.8s,baz=89,slow=34,SNR=1.6
PETK  Petropavlovsk-     17.09  32 LR     LR      03 32 54.5
      comp=Z,50nm,20.5s,baz=238,slow=35
JOW   Kunigami           17.43 228 LR     LR      03 34 18.2
      comp=Z,38nm,18.9s,baz=122,slow=40
ZEA   Zeya               17.76 329 eP     P       03 26 56.1 +0.3
ZEA                                pmax   pmax
      comp=Z,10.0nm,0.8s
HILR  Hailar Array B     19.19 309 P      P       03 27 09.4 -2.2
      comp=Z,9.9nm,0.4s,baz=118,slow=14,SNR=2.9
MA2   Magadan            20.78  12 LR     LR      03 37 02.4
      comp=Z,53nm,18.1s,baz=148,slow=40
YAK   Yakutsk            23.98 345 LR     LR      03 39 46.0
      comp=Z,56nm,19.1s,baz=44,slow=42
SEY   Seymchan           24.23  11 P      P       03 28 06.0 +1.8
      comp=Z,3.8nm,0.8s,baz=207,slow=11,SNR=5.2
SEY                                LR     LR      03 40 05.2
      comp=Z,61nm,18.1s,baz=140,slow=42
      comp=Z,3.8nm,0.8s
SEY   Seymchan           24.23  11 i P    P       03 28 04.6 +0.4
SEY                                pmax   pmax
      comp=Z,29nm,1.3s
ULN   Ulaanbaatar        26.96 300ceP     P       03 28 29.7 +0.4
ULN                                pmax   pmax
      comp=Z,12nm,2.7s
SONM  Songino Array      27.40 300 P      P       03 28 33.1 -0.1
      comp=Z,1.7nm,0.6s,baz=81,slow=7.5,SNR=9.2
SONM                               LR     LR      03 40 01.1
      comp=Z,70nm,18.3s,baz=116,slow=38
      comp=Z,1.7nm,0.6s
SONM  Songino Array      27.40 300 P      P       03 28 32.6 -0.6
H11N2 WAKE ISLAND Hy     28.61 126 T      T       03 59 17.9
      baz=318,slow=75,SNR=361
H11N1 WAKE ISLAND Hy     28.62 126 T      T       03 59 18.9
      baz=318,slow=75,SNR=390
H11N3 WAKE ISLAND Hy     28.63 126 T      T       03 59 22.7
      baz=318,slow=75,SNR=358
H11S1 WAKE ISLAND Hy     29.41 128 T      T       04 00 24.1
      baz=320,slow=0.8
H11S3 WAKE ISLAND Hy     29.42 128 T      T       04 00 36.1
      baz=320,slow=0.8
H11S2 WAKE ISLAND Hy     29.43 128 T      T       04 00 21.0
      baz=320,slow=0.8
LZDM  Lanzhou Array      30.92 276 P      P       03 29 04.5 -0.3
      comp=Z,1.1nm,0.4s,baz=69,slow=4.8,SNR=1.4
      comp=Z,1.1nm,0.4s
CD2   Chengdu            32.77 267 eP     P       03 29 21.0 +0.2
TIXI  Tiksi              33.04 352 LR     LR      03 44 24.7
      comp=Z,38nm,19.3s,baz=204,slow=39
PZH   PanZhiHua          36.43 262 P      P       03 29 54.2 +1.6
GOMU  GeErMu             37.65 281 P      P       03 30 02.9 -0.2
GOMU                               pP     pP      03 30 12.0 +0.4
GOMU                               pmax   pmax
      comp=Z,13nm,0.6s
DGZ   Jazzator, Alta     39.88 304 i P    P       03 30 21.8 +0.4
DGZ                                pmax   pmax
      comp=Z,5.0nm,0.6s
ZAA0  Zalesovo Array     41.10 310 P      P       03 30 31.6 +0.3
ZALV  Zalesovo Beam      41.10 310 P      P       03 30 31.4 +0.2
      comp=Z,2.6nm,0.4s,baz=92,slow=8.4,SNR=17
ZALV                               LR     LR      03 48 06.1
      comp=Z,31nm,18.5s,baz=98,slow=37
      comp=Z,2.6nm,0.4s
ZALV  Zalesovo Beam      41.10 310 P      P       03 30 31.6 +0.3
ZALV  Zalesovo Beam      41.10 310 i P    P       03 30 31.3 +0.1
ZALV                               pmax   pmax
      comp=Z,3.0nm,0.4s
NRIK  Noril'sk           41.54 334 LR     LR      03 48 51.3
      comp=Z,61nm,18.7s,baz=120,slow=37
CMAR  Chiang Mai Arr     43.14 254 P      P       03 30 46.9 -1.4
      comp=Z,0.7nm,0.3s,baz=72,slow=8.5,SNR=4.1
CMAR                               LR     LR      03 49 08.8
      comp=Z,26nm,18.2s,baz=185,slow=37
      comp=Z,0.7nm,0.3s
MK31  Makanchi Array     43.77 300ceP     P       03 30 53.2 +0.2
MKAR  Makanchi Array     43.77 300 P      P       03 30 52.8 -0.2
      comp=Z,1.8nm,0.6s,baz=85,slow=9.5,SNR=22
      comp=Z,1.8nm,0.6s
MKAR  Makanchi Array     43.77 300 i P    P       03 30 53.0  0.0
MKAR                               pmax   pmax
      comp=Z,2.0nm,0.6s
KURK  Kurchatov          45.30 306        P       03 31 05.1 -0.1
KURK                               IAmb   IAmb    03 31 22.1
      comp=Z,5.4nm,0.7s
KURK  Kurchatov          45.30 306ceP     P       03 31 05.7 +0.5
KURK                               pmax   pmax
      comp=Z,6.0nm,1.0s
KURBB Kurchatov Arra     45.38 306 P      P       03 31 05.7 -0.1
      comp=Z,5.1nm,0.5s,baz=81,slow=8.5,SNR=22
      comp=Z,5.1nm,0.5s
ILAR  Eielson Array      46.91  34 P      P       03 31 18.9 +1.3
      comp=Z,0.5nm,0.6s,baz=265,slow=5.9,SNR=8.5
      comp=Z,0.5nm,0.6s
EVN   Everest            47.24 274        P       03 31 22.6 +1.1
EVN                                IAmb   IAmb    03 31 48.5
      comp=Z,4.4nm,0.9s
BVAR  Borovoye Array     49.75 311 P      P       03 31 39.7 -0.1
      comp=Z,1.6nm,0.5s,baz=71,slow=8.5,SNR=8.9
      comp=Z,1.6nm,0.5s
BORK  Borovoye           49.78 311 P      P       03 31 39.4 -0.6
BORK  Borovoye           49.78 311ceP     P       03 31 41.2 +1.2
BORK                               pmax   pmax
      comp=Z,3.0nm,0.9s
AAK   Ala-Archa          50.29 297 P      P       03 31 43.2 -1.0
AAK                                IAmb   IAmb    03 31 44.7
      comp=Z,2.2nm,0.4s
AAK   Ala-Archa          50.29 297 P      P       03 31 43.2 -1.0
AAK                                pmax   pmax
      comp=Z,2.0nm,0.4s
I30M  Mount Dempster     51.28  32 P      P       03 31 52.9 +1.6
INK   Inuvik             51.77  28 P      P       03 31 55.2 +0.5
INK                                IAmb   IAmb    03 32 03.8
      comp=Z,7.6nm,1.3s
INK   Inuvik             51.77  28 P      P       03 31 55.2 +0.5
INK                                pmax   pmax
      comp=Z,8.0nm,1.3s
ARSB  Arslanbob          51.83 296 IAmb   IAmb    03 31 57.4
      comp=Z,5.1nm,0.7s
KKAR  Karatay Array      52.84 299 P      P       03 32 02.6 -0.4
KKAR  Karatay Array      52.84 299 P      P       03 32 02.7 -0.4
NIL   Nilore             54.88 287 P      P       03 32 18.9 +0.9
NIL                                IAmb   IAmb    03 32 19.8
      comp=Z,5.6nm,0.7s
NIL   Nilore             54.88 287 P      P       03 32 19.0 +0.9
NIL                                pmax   pmax
      comp=Z,6.0nm,0.7s
ARTI  Arti               55.37 318 P      P       03 32 21.6 +0.4
ARTI  Arti               55.37 318c iP    P       03 32 21.6 +0.4
ARTI                               *PP    sP      03 32 34.5 +1.0
ARTI                                              03 33 17.0
ARTI                                              03 34 22.4
ARTI                               S      S       03 40 04.6 +1.2
ARTI                               SS     SS      03 43 45.7 -1.8
ARTI                               pmax   pmax
      comp=Z,8.0nm,0.7s
SHAA  Shahritus          56.81 294 IAmb   IAmb    03 32 33.0
      comp=Z,13nm,0.7s
AB31  Akbulak array      57.20 309        P       03 32 34.6 +0.2
AB31                               IAmb   IAmb    03 32 46.0
      comp=Z,4.1nm,0.6s
ABKAR Akbulak array      57.20 309 P      P       03 32 34.6 +0.2
WB0   Warramunga Arr     59.42 189 P      P       03 32 49.4 -0.7
WB0                                IAmb   IAmb    03 33 09.2
      comp=Z,8.0nm,1.2s
WRA   Warramunga Arr     59.60 189 P      P       03 32 50.4 -1.0
      comp=Z,1.7nm,0.7s,baz=9.6,slow=7.2,SNR=11
      comp=Z,1.7nm,0.7s
WRA   Warramunga Arr     59.60 189 P      P       03 32 49.6 -1.7
WRA   Warramunga Arr     59.60 189 i P    P       03 32 49.7 -1.7
WRA                                pmax   pmax
      comp=Z,2.0nm,0.9s
RES   Resolute Bay       60.01  15 P      P       03 32 53.9 +0.4
RES                                IAmb   IAmb    03 33 05.8
      comp=Z,3.3nm,0.7s
RES   Resolute Bay       60.01  15 P      P       03 32 53.9 +0.4
RES                                pmax   pmax
      comp=Z,3.0nm,0.7s
YKA   Yellowknife Ar     61.20  31 P      P       03 33 02.7 +0.8
      comp=Z,0.3nm,0.7s,baz=300,slow=7.7,SNR=3.9
      comp=Z,0.3nm,0.7s
YKA   Yellowknife Ar     61.20  31 i P    P       03 33 03.4 +1.5
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ARCES	ARCESS Array B	62.11	339	P	P	03 33 07.9	0.0
	comp=Z,4.3nm,1.1s,baz=47,slow=5.3,SNR=1.9						
	comp=Z,4.3nm,1.1s						
ARCES	ARCESS Array B	62.11	339	IAmb	IAmb	03 33 20.5	
	comp=Z,8.2nm,1.1s						
ASAR	Alice Springs	63.32	189	P	P	03 33 14.8	-1.7
	comp=Z,0.9nm,0.8s,baz=12,slow=5.5,SNR=10.0						
	comp=Z,0.9nm,0.8s						
ASAR	Alice Springs	63.32	189	P	P	03 33 16.4	-0.1
ASAR	Alice Springs	63.32	189	P	P	03 33 16.4	-0.1
OBN	Obninsk	66.79	323	*e*P	P	03 33 35.1	-3.6
OBN				*e*		03 34 05.3	
OBN				*e*		03 36 03.8	
OBN				*e*PPP	PPP	03 37 42.2	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FINES	FINESS Array B	67.17	332	P	P	03 33 40.9	-0.1
	comp=Z,2.4nm,0.6s,baz=34,slow=7.8,SNR=8.7						
	comp=Z,2.4nm,0.6s						
FINES	FINESS Array B	67.17	332	P	P	03 33 41.1	0.0
FINES	FINESS Array B	67.17	332	*i* P	P	03 33 41.0	0.0
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KIV	Kislovodsk	70.12	311	*e*P	P	03 33 59.6	-0.2
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KBZ	Khabaz	70.13	311	P	P	03 33 59.9	+0.2
	comp=Z,1.5nm,0.7s,baz=45,slow=10.0,SNR=2.8						
	comp=Z,1.5nm,0.7s						
STKA	Stephens Creek	70.97	181	P	P	03 34 03.9	-0.9
	comp=Z,0.6nm,0.4s,baz=338,slow=5.4,SNR=1.7						
	comp=Z,0.6nm,0.4s						
NC405	NORSAR Array S	72.16	337	P	P	03 34 11.9	+0.1
HFS	Hagfors	72.32	336	P	P	03 34 13.0	+0.3
	comp=Z,8.8nm,1.1s,baz=39,slow=6.7,SNR=9.3						
	comp=Z,8.8nm,1.1s						
HFS	Hagfors	72.32	336	P	P	03 34 13.0	+0.3
NOA	NORSAR Array B	72.36	338	P	P	03 34 13.0	-0.1
	comp=Z,0.8nm,0.6s,baz=38,slow=5.8,SNR=3.7						
	comp=Z,0.8nm,0.6s						
NOA	NORSAR Array B	72.36	338	P	P	03 34 13.0	-0.1
NVAR	Mina Array Bea	72.72	54	P	P	03 34 16.9	+1.0
	comp=Z,0.5nm,0.6s,baz=305,slow=5.7,SNR=2.5						
	comp=Z,0.5nm,0.6s						
AKASG	Malin Array Be	73.03	322	P	P	03 34 16.6	-0.5
	comp=Z,1.5nm,0.5s,baz=46,slow=6.4,SNR=8.8						
	comp=Z,1.5nm,0.5s						
AKASG	Malin Array Be	73.03	322	IAmb	IAmb	03 34 18.3	
	comp=Z,3.0nm,1.1s						
AKASG	Malin Array Be	73.03	322	*ce*P	P	03 34 17.0	-0.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKBB	Malin Array Si	73.03	322	P	P	03 34 16.9	-0.2
AKBB				IAmb	IAmb	03 34 18.1	
	comp=Z,5.2nm,1.0s						
AKBB	Malin Array Si	73.03	322	P	P	03 34 16.9	-0.2
AKBB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIEV	Kiev	73.04	322	P	P	03 34 17.0	-0.2
KIEV				IAmb	IAmb	03 34 18.1	
	comp=Z,4.3nm,0.9s						
KIEV	Kiev	73.04	322	P	P	03 34 17.0	-0.2
KIEV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PDAR	Pinedale Array	75.24	47	P	P	03 34 30.9	+0.3
	comp=Z,0.2nm,0.6s,baz=307,slow=3.9,SNR=2.6						
	comp=Z,0.2nm,0.6s						
PDAR	Pinedale Array	75.24	47	P	P	03 34 30.7	+0.1
BORG	Borgarnes	75.39	353	LR	LR	04 09 10.1	
	comp=Z,38nm,18.4s,baz=304,slow=37						
BUR08	Bucovina Ar. S	77.05	322	P	P	03 34 40.8	+0.2
BUR08				IAmb	IAmb	03 34 41.8	
	comp=Z,3.1nm,0.9s						
BURAR	Bucovina Array	77.06	322	P	P	03 34 40.4	-0.2
BRTR	Keskin Array B	78.03	312	P	P	03 34 45.5	-0.7
	comp=Z,0.4nm,0.5s,baz=79,slow=3.9,SNR=5.5						
	comp=Z,0.4nm,0.5s						
BRTR	Keskin Array B	78.03	312	P	P	03 34 46.7	+0.5
BRTR	Keskin Array B	78.03	312	P	P	03 34 46.7	+0.5
PV10	Paradox Valley	78.41	50	P	P	03 34 50.5	+2.1
PV10				IAmb	IAmb	03 35 08.6	
	comp=Z,5.8nm,0.9s						
GERES	GERESS Array B	81.20	329	P	P	03 35 03.0	-0.2
	comp=Z,0.2nm,0.4s,baz=73,slow=6.9,SNR=0.8						
	comp=Z,0.2nm,0.4s						
TXAR	Lajitas Array	87.83	53	P	P	03 35 37.0	0.0
	comp=Z,0.2nm,0.6s,baz=318,slow=4.6,SNR=3.7						
	comp=Z,0.2nm,0.6s						
ESDC	Sonseca Array	95.57	335	P	P	03 36 12.8	+0.1
	comp=Z,0.3nm,0.7s,baz=31,slow=3.6,SNR=2.6						
	comp=Z,0.3nm,0.7s						
SNAA	Sanae	143.36	197	PKP	PKPab	03 42 16.8	+0.1
	comp=Z,0.9nm,0.7s,baz=108,slow=5.8,SNR=7.0						
LPAZ	La Paz	144.56	58	PKP	PKPab	03 42 23.2	-0.3
	comp=Z,0.5nm,0.5s,baz=340,slow=5.8,SNR=2.6						

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*IDC **08** 03:33:00.3±5.3, 3°.04S×105°.71E, h0^{km}, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=265.3km s-min=28.0km az=58.0*

*DJA **08** 03:33:39.6±0.3, 7°S±5°×10°7E±°, h104^{km}±5^{km}, M3.7/13, mb4.2/4, MLv3.4/13*

ISC 08 03:33:38.7±1.2**, 7°.2S**±0°.1×**106°.4E**±0°.1**, h91**^{km}**, n19, σ1^{s}.51**/21**, mb3.4**/4**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNJI	Cibinong	0.69	99	P	Pn	03 33 58.5	+3.3
DBJI	Dramaga	0.71	26	P	Pn	03 33 56.6	+1.2
DBJI				S	Sn	03 34 09.0	+1.1
SBJI	Serang	1.11	344	P	Pn	03 34 00.9	+1.1
BBJI	Bungbulang	1.23	102	P	Pn	03 34 03.1	+1.9
BBJI				S	Sn	03 34 20.3	+2.1
KPJI	Karang Pucung	2.47	93	P	Pn	03 34 17.0	-0.2
KASI	Kota Agung	2.55	311	P	Pn	03 34 20.3	+2.0
KLSI		3.02	326	P	Pn	03 34 25.1	+0.6
MDSI	Maura Dua	3.51	320	P	Pn	03 34 30.9	-0.3
SMRI	Semarang	3.97	88	P	Pn	03 34 37.4	0.0
UGM	Wanagama	4.11	100	P	Pn	03 34 39.4	+0.1
PCJI	Pacitan	4.80	102	P	Pn	03 34 48.3	-0.3
SNJI	Sawahan-Nganju	5.30	97	P	Pn	03 34 54.9	-0.8
	0.1nm9.3nm,0.4s						
JAGI	Jajag, Banyuwa	7.74	100	P	Pn	03 35 28.8	0.0
	8.0nm,0.4s						
PPSI	Pulau Pagai	7.78	304	P	Pn	03 35 28.6	-0.6
	62nm,1.3s						
RTBI	Rangdo, Negare	8.51	99	P	Pn	03 35 38.5	-0.8
FITZ	Fitzroy Crossi	21.61	122	P	P	03 38 21.0	-0.5
	1.4nm,0.9s,baz=315,slow=10.0,SNR=1.4						
	1.4nm,0.9s						
WRA	Warramunga Arr	29.87	118	P	P	03 39 34.9	-3.0
	0.5nm,0.7s,baz=304,slow=7.7,SNR=4.6						
	0.5nm,0.7s						
ASAR	Alice Springs	31.03	125	P	P	03 39 46.5	-1.6
	0.3nm,0.4s,baz=304,slow=8.6,SNR=5.5						
	0.3nm,0.4s						
STKA	Stephens Creek	40.92	132	P	P	03 41 12.5	+0.1
	1.2nm,0.3s,baz=321,slow=6.5,SNR=5.3						
	1.2nm,0.3s						

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*HLW **08** 03:41:51.0, 35°.25N×22°.80E, h14^{km}±2^{km}, Md3.9, Ml3.9*

*GII **08** 03:41:51.1±0.0, 35°.03N×23°.79E, h10^{km}, Mws4.4, confirmed*

*IDC **08** 03:41:54.1±0.6, 35°.25N×23°.82E, h0^{km}, mb4.1/22, mbtmp4.0/34, ML3.8/11, MS3.3/9, Error ellipse: s-maj=13.4km s-min=8.0km az=6.0*

*MED_RC **08** 03:41:56.0±1.0, 35°.00N×23°.87E, h18^{km}±3^{km}, MW4.3/17, Moment Tensor Solution.Mantle waves: s17,c19; Duration: 1^{s}.0 Moment tensor: Scale 10^{15}Nm; M_{rr}0.54±.52; $M_{\theta\theta}$-3.52±.41; $M_{\phi\phi}$2.98±.29; $M_{r\theta}$0.63±.58; $M_{\theta\phi}$-0.36±.41; $M_{\phi r}$1.01±.53; Best double couple: $M_0$3.50000×10^{15} NP1:ϕ_s311.00000°, δ69.00000°, λ173.00000°. NP2:ϕ_s43.00000°, δ83.00000°, λ21.00000°. Principal axes: T 3.3500, Plg20.0000°, Azm269.0000°; N 0.3100, Plg68.0000°, Azm61.0000°; P -3.6600, Plg10.0000°, Azm175.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*ATH **08** 03:41:56.6, 35°.18N×23°.82E, h6^{km}±1^{km}, ML3.8/18, Manual Solution by A.Agalos First location: 2019/12/08 03:42:19, This location: 2019/12/08 03:51:29 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*

*ISK **08** 03:41:56.4, 35°.18N×23°.81E, h5^{km}, ML4.0/18*

*MOS **08** 03:41:56.1±1.6, 35°.02N×23°.77E, h24^{km}, mb4.4/8, Error ellipse: s-maj=7.6km s-min=4.5km az=74.2*

*THE **08** 03:41:56.5, 35°N±1°×23°.8E±0°.6, h0^{km}±2^{km}, M3.9/10, MLh3.9/10*

*NEIC **08** 03:41:59.9±2.7, 35°.18N±0°.08×23°.81E±0°.06, h35^{km}±2^{km}, mb4.5/22, Error ellipse: s-maj=13.5km s-min=7.4km az=189.0*

*AFAD **08** 03:42:07.0, 35°.33N×24°.38E, h39^{km}, MW4.3*

ISC 08 03:41:56.2±0.8**, 35°.16N**±0°.02×**23°.83E**±0°.02**, h13**^{km}±4^{km}**, n326, σ2^{s}.46**/355**, mb4.4**/50**, MS3.3**/6**, 19C-10D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNDR	Palaiochora Ch	0.18	295	P	Pg	03 42 00.1	-0.2
KNDR				S	Sg	03 42 03.0	-0.1
KNDR	Palaiochora Ch	0.18	295	Pg	Pg	03 42 00.2	-0.2
KNDR				Sg	Sg	03 42 03.1	-0.1
KNDR	Palaiochora Ch	0.18	295	P	Pg	03 42 00.1	-0.2
KNDR				S	Sg	03 42 02.4	-0.8
IMMV	Iera Moni Meta	0.33	23	P	Pg	03 42 02.5	-0.4
IMMV				S	Sg	03 42 07.2	-0.3
IMMV	Iera Moni Meta	0.33	23	Pg	Pg	03 42 02.6	-0.4
IMMV				Sg	Sg	03 42 07.7	+0.3
IMMV	Iera Moni Meta	0.33	23	P	Pg	03 42 02.6	-0.4
IMMV				S	Sg	03 42 06.6	-0.8
CHNB	Souda	0.38	31	P	Pg	03 42 03.7	-0.2
CHNB				S	Sg	03 42 08.4	-0.6
GVD	Gavdhos	0.38	146	P	Pg	03 42 04.3	+0.5
GVD				S	Sb	03 42 11.1	+0.5
GVD	Gavdhos	0.38	146	Pg	Pg	03 42 04.2	+0.3
GVD				Sg	Sb	03 42 11.3	+0.7
GVD	Gavdhos	0.38	146	P	Pg	03 42 04.4	+0.5
GVD				S	Sg	03 42 10.3	+1.2
VAM	Vamos	0.40	51	P	Pg	03 42 03.7	-0.4
VAM				S	Sg	03 42 09.7	+0.3
VAM	Vamos	0.40	51	P	Pg	03 42 03.8	-0.4
CHAN	Chania	0.40	26	P	Pg	03 42 04.1	-0.2
CHAN				S	Sb	03 42 10.2	-1.0
CHAN	Chania	0.40	26	P	Pg	03 42 04.0	-0.2
CHAN				S	Sg	03 42 09.4	-0.3
ANKY	Antikythira Is	0.83	329	P	Pg	03 42 11.9	-0.4
ANKY				S	Sb	03 42 23.3	-0.1
ANKY	Antikythira Is	0.83	329	P	Pg	03 42 12.0	-0.2
IDI	Anoyia	0.88	81	Pg	Pg	03 42 11.9	-1.3
	45nm,0.3s,baz=275,slow=9.6,SNR=320						
IDI				Lg	Lg	03 42 23.9	
	300nm,0.3s,baz=334,slow=20,SNR=19						
IDI				LR	LR	03 42 46.4	
	comp=Z,1μm,19.4s,baz=162,slow=60						
IDI	Anoyia	0.88	81	P	Pg	03 42 11.8	-1.4
IDI				S	Sb	03 42 25.5	+0.4
IDI	Anoyia	0.88	81		Pg	03 42 12.2	-1.1
IDI					Sg	03 42 24.6	-0.2
IDI	Anoyia	0.88	81	Pg	Pg	03 42 12.7	-0.6
IDI	Anoyia	0.88	81	P	Pg	03 42 12.1	-1.1
IACM	Heraklion	1.03	81	P	Pb	03 42 15.0	-0.9
IACM				S	Sn	03 42 31.7	+1.2
IACM	Heraklion	1.03	81	P	Pb	03 42 15.3	-0.5
KTHA	Kythira Island	1.26	331	P	Pb	03 42 19.6	-0.2
KTHA	Kythira Island	1.26	331	Pn	Pg	03 42 20.4	-0.1
KTHA				Sn	Sg	03 42 37.9	+1.0
KTHA	Kythira Island	1.26	331	P	Pg	03 42 20.1	-0.4
NPS	Neapolis	1.47	85	P	Pb	03 42 23.6	+0.3
NPS				S	Sg	03 42 45.4	+1.9
NPS	Neapolis	1.47	85	P	Pb	03 42 23.1	-0.3
NPS1	Neapolis Lacon	1.49	336	P	Pb	03 42 23.8	+0.1
MHLO	Agia Marina, M	1.60	17	P	Pb	03 42 25.8	+0.2
MHLO				S	Sg	03 42 47.8	+0.1
MHLO	Agia Marina, M	1.60	17	P	Pb	03 42 25.1	-0.4
MNVA	Monemvasia	1.66	338	P	Pb	03 42 26.3	-0.2
VLI	Veliai	1.72	335	S	Sg	03 42 49.9	-1.5
VLI	Veliai	1.72	335	P	Pb	03 42 27.0	-0.6
THR9	Santorini-Faro	1.73	46	P	Pb	03 42 27.6	-0.2
THR6	Thira Island,	1.75	46	P	Pb	03 42 27.9	-0.3
SAP3	Santorini-Thir	1.78	44	P	Pb	03 42 28.2	-0.3
THERA	Ancient Thera,	1.81	48	P	Pn	03 42 27.7	+0.7
ZKR	Zakros	1.96	91	Pn	Pb	03 42 31.8	0.0
ZKR	Zakros	1.96	91	P	Pb	03 42 31.7	0.0
APE	Apeiranthos	2.35	35	Pn	Pb	03 42 36.5	-2.0
APE	Apeiranthos	2.35	35	*i* P	Pn	03 42 34.8	+0.2
APE	Apeiranthos	2.35	35	P	Pn	03 42 35.1	+0.5
APE	Apeiranthos	2.35	35	P	Pn	03 42 35.4	+0.9
PYL	PYLOS	2.42	316	P	Pn	03 42 36.6	+1.2
MET2	Kameni Chora,	2.48	351	P	Pn	03 42 37.4	+1.1
MET4	Agioi Theodoro	2.48	352	P	Pn	03 42 37.0	+0.7
MET5	Makryloggos,Me	2.49	351	P	Pn	03 42 37.5	+1.1
ITM	Ithomi	2.54	323		Pn	03 42 39.1	+2.0
ITM	Ithomi	2.54	323	Pn	Pb	03 42 39.4	-2.2
ITM	Ithomi	2.54	323	P	Pn	03 42 38.8	+1.8
VLY	Voula,Athens	2.69	359	P	Pn	03 42 40.5	+1.3
KARP	Karpathos	2.75	81		Pn	03 42 42.4	+2.4
KARP	Karpathos	2.75	81	Pn	Pb	03 42 42.9	-2.4
KARP	Karpathos	2.75	81	P	Pn	03 42 42.0	+2.0
PTL	Penteli	2.89	1	P	Pn	03 42 43.1	+1.2
KARY	Karystos	2.91	10	P	Pn	03 42 43.4	+1.2
DION	Dionisos Attik	2.92	2	P	Pn	03 42 43.4	+1.1
LTK	Loutraki	2.94	347	P	Pn	03 42 43.4	+0.7
GUR	Goura	3.02	337	P	Pn	03 42 45.9	+2.2
VIL2	Platees	3.08	352	P	Pn	03 42 44.8	+0.3
KLV	Kalavryta, Ach	3.18	335	P	Pn	03 42 47.4	+1.5
DRO	Drossia	3.27	329	P	Pn	03 42 48.8	+1.7
YAZI	Mula-Dat§a-	3.31	62	P	Pn	03 42 49.9	+2.2
YAZI				S	Sn	03 43 23.1	-3.9
BODT	Bodrum	3.40	55	Pn	Pn	03 42 52.5	+3.6
DAT	Datca	3.42	62	P	Pn	03 42 52.2	+2.8
DAT				S	Sn	03 43 27.7	-2.2
DAT	Datca	3.42	62	Pn	Pn	03 42 51.8	+2.5
RLS	Riolos of Patr	3.46	327	P	Pn	03 42 50.6	+0.9
KYMI	Kymi, Euboea I	3.48	4	P	Pn	03 42 50.9	+1.0
BDRM	Kayabasi	3.49	56	P	Pn	03 42 52.5	+2.3
BDRM				S	Sn	03 43 28.5	-2.9
LTHK	Lithakia	3.51	317	P	Pn	03 42 50.1	-0.2
SMG	Samos	3.52	43	P	Pn	03 42 51.1	+0.6
LKR	Lokris	3.55	349	P	Pn	03 42 52.0	+1.1
ATAL	Atalanti	3.59	350	P	Pn	03 42 52.5	+1.0
DDIM	Aydin, Didim	3.59	49	P	Pn	03 42 55.1	+3.7
DDIM				S	Sn	03 43 36.9	+3.2
AXS	Araxos	3.62	328	P	Pn	03 42 52.8	+0.9
ARG	Arkhangelos	3.66	72		Pn	03 42 55.5	+3.1
ARG	Arkhangelos	3.66	72	Pn	Pn	03 42 55.5	+3.1
ARG	Arkhangelos	3.66	72	P	Pn	03 42 55.5	+3.1
CHOS	Chios island	3.69	28	Pn	Pn	03 42 55.7	+2.8
CHOS	Chios island	3.69	28	P	Pn	03 42 53.3	+0.4
AXAR	Agios Charalam	3.72	346	P	Pn	03 42 54.6	+1.3
GCAM	G?zelcaml?	3.74	46	P	Pn	03 42 54.3	+0.8
GCAM				S	Sn	03 43 35.1	-2.3
GCAM	G?zelcaml?	3.74	46	Pn	Pn	03 42 56.6	+3.0
ZEYE	Izmir, Urla-Ze	3.75	34	P	Pn	03 42 53.7	-0.1
ZEYE				S	Sn	03 43 36.9	-0.9
SLUM	Salum	3.84	162	P	Pn	03 42 55.0	+0.1
SLUM				S	Sn	03 43 41.8	+1.9
MLSB	Milas	3.84	55	Pn	Pn	03 42 57.4	+2.4
KUSD	Kusadasi-Aydin	3.88	45	Pn	Pn	03 42 58.7	+3.2
URLA	Izmir	3.89	34	P	Pn	03 42 54.5	-1.2
URLA				S	Sn	03 43 42.8	+1.5
URLA	Izmir	3.89	34	Pn	Pn	03 42 56.9	+1.2
TURN	Turunc	3.93	64	P	Pn	03 42 58.9	+2.7
TURN				S	Sn	03 43 42.2	0.0
TURN	Turunc	3.93	64	Pn	Pn	03 42 59.4	+3.2
KARB	zmir-Karabur	4.07	30	P	Pn	03 42 58.8	+0.7
YER	Yerkesik	4.11	60	Pn	Pn	03 43 02.1	+3.4
BLCB	Balcova	4.13	38	Pn	Pn	03 43 02.1	+3.2
NEO	Neokhori	4.17	354	P	Pn	03 43 00.4	+0.9
MULA	Mugla, Merkez-	4.20	59	P	Pn	03 43 04.8	+4.9
MULA				S	Sn	03 43 49.1	+0.2
DALY	Dalyan (Mula)	4.25	66	Pn	Pn	03 43 04.3	+3.7
AYDB	Zeytinkoy-Aydi	4.30	48	Pn	Pn	03 43 04.6	+3.3
SIGR	SIGRI	4.36	21	Pn	Pn	03 43 04.8	+2.7
IZMR	zmir-demi	4.46	47	P	Pn	03 43 06.0	+2.6
ESEN	Aydn-Nazilli	4.50	53	P	Pn	03 43 06.5	+2.5
ESEN				S	Sn	03 43 55.1	-1.0
IZZE	Mula-Seydike	4.57	72	P	Pn	03 43 07.1	+2.1
IZZE				S	Sn	03 43 52.7	-5.3
ZEDA	zmir-Bergama	4.61	33	P	Pn	03 43 06.8	+1.3
THL	Klokotos Trika	4.63	342	P	Pn	03 43 06.8	+1.0
DNZT	Denizli-Tavas-	4.71	62	P	Pn	03 43 10.9	+4.0
DNZT				S	Sn	03 44 02.2	+0.8
TAVA	DENIZLI_Tavas	4.71	59	P	Pn	03 43 10.4	+3.4
TAVA				S	Sn	03 43 56.6	-4.9
KIRA	zmir-Kiraz	4.77	49	P	Pn	03 43 10.3	+2.5
AKAS	Kas	4.83	75	P	Pn	03 43 08.6	0.0
AKAS				S	Sn	03 44 01.1	-3.3
AKAS	Kas	4.83	75		Pn	03 43 11.5	+2.9
CAEL	Denizli, Camel	4.86	65	P	Pn	03 43 12.2	+3.1
DNIZ	Denizli-Tavas-	4.87	58	P	Pn	03 43 13.1	+3.8
KNIK	Mula-Seydike	4.96	68	P	Pn	03 43 13.7	+3.3
KNIK				S	Sn	03 44 02.2	-5.4
LIT	Litokhoron	5.05	348		Pn	03 43 13.2	+1.6
LIT	Litokhoron	5.05	348	P	Pn	03 43 13.2	+1.6
MANT	Manisa	5.05	47	P	Pn	03 43 15.5	+3.8
MANT	Manisa	5.05	47		Pn	03 43 15.3	+3.6
GOLH	Golhisar	5.08	64	P	Pn	03 43 15.5	+3.4
GOLH				S	Sn	03 44 06.2	-4.5
ELL	Elmali	5.18	70		Pn	03 43 16.9	+3.4
ELL	Elmali	5.18	70	P	Pn	03 43 16.9	+3.4
INCE	Denizli-Bozkur	5.29	60	P	Pn	03 43 18.6	+3.7
INCE				S	Sn	03 44 08.1	-7.7
AKUM	Antalya-Kumluc	5.43	76	P	Pn	03 43 19.1	+2.4
AKUM				S	Sn	03 44 11.8	-7.3
USAK	Uak-Merkez	5.47	48	P	Pn	03 43 21.3	+3.9
DEMI	Demirci	5.51	44	P	Pn	03 43 22.6	+4.7
PASA	Karahalli, USA	5.55	53	P	Pn	03 43 22.8	+4.2
KORT	Korkueli	5.59	69	P	Pn	03 43 19.6	+0.4
KORT				S	Sn	03 44 20.3	-3.1
BRDR	BURDUR-Merkez	5.63	61	P	Pn	03 43 23.4	+3.8
BUCA	Burdur, Bucak-	5.86	66	P	Pn	03 43 25.2	+2.5
KZIL	AFYON_Kizioren	5.94	57	P	Pn	03 43 28.0	+4.1
ISP	Isparta	6.01	62	Pn	Pn	03 43 27.2	+2.3
ISP	Isparta	6.01	62	*i* P	Pn	03 43 26.6	+1.7
SWA2		6.06	166	P	Pn	03 43 24.6	-0.8
SWA2				S	Sn	03 44 33.3	-1.3
RDO	Rodhopi	6.13	12		Pn	03 43 29.2	+2.8
VAY	Valandovo	6.23	351	*i* Pn	Pn	03 43 31.7	+3.9
VAY				*e*Sn	Sn	03 44 46.6	+7.8
OHR	Ohrid	6.41	339	*e*Pn	Pn	03 43 33.0	+2.7
OHR				*e*Sn	Sn	03 44 44.1	+0.9
TIP	Timpagrande	6.92	308		Pn	03 43 37.8	+0.4
TIP	Timpagrande	6.92	308	⇑P	Pn	03 43 37.5	+0.2
BORA	Eskisehir	7.07	46		Pn	03 43 43.3	+4.0
CEL	Celeste	7.08	298		Pn	03 43 39.2	-0.4
CSS	Mathiatis	7.80	89		Pn	03 43 48.8	-0.6
CSS	Mathiatis	7.80	89	P	Pn	03 43 48.5	-0.8
CSS	Mathiatis	7.80	89	S	Sn	03 45 14.5	-3.0
MATE	Matera	7.86	316	⇑P	Pn	03 43 51.9	+1.8
ELND	Elena	7.92	11	⇓P	Pn	03 43 54.7	+3.7
RAFF	Raffo Rosso	7.92	288		Pn	03 43 50.5	-0.6
VAE	Valguarnera	7.94	290	Pn	Pn	03 43 51.7	+0.3
	7.4nm,0.8s,baz=182,slow=8.9,SNR=4.8						
VAE				Sn	Sn	03 45 17.4	-3.7
	3.6nm,0.3s,baz=39,slow=7.0,SNR=7.4						
CUC	Castrocucco	7.98	310		Pn	03 43 52.5	+0.7
PDG	Podgorica	8.09	335		Pn	03 43 55.4	+2.1
PDG	Podgorica	8.09	335	⇑P	Pn	03 43 56.4	+3.1
RYAN	Fayoum	8.16	136	P	Pn	03 43 59.3	+5.0
PLVB	Pleven	8.24	4	⇑P	Pn	03 43 59.6	+4.3
ACER	Acerenza	8.38	314		Pn	03 43 57.5	+0.2
ANTO	Ankara	8.54	54		Pn	03 44 02.9	+3.4
ANTO	Ankara	8.54	54	P	Pn	03 44 02.9	+3.4
BOVS	Bovan	8.62	350	⇑P	Pn	03 44 04.1	+3.5
HFRF	Wahat Farafira	8.86	153	P	Pn	03 44 05.9	+2.0
BR131	Keskin Array S	9.04	57	Pn	Pn	03 44 09.9	+3.5
BR131	Keskin Array S	9.04	57	*i* P	Pn	03 44 09.6	+3.2
BRTR	Keskin Array B	9.04	57	Pn	Pn	03 44 06.2	-0.3
	0.3nm,0.3s,baz=230,slow=13,SNR=32						
BRTR				LR	LR	03 48 30.3	
	comp=Z,107nm,19.1s,baz=240,slow=44						
	2.7nm,0.6s						
BRTR	Keskin Array B	9.04	57		Pn	03 44 09.9	+3.5
NBNS	Bani Suef	9.09	134	P	Pn	03 44 08.2	+1.0
SGRT	San Giovanni R	9.14	319	Pn	Pn	03 44 06.2	-1.5
PAOL	Paolisi	9.36	312		Pn	03 44 10.8	+0.1
MDVR	Moldovita	9.75	351	⇓P	Pn	03 44 19.7	+3.6
HERR	Herculane	9.77	354	⇓P	Pn	03 44 19.3	+3.0
SLTI	Sal'it	9.79	104	P	Pn	03 44 12.2	-4.4
SLTI	Sal'it	9.79	104	S	Sn	03 46 01.2	-5.1
KZIT	Kziot	9.83	113	P	Pn	03 44 13.2	-4.1
KZIT	Kziot	9.83	113	S	Sn	03 46 02.6	-4.9
MMA0B	Mount Meron ar	9.84	99	P	Pn	03 44 13.0	-4.4
MMA0B	Mount Meron ar	9.84	99	S	Sn	03 46 03.7	-4.0
MMAI	Mount Meron Ar	9.84	99	Pn	Pn	03 44 15.9	-1.5
	2.7nm,0.3s,baz=302,slow=13,SNR=12						
MMAI				Sn	Sn	03 46 02.6	-5.1
	3.1nm,0.3s,baz=270,slow=32,SNR=6.5						
	2.3nm,0.4s						
AMAZ	Amatzia	9.96	108	P	Pn	03 44 14.5	-4.4
SALP	Salfit	9.97	105	P	Pn	03 44 14.5	-4.6
GEM	Giv'at Ha'Em	10.00	98	P	Pn	03 44 15.3	-4.2
GEM	Giv'at Ha'Em	10.00	98	S	Sn	03 46 07.4	-4.1
KSHT	Keshet	10.18	99	P	Pn	03 44 18.0	-4.0
KSHT	Keshet	10.18	99	S	Sn	03 46 12.2	-3.8
YTIR	Yattir	10.18	109	P	Pn	03 44 17.7	-4.4
ARR	Arges	10.22	3	⇓P	Pn	03 44 26.8	+4.3
UJAP	Al Uja	10.22	105	P	Pn	03 44 18.2	-4.4
GZR	Gura Zlata	10.26	356	⇓P	Pn	03 44 27.1	+4.1
GZR	Gura Zlata	10.26	356	P	Pn	03 44 27.1	+4.1
LOT	Lotru	10.28	360	⇑P	Pn	03 44 27.7	+4.3
BALJ	Balqa	10.31	104		Pn	03 44 22.8	-1.0
MLR	Muntele Rosu	10.45	8	Pn	Pn	03 44 23.4	-2.4
	0.2nm,0.3s,baz=169,slow=9.7,SNR=8.4						
MLR				LR	LR	03 48 23.3	
	comp=Z,51nm,18.8s,baz=192,slow=38						
	0.5nm,0.4s						
MLR	Muntele Rosu	10.45	8	⇑P	Pn	03 44 30.1	+4.3
GHAJ	Ghor Haditha	10.56	108		Pn	03 44 26.8	-0.3
HRFI	Mount Harif	10.74	115	P	Pn	03 44 25.4	-4.3
HRFI	Mount Harif	10.74	115	S	Sn	03 46 24.8	-5.1
BLY	Banja Luka	10.85	334	⇓P	Pn	03 44 33.1	+2.1
EIL	Elat	10.88	117	Pn	Pn	03 44 31.3	-0.2
	1.5nm,0.3s,baz=0.6,slow=3.7,SNR=14						
EIL				Sn	Sn	03 46 26.6	-6.4
	2.5nm,0.3s,baz=303,slow=21,SNR=7.2						
	12nm,0.7s						
PLOR	Plostina	10.90	10	⇓P	Pn	03 44 36.6	+4.9
PLOR	Plostina	10.90	10	P	Pn	03 44 36.6	+4.8
VRI	Vrincioaia	10.92	11	⇓P	Pn	03 44 36.7	+4.5
VRI	Vrincioaia	10.92	11	P	Pn	03 44 36.6	+4.5
MDB	Medias	10.98	2	⇓P	Pn	03 44 37.4	+4.4
MDB	Medias	10.98	2	P	Pn	03 44 37.3	+4.4
BOSR	Bodos	10.99	7	⇑P	Pn	03 44 37.0	+3.9
GAZ	Gaziantep	11.01	76		Pn	03 44 34.0	+0.6
TURR	Turia	11.01	8	⇑P	Pn	03 44 38.1	+4.8
ASF	Jabal al Asfar	11.29	102	Pn	Pn	03 44 37.9	+0.6
	baz=289,slow=18						
ASF				Sn	Sn	03 46 37.0	-6.4
	baz=300,slow=16						
NRCA	Norcia	11.31	316		Pn	03 44 38.5	+0.9
FDMO	Fiordimonte	11.46	317		Pn	03 44 40.4	+0.9
MARR	Marisel-Cluj	11.52	358	⇓P	Pn	03 44 44.1	+3.7
TESR	Tescani	11.54	10	⇑P	Pn	03 44 45.4	+4.9
DRGR		11.65	356	⇑P	Pn	03 44 46.2	+4.0
DRGR		11.65	356	P	Pn	03 44 46.1	+4.0
KEST	Kesra	11.83	277	Pn	Pn	03 44 44.4	-0.2
	0.1nm,0.3s,baz=90,slow=9.1,SNR=1.8						
KEST				Sn	Sn	03 46 52.0	-4.5
	0.1nm,0.3s,baz=163,slow=22,SNR=1.2						
	1.0nm,0.6s						
SOKA	Soboth	13.28	333	*e*Pn	Pn	03 45 06.0	+1.6
	0.8nm,0.4s						
ARSA	Arzberg	13.59	335	*e*Pn	Pn	03 45 10.6	+2.0
	0.9nm,0.6s						
MODS	Modra-Piesok	14.07	342	*e*P	P	03 45 28.8	+5.9
MODS	Modra-Piesok	14.07	342	*e*P	P	03 45 28.8	+5.9
KOPT	Kop Dagi	14.08	65		Pn	03 45 17.8	+2.3
KBA	Koelnbreinsper	14.27	330	*e*P	P	03 45 27.3	+2.0
	1.1nm,0.5s						
MOA	Molln	14.55	334	*e*Pn	Pn	03 45 23.5	+1.8
	3.3nm,1.3s						
LESA	Schwarzleotal	14.83	329	*e*P	P	03 45 32.7	+1.4
	2.3nm,0.7s						
MAUC	Maruska	14.87	345	*e*P	P	03 45 37.1	+5.3
GURO	Guroymak-BITLI	14.96	72		Pn	03 45 30.1	+2.6
VRAC	Vranov	15.11	342	Pn	Pn	03 45 29.8	+0.6
	0.6nm,0.3s,baz=161,slow=10,SNR=9.4						
VRAC				LR	LR	03 52 59.4	
	comp=Z,313nm,18.3s,baz=161,slow=44						
	0.6nm,0.6s						
WTTA	Wattenberg	15.16	327	*e*Pn	Pn	03 45 31.1	+1.1
	2.4nm,0.8s						

WATA	Walderalm	15.24	327	*e*Pn	Pn	03 45 32.8	+1.7
	0.6nm,0.4s						
SQTA	Sankt Quirin	15.32	326	*e*Pn	Pn	03 45 34.2	+2.1
	1.7nm,0.9s						
CKRC	Cesky Krumlov	15.36	336	*e*P	P	03 45 38.6	+1.4
CKRC	Cesky Krumlov	15.36	336	*e*P	P	03 45 38.6	+1.4
MOTA	Moosalm	15.46	326	*e*Pn	Pn	03 45 35.5	+1.6
	4.2nm,1.4s						
GEC2	GERESS Array S	15.59	334	P	P	03 45 41.5	+1.6
GERES	GERESS Array B	15.59	334	Pn	Pn	03 45 35.0	-0.6
	0.1nm,0.3s,baz=147,slow=11,SNR=12						
GERES				LR	LR	03 53 28.7	
	comp=Z,116nm,19.6s,baz=250,slow=45						
	0.5nm,0.7s						
GERES	GERESS Array B	15.59	334	P	Pn	03 45 35.0	-0.6
DAVOX	Davos/Dischmat	15.65	322	Pn	Pn	03 45 35.1	-1.4
	0.3nm,0.3s,baz=147,slow=15,SNR=11						
DAVOX				Sn	Sn	03 48 21.2	-8.6
	0.1nm,0.3s,baz=139,slow=23,SNR=1.6						
	0.8nm,0.8s						
RETA	Reutte	15.72	326	*e*Pn	P	03 45 39.2	-2.1
	1.9nm,1.0s						
KHC	Kasperske Hory	15.88	335		Pn	03 45 40.7	+1.5
KHC	Kasperske Hory	15.88	335	*ce*P	P	03 45 43.8	+0.9
KHC				pmax	pmax		
	comp=Z,15nm,1.7s						
KHC	Kasperske Hory	15.88	335	*e*P	P	03 45 44.3	+1.4
ZVC	Zvikov	15.93	337	*e*P	P	03 45 44.4	+0.9
DAVA	Damuels	16.00	323	*e*Pn	P	03 45 43.0	-1.5
	comp=Z,2.7nm,0.6s						
AKASG	Malin Array Be	16.02	13	Pn	Pn	03 45 37.8	-3.2
	comp=Z,1.4nm,0.3s,baz=204,slow=11,SNR=4.9						
AKASG				LR	LR	03 51 34.4	
	comp=Z,51nm,20.0s,baz=181,slow=36						
	comp=Z,0.9nm,0.7s						
AKASG	Malin Array Be	16.02	13	*i* P	P	03 45 44.7	+0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKBB	Malin Array Si	16.02	13	*i* P	P	03 45 43.4	-1.1
DPC	Dobruska-Polom	16.14	342	*e*P	P	03 45 46.7	+0.8
DPC	Dobruska-Polom	16.14	342	*e*P	P	03 45 46.7	+0.8
PRU	Pruhonice	16.30	338	*e*P	P	03 45 48.2	+0.6
PRU	Pruhonice	16.30	338	*e*P	P	03 45 48.2	+0.6
NEUR	Neytrino	16.70	55	*i* P	P	03 45 52.2	0.0
SHA1	Shidzhatmaz	16.86	54	*ce*P	P	03 45 55.2	+1.2
KIV	Kislovodsk	16.96	53	*e*P	P	03 45 55.9	+0.8
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
KIV				MLR	MLR		
	comp=Z,27nm,14.0s						
KVAR	Kislovodsk Arr	16.97	53	Pn	Pn	03 45 53.2	-0.1
	baz=261,slow=4.3						
	comp=Z,1.8nm,0.7s						
KBZ	Khabaz	17.01	54	Pn	Pn	03 45 54.1	+0.4
	comp=Z,0.2nm,0.3s,baz=232,slow=8.6,SNR=13						
	comp=Z,10nm,1.0s						
KBZ	Khabaz	17.01	54	*ce*P	P	03 45 55.7	+0.2
NCK	Nalchik	17.39	55	*i* P	P	03 46 00.4	+0.7
CLL	Collm	17.93	337	*e*P	P	03 46 09.0	+3.4
CLL	Collm	17.93	337	*e*Px	Px	03 46 09.0	
CLL				*i* pP	sP	03 46 12.6	+1.7
CLL				*e*x	x	03 46 27.0	
OBN	Obninsk	21.82	20	*e*P	P	03 46 50.1	+2.2
OBN				*e*PPP	PPP	03 47 18.0	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,74nm,21.0s						
ESDC	Sonseca Array	22.49	290	P	P	03 46 54.9	-0.4
	comp=Z,2.2nm,0.8s,baz=82,slow=9.3,SNR=24						
	comp=Z,2.2nm,0.8s						
ESDC	Sonseca Array	22.49	290	IAmb	IAmb	03 46 58.7	
	comp=Z,2.3nm,1.1s						
MD31	MD31	23.77	273	P	P	03 47 09.3	+0.8
MD31				IAmb	IAmb	03 47 41.3	
	comp=Z,7.3nm,1.3s						
PBRG	Braganca	24.75	295	*e*P	P	03 47 18.7	+1.3
PBRG				*i* IAmb	IAmb	03 47 31.3	
	comp=Z,21nm,1.7s						
PBAR	Barrancos	24.88	286	*e*P	P	03 47 20.8	+2.2
PBAR				*i* IAmb	IAmb	03 47 24.0	
	comp=Z,23nm,1.9s						
MVO	Moncorvo	24.91	293	*e*P	P	03 47 20.1	+1.2
MVO				*i* IAmb	IAmb	03 47 22.0	
	comp=Z,32nm,1.7s						
PMRV	Marv??o	25.13	289	*e*P	P	03 47 19.7	-1.1
PMRV				*i* IAmb	IAmb	03 47 21.5	
	comp=Z,22nm,1.4s						
PESTR	Estremoz	25.29	288	*e*P	P	03 47 23.0	+0.7
PESTR				*i* IAmb	IAmb	03 47 26.0	
	comp=Z,14nm,2.1s						
PVRL	Vila Real	25.43	293	*e*P	P	03 47 19.7	-3.9
PVRL				*i* IAmb	IAmb	03 47 30.5	
	comp=Z,32nm,1.8s						
EVO	Evora	25.63	287	*e*P	P	03 47 27.7	+2.4
EVO				*i* IAmb	IAmb	03 47 33.6	
	comp=Z,16nm,1.7s						
PARRA	Arraiolos	25.64	288	*e*P	P	03 47 27.1	+1.7
PARRA				*i* IAmb	IAmb	03 47 28.3	
	comp=Z,27nm,1.5s						
PBDV	Barranco-do-Ve	25.65	284	*e*P	P	03 47 29.9	+4.3
PBDV				*i* IAmb	IAmb	03 47 34.9	
	comp=Z,48nm,1.7s						
PCAB	Cabril	25.70	294	*e*P	P	03 47 27.2	+1.3
PCAB				*i* IAmb	IAmb	03 47 34.7	
	comp=Z,27nm,1.6s						
PSARD	Sardoal	25.73	289	*e*P	P	03 47 26.8	+0.6
PSARD				*i* IAmb	IAmb	03 47 35.5	
	comp=Z,28nm,1.7s						
PMTG	Montargil	25.78	288	*e*P	P	03 47 28.9	+2.2
PMTG				*i* IAmb	IAmb	03 47 31.1	
	comp=Z,27nm,1.8s						
HFS	Hagfors	25.84	348	P	P	03 47 25.5	-1.6
	comp=Z,1.6nm,0.4s,baz=151,slow=9.7,SNR=16						
HFS				LR	LR	04 00 11.2	
	comp=Z,88nm,18.3s,baz=183,slow=43						
	comp=Z,1.6nm,0.4s						
FINES	FINESS Array B	26.34	2	P	P	03 47 29.9	-1.6
	comp=Z,7.9nm,1.0s,baz=156,slow=10,SNR=4.5						
	comp=Z,7.9nm,1.0s						
NC602	NORSAR Array S	26.79	347	P	P	03 47 34.8	-0.8
NC602				IAmb	IAmb	03 47 57.1	
	comp=Z,29nm,1.4s						
NOA	NORSAR Array B	27.14	347	P	P	03 47 38.2	-0.5
	comp=Z,1.8nm,1.0s,baz=148,slow=8.9,SNR=5.3						
NOA				LR	LR	03 59 45.2	
	comp=Z,75nm,18.8s,baz=170,slow=40						
	comp=Z,1.8nm,1.0s						
EKA	Eskdalemuir Ar	27.42	326	P	P	03 47 41.3	0.0
	comp=Z,3.4nm,0.9s,baz=126,slow=8.6,SNR=4.7						
	comp=Z,3.4nm,0.9s						
AKTO	Aktyubinsk	29.06	48	LR	LR	04 04 02.8	
	comp=Z,46nm,19.4s,baz=190,slow=46						
TORD	Torodi Ar. Bea	29.66	228	P	P	03 48 02.4	+0.7
	comp=Z,3.1nm,0.3s,baz=32,slow=13,SNR=1.8						
	comp=Z,3.1nm,0.3s						
ARTI	Arti	31.60	37	*c i*P	P	03 48 21.1	+2.7
ARTI				S	S	03 53 31.8	+5.0
ARTI				SS	SnSn	03 55 14.0	+1.6
ARTI				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ARCES	ARCESS Array B	34.45	1	P	P	03 48 42.0	-1.0
	comp=Z,1.4nm,0.8s,baz=187,slow=7.3,SNR=6.2						
	comp=Z,1.4nm,0.8s						
KK31	Karatay Array	36.68	63	P	P	03 49 03.2	+0.5
KK31				IAmb	IAmb	03 49 08.8	
	comp=Z,2.9nm,0.7s						
KK31	Karatay Array	36.68	63	P	P	03 49 03.2	+0.5
KK31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KKAR	Karatay Array	36.68	63	P	P	03 49 03.9	+1.3
KKAR	Karatay Array	36.68	63	P	P	03 49 03.9	+1.3
GAR	Garm	36.98	70	IAmb	IAmb	03 49 12.5	
	comp=Z,9.7nm,0.9s						
BORK	Borovoye	37.10	47	*ce*P	P	03 49 09.6	+3.5
BORK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
BVAR	Borovoye Array	37.14	47	P	P	03 49 05.0	-1.4
	comp=Z,1.0nm,0.8s,baz=284,slow=6.0,SNR=5.5						
	comp=Z,1.0nm,0.8s						
BVAR	Borovoye Array	37.14	47	P	P	03 49 05.0	-1.4
DBIC	Dimbokro	38.72	230	P	P	03 49 20.1	+0.1
	comp=Z,2.7nm,0.7s,baz=25,slow=6.5,SNR=3.1						
	comp=Z,2.7nm,0.7s						
DBIC	Dimbokro	38.72	230	IAmb	IAmb	03 49 55.9	
	comp=Z,12nm,1.4s						
AAK	Ala-Archa	39.64	63	P	P	03 49 29.2	+1.5
AAK				IAmb	IAmb	03 49 29.9	
	comp=Z,3.7nm,0.8s						
AAK	Ala-Archa	39.64	63	*ce*P	P	03 49 28.7	+1.0
AAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NIL	Nilore	40.47	77	P	P	03 49 35.4	+0.8
NIL				IAmb	IAmb	03 49 36.7	
	comp=Z,12nm,0.7s						
NIL	Nilore	40.47	77	P	P	03 49 35.4	+0.8
NIL				pmax	pmax		
	comp=Z,12nm,0.7s						
KSH	Kashi	41.22	68	P	P	03 49 40.5	-0.3
KSH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KURBB	Kurchatov Arra	41.97	51	P	P	03 49 45.7	-1.0
	comp=Z,1.0nm,0.6s,baz=272,slow=8.6,SNR=18						
	comp=Z,1.0nm,0.6s						
KURK	Kurchatov	42.03	51	P	P	03 49 45.6	-1.5
KURK	Kurchatov	42.03	51	IAmb	IAmb	03 49 51.4	
	comp=Z,2.7nm,1.0s						
KURK	Kurchatov	42.03	51	*ce*P	P	03 49 51.2	+4.1
KURK				pmax	pmax		
	comp=Z,10.0nm,2.5s						
SPITS	Spitsbergen Ar	43.24	358	P	P	03 49 56.4	-0.3
	comp=Z,18nm,1.1s,baz=136,slow=7.2,SNR=8.8						
	comp=Z,18nm,1.1s						
WUS	Wushi	43.34	65	IAmb	IAmb	03 50 00.0	
	comp=Z,9.6nm,0.7s						
MK31	Makanchi Array	44.69	56	*ce*P	P	03 50 09.0	+0.3
MKAR	Makanchi Array	44.69	56	P	P	03 50 08.9	+0.2
	comp=Z,1.4nm,0.5s,baz=279,slow=6.4,SNR=14						
	comp=Z,1.4nm,0.5s						
MKAR	Makanchi Array	44.69	56	P	P	03 50 08.5	-0.2
ZALV	Zalesovo Beam	45.80	46	P	P	03 50 17.0	-0.3
	comp=Z,1.8nm,0.5s,baz=267,slow=9.1,SNR=9.2						
	comp=Z,1.8nm,0.5s						
ZALV	Zalesovo Beam	45.80	46	*i* P	P	03 50 20.2	+2.9
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
EVN	Everest	53.38	79	P	P	03 51 16.8	+0.5
GRTLG	Ghanzi	56.26	183	P	P	03 51 37.8	+1.3
GRTLG				IAmb	IAmb	03 51 38.4	
	comp=Z,13nm,1.4s						
GOMU	GeErMu	56.43	67	P	P	03 51 36.5	-1.5
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SHL	Shillong	58.49	79	IAmb	IAmb	03 51 52.4	
	comp=Z,4.5nm,0.7s						
GTA	Gaotai	58.92	61	*e*P	P	03 51 55.3	+0.1
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				LR	LR		
	comp=N,440nm,10.5s						
GTA				LR	LR		
	comp=E,630nm,10.5s						
GTA				LR	LR		
	comp=Z,300nm,11.6s						
SONM	Songino Array	60.33	50	P	P	03 52 04.8	+0.1
	comp=Z,0.7nm,0.6s,baz=270,slow=7.4,SNR=5.7						
	comp=Z,0.7nm,0.6s						
SONM	Songino Array	60.33	50	IAmb	IAmb	03 52 06.5	
	comp=Z,2.4nm,1.1s						
SCHQ	Schefferville	62.48	319	P	P	03 52 19.4	+0.4
	comp=Z,5.1nm,0.9s,baz=66,slow=8.7,SNR=2.2						
	comp=Z,5.1nm,0.9s						
SCHQ	Schefferville	62.48	319	IAmb	IAmb	03 52 28.7	
	comp=Z,106nm,1.1s						
LZDM	Lanzhou Array	63.13	64	P	P	03 52 24.4	+0.3
	comp=Z,0.9nm,0.3s,baz=272,slow=16,SNR=1.8						
	comp=Z,0.9nm,0.3s						
BOSA	Boshof	63.44	179	P	P	03 52 25.9	+0.2
	comp=Z,1.6nm,0.4s,baz=354,slow=8.5,SNR=10						
	comp=Z,1.6nm,0.4s						
BOSA	Boshof	63.44	179	IAmb	IAmb	03 52 42.0	
	comp=Z,13nm,1.5s						
PZH	PanZhiHua	65.91	74	P	P	03 52 43.8	+1.7
HHC	Hu-ho-hao-te	66.55	56	*e*P	P	03 52 46.7	+0.7
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CMAR	Chiang Mai Arr	67.66	83	P	P	03 52 53.0	-0.2
	comp=Z,1.8nm,0.8s,baz=304,slow=8.5,SNR=8.4						
	comp=Z,1.8nm,0.8s						
PSI	Prapat	76.22	96	LR	LR	04 32 27.9	
	comp=Z,54nm,19.0s,baz=110,slow=40						
YKA	Yellowknife Ar	77.11	342	P	P	03 53 49.2	+0.4
	comp=Z,0.5nm,0.9s,baz=31,slow=5.2,SNR=4.3						
	comp=Z,0.5nm,0.9s						
USRK	Ussuriysk Ar.	77.61	44	P	P	03 53 51.1	-1.0
	comp=Z,3.9nm,0.7s,baz=330,slow=2.0,SNR=5.9						
	comp=Z,3.9nm,0.7s						
KSRS	Korea Array	79.15	52	P	P	03 53 59.8	-0.8
	comp=Z,1.6nm,0.7s,baz=306,slow=6.0,SNR=7.0						
	comp=Z,1.6nm,0.7s						
ILAR	Eielson Array	80.13	356	P	P	03 54 06.0	+0.5
	comp=Z,0.4nm,0.8s,baz=350,slow=3.0,SNR=4.4						
	comp=Z,0.4nm,0.8s						
ILAR	Eielson Array	80.13	356	P	P	03 54 06.0	+0.5
WRA	Warramunga Arr	117.68	96	PKP	PKPdf	04 00 41.8	-0.6
	comp=Z,1.1nm,0.9s,baz=306,slow=1.6,SNR=5.7						
ASAR	Alice Springs	119.13	100	PKP	PKiKP	04 00 45.4	+0.1
	comp=Z,0.9nm,0.7s,baz=315,slow=1.6,SNR=13						

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*MDD **08** 03:58:15.5±1.2, 36°.63N×9°.75W, h24^{km}±9^{km}, mb_Lg2.3/6, Error ellipse: s-maj=8.9km s-min=5.5km az=71.0*
*SFS **08** 03:58:16.7, 36°.72N×9°.74W, h26^{km}, ML2.6/5, ML1.9/12, MLv1.6/12*
*IGIL **08** 03:58:17.4, 36°.72N×9°.68W, h19^{km}, ML1.0*
*INMG **08** 03:58:17.6±1.1, 36°.72N×9°.69W, h20^{km}±4^{km}, ML1.4, Error ellipse: s-maj=5.3km s-min=4.1km az=37.0, #DIST_RANGE: LOCAL #IPMA_REGION: SW Cabo S.Vicente*
*CNRM **08** 03:58:17.9, 36°.50N×8°.86W, h8^{km}*
ISC 08 03:58:16.3±3.0**, 36°.7N**±0°.1×**9°.67W**±0°.10**, h31**^{km}±12^{km}**, n48,** σ1^{s}.**01**/68**, 1C, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	0.79	58	Pg	Pb	03 58 32.0	+0.4
PFVI				Sg	Sb	03 58 43.2	+1.1
PFVI	Vila Bisbo	0.79	58	⇑*e*P	Pb	03 58 32.1	+0.5
PFVI				*e*S	Sb	03 58 43.2	+1.1
PFVI				*i* IAML		03 58 43.9	
PFVI				*i* IAML		03 58 44.0	
PFVI				*i* IAML		03 58 44.2	
PFVI	Vila Bisbo	0.79	58	P	Pb	03 58 30.0	-1.7
PFVI	Vila Bisbo	0.79	58	S	Sb	03 58 39.4	-2.7
MORF	Marmelete	1.00	54	*e*P	Pb	03 58 35.0	-0.1
MORF				*e*S	Sb	03 58 47.9	-0.1
MORF				IAML		03 58 48.7	
	comp=E,3.9nm,0.2s						
MORF	Marmelete	1.00	54	*e*P	Pb	03 58 35.1	-0.1
MORF				*e*S	Sb	03 58 48.8	+0.8
MORF				*i* IAML		03 58 51.1	
MORF				*i* IAML		03 58 51.8	
MORF				*i* IAML		03 58 54.4	
PTEO	Sao Teotonio	1.12	42	*e*S	Sb	03 58 51.2	-0.1
PTEO				*i* IAML		03 58 52.1	
PTEO				*i* IAML		03 58 54.0	
PTEO				*i* IAML		03 58 54.0	
PBDV	Barranco-do-Ve	1.49	69	Pn	Pn	03 58 41.7	+0.8
PBDV	Barranco-do-Ve	1.49	69	*e*P	Pn	03 58 41.7	+0.8
PBDV				*e*S	Sn	03 58 60.0	+0.6
PBDV				*i* IAML		03 59 02.5	
PBDV				*i* IAML		03 59 04.2	
PBDV				*i* IAML		03 59 06.4	
PCVE	Castro Verde	1.59	55	Sn	Sn	03 59 02.7	+0.9
PCVE	Castro Verde	1.59	55	*e*P	Pn	03 58 44.3	+1.9
PCVE				*e*S	Sn	03 59 02.4	+0.5
PCVE				*i* IAML		03 59 03.9	
PCVE				*i* IAML		03 59 04.0	
PCVE				*i* IAML		03 59 04.5	
MESJ	Messejana	1.61	46	*e*P	Pn	03 58 43.3	+0.7
MESJ				*e*S	Sn	03 59 02.2	-0.1
MESJ				IAML		03 59 04.8	
	comp=E,1.3nm,0.0s						
MESJ	Messejana	1.61	46	*e*P	Pn	03 58 43.6	+1.0
MESJ				*e*S	Sn	03 59 02.7	+0.4
MESJ				*i* IAML		03 59 03.0	
MESJ				*i* IAML		03 59 04.7	
MESJ				*i* IAML		03 59 10.5	
PVAQ	Vaqueiros	1.71	66	Pn	Pn	03 58 44.6	+0.7
PVAQ	Vaqueiros	1.71	66	*e*P	Pn	03 58 44.7	+0.8
PVAQ				*e*S	Sn	03 59 05.0	+0.3
PVAQ				*i* IAML		03 59 06.4	
PVAQ				*i* IAML		03 59 07.9	
PVAQ				*i* IAML		03 59 08.9	
PVAQ	Vaqueiros	1.71	66	P	Pn	03 58 42.1	-1.8
PVAQ	Vaqueiros	1.71	66	S	Sn	03 59 00.3	-4.4
EGRO	El Granado	1.93	64	Sn	Sn	03 59 09.8	-0.3
EGRO	El Granado	1.93	64	Sn	Sn	03 59 11.0	+0.9
EGRO				*i* IVmb_Lg		03 59 11.7	
PBEJ	Beja	1.94	47	*e*S	Sn	03 59 10.6	+0.1
PBEJ				*i* IAML		03 59 11.4	
PBEJ				*i* IAML		03 59 11.8	
MOE	Montemor	2.08	30	*e*P	Pn	03 58 50.3	+1.2
MOE				*e*S	Sn	03 59 14.8	+0.9
MOE				*i* IAML		03 59 15.8	
MOE				*i* IAML		03 59 16.5	
MOE				*i* IAML		03 59 18.1	
EVO	Evora	2.24	36	Pn	Pn	03 58 51.3	+0.1
EVO				Sn	Sn	03 59 17.3	-0.5
EVO	Evora	2.24	36	*e*P	Pn	03 58 51.6	+0.4
EVO				*e*S	Sn	03 59 17.5	-0.2
EVO				*i* IAML		03 59 18.2	
EVO				*i* IAML		03 59 18.2	
EVO				*i* IAML		03 59 18.3	
PMAFR	Mafra	2.25	8	Pn	Pn	03 58 51.5	+0.1
PMAFR				Sn	Sn	03 59 17.4	-0.8
PMAFR	Mafra	2.25	8	*e*P	Pn	03 58 51.6	+0.1
PMAFR				*e*S	Sn	03 59 17.7	-0.5
PMAFR				*i* IAML		03 59 20.0	
PMAFR				*i* IAML		03 59 20.6	
PMAFR				*i* IAML		03 59 20.9	
PARRA	Arraiolos	2.46	31	*e*P	Pn	03 58 55.2	+0.9
PARRA				*e*S	Sn	03 59 22.9	-0.4
PARRA				*i* IAML		03 59 24.3	
PARRA				*i* IAML		03 59 24.5	
PARRA				*i* IAML		03 59 24.7	
PBAR	Barrancos	2.55	54	Sn	Sn	03 59 24.7	-0.8
PBAR	Barrancos	2.55	54	*e*P	Pn	03 58 57.0	+1.5
PBAR				*e*S	Sn	03 59 25.4	-0.1
PBAR				*i* IAML		03 59 27.4	
PBAR				*i* IAML		03 59 27.7	
PBAR				*i* IAML		03 59 41.8	
PMTG	Montargil	2.61	26	*e*P	Pn	03 58 57.2	+0.8
PMTG				*e*S	Sn	03 59 26.4	-0.5
PMTG				*i* IAML		03 59 26.9	
PMTG				*i* IAML		03 59 27.4	
PMTG				*i* IAML		03 59 28.5	
EMIN	Mina Concepcio	2.61	66	Sn	Sn	03 59 27.3	+0.2
EMIN				*i* IVmb_Lg		03 59 32.6	
PESTR	Estremoz	2.70	37	Sn	Sn	03 59 28.5	-0.9
PESTR	Estremoz	2.70	37	*e*P	Pn	03 58 58.1	+0.4
PESTR				*e*S	Sn	03 59 29.0	-0.4
PESTR				*i* IAML		03 59 29.8	
PESTR				*i* IAML		03 59 30.2	
PESTR				*i* IAML		03 59 42.6	
PSBE	So Bento	2.87	14	*e*P	Pn	03 59 00.7	+0.7
PSBE				*e*S	Sn	03 59 33.3	-0.2
PSBE				*i* IAML		03 59 35.3	
PSBE				*i* IAML		03 59 36.0	
EBAD	Badajoz	2.93	45	Pn	Pn	03 59 00.4	-0.4
EBAD				Sn	Sn	03 59 34.3	-0.5
EBAD	Badajoz	2.93	45	Pn	Pn	03 59 01.0	+0.2
EBAD				Sn	Sn	03 59 34.0	-0.8
EBAD				*i* IVmb_Lg		03 59 35.6	
ESPR	Espera	3.07	86	Sn	Sn	03 59 37.7	-0.5
PSARD	Sardoal	3.11	22	*e*P	Pn	03 59 04.1	+0.8
PSARD				*e*S	Sn	03 59 38.4	-1.0
PSARD				*i* IAML		03 59 40.4	
PSARD				*i* IAML		03 59 41.2	
PSARD				*i* IAML		03 59 41.6	
PMRV	Marv??o	3.25	33	*e*P	Pn	03 59 05.5	+0.4
PMRV				*e*S	Sn	03 59 41.5	-1.2
PMRV				*i* IAML		03 59 43.3	
PMRV				*i* IAML		03 59 43.9	
PMRV				*i* IAML		03 59 44.0	
PCAS	Casmilo, Conde	3.45	15	*e*P	Pn	03 59 08.4	+0.4
PCAS				*e*S	Sn	03 59 47.9	+0.1
ECAB	El Cabril	3.65	67	Sn	Sn	03 59 51.4	-1.2
ECAB	El Cabril	3.65	67	Sn	Sn	03 59 51.2	-1.4
ECAB				*i* IVmb_Lg		04 00 00.2	
PVIS	Viseu	4.22	19	*e*S	Sn	04 00 06.1	-0.8
EPLA	Plasencia	4.37	39	Sn	Sn	04 00 09.6	-0.8
EPLA				*i* IVmb_Lg		04 00 11.3	
PSIM	Granatula de C	5.13	64	Sn	Sn	04 00 29.2	-0.1
MD31	MD31	5.58	132	P	Pn	03 59 33.0	-4.3
MD31	MD31	5.58	132	S	Sn	04 00 31.2	-9.1
MDT	Midelt	5.71	132	P	Pn	03 59 34.5	-4.5
MDT	Midelt	5.71	132	S	Sn	04 00 34.3	-9.2

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*THE **08** 04:01:42.4, 35°.2N±0°.8×23°.8E±0°.6, h0^{km}±1^{km}, M3.2/14, MLh3.2/14*
*ISK **08** 04:01:42.1, 35°.18N×23°.83E, h5^{km}, ML3.0/15*
*IDC **08** 04:01:42.0±2.9, 35°.54N×23°.74E, h0^{km}, mb3.5/2, mbtmp3.4/5, ML3.0/3, Error ellipse: s-maj=57.4km s-min=27.0km az=11.0*
*ATH **08** 04:01:42.2, 35°.18N×23°.83E, h7^{km}±1^{km}, ML3.4/9, Manual Solution by A.Papageorgiou First location: 2019/12/08 04:02:43, This location: 2019/12/08 08:45:48 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*
ISC 08 04:01:42.4±0.8**, 35°.18N**±0°.03×**23°.81E**±0°.02**, h13**^{km}±6^{km}**, n56,** σ1^{s}.**19**/83**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDR	Palaiochora Ch	0.16	290	P	Pg	04 01 46.0	-0.2
KNDR				S	Sg	04 01 49.0	+0.1
KNDR	Palaiochora Ch	0.16	290	Pg	Pg	04 01 46.1	-0.2
KNDR				Sg	Sg	04 01 49.0	+0.1
KNDR	Palaiochora Ch	0.16	290	P	Pg	04 01 45.9	-0.3
KNDR				S	Sg	04 01 48.8	-0.1
IMMV	Iera Moni Meta	0.31	27	P	Pg	04 01 48.4	-0.5
IMMV				S	Sg	04 01 53.4	+0.1
IMMV	Iera Moni Meta	0.31	27	Pg	Pg	04 01 48.8	-0.1
IMMV				Sg	Sg	04 01 53.2	0.0
CHNB	Souda	0.37	34	P	Pg	04 01 49.5	-0.4
CHNB				S	Sg	04 01 54.8	-0.2
CHAN	Chania	0.39	29	P	Pg	04 01 49.9	-0.3
CHAN				S	Sg	04 01 56.0	+0.5
CHAN	Chania	0.39	29	P	Pg	04 01 49.8	-0.5
CHAN				S	Sg	04 01 55.4	-0.1
VAM	Vamos	0.39	55	P	Pg	04 01 49.6	-0.7
VAM				S	Sg	04 01 55.8	+0.3
VAM	Vamos	0.39	55	P	Pg	04 01 49.4	-0.9
VAM				S	Sg	04 01 55.5	0.0
GVD	Gavdhos	0.41	146	P	Pg	04 01 50.3	-0.3
GVD				S	Sg	04 01 56.4	+0.3
GVD	Gavdhos	0.41	146	Pg	Pg	04 01 50.5	-0.1
GVD				Sg	Sg	04 01 56.8	+0.7
GVD	Gavdhos	0.41	146	P	Pg	04 01 50.1	-0.5
GVD				S	Sg	04 01 55.9	-0.2
ANKY	Antikythira Is	0.80	329	P	Pg	04 01 57.8	-0.2
ANKY				S	Sb	04 02 09.6	+0.7
ANKY	Antikythira Is	0.80	329	P	Pg	04 01 57.8	-0.2
ANKY				S	Sb	04 02 09.3	+0.4
IDI	Anoyia	0.89	83	P	Pg	04 01 57.9	-1.8
IDI				S	Sb	04 02 11.6	+0.1
IDI	Anoyia	0.89	83	Pg	Pg	04 01 58.5	-1.2
IDI				Sg	Sb	04 02 11.9	+0.3
IDI	Anoyia	0.89	83	P	Pg	04 01 59.0	-0.7
IDI				S	Sg	04 02 11.1	-0.2
IACM	Heraklion	1.04	83	P	Pg	04 02 01.1	-1.4
IACM				S	Sb	04 02 16.7	+0.9
IACM	Heraklion	1.04	83	P	Pg	04 02 01.9	-0.6
IACM				S	Sb	04 02 16.2	+0.4
KTHA	Kythira Island	1.23	331	P	Pg	04 02 05.6	-0.5
NPS1	Neapolis Lacon	1.46	336	P	Pn	04 02 09.1	+0.6
NPS1				S	Sn	04 02 28.1	+0.7
NPS	Neapolis	1.48	86	S	Sg	04 02 30.6	+0.6
NPS	Neapolis	1.48	86	P	Pn	04 02 08.5	-0.3
NPS				S	Sn	04 02 28.5	+0.6
MHLO	Agia Marina, M	1.58	18	S	Sg	04 02 33.5	+0.1
MHLO	Agia Marina, M	1.58	18	P	Pb	04 02 11.5	0.0
MHLO				S	Sb	04 02 32.4	+1.0
VLI	Veliai	1.69	336	P	Pn	04 02 12.7	+1.2
VLI				S	Sg	04 02 36.2	-0.6

VLI	**Veliai**	**1.69**	**336**	P	**Pn**	**04 02 12.8**	**+1.2**
VLI				S	**Sb**	**04 02 35.3**	**+0.8**
THR6	**Thira Island,**	**1.75**	**47**	P	**Pn**	**04 02 13.7**	**+1.3**
SAP3	**Santorini-Thir**	**1.77**	**44**	P	**Pn**	**04 02 13.8**	**+1.1**
SAP3				S	**Sn**	**04 02 36.5**	**+1.5**
SNT5	**Nea Kammeni, S**	**1.78**	**46**	P	**Pn**	**04 02 13.4**	**+0.6**
SNT5	**Nea Kammeni, S**	**1.78**	**46**	P	**Pn**	**04 02 13.2**	**+0.4**
THR3	**Thira Island,**	**1.78**	**46**	P	**Pn**	**04 02 13.3**	**+0.4**
THERA	**Ancient Thera,**	**1.80**	**48**	P	**Pn**	**04 02 13.5**	**+0.4**
THERA				S	**Sb**	**04 02 37.5**	**-0.2**
STIA	**Sitia Lasithi**	**1.87**	**89**	P	**Pn**	**04 02 14.5**	**+0.4**
ZKR	**Zakros**	**1.97**	**91**	Pn	**Pn**	**04 02 16.9**	**+1.4**
ZKR	**Zakros**	**1.97**	**91**	P	**Pn**	**04 02 17.0**	**+1.5**
APE	**Apeiranthos**	**2.34**	**36**	P	**Pn**	**04 02 21.6**	**+1.0**
APE	**Apeiranthos**	**2.34**	**36**	Pn	**Pn**	**04 02 22.5**	**+1.8**
PYL	**PYLOS**	**2.40**	**316**	P	**Pn**	**04 02 22.5**	**+1.2**
PYL	**PYLOS**	**2.40**	**316**	P	**Pn**	**04 02 22.0**	**+0.7**
MET2	**Kameni Chora,**	**2.46**	**351**	P	**Pn**	**04 02 22.9**	**+0.7**
ITM	**Ithomi**	**2.51**	**323**	Pn	**Pn**	**04 02 25.1**	**+2.2**
KARP	**Karpathos**	**2.76**	**81**	Pn	**Pn**	**04 02 28.2**	**+1.8**
BODT	**Bodrum**	**3.40**	**55**	Pn	**Pn**	**04 02 37.2**	**+2.1**
DAT	**Datca**	**3.43**	**62**	Pn	**Pn**	**04 02 37.7**	**+2.1**
ARG	**Arkhangelos**	**3.66**	**72**	Pn	**Pn**	**04 02 41.1**	**+2.4**
CHOS	**Chios island**	**3.67**	**29**	Pn	**Pn**	**04 02 41.4**	**+2.5**
URLA	**Izmir**	**3.88**	**34**	Pn	**Pn**	**04 02 44.5**	**+2.7**
TURN	**Turunc**	**3.93**	**65**	Pn	**Pn**	**04 02 44.5**	**+2.1**
YER	**Yerkesik**	**4.11**	**60**	Pn	**Pn**	**04 02 47.6**	**+2.6**
BRTR	**Keskin Array B**	**9.04**	**57**	Pn	**Pn**	**04 03 55.1**	**+2.5**
	0.1nm,0.3s,baz=242,slow=16,SNR=7.6						
	1.5nm,0.9s						
MMAI	**Mount Meron Ar**	**9.85**	**99**	Pn	**Pn**	**04 04 05.3**	**+1.5**
	0.6nm,0.3s,baz=290,slow=9.0,SNR=1.8						
	0.6nm,0.4s						
GERES	**GERESS Array B**	**15.56**	**334**	Pn	**Pn**	**04 05 17.2**	**-4.3**
	baz=147,slow=16,SNR=1.8						
	0.4nm,0.5s						
ESDC	**Sonseca Array**	**22.47**	**290**	P	**P**	**04 06 41.5**	**+0.2**
	0.5nm,1.0s,baz=83,slow=11,SNR=5.0						
	0.5nm,1.0s						
HFS	**Hagfors**	**25.82**	**348**	P	**P**	**04 07 11.6**	**-1.4**
	3.6nm,0.9s,baz=146,slow=9.0,SNR=4.1						
	3.6nm,0.9s						

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*BJI **08** 04:04:31.6, 50°.04N×89°.48E, h5^{km}, mB4.9/4, mb4.2/11, ML4.5/5, Ms4.0/7, Ms7 3.8/5*

*IDC **08** 04:04:33.3±0.8, 49°.82N×89°.62E, h0^{km}, mb4.0/9, mbtmp4.0/17, ML3.6/8, MS3.2/6, Error ellipse: s-maj=12.4km s-min=9.7km az=170.0*

*ASRS **08** 04:04:33.3±0.4, 50°N±2°×9°0E±°, h10^{km}, MLh4.7/15, Error ellipse: s-maj=4.4km s-min=2.2km az=156.7, confirmed*

*MOS **08** 04:04:33.6±3.1, 49°.60N×89°.48E, h11^{km}, mb4.4/5, Error ellipse: s-maj=6.6km s-min=4.7km az=104.2*

*SOME **08** 04:04:35.9, 49°.73N×89°.35E, h5^{km}*

*NEIC **08** 04:04:35.9±2.2, 49°.86N±0°.08×89°.5E±0°.1, h10^{km}±1^{km}, mb4.3/18, Error ellipse: s-maj=14.2km s-min=12.8km az=197.0*

*NNC **08** 04:04:38.2±2.1, 49°.92N×88°.99E, h0^{km}, mb4.1, mpv3.9, Error ellipse: s-maj=23.8km s-min=8.9km az=104.0*

ISC 08 04:04:34.5±1.2, **49°.89N**±0°.03×**89°.46E**±0°.02, **h3**^{km}±8^{km}, **n140,** σ1^{s}.**68**/181, **mb4.0**/12, **MS3.3**/3, **21C-10D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUR	**Chagan-Uzun**	**0.75**	**287**	⇑Pg	**Pg**	**04 04 49.2**	**+0.3**
CUR				Sg	**Sg**	**04 04 59.5**	**+0.9**
CUR	**Chagan-Uzun**	**0.75**	**287**	PG	**Pg**	**04 04 49.2**	**+0.3**
CUR						04 04 59.4	
ULGR	**Ulagan, Altay**	**1.22**	**308**	⇓Pg	**Pg**	**04 04 58.0**	**+0.3**
ULGR				Sg	**Sg**	**04 05 13.6**	**+0.1**
ULGR	**Ulagan, Altay**	**1.22**	**308**	PG	**Pg**	**04 04 58.1**	**+0.3**
TEL	**Teeli**	**1.23**	**22**	⇓Pg	**Pg**	**04 04 56.4**	**-1.7**
TEL				Sg	**Sg**	**04 05 13.1**	**-0.9**
TEL	**Teeli**	**1.23**	**22**	PG	**Pg**	**04 04 56.4**	**-1.7**
AKAR	**Aktash**	**1.27**	**291**	⇑Pg	**Pg**	**04 04 58.4**	**-0.4**
AKAR				Sg	**Sg**	**04 05 15.2**	**+0.1**
AKAR	**Aktash**	**1.27**	**291**	PG	**Pg**	**04 04 58.5**	**-0.2**
DGZ	**Jazzator, Alta**	**1.33**	**263**	⇑Pg	**Pn**	**04 04 59.4**	**-0.8**
DGZ				Sg	**Sn**	**04 05 18.2**	**-0.2**
DGZ	**Jazzator, Alta**	**1.33**	**263**	PG	**Pn**	**04 04 59.5**	**-0.6**
DGZ						04 05 17.3	
CHBI	**Chibit, Altay**	**1.33**	**290**	⇓Pg	**Pn**	**04 04 59.7**	**-0.4**
CHBI				Sg	**Sb**	**04 05 17.6**	**-0.1**
CHBI	**Chibit, Altay**	**1.33**	**290**	PG	**Pn**	**04 04 59.7**	**-0.4**
CHBI						04 05 17.6	
TUNR	**Tungur**	**2.04**	**279**	⇑Pg	**Pb**	**04 05 12.0**	**-0.3**
TUNR				Sg	**Sg**	**04 05 41.3**	**+1.4**
TUNR	**Tungur**	**2.04**	**279**	PN	**Pb**	**04 05 11.9**	**-0.3**
TUNR						04 05 41.3	
YALR	**Yailyu, Altay**	**2.22**	**329**	Pg	**Pb**	**04 05 16.4**	**+1.0**
YALR				Sg	**Sg**	**04 05 46.0**	**+0.1**
YALR	**Yailyu, Altay**	**2.22**	**329**	PN	**Pb**	**04 05 16.3**	**+1.0**
YALR						04 05 45.9	
ARTR	**Artybash**	**2.36**	**325**	Pg	**Pb**	**04 05 18.6**	**+0.8**
ARTR				Sg	**Sg**	**04 05 50.7**	**+0.3**
ARTR	**Artybash**	**2.36**	**325**	PN	**Pb**	**04 05 18.5**	**+0.8**
ARTR						04 05 50.6	
ELDR	**Elanda**	**2.53**	**303**	Pg	**Pb**	**04 05 21.6**	**+1.0**
ELDR				Sg	**Sg**	**04 05 55.6**	**-0.2**
ELDR	**Elanda**	**2.53**	**303**	PN	**Pb**	**04 05 21.5**	**+1.0**
ELDR						04 05 55.5	
DJO	**Djoy, Khakassi**	**3.10**	**20**	Pn	**Pn**	**04 05 27.2**	**+2.8**
DJO				Pg	**Pb**	**04 05 32.2**	**+1.9**
DJO				Sg	**Sg**	**04 06 13.4**	**-0.7**
DJO	**Djoy, Khakassi**	**3.10**	**20**	PN	**Pn**	**04 05 27.2**	**+2.8**
DJO						04 06 13.4	
CERR	**Cheremushki**	**3.21**	**22**	Pn	**Pn**	**04 05 29.1**	**+3.2**
CERR				Pg	**Pg**	**04 05 35.1**	**-0.9**
CERR				Sg	**Sg**	**04 06 16.0**	**-1.8**
CERR	**Cheremushki**	**3.21**	**22**	PN	**Pn**	**04 05 29.1**	**+3.2**
CERR						04 05 35.1	
CERR						04 06 15.9	
VEH	**Verkhnyaya Baz**	**3.42**	**9**	Pg	**Pg**	**04 05 38.1**	**-1.8**
VEH				Sg	**Sg**	**04 06 22.7**	**-1.4**
VEH	**Verkhnyaya Baz**	**3.42**	**9**	PN	**Pg**	**04 05 38.1**	**-1.8**
VEH						04 06 22.7	
KZLR	**Kyzyl**	**3.65**	**58**	Pn	**Pn**	**04 05 34.1**	**+2.1**
KZLR				Pg	**Pb**	**04 05 41.3**	**+1.6**
KZLR				Sg	**Sg**	**04 06 29.7**	**-2.0**
KZLR	**Kyzyl**	**3.65**	**58**	PN	**Pn**	**04 05 34.0**	**+2.1**
KZLR						04 05 41.2	
KZLR						04 06 29.7	
ARDR	**Aradan**	**3.67**	**41**	Pn	**Pn**	**04 05 34.6**	**+2.3**
ARDR				Pg	**Pb**	**04 05 41.7**	**+1.6**
ARDR				Sg	**Sb**	**04 06 27.6**	**+2.5**
ARDR	**Aradan**	**3.67**	**41**	PN	**Pn**	**04 05 34.6**	**+2.3**
ARDR						04 06 27.5	
MALIN	**Malinovka, Kuz**	**3.79**	**340**	Pg	**Pb**	**04 05 44.7**	**+2.6**
MALIN				Sg	**Sg**	**04 06 36.0**	**-0.3**
MALIN	**Malinovka, Kuz**	**3.79**	**340**	PN	**Pb**	**04 05 44.7**	**+2.6**
MALIN						04 06 36.0	
LUZB	**Luzhba, Kemero**	**3.80**	**355**	Pg	**Pb**	**04 05 44.3**	**+2.1**
LUZB				Sg	**Sg**	**04 06 35.6**	**-0.8**
LUZB	**Luzhba, Kemero**	**3.80**	**355**	PN	**Pb**	**04 05 44.3**	**+2.1**
LUZB						04 06 35.6	
KIYZ	**Kiyzas, Kuzbas**	**3.83**	**345**	Pg	**Pb**	**04 05 45.4**	**+2.7**
KIYZ				Sg	**Sg**	**04 06 38.5**	**+1.1**
TAIL	**Tailep, Kuzbas**	**3.84**	**339**	Pg	**Pg**	**04 05 45.8**	**-2.2**
TAIL				Sg	**Sg**	**04 06 36.4**	**-1.3**
TAIL	**Tailep, Kuzbas**	**3.84**	**339**	PN	**Pg**	**04 05 45.7**	**-2.2**
TAIL						04 06 36.3	
ZSN	**Zaisan**	**3.90**	**233**	*e*P	**Pb**	**04 05 45.8**	**+1.9**
	96nm,0.2s						
ZSN				*e*S	**Sb**	**04 06 35.0**	**+3.4**
	471nm,0.6s						
ELT	**Eltsovka**	**3.93**	**330**	Pg	**Pb**	**04 05 46.5**	**+2.0**
ELT				Sg	**Sg**	**04 06 39.1**	**-1.7**
ELT	**Eltsovka**	**3.93**	**330**	PN	**Pb**	**04 05 46.4**	**+2.0**
ELT						04 06 39.0	
TDJR	**Todzha**	**4.88**	**56**	⇑Pn	**Pn**	**04 05 51.2**	**+2.3**
TDJR				Pg	**Pb**	**04 06 01.7**	**+1.1**
TDJR				Sg	**Sb**	**04 07 03.4**	**+3.8**
TDJR	**Todzha**	**4.88**	**56**	PN	**Pn**	**04 05 51.1**	**+2.3**
TDJR						04 07 03.4	
ZAA0	**Zalesovo Array**	**4.98**	**327**		**Pn**	**04 05 51.5**	**+1.4**
ZAA0	**Zalesovo Array**	**4.98**	**327**	⇓Pn	**Pn**	**04 05 52.1**	**+2.0**
	0.8nm,0.3s						
ZAA0				⇑Pg	**Pg**	**04 06 06.3**	**-3.6**
	3.8nm,0.5s						
ZAA0				⇑Lg	Lg	04 07 11.2	
	64nm,0.9s						
ZALV	**Zalesovo Beam**	**4.98**	**327**	Pn	**Pn**	**04 05 52.2**	**+2.1**
	2.0nm,0.3s,baz=142,slow=14,SNR=22						
ZALV				Pg	**Pb**	**04 06 05.3**	**+3.1**
	13nm,0.3s,baz=138,slow=16,SNR=20						
ZALV				Sn	**Sn**	**04 06 52.6**	**+4.5**
	15nm,0.3s,baz=152,slow=25,SNR=5.3						
ZALV				Lg	Lg	04 07 13.6	
	45nm,0.3s,baz=154,slow=28,SNR=7.5						
ZALV				LR	LR	04 08 01.8	
	comp=Z,52nm,20.0s,baz=74,slow=41						
	7.9nm,0.3s						
SALR	**Pechorkino, Sa**	**5.09**	**334**	Pn	**Pn**	**04 05 55.0**	**+3.3**
SALR				Pg	**Pb**	**04 06 07.2**	**+3.0**
SALR				Sg	**Sg**	**04 07 14.6**	**-3.4**
SALR	**Pechorkino, Sa**	**5.09**	**334**	PN	**Pn**	**04 05 54.9**	**+3.3**
SALR						04 07 14.6	
KNGR	**Kungurtug, Tuv**	**5.22**	**79**	Pn	**Pn**	**04 05 54.1**	**+0.5**
KNGR				Pg	**Pb**	**04 06 06.1**	**-0.4**
KNGR				Sg	**Sg**	**04 07 23.7**	**+1.7**
KNGR	**Kungurtug, Tuv**	**5.22**	**79**	*i* PN	**Pn**	**04 05 54.3**	**+0.8**
MK31	**Makanchi Array**	**5.70**	**240**	⇑Pn	**Pn**	**04 06 01.9**	**+1.9**
	1.3nm,0.2s,baz=47,slow=14,SNR=208						
MK31				⇑Pg	**Pb**	**04 06 17.3**	**+2.8**
	28nm,0.5s,baz=56,slow=14,SNR=14						
MK31				⇑Lg	Lg	04 07 34.1	
	116nm,0.6s,baz=60,slow=32,SNR=6.0						
MK31	**Makanchi Array**	**5.70**	**240**	*ce*PN	**Pn**	**04 06 01.7**	**+1.7**
MKAR	**Makanchi Array**	**5.70**	**240**	Pn	**Pn**	**04 06 02.3**	**+2.3**
	3.2nm,0.3s,baz=47,slow=15,SNR=106						
MKAR				Pg	**Pb**	**04 06 14.3**	**-0.2**
	4.7nm,0.3s,baz=54,slow=16,SNR=9.2						
MKAR				Sn	**Sn**	**04 07 06.9**	**+1.0**
	18nm,0.3s,baz=52,slow=16,SNR=5.7						
MKAR				Lg	Lg	04 07 33.7	
	24nm,0.3s,baz=66,slow=31,SNR=13						
MKAR				LR	LR	04 08 20.7	
	comp=Z,147nm,18.3s,baz=290,slow=40						
	5.2nm,0.4s						
MKAR	**Makanchi Array**	**5.70**	**240**		**Pn**	**04 06 01.9**	**+1.9**
MKAR	**Makanchi Array**	**5.70**	**240**	*i* PN	**Pn**	**04 06 02.2**	**+2.3**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
BRCR	**Berchikul'**	**5.81**	**354**	Pn	**Pn**	**04 06 00.3**	**-1.2**
BRCR				Pg	**Pb**	**04 06 19.2**	**+2.8**
BRCR				Sg	**Sg**	**04 07 39.0**	**-1.9**
BRCR	**Berchikul'**	**5.81**	**354**	PN	**Pn**	**04 06 00.2**	**-1.2**
BRCR						04 07 38.9	
MAKZ	**Makanchi**	**5.86**	**241**		**Pn**	**04 06 04.1**	**+1.8**
MAKZ	**Makanchi**	**5.86**	**241**	⇓Pn	**Pn**	**04 06 04.3**	**+2.0**
	comp=Z,16nm,1.0s						
MAKZ				⇑Pg	**Pb**	**04 06 20.0**	**+2.6**
	comp=Z,51nm,0.5s						
MAKZ				⇑Lg	Lg	04 07 36.7	
	comp=Z,220nm,0.8s						
MAKZ	**Makanchi**	**5.86**	**241**	PN	**Pn**	**04 06 04.3**	**+2.0**
MAKZ						04 06 19.9	
SEM	**Semipalatinsk**	**5.95**	**279**	*e*P	**Pg**	**04 06 26.4**	**-2.0**
	comp=Z,15nm,0.2s						
SEM				*e*S	**Sg**	**04 07 45.2**	**-0.1**
	comp=Z,267nm,1.0s						
WMQ	**Urumqi**	**6.19**	**192**	Pn	**Pn**	**04 06 07.4**	**+0.6**
WMQ				Sn	**Sn**	**04 07 20.9**	**+2.9**
WMQ				smax	smax		
	comp=Z,330nm,1.9s						
WMQ				smax	smax		
	comp=Z,320nm,1.5s						
KURK	**Kurchatov**	**7.00**	**281**		**Pn**	**04 06 18.7**	**+0.9**
KURK	**Kurchatov**	**7.00**	**281**	⇑Pn	**Pn**	**04 06 17.6**	**-0.2**
KURK				⇓Lg	Lg	04 08 13.9	
	comp=Z,114nm,0.7s						
KURK	**Kurchatov**	**7.00**	**281**	PN	**Pn**	**04 06 19.3**	**+1.5**
KURK						04 07 39.4	
KURBB	**Kurchatov Arra**	**7.05**	**280**	Pn	**Pn**	**04 06 19.3**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=93,slow=14,SNR=160						
KURBB				Sn	**Sn**	**04 07 39.4**	**+0.3**
	comp=Z,1.6nm,0.3s,baz=97,slow=31,SNR=4.7						
KURBB				Lg	Lg	04 08 16.5	
	comp=Z,3.1nm,0.3s,baz=86,slow=35,SNR=8.2						
	comp=Z,20nm,0.7s						
PDGK	**Podgornoye**	**9.49**	**230**	⇑Pn	**Pn**	**04 06 52.2**	**+0.1**
	comp=Z,9.4nm,0.6s						
PDGK				⇓Lg	Lg	04 09 31.6	
	comp=Z,88nm,1.1s						
PDGK	**Podgornoye**	**9.49**	**230**	P	**Pn**	**04 06 52.2**	**+0.1**
WUS	**Wushi**	**11.26**	**223**		**Pn**	**04 07 15.2**	**-1.3**
SONM	**Songino Array**	**11.34**	**94**	Pn	**Pn**	**04 07 15.2**	**-2.3**
	comp=Z,0.3nm,0.3s,baz=280,slow=15,SNR=5.4						
SONM				Pg		04 07 58.0	
	comp=Z,0.8nm,0.3s,baz=290,slow=16,SNR=6.8						
SONM				Lg	Lg	04 10 26.7	
	comp=Z,0.5nm,0.3s,baz=276,slow=29,SNR=3.8						
	comp=Z,0.4nm,0.3s						
ULN	**Ulaanbaatar**	**11.76**	**93**	*i* P	**Pn**	**04 07 23.6**	**+0.4**
BOOM	**Boomskoye usch**	**11.93**	**237**	Pn	**Pn**	**04 07 26.0**	**+0.5**
BOOM	**Boomskoye usch**	**11.93**	**237**	P	**Pn**	**04 07 26.0**	**+0.5**
BVA0	**Borovoye Array**	**12.30**	**292**	⇑Pn	**Pn**	**04 07 28.8**	**-1.6**
	comp=Z,2.0nm,0.5s						
BVA0	**Borovoye Array**	**12.30**	**292**	P	**Pn**	**04 07 29.1**	**-1.3**
BVAR	**Borovoye Array**	**12.30**	**292**	Pn	**Pn**	**04 07 29.5**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=106,slow=14,SNR=10.0						
BVAR				Sn	**Sn**	**04 09 45.2**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=93,slow=21,SNR=5.6						
BVAR				LR	LR	04 12 35.1	
	comp=Z,68nm,18.9s,baz=63,slow=39						
	comp=Z,2.3nm,0.5s						
BORK	**Borovoye**	**12.35**	**292**		**Pn**	**04 07 30.4**	**-0.6**
BORK	**Borovoye**	**12.35**	**292**	*i* P	**Pn**	**04 07 32.8**	**+1.8**
AAK	**Ala-Archa**	**12.63**	**241**	Pn	**Pn**	**04 07 33.8**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=50,slow=17,SNR=6.4						
AAK				Lg	Lg	04 11 10.5	
	comp=Z,0.2nm,0.3s,baz=161,slow=20,SNR=7.9						
	comp=Z,0.6nm,0.3s						
AAK	**Ala-Archa**	**12.63**	**241**		**Pn**	**04 07 35.5**	**+0.4**
AAK	**Ala-Archa**	**12.63**	**241**	⇑Pn	**Pn**	**04 07 37.5**	**+2.4**
	comp=Z,1.1nm,0.5s						
AAK				⇑Sn	**Sn**	**04 09 54.5**	**-1.8**
	comp=Z,3.0nm,0.8s						
AAK				⇓Lg	Lg	04 11 06.6	
	comp=Z,7.9nm,0.8s						
AAK	**Ala-Archa**	**12.63**	**241**	*i* P	**Pn**	**04 07 35.5**	**+0.4**
KSH	**Kashi**	**14.10**	**228**	P	**P**	**04 08 03.0**	**-0.1**
KSH				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KK31	**Karatay Array**	**14.69**	**250**	⇑Pn	**Pn**	**04 08 00.3**	**-2.7**
	comp=Z,1.5nm,0.5s,baz=57,slow=13,SNR=9.0						
KK31				⇓Lg	Lg	04 12 14.4	
	comp=Z,16nm,0.8s,baz=53,slow=28,SNR=5.3						
KK31	**Karatay Array**	**14.69**	**250**	P	**Pn**	**04 08 00.4**	**-2.7**
KKAR	**Karatay Array**	**14.69**	**250**		**Pn**	**04 08 00.9**	**-2.2**
KKAR	**Karatay Array**	**14.69**	**250**	P	**Pn**	**04 08 00.9**	**-2.2**
BTO	**Baotou**	**17.15**	**115**	*e*P	**Pn**	**04 08 33.2**	**-1.9**
BTO				S	**Sn**	**04 11 43.7**	**-2.5**
BTO				pmax	pmax		
	comp=Z,13nm,0.6s						
BTO				pmax	pmax		
	comp=Z,380nm,5.2s						
BTO				LR	LR		
	comp=Z,410nm,6.1s						
BTO				LR	LR		
	comp=Z,430nm,5.1s						
BTO				LR	LR		
	comp=Z,280nm,5.1s						
LZH	**Lanzhou**	**17.30**	**137**	*e*P	**P**	**04 08 40.2**	**+1.5**
LZH				pP	sP	04 08 46.2	+5.3
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
LZH				LR	LR		
	comp=Z,360nm,10.6s						
LZH				LR	LR		
	comp=Z,380nm,13.1s						
LZH				LR	LR		
	comp=Z,270nm,16.5s						
GAR	**Garm**	**17.42**	**239**		**Pn**	**04 08 36.5**	**-2.1**
GAR				IAmb	IAmb	04 08 43.7	
	comp=Z,14nm,1.0s						
MANEM	**Manem**	**17.76**	**233**	P	**P**	**04 08 43.4**	**-0.5**
MANEM				IAmb	IAmb	04 08 50.0	
	comp=Z,20nm,0.7s						
HHC	**Hu-ho-hao-te**	**17.91**	**112**	*e*P	**P**	**04 08 45.0**	**-0.3**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XLT	**XiLinHaoTe**	**19.09**	**98**	*e*P	**P**	**04 08 57.8**	**-0.5**
XLT				sP	sP	04 09 03.7	+3.2
XLT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AB31	**Akbulak array**	**19.11**	**279**		**P**	**04 08 57.3**	**-1.0**
AB31	**Akbulak array**	**19.11**	**279**	⇑P	**P**	**04 08 56.9**	**-1.3**
	comp=Z,1.2nm,0.6s,baz=83,slow=11,SNR=14						
AB31	**Akbulak array**	**19.11**	**279**	P	**P**	**04 08 56.9**	**-1.3**
ABKAR	**Akbulak array**	**19.11**	**279**		**P**	**04 08 57.9**	**-0.4**
HILR	**Hailar Array B**	**19.53**	**79**	LR	LR	04 16 54.5	
	comp=Z,205nm,18.9s,baz=75,slow=38						
NRIK	**Noril'sk**	**19.54**	**358**	P	**Pn**	**04 09 04.1**	**0.0**
	comp=Z,0.3nm,0.3s,baz=170,slow=16,SNR=5.3						
	comp=Z,1.3nm,0.3s						
NRIK	**Noril'sk**	**19.54**	**358**	IAmb	IAmb	04 09 09.7	
	comp=Z,4.0nm,0.8s						
NRIK	**Noril'sk**	**19.54**	**358**	*i* P	**Pn**	**04 09 03.7**	**-0.4**
ARTI	**Arti**	**19.63**	**301**	P	**P**	**04 09 04.1**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=87,slow=9.3,SNR=10						
ARTI				S	**S**	**04 12 41.3**	**-4.5**
	comp=Z,1.7nm,0.5s,baz=149,slow=20,SNR=2.2						
	comp=Z,5.0nm,0.5s						
ARTI	**Arti**	**19.63**	**301**		**P**	**04 09 04.3**	**+0.4**
ARTI				IAmb	IAmb	04 09 09.8	
	comp=Z,13nm,0.6s						
ARTI	**Arti**	**19.63**	**301**	*d i*P	**P**	**04 09 04.2**	**+0.3**
ARTI				S	**Sn**	**04 12 46.3**	**+0.6**
ARTI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
AKTO	**Aktyubinsk**	**20.08**	**284**	P	**P**	**04 09 08.6**	**-0.3**
	comp=Z,6.0nm,0.8s,baz=86,slow=13,SNR=12						
	comp=Z,6.0nm,0.8s						
AKTO	**Aktyubinsk**	**20.08**	**284**	⇑P	**P**	**04 09 08.7**	**-0.3**
	comp=Z,2.9nm,0.7s						
LSA	**Lhasa**	**20.20**	**176**	P	Pn	04 09 13.2	+0.5
SHL	**Shillong**	**24.35**	**175**		**P**	**04 09 53.4**	**-0.4**
SHL				IAmb	IAmb	04 09 59.3	
	comp=Z,14nm,1.1s						
SHL	**Shillong**	**24.35**	**175**	P	**P**	**04 09 53.4**	**-0.4**
SHL				pmax	pmax		
	comp=Z,14nm,1.1s						
KIRV	**Kirov**	**24.63**	**306**	LR	LR	04 20 32.4	
	comp=Z,137nm,18.6s,baz=50,slow=39						
KIRV	**Kirov**	**24.63**	**306**	*i* P	**P**	**04 09 56.2**	**+0.3**
TIXI	**Tiksi**	**28.16**	**25**	LR	LR	04 22 16.4	
	comp=Z,74nm,19.0s,baz=202,slow=38						
OBN	**Obninsk**	**31.96**	**300**	*e*P	**P**	**04 11 01.5**	**+0.2**
OBN				*e*		04 12 08.9	
OBN				*e*PPP	PPP	04 12 17.6	
OBN				*e*		04 13 51.7	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,39nm,14.0s						
FINES	**FINESS Array B**	**36.09**	**313**	P	**P**	**04 11 36.9**	**-0.2**
	comp=Z,3.0nm,0.8s,baz=78,slow=9.9,SNR=8.3						
	comp=Z,3.0nm,0.8s						
FINES	**FINESS Array B**	**36.09**	**313**	P	**P**	**04 11 37.3**	**+0.2**
FINES	**FINESS Array B**	**36.09**	**313**	*i* P	**P**	**04 11 36.7**	**-0.4**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKASG	**Malin Array Be**	**37.56**	**295**	P	**P**	**04 11 49.3**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=61,slow=9.2,SNR=2.6						
	comp=Z,0.6nm,0.4s						
AKASG	**Malin Array Be**	**37.56**	**295**	IAmb	IAmb	04 12 17.3	
	comp=Z,3.4nm,1.1s						
BR131	**Keskin Array S**	**40.03**	**277**	P	**P**	**04 12 11.6**	**+0.8**
BR131				IAmb	IAmb	04 12 12.4	
	comp=Z,3.9nm,0.8s						
BR131	**Keskin Array S**	**40.03**	**277**	*i* P	**P**	**04 12 10.3**	**-0.5**
BRTR	**Keskin Array B**	**40.03**	**277**	P	**P**	**04 12 11.2**	**+0.4**
	comp=Z,2.8nm,0.8s,baz=82,slow=8.5,SNR=15						
	comp=Z,2.8nm,0.8s						
BRTR	**Keskin Array B**	**40.03**	**277**	P	**P**	**04 12 11.6**	**+0.8**
BRTR	**Keskin Array B**	**40.03**	**277**	*i* P	**P**	**04 12 11.6**	**+0.8**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BUR08	**Bucovina Ar. S**	**41.26**	**293**	P	**P**	**04 12 21.3**	**+0.6**
BUR08				IAmb	IAmb	04 12 41.9	
	comp=Z,4.4nm,1.4s						
BURAR	**Bucovina Array**	**41.26**	**292**	P	**P**	**04 12 21.4**	**+0.6**
B22K	**Teshekpuk Lake**	**51.84**	**23**	P	**P**	**04 13 44.0**	**+0.7**
B22K				IAmb	IAmb	04 14 09.7	
	comp=Z,6.8nm,1.1s						
B21K	**Ikpikpuk River**	**52.03**	**24**	P	**P**	**04 13 45.7**	**+1.0**
A36M	**Sachs Harbour**	**55.99**	**12**	P	**P**	**04 14 14.8**	**+1.3**
A36M				IAmb	IAmb	04 14 18.2	
	comp=Z,5.5nm,1.2s						
ILAR	**Eielson Array**	**57.63**	**25**	P	**P**	**04 14 24.9**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=318,slow=5.2,SNR=18						
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	**57.63**	**25**	P	**P**	**04 14 25.6**	**+0.3**
ILAR	**Eielson Array**	**57.63**	**25**	P	**P**	**04 14 25.6**	**+0.3**
SKT	**Skwentna**	**58.39**	**29**	P	**P**	**04 14 31.7**	**+0.9**
G31M	**Satah River**	**58.90**	**19**	P	**P**	**04 14 34.2**	**+0.1**
ESDC	**Sonseca Array**	**62.93**	**300**	P	**P**	**04 15 02.2**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=39,slow=6.7,SNR=4.9						
	comp=Z,0.4nm,0.7s						
ESDC	**Sonseca Array**	**62.93**	**300**	IAmb	IAmb	04 15 28.6	
	comp=Z,2.6nm,1.4s						
TORD	**Torodi Ar. Bea**	**78.64**	**277**	P	**P**	**04 16 38.5**	**+0.5**
	comp=Z,3.3nm,0.4s,baz=35,slow=8.8,SNR=1.2						
	comp=Z,3.3nm,0.4s						
WRA	**Warramunga Arr**	**80.06**	**138**	P	**P**	**04 16 43.6**	**-1.8**
	comp=Z,0.3nm,0.5s,baz=342,slow=5.9,SNR=5.3						
	comp=Z,0.3nm,0.5s						
WRA	**Warramunga Arr**	**80.06**	**138**	*i* P	**P**	**04 16 44.7**	**-0.7**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**83.16**	**140**	P	**P**	**04 17 00.1**	**-1.7**
	comp=Z,0.3nm,0.5s,baz=334,slow=5.0,SNR=9.4						
	comp=Z,0.3nm,0.5s						
ASAR	**Alice Springs**	**83.16**	**140**	P	**P**	**04 17 00.7**	**-1.1**
ASAR	**Alice Springs**	**83.16**	**140**	P	**P**	**04 17 00.7**	**-1.1**

PRU 08 04:12:21.3, 50°.19N×18°.96E, h0^{km}, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STEB	**Steborice**	**0.81**	**252**	*e*SG	Sg	04 12 48.1	+0.9
MORC	**Moravsky Berou**	**1.00**	**246**	*e*PG	Pg	04 12 40.4	-0.1
MORC				*e*SG	Sg	04 12 52.4	-1.1
KRLC	**Kraliky**	**1.41**	**266**	*e*P	Pn	04 12 46.6	-1.6
KRLC	**Kraliky**	**1.41**	**266**	*e*PG	Pn	04 12 46.6	-1.6
KRLC				*e*SG	Sg	04 13 05.0	-1.5
DPC	**Dobruska-Polom**	**1.70**	**276**	*e*SG	Sb	04 13 15.2	-0.2
VRAC	**Vranov**	**1.77**	**241**	*e*PN	Pn	04 12 52.8	-0.4
VRAC				*e*SG	Sn	04 13 16.2	-0.2

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*SFS **08** 04:16:33.0, 35°.99N×4°.68W, h39^{km}, ML2.6/5, ML1.9/6, MLv1.6/6*

*MDD **08** 04:16:34.9±1.2, 36°.15N×4°.69W, h26^{km}±7^{km}, mb_Lg2.1/7, Error ellipse: s-maj=13.4km s-min=4.3km az=167.0*

*CNRM **08** 04:16:39.1, 35°.49N×5°.01W, h74^{km}*

ISC 08 04:16:32.1±1.2, **36°.01N**±0°.03×**4°.70W**±0°.04, **h35**^{km}, **n31,** σ1^{s}.**67**/38, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGOR	**Sierra Gorda,**	**1.20**	**23**	Pg	**Pn**	**04 16 55.3**	**+2.7**
ELGU	**Los Guajares,**	**1.22**	**45**	Pg	**Pn**	**04 16 53.0**	**+0.2**
ELGU				Sg	**Sn**	**04 17 08.9**	**+0.7**
ESPR	**Espera**	**1.27**	**313**	Sg	**Sn**	**04 17 14.6**	**+5.5**
AKLM	**AKL**	**1.65**	**155**	P	**Pn**	**04 17 00.4**	**+1.8**
AKLM	**AKL**	**1.65**	**155**	S	**Sn**	**04 17 17.5**	**-1.1**
ECAB	**El Cabril**	**2.14**	**345**	Pn	**Pn**	**04 17 05.9**	**+0.5**
ECAB				Sn	**Sn**	**04 17 30.3**	**-0.5**
ECAB				*i* IVmb_Lg		04 17 33.3	
ECAB	**El Cabril**	**2.14**	**345**	Pn	**Pn**	**04 17 05.9**	**+0.5**
ECAB				Sn	**Sn**	**04 17 30.4**	**-0.4**
EADA	**Adamuz**	**2.16**	**3**	Pn	**Pn**	**04 17 06.3**	**+0.7**
EADA				Sn	**Sn**	**04 17 30.0**	**-1.2**
EADA				*i* IVmb_Lg		04 17 32.5	
EQES	**Quesada**	**2.22**	**36**	Pn	**Pn**	**04 17 07.7**	**+1.1**
EQES				Sn	**Sn**	**04 17 32.2**	**-0.6**
EQES				*i* IVmb_Lg		04 17 37.5	
EMIN	**Mina Concepcio**	**2.36**	**319**	Pn	**Pn**	**04 17 09.1**	**+0.7**
EMIN				Sn	**Sn**	**04 17 35.5**	**-0.6**
EMIN	**Mina Concepcio**	**2.36**	**319**	Pn	**Pn**	**04 17 09.2**	**+0.8**
EMIN				Sn	**Sn**	**04 17 35.8**	**-0.4**
EMIN				*i* IVmb_Lg		04 17 40.7	
IFR	**Ifrane**	**2.51**	**188**	Sn	**Sn**	**04 17 38.1**	**-1.9**
IFR				Pn	Pn	04 17 10.4	-0.2
EGRO	**El Granado**	**2.70**	**305**	Sn	**Sn**	**04 17 44.1**	**-0.4**
PVAQ	**Vaqueiros**	**2.79**	**301**	*e*S	**Sn**	**04 17 46.2**	**-0.6**

PVAQ				IAML		04 17 48.1	
PVAQ				IAML		04 17 48.6	
PVAQ				IAML		04 17 48.8	
PBAR	**Barrancos**	**2.86**	**320**	Pn	**Pn**	**04 17 15.9**	**+0.7**
PBAR				Sn	**Sn**	**04 17 47.4**	**-1.0**
PBAR	**Barrancos**	**2.86**	**320**	*e*P	**Pn**	**04 17 15.9**	**+0.7**
PBAR				*e*S	**Sn**	**04 17 47.3**	**-1.0**
PBAR				IAML		04 17 48.2	
PBAR				IAML		04 17 49.3	
PBAR				IAML		04 17 57.9	
PBDV	**Barranco-do-Ve**	**2.87**	**296**	*e*S	**Sn**	**04 17 46.9**	**-2.0**
PSIM	**Granatula de C**	**2.91**	**15**	Sn	**Sn**	**04 17 47.2**	**-2.6**
MD31	**MD31**	**3.13**	**181**	P	**Pn**	**04 17 19.5**	**+0.4**
MD31	**MD31**	**3.13**	**181**	S	Sn	04 17 50.8	-4.5
MDT	**Midelt**	**3.19**	**179**	P	**Pn**	**04 17 20.6**	**+0.8**
MDT	**Midelt**	**3.19**	**179**	S	Sn	04 17 52.6	-4.1
EBAD	**Badajoz**	**3.30**	**327**	Sn	**Sn**	**04 17 57.6**	**-1.7**
EBAD	**Badajoz**	**3.30**	**327**	Sn	**Sn**	**04 17 57.8**	**-1.5**
EBAD				*i* IVmb_Lg		04 18 00.8	
MESJ	**Messejana**	**3.36**	**304**	*e*S	**Sn**	**04 17 59.8**	**-1.0**
PAB	**San Pablo**	**3.54**	**4**	Sn	**Sn**	**04 18 02.0**	**-3.5**
PAB				*i* IVmb_Lg		04 18 05.2	
EVO	**Evora**	**3.65**	**315**	*e*S	**Sn**	**04 18 06.5**	**-1.4**
PESTR	**Estremoz**	**3.66**	**322**	*e*S	**Sn**	**04 18 06.6**	**-1.7**
PARRA	**Arraiolos**	**3.86**	**318**	*e*S	**Sn**	**04 18 10.6**	**-2.5**
PMRV	**Marv??o**	**4.03**	**329**	*e*S	**Sn**	**04 18 17.1**	**-0.1**
AFON	**Font Roja**	**4.25**	**50**	Sn	**Sn**	**04 18 21.9**	**-0.9**

*CATAC **08** 04:39:56.0±0.6, 7°N±2°×7°3W±°, h158^{km}±5^{km}, M4.3/7, MLv4.3/7, Error ellipse: s-maj=12.0km s-min=4.5km az=97.5, confirmed*

*IDC **08** 04:39:57.2±0.7, 6°.84N×73°.01W, h155^{km}±8^{km}, mb3.1/3, mbtmp3.9/7, Error ellipse: s-maj=20.3km s-min=7.5km az=131.0*

*NEIC **08** 04:39:58.3±2.1, 6°.76N±0°.06×72°.96W±0°.09, h150^{km}±7^{km}, mb4.3/7, Error ellipse: s-maj=13.2km s-min=8.3km az=109.0*

*RSNC **08** 04:39:58.2±0.0, 7°N±1°×7°3W±°, h146^{km}±1^{km}, M3.7, mB4.6, mb4.2, ML3.5, Mw(mB)3.9*

ISC 08 04:39:56.6±0.6, **6°.85N**±0°.03×**73°.09W**±0°.04, **h154**^{km}±5^{km}, **n73**, σ**1^{s}.48**/118, **mb4.2**/7, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**200**	P	**Pn**	**04 40 18.3**	**+0.5**
BARC				S	**Sn**	**04 40 32.3**	**-1.7**
PAMC	**Pamplona, Colo**	**0.62**	**38**	P	**Pn**	**04 40 21.1**	**+1.5**
PAMC				S	**Sn**	**04 40 37.8**	**+0.7**
BRJC	**Barrancabermej**	**0.66**	**281**	P	**Pn**	**04 40 20.0**	**+0.8**
BRJC				S	**Sn**	**04 40 36.8**	**+0.3**
RUSC	**La Rusia**	**0.95**	**180**		**Pn**	**04 40 22.4**	**+0.5**
RUSC	**La Rusia**	**0.95**	**180**	P	**Pn**	**04 40 22.3**	**+0.5**
RUSC				S	**Sn**	**04 40 40.7**	**-0.5**
RUSC	**La Rusia**	**0.95**	**180**	P	**Pn**	**04 40 22.3**	**+0.5**
RUSC				S	**Sn**	**04 40 39.9**	**-1.3**
PTBC	**PUERTO BERRIO,**	**1.40**	**257**	P	**Pn**	**04 40 24.8**	**-0.5**
PTBC				S	**Sn**	**04 40 45.7**	**-1.7**
OCAC	**Ocana**	**1.40**	**351**	P	**Pn**	**04 40 26.6**	**+1.0**
OCAC				S	**Sn**	**04 40 48.2**	**+0.4**
SPBC	**San Pablo de B**	**1.54**	**219**	P	**Pn**	**04 40 27.3**	**+0.3**
SPBC				S	**Sn**	**04 40 49.4**	**-0.9**
CHIC	**Chingaza**	**2.30**	**196**	P	**Pn**	**04 40 36.5**	**+0.6**
CHIC				S	**Sn**	**04 41 05.3**	**-0.8**
ROSC	**El Rosal**	**2.34**	**212**	P	**Pn**	**04 40 38.8**	**+2.4**
	72nm,0.3s,baz=56,slow=7.3,SNR=103						
ROSC				S	**Sn**	**04 41 08.4**	**+1.4**
	441nm,0.5s,baz=349,slow=22,SNR=11						
ROSC	**El Rosal**	**2.34**	**212**		**Pn**	**04 40 38.5**	**+2.1**
ROSC	**El Rosal**	**2.34**	**212**	P	**Pn**	**04 40 38.2**	**+1.8**
ROSC				S	**Sn**	**04 41 06.5**	**-0.5**
MEDEC	**Medelln, Ant**	**2.55**	**257**	P	**Pn**	**04 40 39.7**	**+1.0**
MEDEC				S	**Sn**	**04 41 11.6**	**+0.5**
UREC	**San Jos de Ur**	**2.59**	**290**	P	**Pn**	**04 40 38.5**	**-0.4**
UREC				S	**Sn**	**04 41 09.7**	**-2.0**
GUY2C	**Guyana, Caldas**	**2.78**	**235**	P	**Pn**	**04 40 42.9**	**+1.1**
GUY2C				S	**Sn**	**04 41 14.7**	**-2.0**
VILC	**Villavicencio,**	**2.79**	**193**	P	**Pn**	**04 40 41.6**	**0.0**
VILC				S	**Sn**	**04 41 15.9**	**-0.5**
NIZA	**Niza - Manizal**	**2.96**	**233**	P	**Pn**	**04 40 42.9**	**-1.0**
NIZA				S	**Sn**	**04 41 20.8**	**+0.3**
CBOC	**Ciudad Bolivar**	**3.07**	**252**	P	**Pn**	**04 40 46.4**	**+1.3**
CBOC				S	**Sn**	**04 41 22.4**	**-0.3**
DBBC	**Dabeiba**	**3.10**	**273**	P	**Pn**	**04 40 46.3**	**+0.8**
DBBC				S	**Sn**	**04 41 22.4**	**-0.9**
SDV	**Santo Domingo**	**3.16**	**50**	P	**Pn**	**04 40 48.1**	**+1.8**
	45nm,0.3s,baz=233,slow=11,SNR=71						
SDV				S	**Sn**	**04 41 24.5**	**-0.4**
	298nm,0.5s,baz=80,slow=22,SNR=24						
SDV	**Santo Domingo**	**3.16**	**50**	P	**Pn**	**04 40 47.8**	**+1.5**
SDV				S	**Sn**	**04 41 24.9**	**0.0**
ARGC	**Ariguani, Magd**	**3.20**	**339**	P	**Pn**	**04 40 48.9**	**+2.3**
ARGC				S	**Sn**	**04 41 26.2**	**+0.7**
PRAC	**Prado**	**3.59**	**210**	P	**Pn**	**04 40 52.3**	**+0.6**
PRAC				S	**Sn**	**04 41 34.2**	**-0.4**
PRAC	**Prado**	**3.59**	**210**	P	**Pn**	**04 40 52.2**	**+0.5**
PRAC				S	**Sn**	**04 41 34.2**	**-0.4**
ORTC	**Ortega, Tolima**	**3.63**	**216**	P	**Pn**	**04 40 53.3**	**+1.1**
ORTC				S	**Sn**	**04 41 35.5**	**+0.2**
SJCC	**San Jacinto, C**	**3.67**	**326**	P	**Pn**	**04 40 52.8**	**+0.1**
SJCC				S	**Sn**	**04 41 33.9**	**-2.4**
SJCC	**San Jacinto, C**	**3.67**	**326**	P	**Pn**	**04 40 52.8**	**+0.1**
SJCC				S	**Sn**	**04 41 33.9**	**-2.4**
PLMC	**San Jos del P**	**3.72**	**239**	P	**Pn**	**04 40 54.0**	**+0.6**
PLMC				S	**Sn**	**04 41 37.1**	**-0.4**
URMC	**La Uribe, Meta**	**3.80**	**200**	P	**Pn**	**04 40 55.2**	**+0.7**
URMC				S	**Sn**	**04 41 38.6**	**-0.9**
LCBC	**Los crdobas,**	**3.81**	**302**	P	**Pn**	**04 40 54.7**	**+0.2**
LCBC				S	**Sn**	**04 41 41.0**	**+1.5**
YOTC	**Yotoco, Valle**	**4.32**	**229**	P	**Pn**	**04 41 02.0**	**+0.8**
YOTC				S	**Sn**	**04 41 51.9**	**+0.4**
SMRC	**Santa Marta, M**	**4.43**	**345**		**Pn**	**04 41 03.4**	**+0.8**
SMRC	**Santa Marta, M**	**4.43**	**345**	P	**Pn**	**04 41 03.5**	**+0.9**
SMRC				S	**Sn**	**04 41 53.0**	**-1.0**
CAPC	**Capurgana**	**4.58**	**293**	P	**Pn**	**04 41 03.6**	**-1.0**
CAPC				S	**Sn**	**04 41 54.3**	**-3.3**
PIZC	**Pizarro, Choco**	**4.64**	**246**	P	**Pn**	**04 41 07.1**	**+1.7**
PIZC				S	**Sn**	**04 41 59.3**	**+0.3**
PTAC	**Punta Ardita,**	**4.70**	**274**	P	**Pn**	**04 41 05.7**	**-0.3**
PTAC				S	**Sn**	**04 41 59.2**	**-1.0**
MACC	**Macarena, Meta**	**4.74**	**189**	P	**Pn**	**04 41 05.4**	**-1.2**
MACC				S	**Sn**	**04 41 57.1**	**-4.2**
URI	**Uribia**	**4.94**	**13**	P	**Pn**	**04 41 08.9**	**-0.4**
URI				S	**Sn**	**04 42 01.7**	**-4.3**
URIC	**Uribia, Colomb**	**4.94**	**13**	P	**Pn**	**04 41 08.7**	**-0.6**
URIC				S	**Sn**	**04 42 03.7**	**-2.4**
JAMC	**Jamundi, Valle**	**5.08**	**225**	P	**Pn**	**04 41 12.0**	**+0.7**
	877nm11nm,0.5s						
JAMC				S	**Sn**	**04 42 06.7**	**-3.0**
	877nm11nm,0.5s						
GARC	**Garzon, Huila**	**5.22**	**207**	P	**Pn**	**04 41 12.7**	**-0.5**
GARC				S	**Sn**	**04 42 09.6**	**-3.4**
POPC	**Popayan, Colom**	**5.58**	**220**	P	**Pn**	**04 41 18.7**	**+0.7**
	9.8nm,0.6s						
POPC				S	**Sn**	**04 42 18.8**	**-2.8**
	9.8nm,0.6s						
FLOC	**Florencia**	**5.82**	**206**		**Pn**	**04 41 21.3**	**+0.3**
FLOC	**Florencia**	**5.82**	**206**	P	**Pn**	**04 41 21.4**	**+0.3**
	18nm,0.8s						
FLOC				S	**Sn**	**04 42 26.7**	**-0.5**
	18nm,0.8s						
BBAC	**Balboa, Cauca**	**6.34**	**221**	P	**Pn**	**04 41 29.7**	**+1.6**
	590nm29nm,0.6s						
BBAC				S	**Sn**	**04 42 37.8**	**-2.0**
	590nm29nm,0.6s						
CRUC	**La Cruz**	**6.51**	**216**	P	**Pn**	**04 41 34.2**	**+3.7**
CRUC				S	**Sn**	**04 42 43.9**	**-0.1**
BCIP	**Isla Barro Col**	**7.07**	**289**	P	**Pn**	**04 41 36.4**	**-1.2**
BCIP				S	**Sn**	**04 42 57.3**	**+0.4**
OTAV	**Otavalo**	**8.47**	**219**	Pn	**Pn**	**04 41 56.9**	**+0.2**
SGC2	**Sao Gabriel da**	**9.25**	**139**	P	**Pn**	**04 42 08.6**	**+2.0**
SGC2				S	**Sn**	**04 43 46.3**	**-3.1**
MTDJ	**Mount Denham**	**12.11**	**339**	Pn	**Pn**	**04 42 48.0**	**+3.7**
MTDJ	**Mount Denham**	**12.11**	**339**	P	**Pn**	**04 42 47.6**	**+3.3**
	61nm,1.7s						
JTS	**Las Juntas de**	**12.22**	**287**	P	**Pn**	**04 42 46.9**	**+1.2**
	3.5nm,0.7s,baz=42,slow=14,SNR=5.6						
DR12	**Loma Pena Alta**	**12.40**	**17**	Pn	**Pn**	**04 42 49.6**	**+1.6**
SJG	**San Juan**	**13.08**	**31**	P	**Pn**	**04 42 55.7**	**-0.9**
	3.5nm,0.5s,baz=245,slow=14,SNR=1.8						
GTBY	**Guantanamo Bay**	**13.15**	**352**	P	**P**	**04 43 02.1**	**+0.1**
BOAV	**Boa Vista**	**13.28**	**109**	Pn	**Pn**	**04 42 58.7**	**-0.6**
BOAV	**Boa Vista**	**13.28**	**109**	P	**Pn**	**04 42 57.8**	**-1.5**
TEIG	**Tepich**	**19.84**	**314**	P	**Pn**	**04 44 18.9**	**0.0**
TEIG				IAmb	IAmb	04 44 58.2	
	comp=Z,17nm,1.4s						
VILB	**Vilhena**	**23.47**	**147**	P	**P**	**04 44 53.0**	**+0.5**
VILB				IAmb	IAmb	04 44 55.0	
	comp=Z,10nm,0.8s						
PB11	**IPOC Station P**	**26.66**	**173**	P	**P**	**04 45 21.0**	**-0.4**
PB11				IAmb	IAmb	04 45 45.5	
	comp=Z,8.0nm,1.1s						
PB01	**IPOC Station P**	**27.94**	**173**	P	**P**	**04 45 31.1**	**-1.6**
PB01				IAmb	IAmb	04 45 36.3	
	comp=Z,15nm,1.5s						
MCWV	**Mont Chateau**	**33.23**	**350**	P	**P**	**04 46 17.9**	**-1.0**
BDFB	**Brasilia**	**33.41**	**132**	P	**P**	**04 46 21.2**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=290,slow=11,SNR=4.7						
	comp=Z,1.1nm,0.5s						
BDFB	**Brasilia**	**33.41**	**132**	P	**P**	**04 46 21.6**	**+0.6**
TXAR	**Lajitas Array**	**36.47**	**312**	P	**P**	**04 46 49.2**	**+2.1**
	comp=Z,0.4nm,0.6s,baz=124,slow=9.3,SNR=8.6						
	comp=Z,0.4nm,0.6s						
TXAR	**Lajitas Array**	**36.47**	**312**	P	**P**	**04 46 49.0**	**+1.9**
YKA	**Yellowknife Ar**	**63.25**	**340**	P	**P**	**04 50 07.4**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=132,slow=6.3,SNR=3.8						
	comp=Z,0.2nm,0.5s						
SNAA	**Sanae**	**90.36**	**163**	P	**P**	**04 52 39.5**	**-0.4**
SNAA				IAmb	IAmb	04 53 21.0	
	comp=Z,3.4nm,1.3s						
ASAR	**Alice Springs**	**149.16**	**234**	PKPbc	**PKPbc**	**04 59 27.7**	**0.0**
	comp=Z,1.3nm,0.5s,baz=117,slow=3.4,SNR=26						
ASAR	**Alice Springs**	**149.16**	**234**		**PKPbc**	**04 59 27.6**	**-0.2**
WRA	**Warramunga Arr**	**150.38**	**241**	PKPbc	**PKPbc**	**04 59 31.1**	**+0.3**
	comp=Z,1.1nm,0.4s,baz=108,slow=2.8,SNR=16						
WRA	**Warramunga Arr**	**150.38**	**241**		**PKPbc**	**04 59 30.8**	**0.0**

*UCR **08** 05:01:56.7±0.9, 8°.11N×82°.60W, h28^{km}±3^{km}, MW3.8*

*UPA **08** 05:01:57.8±1.3, 8°.19N×82°.64W, h37^{km}±3^{km}, ML3.4, MW3.5*

ISC 08 05:01:56.6±1.1, **8°.12N**±0°.04×**82°.60W**±0°.02, **h32**^{km}±10^{km}, **n66**, σ**0^{s}.96**/92, **1C-6D**, **Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMNES	**Limones**	**0.26**	**266**	*e*P	**Pn**	**05 02 04.2**	**-0.1**
LIMO3	**Limones**	**0.27**	**267**	*e*P	**Pn**	**05 02 05.1**	**+0.8**
PTPA	**Petro Terminal**	**0.28**	**287**	*e*P	**Pn**	**05 02 04.8**	**+0.3**
PTPA				*e*S	**Sn**	**05 02 12.3**	**+2.6**
PTPM	**Petroterminale**	**0.29**	**287**	⇑*i*P	**Pn**	**05 02 05.1**	**+0.5**
PTPM				AMP		05 02 05.4	
	comp=Z,9μm,0.3s						
PTPM				*e*S	**Sn**	**05 02 10.0**	**+0.1**
ARIEL	**Armuelles**	**0.30**	**304**	*e*P	**Sn**	**05 02 10.3**	**+0.1**
LOCO3	**Loma Colorada,**	**0.34**	**31**	⇓*i*P	**Pn**	**05 02 05.6**	**+0.3**
LOCO3				AMP		05 02 05.7	
	comp=Z,3μm,0.1s						
LOCO3				*e*S	**Sn**	**05 02 11.2**	**+0.1**
LESP3	**La Esperanza,**	**0.34**	**326**	*e*P	**Pn**	**05 02 05.2**	**-0.1**
LESP3				AMP		05 02 06.8	
	comp=Z,3μm,0.1s						
LESP3				*e*S	**Sn**	**05 02 11.2**	**-0.1**
DVD	**David**	**0.35**	**25**	*e*P	**Pn**	**05 02 05.5**	**+0.1**
DVD				*e*S	**Sn**	**05 02 12.2**	**+0.9**
BAGA3	**Bagala, Chiriq**	**0.35**	**11**	⇓*e*P	**Pn**	**05 02 05.7**	**+0.2**
BAGA3				AMP		05 02 05.9	
	comp=Z,3μm,0.2s						
BAGA3				*e*S	**Sn**	**05 02 11.4**	**-0.1**
LOMA3	**Las Lomas, Chi**	**0.37**	**33**	⇓*i*P	**Pn**	**05 02 05.9**	**+0.1**
LOMA3				AMP		05 02 06.1	
	comp=Z,2μm,0.2s						
LOMA3				*e*S	**Sn**	**05 02 12.6**	**+0.7**
CHIR3	**Chiriqui UPA,**	**0.38**	**44**	⇓*i*P	**Pn**	**05 02 06.1**	**+0.2**
CHIR3				*e*S	**Sn**	**05 02 13.0**	**+0.9**
LPPC	**Paso Canoas**	**0.48**	**330**	*e*P	**Pb**	**05 02 06.7**	**0.0**
LPPC				*e*S	**Sn**	**05 02 14.6**	**+0.1**
JEFFS	**S de V. Baru**	**0.55**	**7**	*e*P	**Pb**	**05 02 07.9**	**-0.1**
PTAR3	**Potrerillos Ar**	**0.58**	**10**	*e*P	**Pb**	**05 02 08.5**	**-0.1**
PTAR3				AMP		05 02 10.1	
	comp=Z,2μm,0.1s						
PTAR3				*e*S	**Sb**	**05 02 16.9**	**+0.3**
DMCAL	**E. de Neily**	**0.58**	**341**	*e*P	**Pb**	**05 02 07.9**	**-0.6**
PSOM3	**Paja de Sombre**	**0.63**	**26**	*e*P	**Pb**	**05 02 08.6**	**-0.6**
PSOM3				AMP		05 02 10.7	
	comp=Z,2μm,0.1s						
PSOM3				*e*S	**Sb**	**05 02 18.0**	**+0.2**
NELY	**Ciudad Neily**	**0.63**	**327**	*e*P	**Pb**	**05 02 08.8**	**-0.5**
NELY				*e*S	**Sn**	**05 02 18.5**	**+0.2**
BQSF3	**Alto Boquete,**	**0.64**	**15**	*e*P	**Pb**	**05 02 09.0**	**-0.5**
BQSF3				*e*S	**Sb**	**05 02 18.3**	**0.0**
BQTLY	**Boquete Panama**	**0.65**	**12**	*e*P	**Pb**	**05 02 09.1**	**-0.6**
BRU2	**Volcan**	**0.68**	**352**	⇓*i*P	**Pn**	**05 02 09.7**	**-0.5**
BRU2				AMP		05 02 09.8	
	comp=Z,687nm,0.2s						
BRU2				*e*S	**Sb**	**05 02 19.4**	**0.0**
BRU2	**Volcan**	**0.68**	**352**	*e*P	**Pn**	**05 02 09.5**	**-0.6**
BRU2				*e*S	**Sb**	**05 02 19.4**	**0.0**
LNBQ3	**Los Naranjos,**	**0.69**	**13**	*e*P	**Pn**	**05 02 09.6**	**-0.7**
LNBQ3				AMP		05 02 10.9	
	comp=Z,2μm,0.1s						
LNBQ3				*e*S	**Sb**	**05 02 19.7**	**0.0**
FITO	**Golfito**	**0.75**	**313**	*e*P	**Pn**	**05 02 09.8**	**-1.2**
FITO				*e*S	**Sb**	**05 02 20.4**	**-0.8**
REME3	**Remedios, Chir**	**0.77**	**82**	*e*P	**Pb**	**05 02 11.8**	**+0.4**
EDAD	**Golfito**	**0.77**	**313**	*e*P	**Pn**	**05 02 10.3**	**-1.0**
PIRO	**Carate, Puerto**	**0.79**	**291**	*e*P	**Pn**	**05 02 10.6**	**-0.8**
PIRO	**Carate, Puerto**	**0.79**	**291**	*e*P	**Pn**	**05 02 10.4**	**-1.0**
VITO	**San Vito**	**0.79**	**332**	*e*P	**Pn**	**05 02 11.8**	**+0.2**
VITO				*e*S	**Sb**	**05 02 23.7**	**+1.3**
PTJ1	**Puerto Jimnez**	**0.81**	**301**	*e*P	**Pn**	**05 02 11.2**	**-0.6**
ALCO	**Alturas Coton,**	**0.86**	**344**	*e*P	**Pn**	**05 02 11.8**	**-0.8**
NANC3	**Nancito, Chiri**	**0.86**	**82**	*e*P	**Pb**	**05 02 13.1**	**-0.1**
PBNVO	**Pueblo Nuevo,**	**0.87**	**27**	*e*P	**Pn**	**05 02 11.4**	**-1.2**
RBALA	**Bur**	**0.88**	**30**	*e*P	**Pn**	**05 02 12.1**	**-0.6**
PDCAN	**Manzana , Fuen**	**0.91**	**79**	*e*P	**Pn**	**05 02 12.9**	**-0.3**
CHGR2	**Aguacate**	**0.93**	**29**	*e*P	**Pn**	**05 02 13.8**	**+0.4**
CHGR2				*e*S	**Sn**	**05 02 24.6**	**-1.1**
EDP2	**Potrero Grande**	**1.06**	**327**	*e*P	**Pn**	**05 02 15.3**	**+0.1**
EDP2				*e*S	**Sb**	**05 02 30.4**	**+0.4**
KKNTU	**Kakintº**	**1.06**	**47**	*e*P	**Pn**	**05 02 14.8**	**-0.5**
FIMO	**Fila Mora**	**1.15**	**319**	*e*P	**Pn**	**05 02 16.6**	**0.0**
FIMO				*e*S	**Sb**	**05 02 33.2**	**+0.7**
PANP	**Palmar Norte**	**1.20**	**315**	*e*P	**Pn**	**05 02 17.2**	**+0.2**
DRK0	**Durika**	**1.31**	**331**	*e*P	**Pn**	**05 02 18.8**	**-0.1**
DRK0				*e*S	**Sn**	**05 02 35.4**	**+0.2**
DRK0	**Durika**	**1.31**	**331**	*e*P	**Pn**	**05 02 18.7**	**-0.1**
GMAL	**Guarumal, Vera**	**1.40**	**105**	*e*P	**Pn**	**05 02 20.7**	**+0.8**
GMAL	**Guarumal, Vera**	**1.40**	**105**	*e*P	**Pn**	**05 02 20.3**	**+0.4**
EDPE	**Pejibaye, P**	**1.41**	**317**	*e*P	**Pn**	**05 02 20.3**	**+0.2**
CEUA	**Cerro Uatsi, L**	**1.53**	**347**	*e*P	**Pn**	**05 02 22.2**	**+0.4**
SAFE3	**Santa Fe, Vera**	**1.56**	**75**	*e*P	**Pb**	**05 02 23.9**	**-0.9**
STIA3	**Santiago, Vera**	**1.61**	**91**	*e*P	**Pb**	**05 02 24.5**	**-1.2**
MARI3	**Mariato, Verag**	**1.66**	**106**	*e*P	**Pb**	**05 02 25.2**	**-1.4**
BUS1	**Rivas**	**1.82**	**322**	*e*P	**Pn**	**05 02 26.8**	**+0.6**
CACAO	**El Cacao, Vera**	**1.88**	**114**	*e*P	**Pb**	**05 02 29.4**	**-0.9**
PIEC	**Cerro El Cedra**	**2.01**	**318**	*e*P	**Pn**	**05 02 29.3**	**+0.8**
VINA	**Juan Vinas**	**2.10**	**327**	*e*P	**Pn**	**05 02 30.9**	**+1.3**
VINA				*e*S	**Sn**	**05 02 57.4**	**+2.6**
RESJ	**San Isidro (Tu**	**2.16**	**332**	*e*P	**Pn**	**05 02 31.1**	**+0.6**
VTCV	**VTCV, Calle Va**	**2.16**	**329**	*e*P	**Pn**	**05 02 32.0**	**+1.4**
VTCV				*e*S	**Sb**	**05 02 59.4**	**-2.3**
LCOCO	**El Coco**	**2.17**	**334**	*e*P	**Pn**	**05 02 32.6**	**+2.0**
ABRB	**Las Abras (San**	**2.18**	**330**	*e*P	**Pn**	**05 02 32.3**	**+1.5**
PICV	**PH. Pirrs**	**2.18**	**314**	*e*P	**Pn**	**05 02 30.2**	**-0.4**
RAFA	**San Farael, Vo**	**2.19**	**327**	*e*P	**Pn**	**05 02 32.5**	**+1.4**
CVTV	**Tajo**	**2.19**	**329**	*e*P	**Pn**	**05 02 32.5**	**+1.3**
ACOS	**Acosta**	**2.28**	**317**	*e*P	**Pn**	**05 02 33.1**	**+1.0**
AZU	**Azuero**	**2.32**	**98**	*e*P	**Pn**	**05 02 34.7**	**+2.1**
AZU				*e*S	**Sb**	**05 03 03.8**	**-2.4**
AZU	**Azuero**	**2.32**	**98**	*e*P	**Pn**	**05 02 34.2**	**+1.6**
CVTG	**V. Turrialba,**	**2.33**	**330**	*e*P	**Pn**	**05 02 34.2**	**+1.5**
BCIP	**Isla Barro Col**	**2.92**	**69**	⇓*e*P	**Pn**	**05 02 42.9**	**+2.0**
BCIP	**Isla Barro Col**	**2.92**	**69**	*e*P	**Pn**	**05 02 42.0**	**+1.2**
JTS	**Las Juntas de**	**3.17**	**313**	*e*P	**Pn**	**05 02 43.5**	**-0.9**
JTS				*e*S	**Sn**	**05 03 19.9**	**-1.3**

*IDC **08** 06:03:12.2±0.9, 1°.99N×128°.77E, h0^{km}, mb3.8/7, mbtmp3.8/7, MS3.0/5, Error ellipse: s-maj=66.3km s-min=16.8km az=76.0*

*NEIC **08** 06:03:17.0±0.9, 2°.0N±0°.1×128°.99E±0°.09, h35^{km}±2^{km}, mb4.1/10, Error ellipse: s-maj=18.1km s-min=14.2km az=19.0*

*DJA **08** 06:03:16.2±0.5, 2°N±6°×12°9E±°, h10^{km}, M4.2/10, mb4.5/1, MLv4.1/10*

ISC 08 06:03:17.2±0.7, **1°.99N**±0°.08×**128°.92E**±0°.10, **h40**^{km}, **n33**, σ**1^{s}.04**/29, **mb3.9**/14, **MS3.0**/4, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**1.14**	**262**	P	**Pn**	**06 03 36.4**	**-0.4**
TNTI	**Ternate**	**1.97**	**232**		**Pn**	**06 03 48.7**	**+0.6**
TNTI	**Ternate**	**1.97**	**232**	P	**Pn**	**06 03 49.0**	**+0.9**
SWI	**Sorong**	**3.67**	**140**	P	**Pn**	**06 04 12.6**	**+1.1**
SGSI	**Sangihe**	**3.79**	**297**	P	**Pn**	**06 04 15.2**	**+2.1**
FAKI	**Fak Fak**	**5.90**	**146**	Pn	**Pn**	**06 04 42.5**	**+0.3**
FAKI	**Fak Fak**	**5.90**	**146**	P	**Pn**	**06 04 42.5**	**+0.3**
GTOI	**Gorontalo**	**6.06**	**257**	P	**Pn**	**06 04 47.2**	**+2.8**
TOLI2	**Tolitoli**	**8.19**	**264**	Pn	**Pn**	**06 05 14.1**	**+0.6**
GUMO	**Guam**	**19.53**	**53**	LR	LR	06 14 21.7	
	comp=Z,28nm,20.2s,baz=114,slow=34						
FITZ	**Fitzroy Crossi**	**20.22**	**189**		**P**	**06 07 48.7**	**-0.2**
PMG	**Port Moresby**	**21.41**	**122**	LR	LR	06 19 06.3	
	comp=Z,31nm,19.6s,baz=267,slow=44						
WB0	**Warramunga Arr**	**22.28**	**166**	P	**P**	**06 08 11.6**	**+0.4**
WB0				IAmb	IAmb	06 08 24.2	
	comp=Z,5.0nm,1.1s						
WRA	**Warramunga Arr**	**22.43**	**167**	P	**P**	**06 08 12.8**	**0.0**
	comp=Z,1.3nm,0.6s,baz=346,slow=10,SNR=8.2						
	comp=Z,1.3nm,0.6s						
WRA	**Warramunga Arr**	**22.43**	**167**	P	**P**	**06 08 12.5**	**-0.3**
MYKOM	**Kota Tinggi**	**25.06**	**270**	P	**P**	**06 08 36.2**	**-1.9**
AS31	**Alice Springs**	**25.96**	**170**	P	**P**	**06 08 44.5**	**-1.6**
AS31				IAmb	IAmb	06 09 03.0	
	comp=Z,0.7nm,0.7s						
ASAR	**Alice Springs**	**25.96**	**170**	P	**P**	**06 08 47.0**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=353,slow=8.4,SNR=20						
ASAR				LR	LR	06 20 41.7	
	comp=Z,35nm,19.1s,baz=330,slow=40						
	comp=Z,0.6nm,0.4s						
ASAR	**Alice Springs**	**25.96**	**170**	P	**P**	**06 08 45.6**	**-0.6**
BBOO	**Buckleboo**	**35.26**	**170**	P	**P**	**06 10 06.8**	**-1.4**
BBOO				IAmb	IAmb	06 10 24.2	
	comp=Z,5.2nm,1.0s						
KSRS	**Korea Array**	**35.30**	**359**	P	**P**	**06 10 09.7**	**+1.2**
	comp=Z,0.6nm,0.4s,baz=173,slow=11,SNR=4.5						
	comp=Z,0.6nm,0.4s						
KS19	**Wonju Array Si**	**35.35**	**359**	P	**P**	**06 10 08.4**	**-0.5**
MJAR	**Matsushiro Arr**	**35.44**	**13**	P	**P**	**06 10 09.8**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=188,slow=8.8,SNR=1.9						
	comp=Z,0.5nm,0.4s						
STKA	**Stephens Creek**	**35.76**	**161**	P	**P**	**06 10 13.4**	**+0.9**
	comp=Z,2.1nm,0.5s,baz=327,slow=10,SNR=6.1						
	comp=Z,2.1nm,0.5s						
XLT	**XiLinHaoTe**	**43.26**	**346**	*e*P	**P**	**06 11 15.2**	**+0.3**
XLT				pP	pP	06 11 19.3	-6.2
XLT				sP	pwP	06 11 23.2	-5.7
XLT				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MA2	**Magadan**	**59.88**	**13**	LR	LR	06 38 35.6	
	comp=Z,12nm,21.3s,baz=107,slow=35						
MKAR	**Makanchi Array**	**60.23**	**325**	P	**P**	**06 13 21.8**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=119,slow=8.6,SNR=7.2						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**60.23**	**325**	P	**P**	**06 13 21.5**	**+0.1**
AAK	**Ala-Archa**	**63.11**	**318**	P	**P**	**06 13 41.0**	**-0.1**
AAK				IAmb	IAmb	06 13 47.6	
	comp=Z,2.5nm,0.8s						
KURK	**Kurchatov**	**64.38**	**327**	P	**P**	**06 13 48.6**	**-0.5**
KURK				IAmb	IAmb	06 13 49.6	
	comp=Z,2.0nm,0.9s						
KURBB	**Kurchatov Arra**	**64.38**	**327**	P	**P**	**06 13 49.0**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=123,slow=6.6,SNR=4.9						
	comp=Z,0.6nm,0.5s						
VNDA	**Vanda**	**81.44**	**173**	P	**P**	**06 15 29.5**	**-0.1**
VNDA				IAmb	IAmb	06 15 30.6	
	comp=Z,2.9nm,1.0s						
MBAR	**Mbarara**	**98.20**	**270**	LR	LR	07 00 08.4	
	comp=Z,21nm,19.4s,baz=299,slow=35						

*IDC **08** 07:14:49.8±0.8, 36°.18N×141°.94E, h0^{km}, mb3.8/15, mbtmp3.8/20, ML3.4/5, Error ellipse: s-maj=18.4km s-min=17.7km az=49.0*

*NIED **08** 07:14:53.8, 36°.25N×141°.81E, h61^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.33; $M_{\theta\theta}$-1.72; $M_{\phi\phi}$-2.61; $M_{r\theta}$1.80; $M_{\theta\phi}$-2.07; $M_{\phi r}$5.31; Fault plane solution: $M_0$7.07000×10^{14} NP1: ϕ_s232.00000°, δ21.00000°, λ117.00000°. NP2: ϕ_s23.00000°, δ72.00000°, λ80.00000°.*

*JMA **08** 07:14:53.8±0.3, 36°.3N±0°.5×14°2E±°, h61^{km}±4^{km}, MV3.6/39, FAR E OFF IBARAKI PREF*

*NEIC **08** 07:14:55.4±1.1, 36°.19N±0°.08×141°.87E±0°.09, h38^{km}±10^{km}, mb4.3/5, Error ellipse: s-maj=13.7km s-min=8.2km az=141.0*

ISC 08 07:14:53.3±0.6, **36°.22N**±0°.05×**141°.88E**±0°.06, **h23**^{km}, **n59**, σ**0^{s}.91**/58, **mb3.9**/18, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**1.05**	**277**	*i* P	**Pn**	**07 15 12.2**	**-0.3**
JIHU	**Itakohorinouch**	**1.12**	**257**	*i* P	**Pn**	**07 15 13.8**	**+0.2**
JHO	**Hitachi**	**1.12**	**291**	P	**Pn**	**07 15 12.6**	**-1.0**
JHO				*e*S	**Sb**	**07 15 26.2**	**-2.1**
ONAJ	**Iwakimizuishiy**	**1.23**	**316**	P	**Pn**	**07 15 14.3**	**-0.9**
JYT	**Yasato**	**1.36**	**271**	Pn	**Pn**	**07 15 17.3**	**+0.5**
JFK	**Kawauchi**	**1.40**	**325**	P	**Pn**	**07 15 16.8**	**-0.7**
BSO1	**Boso 1**	**1.73**	**205**	P	**Pn**	**07 15 21.4**	**0.0**
BSO1				*e*S	**Sn**	**07 15 42.8**	**+0.4**
BSO3	**Boso 3**	**1.80**	**219**	P	**Pn**	**07 15 22.7**	**0.0**
JOTO	**OTAMA OYAMA**	**1.82**	**318**	*i* P	**Pn**	**07 15 22.4**	**-0.9**
JMM	**Marumori**	**1.86**	**333**	P	**Pn**	**07 15 23.5**	**-0.2**
JAG	**Ashikaga**	**1.97**	**277**	*i* P	**Pn**	**07 15 25.1**	**-0.1**
JFY	**Yanaizu**	**2.11**	**305**	P	**Pn**	**07 15 28.0**	**+0.8**
JRY	**Ryogami san**	**2.42**	**266**	*e*P	**Pn**	**07 15 31.3**	**-0.1**
JOD2	**Odawara 2**	**2.46**	**248**	*e*P	**Pn**	**07 15 32.4**	**+0.3**
MJAR	**Matsushiro Arr**	**2.98**	**277**	Pn	**Pn**	**07 15 40.1**	**+0.9**
	2.8nm,0.3s,baz=104,slow=9.0,SNR=181						
MJAR				Sn	**Sn**	**07 16 15.4**	**+1.3**
	1.1nm,0.3s,baz=63,slow=8.6,SNR=6.0						
	25nm,0.5s						
MAJO	**Matsushiro**	**2.98**	**277**		**Pn**	**07 15 40.4**	**+1.2**
MJB9	**Matsu-Tunnel**	**2.98**	**277**		**Pn**	**07 15 40.4**	**+1.2**
JSD	**Sado**	**3.41**	**303**	Pn	**Pn**	**07 15 46.0**	**+0.9**
JHJ2	**Mitsune**	**3.54**	**209**	Pn	**Pn**	**07 15 46.7**	**-0.1**
JHJ	**Hachijo jima 2**	**3.54**	**210**	Pn	**Pn**	**07 15 46.9**	**0.0**
	59nm,0.3s,baz=49,slow=16,SNR=12						
JHJ				Sn	**Sn**	**07 16 25.5**	**-2.5**
	122nm,0.3s,baz=293,slow=22,SNR=14						
	108nm,0.3s						
JGF	**Kuroka**	**3.72**	**262**		**Pn**	**07 15 51.2**	**+1.9**
INU	**Inuyama**	**4.04**	**259**		**Pn**	**07 15 54.8**	**+1.0**
JTM	**Tenmabayashi**	**4.60**	**352**	Pn	**Pn**	**07 16 02.3**	**+0.9**
JMN	**Monobe**	**7.02**	**252**	Pn	**Pn**	**07 16 35.5**	**+0.8**
ASAJ	**Asahikawa**	**7.91**	**4**	Pn	**Pn**	**07 16 47.4**	**+0.6**
	0.6nm,0.3s,baz=208,slow=13,SNR=4.7						
ASAJ				Sn	**Sn**	**07 18 14.3**	**-1.2**
	0.2nm,0.3s,baz=330,slow=20,SNR=1.4						
	10nm,0.9s						
JKA	**Kamikawa-asahi**	**7.91**	**4**		**Pn**	**07 16 46.0**	**-0.8**
USRK	**Ussuriysk Ar.**	**10.98**	**320**	Pn	**Pn**	**07 17 29.7**	**+0.8**
	0.4nm,0.3s,baz=121,slow=15,SNR=3.4						
	2.2nm,0.5s						
KSRS	**Korea Array**	**11.25**	**280**	Pn	**Pn**	**07 17 32.0**	**-0.6**
	baz=96,slow=13,SNR=5.7						
	0.5nm,0.6s						
KSAR	**Wonju Array Be**	**11.28**	**280**	Pn	**Pn**	**07 17 31.4**	**-1.7**
INCN	**Inchon**	**12.28**	**280**	Pn	**Pn**	**07 17 45.9**	**-0.9**
TPUB	**Ta-pu**	**22.43**	**241**	P	**P**	**07 19 50.0**	**-0.6**
TPUB				IAmb	IAmb	07 20 04.3	
	comp=Z,27nm,1.0s						
YAK	**Yakutsk**	**26.94**	**347**	P	**P**	**07 20 32.8**	**+0.1**
H11N2	**WAKE ISLAND Hy**	**27.42**	**120**	T	T	07 49 09.9	
	baz=312,slow=75,SNR=10						
H11N1	**WAKE ISLAND Hy**	**27.42**	**120**	T	T	07 49 10.5	
	baz=312,slow=75,SNR=10.0						
H11N3	**WAKE ISLAND Hy**	**27.43**	**120**	T	T	07 49 12.4	
	baz=312,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**28.11**	**122**	T	T	07 50 06.0	
	baz=314,slow=76,SNR=11						
H11S3	**WAKE ISLAND Hy**	**28.11**	**122**	T	T	07 50 08.3	
	baz=314,slow=76,SNR=12						
H11S2	**WAKE ISLAND Hy**	**28.12**	**122**	T	T	07 50 05.9	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=314,slow=76,SNR=9.8						
SONM	Songino Array	28.55	305	P	P	07 20 48.1	+0.7
	comp=Z,1.5nm,0.8s,baz=108,slow=9.1,SNR=9.6						
	comp=Z,1.5nm,0.8s						
SONM	Songino Array	28.55	305	P	P	07 20 48.1	+0.7
ZALV	Zalesovo Beam	42.74	313	P	P	07 22 49.1	+0.6
	comp=Z,0.6nm,0.4s,baz=101,slow=7.7,SNR=5.0						
	comp=Z,0.6nm,0.4s						
MKAR	Makanchi Array	44.87	303	P	P	07 23 06.4	+0.6
	comp=Z,1.1nm,0.6s,baz=91,slow=9.7,SNR=13						
	comp=Z,1.1nm,0.6s						
MKAR	Makanchi Array	44.87	303	P	P	07 23 05.7	-0.1
KURK	Kurchatov	46.73	309	P	P	07 23 20.5	+0.2
KURK				IAmb	IAmb	07 23 25.3	
	comp=Z,1.9nm,0.6s						
KURBB	Kurchatov Arra	46.80	309	P	P	07 23 21.2	+0.3
	comp=Z,1.4nm,0.5s,baz=84,slow=8.0,SNR=13						
	comp=Z,1.4nm,0.5s						
EVN	Everest	46.84	276	P	P	07 23 21.8	-0.5
EVN				IAmb	IAmb	07 23 43.9	
	comp=Z,1.5nm,0.9s						
ILAR	Eielson Array	49.98	32	P	P	07 23 46.1	+0.8
	comp=Z,0.6nm,0.8s,baz=268,slow=5.5,SNR=4.3						
	comp=Z,0.6nm,0.8s						
BVAR	Borovoye Array	51.40	313	P	P	07 23 57.2	+1.1
	comp=Z,0.6nm,0.5s,baz=79,slow=7.5,SNR=3.9						
	comp=Z,0.6nm,0.5s						
WRA	Warramunga Arr	56.31	189	P	P	07 24 31.4	-0.8
	comp=Z,0.7nm,0.8s,baz=5.4,slow=7.1,SNR=5.3						
	comp=Z,0.7nm,0.8s						
ASAR	Alice Springs	60.04	188	P	P	07 24 58.5	+0.2
	comp=Z,0.1nm,0.5s,baz=21,slow=11,SNR=4.2						
	comp=Z,0.1nm,0.5s						
ARCES	ARCESS Array B	64.89	340	P	P	07 25 29.8	-0.4
	comp=Z,7.5nm,1.1s,baz=41,slow=6.6,SNR=3.1						
	comp=Z,7.5nm,1.1s						
FINES	FINESS Array B	69.71	333	P	P	07 26 01.3	+0.4
	comp=Z,5.8nm,1.0s,baz=57,slow=5.1,SNR=4.2						
	comp=Z,5.8nm,1.0s						
FINES	FINESS Array B	69.71	333	P	P	07 26 00.6	-0.3
NOA	NORSAR Array B	75.08	338	P	P	07 26 33.3	+0.4
	comp=Z,1.3nm,0.9s,baz=40,slow=5.8,SNR=2.2						
	comp=Z,1.3nm,0.9s						
AKASG	Malin Array Be	75.17	323	P	P	07 26 34.0	+0.4
	comp=Z,0.7nm,0.4s,baz=48,slow=5.9,SNR=7.0						
	comp=Z,0.7nm,0.4s						
NVAR	Mina Array Bea	75.18	53	P	P	07 26 32.8	-1.4
	comp=Z,0.2nm,0.5s,baz=332,slow=5.8,SNR=2.2						
	comp=Z,0.2nm,0.5s						
PDAR	Pinedale Array	77.97	46	P	P	07 26 51.6	+1.7
	comp=Z,0.1nm,0.3s,baz=299,slow=7.6,SNR=1.7						
	comp=Z,0.1nm,0.3s						
PDAR	Pinedale Array	77.97	46	P	P	07 26 49.6	-0.3
TXAR	Lajitas Array	90.32	53	P	P	07 27 53.4	+0.6
	comp=Z,0.1nm,0.8s,baz=339,slow=6.1,SNR=1.2						
	comp=Z,0.1nm,0.8s						

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*ATH **08** 07:15:12.3, 38°.34N×21°.90E, h13km±1km, ML3.2/22, Manual Solution by A.Papageorgiou First location: 2019/12/08 07:16:00, This location: 2019/12/08 07:43:42 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

*IDC **08** 07:15:13.7±1.5, 38°.56N×21°.95E, h0km, mb3.8/11, mbtmp3.7/14, ML3.4/2, Error ellipse: s-maj=28.7km s-min=19.5km az=22.0*

*THE **08** 07:15:13.1, 38°.3N±0°.5×21°.9E±0°.5, h8km±2km, M3.2/20, MLh3.2/20*

ISC 08 07:15:13.4±0.7**, 38°.34N**±0°.02×**21°.89E**±0°.02**, h9**km±4km**,**
n78, σ0ˢ.86/118**, mb3.8**/10**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EFP	Efpalio	0.08	6	P	Pg	07 15 15.4	-0.2
EFP				S	Sg	07 15 17.1	-0.1
EFP	Efpalio	0.08	6	P	Pg	07 15 15.2	-0.5
EFP				S	Sg	07 15 16.9	-0.3
UPR	University Cam	0.10	235	P	Pg	07 15 15.5	-0.4
UPR				S	Sg	07 15 17.9	+0.2
UPR	University Cam	0.10	235	P	Pg	07 15 15.4	-0.5
UPR				S	Sg	07 15 17.5	-0.2
PATC	Patra C	0.13	235	P	Pg	07 15 15.9	-0.4
PATC				S	Sg	07 15 18.6	+0.3
SERG	Sergoula	0.15	61	P	Pg	07 15 16.6	0.0
SERG				S	Sg	07 15 18.5	-0.2
SERG	Sergoula	0.15	61	P	Pg	07 15 16.5	-0.1
SERG				S	Sg	07 15 18.6	-0.2
PATG	Patra B	0.17	232	P	Pg	07 15 16.8	-0.1
PATG				S	Sg	07 15 20.1	+0.8
KALE	Kalithea	0.20	76	P	Pg	07 15 17.4	-0.1
KALE				S	Sg	07 15 20.5	+0.1
KALE	Kalithea	0.20	76	P	Pg	07 15 17.2	-0.3
KALE				S	Sg	07 15 19.9	-0.5
ANX	Ano Chora	0.25	5	P	Pg	07 15 18.6	+0.1
ANX				S	Sg	07 15 23.3	+1.3
ANX	Ano Chora	0.25	5	P	Pg	07 15 18.2	-0.3
ANX				S	Sg	07 15 22.7	+0.8
KLV1	Kalavrita	0.35	151	P	Pg	07 15 20.1	-0.3
KLV1				S	Sg	07 15 24.9	-0.2
KLV	Kalavryta, Ach	0.36	146	P	Pg	07 15 19.9	-0.6
KLV				S	Sg	07 15 25.4	+0.1
KLV	Kalavryta, Ach	0.36	146	P	Pg	07 15 19.8	-0.8
KLV				S	Sg	07 15 25.6	+0.3
MSL1	Messolongi	0.37	275	P	Pg	07 15 20.7	0.0
MSL1				S	Sg	07 15 26.2	+0.6
PVO	Paravola	0.40	313	P	Pg	07 15 21.0	-0.2
PVO	Paravola	0.40	313	P	Pg	07 15 20.8	-0.4
PVO				S	Sg	07 15 27.1	+0.6
DRO	Drossia	0.42	200	P	Pg	07 15 21.2	-0.4
DRO				S	Sg	07 15 27.9	+0.9
DRO	Drossia	0.42	200	P	Pg	07 15 21.0	-0.5
DRO				S	Sg	07 15 27.7	+0.6
AXS	Araxos	0.43	250	P	Pg	07 15 21.5	-0.4
AXS				S	Sg	07 15 28.5	+0.9
AXS	Araxos	0.43	250	P	Pg	07 15 21.2	-0.6
AXS				S	Sg	07 15 27.8	+0.3
RLS	Riolos of Patr	0.44	230	P	Pg	07 15 21.7	-0.3
RLS				S	Sb	07 15 29.1	-1.0
RLS	Riolos of Patr	0.44	230	P	Pg	07 15 21.5	-0.5
RLS				S	Sg	07 15 28.1	+0.3
DLFA	Delphi	0.49	74	P	Pg	07 15 22.1	-0.9
DLFA				S	Sg	07 15 29.6	+0.1
GUR	Goura	0.54	139	P	Pg	07 15 23.1	-0.8
GUR				S	Sg	07 15 31.2	+0.3
GUR	Goura	0.54	139	P	Pg	07 15 23.1	-0.8
GUR				S	Sg	07 15 31.2	+0.3
EVR	Evrytania	0.58	353	P	Pg	07 15 24.3	-0.4
EVR				S	Sb	07 15 33.5	-0.7
EVR	Evrytania	0.58	353	P	Pg	07 15 24.2	-0.4
EVR				S	Sg	07 15 32.5	+0.3
AST1	Astakos	0.66	288	P	Pg	07 15 25.8	-0.4
MAKR	Makrakomi, Fth	0.69	15	P	Pg	07 15 26.9	+0.1
MAKR	Makrakomi, Fth	0.69	15	P	Pg	07 15 26.7	-0.1
MAKR				S	Sg	07 15 35.9	0.0
AXAR	Agios Charalam	0.73	55	P	Pg	07 15 27.1	-0.5
AXAR	Agios Charalam	0.73	55	P	Pg	07 15 26.7	-0.9
AXAR				S	Sg	07 15 36.9	-0.3
CLEM	Kyllini,Ilia,G	0.75	233	P	Pg	07 15 28.0	+0.1
CLEM				S	Sg	07 15 38.0	+0.3
AGG	Agios Georgios	0.76	27	P	Pg	07 15 27.3	-0.7
AGG				S	Sb	07 15 39.4	+0.1
AGG	Agios Georgios	0.76	27	P	Pg	07 15 27.1	-0.9
AGG				S	Sb	07 15 38.5	-0.9
AMT	Artemida-Makis	0.82	190	P	Pg	07 15 28.6	-0.7
AMT				S	Sg	07 15 40.3	+0.4
LTK	Loutraki	0.90	110	P	Pg	07 15 30.3	-0.5
LTK				S	Sb	07 15 43.2	-0.2
LTK	Loutraki	0.90	110	P	Pg	07 15 30.4	-0.4
LKR	Lokris	0.92	70	P	Pg	07 15 29.8	-1.3
LKR	Lokris	0.92	70	P	Pg	07 15 30.0	-1.1
LKR				S	Sb	07 15 43.1	-0.8
RTZL	Ratzakli, Kefa	0.92	254	P	Pg	07 15 30.5	-0.7
RTZL				S	Sg	07 15 43.0	-0.2
ATAL	Atalanti	0.95	68	P	Pg	07 15 30.1	-1.6
ATAL				S	Sb	07 15 44.6	-0.2
KYPS	Kipseli, Zakin	0.99	239	P	Pg	07 15 31.9	-0.6
NYDR	Nydri-Lefkada	1.01	292	P	Pg	07 15 31.6	-1.3
NYDR	Nydri-Lefkada	1.01	292	P	Pg	07 15 31.5	-1.3
VLS	Valsamata	1.04	261	P	Pg	07 15 32.2	-1.2
VLS	Valsamata	1.04	261	P	Pg	07 15 32.1	-1.2
LTHK	Lithakia	1.05	233	P	Pg	07 15 32.6	-1.0
FSK	Fiskardo	1.05	277	P	Pg	07 15 32.1	-1.6
ORTH	Orthonies,Zaky	1.06	243	P	Pg	07 15 33.4	-0.5
LKD2	Lefkada island	1.07	295	P	Pg	07 15 32.9	-1.0
TSLK	Tsoukalades, L	1.08	297	P	Pg	07 15 33.3	-0.9
VIL2	Platees	1.09	96	P	Pn	07 15 34.5	-0.5
DRAG	Dragano-Lefkad	1.09	289	P	Pg	07 15 33.6	-0.8
TETR	Tetrakomo, Epi	1.11	334	P	Pg	07 15 34.1	-0.7
KFL1	Kefalonia,Entr	1.11	261	P	Pg	07 15 32.8	-2.0
ARG2	Argostoli	1.12	262	P	Pg	07 15 32.8	-2.1
ITM	Ithomi	1.16	179	P	Pg	07 15 34.0	-1.7
DMLN	Damoulianata-K	1.20	265	P	Pb	07 15 34.9	-1.5
THL	Klokotos Trika	1.22	4	P	Pb	07 15 35.6	-1.2
OHR	Ohrid	2.89	343	*e*Pn	Pb	07 16 05.8	+0.6
OHR				*e*Sn	Sg	07 16 44.8	-1.5
VAY	Valandovo	3.02	10	*e*Pn	Pn	07 16 03.9	+2.4
VAY				*e*Sn	Sb	07 16 44.0	-0.3
IDI	Anoyia	3.88	141	Pn	Pn	07 16 16.0	+2.6
	14nm,0.8s,baz=134,slow=11,SNR=2.7						
IDI				Sn	Sn	07 17 00.7	+1.6
	2.4nm,0.3s,baz=317,slow=19,SNR=6.1						
MLR	Muntele Rosu	7.75	22	Pn	Pn	07 17 06.1	-0.5
	0.2nm,0.3s,baz=149,slow=9.3,SNR=3.8						
	1.1nm,0.6s						
BRTR	Keskin Array B	9.24	78	Pn	Pn	07 17 29.2	+2.1
	0.2nm,0.3s,baz=257,slow=13,SNR=5.4						
	0.8nm,0.5s						
ESDC	Sonseca Array	20.12	282	P	Pn	07 19 48.8	-0.7
	1.4nm,0.9s,baz=77,slow=11,SNR=11						
	1.4nm,0.9s						
HFS	Hagfors	22.42	349	P	P	07 20 11.9	-0.4
	1.6nm,0.5s,baz=165,slow=12,SNR=6.3						
	1.6nm,0.5s						
FINES	FINESS Array B	23.27	5	P	P	07 20 19.3	-1.8
	2.6nm,0.8s,baz=176,slow=7.6,SNR=4.4						
	2.6nm,0.8s						
NOA	NORSAR Array B	23.68	347	P	P	07 20 24.9	-0.3
	1.2nm,0.8s,baz=152,slow=9.7,SNR=4.8						
	1.2nm,0.8s						
EKA	Eskdalemuir Ar	23.93	323	P	P	07 20 27.6	0.0
	5.0nm,1.0s,baz=123,slow=10,SNR=3.4						
	5.0nm,1.0s						
SPITS	Spitsbergen Ar	40.01	358	P	P	07 22 47.1	-1.1
	12nm,1.1s,baz=198,slow=4.2,SNR=1.8						
	12nm,1.1s						
KURBB	Kurchatov Arra	41.26	54	P	P	07 22 59.2	+0.4
	1.1nm,0.8s,baz=282,slow=8.7,SNR=7.3						
	1.1nm,0.8s						
MKAR	Makanchi Array	44.29	59	P	P	07 23 24.3	+0.8
	1.3nm,0.5s,baz=281,slow=6.6,SNR=20						
	1.3nm,0.5s						
ZALV	Zalesovo Beam	44.77	48	P	P	07 23 27.2	0.0
	1.1nm,0.5s,baz=271,slow=9.2,SNR=5.4						
	1.1nm,0.5s						
SONM	Songino Array	59.52	51	P	P	07 25 17.2	+0.1
	0.2nm,0.4s,baz=283,slow=8.7,SNR=1.7						
	0.2nm,0.4s						
ILAR	Eielson Array	76.84	355	P	P	07 27 06.7	+1.4
	0.5nm,0.9s,baz=357,slow=3.8,SNR=5.9						
	0.5nm,0.9s						

GCG 08 07:23:11.9±1.6**, 15°.95N×91°.16W, h17**km±28km**, MD3.6,**
Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUIS	Sacapulas	0.66	174	*e*P	Pg	07 23 24.0	-0.9
HUEH	Huehuetenango	0.71	208	*e*P	Pg	07 23 24.6	-1.3
CCIG	Comitan	1.00	290	*e*P	Pb	07 23 30.4	-0.4
QUEO	Labor Ovalle	1.12	198	*e*P	Pb	07 23 33.0	0.0
APG	El Apazote	1.15	144	*e*P	Pb	07 23 33.7	+0.1
SMCA	Catarina	1.40	219	*e*P	Pb	07 23 37.3	-0.3
STG8	El Palmar, Qui	1.50	187	*e*P	Pn	07 23 35.2	-3.1
STG2	El Palmar, Qui	1.52	188	*e*S	Sn	07 23 53.0	-4.9
PETF	Flores	1.57	52	*e*P	Pn	07 23 38.4	-0.7
PETF				*e*S	Sb	07 23 59.9	-0.3

IDC 08 07:23:21.1±1.7**, 56°.74S×143°.03W, h0**km**, mb4.0**/3**,**
mbtmp4.0/3**, MS3.3**/5**, Error ellipse: s-maj=69.7km**
s-min=32.8km az=29.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	27.99	202	LR	LR	07 37 16.6	
	comp=Z,34nm,21.7s,baz=88,slow=30						
QSPA	South Pole Qui	33.42	180	LR	LR	07 40 53.0	
	comp=Z,58nm,21.4s,baz=52,slow=32						
RAR	Rarotonga	37.58	334	LR	LR	07 41 07.9	
	comp=Z,52nm,19.6s,baz=183,slow=28						
H03S2	Juan Fernandez	48.49	90	T	T	08 23 53.6	
	baz=220,slow=74,SNR=41						
H03S1	Juan Fernandez	48.49	90	T	T	08 23 54.9	
	baz=220,slow=74,SNR=38						
H03S3	Juan Fernandez	48.50	90	T	T	08 23 52.6	
	baz=220,slow=74,SNR=39						
H03N3	Juan Fernandez	48.77	90	T	T	08 24 15.7	
	baz=223,slow=72,SNR=28						
H03N2	Juan Fernandez	48.78	90	T	T	08 24 16.8	
	baz=223,slow=72,SNR=30						
H03N1	Juan Fernandez	48.79	90	T	T	08 24 16.6	
	baz=223,slow=72,SNR=37						
SNAA	Sanae	48.88	164	P	P	07 32 07.7	-0.3
	1.1nm,0.6s,baz=222,slow=14,SNR=10						
	1.1nm,0.6s						
MAW	Mawson	54.49	192	LR	LR	07 53 00.8	
	comp=Z,31nm,20.1s,baz=76,slow=33						
ASAR	Alice Springs	66.79	262	P	P	07 34 14.9	+0.5
	1.5nm,0.7s,baz=144,slow=6.4,SNR=19						
	1.5nm,0.7s						
H01W1	Cape Leeuwin H	67.99	240	T	T	08 49 40.7	
	baz=144,slow=76						
H01W2	Cape Leeuwin H	68.00	240	T	T	08 49 34.6	
	baz=144,slow=76						
H01W3	Cape Leeuwin H	68.01	240	T	T	08 49 56.1	
	baz=144,slow=76						
WRA	Warramunga Arr	69.55	265	P	P	07 34 32.1	+0.4
	0.7nm,0.6s,baz=144,slow=5.9,SNR=8.5						
	0.7nm,0.6s						
LBTB	Lobatse	98.00	170	LR	LR	08 17 42.7	
	comp=Z,24nm,18.9s,baz=86,slow=33						
ESDC	Sonseca Array	148.42	105	PKPbc	PKPbc	07 43 09.5	+0.6
	0.8nm,0.8s,baz=230,slow=3.9,SNR=5.1						
MKAR	Makanchi Array	150.75	270	PKPbc	PKPbc	07 43 12.1	-2.2
	0.8nm,0.8s,baz=112,slow=1.3,SNR=9.0						

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*GCG **08** 07:36:19.8±0.6, 14°.37N×92°.16W, h30km±3km, MD3.6*

*MEX **08** 07:36:20.3±0.9, 14°.45N×92°.29W, h59km±10km, MD4.0*

ISC 08 07:36:15.6±2.0**, 14°.27N**±0°.08×**92°.29W**±0°.06**, h17**km±11km**,**
n17, σ2ˢ.19/29**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMCA	Catarina	0.62	20	*e*P	Pb	07 36 30.0	+2.0
SMCA				*e*S	Sb	07 36 38.0	+1.6
THIG		0.63	2	*e*P	Pb	07 36 30.5	+2.2
THIG				*e*S	Sb	07 36 37.9	+1.1
THIG		0.63	2	*e*P	Pb	07 36 30.4	+2.2
CHUJ	Union Juarez	0.84	12	*e*P	Pg	07 36 32.2	+0.3
CHUJ				*e*S	Sb	07 36 42.7	-0.3
PATR	El Naranjo	0.84	4	*e*P	Pg	07 36 32.4	+0.4
PATR				*e*S	Sb	07 36 42.9	-0.2
STG2	El Palmar, Qui	0.90	79	*e*P	Pg	07 36 32.5	-0.7
STG2				*e*S	Sg	07 36 42.5	-2.6
PAVE	Pavencul	0.92	7	*e*P	Pg	07 36 33.7	+0.1
PAVE				*e*S	Sg	07 36 44.3	-1.5
STG5	El Palmar, Qui	0.93	82	*i* P	Pg	07 36 32.6	-1.0
STG8	El Palmar, Qui	0.93	79	*i* P	Pg	07 36 33.1	-0.6
STG8				*e*S	Sg	07 36 43.9	-2.2
QUEO	Labor Ovalle	0.96	52	*e*P	Pb	07 36 35.6	+1.6
QUEO				*e*S	Sb	07 36 48.1	+1.6
HUEH	Huehuetenango	1.29	36	*e*P	Pg	07 36 40.4	-0.1
PCIG		1.68	328	*e*P	Pn	07 36 44.3	+0.1
PCIG				*e*S	Sn	07 37 01.8	-3.7
CCIG	Comitan	2.00	4	*e*P	Pn	07 36 50.7	+1.8
CCIG				*e*S	Sn	07 37 10.8	-2.9
CCIG	Comitan	2.00	4	*e*P	Pn	07 36 50.8	+2.0
NUBE	Las Nubes	2.47	98	*e*P	Pn	07 36 57.5	+2.3
UXUV	UXUV	3.51	330	*e*P	Pn	07 37 10.9	+1.4
UXUV				*e*S	Sn	07 37 45.0	-5.7
CMIG	Matias Romero	3.75	319	*e*P	Pn	07 37 15.3	+2.5
CMIG				*e*S	Sn	07 37 54.2	-2.4

IDC 08 07:42:38.3±1.3**, 7°.56N×92°.89E, h0**km**, mb3.5**/4**,**
mbtmp3.7/5**, ML4.1**/1**, MS2.6**/1**, Error ellipse:**
s-maj=50.9km s-min=22.2km az=51.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	12.09	269	Pn	Pn	07 45 32.4	+0.4
	1.1nm,0.3s,baz=95,slow=12,SNR=17						
PALK				Sn	Sn	07 47 34.7	-13
	0.6nm,0.3s,baz=55,slow=17,SNR=1.3						
PALK				LR	LR	07 50 02.7	
	comp=Z,25nm,19.1s,baz=142,slow=37						
	2.8nm,0.3s						
H08S3	Diego Garcia H	25.33	234	T	T	08 15 04.0	
	baz=50						
H08S2	Diego Garcia H	25.33	234	T	T	08 15 01.2	
	baz=50,slow=74						
H08S1	Diego Carcia H	25.35	234	T	T	08 15 07.4	
	baz=50,slow=74						
MKAR	Makanchi Array	40.14	349	P	P	07 50 17.2	+1.2
	0.4nm,0.6s,baz=177,slow=7.9,SNR=4.6						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	44.56	347	P	P	07 50 50.4	-1.5
	0.5nm,0.7s,baz=169,slow=7.3,SNR=7.2						
	0.5nm,0.7s						
WRA	Warramunga Arr	49.09	125	P	P	07 51 27.8	0.0
	0.4nm,0.4s,baz=302,slow=9.3,SNR=16						
	0.4nm,0.4s						
ASAR	Alice Springs	50.67	129	P	P	07 51 39.8	-0.1
	0.4nm,0.7s,baz=302,slow=7.5,SNR=7.6						
	0.4nm,0.7s						
H04N2	CROZET ISLANDS	64.82	210	T	T	09 05 05.4	
	baz=44,slow=75,SNR=33						
H04N1	CROZET ISLANDS	64.83	210	T	T	09 05 09.8	
	baz=44,slow=75,SNR=33						
H04N3	CROZET ISLANDS	64.84	210	T	T	09 05 05.0	
	baz=44,slow=75,SNR=40						

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*JMA **08** 07:51:00.6±0.2, 23°.7N±0°.9×122°.6E±0°.4, h31km±4km, MV3.0/14, NEAR ISHIGAKIJIMA ISLAND*

*TAP **08** 07:51:01.5, 23°.81N×122°.61E, h41km, ML3.5, C*

ISC 08 07:50:58.0±1.1**, 23°.73N**±0°.02×**122°.61E**±0°.02**, h9**km±9km**,**
n116, σ0ˢ.91/196**, 2C-17D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	EOS4	0.47	326	⇓*i*P	Pn	07 51 11.0	+0.4
EOS4				*i* S	Sb	07 51 18.0	+2.9
EOS3	EOS3	0.61	335	⇓*i*P	Pn	07 51 13.4	+0.7
EOS3				S	Sn	07 51 22.0	-0.6
EOS2	EOS2	0.76	334	P	Pn	07 51 15.9	+1.1
EOS2				S	Sn	07 51 26.7	+0.2
JYNG	Yonagunijimaku	0.78	23	P	Pn	07 51 15.2	0.0
JYNG				*e*S	Sb	07 51 25.2	+0.7
YOJ	Yonaguni jima	0.82	27	P	Pn	07 51 16.0	+0.2
YOJ	Yonaguni jima	0.82	27	⇑*i*P	Pn	07 51 15.9	+0.2
YOJ				S	Sb	07 51 25.6	+0.1
YOJ	Yonaguni jima	0.82	27	P	Pn	07 51 15.9	+0.2
YOJ				*e*S	Sn	07 51 26.8	-1.1
SHUL	Shoufeng	0.96	274	*e*P	Pn	07 51 18.1	+0.5
SHUL				*e*S	Sb	07 51 30.6	+1.1
TWD	Chiawan	0.99	291	⇓*i*P	Pn	07 51 18.1	0.0
EAHA	Aohua	0.99	307	*e*P	Pn	07 51 18.9	+0.8
EAHA				*e*S	Sn	07 51 31.7	-0.5
ETL	Fush Village	0.99	296	*e*P	Pn	07 51 18.1	-0.1
NACB	Ninganchiao	1.02	296	P	Pn	07 51 18.5	0.0
NACB	Ninganchiao	1.02	296	⇓*i*P	Pn	07 51 18.6	0.0
NACB				*e*S	Sb	07 51 31.5	0.0
EWUT	Wuta	1.04	313	*e*P	Pn	07 51 19.2	+0.4
EWUT				*e*S	Sn	07 51 33.1	-0.3
ETM	Tongmen	1.04	283	P	Pn	07 51 18.8	-0.1
ENA	Nanau	1.05	311	*e*P	Pn	07 51 19.7	+0.7
ENA				*e*S	Sn	07 51 33.3	-0.4
EGFH	Guangfu	1.08	267	*e*P	Pn	07 51 20.1	+0.7
EGFH				*e*S	Sb	07 51 33.9	+0.8
ESAO	Su ao	1.09	321	*e*P	Pn	07 51 20.5	+1.0
ESAO				*e*S	Sn	07 51 34.3	-0.4
HGSD	Ruisui	1.11	258	⇓*i*P	Pn	07 51 20.1	+0.3
HGSD				*i* S	Sg	07 51 33.8	0.0
TWC	Suao	1.11	322	*e*P	Pn	07 51 20.1	+0.4
TWC				*e*S	Sn	07 51 34.6	-0.6
WARBT	Fenglin Townsh	1.12	270	⇓*i*P	Pb	07 51 19.9	+0.3
WARBT				S	Sg	07 51 33.5	-0.5
ETLH	Xiulin Townshi	1.13	295	*e*P	Pn	07 51 20.4	+0.3
ETLH				*e*S	Sb	07 51 34.4	-0.3
ECBN	Changbin	1.14	249	*e*P	Pn	07 51 21.0	+0.9
ECBN				S	Sg	07 51 34.4	-0.2
HATJ	Hateruma jima	1.15	73	P	Pn	07 51 21.1	+0.9
HATJ				*e*S	Sb	07 51 35.5	+0.5
EHYH	Wanrong	1.18	259	*e*P	Pn	07 51 21.6	+0.9
EHYH				*e*S	Sg	07 51 36.2	+0.1
IRIF	Iriomote-Funau	1.19	60	P	Pn	07 51 21.9	+1.0
IRIF				*e*S	Sb	07 51 36.6	+0.3
EHY	Hungye	1.20	259	⇑P	Pn	07 51 21.8	+0.9
EHY				S	Sg	07 51 36.6	-0.1
NDS	Dongshan	1.21	318	*e*P	Pn	07 51 21.9	+0.8
NDS				*e*S	Sb	07 51 36.8	-0.1
CHKH	Chenggong	1.23	244	S	Sg	07 51 36.1	-1.7
EYUL	Yuli	1.24	252	S	Sg	07 51 38.4	+0.4
YULB	Yu-li	1.25	255	P	Pg	07 51 22.6	+0.6
YULB	Yu-li	1.25	255	P	Pg	07 51 22.3	+0.3
YULB				S	Sg	07 51 37.4	-0.8
TWF1	Yuli	1.26	253	P	Pg	07 51 22.5	+0.3
TWF1				S	Sb	07 51 38.1	-0.2
LATG	Datong	1.27	309	⇓*i*P	Pn	07 51 22.8	+0.7
WHF	Hehuan Shan	1.29	289	P	Pg	07 51 22.8	-0.1
CHKT	Chengkung	1.30	241	P	Pn	07 51 22.8	+0.4
CHKT				*e*S	Sb	07 51 37.8	-1.7
TWE	Neicheng	1.30	319	*e*P	Pg	07 51 23.6	+0.5
TWE				*e*S	Sn	07 51 39.5	-0.5
ENTT	Nioudou	1.31	314	*e*P	Pg	07 51 23.5	+0.3
ENTT				*e*S	Sg	07 51 39.4	-0.9
NNSB	Datong	1.31	302	⇓P	Pg	07 51 23.4	+0.1
NNSB				S	Sg	07 51 39.3	-1.1
FULB	Fuli	1.32	246	P	Pn	07 51 23.1	+0.5
FULB				*e*S	Sb	07 51 38.5	-1.5
OWD	Renai	1.33	280	P	Pb	07 51 23.4	+0.1
OWD				*e*S	Sb	07 51 39.5	-0.9
NNS	Nan Shan	1.33	302	P	Pg	07 51 23.7	+0.1
NNS				S	Sb	07 51 39.6	-0.8
VWDT	VWDT	1.34	271	*i* P	Pg	07 51 23.9	+0.1
VWDT				*e*S	Sb	07 51 39.6	-1.0
FUSS	Fushou	1.35	293	⇓P	Pg	07 51 24.2	+0.2
JKRS	Kuro-shima	1.38	68	P	Pg	07 51 24.6	0.0
JKRS				*e*S	Sb	07 51 41.6	-0.1
FUSB	Fushanzhiwuyua	1.38	318	P	Pg	07 51 24.9	+0.3
FUSB				S	Sb	07 51 41.3	-0.6
WUSB	Renai	1.39	281	⇓P	Pg	07 51 24.6	-0.1
WUSB				*e*S	Sb	07 51 41.0	-1.1
TWT	Tachien	1.41	292	P	Pg	07 51 25.3	+0.2
EHD	Haiduan	1.41	246	*e*P	Pn	07 51 24.0	+0.1
EHD				*e*S	Sb	07 51 40.3	-2.3
EDH	Donghe	1.42	238	*e*P	Pn	07 51 24.4	+0.5
EDH				*e*S	Sb	07 51 40.4	-2.3
TDCB	Techi	1.42	292	⇓P	Pg	07 51 25.2	-0.2
ECS	Chishang	1.42	244	*e*S	Sb	07 51 43.1	+0.1
TIPB	Shuangxi	1.43	330	*e*P	Pg	07 51 25.6	+0.2
TIPB				*e*S	Sb	07 51 41.6	-1.5
NWLT	Wulai	1.45	316	*e*P	Pg	07 51 25.8	-0.1
NWLT				*e*S	Sb	07 51 42.7	-1.0
YHNB	Yeheng	1.46	310	P	Pg	07 51 25.8	-0.3
YHNB	Yeheng	1.46	310	P	Pg	07 51 25.8	-0.3
NSK	Sanguang	1.48	310	P	Pg	07 51 26.0	-0.4
NSK				*e*S	Sn	07 51 42.9	-1.4
LDUT	Ludao	1.48	225	*e*P	Pn	07 51 25.2	+0.3
LDUT				*e*S	Sn	07 51 42.1	-2.3
SXI1	Grass Mountain	1.51	334	*e*P	Pb	07 51 26.0	-0.3
SXI1				*e*S	Sn	07 51 44.2	-1.0
SSLB	Suanglung	1.51	272	P	Pb	07 51 26.3	-0.1
SSLB	Suanglung	1.51	272	⇓*i*P	Pb	07 51 26.2	-0.1
SSLB				*e*S	Sn	07 51 44.9	-0.3
NWF	Wu-fen Shan	1.53	331	*e*S	Sn	07 51 44.8	-0.9
WFSB	Wu-fen Shan	1.53	331	*e*P	Pn	07 51 24.1	-1.4
WFSB				*e*S	Sn	07 51 44.2	-1.3
YUS	Yu-Shan	1.54	261	*e*P	Pb	07 51 27.3	+0.3
YUS				*e*S	Sn	07 51 45.6	-0.8
JIJ	Ishigaki jima	1.54	66	P	Pn	07 51 26.2	+0.6
JIJ				S	Sn	07 51 45.6	-0.2
TWA	Mucha	1.55	323	*e*S	Sn	07 51 45.6	-0.6
ELDTW	Lidau	1.56	250	⇓P	Pn	07 51 26.7	+0.7
ELDTW				*e*S	Sn	07 51 45.1	-1.3

SMLT	Sun Moon Lake	1.57	276	⇓iP	Pb	07 51 27.6	+0.3
WCS	Beigang Elemen	1.58	282	⇓P	Pb	07 51 27.8	+0.3
LONT	Longtian	1.59	239	eP	Pn	07 51 27.5	+1.2
LONT				eS	Sn	07 51 46.1	-0.8
TATO	Taipei	1.60	321	P	Pg	07 51 28.9	+0.1
WHYT	Xinyi Township	1.61	269	eP	Pb	07 51 28.3	+0.4
TYC	Yuchr	1.61	276	eP	Pb	07 51 28.1	+0.2
WHP	Taichung City	1.61	290	eP	Pg	07 51 28.9	-0.1
WHP				eS	Sg	07 51 50.4	+0.5
NFF	Wufeng Townshi	1.63	304	eP	Pg	07 51 28.9	-0.3
NFF				eS	Sb	07 51 48.4	-0.6
ALS	Alishan	1.67	263	⇓P	Pb	07 51 29.5	+0.5
ALS				eS	Sn	07 51 49.1	-0.2
KSHI	Guanxi Townshi	1.67	309	eP	Pg	07 51 29.7	-0.3
KSHI				eS	Sb	07 51 50.1	0.0
TWGBT	Beinan	1.67	237	P	Pn	07 51 28.6	+1.1
TWGBT	Beinan	1.67	237	P	Pn	07 51 28.3	+0.8
TWGBT				eS	Sn	07 51 47.9	-1.2
TWG	Pinlang	1.68	238	eP	Pn	07 51 28.8	+1.2
TWG				eS	Sn	07 51 48.1	-1.1
YM01	YM01	1.69	326	P	Pg	07 51 29.6	-1.0
LIOB	Emei	1.71	302	eP	Pg	07 51 30.7	-0.3
LIOB				eS	Sb	07 51 51.0	-0.3
NSTT	Nanjuang	1.72	302	eP	Pg	07 51 30.2	-0.8
NSTT				eS	Sb	07 51 50.9	-0.5
ZUZH	Zhuzihu	1.72	326	eP	Pb	07 51 30.0	+0.2
ZUZH				eS	Sn	07 51 50.5	+0.2
WJS	Zhushan	1.72	273	eP	Pg	07 51 30.9	-0.2
WNT	Mingjian	1.77	275	P	Pg	07 51 31.4	-0.5
STYH	Taoyuan	1.77	252	P	Pb	07 51 30.7	0.0
STYH				S	Sn	07 51 51.5	0.0
CHN5	Tsauling	1.77	266	P	Pb	07 51 31.6	+0.9
CHN5				eS	Sb	07 51 53.3	+0.2
JISG	Ishigakijimahi	1.77	61	P	Pn	07 51 29.3	+0.4
JISG				eS	Sn	07 51 50.5	-1.1
TWQ1	Liyutan	1.78	290	eP	Pb	07 51 31.5	+0.6
TCU	Taichung	1.81	284	eP	Pg	07 51 32.6	-0.2
NMLH	Miaoli	1.84	296	eP	Pg	07 51 32.6	-0.8
NMLH				eS	Sb	07 51 55.2	+0.1
WCKO	Fanlu	1.86	261	eP	Pb	07 51 33.2	+1.0
WCKO				eS	Sb	07 51 55.9	+0.3
TPUB	Ta-pu	1.86	257	P	Pb	07 51 32.6	+0.3
TPUB	Ta-pu	1.86	257	P	Pb	07 51 32.8	+0.5
TPUB				eS	Sb	07 51 55.5	-0.2
WTP	Ta-pu	1.89	256	⇓P	Pb	07 51 33.1	+0.3
WTP				eS	Sn	07 51 56.0	+1.4
WDLH	Douliu	1.90	269	eP	Pg	07 51 33.8	-0.6
WDLH				eS	Sb	07 51 56.9	+0.3
WCHH	Zhanghua	1.91	281	eP	Pb	07 51 33.7	+0.8
LYUB	Lan-yu	1.96	209	P	Pn	07 51 31.5	0.0
LYUB				S	Sn	07 51 52.6	-3.7
SGST	Jiashian	1.97	251	eP	Pb	07 51 33.7	-0.4
SGST				eS	Sn	07 51 58.1	+1.7
CHN1	Nanshi	1.98	254	eP	Pb	07 51 34.8	+0.4
CHN1				eS	Sb	07 51 59.7	+0.5
TWK	Hsinying	2.00	257	eP	Pb	07 51 35.0	+0.4
TWK				eS	Sb	07 51 59.8	+0.2
SNST	Tainan City	2.00	256	eP	Pb	07 51 35.0	+0.4
SNST				eS	Sb	07 51 59.8	+0.1
CHY	Chiayi	2.01	264	eP	Pb	07 51 35.5	+0.7
CHY				eS	Sb	07 52 00.0	0.0
SSD	Sandimen	2.06	242	eP	Pb	07 51 36.1	+0.5
SSD				eS	Sn	07 52 00.0	+1.3
EAST	Anshuo	2.10	231	eP	Pn	07 51 34.8	+1.4
EAST				eS	Sn	07 51 58.1	-1.6
JTJ	Tarama	2.12	64	eP	Pn	07 51 35.1	+1.5
MASBT	Mashibuluo	2.13	239	eP	Pn	07 51 35.6	+1.8
MASBT				eS	Sb	07 52 03.3	-0.1
WSL	Shuilin Townsh	2.19	265	eP	Pb	07 51 37.4	-0.4
WSL				eS	Sn	07 52 03.9	+2.1
SCZT	Fangliau	2.27	234	eP	Pb	07 51 38.7	-0.5
SCZT				eS	Sn	07 52 03.9	0.0
TWKBT	Hengchun	2.43	223	eP	Pn	07 51 39.8	+1.8
TWKBT				eS	Sn	07 52 08.8	+1.0
PHUB	P'eng-hu	2.79	266	eP	Pn	07 51 44.6	+1.7
PHUB				eS	Sn	07 52 17.1	+0.5
PNG	Penghu	2.80	267	eP	Pn	07 51 45.2	+2.2
PTMZ	Houxiangcun	3.43	293	eP	Pn	07 51 52.9	+1.1
PTMZ				eS	Sn	07 52 29.7	-2.8
KNM	Kinmen	3.87	281	eP	Pn	07 52 00.7	+3.0
KNMB	Chin-men Tao	3.92	282	eP	Pn	07 51 59.7	+1.3

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*IDC **08** 07:59:03.6±0.9, 6°.20S×149°.54E, h0^{km}, mb3.9/9, mbtmp4.0/10, ML3.0/1, Error ellipse: s-maj=42.5km s-min=18.0km az=106.0*

ISC 08 07:59:10.7±0.9, **6°.3S**±0°.1×**149°.4E**±0°.2, **h50**^{km}, **n11**, σ**0ˢ.79**/14, **mb3.8**/8, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.85	215	Pn	Pn	08 00 07.8	+0.3
	73nm,0.3s,baz=44,slow=5.6,SNR=93						
PMG				Sn	Sn	08 00 51.2	-0.2
	31nm,0.3s,baz=350,slow=2.8,SNR=8.9						
	179nm,0.3s						
WRA	Warramunga Arr	19.99	226	P	P	08 03 38.3	-1.0
	3.8nm,0.4s,baz=50,slow=11,SNR=49						
WRA				PcP	PcP	08 07 54.1	-0.1
	0.6nm,0.6s,baz=46,slow=1.9,SNR=5.6						
	3.8nm,0.4s						
ASAR	Alice Springs	22.85	219	P	P	08 04 09.4	-0.6
	2.2nm,0.6s,baz=52,slow=9.6,SNR=71						
ASAR				PcP	PcP	08 08 00.2	+0.4
	0.2nm,0.6s,baz=66,slow=2.3,SNR=4.2						
	2.2nm,0.6s						
STKA	Stephens Creek	26.52	195	P	P	08 04 44.0	+0.2
	0.9nm,0.6s,baz=38,slow=12,SNR=4.4						
	0.9nm,0.6s						
PETK	Petropavlovsk-	59.55	6	P	P	08 09 09.3	+0.3
	2.0nm,0.6s,baz=147,slow=4.4,SNR=4.6						
	2.0nm,0.6s						
HILR	Hailar Array B	61.27	338	P	P	08 09 22.0	+1.1
	1.0nm,0.5s,baz=159,slow=6.2,SNR=2.3						
	1.0nm,0.5s						
VNDA	Vanda	71.54	177	P	P	08 10 26.7	+0.7
	0.7nm,0.5s,baz=336,slow=6.9,SNR=2.2						
	0.7nm,0.5s						
MKAR	Makanchi Array	79.22	320	P	P	08 11 11.1	+0.5
	0.2nm,0.5s,baz=103,slow=8.2,SNR=2.4						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	80.50	327	P	P	08 11 16.2	-1.1
	0.6nm,0.5s,baz=110,slow=6.7,SNR=2.3						
	0.6nm,0.5s						
ILAR	Eielson Array	84.78	23	P	P	08 11 38.1	-1.3
	0.5nm,0.6s,baz=254,slow=5.5,SNR=3.7						
	0.5nm,0.6s						
BDFB	Brasilia	152.24	142	PKPbc	PKPbc	08 19 02.0	-0.1
	1.0nm,0.4s,baz=146,slow=3.6,SNR=6.1						

IDC 08 08:05:26.2±5.2, **3°.60S**×**104°.65W**, **h0**^{km}, **mb3.6**/4, **mbtmp3.6**/4, **MS3.2**/4, **Error ellipse: s-maj=244.8km s-min=89.6km az=100.0**, **Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	22.70	25	LR	LR	08 17 03.7	
	comp=Z,61nm,20.9s,baz=200,slow=31						
JTS	Las Juntas de	23.98	55	LR	LR	08 16 60.0	
	comp=Z,99nm,19.8s,baz=270,slow=29						
TEIG	Tepich	28.62	34	LR	LR	08 20 21.7	
	comp=Z,48nm,20.3s,baz=42,slow=31						
TXAR	Lajitas Array	32.75	2	P	P	08 12 01.2	+0.1
	0.5nm,1.0s,baz=181,slow=9.3,SNR=3.4						
	0.5nm,1.0s						
SDV	Santo Domingo	36.11	70	LR	LR	08 24 17.4	
	comp=Z,27nm,19.4s,baz=259,slow=31						
H03N2	Juan Fernandez	38.18	144	T	T	08 52 13.9	
	baz=322,slow=78,SNR=18						
H03N1	Juan Fernandez	38.20	144	T	T	08 52 20.9	
	baz=322,slow=78,SNR=18						
H03N3	Juan Fernandez	38.20	144	T	T	08 52 16.7	
	baz=322,slow=78,SNR=20						
PDAR	Pinedale Array	46.36	355	P	P	08 13 54.7	+0.2
	0.9nm,0.6s,baz=186,slow=4.9,SNR=11						
	0.9nm,0.6s						
YKA	Yellowknife Ar	66.34	355	P	P	08 16 15.7	-0.7
	0.4nm,0.7s,baz=171,slow=5.9,SNR=5.6						
	0.4nm,0.7s						
ILAR	Eielson Array	74.91	343	P	P	08 17 09.1	+0.4
	0.6nm,0.7s,baz=156,slow=6.3,SNR=9.9						
	0.6nm,0.7s						
MKAR	Makanchi Array	136.55	353	PKP	PKPdf	08 24 50.0	-0.6
	0.2nm,0.5s,baz=20,slow=4.6,SNR=1.5						

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*IDC **08** 08:10:16.6±0.8, 33°.27N×121°.37E, h0^{km}, mb3.9/13, mbtmp3.8/17, ML2.8/3, MS3.3/17, Error ellipse: s-maj=17.4km s-min=14.2km az=178.0*

*NEIC **08** 08:10:17.6±0.7, 33°.07N±0°.08×121°.4E±0°.1, h14^{km}±5^{km}, mb4.2/7, Error ellipse: s-maj=13.5km s-min=11.7km az=95.0*

*BJI **08** 08:10:17.1, 33°.06N×121°.39E, h15^{km}, mb4.2/8, ML4.3/12, Ms4.0/8, Ms7 3.7/6*

*KEA **08** 08:10:33.3, 33°.50N×122°.67E, h3^{km}, ML3.8/2*

ISC 08 08:10:17.2±0.5, **33°.09N**±0°.03×**121°.42E**±0°.04, **h10**^{km}, **n59**, σ**2ˢ.29**/62, **mb4.1**/16, **MS3.4**/12, **Yellow Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SSE	Sheshan	1.99	186	Pn	Pn	08 10 50.4	-0.5
SSE				Pg	Pb	08 10 54.4	+0.9
SSE				Sg	Sb	08 11 17.2	-1.2
SSE				smax	smax		
	comp=N,350nm,0.7s						
SSE				smax	smax		
	comp=E,930nm,1.0s						
NJ2	Nanjing	2.40	245	ePn	Pn	08 10 55.0	-1.5
NJ2				Pg	Pb	08 10 59.6	-0.9
NJ2				Sg	Sb	08 11 31.2	+1.0
NJ2				smax	smax		
	comp=N,2µm,0.5s						
NJ2				smax	smax		
	comp=E,2µm,0.5s						
TIA	Tai'an	4.72	313	Pn	Pn	08 11 27.2	-1.2
TIA				Pg	Pb	08 11 42.3	+2.3
TIA				Sg	Sg	08 12 43.3	-5.5
TIA				smax	smax		
	comp=N,690nm,0.8s						
TIA				smax	smax		
	comp=E,270nm,0.7s						
DL2	Dalian	5.81	2	ePn	Pn	08 11 44.6	+1.2
DL2				ePg	Pb	08 12 00.4	+1.8
DL2				Sn	Sn	08 12 44.1	-6.0
DL2				smax	smax		
	comp=N,190nm,0.7s						
DL2				smax	smax		
	comp=E,230nm,0.8s						
DL2				LR	LR		
	comp=N,440nm,4.7s						
DL2				LR	LR		
	comp=E,550nm,6.5s						
DL2				LR	LR		
	comp=Z,380nm,8.1s						
TJN	Taejon	5.89	54		Pn	08 11 45.5	+1.0
HJU	Haeju	6.06	34	Pg	Pg	08 12 12.6	-0.6
HJU				Sg	Sg	08 13 25.9	-5.9
HJU				AML	AML		
	comp=N,116nm,0.5s						
HJU				AML	AML		
	comp=E,146nm,0.8s						
HJU				AML	AML		
	comp=Z,75nm,0.9s						
INCN	Inchon	6.12	43	Pn	Pn	08 11 47.3	-0.3
WHN	Wuhan	6.53	249	Pg	Pg	08 12 23.1	+0.8
WHN				Sg	Sg	08 13 44.3	-2.6
WHN				smax	smax		
	comp=N,1µm,1.1s						
WHN				smax	smax		
	comp=E,680nm,0.7s						
KSAR	Wonju Array Be	6.84	49	Pn	Pn	08 11 58.4	+0.8
KS19	Wonju Array Si	6.87	48		Pn	08 11 58.6	+0.7
KSRS	Korea Array	6.87	49	Pn	Pn	08 11 57.9	-0.1
	comp=E,0.4nm,0.3s,baz=241,slow=13,SNR=8.6						
KSRS				Sn	Sn	08 13 16.4	+0.1
	comp=E,1.4nm,0.3s,baz=238,slow=15,SNR=5.3						
KSRS				Lg	Lg	08 13 51.5	
	comp=E,2.1nm,0.3s,baz=228,slow=28,SNR=7.1						
	comp=E,1.1nm,0.5s						
PYAG	Pyongyang	6.91	29	Sg	Sg	08 13 57.3	-1.7
LYN	LuoYang	7.59	284	Pn	Pn	08 12 12.5	+4.6
LYN				Pg	Pg	08 12 36.6	-6.0
LYN				Sn	Sb	08 13 48.3	-11
LYN				Sg	Sg	08 14 08.1	-13
LYN				smax	smax		
	comp=N,150nm,0.7s						
LYN				smax	smax		
	comp=E,82nm,0.8s						
LYN				LR	LR		
	comp=N,740nm,12.2s						
LYN				LR	LR		
	comp=E,510nm,12.2s						
JNU	Nakatsue	7.93	87	Pn	Pn	08 12 14.2	+1.6
	comp=E,0.2nm,0.3s,baz=236,slow=3.6,SNR=1.7						
JNU				Pg	Pb	08 12 41.6	+6.9
	comp=E,0.5nm,0.3s,baz=344,slow=21,SNR=4.9						
JNU				Lg	Lg	08 14 30.5	
	comp=E,0.4nm,0.3s,baz=247,slow=22,SNR=2.8						
JNU				LR	LR	08 15 58.3	
	comp=E,66nm,18.7s,baz=264,slow=43						
	comp=E,3.5nm,0.7s						
JNU	Nakatsue	7.93	87		Pn	08 12 12.5	-0.1
BJT	Baijiatuau	8.11	330		Pn	08 12 14.3	-0.6
BJI	Beijing	8.12	330	P	Pn	08 12 14.6	-0.5
BJI				S	Sn	08 13 48.2	+1.2
BJI				pmax	pmax		
	comp=E,6.0nm,0.7s						
BJI				LR	LR		
	comp=E,140nm,14.3s						
BJI				LR	LR		
	comp=E,150nm,14.3s						
BJI				LR	LR		
	comp=E,170nm,13.5s						
YHNB	Yeheng	8.39	180		Pn	08 12 18.2	-0.6
HHU	Hamhung	8.41	34	Sg	Sg	08 14 43.3	-3.8
HHU				AML	AML		
	comp=N,44nm,0.6s						
HHU				AML	AML		
	comp=E,126nm,0.9s						
HHU				AML	AML		
	comp=Z,33nm,0.5s						
JOW	Kunigami	8.61	135	LR	LR	08 15 51.0	
	comp=Z,176nm,18.2s,baz=219,slow=38						
CN2	Changchun	11.15	15	P	Pn	08 12 59.2	+2.6
CN2				PP	PnPn	08 13 07.6	+3.1
CN2				S	Sn	08 15 05.4	+4.0
CN2				LR	LR		
	comp=Z,330nm,10.0s						
CN2				LR	LR		
	comp=Z,470nm,10.0s						
CN2				LR	LR		
	comp=Z,310nm,11.0s						
BTO	Baotou	11.81	313	eP	Pn	08 13 09.3	+3.5
BTO				S	Sn	08 15 25.5	+7.7
BTO				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BTO				LR	LR		
	comp=Z,520nm,5.3s						
BTO				LR	LR		
	comp=Z,620nm,5.9s						
BTO				LR	LR		
	comp=Z,480nm,6.3s						
USRK	Ussuriysk Ar.	13.82	34	Lg	Lg	08 17 33.9	
	baz=209,slow=26,SNR=4.3						
MJAR	Matsushiro Arr	14.21	71	Pn	Pn	08 13 38.1	-0.5
	baz=263,slow=14,SNR=2.3						
MJAR				LR	LR	08 18 42.5	
	comp=Z,71nm,19.8s,baz=232,slow=36						
	comp=Z,3.0nm,1.2s						
LZH	Lanzhou	14.79	287	eP	Pn	08 13 48.0	+1.5
LZH				pP	P	08 13 51.8	-0.8
LZH				pmax	pmax		
	comp=Z,16nm,0.9s						
LZH				LR	LR		
	comp=Z,470nm,16.1s						
LZH				LR	LR		
	comp=Z,440nm,13.4s						
LZH				LR	LR		
	comp=Z,340nm,12.4s						
JHJ	Hachijo jima 2	15.39	85	LR	LR	08 19 40.0	
	comp=Z,84nm,19.8s,baz=246,slow=36						
HIA	Hailar	16.21	356		Pn	08 14 05.0	-0.1
HIA				IAmb	IAmb	08 14 08.8	
	comp=Z,14nm,0.9s						
HEH	HeiHe	17.72	13	eP	P	08 14 25.2	+0.5
HEH				LR	LR		
	comp=Z,350nm,8.1s						
HEH				LR	LR		
	comp=Z,540nm,8.1s						
HEH				LR	LR		
	comp=Z,400nm,9.4s						
SONM	Songino Array	18.60	327	P	Pn	08 14 35.2	+0.3
	comp=Z,0.6nm,0.6s,baz=135,slow=13,SNR=4.1						
SONM				LR	LR	08 22 11.8	
	comp=Z,49nm,20.8s,baz=129,slow=39						
SONM	Songino Array	18.60	327	P	P	08 14 32.9	-1.8
CMAR	Chiang Mai Arr	24.87	240	P	P	08 15 41.9	+1.8
	comp=Z,3.1nm,0.3s,baz=36,slow=8.4,SNR=10						
CMAR				LR	LR	08 25 15.7	
	comp=Z,36nm,19.9s,baz=75,slow=36						
	comp=Z,3.1nm,0.3s						
CMAR	Chiang Mai Arr	24.87	240	P	P	08 15 38.6	-1.4
YAK	Yakutsk	29.44	8	LR	LR	08 29 41.9	
	comp=Z,48nm,18.9s,baz=88,slow=40						
MKAR	Makanchi Array	32.63	306	P	P	08 16 49.4	+0.3
	comp=Z,0.3nm,0.6s,baz=95,slow=9.7,SNR=2.6						
MKAR				LR	LR	08 30 40.6	
	comp=Z,54nm,18.2s,baz=115,slow=38						
	comp=Z,0.3nm,0.6s						
ZALV	Zalesovo Beam	33.22	320	P	P	08 16 54.4	+0.3
	comp=Z,2.1nm,0.8s,baz=105,slow=9.3,SNR=7.8						
	comp=Z,2.1nm,0.8s						
ZALV	Zalesovo Beam	33.22	320	P	P	08 16 53.2	-0.9
PBA	Port Blair	33.84	238	P	P	08 16 58.9	-1.0
TARG	Taragay, Kyrgy	35.39	297	P	P	08 17 12.7	-0.9
TARG				IAmb	IAmb	08 17 15.9	
	comp=Z,4.3nm,1.0s						
KURK	Kurchatov	35.81	312	P	P	08 17 15.8	-0.8
KURK				IAmb	IAmb	08 17 17.8	
	comp=Z,2.4nm,0.8s						
KURBB	Kurchatov Arra	35.84	312	P	P	08 17 16.9	+0.1
	comp=Z,1.0nm,0.8s,baz=104,slow=8.8,SNR=5.5						
	comp=Z,1.0nm,0.8s						
TIXI	Tiksi	38.83	4	LR	LR	08 34 27.9	
	comp=Z,44nm,19.3s,baz=353,slow=38						
JAY	Jayapura	39.83	149	LR	LR	08 32 51.6	
	comp=Z,20nm,20.9s,baz=317,slow=34						
NRIK	Noril'sk	40.95	342	P	P	08 17 59.0	-0.5
	comp=Z,1.4nm,0.5s,baz=107,slow=9.1,SNR=5.4						
NRIK				LR	LR	08 36 57.9	
	comp=Z,60nm,18.5s,baz=162,slow=39						
	comp=Z,1.4nm,0.5s						
NRIK	Noril'sk	40.95	342	IAmb	IAmb	08 18 00.8	
	comp=Z,4.3nm,1.0s						
BVAR	Borovoye Array	41.25	315	P	P	08 18 01.8	-0.4
	comp=Z,0.4nm,0.5s,baz=86,slow=5.9,SNR=2.3						
	comp=Z,0.4nm,0.5s						
ARTI	Arti	48.45	319	LR	LR	08 41 15.5	
	comp=Z,64nm,19.8s,baz=210,slow=38						
PMG	Port Moresby	48.85	145	LR	LR	08 38 47.6	
	comp=Z,14nm,21.4s,baz=6.5,slow=35						
WRA	Warramunga Arr	54.15	165	P	P	08 19 45.2	+2.6
	comp=Z,0.8nm,0.8s,baz=347,slow=7.6,SNR=4.5						
	comp=Z,0.8nm,0.8s						
ASAR	Alice Springs	57.68	166	P	P	08 20 10.3	+2.4
	comp=Z,0.8nm,1.0s,baz=331,slow=5.4,SNR=4.7						
	comp=Z,0.8nm,1.0s						
OBN	Obninsk	60.79	319	LR	LR	08 47 15.5	
	comp=Z,69nm,20.2s,baz=29,slow=37						
ILAR	Eielson Array	61.30	29	P	P	08 20 33.3	+0.9
	comp=Z,0.4nm,0.7s,baz=297,slow=6.9,SNR=5.5						
	comp=Z,0.4nm,0.7s						
FINES	FINESS Array B	63.97	328	P	P	08 20 49.2	-1.1
	comp=Z,2.9nm,0.8s,baz=72,slow=9.1,SNR=5.5						
	comp=Z,2.9nm,0.8s						
FINES	FINESS Array B	63.97	328	P	P	08 20 49.7	-0.6
L27K	Beaver Creek,	63.98	30	P	P	08 20 50.8	+0.4
L27K				IAmb	IAmb	08 21 18.4	
	comp=Z,2.5nm,1.1s						
AKASG	Malin Array Be	66.50	316	P	P	08 21 05.0	-1.8
	comp=Z,0.9nm,0.6s,baz=69,slow=6.9,SNR=2.8						
AKASG				LR	LR	08 52 03.0	
	comp=Z,74nm,20.2s,baz=50,slow=38						
	comp=Z,0.9nm,0.6s						
BRTR	Keskin Array B	68.23	304	P	P	08 21 17.8	-0.5
	comp=Z,1.7nm,0.7s,baz=90,slow=4.9,SNR=8.6						
	comp=Z,1.7nm,0.7s						
NOA	NORSAR Array B	70.52	331	LR	LR	08 55 47.7	
	comp=Z,42nm,18.4s,baz=295,slow=39						
VRAC	Vranov	74.33	319	LR	LR	08 55 14.0	
	comp=Z,64nm,18.1s,baz=352,slow=36						
YKA	Yellowknife Ar	74.73	24	P	P	08 21 56.2	-0.6
	comp=Z,0.7nm,0.7s,baz=315,slow=6.5,SNR=13						
	comp=Z,0.7nm,0.7s						

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*NIED **08** 08:29:18.1, 38°.71N×142°.25E, h39^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.81; $M_{\theta\theta}$1.18; $M_{\phi\phi}$-2.98; $M_{r\theta}$0.40; $M_{\theta\phi}$-0.50; $M_{\phi r}$4.15; Fault plane solution: $M_0$4.82000×10^{14} NP1: ϕ_s190.00000°, δ15.00000°, λ95.00000°. NP2: ϕ_s5.00000°, δ75.00000°, λ89.00000°.*

*JMA **08** 08:29:18.1±0.1, 38°.7N±0°.2×142°.3E±0°.7, h39^{km}±1^{km}, MD3.7/40, MV4.1/40, E OFF MIYAGI PREF*

JMA Felt I J1 at E OFF MIYAGI PREF .

*IDC **08** 08:29:20.7±2.1, 38°.90N×142°.10E, h49^{km}±18^{km}, mb3.3/8, mbtmp3.6/13, ML3.4/5, MS2.5/2, Error ellipse: s-maj=24.3km s-min=11.9km az=118.0*

ISC 08 08:29:17.8±1.7, **38°.74N**±0°.05×**142°.27E**±0°.07, **h29**^{km}±11^{km}, **n37**, σ**1ˢ.16**/34, **mb3.6**/8, **11D**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.58	306	⇓P	Pb	08 29 30.0	+0.5
OFUJ				⇓S	Sb	08 29 38.2	+0.7
OFUJ	Ofunato	0.58	306	A	A	08 29 30.0	
	comp=N,5.0nm,0.5s,comp=E,4.0nm,0.5s						
JKMT	Kesennumamotoy	0.63	277	⇓iP	Pb	08 29 30.4	+0.1
JKMT				⇓S	Sb	08 29 38.7	-0.1
JKMT	Kesennumamotoy	0.63	277	A	A	08 29 30.4	
	comp=N,5.0nm,5.9s						
JIKH	Ishinomakikobu	0.76	236	⇓iP	Pb	08 29 31.8	-0.7
JIKH				⇓S	Sb	08 29 41.4	-1.1
JIKH	Ishinomakikobu	0.76	236	A	A	08 29 31.8	
	comp=N,11nm,0.3s,comp=E,10.0nm,0.2s						
JIO	Ouri	0.77	249	⇓P	Pb	08 29 32.0	-0.7
JMK	Ichinoseki	0.85	285	⇓P	Pb	08 29 33.8	-0.1
JMK				⇓S	Sb	08 29 44.5	-0.4
JMK	Ichinoseki	0.85	285	A	A	08 29 33.8	
	comp=N,4.0nm,0.4s,comp=E,4.0nm,1.0s						
JOM	Ohasama	1.06	314	⇓P	Pn	08 29 37.0	+0.3
JOM				⇓S	Sb	08 29 50.8	-0.3
JTH	Tanohata	1.24	345	P	Pn	08 29 39.3	+0.1
JOU	Okura	1.31	254	P	Pn	08 29 40.0	-0.2
JOU				S	Sn	08 29 56.6	-0.1
JOU	Okura	1.31	254	A	A	08 29 40.0	
	comp=N,4.0nm,0.4s,comp=E,3.0nm,0.4s						
JRG	Rokugo	1.43	298	P	Pn	08 29 42.5	+0.6
JRG	Rokugo	1.43	298	A	A	08 29 42.5	
	comp=N,2.0nm,0.6s,comp=E,2.0nm,0.6s						
JMM	Marumori	1.45	234	P	Pn	08 29 41.4	-0.7
JMM				S	Sn	08 29 59.1	-1.0
JYK	Kaneyama	1.50	278	P	Pn	08 29 43.0	+0.2
JYK				S	Sn	08 30 01.8	+0.4
MJAR	Matsushiro Arr	3.90	237	P	Pn	08 30 16.9	+1.1
	comp=E,0.7nm,0.3s,baz=339,slow=4.8,SNR=32						
MJAR				S	Sn	08 31 01.8	+1.3
	comp=E,6.1nm,0.8s,baz=93,slow=16,SNR=4.1						
MJAR				LR	LR	08 31 59.5	
	comp=E,121nm,20.2s,baz=69,slow=41						
	comp=E,5.8nm,0.4s						
ASAJ	Asahikawa	5.38	3	P	Pn	08 30 37.5	+1.4
	comp=E,0.8nm,0.3s,baz=226,slow=15,SNR=12						
ASAJ				S	Sn	08 31 34.8	-2.2
	comp=E,17nm,0.8s,baz=262,slow=19,SNR=2.6						
	comp=E,3.3nm,0.4s						
USRK	Ussuriysk Ar.	9.45	309	P	Pn	08 31 32.9	+1.0
	comp=E,0.6nm,0.3s,baz=116,slow=16,SNR=8.5						
	comp=E,1.5nm,0.5s						
KSRS	Korea Array	11.38	268	P	Pn	08 32 01.1	+2.8
	comp=E,0.2nm,0.3s,baz=76,slow=14,SNR=5.0						
	comp=E,1.0nm,0.6s						
HILR	Hailar Array B	19.37	311	P	P	08 33 38.2	-2.9
	baz=114,slow=14						
	comp=E,0.6nm,0.3s						
GUMO	Guam	25.15	174	LR	LR	08 45 58.9	
	comp=E,4.7nm,20.0s,baz=327,slow=39						
H11N2	WAKE ISLAND Hy	28.50	125	T	T	09 05 32.2	
	baz=317,slow=76,SNR=47						
H11N1	WAKE ISLAND Hy	28.51	125	T	T	09 05 38.3	
	baz=317,slow=76,SNR=46						
H11N3	WAKE ISLAND Hy	28.52	125	T	T	09 05 38.9	
	baz=317,slow=76,SNR=50						

H11S1	WAKE ISLAND Hy	29.27	127	T	T	09 06 35.1	
	baz=318,slow=76,SNR=10						
H11S3	WAKE ISLAND Hy	29.27	127	T	T	09 06 27.5	
	baz=318,slow=76,SNR=14						
H11S2	WAKE ISLAND Hy	29.29	127	T	T	09 06 29.2	
	baz=318,slow=76,SNR=12						
ZALV	Zalesovo Beam	41.29	311	P	P	08 36 59.7	-0.7
	comp=E,0.7nm,0.4s,baz=95,slow=10,SNR=4.9						
	comp=E,0.7nm,0.4s						
MKAR	Makanchi Array	43.81	301	P	P	08 37 19.9	-1.1
	comp=E,0.5nm,0.6s,baz=82,slow=12,SNR=5.8						
	comp=E,0.5nm,0.6s						
KURBB	Kurchatov Arra	45.51	307	P	P	08 37 33.5	-1.0
	comp=E,2.0nm,0.5s,baz=82,slow=8.2,SNR=14						
	comp=E,2.0nm,0.5s						
ILAR	Eielson Array	47.70	33	P	P	08 37 51.8	+0.4
	comp=E,0.3nm,0.7s,baz=273,slow=7.3,SNR=2.4						
	comp=E,0.3nm,0.7s						
BVAR	Borovoye Array	49.94	311	P	P	08 38 07.5	-1.3
	comp=E,0.5nm,0.4s,baz=64,slow=9.8,SNR=2.9						
	comp=E,0.5nm,0.4s						
WRA	Warramunga Arr	58.84	189	P	P	08 39 15.7	+1.9
	comp=E,0.4nm,0.7s,baz=6.6,slow=7.1,SNR=5.6						
	comp=E,0.4nm,0.7s						
PDAR	Pinedale Array	76.00	46	P	P	08 41 02.4	0.0
	comp=E,0.2nm,0.5s,baz=321,slow=7.4,SNR=2.1						
	comp=E,0.2nm,0.5s						
TXAR	Lajitas Array	88.55	53	P	P	08 42 08.1	0.0
	comp=E,0.1nm,0.6s,baz=318,slow=4.8,SNR=1.6						
	comp=E,0.1nm,0.6s						

TEH ***08*** *08:35:25.9, 33°.09N×46°.46E, h9^{km}±47^{km}*
ISN ***08*** *08:35:25.1±0.8, 33°.01N×46°.43E, h4^{km}±3^{km}, ML3.0*
ISC 08 08:35:27.4±1.0**, 33°.07N**±0°.05×**46°.40E**±0°.05**, h13^{km}, n17, σ1^{s}.20**/22**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBDR	Badra	0.40	276	*e*Pg	Pg	08 35 34.0	-1.3
IBDR				*e*Sg	Sg	08 35 40.5	-0.2
IBDR				AML	AML	08 35 42.5	
	comp=N,631nm,0.2s						
IBDR				AML	AML	08 35 44.5	
	comp=E,1μm,0.4s						
GLG1	Gilan-e-Gharb	1.12	339	Pg	Pb	08 35 47.4	-1.3
IGHG	Ghaleghazi	1.26	6	Pg	Pn	08 35 50.0	-0.9
KCHF	Cheshme Sefid,	1.31	24	Pg	Pn	08 35 50.8	-0.8
RAFI	Al-Rafai	1.36	190	*e*Pn	Pb	08 35 52.0	-0.8
RAFI				*e*Sn	Sg	08 36 12.0	+0.7
RAFI				AML	AML	08 36 15.4	
	comp=N,296nm,0.8s						
RAFI				AML	AML	08 36 18.6	
	comp=E,262nm,0.7s						
IDHR	Dehrash	1.63	360	Pg	Pn	08 35 56.2	+0.3
IDOB	Doab	1.65	64	Pg	Pn	08 35 56.5	+0.3
BHD	Baghdad	1.71	277	*e*Pn	Pb	08 35 57.7	-0.9
BHD				*e*Sn	Sg	08 36 21.5	-0.8
IBZA	Bozab	1.85	41	Pg	Pn	08 35 59.9	+0.8
SNQR	Sonqor, Kerman	2.05	29	Pn	Pn	08 36 02.9	+1.0
HAGD	Aghdareh	2.87	52	Pn	Pn	08 36 13.1	+0.1
IKRK	Kirkuk	2.88	324	*e*Pn	Pn	08 36 14.0	+1.0
IKRK				*e*Sn	Sn	08 36 51.0	+3.4
HGHA	Hamedan- Ghaye	3.15	39	Pn	Pn	08 36 17.3	+0.3
QABG	Abgarm-Qazvin	3.72	44	Pn	Pn	08 36 25.5	+0.7
IPIR	Pirpir	3.80	95	Pn	Pn	08 36 26.1	+0.3
MSL	Mosul	4.29	322	*e*Pn	Pn	08 36 34.0	+1.7
MSL				*e*Sn	Sn	08 37 23.5	+1.3
IKLH	Kolahrood	4.35	85	Pn	Pn	08 36 34.0	+0.6

GCG ***08*** *08:40:27.4±2.2, 15°.14N×94°.71W, h37^{km}±999^{km}, MD4.1*
MEX ***08*** *08:40:29.6±1.0, 15°.36N×94°.55W, h37^{km}±999^{km}, MD4.1*
ISC 08 08:40:21.7±1.3**, 15°.29N**±0°.05×**94°.62W**±0°.02**, h10^{km}**±11^{km}**, n38, σ2^{s}.10**/67**, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.41	73	*e*P	Pg	08 40 50.6	+1.9
PCIG				*e*S	Sn	08 41 05.1	-0.9
HUIG	Huatulco	1.51	288	*e*P	Pg	08 40 52.8	+2.0
HUIG				*e*S	Sg	08 41 09.9	-0.6
HUIG	Huatulco	1.51	288	*i* P	Pg	08 40 53.1	+2.3
HUIG				*e*S	Sb	08 41 08.9	-0.3
CMIG	Matias Romero	1.81	352	*e*P	Pg	08 40 56.5	+0.1
CMIG				*e*S	Sn	08 41 16.8	+0.8
UXUV	UXUV	2.06	13	*e*P	Pg	08 41 00.9	-0.4
UXUV				*e*S	Sb	08 41 24.4	-0.6
THIG		2.30	99	*e*P	Pb	08 41 02.6	-0.7
THIG				*e*S	Sn	08 41 28.3	+0.2
PATR	El Naranjo	2.31	94	*e*P	Pb	08 41 03.2	-0.4
PATR				*e*S	Sn	08 41 29.0	+0.4
PAVE	Pavencul	2.36	92	*e*P	Pb	08 41 03.9	-0.6
PAVE				*e*S	Sn	08 41 29.4	-0.4
CHUJ	Union Juarez	2.43	94	*e*P	Pb	08 41 04.7	-1.0
CHUJ				*e*S	Sn	08 41 32.0	+0.4
SMCA	Catarina	2.49	100	*e*P	Pb	08 41 06.3	-0.3
PEIG	Puerto Escondi	2.54	286	*e*P	Pb	08 41 07.3	-0.1
PEIG				*e*S	Sn	08 41 32.1	-1.9
CCIG	Comitan	2.58	67	*e*P	Pb	08 41 08.9	+0.7
CCIG				*e*S	Sb	08 41 38.3	-1.8
CCIG	Comitan	2.58	67	*e*P	Pg	08 41 09.8	-1.4
NEUV	Arroyo Zacate	2.66	335	*e*P	Pb	08 41 09.2	-0.3
NEUV				*e*S	Sn	08 41 35.6	-1.4
VHO	Vista Hermosa	2.70	311	*e*P	Pg	08 41 11.5	-2.0
VHO				*e*S	Sn	08 41 39.2	+1.0
HUEH	Huehuetenango	3.00	89	*e*P	Pb	08 41 13.5	-2.0
HUEH				*e*S	Sn	08 41 44.5	-1.3
YOIG	Yosondua	3.22	299	*e*P	Pb	08 41 18.9	-0.2
YOIG				*e*S	Sn	08 41 51.1	0.0
PMUV	Sontecomapan	3.27	352	*e*P	Pn	08 41 15.7	+2.6
PMUV				*i* S	Sn	08 41 50.1	-2.1
STG5	El Palmar, Qui	3.28	105	*e*P	Pn	08 41 13.5	+0.2
PNIG	Pinotepa	3.55	288	*e*P	Pb	08 41 21.9	-2.8
PNIG				*e*S	Sn	08 41 58.4	-0.6
TXIG	Tlaxiaco	3.60	303	*e*P	Pb	08 41 24.7	-0.9
TXIG				*e*S	Sn	08 41 58.4	-2.2
TOIG	Toxpalan	3.64	320	*e*P	Pb	08 41 25.9	-0.4
TOIG				*e*S	Sn	08 42 01.5	0.0
HLIG	Huajuapan de L	3.96	310	*e*P	Pb	08 41 29.1	-2.8
HLIG				*e*S	Sn	08 42 11.9	+2.4
TPIG	Tehuac#an	4.07	320	*e*S	Sn	08 42 15.9	+3.8
FTIG	Fresnillo de T	4.26	308	*e*P	Pb	08 41 33.9	-2.9
FTIG				*e*S	Sn	08 42 16.4	-0.3
MGIG	Malinaltepec	4.32	297	*e*P	Pb	08 41 34.5	-3.3
MGIG				*e*S	Sn	08 42 17.9	-0.3
JAUV	Jalcomulco	4.56	333	*e*P	Pn	08 41 33.0	+2.2
JAUV				*e*S	Sn	08 42 21.5	-2.5
CRIG	Cruz Grande	4.57	289	*e*P	Pb	08 41 36.6	-5.5
CRIG				*e*S	Sn	08 42 21.9	-2.3
PETF	Flores	4.84	70	*e*P	Pn	08 41 39.4	+4.7
PETF				*e*S	Sn	08 42 30.4	-0.5
SCIG	Sabancuy	4.91	41	*e*P	Pn	08 41 39.7	+4.1
SCIG				*e*S	Sn	08 42 29.0	-3.5
DAIG	Los Arroyos	5.13	290	*e*	Pn	08 41 44.4	+5.7
DAIG				*e*S	Sn	08 42 33.4	-4.7
PPCL	Tochimilco	5.25	314	*e*P	Pb	08 41 49.2	-4.7
PPCL				*e*S	Sn	08 42 43.8	+2.4
PPPT	Popocatepetl	5.30	314	*e*P	Pb	08 41 50.1	-4.7
PPPT				*e*S	Sn	08 42 43.4	+0.6
PPSX	Xalitzintla	5.30	316	*e*P	Pb	08 41 52.9	-1.7
PPSX				*e*S	Sn	08 42 46.1	+3.6
PPM	Popocatepetl	5.36	315	*e*P	Pn	08 41 46.1	+3.8
PPM				*e*S	Sn	08 42 46.2	+1.7
MEIG	Mezcala	5.46	299	*e*P	Pb	08 41 50.6	-6.7
MEIG				*e*S	Sn	08 42 47.7	+1.3
YAIG	Yautepec	5.54	310	*e*P	Pb	08 41 51.7	-7.0
YAIG				*e*S	Sn	08 42 46.4	-2.0
CXUV	Coxquihui	5.62	330	*e*P	Pn	08 41 48.0	+2.6
CXUV				*e*S	Sn	08 42 51.2	+1.1

IDC ***08*** *08:44:45.9±0.6, 53°.26S×140°.03E, h0^{km}, mb4.4/10, mbtmp4.4/10, MS4.0/27, Error ellipse: s-maj=43.3km s-min=14.5km az=90.0*
NEIC ***08*** *08:44:47.2±1.3, 53°.20S±0°.08×140°.3E±0°.2, h10^{km}±1^{km}, mb4.6/22, Error ellipse: s-maj=24.7km s-min=6.8km az=117.0*
GCMT ***08*** *08:44:49.2±0.2, 53°.22S±0°.01×140°.41E±0°.02, h18^{km}±1^{km}, MW5.0/116, Moment Tensor Solution. s52,c58; s116,c170; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.35±.11; $M_{\theta\theta}$0.26±.09; $M_{\phi\phi}$0.09±.10; $M_{r\theta}$-1.40±.25; $M_{\theta\phi}$-3.83±.08; $M_{\phi r}$-0.01±.22; Best double couple: $M_0$4.08200×10^{16} NP1:ϕ_s359.00000°, δ70.00000°, λ-2.00000°. NP2:ϕ_s90.00000°, δ88.00000°, λ-160.00000°. Principal axes: T 4.2290, Plg13.0000°, Azm223.0000°; N -0.2940, Plg70.0000°, Azm96.0000°; P -3.9350, Plg16.0000°, Azm316.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 08 08:44:47.2±0.4**, 53°.26S**±0°.06×**140°.3E**±0°.1**, h10^{km}, n134, σ0^{s}.98**/97**, mb4.8**/27**, MS4.1**/28**, 4C, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUMTC	Mt Clear Colle	15.85	11	P	Pn	08 48 30.5	+0.2
BRAT	Ballarat	15.91	11	P	Pn	08 48 30.1	-1.0
TOO	Toolangi	16.10	15		Pn	08 48 31.4	-2.2
AUSMG	Snowy Mountain	17.82	22	P	P	08 48 55.9	-0.1
AUMHS	Melrose High S	18.95	23	P	Pn	08 49 08.4	-0.6
CAN	Canberra	18.96	22		P	08 49 07.8	-0.7
CAN				IAmb	IAmb	08 49 11.1	
	comp=Z,34nm,1.0s						
CAN	Canberra	18.96	22	P	Pn	08 49 09.1	-0.1
AUMTS	Mt Stromlo	18.96	22	P	Pn	08 49 09.4	+0.2
AUSIS	Research Schoo	19.03	23	P	Pn	08 49 09.7	-0.3
CNB	Canberra Magne	19.05	23	P	Pn	08 49 09.6	-0.7
WHZ	Wether Hill Ro	19.31	79	P	P	08 49 12.2	0.0
WHZ				IAmb	IAmb	08 49 14.4	
	comp=Z,47nm,1.1s						
CASY	Casey	19.59	217		P	08 49 15.5	+0.4
CASY				IAmb	IAmb	08 49 19.4	
	comp=Z,46nm,0.8s						
HTT	Hallett	19.84	357	P	Pn	08 49 19.0	-0.8
AUJCS	Jamestown Cent	20.09	356	P	Pn	08 49 21.3	-1.3
WHYH	Whyalla	20.31	353	P	Pn	08 49 24.6	-0.6
BBOO	Buckleboo	20.66	350	P	P	08 49 25.4	-1.6
BBOO				IAmb	IAmb	08 49 37.9	
	comp=Z,22nm,0.9s						
STKA	Stephens Creek	21.39	3	P	P	08 49 34.3	-0.5
	comp=Z,17nm,0.9s,baz=172,slow=11,SNR=28						
STKA				LR	LR	08 56 27.1	
	comp=Z,248nm,19.5s,baz=184,slow=33						
	comp=Z,17nm,0.9s						
STKA	Stephens Creek	21.39	3	P	P	08 49 34.8	-0.1
AUDCS	Dubbo College	21.86	19	P	P	08 49 39.1	-0.8
CMSA	Cobar Meteorol	22.06	12	P	P	08 49 41.4	-0.6
AUPHS	Peel High Scho	23.45	23	P	P	08 49 57.0	+0.4
FORT	Forrest	24.16	334	P	P	08 50 03.0	-0.4
FORT				IAmb	IAmb	08 50 10.4	
	comp=Z,23nm,0.8s						
ARMA	Armidale	24.28	24		P	08 50 03.7	-1.0
ARMA				IAmb	IAmb	08 50 09.9	
	comp=Z,9.0nm,0.9s						
ARMA	Armidale	24.28	24	P	P	08 50 04.9	+0.2
AULRC	Lightning Ridg	24.47	16	P	P	08 50 06.5	+0.2
INKA	Innaminka	25.50	1		P	08 50 13.9	-1.6
INKA				IAmb	IAmb	08 50 18.8	
	comp=Z,22nm,1.1s						
VNDA	Vanda	25.60	169	P	P	08 50 15.9	-0.2
	comp=Z,5.7nm,0.9s,baz=343,slow=7.9,SNR=8.6						
VNDA				LR	LR	08 59 38.1	
	comp=Z,330nm,19.1s,baz=337,slow=35						
	comp=Z,5.7nm,0.9s						
VNDA	Vanda	25.60	169		P	08 50 16.7	+0.6
VNDA				IAmb	IAmb	08 50 23.8	
	comp=Z,12nm,0.9s						
H01W1	Cape Leeuwin H	26.02	304	T	T	09 17 33.7	
	baz=143,slow=76,SNR=99						
H01W2	Cape Leeuwin H	26.03	304	T	T	09 17 28.7	
	baz=143,slow=76,SNR=115						
H01W3	Cape Leeuwin H	26.04	304	T	T	09 17 36.0	
	baz=143,slow=76,SNR=89						
NWAO	Narrogin (SRO)	26.18	312	LR	LR	08 58 17.1	
	comp=Z,496nm,20.4s,baz=139,slow=31						
SBA	Scott Base	26.47	168	P	P	08 50 24.6	+0.7
QLP	Quilpie	26.81	8	P	P	08 50 27.7	+0.3
EIDS	Eidsvold	29.01	20		P	08 50 45.6	-1.5
EIDS				IAmb	IAmb	08 50 47.2	
	comp=Z,17nm,0.9s						
EIDS	Eidsvold	29.01	20	P	P	08 50 46.2	-0.9
URZ	Urewera	29.36	74	LR	LR	09 02 01.7	
	comp=Z,422nm,18.2s,baz=220,slow=35						
ASAR	Alice Springs	29.94	348	P	P	08 50 54.4	-1.1
	comp=Z,1.1nm,0.5s,baz=167,slow=9.7,SNR=24						
ASAR				PcP	PcP	08 53 58.5	+0.6
	comp=Z,1.2nm,0.7s,baz=155,slow=1.9,SNR=11						
ASAR				LR	LR	09 01 51.6	
	comp=Z,162nm,20.6s,baz=166,slow=34						
	comp=Z,1.1nm,0.5s						
ASAR	Alice Springs	29.94	348	P	P	08 50 53.8	-1.6
AS31	Alice Springs	29.94	348		P	08 50 54.4	-1.1
QIS	Mount Isa	32.65	359	P	P	08 51 18.7	-0.6
CTA	Charters Tower	33.43	10	LR	LR	09 04 31.2	
	comp=Z,12nm,18.1s,baz=210,slow=35						
WRA	Warramunga Arr	33.57	350	P	P	08 51 26.1	-1.3
	comp=Z,7.6nm,1.0s,baz=172,slow=7.4,SNR=32						
WRA				PcP	PcP	08 54 07.2	-0.5
	comp=Z,1.6nm,0.7s,baz=175,slow=2.1,SNR=7.2						
	comp=Z,7.6nm,1.0s						
WRA	Warramunga Arr	33.57	350	P	P	08 51 26.2	-1.1
WRAB	Tennant Creek	33.58	350	P	P	08 51 25.7	-1.7
WRAB				IAmb	IAmb	08 51 33.7	
	comp=Z,11nm,0.8s						
WRAB	Tennant Creek	33.58	350	P	P	08 51 26.6	-0.8
WB0	Warramunga Arr	33.74	350	P	P	08 51 27.8	-1.0
WB0				IAmb	IAmb	08 51 34.5	
	comp=Z,8.4nm,0.8s						
MTSU	Mount Surprise	35.20	7	P	P	08 51 42.1	+0.7
PSA00	Pilbara Seismi	35.29	326	P	P	08 51 40.6	-1.5
QSPA	South Pole Qui	36.85	180	P	P	08 51 54.6	-0.8
	comp=Z,17nm,1.0s,baz=340,slow=5.7,SNR=20						
QSPA				LR	LR	09 06 27.5	
	comp=Z,434nm,21.5s,baz=7.0,slow=35						
	comp=Z,17nm,1.0s						
QSPA	South Pole Qui	36.85	180	P	P	08 51 55.0	-0.4
FITZ	Fitzroy Crossi	36.90	336	LR	LR	09 05 42.8	
	comp=Z,440nm,20.9s,baz=170,slow=34						
FITZ	Fitzroy Crossi	36.90	336	P	P	08 51 55.5	-0.4
DZM	Mont Dzumac	36.98	43	*e*S	S	08 57 31.7	-10
	comp=Z,157nm,26.8s						
DZM				*e*LR	LR	09 01 46.7	
	comp=Z,1μm,26.0s						
YATNC	Mamie plateau,	37.18	43	P	P	08 51 57.7	-0.6
MAW	Mawson	37.95	217	P	P	08 52 02.9	-1.5
	comp=Z,7.3nm,1.0s,baz=95,slow=8.9,SNR=4.3						
MAW				LR	LR	09 06 13.8	
	comp=Z,670nm,20.0s,baz=90,slow=34						
	comp=Z,7.3nm,1.0s						
KNRA	Kununurra	38.58	342	P	P	08 52 09.4	-0.8
KNRA				IAmb	IAmb	08 52 13.4	
	comp=Z,7.1nm,0.9s						
RAO	Raoul Island	38.74	69	LR	LR	09 05 36.6	
	comp=Z,290nm,19.7s,baz=257,slow=32						
SANVU	Saraoutou	43.27	40	P	P	08 52 48.2	-0.6
PMG	Port Moresby	44.08	10	LR	LR	09 11 12.2	
	comp=Z,258nm,18.1s,baz=163,slow=36						
BATI	Baumata	44.97	337	LR	LR	09 10 54.1	
	comp=Z,392nm,21.5s,baz=188,slow=35						
SOEI	Soe	45.27	337	P	P	08 53 06.5	+1.5
SOEI	Soe	45.27	337	P	P	08 53 06.2	+1.2
	comp=Z,26nm,1.1s						
EDFI	Ende, Flores	46.87	334	P	P	08 53 16.9	-0.7
	comp=Z,15nm,0.7s						
TATA	Tatamba Isabel	47.46	27	P	P	08 53 23.5	+1.4
LBFI	Labuhan Bajo,	47.61	332	P	P	08 53 26.2	+2.9
	comp=Z,21nm,0.8s						
BELA	Belgrano 2	49.09	181	P	P	08 53 34.4	+0.3
BKSI	Bulukumba	50.56	334	P	P	08 53 46.6	+0.7
	comp=Z,8.0nm,1.2s						
KAPI	Kappang	50.96	333	LR	LR	09 14 59.2	
	comp=Z,188nm,19.7s,baz=144,slow=36						
KAPI	Kappang	50.96	333	P	P	08 53 48.2	-0.6
KAPI	Kappang	50.96	333	P	P	08 53 50.0	+1.2
KAPI	Kappang	50.96	333	P	P	08 53 49.6	+0.8
	comp=Z,12nm,0.8s						
TROLL	Troll, Antarti	51.56	195	⇑P	P	08 53 49.8	-3.1
	comp=Z,385nm,0.8s						
SNAA	Sanae	52.68	194	⇑P	P	08 54 01.3	+0.2
	comp=Z,192nm,0.8s						
SNAA	Sanae	52.68	194	P	P	08 54 01.3	+0.2
	comp=Z,6.4nm,0.8s,baz=160,slow=8.5,SNR=16						
SNAA				LR	LR	09 15 50.2	
	comp=Z,589nm,21.1s,baz=191,slow=35						
	comp=Z,6.4nm,0.8s						
SNAA	Sanae	52.68	194	P	P	08 54 01.3	+0.2
MMSI	Mamuju	53.41	333	P	P	08 54 08.3	+1.2
H04S1	CROZET ISLANDS	53.63	238	T	T	09 53 00.7	
	baz=131,slow=76,SNR=13						
H04S2	CROZET ISLANDS	53.63	238	T	T	09 52 49.7	
	baz=131,slow=76,SNR=20						
H04S3	CROZET ISLANDS	53.64	238	T	T	09 52 51.3	
	baz=131,slow=76,SNR=18						
BBKI	Banjar Baru	53.88	328	P	P	08 54 18.6	+8.1
VNA2	Neumayer--Watz	53.98	193	⇑P	P	08 54 10.0	-0.6
	comp=Z,12nm,0.7s,baz=162,slow=7.0						
VNA1	Neumayer--Stat	54.35	192	⇑P	P	08 54 13.5	+0.2
	comp=Z,18nm,0.8s						
PMSA	Palmer Station	60.81	168	LR	LR	09 18 20.4	
	comp=Z,84nm,20.0s,baz=216,slow=33						
DAV	Davao City (W)	61.38	343	LR	LR	09 21 05.0	
	comp=Z,51nm,21.9s,baz=174,slow=36						
PPT	Papeete	64.25	85	LR	LR	09 17 35.6	
	comp=Z,53nm,19.1s,baz=214,slow=31						
PSI	Prapat	65.69	314	LR	LR	09 21 20.5	
	comp=Z,37nm,20.2s,baz=110,slow=34						
H08S2	Diego Garcia H	70.68	283	T	T	10 13 21.3	
	baz=143,slow=76,SNR=6.1						
H08S1	Diego Carcia H	70.69	283	T	T	10 13 24.4	
	baz=143,slow=76,SNR=13						
H08S3	Diego Garcia H	70.70	283	T	T	10 13 23.5	
	baz=143,slow=76,SNR=11						
TAOE	Nuku Hiva Isla	76.72	87	*e*LR	LR	09 20 16.9	
	comp=Z,75nm,22.9s						
PALK	Pallekele	78.39	299	LR	LR	09 24 43.6	
	comp=Z,129nm,19.4s,baz=150,slow=31						
CMAR	Chiang Mai Arr	79.83	320	P	P	08 56 55.8	+0.1
	comp=Z,0.9nm,0.3s,baz=180,slow=4.6,SNR=4.8						
CMAR				LR	LR	09 30 55.2	
	comp=Z,59nm,20.0s,baz=160,slow=35						
	comp=Z,0.9nm,0.3s						
RPN	Rapa Nui	79.86	122	LR	LR	09 24 49.3	
	comp=Z,93nm,19.7s,baz=350,slow=30						
BOSA	Boshof	80.94	234	LR	LR	09 25 25.0	
	comp=Z,158nm,21.8s,baz=194,slow=30						
LBTB	Lobatse	83.77	236	LR	LR	09 28 11.8	
	comp=Z,151nm,21.6s,baz=192,slow=31						
JHJ	Hachijo jima 2	86.02	360	LR	LR	09 34 37.1	
	comp=Z,47nm,19.1s,baz=202,slow=35						
PZH	PanZhiHua	86.20	326	P	P	08 57 31.2	+2.6
BRDH	Bariadhala	86.55	316	LR	LR	09 37 25.6	
	comp=Z,47nm,19.4s,baz=280,slow=37						
H03S1	Juan Fernandez	86.81	148	T	T	10 34 15.9	
	baz=200,slow=74,SNR=4.2						
H03S2	Juan Fernandez	86.81	148	T	T	10 34 12.8	
	baz=200,slow=74,SNR=4.7						
H03S3	Juan Fernandez	86.83	148	T	T	10 34 17.6	
	baz=200,slow=74,SNR=4.0						
NJ2	Nanjing	86.98	342	*e*P	P	08 57 33.8	+1.7
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MJAR	Matsushiro Arr	89.45	358	P	P	08 57 43.6	-0.2
	comp=Z,1.4nm,0.9s,baz=154,slow=7.5,SNR=2.1						
	comp=Z,1.4nm,0.9s						
LSZ	Lusaka	90.50	243	LR	LR	09 33 19.7	
	comp=Z,188nm,18.4s,baz=146,slow=32						
KSRS	Korea Array	90.98	350	P	P	08 57 51.9	+1.1
	comp=Z,1.1nm,0.9s,baz=188,slow=4.9,SNR=2.6						
	comp=Z,1.1nm,0.9s						
TSUM	Tsumeb	92.60	233	LR	LR	09 32 59.0	
	comp=Z,89nm,20.1s,baz=157,slow=31						
LZH	Lanzhou	94.43	331	*e*P	P	08 58 12.5	+5.4
LZH				pP	pwP	08 58 18.3	+4.8
LZH				pmax	pmax		
	comp=Z,25nm,1.4s						
HHC	Hu-ho-hao-te	96.96	338	*e*P	P	08 58 20.3	+1.9
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
ASAJ	Asahikawa	97.02	2	LR	LR	09 40 22.0	
	comp=Z,27nm,21.7s,baz=108,slow=34						
NVAR	Mina Array Bea	126.03	72	PKP	PKPdf	09 03 49.2	0.0
	comp=Z,1.0nm,0.8s,baz=213,slow=4.6,SNR=4.7						
ILAR	Eielson Array	130.26	32	PKP	PKPdf	09 03 55.3	-0.8
	comp=Z,0.4nm,0.7s,baz=245,slow=1.9,SNR=5.0						
YKA	Yellowknife Ar	141.33	46	PKP	PKPdf	09 04 16.1	-0.6
	comp=Z,0.5nm,0.8s,baz=250,slow=3.6,SNR=5.0						
RONA	Rosalia, Austr	144.72	284	*e*PKP	PKPdf	09 04 23.7	+0.4
	comp=Z,1.9nm,0.7s						
SOKA	Soboth	144.93	282	*e*PKP	PKPdf	09 04 24.4	+0.7
	comp=Z,2.8nm,0.7s						
ARSA	Arzberg	144.94	283	*e*PKP	PKPdf	09 04 23.8	+0.1
	comp=Z,6.6nm,1.3s						
FINES	FINESS Array B	145.03	310	PKP	PKPab	09 04 22.9	+0.2
	comp=Z,8.0nm,0.6s,baz=103,slow=6.9,SNR=13						
CONA	Conrad Observa	145.09	284	*e*PKP	PKPdf	09 04 24.0	+0.1
	comp=Z,7.3nm,1.5s						
MYKA	Terra Mystica	145.73	281	*e*PKP	PKPab	09 04 25.9	0.0
	comp=Z,5.1nm,0.9s						
ULM	Lac du Bonnet	145.87	72	PKPbc	PKPab	09 04 27.2	+0.9
	comp=Z,4.7nm,0.7s,baz=252,slow=1.6,SNR=5.4						
MOA	Molln	145.98	283	*e*PKP	PKPab	09 04 27.5	+0.8
	comp=Z,1.6nm,0.8s						
ABTA	Abfaltersbach	146.45	280	*e*PKP	PKPbc	09 04 28.0	+0.3
	comp=Z,7.5nm,1.7s						
LESA	Schwarzleotal	146.70	282	*e*PKP	PKPbc	09 04 27.8	-0.6
	comp=Z,2.7nm,0.6s						
GERES	GERESS Array B	146.79	284	PKPbc	PKPbc	09 04 28.9	+0.2
	comp=Z,2.4nm,0.8s,baz=132,slow=4.1,SNR=3.5						
ARCES	ARCESS Array B	146.81	324	PKPbc	PKPbc	09 04 28.1	+0.1
	comp=Z,4.5nm,0.8s,baz=72,slow=2.9,SNR=5.9						
WTTA	Wattenberg	147.23	281	*e*PKP	PKPab	09 04 32.0	+0.1
	comp=Z,5.4nm,1.0s						
SQTA	Sankt Quirin	147.46	280	*e*PKP	PKPab	09 04 32.7	0.0
	comp=Z,5.1nm,0.8s						
MOTA	Moosalm	147.59	280	*e*PKP	PKPab	09 04 33.3	0.0
	comp=Z,7.7nm,1.3s						
FETA	Feichten	147.65	280	*e*PKP	PKPab	09 04 33.9	+0.4
	comp=Z,2.9nm,0.9s						
RETA	Reutte	147.86	280	*e*PKP	PKiKP	09 04 32.7	-0.9
	comp=Z,2.7nm,1.0s						
DAVA	Damuels	148.28	280	*e*PKP	PKPbc	09 04 33.4	+0.6
	comp=Z,4.6nm,0.7s						
SPITS	Spitsbergen Ar	148.36	341	PKPbc	PKiKP	09 04 33.5	-0.1
	comp=Z,13nm,0.8s,baz=98,slow=2.0,SNR=7.8						
HFS	Hagfors	150.61	305	PKPbc	PKPbc	09 04 38.2	+0.2
	comp=Z,4.9nm,1.1s,baz=98,slow=6.0,SNR=1.6						
ESDC	Sonseca Array	152.20	255	PKPbc	PKPbc	09 04 42.3	-0.2
	comp=Z,0.5nm,0.6s,baz=126,slow=3.2,SNR=6.0						

IGQ ***08*** *08:56:07.4±0.2, 0°S±1°×7°8W±°, h10^{km}±1^{km}, MLv4.3/29*
NEIC ***08*** *08:56:09.8±2.1, 0°.09S±0°.03×78°.41W±0°.02, h10^{km}±1^{km}, mb4.6/123, Error ellipse: s-maj=6.7km s-min=2.9km az=326.0*
RSNC ***08*** *08:56:09.9±0.2, 0°S±1°×7°9W±°, h0^{km}, M4.1, mB4.9, mb4.8, ML3.7, Mw(mB)4.2*
IDC ***08*** *08:56:16.6±2.1, 0°.08S×78°.48W, h70^{km}±20^{km}, mb3.8/10, mbtmp4.1/16, MS3.5/9, Error ellipse: s-maj=24.3km s-min=13.2km az=78.0*
VAO ***08*** *08:56:20.4±1.0, 0°.40S×77°.44W, h10^{km}, mb4.5, Presumed earthquake*
ISC 08 08:56:08.9±0.7**, 0°.07S**±0°.01×**78°.44W**±0°.02**, h9^{km}**±4^{km}**, n238, σ1^{s}.63**/202**, mb4.6**/66**, MS3.3**/6**, 10C-34D, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AV11	Acelerografo,	0.07	96	S	Sg	08 56 13.0	0.0
AV11				P	Pg	08 56 10.7	-0.7
FENY	Casa Vinicio C	0.09	205	S	Sg	08 56 14.1	+0.6
FENY				P	Pg	08 56 11.4	-0.2
YANA	Yana	0.14	248	⇓P	Pg	08 56 11.5	-0.9
CIVI	Edificio de In	0.15	198	P	Pg	08 56 12.2	-0.3
PINO	Pino	0.19	241	⇓P	Pg	08 56 12.5	-0.6
GGPC	Guagua Pichinc	0.19	234	⇓P	Pg	08 56 12.4	-0.7
TERV	Terraza Guagua	0.19	236	⇓P	Pg	08 56 12.6	-0.7
TING	Casa Alexandra	0.21	181	P	Pg	08 56 13.3	-0.2
JUA2	San Juan 2	0.22	228	P	Pg	08 56 12.7	-1.0
GGPT	Toaza - Volcan	0.24	228	⇓P	Pg	08 56 13.0	-0.9
OTAV	Otavalo	0.30	359	Pg	Pg	08 56 13.4	-1.7
OTAV				Sg	Sg	08 56 17.8	-1.5
AOTA	Otavalo	0.36	32	⇓P	Pg	08 56 15.1	-1.0
CUSE	Cuicocha Este	0.37	7	P	Pg	08 56 14.8	-1.6
CUSE	Cuicocha Este	0.37	7	P	Pg	08 56 14.7	-1.7
CUSE				S	Sg	08 56 20.6	-0.8
CUIC	Cuicocha-Domo	0.38	13	⇓P	Pg	08 56 15.0	-1.5
ACOT	Cotacachi (Cas	0.40	25	⇓P	Pg	08 56 15.7	-1.1
COTA	Cotacachi	0.41	15	⇓P	Pg	08 56 15.8	-1.4
COTA				S	Sg	08 56 22.1	-0.6
IMBA	Imbabura, San	0.42	36	⇓P	Pg	08 56 16.8	-0.5
TOMA	Boca Toma-Volc	0.43	179	⇑P	Pb	08 56 17.0	-2.0

CAYR	Refugio Cayamb	0.45	80	P	Pg	08 56 16.7	-1.1
ANGU	Angureal	0.45	76	⇓P	Pg	08 56 16.7	-1.2
APS4	Papallacta	0.45	132	⇓P	Pg	08 56 16.4	-1.5
ANTG	Antisana-Guama	0.47	156	⇓P	Pg	08 56 17.2	-1.1
ANTI	Antisana	0.47	143	⇓P	Pg	08 56 17.4	-1.0
PAC1	Pacto, Paraso	0.48	313	P	Pg	08 56 16.9	-1.5
PAC1	Pacto, Paraso	0.48	313	P	Pg	08 56 16.8	-1.5
PAC1				S	Sg	08 56 23.6	-1.1
PITA	Cotopaxi Volc	0.49	179	⇑P	Pb	08 56 18.1	-2.0
AMAC	Ecuador-Machac	0.49	196	P	Pb	08 56 18.5	-1.5
ANTS	Antisana-Sarah	0.51	147	⇓P	Pg	08 56 17.9	-1.1
ANTS				S	Sg	08 56 24.7	-1.0
ANTM	Antisana-La Mi	0.52	155	⇓P	Pg	08 56 17.9	-1.2
URCU	Urcuqui	0.54	21	⇓P	Pg	08 56 18.1	-1.3
APR2	Miler	0.54	285	⇓P	Pg	08 56 18.3	-1.2
YAHU	Yahuarcocha	0.57	41	⇓P	Pg	08 56 18.9	-1.2
SUCR	Mariscal Sucre	0.57	185	⇑P	Pb	08 56 19.9	-1.6
BVC2	Cotopaxi Volca	0.59	177	⇑P	Pb	08 56 20.0	-1.8
BREF	Cotopaxi Volca	0.60	180	⇑P	Pb	08 56 20.3	-1.7
BTAM	Cotopaxi Volca	0.61	176	⇓P	Pb	08 56 20.2	-1.8
CAMI	Rancho Maria	0.61	186	⇑P	Pb	08 56 20.6	-1.5
TAMB	Tambo	0.63	173	P	Pg	08 56 20.5	-0.8
BMOR	Cotopaxi Volca	0.66	181	⇑P	Pg	08 56 20.9	-1.0
SLOR	San Lorenzo -	0.66	185		Pb	08 56 21.5	-1.4
SLOR	San Lorenzo -	0.66	185	⇑P	Pb	08 56 21.3	-1.6
ASDO	Santo Domingo	0.71	254	⇓P	Pg	08 56 21.3	-1.4
VCES	Cotopaxi	0.73	176	⇑P	Pg	08 56 22.1	-1.0
BV15	Puerto Quito-O	0.81	286	⇓P	Pg	08 56 23.2	-1.3
REVN	San Rafael	0.82	91	⇓P	Pg	08 56 23.0	-1.8
REVS	Reventador Sur	0.82	93	⇓P	Pg	08 56 23.2	-1.7
ALIT	Ecuador-Imbabu	0.86	6	P	Pg	08 56 23.3	-2.2
LITE1	Lita	0.86	6	P	Pg	08 56 23.1	-2.4
LNGL	El Angel-Carch	0.91	29	P	Pg	08 56 24.7	-2.0
PIAT	Ana Tenorio	0.94	169	P	Pg	08 56 24.6	-2.6
PIAT				S	Sg	08 56 36.8	-2.7
ASLC	Ecuador-Salced	0.98	189	P	Pb	08 56 27.2	-1.1
CHL1	Volc¡n Chiles	0.99	30	⇓P	Pg	08 56 25.9	-2.1
PIS1	Pisayambo	0.99	177	⇑P	Pg	08 56 26.9	-1.1
CHMA	Chilma	1.00	22	⇓P	Pg	08 56 24.7	-3.5
ECEN	Cerro Negro	1.00	28	⇓P	Pg	08 56 26.0	-2.3
CHL2	Volc¡n Chiles	1.01	31	⇓P	Pg	08 56 26.3	-2.2
TULM	Tulcn-Chalpat	1.02	40	⇓P	Pg	08 56 26.5	-2.1
TULM	Tulcn-Chalpat	1.02	40	P	Pg	08 56 26.4	-2.2
TULM				S	Sg	08 56 39.8	-2.1
BONI	La Bonita	1.05	61	⇓P	Pg	08 56 26.8	-2.5
BONI	La Bonita	1.05	61	P	Pg	08 56 26.7	-2.5
BONI				S	Sg	08 56 40.6	-2.3
AV18	Acelerografo,	1.10	290	⇓P	Pb	08 56 29.0	-1.1
ATUL	Tulcn	1.10	41	⇓P	Pg	08 56 28.0	-2.2
CASC	Dorado de Casc	1.12	80	⇓P	Pb	08 56 28.9	-1.8
CASC	Dorado de Casc	1.12	80	P	Pb	08 56 28.8	-1.8
CASC				S	Sg	08 56 43.5	-1.7
ARDO	Archidona, Ten	1.12	145	⇓P	Pg	08 56 29.0	-1.6
CMBC	Cumbal	1.18	32	P	Pb	08 56 30.5	-1.2
CMBC	Cumbal	1.18	32	P	Pb	08 56 30.5	-1.2
AV21	Acelerografo,	1.32	303	P	Pn	08 56 31.8	-1.8
JUI6	Juive	1.35	181	P	Pn	08 56 32.8	-1.5
BBIL	Ulba Tungurahu	1.38	182	P	Pg	08 56 34.1	-1.4
BIL2	Estacion Bilba	1.38	182	P	Pb	08 56 33.8	-1.4
SNLR	San Lorenzo-Es	1.41	343	P	Pn	08 56 33.6	-1.2
TUMC	Tumaco	1.90	351		Pn	08 56 42.3	+0.7
TUMC	Tumaco	1.90	351	P	Pn	08 56 41.5	0.0
TUMC				S	Sn	08 57 06.5	+0.9
CRUC	La Cruz	2.21	43	P	Pb	08 56 47.6	-1.6
CRUC				S	Sb	08 57 16.4	-0.4
BBAC	Balboa, Cauca	2.39	30	P	Pb	08 56 50.5	-1.9
BBAC				S	Sg	08 57 25.3	-0.7
COHC	Cochancay	2.52	199	Pn	Pn	08 56 50.4	+0.3
COHC	Cochancay	2.52	199	P	Pb	08 56 53.6	-0.8
COHC				S	Sg	08 57 26.6	-3.4
PPLP	Puerto Lpez	2.75	238	P	Pn	08 56 53.3	-0.1
PPLP				S	Sb	08 57 30.6	-1.8
POPC	Popayan, Colom	3.13	34	P	Pn	08 57 01.4	+2.6
POPC				S	Sg	08 57 49.6	-0.2
FLOC	Florencia	3.24	60	Pn	Pn	08 57 00.7	+0.7
FLOC	Florencia	3.24	60	P	Pn	08 57 01.0	+1.0
FLOC				S	Sb	08 57 45.6	-0.6
PTLC	Puerto Leguiza	3.66	86	P	Pn	08 57 05.9	+0.2
PTLC				S	Sb	08 57 58.0	-0.3
GARC	Garzon, Huila	3.70	53	P	Pn	08 57 09.3	+2.7
GARC				S	Sb	08 58 02.1	+2.2
JAMC	Jamundi, Valle	3.71	28	P	Pb	08 57 10.5	-4.3
JAMC				S	Sb	08 58 01.1	+1.1
BETC	Betania	4.06	48	P	Pb	08 57 21.7	+1.0
MCRA	Macar, Loja	4.53	199	P	Pn	08 57 19.0	+1.1
MCRA				S	Sb	08 58 21.9	-1.7
YOTC	Yotoco, Valle	4.54	28	P	Pn	08 57 20.3	+2.3
ORTC	Ortega, Tolima	5.08	39	P	Pn	08 57 28.5	+3.1
	2µm213nm,0.9s						
MACC	Macarena, Meta	5.09	64	P	Pn	08 57 26.6	+1.1
PRAC	Prado	5.17	43	P	Pn	08 57 31.4	+4.8
URMC	La Uribe, Meta	5.23	51	P	Pn	08 57 31.5	+4.0
	2µm156nm,0.9s						
PLMC	San Jos del P	5.39	24	P	Pn	08 57 31.1	+1.4
	914nm51nm,0.9s						
PLMC				S	Sn	08 58 37.9	+6.0
	914nm51nm,0.9s						
GUY2C	Guyana, Caldas	6.09	30	P	Pn	08 57 42.4	+2.8
	747nm63nm,1.0s						
VILC	Villavicencio,	6.30	49	P	Pn	08 57 47.5	+5.2
CBOC	Ciudad Bolivar	6.37	22	P	Pn	08 57 45.7	+2.5
	645nm67nm,0.9s						
ROSC	El Rosal	6.38	40	P	Pn	08 57 49.4	+5.8
	75nm,0.9s,baz=117,slow=5.3,SNR=14						
ROSC	El Rosal	6.38	40	Pn	Pn	08 57 44.5	+0.9
ROSC	El Rosal	6.38	40	P	Pn	08 57 48.7	+5.1
CHIC	Chingaza	6.63	45	P	Pn	08 57 52.8	+5.8
	1µm122nm,0.9s						
ATAH	Atahualpa	7.02	180	P	Pn	08 57 55.5	+3.1
	15nm,0.7s,baz=352,slow=6.5,SNR=11						
SPBC	San Pablo de B	7.16	37	P	Pn	08 58 00.9	+6.8
PTBC	PUERTO BERRIO,	7.67	31	P	Pn	08 58 03.3	+2.3
RUSC	La Rusia	7.98	42		Pn	08 58 06.8	+1.2
RUSC	La Rusia	7.98	42	P	Pn	08 58 10.7	+5.1
PAMC	Pamplona, Colo	9.32	38	P	Pn	08 58 29.6	+5.5
BRU2	Volcan	9.77	334		Pn	08 58 30.6	+0.7
SDV	Santo Domingo	11.82	41	P	Pn	08 59 03.3	+5.3
	5.9nm,0.8s,baz=241,slow=14,SNR=5.7						
SDV				LR	LR	09 04 13.0	
	comp=Z,420nm,19.0s,baz=238,slow=40						
SDV	Santo Domingo	11.82	41		Pn	08 58 59.5	+1.5
SDV	Santo Domingo	11.82	41	*e*P	Pn	08 59 05.0	+7.1
NNA	Nana	11.95	172	P	Pn	08 59 03.6	+3.9
	2.5nm,0.3s,baz=343,slow=11,SNR=5.3						
NNA	Nana	11.95	172		Pn	08 58 57.9	-1.8
JTS	Las Juntas de	12.16	328	LR	LR	09 02 50.0	
	comp=Z,138nm,18.9s,baz=157,slow=32						
TEFE	Tefe	14.22	104	*e*P	Pn	08 59 27.8	-2.9
TGUH	Tegucigalpa,Un	16.53	328	Pn	Pn	09 00 00.9	-0.5
MTO3	Montecristo	17.98	324	P	P	09 00 19.7	-0.4
MTO3				IAmb	IAmb	09 00 23.5	
	comp=Z,31nm,0.9s						
MACA	Manacapuru-AM	18.02	100		Pn	09 00 17.0	-2.9
MACA				IAmb	IAmb	09 00 26.6	
	comp=Z,57nm,1.1s						
MACA	Manacapuru-AM	18.02	100	*e*P	P	09 00 19.3	-1.0
BOAV	Boa Vista	18.08	82		Pn	09 00 19.8	-0.8
BOAV	Boa Vista	18.08	82	*e*P	P	09 00 21.2	+0.1
LPAZ	La Paz	19.06	148	P	Pn	09 00 34.8	+1.6
	comp=Z,3.3nm,0.7s,baz=320,slow=10.0,SNR=13						
LPAZ				LR	LR	09 09 20.9	
	comp=Z,279nm,19.3s,baz=320,slow=41						
LPAZ	La Paz	19.06	148		Pn	09 00 33.1	0.0
LPAZ	La Paz	19.06	148	*e*P	Pn	09 00 34.1	+1.0
APG	El Apazote	19.12	322	P	Pn	09 00 34.2	+0.8
	comp=Z,1.3nm,1.1s,baz=163,slow=9.7,SNR=5.9						
APG				LR	LR	09 06 29.3	
	comp=Z,7.1nm,19.2s,baz=76,slow=32						
SDD	Santo Domingo	20.23	24	P	P	09 00 45.0	+0.5
PETF	Flores	20.29	327	P	P	09 00 45.6	+0.4
PETF				IAmb	IAmb	09 00 49.0	
	comp=Z,21nm,1.1s						
GO01	Chusmiza	21.49	156	P	P	09 00 57.8	-0.9
GO01				IAmb	IAmb	09 01 16.1	
	comp=Z,13nm,0.8s						
SJG	San Juan	21.73	33	P	P	09 01 03.5	+2.8
	comp=Z,9.9nm,0.5s,baz=215,slow=8.3,SNR=6.1						
SJG				LR	LR	09 10 39.3	
	comp=Z,94nm,18.6s,baz=190,slow=40						
	comp=Z,9.9nm,0.5s						
TA01	Diego Aracena	21.92	159	P	P	09 01 01.8	-0.9
TA01				IAmb	IAmb	09 01 18.6	
	comp=Z,20nm,1.1s						
HUMP	Col San Antoni	21.93	34	P	P	09 01 02.7	-0.1
HUMP				IAmb	IAmb	09 01 12.3	
	comp=Z,21nm,1.0s						
VILB	Vilhena	22.16	126	P	P	09 01 04.8	-0.7
VILB	Vilhena	22.16	126	*e*P	P	09 01 05.1	-0.4
TEIG	Tepich	22.35	335	P	P	09 01 08.2	+0.8
TEIG				IAmb	IAmb	09 01 11.2	
	comp=Z,16nm,1.1s						
ITTB	Itaituba	23.09	101	*e*P	P	09 01 15.2	-0.1
SIV	San Ignacio	23.33	134	LR	LR	09 11 02.9	
	comp=Z,255nm,19.2s,baz=312,slow=38						
NPGB	Novo Progresso	24.05	107	*e*P	P	09 01 24.2	-0.6
PDRB	Porto dos Gac	24.43	119	*e*P	P	09 01 28.2	0.0
PTLB	Pontes e Lacer	24.44	130	P	P	09 01 27.5	-0.8
PTLB				IAmb	IAmb	09 01 38.8	
	comp=Z,18nm,1.2s						
PTLB	Pontes e Lacer	24.44	130	*e*P	P	09 01 31.5	+3.2
CLDB	Colider	24.94	116	*e*P	P	09 01 33.4	+0.5
MDP	Montagnes des	26.27	78	LR	LR	09 12 10.2	
	comp=Z,363nm,19.4s,baz=248,slow=36						
BDQN	Bodoquena, MS	29.34	135	*e*P	P	09 02 15.1	+2.8
SNDB	Serra Nova Dou	29.43	115	*e*P	P	09 02 15.5	+2.3
AQDB	Aquidauana	30.11	134	*e*P	P	09 02 21.1	+1.9
SMTB	Santa Maria do	31.95	107	*e*P	P	09 02 38.6	+3.0
AMBA	Amambai (Brazi	32.20	136	*e*P	P	09 02 41.1	+3.6
CPUP	Villa Florida	33.10	144	LR	LR	09 16 28.5	
	comp=Z,11nm,18.0s,baz=186,slow=37						
CPUP	Villa Florida	33.10	144	*e*P	P	09 02 48.6	+3.2
BDFB	Brasilia	33.80	119	LR	LR	09 18 36.8	
	comp=Z,53nm,18.3s,baz=165,slow=40						
IPMB	Ipameri, GO	34.65	123	*e*P	P	09 03 02.1	+3.0
SDBA	SAO DESIDERIO	35.46	111	*e*P	P	09 03 07.7	+1.5
DRIO	Del Rio	36.16	326	P	P	09 03 12.9	+0.9
DRIO				IAmb	IAmb	09 03 18.7	
	comp=Z,9.0nm,0.9s						
V48A	Smith Brothers	36.47	348	P	P	09 03 13.9	-0.5
V48A				IAmb	IAmb	09 03 14.6	
	comp=Z,4.9nm,0.7s						
LCAR	Lake Charles	37.85	343	P	P	09 03 25.5	-0.6
LCAR				IAmb	IAmb	09 03 26.1	
	comp=Z,9.5nm,0.8s						
TXAR	Lajitas Array	37.87	323	P	P	09 03 27.0	+0.4
	comp=Z,0.5nm,0.7s,baz=150,slow=8.3,SNR=8.7						
TXAR				PcP	PcP	09 05 42.5	-0.5
	comp=Z,0.6nm,0.8s,baz=133,slow=4.6,SNR=5.4						
	comp=Z,0.5nm,0.7s						
FCAR	Ozark Folk Cen	37.97	342	P	P	09 03 26.5	-0.7
LPIG	La Paz	39.13	310	LR	LR	09 16 10.0	
	comp=Z,41nm,19.3s,baz=48,slow=30						
VHRN	Van Horn	39.71	323	P	P	09 03 43.2	+1.2
SMWD	Samnorwood	40.48	332	IAmb	IAmb	09 03 50.2	
	comp=Z,15nm,0.8s						
MNTX	Cornudas Mount	40.60	324	P	P	09 03 50.3	+1.1
MSTX	Muleshoe	40.83	328	IAmb	IAmb	09 04 10.4	
	comp=Z,13nm,1.1s						
PLCA	Paso Flores	41.11	171	P	P	09 03 53.6	+0.2
	comp=Z,1.7nm,0.8s,baz=346,slow=10,SNR=4.3						
	comp=Z,1.7nm,0.8s						
PLCA	Paso Flores	41.11	171	P	P	09 03 52.6	-0.7
PLCA				IAmb	IAmb	09 03 59.5	
	comp=Z,16nm,1.4s						
NBIT	Itapeh - BA	41.29	113	*e*P	P	09 03 55.6	+0.5
121A	Cookes Peak, D	42.63	322	IAmb	IAmb	09 04 08.6	
	comp=Z,7.3nm,1.1s						
RTBA	Rita Blanca	42.75	331	IAmb	IAmb	09 04 19.3	
	comp=Z,9.7nm,1.1s						
319A	Douglas	42.79	320	P	P	09 04 08.1	+0.8
DUN6	Lazy B Ranch	43.45	321	IAmb	IAmb	09 04 29.2	
	comp=Z,11nm,1.1s						
ANMO	Albuquerque	43.56	326	P	P	09 04 14.5	+0.9
TASM	ASL Pad, Albuq	43.57	326	IAmb	IAmb	09 04 15.8	
	comp=Z,4.8nm,0.9s						
TASM	ASL Pad, Albuq	43.57	326	IAmb	IAmb	09 04 15.8	
	comp=Z,4.9nm,0.9s						
TUC	Tucson	44.37	320	P	P	09 04 20.9	+0.9
TUC				IAmb	IAmb	09 04 22.1	
	comp=Z,4.8nm,1.0s						
SDCO	Great Sand Dun	45.15	329	IAmb	IAmb	09 04 28.5	
	comp=Z,3.7nm,0.8s						
214A	Organ Pipe Nat	45.49	318	P	P	09 04 27.3	-1.6
214A				IAmb	IAmb	09 04 31.2	
	comp=Z,5.3nm,0.8s						
X16A	Lo Mia Camp, P	46.16	321	IAmb	IAmb	09 04 36.6	
	comp=Z,3.4nm,0.9s						
WUAZ	Wupatki	46.84	323	IAmb	IAmb	09 04 42.0	
	comp=Z,8.2nm,1.0s						
PV13	Radium Mtn., P	47.20	327	IAmb	IAmb	09 04 44.2	
	comp=Z,7.2nm,1.0s						
W13A	Hualapai Mount	48.13	320	IAmb	IAmb	09 04 52.2	
	comp=Z,4.2nm,0.9s						
RSSD	Black Hills	49.55	336	P	P	09 05 01.4	+0.9
RSSD				IAmb	IAmb	09 05 01.7	
	comp=Z,4.9nm,0.9s						
SHOC	Shoshone, Teco	50.16	320	IAmb	IAmb	09 05 07.2	
	comp=Z,6.8nm,0.9s						
GWY	Greenwater Val	50.59	320	IAmb	IAmb	09 05 21.8	
	comp=Z,4.4nm,0.7s						
FURC	Furnace Creek,	50.88	320	IAmb	IAmb	09 05 12.7	
	comp=Z,5.3nm,0.9s						
PDAR	Pinedale Array	50.97	331	P	P	09 05 11.1	-0.3
	comp=Z,1.5nm,1.0s,baz=131,slow=8.4,SNR=7.7						
PDAR				PcP	PcP	09 06 26.1	-1.5
	comp=Z,0.3nm,0.7s,baz=161,slow=4.0,SNR=1.5						
	comp=Z,1.5nm,1.0s						
PDAR	Pinedale Array	50.97	331	P	P	09 05 11.6	+0.2
NV11	Mina Array Sit	52.88	321	IAmb	IAmb	09 05 27.3	
	comp=Z,4.6nm,0.9s						
NVAR	Mina Array Bea	52.97	321	P	P	09 05 27.2	+0.9
	comp=Z,3.5nm,0.8s,baz=126,slow=6.9,SNR=25						
	comp=Z,3.5nm,0.8s						
NVAR	Mina Array Bea	52.97	321	P	P	09 05 27.4	+1.1
MDPB	Devils Postpil	53.00	320	P	P	09 05 27.7	+1.1
YHL	Hebgen Lake	53.31	331	IAmb	IAmb	09 05 30.9	
	comp=Z,8.4nm,1.1s						
BOZ	Bozeman (W)	54.07	332	IAmb	IAmb	09 05 35.6	
	comp=Z,6.7nm,0.8s						
MFID	Camas Ranch	54.67	327	IAmb	IAmb	09 05 40.4	
	comp=Z,8.5nm,1.1s						
WVOR	Wild Horse Val	55.62	325	IAmb	IAmb	09 05 46.8	
	comp=Z,8.8nm,0.9s						
ORV	Oroville	55.66	320	IAmb	IAmb	09 05 47.8	
	comp=Z,5.4nm,0.9s						
F10A	Beach Ranch, E	57.12	329	IAmb	IAmb	09 05 59.6	
	comp=Z,3.6nm,1.0s						
I07A	Izee	57.14	326	IAmb	IAmb	09 05 58.2	
	comp=Z,3.4nm,0.8s						
G08A	Pilot Rock	57.60	327	IAmb	IAmb	09 06 01.1	
	comp=Z,5.1nm,0.9s						
LNOR	Lincton Mounta	57.61	328	IAmb	IAmb	09 06 01.8	
	comp=Z,7.0nm,1.1s						
FFC	Flin Flon	57.93	344	IAmb	IAmb	09 06 01.5	
	comp=Z,4.6nm,0.8s						
FFC				P	P	09 06 01.6	+0.1
J04A	Umpqua Nationa	58.14	324	P	P	09 06 04.4	+1.0
G06A	Carlson Farm,	58.49	326	IAmb	IAmb	09 06 08.1	
	comp=Z,8.8nm,1.0s						
NEW	Newport	58.62	331	IAmb	IAmb	09 06 07.4	
	comp=Z,6.6nm,1.1s						
MXC	Moxie City	59.13	328	IAmb	IAmb	09 06 12.2	
	comp=Z,6.2nm,0.9s						
LTY	Liberty	59.76	328	IAmb	IAmb	09 06 16.5	
	comp=Z,9.4nm,1.2s						
B08A	Colville Reser	59.78	330	IAmb	IAmb	09 06 15.7	
	comp=Z,5.7nm,0.9s						
LON	Longmire	60.06	327	P	P	09 06 17.2	+0.7
LON				IAmb	IAmb	09 06 17.7	
	comp=Z,6.2nm,0.8s						
EDM	Edmonton	60.51	337	P	P	09 06 19.0	-0.4
RADR	Rader Ridge	60.97	326	P	P	09 06 24.0	+1.3
GNW	Green Mountain	61.11	327	P	P	09 06 24.0	+0.6
NLWA	Neilton Lookou	61.57	327	P	P	09 06 27.9	+1.2
A04D	Lummi Island	61.74	328	P	P	09 06 28.8	+1.1
YKA	Yellowknife Ar	68.05	343	P	P	09 07 07.5	-1.1
	comp=Z,1.2nm,0.8s,baz=149,slow=4.8,SNR=15						
	comp=Z,1.2nm,0.8s						
M29M	Somme Creek	76.62	336	IAmb	IAmb	09 08 02.7	
	comp=Z,6.3nm,1.1s						
L29M	L29M	76.79	336	IAmb	IAmb	09 08 01.9	
	comp=Z,7.1nm,0.8s						
I30M	Mount Dempster	77.13	339	IAmb	IAmb	09 08 04.0	
	comp=Z,7.5nm,0.9s						
F31M	Tsiigehtchic	77.37	341	IAmb	IAmb	09 08 08.5	
	comp=Z,9.7nm,1.3s						
A36M	Sachs Harbour	77.77	347	IAmb	IAmb	09 08 05.6	
	comp=Z,8.3nm,0.9s						
ESDC	Sonseca Array	78.12	49	P	P	09 08 07.9	-0.9
	comp=Z,0.4nm,0.6s,baz=265,slow=6.1,SNR=6.8						
	comp=Z,0.4nm,0.6s						
F30M	Barrier River	78.13	341		P	09 08 08.2	0.0
I28M	Miner Creek	78.56	338	IAmb	IAmb	09 08 11.6	
	comp=Z,9.0nm,1.1s						
E29M	Blow River	79.21	341	IAmb	IAmb	09 08 15.2	
	comp=Z,9.9nm,1.1s						
F28M	Old Crow	79.50	340	IAmb	IAmb	09 08 16.1	
	comp=Z,5.0nm,0.9s						
E28M	Babbage River	79.84	341	IAmb	IAmb	09 08 21.4	
	comp=Z,8.2nm,1.1s						
E27K	Coleen River	80.34	340	IAmb	IAmb	09 08 25.4	
	comp=Z,8.5nm,1.2s						
ILAR	Eielson Array	81.00	336	P	P	09 08 23.2	-0.6
	comp=Z,1.7nm,0.8s,baz=110,slow=4.0,SNR=17						
	comp=Z,1.7nm,0.8s						
ILAR	Eielson Array	81.00	336	P	P	09 08 24.3	+0.4
F26K	Sheenjek River	81.02	339	P	P	09 08 24.9	+0.9
F26K				IAmb	IAmb	09 08 25.3	
	comp=Z,3.7nm,0.9s						
C27K	Jago River	81.64	341	IAmb	IAmb	09 08 31.8	
	comp=Z,11nm,1.3s						
E25K	Arctic Village	81.68	340	IAmb	IAmb	09 08 28.6	
	comp=Z,8.3nm,1.2s						
D25K	Kavik River	82.39	341	IAmb	IAmb	09 08 36.3	
	comp=Z,8.9nm,1.4s						
D23K	Nanushuk River	83.74	340	IAmb	IAmb	09 08 39.0	
	comp=Z,6.2nm,1.1s						
SNAA	Sanae	85.43	162	P	P	09 08 46.7	0.0
	comp=Z,1.6nm,0.8s,baz=277,slow=8.0,SNR=5.4						
	comp=Z,1.6nm,0.8s						
SNAA	Sanae	85.43	162	P	P	09 08 46.3	-0.4
SNAA				IAmb	IAmb	09 08 55.3	
	comp=Z,3.4nm,1.0s						
QSPA	South Pole Qui	89.99	180	P	P	09 09 09.2	+0.5
	comp=Z,0.9nm,0.3s,baz=146,slow=7.3,SNR=3.5						
	comp=Z,0.9nm,0.3s						
MKAR	Makanchi Array	130.50	17	PKP	PKPdf	09 15 19.0	-1.4
	comp=Z,0.3nm,0.8s,baz=316,slow=4.0,SNR=2.5						
SONM	Songino Array	132.24	356	PKP	PKPdf	09 15 22.8	-1.1
	comp=Z,0.7nm,1.0s,baz=321,slow=2.0,SNR=2.9						
ASAR	Alice Springs	140.73	231	PKhKP	PKPpre	09 15 31.2	
	comp=Z,0.5nm,1.0s,baz=104,slow=4.2,SNR=4.6						
ASAR				PKP	PKPdf	09 15 38.4	-1.8
	comp=Z,0.8nm,0.9s,baz=126,slow=2.2,SNR=6.5						
WRA	Warramunga Arr	142.24	236	PKP	PKPdf	09 15 40.4	-2.5
	comp=Z,1.0nm,0.8s,baz=111,slow=2.5,SNR=6.5						

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*CATAC **08** 09:27:18.8±0.6, 13°N±3°×9°0W±°, h12km±3km, M3.1/12, MLv3.1/12, Error ellipse: s-maj=6.9km s-min=5.1km az=25.5, confirmed*

*SNET **08** 09:27:21.0±1.8, 12°.93N×89°.54W, h8km, ML3.1*

*GCG **08** 09:27:21.2±0.7, 12°.93N×89°.71W, h21km±7km, MD3.7*

ISC 08 09:27:20.7±2.8,**12°.8N**±0°.1×**89°.54W**±0°.08,**h43km,n38, σ1§11**/43,**2C-7D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.68	18	*i* P	Pn	09 27 33.5	-0.5
LALI	Alcalda de L	0.68	18	S	Sn	09 27 42.3	-1.3
LALI	Alcalda de L	0.68	18	⇓P	Pn	09 27 33.5	-0.5
JAYA	Jayaque - finc	0.82	6	*i* P	Pn	09 27 35.4	-0.7
JAYA				*e*S	Sn	09 27 47.0	-0.1
JAYA	Jayaque - finc	0.82	6	*i* P	Pn	09 27 35.4	-0.7
JAYA				*i* S	Sn	09 27 47.0	-0.1
JAYA	Jayaque - finc	0.82	6	⇓P	Pn	09 27 35.3	-0.7
LOMA	Loma Larga	0.88	24	*i* P	Pn	09 27 35.0	-1.8
LOMA	Loma Larga	0.88	24	S	Sn	09 27 47.0	-1.5
LOMA	Loma Larga	0.88	24	⇓P	Pn	09 27 35.0	-1.8
PMON	Piamonte	0.90	14	S	Sn	09 27 49.0	+0.1
PMON	Piamonte	0.90	14	⇓P	Pn	09 27 36.6	-0.4
UTEC	Universidad Te	0.92	21	⇓P	Pn	09 27 36.9	-0.4
UEES	Universidad Ev	0.92	18	S	Sn	09 27 49.5	-0.1
UEES	Universidad Ev	0.92	18	P	Pn	09 27 36.5	-0.9
BOQS	Boqueron	0.93	16	*i* P	Pn	09 27 37.4	-0.2
BOQS				*e*S	Sn	09 27 49.6	-0.3
IGN	Direccin Gen	0.94	22	P	Pn	09 27 37.3	-0.3
TECO	Alcaldia de Te	1.02	47	S	Sn	09 27 51.3	-0.4
TECO	Alcaldia de Te	1.02	47	⇑P	Pn	09 27 37.9	-0.7
PAVA	Las Pavas	1.05	34	S	Sn	09 27 53.5	+0.8
PAVA	Las Pavas	1.05	34	P	Pn	09 27 38.9	-0.2
UESV	Universidad de	1.08	43	S	Sn	09 27 52.1	-1.2
UESV	Universidad de	1.08	43	⇑P	Pn	09 27 39.0	-0.5
NUBE	Las Nubes	1.09	348	*e*P	Pn	09 27 39.5	-0.1
NUBE				*e*S	Sn	09 27 54.0	+0.4
NUBE	Las Nubes	1.09	348	*i* P	Pn	09 27 39.4	-0.3
NUBE				*e*S	Sn	09 27 52.8	-0.8
NUBE	Las Nubes	1.09	348	S	Sn	09 27 53.4	-0.2
NUBE	Las Nubes	1.09	348	⇓P	Pn	09 27 39.4	-0.3
FAME	Alcaldia de Sa	1.10	335	P	Pn	09 27 39.6	-0.2
UNIC	Universidad Ca	1.14	360	S	Sn	09 27 55.2	+0.4
SCLA	Alcaldia de Sa	1.17	42	S	Sn	09 27 56.0	+0.5
SCLA	Alcaldia de Sa	1.17	42	⇓P	Pn	09 27 40.7	+0.1
SLOZ	Alcaldia de Sa	1.21	349	P	Pn	09 27 38.2	-3.0
LLGN	La Laguna	1.44	24	P	Pn	09 27 45.6	+1.1
JUAM	Asuncion Mita	1.50	354	*e*P	Pn	09 27 46.4	+1.2
MTO3	Montecristo	1.56	6	*i* P	Pn	09 27 47.2	+0.9
MTO3	Montecristo	1.56	6	S	Sn	09 28 08.0	+2.6
LCND	La Caada	1.68	73	P	Pn	09 27 48.4	+0.8
CNCH	Conchagua	1.72	75	S	Sn	09 28 09.1	0.0
ESQI	Esquipulas	1.73	6	S	Sn	09 28 12.6	+3.3

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*LDG **08** 09:28:49.7±0.1, 48°.07N×2°.42W, h10km, Md2.6/2, Ml2.6/10, Error ellipse: s-maj=1.5km s-min=1.0km az=10.0*

*STR **08** 09:28:50.0±0.0, 48°.07N±0°.08×2°.44W±0°.09, h10km, MLv2.2/7, LOCSAT earthModelID haslach_taup-2.11 preliminary*

ISC 08 09:28:49.0±0.9,**48°.05N**±0°.03×**2°.38W**±0°.02,**h17km**±7km,**n23,σ1§32**/45,**France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGMF	Saint Gilles	0.23	330	*e*Pg	Pg	09 28 54.1	-0.3
SGMF				*e*Sg	Sg	09 28 57.3	-0.7
	114nm,0.2s						
GUEF	Guhenno - 56	0.23	226	Pg	Pg	09 28 54.8	+0.4
GUEF				Sg	Sg	09 28 58.0	0.0
PLEF	Pleven - 22200	0.44	4	Pg	Pb	09 28 58.4	+0.1
PLEF				Sg	Sg	09 29 03.9	-0.1
BEGF	Beganne - 5601	0.45	169	Pg	Pb	09 28 59.1	+0.8
BEGF				Sg	Sb	09 29 05.3	+0.7
QUIF	Quistinic	0.54	256	*e*Pg	Pb	09 28 59.6	-0.4
QUIF				*e*Sg	Sg	09 29 05.8	-1.2
	20nm,0.2s						
QUIF				*e*Sn	Sb	09 29 09.6	+2.2
	17nm,0.2s						
ROSF	Rostrenen	0.66	296	*e*Pg	Pg	09 29 01.1	-0.9
ROSF	Rostrenen	0.66	296	*e*Pn	Pb	09 29 03.0	+1.0
ROSF				*e*Sg	Sg	09 29 09.4	-1.4
	37nm,0.2s						
ROSF	Rostrenen	0.66	296	Pg	Pb	09 29 01.9	-0.1
ROSF				Pn	Pn	09 29 03.6	+0.1
ROSF				Sg	Sg	09 29 09.7	-1.1
PLOF	Ploemeur	0.77	247	Pg	Pb	09 29 04.1	+0.3
PLOF				Sg	Sb	09 29 13.8	-0.1
LOUF	Saint-Loup	0.96	49	Pg	Pn	09 29 08.3	+0.7
LOUF				Sg	Sb	09 29 20.8	+1.2
LOCF	Locquirec - 29	1.06	307	Pg	Pb	09 29 09.2	+0.3
LOCF				Sg	Sg	09 29 22.5	-1.0
GRR	Gorron	1.07	71	*e*Pg	Pn	09 29 10.5	+1.3
GRR				*e*Sg	Sn	09 29 24.7	+1.0
	22nm,0.2s						
OLIV	Plomelin	1.19	264	Pg	Pn	09 29 11.6	+0.8
OLIV				Sg	Sb	09 29 26.6	+0.5
FLN	La Foliniere	1.45	60	*e*Pg	Pg	09 29 16.7	-0.3
	baz=243						
FLN				*e*Sg	Sg	09 29 35.6	-0.3
	13nm,0.3s						
LDF	La Druitiere	1.60	69	*e*Pg	Pg	09 29 19.5	-0.3
LDF				*e*Sg	Sg	09 29 40.8	+0.1
	12nm,0.2s						
MFF	Saint Martin d	2.10	133	*e*Pg	Pg	09 29 28.5	-0.8
MFF	Saint Martin d	2.10	133	*e*Pg	Pg	09 29 30.0	+0.7
	baz=311						
MFF				*e*Sg	Sg	09 29 56.3	-0.3
	6.0nm,0.2s						
MFF				*e*Sg	Sb	09 29 56.4	+4.0
	11nm,0.3s						
LFF	La Frestale	3.79	144	*e*Sg	Sg	09 30 49.4	-1.1
	3.3nm,0.3s						

RJF	**Les Rejaudoux**	**3.84**	**134**	*e*Pg	**Pg**	**09 30 01.2**	**-1.3**
RJF				*e*Sg	**Sg**	**09 30 50.6**	**-1.7**
	6.9nm,0.3s						
BGF	**Bois d'Agland**	**3.86**	**111**	*e*Sg	**Sg**	**09 30 51.6**	**-1.3**
	6.5nm,0.3s						
AVF	**Avril sur Loir**	**4.09**	**106**	*e*Pn	**Pn**	**09 29 51.7**	**+1.0**
AVF				*e*Sn	**Sn**	**09 30 35.5**	**-2.6**
AVF				*e*Sg	**Sg**	**09 30 57.5**	**-2.8**
	0.8nm,0.3s						
SSF	**Saint Saulge**	**4.11**	**102**	*e*Pn	**Pn**	**09 29 51.2**	**+0.3**
SSF	**Saint Saulge**	**4.11**	**102**	*e*Pg	**Pg**	**09 30 05.8**	**-1.9**
SSF				*e*Sg	**Sg**	**09 30 58.3**	**-2.6**
	0.7nm,0.2s						

CATAC ***08*** *09:29:49.8±0.8, 13°N±4°×9°0W±°, h9^{km}±3^{km}, M3.1/12, MLv3.1/12, Error ellipse: s-maj=8.3km s-min=7.8km az=47.5, confirmed*

GCG ***08*** *09:29:51.3±1.1, 13.°45N×90.°34W, h13^{km}±20^{km}, MD3.8, ML3.6, MW2.9*

SNET ***08*** *09:29:51.7±1.2, 13.°41N×90.°28W, h39^{km}, ML3.2*

ISC 08 09:29:51.2±2.1**, 13.°25N**±0.°10×**90.°18W**±0.°06**, h27**^{km}±13^{km}**, n33, σ0.^{s}69**/38**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**0.61**	**15**	P	**Pb**	**09 30 02.5**	**-0.9**
NUBE	**Las Nubes**	**0.76**	**31**	*e*P	**Pn**	**09 30 05.3**	**-1.0**
NUBE				*e*S	**Sb**	**09 30 16.2**	**+0.3**
NUBE	**Las Nubes**	**0.76**	**31**	*i* P	**Pn**	**09 30 05.2**	**-1.0**
NUBE				*e*S	**Sb**	**09 30 16.0**	**+0.1**
NUBE	**Las Nubes**	**0.76**	**31**	S	**Sb**	**09 30 15.9**	**0.0**
NUBE	**Las Nubes**	**0.76**	**31**	P	**Pn**	**09 30 05.2**	**-1.0**
CEVE	**Cerro Verde**	**0.79**	**43**	*e*P	**Pb**	**09 30 06.4**	**-0.1**
CEVE				*e*S	**Sn**	**09 30 18.7**	**+0.9**
CEVE	**Cerro Verde**	**0.79**	**43**	P	**Pb**	**09 30 06.3**	**-0.2**
SBLS	**San Blas**	**0.80**	**43**	*e*P	**Pb**	**09 30 06.4**	**-0.2**
SBLS				*e*S	**Sn**	**09 30 18.6**	**+0.6**
JAYA	**Jayaque - finc**	**0.82**	**60**	*e*P	**Pb**	**09 30 06.7**	**-0.2**
JAYA				*e*S	**Sn**	**09 30 17.9**	**-0.5**
JAYA	**Jayaque - finc**	**0.82**	**60**	*i* P	**Pb**	**09 30 06.7**	**-0.2**
JAYA	**Jayaque - finc**	**0.82**	**60**	S	**Sn**	**09 30 19.0**	**+0.6**
JAYA	**Jayaque - finc**	**0.82**	**60**	P	**Pb**	**09 30 06.7**	**-0.2**
LALI	**Alcalda de L**	**0.87**	**74**	P	**Pb**	**09 30 07.2**	**-0.5**
LALI	**Alcalda de L**	**0.87**	**74**	S	**Sb**	**09 30 19.0**	**0.0**
UNIC	**Universidad Ca**	**0.95**	**40**	P	**Pn**	**09 30 08.4**	**-0.4**
UNIC	**Universidad Ca**	**0.95**	**40**	S	**Sb**	**09 30 21.9**	**+0.6**
PMON	**Piamonte**	**0.96**	**61**	*e*P	**Pb**	**09 30 09.0**	**-0.3**
PMON				*e*S	**Sb**	**09 30 22.8**	**+1.1**
PMON	**Piamonte**	**0.96**	**61**	P	**Pb**	**09 30 09.0**	**-0.3**
UEES	**Universidad Ev**	**1.02**	**63**	P	**Pb**	**09 30 10.1**	**-0.3**
UEES	**Universidad Ev**	**1.02**	**63**	S	**Sb**	**09 30 25.4**	**+1.9**
LOMA	**Loma Larga**	**1.06**	**68**	P	**Pn**	**09 30 09.6**	**-0.7**
FG16	**Alotenango, Sa**	**1.07**	**342**	IAML		09 30 35.1	
	comp=N,2µm,0.3s						
JUAM	**Asuncion Mita**	**1.17**	**23**	*i* P	**Pn**	**09 30 11.4**	**-0.5**
PAVA	**Las Pavas**	**1.29**	**69**	P	**Pb**	**09 30 14.5**	**-0.4**
MTO3	**Montecristo**	**1.39**	**35**	*i* P	**Pn**	**09 30 15.0**	**0.0**
MTO3	**Montecristo**	**1.39**	**35**	P	**Pn**	**09 30 15.2**	**+0.2**
SCLA	**Alcaldia de Sa**	**1.48**	**72**	P	**Pb**	**09 30 17.0**	**-1.1**
SCLA	**Alcaldia de Sa**	**1.48**	**72**	S	**Sb**	**09 30 37.3**	**+0.8**
LLGN	**La Laguna**	**1.50**	**53**	P	**Pn**	**09 30 16.9**	**+0.5**
ESQI	**Esquipulas**	**1.54**	**32**	P	**Pn**	**09 30 17.0**	**+0.1**
ESQI	**Esquipulas**	**1.54**	**32**	S	**Sb**	**09 30 38.2**	**0.0**
STG5	**El Palmar, Qui**	**1.61**	**315**	*i* P	**Pb**	**09 30 21.0**	**+0.6**
APG	**El Apazote**	**1.77**	**351**	*e*P	**Pn**	**09 30 19.2**	**-1.0**

IDC ***08*** *09:34:02.8±15.0, 2.°58N×128.°25E, h306^{km}±172^{km}, mb3.1/7, mbtmp3.8/7, Error ellipse: s-maj=95.5km s-min=29.4km az=64.0*

ISC 08 09:34:02.0±1.4**, 2.°6N**±0.°2×**128.°3E**±0.°7**, h300**^{km}**, n8, σ0.^{s}54**/8**, mb3.4**/7**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.74**	**187**	P	**P**	**09 38 20.2**	**-0.3**
	1.5nm,0.5s,baz=26,slow=11,SNR=5.7						
	1.5nm,0.5s						
WRA	**Warramunga Arr**	**23.19**	**165**	P	**P**	**09 38 43.4**	**+0.5**
	0.5nm,0.3s,baz=342,slow=10,SNR=16						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**26.69**	**168**	P	**P**	**09 39 14.4**	**+0.1**
	0.3nm,0.3s,baz=351,slow=7.4,SNR=13						
	0.3nm,0.3s						
SONM	**Songino Array**	**48.85**	**341**	P	**P**	**09 42 17.6**	**-0.3**
	0.5nm,0.7s,baz=152,slow=6.4,SNR=2.9						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**59.35**	**325**	P	**P**	**09 43 33.7**	**+0.6**
	0.6nm,0.5s,baz=114,slow=7.8,SNR=6.8						
	0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**62.28**	**333**	P	**P**	**09 43 53.1**	**+0.5**
	0.6nm,0.5s,baz=108,slow=9.3,SNR=1.9						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**63.51**	**327**	P	**P**	**09 44 01.1**	**+0.4**
	0.9nm,0.2s,baz=124,slow=6.0,SNR=5.1						
	0.9nm,0.2s						
ARCES	**ARCESS Array B**	**92.02**	**340**	P	**P**	**09 46 36.2**	**-0.6**
	7.2nm,1.1s,baz=74,slow=4.5,SNR=2.2						

MOS ***08*** *09:44:28.8±1.1, 51.°83N×179.°04W, h79^{km}, mb4.7/20, Error ellipse: s-maj=11.2km s-min=7.6km az=113.5*

NEIC ***08*** *09:44:31.2±1.0, 51.°63N±0.°07×179.°07W±0.°05, h86^{km}±4^{km}, mb4.4/44, ML4.3/12, ML4.1(AEIC), Error ellipse: s-maj=11.4km s-min=2.6km az=160.0*

AEIC ***08*** *09:44:31.2±1.5, 51.°7N±0.°1×179.°05W±0.°02, h80^{km}±4^{km}, Error ellipse: s-maj=16.9km s-min=1.3km az=178.0*

IDC ***08*** *09:44:31.3±0.6, 51.°85N×179.°11W, h90^{km}±4^{km}, mb3.9/31, mbtmp4.3/35, MS3.3/10, Error ellipse: s-maj=14.2km s-min=7.8km az=178.0*

ISC 08 09:44:30.8±0.5**, 51.°64N**±0.°07×**179.°08W**±0.°03**, h89**^{km}±3^{km}**, h89**^{km}**:pP-P, n228, σ1.^{s}04**/261**, mb4.5**/58**, 12C-15D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAKI	**Gareloi-Kavalg**	**0.19**	**117**		**Pn**	**09 44 43.1**	**-0.5**
GAKI					**Sn**	**09 44 52.0**	**-1.1**
GASW	**Gareloi Southw**	**0.20**	**45**		**Pn**	**09 44 43.4**	**-0.3**
GASW					**Sn**	**09 44 52.6**	**-0.6**
GALAA	**Gareloi Lava P**	**0.23**	**57**		**Pn**	**09 44 43.6**	**-0.1**
GALAA					**Sn**	**09 44 53.0**	**-0.4**
GANO	**Gareloi North**	**0.25**	**43**		**Pn**	**09 44 43.2**	**-0.7**
GANE	**Gareloi Northe**	**0.26**	**46**		**Pn**	**09 44 43.4**	**-0.5**
GANE					**Sn**	**09 44 52.5**	**-1.2**
TANO	**Tanaga North**	**0.66**	**65**		**Pn**	**09 44 47.0**	**+0.2**
TANO					**Sn**	**09 44 58.5**	**-0.2**
TASE	**Tanaga Southea**	**0.68**	**73**		**Pn**	**09 44 47.1**	**0.0**
TASE					**Sn**	**09 44 59.2**	**0.0**
TAFP	**Tanaga Falls P**	**0.73**	**69**		**Pn**	**09 44 47.5**	**0.0**
TAFP					**Sn**	**09 44 59.5**	**-0.5**
TAFL	**Tanaga Flats**	**0.74**	**80**		**Pn**	**09 44 47.7**	**+0.1**
TAFL					**Sn**	**09 45 00.1**	**-0.1**
TAPA	**Tanaga Point A**	**0.81**	**77**		**Pn**	**09 44 48.2**	**-0.1**
TAPA					**Sn**	**09 45 01.0**	**-0.5**
CERB	**Semis' Cerberu**	**0.85**	**291**		**Pn**	**09 44 49.1**	**+0.3**
CERB					**Sn**	**09 45 02.5**	**+0.2**
CEPE	**Semis' Perret**	**0.86**	**293**		**Pn**	**09 44 49.0**	**+0.2**
CESW	**Semis' Southwe**	**0.89**	**288**		**Pn**	**09 44 49.2**	**+0.1**
CETU	**Semis' Tuman**	**0.95**	**291**		**Pn**	**09 44 50.1**	**+0.3**
AMKA	**Amchitka**	**1.05**	**256**		**Pn**	**09 44 51.0**	**+0.1**
AMKA					**Sn**	**09 45 06.1**	**+0.1**
KIMD	**Kanaga Island**	**1.15**	**83**		**Pn**	**09 44 52.2**	**+0.1**
KIMD					**Sn**	**09 45 08.1**	**-0.2**
KICM	**Kanaga Island**	**1.20**	**76**		**Pn**	**09 44 53.1**	**+0.4**
KIKV	**Kanaga Island**	**1.21**	**78**		**Pn**	**09 44 53.0**	**+0.1**
KIKV					**Sn**	**09 45 09.5**	**-0.1**
KIWB	**Kanaga Island**	**1.22**	**79**		**Sn**	**09 45 09.4**	**-0.3**
KIWB	**Kanaga Island**	**1.22**	**79**		**Pn**	**09 44 52.8**	**-0.1**
KINC	**Kanaga Island**	**1.25**	**76**		**Pn**	**09 44 53.5**	**+0.2**
KIRH	**Kanaga Island**	**1.26**	**77**		**Pn**	**09 44 53.8**	**+0.3**
KIRH					**Sn**	**09 45 10.6**	**0.0**
LSSE	**Little Sitkin**	**1.49**	**282**		**Pn**	**09 44 57.2**	**+0.8**
LSPA	**Little Sitkin**	**1.49**	**283**		**Pn**	**09 44 57.4**	**+1.0**
LSPA					**Sn**	**09 45 16.4**	**+0.6**
ADK	**Adak**	**1.51**	**80**		**Sn**	**09 45 15.5**	**-0.5**
ADK	**Adak**	**1.51**	**80**		**Pn**	**09 44 56.4**	**-0.2**
ADK				IAML		09 45 16.8	
	3µm,0.3s						
ADK				IAML		09 45 17.1	
	3µm,0.3s						
ADK	**Adak**	**1.51**	**80**	P	**Pn**	**09 44 56.5**	**0.0**
LSNW	**Little Sitkin**	**1.53**	**283**		**Pn**	**09 44 57.4**	**+0.5**
ADAG	**Mount Adagdak**	**1.57**	**76**		**Pn**	**09 44 57.9**	**+0.5**
ETKA	**Kagalaska Isla**	**1.68**	**81**		**Pn**	**09 44 58.8**	**+0.1**
ETKA					**Sn**	**09 45 19.4**	**-0.5**
GSCK	**Great Sitkin C**	**1.85**	**77**		**Pn**	**09 45 01.2**	**+0.3**
GSSP	**Great Sitkin S**	**1.85**	**75**		**Pn**	**09 45 01.2**	**+0.2**
GSTD	**Great Sitkin T**	**1.87**	**76**		**Pn**	**09 45 01.4**	**+0.2**
GSMY	**Great Sitkin M**	**1.92**	**77**		**Pn**	**09 45 02.0**	**+0.2**
GSTR	**Great Sitkin T**	**1.93**	**75**		**Pn**	**09 45 02.2**	**+0.2**
GSTR				IAML		09 45 36.8	
	comp=E,3µm,0.6s						
GSIG	**Igitkin Island**	**1.99**	**79**		**Pn**	**09 45 03.0**	**+0.2**
KOWE	**Korovin West**	**3.07**	**74**		**Pn**	**09 45 17.9**	**+0.7**
ATKA	**Atka Island**	**3.08**	**78**		**Pn**	**09 45 17.6**	**+0.4**
ATKA				IAML		09 46 09.7	
	comp=E,616nm,0.8s						
ATKA	**Atka Island**	**3.08**	**78**	P	**Pn**	**09 45 17.9**	**+0.7**
ATKA	**Atka Island**	**3.08**	**78**	S	**Sn**	**09 45 53.6**	**+0.6**
KOKL	**Mount Kliuchef**	**3.09**	**75**		**Pn**	**09 45 18.4**	**+0.8**
KONW	**Korovin Northw**	**3.10**	**74**		**Pn**	**09 45 18.2**	**+0.5**
KOKV	**Korovin Volcan**	**3.12**	**75**		**Pn**	**09 45 18.8**	**+0.8**
KOFP	**Korovin Flat P**	**3.15**	**76**		**Pn**	**09 45 19.3**	**+1.0**
SHEM	**Shemya Is, Ala**	**4.34**	**287**	P	**Pn**	**09 45 34.3**	**0.0**
	comp=E,40nm,0.3s,baz=252,slow=3.2,SNR=4.4						
SHEM				S	**Sn**	**09 46 23.3**	**-0.3**
	comp=E,47nm,0.3s,baz=304,slow=22,SNR=1.8						
SHEM	**Shemya Is, Ala**	**4.34**	**287**	Pn	**Pn**	**09 45 34.2**	**-0.1**
SMY	**Shemya**	**4.34**	**287**	Pn	**Pn**	**09 45 33.9**	**-0.4**
SMY				IAML		09 46 37.3	
	comp=E,345nm,3.2s						
SMY				IAML		09 46 53.3	
	comp=N,334nm,4.2s						
SMY	**Shemya**	**4.34**	**287**	P	**Pn**	**09 45 34.7**	**+0.4**
SMY	**Shemya**	**4.34**	**287**	P	**Pn**	**09 45 33.9**	**-0.4**
NIKH	**Nikolski High**	**6.41**	**74**	Pn	**Pn**	**09 46 04.7**	**+2.2**
OKCE	**Okmok Cone E**	**6.89**	**71**		**Pn**	**09 46 11.2**	**+2.1**
SPIA	**Saint Paul Isl**	**7.57**	**39**	P	**Pn**	**09 46 20.5**	**+2.3**
MGOD	**Makushin Gods**	**7.72**	**69**		**Pn**	**09 46 22.0**	**+1.6**
MREP	**Makushin Rep't**	**7.80**	**69**		**Pn**	**09 46 23.3**	**+1.9**
UNV	**Unalaska Valle**	**7.95**	**69**	Pn	**Pn**	**09 46 24.5**	**+1.1**
UNV	**Unalaska Valle**	**7.95**	**69**	P	**Pn**	**09 46 25.0**	**+1.6**
LVA	**Lava Point**	**8.28**	**67**	Pn	**Pn**	**09 46 29.9**	**+1.9**
SDPT	**Sand Point**	**11.68**	**64**	P	**Pn**	**09 47 16.6**	**+2.5**
M13K	**Dall Lake**	**12.40**	**39**	Pn	**Pn**	**09 47 27.2**	**+3.4**
N14K	**Kuskokwak Cree**	**12.80**	**43**	Pn	**Pn**	**09 47 31.3**	**+2.3**
PET	**Petropavlovsk**	**13.68**	**285**	Pn	**Pn**	**09 47 41.5**	**+0.8**
PEA0B	**Petropavlovsk-**	**14.25**	**285**	Pn	**Pn**	**09 47 48.4**	**+0.2**
PEA0B	**Petropavlovsk-**	**14.25**	**285**	P	**Pn**	**09 47 48.4**	**+0.2**
PETK	**Petropavlovsk-**	**14.25**	**285**	P	**Pn**	**09 47 48.2**	**0.0**
	comp=N,2.9nm,0.8s,baz=93,slow=14,SNR=5.0						
PETK				LR	LR	09 52 36.6	
	comp=N,94nm,21.8s,baz=96,slow=34						
PETK	**Petropavlovsk-**	**14.25**	**285**	Pn	**Pn**	**09 47 48.7**	**+0.5**
PETK	**Petropavlovsk-**	**14.25**	**285**	P	**Pn**	**09 47 48.7**	**+0.5**
SII	**Sitkinak Islan**	**15.37**	**62**	Pn	**Pn**	**09 48 03.1**	**+0.6**
SKR	**Severo-Kuril's**	**15.57**	**276**	⇑*e*P	**Pn**	**09 48 02.8**	**-2.2**
N18K	**Kilae Creek**	**15.69**	**46**		**P**	**09 48 09.0**	**+0.3**
J17K	**VABM Dome**	**15.85**	**34**	Pn	**P**	**09 48 09.5**	**-0.9**
J17K				IAmb	IAmb	09 48 36.9	
	comp=Z,22nm,1.2s						
F15K	**North Star Dit**	**15.91**	**22**	P	**P**	**09 48 11.4**	**+0.4**
F15K				IAmb	IAmb	09 48 15.8	
	comp=Z,29nm,1.1s						
KDAK	**Kodiak Island**	**16.43**	**58**	P	**Pn**	**09 48 14.8**	**-0.8**
	comp=Z,5.7nm,0.4s,baz=247,slow=7.7,SNR=14						
KDAK	**Kodiak Island**	**16.43**	**58**	⇑*e*P	**Pn**	**09 48 15.1**	**-0.5**
J18K	**Innoko River**	**16.74**	**36**	P	**P**	**09 48 21.4**	**+1.1**
L19K	**White Mountain**	**16.81**	**42**	P	**P**	**09 48 21.9**	**+0.9**
H18K	**Honhosa River**	**17.23**	**30**		**P**	**09 48 26.5**	**+0.9**
H18K				IAmb	IAmb	09 48 53.9	
	comp=Z,25nm,1.4s						
J19K	**Poorman**	**17.45**	**36**	P	**Pn**	**09 48 29.4**	**+1.4**
J19K				IAmb	IAmb	09 48 54.4	
	comp=Z,18nm,1.1s						
C16K	**Lisburne Hills**	**17.97**	**17**	P	**Pn**	**09 48 35.3**	**+1.0**
C16K				IAmb	IAmb	09 48 44.7	
	comp=Z,14nm,0.8s						
SKT	**Skwentna**	**18.14**	**45**		**Pn**	**09 48 37.8**	**+1.3**
SKT				IAmb	IAmb	09 48 59.2	
	comp=Z,25nm,1.2s						
E18K	**Tukpahlearik C**	**18.26**	**23**	P	**Pn**	**09 48 38.7**	**+0.9**
MA2	**Magadan**	**18.66**	**307**	LR	LR	09 55 42.7	
	comp=Z,44nm,19.1s,baz=178,slow=36						
L22K	**Petersville**	**18.68**	**43**	P	**Pn**	**09 48 42.3**	**-0.6**
L22K				IAmb	IAmb	09 48 46.5	
	comp=Z,11nm,0.6s						
SEY	**Seymchan**	**18.93**	**318**	P	**P**	**09 48 44.2**	**-0.2**
	comp=Z,3.0nm,0.9s,baz=119,slow=19,SNR=2.4						
SEY				LR	LR	09 56 30.3	
	comp=Z,86nm,18.6s,baz=148,slow=38						
KTH	**Kantishna Hill**	**19.04**	**40**	P	**Pn**	**09 48 46.8**	**-0.4**
KTH				IAmb	IAmb	09 49 09.8	
	comp=Z,25nm,1.0s						
E19K	**Redstone River**	**19.16**	**26**	P	**Pn**	**09 48 48.2**	**-0.3**
C19K	**Lookout Ridge**	**19.82**	**21**	P	**Pn**	**09 48 55.3**	**-1.0**
C19K				IAmb	IAmb	09 49 03.2	
	comp=Z,14nm,0.9s						
SCM	**Sheep Creek Mo**	**19.97**	**47**	P	**P**	**09 48 55.3**	**-0.4**
SCM				IAmb	IAmb	09 49 22.3	
	comp=Z,36nm,1.0s						
SCM	**Sheep Creek Mo**	**19.97**	**47**	P	**P**	**09 48 55.3**	**-0.4**
SCM				pmax	pmax		
	comp=Z,36nm,1.0s						
F21K	**Alatna River**	**20.08**	**29**		Pn	09 48 58.1	-1.2
D20K	**Etivluk River**	**20.22**	**24**	P	**P**	**09 48 59.5**	**+1.3**
D20K				IAmb	IAmb	09 49 00.5	
	comp=Z,20nm,0.6s						
E21K	**Killik River**	**20.73**	**26**	P	**P**	**09 49 04.3**	**+0.6**
COLA	**College**	**20.81**	**39**	⇑*e*P	**P**	**09 49 03.7**	**-0.9**
COLA				pmax	pmax		
	comp=Z,37nm,3.0s						
BMRM	**Bremner River**	**21.04**	**50**	P	**P**	**09 49 08.8**	**+1.7**
BMRM				IAmb	IAmb	09 49 21.4	
	comp=Z,49nm,1.4s						
ILAR	**Eielson Array**	**21.15**	**39**	P	**P**	**09 49 06.9**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=234,slow=8.2,SNR=12						
ILAR				PcP	**PcP**	**09 53 09.8**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=271,slow=3.4,SNR=9.8						
ILAR				ScP	**ScP**	**09 56 37.5**	**-1.3**
	comp=Z,1.0nm,0.6s,baz=255,slow=3.9,SNR=15						
	comp=Z,0.8nm,0.6s						
F26K	**Sheenjek River**	**23.38**	**33**	P	**P**	**09 49 31.4**	**+0.2**
YSS	**Yuzhno-Sakhali**	**25.12**	**274**	*e*P	**P**	**09 49 49.9**	**+2.8**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ASAJ	**Asahikawa**	**26.54**	**269**	P	**P**	**09 50 00.1**	**+0.2**
	comp=Z,18nm,1.0s,baz=57,slow=12,SNR=6.3						
	comp=Z,18nm,1.0s						
YAK	**Yakutsk**	**29.12**	**311**	LR	LR	10 00 51.4	
	comp=Z,41nm,19.5s,baz=89,slow=34						
TIXI	**Tiksi**	**30.32**	**330**	P	**P**	**09 50 32.1**	**-1.1**
	comp=Z,1.2nm,0.3s,baz=86,slow=7.1,SNR=1.1						
TIXI				LR	LR	10 03 21.4	
	comp=Z,49nm,18.5s,baz=210,slow=38						
	comp=Z,1.2nm,0.3s						
TIXI	**Tiksi**	**30.32**	**330**	P	**P**	**09 50 33.6**	**+0.4**
TIXI				IAmb	IAmb	09 51 08.5	
	comp=Z,7.5nm,1.4s						
TIXI	**Tiksi**	**30.32**	**330**	⇓*e*P	**P**	**09 50 35.0**	**+1.7**
TIXI				pmax	pmax		
	comp=Z,20nm,4.0s						
ZEA	**Zeya**	**31.96**	**295**	*e*P	**P**	**09 50 47.2**	**-0.7**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
JSD	**Sado**	**32.68**	**262**	P	**P**	**09 50 54.9**	**+0.6**
USRK	**Ussuriysk Ar.**	**33.09**	**277**	P	**P**	**09 50 57.8**	**0.0**
	comp=Z,7.8nm,0.6s,baz=58,slow=11,SNR=14						
	comp=Z,7.8nm,0.6s						
MAJO	**Matsushiro**	**33.66**	**260**	P	**P**	**09 51 04.1**	**+1.2**
MAJO				IAmb	IAmb	09 51 05.0	
	comp=Z,6.4nm,0.7s						
MAJO	**Matsushiro**	**33.66**	**260**	P	**P**	**09 51 04.1**	**+1.2**
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MJAR	**Matsushiro Arr**	**33.66**	**260**	P	**P**	**09 51 03.8**	**+0.9**
	comp=Z,2.5nm,0.6s,baz=47,slow=6.9,SNR=10						
MJAR				PcP	**PcP**	**09 53 41.4**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=31,slow=5.0,SNR=4.1						
	comp=Z,2.5nm,0.6s						
MJAR	**Matsushiro Arr**	**33.66**	**260**	P	**P**	**09 51 04.3**	**+1.4**
MJAR				IAmb	IAmb	09 51 44.5	
	comp=Z,4.8nm,1.4s						
MJAR	**Matsushiro Arr**	**33.66**	**260**	P	**P**	**09 51 04.3**	**+1.4**
MJAR				pmax	pmax		
	comp=Z,5.0nm,1.4s						
MJB9	**Matsu-Tunnel**	**33.66**	**260**	P	**P**	**09 51 04.1**	**+1.2**
MJB9				IAmb	IAmb	09 51 05.0	
	comp=Z,6.3nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**33.70**	**204**	T	T	10 26 51.9	
	baz=17,slow=76,SNR=61						
H11N3	**WAKE ISLAND Hy**	**33.70**	**204**	T	T	10 26 52.6	
	baz=17,slow=76,SNR=57						
H11N1	**WAKE ISLAND Hy**	**33.71**	**204**	T	T	10 26 53.5	
	baz=17,slow=76,SNR=45						
JGF	**Kuroka**	**34.79**	**260**	P	**P**	**09 51 13.2**	**+0.5**
H11S1	**WAKE ISLAND Hy**	**34.92**	**204**	T	T	10 28 35.7	
	baz=16,slow=76,SNR=40						
H11S2	**WAKE ISLAND Hy**	**34.93**	**204**	T	T	10 28 34.5	
	baz=16,slow=76,SNR=21						
H11S3	**WAKE ISLAND Hy**	**34.93**	**204**	T	T	10 28 34.0	
	baz=16,slow=76,SNR=6.3						
BNX	**BinXian**	**35.14**	**282**	⇓P	**P**	**09 51 14.7**	**-0.8**
BNX				pmax	pmax		
	comp=Z,18nm,0.6s						
YKAW3	**Yellowknife Wh**	**35.16**	**47**	P	**P**	**09 51 14.7**	**-0.8**
YKA	**Yellowknife Ar**	**35.18**	**47**	P	**P**	**09 51 15.1**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=303,slow=7.9,SNR=13						
YKA				pP	**pP**	**09 51 36.2**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=334,slow=5.9,SNR=4.7						
YKA				PcP	**PcP**	**09 53 44.2**	**-0.5**
	comp=Z,0.3nm,0.8s,baz=273,slow=3.0,SNR=3.8						
YKA				ScP	**ScP**	**09 57 21.1**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=285,slow=3.9,SNR=7.0						
	comp=Z,0.5nm,0.6s						
NLWA	**Neilton Lookou**	**35.37**	**75**	P	**P**	**09 51 19.5**	**+2.0**
HILR	**Hailar Array B**	**37.89**	**292**	P	**P**	**09 51 38.0**	**-0.9**
	comp=Z,0.9nm,0.4s,baz=60,slow=8.5,SNR=4.1						
	comp=Z,0.9nm,0.4s						
KSRS	**Korea Array**	**39.46**	**270**	P	**P**	**09 51 53.5**	**+1.4**
	comp=Z,3.6nm,0.8s,baz=58,slow=8.0,SNR=14						
	comp=Z,3.6nm,0.8s						
NVAR	**Mina Array Bea**	**43.69**	**83**	P	**P**	**09 52 28.6**	**+1.6**
	comp=Z,1.8nm,0.7s,baz=297,slow=6.9,SNR=14						
NVAR				pP	**pP**	**09 52 49.4**	**+1.4**
	comp=Z,1.4nm,0.7s,baz=286,slow=8.4,SNR=5.7						
NVAR				ScP	**ScP**	**09 57 56.2**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=324,slow=5.7,SNR=5.4						
	comp=Z,1.8nm,0.7s						
NRIK	**Noril'sk**	**44.10**	**329**	P	**P**	**09 52 28.6**	**-0.9**
	comp=Z,3.5nm,0.8s,baz=78,slow=7.6,SNR=5.5						
	comp=Z,3.5nm,0.8s						
NRIK	**Noril'sk**	**44.10**	**329**	⇓*e*P	**P**	**09 52 28.9**	**-0.6**
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ULN	**Ulaanbaatar**	**45.99**	**296**	⇓*e*P	**P**	**09 52 46.2**	**+1.2**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
SONM	**Songino Array**	**46.38**	**296**	P	**P**	**09 52 48.0**	**0.0**
	comp=Z,1.4nm,0.5s,baz=61,slow=6.2,SNR=12						
SONM				PcP	**PcP**	**09 54 21.4**	**-0.1**
	comp=Z,2.0nm,0.6s,baz=86,slow=2.8,SNR=9.3						
SONM				ScP	**ScP**	**09 58 06.8**	**+0.3**
	comp=Z,2.5nm,0.9s,baz=60,slow=3.5,SNR=12						
SONM				LR	LR	10 11 27.6	
	comp=Z,26nm,21.1s,baz=74,slow=35						
	comp=Z,1.4nm,0.5s						
SONM	**Songino Array**	**46.38**	**296**	P	**P**	**09 52 48.1**	**+0.2**
SONM				IAmb	IAmb	09 52 49.6	
	comp=Z,9.1nm,1.5s						
PDAR	**Pinedale Array**	**46.40**	**72**	P	**P**	**09 52 48.4**	**+0.1**
	comp=Z,2.1nm,0.5s,baz=318,slow=3.3,SNR=32						
PDAR				pP	**pP**	**09 53 09.9**	**+0.4**
	comp=Z,5.0nm,0.6s,baz=307,slow=3.7,SNR=17						
PDAR				ScP	**ScP**	**09 58 06.5**	**-0.3**
	comp=Z,1.3nm,0.9s,baz=311,slow=4.0,SNR=7.6						
	comp=Z,2.1nm,0.5s						
TCRU	**Three Creeks R**	**47.18**	**79**	P	**P**	**09 52 54.7**	**+0.2**
HHC	**Hu-ho-hao-te**	**47.45**	**286**	*e*P	**P**	**09 52 57.3**	**+0.9**
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
TMUT	**Trail Mountain**	**47.51**	**77**	P	**P**	**09 52 58.9**	**+1.8**
TMUT				IAmb	IAmb	09 53 21.3	
	comp=Z,9.0nm,1.0s						
RDMU	**Red Mountain**	**47.71**	**75**	P	**P**	**09 52 59.8**	**+1.2**
RDMU				IAmb	IAmb	09 53 21.5	
	comp=Z,8.3nm,0.8s						
SPITS	**Spitsbergen Ar**	**50.10**	**356**	P	**P**	**09 53 15.2**	**-0.9**
	comp=Z,4.8nm,0.4s,baz=39,slow=7.4,SNR=29						
SPITS				ScP	**ScP**	**09 58 20.1**	**-1.6**
	comp=Z,4.3nm,0.9s,baz=330,slow=2.3,SNR=8.2						
	comp=Z,4.8nm,0.4s						
ANMO	**Albuquerque**	**53.21**	**78**	⇓*i*P	**P**	**09 53 42.0**	**+2.0**
ANMO				pmax	pmax		
	comp=Z,14nm,3.8s						
ZALV	**Zalesovo Beam**	**53.73**	**313**	P	**P**	**09 53 42.1**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=31,slow=4.0,SNR=1.6						
ZALV				PcP	**PcP**	**09 54 47.7**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=31,slow=2.8,SNR=6.3						
	comp=Z,0.4nm,0.3s						
LZH	**Lanzhou**	**55.15**	**286**	*e*P	**P**	**09 53 55.6**	**+1.6**
LZH				sP	sP	09 54 31.6	+6.4
LZH				pmax	pmax		
	comp=Z,43nm,1.0s						
DGZ	**Jazzator, Alta**	**55.24**	**308**	⇓*e*P	**P**	**09 53 54.6**	**+0.1**
DGZ				pmax	pmax		
	comp=Z,10.0nm,3.3s						
GTA	**Gaotai**	**55.31**	**291**	*e*P	**P**	**09 53 55.9**	**+0.8**
GTA				pmax	pmax		
	comp=Z,21nm,0.8s						
LZDM	**Lanzhou Array**	**55.32**	**286**	P	**P**	**09 53 55.9**	**+0.4**
	comp=Z,2.4nm,0.4s,baz=48,slow=4.5,SNR=6.8						
	comp=Z,2.4nm,0.4s						
ARCES	**ARCESS Array B**	**57.80**	**350**	P	**P**	**09 54 11.2**	**-1.0**
	comp=Z,0.8nm,0.4s,baz=18,slow=7.4,SNR=16						
	comp=Z,0.8nm,0.4s						
KURK	**Kurchatov**	**58.72**	**313**		**P**	**09 54 17.7**	**-1.0**
KURK	**Kurchatov**	**58.72**	**313**	⇓*i*P	**P**	**09 54 17.2**	**-1.6**
KURK				pmax	pmax		
	comp=Z,22nm,3.3s						
TXAR	**Lajitas Array**	**58.78**	**81**	P	**P**	**09 54 20.5**	**+0.8**
	comp=Z,2.2nm,0.6s,baz=302,slow=4.8,SNR=42						
TXAR				pP	**pP**	**09 54 41.0**	**-0.8**
	comp=Z,1.3nm,0.5s,baz=304,slow=4.9,SNR=7.5						
TXAR				ScP	**ScP**	**09 58 59.7**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=311,slow=4.5,SNR=3.7						
TXAR				LR	LR	10 18 58.5	
	comp=Z,24nm,19.0s,baz=358,slow=35						
	comp=Z,2.2nm,0.6s						
KURBB	**Kurchatov Arra**	**58.82**	**313**	P	**P**	**09 54 18.3**	**-1.2**
	comp=Z,3.1nm,0.5s,baz=43,slow=6.6,SNR=17						
	comp=Z,3.1nm,0.5s						
MK31	**Makanchi Array**	**59.74**	**308**	*c i*P	**P**	**09 54 24.2**	**-1.7**
MKAR	**Makanchi Array**	**59.74**	**308**	P	**P**	**09 54 24.3**	**-1.6**
	comp=Z,1.7nm,0.3s,baz=51,slow=6.5,SNR=26						
MKAR				pP	**pP**	**09 54 47.5**	**0.0**
	comp=Z,0.5nm,0.5s,baz=54,slow=14,SNR=3.5						
	comp=Z,1.7nm,0.3s						
MKAR	**Makanchi Array**	**59.74**	**308**		**P**	**09 54 24.5**	**-1.4**
MKAR	**Makanchi Array**	**59.74**	**308**	*i* P	**P**	**09 54 24.2**	**-1.7**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BVAR	**Borovoye Array**	**60.58**	**320**	P	**P**	**09 54 30.6**	**-1.0**
	comp=Z,3.5nm,0.4s,baz=51,slow=6.8,SNR=15						
BVAR				pP	**pP**	**09 54 54.4**	**+1.3**
	comp=Z,1.5nm,0.7s,baz=29,slow=3.4,SNR=2.3						
BVAR				LR	LR	10 22 15.4	
	comp=Z,26nm,18.7s,baz=48,slow=38						
	comp=Z,3.5nm,0.4s						
BORK	**Borovoye**	**60.59**	**320**	⇑*e*P	**P**	**09 54 30.2**	**-1.4**
BORK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARTI	**Arti**	**62.38**	**328**		**P**	**09 54 43.2**	**-0.4**
ARTI	**Arti**	**62.38**	**328**	*c i*P	**P**	**09 54 42.7**	**-0.9**
ARTI				S	**S**	**10 03 02.5**	**-0.5**
ARTI				pmax	pmax		
	comp=Z,27nm,2.4s						
PZH	**PanZhiHua**	**63.13**	**279**	P	**P**	**09 54 51.2**	**+2.0**
KIRV	**Kirov**	**63.26**	**334**	*ce*P	**P**	**09 54 50.5**	**+1.1**
FINES	**FINESS Array B**	**65.49**	**347**	P	**P**	**09 55 02.6**	**-1.3**
	comp=Z,2.3nm,0.6s,baz=19,slow=6.0,SNR=16						
FINES				LR	LR	10 25 30.2	
	comp=Z,36nm,20.3s,baz=74,slow=38						
	comp=Z,2.3nm,0.6s						
AAK	**Ala-Archa**	**66.56**	**310**	P	**P**	**09 55 10.9**	**-0.4**
AAK	**Ala-Archa**	**66.56**	**310**	⇓*e*P	**P**	**09 55 11.4**	**+0.1**
AAK				pmax	pmax		
	comp=Z,8.0nm,2.2s						
LSA	**Lhasa**	**67.19**	**289**	P	**P**	**09 55 13.2**	**-2.6**
LSA				pmax	pmax		
	comp=Z,27nm,0.7s						
NOA	**NORSAR Array B**	**67.37**	**355**	P	**P**	**09 55 15.3**	**-0.7**

```
        comp=Z,1.0nm,0.6s,baz=12,slow=6.8,SNR=6.9
        comp=Z,1.0nm,0.6s
AB31  Akbulak array     67.63 323         P      09 55 16.8 -0.8
KKAR  Karatay Array     68.08 312         P      09 55 19.6 -1.1
KKAR  Karatay Array     68.08 312  P      P      09 55 19.6 -1.1
HFS   Hagfors           68.11 353  P      P      09 55 19.0 -1.5
        comp=Z,1.3nm,0.5s,baz=29,slow=3.3,SNR=11
        comp=Z,1.3nm,0.5s
KSH   Kashi             68.20 306  P      P      09 55 24.8 +3.2
KSH                                pmax   pmax
        comp=Z,4.0nm,0.5s
OBN   Obninsk           69.56 339  LR     LR     10 29 19.8
        comp=Z,32nm,18.9s,baz=334,slow=39
OBN   Obninsk           69.56 339 eP      P      09 55 29.2 -0.4
OBN                               e              09 55 52.5
OBN                               e              09 58 00.8
OBN                               ePPP    PPP    09 59 46.8
OBN                                pmax   pmax
        comp=Z,11nm,0.9s
OBN                                MLR    MLR
        comp=Z,19nm,7.0s
SHL   Shillong          69.81 286         P      09 55 32.7 +0.8
SHL   Shillong          69.81 286  P      P      09 55 32.7 +0.8
SHL                                pmax   pmax
        comp=Z,23nm,0.9s
CMAR  Chiang Mai Arr    70.81 276  P      P      09 55 38.3 +0.5
        comp=Z,0.9nm,0.3s,baz=28,slow=6.9,SNR=5.9
        comp=Z,0.9nm,0.3s
CMAR  Chiang Mai Arr    70.81 276ceP      P      09 55 38.7 +0.9
CMAR                               pmax   pmax
        comp=Z,1.0nm,0.3s
EVN   Everest           71.02 291         P      09 55 40.1 +0.4
MNK   Minsk             71.86 344 i P     P      09 55 42.1 -1.4
        comp=E,13nm,0.9s
MNK                               i P     P      09 55 42.1 -1.4
        comp=N,22nm,1.1s
MNK                               i P     P      09 55 42.1 -1.4
        comp=Z,7.0nm,0.7s,baz=17
MNK                               i pP    pP     09 56 04.9 -0.9
MNK                               i PP    PP     09 58 20.8 -2.6
MNK                               i PPP   PPP    10 00 05.5
MNK                               i S     S      10 04 57.3 +0.5
MNK                               i SS    SS     10 09 36.3 +3.0
MNK                               i SSS   SSS    10 12 50.9
MNK                               i LQ    LQ     10 22 32.9
MNK                               i LR    LR     10 27 36.2
MNK                               i LRM   MLR    10 30 43.0
        comp=Z,25nm,6.6s
MNK                               i LRM   MLR    10 31 10.2
        comp=N,164nm,19.3s
MNK   Minsk             71.86 344 i P     P      09 55 42.1 -1.5
MNK                               i *PP   pP     09 56 04.9 -0.9
MNK                               i              09 58 20.8
MNK                               i PPP   PPP    10 00 05.4
MNK                               i S     S      10 04 57.2 +0.4
MNK                               i SS    SS     10 09 36.3 +3.0
MNK                               i SSS   SSS    10 12 50.8
MNK                                pmax   pmax
        comp=E,13nm,0.9s
MNK                                pmax   pmax
        comp=Z,7.0nm,0.7s
MNK                                pmax   pmax
        comp=N,22nm,1.1s
MNK                                MLR    MLR
        comp=Z,25nm,7.0s
MNK                                MLR    MLR
        comp=N,164nm,19.0s
MNK                                MLR    MLR
        comp=E,442nm,22.0s
EKA   Eskdalemuir Ar    73.34   2  P      P      09 55 51.5 -0.9
        comp=E,3.9nm,0.9s,baz=0.0,slow=3.6,SNR=3.5
        comp=E,3.9nm,0.9s
AK23  Malin Array Si    75.21 342  P      P      09 56 02.3 -0.9
AK21  Malin Array Si    75.21 342  P      P      09 56 02.2 -1.0
AK22  Malin Array Si    75.22 342  P      P      09 56 02.5 -0.8
AK03  Malin Array Si    75.22 342  P      P      09 56 02.2 -1.1
AK04  Malin Array Si    75.24 342  P      P      09 56 02.4 -1.0
AKASG Malin Array Be    75.25 342  P      P      09 56 02.9 -0.5
        comp=E,5.0nm,0.3s,baz=22,slow=6.7,SNR=20
        comp=E,5.0nm,0.3s
AKASG Malin Array Be    75.25 342ceP      P      09 56 02.9 -0.5
AKASG                              pmax   pmax
        comp=Z,6.0nm,0.3s
AKBB  Malin Array Si    75.25 342  P      P      09 56 03.1 -0.3
AKBB  Malin Array Si    75.25 342⇓eP      P      09 56 02.7 -0.7
AKBB                               pmax   pmax
        comp=Z,5.0nm,0.4s
AKBB  Malin Array Si    75.25 342  P      P      09 56 02.5 -0.9
AK20  Malin Array Si    75.25 342  P      P      09 56 02.6 -0.8
KIEV  Kiev              75.26 342  P      P      09 56 02.7 -0.8
KIEV  Kiev              75.26 342  P      P      09 56 02.7 -0.8
KIEV                               pmax   pmax
        comp=Z,15nm,0.4s
KIEV  Kiev              75.26 342  P      P      09 56 02.4 -1.1
        comp=Z,54nm,0.5s
AK18  Malin Array Si    75.26 342  P      P      09 56 02.7 -0.8
AK01  Malin Array Si    75.26 342  P      P      09 56 02.6 -0.9
AK11  Malin Array Si    75.28 342  P      P      09 56 02.5 -1.1
AK02  Malin Array Si    75.29 342  P      P      09 56 02.7 -1.0
AK17  Malin Array Si    75.29 342  P      P      09 56 02.9 -0.8
LUBAR Lubar, Ukraine    76.27 343  P      P      09 56 07.9 -1.4
SHIU  Shidnytsya        77.71 345  P      P      09 56 17.9 +0.5
KMPD  K-Podol'skiy      77.82 343  P      P      09 56 16.3 -1.7
SORM  Soroca            77.87 342 ⇓P      P      09 56 17.9 -0.3
KBZ   Khabaz            78.30 330  P      P      09 56 20.5 -0.2
        comp=Z,1.2nm,0.5s,baz=34,slow=3.6,SNR=4.3
        comp=Z,1.2nm,0.5s
NSLU  Nyzhne Selyshc    78.52 344  P      P      09 56 22.1 +0.2
BUR08 Bucovina Ar. S    78.93 344         P      09 56 24.2 -0.1
BUR08                              IAmb   IAmb   09 56 53.6
        comp=Z,9.0nm,1.4s
BURAR Bucovina Array    78.95 344  P      P      09 56 24.6 +0.1
BURAR                              IAmb   IAmb   09 56 25.6
        comp=Z,4.3nm,0.6s
BURAR Bucovina Array    78.95 344 ⇑P      P      09 56 24.7 +0.2
COVR  Voineasa-Covas    80.48 342 ⇓P      P      09 56 33.5 +0.9
DOPR  Dopca             80.51 343 ⇓P      P      09 56 33.7 +0.9
CFR   Carcaliu          80.74 341 ⇓P      P      09 56 35.2 +1.3
MLR   Muntele Rosu      80.87 342         P      09 56 35.9 +1.1
MLR                                IAmb   IAmb   09 56 36.4
        comp=Z,5.1nm,0.5s
MLR   Muntele Rosu      80.87 342 ⇓P      P      09 56 36.0 +1.2
MLR   Muntele Rosu      80.87 342  P      P      09 56 35.9 +1.1
MLR                                pmax   pmax
        comp=Z,5.0nm,0.5s
MLR   Muntele Rosu      80.87 342  P      P      09 56 35.1 +0.3
        comp=Z,11nm,1.7s
GZR   Gura Zlata        81.52 345 ⇑P      P      09 56 38.4 +0.2
WRA   Warramunga Arr    82.08 224  P      P      09 56 41.8 +0.5
        comp=Z,1.0nm,0.8s,baz=36,slow=6.1,SNR=7.7
        comp=Z,1.0nm,0.8s
WRA   Warramunga Arr    82.08 224 i P     P      09 56 42.0 +0.8
WRA                                pmax   pmax
        comp=Z,1.0nm,0.8s
BOVS  Bovan             83.41 345 ⇓P      P      09 56 47.6 -0.3
BR106 Keskin Array S    84.63 335  P      P      09 56 53.9 -0.5
        comp=Z,5.2nm,0.9s
BRTR  Keskin Array B    84.64 335  P      P      09 56 53.9 -0.6
        comp=Z,3.7nm,0.7s,baz=41,slow=2.7,SNR=22
        comp=Z,3.7nm,0.7s
BRTR  Keskin Array B    84.64 335  P      P      09 56 54.1 -0.3
BRTR  Keskin Array B    84.64 335ceP      P      09 56 54.2 -0.3
BRTR                               pmax   pmax
        comp=Z,4.0nm,0.7s
BR105 Keskin Array S    84.65 335  P      P      09 56 54.0 -0.5
        comp=Z,60nmcomp=Z,7.2nm,0.8s
BR104 Keskin Array S    84.65 335  P      P      09 56 54.1 -0.4
ASAR  Alice Springs     85.56 222  P      P      09 57 00.1 +1.1
        comp=Z,0.9nm,0.7s,baz=23,slow=5.2,SNR=14
ASAR                               pP     pP     09 57 21.9 -0.2
        comp=Z,0.8nm,0.8s,baz=22,slow=5.2,SNR=4.2
        comp=Z,0.9nm,0.7s
ESDC  Sonseca Array     88.96   4  P      P      09 57 13.9 -1.5
        comp=Z,0.5nm,0.6s,baz=343,slow=4.4,SNR=4.2
        comp=Z,0.5nm,0.6s
H03N2 Juan Fernandez   121.38 105  T      T      12 15 59.2
        baz=317,slow=78,SNR=31
H03N1 Juan Fernandez   121.39 105  T      T      12 16 00.5
        baz=317,slow=78,SNR=23
H03N3 Juan Fernandez   121.40 105  T      T      12 15 59.8
        baz=317,slow=78,SNR=31
QSPA  South Pole Qui   141.39 180  PKP    PKiKP  10 03 51.8 -0.8
        comp=Z,1.2nm,0.7s,baz=37,slow=5.1,SNR=8.9
BOSA  Boshof           150.67 312  PKPbc  PKPbc  10 04 12.0 -0.3
        comp=Z,4.2nm,0.5s,baz=45,slow=1.2,SNR=20
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*PRE **08** 10:33:58.2±0.9, 21°.62S×33°.27E, $h5^{km}$, ML3.4*

ISC 08 10:33:59.1±2.0**, 21°.66S**±0°.07×**33°.3E**±0°.1**, $h13^{km}$, n24, $\sigma 2^{s}.12$**/46**, Mozambique**

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Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                   Op     ISC       h  m  s     ISC
MOPA  Mopani             2.53 223 eP      Pn     10 34 42.1 +2.2
MOPA                              eS      Sn     10 35 12.3 +1.8
MOPA                               IAML          10 35 30.6
        comp=Z,1µm,0.3s
MUSN  Musina, Limpop     3.22 258 eP      Pn     10 34 51.0 +1.7
MUSN                              eS      Sn     10 35 28.7 +1.1
MUSN                               IAML          10 35 50.6
        comp=Z,269nm,0.5s
MUSN  Musina, Limpop     3.22 258 i P     Pb     10 34 54.5 -1.6
MUSN                              i S     Sb     10 35 34.2 -1.0
PILG  Pilgrimsrest,      4.01 215 eP      Pn     10 35 02.3 +1.8
PILG                              eS      Sn     10 35 48.5 +0.9
PILG                               IAML          10 36 21.7
        comp=Z,158nm,0.6s
CRLN  Carolina, Mapu     5.24 214 eP      Pn     10 35 19.1 +1.8
CRLN                              eS      Sn     10 36 17.8 +0.2
CRLN                               IAML          10 36 55.0
        comp=Z,28nm,0.5s
LEPH  Lephalale, Lim     5.50 245 eP      Pn     10 35 23.1 +2.3
LEPH                              eS      Sn     10 36 23.6 -0.3
LEPH                               IAML          10 37 03.4
        comp=Z,171nm,0.6s
BROLN Tlhalogang         5.55 275 i P     Pn     10 35 23.6 +2.1
BROLN                             i S     Sn     10 36 29.2 +4.0
BROLN                              IAML          10 36 58.9
        comp=N,149nm,0.5s
POGA  Pongola            5.84 194 eP      Pn     10 35 27.1 +1.7
POGA                              eS      Sn     10 36 32.3 +0.1
POGA                               IAML          10 37 21.1
        comp=Z,37nm,0.3s
HRAO  HartRAO            6.62 229 eP      Pn     10 35 38.0 +1.8
HRAO                              eS      Sn     10 36 51.2 -0.5
HRAO                               IAML          10 37 39.1
        comp=Z,46nm,0.9s
NWCL  Newcastle          6.78 206 eP      Pn     10 35 39.8 +1.4
NWCL                              eS      Sn     10 36 53.8 -1.9
NWCL                               IAML          10 37 48.5
        comp=Z,47nm,0.5s
LPHEP Lephephe           7.05 255 i P     Pn     10 35 43.0 +1.0
LPHEP                             i S     Sn     10 37 03.1 +0.9
LPHEP                              IAML          10 37 50.4
        comp=N,138nm,1.5s
KHWEE KHWEE              7.26 266 i P     Pn     10 35 45.7 +0.7
KHWEE                             i S     Sn     10 37 10.0 +2.4
KHWEE                              IAML          10 37 56.8
        comp=N,533nm,0.4s
PRYS  Parys              7.51 225 eP      Pn     10 35 49.6 +1.1
PRYS                              eS      Sn     10 37 11.4 -2.3
PRYS                               IAML          10 37 37.3
        comp=Z,12nm,0.3s
LBTB  Lobatse            7.79 243 i P     Pn     10 35 55.9 +3.6
LBTB                              i S     Sn     10 37 20.9 +0.4
LBTB                               IAML          10 38 09.7
        comp=N,69nm,0.6s
LBTB  Lobatse            7.79 243 eP      Pn     10 35 54.0 +1.7
LBTB                              eS      Sn     10 37 18.4 -2.1
LBTB                               IAML          10 37 26.9
        comp=Z,30nm,0.6s
LBTB  Lobatse            7.79 243 i P     Pn     10 35 55.9 +3.6
LBTB                              i S     Sn     10 37 20.1 -0.4
LSZ   Lusaka             7.96 322 eP      Pn     10 35 55.0 +0.4
LSZ                               eS      Sn     10 37 20.5 -4.2
LSZ                                IAML          10 38 13.5
        comp=Z,92nm,0.5s
LSZ   Lusaka             7.96 322 i P     Pn     10 35 55.8 +1.1
LSZ                               i S     Sn     10 37 20.0 -4.7
PMBG  Pietermaritzbu     8.21 197 eP      Pn     10 35 59.0 +1.0
PMBG                              eS      Sn     10 37 28.6 -1.9
PMBG                               IAML          10 38 29.4
        comp=Z,14nm,0.6s
KSANE Kasane             8.54 295 i P     Pn     10 36 04.2 +1.7
KSANE                              IAML          10 37 43.0
        comp=N,105nm,0.2s
MAKGR Makgori            8.78 240 i P     Pn     10 36 08.5 +2.6
MAKGR                             i S     Sn     10 37 45.0 +0.2
MAKGR                              IAML          10 38 49.2
        comp=E,100nm,0.6s
SKOMA Sekoma             9.04 250 i P     Pn     10 36 12.0 +2.5
SKOMA                              IAML          10 39 06.4
        comp=N,69nm,1.1s
KSTD  Kokstad            9.60 201 eP      Pn     10 36 19.0 +1.8
KSTD                              eS      Sn     10 38 02.0 -3.0
KSTD                               IAML          10 38 07.7
        comp=Z,7.4nm,0.4s
BOSA  Boshof            10.02 225 eP      Pn     10 36 24.6 +1.7
BOSA                              eS      Sn     10 38 12.4 -3.0
BOSA                               IAML          10 38 26.4
        comp=Z,6.6nm,0.5s
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*IDC **08** 10:41:57.1±1.1, 53°.04S×140°.80E, $h0^{km}$, mb3.8/6, mbtmp3.9/6, MS3.4/4, Error ellipse: s-maj=112.8km s-min=18.3km az=86.0*

ISC 08 10:41:58.8±1.0**, 53°.1S**±0°.1×**140°.4E**±0°.7**, $h10^{km}$, n20, $\sigma 0^{s}.67$**/9**, mb3.9**/6**, MS3.3**/4**, West of Macquarie Island**

```
Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                   Op     ISC       h  m  s     ISC
STKA  Stephens Creek    21.19   3  P      P      10 46 44.8 +0.6
        1.9nm,0.7s,baz=177,slow=12,SNR=4.2
        1.9nm,0.7s
VNDA  Vanda             25.79 169  P      P      10 47 29.1 -0.3
        3.2nm,1.0s,baz=336,slow=9.4,SNR=3.0
        3.2nm,1.0s
H01W1 Cape Leeuwin H    25.96 304  T      T      11 14 40.4
        baz=142,slow=76,SNR=33
H01W2 Cape Leeuwin H    25.97 304  T      T      11 14 40.9
        baz=142,slow=76,SNR=28
H01W3 Cape Leeuwin H    25.98 304  T      T      11 14 41.7
        baz=142,slow=76,SNR=25
ASAR  Alice Springs     29.76 348  P      P      10 48 05.5 +0.2
        0.6nm,0.8s,baz=167,slow=10,SNR=8.3
ASAR                               PcP    PcP    10 51 08.6 -0.4
        0.2nm,0.7s,baz=176,slow=2.8,SNR=4.1
        0.6nm,0.8s
WRA   Warramunga Arr    33.38 350  P      P      10 48 37.4 +0.2
        1.6nm,1.0s,baz=171,slow=7.3,SNR=7.0
WRA                                PcP    PcP    10 51 18.0 -0.8
        0.5nm,0.7s,baz=175,slow=2.1,SNR=5.1
        1.6nm,1.0s
FITZ  Fitzroy Crossi    36.74 336  LR     LR     11 03 02.8
        comp=Z,44nm,21.6s,baz=230,slow=34
QSPA  South Pole Qui    37.05 180  P      P      10 49 08.7  0.0
        0.7nm,0.3s,baz=359,slow=7.4,SNR=3.5
        0.7nm,0.3s
MAW   Mawson            38.15 217  LR     LR     11 03 07.0
        comp=Z,52nm,19.7s,baz=73,slow=33
KAPI  Kappang           50.80 333  LR     LR     11 12 09.7
        comp=Z,22nm,20.5s,baz=146,slow=36
SNAA  Sanae             52.89 194  P      P      10 51 15.0 +0.7
        1.0nm,0.8s,baz=204,slow=10.0,SNR=3.7
        1.0nm,0.8s
H04S1 CROZET ISLANDS    53.79 238  T      T      11 50 03.8
        baz=130,slow=75,SNR=5.7
H04S2 CROZET ISLANDS    53.79 238  T      T      11 50 01.8
        baz=130,slow=75,SNR=6.2
H04S3 CROZET ISLANDS    53.80 238  T      T      11 50 03.8
        baz=130,slow=75,SNR=5.7
H08S2 Diego Garcia H    70.70 283  T      T      12 10 31.8
        baz=144
H08S1 Diego Carcia H    70.71 283  T      T      12 10 36.5
        baz=144,slow=74
H08S3 Diego Garcia H    70.72 283  T      T      12 10 34.6
        baz=144,slow=74
JOW   Kunigami          80.25 349  LR     LR     11 26 24.6
        comp=Z,46nm,21.9s,baz=148,slow=33
FINES FINESS Array B   144.95 310  PKPbc  PKPbc  11 01 33.1 -0.9
        1.3nm,0.6s,baz=126,slow=2.4,SNR=4.7
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*NEIC **08** 10:49:47.4±1.6, 19°.14N±0°.07×67°.28W±0°.04, $h24^{km}\pm14^{km}$, ML2.0/22, Md3.0/11(RSPR), Error ellipse: s-maj=10.2km s-min=5.5km az=176.0*

*RSPR **08** 10:49:47.2, 19°.28N×67°.35W, $h25^{km}\pm27^{km}$, MD3.0/11*

*SDD **08** 10:49:50.0±1.3, 19°.08N×67°.28W, $h31^{km}\pm31^{km}$, MD3.2, ML2.0, MW3.1, Presumed earthquake*

ISC 08 10:49:44.0±1.8**, 19°.24N**±0°.07×**67°.24W**±0°.03**, $h5^{km}$**$\pm11^{km}$**, n50, $\sigma 0^{s}.66$**/61**, 16C-10D, Mona Passage**

```
Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                   Op     ISC       h  m  s     ISC
AGPR  Aguadilla, PR      0.78 171  Pn     Pb     10 50 00.1 +0.2
AGPR                               IAML          10 50 14.8
        48nm,1.0s
AGPR                               IAML          10 50 15.0
        57nm,0.9s
AGPR  Aguadilla, PR      0.78 171⇓eP      Pb     10 50 00.5 +0.5
AGPR  Aguadilla, PR      0.78 171 eS      Sb     10 50 11.2 +0.3
AGPR  Aguadilla, PR      0.78 171⇑ePg     Pn     10 50 01.5 -0.1
AGPR                             ⇑eSg     Sb     10 50 10.4 -0.4
AGPR                               IAML          10 50 14.9
        comp=N,51nm,0.9s
IDE   Isla Desecheo      0.88 195         Pb     10 50 01.9 +0.2
IDE                                       Sb     10 50 14.0 +0.3
IDE   Isla Desecheo      0.88 195⇓eP      Pb     10 50 01.9 +0.2
IDE   Isla Desecheo      0.88 195 eS      Sb     10 50 14.0 +0.3
AOPR  Arecibo Observ     1.00 153         Pn     10 50 04.4 -0.2
AOPR                                      Sb     10 50 17.6 +0.3
AOPR  Arecibo Observ     1.00 153  IAML          10 50 21.7
        comp=E,79nm,0.3s
AOPR                               IAML          10 50 21.9
        comp=N,35nm,0.3s
AOPR  Arecibo Observ     1.00 153⇑eP      Pn     10 50 04.4 -0.2
AOPR  Arecibo Observ     1.00 153 eS      Sb     10 50 17.6 +0.3
AOPR  Arecibo Observ     1.00 153⇑ePg     Pn     10 50 05.7 +1.0
AOPR                             ⇓eSg     Sb     10 50 17.5 +0.3
EMPR  Esperanza - Ma     1.01 138  Pn     Pn     10 50 06.3 +1.6
PRSN  Puerto Rico Se     1.02 175  Pn     Pb     10 50 04.3 +0.2
PRSN                               IAML          10 50 18.8
        comp=N,94nm,0.3s
PRSN  Puerto Rico Se     1.02 175⇑ePg     Pn     10 50 05.4 +0.5
PRSN                             ⇓eSg     Sg     10 50 16.9 +0.1
PRSN                               IAML          10 50 22.1
        comp=N,79nm,0.2s
LSP   Las Mesas          1.07 172         Pb     10 50 05.1 +0.1
LSP                                       Sb     10 50 19.2  0.0
LSP   Las Mesas          1.07 172⇓eP      Pb     10 50 05.1 +0.1
LSP   Las Mesas          1.07 172 eS      Sb     10 50 19.2  0.0
UUPR  Utuado, UPR, P     1.10 153         Pg     10 50 04.9 -0.2
UUPR                                      Sb     10 50 20.4 +0.3
UUPR  Utuado, UPR, P     1.10 153         Pn     10 50 06.5 +0.5
UUPR                               IAML          10 50 24.2
        comp=N,105nm,0.3s
UUPR                               IAML          10 50 27.9
        comp=N,120nm,0.3s
UUPR  Utuado, UPR, P     1.10 153⇑eP      Pg     10 50 04.9 -0.2
UUPR  Utuado, UPR, P     1.10 153 eS      Sb     10 50 20.4 +0.3
CRPR  Cabo Rojo, PR      1.23 174         Pg     10 50 07.8 +0.1
CRPR                                      Sg     10 50 23.8 +0.1
CRPR  Cabo Rojo, PR      1.23 174  IAML          10 50 26.2
        comp=N,22nm,1.2s
CRPR  Cabo Rojo, PR      1.23 174⇑eP      Pg     10 50 07.8 +0.1
CRPR  Cabo Rojo, PR      1.23 174 eS      Sg     10 50 23.8 +0.1
CRPR  Cabo Rojo, PR      1.23 174⇑ePg     Pn     10 50 08.9 +1.1
CRPR                             ⇑eSg     Sg     10 50 22.6 -1.0
CRPR                               IAML          10 50 27.3
        comp=N,30nm,1.2s
ECPR  Experimental S     1.23 138  Pn     Pn     10 50 08.2 +0.3
ECPR                               IAML          10 50 28.8
        comp=N,54nm,0.2s
ECPR                               IAML          10 50 32.7
        comp=N,52nm,0.2s
ECPR  Experimental S     1.23 138⇓eP      Pn     10 50 08.0 +0.2
ECPR  Experimental S     1.23 138 eS      Sn     10 50 25.2 +0.3
MLPR  Magueyes Islan     1.28 172⇓eP      Pg     10 50 08.0 -0.5
MLPR  Magueyes Islan     1.28 172 eS      Sg     10 50 24.7 -0.3
MLPR  Magueyes Islan     1.28 172⇓ePg     Pg     10 50 08.4 -0.1
MLPR                             ⇑eSg     Sg     10 50 23.2 -1.9
MLPR                               IAML          10 50 45.3
        comp=N,9.5nm,3.4s
OBIP  Obispado Ponce     1.33 153         Pb     10 50 09.5  0.0
OBIP                                      Sg     10 50 26.3 -0.6
OBIP  Obispado Ponce     1.33 153  IAML          10 50 29.1
        comp=E,32nm,0.4s
OBIP                               IAML          10 50 30.8
        comp=N,21nm,0.5s
OBIP  Obispado Ponce     1.33 153⇑eP      Pb     10 50 09.5  0.0
OBIP  Obispado Ponce     1.33 153 eS      Sg     10 50 26.3 -0.6
GCPR  Guaynabo City      1.43 130         Pb     10 50 11.0 -0.1
GCPR                                      Sn     10 50 29.8  0.0
GCPR  Guaynabo City      1.43 130⇑eP      Pb     10 50 11.0 -0.1
GCPR  Guaynabo City      1.43 130 eS      Sn     10 50 29.8  0.0
SJG   San Juan           1.52 137  Pn     Pb     10 50 12.7  0.0
SJG                                IAML          10 50 39.7
        comp=N,13nm,0.7s
HIDR  Higuey Centro      1.54 246⇑ePg     Pg     10 50 14.6 +1.1
HIDR                             ⇓eSg     Sn     10 50 31.7 -0.7
HIDR                               IAML          10 50 48.1
        comp=N,81nm,0.3s
HUMP  Col San Antoni     1.71 129         Pb     10 50 15.4 -0.5
HUMP                                      Sn     10 50 36.6  0.0
HUMP  Col San Antoni     1.71 129  IAML          10 50 53.0
        comp=N,10nm,1.4s
HUMP  Col San Antoni     1.71 129⇓eP      Pb     10 50 15.4 -0.5
HUMP  Col San Antoni     1.71 129 eS      Sn     10 50 36.6  0.0
MIDR  Miches             1.73 262⇑eP      Pn     10 50 14.8 +0.1
MIDR  Miches             1.73 262 eS      Sn     10 50 34.2 -3.0
DR12  Loma Pena Alta     2.08 258  Pn     Pn     10 50 20.0 +0.5
HATOM Hato Mayor del     2.08 258⇑ePg     Pb     10 50 22.6 +0.4
HATOM                            ⇑eSg     Sb     10 50 48.5 +0.2
HATOM                              IAML          10 51 17.2
        comp=N,14nm,1.9s
```

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*IDC **08** 10:51:45.2±1.3, 30°.42S×177°.23W, $h0^{km}$, mb3.9/5, mbtmp3.9/5, MS3.6/9, Error ellipse: s-maj=30.8km s-min=22.6km az=73.0*

ISC 08 10:51:48.9±1.2**, 30°.36S**±0°.08×**177°.2W**±0°.2**, $h24^{km}$, n18, $\sigma 1^{s}.12$**/9**, mb4.1**/5**, MS3.7**/8**, Kermadec Islands**

```
Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                   Op     ISC       h  m  s     ISC
RAO   Raoul Island       1.25 331  Pn     Pn     10 52 09.9 -1.0
        260nm,0.3s,baz=74,slow=8.7,SNR=6.4
RAO                                Sn     Sb     10 52 27.9 +0.4
        328nm,0.3s,baz=58,slow=12,SNR=7.2
RAO                                LR     LR     10 52 46.7
        comp=Z,1µm,18.1s,baz=126,slow=47
URZ   Urewera            9.17 209  Pn     Pn     10 53 52.4 -7.2
        2.1nm,0.3s,baz=221,slow=6.5,SNR=6.3
URZ                                Sn     Sn     10 55 42.8 +0.8
        baz=94,slow=22
DZM   Mont Dzumac       16.80 296  LR     LR     11 00 41.9
        comp=Z,172nm,20.6s,baz=174,slow=32
STKA  Stephens Creek    35.14 257  P      P      10 58 40.7  0.0
        1.2nm,0.5s,baz=90,slow=13,SNR=5.2
        1.2nm,0.5s
PMG   Port Moresby      39.19 295  LR     LR     11 13 03.0
        comp=Z,66nm,19.7s,baz=70,slow=33
ASAR  Alice Springs     43.78 267  P      P      10 59 53.1 +0.2
        1.0nm,0.8s,baz=112,slow=8.1,SNR=11
ASAR                               LR     LR     11 17 45.1
        comp=Z,160nm,18.3s,baz=115,slow=36
        1.0nm,0.8s
WRA   Warramunga Arr    44.76 272  P      P      11 00 01.0 +0.2
        2.3nm,0.7s,baz=110,slow=8.1,SNR=25
WRA                                LR     LR     11 17 17.1
        comp=Z,124nm,19.8s,baz=58,slow=34
        2.3nm,0.7s
FITZ  Fitzroy Crossi    53.03 269  LR     LR     11 22 55.6
        comp=Z,70nm,18.8s,baz=94,slow=35
GUMO  Guam              56.92 315  LR     LR     11 24 14.9
        comp=Z,10nm,18.2s,baz=143,slow=34
BATI  Baumata           58.31 277  LR     LR     11 26 39.6
        comp=Z,169nm,18.3s,baz=138,slow=36
DAV   Davao City (W)    66.21 294  LR     LR     11 31 21.4
        comp=Z,16nm,19.6s,baz=181,slow=36
SNAA  Sanae             78.18 178  P      P      11 03 44.1 -1.8
        2.6nm,1.1s,baz=208,slow=11,SNR=4.2
        2.6nm,1.1s
H03S2 Juan Fernandez    79.93 123  T      T      12 31 45.1
        baz=240
H03S1 Juan Fernandez    79.94 123  T      T      12 31 47.1
        baz=240
H03S3 Juan Fernandez    79.95 123  T      T      12 31 45.8
        baz=240
PSI   Prapat            86.09 276  LR     LR     11 43 43.6
        comp=Z,25nm,19.6s,baz=94,slow=36
NVAR  Mina Array Bea    87.76  42  P      P      11 04 37.5 +1.5
        0.2nm,0.7s,baz=224,slow=3.9,SNR=1.9
        0.2nm,0.7s
FINES FINESS Array B   145.33 340  PKPbc  PKPbc  11 11 24.3 +0.6
        2.0nm,0.5s,baz=52,slow=5.4,SNR=17
```

*WEL **08** 10:52:53.6±0.3, 42°S±3°×17°4E±°, h10km±3km, M4.2/18, ML4.2/17, MLv4.2/18, Error ellipse: s-maj=4.1km s-min=2.6km az=146.2, confirmed*

*NOU **08** 10:52:53.1, 41°.78S×174°.60E, h6km, MLv4.5/14, Cook Strait, New Zealand*

*WEL **08** 10:52:53.8, 41°.63S×174°.36E, h14km, ML4.3, Mw4.2, Moment Tensor Solution. s5 Moment tensor: Scale 10^{15} Nm; M_{rr}1.88; $M_{\theta\theta}$0.33; $M_{\phi\phi}$-2.22; $M_{r\theta}$-0.43; $M_{\theta\phi}$-1.00; $M_{\phi r}$0.84; Fault plane solution: $M_0$2.46000×10^{15} NP1: ϕ_s358.00000°, δ57.00000°, λ63.00000°. NP2: ϕ_s222.00000°, δ41.00000°, λ125.00000°. Principal axes: T -2.6592, Plg66.0000°, Azm217.0000°; N 0.3947, Plg22.0000°, Azm13.0000°; P 2.2644, Plg9.0000°, Azm107.0000°; Stations used: NNZ KHZ QRZ INZ WVZ REVERSE FAULTING*

ISC 08 10:52:52.4±1.1, **41°.74S**±0°.03×**174°.51E**±0°.03, **h10**km±9km, **n132**, σ**1ˢ.47**/142, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.22	268	P	Pg	10 52 57.7	+0.7
WDFS	Ward Fire Stat	0.29	253	P	Pg	10 52 59.4	+1.2
WDFS				S	Sb	10 53 04.5	-0.2
SEDS	Seddon Fire St	0.33	282	P	Pg	10 52 58.8	-0.2
SEDS				S	Sg	10 53 03.3	-0.2
BHW	Baring Head	0.43	39	P	Pb	10 53 03.1	+1.1
KEKS	Kekerengu Vall	0.45	241	P	Pb	10 53 03.1	+0.7
KEKS				S	Sb	10 53 10.8	+1.6
SNZO	South Karori	0.45	19	P	Pb	10 53 02.7	+0.3
SNZO	South Karori	0.45	19	S	Sb	10 53 09.4	+0.2
WNAS	Wellington Int	0.47	28	P	Pb	10 53 03.4	+0.7
WNAS				S	Sb	10 53 10.0	+0.4
BSWZ	Blackbirch Sta	0.48	273	P	Pg	10 53 01.3	-0.3
BSWZ				S	Sg	10 53 07.6	-0.4
MGCS	Blenheim Marlb	0.48	298	P	Pg	10 53 00.7	-1.1
MGCS				S	Sg	10 53 06.7	-1.5
WNKS	Wellington Kar	0.49	21	P	Pb	10 53 03.3	+0.2
WEL	Wellington	0.49	23	P	Pb	10 53 03.5	+0.4
TUWZ	Tuamarina	0.53	306	P	Pg	10 53 02.3	-0.3
TUWZ				S	Sg	10 53 08.4	-1.1
GLOS	29 km south-we	0.53	257	P	Pg	10 53 03.2	+0.5
GLOS				S	Sg	10 53 10.3	+0.6
BWRS	Waikakaho Road	0.55	303	P	Pg	10 53 01.8	-1.1
BWRS				S	Sg	10 53 08.3	-1.9
TCW	Tory Channel	0.56	341	P	Pg	10 53 02.4	-0.8
TCW				S	Sg	10 53 08.9	-1.6
MSWZ	Moikau Station	0.64	60	P	Pn	10 53 07.9	+0.4
CAW	Cannon Point	0.76	34	P	Pb	10 53 08.4	+0.7
PAWZ	Paruwai Farm	0.77	63	P	Pn	10 53 10.4	+1.0
KIW	Kapiti Island	0.93	19	P	Pg	10 53 10.6	+0.4
MTW	Mount Morrison	0.94	52	P	Pn	10 53 12.9	+1.2
TRWZ	Traveller	0.95	69	P	Pn	10 53 13.1	+1.4
KHZ	Kahutara	0.99	227	P	Pb	10 53 12.7	+1.1
KHZ	Kahutara	0.99	227	S	Sn	10 53 28.5	+2.1
KHZ	Kahutara	0.99	227	P	Pb	10 53 12.8	+1.2
NNZ	Nelson	1.00	301	P	Pg	10 53 09.7	-1.8
DUWZ	D'Urville Isla	1.04	334	P	Pg	10 53 10.7	-1.6
OGWZ	Otaki Gorge	1.05	28	P	Pg	10 53 13.1	+0.6
HOWZ	Holdsworth Sta	1.13	42	P	Pn	10 53 15.3	+1.0
THZ	Tophouse	1.20	268	P	Pg	10 53 14.3	-1.1
TMWZ	Te Maipa	1.21	59	P	Pb	10 53 16.5	+1.0
MRZ	Mangatainoka R	1.34	37	P	Pn	10 53 18.3	+1.0
MRNZ	Matariki Terra	1.36	284	P	Pn	10 53 17.0	-0.5
TKNZ	Takaka Hill	1.36	301	P	Pn	10 53 16.4	-1.1
TIWZ	Tintock	1.41	48	P	Pn	10 53 19.6	+1.4
CPWZ	Castlepoint	1.52	57	P	Pn	10 53 20.8	+1.2
PRWZ	Pori Road	1.62	43	P	Pn	10 53 22.3	+1.4
GVZ	Greta Valley S	1.64	221	P	Pn	10 53 21.7	+0.4
POWZ	Post Office Ro	1.65	36	P	Pn	10 53 22.5	+1.2
OHWZ	Ohakea	1.65	22	P	Pb	10 53 23.9	+1.0
BFZ	Birch Farm	1.68	52	P	Pn	10 53 22.4	+0.5
BFZ	Birch Farm	1.68	52	P	Pn	10 53 22.3	+0.5
QRZ	Quartz Range	1.75	301	P	Pn	10 53 23.6	+0.8
QRZ	Quartz Range	1.75	301	P	Pn	10 53 23.0	+0.3
DVHZ	Dannevirke	1.91	42	P	Pn	10 53 25.3	+0.3
ANWZ	Angora Road	1.96	50	P	Pn	10 53 26.3	+0.7
LTZ	Lake Taylor	1.96	237	P	Pn	10 53 25.9	+0.2
AMCZ	Amberley	1.99	223	P	Pn	10 53 26.1	0.0
TSZ	Takapari Road	2.01	34	P	Pn	10 53 26.9	+0.6
WAZ	Wanganui	2.02	10	P	Pb	10 53 29.7	+0.6
DSZ	Denniston Nort	2.03	269	P	Pn	10 53 27.2	+0.6
PRHZ	Porangahau	2.18	48	P	Pn	10 53 29.2	+0.5
WPHZ	Waipukurau	2.22	42	P	Pn	10 53 29.9	+0.6
PNHZ	Pukenui	2.23	36	P	Pn	10 53 29.8	+0.4
OKCZ	Okains Bay	2.25	208	P	Pn	10 53 29.6	-0.1
LREZ	Lake Rotokare	2.28	358	P	Pb	10 53 34.1	+0.6
NMEZ	Namu Road	2.37	348	P	Pb	10 53 34.2	-0.9
MQZ	McQueen's Vall	2.40	214	P	Pn	10 53 30.6	-1.0
PREZ	Palmer Road	2.41	353	P	Pb	10 53 35.6	-0.2
OXZ	Oxford	2.42	228	P	Pn	10 53 31.2	-0.8
AKCZ	Akaroa Harbour	2.44	208	P	Pn	10 53 32.1	-0.1
MTVZ	Mangateitei	2.46	18	P	Pb	10 53 36.8	0.0
PXZ	Pawanui	2.47	47	P	Pn	10 53 32.5	-0.1
KHEZ	Kahui Hut	2.47	351	P	Pn	10 53 35.5	+2.7
KHEZ	Kahui Hut	2.47	351	P	Pb	10 53 35.8	-1.1
INZ	Inchbonnie	2.48	246	P	Pn	10 53 33.0	+0.2
NBEZ	Newall Road No	2.52	349	P	Pn	10 53 35.9	+2.6
KRHZ	Kereru	2.53	35	P	Pn	10 53 33.7	+0.2
PKVZ	Pokaka	2.53	15	P	Pb	10 53 38.1	+0.2
WNVZ	Wahianoa	2.55	19	P	Pn	10 53 36.1	+2.2
DREZ	Durham Road	2.56	355	P	Pb	10 53 37.1	-1.2
TRVZ	Turoa	2.56	18	P	Pb	10 53 38.9	+0.4
PKE	Pukeiti	2.58	351	P	Pn	10 53 36.9	+2.7
MAVZ	Matarangi	2.60	18	P	Pb	10 53 38.9	-0.2
FWVZ	Far West T-bar	2.61	18	P	Pb	10 53 40.1	+0.8
VRZ	Vera Road	2.62	4	P	Pn	10 53 37.4	+2.6
KAHZ	Kahuranaki	2.65	44	P	Pn	10 53 35.0	-0.1
RACZ	Rakaia	2.65	221	P	Pn	10 53 34.9	-0.1
COVZ	Chateau Observ	2.66	18	P	Pb	10 53 39.9	-0.2
SNVZ	South Ngauruho	2.69	19	P	Pn	10 53 38.3	+2.4
NGZ	Ngauruhoe	2.69	18	P	Pn	10 53 38.0	+2.1
OTVZ	Oturere	2.72	19	P	Pb	10 53 39.7	-1.6
KWHZ	Kaweka Forest	2.73	33	P	Pn	10 53 36.4	+0.1
NNVZ	North Ngauruho	2.74	18	P	Pn	10 53 38.7	+2.2
WTVZ	West Tongariro	2.75	18	P	Pn	10 53 39.3	+2.6
ETVZ	East Tongariro	2.76	20	P	Pn	10 53 39.1	+2.4
TWVZ	Taurewa	2.76	15	P	Pb	10 53 40.4	-1.4
TMVZ	Te Maari	2.77	20	P	Pn	10 53 38.7	+1.7
KRVZ	Karewarewa	2.78	18	P	Pn	10 53 40.2	+3.1
NTVZ	North Tongarir	2.78	19	P	Pn	10 53 39.0	+1.9
MHCZ	Mount Hutt	2.81	230	P	Pn	10 53 36.6	-0.8
MCHZ	McNeill Hill	2.83	37	P	Pn	10 53 38.2	+0.5
KATZ	Kakaramea	2.91	18	P	Pb	10 53 45.0	+0.7
BKZ	Black Stump Fm	2.98	31	P	Pn	10 53 41.3	+1.5
BKZ	Black Stump Fm	2.98	31	P	Pn	10 53 39.7	-0.1
RATZ	Rangitukua	3.03	19	P	Pb	10 53 47.4	+1.1
WVZ	Waitaha Valley	3.10	243	P	Pn	10 53 41.9	+0.6
ARHZ	Aropaoanui	3.12	38	P	Pn	10 53 41.7	+0.1
WATZ	Wairara	3.17	18	P	Pb	10 53 48.6	-0.2
HIZ	Hauiti	3.23	5	P	Pn	10 53 46.7	+3.5
HIZ	Hauiti	3.23	5	P	Pn	10 53 45.7	+2.5
MRHZ	Matea Rd	3.25	27	P	Pb	10 53 47.7	-2.4
ARCZ	Arundel	3.30	227	P	Pn	10 53 43.9	-0.2
TLZ	Tolley Road	3.50	13	P	Pn	10 53 49.4	+2.6
PRRZ	Plateau Road	3.54	25	P	Pb	10 53 55.6	+0.5
TMZ	Timaru	3.69	223	P	Pn	10 53 49.1	-0.3
PRGZ	Paritu Road	3.81	44	P	Pn	10 53 50.5	-0.7
RIGZ	Rimuhau	3.92	40	P	Pn	10 53 51.8	-0.9
URZ	Urewera	4.01	31	P	Pn	10 53 54.9	+1.1
URZ	Urewera	4.01	31	P	Pn	10 53 54.8	+0.9
TOZ	Tahuroa Road	4.08	11	P	Pn	10 53 58.6	+3.8
LBZ	Lake Benmore	4.13	229	P	Pn	10 53 55.9	+0.4
ODZ	Otahua Downs	4.34	219	P	Pn	10 53 57.9	-0.5
ODZ	Otahua Downs	4.34	219	P	Pn	10 53 57.9	-0.5
MKAZ	Moumakai	4.66	6	P	Pn	10 54 05.0	+2.3
PUZ	Puketiti	4.66	39	P	Pn	10 54 04.9	+2.1
AWAZ	Awhitu Peninsu	4.67	1	P	Pn	10 54 05.3	+2.4
ETAZ	East Tamaki Re	4.79	4	P	Pn	10 54 07.5	+3.0
WTAZ	Waiatarua	4.80	1	P	Pn	10 54 07.6	+2.9
JCZ	Jackson Bay	4.81	239	P	Pn	10 54 05.5	+0.6
JCZ	Jackson Bay	4.81	239	P	Pn	10 54 04.5	-0.4
WMGZ	Waiomatatini S	4.94	39	P	Pn	10 54 07.1	+0.5
RVAZ	Riverhead Bore	4.96	1	P	Pn	10 54 09.1	+2.1
WIAZ	Waiheke Island	4.96	6	P	Pn	10 54 07.5	+0.5
MBAZ	Motutapu North	4.97	4	P	Pn	10 54 12.0	+5.0
TUZ	Tuapeka	5.50	218	P	Pn	10 54 14.8	+0.6
WCZ	Waipu Caves	5.79	359	P	Pn	10 54 22.7	+4.3
SYZ	Scrubby Hill	6.16	217	P	Pn	10 54 24.4	+1.1
WHZ	Wether Hill Ro	6.31	227	P	Pn	10 54 27.5	+2.1
OUZ	Omahuta	6.55	353	P	Pn	10 54 31.0	+2.3
OUZ	Omahuta	6.55	353	P	Pn	10 54 32.0	+3.3
CTZ	Chatham Island	6.83	110	P	Pn	10 54 33.9	+1.4
CTZ				S	Sn	10 55 46.0	-4.2

*WEL **08** 11:14:55.5±0.4, 42°S±2°×17°4E±°, h10km±3km, M3.1/12, ML3.0/12, MLv3.1/12, Error ellipse: s-maj=3.6km s-min=2.5km az=133.0, confirmed*

*NOU **08** 11:14:57.1, 41°.69S×174°.38E, h0km, MLv3.7/10, Cook Strait, New Zealand*

ISC 08 11:14:56.1±0.8, **41°.67S**±0°.02×**174°.36E**±0°.02, **h17**km±6km, **n90**, σ**1ˢ.37**/105, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.13	234	P	Pg	11 14 59.3	-0.7
CMWZ				S	Sg	11 15 03.2	+0.6
SDNS	Seddon	0.17	272	P	Pg	11 14 59.5	-0.9
SDNS				S	Sg	11 15 03.1	-0.2
SEDS	Seddon Fire St	0.21	270	P	Pg	11 15 00.1	-0.9
SEDS				S	Sg	11 15 04.2	-0.2
WDFS	Ward Fire Stat	0.23	226	P	Pg	11 15 01.1	-0.2
WDFS				S	Sg	11 15 06.1	+1.3
BSWZ	Blackbirch Sta	0.36	263	P	Pg	11 15 02.9	-0.7
BSWZ				S	Sg	11 15 08.9	+0.1
TUWZ	Tuamarina	0.39	308	P	Pg	11 15 03.9	-0.3
TUWZ				S	Sg	11 15 09.4	-0.2
SNZO	South Karori	0.45	36	P	Pg	11 15 04.1	-1.0
SNZO	South Karori	0.45	36	S	Sg	11 15 11.5	+0.4
TCW	Tory Channel	0.46	352	P	Pg	11 15 04.0	-1.4
TCW				S	Sg	11 15 09.9	-1.8
QCCS	Picton Queen C	0.47	327	P	Pg	11 15 03.8	-1.6
QCCS				S	Sg	11 15 10.0	-1.7
BHW	Baring Head	0.47	56	P	Pg	11 15 04.5	-1.0
WEL	Wellington	0.49	39	P	Pg	11 15 05.1	-0.8
WEL				S	Sg	11 15 12.5	-0.2
MSWZ	Moikau Station	0.72	69	P	Pg	11 15 09.5	-0.6
MSWZ				S	Sb	11 15 22.3	+2.5
CAW	Cannon Point	0.78	44	P	Pg	11 15 10.1	-1.1
CAW				S	Sb	11 15 24.2	+2.8
PAWZ	Paruwai Farm	0.85	71	P	Pg	11 15 12.0	-0.7
PAWZ				S	Sb	11 15 25.6	+1.9
NNZ	Nelson	0.86	301	P	Pg	11 15 11.3	-1.6
NNZ				S	Sg	11 15 22.7	-1.6
KIW	Kapiti Island	0.91	27	P	Pg	11 15 12.1	-1.6
KIW				S	Sg	11 15 24.3	-1.4
DUWZ	D'Urville Isla	0.93	339	P	Pg	11 15 12.2	-1.9
KHZ	Kahutara	0.96	219	P	Pg	11 15 14.4	-0.4
KHZ	Kahutara	0.96	219	S	Sb	11 15 29.3	+2.5
KHZ	Kahutara	0.96	219	P	Pg	11 15 14.6	-0.2
KHZ				S	Sb	11 15 29.4	+2.6
MTW	Mount Morrison	1.00	60	P	Pg	11 15 14.4	-1.1
MTW				S	Sg	11 15 28.9	+0.2
TRWZ	Traveller	1.03	75	P	Pg	11 15 14.8	-1.3
OGWZ	Otaki Gorge	1.05	36	P	Pg	11 15 14.6	-1.8
THZ	Tophouse	1.09	265	P	Pg	11 15 15.9	-1.3
HOWZ	Holdsworth Sta	1.17	49	P	Pg	11 15 16.9	-1.7
TKNZ	Takaka Hill	1.23	301	P	Pg	11 15 17.8	-2.0
MRNZ	Matariki Terra	1.23	282	P	Pg	11 15 18.4	-1.5
TMWZ	Te Maipa	1.28	64	P	Pg	11 15 18.1	-2.7
MRZ	Mangatainoka R	1.37	43	P	Pn	11 15 19.9	-0.6
TIWZ	Tintock	1.46	53	P	Pb	11 15 23.7	+0.8
CPWZ	Castlepoint	1.58	62	P	Pn	11 15 21.9	-1.5
QRZ	Quartz Range	1.62	301	P	Pn	11 15 24.8	+0.9
QRZ	Quartz Range	1.62	301	S	Sg	11 15 48.8	+0.6
QRZ	Quartz Range	1.62	301	P	Pn	11 15 24.5	+0.6
GVZ	Greta Valley S	1.62	217	P	Pn	11 15 23.3	-0.7
OHWZ	Ohakea	1.63	27	P	Pn	11 15 25.6	+1.5
PRWZ	Pori Road	1.65	48	P	Pn	11 15 23.9	-0.5
POWZ	Post Office Ro	1.67	40	P	Pn	11 15 24.3	-0.3
BFZ	Birch Farm	1.73	56	P	Pg	11 15 31.0	+1.6
LTZ	Lake Taylor	1.91	234	P	Pn	11 15 27.5	-0.4
DSZ	Denniston Nort	1.91	267	P	Pn	11 15 28.8	+0.8
DVHZ	Dannevirke	1.94	46	P	Pn	11 15 26.8	-1.5
AMCZ	Amberley	1.96	219	P	Pn	11 15 27.7	-1.0
WAZ	Wanganui	1.97	14	P	Pb	11 15 31.5	-0.1
ANWZ	Angora Road	2.01	54	P	Pb	11 15 32.1	0.0
TSZ	Takapari Road	2.02	38	P	Pn	11 15 28.6	-0.8
LREZ	Lake Rotokare	2.21	1	P	Pb	11 15 36.6	+1.0
PNHZ	Pukenui	2.25	39	P	Pn	11 15 31.4	-1.1
WPHZ	Waipukurau	2.25	45	P	Pn	11 15 32.8	+0.2
OKCZ	Okains Bay	2.26	205	P	Pn	11 15 31.2	-1.6
PREZ	Palmer Road	2.33	356	P	Pb	11 15 37.7	0.0
OXZ	Oxford	2.38	225	P	Pn	11 15 32.8	-1.6
KHEZ	Kahui Hut	2.39	354	P	Pb	11 15 38.6	-0.1
KHEZ	Kahui Hut	2.39	354	S	Sb	11 16 08.6	+0.7
KHEZ	Kahui Hut	2.39	354	P	Pb	11 15 38.4	-0.3
MQZ	McQueen's Vall	2.39	211	P	Pn	11 15 32.3	-2.2
INZ	Inchbonnie	2.41	243	P	Pn	11 15 34.6	-0.2
NBEZ	Newall Road No	2.43	351	P	Pb	11 15 38.6	-0.7
DREZ	Durham Road	2.48	357	P	Pb	11 15 40.3	+0.1
PKE	Pukeiti	2.49	353	P	Pb	11 15 39.4	-1.1
MOVZ	Moawhango	2.50	26	P	Pb	11 15 39.6	-0.9
PXZ	Pawanui	2.51	50	P	Pn	11 15 34.3	-1.8
WNVZ	Wahianoa	2.52	22	P	Pb	11 15 40.8	-0.3
KRHZ	Kereru	2.54	38	P	Pn	11 15 35.2	-1.3
VRZ	Vera Road	2.56	7	P	Pn	11 15 39.9	+3.1
MAVZ	Matarangi	2.57	21	P	Pb	11 15 42.3	+0.3
COVZ	Chateau Observ	2.63	21	P	Pb	11 15 43.0	+0.2
NGZ	Ngauruhoe	2.67	21	P	Pb	11 15 43.7	+0.2
SNVZ	South Ngauruho	2.67	22	P	Pb	11 15 43.8	+0.3
KAHZ	Kahuranaki	2.68	46	P	Pn	11 15 36.9	-1.7
OTVZ	Oturere	2.70	22	P	Pb	11 15 43.5	-0.5
NNVZ	North Ngauruho	2.71	21	P	Pn	11 15 41.6	+2.5
WTVZ	West Tongariro	2.72	21	P	Pb	11 15 44.4	0.0
TWVZ	Taurewa	2.73	18	P	Pb	11 15 44.0	-0.4
ETVZ	East Tongariro	2.73	23	P	Pb	11 15 44.2	-0.4
KWHZ	Kaweka Forest	2.74	36	P	Pn	11 15 38.4	-1.0
TMVZ	Te Maari	2.75	22	P	Pb	11 15 44.5	-0.4
KRVZ	Karewarewa	2.75	21	P	Pb	11 15 44.8	-0.2
NTVZ	North Tongarir	2.76	22	P	Pb	11 15 44.6	-0.5
MHCZ	Mount Hutt	2.77	227	P	Pn	11 15 38.3	-1.5
BKZ	Black Stump Fm	2.99	34	P	Pn	11 15 46.7	+3.9
BKZ	Black Stump Fm	2.99	34	P	Pb	11 15 48.1	-0.8
HIZ	Hauiti	3.18	7	P	Pn	11 15 48.6	+3.3
HIZ	Hauiti	3.18	7	P	Pn	11 15 47.9	+2.6
ARCZ	Arundel	3.26	225	P	Pn	11 15 45.2	-1.3
TLZ	Tolley Road	3.46	16	P	Pb	11 15 56.2	-0.7
TMZ	Timaru	3.66	221	P	Pn	11 15 50.6	-1.4
TOZ	Tahuroa Road	4.03	13	P	Pn	11 16 02.5	+5.4
ODZ	Otahua Downs	4.32	218	P	Pn	11 15 59.4	-1.7

KRSC 08 11:20:19.4±0.7, **55°.52N**×**166°.11E**, **h27**km±6km, **Ml3.6**, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	0.32	194	*e*P	Pn	11 20 27.6	-0.6
BKI				*e*S	Sb	11 20 32.8	+0.9
KBTR	Krutoberegovo	1.98	292	*e*P	Pn	11 20 52.5	+1.4
KBTR				*e*S	Sb	11 21 17.2	-1.7
KZV	Kizimen	3.35	265	*e*P	Pn	11 21 13.9	+3.9
KZV				*e*S	Sn	11 21 53.5	+4.7
SDLR	Sedlovina	4.78	245	*e*P	Pn	11 21 33.9	+4.3
SMAR	Somma	4.83	245	*e*P	Pn	11 21 34.9	+4.4
KRER	Koryakskii	4.84	246	*e*P	Pn	11 21 35.0	+4.5
UGLR	Uglovaya	4.85	244	*e*P	Pn	11 21 35.2	+4.7
KRX	Arik	4.86	247	*e*P	Pn	11 21 35.2	+4.4
AVH	Avacha	4.86	245	*e*P	Pn	11 21 35.4	+4.7
KOK	Koryaka	4.90	246	*e*P	Pn	11 21 35.7	+4.4
MTVR	Mutnovka	5.57	240	*e*P	Pn	11 21 45.2	+4.6
MTVR				*e*S	Sn	11 22 47.6	+3.9
ASAK	Asacha	5.77	240	*e*P	Pn	11 21 47.7	+4.5

RSNC 08 11:24:59.4±0.0, **7°N**±1°×**7°3W**±°, **h146**km±2km, **M2.7**, **mb3.0**, **mB4.8**, **ML2.5**, **Mw(mB)4.0**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.24	181	P	Pn	11 25 19.3	-0.3
BARC				S	Sn	11 25 33.7	-1.3
BRJC	Barrancabermej	0.58	284	P	Pn	11 25 21.0	+0.3
BRJC				S	Sn	11 25 37.8	+0.9
PAMC	Pamplona, Colo	0.69	43	P	Pn	11 25 22.1	+0.1
PAMC				S	Sn	11 25 38.9	-0.3
RUSC	La Rusia	0.94	174	P	Pn	11 25 23.3	-0.6
RUSC				S	Sn	11 25 41.7	-0.7
PTBC	PUERTO BERRIO,	1.30	257	P	Pn	11 25 25.9	-0.7
PTBC				S	Sn	11 25 46.3	-1.1
OCAC	Ocana	1.41	354	P	Pn	11 25 27.3	-0.6
OCAC				S	Sn	11 25 48.4	-1.3
SPBC	San Pablo de B	1.47	217	P	Pn	11 25 28.1	-0.4
SPBC				S	Sn	11 25 49.9	-0.7
CHIC	Chingaza	2.25	194	P	Pn	11 25 37.4	-0.4
CHIC				S	Sn	11 26 06.7	-0.5
ROSC	El Rosal	2.28	210	P	Pn	11 25 38.8	+0.8
ROSC				S	Sn	11 26 08.8	+1.1
UREC	San Jos de Ur	2.51	292	P	Pn	11 25 38.9	-1.5
UREC				S	Sn	11 26 10.6	-1.4
GUY2C	Guyana, Caldas	2.70	234	P	Pn	11 25 43.5	+0.3
GUY2C				S	Sn	11 26 16.9	-0.1
VILC	Villavicencio,	2.75	191	P	Pn	11 25 42.8	-0.8
VILC				S	Sn	11 26 16.5	-1.2
CBOC	Ciudad Bolivar	2.97	251	P	Pn	11 25 45.7	-0.8
CBOC				S	Sn	11 26 22.2	-0.6
DBBC	Dabeiba	3.01	274	P	Pn	11 25 46.2	-0.7
DBBC				S	Sn	11 26 22.1	-1.4
ARGC	Ariguani, Magd	3.19	341	P	Pn	11 25 48.8	-0.3
ARGC				S	Sn	11 26 28.2	+0.7
SDV	Santo Domingo	3.25	51	P	Pn	11 25 48.6	-1.4
SDV				S	Sn	11 26 25.9	-3.2
PRAC	Prado	3.53	209	P	Pn	11 25 53.0	-0.5
PRAC				S	Sn	11 26 34.8	-0.7
ORTC	Ortega, Tolima	3.56	215	P	Pn	11 25 53.6	-0.3
ORTC				S	Sn	11 26 37.0	+0.9
PLMC	San Jos del P	3.63	238	P	Pn	11 25 54.7	-0.1
PLMC				S	Sn	11 26 37.8	0.0
SJCC	San Jacinto, C	3.63	327	P	Pn	11 25 53.4	-1.4
SJCC				S	Sn	11 26 33.6	-4.3
URMC	La Uribe, Meta	3.75	199	P	Pn	11 25 56.1	-0.4
URMC				S	Sn	11 26 40.0	-0.7
YOTC	Yotoco, Valle	4.23	228	P	Pn	11 26 00.5	-2.3
YOTC				S	Sn	11 26 51.8	-0.2
CAPC	Capurgana	4.51	294	P	Pn	11 26 04.2	-2.0
CAPC				S	Sn	11 26 53.9	-4.3
URIC	Uribia, Colomb	4.98	14	P	Pn	11 26 08.8	-3.7
URIC				S	Sn	11 27 07.1	-2.4
GARC	Garzon, Huila	5.16	207	P	Pn	11 26 13.1	-2.0
POPC	Popayan, Colom	5.50	219	P	Pn	11 26 19.1	-0.6
	3.8nm,1.8s						
POPC				S	Sn	11 27 20.3	-2.1
	3.8nm,1.8s						
BBAC	Balboa, Cauca	6.26	221	P	Pn	11 26 29.3	-0.6

*NOU **08** 11:45:36.8, 41°.77S×174°.55E, h5km, MLv3.8/9, Cook Strait, New Zealand*

*WEL **08** 11:45:37.1±0.5, 42°S±3°×17°4E±°, h11km±4km, M3.5/43, ML3.4/12, MLv3.5/43, Error ellipse: s-maj=4.1km s-min=2.8km az=135.3, confirmed*

ISC 08 11:45:37.1±0.9, **41°.70S**±0°.03×**174°.41E**±0°.03, **h16**km±6km, **n107**, σ**1ˢ.11**/118, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.16	252	P	Pg	11 45 41.2	-0.1
CMWZ				S	Sg	11 45 44.6	+0.7
SDNS	Seddon	0.21	280	P	Pg	11 45 41.5	-0.5
SDNS				S	Sg	11 45 44.8	-0.4
WDFS	Ward Fire Stat	0.24	238	P	Pb	11 45 43.0	-0.1
WDFS				S	Sb	11 45 47.6	+0.4
SEDS	Seddon Fire St	0.25	276	P	Pg	11 45 41.9	-0.7
SEDS				S	Sg	11 45 46.2	-0.3
MGCS	Blenheim Marlb	0.40	299	P	Pg	11 45 44.2	-1.0
BSWZ	Blackbirch Sta	0.40	268	P	Pg	11 45 44.8	-0.5
BSWZ				S	Sg	11 45 50.4	-0.4
KEKS	Kekerengu Vall	0.41	232	P	Pb	11 45 46.5	+0.4
TUWZ	Tuamarina	0.45	307	P	Pg	11 45 45.7	-0.3
TUWZ				S	Sg	11 45 51.3	-0.8
SNZO	South Karori	0.45	29	P	Pg	11 45 46.0	-0.1
SNZO	South Karori	0.45	29	S	Sb	11 45 53.0	0.0
BHW	Baring Head	0.45	50	P	Pb	11 45 46.6	-0.1
BWRS	Waikakaho Road	0.46	304	P	Pg	11 45 45.2	-1.2
GLOS	29 km south-we	0.47	250	P	Pg	11 45 46.6	+0.1
WEL	Wellington	0.49	33	P	Pb	11 45 47.0	-0.4
WEL				S	Sb	11 45 54.5	+0.1
TCW	Tory Channel	0.50	348	P	Pg	11 45 45.9	-1.2
TCW				S	Sg	11 45 52.1	-1.7
QCCS	Picton Queen C	0.51	325	P	Pg	11 45 45.8	-1.5
MSWZ	Moikau Station	0.69	66	P	Pb	11 45 51.4	+0.7
MSWZ				S	Sn	11 46 03.6	+1.0
CAW	Cannon Point	0.77	40	P	Pg	11 45 51.8	-0.3
CAW				S	Sb	11 46 02.6	+0.2
PAWZ	Paruwai Farm	0.82	68	P	Pb	11 45 53.9	+0.8
NNZ	Nelson	0.92	302	P	Pg	11 45 53.2	-1.6
KIW	Kapiti Island	0.92	24	P	Pg	11 45 54.0	-0.9
KIW				S	Sb	11 46 06.7	+0.1
KHZ	Kahutara	0.97	222	P	Pb	11 45 56.4	+0.9
KHZ	Kahutara	0.97	222	S	Sb	11 46 09.7	+1.7
KHZ	Kahutara	0.97	222	P	Pb	11 45 56.4	+0.9
DUWZ	D'Urville Isla	0.97	337	P	Pg	11 45 54.1	-1.8
MTW	Mount Morrison	0.98	57	P	Pb	11 45 56.3	+0.6
TRWZ	Traveller	1.00	73	P	Pb	11 45 56.6	+0.5
OGWZ	Otaki Gorge	1.05	33	P	Pg	11 45 56.4	-1.0
THZ	Tophouse	1.13	266	P	Pg	11 45 57.8	-1.2
HOWZ	Holdsworth Sta	1.16	46	P	Pg	11 45 58.7	-0.7
TMWZ	Te Maipa	1.26	62	P	Pn	11 45 60.0	-0.1
MRNZ	Matariki Terra	1.28	283	P	Pn	11 46 00.3	-0.1
TKNZ	Takaka Hill	1.28	301	P	Pn	11 45 59.8	-0.6
MRZ	Mangatainoka R	1.36	41	P	Pn	11 46 01.8	+0.3
TIWZ	Tintock	1.44	51	P	Pn	11 46 02.7	+0.1
CPWZ	Castlepoint	1.56	60	P	Pn	11 46 04.5	+0.3
GVZ	Greta Valley S	1.63	218	P	Pn	11 46 05.2	0.0
OHWZ	Ohakea	1.64	25	P	Pb	11 46 07.5	+0.5
PRWZ	Pori Road	1.64	46	P	Pn	11 46 05.3	0.0
POWZ	Post Office Ro	1.66	39	P	Pn	11 46 06.0	+0.4
QRZ	Quartz Range	1.67	301	P	Pn	11 46 06.2	+0.5
QRZ	Quartz Range	1.67	301	P	Pn	11 46 06.3	+0.7
BFZ	Birch Farm	1.72	54	P	Pn	11 46 05.8	-0.5
BFZ	Birch Farm	1.72	54	P	Pn	11 46 05.8	-0.5
LTZ	Lake Taylor	1.92	235	P	Pn	11 46 09.4	+0.2
DVHZ	Dannevirke	1.93	44	P	Pn	11 46 08.7	-0.6
DSZ	Denniston Nort	1.95	268	P	Pn	11 46 10.6	+1.0
AMCZ	Amberley	1.97	221	P	Pn	11 46 09.5	-0.4
ANWZ	Angora Road	1.99	52	P	Pn	11 46 10.6	+0.5
WAZ	Wanganui	1.99	13	P	Pb	11 46 13.3	+0.3
TSZ	Takapari Road	2.02	36	P	Pn	11 46 10.4	-0.2
PRHZ	Porangahau	2.21	50	P	Pn	11 46 13.5	+0.3
LREZ	Lake Rotokare	2.24	360	P	Pb	11 46 18.2	+1.0
PNHZ	Pukenui	2.24	38	P	Pn	11 46 13.2	-0.4
WPHZ	Waipukurau	2.24	44	P	Pn	11 46 13.1	-0.5
OKCZ	Okains Bay	2.25	206	P	Pn	11 46 13.1	-0.7
NMEZ	Namu Road	2.32	350	P	Pb	11 46 19.7	+1.2
PREZ	Palmer Road	2.36	355	P	Pb	11 46 19.9	+0.6
MQZ	McQueen's Vall	2.39	212	P	Pn	11 46 14.1	-1.5
OXZ	Oxford	2.39	226	P	Pn	11 46 14.6	-1.0
KHEZ	Kahui Hut	2.42	353	P	Pb	11 46 19.7	-0.7
KHEZ	Kahui Hut	2.42	353	P	Pb	11 46 19.9	-0.4
INZ	Inchbonnie	2.43	244	P	Pn	11 46 16.4	+0.3
AKCZ	Akaroa Harbour	2.44	207	P	Pn	11 46 15.5	-0.8
MTVZ	Mangateitei	2.45	20	P	Pb	11 46 21.4	+0.5
NBEZ	Newall Road No	2.46	350	P	Pb	11 46 20.3	-0.8
PXZ	Pawanui	2.50	49	P	Pn	11 46 15.7	-1.3
MOVZ	Moawhango	2.51	24	P	Pn	11 46 19.1	+1.8
PKVZ	Pokaka	2.51	17	P	Pb	11 46 23.5	+1.7
DREZ	Durham Road	2.51	356	P	Pb	11 46 21.4	-0.4
PKE	Pukeiti	2.52	352	P	Pb	11 46 21.1	-1.0
KRHZ	Kereru	2.54	37	P	Pn	11 46 17.1	-0.6
WNVZ	Wahianoa	2.54	21	P	Pn	11 46 20.4	+2.6
TRVZ	Turoa	2.55	20	P	Pb	11 46 22.2	-0.4
WHVZ	Whangaehu Hut	2.58	21	P	Pb	11 46 24.7	+1.6
MAVZ	Matarangi	2.58	20	P	Pb	11 46 23.3	+0.1
VRZ	Vera Road	2.59	6	P	Pb	11 46 21.5	-1.7
TUVZ	Tukino	2.61	22	P	Pg	11 46 25.3	-1.8
COVZ	Chateau Observ	2.64	19	P	Pb	11 46 24.9	+0.8
KAHZ	Kahuranaki	2.67	45	P	Pn	11 46 18.3	-1.2
NGZ	Ngauruhoe	2.68	20	P	Pn	11 46 22.6	+2.9
SNVZ	South Ngauruho	2.68	21	P	Pb	11 46 25.5	+0.7
OTVZ	Oturere	2.71	21	P	Pn	11 46 21.0	+0.8
NNVZ	North Ngauruho	2.73	20	P	Pn	11 46 22.2	+1.8
WTVZ	West Tongariro	2.73	20	P	Pb	11 46 25.6	-0.1
KWHZ	Kaweka Forest	2.74	35	P	Pn	11 46 20.1	-0.4
TWVZ	Taurewa	2.74	17	P	Pn	11 46 23.3	+2.8
ETVZ	East Tongariro	2.75	22	P	Pn	11 46 22.5	+1.9

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
TMVZ	**Te Maari**	2.76	21	P	Pn	11 46 22.3	+1.5
KRVZ	**Karewarewa**	2.77	20	P	Pb	11 46 25.8	-0.4
NTVZ	**North Tongarir**	2.77	21	P	Pb	11 46 26.5	+0.1
MHCZ	**Mount Hutt**	2.79	228	P	Pn	11 46 19.9	-1.2
MCHZ	**McNeill Hill**	2.85	38	P	Pn	11 46 21.2	-0.7
KATZ	**Kakaramea**	2.89	20	P	Pb	11 46 30.0	+1.5
BKZ	**Black Stump Fm**	2.99	33	P	Pn	11 46 24.0	+0.1
BKZ	**Black Stump Fm**	2.99	33	P	Pn	11 46 23.4	-0.5
RATZ	**Rangitukua**	3.02	21	P	Pb	11 46 31.5	+1.0
WVZ	**Waitaha Valley**	3.05	242	P	Pn	11 46 25.0	+0.3
HIZ	**Hauiti**	3.20	6	P	Pn	11 46 29.9	+3.1
HIZ	**Hauiti**	3.20	6	P	Pn	11 46 29.6	+2.9
ARCZ	**Arundel**	3.27	226	P	Pn	11 46 27.1	-0.7
TLZ	**Tolley Road**	3.48	15	P	Pn	11 46 33.9	+3.3
TMZ	**Timaru**	3.66	222	P	Pn	11 46 32.5	-0.7
TOZ	**Tahuroa Road**	4.05	12	P	Pn	11 46 41.4	+3.0
LBZ	**Lake Benmore**	4.10	228	P	Pn	11 46 39.5	+0.3
ODZ	**Otahua Downs**	4.33	218	P	Pn	11 46 41.0	-1.3
JCZ	**Jackson Bay**	4.77	238	P	Pn	11 46 48.4	0.0

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*NNC **08** 12:00:27.9±5.5, 36°.63N×71°.14E, h133km±113km, mb2.8, mpv3.5, Error ellipse: s-maj=51.4km s-min=50.9km az=84.0*

*IDC **08** 12:00:34.6±20.0, 36°.63N×71°.73E, h190km±149km, mb3.4/3, mbtmp3.7/7, MS3.8/1, Error ellipse: s-maj=192.9km s-min=75.8km az=172.0*

ISC 08 12:00:29.5±3.0, 36°.7N±0°.2×71°.0E±0°.2, h150km, n11, σ1ˢ.55/9, mb3.9/3, 1C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	6.41	357	P	Pn	12 02 01.1	-0.5
	2.6nm,0.3s,baz=181,slow=13,SNR=48						
KK31				S	Sn	12 03 14.1	+0.4
	2.1nm,0.3s,baz=174,slow=17,SNR=10						
AAK	**Ala-Archa**	6.50	23	⇓P	Pn	12 02 01.4	-1.6
	1.3nm,0.5s						
AAK				⇑S	Sn	12 03 15.5	-0.7
	3.3nm,1.0s						
MKAR	**Makanchi Array**	13.11	36	P	Pn	12 03 30.9	+0.8
	0.3nm,0.9s,baz=210,slow=12,SNR=1.1						
AB31	**Akbulak array**	14.92	331	P	P	12 03 53.2	-1.4
	0.4nm,0.5s,baz=143,slow=12,SNR=25						
KURBB	**Kurchatov Arra**	14.92	19	P	P	12 03 54.5	-0.1
	0.6nm,0.6s,baz=205,slow=10,SNR=4.7						
BVAR	**Borovoye Array**	16.33	359	P	P	12 04 13.0	+2.8
	0.5nm,0.3s,baz=177,slow=10,SNR=4.4						
ZALV	**Zalesovo Beam**	19.72	25	P	P	12 04 47.7	+0.5
	3.0nm,0.3s,baz=205,slow=9.8,SNR=19						
FINES	**FINESS Array B**	37.33	326	P	P	12 07 31.9	+4.9
	3.8nm,1.0s,baz=103,slow=9.7,SNR=3.4						
	3.8nm,1.0s						
GERES	**GERESS Array B**	42.83	305	LR	LR	12 29 14.2	
	comp=Z,106nm,19.5s,baz=349,slow=40						
HFS	**Hagfors**	42.92	322	P	P	12 08 17.1	+4.1
	3.3nm,1.0s,baz=111,slow=6.8,SNR=5.0						
	3.3nm,1.0s						
NOA	**NORSAR Array B**	44.23	323	P	P	12 08 27.8	+4.2
	0.3nm,0.4s,baz=101,slow=7.5,SNR=1.7						
	0.3nm,0.4s						

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*MDD **08** 12:16:05.9±1.3, 37°.99N×13°.32W, h0km±59km, Mb4.0/6, M_mb3.4/6, Error ellipse: s-maj=73.3km s-min=16.3km az=87.0*

*IGIL **08** 12:16:06.6, 38°.04N×13°.67W, h31km, ML2.0*

*INMG **08** 12:16:07.3±1.3, 38°.12N×13°.76W, h10km, ML2.0, Error ellipse: s-maj=7.9km s-min=6.4km az=104.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Josephine*

ISC 08 12:16:03.9±3.5, 38°.16N±0°.08×13°.3W±0°.2, h10km, n42, σ1ˢ.86/71, 5C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMAFR	**Mafra**	3.24	75	S	Sn	12 17 36.1	+2.7
PMAFR				P	Pb	12 16 58.5	-3.1
PMAFR	**Mafra**	3.24	75	eP	Pn	12 16 57.6	+2.8
PMAFR				eS	Sn	12 17 35.1	+1.7
PMAFR				i IAML		12 17 42.2	
PMAFR				i IAML		12 17 48.2	
PMAFR				i IAML		12 17 48.5	
PTEO	**Sao Teotonio**	3.66	98	eP	Pn	12 17 02.7	+2.1
PTEO				eS	Sn	12 17 44.2	+0.3
PTEO				i IAML		12 17 45.0	
PTEO				i IAML		12 17 48.6	
PTEO				i IAML		12 17 50.1	
PFVI	**Vila Bisbo**	3.69	105	S	Sn	12 17 43.9	-0.5
PFVI				P	Pn	12 17 01.8	+0.8
PFVI	**Vila Bisbo**	3.69	105	eP	Pn	12 17 02.9	+1.9
PFVI				eS	Sn	12 17 43.8	-0.7
PFVI				i IAML		12 17 48.6	
PFVI				i IAML		12 17 52.7	
PFVI				i IAML		12 17 58.0	
PSBE	**So Bento**	3.76	68	eS	Sn	12 17 48.4	+2.1
PSBE				i IAML		12 17 59.9	
PSBE				i IAML		12 18 01.9	
PSBE				i IAML		12 18 14.0	
MORF	**Marmelete**	3.77	102	eP	Pn	12 17 04.3	+2.1
MORF				eS	Sn	12 17 46.4	-0.3
MORF				IAML		12 17 49.1	
	comp=E,3.3nm,0.1s						
MORF	**Marmelete**	3.77	102	eP	Pn	12 17 04.4	+2.1
MORF				eS	Sn	12 17 46.8	+0.1
MORF				i IAML		12 17 51.2	
MORF				i IAML		12 17 52.5	
MORF				i IAML		12 17 54.7	
MOE	**Montemor**	3.90	83	eP	Pn	12 17 06.1	+2.3
MOE				eS	Sn	12 17 51.0	+1.3
MOE				i IAML		12 17 53.6	
MOE				i IAML		12 17 53.9	
MOE				i IAML		12 17 54.4	
MESJ	**Messejana**	4.02	93	eP	Pn	12 17 08.1	+2.6
MESJ				eS	Sn	12 17 52.5	-0.1
MESJ				IAML		12 17 58.1	
	comp=N,2.8nm,0.4s						
MESJ	**Messejana**	4.02	93	eP	Pn	12 17 08.6	+3.1
MESJ				eS	Sn	12 17 53.6	+1.0
MESJ				i IAML		12 17 57.6	
MESJ				i IAML		12 17 58.0	
MESJ				i IAML		12 17 58.1	
PMTG	**Montargil**	4.07	76	eP	Pb	12 17 11.7	-3.9
PMTG				eS	Sn	12 17 54.5	+0.7
PMTG				i IAML		12 17 56.5	
PMTG				i IAML		12 18 00.6	
PMTG				i IAML		12 18 01.1	
EVO	**Evora**	4.16	83	S	Sn	12 17 57.7	+1.4
EVO	**Evora**	4.16	83	eS	Sn	12 17 57.1	+0.9
EVO				i IAML		12 18 00.3	
EVO				i IAML		12 18 01.1	
EVO				i IAML		12 18 02.5	
PARRA	**Arraiolos**	4.17	79	eP	Pn	12 17 10.6	+3.0
PARRA				eS	Sn	12 17 56.5	+0.1
PARRA				i IAML		12 17 58.9	
PARRA				i IAML		12 18 00.4	
PARRA				i IAML		12 18 04.0	
PCAS	**Casmilo, Conde**	4.18	62	i IAML		12 17 56.4	
PCAS				eS	Sn	12 17 57.1	+0.6
PCAS				i IAML		12 18 01.3	
PCVE	**Castro Verde**	4.18	96	P	Pn	12 17 09.0	+1.2
PCVE				S	Sn	12 17 57.7	+0.9
PCVE	**Castro Verde**	4.18	96	eP	Pn	12 17 10.7	+2.9
PCVE				eS	Sn	12 17 57.3	+0.6
PCVE				i IAML		12 18 01.4	
PCVE				i IAML		12 18 02.0	
PCVE				i IAML		12 18 02.7	
PSARD	**Sardoal**	4.25	69	eP	Pn	12 17 10.7	+2.0
PSARD				eS	Sn	12 17 58.9	+0.5
PSARD				i IAML		12 18 03.4	
PSARD				i IAML		12 18 03.9	
PSARD				i IAML		12 18 04.3	
PBEJ	**Beja**	4.28	90	eS	Sn	12 17 57.7	-1.4
PBDV	**Barranco-do-Ve**	4.35	101	eP	Pn	12 17 13.1	+3.1
PVAQ	**Vaqueiros**	4.48	98	P	Pn	12 17 13.5	+1.6
PVAQ	**Vaqueiros**	4.48	98	eP	Pn	12 17 14.5	+2.7
PVAQ				eS	Sn	12 18 04.3	+0.3
PVAQ				i IAML		12 18 08.3	
PVAQ				i IAML		12 18 09.1	
PVAQ				i IAML		12 18 09.9	
PESTR	**Estremoz**	4.52	79	P	Pn	12 17 13.6	+1.1
PESTR				S	Sn	12 18 06.8	+1.6
PESTR	**Estremoz**	4.52	79	eP	Pn	12 17 15.4	+2.9
PESTR				eS	Sn	12 18 05.8	+0.6
PESTR				i IAML		12 18 08.1	
PESTR				i IAML		12 18 10.3	
PESTR				i IAML		12 18 11.8	
EGRO	**El Granado**	4.64	96	P	Pn	12 17 16.0	+2.0
EGRO				S	Sn	12 18 08.5	+0.6
EGRO	**El Granado**	4.64	96	Pn	Pn	12 17 16.5	+2.5
EGRO				⇑iIVmb_VC		12 17 21.1	
	comp=N,121nm,SNR=2.2						
EGRO				Sn	Sn	12 18 08.3	+0.5
PMRV	**Marv??o**	4.78	73	eP	Pn	12 17 18.5	+2.5
PMRV				eS	Sn	12 18 11.6	+0.2
PMRV				i IAML		12 18 13.2	
PMRV				i IAML		12 18 14.4	
PMRV				i IAML		12 18 15.5	
PBAR	**Barrancos**	4.92	88	S	Sn	12 18 15.4	+0.4
PBAR	**Barrancos**	4.92	88	eS	Sn	12 18 15.1	+0.1
PBAR				i IAML		12 18 20.1	
PBAR				i IAML		12 18 20.8	
PBAR				i IAML		12 18 21.2	
EBAD	**Badajoz**	4.96	81	S	Sn	12 18 16.5	+0.6
EBAD	**Badajoz**	4.96	81	Pn	Pn	12 17 20.3	+1.8
EBAD				⇑iIVmb_VC		12 17 26.7	
	comp=N,135nm,SNR=1.8						
EBAD				Sn	Sn	12 18 16.6	+0.7
MTE	**Manteigas**	4.99	62	eP	Pn	12 17 20.3	+1.4
EMIN	**Mina Concepcio**	5.24	92	S	S	12 18 22.6	-5.0
EMIN	**Mina Concepcio**	5.24	92	Pn	Pn	12 17 23.8	+1.5
EMIN				⇑iIVmb_VC		12 17 31.8	
	comp=N,90nm,SNR=1.6						
EMIN				Sn	Sn	12 18 22.2	-0.7
PCAB	**Cabril**	5.38	47	eS	Sn	12 18 24.6	-1.6
PGAV	**Gavieira, Arco**	5.41	44	eP	Pn	12 17 27.9	+3.2
PGAV				eS	Sn	12 18 24.8	-2.3
PGAV				i IAML		12 18 34.6	
ESPR	**Espera**	6.05	100	P	Pn	12 17 36.3	+2.9
ESPR				S	Sn	12 18 41.9	-0.8
ECAB	**El Cabril**	6.21	88	P	Pn	12 17 37.6	+1.9
ECAB				S	Sn	12 18 47.9	+1.3
ECAB	**El Cabril**	6.21	88	Pn	Pn	12 17 38.4	+2.8
ECAB				⇑iIVmb_VC		12 17 46.1	
	comp=N,78nm,SNR=1.6						
ECAB				Sn	Sn	12 18 47.4	+0.7
EADA	**Adamuz**	6.86	87	P	Pn	12 17 46.3	+1.7
EADA				S	Sn	12 19 02.4	-0.4
EADA	**Adamuz**	6.86	87	Pn	Pn	12 17 46.9	+2.3
EADA				⇑iIVmb_VC		12 17 50.9	
	comp=N,81nm,SNR=1.2						
EADA				Sn	Sn	12 19 00.8	-2.0

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*MDD **08** 12:38:38.9±0.7, 29°.88N×17°.47W, h2km±7km, mb_Lg3.3/31, Error ellipse: s-maj=16.5km s-min=3.7km az=169.0*

*INMG **08** 12:38:39.4±1.3, 30°.07N×17°.47W, h25km, ML2.7, Error ellipse: s-maj=3.9km s-min=1.5km az=93.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Canary Islands, Spain Region*

*CNRM **08** 12:38:40.1, 30°.61N×16°.72W, h10km, ML3.2*

ISC 08 12:38:30.1±1.2, 30°.14N±0°.02×17°.42W±0°.04, h26km±13km, n50, σ1ˢ.54/82, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPUN	**Puntallana, La**	1.43	192	S	Sb	12 39 13.4	-0.5
CPUN				i IVmb_Lg		12 39 13.9	
CROM	**Garafia, La Pa**	1.43	197	S	Sb	12 39 13.6	-0.5
CROM				i IVmb_Lg		12 39 20.4	
CGOR	**Puntagorda, La**	1.44	201	P	Pb	12 38 58.8	+2.5
CGOR				S	Sb	12 39 13.8	-0.5
CGOR				i IVmb_Lg		12 39 20.7	
CMIR	**El Paso, La Pa**	1.48	195	S	Sn	12 39 13.5	-0.5
CMIR				i IVmb_Lg		12 39 18.8	
TBT	**Taburiente**	1.51	197	P	Pb	12 38 59.0	+1.5
TBT				S	Sn	12 39 13.9	-0.5
TBT				i IVmb_Lg		12 39 19.2	
CENR	**El Paso, La Pa**	1.55	194	S	Sb	12 39 17.1	-0.4
CENR				i IVmb_Lg		12 39 22.1	
CVIE	**Villa de Mazo,**	1.58	193	P	Pb	12 39 00.7	+2.0
CVIE				S	Sn	12 39 16.8	+0.5
CJED	**Jedey, El Paso**	1.60	195	P	Pb	12 39 01.2	+2.1
CJED				S	Sb	12 39 17.8	-1.1
CJED				i IVmb_Lg		12 39 21.1	
EHIG	**Higuera**	1.61	192	P	Pb	12 39 01.4	+2.2
EHIG				S	Sn	12 39 17.5	+0.6
EHIG				i IVmb_Lg		12 39 19.5	
EBAJ	**Bajamar**	1.84	149	P	Pb	12 39 05.4	+2.3
EBAJ				S	Sb	12 39 25.7	-0.1
EBAJ				i IVmb_Lg		12 39 35.6	
CBOL	**Buenavista del**	1.88	164	S	Sn	12 39 24.5	+0.8
CBOL				i IVmb_Lg		12 39 36.1	
CREA	**Los Realejos,**	1.92	157	P	Pb	12 39 06.4	+1.9
CREA				S	Sn	12 39 25.7	+1.1
CREA				i IVmb_Lg		12 39 34.5	
CDOS	**Garachico, Isl**	1.93	162	S	Sb	12 39 27.0	-1.3
CDOS				i IVmb_Lg		12 39 31.2	
CNOR	**Icod de los Vi**	1.93	160	P	Pb	12 39 06.5	+1.7
CNOR				S	Sb	12 39 27.2	-1.3
CFOR	**Fortaleza, Los**	1.95	158	P	Pb	12 39 06.9	+1.8
CFOR				S	Sb	12 39 27.4	-1.7
CFOR				i IVmb_Lg		12 39 33.5	
EGOM	**La Gomera**	1.98	175	P	Pb	12 39 05.9	+0.5
EGOM				S	Sn	12 39 26.2	+0.4
CPVI	**La Orotava (Te**	1.98	160	P	Pb	12 39 07.2	+1.5
CPVI				S	Sn	12 39 28.0	+1.6
CDIE	**La Orotava (Te**	1.99	158	P	Pb	12 39 07.0	+1.2
CDIE				S	Sn	12 39 27.5	+1.0
CGUI	**Guimar, Teneri**	2.00	155	P	Pb	12 39 07.2	+1.4
CGUI				S	Sn	12 39 27.9	+1.4
CRAJ	**Montana Rajada**	2.00	159	S	Sb	12 39 28.8	-1.6
CRAJ				i IVmb_Lg		12 39 56.9	
CCAN	**Las Canadas**	2.03	159	P	Pb	12 39 07.3	+0.8
CCAN				S	Sn	12 39 28.1	+0.5
CCAN				i IVmb_Lg		12 39 34.7	
MACI	**Morro de la Ar**	2.04	157	P	Pb	12 39 08.2	+1.6
MACI				S	Sn	12 39 28.6	+0.9
MACI				i IVmb_Lg		12 39 33.7	
CADE	**Adeje, Tenerif**	2.05	163	P	Pb	12 39 07.2	+0.4
CADE				S	Sn	12 39 28.3	+0.4
CADE				i IVmb_Lg		12 39 30.4	
CLAJ	**Vilaflor (Tene**	2.08	162	P	Pb	12 39 07.8	+0.6
CLAJ				S	Sn	12 39 29.0	+0.5
CLAJ				i IVmb_Lg		12 39 33.0	
CVIL	**Vilaflor**	2.08	161	S	Sn	12 39 29.4	+0.8
CVIL				i IVmb_Lg		12 39 32.8	
CTFS	**San Miguel de**	2.15	161	P	Pb	12 39 09.0	+0.5
CTFS				S	Sn	12 39 31.8	+1.5
CTFS				i IVmb_Lg		12 39 36.9	
CTIG	**El Hierro**	2.38	191	P	Pb	12 39 11.6	-0.7
CTIG				S	Sn	12 39 36.6	+0.8
CTIG				i IVmb_Lg		12 39 42.1	
CTAN	**El Hierro**	2.44	193	P	Pb	12 39 12.3	-1.0
CTAN				S	Sn	12 39 38.4	+1.2
CTAN				i IVmb_Lg		12 39 40.6	
CCUM	**Cumbre, El Hie**	2.44	193	P	Pb	12 39 12.3	-1.1
CCUM				S	Sn	12 39 38.2	+0.8
CCUM				i IVmb_Lg		12 39 41.1	
CTAD	**Las Tabladas,**	2.45	194	P	Pb	12 39 12.5	-1.0
CTAD				S	Sn	12 39 38.5	+1.0
CTAD				i IVmb_Lg		12 39 40.1	
CJUL	**El Julan, El H**	2.47	194	P	Pb	12 39 12.7	-1.2
CJUL				S	Sn	12 39 38.4	+0.3
CJUL				i IVmb_Lg		12 39 42.0	
CMCL	**Mercadel, El H**	2.47	193	P	Pb	12 39 12.9	-1.0
CMCL				S	Sn	12 39 39.6	+1.4
CMCL				i IVmb_Lg		12 39 41.6	
CCAL	**Punta Orchilla**	2.50	195	P	Pb	12 39 13.1	-1.2
CCAL				S	Sn	12 39 38.4	-0.3
CCAL				i IVmb_Lg		12 39 43.2	
CTAC	**Tacoron (Front**	2.51	192	P	Pb	12 39 13.2	-1.3
CTAC				S	Sn	12 39 39.7	+0.7
CTAC				i IVmb_Lg		12 39 46.5	
FUL	**Funchal**	2.54	10	eP	Pb	12 39 15.4	+0.3
FUL				eS	Sn	12 39 42.8	+2.9
FUL				i IAML		12 39 46.6	
FUL				i IAML		12 39 56.8	
FUL				i IAML		12 39 57.8	
PMAR	**Madeira**	2.62	9	eP	Pb	12 39 16.5	0.0
PMAR				eS	Sb	12 39 45.9	-2.3
PMAR				i IAML		12 39 47.4	
PMAR				i IAML		12 39 49.4	
PMAR				i IAML		12 39 49.6	
PMAR	**Madeira**	2.62	9	P	Pb	12 39 16.7	+0.2
PMAR	**Madeira**	2.62	9	S	Sn	12 39 42.8	+0.9
EOSO	**Osorio**	2.62	141	S	Sb	12 39 48.0	-0.3
EOSO				i IVmb_Lg		12 39 54.7	
PMOZ	**Porto Moniz, M**	2.69	4	eP	Pb	12 39 17.2	-0.4
PMOZ				eS	Sn	12 39 46.6	+3.1
PMOZ				i IAML		12 39 48.7	
PMOZ				i IAML		12 39 49.0	
PMOZ				i IAML		12 39 50.2	
PMOZ	**Porto Moniz, M**	2.69	4	P	Pb	12 39 16.3	-1.3
PMOZ	**Porto Moniz, M**	2.69	4	S	Sn	12 39 45.6	+2.1
CLUM	**San Bartolome**	2.78	146	P	Pb	12 39 18.4	-0.7
CLUM				S	Sn	12 39 47.8	+2.1
CLUM				i IVmb_Lg		12 39 52.4	
PMPS	**Porto Santo**	3.06	17	eP	Pb	12 39 23.6	-0.2
PMPS				i IAML		12 40 01.6	
PMPST	**Porto Santo, M**	3.08	17	eP	Pb	12 39 23.7	-0.5
PMPST				eS	Sn	12 39 56.8	+3.8
PMPST				i IAML		12 40 00.6	
PMPST				i IAML		12 40 01.6	
PMPST				i IAML		12 40 04.5	
CGIN	**Giniginamar, F**	3.49	123	P	Pb	12 39 29.9	-1.4
CGIN				S	Sn	12 40 05.9	+2.7
CGIN				i IVmb_Lg		12 40 09.9	
MD31	**MD31**	11.14	73	P	Pn	12 41 09.5	+1.7
MD31	**MD31**	11.14	73	S	Sn	12 43 07.3	-4.3
MDT	**Midelt**	11.26	73	P	Pn	12 41 11.5	+2.0
MDT	**Midelt**	11.26	73	S	Sn	12 43 10.6	-3.8

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*IDC **08** 12:58:03.3±2.0, 8°.38S×116°.74E, h0km, mb3.2/3, mbtmp3.5/5, ML3.6/2, MS3.2/1, Error ellipse: s-maj=43.3km s-min=24.6km az=64.0*

*DJA **08** 12:58:07.2±0.2, 8°S±5°×11°7E±°, h10km, M3.9/17, mB4.7/1, mb4.0/1, MLv3.8/17, Mw(mB)4.0/1*

ISC 08 12:58:08.8±0.9, 8°.55S±0°.07×116°.90E±0°.04, h35km, n26, σ1ˢ.35/27, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	0.19	184	P	Pn	12 58 13.1	-2.4
KLNI	**Mataram**	0.80	279	P	Pn	12 58 22.0	-1.6
PLAI	**Plampang**	0.91	108	P	Pn	12 58 24.5	-0.7
KHKI	**Kahang-Kahang**	1.29	278	P	Pn	12 58 30.4	+0.1
DBNI	**Kabupaten Domp**	1.40	88	P	Pn	12 58 32.5	+0.6
DNP	**Denpasar**	1.67	266	P	Pn	12 58 36.2	+0.6
IGBI	**Denpasar**	1.75	261	P	Pn	12 58 37.5	+0.8
RTBI	**Rangdo, Negare**	1.93	272	P	Pn	12 58 40.5	+1.3
WBSI	**Waikabubak, Su**	2.69	114	P	Pn	12 58 51.2	+1.5
JAGI	**Jajag, Banyuwa**	2.71	271	P	Pn	12 58 50.2	+0.2
ABJI	**Asem Bagus**	2.74	286	P	Pn	12 58 50.8	+0.5
LBFI	**Labuhan Bajo,**	2.96	89	P	Pn	12 58 54.4	+1.0
KMMI	**Kalianget**	3.26	297	P	Pn	12 58 58.6	+1.1
BLJI	**Banyuglugur**	3.36	284	P	Pn	12 58 59.5	+0.6
GMJI	**Gumukmas**	3.42	274	P	Pn	12 59 00.7	+1.0
WSI	**Waingapu**	3.54	109	P	Pn	12 59 02.2	+0.9
KAPI	**Kappang**	4.51	39	Pn	Pn	12 59 13.6	-1.1
	2.5nm,0.3s,baz=204,slow=12,SNR=2.3						
KAPI				Sn	Sn	13 00 05.1	-0.9
	7.8nm,0.3s,baz=217,slow=23,SNR=7.7						
	9.6nm,0.3s						
BKSI	**Bulukumba**	4.53	45	P	Pn	12 59 14.8	-0.2
EDFI	**Ende, Flores**	4.75	93	P	Pn	12 59 18.9	+0.9
SNJI	**Sawahan-Nganju**	5.14	278	P	Pn	12 59 25.4	+1.9
PCJI	**Pacitan**	5.67	273	P	Pn	12 59 31.7	+1.1
FITZ	**Fitzroy Crossi**	12.74	139	Pn	Pn	13 01 08.6	+1.0
	0.3nm,0.3s,baz=315,slow=11,SNR=6.8						
FITZ				Sn	Sn	13 03 25.8	-2.5
	0.4nm,0.3s,baz=188,slow=21,SNR=6.7						
	2.0nm,0.6s						
WRA	**Warramunga Arr**	20.33	126	P	P	13 02 43.9	+1.7
	0.9nm,0.5s,baz=301,slow=12,SNR=23						
	0.9nm,0.5s						
ASAR	**Alice Springs**	22.16	135	P	P	13 03 03.6	+1.7
	0.6nm,0.6s,baz=315,slow=9.9,SNR=15						
	0.6nm,0.6s						
JHJ	**Hachijo jima 2**	46.82	27	LR	LR	13 23 25.1	
	comp=Z,32nm,21.9s,baz=266,slow=33						
MKAR	**Makanchi Array**	63.13	334	P	P	13 08 31.1	-1.9
	0.1nm,0.5s,baz=145,slow=8.1,SNR=1.7						
	0.1nm,0.5s						

IDC 08 13:18:51.3±11.0, 1°.52N×102°.99W, h0km, mb3.4/4, mbtmp3.4/4, MS3.2/2, Error ellipse: s-maj=338.2km s-min=126.5km az=119.0, Galapagos Triple Junction region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	**La Paz**	23.54	343	LR	LR	13 31 06.8	
	comp=Z,54nm,18.3s,baz=60,slow=31						
ATAH	**Atahualpa**	26.00	110	LR	LR	13 31 50.3	
	comp=Z,52nm,18.3s,baz=8.6,slow=30						
TXAR	**Lajitas Array**	27.66	359	P	P	13 24 41.2	+0.1
	0.3nm,0.9s,baz=163,slow=7.9,SNR=4.3						
	0.3nm,0.9s						
PDAR	**Pinedale Array**	41.48	353	P	P	13 26 40.8	+0.4
	0.3nm,0.7s,baz=145,slow=7.7,SNR=3.8						
	0.3nm,0.7s						
H03N2	**Juan Fernandez**	41.51	149	T	T	14 09 54.6	
	baz=326,slow=77,SNR=4.3						
H03N1	**Juan Fernandez**	41.52	149	T	T	14 09 54.8	
	baz=326,slow=77,SNR=3.8						
H03N3	**Juan Fernandez**	41.53	149	T	T	14 09 50.3	
	baz=326,slow=77,SNR=4.9						
YKA	**Yellowknife Ar**	61.45	354	P	P	13 29 08.5	-0.8
	0.3nm,0.8s,baz=169,slow=6.9,SNR=4.4						
	0.3nm,0.8s						
ILAR	**Eielson Array**	70.58	342	P	P	13 30 08.3	+0.3
	0.4nm,0.7s,baz=149,slow=5.6,SNR=7.3						
	0.4nm,0.7s						

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*ECX **08** 13:25:50.6±0.4, 32°.14N×115°.19W, h9km±1km, MD2.4, ML2.6*

*MEX **08** 13:25:51.5±0.7, 32°.11N×115°.23W, h6km±6km, MD3.0*

ISC 08 13:25:50.8±0.9, 32°.10N±0°.03×115°.26W±0°.03, h17km±6km, n15, σ0ˢ.84/24, 2C-6D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RHX	**Rio Hardy**	0.04	331	⇑iP	Pg	13 25 54.1	+0.1
RHX				eS	Sg	13 25 55.9	-0.2
AGSX	**Ej. Aguas Cali**	0.19	26	⇓iP	Pg	13 25 55.2	-0.3
AGSX				eS	Sg	13 25 58.4	-0.3
AGSX				IAML		13 25 58.5	
	comp=N,2µm,0.1s						
GUVIX	**Guadalupe Vict**	0.26	37	⇓iP	Pg	13 25 56.6	0.0
GUVIX				eS	Sg	13 26 00.7	+0.1
RITX	**Riito Sonora**	0.26	75	⇑iP	Pg	13 25 56.7	0.0
RITX				eS	Sg	13 26 00.9	+0.2
MBIG	**Mexicali**	0.31	9	eP	Pb	13 25 58.1	+0.2
MBIG				eP	Pb	13 25 58.2	+0.2
MBIG				eS	Sb	13 26 03.5	+0.8
MBIG				eS	Sg	13 26 04.0	+1.8
CPBX	**Cerro Prieto**	0.32	353	eP	Pb	13 25 58.4	+0.2
CPBX				⇓e		13 26 05.8	
CPBX				IAML		13 26 05.8	
	comp=N,2µm,0.2s						
CPBX				⇓e		13 26 06.5	
CPBX				IAML		13 26 06.5	
	comp=E,2µm,0.1s						
ALAMX	**Rancho Alamar**	0.39	257	IAML		13 26 07.3	
	comp=N,448nm,0.3s						
PESCX	**Ej. Pescaderos**	0.42	37	⇓iP	Pg	13 25 59.1	-0.3
PESCX				eS	Sb	13 26 05.3	-0.5
EDOMX	**El Doctor, EDO**	0.46	107	⇓iP	Pb	13 26 00.6	+0.2
JARAX	**Ej. Heriberto**	0.52	328	IAML		13 26 09.8	
	comp=N,343nm,0.3s						
JARAX				IAML		13 26 14.1	
	comp=E,319nm,0.5s						
ECBX	**El Chinero**	0.65	164	IAML		13 26 14.0	
	comp=E,342nm,0.3s						
SPIG	**San Pedro Mart**	1.06	190	eP	Pg	13 26 12.3	+0.8
SPIG				eS	Sb	13 26 27.1	+2.4
SFX	**San Felipe**	1.11	162	eP	Pg	13 26 10.8	-1.6
SFX				eS	Sg	13 26 26.6	-0.4

CBX	Cerro Bola	1.21	281	eP	Pb	13 26 12.9	-0.5
CBX				eS	Sg	13 26 29.8	-0.3
TJIG	Tijuana	1.25	286	eP	Pn	13 26 12.9	-0.6
TJIG				eS	Sb	13 26 29.9	+0.3

*IDC **08** 13:31:19.2±1.4, 35°.96N×78°.04E, h0^{km}, mb3.8/5, mbtmp3.8/10, ML3.4/5, Error ellipse: s-maj=40.4km s-min=16.9km az=65.0*
*NEIC **08** 13:31:27.8±2.8, 36°.27N±0°.04×78°.01E±0°.07, h50^{km}±6^{km}, mb4.5/20, Error ellipse: s-maj=10.2km s-min=3.8km az=125.0*
*NNC **08** 13:31:32.9±5.8, 36°.80N×77°.93E, h0^{km}, mb3.9, mpv3.8, Error ellipse: s-maj=49.0km s-min=37.7km az=154.0*
ISC 08 13:31:27.7±0.5**, 36°.31N**±0°.04×**78°.06E**±0°.06**, h50^{km}, n68, σ2^{s}.22**/77**, mb4.4**/16**, 7C-1D, Kashmir-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALCI	Alchi Leh	2.21	199	eP	Pn	13 32 08.7	+6.4
ALCI				eS	Sn	13 32 32.0	+3.4
ALCI				IAML		13 32 38.5	
	comp=N,895nm,0.7s						
ALCI				IAML		13 32 38.9	
	comp=E,807nm,1.0s						
KSH	Kashi	3.60	333	Pn	Pn	13 32 22.7	+1.7
KSH				Sn	Sn	13 33 02.2	-0.1
KSH				smax	smax		
	comp=N,320nm,0.7s						
KSH				smax	smax		
	comp=E,220nm,0.5s						
NIL	Nilore	4.76	237		Pn	13 32 37.2	+0.3
KLP	Kalpa	4.77	178	eP	Pn	13 32 41.4	+4.0
KLP				eS	Sn	13 33 31.4	-0.1
KLP				IAML		13 33 36.1	
	comp=N,604nm,0.5s						
KLP				IAML		13 33 37.8	
	comp=E,626nm,0.7s						
WUS	Wushi	4.96	10		Pn	13 32 42.4	+2.7
BHK	Bhakra	5.10	196	eS	Sn	13 33 36.9	-1.5
BHK				IAML		13 33 38.5	
	comp=N,668nm,0.1s						
BHK				IAML		13 33 38.9	
	comp=E,614nm,0.3s						
MANEM	Manem	5.25	285		Pn	13 32 43.7	-0.2
TARG	Taragay, Kyrgy	5.41	358		Pn	13 32 46.2	0.0
KDJ	Kajisay	5.85	354	Pn	Pn	13 32 51.7	-0.2
DRK	Karamyk	5.87	304	Pn	Pn	13 32 51.1	-1.3
JOSI	Joshimath	5.88	167	eP	Pn	13 32 56.8	+4.4
JOSI				eS	Sn	13 33 56.9	-1.6
JOSI				IAML		13 34 02.1	
	comp=E,670nm,0.4s						
JOSI				IAML		13 34 03.3	
	comp=N,653nm,0.4s						
ARSB	Arslanbob	6.38	323		Pn	13 33 00.2	+1.0
AAK	Ala-Archa	6.89	338	Pn	Pn	13 33 09.7	+3.5
	comp=N,1.9nm,0.3s,baz=143,slow=8.1,SNR=23						
AAK				Sn	Sn	13 34 23.7	+0.4
	comp=N,1.0nm,0.3s,baz=355,slow=17,SNR=1.9						
	comp=N,4.0nm,0.3s						
AAK	Ala-Archa	6.89	338		Pn	13 33 07.6	+1.4
AAK	Ala-Archa	6.89	338	⇑Pn	Pn	13 33 10.1	+3.9
	comp=N,0.9nm,0.4s						
AAK				⇑Sn	Sn	13 34 25.2	+1.9
	comp=N,4.4nm,0.7s						
PDGK	Podgornoye	7.09	8	⇑Pn	Pn	13 33 13.0	+4.1
	comp=N,42nm,0.5s						
PDGK				⇓Sn	Sn	13 34 29.4	+1.1
	comp=N,24nm,0.4s						
LGTI	Lohaghat	7.10	166	eP	Pn	13 33 13.7	+4.9
LGTI				eS	Sn	13 34 25.8	-2.1
KBL	Kabul	7.57	259		Pn	13 33 14.5	-1.1
SHAA	Shahritus	8.05	282	Pn	Pn	13 33 22.2	+0.1
KUDL	Kundal	8.25	190	eP	Pn	13 33 30.5	+5.8
KUDL				IAML		13 34 53.4	
	comp=E,536nm,0.7s						
KUDL				eS	Sn	13 34 53.8	-2.8
KUDL				IAML		13 34 57.0	
	comp=N,535nm,0.3s						
KK31	Karatay Array	8.93	322	⇑Pn	Pn	13 33 36.9	+2.9
	comp=N,0.5nm,0.3s,baz=52,slow=40,SNR=5.0						
KK31				⇑Sn	Sn	13 35 08.7	-4.4
	comp=N,0.8nm,0.3s,baz=136,slow=22,SNR=4.6						
KKAR	Karatay Array	8.93	322	Pn	Pn	13 33 33.9	-0.1
WMQ	Urumqi	10.52	42	eP	Pn	13 33 58.3	+2.5
WMQ				S	Sn	13 35 54.0	+1.9
WMQ				pmax	pmax		
	comp=Z,20nm,0.9s						
MAKZ	Makanchi	10.89	14		Pn	13 34 01.5	+0.8
MK31	Makanchi Array	10.94	15	⇑Pn	Pn	13 34 03.2	+1.7
	comp=Z,0.7nm,0.2s,baz=200,slow=9.8,SNR=107						
MK31				⇑Sn	Sn	13 35 58.5	-3.8
	comp=Z,5.0nm,0.5s,baz=155,slow=38,SNR=5.3						
MKAR	Makanchi Array	10.94	15	Pn	Pn	13 34 03.0	+1.5
	comp=Z,1.7nm,0.3s,baz=203,slow=14,SNR=95						
MKAR				Sn	Sn	13 35 59.5	-2.8
	comp=Z,3.4nm,0.3s,baz=201,slow=25,SNR=16						
	comp=Z,5.2nm,0.4s						
MKAR	Makanchi Array	10.94	15		Pn	13 34 02.0	+0.5
EVN	Everest	11.15	136		Pn	13 34 04.9	-0.1
GTK	Tadong	12.67	132	eS	Sn	13 36 37.2	-7.8
KURBB	Kurchatov Arra	14.31	1	Pn	Pn	13 34 47.8	+0.6
	baz=185,slow=12,SNR=6.3						
	comp=Z,0.3nm,0.6s						
KURK	Kurchatov	14.40	1		Pn	13 34 47.8	-0.6
GTA	Gaotai	17.45	73	eP	P	13 35 30.4	+2.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BVAR	Borovoye Array	17.56	345	P	P	13 35 29.6	+0.5
	comp=Z,0.1nm,0.3s,baz=137,slow=11,SNR=6.5						
	comp=Z,0.8nm,0.5s						
BORK	Borovoye	17.59	344	P	Pn	13 35 29.7	+0.6
ZALV	Zalesovo Beam	18.25	13	P	P	13 35 36.1	-0.7
	comp=Z,0.2nm,0.3s,baz=198,slow=14,SNR=6.5						
	comp=Z,0.5nm,0.3s						
AB31	Akbulak array	18.49	320	P	P	13 35 39.3	-0.1
AB31	Akbulak array	18.49	320	P	Pn	13 35 41.5	+1.5
	comp=Z,0.3nm,0.6s,baz=122,slow=11,SNR=7.3						
ABKAR	Akbulak array	18.49	320	P	P	13 35 39.7	+0.3
HYB	Hyderabad	18.83	179	eP	Pn	13 35 49.9	+5.5
LZH	Lanzhou	20.80	83	eP	Pn	13 36 06.9	-0.8
LZH				sP	sP	13 36 33.0	+8.3
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
UOSS	Minazif	21.90	245	P	P	13 36 14.2	-2.4
UOSS				IAmb	IAmb	13 36 31.3	
	comp=Z,36nm,1.4s						
PZH	PanZhiHua	22.41	109	P	P	13 36 22.6	+0.4
SONM	Songino Array	23.84	52	P	P	13 36 36.9	+0.7
	comp=Z,1.9nm,0.6s,baz=248,slow=10.0,SNR=12						
	comp=Z,1.9nm,0.6s						
SONM	Songino Array	23.84	52	P	P	13 36 37.3	+1.0
ARTI	Arti	24.08	333	P	P	13 36 39.1	+1.0
ARTI				IAmb	IAmb	13 37 05.2	
	comp=Z,6.7nm,1.2s						
ULN	Ulaanbaatar	24.27	53	P	P	13 36 41.7	+1.5
ULN				IAmb	IAmb	13 36 42.9	
	comp=Z,2.9nm,0.8s						
CMAR	Chiang Mai Arr	25.60	128	P	P	13 36 49.9	-2.4
	comp=Z,1.0nm,0.6s,baz=309,slow=11,SNR=7.1						
	comp=Z,1.0nm,0.6s						
HHC	Hu-ho-hao-te	26.48	70	eP	P	13 37 02.1	+1.8
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
MLR	Muntele Rosu	39.83	300	P	P	13 38 54.0	-2.1
MLR				IAmb	IAmb	13 38 57.0	
	comp=Z,9.9nm,1.5s						
FIA1	FINESS Array S	40.88	325	P	P	13 39 05.6	+1.2
FINES	FINESS Array B	40.88	325	P	P	13 39 05.9	+1.5
	comp=Z,2.5nm,0.9s,baz=115,slow=7.9,SNR=5.4						
	comp=Z,2.5nm,0.9s						
FINES	FINESS Array B	40.88	325	P	P	13 39 05.7	+1.3
JMN	Monobe	45.25	76	P	P	13 39 40.9	+0.7
JSD	Sado	47.26	69	P	P	13 39 56.6	+0.8
SGRT	San Giovanni R	47.78	297	P	P	13 39 59.3	-0.7
SGRT				IAmb	IAmb	13 40 04.5	
	comp=Z,9.7nm,1.1s						
D19K	Kuna River	67.52	19	P	P	13 42 16.5	-1.7
D19K				IAmb	IAmb	13 42 50.0	
	comp=Z,6.5nm,1.2s						
TOLK	Toolik Lake Re	69.56	17	P	P	13 42 29.4	-1.5
TOLK				IAmb	IAmb	13 42 37.3	
	comp=Z,8.4nm,1.5s						
H18K	Honhosa River	69.78	22	P	P	13 42 31.1	-1.2
H18K				IAmb	IAmb	13 43 08.0	
	comp=Z,14nm,1.5s						
IMAR	Indian Mountai	70.51	20	P	P	13 42 35.5	-1.2
I21K	Tanana	71.61	20	P	P	13 42 43.0	-0.3
I21K				IAmb	IAmb	13 43 11.9	
	comp=Z,6.0nm,1.0s						
J25K	Salcha River,	73.79	18	P	P	13 42 57.4	+1.0
SCM	Sheep Creek Mo	75.53	20	P	P	13 43 06.7	+0.2
BCAR	Beaver Creek A	75.96	18	P	P	13 43 08.3	-0.7
MAYO	Mayo, Yukon	76.83	15	P	P	13 43 13.0	-0.8
WRA	Warramunga Arr	77.18	127	P	P	13 43 13.4	-3.0
	comp=Z,0.4nm,0.7s,baz=327,slow=5.8,SNR=6.7						
	comp=Z,0.4nm,0.7s						
WRA	Warramunga Arr	77.18	127	P	P	13 43 13.9	-2.4
PMG	Port Moresby	79.13	110	P	P	13 43 26.4	-0.9
PMG				IAmb	IAmb	13 43 42.7	
	comp=Z,10.0nm,1.0s						
ASAR	Alice Springs	79.61	130	P	P	13 43 26.2	-3.5
	comp=Z,0.6nm,0.9s,baz=307,slow=5.3,SNR=6.5						
	comp=Z,0.6nm,0.9s						

KRSC 08 14:05:13.0±1.4**, 48°.18N×156°.49E, h18^{km}**±49^{km}**, Ml3.8, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.52	355	eS	Sb	14 06 26.5	-2.0
PAU	Pauzhetka	3.30	3	eP	Pn	14 06 06.2	+2.4
PAU				eS	Sn	14 06 46.1	+3.5
KDTR	Khodutka, Kamc	3.78	15	eP	Pn	14 06 14.7	+4.4
KDTR				eS	Sb	14 06 59.7	-4.9
ASAK	Asacha	4.31	12	eP	Pn	14 06 21.5	+3.8
MTVR	Mutnovka	4.45	13	eP	Pn	14 06 24.3	+4.6
MTVR				eS	Sn	14 07 15.9	+4.9
RUS	Russkaya	4.46	16	eP	Pn	14 06 23.9	+4.3
RUS				eS	Sn	14 07 15.5	+4.5
GRL	Gorelyy	4.50	12	eP	Pn	14 06 24.6	+4.2
GRL				eS	Sn	14 07 17.8	+5.5
KOK	Koryaka	5.30	14	eP	Pn	14 06 36.9	+5.5
SDLR	Sedlovina	5.33	16	eP	Pn	14 06 35.6	+3.8
KRER	Koryakskii	5.33	15	eP	Pn	14 06 37.0	+5.1
KRX	Arik	5.37	14	eP	Pn	14 06 36.9	+4.5
SPN	Mys Shipunski	5.42	23	eS	Sn	14 07 39.8	+5.1
KZV	Kizimen	7.34	17	eP	Pn	14 07 04.2	+4.8

DJA 08 14:32:02.7±0.2**, 9°S**±3°×**11°9E**±°**, h55^{km}**±4^{km}**, M4.1**/20**, mB4.9**/1**, mb4.2**/9**, MLv4.1**/20**, Mw(mB)4.2**/1**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.20	137	P	Pn	14 32 12.3	+0.6
WBSI				S	Sn	14 32 20.3	+2.2
WSI	Waingapu	1.05	100	P	Pn	14 32 21.0	-0.2
WSI				S	Sn	14 32 36.1	+1.2
LBFI	Labuhan Bajo,	1.19	32	P	Pn	14 32 22.3	-0.8
DBNI	Kabupaten Domp	1.35	317	P	Pn	14 32 25.8	+0.5
DBNI				S	Sn	14 32 43.3	+1.1
BASI	Baing, Sumba	1.50	119	P	Pn	14 32 27.6	+0.4
PLAI	Plampang	1.60	294	P	Pn	14 32 28.8	+0.2
PLAI				S	Sn	14 32 48.4	+0.2
TWSI	Taliwang, Sumb	2.46	288	P	Pn	14 32 41.4	+1.1
EDFI	Ende, Flores	2.52	73	P	Pn	14 32 40.5	-0.8
MMRI	Maumere	3.07	74	P	Pn	14 32 48.9	+0.1
KLNI	Mataram	3.29	289	P	Pn	14 32 52.7	+0.9
KHKI	Kahang-Kahang	3.77	287	P	Pn	14 32 59.2	+0.9
IGBI	Denpasar	4.11	279	P	Pn	14 33 03.3	+0.3
BKSI	Bulukumba	4.23	12	P	Pn	14 33 04.6	-0.1
RTBI	Rangdo, Negare	4.38	283	P	Pn	14 33 06.5	-0.2
BATI	Baumata	4.41	100	P	Pn	14 33 07.2	+0.1
KAPI	Kappang	4.47	6	P	Pn	14 33 08.7	+0.7
SOEI	Soe	4.96	93	P	Pn	14 33 15.7	+1.0
BNSI	Bone	5.13	10	P	Pn	14 33 15.3	-1.7
JAGI	Jajag, Banyuwa	5.14	281	P	Pn	14 33 15.5	-1.6
GMJI	Gumukmas	5.86	281	P	Pn	14 33 25.5	-1.6
	0.1nm12nm,0.5s						
PMSI	Majene	5.96	357	P	Pn	14 33 28.6	+0.2
	0.1nm30nm,1.1s						
PCJI	Pacitan	8.08	279	P	Pn	14 33 57.7	+0.2
	26nm,1.4s						
UGM	Wanagama	8.77	280	P	Pn	14 34 06.7	-0.2
	31nm,1.9s						
FAKI	Fak Fak	14.47	64	P	Pn	14 35 23.7	-0.9

*DJA **08** 14:37:23.3±0.8, 3°N±3°×9°6E±°, h15^{km}±4^{km}, M4.0/10, mb4.2/3, MLv3.9/10*
*NEIC **08** 14:37:24.8±1.2, 2°.52N±0°.06×95°.9E±0°.1, h25^{km}±7^{km}, mb4.3/10, Error ellipse: s-maj=17.4km s-min=7.2km az=69.0*
*IDC **08** 14:37:26.0±7.7, 2°.28N×95°.90E, h56^{km}±63^{km}, mb3.9/6, mbtmp4.1/8, ML4.5/1, MS3.0/3, Error ellipse: s-maj=84.2km s-min=43.2km az=17.0*
ISC 08 14:37:24.1±0.8**, 2°.53N**±0°.05×**95°.83E**±0°.06**, h25^{km}, n53, σ0^{s}.86**/44**, mb4.2**/13**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.51	104	P	Pb	14 37 34.9	+0.4
SNSI				S	Sn	14 37 43.2	-0.6
TPTI		1.53	62	P	Pn	14 37 49.0	-0.8
TPTI				S	Sb	14 38 10.5	-0.2
MLSI	Meulaboh, Aceh	1.81	18	P	Pn	14 37 54.9	+1.1
MLSI				S	Sn	14 38 17.6	+1.6
GSI	Gunungsitoli	2.13	125		Pn	14 37 58.2	+0.1
GSI	Gunungsitoli	2.13	125	P	Pn	14 37 58.6	+0.5
KCSI	Kotacane, Aceh	2.17	63	P	Pn	14 38 00.0	+1.3
TSI	Tuntungan	2.90	71	P	Pn	14 38 08.9	+0.3
LHMI	Lhok Sumawe	2.90	23	P	Pn	14 38 08.1	-0.6
RPSI	Rantau Prapat	3.10	87		Pn	14 38 11.5	+0.1
RPSI					Sn	14 38 48.1	+0.5
PSI	Prapat	3.10	85	P	Pn	14 38 11.5	-0.1
	6.4nm,0.7s,baz=320,slow=5.9,SNR=9.1						
PSI				S	Sn	14 38 48.1	+0.2
	14nm,0.7s,baz=328,slow=12,SNR=3.7						
PSI				LR	LR	14 39 35.7	
	comp=Z,95nm,19.5s,baz=287,slow=42						
PSI	Prapat	3.10	85	P	Pn	14 38 12.6	+1.0
PBSI	Pulau Batu	3.55	136	P	Pn	14 38 18.2	+0.6
SISI	Saibi	5.03	140	P	Pn	14 38 38.7	+0.7
	24nm,1.1s						
KULM	Kulim	5.53	60		Pn	14 38 45.2	+0.3
KULM	Kulim	5.53	60	P	Pn	14 38 45.5	+0.6
	43nm,0.9s						
IPM	Ipoh	5.53	69	Pn	Pn	14 38 45.0	0.0
IPM	Ipoh	5.53	69	P	Pn	14 38 46.1	+1.1
CMAR	Chiang Mai Arr	16.12	11	P	P	14 41 11.3	-0.9
	0.6nm,0.3s,baz=200,slow=11,SNR=9.8						
CMAR				LR	LR	14 47 17.1	
	comp=Z,26nm,19.5s,baz=200,slow=36						
	1.0nm,0.3s						
CMAR	Chiang Mai Arr	16.12	11	P	P	14 41 11.9	-0.4
H08S2	Diego Garcia H	25.38	246	T	T	15 09 02.6	
	baz=67,slow=76,SNR=110						
H08S3	Diego Garcia H	25.39	246	T	T	15 09 02.6	
	baz=67,slow=76,SNR=174						
H08S1	Diego Carcia H	25.40	246	T	T	15 09 03.8	
	baz=67,slow=76,SNR=83						
EVN	Everest	26.71	342	P	P	14 43 03.3	+1.0
LSA	Lhasa	27.38	351	P	P	14 43 04.9	-3.2
LSA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GTA	Gaotai	36.88	5	eP	P	14 44 31.1	+0.2
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
H01W3	Cape Leeuwin H	40.99	157	T	T	15 28 45.0	
	baz=332,slow=76,SNR=46						
H01W2	Cape Leeuwin H	41.01	157	T	T	15 28 40.3	
	baz=332,slow=76,SNR=57						
H01W1	Cape Leeuwin H	41.01	157	T	T	15 28 40.0	
	baz=332,slow=76,SNR=44						
MANEM	Manem	41.30	330	P	P	14 45 08.9	+0.9
MANEM				IAmb	IAmb	14 45 13.2	
	comp=Z,12nm,1.2s						
TARG	Taragay, Kyrgy	42.25	340	P	P	14 45 15.7	-0.1
DRK	Karamyk	42.78	332	P	P	14 45 20.9	+0.8
ARSB	Arslanbob	43.76	335	P	P	14 45 28.9	+1.1
ARSB				IAmb	IAmb	14 45 30.0	
	comp=Z,5.0nm,1.0s						
MKAR	Makanchi Array	45.63	347	P	P	14 45 43.1	+0.6
	comp=Z,1.7nm,0.6s,baz=164,slow=7.9,SNR=23						
	comp=Z,1.7nm,0.6s						
MKAR	Makanchi Array	45.63	347	P	P	14 45 42.4	-0.2
MAKZ	Makanchi	45.72	347	P	P	14 45 43.2	0.0
MAKZ				IAmb	IAmb	14 45 43.9	
	comp=Z,1.9nm,0.8s						
SONM	Songino Array	46.04	10	P	P	14 45 45.5	-0.4
	comp=Z,1.4nm,0.6s,baz=190,slow=9.0,SNR=9.8						
	comp=Z,1.4nm,0.6s						
SONM	Songino Array	46.04	10	IAmb	IAmb	14 45 53.8	
	comp=Z,5.6nm,1.4s						
KKAR	Karatay Array	46.27	334	P	P	14 45 47.9	+0.4
KURBB	Kurchatov Arra	50.10	346	P	P	14 46 17.9	+0.9
	comp=Z,1.4nm,0.8s,baz=166,slow=6.7,SNR=14						
	comp=Z,1.4nm,0.8s						
ZALV	Zalesovo Beam	52.04	352	P	P	14 46 31.6	+0.1
	comp=Z,1.6nm,0.5s,baz=182,slow=6.4,SNR=10						
	comp=Z,1.6nm,0.5s						
ZALV	Zalesovo Beam	52.04	352	P	P	14 46 31.3	-0.2
BVAR	Borovoye Array	54.55	341	P	P	14 46 50.1	+0.1
	comp=Z,1.9nm,0.8s,baz=142,slow=7.3,SNR=9.7						
	comp=Z,1.9nm,0.8s						
BORK	Borovoye	54.59	341	P	P	14 46 49.1	-1.2
BORK				IAmb	IAmb	14 46 51.1	
	comp=Z,1.9nm,0.8s						
AB31	Akbulak array	55.70	332	P	P	14 46 59.0	+0.5
AB31				IAmb	IAmb	14 47 00.8	
	comp=Z,3.9nm,1.4s						
H04N2	CROZET ISLANDS	62.12	213	T	T	15 55 11.7	
	baz=52,slow=75,SNR=1119						
H04N1	CROZET ISLANDS	62.13	213	T	T	15 55 09.0	
	baz=52,slow=75,SNR=1194						
H04N3	CROZET ISLANDS	62.14	213	T	T	15 55 07.6	
	baz=52,slow=75,SNR=918						
H04S1	CROZET ISLANDS	62.48	212	T	T	15 55 34.7	
	baz=53,slow=75,SNR=23						
H04S3	CROZET ISLANDS	62.49	212	T	T	15 55 34.6	
	baz=53,slow=75,SNR=43						
H04S2	CROZET ISLANDS	62.50	212	T	T	15 55 39.3	
	baz=53,slow=75,SNR=28						
YAK	Yakutsk	64.54	17	LR	LR	15 19 35.7	
	comp=Z,40nm,18.5s,baz=346,slow=39						
MARNC	Mare, Loyalty	74.43	113	P	P	14 49 00.8	+0.1
SPITS	Spitsbergen Ar	85.37	348	P	P	14 49 57.9	-0.9
	comp=Z,7.8nm,1.0s,baz=117,slow=1.6,SNR=1.5						
	comp=Z,7.8nm,1.0s						

*BJI **08** 14:37:55.9, 13°.05S×167°.42E, h151^{km}, mB5.0/7, mb4.7/38*
*IDC **08** 14:37:57.3±2.2, 13°.12S×166°.93E, h136^{km}±18^{km}, mb4.1/20, mbtmp4.5/22, MS3.0/3, Error ellipse: s-maj=18.5km s-min=11.9km az=92.0*
*NEIC **08** 14:37:57.7±1.9, 13°.19S±0°.08×167°.1E±0°.1, h140^{km}±5^{km}, mb4.9/73, Error ellipse: s-maj=15.8km s-min=11.9km az=101.0*
ISC 08 14:37:56.9±1.4**, 13°.15S**±0°.06×**167°.00E**±0°.09**, h135^{km}**±12^{km}**, n139, σ0^{s}.98**/141**, mb4.8**/66**, 4C-1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	2.29	175		Pn	14 38 34.6	0.0
MARNC	Mare, Loyalty	8.34	173	Pn	Pn	14 39 55.2	+0.3
DZM	Mont Dzumac	8.88	183	P	Pn	14 40 04.5	+2.2
	14nm,0.4s,baz=106,slow=23,SNR=92						
DZM				S	Sn	14 41 39.5	-1.3
DZM				LR	LR	14 43 13.9	
	comp=Z,70nm,18.9s,baz=346,slow=36						
DZM	Mont Dzumac	8.88	183		Pn	14 40 02.7	+0.4
ONTNC	Ouen Toro	9.12	183		Pn	14 40 06.3	+1.0
PINNC	Pines Island,	9.42	177	Pn	Pn	14 40 10.6	+1.3
EIDS	Eidsvold	19.30	229		P	14 42 12.5	+1.0
PMG	Port Moresby	19.80	279	P	P	14 42 17.5	+0.5
	40nm,0.8s,baz=265,slow=22,SNR=6.4						
PMG	Port Moresby	19.80	279	P	P	14 42 16.8	-0.2
CTAO	Charters Tower	21.02	248		P	14 42 29.6	-0.5
COEN	Coen	23.17	265	P	P	14 42 51.9	+0.1
TOZ	Tahuroa Road	25.63	164	P	P	14 43 14.5	+0.7
TOZ				IAmb	IAmb	14 43 22.3	
	comp=Z,109nm,2.0s						
BKZ	Black Stump Fm	27.24	164	P	P	14 43 28.6	+0.2
BKZ				IAmb	IAmb	14 44 20.9	
	comp=Z,60nm,1.8s						
INKA	Innaminka	28.47	235	P	P	14 43 39.5	+0.1
TCW	Tory Channel	28.67	169	P	P	14 43 42.1	+1.2
STKA	Stephens Creek	29.84	227	P	P	14 43 52.1	+0.7
	comp=Z,3.5nm,0.6s,baz=48,slow=9.4,SNR=12						
STKA				PcP	PcP	14 46 51.8	+0.3
	comp=Z,6.0nm,0.7s,baz=85,slow=4.1,SNR=11						
	comp=Z,3.5nm,0.6s						
STKA	Stephens Creek	29.84	227	P	P	14 43 52.1	+0.7
MQZ	McQueen's Vall	30.83	172	P	P	14 44 01.1	+1.1
TOO	Toolangi	30.97	214	P	P	14 44 01.8	+0.4
WB0	Warramunga Arr	31.91	254		P	14 44 08.4	-1.5
WB0				IAmb	IAmb	14 44 09.7	
	comp=Z,16nm,1.4s						
WRAB	Tennant Creek	31.97	253	P	P	14 44 08.4	-2.0
WRA	Warramunga Arr	31.98	253	P	P	14 44 08.9	-1.6
	comp=Z,2.1nm,0.6s,baz=86,slow=9.3,SNR=24						
WRA				PcP	PcP	14 46 57.1	-0.4
	comp=Z,2.1nm,0.9s,baz=32,slow=0.9,SNR=7.8						
WRA				ScP	ScP	14 50 29.5	+0.9
	comp=Z,1.6nm,1.0s,baz=82,slow=3.6,SNR=5.9						
	comp=Z,2.1nm,0.6s						
WRA	Warramunga Arr	31.98	253	P	P	14 44 08.0	-2.5
AS31	Alice Springs	33.01	247		P	14 44 17.8	-1.7
ASAR	Alice Springs	33.02	247	P	P	14 44 18.1	-1.4
	comp=Z,3.4nm,0.6s,baz=74,slow=9.3,SNR=65						
ASAR				PcP	PcP	14 46 59.8	-0.6
	comp=Z,2.4nm,0.9s,baz=89,slow=2.9,SNR=9.6						
ASAR				ScP	ScP	14 50 32.1	-0.1
	comp=Z,1.0nm,0.9s,baz=84,slow=3.2,SNR=6.2						
ASAR				LR	LR	14 57 22.3	
	comp=Z,67nm,18.6s,baz=110,slow=35						
	comp=Z,3.4nm,0.6s						
ASAR	Alice Springs	33.02	247	P	P	14 44 17.8	-1.7
TAU	Tasmania Unive	34.18	206	P	P	14 44 29.7	+0.5
BBOO	Buckleboo	34.36	230	P	P	14 44 30.9	0.0
BBOO				IAmb	IAmb	14 45 07.2	
	comp=Z,23nm,1.1s						
GUMO	Guam	34.45	320	LR	LR	14 59 42.8	
	comp=Z,12nm,19.5s,baz=134,slow=38						
MTN	Manton Dam	34.93	266	P	P	14 44 36.2	+0.1
MTN				IAmb	IAmb	14 45 23.2	
	comp=Z,34nm,1.4s						
KNRA	Kununurra	37.08	261	P	P	14 44 53.6	-0.8
KNRA				IAmb	IAmb	14 45 03.2	
	comp=Z,31nm,1.4s						
FORT	Forrest	39.89	237	P	P	14 45 18.0	+0.2
FORT				IAmb	IAmb	14 45 18.3	
	comp=Z,15nm,1.1s						
PSA00	Pilbara Seismi	45.63	253	P	P	14 46 04.2	+0.1
PSA00				IAmb	IAmb	14 47 42.5	
	comp=Z,54nm,1.9s						
MBWA	Marble Bar	45.72	253	P	P	14 46 05.1	+0.2
MBWA				IAmb	IAmb	14 46 39.1	
	comp=Z,72nm,1.9s						
NWAO	Narrogin (SRO)	49.34	238	P	P	14 46 32.0	-0.7
NWAO				IAmb	IAmb	14 47 14.2	
	comp=Z,68nm,1.8s						
STCH	Steam Cracks	49.37	50	P	P	14 46 33.0	0.0
STCH				IAmb	IAmb	14 47 56.0	
	comp=Z,41nm,1.0s						
JOKA	Jonika Flow	49.49	50	P	P	14 46 32.1	-1.8
GIRL	Giralia	50.87	251	P	P	14 46 44.3	0.0
MJAR	Matsushiro Arr	56.39	332	P	P	14 47 23.5	-0.8
	comp=Z,5.1nm,0.8s,baz=168,slow=8.6,SNR=18						
	comp=Z,5.1nm,0.8s						
MJAR	Matsushiro Arr	56.39	332		P	14 47 23.3	-0.9
MAJO	Matsushiro	56.40	332	P	P	14 47 23.7	-0.6
MAJO				IAmb	IAmb	14 47 24.1	
	comp=Z,8.2nm,0.6s						
MAJO	Matsushiro	56.40	332	P	P	14 47 23.7	-0.6
MJB9	Matsu-Tunnel	56.40	332	P	P	14 47 24.4	+0.1
MJB9				IAmb	IAmb	14 47 25.1	
	comp=Z,8.0nm,0.6s						
JNU	Nakatsue	57.49	324	P	P	14 47 31.9	-0.2
JNU				IAmb	IAmb	14 49 30.8	
	comp=Z,13nm,1.1s						
SSLB	Suanglung	58.08	309	P	P	14 47 35.8	-0.6
YHNB	Yeheng	58.27	310	P	P	14 47 37.6	-0.1
JTM	Tenmabayashi	58.80	337	P	P	14 47 41.0	0.0
JKA	Kamikawa-asahi	61.18	340	P	P	14 47 58.4	+1.3
KSRS	Korea Array	62.30	325	P	P	14 48 04.9	+0.1

	comp=Z,2.2nm,0.8s,baz=134,slow=7.6,SNR=8.3						
	comp=Z,2.2nm,0.8s						
NJ2	**Nanjing**	64.37	315	*e*P	P	14 48 19.2	+0.7
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
VNDA	**Vanda**	64.42	181	P	P	14 48 20.2	+2.0
	comp=Z,2.3nm,0.8s,baz=345,slow=8.3,SNR=9.1						
	comp=Z,2.3nm,0.8s						
VNDA	**Vanda**	64.42	181	P	P	14 48 19.2	+1.0
CASY	**Casey**	64.88	202	P	P	14 48 19.0	-2.3
CASY				IAmb	IAmb	14 48 20.6	
	comp=Z,13nm,0.6s						
CASY	**Casey**	64.88	202	P	P	14 48 19.2	-2.1
USRK	**Ussuriysk Ar.**	65.37	333	P	P	14 48 25.9	+1.1
	comp=Z,3.6nm,0.7s,baz=128,slow=6.9,SNR=4.8						
	comp=Z,3.6nm,0.7s						
CCD	**Concordia, Ant**	66.39	191	P	P	14 48 31.7	+0.3
PEA0B	**Petropavlovsk-**	66.47	354	P	P	14 48 32.4	+0.7
PETK	**Petropavlovsk-**	66.47	354	P	P	14 48 32.4	+0.7
	comp=Z,4.8nm,0.8s,baz=145,slow=5.7,SNR=7.9						
	comp=Z,4.8nm,0.8s						
WHN	**Wuhan**	66.70	312	P	P	14 48 36.8	+3.3
CN2	**Changchun**	68.17	329	P	P	14 48 42.8	+0.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KULM	**Kulim**	68.38	281	P	P	14 48 44.7	+0.2
ENH	**Enshi**	70.17	309	P	P	14 48 55.0	-0.2
LYN	**LuoYang**	70.19	314	P	P	14 48 55.8	+0.6
LYN				pmax	pmax		
	comp=Z,12nm,1.2s						
HNS	**HongShan**	70.26	318	⇓P	P	14 48 56.4	+0.9
HNS				pmax	pmax		
	comp=Z,8.0nm,1.4s						
XAN	**Xi'an**	72.44	312	⇑P	P	14 49 09.1	+0.3
XAN				pmax	pmax		
	comp=Z,15nm,0.7s						
XAN				pmax	pmax		
	comp=Z,470nm,5.7s						
XLT	**XiLinHaoTe**	73.28	324	*e*P	P	14 49 13.6	0.0
XLT				pP	pwP	14 49 49.7	+1.2
XLT				sP	sP	14 50 02.8	+2.0
XLT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CMAR	**Chiang Mai Arr**	74.07	294	P	P	14 49 19.6	+1.0
	comp=Z,2.5nm,0.8s,baz=126,slow=4.9,SNR=17						
	comp=Z,2.5nm,0.8s						
CHTO	**Chiang Mai**	74.19	294	P	P	14 49 19.2	-0.1
HHC	**Hu-ho-hao-te**	74.22	320	*e*P	P	14 49 21.2	+2.0
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
PZH	**PanZhiHua**	74.63	302	P	P	14 49 23.5	+1.6
QSPA	**South Pole Qui**	76.86	180	P	P	14 49 34.6	+0.7
	comp=Z,10.0nm,0.6s,baz=307,slow=0.5,SNR=84						
	comp=Z,10.0nm,0.6s						
QSPA	**South Pole Qui**	76.86	180	P	P	14 49 34.4	+0.5
QSPA				IAmb	IAmb	14 49 35.6	
	comp=Z,45nm,1.5s						
QSPA	**South Pole Qui**	76.86	180	P	P	14 49 34.7	+0.7
LZH	**Lanzhou**	77.07	312	*e*P	P	14 49 37.0	+1.4
LZH				pP	pP	14 50 11.0	+2.2
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZDM	**Lanzhou Array**	77.12	312	P	P	14 49 37.4	+1.3
	comp=Z,1.3nm,0.3s,baz=163,slow=5.6,SNR=4.3						
	comp=Z,1.3nm,0.3s						
L16K	**Owhat River**	79.16	16	P	P	14 49 46.9	+0.6
L16K				IAmb	IAmb	14 50 12.0	
	comp=Z,39nm,1.5s						
ULN	**Ulaanbaatar**	80.71	324	P	P	14 49 55.1	-0.1
BILL	**Bilibino**	80.97	360	P	P	14 49 56.2	+0.3
BILL				PcP	PcP	14 50 02.1	+0.1
SONM	**Songino Array**	81.08	324	P	P	14 49 57.9	+0.7
	comp=Z,2.2nm,0.8s,baz=134,slow=5.9,SNR=12						
	comp=Z,2.2nm,0.8s						
SONM	**Songino Array**	81.08	324	P	P	14 49 57.0	-0.1
GTA	**Gaotai**	81.39	314	*e*P	P	14 50 00.2	+1.2
GTA				pmax	pmax		
	comp=Z,12nm,0.9s						
RC01	**Rabbit Creek A**	81.54	20	P	P	14 49 59.1	0.0
RC01				IAmb	IAmb	14 50 27.7	
	comp=Z,31nm,1.0s						
PMR	**Palmer**	82.11	20	P	P	14 50 02.3	+0.3
SML	**Sawmill**	82.53	20	P	P	14 50 04.8	+0.5
SCM	**Sheep Creek Mo**	82.88	20	P	P	14 50 06.4	+0.3
TRF	**Thorofare Moun**	83.13	18	P	P	14 50 07.2	-0.4
MAW	**Mawson**	83.24	202	P	P	14 50 08.4	+0.5
	comp=Z,4.0nm,0.6s,baz=90,slow=7.8,SNR=3.6						
	comp=Z,4.0nm,0.6s						
RND	**Reindeer**	83.53	18	P	P	14 50 09.6	+0.2
RND				IAmb	IAmb	14 50 10.0	
	comp=Z,8.6nm,0.6s						
N25K	**Chitina, Valde**	83.66	21	P	P	14 50 10.5	+0.4
MCK	**McKinley**	83.75	18	P	P	14 50 10.2	-0.3
MCK				IAmb	IAmb	14 51 22.4	
	comp=Z,48nm,1.8s						
GOMU	**GeErMu**	83.79	309	P	P	14 50 11.8	0.0
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
DIB	**Dawson Inlet,**	83.82	32	P	P	14 50 11.1	+0.1
DIB				IAmb	IAmb	14 51 56.2	
	comp=Z,15nm,1.2s						
I21K	**Tanana**	83.96	16	IAmb	IAmb	14 50 13.3	
	comp=Z,15nm,1.1s						
IMAR	**Indian Mountai**	84.12	15	P	P	14 50 13.1	+0.8
TABL	**Table Mountain**	84.15	23	P	P	14 50 13.2	+0.4
LSA	**Lhasa**	84.50	302	P	P	14 50 12.3	-3.3
WRH	**Wood River Hil**	84.54	18		P	14 50 14.2	-0.2
WRH				IAmb	IAmb	14 50 15.0	
	comp=Z,20nm,1.2s						
TLY	**Talaya**	84.54	326	P	P	14 50 14.9	+0.1
TLY				PcP	PcP	14 50 19.0	+1.0
CCB	**Clear Creek Bu**	84.75	18		P	14 50 14.9	-0.6
HDA	**Harding Lake**	84.84	18	P	P	14 50 16.0	0.0
HDA				IAmb	IAmb	14 50 17.6	
	comp=Z,25nm,1.0s						
COLA	**College**	84.90	18	P	P	14 50 16.0	-0.2
COLA				IAmb	IAmb	14 50 16.9	
	comp=Z,16nm,0.8s						
COLA	**College**	84.90	18	P	P	14 50 16.1	-0.2
COLA				PcP	PcP	14 50 19.2	-0.1
IL31		85.12	18		P	14 50 16.9	-0.3
IL31				IAmb	IAmb	14 50 18.0	
	comp=Z,14nm,1.1s						
ILAR	**Eielson Array**	85.12	18	P	P	14 50 16.9	-0.4
	comp=Z,6.2nm,0.8s,baz=235,slow=5.2,SNR=56						
	comp=Z,6.2nm,0.8s						
J25K	**Salcha River,**	85.47	19	IAmb	IAmb	14 50 20.5	
	comp=Z,12nm,1.1s						
SCRK	**Sand Creek**	85.48	20	P	P	14 50 19.7	+0.5
SCRK				IAmb	IAmb	14 52 18.9	
	comp=Z,18nm,1.8s						
G23K	**Bananza Creek**	85.65	16	IAmb	IAmb	14 50 22.0	
	comp=Z,8.4nm,0.8s						
D20K	**Etivluk River**	85.65	13	P	P	14 50 21.1	+1.1
D20K				IAmb	IAmb	14 51 09.8	
	comp=Z,56nm,1.9s						
COLD	**Coldfoot**	85.99	15		P	14 50 22.3	+0.7
E22K	**Anaktuvuk Pass**	86.28	14		P	14 50 23.7	+0.7
O30N	**Mendenhall**	86.33	24	P	P	14 50 23.6	+0.1
NVAR	**Mina Array Bea**	86.45	49	P	P	14 50 25.0	+0.2
	comp=Z,0.7nm,0.8s,baz=224,slow=8.2,SNR=3.9						
	comp=Z,0.7nm,0.8s						
D22K	**Ayikyak River**	86.65	14	IAmb	IAmb	14 50 27.4	
	comp=Z,7.2nm,0.8s						
B21K	**Ikpikpuk River**	86.81	13	IAmb	IAmb	14 50 27.7	
	comp=Z,12nm,0.8s						
TOLK	**Toolik Lake Re**	87.20	15	P	P	14 50 28.0	+0.5
TOLK				IAmb	IAmb	14 50 32.0	
	comp=Z,10nm,1.2s						
EVN	**Everest**	87.62	299	IAmb	IAmb	14 50 32.0	
	comp=Z,5.0nm,0.7s						
BELA	**Belgrano 2**	88.31	176	P	P	14 50 32.0	-0.7
WMQ	**Urumqi**	91.44	315	*e*P	P	14 50 48.3	+0.3
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
TROLL	**Troll, Antarti**	94.40	185	⇑P	P	14 51 00.5	-0.7
	comp=Z,178nm,0.7s						
SNAA	**Sanae**	95.10	183	⇑P	P	14 51 02.9	-1.4
	comp=Z,36nm,0.8s						
SNAA	**Sanae**	95.10	183	P	P	14 51 03.7	-0.7
	comp=Z,1.7nm,0.9s,baz=216,slow=14,SNR=3.5						
	comp=Z,1.7nm,0.9s						
SNAA	**Sanae**	95.10	183	IAmb	IAmb	14 54 46.5	
	comp=Z,13nm,1.9s						
VNA3	**Neumayer Olymp**	95.78	181	⇑P	P	14 51 06.4	-1.0
	comp=Z,4.4nm,0.7s						
MKAR	**Makanchi Array**	95.89	317	P	P	14 51 08.4	+0.1
	comp=Z,2.8nm,0.7s,baz=94,slow=6.4,SNR=31						
	comp=Z,2.8nm,0.7s						
MKAR	**Makanchi Array**	95.89	317	P	P	14 51 07.6	-0.7
ZAA0	**Zalesovo Array**	95.97	324	P	P	14 51 07.4	-1.0
ZAA0				IAmb	IAmb	14 51 08.1	
	comp=Z,3.1nm,0.7s						
ZALV	**Zalesovo Beam**	95.97	324	P	P	14 51 07.5	-1.0
	comp=Z,2.7nm,0.7s,baz=103,slow=4.5,SNR=13						
	comp=Z,2.7nm,0.7s						
MAKZ	**Makanchi**	96.10	317	P	P	14 51 08.7	-0.5
MAKZ				IAmb	IAmb	14 51 10.1	
	comp=Z,7.9nm,1.4s						
YKA	**Yellowknife Ar**	96.28	27	P	P	14 51 08.3	-1.3
	comp=Z,0.4nm,0.7s,baz=12,slow=2.2,SNR=6.9						
	comp=Z,0.4nm,0.7s						
KURK	**Kurchatov**	99.03	320	P	Pdif	14 51 20.7	-1.6
KURBB	**Kurchatov Arra**	99.07	320	P	Pdif	14 51 20.7	-1.8
	comp=Z,0.4nm,0.6s,baz=99,slow=3.4,SNR=4.9						
	comp=Z,0.4nm,0.6s						
ARCES	**ARCESS Array B**	118.67	346	PKP	PKPdf	14 56 27.9	-0.4
	comp=Z,1.2nm,0.4s,baz=80,slow=1.8,SNR=21						
FINES	**FINESS Array B**	124.17	339	PKP	PKPdf	14 56 38.2	-0.9
	comp=Z,2.3nm,0.8s,baz=141,slow=1.2,SNR=6.3						
BOSA	**Boshof**	124.39	221	PKP	PKPdf	14 56 40.3	-0.5
	comp=Z,2.9nm,0.9s,baz=185,slow=7.5,SNR=5.3						
NOA	**NORSAR Array B**	129.04	345	PKP	PKPdf	14 56 48.6	+0.1
	comp=Z,1.9nm,1.0s,baz=122,slow=8.8,SNR=2.3						
AKASG	**Malin Array Be**	129.28	326	PKP	PKPdf	14 56 47.2	-2.0
	comp=Z,0.5nm,0.5s,baz=64,slow=2.2,SNR=1.6						
BRTR	**Keskin Array B**	131.28	312	PKP	PKPdf	14 56 53.8	+0.2
	comp=Z,0.4nm,0.6s,baz=135,slow=5.5,SNR=2.8						
KEST	**Kesra**	149.82	322	PKPbc	PKPbc	14 57 31.4	-0.2
	comp=Z,2.3nm,0.5s,baz=16,slow=5.1,SNR=3.8						
ESDC	**Sonseca Array**	152.40	345	PKPbc	PKiKP	14 57 38.1	+0.5
	comp=Z,1.3nm,0.7s,baz=22,slow=3.0,SNR=9.0						
ESDC				PKPab	PKPab	14 57 48.9	+1.0
	comp=Z,1.5nm,0.7s,baz=2.6,slow=3.9,SNR=8.0						

IDC ***08*** *14:47:57.9±4.7, 5°.92S×153°.64E, h47^{km}±47^{km}, mb3.5/10, mbtmp3.7/11, ML1.9/1, MS2.9/1, Error ellipse: s-maj=29.7km s-min=27.6km az=46.0*

ISC 08 14:47:58.2±0.9, **5°.9S**±0°.1×**153°.7E**±0°.1, **h50**^{km}, **n11**, σ**1^{s}.04**/12, **mb3.8**/9, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	7.32	241	P	Pn	14 49 43.2	+0.6
	1.1nm,0.3s,baz=67,slow=9.3,SNR=1.9						
PMG				S	Sn	14 51 03.9	-0.5
	5.4nm,0.5s,baz=30,slow=21,SNR=1.6						
PMG				LR	LR	14 52 56.3	
	comp=Z,86nm,18.8s,baz=308,slow=41						
	3.3nm,0.4s						
DZM	**Mont Dzumac**	20.29	144	P	P	14 52 30.8	+0.7
	2.1nm,0.5s,baz=71,slow=8.4,SNR=5.9						
	2.1nm,0.5s						
WRA	**Warramunga Arr**	23.40	232	P	P	14 53 01.7	-1.2
	0.2nm,0.4s,baz=58,slow=9.4,SNR=2.0						
	0.2nm,0.4s						
ASAR	**Alice Springs**	25.95	225	P	P	14 53 25.5	-0.7
	0.5nm,0.8s,baz=55,slow=9.4,SNR=6.7						
	0.5nm,0.8s						
KSRS	**Korea Array**	49.35	333	P	P	14 56 44.0	+1.4
	0.5nm,0.6s,baz=142,slow=7.5,SNR=2.0						
	0.5nm,0.6s						
PETK	**Petropavlovsk-**	58.88	3	P	P	14 57 50.6	-1.2
	5.2nm,1.0s,baz=211,slow=7.9,SNR=3.8						
	5.2nm,1.0s						
SONM	**Songino Array**	67.69	328	P	P	14 58 49.7	-0.7
	0.9nm,0.9s,baz=139,slow=9.6,SNR=4.3						
	0.9nm,0.9s						
MKAR	**Makanchi Array**	81.70	319	P	P	15 00 12.6	+1.1
	1.0nm,0.7s,baz=100,slow=6.0,SNR=9.3						
	1.0nm,0.7s						
ZALV	**Zalesovo Beam**	82.53	326	P	P	15 00 16.4	+0.9
	0.6nm,0.4s,baz=105,slow=5.8,SNR=4.8						
	0.6nm,0.4s						
ILAR	**Eielson Array**	82.85	22	P	P	15 00 16.3	-0.7
	0.2nm,0.7s,baz=256,slow=5.6,SNR=1.4						
	0.2nm,0.7s						
KURBB	**Kurchatov Arra**	85.18	322	P	P	15 00 29.6	+0.5
	0.3nm,0.4s,baz=108,slow=3.7,SNR=4.0						
	0.3nm,0.4s						

IDC ***08*** *14:59:26.3±14.0, 17°.55S×169°.00E, h143^{km}±191^{km}, mb3.2/3, mbtmp3.6/4, ML3.0/1, Error ellipse: s-maj=303.4km s-min=37.9km az=155.0*

NOU ***08*** *14:59:42.1, 18°.93S×168°.89E, h158^{km}, MLv3.9/13, Vanuatu Islands*

ISC 08 14:59:36.2±3.0, **18°.81S**±0°.08×**169°.3E**±0°.3, **h200**^{km}, **n14**, σ**1^{s}.80**/10, **mb3.5**/3, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INH	**Isangel**	0.73	181	P	Pn	15 00 06.4	+2.0
RTV	**Rentapao**	1.30	321	P	Pn	15 00 09.5	+1.3
RTV	**Rentapao**	1.30	321	S	Sn	15 00 30.9	-2.1
DVP	**Devils Point**	1.50	316	P	Pn	15 00 11.2	+1.3
MARNC	**Mare, Loyalty**	2.91	204	P	Pn	15 00 25.1	+0.4
MARNC	**Mare, Loyalty**	2.91	204	S	Sn	15 00 59.8	-3.0
YATNC	**Mamie plateau,**	3.93	214	P	Pn	15 00 36.4	-0.8
PINNC	**Pines Island,**	4.16	204	P	Pn	15 00 41.7	+1.8
DZM	**Mont Dzumac**	4.20	219	P	Pn	15 00 40.9	+0.4
	0.6nm,0.3s,baz=29,slow=19,SNR=15						
DZM				S	Sn	15 01 32.2	+1.1
	7.3nm,0.6s,baz=50,slow=21,SNR=5.7						
	3.4nm,0.6s						
DZM	**Mont Dzumac**	4.20	219	P	Pn	15 00 41.3	+0.8
OUENC	**Ouen Island, N**	4.25	212	P	Pn	15 00 42.5	+1.3
WRA	**Warramunga Arr**	32.95	262	P	P	15 05 47.0	-5.2
	0.3nm,0.8s,baz=83,slow=6.8,SNR=1.8						
	0.3nm,0.8s						
ASAR	**Alice Springs**	33.27	255	P	P	15 05 50.9	-4.2
	0.7nm,0.5s,baz=82,slow=8.8,SNR=22						
	0.7nm,0.5s						
ILAR	**Eielson Array**	89.81	17	P	P	15 12 03.0	-8.6
	0.8nm,1.1s,baz=234,slow=5.5,SNR=4.1						
	0.8nm,1.1s						

IDC ***08*** *15:03:55.9±1.4, 31°.28N×130°.60E, h130^{km}±13^{km}, mb3.5/10, mbtmp3.8/12, MS3.5/2, Error ellipse: s-maj=28.5km s-min=13.8km az=114.0*

JMA ***08*** *15:03:56.6±0.1, 31°.4N±0°.3×130°.7E±0°.5, h118^{km}, MV3.2/39, SATSUMA PENINSULA REGION*

JMA Felt I J1 at SATSUMA PENINSULA REGION.

NEIC ***08*** *15:03:56.3±1.3, 31°.37N±0°.06×130°.7E±0°.1, h126^{km}±7^{km}, mb4.2/16, Error ellipse: s-maj=14.3km s-min=7.6km az=107.0*

ISC 08 15:03:55.7±0.7, **31°.34N**±0°.04×**130°.66E**±0°.06, **h126**^{km}±5^{km}, **n47**, σ**0^{s}.85**/56, **mb4.0**/17, **Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSU	**Suzuyama**	0.24	314	*i* P	Pn	15 04 13.3	+0.1
JSU				S	Sn	15 04 25.7	-0.7
JTZ	**Takazaki**	0.67	33	*i* P	Pn	15 04 15.4	-0.1
JTZ				S	Sn	15 04 29.1	-1.3
JTN	**Tanegashima 3**	0.74	158	*i* P	Pn	15 04 16.4	+0.5
JTN				S	Sn	15 04 30.9	-0.4
JSJ	**Shimokoshiki**	0.87	293	*i* P	Pn	15 04 16.9	-0.1
JSJ				S	Sn	15 04 32.9	-0.4
JMTN	**Minamitane**	0.96	167	P	Pn	15 04 18.5	+0.6
JMTN				S	Sn	15 04 34.7	0.0
JYAK	**Yakushimahirau**	1.11	187	P	Pn	15 04 19.7	+0.4
JIU3	**Izumi3**	1.21	6	*i* P	Pn	15 04 20.7	+0.3
JIU3				S	Sn	15 04 38.4	-0.7
JNN	**Nakanoshima**	1.64	205	P	Pn	15 04 26.0	+0.8
JNU	**Nakatsue**	1.79	6	P	Pn	15 04 27.2	+0.3
	30nm,0.4s,baz=144,slow=0.8,SNR=48						
JNU				S	Sn	15 04 49.9	-0.9
	43nm,0.6s,baz=61,slow=18,SNR=12						
JNU	**Nakatsue**	1.79	6		Pn	15 04 27.0	+0.1
JMN	**Monobe**	3.62	48		Pn	15 04 50.1	-0.1
JOW	**Kunigami**	4.95	206	P	Pn	15 05 08.9	+0.8
	13nm,0.4s,baz=85,slow=22,SNR=1.8						
JOW				S	Sn	15 06 02.5	-2.0
	7.2nm,0.3s,baz=133,slow=25,SNR=1.7						
JOW	**Kunigami**	4.95	206		Pn	15 05 08.7	+0.6
KSRS	**Korea Array**	6.50	340	P	Pn	15 05 31.4	+2.5
	0.6nm,0.5s,baz=166,slow=15,SNR=1.8						
INU	**Inuyama**	6.65	51	Pn	Pn	15 05 32.9	+2.0
MJAR	**Matsushiro Arr**	8.14	48	P	Pn	15 05 53.2	+2.3
	0.5nm,0.3s,baz=206,slow=5.6,SNR=5.6						
MJAR				S	Sn	15 07 21.0	-0.3
	0.5nm,0.5s,baz=235,slow=23,SNR=4.0						
MJAR	**Matsushiro Arr**	8.14	48		Pn	15 05 51.5	+0.5
MJAR	**Matsushiro Arr**	8.14	48		Sn	15 07 21.0	-0.3
LZDM	**Lanzhou Array**	22.88	289	P	P	15 08 49.2	+0.4
	1.0nm,0.3s,baz=98,slow=8.9,SNR=3.7						
	1.0nm,0.3s						
SONM	**Songino Array**	24.77	319	P	P	15 09 05.8	+0.1
	0.3nm,0.4s,baz=113,slow=9.6,SNR=2.7						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	39.95	307	P	P	15 11 17.4	-0.2
	0.3nm,0.5s,baz=93,slow=9.9,SNR=4.5						
MKAR				LR	LR	15 30 07.4	
	comp=Z,55nm,19.4s,baz=332,slow=39						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	39.95	307	P	P	15 11 17.0	-0.5
MAKZ	**Makanchi**	40.16	307	P	P	15 11 20.7	+1.3
MAKZ				IAmb	IAmb	15 11 46.9	
	comp=Z,2.6nm,1.3s						
SOEI	**Soe**	41.32	190	P	P	15 11 29.3	+0.2
KURK	**Kurchatov**	42.77	312	P	P	15 11 41.0	+0.6
KURBB	**Kurchatov Arra**	42.81	312	P	P	15 11 39.0	-1.8
	comp=Z,0.6nm,0.5s,baz=106,slow=8.6,SNR=5.0						
	comp=Z,0.6nm,0.5s						
BVAR	**Borovoye Array**	48.03	315	P	P	15 12 22.1	+0.3
	comp=Z,1.8nm,0.4s,baz=92,slow=9.1,SNR=23						
BVAR				PcP	PcP	15 13 47.7	-0.1
	comp=Z,0.4nm,0.5s,baz=90,slow=2.9,SNR=3.6						
BVAR				LR	LR	15 34 06.4	
	comp=Z,54nm,19.3s,baz=337,slow=38						
	comp=Z,1.8nm,0.4s						
BORK	**Borovoye**	48.07	315	P	P	15 12 22.4	+0.2
BORK				IAmb	IAmb	15 12 24.1	
	comp=Z,3.2nm,0.4s						
KKAR	**Karatay Array**	48.37	302	P	P	15 12 25.1	+0.4
F15K	**North Star Dit**	51.50	29	P	P	15 12 47.2	-0.7
AB31	**Akbulak array**	54.82	311	P	P	15 13 13.2	+0.7
ABKAR	**Akbulak array**	54.82	311	P	P	15 13 13.1	+0.6
D22K	**Ayikyak River**	56.36	25	P	P	15 13 23.5	+0.2
D22K				IAmb	IAmb	15 14 04.1	
	comp=Z,5.3nm,1.4s						
ILAR	**Eielson Array**	58.95	30	P	P	15 13 41.8	+0.4
	comp=Z,0.2nm,0.7s,baz=275,slow=8.8,SNR=2.0						
	comp=Z,0.2nm,0.7s						
DAWY	**Dawson**	62.28	30	P	P	15 14 04.1	+0.1
DAWY				IAmb	IAmb	15 14 08.6	
	comp=Z,5.7nm,1.5s						
KBZ	**Khabaz**	67.62	308	P	P	15 14 39.4	+0.6
	comp=Z,2.2nm,0.8s,baz=349,slow=8.1,SNR=4.5						
	comp=Z,2.2nm,0.8s						
FIA1	**FINESS Array S**	69.49	330	P	P	15 14 49.3	-0.8
FINES	**FINESS Array B**	69.49	330	P	P	15 14 49.6	-0.5
	comp=Z,1.8nm,0.5s,baz=67,slow=5.2,SNR=28						
	comp=Z,1.8nm,0.5s						
FINES	**FINESS Array B**	69.49	330	P	P	15 14 49.4	-0.8
AKASG	**Malin Array Be**	73.05	319	P	P	15 15 11.3	-0.4
	comp=Z,0.7nm,0.3s,baz=58,slow=6.5,SNR=3.5						
	comp=Z,0.7nm,0.3s						
AKASG	**Malin Array Be**	73.05	319	IAmb	IAmb	15 15 22.4	
	comp=Z,5.0nm,1.3s						
AKBB	**Malin Array Si**	73.05	319	P	P	15 15 11.3	-0.5
AKBB				IAmb	IAmb	15 15 29.1	
	comp=Z,3.3nm,1.0s						
KIEV	**Kiev**	73.06	319	P	P	15 15 11.3	-0.5
KIEV				IAmb	IAmb	15 15 29.1	
	comp=Z,2.9nm,1.0s						
BRTR	**Keskin Array B**	75.59	308	P	P	15 15 27.2	+0.3
	comp=Z,0.9nm,0.7s,baz=116,slow=8.4,SNR=5.7						
	comp=Z,0.9nm,0.7s						
BRTR	**Keskin Array B**	75.59	308	P	P	15 15 26.5	-0.4
ILON	**Igloolik, Nuna**	76.81	11	P	P	15 15 32.1	-0.8
ILON				IAmb	IAmb	15 15 48.4	
	comp=Z,14nm,1.3s						
BURAR	**Bucovina Array**	76.88	318	P	P	15 15 34.3	+0.3

TEH ***08*** *15:33:40.0, 38°.90N×49°.37E, h19^{km}*

AZER ***08*** *15:33:42.0, 39°.10N×49°.23E, h27^{km}, ml3.0*

ISC 08 15:33:41.5±1.3, **39°.07N**±0°.03×**49°.40E**±0°.05, **h27**^{km}±12^{km}, **n36**, σ**1^{s}.27**/65, **Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKRN	**Lenkeran, Azer**	0.60	233	P	Pb	15 33 54.0	+0.4
LKRN				S	Sn	15 34 03.8	+0.7
ASTR	**Astara**	0.70	223	P	Pb	15 33 55.2	+0.1
ASTR				S	Sn	15 34 05.8	+0.3
GLBA	**Clilabad**	0.80	282	P	Pb	15 33 56.2	-0.6
GLBA				S	Sb	15 34 07.8	+0.6
YRD	**Yardimli**	0.92	260	P	Pb	15 33 57.8	-1.1
YRD				S	Sb	15 34 10.3	-0.5
LRK	**Lerik**	0.93	243	P	Pb	15 33 58.2	-1.0
LRK				S	Sb	15 34 11.2	0.0
ALIB	**&Aumlli-Bayram**	0.93	341	P	Pn	15 34 00.2	+1.5
ALIB				S	Sn	15 34 12.2	+0.9
SAAT	**Saatly**	1.09	316	P	Pb	15 34 02.0	+0.3
SAAT				Sn	Sn	15 34 17.8	+2.7
GRMI	**Germi**	1.20	258	Pg	Pn	15 34 02.0	-0.6
GBS	**Qobustan**	1.50	347	Pn	Pb	15 34 07.6	-1.1
GBS				Sn	Sb	15 34 29.0	+1.6
BLQ	**Beylaqan**	1.56	295	Pn	Pn	15 34 06.5	-1.0
BLQ				Sn	Sn	15 34 26.1	-0.7
NDR	**Nardaran**	1.57	17	Sn	Sb	15 34 32.1	+2.7
KDMR	**Kurdemir**	1.60	325	Pn	Pb	15 34 09.5	-0.9
KDMR				Sn	Sn	15 34 27.8	+0.1
QRD	**Qoradiz**	1.66	284	Pn	Pn	15 34 10.0	+1.2
QRD				Sn	Sn	15 34 28.2	-1.0
ATGJ	**Altiaghaj**	1.82	349	Pg	Pb	15 34 13.8	-0.4
ATGJ				Sn	Sb	15 34 35.4	-1.2
PQL	**Pirkuli**	1.82	340	Pn	Pb	15 34 12.9	-1.3
PQL				Sn	Sn	15 34 35.0	+1.6
ISRB	**Sarab**	1.84	228	Pg	Pn	15 34 12.4	+0.8
ISRB				Sg	Sn	15 34 36.2	+2.1
IML	**Ismayilli**	1.96	332	Pn	Pn	15 34 14.0	+1.1
IML				Sn	Sn	15 34 35.4	-1.1
IHRS	**Heris**	1.99	249	Pn	Pn	15 34 14.2	+0.7
AGDM	**Agdam**	2.05	301	Pn	Pn	15 34 15.5	+1.3
AGDM				Sn	Sn	15 34 39.6	+0.7
BRDA	**Brd**	2.08	305	Pn	Pn	15 34 16.1	+1.5
BRDA				Sn	Sn	15 34 41.9	+2.3
GIDE	**GILAN DEYLAMAN**	2.18	169	Pn	Pn	15 34 15.5	-0.7
QBL	**Gabala**	2.22	328	Pn	Pn	15 34 17.1	+0.5
QBL				Sn	Sn	15 34 43.2	+0.1
XNQ	**Khinaliq**	2.31	336	Pn	Pn	15 34 17.6	-0.3
XNQ				Sn	Sn	15 34 44.3	-1.2
JIR1	**Jirandeh**	2.38	172	Pn	Pn	15 34 17.5	-1.4
ZNJK	**Zanjan**	2.46	193	Pn	Pn	15 34 20.3	+0.2
ORD	**Ordubad**	2.66	268	Pn	Pn	15 34 23.2	+0.7
ORD				Sn	Sn	15 34 53.8	-0.1
SEKA	**Sheki**	2.72	322	Pn	Pn	15 34 24.6	+1.2
SEKA				Sn	Sn	15 34 55.4	-0.1
GANJ	**Ganja**	2.84	305	Pn	Pn	15 34 25.7	+0.6
GANJ				Sn	Sn	15 34 56.5	-1.9
IMRD	**Marand**	2.91	264	Pn	Pn	15 34 26.7	+0.6
SBZ	**Shahbuz**	3.00	277	Pn	Pn	15 34 28.3	+1.0
SBZ				Sn	Sn	15 35 03.3	+0.8
NAX	**Nakhchivan**	3.04	273	Pn	Pn	15 34 28.9	+1.1
NAX				Sn	Sn	15 35 05.2	+1.9
VSHL	**Vashlovani**	3.15	314	P	Pn	15 34 30.0	+0.7
VSHL				S	Sn	15 35 07.3	+1.3
GDB	**GEDABAY**	3.25	302	Pn	Pn	15 34 31.2	+0.4
GDB				Sn	Sn	15 35 07.5	-1.1
ZKTA	**Zakatala**	3.33	321	Pn	Pn	15 34 32.2	+0.5
ZKTA				Sn	Sn	15 35 10.7	+0.3
DGRG	**David-gareji**	3.89	309	P	Pb	15 34 47.4	-2.0
DGRG				S	Sn	15 35 25.6	+1.3
CHRG	**Chargali**	4.70	315	P	Pn	15 34 47.5	-3.3
CHRG				S	Sn	15 35 41.8	-2.7

JMA 08 15:47:52.3±0.0, **37°.0N**±0°.2×**139°.7E**±0°.2, **h6**^{km}, **MV2.1**/20, **NORTHERN TOCHIGI PREF, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSB	**Shiboa**	0.19	86	P	Pg	15 47 56.5	+0.4
JKT	**Katashina**	0.39	242	P	Pg	15 48 00.0	+0.1
JKT				S	Sg	15 48 05.4	+0.3
JFY	**Yanaizu**	0.45	3	*i* P	Pg	15 48 01.2	+0.2
JFY				S	Sg	15 48 07.1	+0.1
JAG	**Ashikaga**	0.56	199	*i* P	Pg	15 48 02.7	-0.3
JAG				S	Sg	15 48 09.7	-0.6

JUON	**Uonuma**	**0.56**	**297**	i P	Pg	15 48 03.1	+0.1
JUON				S	Sg	15 48 10.4	+0.1
JOTO	**OTAMA OYAMA**	**0.80**	**41**	P	Pg	15 48 07.7	0.0
JOTO				S	Sg	15 48 18.1	0.0
JNS	**Sasagawa**	**0.91**	**342**	S	Sg	15 48 21.5	-0.1
JIZZ	**Izumozaki**	**0.96**	**307**	P	Pn	15 48 12.0	-0.3
JIZZ				S	Sn	15 48 26.1	-0.2
MJAR	**Matsushiro Arr**	**1.25**	**251**	Sn	Sn	15 48 33.2	-0.2
	0.1nm,0.3s,baz=94,slow=15,SNR=5.6						
MJAR	**Matsushiro Arr**	**1.25**	**251**	Pn	Pg	15 48 15.6	-0.6
	0.2nm,0.3s,baz=84,slow=11,SNR=21						

*IDC **08** 15:47:35.1±1.7,34°.16N×138°.74E,h0^{km},mb3.4/2, mbtmp3.4/3,ML2.5/2,Error ellipse: s-maj=41.4km s-min=27.0km az=76.0*

*JMA **08** 15:48:47.5±0.2,30°N±1°×14°0E±°,h438^{km},MV3.4/19, NEAR TORISHIMA IS*

ISC 08 15:48:48.6±1.2,30°.0N±0°.1×140°.1E±0°.3,h450^{km},n10, σ0^{s}.95/11,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**3.39**	**147**	P	**P**	**15 49 57.0**	**-1.7**
JMKN	**Mikurajimanish**	**3.94**	**354**	eP	**P**	**15 50 03.4**	**+0.3**
JIE	**Ise**	**5.27**	**328**	eP	**P**	**15 50 14.9**	**-0.5**
JOD2	**Odawara 2**	**5.35**	**351**	eP	**P**	**15 50 16.6**	**+0.3**
JNY	**Yasuok**	**5.70**	**341**	eP	**P**	**15 50 20.1**	**+0.2**
JRY	**Ryogami san**	**6.12**	**351**	P	**P**	**15 50 24.7**	**+0.7**
JYT	**Yasato**	**6.24**	**1**	P	**P**	**15 50 26.1**	**+0.9**
JYT				S	**S**	**15 51 43.2**	**-1.2**
JAG	**Ashikaga**	**6.46**	**355**	P	**P**	**15 50 27.9**	**+0.4**
WRA	**Warramunga Arr**	**49.93**	**187**	P	**P**	**15 57 00.6**	**+0.8**
	0.3nm,0.3s,baz=6.5,slow=8.0,SNR=17						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**53.66**	**187**	P	**P**	**15 57 27.4**	**+0.5**
	0.1nm,0.5s,baz=9.1,slow=8.0,SNR=8.6						
	0.1nm,0.5s						

ISC 08 16:11:54.7±1.7,0°.06S±0°.04×78°.43W±0°.08,h3^{km}±19^{km},n9, σ0^{s}.61/14,Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PIAT	**Ana Tenorio**	**0.95**	**170**	P	**Pg**	**16 12 12.6**	**-0.4**
PIAT				S	**Sg**	**16 12 24.6**	**-0.7**
TULM	**Tulcn-Chalpat**	**1.00**	**40**	P	**Pg**	**16 12 14.2**	**+0.2**
TULM				S	**Sg**	**16 12 26.9**	**-0.1**
BONI	**La Bonita**	**1.03**	**60**	P	**Pg**	**16 12 14.5**	**0.0**
BONI				S	**Sg**	**16 12 28.0**	**+0.1**
CASC	**Dorado de Casc**	**1.10**	**80**	P	**Pb**	**16 12 16.5**	**-0.1**
FLF1	**Flavio Alfaro-**	**1.45**	**258**	P	**Pn**	**16 12 21.7**	**-0.2**
FLF1				S	**Sn**	**16 12 40.5**	**-0.9**
TUMC	**Tumaco**	**1.89**	**351**	P	**Pb**	**16 12 29.9**	**-0.1**
CRUC	**La Cruz**	**2.19**	**42**	P	**Pb**	**16 12 34.9**	**-0.3**
BBAC	**Balboa, Cauca**	**2.38**	**30**	P	**Pb**	**16 12 39.0**	**+0.6**
COHC	**Cochancay**	**2.53**	**199**	P	**Pb**	**16 12 41.6**	**+0.8**
COHC				S	**Sb**	**16 13 13.5**	**+1.1**

*IDC **08** 16:14:45.7±0.9,44°.72S×35°.16E,h0^{km},mb4.0/8, mbtmp4.0/9,ML4.1/1,MS3.6/21,Error ellipse: s-maj=41.9km s-min=19.1km az=75.0*

*NEIC **08** 16:14:47.8±1.1,44°.8S±0°.1×35°.3E±0°.1,h10^{km}±1^{km}, mb4.5/23,Error ellipse: s-maj=17.7km s-min=12.8km az=22.0*

ISC 08 16:14:47.4±0.6,44°.72S±0°.09×35°.3E±0°.1,h10^{km},n50, σ1^{s}.01/34,mb4.3/17,MS3.6/20,Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRHM	**Grahamstown, E**	**13.34**	**326**	Pn	**Pn**	**16 17 55.3**	**-1.5**
SUR	**Sutherland**	**16.68**	**313**	Pn	**Pn**	**16 18 41.0**	**-0.4**
FRAZ	**Fraserburg**	**16.73**	**315**	eP	**Pn**	**16 18 40.6**	**-1.4**
POGA	**Pongola**	**17.57**	**349**		**P**	**16 18 54.0**	**+0.6**
BOSA	**Boshof**	**17.94**	**330**	P	**Pn**	**16 18 55.0**	**-2.0**
	0.4nm,0.3s,baz=155,slow=17,SNR=7.4						
BOSA				LR	LR	16 24 34.0	
	comp=Z,286nm,21.8s,baz=176,slow=33						
	4.0nm,0.8s						
BOSA	**Boshof**	**17.94**	**330**	Pn	**Pn**	**16 18 56.1**	**-0.9**
ALKP	**Alkanpan, Nort**	**17.98**	**321**	eP	Pn	16 18 47.4	-10
MAKGR	**Makgori**	**20.67**	**332**	P	**P**	**16 19 28.1**	**+0.6**
MAKGR				IAmb	IAmb	16 19 33.2	
	comp=Z,47nm,1.2s						
LBTB	**Lobatse**	**21.16**	**335**	P	**P**	**16 19 31.0**	**-1.8**
	comp=Z,15nm,1.1s,baz=155,slow=9.9,SNR=14						
LBTB				LR	LR	16 26 52.1	
	comp=Z,223nm,19.2s,baz=153,slow=34						
	comp=Z,15nm,1.1s						
LBTB	**Lobatse**	**21.16**	**335**	P	**P**	**16 19 34.5**	**+1.7**
LBTB				IAmb	IAmb	16 19 35.5	
	comp=Z,16nm,1.0s						
LPHEP	**Lephephe**	**22.65**	**337**	P	**P**	**16 19 48.0**	**-0.7**
LPHEP				IAmb	IAmb	16 19 56.7	
	comp=Z,21nm,1.2s						
LKGWB	**Lokgwabe**	**23.52**	**326**	P	**P**	**16 19 56.3**	**-1.5**
KGCAE	**Kacgae**	**24.29**	**330**	P	**P**	**16 20 06.5**	**+1.4**
KGCAE				IAmb	IAmb	16 20 19.0	
	comp=Z,18nm,1.1s						
GRTLG	**Ghanzi**	**26.02**	**329**	P	**P**	**16 20 21.6**	**+0.8**
GRTLG				IAmb	IAmb	16 20 32.8	
	comp=Z,5.9nm,0.8s						
PHDHD	**Phuduhudu**	**26.02**	**337**	P	**P**	**16 20 21.0**	**+0.3**
PHDHD				IAmb	IAmb	16 20 32.6	
	comp=Z,14nm,1.0s						
MAW	**Mawson**	**27.16**	**157**	P	**P**	**16 20 30.4**	**0.0**
	comp=Z,2.2nm,0.9s,baz=270,slow=14,SNR=3.3						
MAW				LR	LR	16 28 19.1	
	comp=Z,69nm,21.3s,baz=316,slow=30						
	comp=Z,2.2nm,0.9s						
GMARE	**Gumare**	**27.51**	**332**	P	**P**	**16 20 34.5**	**+0.4**
QNGWA	**Qangwa**	**27.72**	**330**	P	**P**	**16 20 36.2**	**+0.2**
OPO	**Ambohidratompo**	**27.91**	**25**	LR	LR	16 30 31.3	
	comp=Z,108nm,18.7s,baz=214,slow=34						
TSUM	**Tsumeb**	**29.40**	**324**	LR	LR	16 32 01.2	
	comp=Z,176nm,19.4s,baz=154,slow=35						
TSUM	**Tsumeb**	**29.40**	**324**	P	**P**	**16 20 52.1**	**+1.1**
TSUM				IAmb	IAmb	16 20 53.9	
	comp=Z,6.3nm,1.1s						
LSZ	**Lusaka**	**29.95**	**346**	P	**P**	**16 20 56.7**	**+0.8**
LSZ				IAmb	IAmb	16 21 07.3	
	comp=Z,4.0nm,0.8s						
SNAA	**Sanae**	**32.57**	**201**	P	**P**	**16 21 18.9**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=66,slow=5.9,SNR=6.6						
	comp=Z,0.7nm,0.7s						
SNAA	**Sanae**	**32.57**	**201**	P	**P**	**16 21 18.5**	**0.0**
MSEY	**Mahe Island**	**43.65**	**30**	P	**P**	**16 22 51.9**	**-0.4**
MSEY				IAmb	IAmb	16 23 23.7	
	comp=Z,17nm,1.4s						
MBAR	**Mbarara**	**44.11**	**354**	LR	LR	16 40 38.4	
	comp=Z,84nm,19.1s,baz=184,slow=35						
QSPA	**South Pole Qui**	**45.50**	**180**	P	**P**	**16 23 06.1**	**-0.6**
	comp=Z,3.0nm,0.7s,baz=270,slow=2.7,SNR=26						
QSPA				LR	LR	16 40 14.2	
	comp=Z,57nm,20.9s,baz=248,slow=34						
	comp=Z,3.0nm,0.7s						
QSPA	**South Pole Qui**	**45.50**	**180**	P	**P**	**16 23 06.5**	**-0.2**
QSPA				IAmb	IAmb	16 23 16.1	
	comp=Z,6.8nm,1.0s						
VNDA	**Vanda**	**53.71**	**167**	P	**P**	**16 24 08.3**	**-0.6**
	comp=Z,2.4nm,1.0s,baz=199,slow=3.8,SNR=3.9						
VNDA				LR	LR	16 45 25.7	
	comp=Z,74nm,19.3s,baz=221,slow=34						
	comp=Z,2.4nm,1.0s						
VNDA	**Vanda**	**53.71**	**167**	P	**P**	**16 24 08.9**	**0.0**
VNDA				IAmb	IAmb	16 24 12.4	
	comp=Z,4.7nm,1.1s						
PMSA	**Palmer Station**	**54.26**	**211**	LR	LR	16 42 21.1	
	comp=Z,44nm,20.9s,baz=60,slow=30						
ASCN	**Ascension**	**56.38**	**295**	P	**P**	**16 24 29.2**	**+0.2**
DBIC	**Dimbokro**	**62.57**	**314**	LR	LR	16 50 28.5	
	comp=Z,27nm,18.9s,baz=182,slow=34						
PALK	**Pallekele**	**65.92**	**51**	LR	LR	16 47 55.3	
	comp=Z,44nm,18.5s,baz=219,slow=30						
GIRL	**Giralia**	**66.78**	**99**	P	**P**	**16 25 38.0**	**-1.1**
TRQA	**Tornquist**	**68.93**	**237**	P	**P**	**16 25 52.6**	**+0.1**
TRQA				IAmb	IAmb	16 26 12.0	
	comp=Z,11nm,1.3s						
PLCA	**Paso Flores**	**72.05**	**230**	LR	LR	16 51 41.0	
	comp=Z,23nm,20.8s,baz=116,slow=31						
CPUP	**Villa Florida**	**73.71**	**249**	LR	LR	16 51 26.0	
	comp=Z,9.5nm,19.4s,baz=324,slow=30						
STKA	**Stephens Creek**	**78.59**	**124**	P	**P**	**16 26 49.6**	**+0.3**
	comp=Z,2.1nm,0.9s,baz=232,slow=7.5,SNR=3.1						
	comp=Z,2.1nm,0.9s						
CSS	**Mathiatis**	**79.32**	**358**	P	**P**	**16 26 54.8**	**+1.9**
CSS				IAmb	IAmb	16 27 34.2	
	comp=Z,10nm,0.9s						
ASAR	**Alice Springs**	**79.54**	**113**	P	**P**	**16 26 54.6**	**0.0**
	comp=Z,0.6nm,1.1s,baz=229,slow=5.5,SNR=4.1						
ASAR				LR	LR	16 56 34.8	
	comp=Z,60nm,18.9s,baz=264,slow=32						
	comp=Z,0.6nm,1.1s						
BRTR	**Keskin Array B**	**84.07**	**359**	P	**P**	**16 27 19.6**	**+1.6**
	comp=Z,0.2nm,0.4s,baz=167,slow=6.7,SNR=5.8						
	comp=Z,0.2nm,0.4s						
MDT	**Midelt**	**85.26**	**327**	LR	LR	17 06 40.3	
	comp=Z,63nm,18.2s,baz=211,slow=36						
CMAR	**Chiang Mai Arr**	**85.45**	**59**	LR	LR	16 58 18.4	
	comp=Z,16nm,22.0s,baz=260,slow=31						
MLR	**Muntele Rosu**	**90.20**	**353**	LR	LR	17 08 09.0	
	comp=Z,14nm,19.4s,baz=267,slow=36						
URZ	**Urewera**	**90.52**	**151**	LR	LR	17 04 54.4	
	comp=Z,30nm,19.8s,baz=190,slow=33						
ESDC	**Sonseca Array**	**91.12**	**331**	LR	LR	17 09 03.7	
	comp=Z,107nm,18.0s,baz=140,slow=36						
DAVOX	**Davos/Dischmat**	**93.82**	**343**	LR	LR	17 12 02.9	
	comp=Z,170nm,18.1s,baz=272,slow=37						
PMG	**Port Moresby**	**98.54**	**112**	LR	LR	17 09 03.2	
	comp=Z,42nm,18.1s,baz=156,slow=33						
TXAR	**Lajitas Array**	**144.20**	**259**	PKP	**PKPdf**	**16 34 23.5**	**0.0**
	comp=Z,0.4nm,0.8s,baz=104,slow=4.2,SNR=5.8						

*NIED **08** 16:22:15.7,40°.76N×139°.14E,h21^{km},MW3.4,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.21; $M_{\theta\theta}$0.54; $M_{\phi\phi}$-0.33; $M_{r\theta}$0.53; $M_{\theta\phi}$0.73; $M_{\phi r}$-0.79; Fault plane solution: $M_0$1.21000×10^{14} NP1:ϕ_s24.00000°, δ59.00000°,λ-156.00000°. NP2:ϕ_s281.00000°, δ70.00000°,λ-33.00000°.*

JMA 08 16:22:15.7±0.1,40°.8N±0°.3×139°.1E±0°.6,h21^{km}±1^{km}, MV3.7/39,2D,W OFF AOMORI PREF,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIW	**Iwasaki**	**0.68**	**104**	i P	Pb	16 22 28.6	-0.3
JIW				S	Sb	16 22 37.5	-0.4
JOG3	**Oga3**	**0.84**	**183**	P	Pn	16 22 33.7	+1.4
JOG3				S	Sn	16 22 47.3	+3.2
JNTW	**Noshirotokiwa**	**0.92**	**122**	eP	Pb	16 22 33.0	+0.1
JNTW				S	Sn	16 22 45.4	-0.6
JHHS	**Hirosakihyakuz**	**0.93**	**96**	⇓P	Pb	16 22 33.3	+0.2
JHHS				⇓S	Sn	16 22 45.9	-0.4
JOMM	**Oshimamatsumae**	**1.00**	**40**	i P	Pb	16 22 34.0	-0.4
JOMM				S	Sb	16 22 47.3	+0.2
JSI2	**Shiura 2**	**1.01**	**72**	P	Pb	16 22 34.0	-0.4
JSI2				S	Sb	16 22 47.2	0.0
JSR	**Shiriuchi**	**1.23**	**51**	P	Pn	16 22 37.6	-0.1
JAH	**Hinai**	**1.27**	**116**	P	Pn	16 22 38.3	0.0
JAH				S	Sb	16 22 55.2	+0.3
JOSM	**Okushiri--Mats**	**1.34**	**11**	P	Pn	16 22 38.1	-1.1
JOSM				eS	Sn	16 22 55.8	-0.8
JTM	**Tenmabayashi**	**1.46**	**88**	eP	Pn	16 22 40.6	-0.3
JTM				eS	Sn	16 22 58.6	-0.8
JOT	**Ohata**	**1.57**	**66**	P	Pn	16 22 42.6	+0.2
JOT				eS	Sn	16 23 01.8	-0.2
JYM2	**Yakumo 2**	**1.64**	**34**	P	Pn	16 22 43.4	+0.1
JRG	**Rokugo**	**1.78**	**139**	P	Pn	16 22 45.2	-0.1
JKB	**Kayabe**	**1.82**	**51**	P	Pn	16 22 46.2	+0.4
JANG	**Nango**	**1.85**	**101**	eP	Pn	16 22 46.6	+0.4

SJA 08 16:31:27.3±0.7,29°.64S×68°.53W,h113^{km}±3^{km},ML3.6, MW3.7,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGUA	**GUANDACOL**	**0.15**	**13**	eP	Pn	16 31 44.2	+1.1
AGUA				eS	Sn	16 31 55.5	+0.5
ACDV	**Cuesta del Vie**	**0.74**	**224**	eP	Pn	16 31 47.6	+1.1
ACDV				eS	Sn	16 32 02.3	+1.4
VCA	**Vinchina**	**0.94**	**18**	eP	Pn	16 31 49.6	+1.2
VCA				eS	Sn	16 32 05.2	+1.0
AROD	**Rodeo**	**0.97**	**237**	eP	Pn	16 31 50.1	+1.2
AROD				eS	Sn	16 32 06.4	+1.3
ACCO	**Cerro Coronel**	**1.05**	**206**	eP	Pn	16 31 50.7	+1.0
ACCO				eS	Sn	16 32 07.7	+1.1
AVFE	**Valle Fertil**	**1.38**	**138**	eP	Pn	16 31 54.2	+1.2
AVFE				eS	Sn	16 32 13.6	+1.1
AVFE				IAML		16 32 14.9	
	comp=Z,867nm,0.3s						
ACLC	**CERRO LA CRUZ**	**1.39**	**82**	eP	Pn	16 31 54.4	+1.2
ACLC				eS	Sn	16 32 14.4	+1.5
ACLC				IAML		16 32 15.2	
	comp=Z,354nm,0.3s						
AANI	**Anillaco**	**1.62**	**60**	eP	Pn	16 31 57.2	+1.4
AANI				eS	Sn	16 32 18.8	+1.2
AANI				IAML		16 32 19.6	
	comp=Z,2µm,0.8s						
RTLL	**Cerro Villicun**	**1.69**	**178**	eP	Pn	16 31 57.8	+1.2
RTLL				eS	Sn	16 32 19.8	+0.9
RTLL				IAML		16 32 22.1	
	comp=Z,689nm,0.5s						
TINO	**Tinogasta**	**1.78**	**29**	eP	Pn	16 31 59.1	+1.2
TINO				eS	Sn	16 32 21.8	+0.7
APLL	**PUNTA DE LOS L**	**1.89**	**114**	eP	Pn	16 32 00.4	+1.2
APLL				eS	Sn	16 32 24.5	+1.0
APLL				IAML		16 32 26.1	
	comp=Z,442nm,0.3s						
GO04	**Tololo Observa**	**2.04**	**254**	eP	Pn	16 32 02.2	+1.1
GO04				eS	Sn	16 32 28.7	+1.7
GO04				IAML		16 32 30.2	
	comp=Z,1µm,0.3s						
ACHE	**Chepes**	**2.22**	**134**	eP	Pn	16 32 04.7	+1.4
ACHE				eS	Sn	16 32 30.9	0.0
RTLS	**Leoncito**	**2.25**	**197**	eP	Pn	16 32 05.3	+1.4
RTLS				eS	Sn	16 32 32.8	+0.8
RTLS				IAML		16 32 35.6	
	comp=Z,455nm,0.3s						
GO03	**Copiapo**	**2.53**	**323**	eP	Pn	16 32 07.8	+0.5
GO03				eS	Sn	16 32 31.5	-6.4
GO03				eS		16 32 37.8	
GO03				IAML		16 32 44.5	
	comp=Z,213nm,0.6s						
CO02	**Combarbal**	**2.64**	**233**	eP	Pn	16 32 09.0	+0.2
CO02				eS	Sn	16 32 41.9	+1.2
CO02				IAML		16 32 42.5	
	comp=Z,364nm,0.5s						
CYA	**Choya**	**2.67**	**64**	eP	Pn	16 32 09.9	+0.8
CYA				eS	Sn	16 32 41.3	+0.1
CYA				IAML		16 33 00.9	
	comp=Z,85nm,0.4s						
AUSP	**Uspallata**	**2.68**	**196**	eP	Pn	16 32 10.8	+1.4
AUSP				eS	Sn	16 32 30.0	-12
ASAL	**Salagasta**	**2.96**	**185**	eP	Pn	16 32 14.4	+1.5
ASAL				eS	Sn	16 32 38.0	-10
AAGR	**Agrelo**	**3.45**	**184**	eP	Pn	16 32 20.8	+1.4
AAGR				eS	Sn	16 33 01.6	+1.9
AAGR				IAML		16 33 03.0	
	comp=Z,55nm,0.5s						
VA03	**San Esteban**	**3.56**	**209**	eS	Sn	16 33 05.1	+2.6
VA03				IAML		16 33 12.1	
	comp=Z,80nm,0.6s						
MRA	**San Martin**	**3.68**	**140**	eP	Pn	16 32 23.5	+1.0
MRA				eS	Sn	16 33 05.0	-0.2
MRA				IAML		16 33 28.4	
	comp=Z,82nm,0.4s						
TCA	**Tanti**	**3.80**	**117**	eP	Pn	16 32 24.3	+0.2
TCA				eS	Sn	16 32 54.0	-14
TCA				IAML		16 33 07.4	
	comp=Z,87nm,0.2s						
ROC1	**El Roble**	**3.95**	**212**	eS	Sn	16 33 11.1	-0.8
PEL	**Peldehue**	**3.95**	**207**	eP	Pn	16 32 27.2	+1.1
PEL				eS	Sn	16 33 12.0	+0.4
PEL				IAML		16 33 22.6	
	comp=Z,33nm,0.3s						
AHML	**Horco Molle**	**4.00**	**46**	eP	Pn	16 32 16.7	-10
AHML				IAML		16 33 22.9	
	comp=Z,30nm,0.6s						
PIL	**Pilar**	**4.49**	**118**	eP	Pn	16 32 48.1	+15
TRQA	**Tornquist**	**10.01**	**149**	IAML		16 35 47.2	
	comp=Z,4.0nm,2.1s						

KRSC 08 16:48:07.4±1.8,50°.02N×156°.85E,h16^{km}±24^{km},Ml3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.82**	**325**	eP	Pb	16 48 21.4	-1.8
SKR				eS	Sb	16 48 32.6	-1.4
PAU	**Pauzhetka**	**1.45**	**359**	eP	Pn	16 48 32.7	-0.3
PAU				eS	Sb	16 48 52.8	+0.5
KDTR	**Khodutka, Kamc**	**1.96**	**23**	eP	Pn	16 48 41.1	+1.2
KDTR				eS	Sb	16 49 06.9	+0.1
ASAK	**Asacha**	**2.46**	**15**	eP	Pn	16 48 48.8	+1.9
MTVR	**Mutnovka**	**2.61**	**18**	eP	Pn	16 48 50.9	+1.9
MTVR				eS	Sb	16 49 23.9	-1.8
RUS	**Russkaya**	**2.64**	**23**	eP	Pn	16 48 50.4	+1.2
RUS				eS	Sn	16 49 23.2	+2.3
GRL	**Gorelyy**	**2.66**	**16**	eP	Pn	16 48 51.9	+2.3
KRMR	**Karymshinskiy**	**2.93**	**15**	eS	Sn	16 49 30.3	+2.2
DALK	**Dalny**	**3.25**	**21**	eP	Pn	16 48 59.7	+2.1
DALK				eS	Sb	16 49 40.3	-3.6
UGLR	**Uglovaya**	**3.43**	**20**	eP	Pn	16 49 03.8	+3.6
KOK	**Koryaka**	**3.47**	**18**	eP	Pn	16 49 04.1	+3.3
SMAR	**Somma**	**3.47**	**20**	eP	Pb	16 49 05.3	-3.3
KRER	**Koryakskii**	**3.50**	**19**	eP	Pb	16 49 05.3	-3.8
SDLR	**Sedlovina**	**3.51**	**20**	eP	Pn	16 49 04.3	+3.0
KRX	**Arik**	**3.53**	**18**	eP	Pn	16 49 05.3	+3.7
KZV	**Kizimen**	**5.52**	**21**	eP	Pn	16 49 35.3	+6.3

*IDC **08** 16:57:13.4±1.0,30°.97N×143°.16E,h0^{km},mb3.7/9, mbtmp3.6/10,ML2.7/1,MS3.1/2,Error ellipse: s-maj=33.4km s-min=19.7km az=73.0*

*JMA **08** 16:57:14.5±0.2,31°.1N±0°.7×14°3E±°,h44^{km},MV3.8/23, FAR E OFF IZU ISLANDS*

ISC 08 16:57:18.3±0.8,31°.01N±0°.07×142°.8E±0°.1,h35^{km},n26, σ2^{s}.06/30,mb3.8/9,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHCJ	**Hachijojimakas**	**3.25**	**310**	eS	**Sn**	**16 58 42.8**	**-1.3**
JHJ2	**Mitsune**	**3.26**	**311**	eS	**Sn**	**16 58 43.6**	**-0.9**
JHJ	**Hachijo jima 2**	**3.29**	**311**	Pn	**Pn**	**16 58 03.4**	**-3.8**
	13nm,0.3s,baz=288,slow=20,SNR=1.9						
JHJ				Sn	**Sn**	**16 58 42.6**	**-2.5**
	25nm,0.3s,baz=62,slow=20,SNR=1.8						
JMKN	**Mikurajimanish**	**3.93**	**318**	eS	**Sn**	**16 58 58.6**	**-2.4**
BSO1	**Boso 1**	**3.93**	**338**	eP	**Pn**	**16 58 13.9**	**-1.7**
BSO1				eS	**Sn**	**16 58 59.2**	**-1.0**
CBIJ	**Chichi jima**	**3.93**	**187**	eP	**Pn**	**16 58 14.9**	**-1.2**
CBIJ				eS	**Sn**	**16 58 58.4**	**-2.6**
JCJ	**Chichijima**	**3.93**	**187**	Pn	Pn	16 58 05.1	-11
	4.3nm,0.3s,baz=294,slow=20,SNR=1.3						
JCJ				Sn	Sn	16 58 45.2	-16
	22nm,0.3s,baz=286,slow=22,SNR=7.1						
BSO3	**Boso 3**	**4.23**	**334**	eS	**Sn**	**16 59 08.3**	**+0.4**
JOD2	**Odawara 2**	**5.24**	**325**	eP	**Pn**	**16 58 33.6**	**-0.5**
JOD2				eS	**Sn**	**16 59 32.6**	**-0.8**
JHO	**Hitachi**	**5.88**	**343**	eP	**Pn**	**16 58 41.0**	**-1.8**
JRY	**Ryogami san**	**5.94**	**328**	eP	**Pn**	**16 58 43.0**	**-0.8**
JRY				eS	**Sn**	**16 59 49.8**	**-0.9**
JNY	**Yasuok**	**5.97**	**318**	eP	**Pn**	**16 58 46.1**	**+1.9**
JAG	**Ashikaga**	**6.06**	**334**	eP	**Pn**	**16 58 44.4**	**-1.0**
JAG				eS	**Sn**	**16 59 52.5**	**-1.0**
MJAR	**Matsushiro Arr**	**6.69**	**327**	Pn	**Pn**	**16 58 53.7**	**-0.3**
	0.1nm,0.3s,baz=100,slow=21,SNR=13						
MJAR				Sn	**Sn**	**17 00 05.5**	**-3.5**
	0.1nm,0.3s,baz=38,slow=23,SNR=5.9						
	0.8nm,0.4s						
JNU	**Nakatsue**	**10.30**	**285**	LR	LR	17 03 10.9	
	comp=Z,32nm,21.7s,baz=20,slow=34						
ASAJ	**Asahikawa**	**13.09**	**359**	Pn	**Pn**	**17 00 18.2**	**-3.4**
	0.5nm,0.3s,baz=198,slow=6.4,SNR=5.4						
SONM	**Songino Array**	**32.36**	**312**	P	**P**	**17 03 47.5**	**+3.0**
	1.1nm,0.7s,baz=113,slow=8.0,SNR=7.4						
	1.1nm,0.7s						
ZALV	**Zalesovo Beam**	**46.93**	**317**	P	**P**	**17 05 48.1**	**+2.8**
	0.2nm,0.3s,baz=99,slow=8.9,SNR=1.8						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**48.45**	**307**	P	**P**	**17 06 00.4**	**+3.1**
	0.7nm,0.7s,baz=89,slow=10.0,SNR=9.3						
	0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**50.73**	**312**	P	**P**	**17 06 16.4**	**+2.0**
	0.8nm,0.7s,baz=89,slow=6.9,SNR=5.9						
	0.8nm,0.7s						
WRA	**Warramunga Arr**	**51.30**	**190**	P	**P**	**17 06 19.2**	**+0.2**
	1.0nm,0.8s,baz=9.8,slow=7.6,SNR=7.8						
	1.0nm,0.8s						
ILAR	**Eielson Array**	**54.07**	**30**	P	**P**	**17 06 37.8**	**-1.2**
	0.5nm,0.6s,baz=253,slow=6.3,SNR=5.5						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**55.02**	**190**	P	**P**	**17 06 46.7**	**+0.3**
	0.3nm,0.6s,baz=1.8,slow=5.4,SNR=9.8						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**55.55**	**316**	P	**P**	**17 06 52.0**	**+2.1**
	0.4nm,0.5s,baz=98,slow=7.4,SNR=2.6						
	0.4nm,0.5s						
NEW	**Newport**	**73.71**	**43**	LR	LR	17 43 01.1	
	comp=Z,45nm,18.0s,baz=24,slow=37						
TXAR	**Lajitas Array**	**92.87**	**53**	P	**P**	**17 10 28.4**	**+0.5**
	0.4nm,0.9s,baz=318,slow=3.3,SNR=2.4						
	0.4nm,0.9s						

*ATH **08** 17:22:52.5,35°.18N×26°.29E,h36^{km}±1^{km},ML2.8/5, Manual Solution by A.Moschou First location: 2019/12/08 17:24:23, This location: 2019/12/09 04:07:54 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 0 km*

*ISK **08** 17:22:52.9,35°.34N×26°.35E,h25^{km},ML2.7/22*

*THE **08** 17:22:53.6,35°N±5°×2°6E±°,h22^{km}±5^{km},M2.6/7, MLh2.6/7*

*AFAD **08** 17:22:53.0,35°.32N×26°.80E,h10^{km}±1^{km},ML2.4*

*IDC **08** 17:23:34.9±4.9,39°.49N×31°.73E,h0^{km},mb3.7/3, mbtmp3.7/3,Error ellipse: s-maj=71.7km s-min=44.3km az=42.0*

ISC 08 17:22:52.7±0.8,35°.32N±0°.05×26°.34E±0°.03,h32^{km}±7^{km}, n54,σ1^{s}.69/75,mb3.6/3,Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIT2	**Siteia**	**0.22**	**240**	P	**Pb**	**17 22 59.0**	**-0.4**
SIT2				S	**Sb**	**17 23 03.6**	**-0.3**
ZKR	**Zakros**	**0.23**	**207**	P	**Pb**	**17 22 59.2**	**-0.3**
ZKR	**Zakros**	**0.23**	**207**	Pg	**Pb**	**17 22 59.0**	**-0.5**
ZKR				Sg	**Sb**	**17 23 04.4**	**+0.4**
ZKR	**Zakros**	**0.23**	**207**	P	**Pb**	**17 22 58.7**	**-0.8**
ZKR				S	**Sb**	**17 23 03.5**	**-0.5**
STIA	**Sitia Lasithi**	**0.23**	**241**	P	**Pb**	**17 22 59.1**	**-0.4**
STIA				S	**Sb**	**17 23 03.6**	**-0.6**
KSS1	**Kassos Island**	**0.48**	**78**	P	**Pn**	**17 23 04.2**	**+0.8**
NPS	**Neapolis**	**0.60**	**265**	P	**Pb**	**17 23 04.0**	**-0.8**
NPS				S	**Sb**	**17 23 13.1**	**-0.1**
NPS	**Neapolis**	**0.60**	**265**	P	**Pb**	**17 23 04.1**	**-0.8**
NPS				S	**Sb**	**17 23 12.2**	**-0.9**
KARP	**Karpathos**	**0.71**	**71**	P	**Pn**	**17 23 08.1**	**+1.5**
KARP				S	**Sn**	**17 23 18.6**	**+2.3**
KARP	**Karpathos**	**0.71**	**71**	Pg	**Pn**	**17 23 07.3**	**+0.8**
KARP	**Karpathos**	**0.71**	**71**	P	**Pn**	**17 23 07.4**	**+0.8**
KARP				S	**Sn**	**17 23 18.7**	**+2.3**
IDI	**Anoyia**	**1.19**	**269**	P	**Pn**	**17 23 13.4**	**+0.3**
IDI				S	**Sb**	**17 23 29.0**	**-0.8**
IDI	**Anoyia**	**1.19**	**269**	Pn	**Pn**	**17 23 13.5**	**+0.3**
IDI	**Anoyia**	**1.19**	**269**	P	**Pn**	**17 23 13.1**	**0.0**
IDI				S	**Sb**	**17 23 27.1**	**-2.7**
THERA	**Ancient Thera,**	**1.26**	**326**	P	**Pn**	**17 23 14.3**	**+0.1**
THERA				S	**Sb**	**17 23 31.5**	**-0.4**
SNT5	**Nea Kammeni, S**	**1.33**	**325**	P	**Pn**	**17 23 15.7**	**+0.6**
SNT5	**Nea Kammeni, S**	**1.33**	**325**	P	**Pn**	**17 23 15.4**	**+0.3**
SNT5				S	**Sb**	**17 23 33.8**	**0.0**
YAZI	**Mula-Dat§a-**	**1.63**	**33**	P	**Pn**	**17 23 20.5**	**+1.3**
YAZI				S	**Sn**	**17 23 40.8**	**+1.7**
ARG	**Arkhangelos**	**1.71**	**58**	P	**Pn**	**17 23 22.3**	**+2.0**
ARG	**Arkhangelos**	**1.71**	**58**	Pn	**Pn**	**17 23 21.7**	**+1.5**
DAT	**Datca**	**1.73**	**35**	Pn	**Pn**	**17 23 21.9**	**+1.2**
APE	**Apeiranthos**	**1.87**	**340**	P	**Pn**	**17 23 23.0**	**+0.4**
APE				S	**Sn**	**17 23 47.1**	**+2.1**
APE	**Apeiranthos**	**1.87**	**340**	Pn	**Pn**	**17 23 23.2**	**+0.7**
APE				Sn	**Sn**	**17 23 47.4**	**+2.3**
APE	**Apeiranthos**	**1.87**	**340**	P	**Pn**	**17 23 22.9**	**+0.3**
APE				S	**Sn**	**17 23 46.5**	**+1.5**

GVD	Gavdhos	1.91	256	Pn	Pn	17 23 25.2	+2.2
BODT	Bodrum	1.91	24	Pn	Pn	17 23 24.6	+1.5
IMMV	Iera Moni Meta	1.93	275	Pn	Pn	17 23 25.6	+2.2
TURN	Turunc	2.12	46	P	Pn	17 23 27.1	+1.2
TURN				S	Sn	17 23 53.4	+2.2
TURN				i IAML		17 24 03.0	
	comp=E,27nm,0.6s						
TURN				i IAML		17 24 04.0	
	comp=N,32nm,0.6s						
TURN	Turunc	2.12	46	Pn	Pn	17 23 27.3	+1.4
KNDR	Palaiochora Ch	2.22	269	Pn	Pn	17 23 29.6	+2.3
MLSB	Milas	2.29	30	Pn	Pn	17 23 29.8	+1.5
DALY	Dalyan (Mula)	2.40	51	Pn	Pn	17 23 31.4	+1.7
YER	Yerkesik	2.40	40	Pn	Pn	17 23 31.6	+1.8
FETY	Fethiye	2.58	59	P	Pn	17 23 27.8	-4.5
FETY				S	Sn	17 23 58.7	-4.0
IZZE	Mula-Seydike	2.60	64	P	Pn	17 23 33.3	+0.8
IZZE				S	Sn	17 24 02.4	-0.5
IZZE				i IAML		17 24 04.0	
	comp=E,18nm,0.5s						
IZZE				i IAML		17 24 06.0	
	comp=N,38nm,0.4s						
AKAS	Kas	2.81	70	P	Pn	17 23 36.4	+0.9
AKAS				i IAML		17 24 18.0	
	comp=N,47nm,1.2s						
AKAS				i IAML		17 24 39.0	
	comp=E,32nm,1.8s						
AKAS	Kas	2.81	70	Pn	Pn	17 23 37.2	+1.7
KTHA	Kythira Island	2.83	290	Pn	Pn	17 23 37.9	+2.2
CAME	Cameli-Denizli	2.90	55	Pn	Pn	17 23 38.2	+1.5
AYDB	Zeytinkoy-Aydi	2.91	25	Pn	Pn	17 23 38.7	+1.8
DNZT	Denizli-Tavas-	2.92	47	P	Pn	17 23 39.1	+2.1
DNZT				S	Sb	17 24 18.2	-1.3
DNZT				i IAML		17 24 24.0	
	comp=N,24nm,0.7s						
DNZT				i IAML		17 24 31.0	
	comp=E,24nm,1.1s						
ESEN	Aydn-Nazilli	2.96	33	P	Pn	17 23 39.7	+2.3
ESEN				S	Sb	17 24 16.9	-3.6
ESEN				i IAML		17 24 24.0	
	comp=N,13nm,1.1s						
TAVA	DENIZLI_Tavas	2.98	43	P	Pn	17 23 39.5	+1.6
TAVA				S	Sn	17 24 16.7	+4.0
TAVA				i IAML		17 24 36.0	
	comp=N,19nm,1.0s						
TAVA				i IAML		17 24 36.0	
	comp=E,16nm,0.9s						
KNIK	Mula-Seydike	3.03	59	P	Pn	17 23 40.0	+1.4
KNIK				i IAML		17 24 38.0	
	comp=E,13nm,0.9s						
NAZL	Nazilli-Aydin	3.07	30	Pn	Pn	17 23 41.3	+2.2
APMY	Acipayam-Deniz	3.21	47	Pn	Pn	17 23 43.0	+1.9
ELL	Elmali	3.23	63	Pn	Pn	17 23 43.0	+1.8
GOLH	Golhisar	3.23	53	P	Pn	17 23 43.6	+2.3
GOLH				S	Sb	17 24 27.8	-0.6
KIRA	zmir-Kiraz	3.32	29	P	Pn	17 23 44.5	+2.0
KIRA				S	Sn	17 24 23.5	+2.6
KIRA				i IAML		17 24 33.0	
	comp=N,12nm,1.3s						
KORT	Korkueli	3.65	61	Pn	Pn	17 23 49.2	+2.1
BRTR	Keskin Array B	7.28	51	Pg	Pn	17 24 04.7	-32
	baz=261,slow=17,SNR=1.2						
KURBB	Kurchatov Arra	40.27	51	P	P	17 30 23.0	-3.5
	0.6nm,0.4s,baz=274,slow=8.7,SNR=4.8						
	0.6nm,0.4s						
MKAR	Makanchi Array	42.88	57	P	P	17 30 46.9	-1.2
	0.4nm,0.5s,baz=270,slow=7.7,SNR=8.7						
	0.4nm,0.5s						
ZALV	Zalesovo Beam	44.20	46	P	P	17 30 55.6	-2.8
	0.5nm,0.5s,baz=287,slow=9.9,SNR=2.7						
	0.5nm,0.5s						

IDC ***08*** *17:27:49.0±2.0, 3°.72S×135°.77E, h0^{km}, mb3.8/1, mbtmp3.8/4, ML3.7/3, Error ellipse: s-maj=102.2km s-min=31.6km az=107.0*

DJA ***08*** *17:27:49.4±0.4, 4°S±4°×13°6E±°, h10^{km}, M4.0/9, mb4.1/2, MLv3.9/9*

ISC 08 17:27:52.7±1.0**, 4°.02S**±0°.08×**135°.86E**±0°.07**, h24^{km}, n11, σ1^{s}55**/13**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMPI	Kaimana, Papua	2.18	279	P	Pn	17 28 26.2	-1.2
BAKI	Biak	2.81	5	P	Pn	17 28 35.2	-1.0
RKPI	Ransiki, Papua	3.00	326	P	Pn	17 28 38.3	-0.5
SMPI	Sarmi	3.48	55	P	Pn	17 28 44.5	-0.9
SMPI				S	Sn	17 29 26.5	+0.6
MWPI	Manokwari, Pap	3.56	329	P	Pn	17 28 46.9	+0.4
FAKI	Fak Fak	3.77	287	P	Pn	17 28 47.8	-1.5
SWI	Sorong	5.56	304	P	Pn	17 29 14.3	+0.3
	0.1nm13nm,0.5s						
WRA	Warramunga Arr	15.90	185	Pn	Pn	17 31 37.7	+2.6
	0.3nm,0.3s,baz=6.8,slow=12,SNR=6.4						
WRA				Sn	Sn	17 34 28.5	-2.3
	0.3nm,0.3s,baz=17,slow=22,SNR=7.0						
	0.9nm,0.7s						
FITZ	Fitzroy Crossi	17.20	215	P	Pn	17 31 53.2	+1.7
	0.1nm,0.3s,baz=39,slow=12,SNR=1.8						
FITZ				S	Sn	17 34 53.0	-9.4
	1.6nm,0.9s,baz=156,slow=22,SNR=1.2						
	2.1nm,0.9s						
ASAR	Alice Springs	19.63	185	P	Pn	17 32 22.5	+1.4
	0.5nm,0.3s,baz=9.3,slow=10,SNR=58						
	5.6nm,0.7s						
ILAR	Eielson Array	88.19	25	P	P	17 40 40.6	-0.9
	0.4nm,0.7s,baz=260,slow=5.0,SNR=4.4						
	0.4nm,0.7s						

IDC ***08*** *17:40:05.6±1.2, 39°.23N×72°.15E, h0^{km}, mb3.7/7, mbtmp3.7/13, ML3.3/6, MS3.9/1, Error ellipse: s-maj=18.9km s-min=15.7km az=140.0*

SOME ***08*** *17:40:06.3, 39°.65N×71°.88E, h5^{km}*

KRNET ***08*** *17:40:06.8±0.1, 39°.37N×72°.17E, h27^{km}, mb4.0*

MOS ***08*** *17:40:06.0±1.1, 39°.35N×72°.12E, h9^{km}, mb4.3/2, Error ellipse: s-maj=9.1km s-min=4.5km az=72.8*

NNC ***08*** *17:40:11.7±2.6, 39°.70N×72°.10E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=20.5km s-min=10.6km az=6.0*

ISC 08 17:40:07.0±1.3**, 39°.44N**±0°.03×**72°.14E**±0°.02**, h3^{km}**±9^{km}**, n120, σ1^{s}95**/167**, mb3.7**/8**, 30C-35D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.26	279	⇓iP	Pg	17 40 13.5	+1.4
DRK				⇓iS	Sb	17 40 18.6	-1.0
DRK	Karamyk	0.26	279	ePG	Pg	17 40 13.5	+1.4
OHH	Osh	1.19	25	⇓iP	Pn	17 40 29.6	-1.1
OHH				⇓iS	Sb	17 40 46.3	+0.1
OHH	Osh	1.19	25	i PG	Pn	17 40 29.6	-1.1
OHH				i S	Sb	17 40 46.3	+0.1
SFK	Sufi-Kurgan	1.20	61	⇑iP	Pn	17 40 29.3	-1.6
SFK				⇑iS	Sb	17 40 45.4	-1.2
SFK	Sufi-Kurgan	1.20	61	i PG	Pn	17 40 29.3	-1.6
SFK				i S	Sb	17 40 45.4	-1.2
GAR	Garm	1.48	253	⇑iP	Pn	17 40 33.7	-1.0
GAR				⇑iS	Sb	17 40 53.4	-1.1
GAR	Garm	1.48	253	i PG	Pn	17 40 33.7	-1.0
GAR				i S	Sb	17 40 53.4	-1.1
SALK	Salom-Alik	1.94	41	⇓iP	Pn	17 40 41.2	+0.2
SALK				⇓iS	Sn	17 41 06.3	+0.3
SALK	Salom-Alik	1.94	41	i PN	Pn	17 40 41.2	+0.2
SALK				i S	Sn	17 41 06.3	+0.3
ARSB	Arslanbob	1.99	19	⇑iP	Pn	17 40 42.3	+0.6
ARSB				⇑iS	Sn	17 41 08.2	+0.9
ARSB	Arslanbob	1.99	19	i PN	Pn	17 40 42.3	+0.6
ARSB				i S	Sn	17 41 08.2	+0.9
TRKS	Terek-Say	2.22	340	⇑iP	Pn	17 40 44.7	-0.2
TRKS				⇑iS	Sn	17 41 12.5	-0.5
TRKS	Terek-Say	2.22	340	i PN	Pn	17 40 44.7	-0.2
TRKS				i S	Sn	17 41 12.5	-0.5
ARK	Arkit	2.36	357	⇑iP	Pn	17 40 47.7	+0.9
ARK				⇑iS	Sn	17 41 17.4	+1.0
ARK	Arkit	2.36	357	i PN	Pn	17 40 47.7	+0.9
ARK				i S	Sn	17 41 17.4	+1.0
CHGR	Chuyangaron	2.45	252	⇓iP	Pn	17 40 47.9	0.0
CHGR				⇓iS	Sn	17 41 17.7	-0.7
CHGR	Chuyangaron	2.45	252	i PN	Pn	17 40 47.9	0.0
CHGR				i S	Sn	17 41 17.7	-0.7
ARLS	Aral	2.94	34	⇓iP	Pn	17 40 55.2	+0.4
ARLS				⇓iS	Sn	17 41 30.4	-0.2
ARLS	Aral	2.94	34	i PN	Pn	17 40 55.2	+0.4
ARLS				i S	Sn	17 41 30.4	-0.2
KSH	Kashi	2.97	87	Pn	Pn	17 40 54.1	-1.1
KSH				Sn	Sn	17 41 33.0	+1.6
KSH				smax	smax		
	comp=N,390nm,0.7s						
KSH				smax	smax		
	comp=E,280nm,0.9s						
MNAS	Manas	3.06	5	⇑eP	Pn	17 40 57.2	+0.8
MNAS				⇑iS	Sn	17 41 34.0	+0.4
MNAS	Manas	3.06	5	ePN	Pn	17 40 57.2	+0.8
IUG	Iuzhnay	3.14	330	Pg	Pb	17 41 01.7	-1.9
	comp=E,213nm,0.2s						
IUG				Lg	Lg	17 41 42.8	
	comp=E,182nm,0.4s						
JNKS	Jany-Kuch	3.14	58	⇓eP	Pn	17 40 57.9	+0.3
JNKS				⇓eS	Sn	17 41 35.0	-0.8
UCH	Uchtor	3.32	32	P	Pb	17 41 05.0	-1.8
	SNR=39						
UCH	Uchtor	3.32	32	⇓iP	Pn	17 41 00.7	+0.4
UCH				⇓iS	Sn	17 41 40.1	-0.4
UCH	Uchtor	3.32	32	i PN	Pn	17 41 00.7	+0.4
UCH				i S	Sn	17 41 40.1	-0.4
MRKS	Merke	3.40	14	Pg	Pb	17 41 05.8	-2.2
	comp=E,70nm,0.4s						
MRKS				Lg	Lg	17 41 50.3	
	comp=E,117nm,0.4s						
MRKS	Merke	3.40	14	eP	Pb	17 41 05.8	-2.2
	comp=E,70nm,0.4s						
MRKS				eS	Sb	17 41 49.6	-0.3
	comp=E,117nm,0.4s						
EKS2	Erkin-Say	3.45	21	P	Pb	17 41 07.4	-1.5
	SNR=38						
EKS2	Erkin-Say	3.45	21	⇑iP	Pn	17 41 02.6	+0.8
EKS2				⇑iS	Sn	17 41 43.1	-0.2
EKS2	Erkin-Say	3.45	21	ePN	Pn	17 41 02.6	+0.8
CHM	Chimkent	3.46	327	eP	Pb	17 41 06.4	-2.5
	comp=E,27nm,0.1s						
CHM				eS	Sb	17 41 50.5	-0.8
	comp=E,60nm,0.1s						
DZA	Taraz	3.50	350	eP	Pb	17 41 08.1	-1.6
	comp=E,22nm,0.1s						
DZA				eS	Sb	17 41 53.4	+0.8
	comp=E,88nm,0.2s						
AAK	Ala-Archa	3.66	28	P	Pb	17 41 09.7	-2.7
	SNR=23						
AAK	Ala-Archa	3.66	28	Pn	Pb	17 41 09.3	-3.1
	comp=E,4.8nm,0.3s,baz=187,slow=5.6,SNR=61						
AAK				Sn	Sb	17 41 56.7	-0.6
	comp=E,6.9nm,0.3s,baz=336,slow=21,SNR=10						
	comp=E,11nm,0.3s						
AAK	Ala-Archa	3.66	28	⇑iP	Pn	17 41 05.4	+0.7
AAK				⇑iS	Sn	17 41 48.0	-0.5
AAK	Ala-Archa	3.66	28	⇓Pn	Pb	17 41 10.2	-2.3
	comp=E,1.2nm,0.3s						
AAK				⇓Pg	Pg	17 41 16.6	-0.5
	comp=E,4.7nm,0.4s						
AAK				⇑Lg	Lg	17 41 57.4	
	comp=E,17nm,0.4s						
AAK	Ala-Archa	3.66	28	⇓iPN	Pn	17 41 09.1	+4.4
KBK	Karagaybulak	3.85	33	P	Pb	17 41 12.4	-3.3
	SNR=13						
KBK	Karagaybulak	3.85	33	⇓iP	Pn	17 41 07.9	+0.5
KBK				⇓iS	Sn	17 41 52.6	-0.7
KBK	Karagaybulak	3.85	33	ePN	Pn	17 41 07.9	+0.5
FRU1	Bishkek	3.86	28	⇓iP	Pn	17 41 08.3	+1.0
FRU1				⇓iS	Sn	17 41 53.0	-0.3
FRU1	Bishkek	3.86	28	i PN	Pn	17 41 08.3	+1.0
FRU1				i S	Sn	17 41 53.0	-0.3
KK31	Karatay Array	3.86	342	Pn	Pb	17 41 11.9	-3.8
	comp=E,11nm,0.2s,baz=148,slow=12,SNR=563						
KK31				Pg	Pg	17 41 23.1	+2.2
	comp=E,7.0nm,0.3s,baz=154,slow=14,SNR=3.8						
KK31				⇑Sn	Sb	17 41 58.1	-4.8
	comp=E,6.1nm,0.3s						
KK31				⇑Lg	Lg	17 42 12.6	
	comp=E,16nm,0.5s,baz=154,slow=16,SNR=5.0						
KK31	Karatay Array	3.86	342	PN	Pb	17 41 11.9	-3.8
KK31				P	Pg	17 41 23.7	+2.8
KK31				S	Sb	17 41 58.8	-4.1
BRLS	Borolday	3.98	335	Pg	Pn	17 41 11.4	+2.4
	comp=E,22nm,0.2s						
BRLS				Lg	Lg	17 41 59.4	
	comp=E,21nm,0.4s						
BRLS	Borolday	3.98	335	eP	Pn	17 41 11.4	+2.4
	comp=E,22nm,0.2s						
BRLS				eS	Sn	17 41 59.2	+2.9
	comp=E,14nm,0.1s						
CHMS	Chumysh	4.07	28	P	Pb	17 41 15.4	-3.9
	SNR=33						
CHMS	Chumysh	4.07	28	⇑iP	Pn	17 41 10.8	+0.6
CHMS				⇑iS	Sn	17 41 57.6	-0.7
CHMS	Chumysh	4.07	28	ePN	Pn	17 41 10.8	+0.6
ULHL	Ulahol	4.19	47	P	Pn	17 41 16.2	+4.1
	SNR=16						
ULHL	Ulahol	4.19	47	⇓iP	Pn	17 41 12.5	+0.5
ULHL				⇓iS	Sn	17 42 00.4	-1.2
ULHL	Ulahol	4.19	47	i PN	Pn	17 41 12.5	+0.5
ULHL				i S	Sn	17 42 00.4	-1.2
BOOM	Boomskoye usch	4.19	42	⇑iP	Pn	17 41 12.5	+0.5
BOOM				⇑iS	Sn	17 42 00.5	-1.2
BOOM	Boomskoye usch	4.19	42	i PN	Pn	17 41 12.5	+0.5
BOOM				i S	Sn	17 42 00.5	-1.2
USP	Ospenovka	4.22	24	P	Pn	17 41 17.0	+4.8
	SNR=26						
USP	Ospenovka	4.22	24	⇑iP	Pn	17 41 13.1	+0.9
USP				⇑iS	Sn	17 42 01.4	-0.7
USP	Ospenovka	4.22	24	ePN	Pn	17 41 13.1	+0.9
TKM2	Tokmak 2	4.35	36	P	Pn	17 41 19.5	+5.3
	SNR=7.8						
TKM2	Tokmak 2	4.35	36	⇓iP	Pn	17 41 14.8	+0.6
TKM2				⇓iS	Sn	17 42 04.6	-1.0
TKM2	Tokmak 2	4.35	36	ePN	Pn	17 41 14.8	+0.6
SGDS	Sogindy	4.43	24	Pg	Pb	17 41 25.7	+0.3
	comp=E,3.6nm,0.2s						
SGDS				Lg	Lg	17 42 24.4	
	comp=E,11nm,0.4s						
KST	Kastek	4.61	37	Pg	Pb	17 41 31.1	+2.5
	comp=E,3.9nm,0.2s						
KST				Lg	Lg	17 42 34.0	
	comp=E,30nm,0.5s						
KST	Kastek	4.61	37	eP	Pb	17 41 31.1	+2.5
	comp=E,2.2nm,0.1s						
KST				eS	Sg	17 42 32.6	-2.6
	comp=E,49nm,0.4s						
KDJ	Kajisay	4.68	53	⇓iP	Pn	17 41 19.2	+0.5
KDJ				⇓iS	Sn	17 42 11.9	-1.7
KDJ	Kajisay	4.68	53	i PN	Pn	17 41 19.2	+0.5
KDJ				i S	Sn	17 42 11.9	-1.7
DGS	Degeres	4.68	35	Pg	Pb	17 41 33.5	+3.7
	comp=E,14nm,0.5s						
DGS				Lg	Lg	17 42 36.8	
	comp=E,48nm,0.5s						
TARG	Taragay, Kyrgy	4.89	60	⇓iP	Pn	17 41 21.8	0.0
TARG				⇓iS	Sn	17 42 16.6	-2.4
TARG	Taragay, Kyrgy	4.89	60	i PN	Pn	17 41 21.8	0.0
TARG				i S	Sn	17 42 16.6	-2.4
MTBS	Maitube	4.91	40	Pg	Pb	17 41 37.8	+4.2
	comp=E,5.6nm,0.3s						
MTBS				Lg	Lg	17 42 44.1	
	comp=E,30nm,0.4s						
MTBS	Maitube	4.91	40	eP	Pb	17 41 37.8	+4.2
	comp=E,5.6nm,0.3s						
MTBS				eS	Sg	17 42 44.1	-0.4
	comp=E,30nm,0.4s						
IZV	Izvestkoviy	4.93	42	Pg	Pb	17 41 37.3	+3.2
	comp=E,7.6nm,0.4s						
IZV				Lg	Lg	17 42 43.4	
	comp=E,65nm,0.7s						
IZV	Izvestkoviy	4.93	42	eP	Pb	17 41 37.3	+3.2
	comp=E,7.6nm,0.4s						
IZV				eS	Sg	17 42 43.4	-1.9
	comp=E,65nm,0.7s						
KRBS	Karabastau	5.01	31	Pg	Pb	17 41 39.0	+3.6
	comp=E,9.4nm,0.4s						
KRBS				Lg	Lg	17 42 46.3	
	comp=E,24nm,0.5s						
TNSS	Tian-Shan	5.11	44	Pg	Pb	17 41 41.0	+3.8
	comp=E,4.0nm,0.3s						
TNSS				Lg	Lg	17 42 49.9	
	comp=E,7.4nm,0.6s						
TNSS	Tian-Shan	5.11	44	eP	Pb	17 41 41.0	+3.8
	comp=E,4.0nm,0.3s						
TNSS				eS	Sg	17 42 49.9	-1.1
	comp=E,7.4nm,0.6s						
KNDC	Almaty	5.24	42	⇓Pn	Pb	17 41 34.2	-5.1
	comp=E,4.2nm,0.3s						
KNDC				⇓Pg	Pg	17 41 46.0	-1.4
	comp=E,24nm,0.5s						
KNDC				⇑Lg	Lg	17 42 54.5	
	comp=E,25nm,0.6s						
KNDC	Almaty	5.24	42	PN	Pb	17 41 34.2	-5.1
KNDC				P	Pg	17 41 46.0	-1.4
MDOK	Medeo	5.25	43	Pg	Pb	17 41 43.5	+4.0
	comp=E,8.6nm,0.3s						
MDOK				Lg	Lg	17 42 54.3	
	comp=E,30nm,0.5s						
KOTS	Kotyrbulak	5.33	43	Pg	Pb	17 41 44.7	+3.9
	comp=E,13nm,0.6s						
KOTS				Lg	Lg	17 42 56.2	
	comp=E,72nm,0.5s						
KOTS	Kotyrbulak	5.33	43	eP	Pb	17 41 44.7	+3.9
	comp=E,13nm,0.6s						
KOTS				eS	Sg	17 42 56.2	-1.9
	comp=E,72nm,0.5s						
KTBS	Karatobe	5.46	37	Pg	Pb	17 41 45.4	+2.4
	comp=E,4.5nm,0.4s						
KTBS				Lg	Lg	17 42 57.6	
	comp=E,20nm,0.7s						
CHKK	Chushkaly	5.71	38	Pg	Pb	17 41 52.5	+5.2
	comp=E,4.2nm,0.1s						
CHKK				Lg	Lg	17 43 09.4	
	comp=E,30nm,0.3s						
CHKK	Chushkaly	5.71	38	eP	Pb	17 41 52.5	+5.2
	comp=E,4.2nm,0.1s						
CHKK				eS	Sg	17 43 09.4	-1.1
	comp=E,30nm,0.3s						
BTLS	Baital	5.78	14	Pg	Pb	17 41 51.7	+3.3
	comp=E,2.9nm,0.4s						
BTLS				Lg	Lg	17 43 08.1	
	comp=E,9.9nm,0.5s						
BTLS	Baital	5.78	14	eP	Pb	17 41 51.7	+3.3
	comp=E,2.9nm,0.4s						
BTLS				eS	Sg	17 43 08.1	-4.3
	comp=E,9.9nm,0.5s						
SATY	Saty	5.95	51	Pg	Pb	17 41 55.7	+4.3
	comp=E,5.5nm,0.5s						
SATY				Lg	Lg	17 43 15.3	
	comp=E,24nm,0.6s						
KURS	Kuram	6.08	46	Pg	Pb	17 41 57.3	+3.8
	comp=E,5.2nm,1.0s						
KURS				Lg	Lg	17 43 17.9	
	comp=E,16nm,1.4s						
KPKS	Kokpek	6.36	49	Pg	Pb	17 42 04.1	+5.8
	comp=E,0.4nm,0.2s						
KPKS				Lg	Lg	17 43 28.9	
	comp=E,14nm,0.8s						
UZB	Uzynbulak	6.37	52	Pg	Pb	17 42 03.9	+5.3
	comp=E,5.6nm,0.3s						
UZB				Lg	Lg	17 43 28.8	
	comp=E,5.4nm,0.4s						
UZB	Uzynbulak	6.37	52	eP	Pb	17 42 03.9	+5.3
	comp=E,5.6nm,0.3s						
UZB				eS	Sg	17 43 28.8	-2.8
	comp=E,5.4nm,0.4s						
BLB	Baldybastay	6.64	43	Pg	Pb	17 42 08.8	+5.6
	comp=E,5.8nm,0.4s						
BLB				Lg	Lg	17 43 37.2	
	comp=E,27nm,0.6s						
PDGK	Podgornoye	6.76	53	⇓Pn	Pn	17 41 52.0	+4.7
	comp=E,2.2nm,0.6s						
PDGK				⇓Pg	Pb	17 42 09.7	+4.6
	comp=E,5.5nm,0.7s						
PDGK				⇑Lg	Lg	17 43 41.9	
	comp=E,15nm,0.8s						
MK31	Makanchi Array	10.44	42	⇓eP	Pn	17 42 42.4	+4.8
MKAR	Makanchi Array	10.44	42	Pn	Pn	17 42 41.1	+3.6
	comp=E,0.1nm,0.3s,baz=234,slow=14,SNR=6.2						
MKAR				Lg	Lg	17 45 33.2	
	comp=E,0.1nm,0.3s,baz=222,slow=31,SNR=2.2						
	comp=E,0.7nm,0.7s						
KURBB	Kurchatov Arra	12.06	20	Pn	Pn	17 43 00.4	+0.8
	comp=E,0.1nm,0.3s,baz=217,slow=13,SNR=10						
KURBB				Lg	Lg	17 46 26.2	
	baz=198,slow=26,SNR=4.1						
	comp=E,0.5nm,0.8s						
KURK	Kurchatov	12.16	20	P	Pn	17 43 00.4	-0.7
AB31	Akbulak array	13.11	322	P	Pn	17 43 14.1	0.0
	comp=E,1.2nm,0.5s,baz=129,slow=13,SNR=51						
AB31	Akbulak array	13.11	322	P	Pn	17 43 14.7	+0.6
BVA0	Borovoye Array	13.64	356	⇓P	P	17 43 31.6	+1.3
	comp=E,2.1nm,0.8s,baz=176,slow=16,SNR=4.1						
BVAR	Borovoye Array	13.64	356	Pn	Pn	17 43 21.4	+0.1
	baz=161,slow=13,SNR=5.8						
	comp=E,0.5nm,0.4s						
BORK	Borovoye	13.67	355	⇑eP	Pn	17 43 21.9	+0.3
AKTO	Aktyubinsk	14.83	322	Pn	Pn	17 43 36.5	-1.1
	comp=E,0.6nm,0.3s,baz=114,slow=15,SNR=6.5						
	comp=E,0.9nm,0.4s						
AKTO	Aktyubinsk	14.83	322	⇑P	Pn	17 43 37.2	-0.3
	comp=E,1.0nm,0.5s						
DGZ	Jazzator, Alta	14.94	42	⇑eP	P	17 43 44.2	-0.8
ZALV	Zalesovo Beam	16.88	27	P	Pn	17 44 04.6	+0.5
	comp=E,1.0nm,0.3s,baz=214,slow=9.7,SNR=18						
	comp=E,2.0nm,0.3s						
ZALV	Zalesovo Beam	16.88	27	eP	P	17 44 07.6	+1.3
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	Songino Array	26.00	60	P	P	17 45 41.1	-0.1
	comp=Z,0.3nm,0.7s,baz=286,slow=10,SNR=2.2						
	comp=Z,0.3nm,0.7s						
XLT	XiLinHaoTe	32.84	68	eP	P	17 46 44.2	+2.3
XLT				sP	sP	17 46 51.8	+7.5
XLT				pmax	pmax		
	comp=Z,9.0nm,0.9s						
FINES	FINESS Array B	35.60	324	P	P	17 47 06.1	+0.5
	comp=Z,3.2nm,1.0s,baz=128,slow=8.3,SNR=7.1						
	comp=Z,3.2nm,1.0s						
FINES	FINESS Array B	35.60	324	i P	P	17 47 06.0	+0.5
FINES				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ARCES	ARCESS Array B	38.80	336	P	P	17 47 33.3	+0.7
	comp=Z,1.2nm,0.5s,baz=108,slow=8.0,SNR=8.2						
	comp=Z,1.2nm,0.5s						
ARCES	ARCESS Array B	38.80	336	eP	P	17 47 33.5	+0.9
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HFS	Hagfors	41.36	320	P	P	17 47 53.9	0.0
	comp=Z,3.6nm,0.9s,baz=88,slow=12,SNR=7.5						
	comp=Z,3.6nm,0.9s						
NOA	NORSAR Array B	42.62	321	P	P	17 48 03.9	-0.3
	comp=Z,0.7nm,0.7s,baz=96,slow=7.3,SNR=1.5						
	comp=Z,0.7nm,0.7s						
KEST	Kesra	49.01	287	LR	LR	18 12 14.5	
	comp=Z,126nm,18.3s,baz=266,slow=39						
WRA	Warramunga Arr	82.81	123	P	P	17 52 29.6	-3.2
	comp=Z,0.2nm,0.5s,baz=313,slow=5.8,SNR=1.3						
	comp=Z,0.2nm,0.5s						
ASAR	Alice Springs	85.22	126	P	P	17 52 45.1	+0.1
	comp=Z,0.2nm,0.9s,baz=317,slow=5.1,SNR=1.6						
	comp=Z,0.2nm,0.9s						

IDC ***08*** *18:02:56.4±0.9, 15°.01N×147°.14E, h0^{km}, mb4.1/14, mbtmp4.1/15, ML4.3/1, MS2.8/3, Error ellipse: s-maj=26.2km s-min=15.5km az=98.0*

NEIC ***08*** *18:02:56.9±1.9, 15°.0N±0°.1×147°.31E±0°.07, h10^{km}±1^{km}, mb4.6/12, Error ellipse: s-maj=17.9km s-min=11.3km az=18.0*

ISC 08 18:03:00.2±0.6**, 14°.95N**±0°.08×**147°.22E**±0°.07**, h32^{km}, n40, σ1^{s}42**/36**, mb4.3**/20**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DPSS	Saipan	1.42	282		Pn	18 03 23.9	+0.2
DPSS				Sn	Sb	18 03 41.8	-2.0
GUMO	Guam	2.65	240	Pn	Pn	18 03 40.3	-0.4
	55nm,0.3s,baz=107,slow=3.1,SNR=23						
GUMO				Sn	Sn	18 04 14.4	+2.6
	44nm,0.3s,baz=4.3,slow=22,SNR=6.0						
GUMO				LR	LR	18 04 15.8	
	comp=Z,146nm,18.3s,baz=96,slow=30						
	128nm,0.3s						
GUMO	Guam	2.65	240	Pn	Pn	18 03 39.7	-1.0
PATS	Pohnpei	13.54	125	Pn	Pn	18 06 08.2	-1.9
H11S3	WAKE ISLAND Hy	18.97	77	T	T	18 26 58.8	
	baz=263						
H11S1	WAKE ISLAND Hy	18.98	77	T	T	18 27 01.5	
	baz=263						
H11S2	WAKE ISLAND Hy	18.99	77	T	T	18 27 06.1	
	baz=263						
H11N1	WAKE ISLAND Hy	19.36	73	T	T	18 27 38.4	
	baz=257						

H11N2	WAKE ISLAND Hy	19.37	73	T	T	18 27 49.9	
	baz=257						
H11N3	WAKE ISLAND Hy	19.38	73	T	T	18 27 49.2	
	baz=257						
MJAR	Matsushiro Arr	22.96	341	P	P	18 07 58.4	-3.5
	0.5nm,0.5s,baz=157,slow=10,SNR=1.8						
FAKI	Fak Fak	23.13	221	P	P	18 08 05.1	+1.3
FAKI				IAmb	IAmb	18 08 06.8	
	comp=Z,14nm,0.7s						
PMG	Port Moresby	24.19	180	P	P	18 08 14.5	+0.5
	comp=Z,5.8nm,0.9s,baz=4.1,slow=14,SNR=2.0						
	comp=Z,5.8nm,0.9s						
PMG	Port Moresby	24.19	180	P	P	18 08 11.8	-2.1
PMG				IAmb	IAmb	18 08 40.2	
	comp=Z,15nm,1.1s						
KSRS	Korea Array	28.21	326	P	P	18 08 47.6	-2.4
	comp=Z,0.7nm,0.6s,baz=140,slow=8.9,SNR=4.2						
MTN	Manton Dam	31.88	211	P	P	18 09 22.9	+0.3
WB0	Warramunga Arr	36.73	200	P	P	18 10 04.5	-0.1
WB0				IAmb	IAmb	18 10 18.2	
	comp=Z,15nm,1.5s						
WRA	Warramunga Arr	36.91	200	P	P	18 10 07.6	+1.3
	comp=Z,4.7nm,0.8s,baz=24,slow=9.4,SNR=17						
	comp=Z,4.7nm,0.8s						
WRA	Warramunga Arr	36.91	200	P	P	18 10 05.9	-0.3
FITZ	Fitzroy Crossi	39.12	214	P	P	18 10 24.3	-0.6
AS31	Alice Springs	40.52	199	P	P	18 10 35.5	-1.1
ASAR	Alice Springs	40.52	199	P	P	18 10 37.6	+1.1
	comp=Z,1.4nm,0.7s,baz=17,slow=11,SNR=27						
ASAR				LR	LR	18 29 03.2	
	comp=Z,17nm,18.2s,baz=264,slow=39						
	comp=Z,1.4nm,0.7s						
ASAR	Alice Springs	40.52	199	P	P	18 10 36.4	-0.1
LZDM	Lanzhou Array	44.08	307	P	P	18 11 06.6	+0.8
	comp=Z,1.5nm,0.3s,baz=151,slow=6.8,SNR=4.4						
	comp=Z,1.5nm,0.3s						
CMAR	Chiang Mai Arr	46.27	281	P	P	18 11 23.6	+0.5
	comp=Z,0.7nm,0.7s,baz=84,slow=5.4,SNR=4.8						
CMAR				LR	LR	18 30 41.4	
	comp=Z,10nm,19.1s,baz=110,slow=36						
	comp=Z,0.7nm,0.7s						
SONM	Songino Array	46.99	323	P	P	18 11 29.0	+0.6
	comp=Z,0.6nm,0.6s,baz=142,slow=6.0,SNR=6.0						
	comp=Z,0.6nm,0.6s						
ZALV	Zalesovo Beam	61.88	324	P	P	18 13 16.4	+0.1
	comp=Z,0.5nm,0.4s,baz=109,slow=8.8,SNR=4.3						
	comp=Z,0.5nm,0.4s						
ZALV	Zalesovo Beam	61.88	324	P	P	18 13 15.0	-1.4
MKAR	Makanchi Array	62.12	315	P	P	18 13 18.8	+0.6
	comp=Z,1.4nm,0.5s,baz=89,slow=8.7,SNR=38						
	comp=Z,1.4nm,0.5s						
MKAR	Makanchi Array	62.12	315	P	P	18 13 16.9	-1.3
MAKZ	Makanchi	62.34	315	P	P	18 13 19.6	0.0
MAKZ				IAmb	IAmb	18 13 21.0	
	comp=Z,2.7nm,0.6s						
L20K	Farewell, AK	62.68	27	P	P	18 13 23.6	+2.0
KURK	Kurchatov	65.04	319	P	P	18 13 36.3	-1.0
KURK				IAmb	IAmb	18 13 38.1	
	comp=Z,3.4nm,0.8s						
KURBB	Kurchatov Arra	65.08	319	P	P	18 13 37.8	+0.2
	comp=Z,4.7nm,0.7s,baz=98,slow=7.1,SNR=69						
	comp=Z,4.7nm,0.7s						
ILAR	Eielson Array	66.37	25	P	P	18 13 46.9	+1.2
	comp=Z,0.6nm,0.8s,baz=257,slow=5.7,SNR=6.6						
	comp=Z,0.6nm,0.8s						
BVAR	Borovoye Array	70.29	321	P	P	18 14 10.6	+0.1
	comp=Z,1.8nm,0.5s,baz=109,slow=7.2,SNR=19						
	comp=Z,1.8nm,0.5s						
GAR	Garm	70.66	306	P	P	18 14 12.3	-0.8
YKA	Yellowknife Ar	80.61	28	P	P	18 15 12.4	+3.0
	comp=Z,0.1nm,0.3s,baz=293,slow=6.9,SNR=2.8						
	comp=Z,0.1nm,0.3s						
ARCES	ARCESS Array B	86.49	343	P	P	18 15 40.0	+0.5
	comp=Z,6.3nm,1.2s,baz=61,slow=7.6,SNR=4.3						
	comp=Z,6.3nm,1.2s						
FINES	FINESS Array B	90.89	336	P	P	18 15 59.6	-0.8
	comp=Z,3.7nm,1.0s,baz=68,slow=5.9,SNR=3.9						
	comp=Z,3.7nm,1.0s						

NOU 08 18:03:08.1, 16°.68S×167°.62E, h0^{km}, MLv4.6/19, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	1.17	153	P	Pg	18 03 30.8	+0.2
SANVU	Saraoutou	1.29	342	P	Pg	18 03 31.5	-1.3
SANVU	Saraoutou	1.29	342	S	Sb	18 03 50.2	-0.2
RTV	Rentapao	1.35	145	P	Pb	18 03 34.5	+0.3
MARNC	Mare, Loyalty	4.79	175	P	Pn	18 04 23.1	+1.5
KOUNC	Koumac, New Ca	4.98	219	P	Pn	18 04 24.9	+0.7
YATNC	Mamie plateau,	5.39	187	P	Pn	18 04 28.0	-1.9
DZM	Mont Dzumac	5.48	192	P	Pn	18 04 30.3	-0.8
ONTNC	Ouen Toro	5.71	191	P	Pn	18 04 34.4	+0.3
OUENC	Ouen Island, N	5.75	187	P	Pn	18 04 35.3	+0.5
PINNC	Pines Island,	5.90	182	P	Pn	18 04 36.9	0.0
NGOA	Tingoa Renbel	8.93	304	P	Pn	18 05 18.4	0.0

UCR **08** *18:31:41.2±1.1, 10°.03N×85°.88W, h11^{km}±5^{km}, MW5.4, Fault plane solution: NP1:ϕ_s156.87000°, δ67.48000°, λ20.36000°.*

NEIC **08** *18:31:42.9, 10°.03N×85°.89W, h18^{km}, Moment Tensor Solution. Duration: 1^s.6 Moment tensor: Scale 10^{16}Nm; M_{rr}0.95; $M_{\theta\theta}$0.76; $M_{\phi\phi}$-1.71; $M_{r\theta}$0.91; $M_{\theta\phi}$-1.22; $M_{\phi r}$-0.04; Fault plane solution: $M_0$2.13000×10^{16} NP1: ϕ_s164.46000°, δ58.10000°, λ26.82000°. NP2:ϕ_s59.50000°, δ67.48000°, λ145.11000°. Principal axes: T 1.9904, Plg40.0000°, Azm19.0000°; N 0.2553, Plg49.0000°, Azm211.0000°; P -2.2457, Plg6.0000°, Azm114.0000°;*

NEIC **08** *18:31:42.9, 10°.13N×85°.79W, h18^{km}*

NEIC **08** *18:31:42.9±1.6, 10°.12N±0°.06×85°.79W±0°.07, h35^{km}±2^{km}, mb5.1/518, Mww4.8/16, Error ellipse: s-maj=15.0km s-min=3.0km az=226.0*

MOS **08** *18:31:42.8±1.5, 10°.42N×85°.58W, h34^{km}, mb5.3/17, Error ellipse: s-maj=11.8km s-min=6.6km az=115.0*

CATAC **08** *18:31:42.1±0.5, 10°N±3°×8°6W±°, h18^{km}±3^{km}, M5.4/32, MLv5.4/32, Error ellipse: s-maj=7.1km s-min=3.5km az=36.9, confirmed*

GCMT **08** *18:31:44.9±0.3, 10°.03N±0°.02×85°.92W±0°.02, h21^{km}±1^{km}, MW4.9/99, Moment Tensor Solution. s31,c36; s99,c118; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.17±.11; $M_{\theta\theta}$1.45±.07; $M_{\phi\phi}$-2.62±.10; $M_{r\theta}$1.32±.16; $M_{\theta\phi}$-1.31±.07; $M_{\phi r}$-0.35±.14; Best double couple: $M_0$2.95700×10^{16} NP1:ϕ_s158.00000°, δ64.00000°, λ29.00000°. NP2: ϕ_s55.00000°, δ64.00000°, λ151.00000°. Principal axes: T 2.9090, Plg38.0000°, Azm16.0000°; N 0.0960, Plg52.0000°, Azm197.0000°; P -3.0050, Plg0.0000°, Azm107.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

UPA **08** *18:31:44.6±0.7, 10°.40N×85°.41W, h6^{km}±999^{km}*

RSNC **08** *18:31:45.3±0.4, 10°N±4°×8°6W±°, h61^{km}±6^{km}, M4.6, mB5.2, mb4.8, ML4.4, MLv5.3, Mw(mB)4.6*

BJI **08** *18:31:46.1, 10°.62N×86°.08W, h52^{km}, mB5.3/2, Ms5.3/1, Ms7 4.9/3*

IDC **08** *18:31:46.6±0.9, 10°.42N×85°.47W, h55^{km}±6^{km}, mb4.2/15, mbtmp4.5/20, MS4.1/38, Error ellipse: s-maj=19.9km s-min=9.7km az=49.0*

ISC 08 18:31:42.9±0.5, **10°.08N**±0°.03×**85°.84W**±0°.03, **h34**^{km}±1^{km}, **h34**^{km}**:pP-P, n967, σ1^s.30**/747, **mb5.1**/266, **MS4.2**/39, **49C-85D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JUD3	Juan Diaz 3	0.31	73	Pg	Pb	18 31 49.7	-1.3
JUD3	Juan Diaz 3	0.31	73	⇓eP	Pb	18 31 49.7	-1.3
JUD3				eS	Sn	18 31 55.2	-0.5
SACU	Santa Cruz	0.31	53	⇑eP	Pb	18 31 49.7	-1.2
SACU				eS	Sn	18 31 55.3	-0.4
NICO	Nicoya	0.39	81	⇓eP	Pb	18 31 50.9	-1.1
CMARA	Lajas Hojancha	0.41	98	P	Pb	18 31 51.1	-1.2
CMARA	Lajas Hojancha	0.41	98	S	Sb	18 31 58.0	-0.8
CMARA	Lajas Hojancha	0.41	98	⇓eP	Pb	18 31 51.1	-1.2
DELF	Filadelfia	0.46	37	⇑eP	Pb	18 31 52.4	-0.7
DELF				eS	Sb	18 32 00.3	+0.3
PLVR	Palo Verde	0.55	61	⇓eP	Pn	18 31 53.7	-0.8
NYURE	Nandayure	0.58	98	⇓eP	Pn	18 31 53.5	-1.2
ALIBA	Liberia Airpor	0.59	29	⇑eP	Pn	18 31 54.9	+0.1
ELVJ	El Viejo (Barb	0.63	54	⇑eP	Pb	18 31 59.6	+4.0
ELI1	Hacienda Flor	0.63	26	P	Pn	18 31 55.9	+0.4
ELI1	Hacienda Flor	0.63	26	S	Sb	18 32 06.4	+2.0
ELI1	Hacienda Flor	0.63	26	⇑eP	Pn	18 31 55.7	+0.3
ERIA	Liberia	0.68	35	⇑eP	Pn	18 31 56.2	+0.1
BAGA	Bagaces	0.72	52	⇑eP	Pn	18 31 56.6	-0.1
BAGA				eS	Sb	18 32 08.1	+1.2
JCR1	Jicaral	0.75	107	⇓eP	Pn	18 31 56.3	-0.9
LAPC	Finca la Perla	0.79	30	⇑eP	Pn	18 31 57.5	-0.3
CNAS	Canas	0.81	64	eP	Pb	18 31 59.0	+0.3
GPS3	Bodega del ICE	0.82	35	eS	Sb	18 32 10.8	+1.2
GPS2	Hotel Rincn d	0.82	35	⇑eP	Pn	18 31 58.1	-0.1
GPS1	Guardaparques	0.84	35	⇑eP	Pn	18 31 58.4	-0.1
VRLE	La Escondida,	0.85	33	⇑eP	Pn	18 31 58.4	-0.2
COLC	Colonia	0.85	47	⇑eP	Pn	18 31 58.6	0.0
INVE	Universidad In	0.86	62	⇓eP	Pn	18 31 58.7	0.0
CUI	Cuipilapa	0.88	49	⇑eP	Pn	18 31 58.9	-0.1
VORI	VORI	0.88	33	⇑eP	Pn	18 31 59.0	-0.1
JUNT	Juntas	0.89	77	⇓eP	Pn	18 31 58.5	-0.5
JTS	Las Juntas de	0.90	76	P	Pn	18 31 58.6	-0.6
	19µm,0.9s,baz=255,slow=5.0,SNR=2746						
JTS				S	Sn	18 32 09.5	-1.4
	12µm,0.4s,baz=284,slow=19,SNR=17						
JTS	Las Juntas de	0.90	76	P	Pn	18 31 58.6	-0.6
JTS				S	Sn	18 32 11.0	0.0
JTS	Las Juntas de	0.90	76	⇓eP	Pn	18 31 58.6	-0.6
MESS	Mesas	0.91	44	⇑eP	Pn	18 31 59.5	0.0
PAQE	Paquera	0.93	106	⇓eP	Pn	18 31 58.8	-0.7
BUAI	Buenos Aires	0.94	32	⇑eP	Pn	18 31 60.0	+0.2
TILA	Tilaran	0.94	65	⇓eP	Pn	18 31 59.6	-0.2
TIMP	Tierras Morena	0.95	58	⇑eP	Pn	18 31 59.9	-0.1
PEJA	Penjamo Buenos	0.96	32	⇑eP	Pn	18 32 00.7	+0.5
MOTZ	Rio Naranjo	0.97	51	⇑eP	Pn	18 32 00.4	+0.2
CHIK	Chiripa	0.98	68	⇓eP	Pn	18 32 00.5	0.0
ENAS	Puntarenas	0.99	96	⇓eP	Pn	18 32 00.1	-0.3
LCRUZ	La Cruz	1.02	12	⇑eP	Pn	18 32 01.4	+0.6
VMAR	Armenia, Volca	1.02	44	⇑eP	Pn	18 32 01.4	+0.4
MTEVE	Monteverde	1.02	76	⇓eP	Pn	18 32 00.8	-0.2
TENO	El Achiote	1.05	54	⇑eP	Pn	18 32 00.5	-0.8
QUEB	Quebradon, Cot	1.07	60	⇓eP	Pn	18 32 01.9	+0.3
ROBF	Roble, Puntare	1.09	95	⇓eP	Pn	18 32 01.5	-0.2
TABAC	Tabacon	1.13	68	⇓eP	Pn	18 32 03.0	+0.6
CASO	Castillo	1.14	72	⇓eP	Pn	18 32 02.9	+0.3
CARN	Rivas	1.15	16	P	Pn	18 32 03.2	+0.6
CARN	Rivas	1.15	16	⇑eP	Pn	18 32 03.0	+0.4
UPAL	Upala	1.15	45	P	Pn	18 32 03.3	+0.6
UPAL	Upala	1.15	45	S	Sb	18 32 20.5	+1.4
UPAL	Upala	1.15	45	⇑eP	Pn	18 32 03.1	+0.5
ARZA	Esparza	1.16	94	⇓eP	Pn	18 32 02.4	-0.4
ARE1	Arenal 1	1.17	71	⇓eP	Pn	18 32 03.6	+0.7
VARE2	V. Arenal	1.17	71	⇓eP	Pn	18 32 03.6	+0.6
CEDE	Laguna Cedeo	1.19	70	⇓eP	Pn	18 32 03.9	+0.7
REZ	Monterrey de S	1.21	68	eP	Pn	18 32 04.2	+0.8
VACR	Volcan Arenal	1.21	71	⇓eP	Pn	18 32 04.0	+0.6
FORC	Fortuna	1.21	71	⇓eP	Pn	18 32 04.0	+0.5
SOCE	Pocosol	1.24	76		Pn	18 32 00.0	-3.9
SOCE	Pocosol	1.24	76	S	Sb	18 32 21.5	0.0
SOCE	Pocosol	1.24	76	P	Pn	18 32 04.3	+0.3
SOCE	Pocosol	1.24	76	⇓eP	Pn	18 32 04.2	+0.3
BITO	Garabito Jaco	1.28	111	⇓eP	Pn	18 32 04.0	-0.5
SRA1	San Ramn	1.34	90	⇓eP	Pn	18 32 05.4	+0.1
RAMO	San Ramon	1.35	89	⇓eP	Pn	18 32 05.7	+0.2
ARIN	Rivas	1.37	0	P	Pn	18 32 04.0	-1.7
PALD	Palmares	1.38	91	⇓eP	Pn	18 32 06.1	+0.2
QUEU	Ciudad Quesada	1.40	80	eP	Pn	18 32 07.5	+1.4
ZARE	Zarcero	1.43	86	⇓eP	Pn	18 32 07.4	+0.8
ATEO	Atenas	1.44	94	⇓eP	Pn	18 32 06.7	0.0
NARAN	Naranjo de Ala	1.44	89	⇓eP	Pn	18 32 07.4	+0.7
MORN	Al O del Volca	1.47	7	⇑P	Pn	18 32 08.0	+0.9
CONN	Concepcion	1.49	8	P	Pn	18 32 08.2	+0.8
GREC	Grecia	1.50	90	⇓eP	Pn	18 32 08.4	+0.8
TCS1	Tacares	1.51	91	⇓P	Pn	18 32 08.3	+0.6
TCS1	Tacares	1.51	91	⇓eP	Pn	18 32 08.4	+0.6
PURI	Puriscal	1.52	98	eP	Pn	18 32 07.3	-0.5
COVE	Coope Vega, Sa	1.55	66	P	Pn	18 32 08.9	+0.7
POAS	San Pedro de P	1.57	90	eP	Pn	18 32 09.6	+1.0
VPS8	V Poas	1.57	86	⇓eP	Pn	18 32 09.5	+0.7
ITAL	Pital	1.58	76	⇓eP	Pn	18 32 09.3	+0.7
VPS5	V. Poas	1.58	86	⇓eP	Pn	18 32 09.6	+0.7
ARTO	Ro Cuarto	1.62	80	⇓eP	Pn	18 32 09.9	+0.8
BELE	Belen	1.63	93	⇓eP	Pn	18 32 09.6	+0.3
SANTA	Santa Ana	1.63	95	⇓eP	Pn	18 32 09.6	+0.2
ACOS	Acosta	1.67	99	⇓eP	Pn	18 32 09.9	0.0
NADN	Granada	1.67	353	⇑P	Pn	18 32 11.0	+1.2
NADN	Granada	1.67	353	⇑eP	Pn	18 32 11.1	+1.2
HEME	Heredia, Merce	1.68	93	⇓eP	Pn	18 32 11.6	+1.6
PICV	PH. Pirrs	1.68	105	⇓eP	Pn	18 32 10.2	+0.2
HDC	Heredia	1.70	92		Pn	18 32 08.2	-2.1
HDC	Heredia	1.70	92	⇓eP	Pn	18 32 10.9	+0.6
HDC	Heredia	1.70	92	eP	Pn	18 32 11.1	+0.8
VBV1	V. Barva	1.71	89	⇓eP	Pn	18 32 11.2	+0.6
MEXI	Barrio Mexico	1.73	94	eP	Pn	18 32 11.5	+0.7
CENT	San Jose	1.74	95	eP	Pn	18 32 12.4	+1.5
TIBA	Tibas	1.74	94	eP	Pn	18 32 12.2	+1.3
LUJA	Lujan	1.75	95	eP	Pn	18 32 11.3	+0.4
AMPA	Desamparados	1.76	96	⇓eP	Pn	18 32 11.4	+0.3
LUPE	Guadalupe	1.76	94	⇓eP	Pn	18 32 11.4	+0.2
SJS	Escuela Geolog	1.76	94	eP	Pn	18 32 12.1	+0.9
ECI	Escuela Centro	1.76	94	⇓eP	Pn	18 32 11.8	+0.6
SJS3	Mercedes San J	1.76	94	eP	Pn	18 32 11.8	+0.6
SVQ2	Quepos	1.77	111	eP	Pn	18 32 12.3	+1.2
QUEP	Quepos	1.77	111	eP	Pn	18 32 12.3	+1.1
CORON	Coronado	1.81	93	eP	Pn	18 32 12.8	+0.9
TRIO	Tres Rios	1.82	95	⇓eP	Pn	18 32 12.6	+0.5
SARA	Sarapiqu	1.83	78	eP	Pn	18 32 12.3	+0.4
PITB	Pirrs, San	1.83	103	eP	Pn	18 32 12.5	+0.3
RAZU	San Marcos de	1.83	103	⇓eP	Pn	18 32 12.3	0.0
CVIMO	Finca Echandi	1.87	91	⇓eP	Pn	18 32 13.8	+1.1
TAGO	Cartago	1.90	96	eP	Pn	18 32 13.8	+0.7
PIEC	Cerro El Cedra	1.91	104	⇓eP	Pn	18 32 13.5	+0.2
MASN	Masaya	1.92	351	P	Pn	18 32 14.9	+1.6
MASN	Masaya	1.92	351	⇑eP	Pn	18 32 14.3	+0.9
REPA	Paraso	1.96	97	⇓eP	Pn	18 32 14.6	+0.8
MAS3	Al N del Volca	1.96	350	⇑P	Pn	18 32 15.0	+1.1
VICA	Volcano Irazu	1.96	92	⇓eP	Pn	18 32 15.2	+1.0
RAFA	San Farael, Vo	2.00	93	Pn	Pn	18 32 14.3	-0.3
RAFA	San Farael, Vo	2.00	93	⇓eP	Pn	18 32 15.6	+1.0
PCAYA	Pacayas	2.00	94	⇓eP	Pn	18 32 15.7	+1.1
PILE	Guapiles	2.02	86	eP	Pn	18 32 15.7	+1.1
CVTQ	Turrialba Volc	2.04	92	eP	Pn	18 32 16.7	+1.5
VTR0	Volcan Turrial	2.05	91	⇓eP	Pn	18 32 16.6	+1.2
CVTR	Volcan Turrial	2.05	91	⇓eP	Pn	18 32 16.5	+1.2
CVTV	Tajo	2.06	92	⇓eP	Pn	18 32 16.7	+1.2
UNAN	Cigeo UNAN	2.07	348	⇑P	Pn	18 32 13.8	-1.4
VINA	Juan Vinas	2.07	95	eP	Pn	18 32 16.6	+1.2
AERN	Aeropuerto Man	2.08	351	P	Pn	18 32 16.6	+1.1
VTCV	VTCV, Calle Va	2.08	92	⇓eP	Pn	18 32 17.1	+1.5
ABCN	Banco Central	2.08	347	P	Pn	18 32 17.1	+1.5
CARI	Cariari	2.09	82	eP	Pn	18 32 16.4	+0.8
ABRB	Las Abras (San	2.09	92	⇓eP	Pn	18 32 17.3	+1.5
MGAN	Managua	2.10	349		Pn	18 32 15.4	-0.3
MGAN	Managua	2.10	349	P	Pn	18 32 16.6	+0.9
MGAN	Managua	2.10	349	⇑eP	Pn	18 32 16.9	+1.2
MGAN	Managua	2.10	349	P	Pn	18 32 16.9	+1.2
ALLN	Telcor Managua	2.11	348	P	Pn	18 32 16.5	+0.7
VERB	Verbena	2.11	93	eP	Pn	18 32 17.6	+1.5
TRT2	Tortugero	2.12	77	P	Pn	18 32 16.4	+0.3
TRT2	Tortugero	2.12	77	⇓eP	Pn	18 32 16.4	+0.3
BUS1	Rivas	2.12	104	⇓eP	Pn	18 32 16.4	0.0
RESJ	San Isidro (Tu	2.16	91	⇓eP	Pn	18 32 18.3	+1.7
APYN	Apoyeque	2.20	347	P	Pn	18 32 18.8	+1.6
RVLA	Villa Bonita	2.21	89	eP	Pn	18 32 18.5	+1.2
EGUB	Earth Gu¡pi	2.22	86		Pn	18 32 16.8	-0.5
EGUB	Earth Gu¡pi	2.22	86	⇓eP	Pn	18 32 18.4	+1.1
COPN	Copaltepe	2.22	341	⇓P	Pn	18 32 17.9	+0.6
COPN	Copaltepe	2.22	341	⇑eP	Pn	18 32 18.2	+0.9
APQ3	Volcan Apoyequ	2.24	347	P	Pb	18 32 22.0	-0.8
LCOCO	El Coco	2.25	90	eP	Pn	18 32 19.1	+1.3
IRES	Siquirres	2.30	89	eP	Pn	18 32 20.2	+1.8
BOAB	BOACO BROADBAN	2.36	4		Pn	18 32 18.9	-0.4
BOAB	BOACO BROADBAN	2.36	4	⇑P	Pn	18 32 20.2	+0.9
OCHAL	Ojochal	2.37	114	⇓P	Pn	18 32 18.6	-0.9
SAJE	San Jernim	2.41	107	⇓eP	Pn	18 32 19.7	-0.4
EDPE	Pejibaye, P	2.41	112	eP	Pn	18 32 21.2	+1.2
MOM2	El Cardon	2.43	345	⇑P	Pn	18 32 21.2	+1.0
MOM3	MOM3	2.51	345	⇑P	Pn	18 32 22.3	+1.0
CNGA	Al SSO del Vol	2.55	341	⇑P	Pn	18 32 22.9	+1.0
CNGN	Cerro Negro	2.55	341		Pn	18 32 22.5	+0.5
CNGN	Cerro Negro	2.55	341	P	Pn	18 32 23.0	+1.0
CNGN	Cerro Negro	2.55	341	⇑eP	Pn	18 32 23.1	+1.0
CNGN	Cerro Negro	2.55	341	P	Pn	18 32 23.0	+1.0
PANP	Palmar Norte	2.59	115	eP	Pn	18 32 23.8	+1.3
BURE	Buenos Aires	2.62	110	eP	Pn	18 32 23.8	+0.8
FIMO	Fila Mora	2.68	114	⇓eP	Pn	18 32 23.8	0.0
DRK0	Durika	2.68	107	⇓eP	Pn	18 32 24.1	+0.2
HERN	Volcan Telica	2.70	339		Pn	18 32 23.5	-0.6
POLN	Al Sur del Vol	2.73	340	P	Pn	18 32 25.5	+1.1
PKGN	Cerro Pekin	2.81	337	⇑P	Pn	18 32 26.9	+1.4
EDP2	Potrero Grande	2.83	112	eP	Pn	18 32 26.4	+0.6
CRIN	San Cristobal	2.87	336		Pn	18 32 23.9	-2.5
CRIN	San Cristobal	2.87	336	eP	Pn	18 32 26.9	+0.6
CRIN	San Cristobal	2.87	336	P	Pn	18 32 27.9	+1.6
CEUA	Cerro Uatsi, L	2.89	99	⇓eP	Pn	18 32 28.6	+1.9
PIRO	Carate, Puerto	2.98	124		Pn	18 32 26.9	-0.8
PIRO	Carate, Puerto	2.98	124	⇓eP	Pn	18 32 28.0	+0.3
EDAD	Golfito	2.99	118	eP	Pn	18 32 28.5	+0.4
BRIBI	Bribri	3.01	98	eP	Pn	18 32 30.0	+1.8
LIMN	Finca el Limon	3.01	350	P	Pn	18 32 29.7	+1.4
ALCO	Alturas Coton,	3.17	110	eP	Pn	18 32 30.9	+0.3
NELY	Ciudad Neily	3.19	116	eP	Pn	18 32 31.6	+1.0
CDITO	Canoas	3.29	117	P	Pn	18 32 33.4	+1.4
CDITO				S	Sn	18 33 12.5	+2.6
DMCAL	E. de Neily	3.31	115	eP	Pn	18 32 33.5	+1.0
LPPC	Paso Canoas	3.33	117	eP	Pn	18 32 34.0	+1.3
POTN	Potosi Cosigui	3.33	331	eP	Pn	18 32 34.7	+2.0
CSGN	Cosiguina Volc	3.34	330	eP	Pn	18 32 34.4	+1.5
BRU2	Volcan	3.35	112		Pn	18 32 33.4	+0.3
BRU2	Volcan	3.35	112	⇓iP	Pn	18 32 34.7	+1.5
BRU2	Volcan	3.35	112	eP	Pn	18 32 34.5	+1.3
ARIEL	Armuelles	3.44	121	eP	Pb	18 32 42.7	-0.5
PTPA	Petro Terminal	3.47	122	⇓eP	Pn	18 32 35.2	+0.6
LMNES	Limones	3.54	123	⇑eP	Pn	18 32 36.0	+0.5
LMNES	Limones	3.54	123	eP	Pn	18 32 35.7	+0.2
JEFFS	S de V. Baru	3.55	113	eP	Pn	18 32 36.6	+0.8
BQTLY	Boquete Panama	3.58	111	eP	Pn	18 32 37.4	+1.2
BQTLY	Boquete Panama	3.58	111	eP	Pn	18 32 37.3	+1.1
SIUN	Universidad Ur	3.76	16	Pn	Pn	18 32 38.9	+0.3
PBNVO	Pueblo Nuevo,	3.78	108	eP	Pn	18 32 40.0	+1.2
RBALA	Bur	3.82	108	⇓eP	Pn	18 32 40.0	+0.6
RBALA	Bur	3.82	108	⇓eP	Pn	18 32 40.1	+0.6
KKNTU	Kakintº	4.16	107	⇑eP	Pn	18 32 44.4	+0.3
TGUH	Tegucigalpa,Un	4.20	341		Pn	18 32 46.7	+2.0
TGUH	Tegucigalpa,Un	4.20	341	P	Pn	18 32 45.8	+1.1
RMDIO	Remedios, Chir	4.36	115	eP	Pn	18 32 48.8	+2.0
BILN	Bilwi Airport	4.62	31	eP	Pn	18 32 55.7	+5.3
SAIC	Isla e San And	4.73	58	P	Pn	18 32 53.9	+2.0
PRVC	Isla de Provid	5.47	53	Pn	Pn	18 33 02.4	+0.3
PRVC	Isla de Provid	5.47	53	P	Pn	18 33 06.5	+4.4
	107nm,0.8s						
AZU	Azuero	5.95	112	eP	Pn	18 33 10.7	+2.0
BCIP	Isla Barro Col	5.99	98		Pn	18 33 09.7	+0.5
BCIP	Isla Barro Col	5.99	98	P	Pn	18 33 09.7	+0.5
BCIP	Isla Barro Col	5.99	98	eP	Pn	18 33 09.3	+0.1
BCIP	Isla Barro Col	5.99	98	P	Pn	18 33 09.7	+0.5
	247nm,1.0s						
APG	El Apazote	6.66	318	P	Pn	18 33 22.8	+4.1
	2.7nm,0.5s,baz=137,slow=11,SNR=21						
MAPC	Malpelo	7.35	145	P	Pn	18 33 27.5	-0.4
	124nm,1.1s						
CAPC	Capurgana	8.49	99	P	Pn	18 33 47.3	+3.6
	1µm158nm,1.1s						
CCIG	Comitan	8.70	316		Pn	18 33 49.1	+2.5
LCBC	Los crdobas,	9.42	97	P	Pn	18 33 57.2	+0.9
	171nm,1.6s						
DBBC	Dabeiba	9.99	107	P	Pn	18 34 07.6	+3.3
TEIG	Tepich	10.36	347	P	Pn	18 34 10.2	+1.0
	0.8nm,0.6s,baz=132,slow=18,SNR=9.7						
TEIG	Tepich	10.36	347		Pn	18 34 11.6	+2.3
TEIG	Tepich	10.36	347	P	Pn	18 34 13.1	+3.9
GR1C	Gorgona, Isla	10.36	132	P	Pn	18 34 12.1	+2.8
UREC	San Jos de Ur	10.44	102	P	Pn	18 34 11.8	+1.5
	55nm,0.8s						
YOTC	Yotoco, Valle	11.20	122	P	Pn	18 34 20.8	0.0
	33nm,1.3s						
CMIG	Matias Romero	11.22	309	P	Pn	18 34 24.0	+3.0
	15nm,0.6s,baz=130,slow=11,SNR=13						
JAMC	Jamundi, Valle	11.37	126	P	Pn	18 34 24.0	+0.7
	2µm27nm,1.1s						
GUY2C	Guyana, Caldas	11.44	114	P	Pn	18 34 27.4	+2.9
	665nm56nm,0.9s						
BBAC	Balboa, Cauca	11.70	133	P	Pn	18 34 31.0	+3.2
	842nm109nm,1.0s						
POPC	Popayan, Colom	11.78	129	P	Pn	18 34 31.3	+2.3
	822nm71nm,1.3s						
ORTC	Ortega, Tolima	12.16	120	P	Pn	18 34 33.0	-1.0
CRUC	La Cruz	12.23	133	P	Pn	18 34 37.7	+2.6
TULM	Tulcn-Chalpat	12.27	139	P	Pn	18 34 41.7	+5.9
SPBC	San Pablo de B	12.45	110	P	Pn	18 34 41.8	+3.8
	36nm,1.9s						
ROSC	El Rosal	12.55	114	P	Pn	18 34 40.4	+0.8
	3.7nm,0.3s,baz=289,slow=15,SNR=5.2						
ROSC				LR	LR	18 40 04.1	
	comp=Z,1µm,18.3s,baz=291,slow=40						
ROSC	El Rosal	12.55	114	P	Pn	18 34 44.4	+4.9
PRAC	Prado	12.57	119	P	Pn	18 34 40.9	+1.3
	46nm,1.2s						
BONI	La Bonita	12.64	139	P	P	18 34 47.6	-4.0
BETC	Betania	12.67	125	P	Pn	18 34 44.9	+4.0
GARC	Garzon, Huila	12.93	127	P	Pn	18 34 45.9	+1.3
	27nm,1.4s						
CASC	Dorado de Casc	13.00	139	P	Pn	18 34 49.5	+4.0
	1µm103nm,1.1s						
CHIC	Chingaza	13.17	113	P	Pn	18 34 49.8	+1.8
	29nm,1.1s						
FLOC	Florencia	13.18	129	P	Pn	18 34 49.2	+1.3
	954nm90nm,1.3s						
URMC	La Uribe, Meta	13.24	120	P	Pn	18 34 50.0	+1.2
	72nm,1.2s						
PAMC	Pamplona, Colo	13.27	101	P	Pn	18 34 50.9	+1.4
	168nm24nm,0.8s						
RUSC	La Rusia	13.29	107	P	Pn	18 34 48.9	-0.9
VILC	Villavicencio,	13.43	115	P	Pn	18 34 54.9	+3.6
	46nm,0.8s						
COHC	Cochancay	14.08	152	P	Pn	18 35 03.3	+3.2
	0.4nm,1.2s						
MACC	Macarena, Meta	14.28	123	P	Pn	18 35 04.2	+1.3
	112nm,0.9s						
PTLC	Puerto Leguiza	14.75	131	P	Pn	18 35 11.3	+2.1
	1µm76nm,1.2s						
NMDO	Nuevo Mundo	14.76	44		Pn	18 35 10.7	+1.3
SDV	Santo Domingo	15.04	93	P	Pn	18 35 11.6	-1.7
	5.1nm,0.8s,baz=278,slow=10,SNR=7.5						
SDV				S	Sn	18 37 59.3	+0.2
	2.2nm,0.5s,baz=44,slow=15,SNR=1.3						
SDV				LR	LR	18 42 47.8	
	comp=Z,1µm,18.0s,baz=247,slow=45						
SDV	Santo Domingo	15.04	93	eP	Pn	18 35 14.8	+1.5
SDV	Santo Domingo	15.04	93	P	Pn	18 35 14.7	+1.3
	32nm,0.9s						
MCRA	Macar, Loja	15.50	158	P	P	18 35 21.4	-1.9
	43nm,1.2s						
061Z	Ochoppi	16.39	16	P	Pn	18 35 30.8	+0.4
061Z				IAmb	IAmb	18 35 36.5	
	comp=Z,273nm,1.1s						
SDDR	Presa de Saban	16.62	56	P	P	18 35 38.9	+3.2
ATAH	Atahualpa	18.64	156	P	Pn	18 36 02.5	+3.7
	comp=Z,14nm,0.9s,baz=17,slow=6.3,SNR=6.2						
ATAH				LR	LR	18 42 16.8	
	comp=Z,771nm,19.1s,baz=334,slow=34						
656A	Willston	19.44	9	P	P	18 36 07.4	+0.8
656A				IAmb	IAmb	18 36 15.4	
	comp=Z,87nm,0.9s						
CRPR	Cabo Rojo, PR	19.79	64	P	P	18 36 08.3	-2.2
AOPR	Arecibo Observ	20.23	64	P	P	18 36 13.2	-2.1
OBIP	Obispado Ponce	20.25	65	P	P	18 36 13.3	-2.2
SJG	San Juan	20.68	65	P	P	18 36 17.4	-2.8
	comp=Z,2.9nm,0.3s,baz=251,slow=12,SNR=7.5						
	comp=Z,2.9nm,0.3s						
SJG	San Juan	20.68	65	P	P	18 36 17.6	-2.6
SJG	San Juan	20.68	65	P	P	18 36 17.6	-2.6
SJG				pmax	pmax		
	comp=Z,21nm,0.8s						
SJG	San Juan	20.68	65	P	P	18 36 20.3	+0.1
	comp=Z,19nm,1.1s						
SGC2	Sao Gabriel da	21.34	117	P	P	18 36 29.0	+1.7
	comp=Z,1µmcomp=Z,120nm,1.1s						
346A	Big Creek Wild	21.47	351	P	P	18 36 26.0	-2.6
346A				IAmb	IAmb	18 36 31.1	
	comp=Z,125nm,1.0s						
250A	Grady	21.80	359	P	P	18 36 30.7	-1.4
250A				IAmb	IAmb	18 36 36.3	
	comp=Z,135nm,1.1s						
HKT	Hockley	21.86	336	P	P	18 36 31.4	-1.4
HKT				IAmb	IAmb	18 36 40.6	

	comp=Z,86nm,1.3s						
HKT	Hockley	21.86	336	*c* *i*P	P	18 36 33.8	+1.1
HKT				pmax	pmax		
	comp=Z,75nm,1.3s						
CZSB	Cruzeiro do Su	22.00	143	*e*P	P	18 36 37.3	+2.8
CZSB	Cruzeiro do Su	22.00	143	P	P	18 36 37.2	+2.8
833A	Chaparral WMA,	22.17	327	P	P	18 36 35.7	-0.5
833A				IAmb	IAmb	18 36 40.3	
	comp=Z,82nm,0.8s						
152A	Waverly Hall	22.51	2	P	P	18 36 40.7	+1.0
LRAL	Lakeview Retre	22.87	357	P	P	18 36 42.3	-1.3
LRAL				IAmb	IAmb	18 36 46.9	
	comp=Z,86nm,0.8s						
HNDO	Hondo	23.08	329	P	P	18 36 42.5	-3.2
Z47A	Carrollton	23.10	355	P	P	18 36 44.8	-1.1
Z47A				IAmb	IAmb	18 36 49.5	
	comp=Z,70nm,0.8s						
GOGA	Godfrey	23.33	5	P	P	18 36 45.6	-2.5
GOGA				IAmb	IAmb	18 36 50.0	
	comp=Z,69nm,0.8s						
GOGA	Godfrey	23.33	5	P	P	18 36 45.6	-2.5
GOGA				pmax	pmax		
	comp=Z,69nm,0.8s						
NNA	Nana	23.67	158	⇑*e*P	P	18 36 54.4	+2.7
NNA				pmax	pmax		
	comp=Z,35nm,1.5s						
NNA	Nana	23.67	158	P	P	18 36 50.4	-1.3
	comp=Z,17nm,1.1s						
Y49A	Blount Mountai	23.68	359	P	P	18 36 48.7	-2.9
Y49A				IAmb	IAmb	18 36 53.0	
	comp=Z,68nm,0.7s						
237A	Washetta, Mont	23.69	339	P	P	18 36 49.2	-2.4
Y52A	Lilburn	23.73	4	P	P	18 36 49.1	-3.0
Y52A				IAmb	IAmb	18 36 55.2	
	comp=Z,94nm,0.9s						
Z41A	Richland Creek	23.95	346	P	P	18 36 50.8	-3.2
Z41A				IAmb	IAmb	18 36 55.8	
	comp=Z,57nm,0.8s						
JCT	Junction City	24.11	329	P	P	18 36 54.8	-0.9
JCT				IAmb	IAmb	18 36 57.8	
	comp=Z,36nm,0.7s						
JCT	Junction City	24.11	329	P	P	18 36 54.8	-0.9
JCT				pmax	pmax		
	comp=Z,36nm,0.7s						
HODGE	Hodges	24.27	7	P	P	18 36 54.5	-2.5
X48A	Hartselle	24.29	358	P	P	18 36 53.4	-3.8
X48A				IAmb	IAmb	18 36 59.3	
	comp=Z,57nm,0.9s						
FPAL	Fort Paine	24.35	0	P	P	18 36 54.7	-3.1
BRDY	Brady	24.39	332	P	P	18 36 55.0	-3.2
BRDY				IAmb	IAmb	18 37 00.8	
	comp=Z,49nm,0.8s						
JSC	Jenkinsville	24.45	9	P	P	18 36 58.2	-0.5
JSC	Jenkinsville	24.45	9	P	P	18 36 58.2	-0.5
JSC				pmax	pmax		
	comp=Z,98nm,0.9s						
OXF	Oxford	24.54	353	P	P	18 36 58.7	-0.8
OXF	Oxford	24.54	353	P	P	18 36 58.7	-0.8
OXF				pmax	pmax		
	comp=Z,132nm,0.9s						
PLAL	Pickwick Lake	24.88	356	P	P	18 37 00.8	-1.7
PLAL				IAmb	IAmb	18 37 04.7	
	comp=Z,57nm,0.9s						
BIRD	Birdtown, Kers	24.95	11	P	P	18 37 01.3	-1.8
BIRD				IAmb	IAmb	18 37 05.0	
	comp=Z,78nm,0.9s						
SWET	Sewanee	25.02	360	P	P	18 37 02.6	-1.3
TEFE	Tefe	25.06	122	*e*P	P	18 37 06.2	+1.8
OZNA	Ozona	25.15	328	P	P	18 37 03.9	-1.3
OZNA				IAmb	IAmb	18 37 08.5	
	comp=Z,44nm,0.9s						
CPCT	Cooper Cave	25.29	3	P	P	18 37 06.2	0.0
CPCT				IAmb	IAmb	18 37 09.9	
	comp=Z,116nm,1.3s						
KMSC	Kings Mountain	25.29	9	P	P	18 37 06.4	+0.2
UALR	University of	25.29	347	P	P	18 37 04.3	-2.1
UALR				IAmb	IAmb	18 37 08.4	
	comp=Z,59nm,0.8s						
MIAR	Mount Ida	25.36	345	P	P	18 37 06.2	-0.8
MIAR	Mount Ida	25.36	345	P	P	18 37 06.2	-0.8
MIAR				pmax	pmax		
	comp=Z,97nm,0.9s						
TXAR	Lajitas Array	25.40	321	P	P	18 37 08.7	+1.2
	comp=Z,21nm,0.7s,baz=143,slow=8.7,SNR=77						
TXAR				PcP	PcP	18 40 41.8	+2.3
	comp=Z,3.2nm,0.8s,baz=142,slow=4.7,SNR=6.2						
TXAR				ScP	ScP	18 44 14.5	-1.8
	comp=Z,0.2nm,0.8s,baz=48,slow=1.8,SNR=1.8						
	comp=Z,21nm,0.7s						
TXAR	Lajitas Array	25.40	321	P	P	18 37 07.0	-0.5
TXAR	Lajitas Array	25.40	321	P	P	18 37 07.0	-0.5
W57A	Gilead	25.52	11	IAmb	IAmb	18 37 09.6	
	comp=Z,41nm,0.8s						
TKL	Tuckaleechee C	25.54	4	LR	LR	18 47 57.4	
	comp=Z,452nm,18.3s,baz=187,slow=39						
TKL	Tuckaleechee C	25.54	4	IAmb	IAmb	18 37 12.1	
	comp=Z,88nm,1.1s						
V48A	Smith Brothers	25.56	358	IAmb	IAmb	18 37 09.5	
	comp=Z,70nm,0.8s						
WHAR	Wooly Hollow	25.78	348	IAmb	IAmb	18 37 12.6	
	comp=Z,48nm,0.8s						
ABTX	Abilene, Hawle	25.80	332	IAmb	IAmb	18 37 14.6	
	comp=Z,52nm,0.8s						
SGCY	Sterling City	25.93	329	IAmb	IAmb	18 37 15.2	
	comp=Z,36nm,0.8s						
WVT	Waverly	26.00	356	P	P	18 37 11.3	-1.4
WVT	Waverly	26.00	356	P	P	18 37 11.3	-1.4
WVT				pmax	pmax		
	comp=Z,28nm,0.8s						
V55A	Taylorsville	26.00	9	IAmb	IAmb	18 37 14.9	
	comp=Z,54nm,1.0s						
WTFS	Witchita Falls	26.28	336	IAmb	IAmb	18 37 19.1	
	comp=Z,37nm,0.8s						
BOAV	Boa Vista	26.28	105	P	P	18 37 12.9	-2.6
BOAV	Boa Vista	26.28	105	*e*P	P	18 37 17.1	+1.6
BOAV	Boa Vista	26.28	105	P	P	18 37 16.1	+0.6
	comp=Z,20nm,0.8s						
U49A	Red Boiling Sp	26.32	0	IAmb	IAmb	18 37 16.4	
	comp=Z,35nm,0.8s						
LCAR	Lake Charles	26.32	350	IAmb	IAmb	18 37 15.7	
	comp=Z,91nm,1.5s						
FCAR	Ozark Folk Cen	26.32	348	IAmb	IAmb	18 37 18.0	
	comp=Z,36nm,0.8s						
MNHN	Monahans	26.35	326	IAmb	IAmb	18 37 20.6	
	comp=Z,42nm,0.7s						
TZTN	Tazewell	26.43	4	IAmb	IAmb	18 37 20.7	
	comp=Z,32nm,0.8s						
U54A	Nelsons Funny	26.58	7	IAmb	IAmb	18 37 23.8	
	comp=Z,60nm,0.9s						
APMT	Aspermont	26.61	333	IAmb	IAmb	18 37 22.1	
	comp=Z,32nm,0.8s						
U56A	King	26.62	10	IAmb	IAmb	18 37 20.1	
	comp=Z,49nm,0.9s						
X34A	Smith Ranch, M	26.76	338	IAmb	IAmb	18 37 21.2	
	comp=Z,42nm,1.0s						
T47A	Sharon Grove	26.82	358	IAmb	IAmb	18 37 20.4	
	comp=Z,59nm,0.8s						
ODSA	Odessa	26.84	327	IAmb	IAmb	18 37 24.6	
	comp=Z,43nm,0.9s						
PBMO	Poplar Bluff	26.91	352	IAmb	IAmb	18 37 21.1	
	comp=Z,41nm,1.2s						
POST	Post	27.05	330	IAmb	IAmb	18 37 26.6	
	comp=Z,32nm,0.7s						
FNO	Franklin	27.19	339	IAmb	IAmb	18 37 24.0	
	comp=Z,51nm,0.7s						
WMOK	Wichita Mounta	27.25	336	IAmb	IAmb	18 37 28.6	
	comp=Z,40nm,0.9s						
CGM3	Cape Girardeau	27.32	353	IAmb	IAmb	18 37 24.9	
	comp=Z,62nm,1.3s						
DEOK	Depew	27.42	341	IAmb	IAmb	18 37 36.5	
	comp=Z,36nm,0.9s						
BLA	Blacksburg	27.45	9	IAmb	IAmb	18 37 28.2	
	comp=Z,74nm,1.1s						
T57A	Hurt	27.46	11	IAmb	IAmb	18 37 27.1	
	comp=Z,41nm,0.9s						
S51A	Beattyville	27.52	4	IAmb	IAmb	18 37 27.2	
	comp=Z,41nm,0.8s						
OK052	Battle Ridge R	27.66	341	IAmb	IAmb	18 37 27.6	
	comp=Z,54nm,0.8s						
S44A	Carbondale	27.67	354	IAmb	IAmb	18 37 28.1	
	comp=Z,54nm,0.9s						
SIUC	Southern Illin	27.69	354	IAmb	IAmb	18 37 28.2	
	comp=Z,63nm,0.9s						
OK029	Liberty Lake	27.70	339	IAmb	IAmb	18 37 28.4	
	comp=Z,51nm,1.2s						
QUOK	Quay	27.79	341	IAmb	IAmb	18 37 28.8	
	comp=Z,30nm,0.7s						
T59A	Double "B" Far	27.80	14	IAmb	IAmb	18 37 30.8	
	comp=Z,68nm,1.4s						
USIN	University of	27.82	357	IAmb	IAmb	18 37 29.2	
	comp=Z,44nm,0.9s						
S54A	Dingess, Beckl	27.90	8	IAmb	IAmb	18 37 31.0	
	comp=Z,85nm,1.4s						
WCI	Wyandotte Cave	28.04	359	P	P	18 37 30.5	-0.5
WCI	Wyandotte Cave	28.04	359	P	P	18 37 30.5	-0.5
WCI				pmax	pmax		
	comp=Z,68nm,0.9s						
R49A	Shelbyville	28.10	1	IAmb	IAmb	18 37 31.9	
	comp=Z,46nm,0.8s						
R50A	Paris	28.12	3	IAmb	IAmb	18 37 32.5	
	comp=Z,35nm,0.9s						
CCM	Cathedral Cave	28.28	351	P	P	18 37 30.7	-2.5
CCM				IAmb	IAmb	18 37 33.1	
	comp=Z,34nm,1.1s						
CCM	Cathedral Cave	28.28	351	P	P	18 37 30.7	-2.5
CCM				pmax	pmax		
	comp=Z,34nm,1.1s						
MACA	Manacapuru-AM	28.29	116	*e*P	P	18 37 35.4	+1.8
R55A	Marlinton	28.55	9	IAmb	IAmb	18 37 37.4	
	comp=Z,48nm,0.9s						
OLIL	Olney	28.61	356	IAmb	IAmb	18 37 37.4	
	comp=Z,50nm,0.8s						
ELIS	Ellis County	28.66	337	IAmb	IAmb	18 37 38.4	
	comp=Z,56nm,1.1s						
Q44A	Meyer Farm, Va	28.85	355	IAmb	IAmb	18 37 38.3	
	comp=Z,58nm,0.9s						
BLO	Bloomington	28.98	359	IAmb	IAmb	18 37 39.4	
	comp=Z,46nm,0.8s						
CBN	Corbin Frederi	29.02	14	IAmb	IAmb	18 37 41.4	
	comp=Z,61nm,0.9s						
P51A	Williamsport	29.39	4	IAmb	IAmb	18 37 43.5	
	comp=Z,33nm,1.0s						
O49A	Covington	30.02	2	IAmb	IAmb	18 37 48.7	
	comp=Z,31nm,1.0s						
O52A	Adamsville	30.13	6	IAmb	IAmb	18 37 50.2	
	comp=Z,48nm,0.8s						
P38A	Dawn	30.21	348	IAmb	IAmb	18 37 49.7	
	comp=Z,28nm,0.6s						
O54A	Avella	30.37	8	IAmb	IAmb	18 37 54.3	
	comp=Z,92nm,1.7s						
RTBA	Rita Blanca	30.39	332	IAmb	IAmb	18 37 53.3	
	comp=Z,19nm,0.8s						
KSU1	Kansas State U	30.46	343	IAmb	IAmb	18 37 52.8	
	comp=Z,28nm,0.7s						
R32A	Long Quarter,	30.50	340	IAmb	IAmb	18 37 53.3	
	comp=Z,24nm,0.9s						
Y22A	Socorro	30.65	324	IAmb	IAmb	18 37 58.6	
	comp=Z,30nm,0.9s						
N53A	Lisbon	30.92	7	IAmb	IAmb	18 37 57.2	
	comp=Z,37nm,0.8s						
MVL	Millersville	30.97	14	IAmb	IAmb	18 37 58.7	
	comp=Z,51nm,1.1s						
ANMO	Albuquerque	31.10	326	⇑*e*P	P	18 37 58.6	+0.1
ANMO				pmax	pmax		
	comp=Z,14nm,0.9s						
ANMO	Albuquerque	31.10	326	PcP	PcP	18 40 52.0	-1.5
TASM	ASL Pad, Albuq	31.10	326	IAmb	IAmb	18 38 02.0	
	comp=Z,12nm,0.9s						
TASM	ASL Pad, Albuq	31.10	326	IAmb	IAmb	18 38 02.0	
	comp=Z,12nm,1.0s						
CBKS	Cedar Bluff	31.20	339	P	P	18 37 58.2	-1.0
CBKS				IAmb	IAmb	18 38 00.5	
	comp=Z,29nm,0.9s						
CBKS	Cedar Bluff	31.20	339	P	P	18 37 58.2	-1.0
CBKS				pmax	pmax		
	comp=Z,29nm,0.9s						
SSPA	Standing Stone	31.24	12	P	P	18 37 59.9	+0.6
SSPA				PcP	PcP	18 40 52.3	-1.2
N38A	Joes South For	31.29	349	IAmb	IAmb	18 37 59.8	
	comp=Z,22nm,0.6s						
M50A	Fremont	31.30	4	IAmb	IAmb	18 37 59.9	
	comp=Z,54nm,1.1s						
LPAZ	La Paz	31.52	146	P	P	18 38 03.5	+0.7
	comp=Z,2.9nm,1.0s,baz=336,slow=8.8,SNR=6.5						
LPAZ				LR	LR	18 51 34.2	
	comp=Z,234nm,19.3s,baz=308,slow=38						
	comp=Z,2.9nm,1.0s						
LPAZ	La Paz	31.52	146	*e*P	P	18 38 04.2	+1.5
LPAZ	La Paz	31.52	146	P	P	18 38 02.2	-0.5
L40A	Anamosa	32.21	352	IAmb	IAmb	18 38 09.7	
	comp=Z,25nm,0.9s						
PAL	Palisades	32.56	17	IAmb	IAmb	18 38 12.1	
	comp=Z,36nm,1.0s						
KSPA	Keystone Colle	32.59	14	IAmb	IAmb	18 38 12.5	
	comp=Z,43nm,1.0s						
SDCO	Great Sand Dun	32.74	330	IAmb	IAmb	18 38 15.7	
	comp=Z,17nm,0.8s						
WSPT	Westport, CT	32.88	18	IAmb	IAmb	18 38 15.3	
	comp=Z,62nm,1.4s						
JFWS	Jewell Farm	32.94	354	IAmb	IAmb	18 38 20.1	
	comp=Z,20nm,0.8s						
BGNE	Belgrade	33.04	343	IAmb	IAmb	18 38 15.0	
	comp=Z,27nm,0.7s						
L34A	Svendsen Farm,	33.09	346	IAmb	IAmb	18 38 31.4	
	comp=Z,17nm,0.6s						
ITTB	Itaituba	33.24	114	*e*P	P	18 38 18.6	+1.4
MDP	Montagnes des	33.26	96	LR	LR	18 52 50.9	
	comp=Z,739nm,18.6s,baz=278,slow=38						
K57A	Scipio Center	33.54	12	IAmb	IAmb	18 38 20.0	
	comp=Z,48nm,1.1s						
MVCO	Mesa Verde	33.88	327	IAmb	IAmb	18 38 26.4	
	comp=Z,74nm,1.8s						
I40A	Norwalk	33.94	354	IAmb	IAmb	18 38 22.5	
	comp=Z,24nm,0.7s						
VILB	Vilhena	34.23	131	*e*P	P	18 38 27.6	+1.8
L61B	Northampton	34.25	17	IAmb	IAmb	18 38 26.4	
	comp=Z,21nm,0.8s						
K62A	Royalston	34.58	18	IAmb	IAmb	18 38 29.6	
	comp=Z,37nm,1.1s						
J59A	Piesco	34.70	15	IAmb	IAmb	18 38 29.9	
	comp=Z,25nm,1.0s						
NPGB	Novo Progresso	34.80	118	*e*P	P	18 38 31.4	+0.7
ECSD	EROS Data Cent	34.81	346	IAmb	IAmb	18 38 29.5	
	comp=Z,18nm,0.8s						
PV03	Paradox Valley	34.84	327	IAmb	IAmb	18 38 33.7	
	comp=Z,15nm,0.8s						
PV05	Paradox Valley	34.84	327	IAmb	IAmb	18 38 33.5	
	comp=Z,17nm,0.8s						
PV07	Paradox Valley	34.87	328	IAmb	IAmb	18 38 34.8	
	comp=Z,26nm,1.2s						
PV11	David Mesa, Pa	34.88	327	IAmb	IAmb	18 38 34.1	
	comp=Z,22nm,0.8s						
PV16	Nyswonger Mesa	34.91	327	IAmb	IAmb	18 38 34.3	
	comp=Z,16nm,0.8s						
PV17	East Wray Mesa	34.91	327	IAmb	IAmb	18 38 34.3	
	comp=Z,21nm,0.7s						
PV19	Morning Glory	34.95	327	IAmb	IAmb	18 38 34.5	
	comp=Z,32nm,0.8s						
PV20	West Nyswonger	34.96	327	IAmb	IAmb	18 38 34.6	
	comp=Z,25nm,0.8s						
PV04	Paradox Valley	34.97	328	IAmb	IAmb	18 38 35.5	
	comp=Z,33nm,1.2s						
PV22	Blue Mesa, Par	35.01	328	IAmb	IAmb	18 38 35.8	
	comp=Z,24nm,1.3s						
PV10	Paradox Valley	35.03	327	IAmb	IAmb	18 38 34.7	
	comp=Z,30nm,0.8s						
SADO	Sadowa	35.05	8	LR	LR	18 53 08.0	
	comp=Z,417nm,19.0s,baz=158,slow=37						
PV23	Carpenter Ridg	35.07	327	IAmb	IAmb	18 38 36.2	
	comp=Z,20nm,0.9s						
J61A	Chester	35.11	17	IAmb	IAmb	18 38 34.4	
	comp=Z,42nm,1.1s						
G40A	Rib Lake	35.27	355	IAmb	IAmb	18 38 34.3	
	comp=Z,14nm,0.7s						
HNH	Hanover	35.51	17	IAmb	IAmb	18 38 48.3	
	comp=Z,60nm,1.7s						
SPMN	Marine on St.	35.53	352	IAmb	IAmb	18 38 35.3	
	comp=Z,26nm,0.7s						
O20A	White River Ci	35.94	330	IAmb	IAmb	18 38 44.2	
	comp=Z,22nm,1.0s						
I62A	Tamworth	35.95	18	IAmb	IAmb	18 38 41.6	
	comp=Z,21nm,0.8s						
WBO	Williamsburg	35.97	13	IAmb	IAmb	18 38 40.7	
	comp=Z,32nm,1.1s						
PDRB	Porto dos Gac	36.07	126	*e*P	P	18 38 42.1	+0.3
I63A	Otisfield	36.34	19	IAmb	IAmb	18 38 45.0	
	comp=Z,40nm,1.0s						
SRU	San Rafael Swe	36.36	327	IAmb	IAmb	18 38 47.2	
	comp=Z,22nm,0.9s						
CLDB	Colider	36.41	124	*e*P	P	18 38 45.1	+0.5
PFO	Pinyon Flats O	36.58	315	LR	LR	18 55 58.0	
	comp=Z,167nm,18.1s,baz=92,slow=40						
PFO	Pinyon Flats O	36.58	315	⇑*e*P	P	18 38 48.1	+2.0
PFO				pmax	pmax		
	comp=Z,40nm,1.0s						
PFO	Pinyon Flats O	36.58	315	P	P	18 38 49.5	+3.5
PTLB	Pontes e Lacer	36.64	133	*e*P	P	18 38 47.7	+1.2
DNR	Dunn Ranch,Anz	36.68	314	P	P	18 38 43.8	-3.1
DNR				IAmb	IAmb	18 38 51.6	
	comp=Z,40nm,1.1s						
P17A	Butcher Ranch,	36.73	327	IAmb	IAmb	18 38 50.5	
	comp=Z,20nm,0.8s						
F33A	5 Mile Ranch,	36.75	348	IAmb	IAmb	18 38 45.8	
	comp=Z,34nm,0.7s						
SZCU	Shurtz Canyon	36.77	323	IAmb	IAmb	18 38 46.0	
	comp=Z,31nm,1.2s						
WVL	Waterville	37.10	19	IAmb	IAmb	18 38 52.4	
	comp=Z,52nm,1.3s						
K22A	Casper	37.15	334	IAmb	IAmb	18 38 52.2	
	comp=Z,32nm,1.3s						
TRQ	Mont Tremblant	37.29	13	IAmb	IAmb	18 38 51.8	
	comp=Z,34nm,1.0s						
RSSD	Black Hills	37.41	338	P	P	18 38 53.3	+0.3
RSSD	Black Hills	37.41	338	P	P	18 38 53.3	+0.3
RSSD				pmax	pmax		
	comp=Z,13nm,1.0s						
G62A	West of Eustis	37.41	18	IAmb	IAmb	18 38 54.0	
	comp=Z,38nm,0.8s						
G65A	Princeton	38.37	21	IAmb	IAmb	18 39 02.1	
	comp=Z,29nm,1.0s						
E28A	Huff	38.51	343	IAmb	IAmb	18 39 02.1	
	comp=Z,30nm,0.8s						
VLDQ	Val d'Or	38.56	9	IAmb	IAmb	18 39 02.0	
	comp=Z,36nm,1.2s						
PDAR	Pinedale Array	38.60	332	P	P	18 39 02.8	-0.3
	comp=Z,5.3nm,0.7s,baz=130,slow=9.1,SNR=41						
PDAR				PcP	PcP	18 41 16.7	+1.6
	comp=Z,1.6nm,0.7s,baz=140,slow=4.8,SNR=4.6						
PDAR				LR	LR	18 57 42.4	
	comp=Z,150nm,20.8s,baz=126,slow=40						
	comp=Z,5.3nm,0.7s						
PDAR	Pinedale Array	38.60	332	P	P	18 39 02.6	-0.5
PDAR				PcP	PcP	18 41 16.4	+1.3
HWUT	Hardware Ranch	38.71	329	IAmb	IAmb	18 39 06.6	
	comp=Z,23nm,0.7s						
AGMN	Agassiz Nation	39.02	349	IAmb	IAmb	18 39 06.2	
	comp=Z,36nm,0.8s						
PRPB	Parauapebas	39.34	113	*e*P	P	18 39 10.4	+0.9
SALV	Santo Antonio	39.46	131	*e*P	P	18 39 11.4	+1.1
D62A	Allapoint, All	39.54	18	IAmb	IAmb	18 39 11.2	
	comp=Z,38nm,1.0s						
SNOW	Snow King Moun	39.70	331	IAmb	IAmb	18 39 20.6	
	comp=Z,43nm,1.2s						
LDAQ	Lac Daran	39.72	15	IAmb	IAmb	18 39 12.0	
	comp=Z,39nm,1.0s						
LMN	Caledonia Moun	39.94	23	P	P	18 39 12.2	-1.7
LMN				IAmb	IAmb	18 39 14.5	
	comp=Z,42nm,1.1s						
EPLO	Experimental L	40.02	352	IAmb	IAmb	18 39 12.9	
	comp=Z,19nm,0.7s						
ELK	Elko	40.10	325	IAmb	IAmb	18 39 19.5	
	comp=Z,25nm,0.9s						
NVAR	Mina Array Bea	40.52	320	P	P	18 39 22.0	+2.8
	comp=Z,52nm,0.8s,baz=129,slow=7.1,SNR=156						
NVAR				PcP	PcP	18 41 23.9	+2.6
	comp=Z,6.6nm,0.7s,baz=135,slow=4.6,SNR=5.8						
AC04	Llanos de Chal	40.65	160	P	P	18 39 19.6	-0.4
AC04				IAmb	IAmb	18 40 36.2	
	comp=Z,26nm,0.6s						
BATG	Bathurst New B	40.69	21	P	P	18 39 19.9	-0.2
BATG				IAmb	IAmb	18 39 20.9	
	comp=Z,49nm,1.1s						
YMR	Madison River	40.72	332	P	P	18 39 18.6	-2.1
SNDB	Serra Nova Dou	40.72	122	*e*P	P	18 39 22.2	+1.4
ULM	Lac du Bonnet	40.90	350	P	P	18 39 19.5	-2.3
	comp=Z,15nm,0.8s,baz=159,slow=8.5,SNR=13						
ULM				LR	LR	18 57 29.5	
	comp=Z,203nm,19.9s,baz=186,slow=38						
	comp=Z,15nm,0.8s						
ULM	Lac du Bonnet	40.90	350	*c* *e*P	P	18 39 19.2	-2.6
PP1B	Ponte de Pedra	41.13	132	*e*P	P	18 39 25.9	+1.7
BDQN	Bodoquena, MS	41.70	137	*e*P	P	18 39 29.8	+1.0
MURT	Porto Murtinho	41.98	139	*e*P	P	18 39 32.0	+0.9
ARAG	Araguaiana, MT	42.33	127	*e*P	P	18 39 34.6	+0.7
AQDB	Aquidauana	42.43	136	*e*P	P	18 39 36.1	+1.3
SMTB	Santa Maria do	42.47	115	*e*P	P	18 39 36.4	+1.2
BEKR	Beckworth	42.66	320	IAmb	IAmb	18 39 41.0	
	comp=Z,28nm,1.0s						
CO06	Fray Jorge	42.75	162	P	P	18 39 35.8	-1.4
WVOR	Wild Horse Val	43.14	324	IAmb	IAmb	18 39 43.7	
	comp=Z,61nm,1.1s						
RPN	Rapa Nui	43.44	211	LR	LR	18 53 01.9	
	comp=Z,235nm,21.8s,baz=345,slow=29						
H03N2	Juan Fernandez	43.77	172	T	T	19 26 24.2	
	baz=351,slow=76,SNR=26						
H03N1	Juan Fernandez	43.77	172	T	T	19 26 26.2	
	baz=351,slow=76,SNR=30						
H03N3	Juan Fernandez	43.79	172	T	T	19 26 22.2	
	baz=351,slow=76,SNR=28						
HATC	Hat Creek Radi	43.88	320	IAmb	IAmb	18 39 50.3	
	comp=Z,44nm,0.9s						
O02D	Mt. Diablo Mer	44.38	319	P	P	18 39 51.5	+1.2
M03C	McCloud	44.56	321	IAmb	IAmb	18 39 54.2	
	comp=Z,27nm,0.8s						
AMBA	Amambai (Brazi	44.59	138	*e*P	P	18 39 53.3	+1.2
VA03	San Esteban	45.03	162	P	P	18 39 54.3	-1.2
VA03				IAmb	IAmb	18 39 58.9	
	comp=Z,22nm,0.9s						
YBH	Yreka Blue Hor	45.18	321	LR	LR	19 00 55.1	
	comp=Z,13nm,19.0s,baz=128,slow=39						
PINE	Pine Mountain	45.31	324	IAmb	IAmb	18 40 01.1	
	comp=Z,29nm,0.9s						
BDFB	Brasilia	45.34	124	P	P	18 39 59.7	+1.3
	comp=Z,12nm,0.8s,baz=294,slow=8.9,SNR=23						
BDFB				LR	LR	18 59 38.9	
	comp=Z,250nm,18.8s,baz=320,slow=37						
	comp=Z,12nm,0.8s						
E09A	Wood Farm, Sta	45.53	329	IAmb	IAmb	18 40 00.6	
	comp=Z,28nm,1.4s						
CPUP	Villa Florida	45.58	143	P	P	18 40 00.3	+0.4
	comp=Z,1.5nm,0.9s,baz=173,slow=7.9,SNR=10						
CPUP				LR	LR	19 01 09.3	
	comp=Z,56nm,18.6s,baz=182,slow=39						
	comp=Z,1.5nm,0.9s						
CPUP	Villa Florida	45.58	143	*e*P	P	18 40 00.6	+0.7
ITRB	Iturama	45.79	130	*e*P	P	18 40 02.6	+0.9
BBOR	Butler Butte	45.80	322	IAmb	IAmb	18 40 04.0	
	comp=Z,21nm,0.9s						
MT09	Talagante	45.84	163	P	P	18 40 01.4	-0.6
MT09				IAmb	IAmb	18 41 11.8	
	comp=Z,49nm,1.9s						
KSXB	Camp Six Broad	45.96	320	IAmb	IAmb	18 40 05.6	
	comp=Z,27nm,1.0s						
WIFE	Three Sisters-	45.97	324	IAmb	IAmb	18 40 08.1	
	comp=Z,17nm,1.0s						
I04A	Tendick Farm,	46.16	323	IAmb	IAmb	18 40 07.0	
	comp=Z,27nm,0.8s						
HAWA	Hanford	46.17	328	P	P	18 40 03.6	-0.7
NEW	Newport	46.24	331	LR	LR	19 02 10.0	
	comp=Z,175nm,18.1s,baz=131,slow=40						
FFC	Flin Flon	46.34	347	P	P	18 40 04.2	-1.4
FFC	Flin Flon	46.34	347	P	P	18 40 04.2	-1.4
FFC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FFC	Flin Flon	46.34	347	P	P	18 40 04.4	-1.2
FFC				pP	pP	18 40 15.0	-0.7
SDBA	SAO DESIDERIO	46.39	118	*e*P	P	18 40 07.8	+1.1
WAH2	Wahluke Slope	46.42	328	IAmb	IAmb	18 40 07.7	
	comp=Z,18nm,1.1s						
E07A	Sunnyside	46.45	328	IAmb	IAmb	18 40 08.2	
	comp=Z,45nm,1.3s						
IPMB	Ipameri, GO	46.45	127	*e*P	P	18 40 08.0	+1.0
H04A	Detroit Lake	46.56	324	IAmb	IAmb	18 40 09.5	
	comp=Z,20nm,0.6s						
I03D	Drain, OR	46.67	323	IAmb	IAmb	18 40 12.4	
	comp=Z,43nm,1.2s						
H04D	Lebanon	46.78	324	IAmb	IAmb	18 40 22.3	
	comp=Z,21nm,0.6s						
EPH	Ephrata	46.83	329	IAmb	IAmb	18 40 12.3	
	comp=Z,9.9nm,1.0s						
SCHQ	Schefferville	47.12	15	P	P	18 40 09.0	-2.7
	comp=Z,16nm,0.8s,baz=203,slow=6.3,SNR=12						
SCHQ				LR	LR	19 00 45.9	
	comp=Z,453nm,18.8s,baz=220,slow=37						
	comp=Z,16nm,0.8s						
LDASE	Londrina, Braz	47.54	135	*e*P	P	18 40 15.9	+0.4
PTGB	Pitanga	47.76	137	*e*P	P	18 40 17.9	+0.7
BB19B	Bebedouro	47.98	130	*e*P	P	18 40 19.6	+0.7
JANB	Januaria	48.13	121	*e*P	P	18 40 21.0	+0.8

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PMNB  Patos De Minas    48.16 126  eP     P      18 40 21.5 +1.1
EDM   Edmonton          48.39 338  IAmb   IAmb   18 40 21.5
      comp=Z,24nm,0.9s
FRTB  Fartura           48.61 134  eP     P      18 40 24.7 +1.0
GNW   Green Mountain    48.65 327  P      P      18 40 23.4 -0.2
GNW                                IAmb   IAmb   18 40 24.6
      comp=Z,25nm,1.4s
FCC   Fort Churchill    48.98 354  IAmb   IAmb   18 40 26.6
      comp=Z,18nm,1.1s
PSAL  Palomas, Salto    49.07 148  eP     P      18 40 29.1 +2.1
ITAB  Concordia         49.44 139  eP     P      18 40 31.4 +1.5
RCLB  Rio Claro- Sao    49.52 131  eP     P      18 40 32.0 +1.3
LLLB  Lillooet          50.11 331  IAmb   IAmb   18 40 36.3
      comp=Z,23nm,1.1s
DIAM  Diamantina, MG    50.27 124  eP     P      18 40 37.6 +1.1
VAO   Valinhos          50.29 131  eP     P      18 40 37.3 +0.7
SPB   Sao Paulo         50.30 132  eP     P      18 40 37.3 +0.8
PET01 Itanhaem-SP       50.84 133  eP     P      18 40 41.4 +0.8
CPSB  Cacapava Do Su    50.89 143  eP     P      18 40 42.4 +1.5
CNLB  Canela            51.69 140  eP     P      18 40 48.0 +1.1
PLTB  Pedras Altas      51.79 145  P      P      18 40 48.3 +0.7
PLTB                               IAmb   IAmb   18 40 49.6
      comp=Z,16nm,0.9s
PLTB  Pedras Altas      51.79 145  eP     P      18 40 49.4 +1.8
NBIT  Itapeh - BA       52.27 118  eP     P      18 40 52.9 +1.4
CMC01 Camacan, BA       52.38 118  eP     P      18 40 53.7 +1.4
PLCA  Paso Flores       52.49 165  P      P      18 40 54.6 +1.9
      comp=Z,8.9nm,1.0s,baz=331,slow=8.9,SNR=14
PLCA                               LR     LR     18 58 40.0
      comp=Z,48nm,18.0s,baz=356,slow=31
      comp=Z,8.9nm,1.0s
PLCA  Paso Flores       52.49 165  P      P      18 40 52.8 +0.1
PLCA  Paso Flores       52.49 165  eP     P      18 40 54.8 +2.1
PLCA  Paso Flores       52.49 165  P      P      18 40 54.4 +1.6
PLCA                               PcP    PcP    18 42 02.1 -0.9
BBB   Bella Bella       54.16 329  LR     LR     19 06 40.1
      comp=Z,104nm,18.4s,baz=144,slow=39
FRB   Frobisher Bay     54.98   9  LR     LR     19 05 26.7
      comp=Z,496nm,18.4s,baz=220,slow=37
YKAW1 Yellowknife Wh    56.27 344  IAmb   IAmb   18 41 20.1
      comp=Z,14nm,0.8s
YKA   Yellowknife Ar    56.31 344  P      P      18 41 18.6 -1.4
      comp=Z,10nm,0.8s,baz=146,slow=6.3,SNR=79
YKA                                PcP    PcP    18 42 18.1 +1.0
      comp=Z,1.7nm,0.9s,baz=149,slow=3.2,SNR=3.9
      comp=Z,10nm,0.8s
YKA   Yellowknife Ar    56.31 344  P      P      18 41 18.3 -1.8
YKA   Yellowknife Ar    56.31 344  P      P      18 41 18.3 -1.8
YKAW3 Yellowknife Wh    56.36 344  IAmb   IAmb   18 41 20.8
      comp=Z,18nm,0.9s
TOAD  Toad River Com    57.04 337  P      P      18 41 25.0 -0.4
      baz=132
KOTAN Kotaneelee Air    57.47 338  P      P      18 41 27.8 -0.5
      baz=134
V35K  Ketchikan         57.65 331  P      P      18 41 30.3 +0.6
      baz=124
LIRD  Liard River Hi    57.74 337  P      P      18 41 30.0 -0.4
      baz=131
T35M  Bob Quinn         57.95 333  IAmb   IAmb   18 42 27.5
      comp=Z,13nm,1.1s
T35M  Bob Quinn         57.95 333  P      P      18 41 32.2 +0.3
      baz=126
CRAG  Craig             58.45 331  P      P      18 41 35.4 +0.1
      baz=122
DLBC  Dease Lake        58.72 335  LR     LR     19 10 35.2
      comp=Z,161nm,18.1s,baz=98,slow=40
DLBC  Dease Lake        58.72 335  P      P      18 41 37.6 +0.3
      baz=127,SNR=14
U33K  Whale Pass        58.79 331  P      P      18 41 38.2 +0.5
      baz=122
S34M  Telegraph Cree    58.88 334  IAmb   IAmb   18 41 40.2
      comp=Z,10nm,0.9s
S34M  Telegraph Cree    58.88 334  P      P      18 41 38.7 +0.4
      baz=125
WRGLY Wrigley           59.45 341  P      P      18 41 42.1 -0.1
      baz=136
R33M  Jennings River    59.68 335  IAmb   IAmb   18 41 45.5
      comp=Z,16nm,1.0s
R33M  Jennings River    59.68 335  P      P      18 41 44.4 +0.5
      baz=126
Q32M  Nakina River      59.98 334  IAmb   IAmb   18 41 48.5
      comp=Z,19nm,0.9s
Q32M  Nakina River      59.98 334  P      P      18 41 46.9 +0.8
      baz=125
S32K  Killisnoo         60.19 332  P      P      18 41 48.2 +0.9
      baz=122
SIT   Sitka             60.32 331  P      P      18 41 49.3 +1.1
      baz=121
R32K  Eaglecrest        60.58 333  P      P      18 41 50.9 +0.9
      baz=122
P33M  Teslin, Yukon     60.92 335  P      P      18 41 52.8 +0.4
      baz=125
P32M  Atlin             60.94 334  P      P      18 41 53.3 +0.8
      baz=124
S31K  Pelican           61.20 332  P      P      18 41 55.1 +0.9
      baz=120
N32M  Quiet Lake        61.56 336  P      P      18 41 56.9 +0.2
      baz=125
SKAG  Skagway           61.57 334  P      P      18 41 57.4 +0.7
      baz=122
SFJD  Kangerlussuaq     61.57  15  LR     LR     19 08 38.1
      comp=Z,441nm,19.2s,baz=205,slow=36
WHY   Whitehorse        62.02 335  P      P      18 42 00.1 +0.3
      baz=123
PLBC  Pleasant Camp     62.02 333  P      P      18 41 59.9 +0.2
      baz=121
O30N  Mendenhall        62.58 335  IAmb   IAmb   18 42 04.8
      comp=Z,21nm,0.8s
O30N  Mendenhall        62.58 335  P      P      18 42 03.8 +0.3
      baz=122,SNR=8.7
P30M  Million Dollar    62.62 334  P      P      18 42 03.9 +0.2
      baz=120
M31M  Drury Creek, Y    62.67 337  P      P      18 42 04.1  0.0
      baz=124,SNR=6.6
P29M  Windy Craggy      62.71 333  P      P      18 42 04.9 +0.5
      baz=120
N31M  Braeburn, Yuko    62.83 336  IAmb   IAmb   18 42 06.3
      comp=Z,13nm,0.8s
N31M  Braeburn, Yuko    62.83 336  P      P      18 42 05.7 +0.6
      baz=122
HYT   Haines Junctio    63.20 334  P      P      18 42 08.1 +0.3
      baz=120
N30M  Aishikik Lake     63.35 335  IAmb   IAmb   18 42 10.2
      comp=Z,13nm,0.8s
N30M  Aishikik Lake     63.35 335  P      P      18 42 08.9 +0.3
      baz=121
O29M  Mount Kennedy     63.41 334  P      P      18 42 09.7 +0.6
      baz=119
YUK6  Outpost Mounta    63.63 334  P      P      18 42 11.0 +0.3
      baz=119
M30M  Minto, Yukon      63.81 336  IAmb   IAmb   18 42 12.6
      comp=Z,11nm,0.8s
M30M  Minto, Yukon      63.81 336  P      P      18 42 11.1 -0.5
      baz=122,SNR=8.8
YUK4  Talbot Arm        63.95 335  P      P      18 42 11.2 -1.5
      baz=119
PINM  Pinnacle          64.05 333  P      P      18 42 12.9 -0.4
      baz=117
C36M  Paulatuk          64.09 346  P      P      18 42 11.5 -1.7
      baz=138
O28M  Mount Upton       64.33 334  P      P      18 42 15.6 +0.2
      baz=118
YUK8  Steele Glacier    64.39 334  P      P      18 42 15.3 -0.4
      baz=118
M29M  Somme Creek       64.41 336  P      P      18 42 15.5 -0.2
      baz=120
L29M  L29M              64.61 337  IAmb   IAmb   18 42 53.5
      comp=Z,13nm,0.8s
L29M  L29M              64.61 337  P      P      18 42 16.8 -0.1
      baz=120
H31M  Peel River        64.70 340  IAmb   IAmb   18 42 18.8
      comp=Z,10nm,0.8s
H31M  Peel River        64.70 340  P      P      18 42 17.1 -0.3
      baz=126
J30M  Hart River        64.71 338  IAmb   IAmb   18 42 18.8
      comp=Z,18nm,1.5s
J30M  Hart River        64.71 338  P      P      18 42 17.7 +0.1
      baz=123
K29M  Barlow Dome       64.76 337  P      P      18 42 17.4 -0.5
      baz=122,SNR=5.7
RES   Resolute Bay      64.78 357  LR     LR     19 10 30.2
      comp=Z,108nm,19.4s,baz=140,slow=36
MESA  MESA              64.85 333  P      P      18 42 18.4 -0.3
      baz=116
YUK3  Moose Creek       64.91 335  P      P      18 42 19.0 -0.1
      baz=118
CTG   Chitna Glacier    64.92 334  P      P      18 42 19.4 +0.4
      baz=116
I30M  Mount Dempster    65.08 339  IAmb   IAmb   18 42 21.1
      comp=Z,21nm,0.8s
I30M  Mount Dempster    65.08 339  P      P      18 42 19.6 -0.4
      baz=123
G31M  Satah River       65.33 341  IAmb   IAmb   18 42 22.1
      comp=Z,19nm,0.9s
G31M  Satah River       65.33 341  P      P      18 42 21.0 -0.4
      baz=126,SNR=13
J29N  Klondike Camp     65.34 338  IAmb   IAmb   18 42 22.6
      comp=Z,11nm,0.9s
J29N  Klondike Camp     65.34 338  P      P      18 42 21.7 +0.1
      baz=121
BVCY  Beaver Creek      65.38 335  P      P      18 42 22.0 +0.1
      baz=118,SNR=6.6
F31M  Tsiigehtchic      65.48 342  IAmb   IAmb   18 42 23.0
      comp=Z,15nm,0.9s
F31M  Tsiigehtchic      65.48 342  P      P      18 42 21.9 -0.4
      baz=127,SNR=8.8
DAWY  Dawson            65.58 337  P      P      18 42 23.1 -0.1
      baz=120,SNR=5.0
CRQE  Cirque            65.61 333  P      P      18 42 23.7 +0.2
      baz=115
M27K  Edge Creek, AK    65.78 335  IAmb   IAmb   18 42 26.2
      comp=Z,13nm,0.9s
M27K  Edge Creek, AK    65.78 335  P      P      18 42 24.5 -0.1
      baz=116
EPYK  Eagle Plains      65.83 340  IAmb   IAmb   18 42 25.6
      comp=Z,24nm,0.8s
EPYK  Eagle Plains      65.83 340  P      P      18 42 24.2 -0.5
      baz=123,SNR=12
I29M  Ogilvie Camp,     65.84 339  IAmb   IAmb   18 42 25.5
      comp=Z,13nm,0.8s
I29M  Ogilvie Camp,     65.84 339  P      P      18 42 24.2 -0.6
      baz=121,SNR=11
MCARA McCarthy VSAT     65.84 334  P      P      18 42 25.6 +0.8
      baz=115
KAIM  Kayak Island      65.88 332  P      P      18 42 25.8 +0.8
      baz=113
INK   Inuvik            65.93 342  P      P      18 42 24.8 -0.4
      baz=127,SNR=22
G30M  tAoh Zraii Nji    66.00 341  P      P      18 42 25.7 -0.1
      baz=124
BCAR  Beaver Creek A    66.06 336  P      P      18 42 26.1 -0.2
L27K  Beaver Creek,     66.07 336  IAmb   IAmb   18 42 27.9
      comp=Z,22nm,0.8s
L27K  Beaver Creek,     66.07 336  P      P      18 42 26.4 +0.1
      baz=117
F30M  Barrier River     66.21 341  P      P      18 42 27.1  0.0
      baz=125
M26K  Nabesna, AK       66.26 335  P      P      18 42 27.9 +0.3
      baz=116
A36M  Sachs Harbour     66.30 348  P      P      18 42 26.1 -1.4
      baz=137,SNR=14
H29M  Whitestone        66.31 339  IAmb   IAmb   18 42 28.9
      comp=Z,19nm,0.8s
H29M  Whitestone        66.31 339  P      P      18 42 28.1 +0.4
      baz=122,SNR=10
BMRM  Bremner River     66.37 333  P      P      18 42 29.2 +0.9
      baz=113
I28M  Miner Creek       66.47 338  P      P      18 42 29.0 +0.1
      baz=120
G29M  Pine Creek        66.56 340  P      P      18 42 29.6 +0.2
      baz=122,SNR=15
Q23K  Middleton Isla    66.60 331  P      P      18 42 29.8 +0.1
      baz=111
K27K  Chicken           66.61 336  P      P      18 42 29.6 -0.1
      baz=117
N25K  Chitina, Valde    66.62 334  IAmb   IAmb   18 42 31.9
      comp=Z,12nm,0.8s
N25K  Chitina, Valde    66.62 334  P      P      18 42 30.1 +0.1
      baz=114
L26K  Log Cabin Wild    66.68 335  P      P      18 42 30.2  0.0
      baz=115
EYAK  Cordova Ski Ar    66.73 332  P      P      18 42 31.0 +0.6
      baz=112
MENT  Mentasta          66.79 335  IAmb   IAmb   18 42 32.3
      comp=Z,10nm,0.7s
I27K  Kandik River      67.16 338  P      P      18 42 33.3  0.0
      baz=118,SNR=28
KLU   Klutina           67.16 333  P      P      18 42 33.4 +0.1
      baz=112
HARP  HAARP             67.18 334  P      P      18 42 34.1 +0.7
      baz=113
P23K  Montague Islan    67.30 331  P      P      18 42 34.9 +0.7
      baz=110
E29M  Blow River        67.31 342  IAmb   IAmb   18 42 34.7
      comp=Z,10nm,0.8s
E29M  Blow River        67.31 342  P      P      18 42 34.1  0.0
      baz=123,SNR=12
SCRK  Sand Creek        67.34 336  P      P      18 42 34.7 +0.2
      baz=115,SNR=7.3
J26L  Joseph Creek      67.40 337  IAmb   IAmb   18 42 36.6
      comp=Z,19nm,0.7s
J26L  Joseph Creek      67.40 337  P      P      18 42 35.3 +0.5
      baz=116
H27K  Steamboat Moun    67.42 339  P      P      18 42 35.0 +0.1
      baz=118
GLI   Glacier Island    67.47 332  P      P      18 42 35.9 +0.7
      baz=111
M24K  Tolsona, Glenn    67.50 334  P      P      18 42 36.4 +0.9
      baz=112
F28M  Old Crow          67.54 340  IAmb   IAmb   18 42 36.6
      comp=Z,18nm,0.7s
F28M  Old Crow          67.54 340  P      P      18 42 35.4 -0.1
      baz=120,SNR=29
PAX   Paxson            67.54 335  IAmb   IAmb   18 42 36.8
      comp=Z,17nm,0.7s
PAX   Paxson            67.54 335  P      P      18 42 36.2 +0.5
      baz=113,SNR=9.8
RIDG  Independent Ri    67.59 336  P      P      18 42 36.3 +0.3
      baz=114,SNR=18
I26K  Coal Creek Min    67.60 338  P      P      18 42 35.9  0.0
      baz=116
G27K  Doyon Strip       67.75 339  P      P      18 42 37.0 +0.1
      baz=118
SCM   Sheep Creek Mo    67.91 333  P      P      18 42 38.8 +0.7
      baz=111
E28M  Babbage River     67.94 341  IAmb   IAmb   18 42 38.5
      comp=Z,20nm,0.8s
E28M  Babbage River     67.94 341  P      P      18 42 37.8 -0.2
      baz=121
K24K  Donnelly Dome     68.00 336  P      P      18 42 38.8 +0.2
      baz=113
PWL   Port Wells        68.03 332  P      P      18 42 39.2 +0.4
      baz=110
D28M  Stokes Point      68.07 342  P      P      18 42 38.5 -0.4
      baz=122
M23K  Glacier View      68.07 333  P      P      18 42 39.3 +0.3
      baz=111
J25K  Salcha River,     68.16 336  P      P      18 42 39.7 +0.1
      baz=114
KNK   Knik Glacier      68.27 333  P      P      18 42 40.9 +0.6
      baz=110,SNR=8.1
SEW   Seward            68.31 331  P      P      18 42 40.9 +0.5
      baz=108
SML   Sawmill           68.35 333  P      P      18 42 41.2 +0.4
      baz=110
WAT6  Susitna Watana    68.36 334  P      P      18 42 41.2 +0.3
      baz=111,SNR=14
DHY   Denali Highway    68.38 335  IAmb   IAmb   18 43 18.7
      comp=Z,19nm,1.4s
DHY   Denali Highway    68.38 335  P      P      18 42 41.4 +0.3
      baz=112
E27K  Coleen River      68.39 341  IAmb   IAmb   18 42 41.9
      comp=Z,13nm,0.8s
E27K  Coleen River      68.39 341  P      P      18 42 40.7 -0.2
      baz=119
O22K  Cooper Landing    68.55 331  P      P      18 42 42.1 +0.2
      baz=108
G26K  Porcupine Rive    68.56 339  IAmb   IAmb   18 42 42.8
      comp=Z,12nm,0.8s
G26K  Porcupine Rive    68.56 339  P      P      18 42 42.0 +0.1
      baz=116,SNR=11
PMR   Palmer            68.64 333  P      P      18 42 43.1 +0.6
      baz=109
HDA   Harding Lake      68.70 336  P      P      18 42 43.2 +0.3
      baz=112,SNR=22
D27M  Malcolm River     68.71 342  IAmb   IAmb   18 42 43.9
      comp=Z,18nm,0.8s
D27M  Malcolm River     68.71 342  P      P      18 42 42.4 -0.5
      baz=120
RC01  Rabbit Creek A    68.75 332  IAmb   IAmb   18 42 45.2
      comp=Z,27nm,0.9s
RC01  Rabbit Creek A    68.75 332  P      P      18 42 43.8 +0.5
      baz=108
WAT1  Susitna Watana    68.80 334  P      P      18 42 44.0 +0.5
      baz=110
BRSE  Bradley Lake S    68.81 331  P      P      18 42 44.3 +0.6
      baz=107
IL31                    68.82 336  IAmb   IAmb   18 42 44.6
      comp=Z,20nm,0.7s
ILAR  Eielson Array     68.82 336  P      P      18 42 43.5 -0.1
      comp=Z,14nm,0.7s,baz=128,slow=4.2,SNR=163
ILAR                               LR     LR     19 15 54.8
      comp=Z,157nm,20.7s,baz=97,slow=39
      comp=Z,14nm,0.7s
ILAR  Eielson Array     68.82 336  P      P      18 42 43.0 -0.6
ILAR  Eielson Array     68.82 336  P      P      18 42 43.0 -0.6
F26K  Sheenjek River    69.01 340  IAmb   IAmb   18 42 46.2
      comp=Z,11nm,0.8s
F26K  Sheenjek River    69.01 340  P      P      18 42 44.6 -0.2
      baz=116
M22K  Willow            69.13 333  P      P      18 42 46.4 +0.8
      baz=108
POKR  Poker Plat Res    69.16 337  IAmb   IAmb   18 42 47.2
      comp=Z,20nm,0.8s
POKR  Poker Plat Res    69.16 337  P      P      18 42 45.7  0.0
      baz=112,SNR=7.5
WRH   Wood River Hil    69.19 336  IAmb   IAmb   18 42 47.3
      comp=Z,13nm,0.8s
KDAK  Kodiak Island     69.20 328  LR     LR     19 15 01.8
      comp=Z,55nm,20.0s,baz=100,slow=38
KDAK  Kodiak Island     69.20 328⇑iP    P      18 42 46.9 +0.8
KDAK                               pmax   pmax
      comp=Z,96nm,2.2s
KDAK  Kodiak Island     69.20 328  P      P      18 42 47.6 +1.5
      baz=105
HOM   Homer             69.23 330  P      P      18 42 47.5 +1.3
      baz=106
COLA  College           69.24 336  P      P      18 42 45.9 -0.2
COLA                               IAmb   IAmb   18 42 46.9
      comp=Z,22nm,0.8s
COLA  College           69.24 336d iP     P      18 42 46.2  0.0
COLA                               pmax   pmax
      comp=Z,18nm,0.8s
COLA  College           69.24 336  P      P      18 42 45.9 -0.2
      baz=112
COLA  College           69.24 336  P      P      18 42 45.4 -0.7
COLA                               pP     pP     18 42 56.4 -0.3
MCK   McKinley          69.27 335  P      P      18 42 47.0 +0.5
      baz=110,SNR=19
G25K  Bearman Lake      69.31 338  P      P      18 42 46.7 +0.2
      baz=114,SNR=12
Q20K  Shuyak Island     69.32 329  P      P      18 42 48.0 +1.2
      baz=105
SUA   Susitna One       69.33 332  P      P      18 42 47.4 +0.4
      baz=108
CUT   Chulitna          69.41 333  P      P      18 42 47.9 +0.6
      baz=108
OHAK  Old Harbor        69.43 328  P      P      18 42 48.8 +1.3
      baz=104
F25K  Christian Rive    69.49 339  IAmb   IAmb   18 42 49.5
      comp=Z,13nm,0.8s
F25K  Christian Rive    69.49 339  P      P      18 42 48.0 +0.2
      baz=115,SNR=15
H24K  Noodor Dome       69.61 337  IAmb   IAmb   18 42 49.8
      comp=Z,16nm,0.9s
H24K  Noodor Dome       69.61 337  P      P      18 42 49.1 +0.5
      baz=112,SNR=10.0
NEA2  Nenana            69.63 336  P      P      18 42 48.5 -0.2
      baz=110,SNR=19
L22K  Petersville       69.67 333  IAmb   IAmb   18 42 50.0
      comp=Z,20nm,0.9s
E25K  Arctic Village    69.68 340  IAmb   IAmb   18 42 50.5
      comp=Z,15nm,0.8s
E25K  Arctic Village    69.68 340  P      P      18 42 49.0 +0.1
      baz=115,SNR=13
C27K  Jago River        69.74 342  IAmb   IAmb   18 42 50.4
      comp=Z,12nm,0.9s
C27K  Jago River        69.74 342  P      P      18 42 49.1 -0.2
      baz=117
TRF   Thorofare Moun    69.75 334  P      P      18 42 49.9 +0.3
      baz=109,SNR=12
SII   Sitkinak Islan    69.76 327  P      P      18 42 50.7 +1.1
      baz=103
G24K  Hadweenzic Riv    69.78 338  IAmb   IAmb   18 42 51.2
      comp=Z,21nm,0.9s
G24K  Hadweenzic Riv    69.78 338  P      P      18 42 49.8 +0.3
      baz=113,SNR=11
O20K  Slope Mountain    69.82 331  P      P      18 42 50.6 +0.6
      baz=106
STLK  Strandline Lak    69.84 332  IAmb   IAmb   18 42 51.9
      comp=Z,13nm,0.8s
SKT   Skwentna          69.84 333  P      P      18 42 50.5 +0.5
      baz=107,SNR=11
SPCR  Spurr Chakacha    69.93 332  P      P      18 42 51.4 +0.8
      baz=106
I23K  Minto, Yukon-K    69.94 336  P      P      18 42 50.9 +0.4
      baz=110,SNR=14
P19K  Oil Pt            70.00 330  P      P      18 42 52.3 +1.2
      baz=105
Q19K  Cape Douglas,     70.03 329  P      P      18 42 52.8 +1.5
      baz=104,SNR=5.1
ILSW  Iliamna Southw    70.05 330  IAmb   IAmb   18 42 52.5
      comp=Z,16nm,0.8s
BORG  Borgarnes         70.20  24  LR     LR     19 11 01.6
      comp=Z,123nm,20.6s,baz=167,slow=34
H23K  Yukon River       70.24 337  P      P      18 42 52.5  0.0
      baz=110
F24K  Squaw Lake        70.25 339  P      P      18 42 52.9 +0.5
      baz=112
C26K  Camden Bay        70.25 342  P      P      18 42 52.3  0.0
      baz=116
BPAW  Bear Paw Mtn.     70.25 335  P      P      18 42 52.7 +0.2
      baz=108,SNR=6.4
CHIR  Chirikof Islan    70.39 326  P      P      18 42 54.8 +1.4
      baz=101
PPLA  Purkeypile        70.40 334  P      P      18 42 53.7 +0.1
      baz=107,SNR=7.2
MLY   Manley            70.45 336  P      P      18 42 54.0 +0.3
      baz=109,SNR=32
D25K  Kavik River       70.46 341  P      P      18 42 53.8 +0.1
      baz=115
M20K  Styx River        70.54 332  P      P      18 42 55.3 +0.9
      baz=106
Q18K  Katmai Hardscr    70.66 329  P      P      18 42 56.1 +0.9
      baz=103
E24K  Your Creek        70.67 339  P      P      18 42 55.0 -0.1
      baz=112
O19K  Port Alsworth     70.67 330  P      P      18 42 55.7 +0.7
      baz=104
G23K  Bananza Creek     70.73 338  IAmb   IAmb   18 42 57.2
      comp=Z,21nm,0.8s
G23K  Bananza Creek     70.73 338  P      P      18 42 55.7 +0.3
      baz=110
CHUM  Lake Minchumin    70.74 335  P      P      18 42 55.5 +0.1
      baz=107,SNR=7.1
N19K  Bonanza Creek     70.90 331  P      P      18 42 56.5 -0.1
      baz=104,SNR=8.6
P18K  Big Mountain,     70.93 330  P      P      18 42 57.1 +0.4
      baz=103
COLD  Coldfoot          70.97 338  IAmb   IAmb   18 42 59.5
      comp=Z,21nm,1.0s
COLD  Coldfoot          70.97 338  P      P      18 42 57.2 +0.4
      baz=110,SNR=11
H22K  Ishtalitna Cre    70.98 337  IAmb   IAmb   18 42 57.8
      comp=Z,13nm,0.8s
H22K  Ishtalitna Cre    70.98 337  P      P      18 42 57.2 +0.4
      baz=109,SNR=8.7
I21K  Tanana            70.99 336  P      P      18 42 57.2 +0.3
      baz=108,SNR=9.1
O18K  Koktuh Hills      71.02 330  P      P      18 42 58.2 +0.9
      baz=103,SNR=6.7
Q17K  Contact Creek     71.02 328  P      P      18 42 58.3 +0.9
      baz=102
E23K  Chandalar         71.06 339  IAmb   IAmb   18 42 59.2
      comp=Z,23nm,1.0s
E23K  Chandalar         71.06 339  P      P      18 42 57.6 +0.2
      baz=111,SNR=16
M19K  Big River Lodg    71.12 332  IAmb   IAmb   18 42 59.0
      comp=Z,19nm,0.7s
M19K  Big River Lodg    71.12 332  P      P      18 42 58.1 +0.3
      baz=104
R17L  Mt. Peulik Vol    71.15 328  P      P      18 42 59.2 +1.2
      baz=101
D24K  Happy Valley      71.19 340  P      P      18 42 57.6 -0.5
      baz=112
TOLK  Toolik Lake Re    71.25 340  P      P      18 42 58.3 -0.2
      baz=111,SNR=5.9
K20K  Telida            71.35 334  IAmb   IAmb   18 43 00.0
      comp=Z,23nm,0.8s
K20K  Telida            71.35 334  P      P      18 42 59.5 +0.3
      baz=105
G22K  Bettles           71.36 338  P      P      18 42 58.9 -0.2
      baz=109
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C24K	Franklin Bluff	71.37	341	IAmb	IAmb	18 42 59.9	
	comp=Z,12nm,0.7s						
C24K	Franklin Bluff	71.37	341	P	P	18 42 58.8	-0.3
	baz=112						
L19K	White Mountain	71.40	332	IAmb	IAmb	18 43 00.4	
	comp=Z,11nm,0.8s						
L19K	White Mountain	71.40	332	P	P	18 43 00.2	+0.7
	baz=104,SNR=5.5						
H21K	Melozitna Rive	71.46	336	P	P	18 42 59.7	-0.1
	baz=107,SNR=5.7						
P17K	Kvichak River	71.50	329	P	P	18 43 00.1	0.0
	baz=102						
Q16K	King Salmon	71.50	329	P	P	18 43 00.6	+0.4
	baz=101						
N18K	Kilae Creek	71.54	331	IAmb	IAmb	18 43 01.6	
	comp=Z,23nm,0.8s						
N18K	Kilae Creek	71.54	331	P	P	18 43 00.6	+0.2
	baz=103						
J20K	Nowinta River	71.60	335	IAmb	IAmb	18 43 01.5	
	comp=Z,33nm,1.3s						
J20K	Nowinta River	71.60	335	P	P	18 43 00.6	0.0
	baz=106,SNR=12						
M18K	Stony River	71.69	332	P	P	18 43 01.5	+0.3
	baz=103						
D23K	Nanushuk River	71.75	340	P	P	18 43 01.1	-0.3
	baz=110						
F22K	John River	71.79	338	P	P	18 43 01.7	-0.1
	baz=108						
E22K	Anaktuvuk Pass	71.86	339	IAmb	IAmb	18 43 03.4	
	comp=Z,19nm,1.0s						
E22K	Anaktuvuk Pass	71.86	339	P	P	18 43 02.2	0.0
	baz=109,SNR=11						
I20K	Naaghedeneel	71.90	335	P	P	18 43 02.6	+0.2
	baz=105						
IMAR	Indian Mountai	71.93	336	P	P	18 43 02.0	-0.6
O17K	Koliganek Bris	71.94	330	P	P	18 43 03.3	+0.5
	baz=101,SNR=8.3						
G21K	Allakaket	71.99	337	P	P	18 43 03.3	+0.3
	baz=107						
C23K	Itkillik River	72.03	341	IAmb	IAmb	18 43 04.4	
	comp=Z,18nm,0.9s						
C23K	Itkillik River	72.03	341	P	P	18 43 02.6	-0.5
	baz=111						
N17K	Nushagak Hills	72.13	331	IAmb	IAmb	18 43 05.3	
	comp=Z,20nm,0.8s						
N17K	Nushagak Hills	72.13	331	P	P	18 43 04.4	+0.5
	baz=102,SNR=5.8						
J19K	Poorman	72.18	334	IAmb	IAmb	18 43 04.7	
	comp=Z,14nm,0.8s						
J19K	Poorman	72.18	334	P	P	18 43 04.3	+0.2
	baz=104						
F21K	Alatna River	72.19	338	P	P	18 43 04.5	+0.3
	baz=107						
L18K	Granite Mounta	72.25	332	IAmb	IAmb	18 43 42.1	
	comp=Z,65nm,1.9s						
L18K	Granite Mounta	72.25	332	P	P	18 43 05.4	+0.8
	baz=102						
H20K	Anotleneega Mo	72.25	336	P	P	18 43 05.2	+0.7
	baz=105						
P16K	Nushagak River	72.25	329	P	P	18 43 05.6	+1.0
	baz=100						
D22K	Ayikyak River	72.40	340	IAmb	IAmb	18 43 06.8	
	comp=Z,16nm,1.1s						
D22K	Ayikyak River	72.40	340	P	P	18 43 05.3	-0.1
	baz=108						
O16K	Kokwok River B	72.40	329	P	P	18 43 06.2	+0.7
	baz=100						
M17K	Holitna River	72.43	331	IAmb	IAmb	18 43 08.2	
	comp=Z,28nm,1.1s						
M17K	Holitna River	72.43	331	P	P	18 43 06.8	+1.1
	baz=102						
CHNA	Chernabura Isl	72.47	324	P	P	18 43 07.6	+1.6
	baz=98						
J18K	Innoko River	72.53	334	P	P	18 43 06.3	+0.1
	baz=103						
S14K	Fog Glacier	72.65	326	P	P	18 43 08.0	+0.9
	baz=98						
E21K	Killik River	72.72	339	P	P	18 43 07.3	0.0
	baz=107						
GCSA	Galena City Sc	72.89	335	P	P	18 43 08.8	+0.5
	baz=103						
H19K	Roundabout Mou	72.89	336	IAmb	IAmb	18 43 09.6	
	comp=Z,27nm,0.8s						
H19K	Roundabout Mou	72.89	336	P	P	18 43 08.2	-0.1
	baz=104,SNR=14						
N16K	Nishlik Lake	72.89	330	P	P	18 43 10.0	+1.5
	baz=100						
L17K	Donlin	72.97	332	P	P	18 43 09.6	+0.7
	baz=101						
F20K	Avaraart Lake	72.98	337	P	P	18 43 09.7	+0.9
	baz=105						
SDPT	Sand Point	73.04	325	P	P	18 43 10.9	+1.5
	baz=97						
M16K	Timber Creek	73.08	331	P	P	18 43 10.5	+1.0
	baz=100						
K17K	Iditarod	73.08	333	IAmb	IAmb	18 43 11.4	
	comp=Z,29nm,1.2s						
K17K	Iditarod	73.08	333	P	P	18 43 10.2	+0.7
	baz=101						
B22K	Teshekpuk Lake	73.10	341	P	P	18 43 09.9	+0.5
	baz=108						
C21K	Knifeblade Rid	73.21	340	P	P	18 43 10.8	+0.7
	baz=106						
O15K	Ungalikthiuk R	73.21	329	P	P	18 43 11.4	+1.1
	baz=99						
B21K	Ikpikpuk River	73.28	340	IAmb	IAmb	18 43 11.4	
	comp=Z,13nm,0.8s						
B21K	Ikpikpuk River	73.28	340	P	P	18 43 10.8	+0.3
	baz=107						
G19K	Purcell Mounta	73.29	336	IAmb	IAmb	18 43 12.1	
	comp=Z,16nm,1.0s						
G19K	Purcell Mounta	73.29	336	P	P	18 43 11.3	+0.6
	baz=103						
L16K	Owhat River	73.44	332	IAmb	IAmb	18 43 13.5	
	comp=Z,18nm,0.9s						
L16K	Owhat River	73.44	332	P	P	18 43 12.7	+1.1
	baz=100,SNR=7.1						
E20K	Nigu River	73.46	339	P	P	18 43 12.5	+0.8
	baz=105						
N15K	Kwethluk River	73.49	330	P	P	18 43 13.8	+1.8
	baz=99						
J17K	VABM Dome	73.56	333	IAmb	IAmb	18 43 14.0	
	comp=Z,19nm,0.8s						
J17K	VABM Dome	73.56	333	P	P	18 43 13.6	+1.3
	baz=101						
H18K	Honhosa River	73.59	335	IAmb	IAmb	18 43 14.5	
	comp=Z,23nm,0.9s						
H18K	Honhosa River	73.59	335	P	P	18 43 13.6	+1.1
	baz=102						
E19K	Redstone River	73.65	338	IAmb	IAmb	18 43 13.8	
	comp=Z,12nm,0.7s						
E19K	Redstone River	73.65	338	P	P	18 43 13.3	+0.5
	baz=104						
F19K	Shaleruckik Mo	73.71	337	IAmb	IAmb	18 43 14.3	
	comp=Z,14nm,0.8s						
F19K	Shaleruckik Mo	73.71	337	P	P	18 43 13.8	+0.7
	baz=103						
D20K	Etivluk River	73.73	339	P	P	18 43 13.8	+0.6
	baz=104,SNR=18						
A22K	Sinclair Lake	73.79	341	P	P	18 43 14.1	+0.5
	baz=107						
G18K	Tagagawik	73.86	336	IAmb	IAmb	18 43 15.8	
	comp=Z,16nm,0.9s						
G18K	Tagagawik	73.86	336	P	P	18 43 15.3	+1.2
	baz=102						
M15K	Kasigluk River	73.86	330	P	P	18 43 15.6	+1.5
	baz=98						
O14K	Tigyukauivet M	73.95	329	P	P	18 43 15.7	+1.0
	baz=98						
S12K	Black Hills	73.98	325	P	P	18 43 16.5	+1.6
	baz=96						
H17K	Granite Mounta	74.19	335	P	P	18 43 16.9	+0.9
	baz=100						
D19K	Kuna River	74.21	339	IAmb	IAmb	18 43 17.4	
	comp=Z,19nm,0.9s						
D19K	Kuna River	74.21	339	P	P	18 43 16.5	+0.4
	baz=103						
J16K	Anvik River	74.22	333	IAmb	IAmb	18 43 19.2	
	comp=Z,16nm,0.8s						
J16K	Anvik River	74.22	333	P	P	18 43 17.1	+1.0
	baz=99,SNR=5.9						
B20K	Meade River	74.24	340	P	P	18 43 16.1	0.0
	baz=104						
N14K	Kuskokwak Cree	74.25	330	P	P	18 43 17.9	+1.6
	baz=97						
I17K	Unalakleet	74.35	334	P	P	18 43 17.9	+1.0
	baz=99						
L15K	Ungalak Mounta	74.38	331	P	P	18 43 18.2	+1.1
	baz=98						
A21K	Barrow	74.39	342	P	P	18 43 17.8	+0.8
	baz=105						
F18K	Selawik	74.39	337	P	P	18 43 17.9	+0.8
	baz=101						
K15K	Wolf Creek Mou	74.49	332	P	P	18 43 19.6	+1.8
	baz=98						
M14K	Bethel	74.49	330	P	P	18 43 19.2	+1.4
	baz=97,SNR=11						
G17K	Kiwalik Mounta	74.60	335	P	P	18 43 19.6	+1.2
	baz=100						
FALS	False Pass	74.68	324	P	P	18 43 21.0	+2.1
	baz=94						
C19K	Lookout Ridge	74.86	339	IAmb	IAmb	18 43 21.8	
	comp=Z,27nm,1.0s						
C19K	Lookout Ridge	74.86	339	P	P	18 43 20.9	+1.0
	baz=102,SNR=6.0						
L14K	Kuka Creek	74.91	331	P	P	18 43 21.6	+1.4
	baz=97						
E18K	Tukpahlearik C	74.91	337	P	P	18 43 20.8	+0.7
	baz=100						
F17K	Baldwin Pennin	75.00	336	P	P	18 43 21.1	+0.5
	baz=100						
H16K	Elim	75.13	334	P	P	18 43 21.9	+0.4
	baz=98						
M13K	Dall Lake	75.13	330	P	P	18 43 22.6	+1.1
	baz=96						
G16K	Koyuk River	75.29	335	P	P	18 43 22.4	+0.2
	baz=98						
E17K	Hotham Inlet	75.33	337	P	P	18 43 23.1	+0.6
	baz=99,SNR=11						
C18K	Utukok River	75.35	339	P	P	18 43 22.4	-0.3
	baz=100						
J14K	Nanvaranak Lak	75.48	332	P	P	18 43 24.3	+0.9
	baz=96						
A19K	Wainwright	75.59	340	P	P	18 43 23.9	0.0
	baz=101						
B18K	Kokolik River	75.69	339	P	P	18 43 24.7	+0.2
	baz=100						
RDOG	Red Dog Mine	75.88	338	IAmb	IAmb	18 43 26.9	
	comp=Z,17nm,0.8s						
RDOG	Red Dog Mine	75.88	338	P	P	18 43 26.4	+0.7
	baz=98						
D17K	Noatak River	75.90	337	P	P	18 43 26.4	+0.6
	baz=98						
K13K	Kusilvak Mount	75.91	331	P	P	18 43 26.8	+0.9
	baz=95						
G15K	Niukluk	75.94	335	P	P	18 43 26.8	+0.8
	baz=96						
C17K	DeLong Mountai	76.04	338	P	P	18 43 26.7	0.0
	baz=98						
F15K	North Star Dit	76.27	335	IAmb	IAmb	18 43 30.3	
	comp=Z,22nm,0.8s						
F15K	North Star Dit	76.27	335	P	P	18 43 29.2	+1.3
	baz=96						
PMSA	Palmer Station	76.42	171	P	P	18 43 28.6	0.0
UNV	Unalaska Valle	76.43	323	P	P	18 43 30.6	+1.6
	baz=92,SNR=7.1						
ANM	Nome	76.47	334	P	P	18 43 30.4	+1.3
	baz=95						
M11K	Mekoryuk	76.54	330	P	P	18 43 30.5	+0.9
	baz=94						
C16K	Lisburne Hills	76.81	338	P	P	18 43 31.4	+0.5
	baz=96						
F14K	Arctic Creek	76.95	335	P	P	18 43 32.5	+0.7
	baz=94						
MDT	Midelt	77.28	59	LR	LR	19 11 51.5	
	comp=Z,191nm,21.5s,baz=300,slow=31						
ESDC	Sonseca Array	77.41	52	P	P	18 43 33.2	-1.8
	comp=Z,2.1nm,0.8s,baz=282,slow=5.6,SNR=17						
ESDC				LR	LR	19 14 25.0	
	comp=Z,154nm,19.6s,baz=290,slow=33						
	comp=Z,2.1nm,0.8s						
ESDC	Sonseca Array	77.41	52	P	P	18 43 33.6	-1.3
TNA	Tin City	77.61	335	P	P	18 43 36.3	+0.8
	baz=93						
EKA	Eskdalemuir Ar	77.62	35	P	P	18 43 31.8	-3.9
	comp=Z,7.0nm,1.0s,baz=266,slow=5.1,SNR=3.7						
NIKH	Nikolski High	77.83	322	P	P	18 43 38.8	+1.9
	baz=90						
P08K	Saint George I	78.20	326	P	P	18 43 39.9	+1.0
	baz=90						
SPIA	Saint Paul Isl	78.58	326	P	P	18 43 41.7	+0.7
	baz=89						
GAMB	Gambell	79.21	333	P	P	18 43 44.3	+0.1
	baz=89						
DBIC	Dimbokro	80.01	85	LR	LR	19 17 14.3	
	comp=Z,52nm,20.3s,baz=306,slow=34						
ADK	Adak	82.68	321	P	P	18 44 05.5	+2.5
ADK				pP	sP	18 44 17.1	-0.4
SPITS	Spitsbergen Ar	82.69	12	LR	LR	19 21 34.4	
	comp=Z,250nm,19.8s,baz=264,slow=36						
NOA	NORSAR Array B	84.66	29	LR	LR	19 17 59.7	
	comp=Z,48nm,21.4s,baz=250,slow=33						
HFS	Hagfors	86.05	30	P	P	18 44 17.6	-2.4
	comp=Z,3.4nm,0.7s,baz=242,slow=3.1,SNR=5.5						
	comp=Z,3.4nm,0.7s						
DAVOX	Davos/Dischmat	86.63	43	LR	LR	19 19 44.9	
	comp=Z,199nm,21.9s,baz=286,slow=33						
BILL	Bilibino	87.29	339	P	P	18 44 24.4	-1.5
BILL				IAmb	IAmb	18 44 28.3	
	comp=Z,11nm,0.8s						
BILL	Bilibino	87.29	339	P	P	18 44 26.9	+1.0
BILL				pP	pP	18 44 37.8	+1.2
ARCES	ARCESS Array B	87.90	19	P	P	18 44 27.2	-1.7
	comp=Z,1.8nm,0.8s,baz=280,slow=5.4,SNR=1.0						
	comp=Z,1.8nm,0.8s						
SHEM	Shemya Is, Ala	88.09	323	LR	LR	19 24 44.9	
	comp=Z,38nm,18.1s,baz=130,slow=36						
GERES	GERESS Array B	88.70	41	P	P	18 44 31.0	-2.2
	comp=Z,0.6nm,0.9s,baz=269,slow=9.8,SNR=3.7						
	comp=Z,0.6nm,0.9s						
VRAC	Vranov	90.42	40	LR	LR	19 22 31.8	
	comp=Z,171nm,20.5s,baz=289,slow=34						
APA	Apatity	91.38	20	*e*P	P	18 44 42.5	-2.6
APA				MLR	MLR		
	comp=Z,983nm,6.0s						
FINES	FINESS Array B	91.38	26	LR	LR	19 21 10.6	
	comp=Z,116nm,22.0s,baz=252,slow=33						
VAE	Valguarnera	91.95	52	LR	LR	19 19 19.1	
	comp=Z,197nm,22.0s,baz=200,slow=31						
SEY	Seymchan	94.74	337	LR	LR	19 32 51.3	
	comp=Z,91nm,19.9s,baz=44,slow=39						
MORS	Morshin	95.01	38	P	P	18 45 00.4	-1.8
TIXI	Tiksi	95.25	350	LR	LR	19 31 32.3	
	comp=Z,85nm,20.1s,baz=18,slow=38						
TIXI	Tiksi	95.25	350	P	P	18 45 02.2	-0.7
TIXI				IAmb	IAmb	18 45 04.6	
	comp=Z,5.6nm,0.8s						
TIXI	Tiksi	95.25	350	*i* P	P	18 45 02.2	-0.7
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
RNPP1	Kostyukhnivka	95.28	36	P	P	18 45 02.0	-1.4
MA2	Magadan	97.25	335	LR	LR	19 34 22.7	
	comp=Z,79nm,18.8s,baz=72,slow=39						
AK16	Malin Array Si	97.48	36	P	P	18 45 11.4	-2.0
AKASG	Malin Array Be	97.53	36	LR	LR	19 27 17.2	
	comp=Z,145nm,18.2s,baz=292,slow=34						
OBN	Obninsk	99.26	29	*e*P	Pdif	18 45 18.6	-2.7
OBN				*e**PP	pP	18 45 33.6	+1.5
OBN				*e*		18 49 22.0	
OBN				*e*PPP	PPP	18 51 27.4	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,101nm,17.0s						
NVL	N'lazarevskaya	101.98	160	*e*P	Pdif	18 45 35.2	+2.2
NVL				*e*		18 49 43.9	
NVL				*e*PPP	PPP	18 51 57.1	
NVL				*e*S	SKSac	18 56 10.0	+0.5
NVL				*e*SS	SS	19 04 21.1	+4.2
NVL				*e*SSS	SSS	19 08 14.5	
NVL				pmax	pmax		
	comp=Z,13nm,1.6s						
NVL				MLR	MLR		
	comp=Z,584nm,23.0s						
H11S1	WAKE ISLAND Hy	103.04	292	T	T	20 40 36.7	
	baz=77,slow=74,SNR=29						
H11S2	WAKE ISLAND Hy	103.04	292	T	T	20 40 41.8	
	baz=77,slow=74,SNR=33						
H11S3	WAKE ISLAND Hy	103.05	292	T	T	20 40 43.0	
	baz=77,slow=74,SNR=22						
DZM	Mont Dzumac	110.06	250	*e*LR	LR	19 22 34.2	
	comp=Z,36nm,21.2s						
BORK	Borovoye	113.91	15	⇓*i*PKIKP	PKiKP	18 50 19.7	+1.4
BVAR	Borovoye Array	113.94	15	PKiKP	PKiKP	18 50 19.8	+1.3
	comp=Z,1.0nm,0.7s,baz=146,slow=1.0,SNR=5.1						
ZALV	Zalesovo Beam	115.73	6	PKP	PKPdf	18 50 22.3	+0.5
	comp=Z,1.5nm,0.6s,baz=247,slow=1.6,SNR=8.4						
KURK	Kurchatov	117.97	11	⇑*i*PKIKP	PKPdf	18 50 26.3	+0.1
KURBB	Kurchatov Arra	118.04	11	PKP	PKiKP	18 50 27.2	+0.9
	comp=Z,2.5nm,0.8s,baz=341,slow=2.3,SNR=31						
KNGR	Kungurtug, Tuv	119.50	358	⇓*i*PKIKP	PKiKP	18 50 30.6	+1.2
DGZ	Jazzator, Alta	120.19	5	⇑*i*PKIKP	PKiKP	18 50 31.4	+0.6
ULN	Ulaanbaatar	121.19	350	⇓*i*PKIKP	PKiKP	18 50 33.2	+0.4
SONM	Songino Array	121.33	350	PKP	PKiKP	18 50 34.0	+0.9
	comp=Z,1.9nm,0.7s,baz=322,slow=1.1,SNR=15						
SONM	Songino Array	121.33	350	PKIKP	PKiKP	18 50 34.0	+0.9
MK31	Makanchi Array	122.40	10	*d* *i*PKIKP	PKiKP	18 50 35.2	+0.1
MKAR	Makanchi Array	122.40	10	PKP	PKiKP	18 50 35.1	+0.1
	comp=Z,2.1nm,0.8s,baz=341,slow=2.6,SNR=18						
XLT	XiLinHaoTe	122.70	341	*e*PKP	PKiKP	18 50 36.5	+0.7
KSRS	Korea Array	123.11	328	PKP	PKiKP	18 50 38.3	+1.6
	comp=Z,6.3nm,0.7s,baz=6.8,slow=1.5,SNR=22						
TJN	Taejon	124.22	328	⇓*i*PKIKP	PKiKP	18 50 40.4	+1.5
AAK	Ala-Archa	124.54	18	⇓*e*PKIKP	PKPdf	18 50 38.6	-0.7
WMQ	Urumqi	126.04	6	*e*PKP	PKPdf	18 50 41.9	-0.1
WMQ				LR	LR		
	comp=Z,150nm,23.3s						
BJI	Beijing	126.12	339	PKP	PKiKP	18 50 43.0	+0.4
HHC	Hu-ho-hao-te	126.84	344	*e*PKP	PKPdf	18 50 39.1	-4.6
BTO	Baotou	127.48	345	*e*PKP	PKiKP	18 50 47.1	+1.6
BTO				LR	LR		
	comp=Z,550nm,6.3s						
KSH	Kashi	127.84	18	PKP	PKiKP	18 50 46.8	+0.5
HNS	HongShan	129.00	339	⇑PKP	PKiKP	18 50 48.4	0.0
GTA	Gaotai	130.49	354	*e*PKP	PKiKP	18 50 52.2	+0.6
NJ2	Nanjing	131.91	332	*e*PKP	PKPdf	18 50 52.1	-1.3
LZH	Lanzhou	133.19	349	*e*PKP	PKPdf	18 50 49.3	-6.7
XAN	Xi'an	133.94	343	PKP	PKPdf	18 50 55.0	-2.3
XAN				PP	PP	18 53 27.3	+1.4
GOMU	GeErMu	133.97	359	PKP	PKPdf	18 50 56.7	-1.0
ASAR	Alice Springs	139.79	245	PKhKP	PKPpre	18 50 54.9	
	comp=Z,0.3nm,0.8s,baz=92,slow=7.8,SNR=6.9						
ASAR				PKP	PKPdf	18 51 09.1	+0.7
	comp=Z,0.8nm,0.6s,baz=98,slow=2.0,SNR=7.2						
WRAB	Tennant Creek	140.06	251	⇓*e*PKIKP	PKPdf	18 51 08.4	-0.5
WRA	Warramunga Arr	140.07	251	PKP	PKPdf	18 51 09.2	+0.3
	comp=Z,2.9nm,0.9s,baz=93,slow=2.3,SNR=11						
LSA	Lhasa	140.35	4	PKP	PKPdf	18 51 07.3	-2.5
PZH	PanZhiHua	142.90	349	PKP	PKPdf	18 51 12.7	-1.3
TNCH	TengChong	144.85	353	*e*PKP	PKPdf	18 51 18.2	+0.7
MORE	Moreh	145.90	360		PKPab	18 51 20.1	0.0
HYB	Hyderabad	148.63	30	*e*PKPdf	PKPdf	18 51 21.7	-2.2
HYB				*e*PKiKP	PKPbc	18 51 27.5	-0.1
CMAR	Chiang Mai Arr	151.26	351	PKP	PKPdf	18 51 30.1	+2.2
	comp=Z,16nm,0.8s,baz=311,slow=2.4,SNR=20						
CMAR				PKPbc	PKiKP	18 51 35.6	+1.2
	comp=Z,17nm,0.9s,baz=14,slow=2.8,SNR=28						

IDC 08 19:04:40.5±8.8, 5°.14S×152°.73E, h0^{km}, mb3.1/3, mbtmp3.1/3, Error ellipse: s-maj=275.4km s-min=40.2km az=107.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.17	229	P	P	19 09 49.7	+0.7
	0.3nm,0.8s,baz=62,slow=10,SNR=5.4						
	0.3nm,0.8s						
ASAR	Alice Springs	25.86	223	P	P	19 10 13.5	-0.6
	0.1nm,0.6s,baz=50,slow=9.9,SNR=5.9						
	0.1nm,0.6s						
MKAR	Makanchi Array	80.53	319	P	P	19 16 54.9	+0.1
	0.3nm,0.7s,baz=127,slow=3.4,SNR=3.5						
	0.3nm,0.7s						

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*OSPL **08** 19:31:39.8±0.5, 18°.63N×71°.64W, h10^{km}±2^{km}, ML2.0, Presumed earthquake*

*SDD **08** 19:31:41.4±1.4, 18°.62N×71°.43W, h11^{km}±28^{km}, MD2.6, ML2.1, MW2.6, Presumed earthquake*

ISC 08 19:31:40.3±1.0, 18°.60N±0°.03×71°.45W±0°.04, h18^{km}±6^{km}, n10, σ0^{s}.74/19, 1C-6D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LONE3	El Aguacate, B	0.01	317	*i* P	Pg	19 31 43.4	-0.2
LONE3				*e*S	Sg	19 31 46.1	+0.3
LONE3				IAML		19 31 46.5	
	comp=Z,639nm,0.3s						
LODU1	El Espartillar	0.24	186	*i* P	Pg	19 31 46.0	+0.1
LODU1				*e*S	Sg	19 31 49.9	+0.2
LODU1				IAML		19 31 50.9	
	comp=Z,933nm,0.6s						
JIDR	Jimani	0.40	255	⇓*e*Pg	Pb	19 31 48.7	-0.1
JIDR				⇓*e*Sg	Sb	19 31 55.9	+1.3
JIDR				IAML		19 31 56.1	
	comp=N,340nm,0.5s						
SDDR	Presa de Saban	0.41	22	⇓*e*Pg	Pg	19 31 48.5	-0.3
SDDR				⇓*e*Sg	Sg	19 31 53.8	-0.8
SDDR				IAML		19 31 59.2	
	comp=N,41nm,0.6s						
SDDR	Presa de Saban	0.41	22	*i* P	Pg	19 31 48.5	-0.3
SDDR				*e*S	Sg	19 31 55.1	+0.5
SDDR				IAML		19 31 56.2	
	comp=Z,32nm,0.5s						
PODR	Polo	0.46	159	⇓*e*Pg	Pg	19 31 49.2	-0.4
PODR				⇑*e*Sg	Sg	19 31 56.5	+0.6
PODR				IAML		19 31 57.0	
	comp=N,440nm,0.3s						
PODR	Polo	0.46	159	*i* P	Pg	19 31 49.2	-0.4
PODR				*e*S	Sg	19 31 56.5	+0.6
LOBH	Bahia de las A	0.75	194	*i* P	Pg	19 31 53.4	-1.6
LOBH				IAML		19 32 08.0	
	comp=Z,37nm,0.9s						
LOVI	El Cajuil, Ovi	0.80	174	*i* P	Pg	19 31 55.3	-0.5
LOVI				*e*S	Sg	19 32 06.4	0.0
LOVI				IAML		19 32 11.0	
	comp=Z,54nm,1.0s						
BANI	BANI	1.05	101	*e*Pg	Pb	19 31 59.8	-0.3
BANI				⇓*e*Sg	Sb	19 32 14.7	+1.0
BANI				IAML		19 32 26.4	
	comp=N,44nm,1.1s						

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*OSPL **08** 19:33:11.8±0.7, 18°.63N×71°.62W, h9^{km}±5^{km}, ML1.9, Presumed earthquake*

*SDD **08** 19:33:13.0±2.3, 18°.60N×71°.44W, h15^{km}±32^{km}, MD2.6, ML2.5, Presumed earthquake*

ISC 08 19:33:11.8±1.0, 18°.59N±0°.03×71°.43W±0°.04, h18^{km}±6^{km}, n10, σ0^{s}.75/19, 2C-3D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LONE3	El Aguacate, B	0.03	298	*i* P	Pg	19 33 14.8	-0.3
LONE3				*e*S	Sg	19 33 17.6	+0.2
LONE3				IAML		19 33 18.1	
	comp=Z,524nm,0.1s						
LODU1	El Espartillar	0.24	189	*i* P	Pg	19 33 17.5	+0.1
LODU1				*e*S	Sg	19 33 21.2	+0.1
LODU1				IAML		19 33 22.3	
	comp=Z,368nm,0.5s						
JIDR	Jimani	0.41	256	⇓*e*Pg	Pb	19 33 20.1	-0.4
JIDR				⇓*e*Sg	Sb	19 33 27.2	+0.8
JIDR				IAML		19 33 28.4	
	comp=N,774nm,0.3s						
SDDR	Presa de Saban	0.41	19	⇓*e*Pg	Pg	19 33 20.0	-0.3
SDDR				⇑*e*Sg	Sg	19 33 26.7	+0.6
SDDR				IAML		19 33 27.0	
	comp=N,24nm,0.3s						
SDDR	Presa de Saban	0.41	19	*i* P	Pg	19 33 20.0	-0.3
SDDR				*e*S	Sg	19 33 26.7	+0.6
SDDR				IAML		19 33 27.6	
	comp=Z,25nm,0.5s						
PODR	Polo	0.45	161	⇑*e*Pg	Pg	19 33 20.7	-0.3
PODR				*e*Sg	Sg	19 33 27.8	+0.6
PODR				IAML		19 33 29.3	
	comp=N,1µm,0.3s						
PODR	Polo	0.45	161	*i* P	Pg	19 33 20.7	-0.3
PODR				*e*S	Sg	19 33 28.0	+0.8
LOBH	Bahia de las A	0.75	195	*i* P	Pg	19 33 25.8	-0.8
LOBH				IAML		19 33 42.0	
	comp=Z,43nm,2.4s						
LOVI	El Cajuil, Ovi	0.79	175	*i* P	Pg	19 33 26.9	-0.4
LOVI				*e*S	Sg	19 33 38.4	+0.6
LOVI				IAML		19 33 39.7	
	comp=Z,43nm,0.8s						
BANI	BANI	1.04	101	*e*Pg	Pb	19 33 30.1	-1.3
BANI				*e*Sg	Sb	19 33 46.4	+1.6
BANI				IAML		19 33 47.7	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=N,388nm,0.3s						

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*BEO **08** 19:33:52.9±0.2, 43°.27N×18°.08E, h4km±2km, ML2.6/19*
*RHSSO **08** 19:33:52.5±0.4, 43°.24N×18°.09E, h8km, ML2.9/6*
*PDG **08** 19:33:52.2±0.0, 43°.26N×18°.04E, h11km, MD3.0/2, ML2.9/13, Error ellipse: s-maj=0.1km s-min=0.1km az=90.0*
*PRU **08** 19:33:57.2, 43°.28N×17°.81E, h10km*
ISC 08 19:33:52.1±1.1, **43°.28N**±0°.02×**18°.07E**±0°.01, **h4**km±9km, **n81**, σ1§**31**/139, **14C-4D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STON	**Ston**	0.49	214	*e*Pg	Pg	19 34 00.7	-0.8
STON				Sg	Sg	19 34 08.2	+0.3
STON	**Ston**	0.49	214	*e*Pg	Pg	19 34 00.8	-0.7
STON				*e*Sg	Sg	19 34 08.4	+0.5
BRY	**Bratogost**	0.51	138	*e*Pg	Pg	19 34 01.7	-0.2
BRY				*i* Sg	Sg	19 34 09.9	+1.4
TREB	**Trebinje**	0.60	160	⇑*i*Pg	Pg	19 34 02.9	-0.6
TREB				*e*Sg	Sg	19 34 11.2	-0.2
TREB	**Trebinje**	0.60	160	*e*Pg	Pg	19 34 03.0	-0.6
TREB				*e*Sg	Sg	19 34 12.3	+0.9
UPM	**Unac-Piva**	0.61	97	*e*Pg	Pg	19 34 04.1	+0.2
UPM				*i* Sg	Sb	19 34 14.0	-0.5
DBRK	**Dubrovnik**	0.61	175	*e*Pg	Pg	19 34 03.5	-0.4
DBRK				Sg	Sg	19 34 12.4	+0.5
RICI	**Ricice**	0.72	288	*e*Pg	Pg	19 34 05.0	-0.8
RICI				Sg	Sg	19 34 15.5	+0.4
MAKA	**Makarska**	0.77	271	*i* Pg	Pg	19 34 05.7	-1.2
MAKA				Sg	Sg	19 34 16.7	-0.1
NKME	**Niksic**	0.82	128	*e*Pg	Pg	19 34 07.6	-0.3
NKME				*e*Sg	Sb	19 34 20.6	+0.1
HCY	**Herceg Novi**	0.89	160	⇑*i*Pg	Pg	19 34 08.3	-0.8
HCY				*i* Sg	Sb	19 34 22.1	-0.2
CEME	**Cevo**	0.96	140	*e*Pg	Pg	19 34 09.8	-0.7
CEME				*e*Sg	Sb	19 34 24.9	+0.5
PLE	**Pljevlja**	0.96	87	*e*Pg	Pg	19 34 10.4	-0.1
PLE				*i* Sg	Sn	19 34 26.0	-0.7
RUDO	**Rudo**	1.00	70	⇑*i*Pg	Pg	19 34 10.7	-0.6
RUDO				*e*Sg	Sg	19 34 24.5	+0.3
RUDO	**Rudo**	1.00	70	*e*Pg	Pg	19 34 10.8	-0.6
RUDO				*e*Sg	Sg	19 34 24.6	+0.3
LSTV	**Lastovo**	1.01	240	*e*Pg	Pg	19 34 09.4	-2.0
LSTV				Sg	Sg	19 34 23.6	-0.8
BBLS	**Lazi&#263i**	1.13	58	*e*Pg	Pb	19 34 14.0	-0.2
BBLS				*e*Sg	Sn	19 34 30.0	-0.8
KOME	**Kolasin**	1.14	112	*e*Pg	Pb	19 34 13.5	-0.9
KOME				*e*Sg	Sn	19 34 31.7	+0.6
BUM	**Brajici-Budva**	1.15	148	*e*Pg	Pb	19 34 13.3	-1.3
BUM				*i* Sg	Sn	19 34 31.3	0.0
HVAR	**Hvar**	1.19	266	*e*Pg	Pb	19 34 12.8	-2.4
HVAR				Sg	Sb	19 34 29.8	-1.2
PDG	**Podgorica**	1.22	134	⇓P	Pn	19 34 14.7	-1.2
PDG				⇑S	Sn	19 34 34.6	+1.8
PDG	**Podgorica**	1.22	134	*e*Pg	Pn	19 34 14.0	-1.9
PDG				*e*Sg	Sn	19 34 33.2	+0.4
PDG	**Podgorica**	1.22	134	*e*Pg	Pn	19 34 14.7	-1.2
PDG				*i* Sg	Sn	19 34 33.8	+1.0
DRME	**Dracevica, Mon**	1.37	143	*e*Pg	Pn	19 34 17.3	-0.7
DRME				*e*Sg	Sg	19 34 38.7	+2.7
SJES	**Sjenica**	1.39	90	*e*Pg	Pb	19 34 18.9	+0.2
SJES				*e*Sg	Sg	19 34 37.8	+1.1
IVA	**Berane**	1.40	106	*e*Pg	Pn	19 34 18.3	-0.1
IVA				*i* Sg	Sg	19 34 40.0	+3.1
KIJV	**Kijevo**	1.41	301	*e*Pn	Pn	19 34 17.7	-0.9
KIJV				Sg	Sb	19 34 37.6	+0.3
IVAS	**Ivanjica**	1.54	78	*e*Pg	Pn	19 34 20.0	-0.4
IVAS				*e*Sg	Sn	19 34 40.3	-0.7
PVY	**Plav**	1.55	116	*e*Pg	Pn	19 34 20.8	+0.3
PVY				*i* Sg	Sg	19 34 43.5	+1.8
ULC	**Ulcinj**	1.58	146	*e*Pg	Pn	19 34 21.1	+0.3
ULC				*i* Sg	Sg	19 34 43.8	+1.1
BLY	**Banja Luka**	1.60	337	*e*Pn	Pn	19 34 21.7	+0.5
BLY				*e*Sn	Sb	19 34 42.7	-0.1
BLY	**Banja Luka**	1.60	337	⇓P	Pb	19 34 22.6	+0.4
BLY				⇑S	Sb	19 34 43.4	+0.6
BLY	**Banja Luka**	1.60	337	*e*Pg	Pn	19 34 21.9	+0.7
BLY				*e*Sg	Sb	19 34 43.7	+0.9
DIVS	**Divibare**	1.61	59	*e*Pg	Pn	19 34 20.9	-0.5
DIVS				*e*Sg	Sg	19 34 45.2	+1.3
TEKS	**Tekeris**	1.65	39	*e*Pn	Pn	19 34 20.8	-1.0
TEKS				*e*Sn	Sg	19 34 45.5	+0.5
ZIRJ	**Zirje**	1.81	283	*e*Pn	Pn	19 34 23.8	-0.2
ZIRJ				Sn	Sn	19 34 46.9	-0.5
MORI	**Morici**	1.82	290	*e*Pn	Pn	19 34 24.3	+0.2
MORI				Sn	Sn	19 34 46.4	-1.2
TRUS	**Trudelj**	1.94	60	*e*Pn	Pn	19 34 25.3	-0.5
GRUS	**Gruza**	2.01	72	*e*Pn	Pn	19 34 26.8	0.0
GRUS				*e*Sn	Sn	19 34 53.3	+0.8
KNYS	**Krupa na Uni**	2.04	322	*e*Pn	Pn	19 34 27.9	+0.6
KNYS				*e*Sn	Sn	19 34 54.0	+0.7
GOCS	**Kraljevo Serbi**	2.06	81	*e*Pn	Pn	19 34 27.8	+0.2
GOCS				*e*Sn	Sn	19 34 53.7	0.0
SELS	**Selova**	2.23	91	*e*Pn	Pn	19 34 29.8	0.0
AVAS	**Avala Beograd**	2.26	50	*e*Pn	Pn	19 34 29.6	-0.6
DUGI	**Dugi Otok**	2.30	289	*e*Pn	Pn	19 34 31.0	+0.2
DUGI				Sn	Sn	19 34 59.6	0.0
VIRC	**Vir**	2.41	296	*e*Pn	Pn	19 34 32.8	+0.5
VIRC				Sn	Sn	19 35 01.9	-0.2
BARS	**Barje**	2.78	98	*e*Pn	Pn	19 34 37.6	+0.2
BARS				*e*Sn	Sn	19 35 12.6	+1.2
MATE	**Matera**	2.82	202	⇑P	Pb	19 34 42.8	-0.2
MATE				⇑S	Sb	19 35 20.5	+2.6
KUBS	**Kucevo**	2.84	65	*e*Pn	Pn	19 34 40.2	+2.0
MORH	**Mrgy, Hungar**	2.96	8	*e*Pn	Pn	19 34 40.4	+0.6
MORH				*e*Sn	Sn	19 35 16.4	+0.6
MORH	**Mrgy, Hungar**	2.96	8	⇓P	Pn	19 34 38.9	-1.0
BOJS	**Bojanci**	3.00	319	*e*Pn	Pn	19 34 41.1	+0.6
BOJS				*e*Sn	Sn	19 35 18.6	+1.7
BOJS	**Bojanci**	3.00	319	*i* Pn	Pn	19 34 41.2	+0.8
MDVR	**Moldovita**	3.02	59	⇑P	Pn	19 34 38.6	-2.1
MDVR				⇑S	Sn	19 35 13.9	-3.6
MDVR	**Moldovita**	3.02	59	*e*Pn	Pn	19 34 41.2	+0.4
ZAGS	**Zajecar**	3.07	79	*e*Pn	Pn	19 34 42.0	+0.6
ZAGS				*e*Sn	Sn	19 35 17.2	-1.3
CRES	**Cresnjevec Ost**	3.16	325	*i* Pn	Pn	19 34 43.4	+0.8
RIY	**Rijeka**	3.29	310	*e*Pn	Pn	19 34 45.9	+1.5
BEHE	**Becsehely**	3.32	344	*e*Pn	Pn	19 34 45.4	+0.6
BEHE				*e*Sn	Sn	19 35 24.8	+0.1
ZAPS	**Zavoj**	3.33	89	*e*Pn	Pn	19 34 44.8	-0.2
ZAPS				*e*Sn	Sn	19 35 23.6	-1.4
BLKB	**Belogradchik**	3.37	83	⇑S	Sn	19 35 23.3	-2.6
BLKB	**Belogradchik**	3.37	83	*e*Pn	Pn	19 34 47.5	+2.0
VISS	**Visnje**	3.42	319	*i* Pn	Pn	19 34 47.3	+1.1
BZS	**Buzias**	3.45	46	⇑P	Pn	19 34 45.1	-1.4
BZS				⇑S	Sn	19 35 24.2	-3.6
CEY	**Cerknica**	3.58	315	*e*Pn	Pn	19 34 49.8	+1.4
CEY				*e*Sn	Sn	19 35 32.8	+1.6
SKDS	**Skadanscina**	3.69	309	*e*Pn	Pn	19 34 50.8	+0.9
VTS	**Vitosha**	3.85	98	*e*Pn	Pn	19 34 53.3	+1.1
GZR	**Gura Zlata**	3.98	56	⇑P	Pn	19 34 52.6	-1.3
GZR				⇑S	Sn	19 35 37.2	-3.8
SOKA	**Soboth**	4.02	329	*e*Pn	Pn	19 34 55.4	+0.8
	0.4nm,0.3s						
SOKA				*e*Sn	Sn	19 35 40.7	-1.4
	0.7nm,0.3s						
OBKA	**Obir**	4.08	323	*i* Pn	Pn	19 34 56.8	+1.4
	0.4nm,0.2s						
ARSA	**Arzberg**	4.36	336	*e*Pn	Pn	19 35 00.1	+1.0
	1.0nm,0.3s						
DRGR		4.81	42	⇓S	Sn	19 35 57.8	-3.7
KBA	**Koelnbreinsper**	5.06	320	*e*Pn	Pn	19 35 10.3	+1.5
	0.5nm,0.5s						
ABTA	**Abfaltersbach**	5.25	313	*e*Pn	Pn	19 35 12.7	+1.4
	0.2nm,0.1s						
ABTA				*e*Sn	Sn	19 36 15.1	+2.8
	3.2nm,0.7s						
MOA	**Molln**	5.29	331	*e*Pn	Pn	19 35 13.9	+2.0
	0.5nm,0.2s						
MOA				*e*Sn	Sn	19 36 13.0	-0.4
	1.5nm,0.4s						
BIOA	**Bad Ischl, Aus**	5.40	326	*e*Pn	Pn	19 35 15.3	+1.9
	0.4nm,0.2s						
LESA	**Schwarzleotal**	5.62	319	*e*Pn	Pn	19 35 17.5	+1.0
	1.1nm,0.2s						
WTTA	**Wattenberg**	6.04	313	*i* Pn	Pn	19 35 24.3	+2.0
	0.5nm,0.2s						
WTTA				*e*Sn	Sn	19 36 34.4	+2.4
	1.8nm,0.4s						
WATA	**Walderalm**	6.12	314	*e*Pn	Pn	19 35 25.0	+1.6
	0.5nm,0.2s						
SQTA	**Sankt Quirin**	6.24	311	*e*Pn	Pn	19 35 26.8	+1.8
	0.2nm,0.2s						
MOTA	**Moosalm**	6.38	312	*e*Pn	Pn	19 35 28.2	+1.3
	1.2nm,0.5s						
MOTA				*e*Sn	Sn	19 36 42.6	+2.4
	1.1nm,0.4s						
KHC	**Kasperske Hory**	6.63	334	*e*SN	Sn	19 36 44.6	-1.7

ROM 08 19:38:35.6±0.1, **44°.020N**±0°.004×**11°.317E**±0°.005, **h8**km, **ML1.8**/11, **1C-1D, Error ellipse: s-maj=0.4km s-min=0.4km az=211.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCL	**Monte Cuccoli**	0.10	262	⇓P	Pg	19 38 38.6	+0.6
MOCL				S	Sg	19 38 40.4	+0.8
MOCL				AML	AML		
	comp=E,1390µm,0.5s						
MOCL				AML	AML		
	comp=N,2315µm,0.2s						
MOCL				AML	AML		
	comp=E,1395µm,0.5s						
MOCL				AML	AML		
	comp=N,2320µm,0.2s						
MOCL				AML	AML		
	comp=N,2317µm,0.2s						
MOCL				AML	AML		
	comp=E,1162µm,0.1s						
MPPT	**Montemurlo**	0.17	249	P	Pg	19 38 39.9	+0.7
MPPT				S	Sg	19 38 42.7	+1.0
MPPT				AML	AML		
	comp=E,452µm,1.1s						
MPPT				AML	AML		
	comp=N,450µm,0.8s						
MPPT				AML	AML		
	comp=E,452µm,1.1s						
MPPT				AML	AML		
	comp=N,450µm,0.8s						
MPPT				AML	AML		
	comp=N,437µm,0.3s						
MPPT				AML	AML		
	comp=E,369µm,0.2s						
BRIS	**BRISIGHELLA**	0.19	47	AML	AML		
	comp=E,192µm,1.2s						
BRIS				AML	AML		
	comp=N,304µm,0.2s						
FNVD	**Fontana Vidola**	0.20	317	P	Pg	19 38 40.5	+0.7
FNVD				S	Sg	19 38 43.8	+1.2
FNVD				AML	AML		
	comp=E,289µm,0.3s						
FNVD				AML	AML		
	comp=N,428µm,0.4s						
FNVD				AML	AML		
	comp=E,265µm,0.1s						
FNVD				AML	AML		
	comp=N,353µm,0.1s						
FIE	**Fiesole**	0.21	184	P	Pg	19 38 40.5	+0.6
FIE				S	Sg	19 38 44.1	+1.4
RUFI	**Rufina**	0.23	142	⇑P	Pg	19 38 40.9	+0.8
RUFI				S	Sg	19 38 44.5	+1.3
RUFI				AML	AML		
	comp=E,145µm,0.2s						
RUFI				AML	AML		
	comp=N,92µm,0.3s						
LMD	**Lutirano**	0.29	78	P	Pg	19 38 42.0	+0.8
LMD				AML	AML		
	comp=N,405µm,0.2s						
LMD				AML	AML		
	comp=E,234µm,0.3s						
LMD				AML	AML		
	comp=N,405µm,1.8s						
LMD				AML	AML		
	comp=E,234µm,0.3s						
LMD				AML	AML		
	comp=N,405µm,0.2s						
CRMI	**Carmignano**	0.34	228	P	Pg	19 38 42.9	+0.6
SFI	**Santa Sofia**	0.40	107	P	Pb	19 38 44.2	-0.7
SFI				S	Sb	19 38 51.2	0.0
SFI				AML	AML		
	comp=E,238µm,1.4s						
SFI				AML	AML		
	comp=N,88µm,1.4s						
SFI				AML	AML		
	comp=N,128µm,0.6s						
POPM	**Popiglio**	0.41	274	P	Pg	19 38 43.9	+0.5
POPM				S	Sb	19 38 50.5	-0.9
POPM				AML	AML		
	comp=E,536µm,0.7s						
POPM				AML	AML		
	comp=N,431µm,0.7s						
POPM				AML	AML		
	comp=N,423µm,0.2s						
OSSC	**Osservatorio P**	0.50	186	P	Pg	19 38 45.7	+0.5
OSSC				AML	AML		
	comp=N,314µm,0.3s						
OSSC				AML	AML		
	comp=E,270µm,1.1s						
OSSC				AML	AML		
	comp=E,246µm,0.2s						
CSNT	**Castellina Chi**	0.55	182	P	Pg	19 38 46.6	+0.4
CSNT				S	Sb	19 38 56.0	+0.5
CSNT				AML	AML		
	comp=E,458µm,0.4s						
CSNT				AML	AML		
	comp=N,239µm,0.6s						

ROM 08 19:38:40.5±0.1, **44°.017N**±0°.004×**11°.314E**±0°.004, **h8**km, **ML1.9**/10, **Error ellipse: s-maj=0.3km s-min=0.3km az=220.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCL	**Monte Cuccoli**	0.10	263	P	Pg	19 38 43.4	+0.5
MOCL				S	Sg	19 38 45.2	+0.7
MOCL				AML	AML		
	comp=E,1390µm,0.5s						
MOCL				AML	AML		
	comp=N,2315µm,0.2s						
MOCL				AML	AML		
	comp=E,1395µm,0.5s						
MOCL				AML	AML		
	comp=N,2320µm,0.2s						
MPPT	**Montemurlo**	0.17	250	P	Pg	19 38 44.9	+0.8
MPPT				S	Sg	19 38 47.6	+1.0
MPPT				AML	AML		
	comp=E,452µm,1.1s						
MPPT				AML	AML		
	comp=N,450µm,0.8s						
MPPT				AML	AML		
	comp=E,452µm,1.1s						
MPPT				AML	AML		
	comp=N,450µm,0.8s						
MPPT				AML	AML		
	comp=E,452µm,0.9s						
BRIS	**BRISIGHELLA**	0.20	47	AML	AML		
	comp=N,304µm,0.2s						
BRIS				AML	AML		
	comp=E,192µm,1.2s						
FNVD	**Fontana Vidola**	0.20	318	P	Pg	19 38 45.4	+0.7
FNVD				S	Sg	19 38 48.8	+1.3
FNVD				AML	AML		
	comp=N,428µm,0.4s						
FNVD				AML	AML		
	comp=E,289µm,0.3s						
FIE	**Fiesole**	0.21	184	P	Pg	19 38 45.4	+0.6
FIE				S	Sg	19 38 49.0	+1.4
RUFI	**Rufina**	0.23	141	P	Pg	19 38 45.8	+0.7
RUFI				S	Sg	19 38 49.3	+1.2
FIR	**Firenze**	0.25	190	P	Pg	19 38 46.3	+0.9
FIR				S	Sg	19 38 50.5	+1.8
LMD	**Lutirano**	0.29	78	P	Pg	19 38 47.0	+0.7
LMD				S	Sb	19 38 51.9	-1.0
LMD				AML	AML		
	comp=E,234µm,0.3s						
LMD				AML	AML		
	comp=N,405µm,0.2s						
LMD				AML	AML		
	comp=N,405µm,1.8s						
LMD	**Lutirano**	0.29	78	S	Pg	19 38 46.9	+0.7
CRMI	**Carmignano**	0.34	228	P	Pg	19 38 47.7	+0.6
CRMI				S	Sg	19 38 52.5	+1.0
SFI	**Santa Sofia**	0.40	106	P	Pb	19 38 49.3	-0.5
SFI				S	Sb	19 38 55.9	-0.2
SFI				AML	AML		
	comp=E,238µm,1.4s						
SFI				AML	AML		
	comp=N,88µm,1.4s						
POPM	**Popiglio**	0.40	274	P	Pg	19 38 48.8	+0.5
POPM				S	Sb	19 38 55.3	-0.8
POPM				AML	AML		
	comp=E,536µm,0.7s						
POPM				AML	AML		
	comp=N,431µm,0.7s						
OSSC	**Osservatorio P**	0.49	186	P	Pg	19 38 50.6	+0.5
OSSC				S	Sb	19 38 58.5	-0.3
OSSC				AML	AML		
	comp=E,270µm,1.1s						
OSSC				AML	AML		
	comp=N,314µm,0.3s						
CSNT	**Castellina Chi**	0.55	182	P	Pg	19 38 51.4	+0.4
CSNT				S	Sb	19 38 60.0	-0.2
CSNT				AML	AML		
	comp=E,458µm,0.4s						
CSNT				AML	AML		
	comp=N,239µm,0.6s						

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*GEN **08** 19:38:54.2, 43°.98N×11°.30E, h11km±1km, Ml2.5*
*ROM **08** 19:38:54.2±0.1, 44°.005N±0°.004×11°.303E±0°.005, h7km, ML2.6/62, Error ellipse: s-maj=0.4km s-min=0.3km az=13.0*
*LDG **08** 19:38:56.1±0.3, 43°.88N×11°.31E, h7km, Ml2.5/14, Error ellipse: s-maj=5.4km s-min=4.4km az=79.0*
*PRU **08** 19:38:57.4, 43°.99N×11°.56E, h10km*
ISC 08 19:38:54.2±0.9, **43°.99N**±0°.01×**11°.28E**±0°.01, **h5**km±6km, **n102**, σ1§**57**/164, **4C-1D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCL	**Monte Cuccoli**	0.07	282	⇓*i*P	Pg	19 38 57.0	+1.0
MOCL				S	Sg	19 38 58.8	+1.6
MOCL				AML	AML		
	comp=E,15100µm,0.1s						
MOCL				AML	AML		
	comp=N,30950µm,0.5s						
MOCL				AML	AML		
	comp=E,15102µm,0.1s						
MOCL				AML	AML		
	comp=N,29367µm,0.2s						
SEI	**Scarperia**	0.08	40	P	Pg	19 38 53.6	-2.5
SEI				S	Sg	19 38 55.0	-2.4
MPPT	**Montemurlo**	0.14	257	⇑*i*P	Pg	19 38 58.3	+1.2
MPPT				S	Sg	19 39 01.1	+2.1
MPPT				AML	AML		
	comp=E,6455µm,1.2s						
MPPT				AML	AML		
	comp=N,6200µm,0.3s						
MPPT				AML	AML		
	comp=E,5994µm,0.2s						
MPPT				AML	AML		
	comp=N,6200µm,0.3s						
FNVD	**Fontana Vidola**	0.21	327	⇑*i*P	Pg	19 38 58.9	+0.5
FNVD				S	Sg	19 39 02.1	+0.9
FNVD				AML	AML		
	comp=N,5895µm,1.1s						
FNVD				AML	AML		
	comp=E,3085µm,0.3s						
FNVD				AML	AML		
	comp=N,4487µm,0.1s						
FNVD				AML	AML		
	comp=E,3041µm,0.1s						
FIR	**Firenze**	0.22	185	P	Pg	19 38 59.9	+1.4
FIR				S	Sg	19 39 03.9	+2.6
FIR				AML	AML		
	comp=E,6975µm,0.5s						
FIR				AML	AML		
	comp=E,6855µm,0.5s						
FIR				AML	AML		
	comp=N,8075µm,0.2s						
FIR				AML	AML		
	comp=N,8170µm,0.2s						
FIR				AML	AML		
	comp=E,6657µm,0.2s						
FIR				AML	AML		
	comp=N,8076µm,0.2s						
FIR				AML	AML		
	comp=E,6846µm,0.2s						
FIR				AML	AML		
	comp=N,8171µm,0.2s						
RUFI	**Rufina**	0.22	132	P	Pg	19 38 59.3	+0.7
RUFI				S	Sg	19 39 02.9	+1.4
RUFI	**Rufina**	0.22	132	⇑*i*P	Pg	19 38 59.3	+0.7
RUFI				S	Sg	19 39 02.8	+1.4
RUFI				AML	AML		
	comp=N,1326µm,0.9s						
RUFI				AML	AML		
	comp=E,1205µm,0.4s						
RUFI				AML	AML		
	comp=N,1324µm,0.9s						
RUFI				AML	AML		
	comp=E,1200µm,0.4s						
RUFI				AML	AML		
	comp=N,1325µm,0.9s						
RUFI				AML	AML		
	comp=E,1050µm,0.7s						
RUFI				AML	AML		
	comp=N,999µm,0.9s						
RUFI				AML	AML		
	comp=N,999µm,1.1s						
RUFI				AML	AML		
	comp=E,1050µm,1.3s						
BRIS	**BRISIGHELLA**	0.23	46	P	Pg	19 39 02.5	+3.8
BRIS				S	Sg	19 39 08.8	+7.1
BRIS				AML	AML		
	comp=N,2185µm,0.3s						
BRIS				AML	AML		
	comp=E,1330µm,0.3s						
BRIS				AML	AML		
	comp=E,143µm,1.1s						
BRIS				AML	AML		
	comp=N,244µm,0.8s						
BRIS				AML	AML		
	comp=N,2185µm,0.3s						
BRIS				AML	AML		
	comp=E,1330µm,0.3s						
CRMI	**Carmignano**	0.30	229	⇑P	Pg	19 39 01.0	+1.0
CRMI				S	Sg	19 39 06.2	+2.2
CRMI				AML	AML		
	comp=E,936µm,0.3s						
CRMI				AML	AML		
	comp=E,2670µm,0.2s						
CRMI				AML	AML		
	comp=N,1580µm,0.4s						
CRMI				AML	AML		
	comp=E,2674µm,0.2s						
CRMI				AML	AML		
	comp=N,3866µm,0.4s						
CRMI				AML	AML		
	comp=E,936µm,0.3s						
CRMI				AML	AML		
	comp=N,1577µm,0.4s						
CRMI				AML	AML		
	comp=N,3865µm,0.4s						
LMD	**Lutirano**	0.32	74	P	Pg	19 39 00.3	-0.1
LMD				S	Sg	19 39 05.1	+0.5
LMD	**Lutirano**	0.32	74	P	Pg	19 39 00.3	-0.1
LMD				S	Sg	19 39 05.3	+0.6
LMD				AML	AML		
	comp=E,2495µm,1.4s						
LMD				AML	AML		
	comp=N,3190µm,0.2s						
LMD				AML	AML		
	comp=E,2398µm,0.3s						
LMD				AML	AML		
	comp=N,3190µm,0.2s						
LMD				AML	AML		
	comp=E,2398µm,1.7s						
POPM	**Popiglio**	0.38	278	P	Pg	19 39 02.3	+0.7
POPM				S	Sg	19 39 08.5	+1.9
POPM	**Popiglio**	0.38	278	P	Pg	19 39 02.4	+0.7
POPM				S	Sb	19 39 08.8	-0.9
POPM				AML	AML		
	comp=E,3070µm,0.2s						
POPM				AML	AML		
	comp=N,5525µm,0.2s						
POPM				AML	AML		
	comp=E,3068µm,0.2s						

POPM				AML	AML		
	comp=N,5525µm,0.1s						
MTRZ	**Monterenzio**	**0.41**	**19**	P	**Pg**	**19 39 01.7**	**-0.5**
MTRZ				S	**Sg**	**19 39 07.1**	**-0.4**
MTRZ	**Monterenzio**	**0.41**	**19**	P	**Pg**	**19 39 01.7**	**-0.5**
MTRZ				AML	AML		
	comp=E,1655µm,0.5s						
MTRZ				AML	AML		
	comp=N,1830µm,0.5s						
MTRZ				AML	AML		
	comp=E,1710µm,0.5s						
MTRZ				AML	AML		
	comp=E,1656µm,0.5s						
MTRZ				AML	AML		
	comp=N,1830µm,0.5s						
MTRZ				AML	AML		
	comp=E,1711µm,0.5s						
MTRZ				AML	AML		
	comp=N,1837µm,0.5s						
MTRZ				AML	AML		
	comp=E,1655µm,0.5s						
MTRZ				AML	AML		
	comp=N,1840µm,0.5s						
ASQU	**Asqua**	**0.41**	**118**	P	**Pg**	**19 39 02.5**	**+0.3**
ASQU				S	**Sb**	**19 39 09.2**	**-1.5**
ASQU	**Asqua**	**0.41**	**118**	P	**Pg**	**19 39 02.7**	**+0.4**
ASQU				S	**Sb**	**19 39 09.2**	**-1.5**
ASQU				AML	AML		
	comp=E,444µm,1.4s						
ASQU				AML	AML		
	comp=N,542µm,1.2s						
ASQU				AML	AML		
	comp=E,437µm,0.3s						
ASQU				AML	AML		
	comp=N,475µm,0.2s						
SFI	**Santa Sofia**	**0.42**	**102**	P	**Pg**	**19 39 02.3**	**+0.1**
SFI				S	**Sb**	**19 39 08.8**	**-1.9**
SFI				AML	AML		
	comp=E,488µm,0.5s						
SFI				AML	AML		
	comp=N,623µm,0.8s						
SFI				AML	AML		
	comp=N,614µm,0.8s						
SFI				AML	AML		
	comp=E,488µm,0.5s						
SFI				AML	AML		
	comp=N,595µm,0.2s						
SFI				AML	AML		
	comp=N,593µm,0.6s						
SFI				AML	AML		
	comp=N,593µm,1.4s						
SFI				AML	AML		
	comp=E,420µm,0.3s						
SFI				AML	AML		
	comp=E,433µm,0.2s						
ZCCA	**Zocca**	**0.42**	**329**	P	**Pb**	**19 39 03.9**	**-0.3**
ZCCA				AML	AML		
	comp=E,498µm,0.4s						
ZCCA				AML	AML		
	comp=N,518µm,0.4s						
ZCCA				AML	AML		
	comp=E,465µm,0.4s						
ZCCA				AML	AML		
	comp=E,497µm,0.4s						
ZCCA				AML	AML		
	comp=N,518µm,0.4s						
ZCCA				AML	AML		
	comp=N,584µm,0.5s						
OSSC	**Osservatorio P**	**0.47**	**183**	P	**Pg**	**19 39 04.0**	**+0.9**
OSSC				S	**Sb**	**19 39 11.6**	**-0.4**
OSSC	**Osservatorio P**	**0.47**	**183**	P	**Pg**	**19 39 04.1**	**+0.9**
OSSC				S	**Sb**	**19 39 11.7**	**-0.4**
OSSC				AML	AML		
	comp=E,1118µm,0.8s						
OSSC				AML	AML		
	comp=N,1615µm,0.2s						
OSSC				AML	AML		
	comp=E,1655µm,0.2s						
OSSC				AML	AML		
	comp=N,1140µm,0.8s						
OSSC				AML	AML		
	comp=E,1119µm,0.8s						
OSSC				AML	AML		
	comp=E,1090µm,0.2s						
OSSC				AML	AML		
	comp=N,1616µm,0.2s						
OSSC				AML	AML		
	comp=E,1656µm,0.2s						
OSSC				AML	AML		
	comp=N,1114µm,0.2s						
IMOL	**Imola, Italy**	**0.50**	**42**	P	**Pb**	**19 39 05.0**	**-0.4**
IMOL				S	**Sb**	**19 39 13.0**	**+0.1**
IMOL	**Imola, Italy**	**0.50**	**42**	P	**Pb**	**19 39 04.8**	**-0.6**
IMOL				AML	AML		
	comp=E,1210µm,0.6s						
IMOL				AML	AML		
	comp=N,984µm,0.8s						
IMOL				AML	AML		
	comp=N,886µm,0.3s						
IMOL				AML	AML		
	comp=E,1173µm,0.5s						
BDI	**Bagni Di Lucca**	**0.50**	**279**	P	**Pg**	**19 39 04.4**	**+0.6**
BDI				S	**Sg**	**19 39 11.8**	**+1.4**
BDI	**Bagni Di Lucca**	**0.50**	**279**	P	**Pg**	**19 39 04.3**	**+0.5**
BDI				S	**Sg**	**19 39 12.1**	**+1.7**
CSNT	**Castellina Chi**	**0.52**	**179**	P	**Pg**	**19 39 04.9**	**+0.7**
CSNT				S	**Sb**	**19 39 13.1**	**-0.5**
CSNT	**Castellina Chi**	**0.52**	**179**	P	**Pg**	**19 39 04.9**	**+0.7**
CSNT				S	**Sb**	**19 39 13.0**	**-0.6**
CSNT				AML	AML		
	comp=E,885µm,1.6s						
CSNT				AML	AML		
	comp=N,960µm,0.6s						
CSNT				AML	AML		
	comp=E,867µm,0.3s						
FAEN	**Faenza**	**0.52**	**55**	P	**Pb**	**19 39 05.1**	**-0.8**
MAIM	**Mastiano**	**0.58**	**263**	P	**Pg**	**19 39 05.9**	**+0.6**
MAIM				S	**Sg**	**19 39 14.4**	**+1.6**
MAIM	**Mastiano**	**0.58**	**263**	P	**Pg**	**19 39 05.8**	**+0.5**
MAIM				S	**Sg**	**19 39 14.3**	**+1.6**
CARD	**Cardoso**	**0.58**	**274**	P	**Pg**	**19 39 06.0**	**+0.6**
CARD				S	**Sg**	**19 39 14.5**	**+1.6**
CARD	**Cardoso**	**0.58**	**274**	P	**Pb**	**19 39 06.8**	**-0.1**
CARD				S	**Sb**	**19 39 14.9**	**-0.5**
CARD				AML	AML		
	comp=E,702µm,0.7s						
CARD				AML	AML		
	comp=N,984µm,0.8s						
CARD				AML	AML		
	comp=N,884µm,0.2s						
CRE	**Caprese Michel**	**0.61**	**127**	P	**Pb**	**19 39 06.7**	**-0.7**
CRE				S	**Sb**	**19 39 16.4**	**+0.1**
CRE				AML	AML		
	comp=E,352µm,0.5s						
CRE				AML	AML		
	comp=N,588µm,0.3s						
PII	**Pisa**	**0.61**	**244**	P	**Pg**	**19 39 06.5**	**+0.6**
PII				S	**Sb**	**19 39 16.2**	**0.0**
PII	**Pisa**	**0.61**	**244**	P	**Pg**	**19 39 06.5**	**+0.6**
PII				AML	AML		
	comp=E,982µm,1.3s						
PII				AML	AML		
	comp=N,1015µm,0.3s						
PII				AML	AML		
	comp=E,774µm,0.4s						
PII				AML	AML		
	comp=E,774µm,1.6s						
PII				AML	AML		
	comp=N,1014µm,0.3s						
GSCL	**Gusciola**	**0.62**	**306**	P	**Pg**	**19 39 06.7**	**+0.7**
GSCL				S	**Sb**	**19 39 16.6**	**+0.1**
GSCL	**Gusciola**	**0.62**	**306**	P	**Pg**	**19 39 06.8**	**+0.7**
GSCL				S	**Sb**	**19 39 16.6**	**+0.1**
GSCL				AML	AML		
	comp=E,708µm,0.3s						
GSCL				AML	AML		
	comp=N,760µm,0.2s						
GSCL				AML	AML		
	comp=N,760µm,0.2s						
GSCL				AML	AML		
	comp=E,708µm,0.3s						
BRSN	**Barisano**	**0.64**	**63**	P	**Pb**	**19 39 07.3**	**-0.6**
SARO	**Sassorosso**	**0.66**	**287**	P	**Pg**	**19 39 07.7**	**+0.8**
SARO				S	**Sb**	**19 39 18.0**	**+0.1**
SARO	**Sassorosso**	**0.66**	**287**	P	**Pg**	**19 39 07.5**	**+0.5**
SARO				S	**Sb**	**19 39 17.7**	**-0.2**
VLC	**Villacollemand**	**0.67**	**285**	P	**Pg**	**19 39 07.8**	**+0.8**
VLC				S	**Sb**	**19 39 18.0**	**0.0**
VLC	**Villacollemand**	**0.67**	**285**	P	**Pg**	**19 39 07.8**	**+0.8**
VLC				S	**Sb**	**19 39 17.8**	**-0.2**
VLC				AML	AML		
	comp=E,315µm,0.7s						
VLC				AML	AML		
	comp=E,334µm,0.7s						
VLC				AML	AML		
	comp=N,571µm,0.9s						
VLC				AML	AML		
	comp=N,560µm,0.9s						
VLC				AML	AML		
	comp=N,515µm,0.2s						
VLC				AML	AML		
	comp=N,518µm,0.2s						
VLC				AML	AML		
	comp=E,299µm,0.3s						
VLC				AML	AML		
	comp=E,305µm,0.3s						
SSP9	**Sansepolcro**	**0.74**	**124**	P	**Pb**	**19 39 09.3**	**-0.3**
SSP9				AML	AML		
	comp=E,187µm,1.4s						
SSP9				AML	AML		
	comp=N,226µm,0.6s						
SSP9				AML	AML		
	comp=E,187µm,1.4s						
SSP9				AML	AML		
	comp=E,186µm,0.5s						
SSP9				AML	AML		
	comp=N,225µm,0.6s						
PARC	**Parchiule**	**0.77**	**116**	P	**Pb**	**19 39 09.8**	**-0.3**
CPGN	**Carpegna, Ital**	**0.77**	**104**	P	**Pb**	**19 39 09.6**	**-0.7**
FROS	**Frosini**	**0.79**	**187**	AML	AML		
	comp=N,411µm,0.5s						
FROS				AML	AML		
	comp=E,626µm,0.7s						
FROS				AML	AML		
	comp=N,412µm,0.5s						
FROS				AML	AML		
	comp=E,626µm,0.7s						
EQUI	**Equi**	**0.83**	**283**	P	**Pg**	**19 39 10.0**	**-0.2**
EQUI				S	**Sb**	**19 39 22.3**	**-0.4**
EQUI	**Equi**	**0.83**	**283**	P	**Pg**	**19 39 10.0**	**-0.2**
EQUI				S	**Sb**	**19 39 22.4**	**-0.3**
MAGO	**Bibbona**	**0.85**	**213**	AML	AML		
	comp=E,258µm,1.6s						
MAGO				AML	AML		
	comp=N,220µm,0.7s						
MAGO				AML	AML		
	comp=E,230µm,0.5s						
MAGO				AML	AML		
	comp=N,167µm,0.2s						
FIVI	**Fivizzano**	**0.87**	**287**	P	**Pg**	**19 39 11.1**	**+0.2**
PE3	**Peglio**	**0.93**	**108**	P	**Pg**	**19 39 12.0**	**0.0**
GRAM	**Graiana**	**1.01**	**300**	P	**Pg**	**19 39 13.8**	**+0.3**
GRAM				S	**Sn**	**19 39 28.9**	**-0.8**
GRAM	**Graiana**	**1.01**	**300**	P	**Pb**	**19 39 14.1**	**-0.1**
GRAM				AML	AML		
	comp=E,588µm,0.3s						
GRAM				AML	AML		
	comp=N,480µm,0.3s						
GRAM				AML	AML		
	comp=N,480µm,0.3s						
GRAM				AML	AML		
	comp=E,588µm,0.3s						
GRAM				AML	AML		
	comp=N,480µm,1.7s						
NARO	**Abbazia di Nar**	**1.01**	**112**	P	**Pb**	**19 39 14.2**	**0.0**
ATVO	**AVT- Monte Val**	**1.02**	**126**	P	**Pg**	**19 39 13.2**	**-0.5**
ATVO				AML	AML		
	comp=E,158µm,0.6s						
ATVO				AML	AML		
	comp=N,112µm,0.3s						
ATVO				AML	AML		
	comp=N,112µm,0.3s						
ATVO				AML	AML		
	comp=E,158µm,0.6s						
PLMA	**Palmaria, Port**	**1.03**	**274**	P	**Pg**	**19 39 14.3**	**+0.3**
PLMA				S	**Sg**	**19 39 28.2**	**+0.8**
PLMA	**Palmaria, Port**	**1.03**	**274**	P	**Pg**	**19 39 14.4**	**+0.3**
RIBO	**Ribolla Roccas**	**1.05**	**189**	P	**Pg**	**19 39 14.8**	**+0.4**
ARCI	**Arcidosso**	**1.15**	**173**	P	**Pg**	**19 39 16.5**	**+0.3**
SF11	**Podere del Sol**	**1.16**	**165**	P	**Pn**	**19 39 16.9**	**-0.2**
SF04	**Casetta**	**1.19**	**166**	P	**Pg**	**19 39 17.2**	**+0.2**
SF01	**Poggio Pratacc**	**1.20**	**170**	P	**Pb**	**19 39 17.5**	**+0.1**
SACS	**San Casciano d**	**1.23**	**158**	P	**Pn**	**19 39 18.1**	**0.0**
MGAB	**Montegabbione**	**1.23**	**150**	P	**Pb**	**19 39 17.2**	**-0.8**
CASP	**Castiglione de**	**1.24**	**194**	P	**Pn**	**19 39 18.0**	**-0.2**
CASP				AML	AML		
	comp=E,59µm,0.9s						
CASP				AML	AML		
	comp=N,49µm,0.8s						
TEOL	**Teolo**	**1.40**	**11**	P	**Pb**	**19 39 20.2**	**-0.6**
MBAL	**Monte Baldo -**	**1.73**	**350**	P	**Pb**	**19 39 26.5**	**-0.1**
VARA	**Varagna**	**1.86**	**352**	P	**Pb**	**19 39 27.8**	**-0.9**
PGF	**Pioggiola**	**2.20**	**230**	*e*Pn	**Pn**	**19 39 31.1**	**-0.4**
PGF				*e*Sn	**Sn**	**19 39 56.3**	**-2.9**
	comp=N,4.0nm,0.3s						
ZIAN	**Ziano**	**2.29**	**5**	P	**Pn**	**19 39 33.7**	**+0.8**
SBF	**Sospel**	**2.78**	**269**	*e*Pn	**Pn**	**19 39 38.5**	**-1.0**
SBF				*e*Sn	**Sn**	**19 40 10.8**	**-2.7**
	comp=N,7.9nm,0.4s						
ABTA	**Abfaltersbach**	**2.89**	**17**	*e*Pn	**Pn**	**19 39 41.7**	**+0.7**
	comp=N,1.7nm,0.4s						
ABTA				*e*Sn	**Sn**	**19 40 17.4**	**+1.3**
	comp=N,5.3nm,0.7s						
FETA	**Feichten**	**3.06**	**353**	*i* Pn	**Pb**	**19 39 46.5**	**-2.6**
	comp=N,0.6nm,0.2s,SNR=4.3						
SQTA	**Sankt Quirin**	**3.23**	**359**	*i* Pn	**Pb**	**19 39 48.8**	**-3.3**
	comp=N,3.8nm,0.2s,SNR=15						
SQTA				*e*Sn	**Sn**	**19 40 27.4**	**+2.8**
	comp=N,4.3nm,0.4s						
WTTA	**Wattenberg**	**3.28**	**4**	*e*Pn	**Pb**	**19 39 49.5**	**-3.5**
	comp=N,3.5nm,0.4s,SNR=5.6						
WTTA				*e*Sn	**Sn**	**19 40 27.7**	**+1.7**
	comp=N,5.1nm,0.6s						
MBDF	**Montbardon**	**3.32**	**284**	*e*Pn	**Pn**	**19 39 46.5**	**-0.4**
MBDF	**Montbardon**	**3.32**	**284**	*e*P	**Pb**	**19 39 50.8**	**-2.8**
MBDF				*e*Sn	**Sn**	**19 40 25.7**	**-1.1**
	comp=N,2.2nm,0.3s						
WATA	**Walderalm**	**3.35**	**3**	*i* Pn	**Pn**	**19 39 50.3**	**+2.9**
	comp=N,6.1nm,0.3s,SNR=9.2						
WATA				*e*Sn	**Sb**	**19 40 30.9**	**-4.4**
	comp=N,6.3nm,0.5s						
MOTA	**Moosalm**	**3.36**	**358**	*i* Pn	**Pb**	**19 39 50.8**	**-3.5**
	comp=N,1.5nm,0.4s,SNR=7.1						
MOTA				*e*Sn	**Sn**	**19 40 30.8**	**+3.1**
	comp=N,1.6nm,0.4s						
KBA	**Koelnbreinsper**	**3.41**	**24**	*e*Pn	**Pn**	**19 39 48.1**	**-0.1**
	comp=N,0.3nm,0.2s						
KBA				*e*Sn	**Sn**	**19 40 29.8**	**+0.7**
	comp=N,1.1nm,0.3s						
OBKA	**Obir**	**3.42**	**41**	*e*Pn	**Pn**	**19 39 48.3**	**+0.1**
	comp=N,0.3nm,0.2s						
OBKA				*e*Sn	**Sn**	**19 40 30.1**	**+1.0**
	comp=N,1.5nm,0.3s						
DAVA	**Damuels**	**3.44**	**344**	*e*Pn	**Pn**	**19 39 51.7**	**+3.1**
	comp=N,3.9nm,0.5s						
DAVA				*e*Sn	**Sn**	**19 40 32.8**	**+3.0**
	comp=N,6.2nm,0.5s						
RETA	**Reutte**	**3.52**	**354**	*i* Pn	**Pn**	**19 39 52.0**	**+2.4**
	comp=N,2.7nm,0.4s,SNR=9.3						
RETA				*e*Sn	**Sn**	**19 40 33.2**	**+1.7**
	comp=N,2.9nm,0.4s						
LMR	**La Mourre**	**3.52**	**261**	*e*Pn	**Pn**	**19 39 48.4**	**-1.2**
LMR				*e*Sn	**Sn**	**19 40 28.2**	**-3.5**
	comp=N,1.5nm,0.3s						
LPG	**La Plagne**	**3.56**	**297**	*e*Pn	**Pn**	**19 39 51.0**	**+0.6**
LPG				*e*Sn	**Sn**	**19 40 31.8**	**-1.2**
	comp=N,1.2nm,0.4s						
LESA	**Schwarzleotal**	**3.57**	**15**	*e*Pn	**Pn**	**19 39 52.3**	**+2.0**
	comp=N,1.5nm,0.5s						
LESA				*e*Sn	**Sn**	**19 40 34.4**	**+1.5**
	comp=N,3.8nm,0.8s						
LPL	**La Plagne**	**3.58**	**297**	*e*P	**Pb**	**19 39 54.9**	**-3.3**
LPL				*e*Sn	**Sn**	**19 40 32.3**	**-1.1**
	comp=N,2.6nm,0.6s						
ORIF	**Oris-en-Rattie**	**3.98**	**285**	*e*Pn	**Pn**	**19 39 56.0**	**+0.1**
ORIF				*e*Sn	**Sn**	**19 40 41.6**	**-1.4**
	comp=N,3.4nm,0.6s						
BIOA	**Bad Ischl, Aus**	**4.05**	**23**	*e*Pn	**Pn**	**19 39 58.3**	**+1.5**
	comp=N,1.0nm,0.3s						
BIOA				*e*Sn	**Sn**	**19 40 46.5**	**+1.8**
	comp=N,4.1nm,0.6s						
MOA	**Molln**	**4.38**	**27**	*e*Pn	**Pn**	**19 40 02.9**	**+1.4**
	comp=N,0.2nm,0.2s						
MOA				*e*Sn	**Sn**	**19 40 54.6**	**+1.7**
	comp=N,2.4nm,0.5s						
CABF	**La Chapelle**	**4.51**	**307**	*e*Pn	**Pn**	**19 40 04.7**	**+1.5**
CABF				*e*Sn	**Sn**	**19 40 55.6**	**-0.4**
	comp=N,1.3nm,0.3s						
VIVF	**Saint-Julien-l**	**4.81**	**283**	*e*Pn	**Pn**	**19 40 07.8**	**+0.5**
HINF	**Hinteralfeld**	**4.92**	**323**	*e*Pn	**Pn**	**19 40 09.5**	**+0.7**
HINF				*e*Sn	**Sn**	**19 41 04.8**	**-1.3**
	comp=N,2.1nm,0.3s						
CDF	**Champ du Feu**	**5.22**	**329**	*e*Pn	**Pn**	**19 40 13.6**	**+0.6**
CDF	**Champ du Feu**	**5.22**	**329**	*e*Pn	**Pn**	**19 40 13.7**	**+0.7**
CDF				*e*Sn	**Sn**	**19 41 12.5**	**-1.2**
	comp=N,2.6nm,0.3s						
CDF				*e*Sn	Sb	19 41 13.7	-15
CKRC	**Cesky Krumlov**	**5.26**	**22**	*e*SN	**Sn**	**19 41 13.5**	**-1.1**
HAU	**Haudompre**	**5.29**	**321**	*e*Pn	**Pn**	**19 40 15.0**	**+1.2**
KHC	**Kasperske Hory**	**5.38**	**16**	*e*PN	**Pn**	**19 40 15.6**	**+0.5**
KHC				*e*SN	**Sn**	**19 41 15.2**	**-2.3**
LOR	**Lormes**	**6.15**	**305**	*e*Pn	**Pn**	**19 40 26.7**	**+1.0**
	baz=121						
LOR				*e*Sn	**Sn**	**19 41 34.9**	**-1.5**
	comp=N,1.6nm,0.3s						
SSF	**Saint Saulge**	**6.27**	**302**	*e*Pn	**Pn**	**19 40 27.9**	**+0.6**
TCF	**Toulx Ste Croi**	**6.81**	**293**	*e*P	**Pn**	**19 40 38.4**	**+3.6**
HYF	**Humbligny**	**6.89**	**301**	*e*P	**Pn**	**19 40 40.3**	**+4.5**

IDC 08 19:39:11.2±1.6**,2°.63S**×**138°.23E,h0**^{km}**,mb3.2**/2**, mbtmp3.3**/4**,ML3.2**/2**,Error ellipse: s-maj=31.4km s-min=27.2km az=162.0,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.47**	**87**	Pn	Pn	19 39 53.4	+0.6
	2.4nm,0.3s,baz=231,slow=11,SNR=13						
JAY				Sn	Sn	19 40 23.8	0.0
	3.4nm,0.3s,baz=98,slow=23,SNR=4.5						
	9.4nm,0.5s						
WRA	**Warramunga Arr**	**17.62**	**192**	P	Pn	19 43 17.8	-0.6
	0.1nm,0.3s,baz=16,slow=12,SNR=6.0						
WRA				S	Sn	19 46 26.8	-8.7
	0.7nm,0.9s,baz=5.9,slow=24,SNR=1.4						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**21.33**	**191**	P	P	19 44 00.2	+0.2
	0.4nm,0.6s,baz=12,slow=10,SNR=6.3						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**69.44**	**323**	P	P	19 50 21.3	-0.1
	0.6nm,1.0s,baz=132,slow=6.4,SNR=4.1						
	0.6nm,1.0s						

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*IDC **08** 19:50:52.9±1.2,2°.57N×125°.78E,h0*^{km}*,mb3.8/6, mbtmp3.8/6,Error ellipse: s-maj=138.0km s-min=19.4km az=67.0*

*DJA **08** 19:50:57.9±1.2,3°N±5°×12°7E±°,h19*^{km}*±12*^{km}*,M3.7/9, mb3.9/2,MLv3.6/9*

ISC 08 19:50:58.3±0.9**,3°.09N**±0°.07×**126°.74E**±0°.09**,h35**^{km}**,n11,** σ**1ˢ.53**/13**,mb3.8**/6**,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.35**	**296**	P	**Pn**	**19 51 20.7**	**+0.1**
TNTI	**Ternate**	**2.38**	**165**	P	**Pn**	**19 51 35.7**	**+0.8**
TNTI				S	**Sn**	**19 52 04.7**	**+1.8**
MNI	**Manado**	**2.50**	**229**	P	**Pn**	**19 51 36.7**	**+0.1**
MNI				S	**Sn**	**19 52 06.4**	**+0.5**
GTOI	**Gorontalo**	**4.45**	**237**	P	**Pn**	**19 52 04.0**	**+0.7**
SANI	**Sanana**	**5.16**	**188**	P	**Pn**	**19 52 12.4**	**-0.7**
WRA	**Warramunga Arr**	**24.07**	**162**	P	**P**	**19 56 08.6**	**-2.0**
	0.6nm,0.4s,baz=338,slow=10,SNR=8.6						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**27.49**	**166**	P	**P**	**19 56 38.9**	**-2.7**
	0.3nm,0.4s,baz=344,slow=10,SNR=6.4						
	0.3nm,0.4s						
SONM	**Songino Array**	**47.91**	**342**	P	**P**	**19 59 33.4**	**+0.1**
	0.2nm,0.5s,baz=144,slow=5.4,SNR=2.5						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**58.09**	**325**	P	**P**	**20 00 48.1**	**-0.1**
	0.9nm,0.5s,baz=120,slow=8.2,SNR=18						
	0.9nm,0.5s						
KURBB	**Kurchatov Arra**	**62.28**	**328**	P	**P**	**20 01 15.3**	**-1.5**
	0.9nm,0.7s,baz=132,slow=6.0,SNR=10						
	0.9nm,0.7s						
ARCES	**ARCESS Array B**	**91.05**	**340**	P	**P**	**20 04 01.1**	**+2.2**
	3.4nm,0.9s,baz=79,slow=4.9,SNR=1.8						
	3.4nm,0.9s						

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*DJA **08** 19:51:27.6±0.4,9°S±3°×12°4E±°,h108*^{km}*±4*^{km}*,M3.5/12, mb3.8/6,MLv3.3/12*

*IDC **08** 19:51:28.4±3.9,9°.15S×124°.07E,h120*^{km}*±44*^{km}*,mb3.1/1, mbtmp3.2/4,Error ellipse: s-maj=97.2km s-min=28.9km az=50.0*

ISC 08 19:51:26.8±1.2**,9°.00S**±0°.10×**123°.8E**±0°.1**,h100**^{km}**,n17,** σ**1ˢ.71**/20**,Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**0.87**	**150**	P	**Pn**	**19 51 48.7**	**+2.6**
SOEI				S	**Sn**	**19 52 03.3**	**+2.8**
BATI	**Baumata**	**1.21**	**187**	P	**Pn**	**19 51 50.9**	**+1.2**
	69nm,0.4s,baz=24,slow=2.6,SNR=51						
BATI				S	**Sn**	**19 52 09.6**	**+2.7**
	52nm,0.3s,baz=320,slow=23,SNR=26						
BATI	**Baumata**	**1.21**	**187**	P	**Pn**	**19 51 51.2**	**+1.5**
BATI				S	**Sn**	**19 52 08.4**	**+1.5**
MMRI	**Maumere**	**1.60**	**283**	P	**Pn**	**19 51 55.7**	**+1.4**
EDFI	**Ende, Flores**	**2.12**	**277**	P	**Pn**	**19 52 02.2**	**+1.2**
BASI	**Baing, Sumba**	**3.42**	**249**	P	**Pn**	**19 52 18.6**	**+0.4**
WSI	**Waingapu**	**3.54**	**259**	P	**Pn**	**19 52 19.8**	**0.0**
LBFI	**Labuhan Bajo,**	**3.92**	**277**	P	**Pn**	**19 52 24.0**	**-0.9**
WBSI	**Waikabubak, Su**	**4.42**	**261**	P	**Pn**	**19 52 30.6**	**-1.1**
DBNI	**Kabupaten Domp**	**5.46**	**275**	P	**Pn**	**19 52 46.4**	**+0.5**
PLAI	**Plampang**	**5.97**	**271**	P	**Pn**	**19 52 53.3**	**+0.5**
	0.1nm12nm,1.0s						
TWSI	**Taliwang, Sumb**	**6.86**	**272**	P	**Pn**	**19 53 04.9**	**+0.1**
	0.1nm9.6nm,0.8s						
KLNI	**Mataram**	**7.66**	**274**	P	**Pn**	**19 53 15.9**	**+0.2**
	11nm,0.9s						
FITZ	**Fitzroy Crossi**	**9.22**	**169**	P	**Pn**	**19 53 35.1**	**-1.8**
	1.5nm,0.4s,baz=2.4,slow=13,SNR=10						
FITZ				S	Sn	19 55 09.3	-10
	2.3nm,0.3s,baz=253,slow=17,SNR=14						
WRA	**Warramunga Arr**	**14.90**	**138**	P	**Pn**	**19 54 50.3**	**-2.0**
	0.2nm,0.7s,baz=308,slow=13,SNR=7.3						
WRA				S	Sn	19 57 24.8	-12
	0.2nm,0.3s,baz=316,slow=26,SNR=5.8						
ASAR	**Alice Springs**	**17.49**	**148**	P	**P**	**19 55 21.6**	**-2.7**
	0.3nm,0.8s,baz=328,slow=12,SNR=4.1						
ASAR				S	Sn	19 58 26.8	-13
	0.3nm,0.6s,baz=313,slow=22,SNR=2.5						
MKAR	**Makanchi Array**	**66.72**	**330**	P	**P**	**20 02 08.4**	**+1.2**
	0.3nm,0.5s,baz=146,slow=7.0,SNR=4.0						
	0.3nm,0.5s						

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*NOU **08** 19:57:49.2,44°.89S×172°.47E,h374*^{km}*,MLv4.3/6,Off E. Coast of S. Island, N.Z.*

*WEL **08** 19:58:30.9±0.6,42°S±3°×17°4E±°,h11*^{km}*±5*^{km}*,M2.6/12, ML2.5/7,MLv2.6/12,Error ellipse: s-maj=4.8km s-min=3.0km az=135.3,confirmed*

ISC 08 19:58:31.0±0.8**,41°.74S**±0°.03×**174°.28E**±0°.02**,h17**^{km}±5^{km}**, n37,** σ**0ˢ.92**/47**,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.05**	**259**	P	**Pg**	**19 58 33.9**	**-0.2**
CMWZ				S	**Sg**	**19 58 36.7**	**+0.4**
SDNS	**Seddon**	**0.13**	**306**	P	**Pb**	**19 58 34.9**	**0.0**
SDNS				S	**Sg**	**19 58 38.5**	**+1.0**
WDFS	**Ward Fire Stat**	**0.14**	**230**	P	**Pg**	**19 58 34.8**	**-0.2**
WDFS				S	**Sg**	**19 58 38.2**	**+0.6**
SEDS	**Seddon Fire St**	**0.16**	**294**	P	**Pb**	**19 58 35.3**	**-0.3**
BSWZ	**Blackbirch Sta**	**0.30**	**275**	P	**Pg**	**19 58 37.3**	**-0.1**
BSWZ				S	**Sb**	**19 58 42.5**	**-0.1**
KEKS	**Kekerengu Vall**	**0.31**	**225**	P	**Pg**	**19 58 37.8**	**+0.2**
TUWZ	**Tuamarina**	**0.40**	**321**	P	**Pb**	**19 58 40.1**	**+0.5**
TCW	**Tory Channel**	**0.53**	**360**	P	**Pg**	**19 58 41.2**	**-0.3**
TCW				S	**Sb**	**19 58 49.0**	**-0.1**
BHW	**Baring Head**	**0.56**	**54**	P	**Pb**	**19 58 42.3**	**0.0**
WEL	**Wellington**	**0.59**	**39**	P	**Pg**	**19 58 42.7**	**+0.1**
WEL				S	**Sb**	**19 58 51.6**	**+0.9**
MSWZ	**Moikau Station**	**0.80**	**66**	P	**Pb**	**19 58 46.6**	**+0.2**

MSWZ				S	**Sn**	**19 58 59.1**	**+0.2**
NNZ	**Nelson**	**0.85**	**307**	P	**Pg**	**19 58 47.1**	**-0.5**
NNZ				S	**Sn**	**19 59 00.5**	**+0.3**
CAW	**Cannon Point**	**0.87**	**43**	P	**Pg**	**19 58 47.5**	**-0.4**
CAW				S	**Sb**	**19 58 59.9**	**+1.1**
KHZ	**Kahutara**	**0.87**	**219**	P	**Pg**	**19 58 47.6**	**-0.3**
KHZ	**Kahutara**	**0.87**	**219**	P	**Pg**	**19 58 47.7**	**-0.3**
KHZ				S	**Sb**	**19 59 00.5**	**+1.5**
PAWZ	**Paruwai Farm**	**0.94**	**68**	P	**Pg**	**19 58 48.3**	**-0.8**
DUWZ	**D’Urville Isla**	**0.97**	**344**	P	**Pg**	**19 58 49.3**	**-0.6**
KIW	**Kapiti Island**	**1.00**	**29**	P	**Pg**	**19 58 49.5**	**-0.8**
THZ	**Tophouse**	**1.03**	**268**	P	**Pg**	**19 58 50.5**	**-0.4**
MTW	**Mount Morrison**	**1.09**	**58**	P	**Pb**	**19 58 50.5**	**-0.9**
TRWZ	**Traveller**	**1.11**	**73**	P	**Pb**	**19 58 50.4**	**-1.4**
MRNZ	**Matariki Terra**	**1.19**	**286**	P	**Pb**	**19 58 53.3**	**+0.2**
TKNZ	**Takaka Hill**	**1.22**	**305**	P	**Pn**	**19 58 53.7**	**+0.5**
HOWZ	**Holdsworth Sta**	**1.26**	**48**	P	**Pn**	**19 58 52.9**	**-0.8**
TMWZ	**Te Maipa**	**1.37**	**63**	P	**Pn**	**19 58 54.0**	**-1.2**
MRZ	**Mangatainoka R**	**1.46**	**43**	P	**Pn**	**19 58 55.9**	**-0.6**
GVZ	**Greta Valley S**	**1.53**	**216**	P	**Pn**	**19 58 56.6**	**-1.0**
QRZ	**Quartz Range**	**1.60**	**304**	P	**Pb**	**19 58 59.9**	**-0.2**
QRZ	**Quartz Range**	**1.60**	**304**	P	**Pb**	**19 58 59.9**	**-0.2**
LTZ	**Lake Taylor**	**1.82**	**234**	P	**Pn**	**19 59 00.8**	**-0.7**
BFZ	**Birch Farm**	**1.82**	**55**	P	**Pg**	**19 59 09.6**	**+3.6**
DSZ	**Denniston Nort**	**1.85**	**269**	P	**Pb**	**19 59 04.0**	**-0.3**
PNHZ	**Pukenui**	**2.34**	**39**	P	**Pn**	**19 59 07.5**	**-1.2**
KHEZ	**Kahui Hut**	**2.45**	**355**	P	**Pg**	**19 59 17.8**	**-0.2**
WNVZ	**Wahianoa**	**2.61**	**23**	P	**Pb**	**19 59 17.0**	**-0.4**
VRZ	**Vera Road**	**2.64**	**8**	P	**Pb**	**19 59 15.9**	**-1.8**
BKZ	**Black Stump Fm**	**3.08**	**34**	P	**Pb**	**19 59 26.7**	**+1.4**

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*ROM **08** 20:13:55.2±0.1, 44.°004N±0.°004×11.°298E±0.°005, h8^{km}, ML2.9/44, Error ellipse: s-maj=0.4km s-min=0.4km az=10.0*
*LDG **08** 20:13:57.8±0.2, 43.°92N×11.°23E, h7^{km}, Ml2.5/19, Error ellipse: s-maj=4.3km s-min=3.2km az=100.0*
*PRU **08** 20:13:58.3, 43.°99N×11.°56E, h10^{km}*
ISC 08 20:13:56.0±0.8, **43.°95N**±0.°02×**11.°25E**±0.°01, **h15**^{km}±4^{km}, **n104**, σ1ˢ36/152, **5C-2D**, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCL	**Monte Cuccoli**	**0.07**	**315**	⇓*i*P	**Pg**	**20 13 57.9**	**-1.3**
MOCL				S	**Sg**	**20 13 59.7**	**-1.4**
MOCL				AML	AML		
	comp=E,16350µm,0.1s						
MOCL				AML	AML		
	comp=N,35600µm,0.2s						
MOCL				AML	AML		
	comp=E,16337µm,0.1s						
MOCL				AML	AML		
	comp=N,35582µm,0.2s						
MPPT	**Montemurlo**	**0.12**	**272**	⇑*i*P	**Pg**	**20 13 59.2**	**-0.4**
MPPT				S	**Sg**	**20 14 02.1**	**+0.2**
MPPT				AML	AML		
	comp=E,9930µm,1.4s						
MPPT				AML	AML		
	comp=N,12200µm,0.3s						
MPPT				AML	AML		
	comp=N,12178µm,0.3s						
MPPT				AML	AML		
	comp=E,8495µm,0.3s						
FIR	**Firenze**	**0.18**	**179**	P	**Pg**	**20 14 00.7**	**+0.4**
FIR				S	**Sg**	**20 14 05.1**	**+1.9**
FIR				AML	AML		
	comp=N,9580µm,1.4s						
FIR				AML	AML		
	comp=N,9855µm,1.4s						
FIR				AML	AML		
	comp=E,10500µm,0.3s						
FIR				AML	AML		
	comp=E,10310µm,0.3s						
FIR				AML	AML		
	comp=E,10313µm,0.3s						
FIR				AML	AML		
	comp=N,8670µm,0.5s						
FIR				AML	AML		
	comp=E,10523µm,0.3s						
FIR				AML	AML		
	comp=N,8103µm,0.4s						
RUFI	**Rufina**	**0.22**	**121**	⇑*i*P	**Pg**	**20 14 00.2**	**-0.8**
RUFI				S	**Sg**	**20 14 03.8**	**-0.5**
RUFI				AML	AML		
	comp=E,2700µm,0.3s						
RUFI				AML	AML		
	comp=N,2755µm,0.9s						
RUFI				AML	AML		
	comp=N,2418µm,0.5s						
RUFI				AML	AML		
	comp=N,2755µm,0.9s						
RUFI				AML	AML		
	comp=E,2638µm,0.7s						
FNVD	**Fontana Vidola**	**0.23**	**337**	⇑*i*P	**Pg**	**20 13 59.9**	**-1.4**
FNVD				S	**Sg**	**20 14 03.1**	**-1.8**
FNVD				AML	AML		
	comp=E,5775µm,0.5s						
FNVD				AML	AML		
	comp=N,9855µm,0.4s						
FNVD				AML	AML		
	comp=E,5775µm,1.5s						
FNVD				AML	AML		
	comp=E,2969µm,1.1s						
FNVD				AML	AML		
	comp=N,9321µm,0.3s						
CRMI	**Carmignano**	**0.26**	**232**	⇑*i*P	**Pg**	**20 14 02.0**	**+0.3**
CRMI				S	**Sg**	**20 14 07.2**	**+1.7**
CRMI				AML	AML		
	comp=N,2550µm,0.4s						
CRMI				AML	AML		
	comp=E,4760µm,0.3s						
CRMI				AML	AML		
	comp=N,6420µm,0.4s						
CRMI				AML	AML		
	comp=E,1725µm,0.3s						
CRMI				AML	AML		
	comp=N,6424µm,0.4s						
CRMI				AML	AML		
	comp=E,1728µm,0.3s						
CRMI				AML	AML		
	comp=N,2549µm,0.4s						
CRMI				AML	AML		
	comp=E,4758µm,0.3s						
BRIS	**BRISIGHELLA**	**0.27**	**43**	P	**Pg**	**20 14 03.4**	**+1.6**
BRIS				S	**Sg**	**20 14 09.7**	**+3.8**
BRIS				AML	AML		
	comp=E,2770µm,0.3s						
BRIS				AML	AML		
	comp=N,5040µm,0.2s						
BRIS				AML	AML		
	comp=E,132µm,1.0s						
BRIS				AML	AML		
	comp=N,218µm,1.1s						
BRIS				AML	AML		
	comp=E,2766µm,0.3s						
BRIS				AML	AML		
	comp=N,5042µm,0.2s						
LMD	**Lutirano**	**0.35**	**69**	⇑*i*P	**Pg**	**20 14 01.2**	**-2.1**
LMD				S	**Sg**	**20 14 06.1**	**-2.1**
LMD				AML	AML		
	comp=E,4235µm,0.8s						
LMD				AML	AML		
	comp=N,7710µm,0.2s						
LMD				AML	AML		
	comp=N,7710µm,0.2s						
LMD				AML	AML		
	comp=E,4116µm,0.3s						
POPM	**Popiglio**	**0.37**	**285**	P	**Pg**	**20 14 03.2**	**-0.4**
POPM				S	**Sg**	**20 14 09.9**	**+1.2**
POPM				AML	AML		
	comp=E,5265µm,0.2s						
POPM				AML	AML		
	comp=N,9475µm,0.7s						
POPM				AML	AML		
	comp=E,5266µm,0.2s						
POPM				AML	AML		
	comp=N,8477µm,0.2s						
ASQU	**Asqua**	**0.42**	**112**	P	**Pg**	**20 14 03.3**	**-1.2**
ASQU				S	**Sg**	**20 14 10.0**	**-0.2**
ASQU				AML	AML		
	comp=E,1031µm,0.8s						
ASQU				AML	AML		
	comp=N,1130µm,0.7s						
ASQU				AML	AML		
	comp=E,1031µm,1.2s						
ASQU				AML	AML		
	comp=N,1109µm,0.5s						
ASQU				AML	AML		
	comp=E,917µm,0.2s						
ASQU				AML	AML		
	comp=N,1130µm,1.3s						
OSSC	**Osservatorio P**	**0.43**	**181**	P	**Pg**	**20 14 04.8**	**+0.2**
OSSC				S	**Sg**	**20 14 12.7**	**+2.2**
OSSC				AML	AML		
	comp=E,1585µm,0.3s						
OSSC				AML	AML		
	comp=N,1940µm,0.8s						
OSSC				AML	AML		
	comp=E,1895µm,1.0s						
OSSC				AML	AML		
	comp=N,1605µm,0.8s						
OSSC				AML	AML		
	comp=E,1716µm,0.3s						
OSSC				AML	AML		
	comp=E,1558µm,0.3s						
OSSC				AML	AML		
	comp=N,1605µm,0.2s						
OSSC				AML	AML		
	comp=N,1759µm,0.3s						
SFI	**Santa Sofia**	**0.43**	**96**	P	**Pg**	**20 14 03.2**	**-1.5**
SFI				S	**Sg**	**20 14 09.9**	**-0.7**
SFI				AML	AML		
	comp=E,1625µm,0.2s						
SFI				AML	AML		
	comp=N,1175µm,0.5s						
SFI				AML	AML		
	comp=E,1610µm,0.2s						
SFI				AML	AML		
	comp=N,1215µm,0.5s						
SFI				AML	AML		
	comp=E,1627µm,0.2s						
SFI				AML	AML		
	comp=N,1168µm,0.2s						
SFI				AML	AML		
	comp=E,1611µm,0.2s						
SFI				AML	AML		
	comp=N,1135µm,0.2s						
ZCCA	**Zocca**	**0.45**	**334**	P	**Pg**	**20 14 04.7**	**-0.3**
ZCCA				AML	AML		
	comp=N,1315µm,0.5s						
ZCCA				AML	AML		
	comp=E,1022µm,0.4s						
ZCCA				AML	AML		
	comp=E,932µm,0.4s						
ZCCA				AML	AML		
	comp=N,1315µm,0.5s						
ZCCA				AML	AML		
	comp=N,1360µm,0.5s						
ZCCA				AML	AML		
	comp=E,1020µm,0.5s						
ZCCA				AML	AML		
	comp=N,1364µm,0.5s						
ZCCA				AML	AML		
	comp=E,933µm,0.4s						
ZCCA				AML	AML		
	comp=N,1318µm,0.5s						
MTRZ	**Monterenzio**	**0.45**	**20**	P	**Pg**	**20 14 02.5**	**-2.6**
MTRZ				AML	AML		
	comp=E,2795µm,0.4s						
MTRZ				AML	AML		
	comp=N,2980µm,0.5s						
MTRZ				AML	AML		
	comp=E,2835µm,0.4s						
MTRZ				AML	AML		
	comp=N,2990µm,0.5s						
MTRZ				AML	AML		
	comp=N,2980µm,0.5s						
MTRZ				AML	AML		
	comp=E,2840µm,0.4s						
MTRZ				AML	AML		
	comp=E,2838µm,0.4s						
MTRZ				AML	AML		
	comp=E,2793µm,0.4s						
MTRZ				AML	AML		
	comp=N,2979µm,0.5s						
MTRZ				AML	AML		
	comp=N,2989µm,0.5s						
CSNT	**Castellina Chi**	**0.48**	**177**	P	**Pg**	**20 14 05.6**	**0.0**
CSNT				S	**Sg**	**20 14 14.0**	**+1.9**
CSNT				AML	AML		
	comp=E,1170µm,0.4s						
CSNT				AML	AML		
	comp=N,2050µm,0.5s						
CSNT				AML	AML		
	comp=N,2053µm,0.5s						
CSNT				AML	AML		
	comp=E,1170µm,0.4s						
BDI	**Bagni Di Lucca**	**0.48**	**283**	P	**Pg**	**20 14 05.1**	**-0.6**
BDI				S	**Sg**	**20 14 13.1**	**+0.9**
BDI				AML	AML		
	comp=E,2385µm,0.4s						
BDI				AML	AML		
	comp=N,3040µm,1.1s						
BDI				AML	AML		
	comp=E,2870µm,0.3s						
BDI				AML	AML		
	comp=E,2385µm,0.3s						
BDI				AML	AML		
	comp=N,3040µm,1.1s						
BDI				AML	AML		
	comp=N,3225µm,0.5s						
BDI				AML	AML		
	comp=E,2224µm,0.3s						
BDI				AML	AML		
	comp=N,2816µm,0.5s						
BDI				AML	AML		
	comp=E,2870µm,0.3s						
BDI				AML	AML		
	comp=N,3225µm,0.5s						
IMOL	**Imola, Italy**	**0.54**	**41**	P	**Pg**	**20 14 05.8**	**-0.9**
IMOL				AML	AML		
	comp=E,2410µm,0.7s						
IMOL				AML	AML		
	comp=N,2470µm,1.3s						
IMOL				AML	AML		
	comp=N,2470µm,0.7s						
IMOL				AML	AML		
	comp=E,2407µm,0.7s						
IMOL				AML	AML		
	comp=N,2217µm,0.3s						
MAIM	**Mastiano**	**0.55**	**266**	P	**Pg**	**20 14 06.7**	**-0.2**
MAIM				S	**Sg**	**20 14 15.2**	**+0.9**
CARD	**Cardoso**	**0.56**	**278**	P	**Pg**	**20 14 06.5**	**-0.6**
CARD				S	**Sg**	**20 14 15.4**	**+0.8**
CARD				AML	AML		
	comp=N,2205µm,0.9s						
CARD				AML	AML		
	comp=E,1151µm,0.4s						
CARD				AML	AML		
	comp=E,1150µm,0.4s						
CARD				AML	AML		
	comp=N,1716µm,0.5s						
FAEN	**Faenza**	**0.56**	**53**	P	**Pg**	**20 14 05.5**	**-1.6**
PII	**Pisa**	**0.57**	**247**	P	**Pg**	**20 14 07.3**	**0.0**
PII				AML	AML		
	comp=N,2020µm,0.3s						
PII				AML	AML		
	comp=E,1830µm,0.4s						
PII				AML	AML		
	comp=N,2025µm,0.3s						
PII				AML	AML		
	comp=N,2022µm,0.3s						
PII				AML	AML		
	comp=E,1829µm,0.4s						
CRE	**Caprese Michel**	**0.61**	**123**	P	**Pg**	**20 14 07.2**	**-0.8**
CRE				AML	AML		
	comp=E,701µm,1.1s						
CRE				AML	AML		
	comp=N,1360µm,0.4s						
CRE				AML	AML		
	comp=E,283µm,0.3s						
CRE				AML	AML		
	comp=N,1361µm,0.4s						
GSCL	**Gusciola**	**0.62**	**310**	⇓*i*P	**Pg**	**20 14 07.6**	**-0.7**
GSCL				S	**Sg**	**20 14 17.4**	**+0.8**
GSCL				AML	AML		
	comp=N,1365µm,0.3s						
GSCL				AML	AML		
	comp=E,1270µm,0.3s						
GSCL				AML	AML		
	comp=E,1272µm,0.3s						
GSCL				AML	AML		
	comp=N,1366µm,0.3s						
SARO	**Sassorosso**	**0.66**	**291**	P	**Pg**	**20 14 08.3**	**-0.6**
SARO				S	**Sg**	**20 14 18.5**	**+0.9**
VLC	**Villacollemand**	**0.66**	**289**	P	**Pg**	**20 14 08.6**	**-0.3**
VLC				S	**Sg**	**20 14 18.7**	**+1.1**
VLC				AML	AML		
	comp=E,564µm,0.4s						
VLC				AML	AML		
	comp=N,1048µm,1.4s						
VLC				AML	AML		
	comp=E,511µm,0.4s						
VLC				AML	AML		
	comp=N,1060µm,1.4s						
VLC				AML	AML		
	comp=E,564µm,0.5s						
VLC				AML	AML		
	comp=E,511µm,0.4s						
VLC				AML	AML		
	comp=N,868µm,0.3s						
VLC				AML	AML		
	comp=N,870µm,0.3s						
BRSN	**Barisano**	**0.68**	**61**	P	**Pg**	**20 14 08.2**	**-1.2**
BRSN				AML	AML		
	comp=N,1445µm,0.4s						
BRSN				AML	AML		
	comp=E,1286µm,0.5s						
BRSN				AML	AML		
	comp=N,1475µm,0.4s						
BRSN				AML	AML		
	comp=E,1265µm,0.5s						
BRSN				AML	AML		
	comp=E,1286µm,0.5s						
BRSN				AML	AML		
	comp=N,1470µm,0.4s						
BRSN				AML	AML		
	comp=E,1284µm,0.5s						
BRSN				AML	AML		
	comp=N,1473µm,0.4s						
BRSN				AML	AML		
	comp=E,1269µm,0.5s						
BRSN				AML	AML		
	comp=N,1449µm,0.4s						
FIU	**Minerbio Fiu**	**0.71**	**14**	P	**Pb**	**20 14 11.2**	**+1.1**
SSP9	**Sansepolcro**	**0.74**	**120**	P	**Pg**	**20 14 10.1**	**-0.4**
SSP9				AML	AML		
	comp=E,354µm,1.6s						
SSP9				AML	AML		
	comp=N,432µm,1.3s						
SSP9				AML	AML		
	comp=E,354µm,1.6s						
SSP9				AML	AML		
	comp=N,432µm,1.3s						
SSP9				AML	AML		
	comp=E,325µm,0.6s						
SSP9				AML	AML		
	comp=N,430µm,0.5s						
CMPO	**Campotto Po**	**0.74**	**32**	P	**Pb**	**20 14 11.9**	**+1.3**
FROS	**Frosini**	**0.75**	**185**	AML	AML		
	comp=E,1059µm,0.3s						
FROS				AML	AML		
	comp=E,1058µm,0.3s						
FROS				AML	AML		
	comp=N,788µm,0.5s						
FROS				AML	AML		
	comp=N,787µm,0.5s						
PARC	**Parchiule**	**0.78**	**113**	P	**Pg**	**20 14 10.5**	**-0.6**
CPGN	**Carpegna, Ital**	**0.79**	**101**	P	**Pg**	**20 14 11.7**	**+0.4**
MAGO	**Bibbona**	**0.81**	**213**	AML	AML		
	comp=E,383µm,1.4s						
MAGO				AML	AML		
	comp=N,388µm,0.7s						
MAGO				AML	AML		
	comp=N,387µm,0.7s						
MAGO				AML	AML		
	comp=E,353µm,0.5s						
EQUI	**Equi**	**0.82**	**285**	P	**Pg**	**20 14 11.1**	**-0.9**
EQUI				S	**Sg**	**20 14 23.0**	**+0.3**
BADI	**Badiali**	**0.84**	**121**	P	**Pg**	**20 14 11.8**	**-0.6**
ATMC	**Monte Cedrone**	**0.85**	**126**	P	**Pg**	**20 14 12.2**	**-0.3**
ATMC				S	**Sg**	**20 14 24.7**	**+1.0**
FIVI	**Fivizzano**	**0.86**	**290**	P	**Pg**	**20 14 12.0**	**-0.7**
BLLA	**Bellaria**	**0.90**	**77**	P	**Pg**	**20 14 11.7**	**-1.7**
APEC	**Apecchio**	**0.93**	**115**	P	**Pg**	**20 14 13.3**	**-0.8**
PE3	**Peglio**	**0.94**	**105**	P	**Pg**	**20 14 13.0**	**-1.2**
ATMI	**Monte Miggiano**	**0.96**	**130**	P	**Pg**	**20 14 14.2**	**-0.4**
ATMI				AML	AML		
	comp=E,533µm,1.2s						
ATMI				AML	AML		
	comp=N,831µm,0.8s						
ATMI				AML	AML		
	comp=N,737µm,0.5s						
ATMI				AML	AML		
	comp=E,494µm,0.3s						
ATPI	**Pietralunga -**	**0.97**	**121**	P	**Pg**	**20 14 14.0**	**-0.9**
ATPI				AML	AML		
	comp=N,244µm,0.4s						
ATPI				AML	AML		
	comp=E,226µm,0.7s						
ATPI				AML	AML		
	comp=E,258µm,0.8s						
ATPI				AML	AML		
	comp=N,2650µm,1.4s						
ATPI				AML	AML		
	comp=N,243µm,0.4s						
ATPI				AML	AML		
	comp=E,186µm,0.4s						
ATPC	**Poggio Castell**	**0.99**	**118**	P	**Pg**	**20 14 14.4**	**-0.8**
ATVA	**AVT- Monte Val**	**1.01**	**132**	P	**Pg**	**20 14 14.3**	**-1.2**
GRAM	**Graiana**	**1.01**	**303**	P	**Pg**	**20 14 14.9**	**-0.7**
GRAM				AML	AML		
	comp=E,1320µm,0.3s						
GRAM				AML	AML		
	comp=N,994µm,0.3s						
GRAM				AML	AML		
	comp=N,995µm,0.3s						
GRAM				AML	AML		
	comp=E,1316µm,0.3s						
ATVO	**AVT- Monte Val**	**1.01**	**124**	P	**Pg**	**20 14 14.9**	**-0.7**
ATVO				AML	AML		
	comp=E,352µm,0.5s						
ATVO				AML	AML		
	comp=N,298µm,0.5s						
ATVO				AML	AML		
	comp=E,351µm,0.5s						
ATVO				AML	AML		
	comp=N,297µm,0.5s						
RIBO	**Ribolla Roccas**	**1.01**	**189**	P	**Pg**	**20 14 15.6**	**0.0**
PLMA	**Palmaria, Port**	**1.02**	**276**	P	**Pg**	**20 14 14.7**	**-1.0**
PLMA				S	**Sg**	**20 14 29.1**	**+0.1**
PLMA				AML	AML		
	comp=E,328µm,0.5s						
PLMA				AML	AML		
	comp=N,602µm,0.4s						
PLMA				AML	AML		
	comp=E,326µm,0.4s						
PLMA				AML	AML		
	comp=N,602µm,0.4s						
PIEI	**Pieia**	**1.02**	**114**	P	**Pg**	**20 14 14.8**	**-1.0**
PIEI				AML	AML		
	comp=E,169µm,0.4s						
PIEI				AML	AML		
	comp=N,121µm,0.3s						
PIEI				AML	AML		
	comp=E,169µm,0.4s						
PIEI				AML	AML		
	comp=N,121µm,0.3s						
NARO	**Abbazia di Nar**	**1.02**	**109**	P	**Pg**	**20 14 14.3**	**-1.5**
NARO				AML	AML		
	comp=E,104µm,0.4s						
NARO				AML	AML		
	comp=N,87µm,0.8s						
NARO				AML	AML		
	comp=E,104µm,0.5s						
NARO				AML	AML		
	comp=N,82µm,0.4s						
ATLO	**AVT- Montelove**	**1.05**	**127**	P	**Pg**	**20 14 15.1**	**-1.3**
ARCI	**Arcidosso**	**1.11**	**172**	P	**Pg**	**20 14 17.4**	**-0.1**
SF11	**Podere del Sol**	**1.13**	**164**	P	**Pg**	**20 14 16.3**	**-1.5**
MURB	**Monte Urbino**	**1.15**	**126**	P	**Pg**	**20 14 17.7**	**-0.6**
SF04	**Casetta**	**1.16**	**165**	P	**Pg**	**20 14 18.1**	**-0.2**
SF01	**Poggio Pratacc**	**1.16**	**169**	P	**Pg**	**20 14 18.4**	**-0.1**
CASP	**Castiglione de**	**1.20**	**194**	P	**Pn**	**20 14 17.9**	**-0.3**
CASP				AML	AML		
	comp=E,86µm,0.7s						
CASP				AML	AML		
	comp=N,90µm,0.6s						

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CASP                               AML    AML
      comp=E,86µm,0.7s
CASP                               AML    AML
      comp=N,82µm,0.3s
SACS  San Casciano d    1.20 156   P      Pb     20 14 18.0 -0.6
MSSA  Maissana          1.30 287   P      Pn     20 14 19.3 -0.5
TEOL  Teolo             1.44  12   P      Pn     20 14 21.2 -0.4
VARA  Varagna           1.89 352   P      Pn     20 14 28.1 +0.2
SMA1  SAN MARTINO       2.02 130   P      Pn     20 14 31.4 +1.8
LUSI  Trento, Gardas    2.02 354   P      Pn     20 14 30.1 +0.5
RM33  Pellescritta (    2.03 134   P      Pn     20 14 29.6 -0.3
RM33                               AML    AML
      comp=E,60µm,1.3s
RM33                               AML    AML
      comp=N,49µm,0.8s
RM33                               AML    AML
      comp=E,60µm,1.2s
RM33                               AML    AML
      comp=N,49µm,0.8s
RM33                               AML    AML
      comp=E,154µm,1.2s
RM33                               AML    AML
      comp=N,151µm,1.2s
PGF   Pioggiola         2.16 230  ePn     Pn     20 14 31.5 -0.1
PGF                               eSn     Sn     20 14 56.4 -1.8
      comp=N,5.9nm,0.3s
OZOL  Ozolo             2.46 357   P      Pn     20 14 37.0 +1.4
SBF   Sospel            2.76 269  ePn     Pn     20 14 39.1 -0.7
SBF                               eSn     Sn     20 15 12.0 -0.9
      comp=N,3.8nm,0.3s
ABTA  Abfaltersbach     2.93  17  ePn     Pn     20 14 43.0 +0.8
      comp=N,2.1nm,0.3s,SNR=7.2
ABTA                               Sn     Sn     20 15 17.4 +0.2
      comp=N,8.4nm,0.7s
FETA  Feichten          3.09 353  ePn     Pn     20 14 46.8 +2.4
      comp=N,4.4nm,0.4s,SNR=13
FETA                              eSn     Sn     20 15 22.5 +1.3
      comp=N,3.5nm,0.6s
SQTA  Sankt Quirin      3.27 359  i Pn    Pn     20 14 49.0 +2.1
      comp=N,4.2nm,0.2s,SNR=9.0
SQTA                              eSn     Sn     20 15 27.8 +2.3
      comp=N,4.1nm,0.3s
MBDF  Montbardon        3.31 285  ePn     Pn     20 14 47.4  0.0
MBDF                              eSn     Sn     20 15 25.4 -1.1
      comp=N,1.3nm,0.2s
WTTA  Wattenberg        3.32   5  i Pn    Pn     20 14 49.4 +1.8
      comp=N,1.9nm,0.2s,SNR=13
WTTA                              eSn     Sn     20 15 29.1 +2.1
      comp=N,2.8nm,0.3s
WATA  Walderalm         3.39   4  i Pn    Pn     20 14 51.0 +2.4
      comp=N,11nm,0.3s,SNR=28
WATA                              eSn     Sn     20 15 31.0 +2.4
      comp=N,5.2nm,0.6s
MOTA  Moosalm           3.39 358  i Pn    Pn     20 14 51.1 +2.5
      comp=N,4.0nm,0.4s,SNR=15
MOTA                              eSn     Sn     20 15 30.4 +1.7
      comp=N,1.7nm,0.3s
KBA   Koelnbreinsper    3.46  24  i Pn    Pn     20 14 49.7 +0.3
      comp=N,0.4nm,0.2s
KBA                               eSn     Sn     20 15 30.1 -0.1
      comp=N,1.8nm,0.4s
OBKA  Obir              3.46  41  ePn     Pn     20 14 49.1 -0.3
      comp=N,0.6nm,0.3s
DAVA  Damuels           3.47 344  ePn     Pn     20 14 52.4 +2.7
      comp=N,3.6nm,0.3s,SNR=7.4
DAVA                              eSn     Sn     20 15 31.8 +1.3
      comp=N,6.7nm,0.5s
LMR   La Mourre         3.50 261  ePn     Pn     20 14 48.1 -1.8
LMR                               eSn     Sn     20 15 28.6 -2.4
      comp=N,1.9nm,0.3s
RETA  Reutte            3.55 355  i Pn    Pn     20 14 53.1 +2.4
      comp=N,7.8nm,0.4s,SNR=15
RETA                              eSn     Sn     20 15 34.6 +2.2
      comp=N,3.3nm,0.4s
LPG   La Plagne         3.56 297  ePn     Pn     20 14 52.0 +1.0
LPG                               eSn     Sn     20 15 31.9 -1.0
      comp=N,2.5nm,0.4s
LPL   La Plagne         3.58 297  ePn     Pn     20 14 50.8 -0.4
LPL                               eSn     Sn     20 15 32.0 -1.3
      comp=N,2.0nm,0.3s
LESA  Schwarzleotal     3.61  16  i Pn    Pn     20 14 53.4 +1.9
      comp=N,1.9nm,0.2s,SNR=11
LESA                              eSn     Sn     20 15 35.5 +1.5
      comp=N,4.8nm,0.3s
SOKA  Soboth            3.81  43  ePn     Pn     20 14 55.2 +1.0
      comp=N,1.0nm,0.5s
SOKA                              eSn     Sn     20 15 37.9 -1.0
      comp=N,1.2nm,0.4s
ORIF  Oris-en-Rattie    3.97 286  ePn     Pn     20 14 57.3 +0.9
ORIF                              eSn     Sn     20 15 40.3 -2.4
      comp=N,1.9nm,0.3s
BIOA  Bad Ischl, Aus    4.09  23  eSn     Sn     20 15 46.9 +1.2
      comp=N,5.6nm,0.6s
SMRF  Simiane la Rot    4.10 272  ePn     Pn     20 14 58.5 +0.3
SMRF                              eSn     Sn     20 15 43.7 -2.2
      comp=N,0.6nm,0.3s
MOA   Molln             4.43  27  ePn     Pn     20 15 03.1 +0.4
      comp=N,0.3nm,0.2s
MOA                               eSn     Sn     20 15 54.9 +0.9
      comp=N,1.4nm,0.4s
ARSA  Arzberg           4.46  41  ePn     Pn     20 15 02.7 -0.4
      comp=N,0.7nm,0.3s
CABF  La Chapelle       4.51 308  ePn     Pn     20 15 05.5 +1.6
CABF                              eSn     Sn     20 15 53.8 -2.3
      comp=N,0.8nm,0.3s
VIVF  Saint-Julien-l    4.80 283  ePn     Pn     20 15 07.8  0.0
VIVF                              eSn     Sn     20 16 00.8 -2.3
      comp=N,0.8nm,0.5s
HINF  Hinteralfeld      4.94 323  ePn     Pn     20 15 10.0 +0.3
HINF                              eSn     Sn     20 16 04.5 -2.0
      comp=N,1.3nm,0.3s
CONA  Conrad Observa    5.11  37  ePn     Pn     20 15 12.4 +0.3
      comp=N,0.4nm,0.2s
CONA                              eSn     Sn     20 16 09.2 -1.7
      comp=N,3.2nm,0.6s
RONA  Rosalia, Austr    5.14  41  ePn     Pn     20 15 12.4 -0.1
      comp=N,0.4nm,0.1s
CDF   Champ du Feu      5.25 330  ePn     Pn     20 15 14.5 +0.5
CDF                               eSn     Sn     20 16 12.2 -2.0
      comp=N,2.1nm,0.3s
HAU   Haudompre         5.30 322  ePn     Pn     20 15 15.4 +0.7
HAU                               eSn     Sn     20 16 14.0 -1.5
      comp=N,4.3nm,0.3s
CKRC  Cesky Krumlov     5.31  22  eSN     Sn     20 16 12.8 -2.8
KHC   Kasperske Hory    5.42  16  ePN     Pn     20 15 16.3  0.0
KHC                               eSN     Sn     20 16 16.3 -2.2
ZVC   Zvikov            5.85  19  eSN     Sn     20 16 26.5 -2.4
SMF   Signal de Mont    5.88 300  ePn     Pn     20 15 23.4 +0.8
SFTF  Sexfontaines      6.06 317  ePn     Pn     20 15 26.1 +1.0
      baz=132
LOR   Lormes            6.16 305  ePn     Pn     20 15 27.2 +0.8
      baz=122
LOR                               eSn     Sn     20 16 33.7 -2.8
      comp=N,0.4nm,0.2s
AVF   Avril sur Loir    6.25 300  ePn     Pn     20 15 29.2 +1.6
SSF   Saint Saulge      6.27 302  ePn     Pn     20 15 28.7 +0.8
SSF                               eSn     Sn     20 16 36.6 -2.6
      comp=N,0.4nm,0.2s
MTLF  Montolieu         6.58 268  ePn     Pn     20 15 32.6 +0.3
```

ROM 08 20:14:33.0±0.1**,44.°006N**±0.°004×**11.°314E**±0.°005**,**
h7^{km},ML2.0/5**,1C,Error ellipse: s-maj=0.4km**
s-min=0.3km az=194.0,Northern Italy

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                   Op     ISC      h  m  s     ISC
SEI   Scarperia         0.06  32⇑iP      Pg     20 14 32.5 -2.2
SEI                                S      Sg     20 14 34.0 -2.0
SEI                                AML    AML
      comp=E,7460µm,0.3s
SEI                                AML    AML
      comp=N,11950µm,0.3s
SEI                                AML    AML
      comp=E,6225µm,0.2s
SEI                                AML    AML
      comp=N,11887µm,0.4s
MOCL  Monte Cuccoli     0.10 269   P      Pg     20 14 35.8 +0.5
MOCL                               S      Sg     20 14 37.6 +0.8
MOCL                               AML    AML
      comp=N,2743µm,0.2s
MOCL                               AML    AML
      comp=E,1407µm,0.1s
MPPT  Montemurlo        0.17 253   P      Pg     20 14 37.2 +0.7
MPPT                               S      Sg     20 14 39.9 +1.1
MPPT                               AML    AML
      comp=E,925µm,0.2s
MPPT                               AML    AML
      comp=N,737µm,0.2s
BRIS  BRISIGHELLA       0.20  45   P      Pg     20 14 41.6 +4.6
BRIS                               S      Sg     20 14 48.5 +8.7
FNVD  Fontana Vidola    0.21 320   P      Pg     20 14 37.8 +0.5
FNVD                               S      Sg     20 14 41.0 +0.8
RUFI  Rufina            0.22 140   P      Pg     20 14 38.2 +0.9
RUFI                               S      Sg     20 14 41.7 +1.5
FIR   Firenze           0.24 190   P      Pg     20 14 38.7 +1.0
FIR                                S      Sg     20 14 42.8 +2.0
LMD   Lutirano          0.29  76   P      Pg     20 14 39.3 +0.6
LMD                                S      Sb     20 14 44.3 -1.3
CRMI  Carmignano        0.33 229   P      Pg     20 14 40.2 +0.8
CRMI                               S      Sb     20 14 45.4 -1.3
MTRZ  Monterenzio       0.39  16   P      Pg     20 14 40.4 -0.2
MTRZ                               S      Sg     20 14 46.1 +0.5
SFI   Santa Sofia       0.40 105   P      Pb     20 14 41.8 -0.6
SFI                                S      Sb     20 14 48.1 -0.6
ASQU  Asqua             0.40 121   P      Pb     20 14 42.0 -0.5
ASQU                               S      Sb     20 14 48.1 -0.8
OSSC  Osservatorio P    0.48 186   P      Pg     20 14 43.0 +0.6
OSSC                               S      Sb     20 14 50.7 -0.4
CSNT  Castellina Chi    0.53 182   P      Pg     20 14 43.7 +0.4
CSNT                               S      Sb     20 14 52.1 -0.5
CSNT                               AML    AML
      comp=E,163µm,0.6s
CSNT                               AML    AML
      comp=N,138µm,0.2s
```

ROM 08 20:14:57.1±0.0**,44.°019N**±0.°003×**11.°319E**±0.°003**,**
h8^{km},ML1.7/11**,2C-1D,Error ellipse: s-maj=0.3km**
s-min=0.1km az=192.0,Northern Italy

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                   Op     ISC      h  m  s     ISC
MOCL  Monte Cuccoli     0.10 262   P      Pg     20 15 00.2 +0.7
MOCL                               S      Sg     20 15 02.0 +0.8
MOCL                               AML    AML
      comp=E,593µm,0.2s
MOCL                               AML    AML
      comp=N,586µm,0.2s
MOCL                               AML    AML
      comp=E,469µm,0.1s
MPPT  Montemurlo        0.18 250⇑iP      Pg     20 15 01.6 +0.8
MPPT                               S      Sg     20 15 04.4 +1.1
MPPT                               AML    AML
      comp=N,369µm,0.1s
MPPT                               AML    AML
      comp=E,249µm,0.1s
FNVD  Fontana Vidola    0.20 317   P      Pg     20 15 02.1 +0.7
FNVD                               S      Sg     20 15 05.3 +1.1
FIE   Fiesole           0.21 185   P      Pg     20 15 02.1 +0.7
FIE                                S      Sg     20 15 05.5 +1.2
RUFI  Rufina            0.23 142⇑iP      Pg     20 15 02.5 +0.8
RUFI                               S      Sg     20 15 06.0 +1.3
RUFI                               AML    AML
      comp=E,101µm,0.3s
RUFI                               AML    AML
      comp=N,94µm,0.6s
FIR   Firenze           0.25 191   P      Pg     20 15 03.1 +1.0
FIR                                AML    AML
      comp=N,337µm,0.1s
FIR                                AML    AML
      comp=N,377µm,0.1s
FIR                                AML    AML
      comp=E,362µm,0.1s
FIR                                AML    AML
      comp=E,399µm,0.1s
LMD   Lutirano          0.29  78   P      Pg     20 15 03.5 +0.7
LMD                                S      Sb     20 15 08.5 -1.0
LMD                                AML    AML
      comp=E,191µm,0.1s
LMD                                AML    AML
      comp=N,404µm,0.1s
CRMI  Carmignano        0.34 228⇓iP      Pg     20 15 04.5 +0.7
CRMI                               S      Sb     20 15 09.9 -1.1
MTRZ  Monterenzio       0.37  17   P      Pg     20 15 04.1 -0.4
MTRZ                               S      Sg     20 15 08.9 -0.4
SFI   Santa Sofia       0.40 107   P      Pg     20 15 05.6 +0.7
SFI                                S      Sb     20 15 12.3 -0.4
POPM  Popiglio          0.41 274   P      Pg     20 15 05.7 +0.6
POPM                               S      Sb     20 15 12.2 -0.7
ASQU  Asqua             0.41 123   P      Pb     20 15 06.2 -0.4
ASQU                               S      Sb     20 15 12.6 -0.5
ASQU                               AML    AML
      comp=E,43µm,0.3s
ASQU                               AML    AML
      comp=N,66µm,1.5s
```

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*NEIC **08** 20:21:24.8±1.3, 52.°37N±0.°06×166.°74W±0.°06, h10^{km}±1^{km},*
mb4.0/53, ML3.8/14, ML3.6(AEIC), Error ellipse:
s-maj=11.3km s-min=5.3km az=155.0
*IDC **08** 20:21:24.9±0.9, 52.°60N×167.°07W, h0^{km}, mb4.2/26,*
mbtmp4.2/27, ML3.4/1, MS3.4/6, Error ellipse:
s-maj=25.8km s-min=12.4km az=1.0
*AEIC **08** 20:21:24.5±1.1, 52.°34N±0.°07×166.°79W±0.°08, h7^{km}±5^{km},*
Error ellipse: s-maj=11.1km s-min=5.8km az=157.0
*MOS **08** 20:21:27.2±1.4, 52.°86N×167.°13W, h13^{km}, mb4.9/24,*
Error ellipse: s-maj=19.1km s-min=8.4km az=101.7
ISC 08 20:21:28.5±0.8**,52.°51N**±0.°06×**166.°87W**±0.°04**,h26**^{km}±4^{km}**,**
n444,σ**1.^{s}15**/442**,mb4.6**/53**,MS3.4**/7**,5C-17D,Fox Islands**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                   Op     ISC      h  m  s     ISC
OKFG  Magazine Ridge    1.11 326          Pn     20 21 47.7 -0.6
OKFG                                      Sn     20 22 05.3 +2.6
OKTU  Okmok Mt. Tuli    1.13 322          Pn     20 21 48.1 -0.6
OKCE  Okmok Cone E      1.21 320          Pn     20 21 49.5 -0.3
OKNC  Okmok New Cone    1.22 322          Pn     20 21 49.5 -0.4
OKNC                                      Sb     20 22 09.0 +2.8
MGOD  Makushin Gods     1.29 360          Pn     20 21 50.5 -0.4
MGOD                                      Sb     20 22 08.9 +0.6
NIKH  Nikolski High     1.30 292          Sb     20 22 10.9 +2.5
NIKH  Nikolski High     1.30 292   P      Pn     20 21 49.7 -1.2
      baz=114,SNR=29
MAPS  Pakushin South    1.31 358          Pn     20 21 51.0 -0.1
MREP  Makushin Rep't    1.31   3          Pn     20 21 50.9 -0.3
UNV   Unalaska Valle    1.36   9          Sb     20 22 12.9 +2.7
UNV   Unalaska Valle    1.36   9          Pn     20 21 51.1 -0.7
UNV   Unalaska Valle    1.36   9   P      Pn     20 21 51.7 -0.1
      baz=186,SNR=24
MNAT  Makushin Natee    1.39   4          Pn     20 21 51.9 -0.3
MSW   Makushin Switc    1.41   2          Pn     20 21 52.3 -0.2
ZRO   Akutan Zero       1.68  18          Pn     20 21 55.6 -0.6
ZRO                                       Sn     20 22 17.9 +1.1
AKBBA Akutan Broad B    1.69  19          Pn     20 21 55.7 -0.6
AKRB  Akutan Reef Bi    1.70  16          Pn     20 21 56.4  0.0
AKV   Akutan Volcano    1.71  18          Sb     20 22 20.9 +0.4
AHB   Akutan Harbor     1.73  21          Pn     20 21 56.7 -0.2
LVA   Lava Point        1.73  16          Pn     20 21 56.8 -0.1
LVA   Lava Point        1.73  16   IAML          20 22 29.9
      comp=E,1µm,0.6s
AKLV  Akutan Long Va    1.75  18          Pn     20 21 56.8 -0.3
AKUT  Akutan            1.76  21          Pn     20 21 56.9 -0.3
AKUT                               IAML          20 22 38.5
      comp=N,586nm,0.7s
CLCO  Concord Point,    1.76 280          Pn     20 21 56.5 -0.9
AKGG  Akutan Green G    1.78  17          Pn     20 21 57.4 -0.1
AKGG                                      Sb     20 22 23.3 +1.1
AKSA  Akutan Strait     1.78  23          Pn     20 21 57.0 -0.6
CLES  Cleveland East    1.87 281          Pn     20 21 57.8 -1.0
CLES  Cleveland East    1.87 281   IAML          20 22 33.5
      comp=N,903nm,0.7s
CLES                               IAML          20 22 39.5
      comp=E,762nm,0.9s
WEBT  Westdahl Beart    2.44  30          Pn     20 22 06.0 -0.6
WEBT                                      Sn     20 22 38.0 +2.4
SSBA  Shishaldin        2.80  35          Sn     20 22 46.5 +2.0
ISNN  Isanotski Nort    2.97  37          Pn     20 22 12.7 -1.2
FALS  False Pass        3.12  40          Pn     20 22 15.1 -0.9
FALS  False Pass        3.12  40   P      Pn     20 22 14.5 -1.5
      baz=220
DT1   Dutton Round H    3.77  44          Pn     20 22 23.6 -1.2
DT1                                       Sn     20 23 09.1 +0.9
DTNA  Dutton South F    3.81  44          Pn     20 22 24.1 -1.3
DOL   Dolgoi Island     3.97  46          Sn     20 23 14.3 +0.9
S12K  Black Hills       4.27  40          Pn     20 22 30.8 -1.0
S12K  Black Hills       4.27  40   IAML          20 24 01.3
      comp=E,102nm,2.6s
S12K                               IAML          20 24 33.3
      comp=N,109nm,2.7s
S12K  Black Hills       4.27  40   P      Pn     20 22 30.4 -1.5
      baz=222
P08K  Saint George I    4.39 340   P      Pn     20 22 33.5 +0.1
      baz=158
KOFP  Korovin Flat P    4.44 270          Pn     20 22 32.1 -2.0
KOFP                                      Pn     20 22 32.9 -1.2
ATKA  Atka Island       4.50 269   IAML          20 24 07.3
      comp=E,101nm,4.5s
ATKA                               IAML          20 24 35.6
      comp=N,98nm,4.2s
ATKA  Atka Island       4.50 269          Pn     20 22 34.5 -0.5
ATKA                                      Pn     20 22 34.8 -0.2
ATKA                                      Sn     20 23 26.3 -0.1
SDPT  Sand Point        4.73  50   P      Pn     20 22 36.7 -1.4
      baz=234
CHNA  Chernabura Isl    4.91  59   P      Pn     20 22 39.6 -1.0
      baz=243
SPIA  Saint Paul Isl    5.07 339   P      Pn     20 22 43.5 +0.7
      baz=156
GSMY  Great Sitkin M    5.66 269          Pn     20 22 50.4 -0.5
S14K  Fog Glacier       5.71  46   P      Pn     20 22 51.0 -0.5
      baz=230
VNFG  Fog Glacier, M    5.71  46          Pn     20 22 51.0 -0.6
GSTD  Great Sitkin T    5.71 269          Pn     20 22 51.1 -0.5
GSTD                                      Pn     20 22 51.7 +0.1
ADK   Adak              6.07 268          Pn     20 22 54.8 -1.7
KIWB  Kanaga Island     6.36 268          Pn     20 23 00.1 -0.4
R16K  Pilot Point       7.36  43   P      Pn     20 23 12.5 -1.6
      baz=229
CHIR  Chirikof Islan    7.39  59   P      Pn     20 23 11.3 -3.2
      baz=247
O14K  Tigyukauivet M    7.46  23   P      Pn     20 23 13.5 -1.9
      baz=206
O15K  Ungalikthiuk R    7.77  28   P      Pn     20 23 18.3 -1.4
      baz=213
M11K  Mekoryuk          7.91   2   P      Pn     20 23 21.6  0.0
      baz=182
R17L  Mt. Peulik Vol    7.92  45   P      Pn     20 23 19.7 -2.1
      baz=233
N14K  Kuskokwak Cree    7.97  19   P      Pn     20 23 22.0 -0.5
      baz=203
M13K  Dall Lake         8.16  12   P      Pn     20 23 23.7 -1.4
      baz=195
SII   Sitkinak Islan    8.42  56   P      Pn     20 23 26.6 -2.1
      baz=245
Q16K  King Salmon       8.46  39   P      Pn     20 23 26.4 -2.8
      baz=226
Q17K  Contact Creek     8.50  43   P      Pn     20 23 27.1 -2.8
      baz=231
N15K  Kwethluk River    8.55  23   P      Pn     20 23 29.4 -1.1
      baz=208
O16K  Kokwok River B    8.63  31   P      Pn     20 23 30.4 -1.1
      baz=218
M15K  Kasigluk River    8.88  20   P      Pn     20 23 35.9 +0.9
      baz=204
P17K  Kvichak River     8.90  37   P      Pn     20 23 35.6 +0.4
      baz=225
O17K  Koliganek Bris    9.09  33   P      Pn     20 23 38.1 +0.2
      baz=220
Q18K  Katmai Hardscr    9.10  43   P      Pn     20 23 38.0 -0.1
      baz=232
OHAK  Old Harbor        9.14  54   P      Pn     20 23 37.2 -1.3
      baz=244
L14K  Kuka Creek        9.15  13   P      Pn     20 23 36.8 -1.7
      baz=196
N16K  Nishlik Lake      9.15  26   P      Pn     20 23 37.3 -1.4
      baz=212
K13K  Kusilvak Mount    9.53   6   P      Pn     20 23 43.5 -0.3
      baz=188
M16K  Timber Creek      9.57  24   P      Pn     20 23 43.8 -0.6
      baz=210
N17K  Nushagak Hills    9.65  30   P      Pn     20 23 44.9 -0.5
      baz=217
L15K  Ungalak Mounta    9.65  15   P      Pn     20 23 45.1 -0.3
      baz=199
KDAK  Kodiak Island     9.73  51   Pn     Pn     20 23 45.6 -1.0
      comp=N,0.8nm,0.3s,baz=90,slow=3.9,SNR=7.2
KDAK                               Sn     Sn     20 25 31.6 -3.2
      baz=303,slow=16,SNR=1.6
KDAK  Kodiak Island     9.73  51⇓eP      Pn     20 23 46.5 -0.1
KDAK  Kodiak Island     9.73  51   P      Pn     20 23 44.7 -1.9
      baz=242
O18K  Koktuh Hills      9.81  37   P      Pn     20 23 47.2 -0.5
      baz=226
Q19K  Cape Douglas,     9.84  44   P      Pn     20 23 47.8 -0.4
      baz=234
L16K  Owhat River      10.06  21   P      Pn     20 23 50.4 -0.7
      baz=206
N18K  Kilae Creek      10.17  32   P      Pn     20 23 52.3 -0.4
      baz=220
Q20K  Shuyak Island    10.21  48   P      Pn     20 23 52.9 -0.3
      baz=239
K15K  Wolf Creek Mou   10.22  14   P      Pn     20 23 51.7 -1.6
      baz=198
M17K  Holitna River    10.29  26   P      Pn     20 23 54.9 +0.7
      baz=213
J14K  Nanvaranak Lak   10.42   8   P      Pn     20 23 56.7 +0.7
      baz=191
P19K  Oil Pt           10.44  41   P      Pn     20 23 56.2 -0.1
      baz=232
L17K  Donlin           10.70  22   P      Pn     20 24 00.5 +0.6
      baz=209
N19K  Bonanza Creek    10.74  34   P      Pn     20 24 01.2 +0.7
      baz=224
M18K  Stony River      10.82  29   P      Pn     20 24 00.3 -1.2
      baz=218
O20K  Slope Mountain   10.95  41   P      Pn     20 24 02.8 -0.5
      baz=232
HOM   Homer            11.10  44   P      Pn     20 24 04.8 -0.5
      baz=236
L18K  Granite Mounta   11.16  25   P      Pn     20 24 07.1 +0.9
      baz=213
K17K  Iditarod         11.21  21   P      Pn     20 24 06.4 -0.4
      baz=207
J16K  Anvik River      11.30  15   P      Pn     20 24 07.9 -0.2
      baz=199
BRSE  Bradley Lake S   11.53  45   P      Pn     20 24 10.4 -0.9
      baz=237
M19K  Big River Lodg   11.57  31   P      Pn     20 24 10.2 -1.6
      baz=220
GAMB  Gambell          11.58 349   P      Pn     20 24 11.6 -0.2
      baz=165
L19K  White Mountain   11.65  29   P      Pn     20 24 13.9 +1.1
      baz=218
J17K  VABM Dome        11.67  18   P      Pn     20 24 11.1 -2.0
      baz=204
SPCR  Spurr Chakacha   11.81  37   P      Pn     20 24 13.7 -1.5
      baz=228
I17K  Unalakleet       11.86  13   P      Pn     20 24 13.8 -1.9
      baz=198
M20K  Styx River       11.96  33   P      Pn     20 24 16.1 -1.1
      baz=224
ANM   Nome             12.12   3   P      Pn     20 24 20.7 +1.4
      baz=184
J18K  Innoko River     12.22  22   P      Pn     20 24 18.8 -1.8
      baz=210
SEW   Seward           12.28  45   P      Pn     20 24 19.1 -2.3
      baz=239
O22K  Cooper Landing   12.36  43   P      Pn     20 24 20.7 -1.8
      baz=237
H16K  Elim             12.40   9   P      Pn     20 24 22.6 -0.4
      baz=193
SUA   Susitna One      12.53  38   P      Pn     20 24 23.9 -1.0
      baz=231
SKT   Skwentna         12.58  35   P      Pn     20 24 24.4 -1.2
      baz=227
G15K  Niukluk          12.61   6   P      Pn     20 24 25.2 -0.7
      baz=188
RC01  Rabbit Creek A   12.69  41   P      Pn     20 24 25.8 -1.3
      baz=234
K20K  Telida           12.79  27   P      Pn     20 24 28.0 -0.5
      baz=217
J19K  Poorman          12.92  23   P      Pn     20 24 30.6 +0.4
      baz=212
H17K  Granite Mounta   12.97  13   P      Pn     20 24 29.7 -1.2
      baz=199
PPLA  Purkeypile       13.00  31   P      Pn     20 24 29.9 -1.5
      baz=223
F14K  Arctic Creek     13.01   1   P      Pn     20 24 31.8 +0.4
      baz=181
TNA   Tin City         13.11 358   P      Pn     20 24 32.8 +0.1
      baz=177
P23K  Montague Islan   13.13  47   P      Pn     20 24 33.0 -0.1
      baz=243
G16K  Koyuk River      13.13   8   P      Pn     20 24 32.9 -0.1
      baz=192
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PWL   Port Wells         13.14  43  P      Pn     20 24 31.9 -1.3
      baz=238
PMR   Palmer             13.22  40  P      Pn     20 24 35.1 +0.9
      baz=234
F15K  North Star Dit     13.29   4  P      Pn     20 24 36.9 +1.6
      baz=186
CUT   Chulitna           13.30  35  P      Pn     20 24 36.9 +1.5
      baz=229
GCSA  Galena City Sc     13.31  19  P      Pn     20 24 37.2 +1.8
      baz=207,SNR=8.3
Q23K  Middleton Isla     13.38  51  P      Pn     20 24 36.5 +0.1
      baz=247
KNK   Knik Glacier       13.39  41  P      Pn     20 24 37.6 +1.0
      baz=236
H18K  Honhosa River      13.41  16  P      Pn     20 24 37.8 +1.0
      baz=202,SNR=5.3
G17K  Kiwalik Mounta     13.41  11  P      Pn     20 24 36.7 -0.2
      baz=196
J20K  Nowinta River      13.44  25  P      Pn     20 24 38.0 +0.8
      baz=215
SML   Sawmill            13.66  40  P      Pn     20 24 40.5 +0.2
      baz=235
GLI   Glacier Island     13.67  44  P      Pn     20 24 41.7 +1.2
      baz=240
CHUM  Lake Minchumin     13.70  28  P      Pn     20 24 40.9 +0.1
      baz=220
I20K  Naaghedeneel       13.87  23  P      Pn     20 24 43.2 +0.2
      baz=213
M23K  Glacier View       13.89  40  P      Pn     20 24 43.5 +0.1
      baz=236
TRF   Thorofare Moun     14.00  32  P      Pn     20 24 45.6 +0.5
      baz=226
G18K  Tagagawik          14.05  14  P      Pn     20 24 46.5 +0.8
      baz=201
SCM   Sheep Creek Mo     14.07  41  P      Pn     20 24 46.9 +0.9
      baz=237
H19K  Roundabout Mou     14.09  18  P      Pn     20 24 46.8 +0.8
      baz=206
EYAK  Cordova Ski Ar     14.11  47  P      Pn     20 24 46.3 -0.1
      baz=244
WAT1  Susitna Watana     14.19  36  P      Pn     20 24 47.8 +0.3
      baz=231
BPAW  Bear Paw Mtn.      14.25  29  P      Pn     20 24 49.3 +0.9
      baz=222
F17K  Baldwin Pennin     14.26   9  P      Pn     20 24 49.1 +0.7
      baz=194
WAT6  Susitna Watana     14.33  38  P      Pn     20 24 49.2 -0.4
      baz=233
H20K  Anotleneega Mo     14.37  20  P      Pn     20 24 50.4 +0.4
      baz=210,SNR=13
KLU   Klutina            14.47  43  P      Pn     20 24 51.7 +0.3
      baz=240
KAIM  Kayak Island       14.48  50  P      Pn     20 24 50.4 -1.0
      baz=248
G19K  Purcell Mounta     14.53  16  P      Pn     20 24 52.9 +0.8
      baz=204,SNR=7.7
F18K  Selawik            14.59  11  P      Pn     20 24 53.8 +0.9
      baz=197,SNR=8.0
MCK   McKinley           14.64  33  P      Pn     20 24 54.2 +0.6
      baz=228
M24K  Tolsona, Glenn     14.68  41  P      Pn     20 24 55.6 +1.4
      baz=238
DHY   Denali Highway     14.76  37  P      Pn     20 24 55.5  0.0
      baz=233
BMRM  Bremner River      14.80  46  P      Pn     20 24 55.1 -0.7
      baz=244
I21K  Tanana             14.80  25  P      Pn     20 24 55.8  0.0
      baz=217
E17K  Hotham Inlet       14.83   8  P      Pn     20 24 57.3 +1.1
      baz=192
H21K  Melozitna Rive     14.98  23  P      Pn     20 24 57.5 -0.7
      baz=215
MLY   Manley             15.02  27         Pn     20 24 58.7 -0.1
MLY                                 IAmb   IAmb   20 25 05.3
      comp=Z,7.6nm,0.7s
MLY   Manley             15.02  27  P      Pn     20 24 58.5 -0.3
      baz=220,SNR=5.4
IMAR  Indian Mountai     15.04  21         Pn     20 24 58.0 -0.9
F19K  Shaleruckik Mo     15.06  14  P      Pn     20 24 59.3 +0.1
      baz=201
BGLC  Bering Glacier     15.08  50  P      Pn     20 25 00.4 +0.9
      baz=250
N25K  Chitina, Valde     15.08  44  P      Pn     20 24 59.5 -0.1
      baz=242
NEA2  Nenana             15.19  30  P      Pn     20 24 59.9 -1.1
      baz=225
HARP  HAARP              15.24  41  P      Pn     20 25 01.1 -0.6
      baz=239
E18K  Tukpahlearik C     15.28   9         Pn     20 25 01.5 -0.6
E18K                                IAmb   IAmb   20 25 10.2
      comp=Z,8.5nm,0.9s
E18K  Tukpahlearik C     15.28   9  P      Pn     20 25 02.5 +0.4
      baz=194
D17K  Noatak River       15.36   5  P      Pn     20 25 02.3 -0.8
      baz=188
CRQE  Cirque             15.39  48  P      Pn     20 25 02.0 -1.8
      baz=248
PAX   Paxson             15.41  39  P      Pn     20 25 02.9 -1.1
      baz=236
I23K  Minto, Yukon-K     15.50  28         Pn     20 25 05.6 +0.6
I23K                                IAmb   IAmb   20 25 24.6
      comp=Z,8.0nm,0.7s
I23K  Minto, Yukon-K     15.50  28  P      Pn     20 25 06.0 +1.0
      baz=223
H22K  Ishtalitna Cre     15.52  24         Pn     20 25 06.1 +0.8
H22K                                IAmb   IAmb   20 25 11.4
      comp=Z,14nm,0.8s
H22K  Ishtalitna Cre     15.52  24  P      Pn     20 25 05.4  0.0
      baz=217
G21K  Allakaket          15.54  20  P      Pn     20 25 07.3 +1.7
      baz=211,SNR=19
F20K  Avaraart Lake      15.59  16  P      Pn     20 25 07.2 +1.1
      baz=206
MCARA McCarthy VSAT      15.67  46  P      Pn     20 25 07.7 +0.4
      baz=246
E19K  Redstone River     15.72  14  P      P      20 25 10.3 -1.4
      baz=202
MESA  MESA               15.73  51  P      Pn     20 25 08.1 -0.1
      baz=251
HDA   Harding Lake       15.74  33  P      Pn     20 25 08.8 +0.7
      baz=230
COLA  College            15.76  31⇓eP      Pn     20 25 08.8 +0.4
COLA  College            15.76  31  P      Pn     20 25 07.2 -1.1
      baz=227
K24K  Donnelly Dome      15.78  36  P      Pn     20 25 07.6 -1.0
      baz=234
C16K  Lisburne Hills     15.84   2  P      Pn     20 25 10.2 +0.8
      baz=183
H23K  Yukon River        15.95  27         Pn     20 25 10.5 -0.3
H23K  Yukon River        15.95  27  P      Pn     20 25 11.8 +0.9
      baz=221
ILAR  Eielson Array      16.00  32  Pn     Pn     20 25 09.7 -1.8
      comp=Z,0.1nm,0.3s,baz=226,slow=9.8,SNR=7.8
      comp=Z,0.6nm,0.7s
ILAR  Eielson Array      16.00  32         Pn     20 25 09.0 -2.4
POKR  Poker Plat Res     16.06  31  P      Pn     20 25 11.9 -0.3
      baz=227
RIDG  Independent Ri     16.08  37  P      Pn     20 25 12.8 +0.3
      baz=235
M26K  Nabesna, AK        16.12  43  P      Pn     20 25 13.0 -0.1
      baz=242
C17K  DeLong Mountai     16.12   5  P      Pn     20 25 12.4 -0.6
      baz=188
F21K  Alatna River       16.16  19  P      Pn     20 25 13.9 +0.4
      baz=210,SNR=6.1
CTG   Chitna Glacier     16.27  49  P      Pn     20 25 14.0 -1.0
      baz=250
L26K  Log Cabin Wild     16.27  40  P      Pn     20 25 16.0 +1.0
      baz=240
G22K  Bettles            16.32  22  P      Pn     20 25 16.5 +1.0
      baz=215
J25K  Salcha River,      16.41  34  P      Pn     20 25 17.5 +0.8
      baz=232
C18K  Utukok River       16.42   7  P      Pn     20 25 17.9 +1.0
      baz=192
H24K  Noodor Dome        16.43  28         Pn     20 25 16.8 -0.1
H24K  Noodor Dome        16.43  28  P      Pn     20 25 17.2 +0.3
      baz=224
G23K  Bananza Creek      16.50  24  P      Pn     20 25 16.4 -1.5
      baz=218,SNR=9.2
PINM  Pinnacle           16.52  52  P      Pn     20 25 16.1 -2.1
      baz=254
SCRK  Sand Creek         16.53  37         Pn     20 25 16.4 -1.9
SCRK  Sand Creek         16.53  37  P      Pn     20 25 16.4 -1.9
      baz=236,SNR=6.4
M27K  Edge Creek, AK     16.57  44         Pn     20 25 16.4 -2.5
M27K                                IAmb   IAmb   20 25 26.6
      comp=Z,11nm,1.0s
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M27K  Edge Creek, AK     16.57  44  P      Pn     20 25 16.9 -2.0
      baz=244
D19K  Kuna River         16.58  11  P      Pn     20 25 17.4 -1.5
      baz=199
E20K  Nigu River         16.61  14  P      Pn     20 25 18.0 -1.3
      baz=203
F22K  John River         16.66  20  P      Pn     20 25 19.3 -0.6
      baz=212
O28M  Mount Upton        16.74  50  P      Pn     20 25 19.2 -2.0
      baz=252
COLD  Coldfoot           16.87  23  IAmb   IAmb   20 25 29.6
      comp=Z,7.9nm,0.7s
COLD  Coldfoot           16.87  23  P      Pn     20 25 21.6 -0.9
      baz=217,SNR=9.3
L27K  Beaver Creek,      16.90  42  P      Pn     20 25 22.1 -0.8
      baz=242
YUK3  Moose Creek        16.95  46  P      Pn     20 25 22.7 -1.1
      baz=248,SNR=6.8
J26L  Joseph Creek       16.97  36  IAmb   IAmb   20 25 29.8
      comp=Z,6.3nm,0.6s
J26L  Joseph Creek       16.97  36  P      Pn     20 25 22.6 -1.3
      baz=235
D20K  Etivluk River      16.98  13  P      Pn     20 25 23.9  0.0
      baz=202
C19K  Lookout Ridge      17.01   9  IAmb   IAmb   20 25 31.8
      comp=Z,8.5nm,0.7s
C19K  Lookout Ridge      17.01   9  P      Pn     20 25 22.8 -1.4
      baz=195
BVCY  Beaver Creek       17.02  44  P      Pn     20 25 23.6 -0.9
      baz=246
B18K  Kokolik River      17.08   6  P      Pn     20 25 24.9 -0.2
      baz=190
YUK8  Steele Glacier     17.10  48  P      Pn     20 25 24.0 -1.7
      baz=251
E21K  Killik River       17.14  16  P      Pn     20 25 24.8 -1.0
      baz=207
G24K  Hadweenzic Riv     17.16  27  IAmb   IAmb   20 25 29.1
      comp=Z,9.1nm,0.8s
G24K  Hadweenzic Riv     17.16  27  P      Pn     20 25 26.2  0.0
      baz=223,SNR=5.8
E22K  Anaktuvuk Pass     17.27  19  IAmb   IAmb   20 25 31.3
      comp=Z,10nm,0.8s
E22K  Anaktuvuk Pass     17.27  19  P      Pn     20 25 27.7 +0.1
      baz=212,SNR=10
K27K  Chicken            17.27  38  P      Pn     20 25 27.3 -0.2
      baz=239
O29M  Mount Kennedy      17.38  52  P      Pn     20 25 28.2 -0.8
      baz=255
I26K  Coal Creek Min     17.58  34  P      Pn     20 25 30.7 -0.6
      baz=234
G25K  Bearman Lake       17.59  28  P      P      20 25 32.0 -0.3
      baz=225
YUK4  Talbot Arm         17.63  49  P      Pn     20 25 32.0 -0.2
      baz=252,SNR=5.9
P29M  Windy Craggy       17.64  55  P      Pn     20 25 32.0 -0.2
      baz=258
YUK6  Outpost Mounta     17.65  50  P      Pn     20 25 31.5 -0.9
      baz=254
C21K  Knifeblade Rid     17.65  14  P      P      20 25 33.1 +0.1
      baz=205,SNR=7.5
F24K  Squaw Lake         17.66  24  IAmb   IAmb   20 25 37.6
      comp=Z,7.1nm,0.8s
F24K  Squaw Lake         17.66  24  P      Pn     20 25 32.2 -0.2
      baz=220
E23K  Chandalar          17.67  22  P      Pn     20 25 32.2 -0.4
      baz=216
D22K  Ayikyak River      17.75  17  IAmb   IAmb   20 25 44.8
      comp=Z,10nm,0.6s
D22K  Ayikyak River      17.75  17  P      Pn     20 25 33.5 +0.1
      baz=209
E24K  Your Creek         17.95  23  P      P      20 25 36.2 -0.2
      baz=218
HYT   Haines Junctio     18.02  51  P      Pn     20 25 36.4 -0.6
      baz=255
M29M  Somme Creek        18.07  46  IAmb   IAmb   20 25 46.6
      comp=Z,7.6nm,0.8s
M29M  Somme Creek        18.07  46  P      Pn     20 25 37.5  0.0
      baz=249
B21K  Ikpikpuk River     18.10  14  IAmb   IAmb   20 25 39.9
      comp=Z,14nm,0.7s
B21K  Ikpikpuk River     18.10  14  P      Pn     20 25 37.3 -0.4
      baz=204
P30M  Million Dollar     18.12  53  P      P      20 25 38.7 +0.4
      baz=258
B20K  Meade River        18.13  11  P      Pn     20 25 37.7 -0.3
      baz=199
TOLK  Toolik Lake Re     18.16  20  P      Pn     20 25 37.0 -1.5
      baz=215,SNR=8.4
D23K  Nanushuk River     18.20  19  IAmb   IAmb   20 25 49.4
      comp=Z,8.0nm,0.7s
D23K  Nanushuk River     18.20  19  P      Pn     20 25 37.8 -1.1
      baz=213
S31K  Pelican            18.20  60  P      Pn     20 25 36.9 -2.0
      baz=265
I27K  Kandik River       18.27  34  P      Pn     20 25 38.6 -1.4
I27K  Kandik River       18.27  34  P      Pn     20 25 39.0 -1.0
      baz=236
PLBC  Pleasant Camp      18.30  56  P      P      20 25 39.0 -1.2
      baz=261
F25K  Christian Rive     18.30  26  P      P      20 25 38.9 -1.3
      baz=224,SNR=7.0
DAWY  Dawson             18.33  40         P      20 25 38.7 -1.9
DAWY                                IAmb   IAmb   20 25 49.6
      comp=Z,8.0nm,0.8s
DAWY  Dawson             18.33  40  P      P      20 25 40.0 -0.5
      baz=243
N30M  Aishikik Lake      18.38  49  P      P      20 25 41.0 -0.1
N30M                                IAmb   IAmb   20 25 48.1
      comp=Z,13nm,1.0s
N30M  Aishikik Lake      18.38  49  P      P      20 25 40.3 -0.9
      baz=254,SNR=7.6
G26K  Porcupine Rive     18.39  29  P      P      20 25 40.8 -0.4
      baz=229
L29M  L29M               18.45  44  P      P      20 25 41.2 -0.7
      baz=248,SNR=7.4
SIT   Sitka              18.65  63  P      Pn     20 25 45.0 +0.6
      baz=269
H27K  Steamboat Moun     18.66  33  P      P      20 25 42.0 -2.2
H27K  Steamboat Moun     18.66  33  P      P      20 25 44.2 +0.1
      baz=234
O30N  Mendenhall         18.68  52  P      P      20 25 43.6 -0.8
      baz=257
E25K  Arctic Village     18.70  25  P      P      20 25 43.7 -0.9
      baz=223
D24K  Happy Valley       18.73  20  P      Pn     20 25 46.0 +0.6
      baz=216
I28M  Miner Creek        18.78  36  P      P      20 25 45.8 +0.2
      baz=239
F26K  Sheenjek River     18.79  27  P      P      20 25 45.4 -0.2
      baz=227
M30M  Minto, Yukon       18.84  46  P      P      20 25 45.7 -0.5
      baz=251
B22K  Teshekpuk Lake     18.93  14  IAmb   IAmb   20 25 54.7
      comp=Z,7.5nm,0.7s
B22K  Teshekpuk Lake     18.93  14  P      P      20 25 47.2 +0.3
      baz=206
C23K  Itkillik River     18.95  17  P      Pn     20 25 48.4 +0.4
      baz=211
J29N  Klondike Camp      18.96  40  P      Pn     20 25 48.4 +0.2
      baz=244
G27K  Doyon Strip        18.96  31  P      P      20 25 47.3 -0.2
      baz=233
K29M  Barlow Dome        18.98  42  P      Pn     20 25 48.8 +0.2
K29M                                IAmb   IAmb   20 25 54.8
      comp=Z,8.7nm,0.9s
K29M  Barlow Dome        18.98  42  P      P      20 25 48.1 +0.3
      baz=247
N31M  Braeburn, Yuko     18.99  50  P      P      20 25 46.3 -1.6
      baz=255
S32K  Killisnoo          19.06  62  P      P      20 25 48.0 -0.6
      baz=268
R32K  Eaglecrest         19.13  60  P      Pn     20 25 49.9 -0.3
      baz=266
C24K  Franklin Bluff     19.22  19  P      P      20 25 50.4 +0.2
      baz=215
WHY   Whitehorse         19.24  52  P      P      20 25 50.8 +0.1
      baz=259,SNR=7.7
A22K  Sinclair Lake      19.32  12  P      P      20 25 51.2 -0.1
      baz=202
I29M  Ogilvie Camp,      19.34  37  P      P      20 25 50.5 -1.0
      baz=242
D25K  Kavik River        19.40  22  P      P      20 25 52.2 -0.1
      baz=220
A21K  Barrow             19.43  10  P      P      20 25 52.1 -0.4
      baz=199
P32M  Atlin              19.66  56  P      P      20 25 55.8 +0.7
      baz=263
H29M  Whitestone         19.73  35  IAmb   IAmb   20 25 57.6
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      comp=Z,7.4nm,0.7s
H29M  Whitestone         19.73  35  P      P      20 25 55.5 -0.3
      baz=239
J30M  Hart River         19.75  40  P      P      20 25 56.3  0.0
      baz=246
M31M  Drury Creek, Y     19.81  48  P      P      20 25 55.2 -1.6
      baz=255,SNR=21
E27K  Coleen River       19.84  28  P      P      20 25 56.8 -0.1
      baz=230
U33K  Whale Pass         19.89  66  P      P      20 25 57.1 -0.5
      baz=273
CRAG  Craig              19.95  68  P      P      20 25 56.5 -1.7
      baz=275
F28M  Old Crow           20.00  31  P      P      20 25 58.2 -0.6
      baz=234
I30M  Mount Dempster     20.00  39  P      P      20 25 58.5 -0.4
      baz=245
P33M  Teslin, Yukon      20.18  54         P      20 26 00.7 -0.2
P33M                                IAmb   IAmb   20 26 10.1
      comp=Z,6.9nm,0.9s
P33M  Teslin, Yukon      20.18  54  P      P      20 26 01.4 +0.6
      baz=262
C26K  Camden Bay         20.19  22  P      P      20 26 01.7 +0.9
      baz=221
N32M  Quiet Lake         20.20  51  P      P      20 26 01.8 +0.8
      baz=260
G29M  Pine Creek         20.21  33         P      20 26 00.0 -1.0
G29M                                IAmb   IAmb   20 26 03.9
      comp=Z,8.2nm,0.8s
G29M  Pine Creek         20.21  33  P      P      20 26 00.5 -0.5
      baz=238,SNR=9.1
C27K  Jago River         20.26  23  P      P      20 26 02.0 +0.4
      baz=224
Q32M  Nakina River       20.34  58  P      P      20 26 03.0 +0.2
      baz=266
EPYK  Eagle Plains       20.39  36         P      20 26 02.4 -0.7
EPYK  Eagle Plains       20.39  36  P      P      20 26 01.3 -1.7
      baz=241,SNR=8.2
E28M  Babbage River      20.70  28  IAmb   IAmb   20 26 16.2
      comp=Z,3.5nm,0.7s
E28M  Babbage River      20.70  28  P      P      20 26 06.1 -0.2
      baz=232
D27M  Malcolm River      20.70  26  P      P      20 26 06.9 +0.5
      baz=229
V35K  Ketchikan          20.82  68  P      P      20 26 06.5 -1.2
      baz=276
G30M  tAoh Zraii Nji     20.86  34  P      P      20 26 07.5 -0.6
      baz=241
S34M  Telegraph Cree     20.92  61  P      P      20 26 07.8 -0.9
      baz=270
H31M  Peel River         21.01  38         P      20 26 08.7 -1.1
H31M  Peel River         21.01  38  P      P      20 26 09.8  0.0
      baz=246
R33M  Jennings River     21.04  57  P      P      20 26 08.9 -1.3
      baz=266
E29M  Blow River         21.06  30  P      P      20 26 07.9 -2.3
      baz=235
PETK  Petropavlovsk-     21.30 286  P      P      20 26 12.2 -0.8
      comp=Z,5.6nm,0.5s,baz=81,slow=12,SNR=22
      comp=Z,5.6nm,0.5s
F30M  Barrier River      21.31  33  P      P      20 26 11.6 -1.3
F30M                                IAmb   IAmb   20 26 33.9
      comp=Z,7.9nm,0.8s
F30M  Barrier River      21.31  33  P      P      20 26 12.8 -0.2
      baz=240
D28M  Stokes Point       21.37  27  P      P      20 26 12.0 -1.5
      baz=232
T35M  Bob Quinn          21.43  63  P      P      20 26 13.9 -0.4
      baz=273
DLBC  Dease Lake         21.50  59  P      P      20 26 17.1 +2.0
      comp=Z,1.8nm,0.5s,baz=343,slow=21,SNR=9.4
      comp=Z,1.8nm,0.5s
DLBC  Dease Lake         21.50  59  P      P      20 26 13.8 -1.3
      baz=270
G31M  Satah River        21.51  35         P      20 26 13.2 -1.8
G31M                                IAmb   IAmb   20 26 18.9
      comp=Z,6.8nm,0.8s
G31M  Satah River        21.51  35  P      P      20 26 12.6 -2.3
      baz=244
F31M  Tsiigehtchic       21.93  34         P      20 26 17.1 -2.3
F31M                                IAmb   IAmb   20 26 22.7
      comp=Z,4.7nm,0.8s
F31M  Tsiigehtchic       21.93  34  P      P      20 26 19.1 -0.3
      baz=243
INK   Inuvik             22.40  32  P      P      20 26 22.8 -1.7
      baz=242
SEY   Seymchan           23.71 312  P      P      20 26 36.9 -1.0
      comp=Z,5.2nm,0.7s,baz=107,slow=11,SNR=11
SEY                                 LR     LR     20 36 13.0
      comp=Z,92nm,18.3s,baz=338,slow=38
      comp=Z,5.2nm,0.7s
SEY   Seymchan           23.71 312⇓eP      P      20 26 37.0 -1.0
SEY                                 pmax   pmax
      comp=Z,38nm,2.3s
TOAD  Toad River Com     23.99  58  P      P      20 26 41.1 +0.4
      baz=273
MA2   Magadan            24.34 304  P      P      20 26 42.8 -1.0
      comp=Z,10nm,0.7s,baz=87,slow=8.2,SNR=4.6
MA2                                 LR     LR     20 36 12.2
      comp=Z,46nm,18.6s,baz=134,slow=37
      comp=Z,10nm,0.7s
MA2   Magadan            24.34 304⇑eP      P      20 26 43.3 -0.5
MA2                                 pmax   pmax
      comp=Z,64nm,2.6s
KOTAN Kotaneelee Air     24.55  55  P      P      20 26 45.6 -0.2
      baz=271
WRGLY Wrigley            24.94  48  P      P      20 26 49.0 -0.2
      baz=264
C36M  Paulatuk           25.96  33         P      20 26 57.4 -1.0
C36M  Paulatuk           25.96  33  P      P      20 26 59.2 +0.8
      baz=251,SNR=5.3
A36M  Sachs Harbour      26.58  28  P      P      20 27 03.9 -0.1
      baz=245,SNR=9.7
YKA   Yellowknife Ar     29.00  49  P      P      20 27 25.4 -0.3
      comp=Z,0.4nm,0.7s,baz=280,slow=8.7,SNR=5.2
      comp=Z,0.4nm,0.7s
TIXI  Tiksi              33.41 329  LR     LR     20 40 11.5
      comp=Z,30nm,22.0s,baz=204,slow=34
TIXI  Tiksi              33.41 329⇑eP      P      20 28 03.4 -1.0
TIXI                                pmax   pmax
      comp=Z,12nm,2.7s
YAK   Yakutsk            34.23 311  LR     LR     20 44 08.7
      comp=Z,80nm,18.1s,baz=104,slow=40
YAK   Yakutsk            34.23 311⇑eP      P      20 28 10.3 -1.3
YAK                                 pmax   pmax
      comp=Z,19nm,1.9s
LYMT  Lyon Mountain      34.98  77  P      P      20 28 18.8 +0.3
RES   Resolute Bay       35.59  26  LR     LR     20 44 55.8
      comp=Z,61nm,18.6s,baz=357,slow=40
NVAR  Mina Array Bea     36.14  93  P      P      20 28 29.8 +1.2
      comp=Z,1.0nm,0.7s,baz=288,slow=8.9,SNR=5.4
      comp=Z,1.0nm,0.7s
H11N2 WAKE ISLAND Hy     38.55 222  T      T      21 10 30.2
      baz=25,slow=75,SNR=19
H11N3 WAKE ISLAND Hy     38.55 222  T      T      21 10 22.8
      baz=25,slow=75,SNR=23
H11N1 WAKE ISLAND Hy     38.56 222  T      T      21 10 36.8
      baz=25,slow=75,SNR=17
PDAR  Pinedale Array     38.87  81  P      P      20 28 52.7 +1.0
      comp=Z,1.1nm,0.7s,baz=307,slow=5.0,SNR=9.2
      comp=Z,1.1nm,0.7s
PDAR  Pinedale Array     38.87  81  P      P      20 28 52.0 +0.3
H11S1 WAKE ISLAND Hy     39.73 221  T      T      21 12 14.9
      baz=24
H11S2 WAKE ISLAND Hy     39.74 221  T      T      21 12 16.1
      baz=24
H11S3 WAKE ISLAND Hy     39.74 221  T      T      21 12 13.9
      baz=24
MJA0  Matsu Arr-Jizo     41.21 270 eP      P      20 29 11.8 +0.9
MJA0                                pmax   pmax
      comp=Z,1.0nm,0.6s
MAJO  Matsushiro         41.23 270⇓eP      P      20 29 10.2 -0.9
MAJO                                pmax   pmax
      comp=Z,37nm,2.9s
MJAR  Matsushiro Arr     41.23 270  P      P      20 29 08.4 -2.7
      comp=Z,1.3nm,0.6s,baz=33,slow=6.8,SNR=6.1
      comp=Z,1.3nm,0.6s
KSRS  Korea Array        46.91 278  P      P      20 29 55.9 -0.6
      comp=Z,1.4nm,0.8s,baz=50,slow=8.1,SNR=3.0
      comp=Z,1.4nm,0.8s
NRIK  Noril'sk           47.03 332  P      P      20 29 56.6 -0.4
      comp=Z,1.5nm,0.6s,baz=60,slow=11,SNR=2.4
NRIK                                LR     LR     20 52 20.4
      comp=Z,73nm,18.6s,baz=301,slow=40
      comp=Z,1.5nm,0.6s
TXAR  Lajitas Array      51.22  91  P      P      20 30 31.1 +1.4
      comp=Z,1.4nm,0.8s,baz=301,slow=5.3,SNR=16
      comp=Z,1.4nm,0.8s
```

TXAR	Lajitas Array	51.22	91	P	P	20 30 30.3	+0.6
ULN	Ulaanbaatar	52.17	302	⇓iP	P	20 30 36.4	-0.3
ULN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SONM	Songino Array	52.54	302	P	P	20 30 38.8	-0.6
	comp=Z,1.7nm,0.8s,baz=87,slow=4.4,SNR=11						
SONM				PcP	PcP	20 31 50.7	+1.3
	comp=Z,1.0nm,0.9s,baz=83,slow=3.6,SNR=3.9						
	comp=Z,1.7nm,0.8s						
SONM	Songino Array	52.54	302	P	P	20 30 39.0	-0.3
SONM				IAmb	IAmb	20 30 40.2	
	comp=Z,3.6nm,1.0s						
SONM	Songino Array	52.54	302	eP	P	20 30 39.8	+0.4
SONM				pmax	pmax		
	comp=Z,2.0nm,1.0s						
HHC	Hu-ho-hao-te	54.29	292	eP	P	20 30 53.9	+1.6
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ARCES	ARCESS Array B	57.94	355	P	P	20 31 17.2	-0.6
	comp=Z,4.1nm,0.8s,baz=23,slow=5.9,SNR=14						
	comp=Z,4.1nm,0.8s						
ARCES	ARCESS Array B	57.94	355	P	P	20 31 17.5	-0.3
ARCES	ARCESS Array B	57.94	355	eP	P	20 31 19.3	+1.5
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZALV	Zalesovo Beam	58.34	319	P	P	20 31 20.2	-0.7
	comp=Z,1.9nm,0.7s,baz=34,slow=6.1,SNR=8.6						
	comp=Z,1.9nm,0.7s						
ZALV	Zalesovo Beam	58.34	319		P	20 31 19.5	-1.3
ZALV	Zalesovo Beam	58.34	319	eP	P	20 31 20.7	-0.2
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
DGZ	Jazzator, Alta	60.36	314	d iP	P	20 31 35.2	+0.1
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GTA	Gaotai	61.77	299	eP	P	20 31 44.3	-0.5
GTA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LZH	Lanzhou	61.95	293	eP	P	20 31 47.0	+0.9
LZH				sP	pwP	20 31 57.8	-0.2
LZH				pmax	pmax		
	comp=Z,14nm,1.3s						
KURK	Kurchatov	63.28	320	⇓iP	P	20 31 54.2	-0.2
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KURBB	Kurchatov Arra	63.38	320	P	P	20 31 54.7	-0.5
	comp=Z,2.6nm,0.7s,baz=43,slow=7.3,SNR=27						
	comp=Z,2.6nm,0.7s						
BVAR	Borovoye Array	64.47	326	P	P	20 32 02.2	-0.1
	comp=Z,3.4nm,0.7s,baz=50,slow=7.1,SNR=21						
	comp=Z,3.4nm,0.7s						
BORK	Borovoye	64.47	326	⇓iP	P	20 32 02.4	+0.1
BORK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MK31	Makanchi Array	64.81	315	d iP	P	20 32 03.8	-0.9
MKAR	Makanchi Array	64.81	315	P	P	20 32 04.0	-0.7
	comp=Z,3.6nm,0.7s,baz=49,slow=6.8,SNR=44						
	comp=Z,3.6nm,0.7s						
MKAR	Makanchi Array	64.81	315		P	20 32 03.6	-1.1
KLMR	Klimovskoe	65.04	346	eP	P	20 32 04.2	-1.6
KLMR				e		20 32 36.5	
KLMR				pmax	pmax		
	comp=Z,32nm,1.7s						
ARTI	Arti	65.27	334	c iP	P	20 32 07.3	-0.1
ARTI						20 34 25.8	
ARTI				S	S	20 40 49.3	+0.4
ARTI				SS	SS	20 44 54.0	-6.8
ARTI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KIRV	Kirov	65.41	340	⇑iP	P	20 32 08.7	+0.4
FINES	FINESS Array B	65.93	353	P	P	20 32 10.7	-0.9
	comp=Z,9.2nm,0.7s,baz=19,slow=7.7,SNR=39						
	comp=Z,9.2nm,0.7s						
FINES	FINESS Array B	65.93	353	P	P	20 32 11.1	-0.5
FINES	FINESS Array B	65.93	353	i P	P	20 32 11.3	-0.3
FINES				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NOA	NORSAR Array B	66.79	1	P	P	20 32 16.7	-0.5
	comp=Z,2.6nm,0.8s,baz=0.2,slow=6.4,SNR=7.4						
	comp=Z,2.6nm,0.8s						
NOA	NORSAR Array B	66.79	1	eP	P	20 32 17.2	0.0
NOA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GOMU	GeErMu	66.81	299	P	P	20 32 17.9	-0.2
GOMU				pP	pP	20 32 23.2	-1.8
GOMU				sP	sP	20 32 26.6	-1.0
GOMU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HFS	Hagfors	67.71	360	P	P	20 32 22.8	-0.1
	comp=Z,5.1nm,0.4s,baz=28,slow=3.5,SNR=30						
	comp=Z,5.1nm,0.4s						
VSU	Vasula	68.84	352	⇓eP	P	20 32 29.4	-0.6
VSU				pmax	pmax		
	comp=Z,47nm,1.7s						
OBN	Obninsk	71.00	346	eP	P	20 32 43.1	-0.2
OBN				e*PP	sP	20 32 52.3	-0.7
OBN				e		20 33 05.3	
OBN				e		20 35 19.2	
OBN				ePPP	PPP	20 37 01.9	
OBN				pmax	pmax		
	comp=Z,44nm,2.3s						
OBN				MLR	MLR		
	comp=Z,272nm,18.0s						
AAK	Ala-Archa	71.46	317	⇓iP	P	20 32 46.6	0.0
AAK				pmax	pmax		
	comp=Z,29nm,4.2s						
BELG	Belogornoye	71.54	339	⇓iP	P	20 32 46.9	+0.3
BELG				pmax	pmax		
	comp=Z,21nm,5.8s						
EKA	Eskdalemuir Ar	71.68	10	P	P	20 32 48.2	+0.7
	comp=Z,3.8nm,0.8s,baz=356,slow=6.5,SNR=3.5						
	comp=Z,3.8nm,0.8s						
MNK	Minsk	72.66	351	i P	P	20 32 50.7	-2.6
MNK				i		20 35 31.1	
MNK				i PPP	PPP	20 37 16.5	
MNK				i S	S	20 42 13.9	-2.4
MNK				i SS	SS	20 46 54.8	+0.3
MNK				i SSS	SSS	20 50 12.1	
MNK				pmax	pmax		
	comp=Z,14nm,0.9s						
KSH	Kashi	73.40	314	P	P	20 33 02.0	+3.8
KSH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
RNPP8	Varash	75.98	352	P	P	20 33 12.6	-0.1
RNPP5	Staryi Chortor	76.08	352	P	P	20 33 13.1	-0.2
AK21	Malin Array Si	76.22	350	P	P	20 33 14.3	+0.2
AK23	Malin Array Si	76.22	350	P	P	20 33 14.2	+0.1
AK22	Malin Array Si	76.23	350	P	P	20 33 13.9	-0.2
AK03	Malin Array Si	76.25	350	P	P	20 33 14.2	0.0
AK20	Malin Array Si	76.25	350	P	P	20 33 14.3	0.0
AK04	Malin Array Si	76.26	350	P	P	20 33 14.2	-0.1
AK18	Malin Array Si	76.27	350	P	P	20 33 13.5	-0.9
AKASG	Malin Array Be	76.27	350	P	P	20 33 14.7	+0.3
	comp=Z,4.9nm,0.6s,baz=15,slow=5.7,SNR=14						
	comp=Z,4.9nm,0.6s						
AKASG	Malin Array Be	76.27	350	i P	P	20 33 14.6	+0.2
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKBB	Malin Array Si	76.27	350	deP	P	20 33 14.0	-0.3
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.7s						
AKBB	Malin Array Si	76.27	350	P	P	20 33 14.1	-0.3
AK19	Malin Array Si	76.28	350	P	P	20 33 14.6	+0.2
KIEV	Kiev	76.28	350	P	P	20 33 14.1	-0.3
	comp=Z,37nm,0.7s						
AK01	Malin Array Si	76.28	350	P	P	20 33 14.5	+0.1
AK11	Malin Array Si	76.30	350	P	P	20 33 14.6	+0.1
AK17	Malin Array Si	76.31	350	P	P	20 33 14.7	+0.1
AK16	Malin Array Si	76.32	350	P	P	20 33 14.8	+0.2
AK02	Malin Array Si	76.32	350	P	P	20 33 14.7	+0.1
LUBAR	Lubar, Ukraine	77.20	350	P	P	20 33 19.1	-0.5
CMAR	Chiang Mai Arr	78.07	285	P	P	20 33 25.3	+0.3
	comp=Z,0.4nm,0.3s,baz=18,slow=5.8,SNR=4.7						
	comp=Z,0.4nm,0.3s						
CMAR	Chiang Mai Arr	78.07	285	eP	P	20 33 27.2	+2.2
STHS	Stebnicka Huta	78.22	355	eP	P	20 33 28.0	+2.6
STHS	Stebnicka Huta	78.22	355	eP	P	20 33 28.0	+2.6
KMPD	K-Podol'skiy	78.67	351	P	P	20 33 27.6	-0.2
UZHM	Uzhgorod	78.94	354	P	P	20 33 28.9	-0.4
BAL3X	Bal3x, Balta	78.95	349	P	P	20 33 28.4	-1.0
GERES	GERESS Array B	79.03	360	P	P	20 33 30.1	+0.2
	comp=Z,0.5nm,0.7s,baz=14,slow=6.1,SNR=5.4						
	comp=Z,0.5nm,0.7s						
GERES	GERESS Array B	79.03	360	eP	P	20 33 31.8	+1.9
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ERBR	Yeremizino-Bor	79.38	341	eP	P	20 33 31.4	-0.4
ERBR				e*PP	PcP	20 33 39.1	-0.8
ERBR				eS	S	20 43 30.5	-0.1
ERBR				pmax	pmax		
	comp=Z,11nm,1.0s						
MODS	Modra-Piesok	79.44	357	eP	P	20 33 34.6	+2.5
MODS	Modra-Piesok	79.44	357	eP	P	20 33 34.6	+2.5
LABN	Labinsk	80.36	340	eP	P	20 33 36.1	-1.0
LABN				e*PP	pP	20 33 43.7	-0.5
LABN				eS	S	20 43 39.9	-1.1
LABN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SHA1	Shidzhatmaz	80.81	339	⇓eP	P	20 33 41.6	+1.8
NCK	Nalchik	80.83	338	⇓eP	P	20 33 41.6	+1.9
NCK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ANN	Anapa	80.84	343	eP	P	20 33 37.5	-2.2
ANN				e*PP	pP	20 33 44.0	-2.8
ANN				eS	S	20 43 42.7	-3.3
ANN				pmax	pmax		
	comp=Z,22nm,1.0s						
BR131	Keskin Array S	86.43	344	deP	P	20 34 09.9	+1.3
BRTR	Keskin Array B	86.43	344	P	P	20 34 08.8	+0.1
	comp=Z,2.8nm,0.8s,baz=27,slow=2.0,SNR=14						
	comp=Z,2.8nm,0.8s						
BRTR	Keskin Array B	86.43	344	eP	P	20 34 10.0	+1.3
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BR105	Keskin Array S	86.44	344	P	P	20 34 08.5	-0.2
	comp=Z,3.6nm,0.8s						
BR104	Keskin Array S	86.45	344	P	P	20 34 08.3	-0.4
ESDC	Sonseca Array	87.00	13	P	P	20 34 11.2	-0.1
	comp=Z,0.6nm,0.8s,baz=348,slow=4.8,SNR=4.1						
	comp=Z,0.6nm,0.8s						
WRAB	Tennant Creek	88.29	234	⇓eP	P	20 34 20.3	+2.8
WRAB				pmax	pmax		
	comp=Z,22nm,3.5s						

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*SJA **08** 20:24:53.0±0.6, 33°.94S×71°.48W, h49^{km}±5^{km}, ML3.7, MW3.7*

*GUC **08** 20:24:54.0±0.7, 33°.93S×71°.46W, h52^{km}±2^{km}, ML3.7*

ISC 08 20:24:53.6±1.1, **33°.98S**±0°.03×**71°.53W**±0°.03, **h32**^{km}±12^{km}, **n60**, σ**1^{s}27**/87, **5C-10D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MT01	Popeta	0.26	64	⇑iP	Pn	20 25 02.1	+1.0
MT01				eS	Sn	20 25 08.0	+1.9
MT01				IAML		20 25 09.4	
	comp=N,25µm,0.2s						
MT01	Popeta	0.26	64	eP	Pn	20 25 02.0	+0.8
MT01				IAML		20 25 09.0	
	comp=Z,13µm,0.1s						
VA05	Santo Domingo	0.33	348	eP	Pn	20 25 02.8	+0.7
VA05				eS	Sn	20 25 09.2	+1.5
VA05				IAML		20 25 10.5	
	comp=N,17µm,0.2s						
MT09	Talagante	0.49	66	eP	Pn	20 25 04.5	-0.1
MT09				eS	Sn	20 25 12.3	+0.2
MT09				IAML		20 25 14.0	
	comp=N,19µm,0.1s						
BO01	Tunca	0.55	138	⇑iP	Pn	20 25 06.2	+1.0
BO01				eS	Sn	20 25 14.8	+1.5
BO01				IAML		20 25 15.4	
	comp=N,11µm,0.2s						
BO01	Tunca	0.55	138	eP	Pn	20 25 05.8	+0.6
BO01				eS	Sn	20 25 15.1	+1.7
BO01				IAML		20 25 15.2	
	comp=Z,4µm,0.3s						
BO03	Pichilemu	0.63	215	⇑iP	Pn	20 25 07.4	+1.2
BO04	La Punta	0.77	91	⇓eP	Pn	20 25 08.1	-0.1
BO04				eS	Sb	20 25 18.6	-0.1
BO04				IAML		20 25 21.8	
	comp=E,20µm,0.2s						
MT02	Curacav	0.79	25	eP	Pn	20 25 08.2	-0.3
MT02	Curacav	0.79	25	eP	Pn	20 25 08.0	-0.5
MT02				eS	Sn	20 25 18.4	-0.8
MT02				IAML		20 25 18.9	
	comp=Z,1µm,0.1s						
MT12	Pirque	0.85	74	⇓iP	Pn	20 25 09.2	-0.2
MT12				eS	Sn	20 25 20.1	-0.7
MT12				IAML		20 25 25.4	
	comp=N,4µm,0.6s						
MT15	Las Vizcachas	0.93	66	eP	Pn	20 25 10.2	-0.4
MT15				eS	Sn	20 25 22.0	-0.8
MT15				IAML		20 25 25.3	
	comp=N,6µm,0.4s						
VA01	Torpederas	0.96	354	eP	Pn	20 25 11.0	+0.2
VA01	Torpederas	0.96	354	eP	Pn	20 25 10.9	+0.1
VA01				eS	Sn	20 25 10.9	-12
VA01				IAML		20 25 25.8	
	comp=Z,1µm,0.4s						
MT03	Universidad Ad	0.98	61	⇓iP	Pn	20 25 10.7	-0.4
MT03				IAML		20 25 28.6	
	comp=N,4µm,0.2s						
MT03	Universidad Ad	0.98	61	eP	Pn	20 25 10.8	-0.3
MT03				eS	Sb	20 25 24.6	-0.2
MT03				IAML		20 25 25.9	
	comp=Z,2µm,0.1s						
MT14	Cerro Cal¡n	1.01	55	eP	Pn	20 25 11.4	-0.2
MT14				IAML		20 25 30.1	
	comp=E,3µm,0.2s						
BO02	Sierra Bellavi	1.02	143	i P	Pb	20 25 12.6	-0.2
BO02				eS	Sb	20 25 26.1	+0.1
BO02				IAML		20 25 28.5	
	comp=N,4µm,0.2s						
BO02	Sierra Bellavi	1.02	143	eP	Pb	20 25 12.5	-0.2
BO02				eS	Sb	20 25 28.3	+2.4
BO02				IAML		20 25 31.6	
	comp=Z,2µm,0.1s						
MT13	San Alfonso	1.06	78	⇓eP	Pn	20 25 12.2	-0.1
MT13				IAML		20 25 31.8	
	comp=N,2µm,0.3s						
MT13	San Alfonso	1.06	78	eP	Pn	20 25 12.1	-0.2
MT13				eS	Sn	20 25 26.0	-0.1
MT13				IAML		20 25 27.8	
	comp=Z,1µm,0.2s						
GO05	Hualane	1.08	198	eP	Pb	20 25 14.0	+0.3
GO05	Hualane	1.08	198	eP	Pn	20 25 09.0	-3.5
GO05				eS	Sb	20 25 30.4	+2.8
GO05				IAML		20 25 33.1	
	comp=Z,654nm,0.1s						
MT10	Hacienda Santa	1.09	50	⇓eP	Pn	20 25 12.6	-0.1
MT10				IAML		20 25 27.9	
	comp=N,8µm,0.2s						
ROC1	El Roble	1.09	23	eP	Pn	20 25 12.8	-0.1
ROC1				eS	Sn	20 25 27.1	+0.2
PEL	Peldehue	1.09	40	⇓iP	Pn	20 25 12.7	0.0
PEL				eS	Sn	20 25 26.6	-0.1
PEL				IAML		20 25 30.3	
	comp=N,2µm,0.2s						
PEL	Peldehue	1.09	40	eP	Pn	20 25 12.7	0.0
PEL				eS	Sn	20 25 27.4	+0.8
PEL				IAML		20 25 28.2	
	comp=Z,1µm,0.2s						
ROCH	El Roble	1.09	24	⇓eP	Pn	20 25 12.9	+0.1
ROCH				⇓eP		20 25 12.9	
ROCH				eS	Sn	20 25 26.7	-0.3
LMEL	Las Melosas	1.11	84	⇓eP	Pn	20 25 12.9	-0.1
LMEL				eS	Sn	20 25 27.2	-0.1
LMEL				IAML		20 25 30.2	
	comp=N,4µm,0.2s						
LMEL	Las Melosas	1.11	84	eP	Pn	20 25 12.9	-0.1
LMEL				eS	Sn	20 25 27.4	+0.1
LMEL				IAML		20 25 31.2	
	comp=Z,1µm,0.1s						
MT04	Ro Olivares	1.29	64	eP	Pn	20 25 15.4	-0.3
MT04				eS	Sn	20 25 31.2	-0.8
MT04				IAML		20 25 32.5	
	comp=E,1µm,0.2s						
MT04	Ro Olivares	1.29	64	eP	Pn	20 25 10.0	-5.6
MT04				eP		20 25 15.3	
MT04				eS	Sn	20 25 32.4	+0.4
MT04				IAML		20 25 33.0	
	comp=Z,886nm,0.1s						
MT08	Bocatoma Ro	1.37	68	eP	Pn	20 25 16.6	-0.1
MT08				IAML		20 25 34.9	
	comp=N,678nm,0.3s						
MT08	Bocatoma Ro	1.37	68	eP	Pn	20 25 16.8	+0.1
MT08				eS	Sn	20 25 34.2	+0.4
MT08				IAML		20 25 34.4	
	comp=Z,467nm,0.3s						
VA06	Catapilco	1.43	8	⇑iP	Pn	20 25 17.9	+0.7
VA06				IAML		20 25 44.5	
	comp=E,2µm,0.3s						
VA03	San Esteban	1.46	34	⇓eP	Pn	20 25 17.9	0.0
VA03				eS	Sn	20 25 36.3	+0.4
VA03				IAML		20 25 39.6	
	comp=E,4µm,0.1s						
VA03	San Esteban	1.46	34	eP	Pn	20 25 18.0	+0.2
VA03				eS	Sn	20 25 36.7	+0.8
VA03				IAML		20 25 39.8	
	comp=Z,1µm,0.3s						
ML02	Panimavida	1.78	177	eP	Pb	20 25 24.0	-1.6
ML02	Panimavida	1.78	177	eP	Pn	20 25 21.1	-1.0
ML02				IAML		20 25 54.6	
	comp=Z,503nm,0.3s						
CO04	Los Peladeros	1.99	14	⇑eP	Pn	20 25 25.3	+0.1
AAGR	Agrelo	2.43	69	eP	Pn	20 25 14.7	-16
AAGR				eS	Sn	20 25 50.5	-9.2
ARCO	CERRO ARCO	2.45	63	eP	Pn	20 25 29.8	-1.6
ARCO				eS	Sn	20 25 50.9	-9.5
ARCO				IAML		20 25 51.9	
	comp=Z,194nm,0.7s						
EDS3	Malargue	2.50	136	eP	Pn	20 25 32.4	+0.2
AVIZ	Vizcacheras	2.56	79	eP	Pn	20 25 14.9	-18
ASAL	Salagasta	2.65	59	eP	Pn	20 25 32.3	-1.8
ASAL				eS	Sn	20 25 53.8	-11
RFA	San Rafael	2.66	108	eP	Pn	20 25 34.0	-0.1
RFA				eS	Sn	20 25 55.4	-10
BI02	San Fabin de	2.69	176	eP	Pb	20 25 37.2	-3.8
CO02	Combarbal	2.80	9	eP	Pn	20 25 36.4	+0.1
CO02	Combarbal	2.80	9	eP	Pn	20 25 36.6	+0.4
CO02				eS	Sn	20 26 09.8	+0.8
CO02				IAML		20 26 23.0	
	comp=Z,372nm,0.4s						
CO06	Fray Jorge	3.30	358	eP	Pn	20 25 42.8	-0.2
CFA	Coronel Fontan	3.65	50	eP	Pn	20 25 49.8	+2.0
CFA				eS	Sn	20 26 34.3	+4.6
RTLL	Cerro Villicun	3.69	45	eP	Pn	20 25 48.6	+0.1
RTLL				eS	Sn	20 26 32.6	+1.8
RTLL				IAML		20 26 51.2	
	comp=Z,337nm,0.7s						
GO04	Tololo Observa	3.85	9	eP	Pn	20 25 51.4	+0.7
ACCO	Cerro Coronel	3.97	32	eP	Pn	20 25 49.4	-3.2
CO01	Juntas del Tor	4.17	17	eP	Pn	20 25 56.7	+1.5
CO01	Juntas del Tor	4.17	17	eP	Pn	20 25 52.3	-2.9
CO01				eS	Sb	20 26 54.9	-1.6
AROD	Rodeo	4.18	25	eP	Pn	20 25 57.9	+2.4
LCO	Las Campanas	5.00	8	eP	Pn	20 26 06.6	-0.1
LCO				eS	Sn	20 27 05.0	+1.5
LCO				IAML		20 27 24.5	
	comp=Z,75nm,0.3s						
MRA	San Martin	5.12	74	eP	Pn	20 26 09.5	+1.5
TCA	Tanti	6.41	68	eP	Pn	20 26 25.6	-0.3

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*IDC **08** 20:44:13.4±0.7, 6°.75N×73°.01W, h158^{km}±7^{km}, mb3.3/6, mbtmp3.8/8, Error ellipse: s-maj=16.7km s-min=7.5km az=129.0*

*RSNC **08** 20:44:14.9±0.0, 7°N±1°×7°3W±°, h151^{km}±1^{km}, M3.9, mB4.8, mb4.3, ML3.6, MLv4.3, Mw(mB)4.0*

ISC 08 20:44:13.6±0.7, **6°.84N**±0°.03×**73°.12W**±0°.04, **h158**^{km}±5^{km}, **n52**, σ**0^{s}93**/73, **mb3.6**/6, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.25	194	P	Pn	20 44 35.3	0.0
BARC				S	Sn	20 44 50.3	-1.5
BRJC	Barrancabermej	0.63	283	P	Pn	20 44 37.2	+0.7
BRJC				S	Sn	20 44 53.9	-0.1
PAMC	Pamplona, Colo	0.66	40	P	Pn	20 44 38.2	+0.9
PAMC				S	Sn	20 44 55.3	-0.1
RUSC	La Rusia	0.94	178	P	Pn	20 44 39.2	0.0
RUSC				S	Sn	20 44 57.8	-1.0
PTBC	PUERTO BERRIO,	1.35	258	P	Pn	20 44 41.9	-0.4
PTBC				S	Sn	20 45 03.7	-0.7
OCAC	Ocana	1.41	352	P	Pn	20 44 43.5	+0.5
OCAC				S	Sn	20 45 06.0	+0.3
SPBC	San Pablo de B	1.51	219	P	Pn	20 44 44.2	+0.3
SPBC				S	Sn	20 45 06.5	-0.8
NORC	Norcasia	2.15	234	P	Pn	20 44 51.2	+0.3
NORC				S	Sn	20 45 18.4	-1.4
CHIC	Chingaza	2.27	195	P	Pn	20 44 52.9	+0.1
CHIC				S	Sn	20 45 22.7	-0.4
ROSC	El Rosal	2.31	211	P	Pn	20 44 54.6	+1.3
	349nm,0.3s,baz=49,slow=6.6,SNR=96						
ROSC				S	Sn	20 45 23.3	-0.5
	376nm,0.4s,baz=92,slow=19,SNR=12						
ROSC	El Rosal	2.31	211	P	Pn	20 44 54.8	+1.6
ROSC				S	Sn	20 45 24.2	+0.4
HELC	Santa Helena	2.47	255	P	Pn	20 44 55.4	+0.3
HELC				S	Sn	20 45 26.8	-0.4
UREC	San Jos de Ur	2.56	291	P	Pn	20 44 55.0	-0.8
UREC				S	Sn	20 45 26.2	-2.2
GUY2C	Guyana, Caldas	2.74	234	P	Pn	20 44 59.6	+1.1
GUY2C				S	Sn	20 45 32.9	-0.4
VILC	Villavicencio,	2.76	192	P	Pn	20 44 58.3	-0.2
VILC				S	Sn	20 45 33.8	+0.5
PTGC	Puerto Gaitan,	2.80	159	P	Pn	20 44 58.1	-0.7
NIZA	Niza - Manizal	2.93	233	P	Pn	20 45 00.2	-0.4
NIZA				S	Sn	20 45 39.1	+2.1
CBOC	Ciudad Bolivar	3.03	252	P	Pn	20 45 02.9	+1.1
CBOC				S	Sn	20 45 37.4	-1.7
DBBC	Dabeiba	3.07	274	P	Pn	20 45 02.8	+0.6
DBBC				S	Sn	20 45 38.3	-1.6
SDV	Santo Domingo	3.20	50	P	Pn	20 45 04.8	+0.9
	18nm,0.3s,baz=222,slow=8.4,SNR=26						
SDV				S	Sn	20 45 42.1	-1.0
	52nm,0.4s,baz=242,slow=20,SNR=23						
SDV	Santo Domingo	3.20	50	P	Pn	20 45 04.7	+0.7
SDV				S	Sn	20 45 40.8	-2.3
ARGC	Ariguani, Magd	3.20	340	P	Pn	20 45 05.2	+1.4
ARGC				S	Sn	20 45 42.9	0.0
PRAC	Prado	3.56	210	P	Pn	20 45 08.4	-0.1
ORTC	Ortega, Tolima	3.59	216	P	Pn	20 45 08.9	0.0
SJCC	San Jacinto, C	3.66	326	P	Pn	20 45 09.2	-0.5
PLMC	San Jos del P	3.68	239	P	Pn	20 45 10.4	+0.4
URMC	La Uribe, Meta	3.78	199	P	Pn	20 45 11.3	0.0
LCBC	Los crdobas,	3.79	302	P	Pn	20 45 10.8	-0.5
YOTC	Yotoco, Valle	4.28	229	P	Pn	20 45 17.4	-0.4
SMRC	Santa Marta, M	4.44	346	P	Pn	20 45 20.7	+0.9
CAPC	Capurgana	4.55	293	P	Pn	20 45 20.1	-1.2
PTAC	Punta Ardita,	4.66	274	P	Pn	20 45 22.6	-0.1
MACC	Macarena, Meta	4.71	189	P	Pn	20 45 22.8	-0.6
BETC	Betania	4.73	209	P	Pn	20 45 23.4	-0.2
URIC	Uribia, Colomb	4.96	13	P	Pn	20 45 25.5	-1.2
	0.2nm1µm45nm,0.6s						
JAMC	Jamundi, Valle	5.04	225	P	Pn	20 45 28.3	+0.4
	0.1nm736nm22nm,0.5s						
GARC	Garzon, Huila	5.19	207	P	Pn	20 45 29.1	-0.8
	0.3nm3µm50nm,0.6s						
POPC	Popayan, Colom	5.54	220	P	Pn	20 45 34.8	+0.2
	18nm,0.6s						
FLOC	Florencia	5.79	206	P	Pn	20 45 37.4	-0.3
	45nm,1.1s						
BBAC	Balboa, Cauca	6.30	221	P	Pn	20 45 45.8	+1.1
	793nm23nm,0.6s						
BCIP	Isla Barro Col	7.04	290	P	Pn	20 45 53.1	-1.1
LPAZ	La Paz	23.50	168	P	P	20 49 09.0	-0.9
	0.6nm,0.4s,baz=352,slow=11,SNR=4.8						
	0.6nm,0.4s						
BDFB	Brasilia	33.43	132	P	P	20 50 37.1	-0.6
	2.7nm,0.6s,baz=314,slow=9.4,SNR=5.4						
	2.7nm,0.6s						
TXAR	Lajitas Array	36.45	312	P	P	20 51 05.0	+1.5
	0.9nm,0.6s,baz=126,slow=9.1,SNR=15						
	0.9nm,0.6s						
PDAR	Pinedale Array	48.06	324	P	P	20 52 38.2	+0.8
	0.6nm,0.6s,baz=144,slow=7.9,SNR=1.4						
	0.6nm,0.6s						
NVAR	Mina Array Bea	51.47	315	P	P	20 53 04.7	+1.6
	0.3nm,0.5s,baz=80,slow=5.5,SNR=2.3						
	0.3nm,0.5s						
YKA	Yellowknife Ar	63.25	340	P	P	20 54 25.2	+0.3
	0.6nm,0.7s,baz=141,slow=5.8,SNR=8.8						
	0.6nm,0.7s						
MKAR	Makanchi Array	122.31	20	PKP	PKPdf	21 02 49.5	-0.6
	0.3nm,0.4s,baz=308,slow=1.4,SNR=5.8						
SONM	Songino Array	125.57	0	PKP	PKPdf	21 02 56.9	+0.5
	0.4nm,0.5s,baz=324,slow=0.6,SNR=3.7						
ASAR	Alice Springs	149.12	234	PKPbc	PKPbc	21 03 43.5	-0.6
	1.4nm,0.5s,baz=116,slow=3.6,SNR=7.7						
WRA	Warramunga Arr	150.34	241	PKPbc	PKPbc	21 03 46.0	-1.2
	1.1nm,0.4s,baz=108,slow=2.7,SNR=13						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	153.68	17	PKPbc	PKPbc	21 03 54.4	-0.3
	0.5nm,0.3s,baz=326,slow=2.4,SNR=5.0						

IDC 08 20:48:23.3±4.3, 8°.34S×128°.30E, h273^{km}±46^{km}, mb3.0/1, mbtmp3.6/5, Error ellipse: s-maj=53.9km s-min=18.5km az=51.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	4.93	248	P	Pn	20 49 38.9	-0.2
	18nm,0.5s,baz=276,slow=2.7,SNR=12						
BATI				S	S	20 50 40.3	+0.5
	12nm,0.3s,baz=120,slow=1.1,SNR=4.4						
FITZ	Fitzroy Crossi	10.04	195	P	Pn	20 50 43.3	+1.2
	1.9nm,0.8s,baz=5.6,slow=9.7,SNR=9.8						
FITZ				S	S	20 52 33.7	-1.4
	2.4nm,0.6s,baz=102,slow=12,SNR=4.1						
WRA	Warramunga Arr	12.93	154	P	Pn	20 51 16.9	-0.9
	0.8nm,0.3s,baz=329,slow=14,SNR=19						
WRA				S	S	20 53 36.7	-4.8
	1.5nm,0.4s,baz=330,slow=23,SNR=8.1						
ASAR	Alice Springs	16.16	161	P	Pn	20 51 56.6	+0.1
	0.2nm,0.4s,baz=340,slow=10,SNR=12						
ASAR				S	S	20 54 53.2	+3.0
	0.3nm,0.5s,baz=318,slow=16,SNR=3.1						
MKAR	Makanchi Array	68.44	328	P	P	20 58 55.8	-0.3
	0.4nm,0.5s,baz=120,slow=7.8,SNR=5.3 0.4nm,0.5s						

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*IDC **08** 20:52:02.9±1.4, 8°.45S×116°.61E, h0^{km}, mb3.6/6, mbtmp3.8/9, ML4.1/3, Error ellipse: s-maj=46.6km s-min=18.0km az=53.0*

*DJA **08** 20:52:07.3±0.2, 8°S±2°×11°7E±°, h10^{km}, M4.2/23, mb4.3/5, MLv4.1/23*

ISC 08 20:52:07.4±1.1**, 8°.44S**±0°.06×**116°.89E**±0°.04**, h24**^{km}±9^{km}**, n36, σ1^{s}.79**/47**, mb3.6**/5**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWSI	Taliwang, Sumb	0.29	182	P	Pb	20 52 13.5	-0.8
TWSI				S	Sb	20 52 17.8	-1.2
KLNI	Mataram	0.79	271	P	Pb	20 52 21.7	-0.8
PLAI	Plampang	0.96	114	P	Pn	20 52 24.6	-0.8
PLAI				S	Sb	20 52 37.4	-0.2
KHKI	Kahang-Kahang	1.27	273	P	Pb	20 52 31.1	+0.4
KHKI				S	Sb	20 52 48.6	+1.9
DBNI	Kabupaten Domp	1.41	93	P	Pn	20 52 32.2	+0.6
DBNI				S	Sn	20 52 51.4	+2.0
DNP	Denpasar	1.68	262	P	Pb	20 52 37.9	+0.2
IGBI	Denpasar	1.77	258	P	Pb	20 52 38.1	-1.0
IGBI				S	Sb	20 53 01.7	+0.8
RTBI	Rangdo, Negare	1.93	269	P	Pb	20 52 40.6	-1.3
ABJI	Asem Bagus	2.71	284	P	Pn	20 52 51.5	+2.0
ABJI				S	Sb	20 53 25.3	-2.7
JAGI	Jajag, Banyuwa	2.71	269	P	Pn	20 52 50.7	+1.2
WBSI	Waikabubak, Su	2.74	116	P	Pn	20 52 51.6	+1.6
LBFI	Labuhan Bajo,	2.97	91	P	Pn	20 52 54.4	+1.4
KMMI	Kalianget	3.21	295	P	Pn	20 52 59.1	+2.7
KMMI				S	Sb	20 53 38.7	-3.8
BLJI	Banyuglugur	3.34	282	P	Pn	20 53 00.5	+2.4
GMJI	Gumukmas	3.42	273	P	Pn	20 53 00.7	+1.5
WSI	Waingapu	3.58	110	P	Pn	20 53 02.5	+1.0
BASI	Baing, Sumba	4.04	116	P	Pn	20 53 09.4	+1.5
MKS	Makassar	4.10	39	P	Pn	20 53 10.0	+1.4
KAPI	Kappang	4.43	40	Pn	Pn	20 53 13.7	+0.5
	4.9nm,0.3s,baz=198,slow=5.5,SNR=28						
KAPI				Sn	Sn	20 54 04.7	+0.6
	20nm,0.3s,baz=62,slow=20,SNR=21 18nm,0.2s						
KAPI	Kappang	4.43	40	P	Pn	20 53 13.5	+0.3
BKSI	Bulukumba	4.46	46	P	Pn	20 53 14.1	+0.5
EDFI	Ende, Flores	4.76	94	P	Pn	20 53 20.0	+2.2
SJI	Sawahan	5.12	278	P	Pn	20 53 24.8	+2.0
	0.2nm16nm,0.6s						
SNJI	Sawahan-Nganju	5.12	277	P	Pn	20 53 25.4	+2.5
BNSI	Bone	5.13	39	P	Pn	20 53 24.7	+1.9
SPSI	Sidrap Palu	5.29	33	P	Pn	20 53 25.9	+0.9
PCJI	Pacitan	5.66	272	P	Pn	20 53 31.7	+1.6
UGM	Wanagama	6.33	274	P	Pn	20 53 40.5	+1.2
BATI	Baumata	6.91	105	Pn	Pn	20 53 48.8	+1.5
	11nm,0.3s,baz=127,slow=0.8,SNR=11						
BATI				Sn	Sn	20 55 05.0	-0.3
	baz=132,slow=19 15nm,0.4s						
FITZ	Fitzroy Crossi	12.83	139	Pn	Pn	20 55 09.0	+0.7
	0.5nm,0.3s,baz=322,slow=13,SNR=3.5						
FITZ				Sn	Sn	20 57 22.4	-8.1
	0.5nm,0.3s,baz=188,slow=20,SNR=7.2 4.1nm,0.8s						
WRA	Warramunga Arr	20.39	126	P	P	20 56 43.7	+1.0
	1.9nm,0.5s,baz=301,slow=12,SNR=9.0						
WRA				S	S	21 00 25.3	-5.0
	0.7nm,0.7s,baz=298,slow=24,SNR=4.6 1.9nm,0.5s						
ASAR	Alice Springs	22.24	135	P	P	20 57 03.5	+0.8
	1.3nm,0.6s,baz=314,slow=9.1,SNR=12						
ASAR				S	S	21 01 04.5	-2.0
	1.0nm,0.9s,baz=310,slow=22,SNR=5.7 1.3nm,0.6s						
STKA	Stephens Creek	32.72	139	P	P	20 58 39.4	+1.0
	1.8nm,0.6s,baz=308,slow=11,SNR=3.3 1.8nm,0.6s						
SONM	Songino Array	56.80	352	P	P	21 01 50.4	+0.6
	0.6nm,0.8s,baz=166,slow=9.6,SNR=4.2 0.6nm,0.8s						
MKAR	Makanchi Array	63.03	334	P	P	21 02 30.7	-1.9
	0.3nm,0.6s,baz=143,slow=6.8,SNR=4.2 0.3nm,0.6s						
KURBB	Kurchatov Arra	67.56	335	P	P	21 02 59.1	-2.7
	0.1nm,0.4s,baz=152,slow=6.8,SNR=1.6 0.1nm,0.4s						

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*NOU **08** 20:55:36.6, 21°.31S×168°.53E, h0^{km}, MLv5.0/13, Loyalty Islands*

*IDC **08** 20:55:37.0±0.8, 21°.40S×168°.48E, h0^{km}, mb4.3/11, mbtmp4.3/12, ML4.4/1, MS3.4/10, Error ellipse: s-maj=23.6km s-min=20.5km az=123.0*

*NEIC **08** 20:55:38.8±2.3, 21°.5S±0°.1×168°.34E±0°.03, h10^{km}±1^{km}, mb4.4/16, Error ellipse: s-maj=20.2km s-min=5.4km az=178.0*

ISC 08 20:55:39.4±0.6**, 21°.36S**±0°.07×**168°.47E**±0°.07**, h20**^{km}**, n70, σ1^{s}.05**/61**, mb4.5**/19**, MS3.3**/9**, 4D, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	0.43	253		Pb	20 55 48.1	-0.2
MARNC	Mare, Loyalty	0.43	253	P	Pb	20 55 47.9	-0.4
MARNC	Mare, Loyalty	0.43	253	S	Sb	20 55 54.8	+0.4
PINNC	Pines Island,	1.57	217		Pn	20 56 05.2	-1.0
PINNC	Pines Island,	1.57	217	P	Pn	20 56 05.7	-0.5
YATNC	Mamie plateau,	1.63	244	P	Pn	20 56 05.1	-1.9
OUENC	Ouen Island, N	1.85	235	P	Pn	20 56 10.0	0.0
INH	Isangel	1.95	23	P	Pn	20 56 10.4	-1.0
DZM	Mont Dzumac	2.02	249	Pn	Pn	20 56 13.2	+0.8
	141nm,0.3s,baz=81,slow=19,SNR=242						
DZM				LR	LR	20 56 37.4	
	comp=Z,423nm,20.7s,baz=356,slow=30 610nm,0.4s						
DZM	Mont Dzumac	2.02	249		Pn	20 56 12.6	+0.2
DZM	Mont Dzumac	2.02	249	P	Pn	20 56 12.3	-0.1
ONTNC	Ouen Toro	2.10	243		Pn	20 56 13.5	+0.1
ONTNC	Ouen Toro	2.10	243	P	Pn	20 56 13.6	+0.1
KOUNC	Koumac, New Ca	4.00	281	P	Pn	20 56 39.8	+0.3
RAO	Raoul Island	14.59	125	LR	LR	21 02 32.6	
	comp=Z,73nm,21.9s,baz=142,slow=28						
EIDS	Eidsvold	16.46	253	P	P	20 59 31.5	-0.4
ARMA	Armidale	17.62	236	P	P	20 59 47.9	+3.0
ARMA				IAmb	IAmb	21 00 28.1	
	comp=Z,18nm,1.2s						
MSWZ	Moikau Station	20.80	166	P	P	21 00 18.7	-0.8
CTA	Charters Tower	20.82	269	LR	LR	21 07 59.8	
	comp=Z,4.5nm,18.1s,baz=56,slow=36						
COEN	Coen	25.18	283	P	P	21 01 02.3	-1.5
COEN				IAmb	IAmb	21 01 35.9	
	comp=Z,22nm,1.3s						
STKA	Stephens Creek	26.15	241	P	P	21 01 13.2	+0.7
	comp=Z,3.6nm,0.8s,baz=73,slow=12,SNR=4.4						
STKA				LR	LR	21 11 05.1	
	comp=Z,74nm,18.2s,baz=27,slow=36 comp=Z,3.6nm,0.8s						
STKA	Stephens Creek	26.15	241	P	P	21 01 11.8	-0.7
RAR	Rarotonga	29.56	96	LR	LR	21 11 17.5	
	comp=Z,28nm,20.9s,baz=290,slow=32						
WB0	Warramunga Arr	31.91	267	P	P	21 02 02.7	-1.2
WB0				IAmb	IAmb	21 02 36.4	
	comp=Z,6.5nm,1.1s						
WRAB	Tennant Creek	31.93	266	P	P	21 02 01.4	-2.7
WRAB				IAmb	IAmb	21 02 42.4	
	comp=Z,5.2nm,1.1s						
WRA	Warramunga Arr	31.94	266	P	P	21 02 03.5	-0.6
	comp=Z,1.3nm,0.7s,baz=104,slow=8.2,SNR=6.0						
WRA				PcP	PcP	21 04 54.3	0.0
	comp=Z,0.5nm,0.6s,baz=99,slow=2.4,SNR=2.3 comp=Z,1.3nm,0.7s						
WRA	Warramunga Arr	31.94	266		P	21 02 01.9	-2.2
AS31	Alice Springs	31.97	259	P	P	21 02 04.3	-0.1
AS31				IAmb	IAmb	21 02 12.9	
	comp=Z,3.0nm,0.7s						
ASAR	Alice Springs	31.97	259	P	P	21 02 04.3	-0.1
	comp=Z,3.3nm,0.7s,baz=96,slow=9.5,SNR=27						
ASAR				LR	LR	21 14 56.7	
	comp=Z,60nm,18.4s,baz=94,slow=36 comp=Z,3.3nm,0.7s						
ASAR	Alice Springs	31.97	259	P	P	21 02 02.0	-2.5
MTN	Manton Dam	36.60	277	P	P	21 02 43.7	-0.9
KNRA	Kununurra	38.00	272	P	P	21 02 54.8	-1.7
KNRA				IAmb	IAmb	21 03 03.9	
	comp=Z,12nm,0.9s						
FITZ	Fitzroy Crossi	40.36	267	P	P	21 03 16.8	+0.7
	comp=Z,10nm,0.6s,baz=121,slow=7.9,SNR=24 comp=Z,10nm,0.6s						
FITZ	Fitzroy Crossi	40.36	267		P	21 03 16.2	+0.1
BATI	Baumata	44.38	277	LR	LR	21 20 42.5	
	comp=Z,39nm,21.9s,baz=124,slow=34						
PSA00	Pilbara Seismi	45.10	260	P	P	21 03 52.6	-2.0
MBWA	Marble Bar	45.28	261	P	P	21 03 55.8	-0.2
TOLI2	Tolitoli	51.66	289	P	P	21 04 44.4	-0.9
TOLI2				IAmb	IAmb	21 04 46.7	
	comp=Z,13nm,1.3s						
VNDA	Vanda	56.30	182	P	P	21 05 18.8	+0.5
	comp=Z,1.6nm,1.0s,baz=356,slow=3.5,SNR=2.9						
VNDA				LR	LR	21 25 48.3	
	comp=Z,20nm,20.8s,baz=323,slow=32 comp=Z,1.6nm,1.0s						
VNDA	Vanda	56.30	182	P	P	21 05 17.7	-0.6
VNDA				IAmb	IAmb	21 05 19.9	
	comp=Z,3.3nm,1.1s						
QSPA	South Pole Qui	68.71	180	P	P	21 06 42.9	+1.4
	comp=Z,2.7nm,0.3s,baz=36,slow=2.2,SNR=13 comp=Z,2.7nm,0.3s						
PETK	Petropavlovsk-	74.74	353	P	P	21 07 19.2	+1.6
	comp=Z,4.1nm,0.8s,baz=134,slow=8.5,SNR=4.3 comp=Z,4.1nm,0.8s						
CMAR	Chiang Mai Arr	78.73	295	P	P	21 07 43.1	+2.2
	comp=Z,2.4nm,0.7s,baz=134,slow=4.4,SNR=19 comp=Z,2.4nm,0.7s						
CMAR	Chiang Mai Arr	78.73	295	P	P	21 07 39.6	-1.3
TROLL	Troll, Antarti	86.38	184	⇓P	P	21 08 20.4	+0.3
	comp=Z,430nm,0.6s						
SNAA	Sanae	87.02	183	⇓P	P	21 08 23.1	-0.1
	comp=Z,63nm,0.6s						
SNAA	Sanae	87.02	183	P	P	21 08 23.0	-0.1
	comp=Z,3.8nm,0.8s,baz=205,slow=6.4,SNR=14 comp=Z,3.8nm,0.8s						
VNA3	Neumayer Olymp	87.64	181	⇓P	P	21 08 25.7	-0.4
	comp=Z,4.5nm,0.6s						
VNA2	Neumayer--Watz	87.92	181	⇓P	P	21 08 27.3	-0.1
	comp=Z,7.2nm,0.6s,baz=178,slow=4.6						
SONM	Songino Array	88.48	323	P	P	21 08 31.2	+0.7
	comp=Z,1.1nm,0.8s,baz=158,slow=4.9,SNR=8.0 comp=Z,1.1nm,0.8s						
SONM	Songino Array	88.48	323	P	P	21 08 31.5	+1.0
PALK	Pallekele	90.55	278	LR	LR	21 52 29.8	
	comp=Z,40nm,18.1s,baz=224,slow=38						
LPIG	La Paz	90.97	65	LR	LR	21 39 43.6	
	comp=Z,35nm,19.7s,baz=26,slow=29						
ILAR	Eielson Array	92.46	18	P	P	21 08 48.1	-0.3
	comp=Z,0.4nm,0.8s,baz=219,slow=7.0,SNR=2.5 comp=Z,0.4nm,0.8s						
ELK	Elko	93.87	48	LR	LR	21 46 35.4	
	comp=Z,36nm,18.8s,baz=18,slow=33						
H03S2	Juan Fernandez	95.59	129	T	T	22 55 14.3	
	baz=238,slow=74,SNR=5.0						
H03S1	Juan Fernandez	95.61	129	T	T	22 55 15.8	
	baz=238,slow=74,SNR=5.3						
H03S3	Juan Fernandez	95.61	129	T	T	22 55 14.7	
	baz=238,slow=74,SNR=6.9						
ARCES	ARCESS Array B	126.92	345	PKP	PKiKP	21 14 41.8	+0.2
	comp=Z,4.1nm,1.0s,baz=64,slow=2.1,SNR=4.6						
RONA	Rosalia, Austr	145.47	326	*e*PKP	PKPab	21 15 16.7	+0.4
	comp=Z,1.0nm,0.5s						
EKA	Eskdalemuir Ar	145.50	352	PKPbc	PKPab	21 15 16.4	+0.3
	comp=Z,3.7nm,0.5s,baz=352,slow=2.3,SNR=13						
CONA	Conrad Observa	145.55	327	*e*PKP	PKPab	21 15 17.8	+1.1
	comp=Z,1.4nm,0.6s						
GERES	GERESS Array B	145.98	330	PKPbc	PKPab	21 15 18.4	+0.1
	comp=Z,1.5nm,0.6s,baz=44,slow=4.1,SNR=12						
KBA	Koelnbreinsper	147.38	328	*i* PKP	PKPbc	21 15 22.1	+0.1
	comp=Z,0.3nm,0.3s						
LESA	Schwarzleotal	147.47	329	*i* PKP	PKPbc	21 15 22.2	+0.1
	comp=Z,0.8nm,0.4s						
ABTA	Abfaltersbach	148.03	328	*e*PKP	PKPbc	21 15 23.7	+0.1
	comp=Z,1.2nm,0.5s						
MOTA	Moosalm	148.27	330	*i* PKP	PKPbc	21 15 24.7	+0.3
	comp=Z,1.3nm,0.5s						
SQTA	Sankt Quirin	148.31	330	*i* PKP	PKPbc	21 15 24.9	+0.5
	comp=Z,0.9nm,0.4s						
FETA	Feichten	148.68	330	*i* PKP	PKPbc	21 15 25.7	+0.3
	comp=Z,1.4nm,0.6s						
DAVOX	Davos/Dischmat	149.25	331	PKPbc	PKiKP	21 15 27.8	-0.3
	comp=Z,3.1nm,0.5s,baz=211,slow=2.7,SNR=15						

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*NNC **08** 21:02:29.5±0.9, 42°.70N×70°.11E, h0^{km}, mb2.9, mpv2.7, Error ellipse: s-maj=8.0km s-min=5.2km az=132.0*

*SOME **08** 21:02:30.4, 42°.67N×70°.20E, h10^{km}*

*KRNET **08** 21:02:30.6±0.1, 42°.64N×70°.25E, h13^{km}, mb2.5*

ISC 08 21:02:30.0±1.0**, 42°.69N**±0°.02×**70°.16E**±0°.03**, h10**^{km}±10^{km}**, n27, σ1^{s}.21**/53**, 12C-7D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRLS	Borolday	0.42	326	*e*P	Pg	21 02 37.9	-0.3
BRLS				*e*S	Sg	21 02 43.1	-0.7
BRLS	Borolday	0.42	326	P	Pg	21 02 37.9	-0.3
	16nm,0.1s						
BRLS				S	Sg	21 02 43.1	-0.7
	21nm,0.2s						
BRLS	Borolday	0.42	326	*e*P	Pg	21 02 37.9	-0.3
	18nm,0.1s						
BRLS				*e*S	Sg	21 02 43.1	-0.7
	20nm,0.1s						
KK07	Karatay Array	0.48	32	P	Pg	21 02 39.7	+0.4
KK07				S	Sg	21 02 46.2	+0.6
KK08	Karatay Array	0.48	30	P	Pg	21 02 39.9	+0.4
KK08				S	Sg	21 02 46.5	+0.6
KK03	Karatay Array	0.49	31	P	Pg	21 02 39.8	+0.2
KK03				S	Sg	21 02 46.3	+0.3
KK06	Karatay Array	0.49	34	P	Pg	21 02 39.9	+0.3
KK06				S	Sg	21 02 46.5	+0.4
KK01	Karatay Array	0.49	31	P	Pg	21 02 40.0	+0.4
KK01				S	Sg	21 02 46.6	+0.5
KK02	Karatay Array	0.49	32	P	Pg	21 02 40.1	+0.5
KK02				S	Sg	21 02 46.9	+0.7
KK31	Karatay Array	0.49	32	⇑P	Pg	21 02 39.8	+0.1
	0.6nm,0.1s,baz=212,slow=16,SNR=103						
KK31				⇓S	Sg	21 02 46.7	+0.5
	3.6nm,0.2s,baz=212,slow=31,SNR=29						
KK04	Karatay Array	0.50	31	P	Pg	21 02 40.1	+0.4
KK04				S	Sg	21 02 46.7	+0.5
KK09	Karatay Array	0.50	30	P	Pg	21 02 40.1	+0.3
KK09				S	Sg	21 02 47.1	+0.6
KK05	Karatay Array	0.51	32	P	Pg	21 02 40.4	+0.4
KK05				S	Sg	21 02 47.2	+0.5
IUG	Iuzhnay	0.55	190	*e*P	Pg	21 02 40.8	+0.2
IUG				*e*S	Sg	21 02 48.2	+0.3
IUG	Iuzhnay	0.55	190	P	Pg	21 02 40.5	-0.1
	7.8nm,0.2s						
IUG				S	Sg	21 02 47.7	-0.1
	21nm,0.2s						
CHM	Chimkent	0.55	228	*e*P	Pg	21 02 41.2	+0.5
	6.9nm,0.1s						
CHM				*e*S	Sg	21 02 48.9	+1.0
	27nm,0.1s						
TRKS	Terek-Say	1.37	147	⇓*i*P	Pg	21 02 56.0	-0.3
TRKS				⇓*i*S	Sg	21 03 14.5	+0.5
ARK	Arkit	1.61	123	⇑*e*P	Pb	21 02 59.1	-0.8
ARK				⇑*i*S	Sb	21 03 19.6	-0.7
MNAS	Manas	1.75	96	⇑*i*P	Pb	21 03 01.6	-0.6
MNAS				⇑*i*S	Sb	21 03 24.1	-0.2
MRKS	Merke	2.26	87	Pg	Pb	21 03 11.1	0.0
	3.5nm,1.1s						
MRKS				Lg	Lg	21 03 40.6	
	5.2nm,0.5s						
MRKS	Merke	2.26	87	*e*P	Pb	21 03 11.1	0.0
	0.4nm,0.1s						
MRKS				*e*S	Sg	21 03 40.6	-2.2
	4.6nm,0.3s						
ARSB	Arslanbob	2.51	122	⇑*i*P	Pb	21 03 13.0	-2.2
ARSB				⇑*i*S	Sb	21 03 43.7	-2.5
EKS2	Erkin-Say	2.67	89	⇑*e*P	Pn	21 03 15.4	+2.2
EKS2				⇑*i*S	Sb	21 03 47.8	-3.1
AAK	Ala-Archa	3.20	89	P	Pn	21 03 18.9	-1.6
AAK				⇑S	Sn	21 03 56.2	-2.7
	0.2nm,0.5s						
ARLS	Aral	3.20	104	⇓*i*P	Pn	21 03 22.7	+2.2
ARLS				⇓*i*S	Sn	21 04 00.6	+1.8
UCH	Uchtor	3.26	97	⇑*i*P	Pn	21 03 23.7	+2.1
UCH				⇑*i*S	Sn	21 04 02.3	+1.7
SALK	Salom-Alik	3.28	122	⇓*e*P	Pn	21 03 23.7	+2.1
SALK				⇓*e*S	Sn	21 04 02.5	+1.7

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*NEIC **08** 21:04:36.5±1.7, 43°.55N±0°.08×105°.15W±0°.09, h0^{km}±1^{km}, ML3.2/46, Error ellipse: s-maj=14.1km s-min=9.9km az=28.0*

*IDC **08** 21:04:39.8±1.3, 43°.52N×105°.22W, h0^{km}, mbtmp3.1/3, ML2.5/2, Error ellipse: s-maj=21.5km s-min=10.7km az=155.0*

ISC 08 21:04:38.1±1.1**, 43°.57N**±0°.06×**105°.15W**±0°.06**, h0**^{km}**, n27, σ1^{s}.10**/27**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.98	55	Pg	Pn	21 04 58.8	-0.5
K22A	Casper	1.36	228	Pn	Pg	21 05 04.3	+0.2
K22A				IAML		21 05 28.8	
	277nm,0.3s						
BW06	Boulder Array	3.32	258	Pn	Pn	21 05 32.6	+1.1
PD31	Pinedale Array	3.32	258	Pn	Pn	21 05 32.3	+0.7
PDAR	Pinedale Array	3.32	258	Pn	Pb	21 05 36.0	-2.0
	4.4nm,0.3s,baz=84,slow=15,SNR=28						
PDAR				Lg	Lg	21 06 21.1	
	2.2nm,0.3s,baz=80,slow=24,SNR=5.9						
PDAR	Pinedale Array	3.32	258	Pn	Pn	21 05 30.7	-0.8
RLMT	Red Lodge	3.34	299	Pn	Pn	21 05 32.5	+0.8
RLMT				IAML		21 06 49.4	
	36nm,1.2s						
RLMT				IAML		21 07 29.4	
	44nm,4.3s						
HAYD	Hayden	3.43	208	Pn	Pn	21 05 32.3	-0.7
HAYD				IAML		21 06 39.3	
	comp=E,33nm,1.5s						
HAYD				IAML		21 06 43.9	
	comp=N,39nm,1.5s						
OGNE	Ogallala	3.50	138	Pn	Pn	21 05 33.3	-0.4
YNE	Yellowstone No	3.77	294	Pn	Pn	21 05 37.5	-0.3
YNE				IAML		21 06 48.3	
	comp=N,38nm,0.7s						
YNE				IAML		21 06 49.3	
	comp=E,34nm,0.9s						
ISCO	Idaho Springs	3.78	185	Pn	Pn	21 05 38.0	+0.1
ISCO				IAML		21 07 50.5	
	comp=E,37nm,3.9s						
ISCO				IAML		21 07 51.7	
	comp=E,35nm,3.6s						
YMP	Mirror Lake Pl	3.79	290	Pn	Pn	21 05 38.1	+0.2
LKWY	Lake	3.91	287	Pn	Pn	21 05 39.4	-0.3
LKWY				IAML		21 06 59.6	
	comp=E,46nm,3.0s						
LKWY				IAML		21 07 56.4	
	comp=E,49nm,1.1s						
LOHW	Long Hollow	3.96	273	Pn	Pn	21 05 38.9	-1.4
LOHW				IAML		21 06 48.3	
	comp=E,22nm,1.1s						
LOHW				IAML		21 07 14.4	
	comp=E,18nm,2.4s						
MOOW	Moose Ponds	4.06	274	Pn	Pn	21 05 42.9	+1.2
SNOW	Snow King Moun	4.08	270	Pn	Pn	21 05 40.5	-1.4
SNOW				IAML		21 07 04.7	
	comp=E,47nm,2.9s						
O20A	White River Ci	4.13	215	Pn	Pn	21 05 42.1	-0.5
YPP	Pitchstone Pla	4.14	282	Pn	Pn	21 05 42.7	-0.2
YPP				IAML		21 06 55.5	
	comp=E,21nm,3.3s						
YPP				IAML		21 08 09.4	
	comp=N,28nm,4.7s						
FXWY	Fox Creek	4.27	273	Pn	Pn	21 05 46.7	+2.2
BOZ	Bozeman (W)	5.05	296	Pn	Pn	21 05 56.1	+0.9
BOZ				IAML		21 07 28.7	
	comp=N,16nm,3.7s						
BOZ				IAML		21 09 05.6	
	comp=N,18nm,4.0s						
TCUT	Toone Canyon	5.24	244	Pn	Pn	21 05 60.0	+2.1
PV21	Cone Mtn., Par	5.78	211	Pn	Pn	21 06 05.7	+0.4
P17A	Butcher Ranch,	5.86	228	Pn	Pn	21 06 05.5	-0.8
PV02	Paradox Valley	6.00	208	Pn	Pn	21 06 08.4	0.0
LYMT	Lyon Mountain	6.08	307	Pn	Pn	21 06 09.4	0.0
ULM	Lac du Bonnet	9.21	40	Pn	Pn	21 06 51.9	-0.3
	comp=N,0.5nm,0.3s,baz=231,slow=13,SNR=2.0						
ULM				Lg	Lg	21 09 27.7	
	comp=N,0.4nm,0.3s,baz=296,slow=17,SNR=1.6 comp=N,1.4nm,0.3s						
TXAR	Lajitas Array	14.26	175	Pn	Pn	21 08 03.2	+1.9
	baz=359,slow=31,SNR=1.7						
TXAR				Lg	Lg	21 12 02.8	
	baz=359,slow=23,SNR=2.0						

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*AFAD **08** 21:09:04.9, 35°.56N×31°.10E, h37^{km}±1^{km}, MW3.7*

*ISK **08** 21:09:05.8, 35°.67N×31°.11E, h8^{km}, ML3.5/45*

*NIC **08** 21:09:06.0, 35°.61N×31°.06E, h6^{km}±3^{km}, Ml3.3/8*

*IDC **08** 21:09:06.9±1.0, 35°.65N×31°.07E, h46^{km}±15^{km}, mb3.7/11, mbtmp3.9/19, ML3.4/6, MS2.5/1, Error ellipse: s-maj=12.4km s-min=8.8km az=23.0*

*GII **08** 21:09:07.9±0.0, 35°.58N×31°.05E, h40^{km}, Mws3.2, confirmed*

*HLW **08** 21:09:07.5, 35°.62N×31°.05E, h21^{km}±4^{km}, Ml3.5*

*GRAL **08** 21:09:07.9±0.3, 35°.64N×31°.26E, h0^{km}±294^{km}, MD3.9*

ISC 08 21:09:08.2±0.8**, 35°.62N**±0°.03×**31°.04E**±0°.02**, h59**^{km}±10^{km}**, n193, σ1^{s}.38**/249**, mb3.8**/10**, 1C-1D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUM	Antalya-Kumluc	0.90	321	P	Pn	21 09 23.5	-1.4
AKUM				S	Sn	21 09 38.3	+1.1
KEMT	Kemer-ANTALYA	1.05	338	Pg	Pn	21 09 26.4	-0.6
DEMR	Demre-Antalya	1.11	304	Pn	Pn	21 09 27.9	+0.3
GAZI	Gazipasa	1.20	59	P	Pn	21 09 26.3	-2.7
GAZI				S	Sn	21 09 40.5	-3.8
GAZI	Gazipasa	1.20	59	Pn	Pn	21 09 27.5	-1.4
GAZI				Sn	Sn	21 09 43.3	-1.1
AKMS	Akamas	1.22	119	P	Pn	21 09 28.4	-0.8
AKMS				S	Sn	21 09 47.8	+3.0
AKMS				AML	AML	21 09 51.0	
	2.3nm,0.3s						
AKMS				AML	AML	21 09 51.9	
	3.1nm,0.5s						
ANTB	Antalya	1.31	346	Pn	Pn	21 09 30.5	+0.1
AKAS	Kas	1.31	298	Pn	Pn	21 09 31.1	+0.6
ALFC	Alefka	1.35	110	⇑*i*P	Pn	21 09 29.4	-1.5
ALFC				S	Sn	21 09 49.2	+1.2
ALFC				AML	AML	21 09 56.0	
	2.2nm,0.5s						
ALFC				AML	AML	21 09 57.4	
	2.0nm,0.4s						
ELL	Elmali	1.45	321	Pn	Pn	21 09 32.6	+0.3
ELL	Elmali	1.45	321	P	Pn	21 09 32.6	+0.3
ELL				S	Sn	21 09 54.5	+4.1
KORT	Korkueli	1.48	338	P	Pn	21 09 32.7	-0.1
KORT				S	Sn	21 09 53.6	+2.3
KORT	Korkueli	1.48	338	Pn	Pn	21 09 33.3	+0.5
KORT				Sn	Sn	21 09 52.8	+1.5
NATA	Nata	1.51	123	⇓*i*P	Pn	21 09 33.6	+0.5
NATA				S	Sn	21 09 54.5	+2.8
NATA				AML	AML	21 10 05.7	
	4.4nm,0.5s						
NATA				AML	AML	21 10 11.3	
	4.2nm,0.6s						

TROD	Troodos	1.64	114	P	Pn	21 09 34.6	-0.4
TROD				S	Sn	21 09 57.9	+2.8
TROD				AML	AML	21 10 15.1	
	0.8nm,0.7s						
TROD				AML	AML	21 10 17.3	
	1.0nm,1.0s						
BOZY	Bozyazi-Mersin	1.64	72	Pn	Pn	21 09 34.9	+0.1
BOZY				Sn	Sn	21 09 55.0	+0.1
IZZE	Mula-Seydike	1.68	299	P	Pn	21 09 35.3	0.0
IZZE				S	Sn	21 09 54.6	-1.3
KNIK	Mula-Seydike	1.70	316	P	Pn	21 09 35.9	+0.2
KNIK				S	Sn	21 09 57.5	+1.0
BUCA	Burdur, Bucak-	1.75	347	P	Pn	21 09 38.0	+1.7
BUCA				S	Sn	21 10 02.6	+5.1
TEKE	Tekeli-Mersin	1.76	72	Pn	Pn	21 09 35.9	-0.5
TEKE				Sn	Sn	21 09 58.5	+0.7
APOL	The Sanctuary	1.77	122	P	Pn	21 09 37.0	+0.5
APOL				S	Sn	21 09 58.0	0.0
APOL				AML	AML	21 10 17.3	
	0.7nm,0.4s						
APOL				AML	AML	21 10 22.1	
	0.9nm,0.9s						
HDMB	Hadim	1.78	41	Pn	Pn	21 09 36.8	0.0
BCK	Bucak	1.87	349	Pn	Pn	21 09 38.4	+0.4
FETY	Fethiye	1.88	303	P	Pn	21 09 32.9	-5.2
FETY				S	Sn	21 09 53.7	-7.0
SEYD	Seydisehir-KON	1.89	20	Pn	Pn	21 09 37.6	-0.7
BERE	Bereket-Mersin	1.91	67	Pn	Pn	21 09 38.5	-0.1
SEDI	Konya, Seydise	1.91	17	P	Pn	21 09 38.2	-0.4
SEDI				S	Sn	21 10 03.0	+1.3
CAME	Cameli-Denizli	1.93	314	Pn	Pn	21 09 39.4	+0.6
ATHAL	Athalassa	1.98	103	P	Pn	21 09 39.9	+0.5
CSS	Mathiatis	1.98	109	Pn	Pn	21 09 38.8	-0.7
CSS	Mathiatis	1.98	109	P	Pn	21 09 38.2	-1.3
CSS	Mathiatis	1.98	109	P	Pn	21 09 38.4	-1.1
CSS				S	Sn	21 10 01.6	-1.7
CSS				AML	AML	21 10 23.1	
	0.6nm,0.6s						
CSS				AML	AML	21 10 24.0	
	0.6nm,0.5s						
ASGA	Asgata	1.99	114	P	Pn	21 09 39.8	+0.2
ASGA				S	Sn	21 10 06.4	+3.0
ASGA				AML	AML	21 10 18.0	
	0.9nm,0.8s						
ASGA				AML	AML	21 10 21.7	
	0.8nm,0.6s						
YORU	Yoruktepe-Mers	1.99	74	Pn	Pn	21 09 40.0	+0.4
GOLH	Golhisar	2.00	324	P	Pn	21 09 40.8	+1.0
OREN	Orenkoy-Mersin	2.05	73	Pn	Pn	21 09 40.6	+0.3
LFK	Lefkose	2.06	99	Pn	Pn	21 09 40.3	-0.3
AKK1	Akkuyu-Mersin	2.10	75	Pn	Pn	21 09 41.4	+0.5
AKK2	Akkuyu-Mersin	2.10	75	Pn	Pn	21 09 41.2	+0.2
GULN	MERSIN_Gulnar	2.11	74	P	Pn	21 09 41.1	-0.1
GULN				S	Sn	21 10 05.2	-1.0
TEVE	Tevekalti-Mers	2.11	67	Pn	Pn	21 09 41.5	+0.3
TEPK	Tepekoy-MERSIN	2.12	73	Pn	Pn	21 09 41.7	+0.4
OSC1	CSNet OBS 1	2.13	175	P	Pn	21 09 42.2	+0.8
OSC1				S	Sn	21 10 08.7	+2.0
YESI	Yesilovacik-Me	2.19	74	Pn	Pn	21 09 42.5	+0.3
MVOU	Mavrovouni	2.20	105	P	Pn	21 09 40.8	-1.6
MVOU				S	Sn	21 10 05.5	-3.1
MVOU				AML	AML	21 10 23.1	
	0.7nm,0.5s						
MVOU				AML	AML	21 10 29.0	
	0.4nm,0.6s						
TISA	Tisan-Mersin	2.21	75	Pn	Pn	21 09 42.9	+0.4
KKBE	Karaman, Kazim	2.21	43	P	Pn	21 09 43.3	+0.6
KKBE				S	Sn	21 10 10.9	+2.0
BRDR	BURDUR-Merkez	2.21	339	P	Pn	21 09 42.6	-0.1
IKL	Isikli	2.23	73	Pn	Pn	21 09 43.5	+0.7
ISP	Isparta	2.23	349	Pn	Pn	21 09 43.6	+0.6
ISP	Isparta	2.23	349	P	Pn	21 09 43.5	+0.5
KARG	Kargicak-Mersi	2.24	74	Pn	Pn	21 09 43.6	+0.6
DALY	Dalyan (Mula)	2.27	302	Pn	Pn	21 09 43.5	+0.2
APMY	Acipayam-Deniz	2.32	323	Pn	Pn	21 09 44.9	+0.8
KEBE	Keben-Mersin	2.32	68	Pn	Pn	21 09 44.4	+0.3
DNZT	Denizli-Tavas-	2.32	316	P	Pn	21 09 44.4	+0.3
KRMN	Karaman	2.37	49	Pn	Pn	21 09 46.3	+1.5
BAGO	Egridir - ISPA	2.37	355	P	Pn	21 09 44.9	+0.1
BAGO				S	Sn	21 10 12.4	-0.4
INCE	Denizli-Bozkur	2.39	331	P	Pn	21 09 46.5	+1.4
INCE				S	Sn	21 10 16.2	+2.8
BASM	Basmaki-Afyon	2.43	341	Pn	Pn	21 09 46.5	+0.9
ARG	Arkhangelos	2.44	285	P	Pn	21 09 45.8	+0.2
ARG				S	Sn	21 10 13.1	-1.3
SILI	Silifke-Mersin	2.45	72	Pn	Pn	21 09 46.5	+0.7
SLFK	Silifke-Mersin	2.48	71	Pn	Pn	21 09 47.1	+0.9
DOGA	KONYA_Doganhis	2.53	11	P	Pn	21 09 47.4	+0.3
DOGA				S	Sn	21 10 15.7	-1.0
PARAL	Paralimni	2.53	103	P	Pn	21 09 50.2	+3.3
PARAL				S	Sn	21 10 27.8	+11
TURN	Turunc	2.54	298	P	Pn	21 09 47.3	+0.3
TURN				S	Sn	21 10 15.8	-0.9
KONT	Konya--Tatoy	2.55	24	P	Pn	21 09 47.4	+0.2
KONT				S	Sn	21 10 18.7	+1.6
KONT	Konya--Tatoy	2.55	24	Pn	Pn	21 09 47.8	+0.6
YVAC	Isparta, Yalva	2.65	3	P	Pn	21 09 49.1	+0.5
YVAC				S	Sn	21 10 19.4	-0.2
KIZK	Mersin	2.66	70	P	Pn	21 09 49.5	+0.9
KIZK				S	Sn	21 10 21.4	+1.8
KIZK	Mersin	2.66	70	Pn	Pn	21 09 49.4	+0.8
AFYN	Afyon-Dinar-K	2.68	351	P	Pn	21 09 49.8	+0.7
AFYN				S	Sn	21 10 22.5	+2.1
KZIL	AFYON_Kizioren	2.73	345	P	Pn	21 09 49.4	-0.3
OSC2	CSNet OBS 4	2.74	158	P	Pn	21 09 51.9	+2.2
OSC2				S	Sn	21 10 24.6	+3.0
LADK	Ladik-KONYA	2.78	22	Pn	Pn	21 09 51.1	+0.6
SDAG	Sultandagi-AFY	2.81	358	Pn	Pn	21 09 51.9	+1.0
SHUT	Suhut-Afyon	2.95	353	Pn	Pn	21 09 53.6	+0.8
PASA	Karahalli, USA	2.99	336	P	Pn	21 09 53.2	-0.1
PASA				S	Sn	21 10 26.2	-1.8
KDHN	Kadinhani	3.02	16	P	Pn	21 09 53.5	-0.2
KDHN				S	Sn	21 10 27.2	-1.5
UCKU	Afyonkarahisar	3.02	6	P	Pn	21 09 54.1	+0.3
UCKU				S	Sn	21 10 29.7	+0.9
ALIN	Konya, Altinte	3.05	28	P	Pn	21 09 54.4	+0.3
YESY	Yesilyurt	3.06	44	Pn	Pn	21 09 55.2	+1.0
KERG	Konya-Eregli	3.06	53	P	Pn	21 09 55.0	+0.7
KERG				S	Sn	21 10 32.0	+2.2
MERS	Mersin	3.08	65	Pn	Pn	21 09 55.1	+0.7
YAZI	Mula-Dat§a-	3.09	291	P	Pn	21 09 54.5	0.0
YAZI				S	Sn	21 10 28.2	-2.1
KARP	Karpathos	3.16	270	P	Pn	21 09 56.5	+0.9
KARP				S	Sn	21 10 32.5	+0.3
BLVD	Bolvadin-AFYON	3.17	1	Pn	Pn	21 09 56.8	+1.1
BNAZ	Uak-Banaz	3.19	343	P	Pn	21 09 56.9	+0.9
BNAZ				S	Sn	21 10 36.1	+3.2
BDRM	Kayabasi	3.24	297	P	Pn	21 09 56.7	0.0
BDRM				S	Sn	21 10 32.1	-1.9
SULT	Sultanhani-AKS	3.25	37	Pn	Pn	21 09 57.6	+0.8
CHBY	Cihanbeyli	3.30	26	Pn	Pn	21 09 58.3	+0.7
KIZT	Kizilcal	3.32	11	Pn	Pn	21 09 58.4	+0.6
USAK	Uak-Merkez	3.48	333	P	Pn	21 09 59.0	-1.0
MANT	Manisa	3.48	326	P	Pn	21 09 59.2	-0.9
MANT				S	Sn	21 10 38.1	-2.1
KARA	Karaisali	3.62	62	Pn	Pn	21 10 02.9	+1.0
BSIR	Belisirma, Guz	3.71	44	P	Pn	21 10 04.4	+1.2
GULA	Gulagac	3.73	42	Pn	Pn	21 10 04.7	+1.3
KULU	Kulu	3.75	24	Pn	Pn	21 10 04.7	+1.0
CMRD	Camardi-Nigde	3.77	56	Pn	Pn	21 10 04.9	+0.9
DEMI	Demirci	3.88	332	P	Pn	21 10 05.1	-0.4
YURE	YUREGIR	3.90	71	P	Pn	21 10 05.9	+0.3
YURE				S	Sn	21 10 51.6	+1.3
ASUZ	Hatay-Arsuz	3.91	79	P	Pn	21 10 07.3	+1.7
ASUZ				S	Sn	21 10 52.0	+1.7
EMET	Ktahya-Emet	3.99	340	P	Pn	21 10 07.4	+0.5
EMET				S	Sn	21 10 49.8	-2.6
AKO	Adana	3.99	61	P	Pn	21 10 07.9	+1.0
AKO				S	Sn	21 10 54.6	+2.1
BHL	Bhannes	4.17	113	*e*P	Pn	21 10 09.3	-0.1
TAHT	Tahtakopru-Hat	4.24	78	Pn	Pn	21 10 11.7	+1.4
HWQ	Hawqa	4.25	107	*e*P	Pn	21 10 10.3	-0.2
KOZT	Kozan	4.28	63	Pn	Pn	21 10 12.3	+1.5
QRWL	Qaraoun	4.35	117	*e*P	Pn	21 10 11.9	0.0
BEIL	Beino	4.35	103	*e*P	Pn	21 10 11.7	-0.2
BEIL				*e*S	Sn	21 10 58.7	-2.7
ZAHL	Zahle	4.36	112	*e*P	Pn	21 10 11.6	-0.4
OFRI	`Ofer	4.43	131	P	Pn	21 10 13.0	0.0
OFRI	`Ofer	4.43	131	S	Sn	21 11 02.3	-1.1
MMA0B	Mount Meron ar	4.45	125	P	Pn	21 10 12.8	-0.4
MMAI	Mount Meron Ar	4.45	125	P	Pn	21 10 12.9	-0.3
	9.9nm,0.2s,baz=312,slow=12,SNR=113						
MMAI				S	Sn	21 11 02.5	-1.3
	6.6nm,0.3s,baz=312,slow=15,SNR=12						
MMAI				LR	LR	21 13 18.8	
	comp=Z,58nm,21.0s,baz=303,slow=57						
DURS	Dursunbey	4.46	334	P	Pn	21 10 11.9	-1.5
DURS				S	Sn	21 11 00.4	-3.7
BLGI	Bet Lehem HaGe	4.49	129	P	Pn	21 10 13.2	-0.5
BLGI	Bet Lehem HaGe	4.49	129	S	Sn	21 11 03.6	-1.0
RCY	Rachaya	4.49	117	*e*P	Pn	21 10 13.8	-0.1
RCY				*e*S	Sn	21 11 02.5	-2.4
SHBL	Chebaa	4.50	119	*e*P	Pn	21 10 13.9	-0.1
GEM	Giv'at Ha'Em	4.51	121	P	Pn	21 10 13.7	-0.3
GEM	Giv'at Ha'Em	4.51	121	S	Sn	21 11 04.2	-1.1
NATI	Neve Ativ	4.54	120	P	Pn	21 10 14.3	-0.1
BRTR	Keskin Array B	4.58	26	P	Pn	21 10 14.1	-1.1
	0.8nm,0.3s,baz=210,slow=15,SNR=26						
BRTR				S	Sn	21 11 05.3	-1.9
	3.0nm,0.8s,baz=204,slow=17,SNR=3.9						
	2.2nm,0.4s						
STEP	BALIKESIR_Sava	4.58	326	P	Pn	21 10 15.7	+0.7
APE	Apeiranthos	4.68	290	P	Pn	21 10 16.7	+0.4
SLTI	Sal'it	4.74	134	P	Pn	21 10 17.4	+0.3
SLTI	Sal'it	4.74	134	S	Sn	21 11 09.4	-1.3
KSHT	Keshet	4.75	122	P	Pn	21 10 17.6	+0.3
KSHT	Keshet	4.75	122	S	Sn	21 11 10.4	-0.7
SALP	Salfit	4.95	135	P	Pn	21 10 20.4	+0.3
SALP	Salfit	4.95	135	S	Sn	21 11 15.3	-0.7
HMDT	Nahal Hemdat	5.02	131	P	Pn	21 10 21.4	+0.4
HMDT	Nahal Hemdat	5.02	131	S	Sn	21 11 16.9	-0.8
IDI	Anoyia	5.03	268	P	Pn	21 10 20.7	-0.5
	9.3nm,0.3s,baz=80,slow=11,SNR=31						
IDI				S	Sn	21 11 16.2	-1.9
	41nm,0.5s,baz=325,slow=18,SNR=11						
UJAP	Al Uja	5.19	134	P	Pn	21 10 23.6	+0.3
UJAP	Al Uja	5.19	134	S	Sn	21 11 20.9	-1.0
AMAZ	Amatzia	5.21	141	P	Pn	21 10 23.4	-0.1
AMAZ	Amatzia	5.21	141	S	Sn	21 11 21.4	-0.9
DSI	Dead Sea	5.43	137	P	Pn	21 10 25.4	-1.2
DSI	Dead Sea	5.43	137	S	Sn	21 11 26.9	-0.8
YTIR	Yattir	5.44	140	P	Pn	21 10 27.2	+0.3
YTIR	Yattir	5.44	140	S	Sn	21 11 27.3	-0.9
KZIT	Kziot	5.48	148	P	Pn	21 10 27.7	+0.4
KZIT	Kziot	5.48	148	S	Sn	21 11 28.0	-1.0
MSBI	Mazada	5.61	139	P	Pn	21 10 29.4	+0.3
MSBI	Mazada	5.61	139	S	Sn	21 11 31.4	-0.8
KOT	Kottamia	5.72	173	P	Pn	21 10 32.0	+1.4
KOT				S	Sn	21 11 31.8	-3.1
GHAJ	Ghor Haditha	5.73	137	P	Pn	21 10 30.2	-0.5
RMNI	Mount Ramon	5.90	147	P	Pn	21 10 32.9	-0.3
RMNI	Mount Ramon	5.90	147	S	Sn	21 11 38.6	-0.9
IDAN	Idan	5.95	142	P	Pn	21 10 33.5	-0.2
IDAN	Idan	5.95	142	S	Sn	21 11 39.8	-0.7
SUZ	Suez	5.96	165	P	Pn	21 10 35.3	+1.4
ASF	Jabal al Asfar	5.96	124	P	Pn	21 10 34.4	+0.4
	baz=299,slow=13						
ASF				S	Sn	21 11 40.4	-0.6
	baz=324,slow=19						
ZFRI	Zfri	6.13	144	P	Pn	21 10 35.6	-0.6
PRNI	Paran	6.22	147	P	Pn	21 10 37.9	+0.4
KRMI	Paran Flat	6.30	150	P	Pn	21 10 38.6	-0.1
ZAF	Zafarana	6.45	168	P	Pn	21 10 41.4	+0.8
ZAF				S	Sn	21 11 49.5	-3.3
HRFI	Mount Harif	6.51	148	P	Pn	21 10 41.8	+0.4
HRFI	Mount Harif	6.51	148	S	Sn	21 11 53.9	-0.3
MBRI	Mt Berech	6.67	150	P	Pn	21 10 44.2	+0.6
EIL	Elat	6.79	150	P	Pn	21 10 46.0	+0.8
	5.3nm,0.3s,baz=332,slow=15,SNR=80						
EIL				S	Sn	21 11 58.8	-2.4
	6.4nm,0.3s,baz=348,slow=9.3,SNR=5.8						
	26nm,0.5s						
EIL	Elat	6.79	150	P	Pn	21 10 45.6	+0.3
NBNS	Bani Suef	6.98	178	P	Pn	21 10 48.8	+0.9
NBNS				S	Sn	21 12 02.3	-3.6
HBST	Basata	7.11	153	P	Pn	21 10 50.2	+0.6
HKAT	Jabal Katrina	7.51	160	P	Pn	21 10 55.7	+0.4
TAMRE	El Minia	7.92	181	P	Pn	21 11 01.7	+1.0
HFRF	Wahat Farafira	8.76	196	P	Pn	21 11 12.8	+0.6
AKASG	Malin Array Be	15.13	356	P	Pn	21 12 37.5	-0.7
	0.4nm,0.3s,baz=176,slow=9.6,SNR=2.7						
	0.2nm,0.3s						
CONA	Conrad Observa	16.68	322	*e*Pn	P	21 13 09.6	+10
	0.3nm,0.2s						
KBA	Koelnbreinsper	17.49	316	*e*Pn	P	21 13 10.9	+2.4
	3.4nm,0.6s						
KEST	Kesra	17.63	277	P	Pn	21 13 10.0	+0.2
	0.1nm,0.3s,baz=76,slow=4.2,SNR=1.9						
	2.6nm,0.9s						
ABTA	Abfaltersbach	17.79	314	*i* Pn	P	21 13 13.3	+1.6
	1.4nm,0.6s						
LESA	Schwarzleotal	18.06	316	*e*Pn	Pn	21 13 16.5	+1.6
	1.0nm,0.5s						
GERES	GERESS Array B	18.37	321	P	P	21 13 18.1	0.0
	baz=130,slow=11,SNR=6.7						
	0.8nm,0.6s						
SQTA	Sankt Quirin	18.80	314	*i* Pn	Pn	21 13 24.6	+0.7
	0.6nm,0.3s						
MOTA	Moosalm	18.92	314	*i* Pn	Pn	21 13 25.5	+0.1
	1.2nm,0.4s						
FETA	Feichten	18.98	313	*i* Pn	Pn	21 13 26.6	+0.5
	1.5nm,0.6s						
RETA	Reutte	19.19	314	*e*Pn	P	21 13 28.1	+1.0
	3.8nm,0.4s						
DAVOX	Davos/Dischmat	19.37	312	P	P	21 13 29.3	+0.1
	0.3nm,0.3s,baz=121,slow=12,SNR=6.8						
	2.3nm,0.6s						
DAVA	Damuels	19.61	313	*e*Pn	P	21 13 32.6	+0.8
	4.0nm,0.4s						
BELG	Belogornoye	20.49	30	P	P	21 13 40.0	-1.0
	5.9nm,0.5s,baz=240,slow=20,SNR=7.3						
	5.9nm,0.5s						
FINES	FINESS Array B	26.03	355	P	P	21 14 33.9	-1.6
	2.5nm,0.8s,baz=158,slow=12,SNR=8.0						
	2.5nm,0.8s						
HFS	Hagfors	26.97	341	P	P	21 14 45.0	+1.0
	8.0nm,1.1s,baz=150,slow=12,SNR=5.4						
	8.0nm,1.1s						
ESDC	Sonseca Array	27.90	289	P	P	21 14 54.3	+1.7
	1.0nm,0.6s,baz=88,slow=9.1,SNR=12						
	1.0nm,0.6s						
BVAR	Borovoye Array	32.58	45	P	P	21 15 34.0	+0.3
	0.1nm,0.3s,baz=242,slow=7.7,SNR=1.7						
	0.1nm,0.3s						
ARCES	ARCESS Array B	34.10	357	P	P	21 15 45.8	-1.0
	1.3nm,0.7s,baz=175,slow=11,SNR=8.2						
	1.3nm,0.7s						
KURBB	Kurchatov Arra	37.09	51	P	P	21 16 12.8	+0.2
	1.1nm,0.2s,baz=271,slow=9.2,SNR=1.6						
	1.1nm,0.2s						
MKAR	Makanchi Array	39.49	57	P	P	21 16 32.5	-0.4
	0.7nm,0.7s,baz=271,slow=5.9,SNR=5.3						
	0.7nm,0.7s						
ZALV	Zalesovo Beam	41.21	46	P	P	21 16 46.0	-0.9
	0.6nm,0.4s,baz=265,slow=9.8,SNR=3.9						
	0.6nm,0.4s						
SPITS	Spitsbergen Ar	43.12	356	P	P	21 17 02.0	-0.2
	11nm,0.9s,baz=152,slow=9.6,SNR=1.4						
	11nm,0.9s						
ILAR	Eielson Array	79.92	359	P	P	21 21 08.8	-1.5
	0.3nm,0.8s,baz=4.3,slow=3.6,SNR=2.6						
	0.3nm,0.8s						

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*IDC **08** 21:20:35.2±1.0, 2°.51S×138°.28E, h0^{km}, mb3.7/7, mbtmp3.6/9, ML3.4/2, MS3.6/1, Error ellipse: s-maj=26.7km s-min=22.6km az=50.0*

ISC 08 21:20:39.0±0.9, **2°.6S**±0°.1×**138°.47E**±0°.08, **h32^{km}, n10, σ1^{s}.42**/10, **mb3.6**/7, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.23	89	Pn	Pb	21 21 17.1	-1.6
	5.3nm,0.3s,baz=265,slow=14,SNR=18						
JAY				Sn	Sb	21 21 47.9	+2.0
	2.8nm,0.3s,baz=288,slow=20,SNR=2.2						
	15nm,0.3s						
WRA	Warramunga Arr	17.76	193	P	Pn	21 24 44.2	+0.3
	0.1nm,0.3s,baz=14,slow=12,SNR=7.9						
	0.7nm,0.6s						
ASAR	Alice Springs	21.46	192	P	P	21 25 24.9	0.0
	1.2nm,0.7s,baz=14,slow=11,SNR=11						
	1.2nm,0.7s						
NWAO	Narrogin (SRO)	36.20	211	LR	LR	21 41 57.7	
	comp=Z,108nm,21.9s,baz=246,slow=36						
SONM	Songino Array	57.47	335	P	P	21 30 24.3	-0.8
	0.3nm,0.6s,baz=140,slow=5.6,SNR=2.3						
	0.3nm,0.6s						
MKAR	Makanchi Array	69.52	322	P	P	21 31 46.3	+1.7
	0.8nm,0.8s,baz=120,slow=8.5,SNR=8.5						
	0.8nm,0.8s						
ZALV	Zalesovo Beam	71.68	330	P	P	21 31 59.5	+1.9
	0.2nm,0.3s,baz=111,slow=7.9,SNR=1.8						
	0.2nm,0.3s						
KURBB	Kurchatov Arra	73.46	325	P	P	21 32 08.2	-0.1
	0.4nm,0.2s,baz=115,slow=7.5,SNR=2.8						
	0.4nm,0.2s						
BVAR	Borovoye Array	79.04	325	P	P	21 32 39.4	-0.6
	0.8nm,0.7s,baz=92,slow=4.8,SNR=5.2						
	0.8nm,0.7s						
ILAR	Eielson Array	85.78	24	P	P	21 33 14.9	0.0
	0.4nm,1.0s,baz=262,slow=6.1,SNR=1.9						
	0.4nm,1.0s						

IDC 08 21:28:15.2±1.3, **2°.49S×138°.26E, h0^{km}, mb3.3**/3, **mbtmp3.3**/5, **ML3.3**/2, **MS3.3**/2, **Error ellipse: s-maj=28.4km s-min=26.4km az=32.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.44	91	Pn	Pn	21 28 56.7	+0.3
	3.7nm,0.3s,baz=270,slow=8.1,SNR=7.0						
JAY				Sn	Sn	21 29 27.1	+0.1
	1.5nm,0.3s,baz=229,slow=20,SNR=1.6						
	11nm,0.5s						
PMG	Port Moresby	11.20	128	LR	LR	21 34 57.4	
	comp=Z,118nm,21.7s,baz=161,slow=36						
WRA	Warramunga Arr	17.77	192	P	Pn	21 32 24.6	+0.3
	0.1nm,0.3s,baz=15,slow=12,SNR=7.3						
WRA				LR	LR	21 38 54.7	
	comp=Z,136nm,20.7s,baz=214,slow=36						
	0.3nm,0.5s						
ASAR	Alice Springs	21.47	191	P	P	21 33 05.4	-0.2
	0.4nm,0.7s,baz=11,slow=11,SNR=7.6						
	0.4nm,0.7s						
MKAR	Makanchi Array	69.34	323	P	P	21 39 23.8	-1.0
	0.4nm,0.8s,baz=116,slow=5.3,SNR=3.9						
	0.4nm,0.8s						
BVAR	Borovoye Array	78.88	325	P	P	21 40 21.5	+1.2
	0.3nm,0.4s,baz=126,slow=7.3,SNR=2.1						
	0.3nm,0.4s						

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*SFS **08** 21:28:59.7, 36°.22N×8°.28W, h29^{km}, ML2.7/8, ML2.7/9, MLv2.7/9*

*CNRM **08** 21:28:59.6, 38°.13N×8°.74W, h3^{km}*

*INMG **08** 21:29:00.7±1.4, 36°.35N×8°.28W, h14^{km}±4^{km}, ML1.5, Error ellipse: s-maj=6.5km s-min=2.7km az=54.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Faro*

*MDD **08** 21:29:00.9±0.9, 36°.46N×8°.10W, h3^{km}±4^{km}, mb_Lg2.3/9, Error ellipse: s-maj=6.7km s-min=3.8km az=36.0*

*IGIL **08** 21:29:01.0, 36°.35N×8°.28W, h14^{km}, ML1.4*

ISC 08 21:29:01.4±1.3, **36°.49N**±0°.04×**8°.13W**±0°.03, **h17^{km}**±9^{km}, **n50, σ1^{s}.06**/83, **1D, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBDV	Barranco-do-Ve	0.77	12	P	Pb	21 29 16.5	+0.2
PBDV	Barranco-do-Ve	0.77	12	*e*P	Pn	21 29 17.7	+0.2
PBDV				*e*S	Sn	21 29 30.3	+1.7
PBDV				*i* IAML		21 29 32.8	
PBDV				*i* IAML		21 29 36.3	
PBDV				*i* IAML		21 29 36.4	
PFVI	Vila Bisbo	0.85	319	P	Pb	21 29 16.2	-1.5
PFVI				S	Sn	21 29 29.4	-1.2
PFVI	Vila Bisbo	0.85	319⇓	*e*P	Pb	21 29 16.6	-1.0
PFVI				*e*S	Sg	21 29 28.9	-0.1
PFVI				*i* IAML		21 29 29.3	
PFVI				*i* IAML		21 29 34.4	
PFVI				*i* IAML		21 29 36.3	
PFVI	Vila Bisbo	0.85	319	P	Pn	21 29 17.7	-0.9
PFVI	Vila Bisbo	0.85	319	S	Sn	21 29 33.2	+2.7
MORF	Marmelete	0.91	333	*e*P	Pg	21 29 18.3	-0.8
MORF				*e*S	Sn	21 29 31.5	-0.8
MORF				IAML		21 29 32.6	
	comp=E,13nm,0.3s						
MORF	Marmelete	0.91	333	*e*P	Pg	21 29 18.3	-0.8
MORF				*e*S	Sn	21 29 32.2	-0.1
MORF				*i* IAML		21 29 32.6	
MORF				*i* IAML		21 29 32.8	
MORF				*i* IAML		21 29 36.2	
PVAQ	Vaqueiros	0.97	20	P	Pg	21 29 19.8	-0.4
PVAQ	Vaqueiros	0.97	20	*e*P	Pn	21 29 20.5	+0.3
PVAQ				*e*S	Sn	21 29 35.6	+2.0
PVAQ				*i* IAML		21 29 37.4	
PVAQ				*i* IAML		21 29 38.2	
PVAQ				*i* IAML		21 29 42.4	
PVAQ	Vaqueiros	0.97	20	P	Pn	21 29 21.0	+0.8
PCVE	Castro Verde	1.14	4	P	Pb	21 29 22.5	-0.1
PCVE				S	Sg	21 29 39.1	+0.8
PCVE	Castro Verde	1.14	4	*e*P	Pg	21 29 23.0	-0.4
PCVE				*e*S	Sg	21 29 39.5	+1.1
PCVE				*i* IAML		21 29 40.7	
PCVE				*i* IAML		21 29 43.3	
PCVE				*i* IAML		21 29 43.8	
PTEO	Sao Teotonio	1.15	336	*e*P	Pn	21 29 21.9	-0.8
PTEO				*e*S	Sg	21 29 38.3	-0.4
PTEO				*i* IAML		21 29 39.1	
PTEO				*i* IAML		21 29 39.7	
PTEO				*i* IAML		21 29 39.7	
EGRO	El Granado	1.16	26	P	Pb	21 29 22.9	-0.2
EGRO				S	Sg	21 29 39.7	+0.7
EGRO	El Granado	1.16	26	Pg	Pg	21 29 23.5	-0.4
EGRO				Sg	Sb	21 29 38.3	+0.4
EGRO				*i* IVmb_Lg		21 29 41.3	
MESJ	Messejana	1.34	357	*e*P	Pb	21 29 25.5	-0.7
MESJ				*e*S	Sb	21 29 43.6	+0.5
MESJ				IAML		21 29 45.2	
	comp=N,2.2nm,0.1s						
MESJ	Messejana	1.34	357	*e*P	Pb	21 29 25.5	-0.7
MESJ				*e*S	Sb	21 29 44.1	+1.0
MESJ				*i* IAML		21 29 47.7	
MESJ				*i* IAML		21 29 47.8	
MESJ				*i* IAML		21 29 53.2	
PBEJ	Beja	1.54	8	*e*S	Sb	21 29 49.5	+0.7
PBEJ				*i* IAML		21 29 51.6	
PBEJ				*i* IAML		21 29 52.0	
PBEJ				*i* IAML		21 29 52.3	
EMIN	Mina Concepcio	1.73	42	P	Pn	21 29 31.1	+0.5
EMIN				S	Sn	21 29 53.1	+0.7
EMIN	Mina Concepcio	1.73	42	Pn	Pn	21 29 30.5	-0.1
EMIN				Sn	Sn	21 29 52.8	+0.5
ESPR	Espera	1.87	78	S	Sn	21 29 55.4	-0.4
ESPR	Espera	1.87	78	Pn	Pn	21 29 32.4	-0.2
ESPR				Sn	Sn	21 29 54.9	-0.9
ESPR				*i* IVmb_Lg		21 29 57.1	
PBAR	Barrancos	1.89	27	P	Pn	21 29 33.7	+0.8
PBAR				S	Sb	21 29 58.5	-0.3
PBAR	Barrancos	1.89	27	*e*P	Pn	21 29 33.4	+0.5
PBAR				*e*S	Sb	21 29 58.2	-0.7
PBAR				*i* IAML		21 30 00.8	
PBAR				*i* IAML		21 30 01.0	
PBAR				*i* IAML		21 30 01.4	
MOE	Montemor	2.03	355	*e*P	Pn	21 29 34.8	0.0
MOE				*e*S	Sn	21 30 00.4	+0.5
MOE				*i* IAML		21 30 02.5	
MOE				*i* IAML		21 30 02.5	
MOE				*i* IAML		21 30 02.8	
EVO	Evora	2.04	3	*e*P	Pn	21 29 34.8	-0.1
EVO				*e*S	Sn	21 30 00.8	+0.8
EVO				*i* IAML		21 30 02.2	
EVO				*i* IAML		21 30 02.5	
EVO				*i* IAML		21 30 02.6	
EJIF	Jimena Fronter	2.15	90	Pg	Pb	21 29 39.2	-0.7
EJIF				Sn	Sn	21 30 03.1	+0.3
PARRA	Arraiolos	2.32	2	*e*P	Pn	21 29 38.6	-0.2
PARRA				*e*S	Sn	21 30 07.5	+0.6
PARRA				*i* IAML		21 30 08.3	
PARRA				*i* IAML		21 30 08.7	
PARRA				*i* IAML		21 30 09.1	
PESTR	Estremoz	2.41	10	P	Pn	21 29 40.4	+0.3
PESTR				S	Sn	21 30 10.6	+1.4
EBAD	Badajoz	2.43	21	P	Pn	21 29 40.7	+0.4
EBAD				S	Sn	21 30 11.7	+2.1
EBAD	Badajoz	2.43	21	Pn	Pn	21 29 40.5	+0.2
EBAD				Sn	Sn	21 30 10.9	+1.3
EBAD				*i* IVmb_Lg		21 30 13.8	

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
PMTG	Montargil	2.57	358	eP	Pn	21 29 42.8	+0.5
PMTG				eS	Sn	21 30 12.9	-0.3
PMTG				i IAML		21 30 14.4	
PMTG				i IAML		21 30 14.4	
PMTG				i IAML		21 30 14.5	
ECAB	El Cabril	2.68	53	P	Pn	21 29 43.6	-0.1
ECAB				S	Sn	21 30 14.6	-1.3
ECAB	El Cabril	2.68	53	Pn	Pn	21 29 44.0	+0.2
ECAB				Sn	Sn	21 30 14.0	-1.9
ECAB				i IVmb_Lg		21 30 18.7	
PMRV	Marv??o	2.99	11	eP	Pn	21 29 48.0	0.0
PMRV				eS	Sn	21 30 24.4	+0.9
PMRV				i IAML		21 30 25.1	
PMRV				i IAML		21 30 26.2	
PSBE	So Bento	3.06	350	eP	Pn	21 29 49.6	+0.6
PSBE				eS	Sn	21 30 25.9	+0.6
PSARD	Sardoal	3.10	360	eP	Pn	21 29 50.0	+0.4
PSARD				eS	Sn	21 30 26.2	0.0
PSARD				i IAML		21 30 27.5	
PSARD				i IAML		21 30 27.7	
PSARD				i IAML		21 30 28.4	
EADA	Adamuz	3.29	58	P	Pn	21 29 51.6	-0.6
EADA				S	Sn	21 30 29.9	-1.1
EADA	Adamuz	3.29	58	Pn	Pn	21 29 52.0	-0.2
EADA				Sn	Sn	21 30 29.2	-1.8
EADA				i IVmb_Lg		21 30 32.6	
PCBR	Castelo Branco	3.38	9	eS	Sn	21 30 34.3	+1.2
EQUE	Quentar	3.83	78	Sn	Sn	21 30 41.5	-2.9
EPLA	Plasencia	3.91	24	Sn	Sn	21 30 47.2	+0.8
PSIM	Granatula de C	4.18	55	Pn	Pn	21 30 04.3	-0.1
PSIM				Sn	Sn	21 30 51.4	-1.5
EQES	Quesada	4.25	71	Sn	Sn	21 30 53.8	-1.0
EQES				i IVmb_Lg		21 30 58.5	
PAB	San Pablo	4.27	43	Pn	Pn	21 30 05.9	+0.2
PAB				Sn	Sn	21 30 52.1	-3.1
PAB				i IVmb_Lg		21 30 55.0	
MD31	MD31	4.56	141	P	Pg	21 30 32.1	+3.3
MD31	MD31	4.56	141	S	Sg	21 31 43.9	+16
ESDC	Sonseca Array	4.57	45	Sn	Sn	21 31 00.2	-2.4
ESDC				i IVmb_Lg		21 31 03.0	
MDT	Midelt	4.68	141	P	Pg	21 30 33.6	+2.5

IDC 08 21:30:15.2±3.0, 31°.45S×178°.14W, h0km, mb4.0/2, mbtmp4.0/4, ML3.8/2, Error ellipse: s-maj=70.4km s-min=22.6km az=113.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.20	5	Pn	Pn	21 30 52.4	-0.6
	91nm,0.3s,baz=217,slow=20,SNR=2.1						
RAO				Sn	Sb	21 31 23.4	-0.2
	90nm,0.3s,baz=90,slow=20,SNR=4.8 257nm,0.4s						
URZ	Urewera	7.84	209	Pn	Pn	21 32 10.8	+0.3
	0.4nm,0.3s,baz=48,slow=12,SNR=1.3						
URZ				Sn	Sn	21 33 40.1	+0.2
	0.7nm,0.3s,baz=84,slow=18,SNR=1.7 11nm,1.1s						
ASAR	Alice Springs	42.95	268	P	P	21 38 16.0	-0.2
	1.1nm,0.9s,baz=111,slow=8.1,SNR=7.5 1.1nm,0.9s						
WRA	Warramunga Arr	44.03	273	P	P	21 38 24.9	0.0
	1.4nm,0.3s,baz=114,slow=8.3,SNR=18 1.4nm,0.3s						
H03S2	Juan Fernandez	79.99	123	T	T	23 11 23.2	
	baz=237,slow=74,SNR=9.6						
H03S1	Juan Fernandez	80.00	123	T	T	23 11 37.9	
	baz=237,slow=74,SNR=7.5						
H03S3	Juan Fernandez	80.00	123	T	T	23 11 34.8	
	baz=237,slow=74,SNR=7.9						
H03N3	Juan Fernandez	80.19	123	T	T	23 11 28.2	
	baz=240						
H03N2	Juan Fernandez	80.19	123	T	T	23 11 36.9	
	baz=240						
H03N1	Juan Fernandez	80.20	123	T	T	23 11 32.7	
	baz=240,SNR=4.9						
FINES	FINESS Array B	146.08	339	PKPbc	PKPdf	21 49 55.5	-0.1
	4.5nm,1.0s,baz=62,slow=4.8,SNR=3.9						

*TAP **08** 22:00:33.9, 22°.85N×122°.93E, h80km±1km, ML3.5, D*
*JMA **08** 22:00:33.6±0.2, 23°N±1°×122°.9E±0°.7, h48km, MV3.2/16, FAR S OFF ISHIGAKIJIMA*
ISC 08 22:00:30.5±1.8, 22°.85N±0°.03×122°.91E±0°.03, h10km±13km, n91, σ0ˢ87/163, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	Ludao	1.34	263	P	Pn	22 00 55.7	+0.4
EOS4	EOS4	1.38	337	eP	Pn	22 00 54.5	-0.9
EOS4				eS	Sb	22 01 13.8	0.0
CHKH	Chenggong	1.44	284	P	Pn	22 00 57.1	+0.5
CHKH				S	Sn	22 01 13.1	-2.5
CHKT	Chengkung	1.45	280	eP	Pn	22 00 57.3	+0.5
CHKT				eS	Sn	22 01 13.9	-1.9
HATJ	Hateruma jima	1.46	34	eP	Pb	22 00 58.1	+0.4
HATJ				eS	Sn	22 01 15.4	-0.6
EDH	Donghe	1.49	275	eP	Pb	22 00 58.2	0.0
EDH				S	Sn	22 01 15.0	-1.8
LYUB	Lan-yu	1.49	236	P	Pn	22 00 58.0	+0.8
LYUB				eS	Sn	22 01 14.6	-2.2
LAY	Lan-yu	1.49	238	eP	Pn	22 00 58.0	+0.6
HGSD	Ruisui	1.51	295	eP	Pn	22 00 57.8	+0.1
HGSD				eS	Sn	22 01 16.0	-1.4
FULB	Fuli	1.53	284	eP	Pn	22 00 58.2	+0.3
FULB				eS	Sn	22 01 16.0	-1.9
EOS3	EOS3	1.53	339	eP	Pg	22 00 59.7	-0.2
EOS3				eS	Sb	22 01 18.2	-0.1
EYUL	Yuli	1.55	289	eP	Pb	22 00 59.6	+0.3
SHUL	Shoufeng	1.56	307	eP	Pb	22 00 59.5	+0.1
SHUL				S	Sn	22 01 17.6	-0.8
TWF1	Yuli	1.57	289	eP	Pb	22 00 59.4	-0.3
TWF1				eS	Sn	22 01 18.7	-0.2
ECS	Chishang	1.58	279	eP	Pb	22 01 00.1	+0.4
ECS				eS	Sn	22 01 19.1	0.0
EHYH	Wanrong	1.58	294	eP	Pb	22 01 00.4	+0.6
EHYH				eS	Sn	22 01 19.1	+0.1
YULB	Yu-li	1.58	290	P	Pb	22 00 59.6	-0.3
YULB				S	Sn	22 01 19.3	+0.2
EGFH	Guangfu	1.59	301	eP	Pb	22 00 59.9	-0.1
EGFH				eS	Sn	22 01 19.5	+0.1
JYNG	Yonagunijimaku	1.60	1	eS	Sn	22 01 18.9	-0.6
EHY	Hungye	1.60	294	eP	Pb	22 01 00.3	+0.1
EHY				eS	Sn	22 01 19.3	-0.4
YOJ	Yonaguni jima	1.61	3	eP	Pb	22 01 00.7	+0.3
YOJ				S	Sn	22 01 19.7	-0.2
LONT	Longtian	1.65	272	i P	Pb	22 01 01.3	+0.4
LONT				S	Sn	22 01 21.2	+0.6
WARBT	Fenglin Townsh	1.65	302	i P	Pb	22 01 00.7	-0.3
WARBT				S	Sn	22 01 19.5	-1.3
IRIF	Iriomote-Funau	1.66	27	eP	Pb	22 01 01.1	0.0
IRIF				eS	Sn	22 01 20.4	-0.7
EOS2	EOS2	1.69	338	eP	Pb	22 01 02.0	+0.5
EOS2				eS	Sb	22 01 22.9	+0.2
TWGBT	Beinan	1.69	269	i P	Pb	22 01 01.9	+0.2
TWGBT				eS	Sn	22 01 21.2	-0.6
TWG	Pinlang	1.70	270	i P	Pb	22 01 01.7	-0.1
TWG				S	Sn	22 01 21.1	-0.8
JKRS	Kuro-shima	1.71	36	eP	Pb	22 01 01.9	-0.2
JKRS				S	Sn	22 01 22.0	-0.3
ETM	Tongmen	1.71	311	eP	Pb	22 01 01.4	-0.7
TWD	Chiawan	1.72	316	eP	Pn	22 01 01.1	+0.6
TWD				eS	Sn	22 01 21.0	-1.5
ETL	Fush Village	1.76	318	eP	Pb	22 01 02.2	-0.7
ETL				eS	Sn	22 01 22.5	-1.2
ELDTW	Lidau	1.78	281	eP	Pb	22 01 02.7	-0.6
NACB	Ninganchiao	1.79	318	eP	Pn	22 01 02.5	+1.0
NACB				i S	Sn	22 01 22.9	-1.4
LXIB	Xiulin Townshi	1.81	311	eP	Pb	22 01 03.1	-0.7
ECL	Taimali	1.82	263	eP	Pb	22 01 03.4	-0.6
ECL				eS	Sn	22 01 23.6	-1.5
VWDT	VWDT	1.86	299	i P	Pb	22 01 04.4	-0.2
VWDT				S	Sn	22 01 25.8	-0.2
JIJ	Ishigaki jima	1.89	37	P	Pn	22 01 03.7	+0.9
JIJ				S	Sn	22 01 25.1	-1.5
ETLH	Xiulin Townshi	1.89	316	P	Pb	22 01 04.1	-1.0
ETLH				eS	Sn	22 01 25.6	-1.2
ENA	Nanau	1.91	326	eP	Pb	22 01 05.1	-0.2
ENA				S	Sn	22 01 27.4	+0.3
YUS	Yu-Shan	1.91	290	eP	Pb	22 01 05.4	-0.3
YUS				eS	Sn	22 01 26.5	-1.5
TAWH	Dawu Township	1.94	255	P	Pb	22 01 05.8	-0.1
OWD	Renai	1.94	305	P	Pb	22 01 05.2	-0.8
OWD				S	Sn	22 01 26.9	-1.3
EAST	Anshuo	1.96	257	eP	Pb	22 01 06.4	+0.1
EAST				S	Sn	22 01 29.8	+1.2
WHF	Hehuan Shan	1.99	311	eP	Pn	22 01 05.7	+1.1
WHF				S	Sn	22 01 29.0	-0.8
STYH	Taoyuan	2.00	280	P	Pb	22 01 06.6	-0.2
STYH				eS	Sn	22 01 30.4	+1.1
WUSB	Renai	2.00	305	eP	Pb	22 01 06.4	-0.7
WUSB				S	Sn	22 01 29.6	-0.2
TWC	Suao	2.01	331	eP	Pb	22 01 06.5	-0.6
TWC				eS	Sn	22 01 28.8	-0.9
SSLB	Suanglung	2.03	298	eP	Pb	22 01 07.0	-0.5
ALS	Alishan	2.05	289	eP	Pb	22 01 08.0	0.0
ALS				S	Sn	22 01 32.1	+1.0
SLIU	Shizi	2.05	253	eP	Pb	22 01 07.3	-0.5
SLIU				eS	Sn	22 01 29.9	-0.9
FUSS	Fushou	2.07	313	eP	Pb	22 01 07.7	-0.6
FUSS				eS	Sn	22 01 31.6	0.0
WHYT	Xinyi Township	2.07	294	eP	Pn	22 01 06.4	+1.0
WHYT				eS	Sn	22 01 31.5	+0.2
SMST	Manzhou Townsh	2.09	247	eP	Pb	22 01 07.9	-0.5
SMST				eS	Sn	22 01 32.1	+0.5
SSD	Sandimen	2.11	268	eP	Pb	22 01 07.9	-0.9
LATG	Datong	2.11	323	i P	Pb	22 01 07.9	-1.0
LATG				i S	Sn	22 01 32.8	+0.5
NNSB	Datong	2.11	319	eP	Pb	22 01 08.2	-0.7
NNSB				i S	Sn	22 01 32.1	-0.2
MASBT	Mashibuluo	2.12	264	eP	Pb	22 01 07.9	-1.0
SMLT	Sun Moon Lake	2.12	300	eP	Pb	22 01 07.9	-1.1
TWT	Tachien	2.12	312	eP	Pb	22 01 08.0	-1.1
TWT				eS	Sn	22 01 32.5	-0.2
NNS	Nan Shan	2.12	319	eP	Pb	22 01 08.3	-0.9
NNS				i S	Sn	22 01 32.7	0.0
TDCB	Techi	2.13	311	eP	Pb	22 01 08.1	-1.2
TDCB				eS	Sn	22 01 32.5	-0.5
TWKBT	Hengchun	2.14	246	eP	Pn	22 01 08.1	+1.8
TPUB	Ta-pu	2.15	283	eP	Pb	22 01 10.0	+0.5
TPUB				eS	Sb	22 01 35.2	-1.1
WTP	Ta-pu	2.15	281	eP	Pb	22 01 09.7	+0.1
WTP				S	Sb	22 01 36.3	-0.1
JISG	Ishigakijimahi	2.16	36	P	Pn	22 01 07.4	+0.9
JISG				eS	Sn	22 01 32.3	-0.9
SGST	Jiashian	2.16	277	P	Pb	22 01 08.9	-0.7
SGST				S	Sb	22 01 36.4	-0.1
TYC	Yuchr	2.16	300	eP	Pb	22 01 09.2	-0.5
TYC				eS	Sn	22 01 34.3	+0.9
SCZT	Fangliau	2.17	258	eP	Pb	22 01 09.4	-0.5
ENTT	Nioudou	2.17	326	eP	Pn	22 01 08.0	+1.3
HEN	Hengchun	2.18	248	eP	Pb	22 01 09.1	-0.9
HEN				eS	Sn	22 01 33.7	-0.1
CHN5	Tsauling	2.19	290	eP	Pb	22 01 10.7	+0.5
CHN5				S	Sb	22 01 36.7	-0.7
TWE	Neicheng	2.19	329	eP	Pb	22 01 09.3	-0.8
TWE				eS	Sn	22 01 34.4	+0.4
WCS	Beigang Elemen	2.20	304	eP	Pb	22 01 09.6	-0.7
WCKO	Fanlu	2.20	286	eP	Pb	22 01 10.8	+0.4
WCKO				S	Sb	22 01 37.6	-0.2
CHN1	Nanshi	2.22	279	eP	Pb	22 01 11.2	+0.5
CHN1				eS	Sb	22 01 38.7	+0.3
SNST	Tainan City	2.26	280	P	Pb	22 01 11.8	+0.5
SNST				S	Sb	22 01 39.8	+0.5
FUSB	Fushanzhiwuyua	2.26	328	eP	Pb	22 01 10.2	-1.2
FUSB				eS	Sn	22 01 37.0	+1.1
TWK	Hsinying	2.27	281	eP	Pb	22 01 12.0	+0.3
TWK				S	Sb	22 01 39.3	-0.5
YHNB	Yeheng	2.30	323	eP	Pb	22 01 11.0	-1.1
YHNB				eS	Sn	22 01 37.4	+0.5
WHP	Taichung City	2.30	309	eP	Pb	22 01 12.0	-0.1
WHP				S	Sn	22 01 37.9	+0.9
NSK	Sanguang	2.31	322	eP	Pb	22 01 11.2	-1.2
NSK				eS	Sn	22 01 36.8	-0.5
NWLT	Wulai	2.32	326	eP	Pb	22 01 10.9	-1.5
NWLT				eS	Sn	22 01 37.1	-0.2
TIPB	Shuangxi	2.34	335	eP	Pb	22 01 11.6	-1.2
TIPB				eS	Sn	22 01 38.3	+0.4
NFF	Wufeng Townshi	2.42	318	eP	Pb	22 01 13.4	-0.8
NFF				eS	Sn	22 01 40.3	+0.3
JTJ	Tarama	2.42	42	eP	Pn	22 01 11.5	+1.3
JTJ				eS	Sn	22 01 39.0	-0.9
SXI1	Grass Mountain	2.43	337	eP	Pb	22 01 12.6	-1.8
SXI1				eS	Sn	22 01 40.8	+0.6
LIOB	Emei	2.50	316	eP	Pb	22 01 14.2	-1.2
LIOB				eS	Sn	22 01 42.9	+1.1
YM01	YM01	2.60	332	eP	Pb	22 01 16.2	-0.9
JIRB	Irabujima	2.86	46	eP	Pn	22 01 17.4	+1.2
JIRB				eS	Sn	22 01 49.5	-1.2
JMJ2	Miyako jima3	2.91	49	eS	Sn	22 01 50.6	-1.2
PTMZ	Houxiangcun	4.10	303	eP	Pn	22 01 36.1	+2.9

*NEIC **08** 22:03:05.9±1.4, 14°.76S±0°.09×173°.2W±0°.1, h10km±1km, mb4.4/17, Error ellipse: s-maj=19.7km s-min=11.2km az=311.0*
*IDC **08** 22:03:08.4±2.1, 15°.09S×173°.93W, h0km, mb3.8/5, mbtmp3.8/5, MS3.5/6, Error ellipse: s-maj=105.0km s-min=27.4km az=149.0*
ISC 08 22:03:05.7±0.6, 14°.78S±0°.09×173°.18W±0°.10, h10km, n43, σ1ˢ10/28, mb4.3/14, MS3.6/6, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	1.61	58	Pn	Pn	22 03 34.4	+0.2
AFI				Sn	Sn	22 03 54.8	-0.3
NIUE	Niue	5.29	144	Pn	Pn	22 04 24.2	-0.5
DZM	Mont Dzumac	20.64	246	P	P	22 07 46.5	+0.9
TARA	Tarawa	21.12	318	P	P	22 07 49.9	-0.9
TARA				IAmb	IAmb	22 07 55.4	
	comp=Z,7.4nm,0.6s						
PPT	Papeete	22.83	100	LR	LR	22 15 08.0	
	comp=Z,19nm,20.2s,baz=238,slow=31						
SNZO	South Karori	28.45	199	P	P	22 09 01.6	+0.8
QRZ	Quartz Range	28.79	203	P	P	22 09 03.0	-0.7
H11S2	WAKE ISLAND Hy	38.55	328	T	T	22 51 30.4	
	baz=149,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	38.56	328	T	T	22 51 35.0	
	baz=149,slow=76,SNR=16						
H11S1	WAKE ISLAND Hy	38.56	328	T	T	22 51 36.9	
	baz=149,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	39.48	330	T	T	22 52 40.6	
	baz=149,slow=76,SNR=7.1						
H11N1	WAKE ISLAND Hy	39.49	330	T	T	22 52 38.9	
	baz=149,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	39.50	330	T	T	22 52 45.4	
	baz=149,slow=76,SNR=9.0						
WB0	Warramunga Arr	50.16	256	P	P	22 12 00.8	-1.0
WB0				IAmb	IAmb	22 12 06.9	
	comp=Z,2.4nm,1.1s						
WRA	Warramunga Arr	50.20	256	P	P	22 12 00.2	-1.9
	comp=Z,0.8nm,0.7s,baz=91,slow=7.7,SNR=11 comp=Z,0.8nm,0.7s						
AS31	Alice Springs	50.51	251	P	P	22 12 03.7	-0.7
ASAR	Alice Springs	50.51	251	P	P	22 12 02.6	-1.9
	comp=Z,5.5nm,0.7s,baz=90,slow=7.7,SNR=42						
ASAR				LR	LR	22 31 29.8	
	comp=Z,51nm,19.6s,baz=103,slow=34 comp=Z,5.5nm,0.7s						
KNRA	Kununurra	55.87	261	P	P	22 12 44.5	+0.5
KNRA				IAmb	IAmb	22 12 51.4	
	comp=Z,16nm,1.3s						
SBA	Scott Base	63.88	185	P	P	22 13 39.3	+1.2
MJAR	Matsushiro Arr	68.61	320	LR	LR	22 38 18.6	
	comp=Z,34nm,21.3s,baz=120,slow=31						
BBB	Bella Bella	77.24	27	LR	LR	22 43 27.9	
	comp=Z,61nm,18.4s,baz=64,slow=31						
MA2	Magadan	79.64	342	LR	LR	22 46 56.4	
	comp=Z,33nm,21.6s,baz=10.0,slow=33						
NEW	Newport	80.08	34	P	P	22 15 16.0	+0.3
TXAR	Lajitas Array	80.09	56	P	P	22 15 24.7	+8.5
	comp=Z,0.3nm,0.8s,baz=241,slow=4.9,SNR=4.1 comp=Z,0.3nm,0.8s						
TXAR	Lajitas Array	80.09	56	P	P	22 15 15.1	-1.2
R33M	Jennings River	81.44	20	P	P	22 15 22.0	-0.9
R33M				IAmb	IAmb	22 15 24.2	
	comp=Z,1.8nm,1.1s						
ILAR	Eielson Array	81.80	11	P	P	22 15 30.7	+6.3
	comp=Z,0.5nm,0.9s,baz=206,slow=5.5,SNR=4.3 comp=Z,0.5nm,0.9s						
SEY	Seymchan	81.98	345	LR	LR	22 43 52.3	
	comp=Z,33nm,21.5s,baz=324,slow=30						
F21K	Alatna River	83.04	8	P	P	22 15 28.9	-2.0
AMTX	Amarillo	83.80	52	P	P	22 15 35.8	+0.2
I28M	Miner Creek	83.81	13	P	P	22 15 35.3	+0.3
I28M				IAmb	IAmb	22 15 41.0	
	comp=Z,3.8nm,1.3s						
G26K	Porcupine Rive	84.33	11	P	P	22 15 37.2	-0.2
G26K				IAmb	IAmb	22 15 43.9	
	comp=Z,2.1nm,0.9s						
H29M	Whitestone	84.81	13	P	P	22 15 40.4	+0.4
H29M				IAmb	IAmb	22 15 47.5	
	comp=Z,9.2nm,1.4s						
E25K	Arctic Village	85.05	10	P	P	22 15 41.7	+0.5
E25K				IAmb	IAmb	22 15 44.1	
	comp=Z,4.6nm,1.5s						
H03S2	Juan Fernandez	85.37	124	T	T	23 50 07.6	
	baz=253,slow=75,SNR=6.3						
H03S1	Juan Fernandez	85.38	124	T	T	23 50 07.9	
	baz=253,slow=75,SNR=4.7						
H03S3	Juan Fernandez	85.38	124	T	T	23 50 10.9	
	baz=253,slow=75,SNR=3.6						
U38A	Gravette	89.90	52	P	P	22 16 04.4	-0.8
U38A				IAmb	IAmb	22 16 05.0	
	comp=Z,6.0nm,1.4s						
SONM	Songino Array	94.53	318	P	P	22 16 29.5	+2.9
	comp=Z,0.1nm,0.3s,baz=95,slow=3.0,SNR=1.8 comp=Z,0.1nm,0.3s						
SONM	Songino Array	94.53	318	P	P	22 16 26.6	0.0
GERES	GERESS Array B	145.56	352	PKPbc	PKiKP	22 22 49.2	+0.8
	comp=Z,0.6nm,0.8s,baz=19,slow=3.5,SNR=2.0						
BRTR	Keskin Array B	145.81	322	PKPbc	PKiKP	22 22 49.1	-0.1
	comp=Z,0.8nm,0.6s,baz=66,slow=1.7,SNR=6.2						
BRTR	Keskin Array B	145.81	322		PKPdf	22 22 45.0	-0.1

*IDC **08** 22:16:51.4±0.9, 30°.91N×142°.97E, h0km, mb3.6/10, mbtmp3.6/12, ML2.9/2, Error ellipse: s-maj=27.8km s-min=20.0km az=63.0*
*JMA **08** 22:16:53.3±0.3, 31°N±1°×14°3E±°, h105km, MV3.3/17, FAR E OFF IZU ISLANDS*
ISC 08 22:16:56.7±1.0, 31°.22N±0°.10×142°.9E±0°.1, h30km, n18, σ2ˢ28/19, mb3.7/10, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.23	307	eS	Sn	22 18 22.6	-0.3
JHJ	Hachijo jima 2	3.26	306	Pn	Pn	22 17 45.0	-0.8
	5.8nm,0.3s,baz=82,slow=19,SNR=2.4						
JHJ				Sn	Sn	22 18 22.5	-1.1
	16nm,0.3s,baz=139,slow=19,SNR=1.9 453nm,1.1s						
BSO1	Boso 1	3.79	335	eP	Pn	22 17 52.6	-0.1
BSO1				eS	Sn	22 18 38.6	+2.6
JCJ	Chichijima	4.15	189	Pn	Pn	22 17 41.8	-16
	3.8nm,0.3s,baz=273,slow=18,SNR=1.5						
JCJ				Sn	Sn	22 18 23.5	-22
	6.5nm,0.3s,baz=271,slow=21,SNR=2.1						
JRY	Ryogami san	5.84	326	eP	Pn	22 18 21.5	+0.2
JAG	Ashikaga	5.94	332	eS	Sn	22 19 30.8	+1.2
MJAR	Matsushiro Arr	6.59	325	Pn	Pn	22 18 31.7	0.0
	0.1nm,0.3s,baz=150,slow=11,SNR=5.6						
MJAR				Sn	Sn	22 19 40.8	-5.0
	0.1nm,0.3s,baz=136,slow=30,SNR=1.3 1.9nm,0.7s						
JMK	Ichinoseki	7.84	350	eS	Sn	22 20 11.3	-5.1
SONM	Songino Array	32.33	311	P	P	22 23 25.6	+2.3
	0.7nm,0.7s,baz=120,slow=8.4,SNR=5.2 0.7nm,0.7s						
ZALV	Zalesovo Beam	46.87	317	P	P	22 25 26.4	+2.5
	0.2nm,0.4s,baz=95,slow=16,SNR=2.0 0.2nm,0.4s						
MKAR	Makanchi Array	48.43	307	P	P	22 25 37.2	+1.0
	0.5nm,0.7s,baz=87,slow=10,SNR=7.0 0.5nm,0.7s						
KURBB	Kurchatov Arra	50.69	312	P	P	22 25 54.3	+0.9
	0.3nm,0.2s,baz=91,slow=8.0,SNR=3.0 0.3nm,0.2s						
WRA	Warramunga Arr	51.53	190	P	P	22 25 55.7	-4.2
	2.0nm,1.0s,baz=10.0,slow=7.4,SNR=6.3 2.0nm,1.0s						
ILAR	Eielson Array	53.82	30	P	P	22 26 16.3	-0.1
	0.5nm,0.7s,baz=278,slow=8.2,SNR=4.4 0.5nm,0.7s						
ASAR	Alice Springs	55.25	190	P	P	22 26 25.0	-2.2
	0.3nm,0.5s,baz=19,slow=12,SNR=4.7 0.3nm,0.5s						
BVAR	Borovoye Array	55.50	316	P	P	22 26 28.8	+0.1
	0.5nm,0.8s,baz=97,slow=6.0,SNR=2.4 0.5nm,0.8s						
NVAR	Mina Array Bea	77.50	53	P	P	22 28 51.5	+1.6
	0.4nm,0.5s,baz=304,slow=6.4,SNR=4.1 0.4nm,0.5s						
TXAR	Lajitas Array	92.64	53	P	P	22 30 05.2	-0.9
	0.2nm,0.6s,baz=316,slow=4.4,SNR=2.4 0.2nm,0.6s						

*SOF **08** 22:26:29.6, 41°.90N×23°.53E±0°.01, h15km±1km, MD2.6/7*
*SKO **08** 22:26:30.9, 41°.91N×23°.48E, h2km, ML2.1*
ISC 08 22:26:30.3±0.9, 41°.90N±0°.02×23°.52E±0°.02, h12km±8km, n37, σ1ˢ11/59, 22C-7D, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.30	259	Pg	Pg	22 26 36.3	-0.1
KKB				Sg	Sg	22 26 40.8	+0.3
KKB	Krupnik	0.30	259	⇑iPg	Pg	22 26 36.3	-0.1
KKB				i Sg	Sg	22 26 40.8	+0.3
MMB	Musomishta	0.39	154	⇑iPg	Pg	22 26 37.9	-0.2
MMB				Sg	Sg	22 26 43.5	+0.2
MMB	Musomishta	0.39	154	⇑iPg	Pg	22 26 37.9	-0.2
MMB				i Sg	Sg	22 26 43.3	0.0
PLNA	Plana	0.58	353	Pg	Pg	22 26 41.8	+0.1
PLNA				Sg	Sg	22 26 50.1	+0.7
VTS	Vitosha	0.75	344	⇑iPg	Pg	22 26 44.3	-0.6
VTS				Sg	Sg	22 26 54.3	-0.4
SRS	Serrai	0.78	176	⇑iPg	Pg	22 26 45.0	-0.4
SRS				i Sg	Sb	22 26 56.3	-0.1
PGB	Panagyurishte	0.78	38	⇑iPg	Pg	22 26 45.2	-0.3
PGB				Sg	Sb	22 26 56.5	+0.1
SOF	Sofia	0.79	352	Pg	Pg	22 26 45.7	+0.2
SOF				Sg	Sb	22 26 57.0	+0.5
KNT	Kendrikon	0.87	213	⇓iPg	Pg	22 26 46.8	-0.3
KNT				i Sg	Sg	22 26 57.9	-0.6
VAY	Valandovo	0.92	231	i Pg	Pb	22 26 48.2	+0.1
VAY				i Sg	Sg	22 27 00.2	+0.2
VAY				eRg	Rg	22 27 02.2	
	comp=E,34nm,0.3s						
VAY				eRg	Rg	22 27 02.7	
	comp=N,37nm,0.3s						
RZN	Rozhen	0.93	102	P	Pg	22 26 47.7	-0.6
PLD	Plovdiv	0.95	74	P	Pg	22 26 47.6	-0.9
PLD				S	Sg	22 27 00.8	-0.1
BLSH	Balsha	0.97	349	Pg	Pb	22 26 49.4	+0.3
BLSH				Sg	Sn	22 27 03.1	-0.5
SOH	Sokhos	1.08	187	⇑iPg	Pb	22 26 50.3	-0.7
SOH				i Sg	Sg	22 27 05.8	+0.5
TRAN	Tran	1.14	326	Pg	Pb	22 26 51.9	0.0
TRAN				Sg	Sn	22 27 07.6	0.0
THE	Thessaloniki	1.33	199	⇑iPg	Pb	22 26 55.1	-0.1
KDZ	Kurdzhali	1.39	101	P	Pb	22 26 55.8	-0.3
MPEP	Malo Peshtene	1.47	6	P	Pb	22 26 57.5	0.0
DIM	Dimitrovgrad	1.54	84	P	Pb	22 26 58.7	0.0
DIM				S	Sg	22 27 20.9	+1.0
BARS	Barje	1.56	307	i Pn	Pn	22 26 58.5	+0.6
PLVB	Pleven	1.69	28	⇑P	Pg	22 27 02.7	-0.1
PVL	Pavlikeni	1.73	44	S	Sg	22 27 26.7	+0.8
VALD	Valchedram	1.79	358	P	Pg	22 27 05.1	+0.4
BLKB	Belogradchik	1.83	340	⇑S	Sg	22 27 29.5	+0.3
ELND	Elena	2.02	59	⇓P	Pb	22 27 06.2	-0.8
ELND				⇑S	Sg	22 27 36.1	+0.7
BOVS	Bovan	2.19	323	⇑P	Pn	22 27 07.3	+0.9
VLAD	Vladila	2.20	17	⇑S	Sg	22 27 42.1	+1.2
PUNG	Punghina	2.42	350	⇑P	Pn	22 27 11.5	+1.9
PUNG				⇑S	Sg	22 27 47.1	-0.9
RAZG	Razgrad	2.76	52	⇑S	Sb	22 27 54.3	+1.0
HUMR	Humele	2.84	22	⇑P	Pb	22 27 18.8	-2.0
HERR	Herculane	3.09	345	⇑P	Pn	22 27 20.4	+1.5
HERR				⇓S	Sb	22 28 02.5	-0.2
MDVR	Moldovita	3.17	336	⇑P	Pn	22 27 21.3	+1.3
MDVR				⇓S	Sb	22 28 03.6	-1.5
GZR	Gura Zlata	3.54	351	⇓P	Pn	22 27 27.4	+2.3
ICOR	Ion Corvin	3.84	53	⇓S	Sb	22 28 21.8	-2.6
BZS	Buzias	3.96	340	⇑P	Pn	22 27 31.7	+0.8
BZS				⇑S	Sb	22 28 23.7	-4.2
NEHR	Nehoiu	4.06	29	⇓P	Pn	22 27 34.4	+2.2

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEHR				⇑S	Sb	22 28 28.4	-2.3

IDC **08** *22:27:21.2±1.2, 34°.98N×23°.91E, h0^{km}, mb3.7/8, mbtmp3.6/15, ML3.3/6, MS3.2/2, Error ellipse: s-maj=24.2km s-min=9.5km az=172.0*
ATH **08** *22:27:22.8, 35°.17N×23°.85E, h7^{km}±1^{km}, ML3.7/10, Manual Solution by A.Moschou First location: 2019/12/08 22:28:23, This location: 2019/12/08 22:34:32 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
ISK **08** *22:27:22.3, 35°.20N×23°.84E, h3^{km}, ML3.4/19*
HLW **08** *22:27:23.2, 35°.01N×23°.59E, h17^{km}±2^{km}, Ml3.5*
THE **08** *22:27:23.1, 35°N±1°×23°.8E±0°.9, h0^{km}±1^{km}, M3.5/13, MLh3.5/13*
AFAD **08** *22:27:30.0, 34°.91N×24°.21E, h35^{km}, ML3.4*
ISC 08 22:27:23.1±0.9, 35°.16N±0°.02×23°.86E±0°.02, h8^{km}±6^{km}, n95, σ1^{s}.56/131, mb3.5/8, 1D, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNDR	Palaiochora Ch	0.20	291	P	Pg	22 27 26.8	-0.4
KNDR				S	Sg	22 27 30.0	0.0
KNDR	Palaiochora Ch	0.20	291	Pg	Pg	22 27 26.8	-0.4
KNDR				Sg	Sg	22 27 29.9	-0.2
KNDR	Palaiochora Ch	0.20	291	P	Pg	22 27 26.9	-0.4
KNDR				S	Sg	22 27 29.8	-0.3
IMMV	Iera Moni Meta	0.31	19	P	Pg	22 27 28.8	-0.6
IMMV				S	Sg	22 27 33.5	0.0
IMMV	Iera Moni Meta	0.31	19	Pg	Pg	22 27 28.7	-0.6
IMMV				Sg	Sg	22 27 33.2	-0.3
IMMV	Iera Moni Meta	0.31	19	P	Pg	22 27 28.8	-0.6
IMMV				S	Sg	22 27 33.3	-0.3
CHNB	Souda	0.36	28	P	Pg	22 27 30.0	-0.3
CHNB				S	Sg	22 27 35.7	+0.6
VAM	Vamos	0.37	49	P	Pg	22 27 30.1	-0.3
VAM				S	Sg	22 27 36.1	+0.9
VAM	Vamos	0.37	49	P	Pg	22 27 30.1	-0.3
VAM				S	Sg	22 27 35.4	+0.1
GVD	Gavdhos	0.37	150	P	Pg	22 27 31.2	+0.8
GVD				S	Sb	22 27 38.0	+0.1
GVD	Gavdhos	0.37	150	Pg	Pg	22 27 30.9	+0.5
GVD	Gavdhos	0.37	150	P	Pg	22 27 30.2	-0.2
GVD				S	Sg	22 27 35.6	+0.3
CHAN	Chania	0.39	23	P	Pg	22 27 30.0	-0.6
CHAN				S	Sg	22 27 36.0	+0.3
CHAN	Chania	0.39	23	P	Pg	22 27 30.2	-0.5
CHAN				S	Sg	22 27 35.9	+0.1
ANKY	Antikythira Is	0.84	327	P	Pg	22 27 38.0	-1.2
ANKY				S	Sg	22 27 49.7	-0.4
ANKY	Antikythira Is	0.84	327	P	Pg	22 27 38.2	-1.0
ANKY				S	Sg	22 27 49.5	-0.6
IDI	Anoyia	0.85	81	Pg	Pg	22 27 38.4	-1.1
	26nm,0.3s,baz=252,slow=16,SNR=554						
IDI				Lg	Lg	22 27 50.9	
	182nm,0.3s,baz=325,slow=16,SNR=22						
IDI	Anoyia	0.85	81	P	Pg	22 27 38.4	-1.1
IDI				S	Sg	22 27 51.4	+0.8
IDI	Anoyia	0.85	81	Pg	Pg	22 27 38.6	-0.9
IDI				Sg	Sb	22 27 52.6	+0.8
IDI	Anoyia	0.85	81	P	Pg	22 27 38.4	-1.1
IDI				S	Sg	22 27 49.7	-0.9
IACM	Heraklion	1.00	81	P	Pg	22 27 41.3	-1.0
IACM				S	Sb	22 27 56.7	+0.7
IACM	Heraklion	1.00	81	P	Pg	22 27 41.3	-1.0
IACM				S	Sg	22 27 55.5	+0.1
KTHA	Kythira Island	1.27	330	P	Pg	22 27 46.0	-1.5
KTHA	Kythira Island	1.27	330	Pn	Pg	22 27 46.6	-0.9
KTHA				Sn	Sn	22 28 04.4	0.0
NPS	Neapolis	1.44	86	P	Pn	22 27 49.5	0.0
NPS				S	Sg	22 28 10.2	+0.8
NPS	Neapolis	1.44	86	P	Pn	22 27 49.5	0.0
NPS				S	Sb	22 28 08.8	+0.1
MHLO	Agia Marina, M	1.59	16	S	Sg	22 28 13.6	-0.5
MHLO	Agia Marina, M	1.59	16	P	Pn	22 27 52.2	+0.7
MHLO				S	Sn	22 28 12.7	+0.5
VLI	Veliai	1.72	335	P	Pn	22 27 53.2	-0.2
VLI				S	Sn	22 28 15.6	0.0
VLI	Veliai	1.72	335	P	Pn	22 27 53.2	-0.2
VLI				S	Sn	22 28 15.1	-0.5
THR6	Thira Island,	1.73	46	P	Pn	22 27 53.9	+0.5
THR5	Thira Island,	1.74	44	P	Pn	22 27 53.8	+0.2
SAP3	Santorini-Thir	1.75	43	S	Sn	22 28 16.8	+0.4
SNT5	Nea Kammeni, S	1.76	45	P	Pn	22 27 54.0	+0.2
THERA	Ancient Thera,	1.78	47	P	Pn	22 27 53.8	-0.3
THERA				S	Sn	22 28 17.5	+0.4
THERA	Ancient Thera,	1.78	47	P	Pn	22 27 53.9	-0.3
THERA				S	Sn	22 28 17.1	0.0
ZKR	Zakros	1.93	91	P	Pb	22 27 59.3	+0.7
ZKR	Zakros	1.93	91	Pn	Pn	22 27 58.0	+1.7
ZKR				Sn	Sn	22 28 22.9	+2.1
APE	Apeiranthos	2.33	35	P	Pn	22 28 01.6	-0.2
APE				S	Sn	22 28 32.5	+1.7
APE	Apeiranthos	2.33	35	Pn	Pn	22 28 02.6	+0.8
APE				Sn	Sn	22 28 32.0	+1.2
APE	Apeiranthos	2.33	35	⇓S	Sg	22 28 36.7	-1.4
APE	Apeiranthos	2.33	35	P	Pn	22 28 02.1	+0.2
PYL	PYLOS	2.44	316	P	Pn	22 28 03.3	+0.1
PYL	PYLOS	2.44	316	P	Pn	22 28 02.8	-0.4
MET4	Agioi Theodoro	2.48	352	P	Pn	22 28 03.6	-0.2
MET5	Makryloggos,Me	2.49	351	P	Pn	22 28 03.9	0.0
ITM	Ithomi	2.55	323	Pn	Pn	22 28 05.5	+0.7
ITM	Ithomi	2.55	323	P	Pn	22 28 06.3	+1.5
KARP	Karpathos	2.73	81	Pn	Pn	22 28 08.8	+1.6
BODT	Bodrum	3.38	55	Pn	Pn	22 28 18.1	+2.0
YKAV	Yalikavak-Bodr	3.39	54	Pn	Pn	22 28 17.5	+1.2
DAT	Datca	3.40	62	Pn	Pn	22 28 18.0	+1.5
ARG	Arkhangelos	3.63	72	Pn	Pn	22 28 20.9	+1.3
CHOS	Chios island	3.67	28	Pn	Pn	22 28 21.8	+1.6
GCAM	G?zelcaml?	3.72	46	Pn	Pn	22 28 22.4	+1.6
CESE	eme	3.72	31	Pn	Pn	22 28 22.6	+1.8
MLSB	Milas	3.82	55	Pn	Pn	22 28 23.9	+1.7
SLUM	Salum	3.83	162	P	Pn	22 28 20.4	-2.0
URLA	Izmir	3.87	34	Pn	Pn	22 28 24.9	+1.9
TURN	Turunc	3.90	64	P	Pn	22 28 25.3	+1.9
TURN	Turunc	3.90	64	Pn	Pn	22 28 25.4	+2.0
YER	Yerkesik	4.08	60	Pn	Pn	22 28 28.0	+2.1
DALY	Dalyan (Mula)	4.22	66	Pn	Pn	22 28 30.1	+2.4
AYDB	Zeytinkoy-Aydi	4.27	48	Pn	Pn	22 28 30.6	+2.0
SIGR	SIGRI	4.34	21	Pn	Pn	22 28 30.8	+1.4
IZZE	Mula-Seydike	4.54	72	P	Pn	22 28 33.8	+1.6
IZZE				S	Sn	22 29 24.4	-0.8
IZZE				*i* IAML		22 29 40.0	
	comp=N,38nm,0.5s						
DNZT	Denizli-Tavas-	4.68	62	P	Pn	22 28 38.3	+4.2
DNZT				S	Sn	22 29 29.9	+1.2
TAVA	DENIZLI_Tavas	4.68	59	P	Pn	22 28 37.6	+3.5
AKAS	Kas	4.80	75	P	Pn	22 28 38.0	+2.2
AKAS				S	Sn	22 29 31.4	-0.3
AKAS				*i* IAML		22 29 43.0	
	comp=N,52nm,1.2s						
AKAS				*i* IAML		22 30 03.0	
	comp=E,31nm,1.0s						
CAEL	Denizli, Camel	4.83	65	P	Pn	22 28 39.5	+3.2
CAEL				*i* IAML		22 29 56.0	
	comp=N,59nm,1.1s						
CAEL				*i* IAML		22 30 00.0	
	comp=E,52nm,1.7s						
DNIZ	Denizli-Tavas-	4.85	58	P	Pn	22 28 39.3	+2.9
KNIK	Mula-Seydike	4.93	68	P	Pn	22 28 40.3	+2.8
KNIK				S	Sn	22 29 34.8	0.0
GOLH	Golhisar	5.05	64	P	Pn	22 28 42.6	+3.4
AKUM	Antalya-Kumluc	5.40	76	P	Pn	22 28 46.3	+2.4
AKUM				*i* IAML		22 30 37.0	
	comp=E,30nm,1.9s						
KORT	Korkueli	5.57	69	P	Pn	22 28 48.8	+2.5
SWA2		6.05	167	P	Pn	22 28 51.4	-1.5
VAE	Valguarnera	7.97	290	Pn	Pn	22 29 20.1	+0.9
	1.4nm,0.4s,baz=118,slow=13,SNR=1.8						
VAE				Sn	Sn	22 30 55.6	+6.0
	0.4nm,0.3s,baz=41,slow=19,SNR=2.4						
RYAN	Fayoum	8.14	136	P	Pn	22 29 21.8	+0.2
RYAN				S	Sn	22 30 49.0	-4.9
HFRF	Wahat Farafira	8.85	153	P	Pn	22 29 30.5	-0.9
BRTR	Keskin Array B	9.01	57	Pn	Pn	22 29 34.0	+0.4
	0.1nm,0.3s,baz=244,slow=16,SNR=7.3						
	1.0nm,0.8s						
MMAI	Mount Meron Ar	9.81	99	Pn	Pn	22 29 41.8	-2.8
	0.9nm,0.3s,baz=274,slow=11,SNR=1.4						
MMAI				Sn	Sn	22 31 29.8	-5.2
	1.2nm,0.3s,baz=277,slow=23,SNR=4.9						
MMAI				LR	LR	22 35 33.9	
	comp=Z,54nm,18.1s,baz=294,slow=51						
	0.8nm,0.5s						
EIL	Elat	10.85	117	Pn	Pn	22 29 54.3	-4.5
	0.7nm,0.3s,baz=302,slow=9.5,SNR=7.0						
EIL				Sn	Sn	22 31 51.6	-8.8
	0.8nm,0.3s,baz=307,slow=19,SNR=5.3						
	1.6nm,0.4s						
GERES	GERESS Array B	15.60	334	Pn	P	22 31 06.4	-1.2
	baz=134,slow=12,SNR=5.2						
	0.8nm,0.7s						
AKASG	Malin Array Be	16.01	12	Pn	Pn	22 31 06.7	-1.9
	0.5nm,0.3s,baz=208,slow=10,SNR=2.7						
	0.1nm,0.3s						
KBZ	Khabaz	16.98	54	Pn	P	22 31 22.9	0.0
	0.1nm,0.3s,baz=207,slow=2.3,SNR=4.5						
	0.7nm,0.4s						
ESDC	Sonseca Array	22.51	290	P	P	22 32 24.6	+1.4
	0.7nm,0.9s,baz=90,slow=11,SNR=4.5						
	0.7nm,0.9s						
HFS	Hagfors	25.84	348	P	P	22 32 55.6	+0.9
	1.3nm,0.5s,baz=163,slow=10,SNR=8.5						
	1.3nm,0.5s						
EKA	Eskdalemuir Ar	27.43	326	P	P	22 33 10.6	+1.5
	1.1nm,0.7s,baz=127,slow=10,SNR=1.4						
	1.1nm,0.7s						
TORD	Torodi Ar. Bea	29.69	228	P	P	22 33 29.3	-0.3
	2.3nm,0.3s,baz=32,slow=13,SNR=1.4						
	2.3nm,0.3s						
ARCES	ARCESS Array B	34.44	1	P	P	22 34 11.4	+0.6
	1.9nm,0.8s,baz=187,slow=8.3,SNR=1.2						
	1.9nm,0.8s						
BVAR	Borovoye Array	37.12	47	P	P	22 34 34.5	+0.5
	0.2nm,0.5s,baz=274,slow=8.5,SNR=1.8						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	41.95	51	P	P	22 35 13.0	-1.3
	0.4nm,0.5s,baz=274,slow=8.6,SNR=5.6						
	0.4nm,0.5s						
MKAR	Makanchi Array	44.66	56	P	P	22 35 35.3	-0.9
	0.2nm,0.3s,baz=274,slow=8.0,SNR=6.2						
	0.2nm,0.3s						
ZALV	Zalesovo Beam	45.77	46	P	P	22 35 41.4	-3.5
	0.2nm,0.3s,baz=265,slow=7.7,SNR=1.8						
JOW	Kunigami	85.69	60	LR	LR	23 22 23.7	
	comp=Z,35nm,19.4s,baz=304,slow=38						

IDC 08 22:40:54.1±2.4, 16°.09S×174°.44W, h0^{km}, mb4.2/5, mbtmp4.2/5, Error ellipse: s-maj=63.8km s-min=43.6km az=23.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	42.83	240	P	P	22 48 55.0	+0.9
	3.9nm,0.8s,baz=70,slow=12,SNR=5.9						
	3.9nm,0.8s						
WRA	Warramunga Arr	48.71	257	P	P	22 49 40.0	-0.8
	0.9nm,0.6s,baz=93,slow=7.9,SNR=8.8						
	0.9nm,0.6s						
ASAR	Alice Springs	48.95	252	P	P	22 49 42.2	-0.4
	2.9nm,0.5s,baz=93,slow=7.8,SNR=55						
	2.9nm,0.5s						
FITZ	Fitzroy Crossi	57.09	259	P	P	22 50 42.7	0.0
	1.5nm,0.6s,baz=108,slow=6.4,SNR=2.0						
	1.5nm,0.6s						
QSPA	South Pole Qui	73.96	180	P	P	22 52 31.1	-0.1
	2.3nm,0.9s,baz=49,slow=1.4,SNR=5.9						
	2.3nm,0.9s						
BRTR	Keskin Array B	146.04	319	PKPbc	PKPdf	23 00 35.8	+0.1
	0.7nm,0.9s,baz=38,slow=2.6,SNR=2.3						

FUNV **08** *22:41:07.8, 10°.75N×62°.12W, h27^{km}, MW3.9*
TRN **08** *22:41:07.5, 10°.84N×62°.10W, h106^{km}, MD3.1, North of the Paria peninsula.*
ISC 08 22:41:06.4±2.5, 10°.9N±0°.1×62°.2W±0°.1, h107^{km}±25^{km}, n11, σ1^{s}.03/20, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSMG	Mucurapo Girls	0.70	105	*e*P	Pn	22 41 25.1	+0.7
PSMG				*e*S	Sn	22 41 36.8	-1.1
GRGR	Grenville	1.39	23	*e*P	Pn	22 41 32.4	+0.7
GRGR				*e*S	Sn	22 41 51.1	+0.2
GRHS	Sauteurs	1.47	22	*e*P	Pn	22 41 33.6	+0.9
GRHS				*e*S	Sn	22 41 52.2	-0.6
GCMP	Grenada, Carri	1.80	25	*e*P	Pn	22 41 37.5	+0.8
GCMP				*e*S	Sn	22 41 59.2	-0.6
PCRV	Puerto La Cruz	2.47	254	*e*P	Pn	22 41 46.2	+0.7
PCRV				*e*S	Sn	22 42 14.5	-0.9
SVB	Belmont	2.58	21	*e*P	Pn	22 41 48.0	+1.1
SVB				*e*S	Sn	22 42 17.2	-0.7
MCLT	Moule a Chique	3.10	24	*e*P	Pn	22 41 53.8	+0.1
MCLT				*e*S	Sn	22 42 28.7	-1.5
SLBI	Saint Lucia, B	3.38	21	*e*P	Pn	22 41 58.0	+0.7
SLBI				*e*S	Sn	22 42 35.9	-0.9
BIM	Bigot	3.81	17	*e*P	Pn	22 42 04.2	+0.9
BIM				*e*S	Sn	22 42 45.9	-1.3
CACV	CAICARA DEL OR	5.38	233	*e*P	Pn	22 42 19.4	-4.9
CACV				*e*S	Sn	22 43 12.8	-12
TURV	Turiamo	5.54	266	*e*P	Pn	22 42 27.8	+1.2
TURV				*e*S	Sn	22 43 27.4	-1.6

IDC **08** *22:41:11.6±0.5, 35°.10N×23°.80E, h0^{km}, mb4.2/24, mbtmp4.1/35, ML4.0/10, MS3.7/21, Error ellipse: s-maj=12.4km s-min=8.0km az=175.0*
MOS **08** *22:41:12.1±1.5, 35°.07N×23°.68E, h13^{km}, mb4.6/18, Error ellipse: s-maj=7.1km s-min=3.8km az=71.8*
NAO **08** *22:41:13.6, 34°.95N×24°.51E, h10^{km}, MB4.0*
NEIC **08** *22:41:13.7±1.4, 35°.15N±0°.07×23°.86E±0°.05, h7^{km}±4^{km}, mb4.6/50, Error ellipse: s-maj=10.5km s-min=6.3km az=179.0*
ISK **08** *22:41:13.5, 35°.21N×23°.84E, h1^{km}, ML4.3/11*
ATH **08** *22:41:14.3, 35°.18N×23°.84E, h4^{km}, Mw4.2, Moment Tensor Solution. s6 Moment tensor: M_{rr}-0.70; $M_{\theta\theta}$-1.95; $M_{\phi\phi}$2.65; $M_{r\theta}$0.93; $M_{\theta\phi}$-0.16; $M_{\phi r}$-0.07; Fault plane solution: NP1:ϕ_s317.00000°, δ72.00000°, λ-158.00000°. NP2:ϕ_s220.00000°, δ69.00000°, λ-19.00000°.*
THE **08** *22:41:14.3, 35°.2N±0°.8×23°.8E±0°.7, h0^{km}±1^{km}, M4.2/14, MLh4.2/14*
HLW **08** *22:41:14.4, 35°.24N×23°.99E, h17^{km}±3^{km}, Ml4.2*
MCSM **08** *22:41:14.6±0.7, 35°N±5°×2°4E±°, h10^{km}±4^{km}, mb4.2, mB4.3, MLv4.7, Mw(mB)3.5*
PDG **08** *22:41:15.9±0.1, 35°.27N×23°.24E, h10^{km}±9^{km}, ML4.2/9, Error ellipse: s-maj=9.6km s-min=7.1km az=90.0*
GII **08** *22:41:20.8±0.0, 34°.975N±0°.004×24°.429E±0°.001, h30^{km}, Mws4.6, confirmed*
AFAD **08** *22:41:20.0, 35°.08N×23°.97E, h33^{km}, MW4.5*
ISC 08 22:41:14.3±0.6, 35°.13N±0°.02×23°.83E±0°.02, h13^{km}±4^{km}, n448, σ2^{s}.13/505, mb4.4/53, MS3.7/15, 39C-14D, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNDR	Palaiochora Ch	0.20	303	P	Pg	22 41 17.9	-0.8
KNDR				S	Sg	22 41 21.0	-0.7
KNDR	Palaiochora Ch	0.20	303	Pg	Pg	22 41 17.9	-0.8
KNDR				Sg	Sg	22 41 21.2	-0.5
KNDR	Palaiochora Ch	0.20	303	P	Pg	22 41 17.9	-0.8
KNDR				S	Sg	22 41 20.4	-1.3
IMMV	Iera Moni Meta	0.35	20	S	Sg	22 41 24.3	-2.0
IMMV	Iera Moni Meta	0.35	20	Pg	Pg	22 41 19.9	-1.6
IMMV				Sg	Sg	22 41 24.9	-1.4
IMMV	Iera Moni Meta	0.35	20	P	Pg	22 41 19.8	-1.6
IMMV				S	Sg	22 41 24.0	-2.3
GVD	Gavdhos	0.36	144	P	Pb	22 41 22.3	-0.2
GVD				S	Sb	22 41 29.0	+1.0
GVD	Gavdhos	0.36	144	Pg	Pb	22 41 22.5	0.0
GVD	Gavdhos	0.36	144	P	Pg	22 41 22.1	+0.6
GVD				S	Sg	22 41 27.2	+0.9
CHNB	Souda	0.41	28	P	Pg	22 41 21.3	-1.1
CHNB				S	Sg	22 41 26.4	-1.5
VAM	Vamos	0.41	47	P	Pg	22 41 21.2	-1.3
VAM				S	Sg	22 41 27.1	-0.9
VAM	Vamos	0.41	47	P	Pg	22 41 21.1	-1.4
VAM				S	Sg	22 41 26.2	-1.9
CHAN	Chania	0.43	24	P	Pg	22 41 21.2	-1.6
CHAN				S	Sg	22 41 27.7	-0.9
CHAN	Chania	0.43	24	P	Pg	22 41 21.4	-1.4
CHAN				S	Sg	22 41 26.9	-1.6
ANKY	Antikythira Is	0.85	330	P	Pg	22 41 29.3	-1.5
ANKY				S	Sg	22 41 41.0	-1.1
ANKY	Antikythira Is	0.85	330	P	Pg	22 41 29.5	-1.3
ANKY				S	Sg	22 41 40.5	-1.5
IDI	Anoyia	0.88	79	Pg	Pg	22 41 29.2	-2.1
	78nm,0.3s,baz=252,slow=17,SNR=330						
IDI				Lg	Lg	22 41 42.8	
	648nm,0.3s,baz=320,slow=16,SNR=19						
IDI	Anoyia	0.88	79	P	Pg	22 41 29.3	-2.1
IDI	Anoyia	0.88	79		Pg	22 41 29.4	-2.0
IDI	Anoyia	0.88	79	Pg	Pg	22 41 29.8	-1.6
IDI				Sg	Sb	22 41 43.3	0.0
IDI	Anoyia	0.88	79	P	Pg	22 41 29.9	-1.6
IDI				S	Sg	22 41 42.1	-0.8
IACM	Heraklion	1.03	80	P	Pg	22 41 32.4	-1.7
IACM				S	Sb	22 41 48.2	+0.7
IACM	Heraklion	1.03	80	P	Pg	22 41 32.8	-1.4
IACM				S	Sb	22 41 47.4	-0.1
KTHA	Kythira Island	1.29	331	P	Pn	22 41 37.2	-0.9
KTHA	Kythira Island	1.29	331	Pn	Pn	22 41 37.7	-0.4
KTHA				Sn	Sn	22 41 55.4	+0.1
KTHA	Kythira Island	1.29	331	P	Pn	22 41 37.5	-0.6
NPS	Neapolis	1.47	84	P	Pn	22 41 40.7	+0.2
NPS				S	Sg	22 42 02.1	+0.5
NPS	Neapolis	1.47	84	P	Pn	22 41 40.8	+0.2
NPS				S	Sb	22 42 00.5	+0.4
NPS1	Neapolis Lacon	1.52	336	P	Pn	22 41 41.6	+0.4
NPS1				S	Sb	22 42 01.3	-0.1
MHLO	Agia Marina, M	1.63	16	P	Pn	22 41 42.3	-0.4
MHLO				S	Sg	22 42 05.2	-1.5
MHLO	Agia Marina, M	1.63	16	P	Pn	22 41 43.1	+0.4
MHLO				S	Sn	22 42 03.6	0.0
MNVA	Monemvasia	1.68	338	P	Pb	22 41 44.5	-0.7
MNVA				S	Sn	22 42 05.3	+0.3
VLI	Veliai	1.75	336	P	Pn	22 41 44.5	+0.2
VLI				S	Sb	22 42 07.8	-0.3
VLI	Veliai	1.75	336	P	Pn	22 41 44.7	+0.3
VLI				S	Sn	22 42 06.8	+0.3
THR9	Santorini-Faro	1.75	45	P	Pn	22 41 44.0	-0.4
THR6	Thira Island,	1.77	46	P	Pb	22 41 45.8	-0.8
THR5	Thira Island,	1.78	43	P	Pn	22 41 45.4	+0.5
SAP3	Santorini-Thir	1.80	43	P	Pn	22 41 45.4	+0.4
SAP3	Santorini-Thir	1.80	43	P	Pn	22 41 45.6	+0.6
SAP3				S	Sb	22 42 08.4	-1.1
SNT5	Nea Kammeni, S	1.80	45	P	Pn	22 41 45.1	0.0
SNT5	Nea Kammeni, S	1.80	45	P	Pn	22 41 45.2	+0.1
THR3	Thira Island,	1.81	45	P	Pn	22 41 45.1	-0.1
THR3	Thira Island,	1.81	45	P	Pb	22 41 46.3	-0.9
THERA	Ancient Thera,	1.82	47	P	Pn	22 41 45.1	-0.4
THERA	Ancient Thera,	1.82	47	P	Pn	22 41 45.3	-0.1
THERA				S	Sb	22 42 09.5	-0.8
THR8	Santorini-Mono	1.85	46	P	Pn	22 41 45.9	+0.1
SIT2	Siteia	1.87	87	P	Pb	22 41 47.5	-0.8
ZKR	Zakros	1.96	90	Pn	Pb	22 41 49.1	-0.7
ZKR				Sn	Sb	22 42 14.8	+0.6
ZKR	Zakros	1.96	90	P	Pb	22 41 49.5	-0.4
APE	Apeiranthos	2.38	35	Pn	Pn	22 41 53.6	+0.5
APE				Sn	Sn	22 42 23.3	+1.1
APE	Apeiranthos	2.38	35	⇑P	Pb	22 41 55.1	-1.9
APE				⇑S	Sb	22 42 27.0	+0.7
APE	Apeiranthos	2.38	35	⇑*e*P	Pn	22 41 52.5	-0.6
APE	Apeiranthos	2.38	35	P	Pn	22 41 52.3	-0.8
APE				S	Sb	22 42 24.4	-2.0
ITM	Ithomi	2.56	324		Pn	22 41 55.8	+0.2
ITM	Ithomi	2.56	324	Pn	Pn	22 41 56.9	+1.3
ITM				Sn	Sn	22 42 28.3	+1.6
KARP	Karpathos	2.76	80	Pn	Pn	22 41 57.8	-0.5
KARP	Karpathos	2.76	80	Pn	Pn	22 42 00.1	+1.8
KARP	Karpathos	2.76	80	P	Pn	22 42 00.1	+1.8
YAZI	Mula-Dat§a-	3.33	61	P	Pn	22 42 06.8	+0.7
BODT	Bodrum	3.42	55	Pn	Pn	22 42 08.9	+1.6
DAT	Datca	3.44	61	Pn	Pn	22 42 09.3	+1.6
BDRM	Kayabasi	3.51	55	P	Pn	22 42 10.4	+1.8
ARG	Arkhangelos	3.66	72		Pn	22 42 10.5	-0.2
ARG	Arkhangelos	3.66	72	Pn	Pn	22 42 12.8	+2.1
ARG	Arkhangelos	3.66	72	P	Pn	22 42 10.5	-0.2
CHOS	Chios island	3.71	28	Pn	Pn	22 42 12.8	+1.3
GCAM	G?zelcaml?	3.76	46	Pn	Pn	22 42 13.9	+1.9
SLUM	Salum	3.81	162	P	Pn	22 42 13.5	+0.8
MLSB	Milas	3.86	55	Pn	Pn	22 42 14.7	+1.3
URLA	Izmir	3.92	34	Pn	Pn	22 42 15.8	+1.6
TURN	Turunc	3.94	64	P	Pn	22 42 16.8	+2.2
TURN				S	Sn	22 43 00.6	0.0
TURN	Turunc	3.94	64	Pn	Pn	22 42 16.7	+2.2
YER	Yerkesik	4.12	60	Pn	Pn	22 42 19.1	+2.0
BLCB	Balcova	4.15	37	Pn	Pn	22 42 19.1	+1.7
MULA	Mugla, Merkez-	4.21	58	P	Pn	22 42 21.2	+2.9
DALY	Dalyan (Mula)	4.26	65	Pn	Pn	22 42 21.3	+2.4
AYDB	Zeytinkoy-Aydi	4.31	48	Pn	Pn	22 42 21.9	+2.1
SIGR	SIGRI	4.39	21	Pn	Pn	22 42 22.1	+1.5
ESEN	Aydn-Nazilli	4.51	52	P	Pn	22 42 24.6	+2.2
IZZE	Mula-Seydike	4.58	72	P	Pn	22 42 25.3	+2.0
IZZE				S	Sn	22 43 17.2	+0.8
DNZT	Denizli-Tavas-	4.72	61	P	Pn	22 42 28.8	+3.5
DNZT				S	Sn	22 43 22.0	+2.0
TAVA	DENIZLI_Tavas	4.72	59	P	Pn	22 42 29.0	+3.7
AKAS	Kas	4.83	75	P	Pn	22 42 28.3	+1.5
AKAS				S	Sn	22 43 24.3	+1.5
AKAS	Kas	4.83	75		Pn	22 42 26.6	-0.2
CAEL	Denizli, Camel	4.87	64	P	Pn	22 42 30.0	+2.5
CAEL				S	Sn	22 43 28.6	+4.8
DNIZ	Denizli-Tavas-	4.89	58	P	Pn	22 42 31.5	+3.8
KNIK	Mula-Seydike	4.96	68	P	Pn	22 42 31.6	+2.9
KNIK				S	Sn	22 43 27.4	+1.4
MANT	Manisa	5.07	47	Pn	Pn	22 42 29.5	-0.7
LIT	Litokhoron	5.08	348		Pn	22 42 29.7	-0.5
LIT	Litokhoron	5.08	348	P	Pn	22 42 29.7	-0.5
GOLH	Golhisar	5.09	64	P	Pn	22 42 33.5	+3.0
ELL	Elmali	5.19	70		Pn	22 42 31.4	-0.4
ELL	Elmali	5.19	70	P	Pn	22 42 31.4	-0.4
INCE	Denizli-Bozkur	5.30	59	P	Pn	22 42 36.1	+2.8
AKUM	Antalya-Kumluc	5.43	75	P	Pn	22 42 36.8	+1.8
AKUM				S	Sn	22 43 35.9	-1.5
KEK	Kerkira	5.59	326	Pn	Pn	22 42 37.7	+0.5
BRDR	BURDUR-Merkez	5.64	61	P	Pn	22 42 40.8	+2.8
CAVK	Edirne/Enez-Ca	5.86	18	⇑P	Pn	22 42 42.9	+2.1
BUCA	Burdur, Bucak-	5.87	66	P	Pn	22 42 43.7	+2.6
BUCA				S	Sn	22 43 48.9	+0.7
ISP	Isparta	6.03	62		Pn	22 42 43.1	-0.2
ISP	Isparta	6.03	62	⇑*e*P	Pn	22 42 45.8	+2.5
ISP	Isparta	6.03	62	P	Pn	22 42 44.4	+1.1
SWA2		6.03	166	P	Pn	22 42 44.1	+0.9
RDO	Rodhopi	6.16	12	Pn	Pn	22 42 44.5	-0.5
VAY	Valandovo	6.26	351	*i* Pn	Pn	22 42 48.8	+2.4
VAY				*e*Sn	Sn	22 44 02.3	+4.4
OHR	Ohrid	6.43	339	*i* Pn	Pn	22 42 50.1	+1.3
OHR				*e*Sn	Sn	22 44 02.9	+0.7
TIP	Timpagrande	6.94	308		Pn	22 42 54.9	-1.0
TIP	Timpagrande	6.94	308	⇑P	Pn	22 42 55.1	-0.7
TIP				⇑S	Sn	22 44 13.4	-1.3
BORA	Eskisehir	7.09	46		Pn	22 42 57.6	-0.2
CEL	Celeste	7.10	298		Pn	22 42 56.8	-1.2
ULC	Ulcinj	7.71	334	*e*Pn	Pn	22 43 05.6	-0.7
ULC				*i* Sn	Sn	22 44 27.7	-5.9
CSS	Mathiatis	7.79	88		Pn	22 43 06.4	-1.1
CSS	Mathiatis	7.79	88	P	Pn	22 43 07.8	+0.3
	0.2nm26nm,0.8s						
CSS	Mathiatis	7.79	88	P	Pn	22 43 06.1	-1.4
CSS	Mathiatis	7.79	88	S	Sn	22 44 28.2	-7.4
DRME	Dracevica, Mon	7.93	334	*e*Pn	Pn	22 43 08.7	-0.6
DRME				*e*Sn	Sn	22 44 33.1	-5.8
RAFF	Raffo Rosso	7.94	288		Pn	22 43 08.4	-1.0
ELND	Elena	7.95	11	⇑P	Pn	22 43 11.3	+1.7
VAE	Valguarnera	7.96	290	Pn	Pn	22 43 11.1	+1.3
	7.5nm,0.5s,baz=136,slow=8.3,SNR=6.8						
VAE				Sn	Sn	22 44 39.7	0.0
	4.0nm,0.3s,baz=84,slow=10,SNR=6.3						
CUC	Castrocucco	8.00	310		Pn	22 43 09.8	-0.6
PDG	Podgorica	8.12	335		Pn	22 43 11.6	-0.3
PDG	Podgorica	8.12	335	⇓P	Pn	22 43 11.7	-0.1
PDG	Podgorica	8.12	335	*e*Pn	Pn	22 43 11.3	-0.6
PDG				*i* Sn	Sn	22 44 37.8	-5.7
BUM	Brajici-Budva	8.13	333	*e*Pn	Pn	22 43 11.4	-0.8
BUM				*i* Sn	Sn	22 44 37.9	-6.1
RYAN	Fayoum	8.14	136	P	Pn	22 43 12.0	-0.2
PLVB	Pleven	8.27	4	⇑P	Pn	22 43 15.1	+1.1
IVA	Berane	8.32	340	*e*Pn	Pn	22 43 14.5	-0.2
IVA				*i* Sn	Sn	22 44 43.2	-5.3
CEME	Cevo	8.34	334	*e*Pn	Pn	22 43 14.1	-0.9

CEME				eSn	Sn	22 44 42.7	-6.4
ACER	Acerenza	8.41	315		Pn	22 43 15.7	-0.2
KOME	Kolasin	8.41	338	ePn	Pn	22 43 15.6	-0.4
KOME				eSn	Sn	22 44 45.1	-5.7
HCY	Herceg Novi	8.41	332	ePn	Pn	22 43 15.1	-0.8
HCY				i Sn	Sn	22 44 44.3	-6.4
LOZB	Loznitsa	8.51	14	⇑P	Pn	22 43 18.6	+1.4
ANTO	Ankara	8.55	54		Pn	22 43 17.4	-0.5
ANTO	Ankara	8.55	54	⇑P	Pn	22 43 22.1	+4.2
ANTO	Ankara	8.55	54	P	Pn	22 43 17.4	-0.5
ANTO	Ankara	8.55	54	P	Pn	22 43 20.2	+2.3
	15nm,0.8s						
BOVS	Bovan	8.65	350	⇑P	Pn	22 43 20.2	+1.0
RAZG	Razgrad	8.68	13	⇑P	Pn	22 43 22.1	+2.5
BRY	Bratogost	8.79	334	ePn	Pn	22 43 20.5	-0.7
BRY				i Sn	Sn	22 44 53.5	-6.6
HFRF	Wahat Farafira	8.83	153	P	Pn	22 43 21.5	-0.2
HFRF				S	Sn	22 44 56.0	-5.1
VLAD	Vladila	8.87	3	⇓P	Pn	22 43 24.7	+2.5
BR105	Keskin Array S	9.03	57	P	Pn	22 43 26.7	+2.1
	136nm15nm,0.8s						
BR106	Keskin Array S	9.04	57	P	Pn	22 43 26.8	+2.1
	99nm9.5nm,0.8s						
BR104	Keskin Array S	9.04	57	P	Pn	22 43 26.8	+2.1
	140nm18nm,1.0s						
BRTR	Keskin Array B	9.05	57	Pn	Pn	22 43 27.4	+2.5
	0.3nm,0.3s,baz=233,slow=14,SNR=32						
BRTR				LR	LR	22 46 58.0	
	comp=Z,141nm,19.1s,baz=238,slow=38						
	6.0nm,0.7s						
BRTR	Keskin Array B	9.05	57		Pn	22 43 23.8	-1.0
BRTR	Keskin Array B	9.05	57	i P	Pn	22 43 27.7	+2.9
BRTR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BR131	Keskin Array S	9.05	57		Pn	22 43 23.9	-1.0
BR131	Keskin Array S	9.05	57	deP	Pn	22 43 27.7	+2.9
NBNS	Bani Suef	9.07	134	P	Pn	22 43 25.7	+0.7
SGRT	San Giovanni R	9.16	319		Pn	22 43 27.6	+1.3
PAOL	Paolisi	9.38	312		Pn	22 43 28.9	-0.4
HNTI	Hanita	9.63	99	P	Pn	22 43 31.0	-1.6
SLTI	Sal'it	9.78	104	P	Pn	22 43 31.9	-2.8
SLTI	Sal'it	9.78	104	S	Sn	22 45 16.4	-7.9
MDVR	Moldovita	9.78	351	⇑P	Pn	22 43 35.8	+1.1
HERR	Herculane	9.80	354	⇓P	Pn	22 43 36.7	+1.7
KZIT	Kziot	9.82	112	P	Pn	22 43 34.0	-1.2
KZIT	Kziot	9.82	112	S	Sn	22 45 16.9	-8.5
MMAI	Mount Meron Ar	9.83	99	Pn	Pn	22 43 33.6	-1.9
	comp=Z,2.8nm,0.3s,baz=289,slow=10,SNR=13						
MMAI				Sn	Sn	22 45 21.0	-4.7
	comp=Z,3.5nm,0.3s,baz=284,slow=30,SNR=6.5						
	comp=Z,1.9nm,0.4s						
AMAZ	Amatzia	9.94	108	P	Pn	22 43 34.9	-2.0
SALP	Salfit	9.96	105	P	Pn	22 43 34.6	-2.5
TIRR	Tirgusor	9.96	19	P	Pn	22 43 40.0	+2.9
	comp=Z,15nm,1.4s						
GEM	Giv'at Ha'Em	9.99	98	P	Pn	22 43 35.4	-2.2
GEM	Giv'at Ha'Em	9.99	98	S	Sn	22 45 21.2	-8.3
MMLI	Mount Malkishu	10.01	102	P	Pn	22 43 36.0	-1.9
NATI	Neve Ativ	10.04	97	P	Pn	22 43 35.8	-2.4
NATI	Neve Ativ	10.04	97	S	Sn	22 45 22.7	-8.0
HMDT	Nahal Hemdat	10.16	103	P	Pn	22 43 37.9	-2.0
HMDT	Nahal Hemdat	10.16	103	S	Sn	22 45 25.1	-8.6
KSHT	Keshet	10.17	99	P	Pn	22 43 38.4	-1.6
KSHT	Keshet	10.17	99	S	Sn	22 45 26.2	-7.9
YTIR	Yattir	10.17	108	P	Pn	22 43 38.1	-2.0
YTIR	Yattir	10.17	108	S	Sn	22 45 26.3	-7.8
ISR	Istrita	10.19	11	⇑P	Pn	22 43 42.9	+2.5
ISR	Istrita	10.19	11	P	Pn	22 43 42.9	+2.5
ISR	Istrita	10.19	11	P	Pn	22 43 43.3	+2.9
	comp=Z,26nm,1.2s						
UJAP	Al Uja	10.21	105	P	Pn	22 43 37.9	-2.7
RMNI	Mount Ramon	10.24	113	P	Pn	22 43 39.4	-1.7
RMNI	Mount Ramon	10.24	113	S	Sn	22 45 28.5	-7.4
ARR	Arges	10.25	3	⇑P	Pn	22 43 43.6	+2.4
GZR	Gura Zlata	10.29	356	⇑P	Pn	22 43 42.2	+0.5
GZR	Gura Zlata	10.29	356	P	Pn	22 43 42.1	+0.5
DSI	Dead Sea	10.29	107	P	Pn	22 43 39.7	-2.0
DSI	Dead Sea	10.29	107	S	Sn	22 45 28.2	-8.8
BALJ	Balqa	10.30	104		Pn	22 43 40.7	-1.2
BNN	Bunyan	10.30	65		Pn	22 43 42.5	+0.5
LOT	Lotru	10.31	360	⇑P	Pn	22 43 43.9	+1.9
MSBI	Mazada	10.38	108	P	Pn	22 43 40.5	-2.3
MSBI	Mazada	10.38	108	S	Sn	22 45 30.4	-8.6
KRMI	Paran Flat	10.46	116	P	Pn	22 43 42.1	-1.9
NEHR	Nehoiu	10.46	10	⇑P	Pn	22 43 46.1	+2.1
MLR	Muntele Rosu	10.48	8	Pn	Pn	22 43 46.3	+2.0
	comp=Z,0.2nm,0.3s,baz=185,slow=12,SNR=20						
MLR				LR	LR	22 48 24.7	
	comp=Z,221nm,20.9s,baz=151,slow=41						
	comp=Z,8.3nm,0.8s						
MLR	Muntele Rosu	10.48	8		Pn	22 43 44.8	+0.5
MLR	Muntele Rosu	10.48	8	⇑P	Pn	22 43 46.4	+2.1
MLR	Muntele Rosu	10.48	8	P	Pn	22 43 46.4	+2.1
MLR	Muntele Rosu	10.48	8	P	Pn	22 43 47.0	+2.7
	comp=Z,17nm,0.8s						
GHAJ	Ghor Haditha	10.54	108		Pn	22 43 44.8	-0.3
GHAJ	Ghor Haditha	10.54	108	P	Pn	22 43 43.7	-1.5
PRNI	Paran	10.54	114	P	Pn	22 43 43.5	-1.7
PRNI	Paran	10.54	114	S	Sn	22 45 34.6	-8.7
BZS	Buzias	10.61	352	⇑P	Pn	22 43 46.7	+0.6
BZS	Buzias	10.61	352	P	Pn	22 43 46.6	+0.6
HRFI	Mount Harif	10.73	115	P	Pn	22 43 46.4	-1.3
HRFI	Mount Harif	10.73	115	S	Sn	22 45 39.2	-8.6
MBRI	Mt Berech	10.76	117	P	Pn	22 43 47.0	-1.3
MBRI	Mt Berech	10.76	117	S	Sn	22 45 40.5	-8.2
EIL	Elat	10.86	117	Pn	Pn	22 43 47.2	-2.3
	comp=Z,1.8nm,0.3s,baz=312,slow=14,SNR=16						
EIL				Sn	Sn	22 45 41.1	-10
	comp=Z,2.5nm,0.3s,baz=343,slow=14,SNR=8.4						
	comp=Z,6.2nm,0.4s						
EIL	Elat	10.86	117	P	Pn	22 43 48.0	-1.5
EIL	Elat	10.86	117	S	Sn	22 45 42.1	-8.8
AQU	L'Aquila	10.87	315	P	Pn	22 43 51.3	+1.6
	comp=Z,13nm,0.9s						
BLY	Banja Luka	10.88	334	⇓P	Pn	22 43 49.4	-0.3
DOPR	Dopca	10.89	6	⇑P	Pn	22 43 52.2	+2.3
PLOR	Plostina	10.93	10	⇑P	Pn	22 43 52.3	+1.9
PLOR	Plostina	10.93	10	P	Pn	22 43 52.2	+1.9
VRI	Vrincioaia	10.95	11	⇑P	Pn	22 43 52.6	+1.9
VRI	Vrincioaia	10.95	11	P	Pn	22 43 52.5	+1.9
VRI	Vrincioaia	10.95	11	P	Pn	22 43 53.4	+2.7
	comp=Z,13nm,2.5s						
HBST	Basata	10.95	120	P	Pn	22 43 50.0	-0.8
CAMP	Campotosto	10.98	315		Pn	22 43 50.7	-0.6
MDB	Medias	11.01	2	⇑P	Pn	22 43 53.7	+2.1
MDB	Medias	11.01	2	P	Pn	22 43 53.6	+2.1
GAZ	Gaziantep	11.01	75		Pn	22 43 51.5	-0.1
TURR	Turia	11.04	8	⇑P	Pn	22 43 54.4	+2.5
OZUR		11.06	7	⇑P	Pn	22 43 54.0	+1.8
GHRR		11.25	13	P	Pn	22 43 58.5	+3.7
ASF	Jabal al Asfar	11.28	101	Pn	Pn	22 43 52.9	-2.5
	baz=297,slow=12						
ASF				Sn	Sn	22 45 58.8	-2.6
	baz=270,slow=19						
NRCA	Norcia	11.34	316		Pn	22 43 55.3	-0.8
FDMO	Fiordimonte	11.48	317		Pn	22 43 57.9	-0.1
TESR	Tescani	11.57	10	⇑P	Pn	22 44 00.6	+1.5
TESR	Tescani	11.57	10	P	Pn	22 44 02.5	+3.3
	comp=Z,14nm,2.1s						
MORH	Mrgy, Hungar	11.75	342	⇓P	Pn	22 43 59.9	-1.7
KEST	Kesra	11.83	277	Pn	Pn	22 44 04.1	+1.2
	comp=Z,0.1nm,0.3s,baz=63,slow=6.8,SNR=1.6						
KEST				Sn	Sn	22 46 10.2	-4.7
	comp=Z,0.1nm,0.3s,baz=108,slow=19,SNR=1.2						
KEST				LR	LR	22 49 51.9	
	comp=Z,209nm,19.5s,baz=47,slow=44						
KEST	Kesra	11.83	277		Pn	22 44 03.5	+0.6
PRAR	RASCA	12.36	8	⇑P	Pn	22 44 11.8	+1.9
BUR08	Bucovina Ar. S	12.55	4		Pn	22 44 13.0	+0.4
MPLH	Magyarpolny	12.93	340	P	Pn	22 44 19.9	+2.2
	comp=Z,45nm,1.0s						
NSLU	Nyzhne Selyshc	13.07	2	P	Pn	22 44 22.3	+2.7
SOKA	Soboth	13.31	333	ePn	Pn	22 44 22.9	-0.1
	comp=Z,0.6nm,0.4s						
MEZ	Mezhgor'ye	13.38	359	P	Pn	22 44 26.1	+2.2
KOPT	Kop Dagi	14.09	65	Pn	Pn	22 44 34.3	+0.5
CONA	Conrad Observa	14.10	338	ePn	Pn	22 44 34.5	+0.7
	comp=Z,0.1nm,0.1s						
MODS	Modra-Piesok	14.10	342	eP	P	22 44 42.6	+1.1
MODS	Modra-Piesok	14.10	342	eP	P	22 44 42.6	+1.1
SMOL	Smolenice	14.19	342	eP	Pn	22 44 33.4	-1.6
ANN	Anapa	14.20	43	eP	Pn	22 44 34.7	-0.4
ANN				eS	Sn	22 47 14.7	+2.3
ANN				pmax	pmax		
	comp=Z,34nm,1.0s						
HORU	Horodok	14.21	7	P	Pn	22 44 37.5	+2.3
CTI	Castel Tesino	14.29	323		Pn	22 44 36.4	0.0
CTI	Castel Tesino	14.29	323	P	Pn	22 44 36.4	0.0
KBA	Koelnbreinsper	14.30	330	ePn	Pn	22 44 37.7	+1.0
	comp=Z,1.6nm,0.5s						
ABTA	Abfaltersbach	14.40	327	ePn	Pn	22 44 38.8	+0.9
	comp=Z,1.0nm,0.4s						
STHS	Stebnicka Huta	14.41	353	eP	P	22 44 50.6	+5.8
STHS	Stebnicka Huta	14.41	353	eP	P	22 44 50.6	+5.8
NIE	Niedzica	14.52	351	P	Pn	22 44 42.2	+2.8
SALO	Salr	14.56	320	Pn	Pn	22 44 39.7	-0.4
MOA	Molln	14.58	334	ePn	Pn	22 44 41.7	+1.5
	comp=Z,0.6nm,0.3s						
BIOA	Bad Ischl, Aus	14.68	332	ePn	Pn	22 44 42.8	+1.2
	comp=Z,1.2nm,0.3s						
LESA	Schwarzleotal	14.85	329	ePn	Pn	22 44 44.4	+0.3
	comp=Z,0.7nm,0.3s						
GURO	Guroymak-BITLI	14.97	71	Pn	Pn	22 44 44.8	-1.0
LUBAR	Lubar, Ukraine	15.06	10	P	P	22 44 49.6	-2.5
VRAC	Vranov	15.14	342	Pn	Pn	22 44 46.3	-1.5
	comp=Z,0.7nm,0.3s,baz=160,slow=11,SNR=7.8						
VRAC				LR	LR	22 52 16.7	
	comp=Z,467nm,18.8s,baz=168,slow=44						
	comp=Z,0.9nm,0.5s						
VRAC	Vranov	15.14	342	⇓P	Pn	22 44 48.7	+0.9
WTTA	Wattenberg	15.18	327	ePn	Pn	22 44 49.4	+0.8
	comp=Z,0.6nm,0.2s						
WATA	Walderalm	15.26	327	ePn	Pn	22 44 50.5	+0.8
	comp=Z,2.4nm,0.5s						
SQTA	Sankt Quirin	15.35	326	ePn	Pn	22 44 51.4	+0.7
	comp=Z,1.9nm,0.5s						
OJC	Ojcow	15.37	350	P	P	22 44 54.5	-1.0
FUORN	Ofenpass-Fuorn	15.37	322	Pn	Pn	22 44 51.1	0.0
FUORN				IAmb	IAmb	22 45 04.5	
	comp=Z,14nm,0.8s						
CKRC	Cesky Krumlov	15.39	336	eP	P	22 44 56.0	+0.3
CKRC	Cesky Krumlov	15.39	336	eP	P	22 44 56.0	+0.3
TREC	Trest	15.43	339	eP	P	22 44 55.9	-0.3
TREC	Trest	15.43	339	eP	P	22 44 55.9	-0.3
MOTA	Moosalm	15.49	326	ePn	Pn	22 44 54.1	+1.6
	comp=Z,4.8nm,0.9s						
GEC2	GERESS Array S	15.62	334	Pn	Pn	22 44 54.4	+0.2
GERES	GERESS Array B	15.62	334	Pn	Pn	22 44 56.3	+2.1
	comp=Z,0.1nm,0.3s,baz=144,slow=12,SNR=12						
GERES				LR	LR	22 52 39.6	
	comp=Z,369nm,21.6s,baz=239,slow=44						
	comp=Z,5.4nm,0.9s						
DAVOX	Davos/Dischmat	15.67	322	Pn	Pn	22 44 55.7	+0.7
	comp=Z,0.2nm,0.3s,baz=136,slow=18,SNR=9.9						
DAVOX				Sn	Sn	22 47 42.9	-5.8
	comp=Z,0.2nm,0.3s,baz=165,slow=20,SNR=1.5						
DAVOX				LR	LR	22 51 47.7	
	comp=Z,359nm,18.3s,baz=74,slow=41						
	comp=Z,3.0nm,1.0s						
TUE	Stuetta	15.74	320	Pn	Pn	22 44 55.5	-0.4
TUE				IAmb	IAmb	22 45 12.1	
	comp=Z,18nm,1.1s						
TUE	Stuetta	15.74	320	P	P	22 44 59.0	-0.9
	comp=Z,87nm,1.8s						
RETA	Reutte	15.75	326	ePn	P	22 44 58.4	-1.4
	comp=Z,1.3nm,0.6s						
KHC	Kasperske Hory	15.90	335	Pn	Pn	22 44 58.1	+0.3
KHC	Kasperske Hory	15.90	335	⇑iP	P	22 45 02.5	+1.0
KHC				pmax	pmax		
	comp=Z,15nm,1.3s						
KHC	Kasperske Hory	15.90	335	eP	P	22 45 00.1	-1.4
KHC	Kasperske Hory	15.90	335	P	P	22 45 01.3	-0.2
	comp=Z,11nm,0.8s						
AK07	Malin Array Si	15.90	13	P	P	22 45 00.7	-0.7
AK06	Malin Array Si	15.94	13	P	P	22 45 00.9	-0.9
ZVC	Zvikov	15.96	337	eP	P	22 45 02.3	+0.2
DAVA	Damuels	16.02	324	ePn	P	22 45 02.9	-0.1
	comp=Z,5.6nm,0.7s						
KIEV	Kiev	16.04	12	Pn	Pn	22 45 00.6	+1.1
KIEV	Kiev	16.04	12	P	Pn	22 45 00.6	+1.1
KIEV				pmax	pmax		
	comp=Z,12nm,1.1s						
KIEV	Kiev	16.04	12	P	P	22 45 02.3	-0.6
	comp=Z,64nm,2.4s						
AKASG	Malin Array Be	16.05	12	Pn	Pn	22 44 59.6	-0.1
	comp=Z,1.9nm,0.3s,baz=203,slow=11,SNR=6.7						
	comp=Z,0.5nm,0.3s						
AKASG	Malin Array Be	16.05	12	i P	P	22 45 03.4	+0.4
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
AKBB	Malin Array Si	16.05	12		Pn	22 45 01.0	+1.4
AKBB	Malin Array Si	16.05	12	⇑iP	P	22 45 01.6	-1.4
AKBB				pmax	pmax		
	comp=Z,84nm,4.8s						
KARS	Kars	16.15	64	Pn	Pn	22 45 02.0	+0.8
KARS				IAmb	IAmb	22 45 38.0	
	comp=Z,24nm,1.1s						
KARS	Kars	16.15	64	P	Pn	22 45 02.0	+0.8
KARS				pmax	pmax		
	comp=Z,24nm,1.1s						
DPC	Dobruska-Polom	16.17	343	eP	P	22 45 06.5	+2.1
DPC	Dobruska-Polom	16.17	343	eP	P	22 45 06.5	+2.1
RNPP8	Varash	16.27	5	P	P	22 45 05.5	+0.1
PRU	Pruhonice	16.33	338	eP	P	22 45 06.6	+0.4
PRU	Pruhonice	16.33	338	eP	P	22 45 06.6	+0.4
RNPP9	Sopachiv	16.35	5	P	P	22 45 06.5	+0.2
KSP	Ksiaz	16.63	343	P	P	22 45 10.1	+0.6
NEUR	Neytrino	16.71	55	⇓eP	P	22 45 11.1	+0.5
SHA1	Shidzhatmaz	16.87	54	⇓iP	P	22 45 14.3	+1.9
KIV	Kislovodsk	16.98	53		Pn	22 45 11.9	+0.3
KIV				IAmb	IAmb	22 45 17.4	
	comp=Z,30nm,1.0s						
KIV	Kislovodsk	16.98	53	eP	P	22 45 13.8	+0.3
KIV				pmax	pmax		
	comp=Z,26nm,1.1s						
KIV	Kislovodsk	16.98	53	P	P	22 45 13.9	+0.4
	comp=Z,20nm,0.8s						
KVAR	Kislovodsk Arr	16.98	53	P	Pn	22 45 12.2	+0.5
	baz=270,slow=20						
	comp=Z,2.1nm,0.5s						
KBZ	Khabaz	17.02	54	P	Pn	22 45 12.8	+0.7
	comp=Z,0.3nm,0.3s,baz=252,slow=11,SNR=25						
	comp=Z,6.2nm,0.6s						
KBZ	Khabaz	17.02	54	⇑iP	P	22 45 15.4	+1.5
KBZ				pmax	pmax		
	comp=Z,14nm,0.9s						
GRA1	Grafenberg Arr	17.24	331	Pn	Pn	22 45 13.9	-0.8
GRA1				IAmb	IAmb	22 45 23.6	
	comp=Z,55nm,1.2s						
GRF	Grafenberg Arr	17.24	331	P	Pn	22 45 13.9	-0.8
GRF				pmax	pmax		
	comp=Z,55nm,1.2s						
GRF	Grafenberg Arr	17.24	331	eP	P	22 45 19.3	+3.1
	comp=Z,12nm,0.9s,baz=143,slow=11						
NCK	Nalchik	17.40	55	⇓iP	P	22 45 18.6	+0.5
NCK				pmax	pmax		
	comp=Z,108nm,5.4s						
CLL	Collm	17.96	338	P	Pn	22 45 23.6	0.0
CLL	Collm	17.96	338	i P	P	22 45 24.3	+0.1
CLL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CLL	Collm	17.96	338	i P	P	22 45 24.3	+0.1
	comp=Z,7.0nm,0.8s						
CLL				esPP		22 45 38.0	
SUW	Suwalki	18.89	359		P	22 45 33.2	-1.1
SUW	Suwalki	18.89	359	P	P	22 45 33.3	-1.1
VORD	Divnogorie	19.39	31	eP	Pn	22 45 46.0	+5.1
VORD				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VSR	Storozhevoye	19.52	30	eP	Pn	22 45 48.5	+5.9
VSR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MNK	Minsk	19.58	7	i P	P	22 45 40.4	-1.5
	comp=E,26nm,1.1s						
MNK				i P	P	22 45 40.4	-1.5
	comp=N,20nm,1.1s						
MNK				i P	P	22 45 40.4	-1.5
	comp=Z,17nm,0.9s,baz=190						
MNK				i S	Sn	22 49 22.4	-0.3
MNK				i SS	SnSn	22 49 40.0	+3.0
MNK				i LQ	LQ	22 51 45.1	
MNK				i LR	LR	22 53 11.0	
MNK				i LRM	MLR	22 54 36.0	
	comp=Z,171nm,12.0s						
MNK				i LRM	MLR	22 54 55.0	
	comp=N,318nm,18.3s						
MNK				i LRM	MLR	22 55 14.0	
	comp=E,356nm,15.2s						
MNK	Minsk	19.58	7	i P	P	22 45 40.3	-1.5
MNK				i S	Sn	22 49 22.4	-0.3
MNK				pmax	pmax		
	comp=E,26nm,1.1s						
MNK				pmax	pmax		
	comp=N,20nm,1.1s						
MNK				pmax	pmax		
	comp=Z,17nm,0.9s						
MNK				MLR	MLR		
	comp=Z,171nm,12.0s						
MNK				MLR	MLR		
	comp=N,318nm,18.0s						
MNK				MLR	MLR		
	comp=E,356nm,15.0s						
AKT	Akhty	19.77	64	eP	Pn	22 45 47.7	+2.0
NACGM	Naroch	19.88	5	eP	P	22 45 46.1	+0.9
	comp=Z,20nm,0.8s,baz=187						
TAM	Tamanrasset	20.15	237	P	P	22 45 46.2	-2.3
TAM	Tamanrasset	20.15	237	P	P	22 45 46.2	-2.3
TAM				pmax	pmax		
	comp=Z,28nm,0.2s						
PABE	Paberze	20.38	0		P	22 45 48.7	-1.9
LPSR	Galich'ya Gora	20.51	27	eP	P	22 45 52.2	+0.2
LPSR				pmax	pmax		
	comp=Z,15nm,0.8s						
VRH	Novokhopyorsk	20.61	33	eP	P	22 45 52.2	-0.9
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
OBN	Obninsk	21.85	20	P	P	22 46 06.6	+0.2
	comp=Z,5.2nm,0.4s,baz=288,slow=3.2,SNR=3.4						
OBN				LR	LR	22 55 20.7	
	comp=Z,169nm,20.1s,baz=194,slow=39						
	comp=Z,5.2nm,0.4s						
OBN	Obninsk	21.85	20	P	P	22 46 06.0	-0.4
OBN	Obninsk	21.85	20	eP	P	22 46 06.2	-0.2
OBN				e*PP	sP	22 46 12.3	+1.2
OBN				e		22 46 29.2	
OBN				ePPP	PPP	22 46 39.8	
OBN				pmax	pmax		
	comp=Z,116nm,2.9s						
OBN				MLR	MLR		
	comp=Z,79nm,8.0s						
RAYN	Ar Rayn	22.10	116		P	22 46 09.1	-0.4
RAYN	Ar Rayn	22.10	116	P	P	22 46 09.1	-0.4
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ESBB	Sonseca Array	22.50	290	P	P	22 46 14.5	+0.8
ESDC	Sonseca Array	22.50	290	P	P	22 46 13.3	-0.4
	comp=Z,5.6nm,0.8s,baz=94,slow=8.8,SNR=20						
	comp=Z,5.6nm,0.8s						
ESDC	Sonseca Array	22.50	290	P	P	22 46 13.1	-0.5
MOS	Moscow	22.69	20	eP	P	22 46 12.9	-2.5
VSU	Vasula	23.42	4	⇓eP	P	22 46 26.0	+3.1
VSU				pmax	pmax		
	comp=Z,364nm,5.4s						
BELG	Belogornoye	24.18	37	⇑eP	P	22 46 33.7	+3.5
BELG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HFS	Hagfors	25.88	348	P	P	22 46 44.7	-0.9
	comp=Z,3.7nm,0.5s,baz=160,slow=10,SNR=19						
HFS				LR	LR	22 59 22.2	
	comp=Z,234nm,20.1s,baz=198,slow=42						
	comp=Z,3.7nm,0.5s						
FINES	FINESS Array B	26.38	2	P	P	22 46 48.1	-1.9
	comp=Z,3.0nm,0.7s,baz=177,slow=8.4,SNR=7.7						
FINES				PcP	PcP	22 50 14.7	-0.7
	comp=Z,13nm,1.1s,baz=191,slow=2.3,SNR=3.4						
	comp=Z,3.0nm,0.7s						
FINES	FINESS Array B	26.38	2	P	P	22 46 48.6	-1.4
FINES					PcP	22 50 16.0	+0.6
FINES	FINESS Array B	26.38	2	i P	P	22 46 52.5	+2.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NB2	NORSAR Subarra	27.16	347	P	P	22 46 59.1	+1.9
	comp=Z,1.5nm,0.7s,baz=156,slow=9.3						
NOA	NORSAR Array B	27.16	347	P	P	22 46 55.7	-1.5
	comp=Z,1.2nm,0.8s,baz=159,slow=11,SNR=6.3						
NOA				LR	LR	22 59 49.8	
	comp=Z,94nm,18.4s,baz=255,slow=41						
	comp=Z,1.2nm,0.8s						
EKA	Eskdalemuir Ar	27.45	326	P	P	22 46 57.6	-2.2
	comp=Z,1.6nm,0.6s,baz=123,slow=10,SNR=6.3						
	comp=Z,1.6nm,0.6s						
KLMR	Klimovskoe	27.65	17	eP	P	22 47 02.0	+0.5
KLMR				pmax	pmax		
	comp=Z,43nm,1.9s						
KIRV	Kirov	28.93	28	⇑eP	P	22 47 17.1	+4.1
TORD	Torodi Ar. Bea	29.65	228	P	P	22 47 19.5	-0.2
	comp=Z,1.4nm,0.3s,baz=31,slow=12,SNR=2.8						
	comp=Z,1.4nm,0.3s						
TORD	Torodi Ar. Bea	29.65	228	P	P	22 47 19.1	-0.6
ARTI	Arti	31.63	37	c iP	P	22 47 39.7	+2.9
ARTI						22 48 42.1	
ARTI				S	S	22 52 51.4	+6.0
ARTI				SS	SnSn	22 54 38.1	+6.9
ARTI				pmax	pmax		
	comp=Z,8.0nm,1.4s						
LODK	Lodwar	33.31	159		P	22 47 52.0	0.0
LODK				IAmb	IAmb	22 47 54.9	
	comp=Z,6.1nm,1.3s						
ARCES	ARCESS Array B	34.48	1	P	P	22 47 59.6	-1.9
	comp=Z,3.5nm,0.9s,baz=185,slow=8.6,SNR=8.9						
ARCES				LR	LR	23 04 32.9	
	comp=Z,154nm,19.2s,baz=230,slow=41						
	comp=Z,3.5nm,0.9s						
ARCES	ARCESS Array B	34.48	1	P	P	22 48 00.2	-1.4
ARCES	ARCESS Array B	34.48	1	P	P	22 48 00.2	-1.4
ARCES				pmax	pmax		
	comp=Z,24nm,1.5s						
MBAR	Mbarara	36.13	168	LR	LR	23 03 38.7	
	comp=Z,54nm,18.4s,baz=352,slow=37						
CHGR	Chuyangaron	36.15	71	P	P	22 48 16.5	+0.1
CHGR				IAmb	IAmb	22 48 31.3	
	comp=Z,12nm,0.8s						
CHGR	Chuyangaron	36.15	71	P	P	22 48 16.5	+0.1
CHGR				pmax	pmax		
	comp=Z,12nm,0.8s						
GAR	Garm	36.99	70		P	22 48 23.8	+0.2
GAR				IAmb	IAmb	22 48 58.0	
	comp=Z,20nm,1.4s						
BORK	Borovoye	37.12	47	⇓eP	P	22 48 26.6	+2.1
BORK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BVAR	Borovoye Array	37.16	47	P	P	22 48 24.4	-0.4
	comp=Z,0.9nm,0.8s,baz=258,slow=5.7,SNR=5.8						
	comp=Z,0.9nm,0.8s						
MANEM	Manem	38.30	72		P	22 48 34.1	-0.8
MANEM				IAmb	IAmb	22 48 55.1	
	comp=Z,13nm,1.1s						
ARSB	Arslanbob	38.69	66	P	P	22 48 38.5	+0.5
ARSB				IAmb	IAmb	22 49 09.8	
	comp=Z,7.0nm,0.8s						
ARSB	Arslanbob	38.69	66	P	P	22 48 38.5	+0.5
ARSB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
DBIC	Dimbokro	38.70	230	P	P	22 48 37.2	-1.0
	comp=Z,4.1nm,0.7s,baz=30,slow=12,SNR=6.3						
	comp=Z,4.1nm,0.7s						
DBIC	Dimbokro	38.70	230	P	P	22 48 37.4	-0.8
DBIC				IAmb	IAmb	22 48 38.7	
	comp=Z,5.8nm,0.8s						
DBIC	Dimbokro	38.70	230	P	P	22 48 37.4	-0.8
DBIC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AAK	Ala-Archa	39.65	63		P	22 48 46.0	-0.1
AAK	Ala-Archa	39.65	63	⇑eP	P	22 48 47.3	+1.2
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NIL	Nilore	40.48	77		P	22 48 52.8	-0.1
NIL				IAmb	IAmb	22 49 12.6	
	comp=Z,13nm,0.9s						
NIL	Nilore	40.48	77	P	P	22 48 52.8	-0.1
NIL				pmax	pmax		
	comp=Z,13nm,1.0s						
KURBB	Kurchatov Arra	41.99	51	P	P	22 49 04.2	-0.8
	comp=Z,1.9nm,0.6s,baz=277,slow=8.7,SNR=17						
KURBB				PcP	PcP	22 51 02.3	+2.3
	comp=Z,0.5nm,0.7s,baz=270,slow=3.7,SNR=2.1						
	comp=Z,1.9nm,0.6s						
KURK	Kurchatov	42.05	51		P	22 49 06.1	+0.6
KURK	Kurchatov	42.05	51	⇓eP	P	22 49 05.9	+0.4
KURK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
SPITS	Spitsbergen Ar	43.27	358	P	P	22 49 15.9	+0.8
	comp=Z,9.9nm,1.0s,baz=151,slow=6.3,SNR=2.3						
	comp=Z,9.9nm,1.0s						

MK31	Makanchi Array	44.70	56	ceP	P	22 49 27.6	+0.6
MKAR	Makanchi Array	44.70	56	P	P	22 49 27.1	+0.1
	comp=Z,1.4nm,0.4s,baz=276,slow=7.1,SNR=25						
MKAR				PcP	PcP	22 51 09.0	-0.3
	comp=Z,1.6nm,0.8s,baz=298,slow=3.1,SNR=2.1						
	comp=Z,1.4nm,0.4s						
MKAR	Makanchi Array	44.70	56		P	22 49 26.2	-0.8
MKAR					PcP	22 51 08.4	-0.9
MKAR	Makanchi Array	44.70	56	i P	P	22 49 27.3	+0.3
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZAA0	Zalesovo Array	45.81	46		P	22 49 35.9	+0.2
ZAA0				IAmb	IAmb	22 49 50.0	
	comp=Z,3.2nm,0.6s						
ZALV	Zalesovo Beam	45.81	46	P	P	22 49 34.4	-1.3
	comp=Z,1.4nm,0.5s,baz=270,slow=8.4,SNR=11						
	comp=Z,1.4nm,0.5s						
ZALV	Zalesovo Beam	45.81	46	P	P	22 49 35.1	-0.6
ZALV	Zalesovo Beam	45.81	46	i P	P	22 49 36.7	+1.0
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
DGZ	Jazzator, Alta	47.76	52	⇑eP	P	22 49 53.6	+2.4
DGZ				pmax	pmax		
	comp=Z,24nm,4.8s						
NRIK	Noril'sk	48.37	25	⇑eP	P	22 49 57.9	+2.4
NRIK				pmax	pmax		
	comp=Z,7.0nm,2.0s						
MSEY	Mahe Island	49.52	137	P	P	22 50 05.2	+0.2
MSEY				IAmb	IAmb	22 50 07.2	
	comp=Z,9.9nm,0.8s						
MSEY	Mahe Island	49.52	137	P	P	22 50 05.2	+0.2
MSEY				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SFJD	Kangerlussuaq	52.19	331	LR	LR	23 14 42.3	
	comp=Z,99nm,21.5s,baz=129,slow=38						
KSANE	Kasane	52.65	178	P	P	22 50 28.7	+0.3
KSANE				IAmb	IAmb	22 50 30.1	
	comp=Z,5.4nm,0.7s						
EVN	Everest	53.38	79		P	22 50 33.6	-1.0
EVN				IAmb	IAmb	22 51 03.6	
	comp=Z,5.3nm,0.8s						
XAUDM	Khaudum	53.42	183	P	P	22 50 34.8	+0.7
XAUDM				IAmb	IAmb	22 50 35.9	
	comp=Z,9.9nm,1.1s						
TSUM	Tsumeb	54.35	187	LR	LR	23 17 01.5	
	comp=Z,120nm,18.1s,baz=2.0,slow=40						
QNGWA	Qangwa	54.41	183	P	P	22 50 41.1	-0.3
QNGWA				IAmb	IAmb	22 50 42.9	
	comp=Z,4.9nm,0.8s						
PHDHD	Phuduhudu	55.02	179	P	P	22 50 44.8	-0.9
LSA	Lhasa	56.13	75	P	P	22 50 53.3	-1.0
LSA				IAmb	IAmb	22 51 22.0	
	comp=Z,2.9nm,0.8s						
LSA	Lhasa	56.13	75	P	P	22 50 50.6	-3.7
LSA	Lhasa	56.13	75	P	P	22 50 53.3	-1.0
LSA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GRTLG	Ghanzi	56.23	183		P	22 50 53.5	-0.9
GRTLG				IAmb	IAmb	22 50 56.4	
	comp=Z,7.7nm,0.8s						
GOMU	GeErMu	56.44	67	P	P	22 50 56.8	+0.5
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KHWEE	KHWEE	56.78	178	P	P	22 50 57.9	-0.5
KGCAE	Kacgae	57.68	182	P	P	22 51 04.5	-0.2
LPHEP	Lephephe	58.20	178		P	22 51 07.9	-0.4
SONM	Songino Array	60.35	50	P	P	22 51 22.6	-0.5
	comp=Z,0.5nm,0.5s,baz=282,slow=6.8,SNR=4.6						
SONM				LR	LR	23 22 50.7	
	comp=Z,63nm,18.9s,baz=28,slow=41						
	comp=Z,0.5nm,0.5s						
SONM	Songino Array	60.35	50	P	P	22 51 22.6	-0.5
SONM				IAmb	IAmb	22 51 55.8	
	comp=Z,5.1nm,1.4s						
TIXI	Tiksi	61.58	20	LR	LR	23 20 29.2	
	comp=Z,44nm,18.1s,baz=188,slow=38						
TIXI	Tiksi	61.58	20	⇓eP	P	22 51 34.7	+3.8
TIXI				pmax	pmax		
	comp=Z,9.0nm,2.0s						
SCHQ	Schefferville	62.50	319	P	P	22 51 38.0	+0.6
	comp=Z,3.1nm,0.6s,baz=71,slow=6.5,SNR=9.3						
	comp=Z,3.1nm,0.6s						
SCHQ	Schefferville	62.50	319	P	P	22 51 38.3	+0.9
LZDM	Lanzhou Array	63.14	64	P	P	22 51 41.6	-0.8
	comp=Z,0.6nm,0.3s,baz=302,slow=6.6,SNR=1.3						
	comp=Z,0.6nm,0.3s						
LZH	Lanzhou	63.19	63	eP	P	22 51 45.4	+2.9
LZH				sP	sP	22 51 52.6	+5.1
LZH				pmax	pmax		
	comp=Z,13nm,0.9s						
BOSA	Boshof	63.41	179	P	P	22 51 43.1	-0.7
	comp=Z,4.3nm,0.7s,baz=360,slow=8.0,SNR=13						
	comp=Z,4.3nm,0.7s						
BOSA	Boshof	63.41	179	P	P	22 51 43.5	-0.2
BOSA				IAmb	IAmb	22 51 44.4	
	comp=Z,7.3nm,1.0s						
BOSA	Boshof	63.41	179	P	P	22 51 43.5	-0.2
BOSA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
RES	Resolute Bay	63.42	345	LR	LR	23 21 01.9	
	comp=Z,59nm,18.8s,baz=23,slow=38						
PZH	PanZhiHua	65.92	74	P	P	22 52 01.8	+1.4
YAK	Yakutsk	66.45	30	LR	LR	23 26 06.5	
	comp=Z,45nm,18.1s,baz=286,slow=40						
HHC	Hu-ho-hao-te	66.56	56	eP	P	22 52 05.0	+0.7
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CMAR	Chiang Mai Arr	67.66	83	P	P	22 52 11.0	-0.5
	comp=Z,1.5nm,0.3s,baz=306,slow=8.2,SNR=8.1						
	comp=Z,1.5nm,0.3s						
CMAR	Chiang Mai Arr	67.66	83	P	P	22 52 11.8	+0.4
CMAR	Chiang Mai Arr	67.66	83	i P	P	22 52 11.8	+0.4
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
E29M	Blow River	75.89	353	P	P	22 53 00.1	-0.1
E29M				IAmb	IAmb	22 53 34.6	
	comp=Z,10nm,1.4s						
MA2	Magadan	75.97	25	LR	LR	23 28 13.1	
	comp=Z,36nm,20.5s,baz=286,slow=37						
YKA	Yellowknife Ar	77.14	342	P	P	22 53 04.9	-2.4
	comp=Z,0.1nm,0.3s,baz=22,slow=5.1,SNR=6.1						
	comp=Z,0.1nm,0.3s						
YKA	Yellowknife Ar	77.14	342	P	P	22 53 07.3	0.0
YKA	Yellowknife Ar	77.14	342	P	P	22 53 07.3	0.0
USRK	Ussuriysk Ar.	77.63	44	P	P	22 53 09.0	-1.4
	comp=Z,1.9nm,0.6s,baz=297,slow=6.3,SNR=4.2						
	comp=Z,1.9nm,0.6s						
USRK	Ussuriysk Ar.	77.63	44	P	P	22 53 09.0	-1.4
E19K	Redstone River	77.73	0	P	P	22 53 10.7	+0.1
E19K				IAmb	IAmb	22 53 15.7	
	comp=Z,6.2nm,0.8s						
KSRS	Korea Array	79.16	52	P	P	22 53 16.9	-2.0
	comp=Z,1.5nm,0.7s,baz=308,slow=5.1,SNR=2.0						
	comp=Z,1.5nm,0.7s						
J30M	Hart River	79.41	351	P	P	22 53 20.0	+0.1
J30M				IAmb	IAmb	22 53 49.3	
	comp=Z,6.2nm,1.2s						
J29N	Klondike Camp	79.75	352	P	P	22 53 22.0	+0.2
ILAR	Eielson Array	80.16	356	P	P	22 53 23.7	-0.2
	comp=Z,0.3nm,0.7s,baz=1.8,slow=5.8,SNR=6.5						
	comp=Z,0.3nm,0.7s						
ILAR	Eielson Array	80.16	356	P	P	22 53 24.1	+0.2
M29M	Somme Creek	81.72	352	P	P	22 53 33.1	+0.7
M29M				IAmb	IAmb	22 53 39.0	
	comp=Z,6.4nm,1.1s						
PETK	Petropavlovsk-	83.42	26	LR	LR	23 36 14.1	
	comp=Z,33nm,20.4s,baz=351,slow=40						
BDFB	Brasilia	84.69	247	P	P	22 53 47.2	-1.2
	comp=Z,3.3nm,0.9s,baz=63,slow=9.0,SNR=4.7						
	comp=Z,3.3nm,0.9s						
BDFB	Brasilia	84.69	247	P	P	22 53 47.4	-0.9
ELK	Elko	95.63	330	LR	LR	23 39 03.2	
	comp=Z,49nm,18.9s,baz=21,slow=36						
JTS	Las Juntas de	99.09	289	LR	LR	23 42 58.7	
	comp=Z,16nm,18.7s,baz=39,slow=37						
WRA	Warramunga Arr	117.67	96	PKP	PKPdf	22 59 59.4	-1.3
	comp=Z,0.5nm,0.8s,baz=309,slow=1.8,SNR=2.9						
WRA	Warramunga Arr	117.67	96		PKPdf	22 59 59.6	-1.1
ASAR	Alice Springs	119.12	100	PKP	PKPdf	23 00 03.0	-0.4
	comp=Z,1.0nm,0.8s,baz=313,slow=2.0,SNR=9.2						
ASAR	Alice Springs	119.12	100		PKPdf	23 00 02.0	-1.4
ASAR	Alice Springs	119.12	100	PKIKP	PKPdf	23 00 02.0	-1.4
QSPA	South Pole Qui	124.98	180	PKP	PKPdf	23 00 13.2	-0.1
	comp=Z,0.9nm,1.0s,baz=205,slow=2.0,SNR=1.8						
QSPA	South Pole Qui	124.98	180		PKPdf	23 00 13.0	-0.3

*IDC **08** 22:49:11.2±1.1, 15°.15S×173°.65W, h0km, mb3.9/4, mbtmp3.9/4, MS3.1/3, Error ellipse: s-maj=48.8km s-min=31.3km az=146.0*

ISC 08 22:49:15.8±1.1**, 15°.1S**±0°.3×**173°.7W**±0°.3**, h30km, n18, σ0ˢ.46**/6**, mb4.0**/4**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAR	Rarotonga	14.56	117	LR	LR	22 57 28.0	
	comp=Z,21nm,19.1s,baz=349,slow=34						
URZ	Urewera	24.48	198	LR	LR	23 02 31.0	
	comp=Z,105nm,19.8s,baz=18,slow=33						
H11S2	WAKE ISLAND Hy	38.55	329	T	T	23 37 51.4	
	baz=149,slow=76,SNR=4.1						
H11S3	WAKE ISLAND Hy	38.56	329	T	T	23 37 49.8	
	baz=149,slow=76,SNR=4.3						
H11S1	WAKE ISLAND Hy	38.56	329	T	T	23 37 32.7	
	baz=149,slow=76,SNR=5.0						
H11N3	WAKE ISLAND Hy	39.50	331	T	T	23 38 32.4	
	baz=147,slow=76,SNR=7.2						
H11N1	WAKE ISLAND Hy	39.50	331	T	T	23 38 59.4	
	baz=147,slow=76,SNR=6.9						
H11N2	WAKE ISLAND Hy	39.51	331	T	T	23 38 37.9	
	baz=147,slow=76,SNR=6.7						
WRA	Warramunga Arr	49.64	257	P	P	22 58 05.4	+0.4
	0.6nm,0.7s,baz=94,slow=8.3,SNR=5.2						
	0.6nm,0.7s						
ASAR	Alice Springs	49.94	252	P	P	22 58 06.8	-0.5
	2.9nm,0.8s,baz=93,slow=7.4,SNR=28						
	2.9nm,0.8s						
SHEM	Shemya Is, Ala	68.35	352	LR	LR	23 25 50.4	
	comp=Z,20nm,20.7s,baz=275,slow=32						
NVAR	Mina Array Bea	74.28	42	P	P	23 00 50.6	-0.1
	0.3nm,0.5s,baz=255,slow=8.4,SNR=1.8						
	0.3nm,0.5s						
QSPA	South Pole Qui	74.96	180	P	P	23 00 54.2	+0.1
	2.7nm,0.9s,baz=45,slow=3.6,SNR=6.1						
	2.7nm,0.9s						
H03S2	Juan Fernandez	85.61	124	T	T	00 36 25.6	
	baz=253						
H03S1	Juan Fernandez	85.63	124	T	T	00 36 25.5	
	baz=253						
H03S3	Juan Fernandez	85.63	124	T	T	00 36 27.3	
	baz=253						
ARCES	ARCESS Array B	124.26	352	PKP	PKPdf	23 08 10.8	-0.3
	5.1nm,0.9s,baz=16,slow=2.5,SNR=2.7						
BRTR	Keskin Array B	145.73	321	PKPbc	PKPab	23 08 53.0	+0.3
	0.5nm,0.7s,baz=38,slow=2.8,SNR=4.9						

IDC 08 22:50:11.2±2.0**, 4°.28S×142°.88E, h0km, mb3.4**/3**, mbtmp3.5**/5**, ML3.5**/2**, Error ellipse: s-maj=48.7km s-min=28.1km az=102.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	2.79	309	Pn	Pn	22 50 58.0	+0.8
	1.9nm,0.3s,baz=143,slow=20,SNR=7.5						
JAY				Sn	Sn	22 51 22.7	-8.9
	7.9nm,0.3s,baz=209,slow=19,SNR=7.7						
	5.7nm,0.3s						
WRA	Warramunga Arr	17.65	207	P	Pn	22 54 18.4	-0.4
	0.3nm,0.3s,baz=23,slow=14,SNR=6.7						
	0.5nm,0.4s						
ASAR	Alice Springs	21.13	203	P	P	22 54 58.9	+1.0
	1.0nm,0.7s,baz=23,slow=10,SNR=12						
	1.0nm,0.7s						
FITZ	Fitzroy Crossi	21.75	230	P	P	22 55 03.5	-1.0
	1.2nm,0.7s,baz=45,slow=14,SNR=2.1						
	1.2nm,0.7s						
ILAR	Eielson Array	85.55	24	P	P	23 02 50.7	-0.4
	0.3nm,0.7s,baz=259,slow=5.3,SNR=2.1						
	0.3nm,0.7s						

SCB 08 22:52:08.9±1.4**, 21°.42S×67°.36W, h179km**±12km**, ML3.5**/3**, Error ellipse: s-maj=5.8km s-min=3.9km az=0.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCB	Mochara	1.61	84	Pg	Pn	22 52 43.0	+0.7
MOCB				Sg	Sn	22 53 08.0	-0.1
MOCB				IAML		22 53 09.1	
	317nm,0.6s						
PB09	IPOC Station P	1.79	258	Pg	Pn	22 52 45.4	+1.6
YJA	Yavi	1.87	114	Pg	Pn	22 52 45.9	+0.9
PB01	IPOC Station P	2.02	280	Pg	Pn	22 52 46.9	+0.7
PB01				Sg	Sn	22 53 15.9	+0.8
PB08	IPOC Station P	2.11	307	Pg	Pn	22 52 48.6	+1.1
PB02	IPOC Station P	2.37	272	Pg	Pn	22 52 50.7	+0.6
PB02				Sg	Sn	22 53 22.1	+0.1
PB02				IAML		22 53 22.8	
	195nm,0.5s						
PB06	IPOC Station P	2.42	238	Pg	Pn	22 52 51.6	+0.9
GO01	Chusmiza	2.45	315	Pg	Pn	22 52 52.1	+0.7
PB11	IPOC Station P	2.71	307	Pg	Pn	22 52 54.1	-0.1
PB11				Sg	Sn	22 53 28.4	-1.0
PB11				IAML		22 53 30.7	
	79nm,0.3s						
PB14	IPOC Station P	4.25	221	Pg	Pn	22 53 13.1	-0.3
BBOJ	La Paz, Jacaqu	4.49	350	Pg	Pn	22 53 17.6	+0.8
BBOE	La Paz, Chanca	4.62	353	Pg	Pn	22 53 19.6	+1.1
LPAZ	La Paz	5.16	352	Pg	Pn	22 53 25.4	-0.1

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*DNK **08** 22:59:29.2±1.8, 52°.99N×3°.88E, h30km, ML1.9, Presumed earthquake*
*UCC **08** 22:59:30.2, 52°.89N×4°.03E, h3km, ML2.3*
*BGS **08** 22:59:31.2±0.6, 52°.97N×4°.23E, h10km, ML2.9*
*LDG **08** 22:59:35.2±0.3, 52°.65N×3°.78E, h10km, Ml2.9/11, Error ellipse: s-maj=7.3km s-min=3.7km az=32.0*

ISC 08 22:59:27.1±1.1**, 53°.07N**±0°.04×**4°.23E**±0°.05**, h0km, n50, σ1ˢ.79**/57**, 14D, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOST	Ostende	2.00	204	dP	Pn	23 00 02.2	+0.2
BOST				dS	Sn	23 00 26.7	-1.0
	comp=E,50nm,0.0s						
ELMS	Elmsett, Ipswi	2.20	245	eP	Pn	23 00 05.6	+0.6
ELMS				IAML		23 00 39.9	
	comp=N,135nm,0.5s						
ELMS				IAML		23 00 42.7	
	comp=E,139nm,0.4s						
WACR	West Acre	2.21	263	eP	Pn	23 00 06.6	+1.6
WACR				IAML		23 00 39.6	
	comp=N,63nm,0.2s						
WACR				IAML		23 00 42.8	
	comp=E,56nm,0.4s						
TGA	Tangissart	2.47	176	dP	Pn	23 00 09.5	+0.9
TGA				dS	Sn	23 00 38.5	-1.0
	comp=N,14nm,0.0s						
MEM	Membach	2.70	155	dP	Pn	23 00 13.0	+1.3
MEM				dP	Pb	23 00 13.1	-3.1
MEM				dS	Sn	23 00 45.4	+0.3
	comp=N,18nm,0.0s						
ELSH	Elham, Standar	2.71	226	eP	Pn	23 00 12.1	+0.3
ELSH				IAML		23 00 52.9	
	comp=N,55nm,0.6s						
ELSH				IAML		23 00 57.9	
	comp=E,60nm,0.6s						
BCLA	Clavier	2.73	165	dP	Pn	23 00 13.8	+1.5
BCLA				dS	Sn	23 00 44.9	-1.1
	comp=N,14nm,0.0s						
BMRD	Maredsous	2.79	173	dP	Pn	23 00 14.2	+1.2
BMRD				dS	Sn	23 00 47.0	-0.3
	comp=E,11nm,0.0s						
BHOU	Houvegnez	2.93	157	dP	Pn	23 00 16.4	+1.4
RCHB	Rochefort	2.98	168	dP	Pn	23 00 16.6	+1.0
RCHB				dS	Sn	23 00 49.7	-2.3
	comp=E,11nm,0.0s						
DOU	Dourbes	2.98	175	eP	Pn	23 00 15.6	-0.1
GIVF	Givet	2.99	173	ePn	Pn	23 00 15.9	+0.1
GIVF				eSg	Sn	23 00 56.6	+4.3
	comp=E,11nm,0.3s						
BAIF	Baives	3.01	180	ePn	Pn	23 00 16.2	+0.2
BAIF				eSg	Sn	23 00 55.7	+2.9
	comp=E,13nm,0.4s						
CWF	Charnwood Fore	3.37	267	eP	Pn	23 00 22.0	+1.1
CWF				IAML		23 01 15.2	
	comp=N,9.7nm,0.6s						
CWF				IAML		23 01 19.3	
	comp=E,8.4nm,0.3s						
BSEG	Bad Segeberg	3.74	74	i P	Pn	23 00 29.9	+3.9
BSEG				i S	Sn	23 01 11.9	+1.2
SSRD	Sdr. Stenderup	3.98	50	eS	Sn	23 01 17.1	+0.4
MONM	Monmouth	4.47	257	eP	Pn	23 00 36.8	+0.7
SAVF	Savonnieres en	4.49	172	ePn	Pn	23 00 36.1	-0.3
MCH1	Michaelchurch	4.54	259	eP	Pn	23 00 38.0	+1.0
CDF	Champ du Feu	5.04	156	ePn	Pn	23 00 44.5	+0.4
CDF				eSn	Sn	23 01 37.3	-5.8
	comp=E,2.4nm,0.2s						
FLN	La Foliniere	5.24	217	ePn	Pn	23 00 44.5	-2.1
HAU	Haudompre	5.24	164	ePn	Pn	23 00 47.3	+0.6
LDF	La Druitiere	5.26	213	ePn	Pn	23 00 44.4	-2.5
HINF	Hinteralfeld	5.52	161	ePn	Pn	23 00 51.8	+1.3
SNART	Snartemo	5.55	16	eP	Pn	23 00 51.7	+0.9
SNART				i S	Sn	23 01 51.1	-4.1
SNART				eS	Sn	23 01 53.1	-2.1
GRR	Gorron	5.69	217	ePn	Pn	23 00 51.2	-1.6
GRR				eSn	Sn	23 01 47.4	-11
	comp=E,9.8nm,0.3s						
HOMB	Homborsund	5.75	23	eP	Pn	23 00 56.0	+2.5
HOMB				i S	Sn	23 01 58.0	-2.2
LOR	Lormes	5.81	182	ePn	Pn	23 00 53.7	-0.8
LOR				eSn	Sn	23 01 52.9	-8.9
	comp=E,2.0nm,0.2s						
LUNU	Lund	5.97	61	eP	Pn	23 00 57.9	+1.2
LUNU				eS	Sn	23 02 03.9	-1.8
SSF	Saint Saulge	6.03	185	ePn	Pn	23 00 56.5	-1.0
SSF				eSn	Sn	23 01 57.1	-10
	comp=E,1.8nm,0.3s						
ONAU	Onsala	6.18	42	eP	Pn	23 01 01.4	+1.9
ONAU				eS	Sn	23 02 08.8	-1.9
AVF	Avril sur Loir	6.31	185	ePn	Pn	23 01 01.1	-0.2
AVF				eSn	Sn	23 02 03.9	-10
	comp=E,0.9nm,0.3s						
SMF	Signal de Mont	6.43	182	ePn	Pn	23 01 01.9	-1.2
SMF				eSn	Sn	23 02 07.5	-10
	comp=E,2.5nm,0.3s						
TJOU	Tjoern	6.51	37	eP	Pn	23 01 03.6	-0.4
TJOU				i S	Sn	23 02 14.4	-4.4
TJOU				eS	Sn	23 02 14.4	-4.4
DEL	Delary	6.54	55	i P	Pn	23 01 06.2	+1.8
DEL				eS	Sn	23 02 17.1	-2.5
DEL				IAML		23 02 20.6	
	comp=Z,0.4nm,0.2s						
CABF	La Chapelle	6.57	169	ePn	Pn	23 01 05.5	+0.5
BGF	Bois d'Agland	6.58	188	ePn	Pn	23 01 04.3	-0.7
BSD	Bornholm Skovb	6.61	68	i P	Pn	23 01 05.8	+0.3
BSD				eS	Sn	23 02 17.4	-4.0
BORU	Boraas	6.68	43	eP	Pn	23 01 07.7	+1.2
BORU				eS	Sn	23 02 18.9	-4.3
MFF	Saint Martin d	7.06	205	ePn	Pn	23 01 09.0	-2.6
MFF	Saint Martin d	7.06	205	ePn	Pn	23 01 09.6	-2.0
MFF				eSn	Sn	23 02 20.0	-13
	comp=Z,1.2nm,0.2s						
MFF				eSn	Sn	23 02 20.8	-12
	comp=Z,1.1nm,0.2s						
STRU	Stroemstad	7.13	30	eS	Sn	23 02 29.4	-4.8
LPL	La Plagne	7.73	167	ePn	Pn	23 01 21.9	+0.8
LPG	La Plagne	7.75	167	ePn	Pn	23 01 22.5	+1.1
RJF	Les Rejaudoux	7.97	194	ePn	Pn	23 01 21.6	-2.5
VIVF	Saint-Julien-l	8.22	178	ePn	Pn	23 01 27.1	-0.5
ORIF	Oris-en-Rattie	8.23	172	ePn	Pn	23 01 26.0	-1.7
LFF	La Frestale	8.45	197	ePn	Pn	23 01 28.4	-2.3
LASF	Ste Croix	9.00	182	ePn	Pn	23 01 36.9	-1.4
EPF	Esparros	10.37	196	ePn	Pn	23 01 54.1	-3.0

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*IDC **08** 23:08:05.6±2.2, 8°.85S×124°.26E, h91km±17km, mb3.5/9, mbtmp3.9/13, Error ellipse: s-maj=36.7km s-min=14.0km az=77.0*
*DJA **08** 23:08:07.8±0.4, 9°S±3°×12°4E±°, h97km±5km, M4.1/13, mB4.7/2, mb4.4/5, MLv4.0/13, Mw(mB)3.9/2*

ISC 08 23:08:06.5±0.7**, 9°.02S**±0°.06×**124°.19E**±0°.07**, h100km, n34, σ2ˢ.70**/39**, mb3.6**/9**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	0.74	174	P	Pn	23 08 27.6	+3.1
SOEI	Soe	0.74	174	P	Pn	23 08 27.6	+3.1
SOEI				S	Sn	23 08 42.5	+4.7
BATI	Baumata	1.29	204	P	Pn	23 08 32.3	+1.9
	558nm,0.4s,baz=67,slow=4.8,SNR=84						
BATI				S	Sn	23 08 50.2	+1.9
	928nm,0.5s,baz=18,slow=20,SNR=13						
BATI	Baumata	1.29	204	P	Pn	23 08 32.2	+1.9
BATI				S	Sn	23 08 50.0	+1.7
MMRI	Maumere	1.97	281	P	Pn	23 08 37.8	-0.9
EDFI	Ende, Flores	2.48	276	P	Pn	23 08 44.6	-0.9
BASI	Baing, Sumba	3.76	251	P	Pn	23 09 01.5	-0.9
WSI	Waingapu	3.90	260	P	Pn	23 09 03.0	-1.3
LBFI	Labuhan Bajo,	4.28	277	P	Pn	23 09 09.1	-0.5
WBSI	Waikabubak, Su	4.78	262	P	Pn	23 09 14.7	-1.6
BKSI	Bulukumba	5.46	312	P	Pn	23 09 24.5	-1.0
DBNI	Kabupaten Domp	5.83	275	P	Pn	23 09 29.7	-0.9
	0.1nm30nm,0.6s						
KAPI	Kappang	5.93	312	P	Pn	23 09 31.8	-0.2
	6.7nm,0.5s,baz=142,slow=12,SNR=5.3						
PLAI	Plampang	6.34	271	P	Pn	23 09 35.8	-1.7
TWSI	Taliwang, Sumb	7.23	272	P	Pn	23 09 47.0	-2.5
	24nm,0.6s						
DRS	Darwin Rock St	7.42	118	P	Pn	23 09 55.0	+2.9
DRS	Darwin Rock St	7.42	118	S	Sn	23 11 11.8	-2.9
FITZ	Fitzroy Crossi	9.13	171	P	Pn	23 10 14.8	-0.7
	5.0nm,0.4s,baz=354,slow=12,SNR=29						
FITZ				S	Sn	23 11 50.9	-5.6
	58nm,0.5s,baz=270,slow=20,SNR=23						
FITZ	Fitzroy Crossi	9.13	171	P	Pn	23 10 15.5	0.0
FITZ	Fitzroy Crossi	9.13	171	S	Sn	23 11 45.6	-11
WRA	Warramunga Arr	14.64	139	P	Pn	23 11 28.0	-0.8
	4.1nm,0.5s,baz=326,slow=13,SNR=32						
WRA				S	Sn	23 14 00.2	-10
	6.6nm,0.9s,baz=318,slow=23,SNR=15						
WRAB	Tennant Creek	14.64	139	P	Pn	23 11 29.1	+0.4
ASAR	Alice Springs	17.28	149	P	Pn	23 12 03.4	+1.7
	2.7nm,0.7s,baz=327,slow=13,SNR=26						
ASAR				S	Sn	23 15 04.4	-10
	4.8nm,0.9s,baz=323,slow=25,SNR=6.8						
ASAR				ScP	ScP	23 20 06.5	+1.4
	0.2nm,0.6s,baz=332,slow=2.2,SNR=2.0						
MEEK	Meekatharra	18.30	196	P	Pn	23 12 19.0	+5.0
NWAO	Narrogin (SRO)	24.65	194	P	P	23 13 18.5	+0.6
	2.4nm,0.3s,baz=21,slow=7.5,SNR=1.6						
	2.4nm,0.3s						
SONM	Songino Array	58.76	346	P	P	23 17 54.3	+0.1
	0.2nm,0.3s,baz=145,slow=5.3,SNR=1.9						
	0.2nm,0.3s						
MKAR	Makanchi Array	66.92	330	P	P	23 18 47.4	-0.8
	0.5nm,0.7s,baz=134,slow=8.2,SNR=6.0						
	0.5nm,0.7s						
ZALV	Zalesovo Beam	70.99	337	P	P	23 19 11.2	-2.0
	0.4nm,0.6s,baz=120,slow=5.2,SNR=2.3						
	0.4nm,0.6s						
VNDA	Vanda	71.21	172	P	P	23 19 14.9	+0.7
	0.8nm,0.5s,baz=321,slow=3.9,SNR=2.3						
	0.8nm,0.5s						
KURBB	Kurchatov Arra	71.35	331	P	P	23 19 13.9	-1.6
	0.3nm,0.7s,baz=133,slow=5.0,SNR=4.4						
	0.3nm,0.7s						
BVAR	Borovoye Array	76.80	330	P	P	23 19 46.4	-0.8
	0.1nm,0.4s,baz=129,slow=2.0,SNR=1.7						
	0.1nm,0.4s						
QSPA	South Pole Qui	80.97	180	P	P	23 20 11.6	+1.6
	0.7nm,0.6s,baz=298,slow=1.3,SNR=2.0						
	0.7nm,0.6s						
SNAA	Sanae	92.32	195	P	P	23 21 06.9	+1.6
	1.0nm,0.8s,baz=108,slow=20,SNR=2.9						
	1.0nm,0.8s						
CPUP	Villa Florida	144.83	178	PKPbc	PKiKP	23 27 33.9	-2.5
	0.3nm,0.5s,baz=142,slow=2.8,SNR=7.3						

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*IGIL **08** 23:08:34.9, 36°.20N×8°.30W, h15km, ML0.9*
*SFS **08** 23:08:35.1, 36°.14N×8°.17W, h37km, ML2.9/6, ML2.8/7, MLv2.8/7*
*INMG **08** 23:08:35.8±1.5, 36°.19N×8°.18W, h24km±4km, ML1.3, Error ellipse: s-maj=4.7km s-min=2.8km az=84.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Faro*
*MDD **08** 23:08:35.5±1.2, 36°.34N×8°.06W, h7km±5km, mb_Lg2.0/7, Error ellipse: s-maj=8.4km s-min=5.5km az=21.0*

ISC 08 23:08:31.3±2.3**, 36°.11N**±0°.09×**8°.19W**±0°.05**, h17km**±8km**, n37, σ1ˢ.75**/68**, West of Gibraltar**

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

PFVI	Vila Bisbo	1.14	334	P	Pg	23 08 53.1	-0.3
PFVI				S	Sb	23 09 08.1	+0.8
PFVI	Vila Bisbo	1.14	334	eP	Pn	23 08 53.0	+0.4
PFVI				eS	Sb	23 09 07.8	+0.6
PBDV	Barranco-do-Ve	1.15	10	P	Pb	23 08 53.3	+0.5
PBDV				S	Sb	23 09 07.1	-0.4
PBDV	Barranco-do-Ve	1.15	10	eS	Sb	23 09 07.9	+0.4
PBDV				i IAML		23 09 08.1	
PBDV				i IAML		23 09 08.6	
PBDV				i IAML		23 09 10.4	
MORF	Marmelete	1.25	343	eP	Pn	23 08 54.6	+0.5
MORF	Marmelete	1.25	343	eP	Pb	23 08 54.8	+0.3
MORF				eS	Sb	23 09 10.3	-0.1
PVAQ	Vaqueiros	1.35	16	P	Pb	23 08 56.4	+0.2
PVAQ	Vaqueiros	1.35	16	eP	Pb	23 08 56.4	+0.2
PVAQ				i IAML		23 09 12.7	
PVAQ				eS	Sn	23 09 13.9	+1.0
PVAQ				i IAML		23 09 15.4	
PVAQ				i IAML		23 09 21.2	
PTEO	Sao Teotonio	1.50	343	eP	Pn	23 08 58.4	+0.9
PTEO				eS	Sn	23 09 15.7	-0.9
PTEO				i IAML		23 09 24.1	
PTEO				i IAML		23 09 24.5	
PTEO				i IAML		23 09 24.5	
PCVE	Castro Verde	1.52	4	eP	Pn	23 08 58.9	+1.0
PCVE				eS	Sn	23 09 16.4	-0.9
PCVE				i IAML		23 09 20.9	
PCVE				i IAML		23 09 21.3	
PCVE				i IAML		23 09 24.0	
EGRO	El Granado	1.53	21	S	Sn	23 09 17.0	-0.4
EGRO	El Granado	1.53	21	Pg	Pn	23 08 58.9	+1.0
EGRO				Sg	Sn	23 09 16.0	-1.4
EGRO				i IVmb_Lg		23 09 23.2	
EXHU	Huelva	1.54	41	Sn	Sn	23 09 16.6	-1.1
MESJ	Messejana	1.73	359	eP	Pn	23 09 01.5	+0.8
MESJ				eS	Sn	23 09 21.0	-1.3
MESJ				IAML		23 09 22.5	
	comp=E,1.2nm,0.1s						
MESJ	Messejana	1.73	359	ePn	Pn	23 09 01.7	+1.1
MESJ				eSn	Sn	23 09 21.2	-1.1
MESJ				eSg	Sb	23 09 26.6	+2.6
MESJ				i IAML		23 09 27.0	
MESJ				i IAML		23 09 28.8	
MESJ				i IAML		23 09 29.1	
PBEJ	Beja	1.93	8	eSn	Sn	23 09 27.0	-0.4
PBEJ				eSg	Sg	23 09 33.1	-0.4
ESPR	Espera	2.03	67	Sn	Sn	23 09 28.6	-1.1
ESPR				i IVmb_Lg		23 09 29.7	
EMIN	Mina Concepcio	2.05	36	S	Sn	23 09 29.0	-1.3
EMIN	Mina Concepcio	2.05	36	Sn	Sn	23 09 28.2	-2.2
EMIN				i IVmb_Lg		23 09 33.3	
PBAR	Barrancos	2.26	24	P	Pn	23 09 09.1	+1.1
PBAR				S	Sn	23 09 34.6	-0.8
PBAR	Barrancos	2.26	24	ePn	Pn	23 09 09.0	+1.1
PBAR				eSn	Sn	23 09 34.1	-1.3
PBAR				i IAML		23 09 36.3	
PBAR				i IAML		23 09 37.0	
PBAR				eSg	Sg	23 09 43.9	-0.1
PBAR				i IAML		23 09 44.3	
MOE	Montemor	2.41	357	ePn	Pn	23 09 11.3	+1.3
MOE				eSn	Sn	23 09 37.0	-2.2
MOE				eSg	Sg	23 09 48.0	-0.9
EVO	Evora	2.42	3	S	Sn	23 09 36.8	-2.6
EVO	Evora	2.42	3	eSn	Sn	23 09 37.4	-2.0
EVO				eSg	Sb	23 09 47.6	+3.5
PARRA	Arraiolos	2.71	2	ePn	Pn	23 09 14.7	+0.6
PARRA				eSn	Sn	23 09 44.1	-2.3
PARRA				eSg	Sg	23 09 56.7	-1.6
PARRA				i IAML		23 09 59.4	
PARRA				i IAML		23 10 09.1	
PESTR	Estremoz	2.79	10	S	Sn	23 09 45.3	-3.4
PESTR	Estremoz	2.79	10	eSn	Sn	23 09 45.8	-2.8
EBAD	Badajoz	2.80	19	P	Pn	23 09 16.4	+1.0
EBAD				S	Sn	23 09 47.6	-1.3
EBAD	Badajoz	2.80	19	Pn	Pn	23 09 16.7	+1.3
EBAD				Sn	Sn	23 09 46.7	-2.1
EBAD				i IVmb_Lg		23 09 49.7	
PMTG	Montargil	2.96	359	ePn	Pn	23 09 19.1	+1.6
PMTG				eSn	Sn	23 09 50.3	-2.3
PMTG				eSg	Sg	23 10 05.5	-0.8
ECAB	El Cabril	2.96	48	P	Pn	23 09 17.8	+0.2
ECAB				S	Sn	23 09 49.5	-3.2
ECAB	El Cabril	2.96	48	Pn	Pn	23 09 18.6	+1.0
ECAB				Sn	Sn	23 09 48.5	-4.2
ECAB				i IVmb_Lg		23 09 53.6	
PMRV	Marv??o	3.37	11	ePn	Pn	23 09 24.1	+0.9
PMRV				eSn	Sn	23 10 01.3	-1.7
PMRV				eSg	Sb	23 10 15.6	+4.2
PSARD	Sardoal	3.49	0	ePn	Pn	23 09 26.6	+1.8
PSARD				eSn	Sn	23 10 03.1	-2.6
EADA	Adamuz	3.54	53	P	Pn	23 09 27.9	+2.3
EADA				S	Sn	23 10 04.5	-2.7
EADA	Adamuz	3.54	53	Pn	Pn	23 09 27.2	+1.5
EADA				Sn	Sn	23 10 04.9	-2.2
EADA				i IVmb_Lg		23 10 09.7	
PSIM	Granatula de C	4.45	51	Sn	Sn	23 10 26.9	-2.5

IDC ***08*** *23:10:11.4±1.6, 49°.37S×121°.02E, h0^{km}, mb4.0/4, mbtmp4.0/4, MS3.4/10, Error ellipse: s-maj=102.4km s-min=24.3km az=105.0*

ISC 08 23:10:12.9±1.6, **49°.4S**±0°.2×**121°.2E**±0°.6, **h10**^{km}, **n16**, σ**1^{s}00**/6, **mb3.9**/4, **MS3.3**/9, **Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	15.36	338	T	T	23 29 27.7	
	baz=162,slow=74,SNR=16						
H01W2	Cape Leeuwin H	15.36	338	T	T	23 29 37.1	
	baz=162,slow=74,SNR=27						
H01W3	Cape Leeuwin H	15.38	338	T	T	23 29 31.5	
	baz=162,slow=74,SNR=20						
NWAO	Narrogin (SRO)	16.69	348	LR	LR	23 18 58.6	
	comp=Z,109nm,21.1s,baz=298,slow=32						
STKA	Stephens Creek	23.23	49	LR	LR	23 24 19.5	
	comp=Z,36nm,18.5s,baz=202,slow=36						
ASAR	Alice Springs	27.54	26	P	P	23 16 00.5	+0.7
	2.5nm,0.9s,baz=203,slow=9.3,SNR=5.1						
ASAR				LR	LR	23 25 37.8	
	comp=Z,84nm,20.7s,baz=204,slow=34						
	2.5nm,0.9s						
FITZ	Fitzroy Crossi	31.40	8	LR	LR	23 28 12.3	
	comp=Z,59nm,19.6s,baz=194,slow=34						
VNDA	Vanda	32.17	165	P	P	23 16 40.3	0.0
	0.9nm,0.8s,baz=306,slow=6.8,SNR=2.1						
VNDA				LR	LR	23 29 11.9	
	comp=Z,62nm,18.0s,baz=320,slow=35						
	0.9nm,0.8s						
BATI	Baumata	39.09	4	LR	LR	23 34 14.7	
	comp=Z,61nm,18.1s,baz=211,slow=37						
QSPA	South Pole Qui	40.76	180	P	P	23 17 54.5	+0.7
	1.7nm,1.0s,baz=343,slow=2.5,SNR=2.8						
QSPA				LR	LR	23 34 53.2	
	comp=Z,42nm,18.3s,baz=346,slow=36						
	1.7nm,1.0s						
KAPI	Kappang	44.21	358	LR	LR	23 35 12.0	
	comp=Z,33nm,19.1s,baz=261,slow=34						
SNAA	Sanae	52.98	199	P	P	23 19 28.7	-0.4
	3.2nm,0.8s,baz=143,slow=5.9,SNR=11						
	3.2nm,0.8s						
PLCA	Paso Flores	89.69	171	LR	LR	00 02 35.8	
	comp=Z,17nm,18.2s,baz=84,slow=35						
SONM	Songino Array	97.66	350	LR	LR	00 10 43.0	
	comp=Z,35nm,18.1s,baz=342,slow=37						
PDAR	Pinedale Array	144.75	81	PKP	PKPab	23 29 47.1	-1.3
	0.2nm,0.6s,baz=243,slow=4.2,SNR=2.1						
YKA	Yellowknife Ar	147.24	45	PKPbc	PKPbc	23 29 55.2	0.0
	1.0nm,0.8s,baz=268,slow=3.5,SNR=9.6						

IDC ***08*** *23:10:16.0±1.5, 3°.25S×133°.76E, h0^{km}, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=79.0km s-min=30.5km az=78.0*

DJA ***08*** *23:10:20.3±0.4, 3°S±3°×13°4E±°, h11^{km}±3^{km}, M4.0/6, MLv4.0/6*

ISC 08 23:10:18.4±0.8, **3°.30S**±0°.05×**133°.98E**±0°.06, **h13**^{km}, **n15**, σ**1^{s}60**/18, **mb3.8**/5, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMPI	Kaimana, Papua	0.46	218	P	Pb	23 10 27.4	-0.9
KMPI				S	Sb	23 10 35.7	+0.7
FAKI	Fak Fak	1.77	282	P	Pb	23 10 49.7	-1.1
FAKI	Fak Fak	1.77	282	P	Pb	23 10 50.0	-0.8
FAKI				S	Sb	23 11 12.2	-0.7
RKPI	Ransiki, Papua	1.79	6	P	Pg	23 10 52.4	-0.3
MWPI	Manokwari, Pap	2.35	1	P	Pb	23 11 00.3	-0.4
BAKI	Biak	2.98	45	P	Pn	23 11 07.9	+2.5
BAKI				S	Sb	23 11 45.9	-1.9
SWI	Sorong	3.64	312	P	Pn	23 11 17.4	+2.9
BNDI	Bandanaira	4.25	253	P	Pn	23 11 24.0	+1.2
MSAI	Masohi	5.05	269	P	Pn	23 11 35.3	+1.5
ASAR	Alice Springs	20.25	180	P	P	23 14 53.4	-0.2
	6.5nm,0.8s,baz=5.3,slow=12,SNR=30						
	6.5nm,0.8s						
MKAR	Makanchi Array	67.44	324	P	P	23 21 12.8	-1.1
	0.5nm,0.8s,baz=114,slow=6.5,SNR=4.5						
	0.5nm,0.8s						
ZALV	Zalesovo Beam	70.14	332	P	P	23 21 27.3	-3.2
	0.4nm,0.5s,baz=114,slow=5.4,SNR=1.8						
	0.4nm,0.5s						
KURBB	Kurchatov Arra	71.54	326	P	P	23 21 37.9	-1.2
	0.7nm,0.9s,baz=123,slow=5.6,SNR=4.7						
	0.7nm,0.9s						
BVAR	Borovoye Array	77.14	326	P	P	23 22 12.0	+0.3
	0.3nm,0.6s,baz=116,slow=3.4,SNR=2.4						
	0.3nm,0.6s						
ILAR	Eielson Array	88.33	25	P	P	23 23 09.9	+0.2
	0.3nm,0.6s,baz=252,slow=4.9,SNR=4.4						
	0.3nm,0.6s						

RSNC ***08*** *23:23:06.5±0.9, 5°S±3°×7°7W±°, h1^{km}±9^{km}, M4.0, mb4.7, mB5.0, ML3.2, MLv3.6, Mw(mB)4.4*

IDC ***08*** *23:23:18.4±4.1, 5°.19S×77°.41W, h176^{km}±36^{km}, mb3.4/7, mbtmp3.9/9, Error ellipse: s-maj=42.0km s-min=17.0km az=67.0*

ISC 08 23:23:09.5±0.6, **5°.12S**±0°.08×**77°.09W**±0°.10, **h100**^{km}, **n42**, σ**1^{s}70**/42, **mb3.5**/6, **Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCRA	Macar, Loja	2.95	284	P	Pn	23 23 52.3	-2.3
COHC	Cochancay	3.41	321	P	Pn	23 24 00.9	+0.2
PIAT	Ana Tenorio	4.26	344	P	Pn	23 24 14.7	+2.1
PPLP	Puerto Lpez	5.11	314	P	Pn	23 24 23.3	-0.5
CASC	Dorado de Casc	5.23	357	P	Pn	23 24 27.6	+2.2
FLF1	Flavio Alfaro-	5.47	330	P	Pn	23 24 30.4	+1.7
OTAV	Otavalo	5.49	346	P	Pn	23 24 30.4	+1.1
	9.7nm,0.9s						
CUSE	Cuicocha Este	5.54	346	P	Pn	23 24 28.2	-1.8
BONI	La Bonita	5.55	355	P	Pn	23 24 30.9	+0.9
	1μm19nm,0.5s						
PAC1	Pacto, Paraso	5.61	342	P	Pn	23 24 34.8	+4.1
PTLC	Puerto Leguiza	5.73	24	P	Pn	23 24 30.4	-1.8
	192nm,0.9s						
TULM	Tulcn-Chalpat	5.84	353	P	Pn	23 24 38.1	+4.0
	27nm,0.8s						
CMBC	Cumbal	6.06	353	P	Pn	23 24 40.7	+3.6
	29nm,0.8s						
CRUC	La Cruz	6.64	1	P	Pn	23 24 43.4	-1.5
	947nm,2.1s						
FLOC	Florencia	6.81	12	P	Pn	23 24 47.3	+0.4
	1μm38nm,0.6s						
NNA	Nana	6.83	178	P	Pn	23 24 47.4	+0.2
	20nm,0.4s						
BBAC	Balboa, Cauca	7.09	359	P	Pn	23 24 49.9	-1.0
	14nm,0.8s						
GARC	Garzon, Huila	7.43	12	P	Pn	23 24 57.0	+1.5
	4μm96nm,0.4s						
POPC	Popayan, Colom	7.62	3	P	Pn	23 24 56.4	-1.7
MACC	Macarena, Meta	7.91	24	P	Pn	23 25 03.4	+1.6
	788nm57nm,0.7s						
BETC	Betania	7.92	12	P	Pn	23 25 02.8	+0.8
URMC	La Uribe, Meta	8.74	18	P	Pn	23 25 13.0	-0.2
	933nm99nm,0.9s						
VILC	Villavicencio,	9.78	20	P	Pn	23 25 28.1	+0.8
	803nm52nm,0.5s						
CHIC	Chingaza	10.25	19	P	Pn	23 25 36.5	+2.5
	24nm,0.6s						
ROSC	El Rosal	10.27	16	P	Pn	23 25 45.9	+12
	6.0nm,0.5s,baz=186,slow=19,SNR=2.3						
GUY2C	Guyana, Caldas	10.42	10	P	Pn	23 25 38.6	+2.2
	476nm8.2nm,0.9s						
PTGC	Puerto Gaitan,	10.50	28	P	Pn	23 25 38.0	+1.0
	49nm,0.7s						
SGC2	Sao Gabriel da	11.24	64	P	Pn	23 25 46.4	-0.7
LPAZ	La Paz	14.16	142	P	P	23 26 32.2	+1.6
	1.6nm,0.7s,baz=315,slow=7.1,SNR=7.3						
TXAR	Lajitas Array	42.72	325	P	P	23 30 57.2	+0.2
	0.4nm,0.6s,baz=139,slow=8.1,SNR=5.0						
TXAR				PcP	PcP	23 32 45.9	-1.2
	0.3nm,0.8s,baz=138,slow=2.0,SNR=3.6						
	0.4nm,0.6s						
PDAR	Pinedale Array	56.02	332	PcP	PcP	23 33 34.4	-0.9
	0.7nm,1.0s,baz=117,slow=3.7,SNR=2.4						
NVAR	Mina Array Bea	57.75	322	P	P	23 32 50.0	-0.4
	0.3nm,0.5s,baz=131,slow=6.9,SNR=1.9						
	0.3nm,0.5s						
YKA	Yellowknife Ar	73.24	343	P	P	23 34 29.1	-0.3
	0.3nm,0.6s,baz=153,slow=4.8,SNR=3.8						
	0.3nm,0.6s						
SNAA	Sanae	80.23	162	P	P	23 35 09.5	+0.7
	1.0nm,0.5s,baz=287,slow=9.7,SNR=11						
	1.0nm,0.5s						
TORD	Torodi Ar. Bea	80.29	76	P	P	23 35 11.4	+1.3
	1.9nm,0.3s,baz=270,slow=2.9,SNR=1.7						
	1.9nm,0.3s						
QSPA	South Pole Qui	84.97	180	P	P	23 35 33.5	-0.1
	3.4nm,0.9s,baz=138,slow=7.5,SNR=13						
	3.4nm,0.9s						
ILAR	Eielson Array	86.14	336	P	P	23 35 38.5	-0.7
	0.5nm,0.9s,baz=107,slow=6.5,SNR=3.2						
	0.5nm,0.9s						
ZALV	Zalesovo Beam	129.13	14	PKP	PKiKP	23 42 05.6	-1.0
	0.4nm,0.4s,baz=318,slow=1.9,SNR=3.5						
KURBB	Kurchatov Arra	130.26	20	PKP	PKiKP	23 42 08.8	-0.1
	0.5nm,0.5s,baz=310,slow=2.6,SNR=7.1						
MKAR	Makanchi Array	134.82	20	PKP	PKiKP	23 42 16.8	-1.6
	0.3nm,0.5s,baz=330,slow=2.2,SNR=7.1						
ASAR	Alice Springs	138.38	225	PKP	PKiKP	23 42 25.2	-1.1
	0.1nm,0.4s,baz=81,slow=3.9,SNR=4.1						
WRA	Warramunga Arr	140.31	230	PKP	PKiKP	23 42 28.4	-1.9
	0.6nm,0.8s,baz=115,slow=1.9,SNR=2.5						

TAP ***08*** *23:28:23.8, 24°.13N×122°.64E, h14^{km}, ML3.3, C*

JMA ***08*** *23:28:23.8±0.2, 24°.1N±1°.0×122°.7E±0°.5, h17^{km}±3^{km}, MV3.1/15, NW OFF ISHIGAKIJIMA IS*

ISC 08 23:28:23.4±0.9, **24°.07N**±0°.03×**122°.67E**±0°.02, **h16**^{km}±7^{km}, **n99**, σ**0^{s}61**/178, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	EOS4	0.32	280	i P	Pg	23 28 30.0	+0.1
EOS4				S	Sg	23 28 34.7	+0.4
EOS3	EOS3	0.39	305	i P	Pg	23 28 31.4	+0.3
EOS3				i S	Sb	23 28 38.1	+0.7
JYNG	Yonagunijimaku	0.46	34	P	Pg	23 28 32.7	+0.1
JYNG				S	Sg	23 28 38.8	-0.1
YOJ	Yonaguni jima	0.50	39	P	Pg	23 28 33.6	+0.2
YOJ	Yonaguni jima	0.50	39	S	Sb	23 28 40.4	-0.6
YOJ	Yonaguni jima	0.50	39	i P	Pg	23 28 33.5	+0.1
YOJ				i S	Sb	23 28 40.7	-0.3
YOJ	Yonaguni jima	0.50	39	P	Pg	23 28 33.5	+0.1
YOJ				S	Sg	23 28 40.0	-0.2
EOS2	EOS2	0.53	312	i P	Pb	23 28 34.5	+0.3
EOS2				i S	Sb	23 28 42.7	+1.2
EAHA	Aohua	0.89	287	eP	Pb	23 28 39.8	-0.6
EAHA				eS	Sn	23 28 53.1	-0.6
ESAO	Su ao	0.90	304	eP	Pb	23 28 40.2	-0.4
ESAO				eS	Sb	23 28 52.2	-0.3
ENA	Nanau	0.92	293	P	Pb	23 28 40.0	-0.9
ENA				eS	Sb	23 28 52.7	-0.1
TWC	Suao	0.92	306	P	Pb	23 28 40.6	-0.4
ETL	Fush Village	0.96	276	eP	Pb	23 28 41.5	-0.1
ETL				eS	Sn	23 28 55.9	+0.4
HWA	Hwalien	0.97	265	eP	Pb	23 28 42.0	+0.2
HWA				eS	Sn	23 28 56.4	+0.6
TWD	Chiawan	0.98	271	eP	Pb	23 28 41.8	-0.1
TWD				eS	Sg	23 28 55.1	0.0
NACB	Ninganchiao	0.98	276	P	Pb	23 28 42.0	0.0
NACB	Ninganchiao	0.98	276	S	Sn	23 28 56.5	+0.3
NACB	Ninganchiao	0.98	276	i P	Pb	23 28 42.0	0.0
NACB				S	Sn	23 28 56.3	+0.1
TEYL	Yanliau Villag	1.00	259	eP	Pb	23 28 42.1	-0.1
TEYL				eS	Sg	23 28 56.1	+0.4
IRIF	Iriomote-Funau	1.01	74	P	Pb	23 28 42.0	-0.5
IRIF				eS	Sb	23 28 55.5	0.0
EGS		1.02	319	eP	Pb	23 28 42.8	+0.1
NDS	Dongshan	1.03	303	eP	Pb	23 28 42.3	-0.6
NDS				eS	Sn	23 28 57.2	-0.2
HATJ	Hateruma jima	1.04	90	eP	Pb	23 28 42.8	-0.2
HATJ				eS	Sb	23 28 57.3	+0.8
SHUL	Shoufeng	1.05	255	eP	Pb	23 28 42.7	-0.4
SHUL				eS	Sg	23 28 57.5	+0.2
ETLH	Xiulin Townshi	1.09	278	eP	Pb	23 28 43.9	0.0
ETLH				eS	Sn	23 28 59.4	+0.5
TWE	Neicheng	1.12	306	i P	Pb	23 28 43.9	-0.5
TWE				S	Sg	23 28 58.9	-0.7
TWB1	Santiao Chiao	1.12	327	eP	Pg	23 28 45.0	-0.1
TWB1				eS	Sn	23 28 59.4	-0.2
LATG	Datong	1.14	294	eP	Pb	23 28 44.3	-0.5
LATG				eS	Sg	23 29 00.6	+0.3
LXIB	Xiulin Townshi	1.15	268	eP	Pb	23 28 44.2	-0.7
LXIB				eS	Sn	23 29 00.6	+0.2
ENTT	Nioudou	1.15	300	P	Pb	23 28 44.6	-0.4
ENTT				eS	Sg	23 29 00.6	-0.1
TIPB	Shuangxi	1.18	320	eP	Pg	23 28 45.9	-0.3
TIPB				eS	Sn	23 29 00.4	-0.7
FUSB	Fushanzhiwuyua	1.20	305	i P	Pb	23 28 46.1	+0.3
FUSB				S	Sg	23 29 01.9	-0.4
WARBT	Fenglin Townsh	1.22	254	eP	Pn	23 28 44.5	-1.3
WARBT				eS	Sb	23 29 01.3	-0.4
NNSB	Datong	1.22	287	eP	Pn	23 28 46.1	+0.2
NNSB				S	Sg	23 29 03.2	+0.2
NNSH	Datong	1.22	287	P	Pn	23 28 46.0	0.0
NNSH				eS	Sg	23 29 03.3	+0.3
NNS	Nan Shan	1.24	288	P	Pn	23 28 46.4	+0.2
NNS				S	Sg	23 29 03.2	-0.2
JKRS	Kuro-shima	1.24	82	P	Pn	23 28 46.4	+0.4
JKRS				eS	Sn	23 29 03.3	+0.8
SXI1	Grass Mountain	1.25	325	P	Pn	23 28 46.3	0.0
SXI1				S	Sg	23 29 03.2	-0.7
HGSD	Ruisui	1.27	244	eP	Pn	23 28 46.4	-0.1
HGSD				eS	Sb	23 29 03.4	+0.2
NWLT	Wulai	1.27	304	P	Pb	23 28 47.3	+0.2
NWLT				S	Sn	23 29 03.3	-0.1
WHF	Hehuan Shan	1.28	274	eP	Pn	23 28 46.8	-0.3
WHF				eS	Sb	23 29 04.0	+0.2
NWF	Wu-fen Shan	1.28	321	eP	Pb	23 28 46.9	-0.3
NWF				eS	Sg	23 29 04.2	-0.7
WFSB	Wu-fen Shan	1.28	321	eP	Pb	23 28 47.0	-0.2
WFSB				eS	Sn	23 29 03.4	-0.2
FUSS	Fushou	1.31	278	i P	Pb	23 28 47.8	0.0
FUSS				S	Sg	23 29 05.8	0.0
YHNB	Yeheng	1.32	297	P	Pb	23 28 48.1	+0.3
YHNB	Yeheng	1.32	297	i P	Pb	23 28 47.9	+0.1
YHNB				S	Sn	23 29 04.7	+0.1
EHYH	Wanrong	1.34	245	eP	Pn	23 28 46.6	-0.8
EHYH				eS	Sn	23 29 04.7	-0.2
NSK	Sanguang	1.34	297	P	Pb	23 28 48.2	+0.1
NSK				eS	Sn	23 29 05.2	+0.2
TWA	Mucha	1.34	313	eP	Pg	23 28 49.1	-0.1
TWA				eS	Sg	23 29 06.1	-0.6
EHY	Hungye	1.35	246	eP	Pn	23 28 46.7	-0.9
EHY				eS	Sn	23 29 05.0	-0.3
OWD	Renai	1.37	266	i P	Pn	23 28 47.7	-0.3
OWD				S	Sn	23 29 05.6	-0.2
TWT	Tachien	1.37	278	eP	Pb	23 28 49.2	+0.4
JIJ	Ishigaki jima	1.38	77	P	Pn	23 28 47.7	-0.3
JIJ				eS	Sn	23 29 05.5	-0.4
TDCB	Techi	1.39	278	eP	Pb	23 28 48.9	-0.1
TDCB				eS	Sb	23 29 07.2	+0.6
TATO	Taipei	1.40	310	eP	Pb	23 28 49.5	+0.3
TATO				eS	Sg	23 29 07.5	-1.2
WUSB	Renai	1.42	267	eP	Pn	23 28 48.6	-0.1
WUSB				eS	Sb	23 29 07.8	+0.4
YULB	Yu-li	1.42	242	P	Pn	23 28 47.7	-0.9
YULB	Yu-li	1.42	242	i P	Pn	23 28 47.7	-0.9
YULB				eS	Sn	23 29 05.9	-1.1
VWDT	VWDT	1.43	258	eP	Pn	23 28 48.5	-0.2
VWDT				eS	Sn	23 29 07.3	+0.2
TWF1	Yuli	1.44	241	P	Pn	23 28 48.1	-0.7
TWF1				eS	Sn	23 29 07.0	-0.4
YM01	YM01	1.47	317	eP	Pg	23 28 51.3	-0.3
YM01				eS	Sn	23 29 07.4	-0.7
YM08	YM08	1.48	319	eP	Pb	23 28 50.4	-0.2
YM08				eS	Sn	23 29 08.4	-0.2
ZUZH	Zhuzihu	1.49	317	eP	Pn	23 28 50.0	+0.4
ZUZH				eS	Sb	23 29 09.9	+0.4
NFF	Wufeng Townshi	1.52	292	eP	Pb	23 28 51.3	+0.1
NFF				eS	Sg	23 29 11.3	-1.1
FULB	Fuli	1.53	236	eP	Pn	23 28 49.1	-1.0
FULB				eS	Sn	23 29 10.1	+0.5
KSHI	Guanxi Townshi	1.53	298	eP	Pb	23 28 51.4	0.0
KSHI				eS	Sg	23 29 12.7	0.0
WHP	Taichung City	1.58	278	P	Pb	23 28 52.0	-0.4
WHP				S	Sb	23 29 12.9	+0.7
JISG	Ishigakijimahi	1.59	71	P	Pn	23 28 50.6	-0.2
JISG				eS	Sn	23 29 11.2	+0.1
DPDB	Guoxing	1.59	269	eP	Pn	23 28 51.6	+0.7
SSLB	Suanglung	1.59	260	P	Pn	23 28 51.5	+0.5
SSLB	Suanglung	1.59	260	eP	Pn	23 28 51.4	+0.5
LIOB	Emei	1.61	291	eP	Pb	23 28 53.1	+0.4
LIOB				eS	Sg	23 29 14.2	-1.1
NSTT	Nanjuang	1.62	291	eP	Pb	23 28 53.3	+0.4
NSTT				eS	Sg	23 29 14.4	-1.1
EHD	Haiduan	1.62	236	eP	Pn	23 28 51.4	+0.1
EHD				eS	Sn	23 29 11.7	-0.2
SMLT	Sun Moon Lake	1.62	264	P	Pn	23 28 51.7	+0.3
SMLT				eS	Sn	23 29 12.8	+0.7
ECS	Chishang	1.64	234	eS	Sn	23 29 13.4	+1.0
EDH	Donghe	1.66	229	eP	Pn	23 28 51.2	-0.6
TYC	Yuchr	1.66	265	eP	Pn	23 28 52.2	+0.3
TYC				eS	Sn	23 29 13.8	+0.9
YUS	Yu-Shan	1.67	250	P	Pn	23 28 52.3	-0.2
YUS				eS	Sn	23 29 13.7	-0.1
WHYT	Xinyi Township	1.70	258	P	Pn	23 28 53.0	+0.5
ELDTW	Lidau	1.75	240	eP	Pn	23 28 52.2	-1.0
ELDTW				S	Sn	23 29 14.5	-0.7
WJS	Zhushan	1.79	263	eP	Pb	23 28 55.8	0.0
ALS	Alishan	1.79	252	P	Pn	23 28 54.3	+0.4
ALS				eS	Sn	23 29 16.8	+0.3
LONT	Longtian	1.82	231	eP	Pn	23 28 53.7	-0.4
LONT				eS	Sn	23 29 16.7	-0.2
CHN5	Tsauling	1.88	256	eP	Pn	23 28 56.0	+1.0
CHN5				eS	Sb	23 29 20.3	-0.4
TWGBT	Beinan	1.92	230	eP	Pn	23 28 54.7	-0.7
TWG	Pinlang	1.92	230	eP	Pn	23 28 54.6	-0.8
JTJ	Tarama	1.94	73	eP	Pn	23 28 56.0	+0.3
JTJ				eS	Sn	23 29 21.0	+1.2
STYH	Taoyuan	1.95	243	eP	Pn	23 28 56.0	+0.2
STYH				eS	Sn	23 29 21.0	+1.0
STYT	Tauyuan	1.97	243	eP	Pn	23 28 57.0	+0.9
STYT				eS	Sn	23 29 22.1	+1.5
WCKO	Fanlu	1.99	252	eP	Pb	23 28 58.4	-0.8
WCKO				S	Sb	23 29 23.5	-0.2
TPUB	Ta-pu	2.02	248	P	Pn	23 28 58.0	+1.3
TPUB	Ta-pu	2.02	248	eP	Pn	23 28 58.1	+1.3
TPUB				i S	Sn	23 29 23.5	+1.8
SGST	Jiashian	2.15	243	eP	Pn	23 29 00.1	+1.6
SGST				eS	Sb	23 29 27.5	-0.8
CHN1	Nanshi	2.15	246	eP	Pn	23 29 00.1	+1.6
CHN1				eS	Sb	23 29 28.2	-0.2
TWK	Hsinying	2.15	249	eP	Pn	23 28 60.0	+1.3
TWK				eS	Sb	23 29 28.1	-0.4
SNST	Tainan City	2.16	247	eP	Pn	23 29 00.6	+1.8
SNST				eS	Sb	23 29 28.4	-0.2
WSL	Shuilin Townsh	2.30	257	eP	Pn	23 29 02.1	+1.5
WSL				eS	Sb	23 29 31.8	-0.8
PHUB	P'eng-hu	2.89	260	eP	Pn	23 29 09.9	+1.2

IDC ***09*** *00:22:07.4±1.4, 16°.06N×96°.29W, h0^{km}, mb4.0/3, mbtmp3.8/4, ML3.4/1, Error ellipse: s-maj=151.1km s-min=24.6km az=56.0*

NEIC ***09*** *00:22:17.4±1.9, 16°.96N±0°.04×95°.19W±0°.04, h110^{km}±7^{km}, mb4.4/106, Md4.5/100(MEX), Error ellipse: s-maj=6.3km s-min=5.3km az=157.0*

MEX ***09*** *00:22:19.0±0.9, 16°.95N×95°.20W, h106^{km}±6^{km}, MD4.5*

ISC 09 00:22:17.3±0.6, **16°.99N**±0°.03×**95°.21W**±0°.03, **h113**^{km}±6^{km}, **n206**, σ**2^{s}24**/288, **mb4.4**/27, **Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.32	71		Pn	00 22 33.5	-0.1
CMIG					Sn	00 22 44.2	-1.5
CMIG	Matias Romero	0.32	71	*e*P	Pn	00 22 33.5	-0.1
CMIG				*e*S	Sn	00 22 44.2	-1.5
NEUV	Arroyo Zacate	0.92	322		Pn	00 22 37.8	-0.2
NEUV					Sn	00 22 53.1	-0.5
NEUV	Arroyo Zacate	0.92	322	*e*P	Pn	00 22 37.8	-0.2
NEUV				*e*S	Sn	00 22 53.1	-0.5
UXUV	UXUV	1.06	72		Pn	00 22 39.9	+0.5
UXUV					Sn	00 22 55.3	-0.8
UXUV	UXUV	1.06	72	*e*P	Pn	00 22 39.9	+0.5
UXUV				*e*S	Sn	00 22 55.3	-0.8
MIHL	Minatitlan	1.18	32		Pn	00 22 41.2	+0.5
MIHL					Sn	00 22 57.1	-1.2
MIHL	Minatitlan	1.18	32	*e*P	Pn	00 22 41.2	+0.5
MIHL				*e*S	Sn	00 22 57.1	-1.2
TUIG	Tuzandepetl	1.28	36		Pn	00 22 42.5	+0.8
TUIG					Sn	00 22 59.8	-0.5
TUIG	Tuzandepetl	1.28	36	*e*P	Pn	00 22 42.5	+0.8
TUIG				*e*S	Sn	00 22 59.8	-0.5
OXLC	Oaxaca	1.44	273		Pn	00 22 43.9	+0.2
OXLC					Sn	00 23 03.4	-0.4
OXLC	Oaxaca	1.44	273	*e*P	Pn	00 22 43.9	+0.2
OXLC				*e*S	Sn	00 23 03.4	-0.4
OXBJ	Oaxaca	1.46	273		Pn	00 22 48.6	+4.6
OXBJ					Sn	00 23 07.2	+2.9
OXBJ	Oaxaca	1.46	273	*e*P	Pn	00 22 48.6	+4.6
OXBJ				*e*S	Sn	00 23 07.2	+2.9
OXIG	Oaxaca	1.46	274		Pn	00 22 44.4	+0.3
OXIG					Sn	00 23 04.1	-0.3
VHO	Vista Hermosa	1.46	274	*e*P	Pn	00 22 44.4	+0.3
VHO				*e*S	Sn	00 23 04.1	-0.3
HUIG	Huatulco	1.49	216		Pn	00 22 42.0	-2.3
HUIG					Sn	00 23 01.8	-2.8
HUIG	Huatulco	1.49	216	*e*P	Pn	00 22 42.0	-2.3
HUIG				*e*S	Sn	00 23 01.8	-2.8
PMUV	Sontecomapan	1.55	3		Pn	00 22 45.2	+0.2
PMUV					Sn	00 23 05.4	-0.7
PMUV	Sontecomapan	1.55	3	*e*P	Pn	00 22 45.2	+0.2
PMUV				*e*S	Sn	00 23 05.4	-0.7
PANG	Puerto Angel	1.79	223		Pn	00 22 45.1	-2.8
PANG					Sn	00 23 08.3	-2.8
PANG	Puerto Angel	1.79	223	*e*P	Pn	00 22 45.1	-2.8
PANG				*e*S	Sn	00 23 08.3	-2.8
TGBT	Tuxtla Gutierr	2.04	96		Pn	00 22 51.3	+0.4
TGBT					Sn	00 23 14.6	-2.0
TGBT	Tuxtla Gutierr	2.04	96	*e*P	Pn	00 22 51.3	+0.4
TGBT				*e*S	Sn	00 23 14.6	-2.0
TOIG	Toxpalan	2.09	302		Pn	00 22 53.0	+1.3
TOIG					Sn	00 23 17.3	-0.7
TOIG	Toxpalan	2.09	302	*e*P	Pn	00 22 53.0	+1.3
TOIG				*e*S	Sn	00 23 17.3	-0.7
PEIG	Puerto Escondi	2.11	242		Pn	00 22 49.4	-2.4
PEIG					Sn	00 23 14.3	-3.9
PEIG	Puerto Escondi	2.11	242	*e*P	Pn	00 22 49.4	-2.4
PEIG				*e*S	Sn	00 23 14.3	-3.9
YOIG	Yosondua	2.24	267		Pn	00 22 52.9	-0.9
YOIG					Sn	00 23 19.9	-1.9
YOIG	Yosondua	2.24	267	*e*P	Pn	00 22 52.9	-0.9
YOIG				*e*S	Sn	00 23 19.9	-1.9
PCIG		2.29	123		Pn	00 22 54.8	+0.5
PCIG					Sn	00 23 21.9	-0.6
PCIG		2.29	123	*e*P	Pn	00 22 54.8	+0.5
PCIG				*e*S	Sn	00 23 21.9	-0.6
VHSA	Villahermosa	2.38	65		Pn	00 22 55.3	0.0
VHSA					Sn	00 23 23.5	-0.9
VHSA	Villahermosa	2.38	65	*e*P	Pn	00 22 55.3	0.0
VHSA				*e*S	Sn	00 23 23.5	-0.9
TXIG	Tlaxiaco	2.46	277		Pn	00 22 57.0	+0.3
TXIG					Sn	00 23 22.0	-4.9
TXIG	Tlaxiaco	2.46	277	*e*P	Pn	00 22 57.0	+0.3
TXIG				*e*S	Sn	00 23 22.0	-4.9
TPIG	Tehuac#an	2.50	305		Pn	00 22 58.9	+1.9
TPIG					Sn	00 23 27.0	-0.5
TPIG	Tehuac#an	2.50	305	*e*P	Pn	00 22 58.9	+1.9
TPIG				*e*S	Sn	00 23 27.0	-0.5
HLIG	Huajuapan de L	2.62	289		Pn	00 22 59.6	+1.0
HLIG					Sn	00 23 25.6	-4.7
HLIG	Huajuapan de L	2.62	289	*e*P	Pn	00 22 59.6	+1.0
HLIG				*e*S	Sn	00 23 25.6	-4.7
JAUV	Jalcomulco	2.81	328		Pn	00 23 00.6	-0.5
JAUV					Sn	00 23 31.9	-2.7
JAUV	Jalcomulco	2.81	328	*e*P	Pn	00 23 00.6	-0.5
JAUV				*e*S	Sn	00 23 31.9	-2.7
PNIG	Pinotepa	2.86	258		Pn	00 22 59.8	-1.9
PNIG					Sn	00 23 32.2	-3.5
PNIG	Pinotepa	2.86	258	*e*P	Pn	00 22 59.8	-1.9
PNIG				*e*S	Sn	00 23 32.2	-3.5
FTIG	Fresnillo de T	2.94	289		Pn	00 23 04.0	+1.2
FTIG					Sn	00 23 31.8	-5.9
FTIG	Fresnillo de T	2.94	289	*e*P	Pn	00 23 04.0	+1.2
FTIG				*e*S	Sn	00 23 31.8	-5.9
LVIG	Laguna Verde	2.95	337		Pn	00 23 01.2	-1.6
LVIG					Sn	00 23 34.1	-3.7
LVIG	Laguna Verde	2.95	337	*e*P	Pn	00 23 01.2	-1.6
LVIG				*e*S	Sn	00 23 34.1	-3.7
CCIG	Comitan	3.02	103		Pn	00 23 04.6	+0.6
CCIG					Sn	00 23 34.8	-5.1
CCIG	Comitan	3.02	103	*e*P	Pn	00 23 05.1	+1.1
CCIG				*e*S	Sn	00 23 34.9	-4.9
MGIG	Malinaltepec	3.29	275	*e*	Pn	00 23 07.6	+0.2
MGIG				*e*		00 23 32.9	
PATR	El Naranjo	3.41	123		Pn	00 23 10.4	+1.3
PATR					Sn	00 23 48.0	-1.1
PATR	El Naranjo	3.41	123	*e*P	Pn	00 23 10.4	+1.3
PATR				*e*S	Sn	00 23 48.0	-1.1
PAVE	Pavencul	3.42	121		Pn	00 23 10.8	+1.6
PAVE					Sn	00 23 48.9	-0.3
PAVE	Pavencul	3.42	121	*e*P	Pn	00 23 10.8	+1.6
PAVE				*e*S	Sn	00 23 48.9	-0.3
CHUJ	Union Juarez	3.52	122	*e*P	Pn	00 23 12.1	+1.4
CHUJ				*e*S	Sn	00 23 50.3	-1.5
CRIG	Cruz Grande	3.77	267		Pn	00 23 11.9	-1.7
CRIG					Sn	00 23 48.2	-9.1
CRIG	Cruz Grande	3.77	267	*e*P	Pn	00 23 11.9	-1.7
CRIG				*e*S	Sn	00 23 48.2	-9.1
PPM	Popocatepetl	3.86	303	*e*P	Pn	00 23 18.2	+2.9
PPM				*e*S	Sn	00 23 49.9	-10
PPIG	Popocatepetl	3.86	303		Pn	00 23 18.2	+2.9
PPIG					Sn	00 23 49.9	-10
CXUV	Coxquihui	3.89	325		Pn	00 23 15.8	+0.4
CXUV					Sn	00 23 47.4	-13
CXUV	Coxquihui	3.89	325	*e*P	Pn	00 23 15.8	+0.4
CXUV				*e*S	Sn	00 23 47.4	-13
HUEH	Huehuetenango	3.93	114	Pn	Pn	00 23 16.1	+0.1
YAIG	Yautepec	4.12	297		Pn	00 23 20.7	+2.2
YAIG					Sn	00 24 02.9	-3.1
YAIG	Yautepec	4.12	297	*e*P	Pn	00 23 20.7	+2.2
YAIG				*e*S	Sn	00 24 02.9	-3.1
RTAL	Retalhuleu	4.17	125	Pn	Pn	00 23 19.9	+0.8
MPVM	San Francisco	4.24	302		Pn	00 23 20.3	+0.1
MPVM					Sn	00 23 59.0	-10
MPVM	San Francisco	4.24	302	*e*P	Pn	00 23 20.3	+0.1
MPVM				*e*S	Sn	00 23 59.0	-10
DAIG	Los Arroyos	4.25	271		Pn	00 23 19.5	-0.7
DAIG					Sn	00 24 04.5	-4.5
DAIG	Los Arroyos	4.25	271	*e*P	Pn	00 23 19.5	-0.7
DAIG				*e*S	Sn	00 24 04.5	-4.5
SCIG	Sabancuy	4.30	62		Pn	00 23 20.4	-0.4
SCIG					Sn	00 24 01.5	-8.6
SCIG	Sabancuy	4.30	62	*e*P	Pn	00 23 20.4	-0.4
SCIG				*e*S	Sn	00 24 01.5	-8.6
MEIG	Mezcala	4.32	283		Pn	00 23 21.9	+0.8
MEIG					Sn	00 24 06.4	-4.1
MEIG	Mezcala	4.32	283	*e*P	Pn	00 23 21.9	+0.8
MEIG				*e*S	Sn	00 24 06.4	-4.1
MZVM		4.41	300		Pn	00 23 23.3	+1.0
MZVM					Sn	00 24 06.3	-6.4
MZVM		4.41	300	*e*P	Pn	00 23 23.3	+1.0
MZVM				*e*S	Sn	00 24 06.3	-6.4
UNM	Universidad Na	4.44	302	Pn	Pn	00 23 22.3	-0.6
MAVM	Malinalco, Edo	4.53	296		Pn	00 23 26.8	+2.7
MAVM					Sn	00 24 13.3	-2.6
MAVM	Malinalco, Edo	4.53	296	*e*P	Pn	00 23 26.8	+2.7
MAVM				*e*S	Sn	00 24 13.3	-2.6
CAIG	El Cayaco	4.84	271		Pn	00 23 27.4	-0.7
CAIG					Sn	00 24 16.3	-6.9
CAIG	El Cayaco	4.84	271	*e*P	Pn	00 23 27.4	-0.7
CAIG				*e*S	Sn	00 24 16.3	-6.9
ARIG	Puente Sto Nin	5.07	285		Pn	00 23 33.0	+1.8
ARIG					Sn	00 24 26.9	-1.8
ARIG	Puente Sto Nin	5.07	285	*e*P	Pn	00 23 33.0	+1.8
ARIG				*e*S	Sn	00 24 26.9	-1.8
PETF	Flores	5.11	90		Pn	00 23 30.8	-0.9
PETF					Sn	00 24 25.0	-4.6
PETF	Flores	5.11	90	*e*P	Pn	00 23 27.6	-4.1
PETF				*e*S	Sn	00 24 20.6	-9.0
CTUV	Llano Grande	5.36	327		Pn	00 23 33.9	-1.2
CTUV					Sn	00 24 32.1	-3.5
CTUV	Llano Grande	5.36	327	*e*P	Pn	00 23 33.9	-1.2
CTUV				*e*S	Sn	00 24 32.1	-3.5
ZIIG	Zihuatanejo	6.01	277		Pn	00 23 44.5	+0.6
ZIIG					Sn	00 24 49.7	-1.8
ZIIG	Zihuatanejo	6.01	277	*e*P	Pn	00 23 44.5	+0.6
ZIIG				*e*S	Sn	00 24 49.7	-1.8
ESQI	Esquipulas	6.14	112	Pn	Pn	00 23 45.5	-0.3
JRQG	Juriquilla Cam	6.19	307	Pn	Pn	00 23 46.7	+0.2
MTO3	Montecristo	6.19	114	Pn	Pn	00 23 45.2	-1.3
MOIG	Morelia	6.28	296	Pn	Pn	00 23 49.9	+2.1
TEIG	Tepich	7.32	63		Pn	00 23 59.8	-1.7
TEIG				Sn	Sn	00 25 21.1	-2.0
MMIG	Aquila	7.87	281		Pn	00 24 10.1	+1.1
MMIG					Sn	00 25 34.6	-1.9
MMIG	Aquila	7.87	281	*e*P	Pn	00 24 10.1	+1.1
MMIG				*e*S	Sn	00 25 34.6	-1.9
MNGA	Volcan de Coli	8.37	288	*e*P	Pn	00 24 19.6	+3.5
MNGA				*e*S	Sn	00 25 41.2	-7.9
INCO	Volcan de Coli	8.37	289	*e*P	Pn	00 24 20.1	+3.9
INCO				*e*S	Sn	00 25 42.1	-7.2
SOMAC	Volcano de Col	8.39	289	*e*P	Pn	00 24 19.9	+3.4
SOMAC				*e*S	Sn	00 25 46.9	-2.9
CEGR	Campo Tres	8.56	288	*e*P	Pn	00 24 22.4	+3.7
CEGR				*e*S	Sn	00 25 53.4	-0.3
CDAR	Ciudad de Arme	8.60	284	*e*P	Pn	00 24 20.8	+1.8
CDAR				*e*S	Sn	00 25 47.8	-6.5
CNGN	Cerro Negro	9.36	117	Pn	Pn	00 24 30.1	+0.8
JUD3	Juan Diaz 3	11.59	125	Pn	Pn	00 24 59.2	-0.2
833A	Chaparral WMA,	11.92	342	Pn	Pn	00 25 06.0	+2.2
JTS	Las Juntas de	11.98	122	Pn	Pn	00 25 04.3	-0.3
SOR	Soroa	12.84	61	Pn	Pn	00 25 14.4	-1.3
HNDO	Hondo	13.03	344	Pn	Pn	00 25 18.9	+0.6
DRIO	Del Rio	13.34	339	Pn	Pn	00 25 22.1	-0.2
HPIG		13.85	317	P	P	00 25 32.4	-1.3
TXAR	Lajitas Array	14.54	329	Pn	P	00 25 40.9	-0.2
	baz=154,slow=9.7,SNR=3.8						
	0.2nm,0.7s						
OZNA	Ozona	14.88	340	Pn	P	00 25 44.3	-0.7
OZNA				P	Pn	00 25 49.1	+7.0
WHTX	Lake Whitney,	15.08	353	P	P	00 25 47.7	+0.7
WHTX				IAmb	IAmb	00 25 50.3	
	comp=Z,24nm,0.7s						
346A	Big Creek Wild	15.26	19	Pn	Pn	00 25 45.7	-1.0
SGCY	Sterling City	15.80	341	Pn	Pn	00 25 53.7	+0.1
SGCY				IAmb	IAmb	00 26 01.4	
	comp=Z,8.7nm,0.5s						
PLPT	Palo Pinto	16.01	350	P	P	00 25 59.7	+2.4
PLPT				IAmb	IAmb	00 26 01.4	
	comp=Z,11nm,0.5s						
Z41A	Richland Creek	16.34	7		Pn	00 26 00.2	+0.1
553A	Crawfordville	16.42	35		Pn	00 26 00.4	-0.7
APMT	Aspermont	16.86	346		P	00 26 06.8	0.0
250A	Grady	16.98	27	P	P	00 26 06.6	-1.4
352A	Blakely	17.19	31	P	Pn	00 26 11.0	+0.5
352A				IAmb	IAmb	00 26 13.3	
	comp=Z,19nm,0.6s						
Z47A	Carrollton	17.38	20	P	Pn	00 26 12.8	0.0
Z47A				IAmb	IAmb	00 26 20.3	
	comp=Z,23nm,0.8s						
MIAR	Mount Ida	17.55	4		Pn	00 26 15.7	+0.9
MIAR				IAmb	IAmb	00 26 16.8	
	comp=Z,17nm,0.9s						
X40A	Basin Creek Fa	17.56	7	P	P	00 26 14.2	-0.2
LRAL	Lakeview Retre	17.61	23	P	P	00 26 14.8	-0.2
LRAL				IAmb	IAmb	00 26 22.6	
	comp=Z,9.9nm,0.6s						
X34A	Smith Ranch, M	17.70	353	P	Pn	00 26 17.0	+0.4
X34A				IAmb	IAmb	00 26 59.7	
	comp=Z,19nm,1.1s						
UALR	University of	17.90	8	P	Pn	00 26 19.0	0.0
WMOK	Wichita Mounta	17.96	350	P	Pn	00 26 19.7	-0.2
CHIV	Chivirico	18.07	78	P	P	00 26 19.9	-0.2
CHIV				IAmb	IAmb	00 26 44.2	
	comp=Z,13nm,1.0s						
WHAR	Wooly Hollow	18.41	8		Pn	00 26 24.9	-0.3
WHAR				IAmb	IAmb	00 26 26.3	
	comp=Z,16nm,1.1s						
OKCSW	OKLAHOMA CITY	18.45	354	Pn	Pn	00 26 26.0	+0.3
Y49A	Blount Mountai	18.57	24	P	P	00 26 25.1	-0.3
DEOK	Depew	18.82	357		Pn	00 26 29.7	-0.3
DEOK				IAmb	IAmb	00 26 30.9	
	comp=Z,21nm,0.7s						
TUL3	Leonard	18.86	359		Pn	00 26 30.2	-0.2
TUL3				IAmb	IAmb	00 26 30.6	
	comp=Z,14nm,0.7s						
X48A	Hartselle	18.87	21	P	P	00 26 28.6	-0.2
OK052	Battle Ridge R	18.98	356		Pn	00 26 31.7	-0.2
FCAR	Ozark Folk Cen	19.02	8	P	P	00 26 31.0	+0.5
FCAR				IAmb	IAmb	00 26 32.7	
	comp=Z,26nm,0.9s						
RLO	Rose Lookout	19.10	0	P	Pn	00 26 32.1	-1.2
RLO				IAmb	IAmb	00 26 35.4	
	comp=Z,11nm,0.8s						
QUOK	Quay	19.15	356	P	Pn	00 26 32.5	-1.4
QUOK				IAmb	IAmb	00 26 34.3	
	comp=Z,24nm,0.7s						
HHAR	Hobbs	19.25	3		Pn	00 26 34.3	-0.8
LCAR	Lake Charles	19.34	10		P	00 26 34.5	+0.6
LCAR				IAmb	IAmb	00 26 35.7	
	comp=Z,21nm,0.7s						
U38A	Gravette	19.39	2		P	00 26 34.6	+0.1
OK048	Pawnee Station	19.41	356	P	P	00 26 35.4	+0.7
OK048				IAmb	IAmb	00 26 37.1	
	comp=Z,23nm,1.1s						
FPAL	Fort Paine	19.48	24	P	P	00 26 35.4	0.0
OK051	E0350 and S346	19.50	356	P	P	00 26 35.9	+0.4
OK051				IAmb	IAmb	00 26 41.8	
	comp=Z,36nm,1.3s						
Y52A	Lilburn	19.56	29	P	P	00 26 35.4	-0.9
Y52A				IAmb	IAmb	00 26 37.0	
	comp=Z,22nm,0.7s						
OK038	West end E0370	19.67	352	P	Pn	00 26 38.4	-1.5
X51A	Calhoun	19.81	26	P	P	00 26 38.6	-0.3
X51A				IAmb	IAmb	00 26 41.1	
	comp=Z,26nm,1.4s						
T35A	Sooner Cattle	19.89	357		P	00 26 40.3	+0.5
SWET	Sewanee	19.95	23	P	P	00 26 40.0	-0.6
V48A	Smith Brothers	20.11	20	P	P	00 26 41.7	-0.5
WVT	Waverly	20.16	18	P	P	00 26 42.4	-0.3
PBMO	Poplar Bluff	20.16	11	P	P	00 26 43.3	+0.5
PBMO				IAmb	IAmb	00 26 44.3	
	comp=Z,32nm,0.9s						
W50A	Signal Mountai	20.17	24	P	P	00 26 42.3	-0.7
W50A				IAmb	IAmb	00 26 43.1	
	comp=Z,11nm,0.8s						
HICK	Hickman	20.18	14	P	P	00 26 42.6	-0.4
HICK				IAmb	IAmb	00 26 45.4	
	comp=Z,34nm,1.1s						
MGMO	Mountain Grove	20.25	7	P	Pn	00 26 45.2	-1.6
RTBA	Rita Blanca	20.49	342	P	Pn	00 26 47.8	-1.8
CLTN	Cedars of Leba	20.60	21	P	P	00 26 47.5	+0.1
CPCT	Cooper Cave	20.71	25	P	P	00 26 48.5	-0.1
HODGE	Hodges	20.73	32	P	P	00 26 47.9	-0.9
HODGE				IAmb	IAmb	00 26 49.8	
	comp=Z,9.4nm,0.7s						
T45A	Paducah	20.78	15	P	P	00 26 49.9	+0.5
CGM3	Cape Girardeau	20.82	13	P	P	00 26 49.4	-0.3
BG3	Lake Jocassee	21.02	29	P	P	00 26 52.0	0.0
BG3				IAmb	IAmb	00 27 09.1	
	comp=Z,31nm,1.0s						
U49A	Red Boiling Sp	21.17	21		P	00 26 52.7	-0.9
TKL	Tuckaleechee C	21.20	27	P	P	00 26 53.1	-0.8
TKL				IAmb	IAmb	00 26 58.5	
	comp=Z,16nm,1.1s						
CCM	Cathedral Cave	21.27	9	P	P	00 26 54.5	-0.2
CCM				IAmb	IAmb	00 26 56.6	
	comp=Z,12nm,0.7s						
FVM	French Village	21.34	10	P	P	00 26 55.1	-0.3
R40A	Maddies Statio	21.38	6	P	P	00 26 56.3	+0.5
R40A				IAmb	IAmb	00 26 58.8	
	comp=Z,12nm,0.7s						
R32A	Long Quarter,	21.57	352	P	P	00 26 59.6	+1.7
V53A	Saluda	21.63	28	P	P	00 26 58.0	-0.6
Y58A	Scranton	21.88	37	P	P	00 27 00.7	-0.5
KMSC	Kings Mountain	21.91	32	P	P	00 27 01.2	-0.3
KMSC				IAmb	IAmb	00 27 02.5	
	comp=Z,9.4nm,0.7s						
T50A	Nancy	21.96	23	P	P	00 27 00.9	-1.0
TZTN	Tazewell	22.05	26	P	P	00 27 02.1	-0.8
TZTN				IAmb	IAmb	00 27 32.6	
	comp=Z,25nm,1.2s						
Q44A	Meyer Farm, Va	22.50	13	P	P	00 27 07.5	+0.1
Q44A				IAmb	IAmb	00 27 08.3	
	comp=Z,22nm,0.9s						
V55A	Taylorsville	22.53	31	P	P	00 27 07.3	-0.6
V55A				IAmb	IAmb	00 27 40.4	
	comp=Z,31nm,1.4s						
WCI	Wyandotte Cave	22.56	19	P	P	00 27 07.3	-0.8
WCI				IAmb	IAmb	00 27 09.1	
	comp=Z,22nm,1.1s						
P38A	Dawn	22.60	3	P	P	00 27 09.1	+0.6
P40A	Paris	22.63	6		P	00 27 08.9	+0.1
P40A				IAmb	IAmb	00 27 10.1	
	comp=Z,8.7nm,0.6s						
U54A	Nelsons Funny	22.79	29	P	P	00 27 10.1	-0.4
U54A				IAmb	IAmb	00 27 10.8	
	comp=Z,16nm,0.5s						
S51A	Beattyville	22.97	24	P	P	00 27 11.4	-0.8
S51A				IAmb	IAmb	00 27 36.5	
	comp=Z,11nm,0.8s						
R49A	Shelbyville	22.98	21	P	P	00 27 11.6	-0.7
R49A				IAmb	IAmb	00 27 13.0	
	comp=Z,11nm,0.7s						
P43A	Skaggs, Pawnee	23.11	11		P	00 27 13.7	+0.3
P43A				IAmb	IAmb	00 27 14.6	
	comp=Z,20nm,0.7s						
R50A	Paris	23.26	22	P	P	00 27 14.3	-0.5
P46A	Rosedale	23.60	16		P	00 27 18.4	+0.4
P46A				IAmb	IAmb	00 27 19.5	
	comp=Z,13nm,0.6s						
N38A	Joes South For	23.78	4	P	P	00 27 20.6	+1.0
P48A	Milroy	23.96	19	P	P	00 27 21.1	-0.1
P48A				IAmb	IAmb	00 27 22.2	
	comp=Z,26nm,1.3s						
Q52A	Bidwell	24.64	25	P	P	00 27 26.7	-0.6
O48B	Farmland	24.77	19	P	P	00 27 27.7	-0.8
O48B				IAmb	IAmb	00 27 30.1	
	comp=Z,18nm,0.8s						
P51A	Williamsport	24.79	23	P	P	00 27 27.2	-1.5
P51A				IAmb	IAmb	00 27 30.0	
	comp=Z,12nm,0.5s						
SCIA	State Center	24.89	4	P	P	00 27 29.4	-0.3
O49A	Covington	24.97	20		P	00 27 29.2	-1.1
R55A	Marlinton	25.00	29	P	P	00 27 29.7	-1.1
R55A				IAmb	IAmb	00 28 06.5	
	comp=Z,15nm,1.1s						
M44A	Midewin, Midew	25.09	13	P	P	00 27 32.6	+1.2
M44A				IAmb	IAmb	00 27 34.0	
	comp=Z,19nm,1.0s						
L40A	Anamosa	25.22	7	P	P	00 27 33.0	+0.4
L40A				IAmb	IAmb	00 27 35.5	
	comp=Z,9.1nm,0.8s						
L42A	Oliver, Polo	25.38	10	P	P	00 27 34.1	+0.1
L42A				IAmb	IAmb	00 27 36.6	
	comp=Z,20nm,1.3s						
P53A	Whipple	25.44	25	P	P	00 27 34.5	-0.2
P53A				IAmb	IAmb	00 28 15.6	
	comp=Z,21nm,1.3s						
N49A	Columbus Grove	25.68	20	P	P	00 27 35.9	-0.9
N49A				IAmb	IAmb	00 27 41.0	
	comp=Z,16nm,1.2s						
JFWS	Jewell Farm	26.18	8	P	P	00 27 41.3	0.0
ECSD	EROS Data Cent	26.69	358	P	P	00 27 46.8	+0.9
N53A	Lisbon	26.79	25	P	P	00 27 46.4	-0.3
AGPR	Aguadilla, PR	26.79	83	P	P	00 27 43.7	-3.3
GLMI	Grayling	29.15	16	P	P	00 28 07.7	0.0
NVAR	Mina Array Bea	29.42	321	P	P	00 28 14.5	+4.0
	comp=Z,0.9nm,0.7s,baz=140,slow=8.2,SNR=6.6						
	comp=Z,0.9nm,0.7s						
LPAZ	La Paz	42.49	140	P	P	00 30 05.2	+2.7
	comp=Z,1.5nm,0.4s,baz=334,slow=4.0,SNR=4.7						
	comp=Z,1.5nm,0.4s						
PLCA	Paso Flores	61.83	159	P	P	00 32 25.6	+1.1
	comp=Z,1.6nm,0.9s,baz=315,slow=8.0,SNR=3.4						
	comp=Z,1.6nm,0.9s						
WRA	Warramunga Arr	133.04	258	PKP	PKiKP	00 41 21.7	+0.1
	comp=Z,0.3nm,0.6s,baz=86,slow=1.5,SNR=2.4						

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*IDC **09** 00:38:45.7±1.1, 0°.63N×122°.36E, h0^{km}, mb3.7/5, mbtmp3.7/6, ML3.8/1, Error ellipse: s-maj=128.6km s-min=17.5km az=64.0*

*DJA **09** 00:39:05.8±0.4, 0°N±5°×12°2E±°, h150^{km}±5^{km}, M4.2/13, mB5.2/2, mb4.4/2, MLv4.1/13, Mw(mB)4.5/2*

ISC 09 00:39:04.3±0.9**, 0°.34N**±0°.08×**122°.04E**±0°.07**, h164**^{km}±7^{km}**, n18,** σ1^{s}**11**/20**, mb3.7**/5**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	0.16	324	P	Pn	00 39 26.5	+0.4
MRSI				S	Sn	00 39 42.5	-0.4
GTOI	Gorontalo	1.02	73	P	Pn	00 39 30.4	0.0
GTOI				S	Sn	00 39 49.9	-0.6
APSI	Ampana	1.31	197	P	Pn	00 39 34.2	+1.2
LUWI	Luwuk	1.56	152	P	Pn	00 39 36.1	+0.6
KMSI	Cibinong	1.96	83	P	Pn	00 39 40.4	+0.7
MPSI	Mapaga	2.14	270	P	Pn	00 39 43.3	+1.5
PCI	Palu	2.53	241	P	Pn	00 39 47.4	+1.0
MNI	Manado	3.01	69	P	Pn	00 39 53.7	+1.4
TTSI	Tana Toraja	4.03	213	P	Pn	00 40 06.5	+1.2
MMSI	Mamuju	4.34	226	P	Pn	00 40 10.5	+1.1
SGKI	Sangatta, Kali	4.52	259	P	Pn	00 40 12.2	+0.6
SWI	Sorong	9.30	97	P	Pn	00 41 17.0	+2.1
FITZ	Fitzroy Crossi	18.67	169	P	P	00 43 08.9	-1.0
	0.2nm,0.3s,baz=3.4,slow=7.4,SNR=6.2						
	1.1nm,0.6s						
WRA	Warramunga Arr	23.49	150	P	P	00 43 58.4	-1.0
	1.7nm,0.5s,baz=326,slow=11,SNR=20						
	1.7nm,0.5s						
ASAR	Alice Springs	26.51	155	P	P	00 44 25.6	-1.2
	0.5nm,0.6s,baz=344,slow=14,SNR=11						
	0.5nm,0.6s						
MKAR	Makanchi Array	57.82	329	P	P	00 48 39.1	+0.5
	0.9nm,0.4s,baz=125,slow=9.0,SNR=25						
	0.9nm,0.4s						
ZALV	Zalesovo Beam	61.61	336	P	P	00 49 03.6	-0.6
	0.2nm,0.3s,baz=124,slow=7.7,SNR=1.8						
	0.2nm,0.3s						
KURBB	Kurchatov Arra	62.19	330	P	P	00 49 08.0	-0.2
	0.4nm,0.4s,baz=115,slow=5.6,SNR=9.9						
	0.4nm,0.4s						

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*RSNC **09** 00:49:47.5±0.0, 2°N±1°×7°6W±°, h0^{km}±2^{km}, M3.7, mB3.5, mb4.4, ML3.4, MLv4.1, Mw(mB)2.4*

*IDC **09** 00:49:52.5±8.1, 1°.43N×76°.14W, h73^{km}±61^{km}, mb3.4/3, mbtmp3.9/4, ML3.4/1, MS3.0/4, Error ellipse: s-maj=60.6km s-min=34.2km az=7.0*

ISC 09 00:49:47.2±1.1**, 1°.82N**±0°.03×**76°.16W**±0°.02**, h11**^{km}±8^{km}**, n32,** σ1^{s}**31**/46**, mb3.7**/3**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FLOC	Florencia	0.56	115	P	Pg	00 49 58.2	0.0
FLOC				S	Sb	00 50 06.4	-0.7
GARC	Garzon, Huila	0.76	62	P	Pg	00 50 01.2	-0.8
GARC				S	Sb	00 50 11.8	-1.3
CRUC	La Cruz	0.83	252	P	Pg	00 50 03.0	-0.2
CRUC				S	Sg	00 50 14.6	+0.5
POPC	Popayan, Colom	0.88	324	P	Pg	00 50 03.1	-1.1
POPC				S	Sg	00 50 14.9	-0.8
BBAC	Balboa, Cauca	1.10	280	P	Pg	00 50 07.4	-1.0
BBAC				S	Sg	00 50 22.0	-0.8
BETC	Betania	1.12	40	P	Pb	00 50 08.3	-0.3
BETC				S	Sn	00 50 24.2	0.0
JAMC	Jamundi, Valle	1.47	340	P	Pn	00 50 13.7	-0.2
JAMC				S	Sn	00 50 33.5	+0.2
BONI	La Bonita	1.93	225	P	Pn	00 50 21.0	+0.9
BONI				S	Sb	00 50 47.2	+0.5
TULM	Tulcn-Chalpat	1.96	236	P	Pb	00 50 22.8	-0.4
TULM				S	Sb	00 50 48.3	+0.5
CASC	Dorado de Casc	2.04	215	P	Pn	00 50 21.6	0.0
CASC				S	Sb	00 50 51.2	+1.3
PTLC	Puerto Leguiza	2.13	140	P	Pg	00 50 27.2	-1.0

PTLC				S	Sg	00 50 57.9	+2.0
YOTC	Yotoco, Valle	2.15	355	P	Pn	00 50 24.3	+1.1
YOTC				S	Sn	00 50 51.8	+1.8
ORTC	Ortega, Tolima	2.27	24	P	Pn	00 50 25.8	+1.2
ORTC				S	Sb	00 50 57.1	+0.8
PRAC	Prado	2.27	34	P	Pn	00 50 25.9	+1.2
PRAC				S	Sb	00 50 56.8	+0.4
URMC	La Uribe, Meta	2.28	52	P	Pn	00 50 25.7	+0.9
URMC				S	Sb	00 50 56.4	-0.2
GR1C	Gorgona, Isla	2.32	300	P	Pn	00 50 25.6	+0.3
MACC	Macarena, Meta	2.34	82	P	Pn	00 50 26.3	+0.7
MACC				S	Sb	00 50 56.7	-1.5
CUSE	Cuicocha Este	2.69	236	P	Pb	00 50 35.6	-0.1
CUSE				S	Sg	00 51 15.3	+1.4
PAC1	Pacto, Paraso	3.05	240	P	Pb	00 50 42.5	+0.9
PLMC	San Jos del P	3.06	358	P	Pn	00 50 38.9	+3.3
VILC	Villavicencio,	3.36	47	P	Pn	00 50 42.1	+2.4
GUY2C	Guyana, Caldas	3.47	13	P	Pn	00 50 44.4	+2.8
ROSC	El Rosal	3.52	31	P	Pb	00 50 49.7	0.0
	61nm,0.3s,baz=312,slow=6.6,SNR=50						
ROSC				S	Sb	00 51 34.6	+2.0
	224nm,0.5s,baz=80,slow=18,SNR=8.5						
	151nm,0.4s						
CHIC	Chingaza	3.70	41	P	Pn	00 50 46.5	+1.9
RUSC	La Rusia	5.08	37	P	Pn	00 51 05.6	+1.9
	0.4nm39nm,0.8s						
SDV	Santo Domingo	8.92	38	LR	LR	00 56 36.2	
	comp=Z,54nm,18.1s,baz=210,slow=44						
ATAH	Atahualpa	9.17	194	LR	LR	00 56 05.4	
	comp=Z,66nm,18.3s,baz=344,slow=42						
SJG	San Juan	18.94	31	LR	LR	01 02 08.3	
	comp=Z,41nm,18.9s,baz=16,slow=38						
TXAR	Lajitas Array	37.86	319	P	P	00 57 05.0	+0.7
	0.2nm,0.7s,baz=142,slow=6.7,SNR=3.8						
	0.2nm,0.7s						
PLCA	Paso Flores	42.66	174	LR	LR	01 15 47.8	
	comp=Z,27nm,18.2s,baz=46,slow=37						
DBIC	Dimbokro	71.23	84	P	P	01 01 04.7	-2.4
	1.7nm,0.6s,baz=256,slow=8.3,SNR=3.9						
	1.7nm,0.6s						
ESDC	Sonseca Array	75.17	49	P	P	01 01 28.8	-1.2
	0.6nm,0.7s,baz=267,slow=5.7,SNR=5.9						
	0.6nm,0.7s						

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*BEO **09** 01:01:05.0±0.3, 43°.23N×17°.95E, h6^{km}±3^{km}, ML2.2/11*
*RHSSO **09** 01:01:05.1±0.4, 43°.21N×17°.98E, h8^{km}, ML2.5/4*
*PDG **09** 01:01:05.0±0.0, 43°.20N×17°.98E, h8^{km}, ML2.3/12, Error ellipse: s-maj=0.1km s-min=0.1km az=90.0*
ISC 09 01:01:04.7±1.0, **43°.22N**±0°.02×**17°.97E**±0°.02, **h5**^{km}±9^{km}, **n44**, σ**0^{s}88**/84, **3D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	Ston	0.41	210	ePg	Pg	01 01 12.1	-0.3
STON				Sg	Sg	01 01 18.1	+0.4
STON	Ston	0.41	210	ePg	Pg	01 01 12.2	-0.3
STON				eSg	Sg	01 01 18.8	+1.1
KLINJ	Klinje	0.45	97	ePg	Pg	01 01 13.5	+0.1
KLINJ				eSg	Sg	01 01 20.5	+1.2
BRY	Bratogost	0.53	128	ePg	Pg	01 01 14.4	-0.4
BRY				i Sg	Sg	01 01 22.5	+0.9
DBRK	Dubrovnik	0.57	167	ePg	Pg	01 01 15.3	-0.3
DBRK				Sg	Sg	01 01 23.5	+0.5
TREB	Trebinje	0.58	151	ePg	Pg	01 01 15.3	-0.5
TREB				eSg	Sb	01 01 24.2	-1.5
TREB	Trebinje	0.58	151	ePg	Pg	01 01 15.2	-0.5
TREB				eSg	Sb	01 01 24.4	-1.3
RICI	Ricice	0.67	294	ePg	Pg	01 01 17.1	-0.5
RICI				Sg	Sg	01 01 27.0	+0.8
MAKA	Makarska	0.70	276	ePg	Pg	01 01 17.4	-0.7
MAKA				Sg	Sg	01 01 27.6	+0.5
NKME	Niksic	0.85	122	ePg	Pg	01 01 20.4	-0.6
NKME				eSg	Sb	01 01 33.7	0.0
HCY	Herceg Novi	0.87	154	⇓iPg	Pg	01 01 20.7	-0.6
HCY				i Sg	Sb	01 01 33.9	-0.1
LSTV	Lastovo	0.91	240	ePg	Pg	01 01 20.6	-1.6
LSTV				Sg	Sg	01 01 34.5	+0.5
CEME	Cevo	0.97	134	ePg	Pg	01 01 22.6	-0.7
CEME				eSg	Sb	01 01 37.6	+0.5
PLE	Pljevlja	1.04	84	ePg	Pg	01 01 24.2	-0.4
PLE				i Sg	Sn	01 01 40.5	-0.5
RUDO	Rudo	1.09	68	ePg	Pg	01 01 24.6	-1.0
RUDO				eSg	Sg	01 01 39.9	+0.1
RUDO	Rudo	1.09	68	ePg	Pg	01 01 24.6	-1.0
RUDO				eSg	Sg	01 01 39.6	-0.2
HVAR	Hvar	1.11	268	ePg	Pg	01 01 24.5	-1.5
HVAR				Sg	Sg	01 01 40.0	-0.5
BUM	Brajici-Budva	1.15	143	⇓iPg	Pg	01 01 25.9	-0.7
BUM				i Sg	Sn	01 01 43.4	-0.1
KOME	Kolasin	1.19	108	⇓iPg	Pg	01 01 26.8	-0.7
KOME				eSg	Sn	01 01 45.4	+0.8
BBLS	Lazi&#263i	1.22	58	ePg	Pb	01 01 28.0	-0.3
BBLS				eSg	Sn	01 01 45.2	-0.2
PDG	Podgorica	1.23	130	ePg	Pb	01 01 26.6	-1.8
PDG				eSg	Sn	01 01 45.5	0.0
PDG	Podgorica	1.23	130	ePg	Pb	01 01 27.4	-1.0
PDG				i Sg	Sn	01 01 46.5	+1.0
DRME	Dracevica, Mon	1.37	139	ePg	Pn	01 01 29.9	-0.5
DRME				eSg	Sg	01 01 51.1	+2.5
KIJV	Kijevo	1.38	305	ePn	Pn	01 01 30.0	-0.6
KIJV				Sg	Sn	01 01 49.5	+0.3
IVA	Berane	1.45	103	ePg	Pn	01 01 31.6	0.0
IVA				i Sg	Sg	01 01 54.2	+2.9
SJES	Sjenica	1.46	88	ePg	Pb	01 01 32.6	+0.2
SJES				eSg	Sg	01 01 52.3	+0.6
ULC	Ulcinj	1.57	143	ePg	Pb	01 01 33.6	-0.6
ULC				i Sg	Sg	01 01 57.0	+1.9
PVY	Plav	1.59	113	ePn	Pb	01 01 34.1	-0.5
PVY				i Sn	Sg	01 01 57.6	+1.9
BLY	Banja Luka	1.63	340	ePn	Pn	01 01 34.3	+0.3
BLY				eSn	Sb	01 01 56.2	+0.2
BLY	Banja Luka	1.63	340	ePg	Pb	01 01 35.6	+0.5
BLY				eSg	Sg	01 01 57.3	+0.4
IVAS	Ivanjica	1.63	77	ePg	Pn	01 01 34.6	+0.6
IVAS				eSg	Sb	01 01 55.8	-0.2
DIVS	Divibare	1.71	59	ePg	Pn	01 01 34.6	-0.5
DIVS				eSg	Sg	01 01 59.7	+0.2
TEKS	Tekeris	1.74	40	ePn	Pn	01 01 34.7	-0.8
ZIRJ	Zirje	1.75	285	ePn	Pn	01 01 36.1	+0.5
ZIRJ				Sn	Sb	01 01 59.4	0.0
MORI	Morici	1.77	292	ePn	Pn	01 01 36.2	+0.3
MORI				Sn	Sn	01 01 59.2	+0.5
TRUS	Trudelj	2.03	60	ePn	Pn	01 01 39.1	-0.4
KNYS	Krupa na Uni	2.05	325	ePn	Pn	01 01 39.8	+0.1
KNYS				eSn	Sn	01 02 06.1	+0.4
UDBI	Udbina	2.06	310	ePn	Pn	01 01 40.8	+0.8
UDBI				Sn	Sn	01 02 07.3	+1.2
GRUS	Gruza	2.10	71	eSn	Sb	01 02 08.5	-1.1
DUGI	Dugi Otok	2.25	291	ePn	Pn	01 01 43.7	+1.2
DUGI				Sn	Sn	01 02 11.6	+0.9
SELS	Selova	2.30	89	ePn	Pn	01 01 43.6	+0.4
VIRC	Vir	2.37	298	ePn	Pn	01 01 45.3	+1.2
VIRC				Sn	Sn	01 02 14.5	+1.0
NVLJ	Novalja	2.61	302	ePn	Pn	01 01 47.8	+0.4
NVLJ				Sn	Sn	01 02 20.6	+1.1
MORH	Mrgy, Hungar	3.03	9	ePn	Pn	01 01 53.2	0.0
MORH				eSn	Sn	01 02 29.9	+0.1

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*ATH **09** 01:07:04.6, 36°.75N×21°.78E, h16^{km}±1^{km}, ML3.3/19, Manual Solution by I.Dede First location: 2019/12/09 01:07:28, This location: 2019/12/09 09:03:06 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 2 km*
*THE **09** 01:07:05.2, 37°N±3°×2°2E±°, h10^{km}±4^{km}, M3.1/23, MLh3.1/23*
*IDC **09** 01:07:06.3±17.0, 36°.50N×21°.38E, h97^{km}±74^{km}, mb3.6/8, mbtmp3.7/10, ML3.2/2, Error ellipse: s-maj=195.4km s-min=32.9km az=31.0*
ISC 09 01:07:03.1±1.4, **36°.70N**±0°.07×**21°.76E**±0°.03, **h25**^{km}±7^{km}, **n70**, σ**1^{s}33**/86, **mb3.9**/8, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYL	PYLOS	0.19	357	P	Pb	01 07 08.7	0.0
PYL				S	Sb	01 07 11.8	-0.8
ITM	Ithomi	0.49	16	P	Pb	01 07 13.1	-0.3
ITM				S	Sb	01 07 19.6	-0.6
ITM	Ithomi	0.49	16	P	Pb	01 07 13.0	-0.3
ITM				S	Sb	01 07 19.6	-0.6
VLX	Vlachokerasia	0.83	37	P	Pb	01 07 18.9	-0.1
VLX				S	Sb	01 07 30.5	+0.7
VLI	Veliai	0.95	89	P	Pn	01 07 23.1	+2.3
VLI				S	Sn	01 07 37.7	+4.1
VLI	Veliai	0.95	89	P	Pn	01 07 22.6	+1.8
VLI				S	Sn	01 07 36.3	+2.7
LTHK	Lithakia	1.24	324	P	Pn	01 07 25.7	+0.9
DRO	Drossia	1.25	358	P	Pb	01 07 26.0	0.0
DRO	Drossia	1.25	358	P	Pn	01 07 25.3	+0.4
DRO				S	Sb	01 07 43.9	+2.2
CLEM	Kyllini,Ilia,G	1.28	337	P	Pb	01 07 28.3	+1.7
GUR	Goura	1.32	21	P	Pb	01 07 27.2	0.0
GUR	Goura	1.32	21	P	Pb	01 07 27.3	0.0
KYPS	Kipseli, Zakin	1.34	327	P	Pb	01 07 28.2	+0.7
RLS	Riolos of Patr	1.37	350	P	Pb	01 07 28.0	-0.1
RLS	Riolos of Patr	1.37	350	P	Pb	01 07 28.3	+0.2
KLV	Kalavryta, Ach	1.37	13	P	Pb	01 07 28.3	+0.1
KLV				S	Sb	01 07 48.5	+3.1
KLV	Kalavryta, Ach	1.37	13	P	Pb	01 07 28.1	-0.1
ORTH	Orthonies,Zaky	1.42	324	P	Pb	01 07 29.1	+0.1
ORTH				S	Sb	01 07 47.8	+1.1
ORTH	Orthonies,Zaky	1.42	324	P	Pb	01 07 29.7	+0.7
AIOA	Agios Ioannis,	1.51	9	P	Pb	01 07 30.5	+0.1
AXS	Araxos	1.52	349	P	Pb	01 07 30.6	0.0
AXS				S	Sb	01 07 50.3	+0.8
AXS	Araxos	1.52	349	P	Pb	01 07 30.9	+0.3
MET2	Kameni Chora,	1.55	54	P	Pb	01 07 31.1	-0.1
MET5	Makryloggos,Me	1.57	54	P	Pb	01 07 31.4	-0.2
AGEO	AgiosGiorgios,	1.58	9	P	Pb	01 07 31.5	-0.1
RTZL	Ratzakli, Kefa	1.58	331	P	Pb	01 07 32.0	+0.4
RTZL	Ratzakli, Kefa	1.58	331	P	Pn	01 07 30.9	+1.4
MET4	Agioi Theodoro	1.60	55	P	Pb	01 07 32.1	+0.1
LOUT	Loutraki	1.61	37	P	Pb	01 07 31.6	-0.6
LTK	Loutraki	1.63	36	P	Pb	01 07 32.0	-0.6
LTK	Loutraki	1.63	36	P	Pb	01 07 32.0	-0.6
TRIZ	Trizonia	1.68	9	P	Pb	01 07 33.4	+0.1
AGRP	Agrapidokambos	1.69	359	P	Pb	01 07 33.0	-0.6
KALE	Kalithea	1.71	10	P	Pb	01 07 33.7	-0.2
KALE				S	Sb	01 07 54.7	-0.3
KALE	Kalithea	1.71	10	P	Pb	01 07 33.3	-0.6
MG00	Magoula, Dorid	1.71	5	P	Pb	01 07 33.8	-0.1
SERG	Sergoula	1.72	8	P	Pb	01 07 33.9	-0.2
EFP	Efpalio	1.73	4	P	Pb	01 07 33.7	-0.4
EFP				S	Sb	01 07 56.8	+1.4
EFP	Efpalio	1.73	4	P	Pb	01 07 33.5	-0.6
VLS	Valsamata	1.74	328	P	Pn	01 07 33.4	+1.7
VLS	Valsamata	1.74	328	P	Pn	01 07 33.5	+1.7
DMLN	Damoulianata-K	1.89	325	P	Pn	01 07 35.6	+1.9
ANX	Ano Chora	1.89	4	P	Pb	01 07 36.8	-0.2
ANX				S	Sb	01 07 59.5	-0.7
ANX	Ano Chora	1.89	4	P	Pb	01 07 36.5	-0.5
VILL	Villia	1.91	40	P	Pb	01 07 36.3	-1.1
VILL				S	Sb	01 08 05.0	+4.1
PVO	Paravola	1.92	355	P	Pb	01 07 36.8	-0.6
PVO				S	Sb	01 08 03.4	+2.5
PVO	Paravola	1.92	355	P	Pb	01 07 37.0	-0.4
VIL2	Platees	1.93	38	P	Pn	01 07 34.9	+0.6
VLY	Voula,Athens	1.99	54	P	Pn	01 07 36.3	+1.1
VLY				S	Sb	01 08 03.5	+0.5
VLY	Voula,Athens	1.99	54	P	Pn	01 07 36.0	+0.9
FSK	Fiskardo	1.99	332	P	Pb	01 07 38.2	-0.5
FSK				S	Sb	01 08 04.8	+1.7
ATH	Athens Observa	2.01	50	P	Pn	01 07 37.1	+1.7
EVGI	Lefkada island	2.10	336	P	Pb	01 07 40.0	-0.6
EVGI				S	Sn	01 08 04.6	+2.5
EVGI	Lefkada island	2.10	336	P	Pb	01 07 40.1	-0.4
PTL	Penteli	2.15	51	P	Pn	01 07 38.4	+1.0
LKR	Lokris	2.18	27	P	Pn	01 07 39.0	+1.2
AXAR	Agios Charalam	2.18	19	P	Pb	01 07 42.4	+0.5
EVR	Evrytania	2.21	1	P	Pb	01 07 42.3	-0.2
DION	Dionisos Attik	2.21	51	P	Pn	01 07 39.2	+1.0
KARY	Karystos	2.52	57	P	Pn	01 07 43.2	+0.8
MLR	Muntele Rosu	9.33	18	P	Pn	01 09 22.5	+6.5
	0.1nm,0.3s,baz=128,slow=19,SNR=2.3						
	0.9nm,0.6s						
BRTR	Keskin Array B	9.83	69	P	Pn	01 09 29.3	+6.4
	0.1nm,0.3s,baz=251,slow=14,SNR=2.4						
	0.3nm,0.5s						
HFS	Hagfors	24.01	350	P	P	01 12 13.0	-2.6
	3.0nm,0.8s,baz=160,slow=9.0,SNR=1.4						
	3.0nm,0.8s						
FINES	FINESS Array B	24.91	5	P	P	01 12 20.8	-3.0
	11nm,1.1s,baz=183,slow=8.4,SNR=2.8						
	11nm,1.1s						
ARTI	Arti	31.43	40	P	P	01 13 20.7	-1.4
	1.2nm,0.5s,baz=204,slow=10.0,SNR=4.2						
	1.2nm,0.5s						
ARCES	ARCESS Array B	32.95	2	P	P	01 13 34.2	-1.1
	5.2nm,1.2s,baz=182,slow=7.9,SNR=1.3						
	5.2nm,1.2s						
BVAR	Borovoye Array	37.34	48	P	P	01 14 12.6	-0.7
	0.7nm,0.5s,baz=277,slow=5.2,SNR=4.3						
	0.7nm,0.5s						
KURBB	Kurchatov Arra	42.33	52	P	P	01 14 53.0	-1.8
	0.4nm,0.7s,baz=283,slow=8.7,SNR=4.8						
	0.4nm,0.7s						
MKAR	Makanchi Array	45.25	57	P	P	01 15 17.0	-1.3
	0.2nm,0.5s,baz=280,slow=8.2,SNR=2.3						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	45.96	47	P	P	01 15 21.9	-1.8
	0.7nm,0.5s,baz=270,slow=9.4,SNR=4.7						
	0.7nm,0.5s						

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*SKHL **09** 01:19:52.4±0.3, 43°.10N×148°.30E, h39^{km}±4^{km}, mb4.9/3*
*NIED **09** 01:19:55.0, 43°.25N×147°.77E, h15^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.82; M$_{\theta\theta}$-0.04; M$_{\phi\phi}$-0.77; M$_{r\theta}$0.55; M$_{\theta\phi}$-0.86; M$_{\phi r}$0.58; Fault plane solution: M$_{0}$1.35000×10^{15} NP1: ϕ_s196.00000°, δ29.00000°, λ65.00000°. NP2: ϕ_s45.00000°, δ64.00000°, λ103.00000°.*
*JMA **09** 01:19:55.0±0.3, 43°N±1°×14°8E±°, h15^{km}, MV4.1/28, E OFF HOKKAIDO*
*MOS **09** 01:19:58.7±0.9, 43°.65N×147°.70E, h42^{km}, mb4.7/17, Error ellipse: s-maj=11.1km s-min=7.7km az=42.0*
*NEIC **09** 01:20:01.2±1.6, 43°.8N±0°.1×147°.6E±0°.1, h32^{km}±4^{km}, mb4.3/34, Error ellipse: s-maj=17.1km s-min=10.8km az=162.0*
*IDC **09** 01:20:06.0±4.0, 44°.27N×147°.50E, h63^{km}±35^{km}, mb3.7/17, mbtmp4.0/19, ML3.7/2, MS3.4/7, Error ellipse: s-maj=20.7km s-min=19.6km az=87.0*
ISC 09 01:19:57.8±1.7, **43°.49N**±0°.06×**147°.76E**±0°.06, **h30**^{km}±10^{km}, **n156**, σ**1^{s}52**/151, **mb4.3**/44, **MS3.5**/4, **10C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.48	266	eP	Pn	01 20 21.5	-0.8
NEM2				eS	Sn	01 20 40.7	+0.2
YUK	Yuzh-Kuril'sk	1.48	292	ePN	Pn	01 20 22.6	+0.2
YUK				pmax	pmax		
	comp=Z,365nm,0.2s						
YUK				pmax	pmax		
	comp=N,59nm,0.1s						
YUK	Yuzh-Kuril'sk	1.48	292	eP	Pn	01 20 22.7	+0.3
YUK				AMB	AMB	01 20 25.6	
	comp=N,460nm,0.4s						
YUK				i S	Sb	01 20 45.7	+2.6
YUK				A	A	01 20 48.5	
	comp=N,3μm,0.5s						
YUK				A	A	01 20 48.5	
	comp=N,3μm,0.5s						
NMR	Nemuro--Hokkai	1.48	266	⇓iPN	Pn	01 20 21.7	-0.7
NMR				i S	Sb	01 20 47.0	+3.8
NMR	Nemuro--Hokkai	1.48	266	i P	Pn	01 20 21.8	-0.7
NMR				i S	Sb	01 20 43.7	+0.5
GLVR	Golovnino	1.65	280	ePN	Pn	01 20 24.6	-0.1
GLVR				eS	Sb	01 20 49.4	+1.5
GLVR				pmax	pmax		
	comp=E,77nm,0.3s						
GLVR				pmax	pmax		
	comp=Z,254nm,0.3s						
GLVR				smax	smax		
	comp=E,2μm,0.3s						
GLVR				smax	smax		
	comp=N,1μm,0.5s						
GLVR	Golovnino	1.65	280	eP	Pn	01 20 24.6	-0.1
GLVR				AMB	AMB	01 20 28.9	
	comp=N,250nm,0.3s						
GLVR				eS	Sb	01 20 49.4	+1.5
GLVR				A	A	01 20 55.1	
	comp=N,1μm,0.4s						
GLVR				A	A	01 20 55.1	
	comp=N,2μm,0.4s						
KUR	Kuril'sk	1.75	2	ePN	Pn	01 20 23.4	-2.7
KUR				eS	Sb	01 20 49.4	-1.4
KUR	Kuril'sk	1.75	2	eP	Pn	01 20 25.2	-0.9
KUR				AMB	AMB	01 20 29.1	
	comp=N,210nm,0.7s						
KUR				i S	Sb	01 20 49.6	-1.2
KUR				A	A	01 20 53.8	
	comp=N,530nm,0.4s						
KUR				A	A	01 20 53.8	
	comp=N,470nm,0.4s						
RUSJ	Misakicho	1.92	290	ePN	Pb	01 20 29.8	-2.4
JKHN	Kushirohamanak	1.94	259	eP	Pn	01 20 28.1	-0.6
JKHN				eS	Sn	01 20 52.4	+0.4
JRA	Rausu	1.96	284	eP	Pn	01 20 29.7	+0.6
JRA				eS	Sb	01 20 55.5	-1.5
JNSB	Nemuroshibetsu	2.02	279	eP	Pn	01 20 30.4	+0.6
JNSB				eS	Sb	01 20 55.9	-2.7
AKK	Akkeshi	2.18	259	eP	Pn	01 20 31.6	-0.4
JNK	Nakash	2.21	274	eP	Pn	01 20 32.1	-0.4
JNK				eS	Sn	01 20 59.5	+0.7
JAK	Akkeshi	2.29	259	eP	Pn	01 20 32.9	-0.7
JAK				eS	Sn	01 21 00.0	-0.7
JTKR	Abashiri--Toko	2.83	281	eP	Pn	01 20 42.2	+1.3
JAR	Ashorobuto	2.92	268	eP	Pn	01 20 42.0	-0.1
JOB	Onbets	2.93	260	eP	Pn	01 20 42.2	-0.1
JCH	Churui	3.34	256	eP	Pn	01 20 47.4	-0.5
ERM	Erimo	3.69	248		Pn	01 20 53.5	+0.8
ERM	Erimo	3.69	248	PN	Pn	01 20 53.6	+0.8
JKA	Kamikawa-asahi	3.79	281	Pn	Pn	01 20 56.0	+1.9
ASAJ	Asahikawa	3.79	281	P	Pn	01 20 57.2	+3.1
	comp=N,2.5nm,0.3s,baz=121,slow=15,SNR=7.1						
ASAJ				LR	LR	01 22 40.5	
	comp=N,316nm,20.4s,baz=152,slow=44						
	comp=N,9.6nm,0.4s						
JNBK	Urakawa-nobuka	3.87	254	eP	Pn	01 20 54.8	-0.5
YSS	Yuzhno-Sakhali	4.95	316	ePN	Pn	01 21 10.7	+0.6
YSS				eS	Sn	01 22 07.9	+1.6
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
YSS				smax	smax		
	comp=N,20nm,0.5s						
YSS				smax	smax		
	comp=E,20nm,0.5s						
YSS				MLR	MLR		
	comp=Z,900nm,19.0s						
YSS				MLR	MLR		
	comp=E,800nm,15.0s						
YSS	Yuzhno-Sakhali	4.95	316	eP	Pn	01 21 13.2	+3.1
JOT	Ohata	5.39	249	eP	Pn	01 21 15.1	-1.0
TYV	Tymovskoe	8.15	337	ePN	Pb	01 22 06.5	-12
TYV				pmax	pmax		
	comp=Z,12nm,1.1s						
TYV				pmax	pmax		
	comp=Z,800nm,4.3s						
TYV	Tymovskoe	8.15	337	eP	Pn	01 21 58.3	+4.3
MJAR	Matsushiro Arr	10.08	230	Pn	Pn	01 22 25.9	+5.4
MJAR	Matsushiro Arr	10.08	230	PN	Pn	01 22 25.9	+5.3
BNX	BinXian	14.67	286	⇑P	Pn	01 23 24.0	+0.9
BNX				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MA2	Magadan	16.22	5	LR	LR	01 30 15.8	
	comp=Z,65nm,18.4s,baz=256,slow=39						
JNU	Nakatsue	16.78	238	LR	LR	01 31 25.9	
	comp=Z,71nm,18.1s,baz=22,slow=40						
ZEA	Zeya	16.94	314	eP	Pn	01 23 40.3	-12
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HILR	Hailar Array B	20.14	297	P	P	01 24 28.8	-0.5
	baz=88,slow=9.7						
	comp=Z,1.6nm,0.4s						
YAK	Yakutsk	21.41	336	LR	LR	01 32 59.0	
	comp=Z,76nm,18.4s,baz=85,slow=38						
XLT	XiLinHaoTe	22.84	282	eP	P	01 24 50.5	-8.0
HHC	Hu-ho-hao-te	26.83	277	eP	P	01 25 34.9	-0.6
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,170nm,4.9s						
ULN	Ulaanbaatar	28.54	293	P	P	01 25 50.8	0.0
ULN				IAmb	IAmb	01 25 52.6	
	comp=Z,5.0nm,0.8s						
ULN	Ulaanbaatar	28.54	293	d iP	P	01 25 51.9	+1.1
ULN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ULN	Ulaanbaatar	28.54	293	eP	P	01 25 51.9	+1.1
H11N2	WAKE ISLAND Hy	28.61	140	T	T	01 56 38.3	
	baz=330,slow=75,SNR=22						
H11N1	WAKE ISLAND Hy	28.62	140	T	T	01 56 39.2	
	baz=330,slow=75,SNR=50						
H11N3	WAKE ISLAND Hy	28.63	140	T	T	01 56 39.7	
	baz=330,slow=75,SNR=23						
SONM	Songino Array	28.98	293	P	P	01 25 55.7	+1.0
	comp=Z,3.1nm,0.7s,baz=80,slow=8.3,SNR=14						
	comp=Z,3.1nm,0.7s						
SONM	Songino Array	28.98	293	P	P	01 25 55.3	+0.6
SONM				IAmb	IAmb	01 25 56.5	
	comp=Z,5.4nm,1.2s						
SONM	Songino Array	28.98	293	P	P	01 25 55.3	+0.6
SONM				pmax	pmax		
	comp=Z,5.0nm,1.2s						
H11S1	WAKE ISLAND Hy	29.58	141	T	T	01 57 58.3	
	baz=331,slow=76,SNR=109						
H11S3	WAKE ISLAND Hy	29.59	141	T	T	01 57 59.5	
	baz=331,slow=76,SNR=24						
H11S2	WAKE ISLAND Hy	29.60	141	T	T	01 57 59.9	
	baz=331,slow=76,SNR=24						
LZH	Lanzhou	34.23	273	eP	P	01 26 36.6	-4.3
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
D20K	Etivluk River	37.96	29	P	P	01 27 11.8	-0.5
D20K				IAmb	IAmb	01 27 15.1	
	comp=Z,8.2nm,1.1s						
B20K	Meade River	38.07	27	P	P	01 27 13.1	-0.1
B20K				IAmb	IAmb	01 27 23.7	
	comp=Z,8.1nm,1.1s						
E23K	Chandalar	40.42	31	P	P	01 27 34.9	+1.9
E23K				IAmb	IAmb	01 27 35.5	
	comp=Z,4.3nm,1.1s						
TOLK	Toolik Lake Re	40.49	30	P	P	01 27 34.3	+0.8
GOMU	GeErMu	40.72	278	P	P	01 27 32.6	-3.5
GOMU				pmax	pmax		
	comp=Z,3.0nm,1.1s						
PZH	PanZhiHua	40.77	261	P	P	01 27 32.6	-3.8
D24K	Happy Valley	40.81	29	P	P	01 27 37.8	+1.8
D24K				IAmb	IAmb	01 27 50.4	
	comp=Z,7.1nm,1.1s						
C24K	Franklin Bluff	40.91	28	P	P	01 27 36.5	-0.3
C24K				IAmb	IAmb	01 27 52.5	
	comp=Z,7.0nm,1.1s						
DGZ	Jazzator, Alta	40.93	301	i P	P	01 27 39.0	+1.5
DGZ				pmax	pmax		
	comp=Z,18nm,5.6s						
F24K	Squaw Lake	41.05	32	P	P	01 27 39.1	+1.0
G24K	Hadweenzic Riv	41.18	33	P	P	01 27 40.6	+1.4
ILAR	Eielson Array	41.44	36	P	P	01 27 42.9	+1.6
	comp=Z,0.7nm,0.9s,baz=272,slow=7.1,SNR=6.5						
	comp=Z,0.7nm,0.9s						
ILAR	Eielson Array	41.44	36	P	P	01 27 45.0	+3.8
ZALV	Zalesovo Beam	41.51	307	P	P	01 27 42.4	+0.4
	comp=Z,0.6nm,0.5s,baz=113,slow=6.8,SNR=4.3						
	comp=Z,0.6nm,0.5s						
ZALV	Zalesovo Beam	41.51	307	P	P	01 27 41.8	-0.2
ZALV	Zalesovo Beam	41.51	307	i P	P	01 27 43.2	+1.2
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
D25K	Kavik River	41.69	29	P	P	01 27 43.6	+0.3
D25K				IAmb	IAmb	01 27 45.9	
	comp=Z,3.6nm,0.8s						
E25K	Arctic Village	41.95	31	P	P	01 27 48.4	+3.0
F26K	Sheenjek River	42.48	32	P	P	01 27 51.7	+1.9
C27K	Jago River	42.64	29	P	P	01 27 52.1	+1.1
C27K				IAmb	IAmb	01 27 53.3	
	comp=Z,4.7nm,1.0s						
BCAR	Beaver Creek A	43.83	38	P	P	01 28 02.7	+1.9
F28M	Old Crow	44.12	32	P	P	01 28 06.2	+3.3
E29M	Blow River	44.79	30	P	P	01 28 09.3	+1.1
E29M				IAmb	IAmb	01 28 11.2	
	comp=Z,5.2nm,1.1s						
G29M	Pine Creek	44.91	33	P	P	01 28 12.3	+3.0
G29M				IAmb	IAmb	01 28 17.0	

	comp=Z,3.6nm,1.1s						
MK31	Makanchi Array	45.10	298	ceP	P	01 28 11.6	+0.5
MKAR	Makanchi Array	45.10	298	P	P	01 28 11.6	+0.5
	comp=Z,1.6nm,0.5s,baz=78,slow=8.9,SNR=18						
	comp=Z,1.6nm,0.5s						
F30M	Barrier River	45.67	31	P	P	01 28 17.9	+2.6
KURK	Kurchatov	46.04	304	P	P	01 28 18.8	+0.4
KURK				IAmb	IAmb	01 28 20.7	
	comp=Z,2.9nm,0.6s						
KURK	Kurchatov	46.04	304	⇑iP	P	01 28 18.3	-0.1
KURK				pmax	pmax		
	comp=Z,16nm,2.9s						
KURK	Kurchatov	46.04	304	eP	P	01 28 18.3	-0.1
KURBB	Kurchatov Arra	46.13	304	P	P	01 28 19.2	+0.1
	comp=Z,2.5nm,0.6s,baz=76,slow=8.9,SNR=22						
	comp=Z,2.5nm,0.6s						
G31M	Satah River	46.37	32	P	P	01 28 21.9	+1.2
H31M	Peel River	46.55	34	P	P	01 28 24.0	+1.7
H31M				IAmb	IAmb	01 28 36.7	
	comp=Z,5.8nm,1.1s						
BVAR	Borovoye Array	50.01	310	P	P	01 28 49.1	0.0
	comp=Z,1.6nm,0.8s,baz=92,slow=9.7,SNR=7.5						
	comp=Z,1.6nm,0.8s						
BORK	Borovoye	50.04	310	⇑eP	P	01 28 50.4	+1.1
BORK				pmax	pmax		
	comp=Z,24nm,4.2s						
EVN	Everest	50.77	273	P	P	01 28 56.6	+0.8
BOOM	Boomskoye usch	50.99	295	P	P	01 28 57.9	+1.1
BOOM	Boomskoye usch	50.99	295	P	P	01 28 57.9	+1.1
BOOM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AAK	Ala-Archa	51.87	296	ceP	P	01 29 04.0	+0.6
AAK				pmax	pmax		
	comp=Z,9.0nm,2.5s						
AAK	Ala-Archa	51.87	296	eP	P	01 29 04.0	+0.6
KSH	Kashi	52.37	292	P	P	01 29 11.5	+4.4
KSH				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KK31	Karatay Array	54.23	298	P	P	01 29 20.9	+0.3
KK31				IAmb	IAmb	01 29 21.8	
	comp=Z,2.9nm,0.8s						
KK31	Karatay Array	54.23	298	P	P	01 29 20.9	+0.3
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KKAR	Karatay Array	54.23	298	P	P	01 29 20.9	+0.3
KKAR	Karatay Array	54.23	298	P	P	01 29 20.9	+0.3
ARTI	Arti	54.95	317	c iP	P	01 29 25.5	-0.1
ARTI						01 31 31.2	
ARTI				S	S	01 37 05.1	0.0
ARTI				SS	SS	01 40 40.5	-7.6
ARTI				pmax	pmax		
	comp=Z,12nm,1.3s						
YKA	Yellowknife Ar	55.77	34	P	P	01 29 32.7	+1.3
	comp=Z,0.5nm,0.7s,baz=300,slow=7.3,SNR=4.7						
	comp=Z,0.5nm,0.7s						
GAR	Garm	56.42	294	P	P	01 29 36.2	-0.4
CHGR	Chuyangaron	57.37	294	P	P	01 29 42.4	-0.9
CHGR	Chuyangaron	57.37	294	P	P	01 29 42.4	-0.9
CHGR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AB31	Akbulak array	57.57	309	P	P	01 29 44.6	+0.2
AB31				IAmb	IAmb	01 29 46.0	
	comp=Z,3.4nm,0.8s						
ABKAR	Akbulak array	57.57	309	P	P	01 29 45.1	+0.7
KIRV	Kirov	58.07	322	⇑eP	P	01 29 47.5	-0.2
SHAA	Shahritus	58.65	294	P	P	01 29 52.7	+0.5
SHAA				IAmb	IAmb	01 29 53.1	
	comp=Z,6.8nm,0.5s						
ARCES	ARCESS Array B	59.65	340	P	P	01 29 57.9	-0.7
	comp=Z,3.0nm,0.8s,baz=52,slow=6.1,SNR=1.9						
	comp=Z,3.0nm,0.8s						
BELG	Belogornoye	62.39	317	⇑eP	P	01 30 18.5	+1.1
BELG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WB0	Warramunga Arr	64.13	194	P	P	01 30 35.8	+6.6
WB0				IAmb	IAmb	01 30 50.1	
	comp=Z,4.0nm,1.1s						
WRA	Warramunga Arr	64.31	194	P	P	01 30 38.9	+8.5
	comp=Z,1.0nm,0.8s,baz=8.6,slow=6.7,SNR=4.1						
	comp=Z,1.0nm,0.8s						
FINES	FINESS Array B	65.31	333	P	P	01 30 36.4	0.0
	comp=Z,3.6nm,0.9s,baz=61,slow=5.3,SNR=5.3						
	comp=Z,3.6nm,0.9s						
FINES	FINESS Array B	65.31	333	P	P	01 30 36.2	-0.2
FINES	FINESS Array B	65.31	333	i P	P	01 30 36.9	+0.5
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FCC	Fort Churchill	66.03	30	P	P	01 30 43.1	+2.0
FCC	Fort Churchill	66.03	30	P	P	01 30 43.1	+2.0
FCC				pmax	pmax		
	comp=Z,6.0nm,1.2s						
VSU	Vasula	67.28	331	⇓eP	P	01 30 49.4	+0.3
VSU				pmax	pmax		
	comp=Z,229nm,4.3s						
ASAR	Alice Springs	68.03	194	P	P	01 31 04.1	+10
	comp=Z,0.5nm,0.7s,baz=6.3,slow=6.4,SNR=6.4						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	69.74	50	LR	LR	02 02 34.7	
	comp=Z,38nm,19.3s,baz=22,slow=37						
NB2	NORSAR Subarra	70.01	339	P	P	01 31 06.2	0.0
	comp=Z,3.0nm,1.1s,baz=37,slow=6.2						
NOA	NORSAR Array B	70.01	339	P	P	01 31 04.9	-1.2
	comp=Z,2.5nm,0.9s,baz=32,slow=6.2,SNR=3.8						
	comp=Z,2.5nm,0.9s						
HFS	Hagfors	70.10	338	P	P	01 31 05.5	-1.1
	comp=Z,2.7nm,0.7s,baz=17,slow=5.4,SNR=8.7						
	comp=Z,2.7nm,0.7s						
KIV	Kislovodsk	70.27	312	P	P	01 31 10.8	+2.7
KIV	Kislovodsk	70.27	312	eP	P	01 31 08.0	-0.1
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV	Kislovodsk	70.27	312	eP	P	01 31 08.0	-0.1
KBZ	Khabaz	70.31	312	P	P	01 31 08.9	+0.7
	comp=Z,3.3nm,0.9s,baz=56,slow=1.2,SNR=8.0						
	comp=Z,3.3nm,0.9s						
KBZ	Khabaz	70.31	312	⇑eP	P	01 31 08.1	-0.1
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KBZ	Khabaz	70.31	312	eP	P	01 31 08.1	-0.1
AK03	Malin Array Si	72.03	324	P	P	01 31 18.1	-0.5
AKASG	Malin Array Be	72.05	324	P	P	01 31 18.1	-0.6
	comp=Z,3.2nm,0.8s,baz=43,slow=5.9,SNR=7.9						
	comp=Z,3.2nm,0.8s						
AKBB	Malin Array Si	72.05	324	ceP	P	01 31 18.9	+0.2
AKBB				pmax	pmax		
	comp=Z,57nm,5.6s						
AKBB	Malin Array Si	72.05	324	P	P	01 31 18.7	0.0
AK04	Malin Array Si	72.06	324	P	P	01 31 18.7	0.0
AK01	Malin Array Si	72.06	324	P	P	01 31 18.7	0.0
KIEV	Kiev	72.06	324	P	P	01 31 18.9	+0.2
AK22	Malin Array Si	72.07	324	P	P	01 31 19.6	+0.8
AK08	Malin Array Si	72.09	324	P	P	01 31 19.8	+0.9
AK02	Malin Array Si	72.09	324	P	P	01 31 18.9	0.0
AK11	Malin Array Si	72.09	324	P	P	01 31 18.9	0.0
AK15	Malin Array Si	72.10	324	P	P	01 31 19.1	+0.2
AK18	Malin Array Si	72.10	324	P	P	01 31 18.4	-0.6
AK20	Malin Array Si	72.11	324	P	P	01 31 18.7	-0.3
AK17	Malin Array Si	72.14	324	P	P	01 31 18.9	-0.3
RNPP1	Kostyukhnivka	73.00	326	P	P	01 31 24.3	0.0
RNPP5	Staryi Chortor	73.05	326	P	P	01 31 24.8	+0.2
LUBAR	Lubar, Ukraine	73.26	324	P	P	01 31 25.1	-0.8
KMPD	K-Podol'skiy	74.85	324	P	P	01 31 36.1	+1.0
BUR08	Bucovina Ar. S	76.09	324	P	P	01 31 44.9	+2.5
BUR08				IAmb	IAmb	01 31 56.1	
	comp=Z,5.1nm,1.1s						
BURAR	Bucovina Array	76.11	324	P	P	01 31 43.5	+0.9
BRTR	Keskin Array B	78.05	314	P	P	01 31 53.3	-0.3
	comp=Z,0.5nm,0.8s,baz=58,slow=5.4,SNR=2.7						
	comp=Z,0.5nm,0.8s						
BRTR	Keskin Array B	78.05	314	P	P	01 31 54.4	+0.8
TXAR	Lajitas Array	82.43	57	P	P	01 32 18.3	+1.0
	comp=Z,0.4nm,0.9s,baz=299,slow=1.3,SNR=3.8						
	comp=Z,0.4nm,0.9s						
TXAR	Lajitas Array	82.43	57	P	P	01 32 17.8	+0.5
TXAR	Lajitas Array	82.43	57	P	P	01 32 17.8	+0.5
SADO	Sadowa	82.70	32	LR	LR	02 12 10.0	
	comp=Z,66nm,19.4s,baz=132,slow=38						
PPT	Papeete	83.51	121	LR	LR	02 02 58.3	
	comp=Z,16nm,19.7s,baz=349,slow=31						

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*UCR **09** 01:45:28.6±0.9,9°.26N×83°.96W,h54km±3km,MW3.8*

*CATAC **09** 01:45:29.2±0.2,9°N±2°×8°4W±°,h28km±2km,M3.6/12,MLv3.6/12,Error ellipse: s-maj=5.5km s-min=2.6km az=47.9,confirmed*

ISC 09 01:45:30.4±1.6,**9°.28N**±0°.03×**83°.92W**±0°.03,**h36**km±1km,
n124,σ**1§40**/143,**Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QUEP	Quepos	0.28	302	P	Pn	01 45 38.1	-0.5
QUEP	Quepos	0.28	302	S	Sn	01 45 43.9	-1.7
BUS1	Rivas	0.32	32	eP	Pn	01 45 38.4	-0.9
BUS1				eS	Sn	01 45 46.0	-0.5
OCHAL	Ojochal	0.33	124	P	Pn	01 45 38.1	-0.6
OCHAL	Ojochal	0.33	124	S	Sn	01 45 45.7	+0.3
PIEC	Cerro El Cedra	0.34	354	eP	Pn	01 45 38.5	-0.6
PIEC				eS	Sn	01 45 46.1	0.0
EDPE	Pejibaye, P	0.37	109	eP	Pn	01 45 38.8	-0.3
RAZU	San Marcos de	0.39	345	eP	Pn	01 45 38.8	-0.8
PITB	Pirrs, San	0.39	345	eP	Pn	01 45 38.8	-0.8
PITB				eS	Sn	01 45 46.7	+0.2
SAJE	San Jernim	0.41	81	eP	Pn	01 45 39.2	-0.6
PICV	PH. Pirrs	0.44	322	eP	Pn	01 45 39.2	-0.9
PICV				eS	Sn	01 45 47.5	+0.4
LCR2	La Lucha 2	0.46	350	P	Pn	01 45 40.0	-0.7
LCR2	La Lucha 2	0.46	350	S	Sn	01 45 47.8	-0.1
LCR2	La Lucha 2	0.46	350	eS	Sn	01 45 47.6	-0.3
REPA	Paraso	0.54	5	eP	Pn	01 45 40.7	-1.3
REPA				eS	Sn	01 45 50.1	+0.2
PANP	Palmar Norte	0.56	125	eP	Pn	01 45 40.9	-1.1
ACOS	Acosta	0.56	335	eP	Pn	01 45 40.5	-1.7
ACOS				eS	Sn	01 45 49.6	-0.8
TAGO	Cartago	0.58	360	eP	Pn	01 45 41.2	-1.3
TRIO	Tres Rios	0.62	353	eP	Pn	01 45 41.5	-1.6
AMPA	Desamparados	0.62	347	eP	Pn	01 45 41.5	-1.6
AMPA				eS	Sn	01 45 51.5	-0.3
FIMO	Fila Mora	0.63	117	eP	Pn	01 45 42.3	-0.8
VINA	Juan Vinas	0.63	16	eP	Pn	01 45 42.0	-1.1
VINA				eS	Sn	01 45 52.4	+0.3
PCAYA	Pacayas	0.64	10	eP	Pn	01 45 42.2	-1.2
PCAYA				eS	Sn	01 45 52.6	+0.2
LUJA	Lujan	0.66	347	eP	Pn	01 45 42.1	-1.4
LUJA				eS	Sn	01 45 52.5	-0.1
CENT	San Jose	0.66	346	eP	Pn	01 45 43.2	-0.4
CENT				eS	Sn	01 45 53.6	+0.8
ECI	Escuela Centro	0.66	349	eP	Pn	01 45 42.3	-1.3
ECI				eS	Sn	01 45 53.0	+0.1
SJS3	Mercedes San J	0.66	349	eP	Pn	01 45 42.4	-1.1
SJS3				eS	Sn	01 45 53.1	+0.3
SJS	Escuela Geolog	0.67	349	eP	Pn	01 45 42.3	-1.3
SJS				eS	Sn	01 45 53.0	+0.1
DRK0	Durika	0.67	92	P	Pn	01 45 42.3	-1.3
DRK0	Durika	0.67	92	eP	Pn	01 45 42.1	-1.6
DRK0				eS	Sn	01 45 52.6	-0.4
LUPE	Guadalupe	0.67	349	eP	Pn	01 45 41.9	-1.8
LUPE				eS	Sn	01 45 52.7	-0.4
MEXI	Barrio Mexico	0.67	346	eP	Pn	01 45 42.2	-1.5
MEXI				eS	Sn	01 45 53.0	-0.1
PURI	Puriscal	0.68	326	eP	Pn	01 45 42.4	-1.4
RAFA	San Farael, Vo	0.68	9	eP	Pn	01 45 42.7	-1.3
CORON	Coronado	0.69	353	eP	Pn	01 45 43.0	-0.9
TIBA	Tibas	0.69	348	eP	Pn	01 45 42.7	-1.2
VERB	Verbena	0.69	19	eP	Pn	01 45 42.9	-1.0
VICA	Volcano Irazu	0.70	6	eP	Pn	01 45 43.1	-1.2
VTCV	VTCV, Calle Va	0.72	15	eP	Pn	01 45 43.3	-1.0
CVTQ	Turrialba Volc	0.73	12	eP	Pn	01 45 43.7	-0.9
CVTQ				eS	Sn	01 45 55.2	+0.5
CVTV	Tajo	0.74	13	eP	Pn	01 45 43.8	-0.9
CVTV				eS	Sn	01 45 55.1	+0.4
BELE	Belen	0.74	339	eP	Pn	01 45 42.9	-1.5
BELE				eS	Sn	01 45 54.0	-0.5
CVIMO	Finca Echandi	0.74	358	eP	Pn	01 45 43.6	-1.0
HDC	Heredia	0.74	345	eP	Pn	01 45 43.4	-1.2
HDC				eS	Sn	01 45 54.8	+0.2
HEME	Heredia, Merce	0.74	343	eP	Pn	01 45 44.4	-0.1
ABRB	Las Abras (San	0.75	16	eP	Pn	01 45 43.9	-0.8
ABRB				eS	Sn	01 45 55.6	+0.7
VTR0	Volcan Turrial	0.75	12	i P	Pn	01 45 43.9	-1.0
VTR0				eP	Pn	01 45 43.9	-1.0
VTR0				eS	Sn	01 45 55.6	+0.4
CVTR	Volcan Turrial	0.75	12	eP	Pn	01 45 43.9	-1.0
CVTR				eS	Sn	01 45 55.3	+0.1
RESJ	San Isidro (Tu	0.79	20	eP	Pn	01 45 44.4	-0.7
TCS1	Tacares	0.84	334	P	Pn	01 45 45.2	-0.7
TCS1	Tacares	0.84	334	eP	Pn	01 45 44.6	-1.3
CVTG	V. Turrialba,	0.87	10	eP	Pn	01 45 45.5	-0.7
LCOCO	El Coco	0.87	24	eP	Pn	01 45 45.5	-0.7
RVLA	Villa Bonita	0.89	22	eP	Pn	01 45 45.7	-0.7
IRES	Siquirres	0.91	27	eP	Pn	01 45 46.0	-0.7
PILE	Guapiles	0.94	8	eP	Pn	01 45 46.3	-0.8
PTJ1	Puerto Jimnez	0.96	140	S	Sn	01 46 02.8	+3.0
PTJ1	Puerto Jimnez	0.96	140	P	Pn	01 45 47.0	-0.4
EDAD	Golfito	0.97	130	eP	Pn	01 45 46.0	-1.6
EGUB	Earth Gu¡pi	0.98	19	eP	Pn	01 45 47.1	-0.6
FITO	Golfito	1.00	131	eP	Pn	01 45 46.3	-1.6
CEUA	Cerro Uatsi, L	1.02	71	eP	Pn	01 45 48.6	+0.3
PIRO	Carate, Puerto	1.05	146	S	Sn	01 46 02.7	+0.8
PIRO	Carate, Puerto	1.05	146	P	Pn	01 45 48.4	-0.2
ROBF	Roble, Puntare	1.06	311	eP	Pn	01 45 47.1	-1.6
CARI	Cariari	1.09	10	eP	Pn	01 45 48.7	-0.5
CARI				eS	Sn	01 46 04.6	+1.6
ALCO	Alturas Coton,	1.12	107	eP	Pn	01 45 47.4	-2.4
ITAL	Pital	1.21	343	eS	Sn	01 46 07.0	+0.9
CDITO	Canoas	1.25	124	P	Pn	01 45 51.3	-0.1
CDITO	Canoas	1.25	124	S	Sn	01 46 07.9	+0.9
TRT2	Tortugero	1.28	8	S	Sn	01 46 08.8	+1.1
TRT2	Tortugero	1.28	8	P	Pn	01 45 51.1	-0.7
BRU2	Volcan	1.31	112	P	Pn	01 45 51.9	-0.4
BRU2	Volcan	1.31	112	S	Sn	01 46 09.1	+0.4
FORC	Fortuna	1.39	328	eP	Pn	01 45 53.0	-0.4
VACR	Volcan Arenal	1.40	328	eP	Pn	01 45 52.9	-0.5
ARE1	Arenal 1	1.41	326	eP	Pn	01 45 53.3	-0.4
VARE2	V. Arenal	1.41	326	eP	Pn	01 45 53.2	-0.4
CEDE	Laguna Cedeo	1.42	327	eP	Pn	01 45 53.7	-0.1
JTS	Las Juntas de	1.43	315	P	Pn	01 45 52.3	-1.5
JTS				S	Sn	01 46 10.9	-0.5
JTS	Las Juntas de	1.43	315	eP	Pn	01 45 52.3	-1.5
REZ	Monterrey de S	1.46	328	eP	Pn	01 45 53.9	-0.4
TABAC	Tabacon	1.47	325	eP	Pn	01 45 54.2	-0.3
JEFFS	S de V. Baru	1.50	114	eP	Pn	01 45 53.9	-1.0
COVE	Coope Vega, Sa	1.50	342	P	Pn	01 45 54.5	-0.4
COVE	Coope Vega, Sa	1.50	342	S	Sn	01 46 13.6	+0.3
LMNES	Limones	1.57	138	eP	Pn	01 45 54.7	-1.2
INVE	Universidad In	1.64	317	eP	Pn	01 45 56.7	0.0
CMARA	Lajas Hojancha	1.65	296	S	Sn	01 46 15.0	-2.0
CMARA	Lajas Hojancha	1.65	296	P	Pn	01 45 56.4	-0.6
NICO	Nicoya	1.73	300	eP	Pn	01 45 59.7	+1.7
RBALA	Bur	1.79	103	eP	Pn	01 45 57.7	-1.1
CUI	Cuipilapa	1.83	318	eP	Pn	01 45 58.1	-1.3
MESS	Mesas	1.92	319	eP	Pn	01 45 59.5	-1.1
KKNTU	Kakintº	2.13	102	eP	Pn	01 46 03.1	-0.5
BOAB	BOACO BROADBAN	3.58	332	P	Pn	01 46 23.3	-0.2
BOAB	BOACO BROADBAN	3.58	332	S	Sn	01 47 05.2	+0.6
COPN	Copaltepe	3.90	318	P	Pn	01 46 35.3	+7.5
COPN	Copaltepe	3.90	318	P	Pn	01 46 35.2	+7.4
COPN	Copaltepe	3.90	318	eP	Pn	01 46 35.1	+7.3
MOM2	El Cardon	4.02	321	P	Pn	01 46 37.8	+8.3
MOMN	Momotombo	4.03	321	P	Pn	01 46 37.1	+7.4
MOMN	Momotombo	4.03	321	P	Pn	01 46 36.9	+7.2
MOM3	MOM3	4.10	322	P	Pn	01 46 37.9	+7.3
MOM3	MOM3	4.10	322	P	Pn	01 46 37.8	+7.2
CNGA	Al SSO del Vol	4.20	320	P	Pn	01 46 36.4	+4.3
CNGA	Al SSO del Vol	4.20	320	P	Pn	01 46 36.2	+4.2
CNGN	Cerro Negro	4.20	320	P	Pn	01 46 36.8	+4.7
CNGN	Cerro Negro	4.20	320	P	Pn	01 46 36.5	+4.4
ALEN	Leon	4.28	318	P	Pn	01 46 34.8	+1.7
TEL3	Telica 3	4.35	319	P	Pn	01 46 37.1	+3.1
QUEN	Al S del Volca	4.37	319	P	Pn	01 46 36.2	+1.8
QUEN	Al S del Volca	4.37	319	P	Pn	01 46 35.8	+1.4
POLN	Al Sur del Vol	4.39	320	P	Pn	01 46 37.6	+3.0
POLN	Al Sur del Vol	4.39	320	P	Pn	01 46 37.4	+2.8
PKGN	Cerro Pekin	4.51	319	P	Pn	01 46 37.4	+1.2
PKGN	Cerro Pekin	4.51	319	P	Pn	01 46 37.2	+1.0
RCVN	Varillal2	4.82	333	P	Pn	01 46 41.3	+0.7
POTN	Potosi Cosigui	5.10	317	P	Pn	01 46 42.5	-1.9
CSGN	Cosiguina Volc	5.12	316	P	Pn	01 46 42.5	-2.2
CSGN	Cosiguina Volc	5.12	316	P	Pn	01 46 42.3	-2.4
CSGN	Cosiguina Volc	5.12	316	eP	Pn	01 46 42.1	-2.6
CNCH	Conchagua	5.52	316	P	Pn	01 46 47.5	-2.8
TGUH	Tegucigalpa,Un	5.77	326	P	Pn	01 46 56.4	+2.7

CATAC 09 01:46:38.0±0.8,**12°N**±8°×**8°7W**±°,**h10**km,**M3.0**/7,**ML2.9**/7,
MLv3.1/6,**confirmed,Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALEN	Leon	0.31	13	S	Pg	01 46 43.1	-1.2
ALEN	Leon	0.31	13	P	Pg	01 46 44.2	-0.2
CNGA	Al SSO del Vol	0.41	34	S	Pg	01 46 46.2	-0.1
CNGN	Cerro Negro	0.42	34	S	Pg	01 46 46.4	+0.1
MOMN	Momotombo	0.47	57	S	Pg	01 46 47.2	0.0
POLN	Al Sur del Vol	0.51	14	P	Pg	01 46 43.7	-4.3
POLN	Al Sur del Vol	0.51	14	S	Pg	01 46 47.8	-0.3
PKGN	Cerro Pekin	0.52	356	S	Pg	01 46 47.8	-0.3
MOM2	El Cardon	0.53	57	P	Pb	01 46 49.2	-0.2
MOM2	El Cardon	0.53	57	S	Pb	01 46 48.9	-0.6
MOM3	MOM3	0.55	49	S	Pg	01 46 49.3	+0.6
CRIN	San Cristobal	0.56	349	P	Pb	01 46 51.0	+1.0
APYN	Apoyeque	0.58	82	S	Pg	01 46 49.2	-0.2
APYN	Apoyeque	0.58	82	P	Pg	01 46 49.5	+0.2
UNAN	Cigeo UNAN	0.66	93	P	Pg	01 46 47.8	-3.0
MGAN	Managua	0.68	90	S	Pn	01 46 51.1	-2.6
MGAN	Managua	0.68	90	P	Pn	01 46 53.4	-0.3
POTN	Potosi Cosigui	1.01	327	P	Pg	01 46 56.9	-0.5
POTN	Potosi Cosigui	1.01	327	S	Pg	01 46 56.4	-1.0
CSGN	Cosiguina Volc	1.02	324	S	Pg	01 46 56.3	-1.4
CSGN	Cosiguina Volc	1.02	324	eS	Pg	01 46 56.5	-1.2
LIMN	Finca el Limon	1.07	32	S	Pg	01 47 01.0	+2.5
MATN	Matagalpa	1.26	52	S	Pg	01 47 04.4	+2.1
CNCH	Conchagua	1.42	322	S	Pg	01 47 06.5	+1.2
RCVN	Varillal2	1.60	27	S	Pg	01 47 14.1	+5.3
TGUH	Tegucigalpa,Un	1.92	350	S	Pg	01 47 19.8	+4.8

ROM 09 02:39:25.9±0.1,**44°.012N**±0°.004×**11°.322E**±0°.004,
h8km,**ML1.5**/16,**1D,Error ellipse: s-maj=0.3km**
s-min=0.2km az=9.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCL	Monte Cuccoli	0.10	266	P	Pg	02 39 28.8	+0.5
MOCL				S	Sg	02 39 30.8	+0.7
MOCL				AML	AML		
	comp=E,546µm,0.3s						
MOCL				AML	AML		
	comp=N,1014µm,1.3s						
MOCL				AML	AML		
	comp=E,504µm,0.2s						
MOCL				AML	AML		
	comp=N,1009µm,0.2s						
MOCL				AML	AML		
	comp=E,545µm,0.3s						
MPPT	Montemurlo	0.18	252	P	Pg	02 39 30.2	+0.7
MPPT				S	Sg	02 39 33.3	+1.2
MPPT				AML	AML		
	comp=E,4680µm,0.3s						
MPPT				AML	AML		
	comp=N,5275µm,0.3s						
MPPT				AML	AML		
	comp=E,304µm,0.2s						
MPPT				AML	AML		
	comp=N,383µm,0.3s						
MPPT				AML	AML		
	comp=E,305µm,0.2s						
MPPT				AML	AML		
	comp=N,383µm,0.3s						
FIE	Fiesole	0.21	186	P	Pg	02 39 30.7	+0.6
FIE				S	Sg	02 39 34.0	+1.1
FNVD	Fontana Vidola	0.21	317	P	Pg	02 39 30.8	+0.5
FNVD				S	Sg	02 39 34.6	+1.4
RUFI	Rufina	0.22	142	⇓P	Pg	02 39 31.1	+0.8
RUFI				S	Sg	02 39 34.7	+1.4
RUFI				AML	AML		
	comp=E,1400µm,0.4s						
RUFI				AML	AML		
	comp=N,1775µm,1.5s						
RUFI				AML	AML		
	comp=E,1395µm,0.4s						
RUFI				AML	AML		
	comp=N,1320µm,0.4s						
RUFI				AML	AML		
	comp=E,81µm,0.3s						
RUFI				AML	AML		
	comp=N,82µm,0.2s						
RUFI				AML	AML		
	comp=N,48µm,0.0s						
RUFI				AML	AML		
	comp=E,29µm,0.1s						
FIR	Firenze	0.24	192	P	Pg	02 39 31.7	+0.9
FIR				S	Sg	02 39 36.0	+2.0
FIR				AML	AML		
	comp=N,10985µm,1.3s						
FIR				AML	AML		
	comp=N,10730µm,1.3s						
FIR				AML	AML		
	comp=E,13650µm,1.6s						
FIR				AML	AML		
	comp=N,7560µm,0.5s						
FIR				AML	AML		
	comp=E,13950µm,1.6s						
FIR				AML	AML		
	comp=N,7015µm,0.3s						
FIR				AML	AML		
	comp=E,331µm,0.1s						
FIR				AML	AML		
	comp=N,242µm,0.2s						
FIR				AML	AML		
	comp=E,182µm,0.1s						
FIR				AML	AML		
	comp=N,146µm,0.2s						
FIR				AML	AML		
	comp=E,199µm,0.1s						
FIR				AML	AML		
	comp=N,138µm,0.2s						
LMD	Lutirano	0.28	77	P	Pg	02 39 32.2	+0.6
LMD				S	Sb	02 39 37.1	-1.1
LMD				AML	AML		
	comp=E,5555µm,0.3s						
LMD				AML	AML		
	comp=E,9435µm,0.4s						
LMD				AML	AML		
	comp=N,16250µm,0.3s						
LMD				AML	AML		
	comp=E,64µm,0.2s						
LMD				AML	AML		
	comp=N,218µm,0.3s						
MTRZ	Monterenzio	0.38	16	P	Pg	02 39 34.1	+0.7
SFI	Santa Sofia	0.39	106	P	Pg	02 39 34.3	+0.7
SFI				S	Sb	02 39 41.0	-0.3
SFI				AML	AML		
	comp=E,2495µm,0.4s						
SFI				AML	AML		
	comp=N,3215µm,0.5s						
SFI				AML	AML		
	comp=N,3195µm,0.5s						
SFI				AML	AML		
	comp=E,2495µm,0.4s						
SFI				AML	AML		
	comp=E,2520µm,0.4s						
SFI				AML	AML		
	comp=E,15µm,0.2s						
SFI				AML	AML		
	comp=E,40µm,0.3s						
ASQU	Asqua	0.40	122	P	Pb	02 39 34.7	-0.6
ASQU				S	Sb	02 39 40.9	-0.7
ASQU				AML	AML		
	comp=E,2890µm,0.8s						
ASQU				AML	AML		
	comp=N,3715µm,0.4s						
POPM	Popiglio	0.41	275	P	Pg	02 39 34.2	+0.4
POPM				S	Sb	02 39 41.0	-0.8
POPM				AML	AML		
	comp=E,11300µm,1.1s						
POPM				AML	AML		
	comp=N,19700µm,0.7s						
POPM				AML	AML		
	comp=E,216µm,0.2s						
POPM				AML	AML		
	comp=N,203µm,0.2s						
CSNT	Castellina Chi	0.54	182	P	Pg	02 39 36.8	+0.4
CSNT				AML	AML		
	comp=E,2940µm,0.4s						
CSNT				AML	AML		
	comp=N,6685µm,0.4s						

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*BGR **09** 02:39:39.0±1.5,43°.76N×11°.42E,h10km,ML3.4/4,Error ellipse: s-maj=37.8km s-min=17.8km az=41.0*

GEN ***09*** *02:39:38.1, 44°.00N×11°.31E, h13^{km}, Ml3.2*
ROM ***09*** *02:39:38.8±0.1, 43°.998N±0°.005×11°.303E±0°.005, h7^{km}, ML3.2/187, Error ellipse: s-maj=0.4km s-min=0.4km az=205.0*
LDG ***09*** *02:39:40.6±0.2, 43°.90N×11°.26E, h8^{km}, Ml3.2/17, Error ellipse: s-maj=3.3km s-min=3.1km az=155.0*
PRU ***09*** *02:39:42.4, 44°.12N×11°.55E, h2^{km}*
ISC 09 02:39:39.0±0.8**, 43°.98N**±0°.01×**11°.28E**±0°.01**, h13**^{km}±4^{km}**, n174, σ1ˢ.52**/249**, 11C-4D, Central Italy**

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Code  Station Name        Δ°   AZ°    Phase ID         Time      Res
                                     Op    ISC      h  m  s    ISC
MOCL  Monte Cuccoli      0.07 294 ⇓P    Pg    02 39 41.5 -0.4
MOCL                               S    Sg    02 39 43.4 -0.4
MOCL                               AML  AML
      comp=E,33200µm,0.3s
MOCL                               AML  AML
      comp=N,87250µm,0.5s
MOCL                               AML  AML
      comp=E,33209µm,0.3s
MOCL                               AML  AML
      comp=N,72271µm,0.2s
MOCL                               AML  AML
      comp=E,33209µm,0.3s
SEI   Scarperia          0.10  36  P    Pg    02 39 37.9 -4.2
MPPT  Montemurlo         0.14 263 ⇑P    Pg    02 39 42.8 +0.2
MPPT                               S    Sg    02 39 45.6 +0.6
MPPT                               AML  AML
      comp=N,31300µm,0.3s
MPPT                               AML  AML
      comp=E,28000µm,0.3s
MPPT                               AML  AML
      comp=E,28000µm,1.7s
MPPT                               AML  AML
      comp=E,27988µm,0.3s
MPPT                               AML  AML
      comp=N,31328µm,0.3s
MPPT                               AML  AML
      comp=N,31328µm,0.3s
MPPT                               AML  AML
      comp=E,27988µm,0.3s
FIE   Fiesole            0.17 175  P    Pg    02 39 43.4 +0.4
FIE                                S    Sg    02 39 47.0 +1.3
FIR   Firenze            0.20 184 ⇑P    Pg    02 39 44.1 +0.6
FIR                                S    Sg    02 39 48.6 +2.1
FIR                                AML  AML
      comp=E,31350µm,0.7s
FIR                                AML  AML
      comp=N,32900µm,1.6s
FIR                                AML  AML
      comp=E,31350µm,0.7s
FIR                                AML  AML
      comp=E,32350µm,0.7s
FIR                                AML  AML
      comp=N,33050µm,1.6s
FIR                                AML  AML
      comp=E,31350µm,1.3s
FIR                                AML  AML
      comp=N,33050µm,0.4s
FIR                                AML  AML
      comp=N,32900µm,0.4s
FIR                                AML  AML
      comp=E,28958µm,0.2s
FIR                                AML  AML
      comp=E,29457µm,0.2s
FIR                                AML  AML
      comp=E,32350µm,1.3s
FIR                                AML  AML
      comp=N,32232µm,0.4s
FIR                                AML  AML
      comp=N,31342µm,0.4s
RUFI  Rufina             0.22 128  P    Pg    02 39 43.7 -0.1
RUFI                               S    Sg    02 39 47.3 +0.3
RUFI  Rufina             0.22 128 ⇓P    Pg    02 39 43.7 -0.1
RUFI                               S    Sg    02 39 47.2 +0.2
RUFI                               AML  AML
      comp=E,9790µm,0.5s
RUFI                               AML  AML
      comp=N,10790µm,0.6s
RUFI                               AML  AML
      comp=N,10805µm,0.6s
RUFI                               AML  AML
      comp=E,9785µm,0.5s
RUFI                               AML  AML
      comp=N,10785µm,0.6s
RUFI                               AML  AML
      comp=N,10785µm,1.4s
RUFI                               AML  AML
      comp=E,7266µm,0.2s
RUFI                               AML  AML
      comp=N,10790µm,1.4s
RUFI                               AML  AML
      comp=N,10789µm,0.6s
RUFI                               AML  AML
      comp=E,7266µm,0.2s
RUFI                               AML  AML
      comp=N,10789µm,0.6s
FNVD  Fontana Vidola     0.22 330 ⇓P    Pg    02 39 43.3 -0.6
FNVD                               S    Sg    02 39 46.5 -0.8
FNVD                               AML  AML
      comp=E,20900µm,0.4s
FNVD                               AML  AML
      comp=N,35100µm,0.4s
FNVD                               AML  AML
      comp=E,20950µm,0.4s
FNVD                               AML  AML
      comp=N,28847µm,0.2s
FNVD                               AML  AML
      comp=E,20924µm,0.4s
FNVD                               AML  AML
      comp=E,20924µm,0.4s
BRIS  BRISIGHELLA        0.24  44 ⇑P    Pg    02 39 47.0 +2.7
BRIS                               S    Sg    02 39 53.1 +5.3
BRIS                               AML  AML
      comp=E,8880µm,0.7s
BRIS                               AML  AML
      comp=N,9885µm,0.2s
BRIS                               AML  AML
      comp=N,228µm,0.7s
BRIS                               AML  AML
      comp=E,8880µm,0.7s
BRIS                               AML  AML
      comp=E,128µm,0.7s
BRIS                               AML  AML
      comp=N,9884µm,0.2s
CRMI  Carmignano         0.29 230 ⇑P    Pg    02 39 45.6 +0.6
CRMI                               S    Sb    02 39 50.8  0.0
CRMI                               AML  AML
      comp=E,13750µm,0.3s
CRMI                               AML  AML
      comp=E,5070µm,0.3s
CRMI                               AML  AML
      comp=N,8395µm,0.4s
CRMI                               AML  AML
      comp=E,13751µm,0.3s
CRMI                               AML  AML
      comp=N,8377µm,0.4s
CRMI                               AML  AML
      comp=N,21200µm,0.4s
CRMI                               AML  AML
      comp=N,21241µm,0.4s
CRMI                               AML  AML
      comp=E,5067µm,0.3s
CRMI                               AML  AML
      comp=N,8377µm,0.4s
LMD   Lutirano           0.33  72  P    Pg    02 39 44.8 -1.0
LMD                                S    Sg    02 39 49.6 -0.7
LMD   Lutirano           0.33  72 ⇑P    Pg    02 39 44.7 -1.0
LMD                                S    Sg    02 39 49.6 -0.7
LMD                                AML  AML
      comp=E,11200µm,0.7s
LMD                                AML  AML
      comp=N,16250µm,0.3s
LMD                                AML  AML
      comp=E,11200µm,1.3s
LMD                                AML  AML
      comp=N,16285µm,0.3s
LMD                                AML  AML
      comp=N,16285µm,0.3s
LMD                                AML  AML
      comp=E,10983µm,0.4s
POPM  Popiglio           0.38 281  P    Pg    02 39 46.9 +0.2
POPM                               S    Sg    02 39 53.1 +1.2
POPM  Popiglio           0.38 281  P    Pg    02 39 46.8 +0.2
POPM                               S    Sb    02 39 53.5 +0.1
ASQU  Asqua              0.41 115  P    Pg    02 39 47.0 -0.3
ASQU                               S    Sb    02 39 53.7 -0.6
ASQU  Asqua              0.41 115 ⇑P    Pg    02 39 46.8 -0.5
ASQU                               S    Sg    02 39 53.4 +0.6
ASQU                               AML  AML
      comp=N,3715µm,0.4s
ASQU                               AML  AML
      comp=N,3716µm,0.4s
ASQU                               AML  AML
      comp=N,3715µm,1.6s
ASQU                               AML  AML
      comp=E,2494µm,0.2s
ASQU                               AML  AML
      comp=E,2890µm,0.8s
ASQU                               AML  AML
      comp=E,2494µm,0.2s
SFI   Santa Sofia        0.42  99 ⇑P    Pg    02 39 46.8 -0.6
SFI                                S    Sb    02 39 53.4 -1.1
SFI                                AML  AML
      comp=N,3290µm,1.2s
SFI                                AML  AML
      comp=N,3290µm,1.2s
SFI                                AML  AML
      comp=N,3335µm,1.2s
SFI                                AML  AML
      comp=N,3290µm,0.8s
SFI                                AML  AML
      comp=E,2495µm,0.4s
SFI                                AML  AML
      comp=E,2518µm,0.4s
SFI                                AML  AML
      comp=E,2620µm,1.1s
SFI                                AML  AML
      comp=E,2590µm,1.1s
SFI                                AML  AML
      comp=N,2707µm,0.7s
SFI                                AML  AML
      comp=N,3290µm,0.8s
SFI                                AML  AML
      comp=N,3335µm,0.8s
SFI                                AML  AML
      comp=N,2764µm,0.7s
SFI                                AML  AML
      comp=N,2764µm,0.7s
SFI                                AML  AML
      comp=E,2495µm,0.4s
SFI                                AML  AML
      comp=N,2707µm,0.7s
SFI                                AML  AML
      comp=E,2518µm,0.4s
MTRZ  Monterenzio        0.42  19  P    Pg    02 39 46.1 -1.4
MTRZ                               S    Sg    02 39 51.4 -1.8
MTRZ  Monterenzio        0.42  19 ⇑P    Pg    02 39 46.1 -1.4
MTRZ                               AML  AML
      comp=E,7975µm,1.6s
MTRZ                               AML  AML
      comp=N,9435µm,0.5s
MTRZ                               AML  AML
      comp=N,9595µm,0.5s
MTRZ                               AML  AML
      comp=E,7975µm,1.6s
MTRZ                               AML  AML
      comp=E,8125µm,1.6s
MTRZ                               AML  AML
      comp=N,9600µm,0.5s
MTRZ                               AML  AML
      comp=E,7975µm,0.4s
MTRZ                               AML  AML
      comp=N,9577µm,0.5s
MTRZ                               AML  AML
      comp=E,8125µm,0.4s
MTRZ                               AML  AML
      comp=E,7948µm,0.6s
MTRZ                               AML  AML
      comp=E,7975µm,0.4s
MTRZ                               AML  AML
      comp=E,7948µm,0.6s
MTRZ                               AML  AML
      comp=N,9437µm,0.5s
MTRZ                               AML  AML
      comp=N,9577µm,0.5s
MTRZ                               AML  AML
      comp=E,8069µm,0.6s
ZCCA  Zocca              0.43 330  P    Pb    02 39 48.3 -0.3
ZCCA                               S    Sb    02 39 56.5 +1.5
ZCCA  Zocca              0.43 330  P    Pb    02 39 48.3 -0.3
ZCCA                               AML  AML
      comp=E,3490µm,0.4s
ZCCA                               AML  AML
      comp=N,5100µm,0.5s
ZCCA                               AML  AML
      comp=E,3690µm,0.4s
ZCCA                               AML  AML
      comp=N,5100µm,0.5s
ZCCA                               AML  AML
      comp=N,5285µm,0.5s
ZCCA                               AML  AML
      comp=E,3492µm,0.4s
ZCCA                               AML  AML
      comp=E,3495µm,0.4s
ZCCA                               AML  AML
      comp=E,3690µm,0.4s
ZCCA                               AML  AML
      comp=N,5285µm,0.5s
ZCCA                               AML  AML
      comp=N,5098µm,0.5s
OSSC  Osservatorio P     0.45 183  AML  AML
      comp=N,6835µm,0.7s
OSSC                               AML  AML
      comp=E,5505µm,0.1s
OSSC                               AML  AML
      comp=E,7141µm,0.2s
OSSC                               AML  AML
      comp=N,7248µm,0.2s
OSSC                               AML  AML
      comp=N,7250µm,0.2s
OSSC                               AML  AML
      comp=E,7140µm,0.2s
OSSC                               AML  AML
      comp=E,6685µm,0.7s
OSSC                               AML  AML
      comp=N,5616µm,0.5s
BDI   Bagni Di Lucca     0.50 280  P    Pg    02 39 48.9  0.0
BDI                                S    Sb    02 39 56.8 -0.1
BDI   Bagni Di Lucca     0.50 280  P    Pg    02 39 48.9  0.0
BDI                                S    Sb    02 39 56.8 -0.1
BDI                                AML  AML
      comp=E,8445µm,0.4s
BDI                                AML  AML
      comp=E,6340µm,0.3s
BDI                                AML  AML
      comp=N,8490µm,0.5s
BDI                                AML  AML
      comp=E,8446µm,0.4s
BDI                                AML  AML
      comp=E,6342µm,0.3s
BDI                                AML  AML
      comp=E,6340µm,0.3s
BDI                                AML  AML
      comp=N,9425µm,0.5s
BDI                                AML  AML
      comp=N,9425µm,0.5s
BDI                                AML  AML
      comp=E,6342µm,0.3s
BDI                                AML  AML
      comp=N,8493µm,0.5s
CSNT  Castellina Chi     0.50 179  P    Pg    02 39 49.2 +0.3
CSNT                               S    Sb    02 39 57.6 +0.6
CSNT  Castellina Chi     0.50 179 ⇑P    Pg    02 39 49.2 +0.3
CSNT                               S    Sb    02 39 57.5 +0.6
CSNT                               AML  AML
      comp=N,6685µm,0.4s
CSNT                               AML  AML
      comp=E,2940µm,0.4s
CSNT                               AML  AML
      comp=N,6685µm,1.6s
CSNT                               AML  AML
      comp=N,6688µm,0.4s
CSNT                               AML  AML
      comp=E,2943µm,0.4s
IMOL  Imola, Italy       0.51  41  P    Pb    02 39 49.5 -0.3
IMOL                               S    Sb    02 39 58.6 +1.5
IMOL  Imola, Italy       0.51  41  P    Pb    02 39 49.3 -0.5
IMOL                               AML  AML
      comp=E,7385µm,0.6s
IMOL                               AML  AML
      comp=N,8915µm,1.3s
IMOL                               AML  AML
      comp=N,8910µm,1.3s
IMOL                               AML  AML
      comp=E,7390µm,0.6s
IMOL                               AML  AML
      comp=N,6481µm,0.4s
IMOL                               AML  AML
      comp=N,8910µm,1.3s
IMOL                               AML  AML
      comp=E,7390µm,0.6s
IMOL                               AML  AML
      comp=E,7387µm,0.6s
IMOL                               AML  AML
      comp=N,6481µm,0.4s
MAIM  Mastiano           0.57 264  P    Pg    02 39 50.5 +0.3
MAIM                               S    Sg    02 39 59.0 +1.2
MAIM  Mastiano           0.57 264  P    Pg    02 39 50.2  0.0
CARD  Cardoso            0.57 275  P    Pg    02 39 50.2 -0.1
CARD                               S    Sb    02 39 59.3 +0.3
CARD  Cardoso            0.57 275  P    Pg    02 39 50.1 -0.1
CARD                               S    Sb    02 39 59.2 +0.2
CARD                               AML  AML
      comp=N,5570µm,0.9s
CARD                               AML  AML
      comp=N,5570µm,1.1s
CARD                               AML  AML
      comp=E,3575µm,0.6s
CARD                               AML  AML
      comp=N,4793µm,0.5s
CARD                               AML  AML
      comp=E,3262µm,0.4s
PII   Pisa               0.60 245  P    Pg    02 39 51.0 +0.3
PII                                S    Sg    02 39 59.4 +0.7
PII   Pisa               0.60 245 ⇑P    Pg    02 39 51.0 +0.3
PII                                AML  AML
      comp=N,6305µm,0.4s
PII                                AML  AML
      comp=N,6307µm,0.4s
PII                                AML  AML
      comp=E,6923µm,0.4s
PII                                AML  AML
      comp=E,6925µm,0.4s
PII                                AML  AML
      comp=E,6923µm,0.4s
CRE   Caprese Michel     0.60 126  P    Pg    02 39 50.8 -0.1
CRE                                S    Sb    02 40 00.1 +0.1
CRE                                AML  AML
      comp=E,2435µm,0.6s
CRE                                AML  AML
      comp=N,4230µm,0.3s
CRE                                AML  AML
      comp=N,4234µm,0.3s
CRE                                AML  AML
      comp=E,2170µm,0.4s
GSCL  Gusciola           0.62 307  P    Pg    02 39 51.1  0.0
GSCL                               S    Sb    02 40 01.2 +0.8
GSCL  Gusciola           0.62 307 ⇓P    Pg    02 39 51.3 +0.1
GSCL                               S    Sb    02 40 01.0 +0.6
GSCL                               AML  AML
      comp=N,4225µm,0.3s
GSCL                               AML  AML
      comp=E,4260µm,0.3s
GSCL                               AML  AML
      comp=E,4259µm,0.3s
GSCL                               AML  AML
      comp=E,4259µm,0.3s
GSCL                               AML  AML
      comp=N,4225µm,0.3s
BRSN  Barisano           0.66  62  P    Pb    02 39 51.8 -0.5
BRSN                               AML  AML
      comp=E,6945µm,1.6s
BRSN                               AML  AML
      comp=N,11450µm,1.6s
BRSN                               AML  AML
      comp=N,4545µm,0.6s
BRSN                               AML  AML
      comp=N,4650µm,0.7s
BRSN                               AML  AML
      comp=N,4650µm,1.3s
BRSN                               AML  AML
      comp=E,4620µm,0.4s
BRSN                               AML  AML
      comp=N,4550µm,0.6s
BRSN                               AML  AML
      comp=E,4618µm,0.4s
BRSN                               AML  AML
      comp=N,4551µm,0.6s
SARO  Sassorosso         0.66 289  P    Pg    02 39 51.9 -0.1
SARO                               S    Sb    02 40 02.6 +1.0
SARO  Sassorosso         0.66 289 ⇑P    Pg    02 39 52.0 -0.1
SARO                               S    Sb    02 40 02.2 +0.5
VLC   Villacollemand     0.67 286  P    Pg    02 39 52.0 +0.1
VLC                                S    Sb    02 40 02.2 +0.4
VLC   Villacollemand     0.67 286  P    Pg    02 39 52.1 +0.1
VLC                                S    Sb    02 40 02.1 +0.4
VLC                                AML  AML
      comp=E,1735µm,0.7s
VLC                                AML  AML
      comp=N,3005µm,1.5s
VLC                                AML  AML
      comp=N,3090µm,1.4s
VLC                                AML  AML
      comp=E,1770µm,0.7s
VLC                                AML  AML
      comp=N,2787µm,0.5s
VLC                                AML  AML
      comp=N,3090µm,0.6s
VLC                                AML  AML
      comp=N,3005µm,0.5s
VLC                                AML  AML
      comp=E,1730µm,0.7s
VLC                                AML  AML
      comp=E,1693µm,0.4s
VLC                                AML  AML
      comp=E,1731µm,0.4s
VLC                                AML  AML
      comp=N,2806µm,0.5s
VLC                                AML  AML
      comp=E,1693µm,0.4s
FIU   Minerbio Fiu       0.68  13  P    Pn    02 39 54.1 -0.2
FIU                                AML  AML
      comp=E,4835µm,0.6s
FIU                                AML  AML
      comp=E,4835µm,0.6s
FIU                                AML  AML
      comp=N,3865µm,0.8s
FIU                                AML  AML
      comp=N,3869µm,0.8s
FIU                                AML  AML
      comp=N,3869µm,0.8s
FIU                                AML  AML
      comp=E,4835µm,0.6s
SSP9  Sansepolcro        0.74 123  P    Pb    02 39 53.6 -0.1
SSP9                               AML  AML
      comp=N,1548µm,1.0s
SSP9                               AML  AML
      comp=N,1546µm,1.0s
SSP9                               AML  AML
      comp=E,1635µm,0.5s
SSP9                               AML  AML
      comp=E,1635µm,0.5s
SSP9                               AML  AML
      comp=N,1546µm,1.0s
SSP9                               AML  AML
      comp=E,1635µm,0.5s
SSP9                               AML  AML
      comp=N,1546µm,1.0s
FROS  Frosini            0.77 186  AML  AML
      comp=N,2785µm,0.6s
FROS                               AML  AML
      comp=E,2665µm,1.3s
FROS                               AML  AML
      comp=N,2785µm,1.4s
FROS                               AML  AML
      comp=E,2635µm,0.4s
FROS                               AML  AML
      comp=N,2785µm,0.6s
PARC  Parchiule          0.77 115  P    Pg    02 39 53.7 -0.2
CPGN  Carpegna, Ital     0.78 103  P    Pb    02 39 55.1 +0.7
RAVA  Ravarino           0.79 352  P    Pn    02 39 56.4 +0.6
RAVA                               S    Sn    02 40 11.3 +3.9
RAVA  Ravarino           0.79 352  P    Pn    02 39 56.5 +0.6
EQUI  Equi               0.83 284  P    Pg    02 39 54.8 -0.4
EQUI                               S    Sg    02 40 06.7 +0.7
EQUI  Equi               0.83 284  P    Pg    02 39 54.7 -0.4
MAGO  Bibbona            0.83 213  AML  AML
      comp=E,1273µm,1.5s
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MAGO                              AML  AML
      comp=N,1120µm,0.7s
MAGO                              AML  AML
      comp=N,1120µm,0.7s
MAGO                              AML  AML
      comp=E,1243µm,0.7s
BADI  Badiali          0.84 123   P    Pg     02 39 55.3  0.0
BADI                              AML  AML
      comp=N,1490µm,0.7s
BADI                              AML  AML
      comp=E,1395µm,1.4s
BADI                              AML  AML
      comp=E,1353µm,0.6s
BADI                              AML  AML
      comp=N,1489µm,0.7s
BADI                              AML  AML
      comp=N,1489µm,0.7s
BADI                              AML  AML
      comp=E,1353µm,0.6s
ATMC  Monte Cedrone    0.85 128   P    Pg     02 39 55.4 -0.1
RSM   Repubblica di    0.85  93   P    Pn     02 39 56.5 -0.2
FIVI  Fivizzano        0.87 288   P    Pg     02 39 55.9  0.0
CAVE  Cavezzo          0.91 348   P    Pn     02 39 59.2 +1.7
PE3   Peglio           0.93 107   P    Pb     02 39 56.9 -0.1
PE3                               AML  AML
      comp=N,4165µm,0.5s
PE3                               AML  AML
      comp=E,5670µm,0.5s
PE3                               AML  AML
      comp=N,4160µm,0.5s
PE3                               AML  AML
      comp=E,5671µm,0.5s
PE3                               AML  AML
      comp=N,4162µm,0.5s
PE3                               AML  AML
      comp=N,4162µm,0.5s
PE3                               AML  AML
      comp=E,5671µm,0.5s
APEC  Apecchio         0.93 116   P    Pb     02 39 57.2 +0.3
APEC                              AML  AML
      comp=E,1439µm,1.0s
APEC                              AML  AML
      comp=N,1255µm,0.4s
APEC                              AML  AML
      comp=E,1355µm,0.9s
APEC                              AML  AML
      comp=N,1400µm,0.8s
APEC                              AML  AML
      comp=N,1255µm,0.5s
APEC                              AML  AML
      comp=E,1439µm,1.0s
APEC                              AML  AML
      comp=E,1438µm,1.0s
APEC                              AML  AML
      comp=N,1255µm,0.5s
APEC                              AML  AML
      comp=E,1438µm,1.0s
APEC                              AML  AML
      comp=E,1356µm,0.9s
APEC                              AML  AML
      comp=N,1399µm,0.8s
NDIM  Novi di Modena   0.95 344   P    Pn     02 39 58.9 +0.9
ATMI  Monte Miggiano   0.96 131   P    Pb     02 39 57.9 +0.3
ATMI                              AML  AML
      comp=N,2765µm,0.8s
ATMI                              AML  AML
      comp=E,2315µm,0.8s
ATMI                              AML  AML
      comp=N,2765µm,1.2s
ATMI                              AML  AML
      comp=E,2096µm,0.4s
ATMI                              AML  AML
      comp=N,2767µm,0.8s
ATMI                              AML  AML
      comp=E,2096µm,0.4s
ATPI  Pietralunga -    0.97 122   P    Pg     02 39 57.4 -0.3
ATPI                              AML  AML
      comp=N,821µm,0.5s
ATPI                              AML  AML
      comp=N,821µm,1.5s
ATPI                              AML  AML
      comp=E,748µm,0.7s
ATPI                              AML  AML
      comp=E,748µm,0.7s
ATPI                              AML  AML
      comp=E,773µm,0.7s
ATPI                              AML  AML
      comp=E,772µm,0.7s
ATPI                              AML  AML
      comp=N,821µm,0.5s
ATPI                              AML  AML
      comp=N,821µm,0.5s
ATPI                              AML  AML
      comp=E,748µm,0.7s
ATPI                              AML  AML
      comp=E,773µm,0.7s
ATPC  Poggio Castell   0.99 120   P    Pg     02 39 57.9 -0.2
GRAM  Graiana          1.01 301   P    Pg     02 39 58.6  0.0
GRAM                              S    Sb     02 40 13.1 +1.4
GRAM  Graiana          1.01 301   P    Pg     02 39 58.6  0.0
GRAM                              AML  AML
      comp=N,3035µm,0.4s
GRAM                              AML  AML
      comp=E,4895µm,0.3s
GRAM                              AML  AML
      comp=N,3035µm,0.4s
GRAM                              AML  AML
      comp=E,4895µm,0.3s
ATVO  AVT- Monte Val   1.01 125   P    Pb     02 39 58.6 +0.1
ATVO                              AML  AML
      comp=N,1238µm,0.6s
ATVO                              AML  AML
      comp=E,1110µm,0.7s
ATVO                              AML  AML
      comp=E,1110µm,1.3s
ATVO                              AML  AML
      comp=E,1109µm,0.7s
ATVO                              AML  AML
      comp=N,1238µm,0.6s
NARO  Abbazia di Nar   1.01 111   P    Pg     02 39 58.0 -0.5
NARO                              AML  AML
      comp=N,258µm,0.5s
NARO                              AML  AML
      comp=E,330µm,0.6s
NARO                              AML  AML
      comp=N,270µm,1.1s
NARO                              AML  AML
      comp=E,330µm,0.6s
PIEI  Pieia            1.01 115   P    Pg     02 39 58.3 -0.3
PIEI                              AML  AML
      comp=E,568µm,1.3s
PIEI                              AML  AML
      comp=N,406µm,0.6s
PIEI                              AML  AML
      comp=N,406µm,1.4s
PIEI                              AML  AML
      comp=E,568µm,0.7s
PIEI                              AML  AML
      comp=E,551µm,0.5s
PIEI                              AML  AML
      comp=N,406µm,0.6s
PIEI                              AML  AML
      comp=E,551µm,0.5s
PLMA  Palmaria, Port   1.03 275   P    Pg     02 39 59.0 +0.1
PLMA                              S    Sg     02 40 12.6 +0.2
PLMA  Palmaria, Port   1.03 275   P    Pg     02 39 58.4 -0.5
SERM  Sermide          1.03   1   P    Pn     02 40 00.8 +1.6
SERM                              S    Sn     02 40 16.9 +3.4
SERM  Sermide          1.03   1   P    Pn     02 39 59.1 -0.1
SERM                              AML  AML
      comp=E,1635µm,0.7s
SERM                              AML  AML
      comp=E,1635µm,1.3s
SERM                              AML  AML
      comp=E,1635µm,0.7s
SERM                              AML  AML
      comp=N,1384µm,0.7s
SERM                              AML  AML
      comp=N,1385µm,0.7s
SERM                              AML  AML
      comp=N,3654µm,0.5s
SERM                              AML  AML
      comp=E,3557µm,0.5s
SERM                              AML  AML
      comp=N,3654µm,0.5s
SERM                              AML  AML
      comp=E,3557µm,0.5s
SERM                              AML  AML
      comp=N,1384µm,0.7s
RIBO  Ribolla Roccas   1.04 189   P    Pg     02 39 59.3 +0.2
RIBO  Ribolla Roccas   1.04 189   AML  AML
      comp=E,797µm,0.9s
RIBO                              AML  AML
      comp=E,797µm,0.9s
PRMA  PARMA            1.05 319   P    Pn     02 40 01.1 +1.8
SBPO  S.Benedetto Po   1.11 347   P    Pn     02 40 03.8 +3.6
MPAG  Monte Paganucc   1.13 107   P    Pn     02 40 02.4 +1.8
ARCI  Arcidosso        1.13 173   P    Pg     02 40 00.9  0.0
ARCI                              AML  AML
      comp=E,337µm,1.4s
ARCI                              AML  AML
      comp=N,534µm,0.6s
ARCI                              AML  AML
      comp=N,541µm,0.6s
ARCI                              AML  AML
      comp=E,358µm,0.7s
ARCI                              AML  AML
      comp=N,541µm,0.6s
ARCI                              AML  AML
      comp=N,541µm,0.6s
ARCI                              AML  AML
      comp=E,337µm,0.6s
ARCI                              AML  AML
      comp=E,358µm,0.7s
ARCI                              AML  AML
      comp=E,305µm,0.9s
ARCI                              AML  AML
      comp=E,305µm,0.9s
ARCI                              AML  AML
      comp=N,534µm,0.6s
ARCI                              AML  AML
      comp=N,541µm,0.6s
FRON  Frontone         1.15 113   P    Pg     02 40 00.7 -0.4
SF01  Poggio Pratacc   1.18 170   P    Pg     02 40 01.4 -0.3
SF01                              AML  AML
      comp=E,556µm,1.6s
SF01                              AML  AML
      comp=N,806µm,0.4s
SF01                              AML  AML
      comp=N,806µm,1.6s
SF01                              AML  AML
      comp=E,556µm,0.4s
SF01                              AML  AML
      comp=E,521µm,0.5s
SF01                              AML  AML
      comp=N,806µm,0.4s
SACS  San Casciano d   1.22 157   P    Pg     02 40 02.0 -0.4
SACS                              AML  AML
      comp=E,418µm,0.7s
SACS                              AML  AML
      comp=N,515µm,0.7s
SACS                              AML  AML
      comp=E,414µm,0.6s
SACS                              AML  AML
      comp=E,418µm,1.3s
SACS                              AML  AML
      comp=N,574µm,0.7s
SACS                              AML  AML
      comp=N,515µm,1.3s
SACS                              AML  AML
      comp=E,419µm,0.7s
SACS                              AML  AML
      comp=N,515µm,0.7s
SACS                              AML  AML
      comp=N,515µm,1.3s
SACS                              AML  AML
      comp=N,574µm,0.7s
SACS                              AML  AML
      comp=E,414µm,0.6s
SACS                              AML  AML
      comp=N,574µm,0.7s
SACS                              AML  AML
      comp=N,515µm,0.7s
SACS                              AML  AML
      comp=E,419µm,0.7s
CASP  Castiglione de   1.22 194   P    Pn     02 40 01.6 -0.2
CASP                              AML  AML
      comp=E,309µm,0.4s
CASP                              AML  AML
      comp=N,272µm,1.2s
CASP                              AML  AML
      comp=E,309µm,0.4s
CASP                              AML  AML
      comp=E,309µm,0.4s
CASP                              AML  AML
      comp=N,243µm,0.3s
ARVD  Arcevia          1.30 111   P    Pg     02 40 03.9 -0.1
ARVD                              AML  AML
      comp=N,260µm,0.6s
ARVD                              AML  AML
      comp=E,259µm,0.4s
ARVD                              AML  AML
      comp=E,270µm,1.0s
ARVD                              AML  AML
      comp=N,260µm,0.6s
MSSA  Maissana         1.31 286   P    Pn     02 40 03.0 -0.1
MSSA                              S    Sb     02 40 21.1 +0.8
MSSA  Maissana         1.31 286   P    Pn     02 40 03.0 -0.1
MSSA                              AML  AML
      comp=E,576µm,0.4s
MSSA                              AML  AML
      comp=E,576µm,0.4s
MSSA                              AML  AML
      comp=N,744µm,0.6s
MSSA                              AML  AML
      comp=N,744µm,0.6s
MSSA                              AML  AML
      comp=E,576µm,0.4s
TEOL  Teolo            1.41  11   P    Pn     02 40 04.7 +0.3
TEOL                              AML  AML
      comp=E,2410µm,0.6s
TEOL                              AML  AML
      comp=N,2330µm,0.6s
TEOL                              AML  AML
      comp=N,2330µm,1.4s
TEOL                              AML  AML
      comp=E,2410µm,1.4s
TEOL                              AML  AML
      comp=N,2333µm,0.6s
TEOL                              AML  AML
      comp=E,2409µm,0.6s
TEOL                              AML  AML
      comp=N,2333µm,0.6s
CELB  S.Piero in Cam   1.45 213   P    Pn     02 40 04.8 -0.2
CELB                              S    Sn     02 40 22.4 -1.5
EL6   Elcito           1.47 115   P    Pg     02 40 07.5 +0.2
EL6                               AML  AML
      comp=E,628µm,0.8s
EL6                               AML  AML
      comp=N,687µm,0.7s
EL6                               AML  AML
      comp=N,687µm,0.7s
EL6                               AML  AML
      comp=E,628µm,0.8s
EL6                               AML  AML
      comp=E,628µm,0.8s
EL6                               AML  AML
      comp=N,687µm,0.7s
BOB   Bobbio (Coli)    1.53 302   P    Pg     02 40 08.4 -0.1
GORR  Gorreto          1.56 295   P    Pb     02 40 08.4 +0.7
CSP1  Cessapalombo     1.66 122   P    Pb     02 40 10.0 +0.5
CSP1                              AML  AML
      comp=E,456µm,0.7s
CSP1                              AML  AML
      comp=N,638µm,0.6s
CSP1                              AML  AML
      comp=E,456µm,1.3s
CSP1                              AML  AML
      comp=E,456µm,1.3s
CSP1                              AML  AML
      comp=E,456µm,0.7s
CSP1                              AML  AML
      comp=N,638µm,1.4s
CSP1                              AML  AML
      comp=N,637µm,0.6s
CSP1                              AML  AML
      comp=N,637µm,0.6s
CSP1                              AML  AML
      comp=E,456µm,0.7s
CESX  Cesi             1.66 145   P    Pn     02 40 09.1 +1.2
CESX                              AML  AML
      comp=E,342µm,0.8s
CESX                              AML  AML
      comp=N,316µm,1.0s
CESX                              AML  AML
      comp=N,316µm,1.0s
CESX                              AML  AML
      comp=N,317µm,1.0s
CESX                              AML  AML
      comp=E,342µm,1.2s
CESX                              AML  AML
      comp=E,342µm,0.8s
CESX                              AML  AML
      comp=N,317µm,1.0s
ROVR  Rover Verones    1.68 355   P    Pb     02 40 09.1 -0.7
ROVR                              AML  AML
      comp=E,492µm,0.8s
ROVR                              AML  AML
      comp=N,814µm,0.4s
ROVR                              AML  AML
      comp=E,207µm,0.8s
ROVR                              AML  AML
      comp=E,492µm,1.2s
ROVR                              AML  AML
      comp=E,207µm,1.2s
ROVR                              AML  AML
      comp=E,408µm,0.5s
ROVR                              AML  AML
      comp=N,863µm,7.1s
ROVR                              AML  AML
      comp=N,314µm,0.3s
ROVR                              AML  AML
      comp=N,314µm,0.3s
ROVR                              AML  AML
      comp=E,173µm,0.7s
ROVR                              AML  AML
      comp=N,815µm,0.4s
ROVR                              AML  AML
      comp=N,314µm,0.3s
RNCA  Ronca, Sant'Ol   1.74 287   P    Pb     02 40 11.0 +0.1
RNCA                              AML  AML
      comp=N,273µm,0.4s
RNCA                              AML  AML
      comp=E,275µm,0.4s
RNCA                              AML  AML
      comp=N,273µm,0.4s
RNCA                              AML  AML
      comp=E,275µm,0.4s
MMO1  Montemonaco      1.84 125   P    Pn     02 40 11.8 +1.4
VARA  Varagna          1.87 352   P    Pn     02 40 12.0 +1.1
VARA                              AML  AML
      comp=E,1245µm,0.6s
VARA                              AML  AML
      comp=N,1280µm,0.5s
VARA                              AML  AML
      comp=E,1285µm,0.5s
VARA                              AML  AML
      comp=N,1240µm,0.6s
VARA                              AML  AML
      comp=N,1240µm,1.4s
VARA                              AML  AML
      comp=E,1245µm,1.4s
VARA                              AML  AML
      comp=E,1247µm,0.6s
VARA                              AML  AML
      comp=N,1240µm,0.6s
VARA                              AML  AML
      comp=N,1282µm,0.5s
VARA                              AML  AML
      comp=N,1280µm,1.5s
VARA                              AML  AML
      comp=E,1286µm,0.5s
VARA                              AML  AML
      comp=E,1285µm,1.5s
LNSS  Leonessa         1.88 136   P    Pn     02 40 11.2 +0.3
LNSS                              AML  AML
      comp=E,434µm,0.7s
LNSS                              AML  AML
      comp=E,401µm,0.4s
LNSS                              AML  AML
      comp=N,433µm,0.7s
LNSS                              AML  AML
      comp=N,434µm,0.7s
LNSS                              AML  AML
      comp=E,401µm,1.6s
LNSS                              AML  AML
      comp=E,401µm,0.4s
LNSS                              AML  AML
      comp=N,375µm,0.7s
LNSS                              AML  AML
      comp=N,375µm,0.7s
LNSS                              AML  AML
      comp=E,434µm,1.3s
LNSS                              AML  AML
      comp=E,434µm,0.7s
LNSS                              AML  AML
      comp=N,375µm,0.7s
DOSS  Dosso del Somm   1.91 358   P    Pn     02 40 11.9 +0.5
DOSS                              AML  AML
      comp=E,580µm,0.4s
DOSS                              AML  AML
      comp=N,537µm,0.7s
DOSS                              AML  AML
      comp=N,588µm,0.4s
DOSS                              AML  AML
      comp=N,537µm,1.3s
DOSS                              AML  AML
      comp=E,537µm,0.8s
DOSS                              AML  AML
      comp=E,534µm,0.7s
DOSS                              AML  AML
      comp=N,537µm,0.7s
DOSS                              AML  AML
      comp=N,588µm,0.4s
DOSS                              AML  AML
      comp=N,588µm,0.4s
DOSS                              AML  AML
      comp=E,580µm,0.4s
SARZ  Sarezzano        1.92 299   P    Pg     02 40 15.9 +0.2
MNTT  Montottone       1.92 118   P    Pb     02 40 13.5 -0.4
MNTT                              AML  AML
      comp=N,915µm,0.6s
MNTT                              AML  AML
      comp=N,915µm,1.4s
MNTT                              AML  AML
      comp=E,694µm,0.6s
MNTT                              AML  AML
      comp=E,695µm,0.6s
MNTT                              AML  AML
      comp=N,915µm,0.6s
MNTT                              AML  AML
      comp=E,695µm,0.6s
MNTT                              AML  AML
      comp=N,915µm,0.6s
LUSI  Trento, Gardas   2.00 353   P    Pn     02 40 14.0 +1.5
LUSI                              AML  AML
      comp=E,697µm,0.8s
LUSI                              AML  AML
      comp=N,1170µm,0.4s
LUSI                              AML  AML
      comp=E,697µm,1.2s
LUSI                              AML  AML
      comp=N,1172µm,0.4s
LUSI                              AML  AML
      comp=E,697µm,0.8s
LUSI                              AML  AML
      comp=N,1172µm,0.4s
RM33  Pellescritta (   2.04 135   P    Pn     02 40 13.8 +0.7
RM33                              AML  AML
      comp=E,277µm,1.1s
RM33                              AML  AML
      comp=N,201µm,1.0s
RM33                              AML  AML
      comp=N,190µm,1.5s
RM33                              AML  AML
      comp=E,277µm,0.9s
RM33                              AML  AML
      comp=N,190µm,0.5s
RM33                              AML  AML
      comp=N,200µm,0.6s
RM33                              AML  AML
      comp=E,235µm,0.6s
RM33                              AML  AML
      comp=E,235µm,0.6s
RM33                              AML  AML
      comp=N,181µm,0.6s
RM33                              AML  AML
      comp=E,260µm,1.1s
RM33                              AML  AML
      comp=N,181µm,0.6s
RM33                              AML  AML
      comp=E,260µm,1.1s
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RM33                                AML    AML
         comp=E,235µm,0.6s
RM33                                AML    AML
         comp=N,200µm,0.6s
PCP   Piancastagn        2.04 287   P      Pn     02 40 12.1  -1.0
RONC  Roncone            2.06 347   P      Pb     02 40 15.8  -0.6
RONC                                AML    AML
         comp=E,582µm,0.7s
RONC                                AML    AML
         comp=N,566µm,1.5s
RONC                                AML    AML
         comp=E,582µm,1.3s
RONC                                AML    AML
         comp=N,491µm,0.9s
RONC                                AML    AML
         comp=E,583µm,0.7s
RONC                                AML    AML
         comp=N,566µm,0.5s
RONC                                AML    AML
         comp=N,531µm,0.4s
RONC                                AML    AML
         comp=E,780µm,0.5s
RONC                                AML    AML
         comp=N,531µm,0.4s
RONC                                AML    AML
         comp=E,780µm,0.5s
MDI   Monti di Nese      2.12 329   P      Pn     02 40 15.8  +1.6
MDI                                 AML    AML
         comp=E,307µm,1.2s
MDI                                 AML    AML
         comp=N,242µm,0.6s
MDI                                 AML    AML
         comp=N,242µm,0.6s
MDI                                 AML    AML
         comp=N,225µm,0.6s
MDI                                 AML    AML
         comp=E,239µm,0.4s
MDI                                 AML    AML
         comp=E,249µm,0.6s
MDI                                 AML    AML
         comp=N,225µm,0.6s
PGF   Pioggiola          2.19 230  ePn     Pn     02 40 14.9  -0.3
PGF                                eSn     Sn     02 40 39.7  -2.5
         comp=N,16nm,0.3s
OZOL  Ozolo              2.44 356   P      Pn     02 40 20.4  +1.8
OZOL                                AML    AML
         comp=E,397µm,0.5s
OZOL                                AML    AML
         comp=N,344µm,1.6s
OZOL                                AML    AML
         comp=N,343µm,0.4s
OZOL                                AML    AML
         comp=N,344µm,0.4s
OZOL                                AML    AML
         comp=E,399µm,0.5s
OZOL                                AML    AML
         comp=E,397µm,0.5s
OZOL                                AML    AML
         comp=N,401µm,1.2s
OZOL                                AML    AML
         comp=E,399µm,0.5s
OZOL                                AML    AML
         comp=N,401µm,1.2s
OZOL                                AML    AML
         comp=N,343µm,0.4s
OZOL                                AML    AML
         comp=E,397µm,0.5s
CARE  Lago del Cares     2.48 351   P      Pn     02 40 21.5  +2.1
CARE                                AML    AML
         comp=E,116µm,0.7s
CARE                                AML    AML
         comp=E,116µm,0.7s
CARE                                AML    AML
         comp=N,293µm,0.9s
CARE                                AML    AML
         comp=N,130µm,0.9s
CARE                                AML    AML
         comp=N,129µm,0.9s
CARE                                AML    AML
         comp=E,384µm,1.0s
CARE                                AML    AML
         comp=E,116µm,0.7s
MUGIO Muggio             2.51 322   P      Pn     02 40 21.1  +1.5
MUGIO                               AML    AML
         comp=E,138µm,1.0s
MUGIO                               AML    AML
         comp=N,161µm,0.8s
MUGIO                               AML    AML
         comp=E,138µm,1.0s
MUGIO                               AML    AML
         comp=N,161µm,0.8s
MUGIO                               AML    AML
         comp=E,137µm,1.0s
SABO  M.te Sabotino      2.60  39   P      Pn     02 40 20.8  +0.1
SABO                                AML    AML
         comp=E,1005µm,0.6s
SABO                                AML    AML
         comp=N,1325µm,0.6s
SABO                                AML    AML
         comp=N,340µm,0.6s
SABO                                AML    AML
         comp=N,340µm,1.4s
SABO                                AML    AML
         comp=E,237µm,0.5s
SABO                                AML    AML
         comp=N,341µm,0.6s
SABO                                AML    AML
         comp=N,1325µm,1.4s
SABO                                AML    AML
         comp=N,1328µm,0.6s
SABO                                AML    AML
         comp=E,1006µm,0.6s
SABO                                AML    AML
         comp=N,341µm,0.6s
SABO                                AML    AML
         comp=N,1328µm,0.6s
SABO                                AML    AML
         comp=E,1006µm,0.6s
SABO                                AML    AML
         comp=E,237µm,0.5s
VARE  Varese             2.60 318   P      Pn     02 40 22.6  +1.8
VARE                                AML    AML
         comp=E,187µm,1.5s
VARE                                AML    AML
         comp=N,229µm,0.8s
VARE                                AML    AML
         comp=E,187µm,0.5s
VARE                                AML    AML
         comp=N,229µm,0.8s
VARE                                AML    AML
         comp=E,160µm,1.0s
GEPF  Gemona             2.65  29   P      Pn     02 40 21.5  +0.1
GEPF                                AML    AML
         comp=N,148µm,0.6s
GEPF                                AML    AML
         comp=E,122µm,0.8s
GEPF                                AML    AML
         comp=E,122µm,0.8s
GEPF                                AML    AML
         comp=N,149µm,0.6s
MOSI  Grossmontoni       2.69 349   P      Pn     02 40 24.2  +2.1
MOSI                                AML    AML
         comp=E,363µm,0.7s
MOSI                                AML    AML
         comp=N,606µm,0.7s
MOSI                                AML    AML
         comp=E,363µm,0.7s
MOSI                                AML    AML
         comp=N,606µm,0.7s
CLUD  Cludinico          2.73  24   P      Pn     02 40 23.2  +0.6
CLUD                                AML    AML
         comp=E,168µm,0.6s
CLUD                                AML    AML
         comp=E,182µm,0.7s
CLUD                                AML    AML
         comp=N,142µm,0.8s
CLUD                                AML    AML
         comp=E,182µm,1.3s
CLUD                                AML    AML
         comp=N,156µm,0.9s
CLUD                                AML    AML
         comp=E,168µm,0.6s
CLUD                                AML    AML
         comp=E,168µm,1.4s
CLUD                                AML    AML
         comp=N,142µm,0.8s
CLUD                                AML    AML
         comp=E,181µm,0.7s
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CLUD                                AML    AML
         comp=N,156µm,0.9s
DRE   Drenchia           2.77  37   P      Pn     02 40 23.3  +0.2
SBF   Sospel             2.78 269  ePn     Pn     02 40 22.9  -0.3
SBF                                eSn     Sn     02 40 53.0  -3.6
         comp=N,42nm,0.4s
FVI   Forni Avoltri      2.83  22   P      Pn     02 40 24.8  +0.8
FVI                                 AML    AML
         comp=E,117µm,0.6s
FVI                                 AML    AML
         comp=E,116µm,0.6s
FVI                                 AML    AML
         comp=N,102µm,0.5s
FVI                                 AML    AML
         comp=N,101µm,0.5s
FVI                                 AML    AML
         comp=N,102µm,0.5s
TUE   Stuetta            2.84 332   P      Pn     02 40 26.7  +2.4
TUE                                 AML    AML
         comp=E,97µm,1.6s
TUE                                 AML    AML
         comp=N,103µm,0.7s
TUE                                 AML    AML
         comp=E,101µm,1.6s
TUE                                 AML    AML
         comp=N,108µm,0.7s
TUE                                 AML    AML
         comp=E,101µm,0.4s
TUE                                 AML    AML
         comp=N,103µm,1.3s
TUE                                 AML    AML
         comp=E,97µm,0.4s
TUE                                 AML    AML
         comp=E,98µm,0.6s
TUE                                 AML    AML
         comp=E,90µm,0.6s
TUE                                 AML    AML
         comp=N,109µm,0.7s
TUE                                 AML    AML
         comp=N,103µm,0.7s
TUE                                 AML    AML
         comp=N,108µm,1.3s
TUE                                 AML    AML
         comp=N,103µm,0.7s
TUE                                 AML    AML
         comp=E,98µm,0.6s
TUE                                 AML    AML
         comp=N,109µm,0.7s
ABTA  Abfaltersbach      2.91  17  ePn     Pn     02 40 27.0  +2.0
         comp=N,0.3nm,0.1s,SNR=8.5
ABTA                               eSn     Sn     02 41 00.1  +0.2
         comp=N,21nm,0.6s
DAVOX Davos/Dischmat     2.97 341   P      Pb     02 40 29.4  -2.6
DAVOX                               AML    AML
         comp=N,420µm,0.5s
DAVOX                               AML    AML
         comp=N,420µm,1.5s
DAVOX                               AML    AML
         comp=E,311µm,1.1s
DAVOX                               AML    AML
         comp=N,595µm,6.1s
DAVOX                               AML    AML
         comp=N,420µm,0.5s
DAVOX                               AML    AML
         comp=E,311µm,1.1s
FETA  Feichten           3.07 353   Pn     Pn     02 40 30.5  +3.1
         comp=E,15nm,0.6s,SNR=8.1
FETA                               eSn     Sb     02 41 09.1  -1.9
         comp=E,16nm,0.9s
MYKA  Terra Mystica      3.14  31  ePn     Pn     02 40 29.1  +0.9
         comp=E,2.4nm,0.3s
MYKA                               eSn     Sn     02 41 06.7  +1.2
         comp=E,1.1nm,0.4s
BOJS  Bojanci            3.22  60   AML    AML
         comp=N,278µm,0.6s
BOJS                                AML    AML
         comp=E,171µm,1.4s
BOJS                                AML    AML
         comp=N,278µm,1.4s
BOJS                                AML    AML
         comp=E,171µm,0.6s
BOJS                                AML    AML
         comp=E,171µm,1.4s
BOJS                                AML    AML
         comp=E,171µm,1.4s
SQTA  Sankt Quirin       3.25 359   Pn     Pn     02 40 33.2  +3.4
         comp=E,30nm,0.4s,SNR=15
SQTA                               eSn     Sn     02 41 09.7  +1.4
         comp=E,2.9nm,0.2s
WTTA  Wattenberg         3.30   4   Pn     Pn     02 40 33.8  +3.3
         comp=E,0.2nm,0.1s,SNR=8.1
WTTA                               eSn     Sn     02 41 11.9  +2.2
         comp=E,2.8nm,0.3s
MBDF  Montbardon         3.32 285  ePn     Pn     02 40 30.9  +0.2
MBDF                               eSn     Sn     02 41 08.0  -2.1
         comp=E,18nm,0.6s
WATA  Walderalm          3.37   3   Pn     Pn     02 40 34.4  +2.9
         comp=E,2.5nm,0.2s,SNR=16
WATA                               eSn     Sn     02 41 13.9  +2.6
         comp=E,4.3nm,0.3s
MOTA  Moosalm            3.37 358   Pn     Pn     02 40 34.9  +3.4
         comp=E,13nm,0.5s,SNR=9.1
MOTA                               eSn     Sn     02 41 15.1  +3.7
         comp=E,17nm,0.4s
KBA   Koelnbreinsper     3.43  24   Pn     Pn     02 40 33.5  +1.2
         comp=E,0.6nm,0.1s,SNR=6.3
KBA                                eSn     Sn     02 41 12.8   0.0
         comp=E,10nm,0.6s
OBKA  Obir               3.43  41  ePn     Pn     02 40 33.3  +1.0
         comp=E,4.4nm,0.9s
OBKA                               eSn     Sg     02 41 26.9  -2.3
         comp=E,18nm,0.5s
ZUGS  Zugspitze, Sch     3.45 357  ePn     Pn     02 40 35.8  +3.1
DAVA  Damuels            3.45 344   Pn     Pn     02 40 36.3  +3.7
         comp=E,14nm,0.4s,SNR=16
DAVA                               eSn     Sn     02 41 15.5  +2.1
         comp=E,22nm,0.5s
LMR   La Mourre          3.52 261  ePn     Pn     02 40 32.9  -0.4
LMR                                eSn     Sn     02 41 13.1  -1.7
         comp=E,3.5nm,0.2s
BNALP Bannalp            3.52 326   P      Pn     02 40 36.7  +3.1
PART  Garmisch-Parte     3.52 358  ePn     Pn     02 40 36.6  +3.1
RETA  Reutte             3.53 354   Pn     Pn     02 40 36.8  +3.2
         comp=E,26nm,0.4s,SNR=46
RETA                               eSn     Sn     02 41 17.9  +2.7
         comp=E,0.2nm,0.1s
LPG   La Plagne          3.56 297  ePn     Pn     02 40 35.8  +1.5
LPG                                eSn     Sn     02 41 14.9  -1.5
         comp=E,24nm,0.6s
LPL   La Plagne          3.58 297  ePn     Pn     02 40 36.2  +1.7
LPL                                eSn     Sn     02 41 14.9  -1.9
         comp=E,9.4nm,0.4s
LESA  Schwarzleotal      3.59  15   Pn     Pn     02 40 36.6  +2.2
         comp=E,1.1nm,0.2s,SNR=17
LESA                               eSn     Sn     02 41 18.7  +2.1
         comp=E,25nm,0.6s
SOKA  Soboth             3.79  43  ePn     Pn     02 40 39.9  +2.8
         comp=E,2.2nm,0.6s
SOKA                               eSn     Sn     02 41 22.0  +0.5
         comp=E,3.2nm,0.7s
UBR   Ueberruh           3.79 348  ePn     Pn     02 40 39.9  +2.7
UBR                                eSn     Sn     02 41 24.1  +2.4
BE1   Monatshausen       3.94 359  ePn     Pn     02 40 41.7  +2.6
ORIF  Oris-en-Rattie     3.98 286  ePn     Pn     02 40 41.5  +1.8
BIOA  Bad Ischl, Aus     4.07  23  ePn     Pn     02 40 42.1  +1.2
         comp=E,2.1nm,0.6s
BIOA                               eSn     Sn     02 41 30.0  +1.6
         comp=E,24nm,0.6s
SMRF  Simiane la Rot     4.12 272  ePn     Pn     02 40 42.3  +0.7
SMRF                               eSn     Sn     02 41 25.2  -4.4
MOA   Molln              4.40  27  ePn     Pn     02 40 47.4  +1.9
         comp=E,2.0nm,0.7s
MOA                                eSn     Sn     02 41 38.0  +1.4
         comp=E,14nm,0.6s
ARSA  Arzberg            4.43  41  i Pn    Pn     02 40 46.0  +0.1
         comp=E,2.8nm,0.5s,SNR=9.3
ARSA                               eSn     Sn     02 41 36.5  -0.8
         comp=E,2.2nm,0.7s
CABF  La Chapelle        4.51 308  ePn     Pn     02 40 49.0  +1.9
VIVF  Saint-Julien-l     4.81 283  ePn     Pn     02 40 51.1  -0.1
BFO   Black Forest       4.81 336  ePn     Pn     02 40 52.7  +1.5
BFO                                eSn     Sn     02 41 45.2  -1.5
HINF  Hinteralfeld       4.93 323  ePn     Pn     02 40 54.0  +1.2
HINF                               eSn     Sn     02 41 48.3  -1.3
         comp=E,20nm,0.5s
CONA  Conrad Observa     5.08  37  ePn     Pn     02 40 55.4  +0.5
         comp=E,1.1nm,0.6s
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CONA                               eSn     Sn     02 41 51.9  -1.7
         comp=E,4.2nm,0.8s
RONA  Rosalia, Austr     5.12  42  i Pn    Pn     02 40 56.2  +0.8
         comp=E,4.9nm,0.9s,SNR=7.1
RONA                               eSn     Sn     02 41 54.2   0.0
         comp=E,3.8nm,0.7s
GEC2  GERESS Array S     5.15  18  ePn     Pn     02 40 56.5  +0.7
CDF   Champ du Feu       5.23 329  ePn     Pn     02 40 58.0  +1.0
CDF                                eSn     Sn     02 41 55.2  -2.0
         comp=E,12nm,0.5s
CKRC  Cesky Krumlov      5.28  22  ePN     Pn     02 40 58.9  +1.3
CKRC                               eSN     Sn     02 41 56.6  -1.7
WET   Wettzell           5.29  11  ePn     Pn     02 40 57.9  +0.2
HAU   Haudompre          5.29 321  ePn     Pn     02 40 59.2  +1.4
HAU                                eSn     Sn     02 41 56.8  -1.8
         comp=E,33nm,0.5s
LASF  Ste Croix          5.35 274  ePn     Pn     02 40 58.1  -0.5
KHC   Kasperske Hory     5.40  16  ePN     Pn     02 41 00.2  +1.0
KHC                                eSN     Sn     02 41 59.4  -1.7
ZVC   Zvikov             5.82  19  ePN     Pn     02 41 06.0  +1.0
ZVC                                eSN     Sn     02 42 09.1  -2.5
ROTZ  Rotzenmuhle        5.83   6  ePn     Pn     02 41 05.1   0.0
SMF   Signal de Mont     5.88 300  ePn     Pn     02 41 07.2  +1.3
SMF                                eSn     Sn     02 42 09.4  -3.7
         comp=E,14nm,0.6s
MODS  Modra-Piesok       6.06  41  ePN     Pn     02 41 09.1  +0.8
MODS                               eSN     Sn     02 42 15.1  -2.3
LOR   Lormes             6.16 305  ePn     Pn     02 41 10.6  +1.0
         baz=120
LOR                                eSn     Sn     02 42 16.0  -3.8
         comp=E,8.9nm,0.4s
KRUC  Moravsky           6.19  33  ePN     Pn     02 41 10.0  -0.1
KRUC                               eSN     Sn     02 42 19.3  -1.4
AVF   Avril sur Loir     6.25 300  ePn     Pn     02 41 12.6  +1.8
MEZF  Maizieres J'vi     6.25 319  ePn     Pn     02 41 12.6  +1.7
SSF   Saint Saulge       6.27 302  ePn     Pn     02 41 12.4  +1.3
SSF                                eSn     Sn     02 42 20.4  -2.2
         comp=E,7.6nm,0.6s
SAVF  Savonnieres en     6.30 320  ePn     Pn     02 41 12.6  +1.1
TNS   Taunus Mts         6.54 344  ePn     Pn     02 41 16.5  +1.6
MTLF  Montolieu          6.60 268  ePn     Pn     02 41 16.2  +0.5
MOX   Moxa               6.68   2  ePn     Pn     02 41 16.7  -0.1
CLL   Collm              7.43   8  ePn     Pn     02 41 28.0  +1.0
CLL                                eSn     Sn     02 42 36.0   -15
CLL                                eSg     Sg     02 43 35.0  -2.3
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*BGR **09** 02:42:50.0±1.0, 43.°55N×11.°60E, h10km, ML3.5/4, Error ellipse: s-maj=22.2km s-min=15.6km az=99.0*
*GEN **09** 02:42:51.7, 44.°00N×11.°32E, h14km±1km, Ml3.2*
*ROM **09** 02:42:52.3±0.1, 44.°003N±0.°004×11.°307E±0.°004, h8km, ML3.4/61, Error ellipse: s-maj=0.4km s-min=0.2km az=16.0*
*LDG **09** 02:42:54.3±0.1, 43.°90N×11.°32E, h8km, Ml3.1/17, Error ellipse: s-maj=3.3km s-min=2.8km az=13.0*
*PRU **09** 02:42:55.9, 44.°10N×11.°52E, h0km*
ISC 09 02:42:52.3±0.8, **43.°98N**±0.°01×**11.°28E**±0.°01, **h10**km±5km, **n166**, σ1§**43**/244, **13C-8D, Central Italy**

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Code  Station Name        Δ°   AZ°   Phase ID          Time       Res
                                    Op     ISC       h  m  s      ISC
MOCL  Monte Cuccoli      0.08 286  ⇓P      Pg     02 42 55.1  +0.4
MOCL                                S      Sg     02 42 56.9  +0.3
MOCL                                AML    AML
         comp=E,22050µm,1.5s
MOCL                                AML    AML
         comp=N,48750µm,1.2s
MOCL                                AML    AML
         comp=E,22050µm,0.5s
SEI   Scarperia          0.09  36   P      Pg     02 42 51.6  -3.3
SEI                                 S      Sg     02 42 52.9  -3.8
MPPT  Montemurlo         0.14 260  ⇑P      Pg     02 42 56.5  +0.8
MPPT                                S      Sg     02 42 59.4  +1.4
MPPT                                AML    AML
         comp=E,18150µm,0.5s
MPPT                                AML    AML
         comp=N,16850µm,0.5s
FIR   Firenze            0.21 186  ⇑P      Pg     02 42 57.9  +1.1
FIR                                 S      Sg     02 43 02.2  +2.5
FIR                                 AML    AML
         comp=N,28850µm,1.4s
FIR                                 AML    AML
         comp=E,30400µm,0.4s
FIR                                 AML    AML
         comp=N,29600µm,1.4s
FIR                                 AML    AML
         comp=N,29600µm,1.4s
FIR                                 AML    AML
         comp=E,30200µm,0.4s
RUFI  Rufina             0.22 131   P      Pg     02 42 57.5  +0.6
RUFI                                S      Sg     02 43 01.1  +1.1
RUFI  Rufina             0.22 131  ⇑P      Pg     02 42 57.4  +0.6
RUFI                                S      Sg     02 43 01.0  +1.1
RUFI                                AML    AML
         comp=E,10155µm,0.9s
RUFI                                AML    AML
         comp=N,14750µm,0.7s
RUFI                                AML    AML
         comp=N,14800µm,0.7s
RUFI                                AML    AML
         comp=E,10155µm,1.1s
FNVD  Fontana Vidola     0.22 328  ⇓P      Pg     02 42 57.0  +0.1
FNVD                                S      Sg     02 43 00.6  +0.5
FNVD                                AML    AML
         comp=N,29200µm,1.1s
FNVD                                AML    AML
         comp=E,16500µm,1.3s
FNVD                                AML    AML
         comp=N,29150µm,1.1s
FNVD                                AML    AML
         comp=N,29150µm,0.9s
FNVD                                AML    AML
         comp=E,16500µm,0.7s
BRIS  BRISIGHELLA        0.23  44  ⇑P      Pg     02 43 00.6  +3.5
BRIS                                S      Sg     02 43 06.9  +6.4
BRIS                                AML    AML
         comp=E,9765µm,0.4s
BRIS                                AML    AML
         comp=N,20400µm,0.3s
CRMI  Carmignano         0.30 230  ⇑P      Pb     02 42 59.3  -0.5
CRMI                                S      Sb     02 43 04.3  -0.4
CRMI                                AML    AML
         comp=N,18250µm,0.4s
CRMI                                AML    AML
         comp=N,7265µm,0.4s
CRMI                                AML    AML
         comp=E,8380µm,0.3s
CRMI                                AML    AML
         comp=E,3255µm,0.3s
LMD   Lutirano           0.32  73   P      Pg     02 42 58.4  -0.3
LMD                                 S      Sg     02 43 03.4  +0.4
LMD   Lutirano           0.32  73  ⇑P      Pg     02 42 58.5  -0.3
LMD                                 S      Sg     02 43 03.4  +0.4
LMD                                 AML    AML
         comp=E,17200µm,0.5s
LMD                                 AML    AML
         comp=N,29500µm,0.7s
LMD                                 AML    AML
         comp=N,29500µm,1.3s
POPM  Popiglio           0.39 279   P      Pg     02 43 00.1  +0.2
POPM                                S      Sb     02 43 07.0  -0.2
POPM  Popiglio           0.39 279   P      Pg     02 43 00.5  +0.5
POPM                                S      Sb     02 43 06.8  -0.4
POPM                                AML    AML
         comp=E,8140µm,0.2s
POPM                                AML    AML
         comp=N,11800µm,0.7s
POPM                                AML    AML
         comp=N,11800µm,1.3s
ASQU  Asqua              0.41 117   P      Pg     02 43 00.7  +0.3
ASQU                                S      Sb     02 43 07.4  -0.6
ASQU  Asqua              0.41 117  ⇑P      Pg     02 43 00.5  +0.1
ASQU                                S      Sb     02 43 07.1  -0.9
ASQU                                AML    AML
         comp=E,3135µm,0.8s
ASQU                                AML    AML
         comp=N,4985µm,0.9s
ASQU                                AML    AML
         comp=E,3135µm,1.2s
MTRZ  Monterenzio        0.41  18   P      Pg     02 42 59.8  -0.7
MTRZ  Monterenzio        0.41  18  ⇑P      Pg     02 42 59.8  -0.7
MTRZ                                AML    AML
         comp=E,9770µm,0.4s
MTRZ                                AML    AML
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      comp=N,12450µm,0.4s
MTRZ                               AML    AML
      comp=E,10030µm,0.5s
MTRZ                               AML    AML
      comp=E,11150µm,1.0s
MTRZ                               AML    AML
      comp=E,11600µm,1.0s
MTRZ                               AML    AML
      comp=N,12700µm,0.4s
MTRZ                               AML    AML
      comp=E,11150µm,1.0s
MTRZ                               AML    AML
      comp=N,12450µm,0.4s
MTRZ                               AML    AML
      comp=N,12450µm,1.6s
MTRZ                               AML    AML
      comp=E,11150µm,1.0s
MTRZ                               AML    AML
      comp=E,11600µm,1.0s
MTRZ                               AML    AML
      comp=N,12700µm,1.6s
SFI   Santa Sofia       0.41 101 ⇑P    Pg     02 43 00.4 -0.1
SFI                                S     Sb     02 43 07.1 -0.9
SFI                                AML   AML
      comp=E,8250µm,0.3s
SFI                                AML   AML
      comp=N,5100µm,0.9s
SFI                                AML   AML
      comp=E,8205µm,0.3s
SFI                                AML   AML
      comp=E,8250µm,0.3s
SFI                                AML   AML
      comp=N,5100µm,0.9s
SFI                                AML   AML
      comp=N,5175µm,0.9s
SFI                                AML   AML
      comp=N,5175µm,1.1s
SFI                                AML   AML
      comp=N,5100µm,1.1s
SFI                                AML   AML
      comp=E,8250µm,1.7s
SFI                                AML   AML
      comp=E,8205µm,1.7s
ZCCA  Zocca             0.43 329  P    Pb     02 43 01.9 -0.1
ZCCA                              S    Sb     02 43 10.0 +1.4
ZCCA  Zocca             0.43 329 ⇓P    Pb     02 43 01.9 -0.1
ZCCA                              AML  AML
      comp=E,2095µm,0.5s
ZCCA                              AML  AML
      comp=E,2195µm,0.4s
ZCCA                              AML  AML
      comp=N,3655µm,0.4s
ZCCA                              AML  AML
      comp=E,2095µm,0.4s
ZCCA                              AML  AML
      comp=N,3795µm,0.4s
OSSC  Osservatorio P    0.46 183  P    Pb     02 43 02.2 -0.4
OSSC                              S    Sb     02 43 10.1 +0.7
OSSC  Osservatorio P    0.46 183 ⇑P    Pb     02 43 02.2 -0.4
OSSC                              S    Sb     02 43 09.7 +0.3
OSSC                              AML  AML
      comp=E,6370µm,0.2s
OSSC                              AML  AML
      comp=N,8860µm,0.8s
OSSC                              AML  AML
      comp=E,6370µm,0.2s
OSSC                              AML  AML
      comp=N,8860µm,0.8s
OSSC                              AML  AML
      comp=E,8670µm,0.8s
OSSC                              AML  AML
      comp=N,8860µm,1.2s
OSSC                              AML  AML
      comp=N,6420µm,0.2s
OSSC                              AML  AML
      comp=E,8670µm,1.2s
IMOL  Imola, Italy      0.50  41  P    Pb     02 43 03.2  0.0
IMOL                              S    Sb     02 43 11.2 +0.7
IMOL  Imola, Italy      0.50  41  P    Pb     02 43 03.0 -0.2
IMOL                              AML  AML
      comp=E,9870µm,1.6s
IMOL                              AML  AML
      comp=N,12500µm,1.3s
IMOL                              AML  AML
      comp=N,12500µm,0.7s
BDI   Bagni Di Lucca    0.50 279  P    Pg     02 43 02.4 +0.3
BDI                               S    Sb     02 43 10.7  0.0
BDI   Bagni Di Lucca    0.50 279 ⇑P    Pg     02 43 02.5 +0.3
BDI                               S    Sb     02 43 10.3 -0.3
BDI                               AML  AML
      comp=E,7365µm,0.5s
BDI                               AML  AML
      comp=E,6495µm,0.5s
BDI                               AML  AML
      comp=N,9240µm,1.5s
BDI                               AML  AML
      comp=N,9240µm,0.5s
BDI                               AML  AML
      comp=N,8715µm,0.6s
CSNT  Castellina Chi    0.51 179  P    Pb     02 43 02.9 -0.5
CSNT                              S    Sb     02 43 10.8 -0.1
CSNT  Castellina Chi    0.51 179 ⇑P    Pb     02 43 02.9 -0.5
CSNT                              S    Sb     02 43 11.2 +0.4
CSNT                              AML  AML
      comp=N,7780µm,0.6s
CSNT                              AML  AML
      comp=E,5150µm,1.5s
CSNT                              AML  AML
      comp=E,5150µm,0.5s
MAIM  Mastiano          0.58 263  P    Pg     02 43 04.0 +0.5
MAIM                              S    Sb     02 43 13.2 +0.5
MAIM  Mastiano          0.58 263  P    Pg     02 43 03.8 +0.2
CARD  Cardoso           0.58 274  P    Pg     02 43 03.8 +0.1
CARD                              S    Sb     02 43 12.8  0.0
CARD  Cardoso           0.58 274 ⇓P    Pg     02 43 03.9 +0.3
CARD                              S    Sb     02 43 12.6 -0.3
CARD                              AML  AML
      comp=N,5205µm,0.9s
CARD                              AML  AML
      comp=N,4045µm,0.8s
CARD                              AML  AML
      comp=N,4045µm,1.2s
CARD                              AML  AML
      comp=E,2960µm,0.6s
CRE   Caprese Michel    0.60 127  P    Pg     02 43 04.4 +0.3
CRE                               S    Sb     02 43 14.0 +0.4
CRE                               AML  AML
      comp=E,3185µm,0.3s
CRE                               AML  AML
      comp=N,3890µm,0.4s
CRE                               AML  AML
      comp=N,2498µm,1.5s
PII   Pisa              0.61 245  P    Pg     02 43 04.6 +0.5
PII                               S    Sb     02 43 15.4 +1.7
PII   Pisa              0.61 245 ⇑P    Pg     02 43 04.6 +0.5
PII                               S    Sb     02 43 15.3 +1.7
PII                               AML  AML
      comp=N,6305µm,0.7s
PII                               AML  AML
      comp=N,6305µm,1.3s
PII                               AML  AML
      comp=E,6520µm,1.4s
GSCL  Gusciola          0.62 306  P    Pg     02 43 04.8 +0.4
GSCL                              S    Sb     02 43 15.0 +0.9
GSCL  Gusciola          0.62 306 ⇓P    Pg     02 43 04.9 +0.4
GSCL                              S    Sb     02 43 14.8 +0.8
GSCL                              AML  AML
      comp=E,3515µm,0.6s
GSCL                              AML  AML
      comp=N,2830µm,1.0s
GSCL                              AML  AML
      comp=N,2830µm,1.0s
BRSN  Barisano          0.65  62  P    Pg     02 43 05.0 +0.2
BRSN                              AML  AML
      comp=E,4630µm,0.3s
BRSN                              AML  AML
      comp=N,5700µm,0.8s
BRSN                              AML  AML
      comp=E,4605µm,0.3s
BRSN                              AML  AML
      comp=N,5745µm,0.8s
BRSN                              AML  AML
      comp=N,5705µm,0.8s
BRSN                              AML  AML
      comp=E,4975µm,1.0s
BRSN                              AML  AML
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      comp=N,5740µm,0.8s
BRSN                              AML  AML
      comp=N,5705µm,1.2s
BRSN                              AML  AML
      comp=N,5740µm,1.2s
BRSN                              AML  AML
      comp=E,4690µm,1.0s
SARO  Sassorosso        0.67 288  P    Pg     02 43 05.6 +0.4
SARO                              S    Sb     02 43 16.1 +0.6
SARO  Sassorosso        0.67 288  P    Pg     02 43 05.5 +0.2
SARO                              S    Sb     02 43 16.0 +0.6
VLC   Villacollemand    0.67 286  P    Pb     02 43 05.9 -0.2
VLC                               S    Sb     02 43 15.6 +0.2
VLC   Villacollemand    0.67 286  P    Pb     02 43 05.9 -0.2
VLC                               S    Sb     02 43 15.8 +0.3
VLC                               AML  AML
      comp=E,2040µm,0.6s
VLC                               AML  AML
      comp=E,2015µm,0.7s
VLC                               AML  AML
      comp=N,2820µm,1.5s
VLC                               AML  AML
      comp=N,2845µm,1.5s
VLC                               AML  AML
      comp=E,2015µm,1.3s
VLC                               AML  AML
      comp=N,2845µm,0.5s
VLC                               AML  AML
      comp=N,2820µm,0.5s
VLC                               AML  AML
      comp=E,2040µm,1.4s
FIU   Minerbio Fiu      0.67  13  P    Pn     02 43 07.6 -0.2
FIU                               AML  AML
      comp=E,5400µm,1.3s
FIU                               AML  AML
      comp=E,5395µm,1.3s
FIU                               AML  AML
      comp=E,5395µm,0.7s
FIU                               AML  AML
      comp=N,4520µm,0.7s
CMPO  Campotto Po       0.70  32  P    Pn     02 43 08.7 +0.4
SSP9  Sansepolcro       0.74 123  P    Pg     02 43 06.8 +0.2
SSP9                              AML  AML
      comp=N,1920µm,1.6s
SSP9                              AML  AML
      comp=E,1860µm,1.5s
PARC  Parchiule         0.77 116  P    Pb     02 43 07.4 -0.3
PARC                              AML  AML
      comp=E,1022µm,0.4s
PARC                              AML  AML
      comp=N,1510µm,0.3s
PARC                              AML  AML
      comp=E,1022µm,1.6s
CPGN  Carpegna, Ital    0.77 103  P    Pg     02 43 07.4 +0.2
FROS  Frosini           0.78 187  AML  AML
      comp=N,2540µm,0.6s
FROS                              AML  AML
      comp=N,2540µm,0.6s
FROS                              AML  AML
      comp=E,3900µm,1.0s
FROS                              AML  AML
      comp=N,2540µm,1.4s
RAVA  Ravarino          0.78 351  P    Pn     02 43 10.1 +0.8
RAVA                              S    Sn     02 43 24.8 +3.7
RAVA  Ravarino          0.78 351  P    Pb     02 43 08.4 +0.4
RAVA                              AML  AML
      comp=E,3145µm,0.5s
RAVA                              AML  AML
      comp=N,4185µm,0.7s
EQUI  Equi              0.84 283  P    Pg     02 43 08.4  0.0
EQUI                              S    Sb     02 43 20.7 +0.5
EQUI  Equi              0.84 283  P    Pg     02 43 08.7 +0.3
BADI  Badiali           0.84 124  P    Pb     02 43 08.9 -0.1
MAGO  Bibbona           0.84 213  AML  AML
      comp=N,1112µm,0.8s
MAGO                              AML  AML
      comp=E,1085µm,0.6s
MAGO                              AML  AML
      comp=N,1112µm,1.2s
RSM   Repubblica di     0.84  93  P    Pb     02 43 09.3 +0.2
ATMC  Monte Cedrone     0.85 129 ⇓P    Pb     02 43 09.1  0.0
FIVI  Fivizzano         0.87 287  P    Pb     02 43 09.5 -0.1
CAVE  Cavezzo           0.91 347  P    Pn     02 43 11.7 +0.6
TRIF  Trifonti          0.91 198  AML  AML
      comp=N,886µm,1.1s
TRIF                              AML  AML
      comp=E,842µm,0.8s
PE3   Peglio            0.92 108  P    Pg     02 43 09.4 -0.7
APEC  Apecchio          0.93 117  P    Pg     02 43 10.1 -0.1
NDIM  Novi di Modena    0.94 343  P    Pn     02 43 12.4 +0.8
ATMI  Monte Miggiano    0.96 132  P    Pg     02 43 10.8 -0.1
ATPI  Pietralunga -     0.97 123  P    Pg     02 43 10.9 -0.1
ATPC  Poggio Castell    0.99 120  P    Pg     02 43 11.0 -0.3
NARO  Abbazia di Nar    1.01 111  P    Pg     02 43 11.5 -0.3
PIEI  Pieia             1.01 116  P    Pg     02 43 11.4 -0.4
ATVA  AVT- Monte Val    1.01 134 ⇓P    Pb     02 43 11.9 -0.1
ATVO  AVT- Monte Val    1.01 126  P    Pg     02 43 11.7 -0.1
GRAM  Graiana           1.01 301  P    Pb     02 43 12.3 +0.3
GRAM                              S    Sn     02 43 27.1 +0.1
GRAM  Graiana           1.01 301  P    Pb     02 43 12.2 +0.3
SERM  Sermide           1.03   0  P    Pn     02 43 14.7 +2.0
SERM                              AML  AML
      comp=E,3615µm,0.5s
SERM                              AML  AML
      comp=E,1700µm,0.8s
SERM                              AML  AML
      comp=E,1700µm,1.2s
SERM                              AML  AML
      comp=N,1360µm,0.8s
SERM                              AML  AML
      comp=N,3650µm,0.7s
SERM                              AML  AML
      comp=E,3615µm,1.5s
PLMA  Palmaria, Port    1.04 274  P    Pg     02 43 11.4 -0.8
PLMA                              S    Sb     02 43 26.3 +0.4
PLMA  Palmaria, Port    1.04 274  P    Pg     02 43 11.5 -0.8
RIBO  Ribolla Roccas    1.05 190  P    Pg     02 43 12.5  0.0
ATLO  AVT- Montelove    1.05 129  P    Pb     02 43 12.7 +0.1
SBPO  S.Benedetto Po    1.10 346  P    Pg     02 43 12.5 -1.0
PESA  Pesaro            1.12  92  P    Pb     02 43 14.0 +0.2
MPAG  Monte Paganucc    1.12 108  P    Pn     02 43 14.4 +0.3
ARCI  Arcidosso         1.14 173 ⇓P    Pn     02 43 14.8 +0.4
FRON  Frontone          1.14 114  P    Pn     02 43 14.6 +0.3
SF11  Podere del Sol    1.15 165  P    Pg     02 43 13.2 -1.3
MURB  Monte Urbino      1.15 128  P    Pb     02 43 14.4  0.0
SF01  Poggio Pratacc    1.19 170  P    Pn     02 43 15.5 +0.5
SF03  Valle Cupa        1.22 166  P    Pn     02 43 16.0 +0.6
SSFR  Montelago di S    1.22 116  P    Pn     02 43 16.5 +1.1
SACS  San Casciano d    1.22 158  P    Pg     02 43 14.8 -1.0
CASP  Castiglione de    1.23 195  P    Pb     02 43 15.2 -0.4
SF14  Selvena           1.25 169  P    Pn     02 43 16.0 +0.2
MSSA  Maissana          1.31 285  P    Pn     02 43 16.5 -0.2
TEOL  Teolo             1.40  11  P    Pn     02 43 18.2 +0.3
CELB  S.Piero in Cam    1.46 213  P    Pn     02 43 18.7 -0.1
BOB   Bobbio (Coli)     1.53 301  P    Pg     02 43 22.1 +0.4
CESI  CESI - Serrava    1.53 129  P    Pn     02 43 20.1 +0.4
GORR  Gorreto           1.56 294  P    Pn     02 43 21.0 +0.9
MARN  Marana (Italy)    1.66 358  P    Pn     02 43 21.8 +0.4
CESX  Cesi              1.67 145  P    Pn     02 43 22.3 +0.8
ROVR  Rover Verones     1.67 355  P    Pn     02 43 22.6 +0.8
SALO  Salr              1.72 342  P    Pn     02 43 23.1 +0.7
MBAL  Monte Baldo -     1.74 350  P    Pn     02 43 23.5 +0.8
RNCA  Ronca, Sant'Ol    1.75 287  P    Pn     02 43 22.9 +0.3
SMA1  SAN MARTINO       2.02 131  AML  AML
      comp=N,322µm,0.4s
SMA1                              AML  AML
      comp=E,504µm,0.6s
PGF   Pioggiola         2.20 230  ePn  Pn     02 43 28.7 -0.3
PGF                               eSn  Sn     02 43 53.5 -2.8
      comp=E,31nm,0.3s
CANO  Canova, Maglio    2.21 277  P    Pn     02 43 28.1 -0.9
CIMO  Cimolais          2.47  19  P    Pn     02 43 32.9 +0.3
SABO  M.te Sabotino     2.59  39  P    Pn     02 43 34.5 +0.3
GEPF  Gemona            2.64  29  P    Pn     02 43 35.5 +0.6
DRE   Drenchia          2.75  37  P    Pn     02 43 36.9 +0.3
SBF   Sospel            2.78 269  ePn  Pn     02 43 36.4 -0.6
SBF                               eSn  Sn     02 44 08.8 -1.8
      comp=E,58nm,0.5s
FVI   Forni Avoltri     2.82  21  P    Pn     02 43 38.6 +1.2
TUE   Stuetta           2.84 332  P    Pn     02 43 40.1 +2.2
ABTA  Abfaltersbach     2.90  17  ePn  Pn     02 43 40.5 +2.0
      comp=E,7.1nm,0.6s,SNR=10
ABTA                              eSn  Sn     02 44 15.2 +1.8
      comp=E,4.5nm,0.3s
```

```
FETA  Feichten          3.06 353  Pn   Pn     02 43 42.2 +1.3
      comp=E,3.8nm,0.4s,SNR=9.1
FETA                              eSn  Sn     02 44 20.9 +3.2
      comp=E,5.5nm,0.6s
MYKA  Terra Mystica     3.13  31  Pn   Pn     02 43 43.3 +1.6
      comp=E,1.4nm,0.5s,SNR=6.5
MYKA                              eSn  Sn     02 44 19.6 +0.6
      comp=E,4.3nm,0.5s
SQTA  Sankt Quirin      3.24 359  Pn   Pn     02 43 46.1 +2.8
      comp=E,6.2nm,0.4s,SNR=16
SQTA                              eSn  Sn     02 44 22.7 +0.8
      comp=E,12nm,0.6s
WTTA  Wattenberg        3.29   4  Pn   Pn     02 43 47.5 +3.5
      comp=E,8.0nm,0.5s,SNR=34
WTTA                              eSn  Sb     02 44 27.5 -3.5
      comp=E,14nm,0.5s
MBDF  Montbardon        3.32 284  ePn  Pn     02 43 44.6 +0.2
MBDF                              eSn  Sn     02 44 24.8 +0.8
      comp=E,32nm,0.7s
WATA  Walderalm         3.36   3  Pn   Pn     02 43 47.7 +2.8
      comp=E,31nm,0.5s,SNR=63
WATA                              eSn  Sn     02 44 27.1 +2.2
      comp=E,10nm,0.6s
MOTA  Moosalm           3.36 358  Pn   Pn     02 43 47.7 +2.7
      comp=E,18nm,0.5s,SNR=8.0
MOTA                              eSn  Sn     02 44 27.5 +2.5
      comp=E,11nm,0.6s
KBA   Koelnbreinsper    3.42  24  Pn   Pn     02 43 47.7 +1.9
      comp=E,2.5nm,0.5s,SNR=9.6
KBA                               eSn  Sn     02 44 26.3 -0.1
      comp=E,15nm,0.7s
OBKA  Obir              3.42  41  ePn  Pn     02 43 45.8 +0.1
      comp=E,1.7nm,0.5s
OBKA                              eSn  Sn     02 44 28.8 +2.4
      comp=E,17nm,1.0s
ZUGS  Zugspitze, Sch    3.44 357  ePn  Pn     02 43 49.1 +2.9
ZUGS                              eSn  Sb     02 44 32.1 -3.4
DAVA  Damuels           3.45 344  Pn   Pn     02 43 49.7 +3.6
      comp=E,3.1nm,0.3s,SNR=21
DAVA                              eSn  Sn     02 44 28.8 +1.7
      comp=E,39nm,0.7s
OBER  Oberstdorf        3.49 349  ePn  Pn     02 43 50.2 +3.4
PART  Garmisch-Parte    3.52 358  ePn  Pn     02 43 50.0 +2.9
PART                              eSn  Sb     02 44 33.5 -3.9
RETA  Reutte            3.52 354  Pn   Pn     02 43 49.4 +2.2
      comp=E,0.2nm,0.1s,SNR=10
RETA                              eSn  Sn     02 44 31.7 +2.8
      comp=E,11nm,0.4s
LMR   La Mourre         3.52 261  ePn  Pn     02 43 46.7 -0.4
LMR                               eSn  Sn     02 44 27.3 -1.5
      comp=E,2.2nm,0.2s
LPG   La Plagne         3.57 297  ePn  Pn     02 43 49.4 +1.5
      comp=E,11nm,0.4s
LPG                               eSn  Sn     02 44 30.3  0.0
LESA  Schwarzleotal     3.58  15  Pn   Pn     02 43 50.0 +2.1
      comp=E,4.2nm,0.5s,SNR=26
LESA                              eSn  Sn     02 44 32.1 +1.9
      comp=E,31nm,0.9s
LPL   La Plagne         3.59 297  ePn  Pb     02 43 52.5 -3.4
SOKA  Soboth            3.77  43  ePn  Pn     02 43 53.4 +2.8
      comp=E,4.0nm,0.8s
SOKA                              eSn  Sn     02 44 35.5 +0.4
      comp=E,10nm,0.7s
UBR   Ueberruh          3.79 348  ePn  Pn     02 43 53.1 +2.4
UBR                               eSn  Sn     02 44 37.8 +2.5
BE1   Monatshausen      3.93 359  ePn  Pn     02 43 55.2 +2.5
ORIF  Oris-en-Rattie    3.98 285  ePn  Pn     02 43 55.0 +1.5
ORIF                              eSn  Sn     02 44 40.0 -0.2
      comp=E,22nm,0.6s
BIOA  Bad Ischl, Aus    4.06  23  i Pn Pn     02 43 56.8 +2.3
      comp=E,2.0nm,0.5s,SNR=10
BIOA                              eSn  Sn     02 44 43.0 +1.0
      comp=E,6.1nm,0.6s
SMRF  Simiane la Rot    4.12 272  ePn  Pn     02 43 55.8 +0.5
KW1   Garching a.d.     4.24  12  ePn  Pn     02 43 59.4 +2.5
MOA   Molln             4.39  27  i Pn Pn     02 44 01.2 +2.2
      comp=E,2.9nm,0.6s,SNR=5.8
MOA                               eSn  Sn     02 44 51.9 +1.7
      comp=E,8.8nm,0.6s
ARSA  Arzberg           4.42  41  ePn  Pn     02 44 00.4 +1.1
      comp=E,1.0nm,0.5s
ARSA                              eSn  Sn     02 44 50.0 -0.8
      comp=E,2.6nm,0.6s
CABF  La Chapelle       4.51 307  ePn  Pn     02 44 02.8 +2.1
CABF                              eSn  Sn     02 44 54.4 +1.2
      comp=E,4.7nm,0.4s
BFO   Black Forest      4.81 336  ePn  Pn     02 44 06.1 +1.4
VIVF  Saint-Julien-l    4.82 283  ePn  Pn     02 44 04.5 -0.4
HINF  Hinteralfeld      4.92 323  ePn  Pn     02 44 07.7 +1.3
HINF                              eSn  Sn     02 45 02.3 -1.1
      comp=E,16nm,0.5s
CONA  Conrad Observa    5.07  37  ePn  Pn     02 44 07.7 -0.7
      comp=E,2.4nm,1.3s
CONA                              eSn  Sn     02 45 05.3 -1.8
      comp=E,1.6nm,0.5s
RONA  Rosalia, Austr    5.11  42  ePn  Pn     02 44 09.2 +0.3
      comp=E,0.3nm,0.1s
RONA                              eSn  Sn     02 45 07.1 -0.7
      comp=E,4.3nm,1.0s
GEC2  GERESS Array S    5.14  18  ePn  Pn     02 44 10.2 +0.8
GEC2                              eSn  Sn     02 45 07.9 -0.9
CDF   Champ du Feu      5.23 329  ePn  Pn     02 44 11.7 +1.1
CDF                               eSn  Sn     02 45 11.4 +0.4
      comp=E,13nm,0.6s
CKRC  Cesky Krumlov     5.27  22  ePN  Pn     02 44 12.4 +1.3
CKRC                              eSN  Sn     02 45 11.8  0.0
WET   Wettzell          5.28  11  eSn  Sn     02 45 10.5 -1.6
HAU   Haudompre         5.29 321  ePn  Pn     02 44 12.9 +1.5
HAU                               eSn  Sn     02 45 10.6 -1.8
      comp=E,23nm,0.4s
LASF  Ste Croix         5.36 274  ePn  Pn     02 44 13.5 +1.2
KHC   Kasperske Hory    5.39  16  ePN  Pn     02 44 13.8 +1.1
KHC                               eSN  Sn     02 45 13.8 -0.9
ZVC   Zvikov            5.81  19  ePN  Pn     02 44 19.8 +1.3
ZVC                               eSN  Sn     02 45 23.5 -1.6
ROTZ  Rotzenmuhle       5.82   6  ePn  Pn     02 44 18.5 -0.1
SMF   Signal de Mont    5.88 299  ePn  Pn     02 44 20.7 +1.2
SMF                               eSn  Sn     02 45 25.6 -1.4
      comp=E,1.9nm,0.3s
MODS  Modra-Piesok      6.05  41  ePN  Pn     02 44 22.3 +0.5
MODS                              eSN  Sn     02 45 29.3 -1.7
LOR   Lormes            6.16 305  ePn  Pn     02 44 25.0 +1.8
      baz=123
LOR                               eSn  Sn     02 45 33.5 -0.2
      comp=E,4.1nm,0.2s
KRUC  Moravsky          6.18  33  ePN  Pn     02 44 23.3 -0.3
KRUC                              eSN  Sn     02 45 32.4 -1.9
AVF   Avril sur Loir    6.25 299  ePn  Pn     02 44 26.3 +1.8
AVF                               eSn  Sn     02 45 35.4 -0.5
      comp=E,0.8nm,0.3s
MEZF  Maizieres J'vi    6.25 318  ePn  Pn     02 44 25.7 +1.2
SSF   Saint Saulge      6.27 302  ePn  Pn     02 44 25.9 +1.1
SSF                               eSn  Sn     02 45 34.8 -1.7
      comp=E,4.9nm,0.6s
SAVF  Savonnieres en    6.30 320  ePn  Pn     02 44 26.0 +0.8
BGF   Bois d'Agland     6.49 296  ePn  Pn     02 44 28.8 +1.0
MTLF  Montolieu         6.61 268  ePn  Pn     02 44 28.8 -0.7
MOX   Moxa              6.67   2  ePn  Pn     02 44 30.6 +0.4
CLL   Collm             7.42   8  e(Pn) Pn    02 44 40.0 -0.5
CLL                               eSg  Sg     02 46 46.0 -4.3
```

ROM 09 02:44:46.5±0.1**, 44°.005N**±0°.004×**11°.323E**±0°.005**,**
h8km, ML2.0/36**, 1C-2D, Error ellipse: s-maj=0.4km**
s-min=0.2km az=10.0, Northern Italy

```
Code  Station Name      Δ°   AZ°     Phase ID        Time       Res
                                  Op   ISC         h  m  s    ISC
MOCL  Monte Cuccoli     0.10 270 ⇓P    Pg     02 44 49.6 +0.6
MOCL                              S    Sg     02 44 51.4 +0.6
MOCL                              AML  AML
      comp=E,1445µm,0.1s
MOCL                              AML  AML
      comp=N,3000µm,1.0s
MOCL                              AML  AML
      comp=N,3000µm,1.0s
MOCL                              AML  AML
      comp=E,1441µm,0.1s
MOCL                              AML  AML
      comp=N,2938µm,0.2s
MPPT  Montemurlo        0.17 254 ⇑P    Pg     02 44 50.9 +0.7
MPPT                              S    Sg     02 44 53.8 +1.1
MPPT                              AML  AML
      comp=E,663µm,0.3s
MPPT                              AML  AML
      comp=N,680µm,1.1s
```

MPPT				AML	AML		
	comp=E,662μm,0.3s						
MPPT				AML	AML		
	comp=E,662μm,1.7s						
MPPT				AML	AML		
	comp=N,680μm,1.1s						
MPPT				AML	AML		
	comp=E,663μm,0.3s						
MPPT				AML	AML		
	comp=N,647μm,0.3s						
BRIS	**BRISIGHELLA**	0.20	43	P	Pg	02 44 54.8	+4.2
BRIS				S	Sg	02 45 01.8	+8.5
FIE	**Fiesole**	0.20	186	P	Pg	02 44 51.3	+0.7
FIE				S	Sg	02 44 54.5	+1.2
RUFI	**Rufina**	0.21	141	⇓P	Pg	02 44 51.6	+0.7
RUFI				S	Sg	02 44 55.1	+1.3
RUFI				AML	AML		
	comp=E,32μm,0.2s						
RUFI				AML	AML		
	comp=N,181μm,0.3s						
FNVD	**Fontana Vidola**	0.22	319	P	Pg	02 44 51.5	+0.5
FNVD				S	Sg	02 44 55.0	+1.0
FIR	**Firenze**	0.24	192	P	Pg	02 44 52.2	+0.9
FIR				S	Sg	02 44 56.5	+2.1
FIR				AML	AML		
	comp=E,1140μm,0.2s						
FIR				AML	AML		
	comp=N,1195μm,0.5s						
FIR				AML	AML		
	comp=N,1305μm,0.5s						
FIR				AML	AML		
	comp=E,1120μm,0.2s						
FIR				AML	AML		
	comp=N,1111μm,0.2s						
FIR				AML	AML		
	comp=E,1137μm,0.2s						
FIR				AML	AML		
	comp=E,1117μm,0.2s						
FIR				AML	AML		
	comp=N,1082μm,0.2s						
LMD	**Lutirano**	0.29	75	P	Pg	02 44 52.6	+0.4
LMD				S	Sg	02 44 57.4	+1.3
LMD				AML	AML		
	comp=E,650μm,0.5s						
LMD				AML	AML		
	comp=N,1285μm,0.2s						
LMD				AML	AML		
	comp=E,650μm,0.5s						
LMD				AML	AML		
	comp=N,1286μm,0.2s						
LMD				AML	AML		
	comp=E,628μm,0.2s						
CRMI	**Carmignano**	0.33	230	P	Pg	02 44 53.6	+0.5
CRMI				S	Sb	02 44 59.1	-1.1
CRMI				AML	AML		
	comp=E,114μm,0.3s						
CRMI				AML	AML		
	comp=E,368μm,0.3s						
CRMI				AML	AML		
	comp=N,272μm,0.4s						
CRMI				AML	AML		
	comp=N,672μm,0.4s						
CRMI				AML	AML		
	comp=E,114μm,0.3s						
CRMI				AML	AML		
	comp=E,368μm,0.3s						
CRMI				AML	AML		
	comp=N,672μm,0.4s						
CRMI				AML	AML		
	comp=N,273μm,0.4s						
MTRZ	**Monterenzio**	0.39	16	P	Pg	02 44 54.2	+0.1
SFI	**Santa Sofia**	0.39	105	P	Pg	02 44 54.8	+0.6
SFI				S	Sb	02 45 01.1	-0.8
SFI				AML	AML		
	comp=N,96μm,0.0s						
SFI				AML	AML		
	comp=E,183μm,0.4s						
SFI				AML	AML		
	comp=E,151μm,0.1s						
SFI				AML	AML		
	comp=N,186μm,0.3s						
ASQU	**Asqua**	0.40	122	P	Pg	02 44 54.9	+0.6
ASQU				S	Sb	02 45 01.4	-0.7
ASQU				AML	AML		
	comp=N,96μm,0.2s						
ASQU				AML	AML		
	comp=E,80μm,0.4s						
POPM	**Popiglio**	0.41	276	P	Pg	02 44 54.9	+0.4
POPM				S	Sb	02 45 01.5	-0.9
POPM				AML	AML		
	comp=N,866μm,0.1s						
POPM				AML	AML		
	comp=E,652μm,0.1s						
POPM				AML	AML		
	comp=E,651μm,0.1s						
POPM				AML	AML		
	comp=N,867μm,0.1s						
ZCCA	**Zocca**	0.43	324	P	Pb	02 44 56.7	+0.4
OSSC	**Osservatorio P**	0.48	187	P	Pg	02 44 56.5	+0.6
OSSC				S	Sb	02 45 04.3	-0.3
OSSC				AML	AML		
	comp=E,284μm,0.8s						
OSSC				AML	AML		
	comp=N,246μm,1.3s						
OSSC				AML	AML		
	comp=E,284μm,1.2s						
OSSC				AML	AML		
	comp=N,246μm,0.7s						
OSSC				AML	AML		
	comp=N,203μm,0.2s						
OSSC				AML	AML		
	comp=E,230μm,0.2s						
OSSC				AML	AML		
	comp=E,254μm,0.2s						
OSSC				AML	AML		
	comp=N,244μm,0.2s						
BDI	**Bagni Di Lucca**	0.53	276	P	Pg	02 44 57.0	+0.2
BDI				S	Sb	02 45 05.0	-0.9
BDI				AML	AML		
	comp=E,224μm,0.2s						
BDI				AML	AML		
	comp=E,224μm,1.8s						
BDI				AML	AML		
	comp=N,215μm,0.5s						
BDI				AML	AML		
	comp=E,224μm,0.2s						
BDI				AML	AML		
	comp=E,208μm,0.2s						
BDI				AML	AML		
	comp=N,246μm,0.4s						
BDI				AML	AML		
	comp=N,201μm,0.5s						
CSNT	**Castellina Chi**	0.53	182	P	Pg	02 44 57.4	+0.5
CSNT				S	Sb	02 45 05.7	-0.3
CSNT				AML	AML		
	comp=E,198μm,1.5s						
CSNT				AML	AML		
	comp=N,272μm,0.2s						
CSNT				AML	AML		
	comp=N,272μm,1.8s						
CSNT				AML	AML		
	comp=E,198μm,0.5s						
CSNT				AML	AML		
	comp=E,194μm,0.3s						
CSNT				AML	AML		
	comp=N,273μm,0.2s						
PII	**Pisa**	0.64	244	P	Pg	02 44 58.9	0.0
PII				AML	AML		
	comp=N,144μm,0.4s						
PII				AML	AML		
	comp=E,166μm,0.4s						
PII				AML	AML		
	comp=N,144μm,0.4s						
PII				AML	AML		
	comp=E,167μm,0.4s						

ROM 09 02:45:43.4±0.1**, 44°010N**±0°004×**11°331E**±0°005**,**
h8^{km}**, ML1.1**/6**, 1C-1D, Error ellipse: s-maj=0.4km**
s-min=0.3km az=15.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCL	**Monte Cuccoli**	0.11	268	⇓P	Pg	02 45 46.4	+0.5
MOCL				S	Sg	02 45 48.3	+0.6
MOCL				AML	AML		
	comp=E,238μm,0.1s						
MOCL				AML	AML		
	comp=N,530μm,1.0s						
MOCL				AML	AML		
	comp=E,238μm,0.1s						
MOCL				AML	AML		
	comp=N,477μm,0.2s						
MOCL				AML	AML		
	comp=N,477μm,1.8s						
MPPT	**Montemurlo**	0.18	253	⇑P	Pg	02 45 47.8	+0.7
MPPT				S	Sg	02 45 50.9	+1.2
MPPT				AML	AML		
	comp=E,118μm,0.2s						
MPPT				AML	AML		
	comp=N,107μm,0.2s						
MPPT				AML	AML		
	comp=N,107μm,0.2s						
MPPT				AML	AML		
	comp=E,118μm,0.2s						
BRIS	**BRISIGHELLA**	0.19	43	P	Pg	02 45 52.0	+4.7
FIE	**Fiesole**	0.20	187	P	Pg	02 45 48.3	+0.8
FIE				S	Sg	02 45 51.4	+1.1
RUFI	**Rufina**	0.21	143	P	Pg	02 45 48.5	+0.8
RUFI				S	Sg	02 45 52.0	+1.4
RUFI				AML	AML		
	comp=E,34μm,0.3s						
RUFI				AML	AML		
	comp=N,35μm,0.4s						
FNVD	**Fontana Vidola**	0.22	317	P	Pg	02 45 48.4	+0.6
FNVD				S	Sg	02 45 52.0	+1.2
FIR	**Firenze**	0.24	193	P	Pg	02 45 49.3	+1.1
FIR				S	Sg	02 45 53.4	+1.9
LMD	**Lutirano**	0.28	76	P	Pg	02 45 49.5	+0.5
LMD				S	Sb	02 45 54.4	-1.1
CRMI	**Carmignano**	0.34	230	P	Pg	02 45 50.6	+0.6
CRMI				S	Sb	02 45 56.2	-1.1
POPM	**Popiglio**	0.41	275	P	Pg	02 45 51.8	+0.4
POPM				S	Sb	02 45 58.5	-0.9
ZCCA	**Zocca**	0.43	323	P	Pb	02 45 53.3	+0.1

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*TRN **09** 03:03:47.3, 15°03N×60°53W, h42^{km}, MD4.2, North-east of Martinique.*
*IDC **09** 03:03:48.9±1.9, 14°98N×60°70W, h52^{km}±7^{km}, mb3.1/5, mbtmp3.4/5, MS2.4/1, Error ellipse: s-maj=62.9km s-min=6.2km az=86.0*
ISC 09 03:03:48.5±1.1**, 15°03N**±0°03×**60°51W**±0°07**, h51**^{km}±10^{km}**,**
n35, σ0^{s}66/51**, mb3.5**/5**, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILAM	**Ilet Lapin Mar**	0.43	235	*e*P	**Pn**	**03 03 58.8**	**-0.2**
ILAM				*e*S	**Sn**	**03 04 06.5**	**-0.1**
SVN	**Savane Anatole**	0.66	254	*e*P	**Pn**	**03 04 01.9**	**+0.1**
SVN				*e*S	**Sn**	**03 04 12.0**	**+0.6**
H05S1	**Guadeloupe/Mar**	0.68	208	P	**Pn**	**03 04 01.7**	**-0.2**
H05S1				S	**Sn**	**03 04 11.8**	**+0.1**
BIM	**Bigot**	0.74	227	*e*P	**Pn**	**03 04 02.9**	**0.0**
BIM				*e*S	**Sn**	**03 04 13.5**	**+0.2**
DLPL	**La Plaine**	0.77	293	*e*P	**Pn**	**03 04 03.6**	**+0.3**
DLPL				*e*S	**Sn**	**03 04 15.3**	**+1.2**
DSLB	**Salisbury**	0.97	295	*e*P	**Pn**	**03 04 06.2**	**+0.4**
DSLB				*e*S	**Sn**	**03 04 19.3**	**+0.7**
SLBI	**Saint Lucia, B**	1.09	204	*e*P	**Pn**	**03 04 07.0**	**-0.5**
SLBI				*e*S	**Sn**	**03 04 20.9**	**-0.6**
TBG	**Guadaloupe-3**	1.37	307	*e*P	**Pn**	**03 04 11.4**	**+0.2**
TBG				*e*S	**Sn**	**03 04 27.8**	**-0.4**
MCLT	**Moule a Chique**	1.37	198	*e*P	**Pn**	**03 04 10.7**	**-0.6**
MCLT				*e*S	**Sn**	**03 04 29.1**	**+0.7**
DSDZ	**La Diserade, G**	1.39	337	*e*P	**Pn**	**03 04 11.2**	**-0.2**
DSDZ				*e*S	**Sn**	**03 04 28.5**	**-0.2**
H05N1	**Guadeloupe/Mar**	1.39	338	P	**Pn**	**03 04 11.2**	**-0.3**
H05N1				S	**Sn**	**03 04 29.0**	**+0.3**
MMLZ	**Guadeloupe Bro**	1.51	312	*e*P	**Pn**	**03 04 13.5**	**+0.4**
MMLZ				*e*S	**Sn**	**03 04 32.0**	**+0.4**
ATGZ	**Broadband at L**	1.58	312	*e*P	**Pn**	**03 04 14.7**	**+0.6**
ATGZ				*e*S	**Sn**	**03 04 34.0**	**+0.5**
DHSZ	**Broadband at M**	1.73	316	*e*P	**Pn**	**03 04 16.7**	**+0.6**
DHSZ				*e*S	**Sn**	**03 04 37.7**	**+0.6**
SVB	**Belmont**	1.89	203	*e*P	**Pn**	**03 04 18.7**	**+0.4**
SVB				*e*S	**Sn**	**03 04 41.4**	**+0.5**
BBGH	**Gun Hill**	2.09	154	*e*P	**Pn**	**03 04 21.6**	**+0.5**
BBGH				*e*S	**Sn**	**03 04 47.8**	**+2.0**
MBWH	**Windy Hill**	2.35	317	*e*P	**Pn**	**03 04 25.1**	**+0.4**
MBWH				*e*S	**Sn**	**03 04 52.6**	**+0.2**
GCMP	**Grenada, Carri**	2.68	200	*e*P	**Pn**	**03 04 29.5**	**+0.4**
GCMP				*e*S	**Sn**	**03 05 00.9**	**+0.6**
ANWB	**Willy Bob**	2.90	335	*e*P	**Pn**	**03 04 32.7**	**+0.6**
ANWB				*e*S	**Sn**	**03 05 05.3**	**-0.4**
GRHS	**Sauteurs**	2.99	202	*e*P	**Pn**	**03 04 34.0**	**+0.5**
GRHS				*e*S	**Sn**	**03 05 08.3**	**+0.1**
GRGR	**Grenville**	3.08	201	*e*P	**Pn**	**03 04 35.4**	**+0.7**
GRGR				*e*S	**Sn**	**03 05 11.1**	**+0.8**
SKI	**Saint Kitts**	3.14	317	*e*P	**Pn**	**03 04 36.7**	**+1.2**
SKI				*e*S	**Sn**	**03 05 11.7**	**0.0**
SJG	**San Juan**	6.22	300	LR	LR	03 07 31.6	
	comp=Z,36nm,20.0s,baz=91,slow=37						
SJG	**San Juan**	6.22	300	*e*P	**Pn**	**03 05 18.8**	**+1.2**
AOPR	**Arecibo Observ**	6.83	300	*e*P	**Pn**	**03 05 27.6**	**+1.4**
TXAR	**Lajitas Array**	42.18	297	P	**P**	**03 11 35.4**	**-1.1**
	0.1nm,0.5s,baz=101,slow=7.8,SNR=1.8						
	0.1nm,0.5s						
PDAR	**Pinedale Array**	50.16	314	P	**P**	**03 12 38.7**	**-0.5**
	0.3nm,0.6s,baz=119,slow=9.3,SNR=4.3						
	0.3nm,0.6s						
H10N3	**ASCENSION HYDR**	50.95	113	T	T	04 08 00.5	
	baz=297,slow=75,SNR=91						
H10N2	**ASCENSION HYDR**	50.96	113	T	T	04 07 57.9	
	baz=297,slow=75,SNR=95						
H10N1	**ASCENSION HYDR**	50.97	113	T	T	04 07 59.5	
	baz=297,slow=75,SNR=142						
H10S3	**ASCENSION HYDR**	51.31	115	T	T	04 08 27.2	
	baz=285,slow=74,SNR=68						
H10S2	**ASCENSION HYDR**	51.33	115	T	T	04 08 25.9	
	baz=295,slow=74,SNR=51						
NVAR	**Mina Array Bea**	55.67	306	P	**P**	**03 13 19.5**	**-0.4**
	0.4nm,0.7s,baz=72,slow=4.8,SNR=4.1						
	0.4nm,0.7s						
PLCA	**Paso Flores**	56.25	189	P	**P**	**03 13 24.1**	**+0.4**
	0.4nm,0.4s,baz=16,slow=10,SNR=4.6						
	0.4nm,0.4s						
ILAR	**Eielson Array**	74.99	334	P	**P**	**03 15 24.0**	**-0.1**
	0.1nm,0.5s,baz=87,slow=6.3,SNR=3.7						
	0.1nm,0.5s						

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*AEIC **09** 03:33:22.2±1.8, 53°02N±0°06×167°52W±0°07, h38^{km}±9^{km}, Error ellipse: s-maj=9.9km s-min=4.2km az=154.0*
NEIC 09 03:33:23.5±1.4**, 53°2N**±0°2×**167°7W**±0°2**, h56**^{km}±12^{km}**,**
mb3.8/24**, ML3.8**/18**, ML3.4**(AEIC)**, Error ellipse:**
s-maj=27.7km s-min=4.0km az=148.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKFG	**Magazine Ridge**	0.22	332		Pn	03 33 32.7	+0.1
OKTU	**Okmok Mt. Tuli**	0.24	312		Pn	03 33 33.3	+0.4
OKCE	**Okmok Cone E**	0.33	309		Pn	03 33 34.4	+0.8
OKNC	**Okmok New Cone**	0.33	316		Pn	03 33 34.2	+0.7
OKNC					Sn	03 33 43.7	+3.0
OKSP	**Okmok Steeple**	0.33	276		Pn	03 33 33.5	0.0
NIKH	**Nikolski High**	0.72	250		Pn	03 33 36.7	-1.1
NIKH					Sn	03 33 48.0	-0.1
NIKH				IAML		03 33 49.6	
	comp=N,5μm,0.4s						
MAPS	**Pakushin South**	0.76	39		Pn	03 33 37.9	-0.3
MGOD	**Makushin Gods**	0.77	42		Pn	03 33 37.8	-0.7
MREP	**Makushin Rep't**	0.84	45		Pn	03 33 38.9	-0.5
MSW	**Makushin Switc**	0.90	39		Pn	03 33 39.9	-0.2
MSW					Sn	03 33 52.5	+0.2
MNAT	**Makushin Natee**	0.92	43		Pn	03 33 39.9	-0.4
UNV	**Unalaska Valle**	0.97	49		Sn	03 33 53.7	-0.1
UNV	**Unalaska Valle**	0.97	49	Pn	Pn	03 33 39.6	-1.3
UNV				IAML		03 33 54.5	
	comp=E,2μm,0.4s						
UNV				IAML		03 33 54.7	
	comp=N,2μm,0.3s						
CLCO	**Concord Point,**	1.27	251		Pn	03 33 44.9	-0.2
CLCO					Sn	03 34 02.0	+0.9
AKRB	**Akutan Reef Bi**	1.35	47		Pn	03 33 46.3	+0.2
AKMO	**Akutan Morgan**	1.35	49		Pn	03 33 46.0	0.0
CLES	**Cleveland East**	1.36	254	Pn	Pn	03 33 46.0	-0.2
CLES				IAML		03 34 08.2	
	comp=N,2μm,0.3s						
ZRO	**Akutan Zero**	1.36	50		Pn	03 33 46.3	0.0
ZRO					Sn	03 34 04.6	+1.3
LVA	**Lava Point**	1.38	46	Pn	Pn	03 33 46.0	-0.5
LVA				IAML		03 34 07.4	
	comp=N,1μm,0.7s						
LVA				IAML		03 34 10.4	
	comp=E,1μm,0.5s						
AKBBA	**Akutan Broad B**	1.39	50		Pn	03 33 46.7	0.0
AKV	**Akutan Volcano**	1.39	49		Pn	03 33 46.9	+0.1
AKLV	**Akutan Long Va**	1.42	48		Pn	03 33 47.2	+0.2
AKLV					Sn	03 34 06.6	+1.9
AKGG	**Akutan Green G**	1.43	46		Pn	03 33 47.8	+0.7
AHB	**Akutan Harbor**	1.45	51		Pn	03 33 47.2	-0.3
AKUT	**Akutan**	1.49	51	Pn	Pn	03 33 47.0	-0.9
AKSA	**Akutan Strait**	1.52	52		Pn	03 33 47.7	-0.7
WEBT	**Westdahl Beart**	2.24	51		Pn	03 33 58.7	+0.5
SSBA	**Shishaldin**	2.64	52		Pn	03 34 03.9	+0.2
SSLS	**Shishaldin Sou**	2.67	54		Pn	03 34 04.0	0.0
ISNN	**Isanotski Nort**	2.84	54		Pn	03 34 07.0	+0.7
FALS	**False Pass**	3.03	56	Pn	Pn	03 34 07.7	-1.2
DT1	**Dutton Round H**	3.72	57		Pn	03 34 17.6	-0.8
ATKA	**Atka Island**	4.06	258	Pn	Pn	03 34 23.6	+0.6
SPIA	**Saint Paul Isl**	4.22	341	Pn	Pn	03 34 27.3	+2.1
SPIA				IAML		03 35 23.8	
	comp=N,145nm,1.2s						
SPIA				IAML		03 37 00.2	
	comp=E,120nm,1.1s						
SDPT	**Sand Point**	4.76	60	Pn	Pn	03 34 30.8	-1.8
SDPT				IAML		03 35 26.1	
	comp=N,61nm,1.2s						
SDPT				IAML		03 36 50.0	
	comp=E,49nm,1.1s						
ADK	**Adak**	5.62	260	Pn	Pn	03 34 45.9	+1.4
O14K	**Tigyukauivet M**	7.04	28	Pn	Pn	03 35 05.5	+1.7
M11K	**Mekoryuk**	7.23	6	Pn	Pn	03 35 09.2	+2.7
O15K	**Ungalikthiuk R**	7.42	33	Pn	Pn	03 35 09.8	+0.8
N14K	**Kuskokwak Cree**	7.50	24	Pn	Pn	03 35 11.9	+1.8
M13K	**Dall Lake**	7.60	17	Pn	Pn	03 35 13.7	+2.2
N15K	**Kwethluk River**	8.13	28	Pn	Pn	03 35 21.2	+2.4
M14K	**Bethel**	8.18	20	Pn	Pn	03 35 21.0	+1.7
O16K	**Kokwok River B**	8.32	36	Pn	Pn	03 35 22.6	+1.2
L14K	**Kuka Creek**	8.59	17	Pn	Pn	03 35 26.7	+1.8
K13K	**Kusilvak Mount**	8.89	9	Pn	Pn	03 35 32.2	+3.1
M16K	**Timber Creek**	9.15	28	Pn	Pn	03 35 34.7	+2.0
K15K	**Wolf Creek Mou**	9.68	17	Pn	Pn	03 35 42.2	+2.3
KDAK	**Kodiak Island**	9.73	56	Pn	Pn	03 35 38.6	-2.0
M17K	**Holitna River**	9.90	30	Pn	Pn	03 35 43.9	+1.0
K17K	**Iditarod**	10.74	24	Pn	Pn	03 35 56.4	+2.0
J16K	**Anvik River**	10.76	18	Pn	Pn	03 35 57.7	+3.0
J17K	**VABM Dome**	11.16	21	Pn	Pn	03 36 02.9	+2.8
L19K	**White Mountain**	11.30	32	Pn	Pn	03 36 03.6	+1.6
SLKM	**Skilak Lake**	12.02	46	Pn	Pn	03 36 11.6	-0.3
PPLA	**Purkeypile**	12.68	34	Pn	Pn	03 36 21.3	+0.3
PWL	**Port Wells**	13.00	46	Pn	Pn	03 36 23.4	-1.9
KNK	**Knik Glacier**	13.22	44	Pn	Pn	03 36 26.0	-2.2
M24K	**Tolsona, Glenn**	14.50	44	Pn	Pn	03 36 41.8	-3.6
GLB	**Gilahina Butte**	15.24	48	Pn	Pn	03 36 52.6	-2.3
VRDI	**Verde Repeater**	15.32	49	Pn	Pn	03 36 53.3	-2.9
VRDI				IAmb	IAmb	03 37 12.0	
	comp=Z,17nm,1.3s						
TGL	**Tana Glacier**	15.45	51	P	P	03 37 00.7	-0.5
K24K	**Donnelly Dome**	15.52	38		P	03 37 00.3	-1.6
K24K				IAmb	IAmb	03 37 38.7	
	comp=Z,11nm,1.2s						
TABL	**Table Mountain**	16.16	53	P	Pn	03 37 06.4	-0.5
CTGM	**Chitina Glacie**	16.21	51	P	P	03 37 09.0	-0.7
CTGM				IAmb	IAmb	03 37 10.8	
	comp=Z,7.3nm,0.8s						
SCRK	**Sand Creek**	16.29	39	Pn	Pn	03 37 07.0	-1.4
M27K	**Edge Creek, AK**	16.43	46	Pn	Pn	03 37 08.2	-2.0
M27K				IAmb	IAmb	03 37 18.0	
	comp=Z,6.9nm,1.3s						
O28M	**Mount Upton**	16.70	52	Pn	Pn	03 37 13.1	-0.6
O28M				IAmb	IAmb	03 37 40.0	
	comp=Z,7.9nm,0.8s						
I26K	**Coal Creek Min**	17.29	36	Pn	Pn	03 37 19.7	-1.0
O29M	**Mount Kennedy**	17.37	54	Pn	Pn	03 37 20.2	-1.7
M29M	**Somme Creek**	17.96	48		P	03 37 28.6	-0.3
I27K	**Kandik River**	18.00	36		P	03 37 29.1	-0.2
I27K				IAmb	IAmb	03 37 57.9	
	comp=Z,8.9nm,1.4s						
DAWY	**Dawson**	18.14	42		P	03 37 29.7	-1.1
F26K	**Sheenjek River**	18.40	29	P	P	03 37 33.9	+0.2
F26K				IAmb	IAmb	03 38 11.6	
	comp=Z,5.4nm,1.4s						
I28M	**Miner Creek**	18.53	38	P	P	03 37 34.6	-0.6
K29M	**Barlow Dome**	18.82	44	P	P	03 37 36.6	-1.8
K29M				IAmb	IAmb	03 38 01.4	
	comp=Z,5.5nm,1.4s						
N31M	**Braeburn, Yuko**	18.95	51	P	P	03 37 40.0	+0.3
S32K	**Killisnoo**	19.21	64	P	P	03 37 43.2	+0.7
J30M	**Hart River**	19.56	42	P	Pn	03 37 48.4	+0.1
G29M	**Pine Creek**	19.91	35	P	P	03 37 48.3	-1.9
G29M				IAmb	IAmb	03 37 54.1	
	comp=Z,4.0nm,0.9s						
D27M	**Malcolm River**	20.30	28	P	Pn	03 37 56.4	-0.4
D27M				IAmb	IAmb	03 38 21.2	
	comp=Z,10.0nm,1.5s						
F30M	**Barrier River**	21.01	34	P	P	03 37 59.5	-2.5
F30M				IAmb	IAmb	03 38 00.5	
	comp=Z,9.2nm,1.3s						
R33M	**Jennings River**	21.10	58	P	P	03 38 04.1	+0.9
R33M				IAmb	IAmb	03 38 08.4	
	comp=Z,8.4nm,1.1s						

ROM 09 03:36:52.1±0.1**, 44°004N**±0°004×**11°324E**±0°005**,**
h8^{km}**, ML2.1**/8**, 3C-1D, Error ellipse: s-maj=0.4km**
s-min=0.4km az=358.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCL	**Monte Cuccoli**	0.10	271	P	Pg	03 36 55.2	+0.5
MOCL				S	Sg	03 36 57.1	+0.7
MOCL				AML	AML		
	comp=N,4961μm,0.2s						
MPPT	**Montemurlo**	0.17	255	⇑P	Pg	03 36 56.5	+0.7
MPPT				S	Sg	03 37 00.1	+1.8
MPPT				AML	AML		
	comp=E,99800μm,0.3s						
MPPT				AML	AML		
FIE	**Fiesole**	0.20	186	P	Pg	03 36 56.9	+0.7
FIE				S	Sg	03 37 00.3	+1.4
BRIS	**BRISIGHELLA**	0.20	43	P	Pg	03 37 00.6	+4.4
BRIS				S	Sg	03 37 07.8	+8.8
BRIS				AML	AML		
	comp=E,55600μm,0.5s						
BRIS				AML	AML		
	comp=N,47000μm,0.3s						
BRIS				AML	AML		
	comp=N,52450μm,0.7s						
RUFI	**Rufina**	0.21	141	P	Pg	03 36 57.1	+0.7
RUFI				S	Sg	03 37 00.8	+1.5
RUFI				AML	AML		
	comp=E,14300μm,0.7s						
RUFI				AML	AML		
	comp=N,14350μm,0.5s						
RUFI				AML	AML		
	comp=E,14350μm,0.7s						
RUFI				AML	AML		
	comp=N,14300μm,0.5s						
RUFI				AML	AML		
	comp=E,370μm,0.2s						
FNVD	**Fontana Vidola**	0.22	319	P	Pg	03 36 57.1	+0.5
FNVD				S	Sg	03 37 00.9	+1.2
FNVD				AML	AML		
	comp=E,49150μm,0.8s						
FNVD				AML	AML		
	comp=N,43600μm,1.5s						
FIR	**Firenze**	0.23	192	P	Pg	03 36 57.9	+1.0
FIR				S	Sg	03 37 01.9	+1.9
LMD	**Lutirano**	0.29	75	⇑P	Pg	03 36 58.2	+0.4
LMD				S	Sg	03 37 03.0	+1.3
LMD				AML	AML		
	comp=E,54050μm,1.3s						
LMD				AML	AML		
	comp=N,99250μm,0.7s						
LMD				AML	AML		
	comp=E,987μm,0.3s						
CRMI	**Carmignano**	0.33	230	P	Pg	03 36 59.2	+0.5
CRMI				S	Sb	03 37 05.1	-0.7
CRMI				AML	AML		
CRMI				AML	AML		
CRMI				AML	AML		

CRMI				AML	AML		
	comp=N,99250µm,0.3s						
MTRZ	**Monterenzio**	**0.39**	**15**	P	Pg	03 36 59.6	-0.1
SFI	**Santa Sofia**	**0.39**	**105**	P	Pg	03 37 00.3	+0.5
SFI				S	Sb	03 37 06.7	-0.8
SFI				AML	AML		
	comp=E,22800µm,1.1s						
SFI				AML	AML		
	comp=N,46400µm,0.6s						
SFI				AML	AML		
	comp=E,22900µm,1.1s						
SFI				AML	AML		
	comp=N,46450µm,0.6s						
SFI				AML	AML		
	comp=E,167µm,0.2s						
ASQU	**Asqua**	**0.40**	**121**	P	Pg	03 37 00.4	+0.5
ASQU				S	Sb	03 37 06.7	-0.9
ASQU				AML	AML		
	comp=E,26600µm,0.6s						
ASQU				AML	AML		
	comp=N,26700µm,1.2s						
POPM	**Popiglio**	**0.41**	**276**	⇑P	Pg	03 37 00.5	+0.3
POPM				S	Sb	03 37 07.2	-0.9
POPM				AML	AML		
POPM				AML	AML		
POPM				AML	AML		
	comp=N,807µm,0.2s						
ZCCA	**Zocca**	**0.43**	**324**	P	Pb	03 37 02.7	+0.7
IMOL	**Imola, Italy**	**0.47**	**40**	P	Pb	03 37 03.1	+0.6
OSSC	**Osservatorio P**	**0.48**	**187**	P	Pg	03 37 02.0	+0.5
OSSC				S	Sb	03 37 09.8	-0.3
OSSC				AML	AML		
	comp=E,77450µm,1.1s						
OSSC				AML	AML		
OSSC				AML	AML		
OSSC				AML	AML		
	comp=N,78800µm,1.0s						
OSSC				AML	AML		
	comp=N,343µm,0.3s						
BDI	**Bagni Di Lucca**	**0.53**	**277**	⇓P	Pg	03 37 02.6	+0.2
BDI				S	Sb	03 37 10.5	-1.0
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
	comp=E,248µm,1.0s						
CSNT	**Castellina Chi**	**0.53**	**183**	P	Pg	03 37 02.9	+0.4
CSNT				S	Sb	03 37 11.4	-0.1
CSNT				AML	AML		
	comp=E,49250µm,1.1s						
CSNT				AML	AML		
CRE	**Caprese Michel**	**0.59**	**130**	P	Pb	03 37 04.3	-0.6
CRE				AML	AML		
	comp=E,18400µm,1.2s						
CRE				AML	AML		
	comp=N,37150µm,1.5s						
CARD	**Cardoso**	**0.61**	**272**	P	Pg	03 37 03.8	-0.1
CARD				AML	AML		
CARD				AML	AML		
MAIM	**Mastiano**	**0.61**	**262**	P	Pg	03 37 04.2	+0.3
GSCL	**Gusciola**	**0.63**	**303**	P	Pb	03 37 04.9	-0.5
PII	**Pisa**	**0.64**	**244**	P	Pg	03 37 04.8	+0.2
PII				AML	AML		
PII				AML	AML		
PII				AML	AML		
	comp=N,80µm,1.1s						
SARO	**Sassorosso**	**0.69**	**285**	P	Pg	03 37 05.7	+0.2

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*BGR **09** 03:37:02.3±1.1, 43°.64N×11°.57E, h10^{km}, ML4.8/11, Error ellipse: s-maj=20.0km s-min=17.8km az=77.0*

*GEN **09** 03:37:03.8, 44°.00N×11°.31E, h9^{km}, Ml4.5*

*ROM **09** 03:37:03.9±0.0, 44°.005N±0°.003×11°.319E±0°.003, h7^{km}, ML4.5/390, Mw4.5, Error ellipse: s-maj=0.2km s-min=0.1km az=4.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-7.42; $M_{\theta\theta}$6.46; $M_{\phi\phi}$0.96; $M_{r\theta}$-0.62; $M_{\theta\phi}$-3.62; $M_{\phi r}$-1.23; Fault plane solution: $M_0$7.97785×10^{15} NP1:ϕ_s105.00000°, δ46.00000°, λ-106.00000°. NP2:ϕ_s308.00000°, δ46.00000°, λ-74.00000°.*

*IDC **09** 03:37:03.1±0.7, 43°.89N×11°.36E, h0^{km}, mb4.3/14, mbtmp4.3/23, ML3.9/8, MS3.8/53 Error ellipse: s-maj=16.1km s-min=11.8km az=146.0*

*MED_RC **09** 03:37:04.0±0.2, 44°.01N×11°.43E, h10^{km}, MW4.7/24, Moment Tensor Solution.Mantle waves: s24,c32; Duration: 1^{s}1 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.02±.04; $M_{\theta\theta}$0.87±.03; $M_{\phi\phi}$0.15±.04; $M_{r\theta}$0.52±.15; $M_{\theta\phi}$-0.64±.03; $M_{\phi r}$-0.55±.21; Best double couple: $M_0$1.37000×10^{16} NP1:ϕ_s107.00000°, δ30.00000°, λ-111.00000°. NP2:ϕ_s311.00000°, δ62.00000°, λ-79.00000°. Principal axes: T 1.4600, Plg17.0000°, Azm33.0000°; N -0.1900, Plg10.0000°, Azm126.0000°; P -1.2700, Plg70.0000°, Azm246.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=40s.*

*MOS **09** 03:37:04.4±1.1, 44°.07N×11°.31E, h12^{km}, mb4.7/27 Error ellipse: s-maj=6.1km s-min=3.2km az=66.7*

*PDG **09** 03:37:04.6±0.9, 44°.00N×11°.28E, h15^{km}, ML4.5/12, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*

*LDG **09** 03:37:05.1±0.2, 43°.89N×11°.28E, h8^{km}, Ml4.6/40, Error ellipse: s-maj=4.1km s-min=3.9km az=34.0*

*NEIC **09** 03:37:05.4±2.0, 43°.99N±0°.04×11°.32E±0°.04, h10^{km}±1^{km}, mb4.9/160, Mwr4.6/44, Error ellipse: s-maj=8.2km s-min=3.0km az=212.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-1.14; $M_{\theta\theta}$0.91; $M_{\phi\phi}$0.23; $M_{r\theta}$0.00; $M_{\theta\phi}$-0.44; $M_{\phi r}$0.25; Fault plane solution: $M_0$1.16000×10^{16} NP1:ϕ_s126.67000°, δ48.71000°, λ-75.83000°. NP2:ϕ_s285.73000°, δ43.24000°, λ-105.58000°. Principal axes: T 1.1265, Plg3.0000°, Azm207.0000°; N 0.0615, Plg11.0000°, Azm297.0000°; P -1.1879, Plg79.0000°, Azm102.0000°;*

*NEIC **09** 03:37:05.6, 44°.00N×11°.31E, h10^{km}*

*PRU **09** 03:37:06.7, 44°.08N×11°.58E, h0^{km}, M4.8*

*BNS **09** 03:37:06.8±0.4, 44°.00N×11°.44E, h10^{km}, ML4.6*

*MCSM **09** 03:37:06.0±0.3, 44°N±3°×1°1E±°, h6^{km}±3^{km}, mb4.4, MLv5.0*

*BJI **09** 03:37:06.1, 43°.74N×10°.92E, h46^{km}, mB5.0/1, mb4.6/21, Ms5.0/2, Ms7 4.6/3*

*NAO **09** 03:37:07.8, 44°.00N×11°.31E, h10^{km}, MB5.0*

*GCMT **09** 03:37:07.4±0.3, 43°.98N±0°.02×11°.33E±0°.04, h18^{km}±1^{km}, MW4.8/72, Moment Tensor Solution. s21,c23; s72,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.99±.14; $M_{\theta\theta}$1.71±.09; $M_{\phi\phi}$0.27±.08; $M_{r\theta}$0.16±.17; $M_{\theta\phi}$-0.85±.05; $M_{\phi r}$-0.52±.21; Best double couple: $M_0$2.11900×10^{16} NP1:ϕ_s104.00000°, δ41.00000°, λ-107.00000°. NP2: ϕ_s306.00000°, δ51.00000°, λ-75.00000°. Principal axes: T 2.1350, Plg5.0000°, Azm26.0000°; N -0.0330, Plg11.0000°, Azm117.0000°; P -2.1040, Plg78.0000°, Azm272.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 03:37:04.5±0.7**, 44°.00N**±0°.01×**11°.30E**±0°.01**, h6**^{km}±4^{km}**, n679,** σ**1^{s}72**/750**, mb4.8**/119**, MS3.9**/47**, 69C-37D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEI	**Scarperia**	**0.07**	**35**	P	**Pg**	**03 37 03.4**	**-2.9**
SEI	**Scarperia**	**0.07**	**35**	⇑P	**Pg**	**03 37 03.4**	**-2.9**
SEI				S	**Sg**	**03 37 04.8**	**-2.8**
MOCL	**Monte Cuccoli**	**0.09**	**276**	⇓P	**Pg**	**03 37 07.0**	**+0.5**
MOCL				S	**Sg**	**03 37 09.1**	**+1.2**
MOCL				AML	AML		
MOCL				AML	AML		
MOCL				AML	AML		
MOCL				AML	AML		
MPPT	**Montemurlo**	**0.16**	**256**	⇑P	**Pg**	**03 37 08.4**	**+0.6**
MPPT				S	**Sg**	**03 37 11.0**	**+1.2**
MPPT				AML	AML		
MPPT				AML	AML		
MPPT				AML	AML		
MPPT				AML	AML		
FNVD	**Fontana Vidola**	**0.21**	**324**	⇑P	**Pg**	**03 37 08.9**	**+0.2**
FNVD				S	**Sg**	**03 37 12.5**	**+0.8**
BRIS	**BRISIGHELLA**	**0.22**	**45**	⇑P	**Pg**	**03 37 12.5**	**+3.7**
BRIS				S	**Sg**	**03 37 19.4**	**+7.7**
BRIS				AML	AML		
	comp=E,95150µm,1.5s						
BRIS				AML	AML		
	comp=N,59950µm,0.7s						
BRIS				AML	AML		
BRIS				AML	AML		
	comp=N,69100µm,0.5s						
BRIS				AML	AML		
BRIS				AML	AML		
	comp=N,69100µm,1.5s						
RUFI	**Rufina**	**0.22**	**136**	P	**Pg**	**03 37 09.1**	**+0.2**
RUFI				S	**Sg**	**03 37 13.0**	**+1.3**
RUFI	**Rufina**	**0.22**	**136**	⇓P	**Pg**	**03 37 09.1**	**+0.2**
RUFI				S	**Sg**	**03 37 12.8**	**+1.1**
RUFI				AML	AML		
	comp=E,95800µm,0.7s						
RUFI				AML	AML		
RUFI				AML	AML		
	comp=E,95650µm,0.7s						
FIR	**Firenze**	**0.23**	**188**	⇑P	**Pg**	**03 37 09.6**	**+0.6**
FIR				S	**Sg**	**03 37 13.9**	**+2.0**
FIR				AML	AML		
FIR				AML	AML		
FIR				AML	AML		
FIR				AML	AML		
LMD	**Lutirano**	**0.30**	**74**	P	**Pg**	**03 37 10.2**	**-0.4**
LMD				S	**Sg**	**03 37 14.6**	**0.0**
LMD	**Lutirano**	**0.30**	**74**	⇑P	**Pg**	**03 37 10.1**	**-0.4**
LMD				S	**Sg**	**03 37 14.6**	**0.0**
LMD				AML	AML		
	comp=E,64250µm,0.8s						
LMD				AML	AML		
	comp=N,99250µm,0.7s						
CRMI	**Carmignano**	**0.32**	**229**	⇑P	**Pg**	**03 37 11.1**	**+0.4**
CRMI				S	**Sg**	**03 37 16.3**	**+1.5**
CRMI				AML	AML		
CRMI				AML	AML		
CRMI				AML	AML		
CRMI				AML	AML		
CRMI				AML	AML		
CRMI				AML	AML		
	comp=N,99250µm,0.3s						
POPM	**Popiglio**	**0.39**	**277**	P	**Pg**	**03 37 12.5**	**+0.3**
POPM				S	**Sb**	**03 37 19.0**	**-1.3**
POPM	**Popiglio**	**0.39**	**277**	⇑P	**Pg**	**03 37 12.4**	**+0.3**
POPM				S	**Sb**	**03 37 19.0**	**-1.3**
POPM				AML	AML		
POPM				AML	AML		
MTRZ	**Monterenzio**	**0.40**	**18**	P	**Pg**	**03 37 11.6**	**-0.7**
MTRZ	**Monterenzio**	**0.40**	**18**	⇑P	**Pg**	**03 37 11.6**	**-0.7**
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
SFI	**Santa Sofia**	**0.41**	**103**	P	**Pg**	**03 37 12.1**	**-0.3**
SFI				S	**Sg**	**03 37 18.5**	**+0.8**
SFI				AML	AML		
	comp=N,66750µm,1.0s						
SFI				AML	AML		
	comp=E,46050µm,1.1s						
SFI				AML	AML		
	comp=N,67100µm,1.0s						
SFI				AML	AML		
	comp=N,66750µm,1.0s						
SFI				AML	AML		
	comp=E,46000µm,1.1s						
SFI				AML	AML		
	comp=E,45650µm,1.1s						
SFI				AML	AML		
	comp=N,67150µm,1.0s						
SFI				AML	AML		
	comp=N,66800µm,1.0s						
SFI				AML	AML		
	comp=E,46050µm,0.9s						
SFI				AML	AML		
	comp=E,45650µm,0.9s						
ASQU	**Asqua**	**0.41**	**119**	P	**Pg**	**03 37 12.7**	**+0.3**
ASQU				S	**Sg**	**03 37 19.0**	**+1.2**
ASQU	**Asqua**	**0.41**	**119**	⇑P	**Pg**	**03 37 12.4**	**0.0**
ASQU				S	**Sg**	**03 37 18.9**	**+1.2**
ASQU				AML	AML		
	comp=E,31650µm,0.5s						
ASQU				AML	AML		
	comp=N,33700µm,0.5s						
ASQU				AML	AML		
	comp=E,31650µm,1.5s						
ZCCA	**Zocca**	**0.42**	**327**	Pg	**Pb**	**03 37 13.8**	**-0.7**
ZCCA	**Zocca**	**0.42**	**327**	P	**Pb**	**03 37 13.8**	**-0.7**
ZCCA				S	**Sb**	**03 37 22.0**	**+0.8**
ZCCA	**Zocca**	**0.42**	**327**	⇑P	**Pb**	**03 37 13.8**	**-0.7**
ZCCA				AML	AML		
	comp=E,49800µm,0.8s						
ZCCA				AML	AML		
	comp=N,73400µm,0.6s						
ZCCA				AML	AML		
	comp=E,52700µm,0.8s						
ZCCA				AML	AML		
	comp=N,73950µm,0.6s						
OSSC	**Osservatorio P**	**0.47**	**185**	Pg	**Pg**	**03 37 13.8**	**+0.2**
OSSC	**Osservatorio P**	**0.47**	**185**	P	**Pg**	**03 37 14.0**	**+0.3**
OSSC				S	**Sb**	**03 37 21.9**	**-0.6**
OSSC	**Osservatorio P**	**0.47**	**185**	⇑P	**Pg**	**03 37 13.9**	**+0.2**
OSSC				S	**Sb**	**03 37 22.0**	**-0.6**
OSSC				AML	AML		
OSSC				AML	AML		
	comp=N,78850µm,1.1s						
OSSC				AML	AML		
OSSC				AML	AML		
	comp=N,78800µm,1.0s						
OSSC				AML	AML		
	comp=E,77450µm,1.1s						
OSSC				AML	AML		
	comp=N,78800µm,1.0s						
OSSC				AML	AML		
	comp=E,77450µm,0.9s						
OSSC				AML	AML		
IMOL	**Imola, Italy**	**0.48**	**41**	P	**Pb**	**03 37 15.0**	**-0.5**
IMOL				S	**Sb**	**03 37 24.8**	**+2.0**
IMOL	**Imola, Italy**	**0.48**	**41**	⇑P	**Pb**	**03 37 14.7**	**-0.8**
IMOL				AML	AML		
	comp=E,89600µm,1.2s						
IMOL				AML	AML		
IMOL				AML	AML		
IMOL				AML	AML		
FAEN	**Faenza**	**0.51**	**55**	P	**Pg**	**03 37 13.3**	**-1.0**
BDI	**Bagni Di Lucca**	**0.51**	**278**	P	**Pg**	**03 37 14.6**	**+0.2**
BDI				S	**Sg**	**03 37 22.4**	**+1.3**
BDI	**Bagni Di Lucca**	**0.51**	**278**	⇑P	**Pg**	**03 37 14.5**	**+0.2**
BDI				S	**Sg**	**03 37 22.3**	**+1.3**
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
CSNT	**Castellina Chi**	**0.52**	**181**	P	**Pg**	**03 37 14.7**	**+0.1**
CSNT				S	**Sg**	**03 37 22.0**	**+0.6**
CSNT	**Castellina Chi**	**0.52**	**181**	⇑P	**Pg**	**03 37 14.7**	**+0.1**
CSNT				S	**Sb**	**03 37 23.5**	**-0.5**
CSNT				AML	AML		
	comp=E,49250µm,1.1s						
CSNT				AML	AML		
MAIM	**Mastiano**	**0.59**	**262**	P	**Pg**	**03 37 15.1**	**-0.8**
MAIM				S	**Sg**	**03 37 24.4**	**+0.9**
MAIM	**Mastiano**	**0.59**	**262**	⇑P	**Pg**	**03 37 15.9**	**0.0**
MAIM				S	**Sg**	**03 37 24.4**	**+0.9**
CARD	**Cardoso**	**0.59**	**273**	P	**Pg**	**03 37 15.7**	**-0.2**
CARD				S	**Sg**	**03 37 24.6**	**+1.0**
CARD	**Cardoso**	**0.59**	**273**	⇑P	**Pg**	**03 37 15.7**	**-0.2**
CARD				S	**Sg**	**03 37 24.6**	**+1.0**
CRE	**Caprese Michel**	**0.60**	**128**	P	**Pg**	**03 37 16.2**	**+0.1**
CRE				AML	AML		
	comp=N,37150µm,1.5s						
CRE				AML	AML		
	comp=E,23200µm,1.4s						
CRE				AML	AML		
	comp=N,37150µm,0.5s						
CRE				AML	AML		
	comp=E,23200µm,0.6s						
GSCL	**Gusciola**	**0.62**	**305**	P	**Pg**	**03 37 16.8**	**+0.3**
GSCL				S	**Sb**	**03 37 27.0**	**+0.1**
GSCL	**Gusciola**	**0.62**	**305**	P	**Pg**	**03 37 16.9**	**+0.3**
GSCL				S	**Sb**	**03 37 26.4**	**-0.5**
GSCL				AML	AML		
GSCL				AML	AML		
PII	**Pisa**	**0.62**	**244**	P	**Pg**	**03 37 16.6**	**0.0**
PII				S	**Sg**	**03 37 25.2**	**+0.6**
PII	**Pisa**	**0.62**	**244**	⇑P	**Pg**	**03 37 16.4**	**-0.1**
PII				S	**Sb**	**03 37 26.0**	**-0.8**
PII				AML	AML		
PII				AML	AML		
BRSN	**Barisano**	**0.63**	**63**	P	**Pb**	**03 37 17.4**	**-0.6**
BRSN				AML	AML		
	comp=E,73600µm,1.6s						
BRSN				AML	AML		
	comp=E,82300µm,1.6s						
BRSN				AML	AML		
	comp=N,78250µm,1.6s						
BRSN				AML	AML		
	comp=E,73600µm,0.4s						
BRSN				AML	AML		
	comp=E,82300µm,0.4s						
BRSN				AML	AML		
	comp=N,75700µm,0.7s						
BRSN				AML	AML		
	comp=N,78250µm,0.4s						
FIU	**Minerbio Fiu**	**0.66**	**12**	P	**Pb**	**03 37 18.0**	**-0.5**
FIU				AML	AML		
FIU				AML	AML		
	comp=N,78800µm,1.2s						
FIU				AML	AML		
FIU				AML	AML		
	comp=N,78800µm,0.8s						
SARO	**Sassorosso**	**0.67**	**286**	P	**Pg**	**03 37 17.5**	**0.0**
SARO				S	**Sb**	**03 37 28.2**	**-0.2**
SARO	**Sassorosso**	**0.67**	**286**	⇑P	**Pg**	**03 37 17.6**	**0.0**
SARO				S	**Sb**	**03 37 27.8**	**-0.6**
VLC	**Villacollemand**	**0.68**	**284**	P	**Pg**	**03 37 17.5**	**-0.1**
VLC				S	**Sb**	**03 37 28.2**	**-0.3**
VLC	**Villacollemand**	**0.68**	**284**	P	**Pg**	**03 37 17.3**	**-0.3**
VLC				S	**Sb**	**03 37 28.0**	**-0.5**
VLC				AML	AML		
	comp=E,69600µm,0.8s						
VLC				AML	AML		
	comp=N,94500µm,0.6s						
VLC				AML	AML		
	comp=N,93600µm,0.5s						
VLC				AML	AML		
	comp=E,70150µm,0.8s						
MODE	**Modena**	**0.68**	**338**	P	**Pb**	**03 37 19.8**	**+0.9**
CMPO	**Campotto Po**	**0.69**	**32**	P	**Pb**	**03 37 19.2**	**+0.3**
SSP9	**Sansepolcro**	**0.74**	**125**	⇓P	**Pg**	**03 37 19.0**	**+0.3**
SSP9				AML	AML		
	comp=E,31400µm,1.3s						
SSP9				AML	AML		
	comp=N,31100µm,1.6s						
SSP9				AML	AML		
	comp=N,31300µm,1.6s						
SSP9				AML	AML		
	comp=E,31450µm,1.3s						
SSP9				AML	AML		
	comp=N,31300µm,0.4s						
CPGN	**Carpegna, Ital**	**0.76**	**104**	P	**Pg**	**03 37 19.4**	**+0.2**
CPGN				AML	AML		
	comp=E,19950µm,1.0s						
CPGN				AML	AML		
	comp=N,16250µm,1.5s						
CPGN				AML	AML		
	comp=E,17900µm,0.9s						
CPGN				AML	AML		
	comp=N,18650µm,1.3s						
CPGN				AML	AML		
	comp=N,18650µm,0.7s						
CPGN				AML	AML		
	comp=N,16250µm,0.5s						
CPGN				AML	AML		
	comp=E,17900µm,1.1s						
PARC	**Parchiule**	**0.76**	**117**	P	**Pg**	**03 37 18.8**	**-0.4**
PARC				AML	AML		
	comp=E,14000µm,1.0s						
PARC				AML	AML		
	comp=E,14000µm,1.0s						
PARC				AML	AML		
	comp=N,13300µm,0.7s						
RAVA	**Ravarino**	**0.77**	**350**	P	**Pn**	**03 37 22.3**	**+0.3**
RAVA				S	**Sn**	**03 37 37.3**	**+3.4**
RAVA	**Ravarino**	**0.77**	**350**	P	**Pb**	**03 37 20.7**	**+0.4**
RAVA				AML	AML		
	comp=E,97200µm,0.9s						
RAVA				AML	AML		
FROS	**Frosini**	**0.79**	**188**	AML	AML		
	comp=N,46450µm,1.0s						
FROS				AML	AML		
	comp=E,70150µm,0.7s						
FROS				AML	AML		
	comp=E,70150µm,0.7s						
FROS				AML	AML		
	comp=N,46450µm,1.0s						
FROS				AML	AML		
	comp=E,70150µm,1.3s						
RSM	**Repubblica di**	**0.83**	**94**	P	**Pg**	**03 37 20.5**	**-0.1**
BADI	**Badiali**	**0.84**	**125**	⇑P	**Pg**	**03 37 20.1**	**-0.5**
BADI				AML	AML		
	comp=N,19900µm,1.2s						
BADI				AML	AML		
	comp=E,20700µm,0.8s						
BADI				AML	AML		
	comp=N,19950µm,1.2s						
EQUI	**Equi**	**0.84**	**282**	P	**Pg**	**03 37 20.2**	**-0.5**
EQUI				S	**Sb**	**03 37 32.6**	**-0.6**
EQUI	**Equi**	**0.84**	**282**	⇑P	**Pg**	**03 37 20.0**	**-0.7**
ATMC	**Monte Cedrone**	**0.85**	**130**	⇑P	**Pg**	**03 37 20.5**	**-0.4**
MAGO	**Bibbona**	**0.86**	**213**	AML	AML		
	comp=E,41550µm,0.8s						
MAGO				AML	AML		
	comp=N,31900µm,0.9s						
MAGO				AML	AML		
	comp=N,31900µm,1.1s						
CDCA	**Citt' di Caste**	**0.86**	**128**	P	**Pg**	**03 37 20.6**	**-0.6**
FIVI	**Fivizzano**	**0.88**	**286**	P	**Pg**	**03 37 21.6**	**+0.2**
FIVI				S	**Sb**	**03 37 34.2**	**-0.1**
CAVE	**Cavezzo**	**0.90**	**346**	P	**Pn**	**03 37 23.9**	**+0.2**
CAVE				S	**Sn**	**03 37 37.5**	**+0.6**
TRIF	**Trifonti**	**0.93**	**198**	AML	AML		
	comp=N,17000µm,1.2s						
TRIF				AML	AML		
	comp=N,17000µm,0.8s						
TRIF				AML	AML		
	comp=E,20300µm,0.8s						
SERM	**Sermide**	**1.01**	**360**	P	**Pn**	**03 37 26.3**	**+1.0**
SERM				S	**Sn**	**03 37 42.0**	**+2.1**
GRAM	**Graiana**	**1.01**	**300**	P	**Pg**	**03 37 24.2**	**+0.2**
GRAM				S	**Sn**	**03 37 39.9**	**-0.2**
PRMA	**PARMA**	**1.04**	**318**	Pg	**Pn**	**03 37 26.1**	**+0.3**
PRMA	**PARMA**	**1.04**	**318**	P	**Pn**	**03 37 26.9**	**+1.2**
PRMA				S	**Sn**	**03 37 44.5**	**+3.9**
PLMA	**Palmaria, Port**	**1.05**	**273**	P	**Pg**	**03 37 24.0**	**-0.6**
PLMA				S	**Sg**	**03 37 38.1**	**-0.1**
MURB	**Monte Urbino**	**1.15**	**129**		**Pg**	**03 37 25.9**	**-0.8**
MCIV	**Monte Civitell**	**1.25**	**167**	AML	AML		
	comp=N,4375µm,1.3s						
MCIV				AML	AML		
	comp=E,3670µm,1.6s						
MCIV				AML	AML		
	comp=N,4375µm,0.7s						
MCIV				AML	AML		
	comp=E,3670µm,0.4s						
MSSA	**Maissana**	**1.32**	**285**		**Pn**	**03 37 28.6**	**-1.1**
MSSA	**Maissana**	**1.32**	**285**	P	**Pn**	**03 37 28.4**	**-1.2**
MSSA				S	**Sg**	**03 37 45.4**	**-1.7**
TEOL	**Teolo**	**1.39**	**11**		**Pn**	**03 37 30.2**	**-0.3**
CELB	**S.Piero in Cam**	**1.48**	**213**	P	**Pn**	**03 37 30.0**	**-1.8**
BOB	**Bobbio (Coli)**	**1.54**	**301**	P	**Pg**	**03 37 34.4**	**+0.4**
BOB				S	**Sg**	**03 37 58.7**	**+4.9**
GORR	**Gorreto**	**1.56**	**294**	P	**Pg**	**03 37 35.0**	**+0.5**
MAON	**Monte Argentar**	**1.57**	**185**	P	**Pn**	**03 37 31.8**	**-1.2**
MAON				S	**Sg**	**03 37 57.4**	**+2.4**
VENL	**Venezia Lido**	**1.61**	**28**	AML	AML		
	comp=N,16850µm,1.2s						

VENL				AML	AML		
	comp=E,18800µm,0.8s						
VENL				AML	AML		
	comp=E,18800µm,1.2s						
FDMO	Fiordimonte	1.62	126	Pn	Pn	03 37 32.7	-0.9
CESX	Cesi	1.67	146	Pn	Pn	03 37 33.4	-1.0
SALO	Salr	1.71	341	Pn	Pn	03 37 35.6	+0.6
BALD	Monte Baldo	1.72	349	P	Pn	03 37 35.7	+0.5
BALD				S	Sg	03 37 59.4	-0.5
GENL	Genova Univers	1.73	285	P	Pg	03 37 37.3	-0.3
GENL				S	Sg	03 37 59.4	-0.5
GUMA	Gualdo di Mace	1.75	122	Pn	Pn	03 37 35.8	+0.3
RNCA	Ronca, Sant'Ol	1.75	287	P	Pb	03 37 37.5	+0.4
RNCA				S	Sb	03 37 59.5	+0.1
NRCA	Norcia	1.76	131	Pn	Pn	03 37 35.0	-0.7
DOSS	Dosso del Somm	1.89	358	P	Pn	03 37 37.1	-0.4
DOSS				S	Sb	03 38 03.9	+0.5
CTI	Castel Tesino	2.07	7	Pn	Pn	03 37 39.3	-0.6
CTI	Castel Tesino	2.07	7	P	Pn	03 37 39.3	-0.6
MDI	Monti di Nese	2.11	328	P	Pn	03 37 41.3	+0.9
MDI				S	Sb	03 38 09.9	+0.2
CAMP	Campotosto	2.12	133	Pn	Pn	03 37 40.6	-0.1
QLNO	Quiliano	2.15	280	P	Pn	03 37 40.0	-1.0
QLNO				S	Sb	03 38 12.0	+1.2
PGF	Pioggiola	2.22	230	ePn	Pn	03 37 40.6	-1.4
PGF				eSn	Sn	03 38 06.0	-3.7
	comp=E,477nm,0.4s						
PGF	Pioggiola	2.22	230	AML	AML		
	comp=N,2400µm,0.8s						
PGF				AML	AML		
	comp=E,2245µm,0.8s						
AQU	L'Aquila	2.25	136	P	Pb	03 37 44.3	-1.3
SMPL	Sampolo	2.41	219	AML	AML		
	comp=E,1260µm,1.2s						
SMPL				AML	AML		
	comp=E,1260µm,0.8s						
SMPL				AML	AML		
	comp=N,1455µm,1.2s						
SMPL				AML	AML		
	comp=N,1455µm,0.8s						
TRI	Trieste	2.45	45	Pn	Pn	03 37 44.0	-1.0
TRI	Trieste	2.45	45	P	Pn	03 37 44.0	-1.0
STAL	STALIGIAL	2.47	23	Pn	Pn	03 37 44.7	-0.7
SKDS	Skadanscina	2.48	50	i Pn	Pn	03 37 44.3	-1.2
SKDS				e		03 37 54.0	
SKDS				eSn	Sn	03 38 15.5	-0.6
SKDS				IAML		03 38 35.8	
	comp=Z,1µm,0.8s						
SABO	M.te Sabotino	2.57	39	Pn	Pn	03 37 46.2	-0.5
FUORN	Ofenpass-Fuorn	2.72	345	Pn	Pn	03 37 50.0	+0.9
AJAC	Base Areonaval	2.78	223	AML	AML		
	comp=N,2630µm,1.3s						
AJAC				AML	AML		
	comp=E,2240µm,0.9s						
AJAC				AML	AML		
	comp=E,2240µm,1.1s						
AJAC				AML	AML		
	comp=N,2630µm,0.7s						
SBF	Sospel	2.79	269	ePn	Pn	03 37 48.3	-1.6
SBF				eSn	Sn	03 38 21.9	-2.0
	comp=N,2µm,0.5s						
CADS	Cadrg	2.82	37	i Pn	Pn	03 37 49.4	-0.8
CADS				i		03 37 59.3	
TUE	Stuetta	2.83	332	Pn	Pn	03 37 51.5	+0.9
ABTA	Abfaltersbach	2.88	17		Pn	03 37 51.6	+0.6
ABTA					Sn	03 38 26.5	+0.4
ABTA	Abfaltersbach	2.88	17	ePn	Pn	03 37 51.6	+0.6
	comp=N,117nm,0.4s,SNR=80						
ABTA				eSn	Sn	03 38 26.5	+0.4
	comp=N,312nm,0.7s						
DAVOX	Davos/Dischmat	2.96	341	Pn	Pn	03 37 54.1	+1.8
	comp=N,31nm,0.3s,baz=160,slow=15,SNR=193						
DAVOX				Lg	Lg	03 38 37.6	
	comp=N,50nm,0.3s,baz=338,slow=22,SNR=6.1						
	comp=N,412nm,0.9s						
FETA	Feichten	3.05	353		Pn	03 37 54.9	+1.4
FETA					Sb	03 38 34.7	-2.2
FETA	Feichten	3.05	353	i Pn	Pn	03 37 54.9	+1.4
	comp=N,9.1nm,0.2s,SNR=138						
FETA				eSn	Sb	03 38 34.7	-2.2
	comp=N,640nm,1.4s						
LJU	Ljubljana	3.07	47	AML	AML		
	comp=N,17450µm,0.9s						
LJU				AML	AML		
	comp=E,17950µm,1.0s						
LJU				AML	AML		
	comp=N,17450µm,1.1s						
MYKA	Terra Mystica	3.11	31		Pn	03 37 54.4	+0.2
MYKA					Sn	03 38 31.0	-0.7
MYKA	Terra Mystica	3.11	31	i Pn	Pn	03 37 54.4	+0.2
	comp=N,6.2nm,0.4s,SNR=24						
MYKA				eSn	Sn	03 38 31.0	-0.7
	comp=N,0.1nm,0.1s						
BOJS	Bojanci	3.19	60	i Pn	Pn	03 37 54.9	-0.4
BOJS				i		03 38 05.2	
BOJS				eSn	Sn	03 38 31.7	-2.0
BOJS				i		03 38 40.5	
BOJS				IAML		03 38 56.6	
	comp=Z,2µm,1.4s						
BOJS	Bojanci	3.19	60	AML	AML		
	comp=E,5455µm,1.4s						
BOJS				AML	AML		
	comp=N,5590µm,1.3s						
BOJS				AML	AML		
	comp=N,5590µm,0.7s						
SQTA	Sankt Quirin	3.23	359		Pn	03 37 58.3	+2.4
SQTA					Sb	03 38 39.3	-2.6
SQTA	Sankt Quirin	3.23	359	i Pn	Pn	03 37 58.3	+2.4
	comp=N,233nm,0.3s,SNR=167						
SQTA				eSn	Sb	03 38 39.3	-2.6
	comp=N,82nm,0.3s						
WTTA	Wattenberg	3.28	4		Pn	03 37 58.5	+1.9
WTTA					Sn	03 38 39.6	+3.6
WTTA	Wattenberg	3.28	4	i Pn	Pn	03 37 58.5	+1.9
	comp=N,51nm,0.3s,SNR=66						
WTTA				eSn	Sn	03 38 39.6	+3.6
	comp=N,9.1nm,0.2s						
WTTA	Wattenberg	3.28	4	P	Pn	03 37 58.5	+1.9
WTTA						03 38 39.6	
MBDF	Montbardon	3.33	284	ePn	Pn	03 37 56.3	-1.0
MBDF				eSn	Sn	03 38 35.8	-1.4
	comp=N,1µm,0.7s						
WATA	Walderalm	3.34	3		Pn	03 37 59.6	+2.1
WATA					Sn	03 38 40.3	+2.7
WATA	Walderalm	3.34	3	i Pn	Pn	03 37 59.6	+2.1
	comp=N,77nm,0.2s,SNR=209						
WATA				eSn	Sn	03 38 40.3	+2.7
	comp=N,638nm,0.7s						
WATA	Walderalm	3.34	3	P	Pn	03 37 59.6	+2.1
WATA						03 38 40.3	
MOTA	Moosalm	3.35	358		Pn	03 37 59.5	+1.9
MOTA					Sn	03 38 40.3	+2.5
MOTA	Moosalm	3.35	358	i Pn	Pn	03 37 59.5	+1.9
	comp=N,34nm,0.3s,SNR=137						
MOTA				eSn	Sn	03 38 40.3	+2.5
	comp=N,373nm,0.8s						
KBA	Koelnbreinsper	3.40	24		Pn	03 37 59.0	+0.7
KBA					Sn	03 38 38.9	-0.1
KBA	Koelnbreinsper	3.40	24	i Pn	Pn	03 37 59.0	+0.7
	comp=N,32nm,0.3s,SNR=75						
KBA				eSn	Sn	03 38 38.9	-0.1
	comp=N,105nm,0.5s						
KBA	Koelnbreinsper	3.40	24	P	Pn	03 37 59.0	+0.7
KBA						03 38 38.9	
OBKA	Obir	3.40	41		Pn	03 37 57.6	-0.7
OBKA					Sn	03 38 42.8	+3.8
OBKA	Obir	3.40	41	i Pn	Pn	03 37 57.6	-0.7
	comp=N,0.1nm,0.1s,SNR=17						
OBKA				eSn	Sn	03 38 42.8	+3.8
	comp=N,2µm,1.0s						
ZUGS	Zugspitze, Sch	3.43	356	ePn	Pn	03 38 00.4	+1.6
DAVA	Damuels	3.44	344		Pn	03 38 01.3	+2.5
DAVA					Sn	03 38 42.4	+2.5
DAVA	Damuels	3.44	344	i Pn	Pn	03 38 01.3	+2.5
	comp=N,70nm,0.6s,SNR=103						
DAVA				eSn	Sn	03 38 42.4	+2.5
	comp=N,433nm,0.6s						
BNI	Bardonecchia	3.47	289	Pn	Pn	03 37 59.4	+0.2
BNI	Bardonecchia	3.47	289	P	Pn	03 37 59.4	+0.2
OBER	Oberstdorf	3.48	349	ePn	Pn	03 38 01.6	+2.2
PART	Garmisch-Parte	3.50	358	ePn	Pn	03 38 01.3	+1.7
RETA	Reutte	3.51	354		Pn	03 38 01.7	+2.0
RETA					Sn	03 38 44.7	+3.1
RETA	Reutte	3.51	354	i Pn	Pn	03 38 01.7	+2.0
	comp=N,85nm,0.3s,SNR=135						
RETA				eSn	Sn	03 38 44.7	+3.1
	comp=N,67nm,0.3s						
LMR	La Mourre	3.54	261	ePn	Pn	03 37 57.9	-2.1
LMR				eSn	Sn	03 38 38.0	-4.2
	comp=N,93nm,0.3s						
LESA	Schwarzleotal	3.56	15		Pn	03 38 01.5	+1.1
LESA					Sn	03 38 45.1	+2.2
LESA	Schwarzleotal	3.56	15	i Pn	Pn	03 38 01.5	+1.1
	comp=N,29nm,0.2s,SNR=163						
LESA				eSn	Sn	03 38 45.1	+2.2
	comp=N,50nm,0.5s						
LPG	La Plagne	3.57	296	ePn	Pn	03 38 01.3	+0.6
LPG				eSn	Sn	03 38 41.4	-2.0
	comp=N,1µm,0.6s						
LPL	La Plagne	3.59	297	ePn	Pn	03 38 01.7	+0.7
LPL				eSn	Sn	03 38 41.8	-2.0
	comp=N,830nm,0.6s						
SENIN	Lac Senin/Sane	3.69	311	Pn	Pn	03 38 03.4	+1.1
SOKA	Soboth	3.76	43		Pn	03 38 02.9	-0.2
SOKA					Sn	03 38 48.2	+0.5
SOKA	Soboth	3.76	43	i Pn	Pn	03 38 02.9	-0.2
	comp=N,57nm,1.1s,SNR=38						
SOKA				eSn	Sn	03 38 48.2	+0.5
	comp=N,28nm,0.3s						
UBR	Ueberruh	3.78	348	ePn	Pn	03 38 04.9	+1.5
UBR				eSn	Sn	03 38 48.4	+0.3
PAOL	Paolisi	3.82	140	Pn	Pn	03 38 04.1	+0.1
BE1	Monatshausen	3.92	359	ePn	Pn	03 38 06.5	+1.2
SGRT	San Giovanni R	3.96	123	Pn	Pn	03 38 06.3	+0.4
ORIF	Oris-en-Rattie	3.99	285	ePn	Pn	03 38 06.8	+0.5
ORIF				eSn	Sn	03 38 51.5	-1.9
	comp=N,2µm,0.9s						
BIOA	Bad Ischl, Aus	4.04	23		Pn	03 38 07.6	+0.6
BIOA					Sn	03 38 56.8	+2.2
BIOA	Bad Ischl, Aus	4.04	23	i Pn	Pn	03 38 07.6	+0.6
	comp=N,9.6nm,0.2s,SNR=30						
BIOA				eSn	Sn	03 38 56.8	+2.2
	comp=N,341nm,0.7s						
SMRF	Simiane la Rot	4.13	272	ePn	Pn	03 38 07.7	-0.5
SMRF				eSn	Sn	03 38 53.5	-3.4
	comp=N,638nm,0.6s						
FUR	Furstenfeldbru	4.17	360	ePn	Pn	03 38 09.2	+0.5
KW1	Garching a.d.	4.22	12	ePn	Pn	03 38 10.3	+0.9
BLY	Banja Luka	4.29	78	⇑P	Pn	03 38 12.3	+2.0
BLY				⇑S	Sb	03 39 07.1	-5.2
MOA	Molln	4.37	27		Pn	03 38 12.3	+0.7
MOA					Sn	03 39 03.8	+1.0
MOA	Molln	4.37	27	i Pn	Pn	03 38 12.3	+0.7
	comp=N,3.5nm,0.2s,SNR=30						
MOA				eSn	Sn	03 39 03.8	+1.0
	comp=N,4.5nm,0.2s						
ARSA	Arzberg	4.40	41		Sn	03 39 03.8	+0.3
ARSA	Arzberg	4.40	41	Pn	Pn	03 38 11.3	-0.6
ARSA	Arzberg	4.40	41	i Pn	Pn	03 38 12.1	+0.2
	comp=N,7.6nm,0.2s,SNR=35						
ARSA				eSn	Sn	03 39 03.8	+0.3
	comp=N,61nm,0.7s						
CABF	La Chapelle	4.51	307	ePn	Pn	03 38 14.7	+1.2
CABF				eSn	Sn	03 39 04.7	-1.6
	comp=N,1µm,1.0s						
BEHE	Becsehely	4.59	55	Pn	Pn	03 38 15.3	+0.8
ACER	Acerenza	4.70	131	Pn	Pn	03 38 17.8	+1.7
VSL	Villasalto	4.72	198	Pn	Pn	03 38 16.8	+0.5
NORI	Noerdlinger Ri	4.75	355	ePn	Pn	03 38 16.2	-0.5
BFO	Black Forest	4.80	336	Pn	Pn	03 38 17.8	+0.4
BFO	Black Forest	4.80	336	P	Pn	03 38 17.8	+0.4
BFO	Black Forest	4.80	336	ePn	Pn	03 38 18.1	+0.7
VIVF	Saint-Julien-l	4.82	283	ePn	Pn	03 38 16.3	-1.4
VIVF				eSn	Sn	03 39 10.7	-3.2
	comp=N,34nm,0.4s						
HINF	Hinteralfeld	4.92	322	ePn	Pn	03 38 19.7	+0.6
HINF				eSn	Sn	03 39 14.4	-1.9
	comp=N,645nm,0.5s						
SSB	Saint Sauveur	4.99	287	Pn	Pn	03 38 19.3	-0.7
SSB	Saint Sauveur	4.99	287	P	Pn	03 38 19.3	-0.7
STU	Stuttgart	4.99	344	Pn	Pn	03 38 19.9	-0.1
STU	Stuttgart	4.99	344	P	Pn	03 38 19.9	-0.1
STU	Stuttgart	4.99	344	ePn	Pn	03 38 20.1	0.0
CONA	Conrad Observa	5.06	37	i Pn	Pn	03 38 21.0	0.0
	comp=N,0.9nm,0.1s,SNR=30						
CONA				i Sn	Sn	03 39 18.7	-1.0
	comp=N,15nm,0.3s						
RONA	Rosalia, Austr	5.09	42		Pn	03 38 21.1	-0.3
RONA					Sn	03 39 20.5	0.0
RONA	Rosalia, Austr	5.09	42	i Pn	Pn	03 38 21.1	-0.3
	comp=N,53nm,1.0s,SNR=29						
RONA				eSn	Sn	03 39 20.5	0.0
	comp=N,42nm,0.8s						
ECH	Echery	5.11	327	Pn	Pn	03 38 21.8	+0.2
ECH	Echery	5.11	327	P	Pn	03 38 21.8	+0.2
GEC2	GERESS Array S	5.13	18	Pn	Pn	03 38 21.7	-0.3
GEC2	GERESS Array S	5.13	18	ePn	Pn	03 38 21.7	-0.3
GERES	GERESS Array B	5.13	18	Pn	Pn	03 38 21.9	0.0
	comp=N,1.4nm,0.3s,baz=192,slow=13,SNR=85						
GERES				Sn	Sn	03 39 19.1	-2.4
	comp=N,0.7nm,0.3s,baz=197,slow=16,SNR=6.0						
	comp=N,19nm,0.4s						
MATE	Matera	5.22	128	⇑P	Pn	03 38 25.1	+2.0
CDF	Champ du Feu	5.22	329	ePn	Pn	03 38 23.6	+0.3
CDF				eSn	Sn	03 39 21.9	-2.0
	comp=N,897nm,0.8s						
CUC	Castrocucco	5.23	138	Pn	Pn	03 38 24.5	+1.2
CKRC	Cesky Krumlov	5.25	22	eP	Pn	03 38 23.4	-0.2
CKRC				eS	Sn	03 39 23.2	-1.3
CKRC	Cesky Krumlov	5.25	22	ePN	Pn	03 38 23.4	-0.2
CKRC				eSN	Sn	03 39 23.2	-1.3
WET	Wettzell	5.26	11	ePn	Pn	03 38 23.2	-0.6
HAU	Haudompre	5.29	321	ePn	Pn	03 38 25.1	+1.0
HAU				eSn	Sn	03 39 23.5	-1.9
	comp=N,485nm,0.4s						
LASF	Ste Croix	5.37	273	ePn	Pn	03 38 22.7	-2.5
LASF				eSn	Sn	03 39 22.5	-4.8
	comp=N,136nm,0.7s						
KHC	Kasperske Hory	5.37	16	Pn	Pn	03 38 24.8	-0.5
KHC	Kasperske Hory	5.37	16	deP	Pn	03 38 25.3	+0.1
KHC				pmax	pmax		
	comp=Z,171nm,1.7s						
KHC	Kasperske Hory	5.37	16	ePN	Pn	03 38 24.9	-0.3
KHC				eSN	Sn	03 39 26.2	-1.2
KHC				eSG	Sg	03 39 51.9	-5.0
	comp=Z,192nm,0.8s						
KHC				ex	x	03 40 07.5	
KHC	Kasperske Hory	5.37	16	P	Pn	03 38 24.7	-0.5
	comp=Z,1.1nmcomp=Z,79nm,1.0s						
BRY	Bratogost	5.38	99	ePn	Pn	03 38 26.1	+0.6
BRY				i Sn	Sn	03 39 28.2	+0.3
MPLH	Magyarpolny	5.41	52	P	Pn	03 38 24.3	-1.4
	comp=Z,2.7nmcomp=Z,182nm,1.1s						
HCY	Herceg Novi	5.48	104	ePn	Pn	03 38 27.5	+0.8
HCY				i Sn	Sn	03 39 30.5	+0.4
MORH	Mrgy, Hungar	5.65	64	P	Pn	03 38 29.0	0.0
	comp=Z,0.5nmcomp=Z,22nm,1.2s						
GRA1	Grafenberg Arr	5.70	359	Pn	Pn	03 38 29.2	-0.5
GRF	Grafenberg Arr	5.70	359	P	Pn	03 38 29.2	-0.5
GRF	Grafenberg Arr	5.70	359	ePn	Pn	03 38 28.7	-1.0
NKME	Niksic	5.71	100	ePn	Pn	03 38 30.6	+0.7
NKME				eSn	Sn	03 39 36.2	+0.4
CEME	Cevo	5.75	102	⇓iPn	Pn	03 38 31.2	+0.7
CEME				eSn	Sn	03 39 37.0	+0.3
ZVC	Zvikov	5.80	19	ePN	Pn	03 38 30.9	-0.1
ROTZ	Rotzenmuhle	5.81	6	ePn	Pn	03 38 30.4	-0.8
BUM	Brajici-Budva	5.81	104	ePn	Pn	03 38 32.0	+0.7
BUM				i Sn	Sn	03 39 38.5	+0.3
SMF	Signal de Mont	5.89	299	ePn	Pn	03 38 32.7	+0.4
SMF				eSn	Sn	03 39 37.1	-3.0
	comp=Z,392nm,0.6s						
PLE	Pljevlja	5.91	94	ePn	Pn	03 38 33.4	+0.7
PLE				i Sn	Sn	03 39 40.9	+0.2
PAGF	Fort de Pagny	5.97	322	ePn	Pn	03 38 34.6	+1.1
PAGF				eSn	Sn	03 39 38.4	-3.8
	comp=Z,1µm,1.0s						
MANZ	Manzenberg	6.02	5	ePn	Pn	03 38 32.7	-1.4
PDG	Podgorica	6.02	102	Pn	Pn	03 38 35.4	+1.3
PDG	Podgorica	6.02	102	⇑P	Pn	03 38 36.5	+2.4
PDG				⇑S	Sn	03 39 50.1	+6.7
PDG	Podgorica	6.02	102	ePn	Pn	03 38 34.9	+0.8
PDG				i Sn	Sn	03 39 43.6	+0.3
MODS	Modra-Piesok	6.03	41	eP	Pn	03 38 33.8	-0.5
MODS				e		03 39 40.7	
MODS	Modra-Piesok	6.03	41	ePN	Pn	03 38 33.8	-0.5
MODS				eSN	Sn	03 39 40.7	-2.9
TREC	Trest	6.03	27	eP	Pn	03 38 33.4	-0.9
TREC	Trest	6.03	27	ePN	Pn	03 38 33.4	-0.9
DRME	Dracevica, Mon	6.05	105	ePn	Pn	03 38 35.2	+0.7
DRME				eSn	Sn	03 39 44.3	+0.2
SFTF	Sexfontaines	6.05	316	ePn	Pn	03 38 35.0	+0.4
	baz=131						
SFTF				eSn	Sn	03 39 40.7	-3.5
	comp=Z,801nm,1.0s						
KOME	Kolasin	6.09	98	ePn	Pn	03 38 35.9	+0.7
KOME				eSn	Sn	03 39 45.4	+0.1
LOR	Lormes	6.16	305	ePn	Pn	03 38 36.4	+0.4
LOR				eSn	Sn	03 39 44.2	-2.5
	comp=Z,423nm,0.5s						
KRUC	Moravsky	6.17	33	ePN	Pn	03 38 35.7	-0.4
KRUC				eSN	Sn	03 39 44.7	-2.2
ULC	Ulcinj	6.17	106	ePn	Pn	03 38 37.0	+0.8
ULC				i Sn	Sn	03 39 47.3	+0.2
SMOL	Smolenice	6.20	41	eP	Pn	03 38 36.7	+0.1
SMOL				e		03 39 46.9	
SRO	Srobarova	6.21	50	eP	Pn	03 38 38.3	+1.7
SRO	Srobarova	6.21	50	ePN	Pn	03 38 38.3	+1.7
MEZF	Maizieres J'vi	6.25	318	ePn	Pn	03 38 38.1	+0.9
MEZF				eSn	Sn	03 39 45.4	-3.6
	comp=Z,175nm,0.5s						
AVF	Avril sur Loir	6.25	299	ePn	Pn	03 38 37.0	-0.3
AVF				eSn	Sn	03 39 45.4	-3.7
	comp=Z,127nm,0.7s						
SSF	Saint Saulge	6.27	302	ePn	Pn	03 38 37.8	+0.2
SSF				eSn	Sn	03 39 45.2	-4.4
	comp=Z,67nm,0.4s						
SAVF	Savonnieres en	6.29	319	ePn	Pn	03 38 38.7	+0.8
	baz=134						
TIP	Timpagrande	6.32	138	⇑P	Pn	03 38 39.7	+1.4
IVA	Berane	6.36	97	ePn	Pn	03 38 39.6	+0.8
IVA				i Sn	Sn	03 39 51.8	0.0
PRU	Pruhonice	6.39	19	eP	Pn	03 38 38.8	-0.4
PRU				e		03 39 48.2	
PRU	Pruhonice	6.39	19	ePN	Pn	03 38 38.8	-0.4
PRU				eSN	Sn	03 39 48.2	-4.2
VRAC	Vranov	6.44	33	Pn	Pn	03 38 39.8	-0.1
	comp=Z,1.1nm,0.3s,baz=225,slow=14,SNR=8.5						
VRAC				Sn	Sn	03 39 50.9	-2.8
	comp=Z,2.5nm,0.3s,baz=225,slow=13,SNR=4.0						
VRAC				LR	LR	03 41 38.3	
	comp=Z,715nm,21.7s,baz=236,slow=42						
	comp=Z,4.6nm,0.4s						
VRAC	Vranov	6.44	33	⇑P	Pn	03 38 39.4	-0.4
VRAC				⇑S	Sn	03 39 56.0	+2.2
VRAC	Vranov	6.44	33	ePN	Pn	03 38 39.5	-0.4
VRAC				eSN	Sn	03 39 54.9	+1.2
PRA	Prague	6.44	18	eP	Pn	03 38 40.0	+0.1
PRA	Prague	6.44	18	ePN	Pn	03 38 40.0	+0.1
PVY	Plav	6.47	100	ePn	Pn	03 38 41.3	+0.8
PVY				i Sn	Sn	03 39 54.6	-0.1
BGF	Bois d'Agland	6.49	296	ePn	Pn	03 38 40.5	-0.1
BGF				eSn	Sn	03 39 52.8	-2.1
	comp=Z,202nm,0.5s						
TNS	Taunus Mts	6.53	344	ePn	Pn	03 38 41.4	+0.3
JAVC	Velka Javorina	6.56	40	ePN	Pn	03 38 41.7	+0.1
MTLF	Montolieu	6.62	267	ePn	Pn	03 38 41.6	-0.8
MTLF				eSn	Sn	03 39 53.3	-4.8
	comp=Z,100nm,0.7s						
NAST	IGS Nastaetten	6.63	340	ePn	Pn	03 38 43.3	+0.9
NAST				eSn	Sn	03 39 56.5	-1.9
	comp=Z,99nm,0.7s						
MAHO	Mahon	6.65	234	Pn	Pn	03 38 42.9	+0.1
MOX	Moxa	6.66	2	ePn	Pn	03 38 41.4	-1.4
MOX				eSn	Sn	03 39 56.7	-2.3
CAF	Calviac	6.67	281	ePn	Pn	03 38 42.0	-1.1
CAF				eSn	Sn	03 39 55.7	-3.8
	comp=Z,45nm,0.6s						
WLF	Walferdange	6.68	330	Pn	Pn	03 38 43.9	+0.8
WLF	Walferdange	6.68	330	P	Pn	03 38 43.9	+0.8
WLF	Walferdange	6.68	330	ePn	Pn	03 38 44.6	+1.5
WLF	Walferdange	6.68	330	dP	Pn	03 38 44.5	+1.4
CEL	Celeste	6.70	147	Pn	Pn	03 38 44.7	+1.2
CEL	Celeste	6.70	147	P	Pn	03 38 48.2	+4.7
	comp=Z,0.1nmcomp=Z,46nm,0.9s						
HSKC	Hora Svate Kat	6.77	12	ePN	Pn	03 38 44.2	-0.2
BGG	Burgeitz	6.77	338	ePn	Pn	03 38 45.7	+1.3
BGG				eSn	Sn	03 40 00.7	-1.2
	comp=Z,65nm,1.1s						
RICC	Richard	6.82	15	ePN	Pn	03 38 45.8	+0.7
TCF	Toulx Ste Croi	6.82	293	ePn	Pn	03 38 45.9	+0.7
TCF				eSn	Sn	03 39 58.4	-4.8
	comp=Z,108nm,0.6s						
KOE	Koeppel	6.87	341	ePn	Pn	03 38 47.1	+1.2
HYF	Humbligny	6.90	301	ePn	Pn	03 38 46.9	+0.8
HYF				eSn	Sn	03 40 03.0	-1.9
PVCC	Panska Ves	6.90	18	eP	Pn	03 38 45.7	-0.5
PVCC	Panska Ves	6.90	18	ePN	Pn	03 38 45.7	-0.5
HILG	Hillesheim	7.04	335	ePn	Pn	03 38 49.5	+1.4
HILG				eSn	Sn	03 40 07.3	-1.1
	comp=Z,129nm,0.7s						
CORI	Orista	7.08	257	Pn	Pn	03 38 47.5	-1.1
RJF	Les Rejaudoux	7.10	284	ePn	Pn	03 38 47.5	-1.4
KRLC	Kraliky	7.14	30	eP	Pn	03 38 49.3	-0.2
KRLC	Kraliky	7.14	30	ePN	Pn	03 38 49.3	-0.2
PSZ	Piszkesteto	7.16	54	Pn	Pn	03 38 49.2	-0.6
PSZ	Piszkesteto	7.16	54	⇑P	Pn	03 38 51.1	+1.2
PSZ	Piszkesteto	7.16	54	P	Pn	03 38 51.0	+1.2
MORC	Moravsky Berou	7.19	34	Pn	Pn	03 38 49.9	-0.3
MORC	Moravsky Berou	7.19	34	⇑P	Pn	03 38 51.2	+0.9
MORC	Moravsky Berou	7.19	34	ePN	Pn	03 38 50.5	+0.3
MORC	Moravsky Berou	7.19	34	P	Pn	03 38 51.1	+0.9
DPC	Dobruska-Polom	7.22	27	eP	Pn	03 38 49.5	-1.1
DPC	Dobruska-Polom	7.22	27	ePN	Pn	03 38 49.5	-1.1
DPC	Dobruska-Polom	7.22	27	P	Pn	03 38 48.7	-1.9
	comp=Z,0.6nmcomp=Z,20nm,1.2s						
UPC	Upice	7.26	25	eP	Pn	03 38 50.1	-1.0
UPC	Upice	7.26	25	ePN	Pn	03 38 50.1	-1.0
STB	Steinbach	7.26	337	ePn	Pn	03 38 52.0	+0.9
STB				eSn	Sn	03 40 11.7	-2.2
	comp=Z,136nm,0.7s						
BHOU	Houvegnez	7.31	332	dP	Pn	03 38 51.6	-0.2
BHOU				dS	Sn	03 40 13.9	-1.2
CHVC	Chvalec	7.34	24	eP	Pn	03 38 51.6	-0.7
CHVC	Chvalec	7.34	24	ePN	Pn	03 38 51.6	-0.7
OSTC	Ostas	7.36	25	eP	Pn	03 38 51.8	-0.8
OSTC	Ostas	7.36	25	ePN	Pn	03 38 51.8	-0.8
CLL	Collm	7.41	8	Pn	Pn	03 38 52.6	-0.5
CLL	Collm	7.41	8	i P	Pn	03 38 52.5	-0.6
CLL	Collm	7.41	8	P	Pn	03 38 52.4	-0.6
	comp=Z,0.9nmcomp=Z,127nm,1.0s						
CLL	Collm	7.41	8	i Pn	Pn	03 38 52.5	-0.6
CLL				i x	x	03 38 59.7	
CLL				ex	x	03 39 12.0	
CLL				e(Pg)	Pg	03 39 26.0	-0.3
CLL				eSn	Sn	03 40 07.0	-10
CLL				i x	x	03 40 17.9	
CLL				ex	x	03 40 29.0	
CLL				AMS	AMS	03 41 00.0	
CLL				eSg	Sg	03 41 02.0	-0.1
	comp=Z,242nm,1.0s						
RCHB	Rochefort	7.42	328	dP	Pn	03 38 54.4	+1.0
RCHB				dS	Sn	03 40 14.5	-3.4
CEST	Esterri de Car	7.46	263	Pn	Pn	03 38 54.2	+0.2
BTNL	Ternell	7.47	334	dP	Pn	03 38 54.5	+0.5
BTNL				dS	Sn	03 40 13.1	-5.9
CLF	Chambon-Foret	7.47	306	Pn	Pn	03 38 54.8	+0.8
HOBG	Hohbusch	7.49	340	ePn	Pn	03 38 55.3	+1.1
HOBG				eSn	Sn	03 40 18.2	-1.2
	comp=Z,172nm,0.5s						
MDVR	Moldovita	7.50	80	⇑P	Pn	03 38 56.4	+1.9
DREG	Dreilaegerbach	7.50	335	eSn	Sn	03 40 17.9	-1.9
BNS	Bensberg	7.51	340	ePn	Pn	03 38 55.3	+0.8
BZS	Buzias	7.51	74	⇑P	Pn	03 38 57.0	+2.4
BZS	Buzias	7.51	74	P	Pn	03 38 57.0	+2.4
MEM	Membach	7.53	333	dP	Pn	03 38 55.8	+1.1
MEM				dx	x	03 39 34.9	
BOVS	Bovan	7.54	89	⇑P	Pn	03 38 56.4	+1.4
GIVF	Givet	7.54	326	ePn	Pn	03 38 57.7	+2.8
GIVF				eSn	Sn	03 40 17.0	-3.7
	comp=Z,384nm,0.9s						
OHR	Ohrid	7.58	109	i Pn	Pn	03 38 58.1	+2.5
OHR				i Sn	Sn	03 40 25.1	+3.1
BCLA	Clavier	7.61	330	dP	Pn	03 38 57.7	+1.8
BCLA				dS	Sn	03 40 22.5	0.0
LFF	La Frestale	7.61	281	ePn	Pn	03 38 55.4	-0.6
DOU	Dourbes	7.63	325	dP	Pn	03 38 55.5	-0.6
DOU				dS	Sn	03 40 21.1	-1.8
LANS	Liptovska Anna	7.63	45	eP	Pn	03 38 56.8	+0.6
LANS				e		03 40 23.4	

LANS	Liptovska Anna	7.63	45	ePN	Pn	03 38 56.8	+0.6
LANS				eSN	Sn	03 40 23.4	+0.4
KSP	Ksiaz	7.64	25	P	Pn	03 38 54.7	-1.6
	comp=Z,0.6nmcomp=Z,27nm,0.7s						
BSTI	Sart Tilman	7.65	331	dP	Pn	03 38 58.0	+1.5
BSTI				dS	Sn	03 40 18.8	-4.7
BGES	Gesves	7.66	329	dP	Pn	03 38 58.7	+2.1
SKO	Skopje	7.71	102	i Pn	Pn	03 38 59.6	+2.3
BMRD	Maredsous	7.72	327	dP	Pn	03 38 59.3	+1.9
BMRD				dS	Sn	03 40 25.0	-0.1
BAIF	Baives	7.76	324	ePn	Pn	03 38 59.4	+1.4
BAIF				eSn	Sn	03 40 22.6	-3.5
	comp=Z,204nm,0.9s						
KECS	Kecovo	7.79	52	eP	Pn	03 39 01.9	+3.5
KECS				e		03 40 27.2	
KECS	Kecovo	7.79	52	ePN	Pn	03 39 01.9	+3.5
KECS				eSN	Sn	03 40 27.2	+0.4
BEBN	Eben Emael	7.80	333	dP	Pn	03 38 59.9	+1.4
BEBN				dS	Sn	03 40 27.2	+0.3
LAUG	Laupendahl	7.92	340	ePn	Pn	03 39 00.8	+0.6
HERR	Herculane	8.01	80	⇑P	Pn	03 39 02.9	+1.6
EPF	Esparros	8.03	267	ePn	Pn	03 38 59.0	-2.7
EPF				eSn	Sn	03 40 25.5	-7.3
	comp=Z,27nm,0.6s						
NIE	Niedzica	8.22	46	P	Pn	03 39 04.7	+0.3
	comp=Z,9.1nm,1.9s						
BLKB	Belogradchik	8.24	89	⇑P	Pn	03 39 07.9	+3.3
UCC	Uccle	8.27	328	dP	Pn	03 39 06.7	+1.7
GZR	Gura Zlata	8.30	76	⇑P	Pn	03 39 06.8	+1.4
GZR	Gura Zlata	8.30	76	P	Pn	03 39 06.8	+1.4
KEST	Kesra	8.39	191	Pn	Pn	03 39 11.8	+5.1
	comp=Z,2.6nm,0.3s,baz=331,slow=4.2,SNR=30						
KEST				LR	LR	03 41 31.5	
	comp=Z,232nm,20.4s,baz=5.2,slow=32						
DEV	Deva	8.45	73	⇑P	Pn	03 39 10.2	+2.7
DEV	Deva	8.45	73	P	Pn	03 39 10.1	+2.7
MFF	Saint Martin d	8.48	292	ePn	Pn	03 39 07.7	-0.1
MFF				eSn	Sn	03 40 38.8	-5.0
	comp=Z,28nm,0.6s						
DRGR		8.50	67	⇓P	Pn	03 39 09.9	+1.7
DRGR		8.50	67	P	Pn	03 39 09.9	+1.7
ETSF	Etsaut	8.70	267	ePn	Pn	03 39 10.8	-0.1
ETSF				eSn	Sn	03 40 42.4	-7.0
	comp=Z,28nm,0.7s						
STHS	Stebnicka Huta	8.72	48	eP	Pn	03 39 12.4	+1.2
STHS	Stebnicka Huta	8.72	48	ePN	Pn	03 39 12.4	+1.2
VAY	Valandovo	8.72	104	i Pn	Pn	03 39 12.4	+1.2
MARR	Marisel-Cluj	8.75	68	⇑P	Pn	03 39 12.9	+1.3
VALD	Valchedram	8.78	88	eP	Pn	03 39 13.7	+1.7
BLSH	Balsha	8.79	93	eP	Pn	03 39 14.5	+2.3
VTS	Vitosha	8.81	95	eP	Pn	03 39 14.4	+1.8
KKB	Krupnik	8.94	100	eP	Pn	03 39 16.2	+1.9
PLNA	Plana	8.98	96	eP	Pn	03 39 18.1	+3.2
LOT	Lotru	9.00	76	⇑P	Pn	03 39 17.6	+2.5
MPEP	Malo Peshtene	9.04	90	eP	Pn	03 39 18.2	+2.6
CJR	Cluj-Napoca	9.08	68	⇓P	Pn	03 39 17.9	+1.8
CJR	Cluj-Napoca	9.08	68	P	Pn	03 39 17.9	+1.8
SJPF	Ste Jean	9.14	269	ePn	Pn	03 39 14.4	-2.5
SJPF				eSn	Sn	03 40 52.8	-7.3
	comp=Z,16nm,0.7s						
LDF	La Druitiere	9.14	304	ePn	Pn	03 39 16.9	-0.1
LDF				eSn	Sn	03 40 55.2	-4.9
	comp=Z,62nm,0.7s						
LIT	Litokhoron	9.19	111	Pn	Pn	03 39 19.0	+1.4
LIT	Litokhoron	9.19	111	P	Pn	03 39 19.0	+1.4
FLN	La Foliniere	9.43	304	ePn	Pn	03 39 21.0	+0.1
FLN				eSn	Sn	03 41 01.2	-6.0
	comp=Z,46nm,0.7s						
GRR	Gorron	9.50	302	ePn	Pn	03 39 21.5	-0.4
GRR				eSn	Sn	03 41 02.8	-6.2
	comp=Z,27nm,0.4s						
PGB	Panagyurishte	9.51	95	eP	Pn	03 39 24.7	+2.6
MEZ	Mezhgor'ye	9.59	58	P	Pn	03 39 22.6	-0.5
ARR	Arges	9.60	77	⇑P	Pn	03 39 25.3	+2.0
PLVB	Pleven	9.67	89	⇑P	Pn	03 39 26.1	+1.9
SHIU	Shidnytsya	9.81	54	P	Pn	03 39 27.0	+0.9
RAKU	Rahkiv	9.82	61	P	Pn	03 39 27.3	+1.1
PLD	Plovdiv	10.02	96	eP	Pn	03 39 30.9	+2.0
RZN	Rozhen	10.14	98	eP	Pn	03 39 31.8	+1.0
DOPR	Dopca	10.18	74	⇑P	Pn	03 39 33.9	+2.7
BURAR	Bucovina Array	10.37	65	Pn	Pn	03 39 35.9	+2.0
BURAR	Bucovina Array	10.37	65	⇑P	Pn	03 39 35.6	+1.8
BURAR	Bucovina Array	10.37	65	P	Pn	03 39 35.6	+1.8
KSV	Kosov	10.48	61	P	Pn	03 39 36.3	+1.0
SGMF	Saint Gilles	10.52	299	ePn	Pn	03 39 35.0	-0.7
MLR	Muntele Rosu	10.53	77	Pn	Pn	03 39 35.7	-0.4
	comp=Z,0.2nm,0.3s,baz=282,slow=3.6,SNR=7.1						
MLR				LR	LR	03 43 46.1	
	comp=Z,966nm,19.8s,baz=270,slow=38						
	comp=Z,1.7nm,0.6s						
MLR	Muntele Rosu	10.53	77	Pn	Pn	03 39 37.9	+1.8
MLR	Muntele Rosu	10.53	77	⇑P	Pn	03 39 38.8	+2.8
TURR	Turia	10.62	74	⇑P	Pn	03 39 39.1	+1.9
DIM	Dimitrovgrad	10.64	96	eP	Pn	03 39 38.5	+1.1
ELND	Elena	10.65	91	⇑P	Pn	03 39 39.2	+1.6
RDO	Rodhopi	10.88	100	Pn	Pn	03 39 41.7	+0.9
ISR	Istrita	10.94	79	P	Pn	03 39 42.2	+0.6
	comp=Z,28nm,1.0s						
ROSF	Rostrenen	11.00	298	ePn	Pn	03 39 40.9	-1.4
PLOR	Plostina	11.04	75	⇑P	Pn	03 39 45.0	+1.9
PLOR	Plostina	11.04	75	P	Pn	03 39 44.9	+1.9
VRI	Vrincioaia	11.10	75	⇑P	Pn	03 39 45.4	+1.6
VRI	Vrincioaia	11.10	75	P	Pn	03 39 45.4	+1.6
TESR	Tescani	11.11	72	⇑P	Pn	03 39 46.2	+2.3
CART	Cartagena	11.30	240	Pn	Pn	03 39 47.2	+0.7
ESBB	Sonseca Array	12.17	254	Pn	Pn	03 39 59.4	+0.9
ESDC	Sonseca Array	12.17	254	Pn	Pn	03 39 57.2	-1.3
	comp=Z,0.2nm,0.3s,baz=62,slow=12,SNR=23						
ESDC				LR	LR	03 44 28.7	
	comp=Z,407nm,20.9s,baz=73,slow=37						
	comp=Z,14nm,0.9s						
ESDC	Sonseca Array	12.17	254	Pn	Pn	03 39 58.6	+0.1
RNPP1	Kostyukhnivka	12.20	48	P	Pn	03 39 57.5	-1.2
PAB	San Pablo	12.50	255	Pn	Pn	03 40 02.7	-0.3
PAB	San Pablo	12.50	255	P	Pn	03 40 02.7	-0.3
AK19	Malin Array Si	13.74	54	P	Pn	03 40 19.8	0.0
AK20	Malin Array Si	13.75	54	P	Pn	03 40 19.9	0.0
AK17	Malin Array Si	13.76	55	P	Pn	03 40 19.2	-0.8
AK14	Malin Array Si	13.77	55	P	Pn	03 40 20.1	0.0
AK18	Malin Array Si	13.78	55	P	Pn	03 40 19.9	-0.4
AK16	Malin Array Si	13.78	55	P	Pn	03 40 20.0	-0.3
AK21	Malin Array Si	13.78	54	P	Pn	03 40 20.0	-0.3
AK07	Malin Array Si	13.79	55	P	Pn	03 40 20.1	-0.4
AK22	Malin Array Si	13.79	54	P	Pn	03 40 20.4	-0.1
AK12	Malin Array Si	13.80	55	P	Pn	03 40 20.2	-0.4
MVO	Moncorvo	13.80	264	eLR	LR	03 45 21.1	
MVO				i IAMs_20	IAMs_20	03 46 12.5	
	comp=Z,584nm,18.0s						
AK06	Malin Array Si	13.80	55	P	Pn	03 40 20.7	+0.1
AK05	Malin Array Si	13.82	55	P	Pn	03 40 20.6	-0.2
AK11	Malin Array Si	13.82	55	P	Pn	03 40 20.6	-0.3
AK02	Malin Array Si	13.83	55	P	Pn	03 40 20.6	-0.5
AK04	Malin Array Si	13.84	55	P	Pn	03 40 21.0	-0.1
AK10	Malin Array Si	13.84	55	P	Pn	03 40 20.7	-0.4
KIEV	Kiev	13.85	55	⇑P	Pn	03 40 21.8	+0.5
KIEV	Kiev	13.85	55	P	Pn	03 40 21.8	+0.5
KIEV	Kiev	13.85	55	P	Pn	03 40 21.1	-0.2
	comp=Z,82nm,2.6s						
AK01	Malin Array Si	13.85	55	P	Pn	03 40 21.0	-0.3
AK08	Malin Array Si	13.86	55	P	Pn	03 40 21.0	-0.3
AKASG	Malin Array Be	13.86	55	Pn	Pn	03 40 20.7	-0.7
	comp=Z,0.3nm,0.3s,baz=247,slow=12,SNR=11						
	comp=Z,8.3nm,0.9s						
AKASG	Malin Array Be	13.86	55		Pn	03 40 20.5	-0.9
AKASG	Malin Array Be	13.86	55	i P	Pn	03 40 21.3	-0.1
AKASG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AKBB	Malin Array Si	13.86	55	Pn	Pn	03 40 21.6	+0.2
AKBB	Malin Array Si	13.86	55	⇑iP	Pn	03 40 21.9	+0.5
AKBB	Malin Array Si	13.86	55	P	Pn	03 40 21.1	-0.3
AK03	Malin Array Si	13.87	55	P	Pn	03 40 21.3	-0.2
POLO	Lamas de Olo	14.29	266	eP	Pn	03 40 29.1	+1.7
MTE	Manteigas	14.42	262	etx	tx	03 40 44.4	
MTE				eLR	LR	03 45 56.1	
MTE				i IAMs_20	IAMs_20	03 46 39.3	
	comp=Z,343nm,16.0s						
PGAV	Gavieira, Arco	14.47	269	etx	tx	03 40 43.8	
PGAV				eLR	LR	03 45 25.4	
PGAV				i IAMs_20	IAMs_20	03 46 37.3	
	comp=Z,560nm,18.0s						
PVIS	Viseu	14.56	264	eP	Pn	03 40 32.3	+1.1
PCBR	Castelo Branco	14.58	260	eP	Pn	03 40 30.5	-0.8
EKA	Eskdalemuir Ar	14.67	326	Pn	Pn	03 40 33.3	+0.8
	baz=135,slow=14						
	comp=Z,1.1nm,0.4s						
PMRV	Marv??o	14.68	258	eP	Pn	03 40 32.9	+0.1
PMRV				eLR	LR	03 45 01.5	
PMRV				i IAMs_20	IAMs_20	03 46 12.4	
	comp=Z,375nm,20.0s						
NACGM	Naroch	14.81	37	eP	Pn	03 40 34.8	+0.4
DSB	Dublin	14.87	315	Pn	Pn	03 40 36.7	+1.5
PBAR	Barrancos	14.99	253	eP	P	03 40 40.4	-2.1
PBAR				etx	tx	03 40 52.1	
MNK	Minsk	15.05	40	i P	Pn	03 40 34.7	-2.9
	comp=E,23nm,1.1s						
MNK				i P	Pn	03 40 34.7	-2.9
	comp=N,22nm,1.0s						
MNK				i P	Pn	03 40 34.7	-2.9
	comp=Z,18nm,1.0s,baz=233						
MNK				i PP	P	03 40 42.7	-0.4
MNK				i PPP	PPP	03 40 50.4	
MNK				i S	Sn	03 43 20.7	-3.8
MNK				i SS	SnSn	03 43 34.6	-2.4
MNK				i SSS	SSS	03 43 47.2	
MNK				i LQ	LQ	03 45 08.4	
MNK				i LR	LR	03 46 05.1	
MNK				i LRM	MLR	03 47 40.0	
	comp=Z,317nm,12.5s						
MNK				i LRM	MLR	03 47 41.1	
	comp=N,280nm,13.2s						
MNK				i LRM	MLR	03 47 46.1	
	comp=E,389nm,15.2s						
MNK	Minsk	15.05	40	i P	Pn	03 40 34.7	-2.9
MNK				i S	Sn	03 43 20.7	-3.8
MNK				pmax	pmax		
	comp=Z,18nm,1.0s						
MNK				pmax	pmax		
	comp=E,23nm,1.1s						
MNK				pmax	pmax		
	comp=N,22nm,1.0s						
MNK				MLR	MLR		
	comp=Z,317nm,13.0s						
MNK				MLR	MLR		
	comp=N,280nm,13.0s						
MNK				MLR	MLR		
	comp=E,389nm,15.0s						
PESTR	Estremoz	15.06	257	etx	tx	03 40 47.7	
PSARD	Sardoal	15.16	260	eP	P	03 40 44.7	+0.3
PARRA	Arraiolos	15.40	257	eP	Pn	03 40 42.9	+0.6
PMTG	Montargil	15.42	258	eP	P	03 40 46.8	-0.4
EVO	Evora	15.50	256	eP	P	03 40 47.4	-0.8
PBEJ	Beja	15.63	254	eP	Pn	03 40 47.5	+2.1
PVAQ	Vaqueiros	15.84	252	eLR	LR	03 46 36.9	
PVAQ				i IAMs_20	IAMs_20	03 47 44.4	
	comp=E,404nm,16.0s						
ELL	Elmali	15.90	111	Pn	Pn	03 40 48.1	-0.9
ELL	Elmali	15.90	111	P	Pn	03 40 48.1	-0.9
ELL				pmax	pmax		
	comp=Z,29nm,1.1s						
HFS	Hagfors	16.23	4	Pn	Pn	03 40 53.7	+0.8
	comp=Z,13nm,1.1s,baz=183,slow=19,SNR=3.2						
HFS				LR	LR	03 47 10.7	
	comp=Z,226nm,20.6s,baz=192,slow=37						
MDT	Midelt	16.70	233	Pn	P	03 41 03.2	+1.5
	comp=Z,0.1nm,0.3s,baz=55,slow=13,SNR=11						
MDT				LR	LR	03 46 32.2	
	comp=Z,232nm,21.7s,baz=41,slow=34						
MD01	Midelt array s	16.75	234		P	03 41 01.9	-0.3
MD31	MD31	16.75	234		Pn	03 41 01.0	+1.1
NC602	NORSAR Array S	16.77	0	Pn	Pn	03 41 00.0	+0.2
NB2	NORSAR Subarra	17.07	360	P	P	03 41 07.2	+1.7
	comp=Z,168nm,2.0s,baz=180,slow=11						
NB2	NORSAR Subarra	17.07	360	P	P	03 41 07.2	+1.7
	baz=180,slow=11						
NOA	NORSAR Array B	17.07	360	P	P	03 41 06.9	+1.4
	comp=Z,11nm,1.0s,baz=180,slow=11,SNR=11						
NOA				LR	LR	03 48 14.0	
	comp=Z,221nm,20.7s,baz=180,slow=39						
NB201	NORSAR Array S	17.08	360	P	P	03 41 06.4	+0.8
NC405	NORSAR Array S	17.15	1	P	P	03 41 06.8	+0.5
BR131	Keskin Array S	17.17	97	P	P	03 41 06.2	-0.6
BR131	Keskin Array S	17.17	97	⇑eP	P	03 41 07.4	+0.6
BRTR	Keskin Array B	17.17	97	P	P	03 41 08.2	+1.5
	comp=Z,1.8nm,0.8s,baz=284,slow=10,SNR=9.2						
BRTR				LR	LR	03 48 32.1	
	comp=Z,275nm,18.7s,baz=298,slow=40						
BRTR	Keskin Array B	17.17	97	P	P	03 41 07.0	+0.2
BRTR	Keskin Array B	17.17	97	P	P	03 41 07.0	+0.2
VSU	Vasula	17.34	28	deP	P	03 41 08.8	+0.4
VSU				pmax	pmax		
	comp=Z,69nm,0.9s						
KIRS	Kirsehir-Merke	17.59	98	⇑P	P	03 41 11.8	+0.4
TOKA	Tokat	19.00	92	P	P	03 41 27.1	+0.2
BNN	Bunyan	19.08	97	P	Pn	03 41 30.4	+1.7
FINES	FINESS Array B	19.55	21	P	P	03 41 33.0	+0.4
	comp=Z,0.4nm,0.3s,baz=224,slow=5.3,SNR=12						
FINES				LR	LR	03 49 50.7	
	comp=Z,587nm,20.0s,baz=220,slow=39						
	comp=Z,7.9nm,0.8s						
FINES	FINESS Array B	19.55	21	P	P	03 41 32.3	-0.3
FINES	FINESS Array B	19.55	21	P	P	03 41 33.0	+0.4
PUL	Pulkovo	19.56	30	⇑eP	Pn	03 41 33.9	-0.2
PUL				pmax	pmax		
	comp=Z,45nm,0.5s						
OBN	Obninsk	19.69	47	P	Pn	03 41 36.8	+1.2
	comp=Z,9.6nm,0.4s,baz=213,slow=11,SNR=4.5						
OBN				LR	LR	03 51 01.7	
	comp=Z,370nm,18.7s,baz=198,slow=42						
OBN	Obninsk	19.69	47	P	P	03 41 33.4	-0.8
OBN	Obninsk	19.69	47	⇑eP	Pn	03 41 35.1	-0.5
OBN				pmax	pmax		
	comp=Z,43nm,1.3s						
OBN				MLR	MLR		
	comp=Z,402nm,15.0s						
VSR	Storozhevoye	20.05	59	eP	P	03 41 36.9	-1.3
VSR				pmax	pmax		
	comp=Z,20nm,1.0s						
VORR	Voronezh	20.16	58	eP	P	03 41 38.5	-0.9
VORR				pmax	pmax		
	comp=Z,50nm,0.4s						
LPSR	Galich'ya Gora	20.19	55	eP	Pn	03 41 42.0	+0.4
LPSR				pmax	pmax		
	comp=Z,40nm,1.5s						
SOC	Sochi	20.48	81	eP	P	03 41 43.0	0.0
SOC				eS	Sn	03 45 35.2	-0.9
SOC				pmax	pmax		
	comp=Z,26nm,1.0s						
SOC				MLR	MLR		
	comp=Z,246nm,16.0s						
MOS	Moscow	20.50	46	eP	P	03 41 43.1	+0.1
MOS				pmax	pmax		
	comp=Z,56nm,0.9s						
ARPR	Arapgir-MALATY	20.78	94	P	Pn	03 41 47.5	-1.2
ARPR				IAmb	IAmb	03 42 08.0	
	comp=Z,42nm,1.2s						
VRH	Novokhopyorsk	21.63	60	i P	P	03 41 56.2	+0.9
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
TAM	Tamanrasset	21.68	195	P	P	03 41 56.8	+0.6
TAM	Tamanrasset	21.68	195	P	P	03 41 56.8	+0.6
TAM				pmax	pmax		
	comp=Z,28nm,1.1s						
MMAI	Mount Meron Ar	21.74	112	LR	LR	03 53 19.2	
	comp=Z,110nm,19.6s,baz=304,slow=45						
KOPT	Kop Dagi	22.00	90	P	P	03 42 00.9	+1.2
KIV	Kislovodsk	22.52	79	P	P	03 42 05.7	+0.6
KIV				IAmb	IAmb	03 42 20.9	
	comp=Z,44nm,1.1s						
KIV	Kislovodsk	22.52	79	eP	P	03 42 05.4	+0.4
KIV				pmax	pmax		
	comp=Z,25nm,1.1s						
KIV				MLR	MLR		
	comp=Z,74nm,14.0s						
SHA1	Shidzhatmaz	22.55	80	⇑eP	P	03 42 09.2	+3.8
NEUR	Neytrino	22.68	81	⇓eP	P	03 42 11.2	+4.4
NEUR				pmax	pmax		
	comp=Z,11nm,1.2s						
KBZ	Khabaz	22.72	80	P	P	03 42 10.3	+3.3
	comp=Z,5.1nm,0.9s,baz=298,slow=6.8,SNR=9.4						
KBZ				LR	LR	03 54 16.6	
	comp=Z,136nm,18.4s,baz=320,slow=46						
KBZ	Khabaz	22.72	80	⇓eP	P	03 42 11.2	+4.2
KBZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GURO	Guroymak-BITLI	23.65	93	P	P	03 42 17.5	+0.8
KLMR	Klimovskoe	23.81	35	eP	P	03 42 16.4	-1.5
KLMR				e		03 46 00.5	
KLMR				S	S	03 46 33.1	-0.6
KLMR				pmax	pmax		
	comp=Z,89nm,1.3s						
BELG	Belogornoye	25.40	58	⇑eP	P	03 42 33.5	+1.0
BELG				pmax	pmax		
	comp=Z,11nm,0.9s						
MAK	Makhachkala	26.16	80	eP	P	03 42 36.5	-3.0
MAK				eS	S	03 47 07.8	-3.8
MAK				pmax	pmax		
	comp=Z,127nm,1.0s						
MAK				MLR	MLR		
	comp=Z,446nm,17.0s						
APA	Apatity	26.39	19	eP	P	03 42 37.4	-3.9
APA				MLR	MLR		
	comp=Z,2µm,5.0s						
ARCES	ARCESS Array B	26.61	11	P	P	03 42 44.8	+1.4
	comp=Z,2.6nm,0.9s,baz=196,slow=9.4,SNR=4.8						
ARCES				LR	LR	03 52 36.4	
	comp=Z,315nm,20.0s,baz=197,slow=35						
	comp=Z,2.6nm,0.9s						
ARCES	ARCESS Array B	26.61	11	P	P	03 42 43.7	+0.3
ARCES	ARCESS Array B	26.61	11	P	P	03 42 43.7	+0.3
ARCES				pmax	pmax		
	comp=Z,21nm,1.4s						
KIRV	Kirov	27.49	44	LR	LR	03 55 36.7	
	comp=Z,306nm,18.3s,baz=245,slow=40						
KIRV	Kirov	27.49	44	ceP	P	03 42 52.6	+1.3
TORD	Torodi Ar. Bea	31.83	198	P	P	03 43 29.6	-0.6
	comp=Z,4.1nm,0.3s,baz=12,slow=11,SNR=1.9						
	comp=Z,4.1nm,0.3s						
TORD	Torodi Ar. Bea	31.83	198	P	P	03 43 30.2	+0.1
TORD				IAmb	IAmb	03 43 31.3	
	comp=Z,14nm,1.4s						
AKTO	Aktyubinsk	31.94	62	LR	LR	03 56 45.4	
	comp=Z,297nm,18.2s,baz=31,slow=37						
ARTI	Arti	31.94	50	LR	LR	03 58 42.1	
	comp=Z,230nm,18.5s,baz=262,slow=41						
ARTI	Arti	31.94	50	P	P	03 43 30.1	-0.7
ARTI				IAmb	IAmb	03 43 34.5	
	comp=Z,18nm,1.3s						
ARTI	Arti	31.94	50	d iP	P	03 43 30.3	-0.5
ARTI				S	S	03 48 41.6	-0.6
ARTI				SS	SnSn	03 50 25.4	-4.8
ARTI				pmax	pmax		
	comp=Z,13nm,1.2s						
AB31	Akbulak array	33.35	63	P	P	03 43 42.8	-0.4
ABKAR	Akbulak array	33.35	63	P	P	03 43 43.2	+0.1
SPITS	Spitsbergen Ar	34.35	2	LR	LR	03 59 55.0	
	comp=Z,92nm,18.7s,baz=186,slow=40						
BORK	Borovoye	39.10	55	P	P	03 44 32.8	+0.5
BORK	Borovoye	39.10	55	⇓iP	P	03 44 33.7	+1.4
BORK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BVAR	Borovoye Array	39.14	55	P	P	03 44 33.8	+1.1
	comp=Z,2.0nm,0.6s,baz=303,slow=6.5,SNR=12						
BVAR				PP	PP	03 46 01.7	-0.5
	comp=Z,1.3nm,0.7s,baz=280,slow=8.6,SNR=3.6						
BVAR				LR	LR	04 00 36.3	
	comp=Z,215nm,19.7s,baz=275,slow=36						
	comp=Z,2.0nm,0.6s						
DBIC	Dimbokro	39.78	206	P	P	03 44 35.9	-2.5
	comp=Z,7.1nm,1.0s,baz=56,slow=12,SNR=4.6						
DBIC				LR	LR	04 02 06.5	
	comp=Z,432nm,18.3s,baz=33,slow=38						
	comp=Z,7.1nm,1.0s						
DBIC	Dimbokro	39.78	206	P	P	03 44 35.9	-2.5
KK31	Karatay Array	42.11	70	P	P	03 44 58.3	+0.9
KK31	Karatay Array	42.11	70	P	P	03 44 58.3	+0.9
KK31				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KKAR	Karatay Array	42.11	70	P	P	03 44 58.4	+1.0
KKAR	Karatay Array	42.11	70	P	P	03 44 58.4	+1.0
CHGR	Chuyangaron	43.01	76	P	P	03 45 06.2	+1.3
CHGR				IAmb	IAmb	03 45 10.8	
	comp=Z,13nm,0.8s						
CHGR	Chuyangaron	43.01	76	⇓iP	P	03 45 06.5	+1.7
CHGR				pmax	pmax		
	comp=Z,13nm,0.7s						
KURBB	Kurchatov Arra	44.64	57	P	P	03 45 18.7	+1.0
	comp=Z,2.8nm,0.7s,baz=305,slow=8.2,SNR=16						
KURBB				LR	LR	04 03 52.4	
	comp=Z,89nm,21.0s,baz=170,slow=36						
	comp=Z,2.8nm,0.7s						
KURK	Kurchatov	44.67	57	P	P	03 45 18.0	+0.1
KURK	Kurchatov	44.67	57	⇑iP	P	03 45 19.2	+1.4
KURK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NRIK	Noril'sk	44.93	29	LR	LR	04 06 13.7	
	comp=Z,152nm,20.0s,baz=292,slow=39						
NRIK	Noril'sk	44.93	29	ceP	P	03 45 21.1	+1.4
NRIK				pmax	pmax		
	comp=Z,9.0nm,1.5s						
AAK	Ala-Archa	44.98	69	LR	LR	04 06 29.9	
	comp=Z,137nm,18.8s,baz=308,slow=39						
AAK	Ala-Archa	44.98	69	⇑eP	P	03 45 22.7	+2.0
AAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
MANEM	Manem	45.29	76	P	P	03 45 25.0	+1.6
MANEM				IAmb	IAmb	03 45 41.2	
	comp=Z,9.5nm,0.8s						
ZAA0	Zalesovo Array	47.21	51	P	P	03 45 37.1	-0.7
ZALV	Zalesovo Beam	47.21	51	P	P	03 45 36.7	-1.1
	comp=Z,0.8nm,0.6s,baz=294,slow=6.7,SNR=5.1						
ZALV				PP	PP	03 47 26.3	-2.1
	comp=Z,1.5nm,0.8s,baz=282,slow=8.8,SNR=3.9						
ZALV				LR	LR	04 09 03.4	
	comp=Z,148nm,18.6s,baz=284,slow=41						
	comp=Z,0.8nm,0.6s						
ZALV	Zalesovo Beam	47.21	51	P	P	03 45 37.2	-0.6
ZALV	Zalesovo Beam	47.21	51	P	P	03 45 37.2	-0.6
KSH	Kashi	47.35	72	P	P	03 45 40.7	+1.4
KSH				pmax	pmax		
	comp=Z,6.0nm,1.4s						
TARG	Taragay, Kyrgy	47.59	68	P	P	03 45 41.7	+0.2
TARG				IAmb	IAmb	03 46 09.2	
	comp=Z,5.8nm,0.8s						
TARG	Taragay, Kyrgy	47.59	68	P	P	03 45 41.7	+0.2
TARG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MBAR	Mbarara	47.68	153	LR	LR	04 07 15.0	
	comp=Z,129nm,18.4s,baz=342,slow=38						
MAKZ	Makanchi	48.16	60	P	P	03 45 46.4	+1.0
MAKZ	Makanchi	48.16	60	P	P	03 45 46.4	+1.0
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MK31	Makanchi Array	48.36	60	ceP	P	03 45 49.2	+2.3
MKAR	Makanchi Array	48.36	60	P	P	03 45 47.0	0.0
	comp=Z,3.4nm,0.6s,baz=288,slow=4.7,SNR=22						
MKAR				LR	LR	04 08 08.1	
	comp=Z,193nm,19.2s,baz=292,slow=39						
	comp=Z,3.4nm,0.6s						
MKAR	Makanchi Array	48.36	60	P	P	03 45 47.1	+0.2
MKAR	Makanchi Array	48.36	60	P	P	03 45 47.0	0.0
SCHQ	Schefferville	49.42	312	LR	LR	04 05 15.0	
	comp=Z,141nm,18.5s,baz=99,slow=34						
DGZ	Jazzator, Alta	50.30	55	⇑eP	P	03 46 04.3	+2.4
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
RES	Resolute Bay	52.13	341	LR	LR	04 08 51.4	
	comp=Z,78nm,19.7s,baz=19,slow=36						
WMQ	Urumqi	53.10	62	eP	P	03 46 22.9	+0.1
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
KNGR	Kungurtug, Tuv	55.68	50	⇑eP	P	03 46 42.8	+1.3
KNGR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TIXI	Tiksi	56.58	20	LR	LR	04 14 23.5	
	comp=Z,56nm,18.4s,baz=214,slow=40						
TIXI	Tiksi	56.58	20	⇓eP	P	03 46 50.2	+2.8
TIXI				pmax	pmax		
	comp=Z,11nm,1.8s						
FCC	Fort Churchill	60.59	325	P	P	03 47 18.3	+2.7
FCC				IAmb	IAmb	03 47 49.7	
	comp=Z,10nm,1.5s						
FCC	Fort Churchill	60.59	325	P	P	03 47 18.3	+2.7
FCC				pmax	pmax		
	comp=Z,10.0nm,1.5s						
SADO	Sadowa	61.19	306	LR	LR	04 10 42.5	
	comp=Z,93nm,19.4s,baz=110,slow=33						
GOMU	GeErMu	61.77	66	P	P	03 47 23.1	-1.4
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SONM	Songino Array	62.08	49	P	P	03 47 26.4	+0.4
	comp=Z,1.6nm,0.8s,baz=282,slow=8.0,SNR=9.4						
	comp=Z,1.6nm,0.8s						
SONM	Songino Array	62.08	49	P	P	03 47 25.5	-0.5

SONM				IAmb	IAmb	03 47 52.4	
	comp=Z,7.2nm,1.4s						
ULN	**Ulaanbaatar**	**62.42**	**49**	⇓*e*P	**P**	**03 47 30.4**	**+2.1**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.5s						
GTA	**Gaotai**	**63.12**	**60**	*e*P	**P**	**03 47 37.1**	**+4.0**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GTA				LR	LR		
	comp=Z,170nm,13.8s						
YAK	**Yakutsk**	**63.34**	**28**	⇑*e*P	**P**	**03 47 37.4**	**+3.4**
YAK				pmax	pmax		
	comp=Z,17nm,0.6s						
YKAW3	**Yellowknife Wh**	**65.33**	**336**	IAmb	IAmb	03 47 53.4	
	comp=Z,5.6nm,0.9s						
YKAW1	**Yellowknife Wh**	**65.36**	**336**	IAmb	IAmb	03 47 54.8	
	comp=Z,5.3nm,0.9s						
YKA	**Yellowknife Ar**	**65.38**	**336**	P	**P**	**03 47 47.4**	**0.0**
	comp=Z,2.9nm,1.0s,baz=37,slow=6.1,SNR=21						
YKA				LR	LR	04 15 50.2	
	comp=Z,75nm,21.5s,baz=5.0,slow=36						
	comp=Z,2.9nm,1.0s						
YKA	**Yellowknife Ar**	**65.38**	**336**	P	**P**	**03 47 46.1**	**-1.2**
P53A	**Whipple**	**65.66**	**302**	P	**P**	**03 47 50.4**	**+0.8**
D25K	**Kavik River**	**65.80**	**351**	IAmb	IAmb	03 47 56.1	
	comp=Z,9.3nm,1.0s						
SHL	**Shillong**	**66.19**	**77**	P	**P**	**03 47 51.8**	**-1.6**
SHL				IAmb	IAmb	03 47 57.5	
	comp=Z,9.4nm,1.1s						
SHL	**Shillong**	**66.19**	**77**	P	**P**	**03 47 51.8**	**-1.6**
SHL				pmax	pmax		
	comp=Z,9.0nm,1.1s						
E27K	**Coleen River**	**66.30**	**349**	IAmb	IAmb	03 47 58.8	
	comp=Z,8.7nm,1.2s						
F28M	**Old Crow**	**66.60**	**348**	IAmb	IAmb	03 47 60.0	
	comp=Z,11nm,1.4s						
ULM	**Lac du Bonnet**	**66.80**	**318**	P	**P**	**03 47 56.0**	**-0.7**
	comp=Z,8.9nm,0.9s,baz=64,slow=5.4,SNR=5.6						
	comp=Z,8.9nm,0.9s						
ULM	**Lac du Bonnet**	**66.80**	**318**	P	**P**	**03 47 55.8**	**-0.9**
ULM	**Lac du Bonnet**	**66.80**	**318**	*i* P	**P**	**03 47 59.3**	**+2.6**
E25K	**Arctic Village**	**66.86**	**351**	IAmb	IAmb	03 48 03.8	
	comp=Z,7.5nm,1.1s						
F26K	**Sheenjek River**	**67.10**	**350**	IAmb	IAmb	03 48 04.8	
	comp=Z,8.4nm,0.9s						
D20K	**Etivluk River**	**67.25**	**355**	IAmb	IAmb	03 48 05.0	
	comp=Z,14nm,1.2s						
D19K	**Kuna River**	**67.55**	**356**	IAmb	IAmb	03 48 06.8	
	comp=Z,14nm,1.1s						
G27K	**Doyon Strip**	**67.60**	**349**	IAmb	IAmb	03 48 07.1	
	comp=Z,8.1nm,1.2s						
H29M	**Whitestone**	**67.66**	**347**	IAmb	IAmb	03 48 12.8	
	comp=Z,14nm,1.2s						
LZH	**Lanzhou**	**67.67**	**61**	*e*P	**P**	**03 48 04.3**	**+1.6**
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
F24K	**Squaw Lake**	**67.70**	**352**	P	**P**	**03 48 02.1**	**0.0**
F24K				IAmb	IAmb	03 48 07.7	
	comp=Z,6.3nm,0.9s						
G26K	**Porcupine Rive**	**67.76**	**350**	IAmb	IAmb	03 48 08.0	
	comp=Z,9.0nm,0.9s						
MDP	**Montagnes des**	**67.86**	**255**	LR	LR	04 12 48.3	
	comp=Z,40nm,21.5s,baz=26,slow=32						
HILR	**Hailar Array B**	**67.88**	**42**	P	**P**	**03 48 06.4**	**+2.8**
	comp=Z,0.4nm,0.3s,baz=286,slow=7.3,SNR=4.1						
COLD	**Coldfoot**	**68.21**	**352**	IAmb	IAmb	03 48 10.7	
	comp=Z,11nm,1.0s						
I30M	**Mount Dempster**	**68.24**	**346**	IAmb	IAmb	03 48 10.6	
	comp=Z,8.3nm,1.1s						
ZEA	**Zeya**	**68.33**	**35**	*e*P	P	03 47 56.7	-10
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.3s						
F21K	**Alatna River**	**68.51**	**354**	P	**P**	**03 48 07.6**	**+0.4**
F21K				IAmb	IAmb	03 48 13.6	
	comp=Z,12nm,1.1s						
BTO	**Baotou**	**68.56**	**54**	*e*P	**P**	**03 48 05.8**	**-2.4**
BTO				S	**S**	**03 57 07.3**	**-3.6**
BTO				pmax	pmax		
	comp=Z,11nm,0.7s						
I28M	**Miner Creek**	**68.62**	**348**	IAmb	IAmb	03 48 12.9	
	comp=Z,6.4nm,1.1s						
E18K	**Tukpahlearik C**	**68.74**	**357**	IAmb	IAmb	03 48 14.3	
	comp=Z,14nm,1.2s						
J30M	**Hart River**	**68.82**	**346**	IAmb	IAmb	03 48 19.8	
	comp=Z,8.9nm,1.1s						
SEY	**Seymchan**	**68.98**	**18**	LR	LR	04 23 12.0	
	comp=Z,74nm,18.6s,baz=323,slow=40						
HHC	**Hu-ho-hao-te**	**69.30**	**53**	*e*P	**P**	**03 48 11.7**	**-1.0**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
H24K	**Noodor Dome**	**69.32**	**351**	IAmb	IAmb	03 48 18.9	
	comp=Z,18nm,1.4s						
H23K	**Yukon River**	**69.51**	**352**	IAmb	IAmb	03 48 19.9	
	comp=Z,8.1nm,1.0s						
IMAR	**Indian Mountai**	**69.75**	**354**	P	**P**	**03 48 15.0**	**+0.1**
DAWY	**Dawson**	**69.82**	**347**	P	**P**	**03 48 15.7**	**+0.2**
DAWY				IAmb	IAmb	03 48 21.4	
	comp=Z,10.0nm,1.0s						
G19K	**Purcell Mounta**	**69.83**	**355**	IAmb	IAmb	03 48 20.8	
	comp=Z,17nm,1.2s						
LBTB	**Lobatse**	**69.91**	**166**	LR	LR	04 21 05.1	
	comp=Z,69nm,18.1s,baz=347,slow=38						
POKR	**Poker Plat Res**	**69.96**	**351**	P	**P**	**03 48 16.3**	**0.0**
F33A	**5 Mile Ranch,**	**69.97**	**315**	IAmb	IAmb	03 48 20.3	
	comp=Z,8.2nm,1.0s						
J26L	**Joseph Creek**	**70.05**	**349**	IAmb	IAmb	03 48 22.2	
	comp=Z,12nm,1.2s						
PALK	**Pallekele**	**70.19**	**99**	LR	LR	04 21 48.5	
	comp=Z,61nm,19.0s,baz=326,slow=38						
ILAR	**Eielson Array**	**70.23**	**350**	P	**P**	**03 48 18.9**	**+1.0**
	comp=Z,3.9nm,0.9s,baz=7.6,slow=5.7,SNR=18						
ILAR				LR	LR	04 22 29.8	
	comp=Z,80nm,18.1s,baz=10.0,slow=39						
	comp=Z,3.9nm,0.9s						
ILAR	**Eielson Array**	**70.23**	**350**	P	**P**	**03 48 18.6**	**+0.7**
ILAR	**Eielson Array**	**70.23**	**350**	P	**P**	**03 48 18.6**	**+0.7**
COLA	**College**	**70.25**	**351**	⇑*e*P	**P**	**03 48 17.7**	**-0.3**
COLA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MLY	**Manley**	**70.41**	**352**	P	**P**	**03 48 19.4**	**+0.4**
MLY				IAmb	IAmb	03 48 24.8	
	comp=Z,13nm,1.2s						
HDA	**Harding Lake**	**70.59**	**350**	IAmb	IAmb	03 48 25.1	
	comp=Z,11nm,1.0s						
WRH	**Wood River Hil**	**70.66**	**351**	IAmb	IAmb	03 48 26.0	
	comp=Z,11nm,1.1s						
T47A	**Sharon Grove**	**70.72**	**303**	P	**P**	**03 48 19.2**	**-2.2**
HEH	**HeiHe**	**70.92**	**38**	*e*P	**P**	**03 48 23.4**	**+1.0**
RIDG	**Independent Ri**	**70.95**	**349**	P	**P**	**03 48 23.1**	**+0.7**
L27K	**Beaver Creek,**	**71.15**	**347**	IAmb	IAmb	03 49 01.7	
	comp=Z,8.6nm,0.7s						
MA2	**Magadan**	**71.54**	**20**	LR	LR	04 22 43.2	
	comp=Z,98nm,21.4s,baz=328,slow=38						
J20K	**Nowinta River**	**71.56**	**353**	IAmb	IAmb	03 48 32.6	
	comp=Z,13nm,1.2s						
ECSD	**EROS Data Cent**	**71.58**	**313**	P	**P**	**03 48 24.7**	**-1.8**
ECSD				IAmb	IAmb	03 48 30.4	
	comp=Z,8.6nm,0.9s						
M26K	**Nabesna, AK**	**71.96**	**348**	IAmb	IAmb	03 48 54.5	
	comp=Z,10.0nm,0.7s						
XAN	**Xi'an**	**72.17**	**60**	P	**P**	**03 48 30.0**	**-0.2**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
K20K	**Telida**	**72.36**	**353**	IAmb	IAmb	03 48 37.6	
	comp=Z,13nm,1.2s						
PZH	**PanZhiHua**	**72.41**	**70**	P	**P**	**03 48 32.3**	**+0.4**
CCM	**Cathedral Cave**	**72.47**	**306**	P	**P**	**03 48 30.1**	**-1.8**
CCM				IAmb	IAmb	03 48 35.3	
	comp=Z,5.4nm,0.8s						
CCM	**Cathedral Cave**	**72.47**	**306**	P	**P**	**03 48 30.1**	**-1.8**
CCM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
P38A	**Dawn**	**72.72**	**309**	IAmb	IAmb	03 48 36.6	
	comp=Z,12nm,1.2s						
PBMO	**Poplar Bluff**	**72.85**	**305**	IAmb	IAmb	03 48 37.2	
	comp=Z,18nm,1.3s						
R40A	**Maddies Statio**	**72.91**	**307**	IAmb	IAmb	03 48 38.6	
	comp=Z,8.8nm,1.0s						
BOSA	**Boshof**	**73.38**	**167**	LR	LR	04 23 20.7	
	comp=Z,107nm,18.2s,baz=8.5,slow=38						
BNX	**BinXian**	**74.23**	**41**	⇑P	**P**	**03 48 40.9**	**-1.3**
BNX				pmax	pmax		
	comp=Z,6.0nm,1.3s						
CN2	**Changchun**	**74.71**	**43**	P	**P**	**03 48 47.3**	**+2.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
EGMT	**Eagleton**	**74.74**	**323**	IAmb	IAmb	03 48 52.2	
	comp=Z,13nm,1.0s						
WHAR	**Wooly Hollow**	**74.97**	**305**	IAmb	IAmb	03 49 12.1	
	comp=Z,10nm,1.1s						
U38A	**Gravette**	**75.40**	**307**	IAmb	IAmb	03 48 53.0	
	comp=Z,9.1nm,0.9s						
CMAR	**Chiang Mai Arr**	**75.76**	**78**	LR	LR	04 29 36.1	
	comp=Z,29nm,18.0s,baz=170,slow=42						
X40A	**Basin Creek Fa**	**75.84**	**304**	IAmb	IAmb	03 48 54.6	
	comp=Z,9.1nm,1.1s						
MIAR	**Mount Ida**	**76.24**	**305**	IAmb	IAmb	03 48 57.4	
	comp=Z,12nm,1.1s						
T35A	**Sooner Cattle**	**76.29**	**308**	P	**P**	**03 48 53.2**	**-0.9**
T35A				IAmb	IAmb	03 48 57.5	
	comp=Z,9.5nm,0.9s						
KAN01	**Argonia South**	**76.82**	**309**	IAmb	IAmb	03 49 02.1	
	comp=Z,12nm,1.1s						
QUOK	**Quay**	**76.92**	**308**	IAmb	IAmb	03 49 02.5	
	comp=Z,14nm,1.0s						
YNE	**Yellowstone No**	**77.18**	**322**	IAmb	IAmb	03 49 05.4	
	comp=Z,8.6nm,1.1s						
BBB	**Bella Bella**	**78.00**	**336**	LR	LR	04 26 24.8	
	comp=Z,87nm,18.5s,baz=44,slow=38						
DLMT	**Dillon**	**78.04**	**323**	IAmb	IAmb	03 49 23.7	
	comp=Z,9.4nm,1.1s						
PDAR	**Pinedale Array**	**78.71**	**320**	P	**P**	**03 49 06.8**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=42,slow=2.4,SNR=5.8						
	comp=Z,0.5nm,0.8s						
PETK	**Petropavlovsk-**	**79.06**	**20**	LR	LR	04 29 15.5	
	comp=Z,69nm,18.4s,baz=319,slow=40						
WMOK	**Wichita Mounta**	**79.13**	**308**	IAmb	IAmb	03 49 15.2	
	comp=Z,8.8nm,1.0s						
EPH	**Ephrata**	**79.26**	**328**	IAmb	IAmb	03 49 16.3	
	comp=Z,14nm,1.4s						
HAYD	**Hayden**	**79.34**	**317**	P	**P**	**03 49 10.9**	**-0.6**
NJ2	**Nanjing**	**79.59**	**55**	*e*P	**P**	**03 49 13.0**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
YSS	**Yuzhno-Sakhali**	**79.81**	**31**	*e*P	**P**	**03 49 17.3**	**+3.8**
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
BDFB	**Brasilia**	**80.25**	**237**	LR	LR	04 22 03.4	
	comp=Z,55nm,19.5s,baz=176,slow=34						
RDMU	**Red Mountain**	**80.42**	**318**	IAmb	IAmb	03 49 22.9	
	comp=Z,11nm,1.0s						
BMO	**Blue Mountains**	**80.43**	**326**	IAmb	IAmb	03 49 26.8	
	comp=Z,15nm,1.1s						
KSRS	**Korea Array**	**80.69**	**46**	P	**P**	**03 49 17.9**	**-0.4**
	comp=Z,2.8nm,0.9s,baz=330,slow=3.3,SNR=5.1						
	comp=Z,2.8nm,0.9s						
KSRS	**Korea Array**	**80.69**	**46**	P	**P**	**03 49 18.0**	**-0.4**
BRDY	**Brady**	**81.76**	**306**	IAmb	IAmb	03 49 28.6	
	comp=Z,8.3nm,1.2s						
PV23	**Carpenter Ridg**	**81.80**	**317**	IAmb	IAmb	03 49 34.1	
	comp=Z,13nm,1.1s						
PV12	**Saucer Basin,**	**81.80**	**317**	IAmb	IAmb	03 49 29.6	
	comp=Z,14nm,1.1s						
PV16	**Nyswonger Mesa**	**81.86**	**317**	IAmb	IAmb	03 49 40.1	
	comp=Z,13nm,1.4s						
PV18	**Skein Mesa, Pa**	**81.91**	**317**	IAmb	IAmb	03 49 30.5	
	comp=Z,14nm,1.3s						
ASAJ	**Asahikawa**	**82.12**	**33**	LR	LR	04 27 53.9	
	comp=Z,126nm,20.6s,baz=314,slow=37						
SHEM	**Shemya Is, Ala**	**82.52**	**10**	LR	LR	04 29 41.1	
	comp=Z,26nm,18.4s,baz=178,slow=38						
ANMO	**Albuquerque**	**83.19**	**313**	LR	LR	04 24 25.3	
	comp=Z,109nm,19.1s,baz=42,slow=34						
ANMO	**Albuquerque**	**83.19**	**313**	⇓*e*P	**P**	**03 49 31.7**	**-0.2**
ANMO				pmax	pmax		
	comp=Z,10.0nm,3.0s						
TASM	**ASL Pad, Albuq**	**83.19**	**313**	IAmb	IAmb	03 49 36.1	
	comp=Z,4.9nm,1.3s						
J05D	**Fort Rock, OR**	**83.30**	**327**	IAmb	IAmb	03 49 38.6	
	comp=Z,14nm,1.3s						
K05A	**Summer Lake**	**83.64**	**327**	IAmb	IAmb	03 49 41.3	
	comp=Z,14nm,1.2s						
SPR3	**Spring Creek 3**	**83.90**	**320**	IAmb	IAmb	03 49 42.0	
	comp=Z,12nm,1.3s						
PSUT	**Pine Spring**	**84.06**	**320**	IAmb	IAmb	03 49 43.5	
	comp=Z,6.4nm,0.9s						
DRIO	**Del Rio**	**84.07**	**306**	IAmb	IAmb	03 49 40.9	
	comp=Z,11nm,1.2s						
Y22A	**Socorro**	**84.23**	**313**	IAmb	IAmb	03 49 41.4	
	comp=Z,6.0nm,1.2s						
PECS	**Pecos**	**84.49**	**309**	IAmb	IAmb	03 49 44.2	
	comp=Z,12nm,1.1s						
ALPN	**Alpine**	**85.11**	**308**	IAmb	IAmb	03 49 46.4	
	comp=Z,12nm,1.2s						
YBH	**Yreka Blue Hor**	**85.20**	**327**	LR	LR	04 29 35.2	
	comp=Z,8.9nm,20.4s,baz=42,slow=37						
JNU	**Nakatsue**	**85.56**	**47**	LR	LR	04 31 47.9	
	comp=Z,121nm,20.8s,baz=328,slow=38						
TXAR	**Lajitas Array**	**85.91**	**307**	P	**P**	**03 49 45.7**	**+0.1**
	comp=Z,4.6nm,1.0s,baz=78,slow=3.1,SNR=10						
TXAR				LR	LR	04 27 45.3	
	comp=Z,110nm,18.5s,baz=58,slow=35						
	comp=Z,4.6nm,1.0s						
TXAR	**Lajitas Array**	**85.91**	**307**		**P**	**03 49 44.9**	**-0.7**
TX31	**Lajitas Ar. Si**	**85.91**	**307**	P	**P**	**03 49 45.5**	**-0.1**
TX31				IAmb	IAmb	03 50 13.8	
	comp=Z,14nm,1.4s						
NVAR	**Mina Array Bea**	**86.15**	**323**	LR	LR	04 30 21.9	
	comp=Z,86nm,18.4s,baz=24,slow=37						
JTS	**Las Juntas de**	**87.39**	**282**	LR	LR	04 23 54.3	
	comp=Z,24nm,19.5s,baz=29,slow=32						
JOW	**Kunigami**	**88.95**	**53**	LR	LR	04 31 21.9	
	comp=Z,108nm,20.3s,baz=92,slow=37						
LPAZ	**La Paz**	**93.77**	**251**	LR	LR	04 28 48.7	
	comp=Z,43nm,20.9s,baz=62,slow=33						
CPUP	**Villa Florida**	**93.98**	**237**	LR	LR	04 31 17.9	
	comp=Z,21nm,19.1s,baz=271,slow=35						
JCJ	**Chichijima**	**96.17**	**43**	LR	LR	04 37 45.2	
	comp=Z,44nm,18.1s,baz=107,slow=38						
TAOE	**Nuku Hiva Isla**	**137.08**	**316**	*e*LR	LR	04 40 33.7	
	comp=Z,32nm,23.2s						

ROM 09 03:39:11.7±0.1, 43°.996N±0°.004×11°.322E±0°.005, h7^{km}, ML2.9/41, 1C-1D, Error ellipse: s-maj=0.4km s-min=0.3km az=13.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCL	**Monte Cuccoli**	**0.10**	**275**	P	Pg	03 39 14.6	+0.5
MOCL				S	Sg	03 39 16.5	+0.8
MOCL				AML	AML		
	comp=E,18450µm,0.1s						
MOCL				AML	AML		
	comp=N,24750µm,0.2s						
MOCL				AML	AML		
	comp=E,18484µm,0.1s						
MOCL				AML	AML		
	comp=N,24730µm,0.2s						
MOCL				AML	AML		
	comp=N,24730µm,0.2s						
MOCL				AML	AML		
	comp=E,18484µm,0.1s						
MPPT	**Montemurlo**	**0.17**	**257**	⇓P	Pg	03 39 15.9	+0.8
MPPT				S	Sg	03 39 18.9	+1.3
MPPT				AML	AML		
	comp=E,7990µm,0.9s						
MPPT				AML	AML		
	comp=N,6745µm,1.4s						
MPPT				AML	AML		
	comp=E,7499µm,0.3s						
MPPT				AML	AML		
	comp=N,6215µm,0.3s						
MPPT				AML	AML		
	comp=E,7500µm,0.3s						
MPPT				AML	AML		
	comp=N,6215µm,0.3s						
FIE	**Fiesole**	**0.19**	**186**	⇑P	Pg	03 39 16.3	+0.8
FIE				S	Sg	03 39 19.4	+1.3
BRIS	**BRISIGHELLA**	**0.20**	**41**	P	Pg	03 39 20.0	+4.2
BRIS				S	Sg	03 39 27.0	+8.4
RUFI	**Rufina**	**0.21**	**139**	P	Pg	03 39 16.5	+0.7
RUFI				S	Sg	03 39 19.9	+1.3
RUFI				AML	AML		
	comp=E,1692µm,0.3s						
RUFI				AML	AML		
	comp=N,1723µm,0.3s						
RUFI				AML	AML		
	comp=E,1692µm,0.3s						
RUFI				AML	AML		
	comp=N,1725µm,0.3s						
FNVD	**Fontana Vidola**	**0.22**	**320**	P	Pg	03 39 16.5	+0.3
FNVD				S	Sg	03 39 20.5	+1.3
FNVD				AML	AML		
	comp=E,5580µm,1.0s						
FNVD				AML	AML		
	comp=N,9060µm,1.2s						
FNVD				AML	AML		
	comp=E,4829µm,0.3s						
FNVD				AML	AML		
	comp=N,7231µm,0.3s						
FNVD				AML	AML		
	comp=E,4829µm,0.3s						
FNVD				AML	AML		
	comp=N,7231µm,0.3s						
FIR	**Firenze**	**0.23**	**192**	P	Pg	03 39 17.2	+1.1
FIR				S	Sg	03 39 21.4	+2.2
FIR				AML	AML		
	comp=E,6855µm,0.5s						
FIR				AML	AML		
	comp=E,6670µm,0.5s						
FIR				AML	AML		
	comp=N,8435µm,0.5s						
FIR				AML	AML		
	comp=N,8385µm,0.5s						
FIR				AML	AML		
	comp=E,6854µm,0.5s						
FIR				AML	AML		
	comp=N,8434µm,0.5s						
FIR				AML	AML		
	comp=E,6670µm,0.5s						
FIR				AML	AML		
	comp=N,8383µm,0.5s						
FIR				AML	AML		
	comp=E,6854µm,0.5s						
FIR				AML	AML		
	comp=E,6670µm,0.5s						
FIR				AML	AML		
	comp=N,8434µm,0.5s						
FIR				AML	AML		
	comp=N,8383µm,0.5s						
LMD	**Lutirano**	**0.29**	**74**	P	Pg	03 39 17.6	+0.2
LMD				S	Sg	03 39 22.3	+1.1
LMD				AML	AML		
	comp=E,3965µm,0.4s						
LMD				AML	AML		
	comp=N,8085µm,0.3s						
LMD				AML	AML		
	comp=E,3965µm,0.4s						
LMD				AML	AML		
	comp=N,8085µm,0.3s						
LMD				AML	AML		
	comp=N,8085µm,0.3s						
LMD				AML	AML		
	comp=E,3965µm,0.4s						
CRMI	**Carmignano**	**0.33**	**231**	P	Pg	03 39 18.6	+0.5
CRMI				S	Sb	03 39 24.1	-1.2
CRMI				AML	AML		
	comp=E,1074µm,0.3s						
CRMI				AML	AML		
	comp=N,2080µm,0.4s						
CRMI				AML	AML		
	comp=E,3567µm,0.4s						
CRMI				AML	AML		
	comp=N,5398µm,0.4s						
CRMI				AML	AML		
	comp=E,3567µm,0.4s						
CRMI				AML	AML		
	comp=E,1074µm,0.3s						
CRMI				AML	AML		
	comp=N,5398µm,0.4s						
CRMI				AML	AML		
	comp=N,2080µm,0.4s						
SFI	**Santa Sofia**	**0.39**	**103**	P	Pg	03 39 19.8	+0.5
SFI				S	Sb	03 39 26.4	-0.7
SFI				AML	AML		
	comp=E,1061µm,0.1s						
SFI				AML	AML		
	comp=E,1074µm,0.1s						
SFI				AML	AML		
	comp=N,785µm,0.1s						
ASQU	**Asqua**	**0.39**	**120**	P	Pg	03 39 19.8	+0.5
ASQU				S	Sb	03 39 26.4	-0.8
ASQU				AML	AML		
	comp=N,897µm,0.7s						
MTRZ	**Monterenzio**	**0.39**	**15**	P	Pg	03 39 19.4	0.0
MTRZ				S	Sg	03 39 25.5	+1.0
POPM	**Popiglio**	**0.41**	**277**	P	Pg	03 39 20.0	+0.3
POPM				S	Sb	03 39 26.7	-1.0
POPM				AML	AML		
	comp=E,4480µm,0.2s						
POPM				AML	AML		
	comp=N,5080µm,0.2s						
POPM				AML	AML		
	comp=E,4480µm,0.2s						
POPM				AML	AML		
	comp=N,5080µm,0.2s						
POPM				AML	AML		
	comp=E,4480µm,0.2s						
POPM				AML	AML		
	comp=N,5080µm,0.2s						
IMOL	**Imola, Italy**	**0.47**	**40**	P	Pb	03 39 22.6	+0.3
OSSC	**Osservatorio P**	**0.48**	**187**	P	Pg	03 39 21.3	+0.5
OSSC				S	Sb	03 39 29.2	-0.3
OSSC				AML	AML		
	comp=E,2065µm,0.2s						
OSSC				AML	AML		
	comp=N,1379µm,0.5s						
OSSC				AML	AML		
	comp=E,1383µm,0.6s						
OSSC				AML	AML		
	comp=N,2127µm,0.2s						
OSSC				AML	AML		
	comp=N,1378µm,0.5s						
OSSC				AML	AML		
	comp=E,1383µm,0.6s						
OSSC				AML	AML		
	comp=E,2065µm,0.2s						
OSSC				AML	AML		
	comp=N,2127µm,0.2s						
CSNT	**Castellina Chi**	**0.52**	**182**	P	Pg	03 39 22.4	+0.6
CSNT				S	Sb	03 39 30.8	-0.2
CSNT				AML	AML		
	comp=E,994µm,0.4s						
CSNT				AML	AML		
	comp=N,1573µm,0.5s						
CSNT				AML	AML		
	comp=E,994µm,0.4s						
CSNT				AML	AML		
	comp=N,1573µm,0.5s						
BDI	**Bagni Di Lucca**	**0.53**	**277**	P	Pg	03 39 22.1	+0.2
BDI				S	Sb	03 39 30.1	-1.0
BDI				AML	AML		
	comp=E,1780µm,0.3s						
BDI				AML	AML		
	comp=N,2310µm,0.5s						
BDI				AML	AML		
	comp=E,1542µm,0.3s						
BDI				AML	AML		
	comp=N,1986µm,0.4s						
CRE	**Caprese Michel**	**0.59**	**129**	P	Pg	03 39 23.5	+0.4
CRE				S	Sb	03 39 32.8	-0.1
CRE				AML	AML		
	comp=N,969µm,0.6s						
MAIM	**Mastiano**	**0.61**	**262**	P	Pg	03 39 23.5	+0.2
MAIM				S	Sb	03 39 32.7	-0.6
CARD	**Cardoso**	**0.61**	**273**	P	Pg	03 39 23.6	+0.2
CARD				S	Sb	03 39 32.6	-0.7
CARD				AML	AML		
	comp=N,958µm,0.3s						
CARD				AML	AML		
	comp=E,911µm,0.5s						
BRSN	**Barisano**	**0.61**	**62**	P	Pb	03 39 24.9	+0.2
GSCL	**Gusciola**	**0.64**	**304**	P	Pg	03 39 24.4	+0.4
GSCL				S	Sb	03 39 34.3	+0.1
PII	**Pisa**	**0.64**	**245**	P	Pg	03 39 24.3	+0.3
PII				S	Sb	03 39 34.1	-0.1
PII				AML	AML		
	comp=E,1838µm,0.3s						
PII				AML	AML		
	comp=N,2080µm,0.9s						
PII				AML	AML		
	comp=N,2080µm,0.9s						
PII				AML	AML		
	comp=E,1838µm,0.3s						
FIU	**Minerbio Fiu**	**0.65**	**11**	P	Pb	03 39 25.1	-0.3
SARO	**Sassorosso**	**0.69**	**286**	P	Pg	03 39 25.1	+0.1
SARO				S	Sb	03 39 35.7	-0.1
VLC	**Villacollemand**	**0.69**	**284**	P	Pg	03 39 25.2	+0.1
VLC				S	Sb	03 39 35.9	0.0
SSP9	**Sansepolcro**	**0.72**	**125**	P	Pb	03 39 26.7	+0.1

PARC	**Parchiule**	**0.75**	**117**	P	Pb	03 39 27.4	+0.3
EQUI	**Equi**	**0.86**	**282**	P	Pb	03 39 29.2	+0.3
EQUI				S	Sb	03 39 40.5	-0.1
GRAM	**Graiana**	**1.03**	**299**	P	Pg	03 39 31.6	+0.1
RIBO	**Ribolla Roccas**	**1.07**	**191**	P	Pn	03 39 33.4	+0.5

ROM 09 03:39:38.0±0.1**, 44°.013N**±0°.004×**11°.295E**±0°.005**,**
h9^{km}, ML2.5/8**, Error ellipse: s-maj=0.4km s-min=0.2km**
az=213.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCL	**Monte Cuccoli**	**0.08**	**265**	P	Pg	03 39 40.7	+0.5
MOCL				S	Sg	03 39 42.3	+0.4
MPPT	**Montemurlo**	**0.16**	**250**	P	Pg	03 39 42.0	+0.6
MPPT				S	Sg	03 39 44.6	+0.9
MPPT				AML	AML		
	comp=E,2759µm,0.2s						
MPPT				AML	AML		
	comp=N,3314µm,0.2s						
FNVD	**Fontana Vidola**	**0.20**	**321**	P	Pg	03 39 42.8	+0.7
FNVD				S	Sg	03 39 45.9	+0.9
FIE	**Fiesole**	**0.20**	**180**	P	Pg	03 39 42.8	+0.7
FIE				S	Sg	03 39 46.2	+1.2
RUFI	**Rufina**	**0.23**	**138**	P	Pg	03 39 43.4	+0.8
RUFI				S	Sg	03 39 47.3	+1.5
RUFI				AML	AML		
	comp=N,793µm,0.3s						
RUFI				AML	AML		
	comp=E,743µm,0.3s						
FIR	**Firenze**	**0.24**	**187**	P	Pg	03 39 43.8	+1.0
FIR				S	Sg	03 39 47.9	+1.9
FIR				AML	AML		
	comp=N,2762µm,0.3s						
FIR				AML	AML		
	comp=E,2709µm,0.3s						
FIR				AML	AML		
	comp=N,2843µm,0.3s						
FIR				AML	AML		
	comp=E,2755µm,0.4s						
LMD	**Lutirano**	**0.30**	**78**	P	Pg	03 39 44.7	+0.7
LMD				S	Sb	03 39 49.9	-0.9
CRMI	**Carmignano**	**0.32**	**227**	P	Pg	03 39 45.0	+0.6
CRMI				S	Sb	03 39 50.2	-1.1
MTRZ	**Monterenzio**	**0.38**	**19**	P	Pg	03 39 46.0	+0.5
POPM	**Popiglio**	**0.39**	**275**	P	Pg	03 39 46.0	+0.4
POPM				S	Sb	03 39 52.5	-0.7
BDI	**Bagni Di Lucca**	**0.51**	**276**	P	Pg	03 39 48.2	+0.5
BDI				S	Sb	03 39 56.0	-0.6

ROM 09 03:41:48.1±0.1**, 44°.003N**±0°.004×**11°.302E**±0°.006**,**
h6^{km}±1^{km}**, ML1.5**/9**, 1C-2D, Error ellipse: s-maj=0.5km**
s-min=0.3km az=49.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCL	**Monte Cuccoli**	**0.09**	**271**	⇓P	Pg	03 41 50.5	+0.4
MOCL				S	Sg	03 41 52.4	+0.8
MOCL				AML	AML		
	comp=N,1612µm,0.3s						
MOCL				AML	AML		
	comp=E,2025µm,0.2s						
MPPT	**Montemurlo**	**0.16**	**253**	⇑P	Pg	03 41 51.8	+0.5
MPPT				S	Sg	03 41 54.6	+1.1
MPPT				AML	AML		
	comp=N,405µm,0.3s						
MPPT				AML	AML		
	comp=E,390µm,0.2s						
FIE	**Fiesole**	**0.20**	**182**	P	Pg	03 41 52.7	+0.7
FIE				S	Sg	03 41 55.9	+1.3
FNVD	**Fontana Vidola**	**0.21**	**322**	P	Pg	03 41 52.5	+0.2
FNVD				S	Sg	03 41 56.3	+1.2
RUFI	**Rufina**	**0.22**	**137**	P	Pg	03 41 53.1	+0.6
RUFI				S	Sg	03 41 56.9	+1.4
RUFI				AML	AML		
	comp=E,597µm,0.7s						
RUFI				AML	AML		
	comp=N,713µm,0.2s						
RUFI				AML	AML		
	comp=E,141µm,0.2s						
RUFI				AML	AML		
	comp=N,135µm,0.4s						
RUFI				AML	AML		
	comp=N,75µm,0.2s						
RUFI				AML	AML		
	comp=E,20µm,0.1s						
FIR	**Firenze**	**0.23**	**189**	P	Pg	03 41 53.5	+0.8
FIR				S	Sg	03 41 57.7	+2.0
FIR				AML	AML		
	comp=E,4990µm,0.3s						
FIR				AML	AML		
	comp=N,3335µm,1.1s						
FIR				AML	AML		
	comp=E,5045µm,0.3s						
FIR				AML	AML		
	comp=N,3495µm,1.1s						
FIR				AML	AML		
	comp=N,500µm,0.0s						
CRMI	**Carmignano**	**0.32**	**229**	⇓P	Pg	03 41 54.8	+0.4
CRMI				S	Sg	03 42 00.1	+1.4
CRMI				AML	AML		
	comp=E,13150µm,0.3s						
CRMI				AML	AML		
	comp=N,9620µm,0.2s						
CRMI				AML	AML		
	comp=E,4970µm,0.2s						
CRMI				AML	AML		
	comp=N,4580µm,0.3s						
CRMI				AML	AML		
	comp=E,74µm,0.3s						
CRMI				AML	AML		
	comp=N,61µm,0.3s						
CRMI				AML	AML		
	comp=N,102µm,0.1s						
CRMI				AML	AML		
	comp=E,58µm,0.0s						
MTRZ	**Monterenzio**	**0.39**	**17**	P	Pg	03 41 55.7	-0.1
ZCCA	**Zocca**	**0.42**	**326**	P	Pb	03 41 57.9	-0.2

PRU ***09*** *03:41:51.7, 42°.57N×11°.66E, h126^{km}*
GEN ***09*** *03:42:02.0, 43°.97N×11°.28E, h7^{km}, Ml3.0*
LDG ***09*** *03:42:02.8±0.1, 43°.99N×11°.31E, h8^{km}, Ml3.2/19, Error*
ellipse: s-maj=2.8km s-min=2.1km az=14.0
ROM 09 03:42:02.1±0.1**, 43°.998N**±0°.004×**11°.285E**±0°.005**,**
h7^{km}, ML3.2/100**, 4C, Error ellipse: s-maj=0.4km**
s-min=0.3km az=14.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCL	**Monte Cuccoli**	**0.08**	**275**	P	Pg	03 42 04.6	+0.5
MOCL				S	Sg	03 42 06.3	+0.8
MOCL				AML	AML		
MOCL				AML	AML		
	comp=E,78150µm,0.2s						
SEI	**Scarperia**	**0.08**	**42**	P	Pg	03 42 01.5	-2.6
SEI				S	Sg	03 42 03.0	-2.5
MPPT	**Montemurlo**	**0.15**	**254**	⇑P	Pg	03 42 05.9	+0.7
MPPT				S	Sg	03 42 08.7	+1.4
MPPT				AML	AML		
	comp=N,31100µm,1.4s						
MPPT				AML	AML		
	comp=E,31400µm,1.2s						
MPPT				AML	AML		
	comp=N,31050µm,1.4s						
MPPT				AML	AML		
	comp=E,31400µm,0.8s						
MPPT				AML	AML		
	comp=N,31050µm,1.4s						
FNVD	**Fontana Vidola**	**0.21**	**325**	P	Pg	03 42 06.6	+0.3
FNVD				S	Sg	03 42 09.7	+0.6
FNVD				AML	AML		
	comp=N,24400µm,0.6s						
FNVD				AML	AML		
	comp=E,13750µm,1.6s						
FNVD				AML	AML		
	comp=E,13750µm,0.4s						
BRIS	**BRISIGHELLA**	**0.22**	**47**	P	Pg	03 42 10.7	+4.2
BRIS				S	Sg	03 42 17.6	+8.0
BRIS				AML	AML		
	comp=E,4275µm,1.1s						
BRIS				AML	AML		
	comp=N,6895µm,0.5s						
BRIS				AML	AML		
	comp=E,4275µm,0.9s						
FIR	**Firenze**	**0.23**	**186**	P	Pg	03 42 07.4	+0.8
FIR				S	Sg	03 42 11.7	+2.1
FIR				AML	AML		
	comp=E,22800µm,1.5s						
FIR				AML	AML		
	comp=N,31100µm,0.3s						
FIR				AML	AML		
	comp=E,22800µm,1.5s						
FIR				AML	AML		
	comp=E,22900µm,1.5s						
FIR				AML	AML		
	comp=E,22900µm,0.5s						
FIR				AML	AML		
	comp=N,31100µm,0.2s						
FIR				AML	AML		
	comp=E,22800µm,0.5s						
FIR				AML	AML		
	comp=N,30650µm,0.2s						
RUFI	**Rufina**	**0.23**	**134**	P	Pg	03 42 07.2	+0.6
RUFI				S	Sg	03 42 10.8	+1.1
RUFI	**Rufina**	**0.23**	**134**	P	Pg	03 42 07.2	+0.6
RUFI				S	Sg	03 42 11.0	+1.3
RUFI				AML	AML		
	comp=N,4220µm,0.4s						
RUFI				AML	AML		
	comp=E,4160µm,0.3s						
RUFI				AML	AML		
	comp=E,4165µm,0.3s						
RUFI				AML	AML		
	comp=N,4225µm,0.4s						
CRMI	**Carmignano**	**0.31**	**228**	⇑P	Pg	03 42 08.7	+0.5
CRMI				S	Sg	03 42 13.6	+1.3
CRMI				AML	AML		
	comp=E,13150µm,0.3s						
CRMI				AML	AML		
	comp=N,11480µm,0.4s						
CRMI				AML	AML		
	comp=E,4970µm,0.2s						
CRMI				AML	AML		
	comp=N,4640µm,0.4s						
LMD	**Lutirano**	**0.32**	**75**	P	Pg	03 42 08.6	+0.3
LMD				S	Sg	03 42 13.4	+0.9
LMD	**Lutirano**	**0.32**	**75**	P	Pg	03 42 08.5	+0.2
LMD				S	Sg	03 42 13.4	+0.9
LMD				AML	AML		
	comp=N,5170µm,0.6s						
LMD				AML	AML		
	comp=E,3880µm,0.7s						
LMD				AML	AML		
	comp=E,3880µm,1.3s						
POPM	**Popiglio**	**0.38**	**277**	P	Pg	03 42 10.0	+0.3
POPM				S	Sg	03 42 15.9	+1.2
POPM	**Popiglio**	**0.38**	**277**	⇑P	Pg	03 42 09.9	+0.3
POPM				S	Sb	03 42 16.2	-1.2
POPM				AML	AML		
	comp=N,17550µm,0.8s						
POPM				AML	AML		
	comp=N,17550µm,1.2s						
POPM				AML	AML		
	comp=E,7355µm,0.2s						
MTRZ	**Monterenzio**	**0.40**	**19**	P	Pg	03 42 09.6	-0.3
MTRZ				S	Sg	03 42 16.2	+1.0
MTRZ	**Monterenzio**	**0.40**	**19**	⇑P	Pg	03 42 09.6	-0.4
MTRZ				AML	AML		
	comp=E,8550µm,0.8s						
MTRZ				AML	AML		
	comp=N,8935µm,0.5s						
MTRZ				AML	AML		
	comp=E,8840µm,0.8s						
MTRZ				AML	AML		
	comp=N,9145µm,0.4s						
MTRZ				AML	AML		
	comp=N,8930µm,0.5s						
ASQU	**Asqua**	**0.42**	**119**	P	Pg	03 42 10.8	+0.6
ASQU				S	Sb	03 42 17.5	-0.9
ASQU	**Asqua**	**0.42**	**119**	P	Pg	03 42 10.6	+0.4
ASQU				S	Sb	03 42 17.4	-1.0
ASQU				AML	AML		
	comp=E,1860µm,0.8s						
ASQU				AML	AML		
	comp=N,1880µm,0.6s						
ASQU				AML	AML		
	comp=E,1860µm,1.2s						
ASQU				AML	AML		
	comp=N,1880µm,1.4s						
SFI	**Santa Sofia**	**0.42**	**103**	P	Pg	03 42 10.5	+0.3
SFI				S	Sg	03 42 17.0	+1.3
SFI				AML	AML		
	comp=N,1845µm,1.1s						
SFI				AML	AML		
	comp=E,1575µm,0.7s						
SFI				AML	AML		
	comp=N,1930µm,1.1s						
SFI				AML	AML		
	comp=E,1565µm,0.9s						
SFI				AML	AML		
	comp=N,1845µm,1.1s						
SFI				AML	AML		
	comp=N,1925µm,1.1s						
SFI				AML	AML		
	comp=N,1845µm,0.9s						
SFI				AML	AML		
	comp=E,1580µm,0.7s						
SFI				AML	AML		
	comp=N,1925µm,0.9s						
ZCCA	**Zocca**	**0.42**	**328**	P	Pb	03 42 11.9	0.0
ZCCA				S	Sb	03 42 19.2	+0.8
ZCCA	**Zocca**	**0.42**	**328**	P	Pb	03 42 11.4	-0.4
OSSC	**Osservatorio P**	**0.47**	**183**	P	Pg	03 42 11.8	+0.5
OSSC				S	Sb	03 42 19.9	-0.1
OSSC	**Osservatorio P**	**0.47**	**183**	P	Pg	03 42 11.8	+0.5
OSSC				S	Sb	03 42 19.6	-0.4
OSSC				AML	AML		
	comp=E,4640µm,1.5s						
OSSC				AML	AML		
	comp=E,3585µm,1.6s						
OSSC				AML	AML		
	comp=N,3630µm,1.6s						
OSSC				AML	AML		
	comp=N,4715µm,1.5s						
OSSC				AML	AML		
	comp=E,4640µm,0.5s						
OSSC				AML	AML		
	comp=N,4715µm,0.5s						
OSSC				AML	AML		
	comp=E,3585µm,0.4s						
OSSC				AML	AML		
	comp=N,3630µm,0.4s						
IMOL	**Imola, Italy**	**0.49**	**42**	P	Pb	03 42 13.2	+0.2
IMOL				S	Sb	03 42 22.6	+2.2
IMOL	**Imola, Italy**	**0.49**	**42**	P	Pb	03 42 12.9	-0.1
IMOL				AML	AML		
	comp=E,4295µm,0.5s						
IMOL				AML	AML		
	comp=N,4570µm,0.9s						
IMOL				AML	AML		
	comp=N,4565µm,0.9s						
BDI	**Bagni Di Lucca**	**0.50**	**278**	P	Pg	03 42 12.1	+0.3
BDI				S	Sb	03 42 19.7	-1.1
BDI	**Bagni Di Lucca**	**0.50**	**278**	P	Pg	03 42 12.0	+0.2
BDI				S	Sg	03 42 19.5	+1.1
BDI				AML	AML		
	comp=E,4520µm,0.6s						
BDI				AML	AML		
	comp=N,5440µm,0.6s						
BDI				AML	AML		
	comp=N,5505µm,0.7s						
BDI				AML	AML		
	comp=N,5440µm,0.6s						
BDI				AML	AML		
	comp=E,4795µm,0.6s						
BDI				AML	AML		
	comp=E,4520µm,0.6s						
CSNT	**Castellina Chi**	**0.53**	**180**	P	Pg	03 42 12.8	+0.5
CSNT				S	Sb	03 42 21.2	-0.3
CSNT	**Castellina Chi**	**0.53**	**180**	P	Pg	03 42 12.7	+0.4
CSNT				S	Sb	03 42 21.0	-0.5
CSNT				AML	AML		
	comp=N,4645µm,0.5s						
CSNT				AML	AML		
	comp=E,2705µm,0.9s						
MAIM	**Mastiano**	**0.58**	**262**	P	Pg	03 42 13.6	+0.3
MAIM				S	Sg	03 42 21.9	+1.0
MAIM	**Mastiano**	**0.58**	**262**	P	Pg	03 42 13.5	+0.2
CARD	**Cardoso**	**0.58**	**273**	P	Pg	03 42 13.6	+0.3
CARD				S	Sb	03 42 22.2	-0.9
CARD	**Cardoso**	**0.58**	**273**	P	Pg	03 42 13.7	+0.4
CARD				S	Sb	03 42 22.0	-1.1
CARD				AML	AML		
	comp=E,2330µm,0.4s						
CARD				AML	AML		
	comp=N,3685µm,0.9s						
CRE	**Caprese Michel**	**0.61**	**128**	P	Pg	03 42 14.3	+0.4
CRE				AML	AML		
	comp=N,1360µm,0.4s						
CRE				AML	AML		
	comp=E,1165µm,0.4s						
GSCL	**Gusciola**	**0.61**	**305**	P	Pg	03 42 14.4	+0.4
GSCL				S	Sb	03 42 24.1	+0.1
GSCL	**Gusciola**	**0.61**	**305**	P	Pg	03 42 14.4	+0.4
GSCL				S	Sb	03 42 23.9	-0.2
GSCL				AML	AML		
	comp=E,3185µm,0.4s						
GSCL				AML	AML		
	comp=N,2865µm,0.8s						
PII	**Pisa**	**0.61**	**244**	P	Pg	03 42 14.2	+0.2
PII				S	Sg	03 42 22.7	+0.7
PII	**Pisa**	**0.61**	**244**	P	Pg	03 42 13.8	-0.2
PII				AML	AML		
	comp=E,3980µm,1.6s						
PII				AML	AML		
	comp=N,4980µm,1.0s						
PII				AML	AML		
	comp=E,3980µm,0.4s						
BRSN	**Barisano**	**0.64**	**63**	P	Pg	03 42 14.9	+0.5
BRSN				AML	AML		
	comp=E,2940µm,0.6s						
BRSN				AML	AML		
	comp=N,2555µm,1.6s						
BRSN				AML	AML		
	comp=E,2785µm,0.6s						
BRSN				AML	AML		
	comp=N,2590µm,1.6s						
BRSN				AML	AML		
	comp=N,2555µm,0.4s						
BRSN				AML	AML		
	comp=E,2940µm,1.4s						
FIU	**Minerbio Fiu**	**0.66**	**13**	P	Pn	03 42 18.1	+0.3
SARO	**Sassorosso**	**0.66**	**287**	P	Pg	03 42 14.8	-0.1
SARO				S	Sb	03 42 25.5	-0.1
SARO	**Sassorosso**	**0.66**	**287**	P	Pg	03 42 14.9	0.0
VLC	**Villacollemand**	**0.67**	**284**	P	Pb	03 42 15.6	-0.5
VLC				S	Sb	03 42 25.3	-0.3
VLC	**Villacollemand**	**0.67**	**284**	P	Pb	03 42 15.6	-0.6
VLC				S	Sb	03 42 25.1	-0.5
VLC				AML	AML		
	comp=E,832µm,0.3s						
VLC				AML	AML		
	comp=N,1650µm,1.4s						
VLC				AML	AML		
	comp=E,831µm,0.3s						
VLC				AML	AML		
	comp=N,1625µm,1.4s						
VLC				AML	AML		
	comp=E,841µm,0.3s						
VLC				AML	AML		
	comp=N,1625µm,0.6s						
VLC				AML	AML		
	comp=E,841µm,1.7s						
VLC				AML	AML		
	comp=E,831µm,1.7s						
VLC				AML	AML		
	comp=N,1650µm,0.6s						
CMPO	**Campotto Po**	**0.69**	**33**	P	Pn	03 42 18.6	+0.3
SSP9	**Sansepolcro**	**0.74**	**124**	P	Pg	03 42 16.9	+0.4
SSP9				AML	AML		
	comp=E,778µm,0.5s						
SSP9				AML	AML		
	comp=N,1091µm,0.7s						
SSP9				AML	AML		
	comp=N,1094µm,0.7s						
SSP9				AML	AML		
	comp=E,779µm,0.5s						
CPGN	**Carpegna, Ital**	**0.77**	**104**	P	Pb	03 42 17.8	-0.2
PARC	**Parchiule**	**0.77**	**117**	P	Pb	03 42 17.5	-0.4
FROS	**Frosini**	**0.79**	**187**	AML	AML		
	comp=E,2420µm,0.5s						
FROS				AML	AML		
	comp=E,2420µm,0.5s						
FROS				AML	AML		
	comp=N,2380µm,0.3s						
EQUI	**Equi**	**0.83**	**282**	P	Pb	03 42 18.7	-0.2
EQUI				S	Sb	03 42 29.9	-0.4
EQUI	**Equi**	**0.83**	**282**	P	Pb	03 42 18.7	-0.2
RSM	**Repubblica di**	**0.84**	**94**	P	Pn	03 42 20.5	+0.1
BADI	**Badiali**	**0.85**	**125**	P	Pb	03 42 18.8	-0.4
MAGO	**Bibbona**	**0.86**	**212**	AML	AML		
	comp=E,1490µm,0.6s						
MAGO				AML	AML		
	comp=N,1034µm,0.7s						
ATMC	**Monte Cedrone**	**0.86**	**130**	P	Pb	03 42 19.0	-0.3
FIVI	**Fivizzano**	**0.87**	**287**	P	Pb	03 42 19.4	-0.2
FIVI				S	Sb	03 42 31.9	+0.6
FIVI	**Fivizzano**	**0.87**	**287**	P	Pg	03 42 19.1	+0.3
TRIF	**Trifonti**	**0.93**	**198**	AML	AML		
	comp=E,590µm,1.3s						
TRIF				AML	AML		
	comp=E,590µm,0.7s						
TRIF				AML	AML		
	comp=N,790µm,0.7s						
PE3	**Peglio**	**0.93**	**109**	P	Pb	03 42 20.6	0.0
PE3				AML	AML		
	comp=E,3490µm,0.5s						
PE3				AML	AML		
	comp=N,2125µm,0.5s						
PE3				AML	AML		
	comp=E,3490µm,1.5s						
ATMI	**Monte Miggiano**	**0.97**	**133**	P	Pb	03 42 21.6	+0.2
ATMI				AML	AML		
	comp=N,1305µm,0.4s						
ATMI				AML	AML		
	comp=E,1258µm,0.6s						
ATPI	**Pietralunga -**	**0.98**	**124**	P	Pb	03 42 21.2	-0.2
ATPI				AML	AML		
	comp=E,416µm,0.5s						
ATPI				AML	AML		
	comp=N,548µm,0.8s						
ATPI				AML	AML		
	comp=N,548µm,1.2s						
ATPI				AML	AML		
	comp=E,416µm,0.5s						
GRAM	**Graiana**	**1.00**	**300**	P	Pb	03 42 21.8	-0.1
GRAM				S	Sn	03 42 36.9	-0.3
GRAM	**Graiana**	**1.00**	**300**	P	Pg	03 42 21.6	+0.2
GRAM				AML	AML		
	comp=N,1540µm,0.3s						
GRAM				AML	AML		
	comp=E,1435µm,0.3s						
GRAM				AML	AML		
	comp=N,1540µm,1.7s						
PIEI	**Pieia**	**1.02**	**117**	P	Pg	03 42 21.7	+0.1
PIEI				AML	AML		
	comp=E,245µm,0.8s						
PIEI				AML	AML		
	comp=N,228µm,0.5s						
PIEI				AML	AML		
	comp=E,245µm,1.2s						
ATVO	**AVT- Monte Val**	**1.02**	**127**	P	Pb	03 42 22.1	-0.1
ATVA	**AVT- Monte Val**	**1.02**	**134**	P	Pb	03 42 22.1	-0.1
PLMA	**Palmaria, Port**	**1.04**	**273**	P	Pg	03 42 21.8	-0.2
PLMA				S	Sg	03 42 35.8	+0.3
PLMA	**Palmaria, Port**	**1.04**	**273**	P	Pg	03 42 21.7	-0.3
PLMA				AML	AML		
	comp=N,939µm,0.3s						
PLMA				AML	AML		
	comp=N,939µm,1.7s						
PLMA				AML	AML		
	comp=E,589µm,0.7s						
ATLO	**AVT- Montelove**	**1.06**	**130**	P	Pg	03 42 22.3	-0.2
RIBO	**Ribolla Roccas**	**1.06**	**189**	P	Pb	03 42 22.7	-0.1
MURB	**Monte Urbino**	**1.16**	**129**	P	Pg	03 42 24.2	-0.2
MURB				AML	AML		
	comp=E,1195µm,1.2s						
MURB				AML	AML		
	comp=E,1240µm,1.2s						
MURB				AML	AML		
	comp=N,832µm,1.0s						
MURB				AML	AML		
	comp=E,1240µm,0.8s						
MURB				AML	AML		

	comp=E,1195µm,0.8s						
MURB				AML	AML		
	comp=N,870µm,0.8s						
SACS	**San Casciano d**	**1.24**	**158**	P	Pb	03 42 25.1	-0.7
CASP	**Castiglione de**	**1.25**	**194**	P	Pb	03 42 24.8	-1.1
CASP				AML	AML		
	comp=N,226µm,0.7s						
CASP				AML	AML		
	comp=E,302µm,0.4s						
ARVD	**Arcevia**	**1.30**	**112**	P	Pb	03 42 26.9	0.0
ARVD				AML	AML		
	comp=N,160µm,0.7s						
ARVD				AML	AML		
	comp=E,191µm,1.0s						
MSSA	**Maissana**	**1.31**	**285**	P	Pn	03 42 26.6	-0.3
TEOL	**Teolo**	**1.39**	**11**	P	Pg	03 42 28.7	-0.1
TEOL				AML	AML		
	comp=E,1430µm,0.6s						
TEOL				AML	AML		
	comp=N,1045µm,0.5s						
TEOL				AML	AML		
	comp=E,1430µm,1.4s						
BOB	**Bobbio (Coli)**	**1.52**	**301**	P	Pg	03 42 31.6	+0.2
GORR	**Gorreto**	**1.55**	**294**	P	Pb	03 42 31.3	+0.1
ROVR	**Rover Verones**	**1.66**	**355**	P	Pb	03 42 32.7	-0.3
CSP1	**Cessapalombo**	**1.66**	**122**	P	Pb	03 42 32.8	-0.4
VARA	**Varagna**	**1.85**	**352**	P	Pb	03 42 35.7	-0.6
VARA				AML	AML		
	comp=E,749µm,0.7s						
VARA				AML	AML		
	comp=N,701µm,0.7s						
VARA				AML	AML		
	comp=E,685µm,0.7s						
VARA				AML	AML		
	comp=N,757µm,0.7s						
SARZ	**Sarezzano**	**1.91**	**298**	P	Pb	03 42 37.1	-0.2
PGF	**Pioggiola**	**2.21**	**230**	*e*Pn	Pn	03 42 37.9	-1.4
PGF				*e*Sn	Sn	03 43 04.4	-2.5
	comp=N,22nm,0.3s						
ZIAN	**Ziano**	**2.29**	**5**	P	Pn	03 42 41.3	+1.0
ZIAN				AML	AML		
	comp=E,268µm,1.4s						
ZIAN				AML	AML		
	comp=N,250µm,1.4s						
ZIAN				AML	AML		
	comp=E,268µm,0.6s						
ZIAN				AML	AML		
	comp=N,250µm,0.6s						
ZIAN				AML	AML		
	comp=N,244µm,0.5s						
ZIAN				AML	AML		
	comp=E,228µm,0.5s						
OZOL	**Ozolo**	**2.41**	**356**	P	Pb	03 42 44.2	-1.7
OZOL				AML	AML		
	comp=E,715µm,1.5s						
OZOL				AML	AML		
	comp=N,346µm,1.6s						
OZOL				AML	AML		
	comp=N,346µm,0.4s						
GEPF	**Gemona**	**2.63**	**29**	P	Pn	03 42 45.1	+0.2
GEPF				AML	AML		
	comp=E,83µm,0.7s						
GEPF				AML	AML		
	comp=N,85µm,0.5s						
GEPF				AML	AML		
	comp=E,83µm,1.3s						
SBF	**Sospel**	**2.79**	**269**	*e*Pn	Pn	03 42 46.3	-0.9
SBF				*e*Sn	Sn	03 43 18.4	-2.6
ABTA	**Abfaltersbach**	**2.88**	**17**	*e*Pn	Pn	03 42 49.5	+1.0
	comp=E,3.0nm,0.3s						
ABTA				*e*Sn	Sn	03 43 24.6	+1.1
	comp=E,7.0nm,0.5s						
FETA	**Feichten**	**3.05**	**353**	*e*Pn	Pn	03 42 53.4	+2.5
	comp=E,2.7nm,0.3s						
FETA				*e*Sn	Sn	03 43 27.8	+0.1
	comp=E,11nm,0.8s						
MYKA	**Terra Mystica**	**3.11**	**31**	*e*Pn	Pn	03 42 52.6	+0.9
	comp=E,0.2nm,0.1s						
MYKA				*e*Sn	Sn	03 43 27.6	-1.5
	comp=E,1.7nm,0.3s						
SQTA	**Sankt Quirin**	**3.22**	**359**	*e*Pn	Pn	03 42 56.0	+2.8
	comp=E,24nm,0.3s						
SQTA				*e*Sn	Sn	03 43 30.6	-1.4
	comp=E,9.6nm,0.4s						
WTTA	**Wattenberg**	**3.27**	**4**	*e*Pn	Pn	03 42 56.9	+2.9
	comp=E,0.7nm,0.2s						
WTTA				*e*Sn	Sn	03 43 33.2	-0.1
	comp=E,1.1nm,0.2s						
MBDF	**Montbardon**	**3.32**	**284**	*e*Pn	Pn	03 42 54.1	-0.5
MBDF				*e*Sn	Sn	03 43 30.9	-3.4
	comp=E,19nm,0.5s						
WATA	**Walderalm**	**3.34**	**3**	*e*Pn	Pn	03 42 58.2	+3.2
	comp=E,0.1nm,0.1s						
WATA				*e*Sn	Sn	03 43 32.0	-2.9
	comp=E,6.0nm,0.3s						
MOTA	**Moosalm**	**3.35**	**358**	*e*Pn	Pn	03 42 57.5	+2.5
	comp=E,7.7nm,0.4s						
MOTA				*e*Sn	Sn	03 43 34.1	-1.0
	comp=E,3.6nm,0.4s						
KBA	**Koelnbreinsper**	**3.40**	**24**	*e*Pn	Pn	03 42 57.6	+1.8
	comp=E,6.7nm,0.4s						
KBA				*e*Sn	Sn	03 43 32.7	-3.8
	comp=E,1.6nm,0.3s						
OBKA	**Obir**	**3.41**	**41**	*e*Pn	Pn	03 42 56.1	+0.3
	comp=E,2.0nm,0.4s						
OBKA				*e*Sn	Sn	03 43 35.3	-1.2
	comp=E,5.0nm,0.3s						
DAVA	**Damuels**	**3.43**	**344**	*e*Pn	Pn	03 42 59.3	+3.1
	comp=E,0.9nm,0.1s						
DAVA				*e*Sn	Sn	03 43 35.3	-1.9
	comp=E,3.8nm,0.3s						
RETA	**Reutte**	**3.51**	**354**	*e*Pn	Pn	03 42 60.0	+2.9
	comp=E,7.2nm,0.4s						
RETA				*e*Sn	Sn	03 43 33.9	-5.0
	comp=E,16nm,1.0s						
LMR	**La Mourre**	**3.53**	**261**	*e*Pn	Pn	03 42 56.2	-1.1
LMR				*e*Sn	Sn	03 43 35.4	-3.9
	comp=E,8.9nm,0.3s						
LPG	**La Plagne**	**3.56**	**296**	*e*Pn	Pn	03 42 58.8	+0.8
LPG				*e*Sn	Sn	03 43 36.5	-4.0
LESA	**Schwarzleotal**	**3.56**	**15**	*e*Pn	Pn	03 43 00.7	+2.9
	comp=E,9.8nm,0.4s						
LESA				*e*Sn	Sn	03 43 36.6	-3.6
	comp=E,1.4nm,0.2s						
LPL	**La Plagne**	**3.58**	**297**	*e*Pn	Pn	03 42 58.5	+0.2
LPL				*e*Sn	Sn	03 43 36.4	-4.5
	comp=E,9.6nm,0.5s						
SOKA	**Soboth**	**3.76**	**43**	*e*Pn	Pn	03 42 59.6	-1.1
	comp=E,0.2nm,0.1s						
SOKA				*e*Sn	Sn	03 43 40.2	-5.0
	comp=E,2.7nm,0.6s						
ORIF	**Oris-en-Rattie**	**3.98**	**285**	*e*P	Pn	03 43 05.4	+1.8
ORIF				*e*Sn	Sn	03 43 46.3	-4.2
	comp=E,9.8nm,0.4s						
BIOA	**Bad Ischl, Aus**	**4.04**	**23**	*e*Pn	Pn	03 43 05.9	+1.5
	comp=E,1.3nm,0.3s						
BIOA				*e*Sn	Sn	03 43 47.4	-4.6
	comp=E,1.9nm,0.3s						
SMRF	**Simiane la Rot**	**4.12**	**272**	*e*Pn	Pn	03 43 05.7	+0.2
SMRF				*e*Sn	Sn	03 43 51.7	-2.3
	comp=E,6.9nm,0.3s						
CABF	**La Chapelle**	**4.50**	**307**	*e*P	Pn	03 43 13.2	+2.4
CABF				*e*Sn	Sn	03 44 01.2	-2.2
VIVF	**Saint-Julien-l**	**4.81**	**283**	*e*Pn	Pn	03 43 14.4	-0.6
VIVF				*e*Sn	Sn	03 44 06.9	-4.1
	comp=E,2.6nm,0.5s						
HINF	**Hinteralfeld**	**4.91**	**323**	*e*P	Pn	03 43 18.0	+1.6
HINF				*e*Sn	Sn	03 44 12.6	-0.9
	comp=E,16nm,0.5s						
CDF	**Champ du Feu**	**5.22**	**329**	*e*P	Pn	03 43 21.7	+1.1
CDF				*e*Sn	Sn	03 44 16.9	-4.2
	comp=E,31nm,0.7s						
CKRC	**Cesky Krumlov**	**5.26**	**22**	*e*PN	Pn	03 43 22.6	+1.5
CKRC				*e*SN	Sn	03 44 22.4	+0.5
HAU	**Haudompre**	**5.28**	**321**	*e*P	Pn	03 43 23.0	+1.6
HAU				*e*Sn	Sn	03 44 21.4	-1.1
	comp=E,8.7nm,0.3s						
LASF	**Ste Croix**	**5.36**	**273**	*e*Pn	Pn	03 43 20.3	-2.2
LASF	**Ste Croix**	**5.36**	**273**	*e*P	Pn	03 43 25.3	+2.8
LASF				*e*Sn	Sn	03 44 20.9	-3.5
	comp=E,1.5nm,0.2s						
KHC	**Kasperske Hory**	**5.37**	**16**	*e*PN	Pn	03 43 23.5	+0.8
KHC				*e*SN	Sn	03 44 23.5	-1.3
SMF	**Signal de Mont**	**5.88**	**299**	*e*Pn	Pn	03 43 31.4	+1.8
SMF				*e*Sn	Sn	03 44 33.8	-3.4
LOR	**Lormes**	**6.15**	**305**	*e*P	Pn	03 43 37.0	+3.7
LOR				*e*Sn	Sn	03 44 39.0	-4.9
	comp=E,10nm,0.5s						
SSF	**Saint Saulge**	**6.26**	**302**	*e*P	Pn	03 43 38.3	+3.4
SSF				*e*Sn	Sn	03 44 42.0	-4.7
	comp=E,4.8nm,0.6s						
SAVF	**Savonnieres en**	**6.29**	**319**	*e*Sn	Sn	03 44 42.6	-4.6
	comp=E,7.3nm,0.2s						
MTLF	**Montolieu**	**6.61**	**267**	*e*Pn	Pn	03 43 38.4	-1.3
CLL	**Collm**	**7.41**	**8**	*e*Pn	Pn	03 43 51.0	+0.5
CLL				*e*Sg	Sg	03 46 03.0	+3.3

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*GEN **09** 03:42:35.6, 44°.02N×11°.35E, h13^{km}±1^{km}, Ml2.7*

ROM 09 03:42:36.7±0.1**, 43°.997N**±0°.006×**11°.322E**±0°.006**,**
h6^{km}, ML3.0/32**, Error ellipse: s-maj=0.5km**
s-min=0.5km az=16.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SEI	**Scarperia**	**0.06**	**23**	P	Pg	03 42 35.7	-2.6
SEI				S	Sg	03 42 37.3	-2.3
MOCL	**Monte Cuccoli**	**0.10**	**275**	P	Pg	03 42 39.4	+0.5
MOCL				S	Sg	03 42 41.3	+0.8
MOCL				AML	AML		
	comp=N,48095µm,0.2s						
MOCL				AML	AML		
	comp=E,15221µm,0.2s						
MPPT	**Montemurlo**	**0.17**	**257**	P	Pg	03 42 40.7	+0.6
MPPT				S	Sg	03 42 43.6	+1.1
MPPT				AML	AML		
	comp=E,11050µm,1.2s						
MPPT				AML	AML		
	comp=N,11800µm,0.3s						
MPPT				AML	AML		
	comp=N,11794µm,0.3s						
MPPT				AML	AML		
	comp=E,8959µm,0.3s						
FIE	**Fiesole**	**0.19**	**186**	P	Pg	03 42 41.2	+0.7
FIE				S	Sg	03 42 44.4	+1.4
BRIS	**BRISIGHELLA**	**0.20**	**42**	P	Pg	03 42 45.2	+4.5
BRIS				S	Sg	03 42 51.7	+8.2
RUFI	**Rufina**	**0.21**	**139**	P	Pg	03 42 41.5	+0.7
RUFI				S	Sg	03 42 45.1	+1.6
RUFI	**Rufina**	**0.21**	**139**	P	Pg	03 42 41.5	+0.7
RUFI				S	Sg	03 42 45.0	+1.5
RUFI				AML	AML		
	comp=E,2189µm,0.7s						
RUFI				AML	AML		
	comp=N,3094µm,0.5s						
FNVD	**Fontana Vidola**	**0.22**	**320**	P	Pg	03 42 41.2	+0.1
FNVD				S	Sg	03 42 44.7	+0.6
FNVD				AML	AML		
	comp=N,7060µm,0.4s						
FNVD				AML	AML		
	comp=E,5486µm,0.4s						
FIR	**Firenze**	**0.23**	**192**	P	Pg	03 42 42.0	+0.8
FIR				S	Sg	03 42 46.4	+2.2
FIR				AML	AML		
	comp=N,9144µm,0.3s						
FIR				AML	AML		
	comp=E,12101µm,0.4s						
FIR				AML	AML		
	comp=E,12235µm,0.4s						
FIR				AML	AML		
	comp=N,8913µm,0.5s						
LMD	**Lutirano**	**0.29**	**74**	P	Pg	03 42 42.5	+0.2
LMD				S	Sg	03 42 47.4	+1.2
LMD	**Lutirano**	**0.29**	**74**	P	Pg	03 42 42.5	+0.2
LMD				S	Sg	03 42 47.4	+1.2
LMD				AML	AML		
	comp=N,5495µm,0.1s						
LMD				AML	AML		
	comp=E,3436µm,0.2s						
CRMI	**Carmignano**	**0.33**	**231**	P	Pg	03 42 43.5	+0.4
CRMI				S	Sg	03 42 48.9	+1.5
CRMI				AML	AML		
	comp=E,5860µm,0.3s						
CRMI				AML	AML		
	comp=N,9275µm,0.4s						
CRMI				AML	AML		
	comp=E,2195µm,0.4s						
CRMI				AML	AML		
	comp=N,3690µm,0.3s						
CRMI				AML	AML		
	comp=N,3686µm,0.3s						
CRMI				AML	AML		
	comp=E,5858µm,0.3s						
CRMI				AML	AML		
	comp=E,2198µm,0.4s						
CRMI				AML	AML		
	comp=N,9256µm,0.4s						
SFI	**Santa Sofia**	**0.39**	**103**	P	Pg	03 42 44.9	+0.7
SFI				S	Sb	03 42 51.2	-1.1
SFI				AML	AML		
	comp=E,1193µm,0.2s						
SFI				AML	AML		
	comp=E,1183µm,0.1s						
SFI				AML	AML		
	comp=N,1123µm,0.5s						
SFI				AML	AML		
	comp=N,1136µm,0.8s						
ASQU	**Asqua**	**0.39**	**120**	P	Pb	03 42 45.3	-0.8
ASQU				S	Sb	03 42 51.3	-1.1
ASQU	**Asqua**	**0.39**	**120**	P	Pg	03 42 44.9	+0.6
ASQU				S	Sb	03 42 51.5	-0.9
MTRZ	**Monterenzio**	**0.39**	**15**	P	Pg	03 42 43.2	-1.1
MTRZ				S	Sg	03 42 48.0	-1.6
MTRZ	**Monterenzio**	**0.39**	**15**	P	Pg	03 42 44.4	+0.1
POPM	**Popiglio**	**0.41**	**277**	P	Pg	03 42 44.8	+0.1
POPM				S	Sg	03 42 51.4	+1.4
POPM	**Popiglio**	**0.41**	**277**	P	Pg	03 42 44.8	+0.1
POPM				S	Sg	03 42 51.3	+1.2
POPM				AML	AML		
	comp=E,5400µm,0.2s						
POPM				AML	AML		
	comp=N,8045µm,0.7s						
POPM				AML	AML		
	comp=N,7393µm,0.3s						
POPM				AML	AML		
	comp=E,5400µm,0.2s						
ZCCA	**Zocca**	**0.43**	**325**	P	Pb	03 42 47.0	+0.2
IMOL	**Imola, Italy**	**0.47**	**40**	P	Pb	03 42 47.4	0.0
OSSC	**Osservatorio P**	**0.48**	**187**	P	Pg	03 42 46.4	+0.5
OSSC				S	Sb	03 42 53.8	-0.9
OSSC	**Osservatorio P**	**0.48**	**187**	P	Pg	03 42 46.4	+0.5
OSSC				S	Sb	03 42 54.0	-0.7
OSSC				AML	AML		
	comp=N,2418µm,0.5s						
OSSC				AML	AML		
	comp=E,2380µm,0.5s						
OSSC				AML	AML		
	comp=N,2063µm,0.8s						
OSSC				AML	AML		
	comp=E,2079µm,0.8s						
CSNT	**Castellina Chi**	**0.53**	**182**	P	Pg	03 42 47.2	+0.4
CSNT				S	Sb	03 42 55.9	-0.2
CSNT	**Castellina Chi**	**0.53**	**182**	P	Pg	03 42 47.2	+0.4
CSNT				S	Sb	03 42 55.2	-0.9
CSNT				AML	AML		
	comp=E,1285µm,0.4s						
CSNT				AML	AML		
	comp=N,2796µm,0.6s						
BDI	**Bagni Di Lucca**	**0.53**	**277**	P	Pg	03 42 46.6	-0.2
BDI				S	Sg	03 42 54.8	+1.1
BDI	**Bagni Di Lucca**	**0.53**	**277**	P	Pg	03 42 46.8	-0.1
BDI				S	Sg	03 42 54.7	+1.0
CRE	**Caprese Michel**	**0.59**	**129**	P	Pb	03 42 48.9	-0.6
MAIM	**Mastiano**	**0.61**	**262**	P	Pb	03 42 49.9	+0.3
CARD	**Cardoso**	**0.61**	**273**	P	Pg	03 42 47.1	-1.2
CARD				S	Sg	03 42 57.0	+0.7
CARD	**Cardoso**	**0.61**	**273**	P	Pb	03 42 49.5	-0.2
CARD				S	Sg	03 42 57.0	+0.7
CARD				AML	AML		
	comp=N,1700µm,0.5s						
CARD				AML	AML		
	comp=E,1276µm,0.5s						
GSCL	**Gusciola**	**0.64**	**304**	P	Pg	03 42 49.1	+0.2
GSCL				S	Sb	03 42 59.3	-0.2
GSCL	**Gusciola**	**0.64**	**304**	P	Pg	03 42 49.3	+0.4
GSCL				S	Sb	03 42 59.1	-0.3
PII	**Pisa**	**0.64**	**245**	P	Pg	03 42 49.3	+0.3
FIU	**Minerbio Fiu**	**0.65**	**11**	P	Pn	03 42 52.0	-0.5
SARO	**Sassorosso**	**0.69**	**286**	P	Pb	03 42 50.6	-0.6
SARO				S	Sb	03 43 00.4	-0.6
SARO	**Sassorosso**	**0.69**	**286**	P	Pb	03 42 50.6	-0.6
SARO				S	Sb	03 43 00.4	-0.6
VLC	**Villacollemand**	**0.69**	**284**	P	Pg	03 42 50.1	+0.1
VLC				S	Sb	03 43 00.5	-0.6
VLC	**Villacollemand**	**0.69**	**284**	P	Pb	03 42 50.7	-0.6
VLC				S	Sb	03 43 00.4	-0.6
CPGN	**Carpegna, Ital**	**0.75**	**105**	P	Pn	03 42 53.7	-0.2
PARC	**Parchiule**	**0.75**	**117**	P	Pb	03 42 52.4	+0.2
BADI	**Badiali**	**0.83**	**126**	P	Pn	03 42 54.4	-0.5
ATMC	**Monte Cedrone**	**0.84**	**131**	P	Pb	03 42 53.7	0.0
EQUI	**Equi**	**0.86**	**282**	P	Pg	03 42 53.0	-0.2
EQUI				S	Sb	03 43 05.3	-0.5
EQUI	**Equi**	**0.86**	**282**	P	Pn	03 42 54.7	-0.7
FIVI	**Fivizzano**	**0.89**	**286**	P	Pb	03 42 54.8	+0.2
FIVI				S	Sb	03 43 07.0	+0.2
APEC	**Apecchio**	**0.91**	**118**	P	Pb	03 42 55.3	+0.5
ATPC	**Poggio Castell**	**0.97**	**122**	P	Pn	03 42 56.7	-0.2
ATVO	**AVT- Monte Val**	**1.00**	**128**	P	Pn	03 42 56.9	-0.3
GRAM	**Graiana**	**1.03**	**299**	P	Pg	03 42 56.6	+0.2
GRAM				S	Sn	03 43 12.5	0.0
PLMA	**Palmaria, Port**	**1.06**	**273**	P	Pb	03 42 57.6	+0.1
RIBO	**Ribolla Roccas**	**1.07**	**191**	P	Pn	03 42 58.2	+0.1
SBPO	**S.Benedetto Po**	**1.09**	**345**	AML	AML		
	comp=E,2333µm,1.2s						
SBPO				AML	AML		
	comp=N,2952µm,1.9s						
MSSA	**Maissana**	**1.34**	**284**	P	Pg	03 43 03.4	+1.0
MSSA				S	Sn	03 43 20.8	+0.6

ROM 09 03:43:10.8±0.1**, 44°.023N**±0°.003×**11°.313E**±0°.004**,**
h8^{km}, ML2.4/18**, 3C, Error ellipse: s-maj=0.4km**
s-min=0.2km az=38.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCL	**Monte Cuccoli**	**0.10**	**260**	P	Pg	03 43 13.8	+0.5
MOCL				S	Sg	03 43 15.5	+0.5
MOCL				AML	AML		
	comp=N,4880µm,0.2s						
MOCL				AML	AML		
	comp=E,4570µm,0.1s						
MOCL				AML	AML		
	comp=N,4877µm,0.2s						
MOCL				AML	AML		
	comp=E,4569µm,0.1s						
MPPT	**Montemurlo**	**0.17**	**248**	⇑P	Pg	03 43 15.1	+0.7
MPPT				S	Sg	03 43 17.9	+0.9
MPPT				AML	AML		
	comp=E,2465µm,0.2s						
MPPT				AML	AML		
	comp=N,1925µm,0.3s						
MPPT				AML	AML		
	comp=N,1901µm,0.2s						
MPPT				AML	AML		
	comp=E,2464µm,0.2s						
FNVD	**Fontana Vidola**	**0.20**	**317**	P	Pg	03 43 15.7	+0.7
FNVD				S	Sg	03 43 18.9	+1.2
FIE	**Fiesole**	**0.22**	**184**	⇑P	Pg	03 43 15.8	+0.7
FIE				S	Sg	03 43 19.6	+1.5
RUFI	**Rufina**	**0.23**	**142**	⇑P	Pg	03 43 16.3	+0.8
RUFI				S	Sg	03 43 19.9	+1.3
RUFI				AML	AML		
	comp=E,652µm,0.1s						
RUFI				AML	AML		
	comp=N,465µm,0.2s						
FIR	**Firenze**	**0.25**	**190**	P	Pb	03 43 16.8	-0.8
FIR				S	Sb	03 43 21.1	-1.0
FIR				AML	AML		
	comp=N,1682µm,0.2s						
FIR				AML	AML		
	comp=E,2210µm,0.2s						
FIR				AML	AML		
	comp=E,2183µm,0.2s						
FIR				AML	AML		
	comp=N,1661µm,0.2s						
LMD	**Lutirano**	**0.29**	**79**	P	Pg	03 43 17.3	+0.7
LMD				S	Sb	03 43 22.4	-0.8
LMD				AML	AML		
	comp=N,676µm,0.2s						
LMD				AML	AML		
	comp=E,584µm,0.4s						
CRMI	**Carmignano**	**0.34**	**227**	P	Pg	03 43 18.1	+0.6
CRMI				S	Sb	03 43 23.6	-1.1
POPM	**Popiglio**	**0.40**	**273**	P	Pg	03 43 19.1	+0.5
POPM				S	Sb	03 43 25.6	-0.8
POPM				AML	AML		
	comp=N,1159µm,0.2s						
POPM				AML	AML		
	comp=E,827µm,0.2s						
OSSC	**Osservatorio P**	**0.50**	**186**	P	Pg	03 43 21.0	+0.5
OSSC				S	Sb	03 43 29.0	-0.3
BDI	**Bagni Di Lucca**	**0.52**	**275**	P	Pg	03 43 21.2	+0.4
BDI				S	Sb	03 43 29.2	-0.6
BDI				AML	AML		
	comp=E,315µm,0.3s						
BDI				AML	AML		
	comp=N,393µm,0.3s						
BDI				AML	AML		
	comp=E,312µm,0.2s						
BDI				AML	AML		
	comp=N,404µm,0.3s						
CSNT	**Castellina Chi**	**0.55**	**182**	P	Pg	03 43 21.8	+0.4
CSNT				S	Sb	03 43 30.7	0.0
GSCL	**Gusciola**	**0.62**	**302**	P	Pb	03 43 23.4	-0.4
PII	**Pisa**	**0.64**	**242**	P	Pb	03 43 24.1	-0.1
PII				S	Sb	03 43 32.6	-0.8

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*IDC **09** 03:47:21.7±0.5, 8°.73S×110°.19E, h0^{km}, mb4.6/21,*
mbtmp4.6/23, ML4.8/2, MS3.6/15, Error ellipse:
s-maj=20.2km s-min=11.7km az=67.0

*NEIC **09** 03:47:26.9±2.1, 8°.90S±0°.06×110°.10E±0°.07, h35^{km}±1^{km},*
mb4.9/56, Error ellipse: s-maj=13.1km s-min=9.4km
az=296.0

*DJA **09** 03:47:28.3±0.3, 9°S±3°×11°0E±°, h39^{km}±5^{km}, M4.8/43,*
mb5.0/43, mB5.3/18, MLv5.0/26, Mw(mB)4.8/18,
MwMwp4.6/2, Mwp5.0/2

ISC 09 03:47:27.2±0.3**, 8°.96S**±0°.05×**110°.13E**±0°.06**, h39**^{km}±3^{km}**,**
n227, σ1^{s}72/214**, mb4.8**/56**, MS3.7**/14**, 3C-2D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UGM	**Wanagama**	**1.11**	**21**		**Pn**	**03 47 46.5**	**+0.1**
UGM				Sn	**Sn**	**03 48 00.3**	**-0.1**
UGM	**Wanagama**	**1.11**	**21**	P	**Pn**	**03 47 47.0**	**+0.7**
UGM	**Wanagama**	**1.11**	**21**	P	**Pn**	**03 47 47.0**	**+0.7**
YOGI	**Yogyakarta**	**1.15**	**8**	P	**Pn**	**03 47 47.5**	**+0.7**
PCJI	**Pacitan**	**1.28**	**54**	P	**Pn**	**03 47 49.1**	**+0.4**
SMRI	**Semarang**	**1.92**	**9**	Pn	**Pn**	**03 48 00.5**	**+3.0**
SMRI				Sn	**Sn**	**03 48 18.2**	**-2.3**
SMRI	**Semarang**	**1.92**	**9**	P	**Pn**	**03 48 00.9**	**+3.4**
SMRI	**Semarang**	**1.92**	**9**	P	**Pn**	**03 48 00.8**	**+3.3**
SNJI	**Sawahan-Nganju**	**1.99**	**54**	P	**Pn**	**03 48 00.4**	**+1.8**
KPJI	**Karang Pucung**	**2.00**	**324**	P	**Pn**	**03 48 01.6**	**+3.0**
SJI	**Sawahan**	**2.02**	**53**	P	**Pn**	**03 48 00.3**	**+1.3**
NGJI	**Ngawi**	**2.06**	**40**	P	**Pn**	**03 48 03.4**	**+4.1**
CTJI	**Waduk Cacaban**	**2.15**	**334**	P	**Pn**	**03 48 04.2**	**+3.6**
TBJI	**Tambak Boyo**	**2.72**	**39**	P	**Pn**	**03 48 10.6**	**+2.1**
BBJI	**Bungbulang**	**2.87**	**301**	P	**Pn**	**03 48 11.8**	**+1.2**
BBJI	**Bungbulang**	**2.87**	**301**	P	**Pn**	**03 48 11.9**	**+1.3**
GRJI	**Gresik**	**3.09**	**49**	P	**Pn**	**03 48 15.5**	**+2.0**
GMJI	**Gumukmas**	**3.35**	**79**	P	**Pn**	**03 48 19.1**	**+2.0**
CNJI	**Cibinong**	**3.39**	**299**	P	**Pn**	**03 48 19.6**	**+1.9**
BLJI	**Banyuglugur**	**3.63**	**71**	P	**Pn**	**03 48 22.7**	**+1.7**
JAGI	**Jajag, Banyuwa**	**4.01**	**83**	Pn	**Pn**	**03 48 26.6**	**+0.4**
JAGI	**Jajag, Banyuwa**	**4.01**	**83**	P	**Pn**	**03 48 28.2**	**+2.1**
JAGI	**Jajag, Banyuwa**	**4.01**	**83**	P	**Pn**	**03 48 28.3**	**+2.1**
SKJI	**Sukabumi**	**4.04**	**298**	P	**Pn**	**03 48 29.7**	**+3.2**
DBJI	**Dramaga**	**4.11**	**305**	P	**Pn**	**03 48 31.0**	**+3.4**
ABJI	**Asem Bagus**	**4.22**	**74**	P	**Pn**	**03 48 31.6**	**+2.5**
BYJI	**Banyuwangi**	**4.25**	**80**	P	**Pn**	**03 48 32.0**	**+2.6**
KMMI	**Kalianget**	**4.25**	**64**	P	**Pn**	**03 48 30.8**	**+1.4**
XMI	**Christmas Isla**	**4.62**	**251**	P	**Pn**	**03 48 34.6**	**0.0**
RTBI	**Rangdo, Negare**	**4.78**	**84**	P	**Pn**	**03 48 39.4**	**+2.5**
IGBI	**Denpasar**	**4.96**	**89**	P	**Pn**	**03 48 41.3**	**+2.1**
KHKI	**Kahang-Kahang**	**5.45**	**84**	P	**Pn**	**03 48 48.4**	**+2.4**
	1.3nm2µm186nm,0.8s						
KASI	**Kota Agung**	**6.55**	**301**	P	**Pn**	**03 49 02.5**	**+1.4**
	0.3nm947nm58nm,1.0s						
TPI	**Tanjungpandan**	**6.63**	**338**	P	**Pn**	**03 49 05.2**	**+2.9**
TWSI	**Taliwang, Sumb**	**6.68**	**89**	P	**Pn**	**03 49 04.3**	**+1.4**

	0.8nm3μm151nm,0.7s						
KLSI		6.83	308	P	Pn	03 49 07.7	+2.7
	0.2nm47nm,0.7s						
BBKI	Banjar Baru	7.19	41	P	Pn	03 49 12.6	+2.7
	0.8nm106nm,0.9s						
MDSI	Maura Dua	7.39	307	P	Pn	03 49 16.2	+3.5
	48nm,0.9s						
PLAI	Plampang	7.56	90	P	Pn	03 49 17.0	+2.0
PLAI	Plampang	7.56	90	P	Pn	03 49 16.5	+1.5
DBNI	Kabupaten Domp	8.10	87	P	Pn	03 49 23.9	+1.5
	972nm79nm,0.7s						
MNAI	Manna	8.46	302	Pn	Pn	03 49 29.0	+1.6
MNAI	Manna	8.46	302	P	Pn	03 49 29.9	+2.5
	83nm,0.6s						
KSI	Kapahiang	9.16	305	P	Pn	03 49 39.1	+2.1
	89nm,0.5s						
WBSI	Waikabubak, Su	9.17	95	P	Pn	03 49 34.8	-2.3
UBSI	University, Be	9.36	303	P	Pn	03 49 42.9	+3.2
	123nm,0.9s						
LBFI	Labuhan Bajo,	9.66	88	P	Pn	03 49 43.4	-0.4
MKS	Makassar	9.99	69	P	Pn	03 49 49.5	+1.2
	60nm,0.9s						
WSI	Waingapu	10.06	95	P	Pn	03 49 49.1	-0.2
KAPI	Kappang	10.32	68	Pn	Pn	03 49 52.7	-0.1
	1.9nm,0.3s,baz=239,slow=9.4,SNR=24						
KAPI				LR	LR	03 54 19.1	
	comp=Z,251nm,21.4s,baz=260,slow=41						
KAPI	Kappang	10.32	68	Pn	Pn	03 49 54.0	+1.2
KAPI	Kappang	10.32	68	P	Pn	03 49 54.6	+1.7
BASI	Baing, Sumba	10.38	98	P	Pn	03 49 55.1	+1.4
BKSI	Bulukumba	10.55	71	P	Pn	03 49 58.3	+2.3
	2μm47nm,0.9s						
SPSI	Sidrap Palu	10.79	63	P	Pn	03 50 00.9	+1.7
	2μm38nm,1.1s						
BNSI	Bone	10.89	66	P	Pn	03 50 04.6	+3.9
	49nm,1.1s						
TTSI	Tana Toraja	11.28	59	P	Pn	03 50 09.7	+3.7
	46nm,1.0s						
EDFI	Ende, Flores	11.43	90	P	Pn	03 50 05.6	-2.5
	964nm906nm69nm,0.6s						
PPSI	Pulau Pagai	11.79	301	P	Pn	03 50 13.6	+0.6
	75nm,0.6s						
BATI	Baumata	13.40	96	Pn	Pn	03 50 33.5	-1.6
	9.2nm,0.3s,baz=318,slow=3.5,SNR=4.5						
BATI				Sn	Sn	03 52 52.3	-11
	6.4nm,0.3s,baz=261,slow=13,SNR=1.9						
	48nm,0.5s						
BATI	Baumata	13.40	96	P	Pn	03 50 33.9	-1.2
	81nm,0.7s						
MPSI	Mapaga	13.41	47	P	Pn	03 50 38.0	+2.8
	1μm34nm,0.9s						
SOEI	Soe	13.97	94	Pn	Pn	03 50 42.3	-0.7
APSI	Ampana	13.98	56	P	Pn	03 50 46.5	+3.6
	2μm71nm,0.8s						
GIRL	Giralia	14.17	164	Pn	Pn	03 50 41.7	-3.7
LUWI	Luwuk	14.84	59	P	Pn	03 50 56.6	+2.1
MRSI	Marisa	15.04	52	P	Pn	03 50 58.8	+1.6
	34nm,0.5s						
MBWA	Marble Bar	15.26	144	Pn	Pn	03 50 56.0	-4.0
MBWA	Marble Bar	15.26	144	P	Pn	03 50 57.3	-2.7
PSA00	Pilbara Seismi	15.65	144	Pn	Pn	03 51 00.9	-4.1
PSI	Prapat	16.16	316	LR	LR	03 58 06.4	
	comp=Z,265nm,20.9s,baz=144,slow=40						
SANI	Sanana	17.20	67	P	P	03 51 25.8	-0.2
	68nm,0.8s						
FITZ	Fitzroy Crossi	17.59	123	P	Pn	03 51 29.6	+0.1
	1.7nm,0.3s,baz=304,slow=7.5,SNR=49						
FITZ				S	Sn	03 54 29.7	-15
	6.4nm,0.7s,baz=180,slow=20,SNR=3.4						
FITZ				LR	LR	03 59 12.3	
	comp=Z,90nm,18.7s,baz=320,slow=40						
	37nm,0.8s						
FITZ	Fitzroy Crossi	17.59	123		Pn	03 51 29.3	-0.3
FITZ	Fitzroy Crossi	17.59	123	P	Pn	03 51 30.0	+0.4
NLAI	Namlea	17.80	72	P	P	03 51 35.3	+2.7
	890nm72nm,0.7s						
KRAI	Karang Ratu	19.00	74	P	P	03 51 45.9	+0.1
	54nm,0.9s						
MEEK	Meekatharra	19.34	156	P	Pn	03 51 50.6	-0.1
KNRA	Kununurra	19.38	112	P	P	03 51 50.6	+0.6
TNTI	Ternate	19.71	61	P	Pn	03 51 56.5	+1.3
	59nm,0.8s						
GAMI	Galela, Maluku	20.61	59	P	P	03 52 04.1	+0.8
MORW	Morawa	20.76	165		P	03 52 06.0	+1.1
MTN	Manton Dam	20.98	102	P	P	03 52 07.6	+0.3
MTN				IAmb	IAmb	03 52 17.7	
	comp=Z,60nm,0.8s						
DAV	Davao City (W)	22.15	45	LR	LR	04 01 50.7	
	comp=Z,88nm,20.7s,baz=170,slow=40						
SWI	Sorong	22.52	70	P	P	03 52 25.5	+1.6
	comp=Z,34nm,0.9s						
FAKI	Fak Fak	22.79	76	P	P	03 52 25.8	-1.0
FAKI				IAmb	IAmb	03 52 29.3	
	comp=Z,28nm,0.7s						
FAKI	Fak Fak	22.79	76	P	P	03 52 27.1	+0.3
FAKI	Fak Fak	22.79	76	P	P	03 52 26.8	0.0
	comp=Z,40nm,0.8s						
NWAO	Narrogin (SRO)	24.74	166	LR	LR	04 03 00.2	
	comp=Z,129nm,19.2s,baz=76,slow=38						
WB0	Warramunga Arr	25.81	117	P	P	03 52 55.1	+0.1
WB0				IAmb	IAmb	03 52 57.5	
	comp=Z,15nm,0.7s						
WRA	Warramunga Arr	25.82	118	P	P	03 52 55.5	+0.3
	comp=Z,16nm,0.8s,baz=292,slow=11,SNR=48						
WRA				PcP	PcP	03 56 24.9	+0.8
	comp=Z,0.7nm,0.6s,baz=307,slow=1.9,SNR=2.3						
	comp=Z,16nm,0.8s						
WRA	Warramunga Arr	25.82	118	P	P	03 52 55.2	+0.1
WRA	Warramunga Arr	25.82	118	P	P	03 52 55.5	+0.3
WRAB	Tennant Creek	25.83	118	P	P	03 52 53.3	-1.9
WRAB				IAmb	IAmb	03 52 58.1	
	comp=Z,16nm,0.7s						
WRAB	Tennant Creek	25.83	118	P	P	03 52 55.5	+0.3
WRAB	Tennant Creek	25.83	118	*c i*P	P	03 52 55.7	+0.5
WRAB	Tennant Creek	25.83	118	pmax	pmax		
	comp=Z,16nm,0.7s						
ASAR	Alice Springs	27.04	126	P	P	03 53 06.0	0.0
	comp=Z,5.8nm,0.6s,baz=305,slow=9.2,SNR=37						
ASAR				PcP	PcP	03 56 27.7	+0.8
	comp=Z,2.7nm,0.7s,baz=316,slow=1.7,SNR=9.6						
ASAR				LR	LR	04 05 20.0	
	comp=Z,60nm,19.2s,baz=292,slow=40						
	comp=Z,5.8nm,0.6s						
ASAR	Alice Springs	27.04	126	P	P	03 53 04.7	-1.4
ASAR	Alice Springs	27.04	126	P	P	03 53 06.1	0.0
AS31	Alice Springs	27.04	126	P	P	03 53 05.3	-0.8
FORT	Forrest	27.41	145	P	P	03 53 09.7	+0.4
CMAR	Chiang Mai Arr	29.39	338	LR	LR	04 06 21.3	
	comp=Z,128nm,18.8s,baz=165,slow=39						
QIS	Mount Isa	30.69	115	P	P	03 53 39.5	+0.9
COEN	Coen	32.74	102	P	P	03 53 57.3	+0.6
BBOO	Buckleboo	33.73	138	P	P	03 54 06.1	+1.0
WHYH	Whyalla	34.87	137	P	P	03 54 15.7	+0.8
HTT	Hallett	36.02	137	P	P	03 54 26.2	+1.3
PZH	PanZhiHua	36.18	347	P	P	03 54 28.3	+2.0
CTAO	Charters Tower	36.59	112	P	P	03 54 29.1	-0.8
CTAO				IAmb	IAmb	03 54 32.1	
	comp=Z,11nm,0.8s						
CTAO	Charters Tower	36.59	112	P	P	03 54 31.6	+1.6
CTAO				PcP	PcP	03 56 52.3	-0.5
STKA	Stephens Creek	37.04	133	P	P	03 54 34.8	+1.2
	comp=Z,14nm,0.5s,baz=309,slow=8.7,SNR=46						
STKA				PcP	PcP	03 56 54.7	+0.8
	comp=Z,4.3nm,0.6s,baz=333,slow=7.2,SNR=3.9						
STKA				LR	LR	04 11 39.0	
	comp=Z,71nm,19.2s,baz=222,slow=39						
	comp=Z,14nm,0.5s						
STKA	Stephens Creek	37.04	133		P	03 54 34.0	+0.5
STKA	Stephens Creek	37.04	133	P	P	03 54 34.7	+1.2
H08S2	Diego Garcia H	37.25	269	T	T	04 34 31.1	
	baz=94,slow=76,SNR=9.2						
H08S3	Diego Garcia H	37.27	269	T	T	04 34 38.5	
	baz=94,slow=76,SNR=10.0						
H08S1	Diego Carcia H	37.27	269	T	T	04 34 28.4	
	baz=94,slow=76,SNR=7.7						
CMSA	Cobar Meteorol	39.94	129	P	P	03 54 58.7	+0.8
CD2	Chengdu	40.11	351	P	P	03 54 59.4	+0.1
GUMO	Guam	41.12	57	LR	LR	04 12 22.4	
	comp=Z,19nm,19.4s,baz=94,slow=37						
NJ2	Nanjing	41.62	11	*e*P	P	03 55 14.2	+2.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LSA	Lhasa	42.56	335	P	P	03 55 15.6	-4.3
LSA				pmax	pmax		
	comp=Z,8.0nm,0.5s						
XAN	Xi'an	42.77	359	P	P	03 55 19.8	-1.3
XAN				pP	pP	03 55 32.4	+1.0
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
EVN	Everest	43.08	329	P	P	03 55 22.6	-1.8
LYN	LuoYang	43.33	3	P	P	03 55 29.4	+3.9
LYN				pmax	pmax		
	comp=Z,13nm,0.7s						
LZDM	Lanzhou Array	45.08	353	P	P	03 55 40.1	+0.1
	comp=Z,1.1nm,0.3s,baz=185,slow=14,SNR=1.9						
	comp=Z,1.1nm,0.3s						
LZH	Lanzhou	45.19	353	*e*P	P	03 55 43.3	+2.7
LZH				pP	pwP	03 55 55.9	+1.2
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
JMN	Monobe	48.08	27	P	P	03 56 01.8	-1.3
JMN				IAmb	IAmb	03 57 26.8	
	comp=Z,25nm,1.2s						
GTA	Gaotai	49.07	349	*e*P	P	03 56 12.8	+2.0
GTA				PcP	PcP	03 57 35.2	+1.1
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GTA				LR	LR		
	comp=Z,320nm,14.2s						
GTA				LR	LR		
	comp=Z,340nm,13.8s						
GTA				LR	LR		
	comp=Z,170nm,13.1s						
KSRS	Korea Array	49.09	19	P	P	03 56 11.7	+1.0
	comp=Z,2.6nm,0.8s,baz=196,slow=7.3,SNR=8.1						
BTO	Baotou	49.31	360	*e*P	P	03 56 17.6	+5.0
BTO				sP	sP	03 56 34.6	+6.6
BTO				pmax	pmax		
	comp=Z,380nm,4.7s						
BTO				LR	LR		
	comp=Z,660nm,5.7s						
BTO				LR	LR		
	comp=Z,730nm,6.5s						
BTO				LR	LR		
	comp=Z,540nm,6.8s						
HHC	Hu-ho-hao-te	49.58	1	*e*P	P	03 56 17.2	+2.6
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,84nm,5.9s						
JGF	Kuroka	51.23	29	P	P	03 56 24.5	-2.5
MAJO	Matsushiro	52.39	29	P	P	03 56 34.1	-1.6
MAJO				IAmb	IAmb	03 56 35.7	
	comp=Z,12nm,0.7s						
MJAR	Matsushiro Arr	52.39	29	P	P	03 56 33.6	-2.1
	comp=Z,12nm,0.7s,baz=208,slow=7.8,SNR=31						
	comp=Z,12nm,0.7s						
MJAR	Matsushiro Arr	52.39	29	P	P	03 56 34.7	-1.0
MJB9	Matsu-Tunnel	52.39	29	P	P	03 56 33.8	-1.9
MJB9				IAmb	IAmb	03 56 36.7	
	comp=Z,12nm,0.7s						
XLT	XiLinHaoTe	52.88	5	*e*P	P	03 56 44.0	+4.7
XLT				pP	sP	03 56 56.6	+2.3
XLT				sP	pwP	03 57 00.8	+7.2
XLT				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CN2	Changchun	54.32	14	P	P	03 56 46.9	-2.8
CN2				LR	LR		
	comp=N,400nm,16.0s						
CN2				LR	LR		
	comp=E,300nm,16.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
WMQ	Urumqi	56.34	341	*e*P	P	03 57 05.7	+1.3
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
USRK	Ussuriysk Ar.	56.49	19	P	P	03 57 04.2	-1.2
	comp=Z,8.2nm,0.8s,baz=197,slow=4.1,SNR=10.0						
	comp=Z,8.2nm,0.8s						
BNX	BinXian	56.62	14	⇓P	P	03 57 04.9	-1.3
BNX				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ULN	Ulaanbaatar	56.64	358	P	P	03 57 05.5	-1.1
SONM	Songino Array	56.64	357	P	P	03 57 05.3	-1.3
	comp=Z,1.5nm,0.5s,baz=177,slow=8.0,SNR=12						
	comp=Z,1.5nm,0.5s						
SONM	Songino Array	56.64	357	P	P	03 57 05.8	-0.7
SONM				IAmb	IAmb	03 57 30.2	
	comp=Z,12nm,1.9s						
WUS	Wushi	57.44	333		P	03 57 11.5	-0.9
WUS				IAmb	IAmb	03 57 12.6	
	comp=Z,6.7nm,0.6s						
WUS	Wushi	57.44	333	P	P	03 57 11.5	-0.9
WUS				pP	pP	03 57 22.4	-0.5
KSH	Kashi	57.70	329	P	P	03 57 11.1	-3.1
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MANEM	Manem	58.59	325	P	P	03 57 20.1	-0.5
MANEM				IAmb	IAmb	03 57 50.4	
	comp=Z,23nm,0.9s						
HILR	Hailar Array B	58.87	7	P	P	03 57 20.4	-1.6
	comp=Z,1.0nm,0.5s,baz=181,slow=11,SNR=4.6						
HILR				LR	LR	04 22 58.7	
	comp=Z,98nm,20.1s,baz=25,slow=36						
	comp=Z,1.0nm,0.5s						
DRK	Karamyk	59.88	326	P	P	03 57 27.1	-2.4
BOOM	Boomskoye usch	59.98	331	P	P	03 57 27.9	-2.1
BOOM				IAmb	IAmb	03 58 14.2	
	comp=Z,17nm,1.2s						
GAR	Garm	60.37	325	P	P	03 57 31.1	-1.6
GAR				IAmb	IAmb	03 57 31.8	
	comp=Z,5.6nm,0.7s						
JKA	Kamikawa-asahi	60.46	26	P	P	03 57 31.8	-1.2
AAK	Ala-Archa	60.78	330	LR	LR	04 28 43.4	
	comp=Z,54nm,18.1s,baz=357,slow=41						
MKAR	Makanchi Array	60.80	338	P	P	03 57 34.4	-1.0
	comp=Z,3.7nm,0.6s,baz=146,slow=7.4,SNR=35						
	comp=Z,3.7nm,0.6s						
MKAR	Makanchi Array	60.80	338	P	P	03 57 33.7	-1.7
HEH	HeiHe	60.86	13	*e*P	P	03 57 34.2	-1.4
HEH				pmax	pmax		
	comp=Z,12nm,0.8s						
MAKZ	Makanchi	60.93	338	P	P	03 57 35.3	-1.0
MAKZ				IAmb	IAmb	03 57 35.9	
	comp=Z,12nm,1.8s						
WKZ	Wanaka	61.84	136	P	P	03 57 43.7	+1.1
H04N2	CROZET ISLANDS	61.85	222	T	T	05 05 19.4	
	baz=71,slow=74,SNR=30						
H04N1	CROZET ISLANDS	61.87	222	T	T	05 05 24.5	
	baz=71,slow=74,SNR=31						
H04N3	CROZET ISLANDS	61.87	222	T	T	05 05 23.1	
	baz=71,slow=74,SNR=34						
OXZ	Oxford	63.56	134	P	P	03 57 54.0	0.0
LTZ	Lake Taylor	63.60	133	P	P	03 57 55.0	+0.7
MRNZ	Matariki Terra	63.66	132	P	P	03 57 55.6	+0.8
THZ	Tophouse	63.85	132	P	P	03 57 57.4	+1.4
THZ				IAmb	IAmb	03 57 59.0	
	comp=Z,18nm,0.8s						
GVZ	Greta Valley S	64.19	133	P	P	03 57 58.2	0.0
KURBB	Kurchatov Arra	65.37	338	P	P	03 58 04.4	-1.1
	comp=Z,2.7nm,0.7s,baz=156,slow=5.3,SNR=23						
	comp=Z,2.7nm,0.7s						
KURK	Kurchatov	65.41	339	P	P	03 58 04.4	-1.4
KURK				IAmb	IAmb	03 58 06.0	
	comp=Z,5.1nm,0.8s						
KURK	Kurchatov	65.41	339	P	P	03 58 04.7	-1.1
KURK				pP	pP	03 58 15.6	-1.0
ZAA0	Zalesovo Array	66.22	344	P	P	03 58 09.2	-1.7
ZALV	Zalesovo Beam	66.22	344	P	P	03 58 09.5	-1.5
	comp=Z,1.8nm,0.3s,baz=162,slow=4.6,SNR=14						
ZALV				LR	LR	04 29 07.3	
	comp=Z,111nm,18.3s,baz=255,slow=38						
	comp=Z,1.8nm,0.3s						
URZ	Urewera	66.45	128	LR	LR	04 27 25.1	
	comp=Z,38nm,19.9s,baz=287,slow=36						
BVAR	Borovoye Array	70.39	336	P	P	03 58 36.3	-0.8
	comp=Z,5.2nm,0.7s,baz=141,slow=8.5,SNR=28						
	comp=Z,5.2nm,0.7s						
BORK	Borovoye	70.44	336	P	P	03 58 36.1	-1.3
BORK				IAmb	IAmb	03 58 37.1	
	comp=Z,4.4nm,0.7s						
AB31	Akbulak array	72.69	328	P	P	03 58 50.2	-0.8
AB31				IAmb	IAmb	03 58 51.2	
	comp=Z,9.5nm,0.7s						
ABKAR	Akbulak array	72.69	328	P	P	03 58 50.1	-0.9
VNDA	Vanda	73.49	170	P	P	03 58 56.3	+0.9
	comp=Z,1.9nm,0.9s,baz=207,slow=2.3,SNR=2.5						
	comp=Z,1.9nm,0.9s						
VNDA	Vanda	73.49	170	P	P	03 58 56.0	+0.6
VNDA				IAmb	IAmb	04 01 24.0	
	comp=Z,30nm,1.9s						
PEA0B	Petropavlovsk-	73.83	28	P	P	03 58 56.9	-0.8
PETK	Petropavlovsk-	73.83	28	P	P	03 58 57.1	-0.6
	comp=Z,3.8nm,0.5s,baz=182,slow=1.9,SNR=8.0						
	comp=Z,3.8nm,0.5s						
PETK	Petropavlovsk-	73.83	28	P	P	03 58 57.3	-0.4
SYO	Syowa Base	74.76	201	⇓*e*P	P	03 59 04.3	+1.5
ARTI	Arti	77.78	333	LR	LR	04 37 33.6	
	comp=Z,129nm,19.2s,baz=237,slow=39						
ARTI	Arti	77.78	333	P	P	03 59 19.1	-1.1
ARTI				IAmb	IAmb	03 59 20.5	
	comp=Z,13nm,0.7s						
ARTI	Arti	77.78	333	P	P	03 59 19.4	-0.7
ARTI				pP	PcP	03 59 30.2	+0.2
GURO	Guroymak-BITLI	78.87	312	P	P	03 59 26.4	-0.4
GURO				IAmb	IAmb	03 59 41.8	
	comp=Z,16nm,1.2s						
NRIK	Noril'sk	79.68	352	P	P	03 59 29.6	-0.8
	comp=Z,3.6nm,0.8s,baz=108,slow=4.5,SNR=4.7						
	comp=Z,3.6nm,0.8s						
NRIK	Noril'sk	79.68	352	P	P	03 59 28.6	-1.7
KBZ	Khabaz	80.18	317	P	P	03 59 32.8	-0.8
	comp=Z,4.1nm,1.0s,baz=70,slow=7.9,SNR=5.2						
	comp=Z,4.1nm,1.0s						
QSPA	South Pole Qui	81.04	180	P	P	03 59 39.3	+1.3
	comp=Z,2.6nm,0.5s,baz=328,slow=0.7,SNR=9.2						
	comp=Z,2.6nm,0.5s						
QSPA	South Pole Qui	81.04	180	P	P	03 59 38.5	+0.5
QSPA				IAmb	IAmb	04 00 00.5	
	comp=Z,15nm,1.4s						
LPHEP	Lephephe	81.28	248	P	P	03 59 39.8	-0.4
LPHEP				IAmb	IAmb	04 00 35.7	
	comp=Z,35nm,1.9s						
BOSA	Boshof	81.30	242	P	P	03 59 41.4	+1.2
	comp=Z,2.9nm,0.7s,baz=117,slow=5.4,SNR=7.3						
	comp=Z,2.9nm,0.7s						
BOSA	Boshof	81.30	242	P	P	03 59 40.1	0.0
LBTB	Lobatse	81.35	246	P	P	03 59 41.5	+1.0
LBTB				IAmb	IAmb	04 02 09.5	
	comp=Z,11nm,1.4s						
TIXI	Tiksi	81.39	6	P	P	03 59 38.0	-1.5
	comp=Z,16nm,0.7s,baz=193,slow=3.7,SNR=7.7						
	comp=Z,16nm,0.7s						
TIXI	Tiksi	81.39	6	P	P	03 59 37.7	-1.8
TIXI				IAmb	IAmb	03 59 39.3	
	comp=Z,16nm,0.8s						
TIXI	Tiksi	81.39	6	P	P	03 59 38.2	-1.3
BR131	Keskin Array S	85.44	311	P	P	04 00 00.1	-1.1
BR131				IAmb	IAmb	04 00 15.6	
	comp=Z,9.1nm,0.8s						
BRTR	Keskin Array B	85.44	311	P	P	04 00 01.6	+0.4
	comp=Z,3.4nm,0.7s,baz=134,slow=6.9,SNR=24						
	comp=Z,3.4nm,0.7s						
BRTR	Keskin Array B	85.44	311	P	P	04 00 00.7	-0.5
SNAA	Sanae	88.58	197	⇑P	P	04 00 17.6	+1.9
	comp=Z,129nm,0.7s						
SNAA	Sanae	88.58	197	P	P	04 00 17.4	+1.6
	comp=Z,5.8nm,0.8s,baz=137,slow=5.7,SNR=19						
SNAA				LR	LR	04 35 28.9	
	comp=Z,85nm,19.9s,baz=11,slow=32						
	comp=Z,5.8nm,0.8s						
SNAA	Sanae	88.58	197	P	P	04 00 17.7	+1.9
SNAA				IAmb	IAmb	04 00 18.6	
	comp=Z,6.3nm,0.8s						
VNA3	Neumayer Olymp	90.71	196	⇑P	P	04 00 27.0	+1.3
	comp=Z,4.1nm,0.9s						
BELA	Belgrano 2	91.11	187	P	P	04 00 28.4	+1.0
BELA				IAmb	IAmb	04 00 29.7	
	comp=Z,5.8nm,0.9s						
BURAR	Bucovina Array	93.13	318	P	P	04 00 38.2	+0.8
TBI	Tubuai	95.92	115	*e*LR	LR	04 31 44.4	
	comp=Z,775nm,35.8s						
SPB2	Spitsbergen Ar	99.48	348	P	Pdif	04 01 04.1	-1.3
TXAR	Lajitas Array	142.40	53	PKhKP	PKPpre	04 06 52.9	
	comp=Z,0.4nm,0.7s,baz=254,slow=2.3,SNR=7.4						
TXAR	Lajitas Array	142.40	53	PKPpre	PKPpre	04 06 51.4	
CPUP	Villa Florida	142.87	199	PKhKP	PKPpre	04 06 55.0	
	comp=Z,0.3nm,0.6s,baz=297,slow=2.3,SNR=3.9						
AC02	Maricunga	144.41	181		PKPdf	04 07 00.4	-0.4
R40A	Maddies Statio	144.51	31	PKPdf	PKPab	04 06 58.2	-0.1
P43A	Skaggs, Pawnee	144.76	27	PKPdf	PKPbc	04 06 59.3	+0.1
NCB	Newcomb	144.91	5	PKPdf	PKPbc	04 06 59.5	-0.2
MEDO	Medina	145.11	11	PKPdf	PKPbc	04 06 59.7	-0.5
CCM	Cathedral Cave	145.21	30	PKPbc	PKPbc	04 07 00.3	-0.5
J57A	Williamstown	145.26	8	PKPbc	PKPdf	04 07 01.3	+0.3
K57A	Scipio Center	145.86	9	PKPbc	PKPab	04 07 03.4	+0.3
FCAR	Ozark Folk Cen	146.38	34	PKPbc	PKPbc	04 07 04.1	-0.4
KSCT	Kent School, K	147.21	5	PKPbc	PKPbc	04 07 06.3	-0.3
BDFB	Brasilia	147.35	222	PKPbc	PKPab	04 07 09.5	-0.3
	comp=Z,3.4nm,0.6s,baz=108,slow=3.8,SNR=6.5						
P53A	Whipple	147.90	17	PKPbc	PKPbc	04 07 09.2	+0.5
LPAZ	La Paz	154.86	184	PKPab	PKPab	04 07 43.3	+2.0
	comp=Z,3.7nm,0.6s,baz=164,slow=1.8,SNR=17						

ANF 09 03:47:33.4±0.4, 61°.38N×140°.29W, h15^{km}±8^{km}, Error ellipse: s-maj=3.8km s-min=2.5km az=171.0, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK8	Steele Glacier	0.27	110	P	Pg	03 47 39.5	+0.2
	baz=290,SNR=48						
YUK8				S	Sg	03 47 43.6	+0.3
	baz=290						
YUK3	Moose Creek	0.41	349	P	Pg	03 47 41.9	+0.2
	baz=168,SNR=20						
YUK3				S	Sg	03 47 48.0	+0.6
	baz=168						
CTG	Chitna Glacier	0.66	231	P	Pg	03 47 46.3	+0.1
	baz=51						
YUK4	Talbot Arm	0.79	92	P	Pn	03 47 49.8	-0.4
	baz=266,SNR=26						
YUK6	Outpost Mounta	1.03	114	P	Pb	03 47 53.1	0.0
	baz=296,SNR=8.0						

ANF 09 03:47:57.1±0.1, 61°.37N×140°.33W, h7^{km}±1^{km}, ML2.3/13, Error ellipse: s-maj=0.8km s-min=0.7km az=10.0, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK8	Steele Glacier	0.28	107	P	Pg	03 48 03.1	+0.4
	baz=289,SNR=109						
YUK8				S	Sg	03 48 07.5	+1.0
	baz=289						
YUK3	Moose Creek	0.41	351	P	Pg	03 48 05.5	+0.3
	baz=169						
YUK3				S	Sg	03 48 11.4	+0.8
	baz=169						
O28M	Mount Upton	0.60	174	P	Pg	03 48 09.1	+0.4
	baz=355						
O28M				S	Sg	03 48 17.6	+1.1
	baz=355						
CTG	Chitna Glacier	0.64	231	P	Pg	03 48 09.8	+0.4
	baz=50,SNR=20						
CTG				S	Sb	03 48 18.9	-0.8
	baz=50						
YUK4	Talbot Arm	0.81	91	P	Pb	03 48 13.5	-0.1
	baz=266						
YUK6	Outpost Mounta	1.04	113	P	Pg	03 48 16.8	-0.3
	baz=296,SNR=27						
YUK6				S	Sb	03 48 31.3	-0.3
	baz=296						
BVCY	Beaver Creek	1.08	347	P	Pg	03 48 17.3	-0.5
	baz=166,SNR=25						
BVCY				S	Sn	03 48 33.3	-0.6
	baz=166						
M27K	Edge Creek, AK	1.24	324	P	Pg	03 48 20.1	-0.6
	baz=142						
M27K				S	Sn	03 48 38.1	+0.2
	baz=142						
M27K				S	Sn	03 48 38.1	+0.2
	baz=142						
PINM	Pinnacle	1.28	178	P	Pn	03 48 21.3	-0.1
	baz=359,SNR=25						
PINM				S	Sn	03 48 39.6	+0.8
	baz=359						
MCARA	McCarthy VSAT	1.30	272	P	Pn	03 48 21.6	0.0
	baz=89,SNR=28						
MCARA				S	Sn	03 48 40.0	+0.8
	baz=89						
O29M	Mount Kennedy	1.37	140	P	Pn	03 48 22.5	-0.2
	baz=323						
O29M				S	Sn	03 48 41.4	+0.3
	baz=323						
M29M	Somme Creek	1.40	38	Pg	Pg	03 48 23.8	0.0
	baz=220						

M29M				S	Sg	03 48 43.0	+1.1
	baz=220						
MESA	**MESA**	**1.44**	**214**	Pg	Pg	03 48 24.8	+0.2
	baz=33						
HYT	**Haines Junctio**	**1.48**	**110**	P	Pn	03 48 23.7	-0.5
	baz=293,SNR=35						
HYT				S	Sg	03 48 44.5	0.0
	baz=293						
CRQE	**Cirque**	**1.48**	**247**	Pb	Pb	03 48 24.8	-0.1
	baz=64						
CRQE				S	Sg	03 48 45.0	+0.4
	baz=64						
N30M	**Aishikik Lake**	**1.56**	**85**	Pb	Pb	03 48 26.1	-0.2
	baz=268						
N30M				S	Sb	03 48 46.5	+0.3
	baz=268						
M26K	**Nabesna, AK**	**1.64**	**311**	Pb	Pb	03 48 27.5	0.0
	baz=128						
M26K				Sb	Sg	03 48 50.1	+0.5
	baz=128						
M26K				Sb	Sg	03 48 50.1	+0.5
	baz=128						
L27K	**Beaver Creek,**	**1.84**	**338**	Pb	Pb	03 48 30.8	-0.3
	baz=156						
L27K				Sb	Sg	03 48 55.9	-0.2
	baz=156						
L29M	**L29M**	**2.03**	**30**	Pg	Pg	03 48 35.6	-0.3
	baz=211						
L29M				Sb	Sg	03 49 01.5	-0.7
	baz=211						
M30M	**Minto, Yukon**	**2.06**	**52**	Pb	Pb	03 48 34.9	+0.1
	baz=235						
M30M				Sb	Sg	03 49 02.4	-0.9
	baz=235						
N25K	**Chitina, Valde**	**2.06**	**279**	Pb	Pb	03 48 34.8	0.0
	baz=95						
P30M	**Million Dollar**	**2.07**	**126**	Pb	Pb	03 48 34.8	-0.2
	baz=309						
P30M				Sg	Sg	03 49 04.8	+1.2
	baz=309						
BMRM	**Bremner River**	**2.11**	**261**	Pb	Pb	03 48 35.3	-0.4
	baz=77						
O30N	**Mendenhall**	**2.15**	**104**	Pb	Pb	03 48 36.3	0.0
	baz=288						
P29M	**Windy Craggy**	**2.16**	**143**	Pb	Pb	03 48 37.1	+0.5
	baz=325						
N31M	**Braeburn, Yuko**	**2.19**	**85**	Pb	Pb	03 48 37.2	+0.2
	baz=269						
N31M				Sb	Sg	03 49 06.6	-0.7
	baz=269						
KLU	**Klutina**	**2.69**	**275**	Pb	Pb	03 48 45.6	0.0
	baz=90						
DAWY	**Dawson**	**2.74**	**9**	P	Pn	03 48 42.8	+1.3
	baz=189,SNR=19						
DAWY				Sb	Sb	03 49 22.4	+2.2
	baz=189						
WHY	**Whitehorse**	**2.75**	**103**	Pb	Pb	03 48 46.6	+0.1
	baz=288						
K27K	**Chicken**	**2.79**	**344**	Sb	Sg	03 49 24.3	-2.4
	baz=162						
K29M	**Barlow Dome**	**2.80**	**26**	P	Pn	03 48 43.8	+1.4
	baz=209,SNR=15						
H29M	**Whitestone**	**4.95**	**9**	P	Pn	03 49 12.7	+0.9
	baz=191,SNR=14						

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*ROM **09** 03:55:31.2±0.1, 44.°007N±0.°004×11.°294E±0.°005, h9^{km}, ML1.9/24, Error ellipse: s-maj=0.4km s-min=0.3km az=220.0*

GEN 09 03:55:30.2, 44.°03N×11.°33E, h19^{km}±2^{km}, Ml1.6, 2C, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SEI	**Scarperia**	**0.03**	**42**	P	Pg	03 55 30.8	-2.8
SEI				S	Sg	03 55 32.2	-3.7
MOCL	**Monte Cuccoli**	**0.11**	**257**	⇑P	Pg	03 55 33.9	-0.2
MOCL				S	Sg	03 55 35.5	-1.3
MOCL				AML	AML		
	comp=E,3405µm,0.3s						
MOCL				AML	AML		
	comp=N,3045µm,0.2s						
BRIS	**BRISIGHELLA**	**0.18**	**48**	P	Pg	03 55 40.1	+5.2
BRIS				AML	AML		
	comp=E,202µm,0.4s						
BRIS				AML	AML		
	comp=N,326µm,0.3s						
BRIS				AML	AML		
	comp=E,202µm,1.6s						
MPPT	**Montemurlo**	**0.18**	**247**	⇑P	Pg	03 55 35.2	+0.1
MPPT				S	Sg	03 55 37.9	-0.5
FNVD	**Fontana Vidola**	**0.20**	**314**	P	Pg	03 55 35.9	+0.6
FNVD				S	Sg	03 55 39.7	+0.9
FIE	**Fiesole**	**0.22**	**186**	P	Pg	03 55 36.0	+0.4
FIE				S	Sg	03 55 39.2	0.0
RUFI	**Rufina**	**0.23**	**145**	P	Pg	03 55 36.5	+0.8
RUFI				S	Sg	03 55 40.2	+0.8
RUFI	**Rufina**	**0.23**	**145**	P	Pg	03 55 36.5	+0.8
RUFI				S	Sg	03 55 40.2	+0.8
RUFI				AML	AML		
	comp=E,304µm,0.9s						
RUFI				AML	AML		
	comp=N,264µm,0.2s						
RUFI				AML	AML		
	comp=N,265µm,0.2s						
RUFI				AML	AML		
	comp=E,304µm,1.1s						
FIR	**Firenze**	**0.26**	**191**	P	Pg	03 55 36.9	+0.8
FIR				S	Sg	03 55 41.2	+1.0
LMD	**Lutirano**	**0.28**	**80**	P	Pb	03 55 37.8	+1.2
LMD				S	Sn	03 55 43.0	-2.1
LMD	**Lutirano**	**0.28**	**80**	P	Pb	03 55 37.8	+1.2
LMD				S	Sb	03 55 42.9	+2.1
LMD				AML	AML		
	comp=E,208µm,0.2s						
LMD				AML	AML		
	comp=N,260µm,0.7s						
CRMI	**Carmignano**	**0.35**	**227**	P	Pb	03 55 38.2	+0.2
CRMI				S	Sb	03 55 43.1	-0.1
CRMI				AML	AML		
	comp=N,455µm,0.3s						
CRMI				AML	AML		
	comp=E,370µm,0.3s						
CRMI				AML	AML		
	comp=E,154µm,0.3s						
CRMI				AML	AML		
	comp=N,174µm,0.3s						
MTRZ	**Monterenzio**	**0.36**	**16**	P	Pb	03 55 39.0	+0.9
MTRZ				S	Sg	03 55 43.2	+0.1
MTRZ	**Monterenzio**	**0.36**	**16**	P	Pb	03 55 39.1	+0.9
SFI	**Santa Sofia**	**0.40**	**108**	P	Pn	03 55 40.0	-1.0
SFI				S	Sn	03 55 46.6	-1.3
ASQU	**Asqua**	**0.41**	**125**	P	Pb	03 55 39.9	+0.9
ASQU				S	Sn	03 55 46.6	-1.7
ASQU	**Asqua**	**0.41**	**125**	P	Pb	03 55 39.9	+1.0
ASQU				S	Sb	03 55 46.4	+1.6
ASQU				AML	AML		
	comp=N,154µm,1.1s						
ASQU				AML	AML		
	comp=E,168µm,0.2s						
ASQU				AML	AML		
	comp=N,154µm,0.9s						
POPM	**Popiglio**	**0.41**	**272**	P	Pb	03 55 39.2	+0.3
POPM				S	Sb	03 55 45.7	+0.8
POPM	**Popiglio**	**0.41**	**272**	P	Pb	03 55 39.2	+0.2
POPM				S	Sb	03 55 45.6	+0.8
POPM				AML	AML		
	comp=N,534µm,1.2s						
POPM				AML	AML		
	comp=N,534µm,0.8s						
POPM				AML	AML		
	comp=E,312µm,0.2s						
OSSC	**Osservatorio P**	**0.51**	**187**	P	Pb	03 55 41.2	+0.7
OSSC				S	Sb	03 55 49.0	+1.5
OSSC	**Osservatorio P**	**0.51**	**187**	P	Pb	03 55 41.2	+0.6
OSSC				S	Sn	03 55 49.2	-1.5
OSSC				AML	AML		
	comp=E,164µm,0.9s						
OSSC				AML	AML		
	comp=N,194µm,0.2s						
OSSC				AML	AML		
	comp=E,164µm,1.1s						
BDI	**Bagni Di Lucca**	**0.53**	**274**	P	Pb	03 55 41.2	+0.4
BDI				S	Sb	03 55 49.4	+1.3
BDI	**Bagni Di Lucca**	**0.53**	**274**	P	Pb	03 55 41.2	+0.4
BDI				S	Sb	03 55 49.2	+1.1
BDI				AML	AML		
	comp=E,178µm,0.4s						
BDI				AML	AML		
	comp=N,172µm,0.5s						
CSNT	**Castellina Chi**	**0.56**	**183**	P	Pg	03 55 42.0	+0.6
CSNT				S	Sn	03 55 50.6	-1.3
CSNT	**Castellina Chi**	**0.56**	**183**	P	Pg	03 55 41.9	+0.5
CSNT				S	Sg	03 55 50.3	+1.4
CSNT				AML	AML		
	comp=N,210µm,0.2s						
CSNT				AML	AML		
	comp=E,122µm,0.3s						
CSNT				AML	AML		
	comp=N,210µm,1.8s						
CARD	**Cardoso**	**0.61**	**270**	P	Pg	03 55 42.6	+0.3
CARD				S	Sg	03 55 51.5	+1.0
MAIM	**Mastiano**	**0.61**	**259**	P	Pg	03 55 43.1	+0.7
MAIM				S	Sg	03 55 51.8	+1.2
GSCL	**Gusciola**	**0.62**	**301**	P	Pn	03 55 43.8	-0.3
GSCL				S	Sn	03 55 53.5	0.0
PII	**Pisa**	**0.66**	**242**	P	Pg	03 55 43.5	+0.4
PII				S	Sg	03 55 52.6	+0.7
PII	**Pisa**	**0.66**	**242**	P	Pg	03 55 43.6	+0.5
PII				AML	AML		
	comp=E,188µm,1.4s						
PII				AML	AML		
	comp=N,197µm,0.3s						
PII				AML	AML		
	comp=E,188µm,0.6s						
PII				AML	AML		
	comp=N,197µm,1.7s						
SARO	**Sassorosso**	**0.68**	**283**	P	Pg	03 55 43.7	0.0
SARO				S	Sn	03 55 54.7	-0.5
VLC	**Villacollemand**	**0.69**	**281**	P	Pn	03 55 44.6	-0.4
VLC				S	Sn	03 55 54.2	-1.0

ROM 09 03:56:14.3±0.1, **44.°009N**±0.°004×**11.°296E**±0.°004, **h9^{km}, ML2.1**/42, **4C, Error ellipse: s-maj=0.4km s-min=0.2km az=213.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCL	**Monte Cuccoli**	**0.08**	**267**	P	Pg	03 56 17.1	+0.5
MOCL				S	Sg	03 56 18.7	+0.5
MPPT	**Montemurlo**	**0.16**	**251**	⇑P	Pg	03 56 18.4	+0.7
MPPT				S	Sg	03 56 21.0	+1.0
MPPT				AML	AML		
	comp=N,1080µm,0.2s						
MPPT				AML	AML		
	comp=E,1310µm,0.5s						
MPPT				AML	AML		
	comp=N,1080µm,0.2s						
FIE	**Fiesole**	**0.20**	**180**	P	Pg	03 56 19.2	+0.7
FIE				S	Sg	03 56 22.5	+1.3
FNVD	**Fontana Vidola**	**0.20**	**322**	P	Pg	03 56 19.0	+0.5
FNVD				S	Sg	03 56 22.2	+0.9
BRIS	**BRISIGHELLA**	**0.21**	**48**	P	Pg	03 56 23.2	+4.6
BRIS				AML	AML		
	comp=N,539µm,0.3s						
BRIS				AML	AML		
	comp=E,336µm,0.4s						
RUFI	**Rufina**	**0.23**	**138**	⇑P	Pg	03 56 19.7	+0.8
RUFI				S	Sg	03 56 23.4	+1.3
RUFI				AML	AML		
	comp=E,236µm,0.4s						
RUFI				AML	AML		
	comp=N,209µm,0.9s						
RUFI				AML	AML		
	comp=N,210µm,0.9s						
RUFI				AML	AML		
	comp=E,236µm,0.4s						
FIR	**Firenze**	**0.24**	**187**	P	Pg	03 56 20.0	+1.0
FIR				S	Sg	03 56 24.2	+1.9
FIR				AML	AML		
	comp=E,1420µm,0.5s						
FIR				AML	AML		
	comp=N,1024µm,1.6s						
FIR				AML	AML		
	comp=N,912µm,1.0s						
FIR				AML	AML		
	comp=N,1024µm,1.6s						
FIR				AML	AML		
	comp=E,1460µm,0.5s						
FIR				AML	AML		
	comp=E,1420µm,0.5s						
LMD	**Lutirano**	**0.30**	**77**	P	Pg	03 56 20.8	+0.4
LMD				S	Sb	03 56 26.0	-1.1
LMD				AML	AML		
	comp=N,910µm,0.2s						
LMD				AML	AML		
	comp=E,580µm,1.5s						
LMD				AML	AML		
	comp=N,910µm,0.2s						
CRMI	**Carmignano**	**0.32**	**227**	P	Pg	03 56 21.1	+0.5
CRMI				S	Sb	03 56 26.6	-1.0
CRMI				AML	AML		
	comp=E,325µm,0.3s						
CRMI				AML	AML		
	comp=N,637µm,0.3s						
CRMI				AML	AML		
	comp=E,127µm,0.3s						
CRMI				AML	AML		
	comp=N,276µm,0.3s						
CRMI				AML	AML		
	comp=E,325µm,1.7s						
CRMI				AML	AML		
	comp=E,127µm,1.7s						
CRMI				AML	AML		
	comp=N,637µm,1.7s						
CRMI				AML	AML		
	comp=N,276µm,1.7s						
MTRZ	**Monterenzio**	**0.39**	**18**	P	Pg	03 56 22.0	+0.1
MTRZ				AML	AML		
	comp=E,340µm,1.6s						
MTRZ				AML	AML		
	comp=N,307µm,0.4s						
MTRZ				AML	AML		
	comp=E,297µm,0.6s						
MTRZ				AML	AML		
	comp=N,350µm,0.4s						
MTRZ				AML	AML		
	comp=E,297µm,1.4s						
MTRZ				AML	AML		
	comp=E,340µm,0.4s						
POPM	**Popiglio**	**0.39**	**275**	⇑P	Pg	03 56 22.3	+0.3
POPM				S	Sb	03 56 28.6	-1.0
POPM				AML	AML		
	comp=E,854µm,1.2s						
POPM				AML	AML		
	comp=E,854µm,0.8s						
POPM				AML	AML		
	comp=N,1107µm,0.2s						
SFI	**Santa Sofia**	**0.41**	**105**	P	Pg	03 56 22.9	+0.6
SFI				S	Sb	03 56 29.5	-0.7
SFI				AML	AML		
	comp=E,132µm,0.6s						
SFI				AML	AML		
	comp=N,194µm,1.1s						
ASQU	**Asqua**	**0.41**	**121**	P	Pg	03 56 23.0	+0.6
ASQU				AML	AML		
	comp=E,101µm,1.5s						
ASQU				AML	AML		
	comp=N,114µm,0.9s						
ASQU				AML	AML		
	comp=E,101µm,0.5s						
OSSC	**Osservatorio P**	**0.49**	**184**	P	Pg	03 56 24.3	+0.6
OSSC				S	Sb	03 56 32.1	-0.2
OSSC				AML	AML		
	comp=N,240µm,0.3s						
OSSC				AML	AML		
	comp=E,297µm,0.1s						
BDI	**Bagni Di Lucca**	**0.51**	**276**	⇑P	Pg	03 56 24.4	+0.2
BDI				S	Sb	03 56 32.0	-1.0
BDI				AML	AML		
	comp=E,314µm,0.8s						
BDI				AML	AML		
	comp=N,456µm,0.8s						
BDI				AML	AML		
	comp=E,336µm,0.3s						
BDI				AML	AML		
	comp=N,411µm,0.2s						
BDI				AML	AML		
	comp=E,336µm,1.7s						
BDI				AML	AML		
	comp=E,314µm,1.2s						
CSNT	**Castellina Chi**	**0.54**	**180**	P	Pg	03 56 25.1	+0.4
CSNT				S	Sb	03 56 33.3	-0.4
CSNT				AML	AML		
	comp=E,256µm,0.2s						
CSNT				AML	AML		
	comp=N,284µm,0.2s						
CARD	**Cardoso**	**0.59**	**272**	P	Pg	03 56 25.7	+0.1
CARD				AML	AML		
	comp=N,300µm,1.0s						
CARD				AML	AML		
	comp=E,200µm,1.5s						
CARD				AML	AML		
	comp=N,300µm,1.0s						
MAIM	**Mastiano**	**0.59**	**261**	P	Pg	03 56 26.1	+0.5
MAIM				S	Sb	03 56 34.7	-0.5
CRE	**Caprese Michel**	**0.61**	**129**	P	Pb	03 56 26.7	-0.5
CRE				AML	AML		
	comp=E,74µm,0.4s						
CRE				AML	AML		
	comp=N,108µm,0.3s						
GSCL	**Gusciola**	**0.61**	**304**	P	Pb	03 56 26.8	-0.4
GSCL				S	Sb	03 56 36.5	+0.5
PII	**Pisa**	**0.63**	**243**	P	Pg	03 56 26.7	+0.3
PII				AML	AML		
	comp=E,239µm,1.3s						
PII				AML	AML		
	comp=E,239µm,0.7s						
PII				AML	AML		
	comp=N,226µm,0.2s						
FROS	**Frosini**	**0.81**	**187**	AML	AML		
	comp=N,118µm,0.3s						
FROS				AML	AML		
	comp=E,168µm,0.7s						
FROS				AML	AML		
	comp=E,168µm,1.3s						

ROM 09 03:58:45.8±0.1, **44.°007N**±0.°006×**11.°299E**±0.°006, **h9^{km}, ML1.8**/10, **1C, Error ellipse: s-maj=0.7km s-min=0.5km az=194.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCL	**Monte Cuccoli**	**0.09**	**269**	P	Pg	03 58 48.5	+0.4
MOCL				S	Sg	03 58 50.3	+0.4
MOCL				AML	AML		
	comp=E,4840µm,0.1s						
MOCL				AML	AML		
	comp=N,3590µm,1.0s						
MOCL				AML	AML		
	comp=N,3129µm,0.1s						
MOCL				AML	AML		
	comp=E,4836µm,0.1s						
MPPT	**Montemurlo**	**0.16**	**252**	⇑P	Pg	03 58 49.8	+0.6
MPPT				S	Sg	03 58 52.8	+1.1
MPPT				AML	AML		
	comp=N,253µm,0.2s						
MPPT				AML	AML		
	comp=E,232µm,0.2s						
FIE	**Fiesole**	**0.20**	**181**	P	Pg	03 58 50.7	+0.7
FIE				S	Sg	03 58 53.9	+1.2
RUFI	**Rufina**	**0.23**	**138**	P	Pg	03 58 51.2	+0.8
RUFI				S	Sg	03 58 55.0	+1.5
LMD	**Lutirano**	**0.30**	**76**	P	Pg	03 58 52.4	+0.5
LMD				S	Sb	03 58 57.6	-1.0
LMD				AML	AML		
	comp=N,324µm,0.2s						
LMD				AML	AML		
	comp=E,206µm,0.3s						
CRMI	**Carmignano**	**0.32**	**228**	P	Pg	03 58 52.7	+0.5
CRMI				S	Sb	03 58 57.9	-1.2
MTRZ	**Monterenzio**	**0.39**	**18**	P	Pg	03 58 53.3	-0.2
POPM	**Popiglio**	**0.39**	**276**	P	Pg	03 58 53.8	+0.2
POPM				S	Sb	03 59 00.0	-1.1
POPM				AML	AML		
	comp=N,312µm,0.3s						
POPM				AML	AML		
	comp=E,206µm,1.0s						
POPM				AML	AML		
	comp=E,175µm,0.2s						
POPM				AML	AML		
	comp=N,312µm,0.3s						
ZCCA	**Zocca**	**0.41**	**326**	P	Pb	03 58 55.7	+0.3
OSSC	**Osservatorio P**	**0.48**	**185**	P	Pb	03 58 55.9	-0.6
OSSC				S	Sb	03 59 03.6	-0.1
BDI	**Bagni Di Lucca**	**0.51**	**276**	P	Pg	03 58 55.8	+0.1
BDI				S	Sb	03 59 03.5	-1.0
BDI				AML	AML		
	comp=N,105µm,0.4s						
BDI				AML	AML		
	comp=E,98µm,0.3s						
PII	**Pisa**	**0.63**	**243**	P	Pg	03 58 58.2	+0.3
PII				S	Sb	03 59 08.1	+0.3

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*PRU **09** 03:59:20.0, 41.°76N×11.°79E, h191^{km}*
*GEN **09** 03:59:39.6, 43.°96N×11.°30E, h13^{km}, Ml2.6*
*ROM **09** 03:59:40.2±0.1, 43.°990N±0.°005×11.°311E±0.°006, h9^{km}, ML2.9/114, Error ellipse: s-maj=0.5km s-min=0.4km az=221.0*
*LDG **09** 03:59:40.4±0.1, 43.°98N×11.°30E, h8^{km}, Ml2.8/16, Error ellipse: s-maj=2.9km s-min=2.0km az=17.0*

ISC 09 03:59:39.8±0.8, **43.°98N**±0.°01×**11.°27E**±0.°01, **h11**^{km}±4^{km}, **n119,** σ1.^{s}**81**/177, **15C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCL	**Monte Cuccoli**	**0.07**	**292**	P	**Pg**	**03 59 43.0**	**+0.8**
MOCL				S	**Sg**	**03 59 44.9**	**+0.9**
SEI	**Scarperia**	**0.10**	**42**	P	**Pg**	**03 59 39.4**	**-3.1**
SEI				S	**Sg**	**03 59 41.0**	**-3.7**
MPPT	**Montemurlo**	**0.13**	**260**	⇑P	**Pg**	**03 59 44.2**	**+1.3**
MPPT				S	**Sg**	**03 59 47.2**	**+1.9**
MPPT				AML	AML		
	comp=N,6835µm,0.9s						
MPPT				AML	AML		
	comp=E,5245µm,0.8s						
MPPT				AML	AML		
	comp=N,6840µm,0.9s						
MPPT				AML	AML		
	comp=E,4579µm,0.7s						
MPPT				AML	AML		
	comp=N,6522µm,0.5s						
FIE	**Fiesole**	**0.17**	**173**	⇑P	**Pg**	**03 59 44.6**	**+1.0**
FIE				S	**Sg**	**03 59 47.7**	**+1.3**
FIR	**Firenze**	**0.21**	**182**	⇑P	**Pg**	**03 59 45.3**	**+1.2**
FIR				S	**Sg**	**03 59 49.7**	**+2.5**
FIR				AML	AML		
	comp=N,18550µm,0.3s						
FIR				AML	AML		
	comp=E,17400µm,0.4s						
FIR				AML	AML		
	comp=N,18350µm,0.2s						
FIR				AML	AML		
	comp=E,18300µm,0.4s						
FIR				AML	AML		
	comp=E,16198µm,0.2s						
FIR				AML	AML		
	comp=E,15959µm,0.2s						
FIR				AML	AML		
	comp=N,18552µm,0.3s						
FIR				AML	AML		
	comp=N,18394µm,0.2s						
FNVD	**Fontana Vidola**	**0.21**	**331**	P	**Pg**	**03 59 45.0**	**+0.6**
FNVD				S	**Sg**	**03 59 48.8**	**+1.3**
RUFI	**Rufina**	**0.23**	**128**	P	**Pg**	**03 59 45.0**	**+0.4**
RUFI				S	**Sg**	**03 59 48.4**	**+0.6**
RUFI	**Rufina**	**0.23**	**128**	⇑P	**Pg**	**03 59 45.0**	**+0.4**
RUFI				S	**Sg**	**03 59 48.4**	**+0.6**
RUFI				AML	AML		
	comp=E,6050µm,0.9s						
RUFI				AML	AML		
	comp=N,5060µm,0.5s						
RUFI				AML	AML		
	comp=E,5818µm,0.1s						
RUFI				AML	AML		
	comp=N,5061µm,0.5s						
RUFI				AML	AML		
	comp=N,5061µm,1.5s						
BRIS	**BRISIGHELLA**	**0.24**	**46**	⇑P	**Pg**	**03 59 48.3**	**+3.4**
BRIS				AML	AML		
	comp=E,2840µm,0.3s						
BRIS				AML	AML		
	comp=N,3300µm,0.3s						
BRIS				AML	AML		

	comp=E,3250µm,0.8s						
BRIS				AML	AML		
	comp=E,2991µm,0.4s						
BRIS				AML	AML		
	comp=N,3297µm,0.3s						
BRIS				AML	AML		
	comp=E,96µm,0.6s						
BRIS				AML	AML		
	comp=N,196µm,1.0s						
BRIS				AML	AML		
	comp=N,3297µm,1.7s						
BRIS				AML	AML		
	comp=N,196µm,1.0s						
CRMI	**Carmignano**	0.29	228	⇑P	Pb	03 59 46.9	0.0
CRMI				S	Sb	03 59 52.2	+0.6
CRMI				AML	AML		
	comp=N,8305µm,0.4s						
CRMI				AML	AML		
	comp=E,1675µm,0.4s						
CRMI				AML	AML		
	comp=E,2390µm,0.4s						
CRMI				AML	AML		
	comp=N,3055µm,0.4s						
CRMI				AML	AML		
	comp=N,8305µm,0.4s						
CRMI				AML	AML		
	comp=E,2392µm,0.4s						
CRMI				AML	AML		
	comp=E,1676µm,0.4s						
CRMI				AML	AML		
	comp=N,3057µm,0.4s						
LMD	**Lutirano**	0.33	73	P	Pg	03 59 46.0	-0.5
LMD				S	Sg	03 59 50.8	-0.2
LMD	**Lutirano**	0.33	73	⇑P	Pg	03 59 46.0	-0.5
LMD				S	Sg	03 59 50.9	-0.1
LMD				AML	AML		
	comp=N,9125µm,0.5s						
LMD				AML	AML		
	comp=E,6165µm,0.4s						
LMD				AML	AML		
	comp=E,6163µm,0.4s						
LMD				AML	AML		
	comp=N,8669µm,0.2s						
POPM	**Popiglio**	0.37	280	P	Pb	03 59 48.3	-0.1
POPM				S	Sb	03 59 54.6	+0.4
POPM	**Popiglio**	0.37	280	P	Pb	03 59 48.2	-0.1
POPM				S	Sb	03 59 54.7	+0.5
ASQU	**Asqua**	0.42	116	P	Pg	03 59 48.1	0.0
ASQU				S	Sg	03 59 54.5	+0.8
ASQU	**Asqua**	0.42	116	⇑P	Pg	03 59 48.1	0.0
ASQU				S	Sg	03 59 54.5	+0.8
ASQU				AML	AML		
	comp=E,2450µm,1.1s						
ASQU				AML	AML		
	comp=N,2085µm,0.6s						
ASQU				AML	AML		
	comp=E,2383µm,0.2s						
ASQU				AML	AML		
	comp=N,1804µm,0.5s						
MTRZ	**Monterenzio**	0.42	20	P	Pg	03 59 47.6	-0.6
MTRZ				S	Sg	03 59 54.1	+0.3
MTRZ	**Monterenzio**	0.42	20	⇑P	Pg	03 59 47.5	-0.6
MTRZ				AML	AML		
	comp=E,2830µm,1.2s						
MTRZ				AML	AML		
	comp=N,4065µm,0.6s						
MTRZ				AML	AML		
	comp=E,2875µm,1.2s						
MTRZ				AML	AML		
	comp=N,4150µm,0.6s						
MTRZ				AML	AML		
	comp=E,3180µm,0.9s						
MTRZ				AML	AML		
	comp=N,4060µm,0.6s						
MTRZ				AML	AML		
	comp=E,3330µm,0.9s						
MTRZ				AML	AML		
	comp=E,3334µm,0.9s						
MTRZ				AML	AML		
	comp=N,4150µm,0.6s						
MTRZ				AML	AML		
	comp=E,3177µm,0.9s						
MTRZ				AML	AML		
	comp=N,4064µm,0.6s						
MTRZ				AML	AML		
	comp=N,4064µm,1.4s						
MTRZ				AML	AML		
	comp=N,4150µm,1.4s						
MTRZ				AML	AML		
	comp=E,3177µm,1.1s						
MTRZ				AML	AML		
	comp=E,3334µm,1.1s						
ZCCA	**Zocca**	0.42	331	P	Pb	03 59 50.3	+1.0
ZCCA				S	Sb	03 59 58.7	+2.9
ZCCA	**Zocca**	0.42	331	P	Pb	03 59 50.2	+1.0
ZCCA				AML	AML		
	comp=E,728µm,0.4s						
ZCCA				AML	AML		
	comp=N,874µm,0.9s						
ZCCA				AML	AML		
	comp=E,698µm,0.4s						
ZCCA				AML	AML		
	comp=N,845µm,0.9s						
ZCCA				AML	AML		
	comp=N,846µm,0.9s						
ZCCA				AML	AML		
	comp=N,874µm,0.9s						
ZCCA				AML	AML		
	comp=E,727µm,0.4s						
ZCCA				AML	AML		
	comp=E,698µm,0.4s						
SFI	**Santa Sofia**	0.43	100	⇑P	Pg	03 59 48.0	-0.2
SFI				S	Sg	03 59 54.3	+0.4
SFI				AML	AML		
	comp=E,2970µm,0.2s						
SFI				AML	AML		
	comp=N,4035µm,0.3s						
SFI				AML	AML		
	comp=E,2925µm,0.2s						
SFI				AML	AML		
	comp=N,4035µm,0.3s						
SFI				AML	AML		
	comp=N,4030µm,0.3s						
SFI				AML	AML		
	comp=E,2927µm,0.2s						
SFI				AML	AML		
	comp=N,4030µm,0.3s						
SFI				AML	AML		
	comp=N,4036µm,0.3s						
SFI				AML	AML		
	comp=E,2972µm,0.2s						
OSSC	**Osservatorio P**	0.46	182	P	Pb	03 59 49.5	-0.4
OSSC				S	Sb	03 59 57.1	+0.5
OSSC	**Osservatorio P**	0.46	182	⇑P	Pb	03 59 49.7	-0.1
OSSC				S	Sb	03 59 57.2	+0.7
OSSC				AML	AML		
	comp=E,3490µm,0.2s						
OSSC				AML	AML		
	comp=N,5795µm,0.2s						
OSSC				AML	AML		
	comp=E,5780µm,0.2s						
OSSC				AML	AML		
	comp=N,3520µm,0.2s						
OSSC				AML	AML		
	comp=E,5776µm,0.2s						
OSSC				AML	AML		
	comp=N,3521µm,0.2s						
OSSC				AML	AML		
	comp=E,3487µm,0.2s						
OSSC				AML	AML		
	comp=N,5795µm,0.2s						
BDI	**Bagni Di Lucca**	0.49	280	P	Pb	03 59 50.3	-0.1
BDI				S	Sb	03 59 58.4	+0.7
BDI	**Bagni Di Lucca**	0.49	280	⇑P	Pb	03 59 50.3	-0.1
BDI				S	Sb	03 59 58.3	+0.7
BDI				AML	AML		
	comp=E,1960µm,0.4s						
BDI				AML	AML		
	comp=N,2185µm,1.1s						
BDI				AML	AML		
	comp=E,2200µm,0.4s						
BDI				AML	AML		
	comp=N,2185µm,1.1s						
BDI				AML	AML		
	comp=N,2165µm,1.1s						
BDI				AML	AML		
	comp=N,1984µm,0.7s						
BDI				AML	AML		
	comp=E,1963µm,0.4s						
BDI				AML	AML		
	comp=N,2164µm,0.6s						
BDI				AML	AML		
	comp=N,1984µm,1.3s						
BDI				AML	AML		
	comp=N,2164µm,1.4s						
BDI				AML	AML		
	comp=E,2198µm,0.4s						
CSNT	**Castellina Chi**	0.51	178	P	Pb	03 59 50.4	-0.3
CSNT				S	Sb	03 59 57.8	-0.3
CSNT	**Castellina Chi**	0.51	178	⇑P	Pb	03 59 50.4	-0.3
CSNT				S	Sb	03 59 58.5	+0.4
CSNT				AML	AML		
	comp=E,3125µm,0.3s						
CSNT				AML	AML		
	comp=N,4770µm,0.2s						
CSNT				AML	AML		
	comp=E,3125µm,0.3s						
CSNT				AML	AML		
	comp=N,4770µm,0.2s						
CSNT				AML	AML		
	comp=N,4770µm,1.8s						
IMOL	**Imola, Italy**	0.51	42	P	Pb	03 59 50.9	+0.1
IMOL				S	Sb	03 59 60.0	+1.8
IMOL	**Imola, Italy**	0.51	42	P	Pb	03 59 50.5	-0.2
IMOL				AML	AML		
	comp=E,2405µm,0.5s						
IMOL				AML	AML		
	comp=N,3435µm,0.5s						
IMOL				AML	AML		
	comp=E,2410µm,0.5s						
IMOL				AML	AML		
	comp=N,3430µm,0.5s						
IMOL				AML	AML		
	comp=N,3432µm,0.5s						
IMOL				AML	AML		
	comp=E,2406µm,0.5s						
IMOL				AML	AML		
	comp=N,3432µm,1.5s						
MAIM	**Mastiano**	0.56	264	P	Pb	03 59 51.5	-0.1
MAIM				S	Sb	04 00 00.5	+0.9
MAIM	**Mastiano**	0.56	264	P	Pb	03 59 51.5	-0.1
CARD	**Cardoso**	0.57	275	P	Pg	03 59 51.5	+0.7
CARD				S	Sb	04 00 00.4	+0.7
CARD	**Cardoso**	0.57	275	P	Pg	03 59 51.5	+0.7
CARD				AML	AML		
	comp=N,1075µm,0.9s						
CARD				AML	AML		
	comp=E,1125µm,0.7s						
CARD				AML	AML		
	comp=E,1129µm,0.7s						
CARD				AML	AML		
	comp=N,1017µm,0.4s						
CARD				AML	AML		
	comp=E,1129µm,1.3s						
PII	**Pisa**	0.59	244	P	Pb	03 59 52.2	+0.1
PII				S	Sb	04 00 01.2	+0.7
PII	**Pisa**	0.59	244	⇑P	Pb	03 59 52.3	+0.1
PII				AML	AML		
	comp=E,2305µm,0.9s						
PII				AML	AML		
	comp=N,2515µm,1.5s						
PII				AML	AML		
	comp=E,1605µm,0.3s						
PII				AML	AML		
	comp=N,2446µm,0.4s						
PII				AML	AML		
	comp=E,1605µm,1.7s						
GSCL	**Gusciola**	0.61	307	P	Pb	03 59 52.8	+0.3
GSCL				S	Sb	04 00 02.9	+1.8
GSCL	**Gusciola**	0.61	307	⇑P	Pb	03 59 52.8	+0.3
GSCL				AML	AML		
	comp=E,1260µm,0.9s						
GSCL				AML	AML		
	comp=N,1054µm,1.1s						
GSCL				AML	AML		
	comp=E,1186µm,0.5s						
GSCL				AML	AML		
	comp=N,870µm,1.0s						
GSCL				AML	AML		
	comp=N,870µm,1.0s						
CRE	**Caprese Michel**	0.61	126	P	Pg	03 59 52.0	+0.3
CRE				AML	AML		
	comp=N,1495µm,0.3s						
CRE				AML	AML		
	comp=E,1400µm,0.3s						
CRE				AML	AML		
	comp=E,1400µm,0.3s						
CRE				AML	AML		
	comp=N,1497µm,0.3s						
SARO	**Sassorosso**	0.66	288	P	Pb	03 59 53.4	+0.1
SARO				S	Sb	04 00 03.5	+1.1
SARO	**Sassorosso**	0.66	288	P	Pb	03 59 53.3	+0.1
VLC	**Villacollemand**	0.66	286	P	Pb	03 59 53.6	+0.3
VLC				S	Sb	04 00 03.9	+1.5
VLC	**Villacollemand**	0.66	286	P	Pb	03 59 53.4	+0.1
BRSN	**Barisano**	0.66	62	P	Pg	03 59 52.0	-0.5
BRSN				AML	AML		
	comp=E,1935µm,0.8s						
BRSN				AML	AML		
	comp=N,1605µm,0.8s						
BRSN				AML	AML		
	comp=E,1935µm,0.6s						
BRSN				AML	AML		
	comp=N,1580µm,0.7s						
BRSN				AML	AML		
	comp=N,1575µm,0.7s						
BRSN				AML	AML		
	comp=E,1934µm,0.6s						
BRSN				AML	AML		
	comp=E,1884µm,0.6s						
BRSN				AML	AML		
	comp=N,1607µm,0.8s						
BRSN				AML	AML		
	comp=N,1575µm,0.3s						
BRSN				AML	AML		
	comp=E,1884µm,1.4s						
BRSN				AML	AML		
	comp=E,1934µm,1.4s						
BRSN				AML	AML		
	comp=N,1607µm,1.2s						
FIU	**Minerbio Fiu**	0.68	14	P	Pn	03 59 55.3	0.0
SSP9	**Sansepolcro**	0.75	123	P	Pb	03 59 54.6	-0.1
SSP9				AML	AML		
	comp=E,676µm,1.3s						
SSP9				AML	AML		
	comp=N,598µm,1.4s						
SSP9				AML	AML		
	comp=E,677µm,1.3s						
SSP9				AML	AML		
	comp=N,600µm,1.4s						
SSP9				AML	AML		
	comp=N,555µm,0.9s						
SSP9				AML	AML		
	comp=E,539µm,0.4s						
SSP9				AML	AML		
	comp=N,555µm,1.1s						
FROS	**Frosini**	0.77	186	AML	AML		
	comp=N,1413µm,0.3s						
FROS				AML	AML		
	comp=E,2890µm,0.4s						
FROS				AML	AML		
	comp=N,1490µm,0.5s						
FROS				AML	AML		
	comp=E,2890µm,0.4s						
FROS				AML	AML		
	comp=N,1490µm,0.5s						
FROS				AML	AML		
	comp=E,2894µm,0.4s						
PARC	**Parchiule**	0.78	115	P	Pb	03 59 55.4	+0.1
RAVA	**Ravarino**	0.78	352	P	Pn	03 59 58.5	+1.8
RAVA				S	Sn	04 00 12.6	+4.2
RAVA	**Ravarino**	0.78	352	P	Pn	03 59 57.4	+0.8
CPGN	**Carpegna, Ital**	0.78	103	P	Pb	03 59 55.5	0.0
EQUI	**Equi**	0.82	283	P	Pb	03 59 56.8	+0.8
EQUI				S	Sb	04 00 08.3	+1.1
EQUI	**Equi**	0.82	283	P	Pb	03 59 56.8	+0.8
MAGO	**Bibbona**	0.83	212	AML	AML		
	comp=E,478µm,0.7s						
MAGO				AML	AML		
	comp=N,470µm,0.6s						
MAGO				AML	AML		
	comp=E,479µm,0.6s						
MAGO				AML	AML		
	comp=N,470µm,0.6s						
MAGO				AML	AML		
	comp=E,463µm,0.4s						
MAGO				AML	AML		
	comp=N,470µm,0.6s						
MAGO				AML	AML		
	comp=N,470µm,1.4s						
BADI	**Badiali**	0.85	123	P	Pb	03 59 56.4	-0.2
ATMC	**Monte Cedrone**	0.86	128	P	Pb	03 59 56.9	+0.2
FIVI	**Fivizzano**	0.86	288	P	Pn	03 59 58.0	+0.3
TRIF	**Trifonti**	0.90	197	AML	AML		
	comp=E,416µm,1.3s						
TRIF				AML	AML		
	comp=N,434µm,0.4s						
TRIF				AML	AML		
	comp=E,416µm,0.7s						
TRIF				AML	AML		
	comp=E,416µm,0.7s						
TRIF				AML	AML		
	comp=N,434µm,0.4s						
PE3	**Peglio**	0.94	107	P	Pg	03 59 57.6	-0.2
PE3				AML	AML		
	comp=E,2835µm,0.4s						
PE3				AML	AML		
	comp=N,2475µm,0.4s						
PE3				AML	AML		
	comp=N,2475µm,0.4s						
PE3				AML	AML		
	comp=E,2834µm,0.4s						
APEC	**Apecchio**	0.94	116	P	Pb	03 59 57.9	-0.1
APEC				AML	AML		
	comp=N,635µm,0.7s						
APEC				AML	AML		
	comp=E,670µm,1.4s						
APEC				AML	AML		
	comp=N,636µm,0.7s						
APEC				AML	AML		
	comp=E,908µm,0.9s						
APEC				AML	AML		
	comp=E,645µm,1.0s						
APEC				AML	AML		
	comp=N,635µm,0.7s						
APEC				AML	AML		
	comp=N,635µm,1.3s						
APEC				AML	AML		
	comp=N,979µm,0.6s						
APEC				AML	AML		
	comp=E,908µm,1.1s						
ATMI	**Monte Miggiano**	0.97	131	P	Pn	03 59 59.8	+0.4
ATMI				AML	AML		
	comp=E,847µm,0.5s						
ATMI				AML	AML		
	comp=N,1295µm,0.7s						
ATMI				AML	AML		
	comp=E,847µm,0.5s						
ATMI				AML	AML		
	comp=N,1297µm,0.7s						
ATPI	**Pietralunga -**	0.98	122	P	Pb	03 59 58.8	0.0
ATPI				AML	AML		
	comp=E,337µm,0.5s						
ATPI				AML	AML		
	comp=N,399µm,0.6s						
ATPI				AML	AML		
	comp=E,336µm,0.5s						
ATPI				AML	AML		
	comp=E,337µm,0.5s						
ATPI				AML	AML		
	comp=N,399µm,0.6s						
ATPI				AML	AML		
	comp=N,466µm,0.3s						
ATPI				AML	AML		
	comp=E,400µm,0.6s						
GRAM	**Graiana**	1.00	301	P	Pn	03 59 60.0	+0.2
GRAM				S	Sn	04 00 15.5	+1.5
GRAM	**Graiana**	1.00	301	P	Pn	04 00 00.0	+0.2
GRAM				AML	AML		
	comp=E,796µm,0.5s						
GRAM				AML	AML		
	comp=N,746µm,0.4s						
GRAM				AML	AML		
	comp=E,795µm,0.5s						
GRAM				AML	AML		
	comp=N,746µm,0.4s						
GRAM				AML	AML		
	comp=E,795µm,1.5s						
GRAM				AML	AML		
	comp=N,746µm,1.6s						
ATVO	**AVT- Monte Val**	1.02	125	P	Pg	03 59 59.4	-0.1
ATVO				AML	AML		
	comp=E,516µm,0.5s						
ATVO				AML	AML		
	comp=N,499µm,0.8s						
ATVO				AML	AML		
	comp=E,516µm,0.5s						
ATVO				AML	AML		
	comp=N,482µm,0.6s						
ATVO				AML	AML		
	comp=E,516µm,1.5s						
NARO	**Abbazia di Nar**	1.02	111	P	Pb	03 59 59.4	0.0
NARO				AML	AML		
	comp=E,140µm,1.2s						
NARO				AML	AML		
	comp=E,139µm,1.2s						
NARO				AML	AML		
	comp=N,170µm,1.5s						
NARO				AML	AML		
	comp=E,130µm,0.4s						
NARO				AML	AML		
	comp=N,152µm,0.8s						
NARO				AML	AML		
	comp=N,152µm,1.2s						
PIEI	**Pieia**	1.02	115	P	Pg	03 59 59.1	-0.3
PIEI				AML	AML		
	comp=E,260µm,0.5s						
PIEI				AML	AML		
	comp=N,188µm,0.7s						
PLMA	**Palmaria, Port**	1.02	274	P	Pb	03 59 59.7	+0.3
RIBO	**Ribolla Roccas**	1.04	189	P	Pn	04 00 00.9	+0.7
ARCI	**Arcidosso**	1.14	172	P	Pn	04 00 02.3	+0.6
ARCI				AML	AML		
	comp=E,164µm,1.1s						
ARCI				AML	AML		
	comp=N,262µm,0.8s						
ARCI				AML	AML		
	comp=E,146µm,0.6s						
ARCI				AML	AML		
	comp=N,262µm,0.8s						
ARCI				AML	AML		
	comp=E,239µm,1.2s						
ARCI				AML	AML		
	comp=N,241µm,1.5s						
ARCI				AML	AML		
	comp=N,262µm,1.2s						
ARCI				AML	AML		
	comp=E,239µm,0.8s						
ARCI				AML	AML		
	comp=N,241µm,0.5s						
FRON	**Frontone**	1.16	113	P	Pn	04 00 02.5	+0.6
FRON				AML	AML		
	comp=E,293µm,0.7s						
FRON				AML	AML		
	comp=N,272µm,0.9s						
FRON				AML	AML		
	comp=E,293µm,0.7s						
FRON				AML	AML		
	comp=N,272µm,0.9s						
FRON				AML	AML		
	comp=E,293µm,1.3s						
SF01	**Poggio Pratacc**	1.19	169	P	Pg	04 00 03.0	+0.3
SF01				AML	AML		
	comp=E,276µm,0.7s						
SF01				AML	AML		
	comp=N,460µm,0.7s						
SF01				AML	AML		
	comp=E,277µm,0.7s						
SF01				AML	AML		
	comp=N,460µm,0.7s						
SF01				AML	AML		
	comp=N,460µm,1.3s						
CASP	**Castiglione de**	1.22	194	P	Pn	04 00 02.6	-0.1
CASP				AML	AML		
	comp=E,150µm,0.7s						
CASP				AML	AML		
	comp=N,192µm,0.6s						
CASP				AML	AML		
	comp=N,143µm,0.3s						
CASP				AML	AML		

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=E,150µm,0.7s						
SACS	**San Casciano d**	1.22	157	P	Pn	04 00 02.9	0.0
SACS				AML	AML		
	comp=E,168µm,0.5s						
SACS				AML	AML		
	comp=N,184µm,0.5s						
SACS				AML	AML		
	comp=N,185µm,0.5s						
SACS				AML	AML		
	comp=E,221µm,0.5s						
SACS				AML	AML		
	comp=N,309µm,0.5s						
SACS				AML	AML		
	comp=E,221µm,1.5s						
SACS				AML	AML		
	comp=E,168µm,0.5s						
MSSA	**Maissana**	1.30	286	P	Pb	04 00 04.6	+0.3
ARVD	**Arcevia**	1.31	111	P	Pg	04 00 04.8	-0.1
ARVD				AML	AML		
	comp=E,124µm,0.6s						
ARVD				AML	AML		
	comp=N,142µm,0.5s						
ARVD				AML	AML		
	comp=E,124µm,0.6s						
ARVD				AML	AML		
	comp=N,141µm,0.5s						
ARVD				AML	AML		
	comp=E,124µm,1.4s						
TEOL	**Teolo**	1.41	12	P	Pb	04 00 06.1	+0.1
TEOL				AML	AML		
	comp=E,630µm,1.6s						
TEOL				AML	AML		
	comp=N,747µm,0.5s						
TEOL				AML	AML		
	comp=E,560µm,0.7s						
TEOL				AML	AML		
	comp=N,747µm,0.5s						
TEOL				AML	AML		
	comp=N,747µm,1.5s						
TEOL				AML	AML		
	comp=E,560µm,1.3s						
BOB	**Bobbio (Coli)**	1.52	302	P	Pg	04 00 09.8	+0.8
GORR	**Gorreto**	1.55	295	P	Pg	04 00 11.1	+1.6
MBAL	**Monte Baldo -**	1.74	351	P	Pg	04 00 13.0	-0.2
MBAL				AML	AML		
	comp=E,124µm,0.4s						
MBAL				AML	AML		
	comp=N,106µm,0.7s						
MBAL				AML	AML		
	comp=E,124µm,0.4s						
MBAL				AML	AML		
	comp=E,179µm,0.7s						
MBAL				AML	AML		
	comp=N,213µm,0.8s						
MBAL				AML	AML		
	comp=N,106µm,0.7s						
MAGA	**Magasa**	1.85	346	P	Pb	04 00 13.7	0.0
VARA	**Varagna**	1.86	352	P	Pb	04 00 13.7	-0.2
VARA				AML	AML		
	comp=E,319µm,0.6s						
VARA				AML	AML		
	comp=N,284µm,0.6s						
VARA				AML	AML		
	comp=E,274µm,0.6s						
VARA				AML	AML		
	comp=N,301µm,0.6s						
VARA				AML	AML		
	comp=N,284µm,0.6s						
VARA				AML	AML		
	comp=E,319µm,0.6s						
VARA				AML	AML		
	comp=N,301µm,0.6s						
VARA				AML	AML		
	comp=E,274µm,0.6s						
PGF	**Pioggiola**	2.19	230	*e*Pn	Pn	04 00 15.9	-0.2
PGF				*e*Sn	Sn	04 00 40.9	-2.3
	comp=E,11nm,0.4s						
ZIAN	**Ziano**	2.31	5	P	Pb	04 00 20.1	-1.3
ZIAN				AML	AML		
	comp=E,104µm,0.7s						
ZIAN				AML	AML		
	comp=N,130µm,0.5s						
ZIAN				AML	AML		
	comp=E,104µm,0.7s						
ZIAN				AML	AML		
	comp=N,134µm,0.7s						
ZIAN				AML	AML		
	comp=E,123µm,0.5s						
ZIAN				AML	AML		
	comp=N,130µm,0.5s						
ZIAN				AML	AML		
	comp=E,104µm,1.3s						
ZIAN				AML	AML		
	comp=N,134µm,1.3s						
TRI	**Trieste**	2.48	45	AML	AML		
	comp=N,49µm,1.6s						
TRI				AML	AML		
	comp=E,66µm,0.7s						
TRI				AML	AML		
	comp=E,66µm,0.7s						
TRI				AML	AML		
	comp=N,43µm,0.6s						
TRI				AML	AML		
	comp=E,66µm,1.3s						
DRE	**Drenchia**	2.77	37	P	Pn	04 00 24.5	+0.5
SBF	**Sospel**	2.77	269	*e*Pn	Pn	04 00 23.8	-0.3
SBF				*e*Sn	Sn	04 00 55.3	-2.2
	comp=E,22nm,0.5s						
ABTA	**Abfaltersbach**	2.90	17	Pn	Pn	04 00 28.8	+2.8
	comp=E,2.0nm,0.4s,SNR=5.3						
ABTA				*e*Sn	Sn	04 01 03.3	+2.4
	comp=E,2.6nm,0.6s						
FETA	**Feichten**	3.06	353	*e*Pn	Pn	04 00 28.6	+0.4
	comp=E,2.1nm,0.9s						
FETA				*e*Sn	Sn	04 01 05.6	+0.7
	comp=E,2.4nm,0.8s						
LJU	**Ljubljana**	3.10	47	AML	AML		
	comp=N,866µm,1.4s						
LJU				AML	AML		
	comp=E,750µm,0.6s						
LJU				AML	AML		
	comp=N,866µm,0.6s						
LJU				AML	AML		
	comp=E,750µm,0.6s						
LJU				AML	AML		
	comp=N,866µm,0.6s						
LJU				AML	AML		
	comp=E,750µm,1.4s						
MYKA	**Terra Mystica**	3.14	31	*e*Sn	Sb	04 01 10.6	-3.1
	comp=E,0.7nm,0.4s						
SQTA	**Sankt Quirin**	3.24	359	Pn	Pn	04 00 33.9	+3.3
	comp=E,8.9nm,0.5s,SNR=17						
SQTA				*e*Sn	Sb	04 01 14.2	-2.7
	comp=E,2.7nm,0.5s						
WTTA	**Wattenberg**	3.29	4	*i* Pn	Pn	04 00 33.9	+2.5
	comp=E,3.7nm,0.5s,SNR=6.3						
WTTA				*e*Sn	Sn	04 01 13.9	+3.3
	comp=E,16nm,0.8s						
MBDF	**Montbardon**	3.31	285	*e*Pn	Pn	04 00 32.4	+0.8
MBDF				*e*Sn	Sn	04 01 09.2	-1.7
	comp=E,5.8nm,0.5s						
WATA	**Walderalm**	3.36	4	Pn	Pb	04 00 36.4	-3.0
	comp=E,1.2nm,0.2s,SNR=14						
WATA				*e*Sn	Sb	04 01 18.0	-2.4
	comp=E,7.1nm,0.8s						
MOTA	**Moosalm**	3.37	358	Pn	Pb	04 00 36.2	-3.3
	comp=E,3.8nm,0.5s,SNR=13						
MOTA				*e*Sn	Sb	04 01 17.1	-3.4
	comp=E,0.2nm,0.3s						
KBA	**Koelnbreinsper**	3.43	25	*e*Pn	Pn	04 00 35.1	+1.9
	comp=E,2.1nm,0.3s						
KBA				*e*Sn	Sn	04 01 14.2	+0.3
	comp=E,0.1nm,0.3s						
OBKA	**Obir**	3.43	41	*e*Pn	Pn	04 00 36.7	+3.5
	comp=E,0.9nm,0.6s						
OBKA				*e*Sg	Sg	04 01 35.4	+5.5
	comp=E,3.7nm,0.5s						
DAVA	**Damuels**	3.45	344	*e*Pn	Pb	04 00 38.0	-2.9
	comp=E,1.5nm,0.5s						
DAVA				*e*Sn	Sb	04 01 19.8	-3.0
	comp=E,1.8nm,0.5s						
LMR	**La Mourre**	3.51	261	*e*Pn	Pn	04 00 33.6	-0.6
LMR				*e*Sn	Sn	04 01 12.3	-3.4
	comp=E,3.6nm,0.2s						
RETA	**Reutte**	3.52	354	Pn	Pb	04 00 38.9	-3.2
	comp=E,4.4nm,0.7s,SNR=15						
RETA				*e*Sn	Sn	04 01 19.5	+3.3
	comp=E,2.6nm,0.5s						
LESA	**Schwarzleotal**	3.58	16	Pn	Pn	04 00 39.3	+4.0
	comp=E,7.1nm,0.7s,SNR=10						
LESA				*e*Sn	Sn	04 01 19.8	+2.1
	comp=E,6.8nm,0.6s						
SOKA	**Soboth**	3.79	43	*e*Pn	Pn	04 00 41.2	+3.1
	comp=E,2.8nm,0.8s						
SOKA				*e*Sn	Sn	04 01 22.1	-0.5
	comp=E,0.6nm,0.4s						
ORIF	**Oris-en-Rattie**	3.97	286	*e*Pn	Pn	04 00 39.1	-1.5
ORIF				*e*Sn	Sn	04 01 23.5	-3.6
	comp=E,8.2nm,0.6s						
BIOA	**Bad Ischl, Aus**	4.07	23	*e*Pn	Pn	04 00 44.5	+2.7
	comp=E,0.9nm,0.3s						
SMRF	**Simiane la Rot**	4.11	272	*e*Pn	Pn	04 00 41.6	-0.8
SMRF				*e*Sn	Sn	04 01 26.6	-3.9
	comp=E,2.8nm,0.4s						
MOA	**Molln**	4.40	27	*e*Pn	Pn	04 00 48.9	+2.4
	comp=E,0.6nm,0.5s						
MOA				*e*Sn	Sn	04 01 39.2	+1.5
	comp=E,1.7nm,0.6s						
ARSA	**Arzberg**	4.43	41	*e*Pn	Pn	04 00 47.7	+0.9
	comp=E,1.1nm,0.4s						
CABF	**La Chapelle**	4.50	308	*e*P	Pn	04 00 50.6	+2.7
CABF				*e*Sn	Sn	04 01 36.4	-3.8
	comp=E,1.6nm,0.4s						
VIVF	**Saint-Julien-l**	4.80	283	*e*P	Pn	04 00 55.1	+3.1
HINF	**Hinteralfeld**	4.92	323	*e*P	Pn	04 00 55.3	+1.7
HINF				*e*Sn	Sn	04 01 46.8	-3.7
	comp=E,2.5nm,0.3s						
CONA	**Conrad Observa**	5.08	37	*e*Pn	Pn	04 00 57.1	+1.2
	comp=E,0.8nm,0.6s						
CONA				*e*Sn	Sn	04 01 53.5	-1.2
	comp=E,0.1nm,0.1s						
RONA	**Rosalia, Austr**	5.12	42	*e*Pn	Pn	04 00 58.1	+1.8
	comp=E,1.4nm,0.8s						
RONA				*e*Sn	Sn	04 01 55.0	-0.3
	comp=E,0.4nm,0.2s						
CDF	**Champ du Feu**	5.23	329	*e*P	Pn	04 00 59.6	+1.8
CDF				*e*Sn	Sn	04 01 53.3	-4.8
	comp=E,0.9nm,0.2s						
CKRC	**Cesky Krumlov**	5.28	22	*e*PN	Pn	04 00 59.2	+0.7
CKRC				*e*SN	Sn	04 01 58.6	-0.7
HAU	**Haudompre**	5.29	321	*e*P	Pn	04 01 00.6	+2.0
HAU				*e*Sn	Sn	04 01 54.5	-5.0
	comp=E,4.8nm,0.3s						
LASF	**Ste Croix**	5.34	274	*e*P	Pn	04 01 02.4	+3.0
KHC	**Kasperske Hory**	5.39	16	*e*PN	Pn	04 01 01.5	+1.4
KHC				*e*SN	Sn	04 02 01.6	-0.5
LOR	**Lormes**	6.15	305	*e*Pn	Pn	04 01 08.6	-1.8
LOR				*e*Sn	Sn	04 02 16.4	-4.3
	comp=E,3.0nm,0.4s						
SSF	**Saint Saulge**	6.26	302	*e*Pn	Pn	04 01 10.6	-1.4
SSF				*e*Sn	Sn	04 02 18.9	-4.6
	comp=E,0.7nm,0.3s						

ROM 09 04:01:00.0±0.1**,44°.010N**±0°.005×**11°.299E**±0°.005**,**
h9^{km}**,ML1.3**/7**,1C,Error ellipse: s-maj=0.6km**
s-min=0.3km az=205.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCL	**Monte Cuccoli**	0.09	267	P	Pg	04 01 02.8	+0.4
MOCL				S	Sg	04 01 04.4	+0.3
MOCL				AML	AML		
	comp=N,541µm,0.2s						
MOCL				AML	AML		
	comp=E,367µm,0.1s						
MPPT	**Montemurlo**	0.16	251	⇑P	Pg	04 01 04.1	+0.6
MPPT				S	Sg	04 01 06.9	+0.9
MPPT				AML	AML		
	comp=E,114µm,0.3s						
MPPT				AML	AML		
	comp=N,80µm,0.2s						
FIE	**Fiesole**	0.20	181	P	Pg	04 01 05.0	+0.7
FIE				S	Sg	04 01 08.3	+1.2
RUFI	**Rufina**	0.23	138	P	Pg	04 01 05.5	+0.8
RUFI				S	Sg	04 01 09.3	+1.5
RUFI				AML	AML		
	comp=E,47µm,0.5s						
FIR	**Firenze**	0.24	188	P	Pg	04 01 05.9	+1.1
FIR				S	Sg	04 01 09.8	+1.8
LMD	**Lutirano**	0.30	77	P	Pg	04 01 06.6	+0.5
LMD				S	Sb	04 01 11.8	-0.9
LMD				AML	AML		
	comp=N,121µm,0.2s						
LMD				AML	AML		
	comp=E,85µm,0.1s						
MTRZ	**Monterenzio**	0.39	18	P	Pg	04 01 07.5	-0.1
POPM	**Popiglio**	0.39	275	P	Pg	04 01 08.2	+0.4
POPM				S	Sb	04 01 14.6	-0.7

GEN ***09*** *04:01:35.3,44°.02N×11°.32E,h17*^{km}*±2*^{km}*,Ml2.0*
ROM 09 04:01:35.8±0.1**,44°.013N**±0°.004×**11°.297E**±0°.005**,**
h9^{km}**,ML2.3**/34**,Error ellipse: s-maj=0.4km**
s-min=0.3km az=352.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEI	**Scarperia**	0.06	46	P	Pg	04 01 35.3	-2.6
SEI				S	Sg	04 01 36.7	-2.5
MOCL	**Monte Cuccoli**	0.09	265	P	Pg	04 01 38.6	+0.5
MOCL				S	Sg	04 01 40.2	+0.5
MOCL				AML	AML		
	comp=E,5225µm,0.4s						
MOCL				AML	AML		
	comp=N,4070µm,1.0s						
MPPT	**Montemurlo**	0.16	250	P	Pg	04 01 39.7	+0.5
MPPT				S	Sg	04 01 42.7	+1.1
MPPT				AML	AML		
	comp=E,1645µm,1.1s						
MPPT				AML	AML		
	comp=N,1290µm,1.0s						
MPPT				AML	AML		
	comp=E,1645µm,0.9s						
MPPT				AML	AML		
	comp=N,1295µm,1.0s						
FNVD	**Fontana Vidola**	0.20	321	P	Pg	04 01 40.5	+0.5
FNVD				S	Sg	04 01 43.9	+1.0
BRIS	**BRISIGHELLA**	0.21	48	P	Pg	04 01 44.6	+4.5
BRIS				AML	AML		
	comp=E,722µm,0.4s						
BRIS				AML	AML		
	comp=N,1106µm,0.3s						
RUFI	**Rufina**	0.23	138	P	Pg	04 01 41.2	+0.7
RUFI				S	Sg	04 01 45.0	+1.3
RUFI	**Rufina**	0.23	138	P	Pg	04 01 41.2	+0.7
RUFI				S	Sg	04 01 45.0	+1.3
RUFI				AML	AML		
	comp=N,764µm,0.9s						
RUFI				AML	AML		
	comp=E,548µm,0.9s						
RUFI				AML	AML		
	comp=N,765µm,0.9s						
FIR	**Firenze**	0.24	187	P	Pg	04 01 41.6	+1.0
FIR				S	Sg	04 01 45.6	+1.7
LMD	**Lutirano**	0.30	78	P	Pg	04 01 42.3	+0.5
LMD				S	Sb	04 01 47.3	-1.3
LMD	**Lutirano**	0.30	78	P	Pg	04 01 42.2	+0.4
LMD				S	Sb	04 01 47.3	-1.3
LMD				AML	AML		
	comp=E,1185µm,0.5s						
LMD				AML	AML		
	comp=N,2050µm,0.2s						
CRMI	**Carmignano**	0.33	227	P	Pg	04 01 42.7	+0.5
CRMI				S	Sb	04 01 48.3	-0.9
CRMI				AML	AML		
	comp=E,182µm,0.5s						
CRMI				AML	AML		
	comp=N,469µm,0.3s						
CRMI				AML	AML		
	comp=N,1180µm,0.3s						
CRMI				AML	AML		
	comp=E,329µm,0.3s						
MTRZ	**Monterenzio**	0.38	18	P	Pg	04 01 43.5	+0.1
MTRZ				S	Sb	04 01 49.8	-1.1
MTRZ	**Monterenzio**	0.38	18	P	Pg	04 01 43.4	0.0
MTRZ				AML	AML		
	comp=E,625µm,0.4s						
MTRZ				AML	AML		
	comp=N,655µm,1.5s						
MTRZ				AML	AML		
	comp=E,641µm,0.3s						
MTRZ				AML	AML		
	comp=N,643µm,1.5s						
POPM	**Popiglio**	0.39	275	P	Pg	04 01 43.9	+0.4
POPM				S	Sb	04 01 50.2	-0.9
POPM	**Popiglio**	0.39	275	P	Pg	04 01 43.9	+0.4
POPM				S	Sb	04 01 50.3	-0.8
POPM				AML	AML		
	comp=N,1059µm,0.4s						
POPM				AML	AML		
	comp=E,747µm,1.4s						
ZCCA	**Zocca**	0.41	326	P	Pb	04 01 45.8	+0.5
ZCCA				S	Sb	04 01 54.9	+3.2
ZCCA	**Zocca**	0.41	326	P	Pb	04 01 45.6	+0.3
SFI	**Santa Sofia**	0.41	105	P	Pg	04 01 44.5	+0.6
SFI				S	Sb	04 01 51.0	-0.7
SFI				AML	AML		
	comp=E,302µm,0.6s						
SFI				AML	AML		
	comp=N,368µm,0.7s						
SFI				AML	AML		
	comp=E,300µm,0.6s						
SFI				AML	AML		
	comp=N,314µm,0.7s						
SFI				AML	AML		
	comp=E,302µm,1.4s						
SFI				AML	AML		
	comp=E,300µm,1.4s						
SFI				AML	AML		
	comp=N,368µm,1.3s						
SFI				AML	AML		
	comp=N,314µm,1.3s						
ASQU	**Asqua**	0.42	121	P	Pg	04 01 44.6	+0.6
ASQU				S	Sb	04 01 51.2	-0.7
ASQU	**Asqua**	0.42	121	P	Pg	04 01 44.6	+0.6
ASQU				S	Sb	04 01 51.4	-0.4
ASQU				AML	AML		
	comp=N,247µm,1.3s						
ASQU				AML	AML		
	comp=E,249µm,0.4s						
ASQU				AML	AML		
	comp=N,247µm,0.7s						
OSSC	**Osservatorio P**	0.49	184	P	Pg	04 01 46.0	+0.6
OSSC				S	Sb	04 01 53.5	-0.4
OSSC	**Osservatorio P**	0.49	184	P	Pg	04 01 46.0	+0.6
OSSC				S	Sb	04 01 53.6	-0.4
OSSC				AML	AML		
	comp=E,589µm,1.0s						
OSSC				AML	AML		
	comp=N,721µm,0.9s						
OSSC				AML	AML		
	comp=N,656µm,1.0s						
OSSC				AML	AML		
	comp=E,704µm,0.8s						
BDI	**Bagni Di Lucca**	0.51	276	P	Pg	04 01 46.0	+0.3
BDI				S	Sb	04 01 53.9	-0.6
BDI	**Bagni Di Lucca**	0.51	276	P	Pg	04 01 45.9	+0.2
BDI				S	Sb	04 01 53.6	-0.9
BDI				AML	AML		
	comp=E,637µm,0.6s						
BDI				AML	AML		
	comp=E,582µm,0.4s						
BDI				AML	AML		
	comp=N,658µm,0.5s						
BDI				AML	AML		
	comp=N,766µm,0.5s						
CSNT	**Castellina Chi**	0.54	180	P	Pg	04 01 46.7	+0.4
CSNT				S	Sb	04 01 55.1	-0.3
CSNT	**Castellina Chi**	0.54	180	P	Pg	04 01 46.7	+0.4
CSNT				S	Sb	04 01 55.0	-0.4
CSNT				AML	AML		
	comp=N,539µm,0.3s						
CSNT				AML	AML		
	comp=E,578µm,0.5s						
CARD	**Cardoso**	0.59	272	P	Pb	04 01 48.2	-0.2
CARD				S	Sb	04 01 56.0	-0.8
MAIM	**Mastiano**	0.59	261	P	Pg	04 01 46.9	-0.3
MAIM				S	Sb	04 01 56.6	-0.2
GSCL	**Gusciola**	0.61	304	P	Pb	04 01 48.3	-0.5
GSCL				S	Sb	04 01 58.1	+0.6
CRE	**Caprese Michel**	0.61	129	P	Pg	04 01 48.2	+0.5
CRE				AML	AML		
	comp=E,207µm,1.1s						
CRE				AML	AML		
	comp=N,238µm,0.3s						
PII	**Pisa**	0.63	243	P	Pg	04 01 48.2	+0.2
PII				S	Sb	04 01 58.3	+0.4
PII	**Pisa**	0.63	243	P	Pg	04 01 48.2	+0.2
PII				AML	AML		
	comp=N,492µm,0.3s						
PII				AML	AML		
	comp=N,492µm,1.7s						
PII				AML	AML		
	comp=E,507µm,0.4s						
SARO	**Sassorosso**	0.67	285	P	Pg	04 01 49.0	+0.3
SARO				S	Sb	04 01 59.1	0.0
VLC	**Villacollemand**	0.67	283	P	Pg	04 01 49.0	+0.2
VLC				S	Sb	04 01 59.3	+0.1
EQUI	**Equi**	0.84	281	P	Pn	04 01 54.1	+0.2
EQUI				S	Sb	04 02 03.9	-0.1

GEN ***09*** *04:02:46.4,43°.99N×11°.28E,h11*^{km}*±1*^{km}*,Ml2.7*
ROM ***09*** *04:02:47.0±0.1,44°.007N±0°.004×11°.280E±0°.006,*
h7^{km}*,ML2.8/88,Error ellipse: s-maj=0.4km s-min=0.4km*
az=211.0
LDG ***09*** *04:02:48.7±0.2,43°.94N×11°.29E,h8*^{km}*,Ml2.7/21,Error*
ellipse: s-maj=3.4km s-min=2.7km az=29.0
ISC 09 04:02:46.8±0.8**,43°.99N**±0°.01×**11°.27E**±0°.01**,h7**^{km}±5^{km}**,**
n123,σ**1**^{s}**.62**/192**,11C,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCL	**Monte Cuccoli**	0.06	282	P	**Pg**	**04 02 49.5**	**+0.9**
MOCL				S	**Sg**	**04 02 51.2**	**+1.2**
SEI	**Scarperia**	0.09	46	P	**Pg**	**04 02 46.3**	**-2.7**
SEI				S	**Sg**	**04 02 47.7**	**-2.8**
MPPT	**Montemurlo**	0.13	255	⇑P	**Pg**	**04 02 50.8**	**+1.2**
MPPT				S	**Sg**	**04 02 53.5**	**+1.9**
MPPT				AML	AML		
	comp=E,8350µm,0.5s						
MPPT				AML	AML		
	comp=N,7205µm,0.2s						
FIE	**Fiesole**	0.19	174	⇑P	**Pg**	**04 02 51.7**	**+1.2**
FIE				S	**Sg**	**04 02 55.0**	**+1.9**
FNVD	**Fontana Vidola**	0.20	330	P	**Pg**	**04 02 51.4**	**+0.5**
FNVD				S	**Sg**	**04 02 54.5**	**+0.8**
FNVD				AML	AML		
	comp=E,4680µm,0.7s						
FNVD				AML	AML		
	comp=N,6395µm,0.8s						
FNVD				AML	AML		
	comp=E,4680µm,1.3s						
FIR	**Firenze**	0.22	182	P	**Pg**	**04 02 52.4**	**+1.2**
FIR				S	**Sg**	**04 02 56.5**	**+2.4**
FIR				AML	AML		
	comp=E,11100µm,0.6s						
FIR				AML	AML		
	comp=E,11050µm,0.6s						
FIR				AML	AML		
	comp=N,12000µm,0.2s						
FIR				AML	AML		
	comp=N,11950µm,0.2s						
FIR				AML	AML		
	comp=E,11100µm,0.6s						
FIR				AML	AML		
	comp=N,12000µm,0.2s						
RUFI	**Rufina**	0.23	131	P	**Pg**	**04 02 52.3**	**+0.8**
RUFI				S	**Sg**	**04 02 56.1**	**+1.5**
RUFI	**Rufina**	0.23	131	P	**Pg**	**04 02 52.2**	**+0.8**
RUFI				S	**Sg**	**04 02 56.0**	**+1.5**
BRIS	**BRISIGHELLA**	0.24	48	⇑P	**Pg**	**04 02 55.4**	**+3.9**
BRIS				AML	AML		
	comp=N,2800µm,0.3s						
BRIS				AML	AML		
	comp=E,2390µm,0.5s						
CRMI	**Carmignano**	0.29	227	⇑P	**Pg**	**04 02 53.6**	**+1.0**
CRMI				S	**Sb**	**04 02 58.9**	**-0.6**
CRMI				AML	AML		
	comp=E,1930µm,0.2s						
CRMI				AML	AML		
	comp=E,850µm,0.4s						
CRMI				AML	AML		
	comp=N,2320µm,0.3s						
CRMI				AML	AML		
	comp=N,5935µm,0.3s						

LMD	**Lutirano**	0.33	75	P	Pg	04 02 53.3	0.0
LMD				S	Sg	04 02 58.4	+0.8
LMD	**Lutirano**	0.33	75	⇑P	Pg	04 02 53.3	0.0
LMD				S	Sg	04 02 58.4	+0.8
LMD				AML	AML		
	comp=N,7335µm,0.2s						
LMD				AML	AML		
	comp=E,3925µm,1.6s						
LMD				AML	AML		
	comp=E,3925µm,0.4s						
POPM	**Popiglio**	0.37	278	P	Pg	04 02 54.8	+0.7
POPM				S	Sg	04 03 00.4	+1.5
POPM	**Popiglio**	0.37	278	⇑P	Pg	04 02 54.8	+0.7
POPM				S	Sb	04 03 01.0	-0.7
POPM				AML	AML		
	comp=E,4385µm,1.2s						
POPM				AML	AML		
	comp=N,6945µm,0.3s						
POPM				AML	AML		
	comp=N,6945µm,1.7s						
POPM				AML	AML		
	comp=E,4385µm,0.8s						
MTRZ	**Monterenzio**	0.41	20	P	Pg	04 02 54.4	-0.4
MTRZ				S	Sg	04 02 59.9	-0.3
MTRZ	**Monterenzio**	0.41	20	⇑P	Pg	04 02 54.4	-0.4
MTRZ				AML	AML		
	comp=E,2770µm,0.7s						
MTRZ				AML	AML		
	comp=N,3250µm,1.4s						
MTRZ				AML	AML		
	comp=E,2770µm,0.7s						
MTRZ				AML	AML		
	comp=N,3250µm,1.3s						
MTRZ				AML	AML		
	comp=E,2775µm,0.7s						
MTRZ				AML	AML		
	comp=N,3285µm,1.3s						
MTRZ				AML	AML		
	comp=N,3285µm,0.7s						
MTRZ				AML	AML		
	comp=N,3250µm,0.7s						
MTRZ				AML	AML		
	comp=E,2860µm,0.6s						
MTRZ				AML	AML		
	comp=E,2775µm,1.3s						
ZCCA	**Zocca**	0.41	330	P	Pb	04 02 56.4	-0.1
ZCCA				S	Sb	04 03 03.6	+0.5
ZCCA	**Zocca**	0.41	330	P	Pb	04 02 56.3	-0.2
ASQU	**Asqua**	0.43	117	P	Pg	04 02 55.5	+0.4
ASQU				S	Sb	04 03 02.3	-1.1
ASQU	**Asqua**	0.43	117	P	Pg	04 02 55.4	+0.3
ASQU				S	Sb	04 03 02.1	-1.2
ASQU				AML	AML		
	comp=N,775µm,1.4s						
ASQU				AML	AML		
	comp=N,775µm,0.6s						
ASQU				AML	AML		
	comp=E,655µm,0.2s						
SFI	**Santa Sofia**	0.43	102	P	Pg	04 02 55.3	+0.1
SFI				S	Sb	04 03 01.9	-1.4
SFI				AML	AML		
	comp=E,818µm,0.2s						
SFI				AML	AML		
	comp=N,1196µm,1.1s						
SFI				AML	AML		
	comp=E,800µm,0.2s						
SFI				AML	AML		
	comp=N,1193µm,1.1s						
SFI				AML	AML		
	comp=E,818µm,0.2s						
SFI				AML	AML		
	comp=N,1197µm,1.1s						
SFI				AML	AML		
	comp=N,1194µm,1.1s						
SFI				AML	AML		
	comp=N,1194µm,0.9s						
SFI				AML	AML		
	comp=N,1197µm,0.9s						
OSSC	**Osservatorio P**	0.47	182	P	Pg	04 02 56.8	+0.9
OSSC				S	Sb	04 03 04.5	0.0
OSSC	**Osservatorio P**	0.47	182	⇑P	Pg	04 02 56.8	+0.9
OSSC				S	Sb	04 03 04.5	0.0
OSSC				AML	AML		
	comp=E,2330µm,1.0s						
OSSC				AML	AML		
	comp=N,2010µm,1.4s						
OSSC				AML	AML		
	comp=E,1930µm,1.4s						
OSSC				AML	AML		
	comp=N,2270µm,1.0s						
OSSC				AML	AML		
	comp=E,1930µm,0.6s						
OSSC				AML	AML		
	comp=N,2270µm,1.0s						
OSSC				AML	AML		
	comp=E,2330µm,1.0s						
OSSC				AML	AML		
	comp=N,2010µm,0.6s						
BDI	**Bagni Di Lucca**	0.49	279	P	Pg	04 02 56.7	+0.4
BDI				S	Sb	04 03 04.8	-0.4
BDI	**Bagni Di Lucca**	0.49	279	P	Pg	04 02 56.6	+0.4
BDI				S	Sb	04 03 04.7	-0.5
BDI				AML	AML		
	comp=N,4045µm,1.1s						
BDI				AML	AML		
	comp=E,3400µm,0.3s						
BDI				AML	AML		
	comp=E,2765µm,0.3s						
BDI				AML	AML		
	comp=N,4320µm,0.5s						
IMOL	**Imola, Italy**	0.50	43	P	Pb	04 02 57.9	0.0
IMOL				S	Sb	04 03 07.5	+2.1
IMOL	**Imola, Italy**	0.50	43	P	Pb	04 02 57.8	-0.1
IMOL				AML	AML		
	comp=E,4910µm,0.4s						
IMOL				AML	AML		
	comp=N,4255µm,0.4s						
IMOL				AML	AML		
	comp=N,4255µm,0.4s						
IMOL				AML	AML		
	comp=N,4255µm,1.6s						
IMOL				AML	AML		
	comp=E,4910µm,0.4s						
CSNT	**Castellina Chi**	0.52	178	P	Pg	04 02 57.5	+0.7
CSNT				S	Sb	04 03 05.9	-0.1
CSNT	**Castellina Chi**	0.52	178	⇑P	Pg	04 02 57.5	+0.7
CSNT				S	Sb	04 03 05.8	-0.1
CSNT				AML	AML		
	comp=E,1755µm,0.2s						
CSNT				AML	AML		
	comp=N,2040µm,0.4s						
MAIM	**Mastiano**	0.56	262	P	Pg	04 02 58.1	+0.4
MAIM				S	Sb	04 03 07.1	-0.2
MAIM	**Mastiano**	0.56	262	P	Pg	04 02 58.0	+0.4
CARD	**Cardoso**	0.57	274	P	Pg	04 02 58.0	+0.2
CARD				S	Sb	04 03 07.0	-0.3
CARD	**Cardoso**	0.57	274	P	Pg	04 02 58.0	+0.2
CARD				S	Sg	04 03 06.5	+1.4
CARD				AML	AML		
	comp=E,1440µm,1.6s						
CARD				AML	AML		
	comp=N,2345µm,0.5s						
CARD				AML	AML		
	comp=E,1440µm,0.4s						
PII	**Pisa**	0.60	244	P	Pg	04 02 58.9	+0.5
PII				S	Sb	04 03 08.4	+0.2
PII	**Pisa**	0.60	244	⇑P	Pg	04 02 58.9	+0.5
PII				S	Sb	04 03 08.5	+0.2
PII				AML	AML		
	comp=E,2405µm,0.3s						
PII				AML	AML		
	comp=N,2830µm,0.3s						
PII				AML	AML		
	comp=N,2830µm,1.7s						
GSCL	**Gusciola**	0.61	306	P	Pg	04 02 59.2	+0.7
GSCL				S	Sb	04 03 09.1	+0.6
GSCL	**Gusciola**	0.61	306	⇑P	Pg	04 02 59.2	+0.7
GSCL				S	Sb	04 03 09.0	+0.5
GSCL				AML	AML		
	comp=E,1395µm,1.3s						
GSCL				AML	AML		
	comp=N,1750µm,0.3s						
GSCL				AML	AML		
	comp=E,1395µm,0.7s						
CRE	**Caprese Michel**	0.62	127	P	Pg	04 02 59.2	+0.4
CRE				AML	AML		
	comp=N,894µm,0.3s						
CRE				AML	AML		
	comp=E,655µm,0.5s						
SARO	**Sassorosso**	0.65	287	P	Pg	04 02 59.8	+0.4
SARO				S	Sb	04 03 10.3	+0.4
SARO	**Sassorosso**	0.65	287	P	Pg	04 02 59.8	+0.4
SARO				S	Sb	04 03 10.0	+0.1
VLC	**Villacollemand**	0.66	285	P	Pg	04 03 00.0	+0.6
VLC				S	Sb	04 03 10.2	+0.2
VLC	**Villacollemand**	0.66	285	P	Pg	04 02 60.0	+0.5
VLC				S	Sb	04 03 10.1	+0.2
VLC				AML	AML		
	comp=E,646µm,0.5s						
VLC				AML	AML		
	comp=N,1050µm,1.4s						
VLC				AML	AML		
	comp=N,1064µm,1.4s						
VLC				AML	AML		
	comp=E,672µm,0.5s						
VLC				AML	AML		
	comp=N,1050µm,0.6s						
VLC				AML	AML		
	comp=N,1064µm,0.6s						
VLC				AML	AML		
	comp=E,646µm,1.5s						
VLC				AML	AML		
	comp=E,672µm,1.5s						
FIU	**Minerbio Fiu**	0.67	14	P	Pn	04 03 03.4	+0.8
CMPO	**Campotto Po**	0.70	33	P	Pn	04 03 05.1	+2.0
SSP9	**Sansepolcro**	0.75	123	P	Pb	04 03 02.3	+0.1
SSP9				AML	AML		
	comp=N,447µm,1.5s						
SSP9				AML	AML		
	comp=E,300µm,0.4s						
SSP9				AML	AML		
	comp=N,447µm,0.5s						
PARC	**Parchiule**	0.78	116	P	Pb	04 03 02.6	-0.1
FROS	**Frosini**	0.79	186	AML	AML		
	comp=N,818µm,0.7s						
FROS				AML	AML		
	comp=E,1360µm,0.9s						
FROS				AML	AML		
	comp=N,818µm,0.7s						
EQUI	**Equi**	0.82	283	P	Pb	04 03 03.4	0.0
EQUI				S	Sb	04 03 14.8	+0.1
EQUI	**Equi**	0.82	283	P	Pg	04 03 02.4	-0.2
MAGO	**Bibbona**	0.84	212	AML	AML		
	comp=N,388µm,0.6s						
MAGO				AML	AML		
	comp=E,544µm,0.6s						
MAGO				AML	AML		
	comp=E,544µm,1.4s						
BADI	**Badiali**	0.86	124	P	Pb	04 03 04.3	+0.3
BADI				AML	AML		
	comp=E,270µm,0.5s						
BADI				AML	AML		
	comp=N,282µm,0.6s						
BADI				AML	AML		
	comp=N,282µm,1.4s						
BADI				AML	AML		
	comp=E,270µm,1.5s						
FIVI	**Fivizzano**	0.86	287	P	Pn	04 03 05.0	-0.2
FIVI				S	Sb	04 03 16.2	+0.5
FIVI	**Fivizzano**	0.86	287	P	Pg	04 03 03.9	+0.7
ATMC	**Monte Cedrone**	0.86	129	P	Pb	04 03 04.2	0.0
PE3	**Peglio**	0.94	108	P	Pb	04 03 05.5	+0.1
APEC	**Apecchio**	0.94	117	P	Pn	04 03 06.0	-0.5
APEC				AML	AML		
	comp=N,309µm,1.2s						
APEC				AML	AML		
	comp=E,391µm,0.4s						
APEC				AML	AML		
	comp=N,309µm,0.8s						
ATMI	**Monte Miggiano**	0.98	132	P	Pn	04 03 07.0	0.0
ATPI	**Pietralunga -**	0.98	123	P	Pb	04 03 06.2	0.0
ATPI				AML	AML		
	comp=E,186µm,0.8s						
ATPI				AML	AML		
	comp=N,191µm,0.9s						
ATPI				AML	AML		
	comp=N,191µm,1.1s						
ATPI				AML	AML		
	comp=E,186µm,1.2s						
GRAM	**Graiana**	1.00	300	P	Pg	04 03 06.5	+0.5
GRAM				S	Sb	04 03 20.4	+0.6
GRAM	**Graiana**	1.00	300	P	Pg	04 03 06.5	+0.6
GRAM				AML	AML		
	comp=E,1710µm,0.4s						
GRAM				AML	AML		
	comp=N,855µm,0.5s						
ATPC	**Poggio Castell**	1.00	120	P	Pb	04 03 06.7	+0.2
PLMA	**Palmaria, Port**	1.02	274	P	Pb	04 03 07.0	+0.2
PLMA				S	Sg	04 03 20.4	+0.7
PLMA	**Palmaria, Port**	1.02	274	P	Pb	04 03 07.0	+0.2
PLMA				AML	AML		
	comp=N,776µm,0.4s						
PLMA				AML	AML		
	comp=E,384µm,0.9s						
PLMA				AML	AML		
	comp=N,776µm,1.6s						
NARO	**Abbazia di Nar**	1.02	111	P	Pb	04 03 06.9	0.0
PIEI	**Pieia**	1.03	116	P	Pn	04 03 07.5	-0.2
PIEI				AML	AML		
	comp=E,124µm,0.3s						
PIEI				AML	AML		
	comp=N,122µm,1.0s						
ATVA	**AVT- Monte Val**	1.03	134	P	Pb	04 03 07.0	+0.1
ATVO	**AVT- Monte Val**	1.03	126	P	Pb	04 03 07.1	+0.1
ATVO				AML	AML		
	comp=E,284µm,0.8s						
ATVO				AML	AML		
	comp=N,240µm,0.8s						
RIBO	**Ribolla Roccas**	1.05	189	P	Pn	04 03 08.2	+0.2
ATLO	**AVT- Montelove**	1.07	129	P	Pb	04 03 07.7	0.0
ARCI	**Arcidosso**	1.15	172	P	Pn	04 03 09.3	0.0
ARCI				AML	AML		
	comp=E,132µm,0.5s						
ARCI				AML	AML		
	comp=N,157µm,1.1s						
ARCI				AML	AML		
	comp=N,157µm,0.9s						
ARCI				AML	AML		
	comp=E,132µm,1.5s						
SF04	**Casetta**	1.19	166	P	Pn	04 03 10.3	+0.4
SF01	**Poggio Pratacc**	1.20	170	P	Pn	04 03 10.4	+0.4
SF01				AML	AML		
	comp=N,192µm,1.2s						
SF01				AML	AML		
	comp=E,220µm,1.4s						
SACS	**San Casciano d**	1.23	157	P	Pb	04 03 09.6	-0.8
SACS				AML	AML		
	comp=E,121µm,0.7s						
SACS				AML	AML		
	comp=N,136µm,0.6s						
CASP	**Castiglione de**	1.24	194	P	Pn	04 03 09.8	-0.7
CASP				AML	AML		
	comp=E,120µm,0.8s						
CASP				AML	AML		
	comp=N,103µm,0.7s						
CASP				AML	AML		
	comp=N,103µm,1.3s						
MSSA	**Maissana**	1.30	285	P	Pn	04 03 11.4	0.0
MSSA				AML	AML		
	comp=E,260µm,0.4s						
MSSA				AML	AML		
	comp=N,258µm,0.6s						
MSSA				AML	AML		
	comp=E,260µm,1.6s						
CELB	**S.Piero in Cam**	1.46	212	P	Pn	04 03 12.8	-0.8
CELB				S	Sn	04 03 30.9	-2.1
BOB	**Bobbio (Coli)**	1.52	301	P	Pg	04 03 16.8	+0.9
GORR	**Gorreto**	1.54	294	P	Pg	04 03 16.7	+0.3
CSP1	**Cessapalombo**	1.67	122	P	Pb	04 03 17.4	-0.5
VARA	**Varagna**	1.85	352	P	Pn	04 03 20.0	+0.9
VARA				AML	AML		
	comp=E,271µm,1.6s						
VARA				AML	AML		
	comp=E,242µm,0.5s						
VARA				AML	AML		
	comp=N,224µm,1.6s						
VARA				AML	AML		
	comp=E,271µm,0.4s						
VARA				AML	AML		
	comp=N,238µm,0.6s						
VARA				AML	AML		
	comp=N,224µm,0.4s						
MNTT	**Montottone**	1.93	118	P	Pb	04 03 22.0	-0.4
PGF	**Pioggiola**	2.20	230	*e*Pn	Pn	04 03 23.7	-0.1
PGF				*e*Sn	Sn	04 03 49.4	-1.8
	comp=N,16nm,0.4s						
ZIAN	**Ziano**	2.29	5	P	Pn	04 03 26.6	+1.5
OZOL	**Ozolo**	2.42	356	P	Pn	04 03 28.8	+2.0
CARE	**Lago del Cares**	2.47	351	P	Pn	04 03 29.6	+1.9
KOSI	**Kohlern**	2.47	2	AML	AML		
	comp=E,290µm,1.5s						
KOSI				AML	AML		
	comp=N,882µm,0.5s						
SABO	**M.te Sabotino**	2.59	39	P	Pn	04 03 29.5	+0.4
SBF	**Sospel**	2.77	269	*e*Pn	Pn	04 03 32.1	+0.5
SBF	**Sospel**	2.77	269	*e*Pg	Pg	04 03 39.1	-0.8
SBF				*e*Sn	Sn	04 04 03.1	-2.3
	comp=N,9.7nm,0.2s						
ABTA	**Abfaltersbach**	2.89	17	*e*Pn	Pn	04 03 33.9	+0.6
	comp=N,2.2nm,0.5s						
ABTA				*e*Sn	Sn	04 04 04.7	-3.6
	comp=N,4.1nm,0.6s						
FETA	**Feichten**	3.05	353	Pn	Pb	04 03 39.4	-2.2
	comp=N,1.2nm,0.5s,SNR=5.3						
FETA				*e*Sn	Sn	04 04 14.5	+2.0
	comp=N,2.2nm,0.6s						
SQTA	**Sankt Quirin**	3.23	359	Pn	Pb	04 03 41.8	-2.7
	comp=N,6.2nm,0.6s,SNR=14						
SQTA				*e*Sn	Sn	04 04 20.0	+3.3
	comp=N,4.1nm,0.5s						
WTTA	**Wattenberg**	3.28	4	Pn	Pb	04 03 42.4	-3.0
	comp=N,0.2nm,0.1s,SNR=7.0						
WTTA				*e*Sn	Sb	04 04 22.1	-3.5
	comp=N,5.8nm,0.6s						
MBDF	**Montbardon**	3.31	284	*e*Pn	Pn	04 03 39.8	+0.7
MBDF				*e*Sn	Sn	04 04 16.0	-2.7
	comp=N,5.9nm,0.6s						
WATA	**Walderalm**	3.35	4	Pn	Pb	04 03 43.8	-2.8
	comp=N,1.8nm,0.2s,SNR=14						
WATA				*e*Sn	Sn	04 04 22.7	+2.9
	comp=N,4.3nm,1.0s						
MOTA	**Moosalm**	3.35	358	Pn	Pb	04 03 43.9	-2.8
	comp=N,3.6nm,0.6s,SNR=5.9						
MOTA				*e*Sn	Sb	04 04 24.2	-3.6
	comp=N,1.7nm,0.5s						
KBA	**Koelnbreinsper**	3.41	25	*e*Pn	Pn	04 03 43.0	+2.4
	comp=N,2.2nm,0.8s						
KBA				*e*Sn	Sn	04 04 16.2	-5.2
	comp=N,1.9nm,0.6s						
OBKA	**Obir**	3.42	41	*e*Pn	Pb	04 03 48.5	+0.7
	comp=N,1.4nm,0.5s						
OBKA				*e*Sg	Sg	04 04 41.5	+4.8
	comp=N,7.8nm,0.7s						
DAVA	**Damuels**	3.44	344	*e*Pn	Pn	04 03 44.2	+3.3
	comp=N,1.3nm,0.5s						
DAVA				*e*Sn	Sn	04 04 24.2	+2.3
	comp=N,4.2nm,0.5s						
RETA	**Reutte**	3.51	354	Pn	Pb	04 03 45.8	-3.5
	comp=N,2.4nm,0.5s,SNR=9.7						
RETA				*e*Sn	Sn	04 04 26.2	+2.5
	comp=N,0.3nm,0.3s						
LMR	**La Mourre**	3.51	261	*e*Pn	Pn	04 03 41.4	-0.4
LMR				*e*Sn	Sn	04 04 20.7	-2.9
	comp=N,8.6nm,0.5s						
LPG	**La Plagne**	3.55	297	*e*Pn	Pn	04 03 45.8	+3.2
LESA	**Schwarzleotal**	3.57	16	Pn	Pn	04 03 46.1	+3.4
	comp=N,2.9nm,0.5s,SNR=9.5						
LESA				*e*Sn	Sn	04 04 27.1	+2.0
	comp=N,2.1nm,0.5s						
SOKA	**Soboth**	3.78	43	*e*Pn	Pn	04 03 49.3	+3.8
	comp=N,0.5nm,0.3s						
SOKA				*e*Sn	Sn	04 04 27.4	-2.8
	comp=N,0.7nm,0.7s						
ORIF	**Oris-en-Rattie**	3.97	285	*e*Pn	Pn	04 03 51.2	+3.1
ORIF				*e*Sn	Sn	04 04 33.4	-1.5
	comp=N,2.5nm,0.2s						
BIOA	**Bad Ischl, Aus**	4.05	23	*e*Pn	Pn	04 03 50.9	+1.6
	comp=N,0.5nm,0.2s						
BIOA				*e*Sn	Sn	04 04 36.8	-0.1
	comp=N,0.7nm,0.5s						
SMRF	**Simiane la Rot**	4.11	272	*e*Pn	Pn	04 03 50.9	+0.9
SMRF				*e*Sn	Sn	04 04 35.7	-2.6
	comp=N,0.9nm,0.3s						
MOA	**Molln**	4.39	27	*e*Pn	Pn	04 03 55.8	+2.0
	comp=N,0.2nm,0.2s						
MOA				*e*Sn	Sn	04 04 45.3	+0.2
	comp=N,1.0nm,0.5s						
ARSA	**Arzberg**	4.42	41	*e*Pn	Pn	04 03 55.4	+1.1
	comp=N,0.1nm,0.5s						
CABF	**La Chapelle**	4.50	307	*e*Pn	Pn	04 03 57.7	+2.3
CABF				*e*Sn	Sn	04 04 45.5	-2.4
	comp=N,2.5nm,0.4s						
VIVF	**Saint-Julien-l**	4.80	283	*e*Pn	Pn	04 04 00.4	+0.9
VIVF				*e*Sn	Sn	04 04 52.2	-3.2
	comp=N,0.1nm,0.1s						
HINF	**Hinteralfeld**	4.91	323	*e*Pn	Pn	04 04 02.3	+1.3
HINF				*e*Sn	Sn	04 04 58.3	+0.2
	comp=N,6.7nm,0.4s						
CONA	**Conrad Observa**	5.08	38	*e*Pn	Pn	04 04 04.2	+0.9
	comp=N,0.1nm,0.1s						
CONA				*e*Sn	Sn	04 05 01.1	-1.0
	comp=N,1.0nm,0.6s						
RONA	**Rosalia, Austr**	5.11	42	*e*Pn	Pn	04 04 03.5	-0.3
	comp=N,0.1nm,0.1s						
RONA				*e*Sn	Sn	04 05 02.4	-0.5
	comp=N,0.1nm,0.1s						
CDF	**Champ du Feu**	5.22	329	*e*Pn	Pn	04 04 06.3	+1.0
CDF				*e*Sn	Sn	04 05 03.4	-2.3
	comp=N,0.9nm,0.2s						
CKRC	**Cesky Krumlov**	5.27	22	*e*PN	Pn	04 04 06.0	+0.1
CKRC				*e*SN	Sn	04 05 02.3	-4.5
HAU	**Haudompre**	5.28	321	*e*Pn	Pn	04 04 07.7	+1.7
HAU				*e*Sn	Sn	04 05 06.5	-0.6
	comp=N,16nm,0.6s						
KHC	**Kasperske Hory**	5.38	16	*e*PN	Pn	04 04 08.3	+0.8
KHC				*e*SN	Sn	04 05 08.8	-0.9
SMF	**Signal de Mont**	5.87	299	*e*Sn	Sn	04 05 20.8	-0.8
	comp=N,3.8nm,0.5s						
LOR	**Lormes**	6.14	305	*e*Pn	Pn	04 04 19.1	+1.2
LOR				*e*Sn	Sn	04 05 27.8	-0.5
	comp=N,1.4nm,0.3s						
SSF	**Saint Saulge**	6.26	302	*e*P	Pn	04 04 23.4	+4.0
SSF				*e*Sn	Sn	04 05 28.9	-2.2
	comp=N,1.5nm,0.5s						
MTLF	**Montolieu**	6.60	267	*e*Pn	Pn	04 04 23.7	-0.4
MTLF				*e*Sn	Sn	04 05 35.6	-3.9
	comp=N,1.1nm,0.2s						
CAF	**Calviac**	6.65	281	*e*P	Pn	04 04 29.9	+5.0

ROM 09 04:03:35.0±0.1, 44°.011N±0°.004×11°.299E±0°.006, h9km, ML2.1/14, 2C, Error ellipse: s-maj=0.5km s-min=0.3km az=228.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCL	**Monte Cuccoli**	0.09	266	⇑P	Pg	04 03 37.7	+0.4
MOCL				S	Sg	04 03 39.4	+0.5
MOCL				AML	AML		
	comp=E,5280µm,0.7s						
MOCL				AML	AML		
	comp=N,5030µm,0.2s						
MOCL				AML	AML		
	comp=N,5026µm,0.2s						
MOCL				AML	AML		
	comp=E,5234µm,0.2s						
MOCL				AML	AML		
	comp=N,5026µm,1.8s						
MPPT	**Montemurlo**	0.16	251	⇑P	Pg	04 03 39.0	+0.6
MPPT				S	Sg	04 03 42.0	+1.2
MPPT				AML	AML		
	comp=E,776µm,0.5s						
MPPT				AML	AML		
	comp=N,639µm,0.8s						
MPPT				AML	AML		
	comp=E,735µm,0.2s						
MPPT				AML	AML		
	comp=N,617µm,0.3s						
MPPT				AML	AML		
	comp=N,617µm,1.7s						
FNVD	**Fontana Vidola**	0.20	321	P	Pg	04 03 39.6	+0.4
FNVD				S	Sg	04 03 43.3	+1.3
FNVD				AML	AML		
	comp=N,942µm,0.2s						
FNVD				AML	AML		
	comp=E,650µm,0.1s						
FIE	**Fiesole**	0.20	181	P	Pg	04 03 39.9	+0.7
FIE				S	Sg	04 03 43.2	+1.2

RUFI	**Rufina**	**0.23**	**138**	P	Pg	04 03 40.4	+0.8
RUFI				S	Sg	04 03 44.2	+1.5
RUFI				AML	AML		
	comp=N,202µm,0.4s						
RUFI				AML	AML		
	comp=E,214µm,0.1s						
FIR	**Firenze**	**0.24**	**188**	P	Pg	04 03 40.6	+0.8
FIR				S	Sg	04 03 45.0	+2.0
LMD	**Lutirano**	**0.30**	**77**	P	Pg	04 03 41.6	+0.6
LMD				S	Sb	04 03 46.8	-0.9
CRMI	**Carmignano**	**0.33**	**227**	P	Pg	04 03 41.9	+0.5
CRMI				S	Sb	04 03 47.3	-1.0
MTRZ	**Monterenzio**	**0.39**	**18**	P	Pg	04 03 42.9	+0.3
POPM	**Popiglio**	**0.39**	**275**	P	Pg	04 03 42.9	+0.3
POPM				S	Sb	04 03 49.2	-1.1
POPM				AML	AML		
	comp=E,366µm,0.2s						
POPM				AML	AML		
	comp=N,460µm,0.1s						
POPM				AML	AML		
	comp=E,366µm,1.8s						
ZCCA	**Zocca**	**0.41**	**326**	P	Pb	04 03 45.1	+0.6
OSSC	**Osservatorio P**	**0.49**	**185**	P	Pb	04 03 45.2	-0.6
OSSC				S	Sb	04 03 52.8	-0.2
CSNT	**Castellina Chi**	**0.54**	**181**	P	Pg	04 03 45.9	+0.5
CSNT				S	Sb	04 03 54.2	-0.3
PII	**Pisa**	**0.63**	**243**	P	Pg	04 03 47.4	+0.2
PII				AML	AML		
	comp=E,174µm,0.3s						
PII				AML	AML		
	comp=N,205µm,0.3s						

ROM 09 04:03:55.7±0.1**, 44°.010N**±0°.005×**11°.299E**±0°.005**,**
h9^{km}, ML2.0/16**, 1C, Error ellipse: s-maj=0.5km**
s-min=0.4km az=202.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCL	**Monte Cuccoli**	**0.09**	**267**	P	Pg	04 03 58.4	+0.4
MOCL				S	Sg	04 04 00.1	+0.4
MPPT	**Montemurlo**	**0.16**	**251**	⇑P	Pg	04 03 59.8	+0.6
MPPT				S	Sg	04 04 02.5	+1.0
MPPT				AML	AML		
	comp=N,453µm,0.2s						
MPPT				AML	AML		
	comp=E,500µm,0.5s						
FIE	**Fiesole**	**0.20**	**181**	P	Pg	04 04 00.6	+0.7
FIE				S	Sg	04 04 03.9	+1.2
RUFI	**Rufina**	**0.23**	**138**	P	Pg	04 04 01.1	+0.8
RUFI				S	Sg	04 04 05.0	+1.5
RUFI				AML	AML		
	comp=E,113µm,0.6s						
RUFI				AML	AML		
	comp=N,119µm,0.3s						
FIR	**Firenze**	**0.24**	**188**	P	Pg	04 04 01.5	+1.0
FIR				S	Sg	04 04 05.5	+1.8
FIR				AML	AML		
	comp=E,820µm,0.2s						
FIR				AML	AML		
	comp=N,736µm,0.2s						
FIR				AML	AML		
	comp=N,760µm,0.2s						
FIR				AML	AML		
	comp=E,764µm,0.2s						
LMD	**Lutirano**	**0.30**	**77**	P	Pg	04 04 02.2	+0.5
LMD				S	Sb	04 04 07.4	-1.0
LMD				AML	AML		
	comp=E,347µm,0.2s						
LMD				AML	AML		
	comp=N,699µm,0.2s						
CRMI	**Carmignano**	**0.32**	**227**	P	Pg	04 04 02.6	+0.5
CRMI				S	Sb	04 04 08.1	-0.9
MTRZ	**Monterenzio**	**0.39**	**18**	P	Pg	04 04 03.2	-0.2
POPM	**Popiglio**	**0.39**	**275**	P	Pg	04 04 03.7	+0.3
POPM				S	Sb	04 04 09.8	-1.2
POPM				AML	AML		
	comp=N,670µm,0.3s						
POPM				AML	AML		
	comp=E,385µm,0.2s						
BDI	**Bagni Di Lucca**	**0.51**	**276**	P	Pg	04 04 05.7	+0.1
BDI				S	Sb	04 04 13.5	-0.9
CSNT	**Castellina Chi**	**0.54**	**181**	P	Pg	04 04 06.6	+0.5
CSNT				S	Sb	04 04 14.8	-0.3
CSNT				AML	AML		
	comp=E,125µm,0.2s						
CSNT				AML	AML		
	comp=N,122µm,0.6s						
GSCL	**Gusciola**	**0.61**	**304**	P	Pb	04 04 08.2	-0.4
GSCL				S	Sb	04 04 17.9	+0.5
PII	**Pisa**	**0.63**	**243**	P	Pg	04 04 08.2	+0.3
PII				AML	AML		
	comp=N,245µm,0.3s						
PII				AML	AML		
	comp=E,168µm,0.4s						

ROM 09 04:19:28.3±0.1**, 44°.001N**±0°.004×**11°.327E**±0°.004**,**
h9^{km}, ML2.0/27**, 1C-1D, Error ellipse: s-maj=0.4km**
s-min=0.2km az=202.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCL	**Monte Cuccoli**	**0.11**	**272**	P	Pg	04 19 31.5	+0.5
MOCL				S	Sg	04 19 33.4	+0.5
MOCL				AML	AML		
	comp=E,3950µm,0.2s						
MOCL				AML	AML		
	comp=N,4480µm,0.2s						
MPPT	**Montemurlo**	**0.18**	**256**	⇑P	Pg	04 19 32.7	+0.6
MPPT				S	Sg	04 19 35.6	+0.9
MPPT				AML	AML		
	comp=N,472µm,1.0s						
MPPT				AML	AML		
	comp=E,420µm,0.2s						
FIE	**Fiesole**	**0.20**	**187**	P	Pg	04 19 33.1	+0.7
FIE				S	Sg	04 19 36.4	+1.3
RUFI	**Rufina**	**0.21**	**141**	P	Pg	04 19 33.4	+0.8
RUFI				S	Sg	04 19 36.9	+1.4
FIR	**Firenze**	**0.23**	**193**	P	Pg	04 19 33.9	+0.8
FIR				S	Sg	04 19 38.2	+1.9
LMD	**Lutirano**	**0.28**	**74**	P	Pg	04 19 34.5	+0.4
LMD				S	Sb	04 19 39.3	-1.2
LMD				AML	AML		
	comp=N,748µm,0.1s						
LMD				AML	AML		
	comp=E,444µm,0.4s						
CRMI	**Carmignano**	**0.33**	**231**	P	Pg	04 19 35.4	+0.4
CRMI				S	Sb	04 19 40.8	-1.1
CRMI				AML	AML		
	comp=E,188µm,1.6s						
CRMI				AML	AML		
	comp=N,622µm,0.4s						
CRMI				AML	AML		
	comp=E,124µm,0.4s						
CRMI				AML	AML		
	comp=N,234µm,0.4s						
CRMI				AML	AML		
	comp=N,234µm,1.6s						
CRMI				AML	AML		
	comp=N,622µm,1.6s						
CRMI				AML	AML		
	comp=E,188µm,0.4s						
MTRZ	**Monterenzio**	**0.39**	**15**	P	Pg	04 19 36.0	0.0
MTRZ				AML	AML		
	comp=E,232µm,1.3s						
MTRZ				AML	AML		
	comp=E,232µm,1.3s						
MTRZ				AML	AML		
	comp=N,322µm,0.7s						
MTRZ				AML	AML		
	comp=N,322µm,1.3s						
MTRZ				AML	AML		
	comp=E,232µm,0.7s						
MTRZ				AML	AML		
	comp=N,329µm,0.7s						
SFI	**Santa Sofia**	**0.39**	**104**	P	Pg	04 19 36.5	+0.5
SFI				S	Sb	04 19 42.8	-0.7
SFI				AML	AML		
	comp=E,204µm,0.2s						
SFI				AML	AML		
	comp=N,241µm,0.5s						
POPM	**Popiglio**	**0.41**	**276**	P	Pg	04 19 36.8	+0.4
POPM				S	Sb	04 19 43.3	-0.9
POPM				AML	AML		
	comp=E,316µm,0.2s						
POPM				AML	AML		
	comp=N,422µm,0.7s						
ZCCA	**Zocca**	**0.43**	**324**	P	Pb	04 19 38.4	+0.2
OSSC	**Osservatorio P**	**0.48**	**187**	P	Pg	04 19 38.3	+0.6
OSSC				S	Sb	04 19 45.8	-0.4
OSSC				AML	AML		
	comp=E,384µm,0.2s						
OSSC				AML	AML		
	comp=N,225µm,1.1s						
OSSC				AML	AML		
	comp=N,225µm,0.9s						
BDI	**Bagni Di Lucca**	**0.53**	**277**	⇓P	Pg	04 19 38.9	+0.2
BDI				S	Sb	04 19 46.7	-0.9
BDI				AML	AML		
	comp=E,213µm,0.4s						
BDI				AML	AML		
	comp=N,176µm,0.5s						
CSNT	**Castellina Chi**	**0.53**	**183**	P	Pg	04 19 39.0	+0.4
CSNT				S	Sb	04 19 47.0	-0.5
CSNT				AML	AML		
	comp=E,211µm,0.2s						
CSNT				AML	AML		
	comp=N,332µm,0.2s						
PII	**Pisa**	**0.64**	**245**	P	Pg	04 19 41.0	+0.2
PII				AML	AML		
	comp=N,178µm,1.6s						
PII				AML	AML		
	comp=N,178µm,0.4s						
PII				AML	AML		
	comp=E,150µm,0.8s						

ROM 09 04:20:05.5±0.1**, 44°.012N**±0°.004×**11°.296E**±0°.005**,**
h9^{km}, ML1.4/15**, 1C-1D, Error ellipse: s-maj=0.5km**
s-min=0.3km az=214.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCL	**Monte Cuccoli**	**0.08**	**265**	P	Pg	04 20 08.2	+0.4
MOCL				S	Sg	04 20 09.9	+0.5
MOCL				AML	AML		
	comp=N,1164µm,1.0s						
MOCL				AML	AML		
	comp=E,1620µm,0.2s						
MOCL				AML	AML		
	comp=E,1620µm,0.2s						
MOCL				AML	AML		
	comp=N,1070µm,0.2s						
MPPT	**Montemurlo**	**0.16**	**250**	⇑P	Pg	04 20 09.5	+0.6
MPPT				S	Sg	04 20 12.2	+0.9
MPPT				AML	AML		
	comp=N,154µm,0.6s						
MPPT				AML	AML		
	comp=E,220µm,0.2s						
MPPT				AML	AML		
	comp=E,221µm,0.2s						
MPPT				AML	AML		
	comp=N,129µm,0.2s						
FNVD	**Fontana Vidola**	**0.20**	**321**	P	Pg	04 20 10.2	+0.6
FNVD				S	Sg	04 20 13.9	+1.4
FIE	**Fiesole**	**0.20**	**180**	P	Pg	04 20 10.5	+0.8
FIE				S	Sg	04 20 13.7	+1.1
RUFI	**Rufina**	**0.23**	**138**	⇓P	Pg	04 20 10.8	+0.7
RUFI				S	Sg	04 20 14.7	+1.4
RUFI				AML	AML		
	comp=E,44µm,0.2s						
RUFI				AML	AML		
	comp=N,41µm,0.4s						
FIR	**Firenze**	**0.24**	**187**	P	Pg	04 20 11.3	+1.0
FIR				S	Sg	04 20 15.5	+1.9
LMD	**Lutirano**	**0.30**	**77**	P	Pg	04 20 11.9	+0.4
LMD				S	Sb	04 20 17.1	-1.1
LMD				AML	AML		
	comp=E,137µm,0.4s						
LMD				AML	AML		
	comp=N,195µm,0.7s						
LMD				AML	AML		
	comp=N,183µm,0.2s						
LMD				AML	AML		
	comp=E,101µm,0.3s						
CRMI	**Carmignano**	**0.32**	**227**	P	Pg	04 20 12.2	+0.3
CRMI				S	Sb	04 20 17.9	-0.8
CRMI				AML	AML		
	comp=N,74µm,1.2s						
CRMI				AML	AML		
	comp=E,57µm,1.0s						
CRMI				AML	AML		
	comp=N,133µm,0.3s						
CRMI				AML	AML		
	comp=N,49µm,0.1s						
CRMI				AML	AML		
	comp=E,50µm,0.2s						
CRMI				AML	AML		
	comp=N,133µm,1.7s						
MTRZ	**Monterenzio**	**0.38**	**18**	P	Pb	04 20 13.8	-0.7
POPM	**Popiglio**	**0.39**	**275**	P	Pg	04 20 13.5	+0.3
POPM				S	Sb	04 20 20.0	-0.7
POPM				AML	AML		
	comp=E,275µm,0.7s						
POPM				AML	AML		
	comp=N,208µm,0.1s						
POPM				AML	AML		
	comp=N,182µm,0.1s						
POPM				AML	AML		
	comp=E,105µm,0.2s						
POPM				AML	AML		
	comp=N,182µm,1.9s						
SFI	**Santa Sofia**	**0.41**	**105**	P	Pb	04 20 14.5	-0.4
ASQU	**Asqua**	**0.42**	**121**	P	Pb	04 20 14.4	-0.7
BDI	**Bagni Di Lucca**	**0.51**	**276**	P	Pg	04 20 15.5	+0.2
BDI				S	Sb	04 20 23.4	-0.7
BDI				AML	AML		
	comp=E,1066µm,0.2s						
BDI				AML	AML		
	comp=N,1072µm,0.3s						
BDI				AML	AML		
	comp=N,991µm,0.3s						
BDI				AML	AML		
	comp=E,1016µm,0.3s						
BDI				AML	AML		
	comp=E,63µm,0.4s						
BDI				AML	AML		
	comp=N,87µm,0.2s						
CSNT	**Castellina Chi**	**0.54**	**180**	P	Pg	04 20 16.3	+0.4
CSNT				S	Sb	04 20 24.6	-0.3
CSNT				AML	AML		
	comp=N,622µm,0.4s						
CSNT				AML	AML		
	comp=E,760µm,0.3s						

GEN ***09*** *04:20:21.7, 44°.00N×11°.31E, h13^{km}±1^{km}, Ml2.4*
ROM ***09*** *04:20:22.2±0.1, 44°.002N±0°.005×11°.291E±0°.006,*
h8^{km}, ML2.6/68, Error ellipse: s-maj=0.5km s-min=0.4km
az=207.0
LDG ***09*** *04:20:23.8±0.1, 43°.97N×11°.30E, h8^{km}, Ml2.5/12, Error*
ellipse: s-maj=3.3km s-min=2.6km az=29.0
PRU ***09*** *04:20:24.6, 44°.01N×11°.62E, h0^{km}*
ISC 09 04:20:22.9±0.9**, 43°.98N**±0°.02×**11°.27E**±0°.01**, h5**^{km}±6^{km}**,**
n83, σ1^{s}80/142**, 4C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCL	**Monte Cuccoli**	**0.07**	**290**	P	**Pg**	**04 20 24.9**	**+0.4**
MOCL				S	**Sg**	**04 20 26.5**	**+0.9**
MOCL				AML	AML		
	comp=N,27850µm,0.3s						
MOCL				AML	AML		
	comp=E,20850µm,0.2s						
MOCL				AML	AML		
	comp=N,27854µm,0.3s						
MOCL				AML	AML		
	comp=E,20859µm,0.2s						
SEI	**Scarperia**	**0.10**	**41**	P	**Pg**	**04 20 21.7**	**-3.3**
SEI				S	**Sg**	**04 20 23.3**	**-3.1**
MPPT	**Montemurlo**	**0.13**	**259**	⇑P	**Pg**	**04 20 26.1**	**+0.6**
MPPT				S	**Sg**	**04 20 28.8**	**+1.5**
MPPT				AML	AML		
	comp=E,9110µm,0.2s						
MPPT				AML	AML		
	comp=N,9335µm,0.2s						
MPPT				AML	AML		
	comp=E,9103µm,0.2s						
MPPT				AML	AML		
	comp=N,9339µm,0.2s						
FIE	**Fiesole**	**0.17**	**174**	⇑P	**Pg**	**04 20 26.9**	**+0.6**
FIE				S	**Sg**	**04 20 30.2**	**+1.6**
FIR	**Firenze**	**0.21**	**183**	⇑P	**Pg**	**04 20 27.7**	**+0.7**
FIR				S	**Sg**	**04 20 32.0**	**+2.3**
FIR				AML	AML		
	comp=E,7285µm,0.2s						
FIR				AML	AML		
	comp=N,8425µm,1.4s						
FIR				AML	AML		
	comp=E,7230µm,0.2s						
FIR				AML	AML		
	comp=N,8460µm,1.4s						
FIR				AML	AML		
	comp=N,6805µm,0.2s						
FIR				AML	AML		
	comp=E,7231µm,0.2s						
FIR				AML	AML		
	comp=N,6843µm,0.2s						
FIR				AML	AML		
	comp=E,7283µm,0.2s						
FNVD	**Fontana Vidola**	**0.21**	**331**	P	**Pg**	**04 20 26.8**	**-0.3**
FNVD				S	**Sg**	**04 20 30.1**	**+0.1**
FNVD				AML	AML		
	comp=E,4605µm,0.3s						
FNVD				AML	AML		
	comp=N,6475µm,0.3s						
FNVD				AML	AML		
	comp=E,4607µm,0.3s						
FNVD				AML	AML		
	comp=N,5150µm,0.1s						
RUFI	**Rufina**	**0.23**	**129**	P	**Pg**	**04 20 27.4**	**+0.2**
RUFI				S	**Sg**	**04 20 31.1**	**+0.9**
RUFI	**Rufina**	**0.23**	**129**	P	**Pg**	**04 20 27.4**	**+0.1**
RUFI				S	**Sg**	**04 20 31.2**	**+1.0**
RUFI				AML	AML		
	comp=E,1515µm,0.4s						
RUFI				AML	AML		
	comp=N,1570µm,0.4s						
RUFI				AML	AML		
	comp=E,1514µm,0.4s						
RUFI				AML	AML		
	comp=N,1570µm,0.4s						
RUFI				AML	AML		
	comp=E,1514µm,1.6s						
BRIS	**BRISIGHELLA**	**0.24**	**46**	P	**Pg**	**04 20 30.9**	**+3.3**
BRIS				S	**Sg**	**04 20 37.8**	**+6.9**
BRIS				AML	AML		
	comp=E,1360µm,0.5s						
BRIS				AML	AML		
	comp=N,1690µm,0.5s						
BRIS				AML	AML		
	comp=E,131µm,1.3s						
BRIS				AML	AML		
	comp=N,232µm,0.7s						
BRIS				AML	AML		
	comp=N,1691µm,0.5s						
BRIS				AML	AML		
	comp=E,1360µm,0.5s						
BRIS				AML	AML		
	comp=E,131µm,0.7s						
CRMI	**Carmignano**	**0.29**	**228**	P	**Pg**	**04 20 28.9**	**+0.4**
CRMI				S	**Sg**	**04 20 33.9**	**+1.6**
CRMI				AML	AML		
	comp=E,3475µm,0.3s						
CRMI				AML	AML		
	comp=N,3005µm,0.4s						
CRMI				AML	AML		
	comp=E,1310µm,0.2s						
CRMI				AML	AML		
	comp=N,1184µm,0.3s						
CRMI				AML	AML		
	comp=E,1312µm,0.2s						
CRMI				AML	AML		
	comp=E,3476µm,0.3s						
CRMI				AML	AML		
	comp=N,1183µm,0.3s						
CRMI				AML	AML		
	comp=N,3006µm,0.4s						
LMD	**Lutirano**	**0.33**	**73**	P	**Pg**	**04 20 28.6**	**-0.7**
LMD				S	**Sg**	**04 20 33.7**	**0.0**
LMD	**Lutirano**	**0.33**	**73**	P	**Pg**	**04 20 28.6**	**-0.7**
LMD				S	**Sg**	**04 20 33.7**	**0.0**
LMD				AML	AML		
	comp=E,1255µm,0.4s						
LMD				AML	AML		
	comp=N,1195µm,0.9s						
LMD				AML	AML		
	comp=N,1113µm,0.4s						
LMD				AML	AML		
	comp=N,1113µm,1.6s						
LMD				AML	AML		
	comp=E,1254µm,0.4s						
POPM	**Popiglio**	**0.37**	**280**	P	**Pg**	**04 20 30.1**	**0.0**
POPM				S	**Sg**	**04 20 36.3**	**+1.3**
POPM	**Popiglio**	**0.37**	**280**	P	**Pg**	**04 20 30.1**	**0.0**
POPM				S	**Sg**	**04 20 36.6**	**+1.5**
POPM				AML	AML		
	comp=E,2655µm,0.2s						
POPM				AML	AML		
	comp=N,5540µm,0.8s						
POPM				AML	AML		
	comp=N,4832µm,0.2s						
POPM				AML	AML		
	comp=E,2656µm,0.2s						
ASQU	**Asqua**	**0.42**	**116**	P	**Pg**	**04 20 30.9**	**-0.2**
ASQU				S	**Sg**	**04 20 37.4**	**+0.9**
ASQU	**Asqua**	**0.42**	**116**	P	**Pg**	**04 20 30.8**	**-0.2**
ASQU				S	**Sg**	**04 20 37.4**	**+0.9**
ASQU				AML	AML		
	comp=E,499µm,0.8s						
ASQU				AML	AML		
	comp=N,535µm,1.0s						
ASQU				AML	AML		
	comp=E,493µm,0.3s						
ASQU				AML	AML		
	comp=N,534µm,0.3s						
MTRZ	**Monterenzio**	**0.42**	**20**	P	**Pg**	**04 20 29.8**	**-1.3**
MTRZ				S	**Sg**	**04 20 36.3**	**-0.2**
MTRZ	**Monterenzio**	**0.42**	**20**	P	**Pg**	**04 20 29.8**	**-1.2**
MTRZ				AML	AML		
	comp=E,1650µm,1.6s						
MTRZ				AML	AML		
	comp=N,2065µm,0.4s						
MTRZ				AML	AML		
	comp=E,1610µm,0.8s						
MTRZ				AML	AML		
	comp=N,2085µm,0.5s						
MTRZ				AML	AML		
	comp=E,1497µm,0.5s						
MTRZ				AML	AML		
	comp=N,2083µm,0.5s						
MTRZ				AML	AML		
	comp=E,1607µm,0.8s						
MTRZ				AML	AML		
	comp=N,2067µm,0.5s						
MTRZ				AML	AML		
	comp=E,1497µm,1.5s						
SFI	**Santa Sofia**	**0.42**	**100**	P	**Pg**	**04 20 30.9**	**-0.2**
SFI				S	**Sg**	**04 20 37.3**	**+0.6**
SFI				AML	AML		
	comp=E,488µm,0.5s						
SFI				AML	AML		
	comp=N,629µm,0.3s						
SFI				AML	AML		
	comp=E,484µm,0.4s						
SFI				AML	AML		
	comp=N,615µm,0.3s						
SFI				AML	AML		
	comp=E,444µm,0.3s						
SFI				AML	AML		
	comp=N,566µm,0.3s						
SFI				AML	AML		
	comp=N,584µm,0.3s						
SFI				AML	AML		
	comp=E,471µm,0.4s						
ZCCA	**Zocca**	**0.42**	**331**	P	**Pg**	**04 20 31.8**	**+0.7**
ZCCA				S	**Sb**	**04 20 39.6**	**-0.1**
ZCCA	**Zocca**	**0.42**	**331**	P	**Pg**	**04 20 31.8**	**+0.7**
ZCCA				AML	AML		
	comp=E,592µm,0.4s						
ZCCA				AML	AML		
	comp=N,502µm,0.5s						
ZCCA				AML	AML		
	comp=E,603µm,0.4s						
ZCCA				AML	AML		
	comp=N,456µm,0.5s						

ZCCA				AML	AML		
	comp=E,603µm,0.4s						
ZCCA				AML	AML		
	comp=N,456µm,0.5s						
ZCCA				AML	AML		
	comp=E,593µm,0.4s						
ZCCA				AML	AML		
	comp=N,502µm,0.5s						
ZCCA				AML	AML		
	comp=N,456µm,1.5s						
OSSC	**Osservatorio P**	**0.46**	**182**	P	**Pg**	**04 20 32.0**	**+0.3**
OSSC				S	**Sg**	**04 20 40.2**	**+2.5**
OSSC	**Osservatorio P**	**0.46**	**182**	⇑P	**Pg**	**04 20 32.0**	**+0.3**
OSSC				S	**Sg**	**04 20 40.2**	**+2.5**
OSSC				AML	AML		
	comp=E,1265µm,0.9s						
OSSC				AML	AML		
	comp=N,1058µm,1.6s						
OSSC				AML	AML		
	comp=E,947µm,1.6s						
OSSC				AML	AML		
	comp=N,1255µm,0.9s						
OSSC				AML	AML		
	comp=E,1232µm,0.6s						
OSSC				AML	AML		
	comp=N,968µm,0.3s						
OSSC				AML	AML		
	comp=N,1224µm,0.2s						
OSSC				AML	AML		
	comp=E,1232µm,1.4s						
OSSC				AML	AML		
	comp=E,921µm,0.3s						
BDI	**Bagni Di Lucca**	**0.49**	**280**	P	**Pg**	**04 20 32.2**	**-0.2**
BDI				S	**Sg**	**04 20 40.1**	**+1.3**
BDI	**Bagni Di Lucca**	**0.49**	**280**	P	**Pg**	**04 20 32.1**	**-0.3**
BDI				S	**Sg**	**04 20 40.0**	**+1.2**
BDI				AML	AML		
	comp=E,1066µm,0.2s						
BDI				AML	AML		
	comp=N,1330µm,0.6s						
BDI				AML	AML		
	comp=E,1016µm,0.3s						
BDI				AML	AML		
	comp=N,1465µm,0.7s						
BDI				AML	AML		
	comp=E,1087µm,0.4s						
BDI				AML	AML		
	comp=E,1065µm,0.2s						
BDI				AML	AML		
	comp=N,1187µm,0.3s						
BDI				AML	AML		
	comp=N,1215µm,0.3s						
CSNT	**Castellina Chi**	**0.51**	**178**	P	**Pg**	**04 20 32.9**	**+0.2**
CSNT				S	**Sg**	**04 20 41.4**	**+2.1**
CSNT	**Castellina Chi**	**0.51**	**178**	P	**Pg**	**04 20 32.8**	**+0.1**
CSNT				S	**Sg**	**04 20 41.4**	**+2.1**
CSNT				AML	AML		
	comp=E,800µm,0.3s						
CSNT				AML	AML		
	comp=N,1500µm,0.2s						
CSNT				AML	AML		
	comp=E,799µm,0.3s						
CSNT				AML	AML		
	comp=N,1501µm,0.2s						
CSNT				AML	AML		
	comp=N,1501µm,1.8s						
IMOL	**Imola, Italy**	**0.51**	**42**	P	**Pg**	**04 20 33.3**	**+0.6**
IMOL				S	**Sb**	**04 20 40.6**	**-1.5**
IMOL	**Imola, Italy**	**0.51**	**42**	P	**Pg**	**04 20 33.3**	**+0.6**
MAIM	**Mastiano**	**0.56**	**263**	P	**Pg**	**04 20 34.2**	**+0.5**
MAIM				S	**Sg**	**04 20 41.9**	**+0.8**
MAIM	**Mastiano**	**0.56**	**263**	P	**Pg**	**04 20 33.5**	**-0.2**
MAIM				S	**Sg**	**04 20 41.8**	**+0.7**
CARD	**Cardoso**	**0.57**	**275**	P	**Pg**	**04 20 33.5**	**-0.3**
CARD				S	**Sg**	**04 20 42.5**	**+1.3**
CARD	**Cardoso**	**0.57**	**275**	P	**Pg**	**04 20 33.5**	**-0.4**
CARD				AML	AML		
	comp=E,546µm,0.3s						
CARD				AML	AML		
	comp=N,766µm,0.9s						
CARD				AML	AML		
	comp=E,538µm,0.5s						
CARD				AML	AML		
	comp=N,735µm,0.2s						
PII	**Pisa**	**0.60**	**244**	P	**Pg**	**04 20 34.5**	**+0.1**
PII				S	**Sg**	**04 20 43.3**	**+1.2**
PII	**Pisa**	**0.60**	**244**	P	**Pg**	**04 20 34.5**	**+0.1**
PII				AML	AML		
	comp=E,1088µm,1.0s						
PII				AML	AML		
	comp=N,1066µm,0.8s						
PII				AML	AML		
	comp=E,1087µm,0.3s						
PII				AML	AML		
	comp=E,1087µm,1.7s						
PII				AML	AML		
	comp=N,1036µm,0.4s						
CRE	**Caprese Michel**	**0.61**	**126**	P	**Pg**	**04 20 34.5**	**-0.2**
CRE				AML	AML		
	comp=E,487µm,0.3s						
CRE				AML	AML		
	comp=N,554µm,0.3s						
CRE				AML	AML		
	comp=E,487µm,0.3s						
CRE				AML	AML		
	comp=N,554µm,0.3s						
GSCL	**Gusciola**	**0.61**	**307**	P	**Pg**	**04 20 34.7**	**0.0**
GSCL				S	**Sg**	**04 20 44.5**	**+1.8**
GSCL	**Gusciola**	**0.61**	**307**	P	**Pg**	**04 20 34.7**	**0.0**
GSCL				AML	AML		
	comp=E,720µm,0.9s						
GSCL				AML	AML		
	comp=N,1057µm,0.3s						
GSCL				AML	AML		
	comp=E,700µm,0.5s						
GSCL				AML	AML		
	comp=N,1056µm,0.3s						
GSCL				AML	AML		
	comp=N,1056µm,1.7s						
GSCL				AML	AML		
	comp=E,700µm,1.5s						
SARO	**Sassorosso**	**0.66**	**288**	P	**Pg**	**04 20 35.4**	**-0.1**
SARO				S	**Sg**	**04 20 45.7**	**+1.6**
SARO	**Sassorosso**	**0.66**	**288**	P	**Pg**	**04 20 35.4**	**-0.2**
SARO				S	**Sg**	**04 20 45.5**	**+1.5**
VLC	**Villacollemand**	**0.66**	**286**	P	**Pg**	**04 20 35.4**	**-0.1**
VLC				S	**Sg**	**04 20 45.5**	**+1.4**
VLC	**Villacollemand**	**0.66**	**286**	P	**Pg**	**04 20 35.4**	**-0.2**
VLC				AML	AML		
	comp=E,234µm,1.5s						
VLC				AML	AML		
	comp=N,474µm,0.3s						
VLC				AML	AML		
	comp=E,217µm,0.3s						
VLC				AML	AML		
	comp=N,484µm,0.3s						
SSP9	**Sansepolcro**	**0.75**	**123**	P	**Pb**	**04 20 38.4**	**0.0**
SSP9				AML	AML		
	comp=E,221µm,0.8s						
SSP9				AML	AML		
	comp=N,256µm,0.8s						
SSP9				AML	AML		
	comp=N,256µm,0.8s						
SSP9				AML	AML		
	comp=E,177µm,0.4s						
SSP9				AML	AML		
	comp=N,256µm,1.2s						
RAVA	**Ravarino**	**0.78**	**352**	P	**Pb**	**04 20 39.1**	**+0.1**
EQUI	**Equi**	**0.82**	**283**	P	**Pg**	**04 20 40.2**	**+1.5**
EQUI				S	**Sg**	**04 20 50.2**	**+0.8**
EQUI	**Equi**	**0.82**	**283**	P	**Pg**	**04 20 40.1**	**+1.4**
FIVI	**Fivizzano**	**0.86**	**288**	P	**Pg**	**04 20 40.6**	**+1.2**
APEC	**Apecchio**	**0.94**	**116**	P	**Pg**	**04 20 41.2**	**+0.4**
APEC				AML	AML		
	comp=E,290µm,1.2s						
APEC				AML	AML		
	comp=N,229µm,0.8s						
APEC				AML	AML		
	comp=E,281µm,0.4s						
APEC				AML	AML		
	comp=N,229µm,0.8s						
APEC				AML	AML		
	comp=E,926µm,1.1s						
APEC				AML	AML		
	comp=N,910µm,1.3s						
APEC				AML	AML		
	comp=N,910µm,0.7s						
APEC				AML	AML		
	comp=N,229µm,1.2s						
GRAM	**Graiana**	**1.00**	**301**	P	**Pg**	**04 20 41.8**	**-0.3**
GRAM				S	**Sb**	**04 20 57.7**	**+1.3**
GRAM	**Graiana**	**1.00**	**301**	P	**Pg**	**04 20 41.8**	**-0.3**
GRAM				AML	AML		
	comp=E,482µm,0.3s						
GRAM				AML	AML		
	comp=N,368µm,0.3s						
GRAM				AML	AML		
	comp=E,481µm,0.3s						
GRAM				AML	AML		
	comp=N,368µm,0.3s						
ATVO	**AVT- Monte Val**	**1.02**	**126**	P	**Pg**	**04 20 42.6**	**+0.1**
ATVO				AML	AML		
	comp=E,212µm,0.5s						
ATVO				AML	AML		
	comp=N,155µm,0.7s						
ATVO				AML	AML		
	comp=E,212µm,0.5s						
ATVO				AML	AML		
	comp=N,155µm,0.7s						
ATVO				AML	AML		
	comp=E,212µm,1.5s						
PGF	**Pioggiola**	**2.19**	**230**	*e*Pn	**Pn**	**04 20 59.0**	**-1.1**
PGF				*e*Sn	**Sn**	**04 21 25.0**	**-2.7**
	comp=E,7.7nm,0.4s						
SBF	**Sospel**	**2.77**	**269**	*e*P	**Pn**	**04 21 09.6**	**+1.5**
SBF				*e*Sn	**Sn**	**04 21 39.2**	**-2.7**
	comp=E,1.8nm,0.2s						
ABTA	**Abfaltersbach**	**2.90**	**17**	*e*Pn	**Pn**	**04 21 11.1**	**+1.2**
	comp=E,2.5nm,0.6s,SNR=6.6						
ABTA				*e*Sn	**Sn**	**04 21 43.7**	**-1.5**
	comp=E,1.6nm,0.3s						
FETA	**Feichten**	**3.06**	**353**	*e*Pn	**Pn**	**04 21 14.6**	**+2.5**
	comp=E,0.4nm,0.2s						
FETA				*e*Sn	**Sb**	**04 21 55.9**	**+0.2**
	comp=E,0.8nm,0.4s						
SQTA	**Sankt Quirin**	**3.24**	**359**	*i* Pn	**Pn**	**04 21 17.2**	**+2.6**
	comp=E,2.2nm,0.2s,SNR=9.9						
SQTA				*e*Sn	**Sn**	**04 21 56.3**	**+2.8**
	comp=E,2.6nm,0.3s						
WTTA	**Wattenberg**	**3.29**	**4**	*e*Pn	**Pn**	**04 21 17.7**	**+2.4**
	comp=E,1.4nm,0.3s						
WTTA				*e*Sn	**Sn**	**04 21 56.1**	**+1.1**
	comp=E,3.7nm,0.4s						
MBDF	**Montbardon**	**3.31**	**285**	*e*Pn	**Pn**	**04 21 14.8**	**-0.7**
MBDF				*e*Sn	**Sn**	**04 21 52.1**	**-3.3**
	comp=E,0.7nm,0.3s						
WATA	**Walderalm**	**3.36**	**4**	*i* Pn	**Pn**	**04 21 18.5**	**+2.3**
	comp=E,0.2nm,0.1s,SNR=6.8						
WATA				*e*Sn	**Sn**	**04 21 59.0**	**+2.4**
	comp=E,3.3nm,0.4s						
MOTA	**Moosalm**	**3.37**	**358**	*e*Pn	**Pn**	**04 21 18.7**	**+2.4**
	comp=E,0.1nm,0.1s						
MOTA				*e*Sn	**Sn**	**04 21 58.2**	**+1.5**
	comp=E,2.0nm,0.5s						
KBA	**Koelnbreinsper**	**3.42**	**25**	*e*Pn	**Pn**	**04 21 17.1**	**-0.1**
	comp=E,1.0nm,0.5s						
KBA				*e*Sn	**Sn**	**04 21 56.9**	**-1.3**
	comp=E,0.1nm,0.3s						
OBKA	**Obir**	**3.43**	**41**	*e*Pn	**Pn**	**04 21 16.9**	**-0.2**
	comp=E,1.9nm,0.8s						
OBKA				*e*Sn	**Sn**	**04 21 58.0**	**-0.2**
	comp=E,1.8nm,0.5s						
DAVA	**Damuels**	**3.45**	**344**	*e*Pn	**Pn**	**04 21 20.2**	**+2.8**
	comp=E,1.7nm,0.2s						
DAVA				*e*Sn	**Sb**	**04 22 03.1**	**-3.7**
	comp=E,3.4nm,0.4s						
LMR	**La Mourre**	**3.51**	**261**	*e*Pn	**Pn**	**04 21 16.5**	**-1.7**
LMR				*e*Sn	**Sn**	**04 21 55.9**	**-4.2**
	comp=E,3.0nm,0.4s						
RETA	**Reutte**	**3.52**	**354**	*i* Pn	**Pn**	**04 21 20.2**	**+1.8**
	comp=E,3.8nm,0.3s,SNR=6.2						
RETA				*e*Sn	**Sn**	**04 22 02.8**	**+2.3**
	comp=E,0.1nm,0.1s						
LPG	**La Plagne**	**3.56**	**297**	*e*P	**Pn**	**04 21 22.1**	**+3.0**
LPL	**La Plagne**	**3.58**	**297**	*e*P	**Pn**	**04 21 22.3**	**+3.0**
LESA	**Schwarzleotal**	**3.58**	**16**	*i* Pn	**Pn**	**04 21 21.5**	**+2.3**
	comp=E,0.1nm,0.1s,SNR=5.8						
LESA				*e*Sn	**Sn**	**04 22 03.9**	**+1.9**
	comp=E,0.5nm,0.2s						
SOKA	**Soboth**	**3.78**	**43**	*e*Sn	**Sn**	**04 22 01.7**	**-5.2**
	comp=E,0.3nm,0.6s						
ORIF	**Oris-en-Rattie**	**3.97**	**286**	*e*Pn	**Pn**	**04 21 24.8**	**+0.2**
ORIF				*e*Sn	**Sn**	**04 22 08.3**	**-3.2**
	comp=E,1.7nm,0.4s						
BIOA	**Bad Ischl, Aus**	**4.06**	**23**	*e*Pn	**Pn**	**04 21 27.2**	**+1.4**
	comp=E,0.5nm,0.4s						
BIOA				*e*Sn	**Sn**	**04 22 17.0**	**+3.2**
	comp=E,3.3nm,0.5s						
SMRF	**Simiane la Rot**	**4.11**	**272**	*e*Pn	**Pn**	**04 21 25.5**	**-0.9**
SMRF				*e*Sn	**Sn**	**04 22 10.7**	**-4.2**
	comp=E,2.1nm,0.3s						
MOA	**Molln**	**4.40**	**27**	*e*Sn	**Sn**	**04 22 22.4**	**+0.4**
	comp=E,1.3nm,0.5s						
ARSA	**Arzberg**	**4.43**	**41**	*e*Pn	**Pn**	**04 21 31.0**	**+0.2**
	comp=E,1.1nm,0.7s						
CABF	**La Chapelle**	**4.50**	**308**	*e*Pn	**Pn**	**04 21 33.0**	**+1.1**
CABF				*e*Sn	**Sn**	**04 22 21.3**	**-3.4**
	comp=E,0.3nm,0.3s						
VIVF	**Saint-Julien-l**	**4.80**	**283**	*e*P	**Pn**	**04 21 38.3**	**+2.3**
HINF	**Hinteralfeld**	**4.92**	**323**	*e*Pn	**Pn**	**04 21 38.8**	**+1.2**
HINF				*e*Sn	**Sn**	**04 22 32.6**	**-2.3**
	comp=E,2.2nm,0.3s						
CONA	**Conrad Observa**	**5.08**	**37**	*e*Sn	**Sn**	**04 22 39.5**	**+0.6**
	comp=E,0.8nm,0.4s						
CDF	**Champ du Feu**	**5.23**	**329**	*e*Pn	**Pn**	**04 21 41.7**	**-0.1**
CKRC	**Cesky Krumlov**	**5.28**	**22**	*e*PN	**Pn**	**04 21 43.8**	**+1.4**
CKRC				*e*SN	**Sn**	**04 22 42.0**	**-1.6**
HAU	**Haudompre**	**5.29**	**321**	*e*Pn	**Pn**	**04 21 42.2**	**-0.4**
HAU				*e*Sn	**Sn**	**04 22 41.7**	**-2.2**
	comp=E,2.7nm,0.3s						
KHC	**Kasperske Hory**	**5.39**	**16**	*e*PN	**Pn**	**04 21 42.7**	**-1.3**
KHC				*e*SN	**Sn**	**04 22 41.9**	**-4.6**
LOR	**Lormes**	**6.15**	**305**	*e*Sn	**Sn**	**04 23 03.4**	**-1.7**
	comp=E,5.9nm,0.6s						

SDD ***09*** *04:20:34.0±2.7, 17.°98N×71.°48W, h12km±35km, MD3.5, ML3.0, MW3.3, Presumed earthquake*
SSNC ***09*** *04:20:35.9±1.6, 18.°11N×71.°45W, h5km±11km, MD3.5, ML2.6*
OSPL ***09*** *04:20:35.7±1.5, 18.°13N×71.°38W, h26km±8km, ML3.0, Presumed earthquake*
ISC 09 04:20:35.1±1.0**, 18.°10N**±0.°03×**71.°47W**±0.°03**, h9**km±7km**, n30, σ0.ˢ94**/48**, 22C-6D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PODR	**Polo**	**0.20**	**69**	⇑*e*Pg	**Pg**	**04 20 38.7**	**-0.6**
PODR				⇑*e*Sg	**Sg**	**04 20 42.2**	**+0.1**
PODR				IAML		04 20 44.2	
	comp=N,20µm,0.4s						
PODR	**Polo**	**0.20**	**69**	*i* P	**Pg**	**04 20 38.9**	**-0.4**
PODR				*e*S	**Sg**	**04 20 42.2**	**+0.1**
LODU1	**El Espartillar**	**0.26**	**359**	*i* P	**Pg**	**04 20 40.5**	**+0.2**
LODU1				*e*S	**Sg**	**04 20 45.5**	**+1.6**
LODU1				IAML		04 20 46.8	
	comp=Z,11µm,1.1s						
LOBH	**Bahia de las A**	**0.28**	**214**	*i* P	**Pb**	**04 20 42.5**	**+0.2**
LOBH				*e*S	**Sb**	**04 20 49.0**	**+1.9**
LOBH				IAML		04 20 54.3	
	comp=Z,1µm,1.1s						
LOVI	**El Cajuil, Ovi**	**0.31**	**161**	*i* P	**Pb**	**04 20 42.1**	**-0.7**
LOVI				*e*S	**Sb**	**04 20 48.5**	**+0.5**
LOVI				IAML		04 20 48.7	
	comp=Z,2µm,1.0s						
BRH1	**Barahona**	**0.38**	**73**	⇓*e*Pg	**Pg**	**04 20 41.9**	**-0.6**
BRH1				⇑*e*Sg	**Sg**	**04 20 48.1**	**+0.5**
NEDR	**Neiba UASD**	**0.39**	**7**	⇓*e*Pg	**Pg**	**04 20 43.0**	**+0.2**
NEDR				⇑*e*Sg	**Sb**	**04 20 50.2**	**-0.1**
NEDR				IAML		04 20 52.8	
	comp=N,3µm,0.3s						
LONE3	**El Aguacate, B**	**0.51**	**1**	*i* P	**Pg**	**04 20 44.7**	**-0.3**
LONE3				*e*S	**Sg**	**04 20 52.8**	**+1.0**
LONE3				IAML		04 20 55.3	
	comp=Z,977nm,0.4s						
JIDR	**Jimani**	**0.53**	**318**	⇓*e*Pg	**Pb**	**04 20 46.2**	**-0.4**
JIDR				⇑*e*Sg	**Sb**	**04 20 55.2**	**+0.8**
JIDR				IAML		04 20 59.6	
	comp=N,1µm,0.3s						
SDDR	**Presa de Saban**	**0.90**	**11**	*e*P	**Pg**	**04 20 50.6**	**-1.8**
SDDR				*e*S	**Sg**	**04 21 03.6**	**-0.6**
SDDR				*e*Sg	**Sn**	**04 21 07.2**	**+0.2**
SDDR				IAML		04 21 09.3	
	comp=N,207nm,0.4s						
SDDR				IAML		04 21 12.0	
	comp=N,179nm,0.3s						
SDDR	**Presa de Saban**	**0.90**	**11**	⇓*e*Pg	**Pg**	**04 20 50.7**	**-1.7**
SDDR				⇑*e*Sg	**Sg**	**04 21 03.9**	**-0.3**
SDDR				IAML		04 21 09.2	
	comp=N,208nm,0.4s						
SDDR	**Presa de Saban**	**0.90**	**11**	*i* P	**Pg**	**04 20 50.7**	**-1.7**
SDDR				IAML		04 21 09.9	
	comp=Z,188nm,0.4s						
REDR	**Restauracion**	**1.07**	**4**	⇓*e*Pg	**Pb**	**04 20 56.1**	**+0.3**
REDR				⇑*e*Sg	**Sn**	**04 21 12.3**	**+1.2**
REDR				IAML		04 21 16.1	
	comp=N,414nm,0.2s						
ABDR	**Alto Bandera**	**1.07**	**48**	⇑*e*Pg	**Pg**	**04 20 54.5**	**-1.3**
ABDR				⇑*e*Sg	**Sg**	**04 21 10.1**	**+0.3**
ABDR				IAML		04 21 13.1	
	comp=N,0.3nm,0.5s						
BANI	**BANI**	**1.10**	**74**	⇑*e*Pg	**Pg**	**04 20 54.4**	**-1.9**
BANI				⇑*e*Sg	**Sg**	**04 21 10.6**	**0.0**
BANI				IAML		04 21 14.3	
	comp=N,896nm,0.2s						
SC01	**Santiago de lo**	**1.50**	**28**	⇑*e*Pg	**Pn**	**04 21 01.6**	**-0.6**
SC01				IAML		04 21 28.6	
	comp=N,136nm,0.3s						
SDD	**Santo Domingo**	**1.52**	**76**	⇑*e*Pg	**Pn**	**04 21 02.8**	**+0.3**
SDD				IAML		04 21 30.2	
	comp=N,22nm,0.4s						
DR08	**Loma La Naviza**	**1.62**	**58**	⇑*e*Pg	**Pn**	**04 21 03.0**	**-0.9**
DR08				⇑*e*Sg	**Sn**	**04 21 25.2**	**+0.3**
DR08				IAML		04 21 27.9	
	comp=N,2µm,0.2s						
LUDR	**Luperon**	**1.85**	**15**	⇑*e*Pg	**Pn**	**04 21 07.2**	**+0.2**
NADR	**Nagua**	**1.98**	**50**	⇑*e*Pg	**Pn**	**04 21 09.0**	**+0.3**
NADR				⇑*e*Sg	**Sn**	**04 21 35.2**	**+1.6**
NADR				IAML		04 21 46.4	
	comp=N,414nm,0.5s						
HATOM	**Hato Mayor del**	**2.10**	**71**	⇓*e*Pg	**Pn**	**04 21 10.3**	**-0.2**
HATOM				⇑*e*Sg	**Sn**	**04 21 37.2**	**+0.5**
HATOM				IAML		04 21 38.1	
	comp=N,116nm,0.6s						
MIDR	**Miches**	**2.46**	**69**	⇑*e*Pg	**Pn**	**04 21 15.1**	**-0.3**
MIDR				IAML		04 21 55.6	
	comp=N,35nm,0.7s						
SMDR	**Samana, DR**	**2.47**	**61**	⇑*e*Sg	**Sb**	**04 21 51.3**	**+1.2**
SMDR				IAML		04 21 54.2	
	comp=N,129nm,0.6s						
HIDR	**Higuey Centro**	**2.66**	**79**	⇑*e*Pg	**Pn**	**04 21 19.3**	**+1.1**
HIDR				IAML		04 22 02.4	
	comp=N,93nm,0.2s						
MASC	**Masc**	**3.33**	**309**	*e*P	**Pn**	**04 21 25.7**	**-1.6**
QMBU	**Quimbuelo**	**3.79**	**304**	*e*P	**Pn**	**04 21 32.3**	**-1.4**
GTBY	**Guantanamo Bay**	**3.90**	**298**	*e*P	**Pn**	**04 21 34.9**	**-0.3**
RCC	**Rio Carpintero**	**4.42**	**296**	*e*P	**Pn**	**04 21 41.9**	**-0.4**
MARVS	**Santiago de Cu**	**4.60**	**295**	*e*P	**Pn**	**04 21 44.3**	**-0.5**
PINC	**Pinares de May**	**4.72**	**301**	*e*P	**Pn**	**04 21 45.8**	**-0.7**

ROM 09 04:21:03.2±0.1**, 44.°014N**±0.°004×**11.°308E**±0.°006**, h8**km**, ML1.7**/16**, 1D, Error ellipse: s-maj=0.5km s-min=0.3km az=36.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCL	**Monte Cuccoli**	**0.09**	**265**	⇓P	Pg	04 21 06.1	+0.6
MOCL				S	Sg	04 21 07.8	+0.6
MOCL				AML	AML		
	comp=E,1270µm,1.5s						
MOCL				AML	AML		
	comp=N,1510µm,0.4s						
MOCL				AML	AML		
	comp=N,1433µm,0.2s						
MOCL				AML	AML		
	comp=E,1211µm,0.2s						
MPPT	**Montemurlo**	**0.17**	**250**	P	Pg	04 21 07.5	+0.7
MPPT				S	Sg	04 21 10.2	+1.0
MPPT				AML	AML		
	comp=N,344µm,1.1s						
MPPT				AML	AML		
	comp=E,421µm,0.2s						
MPPT				AML	AML		
	comp=N,298µm,0.3s						
MPPT				AML	AML		
	comp=E,421µm,0.2s						
FNVD	**Fontana Vidola**	**0.20**	**319**	P	Pg	04 21 08.1	+0.6
FNVD				S	Sg	04 21 12.0	+1.7
FIE	**Fiesole**	**0.21**	**183**	P	Pg	04 21 08.2	+0.8
FIE				S	Sg	04 21 11.5	+1.2
RUFI	**Rufina**	**0.23**	**140**	P	Pg	04 21 08.8	+1.0
RUFI				S	Sg	04 21 12.4	+1.5
RUFI				AML	AML		
	comp=E,85µm,0.5s						
RUFI				AML	AML		
	comp=N,94µm,0.6s						
FIR	**Firenze**	**0.24**	**189**	P	Pg	04 21 09.1	+1.1
FIR				S	Sg	04 21 12.9	+1.6
LMD	**Lutirano**	**0.29**	**77**	P	Pg	04 21 09.8	+0.8
LMD				S	Sb	04 21 15.0	-0.8
LMD				AML	AML		
	comp=N,312µm,0.2s						
LMD				AML	AML		
	comp=E,168µm,0.1s						
CRMI	**Carmignano**	**0.33**	**228**	P	Pg	04 21 10.4	+0.7
CRMI				S	Sb	04 21 16.0	-0.8
CRMI				AML	AML		
	comp=E,107µm,0.1s						
CRMI				AML	AML		
	comp=N,90µm,0.3s						
CRMI				AML	AML		
	comp=E,173µm,0.2s						
CRMI				AML	AML		
	comp=N,90µm,0.3s						
CRMI				AML	AML		
	comp=N,226µm,0.4s						
CRMI				AML	AML		
	comp=E,107µm,0.1s						
MTRZ	**Monterenzio**	**0.38**	**17**	P	Pg	04 21 11.1	+0.4
POPM	**Popiglio**	**0.40**	**275**	P	Pg	04 21 11.4	+0.4
POPM				S	Sb	04 21 17.9	-0.9
POPM				AML	AML		
	comp=E,215µm,0.3s						
POPM				AML	AML		
	comp=N,348µm,0.4s						
OSSC	**Osservatorio P**	**0.49**	**185**	P	Pg	04 21 13.4	+0.6
OSSC				S	Sb	04 21 21.0	-0.4
BDI	**Bagni Di Lucca**	**0.52**	**276**	P	Pg	04 21 13.4	+0.2
BDI				S	Sb	04 21 21.3	-0.8
CSNT	**Castellina Chi**	**0.54**	**181**	P	Pg	04 21 14.0	+0.3
CSNT				S	Sb	04 21 22.4	-0.4
PII	**Pisa**	**0.64**	**243**	P	Pg	04 21 15.8	+0.3
PII				AML	AML		
	comp=E,113µm,0.4s						
PII				AML	AML		
	comp=N,103µm,0.3s						

ROM ***09*** *04:25:27.9±0.1, 44.°008N±0.°005×11.°291E±0.°006, h7km, ML2.7/48, Error ellipse: s-maj=0.5km s-min=0.4km az=22.0*
LDG ***09*** *04:25:30.1±0.2, 43.°85N×11.°30E, h8km, Ml2.6/15, Error ellipse: s-maj=3.7km s-min=2.9km az=145.0*
ISC 09 04:25:29.0±0.8**, 43.°95N**±0.°02×**11.°26E**±0.°02**, h11**km±5km**, n61, σ1.ˢ53**/100**, 2C-1D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCL	**Monte Cuccoli**	**0.08**	**316**	P	**Pg**	**04 25 30.5**	**-1.0**
MOCL				S	**Sg**	**04 25 32.3**	**-1.1**
MOCL				AML	AML		
	comp=N,22850µm,1.0s						
MOCL				AML	AML		
	comp=E,29400µm,0.2s						
MPPT	**Montemurlo**	**0.12**	**275**	P	**Pg**	**04 25 31.8**	**-0.3**
MPPT				S	**Sg**	**04 25 34.5**	**+0.2**
MPPT				AML	AML		
	comp=N,3375µm,0.5s						
MPPT				AML	AML		
	comp=E,5075µm,0.2s						
MPPT				AML	AML		
	comp=N,3375µm,1.5s						
FIE	**Fiesole**	**0.14**	**169**	P	**Pg**	**04 25 32.6**	**+0.3**
FIE				S	**Sg**	**04 25 35.9**	**+1.2**

FIR	**Firenze**	**0.17**	**180**	P	**Pg**	**04 25 33.5**	**+0.7**
FIR				S	**Sg**	**04 25 37.6**	**+2.1**
RUFI	**Rufina**	**0.21**	**120**	P	**Pg**	**04 25 33.1**	**-0.3**
RUFI				S	**Sg**	**04 25 36.9**	**+0.3**
RUFI				AML	AML		
	comp=E,1006µm,0.8s						
RUFI				AML	AML		
	comp=N,1220µm,1.2s						
RUFI				AML	AML		
	comp=N,1215µm,1.2s						
RUFI				AML	AML		
	comp=N,1215µm,0.8s						
FNVD	**Fontana Vidola**	**0.24**	**336**	⇑P	**Pg**	**04 25 32.5**	**-1.6**
FNVD				S	**Sg**	**04 25 35.8**	**-1.6**
FNVD				AML	AML		
	comp=E,2700µm,0.3s						
FNVD				AML	AML		
	comp=N,3285µm,0.8s						
FNVD				AML	AML		
	comp=E,2700µm,1.7s						
FNVD				AML	AML		
	comp=N,3285µm,1.2s						
CRMI	**Carmignano**	**0.26**	**233**	P	**Pg**	**04 25 34.5**	**+0.2**
CRMI				S	**Sb**	**04 25 39.8**	**-0.4**
CRMI				AML	AML		
	comp=N,3375µm,0.3s						
CRMI				AML	AML		
	comp=E,1030µm,0.3s						
CRMI				AML	AML		
	comp=E,389µm,0.5s						
CRMI				AML	AML		
	comp=N,1365µm,0.3s						
BRIS	**BRISIGHELLA**	**0.27**	**42**	⇓P	**Pb**	**04 25 36.6**	**+0.7**
BRIS				S	**Sb**	**04 25 43.4**	**+2.8**
BRIS				AML	AML		
	comp=E,1675µm,0.5s						
BRIS				AML	AML		
	comp=N,2245µm,0.3s						
BRIS				AML	AML		
	comp=N,2245µm,1.7s						
LMD	**Lutirano**	**0.35**	**68**	P	**Pg**	**04 25 34.2**	**-1.8**
LMD				S	**Sg**	**04 25 39.2**	**-1.5**
LMD				AML	AML		
	comp=N,4215µm,0.2s						
LMD				AML	AML		
	comp=E,2660µm,0.5s						
POPM	**Popiglio**	**0.37**	**285**	⇑P	**Pg**	**04 25 35.8**	**-0.6**
POPM				S	**Sg**	**04 25 41.8**	**+0.4**
POPM				AML	AML		
	comp=E,3495µm,0.2s						
POPM				AML	AML		
	comp=N,4120µm,0.2s						
ASQU	**Asqua**	**0.41**	**111**	P	**Pg**	**04 25 36.5**	**-0.7**
ASQU				S	**Sb**	**04 25 43.4**	**-1.2**
ASQU				AML	AML		
	comp=N,680µm,1.1s						
ASQU				AML	AML		
	comp=N,680µm,0.9s						
ASQU				AML	AML		
	comp=E,534µm,0.3s						
OSSC	**Osservatorio P**	**0.42**	**181**	P	**Pb**	**04 25 37.7**	**-0.8**
OSSC				S	**Sb**	**04 25 45.4**	**+0.6**
OSSC				AML	AML		
	comp=E,1068µm,0.2s						
OSSC				AML	AML		
	comp=N,1086µm,1.1s						
OSSC				AML	AML		
	comp=E,1041µm,1.1s						
OSSC				AML	AML		
	comp=N,1090µm,0.2s						
OSSC				AML	AML		
	comp=E,1068µm,1.8s						
OSSC				AML	AML		
	comp=N,1086µm,0.9s						
OSSC				AML	AML		
	comp=E,1041µm,0.9s						
OSSC				AML	AML		
	comp=N,1090µm,1.8s						
SFI	**Santa Sofia**	**0.43**	**96**	P	**Pg**	**04 25 36.2**	**-1.3**
SFI				S	**Sg**	**04 25 43.0**	**-0.1**
SFI				AML	AML		
	comp=E,562µm,1.3s						
SFI				AML	AML		
	comp=N,878µm,0.6s						
SFI				AML	AML		
	comp=E,514µm,0.5s						
SFI				AML	AML		
	comp=N,798µm,1.2s						
SFI				AML	AML		
	comp=N,798µm,0.8s						
ZCCA	**Zocca**	**0.45**	**334**	P	**Pg**	**04 25 37.5**	**-0.4**
MTRZ	**Monterenzio**	**0.45**	**19**	P	**Pg**	**04 25 35.3**	**-2.6**
MTRZ				AML	AML		
	comp=E,1870µm,0.5s						
MTRZ				AML	AML		
	comp=E,1910µm,0.3s						
MTRZ				AML	AML		
	comp=N,2265µm,0.4s						
MTRZ				AML	AML		
	comp=N,2240µm,0.4s						
MTRZ				AML	AML		
	comp=N,2240µm,1.6s						
MTRZ				AML	AML		
	comp=N,2265µm,1.6s						
CSNT	**Castellina Chi**	**0.48**	**177**	P	**Pg**	**04 25 38.5**	**+0.2**
CSNT				S	**Sb**	**04 25 46.9**	**+0.5**
CSNT				AML	AML		
	comp=E,1012µm,1.6s						
CSNT				AML	AML		
	comp=N,1210µm,1.0s						
CSNT				AML	AML		
	comp=E,1012µm,0.4s						
BDI	**Bagni Di Lucca**	**0.49**	**284**	P	**Pg**	**04 25 37.8**	**-0.7**
BDI				S	**Sg**	**04 25 45.8**	**+0.7**
BDI				AML	AML		
	comp=E,1930µm,0.4s						
BDI				AML	AML		
	comp=N,2340µm,0.5s						
BDI				AML	AML		
	comp=N,2265µm,1.1s						
BDI				AML	AML		
	comp=E,1510µm,0.3s						
IMOL	**Imola, Italy**	**0.54**	**40**	P	**Pg**	**04 25 38.8**	**-0.7**
MAIM	**Mastiano**	**0.55**	**267**	P	**Pg**	**04 25 39.4**	**-0.4**
CARD	**Cardoso**	**0.56**	**278**	P	**Pg**	**04 25 39.0**	**-1.0**
CARD				AML	AML		
	comp=E,906µm,0.7s						
CARD				AML	AML		
	comp=N,1355µm,1.0s						
PII	**Pisa**	**0.57**	**247**	P	**Pg**	**04 25 39.9**	**-0.3**
PII				AML	AML		
	comp=N,1360µm,0.9s						
PII				AML	AML		
	comp=E,1165µm,0.3s						
CRE	**Caprese Michel**	**0.60**	**123**	P	**Pg**	**04 25 40.2**	**-0.5**
CRE				AML	AML		
	comp=N,607µm,0.3s						
CRE				AML	AML		
	comp=E,490µm,0.3s						
GSCL	**Gusciola**	**0.63**	**310**	P	**Pg**	**04 25 40.2**	**-0.9**
GSCL				S	**Sg**	**04 25 50.1**	**+0.7**
GSCL				AML	AML		
	comp=E,847µm,1.2s						
GSCL				AML	AML		
	comp=E,847µm,0.8s						
GSCL				AML	AML		
	comp=N,996µm,0.3s						
SARO	**Sassorosso**	**0.66**	**291**	P	**Pg**	**04 25 40.9**	**-0.9**
SARO				S	**Sg**	**04 25 51.0**	**+0.5**
VLC	**Villacollemand**	**0.66**	**289**	P	**Pg**	**04 25 41.3**	**-0.5**
VLC				S	**Sg**	**04 25 51.1**	**+0.5**
SSP9	**Sansepolcro**	**0.74**	**120**	P	**Pb**	**04 25 43.9**	**+0.1**
SSP9				AML	AML		
	comp=E,230µm,0.9s						
SSP9				AML	AML		
	comp=N,294µm,0.7s						
EQUI	**Equi**	**0.82**	**286**	P	**Pg**	**04 25 44.8**	**0.0**
BADI	**Badiali**	**0.84**	**121**	P	**Pb**	**04 25 45.5**	**-0.1**
FIVI	**Fivizzano**	**0.86**	**290**	P	**Pg**	**04 25 45.9**	**+0.3**
RIBO	**Ribolla Roccas**	**1.01**	**189**	P	**Pn**	**04 25 49.4**	**+0.4**
PIEI	**Pieia**	**1.01**	**114**	P	**Pb**	**04 25 48.5**	**-0.1**
SF01	**Poggio Pratacc**	**1.16**	**169**	P	**Pn**	**04 25 52.0**	**+0.9**
CASP	**Castiglione de**	**1.19**	**194**	P	**Pn**	**04 25 51.9**	**+0.3**
CSP1	**Cessapalombo**	**1.66**	**120**	P	**Pb**	**04 25 59.0**	**-0.5**
PGF	**Pioggiola**	**2.16**	**230**	*e*Pn	**Pn**	**04 26 04.9**	**-0.1**
PGF				*e*Sn	**Sn**	**04 26 28.8**	**-3.0**
	comp=N,6.1nm,0.4s						
SBF	**Sospel**	**2.76**	**270**	*e*Pn	**Pn**	**04 26 13.1**	**-0.1**
SBF				*e*Sn	**Sn**	**04 26 44.9**	**-1.7**
	comp=N,7.8nm,0.3s						
ABTA	**Abfaltersbach**	**2.94**	**17**	*e*Pn	**Pn**	**04 26 16.0**	**+0.4**
	comp=N,1.2nm,0.3s						
ABTA				*e*Sn	**Sn**	**04 26 49.7**	**-1.2**
	comp=N,0.5nm,0.3s						
FETA	**Feichten**	**3.10**	**353**	*e*Pn	**Pn**	**04 26 19.7**	**+1.8**
	comp=N,0.1nm,0.1s						
FETA				*e*Sn	**Sb**	**04 27 00.4**	**-1.5**
	comp=N,0.6nm,0.3s						
SQTA	**Sankt Quirin**	**3.27**	**359**	*i* Pn	**Pn**	**04 26 21.9**	**+1.6**
	comp=N,0.3nm,0.1s,SNR=6.1						
SQTA				*e*Sn	**Sn**	**04 27 00.3**	**+1.1**
	comp=N,1.5nm,0.3s						
MBDF	**Montbardon**	**3.31**	**285**	*e*Pn	**Pn**	**04 26 21.4**	**+0.6**
MBDF				*e*Sn	**Sn**	**04 26 58.6**	**-1.6**
	comp=N,1.6nm,0.2s						
WTTA	**Wattenberg**	**3.33**	**4**	*i* Pn	**Pn**	**04 26 23.0**	**+1.9**
	comp=N,2.0nm,0.2s,SNR=4.5						
WTTA				*e*Sn	**Sn**	**04 27 04.8**	**+4.1**
	comp=N,2.0nm,0.5s						
WATA	**Walderalm**	**3.40**	**4**	*i* Pn	**Pn**	**04 26 24.3**	**+2.3**
	comp=N,1.5nm,0.2s,SNR=8.0						
MOTA	**Moosalm**	**3.40**	**358**	*e*Pn	**Pn**	**04 26 24.2**	**+2.2**
	comp=N,0.9nm,0.2s						
MOTA				*e*Sn	**Sn**	**04 27 05.5**	**+3.1**
	comp=N,3.4nm,0.9s						
KBA	**Koelnbreinsper**	**3.46**	**24**	*e*Pn	**Pn**	**04 26 23.2**	**+0.3**
	comp=N,0.2nm,0.1s						
KBA				*e*Sn	**Sn**	**04 27 02.2**	**-1.7**
	comp=N,1.9nm,0.8s						
OBKA	**Obir**	**3.46**	**41**	*e*Pn	**Pg**	**04 26 35.6**	**+0.4**
	comp=N,0.8nm,0.3s						
OBKA				*e*Sn	**Sg**	**04 27 22.4**	**+2.3**
	comp=N,8.2nm,1.0s						
DAVA	**Damuels**	**3.48**	**344**	*e*Pn	**Pn**	**04 26 25.3**	**+2.2**
	comp=N,1.5nm,0.2s						
DAVA				*e*Sn	**Sn**	**04 27 05.3**	**+1.0**
	comp=N,3.2nm,0.4s						
LMR	**La Mourre**	**3.50**	**262**	*e*Pn	**Pn**	**04 26 22.5**	**-0.8**
LMR				*e*Sn	**Sn**	**04 27 01.2**	**-3.4**
	comp=N,2.5nm,0.4s						
RETA	**Reutte**	**3.56**	**355**	*i* Pn	**Pn**	**04 26 25.8**	**+1.7**
	comp=N,4.3nm,0.4s,SNR=6.6						
RETA				*e*Sn	**Sn**	**04 27 04.4**	**-1.8**
	comp=N,3.2nm,0.9s						
LPG	**La Plagne**	**3.56**	**297**	*e*Pn	**Pn**	**04 26 26.1**	**+1.7**
LPG				*e*Sn	**Sn**	**04 27 05.9**	**-0.8**
	comp=N,0.6nm,0.2s						
LPL	**La Plagne**	**3.58**	**298**	*e*P	**Pn**	**04 26 28.5**	**+3.9**
LPL				*e*Sn	**Sn**	**04 27 05.4**	**-1.7**
	comp=N,1.6nm,0.3s						
LESA	**Schwarzleotal**	**3.62**	**15**	*e*Pn	**Pn**	**04 26 26.9**	**+1.9**
	comp=N,0.2nm,0.2s						
LESA				*e*Sn	**Sn**	**04 27 08.6**	**+0.9**
	comp=N,0.1nm,0.1s						
ORIF	**Oris-en-Rattie**	**3.97**	**286**	*e*P	**Pn**	**04 26 32.2**	**+2.4**
ORIF				*e*Sn	**Sn**	**04 27 13.8**	**-2.6**
	comp=N,2.3nm,0.3s						
BIOA	**Bad Ischl, Aus**	**4.10**	**23**	*e*Pn	**Pn**	**04 26 32.3**	**+0.8**
	comp=N,1.0nm,0.3s						
SMRF	**Simiane la Rot**	**4.10**	**272**	*e*Pn	**Pn**	**04 26 33.6**	**+2.0**
SMRF				*e*Sn	**Sn**	**04 27 17.2**	**-2.4**
	comp=N,1.4nm,0.3s						
ARSA	**Arzberg**	**4.46**	**41**	*e*Pn	**Pn**	**04 26 33.5**	**-2.9**
	comp=N,0.6nm,0.6s						
CABF	**La Chapelle**	**4.52**	**308**	*e*Pn	**Pn**	**04 26 38.7**	**+1.4**
CABF				*e*Sn	**Sn**	**04 27 29.3**	**-0.5**
	comp=N,1.3nm,0.3s						
VIVF	**Saint-Julien-l**	**4.80**	**283**	*e*P	**Pn**	**04 26 44.0**	**+2.8**
HINF	**Hinteralfeld**	**4.94**	**323**	*e*Pn	**Pn**	**04 26 44.0**	**+0.9**
HINF				*e*Sn	**Sn**	**04 27 39.3**	**-0.9**
	comp=N,0.7nm,0.3s						
CDF	**Champ du Feu**	**5.25**	**330**	*e*Pn	**Pn**	**04 26 47.3**	**-0.1**
HAU	**Haudompre**	**5.31**	**322**	*e*Pn	**Pn**	**04 26 48.3**	**+0.2**
HAU				*e*Sn	**Sn**	**04 27 47.6**	**-1.6**
	comp=N,2.0nm,0.2s						
LASF	**Ste Croix**	**5.34**	**274**	*e*P	**Pn**	**04 26 51.3**	**+2.7**

DJA 09 04:25:50.2±0.5, 11°S±3°×12°3E±°, h32^{km}±6^{km}, M3.9/11, mB4.4/1, mb4.1/5, MLv3.8/11, Mw(mB)3.5/1, South of Timor

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**0.94**	**17**	P	Pn	04 26 07.5	+0.3
BATI				S	Sn	04 26 19.7	+0.2
SOEI	**Soe**	**1.60**	**33**	P	Pn	04 26 17.5	+1.1
MMRI	**Maumere**	**2.71**	**335**	P	Pn	04 26 31.2	-0.4
EDFI	**Ende, Flores**	**2.88**	**324**	P	Pn	04 26 32.8	-1.2
BASI	**Baing, Sumba**	**2.90**	**288**	P	Pn	04 26 35.0	+0.8
WBSI	**Waikabubak, Su**	**4.20**	**290**	P	Pn	04 26 51.8	-0.3
LBFI	**Labuhan Bajo,**	**4.33**	**307**	P	Pn	04 26 54.1	+0.3
DBNI	**Kabupaten Domp**	**5.63**	**297**	P	Pn	04 27 12.5	+0.7
	0.1nm11nm,0.6s						
PLAI	**Plampang**	**5.98**	**292**	P	Pn	04 27 16.6	+0.1
TWSI	**Taliwang, Sumb**	**6.83**	**290**	P	Pn	04 27 28.3	+0.1
	14nm,0.9s						

ROM 09 04:26:02.8±0.1, 44°.012N±0°.004×11°.299E±0°.006, h9^{km}, ML2.1/12, 1D, Error ellipse: s-maj=0.5km s-min=0.3km az=221.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCL	**Monte Cuccoli**	**0.09**	**266**	P	Pg	04 26 05.1	0.0
MOCL				S	Sg	04 26 07.4	+0.6
MOCL				AML	AML		
	comp=N,4454µm,0.2s						
MOCL				AML	AML		
	comp=E,6203µm,0.2s						
MPPT	**Montemurlo**	**0.16**	**250**	P	Pg	04 26 06.8	+0.6
MPPT				S	Sg	04 26 09.7	+1.0
MPPT				AML	AML		
	comp=N,558µm,0.4s						
MPPT				AML	AML		
	comp=E,927µm,0.2s						
FNVD	**Fontana Vidola**	**0.20**	**321**	P	Pg	04 26 07.6	+0.6
FNVD				S	Sg	04 26 11.1	+1.3
FIE	**Fiesole**	**0.20**	**181**	P	Pg	04 26 07.7	+0.7
FIE				S	Sg	04 26 11.0	+1.2
RUFI	**Rufina**	**0.23**	**138**	⇓P	Pg	04 26 08.2	+0.8
RUFI				S	Sg	04 26 12.3	+1.7
RUFI				AML	AML		
	comp=E,179µm,0.4s						
RUFI				AML	AML		
	comp=N,164µm,0.3s						
FIR	**Firenze**	**0.24**	**188**	P	Pg	04 26 08.7	+1.1
FIR				S	Sg	04 26 12.8	+2.0
LMD	**Lutirano**	**0.30**	**77**	P	Pg	04 26 09.4	+0.6
LMD				S	Sb	04 26 14.5	-1.0
LMD				AML	AML		
	comp=N,875µm,0.2s						
LMD				AML	AML		
	comp=E,441µm,0.3s						
CRMI	**Carmignano**	**0.33**	**227**	P	Pg	04 26 09.8	+0.5
CRMI				S	Sb	04 26 15.3	-0.8
MTRZ	**Monterenzio**	**0.38**	**18**	P	Pg	04 26 10.9	+0.5
POPM	**Popiglio**	**0.39**	**275**	P	Pg	04 26 10.8	+0.3
POPM				S	Sb	04 26 17.4	-0.7
POPM				AML	AML		
	comp=E,677µm,0.2s						
POPM				AML	AML		
	comp=N,715µm,0.2s						
ASQU	**Asqua**	**0.41**	**121**	P	Pg	04 26 11.3	+0.4
PII	**Pisa**	**0.63**	**243**	P	Pg	04 26 15.2	+0.3
PII				AML	AML		
	comp=N,207µm,0.4s						
PII				AML	AML		
	comp=E,187µm,0.5s						

ROM 09 04:26:30.6±0.1, 44°.014N±0°.004×11°.302E±0°.004, h8^{km}, ML2.1/28, Error ellipse: s-maj=0.4km s-min=0.1km az=201.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCL	**Monte Cuccoli**	**0.09**	**264**	P	Pg	04 26 33.4	+0.5
MOCL				S	Sg	04 26 35.1	+0.6
MOCL				AML	AML		
	comp=E,3385µm,1.1s						
MOCL				AML	AML		
	comp=N,3355µm,0.2s						
MOCL				AML	AML		
	comp=N,3352µm,0.2s						
MOCL				AML	AML		
	comp=E,3016µm,0.1s						
MPPT	**Montemurlo**	**0.16**	**250**	P	Pg	04 26 34.7	+0.7
MPPT				S	Sg	04 26 37.5	+1.1
MPPT				AML	AML		
	comp=E,720µm,0.3s						
MPPT				AML	AML		
	comp=N,713µm,0.3s						
FNVD	**Fontana Vidola**	**0.20**	**320**	P	Pg	04 26 35.3	+0.6
FNVD				S	Sg	04 26 38.6	+1.0
FIE	**Fiesole**	**0.21**	**182**	P	Pg	04 26 35.5	+0.7
FIE				S	Sg	04 26 38.7	+1.1
RUFI	**Rufina**	**0.23**	**139**	P	Pg	04 26 35.9	+0.7
RUFI				S	Sg	04 26 39.6	+1.3
RUFI				AML	AML		
	comp=N,412µm,0.9s						
RUFI				AML	AML		
	comp=E,300µm,0.4s						
FIR	**Firenze**	**0.24**	**188**	P	Pg	04 26 36.5	+1.1
FIR				S	Sg	04 26 40.5	+1.9
FIR				AML	AML		
	comp=N,1509µm,0.4s						
FIR				AML	AML		
	comp=N,1502µm,0.4s						
FIR				AML	AML		
	comp=E,1437µm,0.2s						
FIR				AML	AML		
	comp=E,1359µm,0.2s						
LMD	**Lutirano**	**0.30**	**78**	P	Pg	04 26 37.2	+0.7
LMD				S	Sb	04 26 42.1	-1.2
LMD				AML	AML		
	comp=N,952µm,0.1s						
LMD				AML	AML		
	comp=E,471µm,0.2s						
CRMI	**Carmignano**	**0.33**	**227**	P	Pg	04 26 37.6	+0.6
CRMI				S	Sb	04 26 43.2	-1.0
MTRZ	**Monterenzio**	**0.38**	**18**	P	Pg	04 26 38.5	+0.4
POPM	**Popiglio**	**0.39**	**275**	P	Pg	04 26 38.8	+0.5
POPM				S	Sb	04 26 45.1	-0.9
POPM				AML	AML		
	comp=E,717µm,0.2s						
POPM				AML	AML		
	comp=N,821µm,0.3s						
SFI	**Santa Sofia**	**0.41**	**105**	P	Pb	04 26 39.4	-0.6
SFI				S	Sb	04 26 46.0	-0.4
SFI				AML	AML		
	comp=E,312µm,0.6s						
SFI				AML	AML		
	comp=N,200µm,1.2s						
SFI				AML	AML		
	comp=E,283µm,0.1s						
SFI				AML	AML		
	comp=N,194µm,0.1s						
SFI				AML	AML		
	comp=N,203µm,0.1s						
SFI				AML	AML		
	comp=E,264µm,0.1s						
ASQU	**Asqua**	**0.41**	**122**	P	Pb	04 26 39.5	-0.7
ASQU				AML	AML		
	comp=E,120µm,0.3s						
ASQU				AML	AML		
	comp=N,138µm,0.4s						
OSSC	**Osservatorio P**	**0.49**	**185**	P	Pg	04 26 40.7	+0.6
OSSC				S	Sb	04 26 48.3	-0.5
OSSC				AML	AML		
	comp=E,314µm,0.2s						
OSSC				AML	AML		
	comp=E,259µm,0.2s						
OSSC				AML	AML		
	comp=N,291µm,0.2s						
OSSC				AML	AML		
	comp=N,300µm,0.1s						
CSNT	**Castellina Chi**	**0.54**	**181**	P	Pg	04 26 41.5	+0.5
CSNT				AML	AML		
	comp=E,342µm,0.5s						
CSNT				AML	AML		
	comp=N,256µm,0.3s						
CSNT				AML	AML		
	comp=E,300µm,0.2s						
CSNT				AML	AML		
	comp=N,257µm,0.3s						

ROM 09 04:28:55.8±0.1, 44°.014N±0°.004×11°.295E±0°.005, h8^{km}, ML1.6/20, 2C-1D, Error ellipse: s-maj=0.4km s-min=0.2km az=39.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCL	**Monte Cuccoli**	**0.08**	**264**	⇓P	Pg	04 28 58.5	+0.5
MOCL				S	Sg	04 29 00.1	+0.5
MOCL				AML	AML		
	comp=E,1715µm,1.1s						
MOCL				AML	AML		
	comp=N,1395µm,1.0s						
MOCL				AML	AML		
	comp=E,1661µm,0.2s						
MOCL				AML	AML		
	comp=N,1363µm,0.2s						
MPPT	**Montemurlo**	**0.16**	**249**	⇑P	Pg	04 28 59.8	+0.6
MPPT				S	Sg	04 29 02.5	+1.0
MPPT				AML	AML		
	comp=E,221µm,0.5s						
MPPT				AML	AML		
	comp=N,192µm,1.1s						
MPPT				AML	AML		
	comp=N,178µm,0.2s						
MPPT				AML	AML		
	comp=E,160µm,0.3s						
FNVD	**Fontana Vidola**	**0.20**	**321**	P	Pg	04 29 00.4	+0.5
FNVD				S	Sg	04 29 03.9	+1.2
FIE	**Fiesole**	**0.21**	**180**	P	Pg	04 29 00.7	+0.7
FIE				S	Sg	04 29 04.0	+1.2
RUFI	**Rufina**	**0.23**	**138**	P	Pg	04 29 01.3	+0.8
RUFI				S	Sg	04 29 05.0	+1.4
RUFI				AML	AML		
	comp=E,80µm,1.5s						
RUFI				AML	AML		
	comp=N,80µm,1.0s						
RUFI				AML	AML		
	comp=N,68µm,0.2s						
RUFI				AML	AML		
	comp=E,75µm,0.2s						
FIR	**Firenze**	**0.24**	**187**	P	Pg	04 29 01.6	+1.0
FIR				S	Sg	04 29 05.8	+1.9
LMD	**Lutirano**	**0.30**	**78**	P	Pg	04 29 02.3	+0.5
LMD				S	Sb	04 29 07.6	-1.0
LMD				AML	AML		
	comp=E,168µm,1.5s						
LMD				AML	AML		
	comp=N,300µm,0.2s						
LMD				AML	AML		
	comp=N,300µm,0.2s						
LMD				AML	AML		
	comp=E,139µm,0.3s						
MTRZ	**Monterenzio**	**0.38**	**19**	P	Pg	04 29 03.7	+0.4
POPM	**Popiglio**	**0.39**	**275**	⇑P	Pg	04 29 03.7	+0.3
POPM				S	Sb	04 29 10.2	-0.9
POPM				AML	AML		
	comp=E,186µm,1.3s						
POPM				AML	AML		
	comp=N,258µm,0.3s						
POPM				AML	AML		
	comp=N,190µm,0.1s						
POPM				AML	AML		
	comp=E,178µm,0.2s						
ASQU	**Asqua**	**0.42**	**121**	P	Pb	04 29 04.8	-0.7
ASQU				S	Sb	04 29 11.6	-0.3
ASQU				AML	AML		
	comp=E,27µm,0.2s						
ASQU				AML	AML		
	comp=E,27µm,1.8s						
ASQU				AML	AML		
	comp=N,30µm,0.3s						
OSSC	**Osservatorio P**	**0.49**	**184**	P	Pg	04 29 05.9	+0.6
OSSC				S	Sb	04 29 13.8	-0.2
OSSC				AML	AML		
	comp=E,434µm,0.5s						
OSSC				AML	AML		
	comp=N,366µm,1.5s						
OSSC				AML	AML		
	comp=E,318µm,1.5s						

```
OSSC                                     AML    AML
        comp=N,404µm,0.5s
OSSC                                     AML    AML
        comp=E,163µm,1.2s
OSSC                                     AML    AML
        comp=E,69µm,0.3s
OSSC                                     AML    AML
        comp=N,53µm,0.3s
OSSC                                     AML    AML
        comp=N,155µm,0.7s
CSNT    Castellina Chi       0.54 180    P      Pg      04 29 06.6 +0.4
CSNT                                     S      Sb      04 29 14.8 -0.6
CSNT                                     AML    AML
        comp=E,192µm,1.3s
CSNT                                     AML    AML
        comp=N,303µm,1.3s
CSNT                                     AML    AML
        comp=E,130µm,0.3s
CSNT                                     AML    AML
        comp=N,118µm,0.6s
CSNT                                     AML    AML
        comp=E,43µm,0.3s
CSNT                                     AML    AML
        comp=N,51µm,0.2s
CSNT                                     AML    AML
        comp=E,43µm,1.7s
PII     Pisa                 0.63 243    P      Pg      04 29 08.1 +0.2
PII                                      AML    AML
        comp=E,1265µm,0.5s
PII                                      AML    AML
        comp=N,586µm,0.5s
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PRU ***09*** *04:28:56.6, 41.°10N×11.°64E, h258km*
GEN ***09*** *04:29:23.0, 43.°98N×11.°29E, h11km±1km, Ml3.2*
ROM ***09*** *04:29:23.6±0.1, 44.°000N±0.°004×11.°281E±0.°005, h8km, ML3.2/143, Error ellipse: s-maj=0.4km s-min=0.4km az=216.0*
BGR ***09*** *04:29:24.1±1.4, 43.°77N×11.°46E, h10km, ML3.2/3, Error ellipse: s-maj=24.5km s-min=20.0km az=130.0*
LDG ***09*** *04:29:25.8±0.1, 43.°88N×11.°26E, h8km, Ml3.2/23, Error ellipse: s-maj=3.3km s-min=2.6km az=27.0*
ISC 09 04:29:23.3±0.8**, 44.°00N**±0.°01×**11.°27E**±0.°01**, h8**km±5km**, n145, σ1.s58**/227**, 14C-1D, Central Italy**

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Code    Station Name          Δ°  AZ°     Phase ID            Time     Res
                                         Op     ISC         h  m  s   ISC
MOCL    Monte Cuccoli        0.07 276   ⇓P      Pg      04 29 26.1 +0.7
MOCL                                     S      Sg      04 29 27.7 +0.9
MOCL                                     AML    AML
        comp=E,69150µm,0.7s
MOCL                                     AML    AML
        comp=N,42400µm,1.5s
MOCL                                     AML    AML
        comp=E,69100µm,0.7s
MOCL                                     AML    AML
        comp=E,62940µm,0.2s
MOCL                                     AML    AML
        comp=N,39707µm,0.2s
SEI     Scarperia            0.08  47    P      Pg      04 29 22.8 -2.7
SEI                                      S      Sg      04 29 24.2 -2.9
MPPT    Montemurlo           0.14 253   ⇑P      Pg      04 29 27.4 +1.0
MPPT                                     S      Sg      04 29 30.1 +1.7
MPPT                                     AML    AML
        comp=E,25400µm,1.3s
MPPT                                     AML    AML
        comp=N,17600µm,1.0s
MPPT                                     AML    AML
        comp=E,16544µm,0.3s
MPPT                                     AML    AML
        comp=N,15575µm,0.6s
FNVD    Fontana Vidola       0.20 327   ⇑P      Pg      04 29 28.0 +0.5
FNVD                                     S      Sg      04 29 31.4 +1.1
FNVD                                     AML    AML
        comp=E,13200µm,0.5s
FNVD                                     AML    AML
        comp=N,18350µm,1.2s
FNVD                                     AML    AML
        comp=E,13212µm,0.5s
FNVD                                     AML    AML
        comp=N,14115µm,0.2s
FNVD                                     AML    AML
        comp=N,14115µm,1.8s
FIR     Firenze              0.23 183    P      Pg      04 29 28.8 +1.0
FIR                                      S      Sg      04 29 33.0 +2.1
FIR                                      AML    AML
        comp=E,20050µm,0.6s
FIR                                      AML    AML
        comp=N,20400µm,0.4s
FIR                                      AML    AML
        comp=E,19250µm,0.5s
FIR                                      AML    AML
        comp=N,21250µm,0.4s
FIR                                      AML    AML
        comp=E,14590µm,0.3s
FIR                                      AML    AML
        comp=N,21284µm,0.4s
FIR                                      AML    AML
        comp=N,20396µm,0.4s
FIR                                      AML    AML
        comp=E,14851µm,0.3s
FIR                                      AML    AML
        comp=N,21284µm,1.6s
FIR                                      AML    AML
        comp=N,20396µm,1.6s
BRIS    BRISIGHELLA          0.23  48   ⇑P      Pg      04 29 31.9 +4.0
BRIS                                     S      Sg      04 29 38.8 +7.7
BRIS                                     AML    AML
        comp=E,5565µm,0.4s
BRIS                                     AML    AML
        comp=N,4865µm,0.7s
BRIS                                     AML    AML
        comp=E,113µm,0.7s
BRIS                                     AML    AML
        comp=N,241µm,1.0s
BRIS                                     AML    AML
        comp=E,5561µm,0.4s
BRIS                                     AML    AML
        comp=N,4445µm,0.7s
BRIS                                     AML    AML
        comp=N,4445µm,1.3s
BRIS                                     AML    AML
        comp=E,5561µm,1.6s
RUFI    Rufina               0.23 133    P      Pg      04 29 28.7 +0.7
RUFI                                     S      Sg      04 29 32.5 +1.3
RUFI    Rufina               0.23 133    P      Pg      04 29 28.7 +0.7
RUFI                                     S      Sg      04 29 32.3 +1.1
CRMI    Carmignano           0.30 227   ⇑P      Pb      04 29 30.2 -0.8
CRMI                                     S      Sb      04 29 35.6 -0.5
CRMI                                     AML    AML
        comp=E,7675µm,0.3s
CRMI                                     AML    AML
        comp=N,16200µm,0.4s
CRMI                                     AML    AML
        comp=E,3085µm,0.3s
CRMI                                     AML    AML
        comp=N,6375µm,0.4s
CRMI                                     AML    AML
        comp=E,3088µm,0.3s
CRMI                                     AML    AML
        comp=N,16174µm,0.4s
CRMI                                     AML    AML
        comp=E,7675µm,0.3s
CRMI                                     AML    AML
        comp=N,6372µm,0.4s
LMD     Lutirano             0.32  76    P      Pg      04 29 29.7  0.0
LMD                                      S      Sg      04 29 34.8 +0.8
LMD     Lutirano             0.32  76   ⇑P      Pg      04 29 29.7  0.0
LMD                                      S      Sg      04 29 34.8 +0.8
LMD                                      AML    AML
        comp=E,6885µm,1.4s
LMD                                      AML    AML
        comp=N,8475µm,0.5s
LMD                                      AML    AML
        comp=E,6829µm,0.4s
LMD                                      AML    AML
        comp=N,8361µm,0.2s
POPM    Popiglio             0.38 277    P      Pg      04 29 31.4 +0.7
POPM                                     S      Sb      04 29 37.5 -0.7
POPM    Popiglio             0.38 277   ⇑P      Pg      04 29 31.3 +0.7
POPM                                     S      Sb      04 29 37.7 -0.5
POPM                                     AML    AML
        comp=E,10455µm,1.4s
POPM                                     AML    AML
        comp=N,15000µm,1.3s
POPM                                     AML    AML
        comp=N,13142µm,0.2s
POPM                                     AML    AML
        comp=N,13142µm,1.8s
POPM                                     AML    AML
        comp=E,10300µm,0.2s
MTRZ    Monterenzio          0.40  20    P      Pg      04 29 30.9 -0.3
MTRZ    Monterenzio          0.40  20   ⇑P      Pg      04 29 30.8 -0.3
MTRZ                                     S      Sg      04 29 35.4 -1.1
MTRZ                                     AML    AML
        comp=N,7700µm,0.6s
MTRZ                                     AML    AML
        comp=E,8100µm,0.6s
MTRZ                                     AML    AML
        comp=E,7945µm,0.6s
MTRZ                                     AML    AML
        comp=E,7950µm,0.6s
MTRZ                                     AML    AML
        comp=N,7700µm,0.6s
MTRZ                                     AML    AML
        comp=N,7800µm,0.6s
MTRZ                                     AML    AML
        comp=E,8099µm,0.6s
MTRZ                                     AML    AML
        comp=N,7697µm,0.6s
MTRZ                                     AML    AML
        comp=N,7800µm,0.6s
MTRZ                                     AML    AML
        comp=E,7948µm,0.6s
ZCCA    Zocca                0.41 329    P      Pb      04 29 33.0 +0.2
ZCCA                                     S      Sb      04 29 40.2 +0.9
ZCCA    Zocca                0.41 329    P      Pb      04 29 32.9  0.0
ZCCA                                     AML    AML
        comp=E,2575µm,0.4s
ZCCA                                     AML    AML
        comp=N,2360µm,0.7s
ZCCA                                     AML    AML
        comp=E,2675µm,0.4s
ZCCA                                     AML    AML
        comp=N,2380µm,0.6s
ZCCA                                     AML    AML
        comp=E,2677µm,0.4s
ZCCA                                     AML    AML
        comp=E,2575µm,0.4s
ZCCA                                     AML    AML
        comp=N,2378µm,0.6s
ZCCA                                     AML    AML
        comp=N,2356µm,0.7s
ASQU    Asqua                0.42 118    P      Pg      04 29 32.0 +0.4
ASQU                                     S      Sb      04 29 39.0 -0.6
ASQU    Asqua                0.42 118   ⇑P      Pg      04 29 31.8 +0.2
ASQU                                     S      Sb      04 29 38.7 -1.0
ASQU                                     AML    AML
        comp=E,1368µm,0.5s
ASQU                                     AML    AML
        comp=N,1715µm,0.5s
ASQU                                     AML    AML
        comp=E,1344µm,0.4s
ASQU                                     AML    AML
        comp=N,1716µm,0.5s
SFI     Santa Sofia          0.42 103   ⇑P      Pg      04 29 31.7 +0.1
SFI                                      S      Sb      04 29 38.6 -1.0
SFI                                      AML    AML
        comp=N,3660µm,0.6s
SFI                                      AML    AML
        comp=E,2220µm,0.8s
SFI                                      AML    AML
        comp=N,3695µm,0.9s
SFI                                      AML    AML
        comp=E,2205µm,0.8s
SFI                                      AML    AML
        comp=N,3660µm,0.7s
SFI                                      AML    AML
        comp=E,2215µm,0.8s
SFI                                      AML    AML
        comp=E,2218µm,0.8s
SFI                                      AML    AML
        comp=E,2202µm,0.8s
SFI                                      AML    AML
        comp=N,2315µm,0.7s
SFI                                      AML    AML
        comp=N,2345µm,0.7s
SFI                                      AML    AML
        comp=E,2202µm,1.2s
SFI                                      AML    AML
        comp=E,2218µm,1.2s
OSSC    Osservatorio P       0.47 182    P      Pg      04 29 33.2 +0.7
OSSC                                     S      Sb      04 29 40.6 -0.4
OSSC    Osservatorio P       0.47 182   ⇑P      Pg      04 29 33.2 +0.7
OSSC                                     S      Sb      04 29 40.6 -0.4
OSSC                                     AML    AML
        comp=E,3625µm,0.8s
OSSC                                     AML    AML
        comp=E,5155µm,0.7s
OSSC                                     AML    AML
        comp=N,3570µm,0.8s
OSSC                                     AML    AML
        comp=E,3625µm,0.8s
OSSC                                     AML    AML
        comp=N,5220µm,0.7s
OSSC                                     AML    AML
        comp=E,3624µm,0.8s
OSSC                                     AML    AML
        comp=N,5124µm,0.7s
OSSC                                     AML    AML
        comp=E,5040µm,0.7s
OSSC                                     AML    AML
        comp=N,3570µm,0.8s
OSSC                                     AML    AML
        comp=E,5040µm,1.3s
OSSC                                     AML    AML
        comp=N,5124µm,1.3s
BDI     Bagni Di Lucca       0.49 278    P      Pg      04 29 33.3 +0.4
BDI                                      S      Sb      04 29 41.4 -0.1
BDI     Bagni Di Lucca       0.49 278   ⇑P      Pg      04 29 33.3 +0.4
BDI                                      S      Sb      04 29 41.2 -0.4
BDI                                      AML    AML
        comp=E,9650µm,0.7s
BDI                                      AML    AML
        comp=N,12450µm,0.6s
BDI                                      AML    AML
        comp=E,10230µm,0.3s
BDI                                      AML    AML
        comp=N,12100µm,0.5s
BDI                                      AML    AML
        comp=E,7934µm,0.3s
BDI                                      AML    AML
        comp=N,12487µm,0.6s
BDI                                      AML    AML
        comp=N,11740µm,0.7s
BDI                                      AML    AML
        comp=E,10238µm,0.3s
BDI                                      AML    AML
        comp=E,7934µm,1.7s
IMOL    Imola, Italy         0.49  43    P      Pb      04 29 34.4 +0.2
IMOL    Imola, Italy         0.49  43    P      Pb      04 29 34.1 -0.1
IMOL                                     AML    AML
        comp=E,8270µm,0.5s
IMOL                                     AML    AML
        comp=N,7730µm,0.6s
IMOL                                     AML    AML
        comp=E,8272µm,0.5s
IMOL                                     AML    AML
        comp=N,7730µm,0.6s
CSNT    Castellina Chi       0.53 179    P      Pg      04 29 34.0 +0.5
CSNT                                     S      Sb      04 29 41.9 -0.6
CSNT    Castellina Chi       0.53 179   ⇑P      Pg      04 29 34.0 +0.5
CSNT                                     S      Sb      04 29 42.1 -0.4
CSNT                                     AML    AML
        comp=E,3860µm,0.5s
CSNT                                     AML    AML
        comp=N,6715µm,0.5s
CSNT                                     AML    AML
        comp=N,6713µm,0.5s
CSNT                                     AML    AML
        comp=E,3863µm,0.5s
CARD    Cardoso              0.57 273    P      Pg      04 29 34.6 +0.2
CARD                                     S      Sb      04 29 43.5 -0.3
CARD    Cardoso              0.57 273    P      Pg      04 29 34.6 +0.2
CARD                                     S      Sb      04 29 43.4 -0.5
CARD                                     AML    AML
        comp=N,7600µm,1.0s
CARD                                     AML    AML
        comp=E,4220µm,0.4s
CARD                                     AML    AML
        comp=E,4218µm,0.4s
CARD                                     AML    AML
        comp=N,6401µm,0.4s
CARD                                     AML    AML
        comp=N,6401µm,1.6s
MAIM    Mastiano             0.57 262    P      Pg      04 29 34.8 +0.4
MAIM                                     S      Sb      04 29 43.8  0.0
MAIM    Mastiano             0.57 262    P      Pg      04 29 34.6 +0.3
GSCL    Gusciola             0.61 306    P      Pb      04 29 35.8 -0.3
GSCL                                     S      Sb      04 29 45.8 +1.0
GSCL    Gusciola             0.61 306   ⇑P      Pb      04 29 35.8 -0.3
GSCL                                     S      Sb      04 29 45.6 +0.7
GSCL                                     AML    AML
        comp=N,4055µm,0.4s
GSCL                                     AML    AML
        comp=E,5380µm,1.1s
GSCL                                     AML    AML
        comp=N,4058µm,0.4s
GSCL                                     AML    AML
        comp=E,5380µm,1.1s
PII     Pisa                 0.61 243    P      Pg      04 29 35.5 +0.4
PII                                      S      Sb      04 29 45.6 +0.8
PII     Pisa                 0.61 243   ⇑P      Pg      04 29 35.4 +0.4
PII                                      S      Sb      04 29 45.6 +0.8
PII                                      AML    AML
        comp=N,6895µm,0.3s
PII                                      AML    AML
        comp=E,7080µm,0.4s
PII                                      AML    AML
        comp=N,6898µm,0.3s
PII                                      AML    AML
        comp=E,7080µm,0.4s
CRE     Caprese Michel       0.62 127    P      Pg      04 29 35.7 +0.4
CRE                                      S      Sb      04 29 45.2 -0.1
CRE                                      AML    AML
        comp=N,1212µm,0.5s
CRE                                      AML    AML
        comp=E,2050µm,0.9s
CRE                                      AML    AML
        comp=N,1213µm,0.5s
CRE                                      AML    AML
        comp=E,2047µm,0.9s
CRE                                      AML    AML
        comp=N,1213µm,1.5s
BRSN    Barisano             0.65  63    P      Pb      04 29 36.9 +0.1
BRSN                                     AML    AML
        comp=E,3725µm,0.8s
BRSN                                     AML    AML
        comp=E,3725µm,0.8s
BRSN                                     AML    AML
        comp=N,4200µm,0.7s
BRSN                                     AML    AML
        comp=N,4235µm,0.7s
BRSN                                     AML    AML
        comp=E,3726µm,0.8s
BRSN                                     AML    AML
        comp=N,4201µm,0.7s
BRSN                                     AML    AML
        comp=E,3726µm,0.8s
BRSN                                     AML    AML
        comp=N,4237µm,0.7s
BRSN                                     AML    AML
        comp=N,4201µm,1.3s
BRSN                                     AML    AML
        comp=N,4237µm,1.3s
BRSN                                     AML    AML
        comp=E,3726µm,1.2s
BRSN                                     AML    AML
        comp=E,3726µm,1.2s
SARO    Sassorosso           0.66 287    P      Pg      04 29 36.4 +0.4
SARO                                     S      Sb      04 29 46.9 +0.5
SARO    Sassorosso           0.66 287    P      Pg      04 29 36.3 +0.4
SARO                                     S      Sb      04 29 46.8 +0.5
VLC     Villacollemand       0.66 284    P      Pb      04 29 36.6 -0.5
VLC                                      S      Sb      04 29 46.9 +0.5
VLC     Villacollemand       0.66 284    P      Pg      04 29 36.4 +0.4
VLC                                      S      Sb      04 29 46.5 +0.1
VLC                                      AML    AML
        comp=E,2560µm,0.5s
VLC                                      AML    AML
        comp=N,3610µm,1.5s
VLC                                      AML    AML
        comp=E,2480µm,0.6s
VLC                                      AML    AML
        comp=N,3595µm,1.5s
VLC                                      AML    AML
        comp=N,3335µm,0.5s
VLC                                      AML    AML
        comp=E,2479µm,0.6s
VLC                                      AML    AML
        comp=N,3351µm,0.5s
VLC                                      AML    AML
        comp=E,2561µm,0.5s
FIU     Minerbio Fiu         0.66  14    P      Pn      04 29 39.0 +0.1
FIU                                      AML    AML
        comp=E,5615µm,0.6s
FIU                                      AML    AML
        comp=N,3560µm,0.8s
FIU                                      AML    AML
        comp=E,5615µm,0.6s
FIU                                      AML    AML
        comp=E,5615µm,1.4s
FIU                                      AML    AML
        comp=N,3561µm,0.8s
SSP9    Sansepolcro          0.75 124    P      Pb      04 29 38.6  0.0
SSP9                                     AML    AML
        comp=E,938µm,0.9s
SSP9                                     AML    AML
        comp=N,1480µm,1.3s
SSP9                                     AML    AML
        comp=E,1073µm,1.2s
SSP9                                     AML    AML
        comp=N,1475µm,1.3s
SSP9                                     AML    AML
        comp=E,1075µm,1.2s
SSP9                                     AML    AML
        comp=N,1475µm,1.3s
SSP9                                     AML    AML
        comp=E,1075µm,0.8s
PARC    Parchiule            0.78 116    P      Pb      04 29 38.9 -0.2
PARC                                     S      Sb      04 29 50.5 +0.6
PARC                                     AML    AML
        comp=E,506µm,1.4s
PARC                                     AML    AML
        comp=N,810µm,0.9s
PARC                                     AML    AML
        comp=N,810µm,0.9s
PARC                                     AML    AML
        comp=E,488µm,0.6s
FROS    Frosini              0.79 186    AML    AML
        comp=E,4250µm,0.8s
FROS                                     AML    AML
        comp=E,4250µm,0.8s
FROS                                     AML    AML
        comp=N,2175µm,0.8s
FROS                                     AML    AML
        comp=N,2175µm,0.8s
FROS                                     AML    AML
        comp=E,4250µm,1.2s
FROS                                     AML    AML
        comp=N,2175µm,1.2s
EQUI    Equi                 0.82 282    P      Pb      04 29 40.2 +0.4
EQUI                                     S      Sb      04 29 51.5 +0.4
EQUI    Equi                 0.82 282    P      Pg      04 29 39.2  0.0
MAGO    Bibbona              0.85 212    AML    AML
        comp=E,1890µm,0.6s
MAGO                                     AML    AML
        comp=N,1280µm,0.8s
MAGO                                     AML    AML
        comp=E,1893µm,0.6s
MAGO                                     AML    AML
        comp=N,1277µm,0.8s
BADI    Badiali              0.86 124    P      Pb      04 29 40.2 -0.2
BADI                                     AML    AML
        comp=E,738µm,0.7s
BADI                                     AML    AML
        comp=N,650µm,1.2s
BADI                                     AML    AML
        comp=N,623µm,0.5s
BADI                                     AML    AML
        comp=E,739µm,0.7s
FIVI    Fivizzano            0.86 287    P      Pb      04 29 40.2 -0.3
ATMC    Monte Cedrone        0.86 129    P      Pb      04 29 40.5  0.0
TRIF    Trifonti             0.92 197    AML    AML
        comp=N,911µm,0.8s
TRIF                                     AML    AML
        comp=E,748µm,0.7s
TRIF                                     AML    AML
        comp=N,911µm,0.8s
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TRIF				AML	AML		
	comp=E,749µm,0.7s						
APEC	**Apecchio**	**0.94**	**118**	P	**Pg**	**04 29 41.5**	**+0.1**
APEC				AML	AML		
	comp=E,899µm,0.6s						
APEC				AML	AML		
	comp=N,822µm,0.7s						
APEC				AML	AML		
	comp=E,899µm,0.6s						
APEC				AML	AML		
	comp=N,824µm,0.7s						
APEC				AML	AML		
	comp=E,1142µm,0.8s						
APEC				AML	AML		
	comp=N,1040µm,0.6s						
APEC				AML	AML		
	comp=N,824µm,1.3s						
APEC				AML	AML		
	comp=E,899µm,1.4s						
ATMI	**Monte Miggiano**	**0.98**	**132**	P	**Pn**	**04 29 44.1**	**+0.8**
ATPI	**Pietralunga -**	**0.98**	**123**	P	**Pb**	**04 29 42.6**	**0.0**
ATPI				AML	AML		
	comp=E,490µm,0.9s						
ATPI				AML	AML		
	comp=N,902µm,0.6s						
ATPI				AML	AML		
	comp=E,424µm,0.9s						
ATPI				AML	AML		
	comp=N,784µm,0.6s						
ATPI				AML	AML		
	comp=E,490µm,0.9s						
ATPI				AML	AML		
	comp=N,904µm,0.6s						
ATPI				AML	AML		
	comp=E,424µm,0.9s						
ATPI				AML	AML		
	comp=N,783µm,0.6s						
ATPI				AML	AML		
	comp=E,490µm,1.1s						
ATPI				AML	AML		
	comp=E,424µm,1.1s						
GRAM	**Graiana**	**1.00**	**300**	P	**Pb**	**04 29 43.2**	**+0.4**
GRAM				S	**Sn**	**04 29 58.5**	**+0.6**
GRAM	**Graiana**	**1.00**	**300**	P	**Pb**	**04 29 42.9**	**+0.1**
GRAM				AML	AML		
	comp=N,2655µm,0.3s						
GRAM				AML	AML		
	comp=E,4550µm,1.0s						
GRAM				AML	AML		
	comp=E,4258µm,0.4s						
GRAM				AML	AML		
	comp=N,2655µm,0.3s						
PIEI	**Pieia**	**1.02**	**116**	P	**Pg**	**04 29 42.9**	**-0.1**
PIEI				AML	AML		
	comp=E,346µm,0.6s						
PIEI				AML	AML		
	comp=N,288µm,0.7s						
PIEI				AML	AML		
	comp=E,345µm,0.6s						
PIEI				AML	AML		
	comp=N,289µm,0.7s						
PIEI				AML	AML		
	comp=E,345µm,1.4s						
PLMA	**Palmaria, Port**	**1.03**	**273**	P	**Pb**	**04 29 43.4**	**+0.1**
PLMA				S	**Sb**	**04 29 57.3**	**+0.4**
PLMA	**Palmaria, Port**	**1.03**	**273**	P	**Pb**	**04 29 43.2**	**0.0**
PLMA				S	**Sb**	**04 29 57.2**	**+0.3**
PLMA				AML	AML		
	comp=E,1515µm,0.6s						
PLMA				AML	AML		
	comp=N,2430µm,0.4s						
PLMA				AML	AML		
	comp=E,1514µm,0.6s						
PLMA				AML	AML		
	comp=N,2433µm,0.4s						
PLMA				AML	AML		
	comp=E,1514µm,1.4s						
ATVO	**AVT- Monte Val**	**1.03**	**126**	P	**Pb**	**04 29 43.5**	**+0.1**
ATVO				AML	AML		
	comp=E,766µm,0.7s						
ATVO				AML	AML		
	comp=N,638µm,0.8s						
ATVO				AML	AML		
	comp=E,767µm,0.7s						
ATVO				AML	AML		
	comp=N,637µm,0.8s						
ATVO				AML	AML		
	comp=E,767µm,1.3s						
ATVO				AML	AML		
	comp=N,637µm,1.2s						
ATVA	**AVT- Monte Val**	**1.03**	**134**	P	**Pb**	**04 29 43.7**	**+0.3**
RIBO	**Ribolla Roccas**	**1.06**	**189**	P	**Pn**	**04 29 44.9**	**+0.5**
RIBO	**Ribolla Roccas**	**1.06**	**189**	AML	AML		
	comp=E,830µm,1.0s						
RIBO				AML	AML		
	comp=E,830µm,1.0s						
ARCI	**Arcidosso**	**1.16**	**173**	P	**Pb**	**04 29 45.6**	**0.0**
ARCI				AML	AML		
	comp=E,346µm,0.9s						
ARCI				AML	AML		
	comp=N,463µm,1.6s						
ARCI				AML	AML		
	comp=E,310µm,0.9s						
ARCI				AML	AML		
	comp=N,465µm,0.6s						
ARCI				AML	AML		
	comp=E,346µm,0.9s						
ARCI				AML	AML		
	comp=E,310µm,0.9s						
ARCI				AML	AML		
	comp=N,465µm,0.6s						
ARCI				AML	AML		
	comp=N,450µm,0.6s						
ARCI				AML	AML		
	comp=E,346µm,1.1s						
FRON	**Frontone**	**1.16**	**114**	P	**Pn**	**04 29 46.5**	**+0.7**
FRON				AML	AML		
	comp=E,387µm,0.6s						
FRON				AML	AML		
	comp=N,437µm,1.0s						
FRON				AML	AML		
	comp=E,387µm,0.6s						
FRON				AML	AML		
	comp=N,437µm,1.0s						
SACS	**San Casciano d**	**1.24**	**158**	P	**Pn**	**04 29 46.6**	**-0.4**
CASP	**Castiglione de**	**1.24**	**194**	P	**Pn**	**04 29 46.4**	**-0.5**
CASP				AML	AML		
	comp=E,356µm,0.6s						
CASP				AML	AML		
	comp=N,234µm,0.6s						
CASP				AML	AML		
	comp=N,234µm,0.6s						
CASP				AML	AML		
	comp=E,355µm,0.6s						
MSSA	**Maissana**	**1.30**	**285**	P	**Pb**	**04 29 48.0**	**-0.1**
MSSA				S	**Sn**	**04 30 05.4**	**0.0**
MSSA	**Maissana**	**1.30**	**285**	P	**Pn**	**04 29 47.8**	**0.0**
MSSA				AML	AML		
	comp=E,824µm,0.5s						
MSSA				AML	AML		
	comp=N,1001µm,0.6s						
MSSA				AML	AML		
	comp=N,1004µm,0.6s						
MSSA				AML	AML		
	comp=E,824µm,0.5s						
MSSA				AML	AML		
	comp=N,1004µm,1.4s						
ARVD	**Arcevia**	**1.31**	**112**	P	**Pg**	**04 29 49.5**	**+1.1**
TEOL	**Teolo**	**1.39**	**12**	P	**Pg**	**04 29 50.0**	**+0.1**
TEOL				AML	AML		
	comp=E,2295µm,0.7s						
TEOL				AML	AML		
	comp=N,1725µm,0.9s						
TEOL				AML	AML		
	comp=E,2296µm,0.7s						
TEOL				AML	AML		
	comp=N,1721µm,0.9s						
TEOL				AML	AML		
	comp=N,1721µm,1.1s						
TEOL				AML	AML		
	comp=E,2296µm,1.3s						
CELB	**S.Piero in Cam**	**1.47**	**212**	P	**Pn**	**04 29 49.6**	**-0.6**
CELB				S	**Sn**	**04 30 07.1**	**-2.4**
CELB	**S.Piero in Cam**	**1.47**	**212**	P	**Pn**	**04 29 49.6**	**-0.6**
CELB				AML	AML		
	comp=E,218µm,0.5s						
CELB				AML	AML		
	comp=N,256µm,0.7s						
CELB				AML	AML		
	comp=N,255µm,0.7s						
CELB				AML	AML		
	comp=E,219µm,0.5s						
CELB				AML	AML		
	comp=E,219µm,1.5s						
CELB				AML	AML		
	comp=N,255µm,1.3s						
BOB	**Bobbio (Coli)**	**1.52**	**301**	P	**Pg**	**04 29 53.1**	**+0.7**
GORR	**Gorreto**	**1.55**	**294**	P	**Pg**	**04 29 53.4**	**+0.4**
FDMO	**Fiordimonte**	**1.63**	**125**	P	**Pb**	**04 29 53.3**	**-0.4**
FDMO				AML	AML		
	comp=E,162µm,0.7s						
FDMO				AML	AML		
	comp=N,222µm,1.0s						
FDMO				AML	AML		
	comp=N,223µm,1.0s						
FDMO				AML	AML		
	comp=E,162µm,0.7s						
FDMO				AML	AML		
	comp=N,223µm,1.0s						
FDMO				AML	AML		
	comp=E,162µm,1.3s						
RNCA	**Ronca, Sant'Ol**	**1.73**	**287**	P	**Pn**	**04 29 53.8**	**+0.1**
MC2	**Monte Cornacci**	**1.77**	**127**	P	**Pb**	**04 29 55.4**	**-0.7**
DOSS	**Dosso del Somm**	**1.88**	**358**	P	**Pn**	**04 29 56.7**	**+0.8**
DOSS				AML	AML		
	comp=E,663µm,0.6s						
DOSS				AML	AML		
	comp=N,537µm,0.6s						
DOSS				AML	AML		
	comp=E,567µm,0.5s						
DOSS				AML	AML		
	comp=N,652µm,0.6s						
DOSS				AML	AML		
	comp=N,537µm,0.6s						
DOSS				AML	AML		
	comp=E,567µm,0.5s						
DOSS				AML	AML		
	comp=E,567µm,1.5s						
DOSS				AML	AML		
	comp=N,653µm,0.6s						
DOSS				AML	AML		
	comp=E,663µm,0.6s						
MNTT	**Montottone**	**1.93**	**118**	P	**Pb**	**04 29 57.8**	**-1.0**
LUSI	**Trento, Gardas**	**1.98**	**353**	P	**Pb**	**04 29 58.6**	**-1.0**
LUSI				AML	AML		
	comp=E,548µm,0.8s						
LUSI				AML	AML		
	comp=N,606µm,1.1s						
LUSI				AML	AML		
	comp=N,546µm,0.5s						
LUSI				AML	AML		
	comp=E,548µm,0.8s						
LUSI				AML	AML		
	comp=N,546µm,1.5s						
CANO	**Canova, Maglio**	**2.20**	**277**	P	**Pn**	**04 29 59.3**	**-0.8**
CANO				AML	AML		
	comp=E,572µm,1.6s						
CANO				AML	AML		
	comp=N,396µm,0.9s						
CANO				AML	AML		
	comp=N,390µm,0.4s						
CANO				AML	AML		
	comp=E,569µm,0.5s						
PGF	**Pioggiola**	**2.20**	**230**	*e*Pn	**Pn**	**04 30 00.1**	**-0.1**
PGF				*e*Sn	**Sn**	**04 30 25.8**	**-1.9**
	comp=E,36nm,0.6s						
ZIAN	**Ziano**	**2.29**	**5**	P	**Pb**	**04 30 03.3**	**-1.6**
ZIAN				AML	AML		
	comp=E,280µm,0.6s						
ZIAN				AML	AML		
	comp=N,236µm,0.5s						
ZIAN				AML	AML		
	comp=E,242µm,0.5s						
ZIAN				AML	AML		
	comp=N,272µm,1.3s						
ZIAN				AML	AML		
	comp=N,263µm,0.6s						
ZIAN				AML	AML		
	comp=E,280µm,0.6s						
ZIAN				AML	AML		
	comp=N,236µm,0.5s						
ZIAN				AML	AML		
	comp=E,241µm,0.5s						
OZOL	**Ozolo**	**2.41**	**356**	P	**Pb**	**04 30 05.3**	**-1.7**
OZOL				AML	AML		
	comp=E,762µm,1.6s						
OZOL				AML	AML		
	comp=N,350µm,1.3s						
OZOL				AML	AML		
	comp=E,436µm,0.6s						
OZOL				AML	AML		
	comp=N,240µm,0.6s						
OZOL				AML	AML		
	comp=E,753µm,1.4s						
OZOL				AML	AML		
	comp=N,328µm,1.4s						
OZOL				AML	AML		
	comp=E,436µm,0.6s						
OZOL				AML	AML		
	comp=E,753µm,0.6s						
OZOL				AML	AML		
	comp=E,436µm,1.4s						
OZOL				AML	AML		
	comp=N,240µm,0.6s						
CIMO	**Cimolais**	**2.46**	**19**	P	**Pn**	**04 30 04.8**	**+1.2**
CIMO				AML	AML		
	comp=E,116µm,0.5s						
CIMO				AML	AML		
	comp=N,88µm,0.9s						
CIMO				AML	AML		
	comp=E,108µm,0.5s						
CIMO				AML	AML		
	comp=N,74µm,1.6s						
CIMO				AML	AML		
	comp=N,70µm,0.8s						
CIMO				AML	AML		
	comp=E,116µm,0.5s						
CIMO				AML	AML		
	comp=N,87µm,0.9s						
CIMO				AML	AML		
	comp=E,108µm,0.5s						
CIMO				AML	AML		
	comp=N,70µm,1.2s						
CIMO				AML	AML		
	comp=N,87µm,1.1s						
CARE	**Lago del Cares**	**2.46**	**351**	P	**Pb**	**04 30 06.5**	**-1.4**
APPI	**Appiano**	**2.48**	**359**	P	**Pn**	**04 30 06.1**	**+2.1**
APPI				AML	AML		
	comp=E,161µm,0.5s						
APPI				AML	AML		
	comp=N,210µm,0.6s						
APPI				AML	AML		
	comp=E,161µm,0.5s						
APPI				AML	AML		
	comp=N,210µm,0.6s						
MPRI	**Monte Prat**	**2.55**	**28**	P	**Pn**	**04 30 06.4**	**+1.5**
MPRI				AML	AML		
	comp=E,203µm,0.8s						
MPRI				AML	AML		
	comp=N,266µm,0.7s						
MPRI				AML	AML		
	comp=E,256µm,0.8s						
MPRI				AML	AML		
	comp=N,366µm,0.7s						
MPRI				AML	AML		
	comp=N,266µm,0.7s						
MPRI				AML	AML		
	comp=E,256µm,0.8s						
MPRI				AML	AML		
	comp=N,367µm,0.7s						
MPRI				AML	AML		
	comp=E,203µm,0.8s						
MPRI				AML	AML		
	comp=N,367µm,1.3s						
MPRI				AML	AML		
	comp=N,266µm,1.3s						
MPRI				AML	AML		
	comp=E,203µm,1.2s						
MPRI				AML	AML		
	comp=E,256µm,1.2s						
DRE	**Drenchia**	**2.75**	**37**	P	**Pn**	**04 30 07.9**	**+0.2**
SBF	**Sospel**	**2.78**	**269**	*e*Pn	**Pn**	**04 30 08.5**	**+0.4**
SBF				*e*Sn	**Sn**	**04 30 40.7**	**-1.1**
	comp=E,93nm,0.6s						
FVI	**Forni Avoltri**	**2.81**	**22**	P	**Pn**	**04 30 09.8**	**+1.3**
FVI				AML	AML		
	comp=E,113µm,0.6s						
FVI				AML	AML		
	comp=N,125µm,0.6s						
FVI				AML	AML		
	comp=E,113µm,0.6s						
FVI				AML	AML		
	comp=N,125µm,0.6s						
TUE	**Stuetta**	**2.82**	**332**	P	**Pn**	**04 30 11.4**	**+2.6**
TUE				AML	AML		
	comp=E,83µm,0.4s						
TUE				AML	AML		
	comp=N,113µm,0.6s						
TUE				AML	AML		
	comp=N,113µm,0.6s						
TUE				AML	AML		
	comp=E,85µm,0.5s						
TUE				AML	AML		
	comp=N,113µm,0.6s						
TUE				AML	AML		
	comp=E,83µm,0.4s						
ABTA	**Abfaltersbach**	**2.88**	**17**	Pn	**Pn**	**04 30 10.8**	**+1.2**
	comp=E,0.1nm,0.1s,SNR=5.8						
ABTA				*e*Sn	**Sn**	**04 30 45.5**	**+1.1**
	comp=E,43nm,0.8s						
FETA	**Feichten**	**3.05**	**353**	Pn	**Pb**	**04 30 16.0**	**-1.9**
	comp=E,8.3nm,0.6s,SNR=21						
FETA				*i* Sn	**Sb**	**04 30 52.2**	**-3.0**
	comp=E,12nm,0.9s						
LJU	**Ljubljana**	**3.08**	**47**	AML	AML		
	comp=E,976µm,0.8s						
LJU				AML	AML		
	comp=N,1088µm,1.0s						
MYKA	**Terra Mystica**	**3.12**	**32**	*e*Pn	**Pn**	**04 30 14.2**	**+1.4**
	comp=N,0.4nm,0.1s						
MYKA				*e*Sn	**Sn**	**04 30 50.5**	**+0.3**
	comp=N,2.5nm,0.3s						
SQTA	**Sankt Quirin**	**3.22**	**359**	Pn	**Pb**	**04 30 18.2**	**-2.6**
	comp=N,0.1nm,0.1s,SNR=16						
SQTA				*e*Sn	**Sn**	**04 30 54.1**	**+1.2**
	comp=N,18nm,0.7s						
WTTA	**Wattenberg**	**3.28**	**4**	Pn	**Pb**	**04 30 18.8**	**-2.9**
	comp=N,4.4nm,0.5s,SNR=19						
WTTA				*e*Sn	**Sb**	**04 30 58.4**	**-3.4**
	comp=N,3.8nm,0.3s						
MBDF	**Montbardon**	**3.31**	**284**	*e*Pn	**Pn**	**04 30 16.0**	**+0.5**
MBDF				*e*Sn	**Sn**	**04 30 52.9**	**-2.2**
	comp=N,8.7nm,0.4s						
WATA	**Walderalm**	**3.34**	**4**	Pn	**Pn**	**04 30 19.4**	**+3.5**
	comp=N,8.1nm,0.3s,SNR=18						
WATA				*e*Sn	**Sn**	**04 30 58.6**	**+2.7**
	comp=N,0.1nm,0.1s						
MOTA	**Moosalm**	**3.35**	**358**	Pn	**Pb**	**04 30 20.5**	**-2.5**
	comp=N,11nm,0.4s,SNR=23						
MOTA				*e*Sn	**Sb**	**04 31 00.5**	**-3.4**
	comp=N,38nm,1.1s						
KBA	**Koelnbreinsper**	**3.41**	**25**	Pn	**Pn**	**04 30 18.2**	**+1.3**
	comp=N,1.2nm,0.2s,SNR=8.6						
KBA				*e*Sn	**Sn**	**04 30 53.9**	**-3.6**
	comp=N,11nm,0.6s						
OBKA	**Obir**	**3.41**	**42**	*e*Pn	**Pn**	**04 30 17.9**	**+1.0**
	comp=N,0.1nm,0.4s						
OBKA				*e*Sn	**Sg**	**04 31 14.3**	**+1.4**
	comp=N,0.1nm,0.1s						
ZUGS	**Zugspitze, Sch**	**3.42**	**357**	*e*Pn	**Pn**	**04 30 20.4**	**+3.2**
DAVA	**Damuels**	**3.43**	**344**	Pn	**Pb**	**04 30 21.3**	**-3.1**
	comp=N,0.1nm,0.1s,SNR=14						
DAVA				*e*Sn	**Sn**	**04 31 00.3**	**+2.2**
	comp=N,35nm,0.5s						
OBER	**Oberstdorf**	**3.48**	**349**	*e*Pn	**Pn**	**04 30 20.9**	**+3.1**
PART	**Garmisch-Parte**	**3.50**	**358**	*e*Pn	**Pn**	**04 30 21.6**	**+3.6**
RETA	**Reutte**	**3.51**	**354**	Pn	**Pn**	**04 30 21.7**	**+3.5**
	comp=N,9.8nm,0.4s,SNR=23						
RETA				*e*Sn	**Sn**	**04 31 03.3**	**+3.5**
	comp=N,30nm,0.5s						
LMR	**La Mourre**	**3.52**	**261**	*e*Pn	**Pn**	**04 30 17.8**	**-0.4**
LMR				*e*Sn	**Sn**	**04 30 57.9**	**-2.1**
	comp=N,10.0nm,0.4s						
LPG	**La Plagne**	**3.55**	**297**	*e*Pn	**Pn**	**04 30 21.0**	**+2.0**
LPG				*e*Sn	**Sn**	**04 31 00.0**	**-1.3**
	comp=N,11nm,0.5s						
LESA	**Schwarzleotal**	**3.56**	**16**	Pn	**Pn**	**04 30 21.0**	**+2.0**
	comp=N,2.5nm,0.2s,SNR=40						
LESA				*e*Sn	**Sn**	**04 31 02.6**	**+1.4**
	comp=N,14nm,0.6s						
LPL	**La Plagne**	**3.57**	**297**	*e*Pn	**Pn**	**04 30 20.6**	**+1.4**
LPL				*e*Sn	**Sn**	**04 30 59.9**	**-1.7**
	comp=N,8.4nm,0.4s						
SOKA	**Soboth**	**3.77**	**43**	*e*Pn	**Pn**	**04 30 23.0**	**+1.3**
	comp=N,0.1nm,0.4s						
SOKA				*e*Sn	**Sn**	**04 31 05.9**	**-0.3**
	comp=N,1.6nm,0.5s						
UBR	**Ueberruh**	**3.77**	**348**	*e*Pn	**Pn**	**04 30 24.4**	**+2.6**
UBR				*e*Sn	**Sn**	**04 31 08.1**	**+1.7**
ORIF	**Oris-en-Rattie**	**3.97**	**285**	*e*Pn	**Pn**	**04 30 27.2**	**+2.7**
ORIF				*e*Sn	**Sn**	**04 31 08.7**	**-2.5**
	comp=N,14nm,0.4s						
BIOA	**Bad Ischl, Aus**	**4.05**	**23**	*e*Pn	**Pn**	**04 30 28.1**	**+2.6**
	comp=N,1.6nm,0.5s						
BIOA				*e*Sn	**Sn**	**04 31 15.8**	**+2.8**
	comp=N,2.3nm,0.4s						
SMRF	**Simiane la Rot**	**4.11**	**272**	*e*Pn	**Pn**	**04 30 27.9**	**+1.5**
SMRF				*e*Sn	**Sn**	**04 31 11.6**	**-3.1**
	comp=N,4.8nm,0.3s						
MOA	**Molln**	**4.38**	**27**	*e*Pn	**Pn**	**04 30 31.6**	**+1.5**
	comp=N,0.6nm,0.5s						
MOA				*e*Sn	**Sn**	**04 31 23.7**	**+2.4**
	comp=N,14nm,1.0s						
ARSA	**Arzberg**	**4.41**	**41**	*e*Pn	**Pn**	**04 30 31.6**	**+1.1**
	comp=N,3.2nm,0.5s						
ARSA				*e*Sn	**Sn**	**04 31 22.9**	**+0.8**
	comp=N,5.3nm,0.7s						
CABF	**La Chapelle**	**4.50**	**307**	*e*Pn	**Pn**	**04 30 34.1**	**+2.4**
CABF				*e*Sn	**Sn**	**04 31 25.0**	**+0.8**
BFO	**Black Forest**	**4.79**	**336**	*e*Pn	**Pn**	**04 30 36.9**	**+1.2**
VIVF	**Saint-Julien-l**	**4.80**	**283**	*e*Pn	**Pn**	**04 30 36.4**	**+0.5**
VIVF				*e*Sn	**Sn**	**04 31 29.9**	**-1.9**
	comp=N,4.5nm,0.4s						
HINF	**Hinteralfeld**	**4.91**	**323**	*e*Pn	**Pn**	**04 30 38.8**	**+1.4**
HINF				*e*Sn	**Sn**	**04 31 35.0**	**+0.7**
	comp=N,24nm,0.5s						
CONA	**Conrad Observa**	**5.07**	**38**	*e*Pn	**Pn**	**04 30 40.2**	**+0.7**
	comp=N,0.9nm,0.6s						
CONA				*e*Sn	**Sn**	**04 31 40.8**	**+2.5**
	comp=N,7.8nm,0.7s						
RONA	**Rosalia, Austr**	**5.10**	**42**	*e*Pn	**Pn**	**04 30 38.8**	**-1.2**
	comp=N,0.3nm,0.4s						
RONA				*e*Sn	**Sn**	**04 31 35.7**	**-3.3**
	comp=N,2.3nm,1.1s						
GEC2	**GERESS Array S**	**5.13**	**18**	*e*Pn	**Pn**	**04 30 41.7**	**+1.2**
GEC2				*e*Sn	**Sn**	**04 31 37.6**	**-2.2**
CDF	**Champ du Feu**	**5.21**	**329**	*e*Pn	**Pn**	**04 30 42.9**	**+1.3**
CDF				*e*Sn	**Sn**	**04 31 41.0**	**-0.9**
	comp=N,10nm,0.5s						
CKRC	**Cesky Krumlov**	**5.26**	**22**	*e*PN	**Pn**	**04 30 44.3**	**+2.1**
CKRC				*e*SN	**Sn**	**04 31 39.8**	**-3.1**
HAU	**Haudompre**	**5.28**	**321**	*e*Pn	**Pn**	**04 30 44.1**	**+1.7**
HAU				*e*Sn	**Sn**	**04 31 43.2**	**-0.1**
	comp=N,23nm,0.4s						
LASF	**Ste Croix**	**5.35**	**273**	*e*Pn	**Pn**	**04 30 44.0**	**+0.6**
LASF				*e*Sn	**Sn**	**04 31 42.6**	**-2.5**
	comp=N,0.9nm,0.3s						
KHC	**Kasperske Hory**	**5.37**	**16**	*e*PN	**Pn**	**04 30 44.8**	**+1.1**
KHC				*e*SN	**Sn**	**04 31 44.9**	**-0.9**
ZVC	**Zvikov**	**5.80**	**19**	*e*PN	**Pn**	**04 30 51.5**	**+1.9**
ZVC				*e*SN	**Sn**	**04 31 54.2**	**-2.0**
ROTZ	**Rotzenmuhle**	**5.81**	**6**	*e*Pn	**Pn**	**04 30 50.2**	**+0.5**
SMF	**Signal de Mont**	**5.87**	**299**	*e*Pn	**Pn**	**04 30 52.4**	**+1.9**
SMF				*e*Sn	**Sn**	**04 31 56.9**	**-1.1**
	comp=N,8.4nm,0.5s						
PAGF	**Fort de Pagny**	**5.96**	**322**	*e*Sn	**Sn**	**04 31 58.6**	**-1.6**
	comp=N,4.4nm,0.2s						
MODS	**Modra-Piesok**	**6.04**	**41**	*e*PN	**Pn**	**04 30 54.0**	**+1.1**
MODS				*e*SN	**Sn**	**04 31 59.6**	**-2.6**
LOR	**Lormes**	**6.14**	**305**	*e*Pn	**Pn**	**04 30 56.0**	**+1.7**
LOR				*e*Sn	**Sn**	**04 32 04.3**	**-0.3**
	comp=N,12nm,0.6s						
AVF	**Avril sur Loir**	**6.24**	**299**	*e*Pn	**Pn**	**04 30 57.4**	**+1.9**
AVF				*e*Sn	**Sn**	**04 32 03.9**	**-3.0**
	comp=N,2.7nm,0.4s						
SSF	**Saint Saulge**	**6.26**	**302**	*e*Pn	**Pn**	**04 30 58.0**	**+2.2**
SSF				*e*Sn	**Sn**	**04 32 05.4**	**-2.0**
	comp=N,7.3nm,0.6s						
BGF	**Bois d'Agland**	**6.47**	**296**	*e*Pn	**Pn**	**04 31 00.7**	**+1.9**
BGF				*e*Sn	**Sn**	**04 32 11.4**	**-1.4**

	comp=N,8.6nm,0.3s						
MTLF	**Montolieu**	**6.60**	**267**	*e*Pn	**Pn**	**04 31 01.0**	**+0.4**
CLL	**Collm**	**7.41**	**8**	*e*Pn	**Pn**	**04 31 12.0**	**+0.4**
CLL				*e*x	x	04 32 59.0	
CLL				*e*Sg	**Sg**	**04 33 19.0**	**-1.9**

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*GEN **09** 04:38:02.4, 44°.00N×11°.30E, h14^{km}±1^{km}, Ml2.1*

*ROM **09** 04:38:03.2±0.1, 44°.009N±0°.005×11°.295E±0°.006, h9^{km}, ML2.4/56, Error ellipse: s-maj=0.6km s-min=0.4km az=223.0*

ISC 09 04:38:03.0±0.8, **44°.01N**±0°.02×**11°.29E**±0°.02, **h13**^{km}±5^{km}, **n52, σ1**^{s}**.34**/79, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCL	**Monte Cuccoli**	**0.08**	**266**	P	**Pg**	**04 38 06.0**	**+0.1**
MOCL				S	**Sg**	**04 38 07.7**	**-0.2**
MOCL				AML	AML		
	comp=E,11075µm,0.4s						
MOCL				AML	AML		
	comp=N,7870µm,0.3s						
MOCL				AML	AML		
	comp=E,7980µm,0.2s						
MOCL				AML	AML		
	comp=N,7875µm,0.3s						
MOCL				AML	AML		
	comp=E,7985µm,0.2s						
MOCL				AML	AML		
	comp=N,7871µm,0.3s						
MOCL				AML	AML		
	comp=E,7958µm,0.2s						
MPPT	**Montemurlo**	**0.15**	**250**	P	**Pb**	**04 38 07.3**	**-0.6**
MPPT				S	**Sg**	**04 38 10.0**	**+0.6**
MPPT				AML	AML		
	comp=E,1850µm,1.1s						
MPPT				AML	AML		
	comp=N,2160µm,0.3s						
MPPT				AML	AML		
	comp=E,1840µm,1.2s						
MPPT				AML	AML		
	comp=E,1785µm,0.2s						
MPPT				AML	AML		
	comp=N,2162µm,0.3s						
MPPT				AML	AML		
	comp=N,2162µm,1.7s						
FNVD	**Fontana Vidola**	**0.20**	**322**	P	**Pg**	**04 38 07.9**	**+0.4**
FNVD				S	**Sg**	**04 38 11.5**	**+0.9**
FNVD				AML	AML		
	comp=E,1985µm,0.1s						
FNVD				AML	AML		
	comp=N,3105µm,0.3s						
FNVD				AML	AML		
	comp=N,3100µm,0.3s						
FNVD				AML	AML		
	comp=E,1988µm,0.1s						
FNVD				AML	AML		
	comp=N,2835µm,0.1s						
BRIS	**BRISIGHELLA**	**0.21**	**48**	P	**Pb**	**04 38 11.9**	**+3.1**
BRIS				AML	AML		
	comp=E,707µm,0.3s						
BRIS				AML	AML		
	comp=N,1225µm,0.3s						
BRIS				AML	AML		
	comp=N,1224µm,0.3s						
BRIS				AML	AML		
	comp=N,1224µm,1.7s						
BRIS				AML	AML		
	comp=E,740µm,0.4s						
RUFI	**Rufina**	**0.23**	**137**	P	**Pg**	**04 38 07.9**	**-0.1**
RUFI				S	**Sg**	**04 38 12.1**	**+0.8**
RUFI	**Rufina**	**0.23**	**137**	P	**Pb**	**04 38 08.5**	**-0.6**
RUFI				S	**Sg**	**04 38 12.2**	**+0.8**
RUFI				AML	AML		
	comp=E,584µm,0.7s						
RUFI				AML	AML		
	comp=N,604µm,1.0s						
RUFI				AML	AML		
	comp=E,452µm,0.9s						
RUFI				AML	AML		
	comp=E,495µm,1.1s						
RUFI				AML	AML		
	comp=N,480µm,0.8s						
RUFI				AML	AML		
	comp=E,408µm,0.2s						
RUFI				AML	AML		
	comp=N,436µm,0.5s						
FIR	**Firenze**	**0.24**	**187**	P	**Pb**	**04 38 08.9**	**-0.3**
FIR				S	**Sg**	**04 38 13.1**	**+1.6**
FIR				AML	AML		
	comp=E,3225µm,0.2s						
FIR				AML	AML		
	comp=N,3070µm,0.5s						
FIR				AML	AML		
	comp=E,3225µm,0.2s						
FIR				AML	AML		
	comp=E,3230µm,0.2s						
FIR				AML	AML		
	comp=N,3075µm,0.5s						
FIR				AML	AML		
	comp=E,3230µm,0.2s						
FIR				AML	AML		
	comp=N,2905µm,0.5s						
FIR				AML	AML		
	comp=E,3227µm,0.2s						
FIR				AML	AML		
	comp=N,2812µm,0.5s						
FIR				AML	AML		
	comp=E,3227µm,0.2s						
FIR				AML	AML		
	comp=N,2614µm,0.3s						
LMD	**Lutirano**	**0.31**	**77**	P	**Pg**	**04 38 09.0**	**-0.3**
LMD				S	**Sb**	**04 38 14.3**	**-1.1**
LMD	**Lutirano**	**0.31**	**77**	P	**Pg**	**04 38 09.6**	**+0.2**
LMD				S	**Sb**	**04 38 14.5**	**-0.9**
LMD				AML	AML		
	comp=E,1535µm,0.5s						
LMD				AML	AML		
	comp=N,2770µm,0.2s						
LMD				AML	AML		
	comp=E,960µm,1.5s						
LMD				AML	AML		
	comp=N,1240µm,0.7s						
LMD				AML	AML		
	comp=E,1097µm,0.2s						
LMD				AML	AML		
	comp=E,1416µm,0.2s						
LMD				AML	AML		
	comp=N,2768µm,0.2s						
CRMI	**Carmignano**	**0.32**	**227**	P	**Pb**	**04 38 10.2**	**-0.5**
CRMI				AML	AML		
	comp=N,1212µm,0.3s						
CRMI				AML	AML		
	comp=E,974µm,0.3s						
CRMI				AML	AML		
	comp=N,1212µm,0.3s						
CRMI				AML	AML		
	comp=E,414µm,0.3s						
CRMI				AML	AML		
	comp=N,500µm,0.3s						
CRMI				AML	AML		
	comp=E,397µm,0.3s						
CRMI				AML	AML		
	comp=E,975µm,0.3s						
CRMI				AML	AML		
	comp=N,1211µm,0.3s						
CRMI				AML	AML		
	comp=E,975µm,1.7s						
CRMI				AML	AML		
	comp=E,397µm,1.7s						
CRMI				AML	AML		
	comp=N,500µm,0.3s						
MTRZ	**Monterenzio**	**0.39**	**19**	P	**Pg**	**04 38 10.6**	**-0.2**
MTRZ	**Monterenzio**	**0.39**	**19**	P	**Pb**	**04 38 11.7**	**-0.1**
MTRZ				AML	AML		
	comp=E,736µm,0.5s						
MTRZ				AML	AML		
	comp=N,756µm,0.4s						
MTRZ				AML	AML		
	comp=E,757µm,0.5s						
MTRZ				AML	AML		
	comp=E,644µm,0.4s						
MTRZ				AML	AML		
	comp=N,756µm,0.4s						
MTRZ				AML	AML		
	comp=E,734µm,0.5s						
MTRZ				AML	AML		
	comp=E,644µm,0.5s						
MTRZ				AML	AML		
	comp=N,713µm,0.4s						
MTRZ				AML	AML		
	comp=E,757µm,0.5s						
MTRZ				AML	AML		
	comp=N,754µm,0.5s						
MTRZ				AML	AML		
	comp=E,736µm,0.5s						
MTRZ				AML	AML		
	comp=N,884µm,0.7s						
MTRZ				AML	AML		
	comp=E,736µm,1.5s						
MTRZ				AML	AML		
	comp=E,757µm,1.5s						
POPM	**Popiglio**	**0.39**	**275**	P	**Pg**	**04 38 10.6**	**-0.2**
POPM				S	**Sb**	**04 38 17.1**	**-0.6**
POPM	**Popiglio**	**0.39**	**275**	P	**Pg**	**04 38 11.2**	**+0.4**
POPM				S	**Sb**	**04 38 17.6**	**-0.2**
POPM				AML	AML		
	comp=N,2725µm,0.2s						
POPM				AML	AML		
	comp=E,1910µm,0.2s						
POPM				AML	AML		
	comp=E,1911µm,0.2s						
POPM				AML	AML		
	comp=E,1911µm,1.8s						
POPM				AML	AML		
	comp=N,2724µm,0.2s						
ZCCA	**Zocca**	**0.41**	**326**	P	**Pb**	**04 38 12.4**	**+0.2**
ZCCA				S	**Sb**	**04 38 20.8**	**+2.4**
ZCCA	**Zocca**	**0.41**	**326**	P	**Pb**	**04 38 12.7**	**+0.5**
ZCCA				AML	AML		
	comp=N,242µm,1.5s						
ZCCA				AML	AML		
	comp=E,222µm,1.2s						
ZCCA				AML	AML		
	comp=E,217µm,0.5s						
ZCCA				AML	AML		
	comp=E,248µm,0.5s						
ZCCA				AML	AML		
	comp=N,244µm,0.4s						
ZCCA				AML	AML		
	comp=N,238µm,0.4s						
SFI	**Santa Sofia**	**0.41**	**105**	P	**Pb**	**04 38 11.9**	**-0.4**
SFI				AML	AML		
	comp=E,414µm,0.5s						
SFI				AML	AML		
	comp=E,392µm,1.2s						
SFI				AML	AML		
	comp=N,564µm,1.3s						
SFI				AML	AML		
	comp=E,414µm,0.5s						
SFI				AML	AML		
	comp=N,586µm,0.7s						
SFI				AML	AML		
	comp=E,391µm,1.2s						
SFI				AML	AML		
	comp=N,564µm,1.3s						
SFI				AML	AML		
	comp=E,351µm,0.2s						
SFI				AML	AML		
	comp=E,366µm,0.2s						
SFI				AML	AML		
	comp=N,579µm,0.5s						
SFI				AML	AML		
	comp=N,524µm,0.5s						
ASQU	**Asqua**	**0.42**	**121**	P	**Pg**	**04 38 11.4**	**+0.1**
ASQU				S	**Sb**	**04 38 18.3**	**-0.4**
ASQU	**Asqua**	**0.42**	**121**	P	**Pb**	**04 38 12.2**	**-0.2**
ASQU				AML	AML		
	comp=E,332µm,0.3s						
ASQU				AML	AML		
	comp=N,380µm,1.1s						
ASQU				AML	AML		
	comp=N,324µm,0.6s						
ASQU				AML	AML		
	comp=E,331µm,0.3s						
OSSC	**Osservatorio P**	**0.49**	**184**	P	**Pg**	**04 38 12.7**	**0.0**
OSSC				S	**Sb**	**04 38 20.2**	**-0.4**
OSSC	**Osservatorio P**	**0.49**	**184**	P	**Pb**	**04 38 13.2**	**-0.3**
OSSC				S	**Sb**	**04 38 20.8**	**+0.2**
OSSC				AML	AML		
	comp=E,628µm,0.8s						
OSSC				AML	AML		
	comp=N,604µm,0.2s						
OSSC				AML	AML		
	comp=E,605µm,0.2s						
OSSC				AML	AML		
	comp=N,597µm,0.2s						
OSSC				AML	AML		
	comp=N,604µm,0.2s						
OSSC				AML	AML		
	comp=E,605µm,0.2s						
OSSC				AML	AML		
	comp=N,597µm,0.2s						
OSSC				AML	AML		
	comp=E,604µm,0.2s						
BDI	**Bagni Di Lucca**	**0.51**	**276**	P	**Pg**	**04 38 12.7**	**-0.3**
BDI				S	**Sb**	**04 38 21.0**	**-0.2**
BDI	**Bagni Di Lucca**	**0.51**	**276**	P	**Pb**	**04 38 13.3**	**-0.6**
BDI				S	**Sb**	**04 38 21.2**	**+0.1**
BDI				AML	AML		
	comp=E,614µm,0.4s						
BDI				AML	AML		
	comp=N,988µm,1.1s						
BDI				AML	AML		
	comp=E,614µm,0.4s						
BDI				AML	AML		
	comp=N,997µm,1.1s						
BDI				AML	AML		
	comp=E,859µm,0.5s						
BDI				AML	AML		
	comp=E,604µm,0.3s						
BDI				AML	AML		
	comp=E,859µm,0.5s						
BDI				AML	AML		
	comp=E,859µm,1.5s						
BDI				AML	AML		
	comp=E,604µm,1.7s						
BDI				AML	AML		
	comp=N,838µm,0.3s						
BDI				AML	AML		
	comp=N,812µm,0.2s						
CSNT	**Castellina Chi**	**0.54**	**180**	P	**Pg**	**04 38 13.4**	**-0.2**
CSNT				S	**Sb**	**04 38 21.0**	**-1.0**
CSNT	**Castellina Chi**	**0.54**	**180**	P	**Pb**	**04 38 14.1**	**-0.3**
CSNT				S	**Sb**	**04 38 22.2**	**+0.2**
CSNT				AML	AML		
	comp=E,581µm,0.8s						
CSNT				AML	AML		
	comp=N,518µm,1.0s						
CSNT				AML	AML		
	comp=N,511µm,0.2s						
CSNT				AML	AML		
	comp=E,550µm,0.2s						
CSNT				AML	AML		
	comp=N,511µm,1.8s						
CARD	**Cardoso**	**0.58**	**272**	P	**Pg**	**04 38 14.3**	**-0.2**
CARD				S	**Sg**	**04 38 22.5**	**+0.3**
CARD	**Cardoso**	**0.58**	**272**	P	**Pg**	**04 38 14.6**	**+0.2**
CARD				AML	AML		
	comp=E,372µm,0.7s						
CARD				AML	AML		
	comp=N,721µm,0.9s						
CARD				AML	AML		
	comp=E,358µm,0.3s						
CARD				AML	AML		
	comp=N,634µm,0.2s						
MAIM	**Mastiano**	**0.59**	**261**	P	**Pb**	**04 38 14.7**	**-0.4**
MAIM				S	**Sb**	**04 38 23.1**	**-0.3**
GSCL	**Gusciola**	**0.61**	**304**	P	**Pg**	**04 38 15.1**	**+0.1**
GSCL				S	**Sb**	**04 38 25.2**	**+1.1**
GSCL	**Gusciola**	**0.61**	**304**	P	**Pb**	**04 38 15.7**	**0.0**
GSCL				AML	AML		
	comp=N,436µm,0.4s						
GSCL				AML	AML		
	comp=E,352µm,1.2s						
CRE	**Caprese Michel**	**0.62**	**129**	P	**Pb**	**04 38 16.0**	**+0.2**
CRE				AML	AML		
	comp=E,238µm,1.0s						
CRE				AML	AML		
	comp=N,296µm,0.9s						
CRE				AML	AML		
	comp=E,238µm,1.0s						
CRE				AML	AML		
	comp=N,281µm,0.3s						
CRE				AML	AML		
	comp=E,227µm,0.3s						
PII	**Pisa**	**0.63**	**243**	P	**Pg**	**04 38 15.0**	**-0.2**
PII				S	**Sg**	**04 38 23.4**	**0.0**
PII	**Pisa**	**0.63**	**243**	P	**Pg**	**04 38 15.0**	**-0.2**
PII				AML	AML		
	comp=N,502µm,0.7s						
PII				AML	AML		
	comp=E,544µm,0.3s						
PII				AML	AML		
	comp=E,544µm,0.3s						
PII				AML	AML		
	comp=N,498µm,0.4s						
SARO	**Sassorosso**	**0.67**	**285**	P	**Pg**	**04 38 16.2**	**+0.2**
SARO				S	**Sb**	**04 38 25.9**	**+0.1**
VLC	**Villacollemand**	**0.67**	**283**	P	**Pb**	**04 38 16.3**	**-0.3**
VLC				S	**Sb**	**04 38 26.2**	**+0.4**
SSP9	**Sansepolcro**	**0.75**	**125**	P	**Pn**	**04 38 18.8**	**-0.5**
SSP9				AML	AML		
	comp=E,113µm,0.6s						
SSP9				AML	AML		
	comp=N,162µm,0.8s						
CPGN	**Carpegna, Ital**	**0.77**	**105**	AML	AML		
	comp=E,119µm,1.3s						
CPGN				AML	AML		
	comp=N,148µm,1.6s						
CPGN				AML	AML		
	comp=E,144µm,1.4s						
CPGN				AML	AML		
	comp=N,146µm,1.6s						
EQUI	**Equi**	**0.84**	**281**	P	**Pb**	**04 38 19.9**	**+0.5**
EQUI				S	**Sb**	**04 38 31.2**	**+0.5**
NARO	**Abbazia di Nar**	**1.01**	**113**	AML	AML		
	comp=E,89µm,0.2s						
NARO				AML	AML		
	comp=N,77µm,0.9s						
PIEI	**Pieia**	**1.02**	**117**	AML	AML		
	comp=N,116µm,1.2s						
PIEI				AML	AML		
	comp=E,138µm,0.5s						
SBPO	**S.Benedetto Po**	**1.07**	**346**	AML	AML		
	comp=N,952µm,0.3s						
SBPO				AML	AML		
	comp=E,1640µm,0.5s						
SNTG	**Esanatoglia**	**1.42**	**122**	AML	AML		
	comp=N,993µm,0.2s						
SNTG				AML	AML		
	comp=E,1070µm,0.2s						
SNTG				AML	AML		
	comp=N,824µm,0.1s						
SNTG				AML	AML		
	comp=E,1065µm,0.2s						
EL6	**Elcito**	**1.48**	**117**	AML	AML		
	comp=N,758µm,0.2s						
EL6				AML	AML		
	comp=E,747µm,1.1s						
ABTA	**Abfaltersbach**	**2.87**	**17**	*i* Pn	**Pb**	**04 38 53.3**	**-0.9**
	comp=E,0.5nm,0.4s						
FETA	**Feichten**	**3.04**	**353**	*e*Pn	**Pb**	**04 38 55.8**	**-1.3**
	comp=E,0.4nm,0.6s						
FETA				*e*Sn	**Sb**	**04 39 31.7**	**-2.4**
	comp=E,0.6nm,0.6s						
SQTA	**Sankt Quirin**	**3.21**	**359**	*e*Pn	**Pb**	**04 38 57.0**	**-3.0**
	comp=E,1.9nm,0.6s						
SQTA				*e*Sn	**Sg**	**04 39 45.7**	**-0.5**
	comp=E,1.4nm,0.5s						
WTTA	**Wattenberg**	**3.26**	**4**	*e*Pn	**Pb**	**04 38 59.1**	**-1.8**
	comp=E,0.9nm,0.5s						
WTTA				*e*Sn	**Sb**	**04 39 41.3**	**+0.6**
	comp=E,2.3nm,0.6s						
WATA	**Walderalm**	**3.33**	**3**	*e*Pn	**Pb**	**04 38 59.3**	**-2.8**
	comp=E,1.7nm,0.7s						
WATA				*e*Sg	**Sg**	**04 39 52.9**	**+2.9**
	comp=E,3.0nm,0.7s						
MOTA	**Moosalm**	**3.34**	**358**	*e*Pn	**Pb**	**04 38 59.6**	**-2.6**
	comp=E,1.3nm,0.5s						
MOTA				*e*Sn	**Sb**	**04 39 40.7**	**-2.0**
	comp=E,1.8nm,0.7s						
DAVA	**Damuels**	**3.42**	**344**	*i* Pn	**Pb**	**04 39 01.0**	**-2.6**
	comp=E,0.1nm,0.2s						
DAVA				*e*Sn	**Sb**	**04 39 42.8**	**-2.4**
	comp=E,2.2nm,0.7s						
RETA	**Reutte**	**3.50**	**354**	*e*Pn	**Pb**	**04 39 01.3**	**-3.6**
	comp=E,0.5nm,0.5s						
RETA				*i* Sn	**Sn**	**04 39 42.3**	**+3.8**
	comp=E,2.0nm,0.6s						
LESA	**Schwarzleotal**	**3.55**	**15**	*e*Pn	**Pb**	**04 39 02.1**	**-3.7**
	comp=E,1.0nm,0.3s						
LESA				*e*Sn	**Sn**	**04 39 41.7**	**+1.8**
	comp=E,0.8nm,0.8s						

ROM 09 04:38:13.7±0.1, **44°.018N**±0°.003×**11°.302E**±0°.004, **h9**^{km}**, ML2.4**/24**, Error ellipse: s-maj=0.4km s-min=0.2km az=219.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCL	**Monte Cuccoli**	**0.09**	**261**	P	Pg	04 38 16.5	+0.5
MOCL				S	Sg	04 38 18.2	+0.6
MOCL				AML	AML		
	comp=E,11075µm,0.4s						
MOCL				AML	AML		
	comp=N,7870µm,0.3s						
MOCL				AML	AML		
	comp=E,7980µm,0.2s						
MOCL				AML	AML		
	comp=N,7875µm,0.3s						
MPPT	**Montemurlo**	**0.17**	**248**	P	Pg	04 38 17.8	+0.6
MPPT				S	Sg	04 38 20.6	+1.0
MPPT				AML	AML		
	comp=E,1850µm,1.1s						
MPPT				AML	AML		
	comp=N,2160µm,0.3s						
MPPT				AML	AML		
	comp=N,2165µm,0.3s						
MPPT				AML	AML		
	comp=E,1840µm,1.2s						
MPPT				AML	AML		
	comp=N,1362µm,0.3s						
MPPT				AML	AML		
	comp=E,1819µm,0.3s						
FNVD	**Fontana Vidola**	**0.20**	**319**	P	Pg	04 38 18.5	+0.7
FNVD				S	Sg	04 38 21.9	+1.2
FNVD				AML	AML		
	comp=E,1985µm,0.1s						
FNVD				AML	AML		
	comp=N,3100µm,0.3s						
FNVD				AML	AML		
	comp=E,1103µm,0.4s						
FNVD				AML	AML		
	comp=N,1494µm,0.4s						
BRIS	**BRISIGHELLA**	**0.20**	**49**	AML	AML		
	comp=N,1225µm,0.3s						
BRIS				AML	AML		
	comp=E,707µm,0.3s						
BRIS				AML	AML		
	comp=E,740µm,0.4s						
FIE	**Fiesole**	**0.21**	**182**	P	Pg	04 38 18.7	+0.7
FIE				S	Sg	04 38 22.0	+1.0
RUFI	**Rufina**	**0.23**	**140**	P	Pg	04 38 19.2	+0.8
RUFI				S	Sg	04 38 23.1	+1.5
RUFI				AML	AML		
	comp=E,584µm,0.7s						
RUFI				AML	AML		
	comp=N,604µm,1.0s						
RUFI				AML	AML		
	comp=E,452µm,0.9s						
RUFI				AML	AML		
	comp=N,480µm,0.8s						
RUFI				AML	AML		
	comp=N,480µm,0.8s						
RUFI				AML	AML		
	comp=N,531µm,0.6s						
RUFI				AML	AML		
	comp=E,479µm,0.3s						
FIR	**Firenze**	**0.25**	**188**	P	Pg	04 38 19.5	+0.9
FIR				S	Sg	04 38 23.7	+1.7
FIR				AML	AML		
	comp=E,3225µm,0.2s						
FIR				AML	AML		
	comp=N,3070µm,0.5s						
FIR				AML	AML		
	comp=E,3225µm,0.2s						
FIR				AML	AML		
	comp=N,2905µm,0.5s						
FIR				AML	AML		

	comp=N,2390µm,0.2s						
FIR				AML	AML		
	comp=E,2610µm,0.6s						
FIR				AML	AML		
	comp=N,2490µm,0.2s						
FIR				AML	AML		
	comp=E,2575µm,0.6s						
FIR				AML	AML		
	comp=N,2812µm,0.5s						
FIR				AML	AML		
	comp=E,3227µm,0.2s						
FIR				AML	AML		
	comp=E,3227µm,0.2s						
FIR				AML	AML		
	comp=N,2614µm,0.3s						
LMD	**Lutirano**	**0.30**	**78**	P	Pg	04 38 20.3	+0.7
LMD				S	Sb	04 38 25.5	-0.8
LMD				AML	AML		
	comp=E,1535µm,0.5s						
LMD				AML	AML		
	comp=N,2770µm,0.2s						
LMD				AML	AML		
	comp=N,2768µm,0.2s						
LMD				AML	AML		
	comp=E,1416µm,0.2s						
CRMI	**Carmignano**	**0.33**	**227**	AML	AML		
	comp=N,1212µm,0.3s						
CRMI				AML	AML		
	comp=E,414µm,0.3s						
CRMI				AML	AML		
	comp=E,974µm,0.3s						
CRMI				AML	AML		
	comp=N,1212µm,0.3s						
CRMI				AML	AML		
	comp=N,500µm,0.3s						
MTRZ	**Monterenzio**	**0.38**	**18**	AML	AML		
	comp=N,873µm,0.7s						
MTRZ				AML	AML		
	comp=N,756µm,0.4s						
MTRZ				AML	AML		
	comp=N,713µm,0.4s						
MTRZ				AML	AML		
	comp=E,736µm,0.5s						
MTRZ				AML	AML		
	comp=N,756µm,0.4s						
MTRZ				AML	AML		
	comp=E,757µm,0.5s						
MTRZ				AML	AML		
	comp=N,712µm,0.4s						
MTRZ				AML	AML		
	comp=N,882µm,0.7s						
POPM	**Popiglio**	**0.39**	**274**	P	Pg	04 38 21.9	+0.4
POPM				S	Sb	04 38 28.2	-0.9
POPM				AML	AML		
	comp=N,2725µm,0.2s						
POPM				AML	AML		
	comp=E,1910µm,0.2s						
POPM				AML	AML		
	comp=N,1246µm,0.3s						
POPM				AML	AML		
	comp=E,924µm,0.2s						
ZCCA	**Zocca**	**0.41**	**325**	AML	AML		
	comp=N,242µm,1.5s						
ZCCA				AML	AML		
	comp=E,222µm,1.2s						
SFI	**Santa Sofia**	**0.41**	**106**	P	Pg	04 38 22.0	+0.3
SFI				S	Sb	04 38 29.2	-0.4
SFI				AML	AML		
	comp=N,586µm,0.7s						
SFI				AML	AML		
	comp=E,392µm,1.2s						
SFI				AML	AML		
	comp=N,564µm,1.3s						
SFI				AML	AML		
	comp=E,414µm,0.5s						
SFI				AML	AML		
	comp=E,391µm,1.2s						
SFI				AML	AML		
	comp=N,564µm,1.3s						
SFI				AML	AML		
	comp=E,324µm,0.3s						
SFI				AML	AML		
	comp=E,366µm,0.2s						
SFI				AML	AML		
	comp=N,524µm,0.5s						
SFI				AML	AML		
	comp=N,579µm,0.5s						
ASQU	**Asqua**	**0.42**	**122**	AML	AML		
	comp=N,304µm,0.5s						
ASQU				AML	AML		
	comp=E,238µm,0.5s						
ASQU				AML	AML		
	comp=E,331µm,0.3s						
ASQU				AML	AML		
	comp=N,376µm,1.1s						
OSSC	**Osservatorio P**	**0.50**	**185**	P	Pb	04 38 24.4	-0.3
OSSC				S	Sb	04 38 31.7	-0.4
OSSC				AML	AML		
	comp=E,605µm,0.2s						
OSSC				AML	AML		
	comp=E,628µm,0.8s						
OSSC				AML	AML		
	comp=N,604µm,0.2s						
OSSC				AML	AML		
	comp=N,597µm,0.2s						
OSSC				AML	AML		
	comp=E,604µm,0.2s						
OSSC				AML	AML		
	comp=N,456µm,0.4s						
OSSC				AML	AML		
	comp=N,597µm,0.2s						
BDI	**Bagni Di Lucca**	**0.51**	**275**	P	Pg	04 38 24.1	+0.5
BDI				S	Sb	04 38 31.9	-0.7
BDI				AML	AML		
	comp=E,614µm,0.4s						
BDI				AML	AML		
	comp=N,997µm,1.1s						
BDI				AML	AML		
	comp=E,859µm,0.5s						
BDI				AML	AML		
	comp=N,988µm,1.1s						
BDI				AML	AML		
	comp=E,614µm,0.4s						
BDI				AML	AML		
	comp=N,997µm,1.1s						
BDI				AML	AML		
	comp=N,673µm,0.5s						
BDI				AML	AML		
	comp=E,540µm,0.5s						
CSNT	**Castellina Chi**	**0.55**	**181**	P	Pg	04 38 24.6	+0.3
CSNT				S	Sb	04 38 32.9	-0.6
CSNT				AML	AML		
	comp=E,581µm,0.8s						
CSNT				AML	AML		
	comp=N,518µm,1.0s						
CSNT				AML	AML		
	comp=E,525µm,0.2s						
CARD	**Cardoso**	**0.59**	**271**	AML	AML		
	comp=N,721µm,0.9s						
CARD				AML	AML		
	comp=E,372µm,0.7s						
GSCL	**Gusciola**	**0.61**	**303**	AML	AML		
	comp=E,352µm,1.2s						
GSCL				AML	AML		
	comp=N,436µm,0.4s						
CRE	**Caprese Michel**	**0.62**	**130**	AML	AML		
	comp=E,238µm,1.0s						
CRE				AML	AML		
	comp=N,296µm,0.9s						
CRE				AML	AML		
	comp=E,238µm,1.0s						
PII	**Pisa**	**0.64**	**242**	AML	AML		
	comp=E,544µm,0.3s						
PII				AML	AML		
	comp=N,502µm,0.7s						
CPGN	**Carpegna, Ital**	**0.77**	**106**	AML	AML		
	comp=E,119µm,1.3s						
CPGN				AML	AML		
	comp=N,147µm,1.6s						
NARO	**Abbazia di Nar**	**1.01**	**113**	AML	AML		
	comp=E,89µm,0.2s						
NARO				AML	AML		
	comp=N,77µm,0.9s						
PIEI	**Pieia**	**1.01**	**118**	AML	AML		
	comp=E,138µm,0.5s						
PIEI				AML	AML		
	comp=N,116µm,1.2s						
SBPO	**S.Benedetto Po**	**1.07**	**345**	AML	AML		
	comp=E,1640µm,0.5s						
SBPO				AML	AML		
	comp=N,952µm,0.3s						
SNTG	**Esanatoglia**	**1.41**	**122**	AML	AML		
	comp=N,993µm,0.2s						
SNTG				AML	AML		
	comp=E,1070µm,0.2s						
SNTG				AML	AML		
	comp=N,824µm,0.1s						
SNTG				AML	AML		
	comp=E,1065µm,0.2s						
EL6	**Elcito**	**1.48**	**117**	AML	AML		
	comp=E,748µm,1.1s						
EL6				AML	AML		
	comp=N,758µm,0.2s						

ROM 09 04:38:23.1±0.1**, 43°.042N**±0°.003×**13°.167E**±0°.005**,**
h8^{km}, ML2.1/68**, 2C-4D, Error ellipse: s-maj=0.3km**
s-min=0.3km az=57.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSP1	**Cessapalombo**	**0.06**	**29**	P	Pg	04 38 25.1	0.0
CSP1				S	Sg	04 38 26.2	-0.3
CSP1				AML	AML		
	comp=E,9225µm,0.4s						
CSP1				AML	AML		
	comp=N,9595µm,0.2s						
FDMO	**Fiordimonte**	**0.06**	**264**	P	Pg	04 38 25.4	+0.4
FDMO				S	Sg	04 38 26.9	+0.5
PF6	**Pievefavera**	**0.11**	**10**	P	Pg	04 38 25.6	0.0
PF6				S	Sg	04 38 27.3	-0.1
FEMA	**Monte Fema**	**0.12**	**227**	P	Pg	04 38 26.6	+0.8
FEMA				S	Sg	04 38 29.3	+1.5
GUMA	**Gualdo di Mace**	**0.12**	**81**	P	Pg	04 38 26.5	+0.6
GUMA				S	Sg	04 38 28.9	+1.0
GUMA				AML	AML		
	comp=N,5225µm,0.2s						
GUMA				AML	AML		
	comp=N,3445µm,0.4s						
GUMA				AML	AML		
	comp=E,7910µm,0.3s						
GUMA				AML	AML		
	comp=N,5225µm,0.3s						
GUMA				AML	AML		
	comp=N,3445µm,1.6s						
GUMA				AML	AML		
	comp=E,4925µm,0.3s						
MC2	**Monte Cornacci**	**0.13**	**172**	⇓P	Pg	04 38 26.7	+0.6
MC2				S	Sg	04 38 29.2	+1.0
MDAR	**Monte D'Aria**	**0.15**	**353**	P	Pg	04 38 26.7	+0.3
MDAR				S	Sg	04 38 29.3	+0.6
MDAR				AML	AML		
	comp=E,1006µm,1.0s						
MDAR				AML	AML		
	comp=N,1465µm,1.0s						
MDAR				AML	AML		
	comp=E,1011µm,1.0s						
SAP2	**Sant'Angelo in**	**0.18**	**72**	P	Pg	04 38 27.5	+0.7
SAP2				S	Sg	04 38 30.9	+1.6
SAP2				AML	AML		
	comp=E,838µm,1.2s						
SAP2				AML	AML		
	comp=N,5305µm,1.2s						
SAP2				AML	AML		
	comp=E,838µm,1.2s						
SAP2				AML	AML		
	comp=E,838µm,0.8s						
SAP2				AML	AML		
	comp=N,5305µm,0.8s						
MMO1	**Montemonaco**	**0.18**	**141**	⇓P	Pg	04 38 27.4	+0.5
MMO1				S	Sg	04 38 30.6	+1.0
SSM1	**San Severino M**	**0.19**	**2**	P	Pg	04 38 27.4	+0.4
SSM1				S	Sg	04 38 30.7	+1.1
CESI	**CESI - Serrava**	**0.20**	**259**	⇑P	Pg	04 38 28.0	+0.9
CESI				S	Sg	04 38 31.7	+1.9
CESI				AML	AML		
	comp=E,600µm,0.4s						
CESI				AML	AML		
	comp=E,601µm,0.4s						
CESI				AML	AML		
	comp=E,601µm,0.4s						
CESI				AML	AML		
	comp=N,745µm,1.2s						
CESI				AML	AML		
	comp=E,624µm,0.4s						
CESI				AML	AML		
	comp=E,624µm,1.6s						
CESI				AML	AML		
	comp=E,601µm,1.6s						
CESI				AML	AML		
	comp=N,679µm,0.4s						
GAG1	**Gagliole**	**0.21**	**340**	P	Pg	04 38 27.8	+0.5
GAG1				S	Sg	04 38 31.7	+1.4
NRCA	**Norcia**	**0.21**	**190**	P	Pg	04 38 28.0	+0.6
NRCA				S	Sg	04 38 31.7	+1.3
NRCA				AML	AML		
	comp=N,1695µm,0.1s						
NRCA				AML	AML		
	comp=N,1855µm,0.1s						
NRCA				AML	AML		
	comp=E,1810µm,0.2s						
NRCA				AML	AML		
	comp=E,1650µm,0.1s						
MF5	**Montefalcone A**	**0.22**	**104**	⇑P	Pg	04 38 28.5	+0.9
MF5				S	Sg	04 38 32.5	+1.9
MF5				AML	AML		
	comp=N,1185µm,1.2s						
MF5				AML	AML		
	comp=E,918µm,0.2s						
MF5				AML	AML		
	comp=N,1185µm,0.8s						
MNTP	**Montappone**	**0.24**	**67**	P	Pg	04 38 28.9	+0.9
MNTP				S	Sg	04 38 33.8	+2.6
MNTP				AML	AML		
	comp=E,1028µm,0.2s						
MNTP				AML	AML		
	comp=N,1016µm,0.6s						
MTL1	**Matelica**	**0.24**	**332**	P	Pg	04 38 28.6	+0.6
MTL1				S	Sg	04 38 33.1	+1.8
SNTG	**Esanatoglia**	**0.27**	**322**	⇓P	Pg	04 38 28.9	+0.5
SNTG				S	Sg	04 38 33.5	+1.4
SNTG				AML	AML		
	comp=E,1070µm,0.2s						
SNTG				AML	AML		
	comp=N,824µm,0.1s						
SNTG				AML	AML		
	comp=E,1065µm,0.2s						
SNTG				AML	AML		
	comp=N,994µm,0.2s						
TRE1	**Treia**	**0.29**	**22**	P	Pb	04 38 29.8	-0.7
TRE1				S	Sb	04 38 35.0	-0.4
EL6	**Elcito**	**0.29**	**351**	⇓P	Pg	04 38 29.2	+0.3
EL6				S	Sb	04 38 34.4	-1.2
EL6				AML	AML		
	comp=E,748µm,1.1s						
EL6				AML	AML		
	comp=N,758µm,0.2s						
EL6				AML	AML		
	comp=E,748µm,0.9s						
MNTT	**Montottone**	**0.32**	**86**	P	Pb	04 38 30.5	-0.5
MNTT				S	Sb	04 38 36.5	+0.3
MNTT				AML	AML		
	comp=E,1030µm,0.4s						
MNTT				AML	AML		
	comp=N,1045µm,0.9s						
MNTT				AML	AML		
	comp=E,1030µm,1.6s						
MTRA	**Matera**	**0.33**	**149**	P	Pg	04 38 29.9	+0.3
MTRA				S	Sb	04 38 35.5	-1.2
MTRA				AML	AML		
	comp=E,413µm,0.2s						
MTRA				AML	AML		
	comp=N,409µm,0.5s						
MTRA				AML	AML		
	comp=E,392µm,0.2s						
MTRA				AML	AML		
	comp=N,409µm,0.5s						
MTRA				AML	AML		
	comp=E,414µm,0.2s						
MTRA				AML	AML		
	comp=E,392µm,0.2s						
MTRA				AML	AML		
	comp=N,394µm,0.5s						
OFFI	**Offida**	**0.40**	**106**	P	Pb	04 38 32.2	-0.1
OFFI				AML	AML		
	comp=E,431µm,1.1s						
OFFI				AML	AML		
	comp=N,396µm,0.6s						
SMA1	**SAN MARTINO**	**0.43**	**163**	P	Pg	04 38 31.7	+0.2
SMA1				S	Sb	04 38 39.3	-0.3
SMA1				AML	AML		
	comp=E,240µm,0.5s						
SMA1				AML	AML		
	comp=N,225µm,0.8s						
SMA1				AML	AML		
	comp=N,225µm,1.2s						
LNSS	**Leonessa**	**0.45**	**192**	P	Pg	04 38 32.3	+0.4
LNSS				S	Sb	04 38 39.3	-0.9
LNSS				AML	AML		
	comp=E,490µm,0.7s						
LNSS				AML	AML		
	comp=N,336µm,0.5s						
LNSS				AML	AML		
	comp=E,495µm,0.7s						
LNSS				AML	AML		
	comp=N,346µm,0.1s						
ARVD	**Arcevia**	**0.48**	**340**	P	Pg	04 38 32.6	+0.1
ARVD				S	Sb	04 38 41.0	-0.1
ARVD				AML	AML		
	comp=E,278µm,0.1s						
ARVD				AML	AML		
	comp=N,158µm,1.1s						
ARVD				AML	AML		
	comp=N,158µm,0.9s						
SSFR	**Montelago di S**	**0.48**	**325**	P	Pg	04 38 32.8	+0.3
SSFR				S	Sb	04 38 41.1	0.0
SSFR				AML	AML		
	comp=E,954µm,0.2s						
SSFR				AML	AML		
	comp=N,594µm,0.3s						
SSFR				AML	AML		
	comp=N,595µm,0.3s						
SSFR				AML	AML		
	comp=N,537µm,0.3s						
SSFR				AML	AML		
	comp=E,970µm,0.2s						
SSFR				AML	AML		
	comp=E,953µm,0.2s						
MURB	**Monte Urbino**	**0.52**	**295**	P	Pb	04 38 34.0	-0.5
MURB				S	Sb	04 38 42.4	+0.3
MURB				AML	AML		
	comp=E,534µm,0.3s						
MURB				AML	AML		
	comp=N,400µm,0.2s						
TERO	**Teramo**	**0.53**	**142**	P	Pg	04 38 33.4	0.0
TERO				S	Sb	04 38 42.1	-0.3
TERO				AML	AML		
	comp=E,135µm,1.3s						
TERO				AML	AML		
	comp=N,146µm,0.7s						
TERO				AML	AML		
	comp=E,135µm,0.7s						
RM33	**Pellescritta (**	**0.53**	**176**	P	Pg	04 38 33.6	+0.2
RM33				S	Sb	04 38 42.4	-0.2
RM33				AML	AML		
	comp=N,130µm,1.0s						
RM33				AML	AML		
	comp=E,148µm,1.0s						
RM33				AML	AML		
	comp=N,130µm,1.0s						
RM33				AML	AML		
	comp=E,148µm,1.0s						
CAMP	**Campotosto**	**0.54**	**161**	P	Pg	04 38 33.5	0.0
CAMP				S	Sb	04 38 42.0	-0.7
CAMP				AML	AML		
	comp=N,88µm,0.7s						
CAMP				AML	AML		
	comp=E,91µm,0.3s						
CAMP				AML	AML		
	comp=N,88µm,1.3s						
FRON	**Frontone**	**0.57**	**326**	P	Pg	04 38 34.3	+0.1
FRON				S	Sb	04 38 44.0	+0.3
FRON				AML	AML		
	comp=N,253µm,0.5s						
FRON				AML	AML		
	comp=E,150µm,1.4s						
COR1	**Corinaldo**	**0.60**	**348**	P	Pb	04 38 35.6	-0.2
CESX	**Cesi**	**0.61**	**225**	P	Pg	04 38 35.0	+0.2
CESX				S	Sb	04 38 44.7	0.0
CESX				AML	AML		
	comp=E,142µm,0.5s						
CESX				AML	AML		
	comp=N,132µm,0.3s						
CESX				AML	AML		
	comp=E,142µm,1.5s						
MPAG	**Monte Paganucc**	**0.66**	**333**	P	Pg	04 38 36.2	+0.4
MPAG				AML	AML		
	comp=E,92µm,0.4s						
MPAG				AML	AML		
	comp=N,84µm,1.0s						
MPAG				AML	AML		
	comp=E,92µm,0.4s						
MPAG				AML	AML		
	comp=N,84µm,1.0s						
GIGS	**Gran Sasso**	**0.66**	**153**	P	Pg	04 38 35.7	-0.1
GIGS				S	Sb	04 38 46.1	-0.2
PIEI	**Pieia**	**0.68**	**317**	P	Pg	04 38 36.1	0.0
PIEI				S	Sb	04 38 47.1	+0.5
PIEI				AML	AML		
	comp=N,116µm,1.2s						
PIEI				AML	AML		
	comp=E,138µm,0.5s						
NARO	**Abbazia di Nar**	**0.71**	**323**	P	Pg	04 38 36.6	-0.1
NARO				AML	AML		
	comp=E,89µm,0.2s						
NARO				AML	AML		
	comp=N,77µm,0.9s						
VCEL	**Villa Celiera**	**0.82**	**142**	P	Pg	04 38 38.9	+0.1
VCEL				AML	AML		
	comp=E,74µm,1.1s						
VCEL				AML	AML		
	comp=N,69µm,0.2s						
VCEL				AML	AML		
	comp=N,68µm,0.2s						
VCEL				AML	AML		
	comp=E,73µm,1.1s						
FAGN	**Fagnano**	**0.83**	**158**	P	Pg	04 38 38.6	-0.5
FAGN				AML	AML		
	comp=N,113µm,0.5s						
FAGN				AML	AML		
	comp=E,122µm,1.1s						
FAGN				AML	AML		
	comp=E,122µm,0.9s						
FAGN				AML	AML		
	comp=N,113µm,1.5s						
T0110	**Collepietro**	**0.93**	**151**	P	Pg	04 38 40.4	-0.6

*NEIC **09** 04:48:50.3±1.9, 5°.82S±0°.10×151°.07E±0°.10, h35^{km}±1^{km},*
mb4.5/20, Error ellipse: s-maj=22.5km s-min=5.8km
az=135.0

*IDC **09** 04:48:54.0±4.0, 5°.76S×150°.99E, h75^{km}±37^{km}, mb3.8/9,*
mbtmp4.2/10, ML2.4/1, MS3.1/4, Error ellipse:
s-maj=27.4km s-min=19.3km az=88.0

ISC 09 04:48:49.7±0.6**, 5°.69S**±0°.08×**151°.09E**±0°.10**, h35^{km}, n38,**
σ**1ˢ.43**/38**, mb4.3**/16**, MS3.0**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.83**	**36**		**Pn**	**04 49 20.9**	**+2.2**
PMG	**Port Moresby**	**5.37**	**226**	P	**Pn**	**04 50 10.1**	**+2.6**
	8.4nm,0.3s,baz=25,slow=8.9,SNR=20						
PMG				S	**Sn**	**04 51 09.6**	**+1.6**
	162nm,0.6s,baz=48,slow=18,SNR=14						
PMG				LR	LR	04 52 20.7	
	comp=Z,161nm,20.7s,baz=346,slow=39						
	96nm,0.8s						
PMG	**Port Moresby**	**5.37**	**226**	Pn	**Pn**	**04 50 09.6**	**+2.2**
EIDS	**Eidsvold**	**19.57**	**180**	P	**Pn**	**04 53 16.3**	**+0.1**
EIDS				IAmb	IAmb	04 53 21.8	
	comp=Z,22nm,1.5s						
MTN	**Manton Dam**	**20.93**	**249**	P	**P**	**04 53 28.9**	**-0.7**
WB0	**Warramunga Arr**	**21.44**	**228**	P	**P**	**04 53 34.4**	**-0.7**
WB0				IAmb	IAmb	04 54 04.0	
	comp=Z,13nm,1.2s						
WRAB	**Tennant Creek**	**21.58**	**227**	P	**P**	**04 53 35.1**	**-1.4**
WRA	**Warramunga Arr**	**21.59**	**227**	P	**P**	**04 53 35.9**	**-0.8**
	comp=Z,4.1nm,0.5s,baz=54,slow=10,SNR=26						
	comp=Z,4.1nm,0.5s						
WRA	**Warramunga Arr**	**21.59**	**227**	P	**P**	**04 53 33.8**	**-2.9**

DZM	Mont Dzumac	22.04	139	P	P	04 53 43.6	+2.0
	comp=Z,7.7nm,0.8s,baz=267,slow=8.5,SNR=6.9						
	comp=Z,7.7nm,0.8s						
DZM	Mont Dzumac	22.04	139	P	P	04 53 40.3	-1.3
DZM				IAmb	IAmb	04 53 46.0	
	comp=Z,18nm,1.3s						
KNRA	Kununurra	24.05	244	P	P	04 54 00.3	-1.6
KNRA				IAmb	IAmb	04 54 04.3	
	comp=Z,22nm,1.4s						
AS31	Alice Springs	24.36	221	P	P	04 54 03.7	-1.0
ASAR	Alice Springs	24.36	221	P	P	04 54 04.5	-0.2
	comp=Z,5.9nm,0.5s,baz=56,slow=8.7,SNR=83						
ASAR				LR	LR	05 02 47.8	
	comp=Z,45nm,21.0s,baz=96,slow=34						
	comp=Z,5.9nm,0.5s						
ASAR	Alice Springs	24.36	221	P	P	04 54 03.5	-1.2
STKA	Stephens Creek	27.53	198	P	P	04 54 32.7	-0.5
	comp=Z,2.1nm,0.5s,baz=14,slow=14,SNR=4.4						
	comp=Z,2.1nm,0.5s						
STKA	Stephens Creek	27.53	198	P	P	04 54 32.8	-0.5
FITZ	Fitzroy Crossi	27.74	241	P	P	04 54 33.4	-1.8
MORW	Morawa	40.47	231	P	P	04 56 23.4	-1.9
TCW	Tory Channel	41.00	153	P	P	04 56 30.6	+1.2
TUWZ	Tuamarina	41.02	154	P	P	04 56 30.5	+0.9
JNU	Nakatsue	43.10	335	P	P	04 56 47.4	+0.7
JNU				IAmb	IAmb	04 56 51.2	
	comp=Z,14nm,1.0s						
KSRS	Korea Array	48.05	335	P	P	04 57 27.2	+1.5
	comp=Z,1.9nm,0.7s,baz=154,slow=8.3,SNR=5.0						
	comp=Z,1.9nm,0.7s						
PETK	Petropavlovsk-	58.84	5	P	P	04 58 44.1	-0.5
	comp=Z,2.9nm,0.8s,baz=189,slow=6.9,SNR=2.3						
PETK				LR	LR	05 25 26.6	
	comp=Z,9.8nm,18.1s,baz=92,slow=37						
	comp=Z,2.9nm,0.8s						
SONM	Songino Array	66.18	329	P	P	04 59 34.5	+0.5
	comp=Z,0.4nm,0.5s,baz=144,slow=5.9,SNR=2.2						
	comp=Z,0.4nm,0.5s						
SEY	Seymchan	68.43	1	LR	LR	05 32 11.0	
	comp=Z,19nm,18.3s,baz=320,slow=38						
L19K	White Mountain	79.21	23	P	P	05 00 52.1	+1.1
L19K				IAmb	IAmb	05 00 58.1	
	comp=Z,11nm,1.4s						
C19K	Lookout Ridge	81.90	16	P	P	05 01 06.0	+0.7
ILAR	Eielson Array	83.62	22	P	P	05 01 13.5	-0.7
	comp=Z,0.7nm,0.7s,baz=258,slow=5.8,SNR=6.9						
	comp=Z,0.7nm,0.7s						
ILAR	Eielson Array	83.62	22	P	P	05 01 13.1	-1.1
J25K	Salcha River,	84.12	23	P	P	05 01 16.9	-0.1
J25K				IAmb	IAmb	05 01 51.2	
	comp=Z,8.4nm,1.4s						
QSPA	South Pole Qui	84.28	180	P	P	05 01 17.1	-0.8
	comp=Z,1.3nm,0.6s,baz=345,slow=2.1,SNR=4.4						
	comp=Z,1.3nm,0.6s						
QSPA	South Pole Qui	84.28	180	P	P	05 01 17.3	-0.5
QSPA				IAmb	IAmb	05 01 34.9	
	comp=Z,2.3nm,0.9s						
K29M	Barlow Dome	86.99	25	P	P	05 01 29.9	-1.3
K29M				IAmb	IAmb	05 02 01.2	
	comp=Z,4.6nm,1.2s						
D27M	Malcolm River	87.64	19	P	P	05 01 33.4	-0.8
F30M	Barrier River	88.87	22	P	P	05 01 37.7	-2.2
G31M	Satah River	89.23	22	P	P	05 01 39.5	-2.1
G31M				IAmb	IAmb	05 02 12.8	
	comp=Z,4.1nm,1.4s						
BDFB	Brasilia	151.59	138	PKPbc	PKPbc	05 08 40.5	-1.0
	comp=Z,1.8nm,0.5s,baz=162,slow=3.2,SNR=5.4						

SFS ***09*** *05:03:07.3, 36°.98N×5°.32W, h3^{km}, ML2.4/6, ML2.5/7, MLv2.5/7*

MDD ***09*** *05:03:07.1±1.2, 36°.96N×5°.32W, h0^{km}±5^{km}, mb_Lg1.9/5, Error ellipse: s-maj=8.9km s-min=3.4km az=166.0*

ISC 09 05:03:06.7±1.3**, 36°.95N**±0°.06×**5°.34W**±0°.03**, h10**^{km}±8^{km}**, n15,** σ**0^{s}75**/30**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UMV12	Villanueva de	0.16	53	Pg	Pg	05 03 09.7	-0.5
UMV12				Sg	Sg	05 03 12.5	-0.2
EGOR	Sierra Gorda,	1.00	80	Sn	Sg	05 03 39.6	+0.8
EGOR				Pn	Pb	05 03 26.3	+0.1
ECAB	El Cabril	1.12	357	Sn	Sb	05 03 42.7	-0.3
ECAB				Pn	Pb	05 03 28.2	0.0
ECAB	El Cabril	1.12	357	Pg	Pb	05 03 28.5	+0.3
ECAB				Sg	Sn	05 03 43.5	-0.6
ECAB				*i* IVmb_Lg		05 04 16.3	
EMIN	Mina Concepcio	1.34	308	Pn	Pn	05 03 31.8	+0.3
EMIN				Sn	Sb	05 03 50.3	+1.2
EMIN	Mina Concepcio	1.34	308	Pg	Pn	05 03 31.2	-0.3
EMIN				Sg	Sg	05 03 51.2	+1.4
EMIN				*i* IVmb_Lg		05 03 53.5	
EADA	Adamuz	1.36	26	Pn	Pn	05 03 31.5	-0.3
EADA				Sn	Sn	05 03 48.4	-1.5
EADA	Adamuz	1.36	26	Pg	Pn	05 03 31.2	-0.6
EADA				Sg	Sb	05 03 49.9	+0.2
EADA				*i* IVmb_Lg		05 03 53.1	
EQTA	Presa de Quent	1.54	80	Pn	Pn	05 03 34.6	+0.3
EQTA				Sn	Sb	05 03 55.4	+0.5
PBAR	Barrancos	1.82	313	Pn	Pn	05 03 36.8	-1.3
PBAR				Sn	Sb	05 04 02.7	-0.3
PVAQ	Vaqueiros	1.95	284	Pn	Pn	05 03 39.6	-0.3
PBDV	Barranco-do-Ve	2.09	279	Pn	Pn	05 03 41.5	-0.3
PBDV				Sn	Sn	05 04 07.2	-0.8
EBAD	Badajoz	2.24	324	Pn	Pn	05 03 44.3	+0.5
EBAD				Sn	Sn	05 04 11.0	-0.6
EBAD	Badajoz	2.24	324	Pn	Pn	05 03 44.3	+0.5
EBAD				*i* IVmb_Lg		05 04 00.1	
EBAD				Sn	Sn	05 04 11.8	+0.3
PSIM	Granatula de C	2.25	33	Pn	Pn	05 03 44.5	+0.5
PSIM				Sn	Sn	05 04 11.0	-0.8
PSIM				Sg	Sb	05 04 16.8	+1.5

SJA ***09*** *05:04:11.9±0.7, 32°.11S×70°.31W, h134^{km}±3^{km}, ML4.8, MW4.6*

VAO ***09*** *05:04:12.5±0.6, 32°.02S×70°.12W, h81^{km}±5^{km}, mb4.7, Presumed earthquake*

MOS ***09*** *05:04:13.8±1.1, 32°.02S×70°.21W, h114^{km}, mb5.2/13, Error ellipse: s-maj=18.2km s-min=7.7km az=99.6*

GUC ***09*** *05:04:14.3±0.9, 32°.09S×70°.53W, h130^{km}±3^{km}, ML4.9*

NEIC ***09*** *05:04:14.4, 32°.07S×70°.38W, h114^{km}*

NEIC ***09*** *05:04:14.5±1.9, 32°.08S±0°.04×70°.38W±0°.08, h111^{km}±3^{km}, mb5.1/501, Mwr4.8/70, Mww4.8/15, Mwr4.8(GUC), Mww4.9(GUC), Error ellipse: s-maj=9.6km s-min=6.3km az=82.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.42; M$_{\theta\theta}$-0.56; M$_{\phi\phi}$-0.85; M$_{r\theta}$0.49; M$_{\theta\phi}$1.08; M$_{\phi r}$0.44; Fault plane solution: M$_0$1.77000×10^{16} NP1: ϕ_s115.28000°, δ50.30000°, λ55.49000°. NP2: ϕ_s342.38000°, δ50.65000°, λ124.31000°. Principal axes: T 1.7376, Plg64.0000°, Azm318.0000°; N 0.0575, Plg26.0000°, Azm139.0000°; P -1.7951, Plg0.0000°, Azm49.0000°;*

NEIC ***09*** *05:04:14.6, 32°.08S×70°.40W, h90^{km}*

NEIC ***09*** *05:04:14.6, 32°.08S×70°.52W, h90^{km}, Moment Tensor Solution. Duration: 1^{s}3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.74; M$_{\theta\theta}$-0.34; M$_{\phi\phi}$-1.40; M$_{r\theta}$0.39; M$_{\theta\phi}$1.13; M$_{\phi r}$0.15; Fault plane solution: M$_0$2.00000×10^{16} NP1: ϕ_s342.68000°, δ45.81000°, λ111.88000°. NP2: ϕ_s132.73000°, δ48.29000°, λ69.03000°. Principal axes: T 1.8531, Plg74.0000°, Azm332.0000°; N 0.2701, Plg15.0000°, Azm147.0000°; P -2.1232, Plg1.0000°, Azm237.0000°;*

IDC ***09*** *05:04:15.7±1.4, 32°.01S×70°.15W, h123^{km}±11^{km}, mb4.5/20, mbtmp4.9/22, MS3.3/3 Error ellipse: s-maj=16.3km s-min=10.5km az=68.0*

GCMT ***09*** *05:04:17.6±0.3, 32°.05S±0°.02×70°.07W±0°.04, h132^{km}±4^{km}, MW4.9/74, Moment Tensor Solution. s23,c26; s74,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.03±.14; M$_{\theta\theta}$-0.31±.20; M$_{\phi\phi}$-1.72±.25; M$_{r\theta}$1.43±.09; M$_{\theta\phi}$1.95±.14; M$_{\phi r}$-0.55±.14; Best double couple: M$_0$3.06800×10^{16} NP1: ϕ_s352.00000°, δ38.00000°, λ133.00000°. NP2: ϕ_s122.00000°, δ63.00000°, λ62.00000°. Principal axes: T 2.7420, Plg61.0000°, Azm348.0000°; N 0.6550, Plg25.0000°, Azm136.0000°; P -3.3940, Plg14.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 05:04:14.4±0.5**, 32°.07S**±0°.02×**70°.31W**±0°.03**, h118**^{km}±4^{km}**, n629,** σ**1^{s}47**/504**, mb5.1**/245**, 24C-39D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO04	Los Peladeros	0.56	273	⇑*i*P	Pn	05 04 32.3	-0.7
CO04				*i* S	Sn	05 04 45.6	-1.2
CO04				IAML		05 04 46.8	
	comp=E,36µm,0.2s						
VA03	San Esteban	0.72	196	Pn	Pn	05 04 33.5	-0.4
VA03				Sn	Sn	05 04 47.5	-1.1
VA03	San Esteban	0.72	196	⇑*i*P	Pn	05 04 33.6	-0.4
VA03				*i* S	Sn	05 04 48.4	-0.2
VA03				IAML		05 04 49.6	
	comp=E,117µm,0.4s						
VA03	San Esteban	0.72	196	*e*P	Pn	05 04 33.5	-0.4
VA03				*e*S	Sn	05 04 48.8	+0.2
VA03				IAML		05 04 50.6	
	comp=Z,33µm,0.3s						
VA06	Catapilco	0.97	239	Pn	Pn	05 04 34.7	-1.3
VA06				Sn	Sn	05 04 50.2	-2.0
VA06	Catapilco	0.97	239	⇓*i*P	Pn	05 04 35.0	-1.0
VA06				*i* S	Sn	05 04 50.5	-1.7
VA06				IAML		05 04 52.3	
	comp=N,17µm,0.5s						
CO02	Combarbal	1.04	326	Pn	Pn	05 04 36.5	-0.4
CO02	Combarbal	1.04	326	⇑*i*P	Pn	05 04 36.9	-0.1
CO02				*i* S	Sn	05 04 53.8	-0.1
CO02				IAML		05 04 56.0	
	comp=E,61µm,0.2s						
CO02	Combarbal	1.04	326	*e*P	Pn	05 04 36.6	-0.3
CO02				*e*S	Sn	05 04 54.3	+0.5
CO02				IAML		05 04 56.0	
	comp=Z,13µm,0.2s						
ROCH	El Roble	1.07	213	⇓*i*P	Pn	05 04 36.6	-0.7
ROCH				*i* S	Sn	05 04 53.6	-1.0
ROCH				IAML		05 04 56.2	
	comp=N,38µm,0.5s						
ROC1	El Roble	1.08	213	*e*P	Pn	05 04 30.9	-6.5
PEL	Peldehue	1.11	196	Pn	Pn	05 04 36.8	-0.7
PEL				Sn	Sn	05 04 53.9	-1.2
PEL	Peldehue	1.11	196	P	Pn	05 04 36.8	-0.7
PEL						05 04 53.9	
PEL	Peldehue	1.11	196	⇓*i*P	Pn	05 04 36.3	-1.2
PEL				*i* S	Sn	05 04 54.1	-0.9
PEL				IAML		05 04 55.2	
	comp=E,27µm,0.2s						
PEL	Peldehue	1.11	196	*e*P	Pn	05 04 42.1	+4.6
PEL				*e*S	Sn	05 04 54.7	-0.4
PEL				IAML		05 04 56.0	
	comp=Z,11µm,0.4s						
MT10	Hacienda Santa	1.21	189	⇓*i*P	Pn	05 04 38.6	-0.1
MT10				*i* S	Sn	05 04 56.7	-0.4
MT10				IAML		05 04 58.8	
	comp=E,36µm,0.5s						
CO03	El Pedregal	1.27	345	Pn	Pn	05 04 39.3	+0.1
CO03	El Pedregal	1.27	345	⇓*i*P	Pn	05 04 39.3	+0.1
CO03				*i* S	Sn	05 04 58.1	0.0
CO03				IAML		05 04 59.7	
	comp=N,12µm,0.3s						
CO03	El Pedregal	1.27	345	*e*P	Pn	05 04 39.2	-0.1
CO03				*e*S	Sn	05 04 59.2	+1.2
CO03				IAML		05 05 01.8	
	comp=Z,5µm,0.7s						
MT14	Cerro Cal¡n	1.33	188	⇓*i*P	Pn	05 04 39.8	-0.2
MT14				*i* S	Sn	05 04 59.5	+0.2
MT14				IAML		05 05 01.6	
	comp=E,48µm,0.5s						
MT04	Ro Olivares	1.34	174	⇓*i*P	Pn	05 04 40.5	+0.3
MT04				*i* S	Sn	05 05 00.5	+0.9
MT04				IAML		05 05 04.2	
	comp=E,14µm,0.6s						
MT04	Ro Olivares	1.34	174	*e*P	Pn	05 04 35.5	-4.6
MT04				*e*S	Sn	05 05 00.8	+1.1
MT04				IAML		05 05 03.0	
	comp=Z,9µm,0.3s						
ASAL	Salagasta	1.35	113	*e*P	Pn	05 04 35.7	-4.5
MT16	CCHEN	1.36	187	Pn	Pn	05 04 39.9	-0.4
MT16	CCHEN	1.36	187	⇓*i*P	Pn	05 04 40.1	-0.2
MT16				*i* S	Sn	05 04 59.8	-0.1
MT16				IAML		05 05 02.4	
	comp=N,11µm,0.7s						
MT05	Renca	1.37	195	Pn	Pn	05 04 39.4	-0.9
MT05	Renca	1.37	195	⇓*i*P	Pn	05 04 39.8	-0.5
MT05				*i* S	Sn	05 04 59.4	-0.5
MT05				IAML		05 05 01.7	
	comp=E,47µm,0.2s						
MT05	Renca	1.37	195	*e*P	Pn	05 04 39.1	-1.2
MT05				IAML		05 05 02.7	
	comp=Z,13µm,0.2s						
MT02	Curacav	1.37	210	Pn	Pn	05 04 39.1	-1.2
MT02				Sn	Sn	05 04 58.0	-2.0
MT02	Curacav	1.37	210	⇓*i*P	Pn	05 04 39.1	-1.2
MT02				*i* S	Sn	05 04 58.2	-1.8
MT02				IAML		05 05 00.1	
	comp=E,8µm,0.3s						
MT02	Curacav	1.37	210	*e*P	Pn	05 04 38.9	-1.4
MT02				*e*S	Sn	05 04 59.1	-0.9
MT02				IAML		05 05 01.2	
	comp=Z,5µm,0.2s						
MT08	Bocatoma Ro	1.39	170	Pn	Pn	05 04 41.1	+0.2
MT08	Bocatoma Ro	1.39	170	⇑*i*P	Pn	05 04 41.5	+0.8
MT08				*e*S	Sn	05 05 01.2	+0.4
MT08	Bocatoma Ro	1.39	170	*e*P	Pn	05 04 41.0	+0.2
MT08				IAML		05 05 06.4	
	comp=Z,3µm,0.5s						
ARCO	CERRO ARCO	1.40	124	*e*P	Pn	05 04 41.7	+1.0
ARCO				*e*S	Sn	05 05 04.4	+3.7
ARCO				IAML		05 05 05.9	
	comp=Z,11µm,0.4s						
MT03	Universidad Ad	1.43	187	Pn	Pn	05 04 41.1	+0.1
MT03	Universidad Ad	1.43	187	⇓*i*P	Pn	05 04 41.0	-0.1
MT03				*i* S	Sn	05 05 01.6	+0.3
MT03				IAML		05 05 05.2	
	comp=E,49µm,0.2s						
MT03	Universidad Ad	1.43	187	*e*P	Pn	05 04 40.2	-0.8
MT03				IAML		05 05 05.5	
	comp=Z,19µm,0.6s						
VA01	Torpederas	1.47	230	Pn	Pn	05 04 40.3	-1.0
VA01	Torpederas	1.47	230	⇓*i*P	Pn	05 04 40.4	-1.0
VA01				*i* S	Sn	05 05 00.4	-1.5
VA01				IAML		05 05 04.7	
	comp=E,13µm,0.1s						
VA01	Torpederas	1.47	230	*e*P	Pn	05 04 39.7	-1.7
VA01				IAML		05 05 03.0	
	comp=Z,4µm,0.2s						
MT15	Las Vizcachas	1.53	186	⇓*i*P	Pn	05 04 42.0	-0.2
MT15				*i* S	Sn	05 05 03.4	0.0
MT15				IAML		05 05 05.6	
	comp=N,34µm,0.3s						
SJA	San Juan	1.59	71	*e*P	Pn	05 04 29.1	-14
SJA				*e*S	Sn	05 04 59.6	-4.8
SJA				IAML		05 05 07.5	
	comp=Z,4µm,0.5s						
AAGR	Agrelo	1.61	129	*e*P	Pn	05 04 44.3	+1.1
MT13	San Alfonso	1.67	179	Pn	Pn	05 04 44.3	+0.4
MT13	San Alfonso	1.67	179	⇓*i*P	Pn	05 04 44.0	+0.1
MT13				*e*S	Sn	05 05 06.8	+0.5
MT13				IAML		05 05 09.4	
	comp=N,17µm,0.2s						
MT13	San Alfonso	1.67	179	*e*P	Pn	05 04 38.9	-5.0
MT13				*e*S	Sn	05 05 06.9	+0.6
MT13				IAML		05 05 09.2	
	comp=Z,8µm,0.5s						
MT12	Pirque	1.67	187	⇓*i*P	Pn	05 04 43.5	-0.4
MT12				*i* S	Sn	05 05 06.0	-0.2
MT12				IAML		05 05 07.3	
	comp=E,22µm,0.3s						
RTLL	Cerro Villicun	1.73	65	*e*P	Pn	05 04 44.4	-0.2
RTLL				*e*S	Sn	05 05 07.3	-0.3
RTLL				IAML		05 05 08.1	
	comp=Z,11µm,0.4s						
LMEL	Las Melosas	1.77	177	Pn	Pn	05 04 45.4	+0.2
LMEL	Las Melosas	1.77	177	⇓*i*P	Pn	05 04 45.4	+0.2
LMEL				*e*S	Sn	05 05 08.6	-0.1
LMEL				IAML		05 05 13.5	
	comp=N,14µm,0.2s						
LMEL	Las Melosas	1.77	177	*e*P	Pn	05 04 45.4	+0.2
LMEL				*e*S	Sn	05 05 10.3	+1.6
LMEL				IAML		05 05 13.4	
	comp=Z,7µm,0.1s						
MT09	Talagante	1.79	198	Pn	Pn	05 04 43.8	-1.6
MT09	Talagante	1.79	198	⇓*i*P	Pn	05 04 44.3	-1.1
MT09				*i* S	Sn	05 05 07.4	-1.6
MT09				IAML		05 05 11.5	
	comp=N,13µm,0.2s						
CO06	Fray Jorge	1.79	321	Pn	Pn	05 04 44.7	-0.6
CO06	Fray Jorge	1.79	321	⇑*i*P	Pn	05 04 44.9	-0.4
CO06				*e*S	Sn	05 05 07.1	-1.6
ACCO	Cerro Coronel	1.82	36	*e*P	Pn	05 04 46.1	+0.1
ACCO				*e*S	Sn	05 05 10.5	+0.6
CFA	Coronel Fontan	1.83	76	P	Pn	05 04 45.5	-0.2
	comp=N,1µm,0.4s,baz=256,slow=12,SNR=3613						
CFA				S	Sn	05 05 08.0	-1.5
	comp=N,10µm,0.6s,baz=57,slow=8.9,SNR=80						
CFA				LR	LR	05 05 16.8	
	comp=N,305nm,19.5s,baz=18,slow=36						
CFA	Coronel Fontan	1.83	76	*e*P	Pn	05 04 45.4	-0.2
CFA				*e*S	Sn	05 05 09.1	-0.4
CFA				IAML		05 05 10.3	
	comp=Z,14µm,0.8s						
VA05	Santo Domingo	1.92	214	Pn	Pn	05 04 45.5	-1.3
VA05	Santo Domingo	1.92	214	⇓*i*P	Pn	05 04 45.5	-1.3
VA05				*e*S	Sn	05 05 08.4	-3.2
VA05				IAML		05 05 14.4	
	comp=N,14µm,0.5s						
BO04	La Punta	1.93	187	Pn	Pn	05 04 46.0	-1.0
BO04	La Punta	1.93	187	⇓*i*P	Pn	05 04 46.4	-0.6
BO04				*i* S	Sn	05 05 11.2	-0.7
BO04				IAML		05 05 12.0	
	comp=E,16µm,0.3s						
GO04	Tololo Observa	1.94	347	Pn	Pn	05 04 46.9	-0.4
GO04	Tololo Observa	1.94	347	⇓*i*P	Pn	05 04 47.0	-0.3
GO04				*i* S	Sn	05 05 11.8	-0.5
GO04				IAML		05 05 16.0	
	comp=E,11µm,0.4s						
GO04	Tololo Observa	1.94	347	*e*P	Pn	05 04 46.5	-0.8
GO04				IAML		05 05 17.5	
	comp=Z,6µm,0.6s						
MT01	Popeta	1.96	204	Pn	Pn	05 04 46.0	-1.2
MT01	Popeta	1.96	204	⇓*i*P	Pn	05 04 46.0	-1.2
MT01				*e*S	Sn	05 05 10.4	-2.0
MT01				IAML		05 05 11.6	
	comp=E,10µm,0.2s						
MT01	Popeta	1.96	204	*e*P	Pn	05 04 46.0	-1.2
MT01				*e*S	Sn	05 05 11.4	-0.9
MT01				IAML		05 05 11.7	
	comp=Z,5µm,0.2s						
AROD	Rodeo	2.03	21	*e*P	Pn	05 04 49.6	+1.1
AROD				*e*S	Sn	05 05 11.7	-2.8
AVIZ	Vizcacheras	2.06	133	*e*P	Pn	05 04 43.4	-5.2
AVIZ				*e*S	Sn	05 05 11.4	-3.4
CO01	Juntas del Tor	2.10	5	Pn	Pn	05 04 49.6	+0.3
CO01	Juntas del Tor	2.10	5	⇓*i*P	Pn	05 04 50.1	+0.8
CO01				*i* S	Sn	05 05 16.7	+0.8
CO01	Juntas del Tor	2.10	5	*e*P	Pn	05 04 50.1	+0.8
CO01				*e*S	Sn	05 05 17.4	+1.5
CO01				IAML		05 05 22.5	
	comp=Z,2µm,0.8s						
ACDV	Cuesta del Vie	2.15	29	*e*P	Pn	05 04 50.5	+0.6
ACDV				*e*S	Sn	05 05 19.2	+2.1
ACDV				IAML		05 05 29.6	
	comp=Z,3µm,0.6s						
BO01	Tunca	2.40	195	Pn	Pn	05 04 51.1	-1.8
BO01	Tunca	2.40	195	⇓*i*P	Pn	05 04 51.6	-1.3
BO01				*i* S	Sn	05 05 20.2	-2.3
BO01				IAML		05 05 21.7	
	comp=E,4µm,0.2s						
BO01	Tunca	2.40	195	*e*P	Pn	05 04 51.5	-1.4
BO01				*e*S	Sn	05 05 20.8	-1.6
BO01				IAML		05 05 24.0	
	comp=Z,2µm,0.2s						
BO02	Sierra Bellavi	2.74	188	Pn	Pn	05 04 56.8	-0.6
BO02	Sierra Bellavi	2.74	188	⇓*i*P	Pn	05 04 56.5	-0.9
BO02				*e*S	Sn	05 05 29.1	-1.4
BO02	Sierra Bellavi	2.74	188	*e*P	Pn	05 04 56.5	-0.9
BO02				*e*S	Sn	05 05 29.6	-0.8
BO02				IAML		05 05 31.9	
	comp=Z,5µm,0.1s						
BO03	Pichilemu	2.79	209	⇓*i*P	Pn	05 04 55.3	-2.5
BO03				*i* S	Sn	05 05 27.8	-3.5
AVFE	Valle Fertil	2.82	61	*e*P	Pn	05 04 57.6	-0.7
AVFE				*e*S	Sn	05 05 31.0	-1.2
AVFE				IAML		05 05 34.2	
	comp=Z,2µm,0.6s						
AGUA	GUANDACOL	3.02	32	*e*P	Pn	05 05 01.4	+0.4
AGUA				IAML		05 05 47.3	
	comp=Z,5µm,0.7s						
LCO	Las Campanas	3.07	354	Pn	Pn	05 05 01.3	-0.5
LCO	Las Campanas	3.07	354	P	Pn	05 05 01.3	-0.5
LCO	Las Campanas	3.07	354	⇓*i*P	Pn	05 05 01.1	-0.8
LCO	Las Campanas	3.07	354	*e*P	Pn	05 05 01.1	-0.8
LCO				*e*S	Sn	05 05 36.6	-1.8
LCO				IAML		05 05 39.9	
	comp=Z,7µm,0.4s						
RFA	San Rafael	3.10	151	*e*P	Pn	05 05 01.7	-0.4
RFA				*e*S	Sn	05 05 33.9	-5.0
AC05	El Transito	3.22	1	Pn	Pn	05 05 03.7	-0.1
AC05	El Transito	3.22	1	⇓*e*P	Pn	05 05 03.8	-0.1
AC05	El Transito	3.22	1	*e*P	Pn	05 05 04.1	+0.3
AC05				*e*S	Sn	05 05 41.6	-0.2
AC05				IAML		05 05 42.2	
	comp=Z,1µm,0.7s						
GO05	Hualane	3.23	204	⇓*i*P	Pn	05 05 01.1	-2.5
GO05	Hualane	3.23	204	*e*P	Pn	05 05 01.3	-2.4
GO05				*e*S	Sn	05 05 38.6	-3.1
GO05				IAML		05 05 43.8	
	comp=Z,2µm,0.5s						
ACHE	Chepes	3.24	75	*e*P	Pn	05 05 03.2	-0.8
APLL	PUNTA DE LOS L	3.65	64	*e*P	Pn	05 05 08.2	-1.0
APLL				*e*S	Sn	05 05 50.0	-1.7
APLL				IAML		05 06 12.3	
	comp=Z,1µm,0.5s						
VCA	Vinchina	3.79	29	⇓*i*P	Pn	05 05 11.1	-0.2
VCA	Vinchina	3.79	29	*e*P	Pn	05 05 11.1	-0.2
VCA				*e*S	Sn	05 05 56.0	+0.7
VCA				IAML		05 06 01.3	
	comp=Z,3µm,0.7s						
ML02	Panimavida	3.80	194	Pn	Pn	05 05 09.1	-2.1
ML02	Panimavida	3.80	194	⇓*i*P	Pn	05 05 09.3	-1.8
ML02	Panimavida	3.80	194	*e*P	Pn	05 05 09.4	-1.8
ML02				*e*S	Sn	05 05 52.1	-3.1
ML02				IAML		05 05 54.2	
	comp=Z,2µm,0.3s						
AC04	Llanos de Chal	3.91	350	Pn	Pn	05 05 11.9	-0.8
AC04	Llanos de Chal	3.91	350	⇓*e*P	Pn	05 05 12.1	-0.6
AC04	Llanos de Chal	3.91	350	*e*P	Pn	05 05 12.0	-0.8
AC04				*e*S	Sn	05 05 50.7	-7.3
AC04				IAML		05 06 13.1	
	comp=Z,574nm,0.8s						
MRA	San Martin	3.91	96	*e*P	Pn	05 05 11.5	-1.3
MRA				*e*S	Sn	05 05 41.6	-16
MRA				IAML		05 05 57.6	
	comp=Z,3µm,0.4s						
ACLC	CERRO LA CRUZ	3.91	49	*e*P	Pn	05 05 11.6	-1.4
ACLC				*e*S	Sn	05 05 57.3	-1.0
ACLC				IAML		05 06 25.6	
	comp=Z,1µm,0.6s						
GO03	Copiapo	4.46	1	Pn	Pn	05 05 18.8	-1.4
GO03	Copiapo	4.46	1	*e*P	Pn	05 05 19.4	-0.8
GO03				*e*S	Sn	05 06 08.9	-2.4
GO03				IAML		05 06 10.9	
	comp=Z,664nm,0.6s						
TINO	Tinogasta	4.65	31	*e*P	Pn	05 05 21.5	-1.3
TINO				*e*S	Sn	05 06 14.3	-1.5
BI02	San Fabin de	4.65	190	Pn	Pn	05 05 20.5	-2.2
BI02	San Fabin de	4.65	190	*e*P	Pn	05 05 20.7	-2.0
BI02				IAML		05 06 16.9	
	comp=Z,499nm,0.7s						
AC06	Mina Casimiro	4.70	360	Pn	Pn	05 05 21.6	-1.8
TCA	Tanti	4.93	83	*e*P	Pn	05 05 24.7	-1.8
TCA				*e*S	Sn	05 06 12.0	-10
TCA				*e*S		05 06 18.1	
TCA				IAML		05 06 18.6	
	comp=Z,2µm,0.7s						
BI05	Punta Hualpn	5.24	206	Pn	Pn	05 05 26.6	-3.8
BI05	Punta Hualpn	5.24	206	*e*P	Pn	05 05 26.7	-3.8
BI05				IAML		05 06 27.4	
	comp=Z,458nm,0.3s						
AC02	Maricunga	5.32	11	Pn	Pn	05 05 30.6	-1.6
AC02	Maricunga	5.32	11	*e*P	Pn	05 05 31.2	-0.9
AC02				*e*S	Sn	05 06 30.1	-2.4
AC02				IAML		05 06 35.6	
	comp=Z,352nm,0.7s						

CYA	Choya	5.32	48	*e*P	Pn	05 05 29.0	-2.8
CYA				*e*S	Sn	05 06 28.1	-3.9
CYA				IAML		05 07 17.2	
	comp=Z,498nm,0.9s						
AC01	Pan de Azucar	5.91	358	Pn	Pn	05 05 36.5	-3.1
GO02	Mina Guanaco	6.91	5	Pn	Pn	05 05 50.1	-3.4
LC02	Puerto Saavedr	7.16	200	Pn	Pn	05 05 52.2	-4.2
VA04	Juan Fernndez	7.34	255	Pn	Pn	05 05 57.3	-1.6
PLCA	Paso Flores	8.65	181	P	Pn	05 06 14.1	-2.6
	comp=Z,8.0nm,0.4s,baz=0.5,slow=12,SNR=70						
PLCA	Paso Flores	8.65	181	*e*P	Pn	05 06 14.9	-1.8
TRQA	Tornquist	9.07	133	Pn	Pn	05 06 20.1	-2.3
TRQA	Tornquist	9.07	133	P	Pn	05 06 20.1	-2.3
LL05	Los Muermos	9.65	194	Pn	Pn	05 06 24.4	-5.8
PB03	IPOC Station P	9.99	3	Pn	Pn	05 06 28.4	-6.7
PB09	IPOC Station P	10.28	6	Pn	Pn	05 06 35.3	-3.6
LL01	San Ignacio de	10.42	189	Pn	Pn	05 06 37.2	-3.3
PSAL	Palomas, Salto	10.88	88	*e*P	Pn	05 06 43.2	-3.6
GO07	Milladeo Hill,	11.34	193	Pn	Pn	05 06 46.6	-6.2
TA01	Diego Aracena	11.46	1	Pn	Pn	05 06 52.4	-2.1
CPUP	Villa Florida	12.70	67	P	Pn	05 07 05.1	-5.7
	comp=Z,12nm,0.8s,baz=103,slow=12,SNR=73						
CPUP				LR	LR	05 12 59.4	
	comp=Z,20nm,21.5s,baz=74,slow=42						
CPUP	Villa Florida	12.70	67	Pn	Pn	05 07 05.3	-5.5
CPUP	Villa Florida	12.70	67	P	Pn	05 07 05.4	-5.4
CPUP	Villa Florida	12.70	67	*e*P	Pn	05 07 05.9	-4.9
PLTB	Pedras Altas	14.20	93	*e*P	Pn	05 07 27.4	-2.8
CPSB	Cacapava Do Su	14.53	88	*e*P	Pn	05 07 28.9	-5.5
MURT	Porto Murtinho	15.35	51	*e*P	Pn	05 07 43.5	-1.2
LPAZ	La Paz	15.84	8	P	Pn	05 07 52.0	+0.5
	comp=Z,30nm,0.9s,baz=172,slow=9.2,SNR=65						
LPAZ	La Paz	15.84	8	P	Pn	05 07 52.0	+0.5
LPAZ	La Paz	15.84	8	*e*P	Pn	05 07 52.0	+0.5
AMBA	Amambai (Brazi	16.35	60	*e*P	Pn	05 07 55.3	-1.8
ITAB	Concordia	16.52	78	Pn	Pn	05 07 55.9	-3.3
ITAB	Concordia	16.52	78	*e*P	Pn	05 07 56.6	-2.6
BDQN	Bodoquena, MS	16.77	50	*e*P	Pn	05 07 60.0	-2.3
CNLB	Canela	16.96	86	*e*P	Pn	05 08 02.2	-2.5
AQDB	Aquidauana	17.44	52		P	05 08 08.3	-1.6
AQDB	Aquidauana	17.44	52	*e*P	P	05 08 08.5	-1.4
PTGB	Pitanga	17.64	70	*e*P	P	05 08 11.3	-0.9
SIV	San Ignacio	18.08	30	P	P	05 08 16.8	-0.2
	comp=Z,27nm,0.7s,baz=274,slow=0.8						
LDASE	Londrina, Braz	19.04	68	*e*P	P	05 08 26.7	-0.8
PTLB	Pontes e Lacer	19.43	34		P	05 08 31.3	-0.3
PTLB	Pontes e Lacer	19.43	34	*e*P	P	05 08 32.2	+0.5
PP1B	Ponte de Pedra	20.06	48	*e*P	P	05 08 37.0	-1.4
FRTB	Fartura	20.30	70	*e*P	P	05 08 39.8	-1.2
C2SB	Chapadao do Su	20.57	54	*e*P	P	05 08 44.1	+0.2
NNA	Nana	20.87	342	P	P	05 08 48.2	+0.9
	comp=Z,21nm,0.7s,baz=167,slow=14,SNR=8.4						
	comp=Z,21nm,0.7s						
NNA	Nana	20.87	342	P	P	05 08 46.9	-0.4
NNA	Nana	20.87	342	*d i*P	P	05 08 48.6	+1.3
NNA				pmax	pmax		
	comp=Z,110nm,1.7s						
SALV	Santo Antonio	20.88	43	*e*P	P	05 08 45.6	-1.6
VILB	Vilhena	21.17	28	P	P	05 08 49.5	-0.9
VILB	Vilhena	21.17	28	*e*P	P	05 08 49.6	-0.9
VILB				*e*S	S	05 12 40.3	+1.0
EFI	East Falkland	21.55	159	⇑*e*P	P	05 08 55.0	+0.8
EFI				pmax	pmax		
	comp=Z,105nm,1.5s						
PET01	Itanhaem-SP	21.71	75	*e*P	P	05 08 55.2	-0.9
ITRB	Iturama	21.73	60	*e*P	P	05 08 55.0	-1.4
SPB	Sao Paulo	21.89	73	P	P	05 08 57.1	-0.9
SPB	Sao Paulo	21.89	73	*e*P	P	05 08 57.7	-0.4
BB19B	Bebedouro	22.31	66	*e*P	P	05 09 02.6	+0.2
RCLB	Rio Claro- Sao	22.38	70	*e*P	P	05 09 02.9	-0.3
VAO	Valinhos	22.55	72	P	P	05 09 02.4	-2.4
VAO	Valinhos	22.55	72	*e*P	P	05 09 03.8	-1.1
USHA	Ushuaia	22.79	177	P	P	05 09 07.5	+0.7
	comp=Z,15nm,0.8s,baz=351,slow=4.3,SNR=3.6						
	comp=Z,15nm,0.8s						
ARAG	Araguaiana, MT	23.42	50	*e*P	P	05 09 11.6	-1.5
PARB	Paraibuna	23.49	74	*e*P	P	05 09 13.0	-0.7
PDRB	Porto dos Gac	23.90	35	*e*P	P	05 09 17.6	+0.2
IPMB	Ipameri, GO	24.38	60	*e*P	P	05 09 21.1	-0.8
CLDB	Colider	24.99	36	*e*P	P	05 09 27.2	-0.1
BSCB	Bom Sucesso	25.31	70	*e*P	P	05 09 31.6	+1.3
PMNB	Patos De Minas	25.37	64	*e*P	P	05 09 30.4	-0.5
BDFB	Brasilia	26.06	56	P	P	05 09 36.6	-0.5
	comp=Z,8.3nm,0.7s,baz=233,slow=8.0,SNR=9.7						
	comp=Z,8.3nm,0.7s						
BDFB	Brasilia	26.06	56	P	P	05 09 35.5	-1.5
SNDB	Serra Nova Dou	26.58	45	*e*P	P	05 09 42.5	+0.9
NPGB	Novo Progresso	28.54	32	*e*P	P	05 09 58.4	-0.7
TEFE	Tefe	28.91	12	*e*P	P	05 10 02.4	0.0
MCRA	Macar, Loja	29.00	340	P	P	05 10 04.7	+1.4
	comp=Z,46nm,1.2s						
JANB	Januaria	29.12	60	*e*P	P	05 10 03.5	-0.8
SJMB	Sao Joao De Ma	29.38	70	*e*P	P	05 10 06.0	-0.6
BSFB	Barra de Sao F	29.58	71	*e*P	P	05 10 08.4	0.0
MACA	Manacapuru-AM	30.15	19	P	P	05 10 12.5	-0.9
MACA				IAmb	IAmb	05 10 13.4	
	comp=Z,21nm,0.5s						
MACA	Manacapuru-AM	30.15	19	*e*P	P	05 10 12.7	-0.6
SDBA	SAO DESIDERIO	30.46	56	*e*P	P	05 10 17.2	+1.1
ITTB	Itaituba	30.77	29	*e*P	P	05 10 17.5	-1.3
SMTB	Santa Maria do	31.27	47	*e*P	P	05 10 23.4	+0.1
PIAT	Ana Tenorio	31.80	345	P	P	05 10 31.6	+3.2
	comp=Z,37nm,1.2s						
SGC2	Sao Gabriel da	31.90	6	P	P	05 10 28.0	-0.8
	comp=Z,543nmcomp=Z,35nm,0.8s						
SLOR	San Lorenzo -	32.12	344	IAmb	IAmb	05 10 35.5	
	comp=Z,18nm,0.7s						
PTLC	Puerto Leguiza	32.35	352	P	P	05 10 32.0	-0.7
	comp=Z,732nmcomp=Z,70nm,1.1s						
OTAV	Otavalo	33.04	345	*e*P	P	05 10 41.2	+1.9
OTAV	Otavalo	33.04	345	P	P	05 10 41.8	+2.6
	comp=Z,22nm,1.6s						
OTAV	Otavalo	33.04	345	P	P	05 10 41.8	+2.6
OTAV				pP	pP	05 11 07.0	+0.7
OTAV				PcP	PcP	05 13 21.7	+1.3
CUSE	Cuicocha Este	33.10	345	P	P	05 10 42.4	+2.7
	comp=Z,32nm,0.7s						
MAL2	Monte Alegre,	33.53	30	P	P	05 10 41.8	-1.2
MAL2				IAmb	IAmb	05 10 43.4	
	comp=Z,23nm,0.7s						
CMBC	Cumbal	33.59	346	P	P	05 10 47.7	+3.7
FLOC	Florencia	33.85	350	P	P	05 10 47.0	+1.2
FLOC				IAmb	IAmb	05 10 48.4	
	comp=Z,22nm,0.6s						
CRUC	La Cruz	34.04	348	P	P	05 10 51.6	+3.8
MACC	Macarena, Meta	34.19	354	P	P	05 10 50.1	+1.4
	comp=Z,23nm,1.3s						
GARC	Garzon, Huila	34.42	351	P	P	05 10 53.4	+2.4
	comp=Z,25nm,0.9s						
BBAC	Balboa, Cauca	34.54	348	P	P	05 10 54.7	+2.8
	comp=Z,1µmcomp=Z,57nm,0.7s						
POPC	Popayan, Colom	34.95	349	P	P	05 10 58.0	+2.6
	comp=Z,22nm,0.9s						
BOAV	Boa Vista	35.51	17	P	P	05 10 59.2	-0.8
BOAV	Boa Vista	35.51	17	*e*P	P	05 10 59.8	-0.3
PRAC	Prado	35.85	352	P	P	05 11 05.9	+2.9
	comp=Z,49nm,1.7s						
ORTC	Ortega, Tolima	36.09	352	P	P	05 11 08.0	+3.0
	comp=Z,65nm,1.5s						
VILC	Villavicencio,	36.13	354	P	P	05 11 08.5	+3.1
	comp=Z,974nmcomp=Z,125nm,0.7s						
ROSC	El Rosal	36.90	353	P	P	05 11 15.1	+2.8
	comp=Z,16nm,0.5s,baz=111,slow=5.0,SNR=13						
ROSC	El Rosal	36.90	353	P	P	05 11 12.3	0.0
ROSC				IAmb	IAmb	05 11 17.8	
	comp=Z,37nm,1.1s						
ROSC	El Rosal	36.90	353	P	P	05 11 12.3	0.0
ROSC				pmax	pmax		
	comp=Z,37nm,1.1s						
PLMC	San Jos del P	37.21	350	P	P	05 11 16.7	+2.2
	comp=Z,788nmcomp=Z,99nm,0.9s						
RUSC	La Rusia	37.84	356	P	P	05 11 20.5	+0.2
DBBC	Dabeiba	39.27	351	P	P	05 11 34.4	+2.6
SDV	Santo Domingo	40.73	360	P	P	05 11 43.0	-0.9
SDV	Santo Domingo	40.73	360	*e*P	P	05 11 43.7	-0.2
JTS	Las Juntas de	44.39	339	*ce*P	P	05 12 15.6	+2.2
JTS				pmax	pmax		
	comp=Z,37nm,1.7s						
SIUN	Universidad Ur	47.59	341	IAmb	IAmb	05 12 40.6	
	comp=Z,6.6nm,0.8s						
BELA	Belgrano 2	48.53	171	P	P	05 12 46.1	+1.1
TGUH	Tegucigalpa,Un	48.66	338	P	P	05 12 47.7	+0.9
MTO3	Montecristo	49.68	335	IAmb	IAmb	05 12 57.1	
	comp=Z,18nm,0.9s						
ESQI	Esquipulas	49.82	336	IAmb	IAmb	05 12 58.0	
	comp=Z,35nm,0.9s						
CRPR	Cabo Rojo, PR	49.89	4	P	P	05 12 55.4	-0.5
OBIP	Obispado Ponce	49.95	5	P	P	05 12 55.7	-0.7
SJG	San Juan	50.05	5	P	P	05 12 56.5	-0.7
SJG	San Juan	50.05	5	P	P	05 12 56.5	-0.7
SJG				pmax	pmax		
	comp=Z,79nm,0.7s						
SJG	San Juan	50.05	5	P	P	05 12 56.2	-0.9
HUMP	Col San Antoni	50.11	6	P	P	05 12 57.3	-0.2
HUMP				IAmb	IAmb	05 12 59.5	
	comp=Z,20nm,0.6s						
AOPR	Arecibo Observ	50.25	4	P	P	05 12 57.8	-0.9
DR12	Loma Pena Alta	50.58	1	P	P	05 12 59.4	-1.8
VNA3	Neumayer Olymp	50.61	159	⇑P	P	05 13 01.4	+0.6
	comp=Z,7.9nm,0.6s						
VNA1	Neumayer--Stat	50.89	158	⇑P	P	05 13 03.4	+0.5
	comp=Z,6.7nm,0.8s						
SC01	Santiago de lo	51.21	359	P	P	05 13 03.3	-2.5
VNA2	Neumayer--Watz	51.24	158	⇑P	P	05 13 05.6	+0.1
	comp=Z,11nm,0.6s,baz=289,slow=6.8						
CCIG	Comitan	52.43	333	IAmb	IAmb	05 13 17.3	
	comp=Z,24nm,0.8s						
SNAA	Sanae	52.83	158	⇑P	P	05 13 17.5	+0.2
	comp=Z,316nm,0.7s						
SNAA	Sanae	52.83	158	P	P	05 13 18.1	+0.7
	comp=Z,14nm,0.8s,baz=286,slow=5.7,SNR=45						
	comp=Z,14nm,0.8s						
SNAA	Sanae	52.83	158	P	P	05 13 17.6	+0.2
SNAA				IAmb	IAmb	05 13 19.1	
	comp=Z,17nm,0.8s						
SNAA	Sanae	52.83	158	*c i*P	P	05 13 17.8	+0.4
SNAA				pmax	pmax		
	comp=Z,21nm,0.9s						
TROLL	Troll, Antarti	54.54	159	⇑P	P	05 13 30.2	+0.3
	comp=Z,556nm,0.7s						
TEIG	Tepich	54.77	339	P	P	05 13 32.5	+0.5
TEIG	Tepich	54.77	339	P	P	05 13 32.7	+0.7
NVL	N'lazarevskaya	57.52	157	*i* P	P	05 13 49.4	-1.5
NVL				*e*		05 15 58.1	
NVL				*e*S	S	05 21 38.9	0.0
NVL				*e*SS	SS	05 25 31.6	+1.7
NVL				pmax	pmax		
	comp=Z,13nm,0.8s						
QSPA	South Pole Qui	58.16	180	P	P	05 13 57.0	+1.3
	comp=Z,9.1nm,0.9s,baz=162,slow=2.5,SNR=22						
	comp=Z,9.1nm,0.9s						
QSPA	South Pole Qui	58.16	180	P	P	05 13 57.0	+1.3
QSPA	South Pole Qui	58.16	180	P	P	05 13 57.1	+1.3
656A	Willston	62.20	348	P	P	05 14 23.7	+0.4
553A	Crawfordville	63.35	346	P	P	05 14 31.7	+0.7
BBSR	BB Station	64.31	5	P	P	05 14 37.1	-0.2
154A	Montrose	65.46	348	P	P	05 14 44.2	-0.4
EF02	Christine	66.19	333	IAmb	IAmb	05 14 52.6	
	comp=Z,98nm,0.7s						
HKT	Hockley	66.27	336	P	P	05 14 49.6	-0.2
HKT				IAmb	IAmb	05 14 52.6	
	comp=Z,31nm,1.3s						
HKT	Hockley	66.27	336	⇑*e*P	P	05 14 51.3	+1.5
HKT				pmax	pmax		
	comp=Z,35nm,1.5s						
VNDA	Vanda	66.27	191	P	P	05 14 51.6	+2.2
	comp=Z,1.6nm,0.8s,baz=0.0,slow=0.0,SNR=2.7						
	comp=Z,1.6nm,0.8s						
Y57A	Sumter	66.42	351	IAmb	IAmb	05 14 52.0	
	comp=Z,31nm,0.8s						
LRAL	Lakeview Retre	66.64	345	IAmb	IAmb	05 14 53.5	
	comp=Z,39nm,1.4s						
146A	Union	66.75	343	IAmb	IAmb	05 14 55.6	
	comp=Z,26nm,0.9s						
Y52A	Lilburn	66.85	348	IAmb	IAmb	05 14 54.6	
	comp=Z,30nm,0.8s						
Y49A	Blount Mountai	67.31	346	IAmb	IAmb	05 14 57.7	
	comp=Z,14nm,0.7s						
PAULI	Pauline	67.41	350	IAmb	IAmb	05 14 58.0	
	comp=Z,17nm,0.8s						
W57A	Gilead	67.48	351	IAmb	IAmb	05 14 58.8	
	comp=Z,31nm,1.0s						
DRIO	Del Rio	67.59	332	IAmb	IAmb	05 15 01.3	
	comp=Z,14nm,0.8s						
435B	Jarrell	67.64	335	IAmb	IAmb	05 15 01.0	
	comp=Z,33nm,1.0s						
KMSC	Kings Mountain	67.66	350	IAmb	IAmb	05 14 59.8	
	comp=Z,21nm,0.8s						
HPIG		67.66	326	IAmb	IAmb	05 15 01.6	
	comp=Z,19nm,0.9s						
BG3	Lake Jocassee	67.76	349	IAmb	IAmb	05 15 00.7	
	comp=Z,24nm,0.7s						
V58A	Windy Hill, Pi	68.01	352	P	P	05 15 01.2	+0.5
V58A				IAmb	IAmb	05 15 02.0	
	comp=Z,29nm,0.8s						
W52A	Murphy	68.02	348	IAmb	IAmb	05 15 02.3	
	comp=Z,32nm,0.9s						
V55A	Taylorsville	68.34	350	IAmb	IAmb	05 15 04.2	
	comp=Z,33nm,0.7s						
Z41A	Richland Creek	68.36	340	IAmb	IAmb	05 15 05.4	
	comp=Z,36nm,0.9s						
V53A	Saluda	68.40	349	IAmb	IAmb	05 15 04.4	
	comp=Z,24nm,0.8s						
CPCT	Cooper Cave	68.48	348	IAmb	IAmb	05 15 04.9	
	comp=Z,34nm,0.7s						
TKL	Tuckaleechee C	68.55	348	P	P	05 15 03.9	-0.2
	comp=Z,24nm,0.6s,baz=165,slow=8.3,SNR=42						
	comp=Z,24nm,0.6s						
TKL	Tuckaleechee C	68.55	348	IAmb	IAmb	05 15 05.0	
	comp=Z,30nm,0.7s						
BRDY	Brady	68.62	334	IAmb	IAmb	05 15 06.6	
	comp=Z,25nm,0.8s						
U56A	King	68.71	351	IAmb	IAmb	05 15 06.8	
	comp=Z,31nm,0.8s						
PLAL	Pickwick Lake	68.76	344	IAmb	IAmb	05 15 06.5	
	comp=Z,25nm,1.0s						
TXAR	Lajitas Array	68.80	329	P	P	05 15 07.2	+1.3
	comp=Z,9.5nm,0.6s,baz=154,slow=8.8,SNR=197						
	comp=Z,9.5nm,0.6s						
TXAR	Lajitas Array	68.80	329	P	P	05 15 07.1	+1.1
FW13	Cleburne	69.01	336	IAmb	IAmb	05 15 08.4	
	comp=Z,26nm,0.7s						
Z38A	Mt. Pleasant	69.02	338	IAmb	IAmb	05 15 09.4	
	comp=Z,49nm,1.0s						
V48A	Smith Brothers	69.21	346	P	P	05 15 08.3	+0.1
T57A	Hurt	69.22	352	IAmb	IAmb	05 15 09.7	
	comp=Z,20nm,0.8s						
TZTN	Tazewell	69.37	349	P	P	05 15 08.8	-0.4
TZTN				IAmb	IAmb	05 15 11.0	
	comp=Z,18nm,0.9s						
CLTN	Cedars of Leba	69.45	346	IAmb	IAmb	05 15 11.0	
	comp=Z,22nm,0.7s						
FW06	Azle	69.62	336	IAmb	IAmb	05 15 12.6	
	comp=Z,35nm,1.3s						
U49A	Red Boiling Sp	69.75	347	IAmb	IAmb	05 15 12.4	
	comp=Z,93nm,1.9s						
MIAR	Mount Ida	69.78	340	IAmb	IAmb	05 15 14.2	
	comp=Z,19nm,0.9s						
WVT	Waverly	69.80	345	P	P	05 15 11.9	0.0
WVT	Waverly	69.80	345	P	P	05 15 11.9	0.0
WVT				pmax	pmax		
	comp=Z,117nm,0.7s						
WVT	Waverly	69.80	345	P	P	05 15 12.3	+0.4
S57A	Dark Hollow, R	69.94	353	IAmb	IAmb	05 15 14.4	
	comp=Z,29nm,0.7s						
SGCY	Sterling City	70.00	332	IAmb	IAmb	05 15 14.9	
	comp=Z,25nm,0.9s						
R58B	Mineral	70.03	354	IAmb	IAmb	05 15 15.5	
	comp=Z,51nm,1.3s						
T50A	Nancy	70.06	348	IAmb	IAmb	05 15 14.3	
	comp=Z,65nm,1.8s						
WHAR	Wooly Hollow	70.11	341	IAmb	IAmb	05 15 15.4	
	comp=Z,22nm,1.0s						
MNHN	Monahans	70.15	331	IAmb	IAmb	05 15 16.3	
	comp=Z,33nm,0.8s						
S54A	Dingess, Beckl	70.27	351	IAmb	IAmb	05 15 15.7	
	comp=Z,39nm,0.9s						
S51A	Beattyville	70.45	349	IAmb	IAmb	05 15 16.8	
	comp=Z,32nm,0.8s						
T47A	Sharon Grove	70.47	346	IAmb	IAmb	05 15 16.9	
	comp=Z,36nm,0.8s						
FCAR	Ozark Folk Cen	70.63	341	IAmb	IAmb	05 15 18.2	
	comp=Z,17nm,0.7s						
T45A	Paducah	70.84	345	P	P	05 15 18.1	-0.1
SN07	Snyder 07	70.95	333	IAmb	IAmb	05 15 20.6	
	comp=Z,21nm,0.9s						
POST	Post	71.16	333	IAmb	IAmb	05 15 21.8	
	comp=Z,25nm,0.9s						
R50A	Paris	71.20	348	IAmb	IAmb	05 15 21.2	
	comp=Z,27nm,1.0s						
Q56A	Snyder Ridge,	71.23	353	IAmb	IAmb	05 15 22.6	
	comp=Z,22nm,0.8s						
R49A	Shelbyville	71.36	348	IAmb	IAmb	05 15 22.0	
	comp=Z,22nm,0.7s						
Q54A	Coxs Mills	71.37	351	IAmb	IAmb	05 15 22.1	
	comp=Z,24nm,0.7s						
DKNS	Dickens	71.47	333	IAmb	IAmb	05 15 23.7	
	comp=Z,28nm,0.7s						
HHAR	Hobbs	71.51	340	IAmb	IAmb	05 15 23.7	
	comp=Z,47nm,1.0s						
WCI	Wyandotte Cave	71.51	347	P	P	05 15 21.8	-0.4
WCI				IAmb	IAmb	05 15 22.7	
	comp=Z,35nm,0.9s						
WCI	Wyandotte Cave	71.51	347	P	P	05 15 21.8	-0.4
WCI				pmax	pmax		
	comp=Z,35nm,1.0s						
WCI	Wyandotte Cave	71.51	347	P	P	05 15 21.7	-0.4
Q52A	Bidwell	71.54	350	IAmb	IAmb	05 15 24.0	
	comp=Z,37nm,1.0s						
P57A	Homestead Farm	71.55	354	IAmb	IAmb	05 15 24.8	
	comp=Z,38nm,0.8s						
MNTX	Cornudas Mount	71.58	329	IAmb	IAmb	05 15 23.9	
	comp=Z,23nm,0.8s						
S44A	Carbondale	71.62	344	IAmb	IAmb	05 15 23.9	
	comp=Z,40nm,0.9s						
SIUC	Southern Illin	71.63	344	IAmb	IAmb	05 15 24.0	
	comp=Z,41nm,0.9s						
Q51A	Peebles	71.77	349	IAmb	IAmb	05 15 24.9	
	comp=Z,42nm,0.9s						
MGMO	Mountain Grove	71.86	342	IAmb	IAmb	05 15 25.9	
	comp=Z,27nm,0.9s						
MCWV	Mont Chateau	71.91	352	IAmb	IAmb	05 15 26.2	
	comp=Z,35nm,0.9s						
MVL	Millersville	71.93	355	IAmb	IAmb	05 15 26.9	
	comp=Z,27nm,1.2s						
P53A	Whipple	71.94	351	IAmb	IAmb	05 15 26.6	
	comp=Z,19nm,0.8s						
HSIG		71.99	323	IAmb	IAmb	05 15 27.9	
	comp=Z,18nm,0.7s						
OK052	Battle Ridge R	72.12	338	IAmb	IAmb	05 15 27.3	
	comp=Z,42nm,0.9s						
EPT	El Paso	72.14	328	IAmb	IAmb	05 15 28.2	
	comp=Z,25nm,0.9s						
P51A	Williamsport	72.17	350	IAmb	IAmb	05 15 27.0	
	comp=Z,41nm,0.8s						
P52A	Corning	72.18	350	IAmb	IAmb	05 15 27.1	
	comp=Z,33nm,0.8s						
PAGS	Pennsylvania G	72.18	355	IAmb	IAmb	05 15 27.5	
	comp=Z,25nm,0.8s						
QUOK	Quay	72.25	338	IAmb	IAmb	05 15 28.3	
	comp=Z,33nm,1.0s						
OLIL	Olney	72.36	345	IAmb	IAmb	05 15 27.9	
	comp=Z,60nm,1.4s						
CCM	Cathedral Cave	72.45	343	P	P	05 15 28.0	+0.2
CCM	Cathedral Cave	72.45	343	P	P	05 15 28.0	+0.2
CCM				pmax	pmax		
	comp=Z,67nm,1.0s						
CCM	Cathedral Cave	72.45	343	P	P	05 15 28.2	+0.4
CCM				PcP	PcP	05 15 45.2	+0.3
BLO	Bloomington	72.47	347	IAmb	IAmb	05 15 28.4	
	comp=Z,32nm,0.7s						
O52A	Adamsville	72.61	351	IAmb	IAmb	05 15 29.6	
	comp=Z,23nm,0.7s						
O53A	New Philadelph	72.66	351	IAmb	IAmb	05 15 31.7	
	comp=Z,37nm,1.4s						
SSPA	Standing Stone	72.68	354	P	P	05 15 29.4	+0.3
Q44A	Meyer Farm, Va	72.72	345	IAmb	IAmb	05 15 29.9	
	comp=Z,20nm,0.8s						
N58A	Sunbury	72.79	355	IAmb	IAmb	05 15 31.7	
	comp=Z,22nm,0.9s						
AMTX	Amarillo	72.84	333	IAmb	IAmb	05 15 32.3	
	comp=Z,59nm,1.1s						
T35A	Sooner Cattle	72.87	338	IAmb	IAmb	05 15 32.1	
	comp=Z,42nm,0.9s						
ELIS	Ellis County	73.06	336	IAmb	IAmb	05 15 33.7	
	comp=Z,46nm,1.0s						
319A	Douglas	73.09	326	IAmb	IAmb	05 15 34.9	
	comp=Z,41nm,0.8s						
DBIC	Dimbokro	73.18	71	P	P	05 15 32.5	-0.2
	comp=Z,11nm,0.6s,baz=250,slow=5.9,SNR=22						
	comp=Z,11nm,0.6s						
DBIC	Dimbokro	73.18	71	P	P	05 15 32.2	-0.5
DBIC	Dimbokro	73.18	71	P	P	05 15 32.6	-0.1
PAMR	Moraine State	73.21	352	IAmb	IAmb	05 15 33.6	
	comp=Z,21nm,0.7s						
121A	Cookes Peak, D	73.36	328	IAmb	IAmb	05 15 36.6	
	comp=Z,39nm,0.8s						
PH02	Texas Public H	73.39	333	IAmb	IAmb	05 15 35.6	
	comp=Z,54nm,0.8s						
N51A	Ashland	73.48	350	IAmb	IAmb	05 15 34.7	
	comp=Z,33nm,0.8s						
SFIN	Lafayette	73.74	347	IAmb	IAmb	05 15 35.5	
	comp=Z,18nm,0.7s						
M52A	Chesterland	73.95	351	IAmb	IAmb	05 15 37.7	
	comp=Z,35nm,0.8s						
L59A	Walton	74.03	356	IAmb	IAmb	05 15 39.1	
	comp=Z,33nm,0.8s						
L56A	Greenwood	74.14	354	IAmb	IAmb	05 15 39.0	
	comp=Z,28nm,0.8s						
L61B	Northampton	74.19	358	IAmb	IAmb	05 15 39.8	
	comp=Z,34nm,0.9s						
TRY	Troy	74.50	357	IAmb	IAmb	05 15 42.0	
	comp=Z,36nm,1.0s						
MMNY	Mt. Morris Dam	74.76	354	IAmb	IAmb	05 15 42.6	
	comp=Z,25nm,0.7s						
ABQ	Albuquerque	74.81	330	IAmb	IAmb	05 15 44.8	
	comp=Z,44nm,1.5s						
ANMO	Albuquerque	74.82	330	P	P	05 15 43.4	+1.5
	comp=Z,9.5nm,0.7s,baz=135,slow=7.2,SNR=40						
	comp=Z,9.5nm,0.7s						
ANMO	Albuquerque	74.82	330	P	P	05 15 43.5	+1.5
ANMO				IAmb	IAmb	05 15 44.8	
	comp=Z,45nm,1.4s						
ANMO	Albuquerque	74.82	330	*c i*P	P	05 15 43.5	+1.5
ANMO				pmax	pmax		
	comp=Z,31nm,1.5s						
ANMO	Albuquerque	74.82	330	P	P	05 15 43.7	+1.7
TASM	ASL Pad, Albuq	74.82	330	IAmb	IAmb	05 15 44.9	
	comp=Z,47nm,1.5s						
TASM	ASL Pad, Albuq	74.82	330	IAmb	IAmb	05 15 44.8	
	comp=Z,48nm,1.5s						
TASM	ASL Pad, Albuq	74.82	330	IAmb	IAmb	05 15 44.8	
	comp=Z,47nm,1.5s						
TASM	ASL Pad, Albuq	74.82	330	IAmb	IAmb	05 15 44.8	
	comp=Z,49nm,1.5s						
M44A	Midewin, Midew	74.90	346	IAmb	IAmb	05 15 42.8	
	comp=Z,37nm,0.8s						
KSU1	Kansas State U	74.91	339	IAmb	IAmb	05 15 43.4	
	comp=Z,27nm,0.8s						
R32A	Long Quarter,	74.95	337	IAmb	IAmb	05 15 44.4	
	comp=Z,38nm,0.8s						
L46A	Eue Claire	75.17	348	IAmb	IAmb	05 15 43.8	
	comp=Z,27nm,0.7s						
214A	Organ Pipe Nat	75.30	324	IAmb	IAmb	05 15 47.7	
	comp=Z,38nm,1.3s						
L44A	Lake County Fo	75.64	347	IAmb	IAmb	05 15 47.1	
	comp=Z,35nm,0.8s						
L42A	Oliver, Polo	75.83	345	IAmb	IAmb	05 15 48.3	
	comp=Z,32nm,1.0s						
LBNH	Lisbon	75.96	359	IAmb	IAmb	05 15 50.8	
	comp=Z,24nm,0.9s						
J47A	Sunmer	76.11	349	IAmb	IAmb	05 15 49.5	
	comp=Z,32nm,0.8s						
K43A	Burlington	76.23	346	IAmb	IAmb	05 15 50.5	
	comp=Z,29nm,0.8s						
FRNY	Flat Rock	76.60	358	IAmb	IAmb	05 15 53.5	
	comp=Z,18nm,0.8s						
X16A	Lo Mia Camp, P	76.62	326	IAmb	IAmb	05 15 55.2	
	comp=Z,29nm,1.0s						
SDCO	Great Sand Dun	76.83	332	IAmb	IAmb	05 15 55.9	
	comp=Z,19nm,0.7s						
JFWS	Jewell Farm	76.83	345	IAmb	IAmb	05 15 54.2	
	comp=Z,32nm,0.7s						
KSCO	Kaye Shedlock'	76.84	335	IAmb	IAmb	05 15 55.9	
	comp=Z,26nm,0.6s						
WBO	Williamsburg	76.84	356	IAmb	IAmb	05 15 54.6	
	comp=Z,36nm,0.8s						
SADO	Sadowa	76.90	354	P	P	05 15 53.5	+0.2
	comp=Z,14nm,0.5s,baz=206,slow=6.1,SNR=18						
	comp=Z,14nm,0.5s						
Y14A	Wickenburg	76.99	325	IAmb	IAmb	05 15 56.8	
	comp=Z,18nm,0.9s						
MNTQ	Montreal, Queb	77.26	358	IAmb	IAmb	05 18 46.9	
	comp=Z,85nm,1.9s						
I42A	Draeger Farm,	77.48	346	P	P	05 15 56.5	-0.2
I42A				IAmb	IAmb	05 15 57.7	
	comp=Z,25nm,0.8s						
WUAZ	Wupatki	77.49	327	IAmb	IAmb	05 16 00.1	

	comp=Z,26nm,1.1s						
F64A	Sherman	77.59	1	IAmb	IAmb	05 15 59.5	
	comp=Z,28nm,0.7s						
BLYC	Blythe	77.59	323	IAmb	IAmb	05 16 00.5	
	comp=Z,24nm,0.8s						
I40A	Norwalk	77.84	345	IAmb	IAmb	05 15 59.7	
	comp=Z,41nm,1.2s						
BAR	Barrett	77.87	321	IAmb	IAmb	05 16 02.0	
	comp=Z,19nm,0.9s						
BC3	Big Chuckawall	77.99	323	IAmb	IAmb	05 16 02.7	
	comp=Z,24nm,0.8s						
TRQ	Mont Tremblant	78.02	357	IAmb	IAmb	05 16 01.0	
	comp=Z,25nm,0.9s						
E62A	Clayton Lake	78.33	1	IAmb	IAmb	05 16 03.1	
	comp=Z,24nm,0.6s						
TSUM	Tsumeb	78.33	105	P	P	05 16 03.1	+0.9
PMD	Palm Desert	78.47	322	IAmb	IAmb	05 16 05.4	
	comp=Z,27nm,1.4s						
PFO	Pinyon Flats O	78.48	322	⇑*i*P	P	05 16 04.4	+1.9
PFO				pmax	pmax		
	comp=Z,39nm,1.0s						
PFO	Pinyon Flats O	78.48	322	P	P	05 16 04.9	+2.3
PV13	Radium Mtn., P	78.55	330	IAmb	IAmb	05 16 05.3	
	comp=Z,27nm,0.9s						
PV02	Paradox Valley	78.55	330	IAmb	IAmb	05 16 05.5	
	comp=Z,48nm,1.1s						
PV05	Paradox Valley	78.60	330	IAmb	IAmb	05 16 05.5	
	comp=Z,22nm,0.7s						
PV18	Skein Mesa, Pa	78.66	330	IAmb	IAmb	05 16 05.8	
	comp=Z,36nm,0.8s						
PV12	Saucer Basin,	78.67	330	IAmb	IAmb	05 16 06.1	
	comp=Z,33nm,1.0s						
PV17	East Wray Mesa	78.71	330	IAmb	IAmb	05 16 06.0	
	comp=Z,15nm,0.7s						
PV19	Morning Glory	78.74	330	IAmb	IAmb	05 16 06.3	
	comp=Z,35nm,1.1s						
PV20	West Nyswonger	78.76	330	IAmb	IAmb	05 16 06.3	
	comp=Z,41nm,1.3s						
PV04	Paradox Valley	78.78	330	IAmb	IAmb	05 16 06.7	
	comp=Z,26nm,1.3s						
D62A	Allapoint, All	78.80	1	P	P	05 16 04.7	+0.9
D62A				IAmb	IAmb	05 16 05.8	
	comp=Z,26nm,0.8s						
PV10	Paradox Valley	78.82	330	IAmb	IAmb	05 16 06.3	
	comp=Z,37nm,0.8s						
PV23	Carpenter Ridg	78.87	330	IAmb	IAmb	05 16 07.2	
	comp=Z,31nm,1.1s						
E46A	Sault Ste Mari	79.09	350	IAmb	IAmb	05 16 06.4	
	comp=Z,33nm,1.0s						
F42A	Maple Grove Fa	79.13	347	IAmb	IAmb	05 16 06.8	
	comp=Z,22nm,0.7s						
KNB	Kanab	79.39	327	IAmb	IAmb	05 16 10.6	
	comp=Z,28nm,1.0s						
BOSA	Boshof	79.67	117	P	P	05 16 09.5	+0.1
	comp=Z,7.9nm,0.9s,baz=223,slow=4.7,SNR=11						
BOSA				LR	LR	05 51 04.6	
	comp=Z,36nm,18.4s,baz=20,slow=35						
	comp=Z,7.9nm,0.9s						
BOSA	Boshof	79.67	117	P	P	05 16 09.3	-0.1
BOSA	Boshof	79.67	117	P	P	05 16 09.5	+0.1
MWC	Mount Wilson	79.79	321	IAmb	IAmb	05 16 12.6	
	comp=Z,19nm,0.9s						
PASC	Pasadena Art C	79.82	321	IAmb	IAmb	05 16 13.2	
	comp=Z,29nm,1.1s						
O20A	White River Ci	79.97	331	IAmb	IAmb	05 16 13.0	
	comp=Z,47nm,1.6s						
SRU	San Rafael Swe	80.07	329	IAmb	IAmb	05 16 13.2	
	comp=Z,22nm,0.7s						
VLDQ	Val d'Or	80.08	355	IAmb	IAmb	05 16 12.2	
	comp=Z,22nm,0.8s						
Q16A	Castle Valley	80.19	329	IAmb	IAmb	05 16 14.4	
	comp=Z,18nm,0.9s						
P18A	Preston Nutter	80.38	330	IAmb	IAmb	05 16 15.5	
	comp=Z,28nm,0.8s						
CCCA	Chr Cany lake	80.44	323	IAmb	IAmb	05 16 16.1	
	comp=Z,20nm,0.8s						
OSI	Osito Audit: C	80.44	321	IAmb	IAmb	05 16 16.4	
	comp=Z,27nm,0.8s						
P17A	Butcher Ranch,	80.47	329	IAmb	IAmb	05 16 15.4	
	comp=Z,27nm,1.2s						
TCRU	Three Creeks R	80.51	328	P	P	05 16 14.5	+0.9
RDMU	Red Mountain	80.88	331	IAmb	IAmb	05 16 17.5	
	comp=Z,26nm,0.9s						
QNGWA	Qangwa	81.09	107	IAmb	IAmb	05 18 57.9	
	comp=Z,15nm,0.5s						
K22A	Casper	81.45	334	IAmb	IAmb	05 16 20.7	
	comp=Z,25nm,0.9s						
VES	Vestal, Richgr	81.57	322	IAmb	IAmb	05 16 21.7	
	comp=Z,40nm,1.0s						
GRAC	Grapevine Rang	81.58	324	IAmb	IAmb	05 16 22.2	
	comp=Z,36nm,1.4s						
DRLN	Deer Lake	81.77	8	P	P	05 16 20.3	+0.7
DRLN				IAmb	IAmb	05 16 21.3	
	comp=Z,33nm,0.8s						
LBTB	Lobatse	81.78	114	P	P	05 16 20.5	-0.1
LBTB				IAmb	IAmb	05 16 21.4	
	comp=Z,38nm,1.4s						
LBTB	Lobatse	81.78	114	P	P	05 16 20.5	-0.1
LBTB				pmax	pmax		
	comp=Z,38nm,1.4s						
LBTB	Lobatse	81.78	114	P	P	05 16 20.8	+0.2
RSSD	Black Hills	81.84	336	P	P	05 16 21.5	+1.1
RSSD				IAmb	IAmb	05 16 22.3	
	comp=Z,27nm,0.8s						
RSSD	Black Hills	81.84	336	P	P	05 16 21.5	+1.1
RSSD				pmax	pmax		
	comp=Z,27nm,0.8s						
CASY	Casey	81.96	180	P	P	05 16 22.2	+1.5
TIN	Tinemaha, Big	82.06	323	IAmb	IAmb	05 16 24.6	
	comp=Z,31nm,0.8s						
TORD	Torodi Ar. Bea	82.18	69	P	P	05 16 22.4	-0.2
	comp=Z,3.2nm,0.3s,baz=288,slow=4.1,SNR=2.7						
	comp=Z,3.2nm,0.3s						
HWUT	Hardware Ranch	82.58	330	IAmb	IAmb	05 16 26.1	
	comp=Z,14nm,0.7s						
PDAR	Pinedale Array	82.72	332	P	P	05 16 25.5	+0.4
	comp=Z,4.9nm,0.7s,baz=136,slow=6.6,SNR=50						
PDAR				PKKPbc	PKKPbc	05 34 48.1	-2.3
	comp=Z,0.3nm,0.5s,baz=319,slow=3.3,SNR=4.0						
	comp=Z,4.9nm,0.7s						
LPHEP	Lephephe	82.85	113	IAmb	IAmb	05 16 27.5	
	comp=Z,15nm,0.9s						
E28A	Huff	82.95	339	IAmb	IAmb	05 16 27.6	
	comp=Z,42nm,1.1s						
LHV	Little Huntoon	83.12	324	IAmb	IAmb	05 16 30.0	
	comp=Z,19nm,0.9s						
NVAR	Mina Array Bea	83.16	324	P	P	05 16 28.9	+1.5
	comp=Z,9.0nm,0.8s,baz=157,slow=5.9,SNR=64						
	comp=Z,9.0nm,0.8s						
NVAR	Mina Array Bea	83.16	324	P	P	05 16 28.7	+1.3
AGMN	Agassiz Nation	83.22	343	IAmb	IAmb	05 16 28.3	
	comp=Z,19nm,0.8s						
HVU	Hansel Valley	83.24	329	IAmb	IAmb	05 16 29.3	
	comp=Z,17nm,0.8s						
KHWEE	KHWEE	83.27	112	IAmb	IAmb	05 16 29.7	
	comp=Z,26nm,1.1s						
PHDHD	Phuduhudu	83.46	110	IAmb	IAmb	05 16 30.7	
	comp=Z,20nm,0.8s						
ELK	Elko	83.50	327	P	P	05 16 30.2	+1.1
	comp=Z,13nm,0.8s,baz=148,slow=2.8,SNR=50						
	comp=Z,13nm,0.8s						
ELK	Elko	83.50	327	IAmb	IAmb	05 16 31.2	
	comp=Z,14nm,0.8s						
PNTR	Pine Nut	84.31	324	IAmb	IAmb	05 16 36.2	
	comp=Z,24nm,0.8s						
RLMT	Red Lodge	84.59	333	IAmb	IAmb	05 16 36.3	
	comp=Z,16nm,0.6s						
PAHR	Pah Rah Range	84.67	324	IAmb	IAmb	05 16 37.8	
	comp=Z,43nm,1.5s						
MPK	Martis Peak	84.68	324	IAmb	IAmb	05 16 38.2	
	comp=Z,41nm,1.5s						
YNE	Yellowstone No	84.78	333	IAmb	IAmb	05 16 37.2	
	comp=Z,11nm,0.7s						
YMR	Madison River	84.87	332	IAmb	IAmb	05 16 38.5	
	comp=Z,30nm,0.9s						
ULM	Lac du Bonnet	85.03	344	P	P	05 16 36.6	+0.2
	comp=Z,14nm,0.7s,baz=153,slow=5.9,SNR=18						
	comp=Z,14nm,0.7s						
ULM	Lac du Bonnet	85.03	344	IAmb	IAmb	05 16 37.2	
	comp=Z,18nm,0.8s						
ULM	Lac du Bonnet	85.03	344	*ce*P	P	05 16 36.1	-0.2
YHL	Hebgen Lake	85.11	332	IAmb	IAmb	05 16 39.8	
	comp=Z,58nm,1.9s						
BEKR	Beckworth	85.28	324	IAmb	IAmb	05 16 40.7	
	comp=Z,21nm,1.4s						
HLID	Hailey	85.39	330	IAmb	IAmb	05 16 41.0	
	comp=Z,21nm,1.1s						
SUTB	Sutter Butte	85.53	322	IAmb	IAmb	05 16 41.6	
	comp=Z,41nm,1.7s						
BCYI	Bear Canyon	85.57	331	IAmb	IAmb	05 16 42.0	
	comp=Z,19nm,0.9s						
ORV	Oroville	85.63	323	IAmb	IAmb	05 16 42.4	
	comp=Z,27nm,1.4s						
MFID	Camas Ranch	85.89	329	IAmb	IAmb	05 16 43.2	
	comp=Z,36nm,1.6s						
URZ	Urewera	86.03	227	LR	LR	05 46 56.3	
	comp=Z,44nm,19.5s,baz=65,slow=30						
DLMT	Dillon	86.10	332	IAmb	IAmb	05 16 44.2	
	comp=Z,30nm,1.4s						
O03E	Paynes Creek	86.33	323	IAmb	IAmb	05 16 44.5	
	comp=Z,16nm,1.1s						
SCHQ	Schefferville	86.60	2	P	P	05 16 43.9	0.0
	comp=Z,11nm,0.9s,baz=185,slow=4.4,SNR=13						
	comp=Z,11nm,0.9s						
EGMT	Eagleton	87.22	335	IAmb	IAmb	05 16 48.5	
	comp=Z,23nm,1.1s						
M03C	McCloud	87.22	324	IAmb	IAmb	05 16 49.1	
	comp=Z,15nm,0.9s						
PLID	Pearl Lake	87.30	330	IAmb	IAmb	05 16 49.9	
	comp=Z,26nm,0.8s						
KHMM	Horse Mountain	87.75	322	IAmb	IAmb	05 16 52.4	
	comp=Z,14nm,0.8s						
YBH	Yreka Blue Hor	87.86	324	P	P	05 16 50.7	+0.2
	comp=Z,0.3nm,0.8s,baz=66,slow=1.9,SNR=12						
L04D	Klamath Falls	88.02	324	IAmb	IAmb	05 19 01.0	
	comp=Z,35nm,1.7s						
I07A	Izee	88.08	327	IAmb	IAmb	05 16 54.0	
	comp=Z,17nm,0.9s						
J05D	Fort Rock, OR	88.29	325	IAmb	IAmb	05 16 55.0	
	comp=Z,22nm,1.1s						
F10A	Beach Ranch, E	88.53	329	IAmb	IAmb	05 16 54.7	
	comp=Z,36nm,1.8s						
J04A	Umpqua Nationa	88.68	325	IAmb	IAmb	05 16 56.7	
	comp=Z,19nm,1.0s						
G08A	Pilot Rock	88.76	328	IAmb	IAmb	05 16 56.6	
	comp=Z,21nm,1.8s						
I05D	Terrebonne, OR	89.13	326	IAmb	IAmb	05 16 58.5	
	comp=Z,13nm,0.8s						
WIFE	Three Sisters-	89.15	326	IAmb	IAmb	05 16 59.1	
	comp=Z,15nm,0.9s						
I04A	Tendick Farm,	89.24	325	IAmb	IAmb	05 18 36.6	
	comp=Z,39nm,1.9s						
E09A	Wood Farm, Sta	89.34	329	IAmb	IAmb	05 19 03.8	
	comp=Z,28nm,1.9s						
G06A	Carlson Farm,	89.48	327	P	P	05 16 59.1	+1.2
F07A	Phinny Hill Vi	89.66	328	IAmb	IAmb	05 17 01.2	
	comp=Z,11nm,1.0s						
H04A	Detroit Lake	89.79	326	IAmb	IAmb	05 17 01.0	
	comp=Z,12nm,0.8s						
HAWA	Hanford	89.86	328	IAmb	IAmb	05 17 01.9	
	comp=Z,9.9nm,0.8s						
HOOD	Mount Hood Mea	90.02	327	IAmb	IAmb	05 17 05.8	
	comp=Z,43nm,1.9s						
D08A	Wollman Farm,	90.10	329	IAmb	IAmb	05 17 02.5	
	comp=Z,10nm,0.8s						
WAH2	Wahluke Slope	90.15	329	IAmb	IAmb	05 17 02.7	
	comp=Z,16nm,1.3s						
NEW	Newport	90.28	331	P	P	05 17 01.1	-0.5
	comp=Z,2.3nm,0.8s,baz=38,slow=1.8,SNR=5.4						
	comp=Z,2.3nm,0.8s						
C09A	Chrisman Ranch	90.40	330	IAmb	IAmb	05 17 03.8	
	comp=Z,14nm,0.7s						
FCC	Fort Churchill	92.64	348	P	P	05 17 12.8	+0.7
FCC	Fort Churchill	92.64	348	P	P	05 17 12.8	+0.7
FCC				pmax	pmax		
	comp=Z,16nm,0.7s						
ESDC	Sonseca Array	94.19	45	P	P	05 17 17.9	-2.0
	comp=Z,1.0nm,0.8s,baz=242,slow=3.2,SNR=5.9						
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	100.71	341	P	Pdif	05 17 48.6	0.0
	comp=Z,0.6nm,0.6s,baz=153,slow=3.6,SNR=8.7						
ILAR	Eielson Array	113.14	333	PKiKP	PKiKP	05 22 36.2	-0.8
	comp=Z,0.8nm,0.8s,baz=190,slow=1.8,SNR=8.2						
TOLK	Toolik Lake Re	115.70	336		PKiKP	05 22 42.9	+1.0
MMAI	Mount Meron Ar	118.67	67	PKP	PKiKP	05 22 49.4	+0.6
	comp=Z,3.0nm,0.7s,baz=54,slow=2.5,SNR=2.5						
BR131	Keskin Array S	119.62	59	⇑*i*PKIKP	PKPdf	05 22 50.3	-0.1
BRTR	Keskin Array B	119.62	59	PKP	PKPdf	05 22 50.1	-0.3
	comp=Z,3.3nm,0.7s,baz=192,slow=3.3,SNR=20						
BRTR	Keskin Array B	119.62	59		PKiKP	05 22 50.9	+0.4
BRTR	Keskin Array B	119.62	59	PKIKP	PKiKP	05 22 50.9	+0.4
KBS	Kingsbay	119.76	13		PKiKP	05 22 50.9	+1.4
KBS	Kingsbay	119.76	13	*c i*PKIKP	PKiKP	05 22 51.2	+1.7
AKASG	Malin Array Be	119.82	46	PKP	PKPdf	05 22 49.8	-0.5
	comp=Z,3.8nm,0.6s,baz=263,slow=2.8,SNR=16						
AKASG	Malin Array Be	119.82	46		PKPdf	05 22 49.9	-0.3
AKASG	Malin Array Be	119.82	46	PKIKP	PKPdf	05 22 49.9	-0.3
AKBB	Malin Array Si	119.82	46	⇓*i*PKIKP	PKPdf	05 22 49.7	-0.5
ASAR	Alice Springs	119.94	206	PKP	PKPdf	05 22 50.8	-0.7
	comp=Z,1.7nm,0.7s,baz=144,slow=2.3,SNR=19						
ASAR				PKKPbc	PKKPbc	05 33 00.8	+0.5
	comp=Z,1.2nm,0.6s,baz=336,slow=3.1,SNR=14						
MNK	Minsk	119.99	42	*i* P	Pdif	05 19 15.0	+0.5
MNK				*i*		05 22 51.2	
MNK				*i*		05 24 17.0	
MNK				*i* PPP	PPP	05 26 50.3	
MNK				*i*		05 29 51.9	
MNK				*i* SS	SS	05 40 35.0	+1.1
MNK				*i* SSS	SSS	05 45 02.2	
MNK				pmax	pmax		
	comp=E,24nm,0.9s						
MNK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,13nm,0.8s						
MNK				MLR	MLR		
	comp=Z,120nm,14.0s						
SPITS	Spitsbergen Ar	120.46	14	PKP	PKiKP	05 22 50.9	0.0
	comp=Z,1.7nm,0.5s,baz=232,slow=1.6,SNR=5.1						
FINES	FINESS Array B	120.58	34	PKP	PKiKP	05 22 51.5	0.0
	comp=Z,1.4nm,0.5s,baz=18,slow=0.4,SNR=12						
ARCES	ARCESS Array B	121.66	24	PKP	PKPdf	05 22 51.5	-1.7
	comp=Z,2.5nm,0.8s,baz=251,slow=2.8,SNR=8.0						
WRA	Warramunga Arr	123.14	208	PKP	PKPdf	05 22 57.4	-0.3
	comp=Z,5.0nm,0.6s,baz=162,slow=1.6,SNR=44						
WRA				PKKPbc	PKKPbc	05 32 48.9	+0.7
	comp=Z,0.8nm,0.6s,baz=346,slow=4.2,SNR=8.6						
RAYN	Ar Rayn	123.30	81		PKiKP	05 22 59.0	+0.9
RAYN	Ar Rayn	123.30	81	PKIKP	PKiKP	05 22 59.0	+0.9
OBN	Obninsk	125.04	42	⇑*e*PKIKP	PKiKP	05 23 00.9	+0.5
OBN				*e*		05 23 33.7	
OBN				*e*		05 24 55.1	
OBN				pmax	pmax		
	comp=Z,16nm,1.1s						
KLMR	Klimovskoe	127.00	35	*e*PKIKP	PKPdf	05 23 03.0	-0.7
KLMR				*e*		05 23 37.9	
KLMR				*e*		05 25 04.9	
KLMR				pmax	pmax		
	comp=Z,16nm,0.7s						
SHA1	Shidzhatmaz	127.17	57	⇓*e*PKIKP	PKPdf	05 23 05.0	+0.1
KIV	Kislovodsk	127.23	57	*e*PKIKP	PKPdf	05 23 05.0	+0.2
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
KBZ	Khabaz	127.34	57	PKP	PKiKP	05 23 06.0	+0.6
	comp=Z,3.7nm,0.8s,baz=236,slow=4.1,SNR=8.1						
KBZ	Khabaz	127.34	57	⇓*i*PKIKP	PKPdf	05 23 04.9	0.0
BELG	Belogornoye	131.40	46	PKP	PKPdf	05 23 12.6	+0.3
	comp=Z,18nm,0.8s,baz=183,slow=4.8,SNR=11						
KIRV	Kirov	132.12	38	⇑*i*PKIKP	PKiKP	05 23 15.2	+0.7
ARTI	Arti	137.25	40	PKP	PKiKP	05 23 24.2	-0.9
	comp=Z,7.4nm,0.8s,baz=303,slow=1.4,SNR=7.5						
ARTI	Arti	137.25	40		PKPdf	05 23 24.1	+0.8
ARTI	Arti	137.25	40	*i* PKIKP	PKPdf	05 23 24.0	+0.8
ARTI						05 26 09.9	
ARTI				SS	SS	05 43 59.8	-6.9
AKTO	Aktyubinsk	137.98	49	PKP	PKPdf	05 23 25.2	+0.5
	comp=Z,4.7nm,0.8s,baz=282,slow=3.7,SNR=9.6						
TIXI	Tiksi	139.04	351	⇓*i*PKIKP	PKPdf	05 23 25.4	-0.6
SEY	Seymchan	139.05	332	*i* PKIKP	PKPdf	05 23 27.1	+0.8
SEY				pmax	pmax		
	comp=Z,15nm,1.0s						
PETK	Petropavlovsk-	139.82	316	PKP	PKiKP	05 23 29.4	-1.0
	comp=Z,4.5nm,0.8s,baz=106,slow=5.3,SNR=3.5						
NRIK	Noril'sk	140.63	12	⇑*e*PKIKP	PKPdf	05 23 29.7	+0.7
MA2	Magadan	141.31	328	*i* PKIKP	PKPdf	05 23 30.8	+0.3
GOA	Goa	143.48	108	*e*P	PKPdf	05 23 34.4	-1.2
GOA				IAmb	IAmb	05 23 36.9	
	comp=Z,43nm,0.2s						
BHUJ	Bhuj	143.64	94	*e*P	PKPbc	05 23 33.4	-0.1
BHUJ				IAmb	IAmb	05 23 35.1	
	comp=Z,22nm,0.9s						
BHUJ				IAMs_20	IAMs_20	05 30 26.5	
	comp=N,208nm,2.3s						
BHUJ				IAMs_20	IAMs_20	05 31 08.5	
	comp=E,193nm,8.3s						
BORK	Borovoye	144.84	42		PKPdf	05 23 37.5	+0.6
BORK	Borovoye	144.84	42	⇑*i*PKIKP	PKPdf	05 23 37.4	+0.5
BVAR	Borovoye Array	144.88	42	PKP	PKPdf	05 23 37.9	+0.9
	comp=E,36nm,0.6s,baz=301,slow=3.0,SNR=178						
KBL	Kabul	146.10	75		PKPbc	05 23 41.0	-0.1
KBL	Kabul	146.10	75	PKP2	PKPbc	05 23 41.0	-0.1
CHGR	Chuyangaron	146.51	67	⇑*e*PKP2	PKPbc	05 23 41.5	-0.5
KK31	Karatay Array	147.33	59		PKPdf	05 23 42.7	+1.2
KK31	Karatay Array	147.33	59	PKIKP	PKPdf	05 23 42.7	+1.2
GSI	Gunungsitoli	147.33	157		PKPab	05 23 46.0	-0.9
YAK	Yakutsk	147.37	343	PKPbc	PKPbc	05 23 42.9	-0.6
	comp=E,70nm,0.8s,baz=118,slow=1.4,SNR=12						
YAK	Yakutsk	147.37	343		PKPbc	05 23 44.1	+0.6
YAK	Yakutsk	147.37	343	*e*PKIKP	PKPbc	05 23 42.6	-0.9
YAK				*e*		05 27 10.8	
YAK				*e*SS	SS	05 46 11.6	+9.1
YAK				pmax	pmax		
	comp=Z,62nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.6s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,512nm,3.6s						
YAK				pmax	pmax		
	comp=N,307nm,4.0s						
YAK				pmax	pmax		
	comp=E,352nm,4.0s						
TOLI2	Tolitoli	147.47	201		PKPbc	05 23 44.9	-0.4
BKNR	BIKANER	148.32	88	*e*P	PKPdf	05 23 40.6	-3.0
AKL	Akola	148.74	103	*e*P	PKPdf	05 23 42.1	-2.4
AJM	Ajmer	148.99	91	*e*P	PKPdf	05 23 42.8	-2.0
NIL	Nilore	149.45	77		PKPbc	05 23 50.4	+0.5
NIL	Nilore	149.45	77	PKP2	PKPbc	05 23 50.4	+0.5
EKS2	Erkin-Say	149.77	59	P	PKiKP	05 23 51.8	+0.3
	SNR=9.1						
USP	Ospenovka	150.19	58	P	PKiKP	05 23 52.5	+0.3
	SNR=23						
AAK	Ala-Archa	150.29	59	P	PKiKP	05 23 52.9	+0.4
	SNR=27						
AAK	Ala-Archa	150.29	59	PKP	PKPdf	05 23 48.3	+1.8
	comp=E,11nm,0.9s,baz=224,slow=3.7,SNR=14						
AAK				PKPbc	PKiKP	05 23 52.8	+0.2
	comp=E,50nm,0.7s,baz=211,slow=2.5,SNR=93						
AAK	Ala-Archa	150.29	59		PKPdf	05 23 48.2	+1.6
AAK	Ala-Archa	150.29	59	⇓*e*PKIKP	PKPdf	05 23 48.0	+1.5
UCH	Uchtor	150.37	60	P	PKiKP	05 23 54.0	+0.9
	SNR=5.4						
CHMS	Chumysh	150.42	58	P	PKiKP	05 23 53.1	+0.4
	SNR=16						
KURBB	Kurchatov Arra	150.47	42	PKP	PKPdf	05 23 47.3	+1.1
	comp=E,42nm,0.6s,baz=301,slow=2.9,SNR=52						
KURBB				PKPbc	PKiKP	05 23 52.5	+0.1
	comp=E,42nm,0.6s,baz=300,slow=3.0,SNR=160						
KURK	Kurchatov	150.48	42	PKPbc	PKiKP	05 23 52.7	+0.3
KURK	Kurchatov	150.48	42	⇓*e*PKIKP	PKPdf	05 23 47.1	+0.8
KBK	Karagaybulak	150.62	59	P	PKiKP	05 23 53.9	+0.6
	SNR=12						
JMU	Jammu	150.65	79	*e*P	PKPdf	05 23 46.7	-0.5
YSS	Yuzhno-Sakhali	150.73	310	*e*PKIKP	PKiKP	05 23 52.8	-0.2
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TKM2	Tokmak 2	151.05	58	P	PKiKP	05 23 54.5	+0.4
	SNR=14						
JHJR	Jhajjar	151.34	88	*e*P	PKPdf	05 23 46.6	-1.8
BHK	Bhakra	151.76	82	*e*P	PKPdf	05 23 47.7	-1.2
KSH	Kashi	151.78	65	PKPbc	PKPdf	05 23 49.9	+1.1
KSH				sPKP	sPKPdf	05 24 29.0	-5.8
DHRM	DHARAMSHALA	151.80	81	*e*P	PKPdf	05 23 51.8	+2.6
ZALV	Zalesovo Beam	151.83	32	PKP	PKPdf	05 23 49.0	+0.8
	comp=Z,3.1nm,0.7s,baz=267,slow=2.8,SNR=14						
ZALV				PKPbc	PKiKP	05 23 55.5	+0.4
	comp=Z,4.3nm,0.6s,baz=20,slow=4.7,SNR=3.9						
ZALV	Zalesovo Beam	151.83	32	PKIKP	PKPdf	05 23 49.0	+0.8
JMIU	JAMIA UNIVERSI	151.88	89	*e*P	PKPdf	05 23 47.6	-1.5
CGRH	CHANDIGARH	151.94	84	*e*P	PKPdf	05 23 47.5	-1.6
JHNI	Jhansi	152.04	96	*e*P	PKPdf	05 23 46.8	-2.6
VIS	Vishakhapatnam	152.24	115	*e*P	PKPdf	05 23 48.7	-1.3
BLSP	Bilaspur	153.63	105	*e*P	PKPdf	05 23 52.2	+0.3
HNLY	HANLEY	154.10	80	*e*P	PKPdf	05 23 52.2	-0.8
JOSI	Joshimath	154.25	85	*e*P	PKPdf	05 23 51.3	-1.6
PBA	Port Blair	154.38	139	*e*P	PKPdf	05 23 51.6	-1.6
MKAR	Makanchi Array	154.40	47	PKP	PKPdf	05 23 52.6	+0.4
	comp=Z,1.6nm,0.9s,baz=300,slow=1.6,SNR=8.0						
MKAR				PKPbc	PKiKP	05 24 01.0	+0.3
	comp=Z,7.6nm,0.8s,baz=35,slow=3.0,SNR=5.2						
MKAR				PKPab	PKPab	05 24 15.1	-0.3
	comp=Z,8.5nm,0.6s,baz=298,slow=4.2,SNR=19						
JHSG	JHARSUGUGA	154.77	108	*e*P	PKPdf	05 23 51.7	-1.8
MJAR	Matsushiro Arr	156.06	289	PKPab	PKPab	05 24 23.7	+0.8
	comp=Z,2.1nm,0.5s,baz=127,slow=3.5,SNR=6.2						
GAYA	Gaya	157.34	102	*e*P	PKPdf	05 23 52.6	-4.2
BOK	Bokaro	157.45	105	*e*P	PKPdf	05 23 55.1	-1.8
HEH	HeiHe	157.56	329	*e*P	PKPab	05 24 29.1	+0.3
JMUI	Jamui	158.21	103	*e*P	PKPdf	05 23 56.1	-1.8
WMQ	Urumqi	159.13	50	*e*PKP	PKPdf	05 23 58.0	-0.5
JPG	JALPAIGURI	160.91	101	*e*P	PKPdf	05 23 58.9	-2.0
GTK	Tadong	161.09	99	*e*P	PKPdf	05 24 01.2	0.0
DHUB	DHUBRI	161.77	104	*e*P	PKPdf	05 24 01.0	-0.8
AGT	Agartala	161.80	112	*e*P	PKPdf	05 24 00.7	-1.2
SAIH	SAIHA	162.37	119	*e*P	PKPdf	05 24 01.7	-1.0
CMAR	Chiang Mai Arr	163.34	142	PKP	PKPdf	05 24 04.0	+0.5
	comp=Z,0.9nm,0.4s,baz=214,slow=1.1,SNR=7.8						
CMAR				PKPab	PKPab	05 24 53.7	-1.1
	comp=Z,1.5nm,0.3s,baz=206,slow=4.3,SNR=5.0						
SILR	SILCHAR	163.48	112	*e*P	PKPdf	05 24 02.5	-1.0
TAWA	Tawang	163.91	102	*e*P	PKPdf	05 24 02.8	-1.5
SONM	Songino Array	164.06	8	PKP	PKPdf	05 24 03.3	-0.2
	comp=Z,0.9nm,0.7s,baz=267,slow=1.1,SNR=6.3						
SONM				PKPab	PKPab	05 24 57.2	-0.1
	comp=Z,3.9nm,1.0s,baz=333,slow=5.0,SNR=11						
ULN	Ulaanbaatar	164.10	6		PKPab	05 24 58.5	+0.9
ULN	Ulaanbaatar	164.10	6	PKP2	PKPab	05 24 58.5	+0.9
TEZP	TEZPUR	164.31	106	*e*P	PKPdf	05 24 02.7	-1.6
KOHI	KOHIMA	164.97	111	*e*P	PKPdf	05 24 02.3	-2.8
MOKO	MOKOCHONG	165.57	110	*e*P	PKPdf	05 24 02.9	-2.7
GOMU	GeErMu	167.01	67	PKP	PKPdf	05 24 05.1	-1.6
GTA	Gaotai	169.14	45	*e*PKP	PKPdf	05 24 08.6	+0.9
GTA				PKPab	PKPab	05 25 21.0	+0.8
HHC	Hu-ho-hao-te	171.11	351	*e*PKP	PKPdf	05 24 10.7	+2.0
PZH	PanZhiHua	171.12	127	PKP	PKPdf	05 24 08.6	-0.6
BTO	Baotou	171.48	358	*e*PKP	PKPdf	05 24 09.6	+0.7
BTO				PKPab	PKPab	05 25 29.0	-1.3
BTO				LR	LR		
	comp=Z,440nm,7.3s						
BTO				LR	LR		
	comp=Z,500nm,5.9s						
BTO				LR	LR		
	comp=Z,270nm,5.7s						
NJ2	Nanjing	172.22	272	*e*PKP	PKPdf	05 24 10.6	+1.2
TIA	Tai'an	172.58	306	PKP	PKPdf	05 24 10.4	+1.0
HNS	HongShan	173.27	324	⇓PKP	PKPdf	05 24 10.8	+1.2
XAN	Xi'an	177.93	18	PKP	PKPdf	05 24 11.6	+0.6

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*PRU **09** 05:19:16.3, 41.°94N×11.°65E, h188^{km}*
*BGR **09** 05:19:32.5±1.2, 43.°59N×11.°30E, h10^{km}, ML3.5/5, Error ellipse: s-maj=20.0km s-min=15.6km az=4.0*
*GEN **09** 05:19:33.3, 43.°99N×11.°29E, h9^{km}±1^{km}, Ml3.1*
*ROM **09** 05:19:33.9±0.1, 44.°001N±0.°005×11.°290E±0.°005, h7^{km}, ML3.1/139, Error ellipse: s-maj=0.6km s-min=0.0km az=192.0*
*LDG **09** 05:19:36.3±0.1, 43.°90N×11.°26E, h8^{km}, Ml3.0/25, Error ellipse: s-maj=3.0km s-min=2.5km az=30.0*

ISC 09 05:19:34.1±0.8**, 43.°96N**±0.°02×**11.°28E**±0.°01**, h11**^{km}±5^{km}**, n144, σ1.^{s}62**/225**, 8C-2D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCL	Monte Cuccoli	0.09	304	⇓P	Pg	05 19 36.5	-0.3
MOCL				S	Sg	05 19 38.2	-0.5
MOCL				AML	AML		
MOCL				AML	AML		
	comp=E,68850µm,0.1s						
MOCL				AML	AML		
	comp=E,68855µm,0.1s						
MOCL				AML	AML		
SEI	Scarperia	0.11	29	P	Pg	05 19 33.2	-3.9
SEI				S	Sg	05 19 34.5	-4.7
MPPT	Montemurlo	0.14	271	⇑P	Pg	05 19 37.8	+0.4
MPPT				S	Sg	05 19 40.5	+0.7
MPPT				AML	AML		

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           comp=N,18250µm,0.4s
MPPT                                AML     AML
           comp=E,26000µm,1.4s
MPPT                                AML     AML
           comp=E,22901µm,0.3s
MPPT                                AML     AML
           comp=N,18238µm,0.4s
MPPT                                AML     AML
           comp=E,22901µm,1.7s
RUFI  Rufina           0.20 125     P       Pg        05 19 39.2 +0.7
RUFI                                S       Sg        05 19 42.8 +1.4
RUFI  Rufina           0.20 125     P       Pg        05 19 39.1 +0.7
RUFI                                S       Sg        05 19 43.1 +1.8
RUFI                                AML     AML
           comp=N,5135µm,0.8s
RUFI                                AML     AML
           comp=E,4730µm,1.1s
RUFI                                AML     AML
           comp=E,4725µm,1.1s
RUFI                                AML     AML
           comp=N,5130µm,0.8s
RUFI                                AML     AML
           comp=E,4673µm,0.4s
RUFI                                AML     AML
           comp=N,5133µm,0.8s
RUFI                                AML     AML
           comp=E,4673µm,1.6s
FNVD  Fontana Vidola   0.24 332     P       Pg        05 19 38.4  -0.8
FNVD                                S       Sg        05 19 41.6  -1.0
FNVD                                AML     AML
           comp=N,31750µm,0.5s
FNVD                                AML     AML
           comp=E,21700µm,0.1s
FNVD                                AML     AML
           comp=N,25890µm,0.1s
FNVD                                AML     AML
           comp=E,21674µm,0.1s
BRIS  BRISIGHELLA      0.26   40    P       Pb        05 19 42.2 +1.4
BRIS                                S       Sb        05 19 49.2 +4.0
BRIS                                AML     AML
           comp=E,220µm,1.6s
BRIS                                AML     AML
           comp=N,306µm,1.0s
BRIS                                AML     AML
           comp=E,225µm,1.6s
BRIS                                AML     AML
           comp=N,305µm,1.0s
BRIS                                AML     AML
           comp=E,6630µm,1.5s
BRIS                                AML     AML
           comp=N,6650µm,0.3s
BRIS                                AML     AML
           comp=E,6573µm,0.4s
BRIS                                AML     AML
           comp=E,197µm,1.2s
BRIS                                AML     AML
           comp=N,220µm,1.0s
BRIS                                AML     AML
           comp=N,6650µm,0.3s
BRIS                                AML     AML
           comp=E,197µm,0.8s
CRMI  Carmignano       0.28 234 ⇑P          Pb        05 19 40.6  -0.6
CRMI                                S       Sb        05 19 46.0 +0.1
CRMI                                AML     AML
           comp=E,11900µm,0.3s
CRMI                                AML     AML
           comp=N,13650µm,0.3s
CRMI                                AML     AML
           comp=N,5135µm,0.3s
CRMI                                AML     AML
           comp=E,4420µm,0.3s
CRMI                                AML     AML
           comp=N,13666µm,0.3s
CRMI                                AML     AML
           comp=E,11917µm,0.3s
CRMI                                AML     AML
           comp=E,4420µm,0.3s
CRMI                                AML     AML
           comp=N,5136µm,0.3s
LMD   Lutirano         0.33   68    P       Pg        05 19 40.2  -0.6
LMD                                 S       Sg        05 19 45.2  -0.1
LMD   Lutirano         0.33   68 ⇑P         Pg        05 19 40.1  -0.6
LMD                                 S       Sg        05 19 45.1  -0.1
LMD                                 AML     AML
           comp=N,11750µm,0.7s
LMD                                 AML     AML
           comp=E,8150µm,1.5s
LMD                                 AML     AML
           comp=E,7962µm,0.5s
LMD                                 AML     AML
           comp=N,10128µm,0.3s
POPM  Popiglio         0.39 283     P       Pg        05 19 41.8  -0.1
POPM                                S       Sg        05 19 47.7 +0.7
POPM  Popiglio         0.39 283 ⇑P          Pg        05 19 41.8  -0.1
POPM                                S       Sg        05 19 48.2 +1.2
POPM                                AML     AML
           comp=E,13900µm,1.2s
POPM                                AML     AML
           comp=N,13250µm,0.4s
POPM                                AML     AML
           comp=E,13277µm,0.2s
POPM                                AML     AML
           comp=N,12594µm,0.2s
ASQU  Asqua            0.40 113     P       Pg        05 19 42.3 +0.3
ASQU                                S       Sb        05 19 48.8  -0.6
ASQU  Asqua            0.40 113     P       Pb        05 19 42.5  -0.8
ASQU                                S       Sb        05 19 49.4  -0.1
ASQU                                AML     AML
           comp=E,1390µm,0.7s
ASQU                                AML     AML
           comp=N,2025µm,0.4s
ASQU                                AML     AML
           comp=E,1272µm,0.3s
ASQU                                AML     AML
           comp=N,2028µm,0.4s
SFI   Santa Sofia      0.41   97    P       Pg        05 19 42.2  -0.1
SFI                                 S       Sb        05 19 49.0  -0.8
SFI                                 AML     AML
           comp=E,1700µm,0.7s
SFI                                 AML     AML
           comp=N,2225µm,0.5s
SFI                                 AML     AML
           comp=N,2185µm,0.6s
SFI                                 AML     AML
           comp=E,1730µm,0.7s
SFI                                 AML     AML
           comp=N,2190µm,0.6s
SFI                                 AML     AML
           comp=E,1730µm,0.7s
SFI                                 AML     AML
           comp=E,1704µm,0.7s
SFI                                 AML     AML
           comp=N,2227µm,0.5s
SFI                                 AML     AML
           comp=N,2187µm,0.5s
SFI                                 AML     AML
           comp=E,1704µm,1.3s
SFI                                 AML     AML
           comp=E,1730µm,1.3s
OSSC  Osservatorio P   0.43 183     P       Pb        05 19 43.7  -0.1
OSSC                                S       Sb        05 19 51.3 +1.0
OSSC  Osservatorio P   0.43 183 ⇑P          Pb        05 19 43.7  -0.1
OSSC                                S       Sb        05 19 51.5 +1.2
OSSC                                AML     AML
           comp=E,3490µm,0.4s
OSSC                                AML     AML
           comp=E,3590µm,0.4s
OSSC                                AML     AML
           comp=N,3635µm,0.4s
OSSC                                AML     AML
           comp=N,3410µm,0.4s
OSSC                                AML     AML
           comp=E,3488µm,0.4s
OSSC                                AML     AML
           comp=N,3636µm,0.4s
OSSC                                AML     AML
           comp=E,3587µm,0.4s
OSSC                                AML     AML
           comp=N,3413µm,0.4s
MTRZ  Monterenzio      0.44   17    P       Pg        05 19 41.3  -1.5
MTRZ                                S       Sg        05 19 46.7  -2.0
MTRZ  Monterenzio      0.44   17 ⇑P         Pg        05 19 41.3  -1.5
MTRZ                                S       Sg        05 19 46.6  -2.0
MTRZ                                AML     AML
           comp=E,7655µm,1.6s
MTRZ                                AML     AML
           comp=E,7735µm,1.6s
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MTRZ                                AML     AML
           comp=N,7260µm,0.6s
MTRZ                                AML     AML
           comp=E,7655µm,1.6s
MTRZ                                AML     AML
           comp=N,7045µm,0.6s
MTRZ                                AML     AML
           comp=E,7244µm,0.5s
MTRZ                                AML     AML
           comp=N,7177µm,0.4s
MTRZ                                AML     AML
           comp=E,7384µm,0.5s
MTRZ                                AML     AML
           comp=N,7000µm,0.4s
ZCCA  Zocca            0.45 331     P       Pg        05 19 43.2 +0.2
ZCCA                                S       Sg        05 19 50.4 +1.4
ZCCA  Zocca            0.45 331     P       Pg        05 19 43.3 +0.2
ZCCA                                AML     AML
           comp=E,2100µm,0.5s
ZCCA                                AML     AML
           comp=E,2100µm,0.5s
ZCCA                                AML     AML
           comp=N,2775µm,0.4s
ZCCA                                AML     AML
           comp=E,2200µm,0.5s
ZCCA                                AML     AML
           comp=N,2870µm,0.4s
ZCCA                                AML     AML
           comp=N,2870µm,0.4s
ZCCA                                AML     AML
           comp=E,2102µm,0.5s
ZCCA                                AML     AML
           comp=E,2198µm,0.5s
ZCCA                                AML     AML
           comp=N,2777µm,0.4s
CSNT  Castellina Chi   0.48 179     P       Pb        05 19 44.5  -0.2
CSNT                                S       Sb        05 19 52.2 +0.4
CSNT  Castellina Chi   0.48 179 ⇑P          Pb        05 19 44.5  -0.2
CSNT                                S       Sb        05 19 52.8 +1.0
CSNT                                AML     AML
           comp=E,3050µm,0.4s
CSNT                                AML     AML
           comp=N,6590µm,0.5s
CSNT                                AML     AML
           comp=E,3053µm,0.4s
CSNT                                AML     AML
           comp=N,6589µm,0.5s
BDI   Bagni Di Lucca   0.51 282     P       Pg        05 19 43.7  -0.3
BDI                                 S       Sg        05 19 51.6 +0.9
BDI   Bagni Di Lucca   0.51 282     P       Pg        05 19 43.8  -0.3
BDI                                 S       Sg        05 19 51.9 +1.2
BDI                                 AML     AML
           comp=E,8155µm,0.7s
BDI                                 AML     AML
           comp=N,10950µm,1.0s
BDI                                 AML     AML
           comp=E,8945µm,0.2s
BDI                                 AML     AML
           comp=N,10210µm,0.6s
BDI                                 AML     AML
           comp=E,8965µm,0.2s
BDI                                 AML     AML
           comp=N,10959µm,0.5s
BDI                                 AML     AML
           comp=N,10222µm,0.6s
BDI                                 AML     AML
           comp=E,7559µm,0.4s
IMOL  Imola, Italy     0.52   39    P       Pg        05 19 44.8 +0.5
IMOL                                S       Sb        05 19 55.7 +2.8
IMOL  Imola, Italy     0.52   39    P       Pg        05 19 44.6 +0.3
IMOL                                AML     AML
           comp=E,9205µm,0.4s
IMOL                                AML     AML
           comp=N,12200µm,0.4s
IMOL                                AML     AML
           comp=N,12204µm,0.4s
IMOL                                AML     AML
           comp=N,12204µm,1.6s
IMOL                                AML     AML
           comp=E,9205µm,0.4s
MAIM  Mastiano         0.57 266     P       Pg        05 19 45.1  -0.2
MAIM                                S       Sg        05 19 53.6 +0.8
MAIM  Mastiano         0.57 266     P       Pg        05 19 45.2   0.0
CARD  Cardoso          0.58 277     P       Pg        05 19 45.0  -0.4
CARD                                S       Sg        05 19 53.7 +0.5
CARD  Cardoso          0.58 277     P       Pg        05 19 45.0  -0.4
CARD                                S       Sg        05 19 53.9 +0.8
CARD                                AML     AML
           comp=E,4565µm,0.3s
CARD                                AML     AML
           comp=N,5615µm,0.5s
CARD                                AML     AML
           comp=N,5319µm,0.3s
CARD                                AML     AML
           comp=E,4565µm,0.3s
CRE   Caprese Michel   0.59 124     P       Pb        05 19 46.2  -0.4
CRE                                 AML     AML
           comp=E,1705µm,0.5s
CRE                                 AML     AML
           comp=N,1330µm,0.4s
CRE                                 AML     AML
           comp=E,1705µm,0.5s
CRE                                 AML     AML
           comp=N,1330µm,0.4s
PII   Pisa             0.59 247     P       Pg        05 19 45.9 +0.2
PII                                 S       Sb        05 19 54.4  -0.6
PII   Pisa             0.59 247 ⇑P          Pg        05 19 45.9 +0.2
PII                                 S       Sb        05 19 56.2 +1.2
PII                                 AML     AML
           comp=E,7030µm,0.3s
PII                                 AML     AML
           comp=N,8110µm,0.3s
PII                                 AML     AML
           comp=N,8109µm,0.3s
PII                                 AML     AML
           comp=E,7029µm,0.3s
PII                                 AML     AML
           comp=N,8109µm,1.7s
GSCL  Gusciola         0.64 309     P       Pg        05 19 46.2  -0.3
GSCL                                S       Sg        05 19 56.0 +1.1
GSCL  Gusciola         0.64 309 ⇓P          Pg        05 19 46.2  -0.3
GSCL                                S       Sg        05 19 55.9 +1.0
GSCL                                AML     AML
           comp=E,3785µm,1.1s
GSCL                                AML     AML
           comp=N,3295µm,0.3s
GSCL                                AML     AML
           comp=E,3783µm,0.5s
GSCL                                AML     AML
           comp=N,3295µm,0.3s
BRSN  Barisano         0.66   60    P       Pg        05 19 47.4 +0.4
BRSN                                AML     AML
           comp=E,4190µm,0.8s
BRSN                                AML     AML
           comp=N,3350µm,0.7s
BRSN                                AML     AML
           comp=N,3435µm,0.7s
BRSN                                AML     AML
           comp=E,4195µm,0.8s
BRSN                                AML     AML
           comp=N,3350µm,0.7s
BRSN                                AML     AML
           comp=E,4165µm,0.8s
BRSN                                AML     AML
           comp=E,4164µm,0.8s
BRSN                                AML     AML
           comp=N,3435µm,0.7s
BRSN                                AML     AML
           comp=N,3348µm,0.7s
BRSN                                AML     AML
           comp=E,4193µm,0.8s
SARO  Sassorosso       0.68 290     P       Pg        05 19 46.7  -0.4
SARO                                S       Sg        05 19 57.2 +1.1
SARO  Sassorosso       0.68 290     P       Pg        05 19 46.8  -0.4
SARO                                S       Sg        05 19 57.0 +0.8
VLC   Villacollemand   0.68 288     P       Pg        05 19 47.0  -0.3
VLC                                 S       Sg        05 19 57.2 +1.0
VLC   Villacollemand   0.68 288     P       Pg        05 19 47.0  -0.3
VLC                                 S       Sg        05 19 57.1 +1.0
VLC                                 AML     AML
           comp=E,2340µm,0.4s
VLC                                 AML     AML
           comp=N,2420µm,0.6s
VLC                                 AML     AML
           comp=E,2395µm,0.5s
VLC                                 AML     AML
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           comp=N,2385µm,0.6s
VLC                                 AML     AML
           comp=E,2395µm,0.5s
VLC                                 AML     AML
           comp=N,2387µm,0.6s
VLC                                 AML     AML
           comp=E,2340µm,0.4s
VLC                                 AML     AML
           comp=N,2422µm,0.6s
VLC                                 AML     AML
           comp=E,2395µm,1.5s
VLC                                 AML     AML
           comp=E,2340µm,1.6s
FIU   Minerbio Fiu     0.70   12    P       Pb        05 19 49.0 +0.6
SSP9  Sansepolcro      0.72 121     P       Pb        05 19 48.8   0.0
SSP9                                AML     AML
           comp=E,851µm,0.6s
SSP9                                AML     AML
           comp=N,1042µm,1.6s
SSP9                                AML     AML
           comp=N,1038µm,1.6s
SSP9                                AML     AML
           comp=E,851µm,0.6s
SSP9                                AML     AML
           comp=N,1021µm,1.5s
SSP9                                AML     AML
           comp=N,1021µm,0.5s
CMPO  Campotto Po      0.73   31    P       Pb        05 19 50.0 +1.2
FROS  Frosini          0.75 187     AML     AML
           comp=N,2005µm,0.8s
FROS                                AML     AML
           comp=E,3180µm,0.7s
FROS                                AML     AML
           comp=E,3182µm,0.7s
FROS                                AML     AML
           comp=N,2004µm,0.8s
FROS                                AML     AML
           comp=N,2004µm,1.2s
PARC  Parchiule        0.76 114     P       Pb        05 19 49.8 +0.5
CPGN  Carpegna, Ital   0.77 101     P       Pb        05 19 49.8 +0.2
MAGO  Bibbona          0.82 214     AML     AML
           comp=E,898µm,1.6s
MAGO                                AML     AML
           comp=N,1042µm,0.6s
MAGO                                AML     AML
           comp=N,1042µm,0.6s
MAGO                                AML     AML
           comp=N,1042µm,0.6s
MAGO                                AML     AML
           comp=E,805µm,0.5s
BADI  Badiali          0.83 122     P       Pb        05 19 50.8 +0.3
ATMC  Monte Cedrone    0.83 127     P       Pb        05 19 51.1 +0.4
EQUI  Equi             0.84 285     P       Pg        05 19 50.5 +0.1
EQUI                                S       Sg        05 20 01.8 +0.5
EQUI  Equi             0.84 285     P       Pg        05 19 49.4  -1.0
FIVI  Fivizzano        0.88 289     P       Pg        05 19 51.2 +0.1
APEC  Apecchio         0.92 115     P       Pn        05 19 53.6 +0.7
APEC                                AML     AML
           comp=E,1035µm,0.6s
APEC                                AML     AML
           comp=N,874µm,1.6s
APEC                                AML     AML
           comp=E,1034µm,0.6s
APEC                                AML     AML
           comp=N,870µm,0.7s
APEC                                AML     AML
           comp=E,1236µm,0.9s
APEC                                AML     AML
           comp=N,1121µm,0.5s
APEC                                AML     AML
           comp=N,870µm,1.3s
ATVO  AVT- Monte Val   1.00 125     P       Pb        05 19 53.7 +0.3
ATVO                                AML     AML
           comp=E,852µm,1.6s
ATVO                                AML     AML
           comp=N,496µm,0.7s
ATVO                                AML     AML
           comp=N,496µm,0.7s
ATVO                                AML     AML
           comp=E,848µm,0.5s
RIBO  Ribolla Roccas   1.02 190     P       Pn        05 19 55.3 +0.9
RIBO  Ribolla Roccas   1.02 190     AML     AML
           comp=E,634µm,0.6s
GRAM  Graiana          1.02 302     P       Pg        05 19 53.5  -0.3
GRAM                                S       Sg        05 20 08.3 +1.0
GRAM  Graiana          1.02 302     P       Pg        05 19 53.5  -0.3
GRAM                                AML     AML
           comp=E,3365µm,0.4s
GRAM                                AML     AML
           comp=N,1485µm,0.4s
GRAM                                AML     AML
           comp=E,3364µm,0.4s
GRAM                                AML     AML
           comp=N,1488µm,0.4s
PLMA  Palmaria, Port   1.04 276     P       Pg        05 19 53.9  -0.2
PLMA                                S       Sg        05 20 07.8 +0.2
PLMA  Palmaria, Port   1.04 276     P       Pg        05 19 53.7  -0.4
PLMA                                S       Sg        05 20 07.7 +0.2
PLMA                                AML     AML
           comp=E,1350µm,0.7s
PLMA                                AML     AML
           comp=N,1755µm,0.4s
PLMA                                AML     AML
           comp=E,1351µm,0.7s
PLMA                                AML     AML
           comp=N,1758µm,0.4s
ARCI  Arcidosso        1.11 173     P       Pn        05 19 56.2 +0.4
ARCI                                AML     AML
           comp=E,279µm,0.9s
ARCI                                AML     AML
           comp=N,335µm,0.4s
ARCI                                AML     AML
           comp=N,287µm,0.7s
ARCI                                AML     AML
           comp=N,335µm,0.4s
ARCI                                AML     AML
           comp=N,335µm,1.6s
ARCI                                AML     AML
           comp=E,279µm,0.9s
ARCI                                AML     AML
           comp=N,287µm,1.3s
ARCI                                AML     AML
           comp=E,311µm,0.8s
SF04  Casetta          1.15 166     P       Pn        05 19 57.0 +0.7
SF04                                AML     AML
           comp=E,318µm,0.6s
SF04                                AML     AML
           comp=N,340µm,0.8s
SF04                                AML     AML
           comp=E,318µm,0.6s
SF04                                AML     AML
           comp=N,334µm,0.2s
SF01  Poggio Pratacc   1.16 170     P       Pn        05 19 57.0 +0.6
SF01                                AML     AML
           comp=E,623µm,0.9s
SF01                                AML     AML
           comp=N,650µm,0.9s
SF01                                AML     AML
           comp=E,623µm,0.9s
SF01                                AML     AML
           comp=N,650µm,0.9s
CASP  Castiglione de   1.20 195     P       Pn        05 19 57.5 +0.5
CASP                                AML     AML
           comp=E,238µm,0.6s
CASP                                AML     AML
           comp=N,218µm,0.4s
CASP                                AML     AML
           comp=N,217µm,0.4s
CASP                                AML     AML
           comp=E,238µm,0.6s
MSSA  Maissana         1.32 286     P       Pn        05 19 58.2  -0.4
MSSA                                AML     AML
           comp=E,596µm,0.9s
MSSA                                AML     AML
           comp=N,645µm,0.7s
MSSA                                AML     AML
           comp=E,596µm,0.9s
MSSA                                AML     AML
           comp=N,599µm,0.5s
MSSA                                AML     AML
           comp=E,596µm,1.1s
TEOL  Teolo            1.43   11    P       Pn        05 20 00.4 +0.3
TEOL                                AML     AML
           comp=E,1470µm,0.7s
TEOL                                AML     AML
           comp=N,1105µm,0.7s
TEOL                                AML     AML
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      comp=E,1472µm,0.7s
TEOL                               AML    AML
      comp=N,1104µm,0.7s
TEOL                               AML    AML
      comp=N,1104µm,1.3s
TEOL                               AML    AML
      comp=E,1472µm,1.3s
BOB   Bobbio (Coli)      1.55 302  P      Pb     05 20 03.7 +0.8
GORR  Gorreto            1.57 295  P      Pg     05 20 04.5 +0.3
ROVR  Rover Verones      1.70 355  P      Pn     05 20 05.0 +1.2
ROVR                               AML    AML
      comp=E,456µm,0.5s
ROVR                               AML    AML
      comp=N,654µm,0.3s
ROVR                               AML    AML
      comp=E,176µm,0.5s
ROVR                               AML    AML
      comp=N,268µm,0.3s
ROVR                               AML    AML
      comp=N,268µm,0.3s
ROVR                               AML    AML
      comp=N,654µm,0.3s
ROVR                               AML    AML
      comp=E,456µm,0.5s
ROVR                               AML    AML
      comp=E,175µm,0.5s
RNCA  Ronca, Sant’Ol     1.75 288  P      Pn     05 20 05.8 +1.3
RNCA                               AML    AML
      comp=E,205µm,0.6s
RNCA                               AML    AML
      comp=N,348µm,0.4s
RNCA                               AML    AML
      comp=E,205µm,0.6s
RNCA                               AML    AML
      comp=N,348µm,0.4s
MAGA  Magasa             1.88 346  P      Pn     05 20 08.0 +1.7
MAGA                               AML    AML
      comp=E,1585µm,0.5s
MAGA                               AML    AML
      comp=N,691µm,0.5s
MAGA                               AML    AML
      comp=N,691µm,0.5s
MAGA                               AML    AML
      comp=E,1588µm,0.5s
MAGA                               AML    AML
      comp=N,691µm,1.5s
MAGA                               AML    AML
      comp=E,1588µm,1.5s
VARA  Varagna            1.89 352  P      Pn     05 20 07.3 +0.8
VARA                               AML    AML
      comp=E,692µm,0.5s
VARA                               AML    AML
      comp=N,968µm,0.4s
VARA                               AML    AML
      comp=E,955µm,0.4s
VARA                               AML    AML
      comp=N,718µm,0.5s
VARA                               AML    AML
      comp=N,718µm,0.5s
VARA                               AML    AML
      comp=E,692µm,0.5s
VARA                               AML    AML
      comp=N,718µm,1.5s
VARA                               AML    AML
      comp=E,692µm,1.5s
VARA                               AML    AML
      comp=N,968µm,0.4s
VARA                               AML    AML
      comp=E,958µm,0.4s
DOSS  Dosso del Somm     1.93 358  P      Pn     05 20 06.8 -0.2
DOSS                               AML    AML
      comp=E,550µm,0.5s
DOSS                               AML    AML
      comp=N,338µm,0.5s
DOSS                               AML    AML
      comp=E,357µm,0.5s
DOSS                               AML    AML
      comp=N,563µm,0.5s
DOSS                               AML    AML
      comp=N,338µm,0.5s
DOSS                               AML    AML
      comp=E,357µm,0.5s
DOSS                               AML    AML
      comp=E,357µm,1.5s
DOSS                               AML    AML
      comp=N,338µm,1.5s
DOSS                               AML    AML
      comp=N,563µm,0.5s
DOSS                               AML    AML
      comp=E,550µm,0.5s
ZONE  Zone               1.99 336  AML    AML
      comp=N,364µm,0.5s
ZONE                               AML    AML
      comp=E,261µm,1.1s
ZONE                               AML    AML
      comp=N,364µm,0.5s
ZONE                               AML    AML
      comp=E,118µm,0.5s
ZONE                               AML    AML
      comp=N,150µm,0.7s
ZONE                               AML    AML
      comp=N,364µm,1.5s
ZONE                               AML    AML
      comp=E,259µm,0.5s
ZONE                               AML    AML
      comp=E,118µm,1.5s
PANI  Panarotta          2.10   1  P      Pn     05 20 10.3 +0.9
PANI                               AML    AML
      comp=E,242µm,0.5s
PANI                               AML    AML
      comp=N,248µm,0.7s
PANI                               AML    AML
      comp=E,243µm,0.5s
PANI                               AML    AML
      comp=N,248µm,0.7s
PGF   Pioggiola          2.18 231  ePn    Pn     05 20 10.9 +0.4
PGF                                eSn    Sn     05 20 36.3 -1.2
      comp=N,25nm,0.4s
ZIAN  Ziano              2.33   5  P      Pn     05 20 13.5 +1.0
ZIAN                               AML    AML
      comp=E,226µm,0.5s
ZIAN                               AML    AML
      comp=N,212µm,1.1s
ZIAN                               AML    AML
      comp=E,208µm,0.5s
ZIAN                               AML    AML
      comp=N,244µm,0.5s
ZIAN                               AML    AML
      comp=E,208µm,0.5s
ZIAN                               AML    AML
      comp=E,226µm,0.5s
ZIAN                               AML    AML
      comp=N,213µm,1.1s
ZIAN                               AML    AML
      comp=N,244µm,0.5s
ZIAN                               AML    AML
      comp=N,213µm,0.9s
OZOL  Ozolo              2.45 356  P      Pn     05 20 15.5 +1.3
OZOL                               AML    AML
      comp=E,784µm,1.5s
OZOL                               AML    AML
      comp=N,334µm,1.2s
OZOL                               AML    AML
      comp=E,408µm,0.5s
OZOL                               AML    AML
      comp=N,240µm,0.5s
OZOL                               AML    AML
      comp=E,782µm,1.5s
OZOL                               AML    AML
      comp=N,240µm,0.5s
OZOL                               AML    AML
      comp=E,782µm,0.5s
OZOL                               AML    AML
      comp=E,408µm,0.5s
OZOL                               AML    AML
      comp=N,334µm,1.2s
CARE  Lago del Cares     2.50 351  P      Pn     05 20 16.8 +1.7
CARE                               AML    AML
      comp=E,76µm,1.6s
CARE                               AML    AML
      comp=N,72µm,1.6s
CARE                               AML    AML
      comp=N,68µm,0.8s
CARE                               AML    AML
      comp=E,381µm,0.6s
CARE                               AML    AML
      comp=N,209µm,0.8s
CARE                               AML    AML
      comp=E,69µm,0.5s
CARE                               AML    AML
      comp=N,68µm,1.2s
CARE                               AML    AML
      comp=E,381µm,1.4s
APPI  Appiano            2.52 359  P      Pn     05 20 16.5 +1.4
APPI                               AML    AML
      comp=E,179µm,1.4s
APPI                               AML    AML
      comp=N,166µm,0.4s
APPI                               AML    AML
      comp=N,166µm,0.4s
APPI                               AML    AML
      comp=E,153µm,0.4s
SABO  M.te Sabotino      2.61  38  P      Pn     05 20 16.1 -0.1
SABO                               AML    AML
      comp=E,992µm,1.6s
SABO                               AML    AML
      comp=N,1060µm,0.9s
SABO                               AML    AML
      comp=E,205µm,0.6s
SABO                               AML    AML
      comp=N,248µm,1.5s
SABO                               AML    AML
      comp=E,205µm,0.6s
SABO                               AML    AML
      comp=N,1061µm,0.9s
SABO                               AML    AML
      comp=N,247µm,0.8s
SABO                               AML    AML
      comp=E,937µm,0.6s
SABO                               AML    AML
      comp=N,1061µm,1.1s
DRE   Drenchia           2.78  36  P      Pn     05 20 18.4 -0.2
SBF   Sospel             2.78 269  ePn    Pn     05 20 19.3 +0.6
SBF                                eSn    Sn     05 20 50.1 -2.2
      comp=N,16nm,0.2s
TUE   Stuetta            2.86 332  P      Pn     05 20 21.9 +1.9
TUE                                AML    AML
      comp=E,75µm,0.5s
TUE                                AML    AML
      comp=N,86µm,0.5s
TUE                                AML    AML
      comp=E,67µm,1.3s
TUE                                AML    AML
      comp=N,87µm,0.5s
TUE                                AML    AML
      comp=E,64µm,1.3s
TUE                                AML    AML
      comp=E,75µm,0.5s
TUE                                AML    AML
      comp=N,86µm,0.5s
TUE                                AML    AML
      comp=N,87µm,0.5s
ABTA  Abfaltersbach      2.92  17  ePn    Pn     05 20 22.7 +2.0
      comp=N,1.8nm,0.4s,SNR=9.7
ABTA                               eSn    Sn     05 20 56.9 +1.0
      comp=N,4.3nm,0.5s
FETA  Feichten           3.09 353  Pn     Pn     05 20 25.8 +2.7
      comp=N,2.5nm,0.3s,SNR=14
FETA                               eSn    Sn     05 21 02.3 +2.2
      comp=N,4.4nm,0.6s
FUSIO Fusio              3.11 324  P      Pn     05 20 24.5 +1.2
FUSIO                              AML    AML
      comp=N,75µm,0.9s
FUSIO                              AML    AML
      comp=E,101µm,0.9s
FUSIO                              AML    AML
      comp=E,101µm,1.1s
FUSIO                              AML    AML
      comp=N,75µm,1.1s
MYKA  Terra Mystica      3.15  31  ePn    Pn     05 20 24.6 +0.8
      comp=N,1.1nm,0.2s
MYKA                               eSn    Sn     05 21 02.8 +1.4
      comp=N,5.6nm,0.5s
SQTA  Sankt Quirin       3.27 359  Pn     Pn     05 20 28.5 +3.2
      comp=N,0.7nm,0.1s,SNR=16
SQTA                               eSn    Sn     05 21 00.6 -3.7
      comp=N,8.3nm,0.5s
WTTA  Wattenberg         3.32   4  Pn     Pn     05 20 29.1 +2.9
      comp=N,3.4nm,0.3s,SNR=6.1
WTTA                               eSn    Sn     05 21 08.9 +3.2
      comp=N,4.3nm,0.5s
WTTA  Wattenberg         3.32   4  ePn    Pn     05 20 28.8 +2.7
MBDF  Montbardon         3.33 285  ePn    Pn     05 20 26.5 +0.2
MBDF                               eSn    Sn     05 21 04.2 -1.6
      comp=N,8.2nm,0.4s
WATA  Walderalm          3.39   3  Pn     Pn     05 20 30.0 +2.9
      comp=N,4.9nm,0.2s,SNR=11
WATA                               eSn    Sn     05 21 10.1 +2.7
      comp=N,0.4nm,0.3s
MOTA  Moosalm            3.39 358  Pn     Pn     05 20 28.8 +1.7
      comp=N,2.9nm,0.2s,SNR=11
MOTA                               eSn    Sn     05 21 06.5 -0.9
      comp=N,16nm,0.6s
OBKA  Obir               3.44  41  ePn    Pn     05 20 28.6 +0.8
      comp=N,1.6nm,0.3s
OBKA                               eSn    Sn     05 21 10.3 +1.7
      comp=N,12nm,0.8s
OBKA  Obir               3.44  41  ePn    Pn     05 20 28.2 +0.4
KBA   Koelnbreinsper     3.44  24  Pn     Pn     05 20 28.6 +0.7
      comp=N,2.0nm,0.2s,SNR=8.0
KBA                                eSn    Sn     05 21 04.9 -3.9
      comp=N,10nm,1.0s
KBA   Koelnbreinsper     3.44  24  ePn    Pn     05 20 29.5 +1.6
ZUGS  Zugspitze, Sch     3.47 357  ePn    Pn     05 20 31.1 +2.7
DAVA  Damuels            3.47 344  i Pn   Pn     05 20 31.2 +2.9
      comp=N,7.4nm,0.3s,SNR=11
DAVA                               eSn    Sn     05 21 09.8 +0.3
      comp=N,2.7nm,0.4s
DAVA  Damuels            3.47 344  ePn    Pn     05 20 31.4 +3.1
LMR   La Mourre          3.52 261  ePn    Pn     05 20 28.4 -0.3
LMR                                eSn    Sn     05 21 08.1 -2.3
      comp=N,9.2nm,0.3s
BNALP Bannalp            3.54 326  P      Pn     05 20 32.0 +2.8
PART  Garmisch-Parte     3.54 358  ePn    Pn     05 20 31.8 +2.7
RETA  Reutte             3.55 354  Pn     Pn     05 20 31.9 +2.6
      comp=N,7.1nm,0.2s,SNR=6.6
RETA                               eSn    Sn     05 21 11.2  0.0
      comp=N,2.6nm,0.5s
LPG   La Plagne          3.58 297  ePn    Pn     05 20 30.3 +0.5
LPG                                eSn    Sn     05 21 12.1 -0.1
      comp=N,7.4nm,0.3s
LPL   La Plagne          3.60 297  eP     Pn     05 20 33.9 +3.9
LPL                                eSn    Sn     05 21 11.2 -1.4
      comp=N,10nm,0.5s
LESA  Schwarzleotal      3.60  15  Pn     Pn     05 20 32.4 +2.3
      comp=N,8.7nm,0.5s,SNR=7.5
LESA                               eSn    Sn     05 21 13.4 +0.8
      comp=N,16nm,0.5s
SOKA  Soboth             3.80  43  ePn    Pn     05 20 34.0 +1.4
      comp=N,0.4nm,0.2s
SOKA                               eSn    Sn     05 21 18.5 +1.2
      comp=N,0.8nm,0.5s
UBR   Ueberruh           3.81 348  ePn    Pn     05 20 34.9 +2.0
UBR                                eSn    Sn     05 21 19.0 +1.2
BE1   Monatshausen       3.96 359  ePn    Pn     05 20 37.7 +2.8
ORIF  Oris-en-Rattie     3.99 286  eP     Pn     05 20 38.4 +3.1
ORIF                               eSn    Sn     05 21 20.4 -1.6
      comp=N,3.9nm,0.3s
BIOA  Bad Ischl, Aus     4.08  23  ePn    Pn     05 20 38.2 +1.7
      comp=N,0.8nm,0.2s
BIOA                               eSn    Sn     05 21 27.0 +2.7
      comp=N,12nm,0.8s
SMRF  Simiane la Rot     4.12 272  ePn    Pn     05 20 37.8 +0.7
SMRF                               eSn    Sn     05 21 24.1 -1.2
      comp=N,2.8nm,0.3s
MOA   Molln              4.42  27  ePn    Pn     05 20 42.5 +1.4
      comp=N,0.3nm,0.1s
MOA                                eSn    Sn     05 21 32.7 +0.2
      comp=N,3.9nm,0.6s
MOA   Molln              4.42  27  ePn    Pn     05 20 42.6 +1.5
MOA                                eSn    Sn     05 21 33.7 +1.2
ARSA  Arzberg            4.44  41  ePn    Pn     05 20 40.6 -0.8
      comp=N,0.1nm,0.1s
CABF  La Chapelle        4.53 308  ePn    Pn     05 20 44.5 +1.8
CABF                               eSn    Sn     05 21 32.9 -2.4
      comp=N,1.3nm,0.2s
VIVF  Saint-Julien-l     4.82 283  ePn    Pn     05 20 47.0 +0.3
VIVF                               eSn    Sn     05 21 39.6 -2.9
      comp=N,3.1nm,0.3s
BFO   Black Forest       4.83 336  ePn    Pn     05 20 47.4 +0.5
HINF  Hinteralfeld       4.95 323  ePn    Pn     05 20 49.0 +0.6
HINF                               eSn    Sn     05 21 44.8 -0.8
      comp=N,15nm,0.6s
CONA  Conrad Observa     5.10  37  ePn    Pn     05 20 51.6 +1.0
      comp=N,0.5nm,0.6s
CONA                               eSn    Sn     05 21 49.6 +0.3
      comp=N,5.9nm,0.8s
RONA  Rosalia, Austr     5.13  41  ePn    Pn     05 20 51.9 +1.0
      comp=N,1.5nm,0.2s
RONA                               eSn    Sn     05 21 48.9 -1.1
      comp=N,1.2nm,0.5s
GEC2  GERESS Array S     5.17  18  ePn    Pn     05 20 52.1 +0.6
CDF   Champ du Feu       5.25 329  ePn    Pn     05 20 53.1 +0.4
CDF                                eSn    Sn     05 21 51.4 -1.8
      comp=N,6.9nm,0.4s
CKRC  Cesky Krumlov      5.30  22  ePN    Pn     05 20 55.1 +1.9
CKRC                               eSN    Sn     05 21 50.4 -3.8
WET   Wettzell           5.31  11  ePn    Pn     05 20 53.2 -0.1
HAU   Haudompre          5.31 321  ePn    Pn     05 20 54.2 +0.8
HAU                                eSn    Sn     05 21 53.5 -1.1
      comp=N,20nm,0.4s
LASF  Ste Croix          5.36 274  ePn    Pn     05 20 54.0  0.0
LASF                               eSn    Sn     05 21 51.9 -3.8
      comp=N,0.5nm,0.2s
KHC   Kasperske Hory     5.41  16  ePN    Pn     05 20 55.1 +0.3
KHC                                eSN    Sn     05 21 55.2 -1.9
ZVC   Zvikov             5.84  19  ePN    Pn     05 21 00.7 +0.1
ZVC                                eSN    Sn     05 22 05.2 -2.3
ROTZ  Rotzenmuhle        5.85   6  ePn    Pn     05 21 00.5 -0.3
SMF   Signal de Mont     5.90 300  ePn    Pn     05 21 02.8 +1.4
SMF                                eSn    Sn     05 22 07.4 -1.6
      comp=N,3.6nm,0.4s
PAGF  Fort de Pagny      6.00 322  ePn    Pn     05 21 05.1 +2.3
PAGF                               eSn    Sn     05 22 09.0 -2.5
      comp=N,1.1nm,0.1s
MODS  Modra-Piesok       6.07  41  ePN    Pn     05 21 04.4 +0.6
MODS                               eSN    Sn     05 22 10.9 -2.4
LOR   Lormes             6.17 305  ePn    Pn     05 21 06.2 +1.0
LOR                                eSn    Sn     05 22 15.2 -0.5
      comp=N,8.6nm,0.5s
AVF   Avril sur Loir     6.26 300  ePn    Pn     05 21 07.8 +1.4
AVF                                eSn    Sn     05 22 13.7 -4.3
      comp=N,1.1nm,0.2s
MEZF  Maizieres J’vi     6.27 319  ePn    Pn     05 21 08.2 +1.7
SSF   Saint Saulge       6.28 302  ePn    Pn     05 21 08.1 +1.4
SSF                                eSn    Sn     05 22 15.7 -2.8
      comp=N,3.1nm,0.4s
SAVF  Savonnieres en     6.32 320  ePn    Pn     05 21 08.3 +1.1
BGF   Bois d'Agland      6.50 297  eP     Pn     05 21 14.0 +4.3
BGF                                eSn    Sn     05 22 19.0 -4.8
      comp=N,1.9nm,0.2s
MTLF  Montolieu          6.61 268  ePn    Pn     05 21 11.5 +0.3
MTLF                               eSn    Sn     05 22 22.5 -3.9
      comp=N,1.2nm,0.2s
CLL   Collm              7.45   8  ePn    Pn     05 21 22.0 -0.7
CLL                                ePg    Pg     05 21 54.0 -2.6
CLL                                eSg    Sg     05 23 28.0 -5.0
```

IDC ***09*** *05:19:39.4±21.0, 17°.18S×175°.10W, h170*^{km}*±194*^{km}*, mb3.7/7, mbtmp4.1/7, Error ellipse: s-maj=43.2km s-min=26.8km az=79.0*

NEIC ***09*** *05:19:47.6±0.8, 17°.3S±0°.1×175°.1W±0°.1, h243*^{km}*±2*^{km}*, mb4.0/10, Error ellipse: s-maj=20.6km s-min=15.8km az=111.0*

ISC 09 05:19:48.8±0.7**, 17°.28S**±0°.08×**175°.09W**±0°.09**, h256**^{km}**, n40, σ1**^{s}**.60**/44**, mb3.8**/11**, Tonga Islands**

```
Code  Station Name        Δ°  AZ°   Phase ID        Time       Res
                                   Op     ISC      h  m  s    ISC
AFI   Afiamalu           4.63  44  Pn     Pn     05 20 59.3 -1.1
NIUE  Niue               5.22 111  Pn     Pn     05 21 05.1 -2.4
NIUE  Niue               5.22 111  P      Pn     05 21 03.4 -4.1
NIUE                               S      S      05 22 11.6 +1.2
RIZ   Raoul Island      12.19 192  S      S      05 24 38.2  -12
GLKZ  Green Lake        12.21 192  P      Pn     05 22 34.9 +0.2
GLKZ                               S      S      05 24 38.4  -12
OUZ   Omahuta           20.52 207  P      P      05 24 09.0 +1.1
MXZ   Matakaoa Point    21.03 195  P      P      05 24 14.4 +1.3
HAZ   Te Kaha           21.34 196  P      P      05 24 16.2 +0.1
HAZ                                S      S      05 27 53.6 -1.9
PKGZ  Pakihiroa         21.37 195  P      P      05 24 18.3 +1.8
PKGZ                               S      S      05 27 54.1 -1.9
PUZ   Puketiti          21.52 194  P      P      05 24 20.1 +2.2
PUZ                                S      S      05 27 56.3 -2.2
RUGZ  Raukumara Rang    21.57 196  P      P      05 24 18.5 +0.1
RUGZ                               S      S      05 28 00.6 +1.2
TWGZ  Tauwhareparae     21.69 195  P      P      05 24 20.8 +1.3
TWGZ                               S      S      05 27 59.7 -1.5
URZ   Urewera           21.99 197  P      P      05 24 22.6 +0.5
RAGZ  Rawiri            22.13 196  P      P      05 24 25.8 +2.3
RIGZ  Rimuhau           22.25 195  P      P      05 24 27.5 +3.0
SNGZ  Shannon Statio    22.42 196  P      P      05 24 29.8 +3.7
KNZ   Kokohu            22.57 195  P      P      05 24 30.5 +3.2
RAHZ  Arahi             22.61 196  P      P      05 24 30.7 +2.8
NMHZ  Naumai            22.86 196  P      P      05 24 32.2 +2.0
ARMA  Armidale          33.00 241  P      P      05 26 00.4 +0.1
STKA  Stephens Creek    41.70 241  P      P      05 27 12.8 -0.2
      1.6nm,0.5s,baz=104,slow=4.2,SNR=3.7
      1.6nm,0.5s
WB0   Warramunga Arr    47.82 259  P      P      05 28 00.3 -1.0
WB0                                IAmb   IAmb   05 28 00.4
      comp=Z,5.9nm,1.1s
WRA   Warramunga Arr    47.86 259  P      P      05 27 59.8 -1.8
      comp=Z,1.8nm,0.7s,baz=95,slow=7.4,SNR=11
      comp=Z,1.8nm,0.7s
WRA   Warramunga Arr    47.86 259  P      P      05 28 00.1 -1.4
AS31  Alice Springs     48.00 254  P      P      05 28 01.8 -0.9
AS31                               IAmb   IAmb   05 28 02.6
      comp=Z,2.3nm,0.7s
ASAR  Alice Springs     48.00 254  P      P      05 28 01.6 -1.0
      comp=Z,8.1nm,0.7s,baz=85,slow=8.7,SNR=87
      comp=Z,8.1nm,0.7s
ASAR  Alice Springs     48.00 254  P      P      05 28 01.4 -1.3
FITZ  Fitzroy Crossi    56.25 260  P      P      05 29 02.4 -0.8
VNDA  Vanda             61.36 186  P      P      05 29 37.8 +0.5
      comp=Z,1.1nm,0.7s,baz=30,slow=3.0,SNR=2.2
      comp=Z,1.1nm,0.7s
VNDA  Vanda             61.36 186  P      P      05 29 38.9 +1.6
VNDA                               IAmb   IAmb   05 29 47.7
      comp=Z,7.6nm,1.4s
QSPA  South Pole Qui    72.78 180  P      P      05 30 49.2 +0.1
      comp=Z,1.8nm,0.5s,baz=37,slow=0.2,SNR=8.3
      comp=Z,1.8nm,0.5s
QSPA  South Pole Qui    72.78 180  P      P      05 30 49.3 +0.1
QSPA                               IAmb   IAmb   05 30 50.0
      comp=Z,5.0nm,1.0s
J16K  Anvik River       81.10   7  P      P      05 31 36.9 +1.7
CCB   Clear Creek Bu    84.31  11  P      P      05 31 51.8 +0.2
CCB                                IAmb   IAmb   05 32 05.9
      comp=Z,3.8nm,1.4s
IMAR  Indian Mountai    84.56   9  P      P      05 31 53.3 +0.5
ILAR  Eielson Array     84.60  12  P      P      05 31 52.7 -0.3
      comp=Z,0.6nm,0.6s,baz=223,slow=5.3,SNR=16
      comp=Z,0.6nm,0.6s
ILAR  Eielson Array     84.60  12  P      P      05 31 53.2 +0.2
PDAR  Pinedale Array    84.74  42  P      P      05 31 54.4 -0.2
      comp=Z,0.5nm,1.0s,baz=270,slow=5.6,SNR=3.2
      comp=Z,0.5nm,1.0s
I28M  Miner Creek       86.66  14  P      P      05 32 04.0 +0.7
I28M                               IAmb   IAmb   05 32 10.3
      comp=Z,2.9nm,1.5s
BRTR  Keskin Array B   146.52 318  PKPbc  PKPbc  05 39 00.5 +0.1
      comp=Z,0.7nm,0.7s,baz=151,slow=2.8,SNR=4.4
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AFAD ***09*** *05:27:37.7, 40°.48N×26°.46E, h7*^{km}*±2*^{km}*, ML1.3*

ISK 09 05:27:37.3, 40°.51N×26°.53E, h7^{km}**, ML1.7**/13**, Turkey**

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Code  Station Name        Δ°  AZ°   Phase ID        Time       Res
                                   Op     ISC      h  m  s    ISC
GELI  Tayfur-Gelibol     0.12 200  Pg     Pg     05 27 40.3 +0.5
GELI                               Sg     Sg     05 27 42.7 +1.2
ERIK  Erikli-Kesan       0.16 357  Pg     Pg     05 27 41.1 +0.4
ERIK                               Sg     Sg     05 27 43.9 +1.0
LPK   Lapseki            0.22 127  Pg     Pg     05 27 42.4 +0.7
LPK                                Sg     Sg     05 27 46.3 +1.6
CAVK  Edirne/Enez-Ca     0.33 304  P      Pg     05 27 44.1 +0.3
CAVK                               S      Sg     05 27 48.7 +0.6
CAVK                               i IAML        05 27 49.0
      comp=N,48nm,0.2s
KESN  Edirne-Kesan       0.34  20  P      Pb     05 27 45.0 -0.9
KESN                               S      Sg     05 27 48.5 -0.1
KESN                               i IAML        05 27 51.0
      comp=E,34nm,0.4s
KESN                               i IAML        05 27 52.0
      comp=N,34nm,0.4s
COMU  Canakkale          0.41 186  Pg     Pg     05 27 45.6 +0.3
COMU                               Sg     Sg     05 27 51.5 +0.9
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CNKL	anakkale-Mer	0.45	194	P	Pb	05 27 47.7	0.0
CNKL				S	Sg	05 27 52.8	+0.8
ECEA	Canakkale, Ece	0.53	210	P	Pg	05 27 48.1	+0.5
ECEA				S	Sg	05 27 55.6	+1.0
GOAD	anakkale-G¶	0.58	234	P	Pg	05 27 48.2	-0.3
GOAD				S	Sg	05 27 56.0	-0.1
GOAD				i IAML		05 27 57.0	
	comp=E,24nm,0.6s						
GOAD				i IAML		05 27 58.0	
	comp=N,22nm,0.2s						
KRBG	Karabiga-Canak	0.60	101	Pg	Pg	05 27 48.7	-0.2
UKOP	Uzunkopru-Edir	0.63	7	Pg	Pb	05 27 50.4	-0.2
CANM	Can-anakkale	0.64	141	Pg	Pg	05 27 50.0	+0.4
EZN	Ezine	0.70	193	Pg	Pb	05 27 51.3	-0.5
BOZC	Bozcaada	0.76	209	Pg	Pg	05 27 52.3	+0.5
MRMT	Marmara Adasi	0.82	83	Pg	Pg	05 27 52.8	-0.3
RDO	Rodhopi	0.98	311	Pg	Pg	05 27 56.3	+0.1
SUSR	Susurluk-Balik	1.31	114	Pn	Pn	05 27 59.9	-2.2
KDZ	Kurdzhali	1.44	322	Pn	Pb	05 28 04.4	0.0

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*IDC **09** 05:28:19.6±0.4, 13.°96N×144.°85E, h193^{km}±3^{km}, mb3.7/14, mbtmp4.2/14, Error ellipse: s-maj=24.1km s-min=11.5km az=85.0*

*NEIC **09** 05:28:21.1±1.1, 13.°94N±0.°09×144.°4E±0.°1, h188^{km}±5^{km}, mb4.3/22, Error ellipse: s-maj=19.2km s-min=13.0km az=98.0*

ISC 09 05:28:21.1±0.5**, 13.°93N**±0.°07×**144.°5E**±0.°1**, h200**^{km}**, n48, σ0.^{s}99**/50**, mb4.2**/27**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.47	137	P	Pn	05 28 46.9	-1.2
	869nm,0.4s,baz=173,slow=5.7,SNR=38						
GUMO				S	Sn	05 29 06.6	-2.4
	499nm,0.3s,baz=46,slow=22,SNR=27						
GUMO	Guam	0.47	137	Pn	Pn	05 28 47.1	-1.0
GUMO				Sn	Sn	05 29 07.2	-1.8
DPSS	Saipan	1.78	43	Pn	Pn	05 28 57.4	0.0
FAKI	Fak Fak	20.71	217	P	P	05 32 45.6	-0.6
MJAR	Matsushiro Arr	23.22	347	P	P	05 33 09.3	-1.1
	1.5nm,0.4s,baz=170,slow=9.5,SNR=5.2						
	1.5nm,0.4s						
KSRS	Korea Array	27.71	331	P	P	05 33 49.6	-1.2
	1.5nm,0.4s,baz=153,slow=9.6,SNR=4.1						
	1.5nm,0.4s						
COEN	Coen	27.74	183	P	P	05 33 51.6	+0.3
COEN				IAmb	IAmb	05 34 28.8	
	comp=Z,5.7nm,0.8s						
MTN	Manton Dam	29.73	207	P	P	05 34 08.3	-0.6
MTN				IAmb	IAmb	05 34 08.7	
	comp=Z,7.9nm,1.2s						
KNRA	Kununurra	33.30	208	P	P	05 34 39.9	-0.1
KNRA				IAmb	IAmb	05 35 12.7	
	comp=Z,9.8nm,1.4s						
WB0	Warramunga Arr	34.94	197	P	P	05 34 53.9	-0.3
WB0				IAmb	IAmb	05 34 54.6	
	comp=Z,4.3nm,0.5s						
WRAB	Tennant Creek	35.11	197	P	P	05 34 55.6	0.0
WRAB				IAmb	IAmb	05 34 56.2	
	comp=Z,4.3nm,0.6s						
WRA	Warramunga Arr	35.13	197	P	P	05 34 55.7	0.0
	comp=Z,1.6nm,0.4s,baz=17,slow=9.3,SNR=39						
	comp=Z,1.6nm,0.4s						
WRA	Warramunga Arr	35.13	197	P	P	05 34 53.4	-2.3
SANVU	Saraoutou	36.80	142	P	P	05 35 10.9	+0.9
FITZ	Fitzroy Crossi	36.88	211	P	P	05 35 10.9	+0.2
AS31	Alice Springs	38.79	196	P	P	05 35 27.1	+0.5
AS31				IAmb	IAmb	05 35 28.1	
	comp=Z,1.7nm,0.3s						
ASAR	Alice Springs	38.79	196	P	P	05 35 26.1	-0.5
	comp=Z,0.6nm,0.4s,baz=15,slow=12,SNR=17						
	comp=Z,0.6nm,0.4s						
ASAR	Alice Springs	38.79	196	P	P	05 35 26.9	+0.3
DZM	Mont Dzumac	41.73	149	P	P	05 35 52.7	+1.8
	comp=Z,11nm,0.5s,baz=285,slow=12,SNR=5.7						
DZM	Mont Dzumac	41.73	149	P	P	05 35 52.5	+1.6
LZDM	Lanzhou Array	42.62	308	P	P	05 35 59.6	+1.4
	comp=Z,1.6nm,0.3s,baz=197,slow=7.5,SNR=3.5						
	comp=Z,1.6nm,0.3s						
STKA	Stephens Creek	45.63	184	P	P	05 36 21.4	-0.2
	comp=Z,1.5nm,0.3s,baz=356,slow=15,SNR=4.9						
	comp=Z,1.5nm,0.3s						
SONM	Songino Array	46.27	325	P	P	05 36 27.8	+1.2
	comp=Z,1.0nm,0.5s,baz=140,slow=7.0,SNR=6.5						
	comp=Z,1.0nm,0.5s						
BBOO	Buckleboo	47.18	190	P	P	05 36 34.1	+0.4
BBOO				IAmb	IAmb	05 36 40.2	
	comp=Z,23nm,1.3s						
FORT	Forrest	47.20	199	P	P	05 36 34.1	+0.3
FORT				IAmb	IAmb	05 36 35.2	
	comp=Z,7.0nm,0.7s						
MORW	Morawa	50.85	213	P	P	05 37 01.3	-0.3
BKZ	Black Stump Fm	60.66	152	P	P	05 38 12.1	+0.9
MK31	Makanchi Array	61.02	316	P	P	05 38 14.2	+0.6
MKAR	Makanchi Array	61.02	316	P	P	05 38 14.6	+1.0
	comp=Z,2.1nm,0.5s,baz=91,slow=8.9,SNR=12						
	comp=Z,2.1nm,0.5s						
MKAR	Makanchi Array	61.02	316	P	P	05 38 14.2	+0.6
ZALV	Zalesovo Beam	61.16	324	P	P	05 38 14.2	-0.1
	comp=Z,0.7nm,0.5s,baz=95,slow=7.2,SNR=2.3						
	comp=Z,0.7nm,0.5s						
MAKZ	Makanchi	61.24	316	P	P	05 38 15.7	+0.7
MAKZ				IAmb	IAmb	05 38 16.6	
	comp=Z,3.1nm,0.7s						
TCW	Tory Channel	61.38	155	P	P	05 38 16.7	+0.8
KURK	Kurchatov	64.12	320	P	P	05 38 34.0	+0.1
KURK				IAmb	IAmb	05 38 34.7	
	comp=Z,3.5nm,0.7s						
KURBB	Kurchatov Arra	64.16	320	P	P	05 38 34.6	+0.4
	comp=Z,3.6nm,0.5s,baz=103,slow=6.7,SNR=36						
	comp=Z,3.6nm,0.5s						
ILAR	Eielson Array	68.40	25	P	P	05 38 58.5	-2.4
	comp=Z,0.4nm,0.5s,baz=253,slow=5.6,SNR=15						
	comp=Z,0.4nm,0.5s						
BVAR	Borovoye Array	69.46	322	P	P	05 39 07.9	+0.3
	comp=Z,3.5nm,0.5s,baz=104,slow=7.8,SNR=14						
	comp=Z,3.5nm,0.5s						
BCAR	Beaver Creek A	70.29	28	P	P	05 39 12.6	+0.1
AB31	Akbulak array	76.07	318	P	P	05 39 46.5	-0.1
ABKAR	Akbulak array	76.07	318	P	P	05 39 46.4	-0.2
J05D	Fort Rock, OR	83.62	47	P	P	05 40 28.3	+0.9
J05D				IAmb	IAmb	05 40 38.6	
	comp=Z,4.5nm,1.4s						
PINE	Pine Mountain	83.71	47	P	P	05 40 29.0	+1.1
K05A	Summer Lake	83.99	48	P	P	05 40 30.1	+0.7
K05A				IAmb	IAmb	05 40 54.3	
	comp=Z,5.2nm,1.4s						
NVAR	Mina Array Bea	86.96	51	P	P	05 40 43.8	-0.4
	comp=Z,0.6nm,0.6s,baz=262,slow=6.8,SNR=5.0						
	comp=Z,0.6nm,0.6s						
FINES	FINESS Array B	90.72	335	P	P	05 40 59.4	-1.6
	comp=Z,6.6nm,1.0s,baz=114,slow=6.5,SNR=2.1						
	comp=Z,6.6nm,1.0s						
SNAA	Sanae	119.06	191	PKPdf	PKPdf	05 46 45.5	0.0
AC05	El Transito	144.51	120	PKPdf	PKPdf	05 47 34.8	+0.4
TRQA	Tornquist	146.38	140	PKPbc	PKPbc	05 47 39.3	+0.5

ROM 09 05:29:03.6±0.1**, 44.°007N**±0.°003×**11.°326E**±0.°004**, h9**^{km}**, ML1.8**/18**, 2C-1D, Error ellipse: s-maj=0.2km s-min=0.2km az=205.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCL	Monte Cuccoli	0.10	269	⇑P	Pg	05 29 06.7	+0.6
MOCL				S	Sg	05 29 08.6	+0.7
MOCL				AML	AML		
	comp=E,1735µm,0.2s						
MOCL				AML	AML		
	comp=N,2845µm,0.2s						
MOCL				AML	AML		
	comp=E,1733µm,0.2s						
MOCL				AML	AML		
	comp=N,2847µm,0.2s						
MPPT	Montemurlo	0.18	254	⇑P	Pg	05 29 08.0	+0.7
MPPT				S	Sg	05 29 11.2	+1.3
MPPT				AML	AML		
	comp=E,328µm,1.2s						
MPPT				AML	AML		
	comp=N,336µm,0.3s						
MPPT				AML	AML		
	comp=E,314µm,0.2s						
MPPT				AML	AML		
	comp=N,335µm,0.3s						
MPPT				AML	AML		
	comp=N,335µm,1.7s						
MPPT				AML	AML		
	comp=E,314µm,1.8s						
FIE	Fiesole	0.20	186	P	Pg	05 29 08.3	+0.7
FIE				S	Sg	05 29 11.5	+1.0
RUFI	Rufina	0.21	141	P	Pg	05 29 08.6	+0.7
RUFI				S	Sg	05 29 12.4	+1.6
RUFI				AML	AML		
	comp=E,202µm,0.6s						
RUFI				AML	AML		
	comp=N,139µm,1.2s						
RUFI				AML	AML		
	comp=E,172µm,0.2s						
RUFI				AML	AML		
	comp=N,121µm,0.8s						
FNVD	Fontana Vidola	0.22	318	P	Pg	05 29 08.7	+0.7
FNVD				S	Sg	05 29 12.2	+1.2
FIR	Firenze	0.24	192	P	Pg	05 29 09.3	+0.9
FIR				S	Sg	05 29 13.4	+1.8
LMD	Lutirano	0.28	75	⇓P	Pg	05 29 09.9	+0.6
LMD				S	Sb	05 29 14.8	-1.0
LMD				AML	AML		
	comp=E,338µm,0.4s						
LMD				AML	AML		
	comp=N,506µm,0.2s						
LMD				AML	AML		
	comp=E,337µm,0.4s						
LMD				AML	AML		
	comp=N,506µm,0.2s						
CRMI	Carmignano	0.34	230	P	Pg	05 29 10.6	+0.3
CRMI				S	Sb	05 29 16.2	-1.1
MTRZ	Monterenzio	0.38	15	P	Pg	05 29 11.2	0.0
ASQU	Asqua	0.40	122	P	Pb	05 29 12.2	-0.7
ASQU				S	Sb	05 29 18.4	-0.6
ASQU				AML	AML		
	comp=E,96µm,1.5s						
ASQU				AML	AML		
	comp=N,91µm,1.5s						
ASQU				AML	AML		
	comp=E,96µm,1.5s						
ASQU				AML	AML		
	comp=E,70µm,0.2s						
ASQU				AML	AML		
	comp=N,77µm,0.2s						
POPM	Popiglio	0.41	276	P	Pg	05 29 12.1	+0.5
POPM				S	Sb	05 29 18.6	-0.9
POPM				AML	AML		
	comp=E,203µm,1.1s						
POPM				AML	AML		
	comp=N,276µm,0.7s						
POPM				AML	AML		
	comp=N,253µm,0.2s						
POPM				AML	AML		
	comp=E,203µm,0.2s						
OSSC	Osservatorio P	0.49	187	P	Pg	05 29 13.6	+0.5
OSSC				S	Sb	05 29 21.3	-0.3
OSSC				AML	AML		
	comp=E,224µm,0.2s						
OSSC				AML	AML		
	comp=N,128µm,1.3s						
OSSC				AML	AML		
	comp=N,128µm,1.3s						
OSSC				AML	AML		
	comp=E,224µm,0.2s						
OSSC				AML	AML		
	comp=N,124µm,0.3s						
OSSC				AML	AML		
	comp=N,201µm,0.2s						
OSSC				AML	AML		
	comp=N,201µm,1.8s						
OSSC				AML	AML		
	comp=E,224µm,1.8s						
OSSC				AML	AML		
	comp=E,144µm,0.3s						
CSNT	Castellina Chi	0.54	183	P	Pg	05 29 14.3	+0.4
CSNT				S	Sb	05 29 22.6	-0.5
CSNT				AML	AML		
	comp=E,172µm,0.4s						
CSNT				AML	AML		
	comp=E,136µm,0.2s						
CSNT				AML	AML		
	comp=N,168µm,0.2s						
CSNT				AML	AML		
	comp=E,136µm,0.2s						
CSNT				AML	AML		
	comp=N,167µm,0.2s						

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*IDC **09** 05:29:09.7±2.8, 41.°20N×19.°02E, h0^{km}, mb3.9/8, mbtmp3.9/11, ML3.9/3, MS3.7/3, Error ellipse: s-maj=41.0km s-min=38.0km az=37.0*

*NEIC **09** 05:29:15.5±1.0, 41.°67N±0.°04×19.°45E±0.°07, h10^{km}±1^{km}, mb4.5/21, Error ellipse: s-maj=8.6km s-min=6.4km az=92.0*

*BEO **09** 05:29:15.2±0.5, 41.°40N×19.°50E, h4^{km}±2^{km}, ML3.5/24*

*SKO **09** 05:29:16.3, 41.°39N×19.°37E, h13^{km}, ML3.8*

*TIR **09** 05:29:16.9, 41.°57N×19.°50E, h31^{km}±1^{km}, Ml3.9/5*

*THE **09** 05:29:17.8, 42°N±11°×2°0E±1°5, h1^{km}±27^{km}, M3.5/16, MLh3.5/16*

*PDG **09** 05:29:17.2±0.7, 41.°53N×19.°45E, h19^{km}±1^{km}, MD3.5/5, ML3.4/12, Error ellipse: s-maj=0.7km s-min=2.2km az=0.0*

ISC 09 05:29:16.3±0.9**, 41.°53N**±0.°02×**19.°48E**±0.°02**, h18**^{km}±4^{km}**, n173, σ1.^{s}61**/235**, mb4.4**/16**, MS3.9**/3**, 30C-19D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.34	122	P	Pg	05 29 23.2	-0.3
TIR				Sg	Sg	05 29 27.7	-0.6
TIR				AML	AML	05 29 28.3	
	119nm,0.2s						
TIR	Tirane	0.34	122	⇑iPg	Pg	05 29 23.2	-0.3
TIR				i Sg	Sb	05 29 29.0	+0.1
ULC	Ulcinj	0.47	338	⇑iPg	Pb	05 29 26.2	+0.1
ULC				i Sg	Sb	05 29 33.9	+1.1
SDA	Shkodra	0.53	1	Pg	Pb	05 29 26.8	-0.2
SDA				Sg	Sb	05 29 35.1	+0.9
DRME	Dracevica, Mon	0.70	341	ePg	Pg	05 29 30.2	+0.2
DRME				eSg	Sn	05 29 41.2	-0.4
PHP	Peshkopia	0.74	77	Pg	Pb	05 29 29.6	-1.0
PHP				Sg	Sg	05 29 41.2	+0.6
PHP				AML	AML	05 29 47.2	
	21nm,0.6s						
PHP	Peshkopia	0.74	77	P	Pb	05 29 29.9	-0.7
PHP				S	Sg	05 29 40.8	+0.3
BUM	Brajici-Budva	0.89	331	ePg	Pg	05 29 33.6	0.0
BUM				i Sg	Sn	05 29 47.7	+1.3
PDG	Podgorica	0.92	349	P	Pb	05 29 33.5	-0.2
PDG				S	Sg	05 29 46.8	+0.5
PDG	Podgorica	0.92	349		Pb	05 29 33.4	-0.3
PDG	Podgorica	0.92	349	ePg	Pb	05 29 33.5	-0.2
PDG				eSg	Sn	05 29 49.7	+2.7
PDG	Podgorica	0.92	349	ePg	Pn	05 29 34.1	-0.2
PDG				i Sg	Sn	05 29 48.7	+1.7
VLO	Vlora	1.06	179	P	Pg	05 29 37.8	+1.1
VLO				Sg	Sg	05 29 52.3	+1.7
VLO				AML	AML	05 29 58.7	
	13nm,0.4s						
VLO	Vlora	1.06	179	P	Pg	05 29 37.8	+1.1
VLO				S	Sg	05 29 53.2	+2.6
OHR	Ohrid	1.07	112	i Pg	Pg	05 29 37.7	+0.6
OHR				i Sg	Sg	05 29 53.7	+2.4
OHR				eLg	Lg	05 29 55.4	
	comp=N,3µm,0.8s						
OHR				eLg	Lg	05 29 56.9	
	comp=E,2µm,0.6s						
CEME	Cevo	1.10	338	ePg	Pg	05 29 37.5	-0.2
CEME				eSg	Sg	05 29 54.9	+2.8
PVY	Plav	1.12	18	ePg	Pg	05 29 38.1	0.0
PVY				i Sg	Sg	05 29 55.8	+2.9
HCY	Herceg Novi	1.18	322	ePg	Pg	05 29 38.9	-0.2
HCY				i Sg	Sg	05 29 57.3	+2.8
NKME	Niksic	1.30	343	ePg	Pg	05 29 41.2	-0.2
NKME				eSg	Sg	05 30 00.7	+2.3
KOME	Kolasin	1.32	1	⇑iPg	Pg	05 29 41.6	-0.3
KOME				eSg	Sg	05 30 01.3	+2.1
KBN	Korca	1.34	132	Pg	Pg	05 29 41.7	-0.3
KBN				Sg	Sg	05 30 00.3	+0.7
KBN	Korca	1.34	132	P	Pg	05 29 42.3	+0.2
KBN				S	Sg	05 30 00.5	+0.9
IVA	Berane	1.38	13	ePg	Pb	05 29 42.4	+0.8
IVA				i Sg	Sg	05 30 02.7	+1.8
TREB	Trebinje	1.46	325	ePn	Pb	05 29 43.3	+0.4
TREB	Trebinje	1.46	325	ePg	Pb	05 29 43.0	+0.1
TREB				eSg	Sg	05 30 05.2	+1.8
SKO	Skopje	1.53	72	i Pn	Pb	05 29 45.1	+0.9
SKO				i Sn	Sg	05 30 06.7	+1.0
BRY	Bratogost	1.54	333	⇓iPg	Pb	05 29 44.8	+0.4
BRY				i Sg	Sg	05 30 06.4	+0.3
NEST	Nestorio	1.62	133	P	Pb	05 29 46.8	+1.0
KLINJ	Klinje	1.77	338	ePn	Pb	05 29 48.7	+0.4
SJES	Sjenica	1.77	12	ePn	Pb	05 29 49.0	+0.7
SJES				eSn	Sg	05 30 12.8	-0.6
PLE	Pljevlja	1.80	358	ePn	Pb	05 29 48.5	-0.3
PLE				i Sn	Sb	05 30 12.9	+1.7
KEK	Kerkira	1.83	172	P	Pg	05 29 52.0	+0.6
KEK	Kerkira	1.83	172		Pb	05 29 50.3	+1.1
PENT	Pentalofos	1.83	136	P	Pb	05 29 49.4	+0.1
STON	Ston	1.89	316	ePn	Pb	05 29 51.0	+0.8
STON				eSn	Sg	05 30 16.0	-1.1
NOCI	Noci	1.97	249	Pn	Pb	05 29 51.9	+0.4
SELS	Selova	2.08	35	ePn	Pb	05 29 52.3	-1.2
SELS				eSn	Sb	05 30 19.9	+0.8
RUDO	Rudo	2.09	358	ePn	Pb	05 29 52.5	-1.2
RUDO	Rudo	2.09	358	ePn	Pb	05 29 52.9	-0.8
RUDO				eSn	Sb	05 30 20.7	+1.4
IGT	Igoumenitsa	2.10	162	Pn	Pb	05 29 53.0	-0.7
IGT				Sn	Sb	05 30 21.1	+1.8
IGT	Igoumenitsa	2.10	162	P	Pn	05 29 51.8	+1.3
IVAS	Ivanjica	2.11	13	ePn	Pb	05 29 52.6	-1.4
IVAS				eSn	Sb	05 30 21.5	+1.6
KZN	Kozani	2.12	124	P	Pb	05 29 53.3	-0.9
KPRO	Kipourio	2.12	137	P	Pb	05 29 53.9	-0.4
JAN	Janina	2.14	150	P	Pb	05 29 54.9	+0.4
BARS	Barje	2.16	53	⇑iPn	Pn	05 29 53.2	+1.9
BARS				i Sn	Sb	05 30 22.9	+1.6
BARS	Barje	2.16	53	ePn	Pn	05 29 53.3	+1.9
BARS				eSn	Sb	05 30 22.0	+0.7
GRG	Griva	2.27	104	P	Pn	05 29 54.7	+1.7
MATE	Matera	2.27	248	⇓P	Pg	05 29 59.7	-0.3
GOCS	Kraljevo Serbi	2.28	26	ePn	Pn	05 29 55.0	+1.9
GOCS				eSn	Sb	05 30 24.0	-0.8
VAY	Valandovo	2.33	94	⇓iPn	Pn	05 29 55.5	+1.8
VAY				eSn	Sn	05 30 23.3	+1.4
VAY				eLg	Lg	05 30 33.2	
	comp=E,209nm,0.6s						
VAY				eLg	Lg	05 30 35.4	
	comp=N,307nm,0.6s						
BBLS	Lazi&#263i	2.34	359	ePn	Pn	05 29 55.9	+2.0
BBLS				eSn	Sb	05 30 28.3	+1.8
PRMD	Pramanda	2.34	148	P	Pb	05 29 56.8	-1.2
BOSS	Bosilegrad	2.44	66	ePn	Pn	05 29 56.9	+1.7
BOSS				eSn	Sb	05 30 28.4	-0.8
GRUS	Gruza	2.53	21	ePn	Pn	05 29 58.6	+2.2
GRUS				eSn	Sb	05 30 30.5	-1.4
TETR	Tetrakomo, Epi	2.57	147	P	Pb	05 29 59.7	-2.2
DIVS	Divibare	2.60	8	ePn	Pn	05 29 58.7	+1.2
KNT	Kendrikon	2.60	97	P	Pn	05 29 59.0	+1.6
KNT	Kendrikon	2.60	97	⇑iPn	Pn	05 29 58.8	+1.4
KNT				i Sn	Sn	05 30 30.1	+1.6
LIT	Litokhoron	2.69	121	P	Pn	05 30 00.3	+1.5
LIT	Litokhoron	2.69	121		Pn	05 30 00.0	+1.3
LIT	Litokhoron	2.69	121	i Pn	Pn	05 30 00.2	+1.5
KKB	Krupnik	2.75	82	P	Pn	05 30 01.6	+2.1
KKB	Krupnik	2.75	82	P	Pn	05 30 01.9	+2.4
KKB	Krupnik	2.75	82	i Pn	Pn	05 30 01.5	+2.1
KKB				i Sn	Sn	05 30 35.2	+2.9
THL	Klokotos Trika	2.75	135	P	Pn	05 30 01.3	+1.8
ACER	Acerenza	2.77	256		Pn	05 29 59.7	-0.1
THE	Thessaloniki	2.78	108	i Pn	Pn	05 30 01.1	+1.2
THE				i Sn	Sn	05 30 33.8	+0.9
TRUS	Trudelj	2.78	14	ePn	Pn	05 30 01.4	+1.5
SGRT	San Giovanni R	2.81	276		Pn	05 30 00.2	-0.2
ZAPS	Zavoj	2.92	52	ePn	Pn	05 30 03.7	+1.9
VTS	Vitosha	3.00	67	P	Pn	05 30 04.9	+1.8
VTS	Vitosha	3.00	67	P	Pn	05 30 05.0	+2.0
VTS	Vitosha	3.00	67	ePn	Pn	05 30 05.0	+2.0
VTS				eSn	Sn	05 30 39.9	+1.3
SOH	Sokhos	3.01	102	i Pn	Pn	05 30 04.4	+1.3
SOH				i Sn	Sn	05 30 41.7	+3.1
TEKS	Tekeris	3.02	1	ePn	Pn	05 30 04.3	+1.1
ZAGS	Zajecar	3.06	41	ePn	Pn	05 30 05.6	+1.9
ZAGS				eSn	Sn	05 30 43.0	+3.3
PLNA	Plana	3.09	71	P	Pn	05 30 06.6	+2.4
BLSH	Balsha	3.12	64	eP	Pn	05 30 07.6	+3.0
SRS	Serrai	3.12	96	⇑iPn	Pn	05 30 06.3	+1.7
TIP	Timpagrande	3.13	222		Pn	05 30 05.1	+0.3
BLKB	Belogradchik	3.15	47	eSn	Sn	05 30 44.5	+2.2
BORS2	Bor- Borsko je	3.17	35	ePn	Pn	05 30 05.5	+0.2
BORS2				eSn	Sn	05 30 44.6	+2.0
CUC	Castrocucco	3.18	242		Pn	05 30 05.3	-0.1
MMB	Musomishta	3.20	88	i Pn	Pn	05 30 08.0	+2.3
MMB				i Sn	Sn	05 30 44.0	+0.5
MAKR	Makrakomi, Fth	3.23	140	P	Pn	05 30 08.3	+2.2
AVAS	Avala Beograd	3.26	13	ePn	Pn	05 30 07.4	+0.9
KUBS	Kucevo	3.30	28	ePn	Pn	05 30 07.7	+0.6
PGB	Panagyurishte	3.63	73	P	Pn	05 30 14.6	+3.0
VALD	Valchedram	3.63	52	P	Pn	05 30 14.1	+2.5
BLY	Banja Luka	3.63	333	ePn	Pn	05 30 02.5	-9.1
BLY	Banja Luka	3.63	333	ePn	Pn	05 30 13.9	+2.3
FRGS	Fruska Gora	3.64	4	ePn	Pn	05 30 12.8	+1.1
MDVR	Moldovita	3.64	26	⇑P	Pn	05 30 13.9	+2.1
MDVR	Moldovita	3.64	26	ePn	Pn	05 30 13.3	+1.5
MDVR				eSn	Sn	05 30 56.3	+2.0
MPEP	Malo Peshtene	3.64	58	P	Pn	05 30 14.5	+2.7
PAOL	Paolisi	3.74	264		Pn	05 30 14.2	+1.1
PUNG	Punghina	3.74	42	⇑P	Pn	05 30 15.6	+2.5
PUNG				⇑S	Sn	05 30 58.2	+1.6
DJES	Djerdap	3.85	34	⇓P	Pn	05 30 16.4	+1.9
DJES				⇑S	Sn	05 31 01.3	+2.0
HERR	Herculane	3.98	32	⇑P	Pn	05 30 18.6	+2.2
HERR				⇑S	Sn	05 31 03.7	+1.1
PLD	Plovdiv	3.98	79	P	Pn	05 30 19.1	+2.7
PLD	Plovdiv	3.98	79	ePn	Pn	05 30 17.8	+1.4
KNYS	Krupa na Uni	4.08	327	ePn	Pn	05 30 20.4	+2.6
SRE	Strehaia	4.15	40	⇓P	Pn	05 30 21.1	+2.4
PLVB	Pleven	4.23	62	⇑P	Pn	05 30 22.7	+2.9
PLVB				⇓S	Sn	05 31 10.9	+2.1
CEL	Celeste	4.27	221		Pn	05 30 20.3	-0.2
BZS	Buzias	4.37	20	⇓P	Pn	05 30 23.7	+1.9
BZS				⇓S	Sn	05 31 13.0	+0.7
KDZ	Kurdzhali	4.39	87	eP	Pn	05 30 24.3	+2.2
GZR	Gura Zlata	4.55	31	⇑P	Pn	05 30 26.3	+2.0
GZR				⇓S	Sn	05 31 18.4	+1.7
RDO	Rodhopi	4.58	93		Pn	05 30 24.8	+0.3
MORH	Mrgy, Hungar	4.73	353	ePn	Pn	05 30 27.5	+0.9
MORH	Mrgy, Hungar	4.73	353	⇑P	Pn	05 30 28.1	+1.5
ITM	Ithomi	4.74	156		Pn	05 30 27.7	+0.9
NRCA	Norcia	4.91	288	Pn	Pn	05 30 28.4	-0.8
ELND	Elena	4.95	71	⇑P	Pn	05 30 32.2	+2.5
ELND				⇑S	Sn	05 31 28.7	+2.2
SIRR	Siria	4.99	18	⇑P	Pn	05 30 33.2	+2.9
SIRR				⇑S	Sn	05 31 29.1	+1.5
LOT	Lotru	5.01	37	⇑P	Pn	05 30 33.2	+2.5
LOT				⇓S	Sn	05 31 29.8	+1.8
DEV	Deva	5.01	29	⇓P	Pn	05 30 32.9	+2.4
HUMR	Humele	5.02	52	⇑P	Pn	05 30 32.6	+1.9
HUMR				⇑S	Sn	05 31 29.7	+1.4
ARR	Arges	5.37	43	⇑P	Pn	05 30 38.3	+2.8
ARR				⇑S	Sn	05 31 39.0	+2.1
RAZG	Razgrad	5.58	66	⇓P	Pn	05 30 41.0	+2.7
DRGR		5.75	23	⇑P	Pn	05 30 43.6	+2.8
DRGR				⇑S	Sn	05 31 47.4	+1.0
MARR	Marisel-Cluj	5.78	26	⇓P	Pn	05 30 43.7	+2.6
MARR				⇑S	Sn	05 31 47.7	+0.8
MLR	Muntele Rosu	6.15	48	Pn	Pn	05 30 50.3	+4.1
	comp=N,2.7nm,0.3s,baz=219,slow=11,SNR=22						
MLR				Sn	Sn	05 31 57.9	+1.7
	comp=N,0.4nm,0.3s,baz=288,slow=20,SNR=0.9						
	comp=N,13nm,0.5s						
MLR	Muntele Rosu	6.15	48		Pn	05 30 47.2	+1.0
SABO	M.te Sabotino	6.16	318	Pn	Pn	05 30 45.0	-1.4
DOPR	Dopca	6.16	42	⇓P	Pn	05 30 49.7	+3.3
DOPR				⇓S	Sn	05 31 58.2	+1.8
PSZ	Piszkesteto	6.40	2		Pn	05 30 49.0	-0.6
PSZ	Piszkesteto	6.40	2	⇓P	Pn	05 30 51.5	+1.9
PSZ				⇑S	Sn	05 32 05.4	+3.2
OZUR		6.45	43	⇓P	Pn	05 30 53.3	+2.9
TURR	Turia	6.54	44	⇑P	Pn	05 30 54.2	+2.5
PLOR	Plostina	6.76	48	⇓P	Pn	05 30 57.6	+3.1
VRI	Vrincioaia	6.81	48	⇑P	Pn	05 30 58.5	+3.3
VRI				⇓S	Sn	05 32 13.8	+1.5

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KECS  Kecovo             6.99   5 ePN    Pn      05 30 57.9 +0.2
MODS  Modra-Piesok       7.02 348 ePN    Pn      05 30 59.4 +1.2
MSSA  Maissana           7.83 294  Pn    Pn      05 31 08.3 -0.9
AKASG Malin Array Be    11.39  33  Pn    Pn      05 31 59.2 +1.2
      comp=N,0.3nm,0.3s,baz=222,slow=14,SNR=2.0
      comp=N,0.2nm,0.3s
KBZ   Khabaz            17.36  75  P     P       05 33 18.4 -0.4
      comp=N,0.1nm,0.3s,baz=229,slow=9.3,SNR=2.6
      comp=N,1.7nm,0.8s
NOA   NORSAR Array B    20.18 348  P     P       05 33 49.1 -0.5
      comp=N,0.5nm,0.7s,baz=154,slow=9.2,SNR=1.6
NOA                                LR    LR      05 43 23.5
      comp=N,66nm,19.8s,baz=250,slow=42
      comp=N,0.5nm,0.7s
NC303 NORSAR Array S    20.34 349  P     P       05 33 49.9 -1.3
FINES FINESS Array B    20.34   9  P     P       05 33 50.6 -0.7
      comp=N,6.0nm,0.9s,baz=171,slow=8.3,SNR=7.6
      comp=N,6.0nm,0.9s
FINES FINESS Array B    20.34   9  P     P       05 33 49.6 -1.8
FIA1  FINESS Array S    20.34   9  P     P       05 33 49.5 -1.8
DSB   Dublin            20.94 313  P     P       05 33 56.7 -1.1
ARTI  Arti              29.09  46  P     P       05 35 14.5 -1.0
      comp=N,5.6nm,0.7s,baz=236,slow=6.1,SNR=8.7
      comp=N,5.6nm,0.7s
ARTI  Arti              29.09  46        P       05 35 15.2 -0.3
ARTI                               IAmb  IAmb    05 35 15.4
      comp=Z,8.6nm,0.6s
AB31  Akbulak array     29.16  61  P     P       05 35 15.1 -1.1
ABKAR Akbulak array     29.16  61  P     P       05 35 15.7 -0.5
TORD  Torodi Ar. Bea    32.25 214  P     P       05 35 45.0 +1.3
TORD                               IAmb  IAmb    05 35 57.0
      comp=Z,3.4nm,0.7s
BORK  Borovoye          35.63  53        P       05 36 11.7 -1.1
BORK                               IAmb  IAmb    05 36 14.4
      comp=Z,3.7nm,0.7s
BVAR  Borovoye Array    35.67  54  P     P       05 36 13.4 +0.2
      comp=Z,2.5nm,0.7s,baz=264,slow=4.5,SNR=13
      comp=Z,2.5nm,0.7s
KK31  Karatay Array     37.29  70  P     P       05 36 26.7 -0.5
KKAR  Karatay Array     37.29  70  P     P       05 36 26.2 -0.9
KURBB Kurchatov Arra    40.96  56  P     P       05 36 57.2 -0.4
      comp=Z,0.4nm,0.7s,baz=286,slow=10,SNR=4.1
      comp=Z,0.4nm,0.7s
ZAA0  Zalesovo Array    44.12  51        P       05 37 23.0 -0.3
ZALV  Zalesovo Beam     44.12  51  P     P       05 37 23.3 +0.1
      comp=Z,3.0nm,0.6s,baz=278,slow=9.3,SNR=18
      comp=Z,3.0nm,0.6s
ZALV  Zalesovo Beam     44.12  51        P       05 37 22.6 -0.7
MKAR  Makanchi Array    44.30  61  P     P       05 37 25.1 +0.2
      comp=Z,3.5nm,0.7s,baz=287,slow=6.7,SNR=21
      comp=Z,3.5nm,0.7s
MKAR  Makanchi Array    44.30  61        P       05 37 24.4 -0.6
EVN   Everest           55.67  81  P     P       05 38 51.7 -0.5
EVN                                IAmb  IAmb    05 38 52.5
      comp=Z,3.8nm,0.6s
SONM  Songino Array     58.98  52  P     P       05 39 14.8 +0.1
      comp=Z,0.8nm,0.7s,baz=302,slow=6.7,SNR=4.4
      comp=Z,0.8nm,0.7s
E62A  Clayton Lake      60.82 308  P     P       05 39 26.7 -0.5
BRDH  Bariadhala        62.25  83  LR    LR      06 12 06.1
      comp=Z,123nm,18.6s,baz=174,slow=41
A36M  Sachs Harbour     64.09 348  P     P       05 39 48.1 -0.4
A36M                               IAmb  IAmb    05 40 22.3
      comp=Z,3.5nm,1.1s
WBO   Williamsburg      65.08 309  P     P       05 39 53.6 -1.9
FCC   Fort Churchill    65.97 328  P     P       05 40 01.3 +0.3
E29M  Blow River        69.10 351  P     P       05 40 21.5 +0.9
E29M                               IAmb  IAmb    05 40 30.4
      comp=Z,4.4nm,1.4s
F31M  Tsiigehtchic      69.47 349  P     P       05 40 22.9  0.0
F31M                               IAmb  IAmb    05 41 00.4
      comp=Z,8.3nm,1.5s
E19K  Redstone River    71.31 359  P     P       05 40 34.3  0.0
E19K                               IAmb  IAmb    05 40 47.6
      comp=Z,3.4nm,1.2s
RIDG  Independent Ri    74.34 353  P     P       05 40 52.1 -0.3
RIDG                               IAmb  IAmb    05 41 32.1
      comp=Z,8.9nm,1.0s
SPMN  Marine on St.     74.57 317  P     P       05 40 53.4 -0.5
SPMN                               IAmb  IAmb    05 40 58.0
      comp=Z,6.6nm,0.9s
PETK  Petropavlovsk-    79.08  24  LR    LR      06 24 47.2
      comp=Z,55nm,19.9s,baz=310,slow=42
PKCU  Pink Cliffs       89.91 324  P     P       05 42 11.7 -3.0
PKCU                               IAmb  IAmb    05 42 23.3
      comp=Z,2.6nm,1.1s
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BGR ***09*** *05:29:28.3±1.3, 43°.60N×11°.29E, h10km, ML3.5/5, Error ellipse: s-maj=21.1km s-min=11.1km az=12.0*
GEN ***09*** *05:29:29.2, 43°.97N×11°.29E, h10km±1km, Ml2.9*
ROM ***09*** *05:29:29.4±0.1, 43°.996N±0°.004×11°.313E±0°.005, h7km, ML3.0/136, Error ellipse: s-maj=0.5km s-min=0.3km az=23.0*
LDG ***09*** *05:29:31.4±0.2, 43°.90N×11°.27E, h8km, Ml2.9/19, Error ellipse: s-maj=3.5km s-min=3.0km az=40.0*
PRU ***09*** *05:29:32.0, 44°.00N×11°.64E, h4km*
ISC 09 05:29:29.1±0.9**, 43°.98N**±0°.01×**11°.28E**±0°.01**, h5**km±6km**, n148, σ1ˢ.58**/219**, 15C-2D, Central Italy**

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Code  Station Name       Δ°  AZ°    Phase ID          Time      Res
                                   Op    ISC       h  m  s    ISC
MOCL  Monte Cuccoli     0.08 289 ⇓P     Pg      05 29 32.3 +1.4
MOCL                               S     Sg      05 29 34.2 +2.1
MOCL                               AML   AML
      comp=E,37400μm,0.2s
MOCL                               AML   AML
      comp=N,76150μm,0.5s
MOCL                               AML   AML
      comp=E,37390μm,0.2s
MOCL                               AML   AML
      comp=N,66680μm,0.2s
SEI   Scarperia         0.09  36   P     Pg      05 29 28.7 -2.5
SEI                                S     Sg      05 29 30.1 -2.4
SEI   Scarperia         0.09  36   P     Pg      05 29 28.7 -2.5
SEI                                S     Sg      05 29 30.1 -2.4
MPPT  Montemurlo        0.14 261 ⇑P     Pg      05 29 33.6 +1.6
MPPT                               S     Sg      05 29 36.0 +2.1
MPPT                               AML   AML
      comp=N,12350μm,1.3s
MPPT                               AML   AML
      comp=E,9925μm,1.3s
MPPT                               AML   AML
      comp=E,8029μm,0.2s
MPPT                               AML   AML
      comp=N,10932μm,0.3s
FIE   Fiesole           0.17 177 ⇑P     Pg      05 29 34.0 +1.4
FIE                                S     Sg      05 29 37.2 +2.4
FIR   Firenze           0.21 185   P     Pg      05 29 34.9 +1.7
FIR                                S     Sg      05 29 38.9 +3.0
FIR                                AML   AML
      comp=E,21900μm,0.7s
FIR                                AML   AML
      comp=N,20700μm,0.2s
FIR                                AML   AML
      comp=E,22650μm,0.7s
FIR                                AML   AML
      comp=N,21050μm,0.2s
FIR                                AML   AML
      comp=E,15824μm,0.2s
FIR                                AML   AML
      comp=E,16375μm,0.2s
FIR                                AML   AML
      comp=N,20727μm,0.2s
FIR                                AML   AML
      comp=N,21074μm,0.2s
RUFI  Rufina            0.22 130   P     Pg      05 29 34.3 +0.9
RUFI                               S     Sg      05 29 38.0 +1.8
RUFI  Rufina            0.22 130 ⇓P     Pg      05 29 34.3 +0.9
RUFI                               S     Sg      05 29 37.9 +1.8
RUFI                               AML   AML
      comp=N,7395μm,1.2s
RUFI                               AML   AML
      comp=E,8135μm,0.9s
RUFI                               AML   AML
      comp=N,7400μm,1.2s
RUFI                               AML   AML
      comp=N,7006μm,0.7s
RUFI                               AML   AML
      comp=E,6769μm,0.8s
FNVD  Fontana Vidola    0.22 329 ⇑P     Pg      05 29 34.2 +0.8
FNVD                               S     Sg      05 29 37.6 +1.2
FNVD                               AML   AML
      comp=E,8950μm,1.0s
FNVD                               AML   AML
      comp=N,8720μm,1.1s
FNVD                               AML   AML
      comp=E,7604μm,0.4s
FNVD                               AML   AML
      comp=N,8314μm,0.2s
BRIS  BRISIGHELLA       0.24  44 ⇑P     Pg      05 29 37.6 +3.8
BRIS                               S     Sg      05 29 43.9 +7.0
BRIS                               AML   AML
      comp=E,7800μm,0.6s
BRIS                               AML   AML
      comp=N,6245μm,0.6s
BRIS                               AML   AML
      comp=E,7805μm,0.6s
BRIS                               AML   AML
      comp=N,6245μm,1.4s
BRIS                               AML   AML
      comp=E,7801μm,0.6s
BRIS                               AML   AML
      comp=N,6247μm,0.6s
BRIS                               AML   AML
      comp=N,201μm,1.0s
BRIS                               AML   AML
      comp=E,93μm,0.7s
CRMI  Carmignano        0.29 230 ⇑P     Pb      05 29 36.2 -0.7
CRMI                               S     Sb      05 29 41.6 -0.5
CRMI                               AML   AML
      comp=E,4110μm,0.8s
CRMI                               AML   AML
      comp=N,6300μm,0.6s
CRMI                               AML   AML
      comp=E,1455μm,0.8s
CRMI                               AML   AML
      comp=N,2650μm,0.6s
LMD   Lutirano          0.32  72   P     Pg      05 29 35.3 -0.1
LMD                                S     Sg      05 29 40.0 +0.3
LMD   Lutirano          0.32  72 ⇑P     Pg      05 29 35.3 -0.1
LMD                                S     Sg      05 29 40.1 +0.5
LMD                                AML   AML
      comp=E,12800μm,0.4s
LMD                                AML   AML
      comp=N,16700μm,0.3s
LMD                                AML   AML
      comp=E,12811μm,0.4s
LMD                                AML   AML
      comp=N,16727μm,0.3s
POPM  Popiglio          0.38 280   P     Pg      05 29 37.6 +1.0
POPM                               S     Sb      05 29 43.6 -1.1
POPM  Popiglio          0.38 280 ⇑P     Pg      05 29 37.6 +1.0
POPM                               S     Sb      05 29 44.2 -0.5
POPM                               AML   AML
      comp=E,4255μm,1.4s
POPM                               AML   AML
      comp=N,6375μm,1.2s
POPM                               AML   AML
      comp=N,6375μm,0.8s
POPM                               AML   AML
      comp=E,4255μm,0.6s
POPM                               AML   AML
      comp=E,3523μm,0.2s
POPM                               AML   AML
      comp=N,5599μm,0.2s
ASQU  Asqua             0.41 116 ⇑P     Pg      05 29 37.4 +0.4
ASQU                               S     Sg      05 29 43.8 +1.4
ASQU                               AML   AML
      comp=N,2315μm,0.5s
ASQU                               AML   AML
      comp=E,2270μm,0.6s
ASQU                               AML   AML
      comp=E,2271μm,0.6s
ASQU                               AML   AML
      comp=E,2040μm,0.5s
ASQU                               AML   AML
      comp=N,2313μm,0.5s
SFI   Santa Sofia       0.41 100 ⇑P     Pg      05 29 37.3 +0.2
SFI                                S     Sg      05 29 43.6 +1.0
SFI                                AML   AML
      comp=N,5120μm,0.5s
SFI                                AML   AML
      comp=N,5125μm,0.6s
SFI                                AML   AML
      comp=E,2615μm,0.3s
SFI                                AML   AML
      comp=E,2610μm,0.3s
SFI                                AML   AML
      comp=E,2490μm,0.4s
SFI                                AML   AML
      comp=N,5120μm,0.6s
SFI                                AML   AML
      comp=N,5127μm,0.6s
SFI                                AML   AML
      comp=E,2479μm,0.4s
MTRZ  Monterenzio       0.42  18   P     Pg      05 29 36.8 -0.4
MTRZ                               S     Sg      05 29 43.3 +0.6
MTRZ  Monterenzio       0.42  18 ⇑P     Pg      05 29 36.8 -0.4
MTRZ                               AML   AML
      comp=N,7585μm,0.6s
MTRZ                               AML   AML
      comp=E,6825μm,0.6s
MTRZ                               AML   AML
      comp=N,7845μm,0.7s
MTRZ                               AML   AML
      comp=E,6640μm,0.6s
ZCCA  Zocca             0.43 329   P     Pb      05 29 39.5 +0.1
ZCCA                               S     Sb      05 29 49.2 +3.1
ZCCA  Zocca             0.43 329   P     Pb      05 29 39.4 +0.1
ZCCA                               AML   AML
      comp=E,1385μm,0.4s
ZCCA                               AML   AML
      comp=N,1412μm,0.4s
ZCCA                               AML   AML
      comp=E,1430μm,0.3s
ZCCA                               AML   AML
      comp=N,1360μm,0.4s
ZCCA                               AML   AML
      comp=E,1385μm,0.3s
ZCCA                               AML   AML
      comp=N,1413μm,0.4s
ZCCA                               AML   AML
      comp=E,1385μm,1.7s
ZCCA                               AML   AML
      comp=E,1430μm,1.7s
ZCCA                               AML   AML
      comp=E,1434μm,0.3s
ZCCA                               AML   AML
      comp=E,1386μm,0.3s
ZCCA                               AML   AML
      comp=N,1411μm,0.4s
ZCCA                               AML   AML
      comp=N,1358μm,0.4s
OSSC  Osservatorio P    0.46 183   P     Pb      05 29 39.0 -0.7
OSSC                               S     Sb      05 29 46.7 -0.1
OSSC  Osservatorio P    0.46 183 ⇑P     Pb      05 29 39.0 -0.7
OSSC                               S     Sb      05 29 46.5 -0.3
OSSC                               AML   AML
      comp=E,3865μm,0.8s
OSSC                               AML   AML
      comp=N,7485μm,0.6s
OSSC                               AML   AML
      comp=N,7490μm,0.6s
OSSC                               AML   AML
      comp=E,7450μm,0.6s
OSSC                               AML   AML
      comp=N,3850μm,0.8s
OSSC                               AML   AML
      comp=N,3850μm,1.2s
OSSC                               AML   AML
      comp=E,3865μm,1.2s
OSSC                               AML   AML
      comp=N,5865μm,0.2s
OSSC                               AML   AML
      comp=E,5881μm,0.2s
OSSC                               AML   AML
      comp=N,3849μm,0.8s
OSSC                               AML   AML
      comp=E,3864μm,0.8s
BDI   Bagni Di Lucca    0.50 280   P     Pg      05 29 39.6 +0.8
BDI                                S     Sb      05 29 47.6 -0.6
BDI   Bagni Di Lucca    0.50 280 ⇑P     Pg      05 29 39.7 +0.9
BDI                                S     Sb      05 29 47.4 -0.7
BDI                                AML   AML
      comp=E,3615μm,0.8s
BDI                                AML   AML
      comp=N,3750μm,0.4s
BDI                                AML   AML
      comp=E,3610μm,0.6s
BDI                                AML   AML
      comp=N,3695μm,1.4s
BDI                                AML   AML
      comp=E,3615μm,0.7s
BDI                                AML   AML
      comp=N,3695μm,0.6s
BDI                                AML   AML
      comp=N,3755μm,0.4s
BDI                                AML   AML
      comp=E,3615μm,1.3s
BDI                                AML   AML
      comp=N,3634μm,0.4s
BDI                                AML   AML
      comp=E,3615μm,0.8s
BDI                                AML   AML
      comp=N,3751μm,0.4s
BDI                                AML   AML
      comp=E,3612μm,0.6s
IMOL  Imola, Italy      0.50  41   P     Pb      05 29 40.1 -0.4
IMOL                               S     Sb      05 29 49.4 +1.2
IMOL  Imola, Italy      0.50  41   P     Pb      05 29 40.0 -0.4
IMOL                               AML   AML
      comp=N,7210μm,1.2s
IMOL                               AML   AML
      comp=N,7210μm,0.8s
IMOL                               AML   AML
      comp=E,3990μm,0.4s
IMOL                               AML   AML
      comp=E,3990μm,0.4s
IMOL                               AML   AML
      comp=N,6701μm,0.7s
CSNT  Castellina Chi    0.51 179   P     Pb      05 29 39.8 -0.8
CSNT                               S     Sb      05 29 47.9 -0.3
CSNT  Castellina Chi    0.51 179 ⇑P     Pb      05 29 39.8 -0.8
CSNT                               S     Sb      05 29 47.8 -0.5
CSNT                               AML   AML
      comp=E,3080μm,0.7s
CSNT                               AML   AML
      comp=N,4590μm,0.6s
CSNT                               AML   AML
      comp=E,2476μm,0.2s
CSNT                               AML   AML
      comp=N,4388μm,0.2s
MAIM  Mastiano          0.57 264   P     Pg      05 29 40.9 +0.7
MAIM                               S     Sb      05 29 49.7 -0.4
MAIM  Mastiano          0.57 264   P     Pg      05 29 40.8 +0.7
CARD  Cardoso           0.58 275   P     Pg      05 29 40.8 +0.5
CARD                               S     Sb      05 29 49.9 -0.4
CARD  Cardoso           0.58 275   P     Pg      05 29 40.7 +0.5
CARD                               AML   AML
      comp=E,1675μm,0.9s
CARD                               AML   AML
      comp=N,1925μm,0.8s
CARD                               AML   AML
      comp=N,1925μm,1.2s
CARD                               AML   AML
      comp=E,1605μm,0.2s
CARD                               AML   AML
      comp=N,1663μm,0.6s
CRE   Caprese Michel    0.60 126   P     Pg      05 29 41.2 +0.5
CRE                                AML   AML
      comp=E,1370μm,1.0s
CRE                                AML   AML
      comp=N,2150μm,1.5s
CRE                                AML   AML
      comp=N,2135μm,0.4s
CRE                                AML   AML
      comp=E,1216μm,0.6s
PII   Pisa              0.61 245   P     Pb      05 29 41.6 -0.6
PII                                S     Sb      05 29 52.0 +1.0
PII   Pisa              0.61 245 ⇑P     Pb      05 29 41.6 -0.6
PII                                AML   AML
      comp=E,3760μm,0.4s
PII                                AML   AML
      comp=N,4555μm,1.0s
PII                                AML   AML
      comp=E,3756μm,0.4s
PII                                AML   AML
      comp=N,3901μm,0.9s
GSCL  Gusciola          0.62 307   P     Pb      05 29 42.1 -0.5
GSCL                               S     Sb      05 29 51.7 +0.1
GSCL  Gusciola          0.62 307 ⇑P     Pb      05 29 42.1 -0.5
GSCL                               S     Sb      05 29 51.9 +0.3
GSCL                               AML   AML
      comp=E,2795μm,1.0s
GSCL                               AML   AML
      comp=N,2385μm,0.3s
GSCL                               AML   AML
      comp=E,2795μm,1.0s
GSCL                               AML   AML
      comp=N,2387μm,0.3s
GSCL                               AML   AML
      comp=E,2247μm,0.6s
BRSN  Barisano          0.65  62   P     Pb      05 29 42.8 -0.1
BRSN                               AML   AML
      comp=E,4805μm,0.5s
BRSN                               AML   AML
      comp=N,3850μm,0.7s
BRSN                               AML   AML
      comp=E,4665μm,0.5s
BRSN                               AML   AML
      comp=N,3785μm,0.7s
BRSN                               AML   AML
      comp=E,4805μm,0.5s
BRSN                               AML   AML
      comp=E,4660μm,0.5s
BRSN                               AML   AML
      comp=N,3845μm,0.6s
BRSN                               AML   AML
      comp=E,4662μm,0.5s
BRSN                               AML   AML
      comp=N,3845μm,0.7s
BRSN                               AML   AML
      comp=N,3783μm,0.7s
SARO  Sassorosso        0.67 288   P     Pg      05 29 42.7 +0.7
SARO                               S     Sb      05 29 53.0 +0.1
SARO  Sassorosso        0.67 288   P     Pg      05 29 42.7 +0.7
SARO                               S     Sb      05 29 53.1 +0.1
VLC   Villacollemand    0.67 286   P     Pb      05 29 42.8 -0.5
VLC                                S     Sb      05 29 52.9 -0.1
VLC   Villacollemand    0.67 286   P     Pb      05 29 42.8 -0.5
VLC                                S     Sb      05 29 53.0  0.0
VLC                                AML   AML
      comp=N,1415μm,1.4s
VLC                                AML   AML
      comp=E,961μm,1.4s
VLC                                AML   AML
      comp=N,1415μm,1.4s
VLC                                AML   AML
      comp=E,970μm,1.4s
VLC                                AML   AML
      comp=E,962μm,1.4s
VLC                                AML   AML
      comp=N,1415μm,0.6s
VLC                                AML   AML
      comp=N,1415μm,0.6s
VLC                                AML   AML
      comp=E,970μm,0.6s
VLC                                AML   AML
      comp=E,962μm,0.6s
VLC                                AML   AML
      comp=N,1294μm,0.9s
VLC                                AML   AML
      comp=E,921μm,0.8s
VLC                                AML   AML
      comp=N,1290μm,0.8s
VLC                                AML   AML
      comp=E,877μm,0.8s
FIU   Minerbio Fiu      0.68  13   P     Pn      05 29 44.7 -0.7
SSP9  Sansepolcro       0.74 123   P     Pb      05 29 44.1 -0.3
SSP9                               AML   AML
      comp=N,1185μm,1.6s
SSP9                               AML   AML
      comp=E,1245μm,1.4s
SSP9                               AML   AML
      comp=E,1245μm,0.6s
SSP9                               AML   AML
      comp=N,1185μm,0.4s
SSP9                               AML   AML
      comp=N,1103μm,0.9s
SSP9                               AML   AML
      comp=E,1099μm,0.7s
PARC  Parchiule         0.77 115   P     Pg      05 29 44.3 +0.5
CPGN  Carpegna, Ital    0.77 103   P     Pb      05 29 45.7 +0.6
CPGN                               AML   AML
      comp=N,844μm,1.0s
CPGN                               AML   AML
      comp=N,1012μm,1.5s
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CPGN                           AML   AML
      comp=E,1065µm,1.5s
CPGN                           AML   AML
      comp=N,844µm,1.0s
CPGN                           AML   AML
      comp=E,872µm,1.6s
CPGN                           AML   AML
      comp=N,1008µm,1.5s
CPGN                           AML   AML
      comp=E,872µm,0.4s
CPGN                           AML   AML
      comp=N,844µm,1.0s
CPGN                           AML   AML
      comp=E,1065µm,0.5s
CPGN                           AML   AML
      comp=N,1008µm,0.5s
CPGN                           AML   AML
      comp=E,1043µm,0.6s
CPGN                           AML   AML
      comp=N,844µm,1.0s
CPGN                           AML   AML
      comp=N,869µm,0.5s
CPGN                           AML   AML
      comp=E,824µm,0.6s
FROS  Frosini         0.78 187 AML   AML
      comp=N,1596µm,0.6s
FROS                           AML   AML
      comp=E,3235µm,0.6s
FROS                           AML   AML
      comp=N,1660µm,1.5s
FROS                           AML   AML
      comp=N,1660µm,0.5s
FROS                           AML   AML
      comp=E,3235µm,0.6s
RAVA  Ravarino        0.78 351 P     Pb      05 29 45.3 +0.1
EQUI  Equi            0.83 283 P     Pb      05 29 46.2  0.0
EQUI                           S     Sb      05 29 57.8 +0.1
EQUI  Equi            0.83 283 P     Pb      05 29 46.4 +0.3
MAGO  Bibbona         0.84 213 AML   AML
      comp=N,818µm,0.8s
MAGO                           AML   AML
      comp=N,818µm,0.8s
MAGO                           AML   AML
      comp=E,744µm,0.8s
MAGO                           AML   AML
      comp=N,818µm,1.2s
MAGO                           AML   AML
      comp=N,819µm,0.8s
MAGO                           AML   AML
      comp=E,744µm,0.8s
BADI  Badiali         0.84 124 P     Pb      05 29 45.8 -0.5
BADI                           AML   AML
      comp=E,1054µm,0.6s
BADI                           AML   AML
      comp=N,922µm,0.9s
BADI                           AML   AML
      comp=E,1058µm,0.6s
BADI                           AML   AML
      comp=E,1058µm,1.4s
BADI                           AML   AML
      comp=N,922µm,1.1s
BADI                           AML   AML
      comp=E,1056µm,0.6s
BADI                           AML   AML
      comp=N,863µm,0.7s
ATMC  Monte Cedrone   0.85 129 P     Pb      05 29 46.1 -0.3
FIVI  Fivizzano       0.87 288 P     Pb      05 29 47.3 +0.6
TRIF  Trifonti        0.91 198 AML   AML
      comp=E,753µm,0.7s
TRIF                           AML   AML
      comp=N,698µm,0.7s
TRIF                           AML   AML
      comp=N,698µm,0.7s
TRIF                           AML   AML
      comp=E,753µm,0.8s
TRIF                           AML   AML
      comp=E,753µm,0.8s
TRIF                           AML   AML
      comp=N,698µm,0.7s
PE3   Peglio          0.92 108 P     Pb      05 29 47.5 -0.2
APEC  Apecchio        0.93 117 P     Pb      05 29 47.4 -0.3
ATMI  Monte Miggiano  0.96 132 P     Pb      05 29 48.8 +0.4
ATMI                           AML   AML
      comp=N,1790µm,0.5s
ATMI                           AML   AML
      comp=N,1790µm,1.5s
ATMI                           AML   AML
      comp=N,1790µm,0.5s
ATMI                           AML   AML
      comp=E,1425µm,0.5s
ATMI                           AML   AML
      comp=E,1425µm,0.5s
NARO  Abbazia di Nar  1.01 111 P     Pb      05 29 49.1  0.0
ATVA  AVT- Monte Val  1.01 134 P     Pb      05 29 48.8 -0.4
ATVO  AVT- Monte Val  1.01 126 P     Pb      05 29 49.1  0.0
ATVO                           AML   AML
      comp=E,770µm,0.9s
ATVO                           AML   AML
      comp=N,731µm,0.5s
ATVO                           AML   AML
      comp=N,731µm,1.5s
ATVO                           AML   AML
      comp=N,731µm,0.5s
ATVO                           AML   AML
      comp=E,770µm,0.9s
PIEI  Pieia           1.01 116 P     Pb      05 29 48.8 -0.4
PIEI                           AML   AML
      comp=E,374µm,0.6s
PIEI                           AML   AML
      comp=N,354µm,0.7s
PIEI                           AML   AML
      comp=N,354µm,1.3s
PIEI                           AML   AML
      comp=N,354µm,0.7s
PIEI                           AML   AML
      comp=E,375µm,0.6s
GRAM  Graiana         1.01 301 P     Pg      05 29 48.9 +0.3
GRAM                           S     Sn      05 30 04.9 +0.2
GRAM  Graiana         1.01 301 P     Pg      05 29 48.9 +0.3
GRAM                           AML   AML
      comp=N,1925µm,0.5s
GRAM                           AML   AML
      comp=E,2720µm,0.3s
GRAM                           AML   AML
      comp=E,2722µm,0.3s
GRAM                           AML   AML
      comp=N,1927µm,0.5s
PLMA  Palmaria, Port  1.03 274 P     Pb      05 29 49.6 +0.1
RIBO  Ribolla Roccas  1.04 190 P     Pb      05 29 49.5 -0.1
ARCI  Arcidosso       1.14 173 P     Pb      05 29 51.2 -0.2
ARCI                           AML   AML
      comp=N,346µm,0.8s
ARCI                           AML   AML
      comp=E,232µm,0.8s
ARCI                           AML   AML
      comp=N,338µm,0.8s
ARCI                           AML   AML
      comp=E,232µm,0.8s
ARCI                           AML   AML
      comp=E,307µm,0.9s
SF04  Casetta         1.18 166 P     Pn      05 29 52.3 -0.1
SF04                           AML   AML
      comp=E,302µm,1.1s
SF04                           AML   AML
      comp=N,268µm,0.8s
SF04                           AML   AML
      comp=E,302µm,0.9s
SF04                           AML   AML
      comp=N,268µm,1.2s
SF04                           AML   AML
      comp=E,288µm,0.9s
SF04                           AML   AML
      comp=N,252µm,0.5s
SF01  Poggio Pratacc  1.19 170 P     Pn      05 29 52.4 -0.1
SF01                           AML   AML
      comp=E,434µm,1.6s
SF01                           AML   AML
      comp=N,458µm,0.9s
SF01                           AML   AML
      comp=E,434µm,0.4s
SF01                           AML   AML
      comp=E,408µm,0.7s
SF01                           AML   AML
      comp=N,458µm,0.9s
SACS  San Casciano d  1.22 158 P     Pg      05 29 52.2 -0.3
SACS                           AML   AML
      comp=E,468µm,1.0s
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SACS                           AML   AML
      comp=N,411µm,0.9s
SACS                           AML   AML
      comp=E,366µm,0.9s
SACS                           AML   AML
      comp=N,332µm,0.7s
SACS                           AML   AML
      comp=N,411µm,1.1s
SACS                           AML   AML
      comp=E,366µm,1.1s
SACS                           AML   AML
      comp=N,332µm,1.3s
SACS                           AML   AML
      comp=E,367µm,0.9s
SACS                           AML   AML
      comp=N,411µm,0.9s
SACS                           AML   AML
      comp=E,468µm,1.0s
SACS                           AML   AML
      comp=N,332µm,0.7s
CASP  Castiglione de  1.23 194 P     Pg      05 29 52.0 -0.6
CASP                           AML   AML
      comp=E,262µm,1.0s
CASP                           AML   AML
      comp=N,308µm,0.6s
CASP                           AML   AML
      comp=N,219µm,0.2s
CASP                           AML   AML
      comp=E,263µm,1.0s
ARVD  Arcevia         1.30 111 P     Pb      05 29 54.1 +0.2
ARVD                           AML   AML
      comp=E,230µm,1.6s
ARVD                           AML   AML
      comp=N,239µm,0.7s
ARVD                           AML   AML
      comp=E,230µm,0.4s
ARVD                           AML   AML
      comp=E,205µm,0.6s
ARVD                           AML   AML
      comp=N,239µm,1.3s
ARVD                           AML   AML
      comp=N,239µm,0.7s
MSSA  Maissana        1.31 285 P     Pn      05 29 53.5 -0.7
MSSA                           AML   AML
      comp=E,358µm,1.0s
MSSA                           AML   AML
      comp=N,479µm,0.6s
MSSA                           AML   AML
      comp=E,358µm,1.0s
MSSA                           AML   AML
      comp=N,479µm,0.6s
MSSA                           AML   AML
      comp=E,330µm,1.0s
MMUR  Monte Murano    1.35 113 AML   AML
      comp=E,528µm,1.4s
MMUR                           AML   AML
      comp=E,528µm,0.6s
MMUR                           AML   AML
      comp=N,509µm,1.6s
MMUR                           AML   AML
      comp=N,509µm,0.4s
MMUR                           AML   AML
      comp=N,418µm,0.5s
MMUR                           AML   AML
      comp=E,528µm,0.6s
TEOL  Teolo           1.41  11 P     Pn      05 29 55.3 -0.1
EL6   Elcito          1.47 116 P     Pg      05 29 57.3  0.0
EL6                            AML   AML
      comp=N,618µm,0.8s
EL6                            AML   AML
      comp=E,506µm,0.7s
EL6                            AML   AML
      comp=E,506µm,0.7s
EL6                            AML   AML
      comp=N,618µm,0.8s
BOB   Bobbio (Coli)   1.53 302 P     Pg      05 29 58.9 +0.4
CSP1  Cessapalombo    1.66 122 P     Pb      05 29 59.6 -0.6
CSP1                           AML   AML
      comp=E,452µm,0.5s
CSP1                           AML   AML
      comp=N,359µm,1.3s
CSP1                           AML   AML
      comp=N,359µm,0.7s
CSP1                           AML   AML
      comp=N,359µm,1.3s
CSP1                           AML   AML
      comp=E,453µm,0.5s
ROVR  Rover Verones   1.67 355 P     Pn      05 29 59.5 +0.3
ROVR                           AML   AML
      comp=E,286µm,0.6s
ROVR                           AML   AML
      comp=N,362µm,0.7s
ROVR                           AML   AML
      comp=N,134µm,0.3s
ROVR                           AML   AML
      comp=E,120µm,0.6s
ROVR                           AML   AML
      comp=E,287µm,0.6s
ROVR                           AML   AML
      comp=N,335µm,0.7s
ROVR                           AML   AML
      comp=E,121µm,0.6s
VARA  Varagna         1.87 352 P     Pn      05 30 02.2 +0.3
VARA                           AML   AML
      comp=E,478µm,0.6s
VARA                           AML   AML
      comp=N,509µm,0.5s
VARA                           AML   AML
      comp=N,459µm,0.6s
VARA                           AML   AML
      comp=N,459µm,1.4s
VARA                           AML   AML
      comp=E,478µm,1.4s
VARA                           AML   AML
      comp=E,474µm,0.5s
VARA                           AML   AML
      comp=N,509µm,1.5s
VARA                           AML   AML
      comp=N,459µm,0.6s
VARA                           AML   AML
      comp=N,509µm,0.5s
VARA                           AML   AML
      comp=E,477µm,0.6s
VARA                           AML   AML
      comp=E,474µm,0.5s
DOSS  Dosso del Somm  1.90 358 P     Pn      05 30 02.5 +0.1
DOSS                           AML   AML
      comp=N,272µm,0.9s
DOSS                           AML   AML
      comp=E,266µm,0.6s
DOSS                           AML   AML
      comp=N,348µm,0.5s
DOSS                           AML   AML
      comp=E,344µm,0.5s
DOSS                           AML   AML
      comp=E,344µm,0.5s
DOSS                           AML   AML
      comp=N,270µm,0.5s
DOSS                           AML   AML
      comp=E,266µm,0.6s
DOSS                           AML   AML
      comp=N,348µm,0.5s
MNTT  Montottone      1.92 118 P     Pb      05 30 04.7  0.0
MNTT                           AML   AML
      comp=E,614µm,0.7s
MNTT                           AML   AML
      comp=N,676µm,0.6s
MNTT                           AML   AML
      comp=N,676µm,0.6s
MNTT                           AML   AML
      comp=E,613µm,0.7s
MNTT                           AML   AML
      comp=E,614µm,1.3s
LUSI  Trento, Gardas  1.99 353 P     Pb      05 30 04.9 -1.0
LUSI                           AML   AML
      comp=E,326µm,0.8s
LUSI                           AML   AML
      comp=N,514µm,0.4s
LUSI                           AML   AML
      comp=N,514µm,1.6s
LUSI                           AML   AML
      comp=E,326µm,1.2s
LUSI                           AML   AML
      comp=E,326µm,0.8s
LUSI                           AML   AML
      comp=N,513µm,0.4s
PGF   Pioggiola       2.20 230 ePn   Pn      05 30 05.6 -0.8
PGF                            eSn   Sn      05 30 31.8 -2.2
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      comp=N,15nm,0.3s
AQU   L'Aquila        2.25 136 ePn   Pb      05 30 10.7 +0.5
ZIAN  Ziano           2.31   5 P     Pn      05 30 09.0 +1.1
ZIAN                           AML   AML
      comp=N,159µm,0.8s
ZIAN                           AML   AML
      comp=E,154µm,0.4s
ZIAN                           AML   AML
      comp=E,174µm,0.7s
ZIAN                           AML   AML
      comp=N,181µm,0.9s
ZIAN                           AML   AML
      comp=N,159µm,0.8s
ZIAN                           AML   AML
      comp=E,154µm,0.4s
ZIAN                           AML   AML
      comp=N,181µm,0.9s
ZIAN                           AML   AML
      comp=E,174µm,0.7s
OZOL  Ozolo           2.43 356 P     Pn      05 30 10.7 +1.1
CARE  Lago del Cares  2.48 351 P     Pn      05 30 12.0 +1.6
STAL  STALIGIAL       2.49  23 AML   AML
      comp=E,201µm,1.2s
STAL                           AML   AML
      comp=E,258µm,1.3s
STAL                           AML   AML
      comp=N,228µm,1.4s
STAL                           AML   AML
      comp=E,201µm,0.8s
STAL                           AML   AML
      comp=N,146µm,1.4s
STAL                           AML   AML
      comp=N,228µm,0.6s
STAL                           AML   AML
      comp=E,258µm,0.7s
STAL                           AML   AML
      comp=N,146µm,0.6s
STAL                           AML   AML
      comp=E,179µm,0.4s
STAL                           AML   AML
      comp=E,173µm,0.4s
STAL                           AML   AML
      comp=N,210µm,0.3s
STAL                           AML   AML
      comp=N,117µm,0.3s
MUGIO Muggio          2.51 321 P     Pn      05 30 11.6 +0.9
MUGIO                          AML   AML
      comp=E,95µm,1.5s
MUGIO                          AML   AML
      comp=N,125µm,1.0s
MUGIO                          AML   AML
      comp=E,95µm,0.5s
MUGIO                          AML   AML
      comp=E,94µm,0.8s
MUGIO                          AML   AML
      comp=N,125µm,1.0s
SABO  M.te Sabotino   2.59  39 P     Pn      05 30 11.5 -0.2
SABO                           AML   AML
      comp=E,740µm,1.0s
SABO                           AML   AML
      comp=N,1069µm,0.8s
SABO                           AML   AML
      comp=E,184µm,0.6s
SABO                           AML   AML
      comp=N,276µm,0.8s
SABO                           AML   AML
      comp=N,276µm,1.2s
SABO                           AML   AML
      comp=N,1069µm,1.2s
SABO                           AML   AML
      comp=E,184µm,0.6s
SABO                           AML   AML
      comp=N,276µm,0.8s
SABO                           AML   AML
      comp=N,1069µm,0.8s
SABO                           AML   AML
      comp=E,740µm,1.0s
MOSI  Grossmontoni    2.69 349 P     Pn      05 30 15.2 +2.0
SBF   Sospel          2.78 269 ePn   Pn      05 30 13.7 -0.7
SBF                            eSn   Sn      05 30 43.2 -5.2
      comp=E,13nm,0.3s
FVI   Forni Avoltri   2.82  21 P     Pn      05 30 15.6 +0.6
FVI                            AML   AML
      comp=E,94µm,0.6s
FVI                            AML   AML
      comp=N,108µm,0.6s
FVI                            AML   AML
      comp=E,94µm,0.6s
FVI                            AML   AML
      comp=N,108µm,0.6s
ABTA  Abfaltersbach   2.90  17 Pn    Pn      05 30 17.1 +1.1
      comp=N,1.8nm,0.4s,SNR=14
ABTA                           eSn   Sn      05 30 51.8 +0.4
      comp=N,29nm,1.0s
DAVOX Davos/Dischmat  2.97 341 P     Pn      05 30 19.1 +1.9
FETA  Feichten        3.07 353 Pn    Pn      05 30 20.6 +2.2
      comp=N,16nm,0.6s,SNR=19
FETA                           eSn   Sb      05 30 59.9 -2.2
      comp=N,5.0nm,0.6s
FUSIO Fusio           3.09 324 P     Pn      05 30 20.1 +1.4
FUSIO                          AML   AML
      comp=E,129µm,0.7s
FUSIO                          AML   AML
      comp=N,93µm,0.8s
MYKA  Terra Mystica   3.13  31 ePn   Pn      05 30 20.2 +1.0
      comp=N,0.4nm,0.2s
MYKA                           eSn   Sn      05 30 56.0 -1.0
      comp=N,2.9nm,0.6s
SQTA  Sankt Quirin    3.24 359 Pn    Pn      05 30 23.0 +2.2
      comp=N,10nm,0.2s,SNR=33
SQTA                           eSn   Sn      05 31 01.1 +1.3
      comp=N,8.1nm,0.6s
WTTA  Wattenberg      3.29   4 Pn    Pn      05 30 23.2 +1.7
      comp=N,1.4nm,0.1s,SNR=10
WTTA                           eSn   Sn      05 31 02.2 +1.0
      comp=N,13nm,0.8s
WTTA  Wattenberg      3.29   4 ePn   Pn      05 30 23.5 +2.0
MBDF  Montbardon      3.32 285 ePn   Pn      05 30 21.7 -0.2
MBDF                           eSn   Sn      05 31 04.5 +2.7
      comp=N,19nm,0.7s
WATA  Walderalm       3.36   3 Pn    Pn      05 30 24.6 +2.1
      comp=N,0.9nm,0.1s,SNR=18
WATA                           eSn   Sn      05 31 04.9 +2.0
      comp=N,7.7nm,0.8s
MOTA  Moosalm         3.37 358 Pn    Pn      05 30 25.0 +2.4
      comp=N,0.6nm,0.1s,SNR=21
MOTA                           eSn   Sn      05 31 04.7 +1.7
      comp=N,11nm,0.7s
KBA   Koelnbreinsper  3.42  24 Pn    Pn      05 30 24.4 +1.1
      comp=N,2.0nm,0.3s,SNR=7.8
KBA                            eSn   Sn      05 31 04.9 +0.6
      comp=N,4.0nm,0.5s
KBA   Koelnbreinsper  3.42  24 ePn   Pn      05 30 24.2 +0.9
OBKA  Obir            3.42  41 ePn   Pn      05 30 23.1 -0.2
      comp=N,1.9nm,0.3s
OBKA                           eSg   Sg      05 31 17.5 -1.6
      comp=N,12nm,0.6s
OBKA  Obir            3.42  41 ePn   Pn      05 30 23.7 +0.4
ZUGS  Zugspitze, Sch  3.44 357 ePn   Pn      05 30 26.7 +3.0
DAVA  Damuels         3.45 344 Pn    Pn      05 30 26.9 +3.2
      comp=N,0.5nm,0.2s,SNR=13
DAVA                           eSn   Sn      05 31 08.9 +3.9
      comp=N,10nm,0.7s
DAVA  Damuels         3.45 344 ePn   Pn      05 30 26.7 +3.1
PART  Garmisch-Parte  3.52 358 ePn   Pn      05 30 27.8 +3.3
LMR   La Mourre       3.52 261 ePn   Pn      05 30 23.2 -1.3
LMR                            eSn   Sn      05 31 02.6 -4.0
      comp=N,5.8nm,0.3s
RETA  Reutte          3.53 354 Pn    Pn      05 30 27.6 +3.0
      comp=N,12nm,0.5s,SNR=10
RETA                           eSn   Sn      05 31 08.3 +1.5
      comp=N,4.2nm,0.7s
LPG   La Plagne       3.57 297 ePn   Pn      05 30 26.2 +0.8
LPG                            eSn   Sn      05 31 06.2 -1.9
      comp=N,6.3nm,0.4s
LESA  Schwarzleotal   3.58  15 Pn    Pn      05 30 26.3 +0.9
      comp=N,2.3nm,0.2s,SNR=18
LESA                           eSn   Sn      05 31 12.2 +4.1
      comp=N,6.1nm,0.5s
LPL   La Plagne       3.59 297 ePn   Pn      05 30 26.9 +1.3
LPL                            eSn   Sn      05 31 06.2 -2.3
      comp=N,3.2nm,0.4s
SOKA  Soboth          3.78  43 ePn   Pn      05 30 30.9 +2.8
      comp=N,4.2nm,1.0s
SOKA                           eSn   Sn      05 31 11.2 -1.8
      comp=N,6.2nm,0.7s
UBR   Ueberruh        3.79 348 ePn   Pn      05 30 30.3 +2.0
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ORIF	Oris-en-Rattie	3.98	286	*e*P	Pn	05 30 33.6	+2.7
ORIF				*e*Sn	Sn	05 31 16.4	-1.6
	comp=N,4.9nm,0.4s						
BIOA	Bad Ischl, Aus	4.06	23	*e*Pn	Pn	05 30 34.1	+2.1
	comp=N,1.7nm,0.2s						
BIOA				*e*Sn	Sn	05 31 21.1	+1.2
	comp=N,0.6nm,0.4s						
SMRF	Simiane la Rot	4.12	272	*e*Pn	Pn	05 30 33.4	+0.6
MOA	Molln	4.39	27	*e*Pn	Pn	05 30 37.8	+1.3
	comp=N,0.3nm,0.2s						
MOA				*e*Sn	Sn	05 31 28.7	+0.6
	comp=N,6.4nm,0.7s						
MOA	Molln	4.39	27	*e*Pn	Pn	05 30 38.0	+1.4
MOA				*e*Sn	Sn	05 31 29.4	+1.3
ARSA	Arzberg	4.42	41	*i* Pn	Pn	05 30 38.1	+1.2
	comp=N,2.0nm,0.3s,SNR=4.5						
ARSA				*e*Sn	Sn	05 31 26.7	-2.1
	comp=N,4.3nm,0.9s						
ARSA	Arzberg	4.42	41	*e*Pn	Pn	05 30 38.2	+1.2
CABF	La Chapelle	4.51	307	*e*Pn	Pn	05 30 39.8	+1.6
CABF				*e*Sn	Sn	05 31 28.9	-2.2
	comp=N,1.6nm,0.3s						
BFO	Black Forest	4.81	336	*e*Pn	Pn	05 30 43.8	+1.6
BFO				*e*Sn	Sn	05 31 37.6	-0.7
VIVF	Saint-Julien-l	4.81	283	*e*Pn	Pn	05 30 41.3	-1.0
HINF	Hinteralfeld	4.93	323	*e*Pn	Pn	05 30 44.8	+0.9
HINF				*e*Sn	Sn	05 31 39.5	-1.7
	comp=N,10nm,0.4s						
CONA	Conrad Observa	5.08	37	*e*Pn	Pn	05 30 46.5	+0.5
	comp=N,0.1nm,0.1s						
CONA				*e*Sn	Sn	05 31 43.8	-1.2
	comp=N,1.1nm,0.8s						
RONA	Rosalia, Austr	5.11	42	Pn	Pn	05 30 47.2	+0.8
	comp=N,1.3nm,0.3s,SNR=5.2						
RONA				*e*Sn	Sn	05 31 43.1	-2.7
	comp=N,3.5nm,0.8s						
GEC2	GERESS Array S	5.15	18	*e*Pn	Pn	05 30 47.3	+0.4
CDF	Champ du Feu	5.23	329	*e*Pn	Pn	05 30 48.5	+0.4
CDF				*e*Sn	Sn	05 31 47.8	-1.0
	comp=N,3.2nm,0.3s						
CKRC	Cesky Krumlov	5.27	22	*e*PN	Pn	05 30 50.3	+1.7
CKRC				*e*SN	Sn	05 31 48.1	-1.7
HAU	Haudompre	5.29	321	*e*Pn	Pn	05 30 49.9	+1.0
HAU				*e*Sn	Sn	05 31 48.6	-1.6
	comp=N,13nm,0.4s						
LASF	Ste Croix	5.36	274	*e*Pn	Pn	05 30 48.8	-0.9
KHC	Kasperske Hory	5.39	16	*e*PN	Pn	05 30 50.4	+0.2
KHC				*e*SN	Sn	05 31 49.9	-2.7
ZVC	Zvikov	5.81	19	*e*PN	Pn	05 30 56.6	+0.6
ZVC				*e*SN	Sn	05 32 00.4	-2.6
SMF	Signal de Mont	5.88	300	*e*Pn	Pn	05 30 57.7	+0.7
SMF				*e*Sn	Sn	05 32 01.6	-3.2
	comp=N,1.2nm,0.2s						
LOR	Lormes	6.16	305	*e*Pn	Pn	05 31 01.6	+0.9
LOR				*e*Sn	Sn	05 32 09.9	-1.6
	comp=N,5.3nm,0.4s						
AVF	Avril sur Loir	6.25	299	*e*Pn	Pn	05 31 02.0	0.0
AVF				*e*Sn	Sn	05 32 10.9	-2.9
	comp=N,1.2nm,0.2s						
MEZF	Maizieres J'vi	6.25	318	*e*Pn	Pn	05 31 02.0	0.0
MEZF				*e*Sn	Sn	05 32 10.0	-3.8
	comp=N,1.6nm,0.2s						
SSF	Saint Saulge	6.27	302	*e*Sn	Sn	05 32 10.4	-3.9
	comp=N,0.6nm,0.2s						
MTLF	Montolieu	6.61	268	*e*Pn	Pn	05 31 06.6	-0.3
CLL	Collm	7.42	8	*e*Pn	Pn	05 31 18.0	0.0
CLL				*e*Sg	Sg	05 33 26.0	-1.3

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*TIR **09** 05:34:11.4, 41°.45N×19°.42E, h25^{km}, Ml2.3/3*
*PDG **09** 05:34:14.4±0.1, 41°.57N×19°.49E, h11^{km}±1^{km}, ML2.5/11, Error ellipse: s-maj=0.2km s-min=0.2km az=0.0*
ISC 09 05:34:13.3±1.3, **41°.52N**±0°.05×**19°.48E**±0°.05, **h7**^{km}±10^{km}, **n15**, σ**0^{s}.77**/30, **3C-2D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.34	120	Pg	Pg	05 34 19.9	0.0
TIR				Sg	Sg	05 34 24.4	+0.1
TIR				AML	AML	05 34 24.8	
	1.6nm,0.4s						
ULC	Ulcinj	0.48	339	⇓*i*Pg	Pg	05 34 22.6	-0.1
ULC				*i* Sg	Sg	05 34 29.6	+0.6
SDA	Shkodra	0.54	2	Pg	Pg	05 34 23.3	-0.4
SDA				S	Sb	05 34 32.3	-0.8
SDA				AML	AML	05 34 34.1	
	0.7nm,0.2s						
DRME	Dracevica, Mon	0.71	342	*e*Pg	Pg	05 34 26.6	-0.3
DRME				*e*Sg	Sb	05 34 37.1	-0.9
PHP	Peshkopia	0.74	76	P	Pg	05 34 26.8	-0.8
PHP				Sg	Sg	05 34 38.0	+0.7
PHP				AML	AML	05 34 40.3	
	0.4nm,0.3s						
BUM	Brajici-Budva	0.90	331	⇑*i*Pg	Pg	05 34 30.2	-0.4
BUM				*i* Sg	Sb	05 34 43.7	+0.1
PDG	Podgorica	0.93	350	*e*Pg	Pg	05 34 30.7	-0.5
PDG				*i* Sg	Sb	05 34 44.6	+0.2
OHR	Ohrid	1.07	112	*i* Pg	Pn	05 34 35.0	+0.1
OHR				*e*Sg	Sn	05 34 50.6	+0.5
CEME	Cevo	1.11	338	*e*Pg	Pg	05 34 34.0	-0.7
CEME				*e*Sg	Sn	05 34 50.8	-0.3
PVY	Plav	1.14	18	*e*Pg	Pg	05 34 34.4	-0.8
PVY				*i* Sg	Sn	05 34 51.5	-0.3
HCY	Herceg Novi	1.19	322	⇑*i*Pg	Pg	05 34 35.6	-0.5
HCY				*i* Sg	Sn	05 34 53.6	+0.8
NKME	Niksic	1.31	343	*e*Pg	Pn	05 34 37.7	-0.5
NKME				*e*Sg	Sn	05 34 57.5	+1.5
KOME	Kolasin	1.33	1	⇓*i*Pg	Pn	05 34 38.0	-0.5
KOME				*e*Sg	Sn	05 34 58.1	+1.5
IVA	Berane	1.39	13	*e*Pg	Pn	05 34 39.1	-0.2
IVA				*i* Sg	Sg	05 34 59.9	+1.8
BRY	Bratogost	1.55	334	⇑*i*Pg	Pb	05 34 42.2	-0.3
BRY				*i* Sg	Sg	05 35 04.1	+0.9

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*VAO **09** 05:35:50.6±0.3, 0°.02N×60°.32W, h0^{km}, mbR3.3, Presumed earthquake*
*OSUNB **09** 05:35:51.0±0.3, 0°.05N×60°.36W, h0^{km}, mR3.5/7, Error ellipse: s-maj=2.6km s-min=3.6km az=0.0*
ISC 09 05:35:52.3±1.2, **0°.04N**±0°.04×**60°.32W**±0°.07, **h10**^{km}, **n12**, σ**1^{s}.06**/19, **Brazil**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOAV	Boa Vista	2.35	355	P	Pn	05 36 31.3	+0.3
BOAV				S	Sn	05 37 00.1	+0.2
BOAV	Boa Vista	2.35	355	*e*P	Pn	05 36 31.3	+0.3
BOAV				*e*S	Sn	05 37 00.3	+0.4
MACA	Manacapuru-AM	3.20	186	P	Pn	05 36 42.8	+0.1
MACA				S	Sn	05 37 23.3	+2.3
MACA	Manacapuru-AM	3.20	186	*e*P	Pn	05 36 43.0	+0.3
MACA				*e*S	Sn	05 37 22.6	+1.6
TEFE	Tefe	5.57	231	P	Pn	05 37 16.4	+1.1
TEFE				S	Sn	05 38 18.2	-1.3
TEFE	Tefe	5.57	231	*e*P	Pn	05 37 14.7	-0.6
TEFE				*e*S	Sn	05 38 18.1	-1.3
ITTB	Itaituba	6.34	134	P	Pn	05 37 25.1	-0.8
ITTB	Itaituba	6.34	134	*e*P	Pn	05 37 25.2	-0.8
ITTB				*e*S	Sn	05 38 37.2	-1.2
NPGB	Novo Progresso	8.61	145	P	Pn	05 37 56.3	-0.8
NPGB	Novo Progresso	8.61	145	*e*P	Pn	05 37 56.6	-0.5
ATM1	UHE Belo Monte	8.74	112	P	Pn	05 38 00.1	+1.1
BMO2	UHE Belo Monte	8.98	112	P	Pn	05 38 02.2	-0.1

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*OSUNB **09** 05:37:06.6±0.2, 0°.00S×60°.22W, h0^{km}, mR4.1/12, Error ellipse: s-maj=2.1km s-min=1.8km az=0.0*
*VAO **09** 05:37:07.6, 0°.06N×60°.28W, h0^{km}±5^{km}, mbR3.9, Presumed earthquake*
ISC 09 05:37:07.2±0.8, **0°.02N**±0°.04×**60°.24W**±0°.06, **h10**^{km}, **n24**, σ**2^{s}.22**/37, **Brazil**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOAV	Boa Vista	2.38	353	P	Pn	05 37 48.0	+1.8
BOAV				Pg	Pg	05 37 53.6	+0.8
BOAV				S	Sn	05 38 17.4	+1.9
BOAV	Boa Vista	2.38	353	*e*P	Pn	05 37 47.0	+0.7
BOAV				*e*S	Sn	05 38 16.9	+1.4
MACA	Manacapuru-AM	3.19	188	P	Pn	05 38 01.4	+4.0
MACA				S	Sn	05 38 39.9	+4.4
MACA	Manacapuru-AM	3.19	188	*e*P	Pn	05 37 58.2	+0.8
MACA				*e*S	Sn	05 38 37.6	+2.1
TEFE	Tefe	5.62	231	P	Pn	05 38 32.5	+1.7
TEFE				S	Sn	05 39 34.6	-0.8
TEFE	Tefe	5.62	231	*e*P	Pn	05 38 30.7	-0.1
TEFE				*e*S	Sn	05 39 34.7	-0.8
ITTB	Itaituba	6.26	134	P	Pn	05 38 41.4	+1.7
ITTB				S	Sn	05 39 51.9	+0.5
ITTB	Itaituba	6.26	134	*e*P	Pn	05 38 42.0	+2.2
MAL2	Monte Alegre,	6.39	108	P	Pn	05 38 44.6	+3.2
MAL2				S	Sn	05 39 56.4	+1.8
SGC2	Sao Gabriel da	6.74	269	P	Pn	05 38 44.8	-1.4
SGC2				S	Sn	05 40 00.7	-2.4
NPGB	Novo Progresso	8.54	145	P	Pn	05 39 12.7	+1.6
NPGB				S	Sn	05 40 44.8	-2.8
NPGB	Novo Progresso	8.54	145	*e*P	Pn	05 39 12.5	+1.4
ATM1	UHE Belo Monte	8.66	112	P	Pn	05 39 14.4	+1.7
ATM1				S	Sn	05 40 45.9	-4.6
BMO2	UHE Belo Monte	8.90	112	P	Pn	05 39 17.3	+1.3
BMO2				S	Sn	05 40 51.3	-5.1
CN01	Coaracy Nunes	9.03	84	P	Pn	05 39 17.1	-0.6
CLDB	Colider	11.69	158	P	Pn	05 39 55.5	+1.4
CLDB	Colider	11.69	158	*e*P	Pn	05 39 54.9	+0.8
PDRB	Porto dos Gac	12.07	163	P	Pn	05 40 01.0	+1.6
PDRB	Porto dos Gac	12.07	163	*e*P	Pn	05 40 01.0	+1.6
PRPB	Parauapebas	12.09	121	P	Pn	05 40 01.2	+1.5
PRPB	Parauapebas	12.09	121	*e*P	Pn	05 40 00.2	+0.5
PAL2	UHE Estreito -	14.53	118	P	Pn	05 40 34.0	+0.9
SNDB	Serra Nova Dou	14.86	144	P	Pn	05 40 39.0	+1.4
SMTB	Santa Maria do	15.38	125	P	Pn	05 40 47.1	+2.6

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*IDC **09** 05:37:43.9±1.9, 21°.05S×178°.31W, h487^{km}±22^{km}, mb4.1/18, mbtmp4.9/20, Error ellipse: s-maj=14.3km s-min=12.1km az=163.0*
*NEIC **09** 05:37:46.9±1.3, 21°.2S±0°.1×178°.3W±0°.1, h518^{km}±8^{km}, mb4.5/270, Error ellipse: s-maj=19.0km s-min=14.0km az=158.0*
*NOU **09** 05:37:46.1, 21°.10S×178°.19W, h522^{km}, mb5.1/75, Fiji Islands Region*
ISC 09 05:37:48.6±0.3, **21°.17S**±0°.05×**178°.34W**±0°.05, **h550**^{km}, **n452**, σ**1^{s}.53**/351, **mb4.6**/167, **2C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.82	314		P	05 39 14.1	-3.1
MSVF	Nonsavu	4.82	314	P	P	05 39 14.3	-2.9
MSVF	Nonsavu	4.82	314	S	S	05 40 26.1	-3.2
RAO	Raoul Island	8.06	177	P	P	05 39 42.9	-3.9
	653nm,0.3s,baz=281,slow=11,SNR=5.6						
RAO				S	S	05 41 15.9	-7.9
	747nm,0.4s,baz=256,slow=24,SNR=6.2						
RAO	Raoul Island	8.06	177	P	P	05 39 43.3	-3.5
GLKZ	Green Lake	8.07	177	P	P	05 39 42.2	-4.6
GLKZ				S	S	05 41 16.9	-7.0
NIUE	Niue	8.17	77		P	05 39 44.2	-3.9
NIUE	Niue	8.17	77	P	P	05 39 44.3	-3.8
NIUE	Niue	8.17	77	P	P	05 39 45.5	-2.6
NIUE				S	S	05 41 24.9	-1.2
AFI	Afiamalu	9.55	42	P	P	05 39 55.9	-6.3
AFI	Afiamalu	9.55	42	P	P	05 39 55.8	-6.3
MARNC	Mare, Loyalty	12.71	266		P	05 40 33.0	-1.5
MARNC	Mare, Loyalty	12.71	266	P	P	05 40 33.3	-1.2
MARNC	Mare, Loyalty	12.71	266	S	S	05 42 51.3	+0.3
DVP	Devils Point	13.16	283	P	P	05 40 38.3	-0.9
PINNC	Pines Island,	13.27	261		P	05 40 39.1	-1.2
PINNC	Pines Island,	13.27	261	P	P	05 40 39.7	-0.6
PINNC	Pines Island,	13.27	261	S	S	05 43 02.3	+0.7
YATNC	Mamie plateau,	13.77	264	P	P	05 40 44.3	-1.1
OUENC	Ouen Island, N	13.82	262	P	P	05 40 46.1	+0.1
OUENC	Ouen Island, N	13.82	262	S	S	05 43 14.9	+2.9
ONTNC	Ouen Toro	14.18	263		P	05 40 48.6	-1.0
ONTNC	Ouen Toro	14.18	263	P	P	05 40 49.2	-0.4
DZM	Mont Dzumac	14.18	264	P	P	05 40 47.0	-2.8
	90nm,0.8s,baz=80,slow=20,SNR=44						
DZM				S	S	05 43 19.0	0.0
	25nm,1.0s,baz=143,slow=1.8,SNR=3.5						
DZM	Mont Dzumac	14.18	264	*e*P	P	05 40 48.2	-1.6
	225nm,0.9s						
DZM				*e*S	S	05 43 18.3	-0.7
	116nm,1.3s						
DZM	Mont Dzumac	14.18	264		P	05 40 48.2	-1.6
DZM	Mont Dzumac	14.18	264	P	P	05 40 48.4	-1.4
SANVU	Saraoutou	14.86	290		P	05 40 54.2	-2.4
SANVU	Saraoutou	14.86	290	P	P	05 40 55.1	-1.6
SANVU	Saraoutou	14.86	290	S	S	05 43 32.2	+0.6
GRZ	Great Barrier	15.97	198	P	P	05 41 07.8	+0.1
KUZ	Kuaotunu	16.36	197	P	P	05 41 11.6	+0.3
WIAZ	Waiheke Island	16.57	199	P	P	05 41 14.2	+0.9
MXZ	Matakaoa Point	16.59	189	P	P	05 41 12.4	-1.1
MBAZ	Motutapu North	16.62	199	P	P	05 41 15.0	+1.3
ETAZ	East Tamaki Re	16.79	199	P	P	05 41 16.6	+1.4
WMGZ	Waiomatatini S	16.83	189	P	P	05 41 18.5	+2.9
MKAZ	Moumakai	16.86	198	P	P	05 41 15.4	-0.5
HAZ	Te Kaha	16.87	191	P	P	05 41 14.9	-1.0
WTAZ	Waiatarua	16.88	200	P	P	05 41 17.1	+1.0
KBAZ	Karaka Road Bo	16.93	199	P	P	05 41 18.3	+1.9
PKGZ	Pakihiroa	16.93	190	P	P	05 41 17.1	+0.6
PKGZ				S	S	05 44 13.3	+7.2
AWAZ	Awhitu Peninsu	16.97	200	P	P	05 41 16.7	-0.3
RUGZ	Raukumara Rang	17.09	191	P	P	05 41 16.5	-1.6
RUGZ				S	S	05 44 18.9	+10
PUZ	Puketiti	17.10	189	P	P	05 41 18.4	+0.3
TGRZ	Tauranga	17.15	195	P	P	05 41 19.7	+1.1
TGRZ				S	S	05 44 16.1	+6.4
OPRZ	Ohinepanea	17.20	194	P	P	05 41 20.4	+1.4
TWGZ	Tauwhareparae	17.25	190	P	P	05 41 19.0	-0.5
TWGZ				S	S	05 44 23.8	+12
MARZ	Manawahe	17.30	193	P	P	05 41 19.8	-0.1
KMRZ	Kaimai	17.34	195	P	P	05 41 21.6	+1.3
TOZ	Tahuroa Road	17.35	197		P	05 41 20.6	+0.4
TOZ	Tahuroa Road	17.35	197	P	P	05 41 21.1	+0.9
KARZ	Kaharoa	17.43	194	P	P	05 41 21.8	+0.6
URZ	Urewera	17.48	192	P	P	05 41 19.2	-2.3
	45nm,0.3s,baz=269,slow=2.7,SNR=67						
URZ				S	S	05 44 19.7	+4.7
	18nm,0.6s,baz=141,slow=19,SNR=4.6						
URZ	Urewera	17.48	192	P	P	05 41 19.7	-1.8
URZ	Urewera	17.48	192	P	P	05 41 19.3	-2.3
OMRZ	Omania	17.49	194	P	P	05 41 22.6	+1.0
CNGZ	Carnagh Statio	17.51	189	P	P	05 41 23.8	+2.0
TKGZ	Te Karaka	17.52	190	P	P	05 41 22.1	+0.2
TARZ	Mount Tarawera	17.58	194	P	P	05 41 22.2	-0.4
UTU	Utuhina	17.60	194	P	P	05 41 24.2	+1.6
RAGZ	Rawiri	17.65	191	P	P	05 41 22.2	-1.0
RRRZ	Republican Roa	17.68	193	P	P	05 41 24.3	+0.9
MUGZ	Murupara	17.76	193	P	P	05 41 22.1	-2.0
HRRZ	Handcock Road	17.78	194	P	P	05 41 24.2	-0.1
RIGZ	Rimuhau	17.80	190	P	P	05 41 23.4	-1.1
RTZ	Ruatahuna	17.85	192	P	P	05 41 24.0	-1.0
PRRZ	Plateau Road	17.86	194	P	P	05 41 24.5	-0.6
ALRZ	Allen Road	17.93	194	P	P	05 41 25.1	-0.6
WPRZ	Whakapapatarin	17.93	194	P	P	05 41 25.2	-0.5
SNGZ	Shannon Statio	17.94	191	P	P	05 41 24.3	-1.6
MTHZ	Maungataniwha	18.11	192	P	P	05 41 27.0	-0.3
RAHZ	Arahi	18.12	192	P	P	05 41 26.2	-1.3
KNZ	Kokohu	18.12	190	P	P	05 41 26.8	-0.6
WATZ	Wairara	18.21	195	P	P	05 41 29.4	+1.1
MHGZ	Mahia Peninsul	18.21	189	P	P	05 41 29.1	+0.9
HIZ	Hauiti	18.25	197	P	P	05 41 29.8	+1.1
NMHZ	Naumai	18.35	192	P	P	05 41 29.4	-0.2
RATZ	Rangitukua	18.35	195	P	P	05 41 28.5	-1.1
RITZ	Rihia Road	18.44	194	P	P	05 41 29.4	-1.0
KATZ	Kakaramea	18.47	195	P	P	05 41 30.8	0.0
ARHZ	Aropaoanui	18.48	191	P	P	05 41 30.0	-0.7
BKZ	Black Stump Fm	18.48	193	P	P	05 41 28.4	-2.3
BKZ	Black Stump Fm	18.48	193	P	P	05 41 27.9	-2.8
NTVZ	North Tongarir	18.60	195	P	P	05 41 32.0	+0.1
KRVZ	Karewarewa	18.60	195	P	P	05 41 31.8	-0.1
TMVZ	Te Maari	18.61	195	P	P	05 41 31.2	-0.8
OTVZ	Oturere	18.66	195	P	P	05 41 30.5	-2.0
NGZ	Ngauruhoe	18.69	195	P	P	05 41 32.2	-0.5
MCHZ	McNeill Hill	18.71	192	P	P	05 41 30.9	-1.8
COVZ	Chateau Observ	18.72	195	P	P	05 41 33.0	0.0
KWHZ	Kaweka Forest	18.74	193	P	P	05 41 32.3	-0.8
MAVZ	Matarangi	18.78	195	P	P	05 41 33.9	+0.1
WNVZ	Wahianoa	18.83	195	P	P	05 41 31.9	-2.2
KAHZ	Kahuranaki	19.01	191	P	P	05 41 34.4	-1.1
BFZ	Birch Farm	19.99	192	P	P	05 41 43.2	-1.2
SNZO	South Karori	20.93	195	P	P	05 41 52.4	-0.5
QRZ	Quartz Range	21.08	200	P	P	05 41 53.8	-0.4
HURO	Huro Makira	21.76	296	P	P	05 42 00.8	+0.1
THZ	Tophouse	21.82	198	P	P	05 42 00.3	-0.7
KHZ	Kahutara	22.26	196	P	P	05 42 04.7	-0.1
TARA	Tarawa	23.96	338	P	P	05 42 19.4	-0.9
SAVO	Savo Central	24.20	296	P	P	05 42 22.9	+0.4
TATA	Tatamba Isabel	24.61	298	P	P	05 42 24.5	-1.6
JCZ	Jackson Bay	25.22	202	P	P	05 42 30.9	-0.3
TBI	Tubuai	26.80	100	*e*sS	sS	05 49 05.0	-24
	2μm,27.0s						
WHZ	Wether Hill Ro	27.10	201	P	P	05 42 48.0	+0.4
PPT	Papeete	27.35	87	P	P	05 42 49.1	-1.1
	54nm,0.8s,baz=30,slow=2.0,SNR=5.3						
	54nm,0.8s						
TIAR	Tiarei	27.57	88	*e*P	P	05 42 53.6	+1.5
	120nm,1.0s						
EIDS	Eidsvold	28.37	256	P	P	05 42 58.9	-0.1
ARMA	Armidale	28.49	245	P	P	05 43 01.0	+0.8
AUPHS	Peel High Scho	29.26	244	P	P	05 43 07.5	+0.8
AUKHS	Kincumber High	29.45	239	P	P	05 43 09.4	+1.2
PMOR	Pomariorio Ree	29.55	83	*e*P	P	05 43 08.6	-0.8
	157nm,1.2s						
SYDH	Sydney Hard Ro	30.04	239	P	P	05 43 13.9	+0.5
AUDCS	Dubbo College	31.38	243	P	P	05 43 25.5	+0.6
AULRC	Lightning Ridg	31.45	248	P	P	05 43 25.8	+0.2
CNB	Canberra Magne	31.59	237	P	P	05 43 27.4	+0.7
AUSIS	Research Schoo	31.78	237	P	P	05 43 29.3	+1.0
AUMHS	Melrose High S	31.82	237	P	P	05 43 29.1	+0.5
AUMTS	Mt Stromlo	31.88	237	P	P	05 43 29.9	+0.8
CAN	Canberra	31.88	237	P	P	05 43 29.6	+0.4
CAN	Canberra	31.88	237	P	P	05 43 29.9	+0.7
AUSMG	Snowy Mountain	32.52	235	P	P	05 43 35.5	+0.9
CTAO	Charters Tower	33.11	265	P	P	05 43 39.7	-0.1
CMSA	Cobar Meteorol	33.71	245	P	P	05 43 44.7	+0.1
QLP	Quilpie	34.56	254	P	P	05 43 51.7	-0.1
PMG	Port Moresby	35.19	284	P	P	05 43 56.7	-0.5
PMG	Port Moresby	35.19	284	P	P	05 43 56.7	-0.5
PMG	Port Moresby	35.19	284	P	P	05 43 56.0	-1.2
	1μm126nm,0.9s						
MTSU	Mount Surprise	35.25	268	P	P	05 43 57.7	0.0
TOO	Toolangi	35.25	234	P	P	05 43 57.5	0.0
CORO	Coronation Par	35.43	227	P	P	05 43 59.8	+1.0
BRAT	Ballarat	36.43	235	P	P	05 44 08.3	+1.2
AUMTC	Mt Clear Colle	36.48	235	P	P	05 44 09.2	+1.6
STKA	Stephens Creek	37.21	245	P	P	05 44 14.1	+0.4
	17nm,0.5s,baz=85,slow=10.0,SNR=35						
	17nm,0.5s						
STKA	Stephens Creek	37.21	245		P	05 44 14.1	+0.4
STKA	Stephens Creek	37.21	245	P	P	05 44 14.2	+0.5
COEN	Coen	37.31	275		P	05 44 14.9	+0.2
COEN	Coen	37.31	275	P	P	05 44 14.9	+0.2
MANU	Manus Island	38.43	295		P	05 44 23.5	-0.4
TAOE	Nuku Hiva Isla	38.76	77	*e*P	P	05 44 26.3	-0.3
	178nm,1.1s						
TAOE	Nuku Hiva Isla	38.76	77	P	P	05 44 26.2	-0.3
AUMBR	Murray Bridge	39.57	240	P	P	05 44 33.0	+0.3
HTT	Hallett	39.64	243	P	P	05 44 33.5	+0.1
BBOO	Buckleboo	41.97	244	P	P	05 44 51.7	-0.2
BBOO	Buckleboo	41.97	244	P	P	05 44 51.8	-0.1
JAY	Jayapura	43.96	289	P	P	05 45 06.8	-0.9
	3μm139nm,0.8s						
AS31	Alice Springs	44.06	257	P	P	05 45 08.2	-0.2
ASAR	Alice Springs	44.06	257	P	P	05 45 08.2	-0.1
	16nm,0.8s,baz=98,slow=8.0,SNR=118						
ASAR				S	S	05 50 60.0	-1.3
	7.8nm,0.8s,baz=95,slow=16,SNR=29						
	16nm,0.8s						
ASAR	Alice Springs	44.06	257		P	05 45 08.1	-0.3
WB0	Warramunga Arr	44.18	263	P	P	05 45 08.1	-1.2
WRAB	Tennant Creek	44.19	263	P	P	05 45 08.3	-1.1
WRAB				IAmb	IAmb	05 45 09.4	
	comp=Z,13nm,0.8s						
WRAB	Tennant Creek	44.19	263	P	P	05 45 08.6	-0.8
WRA	Warramunga Arr	44.20	263	P	P	05 45 08.9	-0.5
	comp=Z,14nm,0.8s,baz=95,slow=5.3,SNR=61						
WRA				S	S	05 50 58.3	-4.9
	comp=Z,2.5nm,0.8s,baz=95,slow=13,SNR=5.7						
	comp=Z,14nm,0.8s						
WRA	Warramunga Arr	44.20	263	P	P	05 45 08.2	-1.2
GENI	Genyem	44.39	289	P	P	05 45 11.3	+0.3
GENI	Genyem	44.39	289	P	P	05 45 10.8	-0.2
	comp=Z,4μmcomp=Z,200nm,0.8s						
OVEH	Oceanview Est	45.76	30	P	P	05 45 21.0	-0.5
OVEH				IAmb	IAmb	05 45 21.7	
	comp=Z,38nm,0.7s						
SMPI	Sarmi	45.96	289	P	P	05 45 21.2	-1.8
	comp=Z,103nm,1.1s						
KHLU	Kahalu`u	46.08	30	P	P	05 45 23.3	-0.5
HUH	Hualalai	46.19	30	P	P	05 45 24.1	-0.8
PUH	Pauahi	46.22	31	P	P	05 45 24.3	-0.6
MLH	Mauna Loa	46.24	31	P	P	05 45 25.0	-0.2
KNHH	Kane Nui o Ham	46.24	31	P	P	05 45 24.5	-0.5
HPAH	Hawaii Prepara	46.55	30	P	P	05 45 26.9	-0.5
HIL	Hilo	46.57	31	P	P	05 45 26.9	-0.4
HIL				IAmb	IAmb	05 45 27.7	
	comp=Z,92nm,0.8s						
MHA	Mahukona	46.59	30	P	P	05 45 27.5	-0.1
DHH	Diamond Head	46.70	27	P	P	05 45 28.1	-0.2
BAKI	Biak	48.63	288	P	P	05 45 42.7	-0.3
	comp=Z,179nm,1.1s						
FORT	Forrest	48.74	247	P	P	05 45 42.8	-0.8
FORT				IAmb	IAmb	05 45 43.9	
	comp=Z,9.6nm,0.6s						
MTN	Manton Dam	48.85	271	P	P	05 45 43.4	-1.2
SAUI	Saumlaki	50.26	277	P	P	05 45 55.0	0.0
KNRA	Kununurra	50.30	267	P	P	05 45 54.8	-0.5
FAKI	Fak Fak	51.34	284	P	P	05 46 02.3	-0.6
FAKI	Fak Fak	51.34	284	P	P	05 46 01.7	-1.2
	comp=Z,47nm,1.2s						
FITZ	Fitzroy Crossi	52.63	263	P	P	05 46 12.4	+0.4
FITZ	Fitzroy Crossi	52.63	263	P	P	05 46 12.5	+0.5
BNDI	Bandanaira	52.84	281	P	P	05 46 13.4	-0.2
BNDI	Bandanaira	52.84	281	P	P	05 46 13.0	-0.6
SWI	Sorong	53.11	286	P	P	05 46 15.2	-0.4
MSAI	Masohi	54.19	282	P	P	05 46 23.0	-0.2
	comp=Z,130nm,0.6s						
AAI	Ambon	54.73	281	P	P	05 46 25.2	-1.8
	comp=Z,123nm,0.5s						
NLAI	Namlea	55.91	281	P	P	05 46 35.2	0.0
	comp=Z,82nm,0.7s						
SOEI	Soe	56.20	272	P	P	05 46 37.8	+0.4
SOEI	Soe	56.20	272	P	P	05 46 38.6	+1.2
	comp=Z,124nm,0.8s						
VNDA	Vanda	57.22	185	P	P	05 46 45.5	+2.4
	comp=Z,1.9nm,1.0s,baz=20,slow=3.8,SNR=2.0						
	comp=Z,1.9nm,1.0s						
SANI	Sanana	57.40	282	P	P	05 46 45.0	-0.4
SANI	Sanana	57.40	282	P	P	05 46 44.0	-1.4
	comp=Z,56nm,1.0s						
EDFI	Ende, Flores	58.94	272	P	P	05 46 55.5	-0.4
	comp=Z,34nm,0.8s						
LBFI	Labuhan Bajo,	60.70	272	P	P	05 47 07.3	-0.2
	comp=Z,689nmcomp=Z,61nm,1.1s						
GTOI	Gorontalo	61.21	283	P	P	05 47 11.6	+0.8
	comp=Z,791nmcomp=Z,67nm,0.7s						
BKSI	Bulukumba	61.58	276	P	P	05 47 13.4	+0.2
	comp=Z,13nm,0.8s						
BNSI	Bone	61.92	276	P	P	05 47 17.2	+1.7
	comp=Z,29nm,1.0s						
DBNI	Kabupaten Domp	62.17	271	P	P	05 47 14.9	-2.2
	comp=Z,51nm,0.8s						
PLAI	Plampang	62.56	271	P	P	05 47 19.4	-0.3
PLAI	Plampang	62.56	271	P	P	05 47 20.1	+0.4
	comp=Z,45nm,0.9s						
TWSI	Taliwang, Sumb	63.43	271	P	P	05 47 23.8	-1.4
	comp=Z,32nm,0.9s						
TOLI2	Tolitoli	63.43	282		P	05 47 25.3	0.0
TOLI2	Tolitoli	63.43	282	P	P	05 47 25.6	+0.3
MPSI	Mapaga	63.93	281	P	P	05 47 28.1	-0.3
	comp=Z,3μmcomp=Z,36nm,0.8s						
JAGI	Jajag, Banyuwa	66.06	270		P	05 47 40.9	-1.0
JAGI	Jajag, Banyuwa	66.06	270	P	P	05 47 41.0	-0.8
SNJI	Sawahan-Nganju	68.52	270	P	P	05 47 57.8	+0.7
QSPA	South Pole Qui	68.90	180	P	P	05 48 00.4	+1.9
	comp=Z,2.1nm,0.5s,baz=19,slow=0.5,SNR=5.4						
	comp=Z,2.1nm,0.5s						
MJAR	Matsushiro Arr	70.56	324	P	P	05 48 08.5	-0.1
	comp=Z,7.8nm,0.5s,baz=165,slow=5.7,SNR=16						
	comp=Z,7.8nm,0.5s						
MJAR	Matsushiro Arr	70.56	324		P	05 48 08.7	+0.1
MJAR				IAmb	IAmb	05 48 09.4	
	comp=Z,25nm,1.4s						
MAJO	Matsushiro	70.56	324		P	05 48 08.8	+0.2
MJB9	Matsu-Tunnel	70.56	324	P	P	05 48 09.7	+1.0
MJB9				IAmb	IAmb	05 48 10.6	

	comp=Z,14nm,0.5s						
JNU	Nakatsue	72.54	317		P	05 48 20.6	+0.3
JNU	Nakatsue	72.54	317	P	P	05 48 20.8	+0.5
TPUB	Ta-pu	74.07	303		P	05 48 28.3	-0.9
TPUB	Ta-pu	74.07	303	P	P	05 48 28.6	-0.6
SSLB	Suanglung	74.08	304	P	P	05 48 28.9	-0.3
PETK	Petropavlovsk-	76.83	345	P	P	05 48 43.6	-0.2
	comp=Z,14nm,0.7s,baz=136,slow=6.9,SNR=14						
	comp=Z,14nm,0.7s						
KSRS	Korea Array	77.18	319	P	P	05 48 47.2	+1.2
	comp=Z,4.1nm,0.6s,baz=126,slow=5.8,SNR=9.9						
	comp=Z,4.1nm,0.6s						
KSAR	Wonju Array Be	77.19	319		P	05 48 47.0	+0.9
MHC	Mount Hamilton	78.95	43	IAmb	IAmb	05 48 58.3	
	comp=Z,13nm,0.9s						
USRK	Ussuriysk Ar.	79.34	326	P	P	05 48 59.0	+1.6
	comp=Z,9.8nm,0.6s,baz=122,slow=3.3,SNR=16						
	comp=Z,9.8nm,0.6s						
MNRC	McLaughlin Min	79.39	41	IAmb	IAmb	05 49 00.8	
	comp=Z,24nm,0.9s						
TPO	Tropico Hills	79.75	46	IAmb	IAmb	05 49 02.3	
	comp=Z,16nm,1.0s						
O02D	Mt. Diablo Mer	79.99	40	IAmb	IAmb	05 49 04.1	
	comp=Z,16nm,0.7s						
SUTB	Sutter Butte	80.01	41	P	P	05 49 01.4	+0.3
ISA	Isabella, Lake	80.03	46	P	P	05 49 02.7	+1.3
KHBM	Hayfork Bally	80.04	39	P	P	05 49 02.3	+0.8
NJ2	Nanjing	80.06	310	*e*P	P	05 49 04.3	+2.8
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
SRIG	Santa Rosalia	80.06	56	P	P	05 49 01.8	+0.2
SRIG				IAmb	IAmb	05 49 03.9	
	comp=Z,12nm,0.9s						
BORC	Borrego Spring	80.09	49	P	P	05 49 02.9	+1.2
BORC				IAmb	IAmb	05 49 04.1	
	comp=Z,18nm,1.3s						
YUH	Yuha Desert	80.11	49	P	P	05 49 02.6	+0.9
CMB	Columbia Colle	80.17	43	P	P	05 49 02.4	+0.4
PFO	Pinyon Flats O	80.25	48	P	P	05 49 03.1	+0.4
PMD	Palm Desert	80.33	48	P	P	05 49 03.1	+0.1
N02D	Trinity Center	80.54	39	P	P	05 49 05.5	+1.6
N02D				IAmb	IAmb	05 49 06.9	
	comp=Z,22nm,1.1s						
O03E	Paynes Creek	80.66	40	IAmb	IAmb	05 49 06.9	
	comp=Z,30nm,1.2s						
M02C	Callahan	80.71	39	IAmb	IAmb	05 49 07.9	
	comp=Z,16nm,0.8s						
MDJ	Mudanjiang	80.88	325	IAmb	IAmb	05 49 07.7	
	comp=Z,9.8nm,0.6s						
MDJ	Mudanjiang	80.88	325	P	P	05 49 07.0	+1.5
MDJ				pmax	pmax		
	comp=Z,14nm,0.7s						
YBH	Yreka Blue Hor	81.01	39	IAmb	IAmb	05 49 09.0	
	comp=Z,17nm,0.8s						
WAKR	Walker	81.05	43	IAmb	IAmb	05 49 09.3	
	comp=Z,16nm,1.0s						
MPK	Martis Peak	81.14	42	IAmb	IAmb	05 49 09.8	
	comp=Z,32nm,1.2s						
DSP	Deep Springs	81.34	44	IAmb	IAmb	05 49 10.5	
	comp=Z,13nm,1.1s						
LHV	Little Huntoon	81.50	43	IAmb	IAmb	05 49 11.4	
	comp=Z,16nm,1.0s						
GRAC	Grapevine Rang	81.52	45	IAmb	IAmb	05 49 11.1	
	comp=Z,11nm,0.8s						
L04D	Klamath Falls	81.55	39	IAmb	IAmb	05 49 11.5	
	comp=Z,26nm,0.9s						
DANC	Danby, Needles	81.56	48	IAmb	IAmb	05 49 11.9	
	comp=Z,17nm,1.0s						
BLYC	Blythe	81.69	49	IAmb	IAmb	05 49 12.5	
	comp=Z,9.9nm,0.8s						
NVAR	Mina Array Bea	81.73	43	P	P	05 49 11.4	+1.2
	comp=Z,11nm,0.9s,baz=225,slow=8.5,SNR=58						
	comp=Z,11nm,0.9s						
PAHR	Pah Rah Range	81.79	42	IAmb	IAmb	05 49 12.6	
	comp=Z,19nm,1.3s						
NV11	Mina Array Sit	81.82	44	IAmb	IAmb	05 49 12.8	
	comp=Z,18nm,1.1s						
I03D	Drain, OR	81.88	37	IAmb	IAmb	05 49 12.6	
	comp=Z,12nm,0.8s						
HSIG		81.89	55	IAmb	IAmb	05 49 13.2	
	comp=Z,7.8nm,0.6s						
NEE2	Needles Airpor	82.16	48	IAmb	IAmb	05 49 14.3	
	comp=Z,9.1nm,0.6s						
TPNV	Topopah Spring	82.23	46	IAmb	IAmb	05 49 15.1	
	comp=Z,12nm,0.9s						
I04A	Tendick Farm,	82.47	37	IAmb	IAmb	05 49 15.6	
	comp=Z,10nm,0.7s						
K05A	Summer Lake	82.68	39	IAmb	IAmb	05 49 17.6	
	comp=Z,26nm,0.9s						
H04D	Lebanon	82.75	37	IAmb	IAmb	05 49 17.6	
	comp=Z,14nm,0.8s						
BNX	BinXian	82.79	325	⇑P	P	05 49 15.8	+0.6
BNX				pmax	pmax		
	comp=Z,28nm,0.6s						
S11A	Rachel	82.95	45	IAmb	IAmb	05 49 18.4	
	comp=Z,16nm,1.0s						
WIFE	Three Sisters-	82.97	37	IAmb	IAmb	05 49 18.8	
	comp=Z,19nm,0.8s						
H04A	Detroit Lake	83.15	37	IAmb	IAmb	05 49 18.9	
	comp=Z,28nm,1.2s						
I05D	Terrebonne, OR	83.41	37	IAmb	IAmb	05 49 20.7	
	comp=Z,18nm,0.8s						
TIA	Tai'an	83.49	313	P	P	05 49 20.9	+2.0
TIA				pmax	pmax		
	comp=Z,11nm,0.6s						
WVOR	Wild Horse Val	83.84	40	IAmb	IAmb	05 49 23.0	
	comp=Z,18nm,1.2s						
HOOD	Mount Hood Mea	83.85	36	IAmb	IAmb	05 49 23.2	
	comp=Z,10nm,0.9s						
C03A	Quillayute Air	83.97	33	P	P	05 49 22.8	+1.8
X16A	Lo Mia Camp, P	84.22	50	P	P	05 49 23.9	+1.1
LCMT	Little Creek M	84.30	47	P	P	05 49 23.7	+0.7
319A	Douglas	84.30	53	P	P	05 49 24.9	+1.7
319A				IAmb	IAmb	05 49 26.3	
	comp=Z,21nm,1.0s						
I07A	Izee	84.31	38	P	P	05 49 23.0	+0.1
I07A				IAmb	IAmb	05 49 25.4	
	comp=Z,13nm,1.0s						
G06A	Carlson Farm,	84.36	37	P	P	05 49 23.6	+0.5
G06A				IAmb	IAmb	05 49 25.1	
	comp=Z,8.6nm,1.0s						
J08A	Circle Bar Ran	84.48	39	P	P	05 49 24.6	+0.8
J08A				IAmb	IAmb	05 49 26.1	
	comp=Z,12nm,1.2s						
SLKM	Skilak Lake	84.53	14	P	P	05 49 24.4	+0.9
B04A	Port Angeles	84.58	33	P	P	05 49 25.4	+1.4
KNB	Kanab	84.58	47	P	P	05 49 24.8	+0.3
O22K	Cooper Landing	84.61	14	P	P	05 49 26.0	+2.1
GNW	Green Mountain	84.62	34	P	P	05 49 25.2	+1.0
SPR3	Spring Creek 3	84.62	45	P	P	05 49 25.3	+0.4
U15A	North Rim	84.64	48	P	P	05 49 25.7	+0.7
U15A				IAmb	IAmb	05 49 27.5	
	comp=Z,13nm,0.8s						
CLRS	Cowichan Lake	84.76	33	P	P	05 49 25.6	+0.7
CLRS				IAmb	IAmb	05 49 27.0	
	comp=Z,10nm,1.0s						
WUAZ	Wupatki	84.82	49	P	P	05 49 26.4	+0.7
D05A	Enumclaw	84.83	35	P	P	05 49 26.5	+1.3
GSI	Gunungsitoli	84.95	273	P	P	05 49 27.6	+1.0
GSI	Gunungsitoli	84.95	273	P	P	05 49 28.1	+1.5
PGC	Sidney	84.99	33	P	P	05 49 26.4	+0.4
PGC				IAmb	IAmb	05 49 27.6	
	comp=Z,8.6nm,0.8s						
DUN6	Lazy B Ranch	85.01	52	P	P	05 49 28.5	+1.9
HPIG		85.05	59	P	P	05 49 27.0	0.0
F07A	Phinny Hill Vi	85.15	37	P	P	05 49 27.6	+0.8
F07A				IAmb	IAmb	05 49 29.6	
	comp=Z,15nm,1.5s						
PKCU	Pink Cliffs	85.16	47	P	P	05 49 29.0	+1.5
PKCU				IAmb	IAmb	05 49 30.6	
	comp=Z,13nm,0.8s						
G08A	Pilot Rock	85.34	38	P	P	05 49 28.8	+0.9
G08A				IAmb	IAmb	05 49 30.1	
	comp=Z,12nm,0.9s						
X18A	Snowflake	85.34	50	P	P	05 49 29.3	+1.0
MXC	Moxie City	85.36	36	IAmb	IAmb	05 49 30.0	
	comp=Z,9.1nm,1.0s						
MTPU	Mount Pierson	85.55	46	IAmb	IAmb	05 49 32.3	
	comp=Z,6.8nm,0.9s						
LTY	Liberty	85.58	35	IAmb	IAmb	05 49 30.8	
	comp=Z,8.6nm,0.9s						
E07A	Sunnyside	85.59	36	IAmb	IAmb	05 49 31.3	
	comp=Z,10nm,0.8s						
HAWA	Hanford	85.67	36	IAmb	IAmb	05 49 31.7	
	comp=Z,16nm,1.1s						
HEH	HeiHe	85.71	329	*e*P	P	05 49 29.9	+0.5
HEH				pmax	pmax		
	comp=Z,15nm,0.6s						
ZAIG	Zacatecas	85.78	64	IAmb	IAmb	05 49 33.5	
	comp=Z,6.4nm,0.9s						
WAH2	Wahluke Slope	85.87	36	P	P	05 49 31.8	+1.5
WAH2				IAmb	IAmb	05 49 32.0	
	comp=Z,5.9nm,0.7s						
121A	Cookes Peak, D	85.97	53	IAmb	IAmb	05 49 34.2	
	comp=Z,9.9nm,1.1s						
BMO	Blue Mountains	86.03	39	IAmb	IAmb	05 49 33.1	
	comp=Z,6.1nm,0.8s						
LNOR	Lincton Mounta	86.06	37	P	P	05 49 32.5	+1.2
BJT	Baijiatuau	86.14	316	IAmb	IAmb	05 49 33.4	
	comp=Z,8.4nm,0.6s						
BJT	Baijiatuau	86.14	316	P	P	05 49 32.5	+0.8
BJI	Beijing	86.14	316	P	P	05 49 32.6	+0.9
BJI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ENH	Enshi	86.15	304	P	P	05 49 33.7	+1.7
EPH	Ephrata	86.22	36	IAmb	IAmb	05 49 33.9	
	comp=Z,12nm,0.9s						
D08A	Wollman Farm,	86.41	36	IAmb	IAmb	05 49 35.0	
	comp=Z,13nm,0.9s						
E09A	Wood Farm, Sta	86.52	37	IAmb	IAmb	05 49 35.8	
	comp=Z,12nm,1.1s						
TMUT	Trail Mountain	86.85	46	IAmb	IAmb	05 49 38.0	
	comp=Z,11nm,1.1s						
PLID	Pearl Lake	86.93	39	IAmb	IAmb	05 49 38.2	
	comp=Z,8.0nm,1.0s						
B08A	Colville Reser	86.96	35	IAmb	IAmb	05 49 36.9	
	comp=Z,13nm,0.8s						
LLLB	Lillooet	87.03	32	IAmb	IAmb	05 49 37.5	
	comp=Z,7.3nm,1.0s						
HLID	Hailey	87.04	41	P	P	05 49 37.7	+1.6
HVU	Hansel Valley	87.11	43	P	P	05 49 37.4	+1.0
BARN	Barnard Glacie	87.11	17	P	P	05 49 36.8	+0.8
BARN				IAmb	IAmb	05 49 38.9	
	comp=Z,15nm,1.0s						
CTGM	Chitina Glacie	87.12	17	P	P	05 49 36.8	+0.8
KTH	Kantishna Hill	87.14	12	P	P	05 49 35.5	-0.4
KTH				IAmb	IAmb	05 49 59.1	
	comp=Z,20nm,1.4s						
TRF	Thorofare Moun	87.17	12	P	P	05 49 36.4	+0.2
TRF				IAmb	IAmb	05 49 36.6	
	comp=Z,12nm,0.8s						
SRU	San Rafael Swe	87.21	46	IAmb	IAmb	05 49 39.0	
	comp=Z,7.9nm,0.8s						
VHRN	Van Horn	87.29	56	P	P	05 49 39.4	+1.8
VHRN				IAmb	IAmb	05 49 40.3	
	comp=Z,10nm,0.9s						
LENM	Lemitar	87.33	52	P	P	05 49 38.6	+0.9
MNTX	Cornudas Mount	87.40	55	P	P	05 49 39.4	+1.5
MNTX				IAmb	IAmb	05 49 40.4	
	comp=Z,10nm,0.9s						
RND	Reindeer	87.42	13	P	P	05 49 37.5	+0.2
TX31	Lajitas Ar. Si	87.68	57	P	P	05 49 41.2	+1.8
TX31				IAmb	IAmb	05 49 42.2	
	comp=Z,12nm,1.1s						
TXAR	Lajitas Array	87.68	57	P	P	05 49 41.1	+1.7
	comp=Z,6.7nm,0.9s,baz=218,slow=6.1,SNR=62						
	comp=Z,6.7nm,0.9s						
TXAR	Lajitas Array	87.68	57		P	05 49 41.0	+1.6
BSUT	Blindstream Ca	87.77	45	IAmb	IAmb	05 49 42.0	
	comp=Z,12nm,1.3s						
PV10	Paradox Valley	87.86	47	IAmb	IAmb	05 49 41.7	
	comp=Z,7.8nm,0.8s						
PV19	Morning Glory	87.87	47	IAmb	IAmb	05 49 43.0	
	comp=Z,7.0nm,1.0s						
PV18	Skein Mesa, Pa	87.89	48	IAmb	IAmb	05 49 41.8	
	comp=Z,7.6nm,1.1s						
PV20	West Nyswonger	87.89	47	IAmb	IAmb	05 49 42.0	
	comp=Z,6.5nm,0.8s						
PV23	Carpenter Ridg	87.92	47	IAmb	IAmb	05 49 42.7	
	comp=Z,8.2nm,0.8s						
PV12	Saucer Basin,	88.00	48	IAmb	IAmb	05 49 43.2	
	comp=Z,5.6nm,0.8s						
S34M	Telegraph Cree	88.00	23	P	P	05 49 41.9	+1.9
S34M				IAmb	IAmb	05 49 42.3	
	comp=Z,9.2nm,0.9s						
BCYI	Bear Canyon	88.06	41	IAmb	IAmb	05 49 42.8	
	comp=Z,4.6nm,0.8s						
TASM	ASL Pad, Albuq	88.07	51	P	P	05 49 41.9	+0.8
TASM				IAmb	IAmb	05 49 43.3	
	comp=Z,8.6nm,1.2s						
TASM	ASL Pad, Albuq	88.07	51	IAmb	IAmb	05 49 43.3	
	comp=Z,7.9nm,1.2s						
ABQ	Albuquerque	88.07	51	IAmb	IAmb	05 49 43.3	
	comp=Z,8.3nm,1.2s						
ANMO	Albuquerque	88.07	51	P	P	05 49 42.2	+1.0
ANMO				IAmb	IAmb	05 49 43.3	
	comp=Z,8.4nm,1.1s						
ALPN	Alpine	88.16	57	IAmb	IAmb	05 49 44.0	
	comp=Z,8.5nm,0.7s						
XLT	XiLinHaoTe	88.23	319	*e*P	P	05 49 42.1	+0.6
XLT				pmax	pmax		
	comp=Z,9.0nm,0.6s						
XAN	Xi'an	88.28	308	⇓P	P	05 49 43.3	+1.3
XAN				pmax	pmax		
	comp=Z,28nm,0.8s						
I21K	Tanana	88.42	11	IAmb	IAmb	05 49 43.7	
	comp=Z,15nm,1.1s						
MLY	Manley	88.51	11	IAmb	IAmb	05 49 44.0	
	comp=Z,13nm,1.3s						
HDA	Harding Lake	88.70	13	IAmb	IAmb	05 49 43.7	
	comp=Z,5.7nm,0.8s						
H21K	Melozitna Rive	88.72	10	IAmb	IAmb	05 50 16.3	
	comp=Z,10nm,1.4s						
IMAR	Indian Mountai	88.87	10	P	P	05 49 44.5	+0.6
COLA	College	88.92	13	P	P	05 49 44.0	-0.1
IL31		89.03	13	IAmb	IAmb	05 49 45.7	
	comp=Z,5.9nm,0.9s						
ILAR	Eielson Array	89.03	13	P	P	05 49 44.0	-0.7
	comp=Z,5.3nm,1.0s,baz=220,slow=5.6,SNR=36						
	comp=Z,5.3nm,1.0s						
HIA	Hailar	89.05	325	P	P	05 49 45.3	+0.1
DLMT	Dillon	89.10	40	IAmb	IAmb	05 49 47.9	
	comp=Z,7.7nm,0.8s						
M29M	Somme Creek	89.12	17	IAmb	IAmb	05 49 47.0	
	comp=Z,7.5nm,0.8s						
SAND	Sanderson	89.16	57	IAmb	IAmb	05 49 48.1	
	comp=Z,6.7nm,1.0s						
FXWY	Fox Creek	89.17	42	IAmb	IAmb	05 49 49.1	
	comp=Z,5.2nm,1.1s						
H22K	Ishtalitna Cre	89.18	11	IAmb	IAmb	05 49 47.4	
	comp=Z,5.8nm,0.9s						
HILR	Hailar Array B	89.21	325	P	P	05 49 46.8	+0.8
	comp=Z,9.6nm,0.6s,baz=131,slow=7.4,SNR=19						
	comp=Z,9.6nm,0.6s						
J25K	Salcha River,	89.22	14	IAmb	IAmb	05 49 46.5	
	comp=Z,5.1nm,0.9s						
KMI	Kunming	89.37	297	P	P	05 49 49.3	+1.8
KMI				pmax	pmax		
	comp=Z,18nm,1.0s						
G21K	Allakaket	89.40	10	IAmb	IAmb	05 49 48.5	
	comp=Z,8.1nm,1.0s						
LOHW	Long Hollow	89.42	42	IAmb	IAmb	05 49 49.2	
	comp=Z,6.2nm,0.7s						
J26L	Joseph Creek	89.53	14	IAmb	IAmb	05 49 48.8	
	comp=Z,9.5nm,0.9s						
F20K	Avaraart Lake	89.56	9	IAmb	IAmb	05 49 49.3	
	comp=Z,5.4nm,0.9s						
HHC	Hu-ho-hao-te	89.59	314	*e*P	P	05 49 50.2	+2.2
HHC				pmax	pmax		
	comp=Z,11nm,0.5s						
HHC				pmax	pmax		
	comp=Z,88nm,6.2s						
YHB	Horse Butte	89.63	41	IAmb	IAmb	05 49 51.0	
	comp=Z,7.7nm,1.0s						
BW06	Boulder Array	89.66	43	IAmb	IAmb	05 49 49.9	
	comp=Z,7.7nm,0.8s						
PD31	Pinedale Array	89.67	43	IAmb	IAmb	05 49 49.9	
	comp=Z,7.7nm,0.8s						
PDAR	Pinedale Array	89.67	43	P	P	05 49 48.9	+0.5
	comp=Z,6.0nm,0.7s,baz=208,slow=3.0,SNR=61						
	comp=Z,6.0nm,0.7s						
PDAR	Pinedale Array	89.67	43	P	P	05 49 48.7	+0.2
YHL	Hebgen Lake	89.69	41	IAmb	IAmb	05 49 51.4	
	comp=Z,9.9nm,1.0s						
M30M	Minto, Yukon	89.70	18	IAmb	IAmb	05 49 51.2	
	comp=Z,6.5nm,0.9s						
E19K	Redstone River	89.74	8	IAmb	IAmb	05 49 50.1	
	comp=Z,9.8nm,0.9s						
BOZ	Bozeman (W)	89.80	40	IAmb	IAmb	05 49 51.1	
	comp=Z,6.6nm,0.9s						
CMAR	Chiang Mai Arr	90.04	290	P	P	05 49 53.0	+2.6
	comp=Z,18nm,0.4s,baz=112,slow=7.0,SNR=6.1						
	comp=Z,18nm,0.4s						
CHTO	Chiang Mai	90.17	290	P	P	05 49 53.2	+2.2
CHTO	Chiang Mai	90.17	290	P	P	05 49 52.8	+1.8
DAWY	Dawson	90.19	16	IAmb	IAmb	05 49 53.2	
	comp=Z,5.8nm,1.0s						
OZNA	Ozona	90.35	57	P	P	05 49 52.4	+0.7
OZNA				IAmb	IAmb	05 49 52.8	
	comp=Z,4.6nm,0.8s						
YNE	Yellowstone No	90.49	41	IAmb	IAmb	05 49 54.7	
	comp=Z,7.4nm,1.0s						
K29M	Barlow Dome	90.50	17	IAmb	IAmb	05 49 53.4	
	comp=Z,5.5nm,1.0s						
COLD	Coldfoot	90.59	11	IAmb	IAmb	05 49 54.5	
	comp=Z,5.5nm,1.0s						
D19K	Kuna River	90.62	7	IAmb	IAmb	05 49 53.6	
	comp=Z,7.9nm,1.0s						
PZH	PanZhiHua	90.74	298	P	P	05 49 55.2	+1.6
J29N	Klondike Camp	90.80	16	IAmb	IAmb	05 49 56.1	
	comp=Z,5.2nm,0.9s						
D20K	Etivluk River	91.01	8	IAmb	IAmb	05 49 56.1	
	comp=Z,10nm,1.1s						
E22K	Anaktuvuk Pass	91.15	10	IAmb	IAmb	05 49 56.3	
	comp=Z,10nm,1.2s						
I28M	Miner Creek	91.18	15	IAmb	IAmb	05 49 59.6	
	comp=Z,8.0nm,1.3s						
G26K	Porcupine Rive	91.56	13	IAmb	IAmb	05 49 59.9	
	comp=Z,5.9nm,1.1s						
LZH	Lanzhou	92.92	308	*e*P	P	05 50 04.6	+1.1
LZH				sP	PP	05 53 54.8	-1.4
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZDM	Lanzhou Array	92.98	307	P	P	05 50 04.8	+0.8
	comp=Z,0.7nm,0.3s,baz=120,slow=8.5,SNR=1.6						
	comp=Z,0.7nm,0.3s						
G30M	tAoh Zraii Nji	93.31	15	IAmb	IAmb	05 50 06.5	
	comp=Z,7.8nm,1.1s						
YKA	Yellowknife Ar	97.25	25	P	Pdif	05 50 22.6	+0.4
	comp=Z,0.4nm,0.8s,baz=247,slow=4.6,SNR=4.3						
	comp=Z,0.4nm,0.8s						
MKAR	Makanchi Array	111.42	313	PKiKP	PKiKP	05 55 20.5	0.0
	comp=Z,0.6nm,0.6s,baz=37,slow=3.0,SNR=4.4						
KURBB	Kurchatov Arra	114.32	317	PKP	PKPdf	05 55 25.3	-0.5
	comp=Z,0.7nm,0.7s,baz=92,slow=1.8,SNR=7.4						
BVAR	Borovoye Array	119.38	320	PKP	PKPdf	05 55 34.9	-0.6
	comp=Z,1.1nm,0.4s,baz=96,slow=3.0,SNR=7.6						
ARCES	ARCESS Array B	129.52	349	PKP	PKPdf	05 55 54.9	+0.5
	comp=Z,4.5nm,0.9s,baz=20,slow=3.9,SNR=7.8						
FINES	FINESS Array B	136.32	343	PKP	PKiKP	05 56 10.1	+0.9
	comp=Z,1.0nm,0.5s,baz=64,slow=3.2,SNR=6.0						
HFS	Hagfors	140.15	351	PKhKP	PKPpre	05 56 07.5	
	comp=Z,2.1nm,0.4s,baz=55,slow=5.5,SNR=12						
AK03	Malin Array Si	143.42	330	PKP	PKPab	05 56 18.5	-0.4
AKASG	Malin Array Be	143.44	330	PKhKP	PKPpre	05 56 18.8	
	comp=Z,25nm,0.8s,baz=43,slow=4.5,SNR=62						
AKASG	Malin Array Be	143.44	330		PKPab	05 56 19.0	+0.1
AKBB	Malin Array Si	143.44	330	PKP	PKPab	05 56 18.6	-0.4
AK23	Malin Array Si	143.44	331	PKP	PKPab	05 56 18.2	-0.8
AK01	Malin Array Si	143.45	330	PKP	PKPab	05 56 18.4	-0.6
AK04	Malin Array Si	143.45	330	PKP	PKPab	05 56 18.4	-0.6
KIEV	Kiev	143.45	330		PKPab	05 56 18.7	-0.4
KIEV	Kiev	143.45	330	PKP	PKPab	05 56 18.6	-0.4
AK22	Malin Array Si	143.47	331	PKP	PKPab	05 56 18.4	-0.7
AK09	Malin Array Si	143.47	330	PKP	PKPab	05 56 18.4	-0.7
AK21	Malin Array Si	143.47	331	PKP	PKPab	05 56 18.4	-0.7
AK08	Malin Array Si	143.47	330	PKP	PKPab	05 56 18.4	-0.7
AK02	Malin Array Si	143.48	330	PKP	PKPab	05 56 18.4	-0.7
AK11	Malin Array Si	143.48	330	PKP	PKPab	05 56 18.5	-0.6
AK18	Malin Array Si	143.50	331	PKP	PKPab	05 56 18.9	-0.3
AK10	Malin Array Si	143.50	330	PKP	PKPab	05 56 18.5	-0.7
AK05	Malin Array Si	143.50	330	PKP	PKPab	05 56 18.5	-0.7
EKA	Eskdalemuir Ar	145.69	5	PKPbc	PKPab	05 56 27.6	+0.1
	comp=Z,6.0nm,0.8s,baz=343,slow=3.0,SNR=5.7						
BEL	Belsk	145.96	339	*e*PKP	PKPab	05 56 28.2	-0.5
BRTR	Keskin Array B	147.04	311	PKPbc	PKPbc	05 56 30.6	+0.3
	comp=Z,4.0nm,0.7s,baz=135,slow=3.8,SNR=16						
BRTR	Keskin Array B	147.04	311		PKPbc	05 56 30.3	0.0
KWP	Kalwaria Pacla	147.05	335	*e*PKP	PKiKP	05 56 31.4	-0.2
OJC	Ojcow	147.66	338	*e*PKP	PKPbc	05 56 32.3	+1.0
STHS	Stebnicka Huta	147.79	336	*e*PKP	PKiKP	05 56 33.6	+0.4
STHS				*e*		05 56 37.3	
MMAI	Mount Meron Ar	147.86	299	PKPbc	PKiKP	05 56 33.8	-0.2
	comp=Z,13nm,0.6s,baz=78,slow=5.2,SNR=8.6						
NIE	Niedzica	148.15	337	*e*PKP	PKiKP	05 56 35.0	+1.0
KSP	Ksiaz	148.23	342	*e*PKP	PKiKP	05 56 35.1	+1.1
CLL	Collm	148.63	346	*i* PKPbc	PKiKP	05 56 35.4	+0.6
	comp=Z,13nm,0.7s						
CLL				*i* PKPab	PKPab	05 56 40.1	+0.6
	comp=Z,16nm,1.0s						
LANS	Liptovska Anna	148.68	337	*e*PKP	PKiKP	05 56 37.1	+2.1
LANS				*e*		05 56 42.0	
MORC	Moravsky Berou	148.79	340	*e*PKP	PKiKP	05 56 36.2	+0.9
KECS	Kecovo	148.84	335	*e*PKP	PKPab	05 56 41.7	+1.2
VRAC	Vranov	149.50	341	*e*PKP	PKiKP	05 56 38.2	+1.5
JAVC	Velka Javorina	149.55	339	*e*PKP	PKiKP	05 56 39.3	+2.4
KRUC	Moravsky	149.78	341	*e*PKP	PKiKP	05 56 38.6	+1.3
KRUC				*e*		05 56 45.0	
MODS	Modra-Piesok	150.10	339	*e*PKP	PKiKP	05 56 40.4	+2.4
MODS				*e*		05 56 47.9	
KHC	Kasperske Hory	150.52	344	⇑*e*PKP	PKPbc	05 56 36.0	-2.4
GERES	GERESS Array B	150.75	344	PKPbc	PKiKP	05 56 39.6	+0.2
	comp=Z,1.5nm,0.7s,baz=46,slow=3.9,SNR=7.1						
CONA	Conrad Observa	150.95	340	*i* PKiKP	PKiKP	05 56 41.6	+1.8
	comp=Z,5.0nm,0.7s						
CONA				*i* PKP	PKPab	05 56 51.1	+1.7
	comp=Z,10nm,1.2s						
RONA	Rosalia, Austr	151.01	339	*e*PKP	PKiKP	05 56 40.6	+0.6
	comp=Z,5.5nm,0.8s						
RONA				*i* PKP	PKPab	05 56 51.4	+1.8
	comp=Z,8.1nm,0.9s						
BIOA	Bad Ischl, Aus	151.82	343	*i* PKP	PKPab	05 56 54.5	+1.5
	comp=Z,4.9nm,0.6s						
SOKA	Soboth	152.32	340	*i* PKP	PKiKP	05 56 43.3	+0.6
	comp=Z,10nm,1.5s						
SOKA				*i* PKP	PKPab	05 56 56.2	+0.9
	comp=Z,3.2nm,0.6s						
LESA	Schwarzleotal	152.33	344	*i* PKP	PKPab	05 56 56.6	+1.4
	comp=Z,11nm,1.2s						
OBKA	Obir	152.62	340	*i* PKP	PKiKP	05 56 44.0	+0.7
	comp=Z,6.6nm,1.1s						
OBKA				*i* PKP	PKPab	05 56 57.3	+0.8
	comp=Z,12nm,1.5s						
WATA	Walderalm	152.69	345	*i* PKP	PKPab	05 56 57.9	+1.1
	comp=Z,8.7nm,0.9s						
RETA	Reutte	152.73	346	*i* PKP	PKPab	05 56 57.9	+1.0
	comp=Z,9.4nm,1.0s						
WTTA	Wattenberg	152.74	345	*i* PKiKP	PKiKP	05 56 45.0	+1.3
	comp=Z,5.7nm,0.7s						
WTTA				*i* PKP	PKPab	05 56 58.4	+1.3
	comp=Z,5.8nm,0.7s						
MOTA	Moosalm	152.79	346	*i* PKP	PKPab	05 56 58.6	+1.3
	comp=Z,11nm,1.0s						
MYKA	Terra Mystica	152.79	342	*e*PKP	PKPab	05 56 57.6	+0.4
	comp=Z,5.8nm,1.1s						
SQTA	Sankt Quirin	152.88	346	*i* PKP	PKPab	05 56 58.6	+1.0
	comp=Z,7.7nm,1.1s						
ABTA	Abfaltersbach	153.00	343	*i* PKiKP	PKiKP	05 56 45.4	+1.3
	comp=Z,6.5nm,0.9s						
ABTA				*i* PKP	PKPab	05 56 58.5	+0.4
	comp=Z,10nm,1.1s						
DAVA	Damuels	153.10	348	*i* PKP	PKPab	05 56 59.2	+0.6
	comp=Z,4.4nm,0.7s						
FETA	Feichten	153.18	346	*i* PKP	PKPab	05 56 59.0	+0.1
	comp=Z,6.6nm,1.3s						
ESDC	Sonseca Array	160.94	13	PKPab	PKPab	05 57 31.1	-1.5
	comp=Z,2.3nm,1.0s,baz=340,slow=5.7,SNR=5.7						

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*IDC **09** 05:51:07.0±0.7, 10°.37N×126°.17E, h0^{km}, mb4.1/10, mbtmp4.0/10, MS3.1/3, Error ellipse: s-maj=39.7km s-min=17.5km az=66.0*

*NEIC **09** 05:51:16.3±1.2, 10°.3N±0°.1×125°.92E±0°.07, h63^{km}±8^{km}, mb4.3/15, Error ellipse: s-maj=14.9km s-min=9.3km az=194.0*

ISC 09 05:51:14.4±0.6, **10°.29N**±0°.09×**126°.0E**±0°.2, **h51**^{km}**, n43,** σ**0^{s}.96**/38**, mb4.2**/20**, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	3.23	187	Pn	Pn	05 52 03.9	+1.3
YULB	Yu-li	13.78	342		Pn	05 54 28.0	+0.9
GUMO	Guam	18.75	78	LR	LR	06 01 00.6	
	comp=Z,66nm,22.0s,baz=255,slow=32						
JAY	Jayapura	19.40	130	LR	LR	06 02 25.6	
	comp=Z,120nm,20.6s,baz=351,slow=35						
KNRA	Kununurra	25.95	174	P	P	05 56 42.0	-0.2
KNRA				IAmb	IAmb	05 57 10.8	

	comp=Z,14nm,1.4s						
CM31	Chiang Mai Arr	27.41	290	P	P	05 56 55.4	-0.1
CM31				IAmb	IAmb	05 56 57.8	
	comp=Z,9.4nm,0.9s						
CMAR	Chiang Mai Arr	27.41	290	P	P	05 56 57.0	+1.6
	comp=Z,1.8nm,0.3s,baz=98,slow=9.5,SNR=3.4						
CMAR				LR	LR	06 08 16.4	
	comp=Z,22nm,18.6s,baz=100,slow=37						
CMAR	Chiang Mai Arr	27.41	290	P	P	05 56 55.6	+0.2
WB0	Warramunga Arr	30.99	165	P	P	05 57 26.0	-1.2
WRA	Warramunga Arr	31.15	165	P	P	05 57 27.4	-1.1
	comp=Z,0.5nm,0.8s,baz=344,slow=8.8,SNR=2.4						
	comp=Z,0.5nm,0.8s						
WRA	Warramunga Arr	31.15	165	P	P	05 57 26.1	-2.4
ASAR	Alice Springs	34.62	167	P	P	05 57 58.3	-0.6
	comp=Z,0.4nm,0.3s,baz=347,slow=7.2,SNR=8.1						
ASAR				PcP	PcP	06 00 32.4	-0.2
	comp=Z,0.6nm,0.6s,baz=0.5,slow=2.9,SNR=5.1						
	comp=Z,0.4nm,0.3s						
H11S3	WAKE ISLAND Hy	40.17	74	T	T	06 41 42.1	
	baz=265,slow=73,SNR=46						
H11S1	WAKE ISLAND Hy	40.19	74	T	T	06 41 38.0	
	baz=265,slow=73,SNR=23						
H11S2	WAKE ISLAND Hy	40.19	74	T	T	06 41 45.2	
	baz=265,slow=73,SNR=27						
H11N1	WAKE ISLAND Hy	40.50	72	T	T	06 42 09.4	
	baz=264,slow=74,SNR=52						
H11N2	WAKE ISLAND Hy	40.51	72	T	T	06 42 09.8	
	baz=264,slow=74,SNR=38						
H11N3	WAKE ISLAND Hy	40.52	72	T	T	06 42 10.8	
	baz=264,slow=74,SNR=53						
ULN	Ulaanbaatar	40.71	340	P	P	05 58 51.4	+1.1
ULN				IAmb	IAmb	05 58 52.0	
	comp=Z,3.9nm,0.8s						
EVN	Everest	40.75	301	P	P	05 58 51.0	-0.4
EVN				IAmb	IAmb	05 59 17.3	
	comp=Z,1.8nm,0.8s						
FORT	Forrest	40.88	177	P	P	05 58 52.1	+0.6
FORT				IAmb	IAmb	05 59 10.9	
	comp=Z,6.8nm,0.8s						
SONM	Songino Array	40.91	340	P	P	05 58 51.7	-0.1
	comp=Z,0.8nm,0.5s,baz=153,slow=10,SNR=5.4						
SONM				PcP	PcP	06 00 50.2	-1.4
	comp=Z,0.2nm,0.4s,baz=142,slow=4.2,SNR=3.8						
	comp=Z,0.8nm,0.5s						
SONM	Songino Array	40.91	340	P	P	05 58 51.6	-0.1
SONM				PcP	PcP	06 00 50.0	-1.5
MKAR	Makanchi Array	51.85	323	P	P	06 00 17.5	-0.1
	comp=Z,2.0nm,0.6s,baz=124,slow=7.8,SNR=19						
MKAR				PcP	PcP	06 01 29.7	-0.2
	comp=Z,1.2nm,0.8s,baz=115,slow=4.6,SNR=4.4						
	comp=Z,2.0nm,0.6s						
ZALV	Zalesovo Beam	54.48	331	P	P	06 00 35.7	-1.0
	comp=Z,1.0nm,0.3s,baz=127,slow=7.1,SNR=1.8						
	comp=Z,1.0nm,0.3s						
KURK	Kurchatov	55.90	326	P	P	06 00 46.9	0.0
KURBB	Kurchatov Arra	55.90	325	P	P	06 00 46.4	-0.6
	comp=Z,2.3nm,0.6s,baz=128,slow=6.7,SNR=22						
	comp=Z,2.3nm,0.6s						
KK31	Karatay Array	58.05	315	P	P	06 01 01.6	-0.8
KK31				IAmb	IAmb	06 01 02.5	
	comp=Z,1.7nm,0.8s						
KKAR	Karatay Array	58.05	315	P	P	06 01 01.9	-0.4
AB31	Akbulak array	66.69	319	P	P	06 01 59.7	-0.3
AB31				IAmb	IAmb	06 01 59.9	
	comp=Z,1.9nm,0.9s						
ABKAR	Akbulak array	66.69	319	P	P	06 01 59.5	-0.5
AKTO	Aktyubinsk	68.14	320	P	P	06 02 09.0	-0.2
	comp=Z,1.2nm,0.7s,baz=54,slow=8.7,SNR=3.5						
	comp=Z,1.2nm,0.7s						
IMAR	Indian Mountai	76.69	24	P	P	06 03 01.1	+1.3
B22K	Teshekpuk Lake	77.20	20	P	P	06 03 03.5	+0.9
MLY	Manley	77.89	26	P	P	06 03 07.1	+0.5
MLY				IAmb	IAmb	06 03 20.2	
	comp=Z,3.9nm,1.3s						
KVAR	Kislovodsk Arr	78.13	313	LR	LR	06 43 05.5	
	comp=Z,254nm,19.4s,baz=255,slow=40						
ILAR	Eielson Array	79.54	26	P	P	06 03 14.4	-1.1
	comp=Z,0.6nm,0.7s,baz=241,slow=5.5,SNR=7.8						
	comp=Z,0.6nm,0.7s						
D25K	Kavik River	79.61	21	P	P	06 03 17.4	+1.5
D25K				IAmb	IAmb	06 03 39.4	
	comp=Z,5.4nm,1.1s						
I26K	Coal Creek Min	81.09	25	P	P	06 03 24.4	+0.5
H31M	Peel River	84.62	24	P	P	06 03 43.5	+1.3
FINES	FINESS Array B	85.75	332	P	P	06 03 47.0	-0.8
	comp=Z,11nm,1.1s,baz=91,slow=5.6,SNR=3.3						
	comp=Z,11nm,1.1s						
YKA	Yellowknife Ar	93.85	24	P	P	06 04 27.1	+1.1
	comp=Z,0.5nm,0.7s,baz=301,slow=5.3,SNR=6.7						
	comp=Z,0.5nm,0.7s						
PLCA	Paso Flores	146.33	157	PKPbc	PKPab	06 10 50.5	-0.2
	comp=Z,2.4nm,0.9s,baz=254,slow=4.6,SNR=6.1						

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*IDC **09** 05:52:04.7±11.0, 17°.54S×178°.70W, h594km±151km, mb2.9/6, mbtmp3.8/6, Error ellipse: s-maj=113.2km s-min=39.4km az=163.0*

ISC 09 05:52:01.0±2.0**, 17°.4S**±0°.7×**178°.7W**±0°.4**, h547**km**, n7,** σ**0^{s}80**/7**, mb3.4**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	44.46	259	P	P	05 59 23.9	-0.1
	0.5nm,0.8s,baz=95,slow=8.1,SNR=1.1						
	0.5nm,0.8s						
ASAR	Alice Springs	44.67	254	P	P	05 59 26.1	+0.4
	0.7nm,0.5s,baz=86,slow=8.6,SNR=9.8						
	0.7nm,0.5s						
NVAR	Mina Array Bea	79.24	44	P	P	06 03 10.4	+0.4
	0.7nm,0.8s,baz=238,slow=5.0,SNR=5.1						
	0.7nm,0.8s						
ILAR	Eielson Array	85.44	13	P	P	06 03 41.0	+0.5
	0.8nm,0.4s,baz=220,slow=5.3,SNR=23						
	0.8nm,0.4s						
TXAR	Lajitas Array	85.95	58	P	P	06 03 44.1	+0.2
	0.9nm,0.8s,baz=213,slow=6.7,SNR=9.9						
	0.9nm,0.8s						
PDAR	Pinedale Array	87.16	44	P	P	06 03 48.6	-0.9
	0.4nm,0.7s,baz=177,slow=3.0,SNR=4.2						
	0.4nm,0.7s						
GERES	GERESS Array B	147.03	345	PKPbc	PKPbc	06 10 41.6	-1.1
	1.3nm,0.8s,baz=24,slow=4.5,SNR=3.6						

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*TRN **09** 05:56:37.9, 15°.30N×61°.33W, h17km, MD3.8, Dominica. Double event. Felt in Dominica MMI V, VI.*

*NEIC **09** 05:56:39.5±0.8, 15°.30N±0°.01×61°.32W±0°.03, h10km±2km, ML2.7/24, Error ellipse: s-maj=5.8km s-min=3.0km az=252.0*

ISC 09 05:56:38.3±1.0**, 15°.30N**±0°.03×**61°.27W**±0°.07**, h23**km±6km**, n22,** σ**1^{s}89**/39**, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DLPL	La Plaine	0.04	32	*e*P	Pb	05 56 42.6	+0.1
DLPL				*e*S	Sb	05 56 45.3	+0.1
DLPL				x	x	05 56 51.9	
DSLB	Salisbury	0.20	312	*e*P	Pb	05 56 43.8	-0.1
DSLB				*e*S	Sb	05 56 47.4	-0.3
DSLB				x	x	05 56 53.9	
SVN	Savane Anatole	0.47	168	Pg	Pn	05 56 49.5	-0.2
SVN					Sb	05 56 55.3	+0.7
SVN	Savane Anatole	0.47	168	*e*P	Pn	05 56 50.0	+0.4
SVN				x	Sb	05 56 56.8	+2.2
CXM	Morne La Croix	0.50	169	Pg	Pb	05 56 49.3	+0.8
CXM				Sg	Sb	05 56 53.9	-1.6
CXM				IAML		05 57 05.5	
	comp=E,546nm,0.5s						
CXM				IAML		05 57 06.0	
	comp=N,967nm,0.5s						
MAGL	Barre de l'ile	0.64	359	Pg	Pn	05 56 52.4	+0.4
MAGL				IAML		05 56 57.2	
	comp=E,246nm,2.4s						
MAGL				Sg	Sn	05 57 00.7	-0.8
ILAM	Ilet Lapin Mar	0.65	144	Pg	Pn	05 56 52.7	+0.6
TDBA	Terre de Bas,	0.65	327		Pb	05 56 51.8	+0.8
TDBA					Sb	05 56 58.9	-0.8
TDBA				IAML		05 57 11.3	
	comp=E,274nm,0.8s						
TDBA				IAML		05 57 12.2	
	comp=N,347nm,0.7s						
TBG	Guadaloupe-3	0.66	326	*e*P	Pn	05 56 52.1	-0.1
TBG				x	Sb	05 56 58.6	-1.3
BIM	Bigot	0.80	166	Pg	Pn	05 56 54.8	+0.5
BIM				Sg	Sb	05 57 02.9	-1.2
BIM				IAML		05 57 16.4	
	comp=N,300nm,0.8s						
BIM				IAML		05 57 18.8	
	comp=E,343nm,0.5s						
BIM	Bigot	0.80	166	*e*P	Pn	05 56 55.0	+0.7
BIM				x	Sb	05 57 02.1	-2.1
CBE	Ff, Capester	0.83	337	Pg	Pn	05 56 55.5	+0.8
CBE				Sg	Sb	05 57 03.4	-1.5
MMLZ	Guadeloupe Bro	0.83	332	*e*P	Pn	05 56 55.6	+1.0
MMLZ				x	Sb	05 57 03.1	-1.8
ATGZ	Broadband at L	0.91	331	*e*P	Pn	05 56 56.7	+1.1
ATGZ				x	Sb	05 57 04.6	-2.4
MPOM	Morne Pois Mar	0.94	155	Pg	Pn	05 56 56.4	+0.3
DSDZ	La Diserade, G	1.02	11	*e*P	Pb	05 56 59.1	+1.7
DSDZ				x	Sb	05 57 06.7	-3.7
GDSD	La Dsirade Is	1.02	11	Pg	Pb	05 56 58.9	+1.5
GDSD				IAML		05 57 24.2	
	comp=N,122nm,0.6s						
DHSZ	Broadband at M	1.08	334	*e*P	Pb	05 57 00.6	+2.3
DHSZ				x	Sb	05 57 07.8	-4.2
GDHS	Morne Mazeau,	1.08	334	Pg	Pb	05 56 59.5	+1.1
ABD	La Joyeuse, An	1.18	350		Pb	05 57 02.0	+1.9
ABD				IAML		05 57 30.9	
	comp=N,175nm,1.3s						
ABD				IAML		05 57 39.1	
	comp=E,221nm,1.6s						
SLBI	Saint Lucia, B	1.30	167	*e*P	Pb	05 57 03.8	+1.6
SLBI				x	Sb	05 57 12.6	-5.9
MBWH	Windy Hill	1.69	328	*e*P	Pb	05 57 08.5	-0.2
MBWH				x	Sb	05 57 32.2	+2.7

IDC 09 06:01:39.4±2.4**, 6°.01S**×**130°.04E, h0**km**, mb3.7**/1**, mbtmp3.8**/4**, ML3.9**/3**, Error ellipse: s-maj=99.2km s-min=29.3km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	12.76	199	Pn	Pn	06 04 44.4	+2.1
	0.9nm,0.3s,baz=22,slow=11,SNR=24						
FITZ				Sn	Sn	06 06 56.0	-9.2
	0.9nm,0.3s,baz=72,slow=7.9,SNR=8.9						
	1.3nm,0.4s						
WRA	Warramunga Arr	14.47	164	Pn	Pn	06 05 03.6	-2.1
	0.4nm,0.3s,baz=341,slow=13,SNR=13						
WRA				Sn	Sn	06 07 28.8	-18
	1.1nm,0.3s,baz=346,slow=24,SNR=8.8						
	0.9nm,0.5s						
ASAR	Alice Springs	17.95	168	P	Pn	06 05 50.2	-0.4
	0.4nm,0.3s,baz=353,slow=10,SNR=18						
ASAR				S	Sn	06 08 59.2	-12
	1.2nm,0.7s,baz=346,slow=24,SNR=6.5						
	1.6nm,0.7s						
MKAR	Makanchi Array	67.42	327	P	P	06 12 36.9	0.0
	0.5nm,0.6s,baz=130,slow=9.0,SNR=3.7						
	0.5nm,0.6s						

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*OSPL **09** 06:09:19.1±2.3, 20°.16N×70°.63W, h11km±21km, ML1.9, Presumed earthquake*

*SDD **09** 06:09:22.7±3.3, 20°.01N×70°.74W, h30km±26km, MD2.9, ML2.9, MW2.9, Presumed earthquake*

ISC 09 06:09:20.7±1.5**, 20°.03N**±0°.05×**70°.70W**±0°.05**, h16**km±10km**, n12,** σ**0^{s}89**/19**, 9C-1D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SODR	Sosua Marina B	0.30	156	⇑*e*Sg	Sn	06 09 36.3	-0.2
SODR				IAML		06 09 41.6	
	comp=N,653nm,0.3s						
LOPP1	Punta Rusia, P	0.50	250	*i* P	Pg	06 09 29.9	-0.7
LOPP1				*e*S	Sb	06 09 38.8	+0.7
LOPP1				IAML		06 09 41.3	
	comp=Z,48nm,0.8s						
SC01	Santiago de lo	0.60	182	⇑*e*Pg	Pg	06 09 32.0	-0.5
SC01				⇑*e*Sg	Sn	06 09 43.2	-0.7
SC01				IAML		06 09 47.0	
	comp=N,705nm,0.3s						
SC01	Santiago de lo	0.60	182	*i* P	Pg	06 09 31.8	-0.7
SC01				*e*S	Sb	06 09 42.3	+1.4
REDR	Restauracion	1.08	217	⇓*e*Pg	Pb	06 09 41.1	+0.2
REDR				⇑*e*Sg	Sg	06 09 57.3	+1.7
REDR				IAML		06 09 59.0	
	comp=N,135nm,0.2s						
SDDR	Presa de Saban	1.18	208	⇑*e*Sg	Sb	06 09 57.4	-0.3
SDDR				IAML		06 09 58.1	
	comp=N,708nm,0.3s						
SDDR	Presa de Saban	1.18	208	*i* P	Pn	06 09 41.0	-1.6
SDDR				*e*S	Sb	06 09 57.3	-0.3
SDDR				IAML		06 09 59.3	
	comp=Z,16nm,0.7s						
GRTK	Grand Turk	1.53	345	⇑*e*Sg	Sb	06 10 08.3	+0.5
GRTK				IAML		06 10 08.9	
	comp=N,1µm,0.3s						
LONE3	El Aguacate, B	1.58	207	*i* P	Pn	06 09 47.7	-0.5
LONE3				*e*S	Sb	06 10 09.6	+0.1
LONE3				IAML		06 10 11.7	
	comp=Z,18nm,1.4s						
HATOM	Hato Mayor del	1.75	134	⇑*e*Pg	Pn	06 09 50.1	-0.4
HATOM				⇑*e*Sg	Sb	06 10 14.3	0.0
HATOM				IAML		06 10 18.2	
	comp=N,88nm,0.2s						
LODU1	El Espartillar	1.82	204	*i* P	Pn	06 09 52.3	+1.0
LODU1				IAML		06 10 17.2	
	comp=Z,42nm,2.9s						
MIDR	Miches	1.87	123	⇑*e*Sg	Sn	06 10 16.1	+0.7
MIDR				IAML		06 10 42.2	
	comp=N,23nm,2.4s						

IDC 09 06:12:08.4±1.9**, 6°.08N**×**125°.04E, h0**km**, mb3.6**/5**, mbtmp3.6**/5**, MS3.8**/1**, Error ellipse: s-maj=150.7km s-min=21.6km az=68.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	1.13	29	LR	LR	06 13 14.4	
	comp=Z,139nm,18.1s,baz=282,slow=59						
FITZ	Fitzroy Crossi	24.03	179	P	P	06 17 25.4	+0.1
	1.3nm,0.5s,baz=13,slow=7.9,SNR=11						
	1.3nm,0.5s						
ASAR	Alice Springs	30.80	164	P	P	06 18 25.9	-0.2
	0.4nm,0.5s,baz=341,slow=7.5,SNR=7.9						
	0.4nm,0.5s						
STKA	Stephens Creek	40.91	158	P	P	06 19 52.5	-0.1
	1.4nm,0.7s,baz=323,slow=13,SNR=2.1						
	1.4nm,0.7s						
MKAR	Makanchi Array	54.68	325	P	P	06 21 40.1	+0.7
	0.2nm,0.5s,baz=120,slow=8.2,SNR=2.6						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	58.87	327	P	P	06 22 08.2	-0.7
	0.5nm,0.8s,baz=126,slow=6.7,SNR=4.6						
	0.5nm,0.8s						
EIL	Elat	87.11	299	LR	LR	07 09 09.7	
	comp=Z,44nm,19.6s,baz=356,slow=39						

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*CATAC **09** 06:12:20.9±0.2, 19°N±2°×8°0W±°, h10km, M5.0/14, mb5.2/14, mB5.3/12, MLv5.5/10, Mw(mB)4.7/12, MwMwp4.6/1, Mwp5.0/1, Error ellipse: s-maj=5.3km s-min=2.4km az=148.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.85; M$_{\theta\theta}$-1.24; M$_{\phi\phi}$2.09; M$_{r\theta}$-0.67; M$_{\theta\phi}$-0.87; M$_{\phi r}$-2.03; Fault plane solution: M$_{0}$2.94119×10^{16} NP1:φ$_{s}$124.69073°, δ37.20395°, λ-162.27362°. NP2:φ$_{s}$20.40692°, δ79.39133°, λ-54.12906°. Principal axes: T 3.1807, Plg25.6596°, Azm83.0412°; N -0.5594, Plg35.1659°, Azm192.8241°; P -2.6213, Plg43.8983°, Azm325.5074°; confirmed*

*SSNC **09** 06:12:22.2±2.3, 18°.92N×80°.54W, h22km±23km, MD5.2, ML5.0*

*MOS **09** 06:12:22.1±1.1, 19°.15N×80°.58W, h13km, mb5.3/21, Error ellipse: s-maj=8.9km s-min=5.7km az=93.8*

*NEIC **09** 06:12:23.2, 19°.18N×80°.43W, h26km, Moment Tensor Solution. Duration: 1^{s}7 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.13; M$_{\theta\theta}$-0.67; M$_{\phi\phi}$2.80; M$_{r\theta}$-0.64; M$_{\theta\phi}$-0.73; M$_{\phi r}$-3.09; Fault plane solution: M$_{0}$4.11000×10^{16} NP1: φ$_{s}$143.74000°, δ24.51000°, λ-131.81000°. NP2:φ$_{s}$8.24000°, δ71.99000°, λ-73.10000°. Principal axes: T 4.3194, Plg25.0000°, Azm85.0000°; N -0.4489, Plg16.0000°, Azm183.0000°; P -3.8705, Plg60.0000°, Azm302.0000°;*

*NEIC **09** 06:12:23.2, 19°.08N×80°.43W, h26km*

*IDC **09** 06:12:23.7±3.2, 18°.96N×80°.58W, h18km±19km, mb4.7/28, mbtmp4.8/31, ML4.7/3, MS4.2/57, Error ellipse: s-maj=14.6km s-min=11.7km az=48.0*

*NEIC **09** 06:12:23.2±1.8, 19°.08N±0°.06×80°.44W±0°.06, h10km±1km, mb5.2/641, Mww5.0/23, Error ellipse: s-maj=10.2km s-min=9.4km az=228.0*

*GCMT **09** 06:12:26.2±0.2, 19°.00N±0°.02×80°.63W±0°.01, h22km, MW5.0/93, Moment Tensor Solution. s24,c26; s93,c130; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.74±.17; M$_{\theta\theta}$-0.68±.10; M$_{\phi\phi}$3.42±.12; M$_{r\theta}$-0.55±.16; M$_{\theta\phi}$-1.19±.07; M$_{\phi r}$-1.75±.16; Best double couple: M$_{0}$3.78400×10^{16} NP1:φ$_{s}$143.00000°, δ37.00000°, λ-126.00000°. NP2: φ$_{s}$4.00000°, δ61.00000°, λ-67.00000°. Principal axes: T 4.1000, Plg13.0000°, Azm78.0000°; N -0.6330, Plg20.0000°, Azm172.0000°; P -3.4670, Plg66.0000°, Azm317.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*JSN **09** 06:12:26.1±1.0, 19°.16N×80°.02W, h0km±33km, MD5.3*

*RSNC **09** 06:12:29.5±0.6, 19°N±4°×8°0W±°, h55km±18km, M4.9, mb5.4, mB5.4, mBc6.5, Mjma4.9, ML5.4, ML4.5, MLh5.2, MLv5.4, Ms(BB)4.5, Mw(mB)4.9*

ISC 09 06:12:25.9±0.2**, 19°.07N**±0°.03×**80°.49W**±0°.04**, h35**km**, n988,** σ**1^{s}61**/743**, mb5.2**/294**, MS4.3**/53**, 20C-26D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCCY	Blossom Villag	0.70	33	Pn	Pn	06 12 37.2	-2.2
LCCY	Blossom Villag	0.70	33	*e*P	Pn	06 12 37.2	-2.2
LCCY				*e*S	Sn	06 12 46.2	-2.8
CBCY	The Bluff, Cay	0.95	46	P	Pn	06 12 41.0	-1.8
CBCY				S	Sn	06 12 53.6	-1.5
CBCY	The Bluff, Cay	0.95	46	*e*P	Pn	06 12 41.0	-1.8
CBCY				*e*S	Sn	06 12 51.7	-3.4
MTDJ	Mount Denham	2.92	106		Pn	06 13 07.4	-2.6
MTDJ	Mount Denham	2.92	106	⇑*i*P	Pn	06 13 07.4	-2.6
MTDJ	Mount Denham	2.92	106	P	Pn	06 13 07.5	-2.6
MTDJ				S	Sn	06 13 39.5	-4.5
MTDJ	Mount Denham	2.92	106	*e*P	Pn	06 13 07.3	-2.7
MTDJ				*e*S	Sn	06 13 37.8	-6.1
MTDJ	Mount Denham	2.92	106	P	Pn	06 13 07.4	-2.6
MTDJ				S	Sn	06 13 39.1	-4.8
MGV	Manicaragua	3.06	9	*e*P	Pn	06 13 09.7	-2.0
MGV				IAML		06 13 46.4	
	comp=E,6µm,0.4s						
MGV				IAML		06 13 48.2	
	comp=N,7µm,0.4s						
LMGC	Las Mercedes	3.43	73	*e*P	Pn	06 13 13.6	-3.2
LMGC				*e*S	Sn	06 13 52.6	-3.6
STH	Stony Hill	3.63	105	⇑*i*P	Pn	06 13 17.2	-2.4
GWJ	Greenwich	3.70	105	⇓*i*P	Pn	06 13 18.5	-2.2
HOJ	Hope	3.70	106	⇑*i*P	Pn	06 13 18.7	-1.9
CHIV	Chivirico	3.94	76		Pn	06 13 20.7	-3.2
CHIV	Chivirico	3.94	76	P	Pn	06 13 20.6	-3.2
CHIV				S	Sn	06 14 07.7	-1.3
CHIV	Chivirico	3.94	76	*e*P	Pn	06 13 20.5	-3.4
CHIV				IAML		06 14 08.4	
	comp=N,600nm,0.3s						
CHIV				IAML		06 14 09.2	
	comp=Z,554nm,0.6s						
CAMR	Camarioca	4.05	348		Pn	06 13 25.6	+0.2
CAMR	Camarioca	4.05	348	P	Pn	06 13 25.1	-0.3
CAMR				S	Sn	06 14 10.3	-1.4
CAMR	Camarioca	4.05	348	*e*P	Pn	06 13 24.0	-1.4
CAMR				*e*S	Sn	06 14 09.8	-1.8
SOR	Soroa	4.39	328		Pn	06 13 27.4	-2.6
SOR	Soroa	4.39	328	P	Pn	06 13 27.4	-2.6
SOR	Soroa	4.39	328	*e*P	Pn	06 13 27.4	-2.6
SOR				*e*S	Sn	06 14 14.4	-5.5
MARVS	Santiago de Cu	4.42	77	*e*P	Pn	06 13 26.8	-3.7
MARVS				*e*S	Sn	06 14 14.8	-6.0
HLGC	Holguin	4.54	66	*e*P	Pn	06 13 29.7	-2.4
RCC	Rio Carpintero	4.61	78	*e*P	Pn	06 13 29.6	-3.4
PINC	Pinares de May	4.64	72	*e*P	Pn	06 13 31.7	-1.8
PINC				*e*S	Sn	06 14 22.5	-3.7
GTBY	Guantanamo Bay	5.14	80		Pn	06 13 38.3	-2.1
GTBY	Guantanamo Bay	5.14	80	P	Pn	06 13 37.6	-2.8
GTBY				S	Sn	06 14 34.8	-3.7
GTBY	Guantanamo Bay	5.14	80	*e*P	Pn	06 13 36.2	-4.2
GTBY	Guantanamo Bay	5.14	80	P	Pn	06 13 38.3	-2.1
GTBY				S	Sn	06 14 33.6	-4.9
NMDO	Nuevo Mundo	5.39	73		Pn	06 13 42.1	-1.6
NMDO	Nuevo Mundo	5.39	73	P	Pn	06 13 41.8	-2.0
NMDO				S	Sn	06 14 44.8	+0.1
NMDO	Nuevo Mundo	5.39	73	*e*P	Pn	06 13 41.1	-2.7
MOAC	Moa	5.43	72	*e*P	Pn	06 13 43.2	-1.2
QMBU	Quimbuelo	5.46	77	P	Pn	06 13 42.8	-2.1
QMBU				S	Sn	06 14 44.1	-2.4
QMBU	Quimbuelo	5.46	77	*e*P	Pn	06 13 42.0	-2.9
BILN	Bilwi Airport	5.71	209	Pn	Pn	06 13 47.3	-0.9
BILN	Bilwi Airport	5.71	209	P	Pn	06 13 47.7	-0.6
BILN				S	Sn	06 14 50.8	-1.9
PRVC	Isla de Provid	5.73	189		Pn	06 13 47.2	-1.2
PRVC	Isla de Provid	5.73	189	P	Pn	06 13 47.2	-1.2
PRVC				S	Sn	06 14 49.0	-4.0
PRVC	Isla de Provid	5.73	189	P	Pn	06 13 47.0	-1.5
	comp=Z,1.2nmcomp=Z,6µmcomp=Z,601nm,0.8s						
MASC	Masc	6.00	78	P	Pn	06 13 51.3	-0.9
MASC				S	Sn	06 14 57.8	-1.8
MASC	Masc	6.00	78	*e*P	Pn	06 13 50.4	-1.7
MASC				*e*S	Sn	06 14 54.8	-4.8
SAIC	Isla e San And	6.61	190	P	Pn	06 14 00.4	-0.1
	comp=Z,0.9nmcomp=Z,112nm,0.6s						
SIUN	Universidad Ur	6.73	218		Pn	06 14 02.3	0.0
SIUN	Universidad Ur	6.73	218	P	Pn	06 14 00.2	-2.0
061Z	Ochoppi	6.77	357		Pn	06 14 02.6	-0.2
061Z	Ochoppi	6.77	357	*e*P	Pn	06 14 02.3	-0.5
TEIG	Tepich	7.43	280	Pn	Pn	06 14 09.9	-1.9
	comp=Z,0.1nm,0.3s,baz=130,slow=24,SNR=652						
TEIG				Sn	Sn	06 15 27.3	-7.6
	comp=Z,0.1nm,0.3s,baz=132,slow=24,SNR=17						
TEIG	Tepich	7.43	280		Pn	06 14 09.6	-2.2
TEIG	Tepich	7.43	280	P	Pn	06 14 09.6	-2.2
TEIG				S	Sn	06 15 27.6	-7.3
TEIG	Tepich	7.43	280	P	Pn	06 14 09.7	-2.2
TEIG				S	Sn	06 15 26.9	-8.0
LGNH	Logne	7.49	93	S	Sn	06 15 32.6	-3.7
LGNH	Logne	7.49	93	P	Pn	06 14 10.1	-2.5
RCPN	Sur Rio San Ju	7.71	225	P	Pn	06 14 14.1	-1.7
RCPN	Sur Rio San Ju	7.71	225	S	Sn	06 15 40.2	-1.8
RCVN	Varillal2	7.73	226	P	Pn	06 14 14.4	-1.8
RCVN	Varillal2	7.73	226	S	Sn	06 15 39.9	-2.7
RCON	San Juan de Ri	7.78	225	P	Pn	06 14 15.6	-1.2
RCON	San Juan de Ri	7.78	225	S	Sn	06 15 41.4	-2.3
OCON	Estacion meteo	7.90	228	P	Pn	06 14 17.2	-1.1
OCON				S	Sn	06 15 44.1	-2.5
060A	Indiantown	7.93	1		Pn	06 14 18.4	-0.3
060A	Indiantown	7.93	1	*e*P	Pn	06 14 17.7	-0.9
YUSH	Yuscaran	7.94	231	P	Pn	06 14 19.3	+0.3
YUSH	Yuscaran	7.94	231	S	Sn	06 15 44.7	-3.0
MATN	Matagalpa	8.04	221	P	Pn	06 14 19.4	-0.9
TGUH	Tegucigalpa,Un	8.20	234		Pn	06 14 22.6	0.0
TGUH	Tegucigalpa,Un	8.20	234	P	Pn	06 14 22.8	+0.3
TGUH				S	Sn	06 15 51.7	-2.4
LIMN	Finca el Limon	8.22	224	P	Pn	06 14 22.4	-0.5
LIMN				S	Sn	06 15 53.3	-1.4
BOAB	BOACO BROADBAN	8.26	218		Pn	06 14 23.5	+0.2
BOAB	BOACO BROADBAN	8.26	218	P	Pn	06 14 23.0	-0.3
SDDR	Presa de Saban	8.70	89		Pn	06 14 27.8	-1.5
SDDR	Presa de Saban	8.70	89	P	Pn	06 14 27.9	-1.5
SDDR				S	Sn	06 16 02.5	-3.8
SDDR	Presa de Saban	8.70	89	*e*P	Pn	06 14 27.5	-1.9
SDDR	Presa de Saban	8.70	89	P	Pn	06 14 28.2	-1.2
	comp=Z,6µmcomp=Z,640nm,0.9s						
SDDR				S	Sn	06 16 01.7	-4.6
	comp=Z,6µmcomp=Z,640nm,0.9s						
MOM3	MOM3	8.73	223	P	Pn	06 14 29.7	-0.1
MOM2	El Cardon	8.77	222	P	Pn	06 14 31.1	+0.9
CNGN	Cerro Negro	8.86	223		Pn	06 14 32.1	+0.6
DWPF	Disney Wildern	9.04	355		Pn	06 14 32.4	-1.4
DWPF	Disney Wildern	9.04	355	*e*P	Pn	06 14 32.2	-1.7
GRTK	Grand Turk	9.11	73		Pn	06 14 33.3	-1.6
GRTK	Grand Turk	9.11	73	*e*P	Pn	06 14 32.4	-2.4
GRTK	Grand Turk	9.11	73	P	Pn	06 14 33.5	-1.3
	comp=Z,323nm,0.7s						
GRTK				S	Sn	06 16 11.6	-4.6
	comp=Z,323nm,0.7s						
PETF	Flores	9.18	258		Pn	06 14 34.4	-1.4
SC01	Santiago de lo	9.22	86		Pn	06 14 35.4	-1.1

EGUB	Earth Gu¡pi	9.31	199		Pn	06 14 37.8	+0.2
ESQI	Esquipulas	9.59	243		Pn	06 14 43.2	+1.6
HDC	Heredia	9.68	202	eP	Pn	06 14 43.2	+0.4
MTO3	Montecristo	9.69	243		Pn	06 14 44.1	+1.1
JTS	Las Juntas de	9.74	207	Pn	Pn	06 14 47.1	+3.5
	comp=Z,1.1nm,0.3s,baz=6.7,slow=5.8,SNR=6.2						
JTS	Las Juntas de	9.74	207	⇓eP	Pn	06 14 46.7	+3.1
BCIP	Isla Barro Col	9.87	176	P	Pn	06 14 42.0	-3.3
	comp=Z,207nm,0.5s						
SDD	Santo Domingo	10.04	92		Pn	06 14 47.4	-0.2
JUD3	Juan Diaz 3	10.11	210		Pn	06 14 49.6	+0.9
APG	El Apazote	10.37	249	Pn	Pn	06 14 53.3	+1.0
	comp=Z,0.1nm,0.3s,baz=95,slow=14,SNR=20						
SJCC	San Jacinto, C	10.47	150	P	Pn	06 14 52.0	-1.6
	comp=Z,2µmcomp=Z,156nm,0.8s						
DR12	Loma Pena Alta	10.52	90		Pn	06 14 52.9	-1.3
CAP2	Capurgana	10.80	163	P	Pn	06 14 53.3	-4.7
CAP2				S	Sn	06 16 45.1	-13
ARGC	Ariguani, Magd	10.97	146	P	Pn	06 14 59.4	-1.1
	comp=Z,201nm,0.8s						
ARGC				S	Sn	06 16 51.0	-11
	comp=Z,201nm,0.8s						
URIC	Uribia, Colomb	10.99	131	P	Pn	06 14 58.9	-1.8
	comp=Z,2µmcomp=Z,199nm,0.7s						
URIC				S	Sn	06 16 51.3	-11
	comp=Z,2µmcomp=Z,199nm,0.7s						
HUEH	Huehuetenango	11.17	252		Pn	06 15 04.5	+1.1
CCIG	Comitan	11.45	258		Pn	06 15 06.3	-0.8
UREC	San Jos de Ur	12.24	156	P	Pn	06 15 14.1	-3.7
	comp=Z,44nm,0.5s						
CRPR	Cabo Rojo, PR	12.73	93		Pn	06 15 21.8	-2.7
OCAC	Ocana	12.82	146	P	Pn	06 15 23.3	-2.6
	comp=Z,2µmcomp=Z,199nm,0.6s						
OBIP	Obispado Ponce	13.20	92		Pn	06 15 28.7	-2.3
SJG	San Juan	13.63	92	Pn	Pn	06 15 37.4	+0.7
	comp=Z,6.6nm,0.3s,baz=293,slow=23,SNR=9.3						
SJG				LR	LR	06 20 37.6	
	comp=Z,1µm,21.6s,baz=241,slow=36						
	comp=Z,22nm,0.4s						
CMIG	Matias Romero	13.83	264	Pn	Pn	06 15 37.3	-2.2
	comp=Z,1.0nm,0.3s,baz=64,slow=14,SNR=9.1						
CMIG				Sn	Sn	06 17 59.3	-13
	comp=Z,0.7nm,0.3s,baz=7.6,slow=15,SNR=2.7						
CMIG				LR	LR	06 21 02.4	
	comp=Z,1µm,18.9s,baz=75,slow=38						
	comp=Z,4.2nm,0.3s						
SDV	Santo Domingo	13.92	135	Pn	Pn	06 15 37.7	-3.2
	comp=Z,8.7nm,0.3s,baz=323,slow=5.5,SNR=39						
SDV				Sn	Sn	06 18 01.8	-13
	comp=Z,1.4nm,0.3s,baz=15,slow=20,SNR=1.7						
SDV				LR	LR	06 21 32.8	
	comp=Z,2µm,19.4s,baz=353,slow=40						
SDV	Santo Domingo	13.92	135		Pn	06 15 37.2	-3.7
SDV	Santo Domingo	13.92	135	eP	Pn	06 15 37.5	-3.4
SDV	Santo Domingo	13.92	135	P	Pn	06 15 37.2	-3.7
	comp=Z,1µmcomp=Z,132nm,0.9s						
RUSC	La Rusia	14.96	150		Pn	06 15 53.3	-1.9
Y52A	Lilburn	15.07	348	IAmb	IAmb	06 15 55.1	
	comp=Z,52nm,0.6s						
ROSC	El Rosal	15.37	156	Pn	Pn	06 16 02.4	+1.7
	comp=Z,2.2nm,0.3s,baz=311,slow=22,SNR=11						
ROSC				LR	LR	06 22 13.2	
	comp=Z,813nm,19.4s,baz=35,slow=38						
ROSC	El Rosal	15.37	156		Pn	06 16 02.3	+1.7
ROSC	El Rosal	15.37	156	P	Pn	06 16 02.3	+1.7
ROSC				pmax	pmax		
	comp=Z,76nm,1.6s						
Z47A	Carrollton	15.62	336	Pn	Pn	06 16 00.2	-3.2
Z47A				IAmb	IAmb	06 16 04.4	
	comp=Z,136nm,0.6s						
Y49A	Blount Mountai	15.64	341	Pn	Pn	06 16 00.8	-2.9
Y49A				IAmb	IAmb	06 16 02.5	
	comp=Z,55nm,0.5s						
X51A	Calhoun	15.91	347	IAmb	IAmb	06 16 09.2	
	comp=Z,58nm,0.5s						
W57A	Gilead	16.02	1		Pn	06 16 04.6	-3.9
PRAC	Prado	16.22	160	P	P	06 16 13.0	-1.0
W52A	Murphy	16.25	350	IAmb	IAmb	06 16 11.0	
	comp=Z,85nm,0.7s						
VILC	Villavicencio,	16.28	155	P	Pn	06 16 11.6	-0.5
X48A	Hartselle	16.39	340		Pn	06 16 10.4	-2.8
143A	Socs Landing,	16.74	326	IAmb	IAmb	06 16 16.1	
	comp=Z,181nm,0.6s						
TKL	Tuckaleechee C	16.77	351	Pn	Pn	06 16 15.4	-2.7
	comp=Z,5.3nm,0.3s,baz=158,slow=13,SNR=36						
TKL				Sn	Sn	06 19 07.3	-16
	comp=Z,1.6nm,0.3s,baz=281,slow=5.2,SNR=2.3						
TKL				LR	LR	06 22 49.1	
	comp=Z,932nm,20.5s,baz=164,slow=37						
	comp=Z,23nm,0.4s						
OXF	Oxford	17.30	334	IAmb	IAmb	06 16 28.5	
	comp=Z,416nm,1.3s						
HKT	Hockley	17.65	311	P	Pn	06 16 27.2	-1.7
HKT	Hockley	17.65	311	⇓eP	Pn	06 16 26.6	-2.4
HKT				pmax	pmax		
	comp=Z,44nm,0.7s						
HNVL	Huntsville, TX	17.86	313	P	Pn	06 16 31.2	-0.5
HNVL				IAmb	IAmb	06 16 36.3	
	comp=Z,99nm,0.9s						
CCAR	Cane Creek	17.88	328	IAmb	IAmb	06 16 33.3	
	comp=Z,278nm,1.4s						
T57A	Hurt	17.89	3	P	Pn	06 16 30.2	-1.7
Z41A	Richland Creek	17.91	324	IAmb	IAmb	06 16 34.1	
	comp=Z,126nm,0.9s						
NATX	Nacogdoches	17.96	317	IAmb	IAmb	06 16 34.3	
	comp=Z,119nm,0.6s						
T59A	Double "B" Far	18.02	8	P	Pn	06 16 31.3	-2.2
FLOC	Florencia	18.02	164	P	P	06 16 33.8	-0.1
GDHS	Morne Mazeau,	18.05	96	IAmb	IAmb	06 16 35.8	
	comp=Z,134nm,0.7s						
BLA	Blacksburg	18.07	0	P	Pn	06 16 32.6	-1.6
BLA	Blacksburg	18.07	0	P	Pn	06 16 32.6	-1.6
BLA				pmax	pmax		
	comp=Z,43nm,0.9s						
WVT	Waverly	18.18	341	P	Pn	06 16 33.9	-1.6
WVT	Waverly	18.18	341	P	Pn	06 16 33.9	-1.6
WVT				pmax	pmax		
	comp=Z,42nm,0.8s						
CBE	Ff, Capester	18.25	96	IAmb	IAmb	06 16 38.4	
	comp=Z,342nm,1.3s						
T50A	Nancy	18.28	349	P	P	06 16 36.1	-0.6
MLDN	Muldoon	18.46	308	P	P	06 16 37.7	-0.9
MLDN				IAmb	IAmb	06 16 42.3	
	comp=Z,189nm,0.8s						
HALT	Halls	18.50	337	IAmb	IAmb	06 16 40.0	
	comp=Z,376nm,1.4s						
HBVL	Hebbronville	18.51	299	IAmb	IAmb	06 16 51.6	
	comp=Z,110nm,1.0s						
735A	Kenedy	18.56	305	P	P	06 16 39.3	-0.5
735A				IAmb	IAmb	06 16 42.4	
	comp=Z,112nm,1.0s						
UTMT	University of	18.72	338	IAmb	IAmb	06 16 53.6	
	comp=Z,282nm,1.1s						
EF04	Eagle Ford 04	18.72	306	IAmb	IAmb	06 16 45.1	
	comp=Z,78nm,0.5s						
T47A	Sharon Grove	18.77	343	IAmb	IAmb	06 16 43.2	
	comp=Z,161nm,1.4s						
GLAT	Glass	18.80	337	IAmb	IAmb	06 16 43.9	
	comp=Z,214nm,1.3s						
GNAR	Gosnell	18.81	335	IAmb	IAmb	06 16 50.9	
	comp=Z,103nm,0.7s						
OTAV	Otavalo	18.83	174	P	P	06 16 43.4	+0.1
OTAV	Otavalo	18.83	174	P	P	06 16 43.4	+0.1
OTAV				pmax	pmax		
	comp=Z,57nm,1.7s						
OTAV	Otavalo	18.83	174	eP	P	06 16 42.3	-0.9
JRQG	Juriquilla Cam	18.84	278	P	Pn	06 16 43.9	0.0
237A	Washetta, Mont	18.86	316	IAmb	IAmb	06 16 47.4	
	comp=Z,105nm,0.9s						
X40A	Basin Creek Fa	18.87	327	IAmb	IAmb	06 16 45.1	
	comp=Z,129nm,1.0s						
EF02	Christine	19.09	304	IAmb	IAmb	06 16 50.0	
	comp=Z,84nm,0.6s						
BIM	Bigot	19.13	101	IAmb	IAmb	06 16 51.8	
	comp=Z,155nm,0.9s						
R55A	Marlinton	19.14	1	P	Pn	06 16 47.6	+0.4
WHAR	Wooly Hollow	19.24	329	IAmb	IAmb	06 16 51.9	
	comp=Z,450nm,1.9s						
T45A	Paducah	19.26	340	IAmb	IAmb	06 16 56.5	
	comp=Z,144nm,0.6s						
PARMO	Parma	19.32	337	IAmb	IAmb	06 16 49.9	
	comp=Z,219nm,0.8s						
435B	Jarrell	19.37	310	IAmb	IAmb	06 16 50.9	
	comp=Z,125nm,1.0s						
BBSR	BB Station	19.40	44	P	P	06 16 48.7	-0.3
BBSR				IAmb	IAmb	06 16 54.4	
	comp=Z,224nm,1.1s						
R49A	Shelbyville	19.58	349	IAmb	IAmb	06 16 54.7	
	comp=Z,154nm,1.2s						
833A	Chaparral WMA,	19.59	302	IAmb	IAmb	06 16 57.8	
	comp=Z,129nm,0.8s						
FCAR	Ozark Folk Cen	19.65	331	IAmb	IAmb	06 16 58.2	
	comp=Z,57nm,0.7s						
PBMO	Poplar Bluff	19.68	336	IAmb	IAmb	06 16 54.5	
	comp=Z,140nm,1.1s						
WCI	Wyandotte Cave	19.75	346	P	P	06 16 53.0	+0.3
WCI	Wyandotte Cave	19.75	346	P	P	06 16 53.0	+0.3
WCI				pmax	pmax		
	comp=Z,58nm,0.9s						
USIN	University of	19.84	343	IAmb	IAmb	06 17 00.4	
	comp=Z,117nm,1.2s						
CGM3	Cape Girardeau	19.85	338	IAmb	IAmb	06 16 56.4	
	comp=Z,71nm,0.9s						
WHTX	Lake Whitney,	19.96	313	P	P	06 16 56.2	+1.1
WHTX				IAmb	IAmb	06 17 00.8	
	comp=Z,110nm,0.7s						
HNDO	Hondo	20.02	305	P	P	06 16 56.1	+0.4
HNDO				IAmb	IAmb	06 17 02.6	
	comp=Z,64nm,0.6s						
Q51A	Peebles	20.04	353	P	P	06 16 56.3	+0.5
S44A	Carbondale	20.07	339	P	P	06 16 56.4	+0.2
SIUC	Southern Illin	20.08	339	P	P	06 16 56.6	+0.4
SIUC				IAmb	IAmb	06 17 02.8	
	comp=Z,62nm,0.5s						
FW13	Cleburne	20.16	314	P	P	06 16 57.6	+0.3
FW13				IAmb	IAmb	06 17 05.0	
	comp=Z,101nm,0.5s						
FW06	Azle	20.62	316	IAmb	IAmb	06 17 07.4	
	comp=Z,115nm,0.9s						
Z35A	Perchaven, San	20.64	317	IAmb	IAmb	06 17 09.2	
	comp=Z,214nm,1.5s						
BRDY	Brady	20.66	310	IAmb	IAmb	06 17 08.3	
	comp=Z,75nm,0.8s						
OLIL	Olney	20.68	343	IAmb	IAmb	06 17 08.5	
	comp=Z,120nm,1.1s						
FVM	French Village	20.74	337	IAmb	IAmb	06 17 09.1	
	comp=Z,132nm,1.0s						
HHAR	Hobbs	20.84	328	IAmb	IAmb	06 17 06.3	
	comp=Z,255nm,1.3s						
JCT	Junction City	20.86	307	IAmb	IAmb	06 17 10.4	
	comp=Z,70nm,0.8s						
DRIO	Del Rio	21.02	303	IAmb	IAmb	06 17 07.8	
	comp=Z,97nm,1.2s						
Q44A	Meyer Farm, Va	21.10	341	IAmb	IAmb	06 17 11.5	
	comp=Z,97nm,0.9s						
CCM	Cathedral Cave	21.11	336	P	P	06 17 07.5	+0.1
CCM				IAmb	IAmb	06 17 12.5	
	comp=Z,137nm,0.7s						
CCM	Cathedral Cave	21.11	336	P	P	06 17 07.6	+0.1
CCM				pmax	pmax		
	comp=Z,137nm,0.7s						
U38A	Gravette	21.18	328	IAmb	IAmb	06 17 13.4	
	comp=Z,168nm,1.1s						
SLM	Saint Louis	21.25	339	IAmb	IAmb	06 17 10.5	
	comp=Z,77nm,0.7s						
P46A	Rosedale	21.28	346	IAmb	IAmb	06 17 14.5	
	comp=Z,196nm,1.7s						
RLO	Rose Lookout	21.30	326	IAmb	IAmb	06 17 13.7	
	comp=Z,177nm,1.1s						
PAGS	Pennsylvania G	21.33	8	P	P	06 17 10.7	+0.9
TUL3	Leonard	21.53	324	IAmb	IAmb	06 17 12.8	
	comp=Z,149nm,1.1s						
SSPA	Standing Stone	21.61	5	P	P	06 17 14.4	+1.6
WTFS	Witchita Falls	21.71	316	IAmb	IAmb	06 17 16.1	
	comp=Z,201nm,1.3s						
N51A	Ashland	21.83	356	IAmb	IAmb	06 17 19.2	
	comp=Z,74nm,0.8s						
ABTX	Abilene, Hawle	21.84	312	IAmb	IAmb	06 17 19.5	
	comp=Z,107nm,0.8s						
DEOK	Depew	21.88	323	IAmb	IAmb	06 17 18.9	
	comp=Z,163nm,1.1s						
P43A	Skaggs, Pawnee	21.93	341	IAmb	IAmb	06 17 20.1	
	comp=Z,102nm,1.1s						
SFIN	Lafayette	21.98	346	IAmb	IAmb	06 17 21.3	
	comp=Z,65nm,0.8s						
FNO	Franklin	22.00	321	IAmb	IAmb	06 17 18.1	
	comp=Z,249nm,1.6s						
OZNA	Ozona	22.07	306	IAmb	IAmb	06 17 20.6	
	comp=Z,78nm,0.9s						
N47A	Urbana	22.19	350	IAmb	IAmb	06 17 22.0	
	comp=Z,65nm,0.7s						
QUOK	Quay	22.23	323	IAmb	IAmb	06 17 23.0	
	comp=Z,128nm,1.2s						
M50A	Fremont	22.36	355	IAmb	IAmb	06 17 42.8	
	comp=Z,57nm,0.8s						
WMOK	Wichita Mounta	22.52	318	IAmb	IAmb	06 17 25.4	
	comp=Z,37nm,0.8s						
OK048	Pawnee Station	22.54	323	IAmb	IAmb	06 17 29.0	
	comp=Z,71nm,0.8s						
OK051	E0350 and S346	22.54	324	IAmb	IAmb	06 17 24.5	
	comp=Z,111nm,1.2s						
APMT	Aspermont	22.57	313	IAmb	IAmb	06 17 26.2	
	comp=Z,95nm,1.1s						
T35A	Sooner Cattle	22.66	325	IAmb	IAmb	06 17 26.7	
	comp=Z,90nm,0.8s						
P40A	Paris	22.70	336	IAmb	IAmb	06 17 26.8	
	comp=Z,154nm,1.1s						
SN07	Snyder 07	22.98	311	IAmb	IAmb	06 17 30.6	
	comp=Z,108nm,1.5s						
M44A	Midewin, Midew	23.16	345	IAmb	IAmb	06 17 30.9	
	comp=Z,58nm,0.8s						
CROK	Carrier	23.20	322	IAmb	IAmb	06 17 30.2	
	comp=Z,127nm,0.9s						
DKNS	Dickens	23.31	313	IAmb	IAmb	06 17 50.6	
	comp=Z,42nm,0.6s						
N41A	Harden Midland	23.32	340	IAmb	IAmb	06 17 32.5	
	comp=Z,139nm,1.1s						
P38A	Dawn	23.37	334	IAmb	IAmb	06 17 33.9	
	comp=Z,87nm,0.8s						
L46A	Eue Claire	23.39	349	IAmb	IAmb	06 17 46.4	
	comp=Z,43nm,0.7s						
POST	Post	23.40	311	IAmb	IAmb	06 17 33.9	
	comp=Z,128nm,0.9s						
TXAR	Lajitas Array	23.44	300	P	P	06 17 32.2	0.0
	comp=Z,35nm,0.8s,baz=121,slow=11,SNR=220						
TXAR				PcP	PcP	06 21 18.9	+1.0
	comp=Z,2.5nm,0.6s,baz=184,slow=2.8,SNR=5.7						
TXAR				ScP	ScP	06 24 54.4	+0.9
	comp=Z,1.7nm,1.0s,baz=105,slow=4.4,SNR=4.0						
TXAR				LR	LR	06 29 27.0	
	comp=Z,209nm,19.6s,baz=106,slow=44						
	comp=Z,35nm,0.8s						
TXAR	Lajitas Array	23.44	300	P	P	06 17 32.3	+0.1
TX31	Lajitas Ar. Si	23.44	300	IAmb	IAmb	06 17 34.3	
	comp=Z,84nm,1.1s						
HQIL	Hanson Quary C	23.51	346	IAmb	IAmb	06 17 35.0	
	comp=Z,87nm,1.2s						
MNHN	Monahans	23.51	306	IAmb	IAmb	06 17 35.0	
	comp=Z,64nm,0.8s						
OK038	West end E0370	23.62	321	IAmb	IAmb	06 17 58.7	
	comp=Z,43nm,0.8s						
ALPN	Alpine	23.80	303	IAmb	IAmb	06 17 37.0	
	comp=Z,128nm,1.3s						
K57A	Scipio Center	23.82	7	IAmb	IAmb	06 18 02.3	
	comp=Z,70nm,1.3s						
L44A	Lake County Fo	23.88	346	IAmb	IAmb	06 17 37.1	
	comp=Z,57nm,1.0s						
L42A	Oliver, Polo	24.15	343	IAmb	IAmb	06 17 39.6	
	comp=Z,47nm,0.7s						
J47A	Sunmer	24.37	352	IAmb	IAmb	06 18 09.0	
	comp=Z,32nm,0.9s						
PECS	Pecos	24.38	305	IAmb	IAmb	06 17 42.7	
	comp=Z,103nm,1.0s						
HPIG		24.43	293	IAmb	IAmb	06 17 42.7	
	comp=Z,41nm,1.1s						
K43A	Burlington	24.48	346	IAmb	IAmb	06 18 07.8	
	comp=Z,48nm,1.2s						
R32A	Long Quarter,	24.95	324	IAmb	IAmb	06 17 47.5	
	comp=Z,87nm,1.1s						
VHRN	Van Horn	25.03	302	IAmb	IAmb	06 17 48.7	
	comp=Z,68nm,0.7s						
JFWS	Jewell Farm	25.16	343	IAmb	IAmb	06 17 48.6	
	comp=Z,51nm,0.7s						
BOAV	Boa Vista	25.62	128	P	P	06 17 52.3	0.0
BOAV	Boa Vista	25.62	128	eP	P	06 17 53.2	+0.9
SADO	Sadowa	25.65	2	LR	LR	06 28 24.5	
	comp=Z,509nm,19.7s,baz=191,slow=37						
SADO	Sadowa	25.65	2	IAmb	IAmb	06 17 55.7	
	comp=Z,28nm,0.9s						
MNTX	Cornudas Mount	25.70	304	IAmb	IAmb	06 17 54.5	
	comp=Z,64nm,1.0s						
I42A	Draeger Farm,	25.73	346	IAmb	IAmb	06 18 22.5	
	comp=Z,37nm,0.9s						
GLMI	Grayling	25.91	353	IAmb	IAmb	06 17 58.4	
	comp=Z,74nm,0.8s						
H43A	Windswept, Lux	26.04	348	IAmb	IAmb	06 17 59.2	
	comp=Z,121nm,1.3s						
RTBA	Rita Blanca	26.11	316	IAmb	IAmb	06 17 59.5	
	comp=Z,23nm,0.7s						
ATAH	Atahualpa	26.12	175	LR	LR	06 28 57.6	
	comp=Z,314nm,19.1s,baz=12,slow=38						
I40A	Norwalk	26.16	343	IAmb	IAmb	06 17 58.2	
	comp=Z,52nm,0.9s						
EPT	El Paso	26.61	303	IAmb	IAmb	06 18 02.4	
	comp=Z,86nm,1.5s						
BGNE	Belgrade	26.88	330	IAmb	IAmb	06 18 10.8	
	comp=Z,71nm,0.9s						
I37A	Lemond, Waseca	27.12	339	IAmb	IAmb	06 18 10.4	
	comp=Z,45nm,0.8s						
TEFE	Tefe	27.33	144	eP	P	06 18 08.8	+1.2
G40A	Rib Lake	27.34	345	IAmb	IAmb	06 18 12.6	
	comp=Z,35nm,1.1s						
T25A	Trinidad	27.61	316	IAmb	IAmb	06 18 13.4	
	comp=Z,82nm,1.2s						
121A	Cookes Peak, D	27.90	304	IAmb	IAmb	06 18 31.2	
	comp=Z,45nm,1.1s						
ANMO	Albuquerque	27.91	310	LR	LR	06 31 34.5	
	comp=Z,364nm,19.6s,baz=122,slow=41						
ANMO	Albuquerque	27.91	310	d iP	P	06 18 14.1	+1.2
ANMO				pmax	pmax		
	comp=Z,26nm,1.4s						
TASM	ASL Pad, Albuq	27.91	310	IAmb	IAmb	06 18 15.7	
	comp=Z,36nm,1.5s						
TASM	ASL Pad, Albuq	27.91	310	IAmb	IAmb	06 18 15.7	
	comp=Z,34nm,1.4s						
TASM	ASL Pad, Albuq	27.91	310	IAmb	IAmb	06 18 15.7	
	comp=Z,34nm,1.4s						
TASM	ASL Pad, Albuq	27.91	310	IAmb	IAmb	06 18 15.7	
	comp=Z,34nm,1.5s						
SPMN	Marine on St.	28.02	341	IAmb	IAmb	06 18 15.8	
	comp=Z,40nm,1.3s						
ECSD	EROS Data Cent	28.07	335	IAmb	IAmb	06 18 15.0	
	comp=Z,59nm,1.2s						
LPIG	La Paz	28.15	286	LR	LR	06 30 56.1	
	comp=Z,249nm,18.1s,baz=96,slow=40						
GGN	Saint George	28.34	21	P	P	06 18 20.1	+3.7
GGN				IAmb	IAmb	06 18 20.9	
	comp=Z,54nm,1.2s						
SDCO	Great Sand Dun	28.67	316	IAmb	IAmb	06 18 23.7	
	comp=Z,41nm,1.1s						
319A	Douglas	28.69	301	IAmb	IAmb	06 18 22.8	
	comp=Z,57nm,1.2s						
MACA	Manacapuru-AM	29.46	137	P	P	06 18 26.9	+0.3
MACA				IAmb	IAmb	06 18 28.1	
	comp=Z,21nm,0.9s						
MACA	Manacapuru-AM	29.46	137	eP	P	06 18 27.2	+0.5
F33A	5 Mile Ranch,	29.72	337	IAmb	IAmb	06 18 29.0	
	comp=Z,34nm,1.0s						
X18A	Snowflake	30.33	306	IAmb	IAmb	06 18 37.7	
	comp=Z,65nm,1.6s						
W18A	Petrified Fore	30.40	308	IAmb	IAmb	06 18 38.0	
	comp=Z,55nm,1.1s						
MDP	Montagnes des	30.49	114	LR	LR	06 32 27.9	
	comp=Z,224nm,20.8s,baz=286,slow=39						
PV01	Paradox Valley	30.93	314	IAmb	IAmb	06 18 43.6	
	comp=Z,58nm,1.3s						
PV15	Paradox Valley	30.98	314	IAmb	IAmb	06 18 44.6	
	comp=Z,52nm,1.2s						
PV07	Paradox Valley	31.14	314	IAmb	IAmb	06 18 45.9	
	comp=Z,20nm,1.0s						
PV03	Paradox Valley	31.18	314	IAmb	IAmb	06 18 46.1	
	comp=Z,58nm,1.1s						
PV16	Nyswonger Mesa	31.26	314	IAmb	IAmb	06 18 46.8	
	comp=Z,60nm,1.1s						
PV17	East Wray Mesa	31.27	314	IAmb	IAmb	06 18 46.9	
	comp=Z,70nm,1.2s						
PV04	Paradox Valley	31.29	314	IAmb	IAmb	06 18 47.1	
	comp=Z,68nm,1.2s						
PV23	Carpenter Ridg	31.39	314	IAmb	IAmb	06 18 47.8	
	comp=Z,31nm,0.9s						
X16A	Lo Mia Camp, P	31.43	305	IAmb	IAmb	06 18 47.5	
	comp=Z,26nm,1.0s						
AGMN	Agassiz Nation	31.71	340	IAmb	IAmb	06 18 47.1	
	comp=Z,50nm,0.9s						
214A	Organ Pipe Nat	31.74	300	IAmb	IAmb	06 18 49.2	
	comp=Z,27nm,1.1s						
O20A	White River Ci	31.76	317	IAmb	IAmb	06 18 51.0	
	comp=Z,70nm,1.8s						
RSSD	Black Hills	31.81	327	P	P	06 18 47.9	+0.5
RSSD				IAmb	IAmb	06 18 49.1	
	comp=Z,48nm,1.2s						
RSSD	Black Hills	31.81	327	P	P	06 18 47.9	+0.5
RSSD				pmax	pmax		
	comp=Z,48nm,1.3s						
EPLO	Experimental L	32.32	344	IAmb	IAmb	06 18 58.6	
	comp=Z,44nm,1.5s						
113A	Mohawk Valley,	32.74	301	IAmb	IAmb	06 18 57.7	
	comp=Z,64nm,1.9s						
P18A	Preston Nutter	32.81	315	IAmb	IAmb	06 19 00.3	
	comp=Z,40nm,1.1s						
U15A	North Rim	32.83	308	IAmb	IAmb	06 18 59.9	
	comp=Z,33nm,1.1s						
RDMU	Red Mountain	32.85	317	IAmb	IAmb	06 18 58.7	
	comp=Z,55nm,1.7s						
P17A	Butcher Ranch,	33.07	314	IAmb	IAmb	06 19 02.3	
	comp=Z,77nm,1.4s						
Q16A	Castle Valley	33.10	313	IAmb	IAmb	06 19 04.3	
	comp=Z,38nm,1.2s						
TMUT	Trail Mountain	33.30	314	IAmb	IAmb	06 19 03.9	
	comp=Z,47nm,1.5s						
MTPU	Mount Pierson	33.42	311	IAmb	IAmb	06 19 05.2	
	comp=Z,54nm,1.2s						
ULM	Lac du Bonnet	33.44	342	P	P	06 19 00.6	-0.8
	comp=Z,11nm,0.8s,baz=150,slow=10,SNR=11						
ULM				PcP	PcP	06 21 41.5	-0.6
	comp=Z,7.5nm,0.7s,baz=164,slow=5.0,SNR=3.7						
ULM				LR	LR	06 33 17.5	
	comp=Z,1µm,19.5s,baz=152,slow=37						
	comp=Z,11nm,0.8s						
ULM	Lac du Bonnet	33.44	342	IAmb	IAmb	06 19 02.0	
	comp=Z,15nm,0.9s						
ULM	Lac du Bonnet	33.44	342	⇑eP	P	06 19 01.3	0.0
W13A	Hualapai Mount	33.55	305	IAmb	IAmb	06 19 06.2	
	comp=Z,43nm,0.9s						
BSUT	Blindstream Ca	33.61	316	IAmb	IAmb	06 19 06.3	
	comp=Z,100nm,1.8s						
BLYC	Blythe	33.63	303	IAmb	IAmb	06 19 06.0	
	comp=Z,53nm,1.1s						
ITTB	Itaituba	33.71	131	eP	P	06 19 05.0	+0.9
LCMT	Little Creek M	33.76	309	IAmb	IAmb	06 19 07.8	
	comp=Z,61nm,1.1s						
TCRU	Three Creeks R	33.85	312	IAmb	IAmb	06 19 08.8	
	comp=Z,48nm,1.3s						
SZCU	Shurtz Canyon	33.88	310	IAmb	IAmb	06 19 08.3	
	comp=Z,20nm,1.0s						
VTX	Valle De La Tr	34.06	298	IAmb	IAmb	06 19 09.7	
	comp=Z,32nm,1.1s						
BW06	Boulder Array	34.06	320	IAmb	IAmb	06 19 08.7	
	comp=Z,55nm,1.8s						
PD31	Pinedale Array	34.06	320	IAmb	IAmb	06 19 08.7	
	comp=Z,58nm,1.9s						
PDAR	Pinedale Array	34.06	320	P	P	06 19 07.1	0.0
	comp=Z,5.1nm,0.8s,baz=117,slow=11,SNR=44						
PDAR				PcP	PcP	06 21 44.2	0.0
	comp=Z,9.7nm,0.7s,baz=126,slow=5.1,SNR=15						
PDAR				LR	LR	06 35 46.3	
	comp=Z,140nm,18.1s,baz=92,slow=41						
	comp=Z,5.1nm,0.8s						
ESJX	Sierra Juarez	34.33	299	IAmb	IAmb	06 19 12.3	
	comp=Z,86nm,1.5s						
TCUT	Toone Canyon	34.33	316	IAmb	IAmb	06 19 12.9	
	comp=Z,71nm,1.3s						
CTU	Camp Tracy	34.34	316	IAmb	IAmb	06 19 12.4	
	comp=Z,71nm,1.9s						
BC3	Big Chuckawall	34.35	302	IAmb	IAmb	06 19 12.3	
	comp=Z,46nm,1.1s						
YUH	Yuha Desert	34.46	300	IAmb	IAmb	06 19 13.3	
	comp=Z,50nm,1.2s						
V12A	Nelson	34.51	306	IAmb	IAmb	06 19 14.1	
	comp=Z,59nm,1.0s						
HWUT	Hardware Ranch	34.68	317	IAmb	IAmb	06 19 16.5	
	comp=Z,22nm,1.0s						
PSUT	Pine Spring	34.81	311	IAmb	IAmb	06 19 17.2	
	comp=Z,52nm,0.8s						
BELC	Belle Mtn. Jos	34.88	302	IAmb	IAmb	06 19 17.1	
	comp=Z,66nm,1.1s						
MTPC	Mountain Pass	34.97	305	IAmb	IAmb	06 19 18.0	
	comp=Z,30nm,1.1s						
SHPR	Sheep Range	35.01	307	IAmb	IAmb	06 19 18.9	
	comp=Z,25nm,1.2s						
BORC	Borrego Spring	35.02	301	IAmb	IAmb	06 19 18.1	
	comp=Z,44nm,1.2s						

PMD	Palm Desert	35.09	302	IAmb	IAmb	06 19 18.7	
	comp=Z,52nm,1.2s						
PFO	Pinyon Flats O	35.14	302	LR	LR	06 36 24.1	
	comp=Z,179nm,19.1s,baz=127,slow=41						
PFO	Pinyon Flats O	35.14	302	*d i*P	P	06 19 18.0	+1.5
PFO				pmax	pmax		
	comp=Z,72nm,1.1s						
SNOW	Snow King Moun	35.17	320	IAmb	IAmb	06 19 19.0	
	comp=Z,118nm,2.0s						
DNR	Dunn Ranch,Anz	35.27	301	IAmb	IAmb	06 19 20.6	
	comp=Z,76nm,1.2s						
RLMT	Red Lodge	35.29	324	IAmb	IAmb	06 19 20.3	
	comp=Z,80nm,1.9s						
DPP	Dos Picos Cty	35.38	300	IAmb	IAmb	06 19 21.1	
	comp=Z,49nm,1.2s						
CPE	Camp Elliot	35.49	300	IAmb	IAmb	06 19 21.8	
	comp=Z,65nm,1.4s						
HVU	Hansel Valley	35.55	317	IAmb	IAmb	06 19 23.7	
	comp=Z,40nm,1.5s						
SHOC	Shoshone, Teco	35.66	305	IAmb	IAmb	06 19 24.1	
	comp=Z,56nm,1.2s						
S11A	Rachel	35.85	309	IAmb	IAmb	06 19 26.3	
	comp=Z,50nm,1.1s						
NPGB	Novo Progresso	35.88	134	*e*P	P	06 19 23.0	+0.2
GSC	Goldstone, Bar	35.89	304	IAmb	IAmb	06 19 25.3	
	comp=Z,28nm,1.1s						
ELS	Elsinore Mount	35.93	301	IAmb	IAmb	06 19 26.0	
	comp=Z,71nm,1.6s						
TPNV	Topopah Spring	35.98	307	IAmb	IAmb	06 19 27.4	
	comp=Z,49nm,1.1s						
R11B	Troy Canyon, C	35.99	310	IAmb	IAmb	06 19 27.1	
	comp=Z,22nm,1.0s						
GWY	Greenwater Val	36.05	306	IAmb	IAmb	06 19 27.4	
	comp=Z,48nm,1.1s						
QSM	Queen of Sheba	36.13	305	IAmb	IAmb	06 19 27.9	
	comp=Z,30nm,1.1s						
WCT	Wildcat Mounta	36.21	307	IAmb	IAmb	06 19 29.1	
	comp=Z,40nm,1.2s						
FURC	Furnace Creek,	36.29	306	IAmb	IAmb	06 19 29.6	
	comp=Z,42nm,1.0s						
WSHM	Spangler Hills	36.51	304	IAmb	IAmb	06 19 31.0	
	comp=Z,62nm,1.1s						
CLC	China Lake	36.66	305	IAmb	IAmb	06 19 32.0	
	comp=Z,32nm,1.3s						
ELK	Elko	36.72	314	LR	LR	06 37 22.4	
	comp=Z,254nm,18.1s,baz=137,slow=41						
ELK	Elko	36.72	314	IAmb	IAmb	06 19 32.9	
	comp=Z,84nm,1.6s						
GRAC	Grapevine Rang	36.84	307	IAmb	IAmb	06 19 34.6	
	comp=Z,142nm,2.0s						
LPAZ	La Paz	37.18	160	P	P	06 19 34.1	-0.4
	comp=Z,1.3nm,0.8s,baz=296,slow=10,SNR=5.0						
LPAZ				LR	LR	06 36 52.9	
	comp=Z,305nm,19.5s,baz=332,slow=40						
	comp=Z,1.3nm,0.8s						
LPAZ	La Paz	37.18	160	P	P	06 19 33.9	-0.6
LPAZ	La Paz	37.18	160	*e*P	P	06 19 34.7	+0.1
SCHQ	Schefferville	37.19	13	P	P	06 19 35.2	+1.7
	comp=Z,8.1nm,0.5s,baz=197,slow=7.1,SNR=18						
SCHQ				PcP	PcP	06 21 53.5	+0.5
	comp=Z,14nm,0.7s,baz=250,slow=3.2,SNR=8.1						
SCHQ				LR	LR	06 35 33.3	
	comp=Z,181nm,18.6s,baz=260,slow=37						
	comp=Z,8.1nm,0.5s						
BCYI	Bear Canyon	37.24	320	IAmb	IAmb	06 19 37.4	
	comp=Z,37nm,1.4s						
ISA	Isabella, Lake	37.29	304	IAmb	IAmb	06 19 38.0	
	comp=Z,44nm,1.3s						
DLMT	Dillon	37.33	322	IAmb	IAmb	06 19 37.4	
	comp=Z,70nm,1.8s						
EGMT	Eagleton	37.38	327	IAmb	IAmb	06 19 36.6	
	comp=Z,53nm,0.8s						
DSP	Deep Springs	37.42	307	IAmb	IAmb	06 19 39.2	
	comp=Z,36nm,1.4s						
HLID	Hailey	37.48	318	IAmb	IAmb	06 19 39.0	
	comp=Z,56nm,1.5s						
VILB	Vilhena	37.58	146	*e*P	P	06 19 37.8	+0.6
NV11	Mina Array Sit	37.91	309	IAmb	IAmb	06 19 43.2	
	comp=Z,18nm,0.7s						
NVAR	Mina Array Bea	38.01	309	P	P	06 19 42.9	+1.8
	comp=Z,7.1nm,0.6s,baz=112,slow=8.8,SNR=76						
NVAR				PcP	PcP	06 21 57.5	+1.4
	comp=Z,6.2nm,0.7s,baz=134,slow=4.4,SNR=13						
NVAR				ScP	ScP	06 25 43.2	+2.0
	comp=Z,0.5nm,1.0s,baz=57,slow=3.2,SNR=3.6						
	comp=Z,7.1nm,0.6s						
NVAR	Mina Array Bea	38.01	309	P	P	06 19 41.9	+0.9
LHV	Little Huntoon	38.10	308	IAmb	IAmb	06 19 45.2	
	comp=Z,40nm,1.1s						
MFID	Camas Ranch	38.31	317	IAmb	IAmb	06 19 45.6	
	comp=Z,58nm,1.4s						
TMAB	Tom-Au,PA,Br	38.32	120	*e*P	P	06 19 44.3	+0.8
CLDB	Colider	38.45	139	*e*P	P	06 19 44.6	0.0
PDRB	Porto dos Gac	38.45	141	*e*P	P	06 19 44.7	+0.1
FFC	Flin Flon	39.19	340	P	P	06 19 50.0	-0.3
FFC	Flin Flon	39.19	340	P	P	06 19 50.1	-0.3
FFC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PNTR	Pine Nut	39.19	309	IAmb	IAmb	06 19 54.2	
	comp=Z,80nm,1.1s						
PMPB	Monarch Peak	39.26	304	IAmb	IAmb	06 19 53.5	
	comp=Z,67nm,1.3s						
PRPB	Parauapebas	39.27	127	*e*P	P	06 19 52.0	+0.4
BBGB	Big Mountain B	39.54	305	IAmb	IAmb	06 19 56.6	
	comp=Z,53nm,1.1s						
SIV	San Ignacio	39.74	150	LR	LR	06 38 12.0	
	comp=Z,349nm,18.3s,baz=354,slow=39						
SAO	San Andreas Ge	39.91	305	IAmb	IAmb	06 19 59.0	
	comp=Z,48nm,1.4s						
J08A	Circle Bar Ran	40.01	316	IAmb	IAmb	06 19 59.8	
	comp=Z,81nm,1.3s						
PB11	IPOC Station P	40.03	164	IAmb	IAmb	06 20 12.8	
	comp=Z,46nm,0.8s						
MHC	Mount Hamilton	40.21	306	IAmb	IAmb	06 20 02.3	
	comp=Z,32nm,1.1s						
PTLB	Pontes e Lacer	40.23	147	P	P	06 19 59.2	-0.1
PTLB	Pontes e Lacer	40.23	147	*e*P	P	06 19 59.3	-0.1
F10A	Beach Ranch, E	40.42	320	IAmb	IAmb	06 20 02.1	
	comp=Z,54nm,1.8s						
HMBC	Humberstone	40.47	165	P	P	06 20 01.5	+0.1
ORV	Oroville	40.73	309	IAmb	IAmb	06 20 06.5	
	comp=Z,44nm,1.1s						
SUTB	Sutter Butte	40.85	308	IAmb	IAmb	06 20 07.3	
	comp=Z,48nm,1.1s						
LNOR	Lincton Mounta	41.02	319	IAmb	IAmb	06 20 07.5	
	comp=Z,80nm,1.9s						
HATC	Hat Creek Radi	41.11	311	IAmb	IAmb	06 20 52.1	
	comp=Z,33nm,1.1s						
K05A	Summer Lake	41.39	314	IAmb	IAmb	06 20 10.8	
	comp=Z,53nm,1.4s						
NEW	Newport	41.52	323	LR	LR	06 39 29.2	
	comp=Z,268nm,18.1s,baz=118,slow=39						
NEW	Newport	41.52	323	IAmb	IAmb	06 20 10.9	
	comp=Z,50nm,1.5s						
M03C	McCloud	41.73	311	IAmb	IAmb	06 20 13.1	
	comp=Z,101nm,1.8s						
PINE	Pine Mountain	41.83	315	IAmb	IAmb	06 20 14.3	
	comp=Z,32nm,1.1s						
J05D	Fort Rock, OR	41.83	314	IAmb	IAmb	06 20 14.0	
	comp=Z,49nm,1.2s						
O02D	Mt. Diablo Mer	41.87	309	P	P	06 20 12.4	-0.5
K04D	Chiloquin, OR	41.94	313	IAmb	IAmb	06 20 15.8	
	comp=Z,80nm,1.4s						
C09A	Chrisman Ranch	41.94	322	IAmb	IAmb	06 20 14.9	
	comp=Z,110nm,1.8s						
L04D	Klamath Falls	42.18	312	P	P	06 20 16.2	+0.8
L04D				IAmb	IAmb	06 20 18.2	
	comp=Z,52nm,1.0s						
SNDB	Serra Nova Dou	42.19	135	*e*P	P	06 20 16.1	+0.5
J04A	Umpqua Nationa	42.41	314	IAmb	IAmb	06 20 19.0	
	comp=Z,35nm,0.8s						
SALV	Santo Antonio	42.46	143	*e*P	P	06 20 18.1	+0.3
EDM	Edmonton	42.50	331	IAmb	IAmb	06 20 18.5	
	comp=Z,50nm,0.7s						
EPH	Ephrata	42.51	321	IAmb	IAmb	06 20 19.9	
	comp=Z,34nm,1.6s						
WIFE	Three Sisters-	42.51	315	P	P	06 20 19.2	+1.1
WIFE				IAmb	IAmb	06 20 21.6	
	comp=Z,32nm,0.9s						
G05A	Wamic	42.65	317	IAmb	IAmb	06 20 28.4	
	comp=Z,76nm,1.6s						
BBOR	Butler Butte	42.67	313	IAmb	IAmb	06 20 21.2	
	comp=Z,52nm,1.6s						
SMTB	Santa Maria do	42.69	128	*e*P	P	06 20 20.5	+0.8
I04A	Tendick Farm,	42.81	315	IAmb	IAmb	06 20 22.1	
	comp=Z,25nm,0.8s						
B08A	Colville Reser	42.84	322	P	P	06 20 20.6	+0.1
B08A				IAmb	IAmb	06 20 21.8	
	comp=Z,74nm,1.6s						
HOOD	Mount Hood Mea	42.90	317	IAmb	IAmb	06 20 24.0	
	comp=Z,73nm,1.1s						
JCC	Jacoby Creek,	42.96	310	IAmb	IAmb	06 20 25.0	
	comp=Z,64nm,1.1s						
H04A	Detroit Lake	43.00	316	IAmb	IAmb	06 20 24.1	
	comp=Z,108nm,1.2s						
K02D	Willamette Mer	43.29	313	IAmb	IAmb	06 20 26.6	
	comp=Z,66nm,1.5s						
H04D	Lebanon	43.30	315	IAmb	IAmb	06 20 25.7	
	comp=Z,49nm,1.3s						
G04A	Mulino	43.39	316	IAmb	IAmb	06 20 28.3	
	comp=Z,52nm,1.1s						
I03D	Drain, OR	43.41	314	IAmb	IAmb	06 20 26.7	
	comp=Z,93nm,1.2s						
KBO	Bosley Butte	43.52	312	IAmb	IAmb	06 20 29.7	
	comp=Z,58nm,1.1s						
G03D	McMinnville, O	43.91	316	IAmb	IAmb	06 20 31.3	
	comp=Z,34nm,0.9s						
PP1B	Ponte de Pedra	44.29	144	*e*P	P	06 20 33.4	+0.9
ARAG	Araguaiana, MT	44.62	139	*e*P	P	06 20 35.7	+0.6
NBPS	Pedro II - PI	44.95	117	*e*P	P	06 20 38.7	+0.8
NLWA	Neilton Lookou	45.14	319	IAmb	IAmb	06 20 41.9	
	comp=Z,27nm,1.2s						
FRB	Frobisher Bay	45.38	7	LR	LR	06 40 34.8	
	comp=Z,380nm,18.0s,baz=244,slow=37						
LLLB	Lillooet	45.38	324	P	P	06 20 40.9	0.0
LLLB				IAmb	IAmb	06 20 42.2	
	comp=Z,36nm,1.3s						
NBMO	Morrinhos-CE	45.58	115	*e*P	P	06 20 43.4	+0.5
BDQN	Bodoquena, MS	45.65	148	*e*P	P	06 20 44.2	+0.9
AQDB	Aquidauana	46.20	147	*e*P	P	06 20 46.7	-1.0
MURT	Porto Murtinho	46.26	150	*e*P	P	06 20 45.9	-2.1
BLKN	Baker Lake	46.41	351	P	P	06 20 48.6	-0.1
BLKN				IAmb	IAmb	06 20 54.8	
	comp=Z,56nm,1.8s						
SDBA	SAO DESIDERIO	46.99	129	*e*P	P	06 20 54.0	0.0
BDFB	Brasilia	47.02	135	P	P	06 20 54.7	+0.5
	comp=Z,22nm,0.9s,baz=314,slow=10,SNR=25						
BDFB				LR	LR	06 43 23.8	
	comp=Z,330nm,18.2s,baz=317,slow=40						
	comp=Z,22nm,0.9s						
CBB	Campbell River	47.12	322	IAmb	IAmb	06 20 56.6	
	comp=Z,41nm,1.2s						
ITRB	Iturama	48.56	141	*e*P	P	06 21 06.6	+0.6
IPMB	Ipameri, GO	48.59	137	*e*P	P	06 21 06.7	+0.3
JANB	Januaria	49.18	131	*e*P	P	06 21 10.3	-0.6
NBPA	Parau_RN	49.33	116	*e*P	P	06 21 12.9	+0.9
YKA	Yellowknife Ar	49.37	340	P	P	06 21 11.3	-0.3
	comp=Z,6.5nm,0.6s,baz=80,slow=4.6,SNR=75						
YKA				PcP	PcP	06 22 34.4	+0.7
	comp=Z,5.5nm,0.9s,baz=140,slow=3.3,SNR=11						
YKA				LR	LR	06 42 32.7	
	comp=Z,452nm,19.8s,baz=96,slow=37						
	comp=Z,6.5nm,0.6s						
YKA	Yellowknife Ar	49.37	340	P	P	06 21 11.4	-0.2
YKAW3	Yellowknife Wh	49.42	340	IAmb	IAmb	06 21 13.1	
	comp=Z,55nm,1.8s						
BBB	Bella Bella	49.58	323	LR	LR	06 44 14.1	
	comp=Z,270nm,18.5s,baz=93,slow=38						
PMNB	Patos De Minas	50.15	136	*e*P	P	06 21 17.4	-0.8
ILON	Igloolik, Nuna	50.30	359	IAmb	IAmb	06 21 19.1	
	comp=Z,37nm,1.3s						
NBTA	Tacaratu-PE	50.34	120	*e*P	P	06 21 20.4	+0.7
RCBR	Riachuelo	50.40	115	*e*P	P	06 21 21.4	+1.2
CPUP	Villa Florida	50.43	153	P	P	06 21 18.3	-1.8
	comp=Z,0.7nm,0.9s,baz=154,slow=5.0,SNR=4.8						
CPUP				LR	LR	06 44 14.7	
	comp=Z,58nm,20.0s,baz=200,slow=38						
BB19B	Bebedouro	50.70	140	*e*P	P	06 21 23.3	+1.0
LDASE	Londrina, Braz	51.02	145	*e*P	P	06 21 24.9	+0.2
TOAD	Toad River Com	51.20	332	P	P	06 21 26.3	+0.7
	baz=121,SNR=6.8						
NBPV	Pedro Velho	51.22	115	*e*P	P	06 21 27.7	+1.3
KOTAN	Kotaneelee Air	51.37	334	P	P	06 21 27.8	+1.0
	baz=123,SNR=6.8						
HG4B	Hotspring	51.38	323	IAmb	IAmb	06 21 29.2	
	comp=Z,29nm,1.0s						
PTGB	Pitanga	51.58	146	*e*P	P	06 21 28.7	-0.2
SFJD	Kangerlussuaq	51.61	14	LR	LR	06 45 53.5	
	comp=Z,129nm,18.3s,baz=184,slow=39						
DIAM	Diamantina, MG	51.83	134	*e*P	P	06 21 31.0	0.0
LIRD	Liard River Hi	51.87	332	P	P	06 21 30.9	+0.3
	baz=121,SNR=8.1						
U35K	Hyder	52.12	327	P	P	06 21 33.1	+0.6
	baz=114						
RCLB	Rio Claro- Sao	52.33	141	*e*P	P	06 21 35.6	+1.1
T35M	Bob Quinn	52.68	328	IAmb	IAmb	06 21 39.3	
	comp=Z,37nm,1.1s						
T35M	Bob Quinn	52.68	328	P	P	06 21 37.4	+0.8
	baz=115,SNR=12						
NBIT	Itapeh - BA	52.68	127	*e*P	P	06 21 37.8	+0.6
V35K	Ketchikan	52.72	326	IAmb	IAmb	06 21 39.3	
	comp=Z,45nm,1.2s						
V35K	Ketchikan	52.72	326	P	P	06 21 38.2	+1.3
	baz=112,SNR=5.1						
CMC01	Camacan, BA	52.88	128	*e*P	P	06 21 38.7	0.0
WRGLY	Wrigley	52.91	337	IAmb	IAmb	06 23 10.1	
	comp=Z,34nm,1.0s						
WRGLY	Wrigley	52.91	337	P	P	06 21 39.1	+0.9
	baz=126						
BSCB	Bom Sucesso	53.00	137	*e*P	P	06 21 40.6	+1.1
VAO	Valinhos	53.11	140	*e*P	P	06 21 41.5	+1.2
MT03	Universidad Ad	53.13	170	P	P	06 21 40.7	+0.4
MT03				IAmb	IAmb	06 21 58.7	
	comp=Z,38nm,1.2s						
DLBC	Dease Lake	53.20	330	LR	LR	06 45 42.9	
	comp=Z,358nm,18.2s,baz=98,slow=38						
DLBC	Dease Lake	53.20	330	P	P	06 21 42.1	+1.6
	baz=116,SNR=19						
MT09	Talagante	53.33	170	IAmb	IAmb	06 21 58.0	
	comp=Z,22nm,1.2s						
WTLY	Watson Lake, Y	53.40	332	P	P	06 21 42.9	+0.9
	baz=118						
GUA01	Guaratinga, BA	53.44	129	*e*P	P	06 21 43.5	+0.8
S34M	Telegraph Cree	53.50	329	IAmb	IAmb	06 21 44.6	
	comp=Z,28nm,1.4s						
S34M	Telegraph Cree	53.50	329	P	P	06 21 43.9	+1.2
	baz=114						
WRAK	Wrangell Islan	53.51	327	IAmb	IAmb	06 21 44.9	
	comp=Z,57nm,1.2s						
WRAK	Wrangell Islan	53.51	327	P	P	06 21 44.0	+1.3
	baz=112						
CRAG	Craig	53.57	326	P	P	06 21 44.3	+1.1
	baz=111						
BO04	La Punta	53.60	170	IAmb	IAmb	06 21 58.7	
	comp=Z,19nm,1.1s						
ITAB	Concordia	53.62	148	*e*P	P	06 21 45.1	+1.3
RPN	Rapa Nui	53.77	212	LR	LR	06 41 17.7	
	comp=Z,117nm,18.1s,baz=338,slow=32						
U33K	Whale Pass	53.80	327	P	P	06 21 45.8	+1.0
	baz=111						
SJMB	Sao Joao De Ma	53.83	132	*e*P	P	06 21 46.2	+0.6
PET01	Itanhaem-SP	53.90	142	*e*P	P	06 21 46.8	+0.8
BO01	Tunca	53.92	170	P	P	06 21 45.8	-0.1
T33K	Petersburg	53.97	327	P	P	06 21 47.1	+1.1
	baz=112						
R33M	Jennings River	54.05	331	P	P	06 21 48.0	+1.1
	baz=116,SNR=37						
BSFB	Barra de Sao F	54.16	132	*e*P	P	06 21 48.1	+0.1
BO02	Sierra Bellavi	54.36	170	IAmb	IAmb	06 21 52.9	
	comp=Z,16nm,0.9s						
Q32M	Nakina River	54.48	330	P	P	06 21 51.4	+1.4
	baz=114						
VAS01	Vassouras-RJ	54.78	137	*e*P	P	06 21 54.3	+1.9
RIB01	Linhares ES	54.80	132	*e*P	P	06 21 53.1	+0.5
S32K	Killisnoo	55.04	328	IAmb	IAmb	06 21 56.1	
	comp=Z,50nm,1.1s						
S32K	Killisnoo	55.04	328	P	P	06 21 54.9	+1.1
	baz=111,SNR=7.6						
P33M	Teslin, Yukon	55.25	331	IAmb	IAmb	06 21 57.5	
	comp=Z,32nm,1.2s						
P33M	Teslin, Yukon	55.25	331	P	P	06 21 56.5	+1.0
	baz=114,SNR=10						
SIT	Sitka	55.27	327	P	P	06 21 56.6	+1.0
	baz=110						
R32K	Eaglecrest	55.30	329	P	P	06 21 56.6	+0.8
	baz=111						
DUB01	Friburgo-RJ	55.33	136	*e*P	P	06 21 55.9	-0.6
P32M	Atlin	55.41	330	IAmb	IAmb	06 21 58.8	
	comp=Z,36nm,1.1s						
P32M	Atlin	55.41	330	P	P	06 21 57.5	+0.9
	baz=113,SNR=8.9						
CAM01	Campos-RJ	55.63	135	*e*P	P	06 21 59.5	+0.9
CPSB	Cacapava Do Su	55.66	152	*e*P	P	06 22 00.3	+1.7
N32M	Quiet Lake	55.76	332	P	P	06 21 59.9	+0.9
	baz=115						
R31K	City Hall, Gus	55.95	329	P	P	06 22 01.3	+1.0
	baz=110						
S31K	Pelican	56.04	328	P	P	06 22 01.3	+0.3
	baz=110						
BI02	San Fabin de	56.11	171	IAmb	IAmb	06 22 17.9	
	comp=Z,17nm,1.2s						
SKAG	Skagway	56.12	330	IAmb	IAmb	06 22 04.1	
	comp=Z,18nm,1.0s						
SKAG	Skagway	56.12	330	P	P	06 22 02.6	+1.0
	baz=111						
RES	Resolute Bay	56.18	355	LR	LR	06 46 21.0	
	comp=Z,279nm,18.9s,baz=190,slow=36						
WHY	Whitehorse	56.37	331	IAmb	IAmb	06 22 05.0	
	comp=Z,47nm,1.1s						
WHY	Whitehorse	56.37	331	P	P	06 22 03.7	+0.2
	baz=112,SNR=7.7						
PLBC	Pleasant Camp	56.62	330	P	P	06 22 06.3	+1.1
	baz=110						
PLTB	Pedras Altas	56.74	153	*e*P	P	06 22 07.8	+1.4
M31M	Drury Creek, Y	56.76	333	IAmb	IAmb	06 22 08.2	
	comp=Z,30nm,1.1s						
M31M	Drury Creek, Y	56.76	333	P	P	06 22 06.9	+0.8
	baz=114,SNR=16						
C36M	Paulatuk	56.85	343	P	P	06 22 07.8	+1.2
	baz=129						
O30N	Mendenhall	56.96	331	IAmb	IAmb	06 22 09.6	
	comp=Z,50nm,1.2s						
O30N	Mendenhall	56.96	331	P	P	06 22 08.4	+0.8
	baz=111,SNR=15						
N31M	Braeburn, Yuko	57.09	332	P	P	06 22 09.3	+0.8
	baz=112,SNR=13						
P30M	Million Dollar	57.13	330	P	P	06 22 09.9	+1.0
	baz=110						
P29M	Windy Craggy	57.34	329	P	P	06 22 11.3	+1.0
	baz=109,SNR=5.1						
HYT	Haines Junctio	57.63	331	IAmb	IAmb	06 22 14.7	
	comp=Z,34nm,1.1s						
HYT	Haines Junctio	57.63	331	P	P	06 22 13.5	+1.1
	baz=110,SNR=10						
N30M	Aishikik Lake	57.66	332	P	P	06 22 13.4	+0.9
	baz=111						
TULEG	Thule	57.80	3	P	P	06 22 13.3	+0.1
TULEG				IAmb	IAmb	06 22 14.9	
	comp=Z,26nm,1.2s						
M30M	Minto, Yukon	57.94	333	IAmb	IAmb	06 22 16.9	
	comp=Z,33nm,1.2s						
M30M	Minto, Yukon	57.94	333	P	P	06 22 15.0	+0.5
	baz=112,SNR=13						
MAYO	Mayo, Yukon	57.95	334	P	P	06 22 15.6	+1.1
	baz=113,SNR=7.9						
O29M	Mount Kennedy	57.95	330	P	P	06 22 15.7	+1.0
	baz=109						
YUK6	Outpost Mounta	58.06	331	P	P	06 22 16.7	+1.1
	baz=109,SNR=7.1						
H31M	Peel River	58.27	337	P	P	06 22 17.6	+0.9
	baz=116,SNR=5.8						
YUK4	Talbot Arm	58.33	331	P	P	06 22 18.3	+0.9
	baz=109,SNR=8.3						
J30M	Hart River	58.52	335	P	P	06 22 19.5	+0.9
	baz=113						
M29M	Somme Creek	58.61	332	P	P	06 22 20.0	+0.8
	baz=110						
PINM	Pinnacle	58.69	330	P	P	06 22 20.8	+1.0
	baz=107						
L29M	L29M	58.70	333	P	P	06 22 20.4	+0.6
	baz=111						
K29M	Barlow Dome	58.72	334	P	P	06 22 20.9	+0.9
	baz=112						
G31M	Satah River	58.75	338	IAmb	IAmb	06 22 22.4	
	comp=Z,45nm,1.2s						
G31M	Satah River	58.75	338	P	P	06 22 20.6	+0.6
	baz=117,SNR=13						
I30M	Mount Dempster	58.80	336	P	P	06 22 21.5	+1.0
	baz=114						
F31M	Tsiigehtchic	58.80	339	IAmb	IAmb	06 22 22.9	
	comp=Z,43nm,1.2s						
F31M	Tsiigehtchic	58.80	339	P	P	06 22 20.9	+0.6
	baz=118,SNR=19						
YUK8	Steele Glacier	58.82	331	P	P	06 22 22.0	+1.1
	baz=108,SNR=7.1						
A36M	Sachs Harbour	58.83	345	P	P	06 22 20.2	-0.2
	baz=129,SNR=37						
O28M	Mount Upton	58.86	330	P	P	06 22 22.2	+1.0
	baz=107						
INK	Inuvik	59.14	340	LR	LR	06 48 21.7	
	comp=Z,286nm,18.6s,baz=338,slow=36						
INK	Inuvik	59.14	340	P	P	06 22 23.5	+0.9
	baz=118,SNR=38						
J29N	Klondike Camp	59.23	335	P	P	06 22 24.6	+1.2
	baz=111,SNR=16						
YUK3	Moose Creek	59.28	331	P	P	06 22 24.9	+0.8
	baz=108,SNR=8.9						
EPYK	Eagle Plains	59.39	337	P	P	06 22 25.2	+0.7
	baz=114,SNR=13						
CTG	Chitna Glacier	59.45	330	P	P	06 22 26.0	+0.9
	baz=106,SNR=5.7						
G30M	tAoh Zraii Nji	59.47	338	P	P	06 22 26.7	+1.7
	baz=115						
MESA	MESA	59.52	329	P	P	06 22 25.8	+0.1
	baz=105						
DAWY	Dawson	59.57	334	IAmb	IAmb	06 22 27.1	
	comp=Z,32nm,1.2s						
DAWY	Dawson	59.57	334	P	P	06 22 25.7	-0.1
	baz=110,SNR=18						
GRNC	Granite Creek	59.58	330	IAmb	IAmb	06 22 27.7	
	comp=Z,19nm,0.9s						
F30M	Barrier River	59.58	339	P	P	06 22 26.7	+1.0
	baz=116,SNR=18						
I29M	Ogilvie Camp,	59.60	336	IAmb	IAmb	06 22 27.5	
	comp=Z,23nm,1.4s						
I29M	Ogilvie Camp,	59.60	336	P	P	06 22 26.5	+0.6
	baz=112,SNR=7.1						
BVCY	Beaver Creek	59.66	332	P	P	06 22 27.2	+0.7
	baz=108						
BORG	Borgarnes	59.91	25	LR	LR	06 46 32.2	
	comp=Z,158nm,18.3s,baz=195,slow=34						
H29M	Whitestone	59.95	337	P	P	06 22 29.2	+0.9
	baz=112						
G29M	Pine Creek	60.09	337	P	P	06 22 30.2	+0.9
	baz=113						
M27K	Edge Creek, AK	60.10	332	P	P	06 22 30.5	+1.0
	baz=107						
BGLC	Bering Glacier	60.16	329	P	P	06 22 31.3	+1.6
	baz=104						
PLCA	Paso Flores	60.21	171	P	P	06 22 29.8	-0.7
	comp=Z,6.4nm,0.7s,baz=340,slow=8.1,SNR=26						
	comp=Z,6.4nm,0.7s						
PLCA	Paso Flores	60.21	171	P	P	06 22 29.9	-0.5
PLCA	Paso Flores	60.21	171	P	P	06 22 30.0	-0.5
PLCA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PLCA	Paso Flores	60.21	171	*e*P	P	06 22 29.7	-0.7
CRQE	Cirque	60.22	330	P	P	06 22 31.5	+1.1
	baz=105						
BCAR	Beaver Creek A	60.26	333	P	P	06 22 31.3	+0.8
I28M	Miner Creek	60.27	336	P	P	06 22 31.5	+0.9
	baz=110						
L27K	Beaver Creek,	60.28	333	P	P	06 22 31.4	+0.7
	baz=107,SNR=12						
MCARA	McCarthy VSAT	60.35	331	IAmb	IAmb	06 22 33.6	
	comp=Z,22nm,0.9s						
MCARA	McCarthy VSAT	60.35	331	P	P	06 22 32.6	+1.5
	baz=105						
M26K	Nabesna, AK	60.61	332	P	P	06 22 33.8	+0.8
	baz=106						
E29M	Blow River	60.63	339	P	P	06 22 34.1	+1.2
	baz=114						
KAIM	Kayak Island	60.66	329	P	P	06 22 34.1	+0.8
	baz=103						
K27K	Chicken	60.67	334	P	P	06 22 34.2	+0.9
	baz=107						
GLB	Gilahina Butte	60.73	331	IAmb	IAmb	06 22 35.5	
	comp=Z,17nm,1.0s						
L26K	Log Cabin Wild	60.93	332	P	P	06 22 36.1	+1.0
	baz=106,SNR=13						
I27K	Kandik River	60.98	335	P	P	06 22 36.5	+1.1
	baz=109,SNR=35						
BMRM	Bremner River	60.99	330	IAmb	IAmb	06 22 37.9	
	comp=Z,41nm,1.1s						
BMRM	Bremner River	60.99	330	P	P	06 22 36.9	+1.4
	baz=103,SNR=5.4						
F28M	Old Crow	61.02	338	P	P	06 22 36.4	+0.8
	baz=112,SNR=29						
MENT	Mentasta	61.07	332	IAmb	IAmb	06 22 38.3	
	comp=Z,37nm,1.1s						
N25K	Chitina, Valde	61.14	331	IAmb	IAmb	06 22 39.2	

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      comp=Z,37nm,1.2s
N25K  Chitina, Valde    61.14 331   P      P       06 22 37.6 +1.0
      baz=104,SNR=5.1
H27K  Steamboat Moun    61.15 336   P      P       06 22 37.6 +1.0
      baz=109,SNR=30
E28M  Babbage River     61.27 339   P      P       06 22 37.8 +0.5
      baz=112
D28M  Stokes Point      61.29 340   P      P       06 22 38.5 +1.1
      baz=114,SNR=7.0
G27K  Doyon Strip       61.39 337   P      P       06 22 38.7 +0.5
      baz=109,SNR=8.3
J26L  Joseph Creek      61.43 334   IAmb   IAmb    06 22 42.1
      comp=Z,17nm,0.9s
J26L  Joseph Creek      61.43 334   P      P       06 22 39.5 +0.9
      baz=106,SNR=17
EYAK  Cordova Ski Ar    61.45 329   P      P       06 22 39.8 +1.2
      baz=102
SCRK  Sand Creek        61.47 333   IAmb   IAmb    06 22 41.1
      comp=Z,34nm,1.0s
SCRK  Sand Creek        61.47 333   P      P       06 22 39.8 +1.0
      baz=106,SNR=17
I26K  Coal Creek Min    61.50 335   P      P       06 22 39.7 +0.9
      baz=107
Q23K  Middleton Isla    61.52 328   P      P       06 22 40.6 +1.5
      baz=101
HARP  HAARP             61.58 331   P      P       06 22 40.5 +0.9
      baz=104
KLU   Klutina           61.73 330   P      P       06 22 41.6 +1.0
      baz=102,SNR=9.6
RIDG  Independent Ri    61.77 333   P      P       06 22 42.0 +1.2
      baz=104,SNR=18
E27K  Coleen River      61.83 338   P      P       06 22 41.8 +0.7
      baz=110,SNR=11
PAX   Paxson            61.86 332   P      P       06 22 42.5 +1.0
      baz=104,SNR=25
M24K  Tolsona, Glenn    61.98 331   P      P       06 22 43.6 +1.4
      baz=102,SNR=15
D27M  Malcolm River     61.99 339   P      P       06 22 43.3 +1.1
      baz=111
P23K  Montague Islan    62.15 328   P      P       06 22 44.2 +0.9
      baz=100
GLI   Glacier Island    62.16 329   P      P       06 22 44.3 +0.9
      baz=101,SNR=5.9
K24K  Donnelly Dome     62.19 333   P      P       06 22 45.0 +1.4
      baz=104,SNR=57
J25K  Salcha River,     62.22 334   P      P       06 22 45.0 +1.2
      baz=104
G26K  Porcupine Rive    62.23 337   P      P       06 22 44.5 +0.8
      baz=107
SCM   Sheep Creek Mo    62.46 331   P      P       06 22 46.4 +0.9
      baz=101,SNR=5.3
F26K  Sheenjek River    62.59 337   IAmb   IAmb    06 22 48.3
      comp=Z,9.5nm,0.9s
F26K  Sheenjek River    62.59 337   P      P       06 22 47.1 +1.0
      baz=107
M23K  Glacier View      62.63 330   P      P       06 22 47.3 +0.7
      baz=101,SNR=8.1
DHY   Denali Highway    62.73 332   P      P       06 22 48.4 +1.1
DHY                                 IAmb   IAmb    06 22 53.8
      comp=Z,17nm,1.0s
DHY   Denali Highway    62.73 332   P      P       06 22 47.9 +0.6
      baz=102,SNR=5.8
PWL   Port Wells        62.75 329   P      P       06 22 47.6 +0.2
      baz=100
WAT6  Susitna Watana    62.79 331   P      P       06 22 48.9 +1.1
      baz=101,SNR=15
H25L  Birch Creek       62.82 336   P      P       06 22 49.0 +1.4
      baz=105
HDA   Harding Lake      62.83 333   P      P       06 22 48.7 +0.9
      baz=103,SNR=50
ILAR  Eielson Array     62.89 334   P      P       06 22 48.7 +0.5
      comp=Z,25nm,0.9s,baz=108,slow=3.6,SNR=147
ILAR                                LR     LR      06 51 14.3
      comp=Z,376nm,18.9s,baz=96,slow=37
      comp=Z,25nm,0.9s
ILAR  Eielson Array     62.89 334   P      P       06 22 48.6 +0.4
KNK   Knik Glacier      62.91 330   P      P       06 22 49.3 +0.9
      baz=100,SNR=8.2
SML   Sawmill           62.92 330   P      P       06 22 49.2 +0.7
      baz=100,SNR=5.7
C27K  Jago River        63.03 339   P      P       06 22 50.2 +1.2
      baz=109
G25K  Bearman Lake      63.06 336   P      P       06 22 50.4 +1.1
      baz=105
F25K  Christian Rive    63.11 337   P      P       06 22 50.8 +1.1
      baz=106
SEW   Seward            63.18 328   P      P       06 22 50.6 +0.4
      baz=98
POKR  Poker Plat Res    63.19 334   P      P       06 22 51.0 +0.8
      baz=103,SNR=9.9
WAT1  Susitna Watana    63.21 332   P      P       06 22 51.2 +0.8
      baz=101
E25K  Arctic Village    63.22 338   IAmb   IAmb    06 22 52.7
      comp=Z,23nm,0.9s
E25K  Arctic Village    63.22 338   P      P       06 22 51.5 +1.1
      baz=106,SNR=17
PMR   Palmer            63.26 330   P      P       06 22 51.3 +0.7
      baz=99,SNR=6.7
COLA  College           63.31 334   P      P       06 22 51.9 +0.9
COLA  College           63.31 334d iP      P       06 22 51.6 +0.6
COLA                                pmax   pmax
      comp=Z,39nm,1.0s
COLA  College           63.31 334   P      P       06 22 51.6 +0.6
      baz=102
O22K  Cooper Landing    63.37 329   P      P       06 22 52.1 +0.6
      baz=98
RC01  Rabbit Creek A    63.47 329   P      P       06 22 53.0 +0.9
      baz=99
C26K  Camden Bay        63.52 340   P      P       06 22 53.7 +1.4
      baz=108,SNR=20
H24K  Noodor Dome       63.53 335   P      P       06 22 53.2 +0.7
      baz=103,SNR=15
MCK   McKinley          63.55 332   P      P       06 22 53.6 +1.0
      baz=101,SNR=34
G24K  Hadweenzic Riv    63.57 336   P      P       06 22 53.9 +1.2
      baz=104
M22K  Willow            63.75 330   P      P       06 22 54.6 +0.7
      baz=99,SNR=8.2
NEA2  Nenana            63.77 333   P      P       06 22 54.4 +0.4
      baz=101,SNR=13
BRSE  Bradley Lake S    63.77 328   P      P       06 22 54.7 +0.5
      baz=97
D25K  Kavik River       63.84 339   P      P       06 22 55.5 +1.1
      baz=106
CUT   Chulitna          63.92 331   P      P       06 22 56.1 +1.1
      baz=99,SNR=14
F24K  Squaw Lake        63.92 337   P      P       06 22 56.3 +1.3
      baz=104,SNR=8.3
I23K  Minto, Yukon-K    63.99 334   P      P       06 22 56.7 +1.2
      baz=101,SNR=65
SUA   Susitna One       64.00 330   P      P       06 22 56.8 +1.0
      baz=98
TRF   Thorofare Moun    64.09 332   P      P       06 22 57.4 +1.1
      baz=99,SNR=31
PSBE  So Bento          64.17  55  eP      P       06 22 56.6  -0.6
H23K  Yukon River       64.20 335   P      P       06 22 57.8 +0.9
      baz=101
HOM   Homer             64.22 328   P      P       06 22 58.4 +1.3
      baz=96
E24K  Your Creek        64.27 337   IAmb   IAmb    06 22 59.2
      comp=Z,16nm,1.1s
E24K  Your Creek        64.27 337   P      P       06 22 58.4 +1.1
      baz=103,SNR=11
PGAV  Gavieira, Arco    64.42  52  eP      P       06 22 59.0 +0.2
SKT   Skwentna          64.44 330   P      P       06 22 59.4 +0.8
      baz=97,SNR=19
MORF  Marmelete         64.46  57  eP      P       06 23 00.4 +1.3
MORF                                IAmb   IAmb    06 23 02.2
      comp=Z,11nm,0.9s
MORF  Marmelete         64.46  57  eP      P       06 23 00.9 +1.8
MORF                               etx     tx      06 23 14.2
MORF  Marmelete         64.46  57  eP      P       06 23 00.4 +1.3
Q20K  Shuyak Island     64.50 327   P      P       06 22 59.6 +0.8
      baz=95
BPAW  Bear Paw Mtn.     64.50 333   P      P       06 22 59.8 +0.9
      baz=99,SNR=16
KDAK  Kodiak Island     64.53 326   LR     LR      06 52 13.6
      comp=Z,222nm,20.9s,baz=70,slow=37
KDAK  Kodiak Island     64.53 326⇑eP       P       06 22 59.9 +0.8
KDAK                                pmax   pmax
      comp=Z,129nm,1.2s
KDAK  Kodiak Island     64.53 326   P      P       06 23 00.4 +1.3
      baz=94
MLY   Manley            64.55 334   P      P       06 23 00.1 +0.9
      baz=100,SNR=26
G23K  Bananza Creek     64.56 336   P      P       06 23 00.6 +1.3
      baz=101
MOE   Montemor          64.59  56  eP      P       06 23 01.0 +1.1
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MOE                                etx     tx      06 23 15.4
D24K  Happy Valley      64.64 338   P      P       06 23 00.5 +0.9
      baz=103
PMTG  Montargil         64.65  55  eP      P       06 23 01.8 +1.5
SPCR  Spurr Chakacha    64.67 329   P      P       06 23 00.7 +0.6
      baz=96,SNR=6.9
E23K  Chandalar         64.68 337   P      P       06 23 01.3 +1.3
      baz=102
COLD  Coldfoot          64.73 336   P      P       06 23 01.6 +1.3
      baz=101,SNR=14
C24K  Franklin Bluff    64.73 339   P      P       06 23 01.3 +1.1
      baz=104
MESJ  Messejana         64.75  56  eP      P       06 23 02.3 +1.3
MESJ                                IAmb   IAmb    06 23 03.4
      comp=Z,9.4nm,0.9s
MESJ  Messejana         64.75  56  eP      P       06 23 02.5 +1.5
MESJ                               etx     tx      06 23 16.5
MESJ  Messejana         64.75  56  eP      P       06 23 02.3 +1.3
O20K  Slope Mountain    64.75 328   P      P       06 23 01.6 +0.9
      baz=96
PVIS  Viseu             64.78  53  eP      P       06 23 01.8 +0.7
TOLK  Toolik Lake Re    64.79 338   IAmb   IAmb    06 23 02.5
      comp=Z,17nm,0.8s
TOLK  Toolik Lake Re    64.79 338   P      P       06 23 01.5 +0.8
      baz=102,SNR=13
PARRA Arraiolos         64.81  55  eP      P       06 23 02.4 +1.1
PARRA                              etx     tx      06 23 16.4
EVO   Evora             64.86  56  eP      P       06 23 02.7 +1.1
EVO                                etx     tx      06 23 16.6
PPLA  Purkeypile        64.86 331   P      P       06 23 02.0 +0.6
      baz=97,SNR=14
OHAK  Old Harbor        64.87 325   P      P       06 23 02.3 +1.0
      baz=94
PVRL  Vila Real         64.87  53  eP      P       06 23 03.1 +1.3
PCVE  Castro Verde      64.92  57  eP      P       06 23 04.1 +2.0
H22K  Ishtalitna Cre    64.95 335   P      P       06 23 02.5 +0.7
      baz=99
TAOE  Nuku Hiva Isla    65.01 250  eSS     SS      06 35 52.5  -3.4
      comp=Z,68nm,26.9s
TAOE                               eLR     LR      06 42 26.7
      comp=Z,152nm,28.1s
P19K  Oil Pt            65.02 328   P      P       06 23 02.9 +0.5
      baz=95
PBDV  Barranco-do-Ve    65.04  57  eP      P       06 23 04.8 +1.9
CHUM  Lake Minchumin    65.05 332   P      P       06 23 03.1 +0.8
      baz=98,SNR=19
MTE   Manteigas         65.07  54  eP      P       06 23 02.6  -0.4
I21K  Tanana            65.09 334   P      P       06 23 03.3 +0.7
      baz=98,SNR=36
PESTR Estremoz          65.16  55  eP      P       06 23 04.9 +1.3
Q19K  Cape Douglas,     65.17 327   P      P       06 23 04.4 +1.1
      baz=94
G22K  Bettles           65.18 336   P      P       06 23 04.2 +1.1
      baz=100
M20K  Styx River        65.18 330   P      P       06 23 04.1 +0.7
      baz=96
PVAQ  Vaqueiros         65.19  57  eP      P       06 23 05.3 +1.5
D23K  Nanushuk River    65.25 338   P      P       06 23 05.0 +1.4
      baz=102
PMRV  Marv??o           65.26  55  eP      P       06 23 05.7 +1.4
MVO   Moncorvo          65.40  53  eP      P       06 23 04.5  -0.7
MVO                                etx     tx      06 23 22.5
C23K  Itkillik River    65.41 339   P      P       06 23 05.6 +1.0
      baz=102
H21K  Melozitna Rive    65.50 334   P      P       06 23 06.0 +0.7
      baz=98,SNR=12
E22K  Anaktuvuk Pass    65.50 337   IAmb   IAmb    06 23 06.9
      comp=Z,47nm,1.6s
E22K  Anaktuvuk Pass    65.50 337   P      P       06 23 06.0 +0.6
      baz=100,SNR=10
F22K  John River        65.53 336   P      P       06 23 06.5 +1.0
      baz=99
O19K  Port Alsworth     65.61 328   P      P       06 23 06.6 +0.6
      baz=94,SNR=5.6
PBAR  Barrancos         65.65  56  eP      P       06 23 08.1 +1.3
N19K  Bonanza Creek     65.74 329   P      P       06 23 07.7 +0.6
      baz=94,SNR=11
K20K  Telida            65.77 332   P      P       06 23 07.8 +0.7
      baz=96
Q18K  Katmai Hardscr    65.87 326   P      P       06 23 08.0   0.0
      baz=93
J20K  Nowinta River     65.89 333   P      P       06 23 08.7 +0.9
      baz=96
G21K  Allakaket         65.90 335   P      P       06 23 09.2 +1.3
      baz=98
IMAR  Indian Mountai    65.93 335   P      P       06 23 08.5 +0.5
D22K  Ayikyak River     65.95 338   IAmb   IAmb    06 23 10.2
      comp=Z,24nm,0.8s
D22K  Ayikyak River     65.95 338   P      P       06 23 09.0 +0.8
      baz=100,SNR=16
F21K  Alatna River      65.99 336   P      P       06 23 09.6 +1.1
      baz=98
P18K  Big Mountain,     66.02 327   P      P       06 23 09.1 +0.3
      baz=93
L19K  White Mountain    66.02 330   P      P       06 23 09.4 +0.7
      baz=94
O18K  Koktuh Hills      66.03 328   P      P       06 23 09.3 +0.4
      baz=93,SNR=8.9
I20K  Naaghedeneel      66.09 333   P      P       06 23 09.6 +0.6
      baz=96
Q17K  Contact Creek     66.31 326   P      P       06 23 11.0 +0.2
      baz=92
H20K  Anotleneega Mo    66.34 334   P      P       06 23 10.9 +0.2
      baz=96,SNR=8.9
E21K  Killik River      66.35 337   P      P       06 23 11.0 +0.2
      baz=98
N18K  Kilae Creek       66.42 329   P      P       06 23 11.8 +0.5
      baz=93
M18K  Stony River       66.43 330   P      P       06 23 11.9 +0.5
      baz=93,SNR=15
B22K  Teshekpuk Lake    66.45 339   P      P       06 23 12.1 +0.8
      baz=99
J19K  Poorman           66.51 332   P      P       06 23 12.3 +0.4
      baz=95
R17L  Mt. Peulik Vol    66.55 325   P      P       06 23 12.7 +0.6
      baz=91
Q16K  King Salmon       66.73 326   P      P       06 23 13.7 +0.5
      baz=91
C21K  Knifeblade Rid    66.74 338   P      P       06 23 13.8 +0.6
      baz=98,SNR=6.8
B21K  Ikpikpuk River    66.74 338   P      P       06 23 13.9 +0.7
      baz=98
F20K  Avaraart Lake     66.84 336   P      P       06 23 14.9 +1.1
      baz=96
L18K  Granite Mounta    66.88 330   P      P       06 23 14.9 +0.7
      baz=93
J18K  Innoko River      66.96 332   P      P       06 23 15.2 +0.4
      baz=93,SNR=18
O17K  Koliganek Bris    66.98 328   P      P       06 23 15.5 +0.7
      baz=92,SNR=15
H19K  Roundabout Mou    66.99 334   P      P       06 23 15.6 +0.8
      baz=94
N17K  Nushagak Hills    67.05 328   P      P       06 23 15.9 +0.6
      baz=92
A22K  Sinclair Lake     67.06 340   P      P       06 23 15.6 +0.4
      baz=98
GCSA  Galena City Sc    67.11 333   P      P       06 23 16.3 +0.7
      baz=94,SNR=26
E20K  Nigu River        67.14 337   P      P       06 23 16.7 +0.9
      baz=96
R16K  Pilot Point       67.20 325   P      P       06 23 16.7 +0.5
      baz=90
M17K  Holitna River     67.20 329   P      P       06 23 16.7 +0.4
      baz=92
G19K  Purcell Mounta    67.30 335   P      P       06 23 17.6 +0.8
      baz=94
D20K  Etivluk River     67.34 337   P      P       06 23 17.4 +0.3
      baz=96
EKA   Eskdalemuir Ar    67.35  37   P      P       06 23 17.9 +0.6
      comp=Z,2.7nm,0.6s,baz=271,slow=6.0,SNR=10
EKA                                 LR     LR      06 50 24.1
      comp=Z,262nm,18.4s,baz=354,slow=34
      comp=Z,2.7nm,0.6s
P16K  Nushagak River    67.43 327   P      P       06 23 18.0 +0.4
      baz=90
E19K  Redstone River    67.46 336   P      P       06 23 18.3 +0.4
      baz=95
O16K  Kokwok River B    67.48 327   P      P       06 23 18.1 +0.1
      baz=90
NOR   Nord              67.50   8  eP      P       06 23 18.2 +0.4
F19K  Shaleruckik Mo    67.62 335   P      P       06 23 19.2 +0.4
      baz=94
L17K  Donlin            67.63 330   P      P       06 23 19.7 +0.7
      baz=91
A21K  Barrow            67.63 340   P      P       06 23 19.1 +0.3
      baz=97
K17K  Iditarod          67.65 331   P      P       06 23 19.5 +0.5
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      baz=92,SNR=8.1
B20K  Meade River       67.67 339   P      P       06 23 19.8 +0.7
      baz=96,SNR=5.4
H18K  Honhosa River     67.77 333   P      P       06 23 21.3 +1.5
      baz=93
N16K  Nishlik Lake      67.83 328   P      P       06 23 21.2 +0.9
      baz=90
D19K  Kuna River        67.87 337   P      P       06 23 21.2 +0.8
      baz=94
ESDC  Sonseca Array     67.87  54   P      P       06 23 22.6 +1.6
      comp=Z,8.0nm,0.8s,baz=285,slow=6.2,SNR=37
ESDC                                LR     LR      06 50 47.0
      comp=Z,253nm,18.0s,baz=294,slow=34
      comp=Z,8.0nm,0.8s
G18K  Tagagawik         67.92 334   P      P       06 23 21.8 +1.0
      baz=93,SNR=20
M16K  Timber Creek      67.93 329   P      P       06 23 21.7 +0.9
      baz=90
J17K  VABM Dome         68.02 332   P      P       06 23 22.4 +1.0
      baz=91,SNR=15
L16K  Owhat River       68.18 330   P      P       06 23 23.4 +1.0
      baz=90,SNR=13
S14K  Fog Glacier       68.31 324   P      P       06 23 23.9 +0.5
      baz=88
MDT   Midelt            68.32  62   LR     LR      06 47 06.1
      comp=Z,285nm,21.7s,baz=302,slow=30
F18K  Selawik           68.36 335   P      P       06 23 24.9 +1.5
      baz=92
O15K  Ungalikthiuk R    68.37 327   P      P       06 23 24.4 +0.7
      baz=89
CHNA  Chernabura Isl    68.38 322   P      P       06 23 24.3 +0.5
      baz=87
H17K  Granite Mounta    68.42 333   P      P       06 23 25.0 +1.1
      baz=91,SNR=13
C19K  Lookout Ridge     68.45 338   P      P       06 23 25.0 +1.0
      baz=93
N15K  Kwethluk River    68.49 328   P      P       06 23 25.1 +0.7
      baz=89
J16K  Anvik River       68.71 331   P      P       06 23 27.6 +2.0
      baz=90
G17K  Kiwalik Mounta    68.74 334   P      P       06 23 27.1 +1.2
      baz=91
I17K  Unalakleet        68.75 332   P      P       06 23 27.5 +1.6
      baz=90,SNR=12
E18K  Tukpahlearik C    68.76 336   P      P       06 23 26.1 +0.2
      baz=91
M15K  Kasigluk River    68.78 329   P      P       06 23 27.1 +1.0
      baz=89
SDPT  Sand Point        68.87 323   P      P       06 23 27.0 +0.2
      baz=87
F17K  Baldwin Pennin    69.00 335   P      P       06 23 28.0 +0.6
      baz=90
C18K  Utukok River      69.01 337   P      P       06 23 27.9 +0.4
      baz=91,SNR=7.5
A19K  Wainwright        69.02 339   P      P       06 23 28.3 +0.9
      baz=92
O14K  Tigyukauivet M    69.11 327   P      P       06 23 29.5 +1.2
      baz=88
L15K  Ungalak Mounta    69.14 330   P      P       06 23 30.0 +1.6
      baz=88,SNR=17
K15K  Wolf Creek Mou    69.15 330   P      P       06 23 30.3 +1.8
      baz=89,SNR=11
E17K  Hotham Inlet      69.23 336   P      P       06 23 29.3 +0.4
      baz=90,SNR=19
B18K  Kokolik River     69.25 338   P      P       06 23 29.8 +0.8
      baz=91
N14K  Kuskokwak Cree    69.30 328   P      P       06 23 30.3 +0.9
      baz=88
M14K  Bethel            69.40 329   P      P       06 23 31.5 +1.5
      baz=88,SNR=17
H16K  Elim              69.42 333   P      P       06 23 31.4 +1.3
      baz=89,SNR=12
G16K  Koyuk River       69.45 334   P      P       06 23 31.1 +0.8
      baz=89,SNR=7.9
RDOG  Red Dog Mine      69.64 337   IAmb   IAmb    06 23 32.8
      comp=Z,28nm,1.0s
RDOG  Red Dog Mine      69.64 337   P      P       06 23 31.8 +0.4
      baz=90,SNR=7.0
D17K  Noatak River      69.71 336   P      P       06 23 32.4 +0.6
      baz=89,SNR=5.5
L14K  Kuka Creek        69.73 329   P      P       06 23 33.2 +1.2
      baz=87,SNR=9.6
C17K  DeLong Mountai    69.74 337   P      P       06 23 32.5 +0.5
      baz=90
S12K  Black Hills       69.74 323   P      P       06 23 32.1  -0.2
      baz=86
J14K  Nanvaranak Lak    70.07 331   P      P       06 23 36.2 +2.1
      baz=87
M13K  Dall Lake         70.10 328   P      P       06 23 36.1 +1.8
      baz=86
G15K  Niukluk           70.17 333   P      P       06 23 35.8 +1.1
      baz=87
F15K  North Star Dit    70.39 334   P      P       06 23 37.5 +1.5
      baz=87
C16K  Lisburne Hills    70.55 337   P      P       06 23 37.4 +0.5
      baz=87,SNR=10
FALS  False Pass        70.59 323   P      P       06 23 38.2 +0.8
      baz=84
K13K  Kusilvak Mount    70.63 330   P      P       06 23 39.1 +1.6
      baz=86
ANM   Nome              70.77 333   IAmb   IAmb    06 23 40.7
      comp=Z,34nm,1.1s
ANM   Nome              70.77 333   P      P       06 23 39.2 +0.8
      baz=86
F14K  Arctic Creek      71.11 334   P      P       06 23 41.1 +0.7
      baz=86,SNR=8.8
M11K  Mekoryuk          71.52 329   P      P       06 23 43.1 +0.2
      baz=84
TNA   Tin City          71.76 334   P      P       06 23 44.6 +0.3
      baz=84
UNV   Unalaska Valle    72.51 322   P      P       06 23 49.5 +0.5
      baz=82
SPA0  Spitsbergen Ar    72.87  12  eP      P       06 23 51.9 +1.2
SPA0                                IAML           06 23 52.2
      comp=Z,12nm,0.5s
SPITS Spitsbergen Ar    72.87  12   P      P       06 23 51.7 +1.0
      comp=Z,10nm,0.4s,baz=177,slow=1.5,SNR=70
SPITS                               LR     LR      06 57 36.6
      comp=Z,151nm,18.5s,baz=272,slow=37
      comp=Z,10nm,0.4s
GAMB  Gambell           73.61 332   P      P       06 23 55.9 +0.6
      baz=80
P08K  Saint George I    73.79 325   P      P       06 23 57.3 +0.8
      baz=80
NIKH  Nikolski High     74.04 321   P      P       06 23 58.6 +0.5
      baz=79
SPIA  Saint Paul Isl    74.06 326   P      P       06 23 58.6 +0.5
      baz=80
DBIC  Dimbokro          74.30  88   P      P       06 24 00.9 +0.7
      comp=Z,29nm,0.9s,baz=309,slow=4.8,SNR=30
DBIC                                LR     LR      06 52 13.0
      comp=Z,57nm,21.8s,baz=346,slow=32
      comp=Z,29nm,0.9s
DBIC  Dimbokro          74.30  88   P      P       06 24 00.2   0.0
NOA   NORSAR Array B    74.33  30   P      P       06 24 00.8 +1.1
      comp=Z,2.8nm,0.9s,baz=283,slow=5.7,SNR=4.1
      comp=Z,2.8nm,0.9s
HFS   Hagfors           75.72  31   P      P       06 24 09.5 +1.8
      comp=Z,6.5nm,1.1s,baz=297,slow=4.7,SNR=4.0
HFS                                 LR     LR      06 54 45.1
      comp=Z,124nm,19.9s,baz=256,slow=34
      comp=Z,6.5nm,1.1s
FUORN Ofenpass-Fuorn    76.89  45   P      P       06 24 17.0 +2.1
FUORN                               IAmb   IAmb    06 24 17.6
      comp=Z,18nm,0.9s
RETA  Reutte            77.01  44  eP      P       06 24 16.7 +1.4
      comp=Z,23nm,1.3s
PPT   Papeete           77.02 246   LR     LR      06 51 18.2
      comp=Z,92nm,20.0s,baz=59,slow=30
FETA  Feichten          77.10  45  eP      P       06 24 17.6 +1.6
      comp=Z,7.5nm,0.8s
MOTA  Moosalm           77.27  44  eP      P       06 24 18.5 +1.6
      comp=Z,0.8nm,0.4s
SQTA  Sankt Quirin      77.37  44  eP      P       06 24 19.0 +1.6
      comp=Z,2.2nm,0.5s
CLL   Collm             77.48  40  eP      P       06 24 19.0 +1.2
CLL                                 pmax   pmax
      comp=Z,14nm,1.1s
CLL   Collm             77.48  40  eP      P       06 24 19.0 +1.2
      comp=Z,14nm,1.1s
CLL                                ex      x       06 24 32.0
WTTA  Wattenberg        77.64  44  eP      P       06 24 20.9 +1.9
      comp=Z,6.7nm,0.7s
ARCES ARCESS Array B    77.73  20   P      P       06 24 19.8 +0.9
      comp=Z,6.9nm,0.5s,baz=284,slow=4.6,SNR=75
ARCES                               LR     LR      06 56 46.5
      comp=Z,70nm,20.4s,baz=268,slow=34
      comp=Z,6.9nm,0.5s
HSKC  Hora Svate Kat    77.93  41  eP      P       06 24 21.5 +1.2
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HSKC				epP	sP	06 24 34.7	+2.3
KEV	Kevo	78.14	20	P	P	06 24 22.8	+1.7
KEV	Kevo	78.14	20	P	P	06 24 22.8	+1.7
KEV				pmax	pmax		
	comp=Z,148nm,1.7s						
TEOL	Teolo	78.16	46	IAmb	IAmb	06 24 23.6	
	comp=Z,20nm,0.7s						
LESA	Schwarzleotal	78.29	44	eP	P	06 24 22.8	+0.3
	comp=Z,1.5nm,0.8s						
ABTA	Abfaltersbach	78.36	45	eP	P	06 24 24.1	+1.3
	comp=Z,1.5nm,0.5s						
KHC	Kasperske Hory	78.41	42	⇓eP	P	06 24 24.0	+0.9
KHC				pmax	pmax		
	comp=Z,12nm,1.7s						
KHC	Kasperske Hory	78.41	42	eP	P	06 24 25.3	+2.2
KHC				epP	pwP	06 24 38.2	-2.7
TORD	Torodi Ar. Bea	78.54	80	P	P	06 24 24.4	+0.1
	comp=Z,5.2nm,0.6s,baz=284,slow=3.6,SNR=4.5						
	comp=Z,5.2nm,0.6s						
GERES	GERESS Array B	78.57	42	P	P	06 24 25.8	+1.8
	comp=Z,4.2nm,0.9s,baz=280,slow=3.9,SNR=17						
GERES				LR	LR	06 54 22.8	
	comp=Z,137nm,20.8s,baz=275,slow=32						
	comp=Z,4.2nm,0.9s						
KBA	Koelnbreinsper	78.82	44	eP	P	06 24 26.5	+1.0
	comp=Z,18nm,1.6s						
BIOA	Bad Ischl, Aus	78.84	43	eP	P	06 24 26.6	+1.1
	comp=Z,16nm,1.2s						
KEST	Kesra	78.98	56	P	P	06 24 27.8	+1.3
	comp=Z,9.6nm,0.9s,baz=27,slow=4.5,SNR=4.7						
KEST				LR	LR	06 55 46.3	
	comp=Z,118nm,18.6s,baz=315,slow=33						
	comp=Z,9.6nm,0.9s						
MYKA	Terra Mystica	79.14	44	eP	P	06 24 28.0	+0.9
	comp=Z,14nm,1.4s						
MOA	Molln	79.20	43	eP	P	06 24 28.6	+1.2
	comp=Z,1.8nm,0.7s						
TAM	Tamanrasset	79.29	70	P	P	06 24 29.3	+0.8
TAM	Tamanrasset	79.29	70	P	P	06 24 29.3	+0.8
TAM				pmax	pmax		
	comp=Z,63nm,0.2s						
TBI	Tubuai	79.41	241	eP	P	06 24 29.8	+1.0
	comp=Z,527nm,33.0s						
TBI				eS	S	06 34 28.9	+1.3
	comp=Z,790nm,38.8s						
TBI	Tubuai	79.41	241	eLR	LR	06 49 08.5	
	comp=Z,806nm,32.5s						
TBI				eLR	LR	06 49 11.1	
	comp=Z,865nm,35.0s						
UPC	Upice	79.53	40	eP	P	06 24 31.1	+2.0
UPC	Upice	79.53	40	eP	P	06 24 31.1	+2.0
CHVC	Chvalec	79.54	40	eP	P	06 24 30.4	+1.2
CHVC	Chvalec	79.54	40	eP	P	06 24 30.4	+1.2
OSTC	Ostas	79.64	40	eP	P	06 24 32.1	+2.3
OSTC				e*PP	pwP	06 24 44.6	-2.7
OSTC	Ostas	79.64	40	eP	P	06 24 32.1	+2.3
OSTC				epP	pwP	06 24 44.6	-2.7
DPC	Dobruska-Polom	79.77	40	eP	P	06 24 32.5	+2.0
DPC				e*PP	pwP	06 24 45.9	-2.1
DPC	Dobruska-Polom	79.77	40	eP	P	06 24 32.5	+2.0
DPC				epP	pwP	06 24 45.9	-2.1
OBKA	Obir	79.77	44	eP	P	06 24 31.6	+1.0
	comp=Z,7.3nm,1.0s						
SOKA	Soboth	80.04	44	eP	P	06 24 30.6	-1.4
	comp=Z,13nm,1.2s						
KRUC	Moravsky	80.20	42	eP	P	06 24 33.9	+1.1
CONA	Conrad Observa	80.21	43	eP	P	06 24 34.3	+1.3
	comp=Z,5.3nm,0.7s						
VRAC	Vranov	80.25	41	LR	LR	06 55 37.0	
	comp=Z,228nm,18.3s,baz=294,slow=32						
VRAC	Vranov	80.25	41	eP	P	06 24 33.5	+0.4
RONA	Rosalia, Austr	80.56	43	eP	P	06 24 36.2	+1.4
	comp=Z,4.9nm,0.7s						
MORC	Moravsky Berou	80.69	41	⇑P	P	06 24 37.6	+2.1
MORC	Moravsky Berou	80.69	41	eP	P	06 24 37.2	+1.7
MORC	Moravsky Berou	80.69	41	P	P	06 24 37.5	+2.1
MODS	Modra-Piesok	80.97	42	eP	P	06 24 39.0	+2.0
MODS	Modra-Piesok	80.97	42	eP	P	06 24 38.9	+2.0
MODS				e		06 24 52.2	
FIA1	FINESS Array S	81.06	28	P	P	06 24 38.5	+1.4
FINES	FINESS Array B	81.06	28	P	P	06 24 38.5	+1.4
	comp=Z,8.7nm,0.5s,baz=276,slow=3.3,SNR=46						
FINES				LR	LR	06 58 38.5	
	comp=Z,157nm,18.7s,baz=226,slow=34						
	comp=Z,8.7nm,0.5s						
FINES	FINESS Array B	81.06	28	P	P	06 24 38.3	+1.2
JAVC	Velka Javorina	81.07	41	eP	P	06 24 39.8	+2.3
LANS	Liptovska Anna	82.09	41	eP	P	06 24 46.1	+3.2
LANS	Liptovska Anna	82.09	41	eP	P	06 24 46.1	+3.2
LANS				e		06 24 58.7	
VAE	Valguarnera	82.38	53	LR	LR	06 57 34.5	
	comp=Z,290nm,18.2s,baz=308,slow=33						
MORH	Mrgy, Hungar	82.56	44	⇑P	P	06 24 46.8	+1.5
VSU	Vasula	82.58	30	⇓eP	P	06 24 47.3	+2.2
VSU				pmax	pmax		
	comp=Z,43nm,1.1s						
PSZ	Piszkesteto	82.78	42	⇓P	P	06 24 49.4	+2.8
PSZ	Piszkesteto	82.78	42	P	P	06 24 49.3	+2.8
STHS	Stebnicka Huta	83.08	40	eP	P	06 24 50.4	+2.4
STHS	Stebnicka Huta	83.08	40	eP	P	06 24 50.4	+2.4
TIP	Timpagrande	83.59	51	IAmb	IAmb	06 24 51.6	
	comp=Z,10nm,0.9s						
TIP	Timpagrande	83.59	51	⇑P	P	06 24 51.4	+0.5
SHEM	Shemya Is, Ala	83.97	324	LR	LR	07 03 03.0	
	comp=Z,88nm,20.6s,baz=121,slow=36						
BZS	Buzias	84.71	44	⇑P	P	06 24 58.4	+2.1
BZS	Buzias	84.71	44	P	P	06 24 58.4	+2.1
MNK	Minsk	84.84	34	iP	P	06 24 56.0	-0.8
MNK				i		06 28 12.0	
MNK				iPPP	PPP	06 30 04.7	
MNK				iS	SKSac	06 35 19.5	+1.0
MNK				iSS	SS	06 40 57.7	+3.3
MNK				iSSS	SSS	06 44 28.2	
MNK				pmax	pmax		
	comp=Z,14nm,0.6s						
MNK				pmax	pmax		
	comp=N,16nm,0.9s						
MNK				pmax	pmax		
	comp=E,21nm,0.8s						
MNK				MLR	MLR		
	comp=E,336nm,19.0s						
MNK				MLR	MLR		
	comp=N,101nm,14.0s						
MNK				MLR	MLR		
	comp=Z,163nm,16.0s						
DRGR		84.97	42	⇑P	P	06 24 59.3	+1.5
DRGR		84.97	42	P	P	06 24 59.7	+1.9
RNPP9	Sopachiv	85.05	37	P	P	06 24 58.9	+1.0
RNPP8	Varash	85.06	37	P	P	06 24 58.9	+0.9
MDVR	Moldovita	85.08	44	⇓P	P	06 25 00.2	+1.9
RNPP5	Staryi Chortor	85.13	37	P	P	06 24 58.8	+0.5
MARR	Marisel-Cluj	85.28	42	⇑P	P	06 25 01.2	+1.9
HERR	Herculane	85.51	44	⇓P	P	06 25 02.0	+1.6
GZR	Gura Zlata	85.55	43	⇑P	P	06 25 02.7	+2.0
GZR	Gura Zlata	85.55	43	P	P	06 25 02.6	+2.0
BURAR	Bucovina Array	86.22	41	⇑P	P	06 25 05.5	+1.6
BURAR	Bucovina Array	86.22	41	P	P	06 25 05.5	+1.6
ARR	Arges	86.76	43	⇓P	P	06 25 08.9	+2.3
LUBAR	Lubar, Ukraine	86.76	38	P	P	06 25 06.0	-0.5
DOPR	Dopca	87.00	42	⇓P	P	06 25 09.7	+1.9
KLMR	Klimovskoe	87.03	25	eP	P	06 25 06.2	-1.3
KLMR				e		06 28 29.3	
KLMR				pmax	pmax		
	comp=Z,40nm,1.8s						
AK20	Malin Array Si	87.12	37	P	P	06 25 08.1	0.0
AK21	Malin Array Si	87.12	37	P	P	06 25 08.1	-0.1
AK19	Malin Array Si	87.13	37	P	P	06 25 08.1	-0.1
AK22	Malin Array Si	87.14	37	P	P	06 25 08.2	-0.1
AK18	Malin Array Si	87.16	37	P	P	06 25 08.3	0.0
AK17	Malin Array Si	87.17	37	P	P	06 25 08.3	-0.1
AK16	Malin Array Si	87.20	37	P	P	06 25 08.5	-0.1
AK04	Malin Array Si	87.22	37	P	P	06 25 08.5	-0.1
AK11	Malin Array Si	87.24	37	P	P	06 25 08.6	-0.1
AK12	Malin Array Si	87.24	37	P	P	06 25 08.7	-0.1
AK03	Malin Array Si	87.25	37	P	P	06 25 08.7	-0.1
KIEV	Kiev	87.25	37	P	P	06 25 09.1	+0.3
KIEV				IAmb	IAmb	06 25 23.1	
	comp=Z,8.4nm,0.7s						
KIEV	Kiev	87.25	37	⇓P	P	06 25 09.6	+0.8
KIEV	Kiev	87.25	37	P	P	06 25 09.6	+0.8
AKASG	Malin Array Be	87.26	37	P	P	06 25 09.4	+0.6
	comp=Z,2.5nm,0.6s,baz=293,slow=3.9,SNR=8.4						
AKASG				LR	LR	07 00 50.4	
	comp=Z,172nm,18.5s,baz=262,slow=33						
	comp=Z,2.5nm,0.6s						
AKBB	Malin Array Si	87.26	37	P	P	06 25 09.1	+0.3
AKBB				IAmb	IAmb	06 25 23.1	
	comp=Z,9.5nm,0.8s						
AKBB	Malin Array Si	87.26	37	⇑eP	P	06 25 09.1	+0.3
AKBB				pmax	pmax		
	comp=Z,69nm,4.2s						
RAR	Rarotonga	87.30	247	LR	LR	06 57 33.6	
	comp=Z,44nm,20.1s,baz=42,slow=31						
TIXI	Tiksi	87.31	351	LR	LR	07 08 10.3	
	comp=Z,172nm,18.3s,baz=16,slow=38						
TIXI	Tiksi	87.31	351	P	P	06 25 08.8	+0.2
TIXI				IAmb	IAmb	06 25 09.8	
	comp=Z,14nm,0.8s						
TIXI	Tiksi	87.31	351	⇓iP	P	06 25 08.6	0.0
TIXI				pmax	pmax		
	comp=Z,15nm,0.8s						
HUMR	Humele	87.33	44	⇓P	P	06 25 10.8	+1.5
MLR	Muntele Rosu	87.55	42	P	P	06 25 13.4	+2.8
	comp=Z,24nm,0.9s,baz=301,slow=3.7,SNR=29						
MLR				LR	LR	07 04 45.8	
	comp=Z,221nm,18.1s,baz=298,slow=36						
	comp=Z,24nm,0.9s						
MLR	Muntele Rosu	87.55	42	P	P	06 25 12.8	+2.3
MLR	Muntele Rosu	87.55	42	⇓P	P	06 25 12.7	+2.1
COVR	Voineasa-Covas	87.57	42	⇓P	P	06 25 12.8	+2.3
NEHR	Nehoiu	87.80	42	⇓P	P	06 25 13.1	+1.5
VRI	Vrincioaia	87.89	42	⇑P	P	06 25 14.2	+2.2
VRI	Vrincioaia	87.89	42	P	P	06 25 14.2	+2.2
SORM	Soroca	87.90	39	⇑P	P	06 25 13.1	+1.1
SORM	Soroca	87.90	39	P	P	06 25 13.0	+1.1
SEY	Seymchan	88.41	339	LR	LR	07 09 55.4	
	comp=Z,158nm,18.7s,baz=45,slow=39						
SEY	Seymchan	88.41	339	⇓iP	P	06 25 15.4	+1.3
SEY				pmax	pmax		
	comp=Z,29nm,0.9s						
ELND	Elena	88.58	45	⇓P	P	06 25 17.4	+2.0
MILM	Milestii Mici	88.73	40	⇑P	P	06 25 16.5	+0.5
MILM	Milestii Mici	88.73	40	P	P	06 25 16.4	+0.5
CFR	Carcaliu	89.08	42	⇑P	P	06 25 18.4	+0.7
CFR	Carcaliu	89.08	42	P	P	06 25 18.3	+0.7
RDO	Rodhopi	89.10	47	IAmb	IAmb	06 25 20.4	
	comp=Z,14nm,1.0s						
IDI	Anoyia	91.05	52	P	P	06 25 29.6	+2.5
	comp=Z,19nm,0.8s,baz=299,slow=7.0,SNR=7.9						
	comp=Z,19nm,0.8s						
MA2	Magadan	91.24	337	LR	LR	07 10 48.9	
	comp=Z,85nm,19.2s,baz=49,slow=38						
MA2	Magadan	91.24	337	ceP	P	06 25 28.8	+1.4
MA2				pmax	pmax		
	comp=Z,34nm,1.3s						
NRIK	Noril'sk	91.42	4	P	P	06 25 28.7	+0.7
	comp=Z,4.0nm,0.8s,baz=27,slow=3.8,SNR=6.8						
NRIK				LR	LR	07 07 59.7	
	comp=Z,118nm,20.4s,baz=338,slow=36						
	comp=Z,4.0nm,0.8s						
NRIK	Noril'sk	91.42	4	⇓eP	P	06 25 28.4	+0.4
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LPSR	Galich'ya Gora	91.48	32	eP	P	06 25 27.5	-1.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PETK	Petropavlovsk-	92.37	329	P	P	06 25 33.3	+0.5
	comp=Z,8.9nm,0.9s,baz=90,slow=12,SNR=5.6						
PETK				LR	LR	07 11 00.9	
	comp=Z,100nm,19.0s,baz=57,slow=38						
	comp=Z,8.9nm,0.9s						
VSR	Storozhevoye	92.39	33	eP	P	06 25 30.1	-2.8
VSR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VRH	Novokhopyorsk	93.71	32	eP	P	06 25 37.6	-1.3
VRH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BR131	Keskin Array S	95.24	45	⇓eP	P	06 25 47.3	+0.8
BRTR	Keskin Array B	95.24	45	P	P	06 25 47.0	+0.5
	comp=Z,2.3nm,0.8s,baz=291,slow=4.3,SNR=11						
BRTR				LR	LR	07 07 15.2	
	comp=Z,43nm,21.6s,baz=290,slow=34						
	comp=Z,2.3nm,0.8s						
BRTR	Keskin Array B	95.24	45	iP	P	06 25 47.2	+0.8
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YAK	Yakutsk	95.68	346	LR	LR	07 11 13.2	
	comp=Z,125nm,21.7s,baz=60,slow=37						
ARTI	Arti	97.25	22	P	Pdif	06 25 55.3	+0.2
	comp=Z,3.1nm,0.6s,baz=0.0,slow=2.0,SNR=4.3						
	comp=Z,3.1nm,0.6s						
ARTI	Arti	97.25	22	P	P	06 25 54.7	-0.3
ARTI						06 29 51.6	
ARTI				S	SKSac	06 36 31.9	+2.3
ARTI				SS	SS	06 43 51.6	-1.2
SHA1	Shidzhatmaz	98.69	38	ceP	Pdif	06 26 03.6	+1.5
KBZ	Khabaz	98.83	38	LR	LR	07 08 32.2	
	comp=Z,94nm,18.3s,baz=314,slow=34						
KURBB	Kurchatov Arra	108.18	14	PKiKP	PKiKP	06 30 49.1	-1.1
	comp=Z,0.3nm,0.5s,baz=327,slow=2.2,SNR=4.2						
MKAR	Makanchi Array	112.62	13	PKiKP	PKiKP	06 30 57.9	-0.9
	comp=Z,0.6nm,0.6s,baz=357,slow=2.7,SNR=3.7						
SONM	Songino Array	113.11	355	PKiKP	PKiKP	06 30 59.6	-0.2
	comp=Z,0.7nm,0.4s,baz=327,slow=1.6,SNR=4.0						
XLT	XiLinHaoTe	115.52	347	ePKP	PKiKP	06 30 58.1	-6.4
XLT				sPKP		06 31 14.0	
WMQ	Urumqi	116.48	10	ePKP	PKiKP	06 31 05.7	-0.6
DZM	Mont Dzumac	117.72	255	eLR	LR	07 07 00.6	
	comp=Z,78nm,26.8s						
KSRS	Korea Array	117.73	335	PKP	PKPdf	06 31 08.3	-0.4
	comp=Z,2.0nm,0.7s,baz=22,slow=1.9,SNR=5.1						
SYO	Syowa Base	118.28	159	⇓ePdiff	Pdif	06 27 29.0	+0.9
HHC	Hu-ho-hao-te	119.34	350	eP	PKPdf	06 31 08.7	-3.3
BTO	Baotou	119.83	351	ePKP	PKPdf	06 31 09.5	-3.4
BTO				PP	PP	06 32 32.9	-2.3
BTO				pmax	pmax		
	comp=Z,12nm,0.5s						
BTO				pmax	pmax		
	comp=Z,300nm,6.5s						
GTA	Gaotai	121.82	360	eP	PKPdf	06 31 16.7	-0.1
GTA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
GOMU	GeErMu	124.85	5	PKP	PKPdf	06 31 22.1	-0.9
GOMU	GeErMu	124.85	5	SS	SS	06 50 03.7	+2.2
LZH	Lanzhou	124.99	356	eP	PKiKP	06 31 23.1	-0.3
LZH				sP	sPKPdf	06 31 35.9	+0.2
LZH				pmax	pmax		
	comp=Z,30nm,1.5s						
LZDM	Lanzhou Array	125.13	356	PKP	PKiKP	06 31 24.1	+0.2
	comp=Z,3.5nm,0.5s,baz=253,slow=4.5,SNR=4.4						
NJ2	Nanjing	125.89	340	eP	PKiKP	06 31 25.4	+0.4
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
PZH	PanZhiHua	134.64	357	PKP	PKPdf	06 31 41.7	+0.1
KMI	Kunming	135.96	356	PKP	PKiKP	06 31 45.5	-0.3
STKA	Stephens Creek	140.17	243	PKP	PKPdf	06 31 50.8	-0.6
	comp=Z,7.8nm,0.7s,baz=57,slow=2.9,SNR=11						
STKA	Stephens Creek	140.17	243	⇓ePKIKP	PKPdf	06 31 51.2	-0.1
CMAR	Chiang Mai Arr	142.70	1	PKP	PKPdf	06 31 56.7	+0.4
	comp=Z,4.5nm,0.6s,baz=8.4,slow=1.9,SNR=5.4						
WRAB	Tennant Creek	147.19	263	⇓ePKIKP	PKPdf	06 32 03.4	-0.6
WRA	Warramunga Arr	147.20	263	PKP	PKPdf	06 32 03.5	-0.5
	comp=Z,35nm,0.8s,baz=86,slow=3.8,SNR=97						
WRA				PKPbc	PKPbc	06 32 06.0	-0.3
	comp=Z,36nm,0.8s,baz=85,slow=3.3,SNR=100						
ASAR	Alice Springs	147.70	256	PKP	PKPdf	06 32 04.2	-0.6
	comp=Z,38nm,0.6s,baz=88,slow=2.6,SNR=71						
ASAR				PKPbc	PKPbc	06 32 07.1	-0.5
	comp=Z,38nm,0.6s,baz=93,slow=3.7,SNR=120						

OTT 09 06:16:45.5±0.0, 48°.25N×78°.44W, h3km, MN2.5/8, Mining related event, Laronde Mine, Qc 26km northwest from Malartic, Qc Mining induced., Southern Quebec

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLDQ	Val d'Or	0.68	101	PG	Pg	06 16 54.0	-4.5
VLDQ				SG	Sg	06 16 59.9	-7.3
VLDQ				Trac		06 17 02.0	
	comp=Z,26nm,0.1s						
KILO	Kirkland Lake	0.89	287	PG	Pg	06 17 01.6	-1.0
KILO				SG	Sg	06 17 12.7	-1.4
KILO				Trac		06 17 14.9	
	comp=Z,10nm,0.1s						
KIPQ	Kipawa,Quebec	1.52	196	PG	Pn	06 17 12.8	-0.7
KIPQ				SG	Sn	06 17 32.7	-1.1
KIPQ				Trac		06 17 34.6	
	comp=Z,19nm,0.1s						
CHRO	Chalk River	2.33	161	PN	Pn	06 17 24.9	+0.1
CHRO				SN	Sn	06 17 53.0	-0.8
CHRO				Trac		06 17 57.5	
	comp=Z,5.8nm,0.1s						
GRQ	Grand Remous	2.40	132	PN	Pn	06 17 25.5	-0.2
GRQ				SN	Sn	06 17 55.0	-0.8
GRQ				Trac		06 17 59.6	
	comp=Z,6.6nm,0.2s						
SUBO	Sudbury	2.46	229	PN	Pn	06 17 26.1	-0.4
SUBO				SN	Sn	06 17 56.2	-0.7
SUBO				LG	Lg	06 18 01.1	
SUBO				Trac		06 18 04.5	
	comp=Z,3.5nm,0.1s						
PEMO	Pembroke	2.70	162	PN	Pn	06 17 29.5	-0.4
PEMO				SN	Sn	06 18 01.8	-1.2
PEMO				Trac		06 18 12.3	
	comp=Z,4.6nm,0.1s						
GAC	Glen Almond	3.26	140	PN	Pn	06 17 36.9	-0.5
GAC				SN	Sn	06 18 15.9	-0.8
GAC				Trac		06 18 29.1	
	comp=Z,6.8nm,0.3s						

OTT 09 06:17:23.5±0.1, 48°.25N×78°.44W, h3km, MN2.2/5, Mining related event, Laronde Mine, Qc 26km northwest from Malartic, Qc Mining induced., Southern Quebec

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLDQ	Val d'Or	0.68	101	PG	Pg	06 17 32.0	-4.5
VLDQ				SG	Sg	06 17 38.0	-7.2
VLDQ				Trac		06 17 39.8	
	comp=Z,15nm,0.1s						
KILO	Kirkland Lake	0.89	287	PG	Pg	06 17 39.6	-1.0
KILO				SG	Sg	06 17 50.7	-1.4
KILO				Trac		06 17 53.0	
	comp=Z,4.1nm,0.0s						
KIPQ	Kipawa,Quebec	1.52	196	PG	Pn	06 17 50.9	-0.7
KIPQ				SG	Sn	06 18 10.9	-1.0
KIPQ				Trac		06 18 12.0	
	comp=Z,3.9nm,0.1s						
CHRO	Chalk River	2.33	161	SN	Sn	06 18 31.2	-0.7
CHRO				SN	Sb	06 18 31.7	-3.6
CHRO				Trac		06 18 34.3	
	comp=Z,3.7nm,0.2s						
GRQ	Grand Remous	2.40	132	SN	Sn	06 18 33.5	-0.2
GRQ				Trac		06 18 37.8	
	comp=Z,3.5nm,0.2s						

DJA 09 06:18:55.8±0.3, 9°S±5°×11°7E±°, h10km, M3.6/12, MLv3.6/12, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWSI	Taliwang, Sumb	0.21	169	P	Pg	06 19 01.0	+0.8
KLNI	Mataram	0.74	278	P	Pg	06 19 09.4	-0.8
PLAI	Plampang	0.97	108	P	Pg	06 19 11.8	-2.7
KHKI	Kahang-Kahang	1.23	278	P	Pg	06 19 19.9	+0.4
DBNI	Kabupaten Domp	1.46	89	P	Pn	06 19 20.9	-1.3
DNP	Denpasar	1.62	265	P	Pn	06 19 23.4	-1.0
IGBI	Denpasar	1.70	260	P	Pn	06 19 25.7	+0.2
RTBI	Rangdo, Negare	1.88	272	P	Pn	06 19 27.6	-0.4
JAGI	Jajag, Banyuwa	2.66	271	P	Pn	06 19 38.3	-0.5
WBSI	Waikabubak, Su	2.75	114	P	Pn	06 19 41.2	+1.1
LBFI	Labuhan Bajo,	3.02	89	P	Pb	06 19 47.0	-2.7
GMJI	Gumukmas	3.37	274	P	Pn	06 19 48.6	+0.1
WSI	Waingapu	3.60	109	P	Pn	06 19 51.4	-0.3
BKSI	Bulukumba	4.56	46	P	Pn	06 20 03.5	-1.4
EDFI	Ende, Flores	4.80	93	P	Pn	06 20 08.9	+0.6
SNJI	Sawahan-Nganju	5.08	278	P	Pn	06 20 12.8	+0.5

NOU 09 06:29:16.3, 14°.27S×172°.32E, h615km, mb4.5/33, Vanuatu Islands Region

NEIC 09 06:29:18.0±0.9, 14°.3S±0°.2×172°.1E±0°.2, h607km±19km, mb4.6/14, Error ellipse: s-maj=31.2km s-min=4.9km az=133.0

IDC 09 06:29:18.8±1.7, 14°.43S×171°.99E, h610km±19km, mb3.6/8, mbtmp4.5/9, Error ellipse: s-maj=33.1km s-min=14.7km az=151.0

ISC 09 06:29:17.9±0.6, 14°.44S±0°.10×172°.10E±0°.08, h600km, n60, σ1s.15/63, mb4.6/16, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	4.84	257		P	06 30 50.4	+0.9
SANVU	Saraoutou	4.84	257	P	P	06 30 50.6	+1.1
SANVU	Saraoutou	4.84	257	S	S	06 32 08.5	+4.2
RTV	Rentapao	4.86	226	P	P	06 30 52.2	+2.6
DVP	Devils Point	4.98	229	P	P	06 30 52.8	+2.2
MSVF	Nonsavu	6.59	121		P	06 31 05.8	+1.6
MARNC	Mare, Loyalty	8.00	208		P	06 31 16.4	-0.7
MARNC	Mare, Loyalty	8.00	208	P	P	06 31 16.4	-0.7
YATNC	Mamie plateau,	9.05	212	P	P	06 31 28.3	+1.0
PINNC	Pines Island,	9.25	208		P	06 31 29.7	+0.6
DZM	Mont Dzumac	9.30	214	P	P	06 31 31.1	+1.3
	16nm,0.6s,baz=132,slow=23,SNR=34						
DZM	Mont Dzumac	9.30	214		P	06 31 31.4	+1.7
DZM	Mont Dzumac	9.30	214	P	P	06 31 31.1	+1.3
OUENC	Ouen Island, N	9.37	211	P	P	06 31 31.6	+1.2
ONTNC	Ouen Toro	9.48	214		P	06 31 33.4	+1.9
ONTNC	Ouen Toro	9.48	214	P	P	06 31 33.0	+1.5
SAVO	Savo Central	13.12	292	P	P	06 32 07.7	-0.4
TATA	Tatamba Isabel	13.47	295	P	P	06 32 10.5	-1.1
AFI	Afiamalu	15.64	90	P	P	06 32 31.4	-0.8
EIDS	Eidsvold	22.52	238		P	06 33 34.0	-0.2
EIDS				IAmb	IAmb	06 33 34.5	
	comp=Z,8.0nm,0.8s						
EIDS	Eidsvold	22.52	238	P	P	06 33 33.8	-0.4
ARMA	Armidale	24.65	226		P	06 33 53.8	+0.7
ARMA	Armidale	24.65	226	P	P	06 33 53.7	+0.6
CTAO	Charters Tower	25.30	254		P	06 33 59.2	+0.3
CTAO				IAmb	IAmb	06 34 21.1	
	comp=Z,14nm,1.1s						
QRZ	Quartz Range	26.29	179	P	P	06 34 07.5	+0.2
KHZ	Kahutara	27.90	178	P	P	06 34 19.3	-2.0
QLP	Quilpie	28.69	241	P	P	06 34 28.2	-0.2
CNB	Canberra Magne	29.15	220	P	P	06 34 32.8	+0.4
CAN	Canberra	29.38	221	P	P	06 34 34.8	+0.5
CMSA	Cobar Meteorol	29.55	230	P	P	06 34 35.3	-0.5
QIS	Mount Isa	31.55	254	P	P	06 34 52.7	-0.3
STKA	Stephens Creek	32.82	233	P	P	06 35 04.0	+0.4
	comp=Z,14nm,0.4s,baz=54,slow=8.2,SNR=25						
	comp=Z,14nm,0.4s						
STKA	Stephens Creek	32.82	233	P	P	06 35 03.9	+0.3
GLAD	Gladstone	33.75	214	P	P	06 35 11.6	+0.4
HTT	Hallett	35.51	232	P	P	06 35 26.2	+0.1
WR0	Warramunga Arr	36.24	256		P	06 35 31.4	-0.8
WR0				IAmb	IAmb	06 35 32.0	
	comp=Z,8.2nm,0.8s						
WB0	Warramunga Arr	36.37	256		P	06 35 32.6	-0.7
WB2	Warramunga Arr	36.42	256	P	P	06 35 33.0	-0.7
WB2				IAmb	IAmb	06 35 33.5	
	comp=Z,16nm,0.8s						
WRAB	Tennant Creek	36.42	256		P	06 35 32.9	-0.8
WRAB				IAmb	IAmb	06 35 33.5	
	comp=Z,14nm,0.9s						
WRAB	Tennant Creek	36.42	256	P	P	06 35 32.5	-1.2
WRA	Warramunga Arr	36.43	256	P	P	06 35 32.8	-1.0
	comp=Z,12nm,0.6s,baz=83,slow=7.8,SNR=39						
WRA				ScP	ScP	06 40 30.9	-0.6
	comp=Z,1.1nm,0.6s,baz=89,slow=3.9,SNR=7.8						
	comp=Z,12nm,0.6s						
WRA	Warramunga Arr	36.43	256		P	06 35 33.0	-0.8
AS31	Alice Springs	37.15	250	P	P	06 35 39.4	-0.3
AS31				IAmb	IAmb	06 35 39.7	
	comp=Z,14nm,0.5s						
ASAR	Alice Springs	37.15	250	P	P	06 35 39.1	-0.5
	comp=Z,25nm,0.5s,baz=75,slow=9.7,SNR=196						
ASAR				ScP	ScP	06 40 34.2	0.0
	comp=Z,2.2nm,0.7s,baz=89,slow=4.0,SNR=14						
ASAR				S	S	06 40 42.0	-2.8
	comp=Z,0.8nm,0.8s,baz=80,slow=18,SNR=4.6						
	comp=Z,25nm,0.5s						
BBOO	Buckleboo	37.50	234	P	P	06 35 42.3	0.0
BBOO	Buckleboo	37.50	234	P	P	06 35 41.9	-0.4
PSA00	Pilbara Seismi	50.01	254		P	06 37 18.2	-0.7
PSA00	Pilbara Seismi	50.01	254		P	06 37 18.2	-0.7
PSA00				IAmb	IAmb	06 37 19.1	
	comp=Z,16nm,0.5s						
PSA00	Pilbara Seismi	50.01	254	P	P	06 37 18.6	-0.3
MBWA	Marble Bar	50.13	254	P	P	06 37 19.9	+0.2
MBWA				IAmb	IAmb	06 37 20.3	

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
	comp=Z,16nm,0.8s						
MBWA	**Marble Bar**	50.13	254	P	P	06 37 19.5	-0.3
MEEK	**Meekatharra**	51.21	247	P	P	06 37 27.0	-0.6
NWAO	**Narrogin (SRO)**	52.92	240	P	P	06 37 38.7	-0.9
MORW	**Morawa**	53.61	244	P	P	06 37 43.8	-0.8
VNDA	**Vanda**	63.30	182	P	P	06 38 47.9	-0.8
	comp=Z,1.2nm,1.0s,baz=12,slow=3.8,SNR=1.3						
	comp=Z,1.2nm,1.0s						
CMAR	**Chiang Mai Arr**	79.14	292	P	P	06 40 23.1	+1.1
	comp=Z,14nm,0.4s,baz=106,slow=6.6,SNR=2.2						
	comp=Z,14nm,0.4s						
NVAR	**Mina Array Bea**	83.58	48	P	P	06 40 45.1	+0.6
	comp=Z,0.6nm,0.7s,baz=232,slow=7.9,SNR=6.8						
	comp=Z,0.6nm,0.7s						
ILAR	**Eielson Array**	84.87	16	P	P	06 40 49.4	-0.6
	comp=Z,0.4nm,0.7s,baz=227,slow=5.6,SNR=6.8						
	comp=Z,0.4nm,0.7s						
TXAR	**Lajitas Array**	92.05	60	P	P	06 41 24.9	+0.5
	comp=Z,0.6nm,0.7s,baz=218,slow=5.5,SNR=9.6						
	comp=Z,0.6nm,0.7s						
ARCES	**ARCESS Array B**	121.09	347	PKP	PKPdf	06 47 01.6	-1.1
	comp=Z,4.3nm,1.0s,baz=82,slow=2.6,SNR=7.6						

ROM 09 07:04:33.4±0.1**, 42°.945N**±0°.004×**13°.050E**±0°.005**,**
h12^{km}, ML1.0/10**, Error ellipse: s-maj=0.4km**
s-min=0.2km az=49.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FEMA	**Monte Fema**	0.02	360	P	Pg	07 04 36.0	+0.2
FEMA				S	Sg	07 04 37.6	+0.2
MTCL	**Monte Cavallo**	0.06	323	P	Pg	07 04 36.1	+0.2
MTCL				S	Sg	07 04 37.8	0.0
FDMO	**Fiordimonte**	0.10	17	P	Pg	07 04 36.6	+0.4
FDMO				S	Sg	07 04 38.5	+0.1
FDMO				AML	AML		
	comp=E,41µm,0.4s						
FDMO				AML	AML		
	comp=N,54µm,0.2s						
FDMO				AML	AML		
	comp=N,54µm,0.2s						
FDMO				AML	AML		
	comp=E,30µm,0.1s						
MC2	**Monte Cornacci**	0.11	107	P	Pg	07 04 36.9	+0.4
MC2				S	Sg	07 04 39.3	+0.4
NRCA	**Norcia**	0.12	157	P	Pg	07 04 36.9	+0.3
NRCA				S	Sg	07 04 39.3	+0.4
NRCA				AML	AML		
	comp=E,198µm,0.2s						
NRCA				AML	AML		
	comp=N,154µm,0.1s						
NRCA				AML	AML		
	comp=N,169µm,0.1s						
NRCA				AML	AML		
	comp=N,154µm,0.1s						
NRCA				AML	AML		
	comp=E,198µm,0.2s						
CESI	**CESI - Serrava**	0.12	299	P	Pg	07 04 37.1	+0.5
CESI				S	Sg	07 04 39.5	+0.5
CESI				AML	AML		
	comp=E,160µm,0.2s						
CESI				AML	AML		
	comp=N,164µm,0.4s						
CESI				AML	AML		
	comp=E,158µm,0.1s						
CESI				AML	AML		
	comp=E,145µm,0.1s						
CESI				AML	AML		
	comp=N,161µm,0.1s						
CSP1	**Cessapalombo**	0.19	38	P	Pg	07 04 38.1	+0.5
CSP1				S	Sg	07 04 41.3	+0.7
CSP1				AML	AML		
	comp=E,30µm,0.3s						
CSP1				AML	AML		
	comp=N,22µm,0.1s						
MMO1	**Montemonaco**	0.21	103	P	Pg	07 04 38.1	+0.1
LNSS	**Leonessa**	0.34	181	AML	AML		
	comp=N,130µm,0.4s						
LNSS				AML	AML		
	comp=E,134µm,0.5s						
SMA1	**SAN MARTINO**	0.38	146	AML	AML		
	comp=E,1850µm,0.2s						
SMA1				AML	AML		
	comp=N,513µm,0.7s						
RM33	**Pellescritta (**	0.45	164	AML	AML		
	comp=E,404µm,1.4s						
RM33				AML	AML		
	comp=N,284µm,0.1s						
RM33				AML	AML		
	comp=N,284µm,0.1s						
TERO	**Teramo**	0.52	128	AML	AML		
	comp=N,112µm,0.5s						
TERO				AML	AML		
	comp=E,80µm,0.7s						
TERO				AML	AML		
	comp=E,80µm,0.7s						
TERO				AML	AML		
	comp=N,112µm,0.5s						
GIGS	**Gran Sasso**	0.62	142	AML	AML		
	comp=N,36µm,0.1s						
GIGS				AML	AML		
	comp=E,25µm,1.5s						
GIGS				AML	AML		
	comp=N,36µm,0.1s						
GIGS				AML	AML		
	comp=E,25µm,1.5s						

ROM 09 07:04:35.4±0.1**, 42°.617N**±0°.003×**13°.246E**±0°.004**,**
h13^{km}, ML1.3/10**, Error ellipse: s-maj=0.3km**
s-min=0.2km az=204.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMA1	**SAN MARTINO**	0.07	79	P	Pg	07 04 38.6	+0.4
SMA1				S	Sg	07 04 40.5	+0.2
SMA1				AML	AML		
	comp=N,513µm,0.7s						
SMA1				AML	AML		
	comp=E,1855µm,0.2s						
RM33	**Pellescritta (**	0.11	192	P	Pb	07 04 39.1	-0.4
RM33				S	Sg	07 04 41.3	+0.4
RM33				AML	AML		
	comp=N,284µm,0.1s						
RM33				AML	AML		
	comp=E,404µm,1.4s						
RM33				AML	AML		
	comp=N,251µm,0.1s						
RM33				AML	AML		
	comp=N,284µm,0.1s						
RM33				AML	AML		
	comp=E,347µm,0.2s						
RM33				AML	AML		
	comp=E,378µm,0.2s						
LNSS	**Leonessa**	0.15	265	P	Pg	07 04 39.6	+0.3
LNSS				S	Sg	07 04 42.3	+0.4
LNSS				AML	AML		
	comp=N,130µm,0.4s						
LNSS				AML	AML		
	comp=E,134µm,0.5s						
LNSS				AML	AML		
	comp=E,100µm,0.1s						
LNSS				AML	AML		
	comp=E,116µm,0.1s						
NRCA	**Norcia**	0.24	336	P	Pg	07 04 40.9	+0.3
NRCA				S	Sg	07 04 44.8	+0.7
NRCA				AML	AML		
	comp=N,154µm,0.1s						
NRCA				AML	AML		
	comp=E,198µm,0.2s						
TERO	**Teramo**	0.27	89	P	Pg	07 04 41.4	+0.3
TERO				S	Sg	07 04 45.5	+0.7
TERO				AML	AML		
	comp=E,80µm,0.7s						
TERO				AML	AML		
	comp=N,112µm,0.5s						
TERO				AML	AML		
	comp=N,82µm,0.1s						
TERO				AML	AML		
	comp=E,59µm,0.1s						
MMO1	**Montemonaco**	0.29	12	*e*P	Pg	07 04 41.9	+0.4
MMO1				S	Sb	07 04 46.6	-0.7
MMO1	**Montemonaco**	0.29	12	S	Pg	07 04 42.1	+0.6
GIGS	**Gran Sasso**	0.29	125	P	Pg	07 04 41.9	+0.4
GIGS				S	Sg	07 04 46.5	+0.8
GIGS				AML	AML		
	comp=E,25µm,1.5s						
GIGS				AML	AML		
	comp=N,36µm,0.1s						
GIGS				AML	AML		
	comp=E,25µm,1.5s						
GIGS				AML	AML		
	comp=N,36µm,0.1s						
GIGS				AML	AML		
	comp=N,36µm,0.1s						
GIGS				AML	AML		
	comp=E,21µm,0.8s						
FDMO	**Fiordimonte**	0.43	345	AML	AML		
	comp=E,41µm,0.4s						
FDMO				AML	AML		
	comp=N,54µm,0.2s						
CESI	**CESI - Serrava**	0.46	327	AML	AML		
	comp=N,164µm,0.4s						
CESI				AML	AML		
	comp=E,160µm,0.2s						
CSP1	**Cessapalombo**	0.47	356	AML	AML		
	comp=E,99µm,1.6s						
CSP1				AML	AML		
	comp=N,148µm,0.4s						
EL6	**Elcito**	0.72	352	AML	AML		
	comp=N,217µm,1.3s						
EL6				AML	AML		
	comp=E,339µm,0.4s						
APEC	**Apecchio**	1.12	328	AML	AML		
	comp=N,409µm,0.6s						
APEC				AML	AML		
	comp=E,552µm,0.5s						

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*NEIC **09** 07:04:39.7±0.8, 11°.97S±0°.07×167°.0E±0°.2, h240^{km}±9^{km}, mb4.3/15, Error ellipse: s-maj=32.0km s-min=6.1km az=105.0*
*IDC **09** 07:04:42.4±8.4, 12°.04S×166°.93E, h274^{km}±89^{km}, mb3.5/8, mbtmp3.9/9, Error ellipse: s-maj=82.4km s-min=21.5km az=163.0*
ISC 09 07:04:37.4±0.6**, 11°.8S**±0°.1×**166°.9E**±0°.2**, h220^{km}, n32,**
σ**0^s.97**/32**, mb4.2**/16**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	3.67	175		Pn	07 05 36.6	+0.7
DZM	**Mont Dzumac**	10.25	182	P	Pn	07 07 01.1	+1.5
	4.1nm,1.0s,baz=32,slow=9.5,SNR=8.3						
EIDS	**Eidsvold**	20.15	226	P	P	07 08 54.8	-0.3
EIDS				IAmb	IAmb	07 08 56.0	
	comp=Z,9.1nm,0.8s						
WB0	**Warramunga Arr**	32.21	252	P	P	07 10 45.2	0.0
WB0				IAmb	IAmb	07 11 11.2	
	comp=Z,9.4nm,1.4s						
WB2	**Warramunga Arr**	32.28	251	P	P	07 10 46.0	+0.2
WB2				IAmb	IAmb	07 11 04.5	
	comp=Z,8.5nm,1.4s						
WRA	**Warramunga Arr**	32.29	251	P	P	07 10 45.8	-0.1
	comp=Z,0.5nm,0.3s,baz=85,slow=8.8,SNR=6.0						
	comp=Z,0.5nm,0.3s						
WRA	**Warramunga Arr**	32.29	251	P	P	07 10 44.7	-1.2
AS31	**Alice Springs**	33.47	245	P	P	07 10 55.7	-0.4
ASAR	**Alice Springs**	33.47	245	P	P	07 10 55.3	-0.8
	comp=Z,0.7nm,0.4s,baz=69,slow=9.7,SNR=14						
	comp=Z,0.7nm,0.4s						
ASAR	**Alice Springs**	33.47	245	P	P	07 10 55.9	-0.2
BBOO	**Buckleboo**	35.16	229	P	P	07 11 09.7	-0.8
FORT	**Forrest**	40.55	236	P	P	07 11 55.5	0.0
VNDA	**Vanda**	65.79	181	P	P	07 14 57.8	-0.7
VNDA				IAmb	IAmb	07 15 21.1	
	comp=Z,9.7nm,1.4s						
M16K	**Timber Creek**	77.44	16	P	P	07 16 09.6	+1.6
K15K	**Wolf Creek Mou**	77.84	15	P	P	07 16 12.2	+2.1
K15K				IAmb	IAmb	07 16 12.7	
	comp=Z,9.5nm,0.8s						
SCM	**Sheep Creek Mo**	81.63	20	P	P	07 16 31.4	+0.8
IMAR	**Indian Mountai**	82.83	15		P	07 16 38.2	+1.6
IL31		83.85	18		P	07 16 42.0	+0.2
IL31				IAmb	IAmb	07 16 42.5	
	comp=Z,7.6nm,0.8s						
ILAR	**Eielson Array**	83.85	18	P	P	07 16 41.6	-0.2
	comp=Z,4.2nm,0.6s,baz=247,slow=5.1,SNR=71						
	comp=Z,4.2nm,0.6s						
ILAR	**Eielson Array**	83.85	18	P	P	07 16 42.0	+0.1
J25K	**Salcha River,**	84.21	19	P	P	07 16 44.6	+0.8
J25K				IAmb	IAmb	07 16 45.0	
	comp=Z,5.2nm,0.7s						
BCAR	**Beaver Creek A**	84.37	21		P	07 16 45.7	+1.1
PINE	**Pine Mountain**	85.57	44		P	07 16 51.2	0.0
PINE				IAmb	IAmb	07 16 52.4	
	comp=Z,5.8nm,1.5s						
NVAR	**Mina Array Bea**	85.65	49	P	P	07 16 51.6	-0.1
	comp=Z,0.8nm,0.8s,baz=231,slow=8.8,SNR=5.2						
	comp=Z,0.8nm,0.8s						
PDAR	**Pinedale Array**	93.23	47	P	P	07 17 27.0	-0.3
	comp=Z,0.1nm,0.5s,baz=260,slow=5.1,SNR=2.2						
	comp=Z,0.1nm,0.5s						
MK31	**Makanchi Array**	94.80	317		P	07 17 35.4	+1.3
MK31				IAmb	IAmb	07 18 02.5	
	comp=Z,2.7nm,1.4s						
MKAR	**Makanchi Array**	94.80	317	P	P	07 17 35.4	+1.2
	comp=Z,1.0nm,0.8s,baz=99,slow=7.5,SNR=6.3						
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	94.80	317		P	07 17 35.5	+1.4
YKA	**Yellowknife Ar**	95.11	27	P	P	07 17 34.1	-1.0
	comp=Z,0.3nm,0.7s,baz=262,slow=4.9,SNR=4.6						
	comp=Z,0.3nm,0.7s						
TXAR	**Lajitas Array**	95.20	61	P	P	07 17 35.3	-1.1
	comp=Z,0.3nm,0.8s,baz=259,slow=3.2,SNR=2.7						
	comp=Z,0.3nm,0.8s						
ARCES	**ARCESS Array B**	117.31	346	PKP	PKPdf	07 22 55.0	-1.0
	comp=Z,1.9nm,0.8s,baz=60,slow=2.1,SNR=6.8						
ESDC	**Sonseca Array**	151.04	345	PKPbc	PKPbc	07 24 04.2	-0.5
	comp=Z,0.7nm,0.7s,baz=9.0,slow=5.1,SNR=4.3						

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*PRU **09** 07:04:58.8, 42°.96N×11°.46E, h110^{km}*
*BGR **09** 07:05:03.9±1.1, 43°.62N×11°.40E, h10^{km}, ML3.3/5, Error ellipse: s-maj=20.0km s-min=15.6km az=28.0*
*GEN **09** 07:05:04.3, 43°.98N×11°.29E, h11^{km}±1^{km}, Ml3.0*
*ROM **09** 07:05:04.8±0.1, 44°.009N±0°.004×11°.282E±0°.004, h9^{km}, ML3.2/130, Error ellipse: s-maj=0.3km s-min=0.3km az=7.0*
*LDG **09** 07:05:06.8±0.2, 43°.94N×11°.25E, h8^{km}, Ml2.9/18, Error ellipse: s-maj=4.9km s-min=3.4km az=54.0*
ISC 09 07:05:04.5±0.8**, 44°.00N**±0°.01×**11°.28E**±0°.01**, h7^{km}**±5^{km}**,**
n161, σ**1^s.58**/224**, 10C-1D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCL	**Monte Cuccoli**	0.07	274	⇓P	Pg	07 05 07.4	+1.0
MOCL				S	Sg	07 05 09.0	+1.4
MOCL				AML	AML		
	comp=E,45800µm,0.4s						
MOCL				AML	AML		
	comp=N,60250µm,0.3s						
MOCL				AML	AML		
	comp=E,37975µm,0.1s						
MOCL				AML	AML		
	comp=N,60244µm,0.3s						
SEI	**Scarperia**	0.08	47	P	Pg	07 05 04.1	-2.4
SEI				S	Sg	07 05 05.5	-2.4
MPPT	**Montemurlo**	0.14	252	S	Sg	07 05 11.5	+2.0
MPPT				AML	AML		
	comp=E,16850µm,1.0s						
MPPT				AML	AML		
	comp=N,14150µm,0.6s						
MPPT				AML	AML		
	comp=E,12730µm,0.3s						
MPPT				AML	AML		
	comp=N,12026µm,0.4s						
FIE	**Fiesole**	0.19	176	P	Pg	07 05 09.4	+1.1
FIE				S	Sg	07 05 12.7	+1.7
FNVD	**Fontana Vidola**	0.20	327	P	Pg	07 05 09.3	+0.8
FNVD				S	Sg	07 05 12.6	+1.3
FNVD				AML	AML		
	comp=E,13500µm,0.9s						
FNVD				AML	AML		
	comp=N,19400µm,0.4s						
FNVD				AML	AML		
	comp=E,12271µm,0.4s						
FNVD				AML	AML		
	comp=N,14511µm,0.1s						
BRIS	**BRISIGHELLA**	0.23	48	⇑P	Pg	07 05 13.2	+4.2
BRIS				S	Sg	07 05 19.7	+7.6
BRIS				AML	AML		
	comp=E,7540µm,0.3s						
BRIS				AML	AML		
	comp=N,12650µm,0.3s						
BRIS				AML	AML		
	comp=E,7545µm,0.3s						
FIR	**Firenze**	0.23	184	P	Pg	07 05 10.3	+1.3
FIR				S	Sg	07 05 14.4	+2.4
FIR				AML	AML		
	comp=E,22900µm,0.4s						
FIR				AML	AML		
	comp=E,23100µm,0.4s						
FIR				AML	AML		
	comp=E,23069µm,0.4s						
FIR				AML	AML		
	comp=N,16000µm,0.4s						
FIR				AML	AML		
	comp=E,22943µm,0.4s						
FIR				AML	AML		
	comp=N,16921µm,0.8s						
FIR				AML	AML		
	comp=E,23100µm,1.6s						
FIR				AML	AML		
	comp=E,22900µm,1.6s						
FIR				AML	AML		
	comp=N,16900µm,0.8s						
FIR				AML	AML		
	comp=N,16000µm,0.4s						
RUFI	**Rufina**	0.23	133	P	Pg	07 05 09.9	+0.8
RUFI				S	Sg	07 05 12.4	+0.2
RUFI	**Rufina**	0.23	133	⇑P	Pg	07 05 09.9	+0.8
RUFI				S	Sg	07 05 13.6	+1.4
RUFI				AML	AML		
	comp=N,7810µm,0.8s						
RUFI				AML	AML		
	comp=E,6580µm,0.5s						
RUFI				AML	AML		
	comp=N,7815µm,0.8s						
RUFI				AML	AML		
	comp=E,6585µm,0.5s						
RUFI				AML	AML		
	comp=N,7813µm,0.8s						
RUFI				AML	AML		
	comp=E,6585µm,0.5s						
CRMI	**Carmignano**	0.31	227	⇑P	Pg	07 05 11.5	+1.0
CRMI				S	Sb	07 05 16.8	-0.7
CRMI				AML	AML		
	comp=E,6990µm,0.3s						
CRMI				AML	AML		
	comp=N,9360µm,0.5s						
CRMI				AML	AML		
	comp=E,6995µm,0.3s						
CRMI				AML	AML		
	comp=N,3705µm,0.5s						
CRMI				AML	AML		
	comp=E,6994µm,0.3s						
CRMI				AML	AML		
	comp=E,2811µm,0.4s						
CRMI				AML	AML		
	comp=E,2810µm,0.4s						
LMD	**Lutirano**	0.32	76	P	Pg	07 05 11.0	+0.2
LMD				S	Sg	07 05 16.1	+1.1
LMD	**Lutirano**	0.32	76	⇑P	Pg	07 05 11.0	+0.2
LMD				S	Sg	07 05 16.1	+1.1
LMD				AML	AML		
	comp=E,10550µm,1.5s						
LMD				AML	AML		
	comp=N,12250µm,1.3s						
LMD				AML	AML		
	comp=N,12250µm,0.7s						
LMD				AML	AML		
	comp=E,10550µm,0.5s						
POPM	**Popiglio**	0.38	277	P	Pg	07 05 12.7	+0.8
POPM				S	Sb	07 05 19.1	-0.5
POPM	**Popiglio**	0.38	277	⇑P	Pg	07 05 12.7	+0.8
POPM				S	Sb	07 05 19.1	-0.5
POPM				AML	AML		
	comp=E,6120µm,0.2s						
POPM				AML	AML		
	comp=N,12850µm,0.2s						
POPM				AML	AML		
	comp=E,6118µm,0.2s						
POPM				AML	AML		
	comp=N,12846µm,0.2s						
MTRZ	**Monterenzio**	0.40	20	P	Pg	07 05 12.2	-0.1
MTRZ	**Monterenzio**	0.40	20	⇑P	Pg	07 05 12.2	-0.1
MTRZ				AML	AML		
	comp=N,8910µm,0.5s						
MTRZ				AML	AML		
	comp=E,9085µm,0.5s						
MTRZ				AML	AML		
	comp=N,8980µm,0.4s						
MTRZ				AML	AML		
	comp=N,8910µm,0.4s						
MTRZ				AML	AML		
	comp=E,9229µm,0.4s						
MTRZ				AML	AML		
	comp=N,8981µm,0.4s						
MTRZ				AML	AML		
	comp=E,9087µm,0.5s						
MTRZ				AML	AML		
	comp=N,8910µm,0.5s						
MTRZ				AML	AML		
	comp=E,9215µm,0.4s						
MTRZ				AML	AML		
	comp=N,8910µm,1.6s						
MTRZ				AML	AML		
	comp=N,8980µm,1.6s						
ZCCA	**Zocca**	0.41	328	P	Pb	07 05 14.5	+0.3
ZCCA				S	Sb	07 05 22.4	+1.7
ZCCA	**Zocca**	0.41	328	P	Pb	07 05 14.3	+0.1
ZCCA				AML	AML		
	comp=E,2345µm,0.5s						
ZCCA				AML	AML		
	comp=N,2790µm,0.4s						
ZCCA				AML	AML		
	comp=E,2345µm,0.4s						
ZCCA				AML	AML		
	comp=E,2481µm,0.5s						
ZCCA				AML	AML		
	comp=N,2915µm,0.4s						
ZCCA				AML	AML		
	comp=E,2344µm,0.5s						
ZCCA				AML	AML		
	comp=N,2790µm,0.4s						
ZCCA				AML	AML		
	comp=E,2480µm,0.5s						
ZCCA				AML	AML		
	comp=N,2915µm,0.4s						
ZCCA				AML	AML		
	comp=N,2790µm,0.4s						
ASQU	**Asqua**	0.42	119	P	Pg	07 05 13.1	+0.4
ASQU				S	Sg	07 05 19.8	+1.5
ASQU	**Asqua**	0.42	119	⇑P	Pg	07 05 13.1	+0.4
ASQU				AML	AML		
	comp=E,1935µm,0.3s						
ASQU				AML	AML		
	comp=N,2370µm,0.4s						
SFI	**Santa Sofia**	0.42	103	⇑P	Pg	07 05 13.0	+0.3
SFI				S	Sb	07 05 19.9	-1.1
SFI				AML	AML		
	comp=N,2425µm,0.7s						
SFI				AML	AML		
	comp=E,3450µm,0.2s						
SFI				AML	AML		
	comp=N,2450µm,0.7s						
SFI				AML	AML		
	comp=E,3455µm,0.2s						
OSSC	**Osservatorio P**	0.48	183	⇑P	Pg	07 05 14.5	+0.8
OSSC				AML	AML		
	comp=E,3440µm,0.8s						
OSSC				AML	AML		
	comp=E,3655µm,0.8s						
OSSC				AML	AML		
	comp=N,3400µm,0.8s						
OSSC				AML	AML		
	comp=E,3440µm,0.8s						
OSSC				AML	AML		
	comp=N,3715µm,0.9s						
IMOL	**Imola, Italy**	0.49	43	P	Pb	07 05 15.6	+0.1
IMOL	**Imola, Italy**	0.49	43	P	Pg	07 05 14.7	+0.7
IMOL				AML	AML		
	comp=E,10460µm,0.4s						
IMOL				AML	AML		
	comp=N,11550µm,0.4s						
IMOL				AML	AML		
	comp=E,10455µm,0.4s						
IMOL				AML	AML		

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      comp=N,11550µm,0.5s
IMOL                              AML   AML
      comp=N,11550µm,1.5s
BDI   Bagni Di Lucca    0.49 277  P     Pg      07 05 14.6 +0.5
BDI                               S     Sb      07 05 22.6 -0.4
BDI   Bagni Di Lucca    0.49 277  P     Pg      07 05 14.6 +0.5
BDI                               S     Sb      07 05 22.4 -0.6
BDI                               AML   AML
      comp=N,7670µm,0.6s
BDI                               AML   AML
      comp=E,5785µm,0.5s
BDI                               AML   AML
      comp=N,6845µm,0.6s
BDI                               AML   AML
      comp=E,5788µm,0.5s
BDI                               AML   AML
      comp=N,6845µm,0.6s
BDI                               AML   AML
      comp=E,4508µm,0.6s
BDI                               AML   AML
      comp=N,7669µm,0.6s
BDI                               AML   AML
      comp=E,4870µm,0.8s
CSNT  Castellina Chi    0.53 179  P     Pg      07 05 15.3 +0.6
CSNT                              S     Sb      07 05 23.2 -0.7
CSNT  Castellina Chi    0.53 179 ⇑P     Pg      07 05 15.3 +0.6
CSNT                              S     Sb      07 05 23.3 -0.7
CSNT                              AML   AML
      comp=E,3205µm,0.5s
CSNT                              AML   AML
      comp=N,5565µm,0.5s
CSNT                              AML   AML
      comp=N,5565µm,1.5s
MAIM  Mastiano          0.57 262  P     Pg      07 05 16.0 +0.4
MAIM                              S     Sb      07 05 25.1 -0.1
MAIM  Mastiano          0.57 262  P     Pg      07 05 15.9 +0.4
CARD  Cardoso           0.57 273  P     Pg      07 05 16.0 +0.4
CARD                              S     Sb      07 05 24.7 -0.5
CARD  Cardoso           0.57 273  P     Pg      07 05 15.9 +0.4
CARD                              AML   AML
      comp=E,2255µm,0.4s
CARD                              AML   AML
      comp=N,3457µm,0.6s
CARD                              AML   AML
      comp=N,4485µm,1.0s
CARD                              AML   AML
      comp=E,2680µm,0.6s
GSCL  Gusciola          0.61 305  P     Pb      07 05 17.2 -0.3
GSCL                              S     Sb      07 05 26.8 +0.5
GSCL  Gusciola          0.61 305  P     Pg      07 05 16.9 +0.7
GSCL                              AML   AML
      comp=E,2995µm,1.1s
GSCL                              AML   AML
      comp=N,2085µm,0.7s
GSCL                              AML   AML
      comp=E,2998µm,1.1s
GSCL                              AML   AML
      comp=N,2082µm,0.7s
GSCL                              AML   AML
      comp=E,2995µm,0.9s
GSCL                              AML   AML
      comp=N,2085µm,1.3s
PII   Pisa              0.61 243  P     Pg      07 05 16.8 +0.6
PII                               S     Sg      07 05 25.5 +1.3
PII   Pisa              0.61 243  P     Pg      07 05 16.6 +0.4
PII                               AML   AML
      comp=N,5225µm,0.8s
PII                               AML   AML
      comp=E,4009µm,0.4s
PII                               AML   AML
      comp=N,5222µm,0.8s
PII                               AML   AML
      comp=E,4220µm,1.3s
CRE   Caprese Michel    0.62 128  P     Pg      07 05 17.0 +0.5
CRE                               AML   AML
      comp=N,2140µm,1.6s
CRE                               AML   AML
      comp=E,1860µm,0.9s
CRE                               AML   AML
      comp=N,2140µm,0.4s
CRE                               AML   AML
      comp=E,1860µm,1.1s
BRSN  Barisano          0.64  64  P     Pg      07 05 17.4 +0.5
BRSN                              AML   AML
      comp=E,3660µm,0.6s
BRSN                              AML   AML
      comp=N,4510µm,0.8s
BRSN                              AML   AML
      comp=E,3615µm,0.8s
BRSN                              AML   AML
      comp=N,4415µm,0.8s
BRSN                              AML   AML
      comp=E,3660µm,1.4s
SARO  Sassorosso        0.66 287  P     Pg      07 05 17.8 +0.6
SARO                              S     Sb      07 05 28.2 +0.5
SARO  Sassorosso        0.66 287  P     Pg      07 05 17.8 +0.6
VLC   Villacollemand    0.66 284  P     Pg      07 05 18.0 +0.8
VLC                               S     Sb      07 05 28.2 +0.4
VLC   Villacollemand    0.66 284  P     Pg      07 05 17.8 +0.6
VLC                               AML   AML
      comp=E,1515µm,0.5s
VLC                               AML   AML
      comp=E,1470µm,0.5s
VLC                               AML   AML
      comp=N,1880µm,0.4s
VLC                               AML   AML
      comp=N,1850µm,0.4s
VLC                               AML   AML
      comp=E,1518µm,0.5s
VLC                               AML   AML
      comp=N,1849µm,0.4s
VLC                               AML   AML
      comp=E,1471µm,0.5s
VLC                               AML   AML
      comp=N,1881µm,0.4s
VLC                               AML   AML
      comp=E,1515µm,1.5s
VLC                               AML   AML
      comp=E,1470µm,1.5s
SSP9  Sansepolcro       0.75 124  P     Pg      07 05 19.6 +0.6
SSP9                              AML   AML
      comp=E,978µm,0.7s
SSP9                              AML   AML
      comp=N,1310µm,1.6s
SSP9                              AML   AML
      comp=E,982µm,0.7s
SSP9                              AML   AML
      comp=N,1310µm,0.4s
RAVA  Ravarino          0.76 352  AML   AML
      comp=E,2720µm,1.1s
RAVA                              AML   AML
      comp=N,3025µm,0.7s
RAVA                              AML   AML
      comp=N,3025µm,1.3s
CPGN  Carpegna, Ital    0.78 104  P     Pg      07 05 19.7 +0.2
CPGN                              AML   AML
      comp=E,974µm,0.7s
CPGN                              AML   AML
      comp=N,1106µm,1.6s
CPGN                              AML   AML
      comp=E,760µm,1.6s
CPGN                              AML   AML
      comp=N,1295µm,0.7s
PARC  Parchiule         0.78 116  P     Pg      07 05 20.0 +0.5
PARC                              AML   AML
      comp=E,556µm,0.4s
PARC                              AML   AML
      comp=N,1023µm,0.6s
PARC                              AML   AML
      comp=N,1023µm,1.4s
FROS  Frosini           0.80 186  P     Pg      07 05 20.2 +0.5
FROS                              AML   AML
      comp=E,2610µm,0.7s
FROS                              AML   AML
      comp=N,2065µm,0.6s
EQUI  Equi              0.83 282  P     Pg      07 05 20.7 +0.3
EQUI                              S     Sb      07 05 32.8 +0.2
EQUI  Equi              0.83 282  P     Pg      07 05 20.5 +0.1
RSM   Repubblica di     0.85  94  P     Pn      07 05 22.4 -0.5
MAGO  Bibbona           0.85 212  P     Pg      07 05 21.6 +0.7
MAGO                              AML   AML
      comp=E,1145µm,0.6s
MAGO                              AML   AML
      comp=E,1145µm,0.6s
MAGO                              AML   AML
      comp=N,974µm,0.8s
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MAGO                              AML   AML
      comp=E,1145µm,1.4s
BADI  Badiali           0.86 125  P     Pg      07 05 21.3 +0.4
BADI                              AML   AML
      comp=E,774µm,1.2s
BADI                              AML   AML
      comp=N,710µm,1.1s
BADI                              AML   AML
      comp=N,710µm,0.9s
ATMC  Monte Cedrone     0.86 129  P     Pb      07 05 21.8 -0.1
TRIF  Trifonti          0.93 197  P     Pg      07 05 22.8 +0.5
PE3   Peglio            0.93 109  P     Pg      07 05 22.8 +0.4
APEC  Apecchio          0.94 118  P     Pg      07 05 22.4 -0.2
APEC                              AML   AML
      comp=E,993µm,0.7s
APEC                              AML   AML
      comp=N,971µm,0.6s
APEC                              AML   AML
      comp=N,971µm,1.4s
ATMI  Monte Miggiano    0.98 132  P     Pg      07 05 23.4 +0.1
ATMI                              AML   AML
      comp=E,1415µm,1.0s
ATMI                              AML   AML
      comp=N,2275µm,0.5s
ATPI  Pietralunga -     0.98 124  P     Pg      07 05 23.8 +0.4
ATPI                              AML   AML
      comp=N,976µm,0.6s
ATPI                              AML   AML
      comp=E,506µm,0.6s
ATPI                              AML   AML
      comp=N,914µm,0.6s
ATPI                              AML   AML
      comp=E,567µm,0.7s
GRAM  Graiana           1.00 300  P     Pb      07 05 24.4 +0.2
GRAM                              S     Sn      07 05 39.7 +0.3
GRAM  Graiana           1.00 300  P     Pg      07 05 24.0 +0.3
GRAM                              AML   AML
      comp=E,2125µm,0.3s
GRAM                              AML   AML
      comp=N,1470µm,0.4s
GRAM                              AML   AML
      comp=E,2122µm,0.3s
GRAM                              AML   AML
      comp=N,1471µm,0.4s
GRAM                              AML   AML
      comp=E,2125µm,1.7s
ATPC  Poggio Castell    1.00 121  P     Pb      07 05 24.2  0.0
TB03  Pietralunga       1.02 126  P     Pb      07 05 24.5  0.0
NARO  Abbazia di Nar    1.02 112  P     Pg      07 05 24.2 +0.1
PIEI  Pieia             1.02 117  P     Pg      07 05 24.1 -0.1
PIEI                              AML   AML
      comp=E,348µm,0.5s
PIEI                              AML   AML
      comp=N,280µm,1.6s
PIEI                              AML   AML
      comp=N,280µm,0.4s
ATVO  AVT- Monte Val    1.03 127  P     Pg      07 05 24.1 -0.1
ATVO                              AML   AML
      comp=E,832µm,0.6s
ATVO                              AML   AML
      comp=N,592µm,1.2s
ATVO                              AML   AML
      comp=E,832µm,1.4s
ATVA  AVT- Monte Val    1.03 134  P     Pg      07 05 23.9 -0.3
PLMA  Palmaria, Port    1.03 273  P     Pb      07 05 25.1 +0.4
PLMA                              S     Sb      07 05 38.7 +0.3
PLMA  Palmaria, Port    1.03 273  P     Pg      07 05 23.6 -0.6
PLMA                              AML   AML
      comp=E,919µm,0.6s
PLMA                              AML   AML
      comp=N,1355µm,0.5s
PLMA                              AML   AML
      comp=N,1355µm,1.5s
TB02  Pietralunga       1.03 127  P     Pg      07 05 24.7 +0.4
TB01  Gubbio            1.04 126  P     Pg      07 05 24.8 +0.3
RIBO  Ribolla Roccas    1.06 189  P     Pg      07 05 25.0 +0.1
ATLO  AVT- Montelove    1.07 129  P     Pg      07 05 25.3 +0.3
MPAG  Monte Paganucc    1.14 109  P     Pg      07 05 26.1 -0.2
MPAG                              AML   AML
      comp=E,294µm,1.4s
MPAG                              AML   AML
      comp=N,560µm,0.6s
MPAG                              AML   AML
      comp=N,560µm,1.4s
MPAG                              AML   AML
      comp=E,294µm,0.6s
FRON  Frontone          1.16 114  P     Pg      07 05 26.1 -0.5
FRON                              AML   AML
      comp=E,342µm,0.6s
FRON                              AML   AML
      comp=E,342µm,1.4s
FRON                              AML   AML
      comp=N,420µm,0.6s
ARCI  Arcidosso         1.16 173  P     Pg      07 05 26.8 +0.1
MURB  Monte Urbino      1.17 129  P     Pg      07 05 27.3 +0.4
SF11  Podere del Sol    1.17 165  P     Pb      07 05 26.2 -0.9
SF04  Casetta           1.20 166  P     Pb      07 05 27.1 -0.5
SF03  Valle Cupa        1.23 166  P     Pb      07 05 28.5 +0.3
SACS  San Casciano d    1.24 158  P     Pn      07 05 28.4  0.0
CASP  Castiglione de    1.25 194  P     Pn      07 05 28.1 -0.2
CASP                              AML   AML
      comp=E,244µm,0.9s
CASP                              AML   AML
      comp=N,214µm,0.9s
CASP                              AML   AML
      comp=N,214µm,1.1s
CASP                              AML   AML
      comp=E,244µm,1.1s
MCIV  Monte Civitell    1.26 166  P     Pn      07 05 28.7 +0.2
SF14  Selvena           1.27 169  P     Pn      07 05 28.4 -0.3
MSSA  Maissana          1.30 285  P     Pn      07 05 29.4 +0.1
MSSA                              S     Sn      07 05 47.0 +0.1
MSSA  Maissana          1.30 285  P     Pn      07 05 29.1 -0.2
MSSA                              AML   AML
      comp=E,504µm,0.7s
MSSA                              AML   AML
      comp=N,618µm,0.6s
MSSA                              AML   AML
      comp=E,504µm,1.3s
ARVD  Arcevia           1.31 112  P     Pg      07 05 29.7 +0.2
OPPE  Oppeano           1.31 357  AML   AML
      comp=N,1143µm,1.4s
OPPE                              AML   AML
      comp=N,1143µm,0.6s
OPPE                              AML   AML
      comp=E,1450µm,0.7s
TEOL  Teolo             1.39  12  P     Pn      07 05 30.2 -0.1
TEOL                              AML   AML
      comp=E,1975µm,0.7s
TEOL                              AML   AML
      comp=N,1493µm,0.6s
A317A Capraia (LI)      1.41 228  P     Pn      07 05 30.2 -0.4
CELB  S.Piero in Cam    1.48 212  P     Pn      07 05 31.1 -0.4
MML1  Montelago di S    1.52 125  P     Pn      07 05 32.6 +0.4
CING  Cingoli           1.53 114  P     Pb      07 05 33.1 -0.1
CESI  CESI - Serrava    1.55 129  P     Pb      07 05 33.5  0.0
GORR  Gorreto           1.55 294  P     Pn      07 05 33.0 +0.4
GORR                              AML   AML
      comp=N,469µm,0.6s
GORR                              AML   AML
      comp=E,674µm,1.3s
MAON  Monte Argentar    1.57 184  P     Pn      07 05 33.4 +0.5
FDMO  Fiordimonte       1.63 126  P     Pn      07 05 33.9 +0.2
MARN  Marana (Italy)    1.64 358  P     Pn      07 05 34.2 +0.4
ROVR  Rover Verones     1.65 355  P     Pn      07 05 34.3 +0.2
ROVR                              AML   AML
      comp=E,450µm,0.4s
ROVR                              AML   AML
      comp=N,740µm,1.6s
ROVR                              AML   AML
      comp=E,168µm,0.4s
ROVR                              AML   AML
      comp=N,265µm,0.4s
ROVR                              AML   AML
      comp=N,740µm,0.4s
CSP1  Cessapalombo      1.67 122  P     Pb      07 05 35.8 +0.1
BALD  Monte Baldo       1.71 349  P     Pb      07 05 36.0 -0.4
MBAL  Monte Baldo -     1.72 350  P     Pn      07 05 35.5 +0.5
RNCA  Ronca, Sant'Ol    1.74 287  P     Pn      07 05 35.7 +0.6
RNCA                              AML   AML
      comp=E,148µm,0.5s
RNCA                              AML   AML
      comp=N,207µm,0.8s
RNCA                              AML   AML
      comp=N,207µm,1.2s
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NRCA  Norcia            1.78 130  P     Pn      07 05 35.6 -0.1
VARA  Varagna           1.84 352  P     Pn      07 05 37.4 +0.6
VARA                              AML   AML
      comp=E,1014µm,0.5s
VARA                              AML   AML
      comp=N,1155µm,0.5s
VARA                              AML   AML
      comp=N,1065µm,0.5s
VARA                              AML   AML
      comp=E,1150µm,0.5s
LUSI  Trento, Gardas    1.97 353  P     Pb      07 05 39.6 -1.2
LUSI                              AML   AML
      comp=N,731µm,0.9s
LUSI                              AML   AML
      comp=E,554µm,0.8s
LUSI                              AML   AML
      comp=N,731µm,1.1s
CTI   Castel Tesino     2.06   7  P     Pn      07 05 40.8 +1.0
CTI                               AML   AML
      comp=E,273µm,0.6s
CTI                               AML   AML
      comp=N,288µm,0.3s
CTI                               AML   AML
      comp=E,273µm,1.4s
CANO  Canova, Maglio    2.20 276  P     Pn      07 05 40.9 -0.6
CANO                              AML   AML
      comp=E,350µm,1.1s
CANO                              AML   AML
      comp=N,256µm,0.9s
CANO                              AML   AML
      comp=N,256µm,1.1s
CANO                              AML   AML
      comp=E,350µm,0.9s
PGF   Pioggiola         2.21 230  ePn   Pn      07 05 41.7  0.0
PGF                               eSn   Sn      07 06 06.8 -2.5
      comp=E,10nm,0.4s
ZIAN  Ziano             2.29   5  P     Pn      07 05 43.5 +0.8
ZIAN                              AML   AML
      comp=E,251µm,0.5s
ZIAN                              AML   AML
      comp=N,264µm,0.5s
ZIAN                              AML   AML
      comp=E,255µm,1.4s
ZIAN                              AML   AML
      comp=N,236µm,0.5s
ZIAN                              AML   AML
      comp=N,236µm,1.5s
ZIAN                              AML   AML
      comp=E,251µm,1.5s
ZIAN                              AML   AML
      comp=E,255µm,0.6s
OZOL  Ozolo             2.41 356  P     Pn      07 05 45.2 +0.8
OZOL                              AML   AML
      comp=E,378µm,0.5s
OZOL                              AML   AML
      comp=N,212µm,0.4s
OZOL                              AML   AML
      comp=N,212µm,1.6s
CIMO  Cimolais          2.45  19  AML   AML
      comp=N,114µm,0.7s
CIMO                              AML   AML
      comp=E,127µm,0.6s
SABO  M.te Sabotino     2.58  39  P     Pn      07 05 46.9 +0.3
SABO                              AML   AML
      comp=E,941µm,0.6s
SABO                              AML   AML
      comp=N,1208µm,0.7s
SABO                              AML   AML
      comp=E,238µm,0.6s
SABO                              AML   AML
      comp=N,302µm,0.7s
SABO                              AML   AML
      comp=N,302µm,1.3s
SABO                              AML   AML
      comp=N,1208µm,1.3s
DRE   Drenchia          2.74  37  P     Pn      07 05 49.2 +0.2
SBF   Sospel            2.78 268  ePn   Pn      07 05 49.6 +0.1
SBF                               eSn   Sn      07 06 21.3 -2.0
      comp=N,19nm,0.3s
TUE   Stuetta           2.82 332  P     Pn      07 05 50.9 +0.7
ABTA  Abfaltersbach     2.88  17  Pn    Pn      07 05 53.0 +2.0
      comp=N,6.2nm,0.6s,SNR=7.7
ABTA                              eSn   Sn      07 06 27.5 +1.6
      comp=N,12nm,0.6s
FETA  Feichten          3.04 353  Pn    Pb      07 05 57.2 -1.9
      comp=N,3.5nm,0.5s,SNR=22
FETA                              eSn   Sb      07 06 34.4 -2.2
      comp=N,11nm,1.6s
LJU   Ljubljana         3.08  47  AML   AML
      comp=E,786µm,0.9s
LJU                               AML   AML
      comp=N,904µm,0.6s
MYKA  Terra Mystica     3.11  32  ePn   Pn      07 05 56.0 +1.9
      comp=N,0.8nm,0.5s
MYKA                              eSn   Sn      07 06 33.3 +1.7
      comp=N,5.5nm,0.6s
SQTA  Sankt Quirin      3.22 359  i Pn  Pb      07 05 59.7 -2.4
      comp=N,22nm,0.6s,SNR=20
SQTA                              eSn   Sb      07 06 39.9 -1.6
      comp=N,5.8nm,0.6s
WTTA  Wattenberg        3.27   4  i Pn  Pb      07 06 00.6 -2.4
      comp=N,4.4nm,0.6s,SNR=11
WTTA                              eSn   Sb      07 06 40.6 -2.5
      comp=N,2.2nm,0.5s
WTTA  Wattenberg        3.27   4  ePn   Pn      07 05 59.6 +3.2
MBDF  Montbardon        3.31 284  ePn   Pn      07 05 56.6 -0.3
WATA  Walderalm         3.34   3  ePn   Pb      07 06 01.7 -2.5
      comp=N,12nm,0.4s,SNR=15
WATA                              eSn   Sb      07 06 42.1 -3.0
      comp=N,1.1nm,0.4s
MOTA  Moosalm           3.35 358  i Pn  Pb      07 06 01.7 -2.5
      comp=N,0.1nm,0.3s,SNR=18
MOTA                              eSn   Sb      07 06 42.5 -2.7
      comp=N,13nm,0.6s
KBA   Koelnbreinsper    3.40  25  ePn   Pn      07 05 59.5 +1.3
      comp=N,0.4nm,0.1s
KBA                               i Sn  Sn      07 06 40.1 +1.2
      comp=N,11nm,0.5s
KBA   Koelnbreinsper    3.40  25  ePn   Pn      07 06 00.1 +1.9
OBKA  Obir              3.41  42  ePn   Pn      07 05 58.7 +0.5
      comp=N,2.3nm,0.7s
OBKA                              eSn   Sn      07 06 39.8 +0.9
      comp=N,1.8nm,0.4s
ZUGS  Zugspitze, Sch    3.42 357  ePn   Pb      07 06 02.2 -3.4
ZUGS                              eSn   Sb      07 06 44.3 -3.3
DAVA  Damuels           3.43 344  i Pn  Pn      07 06 01.9 +3.4
      comp=N,10.0nm,0.5s,SNR=12
DAVA                              eSn   Sb      07 06 46.8 -0.8
      comp=N,12nm,0.6s
DAVA  Damuels           3.43 344  ePn   Pb      07 06 02.2 -3.5
PART  Garmisch-Parte    3.50 358  ePn   Pb      07 06 03.3 -3.5
RETA  Reutte            3.51 354  i Pn  Pb      07 06 03.4 -3.5
      comp=N,12nm,0.5s,SNR=5.3
RETA                              eSn   Sb      07 06 45.7 -4.1
      comp=N,13nm,0.6s
LMR   La Mourre         3.52 261  ePn   Pn      07 05 59.2 -0.4
LMR                               eSn   Sn      07 06 39.6 -1.9
      comp=N,1.6nm,0.2s
LPG   La Plagne         3.55 296  ePn   Pn      07 06 02.6 +2.2
LPG                               eSn   Sn      07 06 41.0 -1.8
      comp=N,5.7nm,0.4s
LESA  Schwarzleotal     3.56  15  Pn    Pb      07 06 04.1 -3.8
      comp=N,6.7nm,0.6s,SNR=22
LESA                              eSn   Sn      07 06 45.9 +3.2
      comp=N,6.6nm,0.5s
LPL   La Plagne         3.57 297  ePn   Pn      07 06 02.8 +2.2
LPL                               eSn   Sn      07 06 42.1 -1.1
      comp=N,5.9nm,0.4s
SOKA  Soboth            3.77  43  ePn   Pn      07 06 04.4 +1.3
      comp=N,1.0nm,0.8s
SOKA                              eSn   Sn      07 06 46.6 -1.1
      comp=N,2.2nm,0.7s
UBR   Ueberruh          3.77 348  ePn   Pn      07 06 05.9 +2.8
ORIF  Oris-en-Rattie    3.97 285  eP    Pn      07 06 08.5 +2.6
ORIF                              eSn   Sn      07 06 50.3 -2.5
      comp=N,7.0nm,0.4s
BIOA  Bad Ischl, Aus    4.04  23  ePn   Pn      07 06 09.8 +3.0
      comp=N,3.9nm,0.3s
BIOA                              eSn   Sn      07 06 56.3 +1.8
      comp=N,3.4nm,0.3s
SMRF  Simiane la Rot    4.12 272  eP    Pn      07 06 09.9 +2.1
SMRF                              eSn   Sn      07 06 52.5 -3.7
      comp=N,2.5nm,0.3s
MOA   Molln             4.38  27  ePn   Pn      07 06 13.0 +1.6
      comp=N,1.4nm,0.3s
MOA                               eSn   Sn      07 07 03.9 +1.2
      comp=N,7.0nm,0.5s
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ARSA	Arzberg	4.41	41	*e*Pn	Pn	07 06 14.2	+2.4
	comp=N,3.7nm,0.3s						
ARSA				*e*Sn	Sn	07 07 04.3	+0.9
	comp=N,0.6nm,0.2s						
ARSA	Arzberg	4.41	41	*e*Pn	Pn	07 06 12.4	+0.5
CABF	La Chapelle	4.50	307	*e*Pn	Pn	07 06 15.4	+2.3
BFO	Black Forest	4.79	336	*e*Pn	Pn	07 06 18.7	+1.6
BFO				*e*Sn	Sn	07 07 13.4	+0.5
VIVF	Saint-Julien-l	4.81	283	*e*Pn	Pn	07 06 17.9	+0.6
VIVF				*e*Sn	Sn	07 07 10.4	-2.9
	comp=N,1.0nm,0.3s						
HINF	Hinteralfeld	4.91	323	*e*Pn	Pn	07 06 20.1	+1.4
HINF				*e*Sn	Sn	07 07 14.1	-1.7
	comp=N,13nm,0.4s						
CONA	Conrad Observa	5.06	38	*e*Pn	Pn	07 06 21.7	+0.8
	comp=N,0.2nm,0.2s						
CONA				*e*Sn	Sn	07 07 19.3	-0.4
	comp=N,0.3nm,0.2s						
GEC2	GERESS Array S	5.13	18	*e*Pn	Pn	07 06 23.1	+1.3
GEC2				*e*Sn	Sn	07 07 20.5	-0.8
CDF	Champ du Feu	5.21	329	*e*Pn	Pn	07 06 24.3	+1.3
CDF				*e*Sn	Sn	07 07 20.4	-2.9
	comp=N,0.7nm,0.1s						
CKRC	Cesky Krumlov	5.26	22	*e*PN	Pn	07 06 25.1	+1.6
CKRC				*e*SN	Sn	07 07 22.3	-2.0
HAU	Haudompre	5.28	321	*e*Pn	Pn	07 06 25.5	+1.8
HAU				*e*Sn	Sn	07 07 24.6	-0.2
	comp=N,18nm,0.3s						
KHC	Kasperske Hory	5.37	16	*e*PN	Pn	07 06 26.1	+1.0
KHC				*e*SN	Sn	07 07 25.4	-1.8
ROTZ	Rotzenmuhle	5.80	6	*e*Pn	Pn	07 06 31.3	+0.4
SMF	Signal de Mont	5.87	299	*e*P	Pn	07 06 35.9	+4.0
SMF				*e*Sn	Sn	07 07 35.5	-4.0
	comp=N,0.6nm,0.1s						
MODS	Modra-Piesok	6.04	41	*e*PN	Pn	07 06 35.5	+1.3
MODS				*e*SN	Sn	07 07 41.7	-1.9
LOR	Lormes	6.14	305	*e*Pn	Pn	07 06 37.3	+1.7
LOR				*e*Sn	Sn	07 07 45.2	-0.9
	comp=N,2.8nm,0.3s						
MTLF	Montolieu	6.60	267	*e*Pn	Pn	07 06 42.4	+0.4
CLL	Collm	7.40	8	*e*Pn	Pn	07 06 54.0	+1.1
CLL				*e*Sg	Sg	07 09 06.0	+4.0

DJA 09 07:08:00.4±0.9,**9°S**±3°×**12°4E**±°,**h19**^{km}±14^{km},**M3.8**/6,
mb4.2/1,**MLv3.6**/6,**Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.71	170	P	Pn	07 08 15.4	-0.2
BATI	Baumata	1.24	202	P	Pn	07 08 22.4	-0.4
MMRI	Maumere	1.93	282	P	Pn	07 08 31.3	-0.9
EDFI	Ende, Flores	2.44	277	P	Pn	07 08 38.9	-0.4
BNSI	Bone	6.11	319	P	Pn	07 09 32.0	+2.2

JMA ***09*** *07:11:31.6±0.3, 43°N±2°×14°8E±°, h13^{km}, MV3.7/29, E OFF HOKKAIDO*
SKHL ***09*** *07:11:32.7±0.5, 43.°20N×148.°00E, h45^{km}±4^{km}, mb4.3/2*
ISC 09 07:11:33.7±2.5,**43.°3N**±0.°1×**147.°9E**±0.°1,**h34**^{km},**n17**,
σ**0.^{s}72**/29,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.57	273	*e*P	Pn	07 11 58.4	-0.8
NEM2				*e*S	Sn	07 12 17.7	-0.6
NMR	Nemuro--Hokkai	1.59	273	*i* P	Pn	07 11 58.4	-0.9
NMR				*e*S	Sn	07 12 18.1	-0.5
YUK	Yuzh-Kuril'sk	1.65	297	*i* P	Pn	07 12 00.0	-0.2
YUK				AMB	AMB	07 12 02.0	
	170nm,0.5s						
YUK				*i* S	Sn	07 12 20.3	+0.1
YUK				A	A	07 12 25.2	
	520nm,0.5s						
YUK				A	A	07 12 25.2	
	640nm,0.5s						
GLVR	Golovnino	1.79	285	*i* P	Pn	07 12 01.6	-0.4
GLVR				AMB	AMB	07 12 04.0	
	70nm,0.3s						
GLVR				*e*S	Sn	07 12 24.5	+1.0
GLVR				A	A	07 12 28.7	
	250nm,0.5s						
GLVR				A	A	07 12 28.7	
	580nm,0.5s						
KUR	Kuril'sk	1.93	359	*e*P	Pn	07 12 03.8	-0.2
KUR				*e*S	Sn	07 12 26.9	-0.1
KUR				A	A	07 12 32.7	
	110nm,0.5s						
KUR				A	A	07 12 32.7	
	180nm,0.5s						
JKHN	Kushirohamanak	2.02	265	*e*P	Pn	07 12 05.1	-0.1
JKHN				*e*S	Sn	07 12 29.5	+0.3
JRA	Rausu	2.11	288	*e*S	Sn	07 12 32.7	+1.1
JNSB	Nemuroshibetsu	2.16	284	P	Pn	07 12 07.3	+0.1
JNSB				*e*S	Sn	07 12 33.5	+0.7
AKK	Akkeshi	2.25	264	*e*P	Pn	07 12 08.1	-0.4
JNK	Nakash	2.33	278	*e*P	Pn	07 12 09.1	-0.5
JNK				*e*S	Sn	07 12 36.6	-0.4
JAK	Akkeshi	2.36	264	*e*P	Pn	07 12 09.6	-0.4
JAK				*e*S	Sn	07 12 37.0	-0.8
JTKR	Abashiri--Toko	2.97	284	*e*P	Pn	07 12 19.2	+0.8
JOB	Onbets	3.00	264	*e*S	Sn	07 12 52.6	-0.9
JAR	Ashorobuto	3.02	271	*e*P	Pn	07 12 19.3	+0.3
JAR				S	Sn	07 12 54.2	+0.3
JCH	Churui	3.40	260	P	Pn	07 12 24.6	+0.3
JCH				S	Sn	07 13 01.8	-1.6
JEM	Erimo	3.73	251	P	Pn	07 12 30.3	+1.6
JEM				*e*S	Sn	07 13 11.9	+0.4
JNBK	Urakawa-nobuka	3.92	257	*e*P	Pn	07 12 31.9	+0.4

NOU ***09*** *07:15:09.1, 38.°46S×175.°77E, h209^{km}, MLv3.5/11, North Island, New Zealand*
WEL ***09*** *07:15:11.5±1.6, 38°S±11°×17°6E±1°0, h181^{km}±13^{km}, M2.8/27, ML2.1/8, MLv2.8/27, Error ellipse: s-maj=14.9km s-min=12.9km az=29.8, confirmed*
ISC 09 07:15:09.0±2.0,**38.°43S**±0.°06×**175.°78E**±0.°05,
h204^{km}±12^{km},**n81**,σ**1.^{s}07**/89,**North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUTZ	Kaahu Road	0.07	152	P	Pn	07 15 36.5	+0.8
TLZ	Tolley Road	0.21	297	P	Pn	07 15 36.7	+0.7
WATZ	Wairara	0.28	188	P	Pn	07 15 36.9	+0.9
WPRZ	Whakapapatarin	0.31	107	P	Pn	07 15 36.7	+0.6
HSRZ	Hossack Road	0.38	72	P	Pn	07 15 37.0	+0.7
RATZ	Rangitukua	0.44	181	P	Pn	07 15 37.0	+0.6
ALRZ	Allen Road	0.46	107	P	Pn	07 15 37.0	+0.6
KATZ	Kakaramea	0.55	187	P	Pn	07 15 37.6	+0.7
RITZ	Rihia Road	0.55	174	P	Pn	07 15 37.8	+1.0
RRRZ	Republican Roa	0.58	82	P	Pn	07 15 37.5	+0.5
MRHZ	Matea Rd	0.64	129	P	Pn	07 15 37.7	+0.4
KRVZ	Karewarewa	0.68	189	P	Pn	07 15 38.3	+0.8
NTVZ	North Tongarir	0.68	187	P	Pn	07 15 38.3	+0.8
TMVZ	Te Maari	0.69	185	P	Pn	07 15 38.5	+1.0
TWVZ	Taurewa	0.70	203	P	Pn	07 15 38.2	+0.6
WTVZ	West Tongariro	0.70	192	P	Pn	07 15 38.4	+0.8
NNVZ	North Ngauruho	0.71	190	P	Pn	07 15 38.6	+0.8
TOZ	Tahuroa Road	0.73	342	P	Pn	07 15 38.5	+0.8
HIZ	Hauiti	0.73	263	P	Pn	07 15 38.4	+0.8
HIZ	Hauiti	0.73	263	P	Pn	07 15 38.4	+0.8
NGZ	Ngauruhoe	0.76	191	P	Pn	07 15 38.8	+0.9
SNVZ	South Ngauruho	0.77	188	P	Pn	07 15 38.7	+0.7
SNVZ				S	Sn	07 16 00.6	-0.1
COVZ	Chateau Observ	0.79	194	P	Pn	07 15 38.8	+0.7
FWVZ	Far West T-bar	0.84	192	P	Pn	07 15 39.2	+0.7
MAVZ	Matarangi	0.86	192	P	Pn	07 15 39.3	+0.7
WHVZ	Whangaehu Hut	0.87	190	P	Pn	07 15 39.5	+0.9
TRVZ	Turoa	0.89	192	P	Pn	07 15 39.7	+0.9
BKZ	Black Stump Fm	0.92	143	P	Pn	07 15 39.3	+0.6
BKZ	Black Stump Fm	0.92	143	P	Pn	07 15 39.5	+0.7
PKVZ	Pokaka	0.93	201	P	Pn	07 15 39.5	+0.8
MTHZ	Maungataniwha	0.93	117	P	Pn	07 15 39.7	+0.9
MTHZ				S	Sn	07 15 60.0	-2.0
RTZ	Ruatahuna	0.96	102	P	Pn	07 15 39.6	+0.6
RTZ				S	Sn	07 16 00.4	-1.9
MTVZ	Mangateitei	0.99	194	P	Pn	07 15 40.1	+0.9
NMHZ	Naumai	1.04	130	P	Pn	07 15 41.3	+1.7
NMHZ				S	Sn	07 16 03.1	-0.3
URZ	Urewera	1.06	81	P	Pn	07 15 39.7	+0.1
URZ	Urewera	1.06	81	P	Pn	07 15 39.8	+0.2
URZ				S	Sn	07 16 00.6	-2.6
VRZ	Vera Road	1.06	229	P	Pn	07 15 40.6	+1.0
KWHZ	Kaweka Forest	1.11	154	P	Pn	07 15 41.2	+1.1
KWHZ				S	Sn	07 16 04.0	-0.3
RAHZ	Arahi	1.13	116	P	Pn	07 15 41.5	+1.4
RAHZ				S	Sn	07 16 03.4	-0.9
MCHZ	McNeill Hill	1.24	145	P	Pn	07 15 42.7	+1.8
ARHZ	Aropaoanui	1.26	132	P	Pn	07 15 42.6	+1.5
SNGZ	Shannon Statio	1.27	107	P	Pn	07 15 42.4	+1.2
SNGZ				S	Sn	07 16 04.8	-1.4
KRHZ	Kereru	1.30	160	P	Pn	07 15 42.5	+1.1
WHHZ	Waihua	1.31	120	P	Pn	07 15 42.8	+1.4
MKAZ	Moumakai	1.41	339	P	Pn	07 15 43.3	+1.0
WAZ	Wanganui	1.46	205	P	Pn	07 15 43.8	+1.0
PNHZ	Pukenui	1.52	168	P	Pn	07 15 44.2	+1.0
RUGZ	Raukumara Rang	1.56	73	P	Pn	07 15 43.7	-0.1
RIGZ	Rimuhau	1.58	101	P	Pn	07 15 45.0	+1.2
CKHZ	Cape Kidnapper	1.59	141	P	Pn	07 15 45.5	+1.7
PKE	Pukeiti	1.60	241	P	Pn	07 15 45.2	+1.3
KAHZ	Kahuranaki	1.61	148	P	Pn	07 15 45.7	+1.6
TKGZ	Te Karaka	1.62	91	P	Pn	07 15 46.1	+1.9
KHEZ	Kahui Hut	1.63	237	P	Pn	07 15 45.6	+1.3
KHEZ	Kahui Hut	1.63	237	S	Sn	07 16 12.5	+0.7
KHEZ	Kahui Hut	1.63	237	P	Pn	07 15 45.6	+1.3
AWAZ	Awhitu Peninsu	1.63	326	P	Pn	07 15 45.3	+1.0
TSZ	Takapari Road	1.64	175	P	Pn	07 15 45.2	+1.0
WPHZ	Waipukurau	1.71	163	P	Pn	07 15 46.1	+1.1
HAZ	Te Kaha	1.71	68	P	Pn	07 15 45.2	+0.2
PRGZ	Paritu Road	1.72	107	P	Pn	07 15 46.3	+1.3
TWGZ	Tauwhareparae	1.75	82	P	Pn	07 15 47.4	+2.0
PXZ	Pawanui	1.81	153	P	Pn	07 15 47.0	+1.2
MHGZ	Mahia Peninsul	1.81	114	P	Pn	07 15 47.6	+1.6
OHWZ	Ohakea	1.81	191	P	Pn	07 15 47.3	+1.4
DVHZ	Dannevirke	1.89	171	P	Pn	07 15 47.4	+0.7
PKGZ	Pakihiroa	1.90	74	P	Pn	07 15 48.3	+1.5
PRHZ	Porangahau	1.95	160	P	Pn	07 15 48.3	+1.0
POWZ	Post Office Ro	1.96	180	P	Pn	07 15 48.0	+0.6
ANWZ	Angora Road	2.10	165	P	Pn	07 15 49.8	+1.0
PRWZ	Pori Road	2.13	176	P	Pn	07 15 50.1	+1.0
MXZ	Matakaoa Point	2.17	67	P	Pn	07 15 50.7	+1.1
MRZ	Mangatainoka R	2.24	184	P	Pn	07 15 50.6	+0.3
BFZ	Birch Farm	2.28	171	P	Pn	07 15 51.2	+0.5
BFZ	Birch Farm	2.28	171	P	Pn	07 15 51.2	+0.5
TIWZ	Tintock	2.35	178	P	Pn	07 15 51.6	+0.2
HOWZ	Holdsworth Sta	2.48	185	P	Pn	07 15 52.9	+0.1
SNZO	South Karori	3.00	196	P	Pn	07 15 58.6	-0.1
QRZ	Quartz Range	3.47	225	P	Pn	07 16 04.0	-0.4
KHZ	Kahutara	4.34	203	P	Pn	07 16 14.9	-0.1
ODZ	Otahua Downs	7.64	209	P	Pn	07 16 56.9	-0.6

IDC ***09*** *07:20:54.9±0.5, 31.°54N×104.°30E, h0^{km}, mb4.4/27, mbtmp4.4/29, ML4.0/2, MS3.8/30, Error ellipse: s-maj=15.7km s-min=11.1km az=57.0*
MOS ***09*** *07:20:55.0±1.2, 31.°61N×104.°33E, h10^{km}, mb4.9/27, MS4.2/5, Error ellipse: s-maj=7.5km s-min=4.9km az=112.6*
BJI ***09*** *07:20:56.9, 31.°70N×104.°28E, h10^{km}, mB4.9/17, mb4.6/44, ML4.9/23, Ms4.6/55, Ms7 4.4/51*
NEIC ***09*** *07:20:57.8±1.4, 31.°72N±0.°08×104.°3E±0.°1, h10^{km}±1^{km}, mb5.0/116, Error ellipse: s-maj=15.5km s-min=12.6km az=237.0*
ISC 09 07:20:56.2±0.3,**31.°54N**±0.°03×**104.°28E**±0.°03,**h9**^{km},**n522**,
σ**1.^{s}16**/484,**mb4.9**/124,**MS3.9**/35,**10C-12D**,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	Chengdu	0.77	216	Pg	Pn	07 21 12.4	-0.9
CD2				Sg	Sn	07 21 24.7	-0.3
CD2				smax	smax		
	comp=N,30µm,0.3s						
CD2				smax	smax		
	comp=E,31µm,0.5s						
LZDM	Lanzhou Array	4.44	354	Pn	Pn	07 22 05.8	+1.8
	baz=178,slow=15						
LZDM				Sn	Sn	07 22 55.2	-0.7
	baz=112,slow=11						
LZDM				Lg	Lg	07 23 17.1	
	baz=187,slow=31						
	26nm,0.3s						
LZH	Lanzhou	4.55	356	Pn	Pn	07 22 07.9	+2.4
LZH				Sg	Sg	07 23 21.9	-0.6
LZH				smax	smax		
	comp=N,2µm,0.7s						
LZH				smax	smax		
	comp=E,2µm,0.8s						
LZH				LR	LR		
	comp=N,9µm,7.6s						
LZH				LR	LR		
	comp=E,11µm,8.6s						
LZH				LR	LR		
	comp=Z,6µm,9.3s						
XAN	Xi'an	4.64	56	Pn	Pn	07 22 06.0	-0.5
XAN				Pg	Pb	07 22 19.2	+1.4
XAN				Sn	Sn	07 22 59.5	-1.0
XAN				Sg	Sb	07 23 18.1	+4.3
XAN				smax	smax		
	comp=N,3µm,0.9s						
XAN				smax	smax		
	comp=E,4µm,0.9s						
XAN				LR	LR		
	comp=N,3µm,5.1s						
XAN				LR	LR		
	comp=E,2µm,5.7s						
XAN				LR	LR		
	comp=Z,6µm,8.2s						
ENH	Enshi	4.65	104		Pn	07 22 08.1	+1.4
GYA	Guiyang	5.47	157	⇑Pn	Pn	07 22 19.8	+1.7
GYA				Pg	Pg	07 22 41.3	+0.2
GYA				Sn	Sn	07 23 22.0	+0.7
GYA				smax	smax		
	comp=N,2µm,1.0s						
GYA				smax	smax		
	comp=E,2µm,1.2s						
GYA				LR	LR		
	comp=N,5µm,3.9s						
GYA				LR	LR		
	comp=E,3µm,3.9s						
GYA				LR	LR		
	comp=Z,6µm,5.3s						
PZH	PanZhiHua	5.49	205	Pn	Pn	07 22 21.8	+3.5
PZH				Pg	Pb	07 22 34.9	+2.6
PZH				Sg	Sg	07 23 48.9	-3.5
PZH				smax	smax		
	comp=N,420nm,1.1s						
PZH				smax	smax		
	comp=E,390nm,1.0s						
PZH				LR	LR		
	comp=N,3µm,10.7s						
PZH				LR	LR		
	comp=E,2µm,12.9s						
PZH				LR	LR		
	comp=Z,4µm,10.8s						
KMI	Kunming	6.53	192	Pn	Pn	07 22 38.4	+5.7
KMI				Sn	Sn	07 23 49.4	+1.9
KMI				LR	LR		
	comp=N,4µm,8.0s						
KMI				LR	LR		
	comp=E,2µm,7.2s						
KMI				LR	LR		
	comp=Z,3µm,11.3s						
LYN	LuoYang	7.50	64	Pn	Pn	07 22 45.3	-0.5
LYN				Sn	Sn	07 24 03.6	-7.4
LYN				smax	smax		
	comp=N,1µm,1.2s						
LYN				smax	smax		
	comp=E,1µm,1.0s						
LYN				LR	LR		
	comp=N,1µm,5.3s						
LYN				LR	LR		
	comp=E,2µm,5.4s						
LYN				LR	LR		
	comp=Z,2µm,7.7s						
GULI	GuiLin	8.21	138	Pn	Pn	07 22 55.0	-0.6
GULI				Sn	Sn	07 24 28.1	-0.4
GULI				smax	smax		
	comp=N,400nm,1.3s						
GULI				smax	smax		
	comp=E,440nm,1.2s						
CNSH	ChangSha	8.22	112	P	Pn	07 22 58.1	+2.4
CNSH				smax	smax		
	comp=E,420nm,1.1s						
CNSH				smax	smax		
	comp=E,450nm,0.7s						
GTA	Gaotai	8.66	336	*e*P	Pn	07 23 04.5	+2.7
GTA				pmax	pmax		
	comp=E,4.0nm,0.9s						
GTA				LR	LR		
	comp=E,2µm,9.5s						
GTA				LR	LR		
	comp=E,4µm,9.5s						
GTA				LR	LR		
	comp=E,3µm,12.0s						
WHN	Wuhan	8.70	94	P	Pn	07 23 00.0	-2.2
WHN				S	Sn	07 24 34.4	-6.0
WHN				LR	LR		
	comp=N,7µm,5.1s						
WHN				LR	LR		
	comp=E,7µm,6.1s						
GOMU	GeErMu	9.14	303	P	Pn	07 23 07.6	-1.0
GOMU				S	Sn	07 24 50.0	-1.8
GOMU				pmax	pmax		
	comp=E,8.0nm,1.1s						
GOMU				LR	LR		
	comp=E,2µm,7.2s						
GOMU				LR	LR		
	comp=E,1µm,7.2s						
SLVN	Son La	10.17	182		Pn	07 23 26.9	+4.4
BTO	Baotou	10.17	26	*e*P	Pn	07 23 24.1	+1.6
BTO				S	Sn	07 25 19.8	+3.1
BTO				pmax	pmax		
	comp=E,37nm,0.7s						
BTO				pmax	pmax		
	comp=E,380nm,6.0s						
BTO				LR	LR		
	comp=E,4µm,8.3s						
BTO				LR	LR		
	comp=E,2µm,7.3s						
BTO				LR	LR		
	comp=E,1µm,8.4s						
HNS	HongShan	10.40	53	⇓P	Pn	07 23 25.5	-0.1
HNS				S	Sn	07 25 21.6	-0.6
HNS				pmax	pmax		
	comp=E,13nm,0.8s						
HNS				LR	LR		
	comp=E,1µm,13.3s						
HNS				LR	LR		
	comp=E,980nm,15.9s						
HNS				LR	LR		
	comp=E,2µm,12.2s						
HHC	Hu-ho-hao-te	10.99	30	*e*P	Pn	07 23 35.0	+1.2
HHC				pmax	pmax		
	comp=E,11nm,0.8s						
HHC				pmax	pmax		
	comp=E,210nm,4.5s						
HHC				LR	LR		
	comp=E,1µm,8.9s						
HHC				LR	LR		
	comp=E,2µm,7.6s						
HHC				LR	LR		
	comp=E,860nm,8.0s						
LSA	Lhasa	11.46	264	P	Pn	07 23 39.0	-1.5
LSA				S	Sn	07 26 06.0	+17
LSA				pmax	pmax		
	comp=Z,9.0nm,0.4s						
LSA				LR	LR		
	comp=N,2µm,9.6s						
LSA				LR	LR		
	comp=E,870nm,8.2s						
LSA				LR	LR		
	comp=Z,1µm,10.3s						
GZH	Guangzhou	11.65	134	P	Pn	07 23 41.9	-0.8
GZH				S	Sn	07 25 52.0	-0.8
GZH				LR	LR		
	comp=Z,2µm,9.3s						
GZH				LR	LR		
	comp=Z,2µm,8.6s						
TIA	Tai'an	11.65	63	P	Pn	07 23 43.7	+1.1
TIA				pmax	pmax		
	comp=Z,18nm,0.8s						
TIA				LR	LR		
	comp=Z,680nm,11.3s						
TIA				LR	LR		
	comp=Z,500nm,11.7s						
TIA				LR	LR		
	comp=Z,770nm,10.6s						
SHL	Shillong	12.41	244		Pn	07 23 53.1	-0.2
SHL	Shillong	12.41	244	P	Pn	07 23 53.1	-0.2
NJ2	Nanjing	12.41	84	*e*P	Pn	07 23 54.5	+1.4
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
NJ2				LR	LR		
	comp=Z,1µm,7.6s						
NJ2				LR	LR		
	comp=Z,3µm,9.7s						
NJ2				LR	LR		
	comp=Z,2µm,9.9s						
BJI	Beijing	12.85	45	P	Pn	07 23 59.3	+0.3
BJI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
QIZ	Qiongzhong	13.43	157	P	Pn	07 24 10.0	+3.0
QIZ				S	Sn	07 26 43.1	+6.6
QIZ				LR	LR		
	comp=Z,1µm,6.7s						
QIZ				LR	LR		
	comp=Z,1µm,6.9s						
QIZ				LR	LR		
	comp=Z,2µm,6.8s						
CHTO	Chiang Mai	13.55	202		P	07 24 13.7	-4.2
CHTO	Chiang Mai	13.55	202	P	P	07 24 13.7	-4.2
CM31	Chiang Mai Arr	13.89	202	Pn	P	07 24 16.8	-4.9
CMAR	Chiang Mai Arr	13.89	202	Pn	P	07 24 17.3	-4.4
	comp=Z,0.3nm,0.3s,baz=23,slow=14,SNR=2.1						
CMAR	Chiang Mai Arr	13.89	202	Pn	P	07 24 16.8	-4.9
CMAR	Chiang Mai Arr	13.89	202	P	P	07 24 16.8	-4.9
BRDH	Bariadhala	14.29	235	LR	LR	07 31 03.0	
	comp=Z,392nm,19.1s,baz=22,slow=42						
SSE	Sheshan	14.46	87	P	Pn	07 24 21.0	-0.1
SSE				S	Sn	07 27 01.1	-0.5
SSE				pmax	pmax		
	comp=Z,18nm,0.6s						
SSE				pmax	pmax		
	comp=Z,61nm,4.1s						
SSE				LR	LR		
	comp=Z,2µm,11.1s						
SSE				LR	LR		
	comp=Z,380nm,11.2s						
XLT	XiLinHaoTe	15.46	34	*e*P	P	07 24 40.0	+1.0
EVN	Everest	15.58	261		Pn	07 24 36.5	-0.3
DL2	Dalian	15.96	58	P	Pn	07 24 37.4	-3.5
DL2				pmax	pmax		
	comp=Z,62nm,1.6s						
DL2				pmax	pmax		
	comp=Z,330nm,8.0s						
DL2				LR	LR		
	comp=Z,560nm,10.1s						
DL2				LR	LR		
	comp=Z,1µm,13.2s						
DL2				LR	LR		
	comp=Z,1µm,10.6s						
SONM	Songino Array	16.36	5	Pn	Pn	07 24 46.2	0.0
	comp=Z,0.1nm,0.3s,baz=189,slow=4.7,SNR=24						
SONM				Lg	Lg	07 29 34.4	
	comp=Z,0.2nm,0.3s,baz=182,slow=32,SNR=1.4						
SONM				LR	LR	07 31 43.9	
	comp=Z,814nm,18.0s,baz=166,slow=40						
	comp=Z,10nm,1.0s						
SONM	Songino Array	16.36	5		Pn	07 24 45.2	-0.9
ULN	Ulaanbaatar	16.45	7		Pn	07 24 45.9	-1.5
ULN	Ulaanbaatar	16.45	7	⇓*i*P	Pn	07 24 47.6	+0.3
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WMQ	Urumqi	17.92	318	*e*P	P	07 25 07.0	+0.6
WMQ				sP	sP	07 25 12.6	+2.0
WMQ				S	Sn	07 28 21.8	-3.9
WMQ				pmax	pmax		
	comp=Z,15nm,1.1s						
WMQ				LR	LR		
	comp=Z,1µm,9.1s						
WMQ				LR	LR		
	comp=Z,2µm,8.5s						
WMQ				LR	LR		
	comp=Z,220nm,9.9s						
ZAK	Zakamensk	18.84	358	*e*P	P	07 25 16.7	+0.2
ZAK				*e*		07 28 37.2	
ZAK				pmax	pmax		
	comp=Z,24nm,1.6s						
KNGR	Kungurtug, Tuv	19.70	347	⇓*i*P	Pn	07 25 28.4	+1.1
KNGR				pmax	pmax		
	comp=Z,13nm,1.0s						

TJN	**Taejon**	19.73	70	P	Pn	07 25 26.2	-1.4
TJN	**Taejon**	19.73	70	P	Pn	07 25 26.2	-1.4
TJN				pmax	pmax		
	comp=Z,314nm,1.4s						
KS19	**Wonju Array Si**	20.30	67	P	Pn	07 25 33.0	-1.4
KSAR	**Wonju Array Be**	20.30	67		P	07 25 32.2	-0.2
KSAR	**Wonju Array Be**	20.30	67	P	P	07 25 32.2	-0.2
KSRS	**Korea Array**	20.34	67	P	Pn	07 25 33.4	-1.4
	comp=Z,21nm,0.7s,baz=256,slow=10,SNR=65						
	comp=Z,21nm,0.7s						
CN2	**Changchun**	20.68	48	P	Pn	07 25 37.5	-1.3
CN2				S	S	07 29 22.5	-5.1
CN2				pmax	pmax		
	comp=Z,40nm,0.6s						
CN2				LR	LR		
	comp=Z,300nm,11.0s						
CN2				LR	LR		
	comp=Z,300nm,11.0s						
CN2				LR	LR		
	comp=Z,500nm,12.0s						
IRK	**Irkutsk**	20.69	360	eP	P	07 25 31.2	-5.3
IRK				pmax	pmax		
	comp=Z,136nm,0.2s						
HIA	**Hailar**	21.20	29		P	07 25 42.1	+0.1
HIA	**Hailar**	21.20	29	P	P	07 25 42.1	+0.1
HIA				pmax	pmax		
	comp=Z,38nm,0.8s						
HILR	**Hailar Array B**	21.42	28	P	P	07 25 45.8	+1.3
	comp=Z,21nm,0.7s,baz=201,slow=11,SNR=34						
	comp=Z,21nm,0.7s						
DGZ	**Jazzator, Alta**	22.11	330	⇑iP	P	07 25 53.8	+1.8
DGZ				pmax	pmax		
	comp=Z,14nm,1.1s						
WUS	**Wushi**	22.30	303		P	07 25 55.1	+1.0
WUS				IAmb	IAmb	07 26 03.9	
	comp=Z,66nm,1.0s						
JNU	**Nakatsue**	22.51	79	LR	LR	07 36 43.9	
	comp=Z,118nm,18.3s,baz=268,slow=42						
MK31	**Makanchi Array**	22.75	318	P	P	07 25 59.3	+0.5
MK31				IAmb	IAmb	07 26 06.9	
	comp=Z,54nm,1.4s						
MK31	**Makanchi Array**	22.75	318	⇓iP	P	07 25 59.9	+1.2
MKAR	**Makanchi Array**	22.75	318	P	P	07 26 00.0	+1.3
	comp=Z,11nm,1.0s,baz=119,slow=9.9,SNR=65						
MKAR				LR	LR	07 35 26.2	
	comp=Z,268nm,21.2s,baz=109,slow=38						
	comp=Z,11nm,1.0s						
MKAR	**Makanchi Array**	22.75	318		P	07 25 59.2	+0.5
BNX	**BinXian**	22.86	45	⇓P	P	07 26 00.2	+0.4
BNX				pmax	pmax		
	comp=Z,45nm,1.1s						
MAKZ	**Makanchi**	22.94	318		P	07 26 02.0	+1.3
MAKZ	**Makanchi**	22.94	318	P	P	07 26 02.0	+1.3
MAKZ				pmax	pmax		
	comp=Z,35nm,1.2s						
PRZ	**Przheval'sk**	23.29	305	P	P	07 26 04.5	0.0
PRZ	**Przheval'sk**	23.29	305	P	P	07 26 04.5	0.0
PRZ				pmax	pmax		
	comp=Z,26nm,1.0s						
TARG	**Taragay, Kyrgy**	23.47	303	P	P	07 26 07.1	+0.5
TARG				IAmb	IAmb	07 26 16.0	
	comp=Z,49nm,1.2s						
TARG	**Taragay, Kyrgy**	23.47	303	P	P	07 26 07.1	+0.5
TARG				pmax	pmax		
	comp=Z,49nm,1.2s						
MDJ	**Mudanjiang**	23.71	49	P	P	07 26 10.1	+1.7
MDJ				S	S	07 30 29.0	+5.5
MDJ				pmax	pmax		
	comp=Z,25nm,1.4s						
MDJ				LR	LR		
	comp=Z,450nm,11.7s						
KSH	**Kashi**	24.30	297	P	P	07 26 18.6	+4.4
KSH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,320nm,5.7s						
KSH				LR	LR		
	comp=Z,560nm,10.3s						
KSH				LR	LR		
	comp=Z,440nm,13.1s						
KSH				LR	LR		
	comp=Z,390nm,12.0s						
USRK	**Ussuriysk Ar.**	25.13	52	P	P	07 26 22.4	+0.9
	comp=Z,5.8nm,0.8s,baz=261,slow=14,SNR=8.1						
	comp=Z,5.8nm,0.8s						
HEH	**HeiHe**	25.43	36	eP	P	07 26 24.8	+0.7
HEH				pmax	pmax		
	comp=Z,36nm,1.1s						
HEH				LR	LR		
	comp=Z,410nm,9.0s						
HEH				LR	LR		
	comp=Z,480nm,9.0s						
HEH				LR	LR		
	comp=Z,600nm,8.9s						
ARLS	**Aral**	26.02	302	P	P	07 26 32.3	+2.5
AAK	**Ala-Archa**	26.09	304		P	07 26 31.2	+0.8
AAK	**Ala-Archa**	26.09	304	⇓iP	P	07 26 32.4	+2.0
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NIL	**Nilore**	26.18	283	P	P	07 26 31.1	-0.1
NIL	**Nilore**	26.18	283	P	P	07 26 31.1	-0.1
NIL				pmax	pmax		
	comp=Z,16nm,0.8s						
ZALV	**Zalesovo Beam**	26.40	334	LR	LR	07 37 31.4	
	comp=Z,122nm,19.4s,baz=60,slow=38						
KURBB	**Kurchatov Arra**	26.99	322	P	P	07 26 39.1	+1.0
	comp=Z,3.9nm,0.8s,baz=130,slow=9.5,SNR=18						
	comp=Z,3.9nm,0.8s						
KURK	**Kurchatov**	26.99	323		P	07 26 38.6	+0.3
KURK	**Kurchatov**	26.99	323	⇓iP	P	07 26 39.2	+0.9
KURK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
HYB	**Hyderabad**	27.22	245	eP	P	07 26 42.6	+1.9
ZEA	**Zeya**	27.66	30	eP	P	07 26 45.3	+1.1
ZEA				pmax	pmax		
	comp=N,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA				MLR	MLR		
	comp=Z,400nm,10.0s						
ARK	**Arkit**	27.73	301	P	P	07 26 44.4	-0.7
TRKS	**Terek-Say**	28.29	300	P	P	07 26 51.5	+1.3
MJAR	**Matsushiro Arr**	28.46	71	P	P	07 26 50.6	-1.0
	comp=Z,1.0nm,0.3s,baz=280,slow=7.3,SNR=2.3						
	comp=Z,1.0nm,0.3s						
GAR	**Garm**	28.59	295	P	P	07 26 53.1	+0.3
GAR				IAmb	IAmb	07 27 18.4	
	comp=Z,46nm,1.7s						
KK31	**Karatay Array**	29.04	303	P	P	07 26 57.0	+0.3
KK31	**Karatay Array**	29.04	303	P	P	07 26 57.0	+0.3
KK31				pmax	pmax		
	comp=Z,13nm,1.3s						
KKAR	**Karatay Array**	29.04	303		P	07 26 57.5	+0.8
KKAR	**Karatay Array**	29.04	303	P	P	07 26 57.5	+0.8
KBL	**Kabul**	29.60	285	P	P	07 27 02.5	+0.5
KBL	**Kabul**	29.60	285	P	P	07 27 02.5	+0.5
KBL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ASAJ	**Asahikawa**	32.48	56	LR	LR	07 40 02.1	
	comp=Z,88nm,20.7s,baz=332,slow=35						
BVAR	**Borovoye Array**	32.55	321	P	P	07 27 28.4	+0.9
	comp=Z,1.8nm,0.6s,baz=122,slow=8.3,SNR=7.8						
BVAR				PcP	PcP	07 30 13.5	-0.4
	comp=Z,3.3nm,0.6s,baz=142,slow=2.8,SNR=8.9						
BVAR				LR	LR	07 42 00.9	
	comp=Z,77nm,18.6s,baz=135,slow=39						
	comp=Z,1.8nm,0.6s						
BORK	**Borovoye**	32.59	321	P	P	07 27 28.6	+0.7
BORK	**Borovoye**	32.59	321	⇓iP	P	07 27 29.2	+1.3
BORK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PALK	**Pallekele**	32.67	227	LR	LR	07 41 27.3	
	comp=Z,103nm,21.3s,baz=2.5,slow=38						
YSS	**Yuzhno-Sakhali**	33.16	51	eP	P	07 27 33.3	+0.4
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
YSS				MLR	MLR		
	comp=Z,600nm,17.0s						
YSS				MLR	MLR		
	comp=E,600nm,14.0s						
JCJ	**Chichijima**	33.23	88	LR	LR	07 40 12.3	
	comp=E,73nm,20.9s,baz=58,slow=35						
YAK	**Yakutsk**	34.65	21	LR	LR	07 42 52.5	
	comp=E,207nm,18.0s,baz=210,slow=38						
YAK	**Yakutsk**	34.65	21		P	07 27 45.3	-0.3
YAK	**Yakutsk**	34.65	21	eP	P	07 27 44.9	-0.7
YAK				e*PP	pP	07 27 47.8	-0.8
YAK				eS	S	07 33 12.9	-2.1
YAK				e*SS	pS	07 33 18.4	+0.1
YAK				eSSS	SSS	07 35 48.7	
YAK				pmax	pmax		
	comp=Z,43nm,0.8s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,408nm,3.7s						
YAK				pmax	pmax		
	comp=N,152nm,3.1s						
YAK				pmax	pmax		
	comp=E,143nm,3.5s						
YAK				smax	smax		
	comp=N,91nm,2.2s						
YAK				smax	smax		
	comp=E,132nm,2.7s						
YAK				MLR	MLR		
	comp=Z,268nm,16.0s						
YAK				MLR	MLR		
	comp=N,171nm,17.0s						
YAK				MLR	MLR		
	comp=E,146nm,19.0s						
ABKAR	**Akbulak array**	37.50	311		P	07 28 11.1	+0.9
AKTO	**Aktyubinsk**	38.95	313	LR	LR	07 45 32.0	
	comp=E,181nm,18.6s,baz=280,slow=38						
NRIK	**Noril'sk**	39.03	351	P	P	07 28 23.1	+0.3
	comp=E,6.1nm,0.6s,baz=137,slow=8.0,SNR=13						
NRIK				LR	LR	07 45 51.8	
	comp=E,180nm,19.1s,baz=147,slow=38						
	comp=E,6.1nm,0.6s						
NRIK	**Noril'sk**	39.03	351		P	07 28 23.1	+0.3
NRIK	**Noril'sk**	39.03	351	c iP	P	07 28 23.0	+0.2
SVE	**Sverdlovsk**	39.24	323	eP	P	07 28 22.2	-2.6
SVE				pmax	pmax		
	comp=Z,34nm,1.3s						
ARTI	**Arti**	40.27	322		P	07 28 34.0	+0.7
ARTI				IAmb	IAmb	07 28 40.7	
	comp=Z,15nm,0.5s						
ARTI	**Arti**	40.27	322	c iP	P	07 28 34.5	+1.2
ARTI				S	S	07 34 44.6	+4.1
ARTI				pmax	pmax		
	comp=Z,30nm,1.6s						
MA2	**Magadan**	41.65	34	LR	LR	07 48 03.8	
	comp=Z,63nm,18.4s,baz=272,slow=39						
TIXI	**Tiksi**	42.30	11	LR	LR	07 49 08.2	
	comp=Z,86nm,18.1s,baz=202,slow=40						
TIXI	**Tiksi**	42.30	11		P	07 28 48.8	-1.0
TIXI	**Tiksi**	42.30	11	P	P	07 28 48.8	-1.0
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SEY	**Seymchan**	43.64	30	LR	LR	07 48 44.2	
	comp=Z,266nm,19.7s,baz=247,slow=38						
PEA0B	**Petropavlovsk-**	43.78	44	P	P	07 29 02.2	+0.2
PEA0B				IAmb	IAmb	07 29 56.5	
	comp=Z,61nm,1.3s						
PEA0B	**Petropavlovsk-**	43.78	44	P	P	07 29 02.3	+0.2
PEA0B				pmax	pmax		
	comp=Z,61nm,1.3s						
PETK	**Petropavlovsk-**	43.78	44	P	P	07 29 02.1	+0.1
	comp=Z,3.9nm,0.6s,baz=258,slow=3.1,SNR=12						
PETK				LR	LR	07 49 23.6	
	comp=Z,196nm,20.7s,baz=255,slow=39						
	comp=Z,3.9nm,0.6s						
PETK	**Petropavlovsk-**	43.78	44	P	P	07 29 02.2	+0.2
PETK	**Petropavlovsk-**	43.78	44	P	P	07 29 02.3	+0.2
KIRV	**Kirov**	45.51	323	LR	LR	07 48 55.7	
	comp=Z,191nm,18.7s,baz=93,slow=37						
KIRV	**Kirov**	45.51	323	⇓iP	P	07 29 16.7	+1.0
GNI	**Garni**	48.23	298	LR	LR	07 54 39.1	
	comp=Z,60nm,18.5s,baz=49,slow=42						
KBZ	**Khabaz**	49.08	303	P	P	07 29 44.2	+0.4
	comp=Z,1.3nm,0.6s,baz=90,slow=7.1,SNR=5.4						
	comp=Z,1.3nm,0.6s						
KBZ	**Khabaz**	49.08	303	⇑iP	P	07 29 43.1	-0.7
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KIV	**Kislovodsk**	49.20	303	eP	P	07 29 45.8	+0.9
KIV				pmax	pmax		
	comp=Z,15nm,1.0s						
SHA1	**Shidzhatmaz**	49.25	303	⇓iP	P	07 29 45.6	+0.2
VRH	**Novokhopyorsk**	49.30	313	eP	P	07 29 43.5	-1.8
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KLMR	**Klimovskoe**	50.80	325	eP	P	07 29 55.3	-1.3
KLMR				e		07 31 11.0	
KLMR				pmax	pmax		
	comp=Z,56nm,1.5s						
VORD	**Divnogorie**	50.84	312	eP	P	07 29 55.2	-1.8
VORD				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VSR	**Storozhevoye**	50.90	313	eP	P	07 29 52.1	-5.4
VSR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LPSR	**Galich'ya Gora**	50.98	314	eP	P	07 29 56.6	-1.4
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MOS	**Moscow**	51.64	319	eP	P	07 30 01.8	-1.2
MOS				e		07 30 08.2	
MOS				pmax	pmax		
	comp=Z,33nm,0.7s						
OBN	**Obninsk**	52.26	318	⇑eP	P	07 30 07.8	+0.2
OBN				e		07 32 07.9	
OBN				ePPP	PPP	07 33 07.6	
OBN				pmax	pmax		
	comp=Z,20nm,1.4s						
OBN				MLR	MLR		
	comp=Z,130nm,15.0s						
KNRA	**Kununurra**	52.50	150		P	07 30 10.1	+0.4
KEV	**Kevo**	56.40	336	P	P	07 30 37.9	+0.4
KEV	**Kevo**	56.40	336	P	P	07 30 37.9	+0.4
KEV				pmax	pmax		
	comp=Z,162nm,1.9s						
BR131	**Keskin Array S**	56.66	299	P	P	07 30 39.9	-0.1
BR131	**Keskin Array S**	56.66	299	⇑iP	P	07 30 40.6	+0.5
BRTR	**Keskin Array B**	56.66	299	P	P	07 30 40.0	-0.1
	comp=Z,1.6nm,0.8s,baz=99,slow=7.6,SNR=7.8						
	comp=Z,1.6nm,0.8s						
BRTR	**Keskin Array B**	56.66	299	ceP	P	07 30 40.4	+0.3
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARCES	**ARCESS Array B**	56.93	336	P	P	07 30 41.4	+0.1
	comp=Z,3.7nm,0.6s,baz=77,slow=8.0,SNR=16						
ARCES				PcP	PcP	07 31 36.2	-0.4
	comp=Z,2.3nm,0.7s,baz=82,slow=2.7,SNR=3.7						
ARCES				LR	LR	07 55 51.7	
	comp=Z,108nm,18.6s,baz=275,slow=37						
	comp=Z,3.7nm,0.6s						
AKASG	**Malin Array Be**	57.20	313	P	P	07 30 43.3	-0.2
	comp=Z,2.0nm,0.4s,baz=73,slow=6.0,SNR=9.2						
AKASG				LR	LR	07 56 26.6	
	comp=Z,135nm,18.2s,baz=28,slow=37						
	comp=Z,2.0nm,0.4s						
AKASG	**Malin Array Be**	57.20	313	ceP	P	07 30 43.2	-0.3
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AKBB	**Malin Array Si**	57.20	313		P	07 30 43.4	-0.1
AKBB				IAmb	IAmb	07 30 44.4	
	comp=Z,24nm,1.4s						
AKBB	**Malin Array Si**	57.20	313	⇑iP	P	07 30 43.3	-0.2
AKBB				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIEV	**Kiev**	57.21	313		P	07 30 43.4	-0.2
KIEV				IAmb	IAmb	07 30 44.4	
	comp=Z,23nm,1.5s						
KIEV	**Kiev**	57.21	313	P	P	07 30 43.4	-0.2
KIEV				pmax	pmax		
	comp=Z,23nm,1.5s						
MMAI	**Mount Meron Ar**	57.26	291	LR	LR	07 58 07.7	
	comp=Z,65nm,18.0s,baz=112,slow=39						
FIA1	**FINESS Array S**	57.29	326	P	P	07 30 44.1	+0.1
FINES	**FINESS Array B**	57.29	326	P	P	07 30 44.3	+0.3
	comp=Z,8.8nm,0.8s,baz=88,slow=7.3,SNR=22						
FINES				LR	LR	07 54 35.8	
	comp=Z,223nm,20.6s,baz=222,slow=35						
	comp=Z,8.8nm,0.8s						
FINES	**FINESS Array B**	57.29	326	P	P	07 30 44.7	+0.7
FINES	**FINESS Array B**	57.29	326	P	P	07 30 44.7	+0.7
MNK	**Minsk**	57.32	318	i P	P	07 30 43.6	-0.7
MNK				i		07 31 37.3	
MNK				i		07 32 51.0	
MNK				i PPP	PPP	07 34 07.5	
MNK				i S	S	07 38 41.1	+0.5
MNK				i		07 40 33.1	
MNK				i SS	SS	07 42 32.1	+2.6
MNK				pmax	pmax		
	comp=Z,17nm,0.8s						
MNK				pmax	pmax		
	comp=E,17nm,0.7s						
MNK				pmax	pmax		
	comp=N,19nm,1.1s						
MNK				MLR	MLR		
	comp=E,146nm,18.0s						
MNK				MLR	MLR		
	comp=Z,218nm,17.0s						
MNK				MLR	MLR		
	comp=N,81nm,15.0s						
NACGM	**Naroch**	57.88	318	eP	P	07 30 47.2	-1.0
	comp=Z,34nm,1.0s,baz=80						
WB0	**Warramunga Arr**	58.62	146		P	07 30 54.2	+0.4
WB0				IAmb	IAmb	07 30 58.6	
	comp=Z,18nm,1.1s						
COEN	**Coen**	58.64	134	P	P	07 30 55.2	+1.2
COEN				IAmb	IAmb	07 30 59.1	
	comp=Z,17nm,1.1s						
WRAB	**Tennant Creek**	58.75	147	P	P	07 30 55.5	+0.8
WRAB	**Tennant Creek**	58.75	147	d iP	P	07 30 55.1	+0.4
WRAB				pmax	pmax		
	comp=Z,13nm,1.0s						
WRA	**Warramunga Arr**	58.75	147	P	P	07 30 55.2	+0.6
	comp=Z,6.9nm,0.6s,baz=326,slow=9.4,SNR=115						
	comp=Z,6.9nm,0.6s						
WB2	**Warramunga Arr**	58.76	147	P	P	07 30 55.4	+0.6
EIL	**Elat**	58.76	288	LR	LR	08 01 15.7	
	comp=Z,55nm,19.5s,baz=356,slow=41						
WR0	**Warramunga Arr**	58.86	146	P	P	07 30 56.2	+0.7
WR0				IAmb	IAmb	07 31 00.4	
	comp=Z,28nm,1.4s						
SPITS	**Spitsbergen Ar**	58.95	346	P	P	07 30 55.0	-0.4
	comp=Z,1.7nm,0.4s,baz=99,slow=11,SNR=9.2						
SPITS				LR	LR	07 58 26.0	
	comp=Z,85nm,18.2s,baz=134,slow=38						
	comp=Z,1.7nm,0.4s						
GAMB	**Gambell**	59.61	31	P	P	07 30 59.8	-0.3
	baz=280						
BURAR	**Bucovina Array**	60.47	310	P	P	07 31 06.6	+0.2
BUR08	**Bucovina Ar. S**	60.47	310	P	P	07 31 06.8	+0.3
BUR08				IAmb	IAmb	07 32 33.3	
	comp=Z,24nm,1.9s						
MLR	**Muntele Rosu**	60.57	308	P	P	07 31 07.1	-0.1
MLR	**Muntele Rosu**	60.57	308	P	P	07 31 07.1	-0.1
MLR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TNA	**Tin City**	60.86	28	P	P	07 31 08.1	-0.6
	baz=282						
C16K	**Lisburne Hills**	61.25	25	P	P	07 31 10.7	-0.5
	baz=283						
F14K	**Arctic Creek**	61.53	28	P	P	07 31 12.8	-0.4
	baz=284						
SPIA	**Saint Paul Isl**	61.76	38	P	P	07 31 14.6	-0.3
	baz=285						
AS31	**Alice Springs**	61.78	149		P	07 31 16.2	+0.8
ASAR	**Alice Springs**	61.78	149	P	P	07 31 16.1	+0.7
	comp=Z,2.8nm,0.4s,baz=336,slow=6.6,SNR=59						
ASAR				LR	LR	08 02 02.3	
	comp=Z,51nm,18.9s,baz=292,slow=40						
	comp=Z,2.8nm,0.4s						
ASAR	**Alice Springs**	61.78	149	P	P	07 31 16.3	+0.8
C17K	**DeLong Mountai**	61.98	25	P	P	07 31 15.6	-0.6
	baz=285						
F15K	**North Star Dit**	62.14	28	P	P	07 31 16.6	-0.7
	baz=285						
ANM	**Nome**	62.15	29	P	P	07 31 17.0	-0.4
	baz=285						
RDOG	**Red Dog Mine**	62.19	25	P	P	07 31 17.3	-0.4
	baz=285						
D17K	**Noatak River**	62.22	26	P	P	07 31 17.6	-0.2
	baz=285						
B18K	**Kokolik River**	62.23	24	P	P	07 31 17.5	-0.3
	baz=286						
A19K	**Wainwright**	62.24	23	P	P	07 31 17.6	-0.3
	baz=286						
P08K	**Saint George I**	62.28	39	P	P	07 31 18.0	-0.4
	baz=286						
STHS	**Stebnicka Huta**	62.50	313	eP	P	07 31 20.0	0.0
STHS	**Stebnicka Huta**	62.50	313	eP	P	07 31 20.0	0.0
G15K	**Niukluk**	62.58	29	P	P	07 31 20.1	-0.1
	baz=286						
C18K	**Utukok River**	62.63	24	P	P	07 31 20.7	0.0
	baz=287						
E17K	**Hotham Inlet**	62.86	26	P	P	07 31 21.9	-0.2
	baz=287,SNR=5.7						
M11K	**Mekoryuk**	62.91	34	P	P	07 31 22.6	+0.1
	baz=286						
C19K	**Lookout Ridge**	63.06	24	IAmb	IAmb	07 31 24.2	
	comp=Z,11nm,0.7s						
C19K	**Lookout Ridge**	63.06	24	P	P	07 31 24.1	+0.6
	baz=288						
G16K	**Koyuk River**	63.15	28	P	P	07 31 24.3	+0.2
	baz=287						
K13K	**Kusilvak Mount**	63.19	32	P	P	07 31 24.3	0.0
	baz=287						
E18K	**Tukpahlearik C**	63.21	26	P	P	07 31 24.1	-0.4
	baz=288						
F17K	**Baldwin Pennin**	63.27	27	P	P	07 31 24.9	+0.1
	baz=288						
H16K	**Elim**	63.42	29	P	P	07 31 25.6	-0.3
	baz=288						
J14K	**Nanvaranak Lak**	63.44	31	P	P	07 31 25.3	-0.7
	baz=288						
HFS	**Hagfors**	63.50	326	P	P	07 31 26.2	-0.3
	comp=Z,3.1nm,0.5s,baz=101,slow=6.2,SNR=11						
	comp=Z,3.1nm,0.5s						
B20K	**Meade River**	63.58	22	P	P	07 31 26.5	-0.3
	baz=290						
NIKH	**Nikolski High**	63.72	42	P	P	07 31 26.8	-1.2
	baz=288						
D19K	**Kuna River**	63.76	24	P	P	07 31 26.9	-1.2
	baz=289						
G17K	**Kiwalik Mounta**	63.79	28	P	P	07 31 28.3	0.0
	baz=289						
F18K	**Selawik**	63.83	26	P	P	07 31 28.5	0.0
	baz=289						
A22K	**Sinclair Lake**	63.92	21	P	P	07 31 29.2	+0.2
	baz=291						
D20K	**Etivluk River**	64.20	24	P	P	07 31 30.5	-0.5
	baz=291						
M13K	**Dall Lake**	64.26	33	P	P	07 31 31.4	0.0
	baz=289						
L14K	**Kuka Creek**	64.27	32	P	P	07 31 31.2	-0.2
	baz=289						
H17K	**Granite Mounta**	64.27	28	P	P	07 31 31.3	-0.2
	baz=290						
I17K	**Unalakleet**	64.30	29	P	P	07 31 31.4	-0.2
	baz=289						
NB2	**NORSAR Subarra**	64.38	327	P	P	07 31 31.6	-0.7
	comp=Z,20nm,1.1s,baz=74,slow=6.5						
NB2	**NORSAR Subarra**	64.38	327	P	P	07 31 31.6	-0.7
	baz=74,slow=6.5						
NOA	**NORSAR Array B**	64.38	327	P	P	07 31 31.6	-0.7
	comp=Z,4.9nm,0.8s,baz=71,slow=6.6,SNR=9.4						
	comp=Z,4.9nm,0.8s						
E19K	**Redstone River**	64.43	25	P	P	07 31 32.2	-0.3
	baz=291						
G18K	**Tagagawik**	64.44	27	P	P	07 31 32.8	+0.2
	baz=290						
F19K	**Shaleruckik Mo**	64.45	26	P	P	07 31 32.5	-0.1
	baz=290						
K15K	**Wolf Creek Mou**	64.47	31	P	P	07 31 33.2	+0.4
	baz=289						
NC204	**NORSAR Array S**	64.51	328	P	P	07 31 32.9	-0.3
E20K	**Nigu River**	64.51	24	P	P	07 31 32.5	-0.6
	baz=291						
B21K	**Ikpikpuk River**	64.54	22	IAmb	IAmb	07 31 33.9	
	comp=Z,10nm,0.6s						
B21K	**Ikpikpuk River**	64.54	22	P	P	07 31 32.6	-0.5
	baz=292						
J16K	**Anvik River**	64.54	30	P	P	07 31 33.2	-0.1
	baz=290						
B22K	**Teshekpuk Lake**	64.65	21	P	P	07 31 33.6	-0.2
	baz=293,SNR=6.4						
C21K	**Knifeblade Rid**	64.66	23	P	P	07 31 33.4	-0.6
	baz=292						
MORC	**Moravsky Berou**	64.67	314	P	P	07 31 35.1	+0.7
MORC				IAmb	IAmb	07 31 36.1	
	comp=Z,11nm,1.2s						
MORC	**Moravsky Berou**	64.67	314	eP	P	07 31 35.0	+0.6
MORC	**Moravsky Berou**	64.67	314	P	P	07 31 35.1	+0.7
MORC				pmax	pmax		
	comp=Z,11nm,1.2s						
L15K	**Ungalak Mounta**	64.70	32	P	P	07 31 34.0	-0.3

	baz=290						
UNV	**Unalaska Valle**	**64.77**	**41**	P	**P**	**07 31 35.0**	**+0.1**
	baz=289						
M14K	**Bethel**	**64.79**	**33**	P	**P**	**07 31 34.2**	**-0.7**
	baz=290						
H18K	**Honhosa River**	**64.81**	**28**	P	**P**	**07 31 34.5**	**-0.5**
	baz=291						
JAVC	**Velka Javorina**	**64.90**	**313**	*e*P	**P**	**07 31 37.7**	**+1.7**
G19K	**Purcell Mounta**	**64.95**	**26**	P	**P**	**07 31 35.9**	**0.0**
	baz=291						
KRLC	**Kraliky**	**65.04**	**315**	*e*P	**P**	**07 31 37.4**	**+0.6**
KRLC	**Kraliky**	**65.04**	**315**	*e*P	**P**	**07 31 37.4**	**+0.6**
F20K	**Avaraart Lake**	**65.12**	**25**	IAmb	IAmb	07 32 39.2	
	comp=Z,25nm,1.9s						
F20K	**Avaraart Lake**	**65.12**	**25**	P	**P**	**07 31 37.0**	**0.0**
	baz=292						
J17K	**VABM Dome**	**65.15**	**30**	P	**P**	**07 31 37.2**	**-0.1**
	baz=291						
N14K	**Kuskokwak Cree**	**65.20**	**34**	P	**P**	**07 31 37.0**	**-0.6**
	baz=290						
E21K	**Killik River**	**65.20**	**23**	P	**P**	**07 31 37.4**	**-0.2**
	baz=293						
DPC	**Dobruska-Polom**	**65.22**	**315**	*e*P	**P**	**07 31 39.2**	**+1.2**
DPC	**Dobruska-Polom**	**65.22**	**315**	*e*P	**P**	**07 31 39.2**	**+1.2**
MODS	**Modra-Piesok**	**65.31**	**313**	*e*P	**P**	**07 31 43.3**	**+4.7**
MODS	**Modra-Piesok**	**65.31**	**313**	*e*P	**P**	**07 31 43.3**	**+4.7**
UPC	**Upice**	**65.35**	**315**	*e*P	**P**	**07 31 40.2**	**+1.4**
UPC	**Upice**	**65.35**	**315**	*e*P	**P**	**07 31 40.2**	**+1.4**
M15K	**Kasigluk River**	**65.40**	**33**	P	**P**	**07 31 38.6**	**-0.3**
	baz=291						
VRAC	**Vranov**	**65.41**	**314**	LR	LR	08 02 46.0	
	comp=Z,206nm,20.7s,baz=321,slow=38						
VRAC	**Vranov**	**65.41**	**314**	*e*P	**P**	**07 31 40.1**	**+0.9**
H19K	**Roundabout Mou**	**65.42**	**27**	P	**P**	**07 31 38.8**	**-0.1**
	baz=292						
D22K	**Ayikyak River**	**65.46**	**23**	P	**P**	**07 31 38.5**	**-0.7**
	baz=294						
GCSA	**Galena City Sc**	**65.55**	**28**	P	**P**	**07 31 39.3**	**-0.5**
	baz=292,SNR=5.2						
L16K	**Owhat River**	**65.58**	**31**	P	**P**	**07 31 39.8**	**-0.3**
	baz=291						
KRUC	**Moravsky**	**65.62**	**314**	*e*P	**P**	**07 31 41.1**	**+0.6**
K17K	**Iditarod**	**65.72**	**30**	P	**P**	**07 31 40.4**	**-0.5**
	baz=292						
C23K	**Itkillik River**	**65.73**	**22**	P	**P**	**07 31 40.7**	**-0.2**
	baz=295						
F21K	**Alatna River**	**65.86**	**25**	IAmb	IAmb	07 31 42.9	
	comp=Z,26nm,1.6s						
F21K	**Alatna River**	**65.86**	**25**	P	**P**	**07 31 41.3**	**-0.5**
	baz=294						
N15K	**Kwethluk River**	**65.86**	**33**	P	**P**	**07 31 41.4**	**-0.5**
	baz=292						
L17K	**Donlin**	**65.94**	**31**	P	**P**	**07 31 41.9**	**-0.5**
	baz=292						
H20K	**Anotleneega Mo**	**66.04**	**27**	P	**P**	**07 31 42.3**	**-0.6**
	baz=293						
E22K	**Anaktuvuk Pass**	**66.06**	**23**	IAmb	IAmb	07 31 43.6	
	comp=Z,7.3nm,0.6s						
E22K	**Anaktuvuk Pass**	**66.06**	**23**	P	**P**	**07 31 42.5**	**-0.7**
	baz=295						
M16K	**Timber Creek**	**66.07**	**32**	P	**P**	**07 31 42.9**	**-0.3**
	baz=292						
D23K	**Nanushuk River**	**66.08**	**22**	P	**P**	**07 31 42.8**	**-0.4**
	baz=296						
J18K	**Innoko River**	**66.11**	**29**	P	**P**	**07 31 42.9**	**-0.5**
	baz=293						
FALS	**False Pass**	**66.12**	**39**	P	**P**	**07 31 43.1**	**-0.5**
	baz=291						
G21K	**Allakaket**	**66.14**	**25**	P	**P**	**07 31 43.0**	**-0.6**
	baz=294						
RONA	**Rosalia, Austr**	**66.17**	**312**	*e*P	**P**	**07 31 44.3**	**+0.1**
	comp=Z,11nm,1.4s						
F22K	**John River**	**66.20**	**24**	P	**P**	**07 31 43.3**	**-0.8**
	baz=295,SNR=13						
IMAR	**Indian Mountai**	**66.27**	**26**	P	**P**	**07 31 44.1**	**-0.3**
J19K	**Poorman**	**66.35**	**28**	IAmb	IAmb	07 31 45.9	
	comp=Z,11nm,1.0s						
J19K	**Poorman**	**66.35**	**28**	P	**P**	**07 31 44.6**	**-0.4**
	baz=294						
CONA	**Conrad Observa**	**66.36**	**313**	*e*P	**P**	**07 31 45.5**	**+0.1**
	comp=Z,8.8nm,1.2s						
O15K	**Ungalikthiuk R**	**66.36**	**34**	P	**P**	**07 31 44.9**	**-0.2**
	baz=292						
C24K	**Franklin Bluff**	**66.38**	**21**	P	**P**	**07 31 44.3**	**-0.8**
	baz=297						
TOLK	**Toolik Lake Re**	**66.59**	**23**	IAmb	IAmb	07 31 47.3	
	comp=Z,10.0nm,1.1s						
TOLK	**Toolik Lake Re**	**66.59**	**23**	P	**P**	**07 31 46.1**	**-0.4**
	baz=297,SNR=5.9						
D24K	**Happy Valley**	**66.60**	**22**	P	**P**	**07 31 46.3**	**-0.1**
	baz=297						
M17K	**Holitna River**	**66.60**	**31**	P	**P**	**07 31 46.4**	**-0.2**
	baz=293						
L18K	**Granite Mounta**	**66.61**	**30**	P	**P**	**07 31 46.2**	**-0.4**
	baz=293						
G22K	**Bettles**	**66.69**	**25**	P	**P**	**07 31 46.9**	**-0.1**
	baz=296						
H21K	**Melozitna Rive**	**66.76**	**26**	IAmb	IAmb	07 32 02.6	
	comp=Z,27nm,1.6s						
H21K	**Melozitna Rive**	**66.76**	**26**	P	**P**	**07 31 47.7**	**+0.1**
	baz=295,SNR=5.5						
ARSA	**Arzberg**	**66.82**	**312**	*i* P	**P**	**07 31 48.5**	**+0.2**
	comp=Z,6.0nm,1.2s						
E23K	**Chandalar**	**66.84**	**23**	IAmb	IAmb	07 31 48.8	
	comp=Z,10nm,0.6s						
E23K	**Chandalar**	**66.84**	**23**	P	**P**	**07 31 48.0**	**-0.2**
	baz=297,SNR=15						
CLL	**Collm**	**66.84**	**317**	*e*P	**P**	**07 31 49.0**	**+0.7**
CLL	**Collm**	**66.84**	**317**	*e*P	**P**	**07 31 49.0**	**+0.7**
J20K	**Nowinta River**	**66.87**	**28**	P	**P**	**07 31 48.1**	**-0.2**
	baz=295						
COLD	**Coldfoot**	**67.02**	**24**	IAmb	IAmb	07 31 49.8	
	comp=Z,8.8nm,0.9s						
COLD	**Coldfoot**	**67.02**	**24**	P	**P**	**07 31 48.9**	**-0.3**
	baz=297,SNR=8.4						
O16K	**Kokwok River B**	**67.02**	**33**	P	**P**	**07 31 49.1**	**-0.2**
	baz=293						
N17K	**Nushagak Hills**	**67.06**	**32**	P	**P**	**07 31 49.5**	**-0.1**
	baz=294						
H22K	**Ishtalitna Cre**	**67.19**	**26**	P	**P**	**07 31 50.7**	**+0.4**
	baz=296						
E24K	**Your Creek**	**67.21**	**23**	P	**P**	**07 31 50.5**	**0.0**
	baz=298						
K20K	**Telida**	**67.24**	**29**	P	**P**	**07 31 50.1**	**-0.6**
	baz=295						
I21K	**Tanana**	**67.28**	**26**	P	**P**	**07 31 51.0**	**+0.2**
	baz=296						
M18K	**Stony River**	**67.28**	**31**	P	**P**	**07 31 51.2**	**+0.3**
	baz=294						
D25K	**Kavik River**	**67.29**	**21**	IAmb	IAmb	07 31 52.1	
	comp=Z,13nm,1.3s						
D25K	**Kavik River**	**67.29**	**21**	P	**P**	**07 31 50.8**	**-0.1**
	baz=299						
G23K	**Bananza Creek**	**67.31**	**25**	P	**P**	**07 31 50.9**	**-0.2**
	baz=297						
KHC	**Kasperske Hory**	**67.32**	**315**	*e*P	**P**	**07 31 52.0**	**+0.5**
KHC	**Kasperske Hory**	**67.32**	**315**	*e*P	**P**	**07 31 52.0**	**+0.5**
SOKA	**Soboth**	**67.34**	**312**	*i* P	**P**	**07 31 52.0**	**+0.2**
	comp=Z,8.2nm,1.0s						
GEC2	**GERESS Array S**	**67.35**	**314**	IAmb	IAmb	07 31 53.4	
	comp=Z,16nm,1.2s						
GERES	**GERESS Array B**	**67.35**	**314**	P	**P**	**07 31 52.2**	**+0.4**
	comp=Z,1.7nm,0.6s,baz=46,slow=5.8,SNR=10						
GERES				LR	LR	08 03 45.7	
	comp=Z,142nm,18.8s,baz=293,slow=38						
	comp=Z,1.7nm,0.6s						
MOA	**Molln**	**67.38**	**313**	*i* P	**P**	**07 31 52.5**	**+0.6**
	comp=Z,8.3nm,1.1s						
O17K	**Koliganek Bris**	**67.41**	**33**	P	**P**	**07 31 51.5**	**-0.3**
	baz=294						
L19K	**White Mountain**	**67.41**	**30**	P	**P**	**07 31 51.3**	**-0.5**
	baz=295						
C26K	**Camden Bay**	**67.44**	**20**	P	**P**	**07 31 51.8**	**0.0**
	baz=300						
S14K	**Fog Glacier**	**67.61**	**37**	P	**P**	**07 31 53.0**	**-0.2**
	baz=293						
F24K	**Squaw Lake**	**67.67**	**23**	P	**P**	**07 31 53.4**	**0.0**
	baz=299						
CHUM	**Lake Minchumin**	**67.72**	**28**	P	**P**	**07 31 53.6**	**0.0**
	baz=296						
MLY	**Manley**	**67.82**	**26**	IAmb	IAmb	07 31 56.6	
	comp=Z,5.3nm,0.6s						
MLY	**Manley**	**67.82**	**26**	P	**P**	**07 31 54.2**	**-0.1**
	baz=297,SNR=6.1						
BIOA	**Bad Ischl, Aus**	**67.83**	**313**	*e*P	**P**	**07 31 54.8**	**+0.1**
	comp=Z,9.9nm,1.0s						
H23K	**Yukon River**	**67.89**	**25**	IAmb	IAmb	07 31 55.9	
	comp=Z,8.9nm,0.8s						
H23K	**Yukon River**	**67.89**	**25**	P	**P**	**07 31 54.9**	**+0.1**
	baz=298,SNR=6.6						
C27K	**Jago River**	**67.95**	**21**	P	**P**	**07 31 55.1**	**+0.1**
	baz=301,SNR=16						
P17K	**Kvichak River**	**67.95**	**33**	P	**P**	**07 31 54.8**	**-0.4**
	baz=295						
Q16K	**King Salmon**	**68.07**	**34**	P	**P**	**07 31 55.3**	**-0.6**
	baz=295						
R16K	**Pilot Point**	**68.08**	**35**	P	**P**	**07 31 56.1**	**+0.1**
	baz=294						
E25K	**Arctic Village**	**68.14**	**22**	P	**P**	**07 31 56.5**	**+0.1**
	baz=300						
BPAW	**Bear Paw Mtn.**	**68.15**	**27**	P	**P**	**07 31 55.4**	**-1.0**
	baz=297						
N19K	**Bonanza Creek**	**68.15**	**31**	P	**P**	**07 31 56.4**	**-0.2**
	baz=296						
CHNA	**Chernabura Isl**	**68.17**	**38**	P	**P**	**07 31 56.0**	**-0.6**
	baz=294						
G24K	**Hadweenzic Riv**	**68.21**	**24**	IAmb	IAmb	07 31 58.0	
	comp=Z,11nm,0.8s						
G24K	**Hadweenzic Riv**	**68.21**	**24**	P	**P**	**07 31 57.0**	**+0.3**
	baz=299						
PPLA	**Purkeypile**	**68.21**	**29**	P	**P**	**07 31 57.2**	**+0.2**
	baz=297						
O18K	**Koktuh Hills**	**68.24**	**32**	P	**P**	**07 31 56.8**	**-0.2**
	baz=295						
KBA	**Koelnbreinsper**	**68.26**	**313**	*e*P	**P**	**07 31 57.0**	**-0.6**
	comp=Z,3.6nm,0.6s						
M20K	**Styx River**	**68.27**	**30**	P	**P**	**07 31 57.1**	**-0.2**
	baz=296						
I23K	**Minto, Yukon-K**	**68.28**	**26**	IAmb	IAmb	07 31 59.4	
	comp=Z,5.4nm,0.6s						
I23K	**Minto, Yukon-K**	**68.28**	**26**	P	**P**	**07 31 57.1**	**0.0**
	baz=298						
F25K	**Christian Rive**	**68.39**	**23**	IAmb	IAmb	07 31 59.0	
	comp=Z,7.2nm,0.8s						
F25K	**Christian Rive**	**68.39**	**23**	P	**P**	**07 31 57.8**	**-0.1**
	baz=300						
P18K	**Big Mountain,**	**68.43**	**33**	P	**P**	**07 31 58.0**	**-0.3**
	baz=296						
H24K	**Noodor Dome**	**68.49**	**25**	IAmb	IAmb	07 31 59.9	
	comp=Z,23nm,1.6s						
H24K	**Noodor Dome**	**68.49**	**25**	P	**P**	**07 31 58.1**	**-0.5**
	baz=299						
O19K	**Port Alsworth**	**68.50**	**32**	P	**P**	**07 31 58.5**	**0.0**
	baz=296						
LESA	**Schwarzleotal**	**68.54**	**313**	*i* P	**P**	**07 31 59.7**	**+0.5**
	comp=Z,8.8nm,0.8s						
Q17K	**Contact Creek**	**68.61**	**34**	P	**P**	**07 31 58.7**	**-0.8**
	baz=295						
R17L	**Mt. Peulik Vol**	**68.65**	**35**	P	**P**	**07 31 59.5**	**-0.1**
	baz=295						
G25K	**Bearman Lake**	**68.65**	**24**	P	**P**	**07 31 59.0**	**-0.5**
	baz=300,SNR=10						
NEA2	**Nenana**	**68.65**	**26**	P	**P**	**07 31 59.1**	**-0.4**
	baz=299						
TRF	**Thorofare Moun**	**68.72**	**28**	P	**P**	**07 31 59.7**	**-0.5**
	baz=298						
F26K	**Sheenjek River**	**68.83**	**22**	P	**P**	**07 32 00.0**	**-0.6**
	baz=302						
Q18K	**Katmai Hardscr**	**68.86**	**33**	P	**P**	**07 32 00.6**	**-0.5**
	baz=296						
SKT	**Skwentna**	**68.90**	**29**	P	**P**	**07 32 01.0**	**-0.1**
D27M	**Malcolm River**	**68.97**	**20**	IAmb	IAmb	07 32 02.8	
	comp=Z,7.6nm,0.8s						
D27M	**Malcolm River**	**68.97**	**20**	P	**P**	**07 32 01.3**	**-0.2**
	baz=304						
COLA	**College**	**68.97**	**26**	P	**P**	**07 32 01.4**	**-0.1**
COLA	**College**	**68.97**	**26**	P	**P**	**07 32 01.4**	**-0.1**
COLA				pmax	pmax		
	comp=Z,15nm,0.6s						
COLA	**College**	**68.97**	**26**	P	**P**	**07 32 01.3**	**-0.1**
	baz=300						
H25L	**Birch Creek**	**69.00**	**24**	P	**P**	**07 32 01.9**	**+0.2**
	baz=301						
POKR	**Poker Plat Res**	**69.01**	**25**	P	**P**	**07 32 02.1**	**+0.3**
POKR	**Poker Plat Res**	**69.01**	**25**	P	**P**	**07 32 01.4**	**-0.3**
	baz=300						
MCK	**McKinley**	**69.12**	**27**	P	**P**	**07 32 02.8**	**+0.3**
	baz=299						
CUT	**Chulitna**	**69.23**	**29**	P	**P**	**07 32 02.8**	**-0.3**
	baz=298						
G26K	**Porcupine Rive**	**69.34**	**23**	P	**P**	**07 32 03.4**	**-0.4**
	baz=302						
Q19K	**Cape Douglas,**	**69.37**	**33**	P	**P**	**07 32 04.0**	**-0.1**
	baz=297						
E27K	**Coleen River**	**69.37**	**21**	P	**P**	**07 32 03.8**	**-0.2**
	baz=304						
IL31		**69.38**	**26**	IAmb	IAmb	07 32 04.2	
	comp=Z,16nm,1.5s						
ILAR	**Eielson Array**	**69.38**	**26**	P	**P**	**07 32 02.9**	**-1.2**
	comp=Z,1.9nm,0.6s,baz=292,slow=4.5,SNR=33						
ILAR				PP	**PP**	**07 34 37.0**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=291,slow=7.5,SNR=4.3						
	comp=Z,1.9nm,0.6s						
SUA	**Susitna One**	**69.47**	**30**	P	**P**	**07 32 04.6**	**-0.2**
SUA	**Susitna One**	**69.47**	**30**	P	**P**	**07 32 04.6**	**-0.2**
	baz=298						
SQTA	**Sankt Quirin**	**69.53**	**313**	*i* P	**P**	**07 32 05.6**	**+0.1**
	comp=Z,5.4nm,0.5s						
HDA	**Harding Lake**	**69.54**	**26**	P	**P**	**07 32 05.0**	**-0.1**
	baz=300						
MOTA	**Moosalm**	**69.55**	**314**	*i* P	**P**	**07 32 04.8**	**-0.8**
	comp=Z,13nm,1.2s						
D28M	**Stokes Point**	**69.57**	**20**	P	**P**	**07 32 05.0**	**-0.1**
	baz=306						
M22K	**Willow**	**69.60**	**29**	P	**P**	**07 32 05.4**	**0.0**
	baz=299						
R18K	**Karluk**	**69.60**	**34**	P	**P**	**07 32 05.3**	**-0.2**
	baz=297						
CAPN	**Captain Cook N**	**69.63**	**30**	P	**P**	**07 32 05.2**	**-0.4**
	baz=298						
WAT1	**Susitna Watana**	**69.72**	**28**	P	**P**	**07 32 05.4**	**-0.8**
	baz=300						
E28M	**Babbage River**	**69.76**	**21**	IAmb	IAmb	07 32 07.5	
	comp=Z,12nm,0.7s						
E28M	**Babbage River**	**69.76**	**21**	P	**P**	**07 32 06.1**	**-0.3**
	baz=305,SNR=14						
CHIR	**Chirikof Islan**	**69.81**	**36**	P	**P**	**07 32 06.2**	**-0.6**
	baz=296						
FETA	**Feichten**	**69.92**	**313**	*e*P	**P**	**07 32 07.7**	**-0.2**
	comp=Z,14nm,1.1s						
HOM	**Homer**	**69.94**	**32**	P	**P**	**07 32 06.6**	**-1.0**
	baz=298						
J25K	**Salcha River,**	**70.02**	**25**	P	**P**	**07 32 07.1**	**-1.0**
	baz=302						
DHY	**Denali Highway**	**70.06**	**27**	P	**P**	**07 32 07.4**	**-1.1**
	baz=300						
FDMO	**Fiordimonte**	**70.07**	**309**	P	**P**	**07 32 09.4**	**+0.7**
FDMO				IAmb	IAmb	07 32 10.4	
	comp=Z,12nm,1.0s						
RC01	**Rabbit Creek A**	**70.08**	**30**	P	**P**	**07 32 07.2**	**-1.2**
	baz=299						
PMR	**Palmer**	**70.09**	**29**	P	**P**	**07 32 07.7**	**-0.7**
	baz=300						
Q20K	**Shuyak Island**	**70.09**	**33**	P	**P**	**07 32 07.8**	**-0.7**
	baz=298						
G27K	**Doyon Strip**	**70.12**	**23**	P	**P**	**07 32 08.4**	**-0.2**
	baz=304						
WAT6	**Susitna Watana**	**70.16**	**28**	P	**P**	**07 32 08.1**	**-1.0**
	baz=300						
SII	**Sitkinak Islan**	**70.19**	**35**	P	**P**	**07 32 08.3**	**-0.9**
	baz=297						
F28M	**Old Crow**	**70.23**	**21**	IAmb	IAmb	07 32 10.0	
	comp=Z,8.6nm,0.9s						
F28M	**Old Crow**	**70.23**	**21**	P	**P**	**07 32 09.0**	**-0.3**
	baz=305,SNR=9.9						
K24K	**Donnelly Dome**	**70.30**	**26**	P	**P**	**07 32 09.4**	**-0.4**
	baz=302						
BRSE	**Bradley Lake S**	**70.30**	**31**	P	**P**	**07 32 08.8**	**-1.0**
	baz=299						
SML	**Sawmill**	**70.31**	**29**	P	**P**	**07 32 09.4**	**-0.5**
	baz=300						
OHAK	**Old Harbor**	**70.32**	**34**	P	**P**	**07 32 08.9**	**-1.0**
	baz=298						
E29M	**Blow River**	**70.38**	**20**	IAmb	IAmb	07 32 11.5	
	comp=Z,18nm,1.1s						
E29M	**Blow River**	**70.38**	**20**	P	**P**	**07 32 10.0**	**-0.1**
	baz=307,SNR=14						
O22K	**Cooper Landing**	**70.39**	**30**	P	**P**	**07 32 10.0**	**-0.3**
	baz=299						
KDAK	**Kodiak Island**	**70.39**	**34**	P	**P**	**07 32 10.2**	**-0.2**
	baz=298						
I26K	**Coal Creek Min**	**70.45**	**24**	IAmb	IAmb	07 32 11.3	
	comp=Z,11nm,0.7s						
I26K	**Coal Creek Min**	**70.45**	**24**	P	**P**	**07 32 11.2**	**+0.6**
	baz=303,SNR=8.6						
KNK	**Knik Glacier**	**70.46**	**29**	P	**P**	**07 32 10.6**	**-0.1**
	baz=300						
H27K	**Steamboat Moun**	**70.49**	**23**	IAmb	IAmb	07 32 12.4	
	comp=Z,12nm,0.7s						
H27K	**Steamboat Moun**	**70.49**	**23**	P	**P**	**07 32 11.2**	**+0.3**
	baz=304						
M23K	**Glacier View**	**70.57**	**29**	P	**P**	**07 32 11.2**	**-0.2**
	baz=301						
RIDG	**Independent Ri**	**70.68**	**26**	P	**P**	**07 32 11.6**	**-0.5**
	baz=302						
SEW	**Seward**	**70.69**	**31**	P	**P**	**07 32 12.2**	**+0.1**
	baz=300						
SCM	**Sheep Creek Mo**	**70.71**	**28**	P	**P**	**07 32 12.6**	**+0.3**
	baz=301						
J26L	**Joseph Creek**	**70.74**	**25**	P	**P**	**07 32 12.1**	**-0.4**
	baz=303						
PWL	**Port Wells**	**70.79**	**30**	P	**P**	**07 32 12.9**	**+0.1**
	baz=300						
I27K	**Kandik River**	**70.81**	**24**	P	**P**	**07 32 13.4**	**+0.5**
	baz=304						
PAX	**Paxson**	**70.86**	**27**	P	**P**	**07 32 12.7**	**-0.5**
	baz=302						
SCRK	**Sand Creek**	**70.88**	**26**	IAmb	IAmb	07 32 13.7	
	comp=Z,12nm,0.8s						
SCRK	**Sand Creek**	**70.88**	**26**	P	**P**	**07 32 12.8**	**-0.5**
	baz=303,SNR=11						
M24K	**Tolsona, Glenn**	**71.03**	**28**	P	**P**	**07 32 14.6**	**+0.3**
	baz=302						
A36M	**Sachs Harbour**	**71.20**	**14**	P	**P**	**07 32 15.2**	**+0.1**
	baz=317,SNR=16						
G29M	**Pine Creek**	**71.23**	**22**	IAmb	IAmb	07 32 15.8	
	comp=Z,11nm,0.8s						
G29M	**Pine Creek**	**71.23**	**22**	P	**P**	**07 32 15.5**	**+0.1**
	baz=307						
HARP	**HAARP**	**71.28**	**27**	P	**P**	**07 32 16.1**	**+0.3**
	baz=302						
GLI	**Glacier Island**	**71.30**	**29**	P	**P**	**07 32 16.6**	**+0.7**
	baz=301						
KLU	**Klutina**	**71.46**	**28**	P	**P**	**07 32 17.4**	**+0.5**
	baz=302,SNR=5.8						
I28M	**Miner Creek**	**71.48**	**23**	P	**P**	**07 32 17.2**	**+0.3**
	baz=306						
F30M	**Barrier River**	**71.48**	**20**	P	**P**	**07 32 17.1**	**+0.3**
	baz=309						
H29M	**Whitestone**	**71.54**	**22**	P	**P**	**07 32 17.0**	**-0.2**
	baz=307						
K27K	**Chicken**	**71.55**	**25**	P	**P**	**07 32 17.7**	**+0.4**
	baz=304						
P23K	**Montague Islan**	**71.63**	**30**	P	**P**	**07 32 18.1**	**+0.3**
	baz=301						
L26K	**Log Cabin Wild**	**71.64**	**26**	P	**P**	**07 32 18.0**	**+0.1**
	baz=304						
INK	**Inuvik**	**71.70**	**19**	IAmb	IAmb	07 32 18.8	
	comp=Z,13nm,0.7s						
INK	**Inuvik**	**71.70**	**19**	P	**P**	**07 32 18.1**	**0.0**
	baz=310,SNR=13						
G30M	**tAoh Zraii Nji**	**71.75**	**21**	P	**P**	**07 32 18.1**	**-0.4**
	baz=308,SNR=28						
N25K	**Chitina, Valde**	**71.94**	**28**	P	**P**	**07 32 19.2**	**-0.5**
	baz=303						
EPYK	**Eagle Plains**	**71.97**	**22**	IAmb	IAmb	07 32 19.9	
	comp=Z,11nm,0.6s						
EPYK	**Eagle Plains**	**71.97**	**22**	P	**P**	**07 32 19.3**	**-0.5**
	baz=308,SNR=8.0						
EYAK	**Cordova Ski Ar**	**72.04**	**29**	P	**P**	**07 32 20.4**	**+0.2**
	baz=302						
I29M	**Ogilvie Camp,**	**72.08**	**23**	P	**P**	**07 32 20.5**	**0.0**
	baz=307						
M26K	**Nabesna, AK**	**72.12**	**27**	P	**P**	**07 32 21.0**	**+0.2**
	baz=304						
L27K	**Beaver Creek,**	**72.19**	**26**	P	**P**	**07 32 21.4**	**+0.2**
	baz=305						
F31M	**Tsiigehtchic**	**72.20**	**20**	IAmb	IAmb	07 32 21.2	
	comp=Z,11nm,0.7s						
F31M	**Tsiigehtchic**	**72.20**	**20**	P	**P**	**07 32 20.9**	**-0.2**
	baz=310,SNR=11						
BCAR	**Beaver Creek A**	**72.20**	**26**	P	**P**	**07 32 21.6**	**+0.3**
BMRM	**Bremner River**	**72.28**	**29**	P	**P**	**07 32 21.8**	**-0.1**
	baz=303						
STKA	**Stephens Creek**	**72.29**	**147**	P	**P**	**07 32 22.2**	**+0.2**
	comp=Z,3.8nm,0.8s,baz=320,slow=4.2,SNR=7.7						
	comp=Z,3.8nm,0.8s						
G31M	**Satah River**	**72.38**	**21**	IAmb	IAmb	07 32 22.9	
	comp=Z,13nm,0.7s						
G31M	**Satah River**	**72.38**	**21**	P	**P**	**07 32 21.6**	**-0.6**
	baz=310,SNR=11						
DAWY	**Dawson**	**72.49**	**24**	P	**P**	**07 32 22.6**	**-0.4**
DAWY				IAmb	IAmb	07 32 23.5	
	comp=Z,8.5nm,0.8s						
DAWY	**Dawson**	**72.49**	**24**	P	**P**	**07 32 23.1**	**+0.1**
	baz=307,SNR=7.6						
M27K	**Edge Creek, AK**	**72.58**	**27**	P	**P**	**07 32 23.6**	**-0.1**
	baz=305						
J29N	**Klondike Camp**	**72.66**	**24**	IAmb	IAmb	07 32 25.4	
	comp=Z,34nm,1.4s						
J29N	**Klondike Camp**	**72.66**	**24**	P	**P**	**07 32 24.3**	**+0.3**
	baz=308,SNR=6.7						
MCARA	**McCarthy VSAT**	**72.69**	**28**	P	**P**	**07 32 24.5**	**+0.4**
	baz=304						
I30M	**Mount Dempster**	**72.80**	**23**	IAmb	IAmb	07 32 25.2	
	comp=Z,9.1nm,0.8s						
I30M	**Mount Dempster**	**72.80**	**23**	P	**P**	**07 32 24.9**	**0.0**
	baz=309						
BVCY	**Beaver Creek**	**72.93**	**26**	P	**P**	**07 32 25.6**	**0.0**
	baz=306						
KAIM	**Kayak Island**	**72.94**	**29**	P	**P**	**07 32 25.6**	**-0.1**
	baz=304						
CRQE	**Cirque**	**73.02**	**28**	P	**P**	**07 32 25.9**	**-0.4**
	baz=305						
H31M	**Peel River**	**73.08**	**22**	P	**P**	**07 32 26.2**	**-0.2**
	baz=310						
J30M	**Hart River**	**73.23**	**23**	P	**P**	**07 32 27.3**	**-0.1**
	baz=309,SNR=8.1						
K29M	**Barlow Dome**	**73.28**	**24**	IAmb	IAmb	07 32 29.0	
	comp=Z,10nm,0.8s						
K29M	**Barlow Dome**	**73.28**	**24**	P	**P**	**07 32 27.6**	**-0.1**
	baz=308,SNR=8.7						
C36M	**Paulatuk**	**73.42**	**16**	P	**P**	**07 32 27.9**	**-0.4**
	baz=318,SNR=24						
YUK3	**Moose Creek**	**73.46**	**27**	P	**P**	**07 32 29.7**	**+0.7**
	baz=306						
L29M	**L29M**	**73.52**	**25**	IAmb	IAmb	07 32 30.6	
	comp=Z,24nm,1.1s						
L29M	**L29M**	**73.52**	**25**	P	**P**	**07 32 29.6**	**+0.5**
	baz=308						
CTG	**Chitna Glacier**	**73.60**	**28**	P	**P**	**07 32 29.9**	**+0.2**
	baz=306						
EKA	**Eskdalemuir Ar**	**73.68**	**325**	P	**P**	**07 32 30.2**	**0.0**
	comp=Z,2.1nm,0.7s,baz=91,slow=4.2,SNR=2.3						
	comp=Z,2.1nm,0.7s						
M29M	**Somme Creek**	**73.81**	**26**	P	**P**	**07 32 31.7**	**+0.8**
	baz=308						
MAYO	**Mayo, Yukon**	**74.00**	**24**	IAmb	IAmb	07 32 32.8	
	comp=Z,16nm,0.7s						
MAYO	**Mayo, Yukon**	**74.00**	**24**	P	**P**	**07 32 32.6**	**+0.7**
	baz=310						
YUK8	**Steele Glacier**	**74.02**	**27**	P	**P**	**07 32 32.7**	**+0.4**
	baz=307						
O28M	**Mount Upton**	**74.16**	**27**	P	**P**	**07 32 33.6**	**+0.3**
	baz=307						
M30M	**Minto, Yukon**	**74.33**	**25**	P	**P**	**07 32 34.4**	**+0.5**
	baz=309						
YUK4	**Talbot Arm**	**74.41**	**26**	P	**P**	**07 32 34.2**	**-0.4**
	baz=308						
PINM	**Pinnacle**	**74.55**	**28**	P	**P**	**07 32 34.9**	**-0.3**
	baz=307						
YUK6	**Outpost Mounta**	**74.77**	**27**	P	**P**	**07 32 36.7**	**+0.1**
	baz=308						
N30M	**Aishikik Lake**	**74.93**	**26**	P	**P**	**07 32 37.7**	**+0.3**
	baz=309						
O29M	**Mount Kennedy**	**75.08**	**27**	P	**P**	**07 32 38.7**	**+0.3**
	baz=308						
BORG	**Borgarnes**	**75.11**	**339**	LR	LR	08 09 44.4	
	comp=Z,58nm,18.1s,baz=131,slow=39						
HYT	**Haines Junctio**	**75.17**	**27**	P	**P**	**07 32 39.3**	**+0.4**
	baz=309						
N31M	**Braeburn, Yuko**	**75.39**	**25**	IAmb	IAmb	07 32 41.4	
	comp=Z,14nm,0.7s						
N31M	**Braeburn, Yuko**	**75.39**	**25**	P	**P**	**07 32 40.4**	**+0.3**
	baz=310						
M31M	**Drury Creek, Y**	**75.43**	**24**	P	**P**	**07 32 40.4**	**+0.2**
	baz=311						
O30N	**Mendenhall**	**75.74**	**26**	IAmb	IAmb	07 32 43.5	
	comp=Z,13nm,0.8s						
O30N	**Mendenhall**	**75.74**	**26**	P	**P**	**07 32 42.2**	**+0.2**
	baz=310,SNR=6.0						
P30M	**Million Dollar**	**75.83**	**27**	P	**P**	**07 32 42.5**	**-0.1**
	baz=310						
P29M	**Windy Craggy**	**75.83**	**28**	P	**P**	**07 32 42.8**	**+0.2**
	baz=309						

KEST	Kesra	75.94	303	P	P	07 32 44.6	+0.9
	comp=Z,4.1nm,0.7s,baz=90,slow=2.0,SNR=1.9						
	comp=Z,4.1nm,0.7s						
WHY	Whitehorse	76.27	26	P	P	07 32 45.0	-0.1
	baz=311						
PLBC	Pleasant Camp	76.48	27	P	P	07 32 46.3	0.0
	baz=310						
N32M	Quiet Lake	76.59	25	P	P	07 32 47.0	+0.1
	baz=312						
SKAG	Skagway	76.89	27	P	P	07 32 48.7	+0.3
	baz=311						
P33M	Teslin, Yukon	77.33	25	P	P	07 32 51.1	0.0
	baz=313						
P32M	Atlin	77.42	26	P	P	07 32 51.5	-0.1
	baz=312						
S32K	Killisnoo	78.50	28	P	P	07 32 57.4	-0.1
	baz=312						
R33M	Jennings River	78.57	25	P	P	07 32 58.1	+0.1
	baz=314						
WTLY	Watson Lake, Y	78.84	24	P	P	07 32 59.8	+0.4
	baz=316,SNR=6.6						
S34M	Telegraph Cree	79.55	27	P	P	07 33 03.4	+0.1
	baz=314						
SFJD	Kangerlussuaq	79.94	350	LR	LR	08 10 30.3	
	comp=Z,100nm,18.2s,baz=90,slow=37						
LIRD	Liard River Hi	80.28	24	P	P	07 33 07.3	+0.1
	baz=318						
KOTAN	Kotaneelee Air	80.42	22	P	P	07 33 08.2	+0.2
	baz=320						
T35M	Bob Quinn	80.55	27	P	P	07 33 09.5	+0.7
	baz=315						
TOAD	Toad River Com	81.00	24	P	P	07 33 11.1	-0.1
	baz=319						
V35K	Ketchikan	81.17	29	P	P	07 33 12.6	+0.6
	baz=314						
YKAW3	Yellowknife Wh	81.18	17	IAmb	IAmb	07 33 12.9	
	comp=Z,29nm,1.4s						
YKA	Yellowknife Ar	81.23	17	P	P	07 33 12.2	0.0
	comp=Z,4.3nm,0.7s,baz=325,slow=5.7,SNR=52						
	comp=Z,4.3nm,0.7s						
YKA	Yellowknife Ar	81.23	17	P	P	07 33 12.1	-0.2
YKAW1	Yellowknife Wh	81.28	17	IAmb	IAmb	07 33 13.4	
	comp=Z,16nm,1.2s						
ESDC	Sonseca Array	82.84	312	P	P	07 33 21.9	+0.7
	comp=Z,0.4nm,0.5s,baz=66,slow=4.8,SNR=4.3						
	comp=Z,0.4nm,0.5s						
MDT	Midelt	87.25	307	LR	LR	08 16 24.3	
	comp=Z,38nm,18.6s,baz=3.0,slow=38						
EDM	Edmonton	89.47	22	IAmb	IAmb	07 33 55.2	
	comp=Z,12nm,0.9s						
E07A	Sunnyside	92.65	29	IAmb	IAmb	07 34 09.9	
	comp=Z,4.1nm,0.8s						
SCHQ	Schefferville	93.64	355	P	P	07 34 12.7	-0.2
	comp=Z,5.2nm,0.8s,baz=35,slow=4.7,SNR=5.8						
	comp=Z,5.2nm,0.8s						
SYO	Syowa Base	110.73	200	⇓*e*pPdiff	pPdif	07 35 34.4	+2.5
TXAR	Lajitas Array	113.89	27	PKiKP	PKiKP	07 39 35.9	-0.2
	comp=Z,0.3nm,0.5s,baz=134,slow=0.3,SNR=7.8						
TXAR				PKKPbc	PKKPbc	07 50 17.0	-0.7
	comp=Z,0.5nm,1.0s,baz=188,slow=3.3,SNR=3.4						
QSPA	South Pole Qui	121.31	180	PKP	PKPdf	07 39 48.2	-0.8
	comp=Z,2.8nm,0.9s,baz=285,slow=1.5,SNR=6.0						
SNAA	Sanae	124.98	202	PKP	PKPdf	07 39 54.9	-0.9
	comp=Z,1.4nm,0.9s,baz=36,slow=19,SNR=2.6						
ROSC	El Rosal	143.80	358	PKP	PKPbc	07 40 30.6	0.0
	comp=Z,3.6nm,0.4s,baz=63,slow=4.5,SNR=2.4						
PAYG	Puerto Ayora	146.35	27		PKPbc	07 40 37.2	-1.0
MACA	Manacapuru-AM	148.42	330	PKPbc	PKPdf	07 40 41.3	+0.8
LPAZ	La Paz	163.32	334	PKP	PKPdf	07 40 59.9	-0.8
	comp=Z,0.8nm,0.9s,baz=16,slow=5.9,SNR=3.8						
LPAZ				PKPab	PKPab	07 41 49.6	-1.5
	comp=Z,0.3nm,0.5s,baz=27,slow=6.8,SNR=1.2						
PLCA	Paso Flores	169.92	203	PKP	PKPdf	07 41 04.8	+0.4
	comp=Z,1.2nm,1.0s,baz=94,slow=3.7,SNR=2.9						
PLCA				PKPab	pPKPab	07 42 20.6	-1.7
	comp=Z,1.6nm,1.0s,baz=280,slow=8.9,SNR=3.2						

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*ASRS **09** 07:24:22.0±0.8, 53°.78N×91°.09E, h0^{km}, M3.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 09 07:24:28.4±3.4**, 53°.72N×90°.69E, h0**^{km}**, mbtmp3.4**/3**, ML3.0**/3**, Error ellipse: s-maj=28.3km s-min=23.8km az=43.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZALV	Zalesovo Beam	3.49	276	Pn	Pn	07 25 24.9	+1.1
	2.2nm,0.3s,baz=90,slow=15,SNR=15						
ZALV				Lg	Lg	07 26 19.2	
	2.1nm,0.3s,baz=90,slow=23,SNR=4.0						
	4.6nm,0.3s						
KURBB	Kurchatov Arra	8.09	252	Pn	Pn	07 26 26.9	-0.1
	0.3nm,0.3s,baz=64,slow=14,SNR=6.5						
KURBB				Sn	Sn	07 27 56.7	-2.4
	baz=69,slow=27						
	1.3nm,0.3s						
MKAR	Makanchi Array	8.77	221	Pn	Pn	07 26 36.6	+0.3
	0.4nm,0.3s,baz=36,slow=13,SNR=7.1						
MKAR				Sn	Sn	07 28 16.6	+0.8
	0.2nm,0.3s,baz=34,slow=21,SNR=1.8						
MKAR				Lg	Lg	07 29 04.5	
	0.2nm,0.3s,baz=32,slow=28,SNR=2.5						
	1.0nm,0.5s						
SONM	Songino Array	11.54	114	Lg	Lg	07 30 22.3	
	0.1nm,0.3s,baz=307,slow=27,SNR=8.9						
I34MN	SONGINO INFRAS	11.57	114	I	I	08 30 30.0	
	baz=304,slow=318,SNR=1.2						
BVAR	Borovoye Array	12.14	275	Sn	Sn	07 29 33.8	-4.7
	baz=71,slow=26,SNR=1.4						

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*NOU **09** 07:39:35.8, 37°.16S×179°.74E, h0^{km}, MLv4.1/8, Off E. Coast of N. Island, N.Z.*

*IDC **09** 07:39:41.9±2.6, 36°.86S×178°.86E, h0^{km}, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=62.4km s-min=38.2km az=133.0*

*WEL **09** 07:39:45.9±0.9, 37°S±4°×17°9E±°, h12^{km}, M3.5/18, ML3.5/18, MLv3.5/18, Error ellipse: s-maj=9.5km s-min=4.7km az=84.6, confirmed*

*NEIC **09** 07:39:47.8±0.5, 37°.23S±0°.09×178°.8E±0°.1, h36^{km}±12^{km}, mb4.2/8, Error ellipse: s-maj=18.2km s-min=5.3km az=133.0*

ISC 09 07:39:45.4±1.9**, 37°.20S**±0°.05×**178°.97E**±0°.08**, h19**^{km}±9^{km}**, n89, σ1.^{s}08**/84**, mb4.1**/7**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ECLS	East Cape Ligh	0.59	214	P	Pg	07 39 58.8	+1.5
MXZ	Matakaoa Point	0.64	235		Pg	07 39 58.1	0.0
MXZ					Sg	07 40 06.1	-0.6
MXZ	Matakaoa Point	0.64	235	P	Pg	07 39 57.8	-0.3
MXZ	Matakaoa Point	0.64	235	P	Pg	07 39 57.9	-0.2
MXZ				S	Sg	07 40 05.7	-0.9
TDHS	Te Araroa Dist	0.65	228	P	Pg	07 39 58.3	0.0
TDHS				S	Sb	07 40 08.5	+1.8
WMGZ	Waiomatatini S	0.76	215	P	Pg	07 40 01.4	+1.0
WMGZ				S	Sb	07 40 13.0	+2.9
PUZ	Puketiti	1.04	213	P	Pg	07 40 04.9	-0.7
PUZ				S	Sg	07 40 18.5	-0.8
RUGZ	Raukumara Rang	1.28	233	P	Pn	07 40 09.0	+0.6
CNGZ	Carnagh Statio	1.42	205	P	Pn	07 40 10.7	+0.5
TKGZ	Te Karaka	1.52	215	P	Pn	07 40 11.5	-0.1
TKGZ				S	Sn	07 40 30.7	-0.2
WHRZ	Whale Island	1.71	247	P	Pn	07 40 14.5	+0.2
RIGZ	Rimuhau	1.78	212	P	Pn	07 40 14.7	-0.6
RIGZ				S	Sn	07 40 36.3	-1.1
RAGZ	Rawiri	1.79	223	P	Pn	07 40 15.5	+0.2
RAGZ				S	Sn	07 40 36.9	-0.7
URZ	Urewera	1.81	234	Pn	Pn	07 40 15.7	+0.1
	58nm,0.3s,baz=50,slow=7.9,SNR=334						
URZ				Sn	Sn	07 40 37.0	-1.1
	42nm,0.3s,baz=90,slow=20,SNR=16						
URZ	Urewera	1.81	234	P	Pn	07 40 15.9	+0.3
URZ	Urewera	1.81	234	P	Pn	07 40 15.7	+0.1
URZ				S	Sn	07 40 38.5	+0.4
PRGZ	Paritu Road	1.92	206	P	Pn	07 40 16.6	-0.6
PRGZ				S	Sn	07 40 39.6	-1.3
MARZ	Manawahe	1.98	246	P	Pn	07 40 17.8	-0.2
OPRZ	Ohinepanea	2.02	251	P	Pn	07 40 18.3	-0.2
SNGZ	Shannon Statio	2.04	219	P	Pn	07 40 18.6	-0.2
SNGZ				S	Sn	07 40 43.0	-0.8
KNZ	Kokohu	2.09	209	P	Pn	07 40 18.2	-1.2
RTZ	Ruatahuna	2.12	227		Pn	07 40 19.9	0.0
RTZ	Ruatahuna	2.12	227	P	Pn	07 40 20.0	0.0
RTZ				S	Sn	07 40 46.0	+0.3
MHGZ	Mahia Peninsul	2.12	203	P	Pn	07 40 19.0	-1.0
MUGZ	Murupara	2.16	233	P	Pn	07 40 20.6	+0.2
TARZ	Mount Tarawera	2.21	241	P	Pn	07 40 21.8	+0.6
TGRZ	Tauranga	2.22	255	P	Pn	07 40 21.1	-0.1
RAHZ	Arahi	2.27	220	P	Pn	07 40 21.8	-0.2
KARZ	Kaharoa	2.31	248	P	Pn	07 40 22.7	+0.1
WHHZ	Waihua	2.32	216	P	Pn	07 40 22.0	-0.7
MTHZ	Maungataniwha	2.35	225	P	Pn	07 40 23.2	0.0
PRRZ	Plateau Road	2.42	237	P	Pn	07 40 23.8	-0.2
ALRZ	Allen Road	2.48	236	P	Pn	07 40 24.9	+0.1
NMHZ	Naumai	2.55	221	P	Pn	07 40 26.1	+0.2
ARHZ	Aropaoanui	2.58	216	P	Pn	07 40 25.6	-0.6
KUZ	Kuaotunu	2.64	279	P	Pn	07 40 26.8	-0.2
KUZ	Kuaotunu	2.64	279	P	Pn	07 40 26.1	-0.9
KUZ				S	Sn	07 40 54.2	-4.3
BKZ	Black Stump Fm	2.77	224		Pn	07 40 28.2	-0.7
BKZ	Black Stump Fm	2.77	224	P	Pn	07 40 28.7	-0.1
BKZ	Black Stump Fm	2.77	224	P	Pn	07 40 28.2	-0.7
KUTZ	Kaahu Road	2.80	242	P	Pn	07 40 29.7	+0.5
TOZ	Tahuroa Road	2.81	258	Pn	Pn	07 40 28.9	-0.4
TOZ	Tahuroa Road	2.81	258	P	Pn	07 40 29.3	0.0
MCHZ	McNeill Hill	2.87	218	P	Pn	07 40 29.1	-1.0
CKHZ	Cape Kidnapper	2.87	211	P	Pn	07 40 28.4	-1.8
GRZ	Great Barrier	2.97	287	P	Pn	07 40 32.4	+0.8
KWHZ	Kaweka Forest	2.99	221	P	Pn	07 40 30.7	-1.3
MKAZ	Moumakai	3.04	271	P	Pn	07 40 32.0	-0.5
KAHZ	Kahuranaki	3.07	212	P	Pn	07 40 31.1	-1.9
KRHZ	Kereru	3.18	219	P	Pn	07 40 32.8	-1.7
TMVZ	Te Maari	3.21	232	P	Pn	07 40 34.6	-0.3
NTVZ	North Tongarir	3.21	233	P	Pn	07 40 34.9	-0.1
KRVZ	Karewarewa	3.23	233	P	Pn	07 40 35.0	-0.3
OTVZ	Oturere	3.26	232	P	Pn	07 40 35.2	-0.5
PXZ	Pawanui	3.27	210	P	Pn	07 40 33.2	-2.5
SNVZ	South Ngauruho	3.29	232	P	Pn	07 40 33.8	-2.3
NGZ	Ngauruhoe	3.31	232	P	Pn	07 40 35.9	-0.4
MOVZ	Moawhango	3.35	228	P	Pn	07 40 36.1	-0.8
ABAZ	Army Bay	3.37	279	P	Pn	07 40 38.3	+1.3
MAVZ	Matarangi	3.39	231	P	Pn	07 40 37.0	-0.6
EPAZ	Eden Park BICE	3.39	274	P	Pn	07 40 35.4	-1.9
WNVZ	Wahianoa	3.40	230	P	Pn	07 40 36.9	-0.7
HBAZ	Herne Bay Bore	3.41	275	P	Pn	07 40 38.8	+1.3
TRVZ	Turoa	3.41	231	P	Pn	07 40 37.1	-0.8
HIZ	Hauiti	3.51	247	P	Pn	07 40 40.1	+1.1
PRHZ	Porangahau	3.57	210	P	Pn	07 40 37.0	-2.7
BFZ	Birch Farm	4.08	211	P	Pn	07 40 43.2	-3.5
KHEZ	Kahui Hut	4.42	240	P	Pn	07 40 52.6	+1.0
OUZ	Omahuta	4.77	293	P	Pn	07 40 57.1	+0.8
STKA	Stephens Creek	31.10	269	P	P	07 46 02.0	-0.7
	0.6nm,0.4s,baz=96,slow=9.1,SNR=3.5						
	0.6nm,0.4s						
COEN	Coen	39.37	296	P	P	07 47 13.3	-0.6
AS31	Alice Springs	40.76	276	P	P	07 47 23.9	-1.6
ASAR	Alice Springs	40.76	276	P	P	07 47 23.6	-1.9
	1.2nm,0.7s,baz=119,slow=8.2,SNR=14						
	1.2nm,0.7s						
ASAR	Alice Springs	40.76	276	P	P	07 47 23.9	-1.6
FORT	Forrest	42.28	263	P	P	07 47 35.7	-2.1
WB2	Warramunga Arr	42.37	281	P	P	07 47 36.9	-1.7
WB2				IAmb	IAmb	07 47 44.7	
	comp=Z,10.0nm,1.5s						
WRA	Warramunga Arr	42.38	281	P	P	07 47 36.8	-1.9
	comp=Z,2.0nm,0.5s,baz=121,slow=7.9,SNR=19						
	comp=Z,2.0nm,0.5s						
WRA	Warramunga Arr	42.38	281	P	P	07 47 36.0	-2.7
WB0	Warramunga Arr	42.43	282	P	P	07 47 37.4	-1.8
WB0				IAmb	IAmb	07 47 37.8	
	comp=Z,3.3nm,0.6s						
FITZ	Fitzroy Crossi	50.25	277	P	P	07 48 38.9	-1.7
FITZ				IAmb	IAmb	07 49 16.9	
	comp=Z,2.1nm,1.5s						
BELA	Belgrano 2	63.40	172	P	P	07 50 12.9	-0.2
BELA				IAmb	IAmb	07 50 48.2	
	comp=Z,3.9nm,1.3s						
H03S2	Juan Fernandez	78.80	124	T	T	09 18 06.0	
	baz=231,slow=74,SNR=3.7						
H03S1	Juan Fernandez	78.81	124	T	T	09 18 12.4	
	baz=231,slow=74,SNR=4.2						
H03S3	Juan Fernandez	78.82	124	T	T	09 18 11.3	
	baz=231,slow=74,SNR=4.3						
H03N3	Juan Fernandez	79.03	124	T	T	09 18 22.9	
	baz=238						
H03N2	Juan Fernandez	79.03	124	T	T	09 18 21.6	
	baz=238						
H03N1	Juan Fernandez	79.05	124	T	T	09 18 22.0	
	baz=238						
ARCES	ARCESS Array B	144.56	344	PKP	PKPab	07 59 16.7	-1.3
	comp=Z,3.7nm,1.0s,baz=10,slow=2.5,SNR=1.6						
FINES	FINESS Array B	150.40	334	PKPbc	PKPdf	07 59 33.4	+4.0
	comp=Z,2.9nm,0.8s,baz=64,slow=3.2,SNR=4.9						

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*NEIC **09** 07:51:03.7±0.8, 19°.16N±0°.04×67°.18W±0°.03, h10^{km}±2^{km}, ML2.5/16, Md3.5/7(RSPR), Error ellipse: s-maj=7.2km s-min=3.2km az=335.0*

*SDD **09** 07:51:04.7±2.0, 19°.23N×67°.19W, h18^{km}±69^{km}, MD3.3, ML2.9, MW3.1, Presumed earthquake*

*OSPL **09** 07:51:04.0±1.0, 19°.28N×67°.28W, h17^{km}±6^{km}, ML2.2, Presumed earthquake*

*RSPR **09** 07:51:05.2, 19°.32N×67°.29W, h28^{km}±15^{km}, MD3.5/7*

ISC 09 07:51:03.8±1.7**, 19°.26N**±0°.07×**67°.21W**±0°.04**, h24**^{km}±14^{km}**, n46, σ0.^{s}54**/59**, 22C-4D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	0.79	173	⇑*e*P	Pb	07 51 19.4	+0.4
AGPR	Aguadilla, PR	0.79	173	*e*S	Sn	07 51 30.4	-0.1
AGPR	Aguadilla, PR	0.79	173	⇑*e*Pg	Pb	07 51 17.3	-1.6
AGPR				⇑*e*Sg	Sb	07 51 28.0	-1.3
AGPR				IAML		07 51 35.8	
	comp=N,1µm,0.3s						
AGPR	Aguadilla, PR	0.79	173	*i* P	Pb	07 51 18.7	-0.3
AGPR				*e*S	Sb	07 51 29.1	-0.1
AGPR				IAML		07 51 30.6	
	comp=Z,88nm,1.1s						
IDE	Isla Desecheo	0.90	196		Pb	07 51 21.1	+0.2
IDE					Sb	07 51 32.9	+0.4
IDE	Isla Desecheo	0.90	196	⇓*e*P	Pb	07 51 21.1	+0.2
IDE	Isla Desecheo	0.90	196	*e*S	Sb	07 51 32.9	+0.4
AOPR	Arecibo Observ	1.00	155		Pn	07 51 21.9	-0.5
AOPR				IAML		07 51 44.5	
	comp=E,289nm,0.3s						
AOPR	Arecibo Observ	1.00	155	⇑*e*P	Pn	07 51 22.0	-0.5
AOPR	Arecibo Observ	1.00	155	*e*S	Sn	07 51 36.1	+0.3
AOPR	Arecibo Observ	1.00	155	⇑*e*Pg	Pn	07 51 21.9	-0.5
AOPR				IAML		07 51 34.4	
	comp=N,286nm,3.4s						
AOPR				⇑*e*Sg	Sn	07 51 36.1	+0.3
PRSN	Puerto Rico Se	1.04	177		Pn	07 51 22.7	-0.1
PRSN					Sn	07 51 36.3	-0.3
PRSN	Puerto Rico Se	1.04	177	IAML		07 51 41.5	
	comp=N,270nm,0.2s						
PRSN	Puerto Rico Se	1.04	177	⇑*e*P	Pn	07 51 22.7	-0.1
PRSN	Puerto Rico Se	1.04	177	*e*S	Sn	07 51 36.3	-0.3
LSP	Las Mesas	1.08	174		Pn	07 51 23.4	-0.1
LSP	Las Mesas	1.08	174	⇑*e*P	Pn	07 51 23.4	-0.1
UUPR	Utuado, UPR, P	1.10	155		Pn	07 51 23.8	+0.1
UUPR					Sb	07 51 38.6	+0.4
UUPR	Utuado, UPR, P	1.10	155	⇑*e*P	Pn	07 51 23.8	+0.1
UUPR	Utuado, UPR, P	1.10	155	*e*S	Sb	07 51 38.6	+0.4
ECPR	Experimental S	1.23	139	⇑*e*P	Pn	07 51 25.9	+0.4
ECPR	Experimental S	1.23	139	*e*S	Sb	07 51 42.8	+0.9
CRPR	Cabo Rojo, PR	1.25	176		Sn	07 51 42.0	+0.2
CRPR	Cabo Rojo, PR	1.25	176		Pn	07 51 25.8	0.0
CRPR				IAML		07 51 44.8	
	comp=N,87nm,0.4s						
CRPR	Cabo Rojo, PR	1.25	176	⇑*e*P	Pn	07 51 25.9	+0.2
CRPR	Cabo Rojo, PR	1.25	176	*e*S	Sn	07 51 42.0	+0.2
CRPR	Cabo Rojo, PR	1.25	176	⇑*e*Pg	Pn	07 51 25.6	-0.1
CRPR				⇑*e*Sg	Sn	07 51 41.5	-0.3
CRPR				IAML		07 51 45.1	
	comp=N,459nm,0.4s						
CRPR	Cabo Rojo, PR	1.25	176	*i* P	Pn	07 51 25.8	+0.1
CRPR				*e*S	Sn	07 51 41.0	-0.8
CRPR				IAML		07 51 42.3	
	comp=Z,66nm,0.2s						
MLPR	Magueyes Islan	1.29	173	⇓*e*P	Pn	07 51 26.5	+0.2
MLPR	Magueyes Islan	1.29	173	*e*S	Sn	07 51 42.8	0.0
MLPR	Magueyes Islan	1.29	173	*e*Pg	Pn	07 51 26.2	-0.1
MLPR				⇑*e*Sg	Sn	07 51 42.2	-0.7
MLPR				IAML		07 51 46.5	
	comp=N,222nm,0.3s						
OBIP	Obispado Ponce	1.34	155		Pn	07 51 27.3	+0.3
OBIP	Obispado Ponce	1.34	155		Sn	07 51 44.0	0.0
OBIP				IAML		07 51 46.3	
	comp=E,68nm,0.5s						
OBIP				IAML		07 51 46.4	
	comp=N,54nm,0.2s						
OBIP	Obispado Ponce	1.34	155	⇑*e*P	Pn	07 51 27.3	+0.3
OBIP	Obispado Ponce	1.34	155	*e*S	Sb	07 51 45.0	+0.1
PCDR	Punta Cana, DR	1.34	237	⇑*e*Pg	Pb	07 51 29.6	+1.4
PCDR				⇓*e*Sg	Sb	07 51 45.3	+0.4
PCDR				IAML		07 51 59.0	
	comp=N,117nm,2.0s						
GCPR	Guaynabo City	1.42	131	Pn	Pn	07 51 28.4	+0.2
GCPR				Sn	Sn	07 51 46.0	-0.1
SJG	San Juan	1.52	139	Pn	Pn	07 51 29.2	-0.2
SJG				IAML		07 51 59.2	
	comp=N,46nm,0.3s						
SJG				IAML		07 52 00.9	
	comp=N,59nm,0.2s						
SJG	San Juan	1.52	139	*i* P	Pn	07 51 29.0	-0.4
SJG				*e*S	Sn	07 51 49.0	+0.6
SJG				IAML		07 51 58.4	
	comp=Z,30nm,0.3s						
HIDR	Higuey Centro	1.58	245	⇑*e*Pg	Pb	07 51 32.4	+0.1
HIDR				⇓*e*Sg	Sb	07 51 52.6	+0.8
HIDR				IAML		07 52 02.3	
	comp=N,167nm,0.3s						
HUMP	Col San Antoni	1.70	131		Pn	07 51 32.0	0.0
HUMP	Col San Antoni	1.70	131	IAML		07 52 02.6	
	comp=N,40nm,0.3s						
HUMP	Col San Antoni	1.70	131	⇑*e*P	Pn	07 51 32.5	+0.6
MIDR	Miches	1.76	261	⇑*e*Pg	Pb	07 51 35.2	-0.3
MIDR				⇑*e*Sg	Sb	07 51 57.8	+0.5
MIDR				IAML		07 52 07.4	
	comp=N,26nm,1.2s						
DR12	Loma Pena Alta	2.11	258		Pb	07 51 40.0	-1.5
HATOM	Hato Mayor del	2.11	258	⇑*e*Pg	Pb	07 51 40.4	-1.0
HATOM				⇑*e*Sg	Sb	07 52 07.3	+0.1
HATOM				IAML		07 52 16.3	
	comp=N,95nm,0.3s						

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*IDC **09** 08:19:02.5±1.5, 24°.02S×66°.89W, h170^{km}±14^{km}, mb3.5/8, mbtmp4.0/14, Error ellipse: s-maj=18.7km s-min=11.1km az=87.0*

*NEIC **09** 08:19:04.8±1.5, 23°.98S±0°.08×67°.09W±0°.05, h222^{km}±10^{km}, mb4.5/4, ML4.5(GUC), Error ellipse: s-maj=13.2km s-min=3.8km az=154.0*

*GUC **09** 08:19:05.2±0.7, 23°.95S×66°.95W, h194^{km}±5^{km}, ML4.5*

*SJA **09** 08:19:05.0±1.0, 23°.95S×66°.93W, h185^{km}, ML4.3, MW4.1*

*VAO **09** 08:19:05.5±0.6, 23°.92S×66°.89W, h210^{km}±5^{km}, mb3.8, Presumed earthquake*

ISC 09 08:19:04.6±0.6**, 23°.98S**±0°.04×**66°.98W**±0°.04**, h198**^{km}±6^{km}**, n144, σ1.^{s}25**/168**, mb3.7**/6**, 11C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALTA		0.63	113	*i* P	Pn	08 19 33.0	+0.4
SALTA				*e*S	Sn	08 19 53.4	-0.9
SALTA		0.63	113	*e*P	Pn	08 19 27.3	-5.3
SALTA				*e*P		08 19 27.5	
SALTA				*e*P		08 19 33.0	
AF01	San Pedro de A	1.51	313		Pn	08 19 40.5	+2.0
AF01				Sn	Sn	08 20 07.7	+2.9
AF01	San Pedro de A	1.51	313	⇑*i*P	Pn	08 19 40.4	+1.8
AF01	San Pedro de A	1.51	313	*e*P	Pn	08 19 40.9	+2.4
AF01				*e*S	Sn	08 20 15.0	+10
SLA	San Lorenzo	1.53	119	⇓*e*P	Pn	08 19 38.9	+0.3
SLA	San Lorenzo	1.53	119	*e*P	Pn	08 19 38.9	+0.3
SLA				*e*S	Sn	08 20 05.9	+1.0
HJA	Humahuaca	1.63	62	*e*P	Pn	08 19 39.9	+0.1
YJA	Yavi	2.25	37	⇑*e*P	Pn	08 19 46.2	+0.1
YJA				*e*S	Sn	08 20 18.2	0.0
YJA	Yavi	2.25	37	*e*P	Pn	08 19 45.9	-0.2
YJA				*e*S	Sn	08 20 20.7	+2.4
FSA	Cafayete	2.31	157	*e*P	Pn	08 19 46.5	+0.1
FSA				*e*S	Sn	08 20 17.5	-1.6
GO02	Mina Guanaco	2.66	243		Pn	08 19 51.5	+1.1
GO02	Mina Guanaco	2.66	243	⇑*i*P	Pn	08 19 51.5	+1.1
GO02				*e*S	Sn	08 20 26.7	+0.6
GO02	Mina Guanaco	2.66	243	*e*P	Pn	08 19 51.5	+1.1
GO02				*e*S	Sn	08 20 27.3	+1.1
GO02				IAML		08 20 28.6	
	comp=Z,2µm,0.3s						
PB06	IPOC Station P	2.70	297		Pn	08 19 52.0	+1.2
PB06	IPOC Station P	2.70	297	⇑*i*P	Pn	08 19 52.1	+1.3
PB06				*e*S	Sn	08 20 26.6	-0.3
PB06				IAML		08 20 28.7	
	comp=N,2µm,0.3s						
PB06	IPOC Station P	2.70	297	*e*P	Pn	08 19 52.0	+1.2
PB06				*e*S	Sn	08 20 26.4	-0.5
PB06				IAML		08 20 27.9	
	comp=Z,868nm,0.4s						
PB09	IPOC Station P	3.02	316	Pn	Pn	08 19 55.9	+1.3
PB09	IPOC Station P	3.02	316	⇑*e*P	Pn	08 19 55.8	+1.3
PB09	IPOC Station P	3.02	316	*e*P	Pn	08 19 55.9	+1.3
PB09				*e*S	Sn	08 20 34.5	+1.0
PB09				IAML		08 20 36.0	
	comp=Z,477nm,0.4s						
AHML	Horco Molle	3.16	152	*e*P	Pn	08 19 45.4	-11
AHML				*e*S	Sn	08 20 19.7	-17
PB05	IPOC Station P	3.17	290		Pn	08 19 56.9	+0.7
PB05	IPOC Station P	3.17	290	⇑*i*P	Pn	08 19 57.0	+0.7
PB05	IPOC Station P	3.17	290	*e*P	Pn	08 19 57.0	+0.7
PB05				*e*S	Sn	08 20 35.9	-0.8
PB05				IAML		08 20 40.1	
	comp=Z,392nm,0.5s						
PB14	IPOC Station P	3.19	258	Pn	Pn	08 19 57.3	+0.6
PB14	IPOC Station P	3.19	258	⇑*e*P	Pn	08 19 57.3	+0.6
PB14	IPOC Station P	3.19	258	*e*P	Pn	08 19 57.3	+0.6
PB14				*e*S	Sn	08 20 37.2	-0.2
PB14				IAML		08 20 40.5	
	comp=Z,567nm,0.3s						
PB03	IPOC Station P	3.20	306	Pn	Pn	08 19 57.4	+0.7
PB03	IPOC Station P	3.20	306	⇑*e*P	Pn	08 19 57.5	+0.7
PB03				IAML		08 20 38.4	
	comp=N,706nm,0.3s						
PB03	IPOC Station P	3.20	306	*e*P	Pn	08 19 57.4	+0.7
PB03				*e*S	Sn	08 20 36.4	-1.1
PB03				IAML		08 20 39.6	
	comp=Z,1µm,0.3s						
PB10	IPOC Station P	3.31	277	Pn	Pn	08 19 58.9	+1.0
PB10	IPOC Station P	3.31	277	*e*P	Pn	08 19 58.7	+0.9
PB10	IPOC Station P	3.31	277	*e*P	Pn	08 19 58.7	+0.9
PB10				*e*S	Sn	08 20 39.5	0.0
PB10				IAML		08 20 43.2	
	comp=Z,389nm,0.8s						
AC02	Maricunga	3.44	214		Pn	08 20 00.8	+0.9
AC02	Maricunga	3.44	214	⇑*i*P	Pn	08 20 00.8	+0.9
AC02				IAML		08 21 02.0	
	comp=N,182nm,0.3s						
AC02	Maricunga	3.44	214	*e*P	Pn	08 20 00.8	+0.9
AC02				*e*S	Sn	08 20 45.0	+1.7
PB07	IPOC Station P	3.50	309	Pn	Pn	08 20 00.6	+0.3
PB07	IPOC Station P	3.50	309	*e*P	Pn	08 20 00.7	+0.3
PB07	IPOC Station P	3.50	309	*e*P	Pn	08 20 00.9	+0.6
PB07				*e*S	Sn	08 20 42.6	-1.3
PB07				IAML		08 20 47.5	
	comp=Z,443nm,0.4s						
PB01	IPOC Station P	3.73	321		Pn	08 20 03.4	+0.3
PB01	IPOC Station P	3.73	321	*e*P	Pn	08 20 03.4	+0.3
PB01	IPOC Station P	3.73	321	*e*P	Pn	08 20 03.5	+0.3
PB01				*e*S	Sn	08 20 48.3	-0.7
PB01				IAML		08 20 52.7	
	comp=Z,142nm,0.2s						
PB02	IPOC Station P	3.78	314	Pn	Pn	08 20 03.8	+0.1
PB02	IPOC Station P	3.78	314	*e*P	Pn	08 20 03.7	0.0
PB02				*e*S	Sn	08 20 47.8	-2.3
PB02	IPOC Station P	3.78	314	*e*P	Pn	08 20 04.0	+0.2
PB02				*e*S	Sn	08 20 47.7	-2.3
PB02				IAML		08 20 49.2	
	comp=Z,1000nm,0.4s						
AC01	Pan de Azucar	3.93	236	Pn	Pn	08 20 04.9	-0.5
AC01	Pan de Azucar	3.93	236	⇑*e*P	Pn	08 20 04.8	-0.5
AC01	Pan de Azucar	3.93	236	*e*P	Pn	08 20 04.9	-0.5
AC01				*e*S	Sn	08 20 51.6	-1.6
AC01				IAML		08 20 53.4	
	comp=Z,269nm,0.2s						
TINO	Tinogasta	4.10	187	*e*P	Pn	08 20 08.6	+1.0
TINO				*e*S	Sn	08 20 46.9	-10

PATCX	Punta Patache	4.31	316		Pn	08 20 09.9	-0.4
PATCX	Punta Patache	4.31	316	*e*P	Pn	08 20 09.7	-0.5
PATCX	Punta Patache	4.31	316	*e*P	Pn	08 20 09.9	-0.4
PATCX				*e*S	Sn	08 21 00.4	-1.5
PATCX				IAML		08 21 04.1	
	comp=Z,330nm,0.6s						
PB08	IPOC Station P	4.32	332	Pn	Pn	08 20 11.2	+0.5
PB08	IPOC Station P	4.32	332	*e*P	Pn	08 20 11.6	+0.8
PB08	IPOC Station P	4.32	332	*e*P	Pn	08 20 11.8	+1.0
PB08				*e*S	Sn	08 21 03.0	+0.3
PB08				IAML		08 21 06.8	
	comp=Z,139nm,0.3s						
TA01	Diego Aracena	4.51	318		Pn	08 20 12.0	-0.8
TA01	Diego Aracena	4.51	318	*e*P	Pn	08 20 11.8	-0.9
TA01	Diego Aracena	4.51	318	*e*P	Pn	08 20 12.2	-0.6
TA01				IAML		08 21 10.2	
	comp=Z,130nm,0.5s						
AC06	Mina Casimiro	4.54	222		Pn	08 20 12.4	-0.7
AC06	Mina Casimiro	4.54	222⇑	*e*P	Pn	08 20 11.9	-1.2
CYA	Choya	4.56	167	*e*P	Pn	08 20 13.7	+0.3
GO03	Copiapo	4.64	219		Pn	08 20 13.8	-0.7
GO03	Copiapo	4.64	219	*e*P	Pn	08 20 13.2	-1.3
TA02	Huaiquique	4.71	321	*e*P	Pn	08 20 15.4	+0.1
GO01	Chusmiza	4.76	334	*e*S	Sn	08 21 13.8	+0.9
VCA	Vinchina	4.86	193	*e*P	Pn	08 20 18.9	+1.6
VCA				*e*S	Sn	08 21 17.1	+2.5
PB11	IPOC Station P	4.88	329		Pn	08 20 17.1	-0.5
LCO	Las Campanas	6.02	213		Pn	08 20 31.2	-1.1
CFA	Coronel Fontan	7.68	188	P	Pn	08 20 52.3	-1.3
	comp=Z,3.0nm,0.3s,baz=50,slow=20,SNR=99						
CFA				S	Sn	08 22 13.8	-6.6
	comp=Z,14nm,0.3s,baz=166,slow=19,SNR=29						
LPAZ	La Paz	7.73	352	P	Pn	08 20 55.4	+0.4
	comp=Z,2.3nm,0.5s,baz=153,slow=14,SNR=12						
LPAZ				S	Sn	08 22 19.4	-3.2
	comp=Z,3.4nm,0.6s,baz=196,slow=14,SNR=4.4						
LPAZ	La Paz	7.73	352		Pn	08 20 54.2	-0.8
LPAZ	La Paz	7.73	352	*e*P	Pn	08 20 55.4	+0.4
CO06	Fray Jorge	7.85	211	Pn	Pn	08 20 54.8	-1.0
CPUP	Villa Florida	9.05	107	P	Pn	08 21 09.2	-2.2
	comp=Z,0.8nm,0.8s,baz=248,slow=5.4,SNR=5.4						
CPUP	Villa Florida	9.05	107	*e*P	Pn	08 21 09.6	-1.8
VA03	San Esteban	9.30	199	Pn	Pn	08 21 13.9	-0.8
SIV	San Ignacio	9.69	36	P	Pn	08 21 17.6	-2.3
	comp=Z,6.0nm,0.5s,baz=274,slow=7.9						
BDQN	Bodoquena, MS	10.10	72	*e*P	Pn	08 21 27.0	+1.8
BO04	La Punta	10.46	197	Pn	Pn	08 21 29.5	-0.3
MT01	Popeta	10.53	200	Pn	Pn	08 21 28.6	-2.1
PSAL	Palomas, Salto	10.91	132	*e*P	Pn	08 21 35.8	+0.3
AQDB	Aquidauana	11.01	74		Pn	08 21 38.4	+1.4
AQDB	Aquidauana	11.01	74	*e*P	Pn	08 21 37.2	+0.3
AMBA	Amambai (Brazi	11.05	87	*e*P	Pn	08 21 36.6	-0.8
PTLB	Pontes e Lacer	11.24	42	Pn	Pn	08 21 39.4	-0.6
PTLB	Pontes e Lacer	11.24	42	*e*P	Pn	08 21 38.1	-1.9
BO02	Sierra Bellavi	11.27	196		Pn	08 21 39.4	-0.8
VILB	Vilhena	12.71	32		Pn	08 21 58.1	-0.5
VILB	Vilhena	12.71	32	*e*P	Pn	08 21 57.9	-0.7
PP1B	Ponte de Pedra	12.97	63	*e*P	Pn	08 22 01.0	-0.8
SALV	Santo Antonio	13.30	55	*e*P	Pn	08 22 04.0	-2.0
PTGB	Pitanga	13.61	96	*e*P	Pn	08 22 09.8	-0.1
CPSB	Cacapava Do Su	13.63	121	*e*P	Pn	08 22 09.5	-0.5
ITAB	Concordia	13.78	107	*e*P	Pn	08 22 10.6	-1.2
C2SB	Chapadao do Su	14.15	71	*e*P	Pn	08 22 15.7	-0.9
TRQA	Tornquist	14.66	164		Pn	08 22 21.4	-1.3
PDRB	Porto dos Gac	15.69	40	*e*P	Pn	08 22 34.5	-0.9
FRTB	Fartura	15.97	91	*e*P	P	08 22 37.8	-0.6
ITRB	Iturama	16.00	78	*e*P	P	08 22 37.6	-1.1
ARAG	Araguaiana, MT	16.46	63	*e*P	P	08 22 42.6	-1.1
CLDB	Colider	16.83	41	*e*P	P	08 22 46.9	-1.0
PLCA	Paso Flores	16.97	189	P	P	08 22 49.5	+0.3
	comp=Z,1.0nm,0.5s,baz=3.7,slow=10,SNR=9.1						
PLCA	Paso Flores	16.97	189	*e*P	P	08 22 50.5	+1.3
BB19B	Bebedouro	17.29	84	*e*P	P	08 22 52.0	-0.9
SPB	Sao Paulo	17.89	93	*e*P	P	08 22 59.4	0.0
RCLB	Rio Claro- Sao	17.94	89	*e*P	P	08 22 60.0	-0.1
PET01	Itanhaem-SP	17.98	95	*e*P	P	08 22 60.0	-0.5
VAO	Valinhos	18.38	91	P	P	08 23 03.1	-1.7
VAO				IAmb	IAmb	08 23 05.3	
	comp=Z,48nm,0.8s						
VAO	Valinhos	18.38	91	*e*P	P	08 23 03.7	-1.1
IPMB	Ipameri, GO	18.50	75	*e*P	P	08 23 05.6	-0.5
SNDB	Serra Nova Dou	19.08	54	*e*P	P	08 23 11.1	-1.2
PARB	Paraibuna	19.57	92	*e*P	P	08 23 17.2	-0.5
BDFB	Brasilia	19.66	69	P	P	08 23 18.2	-0.4
	comp=Z,48nm,0.8s,baz=238,slow=12,SNR=76						
BDFB	Brasilia	19.66	69		P	08 23 18.1	-0.6
PMNB	Patos De Minas	19.88	78	*e*P	P	08 23 20.6	-0.4
ATAH	Atahualpa	20.02	325	P	P	08 23 24.0	+1.2
	comp=Z,2.0nm,0.6s,baz=86,slow=14,SNR=1.8						
	comp=Z,2.0nm,0.6s						
NPGB	Novo Progresso	20.20	35	*e*P	P	08 23 22.7	-1.6
TEFE	Tefe	20.48	7	*e*P	P	08 23 26.8	-0.5
BSCB	Bom Sucesso	20.72	86	*e*P	P	08 23 29.2	-0.8
VAS01	Vassouras-RJ	21.70	90	*e*P	P	08 23 39.7	-0.5
ITTB	Itaituba	22.31	31	*e*P	P	08 23 43.8	-2.1
DIAM	Diamantina, MG	22.45	80	*e*P	P	08 23 46.3	-1.1
JANB	Januaria	23.11	72	*e*P	P	08 23 51.8	-1.5
SMTB	Santa Maria do	23.86	54	*e*P	P	08 23 57.9	-2.2
SDBA	SAO DESIDERIO	23.88	65	*e*P	P	08 23 59.1	-1.2
SJMB	Sao Joao De Ma	24.57	83	*e*P	P	08 24 05.1	-1.4
BSFB	Barra de Sao F	24.84	83	*e*P	P	08 24 07.7	-1.2
RIB01	Linhares ES	25.12	85	*e*P	P	08 24 10.1	-1.3
GUA01	Guaratinga, BA	26.49	79	*e*P	P	08 24 22.8	-1.0
CMC01	Camacan, BA	27.20	77	*e*P	P	08 24 28.8	-1.3
NBIT	Itapeh - BA	27.44	76	*e*P	P	08 24 32.1	-0.2
NBTA	Tacaratu-PE	31.31	67	*e*P	P	08 25 05.6	-0.9
BELA	Belgrano 2	56.06	172	P	P	08 28 23.8	+1.4
SNAA	Sanae	59.36	161	P	P	08 28 46.3	+0.7
	comp=Z,1.2nm,0.6s,baz=251,slow=11,SNR=8.9						
	comp=Z,1.2nm,0.6s						
SNAA	Sanae	59.36	161	P	P	08 28 45.9	+0.4
SNAA				IAmb	IAmb	08 29 13.2	
	comp=Z,3.2nm,1.1s						
TXAR	Lajitas Array	63.68	324	P	P	08 29 15.7	+0.7
	comp=Z,0.4nm,0.8s,baz=160,slow=7.8,SNR=5.7						
	comp=Z,0.4nm,0.8s						
QSPA	South Pole Qui	66.22	180	P	P	08 29 32.2	+1.2
	comp=Z,2.1nm,0.4s,baz=174,slow=6.3,SNR=5.6						
	comp=Z,2.1nm,0.4s						
TORD	Torodi Ar. Bea	76.54	69	P	P	08 30 32.2	-1.1
	comp=Z,0.9nm,0.3s,baz=281,slow=3.8,SNR=2.4						
	comp=Z,0.9nm,0.3s						
PDAR	Pinedale Array	77.14	329	P	P	08 30 38.3	+1.8
	comp=Z,0.2nm,0.6s,baz=107,slow=4.2,SNR=2.7						
	comp=Z,0.2nm,0.6s						
BOSA	Boshof	80.72	117	P	P	08 30 56.2	0.0
	comp=Z,1.9nm,0.8s,baz=233,slow=5.1,SNR=2.0						
	comp=Z,1.9nm,0.8s						
ESDC	Sonseca Array	86.37	44	P	P	08 31 26.1	+1.7
	comp=Z,0.8nm,0.8s,baz=270,slow=3.8,SNR=2.0						
	comp=Z,0.8nm,0.8s						
ASAR	Alice Springs	128.48	205	PKP	PKPdf	08 37 49.3	+0.8
	comp=Z,0.4nm,0.7s,baz=143,slow=1.2,SNR=6.3						
WRA	Warramunga Arr	131.65	207	PKP	PKPdf	08 37 56.0	+1.5
	comp=Z,0.3nm,0.8s,baz=154,slow=1.9,SNR=7.6						
MKAR	Makanchi Array	146.50	40	PKPbc	PKPbc	08 38 23.2	+0.9
	comp=Z,0.7nm,0.6s,baz=326,slow=2.3,SNR=5.7						

GUC 09 08:25:14.1±0.7**, 24°.13S**×**67°.15W, h193**^{km}±7^{km}**, ML3.6, 4C,**
Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALTA		0.74	97	*e*P	Pn	08 25 41.7	-0.5
SLA	San Lorenzo	1.61	112	*e*P	Pn	08 25 48.4	0.0
SLA				*e*S	Sn	08 26 13.9	-1.0
GO02	Mina Guanaco	2.45	245	*e*P	Pn	08 25 57.5	+0.2
GO02				*e*S	Sn	08 26 30.4	-0.5
GO02				IAML		08 26 31.0	
	comp=N,211nm,0.2s						
PB06	IPOC Station P	2.64	302⇑	*e*P	Pn	08 25 59.6	+0.3
PB06				*e*S	Sn	08 26 32.9	-1.7
PB06				IAML		08 26 35.5	
	comp=N,232nm,0.2s						
PB14	IPOC Station P	3.01	260	*e*P	Pn	08 26 04.3	+0.5
PB09	IPOC Station P	3.02	320	*e*P	Pn	08 26 04.5	+0.7
PB09				*e*S	Sn	08 26 42.0	-0.7
PB09				IAML		08 26 44.2	
	comp=N,88nm,0.3s						
PB05	IPOC Station P	3.08	294	*e*P	Pn	08 26 04.4	-0.1
PB05				IAML		08 26 45.3	
	comp=E,72nm,0.2s						
AHML	Horco Molle	3.11	149⇑	*e*P	Pn	08 25 53.7	-11
PB03	IPOC Station P	3.17	310	*e*P	Pn	08 26 05.6	-0.1
PB10	IPOC Station P	3.18	280	*e*P	Pn	08 26 05.8	+0.2
AC02	Maricunga	3.23	213⇑	*e*P	Pn	08 26 06.9	+0.3
AC01	Pan de Azucar	3.72	237⇑	*e*P	Pn	08 26 10.9	-1.3
PB01	IPOC Station P	3.76	324	*e*P	Pn	08 26 12.2	-0.6
PB02	IPOC Station P	3.78	317	*e*P	Pn	08 26 12.1	-0.9
TA01	Diego Aracena	4.53	321	*e*P	Pn	08 26 21.6	-0.8

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*IDC **09** 08:28:01.6±0.8, 4°.08N×82°.14W, h0^{km}, mb3.7/9, mbtmp3.9/13, ML4.2/4, MS3.6/19, Error ellipse: s-maj=68.4km s-min=13.5km az=63.0*
*NEIC **09** 08:28:03.0±1.1, 3°.79N±0°.09×82°.7W±0°.1, h10^{km}±2^{km}, mb4.5/15, Error ellipse: s-maj=22.9km s-min=11.8km az=237.0*
*CATAC **09** 08:28:02.7±0.6, 4°N±4°×8°3W±°, h14^{km}±5^{km}, M4.8/23, mb4.9/23, mB5.4/16, MLv4.8/15, Mw(mB)4.8/16, Error ellipse: s-maj=9.1km s-min=3.2km az=36.7, confirmed*
*RSNC **09** 08:28:08.1±0.5, 3°N±3°×8°2W±°, h0^{km}, M4.2, mB5.0, mb4.7, ML3.5, Mw(mB)4.4*
ISC 09 08:28:01.8±0.5**, 3°.57N**±0°.05×**82°.87W**±0°.06**, h10**^{km}**, n147,**
σ**2**^{s}.**13**/146**, mb4.2**/15**, MS3.6**/15**, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAPC	Malpelo	1.33	71	P	Pn	08 28 22.7	-3.8
TUMC	Tumaco	4.48	113	P	Pn	08 29 09.6	-0.3
TUMC				S	Sn	08 30 05.4	+3.3
TUMC	Tumaco	4.48	113	P	Pn	08 29 10.7	+0.8
TUMC				S	Sn	08 29 57.4	-4.7
GR1C	Gorgona, Isla	4.72	97	P	Pn	08 29 11.9	-1.3
GR1C				S	Sn	08 30 02.2	-5.9
PIRO	Carate, Puerto	4.83	354	Pn	Pn	08 29 11.2	-3.4
PIRO	Carate, Puerto	4.83	354	P	Pn	08 29 11.3	-3.4
PIRO	Carate, Puerto	4.83	354	S	Sn	08 30 08.0	-2.7
FLF1	Flavio Alfaro-	4.93	142	P	Pn	08 29 15.0	-1.1
FLF1				S	Sn	08 30 08.7	-4.6
PTJ1	Puerto Jimnez	4.96	355	S	Sn	08 30 11.8	-2.0
PTJ1	Puerto Jimnez	4.96	355	P	Pn	08 29 14.8	-1.6
CDITO	Canoas	4.97	360	P	Pn	08 29 13.8	-2.8
CDITO	Canoas	4.97	360	S	Sn	08 30 13.8	-0.4
BRU2	Volcan	5.20	2		Pn	08 29 17.3	-2.5
BRU2	Volcan	5.20	2	P	Pn	08 29 17.2	-2.6
BRU2	Volcan	5.20	2	S	Sn	08 30 20.0	+0.1
PAC1	Pacto, Paraso	5.23	129	P	Pn	08 29 16.9	-3.4
PPLP	Puerto Lpez	5.49	158	P	Pn	08 29 20.4	-3.4
OTAV	Otavalo	5.51	127		Pn	08 29 22.8	-1.7
OTAV	Otavalo	5.51	127	P	Pn	08 29 22.2	-2.3
OTAV				S	Sn	08 30 25.9	-2.3
OTAV	Otavalo	5.51	127	P	Pn	08 29 23.2	-1.3
CUSE	Cuicocha Este	5.51	126	P	Pn	08 29 23.0	-1.5
OCHAL	Ojochal	5.55	352	P	Pn	08 29 21.3	-3.2
OCHAL	Ojochal	5.55	352	S	Sn	08 30 26.4	-2.0
PIZC	Pizarro, Choco	5.66	76	P	Pn	08 29 27.1	+1.0
	147nm,1.0s						
CMBC	Cumbal	5.67	117	P	Pn	08 29 26.5	-0.1
DRK0	Durika	5.67	356	P	Pn	08 29 23.8	-2.6
DRK0	Durika	5.67	356	S	Sn	08 30 30.4	-1.3
BBAC	Balboa, Cauca	5.82	105	P	Pn	08 29 27.3	-1.2
	801nm51nm,0.7s						
BBAC				S	Sn	08 30 27.8	-7.6
	801nm51nm,0.7s						
QUEP	Quepos	5.97	348	S	Sn	08 30 36.3	-2.4
SLOR	San Lorenzo -	6.11	134		Pn	08 29 33.5	+0.9
BONI	La Bonita	6.16	120	P	Pn	08 29 34.1	+0.8
	2μm118nm,0.5s						
JAMC	Jamundi, Valle	6.19	93	P	Pn	08 29 33.2	-0.4
	43nm,0.7s						
CRUC	La Cruz	6.23	108	P	Pn	08 29 34.7	+0.4
CRUC				S	Sn	08 30 41.0	-4.8
LCR2	La Lucha 2	6.24	350	S	Sn	08 30 43.6	-2.2
LCR2	La Lucha 2	6.24	350	P	Pn	08 29 32.1	-2.1
POPC	Popayan, Colom	6.26	99	P	Pn	08 29 34.2	-0.4
	350nm16nm,0.5s						
POPC				S	Sn	08 30 42.5	-3.9
	350nm16nm,0.5s						
BCIP	Isla Barro Col	6.32	28	P	Pn	08 29 36.0	+0.8
BCIP				S	Sn	08 30 49.5	+1.9
BCIP	Isla Barro Col	6.32	28	P	Pn	08 29 36.3	+1.1
RAFA	San Farael, Vo	6.42	352	Pn	Pn	08 29 34.9	-1.9
CASC	Dorado de Casc	6.49	122	P	Pn	08 29 39.1	+1.5
	1μm73nm,0.7s						
HDC	Heredia	6.51	349	Pn	Pn	08 29 36.2	-1.7
YOTC	Yotoco, Valle	6.52	86	P	Pn	08 29 38.0	0.0
	30nm,0.7s						
YOTC				S	Sn	08 30 49.1	-3.5
	30nm,0.7s						
TCS1	Tacares	6.59	348	P	Pn	08 29 35.8	-3.1
EGUB	Earth Gu¡pi	6.64	354	Pn	Pn	08 29 37.9	-1.6
PLMC	San Jos del P	6.70	78	P	Pn	08 29 40.7	+0.3
	1μm83nm,0.7s						
PLMC				S	Sn	08 30 55.5	-1.4
	1μm83nm,0.7s						
CMARA	Lajas Hojancha	6.89	339	P	Pn	08 29 41.4	-1.7
CMARA	Lajas Hojancha	6.89	339	S	Sn	08 31 00.7	-1.0
SOCE	Pocosol	6.99	346	Pn	Pn	08 29 43.2	-1.2
SOCE	Pocosol	6.99	346	P	Pn	08 29 42.3	-2.1
SOCE	Pocosol	6.99	346	S	Sn	08 31 04.7	+0.6
JTS	Las Juntas de	6.99	343	Pn	Pn	08 29 42.0	-2.5
	17nm,0.3s,baz=146,slow=7.3,SNR=68						
JTS				Sn	Sn	08 31 01.3	-2.8
	1.6nm,0.3s,baz=244,slow=23,SNR=5.8						
	40nm,0.4s						
JTS	Las Juntas de	6.99	343		Pn	08 29 42.4	-2.1
JTS	Las Juntas de	6.99	343	P	Pn	08 29 42.1	-2.3
COHC	Cochancay	7.00	149	P	Pn	08 29 42.5	-1.9
TRT2	Tortugero	7.00	353	P	Pn	08 29 43.2	-1.2
JUD3	Juan Diaz 3	7.07	338		Pn	08 29 43.8	-1.8
CBOC	Ciudad Bolivar	7.20	71	P	Pn	08 29 48.0	+0.6
	40nm,0.8s						
COVE	Coope Vega, Sa	7.27	348	P	Pn	08 29 45.6	-2.6
COVE	Coope Vega, Sa	7.27	348	S	Sn	08 31 12.5	+1.6
DBBC	Dabeiba	7.46	62	P	Pn	08 29 52.8	+1.9
BETC	Betania	7.46	97	P	Pn	08 29 53.9	+2.9
FLOC	Florencia	7.47	105		Pn	08 29 50.9	-0.1
FLOC	Florencia	7.47	105	P	Pn	08 29 52.2	+1.2
FLOC	Florencia	7.47	105	P	Pn	08 29 52.2	+1.2
	32nm,1.2s						
GARC	Garzon, Huila	7.49	100	P	Pn	08 29 52.4	+0.9
	947nm23nm,0.6s						
ELI1	Hacienda Flor	7.52	339	S	Sn	08 31 18.7	+1.6
ORTC	Ortega, Tolima	7.61	87	P	Pn	08 29 55.6	+2.7
	668nm39nm,0.7s						
GUY2C	Guyana, Caldas	7.66	77	P	Pn	08 29 55.9	+1.9
	53nm,0.8s						
PRAC	Prado	7.96	89	P	Pn	08 29 59.9	+2.0
PRAC				S	Sn	08 31 31.7	+3.6
PRAC	Prado	7.96	89	P	Pn	08 30 00.0	+2.2
	32nm,0.6s						
MCRA	Macar, Loja	8.40	160	P	Pn	08 30 02.1	-1.7
URMC	La Uribe, Meta	8.48	92	P	Pn	08 30 07.3	+2.4
	19nm,0.8s						
ROSC	El Rosal	8.62	81	Pn	Pn	08 30 09.8	+2.8
	3.5nm,0.3s,baz=270,slow=20,SNR=5.0						
ROSC				LR	LR	08 33 13.2	
	comp=Z,241nm,21.2s,baz=253,slow=40						
ROSC	El Rosal	8.62	81	Pn	Pn	08 30 05.0	-2.0
NADN	Granada	8.71	339	P	Pn	08 30 08.5	+0.5
PTLC	Puerto Leguiza	8.74	113	P	Pn	08 30 10.0	+1.6
	22nm,0.7s						
PTBC	PUERTO BERRIO,	8.88	70	P	Pn	08 30 12.7	+2.3
	34nm,0.7s						
SPBC	San Pablo de B	9.01	76	P	Pn	08 30 14.7	+2.6
	15nm,0.7s						
MACC	Macarena, Meta	9.12	99	P	Pn	08 30 14.4	+0.8
	56nm,0.6s						
MGAN	Managua	9.16	339	P	Pn	08 30 15.1	+0.9
VILC	Villavicencio,	9.17	86	P	Pn	08 30 18.4	+4.0
CHIC	Chingaza	9.17	83	P	Pn	08 30 17.7	+3.0
BOAB	BOACO BROADBAN	9.25	343	P	Pn	08 30 14.5	-0.9
COPN	Copaltepe	9.32	337	P	Pn	08 30 17.2	+0.8
MOMN	Momotombo	9.51	338	P	Pn	08 30 19.5	+0.6
MOM3	MOM3	9.59	338	P	Pn	08 30 20.3	+0.2
CNGA	Al SSO del Vol	9.65	337	P	Pn	08 30 21.9	+1.0
CNGN	Cerro Negro	9.65	337	P	Pn	08 30 21.2	+0.3
ILCN	San Idelfonso	9.72	337	P	Pn	08 30 23.8	+1.9
TEL3	Telica 3	9.78	336	P	Pn	08 30 23.8	+1.2
QUEN	Al S del Volca	9.79	336	P	Pn	08 30 24.3	+1.4
HERN	Volcan Telica	9.80	337	Pn	Pn	08 30 23.2	+0.1
SJCC	San Jacinto, C	9.89	50	P	Pn	08 30 27.1	+2.9
PKGN	Cerro Pekin	9.92	336	P	Pn	08 30 24.7	+0.2
CRIN	San Cristobal	9.97	336	Pn	Pn	08 30 25.1	-0.3
PACA	Pacayal	11.22	332	P	Pn	08 30 42.8	+0.3
TGUH	Tegucigalpa,Un	11.29	338		Pn	08 30 41.7	-1.8
TGUH	Tegucigalpa,Un	11.29	338	P	Pn	08 30 42.0	-1.5
ATAH	Atahualpa	11.53	157	Pn	Pn	08 30 50.2	+3.2
	1.0nm,0.3s,baz=324,slow=9.5,SNR=6.2						
ATAH				LR	LR	08 35 03.6	
	comp=Z,792nm,19.4s,baz=332,slow=36						
	5.3nm,0.5s						
IGN	Direccin Gen	11.85	329	P	Pn	08 30 49.8	-1.3
PMON	Piamonte	11.92	328	P	Pn	08 30 52.3	+0.2
JAYA	Jayaque - finc	11.95	327	P	Pn	08 30 52.7	+0.2
NUBE	Las Nubes	12.33	327	P	Pn	08 30 56.9	-0.8
SDV	Santo Domingo	13.25	66	Pn	Pn	08 31 11.2	+0.8
	1.0nm,0.3s,baz=211,slow=13,SNR=5.5						
SDV				LR	LR	08 35 59.7	
	comp=Z,365nm,21.2s,baz=246,slow=39						
SDV	Santo Domingo	13.25	66		Pn	08 31 08.4	-2.1
NNA	Nana	16.57	159	Pn	P	08 31 58.8	+1.7
	0.6nm,0.3s,baz=316,slow=11,SNR=6.1						
	24nm,1.0s						
NNA	Nana	16.57	159		P	08 31 59.3	+2.2
NNA				IAmb	IAmb	08 32 06.1	
	comp=Z,66nm,1.3s						
TEIG	Tepich	17.38	343	P	Pn	08 32 03.8	-0.8
	comp=Z,0.4nm,0.3s,baz=130,slow=6.1,SNR=2.6						
	comp=Z,1.5nm,0.5s						
CMIG	Matias Romero	17.88	320	LR	LR	08 37 45.2	
	comp=Z,198nm,21.2s,baz=132,slow=32						
SJG	San Juan	21.84	47	LR	LR	08 41 18.5	
	comp=Z,72nm,21.1s,baz=237,slow=38						
LPAZ	La Paz	24.52	144	P	P	08 33 23.5	+1.0
	comp=Z,8.9nm,1.1s,baz=334,slow=7.3,SNR=15						
LPAZ				LR	LR	08 43 49.1	
	comp=Z,131nm,20.1s,baz=306,slow=39						
	comp=Z,8.9nm,1.1s						
LPAZ	La Paz	24.52	144		P	08 33 23.3	+0.8
LPAZ				IAmb	IAmb	08 33 27.2	
	comp=Z,12nm,1.1s						
GO01	Chusmiza	26.72	150	P	P	08 33 43.4	+1.2
GO01				IAmb	IAmb	08 33 49.6	
	comp=Z,6.9nm,0.9s						
SIV	San Ignacio	29.02	133	P	P	08 34 02.1	-0.3
	comp=Z,0.3nm,0.6s,baz=274,slow=5.4						
SIV				LR	LR	08 46 32.5	
	comp=Z,259nm,19.0s,baz=12,slow=38						
	comp=Z,0.3nm,0.6s						
MDP	Montagnes des	30.17	86	LR	LR	08 46 56.4	
	comp=Z,128nm,18.8s,baz=282,slow=39						
TKL	Tuckaleechee C	31.94	359	LR	LR	08 46 25.5	
	comp=Z,61nm,19.3s,baz=269,slow=35						
TXAR	Lajitas Array	32.35	325	P	P	08 34 33.1	+1.4
	comp=Z,0.3nm,0.8s,baz=146,slow=8.3,SNR=2.5						
TXAR				PcP	PcP	08 37 22.8	+3.2
	comp=Z,0.3nm,1.0s,baz=48,slow=1.8,SNR=1.9						
TXAR				LR	LR	08 49 43.7	
	comp=Z,45nm,18.2s,baz=90,slow=40						
	comp=Z,0.3nm,0.8s						
LCAR	Lake Charles	33.24	348		P	08 34 37.9	-1.4
LCAR				IAmb	IAmb	08 34 40.8	
	comp=Z,8.0nm,1.0s						
MGMO	Mountain Grove	34.52	347	P	P	08 34 49.4	-1.0
MGMO				IAmb	IAmb	08 34 52.5	
	comp=Z,8.2nm,1.0s						
ADOK	Arcadia Dam	34.63	339	P	P	08 34 50.1	-1.3
MSTX	Muleshoe	35.48	331	P	P	08 34 58.7	-0.2
H03N2	Juan Fernandez	36.99	175	T	T	09 14 28.1	
	baz=354,slow=76,SNR=49						
H03N1	Juan Fernandez	37.00	175	T	T	09 14 23.1	
	baz=354,slow=76,SNR=78						
H03N3	Juan Fernandez	37.01	175	T	T	09 14 21.4	
	baz=354,slow=76,SNR=66						
ANMO	Albuquerque	38.13	328	LR	LR	08 51 14.7	
	comp=Z,26nm,20.1s,baz=110,slow=37						
ANMO	Albuquerque	38.13	328	P	P	08 35 20.5	-1.0
CPUP	Villa Florida	38.65	142	LR	LR	08 52 23.7	
	comp=Z,29nm,20.2s,baz=200,slow=38						
T25A	Trinidad	38.83	332	IAmb	IAmb	08 35 42.7	
	comp=Z,6.6nm,0.9s						
BDFB	Brasilia	39.41	120	LR	LR	08 52 12.5	
	comp=Z,93nm,18.5s,baz=115,slow=37						
SDCO	Great Sand Dun	39.83	332		P	08 35 35.8	-0.1
PV18	Skein Mesa, Pa	41.91	329		P	08 35 52.6	-0.4
PV18				IAmb	IAmb	08 36 29.6	
	comp=Z,15nm,1.5s						
PFO	Pinyon Flats O	43.29	318	LR	LR	08 52 37.8	
	comp=Z,88nm,18.6s,baz=132,slow=34						
PLCA	Paso Flores	45.51	167	P	P	08 36 25.7	+4.1
	comp=Z,0.7nm,0.7s,baz=52,slow=5.0,SNR=3.9						
	comp=Z,0.7nm,0.7s						
PDAR	Pinedale Array	45.70	332	P	P	08 36 24.6	+1.3
	comp=Z,0.7nm,1.1s,baz=144,slow=8.8,SNR=4.2						
PDAR				LR	LR	08 56 42.6	
	comp=Z,70nm,19.2s,baz=57,slow=38						
	comp=Z,0.7nm,1.1s						
ELK	Elko	47.10	326	LR	LR	08 57 20.1	
	comp=Z,81nm,18.1s,baz=162,slow=37						
NVAR	Mina Array Bea	47.40	322	P	P	08 36 37.7	+0.9
	comp=Z,0.7nm,0.7s,baz=131,slow=6.0,SNR=5.9						
NVAR				LR	LR	08 55 50.3	
	comp=Z,61nm,19.2s,baz=83,slow=35						
	comp=Z,0.7nm,0.7s						
ULM	Lac du Bonnet	47.80	349	P	P	08 36 37.7	-1.7
	comp=Z,1.1nm,0.5s,baz=134,slow=11,SNR=1.6						
	comp=Z,1.1nm,0.5s						
NEW	Newport	53.33	332	LR	LR	09 02 20.0	
	comp=Z,49nm,19.0s,baz=74,slow=39						
YKA	Yellowknife Ar	63.33	344	P	P	08 38 29.8	-1.1
	comp=Z,0.8nm,0.9s,baz=147,slow=5.9,SNR=8.2						
	comp=Z,0.8nm,0.9s						
A36M	Sachs Harbour	73.25	347		P	08 39 32.9	0.0
A36M				IAmb	IAmb	08 39 40.5	
	comp=Z,6.3nm,0.9s						
SUMG	Summit	74.11	13		P	08 39 38.4	-0.1
ILAR	Eielson Array	75.92	337	P	P	08 39 47.9	-0.7
	comp=Z,0.5nm,0.9s,baz=113,slow=7.6,SNR=4.3						
	comp=Z,0.5nm,0.9s						
SPITS	Spitsbergen Ar	88.43	12	LR	LR	09 21 41.8	
	comp=Z,44nm,20.2s,baz=234,slow=37						
MKAR	Makanchi Array	128.17	13	PKP	PKiKP	08 47 10.0	+0.7
	comp=Z,0.4nm,0.8s,baz=45,slow=0.2,SNR=2.1						
ASAR	Alice Springs	139.27	237	PKP	PKiKP	08 47 33.4	+0.9
	comp=Z,0.3nm,0.8s,baz=107,slow=1.0,SNR=1.6						
WRA	Warramunga Arr	140.25	243	PKP	PKiKP	08 47 33.5	-1.0
	comp=Z,0.7nm,0.9s,baz=119,slow=1.3,SNR=3.8						
PZH	PanZhiHua	149.78	352	PKPbc	PKPdf	08 47 47.5	-0.9

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*MEX **09** 08:30:37.5±0.6, 14°.65N×93°.15W, h86^{km}±19^{km}, MD3.9*
*GCG **09** 08:30:38.0±0.6, 14°.39N×93°.04W, h57^{km}±49^{km}, MD3.7*
ISC 09 08:30:30.9±2.1**, 14°.46N**±0°.09×**93°.26W**±0°.05**, h15**^{km}±10^{km}**,**
n15, σ**1**^{s}.**96**/28**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.06	65	*e*P	Pn	08 30 54.4	+3.0
THIG				*e*S	Sn	08 31 07.4	+1.5
PATR	El Naranjo	1.19	56	*e*P	Pg	08 30 55.4	+1.4
PATR				*e*S	Sn	08 31 09.7	+0.3
SMCA	Catarina	1.22	71	*e*P	Pg	08 30 56.5	+2.1
SMCA				*e*S	Sn	08 31 11.5	+1.7
PCIG		1.24	2	*e*P	Pg	08 30 56.1	+1.2
PCIG				*e*S	Sg	08 31 10.8	-0.3
PAVE	Pavencul	1.28	55	*e*P	Pg	08 30 57.1	+1.4
PAVE				*e*S	Sg	08 31 11.8	-0.6
CHUJ	Union Juarez	1.28	60	*e*P	Pg	08 30 56.9	+1.2
CHUJ				*e*S	Sn	08 31 12.4	+0.7
STG2	El Palmar, Qui	1.83	90	*e*P	Pb	08 31 01.7	-2.5
STG8	El Palmar, Qui	1.85	90	*e*P	Pb	08 31 02.5	-2.2
STG5	El Palmar, Qui	1.85	91	*e*P	Pb	08 31 02.6	-2.0
STG5				*e*S	Sn	08 31 21.3	-4.3
HUEH	Huehuetenango	1.90	63	*e*P	Pg	08 31 07.6	+0.1
HUEH				*e*S	Sb	08 31 28.3	-1.0
CCIG	Comitan	2.12	31	*e*P	Pg	08 31 10.8	-0.7
CCIG				*e*S	Sn	08 31 31.6	-0.6
CCIG	Comitan	2.12	31	*e*P	Pg	08 31 11.5	-0.1
CCIG				*e*S	Sg	08 31 37.1	-1.9
UXUV	UXUV	2.97	343	*e*P	Pb	08 31 22.2	-1.4
UXUV				*e*S	Sn	08 31 54.8	+1.8
CMIG	Matias Romero	3.05	329	*e*P	Pb	08 31 22.2	-2.8
CMIG				*e*S	Sn	08 31 53.0	-2.0
NEUV	Arroyo Zacate	4.05	323	*e*P	Pn	08 31 35.5	+2.9
NEUV				*e*S	Sn	08 32 18.9	-0.9

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*SOF **09** 08:32:41.3, 45°.48N±0°.01×26°.53E±0°.01, h120^{km}±2^{km},* *MD3.5/6*

BUC ***09*** *08:32:41.4±0.2, 45°.51N×26°.45E, h116^{km}±1^{km}, ml3.8/66, Error ellipse: s-maj=1.2km s-min=1.0km az=22.0*

MCSM ***09*** *08:32:43.4±0.4, 46°N±4°×2°7E±°, h129^{km}±8^{km}, MLv3.5*

ISC 09 08:32:40.0±1.3**, 45°.54N**±0°.03×**26°.47E**±0°.03**, h129**^{km}±6^{km}**, n97, σ0^{s}.74**/148**, 67C-56D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEHR	Nehoiu	0.16	228	⇓P	Pn	08 32 58.3	+0.6
NEHR				⇓S	Sn	08 33 10.2	-0.8
BISRR	Bisoca	0.17	86	⇑P	Pn	08 32 58.4	+0.6
BISRR				⇑S	Sn	08 33 10.7	-0.4
PLOR	Plostina	0.34	22	⇑P	Pn	08 32 58.7	+0.5
PLOR				⇓S	Sn	08 33 11.6	-0.5
COVR	Voineasa-Covas	0.36	329	⇑P	Pn	08 32 58.6	+0.3
COVR				⇑S	Sn	08 33 11.4	-0.8
MLR	Muntele Rosu	0.37	263	⇑P	Pn	08 32 59.0	+0.5
MLR				⇓S	Sn	08 33 11.9	-0.5
MLR	Muntele Rosu	0.37	263	Pn	Pn	08 32 59.0	+0.5
MLR				Sn	Sn	08 33 12.7	+0.3
VRI	Vrincioaia	0.38	29	⇑P	Pn	08 32 59.1	+0.7
VRI				⇓S	Sn	08 33 11.8	-0.5
GRER		0.39	113	⇓S	Sn	08 33 12.1	-0.2
ISR	Istrita	0.42	173	⇓P	Pn	08 32 58.8	+0.2
ISR				⇑S	Sn	08 33 11.6	-1.1
ISR	Istrita	0.42	173	Pn	Pn	08 32 59.2	+0.6
PANC	Panciu	0.58	55	⇑P	Pn	08 33 00.5	+1.0
PANC				⇓S	Sn	08 33 14.4	+0.2
TURR	Turia	0.61	329	⇓P	Pn	08 33 00.2	+0.5
TURR				⇓S	Sn	08 33 13.9	-0.7
COSR	Cosmesti PH	0.67	61	⇑P	Pn	08 33 00.8	+0.8
COSR				⇓S	Sn	08 33 14.6	-0.6
PLAR	PLOIESTI	0.70	207	⇑P	Pn	08 33 00.8	+0.6
PGOR	Pogoanele	0.73	150	⇓P	Pn	08 33 00.8	+0.3
OZUR		0.73	320	⇑P	Pn	08 33 00.8	+0.2
OZUR				⇓S	Sn	08 33 14.9	-1.3
BOSR	Bodos	0.78	314	⇓P	Pn	08 33 01.1	+0.2
BOSR				⇑S	Sn	08 33 15.8	-1.0
ONER	Baraj Valea Uz	0.80	356	⇑P	Pn	08 33 01.8	+0.7
ONER				⇓S	Sn	08 33 16.6	-0.5
GHRR		0.84	51	⇑P	Pn	08 33 02.5	+1.2
GHRR				⇓S	Sn	08 33 18.0	+0.4
TUDR		0.84	86	⇑P	Pn	08 33 01.6	+0.3
TUDR				⇓S	Sn	08 33 17.2	-0.4
DOPR	Dopca	0.87	300	⇑P	Pn	08 33 01.1	-0.6
DOPR				⇑S	Sn	08 33 17.5	-0.6
SULR		0.87	190	⇓P	Pn	08 33 01.9	+0.3
SULR				⇓S	Sn	08 33 17.3	-0.7
IZVR	Izvoarele	0.91	89	⇓P	Pn	08 33 02.1	+0.1
IZVR				⇓S	Sn	08 33 17.6	-1.1
SCHL	Schela	0.96	92	⇑P	Pn	08 33 02.8	+0.4
SCHL				⇑S	Sn	08 33 18.4	-0.9
SCHLR	Schela	0.96	93	⇑P	Pn	08 33 02.6	+0.2
SCHLR				⇓S	Sn	08 33 18.7	-0.7
TESR	Tescani	0.98	7	⇑P	Pn	08 33 03.3	+0.6
NEGRR	Negrea	0.99	89	⇑P	Pn	08 33 03.3	+0.7
NEGRR				⇑S	Sn	08 33 19.6	-0.3
VARL	Varlezi	1.03	69	⇑P	Pn	08 33 04.1	+1.1
VARL				⇑S	Sn	08 33 20.5	-0.1
MTUR	Matau	1.04	253	⇑P	Pn	08 33 03.9	+0.7
SCTR	Scanteiesti	1.08	82	⇑P	Pn	08 33 04.6	+1.1
SCTR				⇑S	Sn	08 33 21.6	+0.2
BIR	Birlad	1.09	47	⇓P	Pn	08 33 04.6	+1.0
BIR				⇓S	Sn	08 33 21.7	+0.1
LEHL	Lehliu	1.09	167	⇑S	Sn	08 33 21.7	+0.1
AMRR	Amara	1.11	146	⇑P	Pn	08 33 04.2	+0.3
AMRR				⇑S	Sn	08 33 22.1	+0.1
TATR	Tatarca	1.11	86	⇑P	Pn	08 33 04.8	+1.0
TATR				⇑S	Sn	08 33 21.9	0.0
INCR	INCERC-Sediu C	1.12	191	⇑P	Pn	08 33 04.4	+0.4
INCR				⇓S	Sn	08 33 21.8	-0.3
GISR	Galati	1.12	94	⇓P	Pn	08 33 04.8	+0.9
GISR				⇑S	Sn	08 33 22.2	+0.2
BUC	Bucharest	1.15	193	⇓S	Sn	08 33 22.7	0.0
VLDR	Vladesti	1.17	74	⇑P	Pn	08 33 05.4	+1.0
VLDR				⇑S	Sn	08 33 23.2	+0.1
GIUM	Giurgiulesti	1.22	92	⇑P	Pn	08 33 05.9	+0.9
GIUM				⇓S	Sn	08 33 24.5	+0.5
BUC1	Bucharest	1.23	195	⇑S	Sn	08 33 23.0	-1.1
CFR	Carcaliu	1.23	106	⇓P	Pn	08 33 05.6	+0.6
ARR	Arges	1.30	263	⇑P	Pn	08 33 06.6	+0.7
ARR				⇓S	Sn	08 33 25.1	-0.5
SGRR	Singureni	1.36	195	⇑P	Pn	08 33 07.0	+0.5
SGRR				⇑S	Sn	08 33 25.7	-0.8
CICN	Ciocanesti	1.40	163	⇓P	Pn	08 33 07.3	+0.4
CICN				⇓S	Sn	08 33 26.8	-0.4
GIRR	Girov	1.42	1	⇑P	Pn	08 33 08.1	+1.0
GIRR				⇓S	Sn	08 33 27.7	-0.1
BIZ	Bicaz	1.43	350	⇑S	Sn	08 33 29.0	+1.0
VASR	Vaslui	1.44	39	⇑P	Pn	08 33 08.3	+1.0
VASR				⇓S	Sn	08 33 27.9	-0.2
HUMR	Humele	1.46	227	⇑P	Pn	08 33 07.9	+0.4
HUMR				⇓S	Sn	08 33 28.0	-0.5
TLBR	Topalu	1.50	131	⇑P	Pn	08 33 08.7	+0.7
TLBR				⇑S	Sn	08 33 28.4	-0.8
TPGR	Topolog	1.54	116	⇓P	Pn	08 33 08.9	+0.5
TPGR				⇓S	Sn	08 33 29.1	-1.0
CVDA	Cernavoda	1.64	137	⇓P	Pn	08 33 10.4	+0.8
CVDA				⇑S	Sn	08 33 32.3	+0.1
COPA	Copaceanca	1.66	213	⇑P	Pn	08 33 10.2	+0.4
COPA				⇓S	Sn	08 33 31.4	-1.2
TLCR		1.69	101	⇓P	Pn	08 33 11.1	+0.9
TLCR				⇑S	Sn	08 33 33.0	-0.1
ICOR	Ion Corvin	1.71	146	⇑P	Pn	08 33 11.4	+1.0
ICOR				⇓S	Sn	08 33 33.3	-0.2
TIRR	Tirgusor	1.75	127	⇑P	Pn	08 33 11.5	+0.7
TIRR				⇑S	Sn	08 33 34.0	-0.5
TIRR	Tirgusor	1.75	127	Pn	Pn	08 33 11.3	+0.4
PRAR	RASCA	1.83	355	⇑P	Pn	08 33 13.2	+1.3
PRAR				⇓S	Sn	08 33 37.0	+0.7
JURR	Jurilovca	1.87	113	⇓P	Pn	08 33 13.2	+0.9
LOT	Lotru	1.90	268	⇑P	Pn	08 33 12.6	-0.2
LOT				⇑S	Sn	08 33 37.1	-0.7
RAZG	Razgrad	1.97	179	⇑P	Pn	08 33 13.7	+0.2
TSCT	Constanta Port	2.08	131	⇑P	Pn	08 33 15.4	+0.6
EFOR	EFORIE	2.12	133	⇓P	Pn	08 33 15.7	+0.4
EFOR				⇑S	Sn	08 33 41.7	-0.6
MILM	Milestii Mici	2.13	49	*e*P	Pn	08 33 15.0	-0.5
MILM	Milestii Mici	2.13	49	PM2		08 33 16.0	
	15nm,0.3s						
MILM				*e*S	Sn	08 33 40.0	-2.8
	160nm,0.3s						
LOZB	Loznitsa	2.17	178	⇓P	Pn	08 33 16.5	+0.5
KIS	Kishinev	2.19	47	*e*P	Pn	08 33 16.8	+0.6
KIS				*e*S	Sn	08 33 43.1	-0.9
	200nm,0.2s						
PSN	Preselentsi	2.24	147	⇓*i*P	Pn	08 33 17.8	+0.9
PSN				S	Sn	08 33 44.7	-0.4
BURAR	Bucovina Array	2.25	338	⇓P	Pn	08 33 19.3	+2.2
MANR	Mangalia	2.29	138	⇓P	Pn	08 33 17.4	0.0
SZH	Strazhitsa	2.30	189	⇓*i*P	Pn	08 33 18.1	+0.5
NEF	NEVSHA	2.34	165	⇓*i*P	Pn	08 33 18.9	+0.7
PRD	Provadia	2.47	164	⇓*i*P	Pn	08 33 20.5	+0.8
PLVB	Pleven	2.52	212	⇓P	Pn	08 33 20.9	+0.5
ROIA	ROIAK	2.53	165	P	Pn	08 33 21.5	+1.0
KALB	Balgarevo	2.55	146	⇑P	Pn	08 33 21.9	+1.2
AVR	AVREN	2.56	160	P	Pn	08 33 21.9	+0.9
PVL	Pavlikeni	2.59	202	*e*P	Pn	08 33 21.9	+0.7
MARR	Marisel-Cluj	2.59	297	⇑P	Pn	08 33 22.5	+1.1
MARR				⇓S	Sn	08 33 54.1	+0.8
GZR	Gura Zlata	2.60	268	⇑P	Pn	08 33 22.4	+1.0
GZR				⇓S	Sn	08 33 53.6	+0.2
ELND	Elena	2.64	190	⇓P	Pn	08 33 22.6	+0.7
DRGR		2.90	297	⇑P	Pn	08 33 25.5	+0.3
SORM	Soroca	2.90	26	⇓P	Pn	08 33 25.7	+0.5
MPEP	Malo Peshtene	2.93	223	P	Pn	08 33 26.2	+0.6
HERR	Herculane	2.94	259	⇑P	Pn	08 33 26.2	+0.5
JMB	Yambol	3.04	179	P	Pn	08 33 27.8	+0.7
MDVR	Moldovita	3.45	259	⇑P	Pn	08 33 32.6	+0.2
MEZ	Mezhgor'ye	3.60	327	Pn	Pn	08 33 35.2	+0.8
LUBAR	Lubar, Ukraine	4.47	11	Pn	Pn	08 33 45.2	-0.7
AK06	Malin Array Si	5.37	19	Pn	Pn	08 33 57.0	-0.9
AK10	Malin Array Si	5.40	19	Pn	Pn	08 33 57.3	-1.0
AK12	Malin Array Si	5.42	18	Pn	Pn	08 33 57.9	-0.6
AK09	Malin Array Si	5.42	19	Pn	Pn	08 33 57.8	-0.8
AK17	Malin Array Si	5.44	18	Pn	Pn	08 33 57.8	-1.0
AK02	Malin Array Si	5.44	19	Pn	Pn	08 33 58.4	-0.5
AK19	Malin Array Si	5.46	17	Pn	Pn	08 33 58.4	-0.7
AK18	Malin Array Si	5.47	18	Pn	Pn	08 33 58.2	-1.1
AK01	Malin Array Si	5.48	19	Pn	Pn	08 33 59.2	-0.1

IDC 09 08:40:39.9±2.1**, 5°.68S**×**152°.44E, h0**^{km}**, mb3.7**/4**, mbtmp3.7**/5**, ML1.5**/1**, Error ellipse: s-maj=73.1km s-min=25.1km az=124.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.41	234	Pn	Pn	08 42 15.0	-0.7
	0.6nm,0.3s,baz=65,slow=18,SNR=1.5						
PMG				Sn	Sn	08 43 29.1	-0.6
	1.0nm,0.3s,baz=36,slow=19,SNR=2.2						
	4.1nm,0.4s						
WRA	Warramunga Arr	22.60	230	P	P	08 45 42.4	0.0
	0.7nm,0.7s,baz=54,slow=10.0,SNR=6.6						
	0.7nm,0.7s						
ASAR	Alice Springs	25.27	223	P	P	08 46 08.4	+0.3
	1.4nm,0.8s,baz=55,slow=9.5,SNR=18						
	1.4nm,0.8s						
LZDM	Lanzhou Array	61.64	316	P	P	08 51 00.6	+0.5
	1.1nm,0.3s,baz=110,slow=6.3,SNR=1.7						
	1.1nm,0.3s						
ILAR	Eielson Array	83.10	22	P	P	08 53 06.9	-0.5
	0.3nm,0.7s,baz=252,slow=4.9,SNR=1.2						
	0.3nm,0.7s						

MOS ***09*** *08:41:18.1±1.0, 33°.02N×140°.56E, h66^{km}, mb4.8/28, Error ellipse: s-maj=14.7km s-min=6.3km az=117.5*

NIED ***09*** *08:41:18.6, 33°.16N×140°.81E, h54^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}5.23; $M_{\theta\theta}$0.55; $M_{\phi\phi}$-5.78; $M_{r\theta}$-0.38; $M_{\theta\phi}$-1.47; $M_{\phi r}$2.45; Fault plane solution: $M_0$6.20000×10^{15} NP1: ϕ_s203.00000°, δ35.00000°, λ107.00000°. NP2:ϕ_s3.00000°, δ57.00000°, λ79.00000°.*

JMA ***09*** *08:41:18.6±0.1, 33°.2N±0°.3×14°1E±°, h54^{km}±3^{km}, MD4.4/39, MV4.5/39, E OFF HACHIJOJIMA ISLAND*

JMA Felt I J1 at E OFF HACHIJOJIMA ISLAND.

IDC ***09*** *08:41:19.6±0.4, 33°.06N×140°.62E, h62^{km}±3^{km}, mb4.1/26, mbtmp4.4/28, MS3.4/19, Error ellipse: s-maj=9.0km s-min=7.1km az=9.0*

NEIC ***09*** *08:41:20.8±1.3, 33°.06N±0°.08×140°.56E±0°.09, h68^{km}±5^{km}, mb4.7/149, Error ellipse: s-maj=12.4km s-min=10.3km az=157.0*

ISC 09 08:41:19.9±0.4**, 33°.14N**±0°.04×**140°.70E**±0°.05**, h64**^{km}±3^{km}**, n530, σ0^{s}.93**/475**, mb4.7**/123**, 9C-12D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	0.74	268		Pn	08 41 34.5	-0.4
JHJ2				Sn	Sn	08 41 45.9	0.0
JHJ2	Mitsune	0.74	268	P	Pn	08 41 34.6	-0.2
JHJ2	Mitsune	0.74	268	P	Pn	08 41 34.5	-0.4
JHJ2				S	Sn	08 41 46.0	+0.2
JHJ2	Mitsune	0.74	268	A	A	08 41 34.5	
	comp=N,23nm,0.6s,comp=E,29nm,3.1s						
JHCJ	Hachijojimakas	0.76	266	P	Pn	08 41 34.6	-0.5
JHCJ				S	Sn	08 41 45.9	-0.3
JHCJ	Hachijojimakas	0.76	266	A	A	08 41 34.6	
	comp=N,20nm,1.0s,comp=E,26nm,3.9s						
JHJ	Hachijo jima 2	0.77	269	P	Pn	08 41 34.8	-0.4
	comp=E,7µm,0.3s,baz=90,slow=20,SNR=379						
JHJ				S	Sn	08 41 45.6	-0.9
	comp=E,7µm,0.3s,baz=72,slow=20,SNR=14						
JHJ				LR	LR	08 42 01.9	
	comp=E,3µm,18.7s,baz=284,slow=62						
JAOM	Aogashimamukai	1.04	230	P	Pn	08 41 38.2	-0.3
JAOM				S	Sn	08 41 53.0	+0.6
JAOM	Aogashimamukai	1.04	230	A	A	08 41 38.2	
	comp=N,34nm,1.0s,comp=E,39nm,0.6s						
JMKN	Mikurajimanish	1.20	309	P	Pn	08 41 40.2	-0.4
JMKN				S	Sn	08 41 55.7	-0.4
JMKN	Mikurajimanish	1.20	309	A	A	08 41 40.2	
	comp=N,8.0nm,0.8s,comp=E,9.0nm,1.2s						
JMYK	Miyake Tsubota	1.33	314	P	Pn	08 41 42.4	-0.1
JMYK				S	Sn	08 41 59.6	+0.3
JMYK	Miyake Tsubota	1.33	314	A	A	08 41 42.4	
	comp=N,16nm,0.5s,comp=E,14nm,2.4s						
BSO1	Boso 1	1.53	8	P	Pn	08 41 43.4	-1.1
BSO3	Boso 3	1.67	355	*i* P	Pn	08 41 46.0	-0.7
JSKK	Shikinejimakit	1.73	314	A	A	08 41 47.6	
	comp=N,7.0nm,3.4s,comp=E,11nm,9.0s						
BSO4	Boso 4	1.88	351	P	Pn	08 41 49.6	+0.1
JIM2	Oshima 3	1.90	327	*i* P	Pn	08 41 49.6	-0.5
JIM2	Oshima 3	1.90	327	A	A	08 41 49.6	
	comp=N,8.0nm,1.1s,comp=E,9.0nm,1.6s						
JIZS	Izushimoda	2.19	317	*i* P	Pn	08 41 54.3	+0.4
JIZS	Izushimoda	2.19	317	A	A	08 41 54.3	
	comp=N,3.0nm,1.1s,comp=E,3.0nm,1.2s						
KTJ3	Kamata3	2.25	323	P	Pn	08 41 54.6	-0.2
KTJ3				S	Sn	08 42 21.6	+0.2
JYO	Yokosk	2.25	338	A	A	08 41 54.7	
	comp=N,9.0nm,3.0s,comp=E,7.0nm,1.2s						
JCCN	Chibachonan	2.28	350	A	A	08 41 54.6	
	comp=N,6.0nm,4.2s,comp=E,8.0nm,3.6s						
JHTM	Izuhatsuma	2.30	323	A	A	08 41 55.6	
	comp=N,7.0nm,1.1s,comp=E,7.0nm,1.6s						
JOD2	Odawara 2	2.51	328	*i* P	Pn	08 41 58.1	-0.2
JOD2	Odawara 2	2.51	328	A	A	08 41 58.1	
	comp=N,2.0nm,2.8s,comp=E,3.0nm,2.1s						
TK02	Tokai 2	2.59	289	*i* P	Pn	08 42 00.3	+1.1
JSG	Sagara	2.60	307		Pn	08 41 59.4	0.0
JSG	Sagara	2.60	307	P	Pn	08 42 01.3	+1.8
SHZ3	Shizuoka 3	2.83	314	*i* P	Pn	08 42 04.2	+1.6
JYN	Shimob	2.96	323	*i* P	Pn	08 42 05.5	+1.1
JGF	Kuroka	3.70	313		Pn	08 42 15.0	+0.4
JGF	Kuroka	3.70	313	P	Pn	08 42 16.4	+1.8
INU	Inuyama	3.77	307		Pn	08 42 16.1	+0.7
INU	Inuyama	3.77	307	P	Pn	08 42 17.0	+1.5
MJAR	Matsushiro Arr	3.97	330	P	Pn	08 42 19.1	+0.8
	comp=E,79nm,0.7s,baz=158,slow=11,SNR=97						
MJAR				S	Sn	08 43 05.1	+1.6
	comp=E,26nm,0.5s,baz=126,slow=25,SNR=3.8						
MJAR				LR	LR	08 43 56.7	
	comp=E,440nm,21.8s,baz=136,slow=39						
MAJO	Matsushiro	3.97	330		Pn	08 42 19.4	+1.2
MAJO	Matsushiro	3.97	330	P	Pn	08 42 19.8	+1.5
MAJO	Matsushiro	3.97	330	*d i*P	Pn	08 42 19.3	+1.0
MJB9	Matsu-Tunnel	3.98	330		Pn	08 42 20.5	+2.2
JMN	Monobe	5.74	278		Pn	08 42 43.0	+0.5
JMN	Monobe	5.74	278	P	Pn	08 42 44.2	+1.7
JCJ	Chichijima	6.16	168	P	Pn	08 42 35.1	-13
	comp=E,71nm,0.3s,baz=330,slow=20,SNR=7.2						
JCJ				S	Sn	08 43 38.7	-18
	comp=E,146nm,0.4s,baz=288,slow=22,SNR=6.5						
JCJ				LR	LR	08 44 21.3	
	comp=E,31nm,20.2s,baz=342,slow=30						
JNU	Nakatsue	8.24	273	P	Pn	08 43 19.5	+2.8
	comp=E,32nm,0.8s,baz=108,slow=18,SNR=18						
JNU				LR	LR	08 45 47.0	
	comp=E,222nm,18.7s,baz=80,slow=33						
JNU	Nakatsue	8.24	273		Pn	08 43 17.3	+0.6
JNU	Nakatsue	8.24	273	P	Pn	08 43 19.3	+2.6
ERM	Erimo	9.07	12	P	Pn	08 43 27.1	-0.9
JEM	Erimo	9.08	12	P	Pn	08 43 27.2	-0.8
JTU	Tsushima	9.51	281	P	Pn	08 43 36.8	+2.8
JKA	Kamikawa-asahi	11.06	7	Pn	Pn	08 43 52.2	-3.0
ASAJ	Asahikawa	11.06	7	P	Pn	08 43 52.3	-2.9
	comp=E,8.8nm,0.4s,baz=229,slow=7.0,SNR=11						
ASAJ				S	Sn	08 45 50.7	-6.5
	comp=E,2.7nm,0.5s,baz=246,slow=20,SNR=1.3						
ASAJ				LR	LR	08 49 00.4	
	comp=E,81nm,21.5s,baz=181,slow=41						
KSRS	Korea Array	11.30	296	P	Pn	08 44 03.8	+5.4
	comp=E,5.3nm,0.9s,baz=114,slow=14,SNR=10						
TJN	Taejon	11.44	290	⇓*i*P	Pn	08 43 58.5	-1.8
JOW	Kunigami	12.47	243	LR	LR	08 48 38.7	
	comp=E,151nm,20.6s,baz=136,slow=36						
YSS	Yuzhno-Sakhali	13.89	6	*e*P	Pn	08 44 26.7	-6.8
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=Z,200nm,13.0s						
YSS				MLR	MLR		
	comp=E,400nm,16.0s						
NJ2	Nanjing	18.44	273	*e*P	P	08 45 30.0	-0.2
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HEH	HeiHe	19.72	334	*e*P	P	08 45 44.7	+0.6
GUMO	Guam	19.82	168	P	P	08 45 45.2	-0.3
	comp=Z,15nm,0.3s,baz=41,slow=11,SNR=1.5						
GUMO				LR	LR	08 51 13.7	
	comp=Z,21nm,19.0s,baz=3.0,slow=30						
XLT	XiLinHaoTe	21.98	306	*e*P	P	08 46 07.6	-1.0
XLT				pP	pP	08 46 24.6	+2.4
XLT				sP	sP	08 46 31.7	+1.5
XLT				PP	PnPn	08 46 36.0	+3.2
XLT				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HILR	Hailar Array B	22.61	323	P	P	08 46 15.5	+0.3
	comp=Z,2.9nm,0.5s,baz=132,slow=8.6,SNR=7.2						
	comp=Z,2.9nm,0.5s						
ZEA	Zeya	22.72	339	*e*P	P	08 46 16.7	+0.5
ZEA				*e*		08 46 32.2	
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
PETK	Petropavlovsk-	23.39	26	LR	LR	08 57 52.4	
	comp=Z,48nm,18.4s,baz=220,slow=42						
XAN	Xi'an	26.44	281	P	P	08 46 49.1	-1.7
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
H11N2	WAKE ISLAND Hy	26.90	113	T	T	09 16 00.2	
	baz=305,slow=75,SNR=171						
H11N1	WAKE ISLAND Hy	26.90	113	T	T	09 15 47.8	
	baz=305,slow=75,SNR=207						
H11N3	WAKE ISLAND Hy	26.92	113	T	T	09 15 42.1	
	baz=305,slow=75,SNR=266						
MA2	Magadan	27.28	11	LR	LR	08 57 58.3	
	comp=Z,54nm,19.3s,baz=198,slow=36						
H11S3	WAKE ISLAND Hy	27.46	116	T	T	09 16 24.0	
	baz=307,slow=75,SNR=34						
H11S1	WAKE ISLAND Hy	27.46	116	T	T	09 16 37.1	
	baz=307,slow=75,SNR=23						
H11S2	WAKE ISLAND Hy	27.48	116	T	T	09 16 34.2	
	baz=307,slow=75,SNR=25						
ULN	Ulaanbaatar	29.25	310	P	P	08 47 17.3	+1.5
ULN	Ulaanbaatar	29.25	310	⇓*e*P	P	08 47 17.8	+1.9
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
DAV	Davao City (W)	29.49	212	LR	LR	08 59 39.8	
	comp=Z,34nm,19.7s,baz=2.5,slow=37						
SONM	Songino Array	29.66	310	P	P	08 47 19.1	-0.4
	comp=Z,1.9nm,0.8s,baz=117,slow=9.3,SNR=8.8						
SONM				PcP	PcP	08 50 23.1	+0.6
	comp=Z,0.5nm,0.6s,baz=126,slow=3.3,SNR=3.7						
SONM				LR	LR	08 59 10.1	
	comp=Z,144nm,19.1s,baz=87,slow=36						
	comp=Z,1.9nm,0.8s						
YAK	Yakutsk	29.77	350	LR	LR	08 58 55.5	
	comp=Z,62nm,19.9s,baz=100,slow=35						
SEY	Seymchan	30.72	10	LR	LR	09 00 19.1	
	comp=Z,81nm,18.9s,baz=110,slow=37						
TIXI	Tiksi	39.09	354	LR	LR	09 04 54.4	
	comp=Z,44nm,18.6s,baz=196,slow=36						
TIXI	Tiksi	39.09	354	P	P	08 48 40.2	-0.1
TIXI	Tiksi	39.09	354	⇓*i*P	P	08 48 40.0	-0.3
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMAR	Chiang Mai Arr	40.07	259	P	P	08 48 49.5	+0.3
	comp=Z,2.0nm,0.3s,baz=46,slow=7.0,SNR=4.4						
	comp=Z,2.0nm,0.3s						
CMAR	Chiang Mai Arr	40.07	259	*ce*P	P	08 48 50.5	+1.3
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
NIKH	Nikolski High	40.85	45	P	P	08 48 55.0	-0.2
	baz=262						
SPIA	Saint Paul Isl	40.91	39	P	P	08 48 54.7	-0.8
	baz=255						
P08K	Saint George I	41.14	40	P	P	08 48 57.1	-0.4
	baz=257						
DGZ	Jazzator, Alta	42.31	309	⇑*i*P	P	08 49 08.5	+1.1
DGZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
UNV	Unalaska Valle	42.36	44	P	P	08 49 07.5	0.0
	baz=263						
GAMB	Gambell	42.37	29	P	P	08 49 07.3	-0.1
	baz=247						
M11K	Mekoryuk	43.74	35	P	P	08 49 18.1	-0.4
	baz=256						
ZAA0	Zalesovo Array	44.19	315	P	P	08 49 21.4	-0.9
ZALV	Zalesovo Beam	44.19	315	P	P	08 49 22.2	-0.1
	comp=Z,0.6nm,0.4s,baz=94,slow=10,SNR=3.7						
ZALV				pP	pP	08 49 38.5	+0.3
	comp=Z,0.7nm,0.4s,baz=99,slow=9.2,SNR=2.8						
ZALV				PcP	PcP	08 51 05.8	-0.2
	comp=Z,4.1nm,0.7s,baz=102,slow=2.6,SNR=15						
ZALV				LR	LR	09 07 03.5	
	comp=Z,86nm,18.2s,baz=94,slow=35						
	comp=Z,0.6nm,0.4s						
ZALV	Zalesovo Beam	44.19	315	P	P	08 49 21.9	-0.4
BRDH	Bariadhala	44.25	269	LR	LR	09 10 36.5	
	comp=Z,84nm,18.1s,baz=115,slow=40						
FALS	False Pass	44.27	43	P	P	08 49 22.0	-0.9
	baz=264						
TNA	Tin City	44.55	28	P	P	08 49 24.6	-0.3
	baz=249						
K13K	Kusilvak Mount	44.85	33	P	P	08 49 27.1	-0.3
	baz=256						
M13K	Dall Lake	45.13	35	P	P	08 49 29.6	0.0
	baz=259						
F14K	Arctic Creek	45.15	28	P	P	08 49 30.1	+0.4
	baz=251						
J14K	Nanvaranak Lak	45.54	32	P	P	08 49 33.1	+0.3
	baz=256						
L14K	Kuka Creek	45.63	34	P	P	08 49 34.0	+0.4
	baz=259						
MK31	Makanchi Array	45.79	305	*d i*P	P	08 49 35.1	-0.1
MKAR	Makanchi Array	45.79	305	P	P	08 49 35.2	+0.1
	comp=Z,1.6nm,0.7s,baz=83,slow=10,SNR=12						
MKAR				pP	pP	08 49 50.8	-0.4
	comp=Z,1.6nm,0.6s,baz=90,slow=8.4,SNR=6.6						
MKAR				PcP	PcP	08 51 11.6	-0.1
	comp=Z,1.6nm,0.8s,baz=90,slow=2.9,SNR=3.9						
MKAR				ScP	ScP	08 54 59.2	0.0
	comp=Z,0.6nm,0.9s,baz=47,slow=2.8,SNR=2.6						
MKAR				LR	LR	09 07 36.4	
	comp=Z,87nm,21.5s,baz=20,slow=34						
	comp=Z,1.6nm,0.7s						
MKAR	Makanchi Array	45.79	305	P	P	08 49 34.6	-0.5
N14K	Kuskokwak Cree	45.86	36	P	P	08 49 35.5	0.0
	baz=261						
G15K	Niukluk	45.92	29	P	P	08 49 36.5	+0.7
	baz=254						
O14K	Tigyukauivet M	45.97	37	P	P	08 49 36.9	+0.6
	baz=262						
L15K	Ungalak Mounta	46.26	34	P	P	08 49 39.3	+0.7
	baz=259						
K15K	Wolf Creek Mou	46.36	33	P	P	08 49 39.6	+0.2
	baz=259						
C16K	Lisburne Hills	46.47	25	P	P	08 49 40.0	0.0
	baz=249						
M15K	Kasigluk River	46.48	35	P	P	08 49 40.5	+0.2
	baz=261						
CHNA	Chernabura Isl	46.48	44	P	P	08 49 40.9	+0.5
	baz=268						
H16K	Elim	46.57	30	P	P	08 49 40.4	-0.5
	baz=256						
S14K	Fog Glacier	46.58	42	P	P	08 49 41.4	+0.2
	baz=266						
NRIK	Noril'sk	46.59	337	P	P	08 49 41.3	+0.3
	comp=Z,1.2nm,0.4s,baz=88,slow=8.4,SNR=3.6						
NRIK				pP	pP	08 49 57.4	+0.5
	comp=Z,1.7nm,0.5s,baz=114,slow=13,SNR=2.9						
	comp=Z,1.2nm,0.4s						
NRIK	Noril'sk	46.59	337	P	P	08 49 40.6	-0.4
MTN	Manton Dam	46.62	193	P	P	08 49 40.1	-1.8
MTN				IAmb	IAmb	08 49 56.6	
	comp=Z,14nm,1.2s						
N15K	Kwethluk River	46.69	36	P	P	08 49 42.0	+0.1
	baz=262						
O15K	Ungalikthiuk R	46.70	38	P	P	08 49 42.1	+0.1
	baz=263						
G16K	Koyuk River	46.71	29	P	P	08 49 42.1	+0.2
	baz=255						
J16K	Anvik River	46.97	32	P	P	08 49 44.1	0.0
	baz=259						
D17K	Noatak River	47.08	26	P	P	08 49 45.4	+0.5
	baz=252						
L16K	Owhat River	47.21	34	P	P	08 49 47.6	+1.6
L16K				IAmb	IAmb	08 50 17.3	
	comp=Z,8.7nm,1.1s						
L16K	Owhat River	47.21	34	P	P	08 49 46.1	+0.1
	baz=261						
RDOG	Red Dog Mine	47.26	25	P	P	08 49 46.7	+0.4
	baz=252						
C17K	DeLong Mountai	47.29	25	P	P	08 49 46.6	+0.1
	baz=252						
M16K	Timber Creek	47.36	35	P	P	08 49 47.0	-0.2
	baz=262						

E17K	Hotham Inlet	47.37	27	P	P	08 49 47.8	+0.7
	baz=254						
N16K	Nishlik Lake	47.38	36	P	P	08 49 46.9	-0.4
	baz=263						
F17K	Baldwin Pennin	47.42	28	P	P	08 49 47.6	+0.1
	baz=255						
G17K	Kiwalik Mounta	47.43	29	P	P	08 49 47.2	-0.4
	baz=257						
H17K	Granite Mounta	47.60	30	P	P	08 49 49.2	+0.2
	baz=258						
O16K	Kokwok River B	47.62	37	P	P	08 49 49.0	-0.2
	baz=264						
P16K	Nushagak River	47.62	38	P	P	08 49 49.6	+0.4
	baz=265						
J17K	VABM Dome	47.67	32	P	P	08 49 50.4	+0.9
	baz=260						
R16K	Pilot Point	47.74	40	P	P	08 49 50.6	+0.5
	baz=267						
L17K	Donlin	47.83	34	P	P	08 49 51.5	+0.7
	baz=262						
K17K	Iditarod	47.91	33	P	P	08 49 51.9	+0.5
	baz=262						
KURK	Kurchatov	47.96	311		P	08 49 51.4	-0.6
KURK	Kurchatov	47.96	311	⇓*i*P	P	08 49 51.3	-0.6
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURBB	Kurchatov Arra	48.02	311	P	P	08 49 52.1	-0.3
	comp=Z,2.7nm,0.6s,baz=88,slow=7.7,SNR=16						
KURBB				pP	pP	08 50 07.9	-0.7
	comp=Z,2.0nm,0.4s,baz=89,slow=7.8,SNR=6.8						
KURBB				PcP	PcP	08 51 19.2	-0.3
	comp=Z,0.4nm,0.4s,baz=90,slow=5.3,SNR=2.9						
	comp=Z,2.7nm,0.6s						
C18K	Utukok River	48.04	25	P	P	08 49 52.2	-0.2
	baz=253						
B18K	Kokolik River	48.04	24	P	P	08 49 52.5	+0.2
	baz=252						
F18K	Selawik	48.08	28	P	P	08 49 52.7	+0.1
	baz=257						
M17K	Holitna River	48.14	35	P	P	08 49 52.8	-0.4
	baz=264						
O17K	Koliganek Bris	48.14	37	P	P	08 49 53.2	-0.1
	baz=265						
Q16K	King Salmon	48.29	38	P	P	08 49 54.4	+0.1
	baz=267						
H18K	Honhosa River	48.29	30	P	P	08 49 54.3	-0.1
	baz=259						
G18K	Tagagawik	48.32	29	P	P	08 49 53.9	-0.6
	baz=258						
R17L	Mt. Peulik Vol	48.40	40	P	P	08 49 54.3	-0.9
	baz=268						
P17K	Kvichak River	48.44	38	P	P	08 49 55.0	-0.4
	baz=266						
A19K	Wainwright	48.55	23	P	P	08 49 56.4	+0.2
	baz=252						
L18K	Granite Mounta	48.59	34	P	P	08 49 57.0	+0.4
	baz=264						
Q17K	Contact Creek	48.67	39	P	P	08 49 57.4	0.0
	baz=268						
C19K	Lookout Ridge	48.73	24	P	P	08 49 59.3	+1.7
C19K	Lookout Ridge	48.73	24	P	P	08 49 58.1	+0.5
	baz=255,SNR=6.0						
J18K	Innoko River	48.73	32	P	P	08 49 58.1	+0.4
	baz=262						
N18K	Kilae Creek	48.82	36	P	P	08 49 59.1	+0.7
	baz=266						
GCSA	Galena City Sc	48.84	30	P	P	08 49 59.6	+1.1
	baz=261						
F19K	Shaleruckik Mo	48.86	28	P	P	08 49 58.3	-0.3
	baz=258						
M18K	Stony River	48.92	35	P	P	08 49 58.5	-0.7
	baz=265						
G19K	Purcell Mounta	48.99	28	P	P	08 49 59.4	-0.3
	baz=260						
P18K	Big Mountain,	49.07	38	P	P	08 50 00.1	-0.3
	baz=267						
D19K	Kuna River	49.09	25	P	P	08 50 00.8	+0.3
	baz=257						
O18K	Koktuh Hills	49.10	37	P	P	08 50 01.0	+0.4
	baz=267						
H19K	Roundabout Mou	49.15	29	P	P	08 50 01.2	+0.4
	baz=261						
Q18K	Katmai Hardscr	49.15	39	P	P	08 50 00.7	-0.4
	baz=268						
E19K	Redstone River	49.19	27	P	P	08 50 01.1	-0.1
	baz=258						
J19K	Poorman	49.28	31	P	P	08 50 02.5	+0.6
	baz=263						
R18K	Karluk	49.42	40	P	P	08 50 03.5	+0.5
	baz=270						
L19K	White Mountain	49.44	34	P	P	08 50 03.3	+0.2
	baz=265						
N19K	Bonanza Creek	49.52	36	P	P	08 50 04.3	+0.4
	baz=267						
O19K	Port Alsworth	49.56	36	P	P	08 50 04.9	+0.8
	baz=267						
SII	Sitkinak Islan	49.57	41	P	P	08 50 04.6	+0.4
	baz=271						
D20K	Etivluk River	49.68	25	P	P	08 50 05.5	+0.6
	baz=258						
F20K	Avaraart Lake	49.69	27	P	P	08 50 05.7	+0.7
	baz=260						
E20K	Nigu River	49.74	26	P	P	08 50 05.6	+0.2
	baz=259,SNR=6.0						
B20K	Meade River	49.78	23	P	P	08 50 06.0	+0.4
	baz=256						
H20K	Anotleneega Mo	49.79	30	P	P	08 50 06.2	+0.4
	baz=262						
KNRA	Kununurra	49.86	195	P	P	08 50 06.4	-0.4
Q19K	Cape Douglas,	49.87	38	P	P	08 50 06.5	0.0
	baz=269						
I20K	Naaghedeneel	49.87	30	P	P	08 50 06.1	-0.2
	baz=263						
K20K	Telida	49.90	32	P	P	08 50 06.7	+0.1
	baz=265						
J20K	Nowinta River	49.95	31	P	P	08 50 07.1	+0.1
	baz=264						
OHAK	Old Harbor	50.05	40	P	P	08 50 07.6	-0.2
	baz=271						
M20K	Styx River	50.23	34	P	P	08 50 08.9	-0.4
	baz=267						
C21K	Knifeblade Rid	50.41	25	P	P	08 50 10.4	0.0
	baz=259						
KDAK	Kodiak Island	50.42	40	LR	LR	09 10 25.3	
	comp=Z,42nm,20.9s,baz=230,slow=35						
KDAK	Kodiak Island	50.42	40	P	P	08 50 10.3	-0.4
	baz=271						
G21K	Allakaket	50.48	28	P	P	08 50 11.0	0.0
	baz=263						
Q20K	Shuyak Island	50.52	39	P	P	08 50 11.2	-0.1
	baz=270						
B21K	Ikpikpuk River	50.56	24	P	P	08 50 11.5	0.0
	baz=259						
E21K	Killik River	50.58	26	P	P	08 50 12.4	+0.7
E21K	Killik River	50.58	26	P	P	08 50 11.6	-0.2
	baz=261,SNR=6.1						
F21K	Alatna River	50.58	27	IAmb	IAmb	08 50 14.5	
	comp=Z,5.6nm,0.9s						
F21K	Alatna River	50.58	27	P	P	08 50 12.1	+0.3
	baz=262						
SPCR	Spurr Chakacha	50.64	35	P	P	08 50 12.6	+0.3
	baz=268						
H21K	Melozitna Rive	50.67	29	P	P	08 50 12.8	+0.4
	baz=264						
PPLA	Purkeypile	50.72	33	P	P	08 50 12.8	-0.2
	baz=267						
A22K	Sinclair Lake	50.72	22	P	P	08 50 13.2	+0.5
	baz=258						
CHUM	Lake Minchumin	50.72	32	P	P	08 50 12.9	+0.1
	baz=266						
HOM	Homer	50.90	37	P	P	08 50 14.9	+0.7
	baz=270						
I21K	Tanana	50.97	30	P	P	08 50 15.3	+0.7
	baz=265						
SKT	Skwentna	50.99	34	P	P	08 50 15.5	+0.6
	baz=268						
B22K	Teshekpuk Lake	51.10	23	IAmb	IAmb	08 50 17.8	
	comp=Z,12nm,0.9s						
B22K	Teshekpuk Lake	51.10	23	P	P	08 50 15.4	-0.1
	baz=260						
D22K	Ayikyak River	51.12	25	P	P	08 50 15.6	-0.2
	baz=262,SNR=12						
CAPN	Captain Cook N	51.15	36	P	P	08 50 15.3	-0.7
	baz=270						
H22K	Ishtalitna Cre	51.27	29	P	P	08 50 17.4	+0.4
	baz=265						
G22K	Bettles	51.32	28	P	P	08 50 17.4	+0.2
	baz=264						
BPAW	Bear Paw Mtn.	51.32	32	P	P	08 50 17.5	+0.1
	baz=267						
E22K	Anaktuvuk Pass	51.33	26	P	P	08 50 17.3	-0.1
	baz=263,SNR=9.5						
SUA	Susitna One	51.35	35	P	P	08 50 18.4	+0.7
	baz=270						
GSI	Gunungsitoli	51.35	241		P	08 50 16.8	-1.4
BRSE	Bradley Lake S	51.36	37	P	P	08 50 17.9	+0.2
	baz=271						
MLY	Manley	51.48	30	P	P	08 50 18.7	+0.2
	baz=267						
CUT	Chulitna	51.59	34	P	P	08 50 19.8	+0.6
	baz=269						
TRF	Thorofare Moun	51.60	32	P	P	08 50 19.8	+0.2
	baz=268						
RC01	Rabbit Creek A	51.84	35	P	P	08 50 21.8	+0.6
	baz=271						
D23K	Nanushuk River	51.84	25	IAmb	IAmb	08 50 24.0	
	comp=Z,16nm,1.2s						
D23K	Nanushuk River	51.84	25	P	P	08 50 21.4	+0.3
	baz=264						
COLD	Coldfoot	51.85	28	P	P	08 50 21.1	-0.2
	baz=265						
G23K	Bananza Creek	51.88	28	IAmb	IAmb	08 50 23.8	
	comp=Z,9.2nm,1.1s						
G23K	Bananza Creek	51.88	28	P	P	08 50 21.9	+0.3
	baz=266						
AAK	Ala-Archa	51.91	301	⇑*i*P	P	08 50 20.5	-1.7
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
C23K	Itkillik River	51.97	24	P	P	08 50 22.4	+0.3
	baz=263,SNR=13						
SEW	Seward	52.00	37	P	P	08 50 22.4	+0.1
	baz=272						
H23K	Yukon River	52.02	29	P	P	08 50 23.6	+1.0
	baz=267						
I23K	Minto, Yukon-K	52.07	30	P	P	08 50 23.7	+0.9
	baz=268						
PMR	Palmer	52.12	35	P	P	08 50 24.4	+1.1
	baz=271						
E23K	Chandalar	52.15	27	P	P	08 50 24.5	+1.0
	baz=265						
NEA2	Nenana	52.17	31	P	P	08 50 24.7	+1.1
NEA2	Nenana	52.17	31	P	P	08 50 24.5	+0.8
	baz=268						
TOLK	Toolik Lake Re	52.21	26		P	08 50 25.6	+1.7
TOLK				IAmb	IAmb	08 50 26.8	
	comp=Z,11nm,0.8s						
TOLK	Toolik Lake Re	52.21	26	P	P	08 50 24.6	+0.7
	baz=265,SNR=8.9						
MCK	McKinley	52.22	32	P	P	08 50 24.8	+0.8
	baz=269						
WAT1	Susitna Watana	52.38	33	P	P	08 50 26.3	+1.0
	baz=270						
KNK	Knik Glacier	52.45	35	P	P	08 50 26.3	+0.6
	baz=272						
SML	Sawmill	52.50	34	P	P	08 50 26.9	+0.7
	baz=271						
D24K	Happy Valley	52.53	25	P	P	08 50 26.8	+0.6
	baz=265						
PWL	Port Wells	52.53	36	P	P	08 50 26.8	+0.4
	baz=272						
E24K	Your Creek	52.57	27	P	P	08 50 27.0	+0.4
	baz=266						
C24K	Franklin Bluff	52.62	24	P	P	08 50 27.6	+0.8
	baz=265						
H24K	Noodor Dome	52.71	29	P	P	08 50 28.4	+0.8
	baz=269						
CCB	Clear Creek Bu	52.72	31	P	P	08 50 28.5	+0.9
WAT6	Susitna Watana	52.76	33	P	P	08 50 28.8	+0.6
	baz=271						
F24K	Squaw Lake	52.77	27	IAmb	IAmb	08 50 30.4	
	comp=Z,4.7nm,0.8s						
F24K	Squaw Lake	52.77	27	P	P	08 50 28.9	+0.9
	baz=267						
M23K	Glacier View	52.79	34	P	P	08 50 28.6	+0.3
	baz=272						
BVAR	Borovoye Array	52.82	314	P	P	08 50 28.5	-0.1
	comp=Z,1.9nm,0.6s,baz=91,slow=7.7,SNR=10						
	comp=Z,1.9nm,0.6s						
BORK	Borovoye	52.86	314	⇓*i*P	P	08 50 28.9	0.0
BORK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
POKR	Poker Plat Res	52.88	30	P	P	08 50 29.0	+0.1
	baz=270						
G24K	Hadweenzic Riv	52.90	28	P	P	08 50 29.7	+0.7
	baz=268						
DHY	Denali Highway	52.92	33	P	P	08 50 29.8	+0.4
	baz=271						
SCM	Sheep Creek Mo	52.98	34	P	P	08 50 30.0	+0.2
	baz=272						
P23K	Montague Islan	53.03	37	P	P	08 50 30.2	+0.2
	baz=274						
HDA	Harding Lake	53.09	31	IAmb	IAmb	08 50 31.2	
	comp=Z,8.8nm,0.8s						
HDA	Harding Lake	53.09	31	P	P	08 50 30.3	-0.1
	baz=271						
IL31		53.11	31	IAmb	IAmb	08 50 31.4	
	comp=Z,7.3nm,0.9s						
ILAR	Eielson Array	53.11	31	P	P	08 50 30.6	+0.1
	comp=Z,3.8nm,0.8s,baz=268,slow=6.2,SNR=38						
ILAR				pP	pP	08 50 47.6	+1.1
	comp=Z,0.7nm,0.7s,baz=270,slow=6.4,SNR=2.2						
ILAR				PcP	PcP	08 51 37.4	-0.7
	comp=Z,0.6nm,0.7s,baz=274,slow=5.3,SNR=1.6						
	comp=Z,3.8nm,0.8s						
ILAR	Eielson Array	53.11	31	P	P	08 50 30.5	0.0
WRAB	Tennant Creek	53.12	187	P	P	08 50 30.2	-0.9
WRAB	Tennant Creek	53.12	187	*d i*P	P	08 50 30.2	-0.9
WRAB				pmax	pmax		
	comp=Z,14nm,0.9s						
WRA	Warramunga Arr	53.13	187	P	P	08 50 29.8	-1.4
	comp=Z,21nm,0.5s,baz=5.6,slow=7.5,SNR=161						
WRA				pP	pP	08 50 46.3	-0.9
	comp=Z,16nm,1.0s,baz=5.9,slow=7.6,SNR=5.0						
WRA				PcP	PcP	08 51 38.1	-0.6
	comp=Z,1.4nm,0.6s,baz=8.9,slow=4.3,SNR=1.4						
WRA	Warramunga Arr	53.13	187		P	08 50 30.4	-0.7
WRA	Warramunga Arr	53.13	187	P	P	08 50 30.4	-0.7
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GLI	Glacier Island	53.13	36	P	P	08 50 30.5	-0.2
	baz=273						
D25K	Kavik River	53.41	25	P	P	08 50 32.8	+0.1
	baz=267						
G25K	Bearman Lake	53.44	28	P	P	08 50 33.1	+0.2
	baz=270						
Q23K	Middleton Isla	53.60	37	P	P	08 50 34.6	+0.4
	baz=275						
K24K	Donnelly Dome	53.62	32	P	P	08 50 35.0	+0.6
	baz=272						
F25K	Christian Rive	53.63	27	P	P	08 50 34.6	+0.2
	baz=269						
KLU	Klutina	53.66	35	P	P	08 50 35.4	+0.7
	baz=274						
E25K	Arctic Village	53.66	27	IAmb	IAmb	08 50 37.5	
	comp=Z,10nm,0.8s						
E25K	Arctic Village	53.66	27	P	P	08 50 34.9	+0.3
	baz=269,SNR=9.6						
J25K	Salcha River,	53.77	31	P	P	08 50 35.8	+0.4
	baz=272						
PAX	Paxson	53.79	33	P	P	08 50 36.7	+1.0
	baz=273						
EYAK	Cordova Ski Ar	53.81	36	P	P	08 50 36.2	+0.5
	baz=274						
C26K	Camden Bay	53.94	24	P	P	08 50 36.6	0.0
	baz=268						
HARP	HAARP	53.97	34	P	P	08 50 36.7	-0.2
	baz=274						
F26K	Sheenjek River	54.20	27	P	P	08 50 38.8	+0.3
	baz=271						
N25K	Chitina, Valde	54.29	35	P	P	08 50 39.6	+0.3
	baz=275						
BMRM	Bremner River	54.34	35	P	P	08 50 40.2	+0.6
	baz=275						
G26K	Porcupine Rive	54.35	28	P	P	08 50 40.5	+0.9
	baz=272						
C27K	Jago River	54.36	25	P	P	08 50 40.2	+0.6
	baz=270						
SCRK	Sand Creek	54.40	32	IAmb	IAmb	08 50 41.5	
	comp=Z,4.9nm,0.8s						
SCRK	Sand Creek	54.40	32	P	P	08 50 40.9	+0.7
	baz=274						
KAIM	Kayak Island	54.53	37	P	P	08 50 41.7	+0.8
	baz=276						
J26L	Joseph Creek	54.55	31	P	P	08 50 42.1	+0.9
	baz=274						
KK31	Karatay Array	54.64	302	P	P	08 50 41.8	-0.3
KK31				IAmb	IAmb	08 50 45.9	
	comp=Z,14nm,1.4s						
KK31	Karatay Array	54.64	302	P	P	08 50 41.8	-0.3
KK31				pmax	pmax		
	comp=Z,14nm,1.5s						
KKAR	Karatay Array	54.64	302		P	08 50 41.9	-0.2
KKAR	Karatay Array	54.64	302	P	P	08 50 41.9	-0.2
I26K	Coal Creek Min	54.68	30	P	P	08 50 43.1	+1.1
	baz=273						
L26K	Log Cabin Wild	54.75	33	IAmb	IAmb	08 50 44.9	
	comp=Z,6.8nm,0.8s						
L26K	Log Cabin Wild	54.75	33	P	P	08 50 43.1	+0.5
	baz=275						
M26K	Nabesna, AK	54.97	34	P	P	08 50 45.2	+1.0
	baz=276						
MCARA	McCarthy VSAT	55.06	35	P	P	08 50 45.7	+0.8
	baz=276						
BGLC	Bering Glacier	55.08	36	P	P	08 50 45.8	+0.9
	baz=277						
CRQE	Cirque	55.10	36	P	P	08 50 46.3	+1.0
	baz=277						
E27K	Coleen River	55.15	26	IAmb	IAmb	08 50 48.0	
	comp=Z,6.4nm,0.7s						
E27K	Coleen River	55.15	26	P	P	08 50 46.6	+1.2
	baz=273,SNR=6.8						
G27K	Doyon Strip	55.20	28	P	P	08 50 46.7	+0.9
	baz=274						
K27K	Chicken	55.24	32	P	P	08 50 46.7	+0.6
	baz=275						
H27K	Steamboat Moun	55.29	29	P	P	08 50 47.3	+0.8
	baz=274						
I27K	Kandik River	55.30	30	P	P	08 50 47.7	+1.1
	baz=274						
MANEM	Manem	55.33	296	P	P	08 50 47.8	+0.4
MANEM				IAmb	IAmb	08 51 05.9	
	comp=Z,8.7nm,1.0s						
D27M	Malcolm River	55.33	25	P	P	08 50 47.6	+0.9
	baz=273						
L27K	Beaver Creek,	55.44	33	P	P	08 50 48.6	+1.0
	baz=276						
M27K	Edge Creek, AK	55.49	34	P	P	08 50 49.7	+1.6
	baz=276						
MESA	MESA	55.73	36	P	P	08 50 50.5	+0.6
	baz=278						
F28M	Old Crow	55.84	27	P	P	08 50 51.3	+0.9
	baz=275,SNR=5.2						
E28M	Babbage River	55.89	26	IAmb	IAmb	08 50 53.3	
	comp=Z,5.4nm,0.8s						
E28M	Babbage River	55.89	26	P	P	08 50 51.9	+1.3
	baz=274						
CTG	Chitna Glacier	55.92	35	P	P	08 50 52.0	+0.9
	baz=278						
BVCY	Beaver Creek	55.96	33	P	P	08 50 52.4	+1.1
	baz=277						
I28M	Miner Creek	56.01	30	P	P	08 50 52.2	+0.5
	baz=276						
D28M	Stokes Point	56.12	25	P	P	08 50 52.4	+0.2
	baz=274						
YUK3	Moose Creek	56.23	34	P	P	08 50 53.0	-0.5
	baz=278						
DAWY	Dawson	56.41	31	P	P	08 50 54.4	0.0
	baz=278						
O28M	Mount Upton	56.51	35	P	P	08 50 56.2	+0.7
	baz=279						
E29M	Blow River	56.51	26	IAmb	IAmb	08 50 57.7	
	comp=Z,5.7nm,0.8s						
E29M	Blow River	56.51	26	P	P	08 50 55.7	+0.6
	baz=276						
H29M	Whitestone	56.57	29	P	P	08 50 56.4	+0.9
	baz=277						
PINM	Pinnacle	56.58	36	P	P	08 50 56.9	+1.1
	baz=279						
G29M	Pine Creek	56.62	28	P	P	08 50 56.8	+0.9
	baz=277						
YUK8	Steele Glacier	56.63	35	P	P	08 50 57.3	+0.9
	baz=279						
I29M	Ogilvie Camp,	56.70	30	P	P	08 50 58.0	+1.5
	baz=278,SNR=5.5						
AS31	Alice Springs	56.85	187	IAmb	IAmb	08 50 59.0	
	comp=Z,6.4nm,0.6s						
ASAR	Alice Springs	56.86	187	P	P	08 50 57.0	-1.0
	comp=Z,7.4nm,0.5s,baz=5.1,slow=7.8,SNR=134						
ASAR				pP	pP	08 51 13.8	-0.4
	comp=Z,2.2nm,0.7s,baz=7.8,slow=10,SNR=3.4						
ASAR				PcP	PcP	08 51 52.8	-0.2
	comp=Z,2.2nm,0.6s,baz=6.8,slow=3.7,SNR=4.4						
	comp=Z,7.4nm,0.5s						
ASAR	Alice Springs	56.86	187		P	08 50 56.9	-1.1
J29N	Klondike Camp	56.86	31	P	P	08 50 58.9	+1.2
	baz=278						
M29M	Somme Creek	57.06	33	P	P	08 51 00.4	+1.2
	baz=279						
L29M	L29M	57.10	32	P	P	08 51 01.2	+1.8
	baz=279						
YUK4	Talbot Arm	57.15	34	P	P	08 51 00.9	+0.9
	baz=280						
EPYK	Eagle Plains	57.21	28	P	P	08 51 01.1	+1.0
	baz=278,SNR=10						
K29M	Barlow Dome	57.26	31	P	P	08 51 01.3	+0.8
	baz=279						
G30M	tAoh Zraii Nji	57.32	28	P	P	08 51 01.6	+0.8
	baz=278						
YUK6	Outpost Mounta	57.36	35	P	P	08 51 02.2	+0.7
	baz=280						
O29M	Mount Kennedy	57.37	36	P	P	08 51 02.8	+1.3
	baz=281						
F30M	Barrier River	57.39	27	P	P	08 51 02.4	+1.0
	baz=278						
I30M	Mount Dempster	57.52	30	P	P	08 51 03.4	+1.0
	baz=279						
J30M	Hart River	57.65	30	IAmb	IAmb	08 51 05.4	
	comp=Z,5.3nm,1.1s						
J30M	Hart River	57.65	30	P	P	08 51 04.2	+0.9
	baz=280						
HYT	Haines Junctio	57.79	35	P	P	08 51 04.7	+0.3
	baz=281						
M30M	Minto, Yukon	57.80	33	IAmb	IAmb	08 51 06.5	
	comp=Z,11nm,1.1s						
M30M	Minto, Yukon	57.80	33	P	P	08 51 05.5	+1.2
	baz=281,SNR=6.4						
N30M	Aishikik Lake	57.87	34	P	P	08 51 05.7	+0.8
	baz=281						
P29M	Windy Craggy	57.91	36	P	P	08 51 05.9	+0.7
	baz=282						
MAYO	Mayo, Yukon	58.01	32	P	P	08 51 06.6	+0.9
	baz=281						
G31M	Satah River	58.08	28	P	P	08 51 06.9	+0.7
	baz=280,SNR=8.6						
INK	Inuvik	58.13	26	P	P	08 51 06.8	+0.4
	baz=280						
F31M	Tsiigehtchic	58.20	27	P	P	08 51 07.3	+0.4
	baz=280,SNR=6.0						
P30M	Million Dollar	58.20	36	P	P	08 51 07.7	+0.6
	baz=282						
H31M	Peel River	58.26	29	P	P	08 51 08.2	+0.7
	baz=281,SNR=8.2						
N31M	Braeburn, Yuko	58.48	34	P	P	08 51 10.0	+0.9
	baz=282						
O30N	Mendenhall	58.48	35	P	P	08 51 09.9	+0.8
	baz=282						
PLBC	Pleasant Camp	58.64	36	P	P	08 51 10.9	+0.8
	baz=283						
M31M	Drury Creek, Y	58.97	33	IAmb	IAmb	08 51 15.0	
	comp=Z,7.8nm,1.1s						
M31M	Drury Creek, Y	58.97	33	P	P	08 51 13.2	+0.7
	baz=283						
ARTI	Arti	59.03	320	*c i*P	P	08 51 12.2	-0.7
ARTI				S	S	08 59 15.8	+1.1
ARTI				SS	SS	09 03 08.3	-0.6
ARTI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
S31K	Pelican	59.05	38	P	P	08 51 14.1	+1.1
	baz=284						
WHY	Whitehorse	59.09	35	P	P	08 51 14.3	+0.9
	baz=283						
SKAG	Skagway	59.15	36	P	P	08 51 14.7	+1.0
	baz=284						
N32M	Quiet Lake	59.83	34	P	P	08 51 19.4	+1.0
	baz=284						
R32K	Eaglecrest	59.85	37	P	P	08 51 19.0	+0.5
	baz=285						
P32M	Atlin	59.92	36	P	P	08 51 19.6	+0.5
	baz=285						
AB31	Akbulak array	60.05	312		P	08 51 19.5	-0.6
AB31				IAmb	IAmb	08 51 20.2	
	comp=Z,4.3nm,0.6s						
ABKAR	Akbulak array	60.05	312		P	08 51 19.2	-0.9
A36M	Sachs Harbour	60.09	21		P	08 51 21.3	+1.4

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A36M  Sachs Harbour     60.09  21   P       P        08 51 21.1 +1.1
      baz=285
DZM   Mont Dzumac       60.14 152  eLR      LR       09 09 09.6
      comp=Z,86nm,32.0s
P33M  Teslin, Yukon     60.19  35   P       P        08 51 21.9 +1.0
      baz=285
Q32M  Nakina River      60.80  36   P       P        08 51 26.2 +0.9
      baz=286
AKTO  Aktyubinsk        60.89 313   LR      LR       09 17 42.6
      comp=Z,74nm,19.8s,baz=292,slow=36
R33M  Jennings River    61.32  36   P       P        08 51 29.8 +1.1
      baz=287
CRAG  Craig             61.37  40   P       P        08 51 30.1 +1.2
      baz=288
S34M  Telegraph Cree    61.68  37   P       P        08 51 32.8 +1.8
      baz=288
DLBC  Dease Lake        62.07  37   P       P        08 51 34.9 +1.3
      baz=288
T35M  Bob Quinn         62.42  38   P       P        08 51 36.9 +0.9
      baz=289
KIRV  Kirov             63.03 324⇓ iP       P        08 51 39.9  0.0
WRGLY Wrigley           63.49  30   P       P        08 51 43.8 +0.9
      baz=291
LIRD  Liard River Hi    63.67  35   P       P        08 51 45.4 +1.2
      baz=291,SNR=8.6
TOAD  Toad River Com    64.29  35   P       P        08 51 49.4 +1.2
      baz=292
KOTAN Kotaneelee Air    64.37  34   P       P        08 51 49.9 +1.2
      baz=292
KBS   Kingsbay          64.39 350⇑ iP       P        08 51 49.5 +0.9
KBS                                 pmax    pmax
      comp=Z,40nm,1.2s
STKA  Stephens Creek    64.67 179   P       P        08 51 51.0 +0.1
      comp=Z,2.3nm,0.6s,baz=358,slow=4.3,SNR=7.4
STKA                                pP      pP       08 52 07.5 +0.2
      comp=Z,8.7nm,1.2s,baz=344,slow=8.0,SNR=3.7
      comp=Z,2.3nm,0.6s
STKA  Stephens Creek    64.67 179   P       P        08 51 51.2 +0.2
STKA  Stephens Creek    64.67 179⇓ iP       P        08 51 51.1 +0.2
FORT  Forrest           64.69 192   P       P        08 51 51.1  0.0
FORT                                IAmb    IAmb     08 51 51.6
      comp=Z,11nm,0.8s
RES   Resolute Bay      66.51  14   IAmb    IAmb     08 52 04.0
      comp=Z,11nm,1.0s
KLMR  Klimovskoe        66.75 328  eP       P        08 52 02.2 -1.9
KLMR                                pmax    pmax
      comp=Z,21nm,1.4s
ARCES ARCESS Array B    67.44 340   P       P        08 52 08.5 +0.2
      comp=Z,5.7nm,0.9s,baz=54,slow=8.2,SNR=5.8
      comp=Z,5.7nm,0.9s
ARCES ARCESS Array B    67.44 340   P       P        08 52 08.7 +0.4
ARCES                               IAmb    IAmb     08 52 10.8
      comp=Z,20nm,1.3s
ARCES ARCESS Array B    67.44 340   P       P        08 52 08.7 +0.4
ARCES                               pmax    pmax
      comp=Z,20nm,1.3s
YKAW3 Yellowknife Wh    67.44  29   IAmb    IAmb     08 52 09.0
      comp=Z,13nm,1.4s
YKA   Yellowknife Ar    67.48  29   P       P        08 52 08.9 +0.3
      comp=Z,2.6nm,0.8s,baz=294,slow=7.0,SNR=20
YKA                                 pP      pP       08 52 26.1 +1.1
      comp=Z,0.3nm,0.5s,baz=319,slow=11,SNR=2.9
      comp=Z,2.6nm,0.8s
YKA   Yellowknife Ar    67.48  29 ceP       P        08 52 08.8 +0.2
YKA                                 pmax    pmax
      comp=Z,3.0nm,0.8s
YKAW1 Yellowknife Wh    67.53  29   IAmb    IAmb     08 52 10.1
      comp=Z,7.5nm,0.9s
TULEG Thule             69.03   7  iP       P        08 52 18.3 +0.2
TULEG                               IAmb    IAmb     08 52 19.1
      comp=Z,7.4nm,0.6s
NWAO  Narrogin (SRO)    69.33 201   P       P        08 52 19.9 -0.5
NWAO  Narrogin (SRO)    69.33 201   P       P        08 52 20.0 -0.5
NWAO                                pmax    pmax
      comp=Z,28nm,1.4s
NEEM  North Greenlan    69.44   3  iP       P        08 52 21.1  0.0
NEEM                                IAmb    IAmb     08 52 22.9
      comp=Z,5.6nm,0.8s
DAG   Danmarks Havn     69.60 355  iP       P        08 52 22.0 +0.4
VRH   Novokhopyorsk     70.09 319  eP       P        08 52 22.6 -2.5
VRH                                 pmax    pmax
      comp=Z,8.0nm,0.9s
GNW   Green Mountain    70.35  46           P        08 52 29.0 +2.3
GNW                                 IAmb    IAmb     08 52 30.2
      comp=Z,15nm,1.1s
OBN   Obninsk           70.88 324⇓ eP       P        08 52 29.2 -0.6
OBN                                e*PP     PcP      08 52 49.4 -0.6
OBN                                e                 08 55 09.3
OBN                                eS       S        09 01 37.5 -2.5
OBN                                 pmax    pmax
      comp=Z,8.0nm,0.8s
OBN                                 MLR     MLR
      comp=Z,147nm,19.0s
LPSR  Galich'ya Gora    70.93 321  eP       P        08 52 28.4 -1.8
LPSR                                pmax    pmax
      comp=Z,8.0nm,0.8s
VSR   Storozhevoye      71.49 319  eP       P        08 52 31.7 -1.9
VSR                                 pmax    pmax
      comp=Z,5.0nm,1.0s
LTY   Liberty           71.78  45   IAmb    IAmb     08 52 36.9
      comp=Z,13nm,1.3s
FIA1  FINESS Array S    71.99 333   P       P        08 52 36.0 -0.4
FINES FINESS Array B    71.99 333   P       P        08 52 36.0 -0.4
      comp=Z,2.9nm,0.5s,baz=45,slow=6.2,SNR=17
      comp=Z,2.9nm,0.5s
FINES FINESS Array B    71.99 333   P       P        08 52 36.2 -0.2
H04A  Detroit Lake      72.11  48   IAmb    IAmb     08 52 39.8
      comp=Z,18nm,1.2s
MXC   Moxie City        72.34  46   IAmb    IAmb     08 52 41.2
      comp=Z,11nm,0.8s
EPH   Ephrata           72.37  45   IAmb    IAmb     08 52 40.7
      comp=Z,7.5nm,0.8s
E07A  Sunnyside         72.61  46   IAmb    IAmb     08 52 42.9
      comp=Z,13nm,1.0s
WAH2  Wahluke Slope     72.69  45   IAmb    IAmb     08 52 42.9
      comp=Z,6.9nm,0.7s
EDM   Edmonton          72.78  37           P        08 52 42.0 +0.7
EDM                                 IAmb    IAmb     08 52 42.7
      comp=Z,11nm,0.9s
EDM   Edmonton          72.78  37   P       P        08 52 42.0 +0.7
EDM                                 pmax    pmax
      comp=Z,11nm,0.9s
G06A  Carlson Farm,     72.80  47   IAmb    IAmb     08 52 43.9
      comp=Z,7.6nm,1.1s
J04A  Umpqua Nationa    72.86  49   IAmb    IAmb     08 52 44.6
      comp=Z,9.8nm,0.7s
HAWA  Hanford           72.89  46   IAmb    IAmb     08 52 44.4
      comp=Z,13nm,1.2s
F07A  Phinny Hill Vi    72.90  46   IAmb    IAmb     08 52 44.5
      comp=Z,14nm,0.9s
D08A  Wollman Farm,     72.92  45   IAmb    IAmb     08 52 44.2
      comp=Z,11nm,0.8s
C09A  Chrisman Ranch    72.92  44   IAmb    IAmb     08 52 44.2
      comp=Z,12nm,0.8s
KBZ   Khabaz            73.02 311   P       P        08 52 43.0 +0.2
      comp=Z,5.7nm,0.9s,baz=131,slow=1.1,SNR=9.3
KBZ                                 LR      LR       09 29 49.8
      comp=Z,67nm,19.0s,baz=1.5,slow=40
      comp=Z,5.7nm,0.9s
KBZ   Khabaz            73.02 311⇓ iP       P        08 52 43.3 +0.5
KBZ                                 pmax    pmax
      comp=Z,7.0nm,1.0s
KIV   Kislovodsk        73.03 312  eP       P        08 52 42.3 -0.8
KIV                                 pmax    pmax
      comp=Z,10.0nm,1.1s
ILON  Igloolik, Nuna    73.17  14   P       P        08 52 42.9 -0.3
ILON                                IAmb    IAmb     08 52 44.0
      comp=Z,6.4nm,1.0s
PINE  Pine Mountain     73.33  48   IAmb    IAmb     08 52 47.7
      comp=Z,12nm,0.9s
NEW   Newport           73.35  43   IAmb    IAmb     08 52 47.3
      comp=Z,14nm,1.1s
YPT   Yellepit          73.41  46   IAmb    IAmb     08 52 47.4
      comp=Z,6.5nm,0.9s
GNI   Garni             73.58 307   LR      LR       09 28 01.0
      comp=Z,60nm,18.3s,baz=341,slow=38
E09A  Wood Farm, Sta    73.66  45   IAmb    IAmb     08 52 48.8
      comp=Z,14nm,0.9s
M03C  McCloud           73.83  51   IAmb    IAmb     08 52 49.9
      comp=Z,8.2nm,0.7s
K05A  Summer Lake       73.89  49   IAmb    IAmb     08 52 51.0
      comp=Z,13nm,1.0s
LNOR  Lincton Mounta    73.90  46   IAmb    IAmb     08 52 51.4
      comp=Z,7.4nm,1.0s
SUMG  Summit            74.57 360           P        08 52 53.2 +1.3
SUMG                                IAmb    IAmb     08 52 54.1
      comp=Z,13nm,0.9s
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SUMG  Summit            74.57 360   P       P        08 52 53.2 +1.3
SUMG                                pmax    pmax
      comp=Z,13nm,0.9s
SUMG  Summit            74.57 360  iP       P        08 52 53.0 +1.0
SUMG                                IAmb    IAmb     08 52 53.7
      comp=Z,12nm,0.6s
BMO   Blue Mountains    75.02  46   IAmb    IAmb     08 52 56.8
      comp=Z,11nm,1.2s
BEKR  Beckworth         75.70  52   IAmb    IAmb     08 53 00.3
      comp=Z,5.6nm,0.8s
SCO   Scoresbysund      75.92 354  iP       P        08 53 00.7 +1.5
SCO                                 IAmb    IAmb     08 53 01.6
      comp=Z,15nm,1.2s
MSO   Missoula          75.94  43   IAmb    IAmb     08 53 01.5
      comp=Z,16nm,1.5s
SAATT Saattut           75.97   4  iP       P        08 52 57.9 -1.6
SAATT                               IAmb    IAmb     08 52 58.5
      comp=Z,21nm,1.0s
MFID  Camas Ranch       76.69  47   IAmb    IAmb     08 53 06.4
      comp=Z,13nm,1.5s
AK03  Malin Array Si    77.01 323   P       P        08 53 05.3 -0.4
AKASG Malin Array Be    77.03 323   P       P        08 53 05.1 -0.7
      comp=Z,1.6nm,0.4s,baz=50,slow=6.1,SNR=12
AKASG                               pP      pP       08 53 23.1 +0.3
      comp=Z,0.3nm,0.3s,baz=51,slow=6.0,SNR=1.2
      comp=Z,1.6nm,0.4s
AKASG Malin Array Be    77.03 323ceP        P        08 53 04.9 -0.9
AKASG                               pmax    pmax
      comp=Z,2.0nm,0.4s
AKBB  Malin Array Si    77.03 323⇑ iP       P        08 53 05.5 -0.3
AKBB                                pmax    pmax
      comp=Z,7.0nm,0.9s
AK01  Malin Array Si    77.04 323   P       P        08 53 05.0 -0.9
AK23  Malin Array Si    77.04 323   P       P        08 53 05.0 -0.9
AK04  Malin Array Si    77.04 323   P       P        08 53 05.0 -0.9
AK09  Malin Array Si    77.05 323   P       P        08 53 05.1 -0.8
AK08  Malin Array Si    77.05 323   P       P        08 53 05.5 -0.4
AK02  Malin Array Si    77.06 323   P       P        08 53 05.5 -0.5
AK11  Malin Array Si    77.07 323   P       P        08 53 05.4 -0.6
AK22  Malin Array Si    77.07 323   P       P        08 53 05.6 -0.4
AK21  Malin Array Si    77.07 323   P       P        08 53 05.5 -0.6
AK18  Malin Array Si    77.09 323   P       P        08 53 05.6 -0.6
AK12  Malin Array Si    77.10 323   P       P        08 53 05.5 -0.7
AK16  Malin Array Si    77.11 323   P       P        08 53 05.6 -0.6
AK06  Malin Array Si    77.11 323   P       P        08 53 05.6 -0.7
AK20  Malin Array Si    77.11 323   P       P        08 53 05.6 -0.7
AK17  Malin Array Si    77.12 323   P       P        08 53 05.7 -0.6
AK19  Malin Array Si    77.12 323   P       P        08 53 05.7 -0.6
FFC   Flin Flon         77.30  32   P       P        08 53 07.9 +0.6
FFC                                 IAmb    IAmb     08 53 08.2
      comp=Z,9.3nm,1.0s
FFC   Flin Flon         77.30  32   P       P        08 53 07.9 +0.6
FFC                                 pmax    pmax
      comp=Z,9.0nm,1.0s
HFS   Hagfors           77.40 336   P       P        08 53 07.5 -0.2
      comp=Z,2.0nm,0.6s,baz=14,slow=6.5,SNR=9.7
HFS                                 pP      pP       08 53 23.1 -1.5
      comp=Z,9.9nm,1.2s,baz=91,slow=7.4,SNR=1.5
      comp=Z,2.0nm,0.6s
DLMT  Dillon            77.53  44   IAmb    IAmb     08 53 11.7
      comp=Z,9.3nm,1.1s
NB2   NORSAR Subarra    77.55 337   P       P        08 53 08.4 -0.2
      comp=Z,1.6nm,0.7s,baz=42,slow=5.6
NOA   NORSAR Array B    77.55 337   P       P        08 53 08.4 -0.2
      comp=Z,4.2nm,0.9s,baz=42,slow=5.6,SNR=6.7
NOA                                 pP      pP       08 53 25.1 -0.5
      comp=Z,1.2nm,0.8s,baz=61,slow=5.0,SNR=2.0
      comp=Z,4.2nm,0.9s
NVAR  Mina Array Bea    77.81  52   P       P        08 53 11.8 +1.1
      comp=Z,2.5nm,0.8s,baz=289,slow=5.0,SNR=15
NVAR                                pP      pP       08 53 28.6 +1.0
      comp=Z,1.5nm,0.8s,baz=286,slow=4.8,SNR=5.4
      comp=Z,2.5nm,0.8s
NVAR  Mina Array Bea    77.81  52   P       P        08 53 11.3 +0.6
LUBAR Lubar, Ukraine    78.25 323   P       P        08 53 11.2 -1.4
RNPP9 Sopachiv          78.25 325   P       P        08 53 11.2 -1.4
ARPR  Arapgir-MALATY    78.36 309   IAmb    IAmb     08 53 15.7
      comp=Z,12nm,1.0s
FURC  Furnace Creek,    79.84  53   IAmb    IAmb     08 53 23.6
      comp=Z,11nm,1.1s
TPNV  Topopah Spring    79.99  52   IAmb    IAmb     08 53 24.3
      comp=Z,8.5nm,1.1s
QSM   Queen of Sheba    80.12  54   IAmb    IAmb     08 53 24.8
      comp=Z,9.2nm,1.0s
GWY   Greenwater Val    80.13  53   IAmb    IAmb     08 53 24.9
      comp=Z,6.4nm,1.0s
HWUT  Hardware Ranch    80.31  46   IAmb    IAmb     08 53 26.5
      comp=Z,6.5nm,1.1s
PDAR  Pinedale Array    80.83  45   P       P        08 53 27.5 +0.4
      comp=Z,0.5nm,0.6s,baz=288,slow=1.9,SNR=6.4
PDAR                                pP      pP       08 53 44.9 +0.9
      comp=Z,0.5nm,0.7s,baz=274,slow=2.2,SNR=2.9
      comp=Z,0.5nm,0.6s
BUR08 Bucovina Ar. S    81.00 322           P        08 53 27.3 -0.4
BR131 Keskin Array S    81.00 312           P        08 53 27.9  0.0
BR131 Keskin Array S    81.00 312   P       P        08 53 27.9  0.0
BR131                               pmax    pmax
      comp=Z,4.0nm,0.9s
BRTR  Keskin Array B    81.00 312   P       P        08 53 27.9  0.0
      comp=Z,3.2nm,0.9s,baz=109,slow=3.8,SNR=14
      comp=Z,3.2nm,0.9s
BRTR  Keskin Array B    81.00 312   P       P        08 53 27.8 -0.2
BRTR  Keskin Array B    81.00 312ceP        P        08 53 28.6 +0.6
BRTR                                pmax    pmax
      comp=Z,4.0nm,0.9s
BURAR Bucovina Array    81.01 322   P       P        08 53 27.6 -0.2
RAYN  Ar Rayn           81.60 292           P        08 53 30.7 -0.6
RAYN  Ar Rayn           81.60 292   P       P        08 53 30.7 -0.6
RAYN                                pmax    pmax
      comp=Z,4.0nm,0.7s
STHS  Stebnicka Huta    81.81 325  eP       P        08 53 35.7 +3.8
STHS  Stebnicka Huta    81.81 325  eP       P        08 53 35.7 +3.8
P17A  Butcher Ranch,    82.08  48   IAmb    IAmb     08 53 35.7
      comp=Z,9.7nm,0.9s
Q16A  Castle Valley     82.14  48   IAmb    IAmb     08 53 37.1
      comp=Z,7.8nm,1.3s
RDMU  Red Mountain      82.14  46   IAmb    IAmb     08 53 36.0
      comp=Z,9.6nm,1.2s
KNB   Kanab             82.20  51   IAmb    IAmb     08 53 36.6
      comp=Z,6.0nm,0.9s
SRU   San Rafael Swe    82.43  48   IAmb    IAmb     08 53 37.1
      comp=Z,8.6nm,0.7s
LANS  Liptovska Anna    82.84 326  eP       P        08 53 39.5 +2.2
LANS  Liptovska Anna    82.84 326  eP       P        08 53 39.5 +2.2
O20A  White River Ci    83.21  46   IAmb    IAmb     08 53 42.3
      comp=Z,12nm,1.4s
MORC  Moravsky Berou    83.30 327  eP       P        08 53 39.9 +0.2
PSZ   Piszkesteto       83.48 324   P       P        08 53 41.0 +0.3
PSZ                                 IAmb    IAmb     08 53 45.5
      comp=Z,8.7nm,1.0s
PSZ   Piszkesteto       83.48 324   P       P        08 53 41.0 +0.3
PSZ                                 pmax    pmax
      comp=Z,9.0nm,1.0s
MMAI  Mount Meron Ar    83.74 305   P       P        08 53 43.4 +1.1
      comp=Z,3.8nm,0.5s,baz=51,slow=6.6,SNR=5.3
      comp=Z,3.8nm,0.5s
JAVC  Velka Javorina    83.89 326  eP       P        08 53 43.7 +1.0
VRAC  Vranov            84.07 327  eP       P        08 53 44.1 +0.6
CLL   Collm             84.18 330  iP       P        08 53 44.0  0.0
CLL                                 pmax    pmax
      comp=Z,11nm,1.0s
CLL   Collm             84.18 330  iP       P        08 53 44.0  0.0
      comp=Z,11nm,1.0s
CLL                                ePP      PP       08 56 59.0 +0.7
KRUC  Moravsky          84.33 327  eP       P        08 53 44.7 -0.2
MODS  Modra-Piesok      84.42 326  eP       P        08 53 46.4 +1.0
MODS  Modra-Piesok      84.42 326  eP       P        08 53 46.4 +1.0
GERES GERESS Array B    85.71 328   P       P        08 53 51.2 -0.7
      comp=Z,0.7nm,0.5s,baz=11,slow=8.4,SNR=4.1
      comp=Z,0.7nm,0.5s
TAOE  Nuku Hiva Isla    85.82 103  eLR      LR       09 21 03.9
      comp=Z,79nm,24.5s
EKA   Eskdalemuir Ar    86.60 340   P       P        08 53 56.4 +0.4
      comp=Z,3.1nm,0.9s,baz=33,slow=5.2,SNR=2.1
      comp=Z,3.1nm,0.9s
ECSD  EROS Data Cent    87.34  38           P        08 53 59.8 -0.1
ECSD                                IAmb    IAmb     08 54 18.5
      comp=Z,5.5nm,1.1s
SCHQ  Schefferville     89.24  16   P       P        08 54 09.1 +0.5
      comp=Z,2.9nm,0.8s,baz=276,slow=10,SNR=1.3
      comp=Z,2.9nm,0.8s
WMOK  Wichita Mounta    92.42  45   IAmb    IAmb     08 54 24.8
      comp=Z,3.8nm,1.0s
TXAR  Lajitas Array     92.97  52   P       P        08 54 27.4 +0.8
      comp=Z,5.3nm,0.7s,baz=300,slow=3.1,SNR=77
TXAR                                pP      pP       08 54 44.6 +0.9
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      comp=Z,2.3nm,0.8s,baz=295,slow=3.1,SNR=6.3
      comp=Z,5.3nm,0.7s
TXAR  Lajitas Array     92.97  52           P        08 54 27.3 +0.7
QSPA  South Pole Qui   122.89 180   PKP     PKPdf    09 00 07.2 -0.7
      comp=Z,2.0nm,0.4s,baz=271,slow=0.9,SNR=11
H03N2 Juan Fernandez   147.00 102   T       T        11 46 01.8
      baz=286,slow=76,SNR=3.7
H03N3 Juan Fernandez   147.01 102   T       T        11 45 53.9
      baz=286,slow=76,SNR=3.6
H03N1 Juan Fernandez   147.02 102   T       T        11 46 09.8
      baz=286,slow=76,SNR=3.5
LPAZ  La Paz           149.04  64   PKPbc   PKPbc    09 01 02.7 +0.6
      comp=Z,2.9nm,0.5s,baz=8.1,slow=2.5,SNR=19
LPAZ  La Paz           149.04  64   PKPbc   PKPbc    09 01 01.8 -0.3
PB11  IPOC Station P   149.85  71   PKPbc   PKPbc    09 01 03.3 -0.1
PATCX Punta Patache    150.00  74   PKPdf   PKPdf    09 00 57.7 -1.0
PLCA  Paso Flores      153.99 116   PKPbc   PKiKP    09 01 12.5 +0.3
      comp=Z,1.2nm,0.9s,baz=190,slow=5.6,SNR=3.6
```

IDC 09 08:44:27.5±6.1**,8°.49S**×**156°.27E,h0^{km},mb3.9**/3**, mbtmp3.9**/3**,MS3.2**/3**,Error ellipse: s-maj=103.9km s-min=80.4km az=11.0,Bougainville-Solomon Islands region**

```
Code  Station Name         Δ°   AZ°    Phase ID             Time     Res
                                    Op      ISC        h  m  s   ISC
PMG   Port Moresby       9.05 264   LR      LR       08 50 04.2
      comp=Z,82nm,19.0s,baz=151,slow=37
WRA   Warramunga Arr    24.08 239   P       P        08 49 45.7 +0.8
      2.7nm,0.8s,baz=66,slow=9.5,SNR=11
      2.7nm,0.8s
ASAR  Alice Springs     26.20 232   P       P        08 50 03.0 -1.1
      1.0nm,1.0s,baz=60,slow=8.8,SNR=6.1
ASAR                                LR      LR       09 00 06.5
      comp=Z,69nm,18.9s,baz=102,slow=36
      1.0nm,1.0s
STKA  Stephens Creek    26.98 208   P       P        08 50 11.3 +0.3
      2.1nm,0.7s,baz=36,slow=14,SNR=6.1
      2.1nm,0.7s
BATI  Baumata           32.21 264   LR      LR       09 04 16.1
      comp=Z,39nm,19.8s,baz=114,slow=37
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*AEIC **09** 08:48:27.9±1.3,56°.17N±0°.09×149°.2W±0°.1,h1^{km}±8^{km}, Error ellipse: s-maj=13.4km s-min=10.1km az=193.0*

NEIC 09 08:48:26.2±1.0**,56°.3N**±0°.1×**149°.3W**±0°.1**,h10**^{km}±2^{km}**, ML3.7**/42**,ML3.3**(AEIC)**,Error ellipse: s-maj=17.7km s-min=11.5km az=188.0,Gulf of Alaska**

```
Code  Station Name         Δ°   AZ°    Phase ID             Time     Res
                                    Op      ISC        h  m  s   ISC
KDAK  Kodiak Island      2.34 311   Pn      Pn       08 49 04.5 -0.2
KDAK                                Sn      Sn       08 49 32.7 -0.8
SYI   Shuyak Island      2.86 325           Pn       08 49 12.0 +0.1
CNPM  China Poot         3.39 343           Pn       08 49 18.4 -0.9
CNPM                                IAML             08 50 11.2
      comp=E,114nm,3.0s
BRLK  Bradley Lake       3.57 347   Pn      Pn       08 49 20.8 -0.9
BRLK                                IAML             08 49 49.7
      comp=N,135nm,0.1s
HOM   Homer              3.59 340   Pn      Pn       08 49 22.2 +0.3
KAWH  Katmai             3.65 307           Pn       08 49 23.6 +0.8
MGLS  Mageik Landsli     3.69 302           Pn       08 49 23.5 +0.2
CAHL  Cahill             3.72 301           Pn       08 49 24.0 +0.3
SEW   Seward             3.81 359           Pn       08 49 24.9  0.0
PLK4  Peulik 4           4.10 292   Pn      Pn       08 49 28.7 -0.3
PLK4                                IAML             08 51 33.3
      comp=E,144nm,4.8s
SLKM  Skilak Lake        4.24 354           Pn       08 49 30.6 -0.3
SLKM  Skilak Lake        4.24 354   IAML             08 50 32.4
      comp=E,70nm,4.1s
HIN   Hinchinbrook I     4.35  18           Pn       08 49 32.8 +0.4
HIN                                 IAML             08 50 44.0
      comp=E,129nm,2.5s
HIN                                 IAML             08 52 21.2
      comp=N,118nm,1.9s
PWL   Port Wells         4.59   6           Pn       08 49 36.0 +0.3
PWL                                 IAML             08 51 34.3
      comp=E,46nm,2.7s
PWL                                 IAML             08 52 00.3
      comp=N,66nm,3.5s
EYAK  Cordova Ski Ar     4.64  22           Pn       08 49 36.4 +0.1
EYAK                                IAML             08 50 28.8
      comp=N,56nm,3.0s
EYAK                                IAML             08 51 24.5
      comp=E,49nm,4.8s
FID   Port Fidalgo       4.69  17   Pn      Pn       08 49 36.4 -0.6
FID                                 IAML             08 50 13.8
      comp=N,58nm,2.8s
FID                                 IAML             08 51 12.3
      comp=E,71nm,2.3s
GLI   Glacier Island     4.72  13   Pn      Pn       08 49 36.9 -0.6
GLI                                 IAML             08 50 41.7
      comp=E,58nm,2.9s
GLI                                 IAML             08 51 10.7
      comp=N,57nm,3.6s
O18K  Koktuh Hills       4.75 321   Pn      Pn       08 49 37.8 -0.1
O18K                                IAML             08 50 37.9
      comp=N,86nm,4.1s
O18K                                IAML             08 52 23.0
      comp=E,67nm,4.9s
RC01  Rabbit Creek A     4.80 357   Pn      Pn       08 49 37.7 -0.8
RC01                                IAML             08 50 43.5
      comp=N,36nm,3.2s
RC01                                IAML             08 52 38.9
      comp=E,38nm,3.4s
SPU   Mount Spurr        5.10 345   Pn      Pn       08 49 42.7  0.0
SNH   Sunshine Point     5.16  38           Pn       08 49 43.2 -0.2
KHIT  Khitrov Hills      5.21  35           Pn       08 49 44.1 -0.2
KHIT                                        Pb       08 49 58.5 +1.1
KHIT                                        Sn       08 50 41.2 -3.3
SUA   Susitna One        5.23 352   Pn      Pn       08 49 44.3 -0.2
BMRM  Bremner River      5.27  26           Pn       08 49 44.4 -0.6
BMRM                                IAML             08 50 56.5
      comp=N,46nm,3.9s
BMRM                                IAML             08 51 17.6
      comp=E,29nm,3.9s
N19K  Bonanza Creek      5.28 331           Pn       08 49 44.9 -0.3
N19K  Bonanza Creek      5.28 331   IAML             08 52 31.5
      comp=E,44nm,4.9s
N19K                                IAML             08 52 46.6
      comp=N,38nm,4.6s
WAX   Waxell Ridge       5.35  36           Pn       08 49 45.7 -0.4
STLK  Strandline Lak     5.37 347           Pn       08 49 46.4  0.0
KLU   Klutina            5.48  17   Pn      Pn       08 49 48.7 +0.8
GHO   Glory Hole Cre     5.48   2   Pn      Pn       08 49 47.6 -0.4
SML   Sawmill            5.54   5   Pn      Pn       08 49 49.8 +1.2
TGL   Tana Glacier       5.59  34           Pn       08 49 49.5 +0.1
N18K  Kilae Creek        5.59 324           Pn       08 49 49.0 -0.4
O16K  Kokwok River B     5.74 309   Pn      Pn       08 49 52.1 +0.8
RKAV  Rock Avalanche     5.78  43           Pn       08 49 51.5 -0.7
VRDI  Verde Repeater     5.78  29   Pn      Pn       08 49 51.9 -0.3
SKT   Skwentna           5.81 349   Pn      Pn       08 49 53.2 +0.8
N25K  Chitina, Valde     5.83  22   Pn      Pn       08 49 53.3 +0.5
KIAG  Kiagna River       5.87  35           Pn       08 49 53.0 -0.3
GLB   Gilahina Butte     5.87  27   Pn      Pn       08 49 54.0 +0.8
SAMH  Samovar Hills      5.89  46           Pn       08 49 53.7 +0.1
GRNC  Granite Creek      5.93  38           Pn       08 49 54.1 -0.1
N17K  Nushagak Hills     5.93 319   Pn      Pn       08 49 53.6 -0.5
N17K  Nushagak Hills     5.93 319   P       Pn       08 49 53.3 -0.7
      baz=264
TABL  Table Mountain     5.95  43   Pn      Pn       08 49 54.5  0.0
BALM  Baldy              5.96  34           Pn       08 49 54.5  0.0
MCARA McCarthy VSAT      6.03  30   Pn      Pn       08 49 55.0 -0.4
PTPK  Patty Peak         6.04  33           Pn       08 49 56.0 +0.3
PCA   Pinnacle           6.09  48           Pn       08 49 56.1 -0.2
BARN  Barnard Glacie     6.20  37   Pn      Pn       08 49 58.0 +0.1
M18K  Stony River        6.21 330           Pn       08 49 57.4 -0.5
CTGM  Chitina Glacie     6.24  38   Pn      Pn       08 49 58.1 -0.3
LOGN  Logan Glacier      6.26  40   Pn      Pn       08 49 58.4 -0.3
BCPM  Bancas Point       6.27  50           Pn       08 49 58.5 -0.2
O28M  Mount Upton        6.52  43           Pn       08 50 02.5 +0.1
L19K  White Mountain     6.55 336   Pn      Pn       08 50 02.1 -0.4
O29M  Mount Kennedy      6.91  50   Pn      Pn       08 50 07.8 +0.2
M16K  Timber Creek       6.92 317           Pn       08 50 07.9 +0.3
P29M  Windy Craggy       6.97  57   Pn      Pn       08 50 07.8 -0.6
YUK6  Outpost Mounta     7.34  46           Pn       08 50 14.7 +1.1
N14K  Kuskokwak Cree     7.51 304   Pn      Pn       08 50 16.5 +0.8
BESE  Bessie Mountai     8.10  68   Pn      Pn       08 50 22.5 -1.3
N30M  Aishikik Lake      8.14  46   Pn      Pn       08 50 24.8 +0.4
O30N  Mendenhall         8.21  52   Pn      Pn       08 50 25.6 +0.3
N31M  Braeburn, Yuko     8.69  48   Pn      Pn       08 50 32.8 +0.9
P33M  Teslin, Yukon      9.50  59   Pn      Pn       08 50 42.7 -0.3
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R33M	Jennings River	10.22	65	Pn	Pn	08 50 52.4	-0.5

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*MOS **09** 09:11:14.6±0.8, 6°.19S×154°.80E, h46^{km}, mb5.4/40, Error ellipse: s-maj=8.7km s-min=6.4km az=115.2*

*IDC **09** 09:11:16.2±1.5, 6°.19S×154°.81E, h48^{km}±13^{km}, mb5.0/30, mbtmp5.2/33, ML3.5/2, MS4.2/54, Error ellipse: s-maj=11.3km s-min=8.5km az=89.0*

*GCMT **09** 09:11:17.2±0.2, 6°.44S±0°.01×154°.47E±0°.02, h63^{km}±1^{km}, MW5.2/98, Moment Tensor Solution. s98,c138; s66,c89; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.71±.02; $M_{\theta\theta}$-0.41±.02; $M_{\phi\phi}$-0.30±.02; $M_{r\theta}$0.07±.02; $M_{\theta\phi}$0.53±.01; $M_{\phi r}$0.03±.02; Best double couple: $M_0$0.80700×10^{17} NP1:ϕ_s319.00000°, δ45.00000°, λ100.00000°. NP2:ϕ_s125.00000°, δ46.00000°, λ80.00000°. Principal axes: T 0.7220, Plg83.0000°, Azm319.0000°; N 0.1700, Plg7.0000°, Azm132.0000°; P -0.8920, Plg1.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **09** 09:11:17.6, 6°.09S×155°.17E, h87^{km}, mB5.3/13, mb5.2/75, Ms4.8/13, Ms7 4.5/17*

*DJA **09** 09:11:18.6±0.6, 6°S±3°×15°5E±°, h80^{km}±5^{km}, M5.4/84, mb5.5/84, mB5.9/41, Mw(mB)5.5/41, MwMwp4.5/4, Mwp4.9/4*

*NEIC **09** 09:11:19.2, 6°.25S×154°.78E, h50^{km}*

*NEIC **09** 09:11:19.5±1.9, 6°.27S±0°.07×154°.77E±0°.07, h72^{km}±1^{km}, mb5.3/363, Mww5.1/11, Error ellipse: s-maj=10.6km s-min=9.8km az=222.0*

*NEIC **09** 09:11:19.2, 6°.25S×154°.98E, h50^{km}, Moment Tensor Solution. Duration: 1^{s}4 Moment tensor: Scale 10^{16}Nm; M_{rr}6.68; $M_{\theta\theta}$-3.28; $M_{\phi\phi}$-3.40; $M_{r\theta}$-0.26; $M_{\theta\phi}$3.16; $M_{\phi r}$-0.42; Fault plane solution: $M_0$6.62000×10^{16} NP1: ϕ_s311.54000°, δ44.62000°, λ84.31000°. NP2: ϕ_s139.52000°, δ45.65000°, λ95.59000°. Principal axes: T 6.7180, Plg86.0000°, Azm128.0000°; N -0.2102, Plg4.0000°, Azm316.0000°; P -6.5077, Plg1.0000°, Azm226.0000°;*

ISC 09 09:11:18.6±0.4**, 6°.24S**±0°.04×**154°.84E**±0°.04**, h72**^{km}±3^{km}**, h72**^{km}**:pP-P, n899, σ1**^{s}**28**/770**, mb5.3**/294**, 23C-2D,**
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.35	307		Pn	09 12 09.1	+0.5
TATA	Tatamba Isabel	5.37	114	P	Pn	09 12 36.9	+0.8
SAVO	Savo Central	5.71	121	P	Pn	09 12 42.0	+1.1
NGOA	Tingoa Renbel	7.38	136	P	Pn	09 13 06.2	+2.5
HURO	Huro Makira	8.15	121	P	Pn	09 13 16.4	+2.2
HURO	Huro Makira	8.15	121	S	Sn	09 14 49.1	+4.2
PMG	Port Moresby	8.23	247	P	Pn	09 13 14.3	-1.0
	19nm,0.3s,baz=48,slow=6.7,SNR=67						
PMG				S	Sn	09 14 47.5	+0.6
	408nm,1.1s,baz=80,slow=20,SNR=9.5						
PMG				LR	LR	09 16 16.8	
	comp=Z,4µm,21.4s,baz=59,slow=36						
	585nm,0.8s						
PMG	Port Moresby	8.23	247		Pn	09 13 14.5	-0.8
PMG	Port Moresby	8.23	247	P	Pn	09 13 16.2	+0.8
PMG	Port Moresby	8.23	247	P	Pn	09 13 16.1	+0.7
	5µm6µm764nm,0.9s						
PMG	Port Moresby	8.23	247	i P	Pn	09 13 15.9	+0.5
MANU	Manus Island	8.54	299		Pn	09 13 20.3	+0.8
PATS	Pohnpei	13.44	15	P	Pn	09 14 25.6	-0.6
PATS	Pohnpei	13.44	15		Pn	09 14 24.0	-2.3
PATS	Pohnpei	13.44	15	P	Pn	09 14 26.0	-0.3
COEN	Coen	13.80	235	P	Pn	09 14 30.9	-0.2
	comp=Z,48nm,0.8s						
COEN	Coen	13.80	235		Pn	09 14 30.7	-0.5
COEN	Coen	13.80	235	P	Pn	09 14 30.6	-0.5
JAY	Jayapura	14.57	284	P	Pn	09 14 40.8	-0.4
	comp=Z,0.6nm,0.3s,baz=5.3,slow=3.4,SNR=4.3						
JAY				LR	LR	09 20 03.9	
	comp=Z,1µm,20.8s,baz=82,slow=36						
	comp=Z,23nm,1.0s						
JAY	Jayapura	14.57	284	P	Pn	09 14 40.9	-0.2
GENI	Genyem	15.07	283	P	Pn	09 14 46.0	-1.5
SANVU	Saraoutou	15.20	128		Pn	09 14 49.7	+0.6
SANVU	Saraoutou	15.20	128	P	Pn	09 14 50.8	+1.7
MTSU	Mount Surprise	15.66	220	P	Pn	09 14 55.3	+0.2
	comp=Z,78nm,1.1s						
CTA	Charters Tower	16.10	210	P	Pn	09 14 59.9	-0.7
	comp=Z,26nm,1.6s,comp=Z,0.0nm						
CTA	Charters Tower	16.10	210	LR	LR	09 20 44.9	
	comp=Z,40nm,19.4s,baz=26,slow=35						
CTAO	Charters Tower	16.10	210		Pn	09 15 00.8	+0.2
CTAO	Charters Tower	16.10	210	P	Pn	09 15 00.8	+0.2
SMPI	Sarmi	16.63	284	P	Pn	09 15 05.4	-1.8
	comp=Z,96nm,0.8s						
DVP	Devils Point	17.33	132	P	P	09 15 18.1	+1.9
DZM	Mont Dzumac	19.33	146	P	P	09 15 39.0	+0.8
	comp=Z,143nm,0.8s,baz=340,slow=10,SNR=61						
DZM				S	Sn	09 19 18.8	+2.4
	comp=Z,7.9nm,1.0s,baz=1.1,slow=17,SNR=3.1						
DZM	Mont Dzumac	19.33	146	eP	P	09 15 38.2	-0.1
	comp=Z,364nm,1.0s						
DZM				eS	S	09 19 06.0	-7.5
	comp=Z,1µm,26.1s						
DZM				eLR	LR	09 20 22.3	
	comp=Z,3µm,26.3s						
DZM	Mont Dzumac	19.33	146	P	P	09 15 39.1	+0.8
DZM				IAmb	IAmb	09 15 41.0	
	comp=Z,144nm,0.8s						
DZM	Mont Dzumac	19.33	146	P	P	09 15 39.4	+1.1
BAKI	Biak	19.35	284	P	P	09 15 38.7	+0.2
	comp=Z,104nm,0.8s						
EIDS	Eidsvold	19.36	190	P	P	09 15 39.3	+0.8
	comp=Z,61nm,1.3s						
EIDS	Eidsvold	19.36	190	P	P	09 15 39.3	+0.8
EIDS	Eidsvold	19.36	190	P	P	09 15 39.3	+0.8
ONTNC	Ouen Toro	19.52	146	P	P	09 15 40.7	+0.4
ONTNC				IAmb	IAmb	09 15 42.0	
	comp=Z,128nm,0.8s						
ONTNC	Ouen Toro	19.52	146	P	P	09 15 41.5	+1.2
MARNC	Mare, Loyalty	19.82	141	P	P	09 15 44.5	+1.0
MARNC	Mare, Loyalty	19.82	141	P	P	09 15 43.9	+0.4
OUENC	Ouen Island, N	19.82	145	P	P	09 15 44.4	+0.8
PINNC	Pines Island,	20.32	145	P	P	09 15 49.7	+0.8
PINNC				IAmb	IAmb	09 15 53.6	
	comp=Z,136nm,1.1s						
QIS	Mount Isa	20.52	225	P	P	09 15 50.9	-0.2
	comp=Z,95nm,1.1s,comp=Z,0.0nm						
QIS	Mount Isa	20.52	225	P	P	09 15 51.3	+0.1
GUMO	Guam	22.05	333	LR	LR	09 24 12.1	
	comp=Z,287nm,20.8s,baz=152,slow=35						
QLP	Quilpie	22.62	205	P	P	09 16 12.3	-1.3
	comp=Z,116nm,0.8s						
QLP	Quilpie	22.62	205	P	P	09 16 13.9	+0.3
FAKI	Fak Fak	22.76	277	P	P	09 16 14.9	-0.2
FAKI				IAmb	IAmb	09 16 16.9	
	comp=Z,148nm,0.9s						
FAKI	Fak Fak	22.76	277	P	P	09 16 15.2	0.0
FAKI	Fak Fak	22.76	277	P	P	09 16 15.0	-0.2
	comp=Z,2µmcomp=Z,186nm,0.9s						
KDU	Kakadu	22.96	252	P	P	09 16 15.8	-1.4
	comp=Z,34nm,0.9s						
SAUI	Saumlaki	23.42	264	P	P	09 16 22.3	+0.6
SAUI	Saumlaki	23.42	264	P	P	09 16 22.7	+1.0
	comp=Z,11µmcomp=Z,319nm,1.1s						
WRAB	Tennant Creek	24.11	234	P	P	09 16 27.7	-0.2
WRAB	Tennant Creek	24.11	234	P	P	09 16 27.6	-0.3
WRAB	Tennant Creek	24.11	234	ceP	P	09 16 27.7	-0.2
WRAB				pmax	pmax		
	comp=Z,79nm,1.3s						
SWI	Sorong	24.12	282	P	P	09 16 30.1	+2.1
	comp=Z,121nm,0.9s						
WRA	Warramunga Arr	24.13	234	P	P	09 16 27.6	-0.4
	comp=Z,53nm,1.0s,baz=58,slow=9.5,SNR=70						
WRA				PcP	PcP	09 20 08.2	+0.5
	comp=Z,18nm,0.7s,baz=59,slow=2.3,SNR=13						
WRA				S	S	09 20 46.2	+5.2
	comp=Z,9.5nm,1.1s,baz=54,slow=17,SNR=7.4						
WRA				ScP	ScP	09 23 44.1	+4.1
	comp=Z,1.6nm,0.7s,baz=64,slow=2.8,SNR=4.6						
WRA				LR	LR	09 25 41.0	
	comp=Z,1µm,20.2s,baz=90,slow=36						
	comp=Z,53nm,1.0s						
WRA	Warramunga Arr	24.13	234	P	P	09 16 26.8	-1.2
WRA	Warramunga Arr	24.13	234	ceP	P	09 16 27.6	-0.4
WRA				pmax	pmax		
	comp=Z,52nm,1.0s						
ARMA	Armidale	24.24	187	P	P	09 16 29.7	+0.6
	comp=Z,69nm,1.4s						
ARMA	Armidale	24.24	187	P	P	09 16 29.4	+0.4
ARMA				IAmb	IAmb	09 16 30.6	
	comp=Z,205nm,1.7s						
ARMA	Armidale	24.24	187	P	P	09 16 29.6	+0.6
FUNA	Funafuti	24.26	97	P	P	09 16 29.4	+0.2
FUNA				IAmb	IAmb	09 16 51.5	
	comp=Z,94nm,0.9s						
MTN	Manton Dam	24.27	253	P	P	09 16 29.2	-0.1
	comp=Z,71nm,1.2s,comp=Z,0.0nm						
BNDI	Bandanaira	24.88	273	P	P	09 16 36.7	+1.8
	comp=Z,143nm,1.1s						
MSVF	Nonsavu	25.38	119	P	P	09 16 39.9	+0.5
MSVF	Nonsavu	25.38	119	P	P	09 16 39.8	+0.3
MSVF	Nonsavu	25.38	119	i P	P	09 16 39.9	+0.5
LHI	Lord Howe Isla	25.46	172	P	P	09 16 39.0	-0.9
	comp=Z,96nm,1.3s						
LHI	Lord Howe Isla	25.46	172	P	P	09 16 39.5	-0.4
LHI				IAmb	IAmb	09 16 40.7	
	comp=Z,63nm,0.8s						
MSAI	Masohi	25.98	275	P	P	09 16 44.2	-0.6
	comp=Z,4µmcomp=Z,48nm,0.8s						
KRAI	Karang Ratu	26.51	275	P	P	09 16 49.9	+0.2
	comp=Z,67nm,1.0s						
AS31	Alice Springs	26.56	227	P	P	09 16 49.5	-0.6
ASAR	Alice Springs	26.57	227	P	P	09 16 49.4	-0.7
	comp=Z,12nm,0.8s,baz=57,slow=8.8,SNR=108						
ASAR				PcP	PcP	09 20 13.6	+0.5
	comp=Z,20nm,0.7s,baz=63,slow=2.6,SNR=20						
ASAR				ScP	ScP	09 23 50.4	+3.4
	comp=Z,1.4nm,0.9s,baz=60,slow=4.7,SNR=4.2						
ASAR				LR	LR	09 26 43.4	
	comp=Z,1µm,21.9s,baz=106,slow=35						
	comp=Z,12nm,0.8s						
ASAR	Alice Springs	26.57	227	P	P	09 16 49.3	-0.8
CMSA	Cobar Meteorol	26.59	198	P	P	09 16 49.6	-0.6
	comp=Z,32nm,1.7s						
CMSA	Cobar Meteorol	26.59	198	P	P	09 16 49.9	-0.2
AAI	Ambon	26.66	274	P	P	09 16 53.0	+2.0
	comp=Z,97nm,0.8s						
H11S3	WAKE ISLAND Hy	27.21	25	T	T	09 45 08.2	
	baz=205,slow=76,SNR=26						
H11S2	WAKE ISLAND Hy	27.22	25	T	T	09 45 02.8	
	baz=205,slow=76,SNR=45						
H11S1	WAKE ISLAND Hy	27.23	25	T	T	09 45 04.1	
	baz=205,slow=76,SNR=40						
KNRA	Kununurra	27.23	248	P	P	09 16 55.0	-1.1
	comp=Z,44nm,0.8s						
NLAI	Namlea	27.80	275	P	P	09 17 02.0	+0.8
	comp=Z,1µmcomp=Z,72nm,2.0s						
STKA	Stephens Creek	28.36	204	P	P	09 17 04.2	-1.7
	comp=Z,72nm,1.0s						
STKA	Stephens Creek	28.36	204	P	P	09 17 04.7	-1.2
	comp=Z,9.8nm,0.8s,baz=31,slow=12,SNR=20						
STKA				PcP	PcP	09 20 17.5	+0.3
	comp=Z,19nm,0.8s,baz=20,slow=2.6,SNR=9.1						
STKA				LR	LR	09 28 22.4	
	comp=Z,1µm,19.9s,baz=17,slow=36						
	comp=Z,9.8nm,0.8s						
STKA	Stephens Creek	28.36	204	P	P	09 17 05.0	-0.9
STKA				IAmb	IAmb	09 17 47.0	
	comp=Z,63nm,0.8s						
STKA	Stephens Creek	28.36	204	P	P	09 17 05.1	-0.9
STKA	Stephens Creek	28.36	204	i P	P	09 17 06.0	+0.1
YNG	Young	28.55	191	P	P	09 17 07.3	-0.4
	comp=Z,10nm,1.0s						
SANI	Sanana	29.07	277	P	P	09 17 12.4	-0.1
	comp=Z,1µmcomp=Z,115nm,1.0s						
CNB	Canberra Magne	29.38	189	P	P	09 17 15.4	+0.4
CAN	Canberra	29.44	190	P	P	09 17 16.2	+0.6
SOEI	Soe	30.47	261	IAmb	IAmb	09 17 57.1	
	comp=Z,74nm,1.0s						
SOEI	Soe	30.47	261	P	P	09 17 27.4	+2.4
	comp=Z,892nmcomp=Z,80nm,1.0s						
FITZ	Fitzroy Crossi	30.82	245	P	P	09 17 27.0	-1.0
	comp=Z,27nm,0.8s,baz=82,slow=7.6,SNR=48						
FITZ				PcP	PcP	09 20 24.5	+0.7
	comp=Z,31nm,0.8s,baz=202,slow=0.9,SNR=7.5						
FITZ				LR	LR	09 30 24.4	
	comp=Z,1µm,20.1s,baz=76,slow=37						
	comp=Z,27nm,0.8s						
FITZ	Fitzroy Crossi	30.82	245	P	P	09 17 27.0	-1.0
HTT	Hallett	30.83	207	P	P	09 17 27.5	-0.4
	comp=Z,9.0nm,0.9s						
HTT	Hallett	30.83	207	P	P	09 17 27.8	-0.1
BATI	Baumata	31.10	261	P	P	09 17 30.1	-0.4
	comp=Z,23nm,0.4s,baz=162,slow=3.2,SNR=4.0						
BATI				LR	LR	09 31 18.6	
	comp=Z,962nm,21.9s,baz=124,slow=39						
	comp=Z,23nm,0.4s						
BATI	Baumata	31.10	261	P	P	09 17 29.0	-1.5
	comp=Z,79nm,0.9s						
WRKA	Warakurna	31.55	231	P	P	09 17 33.1	-1.2
	comp=Z,21nm,0.8s						
BBOO	Buckleboo	31.70	211	P	P	09 17 34.5	-1.0
DAV	Davao City (W)	32.05	294	LR	LR	09 30 33.9	
	comp=Z,139nm,18.2s,baz=104,slow=36						
LUWI	Luwuk	32.41	278	P	P	09 17 42.0	0.0
LUWI	Luwuk	32.41	278	P	P	09 17 42.0	0.0
MMRI	Maumere	32.41	264	P	P	09 17 40.6	-1.4
MMRI	Maumere	32.41	264	P	P	09 17 42.5	+0.5
	comp=Z,6µmcomp=Z,185nm,1.0s						
GTOI	Gorontalo	32.50	281	P	P	09 17 42.0	-0.7
ARPS	Mount Arapiles	32.63	200	P	P	09 17 43.3	-0.3
	comp=Z,32nm,1.1s						
EDFI	Ende, Flores	32.95	264	P	P	09 17 44.3	-2.6
	comp=Z,1µmcomp=Z,159nm,0.9s						
MRSI	Marisa	33.51	280	P	P	09 17 52.1	+0.5
	comp=Z,44nm,0.7s						
APSI	Ampana	33.53	278	P	P	09 17 53.5	+1.7
	comp=Z,2µmcomp=Z,159nm,1.2s						
OUZ	Omahuta	33.62	152	P	P	09 17 53.5	+1.3
BASI	Baing, Sumba	34.13	261	P	P	09 17 58.4	+1.5
WSI	Waingapu	34.37	262	P	P	09 18 00.4	+1.4
RAO	Raoul Island	34.42	135	LR	LR	09 29 53.9	
	comp=Z,342nm,21.9s,baz=318,slow=32						
BKSI	Bulukumba	34.55	270	P	P	09 18 00.0	-0.6
BNSI	Bone	34.63	271	P	P	09 18 01.0	-0.3
	comp=Z,26nm,0.8s						
LBFI	Labuhan Bajo,	34.73	264	P	P	09 17 58.7	-3.4
	comp=Z,68nm,0.7s						
TOLI2	Tolitoli	34.77	281	P	P	09 18 02.8	+0.3
KAPI	Kappang	34.94	270	P	P	09 18 02.5	-1.4
	comp=Z,13nm,0.7s,baz=161,slow=5.3,SNR=5.4						
KAPI				LR	LR	09 34 52.1	
	comp=Z,70nm,21.6s,baz=89,slow=41						
	comp=Z,13nm,0.7s						
KAPI	Kappang	34.94	270	P	P	09 18 05.5	+1.6
	comp=Z,18nm,0.9s						
KAPI	Kappang	34.94	270	i P	P	09 18 03.1	-0.8
KAPI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SPSI	Sidrap Palu	35.00	272	P	P	09 18 03.5	-1.0
	comp=Z,21nm,0.8s						
TTSI	Tana Toraja	35.04	274	P	P	09 18 07.3	+2.5
	comp=Z,429nmcomp=Z,27nm,1.2s						
GLAD	Gladstone	35.13	189	P	P	09 18 06.0	+0.8
WBSI	Waikabubak, Su	35.26	262	P	P	09 18 06.8	0.0
PCI	Palu	35.32	277	P	P	09 18 08.1	+0.8
JCJ	Chichijima	35.33	340	LR	LR	09 30 33.4	
	comp=Z,90nm,20.2s,baz=161,slow=33						
MPSI	Mapaga	35.48	279	P	P	09 18 07.9	-0.7
	comp=Z,5µmcomp=Z,111nm,0.9s						
KUZ	Kuaotunu	35.87	151	P	P	09 18 12.5	+0.9
MMSI	Mamuju	35.99	274	P	P	09 18 11.7	-1.3
	comp=Z,20nm,0.8s						
DBNI	Kabupaten Domp	36.29	264	P	P	09 18 15.1	-0.4
	comp=Z,30nm,1.0s						
MOO	Moorlands	36.69	189	P	P	09 18 19.1	+0.6
PLAI	Plampang	36.82	264	P	P	09 18 18.4	-1.7
PLAI	Plampang	36.82	264	P	P	09 18 19.6	-0.5
	comp=Z,1µmcomp=Z,156nm,0.8s						
HIZ	Hauiti	36.90	153	P	P	09 18 21.2	+0.8
MBWA	Marble Bar	37.08	243	P	P	09 18 21.5	-0.6
MBWA				IAmb	IAmb	09 18 30.3	
	comp=Z,35nm,0.7s						
MBWA	Marble Bar	37.08	243	P	P	09 18 21.3	-0.9
MBWA	Marble Bar	37.08	243	P	P	09 18 21.3	-0.9
MBWA				pP	pP	09 18 38.3	+0.6
MBWA				PcP	PcP	09 20 41.8	+0.3
PSA00	Pilbara Seismi	37.11	242	P	P	09 18 21.5	-0.9
PSA00				IAmb	IAmb	09 18 30.8	
	comp=Z,21nm,0.8s						
PSA00	Pilbara Seismi	37.11	242	IAmb	IAmb	09 18 30.8	
	comp=Z,48nm,0.8s						
PSA00	Pilbara Seismi	37.11	242	P	P	09 18 21.9	-0.5
TAU	Tasmania Unive	37.12	189	P	P	09 18 22.1	-0.1
TAU	Tasmania Unive	37.12	189	P	P	09 18 23.2	+1.0
TAU	Tasmania Unive	37.12	189	P	P	09 18 22.1	-0.1
TAU				pmax	pmax		
	comp=Z,93nm,1.3s						
TWSI	Taliwang, Sumb	37.70	264	P	P	09 18 26.2	-1.4
	comp=Z,729nmcomp=Z,78nm,0.9s						
URZ	Urewera	37.74	151	LR	LR	09 33 32.4	
	comp=Z,283nm,19.2s,baz=318,slow=35						
URZ	Urewera	37.74	151	P	P	09 18 28.1	+0.6
MXZ	Matakaoa Point	37.80	149	P	P	09 18 29.0	+1.0
QRZ	Quartz Range	37.90	158	P	P	09 18 29.6	+0.8
MYLDM	Lahad Datu	38.01	287	P	P	09 18 29.1	-1.0
	comp=Z,69nm,1.1s						
BKZ	Black Stump Fm	38.17	152	P	P	09 18 31.7	+0.5
KLNI	Mataram	38.48	264	P	P	09 18 30.8	-3.3
	comp=Z,2µmcomp=Z,87nm,1.0s						
THZ	Tophouse	38.86	158	P	P	09 18 37.2	+0.3
THZ				IAmb	IAmb	09 18 37.7	
	comp=Z,55nm,0.9s						
SNZO	South Karori	39.16	156	P	P	09 18 40.0	+0.6
TGY	Tagaytay City	39.24	301	LR	LR	09 32 16.0	
	comp=Z,439nm,21.6s,baz=54,slow=32						
BFZ	Birch Farm	39.29	154	P	P	09 18 40.1	-0.3
JCZ	Jackson Bay	39.62	164	P	P	09 18 44.0	+0.7
KHZ	Kahutara	39.66	158	P	P	09 18 42.9	-0.5
KHZ				IAmb	IAmb	09 18 45.5	
	comp=Z,41nm,0.7s						
KHZ	Kahutara	39.66	158	P	P	09 18 42.8	-0.7
BBKI	Banjar Baru	39.94	272	P	P	09 18 46.2	-0.1
GVZ	Greta Valley S	39.96	159	IAmb	IAmb	09 18 49.5	
	comp=Z,53nm,0.8s						
MEEK	Meekatharra	40.01	235	P	P	09 18 46.3	-0.4
MTKI	Muara Teweh, K	40.20	276	P	P	09 18 47.6	-0.8
JAGI	Jajag, Banyuwa	40.40	264	P	P	09 18 48.0	-2.1
JAGI	Jajag, Banyuwa	40.40	264	P	P	09 18 48.3	-1.8
	comp=Z,128nm,1.1s						
KKM	Kota Kinabalu	40.44	287	P	P	09 18 50.7	+0.2
KKM	Kota Kinabalu	40.44	287	P	P	09 18 50.9	+0.5
KKM	Kota Kinabalu	40.44	287	P	P	09 18 51.0	+0.5
	comp=Z,94nm,1.2s						
MQZ	McQueen's Vall	40.47	160	P	P	09 18 50.2	0.0
MQZ				IAmb	IAmb	09 18 58.1	
	comp=Z,110nm,1.5s						
MLZ	Mavora Lakes	40.66	166	P	P	09 18 51.9	+0.2
MLZ				IAmb	IAmb	09 18 52.6	
	comp=Z,59nm,1.0s						
BLJI	Banyuglugur	40.95	265	P	P	09 18 54.1	-0.5
	comp=Z,40nm,0.6s						
ODZ	Otahua Downs	41.04	163	P	P	09 18 54.3	-0.6
JOW	Kunigami	41.75	323	P	P	09 19 01.2	+0.3
	comp=Z,67nm,0.9s,baz=132,slow=10.0,SNR=6.7						
JOW				LR	LR	09 33 57.1	
	comp=Z,238nm,21.1s,baz=99,slow=33						
	comp=Z,67nm,0.9s						
JOW	Kunigami	41.75	323	IAmb	IAmb	09 19 05.5	
	comp=Z,65nm,0.9s						
SJI	Sawahan	42.77	265	P	P	09 19 09.4	-0.1
	comp=Z,73nm,0.6s						
SNJI	Sawahan-Nganju	42.77	265	P	P	09 19 11.3	+1.6
	comp=Z,1µmcomp=Z,83nm,1.5s						
KLBR	Kellerberrin	42.86	229	P	P	09 19 08.7	-1.2
MORW	Morawa	43.08	233	P	P	09 19 10.9	-0.8
MORW				IAmb	IAmb	09 19 12.1	
	comp=Z,43nm,0.8s						
BLDU	Ballidu	43.21	231	P	P	09 19 11.8	-1.0
PCJI	Pacitan	43.35	265	P	P	09 19 13.0	-1.1
	comp=Z,3µmcomp=Z,267nm,1.4s						
SBUM	Sibu	43.42	280	P	P	09 19 14.9	+0.2
SBUM	Sibu	43.42	280	P	P	09 19 16.0	+1.3
YOJ	Yonaguni jima	43.51	316	P	P	09 19 16.3	+1.1
NWAO	Narrogin (SRO)	43.88	228	LR	LR	09 37 34.9	
	comp=Z,749nm,20.0s,baz=62,slow=36						
NWAO	Narrogin (SRO)	43.88	228	P	P	09 19 17.4	-0.7
NWAO	Narrogin (SRO)	43.88	228	P	P	09 19 17.4	-0.7
NWAO				pmax	pmax		
	comp=Z,28nm,1.0s						
NWAO	Narrogin (SRO)	43.88	228	P	P	09 19 17.5	-0.7
NWAO				PcP	PcP	09 21 03.4	+0.1
UGM	Wanagama	44.00	265	P	P	09 19 19.6	+0.2
YULB	Yu-li	44.05	313	IAmb	IAmb	09 19 22.2	
	comp=Z,57nm,0.9s						
MUN	Mundaring	44.20	230	P	P	09 19 20.1	-0.6
NACB	Ninganchiao	44.32	314	P	P	09 19 21.5	-0.3
NACB	Ninganchiao	44.32	314	P	P	09 19 22.5	+0.8
JMN	Monobe	44.43	335	P	P	09 19 23.0	+0.5
TPUB	Ta-pu	44.48	312	IAmb	IAmb	09 19 27.2	
	comp=Z,65nm,0.8s						
TPUB	Ta-pu	44.48	312	P	P	09 19 23.0	-0.1
SSLB	Suanglung	44.54	313	IAmb	IAmb	09 19 28.5	
	comp=Z,48nm,0.7s						
SSLB	Suanglung	44.54	313	P	P	09 19 24.3	+0.7
YHNB	Yeheng	44.79	315	IAmb	IAmb	09 19 30.4	
	comp=Z,55nm,0.8s						
JNU	Nakatsue	45.28	331	P	P	09 19 28.8	-0.5
	comp=Z,58nm,0.8s,baz=137,slow=2.9,SNR=26						
JNU				LR	LR	09 37 01.9	
	comp=Z,78nm,20.1s,baz=146,slow=34						
	comp=Z,58nm,0.8s						
JNU	Nakatsue	45.28	331	IAmb	IAmb	09 19 33.0	
	comp=Z,59nm,0.8s						
JNU	Nakatsue	45.28	331	P	P	09 19 28.7	-0.5
MJAR	Matsushiro Arr	45.32	341	P	P	09 19 28.8	-0.7
	comp=Z,4.7nm,0.7s,baz=172,slow=8.1,SNR=11						
MJAR				PcP	PcP	09 21 07.9	-0.2
	comp=Z,8.6nm,0.9s,baz=164,slow=4.0,SNR=8.1						
MJAR				LR	LR	09 36 45.0	
	comp=Z,116nm,21.5s,baz=162,slow=34						
	comp=Z,4.7nm,0.7s						
MJAR	Matsushiro Arr	45.32	341	P	P	09 19 30.8	+1.3
MJAR	Matsushiro Arr	45.32	341	P	P	09 19 30.8	+1.3
MJAR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MAJO	Matsushiro	45.32	341	P	P	09 19 30.0	+0.5
MAJO	Matsushiro	45.32	341	i P	P	09 19 29.8	+0.3
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CTJI	Waduk Cacaban	45.34	266	P	P	09 19 31.4	+1.3
KPJI	Karang Pucung	45.59	266	P	P	09 19 30.7	-1.3
	comp=Z,67nm,0.7s						
RAR	Rarotonga	46.35	113	LR	LR	09 35 45.3	
	comp=Z,327nm,21.4s,baz=281,slow=32						
KNMB	Chin-men Tao	46.82	312	P	P	09 19 41.9	+0.4
BBJI	Bungbulang	46.85	266	P	P	09 19 40.6	-1.4
BBJI	Bungbulang	46.85	266	P	P	09 19 40.7	-1.3
	comp=Z,677nmcomp=Z,54nm,0.7s						
JTU	Tsushima	47.13	331	P	P	09 19 44.6	+0.9
TPI	Tanjungpandan	47.15	272	P	P	09 19 44.2	-0.1
	comp=Z,1µmcomp=Z,34nm,1.6s						
CNJI	Cibinong	47.37	266	P	P	09 19 45.9	-0.1
	comp=Z,1µmcomp=Z,106nm,1.0s						
KASI	Kota Agung	50.07	268	P	P	09 20 04.3	-2.4
	comp=Z,47nm,0.9s						
KSRS	Korea Array	50.20	332	P	P	09 20 07.0	-0.2
	comp=Z,17nm,0.8s,baz=150,slow=8.2,SNR=40						
KSRS				PcP	PcP	09 21 25.9	+0.4
	comp=Z,3.8nm,0.7s,baz=152,slow=4.0,SNR=5.8						
KSRS				LR	LR	09 39 50.5	
	comp=Z,44µm,21.2s,baz=135,slow=34						
	comp=Z,17nm,0.8s						
KSAR	Wonju Array Be	50.21	332	P	P	09 20 06.8	-0.5
KSAR	Wonju Array Be	50.21	332	P	P	09 20 06.8	-0.5
KS19	Wonju Array Si	50.27	332	IAmb	IAmb	09 20 08.1	
	comp=Z,22nm,0.9s						
MDSI	Maura Dua	50.46	269	P	P	09 20 08.6	-1.0
	comp=Z,33nm,1.3s						
INCN	Inchon	50.84	331	P	P	09 20 12.3	+0.3
INCN	Inchon	50.84	331	P	P	09 20 12.3	+0.3
INCN				pmax	pmax		
	comp=Z,54nm,0.8s						
INCN	Inchon	50.84	331	P	P	09 20 12.3	+0.3
QIZ	Qiongzhong	50.94	301	P	P	09 20 14.5	+1.3
QIZ				S	S	09 27 27.2	+2.2
QIZ				LR	LR		
	comp=Z,350nm,11.0s						
QIZ				LR	LR		
	comp=Z,570nm,19.4s						
QIZ				LR	LR		
	comp=Z,430nm,21.0s						
NJ2	Nanjing	51.24	320	eP	P	09 20 18.4	+3.3
NJ2				pmax	pmax		
	comp=Z,15nm,0.7s						
ASAJ	Asahikawa	51.33	349	P	P	09 20 16.1	+0.5

	comp=Z,13nm,0.9s,baz=257,slow=12,SNR=4.7						
ASAJ				LR	LR	09 39 53.1	
	comp=Z,333nm,20.8s,baz=164,slow=34						
	comp=Z,13nm,0.9s						
WHN	**Wuhan**	**53.29**	**316**	P	**P**	**09 20 31.5**	**+1.1**
WHN				pmax	pmax		
	comp=Z,92nm,0.8s						
YSS	**Yuzhno-Sakhali**	**54.03**	**350**	*e*P	**P**	**09 20 36.3**	**+0.8**
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				MLR	MLR		
	comp=Z,400nm,18.0s						
YSS				MLR	MLR		
	comp=N,400nm,14.0s						
BKNI	**Bangkinang**	**54.09**	**275**	P	**P**	**09 20 36.5**	**-0.1**
BKNI	**Bangkinang**	**54.09**	**275**	P	**P**	**09 20 36.9**	**+0.4**
USRK	**Ussuriysk Ar.**	**54.27**	**340**	P	**P**	**09 20 37.8**	**+0.5**
	comp=N,8.5nm,0.7s,baz=160,slow=8.0,SNR=14						
	comp=N,8.5nm,0.7s						
DL2	**Dalian**	**54.45**	**328**	P	**P**	**09 20 38.5**	**-0.1**
DL2				pmax	pmax		
	comp=N,51nm,0.8s						
PDSI	**Padang**	**54.50**	**273**	P	**P**	**09 20 37.4**	**-2.2**
	comp=N,114nm,0.8s						
PPI	**Padang Panjang**	**54.62**	**274**	P	**P**	**09 20 37.7**	**-2.7**
IPM	**Ipoh**	**54.77**	**280**	P	**P**	**09 20 42.2**	**+0.7**
	comp=N,54nm,0.9s						
TIA	**Tai'an**	**55.07**	**323**	P	**P**	**09 20 43.0**	**-0.3**
TIA				pmax	pmax		
	comp=N,21nm,0.8s						
KULM	**Kulim**	**55.30**	**281**	P	**P**	**09 20 44.7**	**-0.6**
PPT	**Papeete**	**55.36**	**107**	LR	LR	09 39 39.8	
	comp=N,102nm,21.8s,baz=282,slow=31						
MDJ	**Mudanjiang**	**55.48**	**338**	P	**P**	**09 20 46.4**	**+0.4**
MDJ				pmax	pmax		
	comp=N,20nm,0.9s						
MDJ	**Mudanjiang**	**55.48**	**338**	P	**P**	**09 20 46.4**	**+0.4**
MNSI	**Mandailing Nat**	**55.60**	**275**	P	**P**	**09 20 46.4**	**-1.1**
	comp=N,118nm,0.9s						
SISI	**Saibi**	**55.82**	**273**	P	**P**	**09 20 47.3**	**-1.7**
	comp=N,86nm,0.8s						
TBI	**Tubuai**	**56.12**	**114**	*e*P	**P**	**09 20 49.3**	**-1.7**
	comp=N,375nm,26.8s						
TBI				*e*S	**S**	**09 28 27.8**	**-7.2**
	comp=N,736nm,32.2s						
TBI				*e*SS	**SS**	**09 32 20.4**	**-2.1**
	comp=N,616nm,34.0s						
TBI				*e*LQ	LQ	09 34 55.2	
	comp=N,2µm,34.0s						
TBI				*e*LR	LR	09 37 14.1	
	comp=N,834nm,34.8s						
TBI				*e*LR	LR	09 37 19.8	
	comp=N,5µm,28.8s						
CN2	**Changchun**	**56.45**	**335**	P	**P**	**09 20 52.5**	**-0.4**
CN2				PcP	**PcP**	**09 21 48.0**	**-1.1**
CN2				pmax	pmax		
	comp=N,20nm,0.9s						
PSI	**Prapat**	**56.55**	**277**	P	**P**	**09 20 53.4**	**-1.0**
GYA	**Guiyang**	**56.88**	**307**	P	**P**	**09 20 56.8**	**+0.3**
GYA				pmax	pmax		
	comp=N,23nm,1.1s						
GYA				LR	LR		
	comp=N,470nm,20.1s						
LYN	**LuoYang**	**56.95**	**318**	P	**P**	**09 20 56.7**	**0.0**
LYN				pmax	pmax		
	comp=N,26nm,0.8s						
SLVN	**Son La**	**56.97**	**300**	IAmb	IAmb	09 20 59.4	
	comp=Z,42nm,1.0s						
BNX	**BinXian**	**57.26**	**337**	⇓P	**P**	**09 20 58.6**	**0.0**
BNX				pmax	pmax		
	comp=Z,29nm,0.9s						
HNS	**HongShan**	**57.31**	**322**	⇑P	**P**	**09 20 59.1**	**-0.1**
HNS				pmax	pmax		
	comp=Z,25nm,1.1s						
GSI	**Gunungsitoli**	**57.65**	**275**	P	**P**	**09 21 00.5**	**-1.5**
GSI	**Gunungsitoli**	**57.65**	**275**	P	**P**	**09 21 01.2**	**-0.9**
	comp=Z,122nm,0.8s						
KCSI	**Kotacane, Aceh**	**57.80**	**278**	P	**P**	**09 21 00.0**	**-3.1**
	comp=Z,15nm,0.6s						
TYV	**Tymovskoe**	**57.84**	**351**	*e*P	**P**	**09 21 03.3**	**+0.7**
TYV				*e*S	**S**	**09 28 57.6**	**+1.0**
TYV				pmax	pmax		
	comp=Z,17nm,0.9s						
TYV				pmax	pmax		
	comp=Z,700nm,4.9s						
TYV				smax	smax		
	comp=N,400nm,6.1s						
TYV				smax	smax		
	comp=E,1µm,6.1s						
BJI	**Beijing**	**58.21**	**326**	P	**P**	**09 21 06.5**	**+1.1**
BJI				pmax	pmax		
	comp=E,8.0nm,0.6s						
XAN	**Xi'an**	**59.06**	**316**	⇑P	**P**	**09 21 11.2**	**-0.3**
XAN				pmax	pmax		
	comp=E,41nm,0.8s						
XAN	**Xi'an**	**59.06**	**316**	P	**P**	**09 21 11.2**	**-0.3**
XAN				sP	**sP**	**09 21 36.6**	**-1.4**
XAN				PcP	**PcP**	**09 21 58.6**	**-1.1**
PET	**Petropavlovsk**	**59.12**	**3**	P	**P**	**09 21 13.1**	**+1.6**
PET	**Petropavlovsk**	**59.12**	**3**	P	**P**	**09 21 12.8**	**+1.3**
PET	**Petropavlovsk**	**59.12**	**3**	*e*P	**P**	**09 21 12.6**	**+1.1**
PET				pmax	pmax		
	comp=Z,92nm,0.7s						
PEA0B	**Petropavlovsk-**	**59.17**	**2**	P	**P**	**09 21 13.6**	**+1.8**
PEA0B	**Petropavlovsk-**	**59.17**	**2**	*ce*P	**P**	**09 21 14.3**	**+2.5**
PETK	**Petropavlovsk-**	**59.17**	**2**	P	**P**	**09 21 13.5**	**+1.6**
	comp=Z,49nm,0.7s,baz=174,slow=6.5,SNR=37						
PETK				LR	LR	09 43 11.4	
	comp=Z,292nm,21.7s,baz=183,slow=32						
	comp=Z,49nm,0.7s						
PETK	**Petropavlovsk-**	**59.17**	**2**	P	**P**	**09 21 13.1**	**+1.3**
MLSI	**Meulaboh, Aceh**	**59.27**	**279**	P	**P**	**09 21 10.2**	**-3.1**
	comp=Z,81nm,0.8s						
KMI	**Kunming**	**59.47**	**304**	⇑P	**P**	**09 21 16.0**	**+1.3**
KMI				pmax	pmax		
	comp=Z,96nm,1.0s						
KMI				LR	LR		
	comp=Z,370nm,26.0s						
CM31	**Chiang Mai Arr**	**60.32**	**295**	P	**P**	**09 21 22.1**	**+1.6**
CMAR	**Chiang Mai Arr**	**60.32**	**295**	P	**P**	**09 21 21.7**	**+1.3**
	comp=Z,79nm,0.8s,baz=115,slow=5.0,SNR=266						
CMAR				LR	LR	09 46 01.9	
	comp=Z,115nm,21.3s,baz=110,slow=35						
	comp=Z,79nm,0.8s						
CHTO	**Chiang Mai**	**60.44**	**296**	P	**P**	**09 21 21.4**	**+0.2**
CHTO	**Chiang Mai**	**60.44**	**296**	P	**P**	**09 21 21.0**	**-0.2**
	comp=Z,759nmcomp=Z,85nm,1.1s						
CHTO	**Chiang Mai**	**60.44**	**296**	P	**P**	**09 21 21.4**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,75nm,1.0s						
CHTO	**Chiang Mai**	**60.44**	**296**	P	**P**	**09 21 21.8**	**+0.6**
CHTO				pP	**pP**	**09 21 40.2**	**+0.7**
PZH	**PanZhiHua**	**60.85**	**305**	P	**P**	**09 21 27.1**	**+3.0**
XLT	**XiLinHaoTe**	**60.93**	**329**	*e*P	**P**	**09 21 24.2**	**0.0**
XLT				PcP	**PcP**	**09 22 07.2**	**+0.2**
XLT				pmax	pmax		
	comp=Z,64nm,0.8s						
SHEM	**Shemya Is, Ala**	**60.98**	**13**	LR	LR	09 44 53.8	
	comp=Z,580nm,20.3s,baz=170,slow=33						
HEH	**HeiHe**	**61.07**	**340**	*e*P	**P**	**09 21 24.9**	**0.0**
HEH				PcP	**PcP**	**09 22 06.6**	**-0.7**
HEH				pmax	pmax		
	comp=Z,17nm,0.8s						
CD2	**Chengdu**	**61.21**	**310**	P	**P**	**09 21 26.5**	**+0.2**
CD2				pmax	pmax		
	comp=Z,60nm,0.4s						
CD2				pmax	pmax		
	comp=Z,310nm,6.1s						
HHC	**Hu-ho-hao-te**	**61.40**	**324**	*e*P	**P**	**09 21 31.8**	**+4.4**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,220nm,4.9s						
BTO	**Baotou**	**62.16**	**323**	*e*P	**P**	**09 21 37.1**	**+4.5**
BTO				PP	**PP**	**09 23 50.6**	**+0.3**
BTO				pmax	pmax		
	comp=Z,35nm,0.6s						
BTO				pmax	pmax		
	comp=Z,500nm,5.2s						
BTO				LR	LR		
	comp=Z,500nm,6.6s						
BTO				LR	LR		
	comp=Z,280nm,5.6s						
BTO				LR	LR		
	comp=Z,490nm,12.8s						
ADK	**Adak**	**62.81**	**19**	P	**P**	**09 21 38.6**	**+2.1**
ADK	**Adak**	**62.81**	**19**	P	**P**	**09 21 38.3**	**+1.8**
ADK	**Adak**	**62.81**	**19**	P	**P**	**09 21 38.6**	**+2.1**
ADK				pmax	pmax		
	comp=Z,130nm,0.7s						
HIA	**Hailar**	**63.17**	**335**	*i* P	**P**	**09 21 39.5**	**+0.5**
HIA				pmax	pmax		
	comp=Z,36nm,0.8s						
HIA	**Hailar**	**63.17**	**335**	P	**P**	**09 21 39.1**	**+0.1**
HIA				pP	**pP**	**09 21 57.8**	**0.0**
HILR	**Hailar Array B**	**63.39**	**335**	P	**P**	**09 21 40.7**	**+0.2**
	comp=Z,21nm,0.7s,baz=139,slow=9.3,SNR=35						
	comp=Z,21nm,0.7s						
LZH	**Lanzhou**	**63.67**	**315**	*e*P	**P**	**09 21 43.6**	**+0.8**
LZH				sP	sP	09 22 11.8	+2.4
LZH				pmax	pmax		
	comp=Z,35nm,1.0s						
LZH				LR	LR		
	comp=Z,200nm,17.9s						
LZH				LR	LR		
	comp=Z,320nm,16.2s						
LZH				LR	LR		
	comp=Z,400nm,19.2s						
LZDM	**Lanzhou Array**	**63.71**	**315**	P	**P**	**09 21 44.1**	**+0.9**
	comp=Z,24nm,0.7s,baz=144,slow=5.5,SNR=20						
LZDM				LR	LR	09 48 42.2	
	comp=Z,134nm,20.4s,baz=155,slow=35						
	comp=Z,24nm,0.7s						
ATKA	**Atka Island**	**63.92**	**21**	P	**P**	**09 21 45.2**	**+1.4**
ATKA	**Atka Island**	**63.92**	**21**	P	**P**	**09 21 44.9**	**+1.1**
ZEA	**Zeya**	**64.11**	**342**	*e*P	**P**	**09 21 44.8**	**-0.3**
ZEA				*e*		09 22 01.9	
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.7s						
TAOE	**Nuku Hiva Isla**	**64.44**	**97**	*e*S	**S**	**09 30 19.9**	**-2.1**
	comp=Z,46nm,26.6s						
TAOE				*e*SS	**SS**	**09 34 29.1**	**-4.3**
	comp=Z,58nm,38.1s						
TAOE				*e*LQ	LQ	09 38 28.5	
	comp=Z,251nm,29.7s						
TAOE				*e*LR	LR	09 41 06.7	
	comp=Z,224nm,23.5s						
MA2	**Magadan**	**65.68**	**358**	P	**P**	**09 21 55.6**	**+0.5**
	comp=Z,49nm,0.7s,baz=165,slow=5.6,SNR=16						
MA2				LR	LR	09 47 56.0	
	comp=Z,119nm,21.8s,baz=184,slow=34						
	comp=Z,49nm,0.7s						
MA2	**Magadan**	**65.68**	**358**	P	**P**	**09 21 55.7**	**+0.5**
MA2	**Magadan**	**65.68**	**358**	P	**P**	**09 21 55.4**	**+0.2**
MA2	**Magadan**	**65.68**	**358**	*ce*P	**P**	**09 21 55.0**	**-0.2**
MA2				pmax	pmax		
	comp=Z,54nm,0.7s						
MA2	**Magadan**	**65.68**	**358**	P	**P**	**09 21 54.9**	**-0.2**
	comp=Z,96nm,0.8s						
NIKH	**Nikolski High**	**66.51**	**23**	P	**P**	**09 22 02.1**	**+1.6**
NIKH	**Nikolski High**	**66.51**	**23**	P	**P**	**09 22 01.9**	**+1.3**
NIKH	**Nikolski High**	**66.51**	**23**	P	**P**	**09 22 01.6**	**+1.1**
	baz=220						
CASY	**Casey**	**67.26**	**198**	P	**P**	**09 22 05.0**	**-0.2**
CASY	**Casey**	**67.26**	**198**	P	**P**	**09 22 04.9**	**-0.2**
GTA	**Gaotai**	**68.08**	**317**	P	**P**	**09 22 12.3**	**+1.3**
GTA				pmax	pmax		
	comp=Z,34nm,0.9s						
UNV	**Unalaska Valle**	**68.09**	**24**	IAmb	IAmb	09 22 15.2	
	comp=Z,39nm,0.7s						
UNV	**Unalaska Valle**	**68.09**	**24**	P	**P**	**09 22 11.2**	**+0.7**
	baz=222						
BRDH	**Bariadhala**	**68.12**	**297**	LR	LR	09 50 03.4	
	comp=Z,112nm,21.8s,baz=171,slow=34						
ULN	**Ulaanbaatar**	**68.28**	**328**	P	**P**	**09 22 12.8**	**+0.7**
ULN	**Ulaanbaatar**	**68.28**	**328**	P	**P**	**09 22 11.9**	**-0.2**
	comp=Z,74nm,0.9s						
ULN	**Ulaanbaatar**	**68.28**	**328**	*ce*P	**P**	**09 22 13.0**	**+0.9**
ULN				pmax	pmax		
	comp=Z,12nm,0.7s						
SONM	**Songino Array**	**68.62**	**327**	P	**P**	**09 22 14.6**	**+0.4**
	comp=Z,18nm,0.9s,baz=131,slow=5.9,SNR=41						
SONM				PKPPKP	**P'P'df**	**09 50 28.7**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=304,slow=1.7,SNR=5.3						
SONM				LR	LR	09 53 55.5	
	comp=Z,130nm,18.7s,baz=137,slow=37						
	comp=Z,18nm,0.9s						
SONM	**Songino Array**	**68.62**	**327**	P	**P**	**09 22 14.3**	**+0.1**
SEY	**Seymchan**	**69.00**	**359**	LR	LR	09 53 46.9	
	comp=Z,100nm,19.1s,baz=148,slow=37						
SEY	**Seymchan**	**69.00**	**359**	*ce*P	**P**	**09 22 17.2**	**+1.2**
SEY				pmax	pmax		
	comp=Z,13nm,0.7s						
P08K	**Saint George I**	**69.08**	**20**	P	**P**	**09 22 18.2**	**+1.5**
	baz=218						
SPIA	**Saint Paul Isl**	**69.30**	**19**	P	**P**	**09 22 19.4**	**+1.4**
	baz=217						
FALS	**False Pass**	**70.07**	**24**	P	**P**	**09 22 24.3**	**+1.5**
	baz=225						
GOMU	**GeErMu**	**70.23**	**312**	P	**P**	**09 22 25.0**	**+0.3**
GOMU				pP	pP	09 22 44.4	+0.8
GOMU				PcP	**PcP**	**09 22 47.1**	**+1.0**
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LSA	**Lhasa**	**70.72**	**304**	P	**P**	**09 22 24.5**	**-3.4**
LSA				pmax	pmax		
	comp=Z,22nm,0.7s						
YAK	**Yakutsk**	**70.79**	**348**	P	**P**	**09 22 27.5**	**+0.5**
	comp=Z,28nm,0.6s,baz=21,slow=1.3,SNR=10						
YAK				LR	LR	09 51 46.1	
	comp=Z,143nm,21.7s,baz=116,slow=34						
	comp=Z,28nm,0.6s						
YAK	**Yakutsk**	**70.79**	**348**	P	**P**	**09 22 28.1**	**+1.1**
YAK				IAmb	IAmb	09 22 28.4	
	comp=Z,37nm,0.9s						
YAK	**Yakutsk**	**70.79**	**348**	*e*P	**P**	**09 22 28.2**	**+1.2**
YAK				*e**PP	**pP**	**09 22 41.2**	**-4.9**
YAK				*e*		09 22 48.6	
YAK				*e*S	**S**	**09 31 37.1**	**+1.1**
YAK				*e**SS	**SKiKP**	**09 32 03.2**	**+0.1**
YAK				*e*SSS	SSS	09 39 24.0	
YAK				pmax	pmax		
	comp=Z,46nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,339nm,3.4s						
YAK				pmax	pmax		
	comp=N,279nm,3.4s						
YAK				pmax	pmax		
	comp=E,108nm,3.2s						
YAK				smax	smax		
	comp=E,52nm,2.2s						
YAK				smax	smax		
	comp=N,260nm,3.8s						
CCD	**Concordia, Ant**	**71.13**	**188**	P	**P**	**09 22 29.6**	**+0.2**
VNDA	**Vanda**	**71.34**	**178**	P	**P**	**09 22 30.6**	**+0.4**
	comp=N,8.0nm,0.8s,baz=325,slow=6.5,SNR=18						
VNDA				LR	LR	09 49 18.6	
	comp=N,113nm,19.5s,baz=352,slow=32						
	comp=N,8.0nm,0.8s						
VNDA	**Vanda**	**71.34**	**178**	P	**P**	**09 22 30.9**	**+0.7**
VNDA				IAmb	IAmb	09 22 41.2	
	comp=Z,66nm,2.0s						
VNDA	**Vanda**	**71.34**	**178**	P	**P**	**09 22 30.9**	**+0.7**
VNDA				pmax	pmax		
	comp=Z,66nm,2.0s						
SDPT	**Sand Point**	**71.63**	**25**	P	**P**	**09 22 33.6**	**+1.4**
	baz=227						
CHNA	**Chernabura Isl**	**71.66**	**26**	P	**P**	**09 22 33.9**	**+1.5**
	baz=228						
ZAK	**Zakamensk**	**71.77**	**328**	*e*P	**P**	**09 22 33.0**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,29nm,1.0s						
TLY	**Talaya**	**72.34**	**329**	P	**P**	**09 22 36.9**	**+0.2**
TLY	**Talaya**	**72.34**	**329**	*ce*P	**P**	**09 22 37.5**	**+0.9**
TLY				pmax	pmax		
	comp=Z,10.0nm,1.0s						
S14K	**Fog Glacier**	**72.65**	**25**	P	**P**	**09 22 39.4**	**+1.0**
	baz=228						
M11K	**Mekoryuk**	**73.12**	**19**	P	**P**	**09 22 42.5**	**+1.5**
	baz=221						
MOY	**Mondy**	**73.69**	**328**	*e*P	**P**	**09 22 44.9**	**+0.2**
EVN	**Everest**	**73.81**	**301**	IAmb	IAmb	09 22 53.0	
	comp=Z,23nm,0.7s						
O14K	**Tigyukauivet M**	**74.01**	**22**	P	**P**	**09 22 47.6**	**+1.4**
	baz=226						
CHIR	**Chirikof Islan**	**74.04**	**27**	P	**P**	**09 22 47.9**	**+1.4**
	baz=232						
M13K	**Dall Lake**	**74.10**	**20**	P	**P**	**09 22 48.7**	**+2.0**
	baz=224,SNR=6.4						
GAMB	**Gambell**	**74.23**	**15**	P	**P**	**09 22 49.4**	**+2.0**
	baz=215						
R16K	**Pilot Point**	**74.31**	**24**	P	**P**	**09 22 49.7**	**+1.7**
	baz=230						
N14K	**Kuskokwak Cree**	**74.33**	**21**	P	**P**	**09 22 49.5**	**+1.4**
	baz=225						
O15K	**Ungalikthiuk R**	**74.49**	**22**	P	**P**	**09 22 50.9**	**+1.8**
	baz=227						
K13K	**Kusilvak Mount**	**74.79**	**19**	P	**P**	**09 22 52.0**	**+1.3**
	baz=222						
M14K	**Bethel**	**74.82**	**20**	P	**P**	**09 22 52.2**	**+1.3**
	baz=225,SNR=6.8						
R17L	**Mt. Peulik Vol**	**74.85**	**25**	P	**P**	**09 22 52.4**	**+1.1**
	baz=231						
L14K	**Kuka Creek**	**74.99**	**20**	P	**P**	**09 22 53.3**	**+1.4**
	baz=224,SNR=14						
KNGR	**Kungurtug, Tuv**	**75.00**	**326**	*i* P	**P**	**09 22 52.6**	**+0.2**
KNGR				pmax	pmax		
	comp=Z,31nm,1.0s						
N15K	**Kwethluk River**	**75.07**	**21**	P	**P**	**09 22 54.4**	**+2.0**
	baz=227						
P16K	**Nushagak River**	**75.10**	**23**	P	**P**	**09 22 53.6**	**+1.0**
	baz=229						
SII	**Sitkinak Islan**	**75.13**	**26**	P	**P**	**09 22 54.1**	**+1.3**
	baz=233						
PALK	**Pallekele**	**75.17**	**279**	LR	LR	09 59 33.1	
	comp=Z,58nm,19.1s,baz=114,slow=39						
PALK	**Pallekele**	**75.17**	**279**	P	**P**	**09 22 54.6**	**+0.6**
PALK				PcP	**PcP**	**09 23 08.7**	**+1.5**
M15K	**Kasigluk River**	**75.22**	**21**	P	**P**	**09 22 54.7**	**+1.5**
	baz=226,SNR=7.0						
Q16K	**King Salmon**	**75.40**	**24**	P	**P**	**09 22 56.1**	**+1.8**
	baz=230						
O16K	**Kokwok River B**	**75.43**	**23**	P	**P**	**09 22 55.6**	**+1.1**
	baz=229						
Q17K	**Contact Creek**	**75.45**	**24**	P	**P**	**09 22 56.3**	**+1.6**
	baz=231						
L15K	**Ungalak Mounta**	**75.64**	**20**	P	**P**	**09 22 57.4**	**+1.8**
	baz=225						
J14K	**Nanvaranak Lak**	**75.74**	**18**	P	**P**	**09 22 58.0**	**+1.9**
	baz=223						
N16K	**Nishlik Lake**	**75.77**	**22**	P	**P**	**09 22 57.5**	**+1.0**
	baz=228						
P17K	**Kvichak River**	**75.82**	**24**	P	**P**	**09 22 57.4**	**+0.7**
	baz=230						
OHAK	**Old Harbor**	**75.92**	**26**	P	**P**	**09 22 58.3**	**+1.0**
	baz=234						
O17K	**Koliganek Bris**	**75.93**	**23**	P	**P**	**09 22 58.0**	**+0.6**
	baz=230						
Q18K	**Katmai Hardscr**	**76.05**	**24**	P	**P**	**09 22 58.5**	**+0.3**
	baz=232						
K15K	**Wolf Creek Mou**	**76.06**	**19**	P	**P**	**09 22 58.8**	**+0.8**
	baz=225						
M16K	**Timber Creek**	**76.07**	**21**	P	**P**	**09 22 59.3**	**+1.2**
	baz=228,SNR=13						
L16K	**Owhat River**	**76.35**	**21**	IAmb	IAmb	09 23 02.1	
	comp=Z,30nm,0.7s						
L16K	**Owhat River**	**76.35**	**21**	P	**P**	**09 23 00.7**	**+1.0**
	baz=227,SNR=8.8						
N17K	**Nushagak Hills**	**76.39**	**22**	P	**P**	**09 23 01.1**	**+1.2**
	baz=229						
P18K	**Big Mountain,**	**76.42**	**24**	P	**P**	**09 23 01.5**	**+1.3**
	baz=232						
ANM	**Nome**	**76.55**	**17**	IAmb	IAmb	09 23 03.5	
	comp=Z,41nm,0.8s						
ANM	**Nome**	**76.55**	**17**	P	**P**	**09 23 02.7**	**+2.0**
	baz=221,SNR=10						
KDAK	**Kodiak Island**	**76.56**	**26**	LR	LR	09 50 23.6	
	comp=Z,371nm,21.7s,baz=239,slow=31						
KDAK	**Kodiak Island**	**76.56**	**26**	P	**P**	**09 23 03.0**	**+2.1**
	baz=234						
TNA	**Tin City**	**76.64**	**15**	IAmb	IAmb	09 23 03.8	
	comp=Z,32nm,0.8s						
TNA	**Tin City**	**76.64**	**15**	P	**P**	**09 23 02.7**	**+1.5**
	baz=218						
O18K	**Koktuh Hills**	**76.72**	**23**	P	**P**	**09 23 03.6**	**+1.8**
	baz=231						
Q19K	**Cape Douglas,**	**76.78**	**25**	P	**P**	**09 23 03.5**	**+1.3**
	baz=233						
M17K	**Holitna River**	**76.87**	**21**	P	**P**	**09 23 04.1**	**+1.5**
	baz=229						
N18K	**Kilae Creek**	**76.98**	**23**	P	**P**	**09 23 04.8**	**+1.6**
	baz=231						
F14K	**Arctic Creek**	**76.99**	**16**	P	**P**	**09 23 04.9**	**+1.7**
	baz=220,SNR=6.7						
L17K	**Donlin**	**77.05**	**21**	P	**P**	**09 23 05.5**	**+1.9**
	baz=228,SNR=7.5						
J16K	**Anvik River**	**77.06**	**19**	P	**P**	**09 23 05.7**	**+2.0**
	baz=226						
Q20K	**Shuyak Island**	**77.12**	**25**	P	**P**	**09 23 05.4**	**+1.3**
	baz=234						
G15K	**Niukluk**	**77.25**	**17**	P	**P**	**09 23 06.3**	**+1.6**
	baz=222						
O19K	**Port Alsworth**	**77.28**	**23**	P	**P**	**09 23 07.1**	**+2.2**
	baz=232						
P19K	**Oil Pt**	**77.39**	**24**	P	**P**	**09 23 07.1**	**+1.5**
	baz=233						
K17K	**Iditarod**	**77.44**	**20**	P	**P**	**09 23 07.3**	**+1.5**
	baz=228,SNR=11						
I17K	**Unalakleet**	**77.45**	**19**	IAmb	IAmb	09 23 09.1	
	comp=Z,40nm,0.9s						
I17K	**Unalakleet**	**77.45**	**19**	P	**P**	**09 23 07.6**	**+1.8**
	baz=226,SNR=13						
H16K	**Elim**	**77.52**	**17**	P	**P**	**09 23 07.6**	**+1.5**
	baz=224,SNR=7.5						
M18K	**Stony River**	**77.52**	**22**	P	**P**	**09 23 07.8**	**+1.6**
	baz=231						
N19K	**Bonanza Creek**	**77.60**	**23**	P	**P**	**09 23 08.2**	**+1.3**
	baz=232						
F15K	**North Star Dit**	**77.62**	**16**	P	**P**	**09 23 08.0**	**+1.2**
	baz=221						
J17K	**VABM Dome**	**77.64**	**19**	P	**P**	**09 23 08.3**	**+1.4**
	baz=227,SNR=20						
L18K	**Granite Mounta**	**77.67**	**21**	P	**P**	**09 23 08.6**	**+1.5**
	baz=230						
O20K	**Slope Mountain**	**77.89**	**24**	P	**P**	**09 23 09.4**	**+1.0**
	baz=234						
G16K	**Koyuk River**	**78.03**	**17**	P	**P**	**09 23 10.3**	**+1.3**
	baz=224,SNR=18						
WMQ	**Urumqi**	**78.17**	**317**	*e*P	**P**	**09 23 11.6**	**+1.2**
WMQ				sP	sP	09 23 42.7	+5.2
WMQ				pmax	pmax		
	comp=Z,17nm,1.5s						
WMQ				LR	LR		
	comp=Z,160nm,23.9s						
L19K	**White Mountain**	**78.31**	**22**	IAmb	IAmb	09 23 13.8	
	comp=Z,46nm,0.8s						
L19K	**White Mountain**	**78.31**	**22**	P	**P**	**09 23 11.8**	**+1.1**
	baz=231,SNR=14						
H17K	**Granite Mounta**	**78.43**	**18**	P	**P**	**09 23 12.4**	**+1.2**
	baz=226,SNR=6.9						
BRSE	**Bradley Lake S**	**78.47**	**25**	P	**P**	**09 23 12.6**	**+1.0**
	baz=236						
J18K	**Innoko River**	**78.48**	**20**	P	**P**	**09 23 12.8**	**+1.2**
	baz=229						
G17K	**Kiwalik Mounta**	**78.61**	**17**	P	**P**	**09 23 13.7**	**+1.5**
	baz=225						
M20K	**Styx River**	**78.77**	**22**	P	**P**	**09 23 14.6**	**+1.3**
	baz=233						
HYB	**Hyderabad**	**78.88**	**289**	*e*P	**P**	**09 23 14.5**	**-0.3**
HYB				*e*PcP	**PcP**	**09 23 23.0**	**-0.3**
HYB				*e*pP	**pP**	**09 23 33.9**	**-0.2**
HYB				*e*PP	**PP**	**09 26 13.6**	**-0.7**
HYB				*e*S	**S**	**09 33 07.5**	**-0.4**
CAPN	**Captain Cook N**	**78.89**	**24**	P	**P**	**09 23 15.2**	**+1.4**
	baz=235						
H18K	**Honhosa River**	**79.06**	**18**	P	**P**	**09 23 16.1**	**+1.3**
	baz=228						
F17K	**Baldwin Pennin**	**79.10**	**16**	P	**P**	**09 23 16.6**	**+1.8**
	baz=225						
SLKM	**Skilak Lake**	**79.12**	**24**	IAmb	IAmb	09 23 38.3	
	comp=Z,37nm,0.8s						
J19K	**Poorman**	**79.19**	**20**	P	**P**	**09 23 17.0**	**+1.6**
	baz=230						
SEW	**Seward**	**79.21**	**25**	P	**P**	**09 23 17.1**	**+1.5**
	baz=237						
GCSA	**Galena City Sc**	**79.26**	**19**	P	**P**	**09 23 17.2**	**+1.5**
	baz=229,SNR=14						
O22K	**Cooper Landing**	**79.31**	**25**	P	**P**	**09 23 16.9**	**+0.8**
	baz=236						
K20K	**Telida**	**79.33**	**21**	P	**P**	**09 23 17.3**	**+1.1**
	baz=232						
C16K	**Lisburne Hills**	**79.39**	**14**	P	**P**	**09 23 17.6**	**+1.2**
	baz=220						
E17K	**Hotham Inlet**	**79.40**	**16**	P	**P**	**09 23 18.4**	**+1.8**

	baz=224,SNR=34						
SKT	Skwentna	79.44	23	IAmb	IAmb	09 23 41.9	
	comp=Z,70nm,1.9s						
SKT	Skwentna	79.44	23	P	P	09 23 17.4	+0.6
	baz=234						
SUA	Susitna One	79.45	23	IAmb	IAmb	09 23 20.6	
	comp=Z,34nm,0.8s						
SUA	Susitna One	79.45	23	P	P	09 23 17.8	+0.8
	baz=235						
G18K	Tagagawik	79.48	18	P	P	09 23 17.8	+0.8
	baz=227						
D17K	Noatak River	79.52	15	P	P	09 23 18.3	+1.2
	baz=223,SNR=17						
TIXI	Tiksi	79.59	352	LR	LR	09 54 59.2	
	comp=Z,90nm,21.9s,baz=196,slow=33						
TIXI	Tiksi	79.59	352	P	P	09 23 17.7	+0.3
TIXI	Tiksi	79.59	352	*ce*P	P	09 23 18.4	+1.0
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
RC01	Rabbit Creek A	79.64	24	IAmb	IAmb	09 23 19.3	
	comp=Z,77nm,1.2s						
RC01	Rabbit Creek A	79.64	24	P	P	09 23 18.5	+0.6
	baz=236,SNR=5.4						
F18K	Selawik	79.67	17	P	P	09 23 19.6	+1.7
	baz=226,SNR=8.0						
PPLA	Purkeypile	79.73	22	P	P	09 23 19.1	+0.5
	baz=234						
J20K	Nowinta River	79.81	20	IAmb	IAmb	09 23 21.5	
	comp=Z,28nm,0.8s						
J20K	Nowinta River	79.81	20	P	P	09 23 19.8	+1.0
	baz=232,SNR=13						
RDOG	Red Dog Mine	79.83	15	IAmb	IAmb	09 23 21.3	
	comp=Z,49nm,0.8s						
RDOG	Red Dog Mine	79.83	15	P	P	09 23 19.9	+1.0
	baz=223,SNR=32						
M22K	Willow	79.86	23	P	P	09 23 20.3	+1.3
	baz=236						
H19K	Roundabout Mou	79.91	19	P	P	09 23 20.4	+1.1
	baz=229						
E18K	Tukpahlearik C	79.98	16	P	P	09 23 21.2	+1.6
	baz=225,SNR=13						
P23K	Montague Islan	80.02	26	P	P	09 23 21.2	+1.2
	baz=239						
C17K	DeLong Mountai	80.07	15	P	P	09 23 21.1	+0.9
	baz=222,SNR=12						
I20K	Naaghedeneel	80.08	20	P	P	09 23 21.1	+0.9
	baz=231						
PWL	Port Wells	80.09	25	P	P	09 23 21.3	+1.0
	baz=238						
G19K	Purcell Mounta	80.12	18	P	P	09 23 21.9	+1.4
	baz=229						
PMR	Palmer	80.16	24	P	P	09 23 21.5	+0.9
PMR				IAmb	IAmb	09 23 24.8	
	comp=Z,32nm,0.8s						
PMR	Palmer	80.16	24	P	P	09 23 21.5	+0.9
PMR				pmax	pmax		
	comp=Z,32nm,0.8s						
PMR	Palmer	80.16	24	P	P	09 23 21.6	+0.9
	baz=237						
CUT	Chulitna	80.17	23	P	P	09 23 21.6	+0.8
	baz=236						
Q23K	Middleton Isla	80.19	26	P	P	09 23 21.7	+0.8
	baz=240						
CHUM	Lake Minchumin	80.27	21	P	P	09 23 22.3	+1.1
	baz=234,SNR=10						
KNK	Knik Glacier	80.33	24	IAmb	IAmb	09 23 27.3	
	comp=Z,31nm,1.0s						
KNK	Knik Glacier	80.33	24	P	P	09 23 22.4	+0.7
	baz=237						
GHO	Glory Hole Cre	80.34	24	IAmb	IAmb	09 23 25.7	
	comp=Z,31nm,0.8s						
F19K	Shaleruckik Mo	80.38	17	P	P	09 23 22.6	+0.8
	baz=228						
H20K	Anotleneega Mo	80.39	19	P	P	09 23 22.6	+0.7
	baz=231,SNR=14						
DGZ	Jazzator, Alta	80.45	323	*i* P	P	09 23 22.9	+0.1
DGZ				pmax	pmax		
	comp=Z,25nm,0.9s						
KTH	Kantishna Hill	80.58	22	IAmb	IAmb	09 23 52.6	
	comp=Z,37nm,1.3s						
SML	Sawmill	80.60	24	IAmb	IAmb	09 23 47.2	
	comp=Z,54nm,0.9s						
SML	Sawmill	80.60	24	P	P	09 23 23.9	+0.8
	baz=238,SNR=8.9						
GLI	Glacier Island	80.61	25	P	P	09 23 23.9	+0.7
	baz=239						
C18K	Utukok River	80.70	15	P	P	09 23 24.3	+0.7
	baz=224						
TRF	Thorofare Moun	80.75	22	P	P	09 23 24.7	+0.6
	baz=236						
M23K	Glacier View	80.83	24	P	P	09 23 25.2	+0.8
	baz=238						
BPAW	Bear Paw Mtn.	80.87	21	P	P	09 23 24.7	+0.2
	baz=235						
E19K	Redstone River	80.95	17	P	P	09 23 25.5	+0.6
	baz=228						
EYAK	Cordova Ski Ar	81.01	26	P	P	09 23 25.7	+0.4
	baz=240						
SCM	Sheep Creek Mo	81.02	24	IAmb	IAmb	09 23 48.8	
	comp=Z,38nm,0.8s						
SCM	Sheep Creek Mo	81.02	24	P	P	09 23 26.2	+0.7
	baz=238						
B18K	Kokolik River	81.06	14	P	P	09 23 26.4	+1.0
	baz=224,SNR=6.1						
WAT1	Susitna Watana	81.07	23	P	P	09 23 26.1	+0.5
	baz=237						
F20K	Avaraart Lake	81.13	18	P	P	09 23 26.6	+0.9
	baz=230						
I21K	Tanana	81.16	20	IAmb	IAmb	09 23 56.7	
	comp=Z,27nm,0.9s						
I21K	Tanana	81.16	20	P	P	09 23 27.4	+1.4
	baz=234,SNR=9.8						
H21K	Melozitna Rive	81.17	19	P	P	09 23 27.4	+1.4
	baz=233,SNR=9.0						
WAT6	Susitna Watana	81.25	23	P	P	09 23 27.6	+0.9
	baz=238						
ZSN	Zaisan	81.27	320	*e*P	P	09 23 27.4	+0.3
ZSN	Zaisan	81.27	320	*e*P	P	09 23 27.3	+0.3
KAIM	Kayak Island	81.29	26	P	P	09 23 27.7	+0.9
	baz=241						
D19K	Kuna River	81.40	16	P	P	09 23 28.3	+1.0
	baz=227						
MCK	McKinley	81.42	22	IAmb	IAmb	09 23 30.5	
	comp=Z,48nm,0.8s						
MCK	McKinley	81.42	22	P	P	09 23 27.9	+0.5
	baz=237,SNR=16						
KLU	Klutina	81.42	25	IAmb	IAmb	09 23 52.6	
	comp=Z,50nm,1.1s						
KLU	Klutina	81.42	25	P	P	09 23 28.5	+0.9
	baz=240,SNR=8.8						
C19K	Lookout Ridge	81.44	15	P	P	09 23 28.4	+0.9
	baz=226						
G21K	Allakaket	81.47	19	P	P	09 23 28.3	+0.7
	baz=232						
MLY	Manley	81.50	20	P	P	09 23 28.8	+0.9
	baz=235,SNR=6.2						
M24K	Tolsona, Glenn	81.62	24	IAmb	IAmb	09 23 31.3	
	comp=Z,78nm,1.2s						
M24K	Tolsona, Glenn	81.62	24	P	P	09 23 29.6	+1.0
	baz=239						
DHY	Denali Highway	81.65	23	P	P	09 23 29.9	+1.1
	baz=238						
BMRM	Bremner River	81.71	25	IAmb	IAmb	09 23 33.4	
	comp=Z,26nm,1.0s						
BMRM	Bremner River	81.71	25	P	P	09 23 30.0	+0.9
	baz=241						
E20K	Nigu River	81.78	16	P	P	09 23 30.4	+1.1
	baz=229						
H22K	Ishtalitna Cre	81.79	20	P	P	09 23 30.5	+1.2
	baz=234						
NEA2	Nenana	81.84	21	P	P	09 23 30.3	+0.6
	baz=236						
A19K	Wainwright	81.85	14	P	P	09 23 30.6	+1.1
	baz=224						
BGLC	Bering Glacier	81.88	26	P	P	09 23 30.6	+0.7
	baz=242						
F21K	Alatna River	81.92	18	P	P	09 23 30.9	+0.9
	baz=232						
D20K	Etivluk River	81.96	16	P	P	09 23 30.9	+0.7
	baz=229						
N25K	Chitina, Valde	82.02	25	IAmb	IAmb	09 23 34.1	
	comp=Z,52nm,1.6s						
N25K	Chitina, Valde	82.02	25	P	P	09 23 31.2	+0.4
	baz=241						
I23K	Minto, Yukon-K	82.05	21	P	P	09 23 31.4	+0.8
	baz=236						
HARP	HAARP	82.18	24	P	P	09 23 32.4	+0.9
	baz=240						
CRQE	Cirque	82.26	26	P	P	09 23 32.8	+0.7
	baz=242						
GLB	Gilahina Butte	82.28	25	IAmb	IAmb	09 23 36.3	
	comp=Z,27nm,0.9s						
VRDI	Verde Repeater	82.33	25	IAmb	IAmb	09 23 34.8	
	comp=Z,64nm,1.6s						
PAX	Paxson	82.34	23	P	P	09 23 33.3	+0.9
	baz=240						
G22K	Bettles	82.35	19	P	P	09 23 33.3	+1.1
	baz=234,SNR=17						
H23K	Yukon River	82.36	20	P	P	09 23 33.7	+1.3
	baz=236						
COLA	College	82.43	21	P	P	09 23 32.8	+0.1
COLA				IAmb	IAmb	09 23 33.4	
	comp=Z,24nm,0.9s						
COLA	College	82.43	21	P	P	09 23 32.8	+0.1
COLA				pmax	pmax		
	comp=Z,24nm,0.9s						
COLA	College	82.43	21	P	P	09 23 33.3	+0.6
	baz=238						
COLA	College	82.43	21	P	P	09 23 32.4	-0.2
MESA	MESA	82.50	27	P	P	09 23 34.5	+1.0
	baz=244						
HDA	Harding Lake	82.52	22	IAmb	IAmb	09 23 34.2	
	comp=Z,79nm,1.9s						
HDA	Harding Lake	82.52	22	P	P	09 23 34.2	+1.0
	baz=238,SNR=8.2						
E21K	Killik River	82.53	17	P	P	09 23 34.2	+1.0
	baz=231,SNR=5.7						
MCARA	McCarthy VSAT	82.58	25	IAmb	IAmb	09 23 58.1	
	comp=Z,36nm,1.0s						
MCARA	McCarthy VSAT	82.58	25	P	P	09 23 35.0	+1.4
	baz=242						
K24K	Donnelly Dome	82.64	23	P	P	09 23 35.1	+1.2
	baz=240						
B20K	Meade River	82.68	15	P	P	09 23 34.6	+0.8
	baz=228,SNR=18						
G23K	Bananza Creek	82.71	19	P	P	09 23 35.0	+0.8
	baz=235						
POKR	Poker Plat Res	82.72	21	P	P	09 23 34.8	+0.6
	baz=238						
ILAR	Eielson Array	82.73	22	P	P	09 23 33.7	-0.6
	comp=Z,11nm,0.8s,baz=253,slow=5.1,SNR=66						
ILAR				LR	LR	09 55 40.6	
	comp=Z,596nm,21.6s,baz=240,slow=32						
	comp=Z,11nm,0.8s						
ILAR	Eielson Array	82.73	22	P	P	09 23 34.1	-0.2
ILAR	Eielson Array	82.73	22	P	P	09 23 34.1	-0.2
MK31	Makanchi Array	82.74	319	P	P	09 23 34.7	0.0
MK31				IAmb	IAmb	09 23 36.2	
	comp=Z,24nm,0.9s						
MK31	Makanchi Array	82.74	319	*ce*P	P	09 23 34.4	-0.3
MKAR	Makanchi Array	82.74	319	P	P	09 23 34.4	-0.4
	comp=Z,22nm,0.7s,baz=99,slow=4.7,SNR=115						
MKAR				LR	LR	10 00 47.1	
	comp=Z,118nm,19.9s,baz=138,slow=36						
	comp=Z,22nm,0.7s						
C21K	Knifeblade Rid	82.75	16	P	P	09 23 35.0	+0.7
	baz=231,SNR=12						
H24K	Noodor Dome	82.94	20	P	P	09 23 36.3	+0.9
	baz=237						
COLD	Coldfoot	82.95	19	P	P	09 23 36.8	+1.4
	baz=235,SNR=11						
MAKZ	Makanchi	82.95	319	P	P	09 23 35.5	-0.3
MAKZ				IAmb	IAmb	09 23 37.2	
	comp=Z,38nm,0.9s						
MAKZ	Makanchi	82.95	319	P	P	09 23 35.5	-0.3
MAKZ				pmax	pmax		
	comp=Z,39nm,0.9s						
MAKZ	Makanchi	82.95	319	P	P	09 23 35.6	-0.3
MAKZ				pP	pP	09 23 54.8	-0.5
RIDG	Independent Ri	82.97	23	P	P	09 23 36.3	+0.7
	baz=240						
E22K	Anaktuvuk Pass	82.98	18	P	P	09 23 36.4	+0.8
	baz=234,SNR=16						
TABL	Table Mountain	82.98	27	IAmb	IAmb	09 23 40.2	
	comp=Z,29nm,0.9s						
BARN	Barnard Glacie	83.02	26	IAmb	IAmb	09 24 00.1	
	comp=Z,26nm,1.0s						
M26K	Nabesna, AK	83.07	25	P	P	09 23 37.3	+1.1
	baz=242						
B21K	Ikpikpuk River	83.10	16	P	P	09 23 37.6	+1.6
	baz=231						
CTG	Chitna Glacier	83.12	26	P	P	09 23 37.8	+1.2
	baz=244,SNR=5.2						
D22K	Ayikyak River	83.17	17	P	P	09 23 37.7	+1.2
	baz=233						
J25K	Salcha River,	83.21	22	P	P	09 23 37.8	+0.9
	baz=240						
LOGN	Logan Glacier	83.21	26	IAmb	IAmb	09 23 43.4	
	comp=Z,30nm,1.0s						
L26K	Log Cabin Wild	83.22	24	P	P	09 23 37.8	+0.9
	baz=242,SNR=10						
DOT	Dot Lake	83.23	23	IAmb	IAmb	09 24 00.5	
	comp=Z,26nm,0.9s						
PINM	Pinnacle	83.23	27	P	P	09 23 38.4	+1.4
	baz=245						
SCRK	Sand Creek	83.42	23	P	P	09 23 39.0	+1.0
	baz=241,SNR=7.5						
ZAA0	Zalesovo Array	83.47	326	IAmb	IAmb	09 23 38.6	
	comp=Z,28nm,0.9s						
ZALV	Zalesovo Beam	83.47	326	P	P	09 23 37.1	-1.2
	comp=Z,26nm,0.8s,baz=104,slow=6.3,SNR=83						
ZALV				LR	LR	10 02 28.2	
	comp=Z,68nm,18.9s,baz=102,slow=37						
	comp=Z,26nm,0.8s						
ZALV	Zalesovo Beam	83.47	326	P	P	09 23 36.8	-1.4
M27K	Edge Creek, AK	83.51	25	P	P	09 23 39.9	+1.3
	baz=243						
O28M	Mount Upton	83.55	27	P	P	09 23 40.0	+1.1
	baz=245						
G24K	Hadweenzic Riv	83.55	20	P	P	09 23 39.7	+1.3
	baz=238						
E23K	Chandalar	83.61	18	P	P	09 23 40.1	+1.3
	baz=236						
SHLS	Shalkode	83.68	315	*e*P	P	09 23 38.4	-1.4
SHLS	Shalkode	83.68	315	*e*P	P	09 23 38.4	-1.4
A21K	Barrow	83.69	14	P	P	09 23 40.3	+1.3
	baz=229						
QSPA	South Pole Qui	83.73	180	P	P	09 23 40.0	+0.3
	comp=Z,58nm,0.8s,baz=348,slow=1.0,SNR=76						
QSPA				LR	LR	09 54 16.0	
	comp=Z,153nm,21.1s,baz=10,slow=31						
	comp=Z,58nm,0.8s						
QSPA	South Pole Qui	83.73	180	P	P	09 23 40.0	+0.3
D23K	Nanushuk River	83.81	17	P	P	09 23 41.6	+1.9
	baz=234						
J26L	Joseph Creek	83.83	23	P	P	09 23 41.2	+1.1
	baz=242,SNR=7.6						
L27K	Beaver Creek,	83.85	24	P	P	09 23 41.6	+1.5
	baz=243,SNR=8.7						
F24K	Squaw Lake	83.85	19	P	P	09 23 41.1	+1.1
	baz=237,SNR=35						
YUK3	Moose Creek	83.86	26	P	P	09 23 41.3	+0.9
	baz=245						
B22K	Teshekpuk Lake	83.87	16	P	P	09 23 41.5	+1.5
	baz=232						
BCAR	Beaver Creek A	83.87	24	P	P	09 23 41.6	+1.4
A22K	Sinclair Lake	83.89	15	P	P	09 23 41.0	+0.9
	baz=230						
H25L	Birch Creek	83.89	20	P	P	09 23 41.3	+1.2
	baz=239						
TOLK	Toolik Lake Re	83.95	18	IAmb	IAmb	09 23 43.1	
	comp=Z,24nm,0.8s						
TOLK	Toolik Lake Re	83.95	18	P	P	09 23 41.7	+1.2
	baz=236,SNR=22						
YUK8	Steele Glacier	83.95	26	P	P	09 23 42.1	+1.1
	baz=245						
BVCY	Beaver Creek	83.96	25	P	P	09 23 41.7	+1.0
	baz=244,SNR=7.0						
E24K	Your Creek	83.97	18	P	P	09 23 41.6	+1.0
	baz=237,SNR=10.0						
UZB	Uzynbulak	83.99	314	*e*P	P	09 23 41.6	+0.1
	comp=Z,18nm,1.6s						
UZB	Uzynbulak	83.99	314	*e*P	P	09 23 41.5	+0.1
UZB				pmax	pmax		
	comp=Z,18nm,1.6s						
G25K	Bearman Lake	84.05	20	P	P	09 23 42.3	+1.4
	baz=239						
O29M	Mount Kennedy	84.08	27	P	P	09 23 42.7	+1.3
	baz=246						
K27K	Chicken	84.19	23	P	P	09 23 43.2	+1.4
	baz=243,SNR=9.4						
P29M	Windy Craggy	84.20	28	P	P	09 23 43.8	+1.8
	baz=247						
PRZ	Przheval'sk	84.27	314	IAmb	IAmb	09 23 45.5	
	comp=Z,41nm,1.0s						
C23K	Itkillik River	84.33	16	P	P	09 23 43.9	+1.6
	baz=234						
I26K	Coal Creek Min	84.37	22	P	P	09 23 43.7	+1.1
	baz=242						
SATY	Saty	84.41	314	*e*P	P	09 23 43.7	+0.1
	comp=Z,19nm,2.0s						
SATY	Saty	84.41	314	*e*P	P	09 23 43.6	+0.1
SATY				pmax	pmax		
	comp=Z,19nm,2.0s						
YUK6	Outpost Mounta	84.43	27	P	P	09 23 44.7	+1.4
	baz=247						
SIT	Sitka	84.44	31	P	P	09 23 44.5	+1.4
	baz=250						
D24K	Happy Valley	84.46	17	IAmb	IAmb	09 23 45.5	
	comp=Z,28nm,0.8s						
D24K	Happy Valley	84.46	17	P	P	09 23 44.2	+1.2
	baz=236,SNR=18						
YUK4	Talbot Arm	84.47	26	P	P	09 23 44.6	+1.1
	baz=246						
F25K	Christian Rive	84.63	19	P	P	09 23 45.5	+1.5
	baz=239						
P30M	Million Dollar	84.75	28	P	P	09 23 46.2	+1.4
	baz=248						
HYT	Haines Junctio	84.77	27	IAmb	IAmb	09 24 09.3	
	comp=Z,30nm,1.0s						
HYT	Haines Junctio	84.77	27	P	P	09 23 46.5	+1.6
	baz=247,SNR=12						
PLBC	Pleasant Camp	84.79	29	P	P	09 23 45.5	+0.6
	baz=248						
C24K	Franklin Bluff	84.81	17	IAmb	IAmb	09 23 47.2	
	comp=Z,43nm,0.9s						
C24K	Franklin Bluff	84.81	17	P	P	09 23 46.3	+1.5
	baz=236,SNR=24						
TDK	Taldyqorghan	84.87	316	*e*P	P	09 23 46.0	+0.4
TDK	Taldyqorghan	84.87	316	*e*P	P	09 23 46.0	+0.4
E25K	Arctic Village	84.92	19	P	P	09 23 46.6	+1.2
	baz=239,SNR=10.0						
G26K	Porcupine Rive	84.93	20	P	P	09 23 46.9	+1.5
	baz=241						
S32K	Killisnoo	84.97	31	P	P	09 23 47.1	+1.4
	baz=250						
M29M	Somme Creek	84.99	25	P	P	09 23 47.2	+1.2
	baz=246						
I27K	Kandik River	85.08	22	P	P	09 23 47.7	+1.4
	baz=243,SNR=12						
F26K	Sheenjek River	85.17	20	P	P	09 23 48.1	+1.4
	baz=241						
N30M	Aishikik Lake	85.20	27	P	P	09 23 48.5	+1.6
	baz=248						
HG4B	Hotspring	85.21	36	IAmb	IAmb	09 23 49.8	
	comp=Z,28nm,0.8s						
R32K	Eaglecrest	85.27	30	P	P	09 23 48.9	+1.6
	baz=250						
DAWY	Dawson	85.27	24	P	P	09 23 48.6	+1.4
	baz=246,SNR=7.9						
U33K	Whale Pass	85.28	32	P	P	09 23 48.8	+1.5
	baz=252						
SKAG	Skagway	85.28	29	P	P	09 23 48.5	+1.2
	baz=249						
D25K	Kavik River	85.29	18	P	P	09 23 48.5	+1.3
	baz=239						
H27K	Steamboat Moun	85.39	21	P	P	09 23 49.3	+1.4
	baz=243,SNR=15						
L29M	L29M	85.39	25	P	P	09 23 49.5	+1.6
	baz=247						
O30N	Mendenhall	85.39	27	P	P	09 23 49.3	+1.3
	baz=249						
MDOK	Medeo	85.40	314	*e*P	P	09 23 48.6	+0.1
MDOK	Medeo	85.40	314	*e*P	P	09 23 48.6	+0.1
KSH	Kashi	85.41	310	P	P	09 23 50.3	+1.7
KSH				pP	sP	09 24 14.1	-1.8
KSH				pmax	pmax		
	comp=Z,35nm,0.8s						
TNSS	Tian-Shan	85.44	314	*e*P	P	09 23 48.9	-0.1
TNSS	Tian-Shan	85.44	314	*e*P	P	09 23 48.9	-0.1
T33K	Petersburg	85.59	32	P	P	09 23 50.4	+1.6
	baz=252						
G27K	Doyon Strip	85.61	21	P	P	09 23 50.5	+1.7
	baz=243,SNR=12						
I28M	Miner Creek	85.64	22	P	P	09 23 50.7	+1.6
	baz=245						
M30M	Minto, Yukon	85.75	26	P	P	09 23 51.2	+1.6
	baz=248,SNR=11						
ULHL	Ulahol	85.78	313	P	P	09 23 51.6	+1.2
	SNR=6.1						
WRAK	Wrangell Islan	85.78	32	P	P	09 23 51.6	+1.8
	baz=252						
N31M	Braeburn, Yuko	85.80	27	IAmb	IAmb	09 23 55.3	
	comp=Z,31nm,0.9s						
N31M	Braeburn, Yuko	85.80	27	P	P	09 23 51.7	+1.8
	baz=249,SNR=10						
V35K	Ketchikan	85.85	33	IAmb	IAmb	09 23 53.2	
	comp=Z,32nm,0.9s						
V35K	Ketchikan	85.85	33	P	P	09 23 51.6	+1.4
	baz=253,SNR=5.8						
J29N	Klondike Camp	85.89	24	IAmb	IAmb	09 23 56.4	
	comp=Z,22nm,0.7s						
J29N	Klondike Camp	85.89	24	P	P	09 23 52.1	+1.7
	baz=246,SNR=16						
WHY	Whitehorse	85.91	28	P	P	09 23 51.8	+1.2
	baz=250						
K29M	Barlow Dome	85.94	24	P	P	09 23 52.5	+1.8
	baz=247						
C26K	Camden Bay	86.04	17	P	P	09 23 52.7	+1.8
	baz=240,SNR=34						
BOOM	Boomskoye usch	86.05	313	IAmb	IAmb	09 23 56.4	
	comp=Z,31nm,0.8s						
P32M	Atlin	86.10	29	P	P	09 23 53.2	+1.7
	baz=251						
KURK	Kurchatov	86.14	322	P	P	09 23 50.9	-0.8
KURK	Kurchatov	86.14	322	*ce*P	P	09 23 51.0	-0.8
KURK				pmax	pmax		
	comp=Z,27nm,1.3s						
KURK	Kurchatov	86.14	322	P	P	09 23 50.7	-1.1
KURBB	Kurchatov Arra	86.18	322	P	P	09 23 51.2	-0.7
	comp=Z,6.0nm,0.6s,baz=103,slow=3.9,SNR=75						
KURBB				LR	LR	10 05 25.3	
	comp=Z,49nm,18.0s,baz=177,slow=38						
	comp=Z,6.0nm,0.6s						
I29M	Ogilvie Camp,	86.22	23	P	P	09 23 53.1	+1.1
	baz=246,SNR=7.9						
C27K	Jago River	86.25	18	P	P	09 23 53.4	+1.4
	baz=241						
E27K	Coleen River	86.25	20	P	P	09 23 53.7	+1.6
	baz=243,SNR=43						
TKM2	Tokmak 2	86.38	314	P	P	09 23 52.7	-0.7
	SNR=20						
MAYO	Mayo, Yukon	86.51	25	P	P	09 23 54.7	+1.4
	baz=249,SNR=10						
H29M	Whitestone	86.55	22	P	P	09 23 55.5	+2.0
	baz=246						
F28M	Old Crow	86.59	20	IAmb	IAmb	09 23 57.0	
	comp=Z,25nm,0.9s						
F28M	Old Crow	86.59	20	P	P	09 23 55.0	+1.4
	baz=245,SNR=25						
Q32M	Nakina River	86.60	30	P	P	09 23 56.0	+1.8
	baz=252						
M31M	Drury Creek, Y	86.67	26	P	P	09 23 55.8	+1.7
	baz=250,SNR=9.8						
J30M	Hart River	86.70	24	P	P	09 23 56.0	+1.6
	baz=248						
P33M	Teslin, Yukon	86.73	28	P	P	09 23 56.1	+1.5
	baz=252						
S34M	Telegraph Cree	86.86	31	IAmb	IAmb	09 23 58.2	
	comp=Z,32nm,0.9s						
S34M	Telegraph Cree	86.86	31	P	P	09 23 56.6	+1.5
	baz=253,SNR=12						
N32M	Quiet Lake	86.91	28	IAmb	IAmb	09 23 57.9	
	comp=Z,31nm,1.0s						
N32M	Quiet Lake	86.91	28	P	P	09 23 56.5	+1.1
	baz=251,SNR=10						
I30M	Mount Dempster	86.92	23	P	P	09 23 56.6	+1.1
	baz=248						
D27M	Malcolm River	86.94	19	P	P	09 23 57.0	+1.6
	baz=244						
G29M	Pine Creek	86.95	21	P	P	09 23 57.0	+1.5
	baz=247						
CHMS	Chumysh	87.01	314	P	P	09 23 56.6	+0.3
	SNR=7.8						
BBB	Bella Bella	87.01	37	LR	LR	09 55 10.7	
	comp=Z,290nm,21.9s,baz=246,slow=30						
UCH	Uchtor	87.03	313	P	P	09 23 57.4	+0.5
	SNR=8.7						
T35M	Bob Quinn	87.06	32	IAmb	IAmb	09 23 58.6	
	comp=Z,17nm,0.9s						
T35M	Bob Quinn	87.06	32	P	P	09 23 57.6	+1.4
	baz=254,SNR=5.7						
AAK	Ala-Archa	87.12	313	P	P	09 23 56.7	-0.3
	SNR=11						

AAK	**Ala-Archa**	**87.12**	**313**	LR	LR	10 03 05.5	
	comp=Z,119nm,21.8s,baz=80,slow=36						
AAK	**Ala-Archa**	**87.12**	**313**	P	**P**	**09 23 56.7**	**-0.3**
AAK	**Ala-Archa**	**87.12**	**313**	*ce*P	**P**	**09 23 57.6**	**+0.6**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AAK	**Ala-Archa**	**87.12**	**313**	P	**P**	**09 23 56.7**	**-0.3**
E28M	**Babbage River**	**87.12**	**20**	P	**P**	**09 23 57.8**	**+1.6**
	baz=245						
KMPM	**Mount Pierce**	**87.22**	**49**	IAmb	IAmb	09 25 34.1	
	comp=Z,30nm,1.2s						
EPYK	**Eagle Plains**	**87.22**	**22**	P	**P**	**09 23 58.0**	**+1.3**
	baz=248,SNR=30						
USP	**Ospenovka**	**87.24**	**314**	P	**P**	**09 23 58.0**	**+0.6**
	SNR=8.9						
R33M	**Jennings River**	**87.37**	**30**	P	**P**	**09 23 59.0**	**+1.2**
	baz=253,SNR=6.1						
DLBC	**Dease Lake**	**87.57**	**31**	LR	LR	09 56 10.3	
	comp=Z,270nm,21.8s,baz=268,slow=31						
DLBC	**Dease Lake**	**87.57**	**31**	P	**P**	**09 23 59.8**	**+1.1**
	baz=254,SNR=7.0						
E29M	**Blow River**	**87.59**	**20**	P	**P**	**09 23 59.3**	**+0.9**
	baz=247						
G30M	**tAoh Zraii Nji**	**87.63**	**22**	P	**P**	**09 23 59.3**	**+0.5**
	baz=248						
EKS2	**Erkin-Say**	**87.65**	**313**	P	**P**	**09 24 00.4**	**+0.9**
	SNR=8.2						
D28M	**Stokes Point**	**87.69**	**19**	P	**P**	**09 23 59.7**	**+0.8**
	baz=246						
H31M	**Peel River**	**87.92**	**23**	P	**P**	**09 24 01.0**	**+0.9**
	baz=250,SNR=10						
K02D	**Willamette Mer**	**87.97**	**47**	IAmb	IAmb	09 24 04.3	
	comp=Z,19nm,1.0s						
NRIK	**Noril'sk**	**87.97**	**341**	P	**P**	**09 23 59.4**	**-0.8**
	comp=Z,44nm,0.9s,baz=109,slow=4.6,SNR=73						
NRIK				LR	LR	10 03 13.4	
	comp=Z,112nm,20.9s,baz=110,slow=36						
	comp=Z,44nm,0.9s						
NRIK	**Noril'sk**	**87.97**	**341**	*i* P	**P**	**09 23 59.9**	**-0.4**
NRIK				pmax	pmax		
	comp=Z,37nm,0.8s						
F30M	**Barrier River**	**88.02**	**21**	IAmb	IAmb	09 24 02.6	
	comp=Z,42nm,1.1s						
F30M	**Barrier River**	**88.02**	**21**	P	**P**	**09 24 01.5**	**+0.9**
	baz=249,SNR=22						
O02D	**Mt. Diablo Mer**	**88.18**	**49**	IAmb	IAmb	09 24 06.0	
	comp=Z,17nm,0.8s						
CBB	**Campbell River**	**88.22**	**39**	IAmb	IAmb	09 24 04.4	
	comp=Z,25nm,0.8s						
MNRC	**McLaughlin Min**	**88.23**	**51**	IAmb	IAmb	09 24 07.5	
	comp=Z,20nm,0.9s						
G31M	**Satah River**	**88.33**	**22**	IAmb	IAmb	09 24 04.0	
	comp=Z,29nm,0.9s						
G31M	**Satah River**	**88.33**	**22**	P	**P**	**09 24 03.4**	**+1.4**
	baz=250,SNR=18						
YBH	**Yreka Blue Hor**	**88.50**	**48**	LR	LR	09 57 42.7	
	comp=Z,45nm,20.2s,baz=287,slow=32						
MHC	**Mount Hamilton**	**88.61**	**52**	IAmb	IAmb	09 24 08.2	
	comp=Z,59nm,1.9s						
WTLY	**Watson Lake, Y**	**88.63**	**29**	P	**P**	**09 24 04.4**	**+0.8**
	baz=255,SNR=7.8						
NLWA	**Neilton Lookou**	**88.68**	**42**	IAmb	IAmb	09 24 07.0	
	comp=Z,32nm,1.5s						
F31M	**Tsiigehtchic**	**88.70**	**21**	IAmb	IAmb	09 24 05.4	
	comp=Z,19nm,1.3s						
F31M	**Tsiigehtchic**	**88.70**	**21**	P	**P**	**09 24 04.3**	**+0.6**
	baz=250,SNR=6.3						
BBOR	**Butler Butte**	**88.71**	**47**	IAmb	IAmb	09 24 48.6	
	comp=Z,26nm,1.9s						
CLRS	**Cowichan Lake**	**88.77**	**41**	IAmb	IAmb	09 24 08.4	
	comp=Z,13nm,0.9s						
SUTB	**Sutter Butte**	**88.79**	**51**	IAmb	IAmb	09 24 07.7	
	comp=Z,18nm,0.9s						
M03C	**McCloud**	**88.86**	**48**	IAmb	IAmb	09 24 08.6	
	comp=Z,26nm,0.8s						
L04D	**Klamath Falls**	**88.88**	**47**	IAmb	IAmb	09 24 21.9	
	comp=Z,64nm,2.0s						
O03E	**Paynes Creek**	**88.94**	**49**	IAmb	IAmb	09 24 10.3	
	comp=Z,14nm,0.9s						
H04D	**Lebanon**	**88.95**	**45**	IAmb	IAmb	09 24 08.4	
	comp=Z,22nm,1.0s						
B04A	**Port Angeles**	**89.04**	**42**	IAmb	IAmb	09 24 11.5	
	comp=Z,17nm,0.8s						
INK	**Inuvik**	**89.07**	**21**	LR	LR	10 01 13.1	
	comp=Z,435nm,20.2s,baz=270,slow=34						
INK	**Inuvik**	**89.07**	**21**	IAmb	IAmb	09 24 06.8	
	comp=Z,21nm,1.2s						
INK	**Inuvik**	**89.07**	**21**	P	**P**	**09 24 06.0**	**+0.6**
	baz=251,SNR=14						
PKD	**Bear Valley Ra**	**89.28**	**54**	IAmb	IAmb	09 24 10.4	
	comp=Z,24nm,0.8s						
HATC	**Hat Creek Radi**	**89.28**	**49**	IAmb	IAmb	09 24 10.6	
	comp=Z,17nm,0.9s						
GNW	**Green Mountain**	**89.40**	**42**	IAmb	IAmb	09 24 09.6	
	comp=Z,13nm,0.8s						
DZA	**Taraz**	**89.46**	**313**	*e*P	**P**	**09 24 07.1**	**-0.8**
	comp=Z,4.8nm,0.5s						
DZA	**Taraz**	**89.46**	**313**	*e*P	**P**	**09 24 07.9**	**0.0**
DZA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
GAR	**Garm**	**89.64**	**309**	IAmb	IAmb	09 24 10.0	
	comp=Z,32nm,1.2s						
BRZS	**Berezniki**	**89.71**	**320**	*e*P	**P**	**09 24 09.0**	**+0.1**
BRZS	**Berezniki**	**89.71**	**320**	*e*P	**P**	**09 24 09.0**	**+0.1**
LIRD	**Liard River Hi**	**89.79**	**30**	P	**P**	**09 24 10.0**	**+1.0**
	baz=258,SNR=7.4						
J05D	**Fort Rock, OR**	**89.82**	**47**	P	**P**	**09 24 11.4**	**+1.6**
J05D				IAmb	IAmb	09 24 13.3	
	comp=Z,16nm,0.8s						
HOOD	**Mount Hood Mea**	**89.84**	**45**	IAmb	IAmb	09 24 12.3	
	comp=Z,19nm,1.0s						
D05A	**Enumclaw**	**89.90**	**43**	IAmb	IAmb	09 24 13.6	
	comp=Z,17nm,1.0s						
BEKR	**Beckworth**	**89.97**	**50**	IAmb	IAmb	09 24 13.1	
	comp=Z,12nm,0.9s						
K05A	**Summer Lake**	**89.99**	**47**	P	**P**	**09 24 12.1**	**+1.5**
K05A				IAmb	IAmb	09 24 13.2	
	comp=Z,22nm,1.2s						
KBL	**Kabul**	**90.04**	**305**	P	**P**	**09 24 10.3**	**-0.8**
KBL	**Kabul**	**90.04**	**305**	P	**P**	**09 24 10.3**	**-0.8**
KBL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
G05A	**Wamic**	**90.06**	**45**	IAmb	IAmb	09 24 13.2	
	comp=Z,19nm,1.0s						
KKAR	**Karatay Array**	**90.09**	**313**	P	**P**	**09 24 09.8**	**-1.0**
KKAR	**Karatay Array**	**90.09**	**313**	P	**P**	**09 24 09.8**	**-1.0**
TOAD	**Toad River Com**	**90.10**	**31**	P	**P**	**09 24 11.4**	**+0.9**
	baz=258,SNR=8.5						
PINE	**Pine Mountain**	**90.11**	**46**	IAmb	IAmb	09 24 13.5	
	comp=Z,14nm,1.0s						
MPK	**Martis Peak**	**90.15**	**51**	IAmb	IAmb	09 24 14.5	
	comp=Z,24nm,0.9s						
IUG	**Iuzhnay**	**90.30**	**312**	*e*P	**P**	**09 24 11.8**	**-0.1**
IUG	**Iuzhnay**	**90.30**	**312**	*e*P	**P**	**09 24 11.8**	**-0.1**
VES	**Vestal, Richgr**	**90.44**	**54**	IAmb	IAmb	09 24 17.6	
	comp=Z,18nm,0.9s						
CHGR	**Chuyangaron**	**90.49**	**309**	*i* P	**P**	**09 24 12.6**	**-0.3**
CHGR				pmax	pmax		
	comp=Z,28nm,0.9s						
WAKR	**Walker**	**90.50**	**51**	IAmb	IAmb	09 24 16.1	
	comp=Z,11nm,0.7s						
BRLS	**Borolday**	**90.57**	**313**	*e*P	**P**	**09 24 13.5**	**+0.4**
BRLS	**Borolday**	**90.57**	**313**	*e*P	**P**	**09 24 13.5**	**+0.4**
PAHR	**Pah Rah Range**	**90.70**	**50**	IAmb	IAmb	09 24 16.6	
	comp=Z,16nm,0.9s						
LTY	**Liberty**	**90.80**	**43**	IAmb	IAmb	09 24 15.7	
	comp=Z,13nm,1.1s						
ISA	**Isabella, Lake**	**90.91**	**54**	IAmb	IAmb	09 24 17.7	
	comp=Z,17nm,1.2s						
KOTAN	**Kotaneelee Air**	**90.95**	**30**	P	**P**	**09 24 15.4**	**+1.0**
	baz=259						
TPO	**Tropico Hills**	**91.01**	**55**	IAmb	IAmb	09 24 18.8	
	comp=Z,20nm,0.9s						
SHAA	**Shahritus**	**91.16**	**307**	IAmb	IAmb	09 24 22.0	
	comp=Z,22nm,0.7s						
E07A	**Sunnyside**	**91.26**	**43**	IAmb	IAmb	09 24 18.3	
	comp=Z,17nm,0.9s						
CWC	**Cottonwood Cre**	**91.32**	**54**	IAmb	IAmb	09 24 19.8	
	comp=Z,14nm,1.2s						
NVAR	**Mina Array Bea**	**91.37**	**52**	P	**P**	**09 24 18.9**	**+1.8**
	comp=Z,22nm,0.8s,baz=254,slow=6.7,SNR=145						
NVAR				PKKP	**PKKPdf**	**09 41 35.9**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=101,slow=3.2,SNR=5.8						
NVAR				LR	LR	10 00 12.6	
	comp=Z,207nm,19.7s,baz=274,slow=32						
	comp=Z,22nm,0.8s						
NVAR	**Mina Array Bea**	**91.37**	**52**	P	**P**	**09 24 17.0**	**-0.2**
HAWA	**Hanford**	**91.46**	**44**	IAmb	IAmb	09 24 19.2	
	comp=Z,17nm,0.9s						
DSP	**Deep Springs**	**91.51**	**53**	IAmb	IAmb	09 24 20.8	
	comp=Z,15nm,0.9s						
ELS	**Elsinore Mount**	**91.53**	**56**	IAmb	IAmb	09 24 21.3	
	comp=Z,12nm,1.0s						
EPH	**Ephrata**	**91.54**	**43**	IAmb	IAmb	09 24 19.2	
	comp=Z,25nm,1.0s						
BVAR	**Borovoye Array**	**91.60**	**323**	P	**P**	**09 24 16.0**	**-1.6**
	comp=Z,23nm,0.7s,baz=100,slow=6.2,SNR=97						
BVAR				LR	LR	10 07 51.6	
	comp=Z,88nm,18.7s,baz=86,slow=37						
	comp=Z,23nm,0.7s						
CLC	**China Lake**	**91.63**	**54**	IAmb	IAmb	09 24 21.3	
	comp=Z,19nm,0.9s						
BORK	**Borovoye**	**91.65**	**323**	P	**P**	**09 24 16.3**	**-1.5**
BORK	**Borovoye**	**91.65**	**323**	*ce*P	**P**	**09 24 16.3**	**-1.5**
BORK				pmax	pmax		
	comp=Z,24nm,1.0s						
WSHM	**Spangler Hills**	**91.69**	**55**	IAmb	IAmb	09 24 21.6	
	comp=Z,18nm,0.9s						
G08A	**Pilot Rock**	**91.72**	**45**	IAmb	IAmb	09 24 20.4	
	comp=Z,12nm,1.0s						
WRGLY	**Wrigley**	**91.79**	**27**	IAmb	IAmb	09 24 20.3	
	comp=Z,16nm,0.9s						
WRGLY	**Wrigley**	**91.79**	**27**	P	**P**	**09 24 19.3**	**+1.1**
	baz=260,SNR=7.3						
YPT	**Yellepit**	**91.81**	**44**	IAmb	IAmb	09 24 20.8	
	comp=Z,17nm,1.0s						
B08A	**Colville Reser**	**91.84**	**42**	IAmb	IAmb	09 24 20.4	
	comp=Z,13nm,1.1s						
DPP	**Dos Picos Cty**	**91.86**	**57**	IAmb	IAmb	09 24 23.7	
	comp=Z,17nm,0.8s						
GRAC	**Grapevine Rang**	**91.95**	**53**	IAmb	IAmb	09 24 22.7	
	comp=Z,10nm,0.8s						
D08A	**Wollman Farm,**	**91.96**	**43**	IAmb	IAmb	09 24 21.3	
	comp=Z,11nm,1.0s						
BAR	**Barrett**	**92.06**	**58**	IAmb	IAmb	09 24 24.5	
	comp=Z,11nm,0.8s						
GMN	**Gold Mountain**	**92.07**	**53**	IAmb	IAmb	09 24 24.7	
	comp=Z,9.8nm,1.0s						
DNR	**Dunn Ranch,Anz**	**92.18**	**57**	IAmb	IAmb	09 24 27.6	
	comp=Z,16nm,0.8s						
GSC	**Goldstone, Bar**	**92.22**	**55**	IAmb	IAmb	09 24 23.9	
	comp=Z,11nm,0.8s						
BORC	**Borrego Spring**	**92.33**	**57**	IAmb	IAmb	09 24 24.5	
	comp=Z,15nm,1.0s						
PFO	**Pinyon Flats O**	**92.33**	**57**	LR	LR	10 02 00.9	
	comp=Z,213nm,18.1s,baz=263,slow=33						
RPN	**Rapa Nui**	**92.35**	**117**	LR	LR	09 57 31.2	
	comp=Z,147nm,21.8s,baz=290,slow=30						
GWY	**Greenwater Val**	**92.42**	**54**	IAmb	IAmb	09 24 24.7	
	comp=Z,12nm,0.8s						
E09A	**Wood Farm, Sta**	**92.42**	**44**	IAmb	IAmb	09 24 23.5	
	comp=Z,19nm,0.9s						
C09A	**Chrisman Ranch**	**92.48**	**42**	IAmb	IAmb	09 24 23.4	
	comp=Z,15nm,1.1s						
ESJX	**Sierra Juarez**	**92.60**	**58**	IAmb	IAmb	09 24 28.3	
	comp=Z,8.5nm,0.8s						
C36M	**Paulatuk**	**92.65**	**21**	IAmb	IAmb	09 24 23.2	
	comp=Z,14nm,0.8s						
C36M	**Paulatuk**	**92.65**	**21**	P	**P**	**09 24 22.3**	**+0.3**
	baz=260						
YUH	**Yuha Desert**	**92.68**	**58**	IAmb	IAmb	09 24 26.4	
	comp=Z,16nm,1.1s						
A36M	**Sachs Harbour**	**92.77**	**18**	P	**P**	**09 24 23.1**	**+0.5**
	baz=258						
BMO	**Blue Mountains**	**92.83**	**45**	IAmb	IAmb	09 24 25.4	
	comp=Z,33nm,1.6s						
SYO	**Syowa Base**	**92.99**	**199**	⇑*i*P	**P**	**09 24 23.2**	**-0.5**
SYO	**Syowa Base**	**92.99**	**199**	⇑*i*PcP	**P**	**09 24 24.6**	**+0.9**
F10A	**Beach Ranch, E**	**93.00**	**44**	IAmb	IAmb	09 24 26.0	
	comp=Z,12nm,0.9s						
BC3	**Big Chuckawall**	**93.17**	**57**	IAmb	IAmb	09 24 28.8	
	comp=Z,20nm,0.9s						
MTPC	**Mountain Pass**	**93.26**	**55**	IAmb	IAmb	09 24 28.8	
	comp=Z,9.1nm,0.9s						
NEW	**Newport**	**93.30**	**42**	LR	LR	09 59 44.2	
	comp=Z,824nm,21.1s,baz=295,slow=31						
NEW	**Newport**	**93.30**	**42**	IAmb	IAmb	09 24 27.1	
	comp=Z,17nm,1.1s						
S11A	**Rachel**	**93.30**	**53**	IAmb	IAmb	09 24 30.9	
	comp=Z,11nm,0.7s						
R11B	**Troy Canyon, C**	**93.49**	**52**	IAmb	IAmb	09 24 29.8	
	comp=Z,13nm,1.0s						
GLA	**Glamis**	**93.64**	**57**	IAmb	IAmb	09 24 31.1	
	comp=Z,14nm,0.8s						
SHPR	**Sheep Range**	**93.67**	**54**	IAmb	IAmb	09 24 31.0	
	comp=Z,10nm,0.8s						
V12A	**Nelson**	**93.85**	**55**	IAmb	IAmb	09 24 33.7	
	comp=Z,14nm,0.7s						
BLYC	**Blythe**	**93.95**	**57**	IAmb	IAmb	09 24 32.2	
	comp=Z,9.8nm,0.9s						
W13A	**Hualapai Mount**	**94.58**	**55**	IAmb	IAmb	09 24 35.6	
	comp=Z,16nm,0.8s						
PSUT	**Pine Spring**	**94.86**	**52**	IAmb	IAmb	09 24 52.3	
	comp=Z,11nm,1.0s						
SZCU	**Shurtz Canyon**	**95.40**	**53**	IAmb	IAmb	09 24 39.9	
	comp=Z,7.5nm,0.9s						
KNB	**Kanab**	**95.58**	**53**	IAmb	IAmb	09 24 39.9	
	comp=Z,11nm,1.0s						
YKA	**Yellowknife Ar**	**95.74**	**28**	P	**P**	**09 24 37.2**	**+0.8**
	comp=Z,5.9nm,0.8s,baz=273,slow=5.3,SNR=81						
YKA				PKKPbc	**PKKPbc**	**09 41 25.4**	**-3.4**
	comp=Z,1.2nm,0.7s,baz=80,slow=1.9,SNR=16						
YKA				LR	LR	10 06 51.8	
	comp=Z,81nm,18.3s,baz=282,slow=35						
	comp=Z,5.9nm,0.8s						
YKA	**Yellowknife Ar**	**95.74**	**28**	*ce*P	**P**	**09 24 37.2**	**+0.8**
YKA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BELA	**Belgrano 2**	**95.84**	**178**	IAmb	IAmb	09 24 37.2	
	comp=Z,14nm,0.9s						
HVU	**Hansel Valley**	**95.89**	**49**	IAmb	IAmb	09 24 40.5	
	comp=Z,7.8nm,0.9s						
U15A	**North Rim**	**95.97**	**54**	IAmb	IAmb	09 24 41.8	
	comp=Z,12nm,0.8s						
PKCU	**Pink Cliffs**	**96.01**	**53**	IAmb	IAmb	09 24 43.4	
	comp=Z,9.9nm,0.8s						
MTPU	**Mount Pierson**	**96.14**	**52**	IAmb	IAmb	09 24 43.0	
	comp=Z,14nm,0.9s						
LPIG	**La Paz**	**96.93**	**67**	LR	LR	10 00 39.9	
	comp=Z,238nm,21.1s,baz=264,slow=31						
TMUT	**Trail Mountain**	**96.96**	**51**	IAmb	IAmb	09 24 45.7	
	comp=Z,9.5nm,0.8s						
Q16A	**Castle Valley**	**96.98**	**52**	IAmb	IAmb	09 24 47.1	
	comp=Z,5.7nm,0.8s						
YHL	**Hebgen Lake**	**97.17**	**46**	IAmb	IAmb	09 24 46.0	
	comp=Z,6.9nm,0.9s						
YMR	**Madison River**	**97.33**	**46**	IAmb	IAmb	09 24 47.7	
	comp=Z,8.2nm,1.1s						
BSUT	**Blindstream Ca**	**97.35**	**50**	IAmb	IAmb	09 25 01.3	
	comp=Z,24nm,1.9s						
SNOW	**Snow King Moun**	**97.44**	**47**	IAmb	IAmb	09 24 48.2	
	comp=Z,32nm,1.9s						
SRU	**San Rafael Swe**	**97.49**	**51**	IAmb	IAmb	09 28 18.9	
	comp=Z,6.5nm,0.7s						
P18A	**Preston Nutter**	**97.72**	**51**	IAmb	IAmb	09 28 13.9	
	comp=Z,7.7nm,0.6s						
ABKAR	**Akbulak array**	**97.88**	**319**	P	**P**	**09 24 44.0**	**-2.4**
W18A	**Petrified Fore**	**97.98**	**55**	IAmb	IAmb	09 28 34.1	
	comp=Z,10nm,0.7s						
EGMT	**Eagleton**	**98.21**	**42**	IAmb	IAmb	09 24 49.5	
	comp=Z,8.0nm,0.9s						
PDAR	**Pinedale Array**	**98.31**	**48**	P	**P**	**09 24 49.0**	**+0.3**
	comp=Z,3.2nm,0.8s,baz=243,slow=2.5,SNR=28						
PDAR				PKKPbc	**PKKPbc**	**09 41 19.5**	**-1.8**
	comp=Z,0.3nm,0.5s,baz=100,slow=4.3,SNR=4.8						
PDAR				LR	LR	10 05 47.8	
	comp=Z,160nm,19.2s,baz=280,slow=33						
	comp=Z,3.2nm,0.8s						
PDAR	**Pinedale Array**	**98.31**	**48**	P	**P**	**09 24 48.6**	**-0.2**
ARTI	**Arti**	**98.73**	**326**	LR	LR	10 12 20.8	
	comp=Z,90nm,19.4s,baz=74,slow=37						
ARTI	**Arti**	**98.73**	**326**	P	**P**	**09 24 47.8**	**-2.2**
ARTI				IAmb	IAmb	09 24 48.3	
	comp=Z,10nm,0.7s						
ARTI	**Arti**	**98.73**	**326**	*d i*P	**P**	**09 24 47.9**	**-2.1**
ARTI				*PP	**pP**	**09 25 09.9**	**+0.1**
ARTI						09 28 49.9	
ARTI				S	**SKSac**	**09 35 18.5**	**-3.2**
ARTI				SS	**SS**	**09 42 57.1**	**-4.0**
ARTI				pmax	pmax		
	comp=Z,11nm,0.9s						
NVL	**N'lazarevskaya**	**99.28**	**192**	*e*P	**Pdif**	**09 24 50.6**	**-1.6**
NVL				*e*		09 28 52.3	
NVL				*e*S	**SKSac**	**09 35 24.5**	**+0.5**
NVL				*e*SS	**SS**	**09 43 09.3**	**+2.0**
NVL				*e*SSS	SSS	09 46 58.2	
NVL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NVL				MLR	MLR		
	comp=Z,1µm,22.0s						
TROLL	**Troll, Antarti**	**99.84**	**188**	⇑P	**Pdif**	**09 24 54.3**	**-0.6**
	comp=Z,335nm,0.7s						
SNAA	**Sanae**	**100.87**	**187**	⇑P	**Pdif**	**09 24 58.9**	**-0.5**
	comp=Z,71nm,1.0s						
SNAA	**Sanae**	**100.87**	**187**	P	**Pdif**	**09 24 58.8**	**-0.5**
	comp=Z,2.6nm,1.0s,baz=106,slow=7.2,SNR=5.7						
SNAA	**Sanae**	**100.87**	**187**	*i* P	**Pdif**	**09 24 59.6**	**+0.2**
SNAA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TXAR	**Lajitas Array**	**103.04**	**61**	Pdiff	**Pdif**	**09 25 09.8**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=228,slow=5.4,SNR=8.3						
TXAR				PKiKP	**PKiKP**	**09 29 30.0**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=318,slow=1.7,SNR=4.7						
TXAR				PKKPbc	**PKKPbc**	**09 41 04.8**	**-2.3**
	comp=Z,1.9nm,0.7s,baz=97,slow=3.4,SNR=24						
KLMR	**Klimovskoe**	**107.59**	**332**	*e*P	**Pdif**	**09 25 27.0**	**-2.3**
KLMR				pmax	pmax		
	comp=Z,15nm,1.2s						
ARCES	**ARCESS Array B**	**108.82**	**343**	PKiKP	**PKiKP**	**09 29 39.9**	**+0.7**
	comp=Z,3.0nm,0.9s,baz=37,slow=3.0,SNR=4.5						
KIV	**Kislovodsk**	**110.21**	**315**	*i* PKIKP	**PKiKP**	**09 29 42.1**	**-0.5**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,41nm,21.0s						
OBN	**Obninsk**	**111.03**	**327**	⇑*i*PKIKP	**PKiKP**	**09 29 43.8**	**+0.2**
OBN				*e*		09 30 24.0	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,178nm,19.0s						
FINES	**FINESS Array B**	**113.19**	**336**	PKKPbc	PKKPbc	09 40 32.9	-3.0
	comp=Z,6.2nm,1.1s,baz=163,slow=7.4,SNR=6.2						
MNK	**Minsk**	**115.87**	**329**	*i* P	**Pdif**	**09 26 05.6**	**-0.7**
MNK				*i*		09 29 52.2	
MNK				*i*		09 30 57.2	
MNK				*i* PPP	PPP	09 33 24.5	
MNK				*i*		09 36 56.9	
MNK				*i* SS	SS	09 46 54.2	+1.5
MNK				*i* SSS	SSS	09 51 12.8	
MNK				pmax	pmax		
	comp=E,13nm,0.7s						
MNK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,21nm,0.9s						
MNK				MLR	MLR		
	comp=N,182nm,16.0s						
MNK				MLR	MLR		
	comp=Z,124nm,15.0s						
MNK				MLR	MLR		
	comp=E,144nm,16.0s						
AKASG	**Malin Array Be**	**116.84**	**325**	PKP	**PKPdf**	**09 29 54.0**	**-0.9**
	comp=E,1.1nm,0.5s,baz=72,slow=2.1,SNR=4.8						
AKASG	**Malin Array Be**	**116.84**	**325**	*c i*PKIKP	**PKPdf**	**09 29 54.7**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PLCA	**Paso Flores**	**117.41**	**142**	PKP	**PKPdf**	**09 29 56.5**	**0.0**
	comp=Z,8.1nm,1.2s,baz=251,slow=1.1,SNR=9.5						
PLCA				PKKPbc	**PKKPbc**	**09 40 19.3**	**-1.6**
	comp=Z,2.3nm,0.9s,baz=19,slow=0.4,SNR=5.9						
PLCA				PKKP	**PKKPdf**	**09 40 47.0**	**-1.0**
	comp=Z,1.4nm,0.9s,baz=273,slow=9.6,SNR=2.9						
BRTR	**Keskin Array B**	**117.77**	**312**	PKP	**PKPdf**	**09 29 56.2**	**-1.0**
	comp=Z,0.9nm,0.6s,baz=106,slow=2.7,SNR=5.4						
NOA	**NORSAR Array B**	**118.94**	**341**	PKP	**PKPdf**	**09 29 58.1**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=47,slow=1.8,SNR=2.1						
EIL	**Elat**	**118.97**	**300**	PKP	**PKPdf**	**09 29 59.9**	**+0.2**
	comp=Z,2.2nm,0.4s,baz=297,slow=20,SNR=2.0						
BOSA	**Boshof**	**120.37**	**232**	PKP	**PKPdf**	**09 30 02.4**	**-0.3**
	comp=Z,7.5nm,0.7s,baz=111,slow=2.7,SNR=17						
BOSA				PKKPbc	**PKKPbc**	**09 40 09.3**	**-0.5**
	comp=Z,2.2nm,0.8s,baz=321,slow=1.6,SNR=6.0						
BOSA	**Boshof**	**120.37**	**232**		**PKPdf**	**09 30 02.5**	**-0.1**
BOSA	**Boshof**	**120.37**	**232**	PKIKP	**PKPdf**	**09 30 02.5**	**-0.1**
BROLN	**Tlhalogang**	**121.77**	**241**	*i* P	**PKPdf**	**09 30 05.4**	**-0.1**
STHS	**Stebnicka Huta**	**121.97**	**326**	*e*PKIKP	**PKiKP**	**09 30 06.7**	**+1.6**
STHS	**Stebnicka Huta**	**121.97**	**326**	*e*PKP	**PKiKP**	**09 30 06.7**	**+1.6**
MAKGR	**Makgori**	**121.99**	**234**	*i* P	**PKPdf**	**09 30 05.9**	**+0.1**
CLL	**Collm**	**125.08**	**332**	*i* PKIKP	**PKPdf**	**09 30 10.5**	**-0.2**
CLL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CLL	**Collm**	**125.08**	**332**	*i* PKPdf	**PKPdf**	**09 30 10.5**	**-0.2**
	comp=Z,6.0nm,0.7s						
KGCAE	**Kacgae**	**125.41**	**236**	*i* P	**PKPdf**	**09 30 13.2**	**+0.8**
RONA	**Rosalia, Austr**	**125.65**	**327**	*i* PKiKP	**PKPdf**	**09 30 12.4**	**+0.4**
	comp=Z,3.7nm,0.7s						
KHC	**Kasperske Hory**	**126.21**	**329**	*c i*PKIKP	**PKPdf**	**09 30 12.6**	**-0.5**
KHC				pmax	pmax		
	comp=Z,15nm,2.5s						
KHC	**Kasperske Hory**	**126.21**	**329**	*e*PKP	**PKPdf**	**09 30 12.0**	**-1.1**
GERES	**GERESS Array B**	**126.33**	**329**	PKP	**PKPdf**	**09 30 13.0**	**-0.4**
	comp=Z,1.1nm,0.4s,baz=343,slow=1.8,SNR=9.7						
KOOLE	**Kule**	**127.00**	**235**	*i* P	**PKPdf**	**09 30 16.1**	**+0.7**
LESA	**Schwarzleotal**	**127.76**	**328**	*i* PKP	**PKPdf**	**09 30 16.0**	**-0.2**
	comp=Z,5.0nm,0.8s						
EKA	**Eskdalemuir Ar**	**127.97**	**344**	PKP	**PKPdf**	**09 30 16.1**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=0.8,slow=1.5,SNR=3.7						
ABTA	**Abfaltersbach**	**128.28**	**328**	*i* PKP	**PKPdf**	**09 30 16.8**	**-0.3**
	comp=Z,6.6nm,1.0s						
WATA	**Walderalm**	**128.39**	**329**	*i* PKP	**PKPdf**	**09 30 17.3**	**-0.1**
	comp=Z,8.6nm,0.9s						
WTTA	**Wattenberg**	**128.41**	**329**	*i* PKP	**PKPdf**	**09 30 17.0**	**-0.5**
	comp=Z,8.5nm,1.0s						
MOTA	**Moosalm**	**128.63**	**329**	*i* PKP	**PKPdf**	**09 30 18.0**	**+0.1**
	comp=Z,3.8nm,0.7s						
SQTA	**Sankt Quirin**	**128.66**	**329**	*i* PKP	**PKPdf**	**09 30 18.0**	**+0.1**
	comp=Z,15nm,1.6s						
DAVA	**Damuels**	**129.29**	**330**	*i* PKiKP	**PKPdf**	**09 30 20.3**	**+1.2**
	comp=Z,8.5nm,0.9s						
ROSC	**El Rosal**	**131.06**	**89**	PKP	**PKPdf**	**09 30 24.6**	**+0.9**
	comp=Z,30nm,0.5s,baz=122,slow=6.8,SNR=14						
LPAZ	**La Paz**	**131.95**	**118**	PKhKP	PKPpre	09 30 16.8	
	comp=Z,1.0nm,0.6s,baz=260,slow=5.9,SNR=4.8						
LPAZ				PKP	**PKPdf**	**09 30 26.4**	**+0.7**
	comp=Z,5.5nm,0.9s,baz=2.5,slow=1.9,SNR=12						
LPAZ				SKPbc	**SKPab**	**09 33 47.4**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=150,slow=6.4,SNR=3.7						
LPAZ	**La Paz**	**131.95**	**118**		**PKPdf**	**09 30 25.7**	**+0.1**
CPUP	**Villa Florida**	**135.04**	**137**	PKP	**PKPdf**	**09 30 29.9**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=131,slow=0.8,SNR=9.0						
SIV	**San Ignacio**	**138.15**	**122**	PKhKP	PKPpre	09 30 23.6	
	baz=270,slow=6.1						
SIV				PKP	**PKPdf**	**09 30 35.9**	**-0.6**
	baz=274,slow=3.3						
PGAV	**Gavieira, Arco**	**141.38**	**340**	*e*PKP	**PKPdf**	**09 30 42.2**	**+0.5**
ESDC	**Sonseca Array**	**141.63**	**333**	PKP	**PKPdf**	**09 30 43.4**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=29,slow=4.3,SNR=2.9						
PVIS	**Viseu**	**142.35**	**338**	*e*PKP	**PKPdf**	**09 30 39.1**	**-4.3**
MTE	**Manteigas**	**142.50**	**338**	*e*PKP	**PKPdf**	**09 30 39.0**	**-4.8**
PCBR	**Castelo Branco**	**142.95**	**337**	*e*PKP	**PKPdf**	**09 30 41.2**	**-3.2**
PMRV	**Marv??o**	**143.28**	**337**	*e*PKP	PKPab	09 30 41.8	+0.8
PSARD	**Sardoal**	**143.42**	**338**	*e*PKP	PKPab	09 30 42.7	+1.2
PSBE	**So Bento**	**143.73**	**338**	*e*PKP	PKPab	09 30 43.8	+1.0
PESTR	**Estremoz**	**143.84**	**336**	*e*PKP	PKPab	09 30 43.3	+0.1
PMTG	**Montargil**	**143.91**	**337**	*e*PKP	PKPab	09 30 43.8	+0.4
PARRA	**Arraiolos**	**144.06**	**337**	*e*PKP	**PKPab**	**09 30 44.0**	**0.0**
PBAR	**Barrancos**	**144.20**	**335**	*e*PKP	**PKPab**	**09 30 45.2**	**+0.7**
EVO	**Evora**	**144.29**	**337**	*e*PKP	**PKPab**	**09 30 45.1**	**+0.3**
MOE	**Montemor**	**144.43**	**337**	*e*PKP	**PKPab**	**09 30 46.2**	**+0.8**
PBEJ	**Beja**	**144.67**	**336**	*e*PKP	**PKPab**	**09 30 46.6**	**+0.3**
MESJ	**Messejana**	**144.97**	**336**	*e*PKP	**PKPab**	**09 30 47.4**	**0.0**
MESJ	**Messejana**	**144.97**	**336**	*e*PKP	**PKPab**	**09 30 47.8**	**+0.3**
PCVE	**Castro Verde**	**145.08**	**336**	*e*PKP	**PKPbc**	**09 30 48.1**	**+0.4**
PVAQ	**Vaqueiros**	**145.14**	**335**	*e*PKP	**PKPbc**	**09 30 48.7**	**+0.7**
PBDV	**Barranco-do-Ve**	**145.37**	**335**	*e*PKP	**PKPbc**	**09 30 49.4**	**+0.7**
PTEO	**Sao Teotonio**	**145.43**	**337**	*e*PKP	**PKPdf**	**09 30 49.5**	**+0.6**
MORF	**Marmelete**	**145.61**	**336**	*e*PKP	**PKPdf**	**09 30 48.6**	**-0.6**
MORF	**Marmelete**	**145.61**	**336**	*e*PKP	**PKPdf**	**09 30 50.0**	**+0.8**
BDFB	**Brasilia**	**148.62**	**134**	PKP	**PKPdf**	**09 30 55.5**	**+0.6**
	comp=Z,11nm,0.8s,baz=166,slow=2.5,SNR=8.8						
BDFB				PKPbc	**PKPbc**	**09 30 58.7**	**+0.1**
	comp=Z,20nm,0.7s,baz=225,slow=2.3,SNR=13						
MDP	**Montagnes des**	**152.63**	**91**	PKPbc	**PKPbc**	**09 31 08.3**	**+0.2**
	comp=Z,38nm,0.6s,baz=235,slow=3.2,SNR=9.0						
TORD	**Torodi Ar. Bea**	**152.67**	**287**	PKP	**PKPdf**	**09 30 59.8**	**-1.2**
	comp=Z,5.4nm,1.1s,baz=134,slow=4.3,SNR=5.2						
TORD				PKPbc	**PKPbc**	**09 31 07.3**	**-0.8**
	comp=Z,14nm,0.8s,baz=64,slow=2.7,SNR=18						
DBIC	**Dimbokro**	**159.82**	**272**	PKPab	**PKPab**	**09 31 49.8**	**-0.1**
	comp=Z,28nm,0.8s,baz=119,slow=5.8,SNR=22						

DBIC	**Dimbokro**	**159.82**	**272**	PKPdf	**PKPdf**	**09 31 10.1**	**-0.3**
DBIC					**PKPab**	**09 31 49.2**	**-0.6**
DBIC	**Dimbokro**	**159.82**	**272**	PKIKP	**PKPdf**	**09 31 10.1**	**-0.3**
DBIC						09 31 49.2	

JMA 09 09:18:37.1±0.0**,35°.4N**±0°.1×**133°.8E**±0°.1**,h10**^{km}**,MV0.5**/25**,**
EASTERN TOTTORI PREF, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.03**	**219**	*i* P	Pg	09 18 39.0	-0.1
JKR				S	Sg	09 18 40.2	-0.2
JAD	**Aida**	**0.53**	**150**	P	Pg	09 18 47.3	-0.2
JAD				*e*S	Sg	09 18 54.5	0.0
JHS	**Saijyo**	**0.72**	**236**	P	Pg	09 18 51.3	+0.3
JKS	**Kasai**	**0.92**	**117**	*e*S	Sg	09 19 05.9	-0.9
JOI	**OKI**	**1.01**	**332**	*e*S	Sg	09 19 09.1	-0.6

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*THE **09** 09:49:56.2, 35°.2N±0°.8×23°.8E±0°.6, h0^{km}±1^{km}, M3.3/11, MLh3.3/11*

*ATH **09** 09:49:56.4, 35°.18N×23°.84E, h6^{km}±1^{km}, ML3.5/7, Manual Solution by S.Koutrakis First location: 2019/12/09 09:51:03, This location: 2019/12/09 14:11:47 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*

ISC 09 09:49:56.6±1.0**,35°.18N**±0°.03×**23°.83E**±0°.03**,h7**^{km}±11^{km}**,**
n20,σ**0.**^{s}**64**/37**,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	**0.18**	**287**	P	**Pg**	**09 49 59.7**	**-0.5**
KNDR				S	**Sg**	**09 50 02.6**	**0.0**
KNDR	**Palaiochora Ch**	**0.18**	**287**	P	**Pg**	**09 49 59.7**	**-0.5**
KNDR				S	**Sg**	**09 50 02.7**	**+0.1**
IMMV	**Iera Moni Meta**	**0.30**	**23**	P	**Pg**	**09 50 02.2**	**-0.3**
IMMV				S	**Sg**	**09 50 07.1**	**+0.6**
VAM	**Vamos**	**0.37**	**53**	P	**Pg**	**09 50 03.5**	**-0.4**
VAM				S	**Sg**	**09 50 09.7**	**+0.9**
VAM	**Vamos**	**0.37**	**53**	P	**Pg**	**09 50 03.5**	**-0.4**
VAM				S	**Sg**	**09 50 08.8**	**0.0**
CHAN	**Chania**	**0.38**	**27**	P	**Pg**	**09 50 03.9**	**-0.1**
CHAN				S	**Sg**	**09 50 09.7**	**+0.8**
CHAN	**Chania**	**0.38**	**27**	P	**Pg**	**09 50 03.8**	**-0.1**
CHAN				S	**Sg**	**09 50 09.9**	**+1.0**
GVD	**Gavdhos**	**0.40**	**149**	P	**Pg**	**09 50 04.1**	**-0.2**
GVD				S	**Sg**	**09 50 10.6**	**+1.0**
GVD	**Gavdhos**	**0.40**	**149**	P	**Pg**	**09 50 04.1**	**-0.2**
GVD				S	**Sg**	**09 50 10.2**	**+0.6**
ANKY	**Antikythira Is**	**0.81**	**328**	P	**Pg**	**09 50 11.6**	**-0.5**
ANKY				S	**Sg**	**09 50 22.8**	**+0.1**
ANKY	**Antikythira Is**	**0.81**	**328**	P	**Pg**	**09 50 11.8**	**-0.4**
ANKY				S	**Sg**	**09 50 22.8**	**+0.1**
IDI	**Anoyia**	**0.87**	**83**	P	**Pg**	**09 50 11.7**	**-1.6**
IDI				S	**Sg**	**09 50 23.5**	**-1.1**
IACM	**Heraklion**	**1.02**	**83**	P	**Pb**	**09 50 17.1**	**+0.6**
IACM				S	**Sg**	**09 50 29.5**	**+0.1**
IACM	**Heraklion**	**1.02**	**83**	P	**Pb**	**09 50 16.7**	**+0.2**
IACM				S	**Sg**	**09 50 28.7**	**-0.6**
NPS	**Neapolis**	**1.46**	**86**	P	**Pn**	**09 50 22.9**	**-0.5**
NPS				S	**Sg**	**09 50 45.1**	**+1.7**
NPS	**Neapolis**	**1.46**	**86**	P	**Pn**	**09 50 23.2**	**-0.1**
MHLO	**Agia Marina, M**	**1.57**	**17**	P	**Pb**	**09 50 26.0**	**0.0**
MHLO				S	**Sg**	**09 50 47.0**	**-0.1**
MHLO	**Agia Marina, M**	**1.57**	**17**	P	**Pn**	**09 50 25.1**	**+0.2**
VLI	**Veliai**	**1.70**	**335**	P	**Pn**	**09 50 26.8**	**+0.2**
VLI				S	**Sb**	**09 50 49.9**	**+0.2**
VLI	**Veliai**	**1.70**	**335**	P	**Pn**	**09 50 26.7**	**+0.1**

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*IDC **09** 10:07:53.2±0.9, 61°.60N×151°.56W, h0^{km}, mb3.7/5, mbtmp3.7/8, ML3.6/3, Error ellipse: s-maj=19.0km s-min=11.5km az=117.0*

*AEIC **09** 10:07:57.9±1.4, 61°.49N±0°.03×150°.62W±0°.05, h57^{km}±5^{km}, ML3.5, ML3.7/202(NEIC), Error ellipse: s-maj=3.9km s-min=3.5km az=145.0*

*NEIC **09** 10:07:57.3±1.3, 61°.51N±0°.03×150°.69W±0°.05, h62^{km}±6^{km}, Error ellipse: s-maj=3.9km s-min=3.0km az=205.0*

ISC 09 10:07:57.7±0.8**,61°.50N**±0°.03×**150°.65W**±0°.02**,h57**^{km}±6^{km}**,**
n173,σ**0.**^{s}**77**/161**,mb3.8**/5**,Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUA	**Susitna One**	**0.06**	**231**		**Pn**	**10 08 06.1**	**-0.4**
SUA				Sn	**Sn**	**10 08 13.1**	**+0.3**
SUA				IAML		10 08 13.9	
	comp=N,6µm,0.5s						
SUA				IAML		10 08 14.3	
	comp=E,8µm,0.6s						
M22K	**Willow**	**0.36**	**45**		**Pn**	**10 08 07.7**	**-0.4**
M22K	**Willow**	**0.36**	**45**		**Sn**	**10 08 16.1**	**+0.7**
STLK	**Strandline Lak**	**0.57**	**270**		**Pn**	**10 08 09.8**	**-0.5**
STLK					**Sn**	**10 08 19.5**	**0.0**
STLK	**Strandline Lak**	**0.57**	**270**	IAML		10 08 19.8	
	comp=N,3µm,0.4s						
STLK				IAML		10 08 20.9	
	comp=E,2µm,0.4s						
RC01	**Rabbit Creek A**	**0.60**	**133**		**Pn**	**10 08 10.1**	**-0.6**
RC01				Sn	**Sn**	**10 08 20.9**	**+0.9**
RC01				IAML		10 08 21.3	
	comp=N,4µm,0.4s						
RC01				IAML		10 08 21.4	
	comp=E,2µm,0.4s						
SKT	**Skwentna**	**0.64**	**319**		**Pn**	**10 08 10.3**	**-0.8**
SKT				Sn	**Sn**	**10 08 19.9**	**-0.9**
SKT				IAML		10 08 20.7	
	comp=E,5µm,0.3s						
SKT				IAML		10 08 22.1	
	comp=N,3µm,0.2s						
SPCG	**Spurr Capps Gl**	**0.69**	**253**		**Pn**	**10 08 11.3**	**-0.5**
SPCG					**Sn**	**10 08 21.9**	**-0.2**
PMR	**Palmer**	**0.73**	**82**		**Pn**	**10 08 11.3**	**-0.9**
PMR				Sn	**Sn**	**10 08 22.0**	**-0.7**
PMR				IAML		10 08 23.9	
	comp=E,2µm,0.2s						
SPU	**Mount Spurr**	**0.75**	**245**		**Pn**	**10 08 11.6**	**-0.8**
CAPN	**Captain Cook N**	**0.78**	**199**		**Pn**	**10 08 13.8**	**+1.1**
SPCN	**Chakachatna No**	**0.79**	**250**		**Pn**	**10 08 12.5**	**-0.5**
SPCR	**Spurr Chakacha**	**0.81**	**249**		**Pn**	**10 08 12.5**	**-0.8**
SPCR					**Sn**	**10 08 24.4**	**-0.2**
SPBG	**Spurr Blockage**	**0.86**	**254**		**Sn**	**10 08 25.9**	**+0.1**
GHO	**Glory Hole Cre**	**0.87**	**71**		**Pn**	**10 08 13.9**	**-0.1**
GHO				Sn	**Sn**	**10 08 26.1**	**+0.1**
CUT	**Chulitna**	**0.93**	**11**		**Pn**	**10 08 14.0**	**-0.6**
CUT				Sn	**Sn**	**10 08 27.3**	**+0.1**
CUT				IAML		10 08 28.2	
	comp=N,3µm,0.3s						
CUT				IAML		10 08 28.8	
	comp=E,2µm,0.4s						
SLKM	**Skilak Lake**	**1.02**	**168**		**Pn**	**10 08 15.1**	**-0.8**
SLKM				Sn	**Sn**	**10 08 28.6**	**-0.7**
SLKM				IAML		10 08 30.5	
	comp=N,2µm,0.2s						
SLKM				IAML		10 08 31.4	
	comp=E,2µm,0.5s						
L22K	**Petersville**	**1.03**	**357**		**Pn**	**10 08 15.8**	**-0.4**
KNK	**Knik Glacier**	**1.06**	**94**		**Pn**	**10 08 16.1**	**-0.4**
KNK				Sn	**Sn**	**10 08 30.8**	**+0.5**
O22K	**Cooper Landing**	**1.12**	**156**		**Pn**	**10 08 16.7**	**-0.5**
O22K	**Cooper Landing**	**1.12**	**156**	Sn	**Sn**	**10 08 33.0**	**+1.3**
SML	**Sawmill**	**1.15**	**73**		**Pn**	**10 08 17.1**	**-0.6**
SML				Sn	**Sn**	**10 08 32.4**	**-0.1**
SML				IAML		10 08 33.5	
	comp=N,2µm,0.7s						
SML				IAML		10 08 33.9	
	comp=E,2µm,0.7s						
M20K	**Styx River**	**1.24**	**289**		**Sn**	**10 08 34.9**	**+0.1**
M20K	**Styx River**	**1.24**	**289**		**Pn**	**10 08 18.8**	**-0.2**
M20K				IAML		10 08 36.5	
	comp=N,893nm,0.8s						
M20K				IAML		10 08 37.7	
	comp=E,997nm,0.8s						
RDT	**Redoubt**	**1.26**	**223**		**Sn**	**10 08 35.7**	**+0.5**
PWL	**Port Wells**	**1.29**	**119**		**Pn**	**10 08 18.9**	**-0.7**
PWL				Sn	**Sn**	**10 08 35.6**	**-0.3**
PWL				IAML		10 08 36.8	
	comp=N,2µm,0.4s						
RDJH	**Redoubt Jeurge**	**1.39**	**230**		**Sn**	**10 08 38.6**	**+0.2**
RDWB	**Redoubt West**	**1.47**	**227**		**Sn**	**10 08 40.7**	**+0.3**
SEW	**Seward**	**1.52**	**157**		**Pn**	**10 08 21.6**	**-1.0**
SEW	**Seward**	**1.52**	**157**	IAML		10 08 46.0	
	comp=N,1µm,0.4s						
SEW				IAML		10 08 46.3	
	comp=E,986nm,0.4s						
PPLA	**Purkeypile**	**1.58**	**333**		**Pn**	**10 08 23.1**	**-0.4**
PPLA				IAML		10 08 45.5	
	comp=E,734nm,0.5s						
PPLA				IAML		10 08 47.4	
	comp=N,696nm,1.0s						
WAT7	**Susitna Watana**	**1.58**	**32**		**Pn**	**10 08 23.2**	**-0.4**
SCM	**Sheep Creek Mo**	**1.62**	**77**		**Pn**	**10 08 23.6**	**-0.4**
SCM				IAML		10 08 48.4	
	comp=N,1µm,0.7s						
BRLK	**Bradley Lake**	**1.75**	**184**		**Pn**	**10 08 26.0**	**+0.3**
BRLK				IAML		10 08 52.6	
	comp=N,1µm,0.7s						
BRSE	**Bradley Lake S**	**1.77**	**181**		**Pn**	**10 08 26.0**	**+0.1**
GLI	**Glacier Island**	**1.83**	**108**	Pn	**Pn**	**10 08 25.3**	**-1.6**
GLI				IAML		10 08 58.9	
	comp=E,692nm,0.4s						
GLI				IAML		10 09 01.1	
	comp=N,597nm,0.5s						
HOM	**Homer**	**1.91**	**195**		**Pn**	**10 08 28.8**	**+0.8**
ILS	**Iliamna Low So**	**1.95**	**219**		**Pn**	**10 08 28.6**	**0.0**
ILSW	**Iliamna Southw**	**1.95**	**220**		**Pn**	**10 08 28.5**	**-0.1**
ILSW				IAML		10 08 56.0	
	comp=N,433nm,0.7s						
TRF	**Thorofare Moun**	**1.96**	**5**		**Pn**	**10 08 28.6**	**-0.2**
TRF				IAML		10 08 56.1	
	comp=N,951nm,0.6s						
TRF				IAML		10 09 00.3	
	comp=E,548nm,0.6s						
N19K	**Bonanza Creek**	**1.98**	**251**		**Pn**	**10 08 28.5**	**-0.4**
CNPM	**China Poot**	**2.00**	**189**		**Pn**	**10 08 28.3**	**-0.9**
KTH	**Kantishna Hill**	**2.06**	**357**		**Pn**	**10 08 30.5**	**+0.5**
RND	**Reindeer**	**2.09**	**23**		**Pn**	**10 08 30.7**	**+0.3**
RND				IAML		10 09 08.3	
	comp=N,297nm,0.7s						
RND				IAML		10 09 09.2	
	comp=E,313nm,0.8s						
L19K	**White Mountain**	**2.11**	**291**	IAML		10 08 56.7	
	comp=E,350nm,0.5s						
FID	**Port Fidalgo**	**2.16**	**109**		**Pn**	**10 08 29.6**	**-1.7**
FID				IAML		10 08 57.3	
	comp=E,667nm,0.6s						
FID				IAML		10 09 11.4	
	comp=N,492nm,0.6s						
P23K	**Montague Islan**	**2.19**	**132**		**Pn**	**10 08 30.3**	**-1.4**
P23K				IAML		10 09 09.9	
	comp=E,528nm,0.7s						
DHY	**Denali Highway**	**2.20**	**43**		**Pn**	**10 08 30.7**	**-1.3**
O19K	**Port Alsworth**	**2.22**	**236**		**Pn**	**10 08 33.6**	**+1.5**
O19K				IAML		10 09 04.5	
	comp=E,565nm,0.4s						
O19K				IAML		10 09 35.8	
	comp=N,565nm,0.5s						
P19K	**Oil Pt**	**2.25**	**216**		**Pn**	**10 08 33.1**	**+0.5**
P19K				IAML		10 09 05.6	
	comp=N,531nm,0.5s						
KLU	**Klutina**	**2.27**	**88**		**Pn**	**10 08 34.5**	**+1.7**
HIN	**Hinchinbrook I**	**2.31**	**117**		**Pn**	**10 08 31.4**	**-1.9**
HIN	**Hinchinbrook I**	**2.31**	**117**	IAML		10 09 18.1	
	comp=E,434nm,0.8s						
HIN				IAML		10 09 22.8	
	comp=N,365nm,0.9s						
MCK	**McKinley**	**2.38**	**19**		**Pn**	**10 08 34.3**	**0.0**
DIV	**Divide**	**2.38**	**97**		**Pn**	**10 08 33.2**	**-1.2**
DIV				IAML		10 09 14.0	
	comp=E,460nm,0.5s						
K20K	**Telida**	**2.45**	**321**		**Pn**	**10 08 34.9**	**-0.4**
K20K	**Telida**	**2.45**	**321**	IAML		10 09 10.4	
	comp=N,298nm,0.6s						
K20K				IAML		10 09 10.6	
	comp=E,262nm,0.7s						
CHUM	**Lake Minchumin**	**2.51**	**343**		**Pn**	**10 08 35.7**	**-0.4**
EYAK	**Cordova Ski Ar**	**2.57**	**110**		**Pn**	**10 08 37.2**	**+0.3**
EYAK				IAML		10 09 17.8	
	comp=N,196nm,0.5s						
BPAW	**Bear Paw Mtn.**	**2.61**	**357**		**Pn**	**10 08 37.0**	**-0.5**
BPAW				IAML		10 09 08.4	
	comp=N,288nm,0.8s						
BPAW				IAML		10 09 11.2	
	comp=E,245nm,0.6s						
PAX	**Paxson**	**2.84**	**56**		**Pn**	**10 08 40.8**	**+0.1**
PAX				IAML		10 09 22.0	
	comp=N,236nm,0.9s						
PAX				IAML		10 09 22.5	
	comp=E,236nm,0.9s						
N25K	**Chitina, Valde**	**2.90**	**85**		**Pn**	**10 08 39.8**	**-1.6**
N25K	**Chitina, Valde**	**2.90**	**85**	IAML		10 09 25.6	
	comp=N,357nm,0.5s						
N25K				IAML		10 09 27.1	
	comp=E,298nm,0.4s						
L18K	**Granite Mounta**	**2.95**	**287**		**Pn**	**10 08 41.5**	**-0.6**
BMRM	**Bremner River**	**2.97**	**98**		**Pn**	**10 08 40.2**	**-2.2**
BMRM	**Bremner River**	**2.97**	**98**	IAML		10 09 29.3	
	comp=E,269nm,0.7s						
BMRM				IAML		10 09 29.9	
	comp=N,365nm,0.4s						
Q19K	**Cape Douglas,**	**2.98**	**211**		**Pn**	**10 08 42.9**	**+0.4**
SYI	**Shuyak Island**	**3.03**	**198**		**Pn**	**10 08 43.2**	**+0.1**
SYI	**Shuyak Island**	**3.03**	**198**	IAML		10 09 26.4	
	comp=E,214nm,0.6s						
SYI				IAML		10 09 26.6	
	comp=N,200nm,0.7s						
WACK	**Wrangell Chich**	**3.05**	**78**		**Pn**	**10 08 42.5**	**-1.1**
NEA2	**Nenana**	**3.19**	**12**		**Pn**	**10 08 44.9**	**-0.4**
WRH	**Wood River Hil**	**3.20**	**20**		**Pn**	**10 08 46.0**	**+0.4**
K24K	**Donnelly Dome**	**3.22**	**42**		**Pn**	**10 08 47.5**	**+1.6**
M17K	**Holitna River**	**3.26**	**271**		**Pn**	**10 08 45.7**	**-0.6**
M17K	**Holitna River**	**3.26**	**271**	IAML		10 09 25.5	
	comp=N,206nm,0.9s						
M17K				IAML		10 09 25.6	
	comp=E,199nm,0.9s						
GLB	**Gilahina Butte**	**3.28**	**88**		**Pn**	**10 08 46.8**	**+0.1**
GLB				IAML		10 09 39.3	
	comp=N,268nm,0.7s						
GLB				IAML		10 09 39.8	
	comp=E,188nm,0.5s						
N17K	**Nushagak Hills**	**3.33**	**256**		**Pn**	**10 08 46.4**	**-0.8**
HDA	**Harding Lake**	**3.37**	**28**		**Pn**	**10 08 47.6**	**-0.3**
HDA				IAML		10 09 45.2	
	comp=N,134nm,0.7s						
HDA				IAML		10 09 52.5	
	comp=E,95nm,0.5s						
J19K	**Poorman**	**3.39**	**320**	IAML		10 09 44.9	
	comp=N,184nm,0.8s						
J19K				IAML		10 09 46.5	
	comp=E,198nm,1.2s						
CCB	**Clear Creek Bu**	**3.41**	**21**		**Pn**	**10 08 47.3**	**-1.1**
J18K	**Innoko River**	**3.44**	**308**	IAML		10 09 29.2	
	comp=E,98nm,0.7s						
VRDI	**Verde Repeater**	**3.48**	**91**		**Pn**	**10 08 49.2**	**-0.2**
VRDI				IAML		10 09 45.5	
	comp=E,96nm,0.6s						
VRDI				IAML		10 09 47.4	
	comp=N,164nm,0.9s						
RIDG	**Independent Ri**	**3.50**	**48**		**Pn**	**10 08 50.8**	**+1.1**
MLY	**Manley**	**3.54**	**359**		**Pn**	**10 08 49.6**	**-0.6**
MLY				IAML		10 09 43.2	
	comp=E,91nm,0.6s						
MENT	**Mentasta**	**3.55**	**63**		**Pn**	**10 08 49.9**	**-0.4**
COLA	**College**	**3.62**	**19**		**Pn**	**10 08 51.1**	**0.0**
MCARA	**McCarthy VSAT**	**3.67**	**88**	Pn	**Pn**	**10 08 51.2**	**-0.6**
L17K	**Donlin**	**3.68**	**283**		**Pn**	**10 08 51.4**	**-0.7**
ILAR	**Eielson Array**	**3.70**	**26**	Pn	**Pn**	**10 08 51.5**	**-0.8**
	comp=E,6.8nm,0.3s,baz=213,slow=14,SNR=190						
ILAR				Sn	**Sn**	**10 09 33.9**	**-0.8**
	comp=E,5.6nm,0.3s,baz=218,slow=24,SNR=2.9						
ILAR				Lg	Lg	10 09 52.5	
	comp=E,5.7nm,0.3s,baz=207,slow=25,SNR=4.9						
	comp=E,17nm,0.4s						
ILAR	**Eielson Array**	**3.70**	**26**		**Pn**	**10 08 51.7**	**-0.6**
I23K	**Minto, Yukon-K**	**3.71**	**8**		**Pn**	**10 08 51.9**	**-0.5**
CRQM	**Cirque**	**3.72**	**98**	IAML		10 09 53.7	
	comp=E,204nm,0.7s						
M26K	**Nabesna, AK**	**3.73**	**73**	IAML		10 10 01.6	
	comp=E,91nm,0.7s						
M26K				IAML		10 10 05.5	
	comp=N,107nm,0.7s						
DOT	**Dot Lake**	**3.73**	**52**		**Pn**	**10 08 51.9**	**-0.9**
DOT				IAML		10 09 49.3	
	comp=E,116nm,0.7s						
DOT				IAML		10 09 52.5	
	comp=N,109nm,1.1s						
L26K	**Log Cabin Wild**	**3.74**	**63**		**Pn**	**10 08 53.0**	**+0.1**
L26K				IAML		10 09 56.5	
	comp=N,134nm,0.4s						
L26K				IAML		10 09 58.1	
	comp=E,145nm,0.8s						
I21K	**Tanana**	**3.74**	**351**		**Pn**	**10 08 53.0**	**+0.2**
I21K				IAML		10 09 35.9	
	comp=E,117nm,0.4s						
I21K				IAML		10 09 36.0	
	comp=N,110nm,0.4s						
KHIT	**Khitrov Hills**	**3.76**	**103**		**Pn**	**10 08 51.8**	**-1.5**
K17K	**Iditarod**	**3.80**	**292**	IAML		10 09 58.8	
	comp=E,82nm,0.7s						
K17K				IAML		10 10 04.0	
	comp=N,99nm,1.1s						
KDAK	**Kodiak Island**	**3.86**	**196**	Pn	**Pn**	**10 08 53.0**	**-1.4**
	comp=N,21nm,0.3s,baz=25,slow=4.4,SNR=23						
KDAK				Sn	**Sn**	**10 09 36.1**	**-2.3**
	comp=N,1.7nm,0.3s,baz=318,slow=16,SNR=1.1						
KDAK				Lg	Lg	10 09 49.4	
	comp=N,6.7nm,0.3s,baz=196,slow=21,SNR=6.8						
	comp=N,5.7nm,0.3s						
KDAK	**Kodiak Island**	**3.86**	**196**		**Pn**	**10 08 53.5**	**-0.9**
KDAK				IAML		10 09 53.2	
	comp=N,104nm,0.8s						
KDAK				IAML		10 09 57.6	
	comp=N,117nm,0.8s						
TGL	**Tana Glacier**	**3.87**	**98**		**Pn**	**10 08 53.3**	**-1.4**
POKR	**Poker Plat Res**	**3.91**	**20**		**Pn**	**10 08 55.0**	**-0.2**
J25K	**Salcha River,**	**3.94**	**35**	IAML		10 09 50.0	
	comp=E,124nm,0.5s						
J25K				IAML		10 09 54.7	
	comp=N,71nm,0.4s						
SCRK	**Sand Creek**	**3.95**	**48**		**Pn**	**10 08 54.7**	**-1.1**
SCRK				IAML		10 10 06.5	
	comp=E,62nm,0.8s						
PTPK	**Patty Peak**	**3.96**	**91**		**Pn**	**10 08 55.4**	**-0.6**
KABU	**Katmai Buttres**	**3.99**	**218**		**Pn**	**10 08 56.3**	**-0.1**
BALM	**Baldy**	**4.04**	**93**		**Pn**	**10 08 56.5**	**-0.6**
M16K	**Timber Creek**	**4.04**	**267**		**Pn**	**10 08 56.3**	**-0.7**
KIAG	**Kiagna River**	**4.05**	**95**		**Pn**	**10 08 55.7**	**-1.7**
MGLS	**Mageik Landsli**	**4.07**	**216**		**Pn**	**10 08 57.5**	**+0.1**
ANCK	**Angle Creek**	**4.12**	**219**		**Pn**	**10 08 57.5**	**-0.6**
L16K	**Owhat River**	**4.22**	**277**		**Pn**	**10 08 58.6**	**-0.8**
L16K				IAML		10 09 45.8	
	comp=E,51nm,0.6s						
H21K	**Melozitna Rive**	**4.28**	**348**		**Pn**	**10 09 00.3**	**0.0**
H21K	**Melozitna Rive**	**4.28**	**348**	IAML		10 10 04.2	
	comp=E,54nm,0.6s						
GCSA	**Galena City Sc**	**4.31**	**322**		**Pn**	**10 09 00.4**	**-0.3**
J17K	**VABM Dome**	**4.35**	**300**		**Pn**	**10 09 00.5**	**-0.8**
BARN	**Barnard Glacie**	**4.36**	**92**		**Pn**	**10 09 01.0**	**-0.6**
L27K	**Beaver Creek,**	**4.41**	**65**		**Pn**	**10 09 01.5**	**-0.5**
J26L	**Joseph Creek**	**4.42**	**44**	IAML		10 10 01.7	
	comp=N,106nm,0.6s						
J26L				IAML		10 10 16.6	
	comp=E,56nm,0.5s						
H22K	**Ishtalitna Cre**	**4.42**	**356**	IAML		10 09 53.3	
	comp=E,54nm,0.9s						
H22K				IAML		10 09 53.4	
	comp=N,60nm,0.6s						
BCAR	**Beaver Creek A**	**4.43**	**65**		**Pn**	**10 09 02.0**	**-0.3**
H20K	**Anotleneega Mo**	**4.43**	**337**		**Pn**	**10 09 01.8**	**-0.5**
K27K	**Chicken**	**4.69**	**53**	IAML		10 10 23.8	
	comp=N,48nm,1.1s						
YUK2	**White River**	**4.69**	**82**		**Pn**	**10 09 05.5**	**-0.4**
IMAR	**Indian Mountai**	**4.71**	**344**		**Pn**	**10 09 05.8**	**-0.2**
BVCY	**Beaver Creek**	**4.71**	**75**		**Pn**	**10 09 06.0**	**-0.2**
H19K	**Roundabout Mou**	**4.80**	**330**		**Pn**	**10 09 07.0**	**-0.3**
H19K	**Roundabout Mou**	**4.80**	**330**	IAML		10 10 15.3	
	comp=E,57nm,0.8s						
H19K				IAML		10 10 24.9	
	comp=N,47nm,1.4s						
J16K	**Anvik River**	**4.96**	**295**		**Pn**	**10 09 08.9**	**-0.7**
J16K	**Anvik River**	**4.96**	**295**	IAML		10 10 38.9	
	comp=N,41nm,1.1s						
H18K	**Honhosa River**	**5.05**	**320**	IAML		10 10 09.0	
	comp=E,47nm,0.8s						
H18K				IAML		10 10 09.5	
	comp=N,39nm,0.8s						
I26K	**Coal Creek Min**	**5.09**	**38**		**Pn**	**10 09 11.2**	**-0.2**
I26K	**Coal Creek Min**	**5.09**	**38**	IAML		10 10 44.0	
	comp=E,42nm,1.1s						
I26K				IAML		10 10 49.4	
	comp=N,58nm,1.0s						
O15K	**Ungalikthiuk R**	**5.12**	**247**		**Pn**	**10 09 11.4**	**-0.4**
O15K	**Ungalikthiuk R**	**5.12**	**247**	IAML		10 11 10.0	
	comp=E,34nm,1.4s						
O28M	**Mount Upton**	**5.12**	**94**		**Pn**	**10 09 11.1**	**-0.9**
O28M	**Mount Upton**	**5.12**	**94**	IAML		10 10 35.2	
	comp=N,45nm,1.0s						
O28M				IAML		10 10 37.1	
	comp=E,46nm,0.8s						
L15K	**Ungalak Mounta**	**5.18**	**277**		**Pn**	**10 09 11.6**	**-0.9**
G21K	**Allakaket**	**5.19**	**347**		**Pn**	**10 09 12.5**	**-0.2**
G21K	**Allakaket**	**5.19**	**347**	IAML		10 10 12.1	
	comp=N,39nm,1.0s						
G21K				IAML		10 10 12.2	
	comp=E,50nm,0.9s						
I17K	**Unalakleet**	**5.21**	**302**		**Pn**	**10 09 12.8**	**-0.1**
K15K	**Wolf Creek Mou**	**5.21**	**284**		**Pn**	**10 09 12.5**	**-0.4**
G23K	**Bananza Creek**	**5.24**	**3**	IAML		10 10 13.5	
	comp=N,27nm,0.7s						
H17K	**Granite Mounta**	**5.42**	**313**		**Pn**	**10 09 15.8**	**0.0**
G19K	**Purcell Mounta**	**5.46**	**331**		**Pn**	**10 09 15.9**	**-0.4**
G18K	**Tagagawik**	**5.66**	**325**		**Pn**	**10 09 19.0**	**-0.2**
COLD	**Coldfoot**	**5.75**	**2**		**Pn**	**10 09 20.4**	**0.0**
DAWY	**Dawson**	**5.77**	**59**		**Pn**	**10 09 20.2**	**-0.5**
L14K	**Kuka Creek**	**5.78**	**274**		**Pn**	**10 09 20.7**	**-0.1**
F20K	**Avaraart Lake**	**5.99**	**341**		**Pn**	**10 09 23.6**	**-0.1**
G17K	**Kiwalik Mounta**	**6.01**	**316**		**Pn**	**10 09 23.9**	**0.0**
L29M	**L29M**	**6.06**	**69**		**Pn**	**10 09 24.3**	**-0.4**
H16K	**Elim**	**6.13**	**306**		**Pn**	**10 09 25.2**	**-0.4**
J14K	**Nanvaranak Lak**	**6.18**	**287**		**Pn**	**10 09 25.9**	**-0.3**
F19K	**Shaleruckik Mo**	**6.19**	**333**		**Pn**	**10 09 26.2**	**-0.1**
I28M	**Miner Creek**	**6.22**	**46**		**Pn**	**10 09 26.5**	**-0.4**
H27K	**Steamboat Moun**	**6.22**	**36**		**Pn**	**10 09 26.2**	**-0.7**
K29M	**Barlow Dome**	**6.49**	**63**		**Pn**	**10 09 29.9**	**-0.7**
N30M	**Aishikik Lake**	**6.50**	**84**		**Pn**	**10 09 29.0**	**-1.7**
G16K	**Koyuk River**	**6.54**	**312**		**Pn**	**10 09 30.8**	**-0.3**
E19K	**Redstone River**	**6.62**	**337**		**Pn**	**10 09 32.6**	**+0.4**
G15K	**Niukluk**	**6.98**	**306**		**Pn**	**10 09 37.0**	**-0.2**
E25K	**Arctic Village**	**6.99**	**16**		**Pn**	**10 09 37.6**	**+0.3**
H29M	**Whitestone**	**7.19**	**44**		**Pn**	**10 09 39.8**	**-0.3**
J30M	**Hart River**	**7.20**	**58**		**Pn**	**10 09 40.4**	**0.0**
ANM	**Nome**	**7.36**	**301**		**Pn**	**10 09 42.9**	**+0.5**
INK	**Inuvik**	**9.94**	**39**	Pn	**Pn**	**10 10 17.4**	**-0.2**
	comp=N,0.2nm,0.3s,baz=259,slow=19,SNR=11						
INK				Sn	**Sn**	**10 12 09.1**	**+1.7**
	comp=N,0.2nm,0.3s,baz=134,slow=32,SNR=3.0						
INK				Lg	Lg	10 13 06.5	
	baz=305,slow=33						
DLBC	**Dease Lake**	**10.77**	**97**	Pn	Pn	10 10 34.4	+5.3
	comp=N,0.1nm,0.3s,baz=183,slow=14,SNR=1.6						
	comp=N,1.3nm,0.9s						
SONM	**Songino Array**	**54.83**	**307**	P	**P**	**10 17 20.8**	**-0.8**
	comp=N,1.8nm,0.9s,baz=54,slow=7.3,SNR=5.0						
	comp=N,1.8nm,0.9s						
ZALV	**Zalesovo Beam**	**56.83**	**324**	P	**P**	**10 17 36.5**	**+0.7**
	comp=N,0.7nm,0.6s,baz=26,slow=8.0,SNR=3.9						
	comp=N,0.7nm,0.6s						
BVAR	**Borovoye Array**	**61.26**	**333**	P	**P**	**10 18 07.1**	**+0.7**
	comp=N,0.5nm,0.6s,baz=78,slow=7.7,SNR=2.4						
	comp=N,0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**61.53**	**327**	P	**P**	**10 18 09.2**	**+1.0**
	comp=N,0.2nm,0.3s,baz=44,slow=6.8,SNR=1.5						
	comp=N,0.2nm,0.3s						
MKAR	**Makanchi Array**	**63.96**	**322**	P	**P**	**10 18 24.8**	**+0.3**
	comp=N,0.3nm,0.5s,baz=32,slow=5.4,SNR=2.5						
	comp=N,0.3nm,0.5s						

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*NEIC **09** 10:15:42.0±1.6, 24°.6S±0°.1×178°.0W±0°.2, h447^{km}±18^{km}, mb4.3/20, Error ellipse: s-maj=25.7km s-min=12.4km az=113.0*

*IDC **09** 10:16:02.2±3.9, 25°.78S×179°.88E, h525^{km}±46^{km}, mb3.5/5, mbtmp4.5/7, Error ellipse: s-maj=41.3km s-min=22.6km az=176.0*

ISC 09 10:15:41.4±0.9**,24°.63S**±0°.10×**178°.0W**±0°.1**,h450**^{km}**,n43,**
σ**1.**^{s}**03**/37**,mb4.2**/14**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.61**	**179**	P	**P**	**10 17 01.4**	**-0.5**

MSVF	Nonsavu	7.79	331	P	P	10 17 35.9	+1.1
NIUE	Niue	9.30	55	P	P	10 17 50.8	-0.2
AFI	Afiamalu	12.16	30	P	P	10 18 21.3	-0.9
PINNC	Pines Island,	13.50	276	P	P	10 18 35.1	-1.4
TOZ	Tahuroa Road	14.20	202	P	P	10 18 44.3	+0.5
URZ	Urewera	14.22	196	P	P	10 18 46.7	+2.7
	8.7nm,0.4s,baz=332,slow=5.2,SNR=14						
URZ				S	S	10 21 04.1	-11
	11nm,0.9s,baz=175,slow=22,SNR=2.0						
DZM	Mont Dzumac	14.53	277	P	P	10 18 48.5	+0.9
	9.7nm,0.8s,baz=100,slow=15,SNR=6.6						
DZM	Mont Dzumac	14.53	277	P	P	10 18 48.2	+0.5
RTZ	Ruatahuna	14.59	196	P	P	10 18 48.9	+0.8
BKZ	Black Stump Fm	15.23	197	P	P	10 18 55.4	+0.5
BKZ				IAmb	IAmb	10 19 01.5	
	comp=Z,17nm,1.2s						
MRZ	Mangatainoka R	16.87	197	P	P	10 19 12.6	+0.4
TCW	Tory Channel	17.75	199	P	P	10 19 22.6	+1.1
QRZ	Quartz Range	18.00	204	P	P	10 19 24.7	+0.8
TUWZ	Tuamarina	18.06	200	P	P	10 19 24.7	+0.2
MRNZ	Matariki Terra	18.42	203	P	P	10 19 28.7	+0.6
THZ	Tophouse	18.69	202	P	P	10 19 31.4	+0.7
INZ	Inchbonnie	20.05	203	P	P	10 19 43.9	+0.8
ARMA	Armidale	27.51	251	P	P	10 20 49.2	-0.9
EIDS	Eidsvold	28.02	262	P	P	10 20 54.1	-0.5
EIDS				IAmb	IAmb	10 20 54.7	
	comp=Z,11nm,0.7s						
CTAO	Charters Tower	33.32	271	P	P	10 21 41.3	+0.7
CTAO				IAmb	IAmb	10 21 42.2	
	comp=Z,12nm,0.9s						
STKA	Stephens Creek	36.17	249	P	P	10 22 01.8	-2.6
	comp=Z,2.9nm,0.4s,baz=98,slow=12,SNR=11						
	comp=Z,2.9nm,0.4s						
STKA	Stephens Creek	36.17	249	P	P	10 22 03.2	-1.2
INKA	Innaminka	37.04	256	P	P	10 22 11.2	-0.5
COEN	Coen	38.04	279	P	P	10 22 20.4	+0.3
BBOO	Buckleboo	40.86	248	P	P	10 22 41.1	-1.6
BBOO				IAmb	IAmb	10 23 00.5	
	comp=Z,34nm,1.5s						
AS31	Alice Springs	43.73	261	P	P	10 23 05.5	-0.2
AS31				IAmb	IAmb	10 23 07.0	
	comp=Z,3.2nm,0.4s						
ASAR	Alice Springs	43.73	261	P	P	10 23 05.2	-0.5
	comp=Z,3.2nm,0.4s,baz=93,slow=7.8,SNR=103						
	comp=Z,3.2nm,0.4s						
ASAR	Alice Springs	43.73	261	P	P	10 23 05.2	-0.5
WRAB	Tennant Creek	44.18	266	P	P	10 23 09.0	-0.1
WRAB				IAmb	IAmb	10 23 10.1	
	comp=Z,4.9nm,0.5s						
WB0	Warramunga Arr	44.19	266		P	10 23 09.2	-0.1
WB0				IAmb	IAmb	10 23 10.5	
	comp=Z,6.2nm,0.7s						
WRA	Warramunga Arr	44.19	266	P	P	10 23 08.8	-0.4
	comp=Z,4.7nm,0.4s,baz=101,slow=6.4,SNR=116						
	comp=Z,4.7nm,0.4s						
WRA	Warramunga Arr	44.19	266		P	10 23 09.0	-0.2
FORT	Forrest	47.79	250	P	P	10 23 35.2	-1.4
FORT				IAmb	IAmb	10 23 58.6	
	comp=Z,9.5nm,1.1s						
KNRA	Kununurra	50.52	270	P	P	10 23 58.6	+1.4
KNRA				IAmb	IAmb	10 24 00.5	
	comp=Z,14nm,1.0s						
FITZ	Fitzroy Crossi	52.60	265	P	P	10 24 13.1	+0.8
MORW	Morawa	58.35	250	P	P	10 24 52.7	+0.2
MORW				IAmb	IAmb	10 25 18.6	
	comp=Z,19nm,1.3s						
NVAR	Mina Array Bea	84.01	43	P	P	10 27 48.3	+25
	comp=Z,1.1nm,0.8s,baz=222,slow=7.7,SNR=9.5						
	comp=Z,1.1nm,0.8s						
TXAR	Lajitas Array	89.27	57	P	P	10 28 13.6	+25
	comp=Z,0.9nm,0.8s,baz=216,slow=6.4,SNR=12						
	comp=Z,0.9nm,0.8s						
NB2	NORSAR Subarra	143.06	353	PKP	PKiKP	10 34 35.8	+10
	comp=Z,0.9nm,0.6s,baz=20,slow=3.6						
NOA	NORSAR Array B	143.06	353	PKP	PKiKP	10 34 34.3	+8.3
	comp=Z,2.1nm,0.8s,baz=15,slow=4.9,SNR=4.9						
HFS	Hagfors	143.59	350	PKP	PKiKP	10 34 36.8	+10
	comp=Z,2.8nm,0.8s,baz=48,slow=2.2,SNR=5.9						
EKA	Eskdalemuir Ar	149.09	6	PKPbc	PKPab	10 34 53.3	+10
	comp=Z,2.1nm,0.8s,baz=270,slow=0.5,SNR=3.5						

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*JMA **09** 10:18:35.8±0.1, 33°.2N±0°.3×14°1E±°, h59^{km}±3^{km}, MV3.7/35, E OFF HACHIJOJIMA ISLAND*

*IDC **09** 10:18:36.2±3.1, 32°.99N×140°.67E, h58^{km}±29^{km}, mb3.7/3, mbtmp3.8/4, ML2.6/1, Error ellipse: s-maj=49.8km s-min=16.7km az=90.0*

ISC 09 10:18:35.6±1.5**, 33°.11N**±0°.05×**140°.8E**±0°.1**, h55**^{km}±16^{km}**, n23, σ0^{s}.78**/28**, mb3.9**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	0.82	270	P	Pn	10 18 51.5	+0.4
JHJ2				*e*S	Sn	10 19 02.9	+0.3
JHCJ	Hachijojimakas	0.84	268	P	Pn	10 18 51.6	+0.2
JHCJ				S	Sn	10 19 02.4	-0.6
JHJ	Hachijo jima 2	0.85	271	P	Pn	10 18 51.6	+0.1
	682nm,0.3s,baz=338,slow=17,SNR=168						
JHJ				S	Sn	10 19 02.5	-0.7
	836nm,0.3s,baz=85,slow=22,SNR=8.3						
JAOM	Aogashimamukai	1.08	234	P	Pn	10 18 55.3	+0.6
JAOM				*e*S	Sn	10 19 09.4	+0.7
JMKN	Mikurajimanish	1.27	308	P	Pn	10 18 57.2	0.0
JMKN				*e*S	Sn	10 19 12.2	-1.0
JMYK	Miyake Tsubota	1.41	313	*e*P	Pn	10 18 59.2	+0.2
JMYK				*e*S	Sn	10 19 16.1	-0.4
BSO1	Boso 1	1.54	6	*e*P	Pn	10 19 00.6	+0.2
BSO3	Boso 3	1.70	352	P	Pn	10 19 03.1	+0.4
BSO3				S	Sn	10 19 23.7	+0.4
JIM2	Oshima 3	1.96	325	P	Pn	10 19 06.6	0.0
JIZS	Izushimoda	2.26	316	*e*P	Pn	10 19 11.4	+0.8
JIZS				S	Sn	10 19 37.2	-0.1
KTJ3	Kamata3	2.31	322	*e*P	Pn	10 19 11.6	+0.3
KTJ3				*e*S	Sn	10 19 38.3	-0.3
JOD2	Odawara 2	2.57	327	P	Pn	10 19 15.1	+0.2
JOD2				S	Sn	10 19 43.4	-1.6
TK02	Tokai 2	2.67	289	P	Pn	10 19 17.3	+1.3
MJAR	Matsushiro Arr	4.03	329	P	Pn	10 19 35.8	+1.0
	0.3nm,0.3s,baz=158,slow=11,SNR=15						
MJAR				S	Sn	10 20 22.7	+1.9
	3.0nm,0.6s,baz=146,slow=23,SNR=2.4						
	1.5nm,0.3s						
H11N2	WAKE ISLAND Hy	26.82	113	T	T	10 52 59.2	
	baz=305,slow=75,SNR=18						
H11N1	WAKE ISLAND Hy	26.82	113	T	T	10 53 06.9	
	baz=305,slow=75,SNR=14						
H11N3	WAKE ISLAND Hy	26.84	113	T	T	10 53 06.7	
	baz=305,slow=75,SNR=16						
H11S3	WAKE ISLAND Hy	27.38	116	T	T	10 53 39.9	
	baz=307,slow=75,SNR=4.1						
H11S1	WAKE ISLAND Hy	27.38	116	T	T	10 53 41.8	
	baz=307,slow=75,SNR=2.5						
H11S2	WAKE ISLAND Hy	27.40	116	T	T	10 53 41.8	
	baz=307,slow=75,SNR=3.3						
WRA	Warramunga Arr	53.12	188	P	P	10 27 46.7	-1.0
	1.6nm,0.4s,baz=5.8,slow=7.5,SNR=31						
	1.6nm,0.4s						
ASAR	Alice Springs	56.84	188	P	P	10 28 14.1	-0.6
	0.5nm,0.5s,baz=4.3,slow=7.4,SNR=16						
	0.5nm,0.5s						
TXAR	Lajitas Array	92.92	52	P	P	10 31 43.5	+0.3
	0.3nm,0.7s,baz=290,slow=4.1,SNR=4.6						
	0.3nm,0.7s						

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*IDC **09** 10:33:52.5±1.3, 20°.56S×173°.48W, h0^{km}, mb4.0/10, mbtmp4.0/11, ML4.0/1, MS3.6/11, Error ellipse: s-maj=57.3km s-min=19.3km az=150.0*

*NEIC **09** 10:33:53.7±2.7, 20°.3S±0°.1×173°.27W±0°.07, h10^{km}±1^{km}, mb4.6/23, Error ellipse: s-maj=19.2km s-min=11.6km az=176.0*

ISC 09 10:33:53.2±0.5**, 20°.4S**±0°.1×**173°.24W**±0°.06**, h10**^{km}**, n55, σ1^{s}.80**/41**, mb4.5**/19**, MS3.7**/10**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	3.37	68	Pn	Pn	10 34 45.7	-0.2
NIUE					Sn	10 35 19.9	-6.1
AFI	Afiamalu	6.56	13	Pn	Pn	10 35 27.8	-2.1
MSVF	Nonsavu	8.64	286		Pn	10 35 59.4	+0.9
RAR	Rarotonga	12.62	96	Pn	Pn	10 36 52.7	-0.2
	2.1nm,0.3s,baz=260,slow=8.9,SNR=11						
RAR				Sn	Sn	10 39 02.8	-11
	0.8nm,0.3s,baz=101,slow=10,SNR=2.0						
RAR				LR	LR	10 41 18.2	
	comp=Z,223nm,18.8s,baz=278,slow=35						
MARNC	Mare, Loyalty	17.54	263		Pn	10 37 57.6	-0.4
MARNC				IAmb	IAmb	10 38 34.3	
	comp=Z,98nm,1.3s						
PINNC	Pines Island,	18.12	259		Pn	10 38 04.6	-0.5
PINNC				IAmb	IAmb	10 38 48.1	
	comp=Z,40nm,1.1s						
DZM	Mont Dzumac	19.02	261	P	P	10 38 14.3	-1.2
	comp=Z,0.5nm,0.3s,baz=86,slow=20,SNR=5.8						
	comp=Z,4.8nm,0.6s						
DZM	Mont Dzumac	19.02	261	*e*P	P	10 38 11.6	-3.9
	comp=Z,43nm,1.4s						
DZM				*e*S	Sn	10 41 33.7	-16
	comp=Z,75nm,23.8s						
DZM				*e*LR	LR	10 42 33.2	
	comp=Z,276nm,24.7s						
URZ	Urewera	19.71	203	P	P	10 38 23.3	+0.6
	comp=Z,6.8nm,0.8s,baz=160,slow=19,SNR=1.7						
URZ				S	S	10 41 48.8	-16
	comp=Z,36nm,1.3s,baz=139,slow=7.5,SNR=2.2						
TBI	Tubuai	22.26	102	*e*P	P	10 38 39.3	-11
	comp=Z,316nm,36.2s						
TBI				*e*LR	LR	10 44 06.3	
	comp=Z,1µm,31.8s						
PPT	Papeete	22.55	87	LR	LR	10 46 10.2	
	comp=Z,176nm,18.3s,baz=257,slow=32						
LTZ	Lake Taylor	25.47	205	P	P	10 39 21.2	-0.3
LTZ				IAmb	IAmb	10 39 58.5	
	comp=Z,32nm,1.5s						
INZ	Inchbonnie	25.76	207	P	P	10 39 24.0	-0.1
TAOE	Nuku Hiva Isla	33.92	75	*e*LR	LR	10 49 20.4	
	comp=Z,168nm,26.9s						
CAN	Canberra	36.33	238	P	P	10 40 57.5	+0.1
CAN				IAmb	IAmb	10 41 04.4	
	comp=Z,24nm,1.4s						
CTAO	Charters Tower	37.95	263	P	P	10 41 10.7	-0.6
CTAO				IAmb	IAmb	10 41 27.7	
	comp=Z,9.5nm,1.1s						
TOO	Toolangi	39.62	235	P	P	10 41 25.4	+0.2
TAU	Tasmania Unive	39.92	227	P	P	10 41 26.7	-0.8
STKA	Stephens Creek	41.88	245	P	P	10 41 42.0	-1.9
	comp=Z,2.7nm,0.7s,baz=53,slow=7.5,SNR=6.3						
STKA				LR	LR	10 58 38.0	
	comp=Z,76nm,18.0s,baz=51,slow=36						
	comp=Z,2.7nm,0.7s						
STKA	Stephens Creek	41.88	245	IAmb	IAmb	10 41 44.0	
	comp=Z,16nm,0.8s						
COEN	Coen	42.04	272	P	P	10 41 44.5	-0.8
COEN				IAmb	IAmb	10 42 26.6	
	comp=Z,13nm,1.2s						
BBOO	Buckleboo	46.61	244	P	P	10 42 21.5	-0.3
AS31	Alice Springs	48.89	256	P	P	10 42 38.3	-1.3
ASAR	Alice Springs	48.89	256	P	P	10 42 38.0	-1.6
	comp=Z,2.1nm,0.8s,baz=102,slow=7.9,SNR=25						
ASAR				PcP	PcP	10 44 05.2	+1.0
	comp=Z,1.1nm,0.7s,baz=99,slow=4.2,SNR=6.2						
ASAR				LR	LR	11 02 09.7	
	comp=Z,63nm,19.4s,baz=109,slow=35						
	comp=Z,2.1nm,0.8s						
WB0	Warramunga Arr	49.02	261	P	P	10 42 39.2	-1.4
WB0				IAmb	IAmb	10 42 42.3	
	comp=Z,4.2nm,0.8s						
WRAB	Tennant Creek	49.03	261	P	P	10 42 38.9	-1.8
WRAB				IAmb	IAmb	10 42 51.8	
	comp=Z,5.3nm,1.1s						
WRA	Warramunga Arr	49.04	261	P	P	10 42 38.8	-2.0
	comp=Z,1.9nm,0.7s,baz=96,slow=7.1,SNR=23						
	comp=Z,1.9nm,0.7s						
WRA	Warramunga Arr	49.04	261	P	P	10 42 38.9	-1.9
GUMO	Guam	53.24	306	LR	LR	11 03 36.6	
	comp=Z,19nm,19.4s,baz=170,slow=34						
FORT	Forrest	53.45	246	P	P	10 43 12.8	-0.9
FORT				IAmb	IAmb	10 43 18.7	
	comp=Z,9.7nm,1.1s						
MTN	Manton Dam	53.63	269	P	P	10 43 12.7	-2.5
MTN				IAmb	IAmb	10 43 17.9	
	comp=Z,4.8nm,0.8s						
KNRA	Kununurra	55.12	265	P	P	10 43 24.3	-1.8
KNRA				IAmb	IAmb	10 43 44.1	
	comp=Z,7.5nm,0.9s						
FITZ	Fitzroy Crossi	57.47	261	LR	LR	11 08 37.8	
	comp=Z,89nm,18.3s,baz=224,slow=36						
FITZ	Fitzroy Crossi	57.47	261	P	P	10 43 42.3	-0.5
VNDA	Vanda	58.49	186	LR	LR	11 03 45.3	
	comp=Z,30nm,20.6s,baz=212,slow=31						
SOEI	Soe	60.96	270	P	P	10 44 07.4	+0.1
BATI	Baumata	61.39	269	LR	LR	11 10 01.4	
	comp=Z,55nm,18.9s,baz=147,slow=36						
MJAR	Matsushiro Arr	72.83	321	P	P	10 45 22.7	+0.4
	comp=Z,1.9nm,0.6s,baz=152,slow=6.4,SNR=5.3						
	comp=Z,1.9nm,0.6s						
MJAR	Matsushiro Arr	72.83	321	IAmb	IAmb	10 45 47.9	
	comp=Z,3.8nm,1.2s						
LPIG	La Paz	75.53	57	LR	LR	11 13 12.0	
	comp=Z,86nm,19.8s,baz=46,slow=31						
PETK	Petropavlovsk-	77.37	343	P	P	10 45 49.7	+1.6
	comp=Z,4.3nm,1.0s,baz=161,slow=5.3,SNR=4.9						
	comp=Z,4.3nm,1.0s						
NVAR	Mina Array Bea	77.91	41	P	P	10 45 54.7	+3.0
	comp=Z,0.5nm,0.6s,baz=226,slow=7.9,SNR=5.4						
	comp=Z,0.5nm,0.6s						
H03S2	Juan Fernandez	82.36	123	T	T	12 18 56.3	
	baz=248,slow=75,SNR=4.4						
H03S1	Juan Fernandez	82.38	123	T	T	12 18 58.0	
	baz=248,slow=75,SNR=4.9						
H03S3	Juan Fernandez	82.38	123	T	T	12 18 55.2	
	baz=248,slow=75,SNR=3.8						
TXAR	Lajitas Array	83.25	55	P	P	10 46 22.2	+1.8
	comp=Z,0.3nm,0.9s,baz=251,slow=4.6,SNR=2.4						
	comp=Z,0.3nm,0.9s						
PDAR	Pinedale Array	85.84	41	P	P	10 46 35.8	+2.4
	comp=Z,0.5nm,0.8s,baz=186,slow=5.8,SNR=4.1						
	comp=Z,0.5nm,0.8s						
BPAW	Bear Paw Mtn.	85.94	10	P	P	10 46 34.2	+1.1
PLCA	Paso Flores	86.09	132	LR	LR	11 18 39.8	
	comp=Z,48nm,18.6s,baz=34,slow=31						
ILAR	Eielson Array	87.25	11	P	P	10 46 41.5	+2.0
	comp=Z,0.3nm,0.7s,baz=227,slow=6.3,SNR=6.8						
	comp=Z,0.3nm,0.7s						
CMAR	Chiang Mai Arr	94.30	288	P	P	10 47 14.4	+0.9
	comp=Z,0.7nm,0.4s,baz=112,slow=2.2,SNR=4.4						
	comp=Z,0.7nm,0.4s						
LPAZ	La Paz	97.96	111	LR	LR	11 22 59.1	
	comp=Z,41nm,21.4s,baz=48,slow=30						
BVAR	Borovoye Array	121.83	320	PKP	PKiKP	10 52 49.0	+1.4
	comp=Z,1.0nm,0.5s,baz=116,slow=3.4,SNR=1.6						
AKASG	Malin Array Be	144.91	335	PKPbc	PKPbc	10 53 30.2	+0.6
	comp=Z,0.9nm,0.4s,baz=43,slow=4.3,SNR=11						
BRTR	Keskin Array B	149.95	316	PKPbc	PKPbc	10 53 45.1	+0.8
	comp=Z,1.0nm,0.8s,baz=149,slow=2.9,SNR=4.9						

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*NNC **09** 10:50:06.2±1.5, 52°.18N×75°.71E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=27.9km s-min=9.3km az=28.0, Suspected Mining explosion.*

*IDC **09** 10:50:07.9±0.9, 51°.69N×75°.49E, h0^{km}, mbtmp2.6/4, ML1.9/4, Error ellipse: s-maj=21.1km s-min=7.6km az=29.0*

ISC 09 10:50:07.0±1.0**, 51°.64N**±0°.09×**75°.43E**±0°.05**, h0**^{km}**, n9, σ0^{s}.86**/12**, 5C-1D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	2.20	116	Pn	Pn	10 50 45.5	+0.7
	0.2nm,0.3s,baz=304,slow=19,SNR=17						
KURBB				Lg	Lg	10 51 15.8	
	0.3nm,0.3s,baz=305,slow=29,SNR=11						
	1.9nm,0.6s						
KURBB	Kurchatov Arra	2.20	116	⇑Pn	Pb	10 50 46.6	-1.0
	10nm,0.8s,baz=307,slow=18						
KURBB				⇑Sn	Sg	10 51 17.1	-0.5
	27nm,0.6s,baz=315,slow=30						
KURK	Kurchatov	2.21	114	⇑Pn	Pn	10 50 45.6	+0.7
	1.5nm,0.7s						
KURK				⇑Sn	Sb	10 51 15.6	0.0
	3.6nm,0.7s						
BVA0	Borovoye Array	3.39	296	Pg	Pb	10 51 06.5	-1.4
	2.3nm,0.6s,baz=274,slow=35,SNR=6.9						
BVA0				⇓Lg	Lg	10 51 55.0	
	8.5nm,0.8s,baz=110,slow=28,SNR=4.3						
BVAR	Borovoye Array	3.39	296	Pn	Pn	10 51 01.9	+0.8
	0.1nm,0.3s,baz=114,slow=20,SNR=10						
BVAR				Sn	Sn	10 51 42.4	+0.3
	baz=113,slow=20,SNR=3.8						
BVAR				Lg	Lg	10 51 54.9	
	baz=108,slow=28,SNR=3.9						
	1.5nm,0.7s						
I46RU	ZALESOVO INFRA	6.14	64	I	I	11 29 40.0	
	baz=247,slow=295,SNR=1.2						
ZALV	Zalesovo Beam	6.14	64	Pn	Pn	10 51 39.1	+0.3
	0.1nm,0.3s,baz=252,slow=14,SNR=5.6						
ZALV				Sn	Sn	10 52 50.8	+1.0
	0.1nm,0.3s,baz=258,slow=28,SNR=2.8						
ZALV				Lg	Lg	10 53 22.6	
	0.2nm,0.3s,baz=256,slow=31,SNR=5.2						
	1.1nm,0.6s						
MK31	Makanchi Array	6.61	135	⇑Lg	Lg	10 53 45.0	
	4.0nm,0.7s,baz=320,slow=26,SNR=3.9						
MKAR	Makanchi Array	6.61	135	Pn	Pn	10 51 46.1	+0.8
	0.1nm,0.3s,baz=324,slow=11,SNR=5.1						
MKAR				Sn	Sn	10 53 01.2	-0.1
	0.1nm,0.3s,baz=320,slow=22,SNR=5.1						
MKAR				Lg	Lg	10 53 34.9	
	0.2nm,0.3s,baz=318,slow=25,SNR=7.5						
	0.5nm,0.7s						

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*VIE **09** 11:03:41.9±0.4, 50°.14N×18°.40E, h0^{km}, mb2.1/1, ml2.5/3, Error ellipse: s-maj=6.0km s-min=2.1km az=157.0 36 km NNE of Ostrava Suspected Mining induced.*

*IPEC **09** 11:03:42.5±0.2, 50°.09N×18°.45E, h1^{km}, ML2.4/6, Error ellipse: s-maj=1.7km s-min=1.5km az=16.0*

*IDC **09** 11:03:43.1±1.6, 49°.99N×18°.39E, h0^{km}, mbtmp3.7/4, ML2.6/4, Error ellipse: s-maj=29.0km s-min=11.5km az=138.0*

*PRU **09** 11:03:44.9, 50°.06N×18°.33E, h0^{km}*

ISC 09 11:03:41.9±0.7**, 50°.09N**±0°.03×**18°.43E**±0°.02**, h0**^{km}**, n38, σ1^{s}.13**/67**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	Raciborz	0.15	266	*e*PG	Pg	11 03 46.8	+1.9
RAC				*e*SG	Sg	11 03 50.2	+3.4
OKC	Ostrava-Krasne	0.32	216	*e*PG	Pg	11 03 49.1	+1.2
OKC				*e*SG	Sg	11 03 53.8	+1.8
	comp=Z,149nm,0.6s						
STEB	Steborice	0.45	250	*e*PG	Pg	11 03 51.8	+1.2
STEB				*e*SG	Sg	11 03 58.3	+1.8
MORC	Moravsky Berou	0.66	241	*e*PG	Pg	11 03 55.3	+0.8
MORC				*e*SG	Sg	11 04 03.6	+0.6
MORC	Moravsky Berou	0.66	241	*e*Pg	Pg	11 03 55.2	+0.8
	baz=61						
MORC				*e*Sg	Sg	11 04 03.5	+0.6
	78nm,0.4s,baz=61						
ANAC	Anensky vrch	0.68	269	*e*Pg	Pg	11 03 55.7	+0.8
	baz=88						
ANAC				*e*Sg	Sg	11 04 04.1	+0.4
	60nm,0.3s,baz=88						
LOSC	Losov	0.83	236	*e*Pg	Pg	11 03 58.6	+0.7
	baz=55						
LOSC				*e*Sg	Sg	11 04 09.1	+0.5
	56nm,0.3s,baz=55						
OJC	Ojcow	0.89	81	*e*Pg	Pg	11 03 59.3	+0.4
OJC				*e*Sg	Sg	11 04 11.4	+0.9
KRLC	Kraliky	1.06	270	*e*PG	Pg	11 04 02.2	-0.1
KRLC				*e*SG	Sg	11 04 15.9	-0.2
	comp=Z,47nm,0.7s						
LANS	Liptovska Anna	1.16	144	*e*PG	Pg	11 04 04.6	+0.5
LANS				*e*SG	Sb	11 04 20.5	0.0
LANS				*e*LG	Lg	11 04 23.8	
JAVC	Velka Javorina	1.33	202	*e*Pg	Pg	11 04 07.8	+0.4
	baz=22						
DPC	Dobruska-Polom	1.38	282	*e*PG	Pg	11 04 08.7	+0.3
DPC				*e*SG	Sn	11 04 27.8	+0.3
	comp=Z,58nm,0.4s						
NIE	Niedzica	1.39	118	*e*Pg	Pb	11 04 09.1	+0.3
NIE				*e*Sg	Sn	11 04 28.7	+1.0
VRAC	Vranov	1.43	237	Pg	Pn	11 04 09.1	-0.1
	1.9nm,0.3s,baz=64,slow=14,SNR=13						
VRAC				Lg	Lg	11 04 27.5	
	9.6nm,0.3s,baz=104,slow=14,SNR=22						
VRAC	Vranov	1.43	237	*e*PG	Pn	11 04 09.1	-0.1
VRAC				*e*SG	Sg	11 04 27.5	-0.3
VRAC	Vranov	1.43	237	*e*Pg	Pn	11 04 09.0	-0.1
	baz=56						
VRAC				*e*Sg	Sg	11 04 27.4	-0.3
	34nm,0.3s,baz=56						
OSTC	Ostas	1.49	289	*e*PG	Pn	11 04 10.4	+0.3
OSTC				*e*SG	Sn	11 04 31.3	+1.0
	comp=Z,30nm,0.8s						
KSP	Ksiaz	1.56	300	*e*Pg	Pn	11 04 10.7	-0.3
KSP				*e*Sg	Sg	11 04 32.7	+0.7
CHVC	Chvalec	1.60	289	*e*PG	Pn	11 04 12.1	+0.6
CHVC				*e*SG	Sg	11 04 34.6	+1.2
	comp=Z,16nm,0.5s						
UPC	Upice	1.61	286	*e*PG	Pb	11 04 12.5	0.0
UPC				*e*SG	Sg	11 04 34.4	+0.9
	comp=Z,21nm,0.5s						
KRUC	Moravsky	1.68	233	*e*PN	Pn	11 04 13.0	+0.4
KRUC				*e*SG	Sn	11 04 35.5	+0.7
KRUC	Moravsky	1.68	233	*e*Pn	Pn	11 04 12.9	+0.4
	baz=52						
KRUC				*e*Sg	Sn	11 04 35.4	+0.7
	25nm,0.3s,baz=52						
MODS	Modra-Piesok	1.88	204	*e*PN	Pn	11 04 13.2	-2.1
MODS				*e*SN	Sn	11 04 40.2	+0.4
STHS	Stebnicka Huta	1.95	109	*e*PG	Pg	11 04 19.1	-0.1
STHS				*e*SG	Sg	11 04 47.5	+3.1
STHS				*e*LG	Lg	11 04 48.5	
KECS	Kecovo	2.10	139	*e*PN	Pn	11 04 18.6	+0.3
KECS				*e*SN	Sn	11 04 44.3	-0.8
KECS				*e*LG	Lg	11 04 50.1	
PRU	Pruhonice	2.51	269	*e*PG	Pb	11 04 26.6	-1.3
PRU				*e*SG	Sb	11 04 59.8	+0.5
	comp=Z,14nm,0.6s						
PVCC	Panska Ves	2.51	281	*e*PG	Pg	11 04 30.0	-0.1
PVCC				*e*SG	Sg	11 05 04.1	+1.4
	comp=Z,36nm,0.8s						
CONA	Conrad Observa	2.75	219	*i* Sn	Sn	11 05 00.2	-1.1
	2.6nm,0.3s						
RONA	Rosalia, Austr	2.78	211	*e*Pn	Pn	11 04 27.8	+0.1
	0.8nm,0.2s						
RONA				*e*Sn	Sn	11 05 01.5	-0.4
	1.5nm,0.2s						
ZVC	Zvikov	2.83	258	*e*PG	Pb	11 04 34.9	+1.7
ZVC				*e*SG	Sg	11 05 11.8	-0.8
	comp=Z,19nm,0.7s						
CKRC	Cesky Krumlov	2.98	246	*e*SG	Sg	11 05 16.1	-1.4
	comp=Z,13nm,0.6s						
KHC	Kasperske Hory	3.30	255	*e*PG	Pg	11 04 44.5	-0.6
KHC				*e*SG	Sg	11 05 26.2	-1.7
	comp=Z,13nm,0.5s						
GERES	GERESS Array B	3.33	250	Pn	Pn	11 04 35.2	-0.1
	baz=70,slow=13,SNR=1.3						
GERES				Pg	Pb	11 04 42.7	+0.8
	0.1nm,0.3s,baz=64,slow=18,SNR=6.1						
GERES				Lg	Lg	11 05 27.2	
	0.4nm,0.3s,baz=67,slow=28,SNR=14						
MOA	Molln	3.54	232	*e*Sg	Sg	11 05 33.7	-2.0
	2.7nm,0.4s						
DAVOX	Davos/Dischmat	6.58	243	Pn	Pn	11 05 20.2	0.0
	0.4nm,0.3s,baz=103,slow=18,SNR=2.6						
DAVOX				Lg	Lg	11 07 09.7	
	0.2nm,0.3s,baz=304,slow=23,SNR=2.4						
	0.7nm,0.4s						
FINES	FINESS Array B	12.15	18	Pn	Pn	11 06 33.7	-2.4
	0.1nm,0.3s,baz=200,slow=12,SNR=0.9						
	2.6nm,0.8s						
IDI	Anoyia	15.53	160	Pn	Pn	11 07 23.8	+1.6
	0.2nm,0.3s,baz=337,slow=15,SNR=1.8						
	5.6nm,0.9s						
ARCES	ARCESS Array B	19.80	7	Pn	P	11 08 11.9	-1.6
	baz=196,slow=13,SNR=1.1						
	1.9nm,0.9s						

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*NEIC **09** 11:12:46.8±1.5, 5°.06N±0°.10×123°.2E±0°.1, h581^{km}±9^{km}, mb4.5/62, Error ellipse: s-maj=17.2km s-min=13.0km az=59.0*

*DJA **09** 11:12:46.6±0.5, 5°N±6°×12°3E±°, h565^{km}±5^{km}, M4.5/20, mb4.7/20, mB4.9/13, MLv5.0/15, Mw(mB)4.2/13*

*IDC **09** 11:12:46.6±0.7, 5°.02N×123°.26E, h590^{km}±8^{km}, mb3.7/24, mbtmp4.7/27, Error ellipse: s-maj=17.6km s-min=6.5km az=68.0*

ISC 09 11:12:46.8±0.3**, 5°.00N**±0°.05×**123°.18E**±0°.07**, h592**^{km}**, n167, σ1^{s}.13**/164**, mb4.4**/72**, 2C-1D, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	2.68	119	P	P	11 14 01.2	-2.4

DAV	Davao City (W)	3.15	49	P	P	11 14 04.5	-1.7
	188nm,0.4s,baz=24,slow=2.5,SNR=5.4						
DAV				S	S	11 15 09.2	-1.7
	180nm,0.3s,baz=301,slow=23,SNR=14						
MNI	Manado	3.90	155	P	P	11 14 10.0	-1.1
GTOI	Gorontalo	4.33	182	P	P	11 14 11.6	-2.6
TOLI2	Tolitoli	4.54	212		P	11 14 13.9	-1.8
TOLI2	Tolitoli	4.54	212	P	P	11 14 14.3	-1.4
MRSI	Marisa	4.66	195	P	P	11 14 15.5	-1.1
MYLDM	Lahad Datu	4.67	272		P	11 14 15.9	-0.8
MYLDM	Lahad Datu	4.67	272	P	P	11 14 16.6	0.0
MYLDM	Lahad Datu	4.67	272	P	P	11 14 16.3	-0.3
MPSI	Mapaga	5.67	215	P	P	11 14 23.5	-1.3
	0.2nm2µm31nm,0.8s						
TNTI	Ternate	5.92	135		P	11 14 25.0	-1.9
TNTI	Ternate	5.92	135	P	P	11 14 25.3	-1.6
	1.1nm3µm419nm,0.9s						
LUWI	Luwuk	6.01	184		P	11 14 26.3	-1.4
LUWI	Luwuk	6.01	184	P	P	11 14 26.3	-1.4
LUWI	Luwuk	6.01	184	S	S	11 15 47.1	-3.0
LUWI	Luwuk	6.01	184	P	P	11 14 25.7	-2.0
	2.2nm3µm175nm,0.6s						
APSI	Ampana	6.06	195	P	P	11 14 26.9	-1.3
	0.4nm66nm,0.7s						
KKM	Kota Kinabalu	7.01	279		P	11 14 34.9	-1.9
KKM	Kota Kinabalu	7.01	279	P	P	11 14 35.2	-1.6
KKM	Kota Kinabalu	7.01	279	P	P	11 14 34.3	-2.5
SANI	Sanana	7.54	158	P	P	11 14 38.5	-3.1
SANI	Sanana	7.54	158	P	P	11 14 38.5	-3.1
	0.9nm2µm148nm,0.6s						
TTSI	Tana Toraja	8.66	203	P	P	11 14 51.6	-0.7
	721nm15nm,0.5s						
BKB	Balikpapan	8.83	225	P	P	11 14 53.4	-0.6
	2µm209nm,0.9s						
NLAI	Namlea	9.07	154	P	P	11 14 57.1	+0.8
	2µm169nm,0.9s						
SPSI	Sidrap Palu	9.53	201	P	P	11 15 00.8	0.0
KRAI	Karang Ratu	9.76	148	P	P	11 15 03.4	+0.2
	38nm,0.7s						
BNSI	Bone	9.82	198	P	P	11 15 03.7	-0.1
	23nm,0.9s						
MTKI	Muara Teweh, K	10.16	235	P	P	11 15 06.5	-0.6
SBUM	Sibu	11.22	257		P	11 15 17.3	-0.5
SBUM	Sibu	11.22	257	P	P	11 15 18.9	+1.1
SBUM	Sibu	11.22	257	P	P	11 15 18.1	+0.3
BNDI	Bandanaira	11.60	145	P	P	11 15 20.8	-0.7
	111nm,0.7s						
PKKI	Palangkaraya	11.67	232	P	P	11 15 23.1	+0.7
FAKI	Fak Fak	11.99	131	P	P	11 15 24.8	-0.8
	53nm,0.7s						
EDFI	Ende, Flores	13.73	186	P	P	11 15 42.9	-0.5
LBFI	Labuhan Bajo,	13.78	194	P	P	11 15 44.9	+1.1
	30nm,0.8s						
BAKI	Biak	14.30	115	P	P	11 15 48.9	0.0
	2µm234nm,0.7s						
SOEI	Soe	14.69	176	P	P	11 15 52.5	-0.1
SOEI	Soe	14.69	176	P	P	11 15 52.3	-0.3
PLAI	Plampang	14.75	201	P	P	11 15 53.5	+0.5
BATI	Baumata	15.11	178	P	P	11 15 56.2	-0.2
	106nm,0.6s,baz=330,slow=3.4,SNR=10						
BATI	Baumata	15.11	178	P	P	11 15 55.8	-0.6
	2µm131nm,0.7s						
JAGI	Jajag, Banyuwa	16.12	214	P	P	11 16 08.0	+2.2
SMPI	Sarmi	17.00	114	P	P	11 16 14.6	+0.8
TPUB	Ta-pu	18.37	353		P	11 16 26.8	+0.7
TPUB	Ta-pu	18.37	353	P	P	11 16 27.2	+1.1
YULB	Yu-li	18.38	355	P	P	11 16 25.9	-0.4
SSLB	Suanglung	18.81	354	P	P	11 16 30.8	+0.6
DRS	Darwin Rock St	18.94	156	P	P	11 16 31.9	+0.5
JAY	Jayapura	19.03	113	P	P	11 16 32.5	+0.1
	14nm,0.4s,baz=213,slow=6.3,SNR=13						
KNRA	Kununurra	21.27	165	P	P	11 16 52.5	+0.1
KNRA				IAmb	IAmb	11 16 54.0	
	comp=Z,9.3nm,0.8s						
FITZ	Fitzroy Crossi	23.07	174	P	P	11 17 08.9	+0.4
MANU	Manus Island	25.15	106		P	11 17 28.2	+1.2
WB0	Warramunga Arr	26.96	156		P	11 17 42.5	-0.3
WRAB	Tennant Creek	27.10	156	P	P	11 17 43.7	-0.3
WRAB	Tennant Creek	27.10	156	P	P	11 17 44.0	0.0
WRA	Warramunga Arr	27.10	156	P	P	11 17 44.2	+0.2
	comp=Z,33nm,0.4s,baz=333,slow=10,SNR=411						
WRA				S	S	11 21 39.0	-3.0
	comp=Z,4.6nm,0.7s,baz=340,slow=15,SNR=12						
WRA				ScP	ScP	11 23 29.7	-0.2
	comp=Z,1.0nm,0.5s,baz=345,slow=3.0,SNR=4.9						
	comp=Z,33nm,0.4s						
CMAR	Chiang Mai Arr	27.19	301	P	P	11 17 45.6	+0.8
	comp=Z,5.4nm,0.8s,baz=116,slow=6.9,SNR=35						
CMAR				PcP	PcP	11 20 46.1	+1.0
	comp=Z,1.1nm,0.7s,baz=114,slow=1.9,SNR=6.7						
CMAR				ScP	ScP	11 23 31.7	+1.5
	comp=Z,0.4nm,0.3s,baz=128,slow=2.6,SNR=8.8						
	comp=Z,5.4nm,0.8s						
CMAR	Chiang Mai Arr	27.19	301		P	11 17 44.9	+0.1
NJ2	Nanjing	27.22	352	*e*P	P	11 17 46.5	+1.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CHTO	Chiang Mai	27.35	302		P	11 17 46.6	+0.4
CHTO				IAmb	IAmb	11 17 47.4	
	comp=Z,11nm,0.8s						
COEN	Coen	27.35	134	P	P	11 17 45.2	-1.0
COEN				IAmb	IAmb	11 17 46.3	
	comp=Z,8.5nm,0.7s						
COEN	Coen	27.35	134	P	P	11 17 45.7	-0.6
PMG	Port Moresby	27.85	121	P	P	11 17 50.5	-0.1
ENH	Enshi	28.27	334		P	11 17 54.2	+0.1
PZH	PanZhiHua	29.61	318	P	P	11 18 07.5	+1.6
QIS	Mount Isa	30.08	148	P	P	11 18 10.5	+0.6
JMN	Monobe	30.27	18	P	P	11 18 10.7	-0.6
JMN				IAmb	IAmb	11 18 17.9	
	comp=Z,24nm,1.3s						
AS31	Alice Springs	30.35	160		P	11 18 12.4	+0.3
AS31				IAmb	IAmb	11 18 13.3	
	comp=Z,7.3nm,0.5s						
ASAR	Alice Springs	30.35	160	P	P	11 18 12.8	+0.7
	comp=Z,15nm,0.4s,baz=340,slow=7.0,SNR=592						
ASAR				S	S	11 22 31.5	-0.6
	comp=Z,13nm,0.9s,baz=351,slow=21,SNR=41						
ASAR				ScP	ScP	11 23 40.6	+0.4
	comp=Z,4.6nm,0.7s,baz=344,slow=2.9,SNR=17						
	comp=Z,15nm,0.4s						
ASAR	Alice Springs	30.35	160		P	11 18 12.4	+0.3
RABL	Rabaul	30.36	107		P	11 18 12.7	+0.4
LYN	LuoYang	31.04	343	P	P	11 18 18.2	+0.4
LYN				pmax	pmax		
	comp=Z,22nm,0.9s						
TIA	Tai'an	31.56	351	P	P	11 18 22.3	+0.1
TIA				pmax	pmax		
	comp=Z,11nm,0.7s						
XAN	Xi'an	31.79	337	⇓P	P	11 18 23.9	-0.4
XAN				pmax	pmax		
	comp=Z,24nm,0.9s						
KSRS	Korea Array	32.60	7	P	P	11 18 31.4	+0.5
	comp=Z,1.7nm,0.6s,baz=196,slow=9.4,SNR=6.9						
	comp=Z,1.7nm,0.6s						
HNS	HongShan	33.17	348	⇑P	P	11 18 36.3	+0.5
HNS				pmax	pmax		
	comp=Z,12nm,1.1s						
CTAO	Charters Tower	33.70	138	P	P	11 18 41.7	+1.2
CTAO				IAmb	IAmb	11 18 42.8	
	comp=Z,14nm,0.8s						
MJAR	Matsushiro Arr	34.30	22	P	P	11 18 44.3	-0.9
	comp=Z,3.8nm,0.8s,baz=198,slow=9.0,SNR=7.2						
	comp=Z,3.8nm,0.8s						
MJAR	Matsushiro Arr	34.30	22	IAmb	IAmb	11 18 50.9	
	comp=Z,3.1nm,1.2s						
BJI	Beijing	35.46	351	P	P	11 18 54.6	-0.2
BJI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LZH	Lanzhou	35.69	333	*e*P	P	11 18 58.3	+1.3
LZH				pmax	pmax		
	comp=Z,30nm,1.4s						
FORT	Forrest	35.88	173		P	11 18 59.2	+0.8
INKA	Innaminka	36.70	153	IAmb	IAmb	11 19 07.8	
	comp=Z,14nm,0.7s						
HHC	Hu-ho-hao-te	37.19	345	*e*P	P	11 19 08.0	-1.2
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,5.6s						
XLT	XiLinHaoTe	39.25	352	*e*P	P	11 19 25.7	0.0
XLT				PP	PP	11 21 10.1	-4.0
XLT				pmax	pmax		
	comp=Z,13nm,0.8s						
XLT				pmax	pmax		
	comp=Z,160nm,5.5s						
USRK	Ussuriysk Ar.	39.81	10	P	P	11 19 29.9	-0.2
	comp=Z,5.7nm,0.8s,baz=181,slow=5.0,SNR=9.5						
	comp=Z,5.7nm,0.8s						
MDJ	Mudanjiang	39.86	7	P	P	11 19 31.1	+0.6
MDJ				pmax	pmax		
	comp=Z,18nm,1.0s						
GTA	Gaotai	40.25	332	*e*P	P	11 19 35.4	+1.5
GTA				PcP	PcP	11 21 24.0	+1.2
GTA				pmax	pmax		
	comp=Z,23nm,0.8s						
GOMU	GeErMu	40.54	324	P	P	11 19 36.9	+0.4
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
EIDS	Eidsvold	40.56	139		P	11 19 36.8	+0.4
EIDS				IAmb	IAmb	11 19 37.8	
	comp=Z,17nm,0.9s						
STKA	Stephens Creek	40.65	156	P	P	11 19 38.2	+1.2
	comp=Z,13nm,0.4s,baz=342,slow=7.8,SNR=41						
	comp=Z,13nm,0.4s						
STKA	Stephens Creek	40.65	156		P	11 19 37.9	+0.9
BNX	BinXian	40.75	5	⇑P	P	11 19 39.0	+1.5
BNX				pmax	pmax		
	comp=Z,9.0nm,0.9s						
EVN	Everest	41.41	308		P	11 19 43.9	+0.1
HIA	Hailar	44.21	357	IAmb	IAmb	11 20 05.5	
	comp=Z,9.3nm,0.7s						
HILR	Hailar Array B	44.50	357	P	P	11 20 07.2	+0.5
	comp=Z,12nm,0.5s,baz=177,slow=10,SNR=11						
	comp=Z,12nm,0.5s						
ARMA	Armidale	44.51	144		P	11 20 08.9	+1.6
ARMA				IAmb	IAmb	11 20 10.6	
	comp=Z,28nm,1.1s						
ULN	Ulaanbaatar	44.90	345	P	P	11 20 10.2	+0.2
SONM	Songino Array	45.05	344	P	P	11 20 11.3	+0.2
	comp=Z,3.0nm,0.7s,baz=158,slow=8.8,SNR=15						
SONM				PcP	PcP	11 21 39.3	+0.3
	comp=Z,1.2nm,0.6s,baz=158,slow=3.4,SNR=5.2						
SONM				ScP	ScP	11 24 34.7	-1.1
	comp=Z,0.2nm,0.4s,baz=160,slow=4.7,SNR=3.7						
	comp=Z,3.0nm,0.7s						
SONM	Songino Array	45.05	344	IAmb	IAmb	11 20 12.3	
	comp=Z,6.0nm,1.2s						
HEH	HeiHe	45.24	4	*e*P	P	11 20 12.3	0.0
HEH				pmax	pmax		
	comp=Z,16nm,0.7s						
CAN	Canberra	46.88	151	P	P	11 20 26.9	+1.9
WMQ	Urumqi	49.70	327	*e*P	P	11 20 46.6	+0.8
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
MKAR	Makanchi Array	54.53	326	P	P	11 21 20.8	+0.6
	comp=Z,4.7nm,0.3s,baz=122,slow=8.6,SNR=102						
MKAR				PcP	PcP	11 22 14.0	-0.2
	comp=Z,4.3nm,0.7s,baz=123,slow=4.3,SNR=13						
MKAR				ScP	ScP	11 25 16.1	-0.3
	comp=Z,1.0nm,0.8s,baz=111,slow=6.6,SNR=4.1						
	comp=Z,4.7nm,0.3s						
MKAR	Makanchi Array	54.53	326		P	11 21 20.6	+0.4
KSH	Kashi	54.67	316	P	P	11 21 23.2	+1.7
KSH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MAKZ	Makanchi	54.71	326		P	11 21 21.8	+0.3
MAKZ				IAmb	IAmb	11 21 22.8	
	comp=Z,30nm,1.5s						
MANEM	Manem	56.95	312	IAmb	IAmb	11 21 40.3	
	comp=Z,11nm,1.1s						
AAK	Ala-Archa	57.06	319		P	11 21 38.6	+0.6
YAK	Yakutsk	57.12	4		P	11 21 37.8	+0.1
YAK				IAmb	IAmb	11 21 38.9	
	comp=Z,27nm,0.7s						
ARSB	Arslanbob	57.51	317	IAmb	IAmb	11 21 42.7	
	comp=Z,22nm,1.5s						
ZALV	Zalesovo Beam	57.89	334	P	P	11 21 42.4	-0.7
	comp=Z,2.3nm,0.4s,baz=120,slow=5.8,SNR=16						
ZALV				PcP	PcP	11 22 26.0	-1.2
	comp=Z,1.0nm,0.6s,baz=117,slow=4.8,SNR=2.0						
	comp=Z,2.3nm,0.4s						
ZALV	Zalesovo Beam	57.89	334		P	11 21 42.2	-0.9
GAR	Garm	58.48	313	IAmb	IAmb	11 21 48.8	
	comp=Z,42nm,1.3s						
KURBB	Kurchatov Arra	58.79	328	P	P	11 21 49.3	0.0
	comp=Z,14nm,0.7s,baz=127,slow=6.2,SNR=111						
	comp=Z,14nm,0.7s						
KURK	Kurchatov	58.80	329		P	11 21 49.2	0.0
KURK				IAmb	IAmb	11 21 50.3	
	comp=Z,26nm,0.8s						
KK31	Karatay Array	59.91	318		P	11 21 56.6	-0.3
KKAR	Karatay Array	59.91	318	P	P	11 21 57.0	+0.1
BVAR	Borovoye Array	64.35	328	P	P	11 22 25.3	-0.1
	comp=Z,8.4nm,0.8s,baz=130,slow=8.0,SNR=30						
	comp=Z,8.4nm,0.8s						
BORK	Borovoye	64.40	328		P	11 22 25.4	-0.2
BORK				IAmb	IAmb	11 22 26.6	
	comp=Z,10nm,0.8s						
LBZ	Lake Benmore	64.73	145	P	P	11 22 28.8	+0.8
LBZ				IAmb	IAmb	11 23 02.4	
	comp=Z,25nm,1.1s						
LTZ	Lake Taylor	65.05	142	P	P	11 22 31.0	+1.1
LTZ				IAmb	IAmb	11 22 42.4	
	comp=Z,31nm,1.3s						
RTZ	Ruatahuna	65.97	136	P	P	11 22 37.2	+1.4
TIXI	Tiksi	66.67	2		P	11 22 39.1	-0.3
TIXI				IAmb	IAmb	11 22 39.6	
	comp=Z,10nm,0.8s						
NRIK	Noril'sk	68.39	347	P	P	11 22 50.1	+0.2
	comp=Z,11nm,0.6s,baz=126,slow=6.2,SNR=21						
	comp=Z,11nm,0.6s						
NRIK	Noril'sk	68.39	347	IAmb	IAmb	11 22 50.9	
	comp=Z,12nm,0.7s						
AB31	Akbulak array	68.94	321	IAmb	IAmb	11 22 54.5	
	comp=Z,8.0nm,0.8s						
ABKAR	Akbulak array	68.94	321		P	11 22 53.7	0.0
AKTO	Aktyubinsk	70.48	322	P	P	11 23 02.9	+0.1
	comp=Z,5.4nm,0.3s,baz=104,slow=5.8,SNR=38						
	comp=Z,5.4nm,0.3s						
ARTI	Arti	72.07	328	P	P	11 23 10.8	-1.1
	comp=Z,7.6nm,0.7s,baz=92,slow=3.9,SNR=10						
	comp=Z,7.6nm,0.7s						
ARTI	Arti	72.07	328		P	11 23 11.6	-0.4
ARTI				IAmb	IAmb	11 23 11.9	
	comp=Z,11nm,0.7s						
RAYN	Ar Rayn	76.73	293		P	11 23 38.7	-0.1
KBZ	Khabaz	79.55	313	P	P	11 23 53.2	-0.1
	comp=Z,2.5nm,1.0s,baz=33,slow=10,SNR=2.7						
	comp=Z,2.5nm,1.0s						
E19K	Redstone River	81.42	23	IAmb	IAmb	11 24 05.2	
	comp=Z,6.6nm,0.8s						
B21K	Ikpikpuk River	82.63	20	IAmb	IAmb	11 24 11.2	
	comp=Z,14nm,0.8s						
E21K	Killik River	82.75	22	IAmb	IAmb	11 24 11.5	
	comp=Z,7.3nm,0.8s						
ARPR	Arapgir-MALATY	82.88	309	IAmb	IAmb	11 24 13.8	
	comp=Z,9.8nm,1.1s						
B22K	Teshekpuk Lake	83.10	20	IAmb	IAmb	11 24 13.4	
	comp=Z,13nm,0.9s						
E22K	Anaktuvuk Pass	83.53	22	P	P	11 24 14.1	+0.8
C23K	Itkillik River	84.03	20	IAmb	IAmb	11 24 18.8	
	comp=Z,13nm,1.1s						
COLD	Coldfoot	84.11	23	P	P	11 24 18.0	+2.0
E23K	Chandalar	84.35	22	P	P	11 24 18.5	+1.2
TOLK	Toolik Lake Re	84.38	22	P	P	11 24 18.6	+1.2
TOLK				IAmb	IAmb	11 24 20.7	
	comp=Z,7.0nm,1.1s						
HDA	Harding Lake	85.48	26	P	P	11 24 22.1	-0.7
HDA				IAmb	IAmb	11 24 28.2	
	comp=Z,12nm,1.4s						
ILAR	Eielson Array	85.49	25	P	P	11 24 21.7	-1.1
	comp=Z,0.4nm,0.5s,baz=247,slow=5.0,SNR=11						
	comp=Z,0.4nm,0.5s						
E25K	Arctic Village	85.87	22	P	P	11 24 25.9	+1.3
BR104	Keskin Array S	86.49	309	P	P	11 24 27.2	-1.0
	comp=Z,3.5nm,0.9s						
BRTR	Keskin Array B	86.49	309	P	P	11 24 26.5	-1.8
	comp=Z,2.5nm,0.9s,baz=122,slow=6.1,SNR=10						
	comp=Z,2.5nm,0.9s						
BRTR	Keskin Array B	86.49	309	P	P	11 24 27.1	-1.1
BR106	Keskin Array S	86.51	309	P	P	11 24 27.3	-1.0
	comp=Z,3.6nm,0.9s						
BR105	Keskin Array S	86.51	309	P	P	11 24 27.3	-1.0
	comp=Z,3.6nm,0.9s						
ARCES	ARCESS Array B	88.04	340	P	P	11 24 33.6	-1.1
	comp=Z,5.0nm,1.0s,baz=86,slow=6.1,SNR=7.6						
	comp=Z,5.0nm,1.0s						
ARCES	ARCESS Array B	88.04	340	IAmb	IAmb	11 24 34.2	
	comp=Z,28nm,1.4s						
BARN	Barnard Glacie	88.17	29	P	P	11 24 36.4	+0.7
SPITS	Spitsbergen Ar	88.56	349	P	P	11 24 36.2	-0.7
	comp=Z,4.9nm,0.7s,baz=89,slow=10,SNR=10						
	comp=Z,4.9nm,0.7s						
AK10	Malin Array Si	88.67	321	P	P	11 24 36.7	-1.3
FINES	FINESS Array B	89.05	332	P	P	11 24 38.6	-0.8
	comp=Z,4.6nm,0.7s,baz=45,slow=5.4,SNR=14						
	comp=Z,4.6nm,0.7s						
LUBAR	Lubar, Ukraine	89.71	320	P	P	11 24 42.9	+0.1
TESR	Tescani	90.90	317	P	P	11 24 47.3	-1.1
BUR08	Bucovina Ar. S	91.71	318		P	11 24 52.4	+0.1
BUR08				IAmb	IAmb	11 25 02.3	
	comp=Z,5.8nm,1.4s						
HFS	Hagfors	95.25	332	P	P	11 25 06.2	-1.7
	comp=Z,0.6nm,0.3s,baz=108,slow=4.7,SNR=6.8						
	comp=Z,0.6nm,0.3s						
NOA	NORSAR Array B	96.07	333	P	P	11 25 10.5	-1.2
	comp=Z,1.2nm,0.7s,baz=69,slow=4.5,SNR=2.2						
	comp=Z,1.2nm,0.7s						
NVAR	Mina Array Bea	108.66	47	PKKPbc	PKKPbc	11 41 20.8	-1.0
	comp=Z,0.2nm,0.7s,baz=50,slow=2.3,SNR=3.5						
DBIC	Dimbokro	126.85	282	PKP	PKPdf	11 30 45.7	+0.5
	comp=Z,4.0nm,0.7s,baz=212,slow=2.5,SNR=4.3						

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*SJA **09** 11:13:13.3±0.7, 21.°36S×68.°68W, h126^{km}±4^{km}, ML3.5, MW3.5*

*GUC **09** 11:13:14.6±0.6, 21.°33S×68.°73W, h126^{km}±3^{km}, ML3.4*

ISC 09 11:13:15.7±1.5**, 21.°34S**±0.°03×**68.°77W**±0.°06**, h118**^{km}±11^{km}**, n32, σ0.ˢ68**/53**, 7C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.63	224	⇑*i*P	Pn	11 13 34.4	-0.2
PB09				*e*S	Sn	11 13 49.2	+0.4
PB09				IAML		11 13 50.1	
	comp=N,890nm,0.2s						
PB09	IPOC Station P	0.63	224	*e*P	Pn	11 13 34.4	-0.2
PB09				*e*S	Sn	11 13 49.5	+0.6
PB09				IAML		11 13 50.1	
	comp=Z,992nm,0.2s						
PB01	IPOC Station P	0.73	293	⇑*i*P	Pn	11 13 34.8	-0.5
PB01				*e*S	Sn	11 13 49.6	-0.4
PB01				IAML		11 13 50.6	
	comp=N,1µm,0.3s						
PB01	IPOC Station P	0.73	293	*e*P	Pn	11 13 34.7	-0.5
PB01				*e*S	Sn	11 13 50.6	+0.6
PB01				IAML		11 13 51.1	
	comp=Z,1µm,0.2s						
PB02	IPOC Station P	1.05	271	⇑*e*P	Pn	11 13 38.1	-0.1
PB02				*e*S	Sn	11 13 55.5	+0.3
PB02	IPOC Station P	1.05	271	*e*P	Pn	11 13 38.0	-0.3
PB02				*e*S	Sn	11 13 56.6	+1.3
PB02				IAML		11 13 57.4	
	comp=Z,2µm,0.3s						
PB07	IPOC Station P	1.11	249	⇑*e*P	Pn	11 13 38.7	-0.2
PB07				*e*S	Sn	11 13 56.4	-0.1
PB07				IAML		11 13 57.4	
	comp=E,1µm,0.3s						
PB07	IPOC Station P	1.11	249	*e*P	Pn	11 13 38.6	-0.3
PB07				*e*S	Sn	11 13 57.3	+0.8
PB07				IAML		11 13 58.4	
	comp=Z,532nm,0.1s						
PB03	IPOC Station P	1.16	232	⇑*i*P	Pn	11 13 39.2	-0.2
PB03				*e*S	Sn	11 13 57.1	-0.2
PB03				IAML		11 13 58.0	
	comp=E,1µm,0.2s						
PB03	IPOC Station P	1.16	232	*e*P	Pn	11 13 38.5	-0.9
PB03				*e*S	Sn	11 13 57.4	0.0
PB03				IAML		11 13 58.3	
	comp=Z,816nm,0.1s						
PB08	IPOC Station P	1.24	343	*e*P	Pn	11 13 40.3	-0.3
PB08				*e*S	Sn	11 13 59.6	+0.3
PB08				IAML		11 14 01.2	
	comp=N,735nm,0.4s						
PB08	IPOC Station P	1.24	343	*e*P	Pn	11 13 40.3	-0.3
PB08				*e*S	Sn	11 13 59.9	+0.6
PB08				IAML		11 14 00.7	
	comp=Z,365nm,0.5s						
PATCX	Punta Patache	1.39	291	*e*P	Pn	11 13 41.9	+0.1
PATCX				*e*S	Sn	11 14 03.0	+1.3
PATCX				IAML		11 14 03.5	
	comp=Z,355nm,0.3s						
TA01	Diego Aracena	1.52	300	⇑*i*P	Pn	11 13 43.0	-0.3
TA01				*e*S	Sn	11 14 04.0	-0.3
TA01	Diego Aracena	1.52	300	*e*P	Pn	11 13 43.0	-0.3
TA01				IAML		11 14 06.6	
	comp=Z,217nm,0.2s						
PB06	IPOC Station P	1.55	208	⇑*i*P	Pn	11 13 43.5	-0.3
PB06				*e*S	Sn	11 14 05.1	-0.2
PB06				IAML		11 14 06.0	
	comp=E,769nm,0.3s						
PB06	IPOC Station P	1.55	208	*e*P	Pn	11 13 43.5	-0.3
PB06				*e*S	Sn	11 14 05.3	0.0
PB06				IAML		11 14 07.3	
	comp=Z,411nm,0.3s						
TA02	Huaiquique	1.66	310	*e*P	Pn	11 13 44.2	-0.7
TA02	Huaiquique	1.66	310	*e*P	Pn	11 13 44.5	-0.4
TA02				*e*S	Sn	11 14 08.3	+1.2
TA02				IAML		11 14 11.0	
	comp=Z,397nm,0.4s						
AF01	San Pedro de A	1.70	161	*e*P	Pn	11 13 27.5	-18
AF01				*e*S	Sn	11 14 06.7	-1.9
AF01				IAML		11 14 27.6	
	comp=Z,171nm,0.5s						
GO01	Chusmiza	1.71	346	*e*P	Pn	11 13 45.5	-0.5
GO01				*e*S	Sn	11 14 10.0	+1.0
GO01				IAML		11 14 11.8	
	comp=Z,201nm,0.1s						
PB11	IPOC Station P	1.77	332	*e*P	Pn	11 13 45.8	-0.7
PB11				*e*S	Sn	11 14 09.4	-0.5
PB11				IAML		11 14 11.4	
	comp=N,602nm,0.2s						
PB11	IPOC Station P	1.77	332	*e*P	Pn	11 13 45.8	-0.7
PB11				*e*S	Sn	11 14 09.8	-0.2
PB11				IAML		11 14 11.8	
	comp=Z,309nm,0.3s						
PB05	IPOC Station P	2.01	221	*e*P	Pn	11 13 48.8	-0.5
PB05				IAML		11 14 23.6	
	comp=N,141nm,0.4s						
PB05	IPOC Station P	2.01	221	*e*P	Pn	11 13 48.9	-0.5
PB05				*e*S	Sn	11 14 16.4	+1.3
PB10	IPOC Station P	2.72	217	*e*P	Pn	11 13 58.4	0.0
PB10				IAML		11 14 28.5	
	comp=E,61nm,0.2s						
PB10	IPOC Station P	2.72	217	*e*P	Pn	11 13 57.8	-0.5
PB10				*e*S	Sn	11 14 19.8	-11
PB12	IPOC Station P	3.08	331	*e*P	Pn	11 14 03.6	+0.5
PB12				IAML		11 14 45.2	
	comp=E,96nm,0.3s						
PB12	IPOC Station P	3.08	331	*e*P	Pn	11 14 01.4	-1.7
PB12				*e*S	Sn	11 14 28.4	-11
PB12				IAML		11 14 43.3	
	comp=Z,77nm,0.4s						
PB14	IPOC Station P	3.60	204	*e*P	Pn	11 14 10.3	0.0
PB14				IAML		11 14 56.7	
	comp=E,29nm,0.5s						
PB14	IPOC Station P	3.60	204	*e*P	Pn	11 14 10.1	-0.1
PB14				*e*S	Sn	11 14 36.3	-16
PB14				IAML		11 14 58.3	
	comp=Z,40nm,0.4s						
HJA	Humahuaca	3.63	122	*e*P	Pn	11 14 11.6	+1.0

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*SNET **09** 11:16:08.6±0.5, 12.°75N×87.°96W, h64^{km}±94^{km}, ML2.6*

*CATAC **09** 11:16:08.4±0.5, 13°N±3°×8°8W±°, h37^{km}±3^{km}, M3.0/12, MLv3.0/12, Error ellipse: s-maj=8.8km s-min=4.0km az=40.4, confirmed*

ISC 09 11:16:07.4±2.0**, 12.°60N**±0.°09×**87.°97W**±0.°07**, h58**^{km}±17^{km}**, n25, σ0.ˢ48**/36**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	0.55	46	P	Pn	11 16 19.6	-0.3
CSGN				S	Sn	11 16 28.8	-0.2
POTN	Potosi Cosigui	0.60	48	S	Sn	11 16 30.0	+0.1
CNCH	Conchagua	0.69	11	*e*P	Pn	11 16 21.6	0.0
CNCH				*e*S	Sn	11 16 32.0	0.0
CNCH	Conchagua	0.69	11	P	Pn	11 16 21.6	0.0
CNCH	Conchagua	0.69	11	S	Sn	11 16 32.3	+0.3
RANC	El Ranchito	0.89	339	*e*P	Pn	11 16 24.4	+0.2
RANC				*e*S	Sn	11 16 36.1	-0.4
RANC				IAML		11 16 38.9	
	comp=Z,168nm,0.1s						
CRIN	San Cristobal	0.90	83	S	Sn	11 16 38.1	+1.6

PACA	Pacayal	0.94	338	eP	Pn	11 16 24.7	0.0
PACA				eS	Sn	11 16 37.5	0.0
PACA	Pacayal	0.94	338	P	Pn	11 16 24.7	0.0
TECA	Tecapa	1.04	330	eP	Pn	11 16 26.2	+0.1
TEL3	Telica 3	1.09	91	P	Pn	11 16 27.0	+0.3
POLN	Al Sur del Vol	1.13	87	P	Pn	11 16 27.4	+0.2
POLN				S	Sn	11 16 41.6	-0.2
ROCN	Rota Cerro Neg	1.20	93	P	Pn	11 16 27.2	-0.8
ROCN				S	Sn	11 16 42.4	-1.0
CNGA	Al SSO del Vol	1.24	94	P	Pn	11 16 28.8	+0.2
CNGA				S	Sn	11 16 44.1	-0.3
CNGN	Cerro Negro	1.24	94	S	Sn	11 16 44.0	-0.5
CNGN	Cerro Negro	1.24	94	P	Pn	11 16 29.0	+0.3
COPN	Copaltepe	1.40	107	P	Pn	11 16 31.0	+0.2
MOMN	Momotombo	1.40	97	P	Pn	11 16 31.2	+0.3
MOM3	MOM3	1.42	93	P	Pn	11 16 31.3	+0.3
MOM3				S	Sn	11 16 48.2	-0.5
MOM2	El Cardon	1.46	96	P	Pn	11 16 32.2	+0.8
MOM2				S	Sn	11 16 49.1	-0.5
TGUH	Tegucigalpa,Un	1.60	25	P	Pn	11 16 33.9	+0.3
TGUH				S	Sn	11 16 53.0	-0.4
LIMN	Finca el Limon	1.63	73	P	Pn	11 16 33.9	0.0
LIMN				S	Sn	11 16 53.5	-0.4
YUSH	Yuscaran	1.74	39	P	Pn	11 16 35.6	+0.1
OCON	Estacion meteo	1.78	54	P	Pn	11 16 36.0	0.0
RCVN	Varillal2	1.99	60	P	Pn	11 16 39.3	+0.5

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*DJA **09** 11:24:22.4±1.5, 7°S±11°×10°4E±1°2, h10^{km}, M3.7/6, MLv3.7/6*
*IDC **09** 11:24:25.5±3.1, 5°.83S×103°.17E, h0^{km}, mb3.7/7, mbtmp3.7/7, MS3.5/1, Error ellipse: s-maj=142.3km s-min=25.9km az=54.0*
ISC 09 11:24:22.2±1.4**, 6°.4S**±0°.1×**103°.62E**±0°.10**, h10^{km}, n18, σ0^{s}.70**/13**, mb3.8**/7**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	Kota Agung	1.26	44	P	Pb	11 24 46.2	+0.1
LWLI	Liwa	1.48	17	P	Pg	11 24 50.9	+0.2
MDSI	Maura Dua	2.02	16	P	Pb	11 24 58.5	-0.5
KLSI		2.06	32	P	Pb	11 24 59.3	-0.4
MNAI	Manna	2.17	342	P	Pb	11 25 00.9	-0.7
BBJI	Bungbulang	4.12	104	P	Pn	11 25 24.3	-1.1
CMAR	Chiang Mai Arr	25.17	350	P	P	11 29 47.3	-0.6
	1.3nm,0.7s,baz=182,slow=8.8,SNR=10						
	1.3nm,0.7s						
ASAR	Alice Springs	33.76	124	P	P	11 31 16.4	+12
	0.1nm,0.4s,baz=302,slow=8.1,SNR=5.2						
	0.1nm,0.4s						
LZDM	Lanzhou Array	42.17	0	LR	LR	11 50 03.5	
	comp=Z,65nm,20.3s,baz=240,slow=37						
SONM	Songino Array	54.10	2	P	P	11 33 47.9	+0.6
	0.9nm,0.6s,baz=185,slow=9.9,SNR=3.8						
	0.9nm,0.6s						
MKAR	Makanchi Array	56.29	343	P	P	11 34 03.1	+0.1
	0.6nm,0.7s,baz=148,slow=7.8,SNR=5.5						
	0.6nm,0.7s						
H04N2	CROZET ISLANDS	59.53	219	T	T	12 38 56.6	
	baz=66,slow=75,SNR=25						
H04N1	CROZET ISLANDS	59.54	219	T	T	12 39 01.7	
	baz=66,slow=75,SNR=22						
H04N3	CROZET ISLANDS	59.55	219	T	T	12 38 53.4	
	baz=66,slow=75,SNR=22						
KURBB	Kurchatov Arra	60.84	342	P	P	11 34 34.7	+0.1
	0.5nm,0.8s,baz=156,slow=6.5,SNR=3.3						
	0.5nm,0.8s						
ZALV	Zalesovo Beam	62.22	348	P	P	11 34 43.6	-0.3
	0.5nm,0.4s,baz=160,slow=6.9,SNR=4.7						
	0.5nm,0.4s						
BVAR	Borovoye Array	65.59	339	P	P	11 35 06.5	+0.4
	0.4nm,0.3s,baz=153,slow=10,SNR=3.0						
	0.4nm,0.3s						
TXAR	Lajitas Array	145.64	45	PKPbc	PKPab	11 44 03.6	+1.3
	0.4nm,0.6s,baz=324,slow=2.0,SNR=7.2						

IDC 09 11:34:52.9±12.0**, 6°.89S**×**129°.79E, h125^{km}**±127^{km}**, mb3.0**/1**, mbtmp3.7**/4**, ML3.7**/3**, Error ellipse: s-maj=143.0km s-min=33.8km az=46.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	6.90	241	P	Pn	11 36 32.1	+0.5
	3.2nm,0.3s,baz=60,slow=21,SNR=1.4						
BATI				S	Sn	11 37 44.5	-4.3
	23nm,0.4s,baz=113,slow=14,SNR=4.1						
	9.5nm,0.3s						
WRA	Warramunga Arr	13.71	162	P	Pn	11 38 00.4	-1.8
	0.3nm,0.3s,baz=338,slow=13,SNR=7.2						
WRA				S	Sn	11 40 22.2	-11
	0.6nm,0.4s,baz=329,slow=22,SNR=5.9						
	0.5nm,0.5s						
ASAR	Alice Springs	17.15	167	P	Pn	11 38 45.9	+0.8
	0.2nm,0.3s,baz=343,slow=10.0,SNR=23						
ASAR				S	Sn	11 41 48.2	-8.2
	0.3nm,0.6s,baz=360,slow=25,SNR=4.8						
	0.7nm,0.5s						
MKAR	Makanchi Array	68.02	327	P	P	11 45 38.7	-0.1
	0.1nm,0.3s,baz=126,slow=7.9,SNR=2.3						
	0.1nm,0.3s						

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*UPP **09** 11:42:50.5±0.0, 67°.83N×20°.20E, h0^{km}, ML3.0, Confirmed Induced event*
*DNK **09** 11:42:50.9±1.1, 67°.84N×20°.15E, h0^{km}, ML3.0(UPP), Suspected explosion*
*IDC **09** 11:42:50.5±0.9, 67°.84N×20°.51E, h0^{km}, mbtmp3.5/4, ML2.6/4, Error ellipse: s-maj=14.7km s-min=6.1km az=118.0*
*HEL **09** 11:42:51.3±0.1, 67°.84N×20°.19E, h1^{km}, ML2.5, ML3.0(UPP), Confirmed Induced event*
ISC 09 11:42:50.2±0.8**, 67°.82N**±0°.02×**20°.21E**±0°.02**, h0^{km}, n42, σ0^{s}.73**/74**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.14	19	P	Pg	11 42 53.4	+0.5
	baz=218						
KUA				S	Sg	11 42 55.4	+0.6
KUA	Kurravaara	0.14	19	P	Pg	11 42 53.4	+0.5
	baz=218						
KUA				S	Sg	11 42 55.4	+0.6
KUA	Kurravaara	0.14	19	iP	Pg	11 42 53.4	+0.5
KUA				iS	Sg	11 42 55.4	+0.6
KOVU	Salmi	0.41	357	P	Pg	11 42 58.2	+0.2
KOVU				S	Sg	11 43 03.4	+0.2
KOVU	Salmi	0.41	357	P	Pg	11 42 58.2	+0.2
KOVU				S	Sg	11 43 03.4	+0.2
KOVU	Salmi	0.41	357	iP	Pg	11 42 58.2	+0.2
KOVU				iS	Sg	11 43 03.4	+0.2
NIKU	Nikkaluokta	0.45	277	P	Pg	11 42 59.0	+0.3
NIKU				S	Sg	11 43 05.2	+0.7
NIKU	Nikkaluokta	0.45	277	P	Pg	11 42 59.0	+0.3
NIKU				S	Sg	11 43 05.2	+0.7
NIKU	Nikkaluokta	0.45	277	iP	Pg	11 42 59.0	+0.3
NIKU				iS	Sg	11 43 05.2	+0.7
LANU	Lannavaara	0.71	70	P	Pg	11 43 04.0	+0.1
LANU				S	Sg	11 43 13.8	+0.8
LANU	Lannavaara	0.71	70	P	Pg	11 43 04.0	+0.1
LANU				S	Sg	11 43 13.8	+0.8
LANU	Lannavaara	0.71	70	eP	Pg	11 43 03.9	+0.1
LANU				eS	Sg	11 43 13.5	+0.5
DUNU	Dundret	0.71	169	P	Pg	11 43 04.1	+0.3
DUNU				S	Sg	11 43 14.2	+1.1
DUNU	Dundret	0.71	169	P	Pg	11 43 04.1	+0.3
DUNU				S	Sg	11 43 14.2	+1.1
DUNU	Dundret	0.71	169	iP	Pg	11 43 04.1	+0.3
DUNU				iS	Sg	11 43 14.2	+1.1
MASU	Masugnsbyn	0.77	117	P	Pg	11 43 05.3	+0.3
MASU				S	Sg	11 43 16.1	+1.1
MASU	Masugnsbyn	0.77	117	P	Pg	11 43 05.3	+0.3
MASU				S	Sg	11 43 16.1	+1.1
MASU	Masugnsbyn	0.77	117	iP	Pg	11 43 05.3	+0.3
MASU				iS	Sg	11 43 16.1	+1.1
SALU	Saltoluokta	0.79	237	P	Pg	11 43 05.4	+0.1
SALU				S	Sg	11 43 16.0	+0.6
SALU	Saltoluokta	0.79	237	eP	Pg	11 43 05.4	+0.1
SALU	Saltoluokta	0.79	237	P	Pg	11 43 05.4	+0.1
SALU				S	Sg	11 43 16.0	+0.6
SALU	Saltoluokta	0.79	237	iP	Pg	11 43 05.4	+0.1
SALU				iS	Sg	11 43 16.0	+0.6
KIF	Kilpisjarvi	1.21	10	eSB	Sb	11 43 29.9	-0.2
PAJU	Pajala	1.38	124	P	Pg	11 43 16.0	-0.6
PAJU	Pajala	1.38	124	P	Pg	11 43 16.0	-0.6
PAJU	Pajala	1.38	124	eP	Pg	11 43 15.9	-0.6
PAJU				eS	Sg	11 43 34.2	-0.1
HEF	Hetta	1.42	64	eP	Pn	11 43 16.7	-0.6
HEF	Hetta	1.42	64	eP	Pn	11 43 16.8	-0.6
HEF				eS	Sg	11 43 35.6	-0.2
ERTU	Ertsjaerv	1.49	148	P	Pn	11 43 17.9	-0.3
ERTU				S	Sn	11 43 38.7	+0.5
ERTU	Ertsjaerv	1.49	148	P	Pn	11 43 17.9	-0.3
ERTU				S	Sn	11 43 38.7	+0.5
ERTU	Ertsjaerv	1.49	148	eP	Pn	11 43 17.8	-0.3
ERTU				eSB	Sg	11 43 38.2	+0.4
ERTU				MSG		11 43 38.9	
	comp=Z,41nm,0.2s						
KLF	Kolari	1.56	110	eP	Pn	11 43 19.1	0.0
KLF				eSG	Sn	11 43 40.1	+0.2
KLF				MSG		11 43 44.8	
	comp=Z,50nm,0.2s						
HARU	Harads	1.69	169	P	Pn	11 43 21.3	+0.4
HARU	Harads	1.69	169	P	Pn	11 43 21.3	+0.4
HARU	Harads	1.69	169	eP	Pn	11 43 21.3	+0.4
TRO	Tromso	1.88	346	ePN	Pn	11 43 24.3	+0.8
TRO				eSG	Sb	11 43 49.4	0.0
KALU	Kalix	2.33	146	eP	Pn	11 43 31.2	+1.5
KALU				eSB	Sb	11 44 01.4	-0.8
KALU				MSG		11 44 04.9	
	comp=Z,28nm,0.3s						
ARCES	ARCESS Array B	2.59	46	Pg	Pn	11 43 34.1	+0.8
	comp=Z,2.7nm,0.3s,baz=227,slow=15,SNR=192						
ARCES				Lg	Lg	11 44 08.6	
	comp=Z,2.6nm,0.3s,baz=228,slow=23,SNR=6.6						
FINES	FINESS Array B	6.88	156	Pn	Pn	11 44 33.0	+0.9
	comp=Z,0.2nm,0.3s,baz=344,slow=10,SNR=10.0						
FINES				Sn	Sn	11 45 50.2	-0.7
	comp=Z,0.7nm,0.3s,baz=348,slow=23,SNR=5.9						
FINES				Lg	Lg	11 46 23.8	
	comp=Z,1.3nm,0.3s,baz=343,slow=26,SNR=6.6						
	comp=Z,2.2nm,0.6s						
NOA	NORSAR Array B	7.83	214	Pn	Pn	11 44 45.0	-0.3
	baz=24,slow=12,SNR=4.7						
NOA				Sn	Sn	11 46 15.7	+1.2
	baz=29,slow=20,SNR=1.1						
NOA				Lg	Lg	11 46 56.2	
	comp=Z,0.1nm,0.3s,baz=88,slow=15,SNR=5.4						
	comp=Z,0.7nm,0.8s						
HFS	Hagfors	8.22	203	Pn	Pn	11 44 50.1	-0.5
	comp=Z,0.2nm,0.3s,baz=15,slow=12,SNR=8.6						
HFS				Sn	Sn	11 46 20.9	-3.2
	comp=Z,0.3nm,0.3s,baz=19,slow=23,SNR=1.8						
HFS				Lg	Lg	11 47 07.9	
	comp=Z,0.5nm,0.3s,baz=25,slow=24,SNR=2.8						
	comp=Z,0.8nm,0.4s						
SPITS	Spitsbergen Ar	10.47	356	Pn	Pn	11 45 19.6	-1.7
	baz=163,slow=10						
	comp=Z,7.5nm,0.9s						

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*IDC **09** 11:44:25.8±2.2, 52°.29N×171°.00W, h0^{km}, mb3.6/2, mbtmp3.5/4, ML2.8/2, MS3.6/2, Error ellipse: s-maj=77.9km s-min=30.8km az=4.0*
*AEIC **09** 11:44:29.7±1.9, 52°.06N±0°.08×170°.91W±0°.04, h12^{km}±4^{km}, Error ellipse: s-maj=11.8km s-min=0.8km az=161.0*
*NEIC **09** 11:44:31.4±2.4, 52°.22N±0°.05×170°.92W±0°.04, h36^{km}±15^{km}, ML3.8/16, ML3.4(AEIC), Error ellipse: s-maj=7.5km s-min=3.3km az=196.0*
ISC 09 11:44:31.3±1.2**, 52°.2N**±0°.2×**170°.95W**±0°.06**, h42^{km}, n41, σ0^{s}.93**/36**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLES	Cleveland East	0.88	46		Sn	11 44 59.5	+0.6
CLES	Cleveland East	0.88	46		Pn	11 44 46.8	-0.5
CLCO	Concord Point,	0.94	52		Pn	11 44 47.3	-0.8
CLCO					Sn	11 45 00.5	+0.2
NIKH	Nikolski High	1.48	59		Pn	11 44 54.2	-1.3
NIKH	Nikolski High	1.48	59		Sn	11 45 12.0	-1.6
KOSE	Korovin Southe	1.91	275		Pn	11 45 01.7	+0.2
KOSE					Sn	11 45 25.9	+1.6
OKSP	Okmok Steeple	1.92	56		Pn	11 45 01.0	-0.5
KOFP	Korovin Flat P	1.94	273		Pn	11 45 01.1	-0.7
KOFP					Sn	11 45 25.6	+0.7
ATKA	Atka Island	2.00	271		Sn	11 45 25.4	-0.9
ATKA	Atka Island	2.00	271		Pn	11 45 01.3	-1.3
KOKL	Mount Kliuchef	2.00	274		Pn	11 45 02.1	-0.6
KOKL					Sn	11 45 27.3	+0.8
KOWE	Korovin West	2.04	275		Pn	11 45 02.8	-0.3
OKNC	Okmok New Cone	2.11	53		Pn	11 45 05.2	+1.0
OKFG	Magazine Ridge	2.19	56		Sn	11 45 32.1	+1.0
MREP	Makushin Rep't	3.00	56		Pn	11 45 16.8	+0.5
MSW	Makushin Switc	3.03	54		Pn	11 45 17.3	+0.5
MSW					Sn	11 45 52.8	+1.0
MNAT	Makushin Natee	3.06	55		Pn	11 45 17.7	+0.5
UNV	Unalaska Valle	3.14	57		Pn	11 45 18.5	+0.3
UNV				IAML		11 46 08.6	
	comp=E,140nm,1.0s						
GSMY	Great Sitkin M	3.15	269		Pn	11 45 17.9	-0.5
GSMY					Sn	11 45 57.2	+2.4
GSTD	Great Sitkin T	3.21	269		Pn	11 45 18.7	-0.6
LVA	Lava Point	3.54	55		Pn	11 45 24.6	+0.9
LVA				IAML		11 46 20.8	
	comp=E,171nm,0.9s						
LVA				IAML		11 47 04.4	
	comp=N,355nm,0.7s						
AKBBA	Akutan Broad B	3.56	56		Pn	11 45 24.9	+0.9
ADK	Adak	3.56	267		Pn	11 45 24.3	+0.4
ADK	Adak	3.56	267	IAML		11 46 16.9	
	comp=N,177nm,1.0s						
ADK				IAML		11 46 17.6	
	comp=N,136nm,0.8s						
AKUT	Akutan	3.66	56	Pn	Pn	11 45 25.6	+0.3
AKUT				IAML		11 46 22.5	
	comp=E,103nm,0.9s						
KIWB	Kanaga Island	3.85	267		Pn	11 45 28.1	+0.1
KIWB				IAML		11 46 25.7	
	comp=E,148nm,0.9s						
KIWB				IAML		11 46 33.8	
	comp=N,142nm,0.9s						
N14K	Kuskokwak Cree	9.29	30	Pn	Pn	11 46 43.1	+0.7
ILAR	Eielson Array	17.63	35	P	Pn	11 48 32.0	-1.4
	baz=242,slow=12,SNR=1.8						
	comp=N,0.4nm,0.8s						
PETK	Petropavlovsk-	18.97	285	P	P	11 48 48.0	-0.9
	comp=N,0.2nm,0.3s,baz=74,slow=11,SNR=7.5						
	comp=N,2.7nm,0.9s						
INK	Inuvik	24.00	34	LR	LR	12 00 48.2	
	comp=N,110nm,18.0s,baz=350,slow=41						
H11N2	WAKE ISLAND Hy	36.74	216	T	T	12 30 04.8	
	baz=21,slow=76,SNR=4.1						
H11N3	WAKE ISLAND Hy	36.75	216	T	T	12 30 06.6	
	baz=21,slow=76,SNR=4.1						
H11N1	WAKE ISLAND Hy	36.76	216	T	T	12 30 08.3	
	baz=21,slow=76,SNR=3.2						
H11S1	WAKE ISLAND Hy	37.94	216	T	T	12 32 38.8	
	baz=22,slow=76,SNR=13						
H11S2	WAKE ISLAND Hy	37.95	216	T	T	12 32 24.9	
	baz=22,slow=76,SNR=7.2						
H11S3	WAKE ISLAND Hy	37.96	216	T	T	12 32 41.0	
	baz=22,slow=76,SNR=5.9						
PDAR	Pinedale Array	41.38	78	P	P	11 52 14.1	+0.6
	comp=N,1.0nm,0.6s,baz=303,slow=2.8,SNR=14						
	comp=N,1.0nm,0.6s						
TXAR	Lajitas Array	53.72	88	P	P	11 53 49.3	+0.1
	comp=N,0.3nm,0.6s,baz=296,slow=5.3,SNR=6.0						
TXAR				LR	LR	12 14 25.7	
	comp=N,79nm,21.1s,baz=57,slow=34						
	comp=N,0.3nm,0.6s						
H03N2	Juan Fernandez	116.77	111	T	T	14 10 40.9	
	baz=318,slow=77,SNR=4.3						
H03N1	Juan Fernandez	116.79	111	T	T	14 10 41.4	
	baz=318,slow=77,SNR=4.6						
H03N3	Juan Fernandez	116.79	111	T	T	14 10 40.1	
	baz=318,slow=77,SNR=5.9						

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*IDC **09** 12:46:36.9±0.9, 39°.11N×95°.88E, h0^{km}, mb3.7/8, mbtmp3.7/14, ML3.4/5, MS3.8/2, Error ellipse: s-maj=26.8km s-min=15.4km az=45.0*
*NEIC **09** 12:46:39.4±1.7, 39°.25N±0°.08×95°.9E±0°.1, h10^{km}±1^{km}, mb4.1/10, Error ellipse: s-maj=15.0km s-min=12.4km az=222.0*
ISC 09 12:46:38.9±0.6**, 39°.31N**±0°.06×**95°.84E**±0°.07**, h10^{km}, n35, σ1^{s}.71**/32**, mb3.9**/11**, Gansu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LZDM	Lanzhou Array	7.08	116	Pn	Pn	12 48 21.6	-1.3
	baz=318,slow=12						
	1.9nm,0.3s						
LSA	Lhasa	10.34	203		Pn	12 49 08.1	+0.4
PASG	PASIGHAT	11.23	182	eP	Pn	12 49 31.4	+12
PASG				eS	Sn	12 51 26.9	+1.8
PASG				IAML		12 51 59.6	
	comp=E,21nm,0.3s						
PASG				IAML		12 52 10.7	
	comp=N,21nm,0.0s						
SONM	Songino Array	11.44	38	Pn	Pn	12 49 23.9	+1.4
	comp=N,0.4nm,0.3s,baz=222,slow=16,SNR=5.9						
SONM				Lg	Lg	12 52 36.9	
	comp=N,0.3nm,0.3s,baz=228,slow=30,SNR=6.3						
	comp=N,0.6nm,0.4s						
ZIRO	ZIRO	11.87	189	eP	Pn	12 49 39.8	+11
TAWA	Tawang	12.15	197	eP	Pn	12 49 43.7	+11
TAWA				eS	Sn	12 51 49.0	+0.9
TAWA				IAML		12 51 52.2	
	comp=E,31nm,1.1s						
TAWA				IAML		12 51 52.6	
	comp=N,31nm,0.4s						
ITAN	ITANAGAR	12.26	189	eP	Pn	12 49 45.0	+11
ITAN				eS	Sn	12 51 51.0	+0.6
ITAN				IAML		12 51 52.5	
	comp=E,30nm,0.6s						
MKAR	Makanchi Array	12.40	311	Pn	Pn	12 49 34.5	-1.0
	comp=E,0.2nm,0.3s,baz=133,slow=12,SNR=7.4						
MKAR				Sn	Sn	12 51 49.9	-3.8
	comp=E,0.3nm,0.3s,baz=125,slow=24,SNR=12						
MKAR				Lg	Lg	12 53 18.6	
	baz=118,slow=25						
	comp=E,0.9nm,0.7s						
MKAR	Makanchi Array	12.40	311		Pn	12 49 36.4	+0.9
WUS	Wushi	12.84	284		Pn	12 49 42.4	+0.7
GTK	Tadong	13.40	209	eP	P	12 50 00.1	+1.3
GTK				eS	Sn	12 52 17.7	-0.7
GTK				IAML		12 52 38.0	
	comp=N,18nm,0.4s						
GTK				IAML		12 52 38.3	
	comp=E,15nm,0.4s						
TARG	Taragay, Kyrgy	13.93	286		Pn	12 49 58.4	+1.6
KDJ	Kajisay	14.43	287	Pn	Pn	12 50 05.0	+1.6
ZALV	Zalesovo Beam	16.45	336	Pn	Pn	12 50 30.7	+1.0
	comp=E,0.1nm,0.3s,baz=142,slow=13,SNR=4.8						
	comp=E,0.7nm,0.5s						
AAK	Ala-Archa	16.45	289	Pn	Pn	12 50 30.1	+0.1
	comp=E,0.1nm,0.3s,baz=115,slow=24,SNR=3.7						
	comp=E,0.9nm,0.7s						
AAK	Ala-Archa	16.45	289	IAmb	IAmb	12 50 33.7	
	comp=Z,3.3nm,1.1s						
KURBB	Kurchatov Arra	16.62	319	Pn	Pn	12 50 31.4	-0.5
	comp=Z,1.4nm,0.2s,baz=126,slow=12,SNR=8.7						
KURK	Kurchatov	16.63	319		Pn	12 50 33.0	+0.9
KURK				IAmb	IAmb	12 50 38.5	
	comp=Z,3.8nm,0.8s						
ARSB	Arslanbob	17.54	284	P	Pn	12 50 38.1	-5.6
ARSB				IAmb	IAmb	12 50 50.6	
	comp=Z,16nm,1.5s						
CMAR	Chiang Mai Arr	20.96	172	P	P	12 51 20.6	-1.5
	comp=Z,1.1nm,0.7s,baz=348,slow=11,SNR=7.6						
	comp=Z,1.1nm,0.7s						
SHAA	Shahritus	21.75	274	P	P	12 51 31.4	+0.7
SHAA				IAmb	IAmb	12 51 33.5	
	comp=Z,13nm,0.8s						
BVAR	Borovoye Array	22.18	317	P	P	12 51 36.2	+1.1
	comp=Z,0.9nm,0.5s,baz=120,slow=8.7,SNR=6.6						
	comp=Z,0.9nm,0.5s						
BORK	Borovoye	22.23	317	P	P	12 51 36.1	+0.6
BORK				IAmb	IAmb	12 51 44.0	
	comp=Z,2.9nm,0.7s						
KSRS	Korea Array	25.15	84	P	P	12 52 03.6	-0.6
	comp=Z,3.4nm,0.7s,baz=283,slow=9.6,SNR=14						
	comp=Z,3.4nm,0.7s						
AKTO	Aktyubinsk	28.72	305	LR	LR	13 05 15.8	
	comp=Z,126nm,18.2s,baz=38,slow=39						
AKASG	Malin Array Be	46.94	307	LR	LR	13 17 30.3	
	comp=Z,147nm,19.8s,baz=300,slow=39						
ARCES	ARCESS Array B	46.96	333	P	P	12 55 09.8	+0.3
	comp=Z,3.6nm,0.9s,baz=60,slow=6.0,SNR=1.5						
	comp=Z,3.6nm,0.9s						
BRTR	Keskin Array B	47.10	291	P	P	12 55 10.5	-0.7
	comp=Z,0.3nm,0.5s,baz=69,slow=7.9,SNR=1.9						
	comp=Z,0.3nm,0.5s						
B20K	Meade River	59.03	23	P	P	12 56 39.8	+1.3
B20K				IAmb	IAmb	12 57 01.3	
	comp=Z,4.1nm,1.1s						
D19K	Kuna River	59.50	24	P	P	12 56 43.4	+1.6
TOLK	Toolik Lake Re	62.04	22	P	P	12 57 00.5	+1.4
TOLK				IAmb	IAmb	12 57 02.8	
	comp=Z,2.7nm,0.9s						
ILAR	Eielson Array	65.31	25	P	P	12 57 21.4	+0.7
	comp=Z,0.5nm,0.9s,baz=309,slow=6.4,SNR=2.9						
	comp=Z,0.5nm,0.9s						
WRA	Warramunga Arr	69.07	141	P	P	12 57 42.8	-2.3
	comp=Z,0.4nm,0.8s,baz=348,slow=5.9,SNR=2.1						
	comp=Z,0.4nm,0.8s						
WRA	Warramunga Arr	69.07	141	IAmb	IAmb	12 57 44.6	
	comp=Z,0.1nm,0.8s						
ASAR	Alice Springs	72.05	144	P	P	12 58 01.6	-1.6
	comp=Z,0.3nm,0.5s,baz=337,slow=6.3,SNR=12						
	comp=Z,0.3nm,0.5s						

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*CNRM **09** 13:01:14.9, 36°.41N×7°.64W, h68^{km}, ML2.1*
*SFS **09** 13:01:18.9, 36°.50N×7°.59W, h12^{km}, ML2.6/7, ML2.6/8, MLv2.6/8*
*MDD **09** 13:01:18.4±1.0, 36°.53N×7°.58W, h3^{km}±4^{km}, mb_Lg2.2/6, Error ellipse: s-maj=7.3km s-min=3.9km az=9.0*
*IGIL **09** 13:01:19.8, 36°.50N×7°.74W, h16^{km}, ML1.1*
*INMG **09** 13:01:21.3±1.6, 36°.52N×7°.71W, h31^{km}, ML1.6, Error ellipse: s-maj=7.4km s-min=5.2km az=180.0, #DIST_RANGE: LOCAL #IPMA_REGION: Golfo de Cadiz*
ISC 09 13:01:15.5±1.2**, 36°.34N**±0°.04×**7°.66W**±0°.03**, h28^{km}**±12^{km}**, n43, σ1^{s}.30**/70**, 1D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBDV	Barranco-do-Ve	0.93	347	⇓iP	Pn	13 01 34.1	+1.4
PBDV				eS	Sb	13 01 44.1	-0.8
PBDV				i IAML		13 01 47.1	
PBDV				i IAML		13 01 47.5	
PBDV				i IAML		13 01 49.4	
PBDV	Barranco-do-Ve	0.93	347	P	Pn	13 01 33.7	+1.1
PBDV				S	Sb	13 01 44.4	-0.5
PVAQ	Vaqueiros	1.06	358	P	Pb	13 01 35.2	-0.1
PVAQ	Vaqueiros	1.06	358	eP	Pb	13 01 36.0	+0.8
PVAQ				eS	Sb	13 01 46.9	-1.9
PVAQ				i IAML		13 01 47.9	
PVAQ				i IAML		13 01 48.4	
PVAQ				i IAML		13 01 48.9	
PVAQ	Vaqueiros	1.06	358	P	Pn	13 01 32.8	-1.7
PVAQ	Vaqueiros	1.06	358	S	Sb	13 01 47.5	-1.2
EGRO	El Granado	1.20	7	P	Pb	13 01 37.9	+0.4
EGRO				S	Sn	13 01 50.6	-1.1
EGRO	El Granado	1.20	7	Pg	Pb	13 01 38.2	+0.6
EGRO				Sg	Sn	13 01 50.0	-1.7
EGRO				i IVmb_Lg		13 01 52.2	
PFVI	Vila Bisbo	1.23	311	P	Pb	13 01 38.1	+0.1
PFVI				S	Sb	13 01 56.9	+3.5
PFVI	Vila Bisbo	1.23	311	eP	Pb	13 01 38.2	+0.3
PFVI				eS	Sb	13 01 52.8	-0.7
PFVI				i IAML		13 01 57.3	
PFVI				i IAML		13 01 57.3	
PFVI				i IAML		13 02 04.3	
PFVI	Vila Bisbo	1.23	311	P	Pn	13 01 35.8	-1.0
PFVI	Vila Bisbo	1.23	311	S	Sn	13 01 51.9	-0.4
MORF	Marmelete	1.25	321	eP	Pb	13 01 38.6	+0.2
MORF	Marmelete	1.25	321	eP	Pb	13 01 38.4	0.0
PCVE	Castro Verde	1.32	347	P	Pb	13 01 39.6	-0.1
PCVE				S	Sn	13 01 54.2	-0.6
PCVE	Castro Verde	1.32	347	eP	Pb	13 01 39.9	+0.2
PCVE				eS	Sn	13 01 54.0	-0.8
PCVE				i IAML		13 01 54.7	
PCVE				i IAML		13 01 54.7	
PCVE				i IAML		13 01 54.8	
PTEO	Sao Teotonio	1.47	325	eP	Pb	13 01 41.8	-0.4
PTEO				eS	Sn	13 01 57.7	-0.8
ESPR	Espera	1.54	70	S	Sb	13 02 01.5	-1.1
ESPR	Espera	1.54	70	Pg	Pb	13 01 43.6	+0.2
ESPR				Sg	Sb	13 02 02.7	+0.1
ESPR				i IVmb_Lg		13 02 06.1	

MESJ	Messejana	1.56	344	eP	Pb	13 01 43.1	-0.6
MESJ				eS	Sn	13 01 59.7	-1.0
MESJ				IAML		13 02 00.8	
	comp=E,2.4nm,0.1s						
MESJ	Messejana	1.56	344	eP	Pb	13 01 43.2	-0.5
MESJ				eS	Sn	13 02 00.2	-0.4
MESJ				i IAML		13 02 09.5	
MESJ				i IAML		13 02 12.2	
MESJ				i IAML		13 02 12.4	
EMIN	Mina Concepcio	1.63	29	P	Pb	13 01 44.1	-0.7
EMIN				S	Sn	13 02 02.3	0.0
EMIN	Mina Concepcio	1.63	29	Pg	Pb	13 01 46.0	+1.2
EMIN				Sg	Sn	13 02 03.4	+1.1
EMIN				i IVmb_Lg		13 02 10.3	
PBAR	Barrancos	1.90	15	P	Pn	13 01 45.7	-0.2
PBAR				S	Sn	13 02 10.4	+1.5
PBAR	Barrancos	1.90	15	eS	Sn	13 02 07.2	-1.8
PBAR				i IAML		13 02 10.9	
PBAR				i IAML		13 02 13.2	
PBAR				i IAML		13 02 18.3	
MOE	Montemor	2.25	346	eP	Pn	13 01 52.8	+2.0
MOE				eS	Sn	13 02 15.8	-1.7
MOE				i IAML		13 02 32.6	
MOE				i IAML		13 02 36.9	
MOE				i IAML		13 02 39.9	
EBAD	Badajoz	2.46	12	P	Pn	13 01 55.6	+1.9
EBAD	Badajoz	2.46	12	Pn	Pn	13 01 55.9	+2.2
EBAD				Sn	Sn	13 02 21.3	-1.6
EBAD				i IVmb_Lg		13 02 27.9	
PARRA	Arraiolos	2.49	353	eP	Pn	13 01 55.7	+1.6
PARRA				eS	Sn	13 02 22.5	-1.1
PARRA				i IAML		13 02 24.2	
PARRA				i IAML		13 02 25.2	
PARRA				i IAML		13 02 26.3	
ECAB	El Cabril	2.49	45	P	Pb	13 01 57.1	-2.5
ECAB				S	Sn	13 02 23.1	-0.5
ECAB	El Cabril	2.49	45	Pn	Pb	13 01 57.0	-2.5
ECAB				Sn	Sn	13 02 23.4	-0.2
ECAB				i IVmb_Lg		13 02 35.0	
PMTG	Montargil	2.76	351	eP	Pn	13 01 59.6	+1.8
PMTG				eS	Sn	13 02 29.6	-0.7
EADA	Adamuz	3.06	53	P	Pn	13 02 04.2	+2.2
EADA				S	Sn	13 02 37.7	0.0
EADA	Adamuz	3.06	53	Pn	Pn	13 02 04.8	+2.8
EADA				Sn	Sn	13 02 38.6	+0.9
EADA				i IVmb_Lg		13 02 45.5	
PMRV	Marv??o	3.09	4	eP	Pn	13 02 04.0	+1.7
PMRV				eS	Sn	13 02 37.0	-1.4
PMRV				i IAML		13 02 38.1	
PMRV				i IAML		13 02 38.6	
PMRV				i IAML		13 02 38.7	
PSARD	Sardoal	3.28	353	eP	Pn	13 02 06.8	+1.8
PSARD				eS	Sn	13 02 42.2	-0.8
PSARD				i IAML		13 02 42.4	
PSARD				i IAML		13 02 43.2	
PSARD				i IAML		13 02 43.9	
PCBR	Castelo Branco	3.50	2	eS	Sn	13 02 47.5	-0.9
EPLA	Plasencia	3.92	18	Pn	Pn	13 02 16.0	+2.2
EPLA				Sn	Sn	13 02 57.7	-1.2
PSIM	Granatula de C	3.97	50	Sn	Sn	13 03 00.3	+0.2
MD31	MD31	4.21	145	P	Pn	13 02 17.4	-0.5
MD31	MD31	4.21	145	S	Sn	13 03 05.9	-0.3
MDT	Midelt	4.33	144	P	Pn	13 02 19.4	-0.1
MDT	Midelt	4.33	144	S	Sn	13 03 09.6	+0.6

*DNK **09** 13:23:55.3±10.0, 57°.56N×18°.66E, h0^{km}, ML1.6(UPP), Explosion*

UPP 09 13:23:54.3±0.4**, 57°.73N×18°.75E, h0**^{km}**, ML1.6, Suspected explosion, Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOTU	Gotland	0.11	246	P	Pg	13 23 56.6	+0.3
GOTU				S	Sg	13 23 58.3	+0.6
GOTU	Gotland	0.11	246	P	Pg	13 23 56.6	+0.3
GOTU				S	Sg	13 23 58.3	+0.6
VSTU	Vaestervik	1.19	268	P	Pg	13 24 16.3	-0.8
VSTU				S	Sg	13 24 32.9	+0.3
VSTU	Vaestervik	1.19	268	P	Pg	13 24 16.3	-0.8
VSTU				S	Sg	13 24 32.9	+0.3
VIKU	Vikbolandet	1.34	306	P	Pg	13 24 19.2	-0.7
VIKU	Vikbolandet	1.34	306	P	Pg	13 24 19.2	-0.7
NYNU	Nynaeshamn	1.34	343	P	Pg	13 24 19.2	-0.8
NYNU	Nynaeshamn	1.34	343	P	Pg	13 24 19.2	-0.8
OSKU	Oskarshamn	1.53	251	P	Pn	13 24 22.4	-0.4
OSKU	Oskarshamn	1.53	251	P	Pn	13 24 22.4	-0.4

UPP 09 13:23:56.0±0.4**, 57°.74N×18°.78E, h0**^{km}**, ML1.9, Suspected explosion, Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOTU	Gotland	0.12	243	S	Sg	13 24 00.5	+0.5
GOTU	Gotland	0.12	243	S	Sg	13 24 00.5	+0.5
VSTU	Vaestervik	1.21	267	P	Pg	13 24 18.5	-0.5
VSTU	Vaestervik	1.21	267	P	Pg	13 24 18.5	-0.5
NYNU	Nynaeshamn	1.33	343	P	Pg	13 24 20.5	-0.9
NYNU	Nynaeshamn	1.33	343	P	Pg	13 24 20.5	-0.9
VIKU	Vikbolandet	1.34	306	P	Pg	13 24 20.8	-0.8
VIKU	Vikbolandet	1.34	306	P	Pg	13 24 20.8	-0.8
OSKU	Oskarshamn	1.55	250	P	Pn	13 24 24.5	-0.3
OSKU	Oskarshamn	1.55	250	P	Pn	13 24 24.5	-0.3

*GCG **09** 13:26:42.9±0.6, 13°.70N×89°.22W, h13^{km}±924^{km}, MD3.6*
*SNET **09** 13:26:43.0±1.0, 13°.69N×89°.22W, h4^{km}±1^{km}, ML2.4*
*CATAC **09** 13:26:43.6±0.4, 14°N±2°×8°9W±°, h4^{km}±1^{km}, M2.4/9, MLv2.4/9, Error ellipse: s-maj=4.0km s-min=2.6km az=10.4, confirmed*

ISC 09 13:26:42.0±0.8**, 13°.68N**±0°.03×**89°.22W**±0°.03**, h14**^{km}±3^{km}**, n35, σ0^{s}.89**/42**, 3C-1D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UTEC	Universidad Te	0.02	45	P	Pg	13 26 44.0	-0.6
UTEC	Universidad Te	0.02	45	S	Sg	13 26 45.6	-0.9
UEES	Universidad Ev	0.04	328	eP	Pg	13 26 44.8	0.0
UEES				eS	Sg	13 26 46.7	+0.1
UEES	Universidad Ev	0.04	328	P	Pg	13 26 45.0	+0.2
UEES	Universidad Ev	0.04	328	S	Sg	13 26 46.0	-0.6
IGN	Direccin Gen	0.06	58	eP	Pg	13 26 45.4	+0.6
IGN	Direccin Gen	0.06	58	P	Pg	13 26 45.4	+0.6
LOMA	Loma Larga	0.06	131	⇓ iP	Pg	13 26 44.3	-0.7
LOMA				eS	Sg	13 26 46.2	-0.7
LOMA	Loma Larga	0.06	131	P	Pg	13 26 45.5	+0.6
UDBS	Universidad Do	0.07	63	eP	Pg	13 26 45.6	+0.7
UDBS	Universidad Do	0.07	63	P	Pg	13 26 45.8	+0.9
UDBS	Universidad Do	0.07	63	S	Sg	13 26 46.7	-0.3
PIC2	El Picacho	0.07	328	eP	Pg	13 26 45.5	+0.3
BOQS	Boqueron	0.08	310	eP	Pg	13 26 45.6	+0.4
BOQS				eS	Sg	13 26 47.0	-0.4
PANCS	Alcalda de	0.08	152	P	Pg	13 26 46.0	+1.0
PANCS	Alcalda de	0.08	152	S	Sg	13 26 47.5	+0.5
PMON	Piamonte	0.10	287	⇑ eP	Pb	13 26 46.1	+0.8
PMON	Piamonte	0.10	287	S	Sb	13 26 47.9	+0.4
PMON	Piamonte	0.10	287	P	Pb	13 26 46.1	+0.8
LFU	La Fuente	0.12	58	⇑ eP	Pg	13 26 46.7	+1.2
QUEZ	Alcaldia de Qu	0.16	341	eP	Pb	13 26 48.2	+1.5
QUEZ				eS	Sb	13 26 50.8	+0.9
LFRS	El Faro	0.16	112	eP	Pb	13 26 47.8	+0.9
LFRS				eS	Sb	13 26 50.8	+0.7
LBRS	Las Brisas	0.18	72	eP	Pb	13 26 47.9	+0.8
LALI	Alcalda de L	0.22	207	eP	Pb	13 26 49.0	+1.3
LALI	Alcalda de L	0.22	207	i S	Sb	13 26 52.1	+0.6
LALI	Alcalda de L	0.22	207	P	Pb	13 26 48.5	+0.7
JAYA	Jayaque - finc	0.23	262	⇑ iP	Pb	13 26 48.5	+0.5
JAYA	Jayaque - finc	0.23	262	i P	Pb	13 26 48.4	+0.5
JAYA				i S	Sb	13 26 51.9	0.0
JAYA	Jayaque - finc	0.23	262	S	Sb	13 26 52.4	+0.4
JAYA	Jayaque - finc	0.23	262	P	Pb	13 26 48.5	+0.5
PAVA	Las Pavas	0.28	84	eP	Pn	13 26 49.8	-1.9
PAVA	Las Pavas	0.28	84	P	Pn	13 26 49.9	-1.8
SBLS	San Blas	0.42	291	eP	Pn	13 26 52.3	-1.5
MTO3	Montecristo	0.72	349	eP	Pn	13 26 56.7	-1.3
FAME	Alcaldia de Sa	0.79	282	P	Pn	13 26 59.2	+0.5
FAME				S	Sn	13 27 09.3	-0.9

*AZER **09** 13:27:07.8, 41°.59N×47°.72E, h21^{km}, ml2.5*
*DRS **09** 13:27:08.4, 41°.68N×47°.69E, h3^{km}*

ISC 09 13:27:08.1±0.9**, 41°.65N**±0°.02×**47°.69E**±0°.02**, h11**^{km}±7^{km}**, n31, σ0^{s}.84**/66**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKT	Akhty	0.17	170	i Pg	Pg	13 27 11.8	0.0
	867nm,0.3s						
AKT				eSg	Sg	13 27 14.4	0.0
	7µm,0.2s						
KSMR	Kasumkent	0.33	97	i Pg	Pb	13 27 15.3	-0.7
	1µm,0.2s						
KSMR				eSg	Sb	13 27 20.4	-1.0
	2µm,0.3s						
QSAR	Qusar	0.45	107	P	Pb	13 27 17.7	-0.3
QSAR				S	Sb	13 27 24.7	0.0
URKR	Urkarakh	0.52	355	ePg	Pg	13 27 18.6	+0.4
	211nm,0.2s						
URKR				eSg	Sg	13 27 26.2	+0.9
	670nm,0.2s						
SEKA	Sheki	0.57	221	P	Pg	13 27 19.5	+0.3
SEKA				S	Sg	13 27 27.5	+0.7
XNQ	Khinaliq	0.58	144	P	Pb	13 27 20.0	-0.4
XNQ				S	Sb	13 27 27.8	-0.9
DRN	Derbent	0.61	51	ePg	Pg	13 27 20.2	+0.3
	67nm,0.6s						
DRN				eSg	Sb	13 27 29.0	-0.5
	489nm,0.3s						
KMKR	Kumukh	0.66	318	i Pg	Pg	13 27 21.0	+0.2
	475nm,0.4s						
KMKR				eSg	Sg	13 27 30.6	+1.1
	768nm,0.2s						
QUBA	Quba, Azerbaij	0.67	115	P	Pb	13 27 21.9	+0.1
QUBA				S	Sb	13 27 32.0	+0.9
QBL	Gabala	0.71	171	P	Pb	13 27 22.1	-0.3
QBL				S	Sb	13 27 32.2	0.0
ZKTA	Zakatala	0.80	270	P	Pg	13 27 23.2	-0.3
ZKTA				S	Sg	13 27 33.6	-0.4
SGKR	Sergokala	0.81	358	ePg	Pg	13 27 23.1	-0.7
	1.0nm,0.4s						
SGKR				eSg	Sg	13 27 34.4	0.0
	131nm,0.3s						
IML	Ismayilli	0.93	156	P	Pn	13 27 26.5	-0.6
IML				S	Sn	13 27 40.3	-0.2
SIZA	Siyzn	1.07	122	P	Pg	13 27 28.5	-0.1
SIZA				S	Sn	13 27 45.3	+1.2
ARKR	Arakani	1.09	332	ePg	Pb	13 27 28.9	-0.1
	38nm,0.2s						
ARKR				eSg	Sg	13 27 44.1	+0.9
	115nm,0.2s						
PQL	Pirkuli	1.09	141	P	Pn	13 27 29.7	+0.2
PQL				S	Sn	13 27 44.1	-0.6
TLTR	Tlyarata	1.10	295	i Pg	Pb	13 27 27.8	-1.4
	41nm,0.6s						
TLTR				eSg	Sb	13 27 42.7	-1.0
	43nm,0.3s						
XNZR	Khunzakh	1.16	321	ePg	Pb	13 27 30.1	-0.2
	48nm,0.4s						
XNZR				eSg	Sg	13 27 46.0	+0.6
	64nm,0.3s						
ATGJ	Altiaghaj	1.22	129	P	Pg	13 27 31.7	+0.1
ATGJ				S	Sn	13 27 49.0	+1.2
BUJR	Buynaksk	1.26	340	ePg	Pn	13 27 30.6	-1.0
	48nm,0.2s						
BUJR				eSg	Sb	13 27 47.6	-0.5
	151nm,0.3s						
UNCR	Uncukul	1.26	328	ePg	Pb	13 27 31.9	0.0
	75nm,0.5s						
UNCR				eSg	Sg	13 27 49.3	+0.6
	75nm,0.5s						
KRNR	Karanay	1.32	334	ePg	Pb	13 27 33.0	+0.1
	14nm,0.4s						
KRNR				eSg	Sg	13 27 51.4	+0.9
	57nm,0.3s						
MAK	Makhachkala	1.32	354	ePg	Pn	13 27 32.5	0.0
	171nm,0.3s						
MAK				eSg	Sn	13 27 50.5	+0.4
	408nm,0.5s						
GANJ	Ganja	1.44	227	Pn	Pn	13 27 34.3	+0.2
GANJ				Sn	Sg	13 27 54.4	+0.1
BTLR	Botlikh	1.50	313	ePg	Pn	13 27 35.1	+0.2
	17nm,0.1s						
BTLR				eSg	Sb	13 27 55.2	+0.3
	29nm,0.4s						
AGDM	Agdam	1.60	196	Pn	Pg	13 27 38.1	-0.6
AGDM				Sn	Sg	13 28 02.7	+3.2
DLMR	Dylym	1.63	331	ePg	Pn	13 27 37.3	+0.5
	116nm,0.4s						
DLMR				eSg	Sb	13 27 59.6	+0.9
	276nm,0.5s						
GDB	GEDABAY	1.73	238	Pn	Pb	13 27 39.2	-0.8
GDB				Sn	Sb	13 28 02.1	+0.3
DVE	Vedeno	1.75	319	ePg	Pb	13 27 39.5	-0.8
	26nm,0.5s						
DVE				eSg	Sb	13 28 02.7	+0.4
	29nm,0.6s						
QZX	Qazax, Azerbai	1.84	252	Pn	Pb	13 27 41.6	-0.2
QZX				Sn	Sb	13 28 06.1	+1.2
MNK	Minsk	18.37	321	i P	P	13 31 21.5	-1.2
	comp=E,30nm,0.8s						
MNK				i P	P	13 31 21.5	-1.2
	comp=N,21nm,0.8s						
MNK				i P	P	13 31 21.5	-1.2
	comp=Z,27nm,0.8s,baz=126						
MNK				i PP	PnPn	13 31 33.3	-0.8
MNK				i PPP	PPP	13 31 41.0	
MNK				i S	Sn	13 34 48.5	+0.8
MNK				i SS	SnSn	13 35 03.6	+2.3
MNK				i SSS	SSS	13 35 16.4	
MNK				i LQ	LQ	13 36 51.3	
MNK				i LR	LR	13 38 37.1	
MNK				i LRM	MLR	13 39 30.7	
	comp=Z,22nm,5.9s						

*SJA **09** 13:37:16.4±0.7, 32°.36S×70°.60W, h125^{km}, ML3.5, MW3.4*
*GUC **09** 13:37:18.6±0.9, 32°.39S×70°.66W, h103^{km}±3^{km}, ML3.7*

ISC 09 13:37:18.7±1.5**, 32°.36S**±0°.03×**70°.60W**±0°.04**, h94**^{km}±10^{km}**, n31, σ1^{s}.29**/60**, 2C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA03	San Esteban	0.40	174	i P	Pn	13 37 33.0	-0.2
VA03				i S	Sn	13 37 44.3	+0.1
VA03				IAML		13 37 45.8	
	comp=E,7µm,0.2s						
CO04	Los Peladeros	0.45	315	i P	Pn	13 37 34.0	+0.2
CO04				eS	Sn	13 37 46.0	+1.0
VA06	Catapilco	0.62	251	eP	Pn	13 37 34.7	0.0
VA06				eS	Sn	13 37 47.0	+0.2
VA06				IAML		13 37 47.6	
	comp=N,5µm,0.2s						
ROCH	El Roble	0.70	209	i P	Pn	13 37 35.6	-0.1
ROCH				eP	Pn	13 37 35.6	-0.1
ROCH				eS	Sn	13 37 48.7	+0.1
ROCH				eS		13 37 49.0	
ROCH				IAML		13 37 50.1	
	comp=N,3µm,0.4s						
ROCH				IAML		13 37 50.2	
	comp=N,7µm,0.3s						
PEL	Peldehue	0.78	185	i P	Pn	13 37 35.7	-0.7
PEL				eS	Sn	13 37 49.5	-0.2
PEL				IAML		13 37 51.1	
	comp=E,2µm,0.2s						
MT10	Hacienda Santa	0.91	176	i P	Pn	13 37 37.7	-0.1
MT10				eS	Sn	13 37 52.4	+0.3
MT10				IAML		13 37 55.5	
	comp=E,4µm,0.2s						
MT02	Curacav	1.00	207	i P	Pn	13 37 38.2	-0.4
MT02				eS	Sn	13 37 53.7	0.0
MT14	Cerro Cal¡n	1.03	177	i P	Pn	13 37 39.2	+0.1
MT14				eS	Sn	13 37 54.7	+0.3
MT14				IAML		13 37 55.9	
	comp=N,2µm,0.3s						
MT05	Renca	1.03	186	i P	Pn	13 37 38.9	-0.2
MT05				eS	Sn	13 37 54.7	+0.3
AUSP	Uspallata	1.04	83	eP	Pn	13 37 47.3	+7.9
AUSP				eP	Sn	13 37 50.0	-4.9
AUSP				eS	Sn	13 37 50.0	-4.9
MT16	CCHEN	1.07	176	i P	Pn	13 37 39.3	-0.1
MT16				i S	Sn	13 37 55.6	+0.6
VA01	Torpederas	1.10	233	i P	Pn	13 37 39.8	+0.1
VA01				⇑ eS	Sn	13 37 55.4	-0.2
VA01				IAML		13 37 56.8	
	comp=N,2µm,0.1s						
MT04	Ro Olivares	1.11	159	i P	Pn	13 37 40.2	0.0
MT04				eS	Sn	13 37 57.2	+0.9
MT04				IAML		13 38 01.1	
	comp=E,1µm,0.2s						
MT03	Universidad Ad	1.13	176	i P	Pn	13 37 40.1	-0.2
MT03				eS	Sn	13 37 56.9	+0.4
MT03				IAML		13 37 58.4	
	comp=E,4µm,0.3s						
MT03				IAML		13 37 59.3	
	comp=E,4µm,0.2s						
MT08	Bocatoma Ro	1.19	156	i P	Pn	13 37 41.6	+0.6
MT08				eS	Sn	13 37 59.1	+1.3
MT08				IAML		13 38 04.1	
	comp=E,802nm,0.5s						
CO02	Combarbal	1.20	344	⇑ iP	Pn	13 37 41.4	+0.3
CO02				eS	Sn	13 37 58.9	+0.9
CO02				IAML		13 38 00.9	
	comp=N,10µm,0.2s						
MT12	Pirque	1.37	178	i P	Pn	13 37 42.7	-0.3
MT12				eS	Sn	13 38 01.4	-0.1
MT12				IAML		13 38 02.0	
	comp=N,1µm,0.3s						
MT13	San Alfonso	1.40	169	i P	Pn	13 37 43.8	+0.3
MT13				eS	Sn	13 38 02.9	+0.6
MT13				IAML		13 38 05.4	
	comp=E,1µm,0.5s						
MT09	Talagante	1.45	193	i P	Pn	13 37 43.5	-0.6
MT09				eS	Sn	13 38 02.8	-0.5
MT09				IAML		13 38 05.3	
	comp=N,1µm,0.2s						
ARCO	CERRO ARCO	1.49	109	eP	Pn	13 37 46.6	+2.0
ARCO				eS	Sn	13 38 06.4	+2.1
ARCO				IAML		13 38 07.7	
	comp=Z,536nm,0.6s						
ASAL	Salagasta	1.51	99	eP	Pn	13 37 46.6	+1.8
ASAL				eS	Sn	13 38 06.7	+2.0
CO03	El Pedregal	1.52	357	i P	Pn	13 37 45.7	+0.8
CO03				eS	Sn	13 38 06.3	+1.5
CO03				IAML		13 38 07.4	
	comp=E,4µm,0.2s						
MT01	Popeta	1.59	200	i P	Pn	13 37 45.4	-0.4
MT01				eS	Sn	13 38 05.7	-0.6
MT01				IAML		13 38 07.3	
	comp=N,980nm,0.2s						
AAGR	Agrelo	1.66	116	eP	Pn	13 37 47.1	+0.4
AAGR				eP		13 37 47.3	
AAGR				eS	Sn	13 38 10.1	+2.0
AAGR				IAML		13 38 12.5	
	comp=Z,264nm,0.9s						
ACCO	Cerro Coronel	2.20	37	eP	Pn	13 37 54.5	+0.5
ACCO				eS	Sn	13 38 23.3	+2.3
AVFE	Valle Fertil	3.18	59	eP	Pn	13 38 06.2	-0.5
AVFE				eS	Sn	13 38 43.0	-0.9
AGUA	GUANDACOL	3.39	33	eP	Pn	13 38 10.2	+0.5
APLL	PUNTA DE LOS L	4.00	62	eP	Pn	13 38 16.7	-1.1
APLL				eS	Sn	13 39 02.4	-1.3
ACLC	CERRO LA CRUZ	4.29	48	eP	Pn	13 38 21.0	-0.9
ACLC				eS	Sn	13 39 11.5	+0.6
TINO	Tinogasta	5.03	32	eP	Pn	13 38 30.6	-1.2
AC02	Maricunga	5.66	13	eP	Pn	13 38 40.0	-0.7

*NOU **09** 13:41:10.0, 36°.92S×176°.95E, h338^{km}, mb4.1/7, Off E. Coast of N. Island, N.Z.*
*WEL **09** 13:41:26.4±1.3, 37°S±11°×17°7E±°, h209^{km}±11^{km}, M2.4/6, MLv2.4/6, Error ellipse: s-maj=15.3km s-min=8.9km az=22.4, confirmed*

ISC 09 13:41:27.6±1.3**, 37°.52S**±0°.06×**176°.42E**±0°.06**, h200**^{km}**, n47, σ0^{s}.95**/49**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOZ	Tahuroa Road	0.76	253	P	Pn	13 41 56.9	+1.0
URZ	Urewera	0.92	144	P	Pn	13 41 56.1	-0.7
URZ	Urewera	0.92	144	P	Pn	13 41 56.5	-0.4
URZ				S	Sn	13 42 21.3	+1.7
KUZ	Kuaotunu	0.95	324	P	Pn	13 41 56.6	-0.4
PRRZ	Plateau Road	0.98	181	P	Pn	13 41 58.2	+1.0
MUGZ	Murupara	1.00	164	P	Pn	13 41 57.5	+0.1
ALRZ	Allen Road	1.05	183	P	Pn	13 41 58.6	+0.8
MKAZ	Moumakai	1.09	292	P	Pn	13 41 58.1	+0.2
RUGZ	Raukumara Rang	1.09	115	P	Pn	13 41 56.8	-1.4
RUGZ				S	Sn	13 42 21.9	0.0
HAZ	Te Kaha	1.11	103	P	Pn	13 41 57.1	-0.9
HAZ				S	Sn	13 42 22.7	+1.0
RTZ	Ruatahuna	1.18	158	P	Pn	13 41 58.9	+0.1
RTZ				S	Sn	13 42 24.7	+1.5
WIAZ	Waiheke Island	1.26	305	P	Pn	13 41 58.9	-0.4
ETAZ	East Tamaki Re	1.32	295	P	Pn	13 41 59.7	-0.1
PKGZ	Pakihiroa	1.36	105	P	Pn	13 41 59.8	-0.3
MTHZ	Maungataniwha	1.38	166	P	Pn	13 42 00.3	0.0
TWGZ	Tauwhareparae	1.40	119	P	Pn	13 42 01.2	+0.7
MBAZ	Motutapu North	1.43	301	P	Pn	13 42 00.3	-0.4
TKGZ	Te Karaka	1.46	130	P	Pn	13 42 00.6	-0.3
SNGZ	Shannon Statio	1.46	151	P	Pn	13 42 01.0	+0.1
GRZ	Great Barrier	1.48	328	P	Pn	13 42 00.0	-1.1
AWAZ	Awhitu Peninsu	1.49	287	P	Pn	13 42 01.0	-0.2
RAHZ	Arahi	1.49	160	P	Pn	13 42 01.6	+0.3
MXZ	Matakaoa Point	1.50	92	P	Pn	13 42 00.4	-0.8
ABAZ	Army Bay	1.57	305	P	Pn	13 42 01.5	-0.4
WTAZ	Waiatarua	1.59	291	P	Pn	13 42 01.9	-0.2
HIZ	Hauiti	1.59	231	P	Pn	13 42 03.1	+1.0
RIGZ	Rimuhau	1.59	139	P	Pn	13 42 02.3	+0.1
NMHZ	Naumai	1.61	169	P	Pn	13 42 03.2	+0.9
WMGZ	Waiomatatini S	1.61	101	P	Pn	13 42 01.7	-0.6
BKZ	Black Stump Fm	1.65	178	P	Pn	13 42 01.9	-0.8
BKZ	Black Stump Fm	1.65	178	P	Pn	13 42 02.2	-0.5
RVAZ	Riverhead Bore	1.65	296	P	Pn	13 42 01.9	-0.8
WHHZ	Waihua	1.69	158	P	Pn	13 42 03.6	+0.6
CNGZ	Carnagh Statio	1.71	125	P	Pn	13 42 03.3	+0.1
OTVZ	Oturere	1.75	200	P	Pn	13 42 04.1	+0.3
SNVZ	South Ngauruho	1.78	200	P	Pn	13 42 04.3	+0.2
ARHZ	Aropaoanui	1.80	166	P	Pn	13 42 04.1	0.0
TUVZ	Tukino	1.85	199	P	Pn	13 42 04.8	0.0
KWHZ	Kaweka Forest	1.91	180	P	Pn	13 42 05.0	-0.2
WNVZ	Wahianoa	1.92	199	P	Pn	13 42 05.2	-0.3
MCHZ	McNeill Hill	1.94	174	P	Pn	13 42 05.6	+0.1
PKVZ	Pokaka	1.96	205	P	Pn	13 42 06.0	+0.2
KAHZ	Kahuranaki	2.30	171	P	Pn	13 42 08.8	-0.6
BFZ	Birch Farm	3.17	182	P	Pn	13 42 16.7	-2.5
SNZO	South Karori	4.02	199	P	Pn	13 42 25.6	-3.9
QRZ	Quartz Range	4.48	221	P	Pn	13 42 30.9	-4.5
KHZ	Kahutara	5.37	203	P	Pn	13 42 42.0	-4.7

*KRNET **09** 13:42:32.6±0.1, 41°.75N×78°.33E, h19^{km}, mb2.1*
*SOME **09** 13:42:33.1, 41°.80N×78°.22E*
*NNC **09** 13:42:40.1±2.0, 42°.12N×78°.24E, h0^{km}, mb2.7, mpv2.5, Error ellipse: s-maj=15.8km s-min=6.0km az=172.0*

ISC 09 13:42:34.2±1.4**, 41°.83N**±0°.06×**78°.24E**±0°.05**, h0**^{km}**, n16, σ1^{s}.05**/28**, 12C-2D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	0.34	252	⇑ iP	Pg	13 42 40.5	-0.3
TARG				⇑ iS	Sg	13 42 46.2	+1.0
PRZ	Przheval'sk	0.66	10	⇑ iP	Pg	13 42 47.1	+0.2
PRZ				⇑ iS	Sb	13 42 57.3	-1.3
KDJ	Kajisay	0.85	291	⇑ iP	Pg	13 42 50.2	-0.2
KDJ				⇑ iS	Sb	13 43 03.0	-0.9
UZB	Uzynbulak	1.43	23	P	Pb	13 43 03.2	+1.3
	1.4nm,0.2s						
UZB				S	Sg	13 43 20.4	+0.1
	2.5nm,0.3s						
TNSS	Tian-Shan	1.54	322	P	Pb	13 43 03.7	-0.1
	0.8nm,0.2s						
TNSS				S	Sg	13 43 21.2	-2.5
	1.9nm,0.2s						
ULHL	Ulahol	1.55	286	⇑ iP	Pn	13 43 02.8	-0.4
ULHL				⇑ iS	Sn	13 43 24.4	+0.3
MDOK	Medeo	1.60	327	Pg	Pb	13 43 04.6	-0.1
	2.3nm,0.2s						
MDOK				Lg	Lg	13 43 22.0	
	4.1nm,0.7s						
KPKS	Kokpek	1.66	11	P	Pg	13 43 06.4	+0.3
	0.3nm,0.2s						
KPKS				S	Sn	13 43 25.0	-1.8
	1.7nm,0.3s						
BOOM	Boomskoye usch	1.83	292	⇑ iP	Pn	13 43 07.3	+0.2
BOOM				⇑ iS	Sg	13 43 32.8	-0.3
MTBS	Maitube	1.86	315	P	Pg	13 43 11.9	+1.9

	1.7nm,0.2s						
MTBS				S	Sg	13 43 35.0	+0.9
	7.9nm,0.2s						
KST	Kastek	2.08	306	Pg	Pg	13 43 15.8	+1.8
	1.0nm,0.3s						
KST				Lg	Lg	13 43 41.4	
	9.1nm,0.5s						
JNKS	Jany-Kuch	2.10	249	⇓*i*P	Pn	13 43 10.3	-0.5
JNKS				⇓*i*S	Sn	13 43 37.7	0.0
KTBS	Karatobe	2.20	329	P	Pb	13 43 15.3	+0.3
	2.0nm,0.4s						
KTBS				S	Sn	13 43 40.6	+0.6
	0.5nm,0.6s						
TKM2	Tokmak 2	2.24	300	⇑*i*P	Pn	13 43 13.3	+0.5
TKM2				⇑*i*S	Sb	13 43 43.0	-1.1
DGS	Degeres	2.31	308	Pg	Pg	13 43 19.7	+1.3
	2.5nm,0.4s						
DGS				Lg	Lg	13 43 48.2	
	4.8nm,0.5s						
KRBS	Karabastau	2.65	315	Pg	Pg	13 43 25.8	+0.7
	0.6nm,0.5s						
KRBS				Lg	Lg	13 43 58.7	
	0.8nm,0.3s						

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*IDC **09** 13:44:47.8±4.1, 6°.70S×129°.91E, h97^{km}±40^{km}, mb3.8/9, mbtmp4.3/13, MS2.9/1, Error ellipse: s-maj=42.2km s-min=17.7km az=57.0*

*NEIC **09** 13:44:54.9±1.0, 6°.97S±0°.06×129°.48E±0°.08, h161^{km}±6^{km}, mb4.4/25, Error ellipse: s-maj=11.5km s-min=8.6km az=59.0*

*DJA **09** 13:44:55.4±0.2, 7°S±2°×12°9E±°, h174^{km}±5^{km}, M4.5/25, mb4.5/25, mB5.0/13, MLv4.7/20, Mw(mB)4.4/13*

ISC 09 13:44:53.8±0.4**, 7°.15S**±0°.05×**129°.40E**±0°.05**, h150**^{km}**, n113, σ2^{s}05**/114**, mb4.2**/19**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.06	114		Pn	13 45 31.4	+1.8
SAUI	Saumlaki	2.06	114	P	Pn	13 45 32.3	+2.7
SAUI	Saumlaki	2.06	114	P	Pn	13 45 32.3	+2.7
BNDI	Bandanaira	2.66	11	P	Pn	13 45 39.3	+2.4
BNDI	Bandanaira	2.66	11	P	Pn	13 45 39.5	+2.6
AAI	Ambon	3.64	341	P	Pn	13 45 52.1	+2.7
MSAI	Masohi	3.81	353	P	Pn	13 45 53.8	+2.2
KRAI	Karang Ratu	3.94	345	P	Pn	13 45 55.6	+2.3
NLAI	Namlea	4.51	329	P	Pn	13 46 04.0	+3.2
FAKI	Fak Fak	5.07	34	Pn	Pn	13 46 06.4	-1.8
FAKI	Fak Fak	5.07	34	P	Pn	13 46 06.0	-2.2
FAKI	Fak Fak	5.07	34	P	Pn	13 46 06.4	-1.8
	0.8nm3µm60nm,0.8s						
DRS	Darwin Rock St	5.45	164	P	Pn	13 46 16.4	+3.2
KMPI	Kaimana, Papua	5.51	51	P	Pn	13 46 14.4	+0.4
SOEI	Soe	5.70	243		Pn	13 46 20.1	+3.5
SOEI	Soe	5.70	243	P	Pn	13 46 20.8	+4.2
SOEI	Soe	5.70	243	P	Pn	13 46 20.5	+3.9
	1.5nm2µm101nm,0.8s						
MTN	Manton Dam	5.91	163		Pn	13 46 21.0	+1.6
SANI	Sanana	6.10	326	P	Pn	13 46 24.5	+2.6
BATI	Baumata	6.43	241	P	Pn	13 46 29.0	+2.7
	48nm,0.3s,baz=149,slow=0.9,SNR=32						
BATI				S	Sn	13 47 38.4	-0.4
	173nm,0.4s,baz=107,slow=9.0,SNR=22						
BATI	Baumata	6.43	241	P	Pn	13 46 29.7	+3.4
	1.5nm2µm73nm,0.5s						
SWI	Sorong	6.51	17	P	Pn	13 46 27.7	+0.3
	0.3nm1µm26nm,0.9s						
MMRI	Maumere	7.25	258	P	Pn	13 46 40.4	+3.2
	0.3nm22nm,0.5s						
RKPI	Ransiki, Papua	7.35	41	P	Pn	13 46 38.6	0.0
MWPI	Manokwari, Pap	7.72	37	P	Pn	13 46 44.4	+0.9
	0.8nm134nm,0.9s						
EDFI	Ende, Flores	7.80	258	P	Pn	13 46 47.9	+3.2
	0.1nm17nm,0.7s						
KNRA	Kununurra	8.50	184		Pn	13 46 54.9	+1.0
BAKI	Biak	8.93	49	P	Pn	13 47 01.0	+1.3
BASI	Baing, Sumba	9.24	250	P	Pn	13 47 06.0	+2.2
	102nm,1.2s						
WSI	Waingapu	9.35	254	P	Pn	13 47 06.4	+1.2
BKSI	Bulukumba	9.40	281	P	Pn	13 47 08.3	+2.4
	17nm,0.9s						
LBFI	Labuhan Bajo,	9.51	261	P	Pn	13 47 10.0	+2.6
	457nm23nm,0.6s						
KAPI	Kappang	9.82	282	P	Pn	13 47 11.6	+0.1
	4.2nm,0.3s,baz=90,slow=5.4,SNR=4.9						
GTOI	Gorontalo	10.02	320	P	Pn	13 47 19.7	+5.5
	29nm,0.9s						
WBSI	Waikabubak, Su	10.21	255	P	Pn	13 47 17.7	+1.1
	32nm,0.5s						
DBNI	Kabupaten Domp	11.07	262	P	Pn	13 47 28.1	+0.1
MMSI	Mamuju	11.35	292	P	Pn	13 47 35.4	+3.7
	46nm,1.3s						
FITZ	Fitzroy Crossi	11.48	198	P	Pn	13 47 33.2	-0.2
	10nm,0.3s,baz=34,slow=12,SNR=75						
FITZ				S	Sn	13 49 34.1	-6.3
	25nm,0.5s,baz=122,slow=9.8,SNR=8.3						
FITZ	Fitzroy Crossi	11.48	198	Pn	Pn	13 47 33.0	-0.3
FITZ					Sn	13 49 36.9	-3.5
PLAI	Plampang	11.63	261	P	Pn	13 47 34.9	-0.5
PLAI	Plampang	11.63	261	P	Pn	13 47 34.6	-0.8
	40nm,0.7s						
TOLI2	Tolitoli	11.88	313	P	Pn	13 47 40.4	+1.7
JAY	Jayapura	12.17	68	LR	LR	13 53 58.5	
	comp=Z,49nm,18.2s,baz=242,slow=48						
WB0	Warramunga Arr	13.45	159		Pn	13 47 57.6	-1.1
WRAB	Tennant Creek	13.59	160	Pn	Pn	13 47 59.5	-1.0
WRA	Warramunga Arr	13.59	160	P	Pn	13 47 59.1	-1.5
	4.5nm,0.6s,baz=340,slow=14,SNR=59						
WRA				S	Sn	13 50 22.3	-8.8
	16nm,0.4s,baz=336,slow=22,SNR=11						
WRA	Warramunga Arr	13.59	160		Pn	13 47 57.6	-3.0
COEN	Coen	15.13	118	Pn	Pn	13 48 19.2	-0.8
COEN				IAmb	IAmb	13 48 25.9	
	comp=Z,15nm,0.7s						
COEN	Coen	15.13	118	P	Pn	13 48 20.5	+0.5
JAGI	Jajag, Banyuwa	15.16	264	Pn	Pn	13 48 20.4	0.0
JAGI				IAmb	IAmb	13 48 26.1	
	comp=Z,51nm,1.4s						
JAGI	Jajag, Banyuwa	15.16	264	P	Pn	13 48 20.7	+0.3
JAGI	Jajag, Banyuwa	15.16	264	P	Pn	13 48 20.7	+0.3
	comp=Z,23nm,1.0s						
GMJI	Gumukmas	15.85	265	P	Pn	13 48 29.3	+0.5
QIS	Mount Isa	16.59	144	P	Pn	13 48 39.7	+1.8
MBWA	Marble Bar	16.77	213	P	Pn	13 48 42.0	+2.0
MBWA				IAmb	IAmb	13 48 57.2	
	comp=Z,13nm,1.1s						
MBWA	Marble Bar	16.77	213	P	Pn	13 48 42.0	+2.0
AS31	Alice Springs	16.98	166		Pn	13 48 43.4	+0.8
AS31				IAmb	IAmb	13 48 46.8	
	comp=Z,9.3nm,0.7s						
ASAR	Alice Springs	16.98	166	P	Pn	13 48 44.1	+1.5
	comp=Z,26nm,0.6s,baz=346,slow=10,SNR=259						
ASAR				S	S	13 51 43.7	-7.8
	comp=Z,2.7nm,0.7s,baz=330,slow=18,SNR=5.8						
ASAR	Alice Springs	16.98	166		Pn	13 48 43.6	+1.0
PSA00	Pilbara Seismi	17.05	212	P	Pn	13 48 44.8	+1.4
PSA00				IAmb	IAmb	13 48 47.7	
	comp=Z,32nm,1.5s						
PSA00	Pilbara Seismi	17.05	212	P	Pn	13 48 45.3	+1.9
	comp=Z,14nm,1.9s						
SNJI	Sawahan-Nganju	17.50	267	P	P	13 48 49.2	+1.3
PMG	Port Moresby	17.72	98	P	Pn	13 48 52.2	+0.9
PMG	Port Moresby	17.72	98	P	Pn	13 48 52.5	+1.1
PMG	Port Moresby	17.72	98	P	Pn	13 48 52.3	+0.9
MTSU	Mount Surprise	18.18	128	P	Pn	13 48 57.8	+0.9
UGM	Wanagama	18.73	266	P	P	13 49 01.0	-0.2
SBUM	Sibu	19.62	298	P	P	13 49 10.2	-0.6
SBUM				IAmb	IAmb	13 49 14.9	
	comp=Z,10nm,0.9s						
BBJI	Bungbulang	21.57	268	P	P	13 49 33.5	+1.6
INKA	Innaminka	23.13	154		P	13 49 47.2	+0.4
INKA				IAmb	IAmb	13 49 50.3	
	comp=Z,10nm,0.6s						
FORT	Forrest	23.54	183	P	P	13 49 51.1	+0.6
FORT				IAmb	IAmb	13 49 54.0	
	comp=Z,6.0nm,0.7s						
QLP	Quilpie	23.93	146	P	P	13 49 55.5	+1.4
BBOO	Buckleboo	26.27	167	P	P	13 50 16.2	+0.9
BBOO	Buckleboo	26.27	167	P	P	13 50 16.7	+1.5
STKA	Stephens Creek	27.11	157	P	P	13 50 23.7	+1.0
	comp=Z,5.3nm,0.5s,baz=329,slow=11,SNR=7.1						
	comp=Z,5.3nm,0.5s						
STKA	Stephens Creek	27.11	157	P	P	13 50 23.0	+0.3
STKA	Stephens Creek	27.11	157	P	P	13 50 24.4	+1.7
HTT	Hallett	27.60	163	P	P	13 50 31.1	+3.9
CMSA	Cobar Meteorol	28.64	150	P	P	13 50 37.4	+1.0
NGOA	Tingoa Renbel	30.56	101	P	P	13 50 54.7	+1.2
TOO	Toolangi	33.63	157	P	P	13 51 20.0	-0.1
TOO				IAmb	IAmb	13 51 24.1	
	comp=Z,6.7nm,1.2s						
SANVU	Saraoutou	37.93	106	P	P	13 51 55.5	-1.5
SANVU	Saraoutou	37.93	106	P	P	13 51 58.9	+1.9
YATNC	Mamie plateau,	39.05	116	P	P	13 52 08.4	+2.1
CMAR	Chiang Mai Arr	39.37	311	P	P	13 52 09.1	+0.1
	comp=Z,2.6nm,0.6s,baz=136,slow=7.3,SNR=22						
	comp=Z,2.6nm,0.6s						
CMAR	Chiang Mai Arr	39.37	311	P	P	13 52 07.5	-1.5
CHTO	Chiang Mai	39.59	311	P	P	13 52 09.6	-1.2
CHTO				IAmb	IAmb	13 52 11.4	
	comp=Z,6.2nm,0.8s						
PZH	PanZhiHua	42.88	322	P	P	13 52 38.5	+0.8
MJAR	Matsushiro Arr	44.24	10	P	P	13 52 43.1	-5.2
	comp=Z,0.5nm,0.4s,baz=187,slow=8.5,SNR=1.5						
	comp=Z,0.5nm,0.4s						
MJAR	Matsushiro Arr	44.24	10	P	P	13 52 45.7	-2.5
KSRS	Korea Array	44.39	358	P	P	13 52 45.1	-4.3
	comp=Z,0.7nm,0.6s,baz=173,slow=7.1,SNR=1.9						
	comp=Z,0.7nm,0.6s						
LZH	Lanzhou	49.26	333	*e*P	P	13 53 28.7	+1.2
LZH				pP	pP	13 54 03.1	+2.9
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC	Hu-ho-hao-te	50.50	342	*e*P	P	13 53 35.9	-0.8
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,84nm,4.3s						
WHZ	Wether Hill Ro	50.91	146	P	P	13 53 40.5	+0.8
TUWZ	Tuamarina	52.17	138	P	P	13 53 49.6	+0.5
BHW	Baring Head	52.78	138	P	P	13 53 53.3	-0.2
EVN	Everest	53.94	312		P	13 54 02.0	-0.9
EVN				IAmb	IAmb	13 54 03.9	
	comp=Z,4.7nm,0.6s						
SONM	Songino Array	58.40	342	P	P	13 54 32.5	-1.1
	comp=Z,0.5nm,0.6s,baz=151,slow=3.3,SNR=3.1						
	comp=Z,0.5nm,0.6s						
KSH	Kashi	67.73	318	P	P	13 55 37.6	+2.2
KSH				pmax	pmax		
	comp=Z,3.0nm,1.7s						
MKAR	Makanchi Array	68.03	327	P	P	13 55 36.7	-0.3
	comp=Z,4.6nm,0.5s,baz=115,slow=8.4,SNR=69						
	comp=Z,4.6nm,0.5s						
MKAR	Makanchi Array	68.03	327	P	P	13 55 35.9	-1.1
MAKZ	Makanchi	68.20	327	P	P	13 55 37.2	-0.9
MAKZ				IAmb	IAmb	13 55 39.0	
	comp=Z,2.7nm,0.6s						
ZAA0	Zalesovo Array	71.45	334		P	13 55 55.8	-2.0
ZALV	Zalesovo Beam	71.45	334	P	P	13 55 55.3	-2.4
	comp=Z,1.4nm,0.6s,baz=118,slow=5.4,SNR=8.5						
	comp=Z,1.4nm,0.6s						
ZALV	Zalesovo Beam	71.45	334		P	13 55 55.9	-1.9
KURBB	Kurchatov Arra	72.33	329	P	P	13 56 02.4	-0.6
	comp=Z,1.3nm,0.4s,baz=128,slow=4.8,SNR=18						
	comp=Z,1.3nm,0.4s						
KURK	Kurchatov	72.33	329		P	13 56 02.3	-0.7
KKAR	Karatay Array	73.06	319	P	P	13 56 07.0	-0.5
BVAR	Borovoye Array	77.87	328	P	P	13 56 33.6	-1.2
	comp=Z,2.4nm,0.8s,baz=123,slow=5.5,SNR=10						
	comp=Z,2.4nm,0.8s						
BORK	Borovoye	77.92	328	P	P	13 56 34.5	-0.5
AB31	Akbulak array	82.25	322	P	P	13 56 57.3	-1.0
ABKAR	Akbulak array	82.25	322	P	P	13 56 57.4	-0.9
ARTI	Arti	85.60	328	P	P	13 57 14.2	-0.9
ARTI				IAmb	IAmb	13 57 15.2	
	comp=Z,6.6nm,0.7s						

IDC 09 14:16:00.5±2.3**, 1°.75N**×**126°.81E, h0**^{km}**, mb3.3**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=187.1km s-min=27.9km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.79	161	P	P	14 21 04.4	-0.6
	0.4nm,0.5s,baz=340,slow=11,SNR=8.8						
	0.4nm,0.5s						
ASAR	Alice Springs	26.19	165	P	P	14 21 37.6	+0.5
	0.3nm,0.4s,baz=344,slow=11,SNR=11						
	0.3nm,0.4s						
MKAR	Makanchi Array	59.22	326	P	P	14 26 03.5	-0.2
	0.2nm,0.5s,baz=120,slow=7.5,SNR=2.5						
	0.2nm,0.5s						

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*IDC **09** 14:18:22.0±1.9, 9°.83S×116°.23E, h0^{km}, mb3.3/5, mbtmp3.5/7, ML3.8/2, Error ellipse: s-maj=89.5km s-min=20.3km az=45.0*

*DJA **09** 14:18:29.1±1.1, 10°S±6°×11°7E±°, h19^{km}±12^{km}, M4.0/15, mB4.5/1, mb4.2/4, MLv3.9/15, Mw(mB)3.7/1*

*NEIC **09** 14:18:29.0±1.6, 9°.8S±0°.1×116°.43E±0°.07, h54^{km}±11^{km}, mb4.0/9, Error ellipse: s-maj=16.5km s-min=9.0km az=191.0*

ISC 09 14:18:27.3±0.7**, 10°.06S**±0°.07×**116°.45E**±0°.05**, h35**^{km}**, n48, σ2^{s}21**/48**, mb4.0**/7**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWSI	Taliwang, Sumb	1.38	18	P	Pn	14 18 50.0	-0.1
KLNI	Mataram	1.66	348	P	Pn	14 18 54.9	+0.9
IGBI	Denpasar	1.78	314	P	Pn	14 18 57.3	+1.7
PLAI	Plampang	1.79	47	P	Pn	14 18 56.5	+0.8
DNP	Denpasar	1.84	318	P	Pn	14 18 59.0	+2.6
DNP				S	Sn	14 19 20.7	+2.2
KHKI	Kahang-Kahang	1.88	334	P	Pn	14 19 00.0	+3.1
KHKI				S	Sn	14 19 21.1	+1.7
RTBI	Rangdo, Negare	2.18	317	P	Pn	14 19 03.3	+2.2
DBNI	Kabupaten Domp	2.40	50	P	Pn	14 19 06.2	+2.1
DBNI				S	Sn	14 19 33.9	+1.6
JAGI	Jajag, Banyuwa	2.77	305		Pn	14 19 09.6	+0.4
JAGI	Jajag, Banyuwa	2.77	305	P	Pn	14 19 10.7	+1.5
WBSI	Waikabubak, Su	2.92	82	P	Pn	14 19 12.7	+1.3
ABJI	Asem Bagus	3.14	316	P	Pn	14 19 17.1	+2.8
GMJI	Gumukmas	3.46	301	P	Pn	14 19 20.6	+1.9
BLJI	Banyuglugur	3.64	309	P	Pn	14 19 23.8	+2.6
LBFI	Labuhan Bajo,	3.74	65	P	Pn	14 19 25.3	+2.8
KMMI	Kalianget	3.87	320	P	Pn	14 19 28.8	+4.4
SNJI	Sawahan-Nganju	5.16	296	P	Pn	14 19 45.3	+3.0
	0.1nm22nm,1.0s						
SJI	Sawahan	5.17	296	P	Pn	14 19 46.2	+3.8
	0.2nm30nm,1.6s						
EDFI	Ende, Flores	5.33	76	P	Pn	14 19 46.5	+2.0
	0.1nm20nm,0.7s						
MMRI	Maumere	5.88	77	Pn	Pn	14 19 53.2	+1.2
BKSI	Bulukumba	5.95	38	P	Pn	14 19 54.0	+1.1
KAPI	Kappang	5.98	33	Pn	Pn	14 19 51.4	-2.0
UGM	Wanagama	6.24	290	Pn	Pn	14 19 56.7	-0.2
BATI	Baumata	7.10	92	Pn	Pn	14 20 10.1	+1.3
	2.8nm,0.3s,baz=115,slow=5.5,SNR=2.2						
BATI				Sn	Sn	14 21 28.3	0.0
	3.1nm,0.3s,baz=69,slow=22,SNR=1.9						
	9.6nm,0.4s						
SOEI	Soe	7.70	88	Pn	Pn	14 20 20.5	+3.3
FITZ	Fitzroy Crossi	11.97	133	Pn	Pn	14 21 17.8	+2.3
	0.2nm,0.3s,baz=317,slow=13,SNR=7.9						
FITZ				Sn	Sn	14 23 23.4	-4.4
	0.4nm,0.3s,baz=191,slow=21,SNR=7.9						
	1.6nm,0.6s						
FITZ	Fitzroy Crossi	11.97	133		Pn	14 21 17.9	+2.4
KNRA	Kununurra	13.23	116	Pn	Pn	14 21 33.5	+0.7
FAKI	Fak Fak	17.21	67		Pn	14 22 25.4	+0.2
WB0	Warramunga Arr	19.82	121	P	P	14 22 56.5	+1.3
WB0				IAmb	IAmb	14 23 36.5	
	comp=Z,4.8nm,1.3s						
WRA	Warramunga Arr	19.86	122	P	Pn	14 22 58.4	+1.1
	comp=Z,0.2nm,0.6s,baz=295,slow=12,SNR=7.8						
	comp=Z,0.2nm,0.6s						
WRA	Warramunga Arr	19.86	122	P	P	14 22 56.0	+0.5
WRAB	Tennant Creek	19.86	122	P	P	14 22 57.2	+1.7
WRAB				IAmb	IAmb	14 23 26.1	
	comp=Z,8.9nm,1.4s						
ASAR	Alice Springs	21.46	131	P	P	14 23 16.0	+3.1
	comp=Z,0.5nm,0.6s,baz=303,slow=9.6,SNR=10						
	comp=Z,0.5nm,0.6s						
ASAR	Alice Springs	21.46	131	P	P	14 23 14.4	+1.5
AS31	Alice Springs	21.46	131	P	P	14 23 14.4	+1.5
ARMA	Armidale	38.48	127	P	P	14 25 46.9	+0.5
ARMA				IAmb	IAmb	14 26 10.9	
	comp=Z,9.7nm,1.2s						
PALK	Pallekele	39.55	294	P	P	14 25 52.5	-2.9
H08S2	Diego Garcia H	43.48	269	T	T	15 13 32.4	
	baz=95						
H08S3	Diego Garcia H	43.49	269	T	T	15 13 33.5	
	baz=95						
H08S1	Diego Carcia H	43.50	269	T	T	15 13 36.8	
	baz=95						
MKAR	Makanchi Array	64.29	335	P	P	14 28 57.8	-1.4
	comp=Z,0.1nm,0.5s,baz=143,slow=6.7,SNR=1.8						
	comp=Z,0.1nm,0.5s						
KURBB	Kurchatov Arra	68.83	335	P	P	14 29 26.8	-1.3
	comp=Z,0.2nm,0.2s,baz=150,slow=6.0,SNR=1.9						
	comp=Z,0.2nm,0.2s						
KURK	Kurchatov	68.87	335	P	P	14 29 26.8	-1.5
KURK	Kurchatov	68.87	335	IAmb	IAmb	14 29 58.9	
	comp=Z,1.8nm,1.1s						
ZALV	Zalesovo Beam	69.16	341	P	P	14 29 27.4	-2.6
	comp=Z,0.5nm,0.3s,baz=156,slow=7.3,SNR=1.5						
	comp=Z,0.5nm,0.3s						
AB31	Akbulak array	77.00	326	P	P	14 30 13.4	-3.0
AB31				IAmb	IAmb	14 30 49.1	
	comp=Z,3.6nm,1.4s						
ABKAR	Akbulak array	77.00	326	P	P	14 30 12.8	-3.6

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*IDC **09** 14:21:16.5±0.5, 2°.09N×126°.70E, h0^{km}, mb4.2/24, mbtmp4.2/25, ML3.9/1, MS3.8/15, Error ellipse: s-maj=25.0km s-min=11.6km az=78.0*

*NEIC **09** 14:21:20.7±1.6, 1°.99N±0°.07×126°.78E±0°.08, h26^{km}±5^{km}, mb4.9/42, Error ellipse: s-maj=12.7km s-min=8.3km az=49.0*

*DJA **09** 14:21:20.6±0.3, 2°N±3°×12°7E±°, h10^{km}, M4.4/13, mB4.9/4, mb4.6/7, MLv4.3/13, Mw(mB)4.2/4, MwMwp4.4/2, Mwp4.8/2*

ISC 09 14:21:21.7±0.3**, 1°.98N**±0°.05×**126°.81E**±0°.06**, h35**^{km}**, n120, σ1^{s}56**/98**, mb4.7**/48**, MS3.9**/14**, 2C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.32	155		Pn	14 21 43.8	0.0
TNTI	Ternate	1.32	155	P	Pn	14 21 44.3	+0.6
MNI	Manado	2.04	255	P	Pn	14 21 54.7	+1.1
SGSI	Sangihe	2.12	323	P	Pn	14 21 54.8	+0.1
GTOI	Gorontalo	4.02	251	P	Pn	14 22 24.1	+3.2
SANI	Sanana	4.09	192	P	Pn	14 22 24.5	+2.8
LUWI	Luwuk	5.03	233	Pn	Pn	14 22 34.0	-0.8
MRSI	Marisa	5.09	253	P	Pn	14 22 39.1	+3.6
	0.4nm1µm1µm129nm,1.1s						
NLAI	Namlea	5.19	177	P	Pn	14 22 39.9	+2.9
SWI	Sorong	5.27	122	P	Pn	14 22 40.1	+2.0
KRAI	Karang Ratu	5.50	163	P	Pn	14 22 44.6	+3.4
	0.2nm2µm3µm39nm,1.2s						
TOLI2	Tolitoli	6.08	262		Pn	14 22 48.5	-0.7
MPSI	Mapaga	7.10	257	P	Pn	14 23 08.0	+4.8
	0.1nm377nm32nm,0.9s						
TTSI	Tana Toraja	8.59	234	P	Pn	14 23 28.1	+4.5
MYLDM	Lahad Datu	8.88	291		Pn	14 23 27.5	-0.1
MYLDM	Lahad Datu	8.88	291	P	Pn	14 23 31.9	+4.3
KAPI	Kappang	9.90	225	Pn	Pn	14 23 40.1	-1.5
	1.1nm,0.3s,baz=180,slow=12,SNR=1.9						
KAPI				Sn	Sn	14 25 34.7	+3.2
	0.7nm,0.3s,baz=61,slow=22,SNR=1.2						
	2.2nm,0.3s						
KAPI	Kappang	9.90	225	Pn	Pn	14 23 39.2	-2.4
KKM	Kota Kinabalu	11.31	291	Pn	Pn	14 24 01.8	+0.8
SBUM	Sibu	14.58	272	Pn	Pn	14 24 45.1	-0.6
JAY	Jayapura	14.59	108	LR	LR	14 31 06.8	
	comp=Z,504nm,18.7s,baz=296,slow=40						
MTN	Manton Dam	15.34	164	Pn	Pn	14 24 55.2	-0.6
KNRA	Kununurra	17.65	174	Pn	Pn	14 25 22.7	-2.2
UGM	Wanagama	18.98	239	P	P	14 25 40.0	-0.4
FITZ	Fitzroy Crossi	19.98	183	P	Pn	14 25 52.5	-0.7
	2.8nm,0.6s,baz=12,slow=7.9,SNR=8.0						
	2.8nm,0.6s						
WB0	Warramunga Arr	22.86	161		P	14 26 21.3	-0.9
WB0				IAmb	IAmb	14 26 35.3	
	comp=Z,59nm,1.6s						
WRAB	Tennant Creek	23.00	162	P	P	14 26 22.8	-0.9
WRAB				IAmb	IAmb	14 26 36.8	
	comp=Z,40nm,1.5s						
WRA	Warramunga Arr	23.01	162	P	P	14 26 23.3	-0.4
	comp=Z,5.6nm,0.5s,baz=342,slow=10,SNR=24						
WRA				PcP	PcP	14 30 12.6	-0.3
	comp=Z,0.5nm,0.8s,baz=310,slow=2.9,SNR=2.3						
	comp=Z,5.6nm,0.5s						
WRA	Warramunga Arr	23.01	162	P	P	14 26 21.5	-2.2
PMG	Port Moresby	23.22	119	LR	LR	14 38 09.5	
	comp=Z,249nm,18.5s,baz=309,slow=43						
AS31	Alice Springs	26.41	165		P	14 26 54.7	-0.5
ASAR	Alice Springs	26.41	165	P	P	14 26 55.8	+0.5
	comp=Z,1.8nm,0.5s,baz=349,slow=7.4,SNR=21						
ASAR				PcP	PcP	14 30 21.3	+0.9
	comp=Z,0.7nm,0.6s,baz=358,slow=2.3,SNR=4.8						
ASAR				ScP	ScP	14 34 03.3	+5.5
	comp=Z,0.2nm,0.7s,baz=339,slow=3.1,SNR=1.9						
	comp=Z,1.8nm,0.5s						
ASAR	Alice Springs	26.41	165		P	14 26 55.2	0.0
NJ2	Nanjing	30.84	347	*e*P	P	14 27 37.3	+2.8
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CMAR	Chiang Mai Arr	31.85	303	P	P	14 27 41.5	-2.2
	comp=Z,0.7nm,0.8s,baz=109,slow=6.4,SNR=6.1						
	comp=Z,0.7nm,0.8s						
FORT	Forrest	32.60	178		P	14 27 49.3	-0.7
FORT				IAmb	IAmb	14 27 53.0	
	comp=Z,7.5nm,0.8s						
JHJ	Hachijo jima 2	33.28	20	LR	LR	14 39 18.6	
	comp=Z,96nm,20.0s,baz=308,slow=33						
KSRS	Korea Array	35.32	2	P	P	14 28 12.5	-1.1
	comp=Z,2.0nm,0.8s,baz=175,slow=9.7,SNR=6.8						
	comp=Z,2.0nm,0.8s						
TNCH	TengChong	35.63	312	P	P	14 28 16.9	+0.2
TNCH				pP	pP	14 28 26.9	+0.8
TNCH				sP	sP	14 28 31.2	+1.1
TNCH				pmax	pmax		
	comp=Z,22nm,1.1s						
TNCH				pmax	pmax		
	comp=Z,160nm,4.2s						
BBOO	Buckleboo	35.69	167	P	P	14 28 15.7	-1.2
MAJO	Matsushiro	35.97	16	P	P	14 28 18.7	-0.5
MJAR	Matsushiro Arr	35.97	16	P	P	14 28 17.5	-1.7
	comp=Z,2.5nm,0.8s,baz=177,slow=10.0,SNR=5.8						
	comp=Z,2.5nm,0.8s						
MJAR	Matsushiro Arr	35.97	16	IAmb	IAmb	14 29 18.1	
	comp=Z,19nm,2.0s						
MJB9	Matsu-Tunnel	35.97	16	P	P	14 28 19.0	-0.3
XAN	Xi'an	36.01	334	⇑P	P	14 28 19.4	-0.3
XAN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
STKA	Stephens Creek	36.48	159	P	P	14 28 23.7	0.0
	comp=Z,2.0nm,0.7s,baz=337,slow=12,SNR=4.1						
	comp=Z,2.0nm,0.7s						
STKA	Stephens Creek	36.48	159	IAmb	IAmb	14 28 38.4	
	comp=Z,20nm,0.8s						
HNS	HongShan	36.97	344	⇑P	P	14 28 27.4	-0.3
HNS				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ARMA	Armidale	39.98	146	P	P	14 28 52.5	-0.7
ARMA				IAmb	IAmb	14 30 04.0	
	comp=Z,16nm,1.2s						
LZH	Lanzhou	40.05	331	*e*P	P	14 28 53.4	-0.4
LZH				pP	pwP	14 29 05.4	-1.0
LZH				pmax	pmax		
	comp=Z,22nm,0.8s						
HHC	Hu-ho-hao-te	41.08	342	*e*P	P	14 29 01.8	-0.4
HHC				pmax	pmax		
	comp=Z,18nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,5.4s						
CN2	Changchun	41.66	359	P	P	14 29 10.0	+3.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USRK	Ussuriysk Ar.	42.29	6	P	P	14 29 11.4	-0.5
	comp=Z,5.7nm,0.8s,baz=185,slow=6.4,SNR=8.2						
	comp=Z,5.7nm,0.8s						
H11S3	WAKE ISLAND Hy	42.38	65	T	T	15 14 32.1	
	baz=252,slow=75,SNR=15						
H11S2	WAKE ISLAND Hy	42.40	65	T	T	15 14 40.5	
	baz=252,slow=75,SNR=7.5						
H11S1	WAKE ISLAND Hy	42.40	64	T	T	15 14 30.9	
	baz=252,slow=75,SNR=7.6						
H11N1	WAKE ISLAND Hy	42.95	63	T	T	15 15 06.0	
	baz=252						
H11N2	WAKE ISLAND Hy	42.97	63	T	T	15 15 06.4	
	baz=252						
H11N3	WAKE ISLAND Hy	42.97	63	T	T	15 15 12.6	

	baz=252						
ASAJ	Asahikawa	44.23	16	LR	LR	14 48 19.0	
	comp=Z,148nm,20.6s,baz=168,slow=37						
GOMU	GeErMu	45.11	323	P	P	14 29 35.7	+0.5
GOMU				pmax	pmax		
	comp=Z,3.0nm,1.0s						
DZM	Mont Dzumac	45.48	124	LR	LR	14 49 50.4	
	comp=Z,133nm,18.3s,baz=6.5,slow=38						
DZM	Mont Dzumac	45.48	124	eS	S	14 36 20.2	+2.4
	comp=Z,35nm,23.8s						
DZM				eSS	SS	14 39 39.4	-2.6
	comp=Z,70nm,25.9s						
DZM				eLR	LR	14 42 16.3	
	comp=Z,120nm,22.1s						
EVN	Everest	46.10	308		P	14 29 42.4	-1.1
EVN				IAmb	IAmb	14 29 49.9	
	comp=Z,11nm,0.9s						
HEH	HeiHe	48.10	1	eP	P	14 29 58.1	+0.2
HEH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ULN	Ulaanbaatar	48.80	342	P	P	14 30 03.4	-0.1
ULN				IAmb	IAmb	14 30 35.8	
	comp=Z,16nm,1.7s						
SONM	Songino Array	48.97	342	P	P	14 30 03.7	-1.1
	comp=Z,1.5nm,0.7s,baz=150,slow=9.1,SNR=7.4						
SONM				LR	LR	14 52 50.5	
	comp=Z,130nm,20.1s,baz=166,slow=39						
	comp=Z,1.5nm,0.7s						
SONM	Songino Array	48.97	342	P	P	14 30 04.0	-0.9
DGAR	Diego Garcia	55.02	260	P	P	14 30 49.5	-0.9
PETK	Petropavlovsk-	57.01	22	P	P	14 31 04.0	+0.1
	comp=Z,1.9nm,0.7s,baz=189,slow=8.5,SNR=1.3						
	comp=Z,1.9nm,0.7s						
MKAR	Makanchi Array	59.03	326	P	P	14 31 17.1	-1.1
	comp=Z,1.7nm,0.6s,baz=120,slow=8.6,SNR=22						
	comp=Z,1.7nm,0.6s						
MKAR	Makanchi Array	59.03	326		P	14 31 16.7	-1.6
MAKZ	Makanchi	59.22	326		P	14 31 18.2	-1.3
MAKZ				IAmb	IAmb	14 31 43.8	
	comp=Z,9.1nm,1.4s						
KSH	Kashi	59.34	316	P	P	14 31 26.6	+6.0
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KDJ	Kajisay	59.70	319	P	P	14 31 22.4	-0.7
KDJ				IAmb	IAmb	14 31 36.6	
	comp=Z,4.9nm,1.0s						
YAK	Yakutsk	59.94	2	LR	LR	14 57 42.2	
	comp=Z,58nm,21.4s,baz=184,slow=36						
YAK	Yakutsk	59.94	2		P	14 31 24.7	+0.6
LBZ	Lake Benmore	60.20	145	P	P	14 31 25.4	-0.9
MA2	Magadan	60.37	14	LR	LR	14 57 07.5	
	comp=Z,58nm,21.8s,baz=210,slow=36						
AAK	Ala-Archa	61.70	318	LR	LR	15 00 58.9	
	comp=Z,80nm,19.7s,baz=90,slow=39						
ZALV	Zalesovo Beam	62.17	333	P	P	14 31 37.9	-1.6
	comp=Z,0.9nm,0.3s,baz=111,slow=8.1,SNR=3.7						
	comp=Z,0.9nm,0.3s						
KURBB	Kurchatov Arra	63.25	328	P	P	14 31 45.4	-1.3
	comp=Z,4.5nm,0.6s,baz=130,slow=6.3,SNR=58						
	comp=Z,4.5nm,0.6s						
KURK	Kurchatov	63.25	328		P	14 31 44.9	-1.8
KURK				IAmb	IAmb	14 31 46.9	
	comp=Z,7.6nm,0.7s						
SHEM	Shemya Is, Ala	63.93	30	LR	LR	14 58 43.1	
	comp=Z,26nm,20.3s,baz=302,slow=35						
KKAR	Karatay Array	64.56	318	P	P	14 31 54.4	-1.1
BVAR	Borovoye Array	68.82	327	P	P	14 32 21.7	-0.8
	comp=Z,1.9nm,0.6s,baz=146,slow=8.6,SNR=15						
	comp=Z,1.9nm,0.6s						
BORK	Borovoye	68.87	327		P	14 32 22.0	-0.8
BORK				IAmb	IAmb	14 32 24.1	
	comp=Z,3.2nm,0.6s						
CASY	Casey	69.10	187	P	P	14 32 24.1	+0.2
CASY				IAmb	IAmb	14 33 10.3	
	comp=Z,19nm,1.8s						
TIXI	Tiksi	69.58	1	LR	LR	15 05 00.7	
	comp=Z,64nm,19.6s,baz=197,slow=38						
TIXI	Tiksi	69.58	1		P	14 32 26.9	+0.1
NRIK	Noril'sk	72.14	346	LR	LR	15 07 35.9	
	comp=Z,95nm,18.8s,baz=136,slow=39						
AB31	Akbulak array	73.55	321		P	14 32 50.0	-1.2
ABKAR	Akbulak array	73.55	321	P	P	14 32 49.9	-1.2
AKTO	Aktyubinsk	75.07	322	P	P	14 32 59.3	-0.7
	comp=Z,2.4nm,0.6s,baz=114,slow=7.1,SNR=6.6						
	comp=Z,2.4nm,0.6s						
ARTI	Arti	76.53	328		P	14 33 06.3	-1.9
ARTI				IAmb	IAmb	14 33 08.0	
	comp=Z,10nm,0.6s						
PWH	Poliokeawe Pal	77.99	71	P	P	14 33 15.7	-1.4
P16K	Nushagak River	80.71	30	P	P	14 33 31.5	+0.3
VNDA	Vanda	81.69	173	P	P	14 33 37.6	+1.6
	comp=Z,1.9nm,0.8s,baz=334,slow=7.8,SNR=4.7						
	comp=Z,1.9nm,0.8s						
VNDA	Vanda	81.69	173	IAmb	IAmb	14 35 07.4	
	comp=Z,40nm,1.9s						
BELG	Belogornoye	81.83	323	P	P	14 33 35.7	-1.5
	comp=Z,10nm,0.9s,baz=76,slow=6.3,SNR=4.8						
	comp=Z,10nm,0.9s						
C19K	Lookout Ridge	82.34	20	P	P	14 33 40.5	+0.8
C19K				IAmb	IAmb	14 35 15.3	
	comp=Z,40nm,2.0s						
D20K	Etivluk River	83.30	21		P	14 33 45.2	+0.6
D20K				IAmb	IAmb	14 33 50.2	
	comp=Z,14nm,1.2s						
G21K	Allakaket	84.08	23	P	P	14 33 49.6	+1.0
B21K	Ikpikpuk River	84.18	20	P	P	14 33 49.8	+0.7
B21K				IAmb	IAmb	14 33 54.8	
	comp=Z,12nm,1.1s						
KBZ	Khabaz	84.23	314	P	P	14 33 51.0	+1.2
	comp=Z,2.5nm,1.0s,baz=252,slow=3.1,SNR=3.7						
KBZ				LR	LR	15 16 01.6	
	comp=Z,31nm,18.3s,baz=12,slow=39						
	comp=Z,2.5nm,1.0s						
PPTF	Pamatai, Papee	84.52	108	P	P	14 33 50.5	-1.4
B22K	Teshekpuk Lake	84.70	20		P	14 33 52.5	+0.9
E22K	Anaktuvuk Pass	84.95	22	P	P	14 33 54.6	+1.5
ILAR	Eielson Array	86.64	25	P	P	14 34 02.5	+1.1
	comp=Z,0.3nm,0.6s,baz=257,slow=5.4,SNR=2.0						
	comp=Z,0.3nm,0.6s						
ASF	Jabal al Asfar	88.88	302	P	P	14 34 13.2	+0.2
	comp=Z,4.4nm,0.9s,baz=142,slow=4.7,SNR=3.7						
	comp=Z,4.4nm,0.9s						
BRTR	Keskin Array B	91.19	310	P	P	14 34 23.6	-0.1
	comp=Z,0.5nm,0.7s,baz=84,slow=4.5,SNR=3.0						
	comp=Z,0.5nm,0.7s						
F31M	Tsiigehtchic	91.81	22	P	P	14 34 25.5	-0.2
QSPA	South Pole Qui	91.90	180	P	P	14 34 28.0	+1.7
	comp=Z,0.6nm,0.8s,baz=218,slow=0.1,SNR=6.3						
	comp=Z,0.6nm,0.8s						
QSPA	South Pole Qui	91.90	180	IAmb	IAmb	14 35 12.5	
	comp=Z,16nm,1.9s						
ARCES	ARCESS Array B	92.11	340	P	P	14 34 26.1	-1.0
	comp=Z,4.7nm,1.0s,baz=79,slow=6.0,SNR=1.4						
	comp=Z,4.7nm,1.0s						
TAOE	Nuku Hiva Isla	93.31	99	eLR	LR	15 04 31.9	
	comp=Z,92nm,23.1s						
FINES	FINESS Array B	93.40	332	P	P	14 34 33.4	+0.2
	comp=Z,1.4nm,0.7s,baz=82,slow=2.9,SNR=4.1						
	comp=Z,1.4nm,0.7s						
DLBC	Dease Lake	95.19	31	LR	LR	15 15 11.6	
	comp=Z,55nm,19.5s,baz=275,slow=34						
MBAR	Mbarara	96.09	270	LR	LR	15 19 02.2	
	comp=Z,35nm,18.6s,baz=28,slow=36						
BURAR	Bucovina Array	96.35	318	P	P	14 34 47.3	+0.1

IDC ***09*** *14:32:17.6±0.9, 43.°02S×40.°54E, h0km, mb4.1/6, mbtmp4.0/7, ML3.2/1, MS3.2/3, Error ellipse: s-maj=47.1km s-min=21.6km az=45.0*

NEIC ***09*** *14:32:19.4±2.0, 43.°0S±0.°1×40.°6E±0.°2, h10km±1km, mb4.5/9, Error ellipse: s-maj=38.9km s-min=6.7km az=51.0*

ISC 09 14:32:19.1±0.8**, 43.°0S**±0.°2×**40.°5E**±0.°2**, h10**km**, n23, σ0.s65**/16**, mb4.3**/8**, MS2.9**/3**, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRHM	Grahamstown, E	14.73	307	Pn	Pn	14 35 47.2	-0.3
BOSA	Boshof	18.90	315	P	P	14 36 40.4	+0.5
	0.1nm,0.3s,baz=146,slow=9.1,SNR=2.4						
	1.9nm,0.8s						
LBTB	Lobatse	21.72	321	P	P	14 37 10.2	-0.3
	2.9nm,0.8s,baz=156,slow=16,SNR=3.8						
	2.9nm,0.8s						
LBTB	Lobatse	21.72	321	P	P	14 37 09.2	-1.3
LBTB				IAmb	IAmb	14 37 23.6	
	comp=Z,16nm,1.4s						
LPHEP	Lephephe	23.03	324	P	P	14 37 24.6	+0.1
LPHEP				IAmb	IAmb	14 37 29.7	
	comp=Z,13nm,1.1s						
OPO	Ambohidratompo	25.01	15	LR	LR	14 46 05.2	
	comp=Z,37nm,19.7s,baz=18,slow=33						
SNAA	Sanae	35.56	202	LR	LR	14 52 52.7	
	comp=Z,13nm,18.4s,baz=198,slow=35						
QSPA	South Pole Qui	47.21	180	P	P	14 40 51.6	-0.2
	comp=Z,4.4nm,1.1s,baz=246,slow=3.9,SNR=6.9						
	comp=Z,4.4nm,1.1s						
QSPA	South Pole Qui	47.21	180	P	P	14 40 51.7	0.0
QSPA				IAmb	IAmb	14 40 56.1	
	comp=Z,6.4nm,1.1s						
H01W2	Cape Leeuwin H	56.16	108	T	T	15 42 49.1	
	baz=238,slow=75,SNR=153						
H01W3	Cape Leeuwin H	56.17	108	T	T	15 42 49.8	
	baz=238,slow=75,SNR=147						
H01W1	Cape Leeuwin H	56.18	108	T	T	15 42 50.4	
	baz=238,slow=75,SNR=178						
TORD	Torodi Ar. Bea	66.21	318	P	P	14 43 08.0	+0.8
	comp=Z,2.7nm,0.5s,baz=152,slow=4.6,SNR=2.3						
	comp=Z,2.7nm,0.5s						
TORD	Torodi Ar. Bea	66.21	318	IAmb	IAmb	14 43 48.3	
	comp=Z,2.5nm,0.8s						
PLCA	Paso Flores	76.02	227	P	P	14 44 06.6	+0.1
STKA	Stephens Creek	76.30	121	P	P	14 44 08.7	+0.5
	comp=Z,2.5nm,0.9s,baz=256,slow=4.2,SNR=2.9						
	comp=Z,2.5nm,0.9s						
ASAR	Alice Springs	76.63	110	P	P	14 44 09.6	-0.7
	comp=Z,0.6nm,0.9s,baz=228,slow=5.9,SNR=4.1						
	comp=Z,0.6nm,0.9s						
ASAR	Alice Springs	76.63	110	P	P	14 44 08.9	-1.4
WRA	Warramunga Arr	79.39	107	P	P	14 44 25.9	+0.3
	comp=Z,1.2nm,0.9s,baz=228,slow=4.9,SNR=6.7						
	comp=Z,1.2nm,0.9s						
WRA	Warramunga Arr	79.39	107	P	P	14 44 25.7	+0.1
WRAB	Tennant Creek	79.41	107	P	P	14 44 25.6	0.0
WRAB				IAmb	IAmb	14 44 31.5	
	comp=Z,8.7nm,1.4s						
BRTR	Keskin Array B	82.58	355	LR	LR	15 20 34.9	
	comp=Z,41nm,18.6s,baz=293,slow=35						
TXAR	Lajitas Array	148.26	256	PKPbc	PKPbc	14 52 05.2	-0.3
	comp=Z,1.9nm,1.0s,baz=130,slow=5.8,SNR=12						

IDC ***09*** *14:38:01.3±1.3, 23.°05N×121.°75E, h0km, mb3.2/4, mbtmp3.4/5, ML3.3/1, Error ellipse: s-maj=34.5km s-min=24.4km az=66.0*

JMA ***09*** *14:38:03.7±0.1, 23.°2N±0.°5×12°1E±°, h26km±1km, MV3.4/16, TAIWAN REGION*

TAP ***09*** *14:38:04.3, 23.°20N×121.°40E, h24km, ML3.9, C*

ISC 09 14:38:04.2±0.8**, 23.°19N**±0.°01×**121.°46E**±0.°02**, h27**km±4km**, n165, σ1.s25**/261**, mb3.2**/4**, 6C-23D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHKH	Chenggong	0.06	273	⇑iP	Pb	14 38 08.5	-0.3
CHKH				eS	Sb	14 38 11.4	-0.6
CHKT	Chengkung	0.12	225	⇓iP	Pn	14 38 09.3	-1.1
CHKT				i S	Sb	14 38 12.7	0.0
ECBN	Changbin	0.13	356	⇑iP	Pn	14 38 09.4	-1.1
ECBN				S	Sb	14 38 12.9	+0.1
FULB	Fuli	0.15	274	⇑iP	Pb	14 38 09.1	-0.5
FULB				S	Sb	14 38 12.9	-0.3
EYUL	Yuli	0.20	321	⇓iP	Pn	14 38 10.1	-1.5
EYUL				eS	Sb	14 38 14.7	+0.5
TWF1	Yuli	0.22	317	⇓iP	Pb	14 38 09.9	-0.5
TWF1				eS	Sb	14 38 14.4	-0.1
EHD	Haiduan	0.24	261	⇓P	Pb	14 38 09.1	-1.4
EHD				eS	Sb	14 38 13.3	-1.5
ECS	Chishang	0.24	247	⇓P	Pn	14 38 10.8	-1.2
ECS				eS	Sb	14 38 16.1	+1.2
YULB	Yu-li	0.25	324	P	Pb	14 38 10.0	-0.7
YULB	Yu-li	0.25	324	⇓iP	Pb	14 38 10.2	-0.6
YULB				eS	Sb	14 38 14.3	-0.9
EDH	Donghe	0.26	214	⇓iP	Pb	14 38 10.8	0.0
EDH				eS	Sb	14 38 15.6	+0.4
HGSD	Ruisui	0.30	354	⇑iP	Pb	14 38 11.1	-0.4
EHYH	Wanrong	0.32	341	P	Pb	14 38 11.2	-0.5
EHYH				eS	Sb	14 38 16.4	-0.4
EHY	Hungye	0.34	338	⇓P	Pb	14 38 11.3	-0.7
EHY				eS	Sn	14 38 17.5	-1.9
ELDTW	Lidau	0.41	270	⇓iP	Pb	14 38 12.0	-1.1
ELDTW				eS	Sb	14 38 17.2	-1.9
LONT	Longtian	0.41	227	eP	Pb	14 38 12.8	-0.3
LONT				eS	Sn	14 38 19.6	-1.6
EGFH	Guangfu	0.48	356	eP	Pb	14 38 13.5	-0.7
TWGBT	Beinan	0.51	224	P	Pb	14 38 14.2	-0.4
TWGBT	Beinan	0.51	224	⇑iP	Pb	14 38 13.9	-0.7
TWGBT				eS	Sb	14 38 21.1	-0.6
TWG	Pinlang	0.51	224	⇑iP	Pb	14 38 13.9	-0.8
TWG				eS	Sb	14 38 21.0	-0.8
LDUT	Ludao	0.51	179	⇓P	Pb	14 38 14.6	0.0
LDUT				eS	Sn	14 38 23.2	-0.4
TTN	Taitung	0.52	214	eP	Pn	14 38 15.1	-0.7
TEGC	Jichi Village	0.52	8	eP	Pn	14 38 15.2	-0.7
WARBT	Fenglin Townsh	0.53	353	⇓iP	Pb	14 38 13.8	-1.2
YUS	Yu-Shan	0.56	303	⇓iP	Pb	14 38 14.9	-0.9
YUS				eS	Sb	14 38 22.0	-1.6
SHUL	Shoufeng	0.60	9	eP	Pn	14 38 16.5	-0.5
SHUL				eS	Sn	14 38 26.2	+0.3
ESL	Shilin	0.62	358	⇓iP	Pb	14 38 15.3	-1.3
ESL				eS	Sb	14 38 23.7	-1.3
STYH	Taoyuan	0.63	269	⇓iP	Pb	14 38 15.9	-0.8
STYH				S	Sb	14 38 23.7	-1.4
VWDT	VWDT	0.64	333	⇓iP	Pb	14 38 16.1	-0.7
VWDT				eS	Sb	14 38 23.8	-1.5
ALS	Alishan	0.68	298	i P	Pn	14 38 17.2	-1.2
ALS				eS	Sn	14 38 27.1	-1.1
TEYL	Yanliau Villag	0.69	11	i P	Pn	14 38 18.4	+0.2
TEYL				eS	Sn	14 38 29.7	+1.7
ECL	Taimali	0.75	219	P	Pb	14 38 17.1	-1.6
WHYT	Xinyi Township	0.75	312	⇓iP	Pn	14 38 18.4	-0.7
WHYT				eS	Sn	14 38 28.3	-1.4
SSLB	Suanglung	0.76	322	P	Pb	14 38 17.9	-0.9
SSLB	Suanglung	0.76	322	⇓P	Pb	14 38 17.7	-1.1
SSLB				eS	Sb	14 38 27.6	-1.1
TPUB	Ta-pu	0.77	278	P	Pn	14 38 18.9	-0.5
TPUB	Ta-pu	0.77	278	i P	Pn	14 38 18.8	-0.5
TPUB				eS	Sn	14 38 29.0	-1.1
ETM	Tongmen	0.77	2	i P	Pb	14 38 17.8	-1.3
WTP	Ta-pu	0.78	274	i P	Pn	14 38 19.0	-0.5
WTP				S	Sn	14 38 29.3	-1.0
HWA	Hwalien	0.80	10	i P	Pn	14 38 19.2	-0.5
HWA				eS	Sn	14 38 31.6	+1.0
OWD	Renai	0.81	341	i P	Pb	14 38 18.4	-1.3
OWD				eS	Sb	14 38 27.9	-2.4
SGST	Jiashian	0.81	263	⇓iP	Pb	14 38 18.7	-1.1
SGST				eS	Sn	14 38 30.2	-1.0
WCKO	Fanlu	0.82	288	eP	Pn	14 38 19.7	-0.3
WCKO				eS	Sn	14 38 30.9	-0.5
CHN5	Tsauling	0.83	300	⇓iP	Pn	14 38 20.0	-0.1
CHN5				eS	Sn	14 38 31.1	-0.4
LXIB	Xiulin Townshi	0.83	357	⇓iP	Pb	14 38 18.5	-1.6
LXIB				eS	Sb	14 38 29.2	-1.8
CHN1	Nanshi	0.86	270	⇓iP	Pn	14 38 20.6	0.0
CHN1				eS	Sn	14 38 32.2	0.0
WUSB	Renai	0.86	339	⇓iP	Pb	14 38 19.5	-1.1
WUSB				eS	Sb	14 38 29.9	-1.9
SMLT	Sun Moon Lake	0.86	323	⇓iP	Pn	14 38 19.9	-0.8
SMLT				eS	Sn	14 38 32.1	-0.3
SSD	Sandimen	0.88	240	P	Pb	14 38 19.7	-1.2
SNST	Tainan City	0.89	272	i P	Pn	14 38 20.9	0.0
SNST				S	Sn	14 38 32.5	-0.3
TWD	Chiawan	0.90	8	P	Pb	14 38 19.9	-1.2
TWD				eS	Sn	14 38 33.6	+0.5
TWK	Hsinying	0.90	275	P	Pn	14 38 21.0	-0.1
TWK				eS	Sn	14 38 33.5	+0.3
TYC	Yuchr	0.90	322	eP	Pn	14 38 20.6	-0.5
WJS	Zhushan	0.92	313	P	Pn	14 38 21.7	+0.3
WJS				S	Sn	14 38 35.0	+1.3
MASBT	Mashibuluo	0.95	233	P	Pb	14 38 20.8	-1.3
MASBT				eS	Sn	14 38 34.5	-0.1
WGK	Gukeng	0.96	301	P	Pn	14 38 22.7	+0.7
WGK				eS	Sn	14 38 36.4	+1.6
CHN2	Minshiung	0.97	291	eP	Pn	14 38 22.8	+0.8
CHN2				eS	Sn	14 38 37.5	+2.7
WHF	Hehuan Shan	0.97	349	P	Pb	14 38 21.4	-1.3
WHF				eS	Sb	14 38 33.9	-1.3
TAW	Tawu	0.98	212	eP	Pn	14 38 21.0	-1.1
TAW				eS	Sb	14 38 33.2	-1.8
ETL	Fush Village	0.98	9	eP	Pn	14 38 21.1	-1.1
EAST	Anshuo	0.98	215	eP	Pb	14 38 21.0	-1.6
WDLH	Douliu	0.98	301	eP	Pn	14 38 23.2	+1.0
WDLH				eS	Sn	14 38 37.9	+2.7
NACB	Ninganchiao	0.99	7	P	Pn	14 38 21.1	-1.2
NACB	Ninganchiao	0.99	7	P	Pn	14 38 20.7	-1.6
NACB				eS	Sn	14 38 35.3	-0.1
WNT	Mingjian	0.99	314	i P	Pn	14 38 23.0	+0.7
WNT				eS	Sn	14 38 36.1	+0.7
TAWH	Dawu Township	1.00	212	eP	Pn	14 38 19.1	-3.2
TAWH				eS	Sb	14 38 31.5	-4.0
WDL	Douliou City	1.00	302	eP	Pn	14 38 23.3	+0.9
WDL				eS	Sn	14 38 37.5	+1.9
CHY	Chiayi	1.00	288	P	Pn	14 38 23.1	+0.7
CHY				eS	Sn	14 38 36.5	+0.8
WCS	Beigang Elemen	1.00	330	P	Pn	14 38 22.3	-0.1
WCS				eS	Sn	14 38 36.6	+0.9
SGLT	Jiouru	1.01	243	eP	Pb	14 38 25.8	+2.9
ETLH	Xiulin Townshi	1.01	1	eP	Pn	14 38 21.4	-1.4
ETLH				eS	Sb	14 38 33.5	-2.6
CHN3	Shinhua	1.01	264	eP	Pb	14 38 24.6	+1.4
CHN3				i S	Sn	14 38 40.2	+4.2
TWM1	Shoushan	1.02	249	eP	Pb	14 38 24.8	+1.5
SHHT	Tainan City	1.04	261	eP	Pb	14 38 24.9	+1.4
SHHT				eS	Sn	14 38 40.2	+3.6
FUSS	Fushou	1.07	349	P	Pn	14 38 23.2	-0.5
FUSS				S	Sb	14 38 36.1	-1.9
SSHA	Shanhua	1.08	267	eP	Pb	14 38 25.4	+1.2
SSHA				eS	Sn	14 38 41.4	+3.8
TWT	Tachien	1.09	346	P	Pb	14 38 23.8	-0.8
TWT				eS	Sb	14 38 36.9	-1.6
TDCB	Techi	1.10	345	eP	Pb	14 38 23.7	-0.9
SCZT	Fangliau	1.12	224	eP	Pb	14 38 23.9	-1.0
SLIU	Shizi	1.14	212	eP	Pn	14 38 23.6	-0.8
SLIU				eS	Sn	14 38 38.9	-0.3
LAY	Lan-yu	1.15	176	P	Pn	14 38 23.5	-1.0
LAY				eS	Sn	14 38 38.6	-0.8
CHN8	Yiju	1.16	278	P	Pb	14 38 25.6	0.0
CHN8				eS	Sn	14 38 41.4	+1.8
EAHA	Aohua	1.16	13	eP	Pn	14 38 24.3	-0.4
SCLT	Jiali	1.17	270	eP	Pb	14 38 26.1	+0.5
SCLT				eS	Sn	14 38 42.2	+2.4
WSL	Shuilin Townsh	1.18	287	i P	Pb	14 38 25.7	-0.2
WSL				S	Sb	14 38 41.6	+0.8
WHP	Taichung City	1.18	337	eP	Pb	14 38 25.8	-0.2
WHP				eS	Sb	14 38 42.4	+1.5
LYUB	Lan-yu	1.19	174	P	Pn	14 38 23.2	-1.8
TCU	Taichung	1.20	323	eP	Pb	14 38 26.0	-0.2
TCU				eS	Sb	14 38 42.3	+1.0
WCHH	Zhanghua	1.21	317	i P	Pb	14 38 26.4	-0.1
WCHH				eS	Sb	14 38 42.4	+0.6
WCH1	Changhua City	1.22	317	eP	Pb	14 38 25.3	-1.2
WCH1				eS	Sb	14 38 42.5	+0.7
WSF	Szhu	1.22	292	i P	Pb	14 38 26.4	-0.2
WSF				S	Sb	14 38 42.2	+0.2
WSSB	Gushan	1.23	244	eP	Pb	14 38 28.2	+1.4
WSSB				eS	Sb	14 38 46.3	+4.0
NNSB	Datong	1.24	357	i P	Pn	14 38 25.4	-0.4
NNS	Nan Shan	1.25	356	i P	Pn	14 38 25.7	-0.3
NNS				eS	Sn	14 38 40.7	-1.3
ENA	Nanau	1.26	12	P	Pn	14 38 25.5	-0.6
TSCK	Chigu Township	1.27	268	eP	Pb	14 38 27.1	-0.3
TSCK				eS	Sb	14 38 44.4	+1.2
WTCT	Ta-ch'eng	1.27	302	eP	Pb	14 38 27.2	-0.3
WTCT				S	Sb	14 38 43.7	+0.2
EWUT	Wuta	1.28	13	eP	Pn	14 38 26.1	-0.3
WLCH	Liuqiu	1.30	230	eP	Pb	14 38 30.4	+2.4
TWQ1	Liyutan	1.31	332	i P	Pb	14 38 28.4	+0.1
TWQ1				S	Sb	14 38 46.7	+2.0
LATG	Datong	1.34	3	P	Pn	14 38 27.0	-0.3
TWKBT	Hengchun	1.38	206	eP	Pn	14 38 27.4	-0.3
NSY	Sanyi	1.38	332	P	Pb	14 38 29.6	+0.2
NSY				eS	Sb	14 38 48.1	+1.5
TSEB	Hengchuen, Pin	1.38	202	eS	Sb	14 38 45.7	-0.9
ESAO	Su ao	1.43	14	eP	Pb	14 38 29.8	-0.3
ENTT	Nioudou	1.45	4	eP	Pn	14 38 28.3	-0.3
TWC	Suao	1.46	14	eP	Pn	14 38 29.1	+0.4
NFF	Wufeng Townshi	1.47	348	eP	Pb	14 38 29.9	-1.1
NFF				eS	Sb	14 38 48.9	-0.3
NMLH	Miaoli	1.48	336	eP	Pb	14 38 30.8	-0.2
NMLH				eS	Sb	14 38 50.0	+0.7
YHNB	Yeheng	1.48	357	P	Pb	14 38 29.9	-1.1
YHNB	Yeheng	1.48	357	P	Pn	14 38 29.4	+0.3
NSK	Sanguang	1.48	356	i P	Pn	14 38 29.5	+0.3
NSK				eS	Sn	14 38 47.6	-0.2
NSTT	Nanjuang	1.50	344	eP	Pb	14 38 30.8	-0.5
NSTT				eS	Sb	14 38 49.8	-0.1
LIOB	Emei	1.51	344	eP	Pb	14 38 30.8	-0.7
LIOB				eS	Sb	14 38 50.7	+0.5
TWE	Neicheng	1.54	7	eP	Pb	14 38 31.5	-0.5
FUSB	Fushanzhiwuyua	1.57	4	P	Pn	14 38 30.5	+0.2
NWLT	Wulai	1.58	1	eP	Pn	14 38 30.6	+0.1
NWLT				eS	Sn	14 38 50.1	0.0
KSHI	Guanxi Townshi	1.60	351	eP	Pb	14 38 32.7	-0.4
KSHI				eS	Sb	14 38 52.4	-0.5
WDGT	Dungji	1.66	273	eP	Pb	14 38 31.9	-2.1
HSN	Hsinchu	1.67	344	eS	Sb	14 38 53.2	-1.6
PHUB	P'eng-hu	1.77	281	eP	Pn	14 38 33.0	0.0
PHUB				eS	Sb	14 38 54.5	-3.1
NHDH	Xindian Distri	1.77	2	eP	Pn	14 38 34.0	+1.0
NHDH				eS	Sn	14 38 55.3	+0.7
PNG	Penghu	1.79	283	P	Pb	14 38 33.8	-2.5
PNG				eS	Sb	14 38 55.4	-2.9
TIPB	Shuangxi	1.81	11	eP	Pn	14 38 34.5	+0.9
TIPB				eS	Sn	14 38 56.9	+1.2
JYNG	Yonagunijimaku	1.85	47	P	Pn	14 38 35.7	+1.6
JYNG				eS	Sn	14 38 57.8	+1.1
VCHM	Qimei	1.87	271	eP	Pn	14 38 34.3	-0.1
TWB1	Santiao Chiao	1.88	15	eP	Pb	14 38 36.6	-1.1
TWB1				eS	Sb	14 38 59.0	-1.8
NWF	Wu-fen Shan	1.90	9	eP	Pn	14 38 34.8	-0.1
WFSB	Wu-fen Shan	1.90	9	eP	Pn	14 38 34.8	0.0
YOJ	Yonaguni jima	1.90	48	P	Pn	14 38 36.1	+1.2
YOJ	Yonaguni jima	1.90	48	P	Pn	14 38 35.5	+0.6
YOJ				eS	Sn	14 38 59.0	+1.0
YOJ	Yonaguni jima	1.90	48	P	Pn	14 38 36.4	+1.5
YOJ				eS	Sn	14 38 59.5	+1.5
SXI1	Grass Mountain	1.94	11	eP	Pn	14 38 36.7	+1.4
SXI1				eS	Sb	14 39 00.4	-2.1
YM01	YM01	1.95	3	eP	Pn	14 38 36.4	+0.8
ZUZH	Zhuzihu	1.97	2	eP	Pn	14 38 36.0	+0.2
HATJ	Hateruma jima	2.32	68	eS	Sn	14 39 08.6	+0.4
IRIF	Iriomote-Funau	2.37	61	eP	Pn	14 38 42.5	+1.2
IRIF				eS	Sn	14 39 10.7	+1.1
JKRS	Kuro-shima	2.56	65	eP	Pn	14 38 45.1	+1.3
JKRS				eS	Sn	14 39 15.3	+1.2
JIJ	Ishigaki jima	2.72	64	P	Pn	14 38 46.9	+0.8
JIJ				eS	Sn	14 39 19.8	+1.6
PTMZ	Houxiangcun	2.82	311	P	Pn	14 38 47.6	+0.1
PTMZ				S	Sn	14 39 19.6	-1.0
JISG	Ishigakijimahi	2.96	61	P	Pn	14 38 50.0	+0.6
JISG				eS	Sn	14 39 23.4	-0.6
KNM	Kinmen	3.03	294	eP	Pn	14 38 51.9	+1.5
KNMB	Chin-men Tao	3.09	295	P	Pn	14 38 51.0	-0.2
MATB	Ma-tsu	3.26	335	P	Pn	14 38 52.9	-0.6
MATB				S	Sn	14 39 30.2	-1.2
JTJ	Tarama	3.30	63	eP	Pn	14 38 54.9	+0.9
ZPLA	Ao Xicun	3.48	283	eP	Pn	14 38 56.9	+0.3
ZPLA				eS	Sn	14 39 36.0	-1.0
AXDP	Jialang	3.62	299	P	Pn	14 38 58.8	+0.3
MHZQ	Yeshan	3.65	323	eP	Pn	14 38 58.7	-0.1
MHZQ				eS	Sn	14 39 40.2	-0.8
LYJJ	Jianjiangzhen	3.69	336	eS	Sn	14 39 41.5	-0.5
DSXP	Dongshan	3.74	279	eP	Pn	14 39 01.1	+1.0
DSXP				eS	Sn	14 39 42.0	-1.3
JIRB	Irabujima	3.77	64	eS	Sn	14 39 46.1	+2.1
JMJ2	Miyako jima3	3.86	66	eP	Pn	14 39 03.0	+1.2
JMJ2				eS	Sn	14 39 47.5	+1.3
XPSS	Dashiqiu	3.90	343	eP	Pn	14 39 02.3	0.0
SXFK	Yanhouchang	4.72	313	eP	Pn	14 39 12.9	-0.7
SXFK				eS	Sn	14 40 05.6	-1.8
JOW	Kunigami	7.17	58	Pn	Pn	14 39 45.7	-1.6
	1.1nm,0.3s,baz=270,slow=9.1,SNR=1.3						
JOW				Sn	Sn	14 41 06.3	-1.5
	baz=133,slow=26						
	10.0nm,0.7s						
MKAR	Makanchi Array	39.23	317	P	P	14 45 32.5	+2.3
	0.4nm,0.7s,baz=108,slow=9.3,SNR=3.9						
	0.4nm,0.7s						

H11N1	WAKE ISLAND Hy	42.30	86	T	T	15 31 08.3	
	baz=283,slow=74,SNR=28						
H11N2	WAKE ISLAND Hy	42.30	86	T	T	15 31 07.5	
	baz=283,slow=74,SNR=14						
H11N3	WAKE ISLAND Hy	42.31	86	T	T	15 31 07.7	
	baz=283,slow=74,SNR=28						
H11S3	WAKE ISLAND Hy	42.40	88	T	T	15 31 20.6	
	baz=284,slow=75,SNR=29						
H11S1	WAKE ISLAND Hy	42.41	88	T	T	15 31 18.7	
	baz=284,slow=75,SNR=25						
H11S2	WAKE ISLAND Hy	42.42	88	T	T	15 31 17.4	
	baz=284,slow=75,SNR=33						
KURBB	Kurchatov Arra	43.03	321	P	P	14 46 06.0	+4.7
	0.3nm,0.7s,baz=112,slow=8.1,SNR=2.2 0.3nm,0.7s						
WRA	Warramunga Arr	44.67	163	P	P	14 46 13.7	-1.2
	0.3nm,0.6s,baz=344,slow=8.2,SNR=2.2 0.3nm,0.6s						
ASAR	Alice Springs	48.12	165	P	P	14 46 41.9	-0.1
	0.2nm,0.7s,baz=336,slow=6.7,SNR=5.7 0.2nm,0.7s						

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*IDC **09** 14:43:35.7±2.2, 5°.79N×126°.67E, h114^{km}±18^{km}, mb3.3/8, mbtmp3.6/8, Error ellipse: s-maj=63.4km s-min=13.3km az=70.0*

ISC 09 14:43:34.2±1.0**, 5°.8N**±0°.2×**126°.9E**±0°.2**, h100**^{km}**, n10, σ0^{s}.65**/11**, mb3.5**/9**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.77	314	P	Pn	14 44 03.9	0.0
	187nm,0.3s,baz=349,slow=2.7,SNR=1.3						
DAV				S	Sn	14 44 27.3	+0.8
	338nm,0.4s,baz=183,slow=17,SNR=7.2						
FITZ	Fitzroy Crossi	23.81	183	P	P	14 48 37.8	-0.3
	1.3nm,0.8s,baz=0.0,slow=10,SNR=1.4 1.3nm,0.8s						
WRA	Warramunga Arr	26.64	164	P	P	14 49 03.8	0.0
	0.2nm,0.3s,baz=338,slow=10,SNR=26 0.2nm,0.3s						
ASAR	Alice Springs	30.11	167	P	P	14 49 35.0	+0.4
	0.4nm,0.4s,baz=342,slow=6.8,SNR=14 0.4nm,0.4s						
MKAR	Makanchi Array	55.93	324	P	P	14 53 00.9	-1.0
	0.5nm,0.6s,baz=117,slow=7.6,SNR=5.3 0.5nm,0.6s						
ZALV	Zalesovo Beam	58.80	332	P	P	14 53 21.2	-0.7
	0.4nm,0.3s,baz=142,slow=5.4,SNR=1.8 0.4nm,0.3s						
KURBB	Kurchatov Arra	60.06	327	P	P	14 53 30.1	-0.5
	0.5nm,0.7s,baz=122,slow=7.6,SNR=6.2 0.5nm,0.7s						
BVAR	Borovoye Array	65.65	326	P	P	14 54 07.0	-0.7
	0.5nm,0.8s,baz=131,slow=7.9,SNR=2.4 0.5nm,0.8s						
ILAR	Eielson Array	83.16	26	P	P	14 55 49.5	+0.6
	0.5nm,1.0s,baz=275,slow=6.1,SNR=4.1 0.5nm,1.0s						
ARCES	ARCESS Array B	88.54	340	P	P	14 56 15.4	+0.1
	15nm,1.3s,baz=61,slow=5.3,SNR=1.9						

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*TIR **09** 14:45:07.6, 41°.48N×19°.55E, h29^{km}, Ml2.7/2*
*SKO **09** 14:45:07.8, 41°.51N×19°.35E, h0^{km}, ML2.6*
*PDG **09** 14:45:10.5±0.1, 41°.61N×19°.53E, h14^{km}, ML2.9/13, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*

ISC 09 14:45:08.4±1.3**, 41°.51N**±0°.04×**19°.55E**±0°.04**, h9**^{km}±9^{km}**, n37, σ1^{s}.42**/58**, 10C-5D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.28	125	Pg	Pb	14 45 15.2	-0.5
TIR				AML	AML	14 45 19.4	
	2.5nm,0.3s						
TIR				Sg	Sb	14 45 19.8	-0.8
TIR	Tirane	0.28	125	*i* Pg	Pb	14 45 15.2	-0.5
TIR				*i* Sg	Sb	14 45 20.6	0.0
ULC	Ulcinj	0.51	333	*e*Pg	Pg	14 45 18.5	+0.3
ULC				*i* Sg	Sg	14 45 25.1	+0.2
SDA	Shkodra	0.54	356	Pg	Pg	14 45 19.0	+0.2
SDA				Sg	Sb	14 45 27.9	-0.1
PHP	Peshkopia	0.69	75	Pg	Pg	14 45 21.1	-0.5
PHP				Sg	Sg	14 45 31.3	+0.7
PHP				AML	AML	14 45 39.0	
	1.9nm,0.5s						
DRME	Dracevica, Mon	0.73	338	*e*Pg	Pg	14 45 22.6	+0.2
DRME				*e*Sg	Sg	14 45 32.5	+0.5
BUM	Brajici-Budva	0.93	328	*e*Pg	Pg	14 45 26.4	+0.1
BUM				*i* Sg	Sb	14 45 39.8	+0.5
PDG	Podgorica	0.95	347	Pg	Pg	14 45 26.2	-0.4
PDG				Sg	Sn	14 45 40.8	-0.7
PDG	Podgorica	0.95	347	⇑P	Pg	14 45 22.2	-4.4
PDG	Podgorica	0.95	347	*e*Pg	Pg	14 45 26.3	-0.2
PDG				*i* Sg	Sb	14 45 39.9	+0.3
OHR	Ohrid	1.02	113	*i* Pg	Pn	14 45 29.0	+0.1
OHR				*i* Sg	Sn	14 45 45.3	+1.9
OHR				*e*Lg	Lg	14 45 46.2	
	comp=N,156nm,0.7s						
OHR				*e*Lg	Lg	14 45 50.0	
	comp=E,88nm,0.6s						
PVY	Plav	1.12	15	*e*Pg	Pg	14 45 29.4	-0.6
PVY				*i* Sg	Sn	14 45 46.2	0.0
CEME	Cevo	1.14	336	*e*Pg	Pb	14 45 30.0	-0.3
CEME				*e*Sg	Sn	14 45 46.4	0.0
HCY	Herceg Novi	1.23	320	⇑*i*Pg	Pn	14 45 31.7	0.0
HCY				*i* Sg	Sn	14 45 49.9	+1.4
NKME	Niksic	1.33	341	*e*Pg	Pn	14 45 33.4	+0.1
NKME				*e*Sg	Sg	14 45 52.4	+1.2
KOME	Kolasin	1.34	359	*e*Pg	Pg	14 45 34.0	-0.1
KOME				*e*Sg	Sg	14 45 53.0	+1.5
IVA	Berane	1.38	10	⇑*i*Pg	Pn	14 45 33.2	-0.8
IVA				*i* Sg	Sg	14 45 55.0	+2.1
SKO	Skopje	1.48	71	*i* Pg	Pg	14 45 37.0	+0.1
SKO				*i* Sg	Sg	14 45 57.6	+1.5
BRY	Bratogost	1.58	332	*e*Pg	Pb	14 45 37.9	0.0
BRY				*i* Sg	Sg	14 45 59.6	+0.4
UPM	Unac-Piva	1.76	344	*e*Pn	Pb	14 45 40.4	-0.5
UPM				*i* Sn	Sb	14 46 03.6	+0.4
PLE	Pljevlja	1.82	356	*e*Pn	Pb	14 45 41.3	-0.7
PLE				*i* Sn	Sb	14 46 05.3	+0.3
BARS	Barje	2.13	51	*i* Pn	Pn	14 45 44.6	+0.5
VAY	Valandovo	2.28	94	*i* Pn	Pn	14 45 47.3	+1.1
VAY				*i* Sn	Sn	14 46 12.9	-1.5
VAY				*e*Lg	Lg	14 46 15.4	
	comp=E,14nm,0.6s						
VAY				*e*Lg	Lg	14 46 18.3	
	comp=N,27nm,0.7s						
MATE	Matera	2.32	249	⇑P	Pn	14 45 40.9	-5.8
KNT	Kendrikon	2.54	97	*i* Pn	Pn	14 45 51.0	+1.1
BOVS	Bovan	2.65	36	⇑P	Pn	14 45 52.6	+1.2
KKB	Krupnik	2.70	82	*i* Pn	Pn	14 45 53.1	+1.1
KKB				*i* Sn	Sn	14 46 25.3	+0.5
TIP	Timpagrande	3.16	223	⇑P	Pn	14 45 58.4	0.0
MDVR	Moldovita	3.63	25	⇑P	Pn	14 46 03.2	-1.6
HERR	Herculane	3.97	31	⇓P	Pn	14 46 09.7	+0.3
BZS	Buzias	4.37	19	⇑P	Pn	14 46 11.4	-3.5
GZR	Gura Zlata	4.54	30	⇓P	Pn	14 46 17.2	-0.1
ELND	Elena	4.90	71	⇑P	Pb	14 46 30.1	-4.4
LOT	Lotru	4.99	37	⇓P	Pn	14 46 24.8	+1.2
ARR	Arges	5.34	42	⇑P	Pn	14 46 30.5	+2.2
PLOR	Plostina	6.73	47	⇓P	Pn	14 46 50.7	+3.3
VRI	Vrincioaia	6.78	48	⇓P	Pn	14 46 51.2	+3.2

DJA 09 14:47:22.1±0.6**, 2°S**±4°×**14°0E**±°**, h10**^{km}**, M4.3**/6**, mB6.0**/1**, mb4.9**/2**, MLv4.0**/6**, Mw(mB)5.6**/1**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	0.33	187	P	Pg	14 47 28.9	+0.1
GENI				S	Sb	14 47 34.7	-0.9
JAY	Jayapura	0.56	117	P	Pg	14 47 33.4	+0.5
SMPI	Sarmi	1.52	280	P	Pn	14 47 48.7	-0.7
WAMI	Wamena	2.20	223	P	Pb	14 48 00.6	-1.4
SRPI	Serui, Papua	3.99	276	P	Pn	14 48 23.5	+0.2
BAKI	Biak	4.24	284	P	Pn	14 48 26.1	-0.7
MMPI	Merauke	6.17	178	P	Pn	14 48 54.4	+1.1
	10µm333nm,0.8s						
FAKI	Fak Fak	7.98	265	P	Pn	14 49 18.3	+0.1

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*NOU **09** 14:47:58.7, 38°.44S×176°.42E, h144^{km}, MLv3.5/19, North Island, New Zealand*
*WEL **09** 14:48:02.3±0.8, 38°S±5°×17°6E±°, h114^{km}±6^{km}, M2.6/29, ML2.3/24, MLv2.6/29, Error ellipse: s-maj=6.9km s-min=5.7km az=47.7, confirmed*

ISC 09 14:47:57.4±1.5**, 38°.37S**±0°.04×**176°.41E**±0°.04**, h157**^{km}±7^{km}**, n152, σ1^{s}.44**/164**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RRRZ	Republican Roa	0.09	69	P	Pn	14 48 18.9	+0.5
HRRZ	Handcock Road	0.10	259	P	Pn	14 48 19.1	+0.7
HLRZ	Highlands Stat	0.13	339	P	Pn	14 48 19.4	+0.9
PRRZ	Plateau Road	0.13	186	P	Pn	14 48 19.1	+0.7
HSRZ	Hossack Road	0.14	295	P	Pn	14 48 19.2	+0.8
TARZ	Mount Tarawera	0.15	30	P	Pn	14 48 19.2	+0.6
ALRZ	Allen Road	0.20	195	P	Pn	14 48 19.3	+0.8
WPRZ	Whakapapatarin	0.24	232	P	Pn	14 48 19.5	+0.9
UTU	Utuhina	0.26	319	P	Pn	14 48 19.6	+0.9
OMRZ	Omania	0.27	354	P	Pn	14 48 19.2	+0.5
MUGZ	Murupara	0.30	111	P	Pn	14 48 19.3	+0.6
MUGZ				S	Sn	14 48 33.2	-1.8
NGRZ	Ngongotaha	0.32	327	P	Pn	14 48 19.7	+0.8
LIRZ	Lichensteins R	0.37	357	P	Pn	14 48 19.1	+0.1
KARZ	Kaharoa	0.37	340	P	Pn	14 48 19.6	+0.6
MARZ	Manawahe	0.44	29	P	Pn	14 48 19.8	+0.5
WHTZ	Whakaora	0.46	230	P	Pn	14 48 21.0	+1.6
MRHZ	Matea Rd	0.46	179	P	Pn	14 48 20.4	+1.0
MRHZ				S	Sn	14 48 34.8	-1.5
KUTZ	Kaahu Road	0.47	255	P	Pn	14 48 20.6	+1.2
RTZ	Ruatahuna	0.51	119	P	Pn	14 48 20.6	+0.9
RTZ				S	Sn	14 48 35.3	-1.3
OPRZ	Ohinepanea	0.54	12	P	Pn	14 48 19.1	-0.6
OPRZ				S	Sn	14 48 34.8	-1.9
URZ	Urewera	0.56	79	P	Pn	14 48 20.2	+0.4
URZ	Urewera	0.56	79	P	Pn	14 48 20.2	+0.4
URZ				S	Sn	14 48 34.5	-2.4
HATZ	Hinemaiaia	0.58	205	P	Pn	14 48 20.8	+0.8
HATZ				S	Sn	14 48 35.5	-1.7
MTHZ	Maungataniwha	0.59	145	P	Pn	14 48 21.2	+1.2
MTHZ				S	Sn	14 48 36.4	-0.9
WATZ	Wairara	0.63	237	P	Pn	14 48 21.6	+1.4
WATZ				S	Sn	14 48 37.7	0.0
KMRZ	Kaimai	0.64	325	P	Pn	14 48 21.2	+0.9
KMRZ				S	Sn	14 48 36.1	-1.7
TGRZ	Tauranga	0.65	350	P	Pn	14 48 21.0	+0.6
TGRZ				S	Sn	14 48 36.1	-1.7
TLZ	Tolley Road	0.69	273	P	Pn	14 48 21.8	+1.3
RATZ	Rangitukua	0.70	225	P	Pn	14 48 22.1	+1.4
RITZ	Rihia Road	0.74	215	P	Pn	14 48 22.7	+1.8
RAHZ	Arahi	0.76	136	P	Pn	14 48 22.9	+1.9
RAHZ				S	Sn	14 48 39.6	+0.4
NMHZ	Naumai	0.79	157	P	Pn	14 48 23.5	+2.3
BKZ	Black Stump Fm	0.80	175	P	Pn	14 48 22.6	+1.3
BKZ	Black Stump Fm	0.80	175	S	Sn	14 48 38.9	-0.8
BKZ	Black Stump Fm	0.80	175	P	Pn	14 48 22.7	+1.4
RAGZ	Rawiri	0.80	99	P	Pn	14 48 22.7	+1.4
RAGZ				S	Sn	14 48 39.2	-0.4
KATZ	Kakaramea	0.82	223	P	Pn	14 48 23.1	+1.5
SNGZ	Shannon Statio	0.84	120	P	Pn	14 48 23.3	+1.8
NTVZ	North Tongarir	0.93	218	P	Pn	14 48 24.1	+1.8
TMVZ	Te Maari	0.93	216	P	Pn	14 48 24.0	+1.7
ETVZ	East Tongariro	0.94	215	P	Pn	14 48 22.3	-0.1
WHHZ	Waihua	0.96	138	P	Pn	14 48 24.2	+1.8
TOZ	Tahuroa Road	0.96	311	P	Pn	14 48 23.8	+1.3
NNVZ	North Ngauruho	0.98	219	P	Pn	14 48 24.6	+1.7
OTVZ	Oturere	0.98	216	P	Pn	14 48 24.7	+1.9
WTVZ	West Tongariro	0.98	220	P	Pn	14 48 24.4	+1.7
ARHZ	Aropaoanui	1.00	153	P	Pn	14 48 25.0	+2.3
SNVZ	South Ngauruho	1.01	216	P	Pn	14 48 25.0	+1.9
NGZ	Ngauruhoe	1.02	218	P	Pn	14 48 25.0	+1.9
TWVZ	Taurewa	1.03	227	P	Pn	14 48 24.9	+1.7
KWHZ	Kaweka Forest	1.05	179	P	Pn	14 48 25.3	+2.0
COVZ	Chateau Observ	1.07	219	P	Pn	14 48 25.2	+1.7
TUVZ	Tukino	1.07	213	P	Pn	14 48 25.5	+1.9
RUGZ	Raukumara Rang	1.08	68	P	Pn	14 48 23.8	+0.2
MCHZ	McNeill Hill	1.09	168	P	Pn	14 48 26.1	+2.5
FWVZ	Far West T-bar	1.11	217	P	Pn	14 48 26.0	+2.0
RIGZ	Rimuhau	1.11	108	P	Pn	14 48 25.6	+1.8
WHVZ	Whangaehu Hut	1.11	215	P	Pn	14 48 25.8	+1.8
MAVZ	Matarangi	1.11	216	P	Pn	14 48 26.0	+1.9
TKGZ	Te Karaka	1.13	94	P	Pn	14 48 25.6	+1.7
TRVZ	Turoa	1.15	216	P	Pn	14 48 26.2	+1.9
WNVZ	Wahianoa	1.15	213	P	Pn	14 48 26.1	+1.8
MOVZ	Moawhango	1.15	206	P	Pn	14 48 25.7	+1.5
KNZ	Kokohu	1.18	124	P	Pn	14 48 26.1	+1.8
HIZ	Hauiti	1.23	263	P	Pn	14 48 26.7	+1.9
HIZ	Hauiti	1.23	263	S	Sn	14 48 46.6	+0.9
HIZ	Hauiti	1.23	263	P	Pn	14 48 26.7	+1.9
PKVZ	Pokaka	1.24	222	P	Pn	14 48 26.9	+2.0
HAZ	Te Kaha	1.25	61	P	Pn	14 48 25.4	+0.5
MTVZ	Mangateitei	1.25	216	P	Pn	14 48 27.1	+2.0
TWGZ	Tauwhareparae	1.25	82	P	Pn	14 48 26.7	+1.6
KRHZ	Kereru	1.27	181	P	Pn	14 48 27.0	+1.8
PRGZ	Paritu Road	1.28	116	P	Pn	14 48 27.2	+1.9
CKHZ	Cape Kidnapper	1.39	158	P	Pn	14 48 28.8	+2.5
MHGZ	Mahia Peninsul	1.41	124	P	Pn	14 48 28.7	+2.2
PKGZ	Pakihiroa	1.41	70	P	Pn	14 48 27.8	+1.2
CNGZ	Carnagh Statio	1.42	95	P	Pn	14 48 28.9	+2.3
KAHZ	Kahuranaki	1.47	166	P	Pn	14 48 29.6	+2.4
PUZ	Puketiti	1.49	79	P	Pn	14 48 28.5	+1.2
VRZ	Vera Road	1.49	239	P	Pn	14 48 29.7	+2.3
PNHZ	Pukenui	1.55	186	P	Pn	14 48 29.6	+1.6
MKAZ	Moumakai	1.60	322	P	Pn	14 48 30.2	+1.7
WMGZ	Waiomatatini S	1.68	71	P	Pn	14 48 30.7	+1.4
WPHZ	Waipukurau	1.69	179	P	Pn	14 48 31.4	+1.9
PXZ	Pawanui	1.69	168	P	Pn	14 48 31.6	+2.1
MXZ	Matakaoa Point	1.70	62	P	Pn	14 48 31.1	+1.5
MXZ	Matakaoa Point	1.70	62	P	Sn	14 48 53.9	-0.4
MXZ	Matakaoa Point	1.70	62	P	Pn	14 48 31.2	+1.5
KUZ	Kuaotunu	1.71	341	P	Pn	14 48 31.1	+1.4
KUZ	Kuaotunu	1.71	341	P	Sn	14 48 54.8	+0.3
KUZ	Kuaotunu	1.71	341	P	Pn	14 48 31.0	+1.3
TSZ	Takapari Road	1.72	192	P	Pn	14 48 31.6	+1.8
WAZ	Wanganui	1.77	218	P	Pn	14 48 32.8	+2.4
ETAZ	East Tamaki Re	1.84	320	P	Pn	14 48 33.1	+1.9
WIAZ	Waiheke Island	1.87	327	P	Pn	14 48 33.3	+1.8
PRHZ	Porangahau	1.90	175	P	Pn	14 48 33.7	+2.0
AWAZ	Awhitu Peninsu	1.91	312	P	Pn	14 48 33.8	+1.9
DVHZ	Dannevirke	1.94	185	P	Pn	14 48 33.7	+1.5
MBAZ	Motutapu North	2.00	323	P	Pn	14 48 35.0	+2.0
PKE	Pukeiti	2.06	246	P	Pn	14 48 37.3	+3.6
POWZ	Post Office Ro	2.08	194	P	Pn	14 48 35.4	+1.6
ANWZ	Angora Road	2.09	179	P	Pn	14 48 35.9	+2.1
PRWZ	Pori Road	2.21	189	P	Pn	14 48 37.3	+2.0
BFZ	Birch Farm	2.31	183	P	Pn	14 48 38.1	+1.6
BFZ	Birch Farm	2.31	183	P	Sn	14 49 05.9	-0.9
BFZ	Birch Farm	2.31	183	P	Pn	14 48 38.1	+1.6
MRZ	Mangatainoka R	2.38	195	P	Pn	14 48 38.7	+1.4
TIWZ	Tintock	2.44	189	P	Pn	14 48 39.7	+1.6
CPWZ	Castlepoint	2.54	184	P	Pn	14 48 41.6	+2.3
HOWZ	Holdsworth Sta	2.62	195	P	Pn	14 48 41.4	+1.1
OGWZ	Otaki Gorge	2.62	201	P	Pn	14 48 41.6	+1.3
KIW	Kapiti Island	2.74	204	P	Pn	14 48 42.9	+1.1
TMWZ	Te Maipa	2.76	188	P	Pn	14 48 43.3	+1.3
MTW	Mount Morrison	2.87	194	P	Pn	14 48 44.1	+0.8
CAW	Cannon Point	2.92	200	P	Pn	14 48 44.9	+0.9
TRWZ	Traveller	3.07	190	P	Pn	14 48 46.9	+1.0
DUWZ	D’Urville Isla	3.10	218	P	Pn	14 48 47.1	+0.9
PAWZ	Paruwai Farm	3.10	194	P	Pn	14 48 46.8	+0.6
MSWZ	Moikau Station	3.17	196	P	Pn	14 48 47.7	+0.5
WEL	Wellington	3.17	203	P	Pn	14 48 48.1	+1.0
SNZO	South Karori	3.22	204	P	Pn	14 48 48.3	+0.6
SNZO	South Karori	3.22	204	S	Sn	14 49 25.4	-1.3
BHW	Baring Head	3.26	201	P	Pn	14 48 48.7	+0.5
TCW	Tory Channel	3.28	209	P	Pn	14 48 49.0	+0.5
TUWZ	Tuamarina	3.60	211	P	Pn	14 48 53.1	+0.6
NNZ	Nelson	3.68	218	P	Pn	14 48 54.0	+0.5
TKNZ	Takaka Hill	3.76	224	P	Pn	14 48 55.3	+0.6
BSWZ	Blackbirch Sta	3.87	209	P	Pn	14 48 56.9	+0.9
QRZ	Quartz Range	3.87	229	P	Pn	14 48 56.7	+0.6
QRZ	Quartz Range	3.87	229	S	Sn	14 49 40.9	-0.9
QRZ	Quartz Range	3.87	229	P	Pn	14 48 56.7	+0.6
MRNZ	Matariki Terra	4.13	222	P	Pn	14 48 59.9	+0.5
THZ	Tophouse	4.32	217	P	Pn	14 49 02.9	+0.8
KHZ	Kahutara	4.60	208	P	Pn	14 49 05.7	+0.2
KHZ	Kahutara	4.60	208	S	Sn	14 49 57.4	-1.3
KHZ	Kahutara	4.60	208	P	Pn	14 49 05.7	+0.2
DSZ	Denniston Nort	4.88	225	P	Pn	14 49 09.2	-0.2
GVZ	Greta Valley S	5.26	208	P	Pn	14 49 14.1	-0.2
LTZ	Lake Taylor	5.42	214	P	Pn	14 49 16.3	-0.1
AMCZ	Amberley	5.58	210	P	Pn	14 49 19.1	+0.6
INZ	Inchbonnie	5.76	219	P	Pn	14 49 20.5	-0.4
OKCZ	Okains Bay	5.92	204	P	Pn	14 49 22.4	-0.5
OXZ	Oxford	5.96	212	P	Pn	14 49 22.3	-1.2
MQZ	McQueen’s Vall	6.04	207	P	Pn	14 49 23.1	-1.4
AKCZ	Akaroa Harbour	6.10	205	P	Pn	14 49 25.1	-0.3
MHCZ	Mount Hutt	6.32	214	P	Pn	14 49 27.8	-0.6
ARCZ	Arundel	6.83	214	P	Pn	14 49 35.2	+0.1
TMZ	Timaru	7.25	212	P	Pn	14 49 40.0	-0.7
ODZ	Otahua Downs	7.94	211	P	Pn	14 49 49.7	-0.1
ODZ	Otahua Downs	7.94	211	P	Pn	14 49 49.4	-0.4
JCZ	Jackson Bay	8.09	223	P	Pn	14 49 52.6	+0.7
JCZ	Jackson Bay	8.09	223	P	Pn	14 49 52.5	+0.5

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*IDC **09** 14:53:02.4±1.1, 41°.35N×19°.32E, h0^{km}, mb3.9/11, mbtmp3.8/17, ML3.1/6, MS3.3/2, Error ellipse: s-maj=16.8km s-min=11.6km az=24.0*
*MOS **09** 14:53:03.0±0.9, 41°.44N×19°.28E, h11^{km}, mb4.5/6, Error ellipse: s-maj=8.1km s-min=4.6km az=70.6*
*SKO **09** 14:53:06.4, 41°.57N×19°.33E, h10^{km}, ML3.6*
*NEIC **09** 14:53:06.2±2.4, 41°.62N±0°.03×19°.41E±0°.08, h10^{km}±1^{km}, mb4.3/10, Error ellipse: s-maj=9.8km s-min=5.3km az=256.0*
*TIR **09** 14:53:06.2, 41°.57N×19°.49E, h18^{km}, Ml3.5/3*
*THE **09** 14:53:07.4, 42°N±17°×2°0E±1°4, h1^{km}±25^{km}, M3.3/18, MLh3.3/18*
*PDG **09** 14:53:08.3±0.1, 41°.67N×19°.58E, h10^{km}, MD3.6/11, ML3.5/13, Error ellipse: s-maj=0.6km s-min=0.6km az=0.0*
*BEO **09** 14:53:08.5±0.6, 41°.60N×19°.40E, h24^{km}±3^{km}, ML3.7/7*

ISC 09 14:53:07.2±0.8**, 41°.60N**±0°.02×**19°.52E**±0°.02**, h19**^{km}±2^{km}**, n251, σ1^{s}.67**/304**, mb4.2**/17**, 31C-24D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.36	133	Pg	Pg	14 53 14.3	-0.5
TIR				Sg	Sg	14 53 19.4	-0.5
TIR				AML	AML	14 53 19.4	
	18nm,0.2s						
TIR	Tirane	0.36	133	*i* Pg	Pg	14 53 14.2	-0.6
ULC	Ulcinj	0.42	331	⇓*i*Pg	Pb	14 53 15.8	-0.4
ULC				*i* Sg	Sb	14 53 22.0	-0.2
SDA	Shkodra	0.46	358	Pg	Pg	14 53 16.2	-0.3
SDA				Sg	Sb	14 53 23.2	0.0
DRME	Dracevica, Mon	0.64	337	⇓*i*Pg	Pg	14 53 19.4	-0.5
DRME				*e*Sg	Sb	14 53 29.3	+1.0
PHP	Peshkopia	0.70	82	Pg	Pb	14 53 19.9	-0.8
PHP				Sg	Sb	14 53 30.6	+0.6
PHP				AML	AML	14 53 33.8	
	12nm,0.6s						
PHP	Peshkopia	0.70	82	P	Pb	14 53 19.4	-1.3
PHP				S	Sg	14 53 31.1	+0.8
BUM	Brajici-Budva	0.84	327	⇑*i*Pg	Pb	14 53 23.2	-0.1
BUM				*i* Sg	Sn	14 53 36.5	+0.4
PDG	Podgorica	0.86	347	Pg	Pb	14 53 23.1	-0.3
PDG				Sg	Sb	14 53 33.7	-0.8
PDG	Podgorica	0.86	347		Pb	14 53 22.6	-0.9
PDG	Podgorica	0.86	347	⇓P	Pb	14 53 22.4	-1.1
PDG	Podgorica	0.86	347	*e*Pg	Pb	14 53 23.0	-0.5
PDG				*e*Sg	Sn	14 53 36.9	+0.6
PDG	Podgorica	0.86	347	⇑*i*Pg	Pb	14 53 22.9	-0.5
PDG				*i* Sg	Sn	14 53 36.0	-0.3
CEME	Cevo	1.05	335	⇑*i*Pg	Pb	14 53 26.4	-0.4
CEME				*e*Sg	Sn	14 53 43.0	+1.8
PVY	Plav	1.05	18	⇓*i*Pg	Pb	14 53 26.2	-0.7
PVY				*i* Sg	Sg	14 53 41.4	-0.1
OHR	Ohrid	1.08	116	*i* Pg	Pb	14 53 27.3	0.0
OHR				*e*Sg	Sg	14 53 45.5	+3.3
OHR				*e*Lg	Lg	14 53 46.1	
	comp=N,1µm,0.8s						
OHR				*e*Lg	Lg	14 53 49.2	
	comp=E,1µm,0.8s						
VLO	Vlora	1.12	181	P	Pg	14 53 29.0	+0.1
VLO				S	Sg	14 53 45.9	+2.2
HCY	Herceg Novi	1.14	318	⇑*i*Pg	Pg	14 53 29.1	-0.2
HCY				*i* Sg	Sg	14 53 46.7	+2.4
NKME	Niksic	1.24	340	⇓*i*Pg	Pb	14 53 30.1	0.0
NKME				*e*Sg	Sg	14 53 49.1	+1.5
KOME	Kolasin	1.25	360	⇓*i*Pg	Pb	14 53 30.3	0.0
KOME				*e*Sg	Sg	14 53 48.7	+0.8
IVA	Berane	1.31	12	⇓*i*Pg	Pn	14 53 30.9	+0.4
IVA				*i* Sg	Sg	14 53 50.3	+0.8
KBN	Korca	1.36	135	P	Pb	14 53 32.5	+0.3
KBN				S	Sg	14 53 52.6	+1.3
TREB	Trebinje	1.42	323	*e*Pn	Pb	14 53 33.5	+0.5
SKO	Skopje	1.49	75	*i* Pn	Pg	14 53 35.8	-0.1
SKO				*i* Sn	Sg	14 53 57.5	+2.3
BRY	Bratogost	1.50	331	⇓*i*Pg	Pb	14 53 34.9	+0.5
BRY				*i* Sg	Sg	14 53 57.1	+1.6
NEST	Nestorio	1.65	135	P	Pb	14 53 37.3	+0.2
NEST				S	Sg	14 54 01.8	+1.3
UPM	Unac-Piva	1.67	344	*e*Pn	Pb	14 53 37.7	+0.2
UPM				*i* Sn	Sg	14 54 01.4	+0.3
SJES	Sjenica	1.70	11	*e*Pg	Pb	14 53 38.9	+1.0
SJES				*e*Sg	Sg	14 54 02.4	+0.4
KLINJ	Klinje	1.72	337	*e*Pn	Pb	14 53 38.7	+0.5
PLE	Pljevlja	1.74	357	⇑*i*Pn	Pb	14 53 38.5	0.0
PLE				*i* Sn	Sg	14 54 02.6	-0.6
STON	Ston	1.86	314	*e*Pg	Pb	14 53 41.4	+0.9
STON				*e*Sg	Sb	14 54 04.3	+0.9
PENT	Pentalofos	1.86	138	P	Pb	14 53 40.6	-0.1
KEK	Kerkira	1.89	173	Pg	Pg	14 53 43.2	-0.4
SELS	Selova	2.01	36	*e*Pn	Pb	14 53 42.5	-0.7
SELS				*e*Sn	Sb	14 54 07.3	-0.5
RUDO	Rudo	2.02	357	*e*Pn	Pb	14 53 42.5	-0.9
IVAS	Ivanjica	2.04	13	*e*Pn	Pn	14 53 42.0	+1.5
IVAS				*e*Sn	Sn	14 54 05.3	-0.2
BARS	Barje	2.10	54	*i* Pn	Pn	14 53 43.2	+1.9
BARS				*i* Sn	Sg	14 54 13.7	-1.1
BARS	Barje	2.10	54	*e*Pn	Pn	14 53 43.3	+1.9
KZN	Kozani	2.14	126	P	Pb	14 53 44.9	-0.4
IGT	Igoumenitsa	2.15	163	P	Pn	14 53 43.8	+1.8
IGT				S	Sb	14 54 13.0	+1.2
IGT				AML	AML	14 54 27.7	
	comp=E,0.9nm,0.8s						
IGT	Igoumenitsa	2.15	163	P	Pn	14 53 42.9	+0.8
KPRO	Kipourio	2.16	139	P	Pb	14 53 45.4	-0.3
JAN	Janina	2.19	152	P	Pb	14 53 45.5	-0.6
LFKM	Lefkimmi	2.19	169	P	Pn	14 53 44.3	+1.8
GOCS	Kraljevo Serbi	2.21	27	*e*Pn	Pn	14 53 44.7	+1.8
BBLS	Lazi&#263i	2.27	358	*e*Pn	Pb	14 53 46.1	-1.5
VAY	Valandovo	2.31	96	*i* Pn	Pn	14 53 46.0	+1.8
VAY				*i* Sn	Sn	14 54 14.4	+2.3
VAY				*e*Lg	Lg	14 54 24.5	
	comp=N,382nm,0.9s						
VAY				*e*Lg	Lg	14 54 29.5	
	comp=E,146nm,0.7s						
MATE	Matera	2.33	247	⇓P	Pn	14 53 44.3	-0.1
BOSS	Bosilegrad	2.38	67	*e*Pn	Pn	14 53 47.1	+1.8
PRMD	Pramanda	2.39	149	P	Pn	14 53 47.6	+2.3
GRUS	Gruza	2.46	21	*e*Pn	Pn	14 53 48.5	+2.3
DIVS	Divibare	2.53	8	*e*Pn	Pn	14 53 49.0	+1.7
KNT	Kendrikon	2.58	99	P	Pn	14 53 49.6	+1.7
KNT	Kendrikon	2.58	99	*i* Pn	Pn	14 53 50.0	+2.0
KNT				*i* Sn	Sn	14 54 21.4	+2.6
TETR	Tetrakomo, Epi	2.62	149	P	Pn	14 53 50.4	+1.9
LIT	Litokhoron	2.70	123	P	Pn	14 53 51.9	+2.2
LIT	Litokhoron	2.70	123		Pn	14 53 51.9	+2.2
LIT	Litokhoron	2.70	123	*i* Pn	Pn	14 53 52.4	+2.7
LIT				*i* Sn	Sb	14 54 26.2	-1.6
LIT	Litokhoron	2.70	123	P	Pn	14 53 51.9	+2.2
TRUS	Trudelj	2.71	14	*e*Pn	Pn	14 53 51.5	+1.8
KKB	Krupnik	2.71	84	P	Pn	14 53 51.9	+2.1
KKB	Krupnik	2.71	84	*i* Pn	Pn	14 53 52.3	+2.5
KKB				*i* Sn	Sn	14 54 25.7	+3.6
THE	Thessaloniki	2.78	109	*i* Pn	Pn	14 53 52.0	+1.4
THL	Klokotos Trika	2.78	136	P	Pn	14 53 53.4	+2.7
ACER	Acerenza	2.82	255		Pn	14 53 51.0	-0.3
SGRT	San Giovanni R	2.83	274		Pn	14 53 51.1	-0.4
ZAPS	Zavoj	2.85	53	*e*Pn	Pn	14 53 54.0	+2.3
ZAPS				*e*Sn	Sn	14 54 26.8	+1.2
TSLK	Tsoukalades, L	2.90	162	P	Pn	14 53 52.9	+0.5
LKD2	Lefkada island	2.94	162	P	Pn	14 53 53.4	+0.5
LKD2	Lefkada island	2.94	162	P	Pn	14 53 53.1	+0.2
VTS	Vitosha	2.95	68	P	Pn	14 53 55.1	+1.9
TEKS	Tekeris	2.95	0	*e*Pn	Pn	14 53 54.5	+1.4
AMPL	Ampelaki	2.97	154	P	Pn	14 53 54.7	+1.4
ZAGS	Zajecar	2.99	41	*e*Pn	Pn	14 53 55.8	+2.3

SOH	Sokhos	3.00	104	*i* Pn	Pn	14 53 55.6	+1.9
NYDR	Nydri-Lefkada	3.02	162	P	Pn	14 53 54.1	+0.2
DRAG	Dragano-Lefkad	3.02	164	P	Pn	14 53 53.7	-0.3
PLNA	Plana	3.04	72	P	Pn	14 53 57.0	+2.6
BLSH	Balsha	3.06	64	P	Pn	14 53 57.6	+2.9
EVGI	Lefkada island	3.10	163	P	Pn	14 53 55.0	0.0
BORS2	Bor- Borsko je	3.10	36	*e*Pn	Pn	14 53 55.5	+0.4
BORS2				*e*Sn	Sn	14 54 33.0	+1.4
SRS	Serrai	3.10	98	*i* Pn	Pn	14 53 57.0	+1.8
MMB	Musomishta	3.17	89	P	Pn	14 53 58.7	+2.5
MMB	Musomishta	3.17	89	*i* Pn	Pn	14 53 58.9	+2.7
AVAS	Avala Beograd	3.18	13	*e*Pn	Pn	14 53 57.3	+1.0
TIP	Timpagrande	3.20	222		Pn	14 53 56.0	-0.5
TIP	Timpagrande	3.20	222	⇓P	Pn	14 53 55.7	-0.9
KUBS	Kucevo	3.23	29	*e*Pn	Pn	14 53 57.4	+0.5
KUBS				*e*Sn	Sn	14 54 35.3	+0.5
CUC	Castrocucco	3.23	242		Pn	14 53 56.6	-0.4
MDVR	Moldovita	3.57	26	⇓P	Pn	14 54 03.4	+1.9
FRGS	Fruska Gora	3.57	3	*e*Pn	Pn	14 54 02.3	+0.8
BLY	Banja Luka	3.58	332	*e*Pn	Pn	14 54 01.0	-0.8
BLY	Banja Luka	3.58	332	*e*Pn	Pn	14 54 02.8	+1.0
MPEP	Malo Peshtene	3.58	59	P	Pn	14 54 04.5	+2.7
VRSS	Vrsac	3.76	20	*e*Pn	Pn	14 54 03.7	-0.5
PAOL	Paolisi	3.77	263		Pn	14 54 04.3	0.0
DJES	Djerdap	3.77	35	⇓P	Pn	14 54 06.0	+1.6
HERR	Herculane	3.91	32	⇑P	Pn	14 54 08.7	+2.5
RZN	Rozhen	3.91	87	P	Pn	14 54 09.3	+2.8
KNYS	Krupa na Uni	4.04	326	*e*Pn	Pn	14 54 09.8	+1.8
SRE	Strehaia	4.08	40	⇑P	Pn	14 54 10.7	+2.0
SRE	Strehaia	4.08	40	P	Pn	14 54 11.5	+2.9
PLVB	Pleven	4.18	63	⇑P	Pn	14 54 12.1	+2.2
BZS	Buzias	4.30	20	⇑P	Pn	14 54 12.5	+1.0
BZS	Buzias	4.30	20	P	Pn	14 54 13.7	+2.1
CEL	Celeste	4.34	221		Pn	14 54 11.3	-0.9
PVL	Pavlikeni	4.46	68	P	Pn	14 54 16.7	+2.9
GZR	Gura Zlata	4.48	31	⇓P	Pn	14 54 15.8	+1.7
GZR	Gura Zlata	4.48	31	P	Pn	14 54 17.3	+3.2
RDO	Rodhopi	4.55	94		Pn	14 54 16.8	+1.8
AQU	L'Aquila	4.62	281	*e*Pn	Pn	14 54 15.5	-0.6
CAMP	Campotosto	4.64	284		Pn	14 54 17.1	+0.7
MORH	Mrgy, Hungar	4.66	353	*e*Pn	Pn	14 54 13.5	-3.0
MORH	Mrgy, Hungar	4.66	353	⇑P	Pn	14 54 16.8	+0.3
ITM	Ithomi	4.79	156		Pn	14 54 19.4	+1.0
GUMA	Gualdo di Mace	4.81	290		Pn	14 54 18.8	+0.1
ELND	Elena	4.90	72	⇓P	Pn	14 54 22.7	+2.8
NRCA	Norcia	4.91	287		Pn	14 54 20.0	-0.1
SIRR	Siria	4.92	18	⇑P	Pn	14 54 20.7	+0.6
LOT	Lotru	4.94	37	⇑P	Pn	14 54 22.0	+1.5
FDMO	Fiordimonte	4.98	289		Pn	14 54 21.1	+0.1
BOJS	Bojanci	4.99	323	*e*Sn	Sn	14 55 19.6	+1.5
BOJS	Bojanci	4.99	323	*i* Pn	Pn	14 54 22.6	+1.6
BEHE	Becsehely	5.26	339	Pn	Pn	14 54 26.6	+1.8
BEHE	Becsehely	5.26	339	*e*Pn	Pn	14 54 24.7	-0.1
CESX	Cesi	5.26	283		Pn	14 54 25.2	+0.5
ARR	Arges	5.30	43	⇓P	Pn	14 54 28.1	+2.8
TNR	Turnu Rosu	5.33	39	⇑P	Pn	14 54 27.1	+1.4
TNR	Turnu Rosu	5.33	39	P	Pn	14 54 27.1	+1.4
MTUR	Matau	5.43	46	⇑P	Pn	14 54 30.2	+3.0
MTUR	Matau	5.43	46	P	Pn	14 54 30.2	+3.0
MURB	Monte Urbino	5.44	290		Pn	14 54 28.1	+0.8
RAZG	Razgrad	5.52	67	⇓P	Pn	14 54 31.1	+2.7
DRGR		5.68	23	⇓P	Pn	14 54 32.3	+1.7
DRGR		5.68	23	P	Pn	14 54 32.3	+1.7
MARR	Marisel-Cluj	5.70	26	⇑P	Pn	14 54 33.0	+2.1
TRI	Trieste	5.86	317	Pn	Pn	14 54 33.4	+0.4
TRI	Trieste	5.86	317	P	Pn	14 54 33.4	+0.4
SOKA	Soboth	6.02	329	*e*Pn	Pn	14 54 36.9	+1.6
	comp=E,5.2nm,0.5s,SNR=4.4						
SOKA				*i* Sn	Sn	14 55 42.6	-1.1
	comp=E,10nm,0.6s						
OBKA	Obir	6.08	326	*i* Pn	Pn	14 54 37.9	+1.8
	comp=E,3.9nm,0.4s						
OBKA				*i* Sn	Sn	14 55 47.6	+2.4
	comp=E,23nm,0.5s						
MLR	Muntele Rosu	6.08	48	Pn	Pn	14 54 39.7	+3.6
	comp=E,4.6nm,0.3s,baz=159,slow=9.7,SNR=46						
MLR				Sn	Sn	14 55 50.8	+5.6
	comp=E,1.3nm,0.3s,baz=43,slow=23,SNR=1.1						
MLR	Muntele Rosu	6.08	48		Pn	14 54 39.3	+3.1
MLR	Muntele Rosu	6.08	48	⇑P	Pn	14 54 39.1	+3.0
MLR	Muntele Rosu	6.08	48	P	Pn	14 54 39.1	+3.0
DOPR	Dopca	6.09	42	⇑P	Pn	14 54 38.6	+2.3
SABO	M.te Sabotino	6.13	318		Pn	14 54 36.8	0.0
ISR	Istrita	6.21	53	⇑P	Pn	14 54 39.5	+1.6
ISR	Istrita	6.21	53	P	Pn	14 54 42.1	+4.2
BOSR	Bodos	6.31	43	⇑P	Pn	14 54 41.8	+2.6
PSZ	Piszkesteto	6.33	2		Pn	14 54 41.1	+1.6
PSZ	Piszkesteto	6.33	2	P	Pn	14 54 41.1	+1.6
ARSA	Arzberg	6.34	335	*e*Pn	Pn	14 54 40.0	+0.5
	comp=E,6.0nm,0.4s						
ARSA				*i* Sn	Sn	14 55 52.0	+0.6
	comp=E,6.6nm,0.5s						
OSSC	Osservatorio P	6.41	290	Pn	Pn	14 54 41.1	+0.5
COVR	Voineasa-Covas	6.44	46	⇓P	Pn	14 54 42.3	+1.2
TURR	Turia	6.48	44	⇑P	Pn	14 54 43.5	+1.9
APE	Apeiranthos	6.49	132	*i* P	Pn	14 54 42.6	+0.9
RONA	Rosalia, Austr	6.52	340	*i* Pn	Pn	14 54 43.4	+1.3
	comp=E,2.4nm,0.4s						
BISRR	Bisoca	6.55	50	⇑P	Pn	14 54 44.6	+2.1
MYKA	Terra Mystica	6.57	322	*i* Pn	Pn	14 54 43.6	+0.8
	comp=E,3.5nm,0.4s						
MYKA				*i* Sn	Sn	14 55 56.1	-1.2
	comp=E,8.4nm,0.6s						
ICOR	Ion Corvin	6.59	65	⇑P	Pn	14 54 46.2	+3.2
PLOR	Plostina	6.69	48	⇓P	Pn	14 54 47.5	+3.0
PLOR	Plostina	6.69	48	P	Pn	14 54 47.8	+3.3
VRI	Vrincioaia	6.74	48	⇑P	Pn	14 54 47.5	+2.3
VRI	Vrincioaia	6.74	48	P	Pn	14 54 48.5	+3.3
TEOL	Teolo	6.84	306	Pn	Pn	14 54 46.4	0.0
CONA	Conrad Observa	6.85	339	*e*Pn	Pn	14 54 48.3	+1.7
	comp=E,2.7nm,0.5s						
ODBI	Odobesti	6.87	50	⇑P	Pn	14 54 49.9	+3.1
TLBR	Topalu	6.91	62	⇑P	Pn	14 54 50.5	+3.1
KECS	Kecovo	6.92	5	*e*P	Pn	14 54 50.2	+2.6
KECS				*e*		14 56 05.0	
KECS	Kecovo	6.92	5	*e*PN	Pn	14 54 50.2	+2.6
KECS				*e*SN	Sn	14 56 05.0	-0.8
MODS	Modra-Piesok	6.96	348	*e*P	Pn	14 54 56.4	+8.3
MODS				*e*		14 56 05.4	
MODS	Modra-Piesok	6.96	348	*e*PN	Pn	14 54 56.4	+8.3
MODS				*e*SN	Sn	14 56 05.4	-1.4
KBA	Koelnbreinsper	7.04	323	*i* Pn	Pn	14 54 49.7	+0.2
	comp=E,3.0nm,0.3s						
KBA				*i* Sn	Sn	14 56 07.7	-1.4
	comp=E,4.3nm,0.5s						
TESR	Tescani	7.11	44	⇓P	Pn	14 54 51.5	+1.3
ABTA	Abfaltersbach	7.20	318	*i* Sn	Sn	14 56 14.1	+1.3
	comp=E,19nm,0.7s						
CTI	Castel Tesino	7.22	311		Pn	14 54 51.5	-0.3
CTI	Castel Tesino	7.22	311	P	Pn	14 54 51.5	-0.3
CFR	Carcaliu	7.23	57	⇓P	Pn	14 54 54.5	+2.7
CFR	Carcaliu	7.23	57	P	Pn	14 54 54.4	+2.7
BURAR	Bucovina Array	7.26	32	⇑P	Pn	14 54 55.1	+2.8
BURAR	Bucovina Array	7.26	32	P	Pn	14 54 55.1	+2.8
TPGR	Topolog	7.27	60	⇓P	Pn	14 54 54.4	+2.0
MOA	Molln	7.29	331	*i* Pn	Pn	14 54 54.1	+1.5
	comp=E,1.4nm,0.2s						
MOA				*i* Sn	Sn	14 56 18.7	+3.9
	comp=E,6.3nm,0.4s						
BIOA	Bad Ischl, Aus	7.40	327	*i* Pn	Pn	14 54 54.4	+0.3
	comp=E,3.8nm,0.3s						
BIOA				*e*Sn	Sn	14 56 19.6	+2.1
	comp=E,7.8nm,0.5s						
LESA	Schwarzleotal	7.61	322	*i* Pn	Pn	14 54 58.4	+1.4
	comp=E,1.9nm,0.2s						
LESA				*i* Sn	Sn	14 56 20.5	-2.2
	comp=E,3.8nm,0.5s						
TLCR		7.66	59	⇑P	Pn	14 55 00.1	+2.3
TLCR		7.66	59	P	Pn	14 55 00.0	+2.3
SALO	Salr	7.67	305	Pn	Pn	14 54 58.3	+0.5
MSSA	Maissana	7.82	294	Pn	Pn	14 55 00.2	+0.2
STHS	Stebnicka Huta	7.92	8	*e*P	Pn	14 55 05.2	+4.0
STHS				*e*		14 56 32.7	
STHS	Stebnicka Huta	7.92	8	*e*PN	Pn	14 55 05.2	+4.0
STHS				*e*SN	Sn	14 56 32.7	+2.5
WTTA	Wattenberg	7.99	318	*i* Pn	Pn	14 55 03.4	+0.9
	comp=E,4.8nm,0.4s						
WTTA				*i* Sn	Sn	14 56 31.8	-0.6
	comp=E,17nm,0.6s						
WATA	Walderalm	8.07	318	*i* Pn	Pn	14 55 04.7	+1.2
	comp=E,6.7nm,0.4s						
WATA				*i* Sn	Sn	14 56 34.2	-0.1
	comp=E,12nm,0.5s						
SQTA	Sankt Quirin	8.18	316	*i* Pn	Pn	14 55 05.3	+0.3
	comp=E,3.9nm,0.3s						
SQTA				*i* Sn	Sn	14 56 35.8	-1.1
	comp=E,9.5nm,0.5s						
FETA	Feichten	8.31	314	*i* Pn	Pn	14 55 07.5	+0.7
	comp=E,2.5nm,0.6s						
FETA				*e*Sn	Sn	14 56 39.5	-0.7
	comp=E,6.3nm,0.7s						
MOTA	Moosalm	8.32	317	*i* Pn	Pn	14 55 08.5	+1.6
	comp=E,6.4nm,0.7s						
MOTA				*i* Sn	Sn	14 56 39.8	-0.5
	comp=E,16nm,0.7s						
GERES	GERESS Array B	8.33	332	Pn	Pn	14 55 07.4	+0.4
	comp=E,0.1nm,0.3s,baz=142,slow=9.7,SNR=7.5						
GERES				Sn	Sn	14 56 43.9	+3.4
	comp=E,0.1nm,0.3s,baz=149,slow=25,SNR=2.7						
	comp=E,0.6nm,0.3s						
KHC	Kasperske Hory	8.62	333	*e*P	Pn	14 55 12.3	+1.5
KHC				*e*		14 56 44.4	
KHC	Kasperske Hory	8.62	333	*e*SN	Sn	14 56 44.4	-3.1
KHC	Kasperske Hory	8.62	333	*e*PN	Pn	14 55 12.3	+1.5
DAVOX	Davos/Dischmat	8.65	310	Pn	Pn	14 55 11.3	-0.1
	comp=E,0.8nm,0.3s,baz=140,slow=23,SNR=5.4						
DAVOX				Sn	Sn	14 56 50.4	+1.9
	comp=E,0.9nm,0.3s,baz=332,slow=21,SNR=2.2						
	comp=E,4.5nm,0.6s						
TUE	Stuetta	8.80	307	Pn	Pn	14 55 14.2	+0.7
KEST	Kesra	9.87	237	LR	LR	14 59 03.3	
	comp=E,43nm,21.0s,baz=7.7,slow=38						
SENIN	Lac Senin/Sane	10.01	303	Pn	Pn	14 55 29.7	-0.4
BRTR	Keskin Array B	10.89	95	Pn	Pn	14 55 43.5	+1.3
	comp=E,0.1nm,0.3s,baz=276,slow=13,SNR=1.4						
	comp=E,0.3nm,0.6s						
AKASG	Malin Array Be	11.31	33	Pn	Pn	14 55 49.5	+1.8
	comp=E,0.5nm,0.3s,baz=221,slow=12,SNR=4.7						
	comp=E,0.3nm,0.3s						
AKASG	Malin Array Be	11.31	33	*i* P	Pn	14 55 50.2	+2.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KIV	Kislovodsk	17.16	74	*e*P	Pn	14 57 06.6	+0.6
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KBZ	Khabaz	17.32	75	P	P	14 57 09.3	+0.2
	comp=Z,0.1nm,0.3s,baz=274,slow=6.5,SNR=4.1						
	comp=Z,1.9nm,0.8s						
VSU	Vasula	17.49	13	*i* P	Pn	14 57 09.7	-0.1
VSU				pmax	pmax		
	comp=Z,22nm,0.7s						
OBN	Obninsk	17.58	34	⇑*e*P	Pn	14 57 11.2	+0.3
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,100nm,13.0s						
HFS	Hagfors	18.91	351	P	P	14 57 25.2	-1.2
	comp=Z,0.1nm,0.3s,baz=146,slow=10,SNR=2.1						
	comp=Z,4.2nm,0.9s						
EKA	Eskdalemuir Ar	20.25	320	P	P	14 57 41.1	0.0
	comp=Z,1.4nm,0.6s,baz=118,slow=9.7,SNR=3.9						
	comp=Z,1.4nm,0.6s						
FINES	FINESS Array B	20.27	9	P	P	14 57 40.8	-0.5
	comp=Z,6.1nm,0.7s,baz=196,slow=8.9,SNR=20						
	comp=Z,6.1nm,0.7s						
FINES	FINESS Array B	20.27	9	P	P	14 57 41.2	-0.1
FINES	FINESS Array B	20.27	9	P	P	14 57 41.2	-0.1
FIA1	FINESS Array S	20.27	9	P	P	14 57 41.4	+0.1
MAK	Makhachkala	20.72	77	*d* *i*P	P	14 57 43.1	-3.2
MAK				*e*S	S	15 01 34.3	-2.5
MAK				pmax	pmax		
	comp=Z,192nm,1.2s						
MAK				MLR	MLR		
	comp=Z,171nm,13.0s						
BELG	Belogornoye	21.86	51	P	P	14 57 59.0	+0.4
	comp=Z,21nm,0.9s,baz=192,slow=3.8,SNR=5.6						
	comp=Z,21nm,0.9s						
BELG	Belogornoye	21.86	51	*i* P	P	14 57 59.1	+0.6
BELG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KLMR	Klimovskoe	22.82	26	*e*P	P	14 58 07.0	-1.7
KLMR				pmax	pmax		
	comp=Z,18nm,1.0s						
KIRV	Kirov	25.32	38	*ce*P	P	14 58 32.6	+0.3
ARTI	Arti	29.02	46	*d* *i*P	P	14 59 05.2	-0.5
ARTI						14 59 55.2	
ARTI				S	S	15 03 58.8	+3.0
ARTI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ABKAR	Akbulak array	29.10	61	P	P	14 59 06.1	-0.4
BORK	Borovoye	35.57	54	P	P	15 00 03.2	+0.2
BORK				IAmb	IAmb	15 00 04.9	
	comp=Z,3.9nm,0.6s						
BORK	Borovoye	35.57	54	*ce*P	P	15 00 03.7	+0.7
BORK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BVAR	Borovoye Array	35.61	54	P	P	15 00 03.9	+0.5
	comp=Z,2.6nm,0.7s,baz=277,slow=6.1,SNR=13						
	comp=Z,2.6nm,0.7s						
KURBB	Kurchatov Arra	40.90	57	P	P	15 00 47.0	-1.0
	comp=Z,0.4nm,0.6s,baz=290,slow=9.6,SNR=4.8						
	comp=Z,0.4nm,0.6s						
KURK	Kurchatov	40.94	56	P	P	15 00 47.0	-1.3
KURK	Kurchatov	40.94	56	*i* P	P	15 00 48.2	-0.1
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ZAA0	Zalesovo Array	44.05	51		P	15 01 13.2	-0.3
ZAA0				IAmb	IAmb	15 01 14.1	
	comp=Z,5.5nm,0.7s						
ZALV	Zalesovo Beam	44.05	51	P	P	15 01 13.3	-0.2
	comp=Z,5.7nm,0.7s,baz=283,slow=8.5,SNR=30						
	comp=Z,5.7nm,0.7s						
ZALV	Zalesovo Beam	44.05	51		P	15 01 12.6	-0.9
MK31	Makanchi Array	44.25	61	*ce*P	P	15 01 15.4	+0.1
MKAR	Makanchi Array	44.25	61	P	P	15 01 15.5	+0.2
	comp=Z,2.4nm,0.7s,baz=278,slow=6.8,SNR=20						
	comp=Z,2.4nm,0.7s						
MKAR	Makanchi Array	44.25	61		P	15 01 14.8	-0.5
MKAR	Makanchi Array	44.25	61	P	P	15 01 14.8	-0.5
DGZ	Jazzator, Alta	46.68	56	*i* P	P	15 01 34.9	+0.3
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
EVN	Everest	55.63	81	P	P	15 02 41.6	-1.1
EVN				IAmb	IAmb	15 02 43.1	
	comp=Z,2.3nm,0.8s						
SONM	Songino Array	58.92	52	P	P	15 03 04.8	-0.3
	comp=Z,1.0nm,0.8s,baz=292,slow=9.2,SNR=3.6						
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	58.92	52	IAmb	IAmb	15 03 21.9	
	comp=Z,1.9nm,1.4s						
C36M	Paulatuk	66.16	347	P	P	15 03 52.8	0.0
SADO	Sadowa	67.43	310	LR	LR	15 34 19.1	
	comp=Z,98nm,19.5s,baz=28,slow=37						
INK	Inuvik	68.57	350	P	P	15 04 08.0	-0.1
INK				IAmb	IAmb	15 04 44.3	
	comp=Z,3.0nm,1.3s						
INK	Inuvik	68.57	350	P	P	15 04 08.0	-0.1
INK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
F31M	Tsiigehtchic	69.41	349	P	P	15 04 12.8	-0.5
YKA	Yellowknife Ar	69.92	339	P	P	15 04 16.2	-0.3
	comp=Z,0.2nm,0.5s,baz=28,slow=4.6,SNR=4.3						
	comp=Z,0.2nm,0.5s						
F28M	Old Crow	70.00	352	P	P	15 04 17.2	+0.2
BOSA	Boshof	70.06	175	P	P	15 04 14.9	-3.0
	comp=Z,0.6nm,0.4s,baz=216,slow=15,SNR=1.3						
	comp=Z,0.6nm,0.4s						
BOSA	Boshof	70.06	175	P	P	15 04 18.1	+0.3
ILAR	Eielson Array	73.44	354	P	P	15 04 37.5	-0.2
	comp=Z,0.4nm,0.9s,baz=1.8,slow=5.8,SNR=4.2						
	comp=Z,0.4nm,0.9s						

RSNC 09 14:57:25.7±0.0,**7°N**±1°×**7°3W**±°,**h145**^{km}±1^{km},**M3.3,mb3.7, ML3.0,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.26	183	P	Pn	14 57 45.5	-0.4
BARC				S	Sn	14 58 00.6	-0.5
BRJC	Barrancabermej	0.58	282	P	Pn	14 57 47.0	+0.1
BRJC				S	Sn	14 58 03.5	+0.5
PAMC	Pamplona, Colo	0.67	44	P	Pn	14 57 48.2	+0.1
PAMC				S	Sn	14 58 04.8	-0.3
RUSC	La Rusia	0.95	175	P	Pn	14 57 49.5	-0.7
RUSC				S	Sn	14 58 08.5	-0.3
PTBC	PUERTO BERRIO,	1.31	257	P	Pn	14 57 52.0	-1.0
PTBC				S	Sn	14 58 12.5	-1.3
OCAC	Ocana	1.39	354	P	Pn	14 57 53.5	-0.4
OCAC				S	Sn	14 58 15.0	-0.5
SPBC	San Pablo de B	1.49	217	P	Pn	14 57 54.5	-0.4
SPBC				S	Sn	14 58 17.2	0.0
NORC	Norcasia	2.12	233	P	Pn	14 58 01.4	-0.6
NORC				S	Sn	14 58 29.4	-0.5
CHIC	Chingaza	2.28	194	P	Pn	14 58 03.8	-0.5
CHIC				S	Sn	14 58 32.9	-1.0
HELC	Santa Helena	2.43	255	P	Pn	14 58 05.7	-0.4
HELC				S	Sn	14 58 37.0	-0.2
UREC	San Jos de Ur	2.51	291	P	Pn	14 58 05.5	-1.2
UREC				S	Sn	14 58 37.0	-1.3
GUY2C	Guyana, Caldas	2.72	234	P	Pn	14 58 10.0	+0.2
GUY2C				S	Sn	14 58 43.8	+0.2
VILC	Villavicencio,	2.77	191	P	Pn	14 58 09.4	-0.7
VILC				S	Sn	14 58 43.6	-0.8
PTGC	Puerto Gaitan,	2.83	159	P	Pn	14 58 08.7	-2.0
PTGC				S	Sn	14 58 42.1	-3.4
CBOC	Ciudad Bolivar	2.99	251	P	Pn	14 58 13.5	+0.6
CBOC				S	Sn	14 58 47.9	-1.5
DBBC	Dabeiba	3.02	273	P	Pn	14 58 13.2	0.0
DBBC				S	Sn	14 58 48.7	-1.3
ARGC	Ariguani, Magd	3.17	340	P	Pn	14 58 15.8	+0.7
ARGC				S	Sn	14 58 53.2	-0.2
SDV	Santo Domingo	3.23	51	P	Pn	14 58 14.9	-1.1
SDV				S	Sn	14 58 51.6	-3.2
PRAC	Prado	3.55	209	P	Pn	14 58 19.0	-1.1
PRAC				S	Sn	14 59 01.7	-0.5
ORTC	Ortega, Tolima	3.58	215	P	Pn	14 58 20.0	-0.4
ORTC				S	Sn	14 59 03.4	+0.6
SJCC	San Jacinto, C	3.62	327	P	Pn	14 58 19.2	-1.8
SJCC				S	Sn	14 58 59.9	-3.9
PLMC	San Jos del P	3.65	238	P	Pn	14 58 21.6	+0.2
PLMC				S	Sn	14 59 02.6	-1.9
URMC	La Uribe, Meta	3.78	199	P	Pn	14 58 22.8	-0.2
URMC				S	Sn	14 59 05.9	-1.6
YOTC	Yotoco, Valle	4.25	228	P	Pn	14 58 28.7	-0.6
SMRC	Santa Marta, M	4.41	346	P	Pn	14 58 29.8	-1.5
SMRC				S	Sn	14 59 18.4	-3.9
CAPC	Capurgana	4.51	293	P	Pn	14 58 30.5	-2.0
PTAC	Punta Ardita,	4.61	274	P	Pn	14 58 32.8	-1.1
PTAC				S	Sn	14 59 25.8	-1.2
MACC	Macarena, Meta	4.72	188	P	Pn	14 58 33.2	-2.2
MACC				S	Sn	14 59 24.8	-4.9
URIC	Uribia, Colomb	4.96	13	P	Pn	14 58 35.5	-3.0
JAMC	Jamundi, Valle	5.02	224	P	Pn	14 58 39.5	-0.1
	6.4nm,0.8s						
FLOC	Florencia	5.79	205	P	Pn	14 58 48.9	-0.7

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*IDC **09** 14:58:56.4±1.6, 41°.49N×19°.40E, h0^{km}, mb3.8/8, mbtmp3.8/14, ML2.9/4, MS3.8/1, Error ellipse: s-maj=23.4km s-min=15.8km az=10.0*

*SKO **09** 14:58:58.0, 41°.53N×19°.27E, h0^{km}, ML3.3*

*TIR **09** 14:58:58.1, 41°.51N×19°.47E, h32^{km}, Ml3.5/2*

*NEIC **09** 14:58:59.2±1.7, 41°.64N±0°.02×19°.44E±0°.07, h10^{km}±1^{km}, mb4.4/13, Error ellipse: s-maj=8.4km s-min=4.5km az=274.0*

*PDG **09** 14:59:00.9±0.1, 41°.65N×19°.56E, h10^{km}, MD3.4/5, ML3.3/13, Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*

*BEO **09** 14:59:01.6±0.6, 41°.61N×19°.46E, h26^{km}±3^{km}, ML3.4/8*

*THE **09** 14:59:02.0, 42°N±14°×2°0E±1°1, h7^{km}±19^{km}, M3.1/11, MLh3.1/11*

ISC 09 14:58:59.6±0.9,**41°.57N**±0°.02×**19°.48E**±0°.02,**h15**^{km}±6^{km}, **n151,**σ1°.**37**/200,**mb4.2**/12,**31C-9D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.37	127	Pg	Pg	14 59 06.8	-0.3
TIR				AML	AML	14 59 11.7	
	15nm,0.2s						
TIR				Sg	Sg	14 59 12.4	+0.2
TIR	Tirane	0.37	127	*i* Pg	Pg	14 59 06.8	-0.3
TIR				*i* Sg	Sg	14 59 12.7	+0.6
ULC	Ulcinj	0.43	336	⇑*i*Pg	Pb	14 59 08.3	-0.6
ULC				*i* Sg	Sb	14 59 14.8	-0.4
SDA	Shkodra	0.48	2	Pg	Pg	14 59 09.1	0.0
SDA				Sg	Sb	14 59 17.9	+1.3
DRME	Dracevica, Mon	0.65	341	⇑*i*Pg	Pg	14 59 12.1	-0.3
DRME				*e*Sg	Sb	14 59 21.8	+0.2
PHP	Peshkopia	0.73	81	Pg	Pg	14 59 12.5	-1.4
PHP				Sg	Sg	14 59 23.5	-0.1
PHP				AML	AML	14 59 26.2	
	9.8nm,0.5s						
PHP	Peshkopia	0.73	81	P	Pg	14 59 12.5	-1.4
PHP				S	Sb	14 59 24.6	+0.7
BUM	Brajici-Budva	0.85	329	⇑*i*Pg	Pb	14 59 16.2	+0.1
BUM				*i* Sg	Sn	14 59 29.0	-0.3
PDG	Podgorica	0.88	349	Pg	Pg	14 59 16.3	-0.2
PDG				Sg	Sb	14 59 29.2	+1.2
PDG	Podgorica	0.88	349		Pg	14 59 15.2	-1.3
PDG	Podgorica	0.88	349	⇑P	Pg	14 59 15.7	-0.8
PDG	Podgorica	0.88	349	*e*Pg	Pg	14 59 16.2	-0.3
PDG				*e*Sg	Sn	14 59 30.9	+1.1
PDG	Podgorica	0.88	349	⇓*i*Pg	Pg	14 59 15.9	-0.6
PDG				*i* Sg	Sb	14 59 28.9	+0.9
CEME	Cevo	1.06	337	*e*Pg	Pb	14 59 19.7	0.0
CEME				*e*Sg	Sn	14 59 35.7	+1.2
PVY	Plav	1.08	19	⇑*i*Pg	Pg	14 59 19.1	-1.4
PVY				*i* Sg	Sb	14 59 34.9	+0.7
OHR	Ohrid	1.10	114	*i* Pg	Pb	14 59 19.9	-0.3
OHR				*i* Sg	Sn	14 59 37.6	+2.2
OHR				*e*Lg	Lg	14 59 38.6	
	comp=N,692nm,0.8s						
OHR				*e*Lg	Lg	14 59 41.0	
	comp=E,804nm,0.7s						
VLO	Vlora	1.10	179	P	Pn	14 59 22.4	+2.0
VLO				S	Sn	14 59 38.4	+3.1
HCY	Herceg Novi	1.14	320	⇓*i*Pg	Pn	14 59 22.1	+1.1
HCY				*i* Sg	Sn	14 59 39.3	+2.9
NKME	Niksic	1.26	342	⇓*i*Pg	Pg	14 59 23.3	-0.5
NKME				*e*Sg	Sn	14 59 42.2	+2.8
KOME	Kolasin	1.28	1	⇑*i*Pg	Pn	14 59 23.1	+0.1
KOME				*e*Sg	Sn	14 59 41.9	+1.9
IVA	Berane	1.34	13	⇑*i*Pg	Pn	14 59 23.9	+0.1
IVA				*i* Sg	Sg	14 59 43.5	+0.7
KBN	Korca	1.37	133	P	Pg	14 59 25.7	-0.2
KBN				S	Sg	14 59 44.6	+0.9
BRY	Bratogost	1.50	333	⇓*i*Pg	Pg	14 59 28.0	-0.5
BRY				*i* Sg	Sg	14 59 49.9	+1.9
SKO	Skopje	1.52	74	*i* Pg	Pb	14 59 28.1	+0.5
SKO				*i* Sg	Sb	14 59 47.5	+0.9
NEST	Nestorio	1.66	134	P	Pb	14 59 30.4	+0.5
NEST	Nestorio	1.66	134	P	Pb	14 59 30.3	+0.5
NEST				S	Sg	14 59 52.3	-0.7
UPM	Unac-Piva	1.69	346	⇑*i*Pn	Pb	14 59 30.6	+0.2
UPM				*i* Sn	Sg	14 59 54.1	+0.2
SJES	Sjenica	1.73	12	*e*Pg	Pb	14 59 31.5	+0.4
SJES				*e*Sg	Sg	14 59 54.7	-0.6
PLE	Pljevlja	1.76	358	⇑*i*Pn	Pb	14 59 31.5	-0.1
PLE				*i* Sn	Sg	14 59 55.6	-0.6
STON	Ston	1.85	315	*e*Pg	Pg	14 59 34.1	-1.0
STON				*e*Sg	Sg	14 59 57.7	-1.5
PENT	Pentalofos	1.86	137	P	Pb	14 59 33.5	+0.1
KEK	Kerkira	1.87	172	P	Pg	14 59 36.3	+0.8
KEK	Kerkira	1.87	172	Pg	Pg	14 59 36.1	+0.6
SELS	Selova	2.05	36	*e*Pn	Pn	14 59 34.9	+1.4
SELS				*e*Sn	Sn	14 59 59.0	+0.2
IVAS	Ivanjica	2.07	14	*e*Pn	Pn	14 59 35.1	+1.3
IVAS				*e*Sn	Sn	14 59 59.3	0.0
BARS	Barje	2.14	54	*i* Pn	Pn	14 59 35.8	+1.1
BARS				*i* Sn	Sg	15 00 07.5	-0.8
BARS	Barje	2.14	54	*e*Pn	Pn	14 59 36.0	+1.3
IGT	Igoumenitsa	2.14	162	P	Pn	14 59 35.3	+0.6
IGT				S	Sg	15 00 06.8	-1.5
IGT	Igoumenitsa	2.14	162	*i* Pn	Pn	14 59 35.5	+0.8
IGT				*i* Sn	Sg	15 00 07.1	-1.2
KZN	Kozani	2.15	125	P	Pb	14 59 36.9	-1.3
KZN				S	Sb	15 00 04.0	-0.7
KPRO	Kipourio	2.16	138	P	Pb	14 59 37.6	-0.8
JAN	Janina	2.18	151	P	Pb	14 59 39.8	+1.1
GOCS	Kraljevo Serbi	2.24	27	*e*Pn	Pn	14 59 37.6	+1.3
GOCS				*e*Sn	Sn	15 00 04.3	+0.6
BBLS	Lazi&#263i	2.29	359	*e*Pn	Pn	14 59 38.8	+1.8
VAY	Valandovo	2.34	95	*i* Pn	Pn	14 59 38.9	+1.4
VAY				*i* Sn	Sn	15 00 06.9	+0.9
VAY				*e*Lg	Lg	15 00 08.5	
	comp=E,94nm,0.6s						
VAY				*e*Lg	Lg	15 00 17.2	
	comp=N,225nm,0.9s						

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PRMD  Pramanda            2.38 148   P      Pb     14 59 41.6 -0.7
BOSS  Bosilegrad          2.42  67  ePn     Pn     14 59 39.8 +1.2
BOSS                                eSn     Sn     15 00 07.3 -0.7
GRUS  Gruza               2.49  21  ePn     Pn     14 59 41.2 +1.6
DIVS  Divibare            2.56   8  ePn     Pn     14 59 41.5 +1.0
KNT   Kendrikon           2.61  98   P      Pn     14 59 42.2 +1.0
KNT   Kendrikon           2.61  98  i Pn    Pn     14 59 42.6 +1.4
KNT                                 i Sn    Sn     15 00 14.1 +1.5
TETR  Tetrakomo, Epi      2.61 148   P      Pn     14 59 43.9 +2.5
LIT   Litokhoron          2.72 122          Pn     14 59 43.5 +0.8
LIT   Litokhoron          2.72 122  i Pn    Pn     14 59 44.6 +1.9
KKB   Krupnik             2.75  83   P      Pn     14 59 44.5 +1.4
KKB   Krupnik             2.75  83  i Pn    Pn     14 59 44.5 +1.4
KKB                                 i Sn    Sn     15 00 17.9 +1.8
ACER  Acerenza            2.78 255   Pn     Pn     14 59 42.8 -0.8
THE   Thessaloniki        2.80 108  i Pn    Pn     14 59 44.8 +1.0
SGRT  San Giovanni R      2.80 275          Pn     14 59 43.9  0.0
ZAPS  Zavoj               2.89  53  ePn     Pn     14 59 46.9 +1.8
ZAPS                                eSn     Sn     15 00 18.2 -1.5
LKD2  Lefkada island      2.92 162   P      Pn     14 59 45.8 +0.3
TEKS  Tekeris             2.98   1  ePn     Pn     14 59 47.1 +0.8
VTS   Vitosha             2.99  68   P      Pn     14 59 47.7 +1.2
SOH   Sokhos              3.02 103  i Pn    Pn     14 59 47.5 +0.6
SOH                                 i Sn    Sn     15 00 25.1 +2.2
ZAGS  Zajecar             3.02  41  ePn     Pn     14 59 48.4 +1.5
ZAGS                                eSn     Sn     15 00 22.7 -0.2
PLNA  Plana               3.08  72   P      Pn     14 59 49.9 +2.1
BLSH  Balsha              3.10  64   P      Pn     14 59 51.1 +3.0
SRS   Serrai              3.13  97  i Pn    Pn     14 59 49.5 +1.1
SRS                                 i Sn    Sn     15 00 29.5 +4.0
BORS2 Bor- Borsko je      3.14  36  ePn     Pn     14 59 48.4 -0.1
BORS2                               eSn     Sn     15 00 25.4 -0.3
TIP   Timpagrande         3.17 222          Pn     14 59 48.9  0.0
CUC   Castrocucco         3.19 242          Pn     14 59 48.8 -0.5
MMB   Musomishta          3.21  89   P      Pn     14 59 51.6 +2.1
MMB   Musomishta          3.21  89  i Pn    Pn     14 59 50.9 +1.4
MMB                                 i Sn    Sn     15 00 28.5 +1.1
KUBS  Kucevo              3.27  29  ePn     Pn     14 59 50.0 -0.2
KUBS                                eSn     Sn     15 00 25.9 -3.0
BLY   Banja Luka          3.59 333  ⇑P      Pn     14 59 55.8 +1.1
FRGS  Fruska Gora         3.59   4  ePn     Pn     14 59 55.7 +0.9
MDVR  Moldovita           3.60  26  ⇑P      Pn     14 59 55.3 +0.4
PGB   Panagyurishte       3.62  73   P      Pn     14 59 57.5 +2.3
MPEP  Malo Peshtene       3.62  59   P      Pn     14 59 58.3 +3.1
PAOL  Paolisi             3.74 263          Pn     14 59 58.1 +1.4
DJES  Djerdap             3.81  35  ⇑P      Pn     14 59 59.2 +1.4
HERR  Herculane           3.94  32  ⇑P      Pn     15 00 00.7 +1.2
RZN   Rozhen              3.95  86   P      Pn     15 00 02.1 +2.3
SRE   Strehaia            4.12  40  ⇑P      Pn     15 00 02.5 +0.5
BZS   Buzias              4.33  20  ⇓P      Pn     15 00 05.6 +0.8
PVL   Pavlikeni           4.50  68   P      Pn     15 00 09.7 +2.5
GZR   Gura Zlata          4.51  31  ⇑P      Pn     15 00 07.6 +0.2
RDO   Rodhopi             4.58  93   Pn     Pn     15 00 09.8 +1.5
CAMP  Campotosto          4.62 284          Pn     15 00 08.7 -0.3
MORH  Mrgy, Hungar        4.68 353  ⇑P      Pn     15 00 10.1 +0.4
NRCA  Norcia              4.89 287          Pn     15 00 13.2 +0.6
ELND  Elena               4.94  72  ⇑P      Pn     15 00 15.4 +2.2
SIRR  Siria               4.95  18  ⇑P      Pn     15 00 13.6 +0.2
FDMO  Fiordimonte         4.96 289          Pn     15 00 14.0 +0.4
LOT   Lotru               4.98  37  ⇑P      Pn     15 00 15.1 +1.2
HUMR  Humele              5.00  52  ⇑P      Pn     15 00 14.9 +0.8
ARR   Arges               5.34  43  ⇑P      Pn     15 00 20.1 +1.4
TNR   Turnu Rosu          5.36  39  ⇓P      Pn     15 00 19.1 +0.1
MURB  Monte Urbino        5.42 291          Pn     15 00 19.8  0.0
LOZB  Loznitsa            5.56  69  ⇑P      Pn     15 00 24.0 +2.2
RAZG  Razgrad             5.56  67  ⇑P      Pn     15 00 23.7 +1.9
DRGR                      5.71  23  ⇓P      Pn     15 00 24.4 +0.5
MARR  Marisel-Cluj        5.74  26  ⇑P      Pn     15 00 24.8 +0.6
SOKA  Soboth              6.02 329  i Pn    Pn     15 00 29.6 +1.4
      comp=N,1.4nm,0.3s
SOKA                                eSn     Sn     15 01 35.3 -1.6
      comp=N,4.2nm,0.8s
OBKA  Obir                6.08 326  eSn     Sn     15 01 39.1 +0.8
      comp=N,7.5nm,0.4s
MLR   Muntele Rosu        6.12  48   Pn     Pn     15 00 32.2 +2.7
      comp=N,18nm,0.5s,baz=262,slow=7.0,SNR=26
MLR                                  Sn     Sn     15 01 40.8 +1.5
      comp=N,0.8nm,0.3s,baz=140,slow=16,SNR=1.1
MLR   Muntele Rosu        6.12  48  ⇑P      Pn     15 00 31.4 +1.8
SABO  M.te Sabotino       6.12 318   Pn     Pn     15 00 29.0 -0.5
DOPR  Dopca               6.13  42  ⇑P      Pn     15 00 30.2 +0.6
NEHR  Nehoiu              6.28  50  ⇓P      Pn     15 00 33.5 +1.8
ARSA  Arzberg             6.34 335          Pn     15 00 32.5  0.0
PSZ   Piszkesteto         6.35   3   Pn     Pn     15 00 33.3 +0.6
PSZ   Piszkesteto         6.35   3  ⇑P      Pn     15 00 33.7 +1.0
COVR  Voineasa-Covas      6.48  47  ⇑P      Pn     15 00 35.6 +1.1
PLOR  Plostina            6.73  48  ⇓P      Pn     15 00 39.7 +1.8
VRI   Vrincioaia          6.78  48  ⇑P      Pn     15 00 40.2 +1.7
TLBR  Topalu              6.95  62  ⇑P      Pn     15 00 42.2 +1.5
BURAR Bucovina Array      7.30  32  ⇑P      Pn     15 00 46.4 +0.7
BUR08 Bucovina Ar. S      7.32  32          Pn     15 00 46.2 +0.2
IDI   Anoyia              7.57 144   Pn     Pn     15 00 49.0 -0.5
      comp=N,0.9nm,0.3s,baz=264,slow=7.5,SNR=1.1
IDI                                  Sn     Sn     15 02 08.9 -6.2
      comp=N,0.2nm,0.3s,baz=154,slow=19,SNR=2.8
STHS  Stebnicka Huta      7.94   8  ePN     Pn     15 00 58.2 +3.7
STHS                                eSN     Sn     15 02 27.9 +3.9
GERES GERESS Array B      8.34 333   Pn     Pn     15 01 00.1 +0.2
      baz=150,slow=13,SNR=3.3
      comp=N,0.7nm,0.6s
KARP  Karpathos           8.51 133   Pn     Pn     15 01 04.1 +1.9
DAVOX Davos/Dischmat      8.64 310   Pn     Pn     15 01 04.7 +0.5
      comp=N,0.3nm,0.3s,baz=315,slow=19,SNR=1.6
DAVOX                                Sn     Sn     15 02 42.6 +1.2
      comp=N,0.3nm,0.3s,baz=336,slow=22,SNR=1.4
      comp=N,1.0nm,0.3s
SENIN Lac Senin/Sane     10.00 303   Pn     Pn     15 01 23.4 +0.6
AKASG Malin Array Be     11.35  33   Pn     Pn     15 01 42.0 +0.9
      comp=N,0.3nm,0.3s,baz=224,slow=14,SNR=1.8
      comp=N,0.2nm,0.3s
NACGM Naroch             14.19  17  eP      Pn     15 02 21.8 +1.9
      comp=Z,14nm,0.8s,baz=203
HFS   Hagfors            18.93 351   P      Pn     15 03 20.4 +0.2
      comp=Z,0.1nm,0.3s,baz=175,slow=17,SNR=2.8
      comp=Z,5.1nm,0.9s
GNI   Garni              19.15  86   P      Pn     15 03 23.9 +0.6
EKA   Eskdalemuir Ar     20.25 321   P      P      15 03 32.7 -1.4
      comp=Z,1.9nm,0.8s,baz=123,slow=9.2,SNR=1.8
      comp=Z,1.9nm,0.8s
FINES FINESS Array B     20.30   9   P      P      15 03 33.5 -1.1
      comp=Z,3.5nm,0.7s,baz=182,slow=9.2,SNR=11
      comp=Z,3.5nm,0.7s
FIA1  FINESS Array S     20.30   9   P      P      15 03 34.2 -0.4
BELG  Belogornoye        21.90  51   P      P      15 03 51.3 -0.6
      comp=Z,11nm,0.8s,baz=246,slow=2.2,SNR=4.2
      comp=Z,11nm,0.8s
ARTI  Arti               29.06  46   P      P      15 04 58.0 -1.0
ARTI                                 IAmb   IAmb   15 04 58.1
      comp=Z,5.8nm,0.6s
BORK  Borovoye           35.61  54   P      P      15 05 56.2 -0.1
BORK                                 IAmb   IAmb   15 05 57.8
      comp=Z,2.2nm,0.6s
BVAR  Borovoye Array     35.65  54   P      P      15 05 56.5 -0.2
      comp=Z,1.4nm,0.7s,baz=274,slow=5.8,SNR=8.8
      comp=Z,1.4nm,0.7s
KURBB Kurchatov Arra     40.94  56   P      P      15 06 40.9 -0.4
      comp=Z,0.1nm,0.4s,baz=289,slow=9.5,SNR=2.9
      comp=Z,0.1nm,0.4s
KURK  Kurchatov          40.98  56   P      P      15 06 41.2 -0.4
ZAA0  Zalesovo Array     44.09  51   P      P      15 07 05.6 -1.3
ZAA0                                 IAmb   IAmb   15 07 06.7
      comp=Z,2.5nm,0.7s
ZALV  Zalesovo Beam      44.09  51   P      P      15 07 05.9 -1.0
      comp=Z,2.6nm,0.6s,baz=283,slow=8.1,SNR=14
      comp=Z,2.6nm,0.6s
ZALV  Zalesovo Beam      44.09  51   P      P      15 07 05.6 -1.2
MKAR  Makanchi Array     44.29  61   P      P      15 07 07.7 -0.9
      comp=Z,1.3nm,0.6s,baz=288,slow=6.6,SNR=12
      comp=Z,1.3nm,0.6s
MKAR  Makanchi Array     44.29  61   P      P      15 07 08.0 -0.6
SCHQ  Schefferville      55.45 315   LR     LR     15 30 10.8
      comp=Z,72nm,18.2s,baz=253,slow=34
EVN   Everest            55.67  81   P      P      15 08 34.6 -1.3
EVN                                  IAmb   IAmb   15 08 53.2
      comp=Z,4.6nm,1.5s
SONM  Songino Array      58.96  52   P      P      15 08 58.1 -0.3
      comp=Z,0.3nm,0.3s,baz=294,slow=11,SNR=1.6
      comp=Z,0.3nm,0.3s
E29M  Blow River         69.06 351   P      P      15 10 04.4 +0.2
D23K  Nanushuk River     69.54 356   P      P      15 10 07.2  0.0
D23K                                 IAmb   IAmb   15 10 22.3
      comp=Z,5.7nm,1.4s
F28M  Old Crow           70.02 352   P      P      15 10 10.2 +0.1
F28M                                 IAmb   IAmb   15 10 49.8
      comp=Z,5.3nm,1.4s
BWN   Browne             74.24 355   P      P      15 10 35.7 +0.3
DHY   Denali Highway     75.17 354   P      P      15 10 41.7 +0.6
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*IDC **09** 15:04:51.7±4.8, 41°.47N×19°.22E, h0km, mb3.5/3, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=72.0km s-min=63.4km az=158.0*

*TIR **09** 15:04:56.7, 41°.61N×19°.59E, h8km, Ml2.7/2*

*NEIC **09** 15:04:57.5±1.4, 41°.66N±0°.05×19°.46E±0°.08, h10km±2km, mb4.1/1, Error ellipse: s-maj=10.6km s-min=8.2km az=249.0*

*PDG **09** 15:04:58.1±0.1, 41°.64N×19°.52E, h11km, ML2.9/13, Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*

ISC 09 15:04:56.8±1.1, **41°.61N**±0°.03×**19°.53E**±0°.03, **h11**km±8km, **n53**, σ1^s**42**/70, **mb3.7**/3, **9C-5D**, **Albania**

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Code  Station Name        Δ°   AZ°   Phase ID         Time       Res
                                     Op     ISC      h  m  s     ISC
TIR   Tirane              0.36 136   Pg     Pg     15 05 03.8 -0.2
TIR                                  Sg     Sg     15 05 08.4 -0.4
TIR                                  AML    AML    15 05 09.3
      4.5nm,0.4s
ULC   Ulcinj              0.41 329⇓ iPg     Pg     15 05 05.3 +0.3
ULC                                 i Sg    Sb     15 05 11.6 -0.9
SDA   Shkodra             0.45 357   Pg     Pg     15 05 05.7 +0.2
DRME  Dracevica, Mon      0.63 336  ePg     Pg     15 05 09.2 +0.1
DRME                                eSg     Sb     15 05 18.7 -0.1
PHP   Peshkopia           0.69  83   Pg     Pg     15 05 09.2 -0.9
PHP                                  Sg     Sg     15 05 18.4 -0.7
PHP                                  AML    AML    15 05 25.3
      1.7nm,0.4s
BUM   Brajici-Budva       0.84 326  ePg     Pg     15 05 13.1 +0.1
BUM                                 i Sg    Sn     15 05 25.9 -1.1
PDG   Podgorica           0.85 346   Pg     Pb     15 05 13.5  0.0
PDG                                  Sg     Sn     15 05 26.7 -0.4
PDG   Podgorica           0.85 346          Pg     15 05 12.2 -0.9
PDG   Podgorica           0.85 346  ⇑P      Pn     15 05 14.4 -0.3
PDG   Podgorica           0.85 346  ePg     Pg     15 05 13.1  0.0
PDG                                 i Sg    Sn     15 05 26.0 -1.1
PVY   Plav                1.04  18  ePg     Pg     15 05 16.7 -0.1
PVY                                 i Sg    Sn     15 05 32.7 +0.7
CEME  Cevo                1.04 334  ePg     Pg     15 05 16.8 -0.1
CEME                                eSg     Sn     15 05 32.6 +0.5
OHR   Ohrid               1.08 117  i Pg    Pg     15 05 16.9 -0.6
OHR                                 i Sg    Sn     15 05 33.7 +0.8
HCY   Herceg Novi         1.14 318  ePg     Pb     15 05 18.6 +0.1
HCY                                 i Sg    Sn     15 05 36.0 +1.6
NKME  Niksic              1.23 340  ePg     Pn     15 05 20.4 +0.3
NKME                                eSg     Sn     15 05 39.2 +2.4
KOME  Kolasin             1.24 360  ePg     Pb     15 05 20.5 +0.2
KOME                                eSg     Sn     15 05 39.4 +2.4
IVA   Berane              1.29  12  ePg     Pn     15 05 20.7 -0.2
IVA                                 i Sg    Sn     15 05 41.2 +3.0
BRY   Bratogost           1.49 331  ePg     Pb     15 05 24.9 +0.4
BRY                                 i Sg    Sg     15 05 47.1 +2.4
NEST  Nestorio            1.66 136   P      Pn     15 05 27.5 +1.6
UPM   Unac-Piva           1.66 344  ePn     Pb     15 05 27.8 +0.3
UPM                                 i Sn    Sg     15 05 51.2 +1.0
PLE   Pljevlja            1.72 357  ePn     Pb     15 05 28.7 +0.1
PLE                                 i Sn    Sg     15 05 52.8 +0.5
KEK   Kerkira             1.90 174   Pn     Pb     15 05 33.4 +1.8
LIT   Litokhoron          2.70 123          Pn     15 05 42.8 +2.6
SGRT  San Giovanni R      2.84 274   Pn     Pn     15 05 40.9 -1.3
TIP   Timpagrande         3.22 222   Pn     Pn     15 05 46.1 -1.3
CUC   Castrocucco         3.25 241   Pn     Pn     15 05 47.9 +0.2
MDVR  Moldovita           3.55  26  ⇑P      Pn     15 05 52.8 +0.9
PAOL  Paolisi             3.78 263   Pn     Pn     15 05 55.6 +0.5
HERR  Herculane           3.89  32  ⇓P      Pn     15 05 58.5 +1.9
INTR  Introdacqua         4.22 277   Pn     Pn     15 06 01.4 +0.2
BZS   Buzias              4.29  20  ⇑P      Pn     15 06 03.7 +1.8
GZR   Gura Zlata          4.46  31  ⇑P      Pn     15 06 06.3 +1.9
CAMP  Campotosto          4.65 284   Pn     Pn     15 06 07.0  0.0
MORH  Mrgy, Hungar        4.65 352  ⇑P      Pn     15 06 07.6 +0.6
GUMA  Gualdo di Mace      4.82 290   Pn     Pn     15 06 09.2 -0.1
NRCA  Norcia              4.92 287          Pn     15 06 10.6 -0.1
LOT   Lotru               4.92  37  ⇓P      Pn     15 06 12.1 +1.3
FDMO  Fiordimonte         4.99 289          Pn     15 06 11.5 -0.1
ARR   Arges               5.28  43  ⇑P      Pn     15 06 15.2 -0.5
MURB  Monte Urbino        5.44 290          Pn     15 06 18.1 +0.2
MLR   Muntele Rosu        6.07  48   Pn     Pn     15 06 28.2 +1.7
      1.1nm,0.3s,baz=240,slow=14,SNR=7.6
      4.3nm,0.5s
MLR   Muntele Rosu        6.07  48          Pn     15 06 26.8 +0.3
MLR   Muntele Rosu        6.07  48  ⇑P      Pn     15 06 26.0 -0.5
NEHR  Nehoiu              6.23  50  ⇑P      Pn     15 06 26.6 -2.0
PSZ   Piszkesteto         6.32   2  ⇓P      Pn     15 06 30.8 +0.9
PLOR  Plostina            6.68  48  ⇓P      Pn     15 06 31.7 -3.1
VRI   Vrincioaia          6.73  48  ⇑P      Pn     15 06 35.1 -0.4
MODS  Modra-Piesok        6.95 347  eSG     Sn     15 08 03.5 +5.9
FINES FINESS Array B     20.26   9   P      P      15 09 30.2 -1.7
      1.0nm,0.6s,baz=193,slow=11,SNR=4.4
      1.0nm,0.6s
FINES FINESS Array B     20.26   9   P      P      15 09 29.9 -2.0
ZALV  Zalesovo Beam      44.04  51   P      P      15 13 02.6 -1.6
      0.6nm,0.5s,baz=264,slow=8.5,SNR=2.2
      0.6nm,0.5s
MK31  Makanchi Array     44.23  61   P      P      15 13 05.3 -0.7
MK31                                 IAmb   IAmb   15 13 11.2
      comp=Z,4.0nm,1.4s
MKAR  Makanchi Array     44.23  61   P      P      15 13 04.7 -1.3
      comp=Z,0.4nm,0.5s,baz=287,slow=7.0,SNR=4.1
      comp=Z,0.4nm,0.5s
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*IDC **09** 15:10:56.0±4.6, 41°.58N×19°.46E, h0km, mb3.8/4, mbtmp3.8/5, ML3.5/1, Error ellipse: s-maj=68.1km s-min=65.3km az=136.0*

*NEIC **09** 15:10:58.4±0.9, 41°.55N±0°.05×19°.63E±0°.06, h10km±1km, mb4.5/8, Error ellipse: s-maj=9.9km s-min=7.6km az=212.0*

*SKO **09** 15:10:58.7, 41°.55N×19°.34E, h0km, ML2.9*

*THE **09** 15:10:59.2, 42°N±97°×1°9E±5°0, h2km±25km, M2.7/7, MLh2.7/7*

*TIR **09** 15:10:59.9, 41°.60N×19°.59E, h16km±1km, Ml2.8/2*

*PDG **09** 15:11:00.4±0.0, 41°.61N×19°.52E, h12km, ML2.7/12, Error ellipse: s-maj=0.1km s-min=0.1km az=0.0*

ISC 09 15:10:59.9±0.9, **41°.58N**±0°.02×**19°.51E**±0°.02, **h19**km±3km, **n79**, σ1^s**11**/107, **mb3.7**/3, **12C-7D**, **Albania**

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Code  Station Name        Δ°   AZ°   Phase ID         Time       Res
                                     Op     ISC      h  m  s     ISC
TIR   Tirane              0.35 131   Pg     Pg     15 11 06.6 -0.8
TIR                                  AML    AML    15 11 11.8
      4.4nm,0.2s
TIR                                  Sg     Sg     15 11 12.1 -0.4
TIR   Tirane              0.35 131  i Pg    Pg     15 11 06.6 -0.8
TIR                                 i Sg    Sb     15 11 12.6 -0.3
ULC   Ulcinj              0.43 333  ePg     Pg     15 11 08.1 -0.6
ULC                                 i Sg    Sb     15 11 14.7 -0.5
SDA   Shkodra             0.47 359   Pg     Pg     15 11 09.0 -0.5
SDA                                  Sg     Sb     15 11 16.1 -0.1
DRME  Dracevica, Mon      0.65 338⇑ iPg     Pg     15 11 12.1 -0.7
DRME                                eSg     Sb     15 11 22.1 +0.8
PHP   Peshkopia           0.70  81   Pg     Pg     15 11 12.2 -1.5
PHP                                  Sg     Sg     15 11 21.8 -1.3
PHP                                  AML    AML    15 11 28.1
      2.1nm,0.5s
PHP   Peshkopia           0.70  81   P      Pg     15 11 11.8 -2.0
PHP                                  S      Sb     15 11 23.4 +0.5
BUM   Brajici-Budva       0.85 328⇓ iPg     Pb     15 11 15.8 -0.4
BUM                                 i Sg    Sn     15 11 28.9 -0.1
PDG   Podgorica           0.87 347   Pg     Pn     15 11 16.9 -0.3
PDG                                  Sg     Sn     15 11 29.8 +0.5
PDG   Podgorica           0.87 347          Pb     15 11 16.1 -0.3
PDG   Podgorica           0.87 347  ePg     Pb     15 11 16.0 -0.3
PDG                                 i Sg    Sn     15 11 29.3  0.0
PDG   Podgorica           0.87 347  ⇑P      Pg     15 11 16.5 -0.4
CEME  Cevo                1.06 336  ePg     Pb     15 11 19.5 -0.2
CEME                                eSg     Sn     15 11 35.8 +1.6
PVY   Plav                1.07  18  ePg     Pb     15 11 19.6 -0.2
PVY                                 i Sg    Sn     15 11 35.9 +1.5
OHR   Ohrid               1.08 115  i Pg    Pb     15 11 19.4 -0.5
OHR                                 i Sg    Sn     15 11 36.7 +2.2
OHR                                 eLg     Lg     15 11 37.7
      comp=N,160nm,0.5s
OHR                                 eLg     Lg     15 11 39.9
      comp=E,209nm,0.5s
VLO   Vlora               1.11 181   P      Pg     15 11 21.6 +0.3
VLO                                  S      Sg     15 11 38.4 +2.4
HCY   Herceg Novi         1.15 319⇓ iPg     Pb     15 11 21.3 +0.1
HCY                                 i Sg    Sg     15 11 39.1 +1.9
NKME  Niksic              1.26 341  ePg     Pb     15 11 23.2 +0.2
NKME                                eSg     Sg     15 11 42.4 +1.8
KOME  Kolasin             1.27   0  ePg     Pb     15 11 23.3 +0.1
KOME                                eSg     Sg     15 11 42.8 +1.8
IVA   Berane              1.32  12  ePg     Pb     15 11 24.2 +0.1
IVA                                 i Sg    Sg     15 11 44.5 +1.8
KBN   Korca               1.36 134   P      Pg     15 11 26.9 +0.8
KBN                                  S      Sg     15 11 45.8 +1.9
SKO   Skopje              1.49  74  i Pg    Pg     15 11 28.3 -0.3
SKO                                 i Sg    Sg     15 11 50.0 +1.9
BRY   Bratogost           1.50 332  ePg     Pb     15 11 27.7 +0.4
BRY                                 i Sg    Sg     15 11 49.7 +1.2
NEST  Nestorio            1.65 135   P      Pb     15 11 30.0 +0.3
NEST                                 S      Sg     15 11 53.4 +0.4
UPM   Unac-Piva           1.68 345⇓ iPn     Pb     15 11 30.3 -0.1
UPM                                 i Sn    Sg     15 11 53.9 -0.3
PENT  Pentalofos          1.85 138   P      Pb     15 11 33.1 -0.1
KEK   Kerkira             1.88 173   P      Pg     15 11 36.3 +0.3
NOCI  Noci                2.01 248   Pg     Pn     15 11 33.4 +0.6
BARS  Barje               2.11  53  i Pn    Pn     15 11 35.7 +1.4
BARS                                i Sn    Sb     15 12 03.3 -0.1
KZN   Kozani              2.13 126   P      Pn     15 11 35.2 +0.6
IGT   Igoumenitsa         2.14 163  i Pn    Pn     15 11 34.6  0.0
IGT                                 i Sn    Sb     15 12 03.9 -0.3
KPRO  Kipourio            2.15 138   P      Pb     15 11 37.1 -1.1
JAN   Janina              2.18 152   P      Pb     15 11 39.4 +0.7
VAY   Valandovo           2.31  95  i Pn    Pn     15 11 38.4 +1.4
VAY                                 i Sn    Sb     15 12 07.8 -1.5
VAY                                 eLg     Lg     15 12 07.9
      comp=E,39nm,0.7s
VAY                                 eLg     Lg     15 12 15.3
      comp=N,107nm,1.3s
MATE  Matera              2.32 247  ⇓P      Pn     15 11 36.9  0.0
KNT   Kendrikon           2.58  98  i Pn    Pn     15 11 42.3 +1.6
KNT                                 i Pn    Pn     15 11 42.4 +1.7
KNT                                 i Sn    Sn     15 12 14.4 +2.8
LIT   Litokhoron          2.70 122   Pn     Pn     15 11 40.5 -1.8
KKB   Krupnik             2.72  83  i Pn    Pn     15 11 44.6 +2.0
THE   Thessaloniki        2.78 109  i Pn    Pn     15 11 45.2 +1.9
ACER  Acerenza            2.81 255   Pn     Pn     15 11 44.7 +0.9
SGRT  San Giovanni R      2.83 275   Pn     Pn     15 11 43.8 -0.3
SRS   Serrai              3.11  97  i Pn    Pn     15 11 49.3 +1.4
TIP   Timpagrande         3.19 222          Pn     15 11 48.6 -0.5
TIP   Timpagrande         3.19 222  ⇑P      Pn     15 11 48.9 -0.3
CUC   Castrocucco         3.22 242   Pn     Pn     15 11 50.0 +0.5
MDVR  Moldovita           3.58  26  ⇑P      Pn     15 11 55.6 +1.1
PAOL  Paolisi             3.76 263   Pn     Pn     15 11 57.5 +0.6
HERR  Herculane           3.92  32  ⇑P      Pn     15 12 00.2 +1.1
INTR  Introdacqua         4.21 278   Pn     Pn     15 12 04.0 +0.8
BZS   Buzias              4.31  20  ⇓P      Pn     15 12 05.7 +1.3
CEL   Celeste             4.33 221   Pn     Pn     15 12 04.1 -0.6
GZR   Gura Zlata          4.49  31  ⇑P      Pn     15 12 08.1 +1.1
CAMP  Campotosto          4.64 284   Pn     Pn     15 12 09.8 +0.7
ELND  Elena               4.91  72  ⇑P      Pn     15 12 14.2 +1.5
NRCA  Norcia              4.91 287          Pn     15 12 13.4 +0.6
SIRR  Siria               4.94  18  ⇓P      Pn     15 12 14.9 +1.9
LOT   Lotru               4.95  37  ⇑P      Pn     15 12 14.7 +1.3
FDMO  Fiordimonte         4.98 289          Pn     15 12 14.4 +0.8
ARR   Arges               5.31  43  ⇓P      Pn     15 12 18.6 +0.3
MURB  Monte Urbino        5.44 290   Pn     Pn     15 12 21.0 +1.0
MLR   Muntele Rosu        6.09  48   Pn     Pn     15 12 29.8 +0.8
      comp=N,0.5nm,0.3s,baz=138,slow=23,SNR=4.9
      comp=N,3.3nm,0.6s
MLR   Muntele Rosu        6.09  48  ⇑P      Pn     15 12 30.6 +1.5
DOPR  Dopca               6.11  42  ⇑P      Pn     15 12 31.5 +2.3
SABO  M.te Sabotino       6.13 318   Pn     Pn     15 12 29.8 +0.3
PLOR  Plostina            6.71  48  ⇑P      Pn     15 12 38.1 +0.7
VRI   Vrincioaia          6.76  48  ⇑P      Pn     15 12 39.5 +1.4
GNI   Garni              19.12  86   P      P      15 15 20.4 -1.5
GNI                                  IAmb   IAmb   15 15 30.4
      comp=Z,37nm,1.2s
FINES FINESS Array B     20.29   9   P      P      15 15 32.9 -1.3
      comp=Z,4.5nm,0.9s,baz=179,slow=11,SNR=5.3
      comp=Z,4.5nm,0.9s
FINES FINESS Array B     20.29   9   P      P      15 15 33.1 -1.1
NC303 NORSAR Array S     20.29 349   P      P      15 15 34.7 +0.5
NC303                                IAmb   IAmb   15 15 47.7
      comp=Z,33nm,1.4s
FIA1  FINESS Array S     20.29   9   P      P      15 15 33.0 -1.2
BVAR  Borovoye Array     35.62  54   P      P      15 17 56.0 -0.2
      comp=Z,0.6nm,0.6s,baz=280,slow=8.3,SNR=3.0
      comp=Z,0.6nm,0.6s
ZAA0  Zalesovo Array     44.06  51   P      P      15 19 05.8 -0.5
ZALV  Zalesovo Beam      44.06  51   P      P      15 19 05.5 -0.8
      comp=Z,1.0nm,0.5s,baz=282,slow=8.7,SNR=4.8
      comp=Z,1.0nm,0.5s
MKAR  Makanchi Array     44.26  61   P      P      15 19 07.0 -1.1
      comp=Z,0.6nm,0.6s,baz=290,slow=7.2,SNR=5.1
      comp=Z,0.6nm,0.6s
ILULI Ilulissat          45.05 332   P      P      15 19 14.6 +0.6
H29M  Whitestone         71.18 351   P      P      15 22 16.6 -0.4
I28M  Miner Creek        72.11 351   P      P      15 22 22.4 -0.3
MJB9  Matsu-Tunnel       84.15  45   P      P      15 23 28.8 -1.0
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*JMA **09** 15:11:50.7±0.2, 23°.2N±0°.5×12°2E±°, h20km±2km, MV2.8/10, TAIWAN REGION*

*TAP **09** 15:11:52.0, 23°.21N×121°.40E, h23km, ML3.2, C*

ISC 09 15:11:50.2±0.9, **23°.19N**±0°.01×**121°.56E**±0°.02, **h18**km±2km, **n123**, σ0^s**91**/215, **Taiwan**

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Code  Station Name        Δ°   AZ°   Phase ID         Time       Res
                                     Op     ISC      h  m  s     ISC
CHKH  Chenggong           0.15 271  i P     Pg     15 11 56.2 +1.7
CHKH                                i S     Sg     15 11 59.2 +1.9
ECBN  Changbin            0.16 321  i P     Pg     15 11 57.0 +2.4
ECBN                                 S      Sg     15 12 00.8 +3.1
CHKT  Chengkung           0.20 244  i P     Pg     15 11 56.9 +1.8
CHKT                                i S     Sg     15 12 00.4 +1.9
FULB  Fuli                0.25 272  i P     Pg     15 11 56.7 +0.8
FULB                                i S     Sg     15 12 00.9 +1.1
EYUL  Yuli                0.27 305  i P     Pn     15 11 57.8 -1.5
EYUL                                 S      Sb     15 12 02.0 +1.3
TWF1  Yuli                0.29 304  i P     Pb     15 11 57.6 +0.7
TWF1                                i S     Sb     15 12 01.9 +0.5
YULB  Yu-li               0.32 310   P      Pb     15 11 58.0 +0.7
YULB  Yu-li               0.32 310   S      Sb     15 12 02.1  0.0
YULB  Yu-li               0.32 310  i P     Pb     15 11 57.8 +0.5
YULB                                i S     Sb     15 12 01.9 -0.3
EDH   Donghe              0.32 228  i P     Pb     15 11 58.5 +1.2
EDH                                 i S     Sb     15 12 03.2 +1.0
HGSD  Ruisui              0.33 337   P      Pn     15 11 58.8 -1.2
HGSD                                 S      Sn     15 12 04.8 -1.5
ECS   Chishang            0.33 254  i P     Pb     15 11 58.5 +1.0
ECS                                 eS      Sb     15 12 04.3 +1.8
EHD   Haiduan             0.33 263  eP      Pg     15 11 56.8 -0.5
EHD                                 eS      Sg     15 12 01.2 -0.8
EHYH  Wanrong             0.36 327  i P     Pb     15 11 58.9 +0.8
EHYH                                i S     Sb     15 12 04.0 +0.5
EHY   Hungye              0.39 325  i P     Pb     15 11 58.9 +0.4
EHY                                 i S     Sb     15 12 04.1 -0.1
LONT  Longtian            0.49 235  i P     Pb     15 12 00.5 +0.3
LONT                                eS      Sg     15 12 06.8 +0.2
ELDTW Lidau               0.50 270  i P     Pg     15 11 59.6 -0.7
ELDTW                               i S     Sg     15 12 04.8 -2.4
TEGC  Jichi Village       0.52 358  eP      Pn     15 12 03.0 +0.4
TEGC                                eS      Sn     15 12 11.8 +0.8
LDUT  Ludao               0.52 190  i P     Pn     15 12 02.3 -0.3
LDUT                                 S      Sn     15 12 10.3 -0.8
WARBT Fenglin Townsh      0.55 343   P      Pg     15 12 01.5 +0.3
WARBT                               eS      Sb     15 12 09.7 +0.9
TTN   Taitung             0.58 222  i P     Pn     15 12 02.9 -0.6
TTN                                 eS      Sg     15 12 11.1 +1.7
TWGBT Beinan              0.58 230   P      Pb     15 12 01.6 -0.1
TWGBT Beinan              0.58 230   S      Sb     15 12 08.8 -0.7
TWGBT Beinan              0.58 230  i P     Pb     15 12 01.4 -0.3
TWGBT                               eS      Sb     15 12 09.0 -0.5
TWG   Pinlang             0.58 231  eP      Pb     15 12 01.6 -0.2
TWG                                 eS      Sb     15 12 08.9 -0.8
SHUL  Shoufeng            0.60   0  eP      Pn     15 12 04.3 +0.5
SHUL                                eS      Sn     15 12 13.9 +1.0
ESL   Shilin              0.63 349  eP      Pg     15 12 03.3 +0.5
ESL                                 eS      Sg     15 12 11.6 +0.3
YUS   Yu-Shan             0.64 298   P      Pb     15 12 02.5 -0.4
YUS                                 eS      Sb     15 12 09.9 -1.7
TEYL  Yanliau Villag      0.68   3  eP      Pn     15 12 06.3 +1.4
TEYL                                eS      Sn     15 12 17.6 +2.6
VWDT  VWDT                0.68 326  i P     Pg     15 12 03.8 +0.1
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VWDT				S	Sb	15 12 11.9	-0.7
STYH	**Taoyuan**	0.72	269	*i* P	Pb	15 12 03.7	-0.5
STYH				S	Sb	15 12 11.8	-2.0
STYT	**Tauyuan**	0.74	268	*e*P	Pb	15 12 04.0	-0.6
STYT				*e*S	Sb	15 12 11.7	-2.7
ALS	**Alishan**	0.77	295	*e*P	Pg	15 12 05.1	-0.1
ALS				*e*S	Sb	15 12 14.3	-1.0
ETM	**Tongmen**	0.78	355	*e*P	Pn	15 12 05.7	-0.5
ETM				*e*S	Sg	15 12 15.5	-0.2
HWA	**Hwalien**	0.79	3	*e*P	Pn	15 12 07.2	+0.9
ECL	**Taimali**	0.81	224	P	Pb	15 12 04.8	-0.9
ECL				*e*S	Sb	15 12 14.7	-1.7
SSLB	**Suanglung**	0.82	317	P	Pb	15 12 05.6	-0.2
SSLB	**Suanglung**	0.82	317	S	Sb	15 12 16.4	-0.1
SSLB	**Suanglung**	0.82	317	*e*P	Pb	15 12 05.6	-0.2
SSLB				*e*S	Sb	15 12 15.6	-1.0
WHYT	**Xinyi Township**	0.82	308	*i* P	Pg	15 12 06.1	-0.2
WHYT				S	Sb	15 12 16.4	-0.3
LXIB	**Xiulin Townshi**	0.84	351	*e*P	Pg	15 12 06.3	-0.3
LXIB				*e*S	Sg	15 12 17.5	-0.3
TPUB	**Ta-pu**	0.86	278	P	Pb	15 12 06.6	-0.1
TPUB	**Ta-pu**	0.86	278	S	Sb	15 12 17.5	-0.4
TPUB	**Ta-pu**	0.86	278	P	Pb	15 12 06.6	-0.1
TPUB				*e*S	Sb	15 12 16.9	-1.0
WTP	**Ta-pu**	0.87	274	*e*P	Pb	15 12 06.7	-0.1
WTP				*e*S	Sb	15 12 17.2	-1.0
TWD	**Chiawan**	0.89	2	*e*P	Pn	15 12 07.7	0.0
WUSB	**Renai**	0.90	333	*i* P	Pg	15 12 07.3	-0.4
WUSB				*e*S	Sb	15 12 18.6	-0.4
CHN4	**Tsaushan**	0.91	280	*e*P	Pb	15 12 07.5	+0.1
CHN4				*e*S	Sb	15 12 18.1	-0.9
SGST	**Jiashian**	0.91	263	*e*P	Pb	15 12 06.6	-0.8
CHN5	**Tsauling**	0.91	297	P	Pg	15 12 07.8	-0.1
CHN5				S	Sb	15 12 18.5	-0.7
WCKO	**Fanlu**	0.92	286	P	Pn	15 12 08.1	0.0
WCKO				S	Sb	15 12 19.4	+0.1
SMLT	**Sun Moon Lake**	0.92	319	*e*P	Pb	15 12 07.6	-0.1
SMLT				*e*S	Sb	15 12 18.9	-0.8
CHN1	**Nanshi**	0.95	270	P	Pn	15 12 08.4	-0.3
CHN1				*e*S	Sb	15 12 19.9	-0.5
TYC	**Yuchr**	0.96	318	*e*P	Pg	15 12 08.8	-0.1
SSD	**Sandimen**	0.96	243	*e*P	Pb	15 12 07.8	-0.6
NACB	**Ninganchiao**	0.98	2	*e*P	Pn	15 12 08.7	-0.3
NACB				*e*S	Sg	15 12 21.3	-0.9
WHF	**Hehuan Shan**	0.99	344	*e*P	Pg	15 12 09.3	-0.2
WHF				*e*S	Sg	15 12 22.1	-0.5
WPL	**Puli Township**	0.99	326	*e*P	Pg	15 12 09.2	-0.3
TWK	**Hsinying**	0.99	275	*e*P	Pb	15 12 08.8	0.0
TWK				*e*S	Sb	15 12 20.8	-0.8
WJS	**Zhushan**	0.99	310	*e*P	Pg	15 12 09.7	+0.3
WJS				*e*S	Sg	15 12 22.1	-0.4
DPDB	**Guoxing**	1.02	325	P	Pn	15 12 09.5	-0.2
DPDB				*e*S	Sb	15 12 22.3	-0.3
TAW	**Tawu**	1.03	217	*e*P	Pb	15 12 09.2	-0.3
TAW				S	Sb	15 12 21.0	-1.6
MASBT	**Mashibuluo**	1.03	236	*e*P	Pb	15 12 08.9	-0.6
EAST	**Anshuo**	1.04	220	*e*P	Pb	15 12 08.7	-0.9
WGK	**Gukeng**	1.04	299	*e*P	Pg	15 12 10.7	+0.2
WGK				*e*S	Sg	15 12 24.5	+0.3
TAWH	**Dawu Township**	1.05	217	*e*P	Pb	15 12 09.1	-0.7
TAWH				*e*S	Sb	15 12 21.3	-1.9
WCS	**Beigang Elemen**	1.05	326	P	Pg	15 12 10.1	-0.5
WCS				*e*S	Sb	15 12 23.0	-0.2
CHN2	**Minshiung**	1.06	289	*e*P	Pg	15 12 11.1	+0.4
WNT	**Mingjian**	1.06	311	*i* P	Pg	15 12 10.8	+0.1
WNT				S	Sn	15 12 24.2	-0.2
WDLH	**Douliu**	1.06	298	*e*P	Pg	15 12 11.4	+0.6
WDLH				*i* S	Sg	15 12 24.9	+0.1
WDL	**Douliou City**	1.08	299	*e*P	Pb	15 12 10.0	-0.2
WNT1	**Nantou City**	1.08	312	P	Pg	15 12 11.3	+0.1
WNT1				S	Sg	15 12 25.0	-0.3
SGLT	**Jiouru**	1.09	245	*e*P	Pb	15 12 10.8	+0.4
CHY	**Chiayi**	1.09	287	*i* P	Pg	15 12 11.0	-0.3
CHY				*e*S	Sb	15 12 24.6	+0.2
FUSS	**Fushou**	1.09	345	P	Pg	15 12 11.2	-0.3
FUSS				*e*S	Sb	15 12 24.5	-0.2
CHN3	**Shinhua**	1.11	264	*e*P	Pg	15 12 12.4	+0.8
CHN3				*e*S	Sg	15 12 27.6	+1.4
TWM1	**Shoushan**	1.11	251	*e*P	Pg	15 12 12.9	+1.2
TWM1				*e*S	Sg	15 12 27.9	+1.6
TWT	**Tachien**	1.12	342	*e*P	Pg	15 12 11.4	-0.5
TWT				*e*S	Sb	15 12 24.8	-0.5
TDCB	**Techi**	1.12	341	*e*P	Pg	15 12 11.8	-0.1
SHHT	**Tainan City**	1.13	262	*e*P	Pg	15 12 12.9	+0.8
LAY	**Lan-yu**	1.14	181	*e*P	Pn	15 12 11.2	-0.1
LAY				*e*S	Sn	15 12 27.0	+0.5
WWF	**Wufeng**	1.16	317	*e*P	Pg	15 12 12.8	+0.1
WWF				*e*S	Sg	15 12 27.9	0.0
LYUB	**Lan-yu**	1.18	179	*e*P	Pn	15 12 10.9	-0.8
LYUB				*e*S	Sb	15 12 26.1	-0.9
WYL	**Yuanlin Townsh**	1.19	311	*e*P	Pb	15 12 12.3	+0.3
WYL				*e*S	Sn	15 12 27.6	+0.1
SCZT	**Fangliau**	1.19	227	P	Pn	15 12 11.8	-0.1
SCZT				*e*S	Sb	15 12 26.8	-0.4
SLIU	**Shizi**	1.20	216	*i* P	Pn	15 12 11.7	-0.3
SLIU				*e*S	Sb	15 12 25.8	-1.7
ENA	**Nanau**	1.25	8	*e*P	Pg	15 12 13.7	-0.5
NNSB	**Datong**	1.25	352	*e*P	Pb	15 12 13.3	+0.1
NNSB				*e*S	Sb	15 12 28.4	-0.6
NNSH	**Datong**	1.25	352	*e*P	Pb	15 12 13.0	-0.2
CHN8	**Yiju**	1.25	277	*e*P	Pb	15 12 13.4	+0.2
CHN8				*e*S	Sn	15 12 29.8	+0.7
TCU	**Taichung**	1.25	320	*e*P	Pg	15 12 14.6	+0.2
TCU				*e*S	Sg	15 12 30.1	-0.8
NNS	**Nan Shan**	1.26	352	*e*P	Pb	15 12 13.4	0.0
NNS				*e*S	Sb	15 12 29.0	-0.3
WSL	**Shuilin Townsh**	1.27	285	*i* P	Pb	15 12 13.8	+0.2
WSL				S	Sb	15 12 29.8	+0.2
WCHH	**Zhanghua**	1.28	314	P	Pg	15 12 14.4	-0.5
WCHH				S	Sg	15 12 30.7	-1.0
WCH1	**Changhua City**	1.28	314	*e*S	Sg	15 12 31.3	-0.4
RLNB	**Erlin**	1.31	303	*e*P	Pb	15 12 14.6	+0.4
RLNB				*e*S	Sb	15 12 30.7	+0.1
WSF	**Szhu**	1.31	290	*e*P	Pb	15 12 14.3	+0.1
WSF				*e*S	Sn	15 12 30.3	-0.3
LATG	**Datong**	1.34	359	*e*P	Pb	15 12 14.7	-0.1
LATG				*e*S	Sg	15 12 32.5	-1.1
WTCT	**Ta-ch'eng**	1.35	300	*e*S	Sb	15 12 31.8	-0.1
TSCK	**Chigu Township**	1.36	269	P	Pb	15 12 15.2	+0.2
TSCK				*e*S	Sb	15 12 32.9	+0.8
TWQ1	**Liyutan**	1.36	328	*i* P	Pg	15 12 16.2	-0.2
TWQ1				*i* S	Sg	15 12 33.9	-0.4
HEN	**Hengchun**	1.40	213	*e*P	Pb	15 12 15.6	-0.2
TWKBT	**Hengchun**	1.42	209	*e*P	Pn	15 12 15.6	+0.5
NSY	**Sanyi**	1.43	329	P	Pg	15 12 17.6	0.0
NSY				S	Sg	15 12 36.3	0.0
ENTT	**Nioudou**	1.45	0	*e*P	Pg	15 12 17.1	-1.0
YHNB	**Yeheng**	1.48	353	*e*P	Pb	15 12 17.3	0.0
NFF	**Wufeng Townshi**	1.49	344	P	Pg	15 12 18.7	-0.2
NFF				*e*S	Sg	15 12 37.2	-1.3
NSK	**Sanguang**	1.49	353	*e*P	Pb	15 12 17.6	+0.2
NSK				*e*S	Sb	15 12 35.5	-0.5
NMLH	**Miaoli**	1.52	332	P	Pg	15 12 18.9	-0.5
NMLH				S	Sg	15 12 38.3	-0.9
NSTT	**Nanjuang**	1.52	340	*e*P	Pg	15 12 18.9	-0.7
NSTT				*e*S	Sb	15 12 37.4	+0.5
LIOB	**Emei**	1.53	341	*e*P	Pg	15 12 19.1	-0.6
LIOB				*e*S	Sg	15 12 38.9	-0.9
FUSB	**Fushanzhiwuyua**	1.56	1	*e*P	Pb	15 12 18.7	+0.1
NWLT	**Wulai**	1.58	358	*e*P	Pb	15 12 19.4	+0.5
NWLT				*e*S	Sb	15 12 38.6	0.0
NJD	**Zhudong**	1.60	344	*e*S	Sg	15 12 42.1	+0.2
KSHI	**Guanxi Townshi**	1.62	347	*e*P	Pg	15 12 22.2	+0.9
KSHI				*e*S	Sg	15 12 41.6	-0.9
JYNG	**Yonagunijimaku**	1.78	45	*e*P	Pb	15 12 22.4	+0.1
JYNG				*e*S	Sb	15 12 45.4	+1.0
TIPB	**Shuangxi**	1.79	8	*e*P	Pb	15 12 23.0	+0.5
TIPB				*e*S	Sb	15 12 45.5	+0.9
PHUB	**P'eng-hu**	1.86	280	*e*P	Pn	15 12 21.3	+0.2
PHUB				*e*S	Sn	15 12 42.8	-1.3
PNG	**Penghu**	1.88	282	*e*P	Pn	15 12 21.7	+0.3
PNG				*e*S	Sn	15 12 43.7	-1.0
SXI1	**Grass Mountain**	1.92	9	*e*P	Pb	15 12 25.3	+0.7
SXI1				*e*S	Sg	15 12 50.0	-2.0
IRIF	**Iriomote-Funau**	2.29	60	*e*P	Pb	15 12 30.2	-0.7
IRIF				*e*S	Sb	15 12 58.1	-0.8
JIJ	**Ishigaki jima**	2.64	63	P	Pb	15 12 34.8	-2.1
JIJ				*e*S	Sb	15 13 06.1	-2.8
JISG	**Ishigakijimahi**	2.88	60	P	Pn	15 12 37.7	+2.6
JISG				*e*S	Sn	15 13 11.8	+2.7

ROM 09 15:19:28.6±0.0**, 42°.788N**±0°.002×**13°.114E**±0°.005**,**
h10^{km}, ML1.2/6**, Error ellipse: s-maj=0.4km**
s-min=0.2km az=268.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRCA	**Norcia**	0.04	0	P	Pg	15 19 31.1	+0.3
NRCA				S	Sg	15 19 32.4	0.0
NRCA				AML	AML		
	comp=E,812µm,0.2s						
NRCA				AML	AML		
	comp=N,376µm,0.1s						
MC2	**Monte Cornacci**	0.14	24	P	Pg	15 19 32.5	+0.5
MC2				S	Sg	15 19 35.2	+0.8
MMO1	**Montemonaco**	0.19	55	P	Pg	15 19 33.4	+0.5
MMO1				S	Sg	15 19 36.7	+1.0
LNSS	**Leonessa**	0.19	196	P	Pg	15 19 33.4	+0.6
LNSS				S	Sg	15 19 36.9	+1.2
LNSS				AML	AML		
	comp=E,108µm,0.7s						
LNSS				AML	AML		
	comp=N,123µm,0.7s						
MTRA	**Matera**	0.21	99	P	Pg	15 19 33.6	+0.5
MTRA				S	Sg	15 19 37.3	+1.1
SMA1	**SAN MARTINO**	0.23	134	P	Pb	15 19 34.2	-0.7
SMA1				S	Sg	15 19 38.0	+1.4
SMA1				AML	AML		
	comp=E,60µm,1.4s						
SMA1				AML	AML		
	comp=N,55µm,0.5s						
SMA1				AML	AML		
	comp=N,55µm,1.5s						
SMA1				AML	AML		
	comp=E,60µm,0.6s						
FDMO	**Fiordimonte**	0.25	356	P	Pg	15 19 34.4	+0.6
FDMO				S	Sg	15 19 38.4	+1.2
CESI	**CESI - Serrava**	0.27	325	P	Pg	15 19 34.7	+0.6
CESI				S	Sb	15 19 39.1	-1.1
CSP1	**Cessapalombo**	0.31	12	P	Pg	15 19 35.5	+0.6
CSP1				S	Sb	15 19 40.5	-1.0

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*GEN **09** 15:20:06.8, 44°.03N×11°.32E, h15^{km}±2^{km}, Ml2.4*
ROM 09 15:20:07.8±0.1**, 44°.012N**±0°.004×**11°.287E**±0°.004**,**
h9^{km}, ML2.5/60**, 4C-3D, Error ellipse: s-maj=0.3km**
s-min=0.2km az=9.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEI	**Scarperia**	0.07	50	P	Pg	15 20 10.1	+0.2
SEI				S	Sg	15 20 11.6	+0.2
SEI	**Scarperia**	0.07	50	⇑P	Pg	15 20 10.1	+0.2
SEI				S	Sg	15 20 11.6	+0.2
SEI				AML	AML		
	comp=N,29500µm,0.4s						
SEI				AML	AML		
	comp=E,21700µm,0.4s						
MOCL	**Monte Cuccoli**	0.08	265	⇓P	Pg	15 20 10.4	+0.4
MOCL				S	Sg	15 20 12.0	+0.4
MOCL				AML	AML		
	comp=N,11900µm,1.0s						
MOCL				AML	AML		
	comp=E,11745µm,1.1s						
MPPT	**Montemurlo**	0.15	249	⇑P	Pg	15 20 11.8	+0.6
MPPT				S	Sg	15 20 14.4	+1.0
MPPT				AML	AML		
	comp=E,1725µm,1.4s						
MPPT				AML	AML		
	comp=N,1650µm,1.3s						
MPPT				AML	AML		
	comp=E,1725µm,0.6s						
MPPT				AML	AML		
	comp=N,1650µm,0.7s						
FNVD	**Fontana Vidola**	0.20	323	⇓P	Pg	15 20 12.4	+0.5
FNVD				S	Sg	15 20 16.0	+1.3
FNVD				AML	AML		
	comp=N,2265µm,0.5s						
FNVD				AML	AML		
	comp=E,1935µm,0.3s						
FIE	**Fiesole**	0.20	179	P	Pg	15 20 12.7	+0.7
FIE				S	Sg	15 20 16.0	+1.2
VISG	**Visignano**	0.21	31	⇑P	Pg	15 20 12.7	+0.6
VISG				S	Sg	15 20 16.4	+1.4
VISG				AML	AML		
	comp=E,2910µm,0.4s						
VISG				AML	AML		
	comp=N,4080µm,0.2s						
BRIS	**BRISIGHELLA**	0.21	49	P	Pg	15 20 16.6	+4.4
BRIS				AML	AML		
	comp=N,942µm,0.3s						
BRIS				AML	AML		
	comp=E,826µm,1.1s						
RUFI	**Rufina**	0.24	137	P	Pg	15 20 13.3	+0.7
RUFI				S	Sg	15 20 17.1	+1.3
RUFI	**Rufina**	0.24	137	P	Pg	15 20 13.3	+0.7
RUFI				S	Sg	15 20 17.1	+1.3
RUFI				AML	AML		
	comp=E,680µm,0.5s						
RUFI				AML	AML		
	comp=N,760µm,0.3s						
RUFI				AML	AML		
	comp=E,681µm,0.5s						
RUFI				AML	AML		
	comp=E,680µm,1.5s						
RUFI				AML	AML		
	comp=N,759µm,0.3s						
RUFI				AML	AML		
	comp=E,681µm,1.5s						
FIR	**Firenze**	0.24	186	P	Pg	15 20 13.6	+0.9
FIR				S	Sg	15 20 17.7	+1.9
FIR				AML	AML		
	comp=N,4240µm,1.0s						
FIR				AML	AML		
	comp=N,4215µm,1.1s						
FIR				AML	AML		
	comp=N,4235µm,1.0s						
FIR				AML	AML		
	comp=E,3030µm,0.7s						
FIR				AML	AML		
	comp=E,3090µm,0.7s						
LMD	**Lutirano**	0.31	78	P	Pg	15 20 14.3	+0.3
LMD				S	Sb	15 20 19.5	-1.2
LMD	**Lutirano**	0.31	78	⇑P	Pg	15 20 14.3	+0.3
LMD				S	Sb	15 20 19.6	-1.2
LMD				AML	AML		
	comp=E,1705µm,0.4s						
LMD				AML	AML		
	comp=N,3535µm,0.1s						
CRMI	**Carmignano**	0.32	226	P	Pg	15 20 14.7	+0.5
CRMI				AML	AML		
	comp=E,736µm,0.8s						
CRMI				AML	AML		
	comp=N,1290µm,0.3s						
CRMI				AML	AML		
	comp=N,502µm,0.3s						
CRMI				AML	AML		
	comp=E,284µm,0.3s						
CRMI				AML	AML		
	comp=E,737µm,0.8s						
CRMI				AML	AML		
	comp=N,1290µm,0.3s						
POPM	**Popiglio**	0.38	275	P	Pg	15 20 15.7	+0.3
POPM				S	Sb	15 20 21.8	-1.0
POPM	**Popiglio**	0.38	275	P	Pg	15 20 15.7	+0.3
POPM				S	Sb	15 20 21.8	-1.0
POPM				AML	AML		
	comp=N,2145µm,0.3s						
POPM				AML	AML		
	comp=E,1590µm,0.2s						
MTRZ	**Monterenzio**	0.39	19	P	Pg	15 20 15.4	0.0
MTRZ	**Monterenzio**	0.39	19	P	Pg	15 20 15.3	-0.1
MTRZ				AML	AML		
	comp=E,1225µm,1.0s						
MTRZ				AML	AML		
	comp=N,1475µm,0.4s						
MTRZ				AML	AML		
	comp=E,1212µm,1.0s						
MTRZ				AML	AML		
	comp=E,1222µm,1.0s						
MTRZ				AML	AML		
	comp=N,1465µm,0.4s						
MTRZ				AML	AML		
	comp=E,952µm,1.0s						
MTRZ				AML	AML		
	comp=E,960µm,1.0s						
MTRZ				AML	AML		
	comp=N,1150µm,0.4s						
MTRZ				AML	AML		
	comp=N,1160µm,0.4s						
ZCCA	**Zocca**	0.41	327	P	Pb	15 20 17.7	+0.5
ZCCA	**Zocca**	0.41	327	P	Pb	15 20 17.5	+0.3
SFI	**Santa Sofia**	0.42	105	P	Pg	15 20 16.3	+0.3
SFI				S	Sb	15 20 23.3	-0.5
SFI				AML	AML		
	comp=N,546µm,0.5s						
SFI				AML	AML		
	comp=N,526µm,0.5s						
SFI				AML	AML		
	comp=E,336µm,0.2s						
SFI				AML	AML		
	comp=E,341µm,0.6s						
SFI				AML	AML		
	comp=N,547µm,0.5s						
SFI				AML	AML		
	comp=E,342µm,0.6s						
SFI				AML	AML		
	comp=E,336µm,0.2s						
ASQU	**Asqua**	0.42	121	P	Pg	15 20 16.6	+0.5
ASQU				S	Sb	15 20 23.4	-0.5
ASQU	**Asqua**	0.42	121	P	Pg	15 20 16.6	+0.6
ASQU				AML	AML		
	comp=N,286µm,1.5s						
ASQU				AML	AML		
	comp=N,286µm,0.5s						
ASQU				AML	AML		
	comp=E,265µm,0.3s						
OSSC	**Osservatorio P**	0.49	184	P	Pg	15 20 17.9	+0.6
OSSC				S	Sb	15 20 25.7	-0.2
OSSC	**Osservatorio P**	0.49	184	⇓P	Pg	15 20 17.9	+0.6
OSSC				S	Sb	15 20 25.6	-0.3
OSSC				AML	AML		
	comp=E,641µm,1.0s						
OSSC				AML	AML		
	comp=N,749µm,1.3s						
OSSC				AML	AML		
	comp=E,645µm,1.3s						
OSSC				AML	AML		
	comp=N,629µm,1.0s						
OSSC				AML	AML		
	comp=E,645µm,0.7s						
OSSC				AML	AML		
	comp=N,749µm,0.6s						
OSSC				AML	AML		
	comp=N,629µm,1.0s						
OSSC				AML	AML		
	comp=E,641µm,1.0s						
OSSC				AML	AML		
	comp=N,749µm,0.7s						
BDI	**Bagni Di Lucca**	0.50	276	P	Pg	15 20 17.6	+0.1
BDI				S	Sb	15 20 25.4	-0.8
BDI	**Bagni Di Lucca**	0.50	276	P	Pg	15 20 17.6	+0.1
BDI				S	Sb	15 20 25.4	-0.9
BDI				AML	AML		
	comp=E,916µm,0.6s						
BDI				AML	AML		
	comp=E,1008µm,1.1s						
BDI				AML	AML		
	comp=N,1330µm,0.6s						
BDI				AML	AML		
	comp=E,1008µm,0.9s						
BDI				AML	AML		
	comp=E,916µm,1.4s						
BDI				AML	AML		
	comp=N,1285µm,0.6s						
CSNT	**Castellina Chi**	0.54	180	P	Pg	15 20 18.5	+0.2
CSNT				S	Sb	15 20 27.1	-0.3
CSNT	**Castellina Chi**	0.54	180	P	Pg	15 20 18.7	+0.4
CSNT				S	Sb	15 20 26.9	-0.4
CSNT				AML	AML		
	comp=E,480µm,0.8s						
CSNT				AML	AML		
	comp=E,480µm,1.2s						
CSNT				AML	AML		
	comp=N,626µm,0.4s						
CARD	**Cardoso**	0.58	272	P	Pb	15 20 20.0	-0.1
CARD				S	Sb	15 20 27.9	-0.6
CARD	**Cardoso**	0.58	272	P	Pg	15 20 19.1	0.0
CARD				AML	AML		
	comp=N,568µm,0.2s						
CARD				AML	AML		
	comp=E,550µm,0.5s						
MAIM	**Mastiano**	0.58	261	P	Pg	15 20 19.3	+0.2
GSCL	**Gusciola**	0.61	304	P	Pb	15 20 20.1	-0.5
GSCL				S	Sb	15 20 29.9	+0.6
GSCL	**Gusciola**	0.61	304	P	Pb	15 20 20.1	-0.5
GSCL				S	Sb	15 20 29.9	+0.6
GSCL				AML	AML		
	comp=E,368µm,0.6s						
GSCL				AML	AML		
	comp=E,368µm,1.4s						
GSCL				AML	AML		
	comp=N,424µm,0.3s						
CRE	**Caprese Michel**	0.62	129	P	Pg	15 20 20.3	+0.5
CRE				AML	AML		
	comp=N,285µm,1.6s						
CRE				AML	AML		
	comp=N,285µm,0.4s						
CRE				AML	AML		
	comp=E,206µm,0.4s						
PII	**Pisa**	0.62	243	P	Pg	15 20 20.0	+0.1
PII	**Pisa**	0.62	243	P	Pg	15 20 19.9	+0.1
PII				AML	AML		
	comp=E,692µm,1.6s						
PII				AML	AML		
	comp=E,692µm,0.4s						
PII				AML	AML		
	comp=N,836µm,0.4s						
SARO	**Sassorosso**	0.66	285	P	Pg	15 20 21.0	+0.4
SARO				S	Sb	15 20 31.1	+0.2
VLC	**Villacollemand**	0.67	283	S	Sb	15 20 31.0	0.0
FROS	**Frosini**	0.81	187	P	Pb	15 20 23.9	-0.1
FROS				AML	AML		
	comp=E,418µm,0.9s						
FROS				AML	AML		
	comp=N,290µm,0.5s						
FROS				AML	AML		
	comp=N,290µm,1.5s						
FROS				AML	AML		
	comp=N,290µm,1.5s						

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*NEIC **09** 15:40:20.9±1.1, 36°.57N±0°.06×70°.87E±0°.09, h96^{km}±16^{km},*
mb4.2/2, Error ellipse: s-maj=10.8km s-min=8.4km
az=97.0
*IDC **09** 15:40:33.9±14.0, 37°.47N×70°.90E, h128^{km}±72^{km}, mb3.8/2,*
mbtmp3.7/7, MS3.8/1, Error ellipse: s-maj=168.7km
s-min=47.8km az=177.0
ISC 09 15:40:20.7±0.8**, 36°.47N**±0°.06×**71°.02E**±0°.07**, h100^{km}, n33,**
σ**2^{s}.34**/41**, 4C, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANEM	**Manem**	1.19	26		Pn	15 40 42.7	-0.9
KBL	**Kabul**	2.51	220		Pn	15 41 00.2	0.0
SHAA	**Shahritus**	2.56	296		Pn	15 40 58.8	-1.8
GAR	**Garm**	2.58	348		Pn	15 40 59.5	-1.6
CHGR	**Chuyangaron**	2.63	326		Pn	15 40 59.7	-1.9
NIL	**Nilore**	3.36	146		Pn	15 41 14.2	+2.9
SRNI	**Srinagar**	3.93	127	*e*P	Pn	15 41 20.9	+2.1
SRNI				*e*S	Sn	15 42 06.7	+2.7
SRNI				IAML		15 42 53.1	
	comp=E,3µm,0.9s						
SRNI				IAML		15 42 54.1	
	comp=N,1µm,1.1s						
JMU	**Jammu**	4.84	138	*e*P	Pn	15 41 33.3	+0.9
JMU				*e*S	Sn	15 42 25.8	-2.4
JMU				IAML		15 42 32.5	
	comp=N,668nm,0.8s						
JMU				IAML		15 42 32.5	
	comp=E,660nm,0.3s						
ARSB	**Arslanbob**	5.08	17	Pn	Pn	15 41 34.4	-0.2
ALCI	**Alchi Leh**	5.52	112	*e*P	Pn	15 41 41.8	+1.0
ALCI				*e*S	Sn	15 42 41.2	-2.0
ALCI				IAML		15 42 45.9	
	comp=E,142nm,0.1s						
ALCI				IAML		15 42 46.5	
	comp=N,121nm,0.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TSSA	Tissa	5.57	129	*e*P	Pn	15 41 42.9	+1.5
TSSA				*e*S	Sn	15 42 43.6	-0.6
TSSA				IAML		15 42 46.8	
	comp=N,608nm,1.1s						
TSSA				IAML		15 42 47.7	
	comp=E,610nm,0.0s						
DHRM	DHARAMSHALA	6.07	132	*e*P	Pn	15 41 50.6	+2.5
DHRM				*e*S	Sn	15 42 54.4	-1.9
DHRM				IAML		15 42 59.3	
	comp=E,111nm,0.6s						
DHRM				IAML		15 42 59.8	
	comp=N,110nm,0.9s						
KK31	Karatay Array	6.63	357		Pn	15 41 54.8	-0.7
KK31	Karatay Array	6.63	357	⇑P	Pn	15 41 51.5	-4.1
	comp=N,0.6nm,0.3s,baz=183,slow=13,SNR=19						
KK31				⇑S	Sn	15 43 04.8	-4.8
	comp=N,7.7nm,0.6s,baz=194,slow=26,SNR=5.5						
KKAR	Karatay Array	6.63	357		Pn	15 41 54.9	-0.6
AAK	Ala-Archa	6.72	23	P	Pn	15 41 57.8	+1.0
	comp=N,1.5nm,0.3s,baz=216,slow=19,SNR=8.1						
AAK	Ala-Archa	6.72	23		Pn	15 41 57.2	+0.4
AAK	Ala-Archa	6.72	23	⇑P	Pn	15 41 57.0	+0.2
	comp=N,0.3nm,0.4s						
AAK				⇑S	Sn	15 43 17.6	+5.8
	comp=N,2.7nm,0.9s						
SMLA	Simla	7.39	134	*e*P	Pn	15 42 07.2	+1.3
SMLA				*e*S	Sn	15 43 24.9	-3.2
SMLA				IAML		15 43 29.9	
	comp=N,119nm,0.2s						
SMLA				IAML		15 43 32.1	
	comp=E,102nm,0.3s						
TARG	Taragay, Kyrgy	7.44	43	Pn	Pn	15 42 07.5	+0.6
KLP	Kalpa	7.77	127	*e*P	Pn	15 42 12.5	+1.2
KLP				*e*S	Sn	15 43 34.2	-3.5
KLP				IAML		15 43 38.5	
	comp=N,105nm,0.5s						
KLP				IAML		15 43 38.6	
	comp=E,138nm,0.8s						
DDI	Dehra Dun	8.50	134	*e*S	Sn	15 43 50.4	-4.8
DDI				IAML		15 45 21.9	
	comp=E,95nm,0.8s						
DDI				IAML		15 45 31.4	
	comp=N,102nm,0.2s						
MKAR	Makanchi Array	13.31	36	P	P	15 43 30.1	-1.4
	comp=N,0.2nm,0.5s,baz=230,slow=15,SNR=1.6						
AB31	Akbulak array	15.11	331	Pn	Pn	15 43 46.9	-1.7
ABKAR	Akbulak array	15.11	331	Pn	Pn	15 43 46.7	-1.9
EVN	Everest	15.83	118		Pn	15 43 57.5	-0.9
EVN				IAmb	IAmb	15 43 59.9	
	comp=Z,6.0nm,1.4s						
BVAR	Borovoye Array	16.56	359	P	Pn	15 44 05.9	-0.7
	comp=Z,0.4nm,0.4s,baz=173,slow=11,SNR=6.1						
AKTO	Aktyubinsk	16.81	330	P	P	15 44 11.1	+0.8
	comp=Z,2.0nm,0.5s,baz=117,slow=6.8,SNR=9.6						
ZALV	Zalesovo Beam	19.93	24	P	P	15 44 45.3	+0.9
	comp=Z,1.0nm,0.5s,baz=219,slow=11,SNR=5.5						
ZALV	Zalesovo Beam	19.93	24	P	P	15 44 44.2	-0.2
ARCES	ARCESS Array B	41.17	338	P	P	15 47 57.9	+3.0
	comp=Z,4.1nm,0.9s,baz=119,slow=7.5,SNR=2.1						
ARCES				LR	LR	16 04 26.0	
	comp=Z,127nm,19.3s,baz=243,slow=36						
	comp=Z,4.1nm,0.9s						
ARCES	ARCESS Array B	41.17	338	IAmb	IAmb	15 48 35.5	
	comp=Z,16nm,1.2s						
HFS	Hagfors	43.10	322	P	P	15 48 13.5	+3.0
	comp=Z,2.6nm,0.9s,baz=89,slow=11,SNR=1.3						
	comp=Z,2.6nm,0.9s						

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*NEIC **09** 15:43:43.6±2.3, 15°.64S±0°.07×71°.68W±0°.07, h134^{km}±7^{km}, mb4.8/64, Error ellipse: s-maj=11.9km s-min=8.2km az=47.0*

*VAO **09** 15:43:45.6±0.3, 15°.34S×71°.35W, h158^{km}, mb4.8, Presumed earthquake*

*IDC **09** 15:43:47.0±0.5, 15°.50S×71°.36W, h162^{km}±4^{km}, mb3.9/14, mbtmp4.4/17, MS3.3/1, Error ellipse: s-maj=14.7km s-min=9.3km az=44.0*

ISC 09 15:43:44.4±0.4**, 15°.49S**±0°.05×**71°.43W**±0°.06**, h142**^{km}**, n218,** σ1^{s}**77**/213**, mb4.8**/46**, 1C, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB18	Visviri	2.80	138		Pn	15 44 27.3	-2.2
AP01	Chacalluta	3.05	160		Pn	15 44 30.4	-1.7
LPAZ	La Paz	3.27	104	P	Pn	15 44 38.8	+3.2
	413nm,0.6s,baz=293,slow=11,SNR=1210						
LPAZ				S	Sn	15 45 19.3	+4.3
	94nm,0.5s,baz=359,slow=16,SNR=1.5						
LPAZ				LR	LR	15 45 38.5	
	comp=Z,470nm,18.2s,baz=80,slow=35						
LPAZ	La Paz	3.27	104		Pn	15 44 38.5	+2.9
LPAZ	La Paz	3.27	104	*e*P	Pn	15 44 36.3	+0.7
PB12	IPOC Station P	3.28	161		Pn	15 44 33.9	-1.4
PB11	IPOC Station P	4.57	159		Pn	15 44 49.9	-2.3
GO01	Chusmiza	4.67	153		Pn	15 44 52.8	-1.1
TA01	Diego Aracena	5.19	167		Pn	15 44 57.2	-3.0
PATCX	Punta Patache	5.44	167		Pn	15 45 00.6	-3.1
PB01	IPOC Station P	5.82	162		Pn	15 45 05.6	-3.2
PB02	IPOC Station P	5.98	166		Pn	15 45 07.7	-3.2
NNA	Nana	6.31	303	P	Pn	15 45 14.3	-1.0
	139nm,0.4s,baz=137,slow=10,SNR=55						
NNA				S	Sn	15 46 21.9	-4.4
	346nm,0.6s,baz=20,slow=15,SNR=16						
NNA	Nana	6.31	303		Pn	15 45 12.6	-2.7
NNA	Nana	6.31	303	P	Pn	15 45 13.9	-1.4
	4µm308nm,0.6s						
NNA				S	Sn	15 46 15.5	-11
	4µm308nm,0.6s						
PB07	IPOC Station P	6.37	167		Pn	15 45 13.4	-2.9
PB09	IPOC Station P	6.61	162		Pn	15 45 16.9	-2.4
PB03	IPOC Station P	6.71	167		Pn	15 45 17.6	-3.2
PB06	IPOC Station P	7.39	167		Pn	15 45 26.3	-3.6
PB05	IPOC Station P	7.42	171		Pn	15 45 25.9	-4.2
CZSB	Cruzeiro do Su	7.81	351		Pn	15 45 33.3	-2.2
CZSB	Cruzeiro do Su	7.81	351	*e*P	Pn	15 45 33.3	-2.2
CZSB	Cruzeiro do Su	7.81	351	P	Pn	15 45 33.2	-2.2
	8µm1µm,0.8s						
CZSB				S	Sn	15 46 57.9	-4.6
	8µm1µm,0.8s						
PB10	IPOC Station P	8.03	174		Pn	15 45 34.6	-3.6
PB14	IPOC Station P	9.14	174		Pn	15 45 48.7	-4.7
GO02	Mina Guanaco	9.78	170		Pn	15 45 57.9	-4.1
SIV	San Ignacio	9.98	94	P	Pn	15 46 03.2	-1.3
	baz=274,slow=14						
AC01	Pan de Azucar	10.63	176		Pn	15 46 09.0	-4.0
ATAH	Atahualpa	10.75	320	P	Pn	15 46 13.7	-1.3
	8.7nm,0.7s,baz=138,slow=12,SNR=6.2						
VILB	Vilhena	11.18	78		Pn	15 46 18.8	-1.5
VILB	Vilhena	11.18	78	*e*P	Pn	15 46 19.1	-1.2
PTLB	Pontes e Lacer	11.85	91		Pn	15 46 26.6	-2.5
PTLB	Pontes e Lacer	11.85	91	*e*P	Pn	15 46 27.4	-1.7
TINO	Tinogasta	13.01	165	*e*P	Pn	15 46 42.3	-2.0
LCO	Las Campanas	13.47	177		Pn	15 46 46.9	-3.4
VCA	Vinchina	13.52	168	*e*P	Pn	15 46 49.1	-1.6
TEFE	Tefe	13.66	30	*e*P	Pn	15 46 50.2	-2.2
CYA	Choya	13.90	159	*e*P	Pn	15 46 54.1	-1.4
AGUA	GUANDACOL	14.19	169	*e*P	Pn	15 46 58.1	-1.1
ACLC	CERRO LA CRUZ	14.47	164	*e*P	Pn	15 47 01.6	-1.2
AROD	Rodeo	14.72	173	*e*P	Pn	15 47 06.5	+0.5
ACDV	Cuesta del Vie	14.77	172	*e*P	Pn	15 47 07.1	+0.6
PDRB	Porto dos Gac	14.80	77	*e*P	Pn	15 47 05.2	-1.7
BDQN	Bodoquena, MS	14.81	112	*e*P	Pn	15 47 06.1	-0.8
SALV	Santo Antonio	15.16	94	*e*P	Pn	15 47 10.8	-0.6
ACCO	Cerro Coronel	15.18	172	*e*P	Pn	15 47 11.4	-0.5
APLL	PUNTA DE LOS L	15.50	164	*e*P	Pn	15 47 14.7	-0.9
AVFE	Valle Fertil	15.53	167	*e*P	Pn	15 47 14.7	-1.2
AQDB	Aquidauana	15.76	111	Pn	Pn	15 47 18.3	-0.4
AQDB	Aquidauana	15.76	111	*e*P	Pn	15 47 18.7	-0.1
SGC2	Sao Gabriel da	15.86	16	P	Pn	15 47 16.7	-3.3
	71nm,0.8s						
CLDB	Colider	15.90	75	*e*P	Pn	15 47 19.4	-1.1
PTLC	Puerto Leguiza	15.91	348	P	Pn	15 47 13.8	-6.9
RTLL	Cerro Villicun	16.00	171	*e*P	Pn	15 47 20.6	-1.0
PP1B	Ponte de Pedra	16.01	100	*e*P	Pn	15 47 21.8	0.0
MACA	Manacapuru-AM	16.19	42	*e*P	Pn	15 47 22.6	-1.4
ACHE	Chepes	16.20	165	*e*P	Pn	15 47 21.2	-3.0
CFA	Coronel Fontan	16.30	170	P	Pn	15 47 24.8	-0.6
	26nm,0.7s,baz=351,slow=12,SNR=49						
CASC	Dorado de Casc	16.59	339	P	Pn	15 47 29.8	+0.8
	3µm340nm,1.1s						
BONI	La Bonita	16.95	339	P	Pn	15 47 37.6	+4.1
TCA	Tanti	16.97	160	*e*P	P	15 47 31.9	-1.1
CPUP	Villa Florida	17.01	132	P	P	15 47 33.1	-0.3
	6.1nm,1.0s,baz=164,slow=11,SNR=34						
CPUP				pP	pP	15 48 01.9	+2.6
	2.2nm,0.8s,baz=206,slow=5.3,SNR=2.9						
CPUP	Villa Florida	17.01	132	P	P	15 47 33.4	-0.1
CPUP	Villa Florida	17.01	132	*e*P	Pn	15 47 34.0	+0.1
OTAV	Otavalo	17.10	335	P	P	15 47 34.9	-0.1
OTAV	Otavalo	17.10	335	*e*P	P	15 47 34.2	-0.7
OTAV	Otavalo	17.10	335	P	Pn	15 47 37.9	+2.4
	670nm62nm,1.0s						
CUSE	Cuicocha Este	17.14	336	P	Pn	15 47 39.0	+3.0
	97nm,0.9s						
ACAN	Cantantal	17.15	168	*e*P	P	15 47 35.1	+0.1
AMBA	Amambai (Brazi	17.19	118	*e*P	P	15 47 35.2	-0.3
PAC1	Pacto, Paraso	17.26	334	P	Pn	15 47 39.4	+2.2
	63nm,0.9s						
FLOC	Florencia	17.47	346	P	Pn	15 47 39.4	-0.2
FLOC	Florencia	17.47	346	P	Pn	15 47 40.1	+0.5
	763nm71nm,0.9s						
CMBC	Cumbal	17.51	338	P	Pn	15 47 41.6	+1.2
	541nm,0.7s						
MRA	San Martin	17.64	164	*e*P	P	15 47 40.2	-0.2
MACC	Macarena, Meta	17.68	352	P	P	15 47 40.4	-0.6
	1µm75nm,1.0s						
CRUC	La Cruz	17.81	342	P	Pn	15 47 47.5	+3.6
NPGB	Novo Progresso	17.84	64	*e*P	P	15 47 41.7	-1.0
GARC	Garzon, Huila	18.02	347	P	Pn	15 47 46.3	0.0
	2µm269nm,0.8s						
C2SB	Chapadao do Su	18.06	103	*e*P	P	15 47 44.6	-0.5
VA05	Santo Domingo	18.09	180		Pn	15 47 46.1	-0.7
BBAC	Balboa, Cauca	18.33	341	P	Pn	15 47 50.4	+0.5
	1µm133nm,0.9s						
BETC	Betania	18.48	347	P	Pn	15 47 51.8	+0.2
POPC	Popayan, Colom	18.65	343	P	Pn	15 47 53.4	-0.3
	2µm111nm,0.9s						
BO01	Tunca	18.82	179		P	15 47 52.9	-0.3
URMC	La Uribe, Meta	18.84	351	P	P	15 47 53.3	-0.4
	35nm,0.8s						
ARAG	Araguaiana, MT	18.90	93	*e*P	P	15 47 54.5	+0.2
ITTB	Itaituba	18.98	56	*e*P	P	15 47 53.3	-1.9
JAMC	Jamundi, Valle	19.30	344	P	P	15 47 59.6	+0.8
	2µm240nm,0.9s						
PRAC	Prado	19.38	350	P	P	15 47 59.8	+0.3
	45nm,0.6s						
GR1C	Gorgona, Isla	19.55	340	P	Pn	15 48 03.1	-0.9
PTGC	Puerto Gaitan,	19.57	358	P	P	15 48 01.2	-0.3
	3µm229nm,1.2s						
VILC	Villavicencio,	19.60	353	P	Pn	15 48 05.6	+0.8
	53nm,0.6s						
ORTC	Ortega, Tolima	19.64	349	P	P	15 48 02.9	+0.6
	2µm219nm,1.1s						
SNDB	Serra Nova Dou	19.87	82	*e*P	P	15 48 04.1	-0.7
YOTC	Yotoco, Valle	19.95	345	P	P	15 48 05.8	+0.1
	1µm175nm,0.9s						
PSAL	Palomas, Salto	20.02	143	*e*P	P	15 48 07.0	+0.8
CHIC	Chingaza	20.12	353	P	P	15 48 08.0	+0.2
	17nm,0.6s						
PTGB	Pitanga	20.35	120	*e*P	P	15 48 10.0	+0.1
ROSC	El Rosal	20.40	352	P	P	15 48 11.2	+0.4
	11nm,0.6s,baz=186,slow=7.9,SNR=4.7						
	11nm,0.6s						
ROSC	El Rosal	20.40	352	P	P	15 48 11.9	+1.1
ITRB	Iturama	20.51	105	*e*P	P	15 48 11.6	-0.1
LDASE	Londrina, Braz	20.69	115	*e*P	P	15 48 13.0	-0.5
BOAV	Boa Vista	20.79	32	P	P	15 48 15.2	+0.6
BOAV	Boa Vista	20.79	32	*e*P	P	15 48 13.4	-1.2
BOAV	Boa Vista	20.79	32	P	P	15 48 14.5	-0.1
	38nm,0.8s						
PLMC	San Jos del P	20.83	346	P	P	15 48 15.5	+0.5
	2µm194nm,0.9s						
GUY2C	Guyana, Caldas	20.95	349	P	P	15 48 17.6	+0.9
	2µm202nm,0.9s						
BI02	San Fabin de	21.09	180	P	P	15 48 16.8	-0.9
PIZC	Pizarro, Choco	21.15	343	P	P	15 48 19.9	+1.4
	3µm413nm,0.9s						
SPBC	San Pablo de B	21.17	353	P	P	15 48 19.1	+0.4
	37nm,0.8s						
NORC	Norcasia	21.19	350	P	P	15 48 17.6	-1.4
	58nm,0.8s						
RUSC	La Rusia	21.31	355	P	P	15 48 19.6	-1.0
RUSC	La Rusia	21.31	355	P	P	15 48 18.8	-1.8
	697nm60nm,0.6s						
ITAB	Concordia	21.40	126	P	P	15 48 20.0	-1.1
ITAB	Concordia	21.40	126	*e*P	P	15 48 20.6	-0.4
CBOC	Ciudad Bolivar	21.70	348	P	P	15 48 24.2	-0.3
	2µm191nm,1.0s						
HELC	Santa Helena	21.92	349	P	P	15 48 26.9	-0.1
	460nm56nm,0.6s						
BARC	Barichara	22.01	355	P	P	15 48 26.4	-1.4
	38nm,0.9s						
FRTB	Fartura	22.03	114	*e*P	P	15 48 27.1	-0.7
PTBC	PUERTO BERRIO,	22.09	352	P	P	15 48 25.1	-3.3
CPSB	Cacapava Do Su	22.20	135	*e*P	P	15 48 28.8	-0.5
IPMB	Ipameri, GO	22.37	100	*e*P	P	15 48 29.8	-1.4
BB19B	Bebedouro	22.43	108	*e*P	P	15 48 31.5	-0.2
BDFB	Brasilia	22.56	94	P	P	15 48 31.9	-1.2
	18nm,0.5s,baz=262,slow=11,SNR=26						
	18nm,0.5s						
BDFB	Brasilia	22.56	94	P	P	15 48 32.1	-1.0
BDFB				IAmb	IAmb	15 48 33.4	
	comp=Z,74nm,1.3s						
PAMC	Pamplona, Colo	22.72	357	P	P	15 48 33.7	-1.2
	comp=Z,138nmcomp=Z,16nm,0.9s						
DBBC	Dabeiba	22.86	348	P	P	15 48 37.3	+1.5
PLTB	Pedras Altas	22.95	138	P	P	15 48 34.6	-1.8
PLTB				IAmb	IAmb	15 48 37.3	
	comp=Z,24nm,1.1s						
PLTB	Pedras Altas	22.95	138	*e*P	P	15 48 37.1	+0.6
PRPB	Parauapebas	23.14	69	*e*P	P	15 48 37.5	-0.9
PTAC	Punta Ardita,	23.36	344	P	P	15 48 42.0	+1.6
	comp=Z,67nm,0.8s						
CNLB	Canela	23.43	129	*e*P	P	15 48 41.0	+0.1
UREC	San Jos de Ur	23.45	350	P	P	15 48 40.2	-1.0
	comp=Z,20nm,0.6s						
RCLB	Rio Claro- Sao	23.61	111	*e*P	P	15 48 42.9	+0.2
SPB	Sao Paulo	23.98	113	P	P	15 48 45.2	-0.8
SPB	Sao Paulo	23.98	113	*e*P	P	15 48 45.9	-0.1
PMNB	Patos De Minas	24.08	101	*e*P	P	15 48 46.9	-0.2
SMTB	Santa Maria do	24.20	77	*e*P	P	15 48 46.7	-1.4
SDV	Santo Domingo	24.23	2	P	P	15 48 48.0	-0.5
SDV	Santo Domingo	24.23	2	*e*P	P	15 48 47.7	-0.8
SDV	Santo Domingo	24.23	2	P	P	15 48 47.7	-0.8
	comp=Z,1µmcomp=Z,145nm,1.0s						
VAO	Valinhos	24.25	112	P	P	15 48 47.1	-1.4
VAO				IAmb	IAmb	15 48 51.3	
	comp=Z,30nm,0.8s						
VAO	Valinhos	24.25	112	*e*P	P	15 48 48.1	-0.4
PET01	Itanhaem-SP	24.31	115	*e*P	P	15 48 49.1	+0.1
PLCA	Paso Flores	25.16	178	P	P	15 48 56.4	-0.2
	comp=Z,6.1nm,0.8s,baz=358,slow=11,SNR=17						
	comp=Z,6.1nm,0.8s						
PLCA	Paso Flores	25.16	178	P	P	15 48 55.2	-1.4
PLCA	Paso Flores	25.16	178	*e*P	P	15 48 57.3	+0.7
ARGC	Ariguani, Magd	25.34	354	P	P	15 48 57.8	-0.5
	comp=Z,133nm,0.8s						
SJCC	San Jacinto, C	25.50	351	P	P	15 49 00.4	+0.6
PARB	Paraibuna	25.53	112	*e*P	P	15 49 00.1	-0.1
BSCB	Bom Sucesso	25.88	106	*e*P	P	15 49 01.0	-2.3
SDBA	SAO DESIDERIO	25.92	87	*e*P	P	15 49 02.9	-0.8
JANB	Januaria	26.16	93	*e*P	P	15 49 04.8	-1.0
SMRC	Santa Marta, M	26.63	354	P	P	15 49 08.1	-1.8
SMRC				IAmb	IAmb	15 49 17.3	
	comp=Z,28nm,0.7s						
DIAM	Diamantina, MG	26.70	100	*e*P	P	15 49 09.7	-1.0
VAS01	Vassouras-RJ	27.30	109	*e*P	P	15 49 13.1	-2.9
DUB01	Friburgo-RJ	28.25	108	*e*P	P	15 49 23.1	-1.4
GUA01	Guaratinga, BA	30.40	96	*e*P	P	15 49 43.0	-0.4
CMC01	Camacan, BA	30.75	94	*e*P	P	15 49 45.7	-0.8
NBIT	Itapeh - BA	30.86	93	*e*P	P	15 49 47.3	-0.3
NBTA	Tacaratu-PE	33.18	83	*e*P	P	15 50 07.1	-0.8
CRPR	Cabo Rojo, PR	33.55	7	P	P	15 50 10.2	-0.8
AOPR	Arecibo Observ	33.94	8	P	P	15 50 13.5	-0.8
MTDJ	Mount Denham	34.04	350	P	P	15 50 14.8	-0.5
DR12	Loma Pena Alta	34.12	3	P	P	15 50 15.6	-0.3
NBPV	Pedro Velho	36.55	80	*e*P	P	15 50 36.2	-0.7
CAMR	Camarioca	39.53	346	IAmb	IAmb	15 51 05.1	
	comp=Z,372nm,1.6s						
152A	Waverly Hall	49.55	345	IAmb	IAmb	15 52 22.0	
	comp=Z,18nm,1.1s						
JSC	Jenkinsville	50.37	349	IAmb	IAmb	15 52 28.8	
	comp=Z,16nm,1.0s						
BIRD	Birdtown, Kers	50.59	350	P	P	15 52 29.1	+0.4
W57A	Gilead	51.02	351	P	P	15 52 32.5	+0.6
Y49A	Blount Mountai	51.11	344	P	P	15 52 32.8	+0.1
Y49A				IAmb	IAmb	15 54 26.9	
	comp=Z,30nm,1.6s						
V55A	Taylorsville	51.90	350	IAmb	IAmb	15 52 40.5	
	comp=Z,32nm,1.1s						
HNDO	Hondo	52.21	329	IAmb	IAmb	15 52 43.0	
	comp=Z,16nm,0.8s						
T57A	Hurt	52.72	352	P	P	15 52 45.4	+0.8
T57A				IAmb	IAmb	15 52 46.2	
	comp=Z,21nm,0.9s						
BLA	Blacksburg	53.10	351	P	P	15 52 48.4	+1.1
MIAR	Mount Ida	54.03	337	P	P	15 52 54.8	+0.7
MIAR				IAmb	IAmb	15 52 55.4	
	comp=Z,9.6nm,0.9s						
R55A	Marlinton	54.10	352	P	P	15 52 56.0	+1.3
R55A				IAmb	IAmb	15 53 32.5	
	comp=Z,28nm,1.3s						
TXAR	Lajitas Array	54.36	325	P	P	15 52 57.2	+0.5
	comp=Z,1.1nm,0.7s,baz=150,slow=8.3,SNR=12						
TXAR				pP	pP	15 53 34.4	+3.1
	comp=Z,0.8nm,0.8s,baz=140,slow=6.5,SNR=3.9						
	comp=Z,1.1nm,0.7s						
TX31	Lajitas Ar. Si	54.36	325	IAmb	IAmb	15 53 52.4	
	comp=Z,13nm,1.9s						
MCWV	Mont Chateau	55.42	352	IAmb	IAmb	15 53 05.5	
	comp=Z,18nm,0.8s						
HHAR	Hobbs	55.72	338	IAmb	IAmb	15 54 58.1	
	comp=Z,13nm,0.9s						
APMT	Aspermont	55.74	331	IAmb	IAmb	15 53 08.2	
	comp=Z,7.6nm,1.0s						
MNTX	Cornudas Mount	57.12	325	IAmb	IAmb	15 53 54.0	
	comp=Z,12nm,1.6s						
TASM	ASL Pad, Albuq	60.18	327	P	P	15 53 37.9	+0.2
TASM	ASL Pad, Albuq	60.18	327	IAmb	IAmb	15 53 39.4	
	comp=Z,3.3nm,1.0s						
SDCO	Great Sand Dun	61.88	330	P	P	15 53 49.5	+0.3
SDCO				IAmb	IAmb	15 53 51.3	
	comp=Z,5.0nm,0.8s						
PV01	Paradox Valley	63.71	328	IAmb	IAmb	15 55 06.8	
	comp=Z,13nm,1.6s						
MTPU	Mount Pierson	65.56	326	IAmb	IAmb	15 56 15.1	
	comp=Z,11nm,1.8s						
CCUT	Cedar City	65.86	324	IAmb	IAmb	15 55 00.2	
	comp=Z,14nm,1.8s						
PDAR	Pinedale Array	67.73	331	P	P	15 54 27.4	+0.5
	comp=Z,0.3nm,0.4s,baz=142,slow=5.6,SNR=5.0						
PDAR				pP	pP	15 55 05.7	+2.9
	comp=Z,0.8nm,0.9s,baz=134,slow=3.0,SNR=2.8						
	comp=Z,0.3nm,0.4s						
SNAA	Sanae	68.71	162	⇑P	P	15 54 33.2	+0.8
	comp=Z,108nm,0.7s						
SNAA	Sanae	68.71	162	P	P	15 54 32.7	+0.3
	comp=Z,4.3nm,0.7s,baz=281,slow=6.2,SNR=13						
	comp=Z,4.3nm,0.7s						
SNAA	Sanae	68.71	162	P	P	15 54 32.7	+0.3
ULM	Lac du Bonnet	68.90	343	P	P	15 54 33.7	0.0
	comp=Z,2.7nm,0.7s,baz=118,slow=5.2,SNR=3.4						
	comp=Z,2.7nm,0.7s						
ULM	Lac du Bonnet	68.90	343	IAmb	IAmb	15 54 36.3	
	comp=Z,43nm,2.0s						
NVAR	Mina Array Bea	69.31	322	P	P	15 54 37.9	+1.1
	comp=Z,0.7nm,0.8s,baz=140,slow=7.6,SNR=3.5						
NVAR				pP	pP	15 55 16.5	+3.8
	comp=Z,1.0nm,0.8s,baz=143,slow=5.6,SNR=3.3						
	comp=Z,0.7nm,0.8s						
DBIC	Dimbokro	69.50	77	P	P	15 54 37.5	-0.8
	comp=Z,2.9nm,0.5s,baz=292,slow=5.8,SNR=5.8						
	comp=Z,2.9nm,0.5s						
DBIC	Dimbokro	69.50	77	IAmb	IAmb	15 55 17.4	
	comp=Z,23nm,1.6s						
YNE	Yellowstone No	69.66	332	IAmb	IAmb	15 55 19.2	
	comp=Z,9.5nm,0.9s						
QSPA	South Pole Qui	74.67	180	P	P	15 55 08.8	+0.6
	comp=Z,1.6nm,0.6s,baz=156,slow=1.1,SNR=20						
	comp=Z,1.6nm,0.6s						
TORD	Torodi Ar. Bea	77.72	73	P	P	15 55 25.3	-0.9
	comp=Z,11nm,0.5s,baz=251,slow=2.6,SNR=44						
TORD				pP	pP	15 56 05.7	+2.7
	comp=Z,1.8nm,0.6s,baz=275,slow=2.5,SNR=0.8						
	comp=Z,11nm,0.5s						
ESDC	Sonseca Array	83.32	46	P	P	15 55 56.4	+0.8
	comp=Z,1.9nm,0.7s,baz=253,slow=5.1,SNR=11						
	comp=Z,1.9nm,0.7s						
TSUM	Tsumeb	84.12	108	P	P	15 56 00.6	+0.3
TSUM				IAmb	IAmb	15 56 01.8	
	comp=Z,8.1nm,0.8s						
YKA	Yellowknife Ar	84.76	341	P	P	15 56 03.1	+0.9
	comp=Z,0.5nm,0.7s,baz=145,slow=4.2,SNR=8.2						
YKA				pP	pP	15 56 42.2	+2.6
	comp=Z,2.6nm,1.0s,baz=144,slow=4.4,SNR=7.6						
	comp=Z,0.5nm,0.7s						
BOSA	Boshof	88.41	119	P	P	15 56 21.0	-0.1
	comp=Z,3.6nm,0.8s,baz=257,slow=4.0,SNR=4.6						
	comp=Z,3.6nm,0.8s						
BOSA	Boshof	88.41	119	IAmb	IAmb	15 57 51.1	
	comp=Z,32nm,1.8s						
BVAR	Borovoye Array	132.01	30	PKP	PKiKP	16 02 41.9	-0.2
	comp=Z,0.6nm,0.7s,baz=336,slow=3.2,SNR=3.3						
ASAR	Alice Springs	133.87	213	PKP	PKPdf	16 02 45.6	+0.1
	comp=Z,0.5nm,0.7s,baz=138,slow=1.8,SNR=9.3						
ASAR				pPKP	pPKPdf	16 03 28.5	+3.7
	comp=Z,0.3nm,0.7s,baz=129,slow=2.5,SNR=1.8						
WRA	Warramunga Arr	136.62	217	PKP	PKPdf	16 02 50.5	-0.2
	comp=Z,4.1nm,1.2s,baz=138,slow=1.9,SNR=8.4						
ZALV	Zalesovo Beam	137.37	21	PKP	PKPdf	16 02 49.5	-1.5
	comp=Z,3.3nm,0.7s,baz=308,slow=3.6,SNR=16						
ZALV				pPKP	pPKPdf	16 03 34.0	+3.6
	comp=Z,0.7nm,0.6s,baz=319,slow=4.2,SNR=1.9						
KURBB	Kurchatov Arra	137.41	28	PKP	PKiKP	16 02 52.4	-0.7
	comp=Z,0.9nm,0.7s,baz=309,slow=2.8,SNR=8.8						
MKAR	Makanchi Array	141.89	30	PKP	PKPdf	16 02 56.6	-2.9
	comp=Z,0.7nm,0.7s,baz=336,slow=2.7,SNR=6.0						
MJAR	Matsushiro Arr	146.32	314	PKPbc	PKPbc	16 03 08.8	-0.1
	comp=Z,3.7nm,0.9s,baz=101,slow=1.4,SNR=7.5						
MJAR				pPKP	pPKPab	16 03 50.4	+2.1
	comp=Z,2.2nm,0.7s,baz=82,slow=2.1,SNR=3.8						
SONM	Songino Array	147.70	3	PKPbc	PKPbc	16 03 11.5	-1.1
	comp=Z,3.7nm,0.6s,baz=355,slow=3.5,SNR=18						
SONM				pPKP	pPKPab	16 03 53.2	-0.2
	comp=Z,1.4nm,0.9s,baz=330,slow=2.4,SNR=3.3						
KSRS	Korea Array	152.21	326	PKPbc	PKiKP	16 03 25.1	+1.2
	comp=Z,4.5nm,0.7s,baz=14,slow=2.4,SNR=13						
KSRS				pPKPbc	pPKPbc	16 04 05.9	+3.1
	comp=Z,3.0nm,1.0s,baz=16,slow=2.4,SNR=4.2						
CMAR	Chiang Mai Arr	170.33	71	PKPab	PKPab	16 04 53.4	-0.1
	comp=Z,1.0nm,0.7s,baz=282,slow=6.2,SNR=9.7						

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*GCG **09** 16:15:18.9±1.2, 16°.21N×90°.44W, h13^{km}±17^{km}, MD4.0, ML3.9*

*CATAC **09** 16:15:24.7±0.3, 16°N±2°×9°1W±°, h1^{km}, M3.6/16, MLv3.6/16, Error ellipse: s-maj=4.1km s-min=3.4km az=22.4, confirmed*

ISC 09 16:15:18.3±0.8**, 16°.16N**±0°.03×**90°.37W**±0°.04**, h10**^{km}**, n26,** σ**1**^{s}**06**/28**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AVCB	Coban	0.69	183	IAML		16 15 48.9	
	comp=N,11µm,0.5s						
PETF	Flores	0.90	33	*e*P	Pg	16 15 35.1	-0.5
PETF				*e*S	Sg	16 15 46.8	-0.4
PETF				IAML		16 15 49.9	
	comp=E,2µm,0.4s						
QUIS	Sacapulas	1.11	219	*e*S	Sn	16 15 54.7	-0.7
APG	El Apazote	1.15	185	*e*P	Pn	16 15 41.0	+0.3
APG				*e*S	Sn	16 15 57.4	+0.8
HUEH	Huehuetenango	1.37	233	P	Pg	16 15 44.9	+0.2
HUEH	Huehuetenango	1.37	233	S	Sb	16 15 59.0	-3.0
SOKI	Kika Raxquin	1.66	217	*e*P	Pn	16 15 48.3	+0.4
CCIG	Comitan	1.70	274	*i* P	Pn	16 15 48.0	-0.2
CCIG				*e*S	Sn	16 16 09.6	-0.6
CCIG	Comitan	1.70	274	P	Pg	16 15 52.5	+1.5
ESQI	Esquipulas	1.87	148	P	Pg	16 15 56.5	+2.2
STG8	El Palmar, Qui	1.94	209	*e*P	Pn	16 15 51.1	-0.5
MTO3	Montecristo	2.00	151	*e*P	Pg	16 15 56.6	-0.2
MTO3	Montecristo	2.00	151	P	Pg	16 15 57.8	+1.0
MTO3	Montecristo	2.00	151	S	Sg	16 16 23.3	+0.6
NUBE	Las Nubes	2.31	166	*e*P	Pg	16 16 02.1	-0.7
NUBE	Las Nubes	2.31	166	P	Pg	16 16 02.2	-0.5
NUBE	Las Nubes	2.31	166	S	Sb	16 16 29.9	+0.9
CEDA	San Andres	2.52	158	P	Pb	16 16 04.5	+0.7
JAYA	Jayaque - finc	2.64	160	P	Pb	16 16 06.5	+0.6
JAYA	Jayaque - finc	2.64	160	S	Sb	16 16 37.9	-0.7
LOMA	Loma Larga	2.75	155	P	Pb	16 16 07.7	-0.1
SCIG	Sabancuy	2.90	345	S	Sg	16 16 52.7	+1.2
SCIG	Sabancuy	2.90	345	P	Pg	16 16 15.0	+1.1
PACA	Pacayal	3.33	143	P	Pb	16 16 16.8	-0.7

TGUH	**Tegucigalpa,Un**	**3.65**	**125**	P	**Pb**	**16 16 23.5**	**+0.5**
YUSH	**Yuscaran**	**4.05**	**122**	P	**Pb**	**16 16 28.5**	**-1.4**

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*TAP **09** 16:29:03.1, 24°.21N×122°.25E, h25^{km}, ML2.9, D*

*JMA **09** 16:29:03.2±0.1, 24°.1N±0°.7×122°.3E±0°.2, h35^{km}±2^{km}, MV2.3/10, TAIWAN REGION*

ISC 09 16:29:01.8±1.3**, 24°.11N**±0°.02×**122°.32E**±0°.02**, h21**^{km}±4^{km}**, n115, σ0ˢ72**/227**, 2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EAHA	**Aohua**	**0.57**	**292**	*i* P	**Pb**	**16 29 13.0**	**-0.1**
EAHA				S	**Sb**	**16 29 21.1**	**+0.3**
EWUT	**Wuta**	**0.59**	**304**	*i* P	**Pb**	**16 29 13.1**	**-0.4**
EWUT				*i* S	**Sb**	**16 29 20.3**	**-1.2**
ENA	**Nanau**	**0.61**	**301**	⇓*i*P	**Pb**	**16 29 13.5**	**-0.3**
ENA				*i* S	**Sb**	**16 29 21.1**	**-1.0**
ESAO	**Su ao**	**0.63**	**317**	*i* P	**Pb**	**16 29 13.5**	**-0.7**
ESAO				*i* S	**Sb**	**16 29 21.1**	**-1.5**
ETL	**Fush Village**	**0.63**	**274**	*i* P	**Pb**	**16 29 15.0**	**+0.8**
ETL				S	**Sn**	**16 29 24.9**	**-0.1**
TWC	**Suao**	**0.65**	**319**	⇓*i*P	**Pb**	**16 29 13.7**	**-0.8**
TWC				*i* S	**Sb**	**16 29 21.5**	**-1.7**
TWD	**Chiawan**	**0.66**	**267**	*i* P	**Pb**	**16 29 15.3**	**+0.7**
TWD				*i* S	**Sb**	**16 29 24.4**	**+1.0**
NACB	**Ninganchiao**	**0.66**	**275**	*i* P	**Pb**	**16 29 15.3**	**+0.6**
NACB				*i* S	**Sn**	**16 29 25.0**	**-0.7**
HWA	**Hwalien**	**0.66**	**258**	P	**Pn**	**16 29 15.4**	**-0.5**
HWA				*e*S	**Sn**	**16 29 26.1**	**+0.4**
JYNG	**Yonagunijimaku**	**0.67**	**60**	*e*P	**Pn**	**16 29 16.6**	**+0.6**
JYNG				*e*S	**Sn**	**16 29 26.0**	**+0.2**
TEYL	**Yanliau Villag**	**0.70**	**250**	P	**Pn**	**16 29 16.2**	**-0.2**
TEYL				S	**Sn**	**16 29 26.2**	**-0.3**
YOJ	**Yonaguni jima**	**0.72**	**61**	*i* P	**Pn**	**16 29 17.7**	**+1.0**
YOJ				S	**Sn**	**16 29 28.2**	**+1.0**
YOJ	**Yonaguni jima**	**0.72**	**61**	*e*P	**Pn**	**16 29 17.7**	**+1.0**
YOJ				*e*S	**Sn**	**16 29 27.6**	**+0.4**
NDS	**Dongshan**	**0.75**	**314**	*i* P	**Pb**	**16 29 16.0**	**-0.2**
NDS				S	**Sb**	**16 29 25.3**	**-0.7**
SHUL	**Shoufeng**	**0.76**	**245**	*i* P	**Pn**	**16 29 17.3**	**+0.1**
SHUL				S	**Sn**	**16 29 28.5**	**+0.4**
ETLH	**Xiulin Townshi**	**0.77**	**277**	*i* P	**Pb**	**16 29 17.0**	**+0.5**
ETLH				S	**Sb**	**16 29 27.3**	**+0.8**
ETM	**Tongmen**	**0.77**	**259**	*i* P	**Pb**	**16 29 16.8**	**+0.4**
ETM				*i* S	**Sb**	**16 29 27.1**	**+0.7**
EGS		**0.81**	**335**	*i* P	**Pb**	**16 29 16.8**	**-0.3**
EGS				*i* S	**Sb**	**16 29 27.0**	**-0.6**
LXIB	**Xiulin Townshi**	**0.83**	**264**	*i* P	**Pb**	**16 29 17.9**	**+0.3**
LXIB				*e*S	**Sb**	**16 29 29.1**	**+0.7**
ILA	**Ilan**	**0.83**	**322**	*i* P	**Pb**	**16 29 17.2**	**-0.3**
ILA				*i* S	**Sb**	**16 29 28.0**	**-0.2**
LATG	**Datong**	**0.83**	**300**	*i* P	**Pb**	**16 29 17.8**	**+0.1**
LATG				*e*S	**Sb**	**16 29 28.4**	**-0.1**
TWE	**Neicheng**	**0.85**	**316**	*i* P	**Pb**	**16 29 17.6**	**-0.2**
TWE				S	**Sb**	**16 29 27.1**	**-1.5**
ESL	**Shilin**	**0.86**	**250**	*i* P	**Pb**	**16 29 18.2**	**+0.2**
ESL				*i* S	**Sn**	**16 29 29.9**	**-0.6**
ENTT	**Nioudou**	**0.86**	**308**	*i* P	**Pb**	**16 29 18.1**	**0.0**
ENTT				*i* S	**Sb**	**16 29 28.7**	**-0.4**
NNSB	**Datong**	**0.91**	**290**	*i* P	**Pb**	**16 29 19.0**	**+0.2**
NNSB				*e*S	**Sb**	**16 29 30.8**	**+0.2**
NNSH	**Datong**	**0.91**	**290**	*i* P	**Pb**	**16 29 19.1**	**+0.3**
NNSH				S	**Sb**	**16 29 30.9**	**+0.3**
NNS	**Nan Shan**	**0.92**	**291**	*i* P	**Pb**	**16 29 19.4**	**+0.3**
NNS				S	**Sb**	**16 29 31.5**	**+0.5**
FUSB	**Fushanzhiwuyua**	**0.92**	**314**	P	**Pb**	**16 29 19.1**	**0.0**
FUSB				*e*S	**Sb**	**16 29 30.5**	**-0.5**
EGFH	**Guangfu**	**0.93**	**242**	*i* P	**Pn**	**16 29 19.7**	**+0.2**
EGFH				*i* S	**Sn**	**16 29 32.0**	**-0.1**
WARBT	**Fenglin Townsh**	**0.94**	**245**	*i* P	**Pb**	**16 29 19.5**	**+0.2**
WARBT				S	**Sb**	**16 29 31.8**	**+0.5**
TWB1	**Santiao Chiao**	**0.94**	**342**	*i* P	**Pb**	**16 29 19.0**	**-0.3**
TWB1				S	**Sb**	**16 29 30.7**	**-0.7**
WHF	**Hehuan Shan**	**0.96**	**272**	*i* P	**Pb**	**16 29 20.2**	**+0.2**
WHF				S	**Sb**	**16 29 32.3**	**-0.1**
TIPB	**Shuangxi**	**0.96**	**333**	*i* P	**Pb**	**16 29 19.8**	**0.0**
TIPB				*e*S	**Sb**	**16 29 30.8**	**-1.3**
FUSS	**Fushou**	**0.99**	**278**	*i* P	**Pn**	**16 29 20.8**	**+0.2**
FUSS				*e*S	**Sb**	**16 29 33.0**	**+0.1**
NWLT	**Wulai**	**0.99**	**312**	*i* P	**Pb**	**16 29 20.5**	**+0.2**
NWLT				*i* S	**Sb**	**16 29 32.4**	**-0.6**
YHNB	**Yeheng**	**1.02**	**303**	*i* P	**Pb**	**16 29 20.9**	**+0.1**
YHNB				*i* S	**Sb**	**16 29 33.5**	**-0.2**
HGSD	**Ruisui**	**1.02**	**233**	*i* P	**Pn**	**16 29 21.7**	**+0.8**
HGSD				*e*S	**Sn**	**16 29 34.6**	**0.0**
NSK	**Sanguang**	**1.04**	**303**	*i* P	**Pb**	**16 29 21.2**	**+0.1**
NSK				*i* S	**Sb**	**16 29 34.8**	**+0.5**
TWT	**Tachien**	**1.05**	**278**	*i* P	**Pn**	**16 29 21.6**	**+0.2**
TWT				*i* S	**Sn**	**16 29 35.7**	**+0.2**
OWD	**Renai**	**1.05**	**262**	*i* P	**Pb**	**16 29 21.5**	**+0.1**
OWD				*i* S	**Sb**	**16 29 34.0**	**-0.8**
SXI1	**Grass Mountain**	**1.06**	**338**	*i* P	**Pn**	**16 29 21.1**	**-0.3**
SXI1				*e*S	**Sb**	**16 29 35.6**	**+0.8**
TDCB	**Techi**	**1.06**	**278**	*i* P	**Pb**	**16 29 21.3**	**-0.3**
TDCB				S	**Sb**	**16 29 35.6**	**+0.5**
NWF	**Wu-fen Shan**	**1.07**	**333**	*i* P	**Pn**	**16 29 21.7**	**+0.1**
NWF				*i* S	**Sb**	**16 29 34.0**	**-1.2**
WFSB	**Wu-fen Shan**	**1.07**	**333**	*i* P	**Pn**	**16 29 21.3**	**-0.2**
WFSB				S	**Sb**	**16 29 33.9**	**-1.3**
EHYH	**Wanrong**	**1.08**	**235**	*i* P	**Pn**	**16 29 21.6**	**0.0**
EHYH				S	**Sn**	**16 29 35.8**	**-0.2**
TWA	**Mucha**	**1.09**	**323**	*i* P	**Pn**	**16 29 21.9**	**+0.1**
TWA				*i* S	**Sb**	**16 29 35.9**	**+0.2**
EHY	**Hungye**	**1.09**	**237**	*i* P	**Pb**	**16 29 22.1**	**+0.1**
EHY				S	**Sb**	**16 29 35.8**	**+0.1**
WUSB	**Renai**	**1.10**	**264**	*i* P	**Pb**	**16 29 22.3**	**+0.1**
WUSB				*e*S	**Sb**	**16 29 35.3**	**-0.8**
NHDH	**Xindian Distri**	**1.11**	**320**	*i* P	**Pn**	**16 29 22.3**	**+0.2**
NHDH				*i* S	**Sb**	**16 29 36.6**	**+0.4**
VWDT	**VWDT**	**1.13**	**252**	*i* P	**Pb**	**16 29 22.9**	**+0.3**
VWDT				*i* S	**Sn**	**16 29 37.5**	**+0.2**
TNOU	**National Taiwa**	**1.14**	**335**	P	**Pn**	**16 29 20.8**	**-1.7**
TNOU				S	**Sb**	**16 29 36.5**	**-0.7**
YULB	**Yu-li**	**1.18**	**233**	*i* P	**Pn**	**16 29 23.1**	**+0.1**
YULB				S	**Sb**	**16 29 38.0**	**-0.2**
TAP	**Taipei**	**1.18**	**322**	*i* P	**Pb**	**16 29 24.3**	**+0.8**
TAP				S	**Sn**	**16 29 39.0**	**+0.6**
EYUL	**Yuli**	**1.19**	**230**	*e*P	**Pn**	**16 29 22.7**	**-0.4**
EYUL				*e*S	**Sn**	**16 29 39.0**	**+0.4**
TWF1	**Yuli**	**1.20**	**231**	*i* P	**Pb**	**16 29 23.6**	**-0.2**
TWF1				*i* S	**Sb**	**16 29 38.3**	**-0.6**
NFF	**Wufeng Townshi**	**1.21**	**296**	*i* P	**Pb**	**16 29 24.1**	**+0.1**
NFF				*i* S	**Sb**	**16 29 38.4**	**-0.8**
KSHI	**Guanxi Townshi**	**1.23**	**303**	*i* P	**Pb**	**16 29 24.8**	**+0.4**
KSHI				*e*S	**Sn**	**16 29 39.9**	**+0.2**
YM01	**YM01**	**1.23**	**327**	*i* P	**Pn**	**16 29 23.8**	**0.0**
YM01				*e*S	**Sb**	**16 29 40.4**	**+0.6**
CHKH	**Chenggong**	**1.25**	**223**	*e*P	**Pn**	**16 29 22.6**	**-1.3**
CHKH				S	**Sn**	**16 29 39.2**	**-0.8**
YM08	**YM08**	**1.26**	**329**	*i* P	**Pn**	**16 29 24.6**	**+0.4**
YM08				*e*S	**Sn**	**16 29 39.7**	**-0.7**
ZUZH	**Zhuzihu**	**1.26**	**326**	*i* P	**Pn**	**16 29 24.0**	**-0.1**
ZUZH				*i* S	**Sn**	**16 29 40.3**	**-0.1**
WHP	**Taichung City**	**1.26**	**278**	*i* P	**Pb**	**16 29 25.2**	**+0.3**
WHP				*i* S	**Sb**	**16 29 40.9**	**+0.2**
TWS1	**Kuangyinshan**	**1.28**	**320**	*i* P	**Pb**	**16 29 25.1**	**0.0**
TWS1				*e*S	**Sn**	**16 29 40.6**	**-0.3**
WCS	**Beigang Elemen**	**1.28**	**268**	*i* P	**Pn**	**16 29 24.9**	**+0.5**
WCS				*e*S	**Sn**	**16 29 41.1**	**+0.1**
SSLB	**Suanglung**	**1.29**	**256**	*i* P	**Pn**	**16 29 24.8**	**+0.2**
SSLB				*i* S	**Sb**	**16 29 42.2**	**+0.8**
ANP	**Anpu**	**1.29**	**326**	P	**Pn**	**16 29 24.9**	**+0.3**
ANP				*e*S	**Sn**	**16 29 40.8**	**-0.5**
LIOB	**Emei**	**1.30**	**294**	*i* P	**Pb**	**16 29 25.7**	**+0.2**
LIOB				*i* S	**Sb**	**16 29 42.9**	**+1.2**
NSTT	**Nanjuang**	**1.30**	**294**	*i* P	**Pb**	**16 29 25.9**	**+0.3**
NSTT				S	**Sb**	**16 29 42.5**	**+0.7**
FULB	**Fuli**	**1.30**	**226**	*i* P	**Pb**	**16 29 25.6**	**0.0**
FULB				S	**Sn**	**16 29 41.5**	**-0.1**
NTST	**Danshui**	**1.31**	**323**	*i* P	**Pb**	**16 29 26.7**	**+1.0**
NTST				S	**Sb**	**16 29 43.0**	**+1.0**
IRIF	**Iriomote-Funau**	**1.31**	**80**	*e*P	**Pb**	**16 29 26.7**	**+1.0**
SMLT	**Sun Moon Lake**	**1.31**	**260**	*i* P	**Pb**	**16 29 25.7**	**-0.1**
SMLT				*e*S	**Sb**	**16 29 42.4**	**+0.1**
TWY	**Chenhua**	**1.33**	**331**	*i* P	**Pb**	**16 29 26.9**	**+0.9**
TWY				*i* S	**Sn**	**16 29 42.0**	**-0.1**
NCUH	**Zhongli**	**1.33**	**310**	*e*P	**Pn**	**16 29 24.1**	**-1.1**
NCUH				*e*S	**Sb**	**16 29 43.0**	**+0.2**
TYC	**Yuchr**	**1.35**	**261**	*i* P	**Pb**	**16 29 26.1**	**-0.2**
TYC				S	**Sn**	**16 29 41.3**	**-1.3**
EHD	**Haiduan**	**1.40**	**227**	*e*P	**Pn**	**16 29 26.1**	**0.0**
EHD				S	**Sb**	**16 29 44.6**	**0.0**
WHYT	**Xinyi Township**	**1.40**	**253**	*i* P	**Pb**	**16 29 27.8**	**+0.6**
WHYT				S	**Sb**	**16 29 46.8**	**+2.1**
ECS	**Chishang**	**1.43**	**225**	*e*P	**Pb**	**16 29 27.1**	**-0.6**
ECS				S	**Sb**	**16 29 45.3**	**-0.1**
TWQ1	**Liyutan**	**1.43**	**280**	*i* P	**Pb**	**16 29 28.2**	**+0.5**
TWQ1				S	**Sb**	**16 29 46.1**	**+0.7**
NMLH	**Miaoli**	**1.45**	**287**	*i* P	**Pn**	**16 29 27.4**	**+0.6**
NMLH				*e*S	**Sb**	**16 29 47.0**	**+0.8**
EDH	**Donghe**	**1.47**	**219**	*i* P	**Pn**	**16 29 27.2**	**+0.2**
EDH				*i* S	**Sn**	**16 29 44.5**	**-1.0**
WJS	**Zhushan**	**1.48**	**259**	*i* P	**Pb**	**16 29 29.6**	**+1.0**
WJS				*i* S	**Sb**	**16 29 48.5**	**+1.6**
TCU	**Taichung**	**1.50**	**272**	*i* P	**Pb**	**16 29 29.3**	**+0.4**
TCU				*i* S	**Sb**	**16 29 49.4**	**+1.9**
ELDTW	**Lidau**	**1.50**	**233**	*i* P	**Pn**	**16 29 27.8**	**+0.2**
ELDTW				S	**Sn**	**16 29 45.9**	**-0.7**
ALS	**Alishan**	**1.51**	**247**	*i* P	**Pb**	**16 29 29.0**	**-0.2**
ALS				S	**Sb**	**16 29 47.9**	**-0.1**
CHN5	**Tsauling**	**1.58**	**251**	*i* P	**Pb**	**16 29 31.1**	**+0.7**
CHN5				*i* S	**Sb**	**16 29 51.0**	**+1.0**
LONT	**Longtian**	**1.62**	**222**	*i* P	**Pn**	**16 29 29.9**	**+0.8**
LONT				S	**Sn**	**16 29 49.3**	**-0.1**
LDUT	**Ludao**	**1.63**	**209**	*i* P	**Pn**	**16 29 29.6**	**+0.4**
LDUT				*i* S	**Sn**	**16 29 48.2**	**-1.4**
WGK	**Gukeng**	**1.66**	**256**	*i* P	**Pb**	**16 29 33.5**	**+1.9**
WGK				*i* S	**Sb**	**16 29 54.4**	**+2.3**
WDLH	**Douliu**	**1.68**	**256**	*i* P	**Pb**	**16 29 31.8**	**-0.2**
WDLH				*i* S	**Sb**	**16 29 53.4**	**+0.7**
JIJ	**Ishigaki jima**	**1.69**	**81**	*e*P	**Pb**	**16 29 32.1**	**0.0**
STYH	**Taoyuan**	**1.69**	**237**	*i* P	**Pn**	**16 29 30.6**	**+0.6**
STYH				*i* S	**Sb**	**16 29 52.6**	**-0.5**
WCKO	**Fanlu**	**1.70**	**247**	*i* P	**Pb**	**16 29 32.1**	**-0.3**
WCKO				*i* S	**Sb**	**16 29 54.1**	**+0.7**
STYT	**Tauyuan**	**1.71**	**237**	*e*P	**Pn**	**16 29 30.6**	**+0.2**
STYT				S	**Sb**	**16 29 53.6**	**-0.1**
TWGBT	**Beinan**	**1.72**	**222**	P	**Pn**	**16 29 30.3**	**-0.1**
TWGBT				S	**Sn**	**16 29 51.8**	**0.0**
TWG	**Pinlang**	**1.72**	**222**	P	**Pn**	**16 29 30.1**	**-0.4**
TWG				*i* S	**Sn**	**16 29 51.7**	**-0.1**
TPUB	**Ta-pu**	**1.74**	**243**	*i* P	**Pb**	**16 29 33.1**	**+0.1**
TPUB				*i* S	**Sb**	**16 29 54.6**	**+0.1**
CHN4	**Tsaushan**	**1.75**	**245**	*i* P	**Pb**	**16 29 33.7**	**+0.5**
CHN4				*i* S	**Sb**	**16 29 55.7**	**+1.0**
WTP	**Ta-pu**	**1.78**	**241**	*i* P	**Pb**	**16 29 33.8**	**0.0**
WTP				*i* S	**Sb**	**16 29 56.5**	**+0.8**
CHY	**Chiayi**	**1.84**	**251**	*e*P	**Pb**	**16 29 35.0**	**+0.3**
CHY				*i* S	**Sb**	**16 29 57.9**	**+0.7**
TWK	**Hsinying**	**1.87**	**244**	*i* P	**Pb**	**16 29 34.9**	**-0.5**
TWK				*i* S	**Sb**	**16 29 58.0**	**-0.3**
CHN1	**Nanshi**	**1.88**	**241**	*i* P	**Pb**	**16 29 35.1**	**-0.4**
CHN1				*i* S	**Sb**	**16 29 57.3**	**-1.2**
JISG	**Ishigakijimahi**	**1.88**	**75**	*e*P	**Pb**	**16 29 35.0**	**-0.4**
SNST	**Tainan City**	**1.89**	**242**	P	**Pb**	**16 29 35.6**	**+0.1**
SNST				S	**Sb**	**16 29 58.7**	**0.0**
SGST	**Jiashian**	**1.89**	**237**	*i* P	**Pn**	**16 29 33.8**	**+1.0**
SGST				*i* S	**Sb**	**16 29 58.3**	**-0.5**
ECL	**Taimali**	**1.96**	**220**	*i* P	**Pb**	**16 29 35.3**	**-1.5**
ECL				S	**Sn**	**16 29 58.1**	**+0.4**
WSF	**Szhu**	**1.97**	**257**	*e*P	**Pn**	**16 29 34.9**	**+1.0**
WSF				*i* S	**Sb**	**16 30 01.0**	**-0.1**
WSL	**Shuilin Townsh**	**2.00**	**253**	*e*P	**Pn**	**16 29 35.9**	**+1.6**
WSL				*i* S	**Sb**	**16 30 02.0**	**+0.1**
SSD	**Sandimen**	**2.06**	**229**	*i* P	**Pb**	**16 29 37.9**	**-0.5**
SSD				*i* S	**Sb**	**16 30 03.9**	**+0.2**
MASBT	**Mashibuluo**	**2.15**	**226**	*i* P	**Pb**	**16 29 38.8**	**-1.2**
MASBT				*i* S	**Sb**	**16 30 06.2**	**-0.1**
EAST	**Anshuo**	**2.19**	**218**	*i* P	**Pn**	**16 29 38.3**	**+1.4**
EAST				*e*S	**Sn**	**16 30 03.4**	**0.0**
TAWH	**Dawu Township**	**2.20**	**217**	P	**Pn**	**16 29 37.7**	**+0.6**
TAWH				*e*S	**Sn**	**16 30 01.4**	**-2.2**
TSCK	**Chigu Township**	**2.26**	**245**	*i* P	**Pb**	**16 29 40.5**	**-1.3**
TSCK				*i* S	**Sb**	**16 30 07.5**	**-1.9**
SCZT	**Fangliau**	**2.33**	**222**	*i* P	**Pb**	**16 29 41.9**	**-1.2**
SCZT				S	**Sb**	**16 30 10.5**	**-0.9**
PHUB	**P'eng-hu**	**2.58**	**257**	*i* P	**Pn**	**16 29 43.2**	**+0.9**
PHUB				*i* S	**Sn**	**16 30 13.2**	**+0.1**

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*NEIC **09** 16:33:35.6±1.1, 52°.86S±0°.10×11°.7E±0°.2, h10^{km}±1^{km}, mb4.9/28, Error ellipse: s-maj=18.8km s-min=12.9km az=37.0*

*IDC **09** 16:33:35.0±0.8, 52°.83S×11°.00E, h0^{km}, mb4.4/8, mbtmp4.4/9, ML4.4/1, MS4.2/27, Error ellipse: s-maj=28.0km s-min=22.7km az=47.0*

ISC 09 16:33:35.6±0.5**, 52°.81S**±0°.08×**11°.5E**±0°.1**, h10**^{km}**, n79, σ1ˢ19**/49**, mb4.8**/18**, MS4.2**/26**, 6C-1D, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TROLL	**Troll, Antarti**	**19.67**	**188**	⇑P	**Pn**	**16 38 06.5**	**+0.5**
	comp=Z,645nm,0.7s						
SNAA	**Sanae**	**19.97**	**193**	⇑P	**P**	**16 38 07.7**	**+0.1**
	comp=Z,374nm,0.8s						
SNAA	**Sanae**	**19.97**	**193**	P	**P**	**16 38 07.2**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=21,slow=14,SNR=22						
SNAA				LR	LR	16 44 03.5	
	comp=Z,637nm,21.1s,baz=12,slow=32						
	comp=Z,7.5nm,0.6s						
SNAA	**Sanae**	**19.97**	**193**	P	**P**	**16 38 07.3**	**-0.4**
SNAA				IAmb	IAmb	16 38 12.0	
	comp=Z,125nm,1.8s						
VNA1	**Neumayer--Stat**	**20.02**	**199**	⇑P	**P**	**16 38 07.6**	**-0.5**
	comp=Z,18nm,1.0s						
VNA2	**Neumayer--Watz**	**20.07**	**198**	⇑P	**P**	**16 38 08.7**	**0.0**
	comp=Z,26nm,0.9s,baz=27,slow=12						
VNA3	**Neumayer Olymp**	**20.77**	**199**	⇑P	**P**	**16 38 16.2**	**-0.1**
	comp=Z,39nm,0.8s						
SYO	**Syowa Base**	**20.89**	**152**	⇓*e*P	**P**	**16 38 14.0**	**-3.6**
SYO	**Syowa Base**	**20.89**	**152**	⇑*e*pPn	**P**	**16 38 19.2**	**+1.6**
SUR	**Sutherland**	**21.50**	**22**	P	**P**	**16 38 25.3**	**+0.7**
BOSA	**Boshof**	**26.22**	**28**	LR	LR	16 48 02.1	
	comp=Z,601nm,19.3s,baz=200,slow=33						
BOSA	**Boshof**	**26.22**	**28**	P	**P**	**16 39 11.4**	**+0.7**
BOSA				IAmb	IAmb	16 39 35.1	
	comp=Z,24nm,1.6s						
H04S2	**CROZET ISLANDS**	**26.45**	**93**	T	T	17 07 04.4	
	baz=242,slow=75,SNR=36						
H04S3	**CROZET ISLANDS**	**26.45**	**93**	T	T	17 07 05.9	
	baz=242,slow=75,SNR=51						
H04S1	**CROZET ISLANDS**	**26.47**	**93**	T	T	17 07 05.4	
	baz=242,slow=75,SNR=38						
H04N3	**CROZET ISLANDS**	**26.70**	**92**	T	T	17 07 27.7	
	baz=239						
H04N1	**CROZET ISLANDS**	**26.71**	**92**	T	T	17 07 28.9	
	baz=239						
H04N2	**CROZET ISLANDS**	**26.72**	**92**	T	T	17 07 26.0	
	baz=239						
LBTB	**Lobatse**	**29.73**	**26**	LR	LR	16 50 07.7	
	comp=Z,539nm,19.7s,baz=190,slow=33						
BELA	**Belgrano 2**	**30.05**	**198**	P	**P**	**16 39 43.6**	**-0.6**
LPHEP	**Lephephe**	**31.37**	**26**	P	**P**	**16 39 55.7**	**-0.8**
LPHEP				IAmb	IAmb	16 40 20.5	
	comp=Z,16nm,1.2s						
TSUM	**Tsumeb**	**33.87**	**10**	LR	LR	16 53 03.6	
	comp=Z,917nm,18.3s,baz=158,slow=34						
MATP	**Matopo**	**34.89**	**29**	LR	LR	16 53 23.7	
	comp=Z,523nm,20.3s,baz=209,slow=34						
QSPA	**South Pole Qui**	**37.43**	**180**	LR	LR	16 55 25.0	
	comp=Z,550nm,20.6s,baz=227,slow=35						
QSPA	**South Pole Qui**	**37.43**	**180**	P	**P**	**16 40 48.5**	**-0.1**
QSPA				IAmb	IAmb	16 40 53.3	
	comp=Z,24nm,1.2s						
PMSA	**Palmer Station**	**38.48**	**222**	LR	LR	16 52 57.2	
	comp=Z,354nm,18.4s,baz=79,slow=30						
ABPO	**Ambohimpanom**	**43.64**	**53**	P	**P**	**16 41 39.4**	**-1.0**
ABPO				IAmb	IAmb	16 42 18.5	
	comp=Z,31nm,1.6s						
OPO	**Ambohidratompo**	**44.00**	**53**	LR	LR	16 57 01.0	
	comp=Z,195nm,19.9s,baz=324,slow=32						
CASY	**Casey**	**46.51**	**147**	P	**P**	**16 42 01.4**	**-1.1**
CASY				IAmb	IAmb	16 42 06.9	
	comp=Z,13nm,1.2s						
VNDA	**Vanda**	**48.64**	**172**	P	**P**	**16 42 19.4**	**+0.5**
	comp=Z,7.2nm,0.4s,baz=215,slow=6.6,SNR=6.8						
VNDA				LR	LR	17 01 43.9	
	comp=Z,380nm,21.1s,baz=191,slow=35						
	comp=Z,7.2nm,0.4s						
AY01	**Puyuhuapi**	**53.24**	**243**	P	**P**	**16 42 52.5**	**-1.4**
LL02	**Futaleuf**	**53.61**	**244**	P	**P**	**16 42 57.5**	**+0.8**
LL02				IAmb	IAmb	16 44 52.9	
	comp=Z,9.9nm,1.1s						
MBAR	**Mbarara**	**54.44**	**24**	LR	LR	17 05 05.9	
	comp=Z,564nm,19.0s,baz=184,slow=35						
PLCA	**Paso Flores**	**54.53**	**248**	P	**P**	**16 43 01.0**	**-2.6**
	comp=Z,1.8nm,1.0s,baz=114,slow=8.8,SNR=3.9						
PLCA				LR	LR	17 02 38.1	
	comp=Z,170nm,21.9s,baz=122,slow=32						
	comp=Z,1.8nm,1.0s						
PLCA	**Paso Flores**	**54.53**	**248**	P	**P**	**16 43 03.5**	**0.0**
PLCA				IAmb	IAmb	16 43 14.7	
	comp=Z,29nm,2.0s						
CPUP	**Villa Florida**	**56.83**	**269**	P	**P**	**16 43 18.4**	**-1.7**
	comp=Z,0.7nm,0.7s,baz=133,slow=1.5,SNR=7.1						
CPUP				LR	LR	17 06 26.5	
	comp=Z,25nm,18.3s,baz=18,slow=35						
	comp=Z,0.7nm,0.7s						
CPUP	**Villa Florida**	**56.83**	**269**	P	**P**	**16 43 20.7**	**+0.6**
BI02	**San Fabin de**	**57.74**	**251**	P	**P**	**16 43 27.4**	**+0.9**
BI02				IAmb	IAmb	16 43 29.6	
	comp=Z,20nm,1.6s						
BDFB	**Brasilia**	**59.37**	**285**	P	**P**	**16 43 38.3**	**+0.1**
	comp=Z,2.0nm,0.3s,baz=154,slow=7.9,SNR=4.9						
BDFB				LR	LR	17 04 18.3	
	comp=Z,98nm,18.4s,baz=193,slow=31						
	comp=Z,2.0nm,0.3s						
BDFB	**Brasilia**	**59.37**	**285**	IAmb	IAmb	16 45 20.3	
	comp=Z,13nm,1.4s						
LODK	**Lodwar**	**59.52**	**28**	P	**P**	**16 43 38.5**	**-0.6**
CFA	**Coronel Fontan**	**59.56**	**257**	LR	LR	17 04 44.4	
	comp=Z,123nm,21.4s,baz=357,slow=32						
VA03	**San Esteban**	**60.09**	**254**	P	**P**	**16 43 42.8**	**-0.1**
DBIC	**Dimbokro**	**60.86**	**341**	P	**P**	**16 43 47.7**	**-0.4**
	comp=Z,4.3nm,1.0s,baz=161,slow=8.1,SNR=3.2						
DBIC				LR	LR	17 04 44.0	
	comp=Z,151nm,19.4s,baz=186,slow=31						
	comp=Z,4.3nm,1.0s						
CO01	**Juntas del Tor**	**61.84**	**257**	P	**P**	**16 43 56.4**	**+1.3**
CO01				IAmb	IAmb	16 43 58.2	
	comp=Z,15nm,1.4s						
AC02	**Maricunga**	**63.58**	**260**	P	**P**	**16 44 08.0**	**+1.0**
AC06	**Mina Casimiro**	**63.92**	**259**	P	**P**	**16 44 09.5**	**+0.9**
AC06				IAmb	IAmb	16 46 27.7	
	comp=Z,12nm,0.9s						
GO02	**Mina Guanaco**	**65.10**	**261**	P	**P**	**16 44 17.7**	**+0.9**
TORD	**Torodi Ar. Bea**	**66.23**	**350**	LR	LR	17 10 40.6	
	comp=Z,53nm,18.2s,baz=162,slow=34						
PB06	**IPOC Station P**	**66.93**	**263**	P	**P**	**16 44 29.9**	**+1.5**
PB06				IAmb	IAmb	16 44 30.9	
	comp=Z,12nm,1.0s						
PB09	**IPOC Station P**	**67.42**	**263**	P	**P**	**16 44 32.0**	**+0.5**
PB07	**IPOC Station P**	**67.86**	**263**	P	**P**	**16 44 34.2**	**0.0**
PB11	**IPOC Station P**	**69.22**	**265**		**P**	**16 44 42.6**	**-0.2**
H01W2	**Cape Leeuwin H**	**69.91**	**121**	T	T	18 01 55.3	
	baz=219,slow=75,SNR=26						
H01W3	**Cape Leeuwin H**	**69.92**	**121**	T	T	18 01 55.3	
	baz=219,slow=75,SNR=19						
H01W1	**Cape Leeuwin H**	**69.92**	**121**	T	T	18 01 57.3	
	baz=219,slow=75,SNR=32						
LPAZ	**La Paz**	**70.96**	**268**	P	**P**	**16 44 53.8**	**-0.2**
	comp=Z,13nm,0.9s,baz=121,slow=5.8,SNR=23						
LPAZ				LR	LR	17 13 23.3	
	comp=Z,91nm,20.4s,baz=82,slow=34						
	comp=Z,13nm,0.9s						
LPAZ	**La Paz**	**70.96**	**268**		**P**	**16 44 53.9**	**-0.2**
EIL	**Elat**	**84.64**	**20**	LR	LR	17 22 16.6	
	comp=Z,373nm,21.5s,baz=193,slow=34						
STKA	**Stephens Creek**	**85.12**	**139**		**P**	**16 46 10.8**	**-0.9**
RPN	**Rapa Nui**	**85.24**	**230**	LR	LR	17 14 15.3	
	comp=Z,43nm,20.9s,baz=180,slow=29						
ASF	**Jabal al Asfar**	**87.47**	**21**	LR	LR	17 23 42.6	
	comp=Z,151nm,20.1s,baz=132,slow=34						
MMAI	**Mount Meron Ar**	**87.97**	**20**	LR	LR	17 24 20.9	
	comp=Z,251nm,21.2s,baz=190,slow=35						
URZ	**Urewera**	**88.45**	**169**	LR	LR	17 25 43.1	
	comp=Z,146nm,18.6s,baz=194,slow=35						
IDI	**Anoyia**	**88.50**	**11**	LR	LR	17 28 46.5	
	comp=Z,110nm,18.1s,baz=263,slow=37						
ASAR	**Alice Springs**	**88.91**	**129**	P	**P**	**16 46 34.0**	**+3.7**
	comp=Z,1.8nm,0.9s,baz=210,slow=5.0,SNR=6.3						
	comp=Z,1.8nm,0.9s						
WRA	**Warramunga Arr**	**92.30**	**128**	P	**P**	**16 46 48.8**	**+2.7**
	comp=Z,0.7nm,0.7s,baz=212,slow=3.7,SNR=1.4						
	comp=Z,0.7nm,0.7s						
BRTR	**Keskin Array B**	**94.13**	**17**	LR	LR	17 31 35.4	
	comp=Z,105nm,18.4s,baz=210,slow=37						
GNI	**Garni**	**96.95**	**25**	LR	LR	17 30 00.3	
	comp=Z,154nm,21.6s,baz=218,slow=35						
MLR	**Muntele Rosu**	**98.70**	**10**	LR	LR	17 35 12.9	
	comp=Z,94nm,18.2s,baz=227,slow=37						
DAVOX	**Davos/Dischmat**	**99.22**	**359**	LR	LR	17 30 02.7	
	comp=Z,61nm,20.2s,baz=240,slow=34						
MKAR	**Makanchi Array**	**116.11**	**46**	PKP	**PKPdf**	**16 52 18.2**	**+0.2**
	comp=Z,0.3nm,0.9s,baz=212,slow=4.6,SNR=2.0						
BVAR	**Borovoye Array**	**116.34**	**35**	PKP	**PKiKP**	**16 52 18.9**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=226,slow=3.8,SNR=2.6						
TXAR	**Lajitas Array**	**127.80**	**270**	PKP	**PKiKP**	**16 52 41.9**	**+0.2**
	comp=Z,1.0nm,0.9s,baz=138,slow=2.0,SNR=8.1						
SONM	**Songino Array**	**128.46**	**59**	PKP	**PKPdf**	**16 52 42.1**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=186,slow=4.3,SNR=1.6						
PDAR	**Pinedale Array**	**140.21**	**280**	PKP	**PKPdf**	**16 53 03.9**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=120,slow=3.6,SNR=2.1						
NVAR	**Mina Array Bea**	**142.86**	**268**	PKP	**PKPdf**	**16 53 08.2**	**-0.7**
	comp=Z,1.5nm,0.8s,baz=159,slow=3.3,SNR=6.3						
YKA	**Yellowknife Ar**	**150.45**	**310**	PKPbc	**PKPbc**	**16 53 26.2**	**+0.3**
	comp=Z,4.0nm,1.0s,baz=92,slow=1.6,SNR=19						
ILAR	**Eielson Array**	**163.71**	**326**	PKPab	**PKPab**	**16 54 30.4**	**+0.8**
	comp=Z,1.7nm,1.1s,baz=56,slow=3.7,SNR=6.3						

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*IDC **09** 16:38:55.9±1.2, 52°.89S×11°.25E, h0^{km}, mb4.2/6, mbtmp4.2/7, ML3.7/1, Error ellipse: s-maj=43.1km s-min=24.2km az=57.0*

*NEIC **09** 16:38:56.4±1.3, 52°.8S±0°.2×11°.5E±0°.1, h10^{km}±1^{km}, mb4.8/11, Error ellipse: s-maj=33.6km s-min=9.8km az=346.0*

ISC 09 16:38:56.6±0.6**, 52°.8S**±0°.1×**11°.5E**±0°.1**, h10**^{km}**, n33, σ1ˢ31**/27**, mb4.4**/8**, 3C-2D, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	**Sanae**	**19.95**	**193**	⇑P	**P**	**16 43 27.3**	**-1.2**
	comp=Z,149nm,0.9s						
SNAA	**Sanae**	**19.95**	**193**	P	**P**	**16 43 27.8**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=19,slow=13,SNR=5.6						
	comp=Z,7.6nm,1.0s						
SNAA	**Sanae**	**19.95**	**193**	P	**P**	**16 43 28.2**	**-0.4**
VNA2	**Neumayer--Watz**	**20.06**	**198**	⇑P	**P**	**16 43 30.4**	**+0.8**
	comp=Z,10nm,0.7s,baz=22,slow=12						
VNA3	**Neumayer Olymp**	**20.75**	**199**	⇑P	**P**	**16 43 36.0**	**-1.1**
	comp=Z,14nm,0.8s						
SYO	**Syowa Base**	**20.89**	**152**	⇓*e*pP	**P**	**16 43 39.5**	**+0.9**
SYO	**Syowa Base**	**20.89**	**152**	⇓*e*P	**P**	**16 43 40.6**	**+2.0**
H04S2	**CROZET ISLANDS**	**26.46**	**93**	T	T	17 12 26.5	
	baz=242,slow=75,SNR=14						
H04S3	**CROZET ISLANDS**	**26.46**	**93**	T	T	17 12 27.7	
	baz=242,slow=75,SNR=14						
H04S1	**CROZET ISLANDS**	**26.48**	**93**	T	T	17 12 25.4	
	baz=242,slow=75,SNR=18						
BELA	**Belgrano 2**	**30.04**	**198**	P	**P**	**16 45 04.6**	**-0.6**
PAF	**Port-aux-Franc**	**36.16**	**109**	P	**P**	**16 45 58.0**	**-0.8**
QSPA	**South Pole Qui**	**37.42**	**180**	P	**P**	**16 46 09.3**	**-0.3**
	comp=Z,5.8nm,1.1s,baz=241,slow=4.4,SNR=5.2						
	comp=Z,5.8nm,1.1s						
QSPA	**South Pole Qui**	**37.42**	**180**	P	**P**	**16 46 08.7**	**-0.9**
QSPA				IAmb	IAmb	16 46 11.4	
	comp=Z,14nm,1.3s						
VOI	**Vohitsoka**	**40.99**	**55**	P	**P**	**16 46 38.5**	**-1.3**
VNDA	**Vanda**	**48.63**	**172**	P	**P**	**16 47 41.0**	**+1.2**
	comp=Z,2.0nm,0.7s,baz=208,slow=12,SNR=3.0						
	comp=Z,2.0nm,0.7s						
CPUP	**Villa Florida**	**56.81**	**269**	P	**P**	**16 48 40.6**	**-0.4**
	comp=Z,1.6nm,1.1s,baz=146,slow=7.3,SNR=4.3						
	comp=Z,1.6nm,1.1s						
CPUP	**Villa Florida**	**56.81**	**269**	P	**P**	**16 48 40.2**	**-0.8**
CPUP				IAmb	IAmb	16 48 59.9	
	comp=Z,11nm,2.0s						
BDFB	**Brasilia**	**59.36**	**285**	P	**P**	**16 48 58.3**	**-0.8**
	comp=Z,2.4nm,0.7s,baz=133,slow=19,SNR=3.1						
	comp=Z,2.4nm,0.7s						
MSEY	**Mahe Island**	**60.03**	**53**	P	**P**	**16 49 03.3**	**-0.3**
MSEY				IAmb	IAmb	16 49 42.5	
	comp=Z,15nm,1.3s						
GO02	**Mina Guanaco**	**65.08**	**261**	P	**P**	**16 49 37.3**	**-0.3**
GO02				IAmb	IAmb	16 49 38.8	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,14nm,1.4s						
H01W2	Cape Leeuwin H	69.91	121	T	T	18 07 12.4	
	baz=219,slow=75,SNR=8.4						
H01W3	Cape Leeuwin H	69.93	121	T	T	18 07 11.2	
	baz=219,slow=75,SNR=9.6						
H01W1	Cape Leeuwin H	69.93	121	T	T	18 07 11.3	
	baz=219,slow=75,SNR=14						
LPAZ	La Paz	70.94	268	P	P	16 50 15.3	+0.4
	comp=Z,11nm,1.0s,baz=117,slow=4.5,SNR=15						
	comp=Z,11nm,1.0s						
LPAZ	La Paz	70.94	268	P	P	16 50 15.1	+0.2
LPAZ				IAmb	IAmb	16 50 16.9	
	comp=Z,17nm,1.1s						
MSWZ	Moikau Station	85.10	168	P	P	16 51 31.0	-1.5
ASAR	Alice Springs	88.92	129	P	P	16 51 52.0	+0.7
	comp=Z,0.8nm,1.0s,baz=199,slow=3.4,SNR=4.4						
	comp=Z,0.8nm,1.0s						
TXAR	Lajitas Array	127.78	270	PKP	PKPdf	16 58 02.7	+0.6
	comp=Z,1.3nm,1.1s,baz=105,slow=2.3,SNR=4.7						
YKA	Yellowknife Ar	150.45	310	PKPbc	PKPbc	16 58 47.0	+0.1
	comp=Z,3.6nm,1.0s,baz=95,slow=1.6,SNR=13						
YKA	Yellowknife Ar	150.45	310		PKPdf	16 58 46.2	+4.6
ILAR	Eielson Array	163.71	326	PKPab	PKPab	16 59 51.7	+1.1
	comp=Z,0.9nm,0.9s,baz=42,slow=3.3,SNR=5.5						
ILAR	Eielson Array	163.71	326		PKPab	16 59 51.0	+0.4

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*IDC **09** 16:41:02.1±2.6, 5°.59S×147°.42E, h176^{km}±24^{km}, mb3.6/2, mbtmp4.3/4, Error ellipse: s-maj=59.7km s-min=15.5km az=118.0*

*NEIC **09** 16:41:03.1±1.9, 5°.63S±0°.04×147°.6E±0°.2, h186^{km}±10^{km}, mb4.4/15, Error ellipse: s-maj=24.9km s-min=6.2km az=92.0*

ISC 09 16:41:01.9±0.9, **5°.63S**±0°.06×**147°.5E**±0°.1, **h170**^{km}**, n23,** σ**1^{s}.48**/26, **mb4.3**/7, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	3.56	357		Pn	16 41 59.3	+2.2
PMG	Port Moresby	3.77	186	P	Pn	16 42 02.4	+2.7
	46nm,0.3s,baz=12,slow=7.5,SNR=85						
PMG				S	Sn	16 42 45.9	+0.9
	115nm,0.3s,baz=177,slow=22,SNR=17						
PMG	Port Moresby	3.77	186		Pn	16 42 02.3	+2.5
COEN	Coen	9.32	207	Pn	Pn	16 43 15.5	+2.7
CTAO	Charters Tower	14.43	185	P	P	16 44 21.3	+0.8
MTN	Manton Dam	17.70	245	P	P	16 44 55.9	-0.7
MTN				IAmb	IAmb	16 44 56.5	
	comp=Z,8.3nm,0.8s						
WB0	Warramunga Arr	19.00	221		P	16 45 10.6	-0.1
WB0				IAmb	IAmb	16 45 14.8	
	comp=Z,12nm,0.8s						
WRAB	Tennant Creek	19.15	221	P	P	16 45 12.3	-0.1
WRAB				IAmb	IAmb	16 45 16.8	
	comp=Z,13nm,0.7s						
WRA	Warramunga Arr	19.16	221	P	P	16 45 12.2	-0.3
	comp=Z,8.9nm,0.6s,baz=48,slow=12,SNR=91						
WRA				S	S	16 48 38.6	-2.1
	comp=Z,0.3nm,0.6s,baz=24,slow=18,SNR=1.9						
WRA	Warramunga Arr	19.16	221		P	16 45 10.9	-1.5
KNRA	Kununurra	20.96	240	P	P	16 45 29.7	-2.0
KNRA				IAmb	IAmb	16 46 11.9	
	comp=Z,22nm,1.3s						
AS31	Alice Springs	22.22	215		P	16 45 45.1	+0.2
AS31				IAmb	IAmb	16 45 45.8	
	comp=Z,3.1nm,0.6s						
ASAR	Alice Springs	22.23	215	P	P	16 45 45.0	+0.2
	comp=Z,8.5nm,0.7s,baz=50,slow=8.6,SNR=230						
ASAR				S	S	16 49 37.5	+0.3
	comp=Z,1.5nm,1.0s,baz=34,slow=19,SNR=9.1						
	comp=Z,8.5nm,0.7s						
INKA	Innaminka	22.92	196	P	P	16 45 51.2	+0.1
SOEI	Soe	23.41	258	P	P	16 45 56.7	+0.7
SOEI				IAmb	IAmb	16 46 22.3	
	comp=Z,12nm,1.3s						
FITZ	Fitzroy Crossi	24.71	238	P	P	16 46 06.6	-1.0
MBWA	Marble Bar	31.05	238	P	P	16 47 02.3	-1.7
MBWA				IAmb	IAmb	16 47 15.8	
	comp=Z,12nm,1.1s						
MORW	Morawa	37.81	228	P	P	16 48 00.9	-1.2
MORW				IAmb	IAmb	16 48 30.4	
	comp=Z,14nm,1.2s						
NNZ	Nelson	42.30	151	P	P	16 48 37.1	-1.6
FOZ	Fox Glacier	42.55	156	P	P	16 48 39.6	-1.2
F15K	North Star Dit	79.18	18	P	P	16 52 46.6	-0.9
F15K				IAmb	IAmb	16 53 00.5	
	comp=Z,9.1nm,1.1s						
BWN	Browne	83.66	23	P	P	16 53 10.8	-0.3
ILAR	Eielson Array	84.93	23	P	P	16 53 16.4	-1.1
	comp=Z,0.5nm,0.6s,baz=256,slow=5.5,SNR=5.0						
	comp=Z,0.5nm,0.6s						

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*IDC **09** 16:45:07.1±1.2, 52°.90S×11°.46E, h0^{km}, mb4.3/6, mbtmp4.3/7, ML3.6/1, Error ellipse: s-maj=41.7km s-min=24.0km az=59.0*

*NEIC **09** 16:45:08.4±1.8, 53°.0S±0°.1×11°.8E±0°.2, h10^{km}±1^{km}, mb4.7/12, Error ellipse: s-maj=26.9km s-min=21.9km az=140.0*

ISC 09 16:45:08.0±0.7, **52°.9S**±0°.1×**11°.7E**±0°.1, **h10**^{km}**, n34,** σ**0^{s}.83**/27, **mb4.6**/10, **1C-1D, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	19.94	193	P	P	16 49 39.7	0.0
	0.2nm,0.3s,baz=6.6,slow=11,SNR=9.7						
	8.7nm,1.0s						
SNAA	Sanae	19.94	193	P	P	16 49 39.7	0.0
SYO	Syowa Base	20.80	152	⇑eP	P	16 49 50.4	+1.4
SYO	Syowa Base	20.80	152	⇓epP	Pn	16 49 53.6	+2.2
H04S2	CROZET ISLANDS	26.35	93	T	T	17 18 37.3	
	baz=242,slow=75,SNR=15						
H04S3	CROZET ISLANDS	26.36	93	T	T	17 18 38.9	
	baz=242,slow=75,SNR=13						
H04S1	CROZET ISLANDS	26.37	93	T	T	17 18 37.9	
	baz=242,slow=75,SNR=16						
BELA	Belgrano 2	30.03	198	P	P	16 51 16.2	-0.3
BELA				IAmb	IAmb	16 51 17.1	
	comp=Z,7.7nm,1.3s						
QSPA	South Pole Qui	37.38	180	P	P	16 52 20.8	+0.2
	comp=Z,7.7nm,1.1s,baz=213,slow=4.6,SNR=8.8						
	comp=Z,7.7nm,1.1s						
QSPA	South Pole Qui	37.38	180	P	P	16 52 20.6	0.0
QSPA				IAmb	IAmb	16 52 22.9	
	comp=Z,11nm,1.2s						
ABPO	Ambohimpanom	43.59	53	P	P	16 53 12.6	+0.2
ABPO				IAmb	IAmb	16 53 13.8	
	comp=Z,34nm,1.6s						
VNDA	Vanda	48.57	172	P	P	16 53 52.0	+1.2
	comp=Z,3.3nm,0.9s,baz=219,slow=11,SNR=4.3						
	comp=Z,3.3nm,0.9s						
VNDA	Vanda	48.57	172	P	P	16 53 51.2	+0.4
VNDA				IAmb	IAmb	16 54 07.2	
	comp=Z,20nm,1.6s						
CPUP	Villa Florida	56.92	269	P	P	16 54 52.0	-1.2
	comp=Z,1.1nm,0.9s,baz=135,slow=1.4,SNR=5.3						
	comp=Z,1.1nm,0.9s						
CPUP	Villa Florida	56.92	269	P	P	16 54 51.9	-1.2
CO01	Juntas del Tor	61.92	257	P	P	16 55 28.2	+0.3
CO01				IAmb	IAmb	16 55 29.8	
	comp=Z,7.9nm,1.1s						
PTLB	Pontes e Lacer	66.25	276	P	P	16 55 56.3	+0.1
PTLB				IAmb	IAmb	16 55 56.9	
	comp=Z,5.4nm,1.2s						
PB11	IPOC Station P	69.30	264	P	P	16 56 15.9	+0.2
H01W2	Cape Leeuwin H	69.80	121	T	T	18 13 24.0	
	baz=219,slow=75,SNR=9.4						
H01W3	Cape Leeuwin H	69.81	121	T	T	18 13 25.1	
	baz=219,slow=75,SNR=7.8						
H01W1	Cape Leeuwin H	69.82	121	T	T	18 13 25.0	
	baz=219,slow=75,SNR=11						
LPAZ	La Paz	71.05	268	P	P	16 56 26.6	-0.4
	comp=Z,14nm,1.0s,baz=124,slow=3.6,SNR=24						
	comp=Z,14nm,1.0s						
LPAZ	La Paz	71.05	268	P	P	16 56 26.8	-0.1
TOO	Toolangi	81.42	145	P	P	16 57 23.0	-1.9
MQZ	McQueen's Vall	82.43	166	P	P	16 57 28.8	-1.3
ATAH	Atahualpa	84.41	266	P	P	16 57 42.2	+1.1
	comp=Z,4.5nm,0.7s,baz=329,slow=1.3,SNR=4.3						
	comp=Z,4.5nm,0.7s						
TKNZ	Takaka Hill	85.09	166	P	P	16 57 44.6	+0.8
ASAR	Alice Springs	88.81	129	P	P	16 58 02.0	-0.1
	comp=Z,0.8nm,1.0s,baz=226,slow=5.8,SNR=5.5						
	comp=Z,0.8nm,1.0s						
ASAR	Alice Springs	88.81	129	P	P	16 58 01.0	-1.2
TXAR	Lajitas Array	127.89	270	PKP	PKiKP	17 04 14.9	+0.7
	comp=Z,0.8nm,0.9s,baz=145,slow=4.6,SNR=5.8						
TXAR	Lajitas Array	127.89	270		PKPdf	17 04 14.0	+0.4
YKA	Yellowknife Ar	150.56	310	PKPbc	PKPbc	17 04 58.9	+0.3
	comp=Z,3.8nm,1.0s,baz=94,slow=1.6,SNR=17						
YKA	Yellowknife Ar	150.56	310		PKPbc	17 04 58.7	+0.1
ILAR	Eielson Array	163.81	326	PKPab	PKPab	17 06 03.2	+0.8
	comp=Z,0.9nm,0.9s,baz=39,slow=1.5,SNR=5.7						

GCMT 09 17:04:19.0±0.3, **52°.81S**±0°.05×**11°.65E**±0°.04, **h22**^{km}±1^{km}, **MW4.9**/83, **Moment Tensor Solution. s30,c33; s83,c92; Duration: 0 Moment tensor: Scale** 10^{16}**Nm;** M$_{rr}$3.54±.23; M$_{\theta\theta}$-1.14±.15; M$_{\phi\phi}$-2.39±.14; M$_{r\theta}$-0.15±.33; M$_{\theta\phi}$-0.40±.09; M$_{\phi r}$0.67±.22; **Best double couple:** M$_0$3.09600×10^{16} **NP1:**φ$_s$200.00000°, δ39.00000°, λ96.00000°. **NP2:**φ$_s$12.00000°, δ51.00000°, λ85.00000°. **Principal axes:** T 3.6240, Plg83.0000°, Azm250.0000°; N -1.0450, Plg4.0000°, Azm15.0000°; P -2.5690, Plg6.0000°, Azm105.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southwest of Africa**

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*GCG **09** 17:04:44.7±0.8, 13°.91N×89°.40W, h6^{km}±11^{km}, MD3.5*

*SNET **09** 17:04:44.0±1.0, 13°.91N×89°.38W, h8^{km}±3^{km}, ML2.4*

*CATAC **09** 17:04:45.1±0.4, 14°N±2°×8°9W±°, h3^{km}±1^{km}, M2.5/9, MLv2.5/9, Error ellipse: s-maj=4.1km s-min=2.7km az=52.2, confirmed*

ISC 09 17:04:45.2±1.2, **13°.89N**±0°.03×**89°.38W**±0°.02, **h12**^{km}±7^{km}, **n40,** σ**0^{s}.42**/49, **3C-3D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEDA	San Andres	0.09	189	eP	Pg	17 04 47.5	-0.5
CEDA				eS	Sg	17 04 49.4	-0.7
CEDA	San Andres	0.09	189	P	Pg	17 04 47.5	-0.5
CEDA				S	Sg	17 04 49.2	-0.9
QUEZ	Alcaldia de Qu	0.12	119	eP	Pg	17 04 49.4	+1.1
QUEZ				eS	Sg	17 04 52.0	+1.4
BOQS	Boqueron	0.18	148	⇓iP	Pg	17 04 49.5	0.0
BOQS				eS	Sg	17 04 52.6	+0.1
UNIC	Universidad Ca	0.18	298	eP	Pg	17 04 49.4	0.0
UNIC				eS	Sg	17 04 52.2	-0.1
PIC2	El Picacho	0.19	141	eP	Pg	17 04 49.9	+0.3
PMON	Piamonte	0.19	160	⇓eP	Pg	17 04 49.5	0.0
PMON				eS	Sg	17 04 53.0	+0.5
PMON	Piamonte	0.19	160	P	Pg	17 04 49.6	0.0
SNJE	San Jose	0.22	264	⇑iP	Pg	17 04 50.1	+0.1
UEES	Universidad Ev	0.22	142	P	Pg	17 04 49.9	-0.1
UEES	Universidad Ev	0.22	142	S	Sg	17 04 53.1	-0.2
SBLS	San Blas	0.24	257	⇑eP	Pg	17 04 50.6	+0.2
CEVE	Cerro Verde	0.25	255	eP	Pg	17 04 50.9	+0.4
CEVE	Cerro Verde	0.25	255	P	Pg	17 04 50.9	+0.4
CEVE	Cerro Verde	0.25	255	S	Sg	17 04 54.2	+0.1
JAYA	Jayaque - finc	0.25	196	eP	Pg	17 04 50.5	0.0
JAYA				eS	Sg	17 04 54.4	+0.4
JAYA	Jayaque - finc	0.25	196	eP	Pg	17 04 50.5	0.0
JAYA				i S	Sg	17 04 54.1	0.0
JAYA	Jayaque - finc	0.25	196	P	Pg	17 04 50.6	0.0
JAYA	Jayaque - finc	0.25	196	S	Sg	17 04 53.8	-0.3
RTR	El Retiro	0.26	271	⇑eP	Pg	17 04 51.0	+0.4
LFU	La Fuente	0.30	119	eP	Pg	17 04 51.5	+0.1
LOMA	Loma Larga	0.32	141	S	Sg	17 04 55.3	-0.9
LOMA	Loma Larga	0.32	141	P	Pg	17 04 51.4	-0.4
LBRS	Las Brisas	0.36	115	eP	Pg	17 04 52.7	+0.2
RBDL	Robledal	0.37	306	⇓iP	Pg	17 04 52.7	0.0
NUBE	Las Nubes	0.39	271	eP	Pg	17 04 53.1	+0.1
NUBE	Las Nubes	0.39	271	i P	Pg	17 04 53.1	+0.1
NUBE				eS	Sg	17 04 58.6	+0.3
NUBE	Las Nubes	0.39	271	P	Pg	17 04 53.3	+0.3
LALI	Alcalda de L	0.41	172	eP	Pb	17 04 54.2	-0.1
LALI	Alcalda de L	0.41	172	eS	Sg	17 04 59.3	+0.6
LALI	Alcalda de L	0.41	172	P	Pg	17 04 53.1	-0.2
LALI	Alcalda de L	0.41	172	S	Sg	17 04 59.1	+0.3
LFRS	El Faro	0.41	131	eP	Pg	17 04 53.5	+0.1
SLOZ	Alcaldia de Sa	0.41	289	P	Pg	17 04 53.2	-0.2
LLGN	La Laguna	0.50	58	eP	Pg	17 04 54.9	-0.2
LLGN	La Laguna	0.50	58	P	Pg	17 04 54.9	-0.2
MTO3	Montecristo	0.50	2	eP	Pg	17 04 54.9	-0.2
MTO3	Montecristo	0.50	2	i P	Pg	17 04 54.9	-0.2
MTO3	Montecristo	0.50	2	P	Pg	17 04 55.0	-0.2
MTO3	Montecristo	0.50	2	S	Sg	17 05 02.0	+0.1

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*IDC **09** 17:09:30.9±4.6, 12°.23S×169°.99E, h0^{km}, mb4.1/3, mbtmp4.1/3, MS3.8/3, Error ellipse: s-maj=211.7km s-min=35.9km az=140.0*

*NEIC **09** 17:10:31.5±1.3, 12°.8S±0°.1×169°.1E±0°.2, h611^{km}±8^{km}, mb4.3/16, Error ellipse: s-maj=26.3km s-min=15.2km az=115.0*

ISC 09 17:10:32.3±1.0, **12°.9S**±0°.2×**169°.0E**±0°.2, **h625**^{km}**, n28,** σ**1^{s}.00**/24, **mb4.3**/11, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.12	214	P	P	17 11 52.5	-1.6
NNZ	Nelson	28.52	173	P	P	17 15 41.6	+1.9
TCW	Tory Channel	28.63	172	P	P	17 15 41.4	+0.7
MRNZ	Matariki Terra	28.63	174	P	P	17 15 41.1	+0.4
SNZO	South Karori	28.79	171	P	P	17 15 39.2	-2.9
WB0	Warramunga Arr	33.88	254	P	P	17 16 25.2	-0.4
WB0				IAmb	IAmb	17 16 25.6	
	comp=Z,5.1nm,0.5s						
WRA	Warramunga Arr	33.95	253	P	P	17 16 26.0	-0.2
	comp=Z,2.6nm,0.5s,baz=84,slow=8.7,SNR=33						
	comp=Z,2.6nm,0.5s						
WRA	Warramunga Arr	33.95	253	P	P	17 16 26.0	-0.2
WRA	Warramunga Arr	33.95	253	IAmb	IAmb	17 16 26.6	
	comp=Z,0.1nm,0.8s						
AS31	Alice Springs	34.94	247		P	17 16 34.0	-0.4
ASAR	Alice Springs	34.94	247	P	P	17 16 34.2	-0.1
	comp=Z,2.7nm,0.5s,baz=74,slow=9.8,SNR=139						
	comp=Z,2.7nm,0.5s						
ASAR	Alice Springs	34.94	247	P	P	17 16 34.2	-0.1
BBOO	Buckleboo	36.07	231	P	P	17 16 43.9	+0.4
BBOO				IAmb	IAmb	17 16 52.2	
	comp=Z,15nm,1.3s						
MTN	Manton Dam	36.91	266	P	P	17 16 49.8	-0.7
MTN				IAmb	IAmb	17 16 55.8	
	comp=Z,10.0nm,1.1s						
KNRA	Kununurra	39.07	261	P	P	17 17 08.2	+0.2
KNRA				IAmb	IAmb	17 17 34.2	
	comp=Z,16nm,1.2s						
FORT	Forrest	41.71	238	P	P	17 17 28.8	+0.1
FORT				IAmb	IAmb	17 17 34.4	
	comp=Z,9.9nm,1.1s						
FITZ	Fitzroy Crossi	42.05	257	P	P	17 17 32.1	+0.6
PSA00	Pilbara Seismi	47.59	252	P	P	17 18 14.6	+0.8
PSA00				IAmb	IAmb	17 18 16.2	
	comp=Z,21nm,1.4s						
JNU	Nakatsue	58.42	323	LR	LR	17 41 32.2	
	comp=Z,46nm,20.4s,baz=315,slow=33						
VNDA	Vanda	64.78	182	P	P	17 20 09.9	-0.5
VNDA				IAmb	IAmb	17 20 14.2	
	comp=Z,10nm,1.4s						
QSPA	South Pole Qui	77.17	180	P	P	17 21 24.4	+1.4
M16K	Timber Creek	77.90	15	P	P	17 21 27.2	+0.4
M16K				IAmb	IAmb	17 21 39.1	
	comp=Z,12nm,0.7s						
K15K	Wolf Creek Mou	78.37	14	P	P	17 21 28.4	-0.8
LZDM	Lanzhou Array	78.38	311	LR	LR	17 56 00.1	
	comp=Z,46nm,20.3s,baz=355,slow=35						
BRDH	Bariadhala	83.55	295	LR	LR	18 03 18.1	
	comp=Z,72nm,18.1s,baz=67,slow=38						
ILAR	Eielson Array	84.23	17	P	P	17 21 59.5	+0.5
	comp=Z,0.4nm,0.9s,baz=204,slow=4.0,SNR=1.7						
	comp=Z,0.4nm,0.9s						
ILAR	Eielson Array	84.23	17	P	P	17 21 59.5	+0.5
PMSA	Palmer Station	92.96	160	P	P	17 22 39.8	-0.1

GCMT 09 17:11:53.0±0.3, **52°.76S**±0°.03×**11°.62E**±0°.03, **h15**^{km}±1^{km}, **MW4.9**/109, **Moment Tensor Solution. s35,c41; s109,c138; Duration: 0 Moment tensor: Scale** 10^{16} **Nm;** M$_{rr}$2.90±.18; M$_{\theta\theta}$-0.24±.10; M$_{\phi\phi}$-2.65±.12; M$_{r\theta}$-0.57±.24; M$_{\theta\phi}$-0.82±.07; M$_{\phi r}$-0.15±.20; **Best double couple:** M$_0$2.96100×10^{16} **NP1:**φ$_s$8.00000°, δ43.00000°, λ76.00000°. **NP2:**φ$_s$207.00000°, δ49.00000°, λ102.00000°. **Principal axes:** T 2.9990, Plg80.0000°, Azm180.0000°; N -0.0720, Plg9.0000°, Azm18.0000°; P -2.9220, Plg3.0000°, Azm288.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southwest of Africa**

GCMT 09 17:19:57.0±0.3, **52°.70S**±0°.03×**11°.70E**±0°.03, **h23**^{km}, **MW5.0**/102, **Moment Tensor Solution. s37,c42; s102,c133; Duration: 0 Moment tensor: Scale** 10^{16} **Nm;** M$_{rr}$4.56±.27; M$_{\theta\theta}$-1.16±.16; M$_{\phi\phi}$-3.39±.17; M$_{r\theta}$-1.29±.25; M$_{\theta\phi}$-1.15±.11; M$_{\phi r}$0.39±.20; **Best double couple:** M$_0$4.38200×10^{16} **NP1:**φ$_s$10.00000°, δ46.00000°, λ71.00000°. **NP2:**φ$_s$216.00000°, δ48.00000°, λ108.00000°. **Principal axes:** T 4.8850, Plg76.0000°, Azm199.0000°; N -0.9950, Plg14.0000°, Azm24.0000°; P -3.8800, Plg1.0000°, Azm293.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southwest of Africa**

GCMT 09 17:27:10.0±0.3, **52°.80S**±0°.03×**11°.68E**±0°.04, **h23**^{km}±1^{km}, **MW5.0**/91, **Moment Tensor Solution. s23,c28; s91,c113; Duration: 0 Moment tensor: Scale** 10^{16} **Nm;** M$_{rr}$4.21±.29; M$_{\theta\theta}$-1.76±.18; M$_{\phi\phi}$-2.44±.17; M$_{r\theta}$-0.72±.27; M$_{\theta\phi}$-1.38±.10; M$_{\phi r}$0.37±.22; **Best double couple:** M$_0$3.93300×10^{16} **NP1:**φ$_s$29.00000°, δ45.00000°, λ77.00000°. **NP2:**φ$_s$227.00000°, δ47.00000°, λ102.00000°. **Principal axes:** T 4.3410, Plg81.0000°, Azm211.0000°; N -0.8070, Plg9.0000°, Azm39.0000°; P -3.5240, Plg1.0000°, Azm308.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southwest of Africa**

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*IDC **09** 17:27:26.1±3.5, 5°.95S×146°.81E, h34^{km}±29^{km}, mb3.6/11, mbtmp3.8/13, ML3.9/1 Error ellipse: s-maj=30.8km s-min=12.3km az=99.0*

*NEIC **09** 17:27:28.4±1.5, 5°.98S±0°.06×146°.70E±0°.08, h48^{km}±8^{km}, mb4.0/14, Error ellipse: s-maj=11.8km s-min=7.9km az=122.0*

ISC 09 17:27:27.1±0.6, **5°.98S**±0°.06×**146°.61E**±0°.09, **h35**^{km}**, n38,** σ**1^{s}.85**/34, **mb3.9**/14, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.44	171	Pn	Pn	17 28 18.7	+0.5
	29nm,0.3s,baz=35,slow=5.1,SNR=22						
PMG				Sn	Sn	17 28 58.9	+1.0
	15nm,0.3s,baz=105,slow=22,SNR=6.3						
PMG				Lg	Lg	17 29 14.6	
	20nm,0.3s,baz=352,slow=20,SNR=5.8						
PMG	Port Moresby	3.44	171		Pn	17 28 19.0	+0.8
MANU	Manus Island	3.98	11		Pn	17 28 26.4	+0.6
RABL	Rabaul	5.81	72		Pn	17 28 50.6	-0.2
COEN	Coen	8.62	203		Pn	17 29 30.8	+1.4
CTAO	Charters Tower	14.03	181	Pn	Pn	17 30 45.5	+2.1
MTN	Manton Dam	16.72	245	P	Pn	17 31 20.8	+2.1
MTN				IAmb	IAmb	17 31 52.1	
	comp=Z,14nm,1.3s						
WB0	Warramunga Arr	18.14	220	P	P	17 31 35.7	-0.7
WB0				IAmb	IAmb	17 32 12.1	
	comp=Z,6.2nm,1.1s						
WRA	Warramunga Arr	18.30	220	P	P	17 31 38.8	+0.6
	comp=Z,0.4nm,0.3s,baz=38,slow=11,SNR=32						
WRA				S	Sn	17 34 57.6	-4.2
	comp=Z,0.3nm,0.6s,baz=41,slow=22,SNR=1.9						
WRA				PcP	PcP	17 36 10.4	+1.0
	comp=Z,0.6nm,0.5s,baz=34,slow=1.9,SNR=6.7						
	comp=Z,1.4nm,0.6s						
KNRA	Kununurra	19.99	240	P	P	17 31 56.3	-0.4
KNRA				IAmb	IAmb	17 32 04.7	
	comp=Z,23nm,1.5s						
AS31	Alice Springs	21.42	214	P	P	17 32 13.0	+0.9
ASAR	Alice Springs	21.42	214	P	P	17 32 13.1	+0.9
	comp=Z,0.6nm,0.4s,baz=50,slow=9.3,SNR=39						
ASAR				S	S	17 36 10.0	+1.9
	comp=Z,0.4nm,0.7s,baz=33,slow=22,SNR=4.4						
	comp=Z,0.6nm,0.4s						
INKA	Innaminka	22.35	194	P	P	17 32 21.4	-0.6
INKA				IAmb	IAmb	17 32 40.5	
	comp=Z,2.3nm,0.8s						
FITZ	Fitzroy Crossi	23.75	238	P	P	17 32 34.9	-1.5
STKA	Stephens Creek	26.19	190	P	P	17 32 58.1	-0.3
	comp=Z,0.8nm,0.6s,baz=20,slow=8.4,SNR=3.2						
STKA				S	S	17 37 21.6	-6.6
	comp=Z,0.5nm,0.3s,baz=187,slow=20,SNR=1.3						
	comp=Z,0.8nm,0.6s						
STKA	Stephens Creek	26.19	190	IAmb	IAmb	17 33 07.5	
	comp=Z,21nm,1.1s						
TOLI2	Tolitoli	26.74	284	P	P	17 33 03.2	-0.4
TOLI2				IAmb	IAmb	17 33 19.8	
	comp=Z,5.2nm,0.8s						
H11S3	WAKE ISLAND Hy	31.36	39	T	T	18 06 31.3	
	baz=220,slow=74,SNR=9.2						
H11S2	WAKE ISLAND Hy	31.37	39	T	T	18 06 32.4	
	baz=220,slow=74,SNR=7.6						
H11S1	WAKE ISLAND Hy	31.38	39	T	T	18 06 33.3	
	baz=220,slow=74,SNR=6.1						
H11N1	WAKE ISLAND Hy	32.41	38	T	T	18 07 50.0	
	baz=218,slow=76,SNR=6.5						
H11N3	WAKE ISLAND Hy	32.42	38	T	T	18 07 51.2	
	baz=218,slow=76,SNR=6.5						
H11N2	WAKE ISLAND Hy	32.42	38	T	T	18 07 50.4	
	baz=218,slow=76,SNR=15						
MORW	Morawa	36.90	228	P	P	17 34 32.7	+0.1
KSRS	Korea Array	46.60	339	P	P	17 35 51.7	-0.1
	comp=Z,2.1nm,0.9s,baz=160,slow=9.4,SNR=4.2						
	comp=Z,2.1nm,0.9s						
CMAR	Chiang Mai Arr	52.90	298	P	P	17 36 41.8	+1.7
	comp=Z,1.6nm,0.8s,baz=120,slow=6.4,SNR=13						
	comp=Z,1.6nm,0.8s						
CMAR	Chiang Mai Arr	52.90	298	P	P	17 36 40.3	+0.2
SONM	Songino Array	64.20	331	P	P	17 37 59.3	+0.8
	comp=Z,0.5nm,0.6s,baz=131,slow=6.1,SNR=2.8						
	comp=Z,0.5nm,0.6s						
SONM	Songino Array	64.20	331	IAmb	IAmb	17 38 01.5	
	comp=Z,1.0nm,1.0s						
VNDA	Vanda	71.95	177	P	P	17 38 48.5	+2.0
MKAR	Makanchi Array	77.24	321	P	P	17 39 17.0	-0.8
	comp=Z,0.5nm,0.6s,baz=98,slow=8.7,SNR=4.1						
	comp=Z,0.5nm,0.6s						
MAKZ	Makanchi	77.44	321	P	P	17 39 18.7	-0.2
MAKZ				IAmb	IAmb	17 39 36.1	
	comp=Z,5.8nm,1.4s						
ZALV	Zalesovo Beam	78.79	328	P	P	17 39 24.2	-1.9
	comp=Z,0.4nm,0.4s,baz=98,slow=11,SNR=3.8						
	comp=Z,0.4nm,0.4s						
KURBB	Kurchatov Arra	80.99	323	P	P	17 39 36.4	-1.7
	comp=Z,0.2nm,0.8s,baz=101,slow=6.4,SNR=1.8						
	comp=Z,0.2nm,0.8s						
QSPA	South Pole Qui	83.98	180	P	P	17 39 53.2	-0.5
	comp=Z,1.1nm,0.5s,baz=198,slow=1.0,SNR=14						
	comp=Z,1.1nm,0.5s						
QSPA	South Pole Qui	83.98	180	IAmb	IAmb	17 39 53.4	
	comp=Z,1.5nm,0.7s						
ILAR	Eielson Array	85.62	23	P	P	17 40 00.1	-1.6
	comp=Z,1.0nm,0.7s,baz=253,slow=5.6,SNR=14						
	comp=Z,1.0nm,0.7s						
BVAR	Borovoye Array	86.53	324	P	P	17 40 04.3	-2.1
	comp=Z,0.5nm,0.6s,baz=101,slow=7.7,SNR=4.0						
	comp=Z,0.5nm,0.6s						

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*IDC **09** 17:35:25.8±1.4, 52°.96S×11°.58E, h0^{km}, mb4.1/5, mbtmp4.2/6, ML3.8/1, MS4.1/8, Error ellipse: s-maj=44.6km s-min=26.5km az=50.0*

*NEIC **09** 17:35:27.7±1.5, 53°.2S±0°.1×11°.7E±0°.2, h10^{km}±1^{km}, mb4.8/8, Error ellipse: s-maj=25.6km s-min=17.6km az=51.0*

*GCMT **09** 17:35:28.7±0.3, 52°.96S±0°.02×11°.35E±0°.04, h12^{km}, MW4.9/82, Moment Tensor Solution. s11,c12; s82,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.34±.11; M$_{\theta\theta}$2.27±.08; M$_{\phi\phi}$-1.93±.10; M$_{r\theta}$-0.43±.28; M$_{\theta\phi}$-0.32±.10; M$_{\phi r}$-2.90±.32; Best double couple: M$_0$3.27200×10^{16}*

NP1:φ$_s$308.00000°,δ51.00000°,λ-17.00000°. NP2: φ$_s$48.00000°,δ77.00000°,λ-140.00000°. Principal axes: T 2.3590, Plg16.0000°, Azm173.0000°; N 1.8210, Plg48.0000°, Azm64.0000°; P -4.1850, Plg37.0000°, Azm276.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 09 17:35:26.8±0.8**,53°.1S**±0°.1×**11°.8E**±0°.2**,h10^{km},n41, σ1^{s}46**/25**,mb4.5**/6**,MS4.1**/7**,7C,Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TROLL	Troll, Antarti	19.44	189	⇑P	Pn	17 39 57.6	+3.3
	comp=Z,2µm,0.9s						
SNAA	Sanae	19.75	194	⇑P	Pn	17 39 59.0	+1.1
	comp=Z,685nm,1.0s						
SNAA	Sanae	19.75	194	P	Pn	17 39 58.7	+0.8
	comp=Z,0.3nm,0.3s,baz=15,slow=11,SNR=38						
SNAA				LR	LR	17 46 04.4	
	comp=Z,431nm,20.6s,baz=14,slow=32						
	comp=Z,32nm,1.0s						
SNAA	Sanae	19.75	194	P	P	17 39 56.3	-0.2
SNAA				IAmb	IAmb	17 40 01.3	
	comp=Z,60nm,1.1s						
VNA1	Neumayer--Stat	19.83	200	⇑P	Pn	17 40 00.2	+1.5
	comp=Z,30nm,1.0s						
VNA2	Neumayer--Watz	19.88	199	⇑P	Pn	17 40 00.6	+1.3
	comp=Z,56nm,0.9s,baz=26,slow=13						
SYO	Syowa Base	20.58	151	⇑*e*P	P	17 40 01.2	-4.1
SYO	Syowa Base	20.58	151	⇑*e*pP	pP	17 40 10.0	+2.9
VNA3	Neumayer Olymp	20.58	200	⇑P	P	17 40 06.2	+0.8
	comp=Z,46nm,0.8s						
SUR	Sutherland	21.67	21	P	P	17 40 18.1	+0.4
SUR				IAmb	IAmb	17 40 19.8	
	comp=Z,44nm,1.1s						
H04S2	CROZET ISLANDS	26.25	93	T	T	18 08 54.7	
	baz=242,slow=75,SNR=28						
H04S3	CROZET ISLANDS	26.26	93	T	T	18 08 56.2	
	baz=242,slow=75,SNR=32						
H04S1	CROZET ISLANDS	26.27	93	T	T	18 08 52.7	
	baz=242,slow=75,SNR=33						
BOSA	Boshof	26.37	27	LR	LR	17 49 10.8	
	comp=Z,455nm,21.7s,baz=202,slow=31						
H04N3	CROZET ISLANDS	26.52	91	T	T	18 09 15.5	
	baz=249,slow=78,SNR=14						
H04N1	CROZET ISLANDS	26.52	91	T	T	18 09 13.1	
	baz=249,slow=78,SNR=11						
H04N2	CROZET ISLANDS	26.54	91	T	T	18 09 13.7	
	baz=249,slow=78,SNR=9.7						
BELA	Belgrano 2	29.86	198	P	P	17 41 33.4	-0.3
LBTB	Lobatse	29.88	26	LR	LR	17 51 36.5	
	comp=Z,340nm,20.0s,baz=195,slow=32						
TSUM	Tsumeb	34.09	10	LR	LR	17 53 50.1	
	comp=Z,725nm,20.0s,baz=182,slow=32						
MATP	Matopo	35.04	28	LR	LR	17 54 41.4	
	comp=Z,401nm,21.4s,baz=193,slow=33						
QSPA	South Pole Qui	37.17	180	P	P	17 42 38.9	+1.3
	comp=Z,6.4nm,1.1s,baz=238,slow=6.2,SNR=10.0						
QSPA				LR	LR	17 57 14.5	
	comp=Z,390nm,20.0s,baz=193,slow=35						
	comp=Z,6.4nm,1.1s						
QSPA	South Pole Qui	37.17	180	P	P	17 42 37.2	-0.4
QSPA				IAmb	IAmb	17 42 44.9	
	comp=Z,20nm,1.3s						
PMSA	Palmer Station	38.41	222	LR	LR	17 54 35.2	
	comp=Z,160nm,18.7s,baz=108,slow=30						
VNDA	Vanda	48.35	172	LR	LR	18 03 33.4	
	comp=Z,223nm,21.5s,baz=252,slow=35						
CPUP	Villa Florida	57.00	269	P	P	17 45 10.2	-2.3
	comp=Z,0.3nm,0.7s,baz=141,slow=7.2,SNR=3.4						
	comp=Z,0.3nm,0.7s						
CPUP	Villa Florida	57.00	269	P	P	17 45 12.6	+0.1
BDFB	Brasilia	59.61	285	P	P	17 45 32.0	+1.0
	comp=Z,1.6nm,0.4s,baz=160,slow=4.6,SNR=3.1						
	comp=Z,1.6nm,0.4s						
CO01	Juntas del Tor	61.96	257	P	P	17 45 45.9	-1.1
H01W2	Cape Leeuwin H	69.62	121	T	T	19 03 40.6	
	baz=219,slow=75,SNR=15						
H01W3	Cape Leeuwin H	69.63	121	T	T	19 03 41.2	
	baz=219,slow=75,SNR=15						
H01W1	Cape Leeuwin H	69.63	121	T	T	19 03 46.7	
	baz=219,slow=75,SNR=16						
LPAZ	La Paz	71.13	268	P	P	17 46 46.1	-0.1
	comp=Z,7.3nm,1.0s,baz=152,slow=4.4,SNR=14						
	comp=Z,7.3nm,1.0s						
LPAZ	La Paz	71.13	268	P	P	17 46 45.9	-0.3
ASAR	Alice Springs	88.61	129	P	P	17 48 21.3	+1.3
	comp=Z,0.7nm,0.9s,baz=209,slow=4.8,SNR=11						
	comp=Z,0.7nm,0.9s						
PLID	Pearl Lake	145.58	278		PKPbc	17 55 04.4	-0.5
G08A	Pilot Rock	147.46	276		PKPab	17 55 11.8	-0.5
TIXI	Tiksi	147.49	32	PKPbc	PKPab	17 55 12.5	+1.1
E09A	Wood Farm, Sta	147.60	279	PKPbc	PKiKP	17 55 12.9	+0.4
J05D	Fort Rock, OR	147.73	272	PKPbc	PKiKP	17 55 13.1	0.0
YKA	Yellowknife Ar	150.76	310	PKPbc	PKiKP	17 55 18.1	-0.3
	comp=Z,1.9nm,0.9s,baz=95,slow=1.4,SNR=13						

GCMT 09 17:44:29.0±0.4**,53°.00S**±0°.03×**11°.38E**±0°.07**,h27^{km}**±1^{km}**, MW5.1**/67**,Moment Tensor Solution. s23,c24; s67,c82; Duration: 0 Moment tensor: Scale** 10^{16}**Nm;** M$_{rr}$6.22±.48; M$_{\theta\theta}$-3.22±.30; M$_{\phi\phi}$-2.99±.29; M$_{r\theta}$-0.25±.53; M$_{\theta\phi}$-2.20±.16; M$_{\phi r}$-1.04±.51; **Best double couple:** M$_0$5.85700×10^{16} **NP1:**φ$_s$51.00000°,δ41.00000°, λ97.00000°. **NP2:**φ$_s$222.00000°,δ50.00000°,λ84.00000°. **Principal axes:** T 6.3360, Plg84.0000°, Azm90.0000°; N -0.9480, Plg5.0000°, Azm226.0000°; P -5.3780, Plg4.0000°, Azm316.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southwest of Africa**

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*RHSSO **09** 17:46:31.3±0.4, 43°.23N×18°.01E, h8^{km}, ML2.6/5*
*PDG **09** 17:46:31.3±0.1, 43°.23N×18°.01E, h12^{km}, MD2.9/1, ML2.8/12, Error ellipse: s-maj=0.2km s-min=0.2km az=90.0*

ISC 09 17:46:31.2±1.1**,43°.25N**±0°.03×**18°.02E**±0°.02**,h5^{km}**±9^{km}**, n29,**σ**0^{s}77**/58**,10C-2D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLINJ	Klinje	0.42	101	*e*Pg	Pg	17 46 39.4	0.0
KLINJ				*e*Sg	Sg	17 46 46.2	+1.2
STON	Ston	0.44	212	*i* Pg	Pg	17 46 39.3	-0.4
STON				Sg	Sg	17 46 45.6	0.0
BRY	Bratogost	0.52	132	⇑*i*Pg	Pg	17 46 40.9	-0.3
BRY				*i* Sg	Sg	17 46 48.8	+0.9
TREB	Trebinje	0.58	155	⇑*i*Pg	Pg	17 46 41.6	-0.9
TREB				*e*Sg	Sg	17 46 50.3	+0.2
DBRK	Dubrovnik	0.59	171	*e*Pg	Pg	17 46 42.3	-0.2
DBRK				Sg	Sg	17 46 50.2	0.0
UPM	Unac-Piva	0.65	94	⇑*i*Pg	Pg	17 46 43.4	-0.4
UPM				*i* Sg	Sb	17 46 53.9	-0.7
RICI	Ricice	0.69	291	*e*Pg	Pg	17 46 44.4	-0.1
RICI				Sg	Sg	17 46 54.6	+1.1
MAKA	Makarska	0.73	273	*e*Pg	Pg	17 46 44.7	-0.5
MAKA				Sg	Sg	17 46 55.6	+0.9
NKME	Niksic	0.84	125	⇓*i*Pg	Pg	17 46 46.6	-0.7
NKME				*e*Sg	Sb	17 46 59.4	-0.5
HCY	Herceg Novi	0.87	156	⇑*i*Pg	Pg	17 46 47.0	-1.0
HCY				*i* Sg	Sb	17 47 00.6	-0.3
LSTV	Lastovo	0.95	240	*e*Pg	Pg	17 46 48.1	-1.4
LSTV				Sg	Sg	17 47 01.8	-0.1
CEME	Cevo	0.96	136	⇑*i*Pg	Pg	17 46 48.7	-1.0
CEME				*e*Sg	Sb	17 47 03.7	+0.2
PLE	Pljevlja	1.00	85	⇑*i*Pg	Pg	17 46 50.1	-0.4
PLE				*i* Sg	Sn	17 47 06.0	-0.7
RUDO	Rudo	1.05	69	*e*Pg	Pg	17 46 50.3	-1.1
RUDO				*e*Sg	Sg	17 47 05.1	0.0
HVAR	Hvar	1.15	267	*e*Pg	Pg	17 46 52.4	-0.8
HVAR				Sg	Sg	17 47 08.0	-0.1
KOME	Kolasin	1.17	109	*e*Pg	Pg	17 46 52.8	-0.8
KOME				*e*Sg	Sn	17 47 11.0	+0.3
PDG	Podgorica	1.22	132	⇑*i*Pg	Pg	17 46 53.7	-1.0
PDG				*i* Sg	Sn	17 47 12.7	+0.8
DRME	Dracevica, Mon	1.37	141	⇑*i*Pg	Pn	17 46 56.5	-0.5
DRME				*e*Sg	Sn	17 47 17.0	+1.6
KIJV	Kijevo	1.39	303	*e*Pg	Pn	17 46 57.1	-0.3
KIJV				Sg	Sg	17 47 16.9	+0.9
IVA	Berane	1.43	105	⇓*i*Pg	Pn	17 46 57.6	-0.3
IVA				*i* Sg	Sg	17 47 19.3	+2.3
PVY	Plav	1.57	114	⇑*i*Pg	Pn	17 46 59.9	0.0
PVY				*i* Sg	Sg	17 47 22.8	+1.2
ULC	Ulcinj	1.57	144	⇑*i*Pg	Pn	17 46 59.8	0.0
ULC				*i* Sg	Sg	17 47 22.5	+0.8
BLY	Banja Luka	1.62	338	*e*Pn	Pn	17 47 00.2	-0.2
BLY				*e*Sn	Sn	17 47 21.3	-0.3
ZIRJ	Zirje	1.77	284	*e*Pn	Pn	17 47 03.0	+0.4
ZIRJ				Sn	Sn	17 47 25.4	-0.1
MORI	Morici	1.79	291	*e*Pn	Pn	17 47 03.6	+0.9
MORI				Sn	Sn	17 47 26.6	+0.7
KNYS	Krupa na Uni	2.05	324	*e*Pn	Pn	17 47 06.4	+0.1
KNYS				*e*Sn	Sn	17 47 32.3	0.0
DUGI	Dugi Otok	2.27	290	*e*Pn	Pn	17 47 10.6	+1.1
DUGI				Sn	Sn	17 47 39.0	+1.1
VIRC	Vir	2.39	297	*e*Pn	Pn	17 47 11.6	+0.6
VIRC				Sn	Sn	17 47 40.4	-0.2
MORH	Mrgy, Hungar	3.00	8	*e*Pn	Pn	17 47 18.7	-0.7
MORH				*e*Sn	Sn	17 47 55.7	0.0

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*GEN **09** 17:53:51.8, 44°.02N×11°.33E, h23^{km}±1^{km}, Ml1.6*
*ROM **09** 17:53:52.6±0.1, 44°.008N±0°.004×11°.314E±0°.004, h8^{km}, ML2.0/28, Error ellipse: s-maj=0.4km s-min=0.3km az=342.0*

ISC 09 17:53:52.2±0.8**,43°.99N**±0°.03×**11°.29E**±0°.02**,h13^{km}**±5^{km}**, n32,**σ**1^{s}10**/54**,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEI	Scarperia	0.08	33	P	Pg	17 53 54.9	-0.2
SEI				S	Sg	17 53 56.2	-0.9
SEI	Scarperia	0.08	33	P	Pg	17 53 54.8	-0.2
SEI				S	Sg	17 53 56.1	-0.9
SEI				AML	AML		
	comp=E,7100µm,0.4s						
SEI				AML	AML		
	comp=N,11000µm,0.4s						
MOCL	Monte Cuccoli	0.09	283	P	Pg	17 53 55.6	+0.5
MOCL				S	Sg	17 53 57.5	+0.4
MOCL				AML	AML		
	comp=N,3025µm,0.5s						
MOCL				AML	AML		
	comp=E,1740µm,0.1s						
MPPT	Montemurlo	0.15	259	P	Pb	17 53 57.0	0.0
MPPT				S	Sg	17 53 59.8	+1.2
MPPT				AML	AML		
	comp=E,866µm,1.2s						
MPPT				AML	AML		
	comp=N,906µm,0.7s						
MPPT				AML	AML		
	comp=E,866µm,0.8s						
FIE	Fiesole	0.18	180	P	Pb	17 53 57.5	+0.1
FIE				S	Sb	17 54 00.8	0.0
FNVD	Fontana Vidola	0.22	326	P	Pb	17 53 57.6	-0.6
FNVD				S	Sg	17 54 00.8	+0.4
FNVD				AML	AML		
	comp=E,516µm,0.9s						
FNVD				AML	AML		
	comp=N,862µm,1.1s						
FNVD				AML	AML		
	comp=E,516µm,1.1s						
FNVD				AML	AML		
	comp=N,862µm,0.9s						
BRIS	BRISIGHELLA	0.23	43	P	Pb	17 54 01.4	+3.1
BRIS				S	Sb	17 54 07.8	+5.5
BRIS				AML	AML		
	comp=E,232µm,0.3s						
BRIS				AML	AML		
	comp=N,406µm,0.2s						
CRMI	Carmignano	0.30	230	P	Pb	17 53 59.7	+0.1
CRMI				S	Sb	17 54 04.9	+0.4
CRMI				AML	AML		
	comp=N,214µm,0.4s						
CRMI				AML	AML		
	comp=E,162µm,0.2s						
CRMI				AML	AML		
	comp=E,430µm,0.2s						
CRMI				AML	AML		
	comp=N,529µm,0.4s						
LMD	Lutirano	0.31	73	P	Pb	17 53 58.9	-0.8
LMD	Lutirano	0.31	73	P	Pb	17 53 58.9	-0.8
LMD				S	Sb	17 54 03.7	-1.1
LMD				AML	AML		
	comp=E,450µm,1.3s						
LMD				AML	AML		
	comp=N,711µm,0.2s						
LMD				AML	AML		
	comp=E,450µm,0.7s						
POPM	Popiglio	0.39	279	P	Pb	17 54 01.0	-0.1
POPM				S	Sb	17 54 07.7	+0.7
POPM	Popiglio	0.39	279	P	Pb	17 54 01.0	-0.1
POPM				S	Sb	17 54 07.6	+0.5
POPM				AML	AML		
	comp=N,710µm,0.7s						
POPM				AML	AML		
	comp=N,710µm,1.3s						
POPM				AML	AML		
	comp=E,451µm,1.1s						
ASQU	Asqua	0.41	118	P	Pb	17 54 01.1	-0.2
ASQU				S	Sb	17 54 07.8	+0.3
ASQU	Asqua	0.41	118	P	Pb	17 54 01.2	-0.1
ASQU				S	Sb	17 54 07.7	+0.3
ASQU				AML	AML		
	comp=N,130µm,1.3s						
ASQU				AML	AML		
	comp=E,112µm,1.1s						
SFI	Santa Sofia	0.41	101	P	Pb	17 54 00.9	-0.5
SFI				S	Sb	17 54 07.6	+0.1
MTRZ	Monterenzio	0.41	18	P	Pg	17 54 00.3	-0.2
MTRZ				S	Sg	17 54 05.5	-0.4
MTRZ	Monterenzio	0.41	18	P	Pg	17 54 00.3	-0.2
ZCCA	Zocca	0.43	328	P	Pn	17 54 03.4	-0.8
ZCCA	Zocca	0.43	328	P	Pn	17 54 02.8	-1.4
OSSC	Osservatorio P	0.46	184	P	Pb	17 54 02.6	+0.3
OSSC				S	Sb	17 54 10.5	+1.4
OSSC	Osservatorio P	0.46	184	P	Pb	17 54 02.7	+0.4
OSSC				S	Sb	17 54 10.4	+1.3
OSSC				AML	AML		
	comp=N,213µm,1.3s						
OSSC				AML	AML		
	comp=E,184µm,0.1s						
OSSC				AML	AML		
	comp=N,213µm,0.7s						
BDI	Bagni Di Lucca	0.51	279	P	Pb	17 54 03.0	-0.1
BDI				S	Sb	17 54 11.0	+0.5
BDI	Bagni Di Lucca	0.51	279	P	Pb	17 54 03.0	-0.1
BDI				S	Sb	17 54 11.0	+0.5
BDI				AML	AML		
	comp=E,182µm,0.5s						
BDI				AML	AML		
	comp=N,222µm,0.5s						
BDI				AML	AML		
	comp=E,182µm,1.5s						
CSNT	Castellina Chi	0.51	180	P	Pb	17 54 03.5	+0.4
CSNT				S	Sb	17 54 12.1	+1.5
CSNT	Castellina Chi	0.51	180	P	Pb	17 54 03.5	+0.4
CSNT				S	Sb	17 54 11.8	+1.3
CSNT				AML	AML		
	comp=E,108µm,1.6s						
CSNT				AML	AML		
	comp=N,135µm,0.6s						
CSNT				AML	AML		
	comp=E,108µm,0.4s						
CSNT				AML	AML		
	comp=N,135µm,1.4s						
MAIM	Mastiano	0.58	263	S	Sb	17 54 12.9	+0.4
CARD	Cardoso	0.59	274	S	Sb	17 54 13.1	+0.4
CRE	Caprese Michel	0.60	127	P	Pb	17 54 05.0	+0.3
PII	Pisa	0.62	245	P	Pb	17 54 05.2	+0.4
PII				S	Sb	17 54 13.8	+0.3
PII	Pisa	0.62	245	P	Pb	17 54 05.3	+0.4
PII				AML	AML		
	comp=N,176µm,0.3s						
PII				AML	AML		
	comp=E,164µm,1.2s						
SARO	Sassorosso	0.67	287	S	Sb	17 54 15.6	+0.4
VLC	Villacollemand	0.68	285	S	Sb	17 54 15.6	+0.4

ROM 09 17:54:42.4±0.2**,44°.033N**±0°.005×**11°.270E**±0°.005**, h7^{km}**±1^{km}**,ML1.2**/8**,Error ellipse: s-maj=0.6km s-min=0.2km az=343.0,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEI	Scarperia	0.07	71	P	Pg	17 54 44.2	0.0
SEI				S	Sg	17 54 45.7	+0.1
SEI				AML	AML		
	comp=E,841µm,0.3s						
SEI				AML	AML		
	comp=N,1150µm,0.2s						
MOCL	Monte Cuccoli	0.07	247	P	Pg	17 54 44.6	+0.3
MOCL				S	Sg	17 54 46.2	+0.6
MOCL				AML	AML		
	comp=E,362µm,1.1s						
MOCL				AML	AML		
	comp=E,362µm,1.1s						
MOCL				AML	AML		
	comp=N,376µm,1.1s						
MPPT	Montemurlo	0.15	240	P	Pg	17 54 45.9	+0.4
MPPT				S	Sg	17 54 48.6	+1.0
MPPT				AML	AML		
	comp=E,84µm,0.2s						
MPPT				AML	AML		
	comp=N,75µm,0.4s						
FNVD	Fontana Vidola	0.17	322	P	Pg	17 54 46.4	+0.5
FNVD				S	Sg	17 54 49.1	+0.8
VISG	Visignano	0.20	37	P	Pg	17 54 46.9	+0.5
VISG				S	Sg	17 54 50.8	+1.8
VISG				AML	AML		
	comp=E,81µm,0.3s						
VISG				AML	AML		
	comp=N,118µm,0.2s						

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*NEIC **09** 17:59:47.9, 52°.84S×11°.41E, h12^{km}*
*MOS **09** 17:59:47.2±1.3, 52°.82S×11°.34E, h10^{km}, mb5.8/21, MS5.4/21, Error ellipse: s-maj=18.7km s-min=8.9km az=80.1*
*NEIC **09** 17:59:47.9, 52°.84S×12°.07E, h12^{km}, Moment Tensor Solution. Duration: 3^{s}4 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.65; M$_{\theta\theta}$3.24; M$_{\phi\phi}$-2.59; M$_{r\theta}$-0.43; M$_{\theta\phi}$-0.16; M$_{\phi r}$0.54; Fault plane solution: M$_0$3.05000×10^{17} NP1: φ$_s$227.08000°,δ75.20000°,λ-174.35000°. NP2: φ$_s$135.64000°,δ84.54000°,λ-14.87000°. Principal axes: T 3.2949, Plg7.0000°, Azm182.0000°; N -0.5644, Plg74.0000°, Azm296.0000°; P -2.7305, Plg14.0000°, Azm91.0000°;*
*NEIC **09** 17:59:47.9±1.7, 52°.84S±0°.09×11°.4E±0°.1, h10^{km}±1^{km}, mb5.9/143, Ms_20 5.4/248, Mwb5.7/38, Mww5.6/15 Error ellipse: s-maj=15.7km s-min=13.4km az=50.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.37; M$_{\theta\theta}$4.06; M$_{\phi\phi}$-4.43; M$_{r\theta}$0.90; M$_{\theta\phi}$0.56; M$_{\phi r}$-0.73; Fault plane solution: M$_0$4.45000×10^{17} NP1:φ$_s$41.05000°, δ74.58000°,λ177.61000°. NP2:φ$_s$131.69000°,δ87.69000°, λ15.43000°. Principal axes: T 4.2852, Plg13.0000°, Azm357.0000°; N 0.3052, Plg74.0000°, Azm140.0000°; P -4.5904, Plg9.0000°, Azm265.0000°;*
*ISC-PP **09** 17:59:47, 52°.84S×11°.39E, h3^{km}*
*IDC **09** 17:59:47.1±0.4, 52°.85S×11°.46E, h0^{km}, mb5.2/18, mbtmp5.3/19, ML5.0/1, MS5.4/45, Error ellipse: s-maj=17.0km s-min=13.3km az=92.0*
*NEIC **09** 17:59:48.2, 52°.86S×11°.38E, h10^{km}*
*GCMT **09** 17:59:49.9±0.1, 52°.86S×11°.60E, h12^{km}, MW5.7/162, Moment Tensor Solution. s126,c218; s162,c337; Duration: 1^{s}8 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.86±.04; M$_{\theta\theta}$5.47±.04; M$_{\phi\phi}$-3.62±.04; M$_{r\theta}$1.12±.10; M$_{\theta\phi}$-0.37±.04; M$_{\phi r}$0.29±.11; Best double couple: M$_0$4.67400×10^{17} NP1:φ$_s$138.00000°,δ76.00000°, λ-2.00000°. NP2:φ$_s$228.00000°,δ88.00000°, λ-166.00000°. Principal axes: T 5.6480, Plg8.0000°, Azm2.0000°; N -1.9590, Plg76.0000°, Azm235.0000°; P -3.6990, Plg11.0000°, Azm94.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 17:59:48.4±0.2**,52°.83S**±0°.04×**11°.41E**±0°.05**,h10^{km},n588, σ1^{s}66**/483**,mb5.8**/124**,MS5.4**/185**,17C-1D,Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVL	N'lazarevskaya	18.00	180	*e*P	P	18 03 58.5	-0.3
NVL				*e*S	Sn	18 07 20.3	+1.5
NVL				pmax	pmax		
	comp=Z,1µm,1.2s						
NVL				MLR	MLR		
	comp=Z,31µm,21.0s						
TROLL	Troll, Antarti	19.64	188	⇑P	P	18 04 17.3	+0.3
	comp=Z,59µm,0.9s						
TROLL				⇑S	S	18 07 57.8	-0.5
SNAA	Sanae	19.93	193	⇑P	P	18 04 20.3	+0.3
	comp=Z,9µm,0.9s						
SNAA				⇑S	Sn	18 08 08.2	+2.8
SNAA	Sanae	19.93	193	P	P	18 04 20.3	+0.3
	comp=Z,3.9nm,0.3s,baz=22,slow=10.0,SNR=404						
SNAA				S	S	18 07 48.7	-15
	comp=Z,18nm,1.2s,baz=12,slow=14,SNR=1.2						
SNAA				LR	LR	18 10 17.4	
	comp=Z,19µm,21.4s,baz=16,slow=32						
	comp=Z,436nm,0.9s						
SNAA	Sanae	19.93	193		P	18 04 19.6	-0.4
SNAA				IAmb	IAmb	18 04 23.8	
	comp=Z,1µm,1.3s						
SNAA	Sanae	19.93	193	*i* P	P	18 04 20.1	+0.1
SNAA				pmax	pmax		
	comp=Z,684nm,1.1s						
SNAA				MLR	MLR		
	comp=Z,19µm,20.0s						
VNA1	Neumayer--Stat	19.97	199	⇑P	P	18 04 20.8	+0.5
	comp=Z,1µm,1.0s						
VNA2	Neumayer--Watz	20.02	198	⇑P	P	18 04 20.9	-0.1
	comp=Z,2µm,0.8s,baz=25,slow=11						
VNA2				⇑S	Sn	18 08 09.1	+1.4
	baz=35,slow=29						
VNA3	Neumayer Olymp	20.72	199	⇑P	P	18 04 28.3	-0.3
	comp=Z,881nm,0.8s						
VNA3				⇑S	S	18 08 19.5	-0.1
SYO	Syowa Base	20.90	152	⇑*i*P	P	18 04 30.0	-0.5
SYO	Syowa Base	20.90	152	⇑*i*Pn	P	18 04 31.2	+0.7
SUR	Sutherland	21.54	22	P	P	18 04 37.5	-0.4
SUR				P	P	18 04 37.5	-0.4
SUR				S	S	18 08 38.0	+1.4
SUR				S	S	18 08 38.0	+1.4
SUR	Sutherland	21.54	22		P	18 04 37.2	-0.7
SUR				IAmb	IAmb	18 04 41.2	
	comp=Z,1µm,1.2s						
SUR	Sutherland	21.54	22	IAMs_20	IAMs_20	18 10 33.9	
	comp=Z,12µm,21.0s						
GRHM	Grahamstown, E	22.31	35	P	P	18 04 46.2	+0.2
GRHM				IAmb	IAmb	18 05 06.9	
	comp=Z,462nm,1.2s						
BOSA	Boshof	26.28	28	P	P	18 05 25.3	+1.4
	comp=Z,26nm,0.8s,baz=196,slow=10,SNR=24						
BOSA				LR	LR	18 13 42.8	
	comp=Z,10µm,21.6s,baz=202,slow=32						
	comp=Z,26nm,0.8s						
BOSA	Boshof	26.28	28		P	18 05 23.2	-0.8
BOSA				IAmb	IAmb	18 05 29.1	
	comp=Z,614nm,1.9s						
BOSA	Boshof	26.28	28	P	P	18 05 23.2	-0.8
BOSA				pmax	pmax		
	comp=Z,614nm,1.9s						
H04S2	CROZET ISLANDS	26.51	93	T	T	18 33 15.8	
	baz=242,slow=75,SNR=540						
H04S3	CROZET ISLANDS	26.52	93	T	T	18 33 17.1	
	baz=242,slow=75,SNR=184						
H04S1	CROZET ISLANDS	26.53	93	T	T	18 33 16.7	
	baz=242,slow=75,SNR=207						
CRZF	Crozet Islands	26.70	93	P	P	18 05 27.3	-0.1
CRZF				IAmb	IAmb	18 05 30.2	
	comp=Z,537nm,1.4s						
CRZF				IAMs_20	IAMs_20	18 12 36.6	
	comp=Z,8µm,22.0s						
H04N3	CROZET ISLANDS	26.77	92	T	T	18 33 37.5	
	baz=240,slow=75,SNR=71						
H04N1	CROZET ISLANDS	26.77	92	T	T	18 33 32.4	
	baz=240,slow=75,SNR=72						
H04N2	CROZET ISLANDS	26.79	92	T	T	18 33 36.9	
	baz=240,slow=75,SNR=54						
HOPE	Hope Point	28.06	248	P	P	18 05 39.9	+0.3
HOPE				IAmb	IAmb	18 05 46.9	
	comp=Z,301nm,1.7s						
HOPE	Hope Point	28.06	248	P	P	18 05 39.9	+0.3

HOPE				pmax	pmax		
	comp=Z,301nm,1.7s						
HOPE				MLR	MLR		
	comp=Z,4µm,20.0s						
PHPEN	**Phepeng**	**28.65**	**22**	P	**P**	**18 05 43.7**	**-1.5**
PHPEN				IAmb	IAmb	18 05 52.2	
	comp=Z,299nm,1.6s						
MAKGR	**Makgori**	**28.81**	**26**	*i* P	**P**	**18 05 45.5**	**-1.1**
POGA	**Pongola**	**29.61**	**39**	P	**P**	**18 05 51.8**	**-1.8**
LKGWB	**Lokgwabe**	**29.63**	**18**		**P**	**18 05 53.8**	**-0.1**
LBTB	**Lobatse**	**29.78**	**27**	P	**P**	**18 05 54.2**	**-1.0**
	comp=Z,26nm,1.0s,baz=196,slow=10,SNR=18						
LBTB				LR	LR	18 16 26.3	
	comp=Z,7µm,18.4s,baz=194,slow=34						
	comp=Z,26nm,1.0s						
LBTB	**Lobatse**	**29.78**	**27**		**P**	**18 05 53.3**	**-1.9**
BELA	**Belgrano 2**	**30.01**	**198**		**P**	**18 05 55.9**	**-0.8**
BELA				IAmb	IAmb	18 05 57.9	
	comp=Z,379nm,1.2s						
WIN	**Windhoek**	**30.53**	**10**	P	**P**	**18 06 00.9**	**-1.1**
WIN	**Windhoek**	**30.53**	**10**	P	**P**	**18 06 00.9**	**-1.1**
WIN				pmax	pmax		
	comp=Z,126nm,1.5s						
WIN				MLR	MLR		
	comp=Z,20µm,20.0s						
KOOLE	**Kule**	**30.54**	**16**	*i* P	**P**	**18 06 00.9**	**-1.1**
KGCAE	**Kacgae**	**31.05**	**20**		**P**	**18 06 05.2**	**-1.3**
KGCAE				IAmb	IAmb	18 06 09.1	
	comp=Z,132nm,1.1s						
KGCAE	**Kacgae**	**31.05**	**20**	*i* P	**P**	**18 06 05.9**	**-0.6**
LPHEP	**Lephephe**	**31.42**	**26**		**P**	**18 06 08.8**	**-1.0**
LPHEP				IAmb	IAmb	18 06 12.9	
	comp=Z,310nm,1.6s						
LPHEP	**Lephephe**	**31.42**	**26**	*i* P	**P**	**18 06 09.4**	**-0.3**
GRTLG	**Ghanzi**	**32.31**	**17**		**P**	**18 06 15.4**	**-2.2**
GRTLG				IAmb	IAmb	18 06 19.4	
	comp=Z,98nm,1.1s						
GRTLG	**Ghanzi**	**32.31**	**17**	*i* P	**P**	**18 06 16.8**	**-0.8**
MREMI	**Moremi**	**32.61**	**28**	*i* P	**P**	**18 06 19.5**	**-0.7**
TSUM	**Tsumeb**	**33.91**	**11**	LR	LR	18 18 21.2	
	comp=Z,23µm,19.5s,baz=193,slow=33						
TSUM	**Tsumeb**	**33.91**	**11**		**P**	**18 06 30.3**	**-1.2**
TSUM				IAmb	IAmb	18 06 44.6	
	comp=Z,182nm,1.6s						
BROLN	**Tlhalogang**	**33.97**	**27**	*i* P	**P**	**18 06 31.3**	**-0.8**
QNGWA	**Qangwa**	**34.09**	**17**	P	**P**	**18 06 31.1**	**-2.0**
GMARE	**Gumare**	**34.41**	**18**	P	**P**	**18 06 35.1**	**-0.7**
GMARE				IAmb	IAmb	18 06 38.0	
	comp=Z,97nm,0.5s						
GMARE	**Gumare**	**34.41**	**18**	*i* P	**P**	**18 06 35.7**	**-0.2**
MATP	**Matopo**	**34.94**	**29**	LR	LR	18 19 42.5	
	comp=Z,9µm,18.2s,baz=193,slow=34						
KSANE	**Kasane**	**36.58**	**22**		**P**	**18 06 53.1**	**-1.4**
KSANE	**Kasane**	**36.58**	**22**	*i* P	**P**	**18 06 55.4**	**+0.8**
QSPA	**South Pole Qui**	**37.41**	**180**	P	**P**	**18 07 01.3**	**0.0**
	comp=Z,288nm,1.1s,baz=232,slow=4.1,SNR=379						
QSPA				LR	LR	18 21 27.8	
	comp=Z,18µm,20.4s,baz=224,slow=35						
	comp=Z,288nm,1.1s						
QSPA	**South Pole Qui**	**37.41**	**180**	P	**P**	**18 07 00.9**	**-0.3**
PMSA	**Palmer Station**	**38.42**	**222**	LR	LR	18 19 43.6	
	comp=Z,3µm,21.1s,baz=104,slow=31						
PMSA	**Palmer Station**	**38.42**	**222**	P	**P**	**18 07 08.0**	**-1.5**
PMSA				IAmb	IAmb	18 07 11.8	
	comp=Z,190nm,1.1s						
PMSA	**Palmer Station**	**38.42**	**222**	*e*P	**P**	**18 07 11.2**	**+1.7**
SMAI	**San Martin Ant**	**38.53**	**216**	P	**P**	**18 07 10.3**	**-0.1**
SMAI				IAmb	IAmb	18 07 12.8	
	comp=Z,171nm,1.0s						
SHEL	**Horse Pasture**	**39.20**	**333**		**P**	**18 07 17.0**	**+0.4**
SHEL	**Horse Pasture**	**39.20**	**333**	IAMs_20	IAMs_20	18 18 54.6	
	comp=Z,5µm,22.0s						
SHEL	**Horse Pasture**	**39.20**	**333**	P	**P**	**18 07 17.0**	**+0.4**
SHEL				pmax	pmax		
	comp=Z,170nm,1.2s						
SHEL				MLR	MLR		
	comp=Z,5µm,22.0s						
EFI	**East Falkland**	**41.02**	**243**	*i* P	**P**	**18 07 31.1**	**-0.2**
EFI				pmax	pmax		
	comp=Z,35nm,1.0s						
VOI	**Vohitsoka**	**41.04**	**55**	P	**P**	**18 07 32.4**	**+0.4**
VOI	**Vohitsoka**	**41.04**	**55**	P	**P**	**18 07 32.3**	**+0.4**
ABPO	**Ambohimpanom**	**43.70**	**53**		**P**	**18 07 54.5**	**+0.9**
ABPO	**Ambohimpanom**	**43.70**	**53**	IAMs_20	IAMs_20	18 21 31.1	
	comp=Z,4µm,20.0s						
ABPO	**Ambohimpanom**	**43.70**	**53**	P	**P**	**18 07 54.6**	**+0.9**
ABPO				pmax	pmax		
	comp=Z,67nm,1.2s						
ABPO				MLR	MLR		
	comp=Z,4µm,20.0s						
CASY	**Casey**	**46.53**	**147**		**P**	**18 08 15.2**	**-0.2**
CASY				IAmb	IAmb	18 08 19.5	
	comp=Z,138nm,1.2s						
CASY	**Casey**	**46.53**	**147**	IAMs_20	IAMs_20	18 24 52.7	
	comp=Z,4µm,22.0s						
MG05	**Puerto Natales**	**48.54**	**236**		**P**	**18 08 30.3**	**-0.9**
MG05				IAmb	IAmb	18 08 32.2	
	comp=Z,263nm,1.6s						
VNDA	**Vanda**	**48.62**	**172**	P	**P**	**18 08 32.0**	**+0.4**
	comp=Z,175nm,0.9s,baz=227,slow=7.8,SNR=175						
VNDA				PP	**PP**	**18 10 25.7**	**+1.7**
	comp=Z,43nm,1.1s,baz=212,slow=10,SNR=3.3						
VNDA				LR	LR	18 27 46.1	
	comp=Z,14µm,21.4s,baz=192,slow=34						
	comp=Z,175nm,0.9s						
VNDA	**Vanda**	**48.62**	**172**	P	**P**	**18 08 31.5**	**-0.1**
SBA	**Scott Base**	**48.70**	**173**	P	**P**	**18 08 32.6**	**+0.5**
SBA	**Scott Base**	**48.70**	**173**	IAMs_20	IAMs_20	18 27 30.9	
	comp=Z,6µm,20.0s						
SBA	**Scott Base**	**48.70**	**173**	P	**P**	**18 08 32.6**	**+0.5**
SBA				pmax	pmax		
	comp=Z,346nm,1.3s						
SBA				MLR	MLR		
	comp=Z,6µm,20.0s						
SBV	**Sambava**	**49.78**	**53**	P	**P**	**18 08 42.5**	**+1.4**
	SNR=6.7						
PLTB	**Pedras Altas**	**50.60**	**268**	*e*P	**P**	**18 08 48.1**	**+0.8**
CNLB	**Canela**	**50.66**	**272**	*e*P	**P**	**18 08 49.1**	**+1.2**
TRQA	**Tornquist**	**51.32**	**256**	P	**P**	**18 08 51.9**	**-0.8**
TRQA				IAmb	IAmb	18 09 00.3	
	comp=Z,282nm,1.4s						
TRQA				IAMs_20	IAMs_20	18 26 40.8	
	comp=Z,4µm,20.0s						
TRQA	**Tornquist**	**51.32**	**256**	P	**P**	**18 08 51.9**	**-0.8**
TRQA				pmax	pmax		
	comp=Z,282nm,1.4s						
TRQA				MLR	MLR		
	comp=Z,4µm,20.0s						
VAS01	**Vassouras-RJ**	**51.45**	**284**	*e*P	**P**	**18 08 54.7**	**+0.9**
CPSB	**Cacapava Do Su**	**51.46**	**269**	*e*P	**P**	**18 08 54.2**	**+0.6**
RIB01	**Linhares ES**	**52.00**	**290**	*e*P	**P**	**18 09 00.3**	**+2.5**
ABR01	**Abrolhos, BA**	**52.11**	**292**	*e*P	**P**	**18 09 01.4**	**+2.8**
PET01	**Itanhaem-SP**	**52.20**	**279**	*e*P	**P**	**18 09 00.1**	**+0.9**
SPB	**Sao Paulo**	**52.82**	**280**	IAMs_20	IAMs_20	18 25 55.1	
	comp=Z,4µm,20.0s						
SPB	**Sao Paulo**	**52.82**	**280**	*e*P	**P**	**18 09 02.7**	**-1.1**
SJMB	**Sao Joao De Ma**	**52.93**	**289**	*e*P	**P**	**18 09 05.7**	**+0.9**
ITAB	**Concordia**	**52.95**	**273**	P	**P**	**18 09 04.2**	**-0.6**
ITAB	**Concordia**	**52.95**	**273**	*e*P	**P**	**18 09 06.4**	**+1.6**
VAO	**Valinhos**	**52.98**	**281**	P	**P**	**18 09 04.0**	**-1.2**
BSCB	**Bom Sucesso**	**53.22**	**284**	*e*P	**P**	**18 09 08.2**	**+1.2**
PSAL	**Palomas, Salto**	**53.50**	**265**	*e*P	**P**	**18 09 09.3**	**+0.5**
RCLB	**Rio Claro- Sao**	**53.76**	**281**	*e*P	**P**	**18 09 12.8**	**+1.9**
GUA01	**Guaratinga, BA**	**53.84**	**292**	*e*P	**P**	**18 09 14.4**	**+2.9**
FRTB	**Fartura**	**54.28**	**278**	*e*P	**P**	**18 09 16.9**	**+2.3**
PLCA	**Paso Flores**	**54.47**	**248**	P	**P**	**18 09 15.7**	**-0.2**
	comp=Z,8.4nm,1.1s,baz=136,slow=9.1,SNR=8.6						
PLCA				LR	LR	18 27 37.3	
	comp=Z,882nm,20.5s,baz=130,slow=31						
	comp=Z,8.4nm,1.1s						
PLCA	**Paso Flores**	**54.47**	**248**	P	**P**	**18 09 14.6**	**-1.3**
PLCA				IAmb	IAmb	18 09 22.4	
	comp=Z,171nm,1.8s						
PLCA	**Paso Flores**	**54.47**	**248**	*e*P	**P**	**18 09 15.5**	**-0.3**
MBAR	**Mbarara**	**54.49**	**24**	LR	LR	18 31 24.3	
	comp=Z,9µm,18.5s,baz=189,slow=35						
MBAR	**Mbarara**	**54.49**	**24**	P	**P**	**18 09 18.1**	**+1.8**
MBAR				P	**P**	**18 09 18.1**	**+1.8**
MBAR				S	**S**	**18 16 59.5**	**+4.1**
MBAR				S	**S**	**18 16 59.5**	**+4.1**
MBAR	**Mbarara**	**54.49**	**24**	P	**P**	**18 09 16.9**	**+0.6**
MBAR	**Mbarara**	**54.49**	**24**	*i* P	**P**	**18 09 16.9**	**+0.6**
MBAR				pmax	pmax		
	comp=Z,61nm,2.5s						
MBAR				MLR	MLR		
	comp=Z,11µm,17.0s						
CMC01	**Camacan, BA**	**54.67**	**293**	*e*P	**P**	**18 09 17.7**	**+0.2**
DIAM	**Diamantina, MG**	**54.69**	**287**	*e*P	**P**	**18 09 18.3**	**+0.5**
PTGB	**Pitanga**	**54.76**	**275**	*e*P	**P**	**18 09 20.0**	**+1.8**
KIBK	**Kibwezi**	**54.96**	**33**	P	**P**	**18 09 20.3**	**+0.6**
KIBK	**Kibwezi**	**54.96**	**33**	P	**P**	**18 09 21.5**	**+1.8**
	SNR=42						
KIBK	**Kibwezi**	**54.96**	**33**	P	**P**	**18 09 20.2**	**+0.6**
KIBK				IAmb	IAmb	18 09 27.1	
	comp=Z,108nm,1.1s						
NBIT	**Itapeh - BA**	**54.98**	**294**	*e*P	**P**	**18 09 20.3**	**+0.6**
BB19B	**Bebedouro**	**55.39**	**281**	*e*P	**P**	**18 09 24.9**	**+2.2**
LR05	**Currie**	**55.62**	**247**	IAmb	IAmb	18 09 31.5	
	comp=Z,183nm,1.2s						
PMNB	**Patos De Minas**	**56.11**	**285**	*e*P	**P**	**18 09 29.7**	**+1.7**
LR03	**Panguipulli**	**56.22**	**247**	IAmb	IAmb	18 09 35.5	
	comp=Z,151nm,1.2s						
EDA	**Edea**	**56.41**	**358**	P	**P**	**18 09 28.1**	**-1.8**
CPUP	**Villa Florida**	**56.76**	**269**	P	**P**	**18 09 32.6**	**+0.2**
	comp=Z,17nm,1.1s,baz=350,slow=6.2,SNR=56						
CPUP				LR	LR	18 29 35.8	
	comp=Z,702nm,21.1s,baz=8.0,slow=32						
	comp=Z,17nm,1.1s						
CPUP	**Villa Florida**	**56.76**	**269**	IAmb	IAmb	18 09 38.9	
	comp=Z,116nm,1.5s						
CPUP	**Villa Florida**	**56.76**	**269**	*e*P	**P**	**18 09 32.5**	**+0.2**
TCA	**Tanti**	**57.52**	**260**	*e*P	**P**	**18 09 37.1**	**-0.8**
BI02	**San Fabin de**	**57.67**	**251**	IAmb	IAmb	18 09 46.5	
	comp=Z,271nm,1.4s						
BI02				IAMs_20	IAMs_20	18 30 28.6	
	comp=Z,2µm,18.0s						
AMBA	**Amambai (Brazi**	**57.87**	**274**	*e*P	**P**	**18 09 40.9**	**+0.6**
ML02	**Panimavida**	**58.39**	**251**	IAMs_20	IAMs_20	18 29 41.7	
	comp=Z,3µm,22.0s						
ACAN	**Cantantal**	**58.40**	**257**	*e*P	**P**	**18 09 43.2**	**-0.7**
BO02	**Sierra Bellavi**	**58.71**	**253**	IAMs_20	IAMs_20	18 31 28.2	
	comp=Z,2µm,19.0s						
AAGR	**Agrelo**	**58.78**	**255**	*e*P	**P**	**18 09 46.2**	**-0.5**
ACHE	**Chepes**	**58.88**	**258**	*e*P	**P**	**18 09 47.6**	**+0.1**
NBTA	**Tacaratu-PE**	**59.03**	**299**	*e*P	**P**	**18 09 49.6**	**+1.1**
LMEL	**Las Melosas**	**59.04**	**254**	IAmb	IAmb	18 10 00.3	
	comp=Z,83nm,1.2s						
ASAL	**Salagasta**	**59.14**	**256**	*e*P	**P**	**18 09 48.2**	**-0.9**
MT13	**San Alfonso**	**59.17**	**254**	IAmb	IAmb	18 09 56.6	
	comp=Z,160nm,1.5s						
MT13				IAMs_20	IAMs_20	18 35 49.3	
	comp=Z,2µm,18.0s						
BO01	**Tunca**	**59.17**	**253**	IAmb	IAmb	18 09 55.5	
	comp=Z,205nm,1.7s						
BO04	**La Punta**	**59.18**	**253**	IAmb	IAmb	18 09 59.4	
	comp=Z,130nm,1.1s						
MT08	**Bocatoma Ro**	**59.22**	**254**	IAmb	IAmb	18 09 58.0	
	comp=Z,90nm,1.1s						
MT08				IAMs_20	IAMs_20	18 34 10.4	
	comp=Z,3µm,19.0s						
BDFB	**Brasilia**	**59.31**	**285**	P	**P**	**18 09 51.7**	**+1.2**
	comp=Z,27nm,0.9s,baz=133,slow=4.3,SNR=15						
BDFB				LR	LR	18 29 52.4	
	comp=Z,3µm,21.2s,baz=143,slow=30						
	comp=Z,27nm,0.9s						
BDFB	**Brasilia**	**59.31**	**285**		**P**	**18 09 50.1**	**-0.4**
BDFB				IAmb	IAmb	18 10 01.8	
	comp=Z,86nm,1.2s						
APLL	**PUNTA DE LOS L**	**59.35**	**259**	*e*P	**P**	**18 09 49.4**	**-1.2**
MT03	**Universidad Ad**	**59.48**	**254**	IAmb	IAmb	18 09 59.0	
	comp=Z,216nm,1.3s						
CFA	**Coronel Fontan**	**59.49**	**257**	LR	LR	18 31 17.1	
	comp=Z,1µm,22.0s,baz=146,slow=32						
MT16	**CCHEN**	**59.53**	**254**	IAmb	IAmb	18 09 59.4	
	comp=Z,191nm,1.1s						
MT16				IAMs_20	IAMs_20	18 35 15.0	
	comp=Z,2µm,18.0s						
MT09	**Talagante**	**59.55**	**253**	IAmb	IAmb	18 09 59.1	
	comp=Z,192nm,1.4s						
LODK	**Lodwar**	**59.58**	**28**	P	**P**	**18 09 54.6**	**+2.4**
	SNR=19						
LODK	**Lodwar**	**59.58**	**28**		**P**	**18 09 52.3**	**+0.1**
MT01	**Popeta**	**59.64**	**253**	IAmb	IAmb	18 10 01.5	
	comp=Z,112nm,1.4s						
AVFE	**Valle Fertil**	**59.71**	**258**	*e*P	**P**	**18 09 53.1**	**-0.1**
AUSP	**Uspallata**	**59.73**	**256**	*e*P	**P**	**18 09 53.4**	**-0.1**
C2SB	**Chapadao do Su**	**59.73**	**279**	*e*P	**P**	**18 09 55.3**	**+2.0**
PEL	**Peldehue**	**59.83**	**254**	IAMs_20	IAMs_20	18 34 20.7	
	comp=Z,2µm,18.0s						
PEL	**Peldehue**	**59.83**	**254**	*e*P	**P**	**18 09 53.0**	**-0.8**
RTLL	**Cerro Villicun**	**59.83**	**257**	*e*P	**P**	**18 09 53.1**	**-0.9**
NBPV	**Pedro Velho**	**59.88**	**303**	*e*P	**P**	**18 09 56.7**	**+2.4**
RTLS	**Leoncito**	**59.98**	**256**	*e*P	**P**	**18 09 54.9**	**-0.4**
VA05	**Santo Domingo**	**60.00**	**253**	IAmb	IAmb	18 10 01.3	
	comp=Z,200nm,1.6s						
VA03	**San Esteban**	**60.02**	**254**	IAmb	IAmb	18 10 03.0	
	comp=Z,187nm,1.2s						
VA03				IAMs_20	IAMs_20	18 33 12.0	
	comp=Z,3µm,19.0s						
VA03	**San Esteban**	**60.02**	**254**	*e*P	**P**	**18 09 54.7**	**-0.5**
MSEY	**Mahe Island**	**60.08**	**53**	P	**P**	**18 09 56.6**	**+0.9**
MSEY	**Mahe Island**	**60.08**	**53**	P	**P**	**18 09 55.2**	**-0.5**
MSEY				IAmb	IAmb	18 10 00.3	
	comp=Z,88nm,1.6s						
MSEY	**Mahe Island**	**60.08**	**53**	IAMs_20	IAMs_20	18 29 36.3	
	comp=Z,2µm,18.0s						
MSEY	**Mahe Island**	**60.08**	**53**	P	**P**	**18 09 56.5**	**+0.7**
MSEY	**Mahe Island**	**60.08**	**53**	P	**P**	**18 09 55.2**	**-0.5**
MSEY				pmax	pmax		
	comp=Z,88nm,1.6s						
MSEY				MLR	MLR		
	comp=Z,2µm,18.0s						
ROC1	**El Roble**	**60.14**	**254**	*e*P	**P**	**18 09 55.1**	**-1.1**
AQDB	**Aquidauana**	**60.15**	**275**		**P**	**18 09 55.6**	**-0.5**
AQDB	**Aquidauana**	**60.15**	**275**	*e*P	**P**	**18 09 56.7**	**+0.6**
ACLC	**CERRO LA CRUZ**	**60.31**	**260**	*e*P	**P**	**18 09 56.6**	**-0.7**
CYA	**Choya**	**60.34**	**261**	*e*P	**P**	**18 09 55.8**	**-1.6**
VA01	**Torpederas**	**60.48**	**253**	IAmb	IAmb	18 10 04.9	
	comp=Z,276nm,1.8s						
VA06	**Catapilco**	**60.60**	**254**	IAmb	IAmb	18 10 06.3	
	comp=Z,202nm,1.3s						
VA06				IAMs_20	IAMs_20	18 33 40.4	
	comp=Z,2µm,19.0s						
RCBR	**Riachuelo**	**60.69**	**303**	P	**P**	**18 09 57.3**	**-2.6**
RCBR	**Riachuelo**	**60.69**	**303**	P	**P**	**18 09 57.3**	**-2.6**
RCBR				pmax	pmax		
	comp=Z,55nm,1.4s						
RCBR	**Riachuelo**	**60.69**	**303**	*e*P	**P**	**18 10 01.8**	**+1.8**
ACCO	**Cerro Coronel**	**60.72**	**257**	*e*P	**P**	**18 10 00.0**	**-0.3**
BDQN	**Bodoquena, MS**	**60.80**	**274**	*e*P	**P**	**18 10 00.4**	**-0.2**
DBIC	**Dimbokro**	**60.87**	**341**	P	**P**	**18 10 00.1**	**-0.9**
	comp=Z,57nm,1.2s,baz=186,slow=7.2,SNR=17						
DBIC				LR	LR	18 31 17.7	
	comp=Z,6µm,20.1s,baz=184,slow=31						
	comp=Z,57nm,1.2s						
DBIC	**Dimbokro**	**60.87**	**341**	P	**P**	**18 09 59.1**	**-1.8**
DBIC				IAmb	IAmb	18 10 03.7	
	comp=Z,95nm,1.3s						
ACDV	**Cuesta del Vie**	**61.05**	**257**	*e*P	**P**	**18 10 02.0**	**-0.4**
AGUA	**GUANDACOL**	**61.18**	**258**	*e*P	**P**	**18 10 03.8**	**+0.6**
AROD	**Rodeo**	**61.27**	**257**	*e*P	**P**	**18 10 03.4**	**-0.7**
NBPA	**Parau_RN**	**61.38**	**302**	*e*P	**P**	**18 10 06.8**	**+2.3**
CO02	**Combarbal**	**61.41**	**255**	IAmb	IAmb	18 10 11.4	
	comp=Z,188nm,1.5s						
CO02				IAMs_20	IAMs_20	18 34 07.9	
	comp=Z,4µm,19.0s						
CO03	**El Pedregal**	**61.49**	**256**	IAmb	IAmb	18 10 12.1	
	comp=Z,252nm,1.6s						
CO03				IAMs_20	IAMs_20	18 32 28.1	
	comp=Z,2µm,21.0s						
ARAG	**Araguaiana, MT**	**61.50**	**282**	*e*P	**P**	**18 10 07.4**	**+2.0**
VCA	**Vinchina**	**61.56**	**259**	*e*P	**P**	**18 10 05.0**	**-0.8**
TINO	**Tinogasta**	**61.67**	**260**	*e*P	**P**	**18 10 07.2**	**+0.6**
CO01	**Juntas del Tor**	**61.77**	**257**	IAMs_20	IAMs_20	18 31 28.5	
	comp=Z,4µm,21.0s						
PP1B	**Ponte de Pedra**	**61.86**	**278**	*e*P	**P**	**18 10 08.2**	**+0.4**
FSA	**Cafayete**	**62.15**	**263**	*e*P	**P**	**18 10 08.9**	**-1.0**
CO06	**Fray Jorge**	**62.17**	**255**	IAmb	IAmb	18 10 16.1	
	comp=Z,152nm,1.5s						
CO06				IAMs_20	IAMs_20	18 32 50.0	
	comp=Z,3µm,20.0s						
CO05	**La Serena**	**62.49**	**256**	IAMs_20	IAMs_20	18 33 08.3	
	comp=Z,2µm,20.0s						
AC05	**El Transito**	**62.71**	**258**	IAmb	IAmb	18 10 20.4	
	comp=Z,194nm,1.4s						
AC05				IAMs_20	IAMs_20	18 32 59.4	
	comp=Z,2µm,20.0s						
LCO	**Las Campanas**	**62.84**	**257**		**P**	**18 10 14.2**	**-0.4**
LCO	**Las Campanas**	**62.84**	**257**	IAMs_20	IAMs_20	18 32 12.7	
	comp=Z,2µm,21.0s						
LCO	**Las Campanas**	**62.84**	**257**	P	**P**	**18 10 14.2**	**-0.4**
LCO				pmax	pmax		
	comp=Z,278nm,1.6s						
LCO				MLR	MLR		
	comp=Z,2µm,21.0s						
SLA	**San Lorenzo**	**62.90**	**264**	*e*P	**P**	**18 10 14.5**	**-0.4**
AZAP	**Zapla**	**63.01**	**265**	*e*P	**P**	**18 10 14.8**	**-0.9**
AC02	**Maricunga**	**63.51**	**260**	IAMs_20	IAMs_20	18 33 21.6	
	comp=Z,2µm,20.0s						
AC02	**Maricunga**	**63.51**	**260**	*e*P	**P**	**18 10 20.3**	**+1.0**
GO03	**Copiapo**	**63.61**	**259**	*e*P	**P**	**18 10 18.6**	**-0.8**
AC04	**Llanos de Chal**	**63.65**	**258**	IAMs_20	IAMs_20	18 33 15.3	
	comp=Z,3µm,22.0s						
SALV	**Santo Antonio**	**63.66**	**278**	*e*P	**P**	**18 10 20.8**	**+1.0**
NBPS	**Pedro II - PI**	**64.80**	**299**	*e*P	**P**	**18 10 29.8**	**+2.4**
AC01	**Pan de Azucar**	**64.90**	**259**		**P**	**18 10 26.8**	**-1.0**
AC01				IAmb	IAmb	18 10 34.3	
	comp=Z,164nm,1.4s						
NBMO	**Morrinhos-CE**	**64.97**	**300**	*e*P	**P**	**18 10 28.9**	**+0.6**
GO02	**Mina Guanaco**	**65.03**	**261**	IAMs_20	IAMs_20	18 34 34.1	
	comp=Z,3µm,21.0s						
GO02	**Mina Guanaco**	**65.03**	**261**	*e*P	**P**	**18 10 29.0**	**0.0**
AF01	**San Pedro de A**	**65.84**	**264**	IAMs_20	IAMs_20	18 35 35.5	
	comp=Z,2µm,19.0s						
PB14	**IPOC Station P**	**65.92**	**261**	IAmb	IAmb	18 10 42.0	
	comp=Z,150nm,1.4s						
PB14				IAMs_20	IAMs_20	18 34 39.4	
	comp=Z,3µm,22.0s						
PTLB	**Pontes e Lacer**	**66.09**	**276**	*e*P	**P**	**18 10 35.9**	**+0.3**
TOA0	**Torodi Ar. Sit**	**66.24**	**350**	P	**P**	**18 10 36.2**	**-0.2**
	SNR=11						
TOA0				P	**P**	**18 10 36.2**	**-0.2**
	SNR=11						
TORD	**Torodi Ar. Bea**	**66.24**	**350**	P	**P**	**18 10 36.0**	**-0.4**
	comp=Z,28nm,1.1s,baz=165,slow=6.0,SNR=18						
TORD				LR	LR	18 34 54.5	
	comp=Z,2µm,19.5s,baz=178,slow=32						
	comp=Z,28nm,1.1s						
TORD	**Torodi Ar. Bea**	**66.24**	**350**	P	**P**	**18 10 35.0**	**-1.4**
SIV	**San Ignacio**	**66.84**	**274**	LR	LR	18 35 48.6	
	comp=Z,4µm,19.9s,baz=136,slow=32						
PB10	**IPOC Station P**	**66.84**	**261**	IAMs_20	IAMs_20	18 36 23.0	
	comp=Z,2µm,20.0s						
PB05	**IPOC Station P**	**67.13**	**262**	IAMs_20	IAMs_20	18 35 11.7	
	comp=Z,2µm,22.0s						
PRPB	**Parauapebas**	**67.95**	**290**	*e*P	**P**	**18 10 48.2**	**+0.7**
PB02	**IPOC Station P**	**68.11**	**263**	IAMs_20	IAMs_20	18 36 07.6	
	comp=Z,2µm,22.0s						
PB08	**IPOC Station P**	**68.56**	**265**	P	**P**	**18 10 49.3**	**-2.4**
PATCX	**Punta Patache**	**68.64**	**264**	IAmb	IAmb	18 10 59.0	
	comp=Z,158nm,1.4s						
GO01	**Chusmiza**	**68.94**	**265**	IAmb	IAmb	18 11 01.5	
	comp=Z,192nm,1.4s						
ATD	**Arta Tunnel**	**69.54**	**33**	LR	LR	18 41 51.2	
	comp=Z,83nm,18.2s,baz=200,slow=36						
ATD	**Arta Tunnel**	**69.54**	**33**	P	**P**	**18 11 00.0**	**+2.7**
	SNR=13						
ATD	**Arta Tunnel**	**69.54**	**33**		**P**	**18 10 57.3**	**0.0**
ATD				IAmb	IAmb	18 11 04.3	
	comp=Z,172nm,1.8s						
ATD				IAMs_20	IAMs_20	18 38 25.6	
	comp=Z,3µm,18.0s						
H01W2	**Cape Leeuwin H**	**69.95**	**121**	T	T	19 28 01.3	
	baz=219,slow=75,SNR=158						
H01W3	**Cape Leeuwin H**	**69.96**	**121**	T	T	19 28 05.1	
	baz=219,slow=75,SNR=191						
H01W1	**Cape Leeuwin H**	**69.97**	**121**	T	T	19 28 02.0	
	baz=219,slow=75,SNR=179						
TMAB	**Tom-Au,PA,Br**	**70.10**	**294**	*e*P	**P**	**18 11 02.2**	**+1.4**
PB12	**IPOC Station P**	**70.43**	**265**	IAmb	IAmb	18 11 09.9	
	comp=Z,228nm,1.6s						
LPAZ	**La Paz**	**70.89**	**268**	P	**P**	**18 11 07.3**	**+0.9**
	comp=Z,168nm,1.1s,baz=120,slow=4.7,SNR=192						
LPAZ				LR	LR	18 39 37.8	
	comp=Z,1µm,19.5s,baz=109,slow=34						
	comp=Z,168nm,1.1s						
LPAZ	**La Paz**	**70.89**	**268**	*e*P	**P**	**18 11 06.7**	**+0.3**
AUALB	**St Joseph’s Co**	**71.79**	**124**	P	**P**	**18 11 14.1**	**+3.2**
NWAO	**Narrogin (SRO)**	**73.09**	**122**	LR	LR	18 37 09.6	
	comp=Z,870nm,19.2s,baz=224,slow=31						
NWAO	**Narrogin (SRO)**	**73.09**	**122**	P	**P**	**18 11 18.2**	**-0.5**
NWAO				P	**P**	**18 11 18.2**	**-0.5**
NWAO	**Narrogin (SRO)**	**73.09**	**122**	P	**P**	**18 11 17.3**	**-1.4**
NWAO				IAmb	IAmb	18 11 21.7	
	comp=Z,149nm,1.6s						
NWAO	**Narrogin (SRO)**	**73.09**	**122**	P	**P**	**18 11 18.5**	**-0.2**
NWAO	**Narrogin (SRO)**	**73.09**	**122**	P	**P**	**18 11 17.3**	**-1.4**
NWAO				pmax	pmax		
	comp=Z,149nm,1.7s						
NWAO				MLR	MLR		
	comp=Z,1µm,19.0s						
SACV	**Santiago Islan**	**73.96**	**325**	IAMs_20	IAMs_20	18 35 43.3	
	comp=Z,2µm,20.0s						
TAM	**Tamanrasset**	**75.47**	**354**	P	**P**	**18 11 32.5**	**-0.1**
TAM				IAmb	IAmb	18 12 52.3	
	comp=Z,31nm,0.3s						
TAM				IAMs_20	IAMs_20	18 44 50.3	
	comp=Z,1µm,20.0s						
TAM	**Tamanrasset**	**75.47**	**354**	P	**P**	**18 11 32.5**	**-0.1**
TAM				pmax	pmax		
	comp=Z,31nm,0.3s						
TAM				MLR	MLR		
	comp=Z,1µm,20.0s						
MORW	**Morawa**	**75.52**	**119**	P	**P**	**18 11 31.7**	**-1.2**
MORW				IAmb	IAmb	18 11 36.3	
	comp=Z,116nm,1.6s						
TAU	**Tasmania Unive**	**77.35**	**148**	IAMs_20	IAMs_20	18 46 52.0	
	comp=Z,2µm,20.0s						
COCO	**West Island**	**77.64**	**94**	IAMs_20	IAMs_20	18 36 55.3	
	comp=Z,2µm,21.0s						
AUBRN	**Burnie High Sc**	**78.55**	**147**	P	**P**	**18 11 54.1**	**+4.4**
ABTO	**Aybut**	**78.71**	**41**	P	**P**	**18 11 52.0**	**+1.2**
ABTO				P	**P**	**18 11 52.0**	**+1.2**
MDP	**Montagnes des**	**78.80**	**294**	LR	LR	18 42 21.2	
	comp=Z,2µm,19.6s,baz=140,slow=32						
WHFO	**Wadi Hawf**	**79.41**	**41**	P	**P**	**18 11 55.5**	**+0.9**
	SNR=7.6						
WHFO				P	**P**	**18 11 55.5**	**+0.9**
	SNR=7.6						
NNA	**Nana**	**79.50**	**264**	LR	LR	18 46 48.2	
	comp=Z,649nm,18.4s,baz=157,slow=36						
NNA	**Nana**	**79.50**	**264**	P	**P**	**18 11 54.4**	**-1.0**
NNA				IAmb	IAmb	18 12 02.7	
	comp=Z,224nm,1.8s						
NNA	**Nana**	**79.50**	**264**	*ce*P	**P**	**18 11 56.1**	**+0.7**
NNA				pmax	pmax		
	comp=Z,113nm,1.3s						
NNA				MLR	MLR		
	comp=Z,1µm,18.0s						
WHZ	**Wether Hill Ro**	**79.62**	**164**	P	**P**	**18 11 53.5**	**-2.0**
WHZ				IAmb	IAmb	18 11 59.5	
	comp=Z,222nm,1.9s						
DMTO	**DMTO**	**79.70**	**42**	P	**P**	**18 11 58.1**	**+1.9**
MLZ	**Mavora Lakes**	**80.16**	**164**	P	**P**	**18 11 57.5**	**-1.0**
MLZ				IAmb	IAmb	18 12 03.2	
	comp=Z,197nm,1.4s						
DOK	**Doka**	**80.19**	**41**	P	**P**	**18 11 59.5**	**+0.8**
	SNR=7.2						
DOK				P	**P**	**18 11 59.5**	**+0.8**
	SNR=7.2						
AUCAS	**Cummins Area S**	**80.67**	**136**	P	**P**	**18 12 04.9**	**+3.6**
WKZ	**Wanaka**	**80.84**	**164**	P	**P**	**18 12 00.7**	**-1.4**
AUMTC	**Mt Clear Colle**	**80.93**	**144**	P	**P**	**18 12 05.4**	**+2.7**
AUMAR	**Marden Senior**	**81.33**	**139**	P	**P**	**18 12 07.9**	**+3.1**
AUMBR	**Murray Bridge**	**81.37**	**139**	P	**P**	**18 12 05.5**	**+0.4**
LBZ	**Lake Benmore**	**81.46**	**165**	IAmb	IAmb	18 12 10.2	
	comp=Z,284nm,1.5s						
RAYN	**Ar Rayn**	**81.62**	**31**	P	**P**	**18 12 07.8**	**+1.5**
RAYN				S	**SKSac**	**18 22 25.6**	**-0.3**
RAYN	**Ar Rayn**	**81.62**	**31**	P	**P**	**18 12 06.3**	**0.0**
RAYN	**Ar Rayn**	**81.62**	**31**	*i* P	**P**	**18 12 06.7**	**+0.3**
	SNR=41						
RAYN	**Ar Rayn**	**81.62**	**31**	P	**P**	**18 12 06.4**	**0.0**
RAYN				pmax	pmax		
	comp=Z,57nm,1.3s						
RAYN				MLR	MLR		
	comp=Z,3µm,18.0s						
FOZ	**Fox Glacier**	**82.23**	**164**	IAmb	IAmb	18 12 13.7	
	comp=Z,98nm,1.2s						
MQZ	**McQueen’s Vall**	**82.49**	**166**	IAmb	IAmb	18 12 15.6	
	comp=Z,110nm,1.4s						
OXZ	**Oxford**	**82.78**	**166**	IAmb	IAmb	18 12 29.5	
	comp=Z,95nm,1.6s						
AUJCS	**Jamestown Cent**	**82.78**	**138**	P	**P**	**18 12 12.6**	**0.0**
INZ	**Inchbonnie**	**83.28**	**165**	IAmb	IAmb	18 12 15.0	
	comp=Z,80nm,1.1s						
LTZ	**Lake Taylor**	**83.34**	**166**	IAmb	IAmb	18 12 19.1	

	comp=Z,147nm,1.4s						
PSA00	Pilbara Seismi	83.57	117	P	P	18 12 15.4	-1.3
PSA00	Pilbara Seismi	83.57	117	IAmb	IAmb	18 12 19.9	
	comp=Z,41nm,1.0s						
MBWA	Marble Bar	83.85	117	P	P	18 12 19.0	+0.8
MBWA				P	P	18 12 19.0	+0.8
MBWA	Marble Bar	83.85	117	IAMs_20	IAMs_20	18 40 37.6	
	comp=Z,2µm,20.0s						
MBWA	Marble Bar	83.85	117	P	P	18 12 18.2	0.0
MHTO	MHTO	83.87	43	P	P	18 12 18.1	+0.1
	SNR=8.1						
MHTO				P	P	18 12 18.1	+0.1
	SNR=8.1						
MHTO				S	S	18 22 44.1	+2.8
MHTO				S	S	18 22 44.1	+2.8
KHZ	Kahutara	83.88	167	IAmb	IAmb	18 12 32.2	
	comp=Z,174nm,1.8s						
MZR	Muzera	83.91	38	P	P	18 12 19.2	+1.0
	SNR=5.1						
MZR				P	P	18 12 19.2	+1.0
	SNR=5.1						
MZR	Muzera	83.91	38	*i* P	P	18 12 18.0	-0.2
	SNR=5.7						
ATAH	Atahualpa	84.25	266	LR	LR	18 48 34.6	
	comp=Z,947nm,19.6s,baz=153,slow=35						
THZ	Tophouse	84.44	166	IAmb	IAmb	18 12 24.9	
	comp=Z,90nm,1.1s						
SMRA	Abu-Samra	84.53	35	P	P	18 12 21.7	+0.4
SMRA				S	S	18 22 51.7	+3.9
GHWR	Ruwais	84.56	37	P	P	18 12 24.5	+3.1
GHWR				P	P	18 12 24.5	+3.1
GHWR				S	S	18 22 51.9	+3.8
GHWR				S	S	18 22 51.9	+3.8
TRNA	Turayna	84.66	36	P	P	18 12 24.1	+2.2
TRNA				S	S	18 22 49.7	+0.6
EIL	Elat	84.69	20	LR	LR	18 48 46.9	
	comp=Z,8µm,20.2s,baz=183,slow=35						
MZWR	Madinat Zayed	84.75	38	P	P	18 12 25.1	+2.7
MZWR				P	P	18 12 25.1	+2.7
MZWR				S	S	18 22 52.4	+2.4
MZWR				S	S	18 22 52.4	+2.4
AUMHS	Melrose High S	84.77	146	P	P	18 12 23.7	+1.0
CAN	Canberra	84.77	146	IAmb	IAmb	18 12 26.8	
	comp=Z,97nm,1.5s						
CAN				IAMs_20	IAMs_20	18 46 26.6	
	comp=Z,1µm,20.0s						
CAN	Canberra	84.77	146	P	P	18 12 23.8	+1.0
AUMTS	Mt Stromlo	84.77	146	P	P	18 12 24.5	+1.7
AUSIS	Research Schoo	84.84	146	P	P	18 12 25.0	+1.9
TIO	Tiouine	84.98	344	P	P	18 12 25.0	+1.4
BHW	Baring Head	85.05	168	IAmb	IAmb	18 12 27.6	
	comp=Z,150nm,1.6s						
BSY	Bisya	85.12	42	P	P	18 12 25.0	+0.5
	SNR=19						
BSY				P	P	18 12 25.0	+0.5
	SNR=19						
STKA	Stephens Creek	85.15	139	P	P	18 12 24.4	-0.2
	comp=Z,34nm,1.0s,baz=188,slow=3.4,SNR=23						
	comp=Z,34nm,1.0s						
STKA	Stephens Creek	85.15	139	P	P	18 12 23.5	-1.2
STKA	Stephens Creek	85.15	139	*i* P	P	18 12 24.2	-0.4
JMDO	Jabal Madar	85.16	43	P	P	18 12 26.4	+1.8
RPN	Rapa Nui	85.17	230	LR	LR	18 43 58.4	
	comp=Z,295nm,21.7s,baz=140,slow=31						
ARQ	Araqi	85.39	41	P	P	18 12 25.7	+0.1
	SNR=8.3						
ARQ				P	P	18 12 25.7	+0.1
	SNR=8.3						
JRN	Qarnain Island	85.44	37	P	P	18 12 28.0	+2.2
JLN	Jalan Bani Buh	85.50	44	P	P	18 12 26.9	+0.6
	SNR=13						
JLN				P	P	18 12 26.9	+0.6
	SNR=13						
WBK	Wadi Bani Khal	85.73	43	P	P	18 12 28.0	+0.6
	SNR=6.1						
WBK				P	P	18 12 28.0	+0.6
	SNR=6.1						
ALNE	Al Ain	85.73	40	P	P	18 12 28.3	+1.0
	SNR=15						
ALNE				S	SKSac	18 22 50.8	-1.9
ALNE	Al Ain	85.73	40	*i* P	P	18 12 27.5	+0.1
	SNR=9.0						
SMDO	Samad	85.75	42	P	P	18 12 27.4	-0.2
	SNR=15						
SMDO				P	P	18 12 27.4	-0.2
	SNR=15						
MRZ	Mangatainoka R	85.88	168	IAmb	IAmb	18 12 28.8	
	comp=Z,77nm,1.2s						
MRZ				IAMs_20	IAMs_20	18 50 17.3	
	comp=Z,2µm,20.0s						
AJN	Ajban	85.89	39	P	P	18 12 29.9	+1.8
AJN				P	P	18 12 29.9	+1.8
AJN				S	SKSac	18 22 54.2	+0.6
AJN				S	SKSac	18 22 54.2	+0.6
HOQ	Hoqain	85.92	41	P	P	18 12 29.1	+0.8
	SNR=21						
HOQ				P	P	18 12 29.1	+0.8
	SNR=21						
ASUD	Al Ashush, Dub	86.08	39	P	P	18 12 30.1	+1.0
ASUD				P	P	18 12 30.1	+1.0
SOHO	SOHO	86.11	40	P	P	18 12 29.4	+0.2
SOHO				P	P	18 12 29.4	+0.2
SOHO				S	SKSac	18 22 57.0	+2.1
SOHO				S	SKSac	18 22 57.0	+2.1
SOHO	SOHO	86.11	40	*i* P	P	18 12 28.8	-0.4
	SNR=17						
WSAR	Wadi Sarin	86.15	43	P	P	18 12 30.1	+0.7
BIDO	Bidbid	86.19	42	P	P	18 12 30.9	+1.2
	SNR=13						
FAQ	Al Faqa, Dubai	86.29	39	P	P	18 12 33.4	+3.3
	SNR=8.6						
FAQ				P	P	18 12 33.4	+3.3
	SNR=8.6						
FAQ				S	SKSac	18 22 55.7	-0.4
FAQ				S	SKSac	18 22 55.7	-0.4
FAQ	Al Faqa, Dubai	86.29	39	*i* P	P	18 12 30.3	+0.1
	SNR=8.5						
ASHO	Ashiyiah	86.42	40	P	P	18 12 30.6	-0.1
	SNR=13						
ASHO				P	P	18 12 30.6	-0.1
	SNR=13						
ASHO	Ashiyiah	86.42	40	*i* P	P	18 12 29.5	-1.3
	SNR=26						
MDT	Midelt	86.42	347	P	P	18 12 31.2	+0.6
	comp=Z,4.3nm,1.0s,baz=157,slow=5.3,SNR=8.1						
MDT				LR	LR	18 47 40.6	
	comp=Z,2µm,18.8s,baz=183,slow=33						
	comp=Z,4.3nm,1.0s						
MD01	Midelt array s	86.50	346	P	P	18 12 29.6	-1.5
NAZ	Nazwa, Dubai	86.54	39	P	P	18 12 31.5	+0.3
	SNR=17						
NAZ				P	P	18 12 31.5	+0.3
	SNR=17						
NAZ				S	SKSac	18 22 60.0	+2.3
NAZ				S	SKSac	18 22 60.0	+2.3
NAZ	Nazwa, Dubai	86.54	39	*i* P	P	18 12 31.6	+0.3
	SNR=21						
HATD	Hatta, Dubai	86.57	40	P	P	18 12 31.7	+0.2
	SNR=12						
HATD				P	P	18 12 31.7	+0.2
	SNR=12						
HATD				S	SKSac	18 22 56.6	-1.3
HATD				S	SKSac	18 22 56.6	-1.3
HATD	Hatta, Dubai	86.57	40	*i* P	P	18 12 31.7	+0.2
	SNR=19						
UOSS	Minazif	86.71	40	P	P	18 12 32.2	0.0
UOSS				P	P	18 12 32.2	0.0
UOSS	Minazif	86.71	40	P	P	18 12 30.7	-1.4
UOSS				IAmb	IAmb	18 12 42.6	
	comp=Z,63nm,1.1s						
UOSS	Minazif	86.71	40	IAMs_20	IAMs_20	18 53 41.8	
	comp=Z,2µm,18.0s						
MDH	Madha	87.06	40	P	P	18 12 31.8	-2.0
MSFE	Esma-Masafi	87.06	40	P	P	18 12 33.6	-0.3
IFR	Ifrane	87.19	346	P	P	18 12 35.9	+1.4
AUDCS	Dubbo College	87.45	145	P	P	18 12 36.5	+0.5
MNAI	Manna	87.50	94	IAMs_20	IAMs_20	18 42 19.5	
	comp=Z,1µm,20.0s						
KASI	Kota Agung	87.51	96	P	P	18 12 37.3	+0.9
	comp=Z,53nm,1.1s						
ASF	Jabal al Asfar	87.52	21	LR	LR	18 51 33.3	
	comp=Z,1µm,18.3s,baz=186,slow=36						
SISI	Saibi	87.55	89	P	P	18 12 38.1	+1.5
	comp=Z,1µmcomp=Z,54nm,1.3s						
SHME	Shamm	87.68	39	P	P	18 12 36.1	-0.7
CNJI	Cibinong	87.68	99	P	P	18 12 38.9	+1.6
	comp=Z,603nmcomp=Z,51nm,1.4s						
KSI	Kapahiang	87.84	93	P	P	18 12 39.1	+1.0
	comp=Z,2µmcomp=Z,111nm,1.2s						
HIZ	Hauiti	87.90	167	IAMs_20	IAMs_20	18 49 55.8	
	comp=Z,2µm,21.0s						
MMAI	Mount Meron Ar	88.01	20	LR	LR	18 50 30.0	
	comp=Z,6µm,20.9s,baz=193,slow=35						
MASI	Maura Aman, Be	88.03	93	P	P	18 12 40.3	+1.3
DBJI	Dramaga	88.05	98	P	P	18 12 40.0	+0.9
	comp=Z,81nm,1.8s						
MDSI	Maura Dua	88.14	95	P	P	18 12 39.8	+0.4
	comp=Z,1µmcomp=Z,51nm,1.3s						
KEST	Kesra	88.21	358	P	P	18 12 40.4	+1.1
	comp=Z,8.8nm,1.0s,baz=211,slow=3.6,SNR=6.2						
KEST				LR	LR	18 51 14.7	
	comp=Z,2µm,18.3s,baz=190,slow=35						
	comp=Z,8.8nm,1.0s						
KEST	Kesra	88.21	358	P	P	18 12 42.1	+2.9
KEST				P	P	18 12 42.1	+2.9
KLSI		88.31	95	P	P	18 12 41.3	+1.0
	comp=Z,1µmcomp=Z,67nm,2.2s						
KRJI	Kerinci	88.38	91	P	P	18 12 41.8	+1.1
URZ	Urewera	88.44	169	P	P	18 12 39.5	-1.0
	comp=Z,42nm,1.0s,baz=299,slow=1.9,SNR=10						
URZ				LR	LR	18 52 23.3	
	comp=Z,4µm,18.5s,baz=200,slow=36						
	comp=Z,42nm,1.0s						
INKA	Innaminka	88.44	137	IAmb	IAmb	18 12 45.5	
	comp=Z,75nm,1.4s						
IDI	Anoyia	88.54	11	P	P	18 12 40.9	+0.1
	comp=Z,5.1nm,0.9s,baz=169,slow=1.2,SNR=4.6						
IDI				LR	LR	18 53 05.7	
	comp=Z,3µm,20.0s,baz=198,slow=36						
	comp=Z,5.1nm,0.9s						
IDI	Anoyia	88.54	11	IAmb	IAmb	18 12 45.0	
	comp=Z,88nm,2.0s						
PDSI	Padang	88.71	90	P	P	18 12 43.2	+1.0
	comp=Z,1µmcomp=Z,63nm,1.4s						
PMOZ	Porto Moniz, M	88.87	336	*e*LR	LR	18 41 08.2	
PMOZ				*i* IAMs_20	IAMs_20	18 46 42.2	
	comp=Z,1µm,20.0s						
AUALC	St Philip's Co	88.92	129	P	P	18 12 44.2	+1.1
ASAR	Alice Springs	88.95	129	P	P	18 12 42.9	-0.4
	comp=Z,29nm,0.9s,baz=207,slow=5.2,SNR=61						
ASAR				PKPPKP	P'P'df	18 38 30.1	-4.7
	comp=Z,1.2nm,1.1s,baz=166,slow=2.6,SNR=4.7						
ASAR				LR	LR	18 47 10.0	
	comp=Z,746nm,19.4s,baz=207,slow=32						
	comp=Z,29nm,0.9s						
ASAR	Alice Springs	88.95	129	P	P	18 12 42.5	-0.7
PPI	Padang Panjang	89.03	89	P	P	18 12 45.0	+1.4
	comp=Z,1µmcomp=Z,67nm,1.1s						
CTJI	Waduk Cacaban	89.15	100	P	P	18 12 45.4	+1.2
	comp=Z,52nm,1.7s						
AUPHS	Peel High Scho	89.26	146	P	P	18 12 48.4	+3.8
PCJI	Pacitan	89.39	103	P	P	18 12 46.6	+1.3
	comp=Z,82nm,1.4s						
FLOC	Florencia	89.47	273	IAmb	IAmb	18 12 59.8	
	comp=Z,132nm,1.5s						
FITZ	Fitzroy Crossi	89.51	120	LR	LR	18 48 19.1	
	comp=Z,722nm,18.9s,baz=216,slow=32						
MNSI	Mandailing Nat	89.52	88	P	P	18 12 47.1	+1.2
	comp=Z,52nm,1.0s						
PMBI	Palembang	89.73	94	IAMs_20	IAMs_20	18 44 13.0	
	comp=Z,2µm,21.0s						
AULRC	Lightning Ridg	89.76	143	P	P	18 12 46.6	-0.3
SMRI	Semarang	89.87	101	P	P	18 12 45.7	-1.9
SMRI				IAmb	IAmb	18 12 54.1	
	comp=Z,128nm,1.2s						
SMRI	Semarang	89.87	101	P	P	18 12 49.2	+1.6
VAE	Valguarnera	89.97	2	LR	LR	18 50 26.0	
	comp=Z,2µm,20.6s,baz=212,slow=34						
BKNI	Bangkinang	90.03	90	P	P	18 12 47.9	-0.5
BKNI	Bangkinang	90.03	90	IAMs_20	IAMs_20	18 46 23.9	
	comp=Z,2µm,19.0s						
BKNI	Bangkinang	90.03	90	P	P	18 12 49.8	+1.5
BKNI	Bangkinang	90.03	90	P	P	18 12 49.1	+0.8
SNJI	Sawahan-Nganju	90.07	103	P	P	18 12 50.7	+2.0
	comp=Z,1µmcomp=Z,66nm,1.6s						
OTAV	Otavalo	90.10	270	P	P	18 12 47.3	-1.9
OTAV				IAmb	IAmb	18 12 57.5	
	comp=Z,111nm,1.7s						
OTAV	Otavalo	90.10	270	IAMs_20	IAMs_20	18 50 01.9	
	comp=Z,1µm,20.0s						
OTAV	Otavalo	90.10	270	P	P	18 12 47.3	-1.9
OTAV				pmax	pmax		
	comp=Z,111nm,1.7s						
OTAV				MLR	MLR		
	comp=Z,1µm,20.0s						
OTAV	Otavalo	90.10	270	*e*P	P	18 12 50.7	+1.5
SJI	Sawahan	90.11	103	P	P	18 12 49.7	+0.9
	comp=Z,1µmcomp=Z,41nm,1.6s						
NGJI	Ngawi	90.22	102	P	P	18 12 51.4	+2.2
	comp=Z,91nm,1.6s						
MLSI	Meulaboh, Aceh	90.34	83	P	P	18 12 50.3	+0.6
KCSI	Kotacane, Aceh	90.58	85	P	P	18 12 51.4	+0.5
	comp=Z,850nmcomp=Z,56nm,1.5s						
ESPR	Espera	90.58	346	P	P	18 12 50.8	+0.6
EQTA	Presa de Quent	90.59	348	P	P	18 12 50.3	-0.1
HYB	Hyderabad	90.66	62	*e*P	P	18 12 50.9	-0.2
HYB				*e*PP	PP	18 16 26.2	-0.4
HYB				*e*SKSac	SKSac	18 23 22.3	-0.4
GMJI	Gumukmas	90.67	105	P	P	18 12 51.9	+0.6
PSI	Prapat	90.71	86	LR	LR	18 44 31.8	
	comp=Z,1µm,21.8s,baz=160,slow=30						
JAGI	Jajag, Banyuwa	90.92	105	P	P	18 12 53.5	+1.0
EMUR	La Murta	90.97	350	P	P	18 12 54.1	+2.0
ROSC	El Rosal	91.23	276	LR	LR	18 50 42.2	
	comp=Z,3µm,19.6s,baz=161,slow=34						
PBDV	Barranco-do-Ve	91.27	345	P	P	18 12 53.9	+0.5
PBDV	Barranco-do-Ve	91.27	345	*e*P	P	18 12 55.5	+2.1
PBDV				*i* IAmb	IAmb	18 13 01.0	
	comp=Z,70nm,1.9s						
PFVI	Vila Bisbo	91.31	344	*e*P	P	18 12 58.0	+4.4
PFVI				*i* IAmb	IAmb	18 13 00.8	
	comp=Z,85nm,1.8s						
PVAQ	Vaqueiros	91.39	345	P	P	18 12 55.5	+1.6
PVAQ	Vaqueiros	91.39	345	*e*P	P	18 12 56.8	+2.8
PVAQ				*i* IAmb	IAmb	18 13 08.5	
	comp=Z,66nm,1.6s						
PVAQ				*e*LR	LR	18 42 59.5	
EGRO	El Granado	91.48	345	P	P	18 12 56.8	+2.5
EMIN	Mina Concepcio	91.59	346	P	P	18 12 55.9	+1.0
PCVE	Castro Verde	91.67	345	P	P	18 12 56.8	+1.6
PCVE	Castro Verde	91.67	345	*e*P	P	18 12 57.6	+2.4
PCVE				*i* IAmb	IAmb	18 13 02.9	
	comp=Z,43nm,1.7s						
EADA	Adamuz	91.69	347	P	P	18 12 57.3	+2.0
TIP	Timpagrande	91.75	4	IAMs_20	IAMs_20	18 56 14.4	
	comp=Z,2µm,20.0s						
PBAR	Barrancos	92.04	346	*e*P	P	18 12 54.1	-2.8
PBAR				*i* IAmb	IAmb	18 13 04.4	
	comp=Z,62nm,1.7s						
KLNI	Mataram	92.09	107	P	P	18 12 58.3	+0.4
	comp=Z,26nm,1.0s						
SDV	Santo Domingo	92.23	282	LR	LR	18 50 56.1	
	comp=Z,2µm,19.8s,baz=139,slow=33						
SDV	Santo Domingo	92.23	282	IAMs_20	IAMs_20	18 50 33.8	
	comp=Z,2µm,21.0s						
TWSI	Taliwang, Sumb	92.30	108	P	P	18 12 58.9	0.0
	comp=Z,28nm,1.2s						
WRA	Warramunga Arr	92.34	128	P	P	18 12 58.1	-0.9
	comp=Z,7.4nm,0.8s,baz=202,slow=3.4,SNR=26						
WRA				PP	PP	18 16 38.9	-0.1
	comp=Z,3.5nm,1.1s,baz=208,slow=6.8,SNR=5.0						
	comp=Z,7.4nm,0.8s						
WRA	Warramunga Arr	92.34	128	P	P	18 12 57.7	-1.3
WRAB	Tennant Creek	92.35	128	P	P	18 12 58.3	-0.8
WRAB	Tennant Creek	92.35	128	P	P	18 13 00.4	+1.3
WRAB	Tennant Creek	92.35	128	*ce*P	P	18 12 58.5	-0.6
WRAB				pmax	pmax		
	comp=Z,20nm,1.1s						
CUC	Castrocucco	92.53	3	IAMs_20	IAMs_20	18 53 42.9	
	comp=Z,1µm,20.0s						
PLAI	Plampang	92.74	108	P	P	18 13 02.1	+1.2
PLAI	Plampang	92.74	108	P	P	18 13 01.1	+0.2
	comp=Z,32nm,1.3s						
PARRA	Arraiolos	92.82	345	*e*P	P	18 13 01.2	+0.7
PARRA				*i* IAmb	IAmb	18 13 08.0	
	comp=Z,70nm,1.8s						
ESDC	Sonseca Array	93.09	348	P	P	18 13 01.9	+0.1
	comp=Z,3.2nm,0.9s,baz=176,slow=3.4,SNR=12						
ESDC				LR	LR	18 53 43.8	
	comp=Z,2µm,18.3s,baz=186,slow=35						
	comp=Z,3.2nm,0.9s						
ESDC	Sonseca Array	93.09	348	P	P	18 13 02.2	+0.3
DBNI	Kabupaten Domp	93.31	109	P	P	18 13 04.4	+0.8
	comp=Z,492nmcomp=Z,21nm,1.3s						
PMRV	Marv??o	93.32	346	*e*P	P	18 13 05.4	+2.5
PMRV				*i* IAmb	IAmb	18 13 37.8	
	comp=Z,60nm,1.8s						
PMRV				*e*LR	LR	18 43 58.6	
KULM	Kulim	93.72	86	IAMs_20	IAMs_20	18 45 53.6	
	comp=Z,1µm,21.0s						
BRTR	Keskin Array B	94.18	17	P	P	18 13 08.1	+1.1
	comp=Z,1.3nm,0.9s,baz=178,slow=8.7,SNR=6.7						
BRTR				PP	PP	18 16 56.2	+1.9
	comp=Z,2.0nm,1.1s,baz=170,slow=10.0,SNR=5.2						
BRTR				LR	LR	18 57 38.3	
	comp=Z,1µm,18.7s,baz=201,slow=37						
BRTR	Keskin Array B	94.18	17	P	P	18 13 05.5	-1.5
BR131	Keskin Array S	94.18	17	*i* P	P	18 13 07.0	0.0
MTE	Manteigas	94.30	346	*e*LR	LR	18 45 06.0	
MTE				*i* IAMs_20	IAMs_20	18 52 23.1	
	comp=Z,2µm,20.0s						
BATI	Baumata	94.95	114	LR	LR	18 51 55.1	
	comp=Z,547nm,18.4s,baz=209,slow=33						
MVO	Moncorvo	94.97	346	*e*LR	LR	18 44 55.9	
MVO				*i* IAMs_20	IAMs_20	18 50 54.3	
	comp=Z,2µm,22.0s						
PDG	Podgorica	95.12	6	IAMs_20	IAMs_20	18 58 33.9	
	comp=Z,2µm,21.0s						
PBRG	Braganca	95.56	346	*e*P	P	18 13 14.5	+1.4
SOEI	Soe	95.66	114	IAMs_20	IAMs_20	18 52 09.5	
	comp=Z,1µm,18.0s						
BKSI	Bulukumba	96.93	108	P	P	18 13 22.6	+2.5
KAPI	Kappang	96.96	108	LR	LR	18 48 29.5	
	comp=Z,421nm,21.3s,baz=208,slow=30						
SJG	San Juan	96.97	291	LR	LR	18 52 34.6	
	comp=Z,745nm,21.5s,baz=148,slow=33						
GNI	Garni	97.01	25	LR	LR	18 58 04.9	
	comp=Z,2µm,18.1s,baz=213,slow=36						
HRA	Herat	97.47	40	P	P	18 13 21.9	-0.4
CTAO	Charters Tower	97.52	138	IAMs_20	IAMs_20	19 01 16.3	
	comp=Z,1µm,19.0s						
RAO	Raoul Island	97.86	172	LR	LR	18 57 08.4	
	comp=Z,1µm,18.8s,baz=178,slow=35						
BCIP	Isla Barro Col	97.98	275	IAMs_20	IAMs_20	18 54 35.2	
	comp=Z,1µm,21.0s						
BKB	Balikpapan	98.32	103	IAMs_20	IAMs_20	18 50 13.0	
	comp=Z,1µm,20.0s						
MLR	Muntele Rosu	98.73	10	LR	LR	19 01 15.0	
	comp=Z,3µm,19.4s,baz=190,slow=37						
RKT	Rikitea	98.91	211	*e*LR	LR	18 45 31.7	
	comp=Z,16µm,32.0s						
AKT	Akhty	99.04	27	*e*P	Pdif	18 13 28.6	-0.4
AKT				*e*PPP	PPP	18 19 36.7	
AKT				pmax	pmax		
	comp=Z,24nm,1.6s						
AKT				MLR	MLR		
	comp=Z,3µm,21.0s						
MYKA	Terra Mystica	99.10	2	*e*PcP	PP	18 17 34.2	+2.1
	comp=Z,10nm,1.1s						
DAVOX	Davos/Dischmat	99.24	359	LR	LR	18 59 07.4	
	comp=Z,902nm,18.1s,baz=174,slow=36						
H07N1	FLORES T-PHASE	99.24	328	T	T	20 04 31.6	
	SNR=31						
SIM	Simferopol'	99.34	16	*e*P	Pdif	18 13 29.0	-1.0
SIM				*e*S	S	18 24 53.0	-8.4
SIM				pmax	pmax		
	comp=Z,11nm,1.3s						
SIM				MLR	MLR		
	comp=Z,3µm,22.3s						
SQTA	Sankt Quirin	99.67	360	*e*PcP	PP	18 17 36.0	-0.5
	comp=Z,13nm,1.5s						
WTTA	Wattenberg	99.72	0	*e*PcP	PP	18 17 35.5	-1.3
	comp=Z,9.6nm,1.1s						
WATA	Walderalm	99.79	0	*e*PcP	PP	18 17 34.8	-2.6
	comp=Z,11nm,1.2s						
ANN	Anapa	99.79	18	*e*P	Pdif	18 13 32.1	+0.1
ANN				*e**PP	sP	18 13 35.9	+0.2
ANN				*e*S	SKSac	18 24 10.5	+0.6
ANN				pmax	pmax		
	comp=Z,20nm,1.0s						
LESA	Schwarzleotal	99.88	1	*e*PcP	PP	18 17 36.9	-1.1
	comp=Z,9.6nm,1.2s						
KBZ	Khabaz	99.93	23	LR	LR	18 58 38.5	
	comp=Z,2µm,20.0s,baz=202,slow=35						
KIV	Kislovodsk	100.10	22	*e*P	Pdif	18 13 33.5	0.0
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,1µm,20.0s						
RONA	Rosalia, Austr	100.24	3	*e*PcP	PP	18 17 28.9	-12
	comp=Z,9.2nm,1.6s						
LABN	Labinsk	100.31	21	*e*P	Pdif	18 13 33.8	-0.5
LABN				*e*		18 17 38.2	
LABN				pmax	pmax		
	comp=Z,13nm,0.6s						
MAK	Makhachkala	100.36	26	*e*P	Pdif	18 13 28.0	-6.6
MAK				*e*		18 24 07.9	
MAK				pmax	pmax		
	comp=Z,165nm,1.0s						
SDDR	Presa de Saban	100.60	287	IAMs_20	IAMs_20	18 54 53.1	
	comp=Z,970nm,21.0s						
SAUI	Saumlaki	100.94	119	IAMs_20	IAMs_20	18 54 46.3	
	comp=Z,1µm,20.0s						
ERBR	Yeremizino-Bor	101.28	20	*e*P	Pdif	18 13 33.3	-5.3
ERBR				*e*		18 17 45.8	
ERBR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ERBR				MLR	MLR		
	comp=Z,1µm,19.0s						
NIL	Nilore	101.51	49	IAMs_20	IAMs_20	18 58 54.1	
	comp=Z,897nm,21.0s						
KMPD	K-Podol'skiy	101.83	10	P	Pdif	18 13 42.3	+1.4
DZM	Mont Dzumac	102.31	156	*e*PP	PP	18 17 47.3	-8.2
	comp=Z,194nm,25.7s						
DZM				*e*SKSac	SKSac	18 24 19.0	-5.0
	comp=Z,410nm,30.8s						
DZM				*e*SS	SS	18 32 33.4	+1.5
	comp=Z,1µm,26.4s						
DZM	Mont Dzumac	102.31	156	*e*LQ	LQ	18 42 40.6	
	comp=Z,2µm,35.8s						
DZM				*e*LR	LR	18 47 11.6	
	comp=Z,3µm,27.8s						
TBI	Tubuai	102.33	198	*e*S	Sdif	18 25 22.4	-5.5
	comp=Z,2µm,26.0s						
TBI				*e*SS	SS	18 32 28.0	-3.8
	comp=Z,2µm,28.2s						
TBI	Tubuai	102.33	198	*e*LQ	LQ	18 42 41.8	
	comp=Z,5µm,40.0s						
TBI				*e*LR	LR	18 47 01.5	
	comp=Z,16µm,30.5s						
TBI				*e*LR	LR	18 47 09.9	
	comp=Z,3µm,28.8s						
CMAR	Chiang Mai Arr	103.03	77	P	Pdif	18 13 46.0	-1.1
	comp=Z,0.5nm,0.7s,baz=239,slow=3.4,SNR=5.5						
CMAR				PP	PP	18 18 00.4	-1.5
	comp=Z,1.2nm,1.0s,baz=234,slow=6.9,SNR=4.6						
CHTO	Chiang Mai	103.30	77	IAMs_20	IAMs_20	18 52 02.9	
	comp=Z,821nm,20.0s						
MTDJ	Mount Denham	103.68	282	IAMs_20	IAMs_20	19 00 30.5	
	comp=Z,790nm,18.0s						
CLL	Collm	103.77	1	*e*SKSac	SKSac	18 24 30.0	+1.3
CLL				*e*PP	PP	18 18 07.0	-0.1
CLL				*e*PS	PS	18 27 12.0	-4.9
CLL				*e*x	x	18 27 28.0	
CLL				*e*PPS	PPS	18 28 12.0	
CLL				*e*SS	SS	18 32 50.0	-3.4
CLL				*e*SSS	SSS	18 36 42.0	
CLL				AMS	AMS	19 03 00.0	
	comp=N,700nm,20.6s						
CLL				AMS	AMS	19 03 00.0	
	comp=E,1µm,18.5s						
CLL				AMS	AMS	19 07 00.0	
	comp=Z,1µm,18.0s						
BOAB	BOACO BROADBAN	104.08	272	IAMs_20	IAMs_20	19 00 10.8	
	comp=Z,2µm,19.0s						
KIEV	Kiev	104.24	12	IAMs_20	IAMs_20	19 03 54.3	
	comp=Z,2µm,21.0s						
PMG	Port Moresby	107.45	134	IAMs_20	IAMs_20	19 05 02.8	
	comp=Z,762nm,20.0s						
MNK	Minsk	107.84	10	*i* P	Pdif	18 14 06.7	-0.8
MNK				*i* PPP	PPP	18 20 51.1	
MNK				*i*		18 25 26.6	
MNK				*i* PS	PS	18 27 58.3	-0.6
MNK				*i* SS	SS	18 33 47.9	-0.8
MNK				*i* SSS	SSS	18 37 50.2	
MNK				pmax	pmax		
	comp=N,12nm,0.8s						

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MNK                                pmax      pmax
       comp=Z,6.0nm,0.7s
MNK                                pmax      pmax
       comp=E,14nm,0.8s
MNK                                pmax      pmax
       comp=Z,2µm,21.0s
MNK                                pmax      pmax
       comp=N,658nm,21.0s
MNK                                pmax      pmax
       comp=E,1µm,20.0s
TNCH   TengChong        107.86  72  Pdif      Pdif      18 14 02.5 -6.2
TNCH                                PP        PP        18 18 31.1 -6.8
NACGM  Naroch           108.12   9 ePKiKP     PKiKP     18 18 16.0 +0.8
       comp=Z,10.0nm,0.8s,baz=190
SANVU  Saraoutou        108.86 155  IAMs_20   IAMs_20   19 01 43.2
       comp=Z,1µm,20.0s
AAK    Ala-Archa        109.50  44  IAMs_20   IAMs_20   19 08 26.3
       comp=Z,1µm,19.0s
QIZ    Qiongzhong       109.99  85  PKP       PKiKP     18 18 20.2 +0.3
QIZ                                 PP        PP        18 18 52.8 -0.3
QIZ                                 SS        SS        18 34 20.0 +1.6
QIZ                                 LR        LR
       comp=Z,690nm,24.0s
QIZ                                 LR        LR
       comp=Z,610nm,19.0s
QIZ                                 LR        LR
       comp=Z,800nm,20.6s
MOS    Moscow           110.35  15 i PKIKP    PKiKP     18 18 19.0 -0.4
MOS                                e                    18 18 54.4
MOS                                 MLR       MLR
       comp=Z,1µm,22.0s
WUS    Wushi            110.41  48  IAMs_20   IAMs_20   19 10 26.6
       comp=Z,908nm,19.0s
PZH    PanZhiHua        110.86  74  PKP       PKiKP     18 18 20.7 -0.8
TEIG   Tepich           111.66 275  IAMs_20   IAMs_20   19 01 19.7
       comp=Z,798nm,22.0s
060A   Indiantown       112.09 286  IAMs_20   IAMs_20   19 01 50.5
       comp=Z,1µm,18.0s
DWPF   Disney Wildern   113.52 286  IAMs_20   IAMs_20   19 03 03.4
       comp=Z,1µm,20.0s
TAOE   Nuku Hiva Isla   113.93 211 eS         SKSdf     18 25 57.9  +18
       comp=Z,272nm,24.5s
TAOE                               eSS        SS        18 35 12.0 +2.7
       comp=Z,410nm,25.5s
TAOE   Nuku Hiva Isla   113.93 211 eLR        LR        18 52 29.0
       comp=Z,1µm,25.8s
656A   Willston         115.10 286  IAMs_20   IAMs_20   19 04 28.2
       comp=Z,1µm,19.0s
CD2    Chengdu          115.32  72  PKP       PKPdf     18 18 29.0 -0.8
CD2                                 SKS       SKSdf     18 25 41.2 -0.6
CD2                                 LR        LR
       comp=Z,2µm,17.1s
CD2                                 LR        LR
       comp=Z,2µm,19.7s
CD2                                 LR        LR
       comp=Z,730nm,18.0s
ARTI   Arti             115.49  27 i PKIKP    PKiKP     18 18 30.0 +0.8
ARTI                                                    18 19 33.4
ARTI                                                    18 25 42.6
ARTI                                SS        SS        18 35 30.7 -0.1
ARTI                                MLR       MLR
       comp=Z,2µm,23.0s
MAKZ   Makanchi         116.04  46  IAMs_20   IAMs_20   19 12 56.5
       comp=Z,964nm,19.0s
MK31   Makanchi Array   116.17  46 i PKIKP    PKiKP     18 18 31.3 +0.4
MKAR   Makanchi Array   116.17  46  PKP       PKiKP     18 18 32.0 +1.1
       comp=Z,1.1nm,0.7s,baz=222,slow=1.6,SNR=6.9
MKAR                                PKKPbc    PKKPbc    18 28 59.2 -0.8
       comp=Z,0.1nm,0.4s,baz=150,slow=44,SNR=3.0
MKAR                                PKKPab    PKKPab    18 29 06.4 +3.6
       comp=Z,0.3nm,0.6s,baz=66,slow=2.9,SNR=5.2
MKAR   Makanchi Array   116.17  46  PKIKP     PKiKP     18 18 32.0 +1.1
WMQ    Urumqi           116.38  52  PKP       PKiKP     18 18 32.6 +1.1
WMQ                                 LR        LR
       comp=Z,700nm,14.3s
WMQ                                 LR        LR
       comp=Z,1µm,23.7s
WMQ                                 LR        LR
       comp=Z,680nm,16.7s
BORK   Borovoye         116.39  35  IAMs_20   IAMs_20   19 14 01.5
       comp=Z,1µm,19.0s
BORK   Borovoye         116.39  35 i PKIKP    PKiKP     18 18 31.7 +0.6
BVAR   Borovoye Array   116.40  35  PKP       PKiKP     18 18 32.2 +1.1
       comp=Z,6.7nm,1.0s,baz=180,slow=1.5,SNR=10
BVAR                                PKKPbc    PKKPbc    18 28 59.0 -0.3
       comp=Z,0.8nm,0.6s,baz=227,slow=40,SNR=6.0
BVAR                                PKKPab    PKKPab    18 29 02.7 +1.5
       comp=Z,3.3nm,0.9s,baz=38,slow=3.6,SNR=6.2
TIGA   Tifton           117.24 287  IAMs_20   IAMs_20   19 04 16.6
       comp=Z,757nm,20.0s
KURBB  Kurchatov Arra   117.55  41  PKP       PKiKP     18 18 34.5 +1.1
       comp=Z,0.9nm,0.7s,baz=228,slow=2.8,SNR=5.9
KURBB                               PKKPab    PKKPab    18 28 56.9 +0.5
       comp=Z,0.6nm,0.8s,baz=275,slow=11,SNR=1.7
KURK   Kurchatov        117.66  41            PKKPab    18 28 56.9 +1.0
KURK   Kurchatov        117.66  41  IAMs_20   IAMs_20   19 14 09.1
       comp=Z,976nm,20.0s
KURK   Kurchatov        117.66  41 i PKIKP    PKiKP     18 18 34.2 +0.6
154A   Montrose         117.82 288  IAMs_20   IAMs_20   19 05 09.9
       comp=Z,661nm,20.0s
352A   Blakely          118.05 286  IAMs_20   IAMs_20   19 05 18.5
       comp=Z,765nm,19.0s
ENH    Enshi            118.20  76  IAMs_20   IAMs_20   19 03 40.7
       comp=Z,715nm,21.0s
LZH    Lanzhou          119.15  68  PKP       PKPdf     18 18 35.0 -2.2
LZH                                 SS        SS        18 36 15.7 -3.6
LZH                                 LR        LR
       comp=Z,400nm,18.7s
LZH                                 LR        LR
       comp=Z,560nm,19.6s
LZH                                 LR        LR
       comp=Z,640nm,19.9s
250A   Grady            119.19 285  IAMs_20   IAMs_20   19 05 47.3
       comp=Z,1µm,22.0s
KNMB   Chin-men Tao     119.27  87  IAMs_20   IAMs_20   19 01 14.5
       comp=Z,819nm,20.0s
GTA    Gaotai           119.31  63 ePKP       PKiKP     18 18 38.0 +0.6
GTA                                 LR        LR
       comp=Z,490nm,21.4s
GTA                                 LR        LR
       comp=Z,570nm,20.4s
GTA                                 LR        LR
       comp=Z,750nm,21.8s
SSLB   Suanglung        120.32  90  IAMs_20   IAMs_20   19 00 36.3
       comp=Z,967nm,22.0s
LRAL   Lakeview Retre   120.38 286  IAMs_20   IAMs_20   19 05 58.9
       comp=Z,1µm,22.0s
DGZ    Jazzator, Alta   120.62  47 i PKIKP    PKiKP     18 18 39.8 +0.2
NACB   Ninganchiao      120.99  90  IAMs_20   IAMs_20   19 03 30.2
       comp=Z,791nm,20.0s
Z47A   Carrollton       121.13 285  IAMs_20   IAMs_20   19 08 59.5
       comp=Z,1µm,19.0s
APA    Apatity          121.21  10 i PKIKP    PKPdf     18 18 38.1 -1.8
APA                                 MLR       MLR
       comp=Z,2µm,23.8s
WHN    Wuhan            121.28  80  PKP       PKiKP     18 18 44.6 +3.3
WHN                                 PP        PP        18 20 10.8 -1.6
T50A   Nancy            121.96 290  IAMs_20   IAMs_20   19 13 28.6
       comp=Z,785nm,19.0s
V48A   Smith Brothers   122.20 288  IAMs_20   IAMs_20   19 05 18.9
       comp=Z,721nm,19.0s
ARCES  ARCESS Array B   122.49   6  PKKPbc    PKKPbc    18 28 38.7 +1.5
       comp=Z,14nm,1.1s,baz=353,slow=3.9,SNR=2.8
ZALV   Zalesovo Beam    122.60  42  PKP       PKiKP     18 18 43.2 +0.1
       comp=Z,0.7nm,0.4s,baz=268,slow=6.7,SNR=6.3
ZALV                                PKKPbc    PKKPbc    18 28 36.6 +0.2
       comp=Z,3.3nm,0.9s,baz=22,slow=4.8,SNR=12
LYN    LuoYang          123.02  75  PKP       PKiKP     18 18 47.0 +2.4
LYN                                 SS        SS        18 37 10.7 +2.2
LYN                                 AMB       AMB
       comp=Z,330nm,3.8s
LYN                                 LR        LR
       comp=Z,720nm,19.6s
LYN                                 LR        LR
       comp=Z,820nm,19.7s
LYN                                 LR        LR
       comp=Z,1µm,18.9s
NATX   Nacogdoches      124.02 279  IAMs_20   IAMs_20   19 08 17.9
       comp=Z,919nm,21.0s
NJ2    Nanjing          125.05  82 ePKP       PKPdf     18 18 48.4  0.0
NJ2                                 LR        LR
       comp=Z,460nm,18.5s
NJ2                                 LR        LR
       comp=Z,380nm,17.1s
NJ2                                 LR        LR
       comp=Z,560nm,18.9s
BTO    Baotou           125.77  68 ePKP       PKPdf     18 18 46.8 -2.9
BTO                                 LR        LR
       comp=Z,530nm,8.0s
BTO                                 LR        LR
       comp=Z,370nm,11.9s
BTO                                 LR        LR
       comp=Z,430nm,8.6s
SSE    Sheshan          125.78  84  PKP       PKPdf     18 18 49.3 -0.5
SSE                                 PP        PP        18 20 43.8 +1.1
SSE                                 SS        SS        18 37 45.4 +2.1
SSE                                 AMB       AMB
       comp=Z,72nm,3.5s
SSE                                 LR        LR
       comp=Z,200nm,19.1s
SSE                                 LR        LR
       comp=Z,230nm,19.1s
KNGR   Kungurtug, Tuv   125.90  52 i PKIKP    PKPdf     18 18 49.8 +0.2
HNS    HongShan         126.29  74 ⇑PKP       PKiKP     18 18 53.8 +2.8
HNS                                 SS        SS        18 37 49.4 -0.3
HNS                                 LR        LR
       comp=Z,420nm,18.6s
HNS                                 LR        LR
       comp=Z,360nm,20.6s
HNS                                 LR        LR
       comp=Z,620nm,21.8s
HHC    Hu-ho-hao-te     126.81  69 ePKP       PKPdf     18 18 47.7 -3.9
TIA    Tai'an           126.90  77  PKP       PKiKP     18 18 55.3 +3.0
U38A   Gravette         127.10 283  IAMs_20   IAMs_20   19 09 49.7
       comp=Z,1µm,22.0s
L44A   Lake County Fo   127.21 293  IAMs_20   IAMs_20   19 10 14.6
       comp=Z,846nm,20.0s
TXAR   Lajitas Array    127.73 270  PKP       PKiKP     18 18 54.1 -0.2
       comp=Z,6.7nm,1.1s,baz=146,slow=2.7,SNR=33
SONM   Songino Array    128.53  59  PKP       PKiKP     18 18 55.2 -0.2
       comp=Z,2.4nm,0.6s,baz=225,slow=2.8,SNR=11
ZAK    Zakamensk        128.56  55 ePKIKP     PKPdf     18 18 54.3 -0.4
ZAK                                 pmax      pmax
       comp=Z,23nm,2.1s
OK048  Pawnee Station   128.60 282  IAMs_20   IAMs_20   19 13 13.4
       comp=Z,713nm,20.0s
H43A   Windswept, Lux   128.62 295  IAMs_20   IAMs_20   19 04 46.9
       comp=Z,862nm,21.0s
T35A   Sooner Cattle    128.68 282  IAMs_20   IAMs_20   19 12 53.1
       comp=Z,848nm,20.0s
P38A   Dawn             128.74 287  IAMs_20   IAMs_20   19 13 40.2
       comp=Z,552nm,19.0s
ULN    Ulaanbaatar      128.89  59  IAMs_20   IAMs_20   19 23 26.6
       comp=Z,853nm,22.0s
ULN    Ulaanbaatar      128.89  59 i PKIKP    PKPdf     18 18 54.4 -1.0
BJI    Beijing          128.91  73  PKP       PKiKP     18 18 56.1 -0.1
BJI                                 sPKP      sPKPdf    18 19 01.3 +2.4
BJI                                 LR        LR
       comp=Z,220nm,21.2s
BJI                                 LR        LR
       comp=Z,170nm,20.2s
BJI                                 LR        LR
       comp=Z,370nm,24.3s
TLY    Talaya           129.55  54 i PKIKP    PKPdf     18 18 56.7 +0.3
OK038  West end E0370   129.72 280  IAMs_20   IAMs_20   19 13 55.8
       comp=Z,991nm,21.0s
KSU1   Kansas State U   130.19 284  IAMs_20   IAMs_20   19 12 29.4
       comp=Z,559nm,20.0s
AMTX   Amarillo         130.40 277  IAMs_20   IAMs_20   19 09 38.0
       comp=Z,673nm,19.0s
MNTX   Cornudas Mount   130.45 271  IAMs_20   IAMs_20   19 11 20.0
       comp=Z,678nm,19.0s
R32A   Long Quarter,    130.99 282  IAMs_20   IAMs_20   19 13 32.5
       comp=Z,741nm,20.0s
XLT    XiLinHaoTe       131.33  69 ePKP       PKiKP     18 19 05.0 +3.9
XLT                                 SKKS                18 28 08.7
XLT                                 SS        SS        18 38 52.4 +0.3
XLT                                 AMB       AMB
       comp=Z,190nm,8.1s
XLT                                 LR        LR
       comp=Z,38nm,19.6s
XLT                                 LR        LR
       comp=Z,250nm,17.9s
XLT                                 LR        LR
       comp=Z,420nm,25.5s
CBKS   Cedar Bluff      131.85 282  IAMs_20   IAMs_20   19 12 42.3
       comp=Z,792nm,21.0s
ANMO   Albuquerque      133.33 273c iPKIKP    PKPdf     18 19 02.8 -1.5
ANMO                                pmax      pmax
       comp=Z,10.0nm,1.3s
INCN   Inchon           133.42  82  IAMs_20   IAMs_20   19 11 20.3
       comp=Z,532nm,20.0s
NRIK   Noril'sk         133.76  28  PKP       PKPdf     18 19 02.8 -1.0
       comp=Z,1.6nm,0.7s,baz=172,slow=2.6,SNR=3.6
NRIK   Noril'sk         133.76  28 i PKIKP    PKiKP     18 19 04.6 -0.4
KSRS   Korea Array      134.18  83  PKP       PKPdf     18 19 04.0 -1.5
       comp=Z,7.9nm,1.2s,baz=214,slow=1.3,SNR=10
KSRS                                PP        PP        18 21 34.5 -2.9
       comp=Z,2.5nm,1.0s,baz=243,slow=5.5,SNR=4.4
K30B   Basset           134.21 286  IAMs_20   IAMs_20   19 11 52.9
       comp=Z,723nm,22.0s
OGNE   Ogallala         134.57 283  IAMs_20   IAMs_20   19 08 19.3
       comp=Z,558nm,19.0s
SDCO   Great Sand Dun   134.60 277  IAMs_20   IAMs_20   19 16 06.2
       comp=Z,726nm,20.0s
ISCO   Idaho Springs    135.98 279  IAMs_20   IAMs_20   19 17 29.3
       comp=Z,670nm,19.0s
ULM    Lac du Bonnet    136.48 297  PKP       PKPdf     18 19 08.8 -0.6
       comp=Z,7.1nm,1.0s,baz=109,slow=1.7,SNR=5.1
HIA    Hailar           136.52  65  IAMs_20   IAMs_20   19 16 21.4
       comp=Z,1µm,20.0s
CN2    Changchun        136.66  74  PKP       PKPdf     18 19 02.1 -7.9
CN2                                 PP        PP        18 21 48.8 -4.2
CN2                                 LR        LR
       comp=N,500nm,19.0s
CN2                                 LR        LR
       comp=E,600nm,19.0s
CN2                                 LR        LR
       comp=Z,500nm,20.0s
HILR   Hailar Array B   136.69  64  PKhKP     PKPpre    18 19 03.8
       comp=Z,1.1nm,0.5s,baz=165,slow=35,SNR=1.8
HILR                                PKP       PKiKP     18 19 11.9 +0.3
       comp=Z,3.7nm,0.8s,baz=164,slow=6.0,SNR=4.1
IRM    Iron Mountain    138.06 265  IAMs_20   IAMs_20   19 18 28.6
       comp=Z,656nm,20.0s
K22A   Casper           138.27 282  IAMs_20   IAMs_20   19 15 44.2
       comp=Z,757nm,22.0s
MDJ    Mudanjiang       139.56  76  IAMs_20   IAMs_20   19 33 27.9
       comp=Z,705nm,20.0s
MJAR   Matsushiro Arr   139.81  92  PKhKP     PKPpre    18 19 08.3
       comp=Z,2.9nm,0.9s,baz=243,slow=2.5,SNR=7.0
MJAR                                PKP       PKPdf     18 19 16.9 +0.8
       comp=Z,2.9nm,1.0s,baz=258,slow=1.2,SNR=5.8
PDAR   Pinedale Array   140.15 280  PKhKP     PKPpre    18 19 09.0
       comp=Z,2.9nm,1.0s,baz=108,slow=4.8,SNR=6.9
PDAR                                PKP       PKPdf     18 19 16.9 +0.2
       comp=Z,2.2nm,0.8s,baz=147,slow=3.0,SNR=9.2
DUG    Dugway, Tooele   140.57 274  IAMs_20   IAMs_20   19 19 12.2
       comp=Z,779nm,22.0s
HWUT   Hardware Ranch   140.67 277  IAMs_20   IAMs_20   19 19 48.9
       comp=Z,754nm,21.0s
HEH    HeiHe            141.29  67 ePKP       PKPdf     18 19 15.0 -3.2
FXWY   Fox Creek        141.52 280  IAMs_20   IAMs_20   19 15 30.6
       comp=Z,1µm,22.0s
TIN    Tinemaha, Big    141.87 266  IAMs_20   IAMs_20   19 24 31.4
       comp=Z,547nm,20.0s
NVAR   Mina Array Bea   142.80 268  PKhKP     PKPpre    18 19 17.3
       comp=Z,3.1nm,0.8s,baz=144,slow=3.9,SNR=11
NVAR                                PKP       PKPdf     18 19 22.4 +0.8
       comp=Z,2.9nm,0.8s,baz=126,slow=3.4,SNR=7.0
ZEA    Zeya             142.80  62 ePKIKP     PKPdf     18 19 17.2 -3.6
ZEA                                 pmax      pmax
       comp=Z,10.0nm,0.7s
DLMT   Dillon           143.41 281  IAMs_20   IAMs_20   19 19 01.6
       comp=Z,891nm,21.0s
RES    Resolute Bay     144.25 334            PKPbc     18 19 21.7 +0.6
RES    Resolute Bay     144.25 334  PKIKP     PKPbc     18 19 21.7 +0.6
MFID   Camas Ranch      144.28 276  IAMs_20   IAMs_20   19 17 49.6
       comp=Z,903nm,22.0s
JRSC   Jasper Ridge     144.51 263  IAMs_20   IAMs_20   19 38 38.4
       comp=Z,814nm,20.0s
WOH    Wood Valley      144.97 202            PKPab     18 19 24.3 -0.8
BMO    Blue Mountains   145.96 277  IAMs_20   IAMs_20   19 21 39.0
       comp=Z,908nm,21.0s
GRNR   Gornyy           146.63  71⇓iPKP2      PKPbc     18 19 29.3 +0.1
GRNR                                pmax      pmax
       comp=Z,20nm,1.1s
YAK    Yakutsk          146.77  49 i PKP2     PKPbc     18 19 29.3 +0.1
YAK                                e                    18 22 50.4
YAK                                eSS        SS        18 41 59.4 +6.2
YAK                                 pmax      pmax
       comp=Z,64nm,1.3s
YAK                                 pmax      pmax
       comp=N,5.0nm,1.2s
YAK                                 pmax      pmax
       comp=E,23nm,1.4s
YAK                                 pmax      pmax
       comp=Z,160nm,4.3s
YAK                                 pmax      pmax
       comp=N,142nm,3.0s
YAK                                 pmax      pmax
       comp=E,88nm,3.3s
ASAJ   Asahikawa        147.06  85  PKPbc     PKPab     18 19 32.3 +0.1
       comp=E,62nm,1.1s,baz=267,slow=15,SNR=7.8
TIXI   Tiksi            147.41  31c iPKIKP    PKPdf     18 19 27.9 -0.3
TIXI                                pmax      pmax
       comp=Z,78nm,1.7s
KIP    Kipapa           147.60 199c iPKIKP    PKPdf     18 19 29.2 -0.9
KIP                                 pmax      pmax
       comp=Z,198nm,1.7s
YSS    Yuzhno-Sakhali   148.62  81  IAMs_20   IAMs_20   19 39 55.7
       comp=Z,808nm,21.0s
YSS    Yuzhno-Sakhali   148.62  81 ePKP2      PKPab     18 19 37.5 -0.8
YSS                                 pmax      pmax
       comp=Z,80nm,1.3s
K02D   Willamette Mer   148.62 269            PKPbc     18 19 33.4 -1.6
YKA    Yellowknife Ar   150.42 310  PKP       PKPdf     18 19 31.9 -1.5
       comp=Z,0.9nm,1.0s,baz=90,slow=0.3,SNR=5.9
YKA                                 PKPbc     PKPbc     18 19 38.3 -0.3
       comp=Z,46nm,1.1s,baz=88,slow=1.8,SNR=40
SEY    Seymchan         157.29  48 ePKP2      PKPab     18 20 03.0  -11
SEY                                 pmax      pmax
       comp=Z,20nm,1.6s
PETK   Petropavlovsk-   159.80  76  PKPab     PKPab     18 20 25.3 -0.3
       comp=Z,8.2nm,0.9s,baz=242,slow=3.2,SNR=2.8
ILAR   Eielson Array    163.70 326  PKP       PKPdf     18 19 50.9 +0.8
       comp=Z,2.1nm,1.2s,baz=343,slow=0.9,SNR=6.6
ILAR                                PKPab     PKPab     18 20 43.5 +1.2
       comp=Z,8.3nm,0.9s,baz=34,slow=2.1,SNR=18
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*JMA **09** 18:01:26.7±0.3, 30°N±2°×13°9E±°, h442km, MV3.4/23, NEAR TORISHIMA IS*
*IDC **09** 18:01:27.7±0.9, 30°.37N×138°.73E, h428km±14km, mb2.8/9, mbtmp3.7/12, Error ellipse: s-maj=27.6km s-min=12.9km az=72.0*
ISC 09 18:01:27.5±0.8**, 30°.34N**±0°.07×**139°.0E**±0°.1**, h450km, n21, σ1ˢ60**/25**, mb3.0**/9**, Southeast of Honshu**

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Code   Station Name       Δ°  AZ°    Phase ID               Time     Res
                                    Op        ISC         h  m  s    ISC
JHJ2   Mitsune           2.85  14  eP         P         18 02 33.4 +0.1
JHJ    Hachijo jima 2    2.85  13   P         P         18 02 33.7 +0.4
       214nm,0.6s,baz=310,slow=23,SNR=8.0
JHJ                                 S         S         18 03 23.9 -3.0
       358nm,1.0s,baz=66,slow=22,SNR=2.0
CBIJ   Chichi jima       4.26 138  eP         P         18 02 43.9 -1.1
CBIJ                                S         S         18 03 44.2 -3.8
JCJ    Chichijima        4.26 138   S         S         18 03 34.0  -14
       126nm,0.4s,baz=268,slow=23,SNR=10
BSO1   Boso 1            4.62  21  eP         P         18 02 47.8 +0.4
BSO1                               eS         S         18 03 51.5 -1.3
BSO3   Boso 3            4.63  15  eP         P         18 02 47.5 -0.4
BSO3                               eS         S         18 03 51.9 -1.7
JOD2   Odawara 2         4.92   1  eP         P         18 02 51.0 +0.1
JOD2                               eS         S         18 03 56.8 -2.2
JNY    Yasuok            5.10 349  eP         P         18 02 53.5 +0.7
JRY    Ryogami san       5.67 359  eP         P         18 02 58.3  0.0
MJAR   Matsushiro Arr    6.23 354   P         P         18 03 03.5 -0.5
       2.2nm,0.5s,baz=173,slow=11,SNR=11
JSJ    Shimokoshiki      8.09 282  eP         P         18 03 22.4 -1.4
USRK   Ussuriysk Ar.    14.92 340   P         P         18 04 37.8 +0.2
       0.9nm,0.4s,baz=137,slow=10,SNR=2.1
SONM   Songino Array    30.46 314   P         P         18 06 59.7 -2.1
       0.4nm,0.6s,baz=128,slow=7.6,SNR=3.0
       0.4nm,0.6s
CMAR   Chiang Mai Arr   38.17 261   P         P         18 08 07.0 -0.1
       0.5nm,0.7s,baz=67,slow=6.1,SNR=5.8
       0.5nm,0.7s
ZALV   Zalesovo Beam    45.23 318   P         P         18 09 02.9 +0.1
       0.4nm,0.4s,baz=93,slow=6.3,SNR=2.1
       0.4nm,0.4s
MKAR   Makanchi Array   46.29 307   P         P         18 09 11.4 +0.4
       0.3nm,0.6s,baz=89,slow=7.3,SNR=5.8
       0.3nm,0.6s
KURBB  Kurchatov Arra   48.80 313   P         P         18 09 30.4 +0.5
       0.6nm,0.5s,baz=91,slow=7.8,SNR=8.9
       0.6nm,0.5s
WRA    Warramunga Arr   50.19 186   P         P         18 09 42.4 +1.8
       1.4nm,0.6s,baz=3.2,slow=7.9,SNR=12
       1.4nm,0.6s
BVAR   Borovoye Array   53.78 316   P         P         18 10 07.0 +0.8
       0.5nm,0.3s,baz=87,slow=8.1,SNR=5.9
       0.5nm,0.3s
ASAR   Alice Springs    53.92 186   P         P         18 10 09.4 +1.9
       0.4nm,0.6s,baz=358,slow=6.0,SNR=21
       0.4nm,0.6s
ILAR   Eielson Array    56.25  30   P         P         18 10 26.0 +2.6
       0.5nm,0.8s,baz=268,slow=6.8,SNR=2.9
       0.5nm,0.8s
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*SKO **09** 18:10:34.2, 41°.47N×19°.29E, h0km, ML2.9*
*IDC **09** 18:10:35.7±3.1, 41°.73N×19°.60E, h0km, mb3.7/2, mbtmp3.5/5, ML2.8/3, Error ellipse: s-maj=43.0km s-min=18.1km az=2.0*
*THE **09** 18:10:36.9, 42°N±5°×2°0E±°, h5km±16km, M2.8/22, MLh2.8/22*
*TIR **09** 18:10:37.1, 41°.53N×19°.61E, h32km±1km, Md2.6/5, Ml3.2/5*
*PDG **09** 18:10:37.0±0.1, 41°.51N×19°.59E, h10km, MD3.3/5, ML3.2/11, Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*
ISC 09 18:10:36.8±1.0**, 41°.52N**±0°.02×**19°.58E**±0°.02**, h12km**±7km**, n91, σ1ˢ67**/134**, 10C-4D, Albania**

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Code   Station Name       Δ°  AZ°    Phase ID               Time     Res
                                    Op        ISC         h  m  s    ISC
TIR    Tirane            0.28 129   Pg        Pg        18 10 42.4 -0.2
TIR                                 Sg        Sg        18 10 45.0 -1.4
TIR                                 AML       AML       18 10 46.6
       26nm,0.3s
TIR    Tirane            0.28 129  i Pg       Pg        18 10 42.4 -0.2
TIR                                i Sg       Sb        18 10 47.8 -0.5
ULC    Ulcinj            0.51 331  ePg        Pg        18 10 46.7  0.0
ULC                                i Sg       Sb        18 10 55.0  0.0
SDA    Shkodra           0.53 354   Pg        Pg        18 10 47.2  0.0
SDA                                 Sg        Sb        18 10 56.6 +1.0
SDA                                 AMd                 18 11 28.5
PHP    Peshkopia         0.67  76   Pg        Pg        18 10 49.5 -0.2
PHP                                 Sg        Sb        18 10 59.3 -0.3
PHP                                 AML       AML       18 11 04.1
       3.1nm,0.4s
PHP                                 AMd                 18 11 33.2
PHP    Peshkopia         0.67  76   P         Pg        18 10 49.6 -0.2
PHP                                 S         Sb        18 11 00.3 +0.6
DRME   Dracevica, Mon    0.73 336  ePg        Pg        18 10 50.7 -0.2
DRME                               eSg        Sb        18 11 02.5 +1.3
BUM    Brajici-Budva     0.93 327  ePg        Pg        18 10 54.6 -0.1
BUM                                i Sg       Sn        18 11 09.4 +0.4
PDG    Podgorica         0.94 345   Pg        Pg        18 10 54.7 -0.2
PDG                                 Sg        Sb        18 11 08.8 +1.4
PDG                                 AMd                 18 11 38.8
PDG    Podgorica         0.94 345  ⇓P         Pb        18 10 55.4 +0.5
PDG    Podgorica         0.94 345  ePg        Pg        18 10 54.5 -0.4
PDG                                i Sg       Sn        18 11 09.6 +0.5
OHR    Ohrid             1.01 114  i Pg       Pg        18 10 55.3 -0.9
OHR                                eLg        Lg        18 11 12.1
       comp=N,550nm,0.9s
OHR                                i Sg       Sn        18 11 12.7 +1.8
OHR                                eLg        Lg        18 11 13.1
       comp=E,295nm,0.4s
VLO    Vlora             1.05 183   Pg        Pg        18 10 56.5 -0.6
VLO                                 Sg        Sg        18 11 11.4 +0.6
VLO                                 AML       AML       18 11 17.6
       comp=E,7.3nm,0.2s
VLO                                 AMd                 18 11 50.4
VLO    Vlora             1.05 183   P         Pg        18 10 57.1 +0.1
VLO                                 S         Sn        18 11 13.2 +1.3
PVY    Plav              1.11  15  ePg        Pg        18 10 57.6 -0.6
PVY                                i Sg       Sn        18 11 15.1 +1.6
CEME   Cevo              1.14 335⇑iPg         Pg        18 10 58.2 -0.4
CEME                               eSg        Sn        18 11 16.3 +2.2
HCY    Herceg Novi       1.23 319  ePg        Pg        18 11 00.0 -0.4
HCY                                i Sg       Sn        18 11 19.4 +3.2
KBN    Korca             1.28 134   Pn        Pg        18 11 00.4 -1.0
KBN                                 AMd                 18 11 48.7
KBN    Korca             1.28 134   P         Pg        18 11 01.0 -0.4
KBN                                 S         Sn        18 11 19.8 +2.2
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NKME	Niksic	1.33	340	⇑iPg	Pn	18 11 01.7	+0.5
NKME				eSg	Sn	18 11 22.7	+3.9
KOME	Kolasin	1.33	358	⇓iPg	Pn	18 11 01.7	+0.5
KOME				eSg	Sn	18 11 22.7	+3.8
IVA	Berane	1.37	10	ePg	Pn	18 11 02.5	+0.7
IVA				iSg	Sn	18 11 23.9	+4.0
SKO	Skopje	1.47	71	iPg	Pb	18 11 04.4	+0.5
SKO				iSg	Sg	18 11 26.0	+2.0
TREB	Trebinje	1.50	323	ePn	Pn	18 11 03.4	-0.1
NEST	Nestorio	1.57	134	P	Pn	18 11 05.7	+1.2
NEST				S	Sg	18 11 27.9	+0.6
BRY	Bratogost	1.58	331	ePn	Pn	18 11 05.9	+1.2
BRY				iSn	Sg	18 11 29.6	+2.0
UPM	Unac-Piva	1.75	344	ePn	Pn	18 11 08.7	+1.6
UPM				iSn	Sg	18 11 33.7	+0.5
PENT	Pentalofos	1.78	138	P	Pn	18 11 08.6	+1.2
PENT				S	Sb	18 11 32.8	+1.2
KLINJ	Klinje	1.80	336	ePn	Pb	18 11 09.5	-0.3
PLE	Pljevlja	1.81	356	ePn	Pn	18 11 09.5	+1.6
PLE				iSn	Sg	18 11 35.0	-0.1
KEK	Kerkira	1.81	175	Sn	Sb	18 11 33.5	+0.9
NOCI	Noci	2.03	250	Sn	Sn	18 11 38.0	+1.9
NOCI				AML	AML	18 11 40.1	
	comp=E,0.4nm,0.2s						
KZN	Kozani	2.06	125	P	Pn	18 11 12.0	+0.8
KZN				S	Sn	18 11 39.3	+2.5
IGT	Igoumenitsa	2.07	164	P	Pn	18 11 10.7	-0.5
IGT	Igoumenitsa	2.07	164	iPn	Pn	18 11 10.8	-0.5
IGT				iSn	Sn	18 11 37.0	0.0
KPRO	Kipourio	2.07	138	P	Pn	18 11 12.7	+1.4
KPRO				S	Sb	18 11 40.2	+0.2
JAN	Janina	2.10	152	P	Pn	18 11 13.0	+1.3
JAN				S	Sn	18 11 39.7	+1.9
LFKM	Lefkimmi	2.11	170	P	Pn	18 11 12.3	+0.5
BARS	Barje	2.11	51	iPn	Pn	18 11 12.8	+0.9
BARS				iSn	Sn	18 11 40.0	+2.1
VAY	Valandovo	2.26	94	iPn	Pn	18 11 15.2	+1.3
VAY				iSn	Sg	18 11 49.3	-0.1
	comp=N,89nm,1.2s						
VAY				iSn	Sb	18 11 50.7	+5.4
	comp=E,31nm,0.7s						
PRMD	Pramanda	2.30	149	P	Pn	18 11 15.6	+1.0
KNT	Kendrikon	2.53	97	P	Pn	18 11 18.4	+0.8
KNT	Kendrikon	2.53	97	iPn	Pn	18 11 18.6	+1.1
KNT				iSn	Sn	18 11 48.3	0.0
TETR	Tetrakomo, Epi	2.53	149	P	Pn	18 11 18.6	+0.8
LIT	Litokhoron	2.63	122	P	Pn	18 11 19.9	+0.9
LIT	Litokhoron	2.63	122	iPn	Pn	18 11 19.3	+0.3
LIT				iSn	Sn	18 11 52.5	+1.8
KKB	Krupnik	2.68	82	P	Pn	18 11 20.7	+1.0
KKB	Krupnik	2.68	82	iPn	Pn	18 11 20.8	+1.0
KKB				iSn	Sn	18 11 53.8	+1.7
THL	Klokotos Trika	2.70	136	P	Pn	18 11 20.0	+0.1
THE	Thessaloniki	2.71	108	P	Pn	18 11 20.5	+0.4
THE	Thessaloniki	2.71	108	iPn	Pn	18 11 20.4	+0.3
THE				iSn	Sn	18 11 52.3	-0.5
TSLK	Tsoukalades, L	2.82	163	P	Pn	18 11 20.9	-0.7
HORT	Hortiatis	2.82	108	S	Sn	18 11 55.9	+0.3
LKD2	Lefkada island	2.85	163	P	Pn	18 11 21.1	-1.0
AMPL	Ampelaki	2.88	154	P	Pn	18 11 22.2	-0.3
NYDR	Nydri-Lefkada	2.93	163	P	Pn	18 11 21.9	-1.2
DRAG	Dragano-Lefkad	2.94	165	P	Pn	18 11 21.8	-1.4
SOH	Sokhos	2.94	103	P	Pn	18 11 23.7	+0.5
SOH	Sokhos	2.94	103	iPn	Pn	18 11 23.8	+0.5
VTS	Vitosha	2.94	67	P	Pn	18 11 24.3	+1.0
SRS	Serrai	3.05	96	iPn	Pn	18 11 25.3	+0.5
SRS				iSn	Sn	18 12 01.2	0.0
MMB	Musomishta	3.13	88	iPn	Pn	18 11 27.5	+1.5
TIP	Timpagrande	3.18	224	⇓P	Pn	18 11 28.3	+1.7
MDVR	Moldovita	3.61	25	⇑P	Pn	18 11 29.9	-2.7
BLY	Banja Luka	3.67	332	ePn	Pn	18 11 36.6	+3.3
BLY	Banja Luka	3.67	332	⇓P	Pn	18 11 33.6	+0.4
HERR	Herculane	3.95	31	⇑P	Pn	18 11 33.8	-3.3
KNYS	Krupa na Uni	4.12	326	ePn	Pn	18 11 40.2	+0.7
BZS	Buzias	4.35	19	⇑P	Pn	18 11 39.5	-3.2
GZR	Gura Zlata	4.52	30	⇑P	Pn	18 11 41.5	-3.5
MORH	Mrgy, Hungar	4.74	352	ePn	Pn	18 11 50.3	+2.3
MORH	Mrgy, Hungar	4.74	352	⇑P	Pn	18 11 46.9	-1.1
LOT	Lotru	4.97	36	⇑P	Pn	18 11 47.1	-4.2
ARR	Arges	5.32	42	⇑P	Pn	18 11 52.0	-4.1
DRGR		5.73	22	⇑P	Pn	18 11 59.6	-2.1
MLR	Muntele Rosu	6.10	47	Pn	Pn	18 12 08.4	+1.6
	comp=E,0.5nm,0.3s,baz=137,slow=3.5,SNR=6.7						
MLR				Sn	Sn	18 13 13.3	-3.2
	baz=156,slow=20						
	comp=E,2.0nm,0.5s						
SOKA	Soboth	6.10	329	iPn	Pn	18 12 07.1	+0.3
	comp=E,0.7nm,0.2s						
SOKA				iSn	Sn	18 13 14.0	-2.6
	comp=E,1.6nm,0.6s						
OBKA	Obir	6.16	326	iPn	Pn	18 12 07.9	+0.3
	comp=E,1.5nm,0.2s						
OBKA				iSn	Sn	18 13 18.0	0.0
	comp=E,4.2nm,0.3s						
ARSA	Arzberg	6.42	334	iPn	Pn	18 12 11.9	+0.8
	comp=E,0.8nm,0.3s						
RONA	Rosalia, Austr	6.61	340	ePn	Pn	18 12 15.9	+2.3
	comp=E,1.1nm,0.4s						
KECS	Kecovo	6.99	5	ePN	Pn	18 12 23.3	+4.4
KECS				eSN	Sn	18 13 36.9	-1.3
MODS	Modra-Piesok	7.04	347	ePN	Pn	18 12 26.6	+7.0
ABTA	Abfaltersbach	7.29	318	ePn	Pn	18 12 23.5	+0.5
	comp=E,0.7nm,0.2s						
ABTA				eSn	Sn	18 13 40.6	-5.1
	comp=E,1.7nm,0.3s						
WTTA	Wattenberg	8.08	318	iPn	Pn	18 12 35.6	+1.7
	comp=E,1.8nm,0.2s						
WTTA				iSn	Sn	18 14 03.8	-1.4
	comp=E,3.1nm,0.4s						
WATA	Walderalm	8.15	318	ePn	Pn	18 12 36.2	+1.2
	comp=E,1.7nm,0.2s						
SQTA	Sankt Quirin	8.27	316	iPn	Pn	18 12 37.2	+0.7
	comp=E,1.0nm,0.2s						
MOTA	Moosalm	8.40	317	iPn	Pn	18 12 38.8	+0.4
	comp=E,1.0nm,0.3s						
GERES	GERESS Array B	8.41	332	Pn	Pn	18 12 38.1	-0.4
	baz=168,slow=15,SNR=1.9						
	comp=E,0.2nm,0.4s						
DAVOX	Davos/Dischmat	8.73	310	Pn	Pn	18 12 41.6	-1.3
	comp=E,0.3nm,0.3s,baz=352,slow=22,SNR=2.2						
DAVOX				Sn	Sn	18 14 18.0	-3.3
	comp=E,0.2nm,0.3s,baz=96,slow=19,SNR=2.2						
	comp=E,1.0nm,0.3s						
FINES	FINESS Array B	20.34	9	P	P	18 15 10.7	-1.8
	comp=E,4.1nm,1.1s,baz=186,slow=12,SNR=5.4						
	comp=E,4.1nm,1.1s						
MKAR	Makanchi Array	44.24	61	P	P	18 18 44.5	-1.4
	comp=E,0.7nm,0.6s,baz=281,slow=7.7,SNR=7.1						
	comp=E,0.7nm,0.6s						

IDC ***09*** *18:17:00.1±6.4, 16°.95S×178°.84W, h480^{km}±77^{km}, mb3.4/8, mbtmp4.2/9, Error ellipse: s-maj=83.8km s-min=24.3km az=156.0*

NEIC ***09*** *18:17:03.7±2.0, 17°.68S±0°.06×178°.5W±0°.1, h535^{km}±9^{km}, mb4.3/16, Error ellipse: s-maj=17.5km s-min=8.0km az=105.0*

ISC 09 18:17:04.1±0.6**, 17°.6S**±0°.1×**178°.59W**±0°.09**, h547^{km}, n32, σ1^{s}.18**/30**, mb4.2**/16**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.21	267	P	P	18 18 23.1	+2.8
AFI	Afiamalu	7.51	62	P	P	18 18 55.7	-1.4
NIUE	Niue	8.36	101	P	P	18 19 04.3	-1.0
FUNA	Funafuti	9.27	346	P	P	18 19 13.7	-1.0
MARNC	Mare, Loyalty	13.19	251	P	P	18 19 53.0	-2.0
SANVU	Saraoutou	13.79	277	P	P	18 20 01.3	+0.1
DZM	Mont Dzumac	14.77	250	P	P	18 20 08.9	-2.5
	5.5nm,0.9s,baz=54,slow=14,SNR=8.1						
ARMA	Armidale	29.95	239	P	P	18 22 28.1	-0.4
ARMA				IAmb	IAmb	18 22 35.1	
	comp=Z,14nm,1.2s						
PMG	Port Moresby	34.24	279	P	P	18 23 03.1	-1.9
COEN	Coen	36.93	270	P	P	18 23 28.3	+1.0
COEN				IAmb	IAmb	18 23 28.9	
	comp=Z,7.8nm,0.8s						
STKA	Stephens Creek	38.63	241	P	P	18 23 41.4	+0.4
	comp=Z,1.8nm,0.3s,baz=90,slow=11,SNR=5.9						
	comp=Z,1.8nm,0.3s						
STKA	Stephens Creek	38.63	241	IAmb	IAmb	18 23 42.6	
	comp=Z,27nm,1.1s						
BBOO	Buckleboo	43.41	241	P	P	18 24 19.2	+0.4
BBOO				IAmb	IAmb	18 24 20.0	
	comp=Z,12nm,1.0s						
WB0	Warramunga Arr	44.48	259	P	P	18 24 27.0	-0.4
WB0				IAmb	IAmb	18 24 27.5	
	comp=Z,6.1nm,1.0s						
WRAB	Tennant Creek	44.51	259	P	P	18 24 26.9	-0.7
WRA	Warramunga Arr	44.52	259	P	P	18 24 26.9	-0.7
	comp=Z,2.2nm,0.6s,baz=95,slow=7.8,SNR=41						
	comp=Z,2.2nm,0.6s						
WRA	Warramunga Arr	44.52	259	IAmb	IAmb	18 24 27.6	
	comp=Z,0.2nm,0.8s						
AS31	Alice Springs	44.71	254		P	18 24 28.5	-0.5
AS31				IAmb	IAmb	18 24 29.7	
	comp=Z,5.9nm,0.7s						
ASAR	Alice Springs	44.71	254	P	P	18 24 29.2	+0.2
	comp=Z,20nm,0.6s,baz=88,slow=8.1,SNR=128						
	comp=Z,20nm,0.6s						
ASAR	Alice Springs	44.71	254		P	18 24 29.1	+0.1
FORT	Forrest	49.98	244	P	P	18 25 08.1	-0.4
FORT				IAmb	IAmb	18 25 23.9	
	comp=Z,11nm,1.2s						
FAKI	Fak Fak	50.35	281	P	P	18 25 11.9	+0.5
KNRA	Kununurra	50.35	264	P	P	18 25 10.8	-0.6
FITZ	Fitzroy Crossi	52.91	260	P	P	18 25 30.8	+1.0
	comp=Z,1.8nm,0.4s,baz=72,slow=8.9,SNR=12						
	comp=Z,1.8nm,0.4s						
SOEI	Soe	55.90	270	P	P	18 25 51.8	+0.9
SOEI				IAmb	IAmb	18 25 53.5	
	comp=Z,8.3nm,0.7s						
MBWA	Marble Bar	57.98	256	P	P	18 26 05.0	-0.1
MBWA				IAmb	IAmb	18 26 46.0	
	comp=Z,17nm,1.2s						
QSPA	South Pole Qui	72.46	180	P	P	18 27 35.5	+0.4
NVAR	Mina Array Bea	79.32	44	P	P	18 28 14.4	+0.8
	comp=Z,0.8nm,0.7s,baz=223,slow=10,SNR=4.4						
	comp=Z,0.8nm,0.7s						
ILAR	Eielson Array	85.62	13	P	P	18 28 43.1	-1.3
	comp=Z,0.3nm,0.4s,baz=226,slow=5.1,SNR=6.6						
	comp=Z,0.3nm,0.4s						
TXAR	Lajitas Array	85.97	58	P	P	18 28 49.1	+2.0
	comp=Z,0.9nm,0.8s,baz=217,slow=5.8,SNR=8.5						
	comp=Z,0.9nm,0.8s						
PDAR	Pinedale Array	87.25	44	P	P	18 28 53.5	+0.5
	comp=Z,0.5nm,0.5s,baz=214,slow=3.8,SNR=6.6						
	comp=Z,0.5nm,0.5s						
GERES	GERESS Array B	147.27	345	PKPbc	PKPbc	18 35 46.4	0.0
	comp=Z,0.1nm,0.3s,baz=355,slow=2.9,SNR=5.1						

DJA 09 18:19:33.1±0.2**, 3°S**±2°×**12°7E**±°**, h10^{km}, M3.8**/13**, mb4.1**/7**, MLv3.7**/13**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NLAI	Namlea	0.78	140	P	Pg	18 19 47.8	-0.3
NLAI				S	Sg	18 19 57.8	-0.5
SANI	Sanana	0.85	314	P	Pg	18 19 48.4	-1.1
SANI				S	Sg	18 19 59.8	-0.7
AAI	Ambon	1.90	123	P	Pn	18 20 05.5	-0.1
KRAI	Karang Ratu	1.92	111	P	Pn	18 20 06.6	+0.8
MSAI	Masohi	2.43	107	P	Pn	18 20 14.1	+1.2
MSAI				S	Sn	18 20 43.3	+0.6
LUWI	Luwuk	4.14	292	P	Pn	18 20 36.4	-0.1
GTOI	Gorontalo	4.84	312	P	Pn	18 20 49.8	+3.7
	0.1nm37nm,1.4s						
SWI	Sorong	4.98	69	P	Pn	18 20 47.8	-0.2
FAKI	Fak Fak	5.65	93	P	Pn	18 20 57.5	+0.3
	0.1nm13nm,1.3s						
MPSI	Mapaga	7.32	294	P	Pn	18 21 20.1	-0.1
	0.0nm11nm,0.7s						
EDFI	Ende, Flores	7.79	219	P	Pn	18 21 26.3	-0.4
LBFI	Labuhan Bajo,	8.85	229	P	Pn	18 21 41.3	+0.2

GCMT 09 18:20:06.0±0.4**, 52°.95S**±0°.03×**11°.49E**±0°.05**, h28^{km}**±1^{km}**, MW5.0**/74**, Moment Tensor Solution. s11,c14; s74,c91; Duration: 0 Moment tensor: Scale** 10^{16}**Nm;** M_{rr}4.37±.47; $M_{\theta\theta}$-1.52±.27; $M_{\phi\phi}$-2.85±.28; $M_{r\theta}$0.19±.37; $M_{\theta\phi}$-2.69±.13; $M_{\phi r}$-0.63±.37; **Best double couple:** $M_0$4.71600×10^{16} **NP1:**ϕ_s46.00000°**,**δ43.00000°**,** λ102.00000°. **NP2:**ϕ_s210.00000°**,**δ48.00000°**,**λ79.00000°. **Principal axes:** T 4.4600**,** Plg82.0000°**,** Azm54.0000°**;** N 0.5110**,** Plg8.0000°**,** Azm218.0000°**;** P -4.9710**,** Plg2.0000°**,** Azm308.0000°**; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southwest of Africa**

GUC 09 18:31:12.2±0.8**, 21°.57S**×**68°.44W, h142^{km}**±6^{km}**, ML3.5, 4C-3D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	0.78	253	⇓iP	Pn	18 31 34.3	-0.3
PB09				eS	Sn	18 31 51.2	-0.5
PB09				IAML		18 31 55.1	
	comp=N,655nm,0.3s						
PB01	IPOC Station P	1.11	298	eP	Pn	18 31 36.7	-0.6
PB01				eS	Sn	18 31 55.5	-0.9
PB01				IAML		18 31 57.5	
	comp=E,2μm,0.2s						
PB03	IPOC Station P	1.31	249	⇑eP	Pn	18 31 39.0	-0.4
PB03				eS	Sn	18 31 59.1	-0.9
PB03				IAML		18 32 00.0	
	comp=E,783nm,0.2s						
PB02	IPOC Station P	1.38	280	⇑eP	Pn	18 31 39.6	-0.5
PB02				eS	Sn	18 32 00.2	-1.0
PB02				IAML		18 32 01.8	
	comp=N,2μm,0.2s						
PB06	IPOC Station P	1.55	223	⇓eP	Pn	18 31 41.5	-0.3
PB06				eS	Sn	18 32 03.8	-0.6
PB06				IAML		18 32 05.8	
	comp=E,358nm,0.2s						
TA01	Diego Aracena	1.91	301	⇑eP	Pn	18 31 44.7	-1.1
TA01				eS	Sn	18 32 10.2	-1.3
TA01				IAML		18 32 11.8	
	comp=E,699nm,0.3s						
GO01	Chusmiza	2.02	339	⇓eP	Pn	18 31 47.2	-0.4
GO01				eS	Sn	18 32 14.2	-0.5
TA02	Huaiquique	2.05	309	eP	Pn	18 31 45.6	-1.8
PB05	IPOC Station P	2.08	232	⇑eP	Pn	18 31 47.5	-0.4
PB05				eS	Sn	18 32 13.9	-1.3
PB05				IAML		18 32 19.2	
	comp=N,155nm,0.2s						
PB11	IPOC Station P	2.13	327	eP	Pn	18 31 47.4	-1.2
PB11				eS	Sn	18 32 15.2	-1.3
PB11				IAML		18 32 17.7	
	comp=E,375nm,0.5s						
PB10	IPOC Station P	2.75	225	eP	Pn	18 31 55.1	-1.0
PB10				IAML		18 32 32.0	
	comp=E,64nm,0.2s						
PB12	IPOC Station P	3.44	328	eP	Pn	18 32 02.9	-2.1
PB12				IAML		18 32 46.0	
	comp=E,55nm,0.6s						
PB14	IPOC Station P	3.54	210	eP	Pn	18 32 05.8	-0.7
PB14				IAML		18 32 47.7	
	comp=E,28nm,0.3s						

SOME ***09*** *18:31:21.7, 41°.03N×83°.17E, h10^{km}*

NNC ***09*** *18:31:22.7±1.7, 41°.09N×83°.17E, h18^{km}±9^{km}, mb4.2, mpv3.8, Error ellipse: s-maj=12.4km s-min=10.9km az=17.0*

ISC 09 18:31:18.3±2.6**, 40°.9N**±0°.1×**83°.15E**±0°.07**, h10^{km}, n30, σ1^{s}.78**/40**, 6C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	3.27	321	Pg	Pb	18 32 19.6	+3.1
	22nm,0.3s						
KTMS				Lg	Lg	18 33 03.0	
	60nm,0.3s						
KTMS	Ketmen	3.27	321	eP	Pg	18 32 20.8	-0.2
	22nm,0.3s						
KTMS				eS	Sg	18 33 03.7	+0.3
	82nm,0.4s						
SHLS	Shalkode	3.54	310	Pg	Pb	18 32 23.1	+1.9
	48nm,0.2s						
SHLS				Lg	Lg	18 33 06.8	
	376nm,0.4s						
SHLS	Shalkode	3.54	310	eP	Pb	18 32 21.9	+0.7
	41nm,0.2s						
SHLS				eS	Sb	18 33 05.5	+1.2
	376nm,0.4s						
UZB	Uzynbulak	3.80	307	Pg	Pg	18 32 31.3	+0.3
	20nm,0.5s						
UZB				Lg	Lg	18 33 21.7	
	64nm,0.5s						
UZB	Uzynbulak	3.80	307	eP	Pg	18 32 30.3	-0.7
	14nm,0.3s						
UZB				eS	Sg	18 33 19.7	-0.6
	83nm,0.3s						
SATY	Saty	4.13	303	Pg	Pg	18 32 38.3	+0.8
	25nm,0.4s						
SATY				Lg	Lg	18 33 32.8	
	75nm,0.5s						
KPKS	Kokpek	4.18	309	Pg	Pg	18 32 38.6	+0.1
	0.3nm,0.1s						
KPKS				Lg	Lg	18 33 32.8	
	64nm,0.4s						
KURS	Kuram	4.50	306	Pg	Pg	18 32 42.9	-1.6
	7.4nm,0.4s						
KURS				Lg	Lg	18 33 42.6	
	20nm,0.6s						
KNOS	Konyrlen	4.52	321	Pg	Pg	18 32 43.2	-1.6
	15nm,0.3s						
KNOS				Lg	Lg	18 33 41.8	
	31nm,0.5s						
BLB	Baldybastay	4.69	314	Pg	Pg	18 32 45.4	-2.7
	19nm,0.3s						
BLB				Lg	Lg	18 33 47.3	
	42nm,0.2s						
KOTS	Kotyrbulak	5.06	299	Pg	Pg	18 32 54.9	-0.3
	15nm,0.3s						
KOTS				Lg	Lg	18 34 02.0	
	52nm,0.5s						
KOTS	Kotyrbulak	5.06	299	eP	Pg	18 32 53.0	-2.1
	17nm,0.4s						
KOTS				eS	Sg	18 33 58.6	-2.0
	54nm,0.5s						
MDOK	Medeo	5.07	298	Pg	Pg	18 32 52.8	-2.5
	3.4nm,0.3s						
MDOK				Lg	Lg	18 34 01.3	
	22nm,0.4s						
TNSS	Tian-Shan	5.09	297	Pg	Pg	18 32 52.9	-2.8
	1.7nm,0.3s						
TNSS				Lg	Lg	18 33 59.7	
	7.8nm,0.7s						
TNSS	Tian-Shan	5.09	297	eP	Pg	18 32 53.7	-2.1
	1.8nm,0.3s						
TNSS				eS	Sg	18 33 59.6	-2.1
	7.2nm,0.5s						
ARXS	Arharly	5.13	312	Pg	Pg	18 32 54.2	-2.3
	8.7nm,0.2s						
ARXS				Lg	Lg	18 34 02.0	
	33nm,0.5s						
ARXS	Arharly	5.13	312	eP	Pg	18 32 54.2	-2.3
	5.4nm,0.4s						
ARXS				eS	Sg	18 34 00.4	-2.5
	33nm,0.5s						
KAPS	Kapalarasan	5.17	329	Pg	Pb	18 32 51.3	+2.4
	9.0nm,0.3s						
KAPS				Lg	Lg	18 33 58.9	
	32nm,0.1s						
IZV	Izvestkoviy	5.31	296	Pg	Pg	18 32 58.0	-2.1
	8.1nm,0.5s						
IZV				Lg	Lg	18 34 09.1	
	67nm,0.5s						
IZV	Izvestkoviy	5.31	296	eP	Pg	18 32 58.0	-2.1
	5.5nm,0.5s						
IZV				eS	Sg	18 34 07.0	-1.9
	39nm,0.5s						
KST	Kastek	5.76	294	Pg	Pg	18 33 07.9	-0.7
	8.8nm,0.9s						
KST				Lg	Lg	18 34 23.1	
	23nm,0.6s						
KST	Kastek	5.76	294	eP	Pg	18 33 07.9	-0.7
	3.7nm,0.4s						
KST				eS	Sg	18 34 23.9	+0.6
	33nm,0.6s						
MK31	Makanchi Array	5.91	354	⇑Pn	Pn	18 32 46.4	+0.5
	0.5nm,0.4s,baz=172,slow=13,SNR=31						
MK31				⇑Sn	Sn	18 33 54.9	+1.3
	2.4nm,0.4s,baz=176,slow=23,SNR=3.9						
MK31				⇓Lg	Lg	18 34 22.8	
	9.8nm,0.6s,baz=164,slow=26,SNR=5.2						
MAKZ	Makanchi	5.95	352	⇑Pn	Pn	18 32 46.2	-0.3
	0.9nm,0.5s						
MAKZ				⇓Sn	Sn	18 33 54.0	-0.6
	3.8nm,0.6s						
MAKZ				⇑Lg	Lg	18 34 24.5	
	8.0nm,0.5s						
DGS	Degeres	5.96	295	Pg	Pg	18 33 10.0	-2.5
	4.8nm,0.4s						
DGS				Lg	Lg	18 34 28.9	
	22nm,0.4s						
ZSN	Zaisan	6.65	10	Pg	Pg	18 33 23.3	-2.2
	4.1nm,0.2s						
ZSN				Lg	Lg	18 34 50.9	
	24nm,0.8s						
ZSN	Zaisan	6.65	10	eP	Pg	18 33 23.3	-2.2
	4.1nm,0.2s						
ZSN				eS	Sg	18 34 50.9	-0.6
	24nm,0.8s						
AAK	Ala-Archa	6.70	288	⇑Pg	Pg	18 33 25.3	-1.2
	0.7nm,0.5s						
AAK				⇓Lg	Lg	18 34 57.8	
	5.2nm,0.7s						
KK31	Karatay Array	9.66	287	⇓Pg	Pn	18 34 15.7	+38
	0.6nm,0.6s,baz=86,slow=16,SNR=3.8						
KK31				⇑Lg	Lg	18 36 28.7	
	2.0nm,0.6s,baz=90,slow=26,SNR=4.1						

NEIC ***09*** *18:37:30.5±2.5, 6°.1S±0°.1×154°.9E±0°.1, h166^{km}±8^{km}, mb4.4/24, Error ellipse: s-maj=19.4km s-min=16.3km az=73.0*

IDC ***09*** *18:37:34.5±3.1, 6°.18S×154°.95E, h212^{km}±29^{km}, mb3.5/10, mbtmp4.1/12, Error ellipse: s-maj=18.9km s-min=17.0km az=23.0*

ISC 09 18:37:27.9±0.6**, 6°.04S**±0°.07×**155°.02E**±0°.07**, h150^{km}, n48, σ1^{s}.90**/46**, mb4.3**/18**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	3.38	303		Pn	18 38 22.3	+2.1
RABL				Sn	Sn	18 38 55.2	-5.6
TATA	Tatamba Isabel	5.29	116	P	Pn	18 38 46.3	+1.1
NGOA	Tingoa Renbel	7.41	138	P	Pn	18 39 14.7	+1.2
NGOA	Tingoa Renbel	7.41	138	S	Sn	18 40 35.0	-1.3
PMG	Port Moresby	8.48	246	P	Pn	18 39 33.3	+5.6
	85nm,0.9s,baz=54,slow=9.2,SNR=22						
PMG				S	Sn	18 41 07.0	+5.0
	6.6nm,0.6s,baz=207,slow=17,SNR=1.1						
PMG	Port Moresby	8.48	246		Pn	18 39 27.2	-0.5
PMG	Port Moresby	8.48	246	P	Pn	18 39 36.6	+8.9
MANU	Manus Island	8.60	297	Pn	Pn	18 39 31.4	+1.9
TV1H	Townsville Har	15.39	211	P	P	18 41 01.8	+3.3
CTAO	Charters Tower	16.36	211	P	Pn	18 41 06.7	-2.5
CTAO				IAmb	IAmb	18 41 13.3	
	comp=Z,12nm,0.9s						
DZM	Mont Dzumac	19.39	146	P	Pn	18 41 43.7	-1.5
	comp=Z,13nm,0.7s,baz=276,slow=10,SNR=15						
DZM	Mont Dzumac	19.39	146		Pn	18 41 43.4	-1.8
DZM				IAmb	IAmb	18 41 47.8	
	comp=Z,14nm,0.8s						
DZM	Mont Dzumac	19.39	146	P	Pn	18 41 43.7	-1.5
EIDS	Eidsvold	19.59	191		Pn	18 41 45.2	-2.2
EIDS				IAmb	IAmb	18 41 50.6	
	comp=Z,20nm,0.8s						
EIDS	Eidsvold	19.59	191	P	Pn	18 41 49.9	+2.5
OUENC	Ouen Island, N	19.89	146	P	Pn	18 41 48.6	-2.4
WR0	Warramunga Arr	24.24	233	P	P	18 42 30.8	-0.3
WB0	Warramunga Arr	24.25	234	P	P	18 42 31.3	0.0
WRAB	Tennant Creek	24.38	234	P	P	18 42 32.2	-0.2
WRA	Warramunga Arr	24.39	234	P	P	18 42 33.0	+0.5
	comp=Z,2.0nm,0.6s,baz=63,slow=11,SNR=36						
	comp=Z,2.0nm,0.6s						
ARMA	Armidale	24.46	187	P	P	18 42 34.1	+0.9
ARMA				IAmb	IAmb	18 42 40.5	
	comp=Z,18nm,1.4s						
ASAR	Alice Springs	26.83	227	P	P	18 42 54.0	-0.5
	comp=Z,0.5nm,0.5s,baz=57,slow=9.3,SNR=26						
ASAR				PcP	PcP	18 46 13.5	0.0
	comp=Z,0.3nm,0.5s,baz=50,slow=2.4,SNR=4.0						
	comp=Z,0.5nm,0.5s						
H11S3	WAKE ISLAND Hy	26.96	25	T	T	19 11 50.4	

	baz=202,slow=76,SNR=4.9						
H11S2	WAKE ISLAND Hy	26.96	25	T	T	19 11 49.4	
	baz=202,slow=76,SNR=4.9						
H11S1	WAKE ISLAND Hy	26.97	25	T	T	19 12 05.4	
	baz=202,slow=76,SNR=3.1						
STKA	Stephens Creek	28.61	204	P	P	18 43 09.5	-0.7
	comp=Z,0.9nm,0.6s,baz=4.9,slow=12,SNR=4.5						
	comp=Z,0.9nm,0.6s						
FITZ	Fitzroy Crossi	31.07	245	P	P	18 43 30.8	-1.3
BBOO	Buckleboo	31.96	211	P	P	18 43 38.9	-0.9
FORT	Forrest	35.30	222	P	P	18 44 07.5	-1.2
FORT				IAmb	IAmb	18 44 14.6	
	comp=Z,4.4nm,0.7s						
RTZ	Ruatahuna	38.05	152	P	P	18 44 31.3	-0.6
BKZ	Black Stump Fm	38.26	153	P	P	18 44 34.9	+1.2
TCW	Tory Channel	39.02	157	P	P	18 44 40.7	+0.8
MRZ	Mangatainoka R	39.09	155	P	P	18 44 39.5	-0.9
VNDA	Vanda	71.53	178	P	P	18 48 29.3	-2.7
	comp=Z,1.2nm,0.8s,baz=4.8,slow=9.2,SNR=1.5						
	comp=Z,1.2nm,0.8s						
ILAR	Eielson Array	82.48	22	P	P	18 49 32.4	-1.0
	comp=Z,0.3nm,0.6s,baz=252,slow=4.9,SNR=6.4						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	82.71	319	P	P	18 49 33.8	-1.2
	comp=Z,0.6nm,0.7s,baz=88,slow=7.4,SNR=6.9						
	comp=Z,0.6nm,0.7s						
J25K	Salcha River,	82.96	22	P	P	18 49 37.0	+1.1
J25K				IAmb	IAmb	18 49 45.6	
	comp=Z,8.0nm,1.2s						
ZALV	Zalesovo Beam	83.41	326	P	P	18 49 37.7	-0.6
	comp=Z,0.6nm,0.7s,baz=99,slow=8.9,SNR=3.0						
	comp=Z,0.6nm,0.7s						
D23K	Nanushuk River	83.56	17	P	P	18 49 41.5	+2.7
D23K				IAmb	IAmb	18 49 42.3	
	comp=Z,8.2nm,1.4s						
QSPA	South Pole Qui	83.93	180	P	P	18 49 40.3	-0.6
	comp=Z,2.5nm,0.5s,baz=205,slow=0.3,SNR=34						
	comp=Z,2.5nm,0.5s						
QSPA	South Pole Qui	83.93	180		P	18 49 40.8	-0.1
QSPA				IAmb	IAmb	18 49 41.1	
	comp=Z,2.9nm,0.6s						
I30M	Mount Dempster	86.67	23	P	P	18 49 53.0	-1.5
I30M				IAmb	IAmb	18 49 57.2	
	comp=Z,6.0nm,1.4s						
H31M	Peel River	87.67	23	P	P	18 50 00.2	+1.1
H31M				IAmb	IAmb	18 50 04.3	
	comp=Z,3.2nm,0.9s						
F30M	Barrier River	87.78	21		P	18 50 01.0	+1.4
F30M				IAmb	IAmb	18 50 41.0	
	comp=Z,9.5nm,1.5s						
NVAR	Mina Array Bea	91.11	52	P	P	18 50 18.2	+2.0
	comp=Z,3.2nm,0.9s,baz=251,slow=6.5,SNR=12						
	comp=Z,3.2nm,0.9s						
SPR3	Spring Creek 3	94.26	51	P	P	18 50 32.1	+1.3
W13A	Hualapai Mount	94.32	55	P	P	18 50 33.1	+2.1
W13A				IAmb	IAmb	18 50 34.2	
	comp=Z,2.7nm,0.9s						
YKA	Yellowknife Ar	95.48	28	P	P	18 50 36.6	+1.2
	comp=Z,0.7nm,0.7s,baz=270,slow=5.4,SNR=11						
	comp=Z,0.7nm,0.7s						

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*IDC **09** 19:07:03.3±5.6, 35°.74N×70°.26E, h53km±47km, mb3.6/12, mbtmp4.0/17, ML3.8/5, MS4.4/3, Error ellipse: s-maj=39.7km s-min=17.4km az=22.0*

*NNC **09** 19:07:17.6±6.6, 36°.62N×70°.41E, h196km±73km, mb3.3, mpv4.2, Error ellipse: s-maj=63.0km s-min=46.5km az=55.0*

ISC 09 19:07:10.1±0.7**, 36°.18N**±0°.07×**70°.39E**±0°.08**, h110**km**, n40, σ2ˢ80**/42**, mb3.6**/11**, 4C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMU	Jammu	4.99	131	*e*P	Pn	19 08 25.3	+1.4
JMU				*e*S	Sn	19 09 11.5	-10
JMU				IAML		19 09 21.5	
	comp=E,201nm,0.4s						
JMU				IAML		19 09 22.0	
	comp=N,274nm,0.3s						
ALCI	Alchi Leh	5.89	107	*e*P	Pn	19 08 39.4	+4.0
ALCI				*e*S	Sn	19 09 34.5	-7.2
ALCI				IAML		19 09 40.9	
	comp=E,237nm,0.4s						
ALCI				IAML		19 09 41.0	
	comp=N,214nm,0.3s						
DHRM	DHARAMSHALA	6.26	127	*e*P	Pn	19 08 42.9	+2.6
DHRM				*e*S	Sn	19 09 40.5	-10
DHRM				IAML		19 09 47.2	
	comp=E,322nm,0.7s						
DHRM				IAML		19 09 50.3	
	comp=N,302nm,0.5s						
UCH	Uchtor	6.84	27	P	Pn	19 08 50.0	+1.9
	SNR=29						
BHK	Bhakra	6.90	132	*e*P	Pn	19 08 58.6	+10
BHK				*e*S	Sn	19 10 00.9	-4.8
BHK				IAML		19 10 04.9	
	comp=E,181nm,0.4s						
BHK				IAML		19 10 06.5	
	comp=N,186nm,0.4s						
KK31	Karatay Array	6.92	1	P	Pn	19 08 50.0	+1.2
	comp=N,15nm,0.4s,baz=194,slow=14,SNR=300						
KK31				⇑S	Sn	19 10 05.9	-0.2
	comp=N,13nm,0.5s,baz=190,slow=22,SNR=7.6						
EKS2	Erkin-Say	6.99	21	P	Pn	19 08 51.5	+1.6
	SNR=14						
AAK	Ala-Archa	7.19	25	P	Pn	19 08 54.4	+1.7
	SNR=32						
AAK	Ala-Archa	7.19	25	P	Pn	19 08 53.7	+1.0
	comp=N,5.9nm,0.3s,baz=189,slow=4.3,SNR=55						
AAK				S	Sn	19 10 11.8	-1.0
	comp=N,17nm,0.5s,baz=126,slow=22,SNR=10						
	comp=N,11nm,0.3s						
AAK	Ala-Archa	7.19	25	⇑P	Pn	19 08 53.7	+1.0
	comp=N,4.8nm,0.5s						
AAK				⇑S	Sn	19 10 12.9	+0.1
	comp=N,4.3nm,0.4s						
KBK	Karagaybulak	7.37	27	P	Pn	19 08 56.9	+1.8
	SNR=8.3						
SMLA	Simla	7.56	130	*e*P	Pn	19 08 59.4	+1.7
SMLA				*e*S	Sn	19 10 10.4	-11
SMLA				IAML		19 10 18.6	
	comp=E,109nm,0.5s						
SMLA				IAML		19 10 19.8	
	comp=N,107nm,0.4s						
ULHL	Ulahol	7.57	35	P	Pn	19 08 59.6	+1.7
	SNR=13						
CHMS	Chumysh	7.60	25	P	Pn	19 09 00.1	+2.0
	SNR=5.4						
USP	Ospenovka	7.76	23	P	Pn	19 09 02.4	+2.2
	SNR=8.7						
TKM2	Tokmak 2	7.84	29	P	Pn	19 09 03.6	+2.1
	SNR=7.1						
JOSI	Joshimath	9.49	124	*e*P	Pn	19 09 25.8	+1.8
JOSI				*e*S	Sn	19 10 55.3	-14
JOSI				IAML		19 11 06.4	
	comp=E,74nm,0.5s						
JOSI				IAML		19 11 09.3	
	comp=N,68nm,1.3s						
MKAR	Makanchi Array	13.84	36	P	Pn	19 10 21.7	+0.2
	comp=N,0.2nm,0.3s,baz=218,slow=14,SNR=13						
	comp=N,0.7nm,0.6s						
AB31	Akbulak array	15.14	333	⇓P	P	19 10 38.4	-2.1
	comp=N,2.2nm,0.3s,baz=155,slow=12,SNR=223						
AB31				⇓S	Sn	19 13 19.2	-6.0
	comp=N,0.9nm,0.3s,baz=161,slow=23,SNR=8.2						
WMQ	Urumqi	15.28	55	*e*P	Pn	19 10 37.7	-2.2
WMQ				LR	LR		
	comp=N,610nm,11.7s						
WMQ				LR	LR		
	comp=E,990nm,18.5s						
WMQ				LR	LR		
	comp=Z,700nm,19.3s						
KURBB	Kurchatov Arra	15.59	20	P	Pn	19 10 43.3	-0.2
	comp=Z,0.1nm,0.3s,baz=210,slow=10,SNR=19						
	comp=Z,1.2nm,0.9s						
AKTO	Aktyubinsk	16.83	332	P	P	19 10 59.9	+0.8
	comp=Z,1.3nm,0.3s,baz=143,slow=11,SNR=35						
	comp=Z,12nm,0.7s						
AKTO	Aktyubinsk	16.83	332	⇑P	P	19 11 00.3	+1.2
	comp=Z,8.6nm,0.8s						
AKTO				⇓S	Sn	19 13 56.1	-10
	comp=Z,3.6nm,1.1s						
BVAR	Borovoye Array	16.85	360	P	P	19 11 00.2	+0.8
	comp=Z,0.2nm,0.3s,baz=167,slow=14,SNR=25						
	comp=Z,2.2nm,0.4s						
ZALV	Zalesovo Beam	20.41	25	P	Pn	19 11 40.5	-0.9
	comp=Z,12nm,0.4s,baz=220,slow=11,SNR=94						
	comp=Z,12nm,0.4s						
KBZ	Khabaz	22.32	298	P	P	19 11 56.4	-2.2
	comp=Z,1.8nm,1.0s,baz=123,slow=10,SNR=2.1						
	comp=Z,1.8nm,1.0s						
SONM	Songino Array	28.92	55	P	P	19 13 01.1	+2.3
	comp=Z,0.5nm,0.8s,baz=272,slow=9.8,SNR=3.0						
	comp=Z,0.5nm,0.8s						
AKASG	Malin Array Be	32.77	309	P	P	19 13 33.0	+0.6
	comp=Z,0.6nm,0.5s,baz=81,slow=7.6,SNR=2.0						
	comp=Z,0.6nm,0.5s						
FINES	FINESS Array B	37.48	327	P	P	19 14 13.8	+1.1
	comp=Z,4.4nm,0.9s,baz=143,slow=4.8,SNR=4.8						
	comp=Z,4.4nm,0.9s						
HILR	Hailar Array B	37.89	54	LR	LR	19 30 10.4	
	comp=Z,827nm,20.8s,baz=95,slow=36						
ARCES	ARCESS Array B	41.26	338	P	P	19 14 45.8	+1.8
	comp=Z,1.1nm,0.5s,baz=106,slow=8.1,SNR=9.0						
	comp=Z,1.1nm,0.5s						
HFS	Hagfors	43.02	322	P	P	19 15 00.1	+1.7
	comp=Z,3.2nm,0.6s,baz=99,slow=9.2,SNR=8.7						
	comp=Z,3.2nm,0.6s						
NB2	NORSAR Subarra	44.35	323	P	P	19 15 10.2	+1.2
	comp=Z,0.7nm,0.5s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.35	323	P	P	19 15 10.0	+1.0
	comp=Z,1.1nm,0.6s,baz=98,slow=7.9,SNR=3.9						
	comp=Z,1.1nm,0.6s						
KSRS	Korea Array	45.45	70	P	P	19 15 17.7	-0.2
	comp=Z,0.6nm,0.8s,baz=306,slow=9.6,SNR=2.2						
	comp=Z,0.6nm,0.8s						
SPITS	Spitsbergen Ar	47.70	347	P	P	19 15 36.7	+1.6
	comp=Z,5.9nm,0.8s,baz=111,slow=15,SNR=1.5						
	comp=Z,5.9nm,0.8s						
TGY	Tagaytay City	50.12	103	LR	LR	19 38 21.4	
	comp=Z,209nm,20.1s,baz=118,slow=38						
SCHQ	Schefferville	82.20	337	LR	LR	19 59 06.6	
	comp=Z,287nm,18.1s,baz=308,slow=38						
WRA	Warramunga Arr	82.24	121	P	P	19 19 18.6	-0.8
	comp=Z,0.1nm,0.3s,baz=323,slow=4.9,SNR=5.5						
	comp=Z,0.1nm,0.3s						
ASAR	Alice Springs	84.47	124	P	P	19 19 29.9	-0.9
	comp=Z,0.3nm,0.7s,baz=299,slow=4.7,SNR=4.7						
	comp=Z,0.3nm,0.7s						

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*AEIC **09** 19:18:29.9±1.9, 51°.61N±0°.02×178°.37W±0°.02, h7km±6km, Error ellipse: s-maj=2.4km s-min=1.6km az=152.0*

NEIC 09 19:18:30.3±1.1**, 51°.56N**±0°.03×**178°.37W**±0°.03**, h15**km±3km**, ML3.7**/10**, ML3.5**(AEIC)**, Error ellipse: s-maj=4.4km s-min=2.1km az=160.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAKI	Gareloi-Kavalg	0.28	269		Pg	19 18 36.4	+0.2
GAKI					Sg	19 18 40.3	+0.1
GALAA	Gareloi Lava P	0.32	309		Pn	19 18 41.5	+1.1
GAEA	Gareloi East	0.32	314		Pg	19 18 36.9	-0.1
GAEA					Sg	19 18 41.7	0.0
TASE	Tanaga Southea	0.35	37		Pn	19 18 41.7	+0.8
TASE					Sg	19 18 42.6	+0.2
TAFL	Tanaga Flats	0.35	56		Pg	19 18 37.8	+0.2
TAFL					Sg	19 18 43.1	+0.6
GANE	Gareloi Northe	0.36	316		Pn	19 18 42.2	+1.1
GASW	Gareloi Southw	0.37	306		Pg	19 18 37.5	-0.4
GANO	Gareloi North	0.38	314		Pn	19 18 42.4	+1.2
TANO	Tanaga North	0.39	23		Pg	19 18 38.1	-0.1
TANO					Sg	19 18 43.6	-0.1
TAFP	Tanaga Falls P	0.42	35		Pg	19 18 38.4	-0.4
TAPA	Tanaga Point A	0.43	53		Pg	19 18 39.1	+0.1
TAPA					Sg	19 18 45.2	+0.3
KIMD	Kanaga Island	0.74	74		Pg	19 18 44.1	-0.6
KIKV	Kanaga Island	0.81	66		Pg	19 18 45.4	-0.7
KIKV					Sg	19 18 56.7	-0.2
KICM	Kanaga Island	0.81	63		Pg	19 18 45.7	-0.5
KIWB	Kanaga Island	0.81	68		Pg	19 18 45.3	-0.8
KIWB	Kanaga Island	0.81	68		Sb	19 18 57.0	0.0
ADK	Adak	1.10	72		Pb	19 18 49.7	-1.3
ADK				IAML		19 19 07.8	
	1µm,0.2s						
ADK				IAML		19 19 09.0	
	2µm,0.3s						
ADK	Adak	1.10	72		Sb	19 19 05.2	+0.1
ETKA	Kagalaska Isla	1.26	75		Sn	19 19 10.3	+0.3
CERB	Semis' Cerberu	1.30	287		Pn	19 18 53.4	-0.5
AMKA	Amchitka	1.47	264		Pn	19 18 55.9	-0.3
GSTR	Great Sitkin T	1.53	69		Pn	19 18 57.1	0.0
LSSE	Little Sitkin	1.94	282		Pn	19 19 03.1	+0.4
LSPA	Little Sitkin	1.94	283		Pn	19 19 03.1	+0.4
LSNW	Little Sitkin	1.98	283		Pn	19 19 03.8	+0.5
ATKA	Atka Island	2.67	74		Pn	19 19 12.2	-0.4
ATKA				IAML		19 19 47.1	
	comp=E,293nm,0.9s						
ATKA				IAML		19 19 55.1	
	comp=N,391nm,0.6s						
KOWE	Korovin West	2.67	71		Pn	19 19 13.6	+0.8
KOKL	Mount Kliuchef	2.69	72		Pn	19 19 13.7	+0.6
KOFP	Korovin Flat P	2.74	73		Pn	19 19 14.4	+0.7
UNV	Unalaska Valle	7.56	68	Pn	Pn	19 20 21.1	+1.2

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*IDC **09** 19:19:53.9±1.9, 53°.04S×11°.39E, h0km, mb4.2/3, mbtmp4.1/4, ML3.5/1, MS4.1/9, Error ellipse: s-maj=71.6km s-min=28.2km az=72.0*

ISC 09 19:19:54.9±1.7**, 53°.0S**±0°.2×**11°.6E**±0°.4**, h10**km**, n21, σ0ˢ63**/10**, mb4.2**/3**, MS4.1**/8**, 4C, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TROLL	Troll, Antarti	19.48	188	⇑P	P	19 24 20.3	-1.4
	comp=Z,455nm,0.8s						
SNAA	Sanae	19.78	193	⇑P	P	19 24 25.0	+0.1
	comp=Z,111nm,0.8s						
SNAA	Sanae	19.78	193	P	P	19 24 24.9	0.0
	comp=Z,0.1nm,0.3s,baz=24,slow=14,SNR=12						
SNAA				LR	LR	19 30 30.2	
	comp=Z,357nm,19.8s,baz=13,slow=32						
	comp=Z,4.9nm,0.8s						
VNA2	Neumayer--Watz	19.89	198	⇑P	Pn	19 24 28.0	+0.4
	comp=Z,12nm,0.7s,baz=26,slow=12						
VNA3	Neumayer Olymp	20.59	199	⇑P	P	19 24 33.0	-0.6
	comp=Z,11nm,0.8s						
BOSA	Boshof	26.39	28	LR	LR	19 34 10.7	
	comp=Z,183nm,18.8s,baz=346,slow=32						
H04S2	CROZET ISLANDS	26.41	93	T	T	19 53 23.1	
	baz=242,slow=75,SNR=27						
H04S3	CROZET ISLANDS	26.42	93	T	T	19 53 24.8	
	baz=242,slow=75,SNR=22						
H04S1	CROZET ISLANDS	26.43	93	T	T	19 53 23.0	
	baz=242,slow=75,SNR=22						
TSUM	Tsumeb	34.06	10	LR	LR	19 38 37.6	
	comp=Z,324nm,19.3s,baz=204,slow=33						
MATP	Matopo	35.05	28	LR	LR	19 39 56.3	
	comp=Z,178nm,18.0s,baz=158,slow=34						
QSPA	South Pole Qui	37.23	180	P	P	19 27 06.7	+0.5
	comp=Z,0.6nm,0.4s,baz=250,slow=1.4,SNR=3.7						
QSPA				LR	LR	19 41 50.6	
	comp=Z,403nm,19.7s,baz=222,slow=35						
	comp=Z,0.6nm,0.4s						
VNDA	Vanda	48.44	172	P	P	19 28 36.6	0.0
	comp=Z,2.1nm,0.8s,baz=204,slow=4.5,SNR=4.1						
VNDA				LR	LR	19 47 49.3	
	comp=Z,298nm,20.9s,baz=196,slow=35						
	comp=Z,2.1nm,0.8s						
MBAR	Mbarara	54.61	24	LR	LR	19 51 55.2	
	comp=Z,137nm,18.2s,baz=194,slow=35						
DBIC	Dimbokro	61.06	341	LR	LR	19 50 52.9	
	comp=Z,155nm,18.5s,baz=204,slow=30						
H01W2	Cape Leeuwin H	69.78	121	T	T	20 48 02.3	
	baz=219,slow=75,SNR=14						
H01W3	Cape Leeuwin H	69.80	121	T	T	20 48 03.5	
	baz=219,slow=75,SNR=15						
H01W1	Cape Leeuwin H	69.80	121	T	T	20 48 03.8	
	baz=219,slow=75,SNR=18						
LPAZ	La Paz	70.97	268	P	P	19 31 13.4	0.0
	comp=Z,4.7nm,0.8s,baz=156,slow=4.4,SNR=9.6						
LPAZ				LR	LR	20 00 14.4	
	comp=Z,118nm,19.6s,baz=58,slow=34						
	comp=Z,4.7nm,0.8s						
YKA	Yellowknife Ar	150.60	310	PKPbc	PKiKP	19 39 46.1	-0.1
	comp=Z,1.1nm,0.9s,baz=73,slow=1.4,SNR=6.5						
ILAR	Eielson Array	163.89	325	PKPab	PKPab	19 40 49.6	0.0
	comp=Z,0.8nm,1.0s,baz=42,slow=2.8,SNR=4.2						

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*SFS **09** 19:29:35.8, 35°.53N×3°.85W, h13km, ML2.7/6, ML2.7/6, MLv2.6/6*

*MDD **09** 19:29:36.1±1.3, 35°.55N×3°.83W, h0km±7km, mb_Lg2.4/6, Error ellipse: s-maj=10.6km s-min=4.8km az=52.0*

*CNRM **09** 19:29:38.3, 35°.39N×3°.54W, h13km, ML1.6*

ISC 09 19:29:35.6±1.3**, 35°.55N**±0°.03×**3°.77W**±0°.04**, h11**km±10km**, n23, σ1ˢ52**/33**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	Palemas	0.36	203	P	Pb	19 29 45.3	+1.2
PALE	Palemas	0.36	203	S	Sb	19 29 51.4	+1.6
WMELI	Melilla	0.70	109	P	Pg	19 29 50.1	+0.8
WMELI				S	Sb	19 29 59.8	+0.3
EMEL	Melilla	0.71	111	Pg	Pb	19 29 50.6	+0.7
EMEL				Sg	Sg	19 29 58.8	+0.2
EMEL				*i* IVmb_Lg		19 30 00.7	
EALB	Alboran	0.71	57	S	Sb	19 29 59.8	+0.1
EALB				P	Pb	19 29 50.7	+0.8
EALB	Alboran	0.71	57	Pg	Pb	19 29 50.6	+0.6
EALB				Sg	Sb	19 30 00.4	+0.7
EALB				*i* IVmb_Lg		19 30 02.5	
EMLI	Melilla	0.71	110	P	Pg	19 29 50.1	+0.7
EMLI				S	Sb	19 29 59.8	+0.1
AKLM	AKL	1.04	184	P	Pg	19 29 55.1	-0.6
AKLM	AKL	1.04	184	S	Sg	19 30 07.1	-2.2
ELGU	Los Guajares,	1.32	5	P	Pn	19 29 59.2	-0.9
ELGU				S	Sb	19 30 16.8	-0.5
ELGU	Los Guajares,	1.32	5	Pn	Pn	19 29 59.4	-0.7
ELGU				Sn	Sb	19 30 16.9	-0.5
ELGU				*i* IVmb_Lg		19 30 19.0	
TAF	Taforalt	1.33	123	P	Pn	19 29 59.3	-0.9
TAF	Taforalt	1.33	123	S	Sb	19 30 14.5	-3.1
JBK	JBK	1.56	141	P	Pn	19 30 02.5	-1.0
JBK	JBK	1.56	141	S	Sn	19 30 20.4	-3.4
EGOR	Sierra Gorda,	1.58	350	P	Pn	19 30 01.9	-1.8
EGOR				S	Sn	19 30 22.2	-2.0
EGOR	Sierra Gorda,	1.58	350	Pn	Pn	19 30 03.0	-0.7
EGOR				Sn	Sn	19 30 24.8	+0.6
EGOR				*i* IVmb_Lg		19 30 29.7	
ESPR	Espera	2.14	308	P	Pn	19 30 08.8	-2.4
EQES	Quesada	2.31	14	Pn	Pn	19 30 16.0	+2.2
EQES				Sn	Sn	19 30 44.6	+2.4
EQES				*i* IVmb_Lg		19 30 49.6	
MD31	MD31	2.80	197	P	Pn	19 30 21.8	+1.3
MD31	MD31	2.80	197	S	Sn	19 30 55.3	+1.1
MDT	Midelt	2.82	195	P	Pn	19 30 21.8	+1.1
MDT	Midelt	2.82	195	S	Sn	19 30 55.9	+1.2

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*IDC **09** 19:35:12.2±1.4, 53°.06S×11°.61E, h0km, mb4.2/5, mbtmp4.2/6, ML3.5/1, MS4.1/2, Error ellipse: s-maj=48.1km s-min=26.0km az=56.0*

ISC 09 19:35:13.0±1.3**, 52°.9S**±0°.2×**11°.8E**±0°.2**, h10**km**, n20, σ0ˢ99**/13**, mb4.4**/5**, 5C, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TROLL	Troll, Antarti	19.59	189	⇑P	Pn	19 39 43.7	+1.3
	comp=Z,846nm,0.9s						
SNAA	Sanae	19.90	194	⇑P	P	19 39 45.0	+0.6
	comp=Z,93nm,0.7s						
SNAA	Sanae	19.90	194	P	P	19 39 44.2	-0.2
	comp=Z,0.1nm,0.3s,baz=17,slow=12,SNR=9.0						
SNAA				LR	LR	19 45 40.8	
	comp=Z,294nm,21.4s,baz=13,slow=32						
	comp=Z,4.4nm,0.9s						
VNA1	Neumayer--Stat	19.97	200	⇑P	Pn	19 39 47.2	+0.5
	comp=Z,13nm,1.0s						
VNA2	Neumayer--Watz	20.02	198	⇑P	Pn	19 39 47.3	0.0
	comp=Z,19nm,0.8s,baz=26,slow=13						
VNA3	Neumayer Olymp	20.72	200	⇑P	P	19 39 53.2	0.0
	comp=Z,9.9nm,0.8s						
H04S2	CROZET ISLANDS	26.30	93	T	T	20 08 38.5	
	baz=242,slow=75,SNR=14						
H04S3	CROZET ISLANDS	26.30	93	T	T	20 08 38.7	
	baz=242,slow=75,SNR=14						
H04S1	CROZET ISLANDS	26.32	93	T	T	20 08 40.4	
	baz=242,slow=75,SNR=17						
QSPA	South Pole Qui	37.33	180	P	P	19 42 24.1	-1.1
	comp=Z,1.9nm,0.7s,baz=226,slow=5.4,SNR=5.0						
	comp=Z,1.9nm,0.7s						
VNDA	Vanda	48.52	172	P	P	19 43 55.2	-0.2
	comp=Z,3.2nm,0.7s,baz=231,slow=6.0,SNR=6.6						
	comp=Z,3.2nm,0.7s						
BDFB	Brasilia	59.53	285	P	P	19 45 15.6	-1.2
	comp=Z,1.7nm,0.5s,baz=143,slow=5.1,SNR=1.4						
	comp=Z,1.7nm,0.5s						
H01W2	Cape Leeuwin H	69.73	121	T	T	21 03 16.1	
	baz=219,slow=74						
H01W3	Cape Leeuwin H	69.74	121	T	T	21 03 18.4	
	baz=219						
H01W1	Cape Leeuwin H	69.75	121	T	T	21 03 12.7	
	baz=219,slow=74						
LPAZ	La Paz	71.10	268	P	P	19 46 32.5	+0.2
	comp=Z,3.5nm,0.9s,baz=124,slow=5.6,SNR=12						
	comp=Z,3.5nm,0.9s						
URZ	Urewera	88.32	169	LR	LR	20 25 46.2	
	comp=Z,189nm,20.5s,baz=41,slow=34						
ASAR	Alice Springs	88.73	129	P	P	19 48 06.5	-0.5
	comp=Z,0.7nm,0.8s,baz=201,slow=5.0,SNR=7.0						
	comp=Z,0.7nm,0.8s						
TXAR	Lajitas Array	127.94	270	PKP	PKiKP	19 54 21.4	+2.0
	comp=Z,0.4nm,0.9s,baz=142,slow=0.8,SNR=3.5						
YKA	Yellowknife Ar	150.63	310	PKPbc	PKiKP	19 55 05.3	+0.8
	comp=Z,0.9nm,1.0s,baz=87,slow=1.6,SNR=6.4						

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*IDC **09** 19:38:30.7±2.4, 52°.92S×12°.05E, h0km, mb4.3/4, mbtmp4.2/5, ML3.7/1, Error ellipse: s-maj=76.1km s-min=27.9km az=62.0*

ISC 09 19:38:32.4±2.1**, 53°.0S**±0°.2×**12°.0E**±0°.4**, h10**km**, n15, σ0ˢ36**/9**, mb4.4**/4**, 3C, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	19.88	194	⇑P	P	19 43 03.6	+0.1
	comp=Z,118nm,0.7s						
SNAA	Sanae	19.88	194	P	P	19 43 03.6	+0.1
	comp=Z,0.2nm,0.3s,baz=16,slow=9.8,SNR=13						
	comp=Z,5.7nm,0.8s						
VNA2	Neumayer--Watz	20.00	199	⇑P	Pn	19 43 06.4	-0.1
	comp=Z,22nm,0.7s,baz=23,slow=12						
VNA3	Neumayer Olymp	20.71	200	⇑P	P	19 43 12.1	-0.4
	comp=Z,14nm,0.7s						
H04S2	CROZET ISLANDS	26.16	93	T	T	20 12 24.4	
	baz=243,slow=75						
H04S3	CROZET ISLANDS	26.17	93	T	T	20 12 15.9	
	baz=243,slow=75						
H04S1	CROZET ISLANDS	26.18	93	T	T	20 12 01.7	
	baz=243,slow=75						
QSPA	South Pole Qui	37.27	180	P	P	19 45 43.9	-0.2
	comp=Z,1.2nm,0.5s,baz=230,slow=8.0,SNR=3.8						
	comp=Z,1.2nm,0.5s						
VNDA	Vanda	48.44	172	P	P	19 47 14.5	+0.3
	comp=Z,3.8nm,0.9s,baz=226,slow=4.9,SNR=5.1						
	comp=Z,3.8nm,0.9s						
BDFB	Brasilia	59.68	285	P	P	19 48 36.9	-0.2
	comp=Z,1.3nm,0.4s,baz=135,slow=11,SNR=1.9						
	comp=Z,1.3nm,0.4s						
H01W2	Cape Leeuwin H	69.59	121	T	T	21 06 45.6	
	baz=219,slow=75,SNR=13						
H01W3	Cape Leeuwin H	69.60	121	T	T	21 06 47.0	
	baz=219,slow=75,SNR=16						
H01W1	Cape Leeuwin H	69.60	121	T	T	21 06 46.7	
	baz=219,slow=75,SNR=16						
LPAZ	La Paz	71.23	268	P	P	19 49 53.0	+0.5
	comp=Z,5.2nm,0.9s,baz=177,slow=3.0,SNR=9.3						
	comp=Z,5.2nm,0.9s						
YKA	Yellowknife Ar	150.77	310	PKPbc	PKPbc	19 58 23.0	-0.4
	comp=Z,1.0nm,0.8s,baz=71,slow=1.8,SNR=5.1						

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*SFS **09** 19:47:43.0, 36°.44N×9°.86W, h33km, ML3.3/11, ML3.2/12, MLv3.3/12*

*MDD **09** 19:47:43.3±0.7, 36°.43N×9°.83W, h30km±12km, mb_Lg3.0/13, Error ellipse: s-maj=7.4km s-min=3.9km az=84.0*

*INMG **09** 19:47:44.9±1.3, 36°.49N×9°.78W, h26km±15km, ML2.2, Error ellipse: s-maj=9.7km s-min=3.7km az=56.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Cabo S.Vicente*

*IGIL **09** 19:47:44.7, 36°.46N×9°.80W, h32km, ML2.1*

*CNRM **09** 19:47:45.9, 36°.42N×9°.42W, h55km, ML2.2*

ISC 09 19:47:40.2±1.9**, 36°.39N**±0°.05×**9°.83W**±0°.08**, h32**km±15km**, n61, σ1ˢ72**/108**, 4C, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	1.09	47	S	Sn	19 48 13.8	+0.5
PFVI				P	Pb	19 48 01.3	+0.7
PFVI	Vila Bisbo	1.09	47	⇑eP	Pb	19 48 01.5	+0.9
PFVI				eS	Sn	19 48 14.1	+0.8
PFVI				i IAML		19 48 14.8	
PFVI				i IAML		19 48 15.0	
PFVI				i IAML		19 48 15.3	
MORF	Marmelete	1.31	46	eP	Pb	19 48 04.6	+0.3
MORF				eS	Sn	19 48 19.4	+0.6
MORF				IAML		19 48 21.1	
	comp=N,37nm,0.1s						
MORF	Marmelete	1.31	46	⇑eP	Pb	19 48 04.6	+0.3
MORF				eS	Sn	19 48 19.5	+0.7
MORF				i IAML		19 48 20.2	
MORF				i IAML		19 48 22.4	
MORF				i IAML		19 48 22.4	
PTEO	Sao Teotonio	1.45	37	⇑eP	Pb	19 48 06.4	-0.2
PTEO				eS	Sn	19 48 22.6	+0.4
PTEO				i IAML		19 48 23.9	
PTEO				i IAML		19 48 24.2	
PTEO				i IAML		19 48 26.3	
PBDV	Barranco-do-Ve	1.74	60	eP	Pb	19 48 11.0	-0.6
PBDV				eS	Sn	19 48 30.2	+0.7
PBDV				i IAML		19 48 31.2	
PBDV				i IAML		19 48 31.7	
PBDV				i IAML		19 48 33.5	
PCVE	Castro Verde	1.90	49	P	Pb	19 48 12.5	-1.6
PCVE				S	Sn	19 48 33.8	+0.7
PCVE	Castro Verde	1.90	49	eP	Pb	19 48 13.0	-1.2
PCVE				eS	Sn	19 48 34.2	+1.1
PCVE				i IAML		19 48 35.0	
PCVE				i IAML		19 48 35.3	
PCVE				i IAML		19 48 37.0	
MESJ	Messejana	1.94	41	eP	Pb	19 48 13.2	-1.7
MESJ				eS	Sn	19 48 34.2	0.0
MESJ				IAML		19 48 36.8	
	comp=N,8.4nm,0.1s						
MESJ	Messejana	1.94	41	eP	Pb	19 48 13.2	-1.7
MESJ				eS	Sn	19 48 34.4	+0.2
MESJ				i IAML		19 48 35.9	
MESJ				i IAML		19 48 36.8	
MESJ				i IAML		19 48 36.9	
PVAQ	Vaqueiros	1.97	58	P	Pn	19 48 13.6	+2.3
PVAQ				S	Sn	19 48 35.6	+0.5
PVAQ	Vaqueiros	1.97	58	⇑eP	Pb	19 48 13.9	-1.5
PVAQ				eS	Sn	19 48 35.5	+0.5
PVAQ				i IAML		19 48 36.9	
PVAQ				i IAML		19 48 37.9	
PVAQ				i IAML		19 48 38.8	
PVAQ	Vaqueiros	1.97	58	P	Pn	19 48 13.1	+1.7
PVAQ	Vaqueiros	1.97	58	S	Sn	19 48 33.8	-1.2
EGRO	El Granado	2.20	58	P	Pn	19 48 16.7	+2.3
EGRO				S	Sn	19 48 41.1	+0.5
EGRO	El Granado	2.20	58	Pn	Pb	19 48 17.6	-1.7
EGRO				Sn	Sn	19 48 41.4	+0.8
EGRO				i IVmb_Lg		19 48 42.6	
PBEJ	Beja	2.26	43	eP	Pn	19 48 17.4	+2.0
PBEJ				eS	Sn	19 48 42.0	-0.2
PBEJ				i IAML		19 48 43.4	
PBEJ				i IAML		19 48 44.2	
PBEJ				i IAML		19 48 44.8	
MOE	Montemor	2.43	28	eP	Pn	19 48 19.9	+2.2
MOE				eS	Sn	19 48 46.6	+0.2
MOE				i IAML		19 48 48.9	
MOE				i IAML		19 48 49.2	
MOE				i IAML		19 48 52.9	
EVO	Evora	2.58	33	P	Pn	19 48 21.3	+1.5
EVO				S	Sn	19 48 49.2	-0.8
EVO	Evora	2.58	33	eP	Pn	19 48 21.6	+1.8
EVO				eS	Sn	19 48 49.5	-0.6
EVO				i IAML		19 48 51.6	
EVO				i IAML		19 48 51.7	
EVO				i IAML		19 48 52.3	
PMAFR	Mafra	2.60	9	P	Pn	19 48 21.3	+1.3
PMAFR				S	Sn	19 48 51.0	+0.5
PMAFR	Mafra	2.60	9	eP	Pn	19 48 21.6	+1.6
PMAFR				eS	Sn	19 48 49.9	-0.6
PMAFR				i IAML		19 48 51.1	
PMAFR				i IAML		19 48 52.1	
PMAFR				i IAML		19 48 53.2	
PBAR	Barrancos	2.85	50	P	Pn	19 48 25.3	+1.9
PBAR				S	Sn	19 48 57.2	+0.5
PBAR	Barrancos	2.85	50	eP	Pn	19 48 25.8	+2.3
PBAR				eS	Sn	19 48 56.9	+0.2
PBAR				i IAML		19 48 58.9	
PBAR				i IAML		19 48 59.0	
PBAR				i IAML		19 49 00.1	
EMIN	Mina Concepcio	2.87	60	P	Pn	19 48 25.8	+2.1
EMIN				S	Sn	19 48 56.9	-0.4
EMIN	Mina Concepcio	2.87	60	Pn	Pn	19 48 25.9	+2.1
EMIN				Sn	Sn	19 48 57.4	+0.1
EMIN				i IVmb_Lg		19 49 01.5	
PMTG	Montargil	2.96	25	eP	Pn	19 48 26.9	+1.9
PMTG				eS	Sn	19 48 58.4	-1.1
PMTG				i IAML		19 48 59.9	
PMTG				i IAML		19 49 00.0	
PMTG				i IAML		19 49 00.4	
PESTR	Estremoz	3.05	35	eP	Pn	19 48 28.2	+2.0
PESTR				eS	Sn	19 49 00.7	-0.8
PESTR				i IAML		19 49 02.7	
PESTR				i IAML		19 49 04.9	
PESTR				i IAML		19 49 04.9	
PSBE	So Bento	3.23	14	eP	Pn	19 48 30.4	+1.8
PSBE				eS	Sn	19 49 06.6	+0.7
ESPR	Espera	3.23	80	P	Pn	19 48 31.2	+2.5
ESPR				S	Sn	19 49 07.1	+1.1
ESPR	Espera	3.23	80	Pn	Pn	19 48 31.6	+3.0
ESPR				Sn	Sn	19 49 06.5	+0.5
ESPR				i IVmb_Lg		19 49 08.4	
EBAD	Badajoz	3.25	43	P	Pn	19 48 30.2	+1.2
EBAD				S	Sn	19 49 06.4	-0.2
EBAD	Badajoz	3.25	43	Pn	Pn	19 48 30.7	+1.7
EBAD				Sn	Sn	19 49 05.7	-0.9
EBAD				i IVmb_Lg		19 49 09.2	
PSARD	Sardoal	3.47	22	eP	Pn	19 48 34.0	+2.1
PSARD				eS	Sn	19 49 10.4	-1.4
PSARD				i IAML		19 49 12.3	
PSARD				i IAML		19 49 14.0	
PSARD				i IAML		19 49 15.1	
PMRV	Marv??o	3.59	32	eP	Pn	19 48 35.7	+2.0
PMRV				eS	Sn	19 49 13.2	-1.9
PMRV				i IAML		19 49 15.7	
PMRV				i IAML		19 49 15.7	
PMRV				i IAML		19 49 16.2	
PCAS	Casmilo, Conde	3.81	16	eP	Pn	19 48 38.5	+1.9
PCAS				eS	Sn	19 49 19.2	-1.0
ECAB	El Cabril	3.90	63	P	Pn	19 48 40.3	+2.4
ECAB				S	Sn	19 49 22.0	-0.6
ECAB	El Cabril	3.90	63	Pn	Pn	19 48 40.5	+2.6
ECAB				Sn	Sn	19 49 21.1	-1.6
ECAB				i IVmb_Lg		19 49 24.2	
MTE	Manteigas	4.39	23	eP	Pn	19 48 46.5	+1.9
EADA	Adamuz	4.55	65	P	Pn	19 48 49.6	+2.7
EADA				S	Sn	19 49 37.0	-1.6
EADA	Adamuz	4.55	65	Pn	Pn	19 48 49.3	+2.5
EADA				Sn	Sn	19 49 35.9	-2.7
EADA				i IVmb_Lg		19 49 40.8	
PVIS	Viseu	4.58	19	eP	Pn	19 48 48.8	+1.6
PVIS				eS	Sn	19 49 38.9	-0.4
EGOR	Sierra Gorda,	4.65	79	S	Sn	19 49 41.2	0.0
EPLA	Plasencia	4.71	38	Pn	Pn	19 48 50.6	+1.6
EPLA				Sn	Sn	19 49 41.6	-0.9
AKLM	AKL	5.22	109	P	Pn	19 48 55.7	-0.4
AKLM	AKL	5.22	109	S	Sn	19 49 50.4	-4.8
POLO	Lamas de Olo	5.22	17	eP	Pn	19 48 57.7	+1.5
POLO				eS	Sn	19 49 53.0	-2.3
MVO	Moncorvo	5.25	24	eP	Pn	19 48 58.2	+1.8
PAB	San Pablo	5.35	52	Pn	Pn	19 49 00.2	+2.2
PAB				Sn	Sn	19 49 56.4	-2.1
PAB				i IVmb_Lg		19 49 59.0	
PSIM	Granatula de C	5.40	61	Pn	Pn	19 48 59.5	+1.0
PSIM				Sn	Sn	19 49 57.9	-1.7
MD31	MD31	5.46	129	P	Pn	19 49 01.8	+2.4
MD31	MD31	5.46	129	S	Sn	19 50 01.4	+0.3
EQES	Quesada	5.58	73	Pn	Pn	19 49 02.8	+1.6
EQES				Sn	Sn	19 50 03.7	-0.5
EQES				i IVmb_Lg		19 50 05.8	
MDT	Midelt	5.59	128	P	Pn	19 49 02.7	+1.5
MDT	Midelt	5.59	128	S	Sn	19 50 04.4	0.0
ELOB	Lobios	5.64	14	Pn	Pn	19 49 03.4	+1.6
ELOB				Sn	Sn	19 50 02.9	-2.7
ELOB				i IVmb_Lg		19 50 12.0	
PGAV	Gavieira, Arco	5.70	12	eP	Pn	19 49 04.3	+1.6
PGAV				eS	Sn	19 50 04.8	-2.2
TIO	Tiouine	5.85	158	S	Sn	19 50 09.2	-1.8
TIO				P	Pn	19 49 07.6	+2.7
TIO	Tiouine	5.85	158	P	Pn	19 49 09.4	+4.6
TIO	Tiouine	5.85	158	S	Sn	19 50 15.2	+4.2
PBRG	Braganca	5.92	23	eP	Pn	19 49 07.7	+2.1

*BER **09** 20:01:25.2±2.8, 80°.50N×2°.29W, h10^{km}, Mw3.1, ML1.8(DNK), Confirmed Earthquake*
*DNK **09** 20:01:27.1±2.2, 80°.53N×1°.83W, h36^{km}±18^{km}, ML1.8, Presumed earthquake*
*FCIAR **09** 20:01:29.0, 80°.37N×0°.98W, h10^{km}, station ZFI2 has station magnitude of 3.60 station OMEGA has station magnitude of 3.70*
ISC 09 20:01:14.9±0.8, **79°.81N**±0°.05×**3°.97W**±0°.03, **h10**^{km}**, n18,** σ**2**^{s}**.39**/31**, 1C, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOR	Nord	2.73	317	eP	Pg	20 02 06.3	-0.9
NOR				eS	Sn	20 02 31.1	-0.6
NOR	Nord	2.73	317	eP	Pb	20 02 04.6	+0.9
NOR				i S	Sn	20 02 31.8	+0.1
NOR				IAML		20 02 39.3	
	comp=Z,5.0nm,0.5s						
KBS	Kingsbay	3.08	99	eP	Pb	20 02 10.7	+1.2
KBS				eS	Sn	20 02 41.1	+1.1
KBS				IAML		20 02 46.2	
	comp=Z,5.7nm,0.3s						
KBS	Kingsbay	3.08	99	i P	Pb	20 02 10.7	+1.2
KBS				i S	Sn	20 02 41.4	+1.3
BRBB	Barentsburg B	3.89	107	eP	Pb	20 02 24.1	+0.7
BRBB				eS	Sn	20 03 04.8	+4.7
SPA0	Spitsbergen Ar	4.21	103	⇑iP	Pb	20 02 27.1	-1.7
SPA0				i S	Sn	20 03 10.3	+2.2
SPA0	Spitsbergen Ar	4.21	103	eP	Pb	20 02 27.1	-1.7
SPA0				eS	Sn	20 03 10.5	+2.3
DAG	Danmarks Havn	4.26	232	eP	Pg	20 02 37.7	+1.4
DAG				eS	Sg	20 03 29.3	-2.0
DAG	Danmarks Havn	4.26	232	i P	Pg	20 02 37.5	+1.2
DAG				i S	Sg	20 03 29.4	-1.9
DAG				IAML		20 03 35.0	
	comp=Z,4.5nm,0.4s						
HSPB	Hornsund (broa	4.81	116	eP	Pb	20 02 37.5	-1.6
HSPB				eS	Sn	20 03 29.1	+6.2
HSPB	Hornsund (broa	4.81	116	eP	Pb	20 02 37.9	-1.3
HSPB				eS	Sb	20 03 31.5	-5.4
HSPB				IAML		20 03 32.2	
	comp=Z,2.6nm,0.8s						
DBG	Daneborg	6.58	222	eP	Pb	20 03 10.5	+1.2
DBG				eS	Sb	20 04 24.9	-2.9
DBG	Daneborg	6.58	222	i P	Pb	20 03 10.4	+1.2
DBG				i S	Sb	20 04 25.8	-2.0
DBG				IAML		20 04 52.4	
	comp=Z,2.1nm,0.7s						
HOPEN	Hopen	6.74	104	eP	Pn	20 03 01.2	+7.6
HOPEN				eS	Sn	20 04 11.5	+1.2
ZFI2	Zemlya Franca-	8.51	58	eP	Pn	20 03 18.5	+0.6
ZFI2				eS	Sn	20 04 39.5	-14
	comp=Z,17nm,3.0s						
OMEGA	Omega	8.53	59	eP	Pn	20 03 18.5	+0.4
OMEGA				eS	Sn	20 04 39.7	-15
	comp=Z,19nm,2.6s						
NEEM	North Greenlan	9.35	280	i P	Pn	20 03 40.8	+11
NEEM				i S	Sn	20 05 17.4	+2.5
NEEM	North Greenlan	9.35	280	i P	Pn	20 03 40.8	+11
NEEM				i S	Sn	20 05 17.4	+2.5
NEEM				IAML		20 05 22.1	
	comp=Z,3.7nm,0.9s						

*SJA **09** 20:04:44.7±0.7, 23°.95S×66°.94W, h219^{km}±4^{km}, ML3.5, MW3.5*
*GUC **09** 20:04:45.3±0.7, 24°.01S×67°.03W, h206^{km}±8^{km}, ML3.7*
ISC 09 20:04:44.0±1.9, **23°.99S**±0°.04×**66°.95W**±0°.05, **h225**^{km}±15^{km}**, n31,** σ**1**^{s}**.40**/50**, 4C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALTA		0.61	112	⇓iP	Pn	20 05 15.4	+0.4
SALTA		0.61	112	eP	Pn	20 05 15.4	+0.4
SALTA				eS	S	20 05 38.0	-1.1
SLA	San Lorenzo	1.51	119	eP	Pn	20 05 21.3	+1.2
SLA	San Lorenzo	1.51	119	eP	Pn	20 05 21.5	+1.4
SLA				eS	S	20 05 48.0	-0.4
AF01	San Pedro de A	1.53	312	eP	Pn	20 05 21.1	+0.6
AF01	San Pedro de A	1.53	312	eP	Pn	20 05 22.9	+2.4
AZAP	Zapla	1.74	98	eP	Pn	20 05 23.1	+0.9
AZAP				eS	S	20 05 51.5	-0.5
YJA	Yavi	2.24	37	eP	Pn	20 05 28.4	+1.0
YJA				eS	S	20 06 00.6	-0.5
FSA	Cafayete	2.29	157	eP	Pn	20 05 26.2	-1.2
FSA				eS	S	20 06 00.7	-0.7
GO02	Mina Guanaco	2.67	244	⇑iP	Pn	20 05 33.2	+1.7
GO02				eS	S	20 06 08.6	-0.1
GO02				IAML		20 06 09.2	
	comp=N,276nm,0.3s						
GO02	Mina Guanaco	2.67	244	eP	Pn	20 05 33.3	+1.7
GO02				IAML		20 06 11.8	
	comp=Z,219nm,0.1s						
PB06	IPOC Station P	2.73	298	⇑iP	Pn	20 05 33.5	+1.4
PB06				IAML		20 06 10.0	
	comp=N,303nm,0.3s						
PB06	IPOC Station P	2.73	298	eP	Pn	20 05 33.0	+0.9
PB06				eS	S	20 06 08.9	-0.8
PB06				IAML		20 06 09.5	
	comp=Z,111nm,0.6s						
PB09	IPOC Station P	3.04	316	eP	Pn	20 05 37.3	+1.7
PB09				IAML		20 06 17.5	
	comp=N,102nm,0.3s						
PB09	IPOC Station P	3.04	316	eP	Pn	20 05 37.1	+1.5
PB09				eS	S	20 06 15.8	-0.2
PB09				IAML		20 06 17.7	
	comp=Z,76nm,0.2s						
PB05	IPOC Station P	3.19	290	eP	Pn	20 05 38.6	+1.3
PB05				IAML		20 06 20.0	
	comp=E,88nm,0.2s						
PB05	IPOC Station P	3.19	290	eP	Pn	20 05 38.0	+0.7
PB05				eS	S	20 06 18.1	-0.9
PB05				IAML		20 06 21.4	
	comp=Z,45nm,0.3s						
PB14	IPOC Station P	3.21	258	⇑iP	Pn	20 05 39.0	+1.3
PB14				IAML		20 06 21.1	
	comp=E,36nm,0.3s						
PB14	IPOC Station P	3.21	258	eP	Pn	20 05 39.0	+1.3
PB14				eS	S	20 06 19.2	-0.4
PB14				IAML		20 06 21.3	
	comp=Z,59nm,0.2s						
PB03	IPOC Station P	3.23	306	i P	Pn	20 05 38.9	+1.1
PB03	IPOC Station P	3.23	306	eP	Pn	20 05 38.4	+0.7
PB03				eS	S	20 06 18.3	-1.5
PB03				IAML		20 06 20.9	
	comp=Z,172nm,0.3s						
PB10	IPOC Station P	3.33	278	⇑iP	Pn	20 05 40.3	+1.5
PB10	IPOC Station P	3.33	278	eP	Pn	20 05 39.7	+0.9
PB10				eS	S	20 06 20.5	-1.2
PB10				IAML		20 06 24.9	
	comp=Z,44nm,0.5s						
AC02	Maricunga	3.44	214	eP	Pn	20 05 42.6	+2.1
AC02	Maricunga	3.44	214	eP	Pn	20 05 42.9	+2.3
AC02				eS	S	20 06 22.4	-2.5
PB07	IPOC Station P	3.52	309	eP	Pn	20 05 41.7	+0.5
PB07				eS	S	20 06 24.4	-1.6
PB07				IAML		20 06 25.4	
	comp=Z,100nm,0.3s						
PB01	IPOC Station P	3.76	321	eP	Pn	20 05 44.6	+0.7
PB01				eS	S	20 06 28.5	-2.5
PB01				IAML		20 06 30.9	
	comp=Z,50nm,0.2s						
PB02	IPOC Station P	3.80	314	eP	Pn	20 05 45.5	+1.0
PB02				eS	S	20 06 29.8	-2.2
PB02				IAML		20 06 30.3	
	comp=Z,117nm,0.4s						
AC01	Pan de Azucar	3.94	236	eP	Pn	20 05 46.0	+0.1
AC01				eS	S	20 06 33.4	-1.4
AC01				IAML		20 06 37.7	
	comp=Z,31nm,0.5s						
HMBC	Humberstone	4.59	323	eP	Pn	20 05 56.0	+1.9
HMBC				eS	S	20 06 47.0	-2.4
HMBC				IAML		20 06 49.4	
	comp=Z,36nm,0.3s						
GO03	Copiapo	4.65	219	eP	Pn	20 05 55.6	+0.9
GO03				eS	S	20 06 49.3	-1.2
GO03				IAML		20 06 54.4	
	comp=Z,24nm,0.2s						

*SJA **09** 20:33:32.5±0.7, 22°.13S×68°.70W, h133^{km}±3^{km}, ML3.5, MW3.5*
*GUC **09** 20:33:34.0±0.9, 22°.12S×68°.72W, h131^{km}±4^{km}, ML3.4*
ISC 09 20:33:32.2±1.5, **22°.12S**±0°.03×**68°.67W**±0°.06, **h140**^{km}±9^{km}**, n36,** σ**0**^{s}**.89**/58**, 5C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.62	301	eP	Pn	20 33 53.7	+0.4
PB09				eS	Sn	20 34 08.2	-1.0
PB09				IAML		20 34 09.6	
	comp=N,714nm,0.4s						
PB09	IPOC Station P	0.62	301	eP	Pn	20 33 53.7	+0.4
PB09				eS	Sn	20 34 08.2	-1.0
PB09				IAML		20 34 09.3	
	comp=Z,902nm,0.6s						
AF01	San Pedro de A	0.95	151	eP	Pn	20 33 56.4	+0.5
AF01				eS	Sn	20 34 13.3	-0.6
AF01				IAML		20 34 14.3	
	comp=N,3µm,0.4s						
AF01	San Pedro de A	0.95	151	eP	Pn	20 33 56.5	+0.7
AF01				eS	Sn	20 34 13.7	-0.3
AF01				IAML		20 34 38.3	
	comp=Z,1µm,0.7s						
PB03	IPOC Station P	1.00	274	⇑iP	Pn	20 33 56.7	+0.4
PB03				eS	Sn	20 34 13.2	-1.2
PB03				IAML		20 34 15.7	
	comp=E,1µm,0.1s						
PB03	IPOC Station P	1.00	274	eP	Pn	20 33 56.6	+0.4
PB03				eS	Sn	20 34 13.9	-0.5
PB03				IAML		20 34 15.4	
	comp=Z,1µm,0.1s						
PB06	IPOC Station P	1.02	235	⇑iP	Pn	20 33 56.9	+0.5
PB06				eS	Sn	20 34 13.8	-0.9
PB06				IAML		20 34 14.9	
	comp=E,1µm,0.2s						
PB06	IPOC Station P	1.02	235	eP	Pn	20 33 56.7	+0.4
PB06				eS	Sn	20 34 14.5	-0.2
PB06				IAML		20 34 16.7	
	comp=Z,569nm,0.2s						
PB07	IPOC Station P	1.19	289	⇑iP	Pn	20 33 58.8	+0.8
PB07				eS	Sn	20 34 16.6	-1.0
PB07				IAML		20 34 17.2	
	comp=N,2µm,0.2s						
PB07	IPOC Station P	1.19	289	eP	Pn	20 33 58.5	+0.6
PB07				eS	Sn	20 34 17.2	-0.5
PB07				IAML		20 34 18.5	
	comp=Z,916nm,0.1s						
PB01	IPOC Station P	1.31	325	eP	Pn	20 33 59.7	+0.6
PB01				eS	Sn	20 34 19.0	-0.6
PB01				IAML		20 34 20.2	
	comp=N,538nm,0.2s						
PB01	IPOC Station P	1.31	325	eP	Pn	20 33 59.8	+0.7
PB01				eS	Sn	20 34 19.6	-0.1
PB01				IAML		20 34 20.1	
	comp=Z,378nm,0.2s						
PB02	IPOC Station P	1.39	305	eP	Pn	20 34 00.5	+0.6
PB02				eS	Sn	20 34 20.2	-0.8
PB02				IAML		20 34 24.8	
	comp=E,551nm,0.2s						
PB02	IPOC Station P	1.39	305	eP	Pn	20 34 00.6	+0.7
PB02				IAML		20 34 23.6	
	comp=Z,553nm,0.2s						
PB05	IPOC Station P	1.59	242	⇑iP	Pn	20 34 02.8	+0.7
PB05				IAML		20 34 27.1	
	comp=E,237nm,0.3s						
PB05	IPOC Station P	1.59	242	eP	Pn	20 34 02.6	+0.5
PB05				eS	Sn	20 34 24.8	-0.2
PB05				IAML		20 34 26.2	
	comp=Z,166nm,0.3s						
PATCX	Punta Patache	1.89	313	eP	Pn	20 34 06.0	+0.5
PATCX				eS	Sn	20 34 30.6	-0.4
PATCX				IAML		20 34 34.0	
	comp=N,202nm,0.3s						
PATCX	Punta Patache	1.89	313	eP	Pn	20 34 06.1	+0.5
PATCX				eS	Sn	20 34 33.2	+2.2
TA01	Diego Aracena	2.09	317	eP	Pn	20 34 08.1	+0.3
TA01	Diego Aracena	2.09	317	eP	Pn	20 34 08.4	+0.6
TA01				eS	Sn	20 34 35.7	+0.6
HMBC	Humberstone	2.15	328	eP	Pn	20 34 08.9	+0.2
HMBC				IAML		20 34 42.6	
	comp=N,254nm,0.3s						
HMBC	Humberstone	2.15	328	eP	Pn	20 34 09.1	+0.4
HMBC				eS	Sn	20 34 36.7	0.0
HMBC				IAML		20 34 41.2	
	comp=Z,161nm,0.2s						
PB10	IPOC Station P	2.22	231	eP	Pn	20 34 09.7	+0.4
PB10				IAML		20 34 54.6	
	comp=N,124nm,0.2s						
PB10	IPOC Station P	2.22	231	eP	Pn	20 34 09.8	+0.4
PB10				eS	Sn	20 34 40.1	+2.1
TA02	Huaiquique	2.29	323	eP	Pn	20 34 16.3	+6.1
TA02				eS	Sn	20 34 37.9	-1.5
TA02				IAML		20 34 42.7	
	comp=Z,194nm,0.1s						
GO01	Chusmiza	2.49	349	eP	Pn	20 34 14.6	+1.5
GO01	Chusmiza	2.49	349	eP	Pn	20 34 14.4	+1.3
GO01				IAML		20 34 47.9	
	comp=Z,186nm,0.5s						
PB11	IPOC Station P	2.52	338	eP	Pn	20 34 13.8	+0.5
PB11				IAML		20 34 47.3	
	comp=N,241nm,0.2s						
PB11	IPOC Station P	2.52	338	eP	Pn	20 34 13.9	+0.6
PB11				eS	Sn	20 34 45.0	+0.2
PB11				IAML		20 34 48.0	
	comp=Z,123nm,0.2s						
PB14	IPOC Station P	2.96	212	eP	Pn	20 34 19.8	+0.8
PB14				eS	Sn	20 34 54.4	-0.7
PB14				IAML		20 34 58.6	
	comp=Z,105nm,0.2s						
SALTA		3.00	135	eP	Pn	20 34 28.7	+9.1
GO02	Mina Guanaco	3.15	195	⇑iP	Pn	20 34 22.2	+0.9
GO02	Mina Guanaco	3.15	195	eP	Pn	20 34 22.3	+0.9
GO02				IAML		20 35 03.9	
	comp=Z,129nm,0.4s						
PB12	IPOC Station P	3.82	336	eP	Pn	20 34 29.3	-0.6
PB12	IPOC Station P	3.82	336	eP	Pn	20 34 29.9	0.0
PB12				eS	Sn	20 35 12.3	-2.3
PB12				IAML		20 35 26.3	
	comp=Z,35nm,0.3s						
AC01	Pan de Azucar	4.38	203	eP	Pn	20 34 36.8	-0.4
AC01				eS	Sn	20 35 25.9	-1.9
AC01				IAML		20 35 27.8	
	comp=Z,29nm,0.2s						

*IDC **09** 21:01:49.3±0.9, 52°.90S×12°.01E, h0^{km}, mb4.4/6, mbtmp4.4/7, ML3.8/1, MS3.8/15, Error ellipse: s-maj=33.4km s-min=22.6km az=53.0*
*NEIC **09** 21:01:52.1±1.8, 53°.1S±0°.1×12°.0E±0°.3, h10^{km}±1^{km}, mb4.6/10, Error ellipse: s-maj=28.4km s-min=19.6km az=120.0*
ISC 09 21:01:51.2±0.6, **53°.01S**±0°.10×**11°.9E**±0°.2, **h10**^{km}**, n52,** σ**0**^{s}**.82**/34**, mb4.6**/11**, MS4.0**/14**, 5C, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TROLL	Troll, Antarti	19.51	189	⇑P	Pn	21 06 20.0	+0.4
	comp=Z,1µm,0.9s						
SNAA	Sanae	19.83	194	⇑P	P	21 06 21.8	+0.1
	comp=Z,282nm,0.7s						
SNAA	Sanae	19.83	194	P	P	21 06 22.1	+0.4
	comp=Z,0.3nm,0.3s,baz=11,slow=9.6,SNR=25						
SNAA				LR	LR	21 12 17.6	
	comp=Z,305nm,21.9s,baz=13,slow=32						
	comp=Z,15nm,0.9s						
SNAA	Sanae	19.83	194		P	21 06 21.1	-0.6
VNA1	Neumayer--Stat	19.91	200	⇑P	P	21 06 22.6	+0.1
	comp=Z,24nm,0.9s						
VNA2	Neumayer--Watz	19.96	199	⇑P	P	21 06 22.2	-0.8
	comp=Z,41nm,0.8s,baz=22,slow=9.8						

VNA3	**Neumayer Olymp**	**20.66**	**200**	⇑P	**P**	**21 06 29.8**	**-0.9**
	comp=Z,28nm,0.7s						
SUR	**Sutherland**	**21.59**	**21**	P	**P**	**21 06 40.9**	**-0.2**
SUR				IAmb	IAmb	21 06 46.6	
	comp=Z,28nm,1.1s						
H04S2	**CROZET ISLANDS**	**26.18**	**93**	T	T	21 35 08.0	
	baz=242,slow=74,SNR=57						
H04S3	**CROZET ISLANDS**	**26.19**	**93**	T	T	21 35 09.2	
	baz=242,slow=74,SNR=43						
H04S1	**CROZET ISLANDS**	**26.20**	**93**	T	T	21 35 08.7	
	baz=242,slow=74,SNR=57						
LBTB	**Lobatse**	**29.79**	**26**	P	**P**	**21 07 58.0**	**-0.1**
LBTB				IAmb	IAmb	21 08 08.0	
	comp=Z,13nm,1.5s						
BELA	**Belgrano 2**	**29.94**	**198**	P	**P**	**21 07 57.4**	**-1.4**
BELA				IAmb	IAmb	21 08 06.5	
	comp=Z,18nm,1.5s						
TSUM	**Tsumeb**	**34.02**	**10**	LR	LR	21 20 13.8	
	comp=Z,360nm,20.3s,baz=154,slow=33						
QSPA	**South Pole Qui**	**37.23**	**180**	P	**P**	**21 09 02.8**	**+0.4**
	comp=Z,1.6nm,0.3s,baz=230,slow=6.9,SNR=10.0						
QSPA				LR	LR	21 23 27.8	
	comp=Z,260nm,20.7s,baz=225,slow=35						
	comp=Z,1.6nm,0.3s						
QSPA	**South Pole Qui**	**37.23**	**180**	P	**P**	**21 09 02.5**	**0.0**
QSPA				IAmb	IAmb	21 09 11.8	
	comp=Z,8.9nm,1.1s						
VNDA	**Vanda**	**48.40**	**172**	P	**P**	**21 10 33.1**	**+0.5**
	comp=Z,7.9nm,0.8s,baz=232,slow=7.4,SNR=13						
VNDA				LR	LR	21 29 45.9	
	comp=Z,211nm,21.6s,baz=190,slow=35						
	comp=Z,7.9nm,0.8s						
VNDA	**Vanda**	**48.40**	**172**	P	**P**	**21 10 33.3**	**+0.7**
MBAR	**Mbarara**	**54.53**	**23**	LR	LR	21 33 26.6	
	comp=Z,113nm,18.2s,baz=193,slow=35						
PLCA	**Paso Flores**	**54.70**	**247**	LR	LR	21 34 11.4	
	comp=Z,37nm,18.2s,baz=111,slow=36						
CPUP	**Villa Florida**	**57.08**	**269**	P	**P**	**21 11 37.1**	**-0.4**
	comp=Z,2.0nm,0.9s,baz=165,slow=12,SNR=14						
CPUP				LR	LR	21 32 59.8	
	comp=Z,15nm,19.8s,baz=9.5,slow=33						
	comp=Z,2.0nm,0.9s						
CPUP	**Villa Florida**	**57.08**	**269**	P	**P**	**21 11 38.1**	**+0.7**
BDFB	**Brasilia**	**59.67**	**285**	LR	LR	21 32 43.4	
	comp=Z,70nm,19.6s,baz=228,slow=31						
AQDB	**Aquidauana**	**60.49**	**275**	P	**P**	**21 12 02.9**	**+1.7**
AQDB				IAmb	IAmb	21 12 04.6	
	comp=Z,10nm,1.2s						
DBIC	**Dimbokro**	**61.14**	**341**	LR	LR	21 32 07.1	
	comp=Z,106nm,21.0s,baz=190,slow=30						
PTLB	**Pontes e Lacer**	**66.43**	**276**	P	**P**	**21 12 41.0**	**+0.5**
PTLB				IAmb	IAmb	21 12 43.1	
	comp=Z,3.5nm,0.9s						
H01W2	**Cape Leeuwin H**	**69.58**	**121**	T	T	22 29 53.0	
	baz=219,slow=75,SNR=20						
H01W3	**Cape Leeuwin H**	**69.60**	**121**	T	T	22 29 56.6	
	baz=219,slow=75,SNR=18						
H01W1	**Cape Leeuwin H**	**69.60**	**121**	T	T	22 29 54.9	
	baz=219,slow=75,SNR=27						
LPAZ	**La Paz**	**71.21**	**268**	P	**P**	**21 13 11.6**	**+0.6**
	comp=Z,15nm,0.8s,baz=108,slow=6.0,SNR=25						
	comp=Z,15nm,0.8s						
LPAZ	**La Paz**	**71.21**	**268**	P	**P**	**21 13 11.0**	**0.0**
ATAH	**Atahualpa**	**84.56**	**265**	LR	LR	21 50 30.1	
	comp=Z,28nm,19.1s,baz=114,slow=34						
EIL	**Elat**	**84.74**	**20**	LR	LR	21 51 29.2	
	comp=Z,88nm,19.0s,baz=240,slow=35						
MDT	**Midelt**	**86.67**	**346**	LR	LR	21 51 06.8	
	comp=Z,82nm,20.4s,baz=274,slow=34						
ASF	**Jabal al Asfar**	**87.57**	**21**	LR	LR	21 52 33.5	
	comp=Z,40nm,19.2s,baz=183,slow=35						
URZ	**Urewera**	**88.20**	**168**	LR	LR	21 54 13.4	
	comp=Z,71nm,18.4s,baz=192,slow=36						
ASAR	**Alice Springs**	**88.58**	**129**	P	**P**	**21 14 45.0**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=208,slow=5.2,SNR=13						
	comp=Z,1.6nm,0.8s						
ASAR	**Alice Springs**	**88.58**	**129**	P	**P**	**21 14 46.2**	**+1.9**
WRA	**Warramunga Arr**	**91.98**	**127**	P	**P**	**21 14 58.7**	**-1.4**
	comp=Z,0.7nm,1.0s,baz=185,slow=3.0,SNR=4.6						
	comp=Z,0.7nm,1.0s						
KBZ	**Khabaz**	**99.97**	**22**	LR	LR	22 00 56.7	
	comp=Z,38nm,18.5s,baz=282,slow=36						
DZM	**Mont Dzumac**	**102.02**	**156**	*e*LR	LR	21 49 09.1	
	comp=Z,54nm,22.4s						
TXAR	**Lajitas Array**	**128.05**	**270**	PKP	**PKPdf**	**21 20 56.8**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=94,slow=2.3,SNR=3.7						
SONM	**Songino Array**	**128.35**	**59**	PKP	**PKPdf**	**21 20 56.9**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=198,slow=4.3,SNR=1.5						
PDAR	**Pinedale Array**	**140.49**	**279**	PKP	**PKPdf**	**21 21 19.7**	**-0.5**
	comp=Z,0.5nm,0.9s,baz=134,slow=1.8,SNR=2.1						
NVAR	**Mina Array Bea**	**143.11**	**267**	PKP	**PKPdf**	**21 21 26.1**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=139,slow=2.7,SNR=2.2						
MSO	**Missoula**	**145.33**	**282**		**PKPab**	**21 21 28.9**	**+0.5**
WVOR	**Wild Horse Val**	**145.75**	**272**	PKPbc	**PKPab**	**21 21 30.7**	**+0.6**
O03E	**Paynes Creek**	**146.39**	**267**	PKPbc	**PKPbc**	**21 21 31.8**	**+0.1**
TIXI	**Tiksi**	**147.40**	**32**	PKPbc	**PKPbc**	**21 21 34.2**	**+0.7**
G08A	**Pilot Rock**	**147.53**	**276**	PKPbc	**PKPbc**	**21 21 34.7**	**-0.2**
YKA	**Yellowknife Ar**	**150.78**	**310**	PKPbc	**PKPbc**	**21 21 41.2**	**-1.0**
	comp=Z,1.3nm,0.8s,baz=85,slow=1.8,SNR=10						
ILAR	**Eielson Array**	**164.02**	**326**	PKPab	**PKPab**	**21 22 45.1**	**-1.4**
	comp=Z,0.6nm,1.0s,baz=38,slow=3.4,SNR=4.7						

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*IDC **09** 21:18:27.3±2.1, 5.°84S×130.°77E, h0^{km}, mb3.9/1, mbtmp3.9/5, ML3.9/4, Error ellipse: s-maj=59.0km s-min=27.0km az=83.0*

*NEIC **09** 21:18:40.3±1.8, 6.°29S±0.°08×130.°4E±0.°1, h113^{km}±13^{km}, mb4.0/3, Error ellipse: s-maj=18.3km s-min=11.6km az=94.0*

ISC 09 21:18:39.0±0.8**, 6.°26S**±0.°09×**130.°16E**±0.°08**, h100^{km}, n22,** σ1^{s}**85**/23**, mb3.9**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.05**	**147**		**Pn**	**21 19 11.9**	**-0.4**
FAKI	**Fak Fak**	**3.92**	**32**	Pn	**Pn**	**21 19 37.3**	**+0.1**
MTN	**Manton Dam**	**6.61**	**172**	Pn	**Pn**	**21 20 14.9**	**+1.2**
SOEI	**Soe**	**6.79**	**239**	Pn	**Pn**	**21 20 20.3**	**+4.1**
BATI	**Baumata**	**7.53**	**238**	Pn	**Pn**	**21 20 29.5**	**+3.3**
	2.3nm,0.3s,baz=185,slow=1.4,SNR=7.9						
BATI				Sn	**Sn**	**21 21 46.4**	**-3.7**
	5.3nm,0.3s,baz=59,slow=20,SNR=7.0						
	6.8nm,0.3s						
MMRI	**Maumere**	**8.20**	**253**	Pn	**Pn**	**21 20 36.2**	**+0.9**
KNRA	**Kununurra**	**9.46**	**188**		**Pn**	**21 20 52.0**	**-0.4**
FITZ	**Fitzroy Crossi**	**12.56**	**200**	Pn	**Pn**	**21 21 33.6**	**-0.6**
	0.4nm,0.3s,baz=20,slow=10,SNR=22						
FITZ				Sn	Sn	21 23 42.7	-10
	1.2nm,0.3s,baz=74,slow=23,SNR=9.1						
	1.4nm,0.3s						
FITZ	**Fitzroy Crossi**	**12.56**	**200**		**Pn**	**21 21 32.8**	**-1.4**
WB0	**Warramunga Arr**	**14.04**	**163**	Pn	**Pn**	**21 21 51.8**	**-1.8**
WRAB	**Tennant Creek**	**14.19**	**164**	Pn	**Pn**	**21 21 54.3**	**-1.2**
WRA	**Warramunga Arr**	**14.19**	**164**	Pn	**Pn**	**21 21 52.7**	**-2.9**
	0.4nm,0.3s,baz=333,slow=14,SNR=25						
WRA				Sn	Sn	21 24 17.3	-15
	0.9nm,0.3s,baz=340,slow=23,SNR=9.5						
	0.6nm,0.5s						
WB2	**Warramunga Arr**	**14.20**	**164**	Pn	**Pn**	**21 21 53.7**	**-1.9**
WR0	**Warramunga Arr**	**14.27**	**163**	Pn	**Pn**	**21 21 55.0**	**-1.5**
COEN	**Coen**	**14.92**	**122**	P	**Pn**	**21 22 05.3**	**+0.5**
ASAR	**Alice Springs**	**17.68**	**169**	P	**Pn**	**21 22 39.8**	**+0.8**
	0.4nm,0.3s,baz=352,slow=10,SNR=17						
ASAR				S	Sn	21 25 44.1	-12
	1.3nm,0.8s,baz=348,slow=26,SNR=6.9						
	1.0nm,0.4s						
ASAR	**Alice Springs**	**17.68**	**169**	P	**P**	**21 22 39.1**	**+0.6**
PSA00	**Pilbara Seismi**	**18.20**	**212**		**P**	**21 22 45.1**	**+0.9**
PSA00				IAmb	IAmb	21 22 49.5	
	comp=Z,13nm,1.1s						
EVN	**Everest**	**53.91**	**311**	P	**P**	**21 27 52.9**	**-0.3**
EVN				IAmb	IAmb	21 27 55.5	
	comp=Z,1.4nm,0.7s						
MKAR	**Makanchi Array**	**67.70**	**327**	P	**P**	**21 29 26.4**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=124,slow=7.5,SNR=9.2						
	comp=Z,0.8nm,0.6s						
MKAR	**Makanchi Array**	**67.70**	**327**	P	**P**	**21 29 26.4**	**+0.7**
MAKZ	**Makanchi**	**67.88**	**326**	P	**P**	**21 29 26.4**	**-0.4**
MAKZ				IAmb	IAmb	21 29 39.6	
	comp=Z,1.7nm,1.1s						

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*NEIC **09** 22:14:13.9±2.5, 17.°93N±0.°08×101.°21W±0.°08, h35^{km}±1^{km}, mb4.5/206, Error ellipse: s-maj=16.5km s-min=9.1km az=219.0*

*IDC **09** 22:14:14.0±0.6, 17.°93N×101.°21W, h53^{km}±4^{km}, mb4.0/19, mbtmp4.2/25, MS3.7/18, Error ellipse: s-maj=20.4km s-min=9.9km az=55.0*

*MEX **09** 22:14:16.1±1.2, 17.°85N×101.°16W, h47^{km}±14^{km}, MD4.7*

ISC 09 22:14:13.4±0.4**, 17.°81N**±0.°03×**101.°20W**±0.°03**, h53^{km}**±3^{km}**, n309,** σ1^{s}**74**/313**, mb4.5**/75**, MS3.5**/14**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.32**	**232**	*e*P	**Pn**	**22 14 23.6**	**+0.6**
ZIIG				*e*S	**Sn**	**22 14 31.1**	**+1.3**
ARIG	**Puente Sto Nin**	**0.94**	**60**	*e*P	**Pn**	**22 14 30.1**	**-0.3**
ARIG				*e*S	**Sn**	**22 14 42.2**	**-0.7**
ATYC	**Atoyac**	**0.94**	**129**	*e*P	**Pn**	**22 14 31.1**	**+0.7**
ATYC				*e*S	**Sn**	**22 14 43.1**	**+0.2**
CAIG	**El Cayaco**	**1.17**	**130**	*e*P	**Pn**	**22 14 34.4**	**+1.0**
CAIG				*e*S	**Sn**	**22 14 46.7**	**-1.6**
MEIG	**Mezcala**	**1.51**	**85**	*e*P	**Pn**	**22 14 39.1**	**+0.9**
MEIG				*e*S	**Sn**	**22 14 56.0**	**-0.8**
VNTA	**La Mica**	**1.59**	**124**	*e*P	**Pn**	**22 14 40.4**	**+1.2**
VNTA				*e*		22 14 54.1	
DAIG	**Los Arroyos**	**1.67**	**118**	*e*P	**Pn**	**22 14 41.4**	**+1.1**
DAIG				*e*S	**Sn**	**22 14 55.5**	**-5.2**
URUA	**Uruapan**	**1.81**	**333**	*e*P	**Pn**	**22 14 42.4**	**0.0**
URUA				*e*		22 14 57.4	
MOIG	**Morelia**	**1.86**	**0**		**Pn**	**22 14 42.1**	**-1.0**
MOIG	**Morelia**	**1.86**	**0**	*e*P	**Pn**	**22 14 42.6**	**-0.6**
MOIG				*e*S	**Sn**	**22 15 01.8**	**-3.8**
MAVM	**Malinalco, Edo**	**1.98**	**54**	*e*P	**Pn**	**22 14 46.3**	**+1.5**
MAVM				*e*S	**Sn**	**22 15 11.8**	**+3.2**
TOVM	**TOLUCA**	**2.06**	**44**	*e*P	**Pn**	**22 14 46.4**	**+0.5**
TOVM				*e*S	**Sn**	**22 15 14.6**	**+4.0**
MMIG	**Aquila**	**2.10**	**284**	*e*P	**Pn**	**22 14 45.6**	**-0.6**
MMIG				*e*S	**Sn**	**22 15 13.3**	**+2.2**
CRIG	**Cruz Grande**	**2.24**	**118**	*e*P	**Pn**	**22 14 49.4**	**+1.2**
CRIG				*e*S	**Sn**	**22 15 13.2**	**-1.4**
INVM	**La Marquesa**	**2.27**	**49**	*e*P	**Pn**	**22 14 48.3**	**-0.6**
INVM				*e*S	**Sn**	**22 15 19.0**	**+3.1**
YAIG	**Yautepec**	**2.28**	**62**	*e*P	**Pn**	**22 14 49.2**	**+0.4**
YAIG				*e*S	**Sn**	**22 15 14.7**	**-1.1**
AOVM	**Tlapan**	**2.30**	**50**	*e*P	**Pn**	**22 14 49.9**	**+0.6**
AOVM				*e*S	**Sn**	**22 15 14.1**	**-2.6**
MZVM		**2.32**	**53**	*e*P	**Pn**	**22 14 50.4**	**+1.2**
MZVM				*e*S	**Sn**	**22 15 20.3**	**+3.8**
MCRU	**Las Cruces**	**2.38**	**50**	*e*P	**Pn**	**22 14 53.7**	**+3.4**
MCRU				*e*S	**Sn**	**22 15 19.5**	**+1.0**
TLVM	**San Miguel Top**	**2.39**	**54**	*e*P	**Pn**	**22 14 51.0**	**+0.6**
TLVM				*e*S	**Sn**	**22 15 26.6**	**+7.8**
CUP5	**Mexico City**	**2.44**	**51**	*e*P	**Pn**	**22 14 51.9**	**+0.8**
CUP5				*e*S	**Sn**	**22 15 16.9**	**-3.0**
UNM	**Universidad Na**	**2.44**	**51**	Pn	**Pn**	**22 14 51.6**	**+0.5**
UNM	**Universidad Na**	**2.44**	**51**	*e*P	**Pn**	**22 14 51.6**	**+0.5**
UNM				*e*S	**Sn**	**22 15 22.4**	**+2.5**
XCVM	**Xochimilco**	**2.44**	**54**	*e*P	**Pn**	**22 14 51.8**	**+0.6**
XCVM				*e*S	**Sn**	**22 15 21.1**	**+1.1**
MHVM	**Bosque de Chap**	**2.47**	**49**	*e*P	**Pn**	**22 14 52.0**	**+0.5**
MHVM				*e*S	**Sn**	**22 15 20.5**	**-0.1**
BJVM	**Benito Juarez**	**2.48**	**51**	*e*P	**Pn**	**22 14 52.6**	**+1.0**
BJVM				*e*S	**Sn**	**22 15 23.9**	**+3.1**
TACY	**Mexico City**	**2.48**	**50**	*e*P	**Pn**	**22 14 52.1**	**+0.5**
TACY				*e*S	**Sn**	**22 15 19.3**	**-1.5**
MPVM	**San Francisco**	**2.50**	**56**	*e*P	**Pn**	**22 14 53.0**	**+1.2**
MPVM				*e*S	**Sn**	**22 15 21.0**	**-0.3**
ACIG	**Acambay**	**2.50**	**30**	*e*P	**Pn**	**22 14 51.5**	**-0.3**
ACIG				*e*S	**Sn**	**22 15 25.0**	**+3.9**
MGIG	**Malinaltepec**	**2.51**	**103**	*e*P	**Pn**	**22 14 54.5**	**+2.6**
MGIG				*e*S	**Sn**	**22 15 20.9**	**-0.6**
HMTT	**Tlapaneco**	**2.51**	**90**	*e*P	**Pn**	**22 14 53.9**	**+2.0**
HMTT				*e*		22 15 11.4	
TLIG	**Tlapa**	**2.52**	**95**	Pn	**Pn**	**22 14 53.9**	**+1.8**
TLIG	**Tlapa**	**2.52**	**95**	*e*P	**Pn**	**22 14 53.6**	**+1.6**
TLIG				*e*S	**Sn**	**22 15 21.9**	**+0.2**
APVM	**Azcapotzalco**	**2.52**	**48**	*e*P	**Pn**	**22 14 53.0**	**+0.8**
APVM				*e*		22 15 30.8	
AZVM	**Cuida Lopez Ma**	**2.54**	**45**	*e*P	**Pn**	**22 14 53.1**	**+0.7**
AZVM				*e*S	**Sn**	**22 15 24.6**	**+2.4**
PBVM	**Pinon**	**2.58**	**51**	*e*P	**Pn**	**22 14 53.5**	**+0.7**
PBVM				*e*		22 15 29.0	
THVM	**De Xico**	**2.59**	**54**	*e*P	**Pn**	**22 14 54.3**	**+1.2**
THVM				*e*		22 15 28.4	
PTVM	**Pico Tres Padr**	**2.66**	**48**	*e*P	**Pn**	**22 14 54.2**	**+0.1**
PTVM				*e*		22 15 29.6	
PPCL	**Tochimilco**	**2.68**	**65**	*e*P	**Pn**	**22 14 55.3**	**+0.8**
PPCL				*e*S	**Sn**	**22 15 26.4**	**+0.5**
PBXN	**Popocatepetl**	**2.69**	**63**	*e*P	**Pn**	**22 14 55.9**	**+1.1**
PBXN				*e*S	**Sn**	**22 15 30.2**	**+3.8**
PPPT	**Popocatepetl**	**2.71**	**64**	*e*P	**Pn**	**22 14 55.7**	**+0.7**
PPPT				*e*S	**Sn**	**22 15 29.1**	**+2.3**
PPM	**Popocatepetl**	**2.74**	**62**	*e*P	**Pn**	**22 14 56.3**	**+0.8**
PPM				*e*S	**Sn**	**22 15 28.3**	**+0.6**
MNGA	**Volcan de Coli**	**2.83**	**306**	*e*P	**Pn**	**22 14 57.6**	**+1.2**
MNGA				*e*S	**Sn**	**22 15 32.3**	**+2.9**
ZUVM	**ZUMPANGO**	**2.84**	**45**	*e*P	**Pn**	**22 14 56.6**	**0.0**
ZUVM				*e*S	**Sn**	**22 15 28.7**	**-1.1**
INCO	**Volcan de Coli**	**2.85**	**307**	*e*P	**Pn**	**22 14 58.1**	**+1.2**
INCO				*e*S	**Sn**	**22 15 32.6**	**+2.5**
PPSX	**Xalitzintla**	**2.85**	**63**	*e*P	**Pn**	**22 14 58.4**	**+1.6**
PPSX				*e*S	**Sn**	**22 15 32.3**	**+2.2**
COMA	**Comala**	**2.86**	**302**	*e*P	**Pn**	**22 14 58.0**	**+1.3**
COMA				*e*S	**Sn**	**22 15 29.4**	**-0.6**
SOMAC	**Volcano de Col**	**2.87**	**307**	*e*P	**Pn**	**22 14 58.5**	**+1.4**
SOMAC				*e*S	**Sn**	**22 15 32.1**	**+1.5**
CDAR	**Ciudad de Arme**	**2.90**	**293**	*e*P	**Pn**	**22 14 57.1**	**-0.1**
CDAR				*e*S	**Sn**	**22 15 32.7**	**+1.9**
FTIG	**Fresnillo de T**	**2.92**	**88**	*e*P	**Pn**	**22 14 59.1**	**+1.6**
FTIG				*e*S	**Sn**	**22 15 30.1**	**-1.4**
IGIG	**Irapuato, Guan**	**2.93**	**358**	*e*P	**Pn**	**22 14 56.5**	**-1.4**
IGIG				*e*		22 15 14.9	
JRQG	**Juriquilla Cam**	**2.97**	**14**	Pn	**Pn**	**22 14 57.6**	**-0.7**
JRQG	**Juriquilla Cam**	**2.97**	**14**	*e*P	**Pn**	**22 14 57.7**	**-0.6**
JRQG				*e*S	**Sn**	**22 15 33.7**	**+0.9**
CEGR	**Campo Tres**	**2.97**	**302**	*e*P	**Pn**	**22 14 58.9**	**+0.6**
CEGR				*e*S	**Sn**	**22 15 31.8**	**-1.1**
VTVM	**Tizayuca**	**3.02**	**49**	*e*P	**Pn**	**22 14 59.1**	**+0.2**
VTVM				*e*S	**Sn**	**22 15 34.5**	**+0.5**
PHPU	**Puebla**	**3.13**	**66**	*e*P	**Pn**	**22 15 01.2**	**+0.6**
PHPU				*e*S	**Sn**	**22 15 33.6**	**-3.2**
DEIG	**Demacu**	**3.22**	**39**	*e*P	**Pn**	**22 15 01.1**	**-0.6**
DEIG				*e*S	**Sn**	**22 15 41.2**	**+2.3**
HLIG	**Huajuapan de L**	**3.23**	**89**	*e*P	**Pn**	**22 15 03.9**	**+1.9**
HLIG				*e*S	**Sn**	**22 15 36.2**	**-3.1**
PNIG	**Pinotepa**	**3.26**	**115**	*e*P	**Pn**	**22 15 03.8**	**+1.7**
PNIG				*e*S	**Sn**	**22 15 37.6**	**-2.0**
TXIG	**Tlaxiaco**	**3.32**	**99**	*e*P	**Pn**	**22 15 05.4**	**+2.3**
TXIG				*e*S	**Sn**	**22 15 40.2**	**-1.3**
YOIG	**Yosondua**	**3.61**	**105**	*e*P	**Pn**	**22 15 09.8**	**+2.6**
YOIG				*e*S	**Sn**	**22 15 48.3**	**-0.5**
TPIG	**Tehuac#an**	**3.70**	**80**	*e*P	**Pn**	**22 15 09.1**	**+0.9**
TPIG				*e*S	**Sn**	**22 15 48.8**	**-1.9**
TOIG	**Toxpalan**	**3.94**	**85**	*e*P	**Pn**	**22 15 13.3**	**+1.7**
TOIG				*e*S	**Sn**	**22 15 53.9**	**-2.8**
CJM	**Chamela**	**4.02**	**295**	*e*P	**Pn**	**22 15 12.2**	**-0.2**
CJM				*e*S	**Sn**	**22 15 57.9**	**-0.4**
CXUV	**Coxquihui**	**4.15**	**55**	*e*P	**Pn**	**22 15 14.8**	**+0.5**
CXUV				*e*S	**Sn**	**22 16 04.5**	**+3.0**
PEIG	**Puerto Escondi**	**4.27**	**114**	*e*P	**Pn**	**22 15 18.5**	**+2.5**
PEIG				*e*S	**Sn**	**22 16 04.9**	**+0.2**
AAIG	**Aguscalientes**	**4.29**	**345**	*e*P	**Pn**	**22 15 16.4**	**-0.1**
AAIG				*e*S	**Sn**	**22 16 07.4**	**+2.2**
VHO	**Vista Hermosa**	**4.32**	**99**	*e*P	**Pn**	**22 15 19.9**	**+3.1**
VHO				*e*S	**Sn**	**22 16 04.8**	**-1.4**
OXBJ	**Oaxaca**	**4.33**	**99**	*e*S	**Sn**	**22 16 06.4**	**+0.1**
OXLC	**Oaxaca**	**4.35**	**99**	*e*S	**Sn**	**22 16 05.5**	**-1.3**
JAUV	**Jalcomulco**	**4.45**	**69**	*e*P	**Pn**	**22 15 19.0**	**+0.6**
JAUV				*e*S	**Sn**	**22 16 09.1**	**+0.1**
ANIG	**Ahuacatlan**	**4.50**	**316**	*e*P	**Pn**	**22 15 19.9**	**+0.6**
ANIG				*e*S	**Sn**	**22 16 10.4**	**0.0**
CTUV	**Llano Grande**	**4.53**	**36**	*e*P	**Pn**	**22 15 18.9**	**-0.6**
CTUV				*e*S	Sn	22 16 19.2	+8.4
LVIG	**Laguna Verde**	**4.91**	**66**	*e*P	**Pn**	**22 15 25.7**	**+1.0**
LVIG				*e*		22 16 29.3	
ZAIG	**Zacatecas**	**5.10**	**346**	Pn	**Pn**	**22 15 27.0**	**-0.7**
ZAIG	**Zacatecas**	**5.10**	**346**	*e*P	**Pn**	**22 15 27.2**	**-0.4**
ZAIG				*e*S	**Sn**	**22 16 25.3**	**-0.1**
NEUV	**Arroyo Zacate**	**5.14**	**90**	*e*P	**Pn**	**22 15 29.4**	**+1.5**
NEUV				*e*S	**Sn**	**22 16 22.7**	**-3.3**
HUIG	**Huatulco**	**5.28**	**112**	*e*P	**Pn**	**22 15 32.4**	**+2.5**
HUIG				*e*S	**Sn**	**22 16 24.9**	**-4.4**
CMIG	**Matias Romero**	**6.07**	**96**	P	**Pn**	**22 15 42.4**	**+1.7**
	16nm,0.3s,baz=274,slow=11,SNR=52						
CMIG				S	**Sn**	**22 16 45.8**	**-3.0**
	89nm,0.8s,baz=274,slow=16,SNR=5.0						
CMIG				Lg	Lg	22 17 16.5	
	4.7nm,0.3s,baz=336,slow=20,SNR=5.9						
CMIG				LR	LR	22 18 12.3	
	comp=Z,976nm,20.2s,baz=292,slow=39						
CMIG	**Matias Romero**	**6.07**	**96**	*e*P	**Pn**	**22 15 42.6**	**+2.0**
CMIG				*e*S	**Sn**	**22 16 46.8**	**-2.0**
UXUV	**UXUV**	**6.75**	**93**	*e*P	**Pn**	**22 15 51.5**	**+1.6**
UXUV				*e*S	**Sn**	**22 17 04.8**	**-0.6**
PCIG		**7.92**	**104**	*e*P	**Pn**	**22 16 08.9**	**+2.8**
PCIG				*e*S	**Sn**	**22 17 30.6**	**-3.8**
CCIG	**Comitan**	**8.80**	**99**	Pn	**Pn**	**22 16 20.4**	**+2.2**
CCIG	**Comitan**	**8.80**	**99**	*e*P	**Pn**	**22 16 20.9**	**+2.7**
CCIG				*e*S	**Sn**	**22 18 00.4**	**+4.3**
PATR	**El Naranjo**	**9.01**	**106**	*e*P	**Pn**	**22 16 24.6**	**+3.5**
PATR				*e*S	**Sn**	**22 18 01.3**	**0.0**
PAVE	**Pavencul**	**9.03**	**105**	*e*P	**Pn**	**22 16 25.7**	**+4.2**
PAVE				*e*S	**Sn**	**22 17 54.7**	**-7.2**
CHUJ	**Union Juarez**	**9.13**	**106**	*e*P	**Pn**	**22 16 26.6**	**+3.8**
CHUJ				*e*S	**Sn**	**22 17 58.7**	**-5.6**
H06E1	**SOCORRO T-PHAS**	**9.29**	**277**	T	T	22 25 49.3	
	SNR=11						
H06S1	**SOCORRO T**	**9.32**	**277**	T	T	22 25 51.6	
	SNR=4.8						
HUEH	**Huehuetenango**	**9.62**	**103**	Pn	**Pn**	**22 16 32.7**	**+3.2**
HPIG		**9.98**	**336**	Pn	**Pn**	**22 16 32.5**	**-1.9**
SLBS	**Sierra La Lagu**	**10.06**	**307**	Pn	**Pn**	**22 16 36.1**	**+0.8**
LPIG	**La Paz**	**10.56**	**308**	S	**Sn**	**22 18 35.9**	**-3.2**
	16nm,0.2s,baz=239,slow=4.6,SNR=1.3						
LPIG				LR	LR	22 20 27.2	
	comp=Z,389nm,19.0s,baz=118,slow=36						
833A	**Chaparral WMA,**	**10.60**	**9**	Pn	**Pn**	**22 16 42.6**	**-0.1**
APG	**El Apazote**	**10.67**	**104**	P	**Pn**	**22 16 46.1**	**+2.2**
	0.3nm,0.3s,baz=240,slow=20,SNR=7.1						
APG				S	**Sn**	**22 18 44.9**	**+2.8**
	0.6nm,0.9s,baz=91,slow=13,SNR=1.9						
APG				Lg	Lg	22 19 39.0	
	baz=305,slow=19,SNR=3.8						
EF02	**Christine**	**11.19**	**12**	Pn	**Pn**	**22 16 49.4**	**-1.3**
DRIO	**Del Rio**	**11.58**	**3**	Pn	**Pn**	**22 16 55.7**	**-0.3**
TX31	**Lajitas Ar. Si**	**11.70**	**349**	Pn	**Pn**	**22 16 56.2**	**-1.5**
TXAR	**Lajitas Array**	**11.70**	**349**	P	**Pn**	**22 16 58.1**	**+0.4**
	0.6nm,0.4s,baz=177,slow=12,SNR=11						
TXAR				Lg	Lg	22 20 22.8	
	0.1nm,0.3s,baz=165,slow=19,SNR=1.9						
TXAR				LR	LR	22 21 54.9	
	comp=Z,617nm,20.9s,baz=160,slow=40						
TXAR	**Lajitas Array**	**11.70**	**349**	Pn	**Pn**	**22 16 57.0**	**-0.7**
HNDO	**Hondo**	**11.80**	**8**	Pn	**Pn**	**22 16 59.7**	**+0.6**
MTO3	**Montecristo**	**11.87**	**105**	Pn	**Pn**	**22 17 02.1**	**+1.8**
SAND	**Sanderson**	**12.12**	**356**	Pn	**Pn**	**22 17 03.9**	**+0.4**
TEIG	**Tepich**	**12.46**	**77**	P	**Pn**	**22 17 09.3**	**+1.2**
	0.9nm,0.6s,baz=131,slow=20,SNR=2.2						
TEIG				S	**Sn**	**22 19 22.0**	**-3.3**
	0.8nm,0.6s,baz=309,slow=20,SNR=2.0						
TEIG	**Tepich**	**12.46**	**77**		**Pn**	**22 17 09.9**	**+1.9**
MLDN	**Muldoon**	**12.51**	**17**	Pn	**Pn**	**22 17 09.5**	**+0.9**
JCT	**Junction City**	**12.68**	**5**	Pn	**Pn**	**22 17 11.2**	**+0.1**
ALPN	**Alpine**	**12.71**	**350**	Pn	**Pn**	**22 17 12.3**	**+0.7**
HKT	**Hockley**	**13.04**	**21**	Pn	**Pn**	**22 17 14.3**	**-1.7**
OZNA	**Ozona**	**13.06**	**0**	Pn	**Pn**	**22 17 16.9**	**+0.6**
TPB05	**Hovey Rd**	**13.20**	**352**	Pn	**Pn**	**22 17 18.6**	**+0.4**
TPB01	**Permian Basin**	**13.29**	**350**	Pn	**Pn**	**22 17 19.2**	**-0.2**
435B	**Jarrell**	**13.33**	**14**	Pn	**Pn**	**22 17 20.0**	**0.0**
VHRN	**Van Horn**	**13.37**	**346**	Pn	**Pn**	**22 17 20.3**	**-0.4**
MNHN	**Monahans**	**13.55**	**354**	Pn	**Pn**	**22 17 22.8**	**-0.2**
BRDY	**Brady**	**13.57**	**8**	Pn	**Pn**	**22 17 22.6**	**-0.6**
PECS	**Pecos**	**13.72**	**350**	Pn	**Pn**	**22 17 24.7**	**-0.7**
TMB01	**Midkiff**	**13.82**	**357**	Pn	**Pn**	**22 17 26.3**	**-0.5**
TGUH	**Tegucigalpa,Un**	**13.90**	**104**	Pn	**Pn**	**22 17 30.2**	**+2.3**
SGCY	**Sterling City**	**14.05**	**0**	Pn	**Pn**	**22 17 28.8**	**-0.9**
229A	**Bryant Ranch,**	**14.11**	**358**	Pn	**Pn**	**22 17 30.3**	**-0.3**
TPB11	**China Draw**	**14.30**	**350**	Pn	**Pn**	**22 17 34.0**	**+0.8**
ODSA	**Odessa**	**14.30**	**355**	P	**P**	**22 17 37.3**	**-1.7**
MNTX	**Cornudas Mount**	**14.34**	**345**	Pn	**Pn**	**22 17 31.6**	**-2.0**
CLNB	**Carlsbad**	**14.60**	**351**	Pn	**Pn**	**22 17 35.9**	**-1.2**
GDL2	**Guadalupe Moun**	**14.62**	**349**	Pn	**Pn**	**22 17 37.7**	**+0.4**
ABTX	**Abilene, Hawle**	**14.82**	**5**	Pn	**Pn**	**22 17 39.0**	**-0.9**
PLPT	**Palo Pinto**	**15.17**	**9**	Pn	**Pn**	**22 17 44.5**	**+0.1**
SN07	**Snyder 07**	**15.22**	**1**	IAmb	IAmb	22 18 18.1	
	comp=Z,49nm,1.5s						
APMT	**Aspermont**	**15.48**	**3**	IAmb	IAmb	22 18 08.8	
	comp=Z,43nm,1.2s						
DKNS	**Dickens**	**15.80**	**1**	Pn	**Pn**	**22 17 51.2**	**-1.3**
DKNS				IAmb	IAmb	22 18 14.8	
	comp=Z,34nm,0.9s						
121A	**Cookes Peak, D**	**15.82**	**339**	IAmb	IAmb	22 17 58.7	
	comp=Z,55nm,1.4s						
BOAB	**BOACO BROADBAN**	**15.91**	**107**		**P**	**22 17 57.7**	**+0.9**
MSTX	**Muleshoe**	**16.16**	**355**	IAmb	IAmb	22 18 00.5	
	comp=Z,38nm,1.1s						
Z38A	**Mt. Pleasant**	**16.37**	**19**	IAmb	IAmb	22 18 02.2	
	comp=Z,80nm,1.3s						
TUC	**Tucson**	**16.84**	**331**		**P**	**22 18 06.0**	**-1.1**
Y22A	**Socorro**	**16.88**	**343**	IAmb	IAmb	22 18 30.9	
	comp=Z,30nm,1.2s						
SBM	**South Baldy**	**16.97**	**343**		**P**	**22 18 08.6**	**-0.3**
AMTX	**Amarillo**	**17.02**	**359**	Pn	**Pn**	**22 18 06.5**	**-1.4**
SMWD	**Samnorwood**	**17.25**	**3**	IAmb	IAmb	22 18 25.8	
	comp=Z,21nm,0.9s						
143A	**Socs Landing,**	**17.26**	**29**	Pn	**Pn**	**22 18 08.9**	**-1.9**
143A				IAmb	IAmb	22 18 12.2	
	comp=Z,71nm,1.2s						
JTS	**Las Juntas de**	**17.43**	**113**	P	**Pn**	**22 18 14.7**	**+1.6**
	comp=Z,12nm,1.0s,baz=294,slow=20,SNR=3.6						
JTS				LR	LR	22 24 23.9	
	comp=Z,130nm,21.1s,baz=306,slow=35						
JTS	**Las Juntas de**	**17.43**	**113**		**Pn**	**22 18 14.0**	**+1.0**
JTS				IAmb	IAmb	22 18 46.7	
	comp=Z,36nm,1.2s						
ABQ	**Albuquerque**	**17.70**	**346**		**P**	**22 18 17.5**	**+0.8**
W35A	**Tecumseh**	**17.70**	**12**	Pn	**Pn**	**22 18 14.1**	**-2.1**
W35A				IAmb	IAmb	22 18 55.9	
	comp=Z,51nm,1.3s						
ANMO	**Albuquerque**	**17.70**	**346**	P	**Pn**	**22 18 16.1**	**-0.4**
	comp=Z,8.7nm,0.9s,baz=167,slow=18,SNR=15						
ANMO				LR	LR	22 25 39.6	
	comp=Z,608nm,18.9s,baz=163,slow=39						
ANMO	**Albuquerque**	**17.70**	**346**		**P**	**22 18 16.9**	**+0.1**
TASM	**ASL Pad, Albuq**	**17.70**	**346**	IAmb	IAmb	22 18 19.1	
	comp=Z,18nm,1.1s						
TASM	**ASL Pad, Albuq**	**17.70**	**346**	IAmb	IAmb	22 18 19.1	
	comp=Z,18nm,1.2s						
MIAR	**Mount Ida**	**18.01**	**21**	IAmb	IAmb	22 18 44.2	
	comp=Z,70nm,1.2s						
DEOK	**Depew**	**18.44**	**12**	IAmb	IAmb	22 18 55.9	
	comp=Z,34nm,1.2s						
RTBA	**Rita Blanca**	**18.61**	**356**	P	**P**	**22 18 26.1**	**-0.6**
RTBA				IAmb	IAmb	22 18 47.3	
	comp=Z,36nm,1.0s						
113A	**Mohawk Valley,**	**18.71**	**325**	P	**Pn**	**22 18 28.5**	**0.0**
W18A	**Petrified Fore**	**18.84**	**338**	IAmb	IAmb	22 18 34.3	
	comp=Z,27nm,1.2s						
WHAR	**Wooly Hollow**	**19.13**	**23**	IAmb	IAmb	22 18 33.0	
	comp=Z,18nm,0.4s						
Y14A	**Wickenburg**	**19.23**	**329**	P	**Pn**	**22 18 34.0**	**-0.8**
T25A	**Trinidad**	**19.47**	**352**	IAmb	IAmb	22 18 58.9	
	comp=Z,34nm,1.5s						
HHAR	**Hobbs**	**19.49**	**18**	IAmb	IAmb	22 18 35.9	
	comp=Z,15nm,0.7s						
U38A	**Gravette**	**19.51**	**17**	IAmb	IAmb	22 18 36.1	
	comp=Z,25nm,1.0s						
FCAR	**Ozark Folk Cen**	**19.73**	**22**	IAmb	IAmb	22 18 38.5	
	comp=Z,30nm,1.1s						
WUAZ	**Wupatki**	**19.82**	**335**	IAmb	IAmb	22 18 43.2	
	comp=Z,40nm,1.1s						
SDCO	**Great Sand Dun**	**20.22**	**350**	IAmb	IAmb	22 18 46.1	
	comp=Z,48nm,1.4s						
LCAR	**Lake Charles**	**20.25**	**24**	P	**P**	**22 18 43.2**	**-1.2**
LCAR				IAmb	IAmb	22 19 15.3	
	comp=Z,53nm,1.4s						
MVCO	**Mesa Verde**	**20.37**	**343**	IAmb	IAmb	22 18 52.3	
	comp=Z,23nm,1.1s						
IRM	**Iron Mountain**	**20.51**	**325**	IAmb	IAmb	22 18 50.2	
	comp=Z,31nm,1.3s						
BORC	**Borrego Spring**	**20.59**	**321**	IAmb	IAmb	22 18 50.8	
	comp=Z,16nm,1.3s						
W13A	**Hualapai Mount**	**20.60**	**329**	P	**P**	**22 18 48.4**	**-0.1**
PLAL	**Pickwick Lake**	**20.72**	**32**	IAmb	IAmb	22 18 52.7	
	comp=Z,17nm,0.7s						
MGMO	**Mountain Grove**	**20.82**	**20**	IAmb	IAmb	22 19 08.4	
	comp=Z,26nm,1.2s						

PMD	Palm Desert	20.84	322		P	22 18 50.9	+0.1
PMD				IAmb	IAmb	22 18 53.4	
	comp=Z,21nm,1.4s						
X48A	Hartselle	20.85	35	IAmb	IAmb	22 18 53.4	
	comp=Z,37nm,1.4s						
PFO	Pinyon Flats O	20.86	322	P	P	22 18 52.3	+1.2
	comp=Z,7.5nm,0.8s,baz=136,slow=11,SNR=6.5						
PFO				LR	LR	22 27 29.5	
	comp=Z,133nm,20.2s,baz=129,slow=38						
	comp=Z,7.5nm,0.8s						
PFO	Pinyon Flats O	20.86	322	P	P	22 18 51.6	+0.5
PFO				IAmb	IAmb	22 18 58.7	
	comp=Z,24nm,1.3s						
U15A	North Rim	20.98	334	IAmb	IAmb	22 18 58.4	
	comp=Z,25nm,1.4s						
PBMO	Poplar Bluff	21.15	25	P	P	22 18 53.3	-0.8
PBMO				IAmb	IAmb	22 19 19.0	
	comp=Z,21nm,1.2s						
PV05	Paradox Valley	21.35	343	IAmb	IAmb	22 19 36.0	
	comp=Z,32nm,1.5s						
PV02	Paradox Valley	21.37	344	IAmb	IAmb	22 19 02.5	
	comp=Z,17nm,1.0s						
PV15	Paradox Valley	21.43	344	IAmb	IAmb	22 19 03.4	
	comp=Z,21nm,1.1s						
PV18	Skein Mesa, Pa	21.45	343	IAmb	IAmb	22 19 22.2	
	comp=Z,17nm,0.8s						
ELS	Elsinore Mount	21.46	320	P	P	22 18 58.6	+1.0
ELS				IAmb	IAmb	22 19 02.4	
	comp=Z,18nm,1.1s						
PV12	Saucer Basin,	21.49	343	P	P	22 18 57.6	-0.4
PV12				IAmb	IAmb	22 19 20.8	
	comp=Z,33nm,1.0s						
PV11	David Mesa, Pa	21.49	343	P	P	22 18 57.5	-0.5
PV11				IAmb	IAmb	22 19 19.9	
	comp=Z,32nm,1.4s						
PV16	Nyswonger Mesa	21.52	343	IAmb	IAmb	22 19 38.8	
	comp=Z,21nm,1.2s						
PV20	West Nyswonger	21.56	343	IAmb	IAmb	22 19 21.0	
	comp=Z,24nm,1.0s						
PV07	Paradox Valley	21.56	344	IAmb	IAmb	22 19 21.1	
	comp=Z,13nm,0.9s						
PV04	Paradox Valley	21.59	343	IAmb	IAmb	22 19 37.8	
	comp=Z,29nm,1.3s						
PV14	Lion Creek, Pa	21.60	343	IAmb	IAmb	22 19 37.8	
	comp=Z,15nm,1.2s						
PV23	Carpenter Ridg	21.68	343	IAmb	IAmb	22 19 38.7	
	comp=Z,34nm,1.4s						
PV22	Blue Mesa, Par	21.69	344	IAmb	IAmb	22 19 39.0	
	comp=Z,14nm,1.1s						
KNB	Kanab	21.71	334	IAmb	IAmb	22 19 40.9	
	comp=Z,22nm,1.1s						
WVT	Waverly	21.75	30	P	P	22 19 00.2	-0.3
WVT				IAmb	IAmb	22 19 24.6	
	comp=Z,20nm,1.3s						
R40A	Maddies Statio	21.85	19	IAmb	IAmb	22 19 05.6	
	comp=Z,33nm,1.3s						
CCM	Cathedral Cave	21.98	21	P	P	22 19 00.9	-2.1
CCM				IAmb	IAmb	22 19 43.3	
	comp=Z,20nm,1.2s						
MTPU	Mount Pierson	22.34	337	IAmb	IAmb	22 19 28.7	
	comp=Z,12nm,1.0s						
CCUT	Cedar City	22.39	334	P	P	22 19 08.1	+0.4
SRU	San Rafael Swe	22.73	341	IAmb	IAmb	22 19 12.7	
	comp=Z,19nm,1.4s						
CCCA	Chr Cany lake	22.75	324	IAmb	IAmb	22 19 17.8	
	comp=Z,15nm,0.9s						
Q16A	Castle Valley	22.76	340	IAmb	IAmb	22 19 49.3	
	comp=Z,20nm,1.2s						
T47A	Sharon Grove	22.79	30	IAmb	IAmb	22 19 38.4	
	comp=Z,23nm,1.1s						
LRMC	Laurel Mtn Rad	22.90	323	IAmb	IAmb	22 19 19.0	
	comp=Z,18nm,1.3s						
TMUT	Trail Mountain	23.12	340	IAmb	IAmb	22 19 17.0	
	comp=Z,30nm,1.4s						
P18A	Preston Nutter	23.12	342	IAmb	IAmb	22 19 20.5	
	comp=Z,22nm,1.2s						
P17A	Butcher Ranch,	23.13	341	IAmb	IAmb	22 19 52.7	
	comp=Z,19nm,1.5s						
TPNV	Topopah Spring	23.23	328	IAmb	IAmb	22 19 22.6	
	comp=Z,19nm,1.3s						
HAYD	Hayden	23.23	348	P	P	22 19 16.1	-0.2
HAYD				IAmb	IAmb	22 19 20.4	
	comp=Z,24nm,1.4s						
TKL	Tuckaleechee C	23.56	38	LR	LR	22 30 56.1	
	comp=Z,91nm,18.8s,baz=216,slow=43						
BG3	Lake Jocassee	23.61	40	P	P	22 19 18.1	-1.6
BG3				IAmb	IAmb	22 19 19.4	
	comp=Z,29nm,1.3s						
RDMU	Red Mountain	23.81	344	IAmb	IAmb	22 20 04.8	
	comp=Z,29nm,1.4s						
R11B	Troy Canyon, C	24.02	331	P	P	22 19 24.3	+0.6
BSUT	Blindstream Ca	24.11	342	IAmb	IAmb	22 19 29.9	
	comp=Z,15nm,1.1s						
DSP	Deep Springs	24.44	326	P	P	22 19 28.4	+1.2
K30B	Basset	24.82	3	P	P	22 19 31.5	+0.8
TCUT	Toone Canyon	24.84	341	P	P	22 19 30.4	-0.7
TCUT				IAmb	IAmb	22 19 37.7	
	comp=Z,18nm,1.2s						
HWUT	Hardware Ranch	25.33	342	IAmb	IAmb	22 19 41.4	
	comp=Z,14nm,0.9s						
NV11	Mina Array Sit	25.33	328	IAmb	IAmb	22 19 40.0	
	comp=Z,23nm,1.4s						
NVAR	Mina Array Bea	25.41	327	P	P	22 19 37.0	+0.6
	comp=Z,11nm,0.8s,baz=136,slow=6.0,SNR=47						
NVAR				LR	LR	22 30 59.7	
	comp=Z,126nm,18.8s,baz=118,slow=40						
	comp=Z,11nm,0.8s						
NVAR	Mina Array Bea	25.41	327	P	P	22 19 37.7	+1.4
P48A	Milroy	25.56	29	IAmb	IAmb	22 20 15.6	
	comp=Z,24nm,1.3s						
L40A	Anamosa	25.64	17	IAmb	IAmb	22 20 03.5	
	comp=Z,13nm,0.9s						
ELK	Elko	25.86	335	LR	LR	22 30 17.0	
	comp=Z,242nm,21.2s,baz=160,slow=37						
PDAR	Pinedale Array	25.88	346	P	P	22 19 39.8	-0.8
	comp=Z,2.8nm,0.6s,baz=149,slow=8.0,SNR=28						
PDAR				pP	pP	22 19 54.3	-0.1
	comp=Z,5.8nm,0.9s,baz=172,slow=9.4,SNR=8.7						
PDAR				PcP	PcP	22 23 06.2	-2.3
	comp=Z,1.3nm,1.0s,baz=174,slow=3.6,SNR=4.0						
PDAR				LR	LR	22 31 01.7	
	comp=Z,145nm,19.2s,baz=163,slow=39						
	comp=Z,2.8nm,0.6s						
PDAR	Pinedale Array	25.88	346	P	P	22 19 40.1	-0.4
WAKR	Walker	26.06	326	P	P	22 19 43.5	+1.4
WAKR				IAmb	IAmb	22 19 48.2	
	comp=Z,22nm,1.5s						
ECSD	EROS Data Cent	26.14	8	P	P	22 19 40.4	-2.2
ECSD				IAmb	IAmb	22 19 43.8	
	comp=Z,22nm,1.3s						
BLA	Blacksburg	26.60	39	P	P	22 19 44.4	-2.5
BLA				IAmb	IAmb	22 20 24.4	
	comp=Z,16nm,1.0s						
LOHW	Long Hollow	26.93	345	IAmb	IAmb	22 20 05.5	
	comp=Z,17nm,1.3s						
FXWY	Fox Creek	27.06	344	IAmb	IAmb	22 20 15.1	
	comp=Z,8.0nm,1.0s						
MOOW	Moose Ponds	27.09	345	IAmb	IAmb	22 19 58.7	
	comp=Z,8.3nm,1.1s						
BEKR	Beckworth	27.54	327	P	P	22 19 56.9	+1.3
SPMN	Marine on St.	28.23	13	P	P	22 20 00.6	-0.7
SPMN				IAmb	IAmb	22 20 01.5	
	comp=Z,8.6nm,0.5s						
MCMT	McKenzie Canyo	28.66	343	P	P	22 20 06.5	+1.0
DLMT	Dillon	29.08	343	IAmb	IAmb	22 20 13.8	
	comp=Z,13nm,1.1s						
YBH	Yreka Blue Hor	30.12	327	LR	LR	22 32 29.7	
	comp=Z,5.0nm,19.0s,baz=128,slow=36						
SDV	Santo Domingo	30.99	103	LR	LR	22 34 04.2	
	comp=Z,78nm,18.7s,baz=272,slow=38						
F10A	Beach Ranch, E	31.09	338	IAmb	IAmb	22 20 32.5	
	comp=Z,11nm,1.1s						
WIFE	Three Sisters-	31.41	331	IAmb	IAmb	22 20 55.4	
	comp=Z,8.9nm,1.2s						
K57A	Scipio Center	32.51	35	P	P	22 20 37.2	-2.0
ULM	Lac du Bonnet	32.65	6	P	P	22 20 38.3	-2.0
	comp=Z,6.6nm,0.9s,baz=185,slow=9.5,SNR=4.5						
ULM				LR	LR	22 35 01.0	
	comp=Z,185nm,18.3s,baz=183,slow=38						
	comp=Z,6.6nm,0.9s						
ULM	Lac du Bonnet	32.65	6	IAmb	IAmb	22 20 41.5	
	comp=Z,11nm,1.1s						
BUKO	Buck Lake	33.01	29	P	P	22 20 41.1	-2.4
NEW	Newport	33.04	340	LR	LR	22 35 34.9	
	comp=Z,260nm,18.2s,baz=163,slow=39						
SJG	San Juan	33.31	84	LR	LR	22 35 05.1	
	comp=Z,62nm,20.4s,baz=225,slow=38						
ATAH	Atahualpa	33.49	136	LR	LR	22 31 59.5	
	comp=Z,84nm,18.5s,baz=317,slow=32						
FFC	Flin Flon	36.85	359	P	P	22 21 14.5	-2.0
FFC				IAmb	IAmb	22 21 18.6	
	comp=Z,10nm,1.1s						
D62A	Allapoint, All	39.36	35	P	P	22 21 36.8	-1.0
D62A				IAmb	IAmb	22 21 40.4	
	comp=Z,19nm,1.3s						
BBB	Bella Bella	40.31	334	LR	LR	22 38 19.9	
	comp=Z,149nm,19.7s,baz=149,slow=36						
SCHQ	Schefferville	45.34	27	P	P	22 22 25.2	-1.0
	comp=Z,1.7nm,0.4s,baz=229,slow=11,SNR=1.7						
	comp=Z,1.7nm,0.4s						
RPN	Rapa Nui	45.36	190	LR	LR	22 37 19.0	
	comp=Z,64nm,19.7s,baz=150,slow=30						
YKA	Yellowknife Ar	45.62	351	P	P	22 22 28.0	-0.2
	comp=Z,1.4nm,0.9s,baz=165,slow=7.5,SNR=9.2						
YKA				pP	pP	22 22 40.4	-2.3
	comp=Z,1.0nm,0.8s,baz=165,slow=7.4,SNR=7.2						
YKA				PcP	PcP	22 24 04.5	-1.2
	comp=Z,1.9nm,1.1s,baz=167,slow=3.5,SNR=4.5						
	comp=Z,1.4nm,0.9s						
YKA	Yellowknife Ar	45.62	351	P	P	22 22 27.3	-1.0
DLBC	Dease Lake	45.77	339	LR	LR	22 42 08.9	
	comp=Z,207nm,19.2s,baz=128,slow=37						
TAOE	Nuku Hiva Isla	46.71	239	*e*LR	LR	22 35 50.3	
	comp=Z,68nm,22.7s						
LPAZ	La Paz	47.00	134	P	P	22 22 42.2	+1.8
	comp=Z,2.1nm,1.0s,baz=321,slow=6.5,SNR=5.8						
LPAZ				pP	pP	22 22 56.1	+1.5
	comp=Z,1.5nm,0.9s,baz=301,slow=5.9,SNR=2.7						
	comp=Z,2.1nm,1.0s						
LPAZ	La Paz	47.00	134	P	P	22 22 41.8	+1.4
LPAZ				IAmb	IAmb	22 23 02.5	
	comp=Z,3.6nm,0.9s						
BARN	Barnard Glacie	51.82	336	P	P	22 23 17.6	+1.4
K29M	Barlow Dome	52.22	341	P	P	22 23 20.1	+1.1
GO02	Mina Guanaco	52.65	143	P	P	22 23 25.8	+3.0
I30M	Mount Dempster	52.86	342	P	P	22 23 24.9	+1.2
I30M				IAmb	IAmb	22 23 43.6	
	comp=Z,5.9nm,1.2s						
PTLB	Pontes e Lacer	53.01	126	P	P	22 23 26.0	+0.7
PTLB				IAmb	IAmb	22 23 27.1	
	comp=Z,10nm,1.3s						
H29M	Whitestone	54.15	342	P	P	22 23 33.9	+0.8
INK	Inuvik	54.45	346	P	P	22 23 36.2	+1.2
F30M	Barrier River	54.46	344	P	P	22 23 34.9	-0.4
H03N2	Juan Fernandez	55.22	157	T	T	23 23 18.8	
	baz=334,slow=77,SNR=67						
H03N1	Juan Fernandez	55.22	157	T	T	23 23 19.6	
	baz=334,slow=77,SNR=78						
H03N3	Juan Fernandez	55.23	157	T	T	23 23 26.6	
	baz=334,slow=77,SNR=54						
G27K	Doyon Strip	55.52	342	IAmb	IAmb	22 24 03.9	
	comp=Z,4.8nm,0.9s						
F28M	Old Crow	55.55	343	P	P	22 23 43.0	-0.2
F28M				IAmb	IAmb	22 24 02.7	
	comp=Z,7.7nm,1.1s						
E29M	Blow River	55.58	344	P	P	22 23 44.3	+1.0
E29M				IAmb	IAmb	22 24 04.4	
	comp=Z,6.6nm,1.2s						
ILAR	Eielson Array	55.96	338	P	P	22 23 44.0	-2.1
	comp=Z,3.9nm,1.1s,baz=125,slow=7.1,SNR=4.8						
ILAR				pP	pP	22 24 00.3	-0.5
	comp=Z,2.2nm,1.0s,baz=123,slow=6.8,SNR=5.3						
ILAR				PcP	PcP	22 24 44.0	-0.1
	comp=Z,1.0nm,0.6s,baz=134,slow=2.6,SNR=8.6						
	comp=Z,3.9nm,1.1s						
ILAR	Eielson Array	55.96	338	P	P	22 23 43.7	-2.4
TRF	Thorofare Moun	56.50	336	P	P	22 23 51.2	+1.0
H24K	Noodor Dome	56.90	339	P	P	22 23 53.2	+0.4
N18K	Kilae Creek	57.62	332	P	P	22 23 58.9	+1.0
J20K	Nowinta River	58.36	336	P	P	22 24 03.5	+0.5
D25K	Kavik River	58.49	343	IAmb	IAmb	22 24 25.2	
	comp=Z,5.9nm,0.9s						
L18K	Granite Mounta	58.57	333	P	P	22 24 05.4	+0.8
L18K				IAmb	IAmb	22 24 45.1	
	comp=Z,8.3nm,1.2s						
D23K	Nanushuk River	59.54	341	P	P	22 24 12.9	+1.8
C23K	Itkillik River	60.00	342	P	P	22 24 15.2	+0.9
D22K	Ayikyak River	60.11	341	P	P	22 24 15.6	+0.5
E19K	Redstone River	60.94	339	P	P	22 24 21.6	+0.9
BI02	San Fabin de	61.10	153	P	P	22 24 24.6	+2.3
CPUP	Villa Florida	61.16	135	P	P	22 24 23.9	+1.1
	comp=Z,2.0nm,1.1s,baz=315,slow=5.7,SNR=8.0						
CPUP				pP	pP	22 24 37.1	-0.5
	comp=Z,0.7nm,0.8s,baz=278,slow=13,SNR=3.5						
	comp=Z,2.0nm,1.1s						
CPUP	Villa Florida	61.16	135	P	P	22 24 23.2	+0.4
BDFB	Brasilia	62.06	119	P	P	22 24 30.7	+1.5
	comp=Z,1.4nm,0.3s,baz=302,slow=8.4,SNR=3.7						
BDFB				pP	pP	22 24 44.3	0.0
	comp=Z,1.4nm,0.4s,baz=249,slow=8.6,SNR=2.0						
	comp=Z,1.4nm,0.3s						
TBI	Tubuai	62.41	231	*e*LR	LR	22 43 00.5	
	comp=Z,495nm,30.8s						
C19K	Lookout Ridge	62.43	340	P	P	22 24 31.2	+0.4
PLCA	Paso Flores	64.83	155	P	P	22 24 49.0	+2.0
	comp=Z,3.9nm,1.0s,baz=342,slow=20,SNR=3.7						
PLCA				pP	pP	22 25 01.6	-0.2
	comp=Z,2.1nm,1.0s,baz=318,slow=16,SNR=2.2						
	comp=Z,3.9nm,1.0s						
SPITS	Spitsbergen Ar	78.08	11	P	P	22 26 05.8	-0.4
	comp=Z,2.4nm,0.6s,baz=333,slow=0.3,SNR=7.9						
	comp=Z,2.4nm,0.6s						
EKA	Eskdalemuir Ar	80.02	35	P	P	22 26 17.1	-0.1
	comp=Z,1.2nm,0.5s,baz=304,slow=5.1,SNR=4.2						
	comp=Z,1.2nm,0.5s						
PETK	Petropavlovsk-	82.42	323	P	P	22 26 30.5	+0.5
	comp=Z,8.6nm,1.0s,baz=84,slow=8.5,SNR=2.1						
	comp=Z,8.6nm,1.0s						
PETK	Petropavlovsk-	82.42	323	P	P	22 26 31.3	+1.3
ESDC	Sonseca Array	84.22	50	P	P	22 26 40.6	+1.0
	comp=Z,0.9nm,1.2s,baz=284,slow=4.1,SNR=2.1						
	comp=Z,0.9nm,1.2s						
ESDC	Sonseca Array	84.22	50	P	P	22 26 39.9	+0.3
TIXI	Tiksi	84.57	346	P	P	22 26 40.9	+0.2
NOA	NORSAR Array B	84.91	27	P	P	22 26 43.3	+0.7
	comp=Z,2.3nm,1.0s,baz=299,slow=4.9,SNR=3.5						
NOA				pP	pP	22 26 57.9	-0.4
	comp=Z,0.6nm,0.8s,baz=298,slow=4.7,SNR=1.3						
NOA				sP	sP	22 27 05.4	+1.0
	comp=Z,1.6nm,0.8s,baz=300,slow=4.9,SNR=3.3						
	comp=Z,2.3nm,1.0s						
ARCES	ARCESS Array B	85.17	16	P	P	22 26 43.4	-0.4
	comp=Z,2.8nm,0.6s,baz=310,slow=7.0,SNR=12						
	comp=Z,2.8nm,0.6s						
ARCES	ARCESS Array B	85.17	16	P	P	22 26 45.0	+1.3
KEV	Kevo	85.42	16	P	P	22 26 47.2	+2.2
HFS	Hagfors	86.42	27	P	P	22 26 50.0	-0.1
	comp=Z,1.5nm,0.7s,baz=280,slow=8.5,SNR=1.1						
	comp=Z,1.5nm,0.7s						
FINES	FINESS Array B	90.61	22	P	P	22 27 09.5	-0.4
	comp=Z,6.2nm,1.1s,baz=329,slow=5.2,SNR=4.7						
	comp=Z,6.2nm,1.1s						
YAK	Yakutsk	90.88	339	P	P	22 27 10.3	-0.8
MKAR	Makanchi Array	115.63	357	PKP	PKiKP	22 32 47.8	-2.2
	comp=Z,0.4nm,0.8s,baz=12,slow=2.1,SNR=2.7						
STKA	Stephens Creek	122.03	243	PKP	PKPdf	22 33 03.8	+1.2
	comp=Z,1.1nm,0.5s,baz=60,slow=2.1,SNR=2.9						
STKA	Stephens Creek	122.03	243		PKPdf	22 33 03.5	+0.9
WRA	Warramunga Arr	127.61	258	PKP	PKPdf	22 33 14.0	+0.4
	comp=Z,1.2nm,0.5s,baz=79,slow=2.1,SNR=23						
WRA				pPKP	pPKPdf	22 33 29.6	0.0
	comp=Z,0.9nm,0.7s,baz=85,slow=1.8,SNR=4.1						
ASAR	Alice Springs	128.39	254	PKP	PKPdf	22 33 15.6	+0.5
	comp=Z,0.6nm,0.4s,baz=71,slow=2.5,SNR=6.9						
ASAR	Alice Springs	128.39	254	PKPdf	PKPdf	22 33 14.6	-0.5
CMAR	Chiang Mai Arr	138.88	330	PKP	PKPdf	22 33 35.7	+0.9
	comp=Z,0.9nm,0.3s,baz=26,slow=2.3,SNR=6.7						
CMAR				pPKP	pPKPdf	22 33 51.1	-0.1
	comp=Z,0.8nm,0.3s,baz=32,slow=1.8,SNR=1.7						
CMAR	Chiang Mai Arr	138.88	330	PKPdf	PKPdf	22 33 34.7	-0.2

GCG 09 22:21:16.7±0.3**, 14°.98N**×**92°.58W, h85**^{km}±13^{km}**, MD3.7,**
Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMCA	Catarina	0.51	104	*e*P	Pn	22 21 31.1	0.0
STG2	El Palmar, Qui	1.29	115	*i* S	Sn	22 21 51.3	-5.7
STG8	El Palmar, Qui	1.30	114	*i* P	Pn	22 21 36.9	-3.1
STG8				*i* S	Sn	22 21 52.6	-4.9

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*IDC **09** 22:36:28.8±0.3, 52°.75N×34°.92W, h0^{km}, mb4.6/37, mbtmp4.7/40, ML3.9/3, MS4.8/86, Error ellipse: s-maj=11.5km s-min=9.3km az=158.0*

*BJI **09** 22:36:28.0, 52°.80N×35°.00W, h10^{km}, mB5.5/26, mb4.9/58, Ms5.3/45, Ms7 5.0/45*

*NEIC **09** 22:36:30.9±1.6, 52°.86N±0°.08×34°.9W±0°.1, h10^{km}±1^{km}, mb5.1/385, Mww5.4/19, Error ellipse: s-maj=14.1km s-min=13.3km az=180.0*

*NEIC **09** 22:36:30.8, 52°.85N×34°.92W, h12^{km}*

*NEIC **09** 22:36:30.8, 52°.85N×34°.92W, h12^{km}, Moment Tensor Solution. Duration: 2^s.7 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.48; $M_{\theta\theta}$0.21; $M_{\phi\phi}$1.27; $M_{r\theta}$0.36; $M_{\theta\phi}$-0.20; $M_{\phi r}$0.48; Fault plane solution: $M_0$1.53000×10^{17} NP1: ϕ_s337.75000°, δ38.06000°, λ-111.08000°. NP2: ϕ_s183.84000°, δ54.89000°, λ-74.27000°. Principal axes: T 1.3729, Plg9.0000°, Azm263.0000°; N 0.2739, Plg13.0000°, Azm355.0000°; P -1.6467, Plg74.0000°, Azm140.0000°;*

*GCMT **09** 22:36:30.9±0.1, 52°.96N±0°.01×34°.83W±0°.01, h12^{km}, MW5.4/155, Moment Tensor Solution. s99,c163; s155,c320; Duration: 1^s.2 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.43±.02; $M_{\theta\theta}$0.01±.02; $M_{\phi\phi}$1.43±.01; $M_{r\theta}$0.40±.04; $M_{\theta\phi}$-0.34±.01; $M_{\phi r}$0.08±.04; Best double couple: $M_0$1.52400×10^{17} NP1:ϕ_s182.00000°, δ47.00000°, λ-69.00000°. NP2:ϕ_s332.00000°, δ47.00000°, λ-111.00000°. Principal axes: T 1.5050, Plg0.0000°, Azm77.0000°; N 0.0460, Plg15.0000°, Azm347.0000°; P -1.5430, Plg75.0000°, Azm168.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **09** 22:36:30.1±0.9, 52°.84N×34°.90W, h17^{km}, mb5.2/74, MS5.0/26 Error ellipse: s-maj=7.7km s-min=4.7km az=51.6*

*GFZ **09** 22:36:31.6, 52°.77N×34°.89W, h12^{km}, MW5.4, Moment Tensor Solution. s217 Moment tensor: M_{rr}-1.42; $M_{\theta\theta}$0.09; $M_{\phi\phi}$1.33; $M_{r\theta}$0.05; $M_{\theta\phi}$-0.31; $M_{\phi r}$-0.04; Fault plane solution: NP1:ϕ_s168.00000°, δ44.00000°, λ-87.00000°. NP2:ϕ_s345.00000°, δ46.00000°, λ-91.00000°. Principal axes: T 1.4100, Plg1.0000°, Azm77.0000°; N 0.0100, Plg1.0000°, Azm347.0000°; P -1.4200, Plg88.0000°, Azm205.0000°;*

*INMG **09** 22:37:01.0±7.2, 51°.39N×31°.41W, h10^{km}, M4.4, mb4.7, Ms4.6, #DIST_RANGE: DISTANT*

ISC 09 22:36:30.9±0.6**, 52°.82N**±0°.05×**34°.90W**±0°.04**, h12**^{km}±3^{km}**,**
n1007, σ**1^s.06**/833**, mb5.1**/338**, MS4.9**/126**, 58C-30D,**
Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRS	Narsarsuaq	10.13	330	Pn	Pn	22 38 55.3	-0.6
NRS	Narsarsuaq	10.13	330	P	Pn	22 38 55.3	-0.6
IVI	Ivigtut	11.07	325	Pn	Pn	22 39 08.0	-0.7
BORG	Borgarnes	13.83	25	Pn	Pn	22 39 50.2	+3.7
	0.4nm,0.3s,baz=227,slow=10,SNR=3.7						
BORG				LR	LR	22 43 19.6	
	comp=Z,4μm,21.2s,baz=228,slow=30						
BORG	Borgarnes	13.83	25		Pn	22 39 46.6	+0.2
BORG	Borgarnes	13.83	25	P	Pn	22 39 46.6	+0.2
DRLN	Deer Lake	14.64	265	Pn	Pn	22 39 58.9	+1.2
VAL	Valentia	15.06	83	P	Pn	22 40 03.8	+0.5
IGLA	Glengowla, Co	15.31	78	P	P	22 40 12.4	+1.0
SFJD	Kangerlussuaq	16.17	338	Pn	Pn	22 40 18.3	+0.6
	1.0nm,0.3s,baz=152,slow=11,SNR=15						
SFJD				LR	LR	22 45 27.8	
	comp=Z,4μm,18.8s,baz=150,slow=33						
	39nm,1.0s						
SFJD	Kangerlussuaq	16.17	338	Pn	Pn	22 40 16.9	-0.8
IDGL	Inch Island, C	16.24	71	P	Pn	22 40 16.8	-1.8
ILTH	Belurgan, Co L	17.02	75	P	Pn	22 40 29.2	+0.7
IWEX	Carrickbyrne,	17.05	80	P	P	22 40 31.6	+0.9
DSB	Dublin	17.12	77	P	Pn	22 40 29.9	+0.2
DSB	Dublin	17.12	77		P	22 40 30.9	-0.5
DSB				IAmb	IAmb	22 40 35.7	
	comp=Z,258nm,2.0s						
LAWE	Loch Awe, Argy	17.39	67	*e*P	P	22 40 35.1	+0.7
ILULI	Ilulissat	18.11	341	Pn	Pn	22 40 39.3	-2.6
ILULI	Ilulissat	18.11	341	P	Pn	22 40 39.3	-2.6
ILULI				pmax	pmax		
	comp=Z,65nm,1.2s						
NEWG	New Galloway	18.12	70	*e*P	P	22 40 44.0	+1.6
INVG	Invergeldie, C	18.14	66	*e*P	P	22 40 45.1	+2.4
WME	Myndd Eilian	18.31	76	*e*P	P	22 40 46.2	+1.7
RSBS	Rosebush, Pemb	18.37	81	*e*P	P	22 40 46.5	+1.3
EDI	Edinburgh	18.64	68	*e*P	Pn	22 40 50.8	+2.3
ESK	Eskdalemuir	18.68	70	P	P	22 40 45.5	-3.1
ESK	Eskdalemuir	18.68	70	*e*P	Pn	22 40 49.9	+0.9
ESK	Eskdalemuir	18.68	70	P	P	22 40 45.5	-3.1
ESK				pmax	pmax		
	comp=Z,29nm,1.0s						
EKA	Eskdalemuir Ar	18.71	70	P	P	22 40 48.7	-0.2
	baz=273,slow=12						
EKA				LR	LR	22 46 39.0	
	comp=Z,7μm,18.8s,baz=265,slow=33						
	comp=Z,26nm,0.9s						
GBN	Guysborough	18.86	258	P	Pn	22 40 51.5	+0.3
SCHQ	Schefferville	18.87	289	P	P	22 40 49.1	-1.7
	comp=Z,0.7nm,0.3s,baz=91,slow=12,SNR=14						
SCHQ				S	Sn	22 44 11.0	-11
	comp=Z,6.8nm,0.9s,baz=72,slow=20,SNR=2.3						
SCHQ				LR	LR	22 47 03.2	
	comp=Z,4μm,21.2s,baz=86,slow=34						
	comp=Z,73nm,1.1s						
SCHQ	Schefferville	18.87	289	P	P	22 40 49.2	-1.6
DRUM	Mains of Drumt	18.99	65	*e*P	Pn	22 40 54.4	+1.7
FOEL	Foel Wylfa	19.07	77	*e*P	Pn	22 40 54.0	+0.3
HLM1	Long Mynd	19.34	78	*e*P	Pn	22 40 57.6	+0.6
EDMD	Edmundbyers	19.45	71	*e*P	Pn	22 40 59.4	+1.1
MONM	Monmouth	19.56	80	*e*P	Pn	22 40 59.9	+0.3
HPK	Haverah Park	19.78	73	*e*P	Pn	22 41 01.9	-0.3
LBWR	Ladybower, Pea	19.83	75	*e*P	Pn	22 41 02.1	-0.7
SUMG	Summit	19.89	357	P	P	22 41 00.7	-1.4
SUMG	Summit	19.89	357	P	P	22 41 00.7	-1.4
SUMG				pmax	pmax		
	comp=Z,78nm,1.4s						
CWF	Charnwood Fore	20.22	77	*e*P	Pn	22 41 07.9	+0.5
ICQ	Pointe Anglais	20.47	274	P	P	22 41 05.5	-2.7
ICQ				IAmb	IAmb	22 41 19.9	
	comp=Z,66nm,1.1s						
FRB	Frobisher Bay	20.52	315	P	P	22 41 09.6	+1.0
	comp=Z,52nm,1.1s,baz=105,slow=12,SNR=6.3						
FRB				LR	LR	22 47 26.8	
	comp=Z,5μm,18.2s,baz=106,slow=32						
	comp=Z,52nm,1.1s						
LMN	Caledonia Moun	20.59	262	P	P	22 41 07.6	-2.0
BATG	Bathurst New B	20.66	267	P	P	22 41 08.0	-2.4
PGAV	Gavieira, Arco	20.92	111	*e*P	P	22 41 12.2	-1.0
PGAV				*i* IAmb	IAmb	22 41 17.5	
	comp=Z,135nm,1.9s						
PGAV				*e*LR	LR	22 46 13.0	
PGAV				*i* IAMs_20	IAMs_20	22 47 26.1	
	comp=Z,5μm,20.0s						
PTO	Porto	21.28	113	*e*P	P	22 41 18.6	+1.6
PTO				*i* IAmb	IAmb	22 41 20.5	
	comp=Z,81nm,1.7s						
POLO	Lamas de Olo	21.58	111	*e*P	P	22 41 23.9	+3.6
POLO				*i* IAmb	IAmb	22 41 25.1	
	comp=Z,65nm,1.7s						
PVRL	Vila Real	21.68	111	*e*P	P	22 41 23.0	+1.6
PVRL				*i* IAmb	IAmb	22 41 34.4	
	comp=Z,130nm,1.7s						
JMIC	Jan Mayen	21.71	23	LR	LR	22 47 34.4	
	comp=Z,3μm,20.8s,baz=221,slow=31						
PBRG	Braganca	21.90	109	*e*P	P	22 41 25.6	+1.9
PBRG				*i* IAmb	IAmb	22 41 38.7	
	comp=Z,71nm,1.5s						
PVIS	Viseu	21.96	113	*e*P	P	22 41 25.3	+0.9
PCAS	Casmilo, Conde	22.08	115	*e*P	P	22 41 26.4	+0.8
PCAS				*i* IAmb	IAmb	22 42 03.9	
	comp=Z,78nm,1.9s						
MVO	Moncorvo	22.15	111	*e*P	P	22 41 28.8	+2.4
MVO				*i* IAmb	IAmb	22 41 31.3	
	comp=Z,76nm,1.4s						
MVO				*e*LR	LR	22 46 50.2	
MTE	Manteigas	22.37	113	P	P	22 41 29.3	+0.5
MTE				IAmb	IAmb	22 41 38.1	
	comp=Z,74nm,1.5s						
MTE	Manteigas	22.37	113	*e*P	P	22 41 30.8	+2.0
MTE				*i* IAmb	IAmb	22 41 40.9	
	comp=Z,84nm,1.8s						
MTE				*e*LR	LR	22 47 01.6	

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MTE                                i IAMs_20 IAMs_20  22 48 19.1
       comp=Z,4µm,20.0s
PMAFR  Mafra            22.43 118  eP        P        22 41 32.1 +2.7
PMAFR                              i IAmb    IAmb     22 41 54.2
       comp=Z,188nm,1.8s
D62A   Allapoint, All   22.56 269   P        P        22 41 30.0 -0.7
D62A                                IAmb     IAmb     22 41 46.9
       comp=Z,68nm,1.2s
PSARD  Sardoal          22.58 115  eP        P        22 41 32.9 +1.9
PSARD                              i IAmb    IAmb     22 41 43.0
       comp=Z,101nm,1.7s
G65A   Princeton        22.59 263   P        P        22 41 29.8 -1.2
G65A                                IAmb     IAmb     22 41 30.8
       comp=Z,58nm,1.1s
F64A   Sherman          22.72 266   P        P        22 41 30.8 -1.6
F64A                                IAmb     IAmb     22 41 39.4
       comp=Z,77nm,1.5s
PCBR   Castelo Branco   22.79 114  eP        P        22 41 35.1 +2.0
PCBR                               i IAmb    IAmb     22 41 43.1
       comp=Z,101nm,1.6s
PMTG   Montargil        22.92 116  eP        P        22 41 35.2 +0.6
PMTG                               i IAmb    IAmb     22 41 39.0
       comp=Z,77nm,1.8s
E62A   Clayton Lake     23.07 268   P        P        22 41 36.4 +0.4
PMRV   Marv??o          23.12 114  eP        P        22 41 36.7  0.0
PMRV                               i IAmb    IAmb     22 41 41.5
       comp=Z,68nm,1.7s
PMRV                               eLR       LR       22 47 18.1
PMRV                               i IAMs_20 IAMs_20  22 48 53.0
       comp=Z,4µm,18.0s
LMQ    La Malbaie       23.13 271   P        P        22 41 36.7 +0.1
PARRA  Arraiolos        23.20 116  eP        P        22 41 36.5 -0.9
PARRA                              i IAmb    IAmb     22 41 40.8
       comp=Z,49nm,1.6s
PESTR  Estremoz         23.41 116  eP        P        22 41 41.7 +2.1
PESTR                              i IAmb    IAmb     22 41 51.2
       comp=Z,42nm,1.6s
EVO    Evora            23.42 117  eP        P        22 41 39.4 -0.3
EVO                                i IAmb    IAmb     22 41 51.0
       comp=Z,46nm,1.9s
LDAQ   Lac Daran        23.50 273   P        P        22 41 41.7 +1.2
PMOZ   Porto Moniz, M   23.71 140  eP        P        22 41 44.2 +1.6
PMOZ                               eLR       LR       22 47 39.7
PMOZ                               i IAMs_20 IAMs_20  22 48 40.4
       comp=Z,1µm,20.0s
PTEO   Sao Teotonio     23.77 120  eP        P        22 41 43.3 +0.3
PTEO                               i IAmb    IAmb     22 41 46.5
       comp=Z,95nm,1.8s
MESJ   Messejana        23.82 118  eP        P        22 41 44.0 +0.5
MESJ                                IAmb     IAmb     22 41 47.0
       comp=Z,346nm,2.0s
MESJ                               eS        S        22 46 00.8 +1.9
MESJ   Messejana        23.82 118   P        P        22 41 42.0 -1.4
MESJ   Messejana        23.82 118  eP        P        22 41 44.5 +1.0
MESJ                               i IAmb    IAmb     22 41 48.1
       comp=Z,112nm,2.0s
MESJ   Messejana        23.82 118   P        P        22 41 42.1 -1.4
MESJ                                pmax     pmax
       comp=Z,267nm,1.9s
PMPST  Porto Santo, M   23.83 139  eP        P        22 41 44.6 +1.0
PBEJ   Beja             23.87 117  eP        P        22 41 45.6 +1.6
PBEJ                               i IAmb    IAmb     22 41 48.5
       comp=Z,65nm,2.0s
PMAR   Madeira          23.91 140  eP        P        22 41 45.6 +1.0
PMAR                               i IAmb    IAmb     22 41 53.7
       comp=Z,188nm,1.6s
CLF    Chambon-Foret    23.97  87   P        P        22 41 44.3 -0.5
MORF   Marmelete        23.98 120  eP        P        22 41 45.5 +0.4
MORF                                IAmb     IAmb     22 41 47.4
       comp=Z,315nm,2.2s
MORF   Marmelete        23.98 120   P        P        22 41 46.4 +1.2
MORF   Marmelete        23.98 120  eP        P        22 41 45.6 +0.4
MORF                               i IAmb    IAmb     22 41 49.5
       comp=Z,84nm,1.6s
MORF   Marmelete        23.98 120  eP        P        22 41 45.5 +0.4
PFVI   Vila Bisbo       24.02 120  eP        P        22 41 45.9 +0.4
PFVI                               i IAmb    IAmb     22 42 05.6
       comp=Z,115nm,1.5s
PCVE   Castro Verde     24.07 118  eP        P        22 41 47.0 +1.2
PCVE                               i IAmb    IAmb     22 41 49.4
       comp=Z,56nm,2.2s
UCC    Uccle            24.15  79   P        P        22 41 46.0 -0.6
UCC                                 IAmb     IAmb     22 42 04.3
       comp=Z,87nm,1.6s
UCC    Uccle            24.15  79   P        P        22 41 46.0 -0.6
UCC                                 pmax     pmax
       comp=Z,87nm,1.6s
UCC    Uccle            24.15  79  dP        P        22 41 46.4 -0.2
PBAR   Barrancos        24.21 116  eP        P        22 41 48.0 +0.8
PBAR                               i IAmb    IAmb     22 41 50.8
       comp=Z,84nm,1.9s
PVAQ   Vaqueiros        24.41 118   P        P        22 41 50.5 +1.5
PVAQ                                IAmb     IAmb     22 41 59.1
       comp=Z,115nm,1.6s
PVAQ   Vaqueiros        24.41 118  eP        P        22 41 49.1 +0.1
PVAQ                               i IAmb    IAmb     22 41 52.9
       comp=Z,56nm,1.5s
PVAQ                               eLR       LR       22 48 03.9
PVAQ                               i IAMs_20 IAMs_20  22 49 17.7
       comp=Z,1µm,20.0s
DOU    Dourbes          24.55  80  dP        P        22 41 49.7 -0.4
BMRD   Maredsous        24.57  80  dP        P        22 41 49.7 -0.7
       comp=Z,19nm,0.9s
BGES   Gesves           24.73  79  dP        P        22 41 50.9 -1.0
PAB    San Pablo        24.75 110   P        P        22 41 52.0 -0.2
PAB    San Pablo        24.75 110   P        P        22 41 52.0 -0.2
PAB                                 pmax     pmax
       comp=Z,28nm,1.4s
BCLA   Clavier          24.85  79  dP        P        22 41 52.1 -0.8
ESBB   Sonseca Array    24.89 109   IAmb     IAmb     22 41 55.0
       comp=Z,64nm,1.8s
ESDC   Sonseca Array    24.89 109   P        P        22 41 53.2 -0.2
       comp=Z,7.6nm,1.0s,baz=312,slow=8.7,SNR=26
ESDC                                LR       LR       22 49 52.4
       comp=Z,5µm,18.1s,baz=316,slow=32
       comp=Z,7.6nm,1.0s
ESDC   Sonseca Array    24.89 109   P        P        22 41 54.5 +1.1
ESDC                                IAmb     IAmb     22 41 55.2
       comp=Z,80nm,2.0s
RCHB   Rochefort        24.90  80  dP        P        22 41 53.3 -0.1
       comp=Z,25nm,1.1s
BSTI   Sart Tilman      24.95  79  dP        P        22 41 54.2 +0.4
       comp=Z,5.2nm,1.0s
MEM    Membach          25.20  78  dP        P        22 41 55.3 -0.8
       comp=Z,27nm,1.1s
MEM                                dPP       PnPn     22 42 29.4 -0.7
KONO   Kongsberg        25.24  57   P        P        22 41 56.9 +0.5
BTNL   Ternell          25.28  78  dP        P        22 41 56.0 -0.9
       comp=Z,24nm,1.2s
BHOU   Houvegnez        25.29  79  dP        P        22 41 58.9 +2.0
WLF    Walferdange      25.64  80  dP        P        22 42 03.4 +3.3
NBO00  NORSAR Array S   25.75  53   P        P        22 42 00.5 -0.6
NBO00                               IAmb     IAmb     22 42 08.3
       comp=Z,74nm,1.3s
NB2    NORSAR Subarra   25.96  53   P        P        22 42 04.5 +1.5
       comp=Z,39nm,1.2s,baz=280,slow=5.6
NB2    NORSAR Subarra   25.96  53   P        P        22 42 04.5 +1.5
       baz=280,slow=5.6
NOA    NORSAR Array B   25.96  53   P        P        22 42 03.1 +0.1
       comp=Z,6.0nm,1.0s,baz=273,slow=8.9,SNR=5.9
NOA                                 LR       LR       22 51 24.9
       comp=Z,3µm,18.4s,baz=270,slow=34
       comp=Z,6.0nm,1.0s
CEST   Esterri de Car   26.13  98   P        P        22 42 06.3 +1.6
CEST                                IAmb     IAmb     22 42 11.2
       comp=Z,64nm,1.2s
NC602  NORSAR Array S   26.14  54   P        P        22 42 05.1 +0.6
NC602                               IAmb     IAmb     22 42 05.9
       comp=Z,71nm,1.3s
ECH    Echery           26.84  83   P        P        22 42 11.3 +0.3
ECH    Echery           26.84  83   P        P        22 42 11.3 +0.3
ECH                                 pmax     pmax
       comp=Z,21nm,1.1s
POIN   Pond Inlet       27.00 333   P        P        22 42 12.3 +0.3
ILON   Igloolik, Nuna   27.12 325   P        P        22 42 13.2  0.0
ILON                                IAmb     IAmb     22 42 18.6
       comp=Z,86nm,1.7s
HFS    Hagfors          27.25  55   P        P        22 42 15.3 +0.7
       comp=Z,7.0nm,0.9s,baz=258,slow=18,SNR=4.0
HFS                                 LR       LR       22 51 47.5
       comp=Z,3µm,19.6s,baz=282,slow=34
       comp=Z,7.0nm,0.9s
BFO    Black Forest     27.50  82   P        P        22 42 15.9 -1.0
BFO    Black Forest     27.50  82   P        P        22 42 15.9 -1.0
BFO                                 pmax     pmax
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       comp=Z,25nm,1.3s
GRF    Grafenberg Arr   28.65  78  eP        P        22 42 27.4 +0.3
       comp=Z,17nm,1.0s,baz=294,slow=7.9
TUE    Stuetta          28.97  85   P        P        22 42 30.8 +0.5
TUE    Stuetta          28.97  85   P        P        22 42 30.2  0.0
       comp=Z,95nm,2.6s
CLL    Collm            29.06  73   P        P        22 42 30.6 -0.1
CLL                                 IAmb     IAmb     22 42 33.0
       comp=Z,20nm,0.8s
CLL    Collm            29.06  73  i P       P        22 42 30.9 +0.1
CLL                                i                  22 42 36.9
CLL                                eS        S        22 47 24.0 +2.2
CLL                                 pmax     pmax
       comp=Z,24nm,0.9s
CLL                                 MLR      MLR
       comp=Z,4µm,19.3s
CLL    Collm            29.06  73   P        P        22 42 30.5 -0.3
       comp=Z,29nm,0.8s
CLL    Collm            29.06  73  i P       P        22 42 30.9 +0.1
       comp=Z,24nm,0.9s
CLL                                i x       x        22 42 36.9
CLL                                ex        x        22 43 16.0
CLL                                ePP       PnPn     22 43 27.0 +4.3
CLL                                ePPP      PPP      22 43 32.0
CLL                                eS        S        22 47 24.0 +2.2
CLL                                ex        x        22 47 54.0
CLL                                eSSS      SSS      22 49 00.0
CLL                                 AMS      AMS      22 53 00.0
       comp=Z,4µm,19.3s
DAVOX  Davos/Dischmat   29.14  84   LR       LR       22 54 04.1
       comp=Z,2µm,18.5s,baz=308,slow=36
RETA   Reutte           29.34  82  i P       P        22 42 34.3 +0.9
       comp=Z,13nm,1.2s
MD01   Midelt array s   29.43 121   P        P        22 42 32.8 -1.5
MD31   MD31             29.43 121   P        P        22 42 34.2 -0.1
MD31                                IAmb     IAmb     22 42 36.6
       comp=Z,44nm,1.9s
FUORN  Ofenpass-Fuorn   29.45  84   IAmb     IAmb     22 42 36.8
       comp=Z,56nm,1.8s
FETA   Feichten         29.54  83  epP       pP       22 42 36.6 -1.0
       comp=Z,13nm,1.3s
HSKC   Hora Svate Kat   29.58  75  eP        P        22 42 34.7 -0.7
HSKC                                AMS      AMS      22 53 40.0
       comp=Z,5µm,16.5s
MOTA   Moosalm          29.61  82  epP       P        22 42 36.9 +1.0
       comp=Z,25nm,1.5s
SQTA   Sankt Quirin     29.73  82  epP       pP       22 42 38.3 -1.0
       comp=Z,27nm,1.7s
SADO   Sadowa           29.83 272   LR       LR       22 53 31.9
       comp=Z,4µm,21.5s,baz=89,slow=34
WATA   Walderalm        29.90  82  i P       P        22 42 39.2 +0.8
       comp=Z,24nm,1.3s
WTTA   Wattenberg       29.97  82  epP       pP       22 42 40.4 -1.1
       comp=Z,37nm,1.5s
RICC   Richard          30.00  74   AMS      AMS      22 54 00.0
       comp=Z,4µm,19.6s
PVCC   Panska Ves       30.28  74  eP        P        22 42 42.3 +0.8
PVCC                                MLR      MLR
       comp=Z,5µm,19.1s
PVCC   Panska Ves       30.28  74  eP        P        22 42 42.3 +0.8
PVCC                                AMS      AMS      22 54 20.0
       comp=Z,5µm,19.1s
KHC    Kasperske Hory   30.28  77ceP         P        22 42 40.1 -1.5
KHC                                 pmax     pmax
       comp=Z,32nm,2.5s
KHC    Kasperske Hory   30.28  77  eP        P        22 42 42.5 +0.9
KHC                                 AMS      AMS      22 54 00.0
       comp=Z,3µm,14.5s
KHC    Kasperske Hory   30.28  77   P        P        22 42 41.3 -0.3
       comp=Z,12nm,2.9s
PRA    Prague           30.39  75   AMS      AMS      22 54 20.0
       comp=Z,5µm,18.5s
GEC2   GERESS Array S   30.48  78   IAmb     IAmb     22 42 52.1
       comp=Z,22nm,1.1s
GERES  GERESS Array B   30.48  78   P        P        22 42 44.3 +0.8
       comp=Z,3.5nm,0.8s,baz=295,slow=9.6,SNR=19
GERES                               LR       LR       22 54 23.4
       comp=Z,2µm,18.0s,baz=297,slow=35
       comp=Z,3.5nm,0.8s
PRU    Pruhonice        30.48  75  eP        P        22 42 48.2 +4.8
PRU                                 MLR      MLR
       comp=Z,5µm,17.4s
PRU    Pruhonice        30.48  75  eP        P        22 42 48.2 +4.8
PRU                                 AMS      AMS      22 54 20.0
       comp=Z,5µm,17.4s
ZVC    Zvikov           30.51  76  eP        P        22 42 44.8 +1.2
ZVC                                 AMS      AMS      22 54 30.0
       comp=Z,5µm,18.0s
LESA   Schwarzleotal    30.52  81  epP       pP       22 42 45.1 -1.1
       comp=Z,17nm,1.0s
CTI    Castel Tesino    30.57  84   P        P        22 42 44.7 +0.4
CTI    Castel Tesino    30.57  84   P        P        22 42 44.7 +0.4
CTI                                 pmax     pmax
       comp=Z,13nm,1.0s
ABTA   Abfaltersbach    30.74  82  epP       pP       22 42 47.0 -1.2
       comp=Z,5.6nm,1.1s
CKRC   Cesky Krumlov    30.85  77  eP        P        22 42 47.4 +0.7
CKRC                                MLR      MLR
       comp=Z,3µm,18.2s
CKRC   Cesky Krumlov    30.85  77  eP        P        22 42 47.4 +0.7
CKRC                                AMS      AMS      22 54 20.0
       comp=Z,3µm,18.2s
BIOA   Bad Ischl, Aus   30.97  80  eP        P        22 42 48.5 +0.8
       comp=Z,27nm,1.5s
STAL   STALIGIAL        31.10  83   P        P        22 42 48.9  0.0
CHVC   Chvalec          31.12  73  eP        P        22 42 49.6 +0.6
CHVC                                MLR      MLR
       comp=Z,4µm,18.3s
CHVC   Chvalec          31.12  73  eP        P        22 42 49.6 +0.6
CHVC                                AMS      AMS      22 54 40.0
       comp=Z,4µm,18.3s
SPITS  Spitsbergen Ar   31.13  18   LR       LR       22 52 12.4
       comp=Z,1µm,18.4s,baz=220,slow=30
UPC    Upice            31.13  73  eP        P        22 42 49.8 +0.7
UPC                                 MLR      MLR
       comp=Z,4µm,22.3s
UPC    Upice            31.13  73  eP        P        22 42 49.8 +0.7
UPC                                 AMS      AMS      22 54 30.0
       comp=Z,4µm,22.3s
KSP    Ksiaz            31.16  73  eP        P        22 42 50.2 +1.0
KSP    Ksiaz            31.16  73   P        P        22 42 49.0 -0.3
       comp=Z,17nm,2.4s
OSTC   Ostas            31.23  73  eP        P        22 42 50.7 +0.8
OSTC                                MLR      MLR
       comp=Z,4µm,20.7s
OSTC   Ostas            31.23  73  eP        P        22 42 50.7 +0.8
OSTC                                AMS      AMS      22 54 40.0
       comp=Z,4µm,20.7s
MOA    Molln            31.27  79  eP        P        22 42 51.1 +0.8
       comp=Z,22nm,1.3s
TREC   Trest            31.34  76  eP        P        22 42 51.9 +1.0
TREC                                MLR      MLR
       comp=Z,6µm,18.2s
TREC   Trest            31.34  76  eP        P        22 42 51.9 +1.0
TREC                                AMS      AMS      22 55 10.0
       comp=Z,6µm,18.2s
DPC    Dobruska-Polom   31.37  74  eP        P        22 42 51.0 -0.3
DPC                                 MLR      MLR
       comp=Z,4µm,17.6s
DPC    Dobruska-Polom   31.37  74  eP        P        22 42 51.0 -0.3
DPC                                 AMS      AMS      22 55 00.0
       comp=Z,4µm,17.6s
DPC    Dobruska-Polom   31.37  74   P        P        22 42 50.9 -0.3
       comp=Z,23nm,1.9s
MYKA   Terra Mystica    31.48  82  epP       P        22 42 53.3 +1.1
       comp=Z,19nm,1.0s
KRLC   Kraliky          31.76  74   AMS      AMS      22 55 10.0
       comp=Z,4µm,15.9s
ARCES  ARCESS Array B   31.85  35   P        P        22 42 55.1 -0.1
       comp=Z,14nm,1.0s,baz=278,slow=8.1,SNR=16
       comp=Z,14nm,1.0s
ARCES  ARCESS Array B   31.85  35   P        P        22 42 55.2 -0.1
ARCES  ARCESS Array B   31.85  35   P        P        22 42 55.2 -0.1
ARCES                               pmax     pmax
       comp=Z,214nm,2.0s
KRUC   Moravsky         31.98  76  eP        P        22 42 56.8 +0.3
VRAC   Vranov           31.98  75   LR       LR       22 55 21.8
       comp=Z,4µm,18.3s,baz=306,slow=35
VRAC   Vranov           31.98  75  eP        P        22 42 57.0 +0.4
OBKA   Obir             32.08  81  eP        P        22 42 58.0 +0.4
       comp=Z,11nm,0.9s
RES    Resolute Bay     32.13 334   LR       LR       22 54 36.0
       comp=Z,1µm,20.8s,baz=88,slow=34
CONA   Conrad Observa   32.18  78  epP       P        22 42 59.3 +0.9
       comp=Z,12nm,1.3s
SOKA   Soboth           32.29  81  eP        P        22 42 59.5 +0.1
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       comp=Z,19nm,1.2s
MORC   Moravsky Berou   32.33  74   IAmb     IAmb     22 43 07.8
       comp=Z,53nm,1.6s
MORC   Moravsky Berou   32.33  74 ⇑P         P        22 43 00.4 +0.7
MORC   Moravsky Berou   32.33  74  eP        P        22 43 00.1 +0.4
MORC   Moravsky Berou   32.33  74   P        P        22 43 00.3 +0.7
BLKN   Baker Lake       32.52 315   P        P        22 43 02.0 +0.9
BLKN                                IAmb     IAmb     22 43 15.3
       comp=Z,21nm,1.0s
RONA   Rosalia, Austr   32.55  78  epP       pP       22 43 02.8 -1.2
       comp=Z,33nm,1.3s
OKC    Ostrava-Krasne   32.66  74   AMS      AMS      22 55 40.0
       comp=Z,3µm,17.6s
MODS   Modra-Piesok     32.81  76  eP        P        22 43 04.8 +0.9
MODS   Modra-Piesok     32.81  76  eP        P        22 43 04.8 +0.9
JAVC   Velka Javorina   32.82  75  eP        P        22 43 04.7 +0.7
FCC    Fort Churchill   32.83 304   P        P        22 43 03.9 +0.1
FCC                                 IAmb     IAmb     22 43 06.3
       comp=Z,38nm,1.2s
FCC    Fort Churchill   32.83 304   P        P        22 43 03.9 +0.1
FCC                                 pmax     pmax
       comp=Z,38nm,1.2s
FINES  FINESS Array B   33.02  50   P        P        22 43 05.0 -0.5
       comp=Z,17nm,0.9s,baz=284,slow=8.4,SNR=17
FINES                               LR       LR       22 54 59.3
       comp=Z,4µm,20.8s,baz=278,slow=34
       comp=Z,17nm,0.9s
FINES  FINESS Array B   33.02  50   P        P        22 43 05.7 +0.2
FINES  FINESS Array B   33.02  50   P        P        22 43 05.7 +0.2
FIA1   FINESS Array S   33.02  50   P        P        22 43 04.9 -0.5
FDMO   Fiordimonte      33.04  88   P        P        22 43 05.2 -0.8
FDMO                                IAmb     IAmb     22 43 26.9
       comp=Z,41nm,1.5s
BEL    Belsk            33.33  69  eP        P        22 43 08.7 +0.5
OJC    Ojcow            33.45  72  eP        P        22 43 09.5 +0.1
OJC    Ojcow            33.45  72   P        P        22 43 09.0 -0.4
       comp=Z,26nm,1.6s
MPLH   Magyarpolny      33.54  78   P        P        22 43 09.9 -0.3
       comp=Z,77nm,1.4s
SRO    Srobarova        33.69  77  eP        P        22 43 12.6 +1.1
SRO                                e                  22 43 18.7
SRO                                 pmax     pmax
       comp=Z,35nm,1.4s
SRO    Srobarova        33.69  77  eP        P        22 43 12.6 +1.1
SRO                                e                  22 43 18.7
LANS   Liptovska Anna   33.73  74  eP        P        22 43 13.8 +1.9
LANS                               e                  22 43 20.3
LANS                                pmax     pmax
       comp=Z,11nm,1.0s
LANS   Liptovska Anna   33.73  74  eP        P        22 43 13.8 +1.9
LANS                               e                  22 43 20.3
SUW    Suwalki          33.80  64  eP        P        22 43 12.6 +0.2
SUW    Suwalki          33.80  64   P        P        22 43 11.9 -0.4
SUW    Suwalki          33.80  64   P        P        22 43 12.0 -0.4
NIE    Niedzica         34.10  73  eP        P        22 43 16.6 +1.6
NIE    Niedzica         34.10  73   P        P        22 43 14.7 -0.4
       comp=Z,15nm,1.1s
VSU    Vasula           34.14  56  i P       P        22 43 15.3 +0.1
VSU                                 pmax     pmax
       comp=Z,34nm,1.1s
PSZ    Piszkesteto      34.57  76   P        P        22 43 19.9 +0.7
PSZ    Piszkesteto      34.57  76 ⇑P         P        22 43 20.2 +1.0
PSZ    Piszkesteto      34.57  76   P        P        22 43 19.9 +0.7
PSZ                                 pmax     pmax
       comp=Z,55nm,1.4s
BLY    Banja Luka       34.58  82 ⇓P         P        22 43 20.8 +1.6
P52A   Corning          34.60 267   IAmb     IAmb     22 43 32.0
       comp=Z,40nm,1.2s
KECS   Kecovo           34.64  74  eP        P        22 43 20.4 +0.6
KECS                               e                  22 43 27.6
KECS                                pmax     pmax
       comp=Z,21nm,1.2s
KECS   Kecovo           34.64  74  eP        P        22 43 20.4 +0.6
KECS                               e                  22 43 27.6
STHS   Stebnicka Huta   34.64  73  eP        P        22 43 20.8 +1.0
STHS                               e                  22 43 27.5
STHS                                pmax     pmax
       comp=Z,8.0nm,1.0s
STHS   Stebnicka Huta   34.64  73  eP        P        22 43 20.8 +1.0
STHS                               e                  22 43 27.5
MORH   Mrgy, Hungar     34.68  79 ⇑P         P        22 43 20.7 +0.6
MORH   Mrgy, Hungar     34.68  79   P        P        22 43 19.8 -0.3
       comp=Z,20nm,1.3s
APA    Apatity          34.91  39⇓iP         P        22 43 20.4 -1.5
APA                                i                  22 44 33.5
APA                                i                  22 45 52.1
APA                                i S       S        22 48 50.9 -1.7
APA                                 MLR      MLR
       comp=Z,3µm,23.0s
N49A   Columbus Grove   35.05 270   P        P        22 43 22.9 -0.5
N49A                                IAmb     IAmb     22 43 34.9
       comp=Z,22nm,0.9s
Q52A   Bidwell          35.10 266   P        P        22 43 23.9 +0.1
LVZ    Lovozero         35.32  38   P        P        22 43 25.6 +0.2
LVZ    Lovozero         35.32  38ceP         P        22 43 26.1 +0.7
LVZ                                 pmax     pmax
       comp=Z,168nm,2.5s
LVZ    Lovozero         35.32  38   P        P        22 43 24.9 -0.6
       comp=Z,89nm,1.6s
KEST   Kesra            35.33 101   P        P        22 43 26.1 +0.2
       comp=Z,18nm,0.9s,baz=317,slow=11,SNR=11
KEST                                LR       LR       22 56 04.5
       comp=Z,2µm,18.7s,baz=321,slow=33
       comp=Z,18nm,0.9s
KEST   Kesra            35.33 101   P        P        22 43 25.3 -0.6
KEST                                IAmb     IAmb     22 43 29.2
       comp=Z,36nm,1.1s
KWP    Kalwaria Pacla   35.39  71  eP        P        22 43 27.2 +1.0
KWP    Kalwaria Pacla   35.39  71   P        P        22 43 25.8 -0.4
       comp=Z,36nm,1.5s
NACGM  Naroch           35.40  61  eP        P        22 43 26.7 +0.4
       comp=Z,38nm,1.0s,baz=293
MUKU   Mukachevo        35.94  73   P        P        22 43 30.5 -0.4
SHIU   Shidnytsya       35.96  72   P        P        22 43 30.7 -0.4
BERU   Beregovo         36.02  74   P        P        22 43 31.3 -0.3
MNK    Minsk            36.15  62  i P       P        22 43 30.1 -2.5
       comp=E,23nm,1.0s
MNK                                i P       P        22 43 30.1 -2.5
       comp=N,55nm,1.1s
MNK                                i P       P        22 43 30.1 -2.5
       comp=Z,66nm,0.9s,baz=294
MNK                                i PP      PnPn     22 44 51.3 -2.4
MNK                                i PPP     PPP      22 45 05.2
MNK                                i S       S        22 49 10.4 -1.5
MNK                                i SS      SnSn     22 51 36.7 -0.4
MNK                                i SSS     SSS      22 51 53.0
MNK                                i LQ      LQ       22 55 22.9
MNK                                i LR      LR       22 57 53.0
MNK                                i LRM     MLR      22 58 44.3
       comp=E,728nm,14.7s
MNK                                i LRM     MLR      22 59 30.5
       comp=Z,2µm,15.8s
MNK                                i LRM     MLR      22 59 35.7
       comp=N,1µm,15.7s
MNK    Minsk            36.15  62  i P       P        22 43 30.1 -2.5
MNK                                i                  22 44 51.2
MNK                                i                  22 45 55.8
MNK                                i S       S        22 49 10.3 -1.5
MNK                                i SS      SnSn     22 51 36.6 -0.4
MNK                                i                  22 53 47.9
MNK                                 pmax     pmax
       comp=N,55nm,1.1s
MNK                                 pmax     pmax
       comp=Z,66nm,0.9s
MNK                                 pmax     pmax
       comp=E,23nm,1.0s
MNK                                 MLR      MLR
       comp=E,728nm,15.0s
MNK                                 MLR      MLR
       comp=Z,2µm,16.0s
MNK                                 MLR      MLR
       comp=N,1µm,16.0s
BRIU   Brid             36.19  73   P        P        22 43 33.2 +0.2
KORU   Korolevo         36.34  73   P        P        22 43 34.5 +0.1
RNPP9  Sopachiv         36.38  67   P        P        22 43 34.8 +0.2
MEZ    Mezhgor'ye       36.39  73   P        P        22 43 35.0 +0.2
RNPP8  Varash           36.39  67   P        P        22 43 34.8 +0.1
SIRR   Siria            36.44  77 ⇑P         P        22 43 36.4 +1.1
RNPP5  Staryi Chortor   36.46  67   P        P        22 43 34.7 -0.6
MATE   Matera           36.63  88 ⇑P         P        22 43 38.0 +1.2
BZS    Buzias           36.76  78 ⇑P         P        22 43 39.1 +1.1
BZS    Buzias           36.76  78   P        P        22 43 39.0 +1.1
R50A   Paris            36.77 267   P        P        22 43 38.6 +0.5
R50A                                IAmb     IAmb     22 43 51.3
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	comp=Z,32nm,1.2s						
DRGR		36.79	76	⇑P	P	22 43 39.8	+1.4
DRGR		36.79	76	P	P	22 43 39.7	+1.4
STNU	Starunia	36.86	72	P	P	22 43 38.9	+0.1
RAKU	Rahkiv	37.01	73	P	P	22 43 39.5	-0.6
ULM	Lac du Bonnet	37.02	291	P	P	22 43 39.3	-0.8
	comp=Z,6.1nm,0.7s,baz=76,slow=10,SNR=6.4						
ULM				LR	LR	22 57 27.3	
	comp=Z,2µm,19.1s,baz=64,slow=34						
	comp=Z,6.1nm,0.7s						
ULM	Lac du Bonnet	37.02	291	P	P	22 43 39.6	-0.5
ULM				IAmb	IAmb	22 43 54.3	
	comp=Z,44nm,1.5s						
ULM	Lac du Bonnet	37.02	291	P	P	22 43 39.7	-0.5
ULM				pmax	pmax		
	comp=Z,44nm,1.5s						
VAE	Valguarnera	37.22	94	LR	LR	22 58 16.7	
	comp=Z,1µm,19.3s,baz=327,slow=35						
MDVR	Moldovita	37.27	79	⇑P	P	22 43 42.7	+0.4
CJR	Cluj-Napoca	37.35	75	⇑P	P	22 43 44.5	+1.4
CJR	Cluj-Napoca	37.35	75	P	P	22 43 44.4	+1.4
GZR	Gura Zlata	37.57	78	⇑P	P	22 43 45.7	+0.7
GZR	Gura Zlata	37.57	78	P	P	22 43 45.6	+0.7
ARCR	ARCALIA	37.60	74	⇑P	P	22 43 46.5	+1.4
HERR	Herculane	37.63	79	⇑P	P	22 43 45.7	+0.3
HORU	Horodok	37.72	70	P	P	22 43 45.5	-0.6
HORU				pP	sP	22 43 49.2	-0.4
BUR08	Bucovina Ar. S	37.80	73	IAmb	IAmb	22 43 56.5	
	comp=Z,45nm,1.4s						
BURAR	Bucovina Array	37.83	73	P	P	22 43 47.5	+0.4
BURAR	Bucovina Array	37.83	73	⇑P	P	22 43 47.7	+0.6
BURAR	Bucovina Array	37.83	73	P	P	22 43 47.7	+0.6
BOVS	Bovan	37.90	81	⇑P	P	22 43 48.7	+1.1
MI30	MI30,Zelenitsa	37.97	67	P	P	22 43 47.4	-0.8
	comp=Z,35nm,1.4s						
WCI	Wyandotte Cave	38.00	268	P	P	22 43 49.0	+0.5
WCI	Wyandotte Cave	38.00	268	P	P	22 43 49.0	+0.5
WCI				pmax	pmax		
	comp=Z,12nm,0.9s						
KMPD	K-Podol'skiy	38.06	71	P	P	22 43 48.4	-0.5
KMPD				pP	sP	22 43 52.3	-0.2
MDB	Medias	38.11	76	⇑P	P	22 43 50.6	+1.1
MDB	Medias	38.11	76	P	P	22 43 50.5	+1.1
LOT	Lotru	38.13	77	⇑P	P	22 43 50.2	+0.6
LUBAR	Lubar, Ukraine	38.13	68	P	P	22 43 48.9	-0.6
TKL	Tuckaleechee C	38.16	263	LR	LR	22 59 01.7	
	comp=Z,6µm,20.4s,baz=67,slow=36						
FFC	Flin Flon	38.33	301	P	P	22 43 50.6	-0.5
FFC	Flin Flon	38.33	301	P	P	22 43 50.6	-0.5
FFC				pmax	pmax		
	comp=Z,17nm,1.1s						
AK20	Malin Array Si	38.43	67	P	P	22 43 51.4	-0.6
AK21	Malin Array Si	38.44	67	P	P	22 43 51.4	-0.6
KIEV	Kiev	38.57	67	P	P	22 43 52.4	-0.8
KIEV				IAmb	IAmb	22 43 54.1	
	comp=Z,27nm,0.9s						
KIEV	Kiev	38.57	67	⇑P	P	22 43 53.5	+0.3
KIEV	Kiev	38.57	67	*i* P	P	22 43 53.4	+0.3
	SNR=12						
KIEV	Kiev	38.57	67	P	P	22 43 52.4	-0.8
KIEV				pmax	pmax		
	comp=Z,27nm,1.0s						
AKASG	Malin Array Be	38.57	67	P	P	22 43 52.7	-0.5
	comp=Z,12nm,0.9s,baz=300,slow=7.9,SNR=30						
AKASG				LR	LR	22 59 58.1	
	comp=Z,2µm,18.6s,baz=293,slow=36						
	comp=Z,12nm,0.9s						
AKASG	Malin Array Be	38.57	67	P	P	22 43 53.4	+0.1
AKBB	Malin Array Si	38.57	67	IAmb	IAmb	22 43 54.1	
	comp=Z,30nm,0.9s						
AKBB	Malin Array Si	38.57	67	*ce*P	P	22 43 52.8	-0.4
AKBB				pmax	pmax		
	comp=Z,26nm,0.9s						
ARR	Arges	38.68	76	⇑P	P	22 43 55.0	+0.7
DOPR	Dopca	38.80	75	⇑P	P	22 43 55.8	+0.6
OHR	Ohrid	38.83	85	*i* P	P	22 43 56.6	+1.1
OZUR		38.96	75	⇓P	P	22 43 57.7	+1.1
TURR	Turia	39.12	75	⇑P	P	22 43 58.4	+0.5
ONER	Baraj Valea Uz	39.19	74	⇑P	P	22 43 59.2	+0.7
TESR	Tescani	39.24	74	⇑P	P	22 43 59.3	+0.4
VLAD	Vladila	39.31	78	⇓P	P	22 43 59.9	+0.4
COVR	Voineasa-Covas	39.34	75	⇓P	P	22 44 01.2	+1.4
HUMR	Humele	39.35	77	⇓P	P	22 43 59.7	-0.1
SORM	Soroca	39.37	71	⇑P	P	22 43 59.7	-0.2
SORM	Soroca	39.37	71	P	P	22 43 59.7	-0.2
MLR	Muntele Rosu	39.38	75	LR	LR	23 02 10.4	
	comp=Z,2µm,18.2s,baz=297,slow=39						
MLR	Muntele Rosu	39.38	75	⇑P	P	22 44 01.2	+1.0
MLR	Muntele Rosu	39.38	75	P	P	22 44 01.2	+1.0
KLMR	Klimovskoe	39.39	48	*e*P	P	22 43 57.6	-2.3
KLMR				S	S	22 49 57.3	-3.5
KLMR				pmax	pmax		
	comp=Z,169nm,1.3s						
PLOR	Plostina	39.60	75	⇑P	P	22 44 02.4	+0.5
PLOR	Plostina	39.60	75	P	P	22 44 02.4	+0.5
NEHR	Nehoiu	39.63	75	⇓P	P	22 44 01.9	-0.2
VRI	Vrincioaia	39.64	75	⇑P	P	22 44 03.1	+0.9
VRI	Vrincioaia	39.64	75	P	P	22 44 03.1	+0.9
VAY	Valandovo	39.77	83	*i* P	P	22 44 03.5	+0.2
PLVB	Pleven	39.79	79	⇑P	P	22 44 03.8	+0.3
BISRR	Bisoca	39.80	75	⇑P	P	22 44 04.4	+0.7
ODBI	Odobesti	39.89	74	⇑P	P	22 44 04.8	+0.5
GHRR		39.93	74	⇑P	P	22 44 04.4	-0.2
GHRR		39.93	74	P	P	22 44 04.4	-0.2
SIUC	Southern Illin	40.10	270	IAmb	IAmb	22 44 18.5	
	comp=Z,37nm,0.9s						
S44A	Carbondale	40.14	270	IAmb	IAmb	22 44 18.8	
	comp=Z,30nm,0.8s						
KIS	Kishinev	40.24	72	*e*P	P	22 43 56.0	-11
KIS				*e*L	L	22 57 12.0	
KIS				LRM	MLR	23 01 58.0	
	comp=Z,700nm,14.0s						
MILM	Milestii Mici	40.28	72	*e*P	P	22 43 56.0	-11
MILM				*e*L	L	22 57 13.0	
MILM				LQM		23 00 51.0	
	comp=Z,2µm,20.5s						
MILM				LRM	MLR	23 01 51.0	
	comp=Z,2µm,18.0s						
OBN	Obninsk	40.42	57	LR	LR	23 00 15.6	
	comp=Z,3µm,18.4s,baz=238,slow=35						
OBN	Obninsk	40.42	57	P	P	22 44 08.5	0.0
OBN				IAmb	IAmb	22 44 09.8	
	comp=Z,68nm,1.1s						
OBN	Obninsk	40.42	57	⇑P	P	22 44 09.3	+0.8
OBN	Obninsk	40.42	57	*ce*P	P	22 44 09.0	+0.5
OBN				*e*		22 45 45.7	
OBN				*e*SS	SS	22 53 05.4	-10
OBN				pmax	pmax		
	comp=Z,82nm,1.3s						
OBN				MLR	MLR		
	comp=Z,3µm,18.0s						
OBN	Obninsk	40.42	57	P	P	22 44 07.9	-0.6
	comp=Z,67nm,1.2s						
MOS	Moscow	40.66	56	*e*P	P	22 44 09.2	-1.3
MOS				pmax	pmax		
	comp=Z,60nm,1.5s						
MOS				MLR	MLR		
	comp=Z,800nm,17.0s						
FVM	French Village	40.66	271	P	P	22 44 11.4	+0.6
FVM	French Village	40.66	271	P	P	22 44 11.4	+0.6
FVM				pmax	pmax		
	comp=Z,15nm,0.9s						
AMRR	Amara	40.69	76	⇓P	P	22 44 10.9	-0.1
AMRR	Amara	40.69	76	P	P	22 44 10.8	-0.1
ELND	Elena	40.80	79	⇑P	P	22 44 12.0	+0.2
RAZG	Razgrad	40.80	78	⇑P	P	22 44 11.9	0.0
CFR	Carcaliu	40.84	75	⇑P	P	22 44 12.3	+0.1
CFR	Carcaliu	40.84	75	P	P	22 44 12.2	+0.1
ECSD	EROS Data Cent	40.89	283	P	P	22 44 12.5	-0.1
LOZB	Loznitsa	40.97	78	⇑P	P	22 44 13.1	-0.1
YKAW1	Yellowknife Wh	40.99	316	P	P	22 44 12.6	-0.6
YKAW3	Yellowknife Wh	41.01	316	IAmb	IAmb	22 44 15.8	
	comp=Z,39nm,1.6s						
YKA	Yellowknife Ar	41.04	316	P	P	22 44 13.4	-0.2
	comp=Z,7.9nm,0.9s,baz=62,slow=8.0,SNR=31						
YKA				PcP	PcP	22 46 12.3	-0.8
	comp=Z,2.6nm,0.9s,baz=56,slow=3.0,SNR=9.2						
YKA				LR	LR	22 59 44.9	
	comp=Z,1µm,18.1s,baz=90,slow=34						
	comp=Z,7.9nm,0.9s						
YKA	Yellowknife Ar	41.04	316	*i* P	P	22 44 13.5	-0.1
YKA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
A36M	Sachs Harbour	41.05	332	P	P	22 44 13.6	+0.1
A36M	Sachs Harbour	41.05	332	P	P	22 44 13.4	-0.1
	baz=68						
CCM	Cathedral Cave	41.12	272	P	P	22 44 14.2	-0.3
CCM	Cathedral Cave	41.12	272	P	P	22 44 14.2	-0.3
CCM				pmax	pmax		
	comp=Z,20nm,1.1s						
ICOR	Ion Corvin	41.25	76	⇓P	P	22 44 15.4	-0.1
P38A	Dawn	41.51	276	P	P	22 44 18.2	+0.5
P38A				IAmb	IAmb	22 44 29.9	
	comp=Z,32nm,1.2s						
RDO	Rodhopi	41.66	81	P	P	22 44 18.8	-0.1
C36M	Paulatuk	41.74	328	P	P	22 44 18.9	-0.3
	baz=66						
H05N1	Guadeloupe/Mar	41.84	219	T	T	23 28 54.8	
	SNR=10						
250A	Grady	42.19	261	P	P	22 44 24.0	+0.6
250A				IAmb	IAmb	22 44 36.2	
	comp=Z,45nm,1.2s						
OXF	Oxford	42.34	267	IAmb	IAmb	22 44 35.9	
	comp=Z,44nm,0.9s						
SJG	San Juan	42.35	227	LR	LR	22 58 18.8	
	comp=Z,807nm,22.0s,baz=26,slow=31						
LPSR	Galich'ya Gora	42.87	59	*e*P	P	22 44 28.8	+0.2
LPSR				pmax	pmax		
	comp=Z,46nm,0.9s						
TAM	Tamanrasset	42.90	118	P	P	22 44 29.5	+0.1
TAM				IAmb	IAmb	22 44 54.1	
	comp=Z,12nm,0.3s						
TAM	Tamanrasset	42.90	118	P	P	22 44 29.5	+0.1
TAM				pmax	pmax		
	comp=Z,12nm,0.3s						
VORR	Voronezh	43.50	60	*e*P	P	22 44 32.8	-0.9
VORR				pmax	pmax		
	comp=Z,30nm,0.9s						
VSR	Storozhevoye	43.72	61	*e*P	P	22 44 33.7	-1.8
VSR				pmax	pmax		
	comp=Z,70nm,1.0s						
VSR				MLR	MLR		
	comp=Z,2µm,19.0s						
VORD	Divnogorie	43.92	61	*e*P	P	22 44 36.0	-1.1
VORD				pmax	pmax		
	comp=Z,80nm,1.0s						
BALB	Balikesir	44.00	81	P	P	22 44 37.0	-0.9
BALB				IAmb	IAmb	22 44 46.5	
	comp=Z,57nm,1.2s						
SIM	Simferopol'	44.44	71	P	P	22 44 36.2	-5.2
SIM				*e*		22 46 20.0	
SIM				*e*S	S	22 51 06.0	-10
SIM				pmax	pmax		
	comp=Z,14nm,1.2s						
SIM				MLR	MLR		
	comp=Z,3µm,18.6s						
RLO	Rose Lookout	44.64	273	IAmb	IAmb	22 44 59.9	
	comp=Z,32nm,1.2s						
MIAR	Mount Ida	44.84	270	IAmb	IAmb	22 45 02.2	
	comp=Z,22nm,1.1s						
KIRV	Kirov	44.88	48	LR	LR	23 02 28.2	
	comp=Z,3µm,18.8s,baz=301,slow=35						
KIRV	Kirov	44.88	48	*ce*P	P	22 44 45.2	+0.5
EDM	Edmonton	44.92	303	P	P	22 44 45.3	+0.1
EDM				IAmb	IAmb	22 44 47.7	
	comp=Z,24nm,1.1s						
EDM	Edmonton	44.92	303	P	P	22 44 45.3	+0.1
EDM				pmax	pmax		
	comp=Z,24nm,1.1s						
SAHE	Sakarya_HENDEK	45.01	78	⇑P	P	22 44 46.2	+0.2
IDI	Anoyia	45.02	88	LR	LR	23 04 25.8	
	comp=Z,1µm,20.0s,baz=322,slow=37						
VRH	Novokhopyorsk	45.08	60	*e*P	P	22 44 46.5	+0.1
VRH				pmax	pmax		
	comp=Z,40nm,1.0s						
MANT	Manisa	45.13	82	IAmb	IAmb	22 44 55.2	
	comp=Z,28nm,1.1s						
INK	Inuvik	45.25	329	LR	LR	23 03 02.7	
	comp=Z,2µm,18.1s,baz=58,slow=35						
F31M	Tsiigehtchic	45.79	328	P	P	22 44 51.1	-0.7
F31M	Tsiigehtchic	45.79	328	P	P	22 44 51.3	-0.5
	baz=57,SNR=19						
KOTAN	Kotaneelee Air	46.17	316	P	P	22 44 55.3	+0.4
	baz=57,SNR=8.8						
D28M	Stokes Point	46.26	331	P	P	22 44 55.4	0.0
	baz=55						
F30M	Barrier River	46.35	329	P	P	22 44 55.9	-0.3
	baz=55,SNR=19						
ANN	Anapa	46.43	69	*e*P	P	22 44 54.1	-3.0
ANN				*e*		22 46 41.7	
ANN				*e*S	S	22 51 41.6	-2.9
ANN				pmax	pmax		
	comp=Z,41nm,1.4s						
ANN				MLR	MLR		
	comp=Z,3µm,19.0s						
E29M	Blow River	46.55	330	IAmb	IAmb	22 45 00.3	
	comp=Z,25nm,1.2s						
E29M	Blow River	46.55	330	P	P	22 44 57.7	-0.1
	baz=54						
ILGA	Ilgaz	46.58	76	P	P	22 44 58.8	+0.1
ANTO	Ankara	46.78	78	P	P	22 45 00.6	+0.5
ANTO	Ankara	46.78	78	P	P	22 45 00.6	+0.5
ANTO				pmax	pmax		
	comp=Z,45nm,1.4s						
G30M	tAoh Zraii Nji	46.85	328	IAmb	IAmb	22 45 12.5	
	comp=Z,32nm,1.4s						
G30M	tAoh Zraii Nji	46.85	328	P	P	22 45 00.2	0.0
	baz=55						
H31M	Peel River	46.91	326	P	P	22 45 00.8	+0.1
	baz=55						
E28M	Babbage River	46.91	331	IAmb	IAmb	22 45 03.4	
	comp=Z,28nm,1.1s						
E28M	Babbage River	46.91	331	P	P	22 45 00.6	-0.1
	baz=54						
D27M	Malcolm River	46.95	332	P	P	22 45 01.0	0.0
	baz=53						
EPYK	Eagle Plains	47.37	328	P	P	22 45 04.2	-0.1
	baz=54,SNR=6.4						
BR131	Keskin Array S	47.38	77	IAmb	IAmb	22 45 13.5	
	comp=Z,22nm,0.9s						
BR131	Keskin Array S	47.38	77	*i* P	P	22 45 05.1	+0.3
BRTR	Keskin Array B	47.38	77	P	P	22 45 05.7	+0.9
	comp=Z,11nm,0.9s,baz=308,slow=5.6,SNR=60						
BRTR				LR	LR	23 06 31.0	
	comp=Z,2µm,18.6s,baz=302,slow=38						
	comp=Z,11nm,0.9s						
BRTR	Keskin Array B	47.38	77	P	P	22 45 05.8	+1.1
BRTR	Keskin Array B	47.38	77	*i* P	P	22 45 05.9	+1.1
BRTR				pmax	pmax		
	comp=Z,12nm,0.9s						
TOAD	Toad River Com	47.38	315	P	P	22 45 04.8	+0.3
	baz=56						
LIRD	Liard River Hi	47.43	316	P	P	22 45 05.2	+0.4
	baz=55						
BELG	Belogornoye	47.43	56	LR	LR	23 03 47.9	
	comp=Z,975nm,20.0s,baz=301,slow=34						
BELG	Belogornoye	47.43	56	*i* P	P	22 45 04.7	-0.1
BELG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
G29M	Pine Creek	47.47	329	P	P	22 45 05.0	0.0
	baz=53,SNR=8.5						
C27K	Jago River	47.48	333	IAmb	IAmb	22 45 16.9	
	comp=Z,27nm,1.4s						
C27K	Jago River	47.48	333	P	P	22 45 05.1	+0.1
	baz=51						
ERBR	Yeremizino-Bor	47.59	67	*e*P	P	22 45 04.4	-1.8
ERBR				*e*		22 46 59.0	
ERBR				*e*S	S	22 51 58.6	-2.5
ERBR				pmax	pmax		
	comp=Z,58nm,1.3s						
ERBR				MLR	MLR		
	comp=Z,933nm,14.0s						
F28M	Old Crow	47.62	330	P	P	22 45 05.9	-0.3
F28M				IAmb	IAmb	22 45 09.1	
	comp=Z,29nm,1.2s						
F28M	Old Crow	47.62	330	P	P	22 45 05.8	-0.3
	baz=52,SNR=14						
E27K	Coleen River	47.78	331	P	P	22 45 07.3	-0.2
	baz=52						
YNE	Yellowstone No	47.87	292	IAmb	IAmb	22 45 15.9	
	comp=Z,22nm,1.3s						
KIRS	Kirsehir-Merke	47.92	78	⇑P	P	22 45 09.0	+0.1
I30M	Mount Dempster	47.94	326	IAmb	IAmb	22 45 11.6	
	comp=Z,17nm,1.0s						
I30M	Mount Dempster	47.94	326	P	P	22 45 09.1	+0.3
	baz=53,SNR=9.6						
H29M	Whitestone	48.00	328	P	P	22 45 09.8	+0.7
	baz=53,SNR=11						
WTLY	Watson Lake, Y	48.14	318	P	P	22 45 10.4	+0.1
	baz=54						
J30M	Hart River	48.32	325	IAmb	IAmb	22 45 15.1	
	comp=Z,28nm,1.2s						
J30M	Hart River	48.32	325	P	P	22 45 11.9	+0.2
	baz=53,SNR=8.8						
LABN	Labinsk	48.38	68	*e*P	P	22 45 11.7	-0.7
LABN				*e*		22 47 05.2	
LABN				*e*S	S	22 52 13.8	+1.5
LABN				pmax	pmax		
	comp=Z,15nm,0.8s						
LABN				MLR	MLR		
	comp=Z,928nm,12.0s						
D25K	Kavik River	48.39	334	IAmb	IAmb	22 45 25.0	
	comp=Z,18nm,1.0s						
D25K	Kavik River	48.39	334	P	P	22 45 11.8	-0.4
	baz=49,SNR=15						
BOZ	Bozeman (W)	48.41	294	IAmb	IAmb	22 45 28.3	
	comp=Z,28nm,1.6s						
I29M	Ogilvie Camp,	48.50	327	P	P	22 45 13.0	-0.1
	baz=52,SNR=13						
G27K	Doyon Strip	48.66	330	IAmb	IAmb	22 45 17.1	
	comp=Z,26nm,1.1s						
G27K	Doyon Strip	48.66	330	P	P	22 45 14.2	-0.1
	baz=51						
TOKA	Tokat	48.66	75	IAmb	IAmb	22 45 17.2	
	comp=Z,16nm,0.8s						
VSLR	Vesyoloye	48.73	69	*i* P	P	22 45 16.0	+1.0
LRM	Limekiln Ridge	48.73	295	P	P	22 45 14.5	-0.8
C24K	Franklin Bluff	48.74	335	P	P	22 45 15.2	+0.5
	baz=48						
F26K	Sheenjek River	48.84	331	IAmb	IAmb	22 45 28.0	
	comp=Z,37nm,1.9s						
F26K	Sheenjek River	48.84	331	P	P	22 45 15.7	+0.2
	baz=50						
E25K	Arctic Village	48.96	332	P	P	22 45 16.3	-0.3
	baz=49						
I28M	Miner Creek	48.98	328	P	P	22 45 17.2	+0.4
	baz=51						
H27K	Steamboat Moun	48.99	329	P	P	22 45 17.6	+0.8
	baz=50						
BW06	Boulder Array	49.01	290	P	P	22 45 16.6	-0.9
BW06				IAmb	IAmb	22 45 31.2	
	comp=Z,40nm,1.9s						
PD31	Pinedale Array	49.01	290	IAmb	IAmb	22 45 31.2	
	comp=Z,33nm,1.8s						
PDAR	Pinedale Array	49.01	290	P	P	22 45 17.2	-0.3
	comp=Z,2.1nm,0.6s,baz=33,slow=6.1,SNR=24						
PDAR				LR	LR	23 04 53.8	
	comp=Z,1µm,18.7s,baz=38,slow=35						
	comp=Z,2.1nm,0.6s						
PDAR	Pinedale Array	49.01	290	P	P	22 45 16.9	-0.6
J29N	Klondike Camp	49.04	326	IAmb	IAmb	22 45 20.8	
	comp=Z,30nm,1.2s						
J29N	Klondike Camp	49.04	326	P	P	22 45 17.6	+0.3
	baz=51						
LOHW	Long Hollow	49.07	291	IAmb	IAmb	22 45 49.2	
	comp=Z,30nm,1.9s						
M31M	Drury Creek, Y	49.07	322	P	P	22 45 18.0	+0.5
	baz=52						
DLMT	Dillon	49.09	294	IAmb	IAmb	22 45 33.0	
	comp=Z,17nm,1.2s						
RTBA	Rita Blanca	49.11	279	IAmb	IAmb	22 45 30.6	
	comp=Z,45nm,1.7s						
TORD	Torodi Ar. Bea	49.13	130	P	P	22 45 17.6	-0.8
	comp=Z,6.2nm,0.7s,baz=342,slow=3.6,SNR=8.1						
TORD				PcP	PcP	22 46 41.5	-0.3
	comp=Z,1.6nm,0.3s,baz=357,slow=1.7,SNR=2.0						
	comp=Z,6.2nm,0.7s						
C23K	Itkillik River	49.14	336	IAmb	IAmb	22 45 30.4	
	comp=Z,38nm,1.4s						
C23K	Itkillik River	49.14	336	P	P	22 45 18.3	+0.5
	baz=46						
D24K	Happy Valley	49.16	334	IAmb	IAmb	22 45 21.0	
	comp=Z,24nm,1.1s						
D24K	Happy Valley	49.16	334	P	P	22 45 18.4	+0.5
	baz=47						
K29M	Barlow Dome	49.18	325	P	P	22 45 17.2	-1.1
K29M				IAmb	IAmb	22 45 21.8	
	comp=Z,24nm,1.2s						
K29M	Barlow Dome	49.18	325	P	P	22 45 19.1	+0.7
	baz=52,SNR=5.2						
G26K	Porcupine Rive	49.22	331	P	P	22 45 19.0	+0.6
	baz=49,SNR=17						
N32M	Quiet Lake	49.22	321	P	P	22 45 19.3	+0.7
	baz=52						
F25K	Christian Rive	49.33	332	IAmb	IAmb	22 45 22.8	
	comp=Z,30nm,1.6s						
F25K	Christian Rive	49.33	332	P	P	22 45 19.9	+0.5
	baz=48						
PH02	Texas Public H	49.34	277	IAmb	IAmb	22 45 32.5	
	comp=Z,32nm,1.2s						
A22K	Sinclair Lake	49.35	338	P	P	22 45 20.0	+0.6
	baz=44						
GOF	Gofitskoye	49.42	66	*ce*P	P	22 45 21.2	+0.9
I27K	Kandik River	49.42	328	IAmb	IAmb	22 45 23.0	
	comp=Z,22nm,1.0s						
I27K	Kandik River	49.42	328	P	P	22 45 20.4	+0.2
	baz=50,SNR=11						
R33M	Jennings River	49.45	318	IAmb	IAmb	22 45 24.5	
	comp=Z,26nm,1.2s						
R33M	Jennings River	49.45	318	P	P	22 45 20.8	+0.3
	baz=52						
B22K	Teshekpuk Lake	49.47	337	P	P	22 45 20.9	+0.6
	baz=44						
AMTX	Amarillo	49.52	277	IAmb	IAmb	22 45 37.2	
	comp=Z,35nm,1.2s						
T25A	Trinidad	49.64	281	IAmb	IAmb	22 45 36.0	
	comp=Z,28nm,1.4s						
DLBC	Dease Lake	49.65	317	LR	LR	23 05 14.9	
	comp=Z,1µm,18.2s,baz=40,slow=35						
DLBC	Dease Lake	49.65	317	P	P	22 45 22.5	+0.5
	baz=52						
DAWY	Dawson	49.68	326	P	P	22 45 21.9	-0.2
DAWY	Dawson	49.68	326	P	P	22 45 22.8	+0.7
	baz=50						
P33M	Teslin, Yukon	49.69	320	P	P	22 45 22.3	0.0
	baz=52						
TOLK	Toolik Lake Re	49.70	334	IAmb	IAmb	22 45 38.4	
	comp=Z,60nm,1.9s						
TOLK	Toolik Lake Re	49.70	334	P	P	22 45 22.8	+0.6
	baz=46						
M30M	Minto, Yukon	49.72	324	IAmb	IAmb	22 45 25.8	
	comp=Z,27nm,1.4s						
M30M	Minto, Yukon	49.72	324	P	P	22 45 22.9	+0.5
	baz=51						
NEW	Newport	49.74	300	LR	LR	23 05 09.1	
	comp=Z,2µm,18.7s,baz=52,slow=35						
NEW	Newport	49.74	300	IAmb	IAmb	22 45 38.9	
	comp=Z,32nm,1.5s						
MDP	Montagnes des	49.76	203	LR	LR	23 03 10.7	
	comp=Z,402nm,18.9s,baz=1.5,slow=32						
D23K	Nanushuk River	49.77	335	IAmb	IAmb	22 45 26.2	
	comp=Z,24nm,0.9s						
D23K	Nanushuk River	49.77	335	P	P	22 45 23.3	+0.7
	baz=46						
E24K	Your Creek	49.80	333	IAmb	IAmb	22 45 26.1	
	comp=Z,19nm,1.2s						
E24K	Your Creek	49.80	333	P	P	22 45 23.4	+0.4
	baz=47						
L29M	L29M	49.86	325	IAmb	IAmb	22 45 26.9	
	comp=Z,21nm,1.2s						
L29M	L29M	49.86	325	P	P	22 45 23.8	+0.3
	baz=51						
KIV	Kislovodsk	49.91	67	P	P	22 45 24.5	+0.3
KIV				IAmb	IAmb	22 45 32.5	
	comp=Z,15nm,0.8s						
KIV	Kislovodsk	49.91	67	*i* P	P	22 45 25.6	+1.4
	SNR=7.3						
KIV	Kislovodsk	49.91	67	*e*P	P	22 45 24.8	+0.6
KIV				*e*S	S	22 52 35.3	+1.3
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
KIV				MLR	MLR		
	comp=Z,786nm,16.0s						
KVAR	Kislovodsk Arr	49.92	67	LR	LR	23 06 56.4	
	comp=Z,1µm,19.5s,baz=320,slow=37						
F24K	Squaw Lake	50.02	332	IAmb	IAmb	22 45 38.4	
	comp=Z,28nm,1.5s						
F24K	Squaw Lake	50.02	332	P	P	22 45 25.3	+0.7
	baz=47						
G25K	Bearman Lake	50.02	331	P	P	22 45 25.3	+0.7
	baz=48						
SHA1	Shidzhatmaz	50.03	67	*ce*P	P	22 45 26.5	+1.2
I26K	Coal Creek Min	50.10	329	IAmb	IAmb	22 45 29.0	
	comp=Z,29nm,1.2s						
I26K	Coal Creek Min	50.10	329	P	P	22 45 25.5	+0.3
	baz=49						
ARTI	Arti	50.12	46	LR	LR	23 05 32.2	
	comp=Z,2µm,19.8s,baz=294,slow=35						

ARTI	**Arti**	50.12	46	P	P	22 45 25.5	+0.1
ARTI	**Arti**	50.12	46	*c i*P	P	22 45 26.5	+1.0
ARTI						22 46 45.7	
ARTI				S	S	22 52 39.3	+2.9
ARTI				SS	SS	22 56 07.4	-1.5
ARTI				pmax	pmax		
	comp=Z,46nm,1.1s						
E23K	**Chandalar**	50.12	334	IAmb	IAmb	22 45 30.9	
	comp=Z,27nm,1.6s						
E23K	**Chandalar**	50.12	334	P	P	22 45 25.9	+0.4
	baz=46						
KBZ	**Khabaz**	50.17	67	P	P	22 45 27.7	+1.6
	comp=Z,11nm,1.1s,baz=307,slow=9.5,SNR=15						
KBZ				LR	LR	23 07 18.3	
	comp=Z,833nm,19.7s,baz=312,slow=37						
	comp=Z,11nm,1.1s						
KBZ	**Khabaz**	50.17	67	*ce*P	P	22 45 27.5	+1.5
KBZ				pmax	pmax		
	comp=Z,12nm,1.0s						
WHY	**Whitehorse**	50.22	321	P	P	22 45 26.8	+0.5
	baz=51						
Q32M	**Nakina River**	50.25	318	P	P	22 45 26.9	+0.2
	baz=52						
B21K	**Ikpikpuk River**	50.28	337	IAmb	IAmb	22 45 29.9	
	comp=Z,30nm,1.1s						
B21K	**Ikpikpuk River**	50.28	337	P	P	22 45 26.8	+0.4
	baz=43,SNR=14						
D22K	**Ayikyak River**	50.34	335	P	P	22 45 27.3	+0.3
	baz=44						
M29M	**Somme Creek**	50.40	324	IAmb	IAmb	22 45 31.7	
	comp=Z,30nm,1.4s						
M29M	**Somme Creek**	50.40	324	P	P	22 45 27.7	0.0
	baz=50						
RDMU	**Red Mountain**	50.42	288	IAmb	IAmb	22 45 43.3	
	comp=Z,26nm,1.2s						
P32M	**Atlin**	50.44	319	P	P	22 45 28.5	+0.6
	baz=51						
S34M	**Telegraph Cree**	50.44	317	P	P	22 45 28.5	+0.7
	baz=51						
G24K	**Hadweenzic Riv**	50.47	332	P	P	22 45 28.7	+0.7
	baz=47						
B20K	**Meade River**	50.59	338	IAmb	IAmb	22 45 32.3	
	comp=Z,26nm,1.2s						
B20K	**Meade River**	50.59	338	P	P	22 45 29.4	+0.6
	baz=42						
K27K	**Chicken**	50.60	327	IAmb	IAmb	22 45 32.7	
	comp=Z,26nm,1.2s						
K27K	**Chicken**	50.60	327	P	P	22 45 29.9	+0.9
	baz=49						
O30N	**Mendenhall**	50.61	321	P	P	22 45 29.6	+0.5
	baz=50,SNR=6.0						
C09A	**Chrisman Ranch**	50.64	300	IAmb	IAmb	22 45 30.9	
	comp=Z,20nm,1.1s						
T35M	**Bob Quinn**	50.65	315	P	P	22 45 29.5	0.0
	baz=51						
E22K	**Anaktuvuk Pass**	50.65	334	IAmb	IAmb	22 45 41.4	
	comp=Z,45nm,1.9s						
E22K	**Anaktuvuk Pass**	50.65	334	P	P	22 45 29.4	0.0
	baz=44						
C21K	**Knifeblade Rid**	50.66	336	P	P	22 45 29.8	+0.4
	baz=43						
NCK	**Nalchik**	50.71	67	*i* P	P	22 45 31.2	+1.0
NCK				pmax	pmax		
	comp=Z,14nm,1.1s						
LLLB	**Lillooet**	50.73	305	IAmb	IAmb	22 45 32.4	
	comp=Z,14nm,0.9s						
J26L	**Joseph Creek**	50.77	328	P	P	22 45 30.1	-0.3
	baz=48,SNR=8.6						
SVE	**Sverdlovsk**	50.82	45	*e*P	P	22 45 31.0	+0.2
SVE				pmax	pmax		
	comp=Z,35nm,1.5s						
COLD	**Coldfoot**	50.87	333	P	P	22 45 30.9	0.0
	baz=45						
HWUT	**Hardware Ranch**	50.90	290	IAmb	IAmb	22 45 33.9	
	comp=Z,34nm,1.4s						
E21K	**Killik River**	50.99	335	P	P	22 45 32.3	+0.4
	baz=43						
HYT	**Haines Junctio**	51.10	322	P	P	22 45 33.7	+0.7
	baz=50						
PLID	**Pearl Lake**	51.14	296	IAmb	IAmb	22 45 47.1	
	comp=Z,35nm,1.4s						
NRIK	**Noril'sk**	51.14	23	P	P	22 45 33.6	+0.7
	comp=Z,18nm,1.0s,baz=330,slow=4.8,SNR=21						
NRIK				LR	LR	23 05 35.2	
	comp=Z,448nm,21.4s,baz=324,slow=34						
	comp=Z,18nm,1.0s						
NRIK	**Noril'sk**	51.14	23	P	P	22 45 33.5	+0.6
NRIK	**Noril'sk**	51.14	23	*i* P	P	22 45 34.1	+1.1
NRIK				pmax	pmax		
	comp=Z,21nm,1.1s						
BCAR	**Beaver Creek A**	51.15	326	P	P	22 45 34.4	+1.2
SKAG	**Skagway**	51.15	320	P	P	22 45 34.0	+0.8
	baz=50						
GAZ	**Gaziantep**	51.16	77	IAmb	IAmb	22 45 36.6	
	comp=Z,26nm,1.0s						
L27K	**Beaver Creek,**	51.16	326	IAmb	IAmb	22 46 03.0	
	comp=Z,71nm,2.0s						
L27K	**Beaver Creek,**	51.16	326	P	P	22 45 34.0	+0.7
	baz=48						
YUK4	**Talbot Arm**	51.18	323	P	P	22 45 33.2	-0.5
	baz=49						
H24K	**Noodor Dome**	51.19	331	IAmb	IAmb	22 45 37.8	
	comp=Z,23nm,1.3s						
H24K	**Noodor Dome**	51.19	331	P	P	22 45 34.0	+0.6
	baz=46						
G23K	**Bananza Creek**	51.19	332	P	P	22 45 34.4	+0.9
	baz=45						
F22K	**John River**	51.20	334	P	P	22 45 34.0	+0.5
	baz=44						
SCRK	**Sand Creek**	51.26	328	IAmb	IAmb	22 45 37.7	
	comp=Z,32nm,1.0s						
SCRK	**Sand Creek**	51.26	328	P	P	22 45 35.2	+1.1
	baz=47,SNR=11						
BVCY	**Beaver Creek**	51.27	325	P	P	22 45 35.1	+1.0
	baz=48						
J25K	**Salcha River,**	51.27	329	IAmb	IAmb	22 45 37.4	
	comp=Z,25nm,1.1s						
J25K	**Salcha River,**	51.27	329	P	P	22 45 35.2	+1.1
	baz=47,SNR=7.7						
A19K	**Wainwright**	51.30	339	P	P	22 45 34.7	+0.6
	baz=39						
PV22	**Blue Mesa, Par**	51.30	285	IAmb	IAmb	22 45 52.0	
	comp=Z,46nm,1.6s						
P30M	**Million Dollar**	51.35	321	P	P	22 45 35.2	+0.4
	baz=49						
D20K	**Etivluk River**	51.44	337	IAmb	IAmb	22 45 38.8	
	comp=Z,29nm,1.1s						
D20K	**Etivluk River**	51.44	337	P	P	22 45 35.5	+0.3
	baz=41,SNR=16						
PV01	**Paradox Valley**	51.44	285	P	P	22 45 35.7	-0.3
PV01				IAmb	IAmb	22 46 13.0	
	comp=Z,48nm,1.9s						
G22K	**Bettles**	51.45	333	P	P	22 45 35.8	+0.5
	baz=44						
PV04	**Paradox Valley**	51.47	285	IAmb	IAmb	22 45 52.1	
	comp=Z,54nm,1.5s						
PV03	**Paradox Valley**	51.53	285	IAmb	IAmb	22 45 51.7	
	comp=Z,36nm,1.4s						
PV16	**Nyswonger Mesa**	51.53	285	IAmb	IAmb	22 45 54.3	
	comp=Z,55nm,1.6s						
YUK3	**Moose Creek**	51.55	324	P	P	22 45 36.8	+0.4
	baz=48						
POKR	**Poker Plat Res**	51.56	330	IAmb	IAmb	22 45 39.9	
	comp=Z,39nm,1.1s						
POKR	**Poker Plat Res**	51.56	330	P	P	22 45 36.1	-0.1
	baz=46						
PLBC	**Pleasant Camp**	51.56	320	P	P	22 45 37.0	+0.8
	baz=49						
R32K	**Eaglecrest**	51.60	318	P	P	22 45 37.1	+0.5
	baz=50						
YUK8	**Steele Glacier**	51.63	323	P	P	22 45 37.3	+0.2
	baz=48						
IL31		51.63	330	IAmb	IAmb	22 45 40.8	
	comp=Z,38nm,1.6s						
ILAR	**Eielson Array**	51.63	330	P	P	22 45 37.0	+0.3
	comp=Z,5.9nm,0.9s,baz=49,slow=6.9,SNR=27						
ILAR				PcP	PcP	22 46 49.8	-0.4
	comp=Z,3.8nm,0.8s,baz=23,slow=2.2,SNR=12						
ILAR				LR	LR	23 07 04.3	
	comp=Z,664nm,18.1s,baz=56,slow=36						
	comp=Z,5.9nm,0.9s						
ILAR	**Eielson Array**	51.63	330	P	P	22 45 37.2	+0.4
M27K	**Edge Creek, AK**	51.66	325	P	P	22 45 37.5	+0.3
	baz=48						
E20K	**Nigu River**	51.67	336	P	P	22 45 37.8	+0.7
	baz=41						
H23K	**Yukon River**	51.68	332	IAmb	IAmb	22 45 40.9	
	comp=Z,33nm,1.4s						
H23K	**Yukon River**	51.68	332	P	P	22 45 37.5	+0.4
	baz=45						
L26K	**Log Cabin Wild**	51.70	327	P	P	22 45 37.8	+0.5
	baz=47						
RIDG	**Independent Ri**	51.70	328	P	P	22 45 37.9	+0.5
	baz=47						
F21K	**Alatna River**	51.76	334	IAmb	IAmb	22 45 45.6	
	comp=Z,24nm,1.4s						
F21K	**Alatna River**	51.76	334	P	P	22 45 38.6	+0.9
	baz=43						
C19K	**Lookout Ridge**	51.83	338	IAmb	IAmb	22 45 42.9	
	comp=Z,46nm,1.4s						
C19K	**Lookout Ridge**	51.83	338	P	P	22 45 38.6	+0.3
	baz=39,SNR=10						
COLA	**College**	51.85	330	P	P	22 45 38.9	+0.6
	baz=45						
HDA	**Harding Lake**	51.91	329	IAmb	IAmb	22 45 41.9	
	comp=Z,15nm,0.9s						
HDA	**Harding Lake**	51.91	329	P	P	22 45 39.2	+0.4
	baz=46						
K24K	**Donnelly Dome**	51.96	328	P	P	22 45 39.9	+0.7
	baz=46,SNR=9.3						
D19K	**Kuna River**	51.96	337	IAmb	IAmb	22 45 42.1	
	comp=Z,23nm,0.9s						
D19K	**Kuna River**	51.96	337	P	P	22 45 39.3	+0.1
	baz=40						
P29M	**Windy Craggy**	51.97	321	P	P	22 45 40.1	+0.7
	baz=49						
BMO	**Blue Mountains**	52.00	297	IAmb	IAmb	22 45 53.9	
	comp=Z,38nm,1.9s						
CCB	**Clear Creek Bu**	52.00	330	IAmb	IAmb	22 45 56.2	
	comp=Z,35nm,1.6s						
I23K	**Minto, Yukon-K**	52.11	331	IAmb	IAmb	22 45 44.6	
	comp=Z,37nm,1.2s						
I23K	**Minto, Yukon-K**	52.11	331	P	P	22 45 40.9	+0.7
	baz=44,SNR=9.0						
YPT	**Yellepit**	52.12	299	IAmb	IAmb	22 46 09.8	
	comp=Z,23nm,1.4s						
MFID	**Camas Ranch**	52.12	294	IAmb	IAmb	22 45 55.8	
	comp=Z,38nm,1.7s						
B18K	**Kokolik River**	52.12	339	P	P	22 45 41.1	+0.8
	baz=38						
O28M	**Mount Upton**	52.13	323	P	P	22 45 41.1	+0.3
	baz=48						
S32K	**Killisnoo**	52.15	318	P	P	22 45 40.9	+0.2
	baz=49						
DBIC	**Dimbokro**	52.15	141	P	P	22 45 39.6	-1.5
	comp=Z,8.5nm,1.0s,baz=3.8,slow=5.5,SNR=8.0						
	comp=Z,8.5nm,1.0s						
DBIC	**Dimbokro**	52.15	141	P	P	22 45 39.6	-1.5
DBIC				IAmb	IAmb	22 45 41.0	
	comp=Z,17nm,1.1s						
H22K	**Ishtalitna Cre**	52.16	332	P	P	22 45 41.3	+0.6
	baz=43						
WRH	**Wood River Hil**	52.21	330	IAmb	IAmb	22 45 44.7	
	comp=Z,42nm,1.3s						
LTY	**Liberty**	52.24	301	IAmb	IAmb	22 45 55.0	
	comp=Z,44nm,1.4s						
G21K	**Allakaket**	52.29	334	P	P	22 45 42.1	+0.5
	baz=42						
V35K	**Ketchikan**	52.29	314	P	P	22 45 42.4	+0.7
	baz=50						
ANMO	**Albuquerque**	52.34	280	LR	LR	23 07 23.8	
	comp=Z,5µm,18.1s,baz=50,slow=35						
ANMO	**Albuquerque**	52.34	280	P	P	22 45 42.7	0.0
ANMO	**Albuquerque**	52.34	280	*ce*P	P	22 45 45.1	+2.4
ANMO				pmax	pmax		
	comp=Z,16nm,2.5s						
TASM	**ASL Pad, Albuq**	52.35	280	IAmb	IAmb	22 45 56.1	
	comp=Z,19nm,1.3s						
TASM	**ASL Pad, Albuq**	52.35	280	IAmb	IAmb	22 45 56.1	
	comp=Z,18nm,1.3s						
CTG	**Chitna Glacier**	52.41	324	P	P	22 45 43.1	+0.3
	baz=47						
NEA2	**Nenana**	52.42	330	P	P	22 45 43.0	+0.4
	baz=44						
U33K	**Whale Pass**	52.42	316	P	P	22 45 43.4	+0.7
	baz=49						
PAX	**Paxson**	52.44	327	IAmb	IAmb	22 45 59.5	
	comp=Z,50nm,1.6s						
PAX	**Paxson**	52.44	327	P	P	22 45 43.2	+0.3
	baz=46						
F20K	**Avaraart Lake**	52.47	335	IAmb	IAmb	22 45 56.1	
	comp=Z,30nm,1.6s						
F20K	**Avaraart Lake**	52.47	335	P	P	22 45 43.2	+0.3
	baz=41						
S31K	**Pelican**	52.49	319	P	P	22 45 43.6	+0.5
	baz=48						
SDV	**Santo Domingo**	52.50	227	LR	LR	23 06 27.1	
	comp=Z,460nm,20.6s,baz=47,slow=34						
SDV	**Santo Domingo**	52.50	227	*e*P	P	22 45 45.0	+1.0
DUG	**Dugway, Tooele**	52.54	289	IAmb	IAmb	22 46 02.8	
	comp=Z,61nm,1.9s						
E19K	**Redstone River**	52.54	336	IAmb	IAmb	22 45 46.5	
	comp=Z,17nm,0.8s						
E19K	**Redstone River**	52.54	336	P	P	22 45 44.0	+0.5
	baz=40						
C18K	**Utukok River**	52.55	338	IAmb	IAmb	22 45 47.3	
	comp=Z,30nm,1.2s						
C18K	**Utukok River**	52.55	338	P	P	22 45 44.0	+0.3
	baz=38,SNR=9.1						
MLY	**Manley**	52.60	331	P	P	22 45 44.0	0.0
	baz=43						
PINM	**Pinnacle**	52.61	323	P	P	22 45 44.0	-0.2
	baz=47						
MCARA	**McCarthy VSAT**	52.72	325	P	P	22 45 45.4	+0.5
	baz=46						
H21K	**Melozitna Rive**	52.73	333	IAmb	IAmb	22 45 58.1	
	comp=Z,24nm,1.5s						
H21K	**Melozitna Rive**	52.73	333	P	P	22 45 45.9	+0.9
	baz=42						
HARP	**HAARP**	52.74	327	P	P	22 45 46.0	+0.9
	baz=46						
BBB	**Bella Bella**	52.75	309	LR	LR	23 06 54.0	
	comp=Z,2µm,19.6s,baz=52,slow=35						
IMAR	**Indian Mountai**	52.75	333	P	P	22 45 44.3	-0.7
CBB	**Campbell River**	52.83	306	IAmb	IAmb	22 45 48.4	
	comp=Z,22nm,0.9s						
CRAG	**Craig**	52.85	315	P	P	22 45 46.3	+0.5
	baz=49						
MMAI	**Mount Meron Ar**	52.92	83	P	P	22 45 45.9	-1.0
	comp=Z,7.8nm,0.8s,baz=336,slow=3.2,SNR=6.0						
MMAI				LR	LR	23 09 46.3	
	comp=Z,552nm,19.2s,baz=294,slow=38						
	comp=Z,7.8nm,0.8s						
DHY	**Denali Highway**	52.98	328	P	P	22 45 47.4	+0.4
	baz=45						
BNM	**Barren Site**	52.99	280	P	P	22 45 46.3	-1.2
MCK	**McKinley**	53.00	329	P	P	22 45 47.4	+0.5
	baz=44,SNR=8.0						
GURO	**Guroymak-BITLI**	53.07	73	IAmb	IAmb	22 45 58.1	
	comp=Z,32nm,1.6s						
N25K	**Chitina, Valde**	53.11	326	P	P	22 45 48.5	+0.6
	baz=46						
C17K	**DeLong Mountai**	53.13	339	P	P	22 45 48.5	+0.6
	baz=36,SNR=8.0						
F19K	**Shaleruckik Mo**	53.16	335	P	P	22 45 48.5	+0.5
	baz=40						
MESA	**MESA**	53.17	323	P	P	22 45 48.3	-0.2
	baz=46						
CRQE	**Cirque**	53.18	324	P	P	22 45 47.8	-0.7
	baz=46						
MAK	**Makhachkala**	53.23	65	*e*P	P	22 45 42.8	-6.1
MAK				*e*		22 47 44.8	
MAK				*e*PPP	PPP	22 48 54.1	
MAK				*e*S	S	22 53 10.3	-9.2
MAK				*e*SS	SS	22 56 53.2	-5.4
MAK				*e*SSS	SSS	22 58 49.8	
MAK				pmax	pmax		
	comp=Z,181nm,1.0s						
MAK				MLR	MLR		
	comp=Z,2µm,17.0s						
M24K	**Tolsona, Glenn**	53.28	327	P	P	22 45 48.7	-0.4
	baz=45						
Y22A	**Socorro**	53.34	280	IAmb	IAmb	22 46 08.9	
	comp=Z,42nm,1.4s						
BPAW	**Bear Paw Mtn.**	53.36	331	P	P	22 45 50.4	+0.8
	baz=43						
E18K	**Tukpahlearik C**	53.39	337	P	P	22 45 50.5	+0.7
	baz=38						
RDOG	**Red Dog Mine**	53.41	338	IAmb	IAmb	22 46 02.6	
	comp=Z,31nm,1.4s						
RDOG	**Red Dog Mine**	53.41	338	P	P	22 45 50.1	+0.1
	baz=36						
H20K	**Anotleneega Mo**	53.43	333	P	P	22 45 50.8	+0.7
	baz=41						
WAT6	**Susitna Watana**	53.46	328	P	P	22 45 51.2	+0.7
	baz=44						
WAT1	**Susitna Watana**	53.54	328	P	P	22 45 50.8	-0.1
	baz=44						
ELK	**Elko**	53.55	291	LR	LR	23 07 48.8	
	comp=Z,2µm,18.1s,baz=58,slow=35						
ELK	**Elko**	53.55	291	IAmb	IAmb	22 46 51.1	
	comp=Z,6.6nm,0.5s						
GNI	**Garni**	53.55	70	LR	LR	23 08 50.1	
	comp=Z,2µm,21.5s,baz=322,slow=36						
GNI	**Garni**	53.55	70	P	P	22 45 52.2	+0.7
GNI	**Garni**	53.55	70	P	P	22 45 53.2	+1.7
GNI	**Garni**	53.55	70	*ce*P	P	22 45 52.9	+1.4
GNI				pmax	pmax		
	comp=Z,29nm,1.3s						
BMRM	**Bremner River**	53.56	325	P	P	22 45 51.5	+0.4
	baz=45						
J08A	**Circle Bar Ran**	53.61	296	IAmb	IAmb	22 47 17.8	
	comp=Z,21nm,1.2s						
MTPU	**Mount Pierson**	53.62	287	IAmb	IAmb	22 46 07.1	
	comp=Z,32nm,1.6s						
TRF	**Thorofare Moun**	53.62	330	P	P	22 45 52.1	+0.4
	baz=43						
KLU	**Klutina**	53.64	326	P	P	22 45 52.6	+0.8
	baz=45						
D17K	**Noatak River**	53.74	338	P	P	22 45 52.7	+0.4
	baz=36						
AKTO	**Aktyubinsk**	53.75	52	LR	LR	23 07 28.5	
	comp=Z,3µm,21.6s,baz=295,slow=35						
C16K	**Lisburne Hills**	53.77	339	IAmb	IAmb	22 46 08.5	
	comp=Z,33nm,1.3s						
C16K	**Lisburne Hills**	53.77	339	P	P	22 45 53.1	+0.6
	baz=35						
F18K	**Selawik**	53.81	336	P	P	22 45 53.6	+0.9
	baz=38						
H19K	**Roundabout Mou**	53.82	334	P	P	22 45 53.8	+0.9
	baz=40						
SCM	**Sheep Creek Mo**	53.86	327	P	P	22 45 53.9	+0.5
	baz=44						
CHUM	**Lake Minchumin**	53.91	331	P	P	22 45 54.3	+0.7
	baz=42						
E17K	**Hotham Inlet**	53.95	337	P	P	22 45 54.7	+0.8
	baz=37						
G18K	**Tagagawik**	54.11	335	P	P	22 45 56.0	+0.9
	baz=38						
SPR3	**Spring Creek 3**	54.21	289	IAmb	IAmb	22 46 12.9	
	comp=Z,25nm,1.6s						
SML	**Sawmill**	54.21	328	P	P	22 45 56.3	+0.4
	baz=43						
J20K	**Nowinta River**	54.22	332	IAmb	IAmb	22 45 59.7	
	comp=Z,20nm,1.1s						
J20K	**Nowinta River**	54.22	332	P	P	22 45 56.0	+0.1
	baz=41,SNR=5.1						
KAIM	**Kayak Island**	54.23	324	P	P	22 45 56.0	0.0
	baz=45						
EYAK	**Cordova Ski Ar**	54.25	325	P	P	22 45 56.3	+0.2
	baz=44						
F17K	**Baldwin Pennin**	54.33	337	P	P	22 45 56.8	+0.3
	baz=37						
AKT	**Akhty**	54.34	67	*e*P	P	22 45 55.1	-2.1
AKT				*e*		22 47 00.3	
AKT				*e*S	S	22 53 33.8	-1.1
AKT				pmax	pmax		
	comp=Z,24nm,1.3s						
AKT				MLR	MLR		
	comp=Z,3µm,22.0s						
ASF	**Jabal al Asfar**	54.41	82	LR	LR	23 12 38.5	
	comp=Z,536nm,18.3s,baz=325,slow=40						
L22K	**Petersville**	54.46	329	IAmb	IAmb	22 46 00.2	
	comp=Z,27nm,1.0s						
KNK	**Knik Glacier**	54.54	327	P	P	22 45 58.6	+0.3
	baz=43						
GCSA	**Galena City Sc**	54.55	333	P	P	22 45 58.5	+0.3
	baz=39						
BOAV	**Boa Vista**	54.57	212	P	P	22 45 58.7	-0.2
BOAV	**Boa Vista**	54.57	212	*e*P	P	22 45 59.8	+0.9
TX31	**Lajitas Ar. Si**	54.60	273	IAmb	IAmb	22 46 28.6	
	comp=Z,37nm,1.9s						
TXAR	**Lajitas Array**	54.60	273	P	P	22 45 59.0	-0.2
	comp=Z,1.4nm,0.8s,baz=44,slow=7.7,SNR=5.4						
TXAR				PcP	PcP	22 47 02.1	-0.1
	comp=Z,1.1nm,0.8s,baz=45,slow=3.5,SNR=4.1						
TXAR				LR	LR	23 10 09.7	
	comp=Z,1µm,18.4s,baz=48,slow=37						
	comp=Z,1.4nm,0.8s						
TXAR	**Lajitas Array**	54.60	273	P	P	22 45 59.3	+0.1
TXAR	**Lajitas Array**	54.60	273	P	P	22 45 59.3	+0.1
PPLA	**Purkeypile**	54.62	330	P	P	22 45 59.2	+0.3
PPLA	**Purkeypile**	54.62	330	P	P	22 45 59.8	+0.9
	baz=41						
H18K	**Honhosa River**	54.62	334	P	P	22 45 59.5	+0.7
	baz=38						
PMR	**Palmer**	54.63	328	P	P	22 45 59.8	+1.0
	baz=43						
CCUT	**Cedar City**	54.63	287	IAmb	IAmb	22 46 14.0	
	comp=Z,21nm,1.6s						
PINE	**Pine Mountain**	54.66	298	IAmb	IAmb	22 46 02.6	
	comp=Z,19nm,1.0s						
KNB	**Kanab**	54.68	286	IAmb	IAmb	22 46 14.9	
	comp=Z,26nm,1.3s						
J19K	**Poorman**	54.78	332	P	P	22 46 00.9	+0.9
	baz=40						
K20K	**Telida**	54.83	331	IAmb	IAmb	22 46 04.0	
	comp=Z,38nm,1.4s						
K20K	**Telida**	54.83	331	P	P	22 46 01.2	+0.9
	baz=40						
M22K	**Willow**	54.83	328	P	P	22 46 01.0	+0.8
	baz=42						
PWL	**Port Wells**	54.91	327	P	P	22 46 01.9	+1.0
	baz=43						
G17K	**Kiwalik Mounta**	54.93	336	P	P	22 46 01.6	+0.6
	baz=37						
EIL	**Elat**	55.01	86	LR	LR	23 13 45.0	
	comp=Z,689nm,18.5s,baz=267,slow=41						
SKT	**Skwentna**	55.10	329	P	P	22 46 02.6	+0.3
	baz=41						
J05D	**Fort Rock, OR**	55.16	297	IAmb	IAmb	22 46 11.6	
	comp=Z,21nm,0.9s						
RC01	**Rabbit Creek A**	55.20	328	P	P	22 46 03.9	+0.9
	baz=42						
P23K	**Montague Islan**	55.22	326	P	P	22 46 03.8	+0.6
	baz=43						
SUA	**Susitna One**	55.24	328	P	P	22 46 04.0	+0.6
	baz=42						
Q23K	**Middleton Isla**	55.27	325	P	P	22 46 04.1	+0.6
	baz=43						
TIXI	**Tiksi**	55.30	6	LR	LR	23 06 33.5	
	comp=Z,401nm,21.5s,baz=18,slow=33						
TIXI	**Tiksi**	55.30	6	P	P	22 46 04.5	+1.0
TIXI	**Tiksi**	55.30	6	*ce*P	P	22 46 05.0	+1.5
TIXI				pmax	pmax		
	comp=Z,34nm,1.0s						
K05A	**Summer Lake**	55.35	297	IAmb	IAmb	22 46 07.7	
	comp=Z,33nm,1.2s						
G16K	**Koyuk River**	55.44	336	P	P	22 46 05.5	+0.8
	baz=36						
AB31	**Akbulak array**	55.47	52	IAmb	IAmb	22 46 17.4	
	comp=Z,23nm,1.4s						
ABKAR	**Akbulak array**	55.47	52	P	P	22 46 05.0	-0.1
BUCK	**Buck Mountain**	55.48	299	IAmb	IAmb	22 46 18.6	
	comp=Z,42nm,1.5s						
J18K	**Innoko River**	55.50	332	P	P	22 46 05.5	+0.3
	baz=39						
J04A	**Umpqua Nationa**	55.66	298	IAmb	IAmb	22 46 22.9	
	comp=Z,33nm,1.3s						
M20K	**Styx River**	55.67	330	P	P	22 46 06.8	+0.4
	baz=40						
F15K	**North Star Dit**	55.73	337	P	P	22 46 07.2	+0.5
	baz=34						
SPU	**Mount Spurr**	55.87	329	IAmb	IAmb	22 46 11.0	
	comp=Z,19nm,0.9s						
N20K	**Mount Spurr**	55.91	329	P	P	22 46 08.9	+0.7
	baz=41						
L19K	**White Mountain**	55.96	331	P	P	22 46 08.7	+0.2
	baz=39						
H16K	**Elim**	56.03	336	P	P	22 46 09.4	+0.5
	baz=36						
G15K	**Niukluk**	56.18	337	P	P	22 46 10.2	+0.3
	baz=34						
J17K	**VABM Dome**	56.21	333	P	P	22 46 10.7	+0.5
	baz=37						
I17K	**Unalakleet**	56.25	334	P	P	22 46 10.9	+0.5
	baz=36						
F14K	**Arctic Creek**	56.32	338	P	P	22 46 11.4	+0.5
	baz=33						
L18K	**Granite Mounta**	56.47	331	P	P	22 46 12.3	+0.2
	baz=38						
K17K	**Iditarod**	56.54	333	P	P	22 46 13.1	+0.6
	baz=37						
PAHR	**Pah Rah Range**	56.58	293	IAmb	IAmb	22 46 28.7	

	comp=Z,35nm,1.4s						
J16K	**Anvik River**	56.71	334	P	P	22 46 14.2	+0.5
	baz=36						
TPNV	**Topopah Spring**	56.72	289	IAmb	IAmb	22 46 49.8	
	comp=Z,31nm,1.8s						
TUC	**Tucson**	56.76	281	P	P	22 46 15.1	+0.4
TUC	**Tucson**	56.76	281	P	P	22 46 15.1	+0.4
TUC				pmax	pmax		
	comp=Z,12nm,1.3s						
NV11	**Mina Array Sit**	56.77	291	IAmb	IAmb	22 46 29.2	
	comp=Z,23nm,1.3s						
M18K	**Stony River**	56.79	331	P	P	22 46 14.8	+0.5
	baz=38						
ANM	**Nome**	56.86	337	P	P	22 46 15.0	+0.2
	baz=33						
NVAR	**Mina Array Bea**	56.86	291	P	P	22 46 16.1	+0.7
	comp=Z,0.8nm,0.5s,baz=45,slow=7.6,SNR=7.6						
NVAR				LR	LR	23 09 53.9	
	comp=Z,2µm,18.0s,baz=55,slow=35						
	comp=Z,0.8nm,0.5s						
NVAR	**Mina Array Bea**	56.86	291	P	P	22 46 15.9	+0.5
K02D	**Willamette Mer**	56.87	298	IAmb	IAmb	22 46 22.7	
	comp=Z,22nm,1.2s						
O20K	**Slope Mountain**	56.90	328	P	P	22 46 15.2	0.0
	baz=40						
N19K	**Bonanza Creek**	56.91	329	P	P	22 46 15.8	+0.5
	baz=39						
HATC	**Hat Creek Radi**	56.97	295	IAmb	IAmb	22 46 35.2	
	comp=Z,20nm,0.9s						
BEKR	**Beckworth**	57.02	294	IAmb	IAmb	22 46 31.4	
	comp=Z,24nm,1.3s						
YBH	**Yreka Blue Hor**	57.02	297	LR	LR	23 09 54.4	
	comp=Z,131nm,18.4s,baz=62,slow=35						
GMN	**Gold Mountain**	57.05	290	IAmb	IAmb	22 46 31.4	
	comp=Z,24nm,1.5s						
LHV	**Little Huntoon**	57.10	291	IAmb	IAmb	22 46 52.9	
	comp=Z,49nm,1.9s						
L02F	**Cave Junction**	57.21	298	IAmb	IAmb	22 46 19.1	
	comp=Z,13nm,1.0s						
NBPS	**Pedro II - PI**	57.27	188	*e*P	P	22 46 18.4	+0.1
M17K	**Holitna River**	57.34	331	P	P	22 46 18.7	+0.5
	baz=37						
O19K	**Port Alsworth**	57.34	329	P	P	22 46 18.9	+0.6
	baz=39						
FURC	**Furnace Creek,**	57.40	289	IAmb	IAmb	22 46 35.6	
	comp=Z,41nm,1.6s						
DSP	**Deep Springs**	57.41	290	IAmb	IAmb	22 46 34.0	
	comp=Z,18nm,1.4s						
N18K	**Kilae Creek**	57.45	330	P	P	22 46 19.1	+0.1
	baz=38						
GWY	**Greenwater Val**	57.49	288	IAmb	IAmb	22 46 38.4	
	comp=Z,33nm,1.6s						
BORK	**Borovoye**	57.49	44	P	P	22 46 19.8	+0.4
BORK	**Borovoye**	57.49	44	*ce*P	P	22 46 20.3	+0.9
BORK				pmax	pmax		
	comp=Z,45nm,1.0s						
O03E	**Paynes Creek**	57.52	295	IAmb	IAmb	22 46 50.0	
	comp=Z,18nm,1.1s						
BVAR	**Borovoye Array**	57.54	44	P	P	22 46 20.6	+0.8
	comp=Z,38nm,0.8s,baz=314,slow=6.5,SNR=116						
BVAR				LR	LR	23 09 27.2	
	comp=Z,3µm,20.7s,baz=300,slow=34						
	comp=Z,38nm,0.8s						
N02D	**Trinity Center**	57.54	296	IAmb	IAmb	22 46 34.9	
	comp=Z,36nm,1.6s						
APG	**El Apazote**	57.58	251	LR	LR	23 10 49.8	
	comp=Z,133nm,19.6s,baz=74,slow=36						
ROSC	**El Rosal**	57.74	228	P	P	22 46 23.3	+1.2
	comp=Z,108nm,0.8s,baz=35,slow=16,SNR=32						
ROSC				LR	LR	23 08 30.7	
	comp=Z,577nm,21.8s,baz=22,slow=33						
ROSC	**El Rosal**	57.74	228	P	P	22 46 22.9	+0.9
ROSC	**El Rosal**	57.74	228	P	P	22 46 22.9	+0.9
ROSC				pmax	pmax		
	comp=Z,102nm,0.8s						
K15K	**Wolf Creek Mou**	57.77	334	P	P	22 46 21.2	0.0
	baz=35						
O18K	**Koktuh Hills**	57.89	329	P	P	22 46 21.7	-0.5
	baz=38						
Q20K	**Shuyak Island**	57.96	327	P	P	22 46 22.7	+0.2
	baz=39						
N17K	**Nushagak Hills**	57.96	330	P	P	22 46 22.8	+0.1
	baz=37						
KHBM	**Hayfork Bally**	58.04	296	IAmb	IAmb	22 46 37.5	
	comp=Z,24nm,1.4s						
MPMC	**Manual Prospec**	58.05	289	IAmb	IAmb	22 46 39.0	
	comp=Z,24nm,1.5s						
Q19K	**Cape Douglas,**	58.12	328	P	P	22 46 23.5	-0.3
	baz=39						
CWC	**Cottonwood Cre**	58.12	289	IAmb	IAmb	22 46 40.1	
	comp=Z,24nm,1.8s						
113A	**Mohawk Valley,**	58.21	283	IAmb	IAmb	22 46 42.0	
	comp=Z,22nm,1.5s						
L15K	**Ungalak Mounta**	58.26	333	P	P	22 46 24.9	+0.3
	baz=35						
P18K	**Big Mountain,**	58.26	329	P	P	22 46 25.3	+0.5
	baz=38						
JTS	**Las Juntas de**	58.36	242	LR	LR	23 08 20.0	
	comp=Z,1µm,22.0s,baz=5.5,slow=33						
WSHM	**Spangler Hills**	58.38	288	IAmb	IAmb	22 46 41.0	
	comp=Z,18nm,1.4s						
N16K	**Nishlik Lake**	58.47	331	P	P	22 46 26.4	+0.2
	baz=36						
CMIG	**Matias Romero**	58.50	256	LR	LR	23 11 04.2	
	comp=Z,1µm,21.3s,baz=26,slow=36						
O17K	**Koliganek Bris**	58.54	330	P	P	22 46 26.6	-0.1
	baz=37						
BELC	**Belle Mtn. Jos**	58.64	286	IAmb	IAmb	22 46 44.3	
	comp=Z,31nm,1.3s						
KDAK	**Kodiak Island**	58.66	326	LR	LR	23 11 05.4	
	comp=Z,879nm,19.3s,baz=37,slow=35						
KDAK	**Kodiak Island**	58.66	326	P	P	22 46 27.6	0.0
	baz=39						
Q18K	**Katmai Hardscr**	58.78	328	P	P	22 46 28.4	-0.1
	baz=38						
M15K	**Kasigluk River**	58.85	332	P	P	22 46 28.7	-0.1
	baz=35						
L14K	**Kuka Creek**	58.86	334	P	P	22 46 29.4	+0.5
	baz=34						
K13K	**Kusilvak Mount**	58.89	335	P	P	22 46 29.4	+0.4
	baz=33						
O16K	**Kokwok River B**	58.98	330	P	P	22 46 30.0	+0.3
	baz=36						
NBPV	**Pedro Velho**	59.01	180	*e*P	P	22 46 30.9	+0.5
M14K	**Bethel**	59.16	333	P	P	22 46 30.9	+0.1
	baz=34						
PFO	**Pinyon Flats O**	59.19	286	LR	LR	23 12 57.2	
	comp=Z,731nm,18.1s,baz=55,slow=37						
PFO	**Pinyon Flats O**	59.19	286	P	P	22 46 32.2	+0.5
PFO				IAmb	IAmb	22 46 41.1	
	comp=Z,24nm,1.3s						
PFO	**Pinyon Flats O**	59.19	286	P	P	22 46 32.2	+0.5
PFO				pmax	pmax		
	comp=Z,25nm,1.3s						
ITTB	**Itaituba**	59.64	204	*e*P	P	22 46 35.4	+0.6
PRPB	**Parauapebas**	60.12	197	*e*P	P	22 46 38.4	+0.3
FLOC	**Florencia**	61.23	228	P	P	22 46 45.5	-0.2
FLOC				IAmb	IAmb	22 46 49.4	
	comp=Z,13nm,1.0s						
TEFE	**Tefe**	61.47	214	*e*P	P	22 46 48.5	+1.3
NBTA	**Tacaratu-PE**	61.76	184	*e*P	P	22 46 49.6	+0.4
NPGB	**Novo Progresso**	62.13	203	*e*P	P	22 46 51.5	-0.1
SMTB	**Santa Maria do**	62.39	194	*e*P	P	22 46 54.0	+0.6
ZAA0	**Zalesovo Array**	62.40	35	IAmb	IAmb	22 46 55.0	
	comp=Z,22nm,1.7s						
ZALV	**Zalesovo Beam**	62.40	35	P	P	22 46 52.6	-0.6
	comp=Z,1.5nm,0.6s,baz=332,slow=6.8,SNR=9.6						
ZALV				PcP	PcP	22 47 32.4	-0.1
	comp=Z,1.5nm,0.7s,baz=325,slow=4.1,SNR=2.2						
ZALV				LR	LR	23 14 46.1	
	comp=Z,441nm,18.2s,baz=308,slow=37						
	comp=Z,1.5nm,0.6s						
ZALV	**Zalesovo Beam**	62.40	35	P	P	22 46 52.2	-0.9
ZALV	**Zalesovo Beam**	62.40	35	*i* P	P	22 46 53.2	+0.1
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
LPIG	**La Paz**	62.45	274	LR	LR	23 13 18.6	
	comp=Z,720nm,22.0s,baz=52,slow=35						
KURK	**Kurchatov**	62.64	41	P	P	22 46 54.2	-0.5
KURK				IAmb	IAmb	22 47 02.3	
	comp=Z,14nm,0.8s						
KURK	**Kurchatov**	62.64	41	*ce*P	P	22 46 55.1	+0.3
KURK				pmax	pmax		
	comp=Z,35nm,1.7s						
KURBB	**Kurchatov Arra**	62.68	41	P	P	22 46 55.2	+0.2
	comp=Z,7.9nm,0.7s,baz=324,slow=7.2,SNR=57						
KURBB				LR	LR	23 12 44.8	
	comp=Z,896nm,21.1s,baz=320,slow=35						
	comp=Z,7.9nm,0.7s						
SDPT	**Sand Point**	63.21	329	P	P	22 46 58.4	-0.1
	baz=34						
CHNA	**Chernabura Isl**	63.36	328	P	P	22 46 59.5	+0.1
	baz=34						
OTAV	**Otavalo**	63.70	230	*e*P	P	22 47 04.1	+1.4
SEY	**Seymchan**	64.45	356	LR	LR	23 14 01.2	
	comp=Z,744nm,20.5s,baz=6.5,slow=35						
SEY	**Seymchan**	64.45	356	*ce*P	P	22 47 08.0	+1.5
SEY				pmax	pmax		
	comp=Z,12nm,1.0s						
BRLS	**Borolday**	64.71	52	⇓*i*P	P	22 47 09.7	+1.1
	comp=Z,9.7nm,1.1s						
BRLS	**Borolday**	64.71	52	*d i*P	P	22 47 09.6	+1.0
BRLS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YAK	**Yakutsk**	64.84	8	LR	LR	23 14 10.1	
	comp=Z,313nm,20.9s,baz=334,slow=35						
YAK	**Yakutsk**	64.84	8	P	P	22 47 07.9	-1.1
YAK	**Yakutsk**	64.84	8	*e*P	P	22 47 08.2	-0.9
YAK				*e**PP	pP	22 47 11.7	-0.1
YAK				*e*PPP	PPP	22 51 04.1	
YAK				*e*S	S	22 55 48.6	-0.8
YAK				*e*SS	SS	23 00 00.0	+0.4
YAK				pmax	pmax		
	comp=Z,21nm,0.9s						
YAK				pmax	pmax		
	comp=N,12nm,1.2s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				smax	smax		
	comp=N,72nm,2.8s						
YAK				smax	smax		
	comp=E,71nm,2.6s						
KKAR	**Karatay Array**	64.97	51	P	P	22 47 10.3	0.0
KKAR	**Karatay Array**	64.97	51	P	P	22 47 10.3	0.0
BTLS	**Baital**	65.11	48	⇓*i*P	P	22 47 11.6	+0.5
BTLS	**Baital**	65.11	48	*d i*P	P	22 47 11.6	+0.5
CHM	**Chimkent**	65.14	52	*e*P	P	22 47 11.8	+0.3
	comp=E,6.6nm,0.7s						
CHM	**Chimkent**	65.14	52	*e*P	P	22 47 11.7	+0.3
CHM				pmax	pmax		
	comp=Z,7.0nm,0.7s						
IUG	**Iuzhnay**	65.48	52	⇓*i*P	P	22 47 14.0	+0.3
	comp=Z,29nm,1.2s						
IUG	**Iuzhnay**	65.48	52	*d i*P	P	22 47 14.0	+0.3
IUG				pmax	pmax		
	comp=Z,29nm,1.2s						
DZA	**Taraz**	65.52	51	*e*P	P	22 47 14.3	+0.3
DZA	**Taraz**	65.52	51	*e*P	P	22 47 14.2	+0.3
SDBA	**SAO DESIDERIO**	65.53	191	*e*P	P	22 47 13.7	-0.4
RAYN	**Ar Rayn**	65.90	82	P	P	22 47 15.8	-0.8
RAYN	**Ar Rayn**	65.90	82	*i* P	P	22 47 16.6	0.0
	SNR=6.4						
RAYN	**Ar Rayn**	65.90	82	P	P	22 47 15.8	-0.8
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CLDB	**Colider**	65.92	203	*e*P	P	22 47 16.7	0.0
SNDB	**Serra Nova Dou**	66.05	198	*e*P	P	22 47 17.4	-0.1
SGDS	**Sogindy**	66.61	48	*e*P	P	22 47 21.4	+0.4
DGZ	**Jazzator, Alta**	66.81	37	*i* P	P	22 47 23.3	+1.1
DGZ				pmax	pmax		
	comp=Z,16nm,1.2s						
PDRB	**Porto dos Gac**	66.86	203	*e*P	P	22 47 22.8	+0.2
TDK	**Taldyqorghan**	67.06	45	*e*P	P	22 47 24.2	+0.5
	comp=Z,12nm,1.0s						
TDK	**Taldyqorghan**	67.06	45	*e*P	P	22 47 24.2	+0.5
TDK				pmax	pmax		
	comp=Z,12nm,1.0s						
MAKZ	**Makanchi**	67.10	42	P	P	22 47 23.7	-0.2
MAKZ	**Makanchi**	67.10	42	P	P	22 47 23.7	-0.2
MAKZ				pmax	pmax		
	comp=Z,28nm,1.2s						
AAK	**Ala-Archa**	67.19	49	LR	LR	23 16 24.1	
	comp=Z,2µm,18.6s,baz=319,slow=36						
AAK	**Ala-Archa**	67.19	49	P	P	22 47 24.7	-0.1
AAK				IAmb	IAmb	22 47 38.1	
	comp=Z,26nm,1.4s						
AAK	**Ala-Archa**	67.19	49	*i* P	P	22 47 25.9	+1.1
	SNR=13						
AAK	**Ala-Archa**	67.19	49	*ce*P	P	22 47 26.6	+1.9
AAK				pmax	pmax		
	comp=Z,18nm,1.3s						
MK31	**Makanchi Array**	67.23	42	*ce*P	P	22 47 25.3	+0.5
MKAR	**Makanchi Array**	67.23	42	P	P	22 47 25.1	+0.3
	comp=Z,8.9nm,0.8s,baz=331,slow=5.0,SNR=55						
MKAR				LR	LR	23 16 54.4	
	comp=Z,1µm,18.3s,baz=297,slow=36						
	comp=Z,8.9nm,0.8s						
MKAR	**Makanchi Array**	67.23	42	P	P	22 47 24.5	-0.3
MKAR	**Makanchi Array**	67.23	42	P	P	22 47 24.5	-0.3
HRA	**Herat**	67.39	63	IAmb	IAmb	22 47 51.5	
	comp=Z,25nm,1.7s						
ARXS	**Arharly**	67.44	46	*e*P	P	22 47 26.3	+0.1
NBIT	**Itapeh - BA**	67.58	185	*e*P	P	22 47 28.0	+0.9
ZSN	**Zaisan**	67.71	40	*e*P	P	22 47 28.4	+0.6
ZSN	**Zaisan**	67.71	40	*e*P	P	22 47 28.4	+0.6
CHGR	**Chuyangaron**	67.73	55	*i* P	P	22 47 29.1	+1.0
CHGR				pmax	pmax		
	comp=Z,18nm,1.1s						
AAA	**Alma-Ata**	67.83	47	*e*P	P	22 47 29.0	+0.3
	comp=Z,15nm,0.8s						
AAA	**Alma-Ata**	67.83	47	*e*P	P	22 47 28.9	+0.3
AAA				pmax	pmax		
	comp=Z,15nm,0.8s						
MA2	**Magadan**	67.86	357	LR	LR	23 16 00.7	
	comp=Z,529nm,21.1s,baz=12,slow=35						
MDOK	**Medeo**	67.93	47	*e*P	P	22 47 29.6	+0.2
MDOK	**Medeo**	67.93	47	*e*P	P	22 47 29.6	+0.2
BOOM	**Boomskoye usch**	67.96	48	IAmb	IAmb	22 47 31.7	
	comp=Z,14nm,1.0s						
TNSS	**Tian-Shan**	67.98	47	*e*P	P	22 47 30.0	0.0
TNSS	**Tian-Shan**	67.98	47	*e*P	P	22 47 30.0	0.0
CMC01	**Camacan, BA**	68.02	185	*e*P	P	22 47 31.7	+1.8
SHAA	**Shahritus**	68.05	57	IAmb	IAmb	22 47 31.7	
	comp=Z,46nm,1.2s						
JANB	**Januaria**	68.08	190	*e*P	P	22 47 30.0	-0.4
SATY	**Saty**	68.61	46	*e*P	P	22 47 34.0	+0.3
	comp=Z,12nm,1.1s						
SATY	**Saty**	68.61	46	*e*P	P	22 47 33.9	+0.3
SATY				pmax	pmax		
	comp=Z,13nm,1.1s						
KDJ	**Kajisay**	68.81	48	IAmb	IAmb	22 47 47.4	
	comp=Z,15nm,1.1s						
UZB	**Uzynbulak**	68.81	46	*e*P	P	22 47 35.2	+0.3
	comp=Z,20nm,1.2s						
UZB	**Uzynbulak**	68.81	46	*e*P	P	22 47 35.2	+0.3
UZB				pmax	pmax		
	comp=Z,20nm,1.2s						
SHLS	**Shalkode**	68.99	46	*e*P	P	22 47 37.5	+1.4
	comp=Z,16nm,1.1s						
SHLS	**Shalkode**	68.99	46	*e*P	P	22 47 37.4	+1.4
SHLS				pmax	pmax		
	comp=Z,16nm,1.1s						
VILB	**Vilhena**	69.03	206	P	P	22 47 36.3	0.0
VILB	**Vilhena**	69.03	206	*e*P	P	22 47 37.1	+0.8
BDFB	**Brasilia**	69.11	194	P	P	22 47 36.0	-0.9
	comp=Z,8.2nm,0.9s,baz=13,slow=5.3,SNR=13						
BDFB				LR	LR	23 12 41.3	
	comp=Z,687nm,20.8s,baz=350,slow=32						
	comp=Z,8.2nm,0.9s						
BDFB	**Brasilia**	69.11	194	P	P	22 47 35.7	-1.2
BDFB	**Brasilia**	69.11	194	P	P	22 47 36.0	-0.9
GUA01	**Guaratinga, BA**	69.24	185	*e*P	P	22 47 37.5	0.0
KNGR	**Kungurtug, Tuv**	69.41	30	*i* P	P	22 47 39.6	+1.1
KNGR				pmax	pmax		
	comp=Z,20nm,1.1s						
ARAG	**Araguaiana, MT**	69.79	197	*e*P	P	22 47 41.4	+0.5
MANEM	**Manem**	69.84	54	IAmb	IAmb	22 48 02.4	
	comp=Z,156nm,1.7s						
TLY	**Talaya**	70.20	26	*ce*P	P	22 47 46.3	+3.1
TLY				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KSH	**Kashi**	70.34	50	P	P	22 47 46.7	+2.3
KSH				sP	pwP	22 47 52.7	+1.5
KSH				pmax	pmax		
	comp=Z,22nm,1.2s						
KSH				pmax	pmax		
	comp=Z,440nm,4.1s						
KSH				LR	LR		
	comp=Z,1µm,19.9s						
KSH				LR	LR		
	comp=Z,1µm,15.5s						
KSH				LR	LR		
	comp=Z,1µm,20.6s						
WUS	**Wushi**	70.47	47	IAmb	IAmb	22 47 58.7	
	comp=Z,17nm,1.2s						
SALV	**Santo Antonio**	70.76	201	*e*P	P	22 47 47.4	+0.6
NAZ	**Nazwa, Dubai**	70.82	74	P	P	22 47 46.5	-0.8
MSFE	**Esma-Masafi**	70.83	73	P	P	22 47 47.0	-0.4
KBL	**Kabul**	70.86	58	P	P	22 47 47.5	-0.2
KBL				IAmb	IAmb	22 48 00.8	
	comp=Z,19nm,1.2s						
KBL	**Kabul**	70.86	58	P	P	22 47 47.5	-0.2
KBL				pmax	pmax		
	comp=Z,19nm,1.3s						
PTLB	**Pontes e Lacer**	71.14	205	P	P	22 47 48.9	-0.3
PTLB				IAmb	IAmb	22 47 51.2	
	comp=Z,12nm,0.8s						
PTLB	**Pontes e Lacer**	71.14	205	*e*P	P	22 47 49.3	+0.2
UOSS	**Minazif**	71.17	74	P	P	22 47 48.4	-1.1
HATD	**Hatta, Dubai**	71.22	74	*i* P	P	22 47 49.3	-0.5
	SNR=5.1						
DIAM	**Diamantina, MG**	71.23	189	*e*P	P	22 47 50.3	+0.5
ASHO	**Ashiyiah**	71.28	74	P	P	22 47 49.4	-0.8
SJMB	**Sao Joao De Ma**	71.43	186	*e*P	P	22 47 51.0	+0.2
IPMB	**Ipameri, GO**	71.45	193	*e*P	P	22 47 52.0	+0.9
BSFB	**Barra de Sao F**	71.54	186	*e*P	P	22 47 51.3	-0.2
ALNE	**Al Ain**	71.59	74	P	P	22 47 51.7	-0.3
WMQ	**Urumqi**	71.83	40	⇓P	P	22 47 54.5	+1.2
WMQ				pP	pwP	22 48 01.2	+1.0
WMQ				sP	PcP	22 48 08.6	-3.5
WMQ				pmax	pmax		
	comp=Z,23nm,1.5s						
WMQ				LR	LR		
	comp=Z,1µm,13.9s						
WMQ				LR	LR		
	comp=Z,1µm,17.3s						
WMQ				LR	LR		
	comp=Z,1µm,24.2s						
SOHO	**SOHO**	71.98	74	P	P	22 47 53.4	-0.9
RIB01	**Linhares ES**	71.99	185	*e*P	P	22 47 54.0	-0.2
SHEM	**Shemya Is, Ala**	72.06	342	LR	LR	23 19 10.3	
	comp=Z,307nm,21.9s,baz=38,slow=36						
SIV	**San Ignacio**	72.17	206	P	P	22 47 54.9	-0.5
	comp=Z,5.5nm,0.8s,baz=94,slow=0.6						
SIV				LR	LR	23 16 42.4	
	comp=Z,555nm,19.4s,baz=18,slow=34						
	comp=Z,5.5nm,0.8s						
PP1B	**Ponte de Pedra**	72.23	200	*e*P	P	22 47 55.4	-0.3
ZEA	**Zeya**	72.77	11	*e*P	P	22 47 59.7	+1.1
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
ZEA				MLR	MLR		
	comp=N,200nm,18.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,16.0s						
ITRB	**Iturama**	73.46	195	*e*P	P	22 48 04.0	+1.0
ATD	**Arta Tunnel**	73.50	93	LR	LR	23 21 32.1	
	comp=Z,18nm,18.0s,baz=352,slow=37						
NNA	**Nana**	73.88	223	LR	LR	23 18 33.5	
	comp=Z,393nm,22.0s,baz=0.0,slow=34						
PETK	**Petropavlovsk-**	73.92	352	P	P	22 48 05.8	+0.4
	comp=Z,8.5nm,1.0s,baz=23,slow=4.7,SNR=4.0						
PETK				LR	LR	23 22 02.6	
	comp=Z,741nm,19.4s,baz=8.6,slow=37						
	comp=Z,8.5nm,1.0s						
PETK	**Petropavlovsk-**	73.92	352	P	P	22 48 05.4	0.0
PETK	**Petropavlovsk-**	73.92	352	P	P	22 48 05.4	0.0
PET	**Petropavlovsk**	73.92	352	*e*P	P	22 48 07.5	+2.2
PET				*e*S	SKiKP	22 57 34.1	+0.7
PET				MLR	MLR		
	comp=Z,1µm,19.0s						
BSCB	**Bom Sucesso**	74.01	190	*e*P	P	22 48 06.2	0.0
SONM	**Songino Array**	74.44	26	P	P	22 48 09.2	+0.4
	comp=Z,21nm,0.9s,baz=332,slow=5.6,SNR=77						
SONM				LR	LR	23 22 41.2	
	comp=Z,414nm,18.0s,baz=333,slow=37						
	comp=Z,21nm,0.9s						
SONM	**Songino Array**	74.44	26	P	P	22 48 09.1	+0.4
SONM	**Songino Array**	74.44	26	P	P	22 48 09.1	+0.4
SONM				pmax	pmax		
	comp=Z,34nm,1.1s						
BB19B	**Bebedouro**	74.52	193	*e*P	P	22 48 09.5	+0.3
LPAZ	**La Paz**	74.57	213	P	P	22 48 09.8	-0.4
	comp=Z,7.9nm,0.8s,baz=12,slow=10,SNR=27						
LPAZ				LR	LR	23 20 06.4	
	comp=Z,250nm,18.8s,baz=8.0,slow=35						
	comp=Z,7.9nm,0.8s						
LPAZ	**La Paz**	74.57	213	*e*P	P	22 48 10.5	+0.2
ULN	**Ulaanbaatar**	74.59	25	*ce*P	P	22 48 10.5	+0.9
ULN				pmax	pmax		
	comp=Z,39nm,1.0s						
AQDB	**Aquidauana**	75.19	200	*e*P	P	22 48 14.0	+0.9
BDQN	**Bodoquena, MS**	75.39	201	*e*P	P	22 48 14.9	+0.8
LODK	**Lodwar**	75.42	104	P	P	22 48 15.8	+1.1
HILR	**Hailar Array B**	75.76	17	P	P	22 48 17.1	+0.9
	comp=Z,13nm,0.9s,baz=352,slow=5.8,SNR=14						
HILR				LR	LR	23 20 48.2	
	comp=Z,389nm,21.6s,baz=260,slow=35						
	comp=Z,13nm,0.9s						
MBAR	**Mbarara**	75.99	110	P	P	22 48 18.3	+0.3
MBAR				IAmb	IAmb	22 48 21.8	
	comp=Z,30nm,1.6s						
MBAR	**Mbarara**	75.99	110	*i* P	P	22 48 18.4	+0.3
MBAR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MURT	**Porto Murtinho**	76.75	202	*e*P	P	22 48 22.2	+0.3
SPB	**Sao Paulo**	76.87	192	P	P	22 48 22.5	0.0
SPB	**Sao Paulo**	76.87	192	*e*P	P	22 48 23.4	+0.9
FRTB	**Fartura**	76.91	194	*e*P	P	22 48 23.4	+0.6
LDASE	**Londrina, Braz**	77.20	195	*e*P	P	22 48 24.9	+0.5
AMBA	**Amambai (Brazi**	77.43	199	*e*P	P	22 48 26.2	+0.5
PB12	**IPOC Station P**	77.48	214	IAmb	IAmb	22 48 28.2	
	comp=Z,21nm,0.9s						
PET01	**Itanhaem-SP**	77.54	192	*e*P	P	22 48 27.6	+1.4
GO01	**Chusmiza**	78.08	213	IAmb	IAmb	22 48 31.6	
	comp=Z,16nm,0.8s						
PB11	**IPOC Station P**	78.32	213	IAmb	IAmb	22 48 32.1	
	comp=Z,21nm,0.8s						
PB08	**IPOC Station P**	78.51	213	P	P	22 48 31.0	-1.2
PB08				IAmb	IAmb	22 48 34.0	
	comp=Z,18nm,0.9s						
PTGB	**Pitanga**	78.65	196	*e*P	P	22 48 33.4	+0.9
PB02	**IPOC Station P**	79.85	213	IAmb	IAmb	22 48 41.0	
	comp=Z,25nm,1.0s						
GTA	**Gaotai**	80.11	34	*e*P	P	22 48 39.9	-0.7
GTA				S	S	22 58 49.3	+4.4
GTA				SS	SS	23 03 53.2	-0.7
GTA				pmax	pmax		
	comp=Z,15nm,1.3s						
GTA				LR	LR		
	comp=Z,770nm,17.8s						
GTA				LR	LR		
	comp=Z,830nm,17.8s						
GTA				LR	LR		
	comp=Z,1µm,17.8s						
XLT	**XiLinHaoTe**	80.47	21	*e*P	P	22 48 43.3	+0.9
XLT				pP	sP	22 48 47.5	+1.4
XLT				sP	pwP	22 48 50.0	+0.7
XLT				S	S	22 58 52.1	+3.6
XLT				pmax	pmax		
	comp=Z,8.0nm,1.7s						
XLT				pmax	pmax		
	comp=Z,260nm,5.1s						
XLT				LR	LR		
	comp=Z,54nm,22.5s						
XLT				LR	LR		
	comp=Z,220nm,18.3s						
XLT				LR	LR		
	comp=Z,760nm,19.6s						
YSS	**Yuzhno-Sakhali**	80.58	2	*e*P	P	22 48 43.8	+1.0
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,500nm,17.0s						
BNX	**BinXian**	80.65	12	⇑P	P	22 48 43.5	+0.3
BNX				pmax	pmax		
	comp=Z,18nm,1.8s						
ITAB	**Concordia**	81.12	195	*e*P	P	22 48 46.2	+0.5
CPUP	**Villa Florida**	81.21	200	P	P	22 48 45.2	-1.0
	comp=Z,2.0nm,0.8s,baz=280,slow=6.1,SNR=23						
CPUP				LR	LR	23 20 18.9	
	comp=Z,111nm,21.6s,baz=222,slow=32						
	comp=Z,2.0nm,0.8s						
CPUP	**Villa Florida**	81.21	200	*e*P	P	22 48 45.4	-0.8
MDJ	**Mudanjiang**	82.03	11	IAmb	IAmb	22 48 52.6	
	comp=Z,24nm,1.1s						
MDJ	**Mudanjiang**	82.03	11	P	P	22 48 51.1	+0.5

MDJ				pmax	pmax		
	comp=Z,27nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,480nm,5.5s						
BTO	Baotou	82.12	26	eP	P	22 48 49.1	-2.2
BTO				sP	PcP	22 48 56.6	-0.1
BTO				PP	PP	22 51 57.5	-0.9
BTO				S	S	22 59 02.8	-2.9
BTO				pmax	pmax		
	comp=Z,11nm,0.5s						
BTO				pmax	pmax		
	comp=Z,590nm,4.1s						
BTO				LR	LR		
	comp=Z,530nm,17.5s						
BTO				LR	LR		
	comp=Z,1µm,17.5s						
BTO				LR	LR		
	comp=Z,790nm,17.5s						
CN2	Changchun	82.28	14	P	P	22 48 51.5	-0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,300nm,5.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
CN2				LR	LR		
	comp=Z,400nm,16.0s						
CN2				LR	LR		
	comp=Z,400nm,16.0s						
HHC	Hu-ho-hao-te	82.29	25	eP	P	22 48 52.7	+0.5
HHC				pmax	pmax		
	comp=Z,12nm,1.2s						
HHC				pmax	pmax		
	comp=Z,86nm,4.5s						
HHC				LR	LR		
	comp=Z,390nm,18.0s						
HHC				LR	LR		
	comp=Z,450nm,21.8s						
HHC				LR	LR		
	comp=Z,620nm,19.4s						
USRK	Ussuriysk Ar.	82.70	9	P	P	22 48 54.2	+0.1
	comp=Z,5.5nm,0.9s,baz=336,slow=3.2,SNR=8.7						
	comp=Z,5.5nm,0.9s						
CNLB	Canela	82.97	194	eP	P	22 48 56.5	+1.1
ASAJ	Asahikawa	83.42	2	LR	LR	23 26 58.3	
	comp=Z,267nm,18.4s,baz=350,slow=36						
BJI	Beijing	84.17	22	P	P	22 49 01.7	0.0
BJI				S	S	22 59 31.6	+5.3
BJI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BJI				LR	LR		
	comp=Z,230nm,23.5s						
BJI				LR	LR		
	comp=Z,170nm,17.7s						
BJI				LR	LR		
	comp=Z,360nm,22.4s						
CPSB	Cacapava Do Su	84.44	196	eP	P	22 49 03.1	+0.1
LZH	Lanzhou	84.46	32	eP	P	22 49 04.0	+0.5
LZH				sP	pwP	22 49 10.9	+0.5
LZH				PP	PP	22 52 15.5	-2.3
LZH				SS	SS	23 05 01.7	+3.1
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
LZH				pmax	pmax		
	comp=Z,300nm,8.6s						
LZH				LR	LR		
	comp=Z,410nm,18.5s						
LZH				LR	LR		
	comp=Z,680nm,19.6s						
LZH				LR	LR		
	comp=Z,930nm,19.2s						
LZDM	Lanzhou Array	84.53	33	P	P	22 49 04.2	+0.2
	comp=Z,2.2nm,0.5s,baz=316,slow=4.0,SNR=6.9						
	comp=Z,2.2nm,0.5s						
AC02	Maricunga	84.75	210	P	P	22 49 05.6	+0.4
AC02				IAmb	IAmb	22 49 08.6	
	comp=Z,9.9nm,0.8s						
TSUM	Tsumeb	84.87	131	LR	LR	23 27 21.4	
	comp=Z,208nm,18.2s,baz=328,slow=36						
EVN	Everest	84.93	49	IAmb	IAmb	22 49 23.2	
	comp=Z,14nm,1.2s						
PSAL	Palomas, Salto	85.87	199	eP	P	22 49 10.0	0.0
HNS	HongShan	86.34	24	⇑P	P	22 49 12.9	+0.3
HNS				PP	PP	22 52 34.4	+1.6
HNS				S	S	22 59 52.3	+4.5
HNS				pmax	pmax		
	comp=Z,19nm,1.4s						
HNS				LR	LR		
	comp=Z,610nm,17.6s						
HNS				LR	LR		
	comp=Z,380nm,15.4s						
HNS				LR	LR		
	comp=Z,480nm,17.7s						
DL2	Dalian	86.40	18	P	P	22 49 11.0	-1.9
DL2				S	S	22 59 48.3	0.0
DL2				pmax	pmax		
	comp=Z,16nm,0.9s						
DL2				pmax	pmax		
	comp=Z,210nm,7.3s						
DL2				LR	LR		
	comp=Z,590nm,16.0s						
DL2				LR	LR		
	comp=Z,440nm,16.5s						
DL2				LR	LR		
	comp=Z,780nm,17.5s						
XAN	Xi'an	87.93	29	⇓P	P	22 49 20.2	-0.3
XAN				pmax	pmax		
	comp=Z,11nm,0.9s						
TIA	Tai'an	88.05	22	P	P	22 49 20.8	-0.2
TIA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSRS	Korea Array	88.86	14	P	P	22 49 23.7	-1.0
	comp=Z,1.7nm,0.7s,baz=350,slow=5.6,SNR=5.8						
	comp=Z,1.7nm,0.7s						
KSAR	Wonju Array Be	88.87	14	P	P	22 49 23.5	-1.2
KSAR	Wonju Array Be	88.87	14	P	P	22 49 23.5	-1.2
CFA	Coronel Fontan	88.96	208	P	P	22 49 24.9	-0.1
	comp=Z,2.9nm,0.9s,baz=18,slow=4.8,SNR=7.0						
	comp=Z,2.9nm,0.9s						
CD2	Chengdu	89.16	35	P	P	22 49 24.3	-2.0
CD2				S	S	23 00 12.2	-2.9
CD2				LR	LR		
	comp=Z,2µm,21.6s						
CD2				LR	LR		
	comp=Z,2µm,17.1s						
CD2				LR	LR		
	comp=Z,2µm,20.2s						
HYB	Hyderabad	89.67	61	eP	P	22 49 29.1	+0.2
MJAR	Matsushiro Arr	90.81	6	LR	LR	23 29 47.7	
	comp=Z,165nm,20.2s,baz=346,slow=35						
MATP	Matopo	91.20	123	LR	LR	23 29 08.6	
	comp=Z,380nm,20.4s,baz=327,slow=35						
BRDH	Bariadhala	91.67	48	LR	LR	23 34 11.2	
	comp=Z,666nm,18.4s,baz=338,slow=38						
NJ2	Nanjing	92.43	22	eP	P	22 49 40.4	-1.0
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
PZH	PanZhiHua	92.44	38	P	P	22 49 41.2	-0.6
LBTB	Lobatse	93.61	128	LR	LR	23 29 28.9	
	comp=Z,230nm,21.5s,baz=332,slow=34						
JHJ	Hachijo jima 2	94.30	4	LR	LR	23 31 41.0	
	comp=Z,157nm,21.7s,baz=353,slow=35						
BOSA	Boshof	96.50	130	LR	LR	23 31 07.5	
	comp=Z,384nm,21.0s,baz=338,slow=34						
PLCA	Paso Flores	98.16	207	LR	LR	23 32 38.3	
	comp=Z,302nm,21.4s,baz=12,slow=34						
CMAR	Chiang Mai Arr	98.56	44	P	P	22 50 09.6	-0.1
	comp=Z,0.7nm,0.3s,baz=348,slow=5.3,SNR=1.6						
	comp=Z,0.7nm,0.3s						
OPO	Ambohidratompo	99.92	107	LR	LR	23 37 56.8	
	comp=Z,188nm,18.2s,baz=196,slow=37						
QIZ	Qiongzhong	102.19	34	P	Pdif	22 50 21.2	-4.6
QIZ				PP	PP	22 54 35.4	-1.4
QIZ				SS	SS	23 09 11.3	-1.0
QIZ				LR	LR		
	comp=Z,450nm,29.5s						
QIZ				LR	LR		
	comp=Z,350nm,20.3s						
QIZ				LR	LR		
	comp=Z,450nm,24.5s						
TAOE	Nuku Hiva Isla	106.22	277	eLR	LR	23 25 45.0	
	comp=Z,1µm,23.6s						
TBI	Tubuai	123.03	274	eLR	LR	23 33 33.2	
	comp=Z,5µm,38.5s						
SNAA	Sanae	126.24	168	PKP	PKPdf	22 55 31.6	-0.2
	comp=Z,3.5nm,0.8s,baz=0.0,slow=5.1,SNR=11						
NVL	N'lazarevskaya	127.74	162	eP	Pdif	22 52 09.1	-8.8
NVL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SYO	Syowa Base	133.07	152	⇓epPdiff	pPdif	22 52 46.0	+1.7
QSPA	South Pole Qui	142.71	180	PKhKP	PKPpre	22 55 57.8	
	comp=Z,4.3nm,0.8s,baz=182,slow=3.9,SNR=26						
WB0	Warramunga Arr	145.98	18	PKPdf	PKPdf	22 56 09.7	+0.1
WRA	Warramunga Arr	146.14	18	PKPbc	PKPdf	22 56 10.1	+0.1
	comp=Z,20nm,0.8s,baz=342,slow=3.1,SNR=92						
WRA	Warramunga Arr	146.14	18	PKPdf	PKPdf	22 56 09.3	-0.6
WRA	Warramunga Arr	146.14	18	PKP2	PKPdf	22 56 09.3	-0.6
AS31	Alice Springs	149.66	21		PKPbc	22 56 19.2	-1.1
ASAR	Alice Springs	149.67	21	PKPbc	PKPbc	22 56 18.8	-1.5
	comp=Z,15nm,0.8s,baz=346,slow=2.5,SNR=69						
ASAR				PP	PP	22 59 53.3	+0.5
	comp=Z,0.2nm,0.4s,baz=340,slow=5.0,SNR=4.1						
ASAR	Alice Springs	149.67	21	PKPdf	PKPdf	22 56 14.0	-1.7
ASAR	Alice Springs	149.67	21	PKIKP	PKPdf	22 56 14.0	-1.7
VNDA	Vanda	154.44	188	PKPbc	PKPbc	22 56 27.8	-1.7
	comp=Z,2.3nm,0.8s,baz=179,slow=1.7,SNR=4.9						

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*DJA **09** 22:38:41.3±3.1, 16°N±29°×12°1E±1°7, h10^{km}, M4.8/11, mb4.7/11, mB5.4/7, Mw(mB)4.8/7*

*IDC **09** 22:39:12.7±0.5, 13°.56N×121°.04E, h132^{km}±5^{km}, mb3.6/7, mbtmp4.1/8, Error ellipse: s-maj=39.4km s-min=12.8km az=65.0*

*NEIC **09** 22:39:13.3±1.2, 13°.63N±0°.05×121°.1E±0°.1, h144^{km}±5^{km}, mb4.4/23, Error ellipse: s-maj=19.5km s-min=6.8km az=91.0*

ISC 09 22:39:13.6±0.5**, 13°.62N**±0°.06×**121°.1E**±0°.1**, h150^{km}, n49, σ1.^{s}42**/51**, mb4.3**/19**, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.49	347	P	Pn	22 39 34.1	-1.0
	4µm,0.5s,baz=188,slow=7.1,SNR=87						
TGY				S	Sn	22 39 48.6	-2.8
	4µm,0.6s,baz=189,slow=19,SNR=16						
KKM	Kota Kinabalu	8.91	213	Pn	Pn	22 41 17.6	-1.7
TPUB	Ta-pu	9.64	358	Pn	Pn	22 41 29.9	+1.0
GTOI	Gorontalo	13.04	171	P	Pn	22 42 14.1	+0.6
	28nm,0.9s						
MRSI	Marisa	13.09	176	P	P	22 42 17.1	-1.6
	48nm,0.9s						
SBUM	Sibu	14.12	219	P	P	22 42 30.3	+0.1
APSI	Ampana	14.45	178	P	P	22 42 37.2	+3.4
	2µm55nm,0.8s						
LUWI	Luwuk	14.66	173	P	P	22 42 40.2	+4.0
SANI	Sanana	16.32	162	P	P	22 42 53.8	-0.7
	23nm,0.9s						
TTSI	Tana Toraja	16.60	184	P	Pn	22 43 00.2	+2.4
SPSI	Sidrap Palu	17.51	184	P	Pn	22 43 11.3	+2.5
	2µm26nm,0.8s						
KRAI	Karang Ratu	18.34	156	P	Pn	22 43 20.1	+1.6
	4µm35nm,0.9s						
KAPI	Kappang	18.55	184	P	Pn	22 43 20.2	-0.8
	28nm,0.7s,baz=357,slow=11,SNR=15						
KAPI	Kappang	18.55	184	P	Pn	22 43 21.6	+0.5
KAPI				IAmb	IAmb	22 43 23.1	
	comp=Z,20nm,0.7s						
KAPI	Kappang	18.55	184	P	Pn	22 43 22.4	+1.3
AAI	Ambon	18.59	157	P	Pn	22 43 23.1	+1.5
BKSI	Bulukumba	18.84	183	P	Pn	22 43 26.8	+2.4
FAKI	Fak Fak	19.83	145	P	Pn	22 43 35.1	-0.9
FAKI				IAmb	IAmb	22 43 48.1	
	comp=Z,11nm,1.1s						
KULM	Kulim	21.74	250	P	P	22 43 53.1	-0.3
KULM				IAmb	IAmb	22 44 15.6	
	comp=Z,8.2nm,1.0s						
CM31	Chiang Mai Arr	21.78	286	P	P	22 43 53.6	-0.2
CM31				IAmb	IAmb	22 43 55.4	
	comp=Z,10nm,0.9s						
CMAR	Chiang Mai Arr	21.78	286	P	P	22 43 53.7	-0.1
	comp=Z,5.2nm,0.9s,baz=100,slow=9.5,SNR=24						
	comp=Z,5.2nm,0.9s						
CMAR	Chiang Mai Arr	21.78	286	P	P	22 43 54.0	+0.2
CHTO	Chiang Mai	21.84	287	P	P	22 43 54.0	-0.4
JAGI	Jajag, Banyuwa	22.99	198	P	P	22 44 06.2	+0.7
SOEI	Soe	23.44	172	P	P	22 44 09.6	0.0
BATI	Baumata	23.81	174	P	P	22 44 13.6	+0.7
	comp=Z,104nm,0.4s,baz=348,slow=1.1,SNR=21						
LZDM	Lanzhou Array	27.17	328	P	P	22 44 43.0	-0.4
	comp=Z,1.2nm,0.3s,baz=121,slow=12,SNR=2.2						
	comp=Z,1.2nm,0.3s						
SHL	Shillong	29.87	298	P	P	22 45 07.2	-0.2
SHL				IAmb	IAmb	22 45 08.0	
	comp=Z,6.4nm,0.6s						
KNRA	Kununurra	30.09	165	P	P	22 45 08.1	-1.0
KNRA				IAmb	IAmb	22 45 27.5	
	comp=Z,7.7nm,1.1s						
FITZ	Fitzroy Crossi	31.84	172	P	P	22 45 24.4	0.0
MBWA	Marble Bar	34.58	182	P	P	22 45 47.6	-0.6
EVN	Everest	34.90	300	P	P	22 45 52.4	+0.6
PSA00	Pilbara Seismi	34.99	182	P	P	22 45 51.0	-0.7
WB0	Warramunga Arr	35.68	158	P	P	22 45 57.1	-0.6
WB0				IAmb	IAmb	22 45 57.6	
	comp=Z,3.9nm,0.6s						
WRAB	Tennant Creek	35.81	158	P	P	22 45 58.4	-0.4
WRAB				IAmb	IAmb	22 45 59.2	
	comp=Z,4.2nm,0.6s						
WRA	Warramunga Arr	35.82	158	P	P	22 45 58.4	-0.5
	comp=Z,3.5nm,0.6s,baz=336,slow=8.8,SNR=30						
	comp=Z,3.5nm,0.6s						
WRA	Warramunga Arr	35.82	158	P	P	22 45 58.3	-0.6
SONM	Songino Array	36.23	343	P	P	22 46 03.6	+1.4
	comp=Z,0.2nm,0.4s,baz=164,slow=9.6,SNR=1.8						
	comp=Z,0.2nm,0.4s						
AS31	Alice Springs	39.13	161	P	P	22 46 26.5	-0.2
ASAR	Alice Springs	39.13	161	P	P	22 46 26.7	0.0
	comp=Z,1.9nm,0.5s,baz=341,slow=8.4,SNR=36						
ASAR				PcP	PcP	22 48 33.7	+0.3
	comp=Z,0.5nm,0.6s,baz=342,slow=3.6,SNR=3.8						
	comp=Z,1.9nm,0.5s						
MORW	Morawa	42.71	186	P	P	22 46 54.4	-1.5
MORW				IAmb	IAmb	22 46 55.7	
	comp=Z,14nm,1.0s						
FORT	Forrest	44.65	171	P	P	22 47 10.6	-0.8
FORT				IAmb	IAmb	22 47 28.8	
	comp=Z,5.5nm,0.9s						
NWAO	Narrogin (SRO)	46.42	184	P	P	22 47 24.7	-0.5
NWAO				IAmb	IAmb	22 47 25.9	
	comp=Z,11nm,0.8s						
BBOO	Buckleboo	48.34	163	P	P	22 47 39.5	-0.6
BBOO				IAmb	IAmb	22 48 09.2	
	comp=Z,6.8nm,1.1s						
PEA0B	Petropavlovsk-	48.93	29	P	P	22 47 43.6	-0.8
ZALV	Zalesovo Beam	49.29	333	P	P	22 47 50.2	+3.1
	comp=Z,1.1nm,0.8s,baz=134,slow=4.2,SNR=1.8						
	comp=Z,1.1nm,0.8s						
STKA	Stephens Creek	49.34	157	P	P	22 47 47.0	-0.8
STKA				IAmb	IAmb	22 47 48.2	
	comp=Z,9.5nm,0.9s						
KURBB	Kurchatov Arra	50.45	326	P	P	22 47 57.2	+1.3
	comp=Z,1.0nm,0.9s,baz=122,slow=8.8,SNR=1.9						
	comp=Z,1.0nm,0.9s						
KKAR	Karatay Array	52.28	314	P	P	22 48 07.7	-2.0

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*IDC **09** 22:40:40.3±1.0, 55°.92S×27°.75W, h0^{km}, mb4.1/4, mbtmp4.2/5, ML4.8/1, MS3.6/3, Error ellipse: s-maj=40.6km s-min=25.2km az=61.0*

*NEIC **09** 22:40:52.9±0.4, 56°.1S±0°.1×27°.9W±0°.2, h99^{km}±8^{km}, mb4.3/11, Error ellipse: s-maj=17.0km s-min=15.2km az=203.0*

ISC 09 22:40:54.6±0.7**, 56°.1S**±0°.1×**28°.0W**±0°.1**, h121^{km}, n24, σ0.^{s}93**/21**, mb4.2**/8**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.17	287	Pn	Pn	22 42 08.3	-1.4
SNAA	Sanae	18.89	155	P	P	22 45 03.3	-1.9
	2.8nm,0.3s,baz=307,slow=9.9,SNR=27						
	14nm,0.5s						
SNAA	Sanae	18.89	155	P	P	22 45 03.8	-1.4
PMSA	Palmer Station	19.50	229	LR	LR	22 50 47.0	
	comp=Z,98nm,19.0s,baz=38,slow=31						
PMSA	Palmer Station	19.50	229	Pn	Pn	22 45 14.3	+0.1
PMSA				IAmb	IAmb	22 45 14.9	
	comp=Z,13nm,1.1s						
BELA	Belgrano 2	21.99	184	P	P	22 45 39.1	+0.8
BELA				IAmb	IAmb	22 45 40.5	
	comp=Z,9.9nm,0.9s						
TRQA	Tornquist	28.91	294	P	P	22 46 42.4	+0.4
PLCA	Paso Flores	31.54	281	LR	LR	23 00 32.5	
	comp=Z,66nm,18.0s,baz=124,slow=38						
QSPA	South Pole Qui	34.14	180	P	P	22 47 27.3	-0.3
QSPA				IAmb	IAmb	22 47 30.6	
	comp=Z,5.3nm,0.8s						
MT01	Popeta	36.95	289	P	P	22 47 52.4	+0.6
MT01				IAmb	IAmb	22 47 56.1	
	comp=Z,6.0nm,1.0s						
CFA	Coronel Fontan	37.15	294	P	P	22 47 52.9	-0.6
	comp=Z,0.7nm,0.5s,baz=139,slow=11,SNR=1.6						
	comp=Z,0.7nm,0.5s						
GO02	Mina Guanaco	43.10	298	P	P	22 48 43.4	+0.5
VNDA	Vanda	46.49	183	P	P	22 49 10.4	+1.6
	comp=Z,2.3nm,0.8s,baz=170,slow=5.5,SNR=7.1						
	comp=Z,2.3nm,0.8s						
VNDA	Vanda	46.49	183	P	P	22 49 10.0	+1.2
VNDA				IAmb	IAmb	22 49 13.7	
	comp=Z,2.3nm,0.8s						
PB01	IPOC Station P	46.53	302	P	P	22 49 10.7	+0.8
PB01				IAmb	IAmb	22 49 33.6	
	comp=Z,4.4nm,0.9s						
KGCAE	Kacgae	49.43	69	P	P	22 49 32.0	-0.3
KGCAE				IAmb	IAmb	22 49 32.3	
	comp=Z,5.3nm,0.8s						
LPAZ	La Paz	50.02	306	P	P	22 49 37.9	+0.6
	comp=Z,0.8nm,0.3s,baz=158,slow=1.5,SNR=1.4						
	comp=Z,0.8nm,0.3s						
LPAZ	La Paz	50.02	306	P	P	22 49 37.6	+0.3
TORD	Torodi Ar. Bea	73.34	30	P	P	22 52 13.4	+0.5
	comp=Z,1.1nm,0.3s,baz=196,slow=3.5,SNR=2.2						
	comp=Z,1.1nm,0.3s						
SJG	San Juan	80.60	323	LR	LR	23 26 56.4	
	comp=Z,77nm,21.9s,baz=288,slow=34						
ILAR	Eielson Array	149.80	312	PKPbc	PKPbc	23 00 29.1	+0.4
	comp=Z,0.7nm,0.8s,baz=116,slow=2.1,SNR=5.8						
ILAR	Eielson Array	149.80	312		PKiKP	23 00 29.3	-0.4
SONM	Songino Array	151.21	87	PKPbc	PKiKP	23 00 33.1	-0.1
	comp=Z,0.6nm,0.4s,baz=214,slow=3.8,SNR=11						
SONM	Songino Array	151.21	87	PKPbc	PKPbc	23 00 32.4	-0.4

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*IDC **09** 23:23:55.1±1.6, 53°.07S×12°.54E, h0^{km}, mb4.2/4, mbtmp4.1/5, ML3.4/1, MS3.9/4, Error ellipse: s-maj=51.7km s-min=31.1km az=62.0*

*NEIC **09** 23:23:56.5±1.5, 53°.2S±0°.2×12°.7E±0°.1, h10^{km}±1^{km}, mb4.3/7, Error ellipse: s-maj=32.1km s-min=13.9km az=5.0*

ISC 09 23:23:55.9±1.3**, 53°.1S**±0°.2×**12°.6E**±0°.2**, h10^{km}, n32, σ0.^{s}97**/19**, mb4.2**/6**, MS3.8**/4**, 4C, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TROLL	Troll, Antarti	19.50	189	⇑P	Pn	23 28 25.7	+1.5
	comp=Z,1µm,0.8s						
SNAA	Sanae	19.86	194	⇑P	P	23 28 26.7	0.0
	comp=Z,120nm,0.6s						
SNAA	Sanae	19.86	194	P	P	23 28 26.7	0.0
	comp=Z,0.1nm,0.3s,baz=24,slow=10,SNR=7.2						
	comp=Z,3.4nm,0.8s						
SNAA	Sanae	19.86	194	P	P	23 28 26.2	-0.5
VNA2	Neumayer--Watz	20.02	199	⇑P	P	23 28 26.4	-2.1
	comp=Z,23nm,0.7s,baz=26,slow=14						
VNA3	Neumayer Olymp	20.73	200	⇑P	P	23 28 35.1	-1.1
	comp=Z,12nm,0.7s						
H04S2	CROZET ISLANDS	25.76	92	T	T	23 57 19.2	
	baz=242,slow=76,SNR=7.2						
H04S3	CROZET ISLANDS	25.77	92	T	T	23 57 26.0	
	baz=242,slow=76,SNR=7.0						
H04S1	CROZET ISLANDS	25.78	92	T	T	23 57 26.8	
	baz=242,slow=76,SNR=8.6						
H04N3	CROZET ISLANDS	26.03	91	T	T	23 57 42.2	
	baz=236						
H04N1	CROZET ISLANDS	26.03	90	T	T	23 57 41.9	
	baz=236						
H04N2	CROZET ISLANDS	26.04	91	T	T	23 57 37.3	
	baz=236						
BELA	Belgrano 2	29.99	198	P	P	23 30 03.0	-1.1
BELA				IAmb	IAmb	23 30 03.8	
	comp=Z,4.2nm,0.8s						
TSUM	Tsumeb	34.04	8	LR	LR	23 42 15.9	
	comp=Z,338nm,19.3s,baz=15,slow=32						
QSPA	South Pole Qui	37.15	180	P	P	23 31 07.4	+0.8
	comp=Z,3.9nm,1.0s,baz=233,slow=8.1,SNR=7.8						
	comp=Z,3.9nm,1.0s						
QSPA	South Pole Qui	37.15	180	P	P	23 31 07.0	+0.4
QSPA				IAmb	IAmb	23 31 08.1	
	comp=Z,4.1nm,0.9s						
CASY	Casey	45.91	146	P	P	23 32 16.8	-1.3
VNDA	Vanda	48.26	171	P	P	23 32 37.8	+1.4
	comp=Z,3.8nm,0.7s,baz=226,slow=6.5,SNR=13						
	comp=Z,3.8nm,0.7s						
VNDA	Vanda	48.26	171	P	P	23 32 37.0	+0.7
VNDA				IAmb	IAmb	23 32 38.9	
	comp=Z,5.7nm,0.8s						
MBAR	Mbarara	54.44	22	LR	LR	23 55 18.0	
	comp=Z,68nm,18.5s,baz=325,slow=35						
DBIC	Dimbokro	61.35	340	LR	LR	23 55 45.6	
	comp=Z,66nm,19.2s,baz=336,slow=31						
H01W2	Cape Leeuwin H	69.19	120	T	T	00 52 13.4	
	baz=219,slow=75,SNR=6.0						
H01W3	Cape Leeuwin H	69.20	120	T	T	00 52 11.6	
	baz=219,slow=75,SNR=6.4						
H01W1	Cape Leeuwin H	69.20	121	T	T	00 52 11.1	
	baz=219,slow=75,SNR=5.0						
LPAZ	La Paz	71.62	267	P	P	23 35 18.6	+0.2
	comp=Z,2.1nm,0.9s,baz=148,slow=3.5,SNR=6.2						
	comp=Z,2.1nm,0.9s						
LPAZ	La Paz	71.62	267	P	P	23 35 18.5	+0.2
LPAZ				IAmb	IAmb	23 35 20.7	
	comp=Z,4.5nm,1.1s						
EIL	Elat	84.67	19	LR	LR	00 11 46.5	
	comp=Z,48nm,20.1s,baz=80,slow=34						
ASAR	Alice Springs	88.21	128	P	P	23 36 47.7	+0.4
	comp=Z,0.5nm,0.8s,baz=205,slow=5.7,SNR=5.2						
	comp=Z,0.5nm,0.8s						
ASAR	Alice Springs	88.21	128	P	P	23 36 46.8	-0.6
AS31	Alice Springs	88.21	128	P	P	23 36 47.5	+0.2
AS31				IAmb	IAmb	23 37 03.0	
	comp=Z,0.9nm,0.8s						
YKA	Yellowknife Ar	151.15	310	PKPbc	PKiKP	23 43 48.8	+0.3
	comp=Z,0.9nm,1.0s,baz=92,slow=1.9,SNR=5.2						
YKA	Yellowknife Ar	151.15	310		PKiKP	23 43 48.3	-0.1

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*SOME **09** 23:23:53.5, 39°.40N×72°.28E, h5^{km}*

*KRNET **09** 23:23:57.3±0.1, 39°.39N×72°.35E, h30^{km}, mb3.8*

*IDC **09** 23:23:58.1±1.7, 39°.28N×72°.57E, h0^{km}, mb3.7/6, mbtmp3.6/12, ML3.0/6, Error ellipse: s-maj=26.6km s-min=13.9km az=146.0*

*NNC **09** 23:24:03.0±3.3, 39°.48N×72°.37E, h0^{km}, mb4.0, mpv3.4, Error ellipse: s-maj=28.3km s-min=19.2km az=25.0*

ISC 09 23:24:00.6±0.8**, 39°.58N**±0°.05×**72°.49E**±0°.04**, h10^{km}, n42, σ1.^{s}64**/67**, mb3.4**/6**, 33C-24D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.54	260	⇓eP	Pg	23 24 06.7	-4.5
DRK				⇓eS	Sg	23 24 13.7	-4.7
SFK	Sufi-Kurgan	0.90	60	⇑eP	Pg	23 24 17.4	-0.5
SFK				⇑eS	Sn	23 24 32.1	-0.5
OHH	Osh	0.97	13	⇑eP	Pg	23 24 19.0	-0.4
OHH				⇑eS	Sn	23 24 34.8	+0.4
SALK	Salom-Alik	1.66	38	⇓eP	Pn	23 24 29.3	-0.6
SALK				⇓eS	Sg	23 24 52.8	-1.1
GAR	Garm	1.78	252	⇓eP	Pn	23 24 25.9	-5.7
GAR				⇓eS	Sn	23 24 46.8	-7.5
ARSB	Arslanbob	1.79	12	⇓eP	Pn	23 24 31.0	-0.7
ARSB				⇓eS	Sb	23 24 55.7	-0.4
TRKS	Terek-Say	2.21	333	⇑eP	Pn	23 24 34.8	-2.7
TRKS				⇑eS	Sn	23 25 02.1	-2.8
ARK	Arkit	2.26	350	⇑eP	Pn	23 24 37.1	-1.0
ARK				⇑eS	Sn	23 25 06.1	+0.1
ARLS	Aral	2.67	31	⇑eP	Pn	23 24 43.4	-0.5
ARLS				⇑eS	Sn	23 25 17.2	+0.8
CHGR	Chuyangaron	2.75	252	⇑eP	Pn	23 24 39.2	-5.6
CHGR				⇑eS	Sn	23 25 09.9	-8.2
MNAS	Manas	2.91	0	⇓eP	Pn	23 24 46.5	-0.6
MNAS				⇓eS	Sn	23 25 22.4	+0.2
UCH	Uchtor	3.06	29	⇑eP	Pn	23 24 49.1	-0.4
UCH				⇑eS	Sn	23 25 26.9	+0.5
MRKS	Merke	3.21	10	eP	Pb	23 24 57.4	-0.5
	7.5nm,0.2s						
MRKS				eS	Sg	23 25 40.7	-3.1
	34nm,0.5s						
EKS2	Erkin-Say	3.23	17	⇑eP	Pn	23 24 51.2	-0.3
EKS2				⇑eS	Sn	23 25 30.5	+0.4

AAK	**Ala-Archa**	3.41	26	Pn	Pb	23 24 58.9	-2.3
	2.1nm,0.3s,baz=144,slow=4.9,SNR=15						
AAK				Sn	Sg	23 25 47.0	-3.3
	3.8nm,0.3s,baz=344,slow=18,SNR=12						
AAK				Lg	Lg	23 25 54.2	
	11nm,0.3s,baz=82,slow=18,SNR=11						
	6.5nm,0.4s						
AAK	**Ala-Archa**	3.41	26	⇓*e*P	Pn	23 24 53.7	-0.3
AAK				⇓*e*S	Sn	23 25 35.0	+0.4
AAK	**Ala-Archa**	3.41	26	⇑Pn	Pb	23 24 59.7	-1.5
	6.1nm,0.5s						
AAK				⇑Lg	Lg	23 25 53.4	
	15nm,0.5s						
KBK	**Karagaybulak**	3.59	30	⇑*e*P	Pn	23 24 56.4	-0.1
KBK				⇑*e*S	Sn	23 25 39.4	+0.3
FRU1	**Bishkek**	3.61	26	⇑*e*P	Pn	23 24 56.7	0.0
FRU1				⇑*e*S	Sn	23 25 40.0	+0.6
CHMS	**Chumysh**	3.82	26	⇓*e*P	Pn	23 24 59.3	-0.2
CHMS				⇓*e*S	Sn	23 25 44.6	+0.1
KK31	**Karatay Array**	3.83	338	⇑Pn	Pn	23 25 03.3	+3.8
	3.3nm,0.3s,baz=151,slow=11,SNR=84						
KK31				⇓Sn	Sb	23 25 52.2	-2.4
	13nm,0.3s,baz=146,slow=23,SNR=5.5						
KK31				⇑Lg	Lg	23 26 04.4	
	30nm,0.5s,baz=157,slow=29,SNR=4.9						
ULHL	**Ulahol**	3.90	46	⇓*e*P	Pn	23 25 00.5	-0.2
ULHL				⇓*e*S	Sn	23 25 46.6	-0.1
BOOM	**Boomskoye usch**	3.91	41	⇑*e*P	Pn	23 25 01.0	+0.1
BOOM				⇑*e*S	Sn	23 25 47.3	+0.4
USP	**Ospenovka**	3.99	22	⇓*e*P	Pn	23 25 01.7	-0.1
USP				⇓*e*S	Sn	23 25 48.5	-0.1
BRLS	**Borolday**	3.99	331	*e*P	Pn	23 25 05.5	+3.7
	7.2nm,0.3s						
BRLS				*e*S	Sb	23 25 56.3	-3.0
	16nm,0.3s						
TKM2	**Tokmak 2**	4.08	34	⇑*e*P	Pn	23 25 03.1	-0.2
TKM2				⇑*e*S	Sn	23 25 51.1	-0.1
KDJ	**Kajisay**	4.38	53	⇓*e*P	Pn	23 25 06.9	-0.4
KDJ				⇓*e*S	Sn	23 25 57.8	-0.6
TARG	**Taragay, Kyrgy**	4.58	60	⇓*e*P	Pn	23 25 09.6	-0.7
TARG				⇓*e*S	Sn	23 26 02.4	-1.3
PRZ	**Przheval'sk**	5.33	55	⇑*e*P	Pn	23 25 20.0	-0.4
PRZ				⇑*e*S	Sn	23 26 20.4	-1.5
MKAR	**Makanchi Array**	10.16	42	Pn	Pn	23 26 29.6	+3.2
	0.1nm,0.3s,baz=228,slow=11,SNR=14						
MKAR				Lg	Lg	23 29 24.3	
	0.1nm,0.3s,baz=214,slow=20,SNR=3.0						
	1.7nm,0.8s						
KURBB	**Kurchatov Arra**	11.84	19	Pn	Pn	23 26 50.0	+0.7
	baz=213,slow=12,SNR=4.3						
KURBB				Lg	Lg	23 30 20.6	
	baz=216,slow=29,SNR=5.5						
	0.1nm,0.4s						
AB31	**Akbulak array**	13.18	321	⇑Pn	Pn	23 27 08.8	+1.1
	1.5nm,0.5s,baz=130,slow=12,SNR=40						
AB31				⇑Sn	Sn	23 29 37.5	+3.3
	0.6nm,0.5s,baz=147,slow=22,SNR=3.3						
BVAR	**Borovoye Array**	13.53	355	Pn	Pn	23 27 13.4	+0.9
	baz=158,slow=12,SNR=9.2						
	0.5nm,0.4s						
AKTO	**Aktyubinsk**	14.89	322	Pn	Pn	23 27 30.1	-1.0
	0.2nm,0.3s,baz=127,slow=13,SNR=7.1						
	2.0nm,0.6s						
AKTO	**Aktyubinsk**	14.89	322	⇑Pn	P	23 27 37.5	+0.7
	4.4nm,0.8s						
AKTO				⇓Sn	Sn	23 30 20.3	+4.2
	1.2nm,1.1s						
ZALV	**Zalesovo Beam**	16.64	26	Pn	P	23 27 56.2	0.0
	0.2nm,0.3s,baz=221,slow=8.8,SNR=9.2						
	1.8nm,0.6s						
SONM	**Songino Array**	25.70	60	P	P	23 29 30.9	0.0
	0.7nm,0.9s,baz=256,slow=8.0,SNR=4.4						
	0.7nm,0.9s						
BRTR	**Keskin Array B**	29.76	283	P	P	23 30 07.1	-0.2
	0.4nm,0.7s,baz=74,slow=5.1,SNR=2.7						
	0.4nm,0.7s						
FINES	**FINESS Array B**	35.66	323	P	P	23 31 00.4	+2.0
	3.9nm,0.9s,baz=111,slow=8.5,SNR=3.4						
	3.9nm,0.9s						
HFS	**Hagfors**	41.43	320	P	P	23 31 48.2	+1.3
	2.7nm,0.7s,baz=104,slow=6.1,SNR=1.9						
	2.7nm,0.7s						
GERES	**GERESS Array B**	42.19	303	P	P	23 31 55.3	+1.8
	0.2nm,0.4s,baz=66,slow=12,SNR=2.4						
	0.2nm,0.4s						
ILAR	**Eielson Array**	71.50	17	P	P	23 35 20.9	-0.2
	0.4nm,0.9s,baz=343,slow=9.1,SNR=2.6						
	0.4nm,0.9s						

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*SJA **09** 23:45:01.2±0.7, 22°.32S×68°.43W, h25^{km}±3^{km}, ML4.4, MW4.3*

*NEIC **09** 23:45:04.5, 22°.27S×68°.63W, h108^{km}*

*NEIC **09** 23:45:04.4±2.7, 22°.31S±0°.02×68°.63W±0°.07, h112^{km}±4^{km}, mb4.5/21, Mwr4.4/38, Mwr4.6(GUC), Error ellipse: s-maj=9.0km s-min=2.8km az=88.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-3.94; $M_{\theta\theta}$-0.70; $M_{\phi\phi}$4.64; $M_{r\theta}$-0.08; $M_{\theta\phi}$-0.21; $M_{\phi r}$-0.20; Fault plane solution: $M_0$4.35000×10^{15} NP1:ϕ_s359.36000°, δ46.35000°, λ-87.79000°. NP2:ϕ_s176.17000°, δ43.69000°, λ-92.31000°. Principal axes: T 4.6567, Plg1.0000°, Azm88.0000°; N -0.7061, Plg2.0000°, Azm178.0000°; P -3.9506, Plg88.0000°, Azm318.0000°;*

*VAO **09** 23:45:05.4±0.7, 22°.17S×68°.55W, h117^{km}±6^{km}, mb4.7, Presumed earthquake*

*GUC **09** 23:45:05.1±0.6, 22°.24S×68°.68W, h116^{km}±3^{km}, ML4.4*

*IDC **09** 23:45:05.2±2.6, 22°.20S×68°.42W, h110^{km}±22^{km}, mb4.1/8, mbtmp4.3/12, MS3.3/2, Error ellipse: s-maj=24.4km s-min=15.4km az=87.0*

ISC 09 23:45:04.0±0.6, **22°.25S**±0°.03×**68°.60W**±0°.04, **h108**^{km}±5^{km}, **n171,** σ1^{s}**88**/193, **mb4.6**/14, **17C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	0.75	307		Pn	23 45 24.0	+1.3
PB09				Sn	Sn	23 45 36.6	-0.3
PB09	**IPOC Station P**	0.75	307	⇑*i*P	Pn	23 45 24.1	+1.3
PB09				*e*S	Sn	23 45 38.0	+1.2
PB09				IAML		23 45 40.5	
	comp=E,20µm,0.7s						
PB09	**IPOC Station P**	0.75	307	*e*P	Pn	23 45 18.8	-4.0
PB09				IAML		23 45 39.4	
	comp=Z,25µm,0.7s						
AF01	**San Pedro de A**	0.80	151		Pn	23 45 25.5	+2.0
AF01				Sn	Sn	23 45 39.2	+1.1
AF01	**San Pedro de A**	0.80	151	⇓*i*P	Pn	23 45 25.2	+1.8
AF01				*e*S	Sn	23 45 40.3	+2.3
AF01				IAML		23 45 41.3	
	comp=N,70µm,0.4s						
AF01	**San Pedro de A**	0.80	151	*e*P	Pn	23 45 15.2	-8.2
AF01				*e*S	Sn	23 45 20.7	-17
AF01				IAML		23 45 57.4	
	comp=Z,15µm,0.3s						
PB06	**IPOC Station P**	1.01	243		Pn	23 45 26.6	+1.3
PB06				Sn	Sn	23 45 42.4	+1.0
PB06	**IPOC Station P**	1.01	243	⇑*i*P	Pn	23 45 26.3	+0.9
PB06				*e*S	Sn	23 45 42.3	+0.8
PB06				IAML		23 45 44.9	
	comp=N,9µm,0.3s						
PB06	**IPOC Station P**	1.01	243	*e*P	Pn	23 45 20.7	-4.6
PB06				IAML		23 45 43.3	
	comp=Z,9µm,0.9s						
PB03	**IPOC Station P**	1.09	280		Pn	23 45 27.3	+1.1
PB03				Sn	Sn	23 45 44.0	+1.1
PB03	**IPOC Station P**	1.09	280	⇑*i*P	Pn	23 45 27.0	+0.8
PB03				*e*S	Sn	23 45 43.7	+0.8
PB03				IAML		23 45 45.0	
	comp=E,26µm,0.6s						
PB03	**IPOC Station P**	1.09	280	*e*P	Pn	23 45 26.3	+0.1
PB03				IAML		23 45 50.4	
	comp=Z,9µm,0.5s						
PB07	**IPOC Station P**	1.30	293		Pn	23 45 29.6	+1.0
PB07				Sn	Sn	23 45 47.9	+0.8
PB07	**IPOC Station P**	1.30	293	⇑*i*P	Pn	23 45 29.4	+0.8
PB07				*e*S	Sn	23 45 47.4	+0.3
PB07				IAML		23 45 49.2	
	comp=E,7µm,0.6s						
PB07	**IPOC Station P**	1.30	293	*e*P	Pn	23 45 29.2	+0.6
PB07				*e*S	Sn	23 45 48.5	+1.3
PB07				IAML		23 45 48.7	
	comp=Z,4µm,0.8s						
PB01	**IPOC Station P**	1.46	325		Pn	23 45 31.3	+1.0
PB01				Sn	Sn	23 45 51.0	+0.8
PB01	**IPOC Station P**	1.46	325	⇑*i*P	Pn	23 45 31.0	+0.8
PB01				*e*S	Sn	23 45 50.6	+0.4
PB01				IAML		23 45 52.8	
	comp=E,3µm,0.4s						
PB01	**IPOC Station P**	1.46	325	*e*P	Pn	23 45 31.1	+0.8
PB01				*e*S	Sn	23 45 51.8	+1.6
PB02	**IPOC Station P**	1.52	307		Pn	23 45 31.5	+0.5
PB02				Sn	Sn	23 45 52.1	+0.5
PB02	**IPOC Station P**	1.52	307	⇑*i*P	Pn	23 45 31.8	+0.8
PB02				*e*S	Sn	23 45 51.6	+0.1
PB02				IAML		23 45 54.1	
	comp=E,8µm,0.6s						
PB02	**IPOC Station P**	1.52	307	*e*P	Pn	23 45 31.8	+0.8
PB02				*e*S	Sn	23 45 52.6	+1.0
PB02				IAML		23 45 56.4	
	comp=Z,6µm,0.4s						
PB05	**IPOC Station P**	1.60	248		Pn	23 45 32.6	+0.5
PB05	**IPOC Station P**	1.60	248	⇑*i*P	Pn	23 45 32.6	+0.5
PB05				*e*S	Sn	23 45 53.4	0.0
PB05				IAML		23 46 03.6	
	comp=E,5µm,0.5s						
PB05	**IPOC Station P**	1.60	248	*e*P	Pn	23 45 32.6	+0.5
PB05				*e*S	Sn	23 45 48.5	-4.9
PB05				IAML		23 45 54.3	
	comp=Z,4µm,0.8s						
PB08	**IPOC Station P**	2.16	346		Pn	23 45 41.0	+1.7
PB08	**IPOC Station P**	2.16	346	⇑*i*P	Pn	23 45 41.2	+1.8
PB08				IAML		23 46 12.8	
	comp=E,546nm,0.2s						
PB08	**IPOC Station P**	2.16	346	*e*P	Pn	23 45 41.2	+1.8
PB08				*e*S	Sn	23 46 05.5	-0.8
PB10	**IPOC Station P**	2.20	235		Pn	23 45 39.7	+0.2
PB10	**IPOC Station P**	2.20	235	*e*P	Pn	23 45 39.8	+0.2
PB10				IAML		23 46 24.6	
	comp=N,2µm,0.7s						
PB10	**IPOC Station P**	2.20	235	*e*P	Pn	23 45 39.5	0.0
PB10				*e*S	Sn	23 45 58.4	-8.3
PB10				IAML		23 46 06.4	
	comp=Z,1µm,0.8s						
TA01	**Diego Aracena**	2.23	318		Pn	23 45 39.9	+0.1
TA01	**Diego Aracena**	2.23	318	*e*P	Pn	23 45 39.7	-0.2
TA01	**Diego Aracena**	2.23	318	*e*P	Pn	23 45 40.0	+0.1
TA01				*e*S	Sn	23 46 04.4	-2.9
TA01				IAML		23 46 17.6	
	comp=Z,1µm,0.5s						
TA02	**Huaiquique**	2.43	324	*e*P	Pn	23 45 42.3	-0.1
TA02	**Huaiquique**	2.43	324	*e*P	Pn	23 45 42.5	0.0
TA02				*e*S	Sn	23 46 04.2	-7.8
TA02				IAML		23 46 23.4	
	comp=Z,1µm,0.6s						
GO01	**Chusmiza**	2.62	348		Pn	23 45 46.8	+1.3
GO01	**Chusmiza**	2.62	348	⇑*i*P	Pn	23 45 47.0	+1.5
GO01				IAML		23 46 23.2	
	comp=N,940nm,0.2s						
GO01	**Chusmiza**	2.62	348	*e*P	Pn	23 45 46.4	+0.9
GO01				*e*S	Sn	23 46 10.2	-7.0
GO01				IAML		23 46 22.3	
	comp=Z,678nm,0.6s						
PB11	**IPOC Station P**	2.66	338		Pn	23 45 46.0	+0.2
PB11	**IPOC Station P**	2.66	338	⇑*i*P	Pn	23 45 45.8	+0.1
PB11				IAML		23 46 50.0	
	comp=N,1µm,0.4s						
PB11	**IPOC Station P**	2.66	338	*e*P	Pn	23 45 45.9	+0.2
PB11				*e*S	Sn	23 46 09.7	-7.9
PB11				IAML		23 46 15.2	
	comp=Z,654nm,0.7s						
YJA	**Yavi**	2.86	89	*e*P	Pn	23 45 52.7	+4.3
YJA	**Yavi**	2.86	89	*e*P	Pn	23 45 47.9	-0.6
SALTA		2.86	134	⇑*e*P	Pn	23 45 51.6	+3.0
SALTA		2.86	134	*e*P	Pn	23 45 46.2	-2.4
SALTA				*e*P		23 45 46.2	
SALTA				*e*P		23 45 46.6	
PB14	**IPOC Station P**	2.89	215		Pn	23 45 48.6	-0.3
PB14	**IPOC Station P**	2.89	215	*e*P	Pn	23 45 48.9	+0.1
PB14	**IPOC Station P**	2.89	215	*e*P	Pn	23 45 49.0	+0.1
PB14				*e*S	Sn	23 46 33.7	+10
PB14				IAML		23 46 36.3	
	comp=Z,1µm,0.3s						
GO02	**Mina Guanaco**	3.04	197		Pn	23 45 51.2	+0.4
GO02	**Mina Guanaco**	3.04	197	⇑*e*P	Pn	23 45 51.3	+0.5
GO02	**Mina Guanaco**	3.04	197	*e*P	Pn	23 45 50.8	0.0
GO02				*e*S	Sn	23 46 21.9	-4.9
GO02				IAML		23 46 23.6	
	comp=Z,2µm,0.6s						
HJA	**Humahuaca**	3.10	109	*e*P	Pn	23 45 49.6	-2.0
SLA	**San Lorenzo**	3.76	132	⇑*e*P	Pn	23 46 03.6	+3.3
SLA	**San Lorenzo**	3.76	132	*e*P	Pn	23 45 58.8	-1.5
PB12	**IPOC Station P**	3.96	335		Pn	23 46 01.6	-1.3
PB12	**IPOC Station P**	3.96	335	*e*P	Pn	23 46 01.3	-1.6
PB12	**IPOC Station P**	3.96	335	*e*P	Pn	23 46 01.6	-1.3
PB12				*e*S	Sn	23 46 53.0	+4.4
PB12				IAML		23 47 01.6	
	comp=Z,368nm,0.7s						
AP01	**Chacalluta**	4.19	337	Pn	Pn	23 46 06.3	+0.5
AP01	**Chacalluta**	4.19	337	*e*P	Pn	23 46 05.1	-0.8
AC01	**Pan de Azucar**	4.29	205		Pn	23 46 06.0	-1.3
AC01	**Pan de Azucar**	4.29	205	*e*P	Pn	23 46 06.0	-1.3
AC01	**Pan de Azucar**	4.29	205	*e*P	Pn	23 46 05.9	-1.3
AC01				*e*S	Sn	23 47 00.0	+3.6
AC01				IAML		23 47 14.5	
	comp=Z,782nm,0.8s						
AC02	**Maricunga**	4.59	186		Pn	23 46 12.2	+0.4
AC02	**Maricunga**	4.59	186	⇑*e*P	Pn	23 46 12.5	+0.7
AC02	**Maricunga**	4.59	186	*e*P	Pn	23 46 12.7	+0.9
AC02				*e*S	Sn	23 47 17.0	+13
AC02				IAML		23 47 51.3	
	comp=Z,289nm,0.7s						
PB18	**Visviri**	4.71	350		Pn	23 46 13.7	+0.4
PB18	**Visviri**	4.71	350	*e*P	Pn	23 46 21.4	+8.1
AC06	**Mina Casimiro**	5.33	197	⇑*e*P	Pn	23 46 19.0	-2.3
LPAZ	**La Paz**	5.94	4	P	Pn	23 46 32.3	+2.1
	comp=Z,4.1nm,0.3s,baz=142,slow=4.6,SNR=22						
LPAZ				S	Sn	23 47 23.1	-14
	comp=Z,24nm,0.8s,baz=203,slow=22,SNR=8.9						
LPAZ	**La Paz**	5.94	4		Pn	23 46 30.7	+0.5
LPAZ	**La Paz**	5.94	4	*e*P	Pn	23 46 29.9	-0.3
AC04	**Llanos de Chal**	6.34	200		Pn	23 46 31.3	-3.7
AC05	**El Transito**	6.74	193		Pn	23 46 38.5	-1.9
LCO	**Las Campanas**	7.00	195		Pn	23 46 41.0	-3.1
CO01	**Juntas del Tor**	7.82	190		Pn	23 46 53.5	-1.8
GO04	**Tololo Observa**	8.14	194		Pn	23 46 56.9	-2.7
CO03	**El Pedregal**	8.76	192		Pn	23 47 04.6	-3.3
CO06	**Fray Jorge**	8.82	197	Pn	Pn	23 47 03.5	-5.1
CO02	**Combarbal**	9.18	193	Pn	Pn	23 47 09.0	-4.5
CFA	**Coronel Fontan**	9.33	178	P	Pn	23 47 13.7	-1.9
	comp=Z,2.6nm,0.3s,baz=4.6,slow=14,SNR=29						
CFA				S	Sn	23 48 51.4	-7.3
	comp=Z,2.5nm,0.3s,baz=150,slow=20,SNR=1.2						
SIV	**San Ignacio**	9.45	50	P	Pn	23 47 14.9	-2.4
	comp=Z,20nm,0.5s,baz=274,slow=6.0						
MURT	**Porto Murtinho**	10.21	89	*e*P	Pn	23 47 26.4	-1.2
VA06	**Catapilco**	10.55	193	Pn	Pn	23 47 30.9	-1.1
VA03	**San Esteban**	10.62	189	Pn	Pn	23 47 30.6	-2.5
PEL	**Peldehue**	11.01	189	Pn	Pn	23 47 38.8	+0.4
CPUP	**Villa Florida**	11.05	114	P	Pn	23 47 37.6	-1.3
	comp=Z,0.5nm,0.5s,baz=148,slow=12,SNR=5.6						
CPUP	**Villa Florida**	11.05	114	Pn	Pn	23 47 39.3	+0.4
CPUP	**Villa Florida**	11.05	114	*e*P	Pn	23 47 38.2	-0.6
BDQN	**Bodoquena, MS**	11.19	83	*e*P	Pn	23 47 38.4	-2.3
PTLB	**Pontes e Lacer**	11.22	55		Pn	23 47 40.4	-0.8
PTLB	**Pontes e Lacer**	11.22	55	*e*P	Pn	23 47 39.4	-1.7
LMEL	**Las Melosas**	11.64	187	Pn	Pn	23 47 47.2	+0.3
MT09	**Talagante**	11.68	190	Pn	Pn	23 47 47.3	0.0
MT01	**Popeta**	11.81	191	Pn	Pn	23 47 47.2	-1.7
BO04	**La Punta**	11.83	188	Pn	Pn	23 47 47.9	-1.4
AQDB	**Aquidauana**	12.15	84		Pn	23 47 52.0	-1.5
AQDB	**Aquidauana**	12.15	84	*e*P	Pn	23 47 51.3	-2.2
VILB	**Vilhena**	12.22	42		Pn	23 47 53.6	-1.0
VILB	**Vilhena**	12.22	42	*e*P	Pn	23 47 53.4	-1.1
BO01	**Tunca**	12.30	190	Pn	Pn	23 47 51.9	-3.5
AMBA	**Amambai (Brazi**	12.59	96	*e*P	Pn	23 47 59.2	-0.1
BO02	**Sierra Bellavi**	12.65	188	Pn	Pn	23 47 59.4	-0.7
PSAL	**Palomas, Salto**	13.18	134	*e*P	Pn	23 48 06.9	-0.1
PP1B	**Ponte de Pedra**	13.70	73	*e*P	Pn	23 48 12.3	-1.6
SALV	**Santo Antonio**	13.73	65	*e*P	Pn	23 48 11.4	-2.9
BI02	**San Fabin de**	14.55	189		Pn	23 48 25.7	+0.9
PTGB	**Pitanga**	15.37	102	*e*P	P	23 48 36.0	-1.3
PDRB	**Porto dos Gac**	15.50	49	*e*P	Pn	23 48 35.8	-1.0
ITAB	**Concordia**	15.76	112	P	P	23 48 41.5	-0.1
ITAB				IAmb	IAmb	23 48 43.6	
	comp=Z,12nm,0.7s						
ITAB	**Concordia**	15.76	112	*e*P	Pn	23 48 39.7	-0.2
CPSB	**Cacapava Do Su**	15.82	124	*e*P	Pn	23 48 40.0	-0.7
LDASE	**Londrina, Braz**	16.16	97	*e*P	P	23 48 45.1	-1.0
PLTB	**Pedras Altas**	16.37	129		Pn	23 48 47.1	-0.3
PLTB	**Pedras Altas**	16.37	129	*e*P	P	23 48 47.4	-1.0
CLDB	**Colider**	16.67	49	*e*P	Pn	23 48 50.1	-1.2
TRQA	**Tornquist**	16.76	162		Pn	23 48 52.1	0.0
ARAG	**Araguaiana, MT**	17.15	71	*e*P	P	23 48 56.6	-0.4
ITRB	**Iturama**	17.22	85	*e*P	P	23 48 57.5	-0.4
CNLB	**Canela**	17.45	117	*e*P	P	23 48 59.6	-0.8
FRTB	**Fartura**	17.59	97	*e*P	Pn	23 49 01.3	-1.1
PLCA	**Paso Flores**	18.51	185	P	Pn	23 49 13.4	+0.2
	comp=Z,6.6nm,1.3s,baz=0.7,slow=10,SNR=8.0						
PLCA	**Paso Flores**	18.51	185	P	P	23 49 10.6	-1.3
PLCA	**Paso Flores**	18.51	185	*e*P	P	23 49 12.6	+0.7
BB19B	**Bebedouro**	18.69	90	*e*P	P	23 49 13.6	-0.4
SNDB	**Serra Nova Dou**	19.42	61	*e*P	P	23 49 21.2	-0.7
IPMB	**Ipameri, GO**	19.60	81	*e*P	P	23 49 23.8	-0.2
PET01	**Itanhaem-SP**	19.69	100	*e*P	P	23 49 24.5	-0.3
NPGB	**Novo Progresso**	19.78	42	*e*P	P	23 49 24.7	-1.2
VAO	**Valinhos**	19.98	96	P	P	23 49 27.7	-0.4
VAO				IAmb	IAmb	23 49 28.9	
	comp=Z,36nm,1.3s						
VAO	**Valinhos**	19.98	96	*e*P	P	23 49 27.6	-0.5
LL01	**San Ignacio de**	20.33	188	P	P	23 49 29.1	-2.4
LL01				IAmb	IAmb	23 49 48.9	
	comp=Z,24nm,0.8s						
BDFB	**Brasilia**	20.54	75	P	P	23 49 33.3	-0.8
	comp=Z,2.9nm,0.4s,baz=232,slow=9.2,SNR=5.2						
	comp=Z,2.9nm,0.4s						
BDFB	**Brasilia**	20.54	75	P	P	23 49 32.9	-1.2
PMNB	**Patos De Minas**	21.09	84	*e*P	P	23 49 39.8	-0.3
ITTB	**Itaituba**	21.71	37	*e*P	P	23 49 45.3	-1.2
BSCB	**Bom Sucesso**	22.18	91	*e*P	P	23 49 51.4	-0.1
JANB	**Januaria**	24.07	77	*e*P	P	23 50 08.8	-0.9
SMTB	**Santa Maria do**	24.18	60	*e*P	P	23 50 10.0	-0.5
SDBA	**SAO DESIDERIO**	24.61	71	*e*P	P	23 50 13.1	-1.4
BOAV	**Boa Vista**	25.73	19	P	P	23 50 25.7	+1.1
BOAV	**Boa Vista**	25.73	19	*e*P	P	23 50 23.4	-1.1
RUSC	**La Rusia**	28.31	351	P	P	23 50 48.8	+0.7
RUSC				IAmb	IAmb	23 51 30.3	
	comp=Z,8.5nm,1.0s						
MG05	**Puerto Natales**	29.54	185	P	P	23 50 58.7	+0.6
SDV	**Santo Domingo**	31.00	356	LR	LR	00 04 58.6	
	comp=Z,26nm,20.4s,baz=357,slow=38						
RCBR	**Riachuelo**	35.55	68	P	P	23 51 50.5	-0.6
VNA3	**Neumayer Olymp**	59.28	161	⇑P	P	23 54 55.6	+1.6
	comp=Z,6.1nm,0.7s						
HNDO	**Hondo**	59.35	329	P	P	23 54 56.8	+1.9
JCT	**Junction City**	60.39	329	IAmb	IAmb	23 55 05.0	
	comp=Z,6.6nm,0.7s						
BRDY	**Brady**	60.69	330	IAmb	IAmb	23 55 05.8	
	comp=Z,4.1nm,0.8s						
SAND	**Sanderson**	61.10	327	P	P	23 55 08.9	+2.0
SAND				IAmb	IAmb	23 55 09.4	
	comp=Z,7.8nm,1.2s						
SNAA	**Sanae**	61.48	161	⇑P	P	23 55 10.2	+1.3
	comp=Z,152nm,0.7s						
SNAA	**Sanae**	61.48	161	P	P	23 55 09.9	+1.0
	comp=Z,5.8nm,0.6s,baz=293,slow=8.0,SNR=21						
	comp=Z,5.8nm,0.6s						
SNAA	**Sanae**	61.48	161		P	23 55 10.4	+1.4
SNAA				IAmb	IAmb	23 55 11.3	
	comp=Z,6.2nm,0.7s						
MNHN	**Monahans**	62.54	327	IAmb	IAmb	23 55 46.4	
	comp=Z,6.7nm,1.0s						
APMT	**Aspermont**	62.91	331	P	P	23 55 20.6	+1.6
APMT				IAmb	IAmb	23 55 21.0	
	comp=Z,7.7nm,0.8s						
MSTX	**Muleshoe**	64.68	329	P	P	23 55 32.5	+1.8
QSPA	**South Pole Qui**	67.95	180	P	P	23 55 52.9	+1.7
	comp=Z,11nm,0.5s,baz=180,slow=3.0,SNR=56						
	comp=Z,11nm,0.5s						
DBIC	**Dimbokro**	68.67	73	P	P	23 55 56.6	+0.4
	comp=Z,8.2nm,0.7s,baz=255,slow=6.6,SNR=11						
	comp=Z,8.2nm,0.7s						
PDAR	**Pinedale Array**	74.90	330	P	P	23 56 34.3	+1.1
	comp=Z,0.5nm,0.7s,baz=147,slow=8.9,SNR=4.4						
	comp=Z,0.5nm,0.7s						
SCHQ	**Schefferville**	76.78	1	LR	LR	00 32 25.7	
	comp=Z,31nm,19.2s,baz=62,slow=37						
MDT	**Midelt**	82.00	50	P	P	23 57 13.1	+0.7
	comp=Z,1.7nm,0.7s,baz=238,slow=9.3,SNR=4.2						
	comp=Z,1.7nm,0.7s						
BOSA	**Boshof**	82.84	118	P	P	23 57 17.6	+0.5
	comp=Z,4.1nm,0.8s,baz=221,slow=1.8,SNR=6.2						
	comp=Z,4.1nm,0.8s						
YKA	**Yellowknife Ar**	91.98	340	P	P	23 58 00.8	+0.7
	comp=Z,1.4nm,0.8s,baz=139,slow=4.1,SNR=19						
	comp=Z,1.4nm,0.8s						
ASAR	**Alice Springs**	129.39	207	PKP	PKPdf	00 04 01.3	+0.6
	comp=Z,1.7nm,0.8s,baz=140,slow=2.0,SNR=14						
WRA	**Warramunga Arr**	132.46	210	PKP	PKPdf	00 04 06.8	+0.3
	comp=Z,1.1nm,0.7s,baz=150,slow=1.8,SNR=8.8						
BVAR	**Borovoye Array**	136.24	35	PKP	PKiKP	00 04 14.0	-0.2
	comp=Z,0.9nm,0.6s,baz=328,slow=5.1,SNR=4.9						
KURBB	**Kurchatov Arra**	141.79	34	PKP	PKPdf	00 04 22.2	-0.6
	comp=Z,0.6nm,0.8s,baz=295,slow=2.5,SNR=6.0						
ZALV	**Zalesovo Beam**	142.50	26	PKP	PKPdf	00 04 21.9	-1.9
	comp=Z,3.3nm,0.7s,baz=306,slow=5.0,SNR=11						
MKAR	**Makanchi Array**	146.06	37	PKPbc	PKPbc	00 04 31.4	0.0
	comp=Z,6.3nm,0.8s,baz=316,slow=2.8,SNR=48						
HILR	**Hailar Array B**	151.96	348	PKP	PKPdf	00 04 38.9	-0.8
	comp=Z,2.8nm,0.7s,baz=90,slow=3.0,SNR=6.5						
HILR				PKPbc	PKiKP	00 04 47.5	+0.9
	comp=Z,1.1nm,0.4s,baz=43,slow=2.6,SNR=3.6						
SONM	**Songino Array**	154.15	8	PKP	PKPdf	00 04 43.8	+0.7
	comp=Z,0.6nm,0.6s,baz=11,slow=1.5,SNR=3.7						
SONM				PKPbc	PKiKP	00 04 52.0	+0.6
	comp=Z,0.6nm,0.6s,baz=309,slow=3.0,SNR=3.3						
SONM				PKPab	PKPab	00 05 05.6	+0.2
	comp=Z,0.5nm,0.6s,baz=320,slow=3.9,SNR=2.7						

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*GFZ **09** 23:57:58.4, 39°.08S×178°.38E, h25^{km}, MW5.2, Moment Tensor Solution. s19 Moment tensor: M_{rr}-7.26; $M_{\theta\theta}$2.45; $M_{\phi\phi}$4.82; $M_{r\theta}$-1.21; $M_{\theta\phi}$0.61; $M_{\phi r}$2.10; Fault plane solution: NP1:ϕ_s181.00000°, δ54.00000°, λ-100.00000°. NP2:ϕ_s19.00000°, δ37.00000°, λ-75.00000°. Principal axes: T 5.2300, Plg9.0000°, Azm279.0000°; N 2.5500, Plg9.0000°, Azm187.0000°; P -7.7800, Plg78.0000°, Azm53.0000°;*

*BJI **09** 23:57:59.4, 38°.62S×178°.55E, h20^{km}, mb5.1/13, mB5.7/5, Ms5.1/6, Ms7 4.8/7*

*MOS **09** 23:58:00.5±1.1, 38°.76S×177°.87E, h24^{km}, mb5.3/22, Error ellipse: s-maj=14.5km s-min=11.2km az=13.1*

*NOU **09** 23:58:00.1, 39°.03S×178°.10E, h18^{km}, mb5.2/48, Off E. Coast of N. Island, N.Z.*

*WEL **09** 23:58:02.0, 38°.87S×178°.06E, h12^{km}, ML5.3, Mw5.1, Moment Tensor Solution. s15 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.13; $M_{\theta\theta}$0.70; $M_{\phi\phi}$2.43; $M_{r\theta}$1.38; $M_{\theta\phi}$1.60; $M_{\phi r}$4.83; Fault plane solution: $M_0$5.99000×10^{16} NP1: ϕ_s198.00000°, δ74.00000°, λ-98.00000°. NP2:ϕ_s44.00000°, δ18.00000°, λ-65.00000°. Principal axes: T 6.0372, Plg28.0000°, Azm294.0000°; N -0.0858, Plg7.0000°, Azm200.0000°; P -5.9514, Plg60.0000°, Azm97.0000°; Stations used: PUZ HAZ BKZ WIZ OPRZ RATZ OTVZ WHVZ TRVZ TLZ TOZ HIZ VRZ KUZ MKAZ NORMAL FAULTING*

*WEL **09** 23:58:01.9±0.5, 39°S±3°×17°8E±°, h29^{km}±3^{km}, M5.4/24, mB6.6/1, ML5.4/24, MLv5.4/24, Mw(mB)6.4/1 Error ellipse: s-maj=5.6km s-min=3.0km az=117.2, confirmed*

*NEIC **09** 23:58:02.6, 38°.87S×177°.96E, h30^{km}*

*NEIC **09** 23:58:02.6, 38°.87S×177°.96E, h30^{km}, Moment Tensor Solution. Duration: 1^{s}9 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.61; $M_{\theta\theta}$0.55; $M_{\phi\phi}$5.06; $M_{r\theta}$1.17; $M_{\theta\phi}$2.84; $M_{\phi r}$3.05; Fault plane solution: $M_0$6.89000×10^{16} NP1:ϕ_s28.75000°, δ30.87000°, λ-85.23000°. NP2:ϕ_s203.21000°, δ59.25000°, λ-92.84000°. Principal axes: T 7.2586, Plg14.0000°, Azm295.0000°; N -0.8082, Plg2.0000°, Azm205.0000°; P -6.4503, Plg76.0000°, Azm105.0000°;*

*NEIC **09** 23:58:03.0±2.1, 38°.83S±0°.09×177°.97E±0°.10, h32^{km}±3^{km}, mb5.2/121, Mww5.2/16 Error ellipse: s-maj=15.0km s-min=8.8km az=214.0*

*GCMT **09** 23:58:04.3±0.2, 38°.95S±0°.01×178°.13E±0°.01, h28^{km}, MW5.2/105, Moment Tensor Solution. s68,c98; s105,c165; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M_{rr}-5.29±.21; $M_{\theta\theta}$1.13±.15; $M_{\phi\phi}$4.16±.13; $M_{r\theta}$0.05±.26; $M_{\theta\phi}$3.75±.09; $M_{\phi r}$4.32±.23; Best double* couple: M$_0$7.47000×10^{16} NP1:ϕ_s56.00000°,δ34.00000°, λ-53.00000°. NP2:ϕ_s194.00000°,δ64.00000°, λ-112.00000°. Principal axes: T 7.7380, Plg16.0000°, Azm300.0000°; N -0.5380, Plg20.0000°, Azm204.0000°; P -7.2010, Plg64.0000°, Azm66.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

*IDC **09** 23:58:05.7±0.9, 38°.78S×177°.80E, h58^{km}±6^{km}, mb4.7/15, mbtmp4.9/16, MS4.5/39 Error ellipse: s-maj=18.0km s-min=10.2km az=31.0*

ISC 09 23:58:02.0±0.4**, 38°.92S**±0°.03×**178°.07E**±0°.03**, h30**^{km}±2^{km}**, h30**^{km}**:pP-P, n553,** σ1^{s}**73**/543**, mb5.2**/91**, MS4.5**/43**, 15C-6D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRGZ	Paritu Road	0.15	270	P	Pn	23 58 09.0	+0.7
PRGZ				S	Sb	23 58 14.6	+3.0
MHGZ	Mahia Peninsul	0.26	210	P	Pn	23 58 11.2	+1.3
KNZ	Kokohu	0.33	252	P	Pn	23 58 11.1	+0.3
KNZ				S	Sn	23 58 17.7	+1.2
RIGZ	Rimuhau	0.33	312	P	Pn	23 58 10.6	-0.2
RIGZ				S	Sn	23 58 16.7	+0.1
CNGZ	Carnagh Statio	0.45	13	P	Pn	23 58 12.4	-0.1
TKGZ	Te Karaka	0.52	340	P	Pn	23 58 12.7	-0.6
TKGZ				S	Sn	23 58 20.1	-1.0
SNGZ	Shannon Statio	0.59	284	P	Pn	23 58 14.2	-0.2
SNGZ				S	Sn	23 58 23.1	0.0
RAGZ	Rawiri	0.67	309	P	Pn	23 58 15.1	-0.5
RAGZ				S	Sn	23 58 24.6	-0.5
WHHZ	Waihua	0.67	257	P	Pn	23 58 15.9	+0.3
WHHZ				S	Sn	23 58 27.1	+2.1
TWGZ	Tauwhareparae	0.75	354	P	Pn	23 58 16.3	-0.4
TWGZ				S	Sn	23 58 27.0	0.0
RAHZ	Arahi	0.77	270	P	Pn	23 58 17.0	+0.1
PUZ	Puketiti	0.86	10	P	Pn	23 58 17.3	-0.9
PUZ				S	Sn	23 58 28.5	-1.3
ARHZ	Aropaoanui	0.91	248	P	Pn	23 58 19.1	+0.4
RTZ	Ruatahuna	0.91	289		Pn	23 58 18.4	-0.4
RTZ	Ruatahuna	0.91	289	P	Pn	23 58 18.6	-0.2
RTZ				S	Sn	23 58 30.6	-0.3
MTHZ	Maungataniwha	0.96	274	P	Pn	23 58 19.5	-0.1
MTHZ				S	Sb	23 58 32.5	-0.2
NMHZ	Naumai	1.00	260	P	Pn	23 58 20.4	+0.3
URZ	Urewera	1.00	311	P	Pn	23 58 19.5	-0.6
	17μm,0.3s,baz=128,slow=6.9,SNR=7885						
URZ				S	Sb	23 58 32.9	-0.8
	16μm,0.4s,baz=206,slow=14,SNR=6.8						
URZ				LR	LR	23 58 45.0	
	comp=Z,52μm,20.9s,baz=34,slow=52						
URZ	Urewera	1.00	311	P	Pb	23 58 19.9	-0.9
URZ	Urewera	1.00	311	P	Pn	23 58 19.7	-0.4
RUGZ	Raukumara Rang	1.01	342	P	Pn	23 58 19.3	-0.9
PKGZ	Pakihiroa	1.06	0	P	Pn	23 58 20.0	-0.8
PKGZ				S	Sn	23 58 33.3	-1.2
CKHZ	Cape Kidnapper	1.07	226	P	Pn	23 58 21.1	+0.2
OPCS	Opotiki Colleg	1.10	326	P	Pn	23 58 20.9	-0.4
MUGZ	Murupara	1.11	293	P	Pn	23 58 21.6	0.0
WMGZ	Waiomatatini S	1.14	14	P	Pn	23 58 21.2	-0.7
WMGZ				S	Sb	23 58 36.3	-1.1
HAZ	Te Kaha	1.19	349	P	Pn	23 58 21.9	-0.7
MCHZ	McNeill Hill	1.19	244	P	Pn	23 58 23.1	+0.4
BKZ	Black Stump Fm	1.25	258	Pn	Pn	23 58 22.5	-1.1
BKZ	Black Stump Fm	1.25	258	P	Pn	23 58 23.8	+0.2
BKZ	Black Stump Fm	1.25	258	S	Sn	23 58 40.1	+0.6
BKZ	Black Stump Fm	1.25	258	P	Pn	23 58 23.7	+0.2
KAHZ	Kahuranaki	1.27	227	P	Pn	23 58 23.9	+0.1
MRHZ	Matea Rd	1.30	273	P	Pn	23 58 24.5	+0.3
EDRZ	Edgecumbe	1.33	308	P	Pn	23 58 24.4	-0.2
RRRZ	Republican Roa	1.35	295	P	Pn	23 58 24.8	-0.1
MXZ	Matakaoa Point	1.37	8		Pn	23 58 24.6	-0.5
MXZ	Matakaoa Point	1.37	8	P	Pn	23 58 24.6	-0.5
MXZ	Matakaoa Point	1.37	8	P	Pn	23 58 24.5	-0.7
WHRZ	Whale Island	1.37	321	P	Pn	23 58 25.3	+0.2
KWHZ	Kaweka Forest	1.38	248	P	Pn	23 58 25.4	+0.1
PRRZ	Plateau Road	1.38	287	P	Pn	23 58 25.2	-0.1
ALRZ	Allen Road	1.40	284	P	Pn	23 58 25.5	0.0
TARZ	Mount Tarawera	1.41	299	P	Pn	23 58 25.8	+0.1
MARZ	Manawahe	1.44	310	P	Pn	23 58 26.2	+0.1
PWZ	Pawanui	1.45	220	P	Pn	23 58 25.5	-0.7
PXZ	Pawanui	1.45	220	P	Pn	23 58 25.6	-0.6
MKRZ	Makatiti	1.48	301	P	Pb	23 58 27.6	-1.4
HRRZ	Handcock Road	1.50	290	P	Pn	23 58 26.7	-0.3
KRHZ	Kereru	1.50	241	P	Pn	23 58 26.8	-0.2
HLRZ	Highlands Stat	1.51	296	P	Pn	23 58 26.9	-0.1
HATZ	Hinemaiaia	1.55	271	P	Pn	23 58 27.7	+0.1
WPRZ	Whakapapatarin	1.55	285	P	Pn	23 58 27.6	0.0
HSRZ	Hossack Road	1.56	293	P	Pn	23 58 27.6	-0.1
WIZ	White Island	1.56	333	P	Pn	23 58 26.8	-0.9
OMRZ	Omania	1.56	301	P	Pn	23 58 27.4	-0.5
WSRZ	White Island S	1.57	333	P	Pn	23 58 27.9	0.0
OPRZ	Ohinepanea	1.61	312	P	Pn	23 58 27.7	-0.7
LIRZ	Lichensteins R	1.61	304	P	Pn	23 58 28.1	-0.3
UTU	Utuhina	1.65	296	P	Pn	23 58 29.1	+0.1
WHTZ	Whakaora	1.67	278	P	Pn	23 58 29.6	+0.2
NGRZ	Ngongotaha	1.69	298	P	Pn	23 58 29.7	+0.1
KARZ	Kaharoa	1.70	302	P	Pn	23 58 29.0	-0.6
WPHZ	Waipukurau	1.70	227	P	Pn	23 58 29.2	-0.5
RITZ	Rihia Road	1.73	268	P	Pn	23 58 30.6	+0.5
PRHZ	Porangahau	1.74	219	P	Pn	23 58 29.3	-1.0
PNHZ	Pukenui	1.76	235	P	Pn	23 58 29.8	-0.7
RATZ	Rangitukua	1.80	271	P	Pn	23 58 31.3	+0.3
KUTZ	Kaahu Road	1.81	283	P	Pn	23 58 31.3	0.0
WATZ	Wairara	1.84	276	P	Pn	23 58 31.5	-0.2
ETVZ	East Tongariro	1.85	263	P	Pn	23 58 32.4	+0.5
KATZ	Kakaramea	1.86	268	P	Pn	23 58 32.2	+0.2
TMVZ	Te Maari	1.86	263	P	Pn	23 58 32.1	+0.2
TGRZ	Tauranga	1.86	309	P	Pn	23 58 31.0	-0.9
MOVZ	Moawhango	1.87	254	P	Pn	23 58 32.5	+0.5
NTVZ	North Tongarir	1.88	264	P	Pn	23 58 32.4	+0.2
OTVZ	Oturere	1.89	262	P	Pn	23 58 32.7	+0.3
KRVZ	Karewarewa	1.90	264	P	Pn	23 58 32.7	+0.1
SNVZ	South Ngauruho	1.91	261	P	Pn	23 58 33.1	+0.3
TUVZ	Tukino	1.91	259	P	Pn	23 58 33.3	+0.6
NNVZ	North Ngauruho	1.93	263	P	Pn	23 58 33.2	+0.2
NGZ	Ngauruhoe	1.94	262	P	Pn	23 58 33.4	+0.3
WTVZ	West Tongariro	1.94	264	P	Pn	23 58 33.1	0.0
WHVZ	Whangaehu Hut	1.97	259	P	Pn	23 58 33.8	+0.3
WNVZ	Wahianoa	1.97	257	P	Pn	23 58 33.7	+0.2
ANWZ	Angora Road	1.97	218	P	Pn	23 58 32.2	-1.1
MAVZ	Matarangi	1.98	259	P	Pn	23 58 34.0	+0.1
COVZ	Chateau Observ	1.99	261	P	Pn	23 58 34.0	+0.2
FWVZ	Far West T-bar	1.99	260	P	Pn	23 58 34.0	+0.1
TSZ	Takapari Road	1.99	235	P	Pn	23 58 32.8	-0.8
KMRZ	Kaimai	1.99	302	P	Pn	23 58 32.9	-0.8
TRVZ	Turoa	2.00	258	P	Pn	23 58 34.2	+0.2
DVHZ	Dannevirke	2.01	226	P	Pn	23 58 33.1	-0.9
TWVZ	Taurewa	2.06	265	P	Pn	23 58 34.6	-0.1
TLZ	Tolley Road	2.07	286	P	Pn	23 58 34.3	-0.5
MTVZ	Mangateitei	2.08	256	P	Pn	23 58 35.4	+0.5
PKVZ	Pokaka	2.15	259	P	Pn	23 58 36.7	+0.7
MYRZ	Mayor Island	2.19	318	P	Pn	23 58 35.6	-0.7
BFZ	Birch Farm	2.25	218		Pn	23 58 35.7	-1.5
BFZ	Birch Farm	2.25	218	P	Pn	23 58 36.6	-0.6
BFZ	Birch Farm	2.25	218	P	Pn	23 58 35.6	-1.6
PRWZ	Pori Road	2.30	224	P	Pn	23 58 37.1	-0.8
POWZ	Post Office Ro	2.31	230	P	Pn	23 58 37.3	-0.7
TOZ	Tahuroa Road	2.35	300		Pn	23 58 37.9	-0.7
TOZ	Tahuroa Road	2.35	300	P	Pn	23 58 37.8	-0.8
CPWZ	Castlepoint	2.45	215	P	Pn	23 58 38.5	-1.5
OHWZ	Ohakea	2.49	238	P	Pn	23 58 40.8	+0.4
TIWZ	Tintock	2.50	222	P	Pn	23 58 39.4	-1.3
WAZ	Wanganui	2.54	250	P	Pn	23 58 42.1	+1.0
HIZ	Hauiti	2.55	278		Pn	23 58 41.6	+0.2
HIZ	Hauiti	2.55	278	P	Pn	23 58 41.9	+0.6
HIZ	Hauiti	2.55	278	P	Pn	23 58 41.6	+0.2
MRZ	Mangatainoka R	2.59	227		Pn	23 58 40.5	-1.4
MRZ	Mangatainoka R	2.59	227	P	Pn	23 58 40.6	-1.4
VRZ	Vera Road	2.59	265	P	Pn	23 58 42.4	+0.5
TMWZ	Te Maipa	2.75	217	P	Pn	23 58 41.9	-2.2
HOWZ	Holdsworth Sta	2.79	224	P	Pn	23 58 42.8	-1.8
KUZ	Kuaotunu	2.86	319	P	Pn	23 58 44.4	-1.2
KUZ	Kuaotunu	2.86	319	P	Pn	23 58 44.4	-1.2
LREZ	Lake Rotokare	2.90	258	P	Pn	23 58 47.5	+1.3
MHEZ	Mangahewa	2.93	266	P	Pn	23 58 48.5	+2.0
OGWZ	Otaki Gorge	2.93	229	P	Pn	23 58 45.0	-1.5
MKAZ	Moumakai	2.93	307	P	Pn	23 58 45.8	-0.7
MTW	Mount Morrison	2.98	221	P	Pn	23 58 44.7	-2.5
DREZ	Durham Road	3.03	264	P	Pn	23 58 49.3	+1.4
PREZ	Palmer Road	3.07	261	P	Pn	23 58 50.2	+1.6
TRWZ	Traveller	3.07	216	P	Pn	23 58 45.7	-2.9
KBAZ	Karaka Road Bo	3.11	305	P	Pn	23 58 49.4	+0.4
KIW	Kapiti Island	3.11	231	P	Pn	23 58 47.4	-1.7
NEZ	North Egmont	3.12	262	P	Pn	23 58 51.4	+2.2
WIAZ	Waiheke Island	3.15	312	P	Pn	23 58 49.1	-0.5
ETAZ	East Tamaki Re	3.17	307	P	Pn	23 58 49.9	0.0
CAW	Cannon Point	3.18	226	P	Pn	23 58 47.8	-2.1
KHEZ	Kahui Hut	3.18	262	P	Pn	23 58 51.6	+1.6
KHEZ	Kahui Hut	3.18	262	P	Pn	23 58 51.7	+1.6
PAWZ	Paruwai Farm	3.19	219	P	Pn	23 58 47.3	-2.8
PKE	Pukeiti	3.19	264	P	Pn	23 58 51.5	+1.3
AWAZ	Awhitu Peninsu	3.29	303	P	Pn	23 58 51.6	+0.1
NBEZ	Newall Road No	3.29	263	P	Pn	23 58 53.0	+1.5
MSWZ	Moikau Station	3.30	220	P	Pn	23 58 48.9	-2.8
NMEZ	Namu Road	3.30	260	P	Pn	23 58 53.1	+1.5
MBAZ	Motutapu North	3.31	310	P	Pn	23 58 51.6	-0.1
EPAZ	Eden Park BICE	3.33	307	P	Pn	23 58 52.5	+0.4
HBAZ	Herne Bay Bore	3.36	307	P	Pn	23 58 52.7	+0.3
GRZ	Great Barrier	3.38	321	P	Pn	23 58 52.1	-0.7
WTAZ	Waiatarua	3.41	305	P	Pn	23 58 53.3	+0.2
ABAZ	Army Bay	3.46	311	P	Pn	23 58 53.9	0.0
WEL	Wellington	3.46	226	P	Pn	23 58 52.2	-1.7
BHW	Baring Head	3.49	224		Pn	23 58 51.4	-2.8
BHW	Baring Head	3.49	224	P	Pn	23 58 51.4	-2.8
RVAZ	Riverhead Bore	3.50	307	P	Pn	23 58 54.9	+0.5
SNZO	South Karori	3.52	226		Pn	23 58 51.9	-2.6
SNZO	South Karori	3.52	226	P	Pn	23 58 52.2	-2.4
TCW	Tory Channel	3.70	231		Pn	23 58 54.4	-2.8
TCW	Tory Channel	3.70	231	P	Pn	23 58 54.7	-2.5
DUWZ	D’Urville Isla	3.71	238	P	Pn	23 58 55.2	-2.1
TUWZ	Tuamarina	4.04	230		Pn	23 58 58.7	-3.0
TUWZ	Tuamarina	4.04	230	P	Pn	23 58 59.2	-2.5
CMWZ	Cape Campbell	4.08	225		Pn	23 58 59.9	-2.5
CMWZ	Cape Campbell	4.08	225	P	Pn	23 59 00.5	-1.9
WCZ	Waipu Caves	4.21	314	P	Pn	23 59 04.0	-0.1
BSWZ	Blackbirch Sta	4.25	228		Pn	23 59 01.8	-2.9
BSWZ	Blackbirch Sta	4.25	228	P	Pn	23 59 01.9	-2.8
NNZ	Nelson	4.27	236		Pn	23 59 02.6	-2.4
NNZ	Nelson	4.27	236	P	Pn	23 59 02.8	-2.1
TKNZ	Takaka Hill	4.46	240		Pn	23 59 05.2	-2.4
TKNZ	Takaka Hill	4.46	240	P	Pn	23 59 05.4	-2.2
QRZ	Quartz Range	4.67	244		Pn	23 59 07.9	-2.6
QRZ	Quartz Range	4.67	244	P	Pn	23 59 07.8	-2.6
QRZ	Quartz Range	4.67	244	P	Pn	23 59 07.8	-2.6
MRNZ	Matariki Terra	4.76	237		Pn	23 59 09.1	-2.6
MRNZ	Matariki Terra	4.76	237	P	Pn	23 59 09.4	-2.4
THZ	Tophouse	4.86	233		Pn	23 59 10.5	-2.7
THZ	Tophouse	4.86	233	P	Pn	23 59 10.1	-3.1
KHZ	Kahutara	4.91	223		Pn	23 59 11.0	-2.7
KHZ	Kahutara	4.91	223	P	Pn	23 59 10.7	-3.0
KHZ	Kahutara	4.91	223	P	Pn	23 59 10.1	-3.5
OUZ	Omahuta	5.15	315	P	Pn	23 59 17.6	+0.6
OUZ	Omahuta	5.15	315	P	Pn	23 59 17.3	+0.3
GVZ	Greta Valley S	5.56	222		Pn	23 59 19.7	-3.0
GVZ	Greta Valley S	5.56	222	P	Pn	23 59 19.6	-3.0
DSZ	Denniston Nort	5.56	238		Pn	23 59 19.9	-2.9
DSZ	Denniston Nort	5.56	238	P	Pn	23 59 19.4	-3.3
LTZ	Lake Taylor	5.85	227		Pn	23 59 22.9	-3.8
LTZ	Lake Taylor	5.85	227	P	Pn	23 59 22.6	-4.1
AMCZ	Amberley	5.90	222		Pn	23 59 25.3	-2.1
CTZ	Chatham Island	6.25	142		Pn	23 59 31.5	-0.7
CTZ	Chatham Island	6.25	142	P	Pn	23 59 32.6	+0.5
CTZ	Chatham Island	6.25	142	P	Pn	23 59 32.5	+0.3
CTZ				S	Sn	00 00 37.4	-5.1
MQZ	McQueen’s Vall	6.28	219		Pn	23 59 28.7	-3.9
MQZ	McQueen’s Vall	6.28	219	P	Pn	23 59 28.3	-4.3
INZ	Inchbonnie	6.30	231		Pn	23 59 29.6	-3.3
OXZ	Oxford	6.33	224		Pn	23 59 29.5	-3.8
OXZ	Oxford	6.33	224	P	Pn	23 59 28.8	-4.5
I36NZ	CHATHAM INFRAS	6.45	142	P	Pn	23 59 37.0	+2.1
	baz=294,slow=16,SNR=2.1						
I36NZ				S	Sn	00 00 45.6	-1.8
	baz=316,slow=82						
I36NZ				I	I	00 35 10.0	
	baz=322,slow=324,SNR=0.7						
WVZ	Waitaha Valley	6.93	231	P	Pn	23 59 37.7	-3.7
TMZ	Timaru	7.60	222	P	Pn	23 59 46.9	-3.8
FOZ	Fox Glacier	7.74	231		Pn	23 59 49.9	-2.7
FOZ	Fox Glacier	7.74	231	P	Pn	23 59 47.9	-4.7
LBZ	Lake Benmore	8.04	225		Pn	23 59 53.4	-3.4
LBZ	Lake Benmore	8.04	225	P	Pn	23 59 53.1	-3.6
ODZ	Otahua Downs	8.24	220		Pn	23 59 56.6	-3.0
ODZ	Otahua Downs	8.24	220	P	Pn	23 59 56.2	-3.3
ODZ	Otahua Downs	8.24	220	P	Pn	23 59 55.6	-3.9
JCZ	Jackson Bay	8.66	231	P	Pn	00 00 01.1	-4.2
JCZ	Jackson Bay	8.66	231	P	Pn	00 00 00.5	-4.8
HHSZ	Highcliff Hill	8.88	216	P	Pn	00 00 04.9	-3.4
WKZ	Wanaka	8.96	226		Pn	00 00 07.0	-2.5
WKZ	Wanaka	8.96	226	P	Pn	00 00 05.2	-4.2
EAZ	Earnscleugh	9.06	223	P	Pn	00 00 06.7	-4.1
TUZ	Tuapeka	9.39	219	P	Pn	00 00 11.8	-3.5
MSZ	Milford Sound	9.51	230	P	Pn	00 00 14.2	-2.5
MLZ	Mavora Lakes	9.80	226		Pn	00 00 18.4	-2.5
MLZ	Mavora Lakes	9.80	226	P	Pn	00 00 17.1	-3.7
SYZ	Scrubby Hill	10.05	218	P	Pn	00 00 21.7	-2.5
SYZ	Scrubby Hill	10.05	218	P	Pn	00 00 22.0	-2.2
RAO	Raoul Island	10.20	20	LR	LR	00 03 12.8	
	comp=Z,299nm,20.3s,baz=178,slow=30						
WHZ	Wether Hill Ro	10.22	224		Pn	00 00 24.4	-2.2
WHZ	Wether Hill Ro	10.22	224	P	Pn	00 00 23.0	-3.6
DCZ	Deep Cove	10.40	228		Pn	00 00 26.5	-2.6
DCZ	Deep Cove	10.40	228	P	Pn	00 00 27.1	-2.0
PYZ	Puysegur Point	11.08	226		Pn	00 00 35.0	-3.4
PYZ	Puysegur Point	11.08	226	P	Pn	00 00 36.2	-2.2
PYZ	Puysegur Point	11.08	226	P	Pn	00 00 36.6	-1.8
LHI	Lord Howe Isla	17.18	290	Pn	Pn	00 01 58.2	-1.7
PINNC	Pines Island,	18.62	328	P	P	00 02 15.7	-1.4
OUENC	Ouen Island, N	19.05	326	P	Pn	00 02 23.1	+0.3
ONTNC	Ouen Toro	19.32	326	P	P	00 02 24.5	-0.2
ONTNC				IAmb	IAmb	00 02 27.9	
	comp=Z,220nm,1.2s						
YATNC	Mamie plateau,	19.35	327	P	Pn	00 02 26.2	-0.1
MARNC	Mare, Loyalty	19.41	331	P	Pn	00 02 26.0	-1.0
MARNC				IAmb	IAmb	00 02 45.3	
	comp=Z,176nm,1.2s						
MARNC	Mare, Loyalty	19.41	331	P	Pn	00 02 27.1	+0.1
DZM	Mont Dzumac	19.53	326	P	P	00 02 26.8	-0.4
	comp=Z,25nm,0.7s,baz=145,slow=12,SNR=20						
DZM				LR	LR	00 09 42.9	
	comp=Z,2μm,19.1s,baz=178,slow=36						
DZM	Mont Dzumac	19.53	326	*e*Pn	P	00 02 26.8	-0.4
	comp=Z,173nm,1.4s						
DZM				*e*S	S	00 06 02.3	-3.9
	comp=Z,926nm,27.2s						
DZM				*e*LR	LR	00 07 01.7	
	comp=Z,3μm,24.7s						
DZM	Mont Dzumac	19.53	326	P	P	00 02 27.1	0.0
DZM	Mont Dzumac	19.53	326	P	Pn	00 02 28.4	-0.2
MSVF	Nonsavu	21.11	360	P	P	00 02 44.4	0.0
CNB	Canberra Magne	23.13	270	P	P	00 03 06.0	+0.2
ARMA	Armidale	23.29	283		P	00 03 08.5	+1.1
ARMA				IAmb	IAmb	00 03 10.6	
	comp=Z,78nm,1.4s						
ARMA	Armidale	23.29	283	P	P	00 03 09.9	+2.5
CAN	Canberra	23.42	270		P	00 03 08.6	+0.1
CAN	Canberra	23.42	270	P	P	00 03 08.6	+0.1
CAN				pmax	pmax		
	comp=Z,68nm,1.4s						
TAU	Tasmania Unive	23.51	250	P	P	00 03 09.9	+0.6
TAU	Tasmania Unive	23.51	250	P	P	00 03 11.3	+2.0
TAU	Tasmania Unive	23.51	250	P	P	00 03 09.9	+0.6
TAU				pmax	pmax		
	comp=Z,48nm,1.1s						
MOO	Moorlands	23.62	252	P	P	00 03 11.7	+1.3
SANVU	Saraoutou	25.27	335	P	P	00 03 25.9	+0.3
SANVU	Saraoutou	25.27	335	P	P	00 03 25.9	+0.3
TOO	Toolangi	25.55	263		P	00 03 29.0	+0.8
TOO	Toolangi	25.55	263	P	P	00 03 29.0	+0.8
TOO				pmax	pmax		
	comp=Z,25nm,0.8s						
RAR	Rarotonga	25.95	54	LR	LR	00 13 05.2	
	comp=Z,614nm,18.5s,baz=234,slow=34						
RAR	Rarotonga	25.95	54	P	P	00 03 31.0	-0.8
RAR				IAmb	IAmb	00 03 56.7	
	comp=Z,115nm,1.3s						
RAR	Rarotonga	25.95	54	P	P	00 03 31.0	-0.8
RAR				pmax	pmax		
	comp=Z,115nm,1.3s						
EIDS	Eidsvold	26.44	293		P	00 03 36.5	+0.3
EIDS	Eidsvold	26.44	293	P	P	00 03 36.4	+0.1
AFI	Afiamalu	26.48	23	P	P	00 03 37.4	+0.6
AFI				IAmb	IAmb	00 03 53.6	
	comp=Z,33nm,0.7s						
AFI	Afiamalu	26.48	23	P	P	00 03 37.4	+0.6
AFI				pmax	pmax		
	comp=Z,33nm,0.7s						
CMSA	Cobar Meteorol	27.36	276	P	P	00 03 45.1	+0.6
STKA	Stephens Creek	30.41	272	P	P	00 04 11.7	+0.1
	comp=Z,24nm,0.9s,baz=106,slow=10.0,SNR=31						
STKA				ScP	ScP	00 10 53.0	+2.0
	comp=Z,0.8nm,0.3s,baz=83,slow=6.4,SNR=2.9						
STKA				LR	LR	00 15 22.3	
	comp=Z,1μm,22.0s,baz=88,slow=34						
	comp=Z,24nm,0.9s						
STKA	Stephens Creek	30.41	272	*i* P	P	00 04 09.8	-1.8
QLP	Quilpie	30.83	283	P	P	00 04 15.6	+0.2
TBI	Tubuai	31.63	70	*e*S	S	00 09 32.4	+2.7
	comp=Z,1μm,36.8s						
TBI				*e*LR	LR	00 12 27.7	
	comp=Z,1μm,25.2s						
TBI				*e*LR	LR	00 12 33.2	
	comp=Z,6μm,26.5s						
HTT	Hallett	31.90	268	P	P	00 04 25.0	+0.2
INKA	Innaminka	32.91	278		P	00 04 33.8	+0.1
INKA				IAmb	IAmb	00 04 50.8	
	comp=Z,18nm,0.7s						
CTA	Charters Tower	33.22	295	LR	LR	00 16 59.9	
	comp=Z,26nm,21.9s,baz=128,slow=34						
CTAO	Charters Tower	33.22	295		P	00 04 36.8	+0.4
CTAO	Charters Tower	33.22	295	P	P	00 04 36.5	+0.1
CTAO	Charters Tower	33.22	295	P	P	00 04 36.8	+0.4
CTAO				pmax	pmax		
	comp=Z,59nm,0.8s						
CTAO	Charters Tower	33.22	295	P	P	00 04 36.3	-0.1
CTAO				pP	sP	00 04 47.0	-1.9
BBOO	Buckleboo	34.36	267	IAmb	IAmb	00 04 46.6	
	comp=Z,19nm,0.9s						
BBOO	Buckleboo	34.36	267	P	P	00 04 45.6	-0.7
TATA	Tatamba Isabel	34.56	327	P	P	00 04 46.1	-1.9
PPTF	Pamatai, Papee	35.27	62	P	P	00 04 54.7	+0.4
PPT	Papeete	35.28	62	P	P	00 04 56.2	+1.9
	comp=Z,26nm,0.5s,baz=214,slow=2.8,SNR=5.2						
PPT				LR	LR	00 16 22.1	
	comp=Z,669nm,20.7s,baz=244,slow=31						
	comp=Z,26nm,0.5s						
QIS	Mount Isa	37.74	288	P	P	00 05 14.8	-0.5
VNDA	Vanda	39.31	186	LR	LR	00 19 32.3	
	comp=Z,417nm,20.9s,baz=354,slow=33						
COEN	Coen	39.55	299	IAmb	IAmb	00 05 41.3	
	comp=Z,67nm,0.8s						
COEN	Coen	39.55	299	P	P	00 05 29.6	-0.9
ASAR	Alice Springs	40.29	279	P	P	00 05 35.6	-1.1
	comp=Z,173nm,1.1s,baz=130,slow=8.3,SNR=344						
ASAR				PcP	PcP	00 07 37.9	-2.0
	comp=Z,2.1nm,0.6s,baz=125,slow=4.7,SNR=1.7						
ASAR				ScP	ScP	00 11 25.5	-1.4
	comp=Z,2.0nm,1.0s,baz=132,slow=3.6,SNR=6.9						
ASAR				S	S	00 11 36.9	-5.5
	comp=Z,3.3nm,1.0s,baz=95,slow=15,SNR=5.0						
ASAR				LR	LR	00 23 16.9	
	comp=Z,2μm,18.6s,baz=119,slow=38						
	comp=Z,173nm,1.1s						
ASAR	Alice Springs	40.29	279		P	00 05 35.5	-1.2
PMG	Port Moresby	40.37	308	P	P	00 05 37.0	-0.3
	comp=Z,26nm,0.6s,baz=134,slow=5.2,SNR=15						
PMG				LR	LR	00 20 30.6	
	comp=Z,2μm,21.8s,baz=156,slow=34						
	comp=Z,26nm,0.6s						
PMG	Port Moresby	40.37	308		P	00 05 37.3	+0.1
PMG				IAmb	IAmb	00 05 48.5	
	comp=Z,49nm,0.8s						
PMG	Port Moresby	40.37	308	*i* P	P	00 05 35.4	-1.8
PMG				pmax	pmax		
	comp=Z,36nm,0.9s						
PMG	Port Moresby	40.37	308	P	P	00 05 37.0	-0.3
PMG				pP	sP	00 05 47.8	-1.9
WRAB	Tennant Creek	42.06	284	P	P	00 05 49.5	-1.7
WRAB	Tennant Creek	42.06	284	P	P	00 05 49.6	-1.6
WRAB	Tennant Creek	42.06	284	*i* P	P	00 05 49.3	-1.9
WRAB				pmax	pmax		
	comp=Z,17nm,0.9s						
WRAB	Tennant Creek	42.06	284	P	P	00 05 49.6	-1.6
WRAB				pP	pP	00 06 01.1	+0.9
WRA	Warramunga Arr	42.06	284	P	P	00 05 49.7	-1.5
	comp=Z,17nm,0.7s,baz=126,slow=7.4,SNR=71						
WRA				PcP	PcP	00 07 44.1	-1.6
	comp=Z,1.0nm,0.4s,baz=148,slow=3.6,SNR=1.6						
WRA				ScP	ScP	00 11 31.3	-2.7
	comp=Z,2.3nm,1.1s,baz=118,slow=3.2,SNR=4.7						
WRA				S	S	00 12 03.1	-5.6
	comp=Z,2.7nm,1.1s,baz=124,slow=14,SNR=4.8						
	comp=Z,17nm,0.7s						
WRA	Warramunga Arr	42.06	284		P	00 05 49.5	-1.7
CCD	Concordia, Ant	43.88	198	P	P	00 06 07.6	+1.9
CCD				pP	sP	00 06 19.6	+1.4
CASY	Casey	46.15	211	P	P	00 06 25.0	+1.7
CASY				IAmb	IAmb	00 06 43.3	
	comp=Z,21nm,1.0s						
TAOE	Nuku Hiva Isla	47.89	63	*e*S	S	00 13 32.4	-0.9
	comp=Z,221nm,24.8s						
TAOE				*e*SS	SS	00 17 06.2	+4.0
	comp=Z,130nm,24.6s						
TAOE				*e*LR	LR	00 20 08.0	
	comp=Z,1μm,24.9s						
NWAO	Narrogin (SRO)	48.84	257	LR	LR	00 24 45.7	
	comp=Z,714nm,21.1s,baz=124,slow=33						
NWAO	Narrogin (SRO)	48.84	257	P	P	00 06 44.0	-0.7
NWAO				IAmb	IAmb	00 06 59.3	
	comp=Z,43nm,1.4s						
NWAO	Narrogin (SRO)	48.84	257	P	P	00 06 44.0	-0.7
NWAO	Narrogin (SRO)	48.84	257	P	P	00 06 43.6	-1.1
NWAO	Narrogin (SRO)	48.84	257	P	P	00 06 44.0	-0.7
NWAO				pmax	pmax		
	comp=Z,43nm,1.4s						
KNRA	Kununurra	48.86	284	IAmb	IAmb	00 06 55.3	
	comp=Z,12nm,0.6s						
MTN	Manton Dam	48.88	289	IAmb	IAmb	00 06 50.8	
	comp=Z,13nm,0.8s						
KLBR	Kellerberrin	49.02	259	P	P	00 06 45.2	-0.9
JAY	Jayapura	49.71	307	P	P	00 06 51.4	-0.2
	comp=Z,21nm,0.9s,baz=135,slow=5.7,SNR=5.4						
JAY				LR	LR	00 28 15.9	
	comp=Z,598nm,19.9s,baz=156,slow=37						
	comp=Z,21nm,0.9s						
FITZ	Fitzroy Crossi	49.79	279	LR	LR	00 29 19.3	
	comp=Z,1μm,18.1s,baz=118,slow=38						
FITZ	Fitzroy Crossi	49.79	279	P	P	00 06 51.2	-1.0
MUN	Mundaring	50.03	258	P	P	00 06 56.2	+2.4
BLDU	Ballidu	50.26	260	P	P	00 06 55.0	-0.6
MEEK	Meekatharra	50.67	265	P	P	00 06 57.3	-1.5
QSPA	South Pole Qui	51.20	180	P	P	00 07 04.9	+2.5
	comp=Z,22nm,1.0s,baz=33,slow=3.1,SNR=39						
QSPA				LR	LR	00 25 14.5	
	comp=Z,844nm,21.0s,baz=34,slow=32						
	comp=Z,22nm,1.0s						
QSPA	South Pole Qui	51.20	180	P	P	00 07 05.2	+2.8
QSPA				IAmb	IAmb	00 07 27.7	
	comp=Z,52nm,1.1s						
QSPA	South Pole Qui	51.20	180	P	P	00 07 05.2	+2.8
QSPA				pP	sP	00 07 17.9	+3.0
MORW	Morawa	51.49	261	IAmb	IAmb	00 07 08.4	
	comp=Z,28nm,1.1s						
MORW	Morawa	51.49	261	P	P	00 07 03.9	-1.0
PSA00	Pilbara Seismi	52.34	272		P	00 07 09.6	-1.7
PSA00	Pilbara Seismi	52.34	272	P	P	00 07 09.3	-2.0
PSA00				IAmb	IAmb	00 07 26.7	
	comp=Z,20nm,0.8s						
PSA00	Pilbara Seismi	52.34	272	P	P	00 07 10.7	-0.6
MBWA	Marble Bar	52.65	272		P	00 07 12.3	-1.3
MBWA				IAmb	IAmb	00 07 29.1	
	comp=Z,28nm,0.8s						
MBWA	Marble Bar	52.65	272	P	P	00 07 12.1	-1.5
FAKI	Fak Fak	54.93	299	IAmb	IAmb	00 07 55.6	
	comp=Z,23nm,0.9s						
FAKI	Fak Fak	54.93	299	P	P	00 07 28.5	-1.8
	comp=Z,22nm,0.7s						
BNDI	Bandanaira	55.41	296	P	P	00 07 35.2	+1.4
SOEI	Soe	55.99	286	P	P	00 07 41.2	+3.1
	comp=Z,855nmcomp=Z,48nm,1.1s						
GIRL	Giralia	56.14	267	P	P	00 07 38.5	-0.4
BATI	Baumata	56.15	285	LR	LR	00 34 35.3	
	comp=Z,1μm,18.0s,baz=148,slow=39						
MMRI	Maumere	58.23	286	P	P	00 07 55.9	+2.1
	comp=Z,46nm,1.0s						
NLAI	Namlea	58.30	294	P	P	00 07 54.4	+0.2
	comp=Z,728nmcomp=Z,43nm,0.8s						

EDFI	Ende, Flores	58.57	285	P	P	00 07 58.7	+2.4
	comp=Z,15nm,1.0s						
SANI	Sanana	59.92	294	P	P	00 08 04.7	-0.8
	comp=Z,949nmcomp=Z,76nm,0.8s						
RPN	Rapa Nui	60.54	102	LR	LR	00 29 10.6	
	comp=Z,345nm,18.7s,baz=256,slow=31						
GUMO	Guam	60.76	322	LR	LR	00 32 25.2	
	comp=Z,149nm,21.2s,baz=146,slow=34						
BELA	Belgrano 2	61.78	173		P	00 08 18.6	+1.3
BKSI	Bulukumba	61.98	287	P	P	00 08 20.3	+0.8
	comp=Z,19nm,1.1s						
KAPI	Kappang	62.46	287	LR	LR	00 37 09.8	
	comp=Z,704nm,19.2s,baz=131,slow=38						
KAPI	Kappang	62.46	287	P	P	00 08 22.4	-0.3
KAPI				IAmb	IAmb	00 08 38.2	
	comp=Z,24nm,1.2s						
KAPI	Kappang	62.46	287	P	P	00 08 25.2	+2.5
KAPI	Kappang	62.46	287	i P	P	00 08 21.0	-1.7
KAPI				pmax	pmax		
	comp=Z,17nm,1.0s						
SMAI	San Martin Ant	62.77	158	P	P	00 08 26.4	+2.4
SMAI				IAmb	IAmb	00 08 27.9	
	comp=Z,33nm,0.9s						
GTOI	Gorontalo	63.91	294	P	P	00 08 33.2	+0.9
	comp=Z,609nmcomp=Z,44nm,0.6s						
TOLI2	Tolitoli	65.83	293	IAmb	IAmb	00 08 48.7	
	comp=Z,18nm,1.0s						
PMSA	Palmer Station	65.85	155	LR	LR	00 31 01.7	
	comp=Z,313nm,21.3s,baz=228,slow=30						
MPSI	Mapaga	65.94	291	P	P	00 08 45.6	+0.1
	comp=Z,3μmcomp=Z,16nm,0.9s						
DAV	Davao City (W)	66.74	301	LR	LR	00 40 45.1	
	comp=Z,163nm,18.1s,baz=134,slow=38						
SNJI	Sawahan-Nganju	66.76	279	P	P	00 08 52.9	+1.9
	comp=Z,34nm,1.8s						
BBKI	Banjar Baru	67.16	285	P	P	00 08 53.2	-0.1
SYO	Syowa Base	68.08	195	⇑eP	P	00 08 56.7	-1.6
SYO	Syowa Base	68.08	195	⇑ipP	pP	00 09 06.4	-1.2
SYO	Syowa Base	68.08	195	⇑isP	sP	00 09 10.6	-0.5
TROLL	Troll, Antarti	69.33	181	⇓P	P	00 09 07.8	+1.5
	comp=Z,666nm,0.7s						
SNAA	Sanae	69.71	180	⇓P	P	00 09 09.7	+1.2
	comp=Z,408nm,1.1s						
SNAA				⇑PcP	PcP	00 09 27.6	-3.6
SNAA	Sanae	69.71	180	P	P	00 09 09.5	+1.0
	comp=Z,26nm,1.1s,baz=186,slow=4.5,SNR=28						
SNAA				LR	LR	00 37 06.9	
	comp=Z,387nm,19.7s,baz=192,slow=34						
	comp=Z,26nm,1.1s						
SNAA	Sanae	69.71	180		P	00 09 09.8	+1.3
SNAA				IAmb	IAmb	00 09 11.1	
	comp=Z,37nm,1.1s						
SNAA	Sanae	69.71	180	i P	P	00 09 09.2	+0.7
SNAA				pmax	pmax		
	comp=Z,31nm,1.2s						
VNA3	Neumayer Olymp	70.00	177	⇓P	P	00 09 11.3	+1.1
	comp=Z,46nm,0.8s						
VNA3				⇑PcP	PcP	00 09 29.7	-2.6
NVL	N'lazarevskaya	70.17	185	eP	P	00 09 07.2	-4.0
NVL				eS	S	00 18 16.7	-3.4
NVL				eSSS	SSS	00 26 05.9	
NVL				pmax	pmax		
	comp=Z,52nm,1.5s						
NVL				MLR	MLR		
	comp=Z,744nm,22.0s						
VNA2	Neumayer--Watz	70.39	178	⇓P	P	00 09 14.0	+1.4
	comp=Z,50nm,0.8s,baz=175,slow=6.1						
VNA2				⇓PcP	PcP	00 09 31.9	-2.0
	baz=170,slow=6.9						
VNA1	Neumayer--Stat	70.64	178	⇑P	P	00 09 15.3	+1.3
	comp=Z,43nm,0.9s						
VNA1				⇑PcP	PcP	00 09 34.1	-0.9
JCJ	Chichijima	73.75	327	LR	LR	00 39 39.0	
	comp=Z,110nm,20.8s,baz=196,slow=34						
COYC	Coyhaique	74.97	137	IAmb	IAmb	00 09 44.1	
	comp=Z,31nm,1.0s						
COYC	Coyhaique	74.97	137	P	P	00 09 43.2	+3.0
LL02	Futaleuf	76.65	135		P	00 09 52.6	+2.7
LL02				IAmb	IAmb	00 09 53.4	
	comp=Z,41nm,0.9s						
H03S2	Juan Fernandez	78.42	124	T	T	01 36 04.3	
	baz=229,slow=74,SNR=755						
H03S1	Juan Fernandez	78.43	124	T	T	01 36 05.6	
	baz=229,slow=74,SNR=862						
H03S3	Juan Fernandez	78.44	124	T	T	01 36 06.1	
	baz=229,slow=74,SNR=625						
H03N3	Juan Fernandez	78.66	124	T	T	01 36 19.9	
	baz=232,slow=72,SNR=350						
H03N2	Juan Fernandez	78.66	124	T	T	01 36 25.9	
	baz=232,slow=72,SNR=391						
H03N1	Juan Fernandez	78.68	124	T	T	01 36 22.5	
	baz=232,slow=72,SNR=365						
PLCA	Paso Flores	79.01	134	P	P	00 10 05.7	+2.5
	comp=Z,18nm,1.0s,baz=214,slow=5.7,SNR=21						
PLCA				LR	LR	00 37 32.2	
	comp=Z,304nm,19.6s,baz=212,slow=30						
	comp=Z,18nm,1.0s						
PLCA	Paso Flores	79.01	134		P	00 10 04.4	+1.2
PLCA				IAmb	IAmb	00 10 06.9	
	comp=Z,41nm,1.2s						
PLCA	Paso Flores	79.01	134	eP	P	00 10 04.4	+1.2
PLCA	Paso Flores	79.01	134	P	P	00 10 05.7	+2.5
JHJ	Hachijo jima 2	80.01	328	LR	LR	00 41 50.9	
	comp=Z,146nm,21.3s,baz=129,slow=33						
JOW	Kunigami	80.27	316	LR	LR	00 41 17.9	
	comp=Z,158nm,20.7s,baz=150,slow=32						
BI02	San Fabin de	81.33	130		P	00 10 17.7	+1.9
BI02				IAmb	IAmb	00 10 19.3	
	comp=Z,43nm,0.9s						
ML02	Panimavida	81.85	130	P	P	00 10 19.5	+1.1
ML02				IAmb	IAmb	00 10 20.9	
	comp=Z,26nm,1.0s						
SSLB	Suanglung	82.13	309	P	P	00 10 19.7	-0.2
SSLB				IAmb	IAmb	00 10 34.3	
	comp=Z,26nm,0.8s						
IPM	Ipoh	82.78	282	P	P	00 10 23.1	-0.4
IPM				IAmb	IAmb	00 10 28.1	
	comp=Z,32nm,1.3s						
BO02	Sierra Bellavi	82.89	129		P	00 10 24.8	+0.9
BO01	Tunca	82.97	129	P	P	00 10 23.5	-0.8
MT01	Popeta	83.23	128	P	P	00 10 26.8	+1.2
PSI	Prapat	83.32	279	LR	LR	00 51 19.8	
	comp=Z,447nm,18.1s,baz=132,slow=38						
GSI	Gunungsitoli	83.42	277	P	P	00 10 26.2	-0.7
MT09	Talagante	83.45	128	P	P	00 10 28.5	+1.5
MT09				IAmb	IAmb	00 10 29.1	
	comp=Z,16nm,0.8s						
MJAR	Matsushiro Arr	83.61	329	P	P	00 10 27.1	-0.2
	comp=Z,1.7nm,0.7s,baz=161,slow=6.2,SNR=6.2						
MJAR				LR	LR	00 44 39.1	
	comp=Z,138nm,21.9s,baz=150,slow=34						
	comp=Z,1.7nm,0.7s						
MT05	Renca	83.86	128	P	P	00 10 29.6	+0.6
LMEL	Las Melosas	83.88	129	P	P	00 10 29.5	+0.3
LMEL				IAmb	IAmb	00 10 32.7	
	comp=Z,20nm,1.1s						
MT13	San Alfonso	83.90	129	P	P	00 10 28.8	-0.4
MT13				IAmb	IAmb	00 10 32.6	
	comp=Z,24nm,1.1s						
MT03	Universidad Ad	83.93	129	P	P	00 10 29.2	-0.3
MT16	CCHEN	83.97	128	P	P	00 10 29.8	+0.2
JNU	Nakatsue	84.00	322	LR	LR	00 42 41.5	
	comp=Z,109nm,20.5s,baz=162,slow=32						
PEL	Peldehue	84.06	128	P	P	00 10 29.7	-0.3
PEL	Peldehue	84.06	128	P	P	00 10 29.7	-0.3
PEL				pmax	pmax		
	comp=Z,48nm,1.1s						
PEL	Peldehue	84.06	128	P	P	00 10 31.8	+1.8
PEL				pP	sP	00 10 44.5	+1.5
VA06	Catapilco	84.08	127	P	P	00 10 30.4	+0.4
VA06				IAmb	IAmb	00 10 32.8	
	comp=Z,18nm,1.0s						
MT08	Bocatoma Ro	84.27	129	P	P	00 10 31.7	+0.4
MT08				IAmb	IAmb	00 10 35.0	
	comp=Z,12nm,0.9s						
VA03	San Esteban	84.41	128	P	P	00 10 31.9	+0.1
VA03				IAmb	IAmb	00 10 34.4	
	comp=Z,17nm,0.9s						
CO06	Fray Jorge	85.15	126	P	P	00 10 35.0	-0.5
CO06				IAmb	IAmb	00 10 37.8	
	comp=Z,20nm,1.1s						
CO02	Combarbal	85.19	127	P	P	00 10 36.1	+0.3
TRQA	Tornquist	85.60	137		P	00 10 38.3	+0.7
TRQA				IAmb	IAmb	00 10 40.4	
	comp=Z,16nm,1.1s						
TRQA	Tornquist	85.60	137	eP	P	00 10 39.6	+2.0
CO03	El Pedregal	85.63	126	P	P	00 10 38.8	+0.8
CO03				IAmb	IAmb	00 10 41.1	
	comp=Z,30nm,0.9s						
CO05	La Serena	85.91	125	P	P	00 10 40.5	+1.2
QIZ	Qiongzhong	85.94	298	P	P	00 10 42.7	+3.3
QIZ				S	S	00 21 16.8	+5.7
QIZ				LR	LR		
	comp=Z,310nm,15.3s						
QIZ				LR	LR		
	comp=Z,290nm,17.1s						
QIZ				LR	LR		
	comp=Z,410nm,21.5s						
CO01	Juntas del Tor	86.60	126	P	P	00 10 42.8	-0.2
CO01				IAmb	IAmb	00 10 46.6	
	comp=Z,26nm,1.2s						
LCO	Las Campanas	86.87	125		P	00 10 45.2	+0.8
LCO				IAmb	IAmb	00 10 47.5	
	comp=Z,26nm,1.0s						
LCO	Las Campanas	86.87	125	eP	P	00 10 45.2	+0.8
LCO	Las Campanas	86.87	125	P	P	00 10 46.5	+2.1
LCO				pP	sP	00 10 58.7	+1.4
AC04	Llanos de Chal	87.18	124	P	P	00 10 44.5	-1.1
AC05	El Transito	87.26	125		P	00 10 47.6	+1.5
GO03	Copiapo	88.14	124	P	P	00 10 50.2	0.0
AC06	Mina Casimiro	88.23	124	P	P	00 10 50.2	-0.4
AC06				IAmb	IAmb	00 10 53.6	
	comp=Z,16nm,0.8s						
ASAJ	Asahikawa	88.66	335	LR	LR	00 46 44.9	
	comp=Z,120nm,19.3s,baz=158,slow=33						
KSRS	Korea Array	88.92	322	P	P	00 10 53.6	+0.3
	comp=Z,7.8nm,0.8s,baz=142,slow=5.7,SNR=21						
	comp=Z,7.8nm,0.8s						
KSAR	Wonju Array Be	88.93	322		P	00 10 53.1	-0.2
KSAR	Wonju Array Be	88.93	322	P	P	00 10 53.1	-0.2
KS19	Wonju Array Si	88.98	322	P	P	00 10 52.2	-1.4
KS19				IAmb	IAmb	00 11 05.8	
	comp=Z,21nm,0.9s						
AC02	Maricunga	89.38	125	P	P	00 10 57.4	+0.8
AC02				IAmb	IAmb	00 11 00.0	
	comp=Z,11nm,0.9s						
PB14	IPOC Station P	90.07	122	P	P	00 10 59.9	+0.3
GO02	Mina Guanaco	90.23	123		P	00 11 02.2	+1.8
WHN	Wuhan	91.06	309	eP	P	00 11 02.3	-1.2
YSS	Yuzhno-Sakhali	91.14	337	eP	P	00 11 07.3	+3.9
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				MLR	MLR		
	comp=Z,300nm,15.0s						
SHEM	Shemya Is, Ala	91.34	358	LR	LR	00 46 58.9	
	comp=Z,249nm,20.7s,baz=296,slow=32						
PB05	IPOC Station P	91.42	121	P	P	00 11 05.4	-0.3
SLVN	Son La	91.60	296	P	P	00 11 06.3	0.0
SLVN				IAmb	IAmb	00 11 31.8	
	comp=Z,15nm,1.5s						
LPIG	La Paz	91.68	60	LR	LR	00 45 35.6	
	comp=Z,344nm,18.1s,baz=224,slow=31						
PB06	IPOC Station P	91.94	121	P	P	00 11 07.7	-0.5
PB03	IPOC Station P	92.27	121	P	P	00 11 09.2	-0.5
PB07	IPOC Station P	92.40	120	P	P	00 11 10.2	-0.1
AF01	San Pedro de A	92.69	122	P	P	00 11 11.8	0.0
PB01	IPOC Station P	93.14	120	P	P	00 11 14.0	+0.4
PB01				IAmb	IAmb	00 11 17.5	
	comp=Z,18nm,1.2s						
CMAR	Chiang Mai Arr	93.28	291	P	P	00 11 13.9	-0.2
	comp=Z,2.2nm,0.8s,baz=135,slow=3.1,SNR=4.9						
CMAR				LR	LR	00 57 26.1	
	comp=Z,79nm,19.2s,baz=135,slow=38						
	comp=Z,2.2nm,0.8s						
CMAR	Chiang Mai Arr	93.28	291	P	P	00 11 14.2	+0.1
CMAR	Chiang Mai Arr	93.28	291	i P	P	00 11 14.6	+0.5
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PETK	Petropavlovsk-	93.35	348	LR	LR	00 48 14.5	
	comp=Z,161nm,20.3s,baz=150,slow=32						
PKD	Bear Valley Ra	93.59	46		P	00 11 17.5	+2.4
ELS	Elsinore Mount	93.72	49	P	P	00 11 16.8	+1.0
ELS				IAmb	IAmb	00 11 19.5	
	comp=Z,18nm,1.2s						
NNA	Nana	93.98	109	LR	LR	00 45 17.2	
	comp=Z,162nm,19.9s,baz=224,slow=30						
MHC	Mount Hamilton	94.00	44	P	P	00 11 18.0	+0.9
MHC				IAmb	IAmb	00 11 20.2	
	comp=Z,11nm,1.1s						
MHC	Mount Hamilton	94.00	44	P	P	00 11 18.0	+0.9
MHC				pmax	pmax		
	comp=Z,11nm,1.1s						
BORC	Borrego Spring	94.06	50	P	P	00 11 17.6	+0.4
BORC				IAmb	IAmb	00 11 21.1	
	comp=Z,16nm,1.1s						
TPO	Tropico Hills	94.13	48	P	P	00 11 19.2	+1.5
TPO				IAmb	IAmb	00 11 20.6	
	comp=Z,17nm,1.2s						
DNR	Dunn Ranch,Anz	94.14	50	P	P	00 11 18.6	+0.8
DNR				IAmb	IAmb	00 11 21.6	
	comp=Z,17nm,0.9s						
PFO	Pinyon Flats O	94.27	50	LR	LR	00 47 09.6	
	comp=Z,222nm,18.4s,baz=247,slow=31						
PFO	Pinyon Flats O	94.27	50	P	P	00 11 19.2	+0.9
PFO				IAmb	IAmb	00 11 22.2	
	comp=Z,14nm,1.3s						
PFO	Pinyon Flats O	94.27	50	P	P	00 11 19.3	+0.9
PFO				pmax	pmax		
	comp=Z,15nm,1.3s						
ISA	Isabella, Lake	94.55	47	P	P	00 11 21.0	+1.4
ISA	Isabella, Lake	94.55	47	P	P	00 11 21.0	+1.4
ISA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BC3	Big Chuckawall	94.90	50	P	P	00 11 23.7	+2.4
BC3				IAmb	IAmb	00 11 26.3	
	comp=Z,13nm,1.1s						
WSHM	Spangler Hills	95.06	48	P	P	00 11 22.3	+0.3
CN2	Changchun	95.09	325	P	P	00 11 20.9	-0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CLC	China Lake	95.16	47	P	P	00 11 22.7	+0.4
CLC				IAmb	IAmb	00 11 25.7	
	comp=Z,7.1nm,1.1s						
CLC	China Lake	95.16	47	P	P	00 11 22.7	+0.4
CLC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CMB	Columbia Colle	95.19	44	IAmb	IAmb	00 11 25.1	
	comp=Z,6.7nm,1.1s						
MPMC	Manual Prospec	95.39	47	P	P	00 11 25.1	+1.5
IRM	Iron Mountain	95.43	50	P	P	00 11 25.6	+2.0
IRM				IAmb	IAmb	00 11 27.7	
	comp=Z,16nm,1.1s						
O02D	Mt. Diablo Mer	95.48	41	P	P	00 11 25.7	+1.9
O02D				IAmb	IAmb	00 11 27.2	
	comp=Z,13nm,1.1s						
GWY	Greenwater Val	95.95	48	P	P	00 11 26.2	+0.1
ATAH	Atahualpa	95.96	104	LR	LR	00 44 40.2	
	comp=Z,415nm,21.4s,baz=238,slow=29						
WAKR	Walker	96.04	44	P	P	00 11 27.6	+1.1
N02D	Trinity Center	96.11	41	P	P	00 11 27.9	+1.4
N02D				IAmb	IAmb	00 11 29.8	
	comp=Z,13nm,1.4s						
MPK	Martis Peak	96.29	44	P	P	00 11 27.7	0.0
MPK				IAmb	IAmb	00 11 31.0	
	comp=Z,7.7nm,1.1s						
M02C	Callahan	96.34	40	P	P	00 11 27.6	0.0
M02C				IAmb	IAmb	00 11 31.1	
	comp=Z,10nm,1.2s						
NVAR	Mina Array Bea	96.61	45	P	P	00 11 30.2	+1.1
	comp=Z,0.4nm,0.4s,baz=218,slow=9.5,SNR=4.1						
NVAR				LR	LR	00 51 14.1	
	comp=Z,140nm,18.3s,baz=226,slow=33						
	comp=Z,0.4nm,0.4s						
YBH	Yreka Blue Hor	96.67	40	LR	LR	00 46 16.1	
	comp=Z,13nm,21.9s,baz=246,slow=30						
XAN	Xi'an	96.78	309	⇓P	P	00 11 33.0	+3.2
XAN				pP	pP	00 11 37.2	-2.2
XAN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CPUP	Villa Florida	96.97	132	P	P	00 11 31.8	+0.8
	comp=Z,0.7nm,0.9s,baz=188,slow=2.5,SNR=4.7						
CPUP				LR	LR	00 49 32.4	
	comp=Z,110nm,18.0s,baz=74,slow=32						
	comp=Z,0.7nm,0.9s						
LPAZ	La Paz	97.34	118	P	Pdif	00 11 35.8	+2.2
	comp=Z,1.8nm,0.8s,baz=191,slow=4.1,SNR=5.7						
LPAZ				LR	LR	00 46 58.8	
	comp=Z,198nm,19.2s,baz=212,slow=30						
	comp=Z,1.8nm,0.8s						
LPAZ	La Paz	97.34	118		Pdif	00 11 37.2	+3.6
LPAZ	La Paz	97.34	118	P	Pdif	00 11 37.2	+3.6
LPAZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
CMIG	Matias Romero	98.30	75	LR	LR	00 46 26.2	
	comp=Z,132nm,20.9s,baz=208,slow=30						
U15A	North Rim	98.69	50	P	P	00 11 38.3	-0.3
KNB	Kanab	98.77	49	P	Pdif	00 11 39.9	+1.1
KNB	Kanab	98.77	49	P	Pdif	00 11 39.9	+1.1
KNB				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CCUT	Cedar City	98.81	48	P	Pdif	00 11 40.0	+0.9
WIFE	Three Sisters-	98.82	39	P	Pdif	00 11 38.9	0.0
TXAR	Lajitas Array	99.58	60	LR	LR	00 50 24.3	
	comp=Z,383nm,18.3s,baz=244,slow=32						
HHC	Hu-ho-hao-te	99.89	315	eP	Pdif	00 11 46.9	+3.3
LZH	Lanzhou	101.26	307	eP	Pdif	00 11 54.7	+4.8
LZH				pP	pP	00 12 00.7	+1.1
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
PDAR	Pinedale Array	104.44	46	Pdiff	Pdif	00 12 06.4	+2.4
	comp=Z,0.3nm,0.8s,baz=214,slow=1.1,SNR=3.8						
PDAR				PKKPbc	PKKPbc	00 27 50.4	+0.1
	comp=Z,0.6nm,0.9s,baz=54,slow=3.8,SNR=4.6						
ILAR	Eielson Array	106.96	15	PKiKP	PKiKP	00 16 23.9	+0.2
	comp=Z,0.5nm,0.6s,baz=278,slow=2.3,SNR=6.5						
ILAR				PKKP	PKKPdf	00 27 56.2	0.0
	comp=Z,1.2nm,0.9s,baz=9.1,slow=5.4,SNR=7.7						
EGMT	Eagleton	107.67	42		Pdif	00 12 22.8	+4.8
YKA	Yellowknife Ar	114.49	28	PKP	PKPdf	00 16 37.7	-0.2
	comp=Z,0.8nm,0.8s,baz=252,slow=2.0,SNR=10						
YKA				PKKPbc	PKKPbc	00 27 17.3	-0.7
	comp=Z,0.8nm,0.8s,baz=38,slow=3.5,SNR=9.3						
WMQ	Urumqi	115.82	306	ePKP	PKiKP	00 16 42.6	+1.3
WMQ				LR	LR		
	comp=Z,130nm,20.7s						
MK31	Makanchi Array	120.58	307	c iPKIKP	PKPdf	00 16 49.6	-0.7
MKAR	Makanchi Array	120.58	307	PKP	PKPdf	00 16 48.0	-2.2
	comp=Z,2.6nm,0.9s,baz=113,slow=2.2,SNR=11						
MKAR				PKKPab	PKKPbc	00 26 57.8	+2.0
	comp=Z,0.7nm,0.8s,baz=274,slow=4.7,SNR=4.1						
MKAR	Makanchi Array	120.58	307		PKPdf	00 16 48.4	-1.9
MKAR	Makanchi Array	120.58	307	PKIKP	PKPdf	00 16 48.4	-1.9
ZALV	Zalesovo Beam	122.07	316	PKP	PKPdf	00 16 50.4	-2.4
	comp=Z,1.6nm,0.6s,baz=130,slow=2.7,SNR=10						
ZALV	Zalesovo Beam	122.07	316		PKPdf	00 16 50.9	-1.9
ZALV	Zalesovo Beam	122.07	316	PKIKP	PKPdf	00 16 50.9	-1.9
AAK	Ala-Archa	123.88	300		PKPdf	00 16 56.3	-0.6
AAK	Ala-Archa	123.88	300	c iPKIKP	PKPdf	00 16 56.8	-0.1
AAK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KBL	Kabul	124.27	289		PKiKP	00 16 58.2	-0.1
KBL	Kabul	124.27	289	PKIKP	PKiKP	00 16 58.2	-0.1
KURK	Kurchatov	124.36	311		PKPdf	00 16 56.1	-1.2
KURK	Kurchatov	124.36	311	c iPKIKP	PKPdf	00 16 56.1	-1.2
KURK				pmax	pmax		
	comp=Z,11nm,1.3s						
KURBB	Kurchatov Arra	124.39	310	PKP	PKPdf	00 16 55.9	-1.5
	comp=Z,4.6nm,0.7s,baz=117,slow=1.7,SNR=54						
NRIK	Noril'sk	125.98	334	PKP	PKPdf	00 16 59.4	-0.6
	comp=Z,4.2nm,0.6s,baz=122,slow=3.2,SNR=14						
KKAR	Karatay Array	126.76	299		PKPdf	00 17 00.7	-1.6
KKAR	Karatay Array	126.76	299	PKIKP	PKPdf	00 17 00.7	-1.6
BVAR	Borovoye Array	129.93	311	PKP	PKPdf	00 17 07.0	-0.9
	comp=Z,3.1nm,0.6s,baz=85,slow=1.7,SNR=20						
BORK	Borovoye	129.97	311		PKPdf	00 17 07.1	-0.9
BORK	Borovoye	129.97	311	c iPKIKP	PKPdf	00 17 07.8	-0.2
BORK				pmax	pmax		
	comp=Z,18nm,2.5s						
RAYN	Ar Rayn	137.11	263		PKPdf	00 17 22.7	+0.3
RAYN	Ar Rayn	137.11	263	PKIKP	PKPdf	00 17 22.7	+0.3
ARTI	Arti	137.30	315		PKPdf	00 17 21.0	-0.7
ARTI	Arti	137.30	315	c iPKIKP	PKPdf	00 17 21.4	-0.3
ARTI				pmax	pmax		
	comp=Z,15nm,2.5s						
SPITS	Spitsbergen Ar	139.91	354	PKP	PKiKP	00 17 27.1	-1.2
	comp=Z,22nm,0.9s,baz=39,slow=7.4,SNR=8.1						
KIRV	Kirov	142.02	318	c iPKIKP	PKPdf	00 17 29.8	-0.3
ARCES	ARCESS Array B	146.02	343	PKPbc	PKPdf	00 17 36.9	0.0
	comp=Z,18nm,0.7s,baz=49,slow=3.2,SNR=37						
ARCES	ARCESS Array B	146.02	343		PKPdf	00 17 37.1	+0.3
KLMR	Klimovskoe	146.29	324	ePKIKP	PKPdf	00 17 35.7	-1.8
KLMR				pmax	pmax		
	comp=Z,84nm,1.4s						
KBZ	Khabaz	146.31	293	PKPbc	PKPdf	00 17 37.8	-0.4
	comp=Z,6.1nm,0.8s,baz=136,slow=2.4,SNR=13						
KBZ	Khabaz	146.31	293	c iPKIKP	PKPdf	00 17 37.4	-0.7
SHA1	Shidzhatmaz	146.49	293	c iPKIKP	PKPdf	00 17 38.3	-0.5
KIV	Kislovodsk	146.50	293	i PKP2	PKPab	00 17 41.9	+0.8
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
VRH	Novokhopyorsk	147.30	307	ePKIKP	PKPdf	00 17 40.2	+0.7
VRH				pmax	pmax		
	comp=Z,49nm,1.3s						
DBIC	Dimbokro	147.78	175	PKPbc	PKPbc	00 17 44.0	-0.4
	comp=Z,12nm,0.9s,baz=205,slow=4.4,SNR=9.3						
DBIC	Dimbokro	147.78	175		PKPbc	00 17 45.2	+0.8
DBIC	Dimbokro	147.78	175	PKP2	PKPbc	00 17 45.2	+0.8
EIL	Elat	148.34	264	PKPbc	PKPbc	00 17 43.8	-1.7
	comp=Z,5.3nm,0.8s,baz=154,slow=2.5,SNR=6.1						
VORR	Voronezh	148.81	308	ePKP2	PKPbc	00 17 45.1	-0.8
VORR				pmax	pmax		
	comp=Z,94nm,1.4s						
LPSR	Galich'ya Gora	148.84	310	ePKP2	PKPbc	00 17 45.1	-0.9
LPSR				pmax	pmax		
	comp=Z,32nm,1.2s						
VORD	Divnogorie	148.84	306	ePKIKP	PKPdf	00 17 42.8	+0.7
VORD				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MOS	Moscow	148.89	316	i PKIKP	PKPdf	00 17 43.0	+1.0
MOS				e		00 17 53.7	
VSR	Storozhevoye	148.90	307	ePKIKP	PKPdf	00 17 43.0	+0.8
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MMAI	Mount Meron Ar	149.37	271	PKPbc	PKPbc	00 17 47.9	-0.1
	comp=Z,4.6nm,0.6s,baz=128,slow=2.4,SNR=5.3						
OBN	Obninsk	149.65	315	i PKHKP	PKPpre	00 17 43.3	
OBN				i		00 21 19.5	
OBN				pmax	pmax		
	comp=Z,19nm,0.9s						
FINES	FINESS Array B	151.60	332	PKPbc	PKPbc	00 17 50.8	-1.6
	comp=Z,12nm,0.8s,baz=45,slow=4.5,SNR=20						
CSS	Mathiatis	151.66	273		PKPbc	00 17 52.7	-0.6
BRTR	Keskin Array B	152.58	283	PKP	PKPdf	00 17 47.0	-1.5
	comp=Z,0.8nm,0.8s,baz=164,slow=1.0,SNR=5.5						
BRTR				PKPbc	PKPbc	00 17 54.6	-0.9
	comp=Z,2.6nm,0.7s,baz=126,slow=2.5,SNR=15						
BRTR	Keskin Array B	152.58	283		PKPdf	00 17 47.0	-1.5
TORD	Torodi Ar. Bea	154.13	188	PKPbc	PKiKP	00 17 59.5	+0.1
	comp=Z,0.8nm,0.3s,baz=153,slow=2.9,SNR=4.5						
TORD				PKPab	PKPab	00 18 13.1	+0.2
	comp=Z,18nm,1.0s,baz=132,slow=2.1,SNR=16						
AKASG	Malin Array Be	155.15	308	PKP	PKPdf	00 17 49.7	-1.8
	comp=Z,3.0nm,0.8s,baz=64,slow=1.8,SNR=5.0						
AKASG				PKPbc	pPKPdf	00 17 58.4	-3.0
	comp=Z,1.5nm,0.6s,baz=77,slow=2.1,SNR=3.7						
NB2	NORSAR Subarra	156.39	344	PKP	PKPdf	00 18 01.6	+8.7
	comp=Z,1.3nm,0.6s,baz=44,slow=2.7						
NOA	NORSAR Array B	156.39	344	PKPbc	PKPdf	00 18 01.9	+9.0
	comp=Z,2.9nm,0.8s,baz=36,slow=1.8,SNR=5.7						
HFS	Hagfors	156.59	340	PKPbc	PKPdf	00 18 02.9	+10
	comp=Z,3.9nm,0.8s,baz=79,slow=7.7,SNR=5.7						
HFS				PKPab	PKPab	00 18 19.7	-2.6
	comp=Z,3.0nm,0.7s,baz=35,slow=5.3,SNR=5.2						
STHS	Stebnicka Huta	160.42	310	ePKIKP	PKPdf	00 17 58.5	+0.4
STHS				e		00 18 36.5	
LANS	Liptovska Anna	161.59	311	ePKIKP	PKPdf	00 18 10.8	+11
MORC	Moravsky Berou	162.40	314	ePKP	PKPab	00 18 46.0	-2.0
JAVC	Velka Javorina	162.78	312	ePKP	PKPab	00 18 51.0	+1.3
VRAC	Vranov	163.18	314	ePKP	PKPab	00 18 50.2	-1.2
MODS	Modra-Piesok	163.24	311	ePKIKP	PKPdf	00 18 01.4	+0.3
KRUC	Moravsky	163.41	314	ePKP	PKPab	00 18 51.0	-1.4
EKA	Eskdalemuir Ar	163.56	2	PKPab	PKPab	00 18 51.5	-1.2
	comp=Z,1.2nm,0.6s,baz=350,slow=2.7,SNR=4.3						
CLL	Collm	163.78	325	ePKP2	PKPab	00 18 53.0	-0.9
CLL	Collm	163.78	325	ePKPab	PKPab	00 18 53.0	-0.9
CLL				epPKPab	pPKPab	00 19 03.0	-0.5
CONA	Conrad Observa	164.28	311	epPKP	PKPab	00 19 02.8	+6.4
	comp=Z,8.5nm,1.3s						
GERES	GERESS Array B	165.02	317	PKPab	PKPab	00 18 57.7	-1.9
	comp=Z,0.5nm,0.7s,baz=53,slow=5.6,SNR=3.0						
MOA	Molln	165.25	312	ePKP	PKPdf	00 18 03.0	+0.1
	comp=Z,5.8nm,1.2s						
MOA				epPKP	pPKPab	00 19 07.1	-3.1
	comp=Z,12nm,1.6s						
SOKA	Soboth	165.35	307	epPKP	PKPab	00 19 07.0	+5.8
	comp=Z,14nm,2.2s						

BIOA	**Bad Ischl, Aus**	**165.70**	**313**	*e*PKP	**PKPab**	**00 19 04.5**	**+2.0**
	comp=Z,10.0nm,1.8s						
MYKA	**Terra Mystica**	**166.23**	**309**	*e*PKP	**PKPdf**	**00 18 03.5**	**-0.3**
	comp=Z,8.1nm,1.2s						
MYKA				*i* PKP	**PKPab**	**00 19 08.7**	**+3.7**
	comp=Z,4.8nm,1.1s						
LESA	**Schwarzleotal**	**166.39**	**313**	*e*PKP	**PKPab**	**00 19 08.5**	**+2.8**
	comp=Z,6.7nm,1.4s						
WATA	**Walderalm**	**167.06**	**315**	*e*PKP	**PKPab**	**00 19 12.1**	**+3.4**
	comp=Z,10nm,1.6s						
FETA	**Feichten**	**167.71**	**315**	*e*PKP	**PKPdf**	**00 18 05.1**	**+0.1**
	comp=Z,8.6nm,1.5s						
FETA				*e*pPKP	**pPKPab**	**00 19 16.8**	**-4.4**
	comp=Z,8.6nm,1.3s						

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*NEIC **10** 00:16:50.9±1.9, 0°.1N±0°.1×121°.7E±0°.1, h180^{km}±8^{km}, mb4.1/14, Error ellipse: s-maj=27.7km s-min=4.0km az=48.0*

*IDC **10** 00:16:54.1±12.0, 0°.18N×122°.01E, h222^{km}±137^{km}, mb3.2/6, mbtmp3.8/7, Error ellipse: s-maj=91.6km s-min=22.2km az=58.0*

ISC 10 00:16:51.5±0.6, **0°.1N**±0°.1×**121°.7E**±0°.2, **h200**^{km}, **n25**, σ**1^{s}99**/27, **mb3.9**/12, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOLI2	**Tolitoli**	**1.35**	**319**	Pn	**Pn**	**00 17 21.4**	**-2.5**
TOLI2				Sn	**Sn**	**00 17 43.7**	**-5.3**
LUWI	**Luwuk**	**1.58**	**136**	Pn	**Pn**	**00 17 24.2**	**-1.7**
LUWI				Sn	**Sn**	**00 17 47.0**	**-5.6**
MTN	**Manton Dam**	**15.91**	**144**	P	**P**	**00 20 24.4**	**-0.2**
MTN				IAmb	IAmb	00 20 24.9	
	comp=Z,5.5nm,0.6s						
KNRA	**Kununurra**	**17.16**	**156**	P	**Pn**	**00 20 39.3**	**-0.5**
KNRA				IAmb	IAmb	00 20 40.8	
	comp=Z,5.0nm,0.7s						
FITZ	**Fitzroy Crossi**	**18.49**	**168**	P	**P**	**00 20 54.0**	**+1.2**
	comp=Z,2.9nm,0.5s,baz=3.8,slow=8.2,SNR=27						
FITZ	**Fitzroy Crossi**	**18.49**	**168**	P	**P**	**00 20 54.2**	**+1.4**
WB0	**Warramunga Arr**	**23.35**	**148**	P	**P**	**00 21 41.8**	**-0.4**
WB0				IAmb	IAmb	00 21 43.0	
	comp=Z,3.6nm,0.6s						
WRA	**Warramunga Arr**	**23.46**	**149**	P	**P**	**00 21 43.5**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=326,slow=11,SNR=21						
	comp=Z,1.4nm,0.5s						
WRA	**Warramunga Arr**	**23.46**	**149**	P	**P**	**00 21 43.4**	**+0.2**
KNMB	**Chin-men Tao**	**24.43**	**353**	P	**P**	**00 21 51.2**	**-0.8**
ASAR	**Alice Springs**	**26.44**	**154**	P	**P**	**00 22 10.3**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=344,slow=14,SNR=14						
	comp=Z,0.7nm,0.6s						
ASAR	**Alice Springs**	**26.44**	**154**	P	**P**	**00 22 10.9**	**+0.8**
MORW	**Morawa**	**29.49**	**190**	P	**P**	**00 22 37.6**	**+0.5**
MORW				IAmb	IAmb	00 23 13.8	
	comp=Z,8.2nm,1.1s						
FORT	**Forrest**	**31.30**	**169**	P	**P**	**00 22 54.4**	**+1.5**
FORT				IAmb	IAmb	00 23 36.8	
	comp=Z,8.8nm,1.1s						
STKA	**Stephens Creek**	**36.97**	**151**	P	**P**	**00 23 40.6**	**-1.1**
	comp=Z,1.2nm,0.5s,baz=304,slow=11,SNR=3.0						
	comp=Z,1.2nm,0.5s						
STKA	**Stephens Creek**	**36.97**	**151**	P	**P**	**00 23 42.0**	**+0.3**
SONM	**Songino Array**	**49.37**	**346**	P	**P**	**00 25 21.0**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=169,slow=11,SNR=4.4						
	comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**57.84**	**329**	P	**P**	**00 26 23.6**	**+1.3**
	comp=Z,0.9nm,0.4s,baz=126,slow=8.9,SNR=24						
	comp=Z,0.9nm,0.4s						
MAKZ	**Makanchi**	**58.01**	**329**	P	**P**	**00 26 24.4**	**+1.0**
MAKZ				IAmb	IAmb	00 26 30.4	
	comp=Z,2.3nm,1.1s						
KBL	**Kabul**	**59.87**	**311**	P	**P**	**00 26 37.4**	**+0.8**
KBL				IAmb	IAmb	00 26 40.5	
	comp=Z,1.7nm,0.5s						
ARSB	**Arslanbob**	**60.11**	**319**	P	**P**	**00 26 39.6**	**+1.5**
PETK	**Petropavlovsk-**	**60.73**	**24**	P	**P**	**00 26 45.1**	**+3.2**
DSZ	**Denniston Nort**	**61.41**	**139**	P	**P**	**00 26 47.0**	**+0.3**
KURBB	**Kurchatov Arra**	**62.22**	**331**	P	**P**	**00 26 52.6**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=116,slow=5.1,SNR=4.7						
	comp=Z,0.3nm,0.5s						
KURK	**Kurchatov**	**62.24**	**331**	P	**P**	**00 26 52.7**	**+0.7**
KURK				IAmb	IAmb	00 26 53.4	
	comp=Z,1.3nm,0.5s						

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*NEIC **10** 00:40:10.8±1.4, 18°.58S±0°.10×175°.6W±0°.1, h214^{km}±10^{km}, mb4.3/14, Error ellipse: s-maj=17.4km s-min=12.4km az=61.0*

*IDC **10** 00:40:14.4±21.0, 18°.87S×175°.79W, h252^{km}±191^{km}, mb4.1/3, mbtmp4.7/3, Error ellipse: s-maj=117.0km s-min=34.0km az=20.0*

ISC 10 00:40:11.7±0.7, **18°.6S**±0°.1×**175°.51W**±0°.08, **h238**^{km}, **n25**, σ**0^{s}94**/27, **mb4.3**/10, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**5.30**	**96**	Pn	**Pn**	**00 41 30.9**	**0.0**
NIUE				Sn	**S**	**00 42 33.5**	**-0.4**
AFI	**Afiamalu**	**5.91**	**38**	Pn	**Pn**	**00 41 37.8**	**-0.9**
RAO	**Raoul Island**	**10.80**	**191**	Pn	**Pn**	**00 42 40.1**	**-0.4**
URZ	**Urewera**	**20.59**	**197**	P	**P**	**00 44 31.3**	**-1.4**
	11nm,0.4s,baz=22,slow=2.5,SNR=13						
	11nm,0.4s						
QRZ	**Quartz Range**	**24.39**	**202**	P	**P**	**00 45 09.7**	**+1.4**
THZ	**Tophouse**	**25.09**	**201**	P	**P**	**00 45 15.8**	**+1.1**
THZ				IAmb	IAmb	00 45 18.6	
	comp=Z,12nm,1.1s						
ARMA	**Armidale**	**32.00**	**242**	P	**P**	**00 46 16.4**	**+0.3**
ARMA				IAmb	IAmb	00 46 21.1	
	comp=Z,16nm,1.4s						
CTAO	**Charters Tower**	**36.05**	**261**	P	**P**	**00 46 50.4**	**-0.6**
COEN	**Coen**	**39.87**	**270**	P	**P**	**00 47 22.9**	**+0.2**
COEN				IAmb	IAmb	00 47 41.5	
	comp=Z,17nm,1.4s						
BBOO	**Buckleboo**	**45.48**	**242**	P	**P**	**00 48 07.9**	**+0.2**
BBOO				IAmb	IAmb	00 48 21.8	
	comp=Z,25nm,1.4s						
WB0	**Warramunga Arr**	**47.19**	**260**	P	**P**	**00 48 19.8**	**-1.2**
WB0				IAmb	IAmb	00 48 20.6	
	comp=Z,5.5nm,0.5s						
WRA	**Warramunga Arr**	**47.21**	**260**	P	**P**	**00 48 20.0**	**-1.3**
	comp=Z,3.4nm,0.4s,baz=98,slow=6.6,SNR=38						
	comp=Z,3.4nm,0.4s						
WRA	**Warramunga Arr**	**47.21**	**260**	P	**P**	**00 48 20.2**	**-1.1**
AS31	**Alice Springs**	**47.25**	**255**	P	**P**	**00 48 21.1**	**-0.5**
AS31				IAmb	IAmb	00 48 21.7	
	comp=Z,3.7nm,0.5s						
ASAR	**Alice Springs**	**47.25**	**255**	P	**P**	**00 48 20.6**	**-0.9**
	comp=Z,10nm,0.7s,baz=88,slow=8.4,SNR=62						
ASAR				PcP	**PcP**	**00 49 48.5**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=103,slow=3.9,SNR=4.8						
	comp=Z,10nm,0.7s						
ASAR	**Alice Springs**	**47.25**	**255**	P	**P**	**00 48 20.8**	**-0.7**
MTN	**Manton Dam**	**51.53**	**268**	P	**P**	**00 48 53.2**	**-0.7**
MTN				IAmb	IAmb	00 48 53.6	
	comp=Z,6.3nm,0.9s						
FORT	**Forrest**	**52.20**	**245**	P	**P**	**00 48 58.5**	**-0.1**
KNRA	**Kununurra**	**53.16**	**264**	P	**P**	**00 49 04.7**	**-1.0**
KNRA				IAmb	IAmb	00 49 05.9	
	comp=Z,7.6nm,0.6s						
FITZ	**Fitzroy Crossi**	**55.63**	**260**	P	**P**	**00 49 22.4**	**-1.1**
SOEI	**Soe**	**58.83**	**270**	P	**P**	**00 49 46.5**	**+0.5**
BVAR	**Borovoye Array**	**119.14**	**321**	PKP	**PKPdf**	**00 58 32.4**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=106,slow=0.7,SNR=7.6						
ARCES	**ARCESS Array B**	**127.49**	**351**	PKP	**PKPdf**	**00 58 48.8**	**+1.1**
	comp=Z,16nm,1.2s,baz=36,slow=2.1,SNR=4.4						
FINES	**FINESS Array B**	**134.60**	**346**	PKP	**PKPdf**	**00 59 03.1**	**+1.8**
	comp=Z,2.5nm,0.9s,baz=25,slow=3.7,SNR=3.9						
BRTR	**Keskin Array B**	**147.23**	**316**	PKPbc	**PKPbc**	**00 59 28.2**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=122,slow=4.2,SNR=4.7						

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*NOU **10** 00:41:33.7, 21°.29S×168°.81E, h0^{km}, MLv4.4/10, Loyalty Islands*

*IDC **10** 00:41:34.0±2.8, 22°.18S×169°.00E, h0^{km}, mb3.5/2, mbtmp3.6/3, ML3.9/1, MS3.2/1, Error ellipse: s-maj=106.8km s-min=37.0km az=160.0*

ISC 10 00:41:39.7±1.5, **21°.4S**±0°.1×**168°.5E**±0°.1, **h20**^{km}, **n19**, σ**1^{s}37**/20, **Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**0.48**	**254**	P	**Pb**	**00 41 49.6**	**+0.1**
MARNC	**Mare, Loyalty**	**0.48**	**254**	S	**Sb**	**00 41 57.7**	**+1.6**
MARNC	**Mare, Loyalty**	**0.48**	**254**	P	**Pb**	**00 41 49.5**	**+0.1**
MARNC	**Mare, Loyalty**	**0.48**	**254**	S	**Sb**	**00 41 58.0**	**+1.9**
PINNC	**Pines Island,**	**1.61**	**218**	P	**Pn**	**00 42 06.5**	**-0.4**
PINNC	**Pines Island,**	**1.61**	**218**	P	**Pn**	**00 42 06.6**	**-0.4**
PINNC	**Pines Island,**	**1.61**	**218**	S	**Sb**	**00 42 29.8**	**+1.2**
YATNC	**Mamie plateau,**	**1.68**	**245**	P	**Pn**	**00 42 06.1**	**-1.9**
YATNC	**Mamie plateau,**	**1.68**	**245**	P	**Pn**	**00 42 06.0**	**-1.9**
OUENC	**Ouen Island, N**	**1.89**	**235**	P	**Pn**	**00 42 11.3**	**+0.4**
OUENC	**Ouen Island, N**	**1.89**	**235**	P	**Pn**	**00 42 11.1**	**+0.2**
DZM	**Mont Dzumac**	**2.07**	**249**	Pn	**Pn**	**00 42 13.2**	**-0.1**
	26nm,0.3s,baz=99,slow=12,SNR=200						
DZM				Sn	**Sn**	**00 42 35.1**	**-3.5**
	28nm,0.3s,baz=0.0,slow=14,SNR=6.4						
DZM				LR	LR	00 43 13.4	
	comp=Z,497nm,19.8s,baz=135,slow=42						
	92nm,0.5s						
DZM	**Mont Dzumac**	**2.07**	**249**	P	**Pn**	**00 42 13.3**	**-0.1**
ONTNC	**Ouen Toro**	**2.15**	**243**	P	**Pn**	**00 42 15.6**	**+1.2**
ONTNC	**Ouen Toro**	**2.15**	**243**	P	**Pn**	**00 42 15.1**	**+0.7**
WRA	**Warramunga Arr**	**31.99**	**266**	P	**P**	**00 48 06.2**	**+1.3**
	0.3nm,0.6s,baz=102,slow=7.9,SNR=1.9						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**32.02**	**259**	P	**P**	**00 48 05.2**	**+0.1**
	0.7nm,0.7s,baz=84,slow=9.0,SNR=11						
	0.7nm,0.7s						
EKA	**Eskdalemuir Ar**	**145.50**	**352**	PKPbc	**PKPdf**	**01 01 15.2**	**-0.9**
	1.6nm,0.6s,baz=356,slow=2.2,SNR=4.3						
GERES	**GERESS Array B**	**146.00**	**330**	PKPbc	**PKPdf**	**01 01 17.8**	**+0.5**
	0.1nm,0.3s,baz=64,slow=5.1,SNR=3.5						

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*IDC **10** 00:55:25.9±1.0, 35°.35N×28°.46E, h0^{km}, mb4.0/10, mbtmp4.0/15, ML3.5/6, MS3.1/1, Error ellipse: s-maj=22.1km s-min=16.0km az=12.0*

*HLW **10** 00:55:29.9, 35°.32N×28°.66E, h20^{km}±4^{km}, Ml3.8*

*NIC **10** 00:55:31.0, 35°.33N×28°.66E, h32^{km}±99^{km}, Ml3.5/8*

*ATH **10** 00:55:30.9, 35°.38N×28°.61E, h30^{km}±2^{km}, ML3.4/13, Manual Solution by M.Kolligri First location: 2019/12/10 00:56:54, This location: 2019/12/10 01:03:03 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

*ISK **10** 00:55:31.1, 35°.46N×28°.45E, h80^{km}, ML3.4/23*

*NEIC **10** 00:55:31.3±1.7, 35°.32N±0°.05×28°.55E±0°.05, h40^{km}±8^{km}, mb4.1/21, Error ellipse: s-maj=7.6km s-min=5.6km az=168.0*

*GII **10** 00:55:34.6±0.0, 35°.089N±0°.002×28°.872E±0°.001, h40^{km}, Mws3.5, confirmed*

*AFAD **10** 00:55:34.9, 35°.70N×28°.47E, h18^{km}, MW3.7*

*THE **10** 00:55:34.5, 36°N±8°×2°8E±1°6, h59^{km}±15^{km}, M3.3/6, MLh3.3/6*

ISC 10 00:55:29.8±1.1, **35°.32N**±0°.03×**28°.60E**±0°.02, **h31**^{km}±8^{km}, **n251**, σ**1^{s}66**/290, **mb4.0**/14, **3C**, **Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RGE1	**Gennadi, Rhode**	**0.89**	**323**	P	**Pn**	**00 55 46.8**	**+0.5**
RGE1				S	**Sb**	**00 55 58.5**	**+0.1**
ARG	**Arkhangelos**	**0.97**	**337**	P	**Pn**	**00 55 48.3**	**+0.8**
ARG				S	**Sn**	**00 55 59.1**	**-1.1**
ARG	**Arkhangelos**	**0.97**	**337**		**Pn**	**00 55 48.0**	**+0.6**
ARG				Sn	**Sn**	**00 56 00.3**	**+0.1**
ARG	**Arkhangelos**	**0.97**	**337**	Pg	**Pn**	**00 55 48.2**	**+0.8**
ARG				Sg	**Sb**	**00 56 00.5**	**-0.2**
ARG	**Arkhangelos**	**0.97**	**337**	P	**Pn**	**00 55 48.3**	**+0.8**
ARG				S	**Sb**	**00 56 00.7**	**-0.1**
ARG	**Arkhangelos**	**0.97**	**337**	P	**Pn**	**00 55 48.1**	**+0.7**
ARG				S	**Sb**	**00 56 00.6**	**-0.2**
RDI1	**Rhodes Town Ha**	**1.17**	**345**	P	**Pn**	**00 55 49.9**	**-0.2**
RDI1				S	**Sb**	**00 56 05.9**	**-0.5**
KARP	**Karpathos**	**1.20**	**281**	P	**Pn**	**00 55 51.7**	**+1.2**
KARP				S	**Sn**	**00 56 05.4**	**-0.2**
KARP	**Karpathos**	**1.20**	**281**		**Pn**	**00 55 51.2**	**+0.7**
KARP				Sn	**Sn**	**00 56 05.5**	**-0.2**
KARP	**Karpathos**	**1.20**	**281**	Pg	**Pb**	**00 55 51.9**	**0.0**
KARP				Sg	**Sn**	**00 56 06.1**	**+0.4**
KARP	**Karpathos**	**1.20**	**281**	P	**Pb**	**00 55 51.9**	**0.0**
KARP				S	**Sb**	**00 56 07.2**	**+0.2**
KARP	**Karpathos**	**1.20**	**281**	P	**Pn**	**00 55 51.7**	**+1.2**
AKAS	**Kas**	**1.23**	**42**	P	**Pn**	**00 55 52.9**	**+1.8**
AKAS				S	**Sn**	**00 56 07.0**	**+0.4**
AKAS	**Kas**	**1.23**	**42**		**Pn**	**00 55 52.9**	**+1.8**
AKAS				Sn	**Sn**	**00 56 07.5**	**+0.8**
AKAS	**Kas**	**1.23**	**42**	Pn	**Pb**	**00 55 53.1**	**+0.6**
AKAS				Sn	**Sb**	**00 56 09.1**	**+1.0**
IZZE	**Mula-Seydike**	**1.23**	**24**	P	**Pn**	**00 55 51.8**	**+0.9**
IZZE				S	**Sn**	**00 56 04.3**	**-2.2**
KSS1	**Kassos Island**	**1.37**	**275**	P	**Pn**	**00 55 54.1**	**+1.2**
KSS1				S	**Sb**	**00 56 12.3**	**+0.2**
DEMR	**Demre-Antalya**	**1.41**	**49**	Pn	**Pb**	**00 55 55.7**	**+0.3**
TURN	**Turunc**	**1.48**	**349**	P	**Pn**	**00 55 54.8**	**+0.5**
TURN				S	**Sn**	**00 56 12.1**	**-0.6**
TURN	**Turunc**	**1.48**	**349**	Pn	**Pn**	**00 55 55.3**	**+0.9**
TURN				Sn	**Sn**	**00 56 13.0**	**+0.3**
DALY	**Dalyan (Mula)**	**1.50**	**2**	Pn	**Pn**	**00 55 55.4**	**+0.8**
DATC	**Datca-Mugla**	**1.63**	**332**	Pn	**Pn**	**00 55 57.1**	**+0.7**
DAT	**Datca**	**1.63**	**330**	P	**Pn**	**00 55 57.0**	**+0.4**
DAT	**Datca**	**1.63**	**330**	Pn	**Pn**	**00 55 57.1**	**+0.5**
YAZI	**Mula-Dat§a-**	**1.65**	**326**	P	**Pn**	**00 55 57.2**	**+0.6**
YAZI				S	**Sn**	**00 56 13.1**	**-3.7**
KNIK	**Mula-Seydike**	**1.72**	**27**	P	**Pn**	**00 55 59.7**	**+1.9**
KNIK				S	**Sn**	**00 56 16.8**	**-1.9**
AKUM	**Antalya-Kumluc**	**1.74**	**54**	P	**Pn**	**00 55 59.8**	**+1.9**
NISR	**Nisiros**	**1.76**	**318**	P	**Pn**	**00 55 58.6**	**+0.5**
ELL	**Elmali**	**1.78**	**36**		**Pn**	**00 56 00.7**	**+2.1**
ELL	**Elmali**	**1.78**	**36**	Pn	**Pn**	**00 56 01.2**	**+2.6**
ELL	**Elmali**	**1.78**	**36**	P	**Pb**	**00 56 01.5**	**-0.4**
ELL				S	**Sn**	**00 56 22.0**	**+1.8**
YER	**Yerkesik**	**1.83**	**352**	P	**Pn**	**00 56 00.6**	**+1.4**
YER	**Yerkesik**	**1.83**	**352**	Pn	**Pn**	**00 56 00.5**	**+1.2**
CAEL	**Denizli, Camel**	**1.89**	**18**	P	**Pn**	**00 56 02.2**	**+2.0**
CAEL				S	**Sn**	**00 56 23.4**	**+0.2**
MULA	**Mugla, Merkez-**	**1.95**	**354**	P	**Pn**	**00 56 03.4**	**+2.5**
ZKR	**Zakros**	**1.96**	**265**	P	**Pn**	**00 56 02.8**	**+1.9**
ZKR	**Zakros**	**1.96**	**265**	Pn	**Pn**	**00 56 02.3**	**+1.3**
ZKR	**Zakros**	**1.96**	**265**	P	**Pn**	**00 56 02.3**	**+1.3**
ZKR				S	**Sn**	**00 56 26.7**	**+2.2**
ZKR	**Zakros**	**1.96**	**265**	P	**Pn**	**00 56 02.2**	**+1.3**
BDRM	**Kayabasi**	**1.98**	**332**	P	**Pn**	**00 56 01.7**	**+0.5**
DNZT	**Denizli-Tavas-**	**1.99**	**10**	P	**Pn**	**00 56 03.3**	**+1.8**
DNZT				S	**Sn**	**00 56 23.9**	**-1.5**
SIT2	**Siteia**	**2.04**	**268**	P	**Pn**	**00 56 03.6**	**+1.5**
GOLH	**Golhisar**	**2.07**	**22**	P	**Pn**	**00 56 05.6**	**+3.0**
GOLH				S	**Sn**	**00 56 26.7**	**-0.6**
YKAV	**Yalikavak-Bodr**	**2.09**	**330**	Pn	**Pn**	**00 56 03.2**	**+0.4**
TAVA	**DENIZLI_Tavas**	**2.16**	**7**	P	**Pn**	**00 56 05.2**	**+1.4**
TAVA				S	**Sn**	**00 56 27.2**	**-2.4**
KORT	**Korkueli**	**2.20**	**40**	P	**Pn**	**00 56 07.2**	**+2.8**
KORT				S	**Sn**	**00 56 30.4**	**-0.2**
KORT	**Korkueli**	**2.20**	**40**	Pn	**Pn**	**00 56 06.9**	**+2.5**
APMY	**Acipayam-Deniz**	**2.22**	**15**	Pn	**Pn**	**00 56 06.1**	**+1.4**
ANTB	**Antalya**	**2.29**	**46**	Pn	**Pn**	**00 56 08.5**	**+2.9**
DNIZ	**Denizli-Tavas-**	**2.33**	**9**	P	**Pn**	**00 56 07.7**	**+1.6**
DNIZ				S	**Sn**	**00 56 31.9**	**-1.9**
NPS	**Neapolis**	**2.44**	**270**	P	**Pn**	**00 56 09.4**	**+1.8**
NPS	**Neapolis**	**2.44**	**270**	P	**Pn**	**00 56 09.9**	**+2.3**
ESEN	**Aydn-Nazilli**	**2.48**	**355**	P	**Pn**	**00 56 09.4**	**+1.2**
ESEN				S	**Sn**	**00 56 36.0**	**-1.4**
INCE	**Denizli-Bozkur**	**2.51**	**18**	P	**Pn**	**00 56 10.3**	**+1.6**
INCE				S	**Sn**	**00 56 35.9**	**-2.4**
GCAM	**G?zelcaml?**	**2.62**	**336**	P	**Pn**	**00 56 10.7**	**+0.7**
GCAM	**G?zelcaml?**	**2.62**	**336**	Pn	**Pn**	**00 56 10.7**	**+0.7**
BRDR	**BURDUR-Merkez**	**2.65**	**26**	P	**Pn**	**00 56 13.4**	**+2.8**
NAZL	**Nazilli-Aydin**	**2.65**	**355**	Pn	**Pn**	**00 56 11.4**	**+0.9**
BCK	**Bucak**	**2.68**	**36**	Pn	**Pn**	**00 56 13.7**	**+2.8**
AYDB	**Zeytinkoy-Aydi**	**2.69**	**348**	Pn	**Pn**	**00 56 11.4**	**+0.3**
THERA	**Ancient Thera,**	**2.74**	**293**	P	**Pn**	**00 56 12.3**	**+0.5**
THERA	**Ancient Thera,**	**2.74**	**293**	P	**Pn**	**00 56 11.8**	**+0.1**
THR8	**Santorini-Mono**	**2.76**	**294**	P	**Pn**	**00 56 12.1**	**+0.1**
THR8	**Santorini-Mono**	**2.76**	**294**	P	**Pn**	**00 56 12.0**	**+0.1**
SMG	**Samos**	**2.78**	**330**	P	**Pn**	**00 56 12.4**	**+0.2**
SMG	**Samos**	**2.78**	**330**	P	**Pn**	**00 56 12.5**	**+0.2**
THR6	**Thira Island,**	**2.80**	**293**	P	**Pn**	**00 56 13.1**	**+0.6**
THR6	**Thira Island,**	**2.80**	**293**	P	**Pn**	**00 56 13.4**	**+0.9**
THR2	**Thira island,**	**2.80**	**295**	P	**Pn**	**00 56 13.6**	**+1.0**
THR3	**Thira Island,**	**2.81**	**294**	P	**Pn**	**00 56 13.3**	**+0.6**
SNT5	**Nea Kammeni, S**	**2.82**	**294**	P	**Pn**	**00 56 13.2**	**+0.5**
BASM	**Basmaki-Afyon**	**2.85**	**24**	Pn	**Pn**	**00 56 14.9**	**+1.6**
IZMR	**zmir-demi**	**2.86**	**350**	P	**Pn**	**00 56 14.4**	**+1.1**
IZMR				S	**Sn**	**00 56 39.5**	**-7.2**
OSC1	**CSNet OBS 1**	**2.86**	**129**	P	**Pn**	**00 56 15.0**	**+1.6**
OSC1				S	**Sn**	**00 56 48.9**	**+2.1**
OSC1				AML	AML	00 56 50.9	
	0.6nm,0.2s						
OSC1				AML	AML	00 56 56.0	
	0.5nm,0.2s						
KIRA	**zmir-Kiraz**	**2.88**	**357**	P	**Pn**	**00 56 14.3**	**+0.6**
ISP	**Isparta**	**2.94**	**31**	Pn	**Pn**	**00 56 16.1**	**+1.6**
ISP	**Isparta**	**2.94**	**31**	Pn	**Pn**	**00 56 16.8**	**+2.2**
ISP	**Isparta**	**2.94**	**31**	P	**Pb**	**00 56 20.1**	**-1.5**
ODEM	**Odemis-Izmir**	**2.98**	**352**	Pn	**Pn**	**00 56 15.8**	**+0.7**
IDI	**Anoyia**	**3.03**	**271**	Pn	**Pn**	**00 56 16.9**	**+1.1**
	9.8nm,0.3s,baz=59,slow=15,SNR=89						
IDI				Sn	**Sn**	**00 56 51.2**	**+0.1**
	15nm,0.3s,baz=348,slow=17,SNR=6.2						
IDI	**Anoyia**	**3.03**	**271**	P	**Pn**	**00 56 17.2**	**+1.5**
IDI	**Anoyia**	**3.03**	**271**		**Pn**	**00 56 16.8**	**+1.0**
IDI	**Anoyia**	**3.03**	**271**	P	**Pn**	**00 56 16.9**	**+1.1**
APE	**Apeiranthos**	**3.03**	**306**	P	**Pn**	**00 56 16.2**	**+0.4**
APE	**Apeiranthos**	**3.03**	**306**	Pn	**Pn**	**00 56 16.2**	**+0.4**
APE	**Apeiranthos**	**3.03**	**306**	P	**Pn**	**00 56 16.3**	**+0.4**
AKMS	**Akamas**	**3.08**	**94**	⇑*i*P	**Pn**	**00 56 18.1**	**+1.7**
AKMS				S	**Sn**	**00 56 51.3**	**-0.8**
AKMS				AML	AML	00 56 58.3	
	0.4nm,0.2s						
AKMS				AML	AML	00 56 58.5	
	0.5nm,0.3s						
PASA	**Karahalli, USA**	**3.11**	**13**	P	**Pn**	**00 56 17.8**	**+0.9**
MANT	**Manisa**	**3.17**	**359**	P	**Pn**	**00 56 18.5**	**+0.8**
MANT				S	**Sn**	**00 56 50.2**	**-4.4**
MANT	**Manisa**	**3.17**	**359**		**Pn**	**00 56 18.2**	**+0.5**
KULA	**Kula-Manisa**	**3.19**	**1**	Pn	**Pn**	**00 56 18.8**	**+0.8**
ALFC	**Alefka**	**3.28**	**92**	⇑*i*P	**Pn**	**00 56 20.9**	**+1.7**
ALFC				S	**Sn**	**00 56 56.5**	**-0.6**
ALFC				AML	AML	00 57 02.5	
	0.5nm,0.4s						
ALFC				AML	AML	00 57 05.6	
	0.5nm,0.2s						
NATA	**Nata**	**3.30**	**98**	⇑*e*P	**Pn**	**00 56 21.4**	**+1.9**
NATA				S	**Sn**	**00 56 56.5**	**-1.2**
NATA				AML	AML	00 57 01.1	
	1.4nm,0.4s						
NATA				AML	AML	00 57 04.0	
	0.8nm,0.3s						
NATA	**Nata**	**3.30**	**98**	P	**Pn**	**00 56 21.3**	**+1.9**
BLCB	**Balcova**	**3.31**	**338**	Pn	**Pn**	**00 56 19.9**	**+0.4**
ZEYE	**Izmir, Urla-Ze**	**3.37**	**331**	P	**Pn**	**00 56 20.0**	**-0.3**
ZEYE				S	**Sn**	**00 56 51.2**	**-8.0**
USAK	**Uak-Merkez**	**3.41**	**6**	P	**Pn**	**00 56 21.2**	**+0.3**
URLA	**Izmir**	**3.44**	**333**	P	**Pn**	**00 56 21.3**	**0.0**
URLA	**Izmir**	**3.44**	**333**	Pn	**Pn**	**00 56 21.4**	**+0.1**
TROD	**Troodos**	**3.52**	**95**	P	**Pn**	**00 56 23.9**	**+1.3**
TROD				S	**Sn**	**00 56 60.0**	**-3.3**
TROD				AML	AML	00 57 11.3	
	0.3nm,0.4s						
TROD				AML	AML	00 57 12.8	
	0.4nm,0.4s						
APOL	**The Sanctuary**	**3.56**	**99**	P	**Pn**	**00 56 24.9**	**+1.9**
APOL				S	**Sn**	**00 57 03.6**	**-0.4**
APOL				AML	AML	00 57 07.2	
	0.3nm,0.3s						
APOL				AML	AML	00 57 11.3	
	0.3nm,0.2s						
VAM	**Vamos**	**3.59**	**273**	P	**Pn**	**00 56 24.9**	**+1.5**
GORD	**Gordes-Manisa**	**3.60**	**355**	Pn	**Pn**	**00 56 24.1**	**+0.5**
AKHS	**Akhisar**	**3.61**	**350**	P	**Pn**	**00 56 24.0**	**+0.3**
XYLS	**Xyliatos**	**3.66**	**93**	P	**Pn**	**00 56 25.8**	**+1.4**
XYLS				S	**Sn**	**00 57 05.1**	**-1.4**
XYLS				AML	AML	00 57 11.0	
	0.4nm,0.2s						
XYLS				AML	AML	00 57 13.3	
	0.4nm,0.5s						
CHAN	**Chania**	**3.73**	**274**	P	**Pn**	**00 56 26.6**	**+1.4**
GVD	**Gavdhos**	**3.73**	**264**	P	**Pn**	**00 56 27.3**	**+2.0**
GVD	**Gavdhos**	**3.73**	**264**	P	**Pn**	**00 56 26.7**	**+1.4**
KARB	**zmir-Karabur**	**3.77**	**333**	P	**Pn**	**00 56 26.4**	**+0.6**
IMMV	**Iera Moni Meta**	**3.77**	**274**	P	**Pn**	**00 56 27.4**	**+1.5**
IMMV	**Iera Moni Meta**	**3.77**	**274**	P	**Pn**	**00 56 27.1**	**+1.2**
ZEDA	**zmir-Bergama**	**3.84**	**342**	P	**Pn**	**00 56 27.0**	**+0.3**
ASGA	**Asgata**	**3.85**	**97**	P	**Pn**	**00 56 28.6**	**+1.6**
ASGA				S	**Sn**	**00 57 10.4**	**-0.8**
ASGA				AML	AML	00 57 18.1	
	0.4nm,0.3s						
ASGA				AML	AML	00 57 20.0	
	0.4nm,0.4s						
ASGA	**Asgata**	**3.85**	**97**	P	**Pn**	**00 56 28.3**	**+1.3**
CSS	**Mathiatis**	**3.90**	**94**		**Pn**	**00 56 28.9**	**+1.4**
CSS	**Mathiatis**	**3.90**	**94**	P	**Pn**	**00 56 29.0**	**+1.4**
CSS	**Mathiatis**	**3.90**	**94**	S	**Sn**	**00 57 11.2**	**-1.1**
CSS	**Mathiatis**	**3.90**	**94**	P	**Pn**	**00 56 29.3**	**+1.7**
CSS	**Mathiatis**	**3.90**	**94**	P	**Pn**	**00 56 29.0**	**+1.4**
MATC	**Matruh**	**4.12**	**196**	P	**Pn**	**00 56 32.2**	**+1.5**
MVOU	**Mavrovouni**	**4.14**	**93**	P	**Pn**	**00 56 32.5**	**+1.6**
MVOU	**Mavrovouni**	**4.14**	**93**	P	**Pn**	**00 56 32.0**	**+1.2**
ANKY	**Antikythira Is**	**4.35**	**279**	P	**Pn**	**00 56 34.1**	**+0.2**
BALB	**Balikesir**	**4.35**	**353**		**Pn**	**00 56 34.9**	**+1.1**
SIGR	**SIGRI**	**4.46**	**331**	P	**Pn**	**00 56 35.5**	**+0.2**
VLY	**Voula,Athens**	**4.62**	**305**	P	**Pn**	**00 56 38.5**	**+0.9**
DION	**Dionisos Attik**	**4.65**	**308**	P	**Pn**	**00 56 39.2**	**+1.2**
ATHU	**Athens Univers**	**4.69**	**306**	P	**Pn**	**00 56 38.5**	**0.0**
ATHP	**Athens-Neo Psi**	**4.71**	**306**	P	Pn	00 56 29.7	-9.1
SLUM	**Salum**	**4.75**	**218**	P	**Pn**	**00 56 40.9**	**+1.6**
VLI	**Veliai**	**4.80**	**289**	P	**Pn**	**00 56 40.4**	**+0.4**
MET2	**Kameni Chora,**	**4.82**	**300**	P	**Pn**	**00 56 42.1**	**+1.7**
KYMI	**Kymi, Euboea I**	**4.89**	**314**	P	**Pn**	**00 56 42.3**	**+1.1**
MDUB	**Mudurnu**	**5.54**	**21**	Pn	**Pn**	**00 56 53.6**	**+3.3**
ITM	**Ithomi**	**5.70**	**291**		**Pn**	**00 56 53.7**	**+1.3**
HMYD	**Mayadein**	**5.81**	**161**	P	**Pn**	**00 56 55.6**	**+1.7**
HNTI	**Hanita**	**5.89**	**110**	P	**Pn**	**00 56 55.3**	**+0.4**
HNTI	**Hanita**	**5.89**	**110**	S	**Sn**	**00 57 59.8**	**-1.6**
OFRI	**`Ofer**	**5.95**	**115**	P	**Pn**	**00 56 55.6**	**-0.3**
OFRI	**`Ofer**	**5.95**	**115**	S	**Sn**	**00 58 00.1**	**-2.8**
BRTR	**Keskin Array B**	**5.95**	**41**	Pn	**Pn**	**00 56 57.2**	**+1.3**
	0.2nm,0.3s,baz=215,slow=12,SNR=7.2						
BRTR				Sn	**Sn**	**00 58 04.0**	**+0.9**
	0.8nm,0.3s,baz=251,slow=5.8,SNR=13						
BR131	**Keskin Array S**	**5.95**	**41**		**Pn**	**00 56 57.5**	**+1.5**
KOT	**Kottamia**	**6.03**	**152**	P	**Pn**	**00 56 57.7**	**+0.8**
BLGI	**Bet Lehem HaGe**	**6.05**	**113**	P	**Pn**	**00 56 58.2**	**+1.0**
BLGI	**Bet Lehem HaGe**	**6.05**	**113**	S	**Sn**	**00 58 03.1**	**-2.3**
MMA0B	**Mount Meron ar**	**6.09**	**110**	P	**Pn**	**00 56 58.5**	**+0.7**
MMA0B	**Mount Meron ar**	**6.09**	**110**	S	**Sn**	**00 58 04.7**	**-1.8**
MMAI	**Mount Meron Ar**	**6.09**	**110**	Pn	**Pn**	**00 56 58.3**	**+0.5**
	6.5nm,0.3s,baz=310,slow=13,SNR=66						
MMAI				Sn	**Sn**	**00 58 03.8**	**-2.7**
	12nm,0.3s,baz=307,slow=22,SNR=12						
	2.9nm,0.3s						
QRWL	**Qaraoun**	**6.12**	**105**	*e*P	**Pn**	**00 56 59.2**	**+1.1**
SLTI	**Sal'it**	**6.18**	**118**	P	**Pn**	**00 56 59.3**	**+0.4**
SLTI	**Sal'it**	**6.18**	**118**	S	**Sn**	**00 58 06.2**	**-2.4**
ZAHL	**Zahle**	**6.18**	**102**	*e*P	**Pn**	**00 57 00.2**	**+1.0**
GEM	**Giv'at Ha'Em**	**6.22**	**108**	P	**Pn**	**00 57 00.1**	**+0.6**
GEM	**Giv'at Ha'Em**	**6.22**	**108**	S	**Sn**	**00 58 07.4**	**-2.1**
SHBL	**Chebaa**	**6.23**	**106**	*e*P	**Pn**	**00 57 00.3**	**+0.5**
RCY	**Rachaya**	**6.25**	**105**	*e*P	**Pn**	**00 57 00.8**	**+0.7**
NATI	**Neve Ativ**	**6.25**	**107**	P	**Pn**	**00 57 00.7**	**+0.7**
NATI	**Neve Ativ**	**6.25**	**107**	S	**Sn**	**00 58 08.6**	**-1.8**
BEIL	**Beino**	**6.28**	**95**	*e*P	**Pn**	**00 57 01.4**	**+0.9**
RDO	**Rodhopi**	**6.30**	**338**		**Pn**	**00 57 01.1**	**+0.6**
MMLI	**Mount Malkishu**	**6.36**	**115**	P	**Pn**	**00 57 01.8**	**+0.3**
MMLI	**Mount Malkishu**	**6.36**	**115**	S	**Sn**	**00 58 10.4**	**-2.7**
RYAN	**Fayoum**	**6.38**	**167**	P	**Pn**	**00 57 02.9**	**+1.2**
SALP	**Salfit**	**6.38**	**119**	P	**Pn**	**00 57 02.3**	**+0.6**
SALP	**Salfit**	**6.38**	**119**	S	**Sn**	**00 58 11.6**	**-1.9**
KSHT	**Keshet**	**6.42**	**109**	P	**Pn**	**00 57 03.7**	**+1.3**
KSHT	**Keshet**	**6.42**	**109**	S	**Sn**	**00 58 12.7**	**-1.8**
AMAZ	**Amatzia**	**6.49**	**124**	P	**Pn**	**00 57 04.6**	**+1.3**
AMAZ	**Amatzia**	**6.49**	**124**	S	**Sn**	**00 58 13.9**	**-2.4**
SUZ	**Suez**	**6.53**	**146**	P	**Pn**	**00 57 05.3**	**+1.6**
HMDT	**Nahal Hemdat**	**6.53**	**116**	P	**Pn**	**00 57 04.7**	**+0.9**
HMDT	**Nahal Hemdat**	**6.53**	**116**	S	**Sn**	**00 58 14.9**	**-2.2**
KZIT	**Kziot**	**6.56**	**130**	P	**Pn**	**00 57 04.8**	**+0.7**
KZIT	**Kziot**	**6.56**	**130**	S	**Sn**	**00 58 14.9**	**-3.0**
SWA2		**6.61**	**205**	P	**Pn**	**00 57 06.2**	**+1.3**
UJAP	**Al Uja**	**6.64**	**118**	P	**Pn**	**00 57 06.6**	**+1.4**
UJAP	**Al Uja**	**6.64**	**118**	S	**Sn**	**00 58 17.8**	**-2.0**
BALJ	**Balqa**	**6.70**	**117**	Pn	**Pn**	**00 57 06.9**	**+0.8**
YTIR	**Yattir**	**6.73**	**124**	P	**Pn**	**00 57 07.1**	**+0.5**
YTIR	**Yattir**	**6.73**	**124**	S	**Sn**	**00 58 19.9**	**-2.4**

BNN	Bunyan	6.78	57	Pn	Pn	00 57 10.2	+2.8
DSI	Dead Sea	6.79	121	P	Pn	00 57 08.4	+1.0
DSI	Dead Sea	6.79	121	S	Sn	00 58 21.3	-2.3
ZAF	Zafarana	6.88	150	P	Pn	00 57 09.2	+0.6
NBNS	Bani Suef	7.06	160	P	Pn	00 57 11.7	+0.6
GHAJ	Ghor Haditha	7.07	122		Pn	00 57 12.6	+1.3
IDAN	Idan	7.17	127	P	Pn	00 57 13.4	+0.8
IDAN	Idan	7.17	127	S	Sn	00 58 29.9	-3.0
GAZ	Gaziantep	7.20	73	Pn	Pn	00 57 15.1	+2.0
ZFRI	Zfri	7.29	129	P	Pn	00 57 14.9	+0.7
ZFRI	Zfri	7.29	129	S	Sn	00 58 32.2	-3.7
KRMI	Paran Flat	7.32	133	P	Pn	00 57 14.8	+0.2
KRMI	Paran Flat	7.32	133	S	Sn	00 58 32.9	-3.7
PRNI	Paran	7.32	131	P	Pn	00 57 15.1	+0.5
PRNI	Paran	7.32	131	S	Sn	00 58 33.1	-3.6
HRFI	Mount Harif	7.56	132	P	Pn	00 57 18.6	+0.6
HRFI	Mount Harif	7.56	132	S	Sn	00 58 38.9	-3.7
ASF	Jabal al Asfar	7.59	112	Pn	Pn	00 57 20.4	+1.9
	0.7nm,0.3s,baz=290,slow=5.5,SNR=7.5						
	1.8nm,0.3s						
MBRI	Mt Berech	7.66	134	P	Pn	00 57 19.9	+0.4
MBRI	Mt Berech	7.66	134	S	Sn	00 58 42.2	-3.1
EIL	Elat	7.78	135	Pn	Pn	00 57 21.8	+0.9
	2.6nm,0.3s,baz=305,slow=2.2,SNR=63						
EIL				Sn	Sn	00 58 42.1	-5.8
	9.8nm,0.3s,baz=337,slow=17,SNR=11						
	6.0nm,0.2s						
EIL	Elat	7.78	135	P	Pn	00 57 21.6	+0.6
EIL	Elat	7.78	135	S	Sn	00 58 44.5	-3.4
TAMRE	El Minia	7.87	165	P	Pn	00 57 22.9	+0.7
HKAT	Jabal Katrina	8.18	144	P	Pn	00 57 27.2	+0.6
KEK	Kerkira	8.25	305	Pn	Pn	00 57 30.8	+3.4
TIP	Timpagrande	10.19	296	Pn	Pn	00 57 52.3	-1.8
CEL	Celeste	10.60	290	Pn	Pn	00 57 58.0	-1.6
CUC	Castrocucco	11.15	299		Pn	00 58 06.1	-1.1
RAFF	Raffo Rosso	11.65	284	Pn	Pn	00 58 12.0	-1.9
SGRT	San Giovanni R	11.94	306	Pn	Pn	00 58 15.7	-2.3
INTR	Introdacqua	13.28	305	Pn	Pn	00 58 36.3	+0.1
NRCA	Norcia	14.16	307	Pn	Pn	00 58 46.5	-1.8
FDMO	Fiordimonte	14.27	307	Pn	Pn	00 58 46.8	-3.0
STHS	Stebnicka Huta	15.09	341	*e*PN	Pn	00 58 52.6	-8.1
LANS	Liptovska Anna	15.37	337	*e*P	P	00 59 09.9	+1.1
AKASG	Malin Array Be	15.38	2	LR	LR	01 06 21.9	
	comp=Z,62nm,19.3s,baz=259,slow=43						
SABO	M.te Sabotino	15.56	318	Pn	Pn	00 59 04.6	-2.3
KEST	Kesra	15.68	277	Pn	P	00 59 12.3	-0.1
	0.4nm,0.3s,baz=100,slow=5.0,SNR=7.2						
KEST	Kesra	15.68	277		Pn	00 59 09.2	+0.5
KEST				IAmb	IAmb	00 59 25.8	
	comp=Z,16nm,1.1s						
TEOL	Teolo	16.32	313	Pn	Pn	00 59 16.8	+0.2
TEOL				IAmb	IAmb	00 59 20.6	
	comp=Z,11nm,0.8s						
CTI	Castel Tesino	16.70	315	Pn	Pn	00 59 20.6	-1.0
CTI				IAmb	IAmb	00 59 56.0	
	comp=Z,14nm,1.4s						
GERES	GERESS Array B	17.42	325	P	Pn	00 59 30.5	0.0
	baz=122,slow=13,SNR=6.9						
	comp=Z,1.4nm,1.0s						
FUORN	Ofenpass-Fuorn	17.82	315	P	Pn	00 59 33.3	-2.3
DAVOX	Davos/Dischmat	18.13	315	P	Pn	00 59 39.3	0.0
	comp=Z,0.7nm,0.3s,baz=255,slow=4.6,SNR=12						
	comp=Z,3.8nm,0.6s						
BNI	Bardonecchia	19.31	307	P	P	00 59 50.2	-2.2
BNI				IAmb	IAmb	01 00 15.7	
	comp=Z,12nm,1.4s						
SENIN	Lac Senin/Sane	19.47	311	P	P	00 59 52.5	-1.7
SENIN				IAmb	IAmb	01 00 22.8	
	comp=Z,19nm,1.4s						
ESDC	Sonseca Array	26.11	289	P	P	01 01 00.7	-0.4
	comp=Z,1.0nm,0.5s,baz=81,slow=10,SNR=12						
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	26.20	357	P	P	01 01 00.9	-0.5
	comp=Z,4.3nm,0.9s,baz=163,slow=11,SNR=9.4						
	comp=Z,4.3nm,0.9s						
FIA1	FINESS Array S	26.20	357	P	P	01 01 01.1	-0.3
PAB	San Pablo	26.41	289	P	P	01 01 04.0	+0.2
PAB				IAmb	IAmb	01 01 27.6	
	comp=Z,9.4nm,1.2s						
HFS	Hagfors	26.65	343	P	P	01 01 05.8	+0.3
	comp=Z,4.3nm,0.9s,baz=119,slow=15,SNR=4.1						
	comp=Z,4.3nm,0.9s						
AB31	Akbulak array	26.82	49	P	P	01 01 08.3	+1.0
AB31				IAmb	IAmb	01 01 28.6	
	comp=Z,4.3nm,1.4s						
ABKAR	Akbulak array	26.82	49	P	P	01 01 08.4	+1.2
ARCES	ARCESS Array B	34.31	358	P	P	01 02 12.7	-0.5
	comp=Z,7.5nm,1.1s,baz=169,slow=8.7,SNR=2.3						
	comp=Z,7.5nm,1.1s						
ARCES	ARCESS Array B	34.31	358	IAmb	IAmb	01 02 21.5	
	comp=Z,32nm,1.4s						
KURBB	Kurchatov Arra	38.84	51	P	P	01 02 53.1	+1.2
	comp=Z,0.8nm,0.5s,baz=275,slow=9.0,SNR=9.9						
	comp=Z,0.8nm,0.5s						
KURK	Kurchatov	38.90	51	P	P	01 02 53.1	+0.7
KURK	Kurchatov	38.90	51	IAmb	IAmb	01 02 54.3	
	comp=Z,1.1nm,0.7s						
MKAR	Makanchi Array	41.34	57	P	P	01 03 14.2	+1.4
	comp=Z,0.5nm,0.6s,baz=295,slow=4.5,SNR=4.4						
	comp=Z,0.5nm,0.6s						
DBIC	Dimbokro	41.91	235	P	P	01 03 17.2	-0.5
	comp=Z,1.3nm,0.5s,baz=100,slow=11,SNR=4.1						
	comp=Z,1.3nm,0.5s						
ZAA0	Zalesovo Array	42.86	46	P	P	01 03 25.4	+0.4
ZALV	Zalesovo Beam	42.86	46	P	P	01 03 25.7	+0.7
	comp=Z,0.5nm,0.4s,baz=264,slow=9.5,SNR=4.6						
	comp=Z,0.5nm,0.4s						
SONM	Songino Array	57.20	52	P	P	01 05 16.1	+2.1
	comp=Z,0.3nm,0.5s,baz=289,slow=9.0,SNR=2.6						
	comp=Z,0.3nm,0.5s						
SONM	Songino Array	57.20	52	IAmb	IAmb	01 05 59.6	
	comp=Z,2.9nm,1.4s						
SCHQ	Schefferville	64.87	320	P	P	01 06 05.1	-0.7
	comp=Z,5.7nm,0.9s,baz=72,slow=6.4,SNR=2.4						
	comp=Z,5.7nm,0.9s						
B21K	Ikpikpuk River	75.34	1	P	P	01 07 10.3	+0.6
B21K				IAmb	IAmb	01 07 46.5	
	comp=Z,4.5nm,1.5s						
D23K	Nanushuk River	76.03	360	P	P	01 07 13.6	-0.1
D23K				IAmb	IAmb	01 07 29.3	
	comp=Z,2.9nm,1.1s						
E29M	Blow River	76.11	355	P	P	01 07 14.7	+0.5
E21K	Killik River	76.54	1	P	P	01 07 16.1	-0.5
E19K	Redstone River	77.45	2	P	P	01 07 22.0	+0.3

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*NOU **10** 01:00:57.2, 21°.70S×170°.79E, h0^{km}, MLv4.9/9, Southeast of Loyalty Islands*

*IDC **10** 01:01:01.7±7.4, 21°.85S×170°.60E, h157^{km}±43^{km}, mb3.4/3, mbtmp3.9/4, Error ellipse: s-maj=112.6km s-min=46.3km az=149.0*

ISC 10 01:00:40.1±2.3**, 22°.5S**±0°.2×**172°.4E**±0°.2**, h35^{km}, n11, σ1^{s}.95**/10**, mb3.9**/3**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINNC	Pines Island,	4.57	267	P	Pn	01 01 49.5	+2.7
YATNC	Mamie plateau,	5.11	274	P	Pn	01 01 53.1	-1.1
OUENC	Ouen Island, N	5.13	269	P	Pn	01 01 56.2	+1.7
ONTNC	Ouen Toro	5.49	271	P	Pn	01 02 00.8	+1.3
DZM	Mont Dzumac	5.52	273	P	Pn	01 02 00.4	+0.5
	24nm,0.5s,baz=118,slow=13,SNR=33						
DZM				S	Sn	01 02 46.5	-16
	56nm,0.6s,baz=342,slow=20,SNR=4.2						
RTV	Rentapao	5.96	321	P	Pn	01 02 07.1	+1.2
DVP	Devils Point	6.15	319	P	Pn	01 02 08.6	+0.1
ASAR	Alice Springs	35.35	260	P	P	01 07 29.4	-3.1
	1.1nm,0.7s,baz=87,slow=8.5,SNR=12						
	1.1nm,0.7s						
WRA	Warramunga Arr	35.50	267	P	P	01 07 29.0	-4.8
	0.9nm,0.7s,baz=98,slow=8.5,SNR=5.6						
	0.9nm,0.7s						
SONM	Songino Array	91.56	322	P	P	01 13 44.5	+1.2
	0.6nm,0.8s,baz=106,slow=6.1,SNR=3.5						
	0.6nm,0.8s						
GERES	GERESS Array B	148.71	332	PKPbc	PKiKP	01 20 25.7	+0.5
	0.2nm,0.6s,baz=32,slow=3.8,SNR=4.8						

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*NEIC **10** 01:01:20.2±1.8, 19°.0N±0°.1×145°.7E±0°.1, h176^{km}±9^{km}, mb4.1/10, Error ellipse: s-maj=16.4km s-min=12.5km az=220.0*

*IDC **10** 01:01:34.4±6.8, 18°.85N×145°.38E, h328^{km}±69^{km}, mb3.2/8, mbtmp4.0/9, Error ellipse: s-maj=31.6km s-min=20.3km az=76.0*

ISC 10 01:01:22.7±0.6**, 18°.76N**±0°.08×**145°.7E**±0°.1**, h214^{km}, n24, σ1^{s}.32**/25**, mb3.9**/14**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DPSS	Saipan	3.50	178	Pn	Pn	01 02 17.4	-1.6
DPSS				Sn	S	01 03 01.7	-1.2
JOW	Kunigami	17.91	300	P	Pn	01 05 18.8	-0.3
	23nm,0.4s,baz=142,slow=11,SNR=8.4						
JOW	Kunigami	17.91	300		Pn	01 05 18.4	-0.6
WB0	Warramunga Arr	39.85	197	P	P	01 08 37.5	+1.9
WB0				IAmb	IAmb	01 08 47.8	
	comp=Z,6.0nm,1.4s						
WRAB	Tennant Creek	40.02	197	P	P	01 08 39.3	+2.2
WRAB				IAmb	IAmb	01 09 08.6	
	comp=Z,7.1nm,1.4s						
WRA	Warramunga Arr	40.03	197	P	P	01 08 38.8	+1.6
	comp=Z,0.9nm,0.6s,baz=24,slow=9.1,SNR=8.1						
	comp=Z,0.9nm,0.6s						
FITZ	Fitzroy Crossi	41.57	209	P	P	01 08 51.8	+2.1
EVN	Everest	54.35	291	P	P	01 10 30.0	+1.7
EVN				IAmb	IAmb	01 10 31.4	
	comp=Z,2.5nm,0.5s						
UWE	Uwekahuna	55.56	79	P	P	01 10 37.6	+1.1
MKAR	Makanchi Array	58.39	314	P	P	01 10 54.5	-1.4
	comp=Z,0.6nm,0.6s,baz=92,slow=9.4,SNR=5.2						
	comp=Z,0.6nm,0.6s						
MKAR	Makanchi Array	58.39	314	P	P	01 10 55.7	-0.2
MAKZ	Makanchi	58.61	314	P	P	01 10 58.0	+0.7
MAKZ				IAmb	IAmb	01 11 39.4	
	comp=Z,4.7nm,1.3s						
KURBB	Kurchatov Arra	61.25	318	P	P	01 11 13.4	-1.7
	comp=Z,0.4nm,0.4s,baz=93,slow=7.7,SNR=4.2						
	comp=Z,0.4nm,0.4s						
ILAR	Eielson Array	63.61	26	P	P	01 11 30.9	+0.3
	comp=Z,0.6nm,0.8s,baz=269,slow=5.4,SNR=4.3						
	comp=Z,0.6nm,0.8s						
ILAR	Eielson Array	63.61	26	P	P	01 11 30.3	-0.3
BVAR	Borovoye Array	66.40	320	P	P	01 11 47.5	-1.3
	comp=Z,1.2nm,0.5s,baz=93,slow=7.4,SNR=9.4						
	comp=Z,1.2nm,0.5s						
I28M	Miner Creek	66.62	26	P	P	01 11 50.0	0.0
I28M				IAmb	IAmb	01 11 53.1	
	comp=Z,3.0nm,1.2s						
M29M	Somme Creek	67.02	29	P	P	01 11 51.9	-0.7
M29M				IAmb	IAmb	01 12 14.5	
	comp=Z,10nm,1.4s						
H29M	Whitestone	67.34	25	P	P	01 11 56.0	+1.6
AB31	Akbulak array	73.27	317	P	P	01 12 29.9	-0.6
ABKAR	Akbulak array	73.27	317	P	P	01 12 29.9	-0.7
YKA	Yellowknife Ar	77.96	28	P	P	01 12 57.6	+0.7
	comp=Z,0.3nm,0.6s,baz=292,slow=6.3,SNR=4.2						
	comp=Z,0.3nm,0.6s						
NVAR	Mina Array Bea	83.14	52	P	P	01 13 24.6	-0.7
	comp=Z,0.8nm,0.6s,baz=270,slow=5.8,SNR=5.4						
	comp=Z,0.8nm,0.6s						
FINES	FINESS Array B	86.81	335	P	P	01 13 41.1	-1.5
	comp=Z,2.9nm,0.9s,baz=59,slow=4.4,SNR=7.9						
	comp=Z,2.9nm,0.9s						

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*IDC **10** 01:08:33.8±3.9, 16°.71S×177°.07W, h0^{km}, mb4.3/3, mbtmp4.3/3, Error ellipse: s-maj=173.6km s-min=52.6km az=142.0*

*NEIC **10** 01:09:42.8±1.6, 18°.2S±0°.1×179°.14W±0°.10, h552^{km}±8^{km}, mb4.4/28, Error ellipse: s-maj=24.1km s-min=5.8km az=148.0*

ISC 10 01:09:42.7±0.5**, 18°.2S**±0°.2×**179°.14W**±0°.10**, h562^{km}, n36, σ1^{s}.43**/36**, mb4.4**/15**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	2.72	280	P	P	01 10 55.3	-2.0
NIUE	Niue	8.77	97	P	P	01 11 46.9	-1.6
COEN	Coen	36.42	271	P	P	01 16 00.4	-0.4
COEN				IAmb	IAmb	01 16 24.8	
	comp=Z,12nm,1.2s						
STKA	Stephens Creek	37.88	241	P	P	01 16 13.2	+0.6
	comp=Z,1.6nm,0.5s,baz=102,slow=18,SNR=3.5						
	comp=Z,1.6nm,0.5s						
STKA	Stephens Creek	37.88	241	P	P	01 16 13.3	+0.8
STKA				IAmb	IAmb	01 16 43.6	
	comp=Z,23nm,1.3s						
WB0	Warramunga Arr	43.87	260	P	P	01 16 59.4	-0.8
WB2	Warramunga Arr	43.89	260	P	P	01 16 59.7	-0.6
WRA	Warramunga Arr	43.90	260	P	P	01 16 59.7	-0.7
	comp=Z,0.7nm,0.3s,baz=91,slow=8.4,SNR=20						
	comp=Z,0.7nm,0.3s						
WRA	Warramunga Arr	43.90	260	P	P	01 16 59.4	-1.0
KHLU	Kahalu`u	43.95	32	P	P	01 17 01.0	+0.2
AS31	Alice Springs	44.04	255	P	P	01 17 02.1	+0.5
ASAR	Alice Springs	44.05	255	P	P	01 17 02.1	+0.6
	comp=Z,5.6nm,0.5s,baz=88,slow=8.1,SNR=70						
	comp=Z,5.6nm,0.5s						
ASAR	Alice Springs	44.05	255	P	P	01 17 02.0	+0.4
FORT	Forrest	49.25	245	P	P	01 17 41.7	+1.0
FORT				IAmb	IAmb	01 18 20.1	
	comp=Z,5.9nm,1.0s						
KNRA	Kununurra	49.77	265	P	P	01 17 44.6	-0.1
KNRA				IAmb	IAmb	01 17 44.6	
	comp=Z,9.0nm,0.9s						
FITZ	Fitzroy Crossi	52.30	261	P	P	01 18 03.2	+0.3
PSA00	Pilbara Seismi	57.16	256	P	P	01 18 37.5	+0.5
PSA00				IAmb	IAmb	01 18 54.8	
	comp=Z,9.0nm,1.2s						
MBWA	Marble Bar	57.33	256	P	P	01 18 38.1	0.0
MBWA				IAmb	IAmb	01 19 03.6	
	comp=Z,54nm,1.4s						
YHNB	Yeheng	71.93	304	P	P	01 20 09.9	-0.2
S12K	Black Hills	75.03	10	P	P	01 20 27.2	+0.2
SHOC	Shoshone, Teco	80.17	47	P	P	01 20 55.1	-0.1
SHOC				IAmb	IAmb	01 20 55.4	
	comp=Z,9.0nm,0.6s						
SMAI	San Martin Ant	81.12	159	P	P	01 21 01.3	+1.9
SMAI				IAmb	IAmb	01 21 36.6	
	comp=Z,22nm,1.2s						
K15K	Wolf Creek Mou	81.44	8	P	P	01 21 02.3	+1.2
K15K				IAmb	IAmb	01 21 19.7	
	comp=Z,18nm,1.2s						
LOGN	Logan Glacier	84.52	18	P	P	01 21 17.8	+1.0
LOGN				IAmb	IAmb	01 21 25.2	
	comp=Z,26nm,1.3s						
O28M	Mount Upton	84.71	18	P	P	01 21 18.4	+0.6
O28M				IAmb	IAmb	01 21 51.6	
	comp=Z,25nm,1.4s						
NEW	Newport	86.16	36	P	P	01 21 25.4	+0.6
NEW				IAmb	IAmb	01 21 52.6	
	comp=Z,5.5nm,1.4s						
VHRN	Van Horn	86.26	56	P	P	01 21 26.6	+0.8
O20A	White River Ci	87.76	46	P	P	01 21 34.1	+1.4
O20A				IAmb	IAmb	01 21 46.4	
	comp=Z,11nm,0.6s						
735A	Kenedy	91.34	60	P	P	01 21 49.9	+0.6
BO04	La Punta	94.48	128	P	P	01 22 02.6	-1.1
Z38A	Mt. Pleasant	95.07	57	P	P	01 22 06.4	+0.2
HRA	Herat	123.45	300		PKiKP	01 27 37.8	+0.4
BRTR	Keskin Array B	144.50	314	PKP	PKPdf	01 28 11.2	-4.7
	comp=Z,0.3nm,0.7s,baz=45,slow=4.7,SNR=3.6						
BRTR	Keskin Array B	144.50	314		PKPdf	01 28 11.2	-4.7
MMAI	Mount Meron Ar	145.72	302	PKPbc	PKPdf	01 28 17.9	-0.3
	comp=Z,2.2nm,0.8s,baz=72,slow=2.3,SNR=4.1						
MMAI	Mount Meron Ar	145.72	302		PKPdf	01 28 17.9	-0.3

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*IDC **10** 01:14:36.8±1.2, 19°.98N×145°.77E, h0^{km}, mb4.0/5, mbtmp4.0/5, Error ellipse: s-maj=56.4km s-min=26.1km az=96.0*

*NEIC **10** 01:14:38.7±2.1, 19°.86N±0°.07×145°.7E±0°.2, h10^{km}±1^{km}, mb4.4/9, Error ellipse: s-maj=33.6km s-min=3.6km az=108.0*

ISC 10 01:14:37.9±0.7**, 19°.9N**±0°.1×**145°.7E**±0°.2**, h10^{km}, n20, σ1^{s}.06**/20**, mb4.2**/10**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DPSS	Saipan	4.58	179	Pn	Pn	01 15 47.2	-0.2
WB0	Warramunga Arr	40.90	196	P	P	01 22 19.8	-0.8
WB0				IAmb	IAmb	01 22 23.8	
	comp=Z,6.3nm,1.4s						
WRA	Warramunga Arr	41.09	196	P	P	01 22 23.7	+1.6
	comp=Z,0.8nm,0.5s,baz=22,slow=9.1,SNR=11						
	comp=Z,0.8nm,0.5s						
WRA	Warramunga Arr	41.09	196	P	P	01 22 21.6	-0.5
ASAR	Alice Springs	44.76	195	P	P	01 22 53.1	+1.3
	comp=Z,0.3nm,0.4s,baz=16,slow=6.7,SNR=5.7						
	comp=Z,0.3nm,0.4s						
ASAR	Alice Springs	44.76	195	P	P	01 22 51.4	-0.5
BBOO	Buckleboo	53.17	190	P	P	01 23 56.5	+0.3
BBOO				IAmb	IAmb	01 24 01.0	
	comp=Z,17nm,1.4s						
MKAR	Makanchi Array	57.69	313	P	P	01 24 29.6	+0.9
M20K	Styx River	59.18	29	P	P	01 24 39.1	+0.2
M20K				IAmb	IAmb	01 24 57.4	
	comp=Z,6.7nm,1.0s						
D20K	Etivluk River	60.13	21	P	P	01 24 45.9	+0.5
D20K				IAmb	IAmb	01 24 55.9	
	comp=Z,1.5nm,1.2s						
SLKM	Skilak Lake	60.20	31	P	P	01 24 46.2	+0.3
TRF	Thorofare Moun	60.86	28	P	P	01 24 51.0	+0.4
D22K	Ayikyak River	61.52	21	P	P	01 24 55.9	+1.1
D22K				IAmb	IAmb	01 25 06.0	
	comp=Z,3.2nm,1.2s						
E22K	Anaktuvuk Pass	61.58	22	P	P	01 24 57.0	+1.7
BVAR	Borovoye Array	65.61	320	P	P	01 25 22.8	+0.7
	comp=Z,0.7nm,0.4s,baz=101,slow=7.5,SNR=3.8						
	comp=Z,0.7nm,0.4s						
ABKAR	Akbulak array	72.52	317	P	P	01 26 03.6	-1.4
NVAR	Mina Array Bea	82.42	52	P	P	01 27 01.6	+0.6
	comp=Z,0.7nm,0.7s,baz=294,slow=6.1,SNR=4.0						
	comp=Z,0.7nm,0.7s						
NVAR	Mina Array Bea	82.42	52	P	P	01 26 59.7	-1.3
FINES	FINESS Array B	85.85	335	P	P	01 27 16.1	-1.5
	comp=Z,5.7nm,1.1s,baz=46,slow=4.0,SNR=3.6						
	comp=Z,5.7nm,1.1s						
FINES	FINESS Array B	85.85	335	P	P	01 27 16.5	-1.2

IDC 10 01:44:56.4±2.4**, 50°.65N**×**130°.24W, h0^{km}, mbtmp3.4**/6**, ML3.7**/4**, Error ellipse: s-maj=34.5km s-min=16.7km az=60.0, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBB	Bella Bella	2.03	40	Pn	Pn	01 45 30.4	-1.5
	21nm,0.3s,baz=241,slow=8.1,SNR=183						
BBB				Sn	Sn	01 45 50.4	-7.6
	20nm,0.3s,baz=175,slow=12,SNR=4.8						
	48nm,0.3s						
H02S2	DAWSON INLET T	2.91	332	Pn	Pn	01 45 41.7	-2.2
H02S2				Sn	Sn	01 46 15.3	-4.2
NEW	Newport	8.87	101	Pn	Pn	01 47 05.3	-0.6
	0.3nm,0.3s,baz=312,slow=12,SNR=2.8						
	1.3nm,0.4s						
YKA	Yellowknife Ar	14.61	30	Pn	Pn	01 48 21.4	-2.7
	0.2nm,0.3s,baz=224,slow=13,SNR=11						
YKA				Sn	Sn	01 51 00.0	-6.6
	0.1nm,0.3s,baz=209,slow=23,SNR=4.2						
	0.5nm,0.8s						
NVAR	Mina Array Bea	14.86	141	Pn	Pn	01 48 30.6	+2.6
	0.2nm,0.7s,baz=324,slow=9.3,SNR=6.5						
PDAR	Pinedale Array	16.19	111	Pn	P	01 48 47.4	-1.3
	0.1nm,0.3s,baz=314,slow=12,SNR=17						
	3.1nm,1.0s						
ILAR	Eielson Array	16.63	335	Pn	P	01 48 53.0	-0.2
	0.6nm,1.0s,baz=137,slow=10,SNR=4.3						
H11N2	WAKE ISLAND Hy	57.84	262	T	T	02 57 17.6	
	baz=42,slow=76,SNR=199						
H11N3	WAKE ISLAND Hy	57.84	262	T	T	02 57 17.8	
	baz=42,slow=76,SNR=194						
H11N1	WAKE ISLAND Hy	57.85	262	T	T	02 57 18.9	
	baz=42,slow=76,SNR=148						
H11S1	WAKE ISLAND Hy	58.87	261	T	T	02 58 33.6	
	baz=40,slow=75,SNR=18						
H11S2	WAKE ISLAND Hy	58.88	261	T	T	02 58 35.2	
	baz=40,slow=75,SNR=16						
H11S3	WAKE ISLAND Hy	58.89	261	T	T	02 58 36.1	
	baz=40,slow=75,SNR=11						

IDC 10 01:54:52.7±1.9**, 3°.45N**×**126°.73E, h0^{km}, mb3.6**/4**, mbtmp3.6**/4**, Error ellipse: s-maj=201.7km s-min=29.3km az=68.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	24.42	162	P	P	02 00 13.1	-0.1
	0.2nm,0.4s,baz=346,slow=9.2,SNR=2.3						
	0.2nm,0.4s						
SONM	Songino Array	47.56	342	P	P	02 03 31.0	+0.8
	0.3nm,0.4s,baz=148,slow=8.5,SNR=2.5						
	0.3nm,0.4s						
MKAR	Makanchi Array	57.79	325	P	P	02 04 45.6	-0.2
	0.5nm,0.5s,baz=128,slow=8.0,SNR=7.8						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	61.98	327	P	P	02 05 14.2	-0.4
	1.0nm,0.6s,baz=124,slow=6.4,SNR=6.8						
	1.0nm,0.6s						

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*IGQ **10** 01:59:55.9±0.5, 3°S±2°×8°1W±°, h12^{km}±2^{km}, MLv4.2/30*

ISC 10 01:59:56.9±1.3**, 3°.12S**±0°.04×**80°.91W**±0°.05**, h21^{km}±4^{km}, n102, σ1^{s}.49**/120**, 31C-6D, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APLA	Playas - Guaya	0.70	47	P	Pb	02 00 10.4	-0.1
APLA				S	Sb	02 00 20.3	+0.6
MORR	Playas El Morr	0.74	50	⇓P	Pb	02 00 10.9	-0.1
MORR				S	Sb	02 00 21.4	+0.6
ISPG	Isla Puna-Puer	0.75	79	⇓P	Pb	02 00 12.3	+1.0
ISPG				S	Sn	02 00 24.4	+1.3
ALIBE	La Libertad	0.87	4	⇑P	Pb	02 00 13.4	+0.1
SALI	Salinas	0.93	355	⇑P	Pb	02 00 14.3	-0.1
SALI				S	Sb	02 00 27.0	+0.8
ARNL	Arenillas	0.94	117	⇓P	Pb	02 00 13.4	-1.1
ARNL				S	Sb	02 00 25.0	-1.5
ACH2	Ecuador-Machal	1.10	98	⇓P	Pn	02 00 15.9	-1.3
GYE1	Ecuador-Trinit	1.31	49	P	Pn	02 00 19.9	-0.2
AC07	Ecuador-Guayaq	1.33	44	P	Pn	02 00 19.6	-0.7
GYE3	Ecuador-Guayaq	1.39	46	P	Pn	02 00 19.2	-1.9
PCRA	Pucara 2	1.40	94	⇓P	Pn	02 00 19.5	-2.2
AGUAY	Guayaquil	1.42	42	P	Pn	02 00 20.2	-1.3
AMCR	Ecuador-Macara	1.57	143	P	Pn	02 00 22.9	-0.7
MCRA	Macar, Loja	1.57	143	⇑P	Pn	02 00 22.5	-1.1
MCRA	Macar, Loja	1.57	143	P	Pn	02 00 22.3	-1.3
MCRA				S	Sn	02 00 40.0	-3.3
PPLP	Puerto Lpez	1.57	5	P	Pn	02 00 22.1	-1.5
PPLP	Puerto Lpez	1.57	5	⇑P	Pn	02 00 22.9	-0.7
PPLP	Puerto Lpez	1.57	5	P	Pn	02 00 22.7	-0.9
PPLP				S	Sn	02 00 41.7	-1.6
MILO	Milagro-Astudi	1.58	58	⇑P	Pn	02 00 23.4	-0.4
JIPI	JIPIJAPA	1.78	11	P	Pn	02 00 26.1	-0.4
ISPT	Isla de la Pla	1.85	355	⇑P	Pn	02 00 27.4	-0.1
GONZ	Gonzanam	1.88	126	P	Pn	02 00 28.9	+0.8
ALJ1	Ecuador-Loja-U	1.91	117	P	Pn	02 00 29.7	+1.2
ACUE	Ecuador-Cuenca	1.96	84	P	Pn	02 00 29.9	+0.7
JSCH	Cashca Tororas	2.38	54	P	Pn	02 00 33.3	-1.7
BOSC	San Juan Bosco	2.41	91	P	Pn	02 00 36.1	+0.8
ZUMB	Zumba	2.47	135	P	Pn	02 00 37.3	+1.2
PECV	Mancha de Ca P	2.48	20	⇑P	Pn	02 00 34.7	-1.4
ABH2	Ecuador-Univer	2.49	12	P	Pn	02 00 36.9	+0.6
CHSH	Refugio Sur-Vo	2.60	52	P	Pn	02 00 37.6	-0.7
TAMH	Tambohuasha Ch	2.64	54	P	Pn	02 00 37.9	-0.8
SANGA	Volcan Sangay	2.74	67	P	Pn	02 00 40.5	+0.3
CAB1	Cabo Pasado-Ma	2.75	10	⇑P	Pn	02 00 40.1	+0.3
IGUA	Igualata	2.78	55	⇑P	Pn	02 00 40.2	-0.5
BMAS	Trigal station	2.91	57	P	Pn	02 00 40.7	-1.6
BIL2	Estacion Bilba	2.91	56	P	Pn	02 00 42.7	+0.4
BBIL	Ulba Tungurahu	2.93	56	P	Pn	02 00 43.0	+0.4
FLF1	Flavio Alfaro-	2.94	21	P	Pn	02 00 41.8	-0.7
FLF1	Flavio Alfaro-	2.94	21	P	Pn	02 00 41.8	-0.7
FLF1				S	Sn	02 01 18.1	+0.9
BPAT	Tungurahua Vol	2.94	57	P	Pn	02 00 42.6	-0.3
JUI6	Juive	2.96	55	P	Pn	02 00 43.0	0.0
ILLI	Illinizas Sur	3.23	42	P	Pn	02 00 47.3	+0.4
PIS1	Pisayambo	3.24	51	P	Pn	02 00 47.9	+0.8
PUYO	Puyo, Santa Ro	3.30	61	P	Pn	02 00 48.3	+0.8
SLOR	San Lorenzo -	3.38	45	P	Pn	02 00 50.0	+1.1
VCES	Cotopaxi	3.41	48	⇑P	Pn	02 00 50.5	+1.2
BMOR	Cotopaxi Volca	3.41	46	⇑P	Pn	02 00 50.6	+1.2
CAMI	Rancho Maria	3.41	45	⇑P	Pn	02 00 51.0	+1.7
SUCR	Mariscal Sucre	3.44	44	⇑P	Pn	02 00 51.9	+2.1
BREF	Cotopaxi Volca	3.46	45	⇑P	Pn	02 00 51.9	+1.7
TAIS	Taisha	3.48	78	P	Pn	02 00 51.0	+1.1
BTAM	Cotopaxi Volca	3.49	46	⇑P	Pn	02 00 52.0	+1.5
BVC2	Cotopaxi Volca	3.49	46	⇑P	Pn	02 00 52.3	+1.8
TAMB	Tambo	3.50	47	⇑P	Pn	02 00 52.2	+1.6
VC1	Cotopaxi 1	3.51	46	⇑P	Pn	02 00 52.4	+1.7
PITA	Cotopaxi Volc	3.54	44	⇑P	Pn	02 00 53.0	+1.8

TOMA	Boca Toma-Volc	3.59	44	P	Pn	02 00 52.9	+1.2
BV15	Puerto Quito-O	3.66	27	P	Pn	02 00 51.6	-0.8
GGPT	Toaza - Volcan	3.67	39	⇑P	Pn	02 00 53.4	+0.6
JUA2	San Juan 2	3.69	39	⇑P	Pn	02 00 54.4	+1.3
ANTG	Antisana-Guama	3.71	46	⇑P	Pn	02 00 54.8	+1.3
ANTM	Antisana-La Mi	3.71	46	P	Pn	02 00 55.4	+1.9
TERV	Terraza Guagua	3.72	38	⇑P	Pn	02 00 54.6	+0.9
GGPC	Guagua Pichinc	3.72	38	⇑P	Pn	02 00 54.8	+1.1
PINO	Pino	3.73	38	⇑P	Pn	02 00 54.4	+0.6
ARDO	Archidona, Ten	3.75	56	P	Pn	02 00 54.0	+0.3
ANTS	Antisana-Sarah	3.77	46	⇑P	Pn	02 00 55.6	+1.2
YANA	Yana	3.78	38	⇑P	Pn	02 00 55.1	+0.6
ANTI	Antisana	3.81	46	P	Pn	02 00 56.3	+1.3
PAC1	Pacto, Paraso	3.97	32	⇑P	Pn	02 00 55.9	-0.9
PAC1	Pacto, Paraso	3.97	32	P	Pn	02 00 55.7	-1.1
PAC1				S	Sn	02 01 41.1	-1.7
OTAV	Otavalo	4.14	36	⇑P	Pn	02 00 59.6	+0.3
OTAV	Otavalo	4.14	36	P	Pn	02 00 59.2	-0.1
OTAV				S	Sn	02 01 46.8	-0.6
CUSE	Cuicocha Este	4.22	36	P	Pn	02 01 01.1	+0.6
CUSE	Cuicocha Este	4.22	36	P	Pn	02 01 00.9	+0.4
CUSE				S	Sn	02 01 49.5	+0.1
CUIC	Cuicocha-Domo	4.24	37	P	Pn	02 01 02.1	+1.4
CAYR	Refugio Cayamb	4.25	43	P	Pn	02 01 02.8	+1.8
ANGU	Angureal	4.27	43	P	Pn	02 01 03.0	+1.7
COTA	Cotacachi	4.28	37	P	Pn	02 01 02.4	+1.0
IMBA	Imbabura, San	4.32	39	⇑P	Pn	02 01 04.4	+2.5
URCU	Urcuqui	4.42	37	⇓P	Pn	02 01 04.4	+1.3
RVRD	Rio Verde	4.43	20	⇑P	Pn	02 01 03.4	+0.5
REVN	San Rafael	4.46	47	P	Pn	02 01 03.9	+0.3
LITE1	Lita	4.64	33	P	Pn	02 01 06.8	+0.8
LNGL	El Angel-Carch	4.81	37	P	Pn	02 01 10.8	+2.2
CASC	Dorado de Casc	4.81	48	P	Pn	02 01 08.9	+0.6
CASC	Dorado de Casc	4.81	48	P	Pn	02 01 09.0	+0.6
CHMA	Chilma	4.87	36	P	Pn	02 01 09.8	+0.6
CHL1	Volc¡n Chiles	4.88	37	P	Pn	02 01 12.1	+2.5
ECEN	Cerro Negro	4.89	37	P	Pn	02 01 12.6	+2.8
BONI	La Bonita	4.89	44	P	Pn	02 01 12.7	+3.1
BONI	La Bonita	4.89	44	P	Pn	02 01 14.1	+4.5
CHL2	Volc¡n Chiles	4.91	38	P	Pn	02 01 12.5	+2.5
TUMC	Tumaco	5.37	24	P	Pn	02 01 15.9	0.0
	167nm,1.0s						
TUMC				S	Sn	02 02 17.8	+0.7
	167nm,1.0s						
BBAC	Balboa, Cauca	6.28	36	P	Pn	02 01 26.7	-1.9
	653nm14nm,0.6s						
BBAC				S	Sn	02 02 40.4	+0.5
	653nm14nm,0.6s						
GR1C	Gorgona, Isla	6.67	24	P	Pn	02 01 30.9	-2.8
GR1C				S	Sn	02 02 46.1	-3.0
POPC	Popayan, Colom	7.03	37	P	Pn	02 01 37.7	-1.2
	4.0nm,0.6s						
POPC				S	Sn	02 02 58.9	+0.4
	4.0nm,0.6s						
JAMC	Jamundi, Valle	7.58	34	P	Pn	02 01 44.7	-1.8
	10nm,0.8s						
JAMC				S	Sn	02 03 11.0	-0.9
	10nm,0.8s						
YOTC	Yotoco, Valle	8.40	33	P	Pn	02 01 54.5	-3.1
	3.2nm,0.8s						
YOTC				S	Sn	02 03 29.2	-2.7
	3.2nm,0.8s						
PRAC	Prado	9.07	42	P	Pn	02 02 06.3	-0.4
	4.1nm,0.8s						
PLMC	San Jos del P	9.21	30	P	Pn	02 02 07.0	-1.7
PLMC				S	Sn	02 03 47.1	-4.7
PAYG	Puerto Ayora	9.68	284	P	Pn	02 02 17.5	+2.4

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*IDC **10** 02:08:28.2±0.6, 60°.59S×26°.56W, h0^{km}, mb4.5/8, mbtmp4.5/8, MS3.6/20, Error ellipse: s-maj=28.5km s-min=18.8km az=72.0*

*NEIC **10** 02:08:29.8±1.4, 60°.90S±0°.07×26°.7W±0°.2, h10^{km}±1^{km}, mb4.9/39, Error ellipse: s-maj=19.8km s-min=3.0km az=235.0*

ISC 10 02:08:28.9±0.5**, 60°.92S**±0°.07×**26°.30W**±0°.08**, h10^{km}, n88, σ1^{s}.64**/77**, mb4.8**/25**, MS3.7**/18**, 3C-6D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	8.61	316	Pn	Pn	02 10 32.3	-1.0
VNA1	Neumayer--Stat	12.18	151	⇓P	Pn	02 11 22.8	+0.7
	comp=Z,103nm,0.3s						
VNA1				⇑S	Sn	02 13 34.7	-3.0
VNA3	Neumayer Olymp	12.29	154	⇓P	Pn	02 11 23.8	0.0
	comp=Z,122nm,0.6s						
VNA3				⇑S	Sn	02 13 36.6	-4.0
VNA2	Neumayer--Watz	12.58	151	⇓P	Pn	02 11 27.1	-0.5
	comp=Z,26nm,0.4s,baz=311,slow=15						
VNA2				⇓S	Sn	02 13 42.1	-5.5
	baz=308,slow=20						
SNAA	Sanae	14.18	149	⇓P	Pn	02 11 49.5	0.0
	comp=Z,165nm,0.2s						
SNAA				⇑S	Sn	02 14 23.5	-3.3
SNAA	Sanae	14.18	149	Pn	Pn	02 11 49.9	+0.4
	comp=Z,3.4nm,0.3s,baz=305,slow=14,SNR=70						
SNAA				Sn	Sn	02 14 16.2	-11
	comp=Z,0.7nm,0.3s,baz=343,slow=20,SNR=2.5						
SNAA				LR	LR	02 16 13.8	
	comp=Z,236nm,20.7s,baz=12,slow=32						
SNAA	Sanae	14.18	149		Pn	02 11 49.5	0.0
ESPZ	Base Esperanza	14.48	247	Pn	Pn	02 11 53.7	+0.2
TROLL	Troll, Antarti	15.77	147	⇓P	P	02 12 14.5	-0.3
	comp=Z,1μm,0.8s						
BELA	Belgrano 2	17.25	186		P	02 12 32.0	+1.1
PMSA	Palmer Station	17.46	241	P	P	02 12 38.9	+5.5
	comp=Z,1.6nm,0.3s,baz=99,slow=8.2,SNR=5.1						
PMSA				LR	LR	02 18 44.4	
	comp=Z,130nm,18.0s,baz=94,slow=35						
PMSA	Palmer Station	17.46	241	Pn	Pn	02 12 29.8	-2.3
MG02	Cerro Sombrero	24.44	270	P	P	02 13 47.3	0.0
GO09	Cerro Castillo	26.88	270	P	P	02 14 08.9	-0.6
QSPA	South Pole Qui	29.31	180	P	P	02 14 36.1	+4.8
	comp=Z,4.3nm,0.3s,baz=206,slow=5.5,SNR=20						
QSPA				LR	LR	02 26 03.1	
	comp=Z,214nm,20.2s,baz=204,slow=36						
	comp=Z,4.3nm,0.3s						
QSPA	South Pole Qui	29.31	180	P	P	02 14 31.4	+0.1
QSPA				IAmb	IAmb	02 14 37.2	
	comp=Z,30nm,1.2s						
TRQA	Tornquist	31.91	299		P	02 14 53.4	-0.8
TRQA				IAmb	IAmb	02 14 54.6	
	comp=Z,33nm,1.4s						
LL01	San Ignacio de	33.19	283	P	P	02 15 05.2	-0.1
LL01				IAmb	IAmb	02 15 08.3	
	comp=Z,12nm,0.8s						
PLCA	Paso Flores	33.58	287	P	P	02 15 07.3	-1.6
	comp=Z,1.6nm,0.8s,baz=166,slow=6.7,SNR=4.2						
PLCA				LR	LR	02 28 40.5	
	comp=Z,89nm,18.3s,baz=132,slow=36						
	comp=Z,1.6nm,0.8s						
PLCA	Paso Flores	33.58	287	P	P	02 15 07.5	-1.5
PLTB	Pedras Altas	34.22	316	P	P	02 15 13.0	-1.5
PLTB				IAmb	IAmb	02 15 23.5	
	comp=Z,22nm,1.3s						
ITAB	Concordia	37.94	321	P	P	02 15 44.5	-1.7
BO02	Sierra Bellavi	38.51	292		P	02 15 49.0	-2.1
BO01	Tunca	38.98	292		P	02 15 54.3	-0.8
BO01				IAmb	IAmb	02 16 12.5	
	comp=Z,38nm,1.6s						
BO04	La Punta	39.11	293	P	P	02 15 54.9	-1.2
MT08	Bocatoma Ro	39.30	294	P	P	02 15 57.5	-0.4
MT09	Talagante	39.45	293	P	P	02 15 57.7	-1.5
MT09				IAmb	IAmb	02 15 59.1	
	comp=Z,18nm,0.9s						
MT01	Popeta	39.50	292	P	P	02 15 57.9	-1.5
MT01				IAmb	IAmb	02 15 59.2	
	comp=Z,14nm,0.7s						
VA05	Santo Domingo	39.84	292	P	P	02 16 01.6	-0.5
PEL	Peldehue	39.85	294	P	P	02 16 01.7	-0.6
PEL				IAmb	IAmb	02 16 03.0	
	comp=Z,26nm,0.6s						
VA03	San Esteban	40.11	294	P	P	02 16 03.3	-1.2
VA03				IAmb	IAmb	02 16 05.5	
	comp=Z,24nm,1.1s						
CPUP	Villa Florida	40.48	315	P	P	02 16 05.7	-1.8
	comp=Z,1.1nm,0.5s,baz=15,slow=6.5,SNR=15						
CPUP				LR	LR	02 30 46.1	
	comp=Z,27nm,21.9s,baz=14,slow=33						
	comp=Z,1.1nm,0.5s						
CPUP	Villa Florida	40.48	315		P	02 16 05.4	-2.1
CO02	Combarbal	41.64	295	P	P	02 16 16.4	-0.8
CO02				IAmb	IAmb	02 16 18.1	
	comp=Z,14nm,0.5s						
VNDA	Vanda	41.71	183	P	P	02 16 20.3	+3.1
	comp=Z,3.6nm,0.8s,baz=164,slow=7.9,SNR=8.4						
VNDA				LR	LR	02 32 36.9	
	comp=Z,45nm,21.1s,baz=180,slow=34						
	comp=Z,3.6nm,0.8s						
VNDA	Vanda	41.71	183	P	P	02 16 19.5	+2.3
VNDA				IAmb	IAmb	02 16 53.6	
	comp=Z,32nm,2.0s						
CO03	El Pedregal	41.81	296	P	P	02 16 17.9	-0.7
CO01	Juntas del Tor	42.29	297	P	P	02 16 22.2	-0.5
AC05	El Transito	43.35	297		P	02 16 30.4	-0.8
AC02	Maricunga	44.61	300		P	02 16 40.8	-0.9
AC02				IAmb	IAmb	02 16 42.6	
	comp=Z,20nm,1.3s						
AC06	Mina Casimiro	44.67	298	P	P	02 16 41.0	-0.7
AC06				IAmb	IAmb	02 16 41.1	
	comp=Z,15nm,0.9s						
H04S2	CROZET ISLANDS	45.31	109	T	T	03 06 03.5	
	baz=223,slow=75,SNR=13						
H04S3	CROZET ISLANDS	45.32	109	T	T	03 06 05.5	
	baz=223,slow=75,SNR=12						
H04S1	CROZET ISLANDS	45.33	109	T	T	03 06 04.7	
	baz=223,slow=75,SNR=12						
GO02	Mina Guanaco	46.28	301		P	02 16 53.5	-1.2
BOSA	Boshof	46.94	70	P	P	02 17 07.0	+7.4
	comp=Z,4.0nm,0.8s,baz=221,slow=8.0,SNR=9.7						
BOSA				LR	LR	02 32 56.3	
	comp=Z,63nm,18.9s,baz=204,slow=31						
BOSA	Boshof	46.94	70	P	P	02 17 02.2	+2.5
BDFB	Brasilia	47.85	331	LR	LR	02 35 50.8	
	comp=Z,57nm,19.8s,baz=163,slow=35						
PB03	IPOC Station P	49.11	302	P	P	02 17 15.2	-1.4
PB03				IAmb	IAmb	02 17 15.8	
	comp=Z,8.4nm,0.7s						
PB09	IPOC Station P	49.12	303	P	P	02 17 16.1	-0.5
PB07	IPOC Station P	49.45	302	P	P	02 17 18.3	-0.9
PB01	IPOC Station P	49.90	303	P	P	02 17 21.5	-0.9
PB01				IAmb	IAmb	02 17 23.9	
	comp=Z,14nm,0.9s						
LBTB	Lobatse	50.18	68	LR	LR	02 34 35.4	
	comp=Z,73nm,18.3s,baz=204,slow=31						
GO01	Chusmiza	51.01	304	P	P	02 17 30.0	-1.4
GO01				IAmb	IAmb	02 17 30.9	
	comp=Z,7.5nm,0.7s						
PTLB	Pontes e Lacer	51.19	318		P	02 17 30.2	-1.9
PTLB				IAmb	IAmb	02 17 32.5	
	comp=Z,8.0nm,0.8s						
SIV	San Ignacio	51.33	315	LR	LR	02 37 35.8	
	comp=Z,64nm,21.7s,baz=256,slow=34						
LPAZ	La Paz	53.65	307	P	P	02 17 49.9	-1.2
	comp=Z,5.1nm,0.4s,baz=110,slow=5.3,SNR=24						
LPAZ				LR	LR	02 42 31.8	
	comp=Z,28nm,19.5s,baz=134,slow=38						
	comp=Z,5.1nm,0.4s						
LPAZ	La Paz	53.65	307		P	02 17 49.9	-1.2
LPAZ				IAmb	IAmb	02 17 53.7	
	comp=Z,16nm,1.3s						
VILB	Vilhena	53.87	318		P	02 17 50.1	-2.0
VILB				IAmb	IAmb	02 17 58.8	
	comp=Z,16nm,0.8s						
MATP	Matopo	55.47	68	LR	LR	02 37 52.1	
	comp=Z,68nm,18.8s,baz=222,slow=32						
MDP	Montagnes des	68.96	332	LR	LR	02 46 59.5	
	comp=Z,47nm,20.8s,baz=172,slow=34						
DBIC	Dimbokro	69.45	23	P	P	02 19 36.0	-1.1
	comp=Z,4.2nm,0.5s,baz=214,slow=5.0,SNR=7.3						
DBIC				LR	LR	02 43 00.4	
	comp=Z,67nm,18.1s,baz=345,slow=30						
	comp=Z,4.2nm,0.5s						
DBIC	Dimbokro	69.45	23	P	P	02 19 36.0	-1.1
DBIC				IAmb	IAmb	02 21 16.8	
	comp=Z,16nm,1.2s						
MBAR	Mbarara	74.05	61	LR	LR	02 48 17.3	
	comp=Z,67nm,21.8s,baz=208,slow=32						
ROSC	El Rosal	75.38	310	LR	LR	02 54 56.4	
	comp=Z,38nm,18.9s,baz=231,slow=37						
TORD	Torodi Ar. Bea	77.12	28	P	P	02 20 22.8	+0.5
	comp=Z,8.1nm,0.6s,baz=189,slow=3.2,SNR=5.9						
	comp=Z,8.1nm,0.6s						
TORD	Torodi Ar. Bea	77.12	28	P	P	02 20 24.2	+1.9
TORD				IAmb	IAmb	02 20 34.9	
	comp=Z,7.7nm,0.8s						
SDV	Santo Domingo	77.80	315	LR	LR	02 56 35.9	
	comp=Z,50nm,19.7s,baz=88,slow=37						
SJG	San Juan	85.00	322	LR	LR	02 57 37.9	
	comp=Z,22nm,21.9s,baz=150,slow=35						
ASAR	Alice Springs	94.19	162	P	P	02 21 49.2	+1.3
	comp=Z,0.9nm,0.6s,baz=185,slow=4.1,SNR=11						
ASAR				LR	LR	03 03 15.5	
	comp=Z,80nm,18.4s,baz=270,slow=35						
	comp=Z,0.9nm,0.6s						
MDT	Midelt	95.07	18	LR	LR	03 01 33.6	
	comp=Z,37nm,18.2s,baz=260,slow=34						
MODS	Modra-Piesok	114.48	30	*e*PDIFF	Pdif	02 23 17.5	-0.1
PDAR	Pinedale Array	123.24	299	PKP	PKiKP	02 27 25.1	-0.2
	comp=Z,0.4nm,0.7s,baz=137,slow=4.8,SNR=4.8						
PDAR	Pinedale Array	123.24	299		PKiKP	02 27 25.8	+0.4
NVAR	Mina Array Bea	123.61	290	PKP	PKiKP	02 27 26.5	+0.3
	comp=Z,0.4nm,0.6s,baz=74,slow=2.1,SNR=3.1						
NVAR	Mina Array Bea	123.61	290		PKiKP	02 27 27.1	+0.9
FINES	FINESS Array B	128.46	29	PKP	PKiKP	02 27 34.9	+0.1
	comp=Z,6.7nm,1.1s,baz=159,slow=4.3,SNR=1.7						
BVAR	Borovoye Array	136.87	61	PKP	PKiKP	02 27 54.7	+2.6
	comp=Z,0.6nm,0.7s,baz=186,slow=1.3,SNR=4.2						
YKA	Yellowknife Ar	140.01	314	PKP	PKPdf	02 27 56.1	+0.4
	comp=Z,0.8nm,0.9s,baz=152,slow=1.5,SNR=6.6						
YKA	Yellowknife Ar	140.01	314		PKPdf	02 27 56.0	+0.2
ZALV	Zalesovo Beam	143.89	69	PKP	PKPdf	02 28 02.7	-0.2
	comp=Z,0.4nm,0.4s,baz=223,slow=3.6,SNR=2.4						
ZALV	Zalesovo Beam	143.89	69		PKPdf	02 28 04.1	+1.1
INK	Inuvik	149.75	315	PKPbc	PKiKP	02 28 17.4	-0.7
	comp=Z,3.8nm,0.8s,baz=82,slow=1.6,SNR=18						
SONM	Songino Array	150.22	94	PKPbc	PKiKP	02 28 20.0	+0.1
	comp=Z,2.2nm,0.9s,baz=222,slow=2.5,SNR=8.8						
SONM	Songino Array	150.22	94		PKiKP	02 28 19.5	-0.4
KDAK	Kodiak Island	153.08	287	PKPbc	PKiKP	02 28 25.9	+0.7
	comp=Z,12nm,0.7s,baz=225,slow=4.3,SNR=4.7						
ILAR	Eielson Array	153.50	304	PKPbc	PKiKP	02 28 26.1	+0.1
	comp=Z,2.7nm,0.9s,baz=134,slow=0.7,SNR=15						
ILAR	Eielson Array	153.50	304		PKiKP	02 28 26.2	+0.3

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*UPA **10** 02:14:23.4±1.9, 8°.95N×82°.81W, h10^{km}±7^{km}, MD3.5, MW3.7*

*CATAC **10** 02:14:24.2±0.2, 9°N±3°×8°3W±°, h5^{km}±2^{km}, M3.3/12, MLv3.3/12, Error ellipse: s-maj=6.3km s-min=3.4km az=22.4, confirmed*

*UCR **10** 02:14:24.1±1.1, 8°.94N×82°.83W, h14^{km}±3^{km}, MW3.5*

ISC 10 02:14:24.4±0.8**, 8°.95N**±0°.02×**82°.83W**±0°.02**, h16^{km}**±5^{km}**, n67, σ1^{s}.03**/83**, 7C-5D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALCO	Alturas Coton,	0.00	6	⇑*e*P	Pg	02 14 26.6	-0.8
ALCO				*e*S	Sg	02 14 28.5	-1.0
SCLRA	Santa Clara, W	0.12	156	⇑*e*P	Pg	02 14 27.8	-0.5
RSRNO	Rio Sereno	0.13	192	⇑*e*P	Pg	02 14 27.9	-0.4
MLIR3	Monte Lirio, C	0.15	176	*e*P	Pg	02 14 28.5	-0.1
VITO	San Vito	0.18	227	*e*P	Pg	02 14 28.6	-0.4
VITO				*e*S	Sg	02 14 32.7	+0.6
BRU2	Volcan	0.21	137	⇑*i*P	Pg	02 14 29.0	-0.4
BRU2				*e*S	Sg	02 14 33.0	+0.2
BRU2	Volcan	0.21	137	⇑P	Pg	02 14 28.9	-0.4
BRU2	Volcan	0.21	137	⇑*e*P	Pg	02 14 28.9	-0.4
TBS2		0.23	131	*e*P	Pg	02 14 29.4	-0.4
DMCAL	E. de Neily	0.28	172	⇑*e*P	Pb	02 14 30.4	-0.7
NELY	Ciudad Neily	0.32	201	*e*P	Pg	02 14 30.8	-0.2
NELY				*e*S	Sb	02 14 37.0	+0.4
EDP2	Potrero Grande	0.34	281	*e*P	Pg	02 14 31.2	-0.4
CDITO	Canoas	0.37	186	⇓P	Pg	02 14 31.7	-0.4
CDITO	Canoas	0.37	186	S	Sb	02 14 38.2	-0.1
JEFFS	S de V. Baru	0.41	133	*e*P	Pg	02 14 32.2	-0.5
LPPC	Paso Canoas	0.41	181	*e*P	Pg	02 14 32.2	-0.5
BQTLY	Boquete Panama	0.41	117	*e*P	Pg	02 14 32.1	-0.7
LNBQ3	Los Naranjos,	0.42	112	*e*P	Pg	02 14 32.4	-0.5
PTAR3	Potrerillos Ar	0.42	127	*e*P	Pg	02 14 32.5	-0.4
PTAR3				*e*S	Sg	02 14 38.1	-0.6
EDAD	Golfito	0.44	228	*e*P	Pg	02 14 32.2	-1.1
BQSF3	Alto Boquete,	0.45	117	*e*P	Pg	02 14 32.9	-0.5
BQSF3				*e*S	Sg	02 14 39.1	-0.4
DRK0	Durika	0.51	308	*e*P	Pg	02 14 33.3	-1.4
DRK0				*e*S	Sg	02 14 41.4	-0.2
DRK0	Durika	0.51	308	⇓P	Pg	02 14 33.3	-1.4
DRK0	Durika	0.51	308	S	Sg	02 14 40.4	-1.2
DRK0	Durika	0.51	308	*e*P	Pg	02 14 33.2	-1.4
FIMO	Fila Mora	0.52	275	*e*P	Pg	02 14 34.7	0.0
LESP3	La Esperanza,	0.54	175	*e*P	Pb	02 14 35.0	-0.5
LESP3				*e*S	Sb	02 14 43.7	+0.6
BURE	Buenos Aires	0.55	294	*e*P	Pg	02 14 34.6	-0.7
BAGA3	Bagala, Chiriq	0.56	148	*e*P	Pb	02 14 35.5	-0.4
PSOM3	Paja de Sombre	0.57	117	*e*P	Pg	02 14 34.8	-0.9
PSOM3				*e*S	Sg	02 14 42.6	-0.7
CNI2	El Empalme, Bo	0.59	37	⇓*e*P	Pg	02 14 35.0	-1.2
CNI2				*e*S	Sg	02 14 43.5	-0.5
PTJ1	Puerto Jimnez	0.62	229	*e*P	Pg	02 14 35.3	-1.2
PTJ1				*e*S	Sb	02 14 45.9	+0.6
PTJ1	Puerto Jimnez	0.62	229	S	Sg	02 14 44.5	-0.3
PTJ1	Puerto Jimnez	0.62	229	P	Pg	02 14 35.4	-1.2
DVD	David	0.63	143	*e*P	Pg	02 14 36.2	-0.7
DVD				*e*S	Sb	02 14 45.6	-0.2
PBNVO	Pueblo Nuevo,	0.64	95	*e*P	Pg	02 14 35.5	-1.4
BRIBI	Bribri	0.67	1	*e*P	Pg	02 14 37.2	-0.3
LOCO3	Loma Colorada,	0.67	142	*e*P	Pg	02 14 34.3	-3.3
RBALA	Bur	0.68	96	*e*P	Pg	02 14 36.2	-1.5
CEUA	Cerro Uatsi, L	0.68	351	*e*P	Pg	02 14 37.6	-0.2
CHGR2	Aguacate	0.68	91	*e*P	Pg	02 14 36.4	-1.4
CHGR2				*e*S	Sg	02 14 46.0	-0.9
PEDE3	Pedregal, Chir	0.69	144	*e*P	Pg	02 14 37.3	-0.6
PEDE3				*e*S	Sb	02 14 47.3	-0.1
PIRO	Carate, Puerto	0.73	223	⇓*e*P	Pg	02 14 37.0	-1.8
PIRO	Carate, Puerto	0.73	223	⇓P	Pg	02 14 37.0	-1.8
PIRO	Carate, Puerto	0.73	223	*e*P	Pg	02 14 36.9	-1.8
PTPM	Petroterminale	0.74	183	*i* P	Pg	02 14 37.8	-1.0
PTPM				*i* S	Sb	02 14 49.5	+0.7
PTPA	Petro Terminal	0.74	183	*e*P	Pg	02 14 37.6	-1.3
EDPE	Pejibaye, P	0.76	286	*e*P	Pg	02 14 38.5	-0.7
SAJE	San Jernim	0.78	301	*e*P	Pg	02 14 37.9	-1.7
OCHAL	Ojochal	0.82	281	P	Pg	02 14 38.9	-1.4
OCHAL	Ojochal	0.82	281	S	Sg	02 14 50.9	-0.2
LMNES	Limones	0.84	182	*e*P	Pg	02 14 39.3	-1.5
PIEC	Cerro El Cedra	1.30	301	*e*P	Pn	02 14 47.2	-0.9
ABRB	Las Abras (San	1.37	320	*e*P	Pn	02 14 48.8	-0.3
CVTQ	Turrialba Volc	1.40	319	*e*P	Pn	02 14 49.8	+0.2
LCR2	La Lucha 2	1.40	304	*e*S	Sb	02 15 07.9	-0.2
LCR2	La Lucha 2	1.40	304	S	Sb	02 15 07.9	-0.2
VTR0	Volcan Turrial	1.40	319	*e*P	Pn	02 14 49.8	+0.1
TRT2	Tortugero	1.83	331	P	Pn	02 14 54.9	-0.3
TRT2	Tortugero	1.83	331	S	Sn	02 15 19.6	+1.5
SOCE	Pocosol	2.27	309	P	Pn	02 15 01.9	+0.6
SOCE	Pocosol	2.27	309	S	Sb	02 15 32.9	+0.1
COVE	Coope Vega, Sa	2.34	319	S	Sb	02 15 35.5	+0.5
COVE	Coope Vega, Sa	2.34	319	P	Pn	02 15 04.3	+2.0
JTS	Las Juntas de	2.48	303	*e*P	Pn	02 15 05.4	+1.2
JTS	Las Juntas de	2.48	303	P	Pn	02 15 05.0	+0.8
JTS				S	Sn	02 15 37.0	+2.8
BCIP	Isla Barro Col	2.97	86	P	Pn	02 15 12.6	+1.8

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*IDC **10** 02:15:23.2±2.1, 30°.18S×177°.41W, h0^{km}, mb3.8/2, mbtmp3.8/2, MS3.4/1, Error ellipse: s-maj=49.5km s-min=25.0km az=83.0*

ISC 10 02:15:27.9±2.1**, 28°.3S**±0°.1×**177°.4W**±0°.4**, h35^{km}, n7, σ1^{s}.36**/7**, mb4.0**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.04	204	Pn	Pn	02 15 45.5	-0.5
	261nm,0.3s,baz=78,slow=12,SNR=12						
RAO				Sn	Sn	02 15 59.8	+0.4
	412nm,0.3s,baz=131,slow=21,SNR=14						
RAO				LR	LR	02 16 12.5	
	comp=Z,370nm,19.7s,baz=134,slow=48						
DZM	Mont Dzumac	15.85	289	LR	LR	02 24 06.7	
	comp=Z,133nm,18.6s,baz=162,slow=32						
ASAR	Alice Springs	43.75	264	P	P	02 23 29.5	-0.7
	0.6nm,0.7s,baz=100,slow=7.3,SNR=7.3						
	0.6nm,0.7s						
WRA	Warramunga Arr	44.55	270	P	P	02 23 37.1	+0.5
	1.1nm,0.5s,baz=110,slow=8.0,SNR=9.9						
	1.1nm,0.5s						
NJ2	Nanjing	85.26	310	*e*P	P	02 28 00.8	-0.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
FINES	FINESS Array B	143.33	341	PKPbc	PKiKP	02 34 59.9	-1.2
	comp=Z,2.5nm,0.5s,baz=54,slow=3.6,SNR=16						
MMAI	Mount Meron Ar	151.43	288	PKPbc	PKiKP	02 35 21.0	+2.2
	comp=Z,1.5nm,0.7s,baz=75,slow=6.1,SNR=5.2						

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*IDC **10** 02:42:46.3±8.6, 5°.95S×130°.64E, h51^{km}±81^{km}, mb4.0/2, mbtmp4.5/6, ML4.5/4, Error ellipse: s-maj=86.8km s-min=24.4km az=52.0*

*NEIC **10** 02:42:55.4±1.2, 6°.4S±0°.1×130°.0E±0°.1, h130^{km}±7^{km}, mb4.3/18, Error ellipse: s-maj=19.3km s-min=12.5km az=52.0*

*DJA **10** 02:42:59.2±0.2, 7°S±2°×13°0E±°, h180^{km}±5^{km}, M4.3/16, mb4.3/14, mB4.8/9, MLv4.6/16, Mw(mB)4.1/9*

ISC 10 02:43:00.5±0.6**, 6°.58S**±0°.05×**130°.01E**±0°.06**, h200^{km}, n71, σ2^{s}.33**/69**, mb4.3**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.89	137		Pn	02 43 29.2	-8.8
SAUI	Saumlaki	1.89	137	P	Pn	02 43 36.2	-1.8
SAUI				S	Sn	02 44 05.0	-2.2
BNDI	Bandanaira	2.05	357	P	Pn	02 43 36.0	-3.6
MSAI	Masohi	3.39	341	P	Pn	02 43 51.8	-3.0
KRAI	Karang Ratu	3.62	334	P	Pn	02 43 55.8	-1.8
FAKI	Fak Fak	4.27	32	Pn	Pn	02 44 00.9	-4.8
FAKI	Fak Fak	4.27	32	P	Pn	02 43 56.0	-10
FAKI	Fak Fak	4.27	32	P	Pn	02 44 00.9	-4.8
NLAI	Namlea	4.41	319	P	Pn	02 44 05.2	-2.2
KMPI	Kaimana, Papua	4.69	52	P	Pn	02 44 07.8	-3.2
SWI	Sorong	5.81	12	P	Pn	02 44 22.4	-3.1
DRS	Darwin Rock St	5.88	171	P	Pn	02 44 25.6	-0.7
SANI	Sanana	6.03	318	P	Pn	02 44 26.2	-2.0
	0.1nm23nm,0.7s						
MTN	Manton Dam	6.32	170		Pn	02 44 28.0	-4.0
SOEI	Soe	6.50	241		Pn	02 44 27.8	-6.6
SOEI	Soe	6.50	241	P	Pn	02 44 33.3	-1.1
SOEI	Soe	6.50	241	P	Pn	02 44 33.1	-1.3
	0.3nm1μm46nm,0.8s						
RKPI	Ransiki, Papua	6.53	40	P	Pn	02 44 32.2	-2.5
MWPI	Manokwari, Pap	6.91	36	P	Pn	02 44 37.0	-2.6
	0.9nm72nm,0.8s						
BATI	Baumata	7.24	240	P	Pn	02 44 41.4	-2.5
	21nm,0.3s,baz=230,slow=2.1,SNR=12						
BATI				S	Sn	02 45 59.6	-6.4
	46nm,0.4s,baz=136,slow=19,SNR=7.5						
	68nm,0.4s						
BATI	Baumata	7.24	240	P	Pn	02 44 42.8	-1.1
EDFI	Ende, Flores	8.52	255	P	Pn	02 45 00.4	-0.3
KNRA	Kununurra	9.12	188		Pn	02 45 06.8	-1.6
BASI	Baing, Sumba	10.00	248	P	Pn	02 45 19.1	-0.8
	73nm,0.9s						
MMPI	Merauke	10.46	101	P	Pn	02 45 24.3	-1.4
GENI	Genyem	10.87	69	P	Pn	02 45 24.3	-6.8
FITZ	Fitzroy Crossi	12.21	200	P	Pn	02 45 46.8	-1.4
	0.6nm,0.3s,baz=18,slow=8.9,SNR=20						
FITZ				S	Sn	02 47 56.2	-8.3
	4.1nm,0.3s,baz=249,slow=20,SNR=6.3						
	1.8nm,0.2s						
FITZ	Fitzroy Crossi	12.21	200		Pn	02 45 46.6	-1.6
PLAI	Plampang	12.32	259	P	Pn	02 45 48.8	-0.8
PLAI	Plampang	12.32	259	P	Pn	02 45 47.8	-1.8
	23nm,1.1s						
WB0	Warramunga Arr	13.78	162	Pn	Pn	02 46 06.5	-1.4
WRAB	Tennant Creek	13.93	163	P	Pn	02 46 08.9	-0.8
WRA	Warramunga Arr	13.93	163	P	Pn	02 46 08.3	-1.4
	2.7nm,0.3s,baz=347,slow=11,SNR=34						
WRA				S	S	02 48 35.6	-9.3
	5.3nm,0.5s,baz=334,slow=22,SNR=10						
	1.8nm,0.4s						
WRA	Warramunga Arr	13.93	163		Pn	02 46 06.8	-3.0
WB2	Warramunga Arr	13.94	163	Pn	Pn	02 46 08.6	-1.1
COEN	Coen	14.88	121		P	02 46 21.7	-0.5
COEN	Coen	14.88	121	P	Pn	02 46 20.1	-1.3
JAGI	Jajag, Banyuwa	15.83	262		Pn	02 46 31.8	-1.2
JAGI				IAmb	IAmb	02 46 41.7	
	comp=Z,26nm,1.2s						
JAGI	Jajag, Banyuwa	15.83	262	P	Pn	02 46 34.0	+1.0
QIS	Mount Isa	16.72	147	P	Pn	02 46 45.3	+1.7
AS31	Alice Springs	17.40	168		Pn	02 46 51.8	+0.2
AS31				IAmb	IAmb	02 46 54.4	
	comp=Z,7.0nm,0.5s						

ASAR	Alice Springs	17.40	168	P	Pn	02 46 52.4	+0.8
	comp=Z,2.8nm,0.3s,baz=347,slow=10.0,SNR=118						
ASAR				S	S	02 49 57.9	-2.6
	comp=Z,1.2nm,0.6s,baz=348,slow=28,SNR=5.2						
	comp=Z,12nm,0.5s						
ASAR	Alice Springs	17.40	168	Pn	Pn	02 46 52.2	+0.6
MBWA	Marble Bar	17.58	213	P	Pn	02 46 55.2	+1.5
PSA00	Pilbara Seismi	17.85	212		Pn	02 46 56.6	-0.3
PSA00	Pilbara Seismi	17.85	212	P	Pn	02 46 56.1	-0.8
PSA00				IAmb	IAmb	02 47 03.2	
	comp=Z,27nm,1.4s						
PSA00	Pilbara Seismi	17.85	212	P	Pn	02 46 58.3	+1.4
CTAO	Charters Tower	20.71	132	P	P	02 47 27.0	+1.3
CTAO				IAmb	IAmb	02 47 56.6	
	comp=Z,18nm,1.2s						
BBJI	Bungbulang	22.21	266	P	P	02 47 43.2	+2.2
INKA	Innaminka	23.38	155		P	02 47 53.8	+2.4
INKA				IAmb	IAmb	02 47 56.5	
	comp=Z,6.0nm,0.6s						
QLP	Quilpie	24.07	147	P	P	02 47 59.8	+2.1
FORT	Forrest	24.14	184	P	P	02 48 00.2	+1.9
FORT				IAmb	IAmb	02 48 31.6	
	comp=Z,5.2nm,0.9s						
BBOO	Buckleboo	26.70	169	P	P	02 48 23.2	+1.9
BBOO				IAmb	IAmb	02 48 37.4	
	comp=Z,23nm,1.5s						
BBOO	Buckleboo	26.70	169	P	P	02 48 24.2	+2.9
KLBR	Kellerberrin	27.39	203	P	P	02 48 30.7	+3.2
STKA	Stephens Creek	27.40	158	P	P	02 48 30.0	+2.5
	comp=Z,1.8nm,0.3s,baz=333,slow=9.8,SNR=7.1						
	comp=Z,1.8nm,0.3s						
STKA	Stephens Creek	27.40	158	P	P	02 48 29.8	+2.2
STKA	Stephens Creek	27.40	158	P	P	02 48 30.7	+3.2
HTT	Hallett	27.97	164	P	P	02 48 35.7	+3.0
GSI	Gunungsitoli	33.30	282	P	P	02 49 20.6	+0.9
KS19	Wonju Array Si	43.90	358	P	P	02 50 48.1	+0.7
LBZ	Lake Benmore	51.42	144	P	P	02 51 47.5	+2.3
BKZ	Black Stump Fm	52.89	135	P	P	02 51 58.5	+2.4
BKZ				IAmb	IAmb	02 51 59.9	
	comp=Z,8.7nm,1.0s						
MK31	Makanchi Array	67.88	327	P	P	02 53 39.0	+1.6
MKAR	Makanchi Array	67.88	327	P	P	02 53 39.0	+1.6
	comp=Z,1.2nm,0.5s,baz=118,slow=8.0,SNR=22						
	comp=Z,1.2nm,0.5s						
MKAR	Makanchi Array	67.88	327	P	P	02 53 38.2	+0.8
MAKZ	Makanchi	68.06	327	P	P	02 53 39.4	+0.8
BOOM	Boomskoye usch	69.23	320	P	P	02 53 47.8	+1.8
BOOM				IAmb	IAmb	02 54 25.7	
	comp=Z,7.5nm,1.1s						
KURBB	Kurchatov Arra	72.16	328	P	P	02 54 03.5	+0.3
	comp=Z,0.2nm,0.6s,baz=123,slow=5.2,SNR=4.5						
KURK	Kurchatov	72.17	329	P	P	02 54 04.1	+0.8
VNDA	Vanda	72.86	173	P	P	02 54 08.9	+1.9
VNDA				IAmb	IAmb	02 54 32.8	
	comp=Z,6.5nm,1.4s						

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*NEIC **10** 03:29:58.2±1.6, 19.°11N±0.°03×67.°13W±0.°03, h10^{km}±1^{km}, ML2.2/18, Md3.2/9(RSPR), Error ellipse: s-maj=5.5km s-min=4.9km az=218.0*

*SDD **10** 03:29:59.2±1.4, 19.°14N×66.°99W, h31^{km}±39^{km}, MD3.1, ML2.9, MW2.7, Presumed earthquake*

*RSPR **10** 03:30:02.5, 18.°93N×67.°20W, h61^{km}±7^{km}, MD3.2/9*

ISC 10 03:29:59.4±1.4**, 19.°09N**±0.°06×**67.°14W**±0.°03**, h31**^{km}±11^{km}**, n49,** σ**0ˢ63**/56**, 17C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	0.62	177	Pg	Pb	03 30 11.3	-0.6
AGPR				Sg	Sb	03 30 19.4	-1.0
AGPR				IAML		03 30 19.8	
	138nm,2.3s						
AGPR				IAML		03 30 25.2	
	109nm,0.8s						
AGPR	Aguadilla, PR	0.62	177	⇑eP	Pb	03 30 11.9	0.0
AGPR	Aguadilla, PR	0.62	177	eS	Sb	03 30 20.4	0.0
AGPR	Aguadilla, PR	0.62	177	⇑ePg	Pb	03 30 11.5	-0.4
AGPR				⇑eSg	Sb	03 30 20.5	0.0
AGPR				IAML		03 30 21.0	
	comp=N,928nm,0.2s						
IDE	Isla Desecheo	0.77	204		Pb	03 30 14.7	+0.3
IDE					Sb	03 30 24.8	+0.3
IDE	Isla Desecheo	0.77	204	⇑eP	Pb	03 30 14.7	+0.3
IDE	Isla Desecheo	0.77	204	eS	Sb	03 30 24.8	+0.3
AOPR	Arecibo Observ	0.83	154		Pn	03 30 14.7	-0.2
AOPR				IAML		03 30 41.4	
	comp=N,81nm,1.7s						
AOPR	Arecibo Observ	0.83	154		Sn	03 30 25.9	-0.2
AOPR	Arecibo Observ	0.83	154	⇑eP	Pb	03 30 16.0	+0.6
AOPR	Arecibo Observ	0.83	154	eS	Sn	03 30 25.9	-0.2
AOPR	Arecibo Observ	0.83	154	⇑ePg	Pn	03 30 14.4	-0.5
EMPR	Esperanza - Ma	0.84	136	Pg	Pn	03 30 14.5	-0.6
LSP	Las Mesas	0.91	177		Pn	03 30 16.0	-0.1
LSP					Sb	03 30 28.8	+0.2
LSP	Las Mesas	0.91	177	⇓iP	Pn	03 30 16.0	-0.1
LSP	Las Mesas	0.91	177	eS	Sb	03 30 28.8	+0.2
UUPR	Utuado, UPR, P	0.93	154		Sb	03 30 28.9	-0.1
UUPR	Utuado, UPR, P	0.93	154	eS	Sb	03 30 28.9	-0.1
ECPR	Experimental S	1.07	136	Pn	Pn	03 30 18.2	0.0
ECPR				IAML		03 30 37.2	
	comp=N,81nm,0.2s						
ECPR	Experimental S	1.07	136	⇑eP	Pb	03 30 20.1	+0.8
ECPR	Experimental S	1.07	136	eS	Sb	03 30 32.9	0.0
CRPR	Cabo Rojo, PR	1.08	178	Pn	Pn	03 30 18.3	0.0
CRPR				IAML		03 30 39.4	
	comp=N,52nm,1.5s						
CRPR				IAML		03 30 43.3	
	comp=N,54nm,2.5s						
CRPR	Cabo Rojo, PR	1.08	178		Sn	03 30 31.9	-0.4
CRPR	Cabo Rojo, PR	1.08	178	⇑eP	Pn	03 30 18.4	0.0
CRPR	Cabo Rojo, PR	1.08	178	eS	Sn	03 30 31.9	-0.4
CRPR	Cabo Rojo, PR	1.08	178	⇑ePg	Pn	03 30 18.4	0.0
CRPR				⇑eSg	Sn	03 30 32.2	-0.1
CRPR				IAML		03 30 33.5	
	comp=N,333nm,0.3s						
MLPR	Magueyes Islan	1.12	175	⇓iP	Pn	03 30 19.0	+0.1
MLPR	Magueyes Islan	1.12	175	eS	Sn	03 30 33.7	+0.4
MLPR	Magueyes Islan	1.12	175	⇓ePg	Pn	03 30 18.9	+0.1
MLPR				⇑eSg	Sn	03 30 33.6	+0.3
MLPR				IAML		03 30 34.3	
	comp=N,210nm,0.3s						
OBIP	Obispado Ponce	1.16	154		Pn	03 30 20.0	+0.5
OBIP					Sn	03 30 34.6	+0.4
OBIP	Obispado Ponce	1.16	154	IAML		03 30 43.8	
	comp=E,36nm,1.9s						
OBIP	Obispado Ponce	1.16	154	⇓eP	Pn	03 30 20.0	+0.5
OBIP	Obispado Ponce	1.16	154	eS	Sn	03 30 34.6	+0.4
GCPR	Guaynabo City	1.27	128		Pb	03 30 21.9	-0.8
GCPR	Guaynabo City	1.27	128		Sb	03 30 38.7	0.0
GCPR	Guaynabo City	1.27	128	⇑eP	Pb	03 30 24.0	+1.3
GCPR	Guaynabo City	1.27	128	eS	Sb	03 30 38.7	0.0
SJG	San Juan	1.35	136		Pb	03 30 23.2	-0.9
SJG	San Juan	1.35	136	IAML		03 30 33.6	
	comp=E,31nm,3.1s						
SJG				IAML		03 31 12.1	
	comp=E,32nm,2.6s						
SJG	San Juan	1.35	136	⇑eP	Pb	03 30 23.2	-0.9
SJG	San Juan	1.35	136	eS	Sn	03 30 39.3	+0.3
HUMP	Col San Antoni	1.55	127		Pb	03 30 27.4	0.0
HUMP					Sb	03 30 46.0	-0.6
HUMP	Col San Antoni	1.55	127	Pn	Pn	03 30 25.7	+0.9
HUMP				IAML		03 30 48.5	
	comp=E,27nm,3.0s						
HUMP				IAML		03 30 49.4	
	comp=E,20nm,1.4s						
HUMP	Col San Antoni	1.55	127	⇑eP	Pb	03 30 27.4	0.0
HUMP	Col San Antoni	1.55	127	eS	Sb	03 30 46.0	-0.6
MIDR	Miches	1.81	267	⇑eP	Pb	03 30 31.1	-0.8
MIDR	Miches	1.81	267	⇑ePg	Pb	03 30 31.2	-0.7
MIDR				⇑eSg	Sb	03 30 56.1	+2.0
MIDR				IAML		03 31 00.3	
	comp=N,49nm,4.1s						
DR12	Loma Pena Alta	2.14	262	Pn	Pn	03 30 33.9	+0.9
HATOM	Hato Mayor del	2.14	262	⇓ePg	Pb	03 30 35.5	-2.1
HATOM				IAML		03 31 12.3	
	comp=N,84nm,0.3s						

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*JMA **10** 03:43:52.2±0.3, 23.°7N±0.°5×122.°0E±0.°8, h16^{km}±4^{km}, MV3.3/15, TAIWAN REGION*

*TAP **10** 03:43:53.2, 23.°73N×122.°01E, h29^{km}, ML3.6, C*

ISC 10 03:43:52.3±1.0**, 23.°69N**±0.°02×**122.°03E**±0.°02**, h25**^{km}±10^{km}**, n141,** σ**0ˢ85**/246**, 3C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEYL	Yanliau Villag	0.43	294	eP	Pb	03 44 01.8	+0.4
TEYL				S	Sb	03 44 08.1	+0.5
SHUL	Shoufeng	0.44	282	i P	Pb	03 44 02.0	+0.5
SHUL				S	Sn	03 44 09.0	-1.2
TEGC	Jichi Village	0.45	272	i P	Pb	03 44 02.1	+0.4
TEGC				i S	Sn	03 44 09.2	-1.3
HWA	Hwalien	0.48	306	P	Pb	03 44 02.2	0.0
HWA				S	Sb	03 44 09.5	+0.6
EGFH	Guangfu	0.55	268	eP	Pb	03 44 03.6	+0.2
EGFH				eS	Sb	03 44 11.7	+0.7
TWD	Chiawan	0.55	314	P	Pb	03 44 02.9	-0.5
TWD				S	Sb	03 44 10.1	-0.8
ESL	Shilin	0.56	283	P	Pb	03 44 03.0	-0.6
ESL				S	Sb	03 44 10.7	-0.5
ETM	Tongmen	0.56	299	P	Pb	03 44 02.9	-0.7
ETM				S	Sb	03 44 10.8	-0.4
HGSD	Ruisui	0.59	250	⇑iP	Pb	03 44 04.0	0.0
HGSD				S	Sb	03 44 12.2	+0.2
WARBT	Fenglin Townsh	0.59	272	i P	Pb	03 44 03.7	-0.4
WARBT				S	Sb	03 44 11.8	-0.2
ETL	Fush Village	0.59	321	P	Pb	03 44 03.5	-0.7
ETL				eS	Sb	03 44 11.6	-0.6
NACB	Ninganchiao	0.62	320	P	Pb	03 44 04.0	-0.6
NACB	Ninganchiao	0.62	320	S	Sb	03 44 12.0	-0.9
NACB	Ninganchiao	0.62	320	⇑iP	Pb	03 44 03.9	-0.7
NACB				i S	Sb	03 44 11.7	-1.3
ECBN	Changbin	0.65	235	i P	Pb	03 44 05.5	+0.4
ECBN				S	Sb	03 44 14.2	+0.5
LXIB	Xiulin Townshi	0.65	300	P	Pb	03 44 04.6	-0.6
LXIB				S	Sb	03 44 13.6	-0.3
EHYH	Wanrong	0.66	253	P	Pb	03 44 05.5	+0.3
EHYH				S	Sb	03 44 15.1	+1.1
EHY	Hungye	0.67	254	i P	Pb	03 44 05.6	+0.1
EHY				eS	Sb	03 44 15.1	+0.7
EAHA	Aohua	0.69	337	i P	Pb	03 44 05.3	-0.4
EAHA				S	Sb	03 44 14.5	-0.2
ETLH	Xiulin Townshi	0.71	316	i P	Pb	03 44 05.5	-0.8
ETLH				S	Sb	03 44 14.8	-0.9
YULB	Yu-li	0.73	246	P	Pb	03 44 07.0	+0.5
YULB	Yu-li	0.73	246	S	Sb	03 44 16.9	+0.7
YULB	Yu-li	0.73	246	i P	Pb	03 44 06.7	+0.1
YULB				S	Sb	03 44 16.9	+0.7
TWF1	Yuli	0.75	243	i P	Pb	03 44 07.0	+0.2
TWF1				eS	Sb	03 44 17.0	+0.3
CHKH	Chenggong	0.77	229	i P	Pb	03 44 06.8	-0.2
CHKH				i S	Sb	03 44 16.2	-0.8
ENA	Nanau	0.78	340	i P	Pb	03 44 06.8	-0.4
ENA				S	Sb	03 44 17.1	-0.2
VWDT	VWDT	0.81	274	i P	Pb	03 44 07.8	-0.1
VWDT				S	Sb	03 44 18.4	0.0
OWD	Renai	0.82	289	i P	Pb	03 44 07.3	-0.8
OWD				S	Sb	03 44 17.5	-1.3
WHF	Hehuan Shan	0.83	303	P	Pb	03 44 07.6	-0.8
WHF				eS	Sb	03 44 17.4	-1.9
FULB	Fuli	0.83	234	P	Pb	03 44 07.9	-0.3
FULB				S	Sb	03 44 18.6	-0.5
CHKT	Chengkung	0.85	226	i P	Pb	03 44 07.9	-0.6
CHKT				S	Sb	03 44 18.2	-1.2
WUSB	Renai	0.89	290	eP	Pb	03 44 08.9	-0.2
WUSB				eS	Sb	03 44 20.2	-0.4
ESAO	Su ao	0.89	349	eP	Pn	03 44 09.2	-0.2
ESAO				eS	Sn	03 44 20.8	-0.7
FUSS	Fushou	0.91	308	P	Pb	03 44 09.2	-0.4
FUSS				S	Sb	03 44 20.8	-0.5
TWC	Suao	0.93	350	eP	Pb	03 44 09.6	-0.2
TWC				S	Sb	03 44 21.3	-0.3
NNSB	Datong	0.94	321	⇑iP	Pb	03 44 09.5	-0.6
NNSB				S	Sb	03 44 21.6	-0.6
ECS	Chishang	0.95	231	P	Pb	03 44 10.3	+0.1
ECS				S	Sb	03 44 22.9	+0.5
NNS	Nan Shan	0.95	321	eP	Pb	03 44 09.7	-0.6
NNS				S	Sb	03 44 22.0	-0.6
LATG	Datong	0.95	331	i P	Pb	03 44 09.7	-0.6
LATG				S	Sb	03 44 21.8	-0.8
TWT	Tachien	0.96	306	eP	Pb	03 44 10.2	-0.2
TWT				eS	Sb	03 44 22.1	-0.6
TDCB	Techi	0.97	305	P	Pb	03 44 10.2	-0.4
TDCB				S	Sb	03 44 22.3	-0.8
NDS	Dongshan	0.98	343	P	Pb	03 44 10.4	-0.2
NDS				S	Sb	03 44 22.8	-0.3
EDH	Donghe	0.98	223	i P	Pb	03 44 09.8	-0.8
EDH				i S	Sb	03 44 21.8	-1.3
SSLB	Suanglung	0.99	276	P	Pb	03 44 10.3	-0.5
SSLB	Suanglung	0.99	276	eP	Pb	03 44 10.4	-0.5
SSLB				eS	Sb	03 44 22.2	-1.2
YUS	Yu-Shan	1.01	259	i P	Pb	03 44 11.3	-0.1
YUS				i S	Sb	03 44 24.0	-0.5
ENTT	Nioudou	1.03	336	P	Pb	03 44 11.0	-0.6
ENTT				S	Sb	03 44 24.2	-0.6
SMLT	Sun Moon Lake	1.05	281	P	Pn	03 44 11.3	-0.3
SMLT				S	Sb	03 44 24.9	-0.4
ELDTW	Lidau	1.05	242	eP	Pn	03 44 11.4	-0.3
ELDTW				eS	Sb	03 44 23.5	-2.0
TWE	Neicheng	1.07	342	eP	Pn	03 44 11.8	0.0
WHYT	Xinyi Township	1.08	270	eP	Pn	03 44 12.1	+0.2
WCS	Beigang Elemen	1.08	290	eP	Pn	03 44 12.0	0.0
TYC	Yuchr	1.09	281	eP	Pn	03 44 12.3	+0.2
JYNG	Yonagunijimaku	1.13	48	P	Pb	03 44 13.2	0.0
JYNG				S	Sn	03 44 27.6	+0.3
FUSB	Fushanzhiwuyua	1.14	339	i P	Pn	03 44 12.8	0.0
FUSB				eS	Sn	03 44 27.3	-0.3
ALS	Alishan	1.14	261	eP	Pb	03 44 13.6	+0.1
ALS				i S	Sn	03 44 28.2	+0.3
LDUT	Ludao	1.14	207	i P	Pn	03 44 12.0	-0.7
LDUT				S	Sb	03 44 25.4	-2.3
LONT	Longtian	1.14	227	i P	Pn	03 44 12.5	-0.2
LONT				i S	Sb	03 44 27.1	-0.7
YHNB	Yeheng	1.14	329	P	Pn	03 44 12.8	-0.1
YHNB	Yeheng	1.14	329	i P	Pn	03 44 12.7	-0.1
YHNB				eS	Sb	03 44 26.5	-1.4
WHP	Taichung City	1.15	301	eP	Pb	03 44 13.8	+0.2
WHP				S	Sn	03 44 27.9	-0.1
EGS		1.15	356	eP	Pb	03 44 13.5	0.0
NSK	Sanguang	1.15	328	eP	Pn	03 44 12.8	-0.2
NSK				S	Sb	03 44 26.9	-1.4
YOJ	Yonaguni jima	1.18	49	P	Pn	03 44 13.9	+0.7
YOJ	Yonaguni jima	1.18	49	P	Pn	03 44 14.0	+0.7
YOJ				S	Sn	03 44 28.7	+0.2
YOJ	Yonaguni jima	1.18	49	P	Pn	03 44 13.8	+0.5
YOJ				S	Sb	03 44 29.2	+0.2
NWLT	Wulai	1.18	336	i P	Pn	03 44 13.5	+0.2
NWLT				eS	Sb	03 44 27.6	-1.4
WJS	Zhushan	1.20	276	eP	Pb	03 44 14.2	-0.1
TWGBT	Beinan	1.23	225	P	Pn	03 44 13.9	-0.1
TWGBT	Beinan	1.23	225	i P	Pn	03 44 13.7	-0.3
TWGBT				S	Sn	03 44 28.7	-1.2
TWG	Pinlang	1.24	226	i P	Pn	03 44 13.6	-0.5
TWG				S	Sn	03 44 28.7	-1.3
TTN	Taitung	1.24	221	eP	Pn	03 44 14.4	+0.3
TTN				eS	Sn	03 44 28.9	-1.0
WNT	Mingjian	1.25	279	eP	Pb	03 44 15.1	-0.1
WNT				eS	Sb	03 44 31.6	+0.8
NFF	Wufeng Townshi	1.25	319	P	Pb	03 44 15.0	-0.3
NFF				eS	Sb	03 44 30.5	-0.6
STYH	Taoyuan	1.26	246	i P	Pn	03 44 15.2	+0.8
STYH				S	Sn	03 44 31.0	+0.4
TIPB	Shuangxi	1.29	352	eP	Pb	03 44 15.7	-0.2
TWB1	Santiao Chiao	1.31	358	P	Pb	03 44 15.7	-0.6
TWB1				eS	Sn	03 44 30.9	-0.9
TCU	Taichung	1.32	290	eP	Pb	03 44 16.8	+0.4
TCU				eS	Sb	03 44 35.5	+2.6
TWQ1	Liyutan	1.32	300	eP	Pb	03 44 17.4	+0.9
TWQ1				eS	Sb	03 44 33.4	+0.5
NSTT	Nanjuang	1.32	315	eP	Pb	03 44 16.6	+0.1
NSTT				S	Sb	03 44 33.0	-0.1
LIOB	Emei	1.32	316	P	Pb	03 44 16.8	+0.3
LIOB				eS	Sb	03 44 32.3	-0.8
KSHI	Guanxi Townshi	1.33	324	eP	Pb	03 44 17.0	+0.3
KSHI				eS	Sb	03 44 34.6	+1.4
WCKO	Fanlu	1.33	259	eP	Pb	03 44 17.1	+0.5
WCKO				S	Sb	03 44 34.1	+0.8
TPUB	Ta-pu	1.34	253	P	Pb	03 44 17.5	+0.7
TPUB	Ta-pu	1.34	253	P	Pb	03 44 16.9	+0.1
TPUB				eS	Sb	03 44 33.6	0.0
TWA	Mucha	1.34	343	eP	Pb	03 44 16.7	-0.2
NHDH	Xindian Distri	1.34	340	eP	Pn	03 44 15.9	+0.3
NHDH				eS	Sb	03 44 33.6	-0.1
NSY	Sanyi	1.36	302	eP	Pb	03 44 17.5	+0.3
NSY				eS	Sb	03 44 35.6	+1.3
WDLH	Douliu	1.37	270	eP	Pn	03 44 15.6	-0.2
WDLH				eS	Sb	03 44 35.2	+0.9
TATO	Taipei	1.37	339	P	Pb	03 44 16.9	-0.4
WTP	Ta-pu	1.37	251	eP	Pb	03 44 17.6	+0.2
WTP				eS	Sb	03 44 35.6	+1.1
NWF	Wu-fen Shan	1.39	351	P	Pb	03 44 17.4	-0.3
NWF				eS	Sb	03 44 34.4	-0.7
WFSB	Wu-fen Shan	1.39	351	P	Pb	03 44 17.4	-0.3
WFSB				eS	Sb	03 44 35.5	+0.5
SXI1	Grass Mountain	1.40	354	P	Pn	03 44 17.0	+0.6
SXI1				S	Sb	03 44 34.6	-0.8
NHY	Taipei	1.40	343	eS	Sn	03 44 33.6	-0.5
NMLH	Miaoli	1.41	307	eP	Pb	03 44 17.6	-0.3
NMLH				eS	Sb	03 44 36.3	+0.8
SGST	Jiashian	1.46	246	eP	Pb	03 44 18.5	-0.3
SGST				S	Sb	03 44 37.4	+0.4
HSN	Hsinchu	1.47	319	eP	Pb	03 44 19.2	+0.3
HSN				i S	Sb	03 44 37.8	+0.6
CHN1	Nanshi	1.47	250	eP	Pb	03 44 19.6	+0.6
CHN1				i S	Sb	03 44 39.2	+1.9
TNOU	National Taiwa	1.47	351	eP	Pb	03 44 18.2	-0.8
TWK	Hsinying	1.48	254	P	Pb	03 44 19.3	+0.2
TWK				eS	Sb	03 44 38.7	+1.2
SNST	Tainan City	1.48	252	eP	Pb	03 44 19.6	+0.4
SNST				i S	Sb	03 44 38.8	+1.2
CHY	Chiayi	1.48	263	eP	Pn	03 44 18.2	+0.7
CHY				eS	Sb	03 44 38.4	+0.8
NCUH	Zhongli	1.48	329	eP	Pb	03 44 18.9	-0.4
NCUH				S	Sb	03 44 37.9	+0.2
YM01	YM01	1.51	344	eP	Pb	03 44 18.9	-0.7
YM01				i S	Sb	03 44 38.1	-0.3
TWS1	Kuangyinshan	1.51	338	eP	Pb	03 44 18.9	-0.8
ZUZH	Zhuzihu	1.53	343	P	Pn	03 44 18.9	+0.7
ZUZH				i S	Sb	03 44 37.7	-1.3
YM08	YM08	1.54	345	eP	Pn	03 44 18.9	+0.6
ANP	Anpu	1.56	343	eP	Pn	03 44 19.4	+0.8
SSD	Sandimen	1.59	234	eP	Pn	03 44 19.3	+0.3
WSL	Shuilin Townsh	1.66	264	eP	Pn	03 44 21.2	+1.3
WSL				eS	Sb	03 44 42.4	-0.3
HATJ	Hateruma jima	1.67	77	P	Pn	03 44 20.8	+0.8
HATJ				eS	Sn	03 44 41.0	+0.4
MASBT	Mashibuluo	1.68	230	eP	Pn	03 44 20.7	+0.6
IRIF	Iriomote-Funau	1.68	67	P	Pn	03 44 21.3	+1.1
IRIF				eS	Sn	03 44 42.5	+1.5
TAW	Tawu	1.69	218	eP	Pn	03 44 20.5	+0.2
TAW				eS	Sn	03 44 39.9	-1.3
EAST	Anshuo	1.70	220	eP	Pn	03 44 20.9	+0.4
LAY	Lan-yu	1.71	195	eP	Pn	03 44 18.9	-1.6
LAY				eS	Sn	03 44 40.5	-1.1
TAWH	Dawu Township	1.71	218	eP	Pn	03 44 20.6	0.0
TAWH				eS	Sn	03 44 40.9	-0.7
TWM1	Shoushan	1.71	240	eP	Pb	03 44 24.9	+1.7
LYUB	Lan-yu	1.73	194	P	Pn	03 44 19.5	-1.4
LYUB				eS	Sn	03 44 38.3	-4.0
SCZT	Fangliau	1.85	225	eP	Pn	03 44 23.8	+1.4
TSCK	Chigu Township	1.86	253	eP	Pb	03 44 25.2	-0.5
TSCK				i S	Sb	03 44 48.1	-0.5
JKRS	Kuro-shima	1.89	73	P	Pn	03 44 24.4	+1.4
JKRS				eS	Sb	03 44 48.5	-0.9
PCYT	Pengchaiyu	1.93	1	eP	Pn	03 44 24.0	+0.4
WSSB	Gushan	1.93	238	eP	Pb	03 44 26.1	-0.9
WSSB				eS	Sb	03 44 52.5	+1.9
JIJ	Ishigaki jima	2.05	71	P	Pn	03 44 25.9	+0.7
JIJ				eS	Sn	03 44 49.9	-0.1
HEN	Hengchun	2.06	216	eP	Pb	03 44 28.5	-0.5
TSEB	Hengchuen, Pin	2.07	210	eP	Pb	03 44 28.8	-0.3
TSEB				eS	Sn	03 44 52.2	+1.7
TWKBT	Hengchun	2.07	213	eP	Pn	03 44 26.4	+0.8
TWKBT				eS	Sn	03 44 50.6	0.0
TWK1	Hengchun	2.08	213	eP	Pn	03 44 25.8	+0.1
PHUB	P'eng-hu	2.26	266	eP	Pn	03 44 27.8	-0.3
PHUB				eS	Sn	03 44 55.8	+0.6
JISG	Ishigakijimahi	2.27	66	P	Pn	03 44 29.0	+0.7
JISG				eS	Sn	03 44 55.1	-0.3
PNG	Penghu	2.27	267	eP	Pn	03 44 29.6	+1.3
PNG				eS	Sn	03 44 56.8	+1.3
VCHM	Qimei	2.44	259	eP	Pn	03 44 31.0	+0.5
PTMZ	Houxiangcun	2.97	297	eP	Pn	03 44 38.8	+0.8
PTMZ				eS	Sn	03 45 11.2	-1.6
JIRB	Irabujima	3.08	68	P	Pn	03 44 40.4	+0.9
JIRB				eS	Sn	03 45 15.8	+0.2
MATB	Ma-tsu	3.09	323	eP	Pn	03 44 39.3	-0.3
JMJ2	Miyako jima3	3.19	70	eP	Pn	03 44 42.3	+1.4
JMJ2				eS	Sn	03 45 19.8	+1.6
KNM	Kinmen	3.36	283	eP	Pn	03 44 47.4	+4.0
LYJJ	Jianjiangzhen	3.51	325	eP	Pn	03 44 44.7	-0.7
XPSS	Dashiqiu	3.63	333	eP	Pn	03 44 46.4	-0.5

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*NDI **10** 03:51:44.8±0.8, 12.°28N×95.°20E, h10^{km}, ML4.3, MW4.3, mb4.4(NEIC)*

*NEIC **10** 03:51:46.6±1.4, 12.°27N±0.°09×95.°22E±0.°09, h10^{km}±1^{km}, mb4.4/18, Error ellipse: s-maj=17.6km s-min=12.0km az=134.0*

*IDC **10** 03:51:46.6±0.8, 12.°32N×94.°96E, h17^{km}±5^{km}, mb3.8/10, mbtmp3.9/11, ML3.9/1, MS3.3/10, Error ellipse: s-maj=28.3km s-min=15.2km az=62.0*

ISC 10 03:51:45.2±0.5**, 12.°13N**±0.°06×**95.°22E**±0.°07**, h10**^{km}**, n54,** σ**1ˢ54**/48**, mb4.2**/21**, MS3.5**/7**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGPR	DIGLIPUR	2.46	295	eP	Pn	03 52 24.3	-1.2
DGPR				eS	Sn	03 52 53.4	-2.3
DGPR				IAML		03 52 56.8	
	comp=E,636nm,0.5s						
DGPR				IAML		03 52 59.5	
	comp=N,628nm,1.1s						
PBA	Port Blair	2.47	259		Pn	03 52 26.9	+1.3
PBA	Port Blair	2.47	259	eP	Pn	03 52 26.6	+1.0
PBA				eS	Sn	03 52 55.5	-0.2
PBA				IAML		03 53 13.0	
	comp=E,654nm,0.8s						
PBA				IAML		03 53 14.4	
	comp=N,652nm,0.6s						
CMBY	CAMPBELL BAY	5.24	194	eP	Pn	03 53 02.4	-1.3
CMBY				eS	Sn	03 53 59.6	-4.7
CMBY				IAML		03 54 04.7	
	comp=N,668nm,1.0s						
CMBY				IAML		03 54 06.4	
	comp=E,649nm,0.7s						
CMAR	Chiang Mai Arr	7.24	29	Pn	Pn	03 53 30.1	-1.1
	comp=E,0.6nm,0.3s,baz=221,slow=12,SNR=4.8						
CMAR				LR	LR	03 56 06.2	
	comp=E,82nm,20.0s,baz=205,slow=36						
	comp=E,1.2nm,0.4s						
CMAR	Chiang Mai Arr	7.24	29		Pn	03 53 29.3	-1.9
PSI	Prapat	9.97	158	LR	LR	03 58 02.8	
	comp=E,158nm,20.6s,baz=38,slow=36						
BRDH	Bariadhala	11.03	342	LR	LR	03 59 14.0	
	comp=E,89nm,19.9s,baz=111,slow=42						
VIS	Vishakhapatnam	12.76	297	eS	Sn	03 56 54.9	-14
VIS				IAML		03 56 56.0	
	comp=E,633nm,0.4s						
VIS				IAML		03 56 57.5	
	comp=N,631nm,0.6s						
SHL	Shillong	13.73	347		Pn	03 54 58.9	-1.4
VJD	Vijayawada	14.77	289	eS	Sn	03 57 42.5	-16
HYB	Hyderabad	16.95	290	eP	P	03 55 45.2	+0.6
EVN	Everest	17.60	335	Pn	Pn	03 55 49.5	-1.9
LZDM	Lanzhou Array	24.93	16	P	P	03 57 08.7	-0.4
	comp=N,0.7nm,0.3s,baz=193,slow=12,SNR=11						
	comp=N,0.7nm,0.3s						
KAPI	Kappang	29.75	124	LR	LR	04 10 31.5	
	comp=N,29nm,20.1s,baz=271,slow=37						
DGAR	Diego Garcia	29.82	231	P	P	03 57 53.0	+0.2
WUS	Wushi	32.18	337	P	P	03 58 12.8	-0.7
WUS				IAmb	IAmb	03 58 17.6	
	comp=Z,6.0nm,0.8s						
TARG	Taragay, Kyrgy	33.18	336		P	03 58 22.3	-0.3
TARG				IAmb	IAmb	03 58 27.6	
	comp=Z,7.2nm,0.8s						
ARSB	Arslanbob	35.00	330	P	P	03 58 37.2	-0.9
ARSB				IAmb	IAmb	03 58 41.8	
	comp=Z,3.9nm,0.9s						
AAK	Ala-Archa	35.33	333	LR	LR	04 14 38.0	
	comp=Z,81nm,20.1s,baz=96,slow=39						
MKAR	Makanchi Array	36.24	345	P	P	03 58 45.6	-2.9

	comp=Z,1.5nm,0.9s,baz=160,slow=8.5,SNR=14						
MKAR				LR	LR	04 15 50.3	
	comp=Z,54nm,19.3s,baz=187,slow=40						
	comp=Z,1.5nm,0.9s						
MKAR	Makanchi Array	36.24	345		P	03 58 47.8	-0.7
MAKZ	Makanchi	36.33	345	P	P	03 58 49.9	+0.7
MAKZ				IAmb	IAmb	03 58 52.8	
	comp=Z,5.0nm,0.9s						
SONM	Songino Array	36.80	13	P	P	03 58 53.8	+0.4
	comp=Z,3.3nm,1.0s,baz=194,slow=9.0,SNR=12						
	comp=Z,3.3nm,1.0s						
SONM	Songino Array	36.80	13	P	P	03 58 53.1	-0.4
KURBB	Kurchatov Arra	40.74	344	P	P	03 59 23.8	-2.5
	comp=Z,1.7nm,0.8s,baz=161,slow=7.8,SNR=18						
	comp=Z,1.7nm,0.8s						
KURK	Kurchatov	40.80	344		P	03 59 25.9	-0.8
KURK				IAmb	IAmb	03 59 30.9	
	comp=Z,8.0nm,1.1s						
FITZ	Fitzroy Crossi	42.47	134	P	P	03 59 42.1	+1.3
ZAA0	Zalesovo Array	42.52	351		P	03 59 41.0	+0.2
ZAA0				IAmb	IAmb	03 59 45.0	
	comp=Z,9.2nm,1.3s						
ZALV	Zalesovo Beam	42.52	351	P	P	03 59 39.6	-1.2
	comp=Z,2.7nm,0.7s,baz=169,slow=7.7,SNR=12						
	comp=Z,2.7nm,0.7s						
ZALV	Zalesovo Beam	42.52	351		P	03 59 40.1	-0.7
BVAR	Borovoye Array	45.37	339	P	P	04 00 03.2	-0.5
	comp=Z,1.4nm,0.9s,baz=115,slow=13,SNR=5.4						
	comp=Z,1.4nm,0.9s						
AB31	Akbulak array	47.09	329		P	04 00 15.8	-1.5
AB31				IAmb	IAmb	04 00 21.2	
	comp=Z,4.2nm,0.8s						
ABKAR	Akbulak array	47.09	329	P	P	04 00 17.6	+0.3
WB0	Warramunga Arr	49.92	129	P	P	04 00 41.0	+1.5
WB0				IAmb	IAmb	04 01 05.0	
	comp=Z,3.7nm,1.1s						
WRA	Warramunga Arr	49.98	129	P	P	04 00 41.9	+1.8
	comp=Z,0.8nm,0.6s,baz=304,slow=11,SNR=8.4						
WRA				pP	pwP	04 00 48.6	+2.3
	comp=Z,1.7nm,0.7s,baz=309,slow=8.2,SNR=4.7						
	comp=Z,0.8nm,0.6s						
WRA	Warramunga Arr	49.98	129	P	P	04 00 41.0	+1.0
ASAR	Alice Springs	51.93	133	P	P	04 00 56.6	+1.9
	comp=Z,0.4nm,0.6s,baz=314,slow=7.1,SNR=5.5						
ASAR				pP	pwP	04 01 02.8	+1.8
	comp=Z,0.7nm,0.5s,baz=312,slow=7.2,SNR=9.7						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	51.93	133	P	P	04 00 55.6	+0.9
GNI	Garni	52.33	312	LR	LR	04 25 06.8	
	comp=Z,22nm,20.0s,baz=58,slow=38						
ARTI	Arti	52.49	335	LR	LR	04 25 14.3	
	comp=Z,54nm,18.5s,baz=182,slow=38						
KIRV	Kirov	57.66	334	LR	LR	04 31 25.3	
	comp=Z,35nm,18.2s,baz=265,slow=41						
BRTR	Keskin Array B	60.54	309	pP	P	04 01 58.0	+1.8
	comp=Z,1.8nm,0.8s,baz=124,slow=8.3,SNR=9.7						
BRTR	Keskin Array B	60.54	309	P	P	04 01 57.0	+0.9
TIXI	Tiksi	62.88	11		P	04 02 12.3	+1.2
KARP	Karpathos	65.24	304	P	P	04 02 28.1	+0.7
FINES	FINESS Array B	69.49	331	pP	pP	04 02 56.7	+0.7
	comp=Z,4.6nm,1.0s,baz=127,slow=5.0,SNR=2.3						
FINES	FINESS Array B	69.49	331	P	P	04 02 55.4	+1.7
GERES	GERESS Array B	75.40	318	P	P	04 03 26.6	-2.8
	comp=Z,0.6nm,0.7s,baz=74,slow=11,SNR=3.5						
GERES				pP	sP	04 03 33.0	+0.4
	comp=Z,1.4nm,0.7s,baz=79,slow=6.9,SNR=7.6						
	comp=Z,0.6nm,0.7s						
LBTB	Lobatse	77.22	241	LR	LR	04 34 30.0	
	comp=Z,32nm,18.0s,baz=50,slow=33						
BOSA	Boshof	78.75	237	P	P	04 03 49.4	+0.8
	comp=Z,1.5nm,0.6s,baz=11,slow=5.2,SNR=3.8						
	comp=Z,1.5nm,0.6s						
BOSA	Boshof	78.75	237	P	P	04 03 49.1	+0.6
ESDC	Sonseca Array	89.29	310	pP	pP	04 04 45.8	+1.2
	comp=Z,0.8nm,0.8s,baz=84,slow=4.6,SNR=2.6						
ESDC	Sonseca Array	89.29	310	P	P	04 04 43.2	+1.0
ESDC				IAmb	IAmb	04 04 51.9	
	comp=Z,2.3nm,1.4s						

CATAC ***10*** *03:57:44.2±0.3, 13°N±2°×8°9W±°, h40^{km}±6^{km}, M3.8/33, MLv3.8/33, Error ellipse: s-maj=5.6km s-min=1.7km az=26.9, confirmed*

UCR ***10*** *03:57:44.3±1.0, 14.°04N×87.°61W, h20^{km}±23^{km}, MW3.8*

GCG ***10*** *03:57:45.6±0.9, 12.°96N×88.°71W, h65^{km}±18^{km}, MD4.2, ML4.0*

SNET ***10*** *03:57:45.5±2.8, 12.°97N×88.°59W, h58^{km}, ML3.6, ML3.6*

ISC 10 03:57:44.9±1.2**, 12.°85N**±0.°06×**88.°60W**±0.°03**, h46**^{km}±25^{km}**, n84,** σ1^{s}.**17**/101**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PACA	Pacayal	0.68	24	S	Sn	03 58 08.9	+1.0
PACA	Pacayal	0.68	24	P	Pn	03 57 58.4	+0.1
TECO	Alcaldia de Te	0.71	346	S	Sn	03 58 09.2	+0.6
TECO	Alcaldia de Te	0.71	346	P	Pn	03 57 58.3	-0.3
CNRM	Centro Naciona	0.75	34	eP	Pn	03 57 58.1	-1.1
CNRM	Centro Naciona	0.75	34	S	Sn	03 58 10.9	+1.3
CNRM	Centro Naciona	0.75	34	P	Pn	03 57 59.1	-0.1
UESV	Universidad de	0.81	347	S	Sn	03 58 11.9	+1.0
UESV	Universidad de	0.81	347	P	Pn	03 57 59.7	-0.3
CNCH	Conchagua	0.86	60	eP	Pn	03 58 00.7	-0.1
CNCH				eS	Sn	03 58 13.9	+1.5
CNCH	Conchagua	0.86	60	P	Pn	03 58 00.4	-0.4
PAVA	Las Pavas	0.92	339	S	Sn	03 58 13.9	+0.1
PAVA	Las Pavas	0.92	339	P	Pn	03 58 01.3	-0.3
PANCS	Alcalda de	0.94	324	S	Sn	03 58 13.2	-1.1
PANCS	Alcalda de	0.94	324	P	Pn	03 58 01.4	-0.5
LALI	Alcalda de L	0.95	312	eP	Pn	03 58 01.0	-0.8
LALI	Alcalda de L	0.95	312	S	Sn	03 58 11.9	-2.3
LALI	Alcalda de L	0.95	312	P	Pn	03 58 01.1	-0.7
LOMA	Loma Larga	0.97	325	S	Sn	03 58 13.4	-1.5
LOMA	Loma Larga	0.97	325	P	Pn	03 58 00.0	-2.2
UDBS	Universidad Do	1.02	328	S	Sn	03 58 16.0	0.0
UDBS	Universidad Do	1.02	328	P	Pn	03 58 02.6	-0.2
IGN	Direccin Gen	1.02	327	S	Sn	03 58 16.6	+0.4
IGN	Direccin Gen	1.02	327	P	Pn	03 58 02.5	-0.4
CSGN	Cosiguina Volc	1.03	83	P	Pn	03 58 02.7	-0.3
CSGN				S	Sn	03 58 16.6	+0.4
CSGN	Cosiguina Volc	1.03	83	eP	Pn	03 58 02.9	-0.1
CSGN				eS	Sn	03 58 16.7	+0.4
UEES	Universidad Ev	1.06	324	S	Sn	03 58 17.0	-0.2
UEES	Universidad Ev	1.06	324	P	Pn	03 58 02.8	-0.6
POTN	Potosi Cosigui	1.08	82	P	Pn	03 58 03.4	-0.3
POTN				S	Sn	03 58 17.7	+0.2
POTN	Potosi Cosigui	1.08	82	eP	Pn	03 58 03.6	0.0
POTN				eS	Sn	03 58 17.2	-0.2
BOQS	Boqueron	1.10	323	eP	Pn	03 58 03.7	-0.4
PMON	Piamonte	1.10	321	S	Sn	03 58 18.0	-0.2
PMON	Piamonte	1.10	321	P	Pn	03 58 03.5	-0.6
JAYA	Jayaque - finc	1.15	314	eP	Pn	03 58 05.2	+0.4
JAYA	Jayaque - finc	1.15	314	eP	Pn	03 58 03.8	-1.0
JAYA				eS	Sn	03 58 18.1	-1.4
JAYA	Jayaque - finc	1.15	314	P	Pn	03 58 03.8	-1.0
CEDA	San Andres	1.22	321	P	Pn	03 58 04.1	-1.6
CEDA	San Andres	1.22	321	S	Sn	03 58 21.2	+0.1
LLGN	La Laguna	1.35	346	P	Pn	03 58 06.8	-0.6
CEVE	Cerro Verde	1.39	315	eP	Pn	03 58 08.0	-0.2
CEVE				eS	Sn	03 58 29.5	+4.0
CEVE				IAML		03 58 31.1	
	comp=Z,913nm,0.2s						
CEVE	Cerro Verde	1.39	315	P	Pn	03 58 08.0	-0.2
CEVE	Cerro Verde	1.39	315	S	Sn	03 58 25.4	-0.1
UNIC	Universidad Ca	1.46	321	P	Pn	03 58 08.8	-0.1
UNIC	Universidad Ca	1.46	321	S	Sn	03 58 27.0	+0.2
CRIN	San Cristobal	1.52	95	P	Pn	03 58 09.3	-0.5
CRIN	San Cristobal	1.52	95	eP	Pn	03 58 09.5	-0.3
CRIN				eS	Sn	03 58 28.7	+0.3
NUBE	Las Nubes	1.55	313	eP	Pn	03 58 09.7	-0.6
NUBE				eS	Sn	03 58 29.0	-0.3
NUBE	Las Nubes	1.55	313	P	Pn	03 58 09.9	-0.4
NUBE	Las Nubes	1.55	313	S	Sn	03 58 29.0	-0.3
PKGN	Cerro Pekin	1.60	96	P	Pn	03 58 10.3	-0.3
PKGN				S	Sn	03 58 29.4	-0.8
SLOZ	Alcaldia de Sa	1.64	316	P	Pn	03 58 07.1	-4.3
FAME	Alcaldia de Sa	1.69	306	P	Pn	03 58 11.0	-1.0
FAME	Alcaldia de Sa	1.69	306	S	Sn	03 58 31.6	-0.9
MTO3	Montecristo	1.71	335	iP	Pn	03 58 12.0	-0.4
MTO3	Montecristo	1.71	335	P	Pn	03 58 12.1	-0.4
MTO3	Montecristo	1.71	335	S	Sn	03 58 33.4	+0.2
QUEN	Al S del Volca	1.73	98	P	Pn	03 58 10.2	-2.3
POLN	Al Sur del Vol	1.76	96	P	Pn	03 58 12.2	-0.7
POLN				S	Sn	03 58 33.5	-0.7
TGUH	Tegucigalpa,Un	1.77	47	P	Pn	03 58 12.7	-0.5
TGUH				S	Sn	03 58 34.5	0.0
ESQI	Esquipulas	1.85	337	P	Pn	03 58 14.1	-0.2
ESQI	Esquipulas	1.85	337	S	Sn	03 58 37.0	+0.6
ILCN	San Idelfonso	1.88	98	P	Pn	03 58 13.7	-0.8
ILCN				S	Sn	03 58 36.4	-0.7
CNGA	Al SSO del Vol	1.89	100	P	Pn	03 58 14.5	-0.3
CNGA				S	Sn	03 58 36.9	-0.5
CNGN	Cerro Negro	1.89	100	P	Pn	03 58 14.5	-0.2
CNGN	Cerro Negro	1.89	100	eP	Pn	03 58 15.7	+0.9
CNGN				eS	Sn	03 58 37.1	-0.4
YUSH	Yuscaran	2.04	57	P	Pn	03 58 16.3	-0.5
YUSH	Yuscaran	2.04	57	S	Sn	03 58 41.1	0.0
MOM3	MOM3	2.06	99	P	Pn	03 58 16.5	-0.6
COPN	Copaltepe	2.07	108	P	Pn	03 58 16.6	-0.6
MOM2	El Cardon	2.11	101	P	Pn	03 58 17.5	-0.2
MOM2				S	Sn	03 58 42.1	-0.6
LIMN	Finca el Limon	2.19	84	P	Pn	03 58 18.4	-0.6
LIMN				S	Sn	03 58 44.4	-0.5
AMTN	Mateare	2.21	106	S	Sn	03 58 44.4	-0.7
OCON	Estacion meteo	2.21	69	P	Pn	03 58 18.5	-0.7
APYN	Apoyeque	2.28	105	P	Pn	03 58 20.0	-0.1
APQ2	Apoyeque	2.32	106	P	Pn	03 58 19.4	-1.2
RCVN	Varillal2	2.46	72	P	Pn	03 58 22.0	-0.6
RCON	San Juan de Ri	2.47	75	P	Pn	03 58 22.5	-0.3
RCON	San Juan de Ri	2.47	75	S	Sn	03 58 52.1	+0.3
MATN	Matagalpa	2.61	88	P	Pn	03 58 22.9	-1.9
NADN	Granada	2.74	113	S	Sn	03 58 56.7	-1.6
STG5	El Palmar, Qui	3.08	300	eP	Pn	03 58 35.5	+4.3
STG5				eS	Sn	03 59 12.9	+6.0
PICV	PH. Pirrs	5.38	126	eP	Pn	03 59 04.8	+2.1
PIEC	Cerro El Cedra	5.57	125	eP	Pn	03 59 07.0	+1.4
DRK0	Durika	6.35	124	eP	Pn	03 59 17.0	+0.8

IDC ***10*** *04:13:51.1±0.9, 23.°97N×121.°75E, h0^{km}, mb3.7/9, mbtmp3.8/10, ML3.6/1, MS3.1/3, Error ellipse: s-maj=33.2km s-min=18.5km az=61.0*

NEIC ***10*** *04:13:53.3±1.3, 23.°99N±0.°02×121.°60E±0.°04, h10^{km}±1^{km}, mb4.4/19, Error ellipse: s-maj=6.3km s-min=2.8km az=299.0*

JMA ***10*** *04:13:55.2±0.1, 24.°0N±0.°5×12°2E±°, h20^{km}±1^{km}, MV3.4/14, TAIWAN REGION*

ASIES ***10*** *04:13:55.6, 24.°05N×121.°51E, h22^{km}, Mw3.7, Fault plane solution: NP1:ϕ_s50.00000°, δ18.00000°, λ97.00000°. NP2:ϕ_s223.00000°, δ73.00000°, λ88.00000°.*

TAP ***10*** *04:13:55.5, 24.°05N×121.°50E, h22^{km}, ML4.1, B*

ISC 10 04:13:55.4±0.6**, 24.°03N**±0.°01×**121.°56E**±0.°01**, h24**^{km}±3^{km}**, n217,** σ0^{s}.**90**/331**, mb4.2**/21**, 4C-9D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWD	Chiawan	0.06	38	⇑iP	Pb	04 13 59.8	+0.1
TWD				iS	Sb	04 14 02.8	+0.2
HWA	Hwalien	0.07	140	iP	Pb	04 14 00.4	+0.6
HWA				S	Sb	04 14 03.8	+1.1
ETM	Tongmen	0.09	221	iP	Pb	04 13 59.7	-0.2
ETM				iS	Sb	04 14 02.4	-0.5
LXIB	Xiulin Townshi	0.13	265	⇑iP	Pb	04 13 59.8	-0.7
LXIB				iS	Sb	04 14 02.7	-1.1
ETL	Fush Village	0.14	26	iP	Pb	04 14 00.2	-0.2
ETL				S	Sb	04 14 03.6	-0.1
NACB	Ninganchiao	0.15	14	Pg	Pb	04 14 00.1	-0.3
NACB				Sg	Sb	04 14 03.2	-0.6
NACB	Ninganchiao	0.15	14	P	Pb	04 14 00.2	-0.2
NACB	Ninganchiao	0.15	14	S	Sb	04 14 03.7	-0.1
NACB	Ninganchiao	0.15	14	⇑iP	Pb	04 14 00.1	-0.3
NACB				iS	Sb	04 14 03.4	-0.4
TEYL	Yanliau Villag	0.17	166	P	Pb	04 14 00.9	+0.3
TEYL				eS	Sb	04 14 05.2	+1.1
ETLH	Xiulin Townshi	0.19	339	⇑iP	Pb	04 14 00.6	-0.4
ETLH				iS	Sb	04 14 03.8	-0.9
SHUL	Shoufeng	0.24	178	iP	Pb	04 14 02.1	+0.6
SHUL				S	Sb	04 14 07.0	+1.2
ESL	Shilin	0.24	207	iP	Pb	04 14 01.1	-0.4
ESL				S	Sb	04 14 05.3	-0.5
WHF	Hehuan Shan	0.29	293	iP	Pb	04 14 01.8	-0.8
WHF				S	Sb	04 14 06.2	-1.2
TEGC	Jichi Village	0.32	182	P	Pb	04 14 03.0	+0.3
TEGC				eS	Sn	04 14 09.9	-0.5
EHP	Heping Village	0.33	31	P	Pb	04 14 02.7	-0.1
EHP				S	Sb	04 14 08.3	+0.5
EAHA	Aohua	0.34	30	eP	Pb	04 14 03.0	0.0
EAHA				S	Sb	04 14 08.3	+0.1
WARBT	Fenglin Townsh	0.35	206	P	Pb	04 14 02.7	-0.4
WARBT				S	Sb	04 14 07.8	-0.6
OWD	Renai	0.35	258	⇓iP	Pb	04 14 02.7	-0.6
OWD				iS	Sb	04 14 07.2	-1.6
FUSS	Fushou	0.36	307	iP	Pb	04 14 03.0	-0.4
FUSS				iS	Sb	04 14 08.3	-0.6
EGFH	Guangfu	0.38	198	iP	Pb	04 14 03.1	-0.5
EGFH				eS	Sb	04 14 08.7	-0.5
WUSB	Renai	0.40	264	⇓iP	Pb	04 14 03.6	-0.4
WUSB				iS	Sb	04 14 08.6	-1.4
TWT	Tachien	0.41	303	⇓iP	Pb	04 14 04.0	-0.3
TWT				S	Sb	04 14 09.5	-0.8
TDCB	Techi	0.42	301	⇓iP	Pb	04 14 04.0	-0.4
TDCB				S	Sb	04 14 09.5	-1.1
NNSB	Datong	0.42	338	⇓iP	Pb	04 14 04.1	-0.4
NNSB				iS	Sb	04 14 09.6	-1.0
ENA	Nanau	0.43	23	iP	Pb	04 14 04.3	-0.1
ENA				S	Sb	04 14 10.7	+0.1
NNS	Nan Shan	0.44	338	⇓iP	Pb	04 14 04.3	-0.4
NNS				iS	Sb	04 14 10.1	-0.9
LATG	Datong	0.50	357	P	Pb	04 14 05.4	-0.4
LATG				S	Sb	04 14 12.1	-0.6
HGSD	Ruisui	0.55	193	P	Pb	04 14 06.4	-0.1
EHY	Hungye	0.56	202	iP	Pb	04 14 05.2	-1.5
EHYH	Wanrong	0.57	200	eP	Pb	04 14 05.5	-1.3
EHYH				S	Sb	04 14 14.2	-0.3
WCS	Beigang Elemen	0.59	273	⇓iP	Pb	04 14 06.5	-0.6
WCS				S	Sb	04 14 14.4	-0.6
SSLB	Suanglung	0.60	246	Pg	Pb	04 14 06.6	-0.7
SSLB				Sg	Sb	04 14 13.5	-1.9
SSLB	Suanglung	0.60	246	P	Pb	04 14 07.3	0.0
SSLB	Suanglung	0.60	246	S	Sb	04 14 14.6	-0.8
SSLB	Suanglung	0.60	246	iP	Pb	04 14 06.8	-0.5
SSLB				iS	Sb	04 14 13.6	-1.9
ESAO	Su ao	0.60	26	P	Pb	04 14 07.7	+0.3
ESAO				S	Sb	04 14 15.9	+0.5
ENTT	Nioudou	0.61	1	eP	Pb	04 14 07.4	0.0
ENTT				S	Sb	04 14 15.2	-0.4
WHP	Taichung City	0.61	294	eP	Pb	04 14 07.1	-0.4
WHP				S	Sb	04 14 15.0	-0.7
NDS	Dongshan	0.62	14	P	Pb	04 14 07.9	+0.3
NDS				S	Sb	04 14 16.0	+0.1
SMLT	Sun Moon Lake	0.62	256	⇓iP	Pb	04 14 07.0	-0.6
SMLT				S	Sb	04 14 15.0	-0.9
TWC	Suao	0.63	25	P	Pb	04 14 08.0	+0.1
TWC				S	Sb	04 14 16.7	+0.3
TYC	Yuchr	0.65	259	⇓iP	Pb	04 14 07.5	-0.7
TYC				S	Sb	04 14 14.8	-2.0
YHNB	Yeheng	0.66	346	Pg	Pb	04 14 07.6	-0.7
YHNB					Sb	04 14 16.2	-0.8
YHNB	Yeheng	0.66	346	P	Pb	04 14 08.5	+0.2
YHNB	Yeheng	0.66	346	S	Sb	04 14 16.6	-0.5
YHNB	Yeheng	0.66	346	iP	Pb	04 14 07.9	-0.3
YHNB				S	Sb	04 14 16.2	-0.8
NSK	Sanguang	0.67	344	P	Pb	04 14 08.2	-0.2
NSK				iS	Sb	04 14 16.4	-1.0
YULB	Yu-li	0.68	200	Pg	Pb	04 14 08.0	-0.6
YULB	Yu-li	0.68	200	P	Pb	04 14 08.8	+0.2
YULB	Yu-li	0.68	200	S	Sb	04 14 18.0	+0.4
YULB	Yu-li	0.68	200	eP	Pb	04 14 06.8	-1.8
YULB				eS	Sb	04 14 17.2	-0.4
TWE	Neicheng	0.69	8	eP	Pb	04 14 08.9	+0.1
TWE				S	Sb	04 14 18.5	+0.4
EYUL	Yuli	0.71	198	eP	Pn	04 14 09.7	-0.3
TWF1	Yuli	0.72	199	eP	Pb	04 14 09.1	-0.2
ECBN	Changbin	0.72	188	eP	Pb	04 14 09.0	-0.2
ECBN				eS	Sn	04 14 19.7	-0.5
NFF	Wufeng Townshi	0.72	326	iP	Pb	04 14 09.1	-0.2
NFF				S	Sb	04 14 17.8	-1.0
WHYT	Xinyi Township	0.72	243	eP	Pb	04 14 09.5	+0.1
WHYT				eS	Sb	04 14 19.3	+0.3
FUSB	Fushanzhiwuyua	0.72	2	iP	Pb	04 14 09.3	-0.1
FUSB				S	Sb	04 14 18.9	-0.1
NWLT	Wulai	0.74	356	P	Pb	04 14 09.4	-0.3
NWLT				eS	Sb	04 14 17.6	-1.9
ILA	Ilan	0.75	13	eP	Pn	04 14 10.6	+0.2
YUS	Yu-Shan	0.77	226	P	Pb	04 14 10.4	-0.1
YUS				S	Sb	04 14 20.2	-0.5
TWQ1	Liyutan	0.78	294	eP	Pb	04 14 10.6	+0.3
TWQ1				eS	Sb	04 14 20.9	+0.3
NSTT	Nanjuang	0.78	320	iP	Pb	04 14 10.4	0.0
NSTT				S	Sb	04 14 19.6	-0.9
LIOB	Emei	0.79	321	P	Pb	04 14 10.6	+0.1
LIOB				S	Sb	04 14 20.4	-0.3
WJS	Zhushan	0.79	255	P	Pb	04 14 10.8	+0.4
WJS				S	Sb	04 14 21.5	+0.9
TCU	Taichung	0.81	278	eP	Pn	04 14 11.6	+0.3
TCU				S	Sn	04 14 22.6	0.0
WNT	Mingjian	0.81	259	eP	Pn	04 14 11.4	+0.1
WNT				S	Sn	04 14 22.9	+0.3
KSHI	Guanxi Townshi	0.82	335	P	Pn	04 14 11.7	+0.3
KSHI				eS	Sn	04 14 23.0	+0.2
NSY	Sanyi	0.82	298	P	Pn	04 14 11.8	+0.3
NSY				S	Sb	04 14 22.6	+0.9
CHKH	Chenggong	0.85	190	eP	Pb	04 14 10.6	-0.9
CHKH				S	Sb	04 14 22.2	-0.2
NTC	Toucheng	0.86	17	eP	Pn	04 14 13.4	+1.5
NMLH	Miaoli	0.86	306	P	Pn	04 14 12.5	+0.5
NMLH				eS	Sn	04 14 24.0	+0.2
ALS	Alishan	0.86	233	eP	Pb	04 14 12.0	+0.1
ALS				eS	Sb	04 14 23.8	+0.7
FULB	Fuli	0.86	196	eP	Pn	04 14 12.4	+0.3
EGS		0.88	23	eP	Pn	04 14 13.1	+0.8
EGS				S	Sn	04 14 25.3	+1.0
WCHH	Zhanghua	0.91	273	eP	Pn	04 14 13.3	+0.6
WCHH				eS	Sn	04 14 26.9	+1.9
SBCB	Hsinchu	0.92	326	P	Pn	04 14 13.7	+1.0
SBCB				S	Sn	04 14 25.6	+0.4
WCH1	Changhua City	0.92	273	P	Pn	04 14 13.3	+0.5
WCH1				eS	Sn	04 14 26.8	+1.5
NHDH	Xindian Distri	0.93	358	P	Pn	04 14 13.5	+0.6
NHDH				eS	Sn	04 14 25.3	-0.1
EHD	Haiduan	0.94	200	eP	Pb	04 14 11.9	-1.1
EHD				S	Sb	04 14 24.4	-0.6
HSN	Hsinchu	0.94	325	iP	Pn	04 14 14.0	+1.0
HSN				eS	Sn	04 14 27.2	+1.6
TATO	Taipei	0.94	356	Pg	Pn	04 14 13.2	+0.1
CHKT	Chengkung	0.94	191	eP	Pb	04 14 11.9	-1.2
CHKT				eS	Sb	04 14 24.9	-0.2
TWA	Mucha	0.94	2	eP	Pn	04 14 13.7	+0.6
TWA				eS	Sn	04 14 25.8	-0.1
TIPB	Shuangxi	0.97	15	eP	Pb	04 14 13.3	-0.2
TIPB				eS	Sb	04 14 25.8	-0.2
WGK	Gukeng	0.97	249	eP	Pn	04 14 14.2	+0.7
WGK				S	Sn	04 14 27.9	+1.4
ELDTW	Lidau	0.97	211	eP	Pb	04 14 11.9	-1.8
ELDTW				eS	Sb	04 14 25.9	-0.3
ECS	Chishang	0.98	198	eP	Pn	04 14 14.8	+1.1
WDL	Douliou City	0.98	251	eP	Pb	04 14 13.7	-0.1
WDL				eS	Sn	04 14 28.5	+1.7
NCUH	Zhongli	0.99	340	P	Pn	04 14 14.9	+1.1
NCUH				eS	Sn	04 14 28.8	+1.7
WDLH	Douliu	0.99	250	iP	Pn	04 14 14.4	+0.6
WDLH				iS	Sn	04 14 28.1	+1.1
NCU	National Centr	0.99	340	P	Pb	04 14 13.3	-0.6
NCU				eS	Sn	04 14 27.4	+0.3
NHY	Taipei	1.00	1	eP	Pn	04 14 15.1	+1.1
TAP	Taipei	1.00	357	eP	Pn	04 14 14.7	+0.7
TAP				eS	Sn	04 14 28.1	+0.7
TWB1	Santiao Chiao	1.05	22	eP	Pn	04 14 15.4	+0.9
TWB1				eS	Sn	04 14 29.8	+1.4
WCKO	Fanlu	1.05	236	eP	Pn	04 14 15.4	+0.8
WCKO				S	Sn	04 14 30.3	+1.8
NWF	Wu-fen Shan	1.05	11	eP	Pn	04 14 16.1	+1.4
NWF				eS	Sn	04 14 30.1	+1.4
WFSB	Wu-fen Shan	1.05	11	eP	Pn	04 14 15.7	+1.1
WFSB				eS	Sn	04 14 29.5	+1.0
TWS1	Kuangyinshan	1.07	353	eP	Pn	04 14 15.7	+0.9
TWS1				S	Sn	04 14 31.5	+2.5
EDH	Donghe	1.08	192	eP	Pn	04 14 14.2	-0.8
EDH				S	Sb	04 14 28.9	-0.1
SXI1	Grass Mountain	1.10	15	P	Pn	04 14 15.5	+0.2
SXI1				S	Sn	04 14 31.6	+1.9
CHN2	Minshiung	1.11	244	eP	Pb	04 14 17.0	+1.2
CHN2				eS	Sn	04 14 32.0	+2.2
YM01	YM01	1.11	1	eP	Pb	04 14 16.1	+0.1
YM01				S	Sn	04 14 30.7	+0.7
STYH	Taoyuan	1.12	220	eP	Pb	04 14 16.1	+0.1
STYH				eS	Sn	04 14 31.5	+1.5
TPUB	Ta-pu	1.12	230	Pn	Pn	04 14 15.7	+0.1
TPUB	Ta-pu	1.12	230	P	Pb	04 14 17.1	+1.0
TPUB	Ta-pu	1.12	230	P	Pb	04 14 16.6	+0.5
TPUB				S	Sn	04 14 31.4	+1.2
ZUZH	Zhuzihu	1.13	360	eP	Pn	04 14 15.6	-0.1
ZUZH				eS	Sb	04 14 30.3	-0.1
TNOU	National Taiwa	1.13	10	eP	Pb	04 14 16.6	+0.3
TNOU				eS	Sn	04 14 31.4	+0.9
NTST	Danshui	1.13	355	P	Pb	04 14 16.6	+0.3
NTST				S	Sn	04 14 32.4	+1.9
ANP	Anpu	1.15	358	P	Pb	04 14 17.2	+0.5
ANP				eS	Sn	04 14 33.1	+2.0
YM08	YM08	1.15	2	eP	Pn	04 14 16.1	+0.1
YM08				S	Sn	04 14 31.6	+0.6
CHY	Chiayi	1.17	243	eP	Pb	04 14 17.2	+0.4
CHY				eS	Sn	04 14 33.0	+1.8
WTP	Ta-pu	1.17	228	iP	Pb	04 14 17.6	+0.7
WTP				eS	Sn	04 14 33.4	+2.0
WTCT	Ta-ch'eng	1.18	262	eP	Pb	04 14 17.4	+0.4
WTCT				S	Sn	04 14 33.6	+2.0
LONT	Longtian	1.19	199	eP	Pb	04 14 17.2	0.0
TWY	Chenhua	1.24	2	eP	Pb	04 14 19.1	+1.0
TWK	Hsinying	1.24	232	P	Pb	04 14 18.7	+0.5
TWK				S	Sn	04 14 34.9	+1.7
SNST	Tainan City	1.26	230	P	Pb	04 14 19.3	+0.8
SNST				S	Sb	04 14 36.6	+2.3
CHN1	Nanshi	1.26	228	iP	Pb	04 14 19.3	+0.7
CHN1				eS	Sb	04 14 37.2	+2.8
WSF	Szhu	1.28	252	eP	Pb	04 14 18.5	-0.3
WSF				eS	Sb	04 14 36.4	+1.5
TWG	Pinlang	1.28	200	Pn	Pn	04 14 17.0	-0.8
TWG	Pinlang	1.28	200	eP	Pn	04 14 17.9	+0.1
TWGBT	Beinan	1.28	200	P	Pb	04 14 18.8	-0.1
TWGBT	Beinan	1.28	200	eP	Pn	04 14 17.7	-0.1
SGST	Jiashian	1.30	224	P	Pb	04 14 18.9	-0.2
SGST				S	Sb	04 14 36.9	+1.5
WSL	Shuilin Townsh	1.32	248	P	Pb	04 14 19.8	+0.4
WSL				eS	Sb	04 14 37.5	+1.6
JYNG	Yonagunijimaku	1.34	71	eS	Sb	04 14 36.4	0.0
LDUT	Ludao	1.35	183	eP	Pn	04 14 17.5	-1.2
YOJ	Yonaguni jima	1.40	72		Pn	04 14 19.6	+0.2
YOJ	Yonaguni jima	1.40	72	P	Pb	04 14 20.1	-0.7
YOJ	Yonaguni jima	1.40	72	P	Pb	04 14 20.0	-0.7
YOJ				S	Sb	04 14 38.5	+0.4
YOJ	Yonaguni jima	1.40	72	eP	Pb	04 14 19.9	-0.9
YOJ				eS	Sb	04 14 38.6	+0.4
CHN8	Yiju	1.41	241	eP	Pb	04 14 20.6	-0.3
CHN8				eS	Sb	04 14 40.2	+1.6
SHHT	Tainan City	1.50	228	eP	Pb	04 14 23.8	+1.3
SCLT	Jiali	1.51	236	eP	Pn	04 14 21.5	+0.6
SCLT				eS	Sb	04 14 43.0	+1.5
ECL	Taimali	1.53	201	eP	Pb	04 14 23.5	+0.4
SSD	Sandimen	1.54	214	eP	Pb	04 14 23.5	+0.4
SSD				eS	Sb	04 14 43.6	+1.4
TSCK	Chigu Township	1.61	237	eP	Pb	04 14 24.0	-0.4
TSCK				eS	Sb	04 14 44.8	+0.5
MASBT	Mashibuluo	1.65	211	eP	Pb	04 14 24.9	-0.2
MASBT				S	Sb	04 14 46.7	+1.3
PCYT	Pengchaiyu	1.66	16	eP	Pn	04 14 24.1	+1.1
PCYT				eS	Sb	04 14 46.2	+0.5
EAST	Anshuo	1.77	202	eP	Pb	04 14 27.6	+0.5
TAW	Tawu	1.77	200	eP	Pb	04 14 26.5	-0.8
TAWH	Dawu Township	1.79	200	eP	Pn	04 14 26.0	+1.2
SCZT	Fangliau	1.86	208	eP	Pb	04 14 28.6	-0.2
SCZT				eS	Sb	04 14 51.5	-0.1
PNG	Penghu	1.89	256	eP	Pn	04 14 26.8	+0.6
PNG				eS	Sn	04 14 50.2	+1.0
WDGT	Dungji	1.90	247	eP	Pn	04 14 27.3	+1.0
WDGT				S	Sn	04 14 50.5	+1.1
LAY	Lan-yu	1.98	180	eP	Pn	04 14 28.8	+1.3
IRIF	Iriomote-Funau	2.01	81	P	Pn	04 14 28.7	+1.0
IRIF				S	Sb	04 14 54.0	-1.9
LYUB	Lan-yu	2.02	179	eP	Pn	04 14 28.1	+0.2
HATJ	Hateruma jima	2.06	89	eS	Sb	04 14 55.3	-1.9

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VCHM  Qimei               2.12 248  eP     Pn      04 14 29.9 +0.7
VCHM                                eS     Sn      04 14 55.4 +0.6
TWK1  Hengchun            2.19 199  eP     Pb      04 14 32.4  -1.9
TWKBT Hengchun            2.19 198  eP     Pb      04 14 33.1  -1.2
JKRS  Kuro-shima          2.25  84  eP     Pn      04 14 32.5 +1.4
JKRS                                eS     Sn      04 14 59.6 +1.5
JIJ   Ishigaki jima       2.39  82   P     Pn      04 14 33.6 +0.6
JIJ                                 eS     Sn      04 15 02.3 +0.9
PTMZ  Houxiangcun         2.43 295  eP     Pn      04 14 33.1  -0.5
MATB  Ma-tsu              2.57 326  eP     Pn      04 14 35.0  -0.4
JISG  Ishigakijimahi      2.57  77   P     Pn      04 14 36.2 +0.7
JISG                                eS     Sn      04 15 06.8 +0.7
KNM   Kinmen              2.88 278  eP     Pn      04 14 41.1 +1.4
KNMB  Chin-men Tao        2.92 279   Pn    Pn      04 14 40.5 +0.1
KNMB  Chin-men Tao        2.92 279  eP     Pn      04 14 40.1  -0.3
JTJ   Tarama              2.93  77  eS     Sn      04 15 16.5 +1.5
LYJJ  Jianjiangzhen       2.99 327  eP     Pn      04 14 41.5 +0.2
MHZQ  Yeshan              3.08 312  eP     Pn      04 14 42.7 +0.2
AXDP  Jialang             3.38 286  eP     Pn      04 14 46.1  -0.5
ZPLA  Ao Xicun            3.48 269  eP     Pn      04 14 47.8  -0.2
DSXP  Dongshan            3.79 266  eP     Pn      04 14 52.3   0.0
SXFK  Yanhouchang         4.25 304  eP     Pn      04 14 58.5  -0.1
JOW   Kunigami            6.68  64   Pn    Pn      04 15 29.7  -2.4
      2.7nm,0.3s,baz=91,slow=18,SNR=1.9
      16nm,0.7s
KSRS  Korea Array        14.45  21   Pn    P       04 17 24.8  -0.1
      0.3nm,0.3s,baz=199,slow=11,SNR=4.6
DAV   Davao City (W)     17.30 166   LR    LR      04 24 52.3
      comp=Z,25nm,18.4s,baz=92,slow=38
LZH   Lanzhou            19.44 312  eP     Pn      04 18 22.0 +0.4
LZH                                  sP    sP      04 18 32.1 +1.3
LZH                                  pmax  pmax
      comp=Z,21nm,1.3s
CMAR  Chiang Mai Arr     21.78 260   LR    LR      04 27 30.0
      comp=Z,24nm,20.0s,baz=170,slow=37
SONM  Songino Array      26.64 337   P     P       04 19 33.8 +1.6
      comp=Z,1.5nm,0.7s,baz=160,slow=9.9,SNR=10
      comp=Z,1.5nm,0.7s
SONM  Songino Array      26.64 337   P     P       04 19 33.0 +0.8
SHL   Shillong           26.96 279   P     P       04 19 35.4   0.0
SHL                                  IAmb  IAmb    04 19 39.6
      comp=Z,6.5nm,1.0s
WMQ   Urumqi             34.01 314  eP     P       04 20 37.7 +0.4
WMQ                                  pmax  pmax
      comp=Z,14nm,0.9s
MKAR  Makanchi Array     38.68 316   P     P       04 21 17.9 +0.7
      comp=Z,1.9nm,0.7s,baz=110,slow=9.5,SNR=18
      comp=Z,1.9nm,0.7s
MKAR  Makanchi Array     38.68 316   P     P       04 21 16.6  -0.6
ZALV  Zalesovo Beam      40.56 327   P     P       04 21 32.0  -0.6
      comp=Z,0.6nm,0.4s,baz=108,slow=8.0,SNR=4.2
      comp=Z,0.6nm,0.4s
ZALV  Zalesovo Beam      40.56 327   P     P       04 21 31.6  -1.0
KURK  Kurchatov          42.42 320   P     P       04 21 48.3 +0.3
KURBB Kurchatov Arra     42.44 320   P     P       04 21 49.3 +1.2
      comp=Z,0.4nm,0.3s,baz=109,slow=8.6,SNR=5.4
      comp=Z,0.4nm,0.3s
WB0   Warramunga Arr     45.30 163         P       04 22 09.8  -1.5
WRA   Warramunga Arr     45.45 163   P     P       04 22 10.7  -1.9
      comp=Z,0.8nm,0.6s,baz=345,slow=8.7,SNR=6.3
      comp=Z,0.8nm,0.6s
WRA   Warramunga Arr     45.45 163   P     P       04 22 11.5  -1.1
BVAR  Borovoye Array     48.01 321   P     P       04 22 32.2   0.0
      comp=Z,0.8nm,0.6s,baz=101,slow=8.0,SNR=4.3
      comp=Z,0.8nm,0.6s
ASAR  Alice Springs      48.91 165   P     P       04 22 38.5  -1.0
      comp=Z,0.2nm,0.3s,baz=20,slow=12,SNR=5.8
      comp=Z,0.2nm,0.3s
ASAR  Alice Springs      48.91 165   P     P       04 22 38.3  -1.2
AB31  Akbulak array      53.79 314   P     P       04 23 16.0 +0.1
AB31                                 IAmb  IAmb    04 23 25.6
      comp=Z,5.0nm,1.5s
ABKAR Akbulak array      53.79 314   P     P       04 23 15.4  -0.5
ILAR  Eielson Array      69.19  27   P     P       04 24 58.3  -1.4
      comp=Z,0.2nm,0.5s,baz=276,slow=6.0,SNR=5.0
      comp=Z,0.2nm,0.5s
ILAR  Eielson Array      69.19  27   P     P       04 24 59.1  -0.6
J26L  Joseph Creek       70.65  27   P     P       04 25 08.4  -0.3
J26L                                 IAmb  IAmb    04 25 26.4
      comp=Z,5.7nm,1.3s
H27K  Steamboat Moun     71.00  25   P     P       04 25 11.4 +0.6
GLB   Gilahina Butte     71.36  30   P     P       04 25 13.1 +0.1
L27K  Beaver Creek,      71.79  28   P     P       04 25 15.7 +0.1
L27K                                 IAmb  IAmb    04 25 18.1
      comp=Z,5.4nm,1.2s
BCAR  Beaver Creek A     71.81  28   P     P       04 25 15.4  -0.3
I28M  Miner Creek        71.86  26   P     P       04 25 15.9  -0.2
I28M                                 IAmb  IAmb    04 25 16.0
      comp=Z,3.3nm,1.3s
H29M  Whitestone         72.22  25   P     P       04 25 17.6  -0.5
CTGM  Chitina Glacie     72.65  30   P     P       04 25 21.5 +0.6
F30M  Barrier River      72.70  23   P     P       04 25 21.2 +0.2
F30M                                 IAmb  IAmb    04 25 53.8
      comp=Z,16nm,1.5s
I30M  Mount Dempster     73.34  25   P     P       04 25 24.2  -0.8
I30M                                 IAmb  IAmb    04 25 29.7
      comp=Z,4.1nm,1.3s
L29M  L29M               73.37  28   P     P       04 25 24.6  -0.4
M29M  Somme Creek        73.45  29   P     P       04 25 25.4  -0.3
M29M                                 IAmb  IAmb    04 25 51.4
      comp=Z,4.4nm,1.2s
F31M  Tsiigehtchic       73.50  23   P     P       04 25 24.4  -1.2
F31M                                 IAmb  IAmb    04 26 02.5
      comp=Z,6.1nm,1.4s
M30M  Minto, Yukon       74.13  28   P     P       04 25 28.4  -1.1
M30M                                 IAmb  IAmb    04 25 59.9
      comp=Z,8.0nm,1.4s
BURAR Bucovina Array     76.71 316   P     P       04 25 43.0  -1.6
STHS  Stebnicka Huta     78.47 319  eP     P       04 25 55.8 +1.4
NOA   NORSAR Array B     78.52 332   LR    LR      05 04 02.4
      comp=Z,64nm,20.4s,baz=5.0,slow=38
BHW   Baring Head        81.72 142   P     P       04 26 11.1  -0.6
MSWZ  Moikau Station     81.94 142   P     P       04 26 12.7  -0.3
YKAW3 Yellowknife Wh     82.93  23   P     P       04 26 18.2 +0.3
YKAW3                                IAmb  IAmb    04 27 01.0
      comp=Z,5.0nm,1.4s
YKA   Yellowknife Ar     82.98  23   P     P       04 26 17.9  -0.2
      comp=Z,0.4nm,0.9s,baz=318,slow=9.5,SNR=4.1
      comp=Z,0.4nm,0.9s
YKA   Yellowknife Ar     82.98  23   P     P       04 26 18.2 +0.1
```

IDC 10 04:37:46.4±7.4**, 18°.07S×174°.65W, h0^{km}, mb3.8**/3**, mbtmp3.8**/3**, Error ellipse: s-maj=336.2km s-min=37.5km az=142.0, Tonga Islands**

```
Code  Station Name         Δ°   AZ°   Phase ID          Time     Res
                                     Op     ISC      h  m  s    ISC
WRA   Warramunga Arr     48.12 259   P     P       04 46 29.0 +0.5
      1.0nm,0.7s,baz=96,slow=8.6,SNR=7.5
      1.0nm,0.7s
ASAR  Alice Springs      48.19 254   P     P       04 46 28.5  -0.6
      2.1nm,0.7s,baz=86,slow=8.6,SNR=25
      2.1nm,0.7s
ILAR  Eielson Array      85.28  12   P     P       04 50 24.6  -0.1
      0.2nm,0.9s,baz=206,slow=6.0,SNR=4.1
      0.2nm,0.9s
BRTR  Keskin Array B    147.38 317   PKPbc PKPbc   04 57 31.8  -0.9
      0.5nm,0.8s,baz=72,slow=4.7,SNR=4.0
```

KRSC 10 05:14:51.2±1.5**, 52°.82N×162°.80E, h67^{km}**±31^{km}**, Ml3.9, Off east coast of Kamchatka Peninsula**

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Code  Station Name         Δ°   AZ°   Phase ID          Time     Res
                                     Op     ISC      h  m  s    ISC
SPN   Mys Shipunski       1.70 281  eP     Pn      05 15 20.5 +1.8
SPN                                 eS     Sn      05 15 40.5 +0.9
NLC   Nalytchevo          2.12 281  eP     Pn      05 15 26.7 +2.4
NLC                                 eS     Sn      05 15 50.8 +1.3
KII   Karymskiy           2.35 303  eP     Pn      05 15 30.0 +2.5
SDLR  Sedlovina           2.41 283  eP     Pn      05 15 31.4 +3.0
UGLR  Uglovaya            2.43 281  eP     Pn      05 15 32.1 +3.4
SMAR  Somma               2.46 282  eP     Pn      05 15 32.0 +2.9
DALK  Dalny               2.46 277  eP     Pn      05 15 31.6 +2.7
DALK                                eS     Sn      05 15 60.0 +2.1
KRER  Koryakskii          2.49 283  eP     Pn      05 15 32.9 +3.3
KRER                                eS     Sn      05 16 01.7 +2.6
AVH   Avacha              2.49 282  eP     Pn      05 15 32.9 +3.4
AVH                                 eS     Sn      05 16 02.4 +3.6
PET   Petropavlovsk       2.52 276  eP     Pn      05 15 32.4 +2.7
PET                                 eS     Sn      05 16 01.5 +2.2
KOK   Koryaka             2.56 282  eP     Pn      05 15 33.5 +3.2
KOK                                 eS     Sn      05 16 03.0 +2.5
KRX   Arik                2.56 284  eP     Pn      05 15 33.4 +2.9
KRX                                 eS     Sn      05 16 02.9 +2.2
RUS   Russkaya            2.64 263  eP     Pn      05 15 33.9 +2.5
RUS                                 eS     Sn      05 16 03.3 +1.0
KZV   Kizimen             2.73 328  eP     Pn      05 15 36.2 +3.4
KZV                                 eS     Sn      05 16 07.8 +2.9
MTVR  Mutnovka            2.83 265  eP     Pn      05 15 36.9 +2.7
MTVR                                eS     Sn      05 16 09.4 +2.2
KRMR  Karymshinskiy       2.83 272  eP     Pn      05 15 36.7 +2.7
KRMR                                eS     Sn      05 16 09.2 +2.2
GRL   Gorelyy             2.89 267  eP     Pn      05 15 38.3 +3.3
GRL                                 eS     Sn      05 16 11.4 +2.9
ASAK  Asacha              3.02 264  eP     Pn      05 15 40.0 +3.3
ASAK                                eS     Sn      05 16 14.3 +2.6
BKI   Bering              3.04  37  eP     Pn      05 15 38.9 +2.2
BKI                                 eS     Sn      05 16 11.6  -0.3
GNL   Ganaly              3.05 289  eP     Pn      05 15 40.9 +3.8
GNL                                 eS     Sn      05 16 16.8 +4.4
KDTR  Khodutka, Kamc      3.07 253  eP     Pn      05 15 39.5 +2.2
KDTR                                eS     Sn      05 16 13.6 +0.8
KMNR  Kamenistaya         3.31 334  eP     Pn      05 15 44.6 +4.1
KBTR  Krutoberegovo       3.40   0  eP     Pn      05 15 44.1 +2.4
KBTR                                eS     Sn      05 16 22.9 +2.1
APC   Apacha              3.42 274  eP     Pn      05 15 46.2 +4.2
APC                                 eS     Sn      05 16 25.7 +4.3
KBG   Krutoberegovo       3.44 359  eS     Sn      05 16 24.6 +2.7
MIPR  Malaya Ipel'ka      3.73 264  eP     Pn      05 15 50.1 +3.8
PAU   Pauzhetka           3.93 252  eP     Pn      05 15 51.5 +2.5
SKR   Severo-Kuril's      4.67 245  eP     Pn      05 16 01.5 +2.5
```

SDD ***10*** *05:49:55.4±0.4, 19°.12N×67°.04W, h31^{km}±11^{km}, MD3.1, ML2.7, MW2.7, Presumed earthquake*

NEIC ***10*** *05:49:57.1±1.8, 19°.04N±0°.06×67°.14W±0°.03, h35^{km}±2^{km}, ML2.1/16, Md2.9/6(RSPR), Error ellipse: s-maj=10.6km s-min=3.3km az=194.0*

RSPR ***10*** *05:49:59.5, 18°.96N×67°.11W, h50^{km}±10^{km}, MD2.9/6*

ISC 10 05:49:58.4±1.6**, 18°.93N**±0°.09×**67°.13W**±0°.04**, h32^{km}**±11^{km}**, n34, σ1^{s}05**/40**, 14C-2D, Mona Passage**

```
Code  Station Name         Δ°   AZ°   Phase ID          Time     Res
                                     Op     ISC      h  m  s    ISC
AGPR  Aguadilla, PR       0.46 178   Pn    Pb      05 50 06.0  -2.3
AGPR                                 IAML          05 50 17.0
      66nm,0.3s
AGPR                                 IAML          05 50 19.1
      85nm,0.8s
AGPR  Aguadilla, PR       0.46 178⇑eP      Pb      05 50 07.7  -0.5
AGPR  Aguadilla, PR       0.46 178  eS     Sb      05 50 17.0 +2.0
AGPR  Aguadilla, PR       0.46 178⇑ePg     Pb      05 50 07.5  -0.8
AGPR                              ⇓eSg     Sb      05 50 16.3 +1.3
AGPR                                 IAML          05 50 19.1
      comp=N,595nm,0.3s
AOPR  Arecibo Observ      0.68 148         Pb      05 50 11.9 +0.1
AOPR                                 IAML          05 50 24.9
      comp=N,52nm,1.0s
AOPR  Arecibo Observ      0.68 148  eS     Sb      05 50 22.1 +1.1
PRSN  Puerto Rico Se      0.71 181   Pn    Pb      05 50 11.2  -1.1
PRSN                                 IAML          05 50 28.3
      comp=N,109nm,0.3s
PRSN                                 IAML          05 50 29.8
      comp=N,102nm,0.3s
LSP   Las Mesas           0.75 177         Pb      05 50 12.0  -1.0
LSP                                        Sb      05 50 24.0 +1.0
LSP   Las Mesas           0.75 177⇓eP      Pb      05 50 12.0  -1.0
LSP   Las Mesas           0.75 177  eS     Sb      05 50 24.0 +1.0
UUPR  Utuado, UPR, P      0.78 150   Pn    Pb      05 50 11.5  -2.0
CRPR  Cabo Rojo, PR       0.92 179         Pn      05 50 14.4  -0.7
CRPR                                       Sb      05 50 29.1 +1.4
CRPR  Cabo Rojo, PR       0.92 179⇑eP      Pn      05 50 14.4  -0.7
CRPR  Cabo Rojo, PR       0.92 179  eS     Sb      05 50 29.1 +1.4
CRPR  Cabo Rojo, PR       0.92 179⇑ePg     Pn      05 50 14.4  -0.7
CRPR                              ⇑eSg     Sb      05 50 28.2 +0.5
CRPR                                 IAML          05 50 29.4
      comp=N,144nm,0.3s
ECPR  Experimental S      0.94 130   Pn    Pn      05 50 14.4  -1.1
ECPR  Experimental S      0.94 130⇑eP      Pn      05 50 14.9  -0.6
ECPR  Experimental S      0.94 130  eS     Sb      05 50 29.7 +1.1
MLPR  Magueyes Islan      0.96 175⇑eP      Pn      05 50 15.1  -0.6
MLPR  Magueyes Islan      0.96 175  eS     Sb      05 50 29.8 +1.0
MLPR  Magueyes Islan      0.96 175⇑ePg     Pn      05 50 14.9  -0.7
MLPR                              ⇑eSg     Sb      05 50 29.6 +0.8
MLPR                                 IAML          05 50 30.2
      comp=N,75nm,0.3s
CELP  Cerrillos           0.99 148   Pn    Pn      05 50 15.8  -0.4
CELP                                 IAML          05 50 31.3
      comp=N,30nm,0.3s
OBIP  Obispado Ponce      1.01 151         Pn      05 50 16.1  -0.3
OBIP                                       Sb      05 50 29.9  -0.4
OBIP  Obispado Ponce      1.01 151⇑eP      Pn      05 50 16.1  -0.3
OBIP  Obispado Ponce      1.01 151  eS     Sb      05 50 29.9  -0.4
HUMP  Col San Antoni      1.44 123         Pn      05 50 22.7 +0.3
HUMP                                       Sn      05 50 41.0 +0.7
HUMP  Col San Antoni      1.44 123   IAML          05 50 48.3
      comp=N,16nm,1.0s
HUMP                                 IAML          05 50 52.0
      comp=N,19nm,0.9s
HUMP  Col San Antoni      1.44 123⇑eP      Pn      05 50 22.7 +0.3
HUMP  Col San Antoni      1.44 123  eS     Sn      05 50 41.0 +0.7
MIDR  Miches              1.82 272⇑eP      Pn      05 50 26.9  -0.6
MIDR  Miches              1.82 272  eS     Sn      05 50 51.2 +1.7
MIDR  Miches              1.82 272⇑ePg     Pn      05 50 26.9  -0.6
MIDR                                 IAML          05 51 33.5
      comp=N,43nm,2.4s
DR12  Loma Pena Alta      2.14 267   Pn    Pn      05 50 31.1  -0.9
HATOM Hato Mayor del      2.14 267⇑ePg     Pn      05 50 32.0   0.0
HATOM                                IAML          05 51 05.1
      comp=N,62nm,0.3s
```

IDC 10 06:00:31.8±1.6**, 2°.45S×140°.06E, h0^{km}, mb3.1**/2**, mbtmp3.2**/3**, ML3.4**/1**, Error ellipse: s-maj=32.4km s-min=11.1km az=180.0, Near north coast of Irian Jaya**

```
Code  Station Name         Δ°   AZ°   Phase ID          Time     Res
                                     Op     ISC      h  m  s    ISC
JAY   Jayapura            0.65  96   Pg    Pg      06 00 44.7 +0.5
      136nm,0.3s,baz=244,slow=9.5,SNR=427
JAY                                  Lg    Lg      06 00 52.7
      112nm,0.3s,baz=168,slow=20,SNR=10
WRA   Warramunga Arr     18.26 197   P     P       06 04 47.4 +0.3
      0.1nm,0.3s,baz=21,slow=12,SNR=7.0
      0.7nm,0.8s
ASAR  Alice Springs      21.92 195   P     P       06 05 26.4  -0.5
      0.2nm,0.6s,baz=21,slow=10,SNR=3.5
      0.2nm,0.6s
H11N1 WAKE ISLAND Hy     34.34  49   T     T       06 43 20.9
      baz=234,slow=75,SNR=28
H11N2 WAKE ISLAND Hy     34.36  49   T     T       06 43 22.3
      baz=234,slow=75,SNR=29
H11N3 WAKE ISLAND Hy     34.36  49   T     T       06 43 22.3
      baz=234,slow=75,SNR=24
MKAR  Makanchi Array     70.41 322   P     P       06 11 47.6  -0.3
      0.3nm,0.7s,baz=133,slow=3.9,SNR=1.9
      0.3nm,0.7s
```

IDC 10 06:39:04.5±27.0**, 23°.95S×69°.50E, h0^{km}, mb3.6**/3**, mbtmp3.6**/3**, MS3.2**/1**, Error ellipse: s-maj=892.1km s-min=44.8km az=52.0, Mid-Indian Ridge**

```
Code  Station Name         Δ°   AZ°   Phase ID          Time     Res
                                     Op     ISC      h  m  s    ISC
H08S1 Diego Carcia H     16.46  10   T     T       06 59 54.4
      baz=190,slow=76,SNR=20
H08S2 Diego Garcia H     16.46  11   T     T       06 59 54.7
      baz=190,slow=76,SNR=14
H08S3 Diego Garcia H     16.48  10   T     T       06 59 56.5
      baz=190,slow=76,SNR=22
H04N2 CROZET ISLANDS     26.36 208   T     T       07 12 17.3
      baz=40,slow=75,SNR=66
H04N1 CROZET ISLANDS     26.37 208   T     T       07 12 19.5
      baz=40,slow=75,SNR=82
H04N3 CROZET ISLANDS     26.38 208   T     T       07 12 16.8
      baz=40,slow=75,SNR=72
LBTB  Lobatse            39.84 259   LR    LR      06 59 31.7
      comp=Z,30nm,18.4s,baz=42,slow=31
ASAR  Alice Springs      58.43 104   P     P       06 49 02.4  -0.1
      0.3nm,0.5s,baz=256,slow=6.8,SNR=7.1
      0.3nm,0.5s
WRA   Warramunga Arr     59.81 100   P     P       06 49 12.1   0.0
      0.6nm,0.8s,baz=251,slow=7.3,SNR=2.3
      0.6nm,0.8s
MKAR  Makanchi Array     71.36   9   P     P       06 50 26.0   0.0
      0.7nm,0.8s,baz=200,slow=3.8,SNR=3.7
      0.7nm,0.8s
```

IDC ***10*** *06:50:16.4±5.3, 35°.92N×69°.56E, h51^{km}±46^{km}, mb3.7/13, mbtmp3.9/17, ML3.3/4, MS3.3/1, Error ellipse: s-maj=28.5km s-min=21.4km az=21.0*

MOS ***10*** *06:50:22.7±1.1, 36°.30N×69°.40E, h98^{km}, mb4.2/8, Error ellipse: s-maj=10.9km s-min=5.0km az=78.1*

NEIC ***10*** *06:50:23.5±2.6, 36°.20N±0°.06×69°.36E±0°.09, h120^{km}±8^{km}, mb4.1/8, Error ellipse: s-maj=10.2km s-min=8.1km az=80.0*

NNC ***10*** *06:50:23.8±3.8, 36°.77N×69°.09E, h0^{km}, mb4.4, mpv4.3, Error ellipse: s-maj=30.8km s-min=21.4km az=2.0*

ISC 10 06:50:23.5±0.6**, 36°.20N**±0°.05×**69°.48E**±0°.05**, h112^{km}, n95, σ2^{s}42**/105**, mb4.0**/17**, 12C-6D, Hindu Kush region**

```
Code  Station Name         Δ°   AZ°   Phase ID          Time     Res
                                     Op     ISC      h  m  s    ISC
KBL   Kabul               1.69 192         Pn      06 50 53.2 +0.2
KBL   Kabul               1.69 192   PN    Pn      06 50 53.2 +0.2
SHAA  Shahritus           1.74 322         Pn      06 50 52.8  -0.7
MANEM Manem               2.22  52         Pn      06 51 01.3 +1.6
CHGR  Chuyangaron         2.47 354         Pn      06 51 02.6  -0.1
CHGR  Chuyangaron         2.47 354   PN    Pn      06 51 02.6  -0.1
GAR   Garm                2.88  13         Pn      06 51 08.5 +0.4
DRK   Karamyk             3.76  29         Pn      06 51 20.7 +0.7
DRK   Karamyk             3.76  29   PN    Pn      06 51 20.7 +0.7
NIL   Nilore              4.01 128         Pn      06 51 23.8 +0.8
NIL   Nilore              4.01 128   PN    Pn      06 51 23.8 +0.8
TRKS  Terek-Say           5.48  13   PN    Pn      06 51 42.0  -1.0
JMU   Jammu               5.58 126  eP     Pn      06 51 44.5  -0.9
JMU                                 eS     Sn      06 52 43.9  -5.2
JMU                                  IAML          06 52 50.5
      comp=E,147nm,0.4s
JMU                                  IAML          06 52 51.5
      comp=N,145nm,0.4s
ARK   Arkit               5.92  18   PN    Pn      06 51 48.4  -0.5
KSH   Kashi               6.12  55   Pn    Pn      06 51 47.9  -3.6
KSH                                  Sn    Sn      06 52 47.8   -12
KSH                                  smax  smax
      comp=N,310nm,0.8s
KSH                                  smax  smax
      comp=E,240nm,0.7s
ALCI  Alchi Leh           6.61 105  eP     Pn      06 51 58.5  -0.1
ALCI                                eS     Sn      06 53 07.3  -5.4
ALCI                                 IAML          06 53 15.2
      comp=E,154nm,0.5s
ALCI                                 IAML          06 53 15.3
      comp=N,152nm,0.4s
ARLS  Aral                6.80  32   PN    Pn      06 52 00.1  -0.7
DHRM  DHARAMSHALA         6.88 123  eP     Pn      06 52 02.0  -0.1
DHRM                                eS     Sn      06 53 14.5  -4.6
DHRM                                 IAML          06 53 20.1
      comp=N,152nm,0.2s
DHRM                                 IAML          06 53 20.5
      comp=E,157nm,0.3s
KK31  Karatay Array       6.95   6         Pn      06 52 02.1  -0.6
KK31  Karatay Array       6.95   6 ⇑P      Pn      06 52 01.7  -0.9
      comp=E,37nm,0.6s,baz=196,slow=17,SNR=240
KK31                               ⇓S      Sn      06 53 15.5  -4.6
      comp=E,5.5nm,0.3s,baz=192,slow=22,SNR=5.4
KK31  Karatay Array       6.95   6   PN    Pn      06 52 02.1  -0.6
UCH   Uchtor              7.18  31   P     Pn      06 52 08.0 +1.7
      SNR=33
EKS2  Erkin-Say           7.26  26   P     Pn      06 52 06.8  -0.2
      SNR=38
AAK   Ala-Archa           7.51  30   P     Pn      06 52 10.4  -0.1
      SNR=10
AAK   Ala-Archa           7.51  30   P     Pn      06 52 10.2  -0.3
      comp=E,9.3nm,0.3s,baz=212,slow=8.8,SNR=38
AAK                                  S     Sn      06 53 31.9  -2.2
      comp=E,12nm,0.5s,baz=338,slow=22,SNR=9.4
AAK   Ala-Archa           7.51  30 ⇑P      Pn      06 52 10.0  -0.5
      comp=E,6.3nm,0.6s
AAK                                ⇑S      Sn      06 53 31.6  -2.5
      comp=E,10nm,0.7s
AAK   Ala-Archa           7.51  30cePN     Pn      06 52 10.2  -0.3
AAK                                  pmax  pmax
      comp=Z,16nm,0.8s
CHMS  Chumysh             7.92  29   P     Pn      06 52 15.4  -0.4
      SNR=12
ULHL  Ulahol              8.00  39   P     Pn      06 52 16.4  -0.8
      SNR=12
BOOM  Boomskoye usch      8.04  37   Pn    Pn      06 52 16.9  -0.7
BOOM  Boomskoye usch      8.04  37   PN    Pn      06 52 16.9  -0.7
USP   Ospenovka           8.05  27   P     Pn      06 52 16.9  -0.8
      SNR=33
SMLA  Simla               8.16 126  eP     Pn      06 52 18.7  -0.5
SMLA                                eS     Sn      06 53 43.0  -6.7
SMLA                                 IAML          06 53 48.8
      comp=N,90nm,0.6s
SMLA                                 IAML          06 53 49.9
      comp=E,91nm,0.6s
TKM2  Tokmak 2            8.21  33   P     Pn      06 52 19.3  -0.7
      SNR=21
TARG  Taragay, Kyrgy      8.52  47         Pn      06 52 22.3  -2.1
TARG  Taragay, Kyrgy      8.52  47   PN    Pn      06 52 22.3  -2.1
HNLY  HANLEY              8.55 111  eP     Pn      06 52 24.2  -0.7
HNLY                                eS     Sn      06 53 52.9  -7.0
HNLY                                 IAML          06 53 60.0
      comp=E,98nm,0.9s
HNLY                                 IAML          06 54 07.7
      comp=N,98nm,1.1s
WUS   Wushi               9.11  54         Pn      06 52 31.0  -1.0
PDGK  Podgornoye         10.49  44 ⇑P      Pn      06 52 52.1 +1.3
      comp=N,4.6nm,0.8s
PDGK                               ⇓S      Sn      06 54 52.6 +6.3
      comp=N,6.4nm,0.8s
PDGK  Podgornoye         10.49  44   P     Pn      06 52 52.5 +1.7
PDGK                                 S     Sn      06 54 52.6 +6.3
MAKZ  Makanchi           14.13  38   Pn    Pn      06 53 40.4 +1.9
MAKZ  Makanchi           14.13  38   P     Pn      06 53 40.4 +1.9
MK31  Makanchi Array     14.27  38ceP      Pn      06 53 39.6  -0.8
MKAR  Makanchi Array     14.27  38   P     Pn      06 53 39.6  -0.8
      comp=N,0.1nm,0.3s,baz=222,slow=13,SNR=6.2
      comp=N,1.6nm,1.0s
MKAR  Makanchi Array     14.27  38   Pn    Pn      06 53 40.0  -0.4
MKAR  Makanchi Array     14.27  38  eP     Pn      06 53 39.8  -0.6
AB31  Akbulak array      14.80 335         Pn      06 53 44.9  -2.1
AB31  Akbulak array      14.80 335   P     Pn      06 53 44.3  -2.6
      comp=N,0.7nm,0.3s,baz=150,slow=12,SNR=39
AB31                                 S     Sn      06 56 22.9  -7.3
      comp=N,1.6nm,0.5s,baz=153,slow=23,SNR=5.5
AB31  Akbulak array      14.80 335   P     Pn      06 53 44.3  -2.6
AB31                                 S     Sn      06 56 22.9  -7.3
ABKAR Akbulak array      14.80 335         Pn      06 53 44.8  -2.2
KURBB Kurchatov Arra     15.83  22   P     Pn      06 53 56.9  -3.0
      baz=211,slow=10,SNR=14
      comp=N,0.7nm,0.7s
KURK  Kurchatov          15.94  22         Pn      06 54 02.4 +1.2
KURK  Kurchatov          15.94  22⇓eP      P       06 54 03.3 +0.7
KURK                                 pmax  pmax
      comp=Z,8.0nm,1.7s
AKTO  Aktyubinsk         16.47 333   P     Pn      06 54 06.1  -1.7
      comp=Z,0.4nm,0.3s,baz=139,slow=12,SNR=9.4
AKTO                                 S     Sn      06 57 00.6   -10
      comp=Z,0.9nm,0.3s,baz=67,slow=6.2,SNR=4.1
      comp=Z,1.8nm,0.3s
AKTO  Aktyubinsk         16.47 333 ⇓P      Pn      06 54 06.1  -1.7
      comp=Z,4.7nm,0.9s
AKTO                               ⇑S      Sn      06 57 04.0  -6.4
      comp=Z,2.9nm,0.8s
EVN   Everest            16.82 114         Pn      06 54 11.3  -1.6
EVN                                  IAmb  IAmb    06 54 21.9
      comp=Z,4.1nm,0.6s
BVAR  Borovoye Array     16.84   2   P     Pn      06 54 10.9  -1.4
      comp=Z,0.2nm,0.3s,baz=168,slow=11,SNR=17
      comp=Z,3.1nm,0.5s
BORK  Borovoye           16.86   2         Pn      06 54 11.9  -0.7
BORK  Borovoye           16.86   2⇑eP      Pn      06 54 10.9  -1.6
BORK                                 pmax  pmax
      comp=Z,4.0nm,0.6s
DGZ   Jazzator, Alta     18.77  38⇓eP      Pn      06 54 36.4 +0.7
DGZ                                  pmax  pmax
      comp=Z,8.0nm,0.4s
ZAA0  Zalesovo Array     20.72  26         P       06 54 55.6 +0.8
ZAA0                                 IAmb  IAmb    06 54 57.7
      comp=Z,9.3nm,0.7s
ZALV  Zalesovo Beam      20.72  26   P     P       06 54 55.4 +0.6
      comp=Z,9.5nm,0.6s,baz=219,slow=10,SNR=36
      comp=Z,9.5nm,0.6s
ZALV  Zalesovo Beam      20.72  26  eP     P       06 54 55.5 +0.8
ZALV                                 pmax  pmax
      comp=Z,9.0nm,0.6s
```

ARTI	**Arti**	**21.55**	**343**	P	**P**	**06 55 03.9**	**+0.3**
	comp=Z,5.2nm,0.8s,baz=163,slow=6.1,SNR=5.9						
	comp=Z,5.2nm,0.8s						
ARTI	**Arti**	**21.55**	**343**		**P**	**06 55 04.8**	**+1.2**
ARTI				IAmb	IAmb	06 55 07.9	
	comp=Z,15nm,1.2s						
ARTI	**Arti**	**21.55**	**343**	P	**P**	**06 55 04.8**	**+1.2**
ARTI				pmax	pmax		
	comp=Z,15nm,1.2s						
KBZ	**Khabaz**	**21.66**	**298**	P	**P**	**06 55 05.4**	**+0.5**
	comp=Z,1.7nm,0.8s,baz=121,slow=10.0,SNR=4.1						
	comp=Z,1.7nm,0.8s						
KBZ	**Khabaz**	**21.66**	**298**	*e*P	**P**	**06 55 06.6**	**+1.7**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SHA1	**Shidzhatmaz**	**21.83**	**298**	*ce*P	**P**	**06 55 08.3**	**+1.3**
KNGR	**Kungurtug, Tuv**	**24.76**	**46**	⇑*e*P	**P**	**06 55 35.8**	**+1.1**
KNGR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SONM	**Songino Array**	**29.52**	**55**	P	**P**	**06 56 20.2**	**+2.9**
	comp=Z,2.6nm,0.8s,baz=255,slow=9.8,SNR=7.9						
AKASG	**Malin Array Be**	**32.19**	**310**	P	**P**	**06 56 41.2**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=84,slow=7.3,SNR=7.8						
	comp=Z,0.9nm,0.5s						
AKASG	**Malin Array Be**	**32.19**	**310**	IAmb	IAmb	06 57 15.3	
	comp=Z,3.2nm,1.2s						
AKASG	**Malin Array Be**	**32.19**	**310**	*e*P	**P**	**06 56 41.5**	**+1.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	**FINESS Array B**	**37.06**	**327**	P	**P**	**06 57 23.4**	**+1.0**
	comp=Z,3.0nm,0.8s,baz=101,slow=9.9,SNR=5.1						
	comp=Z,3.0nm,0.8s						
FINES	**FINESS Array B**	**37.06**	**327**	*e*P	**P**	**06 57 24.0**	**+1.7**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES	**ARCESS Array B**	**40.96**	**338**	P	**P**	**06 57 55.6**	**+0.8**
	comp=Z,3.1nm,0.7s,baz=114,slow=8.3,SNR=9.1						
	comp=Z,3.1nm,0.7s						
ARCES	**ARCESS Array B**	**40.96**	**338**	P	**P**	**06 57 55.1**	**+0.3**
KHC	**Kasperske Hory**	**42.16**	**306**	⇓*e*P	**P**	**06 58 09.4**	**+4.5**
KHC				pmax	pmax		
	comp=Z,13nm,2.5s						
CLL	**Collm**	**42.43**	**309**	*i* P	**P**	**06 58 09.0**	**+2.1**
CLL	**Collm**	**42.43**	**309**	*i* P	**P**	**06 58 09.0**	**+2.1**
HFS	**Hagfors**	**42.55**	**322**	P	**P**	**06 58 09.0**	**+1.2**
	comp=Z,2.6nm,0.6s,baz=71,slow=6.4,SNR=3.8						
	comp=Z,2.6nm,0.6s						
HFS	**Hagfors**	**42.55**	**322**	P	**P**	**06 58 09.0**	**+1.2**
NB2	**NORSAR Subarra**	**43.89**	**323**	P	**P**	**06 58 19.2**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=99,slow=7.9						
NOA	**NORSAR Array B**	**43.89**	**323**	P	**P**	**06 58 19.3**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=98,slow=8.0,SNR=6.2						
	comp=Z,1.5nm,0.7s						
YAK	**Yakutsk**	**44.93**	**35**	⇑*e*P	**P**	**06 58 29.1**	**+2.3**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TIXI	**Tiksi**	**46.52**	**22**	⇑*e*P	**P**	**06 58 41.6**	**+2.5**
TIXI				pmax	pmax		
	comp=Z,10.0nm,2.5s						
MJAR	**Matsushiro Arr**	**54.21**	**68**	LR	LR	07 25 39.7	
	comp=Z,25nm,19.1s,baz=230,slow=39						
ILAR	**Eielson Array**	**75.40**	**15**	P	**P**	**07 01 54.7**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=320,slow=5.8,SNR=5.6						
	comp=Z,0.6nm,0.8s						
ILAR	**Eielson Array**	**75.40**	**15**	*e*P	**P**	**07 01 55.2**	**+0.7**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BOSA	**Boshof**	**76.73**	**219**	P	**P**	**07 02 01.0**	**-1.6**
	comp=Z,2.1nm,0.7s,baz=56,slow=3.6,SNR=3.8						
	comp=Z,2.1nm,0.7s						
YKA	**Yellowknife Ar**	**81.60**	**2**	P	**P**	**07 02 30.6**	**+2.1**
	comp=Z,0.5nm,0.7s,baz=344,slow=5.8,SNR=7.9						
	comp=Z,0.5nm,0.7s						
WRA	**Warramunga Arr**	**82.88**	**121**	P	**P**	**07 02 34.8**	**-1.1**
	comp=Z,0.3nm,0.8s,baz=313,slow=5.2,SNR=1.0						
	comp=Z,0.3nm,0.8s						
ASAR	**Alice Springs**	**85.10**	**124**	P	**P**	**07 02 46.0**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=305,slow=5.5,SNR=4.3						
	comp=Z,0.1nm,0.3s						
ASAR	**Alice Springs**	**85.10**	**124**	P	**P**	**07 02 46.0**	**-1.1**

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*IDC **10** 07:01:25.7±9.2, 24°.20S×69°.46E, h0^{km}, mb4.0/7, mbtmp4.0/7, Error ellipse: s-maj=309.6km s-min=27.8km az=50.0*

ISC 10 07:01:26.6±10.0,**24°S**±1°×**6°9E**±°,**h10^{km},n13,**σ**0^{s}60**/7,**mb4.0**/7,**Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**16.85**	**11**	T	T	07 22 17.0	
	baz=190,slow=76,SNR=14						
H08S2	**Diego Garcia H**	**16.85**	**11**	T	T	07 22 17.4	
	baz=190,slow=76,SNR=20						
H08S3	**Diego Garcia H**	**16.86**	**11**	T	T	07 22 18.7	
	baz=190,slow=76,SNR=24						
H04N2	**CROZET ISLANDS**	**25.97**	**209**	T	T	07 34 37.0	
	baz=40,slow=74,SNR=78						
H04N1	**CROZET ISLANDS**	**25.97**	**209**	T	T	07 34 34.4	
	baz=40,slow=74,SNR=99						
H04N3	**CROZET ISLANDS**	**25.98**	**209**	T	T	07 34 31.4	
	baz=40,slow=74,SNR=94						
ASAR	**Alice Springs**	**58.51**	**104**	P	**P**	**07 11 23.3**	**-0.2**
	1.0nm,0.7s,baz=256,slow=6.2,SNR=13						
	1.0nm,0.7s						
WRA	**Warramunga Arr**	**59.92**	**100**	P	**P**	**07 11 33.4**	**+0.1**
	1.1nm,0.7s,baz=254,slow=6.3,SNR=6.5						
	1.1nm,0.7s						
MKAR	**Makanchi Array**	**71.74**	**9**	P	**P**	**07 12 48.0**	**-0.8**
	1.2nm,0.8s,baz=190,slow=6.2,SNR=9.5						
	1.2nm,0.8s						
KURBB	**Kurchatov Arra**	**75.05**	**6**	P	**P**	**07 13 08.8**	**+0.6**
	0.5nm,0.3s,baz=200,slow=6.4,SNR=5.7						
	0.5nm,0.3s						
BVAR	**Borovoye Array**	**77.01**	**1**	P	**P**	**07 13 19.7**	**+0.3**
	0.9nm,0.7s,baz=165,slow=6.0,SNR=5.0						
	0.9nm,0.7s						
ZALV	**Zalesovo Beam**	**79.08**	**9**	P	**P**	**07 13 30.9**	**+0.1**
	0.7nm,0.3s,baz=191,slow=3.8,SNR=5.9						
	0.7nm,0.3s						
SONM	**Songino Array**	**79.17**	**24**	P	**P**	**07 13 32.1**	**+0.5**
	0.6nm,0.7s,baz=212,slow=5.1,SNR=3.2						
	0.6nm,0.7s						

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*NNC **10** 07:04:55.9±0.9, 50°.05N×79°.06E, h0^{km}, mb2.5, mpv2.1, Error ellipse: s-maj=22.9km s-min=4.6km az=61.0, Suspected Mining explosion.*

*IDC **10** 07:04:56.7±1.5, 50°.02N×78°.77E, h0^{km}, mbtmp2.4/2, ML1.9/1, Error ellipse: s-maj=14.3km s-min=8.9km az=60.0*

ISC 10 07:04:56.8±2.2,**50°.03N**±0°.07×**78°.5E**±0°.3,**h0^{km},n16,**σ**0^{s}53**/25,**14C-9D,Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.55**	**1**	⇑P	**Pg**	**07 05 07.7**	**+0.3**
KUR07				⇓S	**Sb**	**07 05 17.8**	**0.0**
KUR06	**Kurchatov Arra**	**0.57**	**2**	⇑P	**Pg**	**07 05 07.9**	**+0.1**
KUR06				⇑S	**Sb**	**07 05 17.7**	**-0.6**
KUR14	**Kurchatov Arra**	**0.58**	**6**	⇑P	**Pg**	**07 05 08.0**	**0.0**
KUR14				⇓S	**Sb**	**07 05 18.3**	**-0.5**
KUR15	**Kurchatov Arra**	**0.59**	**4**	⇑P	**Pg**	**07 05 08.0**	**-0.1**
KUR15				⇑S	**Sb**	**07 05 18.3**	**-0.5**
KURBB	**Kurchatov Arra**	**0.59**	**2**	Pg	**Pg**	**07 05 08.1**	**-0.1**
	0.6nm,0.3s,baz=166,slow=19,SNR=48						
KURBB				Lg	Lg	07 05 18.6	
	0.7nm,0.3s,baz=164,slow=35,SNR=11						
KURBB				Rg	Rg	07 05 22.2	
	3.7nm,0.7s,baz=159,slow=42,SNR=5.6						
KURBB	**Kurchatov Arra**	**0.59**	**2**	⇓P	**Pg**	**07 05 08.3**	**+0.2**
	3.7nm,0.3s						
KURBB				⇑S	**Sb**	**07 05 18.9**	**0.0**
	46nm,0.9s						
KUR16	**Kurchatov Arra**	**0.59**	**360**	⇓P	**Pg**	**07 05 08.5**	**+0.3**
KUR16				⇓S	**Sb**	**07 05 18.5**	**-0.5**
KUR17	**Kurchatov Arra**	**0.60**	**358**	⇑P	**Pg**	**07 05 08.9**	**+0.6**
KUR17				⇑S	**Sb**	**07 05 18.7**	**-0.5**
KUR05	**Kurchatov Arra**	**0.61**	**2**	⇑P	**Pg**	**07 05 08.6**	**+0.1**
KUR05				⇓S	**Sb**	**07 05 19.0**	**-0.5**
KUR04	**Kurchatov Arra**	**0.63**	**3**	⇓P	**Pg**	**07 05 09.1**	**+0.2**
KUR04				⇑S	**Sb**	**07 05 19.7**	**-0.4**
KURK	**Kurchatov**	**0.69**	**6**	⇓P	**Pg**	**07 05 09.9**	**-0.1**
	0.7nm,0.5s						
KURK				⇑S	**Sb**	**07 05 20.1**	**-1.6**
	15nm,0.9s						
MAKZ	**Makanchi**	**3.97**	**143**	⇓Lg	Lg	07 06 58.3	
	4.6nm,0.8s						
MK31	**Makanchi Array**	**4.11**	**141**	Pn	**Pn**	**07 06 00.5**	**-0.3**
	0.2nm,0.4s,baz=65,slow=25,SNR=6.1						
MK31				⇑Pg	**Pb**	**07 06 10.5**	**+0.5**
	0.2nm,0.3s,baz=326,slow=11,SNR=4.4						
MK31				⇑Lg	Lg	07 07 01.0	
	2.4nm,0.6s,baz=322,slow=25,SNR=11						
MKAR	**Makanchi Array**	**4.11**	**141**	Pn	**Pn**	**07 06 00.4**	**-0.5**
	0.1nm,0.3s,baz=325,slow=9.2,SNR=1.7						
MKAR				Lg	Lg	07 07 01.0	
	0.7nm,0.3s,baz=319,slow=26,SNR=14						
	0.1nm,0.5s						
I46RU	**ZALESOVO INFRA**	**5.53**	**42**	I	I	07 38 50.0	
	baz=222,slow=327,SNR=4.0						
ZALV	**Zalesovo Beam**	**5.53**	**42**	Pn	**Pn**	**07 06 20.9**	**+0.6**
	0.5nm,0.2s,baz=233,slow=14,SNR=1.7						

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*IDC **10** 07:07:34.0±2.6, 24°.38S×69°.31E, h0^{km}, mb4.1/9, mbtmp4.1/9, MS3.7/19, Error ellipse: s-maj=82.0km s-min=25.5km az=45.0*

ISC 10 07:07:35.6±2.6,**24°.4S**±0°.4×**69°.3E**±0°.4,**h10^{km},n31,**σ**0^{s}43**/9,**mb4.2**/9,**MS3.7**/19,**Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**16.92**	**11**	T	T	07 28 27.6	
	baz=190,slow=76,SNR=55						
H08S2	**Diego Garcia H**	**16.92**	**11**	T	T	07 28 27.8	
	baz=190,slow=76,SNR=38						
H08S3	**Diego Garcia H**	**16.94**	**11**	T	T	07 28 29.0	
	baz=190,slow=76,SNR=50						
OPO	**Ambohidratompo**	**21.39**	**281**	LR	LR	07 17 26.2	
	comp=Z,118nm,21.8s,baz=50,slow=28						
H04N2	**CROZET ISLANDS**	**25.91**	**209**	T	T	07 40 50.6	
	baz=40,slow=75,SNR=88						
H04N1	**CROZET ISLANDS**	**25.91**	**209**	T	T	07 40 50.3	
	baz=40,slow=75,SNR=95						
H04N3	**CROZET ISLANDS**	**25.92**	**209**	T	T	07 40 50.1	
	baz=40,slow=75,SNR=91						
MATP	**Matopo**	**37.85**	**268**	LR	LR	07 28 49.2	
	comp=Z,97nm,19.6s,baz=107,slow=34						
PSI	**Prapat**	**39.47**	**51**	LR	LR	07 26 23.0	
	comp=Z,127nm,21.9s,baz=83,slow=29						
BOSA	**Boshof**	**39.50**	**254**	LR	LR	07 29 11.1	
	comp=Z,157nm,18.4s,baz=66,slow=33						
LBTB	**Lobatse**	**39.60**	**260**	LR	LR	07 28 28.9	
	comp=Z,102nm,20.7s,baz=98,slow=32						
TSUM	**Tsumeb**	**48.10**	**266**	LR	LR	07 34 29.9	
	comp=Z,81nm,18.6s,baz=153,slow=34						
CMAR	**Chiang Mai Arr**	**51.45**	**37**	P	**P**	**07 16 41.2**	**-0.1**
	1.3nm,0.3s,baz=220,slow=7.6,SNR=4.6						
CMAR				LR	LR	07 36 02.6	
	comp=Z,65nm,19.6s,baz=195,slow=33						
	1.3nm,0.3s						
BRDH	**Bariadhala**	**51.56**	**27**	LR	LR	07 35 41.3	
	comp=Z,94nm,20.6s,baz=190,slow=33						
KAPI	**Kappang**	**52.09**	**77**	LR	LR	07 37 58.8	
	comp=Z,23nm,19.7s,baz=264,slow=35						
ASAR	**Alice Springs**	**58.48**	**104**	P	**P**	**07 17 32.5**	**+0.1**
	1.3nm,0.7s,baz=254,slow=6.2,SNR=19						
ASAR				LR	LR	07 39 38.7	
	comp=Z,65nm,20.0s,baz=297,slow=33						
	1.3nm,0.7s						
WRA	**Warramunga Arr**	**59.90**	**100**	P	**P**	**07 17 42.0**	**-0.2**
	1.5nm,0.8s,baz=253,slow=6.8,SNR=5.8						
	1.5nm,0.8s						
EIL	**Elat**	**63.08**	**327**	LR	LR	07 40 48.5	
	comp=Z,40nm,21.4s,baz=98,slow=32						
DAV	**Davao City (W)**	**63.09**	**68**	LR	LR	07 43 14.8	
	comp=Z,36nm,20.7s,baz=276,slow=34						
STKA	**Stephens Creek**	**63.13**	**115**	LR	LR	07 42 51.5	
	comp=Z,54nm,18.3s,baz=209,slow=34						
AAK	**Ala-Archa**	**66.86**	**4**	LR	LR	07 45 34.9	
	comp=Z,41nm,18.6s,baz=190,slow=34						
MKAR	**Makanchi Array**	**71.81**	**9**	P	**P**	**07 18 57.5**	**-0.8**
	1.6nm,0.8s,baz=190,slow=6.2,SNR=11						
	1.6nm,0.8s						
BRTR	**Keskin Array B**	**71.95**	**332**	P	**P**	**07 18 59.2**	**-0.2**
	0.4nm,0.4s,baz=87,slow=4.2,SNR=4.0						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**75.12**	**6**	P	**P**	**07 19 18.0**	**+0.4**
	1.4nm,0.8s,baz=201,slow=6.6,SNR=9.3						
	1.4nm,0.8s						
PMG	**Port Moresby**	**75.15**	**94**	LR	LR	07 51 20.6	
	comp=Z,62nm,18.6s,baz=152,slow=35						
BVAR	**Borovoye Array**	**77.09**	**1**	P	**P**	**07 19 29.1**	**+0.3**
	1.5nm,0.7s,baz=155,slow=7.7,SNR=7.4						
	1.5nm,0.7s						
DBIC	**Dimbokro**	**78.49**	**283**	LR	LR	07 52 33.0	
	comp=Z,82nm,18.3s,baz=178,slow=34						
ZALV	**Zalesovo Beam**	**79.15**	**9**	P	**P**	**07 19 40.3**	**+0.1**
	1.9nm,0.8s,baz=197,slow=4.6,SNR=9.2						
ZALV				LR	LR	07 52 54.5	
	comp=Z,35nm,18.2s,baz=319,slow=34						
	1.9nm,0.8s						
SONM	**Songino Array**	**79.23**	**24**	P	**P**	**07 19 41.3**	**+0.3**
	1.5nm,1.0s,baz=205,slow=6.6,SNR=5.7						
	1.5nm,1.0s						
JNU	**Nakatsue**	**81.88**	**48**	LR	LR	07 57 35.7	
	comp=Z,21nm,18.4s,baz=286,slow=37						
MJAR	**Matsushiro Arr**	**88.79**	**49**	LR	LR	08 01 02.4	
	comp=Z,30nm,18.3s,baz=240,slow=36						

IDC 10 07:21:35.1±20.0,**23°.95S**×**69°.87E,h0^{km},mb3.6**/4,**mbtmp3.6**/4,**Error ellipse: s-maj=672.6km s-min=35.8km az=51.0,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**16.41**	**9**	T	T	07 42 24.2	
	baz=190,slow=76,SNR=15						
H08S2	**Diego Garcia H**	**16.41**	**9**	T	T	07 42 24.8	
	baz=190,slow=76,SNR=12						
H08S3	**Diego Garcia H**	**16.42**	**9**	T	T	07 42 22.7	
	baz=190,slow=76,SNR=15						
H04N2	**CROZET ISLANDS**	**26.52**	**209**	T	T	07 54 41.0	
	baz=40,slow=75,SNR=32						
H04N1	**CROZET ISLANDS**	**26.53**	**209**	T	T	07 54 45.1	
	baz=40,slow=75,SNR=36						
H04N3	**CROZET ISLANDS**	**26.54**	**209**	T	T	07 54 40.3	
	baz=40,slow=75,SNR=31						
ASAR	**Alice Springs**	**58.10**	**104**	P	P	07 31 31.0	+0.3
	0.5nm,0.7s,baz=261,slow=6.3,SNR=5.2						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**59.48**	**100**	P	P	07 31 39.9	-0.5
	0.4nm,0.7s,baz=254,slow=6.8,SNR=1.5						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**71.30**	**9**	P	P	07 32 56.1	-0.2
	0.8nm,0.8s,baz=205,slow=6.4,SNR=5.5						
	0.8nm,0.8s						
KURBB	**Kurchatov Arra**	**74.64**	**6**	P	P	07 33 16.2	+0.3
	0.5nm,0.9s,baz=200,slow=6.8,SNR=4.5						
	0.5nm,0.9s						

IDC 10 08:08:39.4±28.0,**24°.33S**×**69°.08E,h0^{km},mb3.7**/3,**mbtmp3.7**/3,**MS3.3**/3,**Error ellipse: s-maj=919.2km s-min=43.3km az=52.0,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**16.91**	**12**	T	T	08 29 33.7	
	baz=190,slow=76,SNR=28						
H08S2	**Diego Garcia H**	**16.91**	**12**	T	T	08 29 35.9	
	baz=190,slow=76,SNR=19						
H08S3	**Diego Garcia H**	**16.92**	**12**	T	T	08 29 34.5	
	baz=190,slow=76,SNR=24						
H04N2	**CROZET ISLANDS**	**25.85**	**208**	T	T	08 41 47.2	
	baz=40,slow=74,SNR=41						
H04N1	**CROZET ISLANDS**	**25.85**	**208**	T	T	08 41 46.9	
	baz=40,slow=74,SNR=44						
H04N3	**CROZET ISLANDS**	**25.86**	**208**	T	T	08 41 47.5	
	baz=40,slow=74,SNR=47						
MATP	**Matopo**	**37.63**	**268**	LR	LR	08 29 54.5	
	comp=Z,39nm,18.9s,baz=109,slow=34						
BOSA	**Boshof**	**39.30**	**254**	LR	LR	08 29 58.4	
	comp=Z,46nm,18.9s,baz=26,slow=32						
LBTB	**Lobatse**	**39.39**	**260**	LR	LR	08 30 35.3	
	comp=Z,32nm,18.7s,baz=116,slow=33						
ASAR	**Alice Springs**	**58.72**	**104**	P	P	08 18 39.4	0.0
	0.6nm,0.7s,baz=254,slow=6.8,SNR=7.4						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**60.13**	**100**	P	P	08 18 49.1	-0.1
	0.7nm,0.7s,baz=255,slow=6.6,SNR=4.2						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**71.79**	**10**	P	P	08 20 03.6	0.0
	0.7nm,0.8s,baz=201,slow=7.7,SNR=4.4						
	0.7nm,0.8s						

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*MOS **10** 08:21:39.5±1.1, 30°.91N×50°.10E, h13^{km}, mb4.9/29, Error ellipse: s-maj=6.0km s-min=4.3km az=95.5*

*BJI **10** 08:21:40.0, 30°.90N×50°.10E, h10^{km}, mB5.1/14, mb4.8/49, Ms4.3/5, Ms7 4.1/6*

*NEIC **10** 08:21:41.2±2.2, 30°.87N±0°.07×50°.08E±0°.07, h10^{km}±1^{km}, mb4.8/106, Error ellipse: s-maj=12.1km s-min=9.4km az=193.0*

*THR **10** 08:21:41.8±0.0, 30°.95N×50°.09E, h12^{km}±6^{km}, ML4.6*

*IDC **10** 08:21:42.2±3.4, 30°.95N×50°.06E, h19^{km}±20^{km}, mb4.4/40, mbtmp4.5/44, ML4.1/4, MS3.5/10, Error ellipse: s-maj=14.2km s-min=10.1km az=0.0*

*TEH **10** 08:21:43.4, 30°.99N×50°.19E, h21^{km}±23^{km}*

*SGS **10** 08:21:43.3, 31°.17N×50°.12E, h18^{km}, Ml5.0*

*OMAN **10** 08:21:48.4±0.1, 30°.56N×50°.56E, h10^{km}, mb4.9/37, Error ellipse: s-maj=1.4km s-min=1.1km az=35.0*

*DSN **10** 08:21:48.3±2.1, 30°.36N×50°.25E, h15^{km}, ML4.2/14, Error ellipse: s-maj=27.3km s-min=10.8km az=5.0*

ISC 10 08:21:40.6±0.3,**30°.87N**±0°.03×**50°.12E**±0°.02,**h10^{km},n531,**σ**1^{s}95**/538,**mb4.8**/144,**MS3.6**/6,**23C-24D,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABEH	**Behbahan**	**0.29**	**157**	Pg	**Pn**	**08 21 51.1**	**+0.1**
ABEH				Sg	**Sb**	**08 21 58.4**	**+5.5**
KLNJ	**Kolanjah**	**1.27**	**83**	Pg	**Pb**	**08 22 05.4**	**+0.5**
KLNJ	**Kolanjah**	**1.27**	**83**	*e*Pg	**Pg**	**08 22 05.6**	**+0.5**
KLNJ				IAML		08 22 29.4	
	comp=Z,21µm,1.0s						
AHWZ	**Ahwaz**	**1.34**	**290**	Pg	**Pg**	**08 22 08.6**	**+2.2**
AHWZ				Sg	**Sg**	**08 22 28.0**	**+4.1**
ZNGN	**Zangian**	**1.39**	**27**	Pg	**Pb**	**08 22 07.2**	**+0.2**
IBRJ	**Brojen**	**1.42**	**43**	Pg	**Pb**	**08 22 07.7**	**+0.3**
JHBN	**Jahan bin**	**1.43**	**19**	Pg	**Pb**	**08 22 07.7**	**+0.1**
GTMR	**Gotvand**	**1.81**	**332**	*e*Pn	**Pb**	**08 22 13.9**	**0.0**
GTMR				IAML		08 22 43.1	
	comp=Z,11µm,1.0s						
KAZ2	**Kazeron-Fars-I**	**1.83**	**133**	Pn	**Pg**	**08 22 15.9**	**+0.1**
IPIR	**Pirpir**	**1.92**	**20**	Pg	**Pb**	**08 22 16.1**	**+0.1**
SHI	**Shiraz**	**2.41**	**120**	Pn	**Pb**	**08 22 23.7**	**-0.4**
DSBU	**Dashti - Bushe**	**2.69**	**158**	Pn	**Pb**	**08 22 28.0**	**-0.9**
IKLH	**Kolahrood**	**2.74**	**27**	Pn	**Pn**	**08 22 27.2**	**+2.3**
KHMZ	**Khomeyn**	**2.86**	**357**	*e*Pn	**Pn**	**08 22 29.3**	**+2.8**
KHMZ				IAML		08 23 13.7	
	comp=Z,1µm,1.0s						
KFJS2	**Khafji**	**2.93**	**211**	P	**Pb**	**08 22 31.7**	**-1.2**
KFJS2	**Khafji**	**2.93**	**211**	S	**Sb**	**08 23 08.3**	**-0.5**
NASN	**Na'in**	**2.99**	**49**	*e*Pn	**Pn**	**08 22 31.3**	**+2.9**
NASN				IAML		08 23 22.6	
	comp=Z,710nm,1.0s						
BDRS	**Dareh Seyedi**	**3.25**	**342**	Pn	**Pn**	**08 22 33.8**	**+1.9**
KFJS1	**Al Wafrah**	**3.28**	**216**	S	**Sn**	**08 23 15.4**	**+4.3**
KFJS1	**Al Wafrah**	**3.28**	**216**	P	**Pb**	**08 22 36.2**	**-2.7**
IDOB	**Doab**	**3.34**	**331**	Pn	**Pn**	**08 22 34.8**	**+1.7**
QIR1	**Qir**	**3.49**	**132**	Pn	**Pn**	**08 22 38.5**	**+3.5**
ASAO	**Ashtian**	**3.67**	**359**	*e*Pn	**Pn**	**08 22 40.4**	**+2.8**
ASAO				IAML		08 23 45.8	
	comp=Z,1µm,1.0s						
GHVR	**GHOM**	**3.73**	**15**	*e*Pn	**Pn**	**08 22 41.5**	**+3.1**
GHVR				IAML		08 23 20.6	
	comp=Z,880nm,1.0s						
JHRM	**Jahrom**	**3.82**	**127**	Pn	**Pn**	**08 22 43.7**	**+4.1**
ANAR	**Anarak**	**3.84**	**52**	Pn	**Pn**	**08 22 41.8**	**+1.9**
IMEH	**Mehriz**	**3.89**	**81**	Pn	**Pn**	**08 22 43.3**	**+2.6**
ISFB	**Sefidab**	**3.91**	**27**	Pn	**Pn**	**08 22 42.6**	**+1.9**
ICHK	**Chekchek**	**3.91**	**68**	Pn	**Pn**	**08 22 43.7**	**+2.8**
HAGD	**Aghdareh**	**4.03**	**348**	Pn	**Pn**	**08 22 44.0**	**+1.5**
IQOM	**Qom**	**4.04**	**11**	Pn	**Pn**	**08 22 44.7**	**+1.9**
IBZA	**Bozab**	**4.06**	**333**	Pn	**Pn**	**08 22 44.6**	**+1.5**
YZKH	**Yazd**	**4.11**	**67**	*e*Pn	**Pn**	**08 22 46.6**	**+3.1**
YZKH				IAML		08 23 38.1	
	comp=Z,480nm,1.0s						
WANAN	**Al Wanan**	**4.21**	**200**	S	**Sn**	**08 23 38.1**	**+4.0**
WANAN	**Al Wanan**	**4.21**	**200**	P	**Pn**	**08 22 48.4**	**+3.5**
KHL1	**Khalili_Fars**	**4.26**	**138**	Pn	**Pn**	**08 22 49.7**	**+4.2**
KCHF	**Cheshme Sefid,**	**4.27**	**323**	Pn	**Pn**	**08 22 47.9**	**+1.9**
IALM	**Almabolaq**	**4.30**	**338**	Pn	**Pn**	**08 22 48.0**	**+1.6**
IVRN	**Varamin**	**4.33**	**18**	Pn	**Pn**	**08 22 48.9**	**+2.3**
SNQR	**Sonqor, Kerman**	**4.49**	**333**	Pn	**Pn**	**08 22 50.6**	**+1.6**
IGHG	**Ghaleghazi**	**4.57**	**320**	Pn	**Pn**	**08 22 51.4**	**+1.5**
IBAF	**Bafgh**	**4.72**	**80**	Pn	**Pn**	**08 22 54.2**	**+2.1**
HGHA	**Hamedan- Ghaye**	**4.72**	**347**	Pn	**Pn**	**08 22 53.9**	**+1.8**
ARIRA	**AirJ**	**4.75**	**193**	S	**Sn**	**08 23 50.6**	**+3.3**
ARIRA	**AirJ**	**4.75**	**193**	P	**Pn**	**08 22 55.8**	**+3.6**
SNGE	**Sanandaj**	**4.81**	**332**	*e*Pn	**Pn**	**08 22 54.4**	**+1.1**
SNGE				IAML		08 24 34.7	
	comp=Z,6.4nm,1.0s						
QABG	**Abgarm-Qazvin**	**4.84**	**355**	Pn	**Pn**	**08 22 55.9**	**+2.1**
LAR1	**LAR**	**4.90**	**130**	Pn	**Pn**	**08 22 58.0**	**+3.5**
IDMV	**Damavand**	**4.96**	**18**	Pn	**Pn**	**08 22 57.1**	**+1.7**
DAMV	**Damavand**	**4.99**	**18**	*e*Pn	**Pn**	**08 22 57.8**	**+1.9**
DAMV				IAML		08 24 51.1	
	comp=Z,4.0nm,1.0s						
SMAN	**Sihmah**	**5.01**	**202**	P	Pg	08 23 34.4	+18
BOQSS		**5.03**	**188**	S	**Sn**	**08 23 58.1**	**+3.8**
BOQSS		**5.03**	**188**	P	**Pn**	**08 23 00.2**	**+4.1**
SHMA	**Al-Shehemyia**	**5.05**	**171**	P	**Pn**	**08 22 59.6**	**+3.2**
	SNR=53						
SHMA				P	Pb	08 22 59.8	-9.3
	SNR=53						
SHMA				S	**Sn**	**08 23 57.4**	**+2.6**
	SNR=6.8						
RQBS	**RQBS**	**5.06**	**227**	P	**Pn**	**08 22 59.2**	**+2.7**
THKV	**Tehran--Karaj**	**5.07**	**7**	*e*Pn	**Pn**	**08 22 59.0**	**+2.1**
THKV				IAML		08 24 34.8	
	comp=Z,160nm,1.0s						
ILAS	**Lasjerd**	**5.09**	**27**	Pn	**Pn**	**08 22 58.7**	**+1.5**
CHTH	**Charan**	**5.09**	**9**	*e*Pn	**Pn**	**08 22 59.8**	**+2.6**
CHTH				IAML		08 23 42.3	
	comp=Z,14nm,1.0s						
IFIR	**Firoozkooh**	**5.24**	**24**	Pn	**Pn**	**08 23 01.3**	**+2.0**
NHFOF	**Ain Dar Gosp**	**5.33**	**188**	P	**Pn**	**08 23 04.3**	**+4.0**
NHFOF	**Ain Dar Gosp**	**5.33**	**188**	S	**Sn**	**08 24 05.0**	**+3.2**
IGZV	**Ghazvin**	**5.50**	**1**	Pn	**Pn**	**08 23 04.4**	**+1.5**
KHGB	**Koh Gabri**	**5.50**	**94**	Pn	**Pn**	**08 23 05.2**	**+2.3**
ZRDN	**Zarand Kerman**	**5.51**	**87**	Pn	**Pn**	**08 23 05.4**	**+2.4**
MZPU	**Pul - Mazandar**	**5.68**	**12**	Pn	**Pn**	**08 23 07.8**	**+2.5**
KRBR	**Kerman**	**5.80**	**97**	*e*Pn	**Pn**	**08 23 11.2**	**+4.1**
KRBR				IAML		08 24 56.7	
	comp=Z,160nm,1.0s						
NGRK	**Negar Kerman**	**5.85**	**100**	Pn	**Pn**	**08 23 10.4**	**+2.7**
SHOFU	**Shofu**	**5.88**	**183**	S	**Sn**	**08 24 17.2**	**+1.9**
SHOFU	**Shofu**	**5.88**	**183**	P	**Pn**	**08 23 11.1**	**+3.3**
ZNJK	**Zanjan**	**5.91**	**349**	*e*Pn	**Pn**	**08 23 09.6**	**+1.2**
ZNJK				IAML		08 24 14.3	
	comp=Z,4.0nm,1.0s						
TPRV	**Parvadeh(Tabas**	**5.98**	**67**	Pn	**Pn**	**08 23 12.3**	**+3.0**
GIDE	**GILAN DEYLAMAN**	**6.04**	**358**	*e*Pn	**Pn**	**08 23 12.7**	**+2.5**
GIDE				IAML		08 25 17.5	
	comp=Z,380nm,1.0s						
ASYS		**6.06**	**238**	P	**Pn**	**08 23 11.9**	**+1.5**
IKIA	**Kiasar**	**6.10**	**28**	Pn	**Pn**	**08 23 13.4**	**+2.4**
SMRA	**Abu-Samra**	**6.13**	**174**	P	**Pn**	**08 23 14.8**	**+3.5**
	SNR=7.1						
SMRA				S	**Sn**	**08 24 22.5**	**+1.0**
TRNA	**Turayna**	**6.19**	**171**	P	**Pn**	**08 23 15.3**	**+3.2**
	SNR=79						
TRNA				S	**Sn**	**08 24 23.7**	**+0.8**
TRNA				S	Sb	08 24 24.0	-19
RMAH	**Rumah**	**6.20**	**208**	P	**Pn**	**08 23 14.7**	**+2.4**
MJMS	**Al Majmaah**	**6.21**	**220**	P	**Pn**	**08 23 14.6**	**+2.2**
TNSJ	**Nastanj**	**6.29**	**59**	Pn	**Pn**	**08 23 15.7**	**+2.1**
BNDS	**Bandar-Abbas**	**6.32**	**122**	*e*Pn	**Pn**	**08 23 17.4**	**+3.3**
BNDS				IAML		08 24 03.4	
	comp=Z,86nm,1.0s						
JRN	**Qarnain Island**	**6.38**	**157**	P	**Pn**	**08 23 17.2**	**+2.6**
JRN				S	**Sn**	**08 24 28.6**	**+1.0**
	SNR=5.7						
CHMN	**Cheshme madani**	**6.49**	**97**	Pn	**Pn**	**08 23 19.3**	**+2.8**
TKDS	**Koohdasht(Taba**	**6.53**	**63**	Pn	**Pn**	**08 23 19.0**	**+2.1**
TABS	**Tabas**	**6.54**	**63**	*e*Pn	**Pn**	**08 23 19.6**	**+2.6**
TABS				IAML		08 25 32.7	
	comp=Z,140nm,1.0s						
SRSL	**SARDASHT**	**6.61**	**325**	*e*Pn	**Pn**	**08 23 19.8**	**+1.8**
SRSL				IAML		08 24 46.0	
	comp=Z,230nm,1.0s						

BTHS		6.83	174	P	Pn	08 23 24.1	+3.2
SHBH2	SHBH2	6.83	171	P	Pn	08 23 23.7	+2.7
SLWR	Sila	6.92	168	P	Pn	08 23 24.9	+2.9
SLWR				S	Sn	08 24 41.0	+0.1
MAHB	Mahabad	6.93	329	Pn	Pn	08 23 24.6	+2.2
SHRO	Shahrood	7.09	42	ePn	Pn	08 23 27.5	+2.9
SHRO				IAML		08 24 22.2	
	comp=Z,3.1nm,1.0s						
TAPT	Tabas- Tapeh t	7.15	54	Pn	Pn	08 23 27.5	+2.2
SHME	Shamm	7.15	131	P	Pn	08 23 26.7	+1.4
	SNR=14						
SHME				S	Sn	08 24 43.7	-3.0
SHME	Shamm	7.15	131	i P	Pn	08 23 25.9	+0.6
	SNR=14						
UMQ	Umm Al-Quwin	7.23	136	P	Pn	08 23 28.1	+1.7
UMQ				S	Sn	08 24 46.7	-1.9
KHNJ	Kahnooj	7.23	112	Pn	Pn	08 23 28.7	+2.3
GHWR	Ruwais	7.30	160	P	Pn	08 23 30.0	+2.6
GHWR				S	Sn	08 24 49.6	-0.8
KHRJ	Al Kharj	7.33	198	P	Pn	08 23 34.6	+6.7
BANOM	Banah	7.34	131	P	Pn	08 23 29.2	+1.3
BANOM				S	Sn	08 24 49.3	-2.1
BANOM	Banah	7.34	131	i P	Pn	08 23 28.6	+0.7
	SNR=149						
KBAM	BAM	7.43	101	Pn	Pn	08 23 31.7	+2.4
SHBH1	SHBH1	7.43	170	P	Pn	08 23 31.3	+2.2
ITEG	Tejag	7.61	72	Pn	Pn	08 23 34.1	+2.4
AJN	Ajban	7.62	144	P	Pn	08 23 34.2	+2.4
AJN				S	Sn	08 24 56.0	-2.2
	SNR=6.1						
NAZ	Nazwa, Dubai	7.64	139	P	Pn	08 23 33.8	+1.8
	SNR=6.2						
NAZ				S	Sn	08 24 57.6	-1.1
	SNR=8.8						
NAZ	Nazwa, Dubai	7.64	139	i P	Pn	08 23 33.5	+1.5
	SNR=9.1						
MASF	Masafi	7.64	134	P	Pn	08 23 33.1	+1.0
	SNR=9.5						
MASF				S	Sn	08 24 55.9	-2.9
MSFE	Esma-Masafi	7.65	134	i P	Pn	08 23 32.9	+0.7
	SNR=10						
HTM02	HTM02	7.70	241	P	Pn	08 23 33.3	+0.4
HTM03	HTM03	7.72	242	P	Pn	08 23 33.8	+0.6
IKOO	Kooshah	7.73	76	Pn	Pn	08 23 36.5	+3.0
ASUD	Al Ashush, Dub	7.75	142	P	Pn	08 23 35.0	+1.6
ASUD				S	Sn	08 25 00.2	-1.1
ASUD	Al Ashush, Dub	7.75	142	i P	Pn	08 23 35.6	+2.2
	SNR=15						
QSMS	Sumairaa	7.75	239	P	Pn	08 23 34.1	+0.5
BSRN	Basiran	7.78	80	ePn	Pn	08 23 36.0	+2.0
BSRN				IAML		08 26 03.4	
	comp=Z,32nm,1.0s						
MDH	Madha	7.78	134	P	Pn	08 23 35.0	+1.0
	SNR=7.1						
MDH				S	Sn	08 24 58.5	-3.7
MDH	Madha	7.78	134	i P	Pn	08 23 34.6	+0.6
	SNR=7.1						
FAQ	Al Faqa, Dubai	7.79	140	P	Pn	08 23 36.3	+2.2
FAQ				S	Sn	08 25 01.2	-1.2
	SNR=10						
MZWR	Madinat Zayed	7.83	154	P	Pn	08 23 37.3	+2.7
MZWR				S	Sn	08 25 01.7	-1.7
IHRS	Heris	7.85	342	Pn	Pn	08 23 36.7	+1.6
DWDS	Al Duwadimi	7.85	218	P	Pn	08 23 36.0	+1.0
HTM04	HTM04	7.87	243	P	Pn	08 23 35.7	+0.5
HTM01	HTM01	7.87	240	P	Pn	08 23 35.6	+0.4
HTM05	HTM05	7.88	244	P	Pn	08 23 35.9	+0.5
AFRZ	Afriz	7.96	69	Pn	Pn	08 23 38.5	+2.0
UOSS	Minazif	7.99	136	P	Pn	08 23 37.4	+0.6
UOSS				S	Sn	08 25 03.7	-3.6
UOSS	Minazif	7.99	136		Pn	08 23 37.3	+0.6
HATD	Hatta, Dubai	8.04	137	P	Pn	08 23 39.3	+1.8
	SNR=8.5						
HATD				S	Sn	08 25 04.7	-3.7
HATD	Hatta, Dubai	8.04	137	i P	Pn	08 23 38.0	+0.5
	SNR=8.5						
HATD				S	Sn	08 25 04.0	-4.4
HTM06	HTM06	8.07	241	P	Pn	08 23 38.6	+0.6
ASHO	Ashiyiah	8.10	138	S	Sn	08 25 07.8	-2.3
ASHO	Ashiyiah	8.10	138	i P	Pn	08 23 39.1	+0.7
	SNR=28						
GRMI	Germi	8.13	348	ePn	Pn	08 23 40.8	+2.0
GRMI				IAML		08 24 05.2	
	comp=Z,15nm,0.7s						
MRVT	Maraveh tapeh	8.38	35	ePn	Pn	08 23 44.8	+2.6
MRVT				IAML		08 24 02.9	
	comp=Z,37nm,1.0s						
MZR	Muzera	8.39	158	P	Pn	08 23 44.6	+2.3
	SNR=22						
MZR				S	Sn	08 25 15.4	-1.8
MZR	Muzera	8.39	158	i P	Pn	08 23 44.1	+1.8
	SNR=22						
RAYN	Ar Rayn	8.39	210	P	Pn	08 23 44.1	+1.7
RAYN	Ar Rayn	8.39	210		Pn	08 23 43.0	+0.6
RAYN	Ar Rayn	8.39	210	P	Pn	08 23 42.8	+0.4
RAYN	Ar Rayn	8.39	210	P	Pn	08 23 43.2	+0.8
ALNE	Al Ain	8.43	142	P	Pn	08 23 44.4	+1.5
	SNR=18						
ALNE				S	Sn	08 25 16.1	-2.0
ALNE	Al Ain	8.43	142	i P	Pn	08 23 44.1	+1.2
	SNR=18						
SOHO	SOHO	8.80	138	P	Pn	08 23 48.3	+0.4
SOHO				S	Sn	08 25 25.0	-2.1
SOHO	SOHO	8.80	138	i P	Pn	08 23 47.8	-0.1
	SNR=11						
HIL03	Ash Shuqayq	8.92	248	P	Pn	08 23 50.1	+0.5
ISFR	Sfrayin	8.99	45	Pn	Pn	08 23 53.5	+2.8
BJDH	Asilah	9.01	223	P	Pn	08 23 50.1	-0.8
SHRT	Shahrakht	9.05	70	ePn	Pn	08 23 54.2	+2.8
SHRT				IAML_BB		08 24 52.7	
	comp=Z,370nm,1.0s						
BJRD	Bojnurd	9.10	40	ePn	Pn	08 23 55.0	+2.9
BJRD				IAML_BB		08 24 02.2	
	comp=Z,950nm,1.0s						
IAKL	Akhelmad	9.19	49	Pn	Pn	08 23 54.9	+1.4
UMZA	Um Al Zommool	9.29	150	P	Pn	08 23 56.9	+2.2
UMZA				S	Sn	08 25 35.4	-3.8
ARQ	Araqi	9.43	141	P	Pn	08 23 57.0	+0.5
	SNR=22						
ARQ				S	Sn	08 25 39.8	-2.8
ETH04	ETH04	9.47	246	P	Pn	08 23 57.7	+0.4
ETH05	ETH05	9.58	248	P	Pn	08 23 59.4	+0.7
HOQ	Hoqain	9.68	137	P	Pn	08 24 01.0	+1.0
	SNR=7.8						
HOQ				S	Sn	08 25 45.0	-3.7
ETH08	ETH08	9.69	247	P	Pn	08 24 01.5	+1.3
ETH01	ETH01	9.83	246	P	Pn	08 24 04.3	+2.1
ETH06	ETH06	9.88	247	P	Pn	08 24 03.3	+0.3
HRML	HRML	9.91	208	P	Pn	08 24 03.5	+0.3
ETH07	ETH07	10.11	246	P	Pn	08 24 06.7	+0.8
BIDO	Bidbid	10.21	134	P	Pn	08 24 07.0	-0.3
BIDO				S	Sn	08 25 58.2	-3.8
GNI	Garni	10.24	336	LR	LR	08 28 03.2	
	comp=Z,81nm,21.2s,baz=163,slow=38						
BSY	Bisya	10.27	140	P	Pn	08 24 09.0	+0.9
	SNR=41						
BSY				P	Pn	08 24 09.0	+0.9
	SNR=46						
BSY				S	Sn	08 25 58.9	-4.5
SMDO	Samad	10.51	136	P	Pn	08 24 12.1	+0.6
	SNR=23						
SMDO				S	Sn	08 26 04.8	-4.6
WSAR	Wadi Sarin	10.74	133	P	Pn	08 24 14.8	+0.3
	SNR=19						
WSAR				S	Sn	08 26 09.7	-5.0
AKT	Akhty	10.76	350	⇑iP	Pn	08 24 13.6	-1.2
HRA	Herat	10.81	68	Pn	Pn	08 24 18.5	+2.9
JMDO	Jabal Madar	11.07	138	P	Pn	08 24 20.0	+0.9
	SNR=22						
NGCH	Negor - Chabah	11.17	117	P	Pn	08 24 20.7	+0.4
	SNR=6.6						
NGCH				S	Sn	08 26 19.6	-5.7
DRN	Derbent	11.23	353	c iP	Pn	08 24 22.1	+1.0
DRN				pmax	pmax		
	comp=Z,30nm,0.7s						
SRVN	Saravan	11.28	105	i P	Pn	08 24 25.4	+3.4
SRVN				IAML		08 24 50.1	
	comp=Z,9.4nm,1.6s						
ASF	Jabal al Asfar	11.36	280	Pn	Pn	08 24 22.0	-1.0
	comp=Z,3.4nm,0.3s,baz=111,slow=3.4,SNR=12						
ASF				Sn	Sn	08 26 21.3	-8.7
	comp=Z,1.4nm,0.3s,baz=173,slow=5.2,SNR=3.5						
ASF				Lg	Lg	08 27 51.4	
	comp=Z,0.8nm,0.3s,baz=279,slow=18,SNR=3.3						
ASF				LR	LR	08 30 10.4	
	comp=Z,449nm,18.1s,baz=85,slow=45						
	comp=Z,7.1nm,0.2s						
WBK	Wadi Bani Khal	11.41	134	P	Pn	08 24 23.2	-0.5
	SNR=12						
JLN	Jalan Bani Buh	12.02	134	P	Pn	08 24 30.9	-1.2
	SNR=6.3						
KOPT	Kop Dagi	12.03	322	Pn	Pn	08 24 35.6	+3.3
MHTO	MHTO	12.11	143	P	Pn	08 24 33.5	+0.2
	SNR=37						
MHTO				S	Sn	08 26 42.2	-6.2
MAK	Makhachkala	12.25	351	eP	Pn	08 24 29.5	-5.5
MAK				eS	Sn	08 26 43.7	-7.8
MAK				pmax	pmax		
	comp=Z,130nm,1.2s						
MAK				MLR	MLR		
	comp=Z,319nm,6.0s						
DVE	Vedeno	12.48	346	⇑iP	Pn	08 24 40.9	+2.7
DVE				pmax	pmax		
	comp=Z,14nm,0.9s						
ARPR	Arapgir-MALATY	12.66	314		Pn	08 24 41.9	+1.0
MMAI	Mount Meron Ar	12.68	284	Pn	Pn	08 24 44.5	+3.4
	comp=Z,1.1nm,0.3s,baz=85,slow=16,SNR=2.6						
MMAI				Sn	Sn	08 26 56.5	-5.9
	comp=Z,3.0nm,0.3s,baz=102,slow=21,SNR=2.5						
MMAI				Lg	Lg	08 28 35.2	
	comp=Z,0.4nm,0.3s,baz=120,slow=32,SNR=1.5						
DOK	Doka	12.73	162	P	Pn	08 24 42.9	+1.1
	SNR=32						
DOK				S	Sn	08 26 57.3	-6.3
DQM	DQM	12.79	147	P	Pn	08 24 42.0	-0.5
	SNR=7.5						
DQM				S	Sn	08 26 58.9	-6.1
EIL	Elat	13.17	269	Pn	Pn	08 24 48.8	+1.1
	comp=Z,1.7nm,0.3s,baz=80,slow=6.8,SNR=8.2						
EIL				Sn	Sn	08 27 06.5	-7.7
	comp=Z,0.7nm,0.3s,baz=53,slow=18,SNR=0.9						
EIL				Lg	Lg	08 28 54.5	
	comp=Z,0.7nm,0.3s,baz=60,slow=20,SNR=2.6						
EIL				LR	LR	08 31 07.7	
	comp=Z,452nm,18.8s,baz=78,slow=43						
	comp=Z,3.6nm,0.4s						
WHFO	Wadi Hawf	13.32	165	P	Pn	08 24 49.9	+0.1
	SNR=48						
WHFO				S	Sn	08 27 11.5	-6.5
SHAO	Shalim	13.73	157	P	Pn	08 24 53.9	-1.6
	SNR=25						
SHAO				S	Sn	08 27 21.6	-6.6
ABTO	Aybut	13.77	167	P	Pn	08 24 55.2	-0.7
	SNR=15						
ABTO				S	Sn	08 27 22.8	-6.2
DMTO	DMTO	13.81	160	P	Pn	08 24 55.5	-1.1
	SNR=26						
DMTO				S	Sn	08 27 24.2	-5.9
KBZ	Khabaz	14.05	338	Pn	Pn	08 25 02.0	+2.3
	comp=Z,0.3nm,0.3s,baz=155,slow=8.7,SNR=16						
KBZ				LR	LR	08 30 53.3	
	comp=Z,244nm,18.1s,baz=152,slow=40						
	comp=Z,6.5nm,0.7s						
KBZ	Khabaz	14.05	338	⇑iP	Pn	08 25 01.9	+2.3
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SHA1	Shidzhatmaz	14.14	337	⇑iP	Pn	08 25 04.6	+3.5
BNN	Bunyan	14.15	308		Pn	08 25 02.0	+0.7
KIV	Kislovodsk	14.32	338		Pn	08 25 05.0	+1.5
KIV	Kislovodsk	14.32	338	eP	Pn	08 25 05.4	+1.9
KIV				pmax	pmax		
	comp=Z,35nm,1.1s						
KIV				MLR	MLR		
	comp=Z,72nm,13.0s						
KIV	Kislovodsk	14.32	338	P	Pn	08 25 04.0	+0.5
	comp=Z,34nm,1.3s						
TOKA	Tokat	14.55	314	Pn	Pn	08 25 08.6	+2.0
SOC	Sochi	15.14	330	eP	Pn	08 25 13.1	-1.3
SOC				eS	Sn	08 27 57.5	-4.6
SOC				pmax	pmax		
	comp=Z,22nm,0.9s						
SOC				MLR	MLR		
	comp=Z,105nm,11.0s						
KIRS	Kirsehir-Merke	15.61	306	⇓P	Pn	08 25 23.0	+2.2
BR104	Keskin Array S	16.07	308	P	Pn	08 25 26.7	0.0
	comp=Z,123nmcomp=Z,17nm,1.0s						
BR131	Keskin Array S	16.07	308	P	Pn	08 25 27.9	+1.0
	SNR=8.5						
BR131	Keskin Array S	16.07	308		Pn	08 25 27.9	+1.0
BR131	Keskin Array S	16.07	308	⇑iP	Pn	08 25 27.4	+0.6
BRTR	Keskin Array B	16.07	308	Pn	Pn	08 25 27.3	+0.4
	comp=Z,0.8nm,0.3s,baz=128,slow=13,SNR=32						
BRTR				LR	LR	08 32 11.6	
	comp=Z,96nm,20.2s,baz=116,slow=39						
	comp=Z,11nm,0.9s						
BRTR	Keskin Array B	16.07	308	i P	P	08 25 30.6	+0.4
BRTR				pmax	pmax		
	comp=Z,11nm,0.9s						
BR105	Keskin Array S	16.09	308	P	Pn	08 25 27.0	0.0
	comp=Z,132nmcomp=Z,19nm,1.0s						
BR106	Keskin Array S	16.09	308	P	Pn	08 25 27.2	+0.1
	comp=Z,113nmcomp=Z,16nm,0.9s						
SHAA	Shahritus	16.31	61		Pn	08 25 30.3	+0.5
SHAA				IAmb	IAmb	08 25 36.4	
	comp=Z,24nm,0.6s						
KBL	Kabul	16.34	72	P	Pn	08 25 26.1	-4.3
	SNR=7.2						
ILGA	Ilgaz	16.69	312	Pn	Pn	08 25 34.6	-0.2
ANTO	Ankara	16.72	307		Pn	08 25 36.1	+1.1
ANTO	Ankara	16.72	307	P	Pn	08 25 36.1	+1.1
ANTO				pmax	pmax		
	comp=Z,57nm,1.6s						
CHGR	Chuyangaron	17.45	58	P	P	08 25 46.6	+1.2
CHGR	Chuyangaron	17.45	58	P	P	08 25 46.6	+1.2
CHGR				pmax	pmax		
	comp=Z,38nm,0.9s						
MDUB	Mudurnu	18.08	307	P	P	08 25 53.6	+1.2
BORA	Eskisehir	18.35	305	P	P	08 25 55.9	+0.5
GAR	Garm	18.41	58	P	Pn	08 25 57.6	+1.5
MANEM	Manem	19.02	64	P	Pn	08 26 04.4	+0.8
MANEM				IAmb	IAmb	08 26 13.5	
	comp=Z,34nm,0.7s						
MANT	Manisa	19.27	299		Pn	08 26 06.9	+0.3
CHM	Chimkent	19.32	48	eP	P	08 26 06.1	+0.1
CHM	Chimkent	19.32	48	eP	P	08 26 06.0	+0.1
IUG	Iuzhnay	19.52	49	eP	P	08 26 08.4	+0.2
IUG	Iuzhnay	19.52	49	eP	P	08 26 08.4	+0.2
NIL	Nilore	19.75	76	P	P	08 26 11.8	+1.1
NIL	Nilore	19.75	76	P	P	08 26 11.8	+1.1
NIL				pmax	pmax		
	comp=Z,11nm,0.7s						
AB31	Akbulak array	19.81	19	P	P	08 26 10.6	-0.5
ABKAR	Akbulak array	19.81	19	P	P	08 26 10.8	-0.4
BRLS	Borolday	19.83	47	eP	P	08 26 09.5	-2.1
BRLS	Borolday	19.83	47	eP	P	08 26 09.4	-2.1
BALB	Balikesir	20.12	302	IAmb	IAmb	08 26 16.9	
	comp=Z,41nm,0.9s						
KK31	Karatay Array	20.30	47	P	P	08 26 17.1	+0.6
KK31				IAmb	IAmb	08 26 28.1	
	comp=Z,41nm,1.2s						
KK31	Karatay Array	20.30	47	P	P	08 26 17.2	+0.6
KK31				pmax	pmax		
	comp=Z,41nm,1.2s						
KKAR	Karatay Array	20.30	47	P	P	08 26 17.4	+0.8
KKAR	Karatay Array	20.30	47	P	P	08 26 17.4	+0.8
AKTO	Aktyubinsk	20.42	15	P	P	08 26 17.8	0.0
	comp=Z,11nm,0.7s,baz=202,slow=11,SNR=15						
	comp=Z,11nm,0.7s						
ARSB	Arslanbob	21.16	54	IAmb	IAmb	08 26 35.3	
	comp=Z,30nm,1.0s						
VRH	Novokhopyorsk	21.25	345	eP	P	08 26 25.5	-1.2
VRH				pmax	pmax		
	comp=Z,81nm,0.7s						
IDI	Anoyia	21.57	288	P	P	08 26 31.3	+0.9
	comp=Z,44nm,0.7s,baz=348,slow=3.4,SNR=18						
	comp=Z,44nm,0.7s						
IDI	Anoyia	21.57	288	P	P	08 26 31.3	+0.9
IDI				IAmb	IAmb	08 26 42.2	
	comp=Z,49nm,0.9s						
BELG	Belogornoye	21.58	356	P	P	08 26 29.4	-0.9
	comp=Z,39nm,0.6s,baz=297,slow=2.3,SNR=5.6						
	comp=Z,39nm,0.6s						
VORD	Divnogorie	21.63	341	eP	P	08 26 27.4	-3.4
VORD				pmax	pmax		
	comp=Z,20nm,1.0s						
JURR	Jurilovca	21.69	316	⇑P	P	08 26 31.6	+0.1
TIRR	Tirgusor	21.80	315	⇑P	P	08 26 33.1	+0.3
TIRR	Tirgusor	21.80	315	P	P	08 26 33.0	+0.3
VSR	Storozhevoye	21.89	341	eP	P	08 26 29.7	-3.9
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TLCR		21.95	317	⇑P	P	08 26 35.0	+0.6
TLCR		21.95	317	P	P	08 26 34.9	+0.6
TLBR	Topalu	22.07	314	⇓P	P	08 26 36.8	+1.2
VORR	Voronezh	22.29	342	eP	P	08 26 33.0	-4.9
VORR				pmax	pmax		
	comp=Z,254nm,0.4s						
RDO	Rodhopi	22.30	304	IAmb	IAmb	08 26 50.9	
	comp=Z,38nm,1.1s						
CFR	Carcaliu	22.35	316	⇑P	P	08 26 39.0	+0.3
CFR	Carcaliu	22.35	316	P	P	08 26 38.9	+0.3
RAZG	Razgrad	22.58	311	⇓P	P	08 26 41.9	+0.7
AAK	Ala-Archa	22.70	52	LR	LR	08 36 27.0	
	comp=Z,75nm,20.1s,baz=246,slow=39						
AAK	Ala-Archa	22.70	52	P	P	08 26 45.4	+2.8
AAK				IAmb	IAmb	08 26 58.5	
	comp=Z,30nm,1.1s						
AAK	Ala-Archa	22.70	52	⇓iP	P	08 26 45.3	+2.7
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KSH	Kashi	22.76	61	P	P	08 26 40.8	-2.4
KSH				sP	sP	08 26 49.6	+1.9
KSH				pmax	pmax		
	comp=Z,17nm,1.2s						
KSH				LR	LR		
	comp=Z,350nm,18.2s						
KSH				LR	LR		
	comp=Z,520nm,15.1s						
KSH				LR	LR		
	comp=Z,460nm,14.4s						
SGDS	Sogindy	23.13	50	eP	P	08 26 47.1	+0.1
LPSR	Galich'ya Gora	23.21	343	eP	P	08 26 45.9	-1.6
LPSR				pmax	pmax		
	comp=Z,44nm,1.0s						
BTLS	Baital	23.47	46	eP	P	08 26 50.6	+0.4
BTLS	Baital	23.47	46	eP	P	08 26 50.6	+0.4
VRI	Vrincioaia	23.55	316	⇓P	P	08 26 51.5	+0.4
VRI	Vrincioaia	23.55	316	P	P	08 26 51.5	+0.4
VRI	Vrincioaia	23.55	316	P	P	08 26 51.3	+0.2
	comp=Z,18nm,1.2s						
NEHR	Nehoiu	23.59	315	⇑P	P	08 26 52.7	+1.2
PLOR	Plostina	23.59	316	⇑P	P	08 26 52.6	+1.0
PLOR	Plostina	23.59	316	P	P	08 26 52.5	+1.0
BOOM	Boomskoye usch	23.64	53	IAmb	IAmb	08 26 56.4	
	comp=Z,16nm,0.7s						
PLVB	Pleven	23.76	309	⇓P	P	08 26 54.0	+0.9
MLR	Muntele Rosu	23.84	315	LR	LR	08 38 53.3	
	comp=Z,163nm,18.9s,baz=128,slow=43						
MLR	Muntele Rosu	23.84	315	P	P	08 26 56.0	+2.0
MLR				IAmb	IAmb	08 26 57.9	
	comp=Z,41nm,1.3s						
MLR	Muntele Rosu	23.84	315	⇓P	P	08 26 54.5	+0.5
MLR	Muntele Rosu	23.84	315	P	P	08 26 56.0	+2.0
MLR				pmax	pmax		
	comp=Z,41nm,1.3s						
MLR	Muntele Rosu	23.84	315	P	P	08 26 54.4	+0.4
	comp=Z,22nm,0.7s						
TESR	Tescani	23.94	317	⇓P	P	08 26 55.0	+0.2
TESR	Tescani	23.94	317	P	P	08 26 54.0	-0.8
	comp=Z,23nm,1.5s						
TURR	Turia	24.08	316	⇑P	P	08 26 56.9	+0.8
BOSR	Bodos	24.30	316	⇓P	P	08 26 59.0	+0.7
DOPR	Dopca	24.41	315	⇓P	P	08 27 00.1	+0.8
TNSS	Tian-Shan	24.53	53	eP	P	08 27 00.8	0.0
TNSS	Tian-Shan	24.53	53	eP	P	08 27 00.7	0.0
AAA	Alma-Ata	24.57	52	eP	P	08 27 01.2	+0.5
	comp=Z,12nm,0.4s						
AAA	Alma-Ata	24.57	52	eP	P	08 27 01.2	+0.5
AAA				pmax	pmax		
	comp=Z,12nm,0.4s						
ARR	Arges	24.59	313	⇑P	P	08 27 01.7	+0.7
MDOK	Medeo	24.64	53	eP	P	08 27 01.8	+0.2
MDOK	Medeo	24.64	53	eP	P	08 27 01.7	+0.2
TARG	Taragay, Kyrgy	24.70	56	IAmb	IAmb	08 27 13.4	
	comp=Z,13nm,0.8s						
AK07	Malin Array Si	25.10	328	P	P	08 27 03.9	-1.4
AK09	Malin Array Si	25.11	328	P	P	08 27 03.7	-1.7
MDB	Medias	25.11	315	⇑P	P	08 27 06.8	+1.2
MDB	Medias	25.11	315	P	P	08 27 06.7	+1.2
AK10	Malin Array Si	25.11	328	P	P	08 27 03.7	-1.7
AK06	Malin Array Si	25.13	328	P	P	08 27 04.9	-0.7
AK08	Malin Array Si	25.13	328	P	P	08 27 04.5	-1.1
AK05	Malin Array Si	25.15	328	P	P	08 27 05.3	-0.5
AK02	Malin Array Si	25.17	328	P	P	08 27 05.1	-0.9
LOT	Lotru	25.17	313	⇓P	P	08 27 06.8	+0.6
AKASG	Malin Array Be	25.20	328	P	P	08 27 04.8	-1.4
	comp=Z,4.4nm,0.5s,baz=135,slow=9.2,SNR=24						
	comp=Z,4.4nm,0.5s						
AKASG	Malin Array Be	25.20	328	P	P	08 27 05.4	-0.8
AKASG	Malin Array Be	25.20	328	i P	P	08 27 05.0	-1.2
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AKBB	Malin Array Si	25.20	328	P	P	08 27 04.7	-1.5
AKBB				IAmb	IAmb	08 27 12.9	
	comp=Z,18nm,0.5s						
AKBB	Malin Array Si	25.20	328	ceP	P	08 27 05.7	-0.5
AKBB	Malin Array Si	25.20	328	P	P	08 27 05.0	-1.2
KIEV	Kiev	25.20	328	P	P	08 27 05.0	-1.2
KIEV				IAmb	IAmb	08 27 12.9	
	comp=Z,15nm,0.5s						
KIEV	Kiev	25.20	328	⇑P	P	08 27 05.7	-0.5
KIEV	Kiev	25.20	328	P	P	08 27 05.7	-0.5
KMPD	K-Podol'skiy	25.20	321	P	P	08 27 05.8	-0.5
SRE	Strehaia	25.20	311	⇓P	P	08 27 07.3	+1.0
SRE	Strehaia	25.20	311	P	P	08 27 07.3	+1.0
BURAR	Bucovina Array	25.36	318	P	P	08 27 07.8	-0.1
BURAR				IAmb	IAmb	08 27 10.5	
	comp=Z,20nm,1.4s						
BURAR	Bucovina Array	25.36	318	⇓P	P	08 27 08.6	+0.7
BURAR	Bucovina Array	25.36	318	P	P	08 27 08.5	+0.7
LUBAR	Lubar, Ukraine	25.37	325	P	P	08 27 06.7	-1.1
SATY	Saty	25.54	54	eP	P	08 27 09.9	+0.3
SATY	Saty	25.54	54	eP	P	08 27 09.9	+0.3
MI30	MI30,Zelenitsa	25.71	327	P	P	08 27 09.3	-1.5
	comp=Z,66nm,0.6s						
GZR	Gura Zlata	25.78	312	⇓P	P	08 27 12.0	+0.4
GZR	Gura Zlata	25.78	312	P	P	08 27 12.0	+0.4
HERR	Herculane	25.80	311	⇓P	P	08 27 12.8	+1.0
KSV	Kosov	25.82	320	P	P	08 27 11.6	-0.4
UZB	Uzynbulak	26.00	54	eP	P	08 27 14.0	+0.2
	comp=Z,12nm,0.9s						
UZB	Uzynbulak	26.00	54	eP	P	08 27 14.0	+0.2
UZB				pmax	pmax		
	comp=Z,12nm,0.9s						
OBN	Obninsk	26.08	342	P	P	08 27 14.6	+0.4
OBN	Obninsk	26.08	342	⇓iP	P	08 27 12.6	-1.6
OBN				i		08 27 22.1	
OBN				i		08 27 50.8	
OBN				i		08 30 41.6	
OBN				pmax	pmax		
	comp=Z,32nm,0.8s						
MARR	Marisel-Cluj	26.13	315	⇓P	P	08 27 16.0	+1.1
ARTI	Arti	26.16	10	LR	LR	08 40 11.6	
	comp=Z,165nm,18.4s,baz=214,slow=42						
ARTI	Arti	26.16	10	P	P	08 27 14.7	-0.3
ARTI				IAmb	IAmb	08 27 32.3	
	comp=Z,20nm,0.7s						
ARTI	Arti	26.16	10	d iP	P	08 27 14.6	-0.3
ARTI						08 27 53.4	
ARTI				S	S	08 31 47.0	+0.5
ARTI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MDVR	Moldovita	26.23	310	⇑P	P	08 27 16.5	+0.7
SHLS	Shalkode	26.30	54	eP	P	08 27 19.4	+2.8
SHLS	Shalkode	26.30	54	eP	P	08 27 19.3	+2.8
MOS	Moscow	26.38	344	eP	P	08 27 15.5	-1.4
MOS				e		08 27 57.3	
MOS				pmax	pmax		
	comp=Z,70nm,1.4s						
BORK	Borovoye	26.59	28	P	P	08 27 18.9	+0.1
BORK	Borovoye	26.59	28	⇓iP	P	08 27 19.7	+0.8
BORK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BVAR	Borovoye Array	26.61	28	P	P	08 27 19.4	+0.4
	comp=Z,12nm,0.5s,baz=227,slow=7.1,SNR=52						
BVAR				PcP	PcP	08 30 43.0	+0.1
	comp=Z,3.0nm,0.8s,baz=230,slow=3.7,SNR=4.1						
BVAR				LR	LR	08 39 43.5	
	comp=Z,180nm,20.0s,baz=222,slow=41						
	comp=Z,12nm,0.5s						
SIRR	Siria	26.86	313	⇓P	P	08 27 22.2	+0.9
RNPP5	Staryi Chortor	27.12	326	P	P	08 27 22.8	-0.8
KIRV	Kirov	27.72	359	⇓iP	P	08 27 28.6	-0.2
STHS	Stebnicka Huta	28.55	319	eP	P	08 27 34.7	-1.8

STHS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
STHS	Stebnicka Huta	28.55	319	eP	P	08 27 34.7	-1.8
KURBB	Kurchatov Arra	28.92	39	P	P	08 27 40.9	+1.2
	comp=Z,6.5nm,0.8s,baz=241,slow=9.5,SNR=37						
	comp=Z,6.5nm,0.8s						
KURK	Kurchatov	29.02	39	P	P	08 27 41.5	+1.0
KURK				IAmb	IAmb	08 27 43.1	
	comp=Z,11nm,0.8s						
KURK	Kurchatov	29.02	39	⇓iP	P	08 27 42.0	+1.5
KURK				pmax	pmax		
	comp=Z,12nm,0.9s						
NACGM	Naroch	29.22	332	eP	P	08 27 43.4	+1.1
MAKZ	Makanchi	29.23	48	P	P	08 27 43.3	+0.8
MAKZ	Makanchi	29.23	48	P	P	08 27 43.3	+0.8
MAKZ				pmax	pmax		
	comp=Z,15nm,1.8s						
MK31	Makanchi Array	29.42	48	c iP	P	08 27 45.2	+0.9
MKAR	Makanchi Array	29.42	48	P	P	08 27 45.5	+1.3
	comp=Z,3.6nm,0.6s,baz=239,slow=9.3,SNR=36						
	comp=Z,3.6nm,0.6s						
MPLH	Magyarpolny	29.82	312	P	P	08 27 48.0	+0.3
	comp=Z,41nm,0.8s						
MPLH				pP	pP	08 27 51.5	+0.6
	comp=Z,41nm,0.8s						
MODS	Modra-Piesok	30.44	314	eP	P	08 27 53.5	+0.3
MODS				pmax	pmax		
	comp=Z,18nm,1.3s						
MODS	Modra-Piesok	30.44	314	eP	P	08 27 53.5	+0.3
STEB	Steborice	30.79	318	eP	P	08 27 57.3	+1.0
RONA	Rosalia, Austr	30.80	313	i P	P	08 27 57.4	+1.0
	comp=Z,7.0nm,0.8s						
KLMR	Klimovskoe	30.80	350	eP	P	08 27 54.1	-2.1
KLMR				pmax	pmax		
	comp=Z,27nm,1.4s						
MORC	Moravsky Berou	30.85	317	eP	P	08 27 56.3	-0.6
ARSA	Arzberg	31.13	312	i P	P	08 27 59.6	+0.2
	comp=Z,8.1nm,1.0s						
CONA	Conrad Observa	31.15	313	i P	P	08 27 59.6	+0.1
	comp=Z,10.0nm,0.9s						
VRAC	Vranov	31.22	316	P	P	08 28 00.3	+0.2
	comp=Z,1.7nm,0.5s,baz=124,slow=15,SNR=1.7						
	comp=Z,1.7nm,0.5s						
KRUC	Moravsky	31.24	315	eP	P	08 28 00.3	0.0
ZSN	Zaisan	31.30	48	eP	P	08 28 01.3	+0.5
ZSN	Zaisan	31.30	48	eP	P	08 28 01.3	+0.5
DPC	Dobruska-Polom	31.81	317	eP	P	08 28 06.6	+1.3
DPC	Dobruska-Polom	31.81	317	eP	P	08 28 06.6	+1.3
CHVC	Chvalec	32.06	318	eP	P	08 28 07.4	-0.1
CHVC	Chvalec	32.06	318	eP	P	08 28 07.4	-0.1
MOA	Molln	32.13	312	i P	P	08 28 08.3	+0.1
	comp=Z,12nm,0.9s						
WMQ	Urumqi	32.27	56	eP	P	08 28 12.4	+2.9
CKRC	Cesky Krumlov	32.43	314	eP	P	08 28 16.1	+5.3
CKRC	Cesky Krumlov	32.43	314	eP	P	08 28 16.1	+5.3
BIOA	Bad Ischl, Aus	32.49	312	i P	P	08 28 11.1	-0.2
	comp=Z,9.1nm,0.6s						
KBA	Koelnbreinsper	32.50	310	i P	P	08 28 11.4	-0.1
	comp=Z,18nm,0.8s						
ZVC	Zvikov	32.72	315	eP	P	08 28 13.2	-0.1
GERES	GERESS Array B	32.82	314	P	P	08 28 13.7	-0.6
	comp=Z,1.2nm,0.7s,baz=102,slow=9.7,SNR=6.4						
	comp=Z,1.2nm,0.7s						
ABTA	Abfaltersbach	32.95	310	eP	P	08 28 15.4	-0.1
	comp=Z,9.7nm,1.3s						
KHC	Kasperske Hory	32.99	314	eP	P	08 28 20.9	+5.2
KHC	Kasperske Hory	32.99	314	eP	P	08 28 15.5	-0.2
KHC				ex	x	08 28 20.9	
LESA	Schwarzleotal	33.03	311	i P	P	08 28 15.8	-0.3
	comp=Z,8.5nm,0.5s						
WTTA	Wattenberg	33.67	310	eP	P	08 28 21.4	-0.3
	comp=Z,13nm,0.7s						
WATA	Walderalm	33.73	310	eP	P	08 28 21.3	-0.9
	comp=Z,28nm,1.3s						
ZAA0	Zalesovo Array	33.93	37		P	08 28 24.1	+0.3
ZAA0				IAmb	IAmb	08 28 25.1	
	comp=Z,7.0nm,0.6s						
ZALV	Zalesovo Beam	33.93	37	P	P	08 28 23.8	0.0
	comp=Z,6.4nm,0.6s,baz=252,slow=9.7,SNR=19						
	comp=Z,6.4nm,0.6s						
ZALV	Zalesovo Beam	33.93	37	P	P	08 28 24.4	+0.7
ZALV	Zalesovo Beam	33.93	37	i P	P	08 28 24.0	+0.2
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SQTA	Sankt Quirin	33.94	310	i P	P	08 28 23.5	-0.6
	comp=Z,11nm,0.5s						
MOTA	Moosalm	34.04	310	i P	P	08 28 23.8	-1.2
	comp=Z,10nm,0.7s						
CLL	Collm	34.12	318	eP	P	08 28 26.0	+0.6
CLL	Collm	34.12	318	eP	P	08 28 26.0	+0.6
FETA	Feichten	34.21	309	i P	P	08 28 24.8	-1.6
	comp=Z,7.1nm,0.7s						
RETA	Reutte	34.30	310	i P	P	08 28 26.1	-1.0
	comp=Z,6.7nm,0.5s						
FINES	FINESS Array B	34.40	340	P	P	08 28 26.8	-0.9
	comp=Z,7.6nm,0.7s,baz=142,slow=9.3,SNR=26						
	comp=Z,7.6nm,0.7s						
DAVOX	Davos/Dischmat	34.72	309	P	P	08 28 30.4	-0.4
	comp=Z,3.8nm,0.6s,baz=122,slow=21,SNR=5.4						
	comp=Z,3.8nm,0.6s						
DAVA	Damuels	34.83	310	i P	P	08 28 31.2	-0.6
	comp=Z,20nm,0.5s						
MBAR	Mbarara	36.32	214	LR	LR	08 43 17.9	
	comp=Z,30nm,19.2s,baz=26,slow=36						
MBAR	Mbarara	36.32	214	ceP	P	08 28 48.1	+3.2
MBAR				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ECH	Echery	36.83	311	IAmb	IAmb	08 29 04.1	
	comp=Z,15nm,1.3s						
SHL	Shillong	37.02	88	P	P	08 28 50.6	-0.3
SHL				IAmb	IAmb	08 28 59.0	
	comp=Z,14nm,1.0s						
SHL	Shillong	37.02	88	P	P	08 28 50.6	-0.3
SHL				pmax	pmax		
	comp=Z,14nm,1.0s						
GOMU	GeErMu	37.38	70	P	P	08 28 54.5	+0.4
GOMU				S	S	08 34 41.1	-1.3
GOMU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HFS	Hagfors	37.97	331	P	P	08 28 57.6	-0.7
	comp=Z,9.2nm,0.7s,baz=128,slow=9.6,SNR=17						
	comp=Z,9.2nm,0.7s						
NB2	NORSAR Subarra	39.49	331	P	P	08 29 09.4	-1.7
	comp=Z,4.6nm,0.7s,baz=122,slow=8.6						
NOA	NORSAR Array B	39.49	331	P	P	08 29 09.6	-1.5
	comp=Z,2.5nm,0.7s,baz=122,slow=8.3,SNR=9.6						
	comp=Z,2.5nm,0.7s						
GTA	Gaotai	41.09	64	eP	P	08 29 25.8	+1.1
GTA				sP	sP	08 29 34.1	+4.7
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ARCES	ARCESS Array B	41.16	347	P	P	08 29 24.2	-0.5
	comp=Z,4.1nm,0.9s,baz=137,slow=7.5,SNR=6.7						
	comp=Z,4.1nm,0.9s						
NRIK	Noril'sk	43.98	18	P	P	08 29 46.4	-1.2
	comp=Z,3.5nm,0.8s,baz=219,slow=8.8,SNR=6.3						
NRIK				PcP	PcP	08 31 34.1	+1.0
	comp=Z,1.7nm,0.5s,baz=154,slow=3.1,SNR=3.6						
	comp=Z,3.5nm,0.8s						
NRIK	Noril'sk	43.98	18	P	P	08 29 47.2	-0.4
NRIK	Noril'sk	43.98	18	⇑iP	P	08 29 48.0	+0.4
ESDC	Sonseca Array	44.44	297	P	P	08 29 51.4	-0.5
	comp=Z,1.5nm,0.6s,baz=78,slow=8.5,SNR=10						
	comp=Z,1.5nm,0.6s						
ESDC	Sonseca Array	44.44	297	IAmb	IAmb	08 29 58.3	
	comp=Z,5.6nm,1.5s						
EKA	Eskdalemuir Ar	44.54	319	P	P	08 29 51.5	-0.8
	comp=Z,1.2nm,0.6s,baz=98,slow=10,SNR=4.5						
	comp=Z,1.2nm,0.6s						
LZDM	Lanzhou Array	44.55	69	P	P	08 29 54.1	+1.0
	comp=Z,1.8nm,0.3s,baz=253,slow=10,SNR=4.1						
	comp=Z,1.8nm,0.3s						
LZH	Lanzhou	44.65	68	eP	P	08 29 55.4	+1.7
LZH				pP	sP	08 30 00.7	+2.4
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
PZH	PanZhiHua	45.17	82	P	P	08 29 59.2	+1.3
CHTO	Chiang Mai	45.58	93	P	P	08 30 00.6	-0.5
CHTO				IAmb	IAmb	08 30 11.7	
	comp=Z,13nm,1.0s						
CHTO	Chiang Mai	45.58	93	P	P	08 30 00.6	-0.5
CHTO	Chiang Mai	45.58	93	P	P	08 30 00.6	-0.5
CHTO				pmax	pmax		
	comp=Z,13nm,1.0s						
SONM	Songino Array	45.66	52	P	P	08 30 02.4	+0.9
	comp=Z,1.9nm,0.7s,baz=276,slow=8.4,SNR=9.3						
	comp=Z,1.9nm,0.7s						
SONM	Songino Array	45.66	52	P	P	08 30 01.4	-0.1
CMAR	Chiang Mai Arr	45.73	94	P	P	08 30 02.8	+0.4
	comp=Z,3.4nm,0.8s,baz=295,slow=8.1,SNR=20						
CMAR				PcP	PcP	08 31 40.1	0.0
	comp=Z,1.4nm,0.3s,baz=292,slow=4.1,SNR=4.1						
	comp=Z,3.4nm,0.8s						
CMAR	Chiang Mai Arr	45.73	94	i P	P	08 30 03.0	+0.7
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ULN	Ulaanbaatar	46.10	52	P	P	08 30 05.3	+0.2
ULN				IAmb	IAmb	08 30 07.0	
	comp=Z,9.6nm,0.9s						
ULN	Ulaanbaatar	46.10	52	P	P	08 30 05.3	+0.2
ULN	Ulaanbaatar	46.10	52	⇑iP	P	08 30 06.0	+0.9
ULN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PBRG	Braganca	46.33	300	eP	P	08 30 07.1	+0.3
KMI	Kunming	46.47	83	P	P	08 30 09.0	+0.7
KMI				pmax	pmax		
	comp=Z,18nm,0.7s						
MVO	Moncorvo	46.61	299	eP	P	08 30 10.1	+1.0
PBAR	Barrancos	47.02	295	eP	P	08 30 12.3	+0.1
PBAR				i IAmb	IAmb	08 30 22.7	
	comp=Z,19nm,2.8s						
MTE	Manteigas	47.09	298	eP	P	08 30 13.9	+1.2
MTE				i IAmb	IAmb	08 30 28.8	
	comp=Z,43nm,2.4s						
PMRV	Marv??o	47.10	297	eP	P	08 30 13.5	+0.6
PMRV				i IAmb	IAmb	08 30 17.0	
	comp=Z,22nm,1.7s						
PCBR	Castelo Branco	47.11	297	eP	P	08 30 14.0	+1.1
PVRL	Vila Real	47.11	299	eP	P	08 30 14.0	+1.0
POLO	Lamas de Olo	47.16	300	eP	P	08 30 14.3	+1.0
POLO				i IAmb	IAmb	08 30 29.8	
	comp=Z,14nm,1.6s						
PCAB	Cabril	47.30	300	eP	P	08 30 15.5	+1.2
PVIS	Viseu	47.31	299	eP	P	08 30 15.7	+1.2
PGAV	Gavieira, Arco	47.45	300	eP	P	08 30 16.8	+1.2
PGAV				i IAmb	IAmb	08 30 27.9	
	comp=Z,50nm,2.0s						
PVAQ	Vaqueiros	47.67	294	eP	P	08 30 16.8	-0.5
PBEJ	Beja	47.69	295	eP	P	08 30 18.0	+0.6
TORD	Torodi Ar. Bea	47.84	259	P	P	08 30 18.8	0.0
	comp=Z,2.8nm,0.4s,baz=57,slow=9.8,SNR=5.3						
	comp=Z,2.8nm,0.4s						
TORD	Torodi Ar. Bea	47.84	259	IAmb	IAmb	08 30 26.0	
	comp=Z,4.0nm,0.8s						
PCAS	Casmilo, Conde	47.86	298	eP	P	08 30 19.9	+1.2
PCAS				i IAmb	IAmb	08 30 28.9	
	comp=Z,40nm,1.6s						
PBDV	Barranco-do-Ve	47.87	294	eP	P	08 30 16.1	-2.8
MOE	Montemor	47.98	296	eP	P	08 30 23.4	+3.8
BTO	Baotou	48.75	61	eP	P	08 30 25.1	-0.6
BTO				sP	sP	08 30 32.8	+2.4
BTO				PP	PP	08 32 24.8	+6.1
BTO				S	S	08 37 27.3	-1.3
BTO				pmax	pmax		
	comp=Z,35nm,0.9s						
BTO				pmax	pmax		
	comp=Z,98nm,4.1s						
XAN	Xi'an	49.13	70	⇑P	P	08 30 28.9	+0.3
XAN				pP	pP	08 30 33.1	+1.1
XAN				pmax	pmax		
	comp=Z,22nm,0.8s						
XAN				pmax	pmax		
	comp=Z,230nm,5.4s						
SPITS	Spitsbergen Ar	49.68	351	P	P	08 30 32.1	0.0
	comp=Z,4.0nm,0.5s,baz=144,slow=7.2,SNR=12						
	comp=Z,4.0nm,0.5s						
HHC	Hu-ho-hao-te	49.88	61	eP	P	08 30 34.8	+0.5
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,100nm,6.1s						
LYN	LuoYang	51.86	68	P	P	08 30 50.8	+1.6
LYN				pmax	pmax		
	comp=Z,33nm,1.0s						
HILR	Hailar Array B	54.38	49	P	P	08 31 08.6	+0.9
	comp=Z,80nm,1.2s,baz=264,slow=6.7,SNR=3.4						
	comp=Z,80nm,1.2s						
WHN	Wuhan	54.50	73	P	P	08 31 09.1	+0.4
TIA	Tai'an	55.11	65	P	P	08 31 13.7	+0.6
TIA				pmax	pmax		
	comp=Z,18nm,1.0s						
DBIC	Dimbokro	56.69	257	P	P	08 31 24.5	-0.1
	comp=Z,7.4nm,0.9s,baz=70,slow=6.3,SNR=5.4						
	comp=Z,7.4nm,0.9s						
DBIC	Dimbokro	56.69	257	IAmb	IAmb	08 31 31.1	
	comp=Z,18nm,1.2s						
TIXI	Tiksi	57.49	22	P	P	08 31 28.8	-0.6
	comp=Z,2.8nm,0.7s,baz=330,slow=6.5,SNR=2.1						
	comp=Z,2.8nm,0.7s						
TIXI	Tiksi	57.49	22	P	P	08 31 28.5	-0.9
TIXI	Tiksi	57.49	22	⇓iP	P	08 31 29.2	-0.2
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NJ2	Nanjing	57.69	69	eP	P	08 31 31.7	+0.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZEA	Zeya	58.37	43	eP	P	08 31 37.2	+1.3
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YAK	Yakutsk	58.42	33	P	P	08 31 35.4	-0.7
	comp=Z,17nm,0.4s,baz=216,slow=0.9,SNR=4.2						
	comp=Z,17nm,0.4s						
YAK	Yakutsk	58.42	33	P	P	08 31 35.3	-0.8
YAK	Yakutsk	58.42	33	eP	P	08 31 34.7	-1.4
YAK				e*PP	pP	08 31 38.0	-1.5
YAK				e		08 32 24.9	
YAK				e		08 33 43.0	
YAK				ePPP	PPP	08 35 04.6	
YAK				eS	S	08 39 39.3	+0.5
YAK				e*SS	sS	08 39 44.8	+0.1
YAK				e		08 41 28.8	
YAK				eSS	SS	08 43 34.3	+3.8
YAK				pmax	pmax		
	comp=Z,29nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,188nm,5.2s						
YAK				pmax	pmax		
	comp=N,101nm,4.2s						
YAK				pmax	pmax		
	comp=E,56nm,3.5s						
YAK				smax	smax		
	comp=E,88nm,4.1s						
YAK				smax	smax		
	comp=N,84nm,3.6s						
HEH	HeiHe	59.14	47	eP	P	08 31 41.3	-0.1
HEH				pmax	pmax		
	comp=N,24nm,0.8s						
HEH				pmax	pmax		
	comp=N,150nm,5.7s						
CN2	Changchun	59.35	55	P	P	08 31 41.8	-1.1
CN2				pmax	pmax		
	comp=N,10.0nm,0.7s						
BNX	BinXian	60.20	52	⇓P	P	08 31 47.8	-0.9
BNX				pmax	pmax		
	comp=N,9.0nm,1.0s						
LBTB	Lobatse	60.33	206	P	P	08 31 51.6	+1.8
LBTB				IAmb	IAmb	08 31 57.8	
	comp=Z,9.1nm,1.0s						
LBTB	Lobatse	60.33	206	P	P	08 31 51.6	+1.8
LBTB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSAR	Wonju Array Be	62.99	61	P	P	08 32 06.3	-1.4
KSAR	Wonju Array Be	62.99	61	P	P	08 32 06.3	-1.4
KSRS	Korea Array	63.02	61	P	P	08 32 07.8	-0.1
	comp=Z,5.9nm,0.6s,baz=282,slow=6.7,SNR=26						
	comp=Z,5.9nm,0.6s						
BOSA	Boshof	63.73	204	P	P	08 32 13.5	+0.9
	comp=Z,3.9nm,0.8s,baz=26,slow=6.0,SNR=7.1						
	comp=Z,3.9nm,0.8s						
BOSA	Boshof	63.73	204	P	P	08 32 13.8	+1.2
BOSA	Boshof	63.73	204	P	P	08 32 13.8	+1.2
BOSA				pmax	pmax		
	comp=Z,28nm,1.6s						
USRK	Ussuriysk Ar.	63.76	53	P	P	08 32 11.8	-0.8
	comp=Z,4.7nm,0.8s,baz=300,slow=4.6,SNR=5.3						
	comp=Z,4.7nm,0.8s						
SEY	Seymchan	68.26	29	eP	P	08 32 41.2	-0.1
SEY				e		08 32 51.1	
SEY				pmax	pmax		
	comp=Z,14nm,0.9s						
BILL	Bilibino	70.70	21	P	P	08 32 56.6	+0.3
BILL				IAmb	IAmb	08 32 57.6	
	comp=Z,9.1nm,0.8s						
MJAR	Matsushiro Arr	70.99	58	P	P	08 32 58.2	-0.5
	comp=Z,1.4nm,0.7s,baz=312,slow=9.1,SNR=4.0						
	comp=Z,1.4nm,0.7s						
MJAR	Matsushiro Arr	70.99	58	IAmb	IAmb	08 33 28.9	
	comp=Z,14nm,1.9s						
FRB	Frobisher Bay	74.11	336	P	P	08 33 16.4	-0.3
	comp=Z,15nm,0.8s,baz=87,slow=7.0,SNR=3.7						
	comp=Z,15nm,0.8s						
PETK	Petropavlovsk-	75.48	36	P	P	08 33 23.7	-1.1
	comp=Z,4.0nm,1.1s,baz=299,slow=9.1,SNR=1.4						
	comp=Z,4.0nm,1.1s						
A36M	Sachs Harbour	77.37	359		P	08 33 34.6	-0.6
C23K	Itkillik River	78.46	7	IAmb	IAmb	08 33 43.2	
	comp=Z,11nm,0.8s						
D19K	Kuna River	78.74	10	IAmb	IAmb	08 33 44.0	
	comp=Z,8.9nm,0.8s						
D20K	Etivluk River	78.76	10	IAmb	IAmb	08 33 49.5	
	comp=Z,21nm,1.5s						
SCHQ	Schefferville	78.99	328	P	P	08 33 44.1	-0.4
	comp=Z,4.5nm,0.8s,baz=104,slow=4.2,SNR=6.0						
	comp=Z,4.5nm,0.8s						
D22K	Ayikyak River	79.13	8	IAmb	IAmb	08 33 46.6	
	comp=Z,15nm,0.8s						
D23K	Nanushuk River	79.28	7	IAmb	IAmb	08 33 47.8	
	comp=Z,9.9nm,0.9s						
E18K	Tukpahlearik C	79.31	12	IAmb	IAmb	08 33 46.8	
	comp=Z,11nm,0.8s						
D25K	Kavik River	79.37	6	IAmb	IAmb	08 33 47.8	
	comp=Z,9.7nm,1.1s						
E21K	Killik River	79.38	9	IAmb	IAmb	08 33 53.2	
	comp=Z,8.5nm,0.7s						
TOLK	Toolik Lake Re	79.72	7	IAmb	IAmb	08 33 49.8	
	comp=Z,16nm,0.8s						
E19K	Redstone River	79.83	10	IAmb	IAmb	08 33 49.6	
	comp=Z,10nm,0.8s						
E22K	Anaktuvuk Pass	79.94	8	IAmb	IAmb	08 33 50.6	
	comp=Z,8.2nm,0.8s						
C36M	Paulatuk	79.99	358	P	P	08 33 49.0	-0.7
E23K	Chandalar	80.27	7	IAmb	IAmb	08 33 59.1	
	comp=Z,8.6nm,0.8s						
F19K	Shaleruckik Mo	80.31	11	IAmb	IAmb	08 33 58.0	
	comp=Z,17nm,0.8s						
E24K	Your Creek	80.38	7	IAmb	IAmb	08 33 53.9	
	comp=Z,18nm,1.4s						
F20K	Avaraart Lake	80.43	10	IAmb	IAmb	08 33 52.8	
	comp=Z,9.0nm,0.8s						
E28M	Babbage River	80.56	4	IAmb	IAmb	08 34 00.6	
	comp=Z,28nm,1.9s						
F21K	Alatna River	80.59	9	IAmb	IAmb	08 33 54.2	
	comp=Z,7.9nm,0.8s						
E25K	Arctic Village	80.61	6	IAmb	IAmb	08 33 54.4	
	comp=Z,11nm,0.9s						
E27K	Coleen River	80.86	4	IAmb	IAmb	08 33 56.4	
	comp=Z,25nm,1.8s						
E29M	Blow River	80.86	3	IAmb	IAmb	08 33 55.6	
	comp=Z,8.1nm,1.1s						
COLD	Coldfoot	81.00	8	IAmb	IAmb	08 34 03.1	
	comp=Z,8.4nm,0.8s						
G21K	Allakaket	81.25	9	IAmb	IAmb	08 33 57.3	
	comp=Z,10nm,0.8s						
IMAR	Indian Mountai	81.72	10	P	P	08 33 59.2	+0.2
H21K	Melozitna Rive	82.16	9	IAmb	IAmb	08 34 02.8	
	comp=Z,9.8nm,0.9s						
H23K	Yukon River	82.42	8	IAmb	IAmb	08 34 04.8	
	comp=Z,12nm,1.0s						
H27K	Steamboat Moun	82.80	5	IAmb	IAmb	08 34 05.8	
	comp=Z,11nm,1.1s						
POKR	Poker Plat Res	83.35	7	P	P	08 34 07.3	-0.3
J20K	Nowinta River	83.36	10	IAmb	IAmb	08 34 20.9	
	comp=Z,8.3nm,0.9s						
I28M	Miner Creek	83.68	4	IAmb	IAmb	08 34 28.3	
	comp=Z,8.6nm,1.2s						
ILAR	Eielson Array	83.75	7	P	P	08 34 08.6	-1.0
	comp=Z,1.3nm,0.8s,baz=326,slow=3.7,SNR=12						
	comp=Z,1.3nm,0.8s						
J25K	Salcha River,	84.06	7	IAmb	IAmb	08 34 12.2	
	comp=Z,13nm,1.2s						
I30M	Mount Dempster	84.09	3	IAmb	IAmb	08 34 37.6	
	comp=Z,12nm,1.3s						
J26L	Joseph Creek	84.34	6	IAmb	IAmb	08 34 18.5	
	comp=Z,20nm,1.7s						
SCRK	Sand Creek	84.82	6		P	08 34 15.5	+0.4
PPLA	Purkeypile	84.86	10	P	P	08 34 15.3	-0.1
FCC	Fort Churchill	85.85	342	P	P	08 34 20.4	+0.2
FCC	Fort Churchill	85.85	342	P	P	08 34 20.4	+0.2
FCC				pmax	pmax		
	comp=Z,23nm,1.4s						
BCAR	Beaver Creek A	85.91	5	P	P	08 34 21.6	+1.1
YKA	Yellowknife Ar	86.15	353	P	P	08 34 21.2	-0.4
	comp=Z,2.4nm,0.9s,baz=4.8,slow=5.4,SNR=26						
	comp=Z,2.4nm,0.9s						
SUA	Susitna One	86.44	10	P	P	08 34 23.6	+0.3
SML	Sawmill	86.45	9	P	P	08 34 23.4	+0.2
SCM	Sheep Creek Mo	86.55	8	P	P	08 34 24.2	+0.5
SCM	Sheep Creek Mo	86.55	8	P	P	08 34 24.2	+0.5
SCM				pmax	pmax		
	comp=Z,110nm,1.6s						
KLU	Klutina	87.05	8	P	P	08 34 27.2	+1.0
FITZ	Fitzroy Crossi	87.32	113	P	P	08 34 28.1	+0.1
	comp=Z,5.1nm,0.8s,baz=307,slow=4.8,SNR=9.7						
	comp=Z,5.1nm,0.8s						
FITZ	Fitzroy Crossi	87.32	113	P	P	08 34 28.2	+0.1
ULM	Lac du Bonnet	93.79	339	P	P	08 34 55.9	-2.0
	comp=Z,3.1nm,0.6s,baz=79,slow=1.8,SNR=3.9						
	comp=Z,3.1nm,0.6s						
WRA	Warramunga Arr	95.26	110	P	P	08 35 03.5	-1.5
	comp=Z,0.8nm,0.8s,baz=320,slow=3.7,SNR=5.6						
	comp=Z,0.8nm,0.8s						
WRA	Warramunga Arr	95.26	110	i P	P	08 35 04.0	-1.0
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	96.80	113	P	P	08 35 10.8	-1.2
	comp=Z,0.4nm,0.7s,baz=306,slow=4.3,SNR=5.7						
	comp=Z,0.4nm,0.7s						
NVAR	Mina Array Bea	110.21	350	PKiKP	PKiKP	08 40 13.1	-0.1
	comp=Z,0.4nm,0.7s,baz=7.6,slow=2.5,SNR=4.2						
QSPA	South Pole Qui	120.71	180	PKP	PKPdf	08 40 32.0	0.0
	comp=Z,4.6nm,0.7s,baz=270,slow=1.2,SNR=20						
QSPA	South Pole Qui	120.71	180		PKPdf	08 40 31.5	-0.6
PLCA	Paso Flores	131.69	241	PKP	PKPdf	08 40 54.6	+0.8
	comp=Z,0.9nm,0.5s,baz=24,slow=5.6,SNR=6.8						
PLCA				SKPbc	SKPbc	08 44 17.9	-1.6
	comp=Z,1.5nm,1.0s,baz=118,slow=3.2,SNR=5.7						

IDC ***10*** *08:28:00.8±1.4, 53°.32N×35°.74W, h0^{km}, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=61.8km s-min=25.7km az=8.0*

ISC 10 08:28:02.2±1.0, **53°.0N**±0°.1×**35°.8W**±0°.2, **h10**^{km}, **n9,** σ3^{s}.**91**/9, **mb3.9**/5, **Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSA	Rosais	15.25	157	eS	Sn	08 34 33.5	+7.2
ROSA				IAML		08 34 34.2	
ROSA				IAML		08 34 34.3	
ROSA				IAML		08 34 34.6	
PFCBR	Castelo Branco	15.33	158	eS	Sn	08 34 23.6	-4.5
PFCBR				IAML		08 34 23.8	
PFCBR				IAML		08 34 23.9	
PFCBR				IAML		08 34 23.9	
HOR	Horta	15.34	158	eS	Sn	08 34 24.8	-3.8
HOR				IAML		08 34 25.1	
HOR				IAML		08 34 25.2	
HOR				IAML		08 34 25.7	
PICO	Pico	15.42	158	eS	Sn	08 34 30.5	+0.1
PICO				IAML		08 34 31.1	
PICO				IAML		08 34 31.5	
PICO				IAML		08 34 31.8	
ESDC	Sonseca Array	25.48	109	P	P	08 33 30.8	+0.5
	3.0nm,0.9s,baz=314,slow=10,SNR=9.7						
	3.0nm,0.9s						
PDAR	Pinedale Array	48.41	289	P	P	08 36 43.6	-0.9
	0.5nm,0.8s,baz=75,slow=4.2,SNR=3.6						
	0.5nm,0.8s						
TXAR	Lajitas Array	54.03	272	P	P	08 37 27.6	+1.0
	0.8nm,1.1s,baz=34,slow=12,SNR=3.2						
	0.8nm,1.1s						
BVAR	Borovoye Array	57.76	43	P	P	08 37 51.6	-1.3
	0.7nm,0.6s,baz=317,slow=5.9,SNR=4.0						
	0.7nm,0.6s						
GTA	Gaotai	80.23	33	eP	P	08 40 13.9	+1.0
GTA				pmax	pmax		

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         comp=Z,5.0nm,1.0s
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IDC ***10*** *08:32:00.1±0.9, 53°.75N×35°.19W, h0^{km}, mb3.9/12, mbtmp4.0/14, ML3.3/2, MS3.7/10, Error ellipse: s-maj=30.6km s-min=16.3km az=8.0*

GCMT ***10*** *08:32:05.0±0.4, 54°.06N±0°.07×35°.29W±0°.06, h28^{km}, MW4.8/77, Moment Tensor Solution. s28,c30; s77,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.57±.18; M$_{\theta\theta}$1.03±.14; M$_{\phi\phi}$1.54±.11; M$_{r\theta}$0.05±.25; M$_{\theta\phi}$0.11±.08; M$_{\phi r}$0.23±.18; Best double couple: M$_0$2.08000×10^{16} NP1:ϕ_s11.00000°, δ42.00000°, λ-90.00000°. NP2: ϕ_s191.00000°, δ48.00000°, λ-90.00000°. Principal axes: T 1.5750, Plg3.0000°, Azm281.0000°; N 1.0090, Plg0.0000°, Azm11.0000°; P -2.5840, Plg87.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 10 08:32:01.7±0.8**, 53°.7N**±0°.2×**35°.19W**±0°.09**, h10^{km}, n21, σ1^{s}01**/15**, mb4.0**/11**, MS3.7**/5**, Reykjanes Ridge**

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Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                    Op      ISC      h  m  s    ISC
BORG  Borgarnes         13.08  27   LR      LR       08 38 31.7
      comp=Z,177nm,20.7s,baz=227,slow=30
SFJD  Kangerlussuaq     15.26 337   LR      LR       08 40 09.9
      comp=Z,180nm,20.0s,baz=158,slow=32
SCHQ  Schefferville     18.43 286   P       Pn       08 36 18.2 +1.2
      0.1nm,0.3s,baz=69,slow=14,SNR=2.7
SCHQ                                LR      LR       08 41 59.3
      comp=Z,252nm,20.8s,baz=100,slow=32
      7.1nm,1.0s
EKA   Eskdalemuir Ar    18.57  72   P       Pn       08 36 19.5 +0.9
      baz=277,slow=11
EKA                                 LR      LR       08 41 59.6
      comp=Z,252nm,21.8s,baz=258,slow=32
      4.8nm,0.8s
FRB   Frobisher Bay     19.75 314   LR      LR       08 42 37.4
      comp=Z,255nm,18.5s,baz=108,slow=32
JMIC  Jan Mayen         20.94  24   LR      LR       08 42 34.3
      comp=Z,151nm,21.8s,baz=96,slow=30
ESDC  Sonseca Array     25.36 111   P       P        08 37 28.3 -0.5
      3.9nm,1.0s,baz=317,slow=7.9,SNR=14
ESDC                                LR      LR       08 45 20.8
      comp=Z,232nm,19.1s,baz=301,slow=32
      3.9nm,1.0s
NOA   NORSAR Array B    25.57  55   P       P        08 37 28.8 -1.6
      1.1nm,0.8s,baz=274,slow=9.5,SNR=2.1
      1.1nm,0.8s
DAVOX Davos/Dischmat    29.23  85   LR      LR       08 48 35.6
      comp=Z,286nm,19.0s,baz=260,slow=34
SADO  Sadowa            29.63 271   LR      LR       08 49 06.1
      comp=Z,293nm,19.2s,baz=90,slow=35
FINES FINESS Array B    32.57  51   LR      LR       08 49 55.0
      comp=Z,152nm,18.9s,baz=261,slow=33
YKA   Yellowknife Ar    40.26 315   P       P        08 39 38.3 +0.1
      0.3nm,0.9s,baz=61,slow=7.9,SNR=2.7
YKA                                 PcP     PcP      08 41 41.0 -0.7
      0.4nm,0.8s,baz=46,slow=3.0,SNR=3.9
      0.3nm,0.9s
BELG  Belogornoye       47.06  56   P       P        08 40 33.1 +0.1
      10nm,1.0s,baz=331,slow=10,SNR=3.4
      10nm,1.0s
BRTR  Keskin Array B    47.35  78   P       P        08 40 36.4 +0.7
      1.2nm,0.8s,baz=330,slow=6.4,SNR=4.6
      1.2nm,0.8s
PDAR  Pinedale Array    48.54 289   P       P        08 40 43.7 -1.3
      0.6nm,0.8s,baz=63,slow=7.5,SNR=4.4
      0.6nm,0.8s
TORD  Torodi Ar. Bea    49.86 130   P       P        08 40 55.0 +0.1
      1.5nm,0.4s,baz=343,slow=8.0,SNR=2.1
      1.5nm,0.4s
KBZ   Khabaz            49.98  68   P       P        08 40 56.8 +1.2
      1.7nm,0.9s,baz=328,slow=9.7,SNR=3.6
      1.7nm,0.9s
TXAR  Lajitas Array     54.38 272   P       P        08 41 29.3 +0.6
      0.5nm,1.0s,baz=59,slow=7.5,SNR=4.5
      0.5nm,1.0s
TIXI  Tiksi             54.41   6   P       P        08 41 29.1 +1.0
      2.9nm,0.3s,baz=12,slow=9.7,SNR=4.1
      2.9nm,0.3s
BVAR  Borovoye Array    56.99  44   P       P        08 41 47.1 +0.1
      1.2nm,0.8s,baz=30,slow=9.1,SNR=4.2
      1.2nm,0.8s
SONM  Songino Array     73.69  26   P       P        08 43 33.9 -1.4
      2.1nm,0.9s,baz=325,slow=7.6,SNR=5.6
      2.1nm,0.9s
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IDC ***10*** *08:32:08.0±1.4, 0°.08S×125°.19E, h0^{km}, mb3.8/4, mbtmp4.0/6, ML4.0/2, MS3.1/1, Error ellipse: s-maj=50.3km s-min=24.4km az=65.0*

DJA ***10*** *08:32:13.6±1.4, 0°S±3°×12°5E±°, h11^{km}±11^{km}, M4.3/16, mB4.9/4, mb4.6/6, MLv4.2/16, Mw(mB)4.2/4*

ISC 10 08:32:14.8±0.9**, 0°.30S**±0°.06×**125°.02E**±0°.05**, h35^{km}, n23, σ1^{s}62**/24**, mb3.9**/4**, Southern Molucca Sea**

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Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                    Op      ISC      h  m  s    ISC
MNI   Manado             1.75 354   P       Pn       08 32 42.5 -0.2
SANI  Sanana             1.99 151   P       Pn       08 32 45.7 -0.3
LUWI  Luwuk              2.36 252   P       Pn       08 32 52.2 +1.1
TNTI  Ternate            2.58  66   P       Pn       08 32 55.4 +1.2
TNTI                                S       Sn       08 33 27.0 +2.7
MRSI  Marisa             3.17 284   P       Pn       08 33 02.5 +0.2
APSI  Ampana             3.42 260   P       Pn       08 33 07.5 +1.8
GAMI  Galela, Maluku     3.49  52   P       Pn       08 33 08.6 +1.9
NLAI  Namlea             3.58 144   P       Pn       08 33 08.7 +0.8
KRAI  Karang Ratu        4.51 132   P       Pn       08 33 22.8 +2.0
MSAI  Masohi             4.94 128   P       Pn       08 33 29.1 +2.5
MPSI  Mapaga             5.16 277   P       Pn       08 33 32.8 +3.2
TTSI  Tana Toraja        5.87 242   P       Pn       08 33 40.4 +1.1
      0.2nm808nm31nm,0.4s
BNSI  Bone               6.37 230   P       Pn       08 33 47.2 +0.9
      0.1nm43nm,0.6s
SPSI  Sidrap Palu        6.38 235   P       Pn       08 33 48.1 +1.7
BKSI  Bulukumba          6.98 224   P       Pn       08 33 55.7 +1.0
      0.1nm352nm26nm,0.5s
KAPI  Kappang            7.04 228   Pn      Pn       08 33 55.6 +0.2
      4.5nm,0.3s,baz=141,slow=6.5,SNR=5.2
      13nm,0.3s
KAPI  Kappang            7.04 228   P       Pn       08 33 57.4 +1.9
BATI  Baumata            9.93 188   LR      LR       08 39 06.1
      comp=Z,96nm,19.1s,baz=339,slow=41
FITZ  Fitzroy Crossi    17.69 178   P       P        08 36 19.1 -0.1
      0.3nm,0.3s,baz=15,slow=8.0,SNR=8.6
      2.5nm,0.6s
WRA   Warramunga Arr    21.55 155   P       P        08 36 59.6 -1.8
      0.5nm,0.7s,baz=336,slow=11,SNR=5.8
      0.5nm,0.7s
ASAR  Alice Springs     24.77 160   P       P        08 37 32.8 -0.8
      1.7nm,0.9s,baz=338,slow=9.4,SNR=12
ASAR                                PcP     PcP      08 41 09.3 -0.5
      0.4nm,0.4s,baz=349,slow=2.2,SNR=9.2
      1.7nm,0.9s
STKA  Stephens Creek    35.10 155   P       P        08 39 04.8 -0.1
      2.6nm,0.8s,baz=346,slow=9.2,SNR=4.3
      2.6nm,0.8s
AKTO  Aktyubinsk        75.77 323   P       P        08 43 55.1 -2.1
      2.1nm,0.7s,baz=104,slow=4.2,SNR=6.2
      2.1nm,0.7s
```

IDC ***10*** *08:32:51.6±0.9, 30°.98N×50°.00E, h0^{km}, mb4.1/21, mbtmp4.2/24, ML3.4/3, MS3.3/4, Error ellipse: s-maj=19.6km s-min=14.2km az=169.0*

NEIC ***10*** *08:32:53.8±2.1, 31°.02N±0°.08×50°.11E±0°.07, h10^{km}±1^{km}, mb4.2/29, Error ellipse: s-maj=13.3km s-min=10.1km az=25.0*

THR ***10*** *08:32:54.6±0.0, 30°.98N×50°.16E, h14^{km}±5^{km}, ML4.0*

TEH ***10*** *08:32:55.1, 31°.00N×50°.15E, h16^{km}±16^{km}*

DSN ***10*** *08:33:01.1±2.3, 30°.31N×50°.23E, h15^{km}, ML3.6/12, Error ellipse: s-maj=29.4km s-min=13.1km az=2.0*

ISC 10 08:32:52.8±0.4**, 30°.82N**±0°.05×**50°.08E**±0°.04**, h10^{km}, n130, σ1^{s}51**/127**, mb4.3**/30**, MS3.3**/3**, Northern and central Iran**

```
Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                    Op      ISC      h  m  s    ISC
ABEH  Behbahan           0.27 146   Pg      Pn       08 33 03.3 +0.4
KLNJ  Kolanjah           1.32  82   Pg      Pn       08 33 18.3 +0.7
KLNJ  Kolanjah           1.32  82  ePg      Pn       08 33 18.1 +0.5
KLNJ                                IAML             08 33 41.4
      comp=Z,4µm,1.0s
AHWZ  Ahwaz              1.33 293   Pg      Pg       08 33 20.5 +2.1
AHWZ                                Sg      Sg       08 33 39.6 +4.0
ZNGN  Zangian            1.45  27   Pg      Pn       08 33 18.7 -0.7
ZNGN                                Sg      Sn       08 33 37.9 -0.8
IBRJ  Brojen             1.48  43   Pg      Pn       08 33 19.8  0.0
JHBN  Jahan bin          1.49  20   Pg      Pn       08 33 19.7 -0.3
KAZ2  Kazeron-Fars-I     1.83 131   Pn      Pg       08 33 28.8 +0.9
GTMR  Gotvand            1.83 334  ePn      Pn       08 33 25.7 +1.2
GTMR                                IAML             08 33 52.4
      comp=Z,5µm,1.0s
IPIR  Pirpir             1.98  20   Pg      Pn       08 33 28.5 +1.8
IRAM  Ramesheh           2.20  63   Pn      Pn       08 33 31.8 +2.1
SHI   Shiraz             2.42 119   Pn      Pb       08 33 36.9 +0.4
DSBU  Dashti - Bushe     2.66 157   Pn      Pb       08 33 40.7  0.0
IZEF  Zefreh             2.82  42   Pn      Pn       08 33 39.3 +1.1
KHMZ  Khomeyn            2.91 358  ePn      Pn       08 33 41.1 +1.7
KHMZ                                IAML             08 34 24.1
      comp=Z,340nm,1.0s
NASN  Na'in              3.05  49  ePn      Pn       08 33 43.0 +1.6
NASN                                IAML             08 34 31.6
      comp=Z,200nm,1.0s
BDRS  Dareh Seyedi       3.28 342   Pn      Pn       08 33 45.5 +1.0
ASAO  Ashtian            3.71 359  ePn      Pn       08 33 52.6 +2.1
ASAO                                IAML             08 34 58.9
      comp=Z,250nm,1.0s
GHVR  GHOM               3.79  15  ePn      Pn       08 33 53.2 +1.8
GHVR                                IAML             08 35 27.1
      comp=Z,360nm,1.0s
ANAR  Anarak             3.90  52   Pn      Pn       08 33 54.2 +1.3
IMEH  Mehriz             3.93  81   Pn      Pn       08 33 55.8 +2.3
ICHK  Chekchek           3.96  68   Pn      Pn       08 33 55.9 +2.0
ISFB  Sefidab            3.96  27   Pn      Pn       08 33 54.7 +0.9
HAGD  Aghdareh           4.06 349   Pn      Pn       08 33 56.2 +0.9
IBZA  Bozab              4.09 333   Pn      Pn       08 33 56.4 +0.7
IQOM  Qom                4.09  12   Pn      Pn       08 33 56.3 +0.6
YZKH  Yazd               4.16  67  ePn      Pn       08 33 58.5 +2.1
YZKH                                IAML             08 34 38.4
      comp=Z,72nm,1.0s
KCHF  Cheshme Sefid,     4.29 324   Pn      Pn       08 34 00.1 +1.8
IALM  Almabolaq          4.33 339   Pn      Pn       08 34 00.0 +1.0
IVRN  Varamin            4.38  18   Pn      Pn       08 34 00.6 +1.0
SNQR  Sonqor, Kerman     4.52 334   Pn      Pn       08 34 02.5 +0.9
IGHG  Ghaleghazi         4.58 321   Pn      Pn       08 34 03.3 +0.9
IHSB  Hasanabad          4.71  12   Pn      Pn       08 34 04.7 +0.7
HGHA  Hamedan- Ghaye     4.76 348   Pn      Pn       08 34 06.2 +1.3
IBAF  Bafgh              4.77  79   Pn      Pn       08 34 06.9 +2.1
SNGE  Sanandaj           4.83 332  ePn      Pn       08 34 06.6 +0.7
SNGE                                IAML             08 35 19.7
      comp=Z,6.1nm,1.0s
QABG  Abgarm-Qazvin      4.89 355   Pn      Pn       08 34 07.7 +1.0
IDMV  Damavand           5.02  19   Pn      Pn       08 34 09.3 +0.9
DAMV  Damavand           5.05  18  ePn      Pn       08 34 09.5 +0.6
DAMV                                IAML             08 35 16.1
      comp=Z,4.0nm,1.0s
THKV  Tehran--Karaj      5.12   7  ePn      Pn       08 34 10.4 +0.6
THKV                                IAML             08 35 47.1
      comp=Z,42nm,1.0s
CHTH  Charan             5.15  10  ePn      Pn       08 34 11.6 +1.4
CHTH                                IAML             08 36 30.2
      comp=Z,14nm,1.0s
ILAS  Lasjerd            5.15  27   Pn      Pn       08 34 11.0 +0.8
IFIR  Firoozkooh         5.30  24   Pn      Pn       08 34 13.2 +0.8
KHGB  Koh Gabri          5.54  93   Pn      Pn       08 34 17.8 +2.2
IALA  Alasht             5.72  23   Pn      Pn       08 34 19.1 +0.9
IPRN  Peran              5.72  19   Pn      Pn       08 34 19.1 +1.1
MZPU  Pul - Mazandar     5.74  12   Pn      Pn       08 34 19.6 +1.3
KRBR  Kerman             5.84  97  ePn      Pn       08 34 23.1 +3.4
KRBR                                IAML             08 36 00.2
      comp=Z,40nm,1.0s
TPRV  Parvadeh(Tabas     6.03  67   Pn      Pn       08 34 24.0 +1.8
IKIA  Kiasar             6.16  28   Pn      Pn       08 34 25.1 +1.1
IGLO  Ghaloghah          6.47  28   Pn      Pn       08 34 29.7 +1.4
TKDS  Koohdasht(Taba     6.59  63   Pn      Pn       08 34 31.1 +1.3
TABS  Tabas              6.60  63  ePn      Pn       08 34 31.6 +1.6
TABS                                IAML             08 36 44.6
      comp=Z,32nm,1.0s
SRSL  SARDASHT           6.62 325  ePn      Pn       08 34 31.5 +1.1
SRSL                                IAML             08 35 52.1
      comp=Z,87nm,1.0s
SHME  Shamm              7.15 130   P       Pn       08 34 39.4 +1.9
SHRO  Shahrood           7.15  42  ePn      Pn       08 34 39.2 +1.6
SHRO                                IAML             08 35 52.8
      comp=Z,3.0nm,1.0s
TAPT  Tabas- Tapeh t     7.20  54   Pn      Pn       08 34 39.7 +1.3
BANOM Banah              7.34 130   P       Pn       08 34 40.8 +0.7
NAZ   Nazwa, Dubai       7.63 138   P       Pn       08 34 46.2 +2.2
MSFE  Esma-Masafi        7.65 134   P       Pn       08 34 46.7 +2.4
ASUD  Al Ashush, Dub     7.73 142   P       Pn       08 34 48.8 +3.3
MDH   Madha              7.78 134   P       Pn       08 34 47.1 +1.0
UOSS  Minazif            7.98 136   Pn      Pn       08 34 49.2 +0.3
HATD  Hatta, Dubai       8.03 137   P       Pn       08 34 50.8 +1.2
ASHO  Ashiyiah           8.09 138   P       Pn       08 34 50.3 -0.2
ASHO                                S       Sn       08 36 18.3 -3.8
RAYN  Ar Rayn            8.33 210           Pn       08 34 55.7 +1.9
RAYN  Ar Rayn            8.33 210   P       Pn       08 34 55.4 +1.6
ALNE  Al Ain             8.42 142   P       Pn       08 34 55.5 +0.6
MRVT  Maraveh tapeh      8.44  35  ePn      Pn       08 34 56.6 +1.4
MRVT                                IAML             08 35 01.9
      comp=Z,4.8nm,0.7s
SOHO  SOHO               8.79 138   P       Pn       08 35 00.8 +0.8
ISFR  Sfrayin            9.05  45   Pn      Pn       08 35 05.2 +1.4
BJRD  Bojnurd            9.15  40  ePn      Pn       08 35 07.1 +2.0
BJRD                                IAML             08 35 12.6
      comp=Z,18nm,0.6s
ASF   Jabal al Asfar    11.33 280   Pn      Pn       08 35 34.0 -0.9
      comp=Z,1.3nm,0.3s,baz=60,slow=9.8,SNR=6.2
ASF                                 Sn      Sn       08 37 34.8 -6.8
      comp=Z,0.8nm,0.3s,baz=281,slow=19,SNR=2.8
      comp=Z,3.0nm,0.4s
MMAI  Mount Meron Ar    12.65 284   LR      LR       08 42 05.1
      comp=Z,90nm,18.4s,baz=106,slow=44
KBZ   Khabaz            14.08 338   Pn      Pn       08 36 13.6 +1.3
      comp=Z,0.1nm,0.3s,baz=155,slow=9.9,SNR=7.4
KBZ                                 LR      LR       08 42 05.7
      comp=Z,124nm,21.0s,baz=132,slow=40
      comp=Z,2.5nm,0.7s
BR131 Keskin Array S    16.07 308           Pn       08 36 38.3 -0.7
BRTR  Keskin Array B    16.07 308   Pn      Pn       08 36 39.0 -0.1
      baz=0.0,slow=0.4,SNR=4.7
      comp=Z,3.6nm,0.8s
BRTR  Keskin Array B    16.07 308           Pn       08 36 38.5 -0.6
SHAA  Shahritus         16.36  61           Pn       08 36 44.2 +1.5
SHAA                                IAmb    IAmb     08 36 59.7
      comp=Z,11nm,0.7s
CHGR  Chuyangaron       17.50  58           Pn       08 36 58.2 +1.1
CHGR                                IAmb    IAmb     08 36 59.6
      comp=Z,13nm,0.8s
BORA  Eskisehir         18.35 305   P       Pn       08 37 06.8 -0.7
GAR   Garm              18.47  58   P       P        08 37 08.9  0.0
MANEM Manem             19.07  64   P       P        08 37 16.0 +0.3
MANEM                               IAmb    IAmb     08 37 28.9
      comp=Z,12nm,0.9s
MANT  Manisa            19.26 299   P       P        08 37 17.3 -0.4
MANT                                IAmb    IAmb     08 37 20.3
      comp=Z,17nm,1.1s
AB31  Akbulak array     19.87  19           P        08 37 23.0 -1.0
ABKAR Akbulak array     19.87  19   P       P        08 37 23.0 -1.0
KK31  Karatay Array     20.36  47           P        08 37 29.6 +0.2
KK31                                IAmb    IAmb     08 37 32.7
      comp=Z,8.5nm,0.9s
KKAR  Karatay Array     20.36  47           P        08 37 27.4 -2.0
AKTO  Aktyubinsk        20.47  15   P       P        08 37 29.1 -1.5
      comp=Z,3.6nm,0.6s,baz=256,slow=6.2,SNR=7.5
AKTO                                LR      LR       08 47 25.1
      comp=Z,105nm,18.0s,baz=25,slow=43
      comp=Z,3.6nm,0.6s
IDI   Anoyia            21.55 289   P       P        08 37 42.6 +0.2
      comp=Z,10nm,0.6s,baz=114,slow=9.5,SNR=9.0
IDI                                 LR      LR       08 48 20.4
      comp=Z,133nm,21.4s,baz=322,slow=43
      comp=Z,10nm,0.6s
IDI   Anoyia            21.55 289   P       P        08 37 42.1 -0.3
BELG  Belogornoye       21.63 356   P       P        08 37 41.8 -1.2
      comp=Z,9.1nm,0.5s,baz=58,slow=0.6,SNR=4.6
      comp=Z,9.1nm,0.5s
AAK   Ala-Archa         22.76  52   P       P        08 37 56.4 +1.0
      comp=Z,0.5nm,0.2s,baz=217,slow=10,SNR=1.6
      comp=Z,0.5nm,0.2s
AAK   Ala-Archa         22.76  52   IAmb    IAmb     08 38 10.4
      comp=Z,8.3nm,1.1s
KSH   Kashi             22.82  61   P       P        08 37 53.1 -2.9
KSH                                 pP      pP       08 37 54.9 -4.2
KSH                                 sP      sP       08 38 01.0 +0.5
KSH                                 pmax    pmax
      comp=Z,8.0nm,0.7s
BOOM  Boomskoye usch    23.70  53           P        08 38 06.2 +1.2
BOOM                                IAmb    IAmb     08 38 08.2
      comp=Z,7.0nm,0.7s
ITM   Ithomi            24.13 293   P       P        08 38 08.9 -0.1
TARG  Taragay, Kyrgy    24.76  56   P       P        08 38 15.7 +0.6
TARG                                IAmb    IAmb     08 38 25.3
      comp=Z,4.5nm,0.8s
AKASG Malin Array Be    25.21 328   P       P        08 38 17.0 -1.6
      comp=Z,1.5nm,0.4s,baz=136,slow=9.3,SNR=9.1
      comp=Z,1.5nm,0.4s
AKASG Malin Array Be    25.21 328   IAmb    IAmb     08 38 18.0
      comp=Z,1.7nm,0.9s
AKBB  Malin Array Si    25.21 328   P       P        08 38 17.9 -0.7
AKBB                                IAmb    IAmb     08 38 25.5
      comp=Z,4.0nm,0.6s
KIEV  Kiev              25.22 328   P       P        08 38 17.3 -1.3
KIEV                                IAmb    IAmb     08 38 25.5
      comp=Z,3.6nm,0.6s
BURAR Bucovina Array    25.37 318   P       P        08 38 20.2  0.0
BUR08 Bucovina Ar. S    25.39 318           P        08 38 20.2 -0.2
BUR08                               IAmb    IAmb     08 38 37.9
      comp=Z,4.5nm,1.1s
ARTI  Arti              26.21  10   P       P        08 38 26.9 -0.7
      comp=Z,1.8nm,0.5s,baz=256,slow=8.3,SNR=2.2
      comp=Z,1.8nm,0.5s
BORK  Borovoye          26.65  28           P        08 38 31.3 -0.3
BORK                                IAmb    IAmb     08 38 40.3
      comp=Z,2.7nm,0.6s
BVAR  Borovoye Array    26.66  28   P       P        08 38 31.8  0.0
      comp=Z,4.2nm,0.5s,baz=224,slow=7.7,SNR=15
      comp=Z,4.2nm,0.5s
KURBB Kurchatov Arra    28.98  39   P       P        08 38 53.0 +0.6
      comp=Z,2.1nm,0.8s,baz=239,slow=9.3,SNR=7.3
      comp=Z,2.1nm,0.8s
KURK  Kurchatov         29.07  39   P       P        08 38 52.7 -0.6
KURK                                IAmb    IAmb     08 38 54.5
      comp=Z,5.6nm,1.1s
MKAR  Makanchi Array    29.48  48   P       P        08 38 57.6 +0.6
      comp=Z,1.3nm,0.6s,baz=239,slow=8.5,SNR=4.6
      comp=Z,1.3nm,0.6s
EVN   Everest           32.05  86   P       P        08 39 20.7 +0.2
EVN                                 IAmb    IAmb     08 39 40.0
      comp=Z,2.1nm,0.7s
FIA1  FINESS Array S    34.43 340   P       P        08 39 38.6 -1.6
FINES FINESS Array B    34.43 340   P       P        08 39 38.5 -1.7
      comp=Z,1.6nm,0.5s,baz=147,slow=7.9,SNR=10
      comp=Z,1.6nm,0.5s
HFS   Hagfors           38.00 331   P       P        08 40 08.9 -1.8
      comp=Z,1.8nm,0.5s,baz=128,slow=9.6,SNR=8.0
      comp=Z,1.8nm,0.5s
NC405 NORSAR Array S    39.35 332   P       P        08 40 20.4 -1.7
NOA   NORSAR Array B    39.52 331   P       P        08 40 21.3 -2.2
      comp=Z,1.2nm,0.8s,baz=121,slow=8.1,SNR=2.9
      comp=Z,1.2nm,0.8s
ESDC  Sonseca Array     44.43 297   P       P        08 41 03.4 -0.6
      comp=Z,0.9nm,0.9s,baz=88,slow=9.1,SNR=2.8
      comp=Z,0.9nm,0.9s
CMAR  Chiang Mai Arr    45.77  94   P       P        08 41 14.6 -0.2
      comp=Z,1.9nm,0.3s,baz=297,slow=7.8,SNR=6.1
      comp=Z,1.9nm,0.3s
TORD  Torodi Ar. Bea    47.79 259   P       P        08 41 31.1 +0.4
      comp=Z,1.1nm,0.3s,baz=50,slow=8.8,SNR=2.1
      comp=Z,1.1nm,0.3s
TORD  Torodi Ar. Bea    47.79 259   IAmb    IAmb     08 41 40.8
      comp=Z,2.2nm,0.6s
SPITS Spitsbergen Ar    49.72 351   P       P        08 41 44.1 -0.6
      comp=Z,3.4nm,0.8s,baz=187,slow=8.1,SNR=4.2
      comp=Z,3.4nm,0.8s
LYN   LuoYang           51.91  68  eP       P        08 42 02.6 +0.8
LYN                                 pmax    pmax
      comp=Z,11nm,0.7s
HILR  Hailar Array B    54.44  49   P       P        08 42 20.5 +0.2
      comp=Z,2.2nm,0.6s,baz=285,slow=9.1,SNR=2.7
      comp=Z,2.2nm,0.6s
DBIC  Dimbokro          56.65 257   P       P        08 42 36.5  0.0
      comp=Z,5.3nm,1.0s,baz=90,slow=7.4,SNR=2.0
      comp=Z,5.3nm,1.0s
DBIC  Dimbokro          56.65 257   IAmb    IAmb     08 42 39.7
      comp=Z,25nm,1.4s
KSRS  Korea Array       63.07  61   P       P        08 43 19.5 -0.9
      comp=Z,2.5nm,0.6s,baz=281,slow=7.1,SNR=9.2
      comp=Z,2.5nm,0.6s
BOSA  Boshof            63.67 204   P       P        08 43 26.1 +1.6
      comp=Z,2.8nm,0.9s,baz=0.0,slow=3.0,SNR=2.6
      comp=Z,2.8nm,0.9s
BOSA  Boshof            63.67 204   IAmb    IAmb     08 43 30.7
      comp=Z,9.8nm,1.2s
JOW   Kunigami          67.29  71   LR      LR       09 14 35.5
      comp=Z,582nm,18.8s,baz=114,slow=37
YKA   Yellowknife Ar    86.19 353   P       P        08 45 33.2 -0.9
      comp=Z,0.8nm,0.8s,baz=4.7,slow=5.7,SNR=8.7
      comp=Z,0.8nm,0.8s
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ASRS ***10*** *08:38:00.0±2.3, 53°.66N×91°.06E, h0^{km}, M3.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

NNC 10 08:38:11.7±5.9**, 53°.35N×90°.07E, h0^{km}, mb3.5, mpv3.2, 5C-3D, Error ellipse: s-maj=45.7km s-min=27.3km az=64.0, Suspected Mining explosion., Southwestern Siberia**

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Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                    Op      ISC      h  m  s    ISC
ZAA0  Zalesovo Array     3.18 283  ⇓Pg      Pb       08 39 08.2 -0.8
      2.4nm,0.8s
ZAA0                               ⇑Lg      Lg       08 39 53.7
      11nm,0.8s
KURK  Kurchatov          7.54 254  ⇓Pn      Pn       08 40 03.2 +0.5
      3.1nm,1.4s
KURK                               ⇓Sn      Sn       08 41 32.0 +3.2
      7.0nm,0.8s
KURK                               ⇑Lg      Lg       08 42 12.4
      18nm,1.2s
MK31  Makanchi Array     8.25 220  ⇑Pn      Pn       08 40 15.1 +2.5
      1.7nm,0.8s,baz=40,slow=13,SNR=5.7
MK31                               ⇑Sn      Sn       08 41 44.7 -1.7
      3.4nm,0.8s,baz=67,slow=34,SNR=3.1
MK31                               ⇑Lg      Lg       08 42 31.8
      14nm,1.0s,baz=38,slow=32,SNR=4.4
```

IDC 10 08:40:37.3±1.7**, 53°.59N×35°.25W, h0^{km}, mb3.6**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=102.6km s-min=30.1km az=6.0, Reykjanes Ridge**

```
Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                    Op      ISC      h  m  s    ISC
ESDC  Sonseca Array     25.35 111   P       P        08 46 05.6 -0.2
      3.0nm,1.0s,baz=315,slow=9.3,SNR=12
      3.0nm,1.0s
BRTR  Keskin Array B    47.42  78   P       P        08 49 13.5 +0.1
      1.2nm,1.0s,baz=297,slow=9.5,SNR=3.7
      1.2nm,1.0s
TXAR  Lajitas Array     54.35 272   P       P        08 50 05.6 -0.1
      0.3nm,0.9s,baz=54,slow=7.7,SNR=2.5
      0.3nm,0.9s
```

NOU ***10*** *08:40:41.5, 20°.82S×168°.63E, h0^{km}, ML5.6/174, Loyalty Islands*

BJI ***10*** *08:40:41.3, 20°.43S×168°.56E, h5^{km}, mB5.9/67, mb5.6/82, Ms5.4/82, Ms7 5.1/80*

NEIC ***10*** *08:40:42.7, 20°.93S×168°.59E, h10^{km}*

NEIC ***10*** *08:40:42.6, 20°.94S×168°.61E, h18^{km}, Moment Tensor Solution. Duration: 3^{s}5 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-4.09; M$_{\theta\theta}$0.55; M$_{\phi\phi}$3.54; M$_{r\theta}$-1.71; M$_{\theta\phi}$-1.92; M$_{\phi r}$1.55; Fault plane solution: M$_0$4.88000×10^{17} NP1: ϕ_s345.34000°, δ32.73000°, λ-71.17000°. NP2: ϕ_s143.28000°, δ59.22000°, λ-101.72000°. Principal axes: T 4.9948, Plg13.0000°, Azm242.0000°; N -0.2332, Plg10.0000°, Azm149.0000°; P -4.7615, Plg73.0000°, Azm24.0000°;*

NEIC ***10*** *08:40:42.6±2.9, 20°.94S±0°.05×168°.61E±0°.04, h10^{km}±1^{km}, mb5.8/586, Ms_20 5.4/289, Mwb5.5/82, Mww5.7/40 Error ellipse: s-maj=8.6km s-min=6.4km az=151.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-2.18; M$_{\theta\theta}$0.17; M$_{\phi\phi}$2.02; M$_{r\theta}$-0.03; M$_{\theta\phi}$-0.69; M$_{\phi r}$0.79; Fault plane solution: M$_0$2.35000×10^{17} NP1: ϕ_s167.20000°, δ54.69000°, λ-83.49000°. NP2: ϕ_s336.03000°, δ35.83000°, λ-99.09000°. Principal axes: T 2.3724, Plg9.0000°, Azm253.0000°; N -0.0411, Plg5.0000°, Azm343.0000°; P -2.3313, Plg79.0000°,* Azm102.0000°;

ISC-PP **10** *08:40:42,20°.94S×168°.61E,h6^{km},Mwppsm5.8,Moment Tensor Solution. s29 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.56±.10; $M_{\theta\theta}$0.10±.16; $M_{\phi\phi}$0.47±.14; $M_{r\theta}$-0.31±.14; $M_{\theta\phi}$-0.05±.25; $M_{\phi r}$-0.36±.15; Fault plane solution: $M_0$5.25000×10^{17} NP1:ϕ_s351.90000°,δ45.00000°, λ307.80000°. NP2:ϕ_s124.30000°,δ56.00000°, λ-121.50000°.*

NEIC **10** *08:40:42.6,20°.94S×168°.61E,h18^{km}*

MOS **10** *08:40:44.6±1.1,20°.86S×168°.68E,h37^{km},mb6.0/55, MS5.3/22,Error ellipse: s-maj=8.2km s-min=7.4km az=125.5*

GCMT **10** *08:40:46.6±0.1,20°.93S±0°.01×168°.58E,h13^{km}, MW5.7/156,Moment Tensor Solution. s131,c252; s156,c342; Duration: 1^{s}7 Moment tensor: Scale 10^{17} Nm; M_{rr}-3.67±.04; $M_{\theta\theta}$0.39±.03; $M_{\phi\phi}$3.28±.03; $M_{r\theta}$-0.94±.08; $M_{\theta\phi}$-1.98±.03; $M_{\phi r}$0.54±.07; Best double couple: $M_0$4.13500×10^{17} NP1:ϕ_s344.00000°,δ40.00000°, λ-74.00000°. NP2:ϕ_s143.00000°,δ52.00000°, λ-103.00000°. Principal axes: T 4.3900, Plg6.0000°, Azm242.0000°; N -0.5080, Plg10.0000°, Azm151.0000°; P -3.8790, Plg78.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC **10** *08:40:46.1±0.3,21°.03S×168°.69E,h40^{km}±2^{km},mb5.3/23, mbtmp5.5/24,ML5.4/1,MS5.0/39 Error ellipse: s-maj=11.1km s-min=7.8km az=140.0*

ISC 10 08:40:44.9±0.2,**20°.92S**±0°.03×**168°.68E**±0°.03,**h31**^{km}±1^{km}, **h31^{km}:pP-P,n1535,**σ**1^{s}57**/1244,**mb5.8**/432,**MS5.3**/217, **45C-79D,Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	0.82	227		Pb	08 40 57.3	-3.5
MARNC	Mare, Loyalty	0.82	227	P	Pb	08 40 57.2	-3.5
MARNC	Mare, Loyalty	0.82	227	S	Sb	08 41 08.4	-3.1
INH	Isangel	1.47	22	P	Pn	08 41 08.1	-1.2
INH	Isangel	1.47	22	S	Sn	08 41 26.1	-1.5
YATNC	Mamie plateau,	2.02	235	P	Pn	08 41 14.4	-2.4
PINNC	Pines Island,	2.04	214		Pn	08 41 14.6	-2.5
PINNC	Pines Island,	2.04	214	P	Pn	08 41 15.1	-2.0
PINNC	Pines Island,	2.04	214	S	Sn	08 41 42.5	+1.0
I22FR	PORTLAGUERRE I	2.12	233	P	Pn	08 41 15.9	-2.3
	baz=21,slow=270						
I22FR				I	I	09 02 10.0	
	baz=55,slow=319,SNR=1.2						
OUENC	Ouen Island, N	2.27	228	P	Pn	08 41 19.4	-0.9
OUENC	Ouen Island, N	2.27	228	S	Sn	08 41 49.6	+2.4
DZM	Mont Dzumac	2.38	241	P	Pn	08 41 20.6	-1.3
	918nm,0.3s,baz=71,slow=8.9,SNR=1840						
DZM				S	Sn	08 41 49.3	-0.7
	baz=120,slow=20						
DZM				LR	LR	08 42 10.6	
	comp=Z,54μm,20.6s,baz=134,slow=36						
	4μm,0.4s						
DZM	Mont Dzumac	2.38	241	*e*Pn	Pn	08 41 19.5	-2.3
	4μm,0.7s						
DZM				*e*Sn	Sn	08 41 48.9	-1.1
	23μm,0.8s						
DZM	Mont Dzumac	2.38	241		Pn	08 41 19.8	-2.1
DZM	Mont Dzumac	2.38	241	P	Pn	08 41 20.6	-1.3
ONTNC	Ouen Toro	2.49	236		Pn	08 41 21.9	-1.4
ONTNC	Ouen Toro	2.49	236	P	Pn	08 41 23.9	+0.6
ONTNC	Ouen Toro	2.49	236	S	Sn	08 41 54.6	+2.0
RTV	Rentapao	3.12	356	P	Pn	08 41 31.1	-0.9
DVP	Devils Point	3.21	352	P	Pn	08 41 31.2	-2.0
KOUNC	Koumac, New Ca	4.13	274	P	Pn	08 41 45.3	-0.5
SANVU	Saraoutou	5.62	345		Pn	08 42 03.2	-3.2
SANVU	Saraoutou	5.62	345	P	Pn	08 42 04.5	-1.9
NFK	Norfolk Island	8.12	185	P	Pn	08 42 41.0	+0.3
	comp=Z,666nm,0.9s,comp=Z,0.0nm						
NFK	Norfolk Island	8.12	185	P	Pn	08 42 40.9	+0.2
NFK	Norfolk Island	8.12	185	P	Pn	08 42 40.4	-0.3
MSVF	Nonsavu	9.40	72		Pn	08 43 00.5	+2.2
MSVF	Nonsavu	9.40	72	P	Pn	08 42 59.8	+1.5
MSVF	Nonsavu	9.40	72	P	Pn	08 43 00.5	+2.2
HURO	Huro Makira	12.27	327	P	Pn	08 43 36.8	-0.7
NGOA	Tingoa Renbel	12.45	317	P	Pn	08 43 39.4	-0.6
LHI	Lord Howe Isla	13.63	217	P	Pn	08 43 57.0	+1.0
SAVO	Savo Central	14.49	323	P	Pn	08 44 07.7	-0.3
RAO	Raoul Island	14.70	127	LR	LR	08 48 06.4	
	comp=Z,3μm,21.6s,baz=309,slow=30						
OUZ	Omahuta	14.89	164	P	Pn	08 44 15.6	+2.4
OUZ	Omahuta	14.89	164	P	Pn	08 44 15.1	+1.8
TATA	Tatamba Isabel	15.12	324	P	Pn	08 44 17.3	+0.9
GC1S	Gold Coast 1 S	15.56	239	P	Pn	08 44 23.0	+0.9
AUWSH	Wavell State H	15.66	243	P	Pn	08 44 21.7	-1.6
FUNA	Funafuti	15.96	41		P	08 44 29.8	-0.9
FUNA	Funafuti	15.96	41	P	Pn	08 44 27.4	0.0
GD1S	Gladstone Soft	16.45	257	P	Pn	08 44 34.0	+0.4
TW1H	Toowoomba 1 Ha	16.60	243	P	Pn	08 44 35.8	+0.4
EIDS	Eidsvold	16.78	251	P	P	08 44 38.8	-0.8
	comp=Z,135nm,1.3s						
EIDS	Eidsvold	16.78	251		Pn	08 44 37.3	-0.4
EIDS	Eidsvold	16.78	251	P	Pn	08 44 38.0	+0.3
KUZ	Kuaotunu	16.93	160	P	P	08 44 41.6	+0.4
KUZ	Kuaotunu	16.93	160	P	P	08 44 43.6	+2.4
AUNRC	North Rockhamp	16.99	258	P	Pn	08 44 40.8	+0.5
ARMA	Armidale	18.03	235	P	P	08 44 55.3	+1.8
ARMA	Armidale	18.03	235		P	08 44 53.8	+0.2
ARMA	Armidale	18.03	235	P	P	08 44 54.4	+0.9
HIZ	Hauiti	18.33	164	P	Pn	08 44 59.3	+2.6
HAZ	Te Kaha	18.54	157	P	Pn	08 45 01.9	+2.5
MXZ	Matakaoa Point	18.57	155	P	Pn	08 45 02.8	+3.0
URZ	Urewera	18.76	159	P	Pn	08 45 03.3	+1.4
	comp=Z,32nm,0.8s,baz=349,slow=5.6,SNR=10						
URZ				S	S	08 48 41.5	+8.4
	comp=Z,6.7nm,0.8s,baz=90,slow=20,SNR=1.1						
URZ				LR	LR	08 51 07.0	
	comp=Z,10μm,19.3s,baz=336,slow=33						
URZ	Urewera	18.76	159	P	Pn	08 45 03.4	+1.4
AUPHS	Peel High Scho	18.91	234	P	Pn	08 45 04.4	+0.5
PUZ	Puketiti	19.00	156	P	Pn	08 45 05.9	+1.0
RTZ	Ruatahuna	19.04	160		Pn	08 45 06.6	+1.1
RTZ	Ruatahuna	19.04	160	P	Pn	08 45 06.8	+1.4
WTVZ	West Tongariro	19.09	163	P	Pn	08 45 08.4	+2.4
NTVZ	North Tongarir	19.09	163	P	Pn	08 45 06.7	+0.5
NNVZ	North Ngauruho	19.11	163	P	Pn	08 45 08.7	+2.4
TMVZ	Te Maari	19.12	163	P	Pn	08 45 10.4	+3.9
ETVZ	East Tongariro	19.14	163	P	Pn	08 45 10.2	+3.5
NGZ	Ngauruhoe	19.15	163	P	Pn	08 45 10.4	+3.6
OTVZ	Oturere	19.15	163	P	Pn	08 45 11.6	+4.7
SNVZ	South Ngauruho	19.17	163	P	Pn	08 45 09.9	+2.8
TKGZ	Te Karaka	19.17	158	P	Pn	08 45 08.1	+1.1
MTHZ	Maungataniwha	19.21	160	P	Pn	08 45 08.4	+0.9
TRVZ	Turoa	19.25	164	P	Pn	08 45 10.9	+2.8
WNVZ	Wahianoa	19.29	164	P	Pn	08 45 11.6	+3.0
SNGZ	Shannon Statio	19.31	159	P	Pn	08 45 09.8	+1.2
RAHZ	Arahi	19.34	160	P	Pn	08 45 11.3	+2.2
RIGZ	Rimuhau	19.38	158	P	Pn	08 45 10.1	+0.6
BKZ	Black Stump Fm	19.39	161		Pn	08 45 09.7	+0.1
BKZ	Black Stump Fm	19.39	161	P	Pn	08 45 10.3	+0.7
BKZ	Black Stump Fm	19.39	161	P	Pn	08 45 10.2	+0.5
NMHZ	Naumai	19.42	161	P	Pn	08 45 12.3	+2.3
KWHZ	Kaweka Forest	19.61	162	P	Pn	08 45 13.1	+0.9
PRGZ	Paritu Road	19.62	158	P	Pn	08 45 11.6	-0.7
KNZ	Kokohu	19.63	159	P	Pn	08 45 12.3	-0.1
MCHZ	McNeill Hill	19.71	161	P	Pn	08 45 13.7	+0.4
AUKHS	Kincumber High	19.78	227	P	Pn	08 45 15.5	+1.2
KRHZ	Kereru	19.80	162	P	Pn	08 45 14.7	+0.3
MGCD	Mangrove Creek	19.83	228	P	Pn	08 45 16.4	+1.5
MGCD	Mangrove Creek	19.83	228	P	Pn	08 45 16.0	+1.1
MHGZ	Mahia Peninsul	19.83	158	P	Pn	08 45 16.6	+1.7
AFI	Afiamalu	19.90	73		P	08 45 13.9	-0.2
AFI	Afiamalu	19.90	73	P	Pn	08 45 15.4	-0.5
AFI	Afiamalu	19.90	73	P	P	08 45 13.9	-0.2
AFI				pmax	pmax		
	comp=Z,249nm,1.0s						
PNHZ	Pukenui	20.00	163	P	Pn	08 45 17.1	+0.2
CKHZ	Cape Kidnapper	20.02	161	P	Pn	08 45 17.8	+0.7
TSZ	Takapari Road	20.07	164	P	Pn	08 45 17.7	0.0
KAHZ	Kahuranaki	20.08	161	P	Pn	08 45 17.8	0.0
QRZ	Quartz Range	20.11	171	P	Pn	08 45 17.8	-0.3
QRZ				IAMs_20	IAMs_20	08 52 34.8	
	comp=Z,12μm,18.0s						
QRZ	Quartz Range	20.11	171	P	Pn	08 45 18.2	0.0
QRZ	Quartz Range	20.11	171	P	Pn	08 45 20.4	+2.3
RIV	Riverview	20.15	227	P	Pn	08 45 19.7	+1.2
RIV	Riverview	20.15	227	P	Pn	08 45 19.1	+0.5
NIUE	Niue	20.19	89	P	P	08 45 17.6	+0.4
	comp=Z,359nm,1.5s						
NIUE	Niue	20.19	89		P	08 45 17.9	+0.7
NIUE	Niue	20.19	89	P	P	08 45 17.9	+0.7
WPHZ	Waipukurau	20.21	163	P	Pn	08 45 19.1	-0.2
PXZ	Pawanui	20.30	162	P	Pn	08 45 19.4	-0.9
DVHZ	Dannevirke	20.35	163	P	P	08 45 19.6	+0.8
TKNZ	Takaka Hill	20.38	171	P	Pn	08 45 20.9	-0.4
SYDH	Sydney Hard Ro	20.39	227	P	Pn	08 45 22.0	+0.5
AULRC	Lightning Ridg	20.54	242	P	Pn	08 45 22.2	-1.0
MRZ	Mangatainoka R	20.54	165		P	08 45 21.4	+0.6
ANWZ	Angora Road	20.58	163	P	P	08 45 22.1	+0.8
TV1H	Townsville Har	20.62	271	P	Pn	08 45 23.9	-0.3
NNZ	Nelson	20.63	170	P	Pn	08 45 23.4	-0.7
NNZ	Nelson	20.63	170	P	Pn	08 45 23.3	-0.9
WOLH	Wollongong Har	20.67	226	P	Pn	08 45 24.9	+0.1
BFZ	Birch Farm	20.73	164	P	P	08 45 22.8	-0.1
BFZ	Birch Farm	20.73	164	P	P	08 45 23.3	+0.4
HOWZ	Holdsworth Sta	20.75	165	P	P	08 45 23.5	+0.4
DSZ	Denniston Nort	20.93	173	P	Pn	08 45 27.3	-0.5
SNZO	South Karori	20.96	167	P	P	08 45 26.1	+0.8
SNZO	South Karori	20.96	167	P	P	08 45 26.1	+0.8
CTA	Charters Tower	21.02	268	P	P	08 45 29.1	+2.9
CTA	Charters Tower	21.02	268	LR	LR	08 52 37.0	
	comp=Z,168nm,21.5s,baz=88,slow=34						
CTA	Charters Tower	21.02	268	P	P	08 45 28.4	+2.2
CTAO	Charters Tower	21.02	268		P	08 45 26.9	+0.7
CTAO	Charters Tower	21.02	268	P	P	08 45 28.4	+2.2
CTAO	Charters Tower	21.02	268	P	P	08 45 26.9	+0.7
CTAO				pmax	pmax		
	comp=Z,219nm,1.0s						
CTAO				MLR	MLR		
	comp=Z,6μm,21.0s						
THZ	Tophouse	21.09	171	P	P	08 45 28.5	+1.7
AUDCS	Dubbo College	21.14	234	P	P	08 45 28.8	+1.4
AUUHS	Ulladulla High	21.51	224	P	P	08 45 33.9	+2.6
KHZ	Kahutara	21.82	170	IAMs_20	IAMs_20	08 54 00.3	
	comp=Z,9μm,18.0s						
KHZ	Kahutara	21.82	170	P	P	08 45 34.8	+0.2
INZ	Inchbonnie	21.87	175	IAmb	IAmb	08 45 51.6	
	comp=Z,374nm,1.0s						
INZ	Inchbonnie	21.87	175	P	P	08 45 36.1	+1.0
LTZ	Lake Taylor	22.01	173	IAmb	IAmb	08 45 42.5	
	comp=Z,523nm,1.6s						
LTZ				IAMs_20	IAMs_20	08 53 36.1	
	comp=Z,10μm,18.0s						
LTZ	Lake Taylor	22.01	173	P	P	08 45 37.7	+1.1
CNB	Canberra Magne	22.21	226	P	P	08 45 42.2	+3.2
CNB	Canberra Magne	22.21	226	P	P	08 45 41.6	+2.7
GVZ	Greta Valley S	22.29	172	IAmb	IAmb	08 45 53.7	
	comp=Z,380nm,1.2s						
YNG	Young	22.32	229	P	P	08 45 42.1	+2.1
	comp=Z,224nm,1.0s						
AUSIS	Research Schoo	22.36	226	P	P	08 45 43.9	+3.4
AUMHS	Melrose High S	22.42	226	P	P	08 45 44.2	+3.0
AUMTS	Mt Stromlo	22.46	226	P	P	08 45 44.6	+3.0
CAN	Canberra	22.46	226	P	P	08 45 45.0	+3.5
CAN	Canberra	22.46	226		P	08 45 42.3	+0.7
CAN				IAmb	IAmb	08 45 56.1	
	comp=Z,285nm,1.2s						
CAN	Canberra	22.46	226	P	P	08 45 44.6	+3.0
CAN	Canberra	22.46	226	P	P	08 45 42.3	+0.7
CAN				pmax	pmax		
	comp=Z,285nm,1.2s						
OXZ	Oxford	22.52	174	IAmb	IAmb	08 45 56.7	
	comp=Z,433nm,1.3s						
OXZ				IAMs_20	IAMs_20	08 54 08.6	
	comp=Z,12μm,18.0s						
OXZ	Oxford	22.52	174	P	P	08 45 43.8	+1.7
TARA	Tarawa	22.52	11	P	P	08 45 40.7	-1.6
FOZ	Fox Glacier	22.57	178	P	P	08 45 43.8	+1.2
MQZ	McQueen's Vall	22.97	173		P	08 45 47.2	+0.5
MQZ	McQueen's Vall	22.97	173	P	P	08 45 48.2	+1.5
QLP	Quilpie	23.05	251	P	P	08 45 48.8	+1.0
	comp=Z,1μm,1.1s						
QLP	Quilpie	23.05	251	P	P	08 45 48.8	+1.0
JCZ	Jackson Bay	23.09	180	P	P	08 45 50.3	+2.2
JCZ	Jackson Bay	23.09	180	P	P	08 45 51.2	+3.1
RABL	Rabaul	23.11	314	P	P	08 45 48.4	-0.1
RABL				IAmb	IAmb	08 45 55.6	
	comp=Z,451nm,0.9s						
MTSU	Mount Surprise	23.12	273	P	P	08 45 49.8	+1.2
	comp=Z,787nm,0.8s						
MTSU	Mount Surprise	23.12	273	P	P	08 45 49.5	+0.9
CMSA	Cobar Meteorol	23.13	238	P	P	08 45 49.1	+0.6
	comp=Z,320nm,1.1s,comp=Z,0.0nm						
CMSA	Cobar Meteorol	23.13	238	P	P	08 45 49.6	+1.1
AUSMG	Snowy Mountain	23.35	224	P	P	08 45 54.1	+3.3
MILA	Mila	23.38	222	P	P	08 45 54.2	+3.1
LBZ	Lake Benmore	23.44	177	IAMs_20	IAMs_20	08 54 58.7	
	comp=Z,13μm,18.0s						
LBZ	Lake Benmore	23.44	177	P	P	08 45 53.3	+1.8
TMZ	Timaru	23.48	176	P	P	08 45 52.3	+0.4
PMG	Port Moresby	23.68	296		P	08 45 54.2	+0.1
PMG				IAmb	IAmb	08 46 08.0	
	comp=Z,414nm,1.0s						
PMG	Port Moresby	23.68	296	P	P	08 45 54.5	+0.5
PMG	Port Moresby	23.68	296	P	P	08 45 54.1	+0.1
	comp=Z,6μmcomp=Z,7μmcomp=Z,450nm,1.0s						
PMG	Port Moresby	23.68	296	*d i*P	P	08 45 54.3	+0.3
PMG				pmax	pmax		
	comp=Z,277nm,1.0s						
PMG				MLR	MLR		
	comp=Z,6μm,15.0s						
MSZ	Milford Sound	23.70	181	P	P	08 45 55.5	+1.6
WKZ	Wanaka	23.85	179		P	08 45 55.6	+0.2
ODZ	Otahua Downs	24.12	177	P	P	08 45 57.3	-0.5
EAZ	Earnscleugh	24.25	179	P	P	08 46 00.1	+0.9
WHZ	Wether Hill Ro	24.92	181	P	P	08 46 05.4	+0.2
TUZ	Tuapeka	24.98	178	P	P	08 46 06.4	+0.7
COEN	Coen	25.27	282	P	P	08 46 10.0	+1.3
	comp=Z,113nm,0.9s,comp=Z,0.0nm						
COEN	Coen	25.27	282		P	08 46 09.0	+0.3
COEN				IAmb	IAmb	08 46 22.5	
	comp=Z,203nm,1.4s						
COEN	Coen	25.27	282	P	P	08 46 09.5	+0.8
AUSSC	Sale College,	25.33	223	P	P	08 46 10.5	+1.6
SYZ	Scrubby Hill	25.56	179	P	P	08 46 12.5	+1.6
SYZ	Scrubby Hill	25.56	179	P	P	08 46 12.5	+1.6
AUMAG	Moama Anglican	25.80	229	P	P	08 46 16.8	+3.5
CTZ	Chatham Island	25.84	155	P	P	08 46 14.9	+1.4
TOO	Toolangi	26.06	225	P	P	08 46 18.5	+2.8
TOO	Toolangi	26.06	225	P	P	08 46 17.0	+1.3
TOO	Toolangi	26.06	225	P	P	08 46 17.0	+1.3
TOO				pmax	pmax		
	comp=Z,90nm,1.3s						
STKA	Stephens Creek	26.53	240	P	P	08 46 21.1	+1.1
	comp=Z,557nm,0.7s						
STKA	Stephens Creek	26.53	240	P	P	08 46 21.0	+1.1
	comp=Z,30nm,0.8s,baz=78,slow=9.8,SNR=64						
STKA				S	S	08 50 45.8	-6.6
	comp=Z,2.2nm,0.6s,baz=175,slow=12,SNR=0.8						
STKA				LR	LR	08 56 08.9	
	comp=Z,8μm,20.2s,baz=71,slow=35						
	comp=Z,30nm,0.8s						
STKA	Stephens Creek	26.53	240	P	P	08 46 21.0	+1.1
STKA	Stephens Creek	26.53	240	P	P	08 46 21.7	+1.7
GLAD	Gladstone	26.61	217	P	P	08 46 22.1	+1.6
BRAT	Ballarat	27.10	227	P	P	08 46 27.1	+2.1
QIS	Mount Isa	27.18	266	P	P	08 46 26.4	+0.5
	comp=Z,131nm,1.1s,comp=Z,0.0nm						
QIS	Mount Isa	27.18	266	P	P	08 46 26.3	+0.4
MOO	Moorlands	28.05	215	P	P	08 46 35.9	+2.4
	comp=Z,119nm,1.7s						
MOO	Moorlands	28.05	215	P	P	08 46 35.1	+1.7
ARPS	Mount Arapiles	28.19	230	P	P	08 46 36.5	+1.8
	comp=Z,61nm,1.0s						
TAU	Tasmania Unive	28.30	214	P	P	08 46 37.2	+1.5
AUHPC	Hawkesdale P12	28.48	227	P	P	08 46 39.1	+1.8
HTT	Hallett	29.15	238	P	P	08 46 45.0	+1.6
	comp=Z,52nm,0.9s						
HTT	Hallett	29.15	238	P	P	08 46 44.5	+1.1
AUJCS	Jamestown Cent	29.33	239	P	P	08 46 46.7	+1.7
PATS	Pohnpei	29.40	339	P	P	08 46 46.1	+0.4
PATS				IAmb	IAmb	08 46 58.9	
	comp=Z,130nm,1.0s						
PATS				IAMs_20	IAMs_20	08 57 31.2	
	comp=Z,6μm,19.0s						
PATS	Pohnpei	29.40	339	P	P	08 46 45.5	-0.2
RAR	Rarotonga	29.42	96	LR	LR	08 58 28.3	
	comp=Z,1μm,18.0s,baz=260,slow=36						
RAR	Rarotonga	29.42	96	P	P	08 46 49.2	+3.4
AUMBR	Murray Bridge	29.43	235	P	P	08 46 47.3	+1.5
AUMAR	Marden Senior	29.84	236	P	P	08 46 51.1	+1.6
WHYH	Whyalla	30.12	240	P	P	08 46 53.5	+1.6
BBOO	Buckleboo	31.29	241	P	P	08 47 03.2	+0.9
	comp=Z,96nm,1.3s,comp=Z,0.0nm						
BBOO	Buckleboo	31.29	241		P	08 47 02.9	+0.5
BBOO				IAmb	IAmb	08 47 16.9	
	comp=Z,70nm,0.8s						
BBOO	Buckleboo	31.29	241	P	P	08 47 03.5	+1.2
WB0	Warramunga Arr	32.13	266	IAmb	IAmb	08 47 21.6	
	comp=Z,152nm,1.1s						
WRAB	Tennant Creek	32.15	266	IAMs_20	IAMs_20	08 59 14.9	
	comp=Z,6μm,20.0s						
WRAB	Tennant Creek	32.15	266	P	P	08 47 09.0	-1.0
WRAB	Tennant Creek	32.15	266	*ce*P	P	08 47 09.2	-0.8
WRAB				pmax	pmax		
	comp=Z,68nm,1.0s						
WRAB				MLR	MLR		
	comp=Z,9μm,16.0s						
WRA	Warramunga Arr	32.16	266	P	P	08 47 09.2	-0.9
	comp=Z,39nm,1.0s,baz=93,slow=9.1,SNR=56						
WRA				pP	sP	08 47 20.1	-0.6
	comp=Z,97nm,1.1s,baz=99,slow=7.9,SNR=24						
WRA				S	S	08 52 27.0	+5.9
	comp=Z,1.2nm,1.0s,baz=203,slow=18,SNR=1.6						
WRA				PKiKP	PKiKP	08 57 25.7	-1.2
	comp=Z,3.2nm,0.9s,baz=13,slow=0.2,SNR=12						
WRA				pPKiKP	pPKiKP	08 57 38.2	+2.9
	comp=Z,2.2nm,0.7s,baz=26,slow=0.2,SNR=6.9						
WRA				LR	LR	08 59 26.4	
	comp=Z,6μm,20.4s,baz=98,slow=35						
	comp=Z,39nm,1.0s						
WRA	Warramunga Arr	32.16	266		P	08 47 08.3	-1.8
AS31	Alice Springs	32.24	259	IAmb	IAmb	08 47 23.5	
	comp=Z,74nm,0.8s						
ASAR	Alice Springs	32.24	259	P	P	08 47 10.3	-0.6
	comp=Z,128nm,1.1s,baz=89,slow=8.9,SNR=311						
ASAR				pP	sP	08 47 21.4	0.0
	comp=Z,221nm,0.9s,baz=89,slow=8.6,SNR=43						
ASAR				PKiKP	PKiKP	08 57 25.4	-1.5
	comp=Z,1.8nm,0.7s,baz=96,slow=1.5,SNR=12						
ASAR				pPKiKP	pPKiKP	08 57 38.6	+3.3
	comp=Z,1.9nm,0.6s,baz=94,slow=1.3,SNR=14						
ASAR				LR	LR	08 59 46.8	
	comp=Z,8μm,19.1s,baz=93,slow=35						
ASAR				P3KPbc		09 18 38.6	
	comp=Z,3.0nm,0.9s,baz=285,slow=3.8,SNR=14						
	comp=Z,128nm,1.1s						
ASAR	Alice Springs	32.24	259	P	P	08 47 10.8	-0.1
AUALC	St Philip's Co	32.26	259	P	P	08 47 10.8	-0.2
JAY	Jayapura	32.82	300	LR	LR	08 59 41.8	
	comp=Z,2μm,18.7s,baz=98,slow=34						
JAY	Jayapura	32.82	300	P	P	08 47 16.0	0.0
	comp=Z,3μmcomp=Z,2μmcomp=Z,249nm,1.0s						
GENI	Genyem	33.21	299	P	P	08 47 19.8	+0.5
GENI	Genyem	33.21	299	P	P	08 47 19.9	+0.6
SMPI	Sarmi	34.75	299	P	P	08 47 33.8	+1.2
	comp=Z,3μmcomp=Z,2μmcomp=Z,109nm,1.3s						
KDU	Kakadu	35.55	277	P	P	08 47 38.6	-0.9
	comp=Z,25nm,1.6s						
MTN	Manton Dam	36.74	277	P	P	08 47 48.8	-1.0
	comp=Z,77nm,0.9s,comp=Z,0.0nm						
MTN	Manton Dam	36.74	277	IAmb	IAmb	08 48 04.0	
	comp=Z,139nm,1.4s						
DRS	Darwin Rock St	37.08	277	P	P	08 47 53.1	+0.4
WRKA	Warakurna	37.31	256	P	P	08 47 54.2	-0.4
	comp=Z,83nm,1.1s,comp=Z,0.0nm						
BAKI	Biak	37.34	297	P	P	08 47 57.2	+2.3
FORT	Forrest	37.68	246	P	P	08 47 57.9	+0.4
	comp=Z,165nm,1.1s						
FORT	Forrest	37.68	246	IAmb	IAmb	08 48 09.2	
	comp=Z,110nm,0.8s						
KNRA	Kununurra	38.18	271	P	P	08 48 01.5	-0.5
	comp=Z,187nm,1.0s,comp=Z,0.0nm						
KNRA	Kununurra	38.18	271	IAmb	IAmb	08 48 14.7	
	comp=Z,136nm,0.9s						
SAUI	Saumlaki	38.30	284	P	P	08 48 03.9	+0.9
TBI	Tubuai	38.76	102	*e*P	P	08 48 02.6	-4.1
	comp=Z,642nm,27.2s						
TBI	Tubuai	38.76	102	*e*PP	PP	08 49 31.7	-4.1
	comp=Z,670nm,36.5s						
TBI				*e*S	S	08 54 01.9	-0.4
	comp=Z,7μm,29.5s						
TBI				*e*SS	SnSn	08 56 53.0	+0.3
	comp=Z,57μm,31.0s						
TBI				*e*LR	LR	08 58 38.1	
	comp=Z,20μm,32.0s						
TBI				*e*LR	LR	08 58 40.1	
	comp=Z,4μm,32.8s						
PPT	Papeete	39.48	93	P	P	08 48 11.3	-1.6
	comp=Z,90nm,1.1s,baz=213,slow=19,SNR=4.9						
PPT				LR	LR	09 00 40.8	
	comp=Z,1μm,21.3s,baz=259,slow=30						
	comp=Z,90nm,1.1s						
PPTF	Pamatai, Papee	39.48	93	P	P	08 48 13.5	+0.5
PPTF				IAmb	IAmb	08 49 28.9	
	comp=Z,687nm,2.0s						
PPTF	Pamatai, Papee	39.48	93	P	P	08 48 15.2	+2.2
FAKI	Fak Fak	39.72	292	IAmb	IAmb	08 48 15.7	
	comp=Z,170nm,1.0s						
FAKI	Fak Fak	39.72	292	P	P	08 48 14.0	-0.9
FAKI	Fak Fak	39.72	292	P	P	08 48 14.0	-0.9
	comp=Z,3μmcomp=Z,2μmcomp=Z,183nm,1.1s						
XMAS	Kiritimati	40.26	60	P	P	08 48 21.7	+2.4
FITZ	Fitzroy Crossi	40.58	266	P	P	08 48 22.4	+0.4
	comp=Z,85nm,1.1s						
FITZ	Fitzroy Crossi	40.58	266	LR	LR	09 04 36.7	
	comp=Z,4μm,20.7s,baz=100,slow=35						
FITZ	Fitzroy Crossi	40.58	266	P	P	08 48 22.4	+0.4
FITZ	Fitzroy Crossi	40.58	266	P	P	08 48 22.0	0.0
BNDI	Bandanaira	41.02	288	P	P	08 48 25.0	-0.6
BNDI	Bandanaira	41.02	288	P	P	08 48 25.1	-0.6
	comp=Z,394nm,1.2s						
GUMO	Guam	41.51	324	LR	LR	09 04 56.2	
	comp=Z,1μm,18.1s,baz=134,slow=35						
GUMO	Guam	41.51	324	P	P	08 48 27.3	-2.3
GUMO				IAmb	IAmb	08 48 32.7	
	comp=Z,411nm,1.4s						
GUMO	Guam	41.51	324	P	P	08 48 27.3	-2.3
GUMO				pmax	pmax		
	comp=Z,411nm,1.4s						
SWI	Sorong	41.60	294	P	P	08 48 29.9	-0.5
	comp=Z,2μmcomp=Z,3μmcomp=Z,306nm,0.9s						
KRAI	Karang Ratu	42.91	289	P	P	08 48 40.5	-0.6
	comp=Z,4μmcomp=Z,217nm,1.1s						
AAI	Ambon	42.92	288	P	P	08 48 42.9	+1.7
	comp=Z,2μmcomp=Z,115nm,1.0s						
KMBL	Kambalda	43.00	246	P	P	08 48 41.6	-0.1
	comp=Z,133nm,1.0s						
NLAI	Namlea	44.10	288	P	P	08 48 51.2	+0.6
	comp=Z,2μmcomp=Z,3μmcomp=Z,168nm,1.2s						
SOEI	Soe	44.11	278	P	P	08 48 51.5	+0.6
SOEI				IAmb	IAmb	08 49 06.5	
	comp=Z,283nm,1.1s						
SOEI	Soe	44.11	278	P	P	08 48 51.6	+0.7
SOEI	Soe	44.11	278	P	P	08 48 51.8	+0.9
	comp=Z,2μmcomp=Z,3μmcomp=Z,258nm,1.1s						
BATI	Baumata	44.52	277	LR	LR	09 08 43.2	
	comp=Z,4μm,18.7s,baz=140,slow=38						
BATI	Baumata	44.52	277	P	P	08 48 55.3	+1.3
	comp=Z,3μmcomp=Z,4μmcomp=Z,196nm,1.1s						
PSAC2	Pilbara Seismi	45.32	260	P	P	08 49 00.6	+0.2
	comp=Z,225nm,1.1s						
PSAB3	Pilbara Seismi	45.35	260	P	P	08 49 00.9	+0.2
	comp=Z,237nm,1.1s						
PSA00	Pilbara Seismi	45.37	260	P	P	08 49 01.4	+0.6
	comp=Z,230nm,1.0s						
PSA00	Pilbara Seismi	45.37	260	P	P	08 49 00.7	0.0
PSA00	Pilbara Seismi	45.37	260	P	P	08 49 01.3	+0.6
PSAC1	Pilbara Seismi	45.41	260	P	P	08 49 01.6	+0.6
	comp=Z,265nm,1.0s						
MBWA	Marble Bar	45.53	260	P	P	08 49 02.4	+0.3
	comp=Z,296nm,1.1s,comp=Z,0.0nm						
MBWA	Marble Bar	45.53	260	P	P	08 49 02.2	+0.1
MBWA	Marble Bar	45.53	260	P	P	08 49 02.4	+0.3
SANI	Sanana	45.62	289	P	P	08 49 02.8	0.0
SANI	Sanana	45.62	289	P	P	08 49 02.6	-0.2
TNTI	Ternate	45.78	293	P	P	08 49 05.3	+1.3
TNTI	Ternate	45.78	293	P	P	08 49 04.1	+0.1
	comp=Z,61nm,1.1s						
MEEK	Meekatharra	45.94	253	P	P	08 49 05.1	-0.1
	comp=Z,167nm,1.1s						
MEEK	Meekatharra	45.94	253	P	P	08 49 04.9	-0.3
MMRI	Maumere	46.37	278	IAmb	IAmb	08 49 10.0	
	comp=Z,139nm,0.8s						
MMRI	Maumere	46.37	278	P	P	08 49 08.8	+0.1
MMRI	Maumere	46.37	278	P	P	08 49 09.1	+0.4
	comp=Z,3μmcomp=Z,179nm,1.0s						

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AUALB St Joseph’s Co    46.53 241  P        P        08 49 09.6 -0.1
KLBR  Kellerberrin      46.53 246  P        P        08 49 09.3 -0.5
      comp=Z,568nm,0.9s
KLBR  Kellerberrin      46.53 246  P        P        08 49 09.1 -0.7
EDFI  Ende, Flores      46.84 278  P        P        08 49 12.2 -0.3
      comp=Z,2µmcomp=Z,54nm,1.3s
NWAO  Narrogin (SRO)    46.99 244  P        P        08 49 13.1 -0.3
      comp=Z,291nm,1.0s
NWAO  Narrogin (SRO)    46.99 244  P        P        08 49 13.1 -0.3
      comp=Z,471nm,1.0s
NWAO  Narrogin (SRO)    46.99 244  P        P        08 49 13.0 -0.4
NWAO  Narrogin (SRO)    46.99 244  P        P        08 49 12.8 -0.6
NWAO  Narrogin (SRO)    46.99 244  P        P        08 49 13.0 -0.4
NWAO                               pmax     pmax
      comp=Z,236nm,0.9s
NWAO                               MLR      MLR
      comp=Z,9µm,20.0s
RKGY  Rocky Gully       47.27 242  P        P        08 49 15.8 +0.3
      comp=Z,192nm,1.4s,comp=Z,0.0nm
BASI  Baing, Sumba      47.38 275  P        P        08 49 18.7 +2.1
      comp=Z,3µmcomp=Z,4µmcomp=Z,300nm,1.3s
BLDU  Ballidu           47.44 247  P        P        08 49 16.3 -0.6
      comp=Z,76nm,1.0s
BLDU  Ballidu           47.44 247  P        P        08 49 16.0 -0.9
MUN   Mundaring         47.85 245  P        P        08 49 20.1 +0.1
      comp=Z,151nm,1.1s,comp=Z,0.0nm
MUN   Mundaring         47.85 245  P        P        08 49 19.6 -0.5
MORW  Morawa            48.07 249  P        P        08 49 21.8  0.0
      comp=Z,91nm,1.4s
MORW  Morawa            48.07 249  IAmb     IAmb     08 49 33.4
      comp=Z,92nm,1.1s
MORW  Morawa            48.07 249  P        P        08 49 21.3 -0.5
AUHAR St Anne’s Scho    48.12 244  P        P        08 49 23.4 +1.2
LBFI  Labuhan Bajo,     48.60 277  P        P        08 49 26.8 +0.7
      comp=Z,3µmcomp=Z,125nm,1.3s
WBSI  Waikabubak, Su    48.67 276  P        P        08 49 26.7  0.0
      comp=Z,2µmcomp=Z,209nm,1.2s
LUWI  Luwuk             48.94 288  P        P        08 49 29.4 +0.8
LUWI  Luwuk             48.94 288  P        P        08 49 29.6 +0.9
LUWI  Luwuk             48.94 288  P        P        08 49 29.7 +1.0
GTOI  Gorontalo         49.51 290  P        P        08 49 34.1 +1.1
      comp=Z,2µmcomp=Z,126nm,1.1s
BKSI  Bulukumba         49.54 281  P        P        08 49 32.9 -0.4
      comp=Z,2µmcomp=Z,97nm,1.1s
H01W1 Cape Leeuwin H    49.60 242  P        P        08 49 34.8 +1.7
      baz=103,slow=7.6,SNR=6.3
H01W3 Cape Leeuwin H    49.61 242  P        P        08 49 35.3 +2.0
      baz=103,slow=7.6,SNR=6.8
H01W2 Cape Leeuwin H    49.62 242  P        P        08 49 34.4 +1.1
      baz=103,slow=7.6,SNR=5.5
BNSI  Bone              49.92 282  P        P        08 49 36.9 +0.8
      comp=Z,3µmcomp=Z,210nm,1.2s
APSI  Ampana            50.00 287  P        P        08 49 38.3 +1.5
      comp=Z,2µmcomp=Z,196nm,1.3s
KAPI  Kappang           50.00 281  LR       LR       09 12 47.5
      comp=Z,703nm,19.3s,baz=122,slow=38
KAPI  Kappang           50.00 281  P        P        08 49 37.2 +0.4
KAPI  Kappang           50.00 281  P        P        08 49 37.6 +0.8
KAPI  Kappang           50.00 281  P        P        08 49 37.3 +0.5
      comp=Z,1µmcomp=Z,114nm,1.2s
KAPI  Kappang           50.00 281diP       P        08 49 37.0 +0.2
KAPI                               pmax     pmax
      comp=Z,231nm,1.1s
KAPI                               MLR      MLR
      comp=Z,1µm,17.0s
DBNI  Kabupaten Domp    50.06 276  P        P        08 49 37.0 -0.2
      comp=Z,2µmcomp=Z,2µmcomp=Z,140nm,0.7s
MKS   Makassar          50.18 281  P        P        08 49 39.8 +1.7
      comp=Z,3µmcomp=Z,277nm,1.3s
GIRL  Giralia           50.35 257  P        P        08 49 41.2 +1.9
      comp=Z,112nm,1.7s
GIRL  Giralia           50.35 257  IAmb     IAmb     08 49 52.5
      comp=Z,203nm,1.4s
MRSI  Marisa            50.37 289  P        P        08 49 39.0 -0.6
      comp=Z,3µmcomp=Z,1µmcomp=Z,66nm,1.1s
SPSI  Sidrap Palu       50.40 283  P        P        08 49 39.0 -0.8
      comp=Z,5µmcomp=Z,81nm,1.1s
PLAI  Plampang          50.45 276  P        P        08 49 40.7 +0.6
PLAI  Plampang          50.45 276  P        P        08 49 40.4 +0.3
      comp=Z,3µmcomp=Z,3µmcomp=Z,182nm,1.2s
TAOE  Nuku Hiva Isla    50.69  84 ePKP1     P        08 49 41.5 -0.6
      comp=Z,172nm,26.1s
TAOE                              eS        S        08 56 55.4 -0.3
      comp=Z,2µm,26.7s
TAOE                              eSS       SS       09 00 33.9 +3.4
      comp=Z,674nm,28.7s
TAOE                              eLQ       LQ       09 02 04.9
      comp=Z,4µm,27.4s
TAOE                              eLR       LR       09 04 14.9
      comp=Z,6µm,30.4s
TAOE  Nuku Hiva Isla    50.69  84  P        P        08 49 41.3 -0.8
TAOE  Nuku Hiva Isla    50.69  84  P        P        08 49 41.8 -0.3
TTSI  Tana Toraja       50.73 284  P        P        08 49 42.7 +0.4
      comp=Z,2µmcomp=Z,157nm,1.0s
TWSI  Taliwang, Sumb    51.31 276  P        P        08 49 47.2 +0.6
      comp=Z,3µmcomp=Z,160nm,1.2s
PMSI  Majene            51.37 283  P        P        08 49 48.0 +0.9
      comp=Z,4µmcomp=Z,303nm,1.1s
PCI   Palu              51.62 286  P        P        08 49 51.5 +2.5
TOLI2 Tolitoli          51.69 289  P        P        08 49 48.4 -1.1
TOLI2 Tolitoli          51.69 289  P        P        08 49 49.6 +0.1
MMSI  Mamuju            51.70 284  P        P        08 49 51.2 +1.6
      comp=Z,1µmcomp=Z,69nm,0.9s
RKT   Rikitea           52.01 103 eS        S        08 57 19.8 +6.2
      comp=Z,5µm,28.5s
RKT                               eSS       SS       09 00 52.0 +1.1
      comp=Z,1µm,24.0s
RKT                               eLQ       LQ       09 02 23.4
      comp=Z,32µm,41.8s
RKT                               eLR       LR       09 04 45.9
      comp=Z,7µm,31.5s
MPSI  Mapaga            52.12 288  P        P        08 49 52.6 -0.1
      comp=Z,2µmcomp=Z,2µmcomp=Z,281nm,1.1s
KLNI  Mataram           52.15 276  P        P        08 49 52.7 -0.2
      comp=Z,3µmcomp=Z,90nm,1.0s
KHKI  Kahang-Kahang     52.62 275  P        P        08 49 57.0 +0.6
      comp=Z,2µmcomp=Z,161nm,1.2s
KEKH  Kekaha            52.63  38  P        P        08 49 55.6 -0.7
KEKH                               IAmb     IAmb     08 49 57.8
      comp=Z,263nm,1.3s
IGBI  Denpasar          52.90 275  P        P        08 49 59.7 +1.2
KIP   Kipapa            53.20  40⥣eP        P        08 49 58.7 -1.7
KIP                                pmax     pmax
      comp=Z,277nm,2.5s
KIP                                MLR      MLR
      comp=Z,3µm,17.0s
RTBI  Rangdo, Negare    53.21 275  P        P        08 50 01.6 +0.8
      comp=Z,3µmcomp=Z,221nm,1.2s
HMH   Humu‘ula Sheep    53.41  43  P        P        08 50 01.5 -0.9
HMH                                IAmb     IAmb     08 50 17.1
      comp=Z,114nm,0.9s
HPAH  Hawaii Prepara    53.58  43  P        P        08 50 02.7 -0.7
HPAH                               IAmb     IAmb     08 50 16.7
      comp=Z,85nm,0.9s
HIL   Hilo              53.75  44  IAmb     IAmb     08 50 19.0
      comp=Z,100nm,1.0s
JAGI  Jajag, Banyuwa    53.94 275  P        P        08 50 05.7 -0.4
JAGI  Jajag, Banyuwa    53.94 275  P        P        08 50 05.4 -0.7
      comp=Z,2µmcomp=Z,2µmcomp=Z,199nm,1.1s
ABJI  Asem Bagus        54.09 276  P        P        08 50 08.1 +0.9
      comp=Z,2µmcomp=Z,119nm,1.1s
JCJ   Chichijima        54.19 331  P        P        08 50 07.6  0.0
JCJ   Chichijima        54.19 331  P        P        08 50 07.6  0.0
KMMI  Kalianget         54.60 276  P        P        08 50 11.8 +0.9
      comp=Z,2µmcomp=Z,123nm,1.2s
GMJI  Gumukmas          54.66 275  P        P        08 50 11.5 +0.1
      comp=Z,63nm,1.1s
BLJI  Banyuglugur       54.70 275  P        P        08 50 12.2 +0.5
      comp=Z,3µmcomp=Z,94nm,0.7s
BBKI  Banjar Baru       55.11 281  P        P        08 50 15.7 +1.0
      comp=Z,103nm,1.0s
MYLDM Lahad Datu        55.63 292  IAmb     IAmb     08 50 35.4
      comp=Z,187nm,1.3s
MYLDM Lahad Datu        55.63 292  P        P        08 50 20.6 +2.2
MYLDM Lahad Datu        55.63 292  P        P        08 50 26.5 +8.1
MTKI  Muara Teweh, K    56.07 284  P        P        08 50 22.4 +0.8
SNJI  Sawahan-Nganju    56.40 275  P        P        08 50 25.1 +1.0
      comp=Z,3µmcomp=Z,2µmcomp=Z,212nm,1.2s
SJI   Sawahan           56.41 275  P        P        08 50 24.3 +0.2
      comp=Z,130nm,1.0s
TBJI  Tambak Boyo       56.65 276  P        P        08 50 26.9 +1.3
VNDA  Vanda             56.74 182  P        P        08 50 25.6 +0.2
      comp=Z,6.6nm,0.7s,baz=11,slow=5.6,SNR=23
VNDA                               LR       LR       09 11 43.6
      comp=Z,639nm,18.7s,baz=18,slow=33
      comp=Z,6.6nm,0.7s
VNDA  Vanda             56.74 182  P        P        08 50 25.4  0.0
PCJI  Pacitan           56.80 274  P        P        08 50 27.5 +0.7
NGJI  Ngawi             56.82 275  P        P        08 50 35.2 +8.3
SBA   Scott Base        56.99 180  P        P        08 50 28.5 +1.4
SBA                                IAmb     IAmb     08 50 41.8
      comp=Z,162nm,1.1s
SBA   Scott Base        56.99 180  IAMs_20  IAMs_20  09 13 58.9
      comp=Z,2µm,18.0s
SBA   Scott Base        56.99 180  P        P        08 50 28.5 +1.4
SBA                                pmax     pmax
      comp=Z,162nm,1.1s
WOJI  Wonogiri, Jawa    57.16 274  P        P        08 50 29.8 +0.5
UGM   Wanagama          57.51 274  P        P        08 50 32.2 +0.4
UGM   Wanagama          57.51 274  P        P        08 50 32.8 +1.0
      comp=Z,212nm,1.1s
KKM   Kota Kinabalu     58.04 292  P        P        08 50 35.8 +0.2
KKM   Kota Kinabalu     58.04 292  P        P        08 50 36.0 +0.4
      comp=Z,3µmcomp=Z,201nm,1.3s
CASY  Casey             58.38 204  P        P        08 50 36.7 -0.3
CTJI  Waduk Cacaban     59.06 274  P        P        08 50 43.0 +0.4
      comp=Z,3µmcomp=Z,271nm,1.1s
KPJI  Karang Pucung     59.19 274  P        P        08 50 43.8 +0.3
      comp=Z,2µmcomp=Z,1µmcomp=Z,124nm,1.1s
SBUM  Sibu              59.93 286  P        P        08 50 49.4 +0.8
SBUM  Sibu              59.93 286  P        P        08 50 49.1 +0.5
      comp=Z,23nm,1.2s
BBJI  Bungbulang        60.34 273  P        P        08 50 51.3 -0.2
BBJI  Bungbulang        60.34 273  P        P        08 50 50.9 -0.6
      comp=Z,91nm,1.1s
JHJ   Hachijo jima 2    60.40 332  LR       LR       09 20 09.8
      comp=Z,724nm,18.0s,baz=110,slow=39
CNJI  Cibinong          60.88 273  P        P        08 50 55.7 +0.6
      comp=Z,119nm,1.0s
XMI   Christmas Isla    61.21 269  P        P        08 50 57.9 +0.5
DBJI  Dramaga           61.49 274  P        P        08 50 59.2 -0.1
JOW   Kunigami          61.52 319  P        P        08 50 57.8 -1.4
JOW                                IAmb     IAmb     08 51 14.0
      comp=Z,73nm,1.0s
JOW   Kunigami          61.52 319  P        P        08 51 00.2 +1.0
TPI   Tanjungpandan     62.01 278  P        P        08 51 04.4 +1.7
      comp=Z,2µmcomp=Z,1µmcomp=Z,56nm,1.2s
SBJI  Serang            62.21 274  P        P        08 51 04.7 +0.6
INU   Inuyama           63.51 331  P        P        08 51 12.7 +0.5
INU                                IAmb     IAmb     08 51 26.3
      comp=Z,104nm,1.1s
INU   Inuyama           63.51 331  P        P        08 51 12.7 +0.5
JGF   Kuroka            63.57 332  P        P        08 51 12.6  0.0
JGF                                IAmb     IAmb     08 51 15.2
      comp=Z,40nm,1.0s
JGF   Kuroka            63.57 332  P        P        08 51 12.7  0.0
TWGBT Beinan            63.59 310  P        P        08 51 14.0 +1.0
JMN   Monobe            63.66 328  P        P        08 51 14.5 +1.1
YULB  Yu-li             63.80 311  IAmb     IAmb     08 51 30.8
      comp=Z,54nm,1.1s
YULB  Yu-li             63.80 311  P        P        08 51 13.9 -0.5
KASI  Kota Agung        63.94 274  P        P        08 51 14.3 -1.3
      comp=Z,2µmcomp=Z,208nm,0.9s
MJAR  Matsushiro Arr    63.99 333  P        P        08 51 15.1 -0.3
      comp=Z,105nm,1.1s,baz=166,slow=6.7,SNR=100
MJAR                               pP       pwP      08 51 28.1 -3.1
      comp=Z,72nm,0.9s,baz=168,slow=8.8,SNR=14
MJAR                               PKPPKP   P'P'df   09 20 05.1 +1.4
      comp=Z,5.1nm,1.0s,baz=325,slow=3.4,SNR=9.7
MJAR                               LR       LR       09 22 17.1
      comp=Z,612nm,18.0s,baz=147,slow=39
      comp=Z,105nm,1.1s
MJAR  Matsushiro Arr    63.99 333  P        P        08 51 15.4  0.0
MJAR                               IAmb     IAmb     08 51 16.9
      comp=Z,88nm,1.0s
MJAR  Matsushiro Arr    63.99 333  P        P        08 51 15.4  0.0
MJAR                               pmax     pmax
      comp=Z,88nm,1.0s
MAJO  Matsushiro        63.99 333  P        P        08 51 15.8 +0.4
MAJO                               IAmb     IAmb     08 51 17.0
      comp=Z,88nm,0.8s
MAJO  Matsushiro        63.99 333  P        P        08 51 15.3 -0.1
MAJO  Matsushiro        63.99 333diP       P        08 51 14.7 -0.7
MAJO                               pmax     pmax
      comp=Z,108nm,1.0s
MAJO                               MLR      MLR
      comp=Z,718nm,18.0s
MJB9  Matsu-Tunnel      64.00 333  P        P        08 51 16.3 +0.9
MJB9                               IAmb     IAmb     08 51 17.9
      comp=Z,84nm,0.8s
KLSI                    64.02 275  P        P        08 51 15.2 -0.9
      comp=Z,1µmcomp=Z,71nm,1.3s
NACB  Ninganchiao       64.09 312  P        P        08 51 16.5 +0.2
TPUB  Ta-pu             64.21 311  P        P        08 51 16.6 -0.6
SSLB  Suanglung         64.29 311  IAmb     IAmb     08 51 18.4
      comp=Z,92nm,1.0s
SSLB  Suanglung         64.29 311  P        P        08 51 17.3 -0.4
LWLI  Liwa              64.53 274  P        P        08 51 19.4 -0.2
      comp=Z,2µmcomp=Z,139nm,1.0s
YHNB  Yeheng            64.57 312  P        P        08 51 19.9 +0.4
MDSI  Maura Dua         64.61 275  P        P        08 51 18.2 -1.7
      comp=Z,2µmcomp=Z,126nm,1.0s
TATO  Taipei            64.69 313  P        P        08 51 19.3 -0.8
TATO  Taipei            64.69 313  IAMs_20  IAMs_20  09 21 04.7
      comp=Z,2µm,18.0s
TATO  Taipei            64.69 313  P        P        08 51 20.5 +0.3
JNU   Nakatsue          64.73 325  LR       LR       09 19 55.3
      comp=Z,393nm,18.1s,baz=118,slow=36
JNU   Nakatsue          64.73 325  P        P        08 51 20.4 +0.1
JNU                                IAmb     IAmb     08 51 35.6
      comp=Z,47nm,1.0s
JNU   Nakatsue          64.73 325  P        P        08 51 20.7 +0.3
DSRI  Dabo              65.71 279  P        P        08 51 28.2 +1.1
      comp=Z,5µmcomp=Z,71nm,1.3s
JMBI  JAMBI             66.14 278  P        P        08 51 33.4 +3.5
TPRI  Tanjung Pinang    66.30 281  P        P        08 51 32.6 +1.7
      comp=Z,122nm,0.9s
KSI   Kapahiang         66.38 275  P        P        08 51 32.3 +0.8
      comp=Z,130nm,1.1s
QZH   Quanzhou          66.69 311  P        P        08 51 33.1  0.0
QZH                                S        S        09 00 27.7 +4.7
QZH                                pmax     pmax
      comp=Z,870nm,6.7s
QZH                                LR       LR
      comp=Z,760nm,18.6s
QZH                                LR       LR
      comp=Z,390nm,16.1s
QZH                                LR       LR
      comp=Z,880nm,16.1s
MASI  Maura Aman, Be    66.89 276  P        P        08 51 34.2 -0.6
ERM   Erimo             66.92 340  IAMs_20  IAMs_20  09 18 24.6
      comp=Z,2µm,19.0s
BTDF  Bukit Timah Da    67.17 281  P        P        08 51 36.9 +0.5
BTDF  Bukit Timah Da    67.17 281  P        P        08 51 37.1 +0.7
      comp=Z,67nm,1.0s
MYKOM Kota Tinggi       67.27 281  IAmb     IAmb     08 51 52.4
      comp=Z,67nm,1.0s
MYKOM Kota Tinggi       67.27 281  P        P        08 51 37.3 +0.2
MYKOM Kota Tinggi       67.27 281  P        P        08 51 38.2 +1.1
      comp=Z,75nm,1.0s
DLV    Lat              67.55 293  IAmb     IAmb     08 51 42.4
      comp=Z,82nm,1.0s
DLV    Lat              67.55 293  P        P        08 51 40.9 +1.9
HKPS  Hong Kong Po S    68.37 306  P        P        08 51 45.0 +1.2
SSE   Sheshan           68.93 317  P        P        08 51 48.5 +1.4
SSE                                S        S        09 00 55.6 +5.9
SSE                                pmax     pmax
      comp=Z,15nm,0.6s
SSE                                pmax     pmax
      comp=Z,250nm,14.5s
SSE                                LR       LR
      comp=Z,180nm,18.4s
SSE                                LR       LR
      comp=Z,220nm,19.2s
ASAJ  Asahikawa         68.99 340  P        P        08 51 49.4 +2.2
      comp=Z,97nm,0.9s,baz=229,slow=11,SNR=34
      comp=Z,97nm,0.9s
TJN   Taejon            69.08 325  P        P        08 51 48.6 +0.7
TJN   Taejon            69.08 325diP       P        08 51 47.6 -0.3
QSPA  South Pole Qui    69.14 180  P        P        08 51 48.1 -0.1
      comp=Z,53nm,0.8s,baz=16,slow=1.5,SNR=94
QSPA                               pP       pwP      08 52 00.3 -3.5
      comp=Z,128nm,0.9s,baz=25,slow=1.6,SNR=21
QSPA                               PKPPKP   P'P'df   09 19 53.2  -10
      comp=Z,3.7nm,1.1s,baz=312,slow=0.7,SNR=5.8
QSPA                               LR       LR       09 20 33.3
      comp=Z,2µm,18.0s,baz=30,slow=35
      comp=Z,53nm,0.8s
QSPA  South Pole Qui    69.14 180  P        P        08 51 47.9 -0.2
BKNI  Bangkinang        69.29 279  P        P        08 51 52.0 +2.2
KSRS  Korea Array       69.59 326  P        P        08 51 51.7 +0.6
      comp=Z,13nm,0.9s,baz=144,slow=6.1,SNR=31
KSRS                               PKPPKP   P'P'df   09 19 53.5 -1.4
      comp=Z,5.0nm,1.1s,baz=349,slow=3.8,SNR=10.0
KSRS                               LR       LR       09 23 04.2
      comp=Z,297µm,18.0s,baz=145,slow=36
      comp=Z,13nm,0.9s
KSAR  Wonju Array Be    69.61 326  P        P        08 51 51.2  0.0
KSAR  Wonju Array Be    69.61 326  P        P        08 51 51.2  0.0
QIZ   Qiongzhong        69.96 300  IAmb     IAmb     08 52 08.6
      comp=Z,110nm,1.1s
QIZ   Qiongzhong        69.96 300  P        P        08 51 53.8 +0.1
QIZ                                PP       PP       08 54 26.2 -2.8
QIZ                                S        S        09 01 05.1 +2.8
QIZ                                pmax     pmax
      comp=Z,74nm,1.2s
QIZ                                pmax     pmax
      comp=Z,800nm,6.1s
QIZ                                LR       LR
      comp=Z,670nm,18.8s
QIZ                                LR       LR
      comp=Z,390nm,14.9s
QIZ                                LR       LR
      comp=Z,560nm,17.9s
QIZ   Qiongzhong        69.96 300  P        P        08 51 55.1 +1.4
INCN  Inchon            70.29 326  P        P        08 51 56.2 +0.8
INCN                               IAmb     IAmb     08 51 59.2
      comp=Z,188nm,1.4s
INCN  Inchon            70.29 326  P        P        08 51 56.3 +0.9
INCN  Inchon            70.29 326  P        P        08 51 56.2 +0.8
INCN                               pmax     pmax
      comp=Z,188nm,1.5s
SISI  Saibi             70.48 276  P        P        08 51 58.1 +1.0
      comp=Z,93nm,1.4s
IPM   Ipoh              70.92 283  IAmb     IAmb     08 52 13.4
      comp=Z,99nm,0.8s
IPM                                IAMs_20  IAMs_20  09 27 14.6
      comp=Z,1µm,19.0s
IPM   Ipoh              70.92 283  P        P        08 52 00.0 +0.2
IPM   Ipoh              70.92 283  P        P        08 51 59.5 -0.3
      comp=Z,147nm,1.0s
NJ2   Nanjing           71.05 317 ⥣P        P        08 52 00.9 +0.8
NJ2                                sP       pwP      08 52 12.6 -3.1
NJ2                                PcP      PcP      08 52 19.7 -0.6
NJ2                                sS       sS       09 01 26.0 -1.3
NJ2                                pmax     pmax
      comp=Z,20nm,1.0s
NJ2                                pmax     pmax
      comp=Z,570nm,5.7s
YSS   Yuzhno-Sakhali    71.49 342  P        P        08 52 03.8 +1.4
YSS                                IAmb     IAmb     08 52 05.1
      comp=Z,126nm,1.0s
YSS                                IAMs_20  IAMs_20  09 19 19.8
      comp=Z,2µm,20.0s
YSS   Yuzhno-Sakhali    71.49 342  P        P        08 52 04.1 +1.6
YSS   Yuzhno-Sakhali    71.49 342κeP        P        08 52 04.0 +1.6
YSS                               e                  08 52 23.9
YSS                               e                  08 54 42.5
YSS                               eS        S        09 01 23.2 +4.2
YSS                               ePPS      PPS      09 01 53.6
YSS                               e                  09 02 09.6
YSS                                pmax     pmax
      comp=Z,110nm,0.9s
YSS                                pmax     pmax
      comp=Z,2µm,6.0s
YSS                                pmax     pmax
      comp=N,700nm,4.9s
YSS                                MLR      MLR
      comp=N,800nm,18.0s
YSS                                MLR      MLR
      comp=Z,2µm,18.0s
YSS                                MLR      MLR
      comp=E,1µm,17.0s
KULM  Kulim             71.59 283  IAmb     IAmb     08 52 17.0
      comp=Z,66nm,0.9s
KULM  Kulim             71.59 283  P        P        08 52 03.7 -0.1
KULM  Kulim             71.59 283  P        P        08 52 03.9 +0.1
      comp=Z,76nm,1.2s
UBPT  Khong Chiam       71.71 295  P        P        08 52 05.9 +1.5
TEY   Ternei            71.86 337 eP        P        08 51 58.8 -5.8
SKR   Severo-Kuril’s    72.14 352 eP        P        08 51 50.7  -16
SKR                               eS        S        09 01 25.6 -0.7
SKR                                pmax     pmax
      comp=Z,500nm,7.4s
SKR                                MLR      MLR
      comp=Z,1µm,16.0s
VLA   Vladivostok       72.15 333ceP        P        08 52 07.6 +1.1
VLA                                pmax     pmax
      comp=Z,140nm,1.0s
VLA                                MLR      MLR
      comp=Z,641nm,18.0s
PSI   Prapat            72.19 280  LR       LR       09 24 59.8
      comp=Z,785nm,20.3s,baz=134,slow=37
PSTR  Posyet            72.25 332diP       P        08 52 07.9 +0.8
GSI   Gunungsitoli      72.86 278  P        P        08 52 11.3 -0.1
GSI                                IAmb     IAmb     08 52 25.0
      comp=Z,145nm,1.0s
GSI   Gunungsitoli      72.86 278  P        P        08 52 11.7 +0.3
GSI   Gunungsitoli      72.86 278  P        P        08 52 11.5 +0.1
      comp=Z,145nm,1.1s
GULI  GuiLin            72.92 306  P        P        08 52 11.3 -0.2
GULI                               S        SKiKP    09 01 40.8 -1.9
GULI                               pmax     pmax
      comp=Z,130nm,1.1s
GULI                               pmax     pmax
      comp=Z,790nm,6.4s
GULI                               LR       LR
      comp=Z,450nm,17.3s
GULI                               LR       LR
      comp=Z,630nm,18.8s
GULI                               LR       LR
      comp=Z,810nm,19.8s
USRK  Ussuriysk Ar.     72.98 333  P        P        08 52 12.7 +1.2
      comp=Z,217nm,0.9s,baz=142,slow=4.6,SNR=143
USRK                               pP       pwP      08 52 24.8 -2.6
      comp=Z,200nm,0.9s,baz=148,slow=3.9,SNR=21
      comp=Z,217nm,0.9s
WHN   Wuhan             73.09 313 ⥥P        P        08 52 12.3 -0.1
WHN                                sP       pwP      08 52 24.9 -3.2
WHN                                PP       PP       08 54 58.0 +2.4
WHN                                S        SKiKP    09 01 43.7 +0.9
WHN                                pmax     pmax
      comp=Z,200nm,1.0s
WHN                                pmax     pmax
      comp=Z,2µm,6.2s
WHN                                LR       LR
      comp=Z,3µm,17.9s
WHN                                LR       LR
      comp=Z,1µm,15.6s
WHN                                LR       LR
      comp=Z,3µm,17.2s
SHEM  Shemya Is, Ala    73.48   3  P        P        08 52 14.1 -0.1
      comp=Z,161nm,1.0s,baz=218,slow=7.4,SNR=3.6
SHEM                               LR       LR       09 19 57.0
      comp=Z,850nm,20.1s,baz=160,slow=32
      comp=Z,161nm,1.0s
KCSI  Kotacane, Aceh    73.53 280  P        P        08 52 16.0 +0.6
ADK   Adak              73.61   9  P        P        08 52 14.3 -0.6
ADK                                IAmb     IAmb     08 52 29.5
      comp=Z,130nm,0.8s
ADK   Adak              73.61   9  P        P        08 52 14.6 -0.3
ADK   Adak              73.61   9  P        P        08 52 14.3 -0.6
ADK                                pmax     pmax
      comp=Z,130nm,0.8s
RPN   Rapa Nui          73.91 113  LR       LR       09 19 09.5
      comp=Z,423nm,18.4s,baz=266,slow=31
DL2   Dalian            74.04 324  P        P        08 52 18.1 +0.4
DL2                                S        S        09 01 51.4 +3.1
DL2                                pmax     pmax
      comp=Z,140nm,0.9s
DL2                                pmax     pmax
      comp=Z,1µm,6.2s
DL2                                LR       LR
      comp=Z,850nm,17.7s
DL2                                LR       LR
      comp=Z,940nm,17.9s
DL2                                LR       LR
      comp=Z,1µm,19.2s
PET   Petropavlovsk     74.14 354  IAMs_20  IAMs_20  09 19 49.3
      comp=Z,2µm,20.0s
PET   Petropavlovsk     74.14 354 eP        P        08 52 20.4 +2.4
PET                               e                  08 52 39.6
PET                               eS        S        09 01 52.4 +3.5
PET                               e                  09 02 30.1
PET                                MLR      MLR
      comp=Z,1µm,16.0s
PET                                MLR      MLR
      comp=Z,1µm,15.0s
PEA0B Petropavlovsk-    74.33 353deP        P        08 52 19.5 +0.4
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PETK	**Petropavlovsk-**	**74.33**	**353**	P	**P**	**08 52 18.9**	**-0.1**
	comp=Z,52nm,0.9s,baz=123,slow=5.0,SNR=29						
	comp=Z,52nm,0.9s						
PETK	**Petropavlovsk-**	**74.33**	**353**	P	**P**	**08 52 19.0**	**-0.1**
ATKA	**Atka Island**	**74.33**	**11**	P	**P**	**08 52 18.3**	**-0.8**
MDJ	**Mudanjiang**	**74.35**	**332**	P	**P**	**08 52 20.4**	**+1.0**
MDJ				PcP	**PcP**	**08 52 37.5**	**+3.5**
MDJ				PP	**PP**	**08 55 04.5**	**-1.6**
MDJ				S	**S**	**09 01 53.1**	**+1.5**
MDJ				pmax	pmax		
	comp=Z,230nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,2μm,5.7s						
MDJ				LR	LR		
	comp=Z,720nm,17.9s						
MDJ				LR	LR		
	comp=Z,490nm,18.9s						
MDJ				LR	LR		
	comp=Z,980nm,22.6s						
MDJ	**Mudanjiang**	**74.35**	**332**	P	**P**	**08 52 20.6**	**+1.2**
SNSI	**Sinabang, Aceh**	**74.43**	**279**	P	**P**	**08 52 22.4**	**+1.8**
	comp=Z,3μmcomp=Z,243nm,1.1s						
TIA	**Tai'an**	**74.85**	**319**	P	**P**	**08 52 22.6**	**0.0**
TIA				S	**S**	**09 02 04.2**	**+6.6**
TIA				pmax	pmax		
	comp=Z,30nm,1.0s						
TIA				pmax	pmax		
	comp=Z,980nm,7.3s						
TIA				LR	LR		
	comp=Z,610nm,16.2s						
TIA				LR	LR		
	comp=Z,380nm,19.0s						
TIA				LR	LR		
	comp=Z,740nm,16.8s						
TYV	**Tymovskoe**	**75.06**	**343**	*e*P	**P**	**08 52 24.5**	**+1.1**
TYV				*e*S	**PnS**	**09 02 47.8**	**+10**
TYV				pmax	pmax		
	comp=Z,58nm,1.1s						
TYV				pmax	pmax		
	comp=Z,1μm,6.0s						
TYV				smax	smax		
	comp=N,700nm,7.3s						
TYV				smax	smax		
	comp=E,600nm,7.3s						
MLSI	**Meulaboh, Aceh**	**75.07**	**281**	P	**P**	**08 52 25.1**	**+0.8**
	comp=E,6μmcomp=E,219nm,1.1s						
SNY	**Shenyang**	**75.08**	**327**	⇓P	**P**	**08 52 24.2**	**+0.5**
SNY				pmax	pmax		
	comp=E,36nm,0.9s						
SNY				LR	LR		
	comp=E,350nm,14.9s						
SNY				LR	LR		
	comp=E,500nm,17.5s						
SNY				LR	LR		
	comp=E,740nm,16.1s						
CN2	**Changchun**	**75.62**	**329**	⇓*i*P	**P**	**08 52 27.3**	**+0.5**
CN2				PcP	**PcP**	**08 52 39.9**	**+0.4**
CN2				S	**S**	**09 02 08.6**	**+2.8**
CN2				pmax	pmax		
	comp=E,150nm,1.0s						
CN2				pmax	pmax		
	comp=E,1μm,6.0s						
CN2				LR	LR		
	comp=E,600nm,16.0s						
CN2				LR	LR		
	comp=E,600nm,16.0s						
CN2				LR	LR		
	comp=E,600nm,16.0s						
SLVN	**Son La**	**75.93**	**300**	P	**P**	**08 52 30.5**	**+1.3**
NIKH	**Nikolski High**	**76.12**	**14**	P	**P**	**08 52 28.5**	**-0.9**
NIKH	**Nikolski High**	**76.12**	**14**	P	**P**	**08 52 28.2**	**-1.3**
	baz=202						
BNX	**BinXian**	**76.19**	**332**	⇑P	**P**	**08 52 30.3**	**+0.3**
BNX				PcP	**PcP**	**08 52 43.0**	**+1.1**
BNX				S	**S**	**09 02 15.9**	**+3.9**
BNX				pmax	pmax		
	comp=E,180nm,0.9s						
BNX				pmax	pmax		
	comp=E,1μm,6.1s						
BNX				LR	LR		
	comp=E,380nm,19.2s						
BNX				LR	LR		
	comp=E,490nm,18.3s						
BNX				LR	LR		
	comp=E,560nm,21.0s						
ENH	**Enshi**	**76.34**	**310**	IAmb	IAmb	08 52 45.0	
	comp=Z,120nm,0.9s						
ENH	**Enshi**	**76.34**	**310**	P	**P**	**08 52 31.6**	**+0.3**
GYA	**Guiyang**	**76.35**	**305**	⇓P	**P**	**08 52 32.0**	**+0.5**
GYA				sP	pP	08 52 38.4	-0.8
GYA				PcP	**PcP**	**08 52 44.1**	**+0.8**
GYA				S	**S**	**09 02 13.9**	**-0.9**
GYA				SKS	**SKSac**	**09 02 38.8**	**-2.3**
GYA				pmax	pmax		
	comp=Z,50nm,1.1s						
GYA				pmax	pmax		
	comp=Z,730nm,7.2s						
GYA				LR	LR		
	comp=Z,460nm,16.6s						
GYA				LR	LR		
	comp=Z,650nm,16.3s						
GYA				LR	LR		
	comp=Z,740nm,20.2s						
LYN	**LuoYang**	**76.77**	**315**	⇓*i*P	**P**	**08 52 34.3**	**+0.7**
LYN				sP	pwP	08 52 46.9	-2.4
LYN				PP	**PP**	**08 55 29.4**	**+2.6**
LYN				S	**S**	**09 02 22.5**	**+3.6**
LYN				pmax	pmax		
	comp=Z,120nm,1.2s						
LYN				pmax	pmax		
	comp=Z,2μm,5.1s						
LYN				LR	LR		
	comp=Z,960nm,18.6s						
LYN				LR	LR		
	comp=Z,620nm,18.2s						
LYN				LR	LR		
	comp=Z,2μm,18.5s						
GRNR	**Gornyy**	**76.83**	**340**	⇓*i*P	**P**	**08 52 35.0**	**+1.5**
GRNR				pmax	pmax		
	comp=N,20nm,1.1s						
GRNR				pmax	pmax		
	comp=Z,80nm,1.2s						
HNS	**HongShan**	**77.10**	**319**	⇓P	**P**	**08 52 36.2**	**+0.9**
HNS				S	**S**	**09 02 30.1**	**+7.8**
HNS				pmax	pmax		
	comp=Z,54nm,1.1s						
HNS				pmax	pmax		
	comp=Z,990nm,8.0s						
HNS				LR	LR		
	comp=Z,480nm,20.0s						
HNS				LR	LR		
	comp=Z,460nm,17.6s						
HNS				LR	LR		
	comp=Z,740nm,18.7s						
BJT	**Baijiatuau**	**77.90**	**321**	P	**P**	**08 52 40.4**	**+0.6**
BJI	**Beijing**	**77.91**	**321**	P	**P**	**08 52 40.5**	**+0.7**
BJI				PP	**PP**	**08 55 34.9**	**-1.3**
BJI				S	**S**	**09 02 35.7**	**+4.8**
BJI				pmax	pmax		
	comp=Z,15nm,1.0s						
BJI				pmax	pmax		
	comp=Z,490nm,6.0s						
BJI				LR	LR		
	comp=Z,130nm,13.2s						
BJI				LR	LR		
	comp=Z,210nm,17.2s						
BJI				LR	LR		
	comp=Z,250nm,18.5s						
TIY	**Taiyuan**	**78.71**	**318**	*e*P	**P**	**08 52 45.3**	**+0.9**
TIY				SKS	**SKSac**	**09 02 53.1**	**-4.5**
TIY				ScS	**ScS**	**09 03 06.1**	**+2.3**
TIY				pmax	pmax		
	comp=Z,820nm,5.3s						
TIY				LR	LR		
	comp=Z,600nm,15.8s						
TIY				LR	LR		
	comp=Z,280nm,15.8s						
TIY				LR	LR		
	comp=Z,560nm,15.8s						
KMI	**Kunming**	**78.72**	**302**	⇓P	**P**	**08 52 46.4**	**+1.5**
KMI				S	**S**	**09 02 42.0**	**+1.2**
KMI				pmax	pmax		
	comp=Z,140nm,1.0s						
KMI				pmax	pmax		
	comp=Z,820nm,5.9s						
KMI				LR	LR		
	comp=Z,260nm,14.1s						
KMI				LR	LR		
	comp=Z,380nm,14.8s						
KMI				LR	LR		
	comp=Z,660nm,18.1s						
CM31	**Chiang Mai Arr**	**78.72**	**295**	IAmb	IAmb	08 52 60.0	
	comp=Z,184nm,1.1s						
CMAR	**Chiang Mai Arr**	**78.72**	**295**	P	**P**	**08 52 46.0**	**+1.2**
	comp=Z,48nm,1.0s,baz=131,slow=4.1,SNR=100						
CMAR				pP	**pwP**	**08 52 58.3**	**-2.4**
	comp=Z,78nm,1.0s,baz=116,slow=5.5,SNR=15						
CMAR				PKKPbc	**PKKPbc**	**09 11 39.0**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=326,slow=3.4,SNR=4.5						
	comp=Z,48nm,1.0s						
CMAR	**Chiang Mai Arr**	**78.72**	**295**	*i* P	**P**	**08 52 46.2**	**+1.4**
CMAR				pmax	pmax		
	comp=Z,50nm,1.0s						
XAN	**Xi'an**	**78.86**	**313**	⇓P	**P**	**08 52 45.7**	**+0.4**
XAN				PcP	**pwP**	**08 52 58.3**	**-2.7**
XAN				S	**S**	**09 02 42.9**	**+1.4**
XAN				pmax	pmax		
	comp=Z,43nm,1.2s						
XAN				pmax	pmax		
	comp=Z,1μm,5.3s						
XAN				LR	LR		
	comp=Z,620nm,17.8s						
XAN				LR	LR		
	comp=Z,610nm,18.8s						
XAN				LR	LR		
	comp=Z,1μm,17.9s						
CHTO	**Chiang Mai**	**78.87**	**295**	P	**P**	**08 52 47.0**	**+1.3**
CHTO				IAmb	IAmb	08 53 00.5	
	comp=Z,158nm,1.1s						
CHTO	**Chiang Mai**	**78.87**	**295**	P	**P**	**08 52 46.9**	**+1.3**
CHTO	**Chiang Mai**	**78.87**	**295**	P	**P**	**08 52 46.8**	**+1.2**
	comp=Z,1μmcomp=Z,151nm,1.2s						
CHTO	**Chiang Mai**	**78.87**	**295**	P	**P**	**08 52 47.0**	**+1.3**
CHTO				pmax	pmax		
	comp=Z,158nm,1.1s						
FALS	**False Pass**	**79.16**	**16**	P	**P**	**08 52 45.6**	**-0.7**
	baz=206						
P08K	**Saint George I**	**79.37**	**12**	P	**P**	**08 52 46.5**	**-0.9**
	baz=201						
HEH	**HeiHe**	**79.69**	**335**	*e*P	**P**	**08 52 49.5**	**+0.2**
HEH				S	**S**	**09 02 55.3**	**+5.7**
HEH				pmax	pmax		
	comp=Z,82nm,1.2s						
HEH				pmax	pmax		
	comp=Z,1μm,6.2s						
HEH				LR	LR		
	comp=Z,530nm,19.4s						
HEH				LR	LR		
	comp=Z,910nm,18.2s						
HEH				LR	LR		
	comp=Z,1μm,21.8s						
SPIA	**Saint Paul Isl**	**79.78**	**11**	P	**P**	**08 52 48.7**	**-0.9**
	baz=200						
PZH	**PanZhiHua**	**80.17**	**303**	P	**P**	**08 52 53.0**	**+0.3**
PZH				S	**S**	**09 02 56.8**	**+0.8**
PZH				pmax	pmax		
	comp=Z,30nm,1.2s						
PZH				pmax	pmax		
	comp=Z,510nm,7.2s						
PZH				LR	LR		
	comp=Z,300nm,18.7s						
PZH				LR	LR		
	comp=Z,350nm,19.4s						
PZH				LR	LR		
	comp=Z,440nm,18.0s						
CHNA	**Chernabura Isl**	**80.18**	**18**	P	**P**	**08 52 50.5**	**-1.3**
	baz=210						
S12K	**Black Hills**	**80.27**	**16**	P	**P**	**08 52 50.9**	**-1.5**
	baz=208						
SDPT	**Sand Point**	**80.38**	**17**	P	**P**	**08 52 51.6**	**-1.3**
SDPT	**Sand Point**	**80.38**	**17**	P	**P**	**08 52 51.4**	**-1.5**
	baz=209						
BELA	**Belgrano 2**	**80.48**	**175**	P	**P**	**08 52 52.5**	**-0.9**
BELA				IAmb	IAmb	08 52 55.0	
	comp=Z,151nm,1.1s						
XLT	**XiLinHaoTe**	**80.49**	**324**	*e*P	**P**	**08 52 54.5**	**+0.6**
XLT				sP	PcP	08 53 02.1	+1.3
XLT				S	**S**	**09 02 59.7**	**+1.2**
XLT				SKS	**SKSac**	**09 03 10.2**	**+0.4**
XLT				pmax	pmax		
	comp=Z,33nm,1.1s						
XLT				pmax	pmax		
	comp=Z,710nm,5.7s						
XLT				LR	LR		
	comp=Z,61nm,18.7s						
XLT				LR	LR		
	comp=Z,380nm,19.9s						
XLT				LR	LR		
	comp=Z,600nm,20.1s						
CD2	**Chengdu**	**80.84**	**308**	P	**P**	**08 52 56.5**	**+0.4**
CD2				pP	PcP	08 52 59.5	-3.1
CD2				sP	pP	08 53 01.3	-2.5
CD2				pmax	pmax		
	comp=Z,80nm,1.1s						
HHC	**Hu-ho-hao-te**	**81.15**	**320**	*e*P	**P**	**08 52 58.0**	**+0.4**
HHC				pP	PcP	08 53 00.7	-3.1
HHC				sP	sP	08 53 06.6	-1.6
HHC				S	**S**	**09 03 08.7**	**+3.1**
HHC				pmax	pmax		
	comp=Z,57nm,1.0s						
HHC				pmax	pmax		
	comp=Z,670nm,5.9s						
HHC				LR	LR		
	comp=Z,440nm,17.9s						
HHC				LR	LR		
	comp=Z,250nm,17.0s						
HHC				LR	LR		
	comp=Z,500nm,17.5s						
S14K	**Fog Glacier**	**81.45**	**17**	P	**P**	**08 52 57.5**	**-1.3**
	baz=210						
MA2	**Magadan**	**81.53**	**351**	LR	LR	09 23 30.6	
	comp=Z,1μm,21.8s,baz=170,slow=31						
MA2	**Magadan**	**81.53**	**351**	IAMs_20	IAMs_20	09 22 57.0	
	comp=Z,1μm,22.0s						
MA2	**Magadan**	**81.53**	**351**	⇑*e*P	**P**	**08 52 58.0**	**-1.0**
MA2				pmax	pmax		
	comp=Z,92nm,2.5s						
MA2				MLR	MLR		
	comp=Z,1μm,18.0s						
DGPR	**DIGLIPUR**	**81.73**	**287**	*e*P	**P**	**08 52 59.8**	**-1.3**
DGPR				IAmb	IAmb	08 53 14.2	
	comp=Z,110nm,1.0s						
BTO	**Baotou**	**81.94**	**319**	*e*P	**P**	**08 53 03.3**	**+1.5**
BTO				sP	**sP**	**08 53 10.6**	**-1.8**
BTO				PP	**PP**	**08 56 05.1**	**-4.8**
BTO				S	**SKSac**	**09 03 20.6**	**+0.6**
BTO				pmax	pmax		
	comp=Z,48nm,0.9s						
BTO				pmax	pmax		
	comp=Z,2μm,4.3s						
BTO				LR	LR		
	comp=Z,740nm,14.3s						
BTO				LR	LR		
	comp=Z,650nm,18.5s						
BTO				LR	LR		
	comp=Z,530nm,14.3s						
TNCH	**TengChong**	**82.04**	**300**	⇓P	**P**	**08 53 02.7**	**0.0**
TNCH				S	S	09 03 05.4	-10
TNCH				sS	SKKSac	09 03 27.5	+2.8
TNCH				pmax	pmax		
	comp=Z,930nm,5.5s						
TNCH				LR	LR		
	comp=Z,2μm,21.8s						
TNCH				LR	LR		
	comp=Z,3μm,24.4s						
TNCH				LR	LR		
	comp=Z,780nm,20.0s						
CHIR	**Chirikof Islan**	**82.22**	**19**	P	**P**	**08 53 01.5**	**-1.1**
	baz=214						
HIA	**Hailar**	**82.29**	**330**	IAmb	IAmb	08 53 17.3	
	comp=Z,61nm,1.0s						
HIA	**Hailar**	**82.29**	**330**	P	**P**	**08 53 03.7**	**+0.4**
ZEA	**Zeya**	**82.48**	**337**	*e*P	**P**	**08 53 04.6**	**+0.5**
ZEA				*e*S	**S**	**09 03 22.2**	**+3.8**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=N,20nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,60nm,1.5s						
ZEA				pmax	pmax		
	comp=E,100nm,7.9s						
ZEA				pmax	pmax		
	comp=N,200nm,4.5s						
ZEA				pmax	pmax		
	comp=Z,700nm,6.7s						
ZEA				smax	smax		
	comp=N,200nm,13.2s						
HILR	**Hailar Array B**	**82.49**	**330**	P	**P**	**08 53 04.1**	**-0.3**
	comp=N,103nm,1.2s,baz=134,slow=11,SNR=11						
HILR				pP	**pwP**	**08 53 17.2**	**-2.6**
	comp=N,49nm,0.9s,baz=134,slow=10,SNR=7.3						
	comp=N,103nm,1.2s						
R16K	**Pilot Point**	**83.11**	**18**	P	**P**	**08 53 06.7**	**-0.6**
	baz=212						
SYO	**Syowa Base**	**83.18**	**196**	⇓*i*P	**P**	**08 53 06.6**	**-1.1**
SYO	**Syowa Base**	**83.18**	**196**	⇓*i*pP	**P**	**08 53 09.2**	**+1.5**
SYO	**Syowa Base**	**83.18**	**196**	⇓*i*PcP	**PcP**	**08 53 11.5**	**-0.7**
SII	**Sitkinak Islan**	**83.28**	**20**	P	**P**	**08 53 08.1**	**-0.1**
SII	**Sitkinak Islan**	**83.28**	**20**	P	**P**	**08 53 07.7**	**-0.5**
	baz=215						
LZH	**Lanzhou**	**83.46**	**312**	⇓P	**P**	**08 53 11.5**	**+1.6**
LZH				sP	sP	08 53 19.6	-0.9
LZH				PP	**PP**	**08 56 21.4**	**-1.2**
LZH				S	**SKSac**	**09 03 35.0**	**+4.6**
LZH				SS	**SS**	**09 08 59.9**	**+3.6**
LZH				pmax	pmax		
	comp=N,160nm,1.2s						
LZH				pmax	pmax		
	comp=N,1μm,6.5s						
LZH				LR	LR		
	comp=N,820nm,17.9s						
LZH				LR	LR		
	comp=N,1μm,19.2s						
LZH				LR	LR		
	comp=N,1μm,19.2s						
LZDM	**Lanzhou Array**	**83.50**	**312**	P	**P**	**08 53 11.2**	**+1.0**
	comp=N,54nm,0.9s,baz=130,slow=6.0,SNR=35						
LZDM				pP	**pwP**	**08 53 23.9**	**-2.1**
	comp=N,32nm,0.8s,baz=104,slow=6.3,SNR=7.6						
LZDM				LR	LR	09 30 45.2	
	comp=N,460nm,18.5s,baz=130,slow=36						
	comp=N,54nm,0.9s						
R17L	**Mt. Peulik Vol**	**83.52**	**18**	P	**P**	**08 53 09.3**	**-0.1**
	baz=213						
M11K	**Mekoryuk**	**83.55**	**12**	P	**P**	**08 53 09.2**	**-0.2**
	baz=204						
O14K	**Tigyukauivet M**	**83.61**	**15**	P	**P**	**08 53 09.6**	**-0.2**
	baz=208						
O15K	**Ungalikthiuk R**	**83.90**	**16**	P	**P**	**08 53 11.4**	**+0.1**
	baz=210						
R18K	**Karluk**	**84.03**	**19**	P	**P**	**08 53 11.0**	**-1.0**
	baz=214						
OHAK	**Old Harbor**	**84.11**	**20**	P	**P**	**08 53 12.4**	**0.0**
OHAK	**Old Harbor**	**84.11**	**20**	P	**P**	**08 53 12.4**	**0.0**
OHAK	**Old Harbor**	**84.11**	**20**	P	**P**	**08 53 12.1**	**-0.3**
	baz=215,SNR=11						
N14K	**Kuskokwak Cree**	**84.11**	**15**	IAmb	IAmb	08 53 15.0	
	comp=Z,88nm,0.9s						
N14K	**Kuskokwak Cree**	**84.11**	**15**	P	**P**	**08 53 11.6**	**-0.8**
	baz=208						
M13K	**Dall Lake**	**84.17**	**14**	P	**P**	**08 53 12.0**	**-0.7**
	baz=206						
Q17K	**Contact Creek**	**84.19**	**18**	P	**P**	**08 53 12.3**	**-0.7**
	baz=213						
P16K	**Nushagak River**	**84.25**	**17**	P	**P**	**08 53 12.0**	**-1.1**
	baz=211						
ACHA	**Angle Creek He**	**84.30**	**18**	IAmb	IAmb	08 53 27.7	
	comp=Z,54nm,1.0s						
Q16K	**King Salmon**	**84.32**	**17**	P	**P**	**08 53 12.6**	**-0.8**
	baz=212,SNR=10						
SEY	**Seymchan**	**84.56**	**353**	P	**P**	**08 53 14.7**	**+0.1**
	comp=Z,11nm,0.8s,baz=155,slow=4.7,SNR=15						
SEY				pP	**sP**	**08 53 26.8**	**+1.7**
	comp=Z,25nm,1.0s,baz=147,slow=6.4,SNR=9.3						
SEY				LR	LR	09 27 22.9	
	comp=Z,2μm,20.2s,baz=158,slow=33						
	comp=Z,11nm,0.8s						
SEY	**Seymchan**	**84.56**	**353**	⇓*e*P	**P**	**08 53 13.8**	**-0.8**
SEY				pmax	pmax		
	comp=Z,46nm,1.5s						
N15K	**Kwethluk River**	**84.70**	**15**	P	**P**	**08 53 14.6**	**-0.8**
	baz=209,SNR=6.5						
O16K	**Kokwok River B**	**84.71**	**16**	IAmb	IAmb	08 53 15.6	
	comp=Z,50nm,0.9s						
O16K	**Kokwok River B**	**84.71**	**16**	P	**P**	**08 53 14.4**	**-1.0**
	baz=211,SNR=7.9						
Q18K	**Katmai Hardscr**	**84.76**	**18**	P	**P**	**08 53 15.2**	**-0.7**
	baz=214,SNR=25						
M14K	**Bethel**	**84.78**	**14**	P	**P**	**08 53 15.5**	**-0.2**
	baz=208,SNR=8.0						
KDAK	**Kodiak Island**	**84.78**	**20**	P	**P**	**08 53 15.9**	**+0.1**
KDAK	**Kodiak Island**	**84.78**	**20**	P	**P**	**08 53 15.9**	**+0.1**
KDAK				pmax	pmax		
	comp=Z,235nm,1.4s						
KDAK	**Kodiak Island**	**84.78**	**20**	P	**P**	**08 53 15.7**	**-0.1**
	baz=216						
P17K	**Kvichak River**	**84.81**	**17**	P	**P**	**08 53 15.1**	**-0.9**
	baz=212,SNR=8.8						
M15K	**Kasigluk River**	**85.02**	**15**	P	**P**	**08 53 17.0**	**0.0**
	baz=209,SNR=12						
O17K	**Koliganek Bris**	**85.13**	**17**	P	**P**	**08 53 17.5**	**0.0**
	baz=212,SNR=7.0						
L14K	**Kuka Creek**	**85.15**	**13**	IAmb	IAmb	08 53 19.3	
	comp=Z,103nm,1.1s						
L14K	**Kuka Creek**	**85.15**	**13**	P	**P**	**08 53 17.7**	**+0.2**
	baz=207,SNR=11						
K13K	**Kusilvak Mount**	**85.27**	**12**	P	**P**	**08 53 18.2**	**+0.1**
	baz=205						
N16K	**Nishlik Lake**	**85.30**	**16**	P	**P**	**08 53 18.7**	**+0.3**
	baz=210,SNR=5.5						
P18K	**Big Mountain,**	**85.32**	**18**	P	**P**	**08 53 17.9**	**-0.6**
	baz=214,SNR=6.1						
Q19K	**Cape Douglas,**	**85.39**	**19**	P	**P**	**08 53 18.4**	**-0.5**
	baz=215						
SAIH	**SAIHA**	**85.48**	**296**	*e*P	**P**	**08 53 18.0**	**-2.3**
SAIH				IAmb	IAmb	08 53 34.5	
	comp=Z,162nm,1.0s						
Q20K	**Shuyak Island**	**85.51**	**19**	P	**P**	**08 53 19.4**	**-0.1**
	baz=216						
PMSA	**Palmer Station**	**85.52**	**160**	LR	LR	09 28 18.9	
	comp=Z,908nm,18.3s,baz=224,slow=33						
PMSA	**Palmer Station**	**85.52**	**160**	P	**P**	**08 53 19.6**	**0.0**
PMSA				IAMs_20	IAMs_20	09 27 49.0	
	comp=Z,1μm,19.0s						
IMP	**Imphal**	**85.67**	**298**	*e*P	**P**	**08 53 19.7**	**-1.5**
IMP				IAmb	IAmb	08 53 34.5	
	comp=Z,150nm,0.9s						
L15K	**Ungalak Mounta**	**85.71**	**14**	P	**P**	**08 53 20.2**	**-0.2**
	baz=208						
O18K	**Koktuh Hills**	**85.71**	**17**	IAmb	IAmb	08 53 20.7	
	comp=Z,67nm,1.0s						
O18K	**Koktuh Hills**	**85.71**	**17**	P	**P**	**08 53 20.0**	**-0.4**
	baz=214,SNR=5.9						
M16K	**Timber Creek**	**85.72**	**15**	P	**P**	**08 53 21.1**	**+0.6**
	baz=210						
N17K	**Nushagak Hills**	**85.75**	**16**	IAmb	IAmb	08 53 22.9	
	comp=Z,82nm,1.3s						
N17K	**Nushagak Hills**	**85.75**	**16**	P	**P**	**08 53 20.7**	**+0.1**
	baz=212,SNR=5.7						
GAMB	**Gambell**	**85.80**	**9**	P	**P**	**08 53 20.7**	**-0.1**
	baz=198						
MOKO	**MOKOCHONG**	**85.84**	**300**	*e*P	**P**	**08 53 20.5**	**-1.6**
MOKO				IAmb	IAmb	08 53 35.8	
	comp=Z,55nm,0.9s						
KOHI	**KOHIMA**	**85.92**	**299**	*e*P	**P**	**08 53 19.8**	**-2.7**
KOHI				IAmb	IAmb	08 53 25.0	
	comp=Z,88nm,1.4s						
PASG	**PASIGHAT**	**85.95**	**302**	*e*P	**P**	**08 53 20.7**	**-1.7**
PASG				IAmb	IAmb	08 53 36.6	
	comp=Z,75nm,1.3s						
P19K	**Oil Pt**	**86.11**	**18**	P	**P**	**08 53 21.9**	**-0.5**
	baz=215						
L16K	**Owhat River**	**86.20**	**15**	IAmb	IAmb	08 53 24.5	
	comp=Z,86nm,1.1s						
L16K	**Owhat River**	**86.20**	**15**	P	**P**	**08 53 22.6**	**-0.2**
	baz=210						
N18K	**Kilae Creek**	**86.22**	**17**	IAmb	IAmb	08 53 35.7	
	comp=Z,184nm,1.8s						
N18K	**Kilae Creek**	**86.22**	**17**	P	**P**	**08 53 22.3**	**-0.7**
	baz=213						
O19K	**Port Alsworth**	**86.24**	**18**	IAmb	IAmb	08 53 24.0	
	comp=Z,90nm,1.0s						
O19K	**Port Alsworth**	**86.24**	**18**	P	**P**	**08 53 22.3**	**-0.7**
	baz=214,SNR=8.5						
K15K	**Wolf Creek Mou**	**86.25**	**13**	P	**P**	**08 53 23.2**	**+0.2**
	baz=208						
ILSW	**Iliamna Southw**	**86.41**	**18**	IAmb	IAmb	08 53 24.1	
	comp=Z,76nm,0.9s						

M17K	Holitna River	86.43	16	IAmb	IAmb	08 53 27.0	
	comp=Z,66nm,0.9s						
M17K	Holitna River	86.43	16	P	P	08 53 24.4	+0.4
	baz=212,SNR=8.4						
HOM	Homer	86.59	19	P	P	08 53 24.4	-0.3
	baz=217						
SILR	SILCHAR	86.59	298	eP	P	08 53 25.0	-0.6
SILR				IAmb	IAmb	08 53 40.5	
	comp=Z,13nm,1.3s						
O20K	Slope Mountain	86.64	18	P	P	08 53 24.7	-0.4
	baz=216						
FARB	Farallon Islan	86.69	48	IAmb	IAmb	08 53 26.8	
	comp=Z,74nm,1.1s						
N19K	Bonanza Creek	86.71	17	P	P	08 53 24.8	-0.6
	baz=214						
TROLL	Troll, Antarti	86.83	184	⇓P	P	08 53 25.0	-1.2
	comp=Z,4µm,0.8s						
TROLL				⇑pP	sP	08 53 37.9	+1.2
L17K	Donlin	86.85	15	P	P	08 53 25.8	-0.1
	baz=211						
ZIRO	ZIRO	86.90	301	eP	P	08 53 25.2	-2.1
ZIRO				IAmb	IAmb	08 53 44.7	
	comp=Z,84nm,1.0s						
M18K	Stony River	86.92	16	P	P	08 53 26.1	-0.2
	baz=213,SNR=11						
BRSE	Bradley Lake S	86.93	19	P	P	08 53 26.5	0.0
	baz=218						
MCCM	Marconi Confer	86.99	47	IAmb	IAmb	08 53 43.1	
	comp=Z,92nm,0.9s						
MCCM				IAMs_20	IAMs_20	09 33 13.2	
	comp=Z,1µm,19.0s						
FORD	Fort Ord Natur	87.05	49	IAMs_20	IAMs_20	09 32 53.8	
	comp=Z,2µm,18.0s						
CIT	Chita	87.06	329	eP	P	08 53 40.4	+13
CIT				e		08 53 47.4	
CIT				e		08 56 53.4	
CIT				pmax	pmax		
	comp=Z,231nm,1.3s						
JRSC	Jasper Ridge	87.07	48	IAmb	IAmb	08 53 41.4	
	comp=Z,69nm,0.9s						
JRSC				IAMs_20	IAMs_20	09 32 04.4	
	comp=Z,2µm,21.0s						
BELO	BELONIA	87.09	296	eP	P	08 53 27.2	-0.8
BELO				IAML		08 53 34.1	
	comp=Z,64nm,0.2s						
NVL	N'lazarevskaya	87.13	187	eP	P	08 53 24.3	-3.2
NVL				e		08 56 47.8	
NVL				eS	SKSac	09 03 52.1	-0.2
NVL				eSS	SS	09 09 50.2	+3.2
NVL				eSSS	SSS	09 13 23.2	
NVL				pmax	pmax		
	comp=Z,35nm,0.8s						
NVL				MLR	MLR		
	comp=Z,1µm,16.0s						
HOPS	Hopland Field	87.28	46	IAMs_20	IAMs_20	09 30 00.7	
	comp=Z,2µm,20.0s						
L18K	Granite Mounta	87.31	15	IAmb	IAmb	08 53 43.3	
	comp=Z,54nm,1.0s						
L18K	Granite Mounta	87.31	15	P	P	08 53 28.3	0.0
	baz=212						
SAO	San Andreas Ge	87.32	49	IAmb	IAmb	08 53 44.5	
	comp=Z,76nm,0.9s						
J16K	Anvik River	87.33	13	IAmb	IAmb	08 53 42.6	
	comp=Z,53nm,0.7s						
J16K	Anvik River	87.33	13	P	P	08 53 28.5	+0.2
	baz=209,SNR=8.0						
DCMP	DeCamp, Califo	87.33	46	IAmb	IAmb	08 53 43.2	
	comp=Z,38nm,0.8s						
K17K	Iditarod	87.35	15	IAmb	IAmb	08 53 30.2	
	comp=Z,40nm,1.1s						
K17K	Iditarod	87.35	15	P	P	08 53 28.6	+0.2
	baz=211						
TEZP	TEZPUR	87.36	300	eP	P	08 53 28.8	-0.5
TEZP				IAmb	IAmb	08 53 32.5	
	comp=Z,88nm,1.6s						
GDXM	Geysers	87.37	47	IAmb	IAmb	08 53 45.4	
	comp=Z,54nm,1.0s						
CVS	Carmenet Viney	87.38	47	IAmb	IAmb	08 53 30.7	
	comp=Z,107nm,1.1s						
MHC	Mount Hamilton	87.46	48	IAmb	IAmb	08 53 43.6	
	comp=Z,50nm,0.8s						
MHC				IAMs_20	IAMs_20	09 31 27.8	
	comp=Z,2µm,18.0s						
SNAA	Sanae	87.47	183	⇓P	P	08 53 27.7	-1.6
	comp=Z,1µm,0.9s						
SNAA				⇑pP	sP	08 53 41.3	+1.6
SNAA	Sanae	87.47	183	P	P	08 53 28.4	-0.8
	comp=Z,49nm,0.9s,baz=171,slow=3.9,SNR=60						
SNAA				pP	sP	08 53 41.4	+1.6
	comp=Z,23nm,0.8s,baz=213,slow=6.0,SNR=6.2						
SNAA				LR	LR	09 32 08.0	
	comp=Z,1µm,18.1s,baz=192,slow=35						
	comp=Z,49nm,0.9s						
SNAA	Sanae	87.47	183	P	P	08 53 28.2	-1.0
SNAA				IAmb	IAmb	08 53 30.6	
	comp=Z,74nm,1.0s						
SNAA	Sanae	87.47	183	deP	P	08 53 27.6	-1.6
SNAA				pmax	pmax		
	comp=Z,106nm,1.3s						
SNAA				MLR	MLR		
	comp=Z,3µm,17.0s						
PMPB	Monarch Peak	87.52	50	IAmb	IAmb	08 53 48.7	
	comp=Z,88nm,1.1s						
BBGB	Big Mountain B	87.52	49	IAmb	IAmb	08 53 34.3	
	comp=Z,88nm,1.0s						
ANM	Nome	87.54	11	P	P	08 53 29.2	-0.1
	baz=204						
SEW	Seward	87.62	20	P	P	08 53 29.4	-0.3
	baz=219						
CAPN	Captain Cook N	87.63	18	P	P	08 53 29.8	+0.1
	baz=217						
SPCR	Spurr Chakacha	87.67	18	P	P	08 53 29.6	-0.4
	baz=216						
SHL	Shillong	87.67	298	eP	P	08 53 30.1	-1.0
SHL				IAmb	IAmb	08 53 44.6	
	comp=Z,62nm,1.0s						
SLKM	Skilak Lake	87.70	19	IAmb	IAmb	08 53 32.2	
	comp=Z,50nm,0.9s						
L19K	White Mountain	87.75	16	IAmb	IAmb	08 53 45.8	
	comp=Z,59nm,1.1s						
L19K	White Mountain	87.75	16	P	P	08 53 29.9	-0.5
	baz=214						
J17K	VABM Dome	87.76	14	IAmb	IAmb	08 53 46.4	
	comp=Z,32nm,0.7s						
J17K	VABM Dome	87.77	14	P	P	08 53 30.2	-0.2
	baz=210						
KHMM	Horse Mountain	87.77	45	IAMs_20	IAMs_20	09 35 57.0	
	comp=Z,1µm,18.0s						
O22K	Cooper Landing	87.83	19	P	P	08 53 30.3	-0.4
	baz=218						
I17K	Unalakleet	87.84	13	P	P	08 53 30.3	-0.4
	baz=208						
ULN	Ulaanbaatar	87.89	324	P	P	08 53 32.5	+0.9
ULN	Ulaanbaatar	87.89	324	P	P	08 53 32.0	+0.4
ULN	Ulaanbaatar	87.89	324	diP	P	08 53 32.3	+0.7
ULN				pmax	pmax		
	comp=Z,229nm,1.3s						
GTA	Gaotai	87.89	314	P	P	08 53 32.6	+0.8
GTA				sP	sP	08 53 43.8	+1.4
GTA				PP	PP	08 57 01.7	+3.3
GTA				SKS	SKSac	09 04 00.9	+2.8
GTA				pmax	pmax		
	comp=Z,76nm,1.0s						
GTA				pmax	pmax		
	comp=Z,640nm,8.7s						
GTA				LR	LR		
	comp=Z,530nm,16.4s						
GTA				LR	LR		
	comp=Z,520nm,17.8s						
GTA				LR	LR		
	comp=Z,690nm,18.9s						
M20K	Styx River	87.96	17	P	P	08 53 30.8	-0.7
	baz=215						
KHBM	Hayfork Bally	88.00	45	IAMs_20	IAMs_20	09 35 24.1	
	comp=Z,1µm,18.0s						
STLK	Strandline Lak	88.02	18	IAmb	IAmb	08 54 25.1	
	comp=Z,67nm,1.9s						
TNA	Tin City	88.04	10	IAmb	IAmb	08 53 46.7	
	comp=Z,30nm,0.9s						
TNA	Tin City	88.04	10	P	P	08 53 31.1	-0.5
	baz=202						
O02D	Mt. Diablo Mer	88.05	46	IAMs_20	IAMs_20	09 37 10.3	
	comp=Z,1µm,20.0s						
VNA3	Neumayer Olymp	88.08	181	⇓P	P	08 53 30.8	-1.2
	comp=Z,61nm,0.6s						
VNA3				⇑pP	sP	08 53 43.5	+0.8
Q23K	Middleton Isla	88.11	21	P	P	08 53 31.8	-0.2
	baz=221						
KSXB	Camp Six Broad	88.16	44	IAMs_20	IAMs_20	09 28 58.1	
	comp=Z,2µm,20.0s						
G15K	Niukluk	88.17	11	P	P	08 53 32.1	-0.2
	baz=206						
P23K	Montague Islan	88.19	20	P	P	08 53 32.5	0.0
	baz=220						
H16K	Elim	88.19	12	P	P	08 53 32.1	-0.3
	baz=207,SNR=13						
F14K	Arctic Creek	88.21	10	P	P	08 53 32.9	+0.4
	baz=203						
SONM	Songino Array	88.24	323	P	P	08 53 33.7	+0.5
	comp=Z,77nm,0.9s,baz=141,slow=5.0,SNR=220						
SONM				pP	pwP	08 53 46.4	-2.5
	comp=Z,84nm,0.9s,baz=146,slow=5.4,SNR=22						
SONM				PKKP	PKKPdf	09 11 13.4	-0.6
	comp=Z,0.6nm,0.4s,baz=237,slow=2.0,SNR=3.6						
SONM				LR	LR	09 34 21.8	
	comp=Z,416nm,18.7s,baz=114,slow=36						
	comp=Z,77nm,0.9s						
SONM	Songino Array	88.24	323	P	P	08 53 34.1	+0.9
SONM	Songino Array	88.24	323	P	P	08 53 34.1	+0.9
SONM				pmax	pmax		
	comp=Z,115nm,0.9s						
OSI	Osito Audit: C	88.29	52	IAmb	IAmb	08 53 36.3	
	comp=Z,120nm,1.4s						
OSI				IAMs_20	IAMs_20	09 31 06.0	
	comp=Z,1µm,18.0s						
SUA	Susitna One	88.30	18	IAmb	IAmb	08 53 50.0	
	comp=Z,36nm,1.1s						
SUA	Susitna One	88.30	18	P	P	08 53 32.5	-0.7
	baz=218						
RC01	Rabbit Creek A	88.30	19	P	P	08 53 32.4	-0.6
	baz=218						
YAK	Yakutsk	88.31	343	P	P	08 53 33.0	+0.1
	comp=Z,27nm,0.6s,baz=82,slow=1.6,SNR=20						
YAK				LR	LR	09 33 17.3	
	comp=Z,1µm,18.4s,baz=125,slow=36						
	comp=Z,27nm,0.6s						
YAK	Yakutsk	88.31	343	P	P	08 53 33.1	+0.1
YAK				IAmb	IAmb	08 53 51.5	
	comp=Z,58nm,0.9s						
YAK	Yakutsk	88.31	343	IAMs_20	IAMs_20	09 34 11.9	
	comp=Z,2µm,19.0s						
YAK	Yakutsk	88.31	343	eP	P	08 53 31.7	-1.2
YAK				e*PP	sP	08 53 44.6	+0.8
YAK				e		08 56 58.0	
YAK				eS	SKSac	09 03 59.9	+0.8
YAK				e*SS	SKKSac	09 04 08.1	-1.7
YAK				eSP	SPn	09 05 17.2	0.0
YAK				eSS	SS	09 10 10.0	+4.0
YAK				pmax	pmax		
	comp=Z,79nm,1.3s						
YAK				pmax	pmax		
	comp=N,18nm,1.5s						
YAK				pmax	pmax		
	comp=E,16nm,1.5s						
YAK				pmax	pmax		
	comp=Z,305nm,6.1s						
YAK				pmax	pmax		
	comp=N,236nm,5.8s						
YAK				pmax	pmax		
	comp=E,54nm,3.2s						
YAK				smax	smax		
	comp=N,151nm,3.9s						
YAK				smax	smax		
	comp=E,100nm,3.5s						
YAK				MLR	MLR		
	comp=Z,2µm,22.0s						
YAK				MLR	MLR		
	comp=N,1µm,23.0s						
YAK				MLR	MLR		
	comp=E,659nm,20.0s						
VNA2	Neumayer--Watz	88.36	181	⇓P	P	08 53 32.5	-0.9
	comp=Z,59nm,0.5s,baz=148,slow=8.9						
VNA2				⇓pP	sP	08 53 45.3	+1.4
	baz=149,slow=6.1						
J18K	Innoko River	88.37	15	IAmb	IAmb	08 53 34.1	
	comp=Z,46nm,1.0s						
J18K	Innoko River	88.37	15	P	P	08 53 32.8	-0.5
	baz=212						
PASC	Pasadena Art C	88.49	53	IAmb	IAmb	08 53 35.1	
	comp=Z,61nm,1.2s						
PASC				IAMs_20	IAMs_20	09 30 30.3	
	comp=Z,1µm,18.0s						
SKT	Skwentna	88.49	18	P	P	08 53 33.5	-0.4
	baz=217						
L02F	Cave Junction	88.50	44	IAmb	IAmb	08 53 35.9	
	comp=Z,70nm,1.2s						
TAWA	Tawang	88.52	300	eP	P	08 53 33.4	-1.9
TAWA				IAmb	IAmb	08 53 53.2	
	comp=Z,81nm,1.3s						
PWL	Port Wells	88.56	20	IAmb	IAmb	08 53 49.7	
	comp=Z,56nm,1.0s						
PWL	Port Wells	88.56	20	P	P	08 53 33.9	-0.3
	baz=220						
VES	Vestal, Richgr	88.58	51	IAmb	IAmb	08 53 48.1	
	comp=Z,56nm,0.9s						
VES				IAMs_20	IAMs_20	09 31 04.6	
	comp=Z,1µm,18.0s						
M02C	Callahan	88.60	44	P	P	08 53 35.8	+0.8
M02C				IAMs_20	IAMs_20	09 35 51.0	
	comp=Z,916nm,18.0s						
MWC	Mount Wilson	88.60	53	IAMs_20	IAMs_20	09 32 33.4	
	comp=Z,962nm,19.0s						
WELL	Weller Preserv	88.62	48	IAMs_20	IAMs_20	09 31 15.5	
	comp=Z,1µm,18.0s						
CCX	Cicese	88.63	55	IAmb	IAmb	08 53 36.8	
	comp=Z,118nm,1.3s						
VNA1	Neumayer--Stat	88.66	181	⇓P	P	08 53 34.0	-0.8
	comp=Z,45nm,0.7s						
CMB	Columbia Colle	88.66	48	IAmb	IAmb	08 53 40.2	
	comp=Z,68nm,1.0s						
CMB				IAMs_20	IAMs_20	09 31 24.7	
	comp=Z,1µm,18.0s						
BILL	Bilibino	88.71	359	P	P	08 53 34.5	-0.3
BILL				IAmb	IAmb	08 53 35.7	
	comp=Z,76nm,1.2s						
F15K	North Star Dit	88.71	11	P	P	08 53 34.5	-0.3
	baz=205						
M22K	Willow	88.71	18	P	P	08 53 34.3	-0.5
	baz=218						
K02D	Willamette Mer	88.73	43	IAmb	IAmb	08 53 36.9	
	comp=Z,117nm,1.3s						
CPE	Camp Elliot	88.73	54	IAmb	IAmb	08 53 37.0	
	comp=Z,52nm,1.0s						
CBX	Cerro Bola	88.82	55	IAmb	IAmb	08 53 38.5	
	comp=Z,116nm,1.3s						
ELS	Elsinore Mount	88.82	53	IAmb	IAmb	08 53 37.1	
	comp=Z,50nm,1.2s						
G16K	Koyuk River	88.85	12	IAmb	IAmb	08 53 38.1	
	comp=Z,39nm,0.9s						
G16K	Koyuk River	88.85	12	P	P	08 53 35.2	-0.3
	baz=207						
YBH	Yreka Blue Hor	88.86	44	LR	LR	09 30 37.4	
	comp=Z,56nm,18.1s,baz=260,slow=34						
YBH	Yreka Blue Hor	88.86	44	IAmb	IAmb	08 53 37.7	
	comp=Z,107nm,1.2s						
PMR	Palmer	88.88	19	P	P	08 53 35.1	-0.5
PMR				IAmb	IAmb	08 53 51.6	
	comp=Z,29nm,0.8s						
PMR	Palmer	88.88	19	P	P	08 53 36.0	+0.3
PMR	Palmer	88.88	19	P	P	08 53 35.2	-0.5
PMR				pmax	pmax		
	comp=Z,29nm,0.8s						
PMR	Palmer	88.88	19	P	P	08 53 35.4	-0.2
	baz=219						
DPP	Dos Picos Cty	88.90	54	IAmb	IAmb	08 53 50.0	
	comp=Z,61nm,0.9s						
H17K	Granite Mounta	88.93	13	IAmb	IAmb	08 53 50.0	
	comp=Z,30nm,0.8s						
H17K	Granite Mounta	88.93	13	P	P	08 53 35.3	-0.5
	baz=209,SNR=15						
K20K	Telida	88.93	16	P	P	08 53 35.2	-0.7
	baz=214						
ISA	Isabella, Lake	88.94	51	IAmb	IAmb	08 53 37.9	
	comp=Z,93nm,1.1s						
ISA				IAMs_20	IAMs_20	09 30 15.3	
	comp=Z,1µm,18.0s						
KNK	Knik Glacier	88.94	19	IAmb	IAmb	08 53 46.4	
	comp=Z,126nm,1.6s						
KNK	Knik Glacier	88.94	19	P	P	08 53 35.2	-0.9
	baz=220						
GLI	Glacier Island	88.96	20	P	P	08 53 35.6	-0.6
	baz=221						
BAR	Barrett	88.97	54	IAMs_20	IAMs_20	09 32 41.2	
	comp=Z,1µm,18.0s						
PPLA	Purkeypile	89.05	17	P	P	08 53 35.4	-1.3
	baz=216						
J19K	Poorman	89.08	15	P	P	08 53 36.1	-0.5
	baz=213						
GHO	Glory Hole Cre	89.08	19	IAmb	IAmb	08 53 49.2	
	comp=Z,78nm,1.2s						
VTX	Valle De La Tr	89.10	56	IAmb	IAmb	08 53 39.5	
	comp=Z,86nm,1.2s						
KAIM	Kayak Island	89.14	22	P	P	08 53 35.5	-1.4
	baz=223						
EYAK	Cordova Ski Ar	89.15	21	P	P	08 53 35.7	-1.3
	baz=222						
CUT	Chulitna	89.19	18	IAmb	IAmb	08 54 05.3	
	comp=Z,90nm,1.2s						
CUT	Chulitna	89.19	18	P	P	08 53 36.0	-1.1
	baz=218						
ESJX	Sierra Juarez	89.23	55	IAmb	IAmb	08 53 39.7	
	comp=Z,48nm,1.2s						
G17K	Kiwalik Mounta	89.27	12	P	P	08 53 37.2	-0.2
	baz=209,SNR=11						
SML	Sawmill	89.29	19	IAmb	IAmb	08 53 52.5	
	comp=Z,60nm,1.1s						
SML	Sawmill	89.29	19	P	P	08 53 37.1	-0.6
	baz=220						
DNR	Dunn Ranch,Anz	89.38	54	IAmb	IAmb	08 53 40.0	
	comp=Z,65nm,1.1s						
MDPB	Devils Postpil	89.39	49	IAmb	IAmb	08 53 55.7	
	comp=Z,91nm,1.2s						
DHUB	DHUBRI	89.41	298	eP	P	08 53 36.4	-2.7
DHUB				IAmb	IAmb	08 54 08.2	
	comp=Z,23nm,0.7s						
BORC	Borrego Spring	89.42	54	IAmb	IAmb	08 53 40.0	
	comp=Z,85nm,1.1s						
GCSA	Galena City Sc	89.42	14	P	P	08 53 37.4	-0.7
	baz=212,SNR=14						
LRMC	Laurel Mtn Rad	89.44	52	IAmb	IAmb	08 53 41.0	
	comp=Z,83nm,1.3s						
LRMC				IAMs_20	IAMs_20	09 27 28.4	
	comp=Z,954nm,19.0s						
H18K	Honhosa River	89.44	13	P	P	08 53 37.3	-1.0
	baz=211						
BBOR	Butler Butte	89.45	43	IAmb	IAmb	08 53 52.2	
	comp=Z,48nm,1.0s						
M23K	Glacier View	89.46	19	P	P	08 53 37.8	-0.7
	baz=220						
YUH	Yuha Desert	89.53	55	IAmb	IAmb	08 53 40.6	
	comp=Z,55nm,1.1s						
PFO	Pinyon Flats O	89.53	54	LR	LR	09 27 52.2	
	comp=Z,304nm,19.0s,baz=266,slow=32						
PFO	Pinyon Flats O	89.53	54	P	P	08 53 39.5	-0.1
PFO				IAmb	IAmb	08 53 40.6	
	comp=Z,50nm,1.1s						
PFO	Pinyon Flats O	89.53	54	diP	P	08 53 39.2	-0.4
PFO				pmax	pmax		
	comp=Z,73nm,1.1s						
BEKR	Beckworth	89.54	47	IAmb	IAmb	08 53 40.5	
	comp=Z,73nm,1.1s						
WAKR	Walker	89.54	48	IAmb	IAmb	08 53 41.0	
	comp=Z,87nm,1.1s						
CWC	Cottonwood Cre	89.57	51	IAmb	IAmb	08 53 40.8	
	comp=Z,50nm,1.0s						
DIV	Divide	89.58	20	IAmb	IAmb	08 53 56.1	
	comp=Z,39nm,0.8s						
J20K	Nowinta River	89.59	15	P	P	08 53 38.1	-0.9
	baz=214						
PMD	Palm Desert	89.61	54	IAmb	IAmb	08 53 41.3	
	comp=Z,65nm,1.1s						
SCM	Sheep Creek Mo	89.62	19	IAmb	IAmb	08 53 55.7	
	comp=Z,74nm,1.1s						
SCM	Sheep Creek Mo	89.62	19	P	P	08 53 37.9	-1.4
	baz=221						
WSHM	Spangler Hills	89.63	52	IAmb	IAmb	08 53 41.6	
	comp=Z,82nm,1.2s						
WSHM				IAMs_20	IAMs_20	09 24 03.5	
	comp=Z,1µm,22.0s						
SFX	San Felipe	89.68	57	IAmb	IAmb	08 53 41.0	
	comp=Z,39nm,1.1s						
PNTR	Pine Nut	89.70	48	IAmb	IAmb	08 53 54.6	
	comp=Z,84nm,0.9s						
TIN	Tinemaha, Big	89.74	50	IAMs_20	IAMs_20	09 31 31.3	
	comp=Z,1µm,18.0s						
KLU	Klutina	89.80	20	IAmb	IAmb	08 54 36.4	
	comp=Z,81nm,1.6s						
KLU	Klutina	89.80	20	P	P	08 53 39.2	-0.9
	baz=222						
CHUM	Lake Minchumin	89.81	16	P	P	08 53 39.4	-0.6
	baz=216,SNR=6.2						
BMRM	Bremner River	89.84	21	IAmb	IAmb	08 54 15.6	
	comp=Z,52nm,1.2s						
BMRM	Bremner River	89.84	21	P	P	08 53 39.5	-0.8
	baz=223						
COR	Corvallis	89.90	42	P	P	08 53 41.5	+0.6
COR				IAmb	IAmb	08 53 42.4	
	comp=Z,99nm,1.1s						
COR	Corvallis	89.90	42	IAMs_20	IAMs_20	09 32 02.1	
	comp=Z,2µm,18.0s						
COR	Corvallis	89.90	42	P	P	08 53 41.5	+0.6
COR				pmax	pmax		
	comp=Z,99nm,1.1s						
GOMU	GeErMu	89.92	309	P	P	08 53 40.0	-1.7
GOMU				sP	pP	08 53 46.0	-3.5
GOMU				S	S	09 04 34.2	+1.6
GOMU				pmax	pmax		
	comp=Z,12nm,1.1s						
GOMU				LR	LR		
	comp=Z,290nm,18.2s						
GOMU				LR	LR		
	comp=Z,430nm,18.6s						
K04D	Chiloquin, OR	89.92	44	IAmb	IAmb	08 53 42.3	
	comp=Z,120nm,1.2s						
F17K	Baldwin Pennin	89.99	12	IAmb	IAmb	08 53 56.2	
	comp=Z,53nm,0.8s						
F17K	Baldwin Pennin	89.99	12	P	P	08 53 40.0	-0.7
	baz=208						
TRF	Thorofare Moun	90.01	17	IAmb	IAmb	08 53 53.1	
	comp=Z,71nm,1.5s						
TRF	Thorofare Moun	90.01	17	P	P	08 53 40.1	-1.1
	baz=218						
WAT1	Susitna Watana	90.02	18	P	P	08 53 40.0	-1.1
	baz=220						
G18K	Tagagawik	90.02	13	IAmb	IAmb	08 53 43.5	
	comp=Z,43nm,1.1s						
G18K	Tagagawik	90.02	13	P	P	08 53 40.3	-0.7
	baz=210,SNR=21						
I20K	Naaghedeneel	90.02	15	P	P	08 53 40.1	-0.8
	baz=214						
BELC	Belle Mtn. Jos	90.05	53	IAmb	IAmb	08 53 43.2	
	comp=Z,99nm,1.0s						
WAT6	Susitna Watana	90.06	19	P	P	08 53 40.7	-0.7
	baz=220						
DSP	Deep Springs	90.06	50	IAmb	IAmb	08 53 56.2	
	comp=Z,81nm,0.9s						
PAHR	Pah Rah Range	90.13	47	IAmb	IAmb	08 53 44.5	
	comp=Z,128nm,1.3s						
MG05	Puerto Natales	90.16	147	P	P	08 53 42.8	+0.6
MG05				IAmb	IAmb	08 54 01.2	
	comp=Z,96nm,1.2s						
CRQM	Cirque	90.18	21	IAmb	IAmb	08 56 57.4	
	comp=Z,123nm,1.6s						
M24K	Tolsona, Glenn	90.18	19	IAmb	IAmb	08 53 59.1	
	comp=Z,83nm,1.1s						
M24K	Tolsona, Glenn	90.18	19	P	P	08 53 41.3	-0.5
	baz=222						
H19K	Roundabout Mou	90.18	14	P	P	08 53 41.1	-0.5
	baz=212						
MESA	MESA	90.18	22	P	P	08 53 40.9	-1.2
	baz=225						
CRQE	Cirque	90.19	21	P	P	08 53 40.9	-1.2
	baz=224						
RYN	Ryan	90.24	48	IAmb	IAmb	08 53 43.8	
	comp=Z,64nm,1.1s						
QSM	Queen of Sheba	90.25	51	IAmb	IAmb	08 53 44.1	
	comp=Z,74nm,1.1s						
NVAR	Mina Array Bea	90.30	49	P	P	08 53 43.0	-0.2
	comp=Z,44nm,0.9s,baz=226,slow=7.7,SNR=211						
NVAR				pP	sP	08 53 55.5	+1.8
	comp=Z,49nm,0.8s,baz=222,slow=8.4,SNR=19						
NVAR				LR	LR	09 30 12.7	
	comp=Z,815nm,18.1s,baz=284,slow=33						
	comp=Z,44nm,0.9s						
NVAR	Mina Array Bea	90.30	49	P	P	08 53 43.2	0.0
BC3	Big Chuckawall	90.31	54	IAmb	IAmb	08 53 44.6	
	comp=Z,60nm,1.1s						
BC3				IAMs_20	IAMs_20	09 37 02.7	
	comp=Z,908nm,18.0s						
N25K	Chitina, Valde	90.31	20	IAmb	IAmb	08 53 45.4	
	comp=Z,52nm,1.2s						
N25K	Chitina, Valde	90.31	20	P	P	08 53 41.1	-1.4
	baz=223						

BPAW	Bear Paw Mtn.	90.34	17	P	P	08 53 41.8	-0.8
	baz=217						
NV11	Mina Array Sit	90.41	49	IAmb	IAmb	08 53 44.5	
	comp=Z,82nm,1.1s						
VRDI	Verde Repeater	90.41	21	IAmb	IAmb	08 53 59.8	
	comp=Z,43nm,1.2s						
F18K	Selawik	90.44	12	P	P	08 53 42.1	-0.7
	baz=210,SNR=6.2						
GLB	Gilahina Butte	90.45	21	IAmb	IAmb	08 53 58.3	
	comp=Z,34nm,1.1s						
E17K	Hotham Inlet	90.45	11	P	P	08 53 42.0	-0.9
	baz=208,SNR=24						
FURC	Furnace Creek,	90.47	51	IAmb	IAmb	08 53 57.4	
	comp=Z,79nm,0.9s						
FURC				IAMs_20	IAMs_20	09 31 38.6	
	comp=Z,2µm,19.0s						
GO09	Cerro Castillo	90.48	147	P	P	08 53 44.3	+0.6
GWY	Greenwater Val	90.49	51	IAmb	IAmb	08 53 45.3	
	comp=Z,74nm,1.1s						
H20K	Anotleneega Mo	90.51	14	P	P	08 53 42.4	-0.9
	baz=214						
GLA	Glamis	90.53	55	IAMs_20	IAMs_20	09 34 27.7	
	comp=Z,1µm,18.0s						
GMN	Gold Mountain	90.54	50	IAmb	IAmb	08 53 49.0	
	comp=Z,36nm,1.0s						
DHY	Denali Highway	90.55	18	P	P	08 53 42.7	-1.0
	baz=220						
G19K	Purcell Mounta	90.57	13	P	P	08 53 42.9	-0.6
	baz=212						
MCK	McKinley	90.61	17	P	P	08 53 43.1	-0.7
	baz=219						
CRAG	Craig	90.64	29	P	P	08 53 43.6	-0.4
	baz=233						
SIT	Sitka	90.67	27	P	P	08 53 43.6	-0.5
	baz=231						
MCARA	McCarthy VSAT	90.67	21	IAmb	IAmb	08 54 06.4	
	comp=Z,67nm,1.2s						
MCARA	McCarthy VSAT	90.67	21	P	P	08 53 43.1	-1.0
	baz=224						
G04A	Mulino	90.72	41	P	P	08 53 45.0	+0.3
HARP	HAARP	90.72	20	P	P	08 53 43.3	-1.0
	baz=222						
PINM	Pinnacle	90.73	23	P	P	08 53 43.6	-0.9
	baz=227						
IRM	Iron Mountain	90.75	54	IAmb	IAmb	08 53 47.1	
	comp=Z,87nm,1.2s						
SLBS	Sierra La Lagu	90.76	65	P	P	08 53 46.2	+0.7
SLBS				IAmb	IAmb	08 53 47.5	
	comp=Z,69nm,1.1s						
SLBS	Sierra La Lagu	90.76	65	IAMs_20	IAMs_20	09 26 53.2	
	comp=Z,1µm,20.0s						
WCT	Wildcat Mounta	90.78	51	IAmb	IAmb	08 53 59.0	
	comp=Z,64nm,0.9s						
D17K	Noatak River	90.79	10	P	P	08 53 44.3	-0.2
	baz=206,SNR=18						
BWN	Browne	90.81	17	IAmb	IAmb	08 54 05.5	
	comp=Z,54nm,0.8s						
S31K	Pelican	90.87	26	IAmb	IAmb	08 53 59.8	
	comp=Z,79nm,1.0s						
S31K	Pelican	90.87	26	P	P	08 53 44.1	-0.9
	baz=230						
BARN	Barnard Glacie	90.90	22	IAmb	IAmb	08 54 03.8	
	comp=Z,46nm,1.1s						
C16K	Lisburne Hills	90.95	9	IAmb	IAmb	08 53 47.9	
	comp=Z,36nm,1.1s						
C16K	Lisburne Hills	90.95	9	P	P	08 53 45.1	-0.1
	baz=204,SNR=6.0						
CTG	Chitna Glacier	90.95	22	P	P	08 53 44.5	-1.1
	baz=226						
I21K	Tanana	90.95	16	IAmb	IAmb	08 53 59.2	
	comp=Z,36nm,0.8s						
I21K	Tanana	90.95	16	P	P	08 53 44.2	-1.1
	baz=216,SNR=7.2						
CTGM	Chitina Glacie	90.95	22	IAmb	IAmb	08 53 45.6	
	comp=Z,78nm,1.3s						
E18K	Tukpahlearik C	90.98	11	P	P	08 53 45.1	-0.3
	baz=209,SNR=8.1						
PIX	Pinacate	90.98	57	IAmb	IAmb	08 53 47.0	
	comp=Z,57nm,1.0s						
MTPC	Mountain Pass	91.01	52	IAmb	IAmb	08 53 48.1	
	comp=Z,48nm,1.1s						
F19K	Shaleruckik Mo	91.01	13	P	P	08 53 45.2	-0.3
	baz=211						
U33K	Whale Pass	91.04	28	P	P	08 53 45.8	0.0
	baz=233,SNR=5.6						
PAX	Paxson	91.04	19	P	P	08 53 45.7	-0.2
	baz=222						
BLYC	Blythe	91.05	54	IAmb	IAmb	08 54 00.9	
	comp=Z,68nm,1.0s						
GTK	Tadong	91.07	299	*e*P	P	08 53 46.1	-0.9
GTK				IAmb	IAmb	08 54 02.7	
	comp=Z,60nm,0.9s						
TPNV	Topopah Spring	91.12	51	IAmb	IAmb	08 53 48.6	
	comp=Z,79nm,1.0s						
TPNV				IAMs_20	IAMs_20	09 32 09.9	
	comp=Z,2µm,18.0s						
H21K	Melozitna Rive	91.14	15	P	P	08 53 46.1	-0.1
	baz=216						
RDOG	Red Dog Mine	91.14	10	IAmb	IAmb	08 54 01.0	
	comp=Z,40nm,1.1s						
RDOG	Red Dog Mine	91.14	10	P	P	08 53 46.2	+0.1
	baz=206,SNR=8.2						
MLY	Manley	91.15	16	P	P	08 53 45.4	-0.9
	baz=218						
BBB	Bella Bella	91.16	33	LR	LR	09 32 12.2	
	comp=Z,803nm,18.0s,baz=248,slow=34						
IMAR	Indian Mountai	91.18	14	P	P	08 53 45.7	-0.7
O28M	Mount Upton	91.22	22	IAmb	IAmb	08 54 05.2	
	comp=Z,42nm,0.9s						
O28M	Mount Upton	91.22	22	P	P	08 53 46.0	-1.1
	baz=227						
113A	Mohawk Valley,	91.23	55	IAmb	IAmb	08 53 48.5	
	comp=Z,55nm,1.2s						
S32K	Killisnoo	91.24	27	IAmb	IAmb	08 53 47.5	
	comp=Z,93nm,1.3s						
S32K	Killisnoo	91.24	27	P	P	08 53 46.4	-0.4
	baz=232,SNR=5.3						
NEA2	Nenana	91.24	17	P	P	08 53 46.2	-0.5
	baz=219						
V35K	Ketchikan	91.25	30	P	P	08 53 46.4	-0.5
	baz=234,SNR=9.2						
RUBB	Prince Rupert	91.30	31	IAmb	IAmb	08 54 01.1	
	comp=Z,70nm,1.0s						
ZAK	Zakamensk	91.34	324	*e*P	P	08 53 47.1	-0.5
ZAK				*e*		08 54 00.4	
ZAK				pmax	pmax		
	comp=Z,134nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,133nm,1.3s						
R31K	City Hall, Gus	91.36	26	P	P	08 53 46.2	-1.1
	baz=230						
P29M	Windy Craggy	91.36	24	P	P	08 53 46.4	-1.0
	baz=229						
NEE2	Needles Airpor	91.40	53	IAmb	IAmb	08 53 49.3	
	comp=Z,78nm,1.0s						
M26K	Nabesna, AK	91.41	20	IAmb	IAmb	08 53 51.9	
	comp=Z,76nm,1.4s						
M26K	Nabesna, AK	91.41	20	P	P	08 53 47.0	-0.5
	baz=224						
G05A	Wamic	91.45	42	IAmb	IAmb	08 54 18.5	
	comp=Z,76nm,1.0s						
C17K	DeLong Mountai	91.47	10	P	P	08 53 47.4	-0.3
	baz=206						
O29M	Mount Kennedy	91.49	23	P	P	08 53 46.6	-1.5
	baz=228						
T33K	Petersburg	91.54	28	P	P	08 53 47.2	-1.0
	baz=233						
MENT	Mentasta	91.56	20	P	P	08 53 48.1	-0.2
MENT	Mentasta	91.56	20	P	P	08 53 47.2	-1.1
WRAK	Wrangell Islan	91.57	28	P	P	08 53 47.7	-0.6
	baz=233,SNR=5.2						
K24K	Donnelly Dome	91.57	18	IAmb	IAmb	08 53 53.6	
	comp=Z,34nm,1.0s						
K24K	Donnelly Dome	91.57	18	P	P	08 53 47.1	-1.2
	baz=222						
I23K	Minto, Yukon-K	91.60	16	P	P	08 53 48.1	-0.2
	baz=219						
F20K	Avaraart Lake	91.63	13	P	P	08 53 47.4	-0.9
	baz=213						
V12A	Nelson	91.63	52	IAmb	IAmb	08 53 51.6	
	comp=Z,52nm,1.2s						
CCB	Clear Creek Bu	91.63	17	IAmb	IAmb	08 54 00.7	
	comp=Z,22nm,0.8s						
214A	Organ Pipe Nat	91.64	56	IAmb	IAmb	08 53 51.3	
	comp=Z,82nm,1.4s						
E19K	Redstone River	91.66	12	IAmb	IAmb	08 54 05.2	
	comp=Z,50nm,0.9s						
E19K	Redstone River	91.66	12	P	P	08 53 48.3	-0.3
	baz=212						
G21K	Allakaket	91.67	14	IAmb	IAmb	08 53 49.2	
	comp=Z,55nm,1.4s						
G21K				IAMs_20	IAMs_20	09 26 00.2	
	comp=Z,1µm,22.0s						
G21K	Allakaket	91.67	14	P	P	08 53 47.4	-1.3
	baz=215						
H22K	Ishtalitna Cre	91.67	15	P	P	08 53 48.3	-0.4
	baz=217						
HDA	Harding Lake	91.69	18	IAmb	IAmb	08 54 01.9	
	comp=Z,36nm,1.0s						
HDA	Harding Lake	91.69	18	P	P	08 53 48.4	-0.4
	baz=221,SNR=9.6						
YUK8	Steele Glacier	91.72	22	P	P	08 53 48.3	-1.0
	baz=227,SNR=15						
L26K	Log Cabin Wild	91.75	20	IAmb	IAmb	08 54 03.0	
	comp=Z,52nm,1.7s						
L26K	Log Cabin Wild	91.75	20	P	P	08 53 47.9	-1.2
	baz=224						
M27K	Edge Creek, AK	91.75	21	IAmb	IAmb	08 54 00.7	
	comp=Z,57nm,1.4s						
M27K	Edge Creek, AK	91.75	21	P	P	08 53 48.3	-1.0
	baz=225						
R32K	Eaglecrest	91.77	26	P	P	08 53 48.5	-0.8
	baz=232						
PLBC	Pleasant Camp	91.78	25	P	P	08 53 48.4	-0.8
	baz=230,SNR=10						
S11A	Rachel	91.78	50	IAmb	IAmb	08 53 50.8	
	comp=Z,72nm,1.2s						
COLA	College	91.79	17	P	P	08 53 47.8	-1.4
COLA				IAmb	IAmb	08 54 07.9	
	comp=Z,40nm,0.9s						
COLA	College	91.79	17	P	P	08 53 47.4	-1.8
COLA	College	91.79	17	P	P	08 53 47.8	-1.4
COLA				pmax	pmax		
	comp=Z,40nm,0.9s						
COLA	College	91.79	17	P	P	08 53 47.4	-1.8
	baz=220						
RIDG	Independent Ri	91.80	19	P	P	08 53 47.7	-1.6
	baz=223						
IRK	Irkutsk	91.81	326	*e*P	P	08 53 48.1	-1.5
IRK				pmax	pmax		
	comp=Z,70nm,2.4s						
YUK3	Moose Creek	91.82	22	P	P	08 53 47.7	-2.0
	baz=227,SNR=10						
JIS	Juneau Island	91.83	26	P	P	08 53 49.3	-0.2
TLY	Talaya	91.84	326	P	P	08 53 50.2	+0.5
TLY				IAmb	IAmb	08 54 03.9	
	comp=Z,63nm,0.9s						
TLY	Talaya	91.84	326	*ce*P	P	08 53 50.4	+0.6
TLY				pmax	pmax		
	comp=Z,93nm,1.3s						
WVOR	Wild Horse Val	91.87	45	IAmb	IAmb	08 54 03.9	
	comp=Z,71nm,0.9s						
G06A	Carlson Farm,	91.87	42	IAmb	IAmb	08 54 03.5	
	comp=Z,65nm,1.3s						
LON	Longmire	91.87	40	IAmb	IAmb	08 53 55.4	
	comp=Z,55nm,1.2s						
C18K	Utukok River	91.96	11	IAmb	IAmb	08 53 52.2	
	comp=Z,54nm,1.3s						
C18K	Utukok River	91.96	11	P	P	08 53 49.1	-0.9
	baz=208						
HSIG		91.97	60	IAmb	IAmb	08 53 51.8	
	comp=Z,30nm,1.0s						
P30M	Million Dollar	91.98	24	P	P	08 53 49.2	-1.1
	baz=230						
ILAR	Eielson Array	91.98	17	P	P	08 53 48.0	-2.1
	comp=Z,5.9nm,0.6s,baz=238,slow=5.1,SNR=64						
ILAR				PKKP	PKKPdf	09 11 01.2	-6.5
	comp=Z,0.7nm,0.9s,baz=1.0,slow=1.0,SNR=4.9						
ILAR				LR	LR	09 36 24.4	
	comp=Z,2µm,18.1s,baz=226,slow=36						
ILAR	Eielson Array	91.98	17	P	P	08 53 48.2	-1.9
ILAR	Eielson Array	91.98	17	P	P	08 53 48.2	-1.9
YUK6	Outpost Mounta	92.00	23	P	P	08 53 49.3	-1.3
	baz=228,SNR=6.5						
I07A	Izee	92.05	43	IAmb	IAmb	08 53 54.1	
	comp=Z,81nm,1.2s						
H23K	Yukon River	92.08	16	P	P	08 53 49.0	-1.6
	baz=219						
W13A	Hualapai Mount	92.09	53	IAmb	IAmb	08 54 05.3	
	comp=Z,30nm,0.9s						
POKR	Poker Plat Res	92.09	17	P	P	08 53 49.5	-1.2
	baz=220						
BVCY	Beaver Creek	92.12	21	P	P	08 53 50.7	-0.1
	baz=226,SNR=6.5						
YUK4	Talbot Arm	92.16	23	P	P	08 53 50.8	-0.5
	baz=228,SNR=8.3						
SKAG	Skagway	92.19	25	IAmb	IAmb	08 54 07.3	
	comp=Z,72nm,1.0s						
SKAG	Skagway	92.19	25	P	P	08 53 50.9	-0.2
SKAG	Skagway	92.19	25	P	P	08 53 50.2	-1.0
	baz=231,SNR=14						
HYT	Haines Junctio	92.23	23	IAmb	IAmb	08 54 04.1	
	comp=Z,43nm,0.8s						
HYT	Haines Junctio	92.23	23	P	P	08 53 50.6	-0.9
	baz=229,SNR=12						
SCRK	Sand Creek	92.24	19	IAmb	IAmb	08 53 56.7	
	comp=Z,24nm,1.0s						
SCRK	Sand Creek	92.24	19	P	P	08 53 50.0	-1.5
	baz=224,SNR=13						
L27K	Beaver Creek,	92.26	20	IAmb	IAmb	08 54 04.7	
	comp=Z,38nm,1.5s						
L27K	Beaver Creek,	92.26	20	P	P	08 53 51.1	-0.4
	baz=225						
F21K	Alatna River	92.26	14	IAmb	IAmb	08 53 52.5	
	comp=Z,31nm,1.1s						
F21K				IAMs_20	IAMs_20	09 26 08.7	
	comp=Z,1µm,21.0s						
F21K	Alatna River	92.26	14	P	P	08 53 50.7	-0.6
	baz=215,SNR=18						
BCAR	Beaver Creek A	92.28	20	P	P	08 53 50.5	-1.1
J25K	Salcha River,	92.30	18	P	P	08 53 50.9	-0.7
	baz=222						
U35K	Hyder	92.32	30	P	P	08 53 51.3	-0.5
	baz=235						
D19K	Kuna River	92.38	12	IAmb	IAmb	08 53 54.1	
	comp=Z,70nm,1.2s						
D19K	Kuna River	92.38	12	P	P	08 53 51.7	-0.2
	baz=211						
G22K	Bettles	92.47	15	P	P	08 53 51.6	-0.7
	baz=217,SNR=32						
B18K	Kokolik River	92.49	10	P	P	08 53 52.3	0.0
	baz=208						
H24K	Noodor Dome	92.53	16	P	P	08 53 52.3	-0.4
	baz=220						
E20K	Nigu River	92.55	12	P	P	08 53 52.8	+0.1
	baz=213						
F07A	Phinny Hill Vi	92.62	41	IAmb	IAmb	08 53 55.7	
	comp=Z,32nm,1.0s						
C19K	Lookout Ridge	92.64	11	IAmb	IAmb	08 54 09.4	
	comp=Z,46nm,0.9s						
C19K	Lookout Ridge	92.64	11	P	P	08 53 52.9	-0.3
	baz=210						
G23K	Bananza Creek	92.66	15	IAmb	IAmb	08 54 10.4	
	comp=Z,35nm,1.2s						
G23K	Bananza Creek	92.66	15	P	P	08 53 52.4	-0.8
	baz=218,SNR=7.0						
MXC	Moxie City	92.71	41	IAmb	IAmb	08 54 08.8	
	comp=Z,25nm,0.9s						
O30N	Mendenhall	92.73	24	IAmb	IAmb	08 54 06.2	
	comp=Z,37nm,0.8s						
O30N	Mendenhall	92.73	24	P	P	08 53 52.8	-1.0
	baz=230,SNR=14						
J26L	Joseph Creek	92.75	19	P	P	08 53 53.0	-0.8
	baz=224,SNR=17						
EVN	Everest	92.78	299	IAmb	IAmb	08 54 09.6	
	comp=Z,39nm,0.9s						
F22K	John River	92.79	14	P	P	08 53 53.0	-0.8
	baz=216,SNR=28						
LTY	Liberty	92.80	40	IAmb	IAmb	08 54 08.9	
	comp=Z,34nm,0.9s						
N30M	Aishikik Lake	92.80	23	IAmb	IAmb	08 54 06.5	
	comp=Z,24nm,0.8s						
N30M	Aishikik Lake	92.80	23	P	P	08 53 52.7	-1.3
	baz=230,SNR=6.9						
T35M	Bob Quinn	92.83	29	IAmb	IAmb	08 54 09.8	
	comp=Z,40nm,1.1s						
T35M	Bob Quinn	92.83	29	P	P	08 53 53.9	-0.3
	baz=235,SNR=5.4						
D20K	Etivluk River	92.85	12	IAmb	IAmb	08 53 55.8	
	comp=Z,75nm,1.2s						
D20K	Etivluk River	92.85	12	P	P	08 53 53.3	-0.8
	baz=212,SNR=25						
K27K	Chicken	92.86	20	IAmb	IAmb	08 53 55.4	
	comp=Z,43nm,1.1s						
K27K	Chicken	92.86	20	P	P	08 53 53.4	-0.8
	baz=225						
P32M	Atlin	92.91	25	IAmb	IAmb	08 54 07.7	
	comp=Z,47nm,0.8s						
P32M	Atlin	92.91	25	P	P	08 53 53.4	-1.2
	baz=232,SNR=9.6						
G08A	Pilot Rock	92.95	42	IAmb	IAmb	08 54 10.7	
	comp=Z,34nm,0.8s						
M29M	Somme Creek	92.96	22	IAmb	IAmb	08 53 54.9	
	comp=Z,38nm,1.1s						
M29M	Somme Creek	92.96	22	P	P	08 53 53.7	-1.1
	baz=228,SNR=14						
E07A	Sunnyside	92.97	41	IAmb	IAmb	08 54 11.9	
	comp=Z,32nm,0.9s						
S34M	Telegraph Cree	92.98	28	IAmb	IAmb	08 54 08.6	
	comp=Z,61nm,0.9s						
S34M	Telegraph Cree	92.98	28	P	P	08 53 54.6	-0.3
	baz=234,SNR=19						
COLD	Coldfoot	93.03	15	IAmb	IAmb	08 54 10.3	
	comp=Z,40nm,0.9s						
COLD	Coldfoot	93.03	15	P	P	08 53 54.4	-0.5
	baz=218,SNR=30						
HAWA	Hanford	93.09	41	IAmb	IAmb	08 53 58.1	
	comp=Z,53nm,1.2s						
WHY	Whitehorse	93.12	24	P	P	08 53 54.6	-1.0
	baz=231,SNR=11						
Q32M	Nakina River	93.12	26	IAmb	IAmb	08 53 57.1	
	comp=Z,61nm,1.1s						
Q32M	Nakina River	93.12	26	P	P	08 53 54.4	-1.3
	baz=234						
DGAR	Diego Garcia	93.16	261⇓	*e*P	P	08 53 55.6	-1.1
DGAR				pmax	pmax		
	comp=Z,238nm,1.4s						
E21K	Killik River	93.16	13	IAmb	IAmb	08 53 56.8	
	comp=Z,54nm,1.1s						
E21K				IAMs_20	IAMs_20	09 28 33.4	
	comp=Z,1µm,22.0s						
E21K	Killik River	93.16	13	P	P	08 53 54.6	-0.9
	baz=215						
WAH2	Wahluke Slope	93.24	41	IAmb	IAmb	08 53 58.7	
	comp=Z,49nm,1.4s						
MOY	Mondy	93.25	325	*e*P	P	08 53 56.6	+0.2
MOY				pmax	pmax		
	comp=Z,94nm,2.3s						
G24K	Hadweenzic Riv	93.29	16	P	P	08 53 55.1	-1.0
	baz=220						
N31M	Braeburn, Yuko	93.30	23	P	P	08 53 55.3	-1.1
	baz=231,SNR=12						
LCMT	Little Creek M	93.33	52	IAmb	IAmb	08 54 02.8	
	comp=Z,31nm,1.1s						
A19K	Wainwright	93.36	10	P	P	08 53 55.7	-0.6
	baz=208						
TUC	Tucson	93.36	57	P	P	08 53 57.7	+0.3
TUC				IAmb	IAmb	08 53 59.3	
	comp=Z,40nm,1.2s						
TUC	Tucson	93.36	57	P	P	08 53 57.7	+0.3
TUC				pmax	pmax		
	comp=Z,40nm,1.2s						
E22K	Anaktuvuk Pass	93.38	14	IAmb	IAmb	08 53 57.4	
	comp=Z,64nm,1.2s						
E22K	Anaktuvuk Pass	93.38	14	P	P	08 53 55.3	-1.2
	baz=217,SNR=34						
ELK	Elko	93.44	48	LR	LR	09 33 27.4	
	comp=Z,370nm,18.3s,baz=289,slow=34						
I26K	Coal Creek Min	93.45	18	IAmb	IAmb	08 53 57.8	
	comp=Z,72nm,1.2s						
I26K	Coal Creek Min	93.45	18	P	P	08 53 56.3	-0.6
	baz=224,SNR=23						
EPH	Ephrata	93.49	40	IAmb	IAmb	08 54 12.4	
	comp=Z,43nm,1.0s						
L29M	L29M	93.52	21	IAmb	IAmb	08 54 10.2	
	comp=Z,46nm,0.9s						
L29M	L29M	93.52	21	P	P	08 53 55.9	-1.4
	baz=229,SNR=23						
C21K	Knifeblade Rid	93.59	12	P	P	08 53 57.2	-0.2
	baz=214,SNR=28						
M30M	Minto, Yukon	93.64	22	P	P	08 53 56.8	-1.1
	baz=230,SNR=35						
KNB	Kanab	93.65	52	IAmb	IAmb	08 54 00.8	
	comp=Z,53nm,1.5s						
P33M	Teslin, Yukon	93.65	25	IAmb	IAmb	08 54 10.7	
	comp=Z,24nm,0.9s						
P33M	Teslin, Yukon	93.65	25	P	P	08 53 57.0	-1.0
	baz=233,SNR=10						
X16A	Lo Mia Camp, P	93.67	55	IAmb	IAmb	08 54 00.7	
	comp=Z,53nm,1.4s						
LLLB	Lillooet	93.69	37	IAmb	IAmb	08 54 11.6	
	comp=Z,58nm,1.2s						
G25K	Bearman Lake	93.70	16	P	P	08 53 57.7	-0.2
	baz=222						
DAWY	Dawson	93.74	20	IAmb	IAmb	08 53 58.8	
	comp=Z,41nm,1.2s						
DAWY	Dawson	93.74	20	P	P	08 53 57.5	-0.8
	baz=228,SNR=21						
DLBC	Dease Lake	93.77	28	LR	LR	09 34 22.8	
	comp=Z,1µm,18.1s,baz=248,slow=34						
DLBC	Dease Lake	93.77	28	P	P	08 53 58.0	-0.5
	baz=235,SNR=18						
D22K	Ayikyak River	93.79	13	IAmb	IAmb	08 53 59.7	
	comp=Z,58nm,1.1s						
D22K				IAMs_20	IAMs_20	09 40 52.1	
	comp=Z,1µm,19.0s						
D22K	Ayikyak River	93.79	13	P	P	08 53 58.0	-0.4
	baz=216,SNR=31						
U15A	North Rim	93.81	53	IAmb	IAmb	08 54 02.3	
	comp=Z,49nm,1.2s						
F24K	Squaw Lake	93.82	15	IAmb	IAmb	08 54 00.0	
	comp=Z,32nm,1.1s						
F24K	Squaw Lake	93.82	15	P	P	08 53 57.9	-0.7
	baz=220,SNR=25						
E23K	Chandalar	93.82	15	IAmb	IAmb	08 53 60.0	
	comp=Z,47nm,1.1s						
E23K				IAMs_20	IAMs_20	09 42 29.0	
	comp=Z,1µm,18.0s						
E23K	Chandalar	93.82	15	P	P	08 53 58.2	-0.5
	baz=219						
B20K	Meade River	93.86	11	IAmb	IAmb	08 54 00.1	
	comp=Z,36nm,1.0s						
B20K	Meade River	93.86	11	P	P	08 53 57.8	-0.8
	baz=212						
R33M	Jennings River	93.92	26	IAmb	IAmb	08 54 00.8	
	comp=Z,64nm,1.2s						
R33M	Jennings River	93.92	26	P	P	08 53 58.2	-1.1
	baz=235,SNR=14						
B21K	Ikpikpuk River	94.01	12	IAmb	IAmb	08 54 14.8	
	comp=Z,41nm,0.8s						
B21K	Ikpikpuk River	94.01	12	P	P	08 53 59.2	-0.1
	baz=214						
E24K	Your Creek	94.10	15	P	P	08 53 58.5	-1.4
	baz=220						
I27K	Kandik River	94.11	19	IAmb	IAmb	08 54 00.7	
	comp=Z,37nm,1.2s						
I27K	Kandik River	94.11	19	P	P	08 53 58.6	-1.4
	baz=226,SNR=18						
N32M	Quiet Lake	94.11	24	P	P	08 53 58.6	-1.5
	baz=233						
PKCU	Pink Cliffs	94.19	52	IAmb	IAmb	08 54 06.5	
	comp=Z,51nm,1.3s						
319A	Douglas	94.20	58	IAmb	IAmb	08 54 21.0	
	comp=Z,24nm,0.9s						
K29M	Barlow Dome	94.21	21	IAmb	IAmb	08 54 01.2	
	comp=Z,44nm,1.2s						
K29M	Barlow Dome	94.21	21	P	P	08 53 59.3	-1.3
	baz=229						
M31M	Drury Creek, Y	94.27	23	IAmb	IAmb	08 54 12.6	
	comp=Z,27nm,0.8s						
M31M	Drury Creek, Y	94.27	23	P	P	08 53 59.8	-0.9
	baz=232,SNR=12						
TOLK	Toolik Lake Re	94.29	14	P	P	08 54 00.1	-0.6
	baz=219,SNR=9.5						
D23K	Nanushuk River	94.29	14	P	P	08 53 59.5	-1.2
	baz=218						
F10A	Beach Ranch, E	94.34	42	P	P	08 54 00.6	-0.9
J29N	Klondike Camp	94.39	20	IAmb	IAmb	08 54 02.3	
	comp=Z,53nm,1.2s						
J29N	Klondike Camp	94.39	20	P	P	08 53 59.9	-1.4
	baz=229,SNR=14						
F25K	Christian Rive	94.44	16	IAMs_20	IAMs_20	09 26 43.3	
	comp=Z,1µm,20.0s						
F25K	Christian Rive	94.44	16	P	P	08 54 00.7	-0.8
	baz=222,SNR=11						
G26K	Porcupine Rive	94.46	17	IAmb	IAmb	08 54 02.8	
	comp=Z,72nm,1.2s						
G26K	Porcupine Rive	94.46	17	P	P	08 54 00.9	-0.5
	baz=224,SNR=24						
I28M	Miner Creek	94.51	19	P	P	08 54 01.0	-0.9
	baz=227,SNR=9.9						
H27K	Steamboat Moun	94.58	18	IAmb	IAmb	08 54 03.2	
	comp=Z,37nm,1.2s						
H27K	Steamboat Moun	94.58	18	P	P	08 54 01.6	-0.5

	baz=226						
MAYO	Mayo, Yukon	94.61	22	P	P	08 54 01.3	-0.9
	baz=231,SNR=13						
B22K	Teshekpuk Lake	94.84	12	IAmb	IAmb	08 54 04.1	
	comp=Z,42nm,1.1s						
B22K	Teshekpuk Lake	94.84	12	P	P	08 54 02.1	-1.0
	baz=215						
E25K	Arctic Village	94.85	16	IAmb	IAmb	08 54 04.7	
	comp=Z,40nm,1.3s						
E25K	Arctic Village	94.85	16	P	P	08 54 02.0	-1.3
	baz=222,SNR=14						
D24K	Happy Valley	94.86	14	IAmb	IAmb	08 54 04.3	
	comp=Z,42nm,1.1s						
D24K	Happy Valley	94.86	14	P	P	08 54 02.3	-0.9
	baz=219						
F26K	Sheenjek River	94.90	16	P	P	08 54 02.7	-0.9
	baz=224,SNR=12						
DUG	Dugway, Tooele	94.91	49	IAMs_20	IAMs_20	09 33 33.0	
	comp=Z,1µm,18.0s						
G27K	Doyon Strip	94.95	18	IAMs_20	IAMs_20	09 42 56.1	
	comp=Z,2µm,18.0s						
G27K	Doyon Strip	94.95	18	P	P	08 54 03.4	-0.4
	baz=226						
I29M	Ogilvie Camp,	94.96	20	P	P	08 54 02.3	-1.6
	baz=229,SNR=17						
C23K	Itkillik River	95.00	13	P	P	08 54 02.7	-1.2
	baz=218						
J30M	Hart River	95.08	21	P	P	08 54 03.6	-1.0
	baz=230						
A22K	Sinclair Lake	95.09	11	P	P	08 54 03.9	-0.3
	baz=214						
WTLY	Watson Lake, Y	95.23	26	P	P	08 54 03.8	-1.4
	baz=236,SNR=6.3						
C24K	Franklin Bluff	95.33	14	P	P	08 54 04.5	-0.8
	baz=220						
NEW	Newport	95.39	40	LR	LR	09 33 16.9	
	comp=Z,757nm,18.1s,baz=267,slow=33						
LL02	Futaleuf	95.42	140	P	P	08 54 06.6	-0.1
I30M	Mount Dempster	95.48	20	IAmb	IAmb	08 54 06.6	
	comp=Z,38nm,0.9s						
I30M	Mount Dempster	95.48	20	P	P	08 54 04.6	-1.7
	baz=230						
H29M	Whitestone	95.51	19	IAmb	IAmb	08 54 07.0	
	comp=Z,40nm,1.1s						
H29M	Whitestone	95.51	19	P	P	08 54 05.3	-1.0
	baz=229,SNR=10						
D25K	Kavik River	95.55	15	IAmb	IAmb	08 54 06.7	
	comp=Z,24nm,1.0s						
D25K	Kavik River	95.55	15	P	P	08 54 05.6	-0.9
	baz=222						
Q16A	Castle Valley	95.58	51	IAmb	IAmb	08 54 09.4	
	comp=Z,24nm,1.2s						
TMUT	Trail Mountain	95.70	50	IAmb	IAmb	08 54 14.8	
	comp=Z,23nm,1.0s						
E27K	Coleen River	95.93	17	IAmb	IAmb	08 54 09.1	
	comp=Z,31nm,1.0s						
E27K				IAMs_20	IAMs_20	09 44 13.9	
	comp=Z,1µm,18.0s						
E27K	Coleen River	95.93	17	P	P	08 54 07.7	-0.5
	baz=226,SNR=21						
LIRD	Liard River Hi	96.01	28	P	P	08 54 07.9	-0.9
	baz=239						
F28M	Old Crow	96.01	18	IAMs_20	IAMs_20	09 42 56.9	
	comp=Z,1µm,19.0s						
F28M	Old Crow	96.01	18	P	P	08 54 07.5	-1.1
	baz=227,SNR=16						
G29M	Pine Creek	96.07	19	IAmb	IAmb	08 54 09.4	
	comp=Z,46nm,1.1s						
G29M	Pine Creek	96.07	19	P	P	08 54 08.0	-0.9
	baz=229						
TOAD	Toad River Com	96.10	29	P	P	08 54 08.2	-1.0
	baz=239						
EPYK	Eagle Plains	96.12	19	P	P	08 54 07.9	-1.2
	baz=230,SNR=22						
SRU	San Rafael Swe	96.12	51	IAmb	IAmb	08 54 25.4	
	comp=Z,16nm,0.9s						
HYB	Hyderabad	96.17	286	*e*P	P	08 54 10.3	-0.2
HYB				*e*PP	PP	08 58 04.5	+0.5
HYB				*e*SKSac	SKSac	09 04 46.8	+1.5
TCUT	Toone Canyon	96.25	48	IAmb	IAmb	08 54 25.9	
	comp=Z,19nm,0.9s						
TIXI	Tiksi	96.27	348	P	P	08 54 05.4	-4.2
	comp=Z,1.2nm,0.5s,baz=176,slow=13,SNR=3.6						
TIXI	Tiksi	96.27	348	P	P	08 54 09.8	+0.2
TIXI	Tiksi	96.27	348	⇓*e*P	P	08 54 08.0	-1.6
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
HWUT	Hardware Ranch	96.32	48	IAMs_20	IAMs_20	09 36 30.5	
	comp=Z,983nm,19.0s						
C26K	Camden Bay	96.34	15	P	P	08 54 09.6	-0.4
	baz=223						
C27K	Jago River	96.42	15	IAMs_20	IAMs_20	09 28 37.6	
	comp=Z,981nm,20.0s						
C27K	Jago River	96.42	15	P	P	08 54 09.8	-0.6
	baz=224						
H31M	Peel River	96.51	20	IAmb	IAmb	08 54 10.8	
	comp=Z,34nm,1.1s						
H31M	Peel River	96.51	20	P	P	08 54 09.4	-1.5
	baz=232,SNR=13						
G30M	tAoh Zraii Nji	96.66	19	P	P	08 54 09.8	-1.8
	baz=231						
MSO	Missoula	96.77	42	IAMs_20	IAMs_20	09 37 30.8	
	comp=Z,1µm,18.0s						
E28M	Babbage River	96.78	17	IAmb	IAmb	08 54 25.2	
	comp=Z,37nm,0.9s						
E28M				IAMs_20	IAMs_20	09 42 49.3	
	comp=Z,1µm,18.0s						
E28M	Babbage River	96.78	17	P	P	08 54 10.9	-1.1
	baz=228,SNR=40						
D27M	Malcolm River	96.83	16	IAmb	IAmb	08 54 13.9	
	comp=Z,45nm,1.1s						
D27M				IAMs_20	IAMs_20	09 42 25.5	
	comp=Z,1µm,19.0s						
D27M	Malcolm River	96.83	16	P	P	08 54 11.5	-0.8
	baz=227						
MVCO	Mesa Verde	96.92	53	IAMs_20	IAMs_20	09 39 48.7	
	comp=Z,942nm,18.0s						
PV10	Paradox Valley	96.94	52	IAmb	IAmb	08 54 16.0	
	comp=Z,20nm,1.1s						
PV19	Morning Glory	96.95	52	IAmb	IAmb	08 54 29.3	
	comp=Z,17nm,0.9s						
PV20	West Nyswonger	96.98	52	IAmb	IAmb	08 54 29.4	
	comp=Z,22nm,1.0s						
PV23	Carpenter Ridg	96.98	52	IAmb	IAmb	08 54 31.1	
	comp=Z,25nm,0.8s						
PV18	Skein Mesa, Pa	96.99	52	IAmb	IAmb	08 54 28.8	
	comp=Z,17nm,1.1s						
DLMT	Dillon	97.06	44	IAmb	IAmb	08 54 19.1	
	comp=Z,22nm,1.1s						
AHID	Auburn Hatcher	97.08	47	IAMs_20	IAMs_20	09 37 16.9	
	comp=Z,882nm,19.0s						
E29M	Blow River	97.08	17	IAmb	IAmb	08 54 13.3	
	comp=Z,19nm,1.1s						
E29M	Blow River	97.08	17	P	P	08 54 12.1	-1.3
	baz=229						
PV12	Saucer Basin,	97.09	52	IAmb	IAmb	08 54 24.5	
	comp=Z,23nm,1.1s						
PV02	Paradox Valley	97.10	52	IAmb	IAmb	08 54 56.3	
	comp=Z,17nm,1.1s						
F30M	Barrier River	97.19	19	P	P	08 54 12.7	-1.2
	baz=231						
KOTAN	Kotaneelee Air	97.27	28	P	P	08 54 13.6	-0.8
	baz=240						
MNTX	Cornudas Mount	97.42	59	IAMs_20	IAMs_20	09 36 51.3	
	comp=Z,1µm,18.0s						
D28M	Stokes Point	97.48	17	P	P	08 54 14.5	-0.6
	baz=229						
HMDM	Hanimaadhoo	97.50	274	IAMs_20	IAMs_20	09 40 56.1	
	comp=Z,1µm,18.0s						
SNOW	Snow King Moun	97.57	46	IAmb	IAmb	08 54 30.7	
	comp=Z,27nm,1.6s						
SNOW				IAMs_20	IAMs_20	09 39 29.4	
	comp=Z,1µm,19.0s						
PLCA	Paso Flores	97.63	139	P	P	08 54 16.7	-0.1
	comp=Z,2.8nm,1.1s,baz=263,slow=3.5,SNR=6.4						
PLCA				PKKP	PKKPbc	09 10 53.7	+0.3
	comp=Z,5.2nm,1.0s,baz=75,slow=2.6,SNR=9.1						
PLCA				LR	LR	09 28 31.9	
	comp=Z,271nm,21.8s,baz=234,slow=29						
	comp=Z,2.8nm,1.1s						
PLCA	Paso Flores	97.63	139	IAmb	IAmb	08 54 25.2	
	comp=Z,34nm,1.8s						
TASM	ASL Pad, Albuq	97.68	56	IAmb	IAmb	08 54 46.0	
	comp=Z,5.7nm,0.9s						
TASM	ASL Pad, Albuq	97.68	56	IAmb	IAmb	08 54 46.0	
	comp=Z,5.7nm,0.9s						
TASM	ASL Pad, Albuq	97.68	56	IAmb	IAmb	08 54 46.0	
	comp=Z,5.3nm,0.8s						
ANMO	Albuquerque	97.68	56	P	P	08 54 16.2	-0.9
ANMO	Albuquerque	97.68	56	IAMs_20	IAMs_20	09 38 43.9	
	comp=Z,929nm,18.0s						
ANMO	Albuquerque	97.68	56	*de*P	P	08 54 16.0	-1.2
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ANMO				MLR	MLR		
	comp=Z,761nm,16.0s						
F31M	Tsiigehtchic	97.70	19	P	P	08 54 14.8	-1.4
	baz=233						
YHB	Horse Butte	97.75	45	IAmb	IAmb	08 54 35.4	
	comp=Z,14nm,0.9s						
YMR	Madison River	97.87	45	IAmb	IAmb	08 54 36.6	
	comp=Z,12nm,0.9s						
WMQ	Urumqi	97.98	314	*e*P	Pdif	08 54 18.9	+0.7
WMQ				pP	pP	08 54 24.0	-2.0
WMQ				sP	pwP	08 54 31.2	-2.7
WMQ				pmax	pmax		
	comp=Z,21nm,0.9s						
WMQ				LR	LR		
	comp=Z,390nm,22.1s						
TXAR	Lajitas Array	98.03	62	P	P	08 54 18.5	-0.2
	comp=Z,4.2nm,1.1s,baz=230,slow=5.0,SNR=18						
TXAR				PKKP	PKKPbc	09 10 53.4	+1.1
	comp=Z,1.3nm,1.1s,baz=103,slow=4.0,SNR=5.0						
TXAR				LR	LR	09 33 28.5	
	comp=Z,1µm,18.0s,baz=274,slow=32						
	comp=Z,4.2nm,1.1s						
BW06	Boulder Array	98.14	47	IAMs_20	IAMs_20	09 39 47.4	
	comp=Z,1µm,18.0s						
PDAR	Pinedale Array	98.14	47	P	P	08 54 17.8	-1.3
	comp=Z,2.2nm,0.8s,baz=211,slow=2.6,SNR=15						
PDAR				LR	LR	09 37 31.5	
	comp=Z,427nm,18.1s,baz=274,slow=35						
	comp=Z,2.2nm,0.8s						
PDAR	Pinedale Array	98.14	47	P	P	08 54 17.6	-1.5
O20A	White River Ci	98.14	50	IAMs_20	IAMs_20	09 41 10.7	
	comp=Z,1µm,18.0s						
INK	Inuvik	98.29	19	LR	LR	09 40 54.4	
	comp=Z,668nm,18.1s,baz=258,slow=37						
PTH	Pithoragarh	98.76	298	*e*P	P	08 54 14.4	-7.7
NRDN	NARMADA NAGAR	99.15	291	*e*P	Pdif	08 54 21.4	-2.4
NRDN				IAmb	IAmb	08 54 27.8	
	comp=Z,32nm,1.5s						
RLMT	Red Lodge	99.16	45	IAMs_20	IAMs_20	09 39 19.4	
	comp=Z,1µm,20.0s						
SDCO	Great Sand Dun	99.34	53	IAMs_20	IAMs_20	09 37 18.9	
	comp=Z,963nm,18.0s						
BI02	San Fabin de	99.52	135	IAmb	IAmb	08 54 45.1	
	comp=Z,36nm,1.7s						
ISCO	Idaho Springs	99.93	51	IAMs_20	IAMs_20	09 38 27.1	
	comp=Z,1µm,18.0s						
T25A	Trinidad	99.97	54	IAMs_20	IAMs_20	09 40 17.5	
	comp=Z,920nm,19.0s						
K22A	Casper	100.20	48	IAMs_20	IAMs_20	09 40 47.2	
	comp=Z,1µm,18.0s						
MSTX	Muleshoe	100.24	58	IAMs_20	IAMs_20	09 36 34.8	
	comp=Z,1µm,18.0s						
BO01	Tunca	100.94	133	IAMs_20	IAMs_20	09 37 07.7	
	comp=Z,775nm,18.0s						
VA05	Santo Domingo	100.99	132	IAMs_20	IAMs_20	09 35 53.2	
	comp=Z,917nm,18.0s						
MT09	Talagante	101.35	133	IAMs_20	IAMs_20	09 38 11.8	
	comp=Z,754nm,18.0s						
AMTX	Amarillo	101.38	57	IAMs_20	IAMs_20	09 37 14.9	
	comp=Z,949nm,19.0s						
JCT	Junction City	101.57	62	IAMs_20	IAMs_20	09 35 48.3	
	comp=Z,954nm,19.0s						
C36M	Paulatuk	101.75	20	P	Pdif	08 54 32.7	-1.5
	baz=242						
SMLA	Simla	101.75	299	*e*P	Pdif	08 54 34.0	-1.1
SMLA				IAmb	IAmb	08 54 49.5	
	comp=Z,20nm,0.8s						
LMEL	Las Melosas	101.85	133	IAMs_20	IAMs_20	09 37 28.8	
	comp=Z,777nm,19.0s						
MT13	San Alfonso	101.85	133	IAMs_20	IAMs_20	09 37 37.0	
	comp=Z,751nm,18.0s						
KSCO	Kaye Shedlock'	101.88	53	IAMs_20	IAMs_20	09 39 43.1	
	comp=Z,883nm,18.0s						
ABTX	Abilene, Hawle	102.33	60	IAMs_20	IAMs_20	09 36 06.4	
	comp=Z,876nm,18.0s						
YKA	Yellowknife Ar	102.39	28	P	Pdif	08 54 36.3	-0.9
	comp=Z,3.0nm,0.7s,baz=260,slow=5.0,SNR=27						
YKA				pP	sPdif	08 54 49.1	+1.4
	comp=Z,3.5nm,0.7s,baz=261,slow=5.2,SNR=13						
YKA				PP	PP	08 58 38.0	-12
	comp=Z,0.7nm,0.9s,baz=258,slow=8.8,SNR=3.0						
YKA				PKKP	PKKPdf	09 10 46.2	-2.3
	comp=Z,0.3nm,0.8s,baz=69,slow=4.9,SNR=2.1						
MK31	Makanchi Array	102.56	315	*d i*P	Pdif	08 54 38.0	-0.4
MKAR	Makanchi Array	102.56	315	P	Pdif	08 54 38.8	+0.4
	comp=Z,6.3nm,0.8s,baz=101,slow=6.3,SNR=42						
MKAR				pP	sPdif	08 54 51.8	+2.7
	comp=Z,7.4nm,0.8s,baz=97,slow=6.5,SNR=13						
MKAR				PP	PP	08 58 44.1	-7.9
	comp=Z,1.7nm,0.9s,baz=116,slow=6.6,SNR=2.4						
MKAR				PKKPbc	PKKPbc	09 10 35.9	-4.0
	comp=Z,1.0nm,0.6s,baz=271,slow=3.5,SNR=6.3						
MKAR				PKKP	PKKPdf	09 10 48.7	+0.9
	comp=Z,2.9nm,0.8s,baz=276,slow=4.0,SNR=9.1						
A36M	Sachs Harbour	102.67	17	P	Pdif	08 54 37.0	-1.2
	baz=241						
CO02	Combarbal	102.80	131	IAMs_20	IAMs_20	09 39 47.2	
	comp=Z,1µm,18.0s						
OGNE	Ogallala	102.88	51	IAMs_20	IAMs_20	09 30 33.3	
	comp=Z,765nm,18.0s						
ZALV	Zalesovo Beam	103.13	323	Pdiff	Pdif	08 54 40.1	-0.6
	comp=Z,6.6nm,0.9s,baz=108,slow=4.8,SNR=28						
ZALV				pPdiff	sPdif	08 54 53.4	+1.9
	comp=Z,7.9nm,0.8s,baz=108,slow=5.0,SNR=16						
ZALV				PKiKP	PKiKP	08 58 58.6	-1.6
	comp=Z,2.2nm,0.9s,baz=151,slow=3.3,SNR=4.0						
ZALV				PKKPbc	PKKPbc	09 10 35.8	-2.6
	comp=Z,1.3nm,0.5s,baz=295,slow=3.2,SNR=5.2						
ZALV				PKKP	PKKPdf	09 10 49.0	+2.1
	comp=Z,1.9nm,0.6s,baz=293,slow=3.8,SNR=6.0						
CO03	El Pedregal	103.22	131	IAMs_20	IAMs_20	09 38 53.5	
	comp=Z,949nm,18.0s						
DGMT	Dagmar	103.52	43	IAMs_20	IAMs_20	09 42 27.5	
	comp=Z,1µm,18.0s						
WMOK	Wichita Mounta	103.62	58	IAMs_20	IAMs_20	09 38 58.4	
	comp=Z,920nm,18.0s						
CBKS	Cedar Bluff	103.99	54	IAMs_20	IAMs_20	09 42 30.9	
	comp=Z,881nm,18.0s						
Z35A	Perchaven, San	104.46	60	IAMs_20	IAMs_20	09 40 08.7	
	comp=Z,949nm,18.0s						
TRQA	Tornquist	104.48	141	IAMs_20	IAMs_20	09 39 55.4	
	comp=Z,778nm,18.0s						
AC05	El Transito	104.64	129	IAMs_20	IAMs_20	09 27 09.3	
	comp=Z,911nm,20.0s						
OK052	Battle Ridge R	105.51	57	IAMs_20	IAMs_20	09 40 12.4	
	comp=Z,1µm,18.0s						
BGNE	Belgrade	105.83	51	IAMs_20	IAMs_20	09 48 10.4	
	comp=Z,1µm,18.0s						
KURBB	Kurchatov Arra	105.97	319	Pdiff	Pdif	08 54 53.1	-0.3
	comp=Z,1.4nm,0.3s,baz=106,slow=3.8,SNR=10						
KURBB				PKiKP	PKiKP	08 59 04.6	-0.9
	comp=Z,2.3nm,0.8s,baz=108,slow=1.6,SNR=9.0						
KURBB				PKKPbc	PKKPbc	09 10 26.8	-2.8
	comp=Z,2.3nm,0.2s,baz=296,slow=3.5,SNR=11						
KURBB				PKKP	PKKPdf	09 10 39.9	-1.5
	comp=Z,1.5nm,0.2s,baz=291,slow=3.7,SNR=8.4						
SUSD	Miller	105.98	48	IAMs_20	IAMs_20	09 48 54.2	
	comp=Z,1µm,18.0s						
NATX	Nacogdoches	106.16	62	IAMs_20	IAMs_20	09 39 11.8	
	comp=Z,1µm,18.0s						
TUL3	Leonard	106.28	57	IAMs_20	IAMs_20	09 39 52.9	
	comp=Z,1µm,18.0s						
NRIK	Noril'sk	106.30	339	Pdiff	Pdif	08 54 54.6	+0.1
	comp=Z,5.4nm,0.9s,baz=108,slow=4.5,SNR=8.8						
NRIK				pPdiff	sPdif	08 55 07.5	+2.3
	comp=Z,5.1nm,0.9s,baz=103,slow=5.1,SNR=6.9						
KSU1	Kansas State U	106.42	54	IAMs_20	IAMs_20	09 44 15.3	
	comp=Z,1µm,18.0s						
AAK	Ala-Archa	106.85	310	PKiKP	PKiKP	08 59 07.7	0.0
	comp=Z,5.2nm,1.1s,baz=151,slow=5.5,SNR=4.2						
AAK	Ala-Archa	106.85	310	IAMs_20	IAMs_20	09 50 34.7	
	comp=Z,849nm,18.0s						
L34A	Svendsen Farm,	107.25	51	IAMs_20	IAMs_20	09 43 58.0	
	comp=Z,816nm,18.0s						
ECSD	EROS Data Cent	107.47	49	IAMs_20	IAMs_20	09 43 02.5	
	comp=Z,1µm,19.0s						
U38A	Gravette	107.52	57	IAMs_20	IAMs_20	09 40 59.4	
	comp=Z,1µm,19.0s						
P38A	Dawn	108.86	54	IAMs_20	IAMs_20	09 46 22.9	
	comp=Z,1µm,18.0s						
N38A	Joes South For	109.32	53	IAMs_20	IAMs_20	09 43 06.9	
	comp=Z,1µm,18.0s						
SCIA	State Center	109.55	52	IAMs_20	IAMs_20	09 44 41.9	
	comp=Z,1µm,18.0s						
R40A	Maddies Statio	109.56	56	IAMs_20	IAMs_20	09 47 38.5	
	comp=Z,972nm,18.0s						
P40A	Paris	109.97	54	IAMs_20	IAMs_20	09 43 16.2	
	comp=Z,1µm,19.0s						
CCM	Cathedral Cave	110.31	56	IAMs_20	IAMs_20	09 44 03.2	
	comp=Z,1µm,18.0s						
OXF	Oxford	111.07	60	IAMs_20	IAMs_20	09 41 40.8	
	comp=Z,884nm,19.0s						
BVAR	Borovoye Array	111.36	320	Pdiff	Pdif	08 55 17.7	+0.4
	comp=Z,7.3nm,1.1s,baz=101,slow=4.7,SNR=13						
BVAR				pPdiff	sPdif	08 55 32.0	+4.0
	comp=Z,4.5nm,0.9s,baz=108,slow=4.8,SNR=7.9						
BVAR				PKiKP	PKiKP	08 59 15.2	-0.4
	comp=Z,6.9nm,0.9s,baz=108,slow=3.3,SNR=14						
BVAR				pPKiKP	pPKiKP	08 59 28.4	+4.7
	comp=Z,9.1nm,0.7s,baz=86,slow=1.5,SNR=12						
BVAR				PKKPbc	PKKPbc	09 10 10.3	-2.2
	comp=Z,3.9nm,0.6s,baz=277,slow=3.0,SNR=14						
BVAR				PKKPab	PKKPab	09 10 23.1	+3.8
	comp=Z,3.9nm,0.6s,baz=272,slow=3.1,SNR=11						
BORK	Borovoye	111.41	320	*d i*PKIKP	PKiKP	08 59 14.9	-0.8
BORK				pmax	pmax		
	comp=Z,15nm,1.3s						
BORK				MLR	MLR		
	comp=Z,493nm,18.0s						
I40A	Norwalk	111.76	50	IAMs_20	IAMs_20	09 46 45.3	
	comp=Z,1µm,18.0s						
JFWS	Jewell Farm	111.88	51	IAMs_20	IAMs_20	09 45 26.6	
	comp=Z,1µm,19.0s						
Z47A	Carrollton	111.91	62	IAMs_20	IAMs_20	09 42 03.1	
	comp=Z,729nm,19.0s						
P43A	Skaggs, Pawnee	111.91	55	IAMs_20	IAMs_20	09 45 34.6	
	comp=Z,983nm,20.0s						
L42A	Oliver, Polo	112.17	52	IAMs_20	IAMs_20	09 46 05.3	
	comp=Z,1µm,19.0s						
Q44A	Meyer Farm, Va	112.18	55	IAMs_20	IAMs_20	09 44 12.7	
	comp=Z,912nm,19.0s						
G40A	Rib Lake	112.25	48	IAMs_20	IAMs_20	09 44 12.1	
	comp=Z,1µm,18.0s						
X48A	Hartselle	112.98	60	IAMs_20	IAMs_20	09 41 27.4	
	comp=Z,836nm,20.0s						
I42A	Draeger Farm,	112.98	50	IAMs_20	IAMs_20	09 44 19.6	
	comp=Z,1µm,19.0s						
LPAZ	La Paz	113.12	119	PKiKP	PKiKP	08 59 21.2	+0.4
	comp=Z,2.3nm,1.1s,baz=332,slow=3.9,SNR=4.0						
K43A	Burlington	113.25	51	IAMs_20	IAMs_20	09 46 28.8	
	comp=Z,1µm,19.0s						
T47A	Sharon Grove	113.36	58	IAMs_20	IAMs_20	09 46 02.2	
	comp=Z,808nm,20.0s						
V48A	Smith Brothers	113.38	59	IAMs_20	IAMs_20	09 42 07.9	
	comp=Z,837nm,19.0s						
H43A	Windswept, Lux	113.87	50	IAMs_20	IAMs_20	09 45 51.0	
	comp=Z,1µm,20.0s						
W50A	Signal Mountai	114.51	60	IAMs_20	IAMs_20	09 44 12.8	
	comp=Z,1µm,19.0s						
X51A	Calhoun	114.78	61	IAMs_20	IAMs_20	09 44 32.0	
	comp=Z,983nm,18.0s						
CPUP	Villa Florida	115.22	134	PKiKP	PKPdf	08 59 24.7	+0.8
	comp=Z,0.2nm,0.4s,baz=285,slow=3.7,SNR=3.9						
CPUP				PKKPbc	PKKPbc	09 09 58.6	-0.2
	comp=Z,1.8nm,1.1s,baz=283,slow=3.2,SNR=6.3						
W52A	Murphy	115.61	60	IAMs_20	IAMs_20	09 45 43.1	
	comp=Z,1µm,18.0s						
R50A	Paris	115.72	57	IAMs_20	IAMs_20	09 45 34.7	
	comp=Z,995nm,19.0s						
GOGA	Godfrey	115.74	62	IAMs_20	IAMs_20	09 44 21.6	
	comp=Z,870nm,19.0s						
N49A	Columbus Grove	116.13	54	IAMs_20	IAMs_20	09 50 12.2	
	comp=Z,1µm,19.0s						
S51A	Beattyville	116.22	57	IAMs_20	IAMs_20	09 47 01.0	
	comp=Z,1µm,19.0s						
Q51A	Peebles	116.57	56	IAMs_20	IAMs_20	09 46 22.1	
	comp=Z,866nm,19.0s						
V53A	Saluda	116.60	60	IAMs_20	IAMs_20	09 48 04.1	
	comp=Z,986nm,18.0s						
SOHO	SOHO	117.79	287	*i* PKPdf	PKPdf	08 59 27.7	-1.1
	SNR=16						
V55A	Taylorsville	117.91	60	IAMs_20	IAMs_20	09 50 10.8	
	comp=Z,1µm,20.0s						
MDH	Madha	118.23	288	PKPdf	PKPdf	08 59 28.6	-1.1
UOSS	Minazif	118.25	288		PKPdf	08 59 28.6	-1.1
HATD	Hatta, Dubai	118.29	288	*i* PKPdf	PKPdf	08 59 29.3	-0.5
	SNR=7.5						
ASHO	Ashiyiah	118.33	287	*i* PKPdf	PKPdf	08 59 29.2	-0.7
	SNR=8.8						
Y57A	Sumter	118.36	62	IAMs_20	IAMs_20	09 46 17.0	
	comp=Z,986nm,19.0s						
MSFE	Esma-Masafi	118.37	288	PKPdf	PKPdf	08 59 29.8	-0.1
ARTI	Arti	118.38	324	PKP	PKPdf	08 59 28.7	-0.2
	comp=Z,20nm,1.0s,baz=114,slow=1.2,SNR=10.0						
ARTI				pPKP	sPKPdf	08 59 41.7	+1.8
	comp=Z,27nm,0.8s,baz=114,slow=1.3,SNR=9.4						
ARTI				PKKPbc	PKKPab	09 09 44.7	-3.6
	comp=Z,3.6nm,0.8s,baz=297,slow=4.8,SNR=3.7						
ARTI	Arti	118.38	324	*i* PKIKP	PKPdf	08 59 28.6	-0.4
ARTI						09 00 46.4	
ARTI						09 06 40.6	
NAZ	Nazwa, Dubai	118.74	288	PKPdf	PKPdf	08 59 29.5	-1.1
W57A	Gilead	118.82	61		PKPdf	08 59 30.1	-0.4
W57A				IAMs_20	IAMs_20	09 45 18.0	
	comp=Z,1µm,20.0s						
AKTO	Aktyubinsk	118.94	317	PKP	PKPdf	08 59 30.2	-0.1
	comp=Z,15nm,0.9s,baz=87,slow=1.2,SNR=24						
AKTO				pPKP	sPKPdf	08 59 43.0	+1.8
	comp=Z,18nm,0.7s,baz=67,slow=1.8,SNR=13						
ASUD	Al Ashush, Dub	118.97	287	PKPdf	PKPdf	08 59 31.0	-0.1
BOSA	Boshof	119.41	217	PKP	PKPdf	08 59 31.1	-1.0
	comp=Z,3.4nm,0.6s,baz=101,slow=1.7,SNR=5.3						
BOSA				PKKPbc	PKKPbc	09 09 42.3	-2.0
	comp=Z,7.1nm,1.1s,baz=279,slow=1.5,SNR=4.5						
V58A	Windy Hill, Pi	119.60	60	IAMs_20	IAMs_20	09 48 57.6	
	comp=Z,1µm,18.0s						
PTLB	Pontes e Lacer	120.76	124		PKPdf	08 59 33.4	-1.4
SPITS	Spitsbergen Ar	121.20	354	PKP	PKPdf	08 59 32.7	-1.2
	comp=Z,2.1nm,0.5s,baz=108,slow=4.7,SNR=6.6						
SPITS				pPKP	sPKPdf	08 59 45.8	+1.2
	comp=Z,6.1nm,0.6s,baz=100,slow=9.4,SNR=3.3						
SDV	Santo Domingo	121.73	92		PKPdf	08 59 35.4	-1.5
MAKGR	Makgori	121.80	219		PKPdf	08 59 36.7	-0.1
LBTB	Lobatse	121.93	220	PKP	PKPdf	08 59 34.5	-2.5
	comp=Z,4.2nm,1.0s,baz=49,slow=2.4,SNR=4.1						
LBTB				pPKP	sPKPdf	08 59 49.4	+1.2
	comp=Z,2.8nm,0.6s,baz=146,slow=4.9,SNR=3.3						
KIRV	Kirov	122.80	327	*d i*PKIKP	PKPdf	08 59 36.7	-0.6
MATP	Matopo	123.39	226	PKP	PKiKP	08 59 56.1	+16
	comp=Z,15nm,1.1s,baz=144,slow=2.2,SNR=14						
BELG	Belogornoye	125.17	320	*d i*PKIKP	PKPdf	08 59 41.4	-0.7
APA	Apatity	125.64	341	*i* PKIKP	PKPdf	08 59 40.9	-1.7
ARCES	ARCESS Array B	126.54	345	PKP	PKPdf	08 59 43.4	-0.9
	comp=Z,7.9nm,0.9s,baz=38,slow=1.8,SNR=12						
AKT	Akhty	126.55	307	*i* PKIKP	PKPdf	08 59 43.9	-1.4
AKT				*e*		09 01 41.4	
AKT				*e*PS	PS	09 11 42.5	-3.3
AKT				pmax	pmax		
	comp=Z,106nm,1.1s						
SCHQ	Schefferville	126.57	36	PKP	PKPdf	08 59 43.3	-1.5
	comp=Z,5.7nm,0.9s,baz=208,slow=5.0,SNR=3.8						
MAK	Makhachkala	126.60	309	*e*P	Pdif	08 56 12.8	-13
MAK				*e*		09 06 43.1	
MAK				*e*SS	SS	09 18 39.4	-6.1
MAK				*e*SSS	SSS	09 23 26.1	
MAK				pmax	pmax		
	comp=Z,160nm,0.9s						
KLMR	Klimovskoe	126.76	332	*e*PKIKP	PKPdf	08 59 43.9	-1.0
KLMR				*e*		09 01 40.0	
KLMR				pmax	pmax		
	comp=Z,74nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,2µm,22.0s						
CRPR	Cabo Rojo, PR	127.54	83		PKPdf	08 59 46.2	-1.5
RAYN	Ar Rayn	127.62	284		PKPdf	08 59 48.1	+0.3
RAYN	Ar Rayn	127.62	284	IAMs_20	IAMs_20	09 58 46.4	
	comp=Z,868nm,18.0s						
RAYN	Ar Rayn	127.62	284	*i* PKiKP	PKPdf	08 59 48.1	+0.3
	SNR=13						
RAYN	Ar Rayn	127.62	284	⇑PKIKP	PKiKP	08 59 48.6	+0.3
WIN	Windhoek	128.65	214	IAMs_20	IAMs_20	09 54 26.5	
	comp=Z,980nm,20.0s						
BDFB	Brasilia	128.84	132	PKP	PKPdf	08 59 49.6	-0.8
	comp=Z,5.8nm,0.7s,baz=321,slow=3.1,SNR=7.3						
BDFB				pPKP	sPKPdf	09 00 02.1	+0.9
	comp=Z,11nm,0.9s,baz=278,slow=2.5,SNR=5.4						
GNI	Garni	128.90	305	PKiKP	PKiKP	08 59 51.0	+0.4
GNI	Garni	128.90	305	*c i*PKIKP	PKiKP	08 59 51.1	+0.5
GNI				pmax	pmax		

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      comp=Z,135nm,1.7s
GNI                                   MLR       MLR
      comp=Z,192nm,20.0s
VRH   Novokhopyorsk     129.01 320  ePKIKP    PKPdf     08 59 49.8 +0.3
VRH                                   pmax      pmax
      comp=Z,71nm,1.4s
GOF   Gofitskoye        129.53 312ceePKIKP    PKiKP     08 59 51.5 +0.1
MOS   Moscow            129.79 326  i PKIKP   PKPdf     08 59 50.5 -0.3
MOS                                 e                   09 00 03.9
MOS                                 e                   09 02 01.0
MOS                                   pmax      pmax
      comp=Z,69nm,1.2s
MOS                                   MLR       MLR
      comp=Z,700nm,21.0s
KBZ   Khabaz            129.85 310    PKP       PKPdf     08 59 51.8 +0.4
      comp=Z,14nm,1.0s,baz=81,slow=1.1,SNR=14
KBZ                                   pPKP      sPKPdf    09 00 04.5 +2.3
      comp=Z,12nm,0.7s,baz=99,slow=7.3,SNR=7.9
KBZ   Khabaz            129.85 310d iPKIKP    PKPdf     08 59 51.3  0.0
KIV   Kislovodsk        129.96 310              PKPdf     08 59 52.1 +0.4
KIV   Kislovodsk        129.96 310  i PKPdf   PKiKP     08 59 52.6 +0.1
      SNR=5.5
KIV   Kislovodsk        129.96 310  i PKIKP   PKPdf     08 59 51.8 +0.1
KIV                                   pmax      pmax
      comp=Z,47nm,1.1s
SHA1  Shidzhatmaz       130.02 310d iPKIKP    PKPdf     08 59 51.7 -0.3
LPSR  Galich'ya Gora    130.23 322  ePKIKP    PKPdf     08 59 51.9 +0.1
LPSR                                  pmax      pmax
      comp=Z,133nm,1.2s
VORR  Voronezh          130.38 321  ePKIKP    PKPdf     08 59 52.5 +0.4
VORR                                  pmax      pmax
      comp=Z,76nm,0.4s
VSR   Storozhevoye      130.54 320  ePKIKP    PKPdf     08 59 49.7 -2.7
VSR                                   pmax      pmax
      comp=Z,20nm,1.4s
VORD  Divnogorie        130.55 320  ePKIKP    PKPdf     08 59 50.3 -2.1
VORD                                  pmax      pmax
      comp=Z,20nm,1.2s
OBN   Obninsk           130.59 326⇑iPKIKP    PKPdf     08 59 52.3  0.0
OBN                                 i                   09 00 01.6
OBN                                   pmax      pmax
      comp=Z,50nm,1.4s
OBN                                   MLR       MLR
      comp=Z,703nm,20.0s
TSUM  Tsumeb            131.10 217    PKP       PKPdf     08 59 54.9 +0.2
      comp=Z,10nm,1.1s,baz=162,slow=3.1,SNR=8.6
TSUM                                  pPKP      sPKPdf    09 00 07.5 +1.6
      comp=Z,9.3nm,1.0s,baz=112,slow=1.9,SNR=6.8
ERBR  Yeremizino-Bor    131.17 313  i PKIKP   PKPdf     08 59 53.3 -0.5
ERBR                                  pmax      pmax
      comp=Z,87nm,1.3s
LABN  Labinsk           131.22 312  i PKIKP   PKPdf     08 59 54.1 +0.2
LABN                                  pmax      pmax
      comp=Z,39nm,0.8s
FINES FINESS Array B    131.92 337    PKhKP     PKPpre    08 59 46.6
      comp=Z,1.5nm,0.7s,baz=66,slow=4.6,SNR=4.5
FINES                                 PKP       PKPdf     08 59 54.6 -0.1
      comp=Z,5.1nm,0.8s,baz=101,slow=2.1,SNR=5.4
FINES                                 SKPab     SKiKP     09 03 25.1 -4.6
      comp=Z,5.3nm,0.9s,baz=96,slow=4.3,SNR=3.9
VSLR  Vesyoloye         131.94 310⇑iPKIKP    PKPdf     08 59 55.2 -0.1
SOC   Sochi             132.15 310  eP        Pdif      08 56 45.0 -5.0
SOC                                 e                   08 59 55.5
SOC                                 e                   09 02 15.7
SOC                                   pmax      pmax
      comp=Z,28nm,1.1s
ANN   Anapa             133.48 312  i PKIKP   PKPdf     08 59 58.1  0.0
ANN                                   pmax      pmax
      comp=Z,46nm,1.0s
MBAR  Mbarara           133.66 248    PKP       PKPdf     08 59 59.4 -0.3
      comp=Z,2.4nm,0.2s,baz=71,slow=4.9,SNR=5.8
MBAR  Mbarara           133.66 248              PKPdf     08 59 59.2 -0.5
ARPR  Arapgir-MALATY    133.94 305    IAMs_20   IAMs_20   10 08 06.8
      comp=Z,553nm,18.0s
MNK   Minsk             135.30 328  i PKIKP   PKPdf     09 00 01.5 +0.2
MNK                                 i                   09 02 37.9
MNK                                 i PPP     PPP       09 05 33.8
MNK                                 i SS      SS        09 20 35.0 +4.3
MNK                                 i SSS     SSS       09 25 36.0
MNK                                   pmax      pmax
      comp=N,25nm,1.0s
MNK                                   pmax      pmax
      comp=E,27nm,0.9s
MNK                                   pmax      pmax
      comp=Z,27nm,0.9s
MNK                                   pmax      pmax
      comp=Z,24nm,0.9s
MNK                                   MLR       MLR
      comp=N,501nm,18.0s
MNK                                   MLR       MLR
      comp=Z,876nm,18.0s
MNK                                   MLR       MLR
      comp=E,605nm,18.0s
SIM   Simferopol'       135.70 314  ePKIKP    PKPdf     09 00 00.5 -1.8
SIM                                   pmax      pmax
      comp=Z,93nm,1.3s
ASF   Jabal al Asfar    135.75 295    PKP       PKPdf     09 00 02.2 -0.8
      comp=Z,32nm,1.1s,baz=109,slow=1.6,SNR=12
AK03  Malin Array Si    136.51 323    PKP       PKPdf     09 00 03.5 -0.1
AKASG Malin Array Be    136.53 323    PKhKP     PKPpre    08 59 53.4
      comp=Z,1.7nm,0.6s,baz=72,slow=2.2,SNR=8.3
AKASG                                 PKP       PKPdf     09 00 03.2 -0.5
      comp=Z,20nm,1.0s,baz=60,slow=1.9,SNR=24
AKASG                                 pPKP      sPKPdf    09 00 16.5 +1.9
      comp=Z,16nm,0.7s,baz=63,slow=2.0,SNR=9.3
AKBB  Malin Array Si    136.53 323ceePKIKP    PKPdf     09 00 02.8 -0.9
AKBB  Malin Array Si    136.53 323    PKP       PKPdf     09 00 03.1 -0.6
KIEV  Kiev              136.54 323  ⇑P        PKPdf     09 00 04.3 +0.6
KIEV  Kiev              136.54 323  i PKPdf   PKPdf     09 00 02.9 -0.8
      SNR=7.7
KIEV  Kiev              136.54 323  ⇑PKIKP    PKPdf     09 00 04.3 +0.6
NB2   NORSAR Subarra136.91 344    PKPdf     PKPdf     08 59 58.3 -5.9
      comp=Z,1.6nm,0.9s,baz=39,slow=1.9
NOA   NORSAR Array B    136.91 344    PKhKP     PKPpre    08 59 56.0
      comp=Z,0.4nm,0.6s,baz=47,slow=5.0,SNR=1.7
NOA                                   PKP       PKPdf     09 00 05.2 +1.0
      comp=Z,3.7nm,0.9s,baz=30,slow=2.0,SNR=5.3
NOA                                   pPKP      sPKPdf    09 00 17.0 +2.1
      comp=Z,4.7nm,0.9s,baz=35,slow=1.9,SNR=6.0
GHAJ  Ghor Haditha      136.92 294    IAMs_20   IAMs_20   09 59 30.4
      comp=Z,553nm,21.0s
MMAI  Mount Meron Ar    136.96 296    PKP       PKiKP     09 00 06.3 -0.7
      comp=Z,61nm,1.1s,baz=116,slow=1.9,SNR=22
MMAI                                  pPKP      sPKPdf    09 00 19.6 +3.5
      comp=Z,26nm,0.9s,baz=76,slow=7.0,SNR=5.8
HFS   Hagfors           137.00 342    PKP       PKPdf     09 00 05.2 +1.0
      comp=Z,3.0nm,0.6s,baz=106,slow=5.4,SNR=5.6
KIRS  Kirsehir-Merke    137.31 305  ⇑P        PKPdf     09 00 05.7 +0.1
BR131 Keskin Array S    137.40 306deePKIKP    PKPdf     09 00 03.9 -2.0
BRTR  Keskin Array B    137.40 306    PKP       PKPdf     09 00 04.5 -1.3
      comp=Z,29nm,1.1s,baz=138,slow=2.7,SNR=30
BRTR                                  pPKP      sPKPdf    09 00 18.7 +1.9
      comp=Z,9.2nm,0.7s,baz=136,slow=3.7,SNR=7.3
BRTR                                  PP        PP        09 02 41.9  -10
      comp=Z,1.3nm,1.0s,baz=104,slow=10,SNR=2.3
BRTR  Keskin Array B    137.40 306              PKPdf     09 00 04.2 -1.6
EIL   Elat              137.49 291    PKP       PKPdf     09 00 06.8 +0.6
      comp=Z,126nm,1.3s,baz=109,slow=1.9,SNR=21
SUW   Suwalki           137.84 330  ePKP      PKPdf     09 00 06.1 +0.1
RNPP9 Sopachiv          137.99 326    PKP       PKPdf     09 00 05.8 -0.5
ANTO  Ankara            138.00 307              PKPdf     09 00 07.7 +0.8
ANTO  Ankara            138.00 307  ⇓P        PKiKP     09 00 09.6 +0.7
ANTO  Ankara            138.00 307  ⇓PKIKP    PKiKP     09 00 09.6 +0.7
RNPP8 Varash            138.05 325    PKP       PKPdf     09 00 06.1 -0.4
RNPP5 Staryi Chortor    138.09 325    PKP       PKPdf     09 00 06.1 -0.4
SORM  Soroca            138.21 320  ⇑P        PKPdf     09 00 06.6 -0.2
SORM  Soroca            138.21 320  ⇑PKIKP    PKPdf     09 00 06.6 -0.2
MILM  Milestii Mici     138.45 318  ⇑P        PKPdf     09 00 07.0 -0.3
MILM  Milestii Mici     138.45 318  ⇑PKIKP    PKPdf     09 00 07.0 -0.3
CSS   Mathiatis         138.48 299    PKP       PKPdf     09 00 07.1 -0.7
KMPD  K-Podol'skiy      139.12 322    PKP       PKPdf     09 00 08.0 -0.5
TLCR                    139.15 316  ⇓P        PKPdf     09 00 09.4 +0.7
TLCR                    139.15 316  ⇓PKIKP    PKPdf     09 00 09.4 +0.7
SAHE  Sakarya_HENDEK139.19 309  ⇓P        PKPdf     09 00 10.1 +1.2
SCTR  Scanteiesti       139.48 317  ⇓P        PKPdf     09 00 10.4 +1.1
TPGR  Topolog           139.53 316  ⇑P        PKPdf     09 00 09.0 -0.4
CFR   Carcaliu          139.59 316  ⇓P        PKPdf     09 00 09.5  0.0
CFR   Carcaliu          139.59 316  ⇓PKIKP    PKPdf     09 00 09.5  0.0
TESR  Tescani           139.97 319  ⇓P        PKPdf     09 00 09.5 -0.6
TESR  Tescani           139.97 319    PKP       PKPdf     09 00 09.9 -0.3
ISP   Isparta           140.20 304    IAMs_20   IAMs_20   10 11 34.7
      comp=Z,857nm,19.0s
VRI   Vrincioaia        140.20 318  ⇓P        PKPpre    09 00 04.8
VRI   Vrincioaia        140.20 318  ⇓PKHKP    PKPpre    09 00 04.8
PLOR  Plostina          140.26 318  ⇑P        PKiKP     09 00 12.6 -0.7
PLOR  Plostina          140.26 318  ⇑PKIKP    PKiKP     09 00 12.6 -0.7
BURAR Bucovina Array    140.31 321              PKPdf     09 00 11.7 +0.8
BURAR Bucovina Array    140.31 321  ⇓P        PKPpre    09 00 06.4
BURAR Bucovina Array    140.31 321  ⇓PKIKP    PKPdf     09 00 06.4 -4.5
BEL   Belsk             140.33 329  ePKP      PKPpre    09 00 05.3
TURR  Turia             140.56 318  ⇑P        PKPpre    09 00 06.3
KWP   Kalwaria Pacla    140.66 325  ePKP      PKPdf     09 00 11.8 +0.4
NEHR  Nehoiu            140.67 317  ⇑P        PKiKP     09 00 13.2 -0.9
OZUR                    140.69 318  ⇓P        PKPpre    09 00 05.0
PRD   Provadia          140.86 314  i P       PKPdf     09 00 13.2 +1.4
MLR   Muntele Rosu      140.86 318    PKhKP     PKPpre    09 00 06.5
      comp=Z,10nm,0.9s,baz=313,slow=9.6,SNR=5.9
MLR                                   PKP       PKPdf     09 00 12.8 +0.8
      comp=Z,15nm,0.8s,baz=47,slow=4.2,SNR=8.2
MLR   Muntele Rosu      140.86 318  ⇓P        PKPpre    09 00 06.9
MLR   Muntele Rosu      140.86 318  ⇓PKIKP    PKPdf     09 00 06.9 -5.1
STHS  Stebnicka Huta    141.57 326  ePKIKP    PKPdf     09 00 08.7 -4.3
STHS  Stebnicka Huta    141.57 326  ePKP      PKPdf     09 00 08.7 -4.3
CJR   Cluj-Napoca       141.72 321  ⇓P        PKiKP     09 00 16.3 +0.1
CJR   Cluj-Napoca       141.72 321  ⇓PKIKP    PKiKP     09 00 16.3 +0.1
ARR   Arges             141.74 318  ⇑P        PKPdf     09 00 09.9 -3.6
SZH   Strazhitsa        141.78 314  i P       PKPdf     09 00 10.9 -2.6
OJC   Ojcow             141.83 328  ePKP      PKPdf     09 00 08.5 -4.9
TNR   Turnu Rosu        141.83 319  ⇑P        PKPdf     09 00 08.5 -5.1
TNR   Turnu Rosu        141.83 319  ⇑PKHKP    PKPpre    09 00 08.5
MARR  Marisel-Cluj      142.02 321  ⇓P        PKPdf     09 00 09.8 -4.2
NIE   Niedzica          142.06 326  ePKP      PKPdf     09 00 10.5 -3.4
DRGR                    142.21 321  ⇑P        PKPdf     09 00 10.3 -4.0
DRGR                    142.21 321  ⇑PKIKP    PKPdf     09 00 10.3 -4.0
LOT   Lotru             142.24 319  ⇓P        PKPdf     09 00 10.1 -4.4
PLVB  Pleven            142.63 315  ⇓P        PKPdf     09 00 11.7 -3.3
LANS  Liptovska Anna    142.66 326  ePKIKP    PKPdf     09 00 13.7 -1.3
LANS  Liptovska Anna    142.66 326  ePKP      PKPdf     09 00 13.7 -1.3
GZR   Gura Zlata        142.88 319  ⇑P        PKPdf     09 00 12.2 -3.3
GZR   Gura Zlata        142.88 319  ⇑PKIKP    PKPdf     09 00 12.2 -3.3
STEB  Steborice         143.01 329  ePKP      PKPbc     09 00 12.2 -0.1
STEB                                ex        x         09 00 24.2
PLD   Plovdiv           143.06 313  i P       PKPbc     09 00 13.7 +1.0
SIRR  Siria             143.10 321  ⇓P        PKPbc     09 00 12.6 -0.1
KSP   Ksiaz             143.10 331  ePKP      PKPbc     09 00 12.8 +0.3
BSEG  Bad Segeberg      143.14 339  ePKPbc    PKPab     09 00 11.7 +0.6
      baz=40,slow=2.8
PSZ   Piszkesteto       143.17 324  ⇑P        PKPbc     09 00 13.4 +0.5
PSZ   Piszkesteto       143.17 324  ⇑PKIKP    PKPbc     09 00 13.4 +0.5
MPEP  Malo Peshtene     143.22 316  i P       PKPbc     09 00 14.2 +1.1
MORC  Moravsky Berou    143.23 328  ePKP      PKPbc     09 00 13.5 +0.5
PGB   Panagyurishte     143.30 314  i P       PKPbc     09 00 13.9 +0.5
OSTC  Ostas             143.33 330  ePKIKP    PKPbc     09 00 13.7 +0.5
OSTC                                e                   09 00 26.9
OSTC  Ostas             143.33 330  ePKP      PKPbc     09 00 13.7 +0.5
OSTC                                ex        x         09 00 26.9
KARP  Karpathos         143.34 302    IAMs_20   IAMs_20   10 16 02.0
      comp=Z,466nm,20.0s
HERR  Herculane         143.35 319  ⇑P        PKPbc     09 00 13.7 +0.3
MAUC  Maruska           143.35 328  ePKP      PKPdf     09 00 15.5 -0.7
CHVC  Chvalec           143.38 331  ePKIKP    PKPbc     09 00 13.7 +0.3
CHVC                                e                   09 00 26.5
CHVC  Chvalec           143.38 331  ePKP      PKPbc     09 00 13.7 +0.3
CHVC                                ex        x         09 00 26.5
KRLC  Kraliky           143.40 329    AMS       AMS       10 03 50.0
      comp=Z,1µm,17.9s
DPC   Dobruska-Polom    143.43 330  ePKIKP    PKPbc     09 00 13.9 +0.4
DPC                                 e                   09 00 26.9
DPC                                   MLR       MLR
      comp=Z,900nm,16.8s
DPC   Dobruska-Polom    143.43 330  ePKP      PKPbc     09 00 13.9 +0.4
DPC                                 ex        x         09 00 26.9
DPC                                   AMS       AMS       10 05 00.0
      comp=Z,900nm,16.8s
UPC   Upice             143.46 330  ePKIKP    PKPbc     09 00 13.8 +0.2
UPC                                 e                   09 00 26.6
UPC   Upice             143.46 330  ePKP      PKPbc     09 00 13.8 +0.2
UPC                                 ex        x         09 00 26.6
BZS   Buzias            143.47 320  ⇑P        PKPbc     09 00 13.9 +0.2
BZS   Buzias            143.47 320  ⇑PKIKP    PKPbc     09 00 13.9 +0.2
GORT1 Trebel            143.55 337  ePKPbc    PKPbc     09 00 13.4 -0.2
      baz=40,slow=2.8
BLSH  Balsha            143.75 315  i P       PKPdf     09 00 16.2 -0.9
JAVC  Velka Javorina    143.76 327  ePKP      PKPdf     09 00 16.4 -0.5
PLNA  Plana             143.81 314  i P       PKPdf     09 00 16.8 -0.5
MDVR  Moldovita         143.84 319  ⇑P        PKPab     09 00 14.6 +0.4
BANR  Banloc            143.88 320  ⇑P        PKPbc     09 00 16.1 +1.2
VTS   Vitosha           143.88 315  i P       PKPbc     09 00 16.5 +1.3
MMB   Musomishta        143.98 313  i P       PKPbc     09 00 15.5 +0.1
VRAC  Vranov            144.00 329    PKP       PKPbc     09 00 15.8 +0.6
      comp=Z,43nm,1.0s,baz=62,slow=3.4,SNR=19
VRAC                                  pPKP      sPKPdf    09 00 28.2  0.0
      comp=Z,34nm,0.9s,baz=107,slow=3.8,SNR=8.1
VRAC  Vranov            144.00 329  ⇓P        PKPbc     09 00 16.3 +1.1
VRAC  Vranov            144.00 329  ePKP      PKPbc     09 00 15.5 +0.3
VRAC                                e                   09 00 28.8
VRAC  Vranov            144.00 329  ⇓PKIKP    PKPbc     09 00 16.3 +1.1
SRO   Srobarova         144.09 325  ePKIKP    PKPdf     09 00 17.0 -0.4
SRO   Srobarova         144.09 325  ePKP      PKPdf     09 00 17.0 -0.4
PVCC  Panska Ves        144.10 332  ePKIKP    PKPbc     09 00 15.7 +0.3
PVCC  Panska Ves        144.10 332  ePKP      PKPbc     09 00 15.7 +0.3
FLTG  Flechtingen       144.10 336  ePKPbc    PKPab     09 00 14.7 -0.1
      baz=40,slow=2.8
FLTG                                epPKPbc   sPKPdf    09 00 28.9 +0.9
RCBR  Riachuelo         144.10 135              PKPab     09 00 15.5 -0.6
RCBR  Riachuelo         144.10 135    IAMs_20   IAMs_20   09 45 14.0
      comp=Z,720nm,20.0s
RCBR  Riachuelo         144.10 135    PKIKP     PKPab     09 00 15.5 -0.6
BRG   Berggiesshubel    144.12 333  ePKPbc    PKPbc     09 00 15.6 +0.1
      baz=40,slow=2.8
BRG                                 epPKPbc   sPKPdf    09 00 29.0 +0.6
CLL   Collm             144.20 334  i PKIKP   PKPbc     09 00 15.7  0.0
CLL                                 i                   09 00 28.7
CLL                                   pmax      pmax
      comp=Z,127nm,1.1s
CLL   Collm             144.20 334  ePKPbc    PKPab     09 00 15.7 +0.4
      baz=40,slow=2.8
CLL                                 epPKPbc   sPKPdf    09 00 28.9 +0.4
CLL   Collm             144.20 334  i PKPdf   PKPbc     09 00 15.7  0.0
      comp=Z,127nm,1.1s
CLL                                 i PKiKP   PKiKP     09 00 19.7 -1.4
CLL                                 i PKPmax            09 00 28.7
      comp=Z,84nm,0.8s
CLL                                 ePKPlp              09 00 40.0
      comp=Z,500nm,18.4s
CLL                                   AMS       AMS       10 07 00.0
      comp=N,400nm,19.2s
CLL                                   AMS       AMS       10 07 00.0
      comp=E,300nm,20.1s
CLL                                   AMS       AMS       10 07 00.0
      comp=Z,400nm,20.2s
KRUC  Moravsky          144.26 328  ePKP      PKPbc     09 00 16.1 +0.1
KRUC                                e                   09 00 29.4
MODS  Modra-Piesok      144.27 327  ePKIKP    PKPdf     09 00 17.3 -0.5
MODS  Modra-Piesok      144.27 327  ePKP      PKPdf     09 00 17.3 -0.5
KKB   Krupnik           144.28 314  i P       PKPbc     09 00 16.8 +0.5
RETH  Rethem/Aller,     144.45 338  ePKPbc    PKPab     09 00 16.3 +0.2
      baz=40,slow=2.8
ASSE  Asse, Remlinge    144.47 337  ePKPbc    PKPab     09 00 15.7 -0.5
      baz=40,slow=2.8
ASSE                                epPKPbc   sPKPdf    09 00 31.2 +2.6
PRU   Pruhonice         144.50 331  ePKIKP    PKPbc     09 00 17.0 +0.3
PRU                                 e                   09 00 29.8
PRU   Pruhonice         144.50 331  ePKP      PKPbc     09 00 17.0 +0.3
PRU                                 ex        x         09 00 29.8
HSKC  Hora Svate Kat    144.54 333  ePKP      PKPbc     09 00 17.1 +0.2
HSKC                                ex        x         09 00 30.3
TREC  Trest             144.54 329  ePKIKP    PKPbc     09 00 17.5 +0.6
TREC  Trest             144.54 329  ePKP      PKPbc     09 00 17.5 +0.6
NEUB  Neuenburg         144.77 335  ePKPbc    PKPab     09 00 17.4  0.0
      baz=40,slow=2.8
CLZ   Clausthal         144.81 337  ePKPbc    PKPbc     09 00 18.1 +0.4
      baz=40,slow=2.8
CLZ                                 epPKPbc   sPKPdf    09 00 31.2 +1.8
MORH  Mrgy, Hungar      144.87 323  ⇑P        PKPbc     09 00 18.6 +0.6
VAY   Valandovo         144.88 313  i P       PKPab     09 00 18.0 -0.2
ZVC   Zvikov            145.05 331  ePKP      PKPdf     09 00 19.1  0.0
ZVC                                 ex        x         09 00 32.1
EKA   Eskdalemuir Ar    145.09 352    PKPbc     PKPbc     09 00 17.8 -0.6
      comp=Z,27nm,0.7s,baz=350,slow=2.5,SNR=25
EKA                                   pPKPbc    sPKPdf    09 00 30.5 +0.9
      comp=Z,42nm,0.7s,baz=0.6,slow=2.0,SNR=12
TANN  Tannenbergstha    145.09 333  ePKPbc    PKPdf     09 00 19.2  0.0
      baz=40,slow=2.8
TANN                                epPKPbc   sPKPdf    09 00 32.4 +2.2
ESK   Eskdalemuir       145.11 352              PKPbc     09 00 18.1 -0.4
ESK   Eskdalemuir       145.11 352  eP        PKPbc     09 00 17.7 -0.8
ESK   Eskdalemuir       145.11 352    PKIKP     PKPbc     09 00 18.1 -0.4
PLN   Plauen            145.17 334  ePKPbc    PKPab     09 00 19.3 +0.3
      baz=40,slow=2.8
PLN                                 epPKPbc   sPKPdf    09 00 32.6 +2.4
GTTG  Gottingen         145.20 337  ePKPbc    PKPdf     09 00 19.4 +0.1
      baz=40,slow=2.8
GTTG                                epPKPbc   sPKPdf    09 00 33.3 +3.3
IDI   Anoyia            145.21 302    PKPbc     PKPbc     09 00 19.5 -0.1
      comp=Z,261nm,1.2s,baz=106,slow=4.1,SNR=23
IDI                                   pPKPbc    sPKPdf    09 00 32.0 +1.2
      comp=Z,89nm,0.8s,baz=144,slow=6.1,SNR=6.0
RONA  Rosalia, Austr    145.21 327  i PKP     PKPdf     09 00 20.0 +0.6
      comp=Z,399nm,1.0s,SNR=102
MOX   Moxa              145.27 334  ePKPbc    PKPab     09 00 19.5 +0.2
      baz=40,slow=2.8
MOX                                 epPKPbc   sPKPdf    09 00 32.9 +2.5
MOX                                 eL        L         10 05 38.1
      comp=Z,469nm,21.7s
CONA  Conrad Observa    145.28 327  i PKP     PKPdf     09 00 20.2 +0.6
      comp=Z,426nm,1.4s,SNR=110
SKO   Skopje            145.36 315  i P       PKPab     09 00 20.4 +0.5
EDMD  Edmundbyers       145.41 350  eP        PKPbc     09 00 18.4 -1.0
CKRC  Cesky Krumlov     145.43 330  ePKIKP    PKPab     09 00 20.4 +0.4
CKRC                                e                   09 00 33.4
CKRC  Cesky Krumlov     145.43 330  ePKP      PKPab     09 00 20.4 +0.4
CKRC                                ex        x         09 00 33.4
NEWG  New Galloway      145.44 353  eP        PKPbc     09 00 18.8 -0.7
KHC   Kasperske Hory    145.55 331  ePKIKP    PKPab     09 00 20.7 +0.3
KHC                                 e                   09 00 33.7
KHC   Kasperske Hory    145.55 331  ePKP      PKPab     09 00 20.7 +0.3
KHC                                 ex        x         09 00 33.7
MANZ  Manzenberg        145.57 333  ePKPbc    PKPdf     09 00 20.0  0.0
      baz=40,slow=2.8
MANZ                                epPKPbc   sPKPab    09 00 33.7 +2.5
CLGH  Cloghs, Cushen    145.66 355  eP        PKPdf     09 00 19.6 -0.3
ROTZ  Rotzenmuhle       145.69 333  ePKPbc    PKPdf     09 00 20.5 +0.3
      baz=40,slow=2.8
ROTZ                                epPKPbc   sPKPab    09 00 33.9 +2.1
GEC2  GERESS Array S    145.70 330  ePKPbc    PKPdf     09 00 20.5 +0.1
      baz=40,slow=2.8
GEC2                                epPKPbc   sPKPab    09 00 33.8 +1.9
GERES GERESS Array B    145.70 330    PKPbc     PKPab     09 00 21.4 +0.3
      comp=Z,117nm,0.9s,baz=35,slow=3.3,SNR=329
GERES                                 pPKPbc    sPKPab    09 00 34.1 +2.3
      comp=Z,71nm,0.7s,baz=28,slow=3.9,SNR=15
GAL1  Galloway          145.74 353  eP        PKPdf     09 00 19.3 -0.7
UBBA  Unterbreizbach    145.77 336  ePKPbc    PKPdf     09 00 20.2 +0.1
      baz=40,slow=2.8
UBBA                                epPKPbc   sPKPab    09 00 34.9 +3.0
IDGL  Inch Island, C    145.78 356    PKPdf     PKPab     09 00 21.0  0.0
KESW  Keswick, Cumbr    145.81 351  eP        PKPdf     09 00 20.3 +0.1
WET   Wettzell          145.86 331  ePKPbc    PKPdf     09 00 20.6 +0.1
      baz=40,slow=2.8
WET                                 epPKPbc   sPKPab    09 00 35.1 +2.7
ARSA  Arzberg           145.90 327  i PKP     PKPbc     09 00 21.6 +0.3
      comp=Z,153nm,1.4s,SNR=28
KOGS  Kog               146.04 325  ePKPbc    PKPbc     09 00 21.9 +0.2
KOGS                                e                   09 00 34.7
MOA   Molln             146.13 329  i PKP     PKPbc     09 00 22.4 +0.5
      comp=Z,258nm,1.4s,SNR=51
GRF   Grafenberg Arr    146.16 333  ePKPbc    PKPbc     09 00 22.1 +0.1
      baz=40,slow=2.8
GRF                                 epPKPbc   sPKPab    09 00 36.4 +2.9
GRF                                 eL        L         10 02 40.8
      comp=Z,415nm,21.2s
HPK   Haverah Park      146.19 350  eP        PKPdf     09 00 21.3 +0.4
BUG   Bochum--Univer    146.24 339  ePKPbc    PKPbc     09 00 22.2  0.0
      baz=40,slow=2.8
BUG                                 epPKPbc   sPKPab    09 00 36.1 +2.4
IOMK  Kirk Michael      146.32 353  eP        PKPdf     09 00 21.6 +0.6
SOKA  Soboth            146.53 326  i PKP     PKPbc     09 00 23.3  0.0
      comp=Z,156nm,1.2s,SNR=26
BIOA  Bad Ischl, Aus    146.54 329  i PKP     PKPbc     09 00 23.2  0.0
      comp=Z,76nm,1.3s,SNR=13
BLY   Banja Luka        146.56 322  ⇑P        PKPdf     09 00 22.7 +0.9
ILTH  Belurgan, Co L    146.73 355    PKPdf     PKPdf     09 00 22.4 +0.7
LBWR  Ladybower, Pea    146.74 350  eP        PKPdf     09 00 21.8 -0.1
TNS   Taunus Mts        146.84 337  ePKPbc    PKPbc     09 00 23.5 -0.5
      baz=40,slow=2.8
TNS                                 epPKPbc   sPKPab    09 00 37.7 +1.6
OBKA  Obir              146.89 327  i PKP     PKPbc     09 00 24.0 -0.4
      comp=Z,99nm,1.2s,SNR=9.6
KBA   Koelnbreinsper    147.11 328  i PKP     PKPbc     09 00 24.5 -0.6
      comp=Z,128nm,1.2s,SNR=14
LESA  Schwarzleotal     147.19 329  i PKP     PKPbc     09 00 25.0 -0.2
      comp=Z,110nm,0.9s,SNR=30
LJU   Ljubljana         147.21 326  i PKPbc   PKPbc     09 00 25.4 +0.2
WLF1  Llynfaes          147.25 352  eP        PKPdf     09 00 23.5 +0.8
MYKA  Terra Mystica     147.28 327  i PKP     PKPbc     09 00 24.7 -0.7
      comp=Z,61nm,1.0s,SNR=13
FUR   Furstenfeldbru    147.30 332  ePKPbc    PKPbc     09 00 25.1 -0.3
      baz=40,slow=2.8
FUR                                 epPKPbc   sPKPab    09 00 39.9 +1.9
CWF   Charnwood Fore    147.31 349  eP        PKPbc     09 00 24.6 -0.5
BEBN  Eben Emael        147.32 340  dPKP      PKPbc     09 00 25.0 -0.2
BTNL  Ternell           147.35 339  dPKP      PKPbc     09 00 25.6 +0.2
MEM   Membach           147.37 339  dPKP      PKPbc     09 00 25.1 -0.3
GBRS  Gornja Briga      147.40 325  i PKPbc   PKPbc     09 00 26.1 +0.4
FOEL  Foel Wylfa        147.47 351  eP        PKPbc     09 00 25.3 -0.4
IGLA  Glengowla, Co     147.52 358    PKPdf     PKPbc     09 00 24.8 -0.9
BSTI  Sart Tilman       147.54 340  dPKP      PKPbc     09 00 25.8  0.0
BHOU  Houvegnez         147.59 339  dPKPdf    PKPdf     09 00 24.9 +1.5
STU   Stuttgart         147.72 334  ePKPbc    PKPdf     09 00 24.5 +0.8
      baz=40,slow=2.8
STU                                 epPKPbc   sPKPab    09 00 40.4 +0.8
UCC   Uccle             147.73 341  dPKP      PKPbc     09 00 26.2 -0.2
ABTA  Abfaltersbach     147.75 329  i PKP     PKPbc     09 00 26.0 -0.7
      comp=Z,184nm,1.4s,SNR=19
BCLA  Clavier           147.76 340  dPKP      PKPbc     09 00 26.2 -0.3
WATA  Walderalm         147.77 330  i PKP     PKPbc     09 00 26.5 -0.4
      comp=Z,114nm,1.1s,SNR=16
WTTA  Wattenberg        147.80 330  i PKP     PKPbc     09 00 26.9 -0.1
      comp=Z,184nm,1.2s,SNR=20
BGES  Gesves            147.86 340  dPKP      PKPbc     09 00 26.2 -0.6
MOTA  Moosalm           147.99 331  i PKP     PKPbc     09 00 27.2 -0.2
      comp=Z,143nm,1.0s,SNR=24
RCHB  Rochefort         148.02 340  dPKP      PKPbc     09 00 27.4 +0.2
SQTA  Sankt Quirin      148.03 330  i PKP     PKPbc     09 00 27.5  0.0
      comp=Z,182nm,1.4s,SNR=24
RETA  Reutte            148.03 331  i PKP     PKPbc     09 00 27.3 -0.1
      comp=Z,60nm,1.2s,SNR=11
BMRD  Maredsous         148.04 340  dPKP      PKPbc     09 00 27.2  0.0
WLF   Walferdange       148.13 338  ePKPbc    PKPbc     09 00 27.4 -0.1
      baz=40,slow=2.8
WLF   Walferdange       148.13 338  dPKP      PKPbc     09 00 28.1 +0.6
UBR   Ueberruh          148.18 332  ePKPbc    PKPbc     09 00 26.6 -1.2
      baz=40,slow=2.8
UBR                                 epPKPbc   sPKPab    09 00 41.4 -0.1
DOU   Dourbes           148.27 340  dPKP      PKPbc     09 00 27.7 -0.2
MCH1  Michaelchurch     148.31 350  eP        PKPbc     09 00 26.4 -1.4
FETA  Feichten          148.40 331  i pPKP    PKPbc     09 00 28.8 +0.2
      comp=Z,114nm,1.0s,SNR=20
BFO   Black Forest      148.42 335              PKPbc     09 00 27.9 -0.5
BFO   Black Forest      148.42 335    PKP2      PKPbc     09 00 27.9 -0.5
BFO   Black Forest      148.42 335  ePKPbc    PKPbc     09 00 27.0 -1.4
      baz=40,slow=2.8
BFO                                 epPKPbc   sPKPab    09 00 42.1 -0.3
DAVA  Damuels           148.58 332  i PKP     PKPbc     09 00 29.1 +0.1
      comp=Z,70nm,1.0s,SNR=12
DAVOX Davos/Dischmat    148.96 331    PKPbc     PKPbc     09 00 30.2 +0.2
      comp=Z,45nm,1.0s,baz=181,slow=6.8,SNR=4.7
MATE  Matera            149.12 316  ⇑P        PKPbc     09 00 29.5 -0.8
TIP   Timpagrande       149.82 313  ⇓P        PKPbc     09 00 32.4 +0.2
CEL   Celeste           150.85 312              PKPbc     09 00 33.5 -1.2
VAE   Valguarnera       152.26 312    PKPbc     PKiKP     09 00 40.5 +2.3
      comp=Z,8.7nm,0.3s,baz=14,slow=5.3,SNR=3.7
KEST  Kesra             156.64 314    PKP       PKPdf     09 00 36.2 -1.2
      comp=Z,5.7nm,0.9s,baz=329,slow=5.9,SNR=3.6
KEST                                  PKPab     PKPab     09 01 07.0 +0.4
      comp=Z,24nm,0.9s,baz=350,slow=6.1,SNR=5.2
PBRG  Braganca          158.82 350  ePKPab    PKPab     09 01 15.6  0.0
POLO  Lamas de Olo      159.39 352  ePKPab    PKPab     09 01 17.5 -0.6
PVRL  Vila Real         159.47 352  ePKPab    PKPab     09 01 18.7 +0.2
PVIS  Viseu             160.05 352  ePKPab    PKPab     09 01 21.2 +0.2
ESDC  Sonseca Array     160.27 343    PKP       PKPdf     09 00 41.4 -0.2
      comp=Z,0.4nm,0.5s,baz=336,slow=2.8,SNR=1.7
ESDC                                  PKPab     PKPab     09 01 22.1 +0.1
      comp=Z,7.1nm,1.1s,baz=10,slow=3.7,SNR=10
ESDC                                  PP        PP        09 04 57.0 -6.3
      comp=Z,1.3nm,0.9s,baz=34,slow=6.1,SNR=3.2
MTE   Manteigas         160.31 351  ePKPab    PKPab     09 01 22.5 +0.3
PCAS  Casmilo, Conde    160.77 353  ePKPab    PKPab     09 01 24.2 +0.1
PSARD Sardoal           161.18 352  ePKPab    PKPab     09 01 26.0 +0.1
PMRV  Marv??o           161.24 350  ePKPdf    PKPdf     09 00 42.4 -0.3
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PMTG	**Montargil**	161.71	352	*e*PKPab	PKPab	09 01 28.7	+0.5
PARRA	**Arraiolos**	161.94	352	*e*PKPab	PKPab	09 01 29.2	0.0
EVO	**Evora**	162.21	351	*e*PKPab	PKPab	09 01 30.8	+0.4
MOE	**Montemor**	162.27	352	*e*PKPab	PKPab	09 01 30.7	+0.1
PBEJ	**Beja**	162.69	351	*e*PKPab	PKPab	09 01 32.9	+0.3
MESJ	**Messejana**	162.92	352	*e*PKPdf	PKPdf	09 00 44.4	0.0
MESJ				*e*PKPab	PKPab	09 01 33.9	+0.3
MESJ				IAMs_20	IAMs_20	10 23 10.1	
	comp=Z,975nm,17.4s						
MESJ	**Messejana**	162.92	352	*e*PKPab	PKPab	09 01 34.1	+0.5
MESJ	**Messejana**	162.92	352	*e*PKIKP	PKPdf	09 00 44.3	0.0
MESJ				*e*		09 01 33.9	
PCVE	**Castro Verde**	163.10	351	*e*PKPab	PKPab	09 01 34.9	+0.6
PVAQ	**Vaqueiros**	163.28	350	*e*PKPab	PKPab	09 01 35.8	+0.8
PBDV	**Barranco-do-Ve**	163.47	350	*e*PKPdf	PKPdf	09 00 45.6	+0.7
MORF	**Marmelete**	163.51	352	*e*PKPdf	PKPdf	09 00 45.0	0.0
MORF				*e*PKPab	PKPab	09 01 36.4	+0.3
MORF	**Marmelete**	163.51	352	*e*PKIKP	PKPdf	09 00 45.0	0.0
MORF				*e*		09 01 36.4	
DBIC	**Dimbokro**	164.51	205	PKP	PKPdf	09 00 46.4	-0.1
	comp=Z,25nm,1.1s,baz=198,slow=2.5,SNR=8.8						
DBIC				pPKP	sPKPdf	09 00 58.9	+1.6
	comp=Z,12nm,0.9s,baz=257,slow=2.3,SNR=4.7						
DBIC				PKPab	PKPab	09 01 41.3	+0.2
	comp=Z,16nm,1.0s,baz=186,slow=4.7,SNR=5.4						
DBIC	**Dimbokro**	164.51	205		PKPdf	09 00 46.0	-0.5
TORD	**Torodi Ar. Bea**	165.36	240	PKP	PKPdf	09 00 45.7	-1.5
	comp=Z,25nm,1.1s,baz=39,slow=2.9,SNR=22						
TORD				pPKP	sPKPdf	09 00 59.3	+0.9
	comp=Z,9.5nm,0.7s,baz=25,slow=2.4,SNR=5.7						
TORD				PKPab	PKPab	09 01 45.4	+0.3
	comp=Z,4.6nm,0.7s,baz=85,slow=6.3,SNR=3.7						
TORD	**Torodi Ar. Bea**	165.36	240		PKPdf	09 00 46.5	-0.7
MDT	**Midelt**	166.73	335	PKP	PKPdf	09 00 47.5	-0.5
	comp=Z,0.8nm,0.3s,baz=324,slow=4.8,SNR=2.1						
MDT				PKPab	PKPab	09 01 51.2	+0.6
	comp=Z,5.7nm,1.0s,baz=52,slow=7.4,SNR=5.0						
MD01	**Midelt array s**	166.74	335		PKPdf	09 00 48.0	0.0

DNK ***10*** *08:42:45.8±4.1, 81°.36N×3°.89W, h15^{km}, ML1.8, Presumed earthquake*

BER ***10*** *08:42:49.1±4.0, 81°.39N×4°.08W, h23^{km}±43^{km}, Mw3.0, ML1.8(DNK), Confirmed Earthquake*

KOLA ***10*** *08:42:50.3, 81°.53N×1°.67W, h0^{km}, ML2.1, Error ellipse: s-maj=104.9km s-min=25.2km az=40.0, Arctic Ocean,Knipovich ridge, north*

FCIAR ***10*** *08:42:50.0, 81°.30N×2°.75W, h10^{km}, station ZFI2 has station magnitude of 3.60 station OMEGA has station magnitude of 3.60*

ISC 10 08:42:43.9±1.1**, 81°.26N**±0°.07×**4°.14W**±0°.04**, h10**^{km}**, n23, σ2^{s}.61**/39**, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOR	**Nord**	1.91	287	*e*P	Pn	08 43 18.7	+2.2
NOR				*i* S	Sn	08 43 40.9	+0.4
NOR	**Nord**	1.91	287	*i* P	Pn	08 43 18.8	+2.4
NOR				*i* S	Sn	08 43 40.9	+0.4
NOR				IAML		08 43 45.2	
	comp=Z,9.5nm,0.2s						
KBS	**Kingsbay**	3.62	122	P	Pn	08 43 41.8	+1.9
KBS				S	Sn	08 44 19.2	-3.3
KBS	**Kingsbay**	3.62	122	*e*	Pn	08 43 41.8	+1.9
KBS				*e*P	Pb	08 43 42.5	-5.3
KBS				*e*S	Sn	08 44 19.8	-2.8
KBS				IAML		08 44 22.4	
	comp=Z,5.9nm,0.4s						
KBS	**Kingsbay**	3.62	122	*i* P	Pn	08 43 41.8	+1.9
KBS				*i* S	Sn	08 44 19.8	-2.8
BRBB	**Barentsburg B**	4.55	125	P	Pn	08 43 56.1	+3.4
BRBB				S	Sn	08 44 47.5	+1.9
BRBB	**Barentsburg B**	4.55	125	*e*P	Pn	08 43 56.5	+3.8
SPA0	**Spitsbergen Ar**	4.77	120	*e*P	Pn	08 43 58.2	+2.5
SPA0				*e*S	Sn	08 44 48.4	-2.5
SPA0	**Spitsbergen Ar**	4.77	120	*e*P	Pn	08 43 59.3	+3.6
SPA0				*e*S	Sn	08 44 48.6	-2.3
SPA0				IAML		08 44 53.0	
	comp=Z,2.2nm,0.7s						
SPITS	**Spitsbergen Ar**	4.77	120	P	Pn	08 43 58.6	+2.9
SPITS				S	Sn	08 44 49.2	-1.7
DAG	**Danmarks Havn**	5.27	219	*e*P	Pn	08 44 05.7	+3.2
DAG				*e*S	Sn	08 45 01.9	-1.3
DAG	**Danmarks Havn**	5.27	219	*i* P	Pn	08 44 05.8	+3.2
DAG				*i* S	Sn	08 45 02.2	-1.0
DAG				IAML		08 45 09.5	
	comp=Z,2.6nm,0.3s						
HSPB	**Hornsund (broa**	5.62	129	P	Pn	08 44 10.2	+2.9
HSPB	**Hornsund (broa**	5.62	129	*e*P	Pn	08 44 10.1	+2.7
HSPB				*e*S	Sn	08 45 09.1	-2.8
HSPB	**Hornsund (broa**	5.62	129	*e*P	Pn	08 44 10.4	+3.0
HSPB				*e*S	Sn	08 45 13.0	+1.2
HSPB				IAML		08 45 14.3	
	comp=Z,1.2nm,0.3s						
HOPEN	**Hopen**	7.26	115	*e*P	Pn	08 44 32.3	+2.4
HOPEN				*e*S	Sn	08 45 48.4	-3.8
DBG	**Daneborg**	7.72	214	*e*P	Pn	08 44 38.9	+2.7
DBG				*e*S	Sn	08 45 60.0	-3.5
DBG	**Daneborg**	7.72	214	*i* P	Pn	08 44 38.0	+1.8
DBG				*i* S	Sn	08 45 58.7	-4.8
DBG				IAML		08 46 16.9	
	comp=Z,1.9nm,0.6s						
ZFI2	**Zemlya Franca-**	7.87	67	*e*P	Pn	08 44 38.5	+0.3
ZFI2				*e*S	Sn	08 45 58.2	-8.8
	comp=Z,17nm,3.7s						
OMEGA	**Omega**	7.89	67	*e*P	Pn	08 44 38.8	+0.3
OMEGA				S	Sn	08 45 58.0	-10
	comp=Z,18nm,3.4s						
NEEM	**North Greenlan**	9.20	271	*i* P	Pn	08 44 57.0	+0.3
NEEM				*i* S	Sn	08 46 27.7	-12
NEEM	**North Greenlan**	9.20	271	*i* P	Pn	08 44 57.0	+0.3
NEEM				*i* S	Sn	08 46 27.7	-12
NEEM				IAML		08 46 36.8	
	comp=Z,2.3nm,0.5s						
SUMG	**Summit**	11.37	240	*i* P	Pn	08 45 27.3	+0.9
SUMG				*i* S	Sn	08 47 25.1	-8.4
SUMG				IAML		08 47 42.4	
	comp=Z,3.2nm,0.9s						

IDC ***10*** *08:49:39.9±0.9, 53°.63N×35°.24W, h0^{km}, mb4.0/15, mbtmp4.0/17, ML3.1/1, MS4.3/32, Error ellipse: s-maj=30.3km s-min=13.7km az=10.0*

NEIC ***10*** *08:49:42.7±1.9, 53°.7N±0°.1×35°.1W±0°.2, h10^{km}±1^{km}, mb4.6/51, Error ellipse: s-maj=20.5km s-min=16.4km az=183.0*

GCMT ***10*** *08:49:45.7±0.2, 54°.02N±0°.03×35°.18W±0°.03, h12^{km}, MW5.0/106, Moment Tensor Solution. s22,c25; s106,c139; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.37±.10; $M_{\theta\theta}$0.48±.11; $M_{\phi\phi}$2.89±.08; $M_{r\theta}$0.92±.50; $M_{\theta\phi}$0.38±.09; $M_{\phi r}$0.50±.39; Best double couple: $M_0$3.30700×10^{16} NP1:ϕ_s358.00000°, δ40.00000°, λ-108.00000°. NP2:ϕ_s201.00000°, δ52.00000°, λ-75.00000°. Principal axes: T 3.0120, Plg6.0000°, Azm281.0000°; N 0.5910, Plg11.0000°, Azm12.0000°; P -3.6030, Plg77.0000°, Azm164.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 08:49:42.4±0.5**, 53°.7N**±0°.1×**35°.16W**±0°.07**, h12**^{km}**, n83, σ1^{s}.21**/47**, mb4.6**/36**, MS4.3**/27**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	**Borgarnes**	13.09	27	LR	LR	08 56 12.4	
	comp=Z,735nm,20.4s,baz=233,slow=30						
SFJD	**Kangerlussuaq**	15.29	337	LR	LR	08 58 00.8	
	comp=Z,1µm,20.6s,baz=156,slow=33						
SCHQ	**Schefferville**	18.45	286	P	P	08 53 55.6	-2.1
	0.6nm,0.3s,baz=74,slow=6.2,SNR=9.6						
SCHQ				LR	LR	08 59 51.2	
	comp=Z,680nm,21.8s,baz=85,slow=33						
	12nm,1.1s						
SCHQ	**Schefferville**	18.45	286	IAmb	IAmb	08 53 57.8	
	comp=Z,324nm,1.4s						
EKA	**Eskdalemuir Ar**	18.56	72	P	Pn	08 54 00.1	+1.1
	comp=Z,2.6nm,0.8s,baz=270,slow=9.9,SNR=2.4						
EKA				LR	LR	08 59 28.2	
	comp=Z,1µm,19.3s,baz=230,slow=32						
SUMG	**Summit**	18.99	357	P	P	08 54 03.8	-0.1
FRB	**Frobisher Bay**	19.78	314	LR	LR	09 00 16.7	
	comp=Z,1µm,18.4s,baz=99,slow=32						
JMIC	**Jan Mayen**	20.95	24	LR	LR	09 00 23.7	
	comp=Z,768nm,18.6s,baz=242,slow=31						
D62A	**Allapoint, All**	22.44	267	P	P	08 54 43.0	+2.1
D62A				IAmb	IAmb	08 54 53.0	
	comp=Z,47nm,1.3s						
ESBB	**Sonseca Array**	25.34	111		P	08 55 10.2	+1.1
ESBB				IAmb	IAmb	08 55 11.6	
	comp=Z,14nm,1.1s						
ESDC	**Sonseca Array**	25.34	111	P	P	08 55 09.3	+0.3
	comp=Z,8.2nm,1.1s,baz=311,slow=7.8,SNR=17						
ESDC				LR	LR	09 03 00.6	
	comp=Z,993nm,19.1s,baz=313,slow=32						
	comp=Z,8.2nm,1.1s						
ESDC	**Sonseca Array**	25.34	111		P	08 55 08.3	-0.7
NOA	**NORSAR Array B**	25.56	55	P	P	08 55 10.6	-0.3
	comp=Z,2.6nm,1.1s,baz=273,slow=9.0,SNR=3.7						
NOA				LR	LR	09 03 48.0	
	comp=Z,419nm,19.6s,baz=275,slow=33						
	comp=Z,2.6nm,1.1s						
HFS	**Hagfors**	26.88	56	LR	LR	09 04 27.5	
	comp=Z,826nm,18.2s,baz=278,slow=33						
CLL	**Collm**	28.97	75	*e*P	P	08 55 42.0	+0.6
SADO	**Sadowa**	29.65	271	LR	LR	09 06 46.0	
	comp=Z,2µm,18.1s,baz=130,slow=35						
MD01	**Midelt array s**	30.02	122		P	08 55 50.0	-1.1
MD31	**MD31**	30.02	122	P	P	08 55 51.5	+0.4
GERES	**GERESS Array B**	30.45	79	P	P	08 55 54.8	+0.1
	comp=Z,1.4nm,1.0s,baz=305,slow=12,SNR=3.8						
	comp=Z,1.4nm,1.0s						
ARCES	**ARCESS Array B**	31.22	36	LR	LR	09 06 02.9	
	comp=Z,198nm,18.1s,baz=274,slow=31						
RES	**Resolute Bay**	31.26	334	LR	LR	09 07 51.0	
	comp=Z,222nm,18.9s,baz=55,slow=35						
VRAC	**Vranov**	31.91	76	LR	LR	09 08 34.6	
	comp=Z,700nm,18.7s,baz=300,slow=36						
FINES	**FINESS Array B**	32.57	51	LR	LR	09 08 08.1	
	comp=Z,492nm,18.8s,baz=280,slow=34						
KEST	**Kesra**	35.66	102	LR	LR	09 08 37.3	
	comp=Z,437nm,19.9s,baz=171,slow=32						
ULM	**Lac du Bonnet**	36.56	290	P	P	08 56 45.6	-2.1
	comp=Z,3.2nm,0.6s,baz=102,slow=9.3,SNR=3.7						
ULM				LR	LR	09 10 22.9	
	comp=Z,689nm,18.3s,baz=1.5,slow=34						
	comp=Z,3.2nm,0.6s						
VAE	**Valguarnera**	37.45	95	LR	LR	09 09 17.7	
	comp=Z,481nm,20.6s,baz=323,slow=31						
TKL	**Tuckaleechee C**	38.12	262	LR	LR	09 11 52.4	
	comp=Z,593nm,19.4s,baz=42,slow=35						
AKASG	**Malin Array Be**	38.37	67	P	P	08 57 01.6	-1.4
	comp=Z,0.2nm,0.3s,baz=304,slow=8.3,SNR=7.2						
AKASG				LR	LR	09 13 28.9	
	comp=Z,218nm,18.1s,baz=292,slow=37						
	comp=Z,0.2nm,0.3s						
AKASG	**Malin Array Be**	38.37	67	IAmb	IAmb	08 57 06.7	
	comp=Z,4.7nm,1.4s						
MLR	**Muntele Rosu**	39.32	76	LR	LR	09 12 44.6	
	comp=Z,456nm,20.8s,baz=304,slow=35						
SIUC	**Southern Illin**	39.96	269	P	P	08 57 17.9	+1.4
SIUC				IAmb	IAmb	08 57 26.8	
	comp=Z,12nm,0.8s						
S44A	**Carbondale**	39.99	269	P	P	08 57 17.9	+1.2
S44A				IAmb	IAmb	08 57 22.6	
	comp=Z,9.8nm,0.8s						
YKA	**Yellowknife Ar**	40.29	315	P	P	08 57 18.1	-0.8
	comp=Z,0.4nm,0.7s,baz=66,slow=7.6,SNR=3.3						
	comp=Z,0.4nm,0.7s						
LCAR	**Lake Charles**	42.21	269		P	08 57 34.9	-0.1
SJG	**San Juan**	42.85	226	LR	LR	09 13 41.7	
	comp=Z,89nm,19.0s,baz=13,slow=34						
KIRV	**Kirov**	44.40	48	LR	LR	09 15 06.2	
	comp=Z,338nm,18.0s,baz=312,slow=34						
MIAR	**Mount Ida**	44.69	269	P	P	08 57 55.8	+0.7
MIAR				IAmb	IAmb	08 58 05.2	
	comp=Z,7.7nm,0.8s						
IDI	**Anoyia**	45.15	89	LR	LR	09 17 11.0	
	comp=Z,340nm,19.3s,baz=304,slow=36						
BELG	**Belogornoye**	47.06	56	LR	LR	09 17 35.9	
	comp=Z,470nm,18.2s,baz=279,slow=36						
BRTR	**Keskin Array B**	47.34	78	P	P	08 58 16.3	+0.3
	comp=Z,0.9nm,0.7s,baz=306,slow=5.5,SNR=5.0						
BRTR				PcP	PcP	08 59 45.8	-0.9
	comp=Z,0.8nm,0.9s,baz=304,slow=3.3,SNR=4.1						
BRTR				LR	LR	09 19 37.0	
	comp=Z,243nm,18.7s,baz=315,slow=38						
	comp=Z,0.9nm,0.7s						
BRTR	**Keskin Array B**	47.34	78		P	08 58 16.8	+0.8
YNE	**Yellowstone No**	47.39	292	IAmb	IAmb	08 58 34.0	
	comp=Z,5.9nm,1.0s						
WMOK	**Wichita Mounta**	47.65	273		P	08 58 20.2	+1.8
WMOK				IAmb	IAmb	08 58 43.4	
	comp=Z,9.3nm,1.4s						
BOZ	**Bozeman (W)**	47.91	293	P	P	08 58 20.1	-0.4
BOZ				IAmb	IAmb	08 58 40.3	
	comp=Z,6.8nm,1.2s						
PD31	**Pinedale Array**	48.57	289	P	P	08 58 26.1	+0.4
PD31				IAmb	IAmb	08 58 34.8	
	comp=Z,7.2nm,1.3s						
PDAR	**Pinedale Array**	48.57	289	P	P	08 58 25.8	+0.1
	comp=Z,1.3nm,0.6s,baz=63,slow=7.9,SNR=10						
	comp=Z,1.3nm,0.6s						
ARTI	**Arti**	49.62	47	P	P	08 58 32.8	-0.3
	comp=Z,1.4nm,0.4s,baz=313,slow=15,SNR=4.4						
ARTI				LR	LR	09 18 00.4	
	comp=Z,261nm,19.2s,baz=280,slow=34						
	comp=Z,1.4nm,0.4s						
ARTI	**Arti**	49.62	47	IAmb	IAmb	08 58 42.6	
	comp=Z,8.8nm,1.1s						
TORD	**Torodi Ar. Bea**	49.83	130	P	P	08 58 34.0	-1.2
	comp=Z,2.2nm,0.3s,baz=346,slow=7.9,SNR=4.0						
	comp=Z,2.2nm,0.3s						
TORD	**Torodi Ar. Bea**	49.83	130	IAmb	IAmb	08 58 43.7	
	comp=Z,9.4nm,1.4s						
KBZ	**Khabaz**	49.98	68	P	P	08 58 37.6	+1.5
	comp=Z,2.2nm,0.9s,baz=329,slow=10,SNR=4.1						
KBZ				LR	LR	09 21 02.6	
	comp=Z,262nm,18.6s,baz=324,slow=38						
	comp=Z,2.2nm,0.9s						
BRDY	**Brady**	50.22	270		P	08 58 38.5	+0.5
NRIK	**Noril'sk**	50.37	23	P	P	08 58 39.5	+0.8
	comp=Z,1.0nm,0.4s,baz=314,slow=6.7,SNR=4.1						
	comp=Z,1.0nm,0.4s						
NRIK	**Noril'sk**	50.37	23	IAmb	IAmb	08 59 21.5	
	comp=Z,14nm,1.4s						
HWUT	**Hardware Ranch**	50.45	289		P	08 58 41.3	+1.3
HWUT				IAmb	IAmb	08 58 49.7	
	comp=Z,6.9nm,0.9s						
ILAR	**Eielson Array**	50.78	329	P	P	08 58 42.4	+0.4
	comp=Z,0.9nm,0.9s,baz=52,slow=6.4,SNR=6.1						
	comp=Z,0.9nm,0.9s						
PV16	**Nyswonger Mesa**	51.15	284	IAmb	IAmb	08 58 56.7	
	comp=Z,12nm,1.2s						
PV18	**Skein Mesa, Pa**	51.19	284		P	08 58 46.5	+0.8
JCT	**Junction City**	51.27	270	IAmb	IAmb	08 58 55.4	
	comp=Z,6.7nm,0.9s						
PV05	**Paradox Valley**	51.42	284	IAmb	IAmb	08 59 15.7	
	comp=Z,12nm,1.2s						
E19K	**Redstone River**	51.66	335	P	P	08 58 48.1	-0.4
E19K				IAmb	IAmb	08 58 58.0	
	comp=Z,16nm,1.4s						
DBIC	**Dimbokro**	52.95	141	LR	LR	09 18 36.2	
	comp=Z,502nm,20.8s,baz=28,slow=33						
MMAI	**Mount Meron Ar**	52.96	83	LR	LR	09 22 13.6	
	comp=Z,188nm,20.6s,baz=310,slow=37						
SAND	**Sanderson**	53.03	272		P	08 59 00.2	+1.0
SAND				IAmb	IAmb	08 59 01.9	
	comp=Z,9.2nm,1.3s						
GNI	**Garni**	53.39	70	LR	LR	09 21 46.5	
	comp=Z,245nm,21.9s,baz=336,slow=36						
WVOR	**Wild Horse Val**	53.80	294	IAmb	IAmb	08 59 31.6	
	comp=Z,11nm,1.4s						
ASF	**Jabal al Asfar**	54.45	83	LR	LR	09 22 39.3	
	comp=Z,213nm,20.4s,baz=307,slow=36						
ABKAR	**Akbulak array**	55.05	53		P	08 59 14.9	+1.3
PAHR	**Pah Rah Range**	56.09	292		P	08 59 23.2	+1.8
PAHR				IAmb	IAmb	08 59 25.6	
	comp=Z,13nm,1.4s						
NVAR	**Mina Array Bea**	56.39	291	P	P	08 59 24.6	+0.9
	comp=Z,0.9nm,0.9s,baz=47,slow=6.1,SNR=2.5						
	comp=Z,0.9nm,0.9s						
BEKR	**Beckworth**	56.52	293		P	08 59 26.2	+1.7
BEKR				IAmb	IAmb	08 59 36.8	
	comp=Z,8.7nm,1.4s						
GMN	**Gold Mountain**	56.61	289	IAmb	IAmb	08 59 36.2	
	comp=Z,8.9nm,1.4s						
PNTR	**Pine Nut**	56.65	292	IAmb	IAmb	08 59 36.9	
	comp=Z,10nm,1.0s						
KHBM	**Hayfork Bally**	57.50	296	IAmb	IAmb	08 59 34.0	
	comp=Z,8.3nm,1.3s						
MACA	**Manacapuru-AM**	60.56	210	P	P	08 59 52.6	0.0
SONM	**Songino Array**	73.70	26	P	P	09 01 16.2	+0.3
	comp=Z,2.0nm,0.7s,baz=326,slow=4.8,SNR=5.2						
	comp=Z,2.0nm,0.7s						
SONM	**Songino Array**	73.70	26	IAmb	IAmb	09 01 18.5	
	comp=Z,7.3nm,1.4s						
ULN	**Ulaanbaatar**	73.84	25	P	P	09 01 17.1	+0.3
ULN				IAmb	IAmb	09 01 19.9	
	comp=Z,7.5nm,0.9s						
TSUM	**Tsumeb**	85.57	131	P	P	09 02 20.2	-0.4
LBTB	**Lobatse**	94.28	127	LR	LR	09 43 01.6	
	comp=Z,273nm,20.2s,baz=126,slow=34						
WRA	**Warramunga Arr**	145.33	18	PKPbc	PKPbc	09 09 16.4	-3.4
	comp=Z,1.1nm,0.9s,baz=351,slow=4.1,SNR=7.4						
ASAR	**Alice Springs**	148.88	20	PKPbc	PKPdf	09 09 27.8	+1.8
	comp=Z,2.4nm,1.0s,baz=348,slow=2.0,SNR=12						
ASAR	**Alice Springs**	148.88	20		PKPbc	09 09 28.3	-1.5

CATAC ***10*** *08:50:18.5±0.5, 15°N±3°×9°3W±°, h44^{km}±6^{km}, M3.9/12, MLv3.9/12, Error ellipse: s-maj=9.0km s-min=4.0km az=38.1, confirmed*

MEX ***10*** *08:50:19.9±1.1, 14°.69N×92°.53W, h78^{km}±9^{km}, MD3.9*

GCG ***10*** *08:50:20.1±1.0, 14°.68N×92°.40W, h66^{km}±5^{km}, MD3.9, ML4.1*

ISC 10 08:50:16.8±1.3**, 14°.58N**±0°.05×**92°.54W**±0°.03**, h79**^{km}±8^{km}**, n49, σ2^{s}.17**/69**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.42	39	*e*P	Pn	08 50 30.6	+0.7
THIG				*i* S	Sn	08 50 39.4	0.0
THIG		0.42	39	*e*P	Pn	08 50 30.5	+0.7
SMCA	**Catarina**	0.53	58	*i* P	Pn	08 50 31.4	+0.7
SMCA				*e*S	Sn	08 50 40.3	-0.8
SMCA				IAML		08 50 42.0	
	comp=N,7µm,0.1s						
PATR	**El Naranjo**	0.61	29	*e*P	Pn	08 50 31.8	0.0
PATR				*i* S	Sn	08 50 41.4	-1.4
CHUJ	**Union Juarez**	0.66	39	*e*P	Pn	08 50 32.2	-0.1
CHUJ				*i* S	Sn	08 50 42.9	-0.8
PAVE	**Pavencul**	0.71	30	*e*P	Pn	08 50 32.9	+0.2
PAVE				*i* S	Sn	08 50 44.7	+0.2
RTAL	**Retalhuleu**	0.82	93	*i* P	Pn	08 50 35.1	+1.5
RTAL				*i* S	Sn	08 50 48.1	+1.8
RTAL	**Retalhuleu**	0.82	93	P	Pn	08 50 35.1	+1.5
QUEO	**Labor Ovalle**	1.03	73	*e*P	Pn	08 50 38.0	+1.5
QUEO				*e*S	Sn	08 50 53.3	+2.1
QUEO				IAML		08 50 53.9	
	comp=E,2µm,0.5s						
SOKI	**Kika Raxquin**	1.12	77	*e*P	Pn	08 50 39.5	+1.7
STG2	**El Palmar, Qui**	1.13	97	*e*P	Pn	08 50 35.4	-2.1
STG2				*e*S	Sn	08 50 48.1	-5.0
STG8	**El Palmar, Qui**	1.16	96	*e*P	Pn	08 50 35.9	-2.0
STG8				*e*S	Sn	08 50 49.4	-4.3
STG8				IAML		08 50 53.2	
	comp=E,5µm,0.1s						
STG5	**El Palmar, Qui**	1.17	98	*i* P	Pn	08 50 36.0	-1.9
STG5				*e*S	Sn	08 50 49.0	-4.7
HUEH	**Huehuetenango**	1.24	53	*e*P	Pn	08 50 40.4	+1.4
HUEH				*i* S	Sn	08 50 57.3	+1.6
HUEH	**Huehuetenango**	1.24	53	*e*P	Pn	08 50 40.5	+1.4
HUEH				IAML		08 51 07.0	
	comp=E,2µm,0.5s						
HUEH	**Huehuetenango**	1.24	53	P	Pn	08 50 40.5	+1.4
PCIG		1.30	330	*e*P	Pn	08 50 40.5	+0.9
PCIG				*i* S	Sn	08 50 56.5	-0.1
QUIS	**Sacapulas**	1.57	63	*e*P	Pn	08 50 45.0	+1.9
ESSG	**Sabana Grande**	1.67	96	*e*P	Pn	08 50 46.1	+1.8
ESSG				*e*S	Sn	08 51 05.8	+0.7
CCIG	**Comitan**	1.74	13	*e*P	Pn	08 50 46.6	+1.2
CCIG				*i* S	Sn	08 51 06.1	-1.0
CCIG	**Comitan**	1.74	13	*e*P	Pn	08 50 47.1	+1.7
CCIG	**Comitan**	1.74	13	S	Sn	08 51 09.2	+2.2
CCIG	**Comitan**	1.74	13	P	Pn	08 50 47.3	+1.9
FG16	**Alotenango, Sa**	1.99	98	*e*P	Pn	08 50 46.2	-2.5
FG16				*e*S	Sn	08 51 05.6	-7.4
FG16				IAML		08 51 10.6	
	comp=E,6µm,0.3s						
APG	**El Apazote**	2.05	78	*e*P	Pn	08 50 51.1	+1.5
PCG5	**San Vicente Pa**	2.12	99	*e*P	Pn	08 50 49.3	-1.2
FAME	**Alcaldia de Sa**	2.55	106	P	Pn	08 50 58.1	+2.0
FAME	**Alcaldia de Sa**	2.55	106	S	Sn	08 51 27.0	+0.7
SLOZ	**Alcaldia de Sa**	2.73	101	P	Pn	08 50 56.3	-2.2
NUBE	**Las Nubes**	2.76	104	*e*P	Pn	08 51 01.3	+2.3
NUBE	**Las Nubes**	2.76	104	P	Pn	08 51 01.2	+2.3
NUBE	**Las Nubes**	2.76	104	S	Sn	08 51 32.3	+0.9
CEVE	**Cerro Verde**	2.92	104	S	Sn	08 51 37.3	+1.7
CEVE	**Cerro Verde**	2.92	104	P	Pn	08 51 01.8	+0.5
MTO3	**Montecristo**	3.08	93	P	Pn	08 51 05.2	+1.7
JAYA	**Jayaque - finc**	3.13	107	*e*P	Pn	08 51 06.5	+2.5
JAYA	**Jayaque - finc**	3.13	107	P	Pn	08 51 06.6	+2.5
JAYA	**Jayaque - finc**	3.13	107	S	Sn	08 51 41.4	+0.8
UXUV	**UXUV**	3.13	331	*e*P	Pn	08 51 06.0	+2.0
UXUV				*e*S	Sn	08 51 38.9	-1.5
CMIG	**Matias Romero**	3.37	318	*e*P	Pn	08 51 09.0	+1.8
CMIG				*e*S	Sn	08 51 45.2	-0.8
PETF	**Flores**	3.47	48	*e*P	Pn	08 51 09.3	+0.8
PETF				*i* S	Sn	08 51 44.2	-4.3
PETF	**Flores**	3.47	48	*e*P	Pn	08 51 09.4	+0.9
PETF	**Flores**	3.47	48	P	Pn	08 51 09.0	+0.5
PETF	**Flores**	3.47	48	S	Sn	08 51 47.2	-1.3
HUIG	**Huatulco**	3.65	289	*e*P	Pn	08 51 11.9	+1.0
HUIG				*e*S	Sn	08 51 48.2	-4.7
NEUV	**Arroyo Zacate**	4.42	315	*e*P	Pn	08 51 23.4	+1.8
NEUV				*e*S	Sn	08 52 11.8	0.0
SCIG	**Sabancuy**	4.55	16	*e*P	Pn	08 51 23.9	+0.6
SCIG				*e*S	Sn	08 52 07.2	-7.8
PEIG	**Puerto Escondi**	4.67	288	*e*P	Pn	08 51 26.7	+1.8
PEIG				*i* S	Sn	08 52 16.2	-1.6
YOIG	**Yosondua**	5.33	296	*e*P	Pn	08 51 39.4	+5.3
YOIG				*i* S	Sn	08 52 26.5	-7.8

NNC ***10*** *08:55:22.5±0.4, 42°.95N×77°.86E, h0^{km}, mb2.5, mpv3.0, Error ellipse: s-maj=4.9km s-min=1.5km az=1.0*

SOME ***10*** *08:55:24.9, 43°.00N×77°.80E, h20^{km}*

KRNET ***10*** *08:55:26.2±0.1, 42°.86N×77°.75E, h29^{km}, mb2.4*

ISC 10 08:55:22.7±1.0**, 42°.96N**±0°.02×**77°.85E**±0°.02**, h14**^{km}±9^{km}**, n38, σ0^{s}.74**/70**, 15C-9D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	**Saty**	0.42	76	P	Pb	08 55 32.0	-0.1
	12nm,0.1s						
SATY				S	Sb	08 55 37.8	-0.6
	137nm,0.2s						
KURS	**Kuram**	0.58	24	P	Pb	08 55 34.7	0.0
	3.3nm,0.0s						
KURS				S	Sg	08 55 42.1	+0.2
	26nm,0.2s						
KOTS	**Kotyrbulak**	0.60	298	P	Pb	08 55 35.7	+0.6
	3.1nm,0.1s						
KOTS				S	Sb	08 55 43.7	+0.1
	22nm,0.2s						
KOTS	**Kotyrbulak**	0.60	298	*e*P	Pb	08 55 35.7	+0.6
	3.1nm,0.1s						
KOTS				*e*S	Sb	08 55 43.7	+0.1
	22nm,0.2s						
MDOK	**Medeo**	0.62	290	Pg	Pb	08 55 35.7	+0.2
	2.4nm,0.1s						
MDOK				Lg	Lg	08 55 43.6	
	25nm,0.4s						
PRZ	**Przheval'sk**	0.62	139	⇓*e*P	Pn	08 55 38.3	+1.0
PRZ				⇓*e*S	Sn	08 55 47.1	-0.2
TNSS	**Tian-Shan**	0.67	277	P	Pb	08 55 36.3	-0.1
	0.6nm,0.1s						
TNSS				S	Sg	08 55 44.6	+0.1
	3.6nm,0.2s						
TNSS	**Tian-Shan**	0.67	277	*e*P	Pb	08 55 36.4	+0.1
	0.1nm,0.1s						
TNSS				*e*S	Sg	08 55 44.9	+0.3
	5.3nm,0.2s						
KNDC	**Almaty**	0.70	292	⇓P	Pg	08 55 36.1	-0.2
	23nm,0.4s						
KNDC				⇑S	Sg	08 55 45.9	+0.5
	39nm,0.6s						
KPKS	**Kokpek**	0.80	50	P	Pb	08 55 38.6	+0.2
	0.3nm,0.1s						
KPKS				S	Sg	08 55 48.7	0.0
	41nm,0.3s						
KPKS	**Kokpek**	0.80	50	*e*P	Pb	08 55 38.6	+0.2

	0.3nm,0.1s						
KPKS				eS	Sg	08 55 48.7	0.0
	41nm,0.3s						
UZB	**Uzynbulak**	0.88	77	P	Pn	08 55 40.0	-0.8
	4.7nm,0.1s						
UZB				S	Sb	08 55 51.5	-0.2
	26nm,0.1s						
UZB	**Uzynbulak**	0.88	77	eP	Pn	08 55 40.1	-0.8
	3.6nm,0.1s						
UZB				eS	Sb	08 55 51.5	-0.2
	29nm,0.1s						
IZV	**Izvestkoviy**	0.91	275	eP	Pb	08 55 39.6	-0.7
	1.9nm,0.1s						
IZV				eS	Sb	08 55 50.4	-2.0
	44nm,0.2s						
KDJ	**Kajisay**	0.96	211	⇓eP	Pn	08 55 42.3	+0.3
KDJ				⇓eS	Sg	08 55 54.0	+0.2
MTBS	**Maitube**	1.05	280	P	Pg	08 55 43.5	+0.5
	1.5nm,0.1s						
MTBS				S	Sg	08 55 57.1	+0.3
	26nm,0.3s						
MTBS	**Maitube**	1.05	280	eP	Pg	08 55 43.5	+0.5
	1.5nm,0.1s						
MTBS				eS	Sg	08 55 57.1	+0.3
	26nm,0.3s						
CHKK	**Chushkaly**	1.09	325	P	Pb	08 55 43.7	+0.3
	1.1nm,0.1s						
CHKK				S	Sb	08 55 57.3	-0.3
	8.4nm,0.2s						
CHKK	**Chushkaly**	1.09	325	eP	Pb	08 55 43.7	+0.3
	1.1nm,0.1s						
CHKK				eS	Sb	08 55 57.3	-0.3
	8.4nm,0.2s						
SHLS	**Shalkode**	1.20	80	P	Pg	08 55 51.0	+5.2
	3.4nm,0.2s						
SHLS				S	Sg	08 56 10.2	+8.8
	9.6nm,0.2s						
SHLS	**Shalkode**	1.20	80	eP	Pg	08 55 51.7	+5.9
	5.0nm,0.1s						
SHLS				eS	Sg	08 56 11.0	+10
	8.2nm,0.1s						
TARG	**Taragay, Kyrgy**	1.23	181	⇑eP	Pg	08 55 47.3	+1.0
TARG				⇑eS	Sg	08 56 02.5	+0.2
BLB	**Baldybastay**	1.23	22	P	Pg	08 55 46.5	+0.2
	16nm,0.2s						
BLB				S	Sn	08 56 02.2	0.0
	13nm,0.3s						
ARXS	**Arharly**	1.26	359	P	Pg	08 55 47.1	+0.3
	2.1nm,0.1s						
ARXS				S	Sn	08 56 03.2	+0.5
	17nm,0.2s						
ARXS	**Arharly**	1.26	359	eP	Pg	08 55 47.1	+0.3
	2.1nm,0.1s						
ARXS				eS	Sn	08 56 03.2	+0.5
	17nm,0.2s						
PDGK	**Podgornoye**	1.26	72	⇑P	Pb	08 55 46.3	0.0
	1.8nm,0.3s						
PDGK				⇑S	Sn	08 56 02.6	-0.3
	8.2nm,0.6s						
ULHL	**Ulahol**	1.38	240	⇑eP	Pg	08 55 49.6	+0.4
ULHL				⇑eS	Sb	08 56 06.4	+0.4
BOOM	**Boomskoye usch**	1.48	252	⇑eP	Pg	08 55 51.2	+0.1
BOOM				⇑eS	Sb	08 56 09.4	+0.6
DGS	**Degeres**	1.55	281	P	Pg	08 55 52.3	-0.1
	1.7nm,0.2s						
DGS				S	Sg	08 56 12.2	-0.2
	7.5nm,0.4s						
DGS	**Degeres**	1.55	281	eP	Pg	08 55 52.3	-0.1
	0.6nm,0.1s						
DGS				eS	Sg	08 56 12.2	-0.2
	9.5nm,0.3s						
TKM2	**Tokmak 2**	1.65	270	⇑eP	Pg	08 55 54.3	-0.1
TKM2				⇑eS	Sb	08 56 14.8	+1.0
KNOS	**Konyrlen**	1.70	34	P	Pb	08 55 54.5	+0.6
	5.0nm,0.1s						
KNOS				S	Sb	08 56 16.3	+1.0
	1.0nm,0.3s						
KRBS	**Karabastau**	1.75	296	eP	Pg	08 55 55.9	-0.3
	5.3nm,0.2s						
KRBS				eS	Sg	08 56 18.5	-0.5
	9.8nm,0.1s						
KBK	**Karagaybulak**	2.15	263	⇓eP	Pb	08 56 01.2	-0.4
KBK				⇓eS	Sn	08 56 26.5	+1.5
AAK	**Ala-Archa**	2.49	264	⇑eP	Pb	08 56 05.7	-1.6
AAK				⇑eS	Sn	08 56 34.5	+1.3
UCH	**Uchtor**	2.57	255	⇑eP	Pb	08 56 06.8	-2.0
UCH				⇑eS	Sn	08 56 36.4	+0.8
KAPS	**Kapalarasan**	2.57	25	Pg	Pg	08 56 10.7	-1.3
	0.8nm,0.1s						
KAPS				Lg	Lg	08 56 43.5	
	12nm,0.1s						
ARLS	**Aral**	2.83	248	⇓eP	Pb	08 56 10.2	-2.9
ARLS				⇓eS	Sn	08 56 42.1	+0.5

ISK 10 08:57:41.5,37°.24N×28°.21E,h0^{km},ML1.6/9,Suspected Mining explosion.,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	**Yerkesik**	0.12	151	Pg	Pg	08 57 44.4	+0.7
YER				Sg	Sg	08 57 46.7	+1.5
MLSB	**Milas**	0.35	280	Pg	Pg	08 57 49.2	+0.9
MLSB				Sg	Sb	08 57 55.2	-1.6
TURN	**Turunc**	0.46	177	Pg	Pg	08 57 51.0	+0.7
TURN				Sg	Sb	08 57 58.4	-1.5
DALY	**Dalyan (Mula)**	0.55	140	Pg	Pb	08 57 53.1	-0.9
DALY				Sg	Sb	08 58 01.4	-1.0
DAT	**Datca**	0.72	225	Pg	Pg	08 57 56.1	+0.8
BODT	**Bodrum**	0.74	257	Pg	Pg	08 57 56.4	+0.7
AYDB	**Zeytinkoy-Aydi**	0.75	340	Pg	Pb	08 57 56.9	-0.7
APMY	**Acipayam-Deniz**	0.90	75	Pg	Pb	08 57 59.6	-0.4
ODEM	**Odemis-Izmir**	1.04	354	Pg	Pg	08 58 01.9	+0.4

*IDC **10** 08:59:59.4±2.4,41°.46N×19°.66E,h0^{km},mb3.9/5,*
mbtmp3.9/6,ML4.0/1,MS4.2/2,Error ellipse: s-maj=63.8km
s-min=29.5km az=133.0
*TIR **10** 09:00:02.2,41°.53N×19°.54E,h27^{km}±1^{km},Md3.0/5,Ml3.4/7*
*PDG **10** 09:00:03.5±0.1,41°.54N×19°.45E,h12^{km},MD3.5/10,*
ML3.6/13,Error ellipse: s-maj=0.5km s-min=0.7km az=0.0
ISC 10 09:00:02.2±1.0,**41°.51N**±0°.03×**19°.55E**±0°.03,**h14**^{km}±7^{km},
n30,σ**1^{s}.18**/49,**mb4.1**/4,**2C-9D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	0.28	124	Pg	Pg	09 00 08.0	-0.1
TIR				Sg	Sg	09 00 11.2	-1.0
TIR				AML	AML	09 00 13.2	
	19nm,0.5s						
ULC	**Ulcinj**	0.51	333	⇓iPg	Pg	09 00 12.3	-0.1
ULC				i Sg	Sb	09 00 19.3	-1.1
SDA	**Shkodra**	0.55	356	Pg	Pb	09 00 13.1	-0.5
SDA				Sg	Sg	09 00 19.8	-0.5
SDA				AMd		09 01 14.8	
PHP	**Peshkopia**	0.69	75	Pg	Pg	09 00 15.2	-0.5
PHP				Sg	Sb	09 00 25.4	0.0
PHP				AML	AML	09 00 31.4	
	8.2nm,0.6s						
PHP				AMd		09 01 14.8	
DRME	**Dracevica, Mon**	0.73	338	⇓iPg	Pg	09 00 16.2	-0.3
DRME				eSg	Sb	09 00 26.9	+0.2
BUM	**Brajici-Budva**	0.94	328	⇑iPg	Pg	09 00 19.8	-0.5
BUM				i Sg	Sn	09 00 33.9	-0.3
PDG	**Podgorica**	0.95	347	Pg	Pg	09 00 20.0	-0.6
PDG				Sg	Sn	09 00 33.4	-1.1
PDG				AMd		09 01 22.1	
PDG	**Podgorica**	0.95	347	⇓P	Pn	09 00 21.2	+0.1
PDG	**Podgorica**	0.95	347	⇓iPg	Pb	09 00 20.6	+0.1
PDG				i Sg	Sn	09 00 34.5	0.0
OHR	**Ohrid**	1.02	112	i Pg	Pb	09 00 21.2	-0.5
OHR				i Sg	Sn	09 00 37.6	+1.4
VLO	**Vlora**	1.04	182	Pg	Pb	09 00 22.0	+0.1
VLO				Sg	Sb	09 00 36.0	+0.6
VLO				AML	AML	09 00 42.9	
	11nm,0.4s						
VLO				AMd		09 01 25.7	
PVY	**Plav**	1.13	15	⇓iPg	Pn	09 00 24.2	+0.5
PVY				i Sg	Sn	09 00 42.3	+3.2
CEME	**Cevo**	1.14	336	ePg	Pb	09 00 23.5	-0.3
CEME				eSg	Sn	09 00 41.0	+1.6
HCY	**Herceg Novi**	1.23	320	⇓iPg	Pg	09 00 26.0	+0.1
HCY				i Sg	Sn	09 00 43.0	+1.6
KBN	**Korca**	1.28	133	Sn	Sg	09 00 44.2	+0.6
NKME	**Niksic**	1.34	341	⇓iPg	Pg	09 00 27.3	-0.7
NKME				eSg	Sg	09 00 47.0	+1.6
KOME	**Kolasin**	1.34	359	ePg	Pg	09 00 27.9	-0.2
KOME				eSg	Sg	09 00 48.6	+3.0
IVA	**Berane**	1.39	10	⇓iPg	Pg	09 00 28.9	0.0
IVA				i Sg	Sg	09 00 50.6	+3.6
BRY	**Bratogost**	1.58	332	⇓iPg	Pb	09 00 31.3	-0.1
BRY				i Sg	Sg	09 00 53.8	+0.5
UPM	**Unac-Piva**	1.76	344	ePn	Pb	09 00 34.3	-0.2
UPM				i Sn	Sg	09 00 58.3	-0.7
PLE	**Pljevlja**	1.83	356	⇑iPn	Pb	09 00 35.4	-0.1
PLE				i Sn	Sg	09 01 00.2	-0.8
NOCI	**Noci**	2.01	250	Sn	Sb	09 01 03.9	+0.4
NOCI				AML	AML	09 01 09.6	
	3.0nm,0.4s						
IGT	**Igoumenitsa**	2.06	163	Sn	Sb	09 01 06.0	+1.1
IGT				AML	AML	09 01 10.7	
	0.7nm,0.7s						
MLR	**Muntele Rosu**	6.12	47	Pn	Pn	09 01 33.7	+1.4
	1.9nm,0.3s,baz=292,slow=7.9,SNR=6.4						
MLR				Sn	Sn	09 02 41.1	-1.1
	0.6nm,0.3s,baz=299,slow=19,SNR=1.4						
	6.2nm,0.4s						
FINES	**FINESS Array B**	20.36	9	P	P	09 04 37.1	-0.8
	3.2nm,0.6s,baz=178,slow=11,SNR=7.0						
	3.2nm,0.6s						
BVAR	**Borovoye Array**	35.64	53	P	P	09 06 59.1	-0.3
	1.9nm,0.8s,baz=275,slow=6.7,SNR=6.7						
BVAR				LR	LR	09 23 33.0	
	comp=Z,242nm,18.6s,baz=311,slow=40						
	1.9nm,0.8s						
KURBB	**Kurchatov Arra**	40.93	56	P	P	09 07 42.3	-1.7
	0.2nm,0.4s,baz=290,slow=8.8,SNR=1.7						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	44.09	51	P	P	09 08 07.8	-1.8
	1.7nm,0.6s,baz=275,slow=8.6,SNR=8.6						
	1.7nm,0.6s						
MKAR	**Makanchi Array**	44.27	61	P	P	09 08 09.9	-1.3
	2.1nm,0.7s,baz=286,slow=6.6,SNR=16						
	2.1nm,0.7s						
SDV	**Santo Domingo**	84.33	277	LR	LR	09 46 23.4	
	comp=Z,141nm,19.3s,baz=245,slow=33						

RSNC 10 09:01:15.3±0.0,**1°N**±1°×**7°7W**±°,**h4**^{km}±1^{km},**M3.3,mb3.8,**
ML3.1,Colombia-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BONI	**La Bonita**	0.50	249	P	Pg	09 01 24.3	-0.7
BONI				S	Sg	09 01 31.4	-0.1
TULM	**Tulcn-Chalpat**	0.73	277	P	Pg	09 01 28.6	-0.8
TULM				S	Sg	09 01 38.4	-0.5
CMBC	**Cumbal**	0.82	292	P	Pg	09 01 30.7	-0.5
CMBC				S	Sg	09 01 39.6	-2.3
CRUC	**La Cruz**	0.94	7	P	Pg	09 01 31.7	-1.6
CRUC				S	Sg	09 01 44.2	-1.3
CUSE	**Cuicocha Este**	1.38	256	P	Pn	09 01 40.2	-1.5
CUSE				S	Sg	09 01 55.8	-3.9
BBAC	**Balboa, Cauca**	1.40	352	P	Pn	09 01 39.6	-2.2
BBAC				S	Sg	09 01 58.9	-1.3
OTAV	**Otavalo**	1.44	254	P	Pn	09 01 41.0	-1.7
OTAV				S	Sg	09 02 00.7	-1.1
FLOC	**Florencia**	1.70	56	P	Pn	09 01 42.5	-3.2
FLOC				S	Sn	09 02 06.8	-1.1
PAC1	**Pacto, Paraso**	1.77	258	P	Pn	09 01 46.6	-0.3
PAC1				S	Sn	09 02 08.4	-1.5
POPC	**Popayan, Colom**	1.94	11	P	Pn	09 01 48.6	-0.6
POPC				S	Sn	09 02 13.8	-0.4
TUMC	**Tumaco**	2.04	305	P	Pn	09 01 49.6	-0.9
TUMC				S	Sb	09 02 19.5	+0.6
GARC	**Garzon, Huila**	2.20	45	P	Pn	09 01 50.8	-2.1
GARC				S	Sb	09 02 22.5	-1.1
PTLC	**Puerto Leguiza**	2.31	101	P	Pn	09 01 52.9	-1.3
PTLC				S	Sn	09 02 21.7	-1.4
JAMC	**Jamundi, Valle**	2.60	9	P	Pn	09 01 59.8	+1.5
JAMC				S	Sb	09 02 34.0	-1.0
BETC	**Betania**	2.60	38	P	Pb	09 02 03.5	+0.9
BETC				S	Sg	09 02 37.0	-2.0
YOTC	**Yotoco, Valle**	3.41	12	P	Pn	09 02 12.0	+2.6
YOTC				S	Sb	09 02 54.9	-3.3
MACC	**Macarena, Meta**	3.55	65	P	Pn	09 02 09.1	-2.1
MACC				S	Sn	09 02 53.1	-0.5
ORTC	**Ortega, Tolima**	3.73	29	P	Pn	09 02 12.9	-0.8
ORTC				S	Sb	09 03 10.4	+3.0
URMC	**La Uribe, Meta**	3.73	46	P	Pn	09 02 12.4	-1.4
URMC				S	Sb	09 03 04.7	-2.9
PRAC	**Prado**	3.75	35	P	Pn	09 02 12.0	-2.1
PRAC				S	Sn	09 03 01.3	+2.5
PLMC	**San Jos del P**	4.32	10	P	Pn	09 02 20.6	-1.3
VILC	**Villavicencio,**	4.82	44	P	Pn	09 02 34.2	+5.3
CHIC	**Chingaza**	5.18	40	P	Pn	09 02 34.0	0.0
	19nm,0.7s						
CBOC	**Ciudad Bolivar**	5.30	11	P	Pn	09 02 34.7	-0.8
	10.0nm,1.0s						
MCRA	**Macar, Loja**	5.75	210	P	Pn	09 02 40.2	-1.3
SPBC	**San Pablo de B**	5.81	31	P	Pn	09 02 40.7	-1.7
PTBC	**PUERTO BERRIO,**	6.42	24	P	Pn	09 02 42.0	-8.7
RUSC	**La Rusia**	6.56	37	P	Pn	09 02 54.4	+1.3

*IDC **10** 09:10:02.1±3.5,24°.30S×69°.49E,h0^{km},mb4.0/8,*
mbtmp4.0/8,MS4.0/5,Error ellipse: s-maj=108.9km
s-min=29.4km az=50.0
*NEIC **10** 09:10:04.2±0.4,24°.2S±0°.2×69°.6E±0°.1,h10^{km}±2^{km},*
mb4.3/10,Error ellipse: s-maj=34.9km s-min=14.0km
az=214.0
ISC 10 09:10:03.9±2.3,**24°.2S**±0°.4×**69°.6E**±0°.3,**h10**^{km}**,n36,**
σ**0^{s}.61**/25,**mb4.1**/13,**MS4.1**/6,**Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	16.69	10	T	T	09 30 58.0	
	baz=190,slow=76,SNR=69						
H08S2	**Diego Garcia H**	16.69	10	T	T	09 30 59.1	
	baz=190,slow=76,SNR=70						
H08S3	**Diego Garcia H**	16.70	10	T	T	09 30 59.5	
	baz=190,slow=76,SNR=74						
H04N2	**CROZET ISLANDS**	26.18	209	T	T	09 43 07.5	
	baz=40,slow=74,SNR=110						
H04N1	**CROZET ISLANDS**	26.19	209	T	T	09 43 08.3	
	baz=40,slow=74,SNR=110						
H04N3	**CROZET ISLANDS**	26.20	209	T	T	09 43 05.7	
	baz=40,slow=74,SNR=106						
CMAR	**Chiang Mai Arr**	51.16	37	P	P	09 19 08.0	+0.5
	0.5nm,0.3s,baz=213,slow=6.6,SNR=7.2						
	0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	51.16	37	P	P	09 19 07.5	+0.1
RAYN	**Ar Rayn**	52.87	332	P	P	09 19 19.5	-0.7
BATI	**Baumata**	53.20	85	LR	LR	09 39 26.3	
	comp=Z,128nm,20.8s,baz=246,slow=33						
SHL	**Shillong**	53.97	25	P	P	09 19 26.8	-1.6
EVN	**Everest**	54.45	19	P	P	09 19 32.2	-0.1
EVN				IAmb	IAmb	09 19 39.5	
	comp=Z,2.5nm,0.9s						
ASAR	**Alice Springs**	58.31	104	P	P	09 19 59.7	+0.3
	comp=Z,1.1nm,0.7s,baz=256,slow=6.5,SNR=6.6						
ASAR				LR	LR	09 41 11.5	
	comp=Z,202nm,21.6s,baz=286,slow=32						
	comp=Z,1.1nm,0.7s						
ASAR	**Alice Springs**	58.31	104	P	P	09 19 58.7	-0.8
AS31	**Alice Springs**	58.31	104	P	P	09 19 59.0	-0.5
KBL	**Kabul**	58.41	359	P	P	09 19 59.7	-0.3
WRA	**Warramunga Arr**	59.71	100	P	P	09 20 08.9	-0.3
	comp=Z,1.0nm,0.8s,baz=254,slow=6.7,SNR=5.0						
	comp=Z,1.0nm,0.8s						
KK31	**Karatay Array**	66.97	1	P	P	09 20 56.7	+0.1
KK31				IAmb	IAmb	09 21 07.6	
	comp=Z,1.8nm,1.0s						
KKAR	**Karatay Array**	66.97	1	P	P	09 20 57.0	+0.4
CTA	**Charters Tower**	70.31	104	LR	LR	09 49 51.0	
	comp=Z,6.2nm,18.5s,baz=223,slow=34						
MK31	**Makanchi Array**	71.58	9	P	P	09 21 24.8	-0.3
MK31				IAmb	IAmb	09 21 32.1	
	comp=Z,2.3nm,1.0s						
MKAR	**Makanchi Array**	71.58	9	P	P	09 21 25.6	+0.4
	comp=Z,1.3nm,0.7s,baz=194,slow=6.4,SNR=9.8						
	comp=Z,1.3nm,0.7s						
MKAR	**Makanchi Array**	71.58	9	P	P	09 21 24.6	-0.6
AB31	**Akbulak array**	73.62	353	P	P	09 21 37.3	+0.1
AB31				IAmb	IAmb	09 21 43.4	
	comp=Z,3.9nm,0.8s						
ABKAR	**Akbulak array**	73.62	353	P	P	09 21 37.5	+0.3
KURBB	**Kurchatov Arra**	74.90	6	P	P	09 21 45.0	+0.4
	comp=Z,1.6nm,0.2s,baz=201,slow=6.4,SNR=6.4						
	comp=Z,1.6nm,0.2s						
PMG	**Port Moresby**	74.94	94	LR	LR	09 53 16.5	
	comp=Z,124nm,18.6s,baz=250,slow=35						
BVAR	**Borovoye Array**	76.89	1	P	P	09 21 56.2	+0.2
	comp=Z,0.8nm,0.6s,baz=129,slow=12,SNR=5.6						
	comp=Z,0.8nm,0.6s						
BORK	**Borovoye**	76.91	0	P	P	09 21 56.4	+0.3
BORK				IAmb	IAmb	09 22 03.1	
	comp=Z,3.2nm,0.9s						
ZALV	**Zalesovo Beam**	78.92	9	P	P	09 22 07.4	+0.2
	comp=Z,1.7nm,0.8s,baz=205,slow=6.6,SNR=4.0						
	comp=Z,1.7nm,0.8s						
ZALV	**Zalesovo Beam**	78.92	9	P	P	09 22 07.5	+0.3
SONM	**Songino Array**	78.97	24	P	P	09 22 09.0	+1.2
	comp=Z,0.6nm,0.7s,baz=224,slow=6.2,SNR=8.2						
	comp=Z,0.6nm,0.7s						
SONM	**Songino Array**	78.97	24	P	P	09 22 08.2	+0.4
SONM				IAmb	IAmb	09 22 15.5	
	comp=Z,5.3nm,1.2s						
JNU	**Nakatsue**	81.58	48	LR	LR	09 57 34.6	
	comp=Z,79nm,19.1s,baz=260,slow=35						
MJAR	**Matsushiro Arr**	88.49	49	LR	LR	10 03 47.3	
	comp=Z,66nm,18.0s,baz=248,slow=36						
NVAR	**Mina Array Bea**	164.30	23	PKPab	PKPab	09 31 03.2	+1.1
	comp=Z,0.5nm,0.8s,baz=345,slow=3.6,SNR=4.2						

IDC 10 09:14:47.6±1.7,**54°.27N**×**35°.18W,h0**^{km}**,mb3.5**/2,
mbtmp3.5/2,**MS4.0**/1,**Error ellipse: s-maj=150.0km**
s-min=31.9km az=21.0,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	25.56	112	P	P	09 20 18.0	0.0
	0.9nm,0.7s,baz=311,slow=7.9,SNR=5.1						
	0.9nm,0.7s						
ULM	**Lac du Bonnet**	36.36	289	LR	LR	09 35 47.4	
	comp=Z,251nm,21.0s,baz=234,slow=35						
PDAR	**Pinedale Array**	48.37	288	P	P	09 23 31.1	-0.1
	0.2nm,0.6s,baz=63,slow=8.2,SNR=4.1						
	0.2nm,0.6s						
ASAR	**Alice Springs**	148.36	19	PKPbc	PKPbc	09 34 35.0	-0.7
	0.3nm,0.7s,baz=8.7,slow=2.4,SNR=4.9						

*CATAC **10** 09:24:08.4±0.7,13°N±3°×9°0W±°,h16^{km}±4^{km},M3.2/14,*
MLv3.2/14,Error ellipse: s-maj=6.1km s-min=3.9km
az=25.7,confirmed
*GCG **10** 09:24:09.4±1.1,13°.09N×90°.22W,h19^{km}±14^{km},MD4.0*
*SNET **10** 09:24:09.5±1.9,13°.07N×90°.18W,h14^{km},ML3.2*
ISC 10 09:24:07.7±2.5,**13°.01N**±0°.10×**90°.16W**±0°.09,**h10**^{km}**,n45,**
σ**0^{s}.45**/49,**Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	0.84	9	S	Sb	09 24 36.0	+0.2
FAME	**Alcaldia de Sa**	0.84	9	P	Pg	09 24 23.9	-0.1
JAYA	**Jayaque - finc**	0.94	47	eP	Pn	09 24 26.7	-0.5
JAYA				eS	Sb	09 24 39.1	+0.2
JAYA	**Jayaque - finc**	0.94	47	eP	Pb	09 24 26.3	0.0
JAYA				eS	Sb	09 24 38.9	0.0
JAYA	**Jayaque - finc**	0.94	47	P	Pb	09 24 26.4	+0.2
LALI	**Alcalda de L**	0.94	60	S	Sb	09 24 39.5	+0.8
NUBE	**Las Nubes**	0.96	22	eP	Pb	09 24 26.2	-0.4
NUBE	**Las Nubes**	0.96	22	P	Pb	09 24 26.3	-0.4
NUBE	**Las Nubes**	0.96	22	S	Sb	09 24 39.8	+0.4
CEVE	**Cerro Verde**	0.96	32	eP	Pn	09 24 27.2	-0.4
CEVE				eS	Sn	09 24 42.5	+0.9
CEVE	**Cerro Verde**	0.96	32	P	Pn	09 24 27.2	-0.4
CEVE	**Cerro Verde**	0.96	32	S	Sb	09 24 40.4	+0.8
PMON	**Piamonte**	1.08	49	P	Pn	09 24 28.6	-0.4
PMON	**Piamonte**	1.08	49	S	Sn	09 24 43.7	-0.3
CEDA	**San Andres**	1.08	43	P	Pn	09 24 28.9	-0.1
CEDA	**San Andres**	1.08	43	S	Sb	09 24 43.3	+0.5
BOQS	**Boqueron**	1.12	50	eP	Pb	09 24 29.0	-0.3
PANCS	**Alcalda de**	1.12	58	S	Sb	09 24 44.0	0.0
UNIC	**Universidad Ca**	1.13	31	P	Pb	09 24 29.0	-0.4
UNIC	**Universidad Ca**	1.13	31	S	Sb	09 24 44.4	+0.1
UEES	**Universidad Ev**	1.14	52	P	Pb	09 24 29.3	-0.2
UEES	**Universidad Ev**	1.14	52	S	Sb	09 24 44.6	+0.2
UDBS	**Universidad Do**	1.20	54	P	Pb	09 24 30.6	-0.1
LFRS	**El Faro**	1.23	60	eP	Pn	09 24 30.3	-0.7
LBRS	**Las Brisas**	1.30	56	eP	Pn	09 24 31.6	-0.5
PAVA	**Las Pavas**	1.38	59	P	Pb	09 24 33.5	-0.1
PAVA	**Las Pavas**	1.38	59	S	Sb	09 24 52.0	+0.6
JUAM	**Asuncion Mita**	1.39	18	eP	Pn	09 24 33.0	-0.3
JUAM				eS	Sn	09 24 51.1	-0.6
TECO	**Alcaldia de Te**	1.44	68	P	Pg	09 24 35.1	-0.3
TECO	**Alcaldia de Te**	1.44	68	S	Sb	09 24 53.2	+0.1
UESV	**Universidad de**	1.47	65	S	Sn	09 24 53.9	+0.2
UESV	**Universidad de**	1.47	65	P	Pn	09 24 33.9	-0.5
MTO3	**Montecristo**	1.58	29	eP	Pn	09 24 36.3	+0.2
MTO3	**Montecristo**	1.58	29	P	Pn	09 24 36.2	+0.1
MTO3	**Montecristo**	1.58	29	S	Sn	09 24 56.8	+0.1
LLGN	**La Laguna**	1.64	46	P	Pn	09 24 37.2	+0.4
LLGN	**La Laguna**	1.64	46	S	Sb	09 24 59.2	+0.2
ESQI	**Esquipulas**	1.73	27	P	Pn	09 24 38.5	+0.5
ESQI	**Esquipulas**	1.73	27	S	Sb	09 25 01.4	-0.2
PACA	**Pacayal**	1.84	75	S	Sn	09 25 03.4	+0.4
PACA	**Pacayal**	1.84	75	P	Pn	09 24 40.2	+0.6
APG	**El Apazote**	2.01	351	eP	Pn	09 24 42.4	+0.5
CNCH	**Conchagua**	2.28	83	S	Sn	09 25 14.8	+1.1
CSGN	**Cosiguina Volc**	2.53	90	S	Sn	09 25 20.1	+0.1
YUSH	**Yuscaran**	3.36	73	P	Pn	09 24 59.7	-0.7

IDC 10 09:30:35.1±5.8,**18°.54S**×**177°.70W,h0**^{km}**,mb4.3**/4,
mbtmp4.3/4,**Error ellipse: s-maj=116.3km**
s-min=47.3km az=61.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	20.16	192	P	P	09 35 11.4	+0.3
	10nm,1.0s,baz=250,slow=19,SNR=14						
	10nm,1.0s						
WRA	**Warramunga Arr**	45.18	260	P	P	09 38 54.7	+0.5
	1.7nm,0.3s,baz=97,slow=7.9,SNR=74						
	1.7nm,0.3s						
ASAR	**Alice Springs**	45.27	255	P	P	09 38 54.2	-0.6
	4.0nm,0.6s,baz=97,slow=7.6,SNR=73						
	4.0nm,0.6s						
FITZ	**Fitzroy Crossi**	53.59	261	P	P	09 39 58.1	-0.3
	1.1nm,0.4s,baz=111,slow=3.7,SNR=8.7						
	1.1nm,0.4s						
AKASG	**Malin Array Be**	141.43	332	PKP	PKPdf	09 50 06.5	-1.4
	0.9nm,0.4s,baz=48,slow=4.0,SNR=6.0						

*NEIC **10** 09:32:03.0±1.1,19°.13N±0°.04×67°.08W±0°.03,h10^{km}±1^{km},*
ML2.2/14,Md3.1/10(RSPR),Error ellipse: s-maj=6.2km
s-min=4.5km az=196.0
*SDD **10** 09:32:05.9±1.1,19°.09N×67°.10W,h31^{km}±25^{km},MD3.1,*
ML2.9,MW2.7,Presumed earthquake
*RSPR **10** 09:32:06.1,19°.05N×67°.21W,h8^{km}±2^{km},MD3.1/10*
ISC 10 09:32:02.6±1.7,**19°.13N**±0°.07×**67°.10W**±0°.04,**h9**^{km}±11^{km},
n42,σ**0^{s}.61**/48,**15C-5D,Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	0.66	181	Pg	Pb	09 32 17.1	+0.9
AGPR				IAML		09 32 26.2	
	127nm,0.4s						
AGPR				IAML		09 32 31.9	
	123nm,1.0s						
AGPR	**Aguadilla, PR**	0.66	181	⇓eP	Pb	09 32 17.1	+0.9
AGPR	**Aguadilla, PR**	0.66	181	eS	Sb	09 32 25.8	+0.3
AGPR	**Aguadilla, PR**	0.66	181	⇑ePg	Pb	09 32 17.2	+0.9
AGPR				⇓eSg	Sb	09 32 26.2	+0.7
AGPR				IAML		09 32 29.0	
	comp=N,749nm,0.3s						
IDE	**Isla Desecheo**	0.82	206		Pg	09 32 18.8	+0.4
IDE					Sg	09 32 28.8	-0.3
IDE	**Isla Desecheo**	0.82	206	⇓eP	Pg	09 32 18.8	+0.4
IDE	**Isla Desecheo**	0.82	206	eS	Sg	09 32 28.8	-0.3
AOPR	**Arecibo Observ**	0.84	157		Sb	09 32 31.1	+0.3
AOPR	**Arecibo Observ**	0.84	157		Pg	09 32 19.3	+0.5
AOPR				IAML		09 32 40.2	
	comp=N,89nm,0.2s						
AOPR	**Arecibo Observ**	0.84	157	⇑eP	Pb	09 32 19.9	+0.5
AOPR	**Arecibo Observ**	0.84	157	eS	Sb	09 32 31.1	+0.3
AOPR	**Arecibo Observ**	0.84	157	⇑ePg	Pb	09 32 20.1	+0.7
AOPR				⇑eSg	Sb	09 32 31.9	+1.0
AOPR				IAML		09 32 40.7	

	comp=N,764nm,0.2s						
UUPR	**Utuado, UPR, P**	**0.94**	**158**		**Pb**	**09 32 21.4**	**+0.4**
UUPR					**Sg**	**09 32 32.9**	**-0.1**
UUPR	**Utuado, UPR, P**	**0.94**	**158**		**Pb**	**09 32 21.3**	**+0.2**
UUPR				IAML		09 32 34.5	
	comp=N,339nm,0.3s						
UUPR				IAML		09 32 40.9	
	comp=N,437nm,0.4s						
UUPR	**Utuado, UPR, P**	**0.94**	**158**	⇑*e*P	**Pb**	**09 32 21.4**	**+0.4**
UUPR	**Utuado, UPR, P**	**0.94**	**158**	*e*S	**Sg**	**09 32 32.9**	**-0.1**
LSP	**Las Mesas**	**0.95**	**179**		**Pb**	**09 32 21.5**	**+0.3**
LSP					**Sb**	**09 32 34.0**	**+0.1**
LSP	**Las Mesas**	**0.95**	**179**	⇑*e*P	**Pb**	**09 32 21.5**	**+0.3**
LSP	**Las Mesas**	**0.95**	**179**	*e*S	**Sb**	**09 32 34.0**	**+0.1**
ECPR	**Experimental S**	**1.06**	**139**	Pn	**Pn**	**09 32 23.8**	**+0.1**
ECPR				IAML		09 32 42.0	
	comp=N,120nm,0.2s						
ECPR	**Experimental S**	**1.06**	**139**	⇑*e*P	**Pn**	**09 32 23.8**	**+0.1**
ECPR	**Experimental S**	**1.06**	**139**	*e*S	**Sn**	**09 32 39.0**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.12**	**181**		**Pb**	**09 32 23.7**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.12**	**181**	IAML		09 32 45.4	
	comp=N,47nm,0.8s						
CRPR	**Cabo Rojo, PR**	**1.12**	**181**	⇓*e*P	**Pb**	**09 32 23.9**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.12**	**181**	*e*S	**Sg**	**09 32 36.8**	**-1.7**
CRPR	**Cabo Rojo, PR**	**1.12**	**181**	⇑*e*Pg	**Pb**	**09 32 23.9**	**-0.1**
CRPR				⇑*e*Sg	**Sg**	**09 32 37.8**	**-0.7**
CRPR				IAML		09 32 39.0	
	comp=N,367nm,0.3s						
MLPR	**Magueyes Islan**	**1.15**	**178**	⇑*e*P	**Pb**	**09 32 24.4**	**-0.2**
MLPR	**Magueyes Islan**	**1.15**	**178**	*e*S	**Sb**	**09 32 38.7**	**-1.1**
MLPR	**Magueyes Islan**	**1.15**	**178**	⇑*e*Pg	**Pb**	**09 32 24.6**	**-0.1**
MLPR				⇑*e*Sg	**Sb**	**09 32 39.1**	**-0.7**
MLPR				IAML		09 32 49.7	
	comp=N,203nm,0.3s						
CELP	**Cerrillos**	**1.16**	**155**	Pn	**Pg**	**09 32 25.1**	**+0.3**
CELP				IAML		09 32 42.0	
	comp=N,60nm,0.2s						
OBIP	**Obispado Ponce**	**1.18**	**157**		**Sb**	**09 32 38.9**	**-1.5**
OBIP	**Obispado Ponce**	**1.18**	**157**		**Pb**	**09 32 25.0**	**0.0**
OBIP	**Obispado Ponce**	**1.18**	**157**	⇓*e*P	**Pb**	**09 32 25.0**	**0.0**
OBIP	**Obispado Ponce**	**1.18**	**157**	*e*S	**Sb**	**09 32 39.4**	**-1.0**
HUMP	**Col San Antoni**	**1.54**	**130**		**Pb**	**09 32 31.3**	**+0.1**
HUMP					**Sn**	**09 32 49.4**	**-0.9**
HUMP	**Col San Antoni**	**1.54**	**130**	IAML		09 32 55.1	
	comp=N,30nm,0.2s						
HUMP				IAML		09 32 55.7	
	comp=N,29nm,0.5s						
HUMP	**Col San Antoni**	**1.54**	**130**	⇑*e*P	**Pg**	**09 32 31.9**	**-0.1**
HUMP	**Col San Antoni**	**1.54**	**130**	*e*S	**Sb**	**09 32 51.1**	**+0.3**
MIDR	**Miches**	**1.85**	**266**	⇑*e*Pg	**Pb**	**09 32 36.7**	**+0.1**
MIDR				IAML		09 33 05.0	
	comp=N,36nm,2.9s						
DR12	**Loma Pena Alta**	**2.19**	**261**	Pn	**Pn**	**09 32 39.8**	**+0.5**
HATOM	**Hato Mayor del**	**2.19**	**261**	⇑*e*Pg	**Pb**	**09 32 41.9**	**-0.5**
HATOM				IAML		09 33 17.9	
	comp=N,82nm,0.3s						

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*IDC **10** 09:39:56.3±1.4, 36°.15N×142°.21E, h0^{km}, mb3.8/8, mbtmp3.9/12, ML3.5/4, Error ellipse: s-maj=38.1km s-min=18.8km az=74.0*

*JMA **10** 09:40:00.4±0.3, 36°.2N±0°.6×14°2E±°, h60^{km}, MV3.6/38, FAR E OFF IBARAKI PREF*

*NEIC **10** 09:40:01.5±0.9, 36°.16N±0°.08×142°.2E±0°.1, h31^{km}±6^{km}, mb4.3/8, Error ellipse: s-maj=15.7km s-min=10.8km az=108.0*

ISC 10 09:39:59.4±0.8**, 36°.10N**±0°.05×**142°.13E**±0°.07**, h23**^{km}**, n61, σ1^s.56**/58**, mb4.1**/12**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**1.27**	**282**	*i* P	**Pn**	**09 40 20.2**	**-1.5**
JHYU				S	**Sn**	**09 40 35.0**	**-3.1**
JIHU	**Itakohorinouch**	**1.31**	**265**	P	**Pb**	**09 40 21.6**	**-1.7**
JIHU				S	**Sn**	**09 40 37.3**	**-1.6**
JHO	**Hitachi**	**1.36**	**293**	*i* P	**Pn**	**09 40 20.4**	**-2.5**
ONAJ	**Iwakimizuishiy**	**1.47**	**314**	P	**Pn**	**09 40 22.2**	**-2.3**
JYT	**Yasato**	**1.57**	**275**	Pn	**Pb**	**09 40 27.0**	**-0.7**
JFK	**Kawauchi**	**1.62**	**322**	P	**Pn**	**09 40 25.1**	**-1.5**
BSO1	**Boso 1**	**1.72**	**213**	P	**Pb**	**09 40 29.1**	**-0.9**
BSO3	**Boso 3**	**1.85**	**226**	P	**Pb**	**09 40 30.7**	**-1.6**
JOTO	**OTAMA OYAMA**	**2.05**	**316**	*i* P	**Pn**	**09 40 31.8**	**-0.7**
JMM	**Marumori**	**2.06**	**329**	*e*P	**Pn**	**09 40 31.5**	**-1.2**
JAG	**Ashikaga**	**2.19**	**279**	*i* P	**Pn**	**09 40 32.9**	**-1.4**
JFY	**Yanaizu**	**2.35**	**305**	P	**Pn**	**09 40 35.7**	**-0.8**
JOD2	**Odawara 2**	**2.61**	**252**	P	**Pn**	**09 40 40.1**	**-0.1**
JRY	**Ryogami san**	**2.62**	**269**	P	**Pn**	**09 40 39.1**	**-1.1**
JMK	**Ichinoseki**	**2.94**	**346**	P	**Pn**	**09 40 43.6**	**-1.1**
JYN	**Shimob**	**2.98**	**259**	P	**Pn**	**09 40 45.0**	**-0.3**
MJAR	**Matsushiro Arr**	**3.20**	**279**	Pn	**Pn**	**09 40 47.8**	**-0.5**
	3.2nm,0.3s,baz=106,slow=8.5,SNR=128						
	17nm,0.4s						
MJAR	**Matsushiro Arr**	**3.20**	**279**		**Pn**	**09 40 48.4**	**+0.1**
MAJO	**Matsushiro**	**3.20**	**279**		**Pn**	**09 40 48.5**	**+0.2**
MAJO	**Matsushiro**	**3.20**	**279**	P	**Pn**	**09 40 48.6**	**+0.3**
MJB9	**Matsu-Tunnel**	**3.20**	**279**		**Pn**	**09 40 49.2**	**+0.9**
JHJ2	**Mitsune**	**3.54**	**213**	Pn	**Pn**	**09 40 54.4**	**+1.5**
JHJ2	**Mitsune**	**3.54**	**213**	P	**Pb**	**09 40 57.1**	**-4.2**
JHJ	**Hachijo jima 2**	**3.54**	**214**	Pn	**Pn**	**09 40 53.8**	**+0.8**
	18nm,0.3s,baz=329,slow=23,SNR=7.6						
JHJ				Sn	**Sn**	**09 41 32.5**	**-1.7**
	54nm,0.3s,baz=52,slow=23,SNR=9.1						
	85nm,0.4s						
JGF	**Kuroka**	**3.91**	**264**		**Pn**	**09 40 59.5**	**+1.4**
JGF	**Kuroka**	**3.91**	**264**	P	**Pn**	**09 40 59.7**	**+1.6**
INU	**Inuyama**	**4.22**	**261**		**Pn**	**09 41 03.6**	**+1.2**
INU	**Inuyama**	**4.22**	**261**	P	**Pn**	**09 41 04.3**	**+1.9**
ERM	**Erimo**	**5.96**	**7**	Pn	**Pn**	**09 41 25.7**	**-0.6**
JMN	**Monobe**	**7.18**	**253**	Pn	**Pn**	**09 41 44.5**	**+1.5**
JMN	**Monobe**	**7.18**	**253**	P	**Pn**	**09 41 46.2**	**+3.2**
ASAJ	**Asahikawa**	**8.02**	**2**	Pn	**Pn**	**09 41 54.4**	**0.0**
	1.2nm,0.3s,baz=225,slow=11,SNR=7.1						
ASAJ				Sn	**Sn**	**09 43 19.7**	**-4.7**
	0.5nm,0.3s,baz=58,slow=30,SNR=4.2						
	3.6nm,0.3s						
JKA	**Kamikawa-asahi**	**8.02**	**2**		**Pn**	**09 41 54.8**	**+0.3**
KSRS	**Korea Array**	**11.47**	**281**	Pn	**Pn**	**09 42 44.5**	**+2.7**
	0.1nm,0.3s,baz=84,slow=13,SNR=5.2						
	1.4nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**27.18**	**120**	T	T	10 14 17.7	
	baz=312,slow=75,SNR=19						
H11N1	**WAKE ISLAND Hy**	**27.18**	**120**	T	T	10 14 21.2	
	baz=312,slow=75,SNR=19						
H11N3	**WAKE ISLAND Hy**	**27.19**	**120**	T	T	10 14 18.4	
	baz=312,slow=75,SNR=13						
ENH	**Enshi**	**27.85**	**267**	P	**P**	**09 45 47.0**	**-0.3**
H11S1	**WAKE ISLAND Hy**	**27.87**	**122**	T	T	10 15 13.8	
	baz=314,slow=76,SNR=26						
H11S3	**WAKE ISLAND Hy**	**27.87**	**122**	T	T	10 15 11.7	
	baz=314,slow=76,SNR=21						
H11S2	**WAKE ISLAND Hy**	**27.89**	**122**	T	T	10 15 09.4	
	baz=314,slow=76,SNR=16						
SONM	**Songino Array**	**28.79**	**305**	P	**P**	**09 45 56.0**	**+0.4**
	1.1nm,0.5s,baz=101,slow=7.7,SNR=4.7						
	1.1nm,0.5s						
ZAA0	**Zalesovo Array**	**42.97**	**313**	P	**P**	**09 47 57.2**	**+0.7**
ZALV	**Zalesovo Beam**	**42.97**	**313**	P	**P**	**09 47 55.9**	**-0.6**
	1.3nm,0.6s,baz=89,slow=9.3,SNR=4.8						
	1.3nm,0.6s						
ZALV	**Zalesovo Beam**	**42.97**	**313**	P	**P**	**09 47 57.1**	**+0.6**
MK31	**Makanchi Array**	**45.11**	**303**	P	**P**	**09 48 14.4**	**+0.6**
MKAR	**Makanchi Array**	**45.11**	**303**	P	**P**	**09 48 14.7**	**+0.9**
	1.8nm,0.6s,baz=86,slow=11,SNR=12						
	1.8nm,0.6s						
MKAR	**Makanchi Array**	**45.11**	**303**	P	**P**	**09 48 14.3**	**+0.5**
KURK	**Kurchatov**	**46.97**	**309**	P	**P**	**09 48 28.8**	**+0.5**
KURK				IAmb	IAmb	09 48 45.6	
	comp=Z,2.4nm,0.7s						
KURBB	**Kurchatov Arra**	**47.03**	**309**	P	**P**	**09 48 29.1**	**+0.2**
	comp=Z,1.6nm,0.5s,baz=82,slow=7.8,SNR=5.0						
	comp=Z,1.6nm,0.5s						
BVAR	**Borovoye Array**	**51.63**	**313**	P	**P**	**09 49 04.8**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=98,slow=8.9,SNR=2.5						
	comp=Z,0.5nm,0.5s						
KK31	**Karatay Array**	**54.10**	**301**	P	**P**	**09 49 23.2**	**+0.9**
KK31				IAmb	IAmb	09 49 30.7	
	comp=Z,4.7nm,1.3s						
KKAR	**Karatay Array**	**54.10**	**301**	P	**P**	**09 49 23.1**	**+0.7**
WB0	**Warramunga Arr**	**56.04**	**189**	P	**P**	**09 49 38.0**	**+1.5**
WR0	**Warramunga Arr**	**56.21**	**189**		**P**	**09 49 38.6**	**+0.9**
WR0				IAmb	IAmb	09 50 00.1	
	comp=Z,2.9nm,1.0s						
WRA	**Warramunga Arr**	**56.22**	**189**	P	**P**	**09 49 39.3**	**+1.6**
	comp=Z,0.3nm,0.5s,baz=7.3,slow=7.0,SNR=5.7						
	comp=Z,0.3nm,0.5s						
AB31	**Akbulak array**	**58.98**	**311**	IAmb	IAmb	09 49 57.9	
	comp=Z,1.6nm,0.7s						
ABKAR	**Akbulak array**	**58.98**	**311**		**P**	**09 49 57.5**	**+0.5**
ASAR	**Alice Springs**	**59.95**	**189**	P	**P**	**09 50 04.1**	**+0.3**
	comp=Z,0.1nm,0.5s,baz=20,slow=12,SNR=3.7						
	comp=Z,0.1nm,0.5s						
FINES	**FINESS Array B**	**69.91**	**333**	P	**P**	**09 51 09.7**	**+1.5**
AKASG	**Malin Array Be**	**75.39**	**323**	P	**P**	**09 51 41.8**	**+0.8**
	comp=Z,0.6nm,0.4s,baz=45,slow=5.8,SNR=3.2						
	comp=Z,0.6nm,0.4s						

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*SOME **10** 09:41:05.8, 44°.77N×81°.92E, h20^{km}*

*NNC **10** 09:41:06.2±0.7, 44°.71N×81°.81E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=9.4km s-min=2.2km az=120.0, Suspected Mining explosion.*

ISC 10 09:41:05.9±1.4**, 44°.66N**±0°.06×**81°.81E**±0°.09**, h0**^{km}**, n15, σ0^s.64**/23**, 1C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**1.60**	**221**	P	**Pg**	**09 41 36.1**	**-0.5**
	2.8nm,0.3s						
KTMS				S	**Sg**	**09 41 58.2**	**+0.8**
	16nm,0.3s						
KTMS	**Ketmen**	**1.60**	**221**	*e*P	**Pg**	**09 41 36.1**	**-0.5**
	2.4nm,0.1s						
KTMS				*e*S	**Sg**	**09 41 58.2**	**+0.8**
	13nm,0.2s						
KNOS	**Konyrlen**	**1.90**	**262**	Pg	**Pg**	**09 41 42.7**	**+0.3**
	13nm,0.3s						
KNOS				Lg	Lg	09 42 09.1	
	26nm,0.3s						
MAKZ	**Makanchi**	**2.15**	**3**	⇓Pn	**Pn**	**09 41 42.7**	**-0.4**
	2.4nm,0.3s						
MAKZ				⇓Sn	**Sn**	**09 42 10.7**	**+0.1**
	5.7nm,0.3s						
MK31	**Makanchi Array**	**2.16**	**9**	⇓Pn	**Pn**	**09 41 43.0**	**-0.2**
	1.4nm,0.2s,baz=184,slow=14,SNR=183						
MK31				⇑Sn	**Sn**	**09 42 10.7**	**-0.1**
	1.2nm,0.2s,baz=191,slow=30,SNR=18						
SHLS	**Shalkode**	**2.26**	**229**	Pg	**Pn**	**09 41 44.8**	**+0.1**
	22nm,0.2s						
SHLS				Lg	Lg	09 42 12.9	
	23nm,0.3s						
SHLS	**Shalkode**	**2.26**	**229**	*e*P	**Pn**	**09 41 44.8**	**+0.1**
	22nm,0.2s						
SHLS				*e*S	**Sn**	**09 42 12.8**	**-0.6**
	25nm,0.2s						
BLB	**Baldybastay**	**2.45**	**258**	Pg	**Pb**	**09 41 51.8**	**+0.8**
	12nm,0.2s						
BLB				Lg	Lg	09 42 24.9	
	20nm,0.3s						
UZB	**Uzynbulak**	**2.52**	**234**	Pg	**Pb**	**09 41 52.7**	**+0.6**
	11nm,0.2s						
UZB				Lg	Lg	09 42 26.3	
	5.0nm,0.5s						
UZB	**Uzynbulak**	**2.52**	**234**	*e*P	**Pb**	**09 41 52.7**	**+0.6**
	11nm,0.2s						
UZB				*e*S	**Sg**	**09 42 26.3**	**-0.5**
	5.0nm,0.5s						
KPKS	**Kokpek**	**2.55**	**243**	Pg	**Pb**	**09 41 52.8**	**+0.2**
	0.3nm,0.2s						
KPKS				Lg	Lg	09 42 26.5	
	10nm,0.4s						
KPKS	**Kokpek**	**2.55**	**243**	*e*P	**Pb**	**09 41 52.8**	**+0.2**
	0.3nm,0.2s						
KPKS				*e*S	**Sg**	**09 42 26.5**	**-1.3**
	10nm,0.4s						
ARXS	**Arharly**	**2.89**	**263**	Pg	**Pb**	**09 41 59.2**	**+0.9**
	3.9nm,0.5s						
ARXS				Lg	Lg	09 42 37.8	
	16nm,0.7s						
ARXS	**Arharly**	**2.89**	**263**	*e*P	**Pb**	**09 41 59.2**	**+0.9**
	2.4nm,0.3s						
ARXS				*e*S	**Sg**	**09 42 37.8**	**-0.8**
	15nm,0.3s						
SATY	**Saty**	**2.93**	**238**	Pg	**Pb**	**09 41 59.6**	**+0.4**
	3.9nm,0.2s						
SATY				Lg	Lg	09 42 38.2	
	13nm,0.3s						

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*NEIC **10** 09:42:03.0±1.1, 19°.16N±0°.04×67°.21W±0°.02, h10^{km}±2^{km}, ML2.9/24, Md3.4/10(RSPR), Error ellipse: s-maj=6.5km s-min=3.5km az=14.0*

*RSPR **10** 09:42:03.6, 19°.25N×67°.36W, h11^{km}±12^{km}, MD3.4/10*

*OSPL **10** 09:42:04.2±0.8, 19°.16N×67°.34W, h8^{km}±6^{km}, ML2.6, Presumed earthquake*

*SDD **10** 09:42:04.3±1.5, 19°.26N×67°.01W, h34^{km}±227^{km}, MD3.2, ML3.2, MW3.1, Presumed earthquake*

ISC 10 09:42:01.0±1.5**, 19°.21N**±0°.06×**67°.23W**±0°.03**, h3**^{km}±11^{km}**, n58, σ0^s.52**/68**, 19C-7D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.75**	**171**	Pg	**Pb**	**09 42 16.4**	**-0.1**
AGPR				IAML		09 42 29.0	
	520nm,0.3s						
AGPR				IAML		09 42 30.2	
	437nm,0.3s						
AGPR	**Aguadilla, PR**	**0.75**	**171**	⇓*e*P	**Pb**	**09 42 17.2**	**+0.6**
AGPR	**Aguadilla, PR**	**0.75**	**171**	*e*S	**Sb**	**09 42 28.2**	**+1.0**
AGPR	**Aguadilla, PR**	**0.75**	**171**	⇑*e*Pg	**Pb**	**09 42 17.1**	**+0.6**
AGPR				⇑*e*Sg	**Sb**	**09 42 27.7**	**+0.6**
AGPR				IAML		09 42 29.4	
	comp=N,362nm,0.3s						
AGPR	**Aguadilla, PR**	**0.75**	**171**	*i* P	**Pb**	**09 42 17.1**	**+0.6**
AGPR				*e*S	**Sb**	**09 42 27.1**	**-0.1**
AGPR				IAML		09 42 29.0	
	comp=Z,243nm,0.2s						
IDE	**Isla Desecheo**	**0.85**	**196**		**Pb**	**09 42 18.7**	**+0.3**
IDE					**Sb**	**09 42 29.8**	**-0.4**
IDE	**Isla Desecheo**	**0.85**	**196**	⇑*e*P	**Pb**	**09 42 18.7**	**+0.3**
IDE	**Isla Desecheo**	**0.85**	**196**	*e*S	**Sb**	**09 42 29.8**	**-0.4**
AOPR	**Arecibo Observ**	**0.97**	**152**		**Pn**	**09 42 20.9**	**-0.6**
AOPR	**Arecibo Observ**	**0.97**	**152**		**Sb**	**09 42 33.9**	**+0.2**
AOPR				IAML		09 42 38.4	
	comp=N,370nm,0.2s						
AOPR				IAML		09 42 43.0	
	comp=E,565nm,0.3s						
AOPR	**Arecibo Observ**	**0.97**	**152**	⇑*e*P	**Pn**	**09 42 20.9**	**-0.6**
AOPR	**Arecibo Observ**	**0.97**	**152**	*e*S	**Sb**	**09 42 34.3**	**+0.6**
AOPR	**Arecibo Observ**	**0.97**	**152**	⇑*e*Pg	**Pn**	**09 42 20.9**	**-0.6**
AOPR				⇑*e*Sg	**Sg**	**09 42 31.6**	**-0.5**
AOPR				IAML		09 42 38.6	
	comp=N,3µm,0.3s						
EMPR	**Esperanza - Ma**	**0.98**	**138**		**Sn**	**09 42 36.6**	**+0.5**
EMPR	**Esperanza - Ma**	**0.98**	**138**	Pg	**Pn**	**09 42 21.0**	**-0.6**
EMPR				IAML		09 42 41.0	
	comp=N,251nm,0.8s						
EMPR				IAML		09 42 45.4	
	comp=N,238nm,0.9s						
EMPR	**Esperanza - Ma**	**0.98**	**138**	⇓*e*P	**Pn**	**09 42 21.1**	**-0.5**
EMPR	**Esperanza - Ma**	**0.98**	**138**	*e*S	**Sn**	**09 42 36.6**	**+0.5**
PRSN	**Puerto Rico Se**	**0.99**	**175**		**Sb**	**09 42 35.0**	**+0.8**
PRSN	**Puerto Rico Se**	**0.99**	**175**	Pg	**Pb**	**09 42 20.7**	**-0.1**
PRSN	**Puerto Rico Se**	**0.99**	**175**	⇑*e*P	**Pb**	**09 42 21.1**	**+0.4**
PRSN	**Puerto Rico Se**	**0.99**	**175**	*e*S	**Sb**	**09 42 35.0**	**+0.8**
LSP	**Las Mesas**	**1.04**	**173**		**Pb**	**09 42 21.6**	**0.0**
LSP					**Sb**	**09 42 35.4**	**-0.2**
LSP	**Las Mesas**	**1.04**	**173**	⇑*e*P	**Pb**	**09 42 21.6**	**0.0**
LSP	**Las Mesas**	**1.04**	**173**	*e*S	**Sb**	**09 42 35.4**	**-0.2**
UUPR	**Utuado, UPR, P**	**1.07**	**153**	Pg	**Pn**	**09 42 22.8**	**-0.1**
UUPR	**Utuado, UPR, P**	**1.07**	**153**	⇑*e*P	**Pn**	**09 42 22.7**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.20**	**175**		**Pg**	**09 42 24.0**	**0.0**
CRPR				IAML		09 42 41.2	
	comp=N,194nm,0.4s						
CRPR	**Cabo Rojo, PR**	**1.20**	**175**		**Sb**	**09 42 40.4**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.20**	**175**	⇓*e*P	**Pg**	**09 42 24.0**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.20**	**175**	*e*S	**Sb**	**09 42 40.3**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.20**	**175**	⇑*e*Pg	**Pg**	**09 42 24.1**	**+0.1**
CRPR				⇑*e*Sg	**Sb**	**09 42 40.4**	**+0.1**
CRPR				IAML		09 42 47.0	
	comp=N,1µm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.20**	**175**	*i* P	**Pn**	**09 42 24.5**	**-0.2**
CRPR				*e*S	**Sb**	**09 42 40.3**	**0.0**
CRPR				IAML		09 42 40.9	
	comp=Z,133nm,0.5s						
ECPR	**Experimental S**	**1.21**	**137**		**Pn**	**09 42 25.0**	**+0.2**
ECPR				IAML		09 42 47.0	
	comp=Z,363nm,0.2s						
ECPR	**Experimental S**	**1.21**	**137**	⇑*e*P	**Pn**	**09 42 24.6**	**-0.1**
ECPR	**Experimental S**	**1.21**	**137**	*e*S	**Sn**	**09 42 41.8**	**+0.2**
MLPR	**Magueyes Islan**	**1.25**	**172**	⇓*e*P	**Pn**	**09 42 24.6**	**-0.6**
MLPR	**Magueyes Islan**	**1.25**	**172**	*e*S	**Sb**	**09 42 41.9**	**+0.3**
MLPR	**Magueyes Islan**	**1.25**	**172**	⇑*e*Pg	**Pn**	**09 42 24.7**	**-0.6**
MLPR				⇓*e*Sg	**Sg**	**09 42 39.6**	**-1.4**
MLPR				IAML		09 42 50.0	
	comp=N,1µm,0.3s						
GBPR	**Guanica, Bosqu**	**1.27**	**165**		**Pg**	**09 42 25.9**	**+0.6**
GBPR	**Guanica, Bosqu**	**1.27**	**165**	⇓*e*P	**Pg**	**09 42 25.9**	**+0.6**
OBIP	**Obispado Ponce**	**1.30**	**153**		**Pg**	**09 42 26.4**	**+0.4**
OBIP				IAML		09 42 48.3	
	comp=E,163nm,0.3s						
OBIP	**Obispado Ponce**	**1.30**	**153**	⇑*e*P	**Pg**	**09 42 26.2**	**+0.3**
GCPR	**Guaynabo City**	**1.41**	**129**		**Sn**	**09 42 46.0**	**-0.6**
GCPR	**Guaynabo City**	**1.41**	**129**		**Pg**	**09 42 28.4**	**+0.5**
GCPR	**Guaynabo City**	**1.41**	**129**	⇓*e*P	**Pg**	**09 42 28.0**	**+0.1**
GCPR	**Guaynabo City**	**1.41**	**129**	*e*S	**Sn**	**09 42 46.0**	**-0.6**
SJG	**San Juan**	**1.50**	**137**		**Pg**	**09 42 30.7**	**+1.1**
SJG				IAML		09 42 58.6	
	comp=E,99nm,0.3s						
SJG	**San Juan**	**1.50**	**137**	⇑*e*P	**Pb**	**09 42 29.0**	**-0.4**
SJG	**San Juan**	**1.50**	**137**	*e*S	**Sg**	**09 42 49.1**	**+0.1**
SJG	**San Juan**	**1.50**	**137**	*i* P	**Pg**	**09 42 30.7**	**+1.1**
SJG				*e*S	**Sg**	**09 42 49.0**	**0.0**
SJG				IAML		09 42 52.9	
	comp=Z,55nm,0.3s						
HUMP	**Col San Antoni**	**1.68**	**129**		**Pb**	**09 42 32.2**	**-0.4**
HUMP					**Sb**	**09 42 53.8**	**-0.4**
HUMP	**Col San Antoni**	**1.68**	**129**	IAML		09 42 59.9	
	comp=Z,81nm,0.3s						
HUMP	**Col San Antoni**	**1.68**	**129**	⇑*e*P	**Pb**	**09 42 32.2**	**-0.4**
HUMP	**Col San Antoni**	**1.68**	**129**	*e*S	**Sb**	**09 42 53.8**	**-0.4**
MIDR	**Miches**	**1.74**	**263**	⇑*e*Pg	**Pb**	**09 42 33.9**	**+0.4**
MIDR				⇑*e*Pg	**Pg**	**09 42 34.3**	**0.0**
MIDR				IAML		09 42 58.8	
	comp=N,37nm,1.9s						
MIDR				IAML		09 43 03.6	
	comp=N,44nm,0.4s						
DR12	**Loma Pena Alta**	**2.08**	**259**	Pn	**Pb**	**09 42 38.7**	**-0.7**
HATOM	**Hato Mayor del**	**2.08**	**259**	⇑*e*Pg	**Pb**	**09 42 38.7**	**-0.7**
HATOM				IAML		09 43 11.5	
	comp=N,349nm,0.3s						
SDDR	**Presa de Saban**	**3.85**	**267**		**Pn**	**09 43 02.1**	**+1.0**
SDDR				IAML		09 44 07.4	
	comp=N,32nm,0.8s						

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*IDC **10** 09:46:41.3±1.1, 36°.10N×141°.95E, h0^{km}, mb3.8/9, mbtmp3.8/13, ML3.4/4, Error ellipse: s-maj=26.5km s-min=17.3km az=87.0*

*NEIC **10** 09:46:45.0±1.8, 36°.12N±0°.08×142°.13E±0°.07, h35^{km}±2^{km}, mb4.2/7, Error ellipse: s-maj=15.1km s-min=6.1km az=214.0*

*JMA **10** 09:46:44.6±0.3, 36°.2N±0°.6×14°2E±°, h55^{km}, MV3.6/38, FAR E OFF IBARAKI PREF*

*NIED **10** 09:46:44.6, 36°.22N×141°.93E, h55^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.77; $M_{\theta\theta}$-0.05; $M_{\phi\phi}$-3.72; $M_{r\theta}$1.99; $M_{\theta\phi}$-1.39; $M_{\phi r}$2.15; Fault plane solution: $M_0$4.95000×10^{14} NP1: ϕ_s183.00000°, δ30.00000°, λ64.00000°. NP2: ϕ_s33.00000°, δ64.00000°, λ104.00000°.*

ISC 10 09:46:44.1±0.8**, 36°.17N**±0°.06×**141°.98E**±0°.07**, h23**^{km}**, n54, σ1^s.04**/53**, mb4.0**/13**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**1.14**	**279**	P	**Pn**	**09 47 04.0**	**-0.6**
JHYU				S	**Sn**	**09 47 19.3**	**-0.3**
JIHU	**Itakohorinouch**	**1.20**	**261**	P	**Pb**	**09 47 05.5**	**-0.7**
JIHU				S	**Sb**	**09 47 21.3**	**+0.1**
JHO	**Hitachi**	**1.22**	**292**	P	**Pn**	**09 47 04.4**	**-1.4**
ONAJ	**Iwakimizuishiy**	**1.33**	**315**	P	**Pn**	**09 47 06.5**	**-0.9**
JFK	**Kawauchi**	**1.49**	**324**	*i* P	**Pn**	**09 47 08.9**	**-0.6**
BSO1	**Boso 1**	**1.72**	**209**	P	**Pn**	**09 47 12.9**	**+0.7**
BSO3	**Boso 3**	**1.82**	**222**	P	**Pn**	**09 47 14.8**	**+1.0**
JOTO	**OTAMA OYAMA**	**1.92**	**317**	*i* P	**Pn**	**09 47 16.0**	**+0.6**
JMM	**Marumori**	**1.94**	**331**	P	**Pn**	**09 47 15.1**	**-0.6**
JAG	**Ashikaga**	**2.06**	**278**	*i* P	**Pn**	**09 47 16.9**	**-0.5**
JFY	**Yanaizu**	**2.21**	**305**	P	**Pn**	**09 47 19.7**	**+0.3**
JKT	**Katashina**	**2.28**	**286**	*i* P	**Pn**	**09 47 20.8**	**+0.3**
JRY	**Ryogami san**	**2.50**	**267**	P	**Pn**	**09 47 23.2**	**-0.2**
JRY				S	**Sn**	**09 47 52.7**	**-0.5**
JOD2	**Odawara 2**	**2.52**	**250**	P	**Pn**	**09 47 24.3**	**+0.6**
JYN	**Shimob**	**2.87**	**258**	P	**Pn**	**09 47 29.8**	**+1.2**
MJAR	**Matsushiro Arr**	**3.07**	**278**	Pn	**Pn**	**09 47 31.3**	**+0.1**
	2.5nm,0.3s,baz=105,slow=9.1,SNR=118						
	23nm,0.6s						
MJAR	**Matsushiro Arr**	**3.07**	**278**		**Pn**	**09 47 32.1**	**+0.9**
MAJO	**Matsushiro**	**3.07**	**278**		**Pn**	**09 47 32.3**	**+1.1**
MJB9	**Matsu-Tunnel**	**3.07**	**278**		**Pn**	**09 47 33.3**	**+2.0**
JHJ	**Hachijo jima 2**	**3.54**	**211**	Pn	**Pn**	**09 47 37.6**	**-0.1**
	8.4nm,0.3s,baz=58,slow=22,SNR=11						
JHJ				Sn	**Sn**	**09 48 17.6**	**-1.3**
	46nm,0.3s,baz=106,slow=24,SNR=6.2						
	46nm,0.3s						
JGF	**Kuroka**	**3.80**	**263**		**Pn**	**09 47 43.5**	**+2.3**
INU	**Inuyama**	**4.12**	**260**		**Pn**	**09 47 47.0**	**+1.3**
ERM	**Erimo**	**5.91**	**9**	Pn	**Pn**	**09 48 10.4**	**+0.2**
JMN	**Monobe**	**7.09**	**252**	Pn	**Pn**	**09 48 26.1**	**-0.3**
ASAJ	**Asahikawa**	**7.95**	**3**	Pn	**Pn**	**09 48 38.4**	**+0.1**
	0.9nm,0.3s,baz=241,slow=12,SNR=6.5						
ASAJ				Sn	**Sn**	**09 50 05.9**	**-1.5**
	0.6nm,0.3s,baz=66,slow=20,SNR=2.1						
	2.9nm,0.3s						
JKA	**Kamikawa-asahi**	**7.95**	**3**		**Pn**	**09 48 37.8**	**-0.5**
USRK	**Ussuriysk Ar.**	**11.07**	**319**	Pn	**Pn**	**09 49 20.5**	**-0.5**
	0.2nm,0.3s,baz=122,slow=13,SNR=2.0						
	0.9nm,0.5s						
KSRS	**Korea Array**	**11.35**	**281**	Pn	**Pn**	**09 49 28.1**	**+3.4**
	0.1nm,0.3s,baz=92,slow=13,SNR=5.2						
H11N2	**WAKE ISLAND Hy**	**27.32**	**120**	T	T	10 21 02.6	
	baz=312,slow=75,SNR=8.7						
H11N1	**WAKE ISLAND Hy**	**27.32**	**120**	T	T	10 21 08.4	
	baz=312,slow=75,SNR=8.5						
H11N3	**WAKE ISLAND Hy**	**27.33**	**120**	T	T	10 21 05.1	
	baz=312,slow=75,SNR=8.0						
H11S1	**WAKE ISLAND Hy**	**28.01**	**122**	T	T	10 21 55.9	
	baz=314,slow=76,SNR=11						
H11S3	**WAKE ISLAND Hy**	**28.01**	**122**	T	T	10 21 56.0	
	baz=314,slow=76,SNR=12						
H11S2	**WAKE ISLAND Hy**	**28.02**	**122**	T	T	10 21 55.7	
	baz=314,slow=76,SNR=11						
SONM	**Songino Array**	**28.65**	**305**	P	**P**	**09 52 39.8**	**+0.7**
	1.9nm,0.7s,baz=94,slow=12,SNR=5.6						
	1.9nm,0.7s						
SONM	**Songino Array**	**28.65**	**305**	P	**P**	**09 52 38.4**	**-0.7**
SONM				IAmb	IAmb	09 52 53.9	
	comp=Z,3.0nm,1.1s						
ZAA0	**Zalesovo Array**	**42.84**	**313**	P	**P**	**09 54 39.3**	**-0.8**
ZALV	**Zalesovo Beam**	**42.84**	**313**	P	**P**	**09 54 40.3**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=87,slow=7.6,SNR=6.4						
	comp=Z,1.6nm,0.7s						
ZALV	**Zalesovo Beam**	**42.84**	**313**	P	**P**	**09 54 39.3**	**-0.8**
MK31	**Makanchi Array**	**44.97**	**303**	P	**P**	**09 54 57.5**	**+0.1**
MK31				IAmb	IAmb	09 55 00.9	
	comp=Z,2.1nm,0.8s						
MKAR	**Makanchi Array**	**44.97**	**303**	P	**P**	**09 54 58.6**	**+1.2**
	comp=Z,1.7nm,0.6s,baz=84,slow=9.4,SNR=16						
	comp=Z,1.7nm,0.6s						
MKAR	**Makanchi Array**	**44.97**	**303**	P	**P**	**09 54 57.3**	**-0.1**
KURK	**Kurchatov**	**46.83**	**309**		**P**	**09 55 12.2**	**+0.2**
KURK				IAmb	IAmb	09 55 13.1	
	comp=Z,3.4nm,0.9s						
KURBB	**Kurchatov Arra**	**46.90**	**309**	P	**P**	**09 55 12.9**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=85,slow=7.9,SNR=14						
	comp=Z,1.6nm,0.5s						
ILAR	**Eielson Array**	**49.98**	**32**	P	**P**	**09 55 37.8**	**+1.8**
	comp=Z,0.4nm,0.9s,baz=236,slow=6.2,SNR=3.0						
	comp=Z,0.4nm,0.9s						
BVAR	**Borovoye Array**	**51.49**	**313**	P	**P**	**09 55 48.9**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=116,slow=4.9,SNR=3.6						
	comp=Z,0.5nm,0.5s						
KK31	**Karatay Array**	**53.96**	**301**	P	**P**	**09 56 04.8**	**-1.3**
KK31				IAmb	IAmb	09 56 11.9	
	comp=Z,3.4nm,1.1s						
KKAR	**Karatay Array**	**53.96**	**301**	P	**P**	**09 56 04.9**	**-1.1**
WB2	**Warramunga Arr**	**56.27**	**189**	P	**P**	**09 56 21.2**	**-1.7**
WRA	**Warramunga Arr**	**56.27**	**189**	P	**P**	**09 56 22.9**	**0.0**
	comp=Z,0.3nm,0.7s,baz=7.8,slow=7.2,SNR=2.1						
	comp=Z,0.3nm,0.7s						
AB31	**Akbulak array**	**58.85**	**311**	P	**P**	**09 56 41.1**	**+0.3**
AB31				IAmb	IAmb	09 56 41.9	

	comp=Z,2.1nm,0.8s						
ABKAR	Akbulak array	58.85	311	P	P	09 56 41.0	+0.2
ASAR	Alice Springs	60.00	189	P	P	09 56 48.8	-0.1
	comp=Z,0.2nm,0.5s,baz=355,slow=5.2,SNR=3.5						
	comp=Z,0.2nm,0.5s						
AKASG	Malin Array Be	75.26	323	P	P	09 58 25.9	+0.9
	comp=Z,0.6nm,0.4s,baz=48,slow=6.1,SNR=4.7						
	comp=Z,0.6nm,0.4s						

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*IDC **10** 09:55:40.4±1.0, 37°.22N×71°.53E, h0km, mb3.8/9, mbtmp3.7/14, ML3.0/5, Error ellipse: s-maj=21.5km s-min=17.8km az=123.0*

*NNC **10** 09:55:45.5±3.3, 37°.50N×71°.03E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=25.0km s-min=22.0km az=172.0*

ISC 10 09:55:45.2±0.6, 37°.16N±0°.06×71°.45E±0°.08, h35km, n24, σ2ˢ.33/30, mb3.7/8, 1C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMU	Jammu	5.18	147	eP	Pn	09 57 01.0	-0.3
JMU				eS	Sn	09 58 04.0	+3.2
JMU				IAML		09 58 24.8	
	comp=E,340nm,0.6s						
JMU				IAML		09 58 26.8	
	comp=N,275nm,0.8s						
ALCI	Alchi Leh	5.52	121	eP	Pn	09 57 01.4	-3.8
ALCI				eS	Sn	09 58 03.0	-4.6
AAK	Ala-Archa	5.95	22	Pn	Pn	09 57 11.9	+1.1
	comp=N,1.7nm,0.3s,baz=206,slow=7.1,SNR=14						
AAK				Sn	Sn	09 58 22.2	+4.4
	baz=315,slow=20						
	comp=N,4.9nm,0.5s						
AAK	Ala-Archa	5.95	22	⇓Pn	Pn	09 57 12.9	+2.0
	comp=N,5.9nm,0.8s						
AAK				⇓Sn	Sn	09 58 20.2	+2.3
	comp=N,11nm,0.9s						
KK31	Karatay Array	5.98	353	⇑Pn	Pn	09 57 11.3	+0.2
	comp=N,4.5nm,0.5s,baz=179,slow=13,SNR=28						
KK31				⇓Sn	Sn	09 58 16.9	-1.4
	comp=N,4.5nm,0.6s						
KK31				⇓Lg	Lg	09 58 44.5	
	comp=N,13nm,0.6s						
DHRM	DHARAMSHALA	6.32	139	eP	Pn	09 57 15.2	-0.9
DHRM				eS	Sn	09 58 27.4	+0.2
DHRM				IAML		09 58 29.1	
	comp=E,179nm,0.6s						
DHRM				IAML		09 58 30.8	
	comp=N,131nm,0.3s						
BHK	Bhakra	7.05	143	eP	Pn	09 57 28.2	+2.3
SMLA	Simla	7.66	140	eP	Pn	09 57 32.6	-1.6
SMLA				IAML		09 58 57.7	
	comp=E,164nm,1.1s						
SMLA				eS	Sn	09 58 58.1	-1.7
SMLA				IAML		09 59 01.5	
	comp=N,157nm,0.3s						
MKAR	Makanchi Array	12.54	37	Pn	Pn	09 58 39.4	-1.7
	baz=245,slow=8.7,SNR=5.0						
	comp=N,0.8nm,0.8s						
KURBB	Kurchatov Arra	14.38	18	Pn	Pn	09 59 01.9	-4.2
	baz=211,slow=12,SNR=2.9						
	comp=N,0.1nm,0.3s						
AB31	Akbulak array	14.69	329	Pn	Pn	09 59 05.6	-4.6
	comp=N,0.8nm,0.5s,baz=153,slow=12,SNR=20						
AB31				Sn	Sn	10 01 47.0	-4.7
	comp=N,3.0nm,0.7s,baz=144,slow=24,SNR=10						
BVAR	Borovoye Array	15.88	358	Pn	Pn	09 59 22.2	-3.6
	baz=150,slow=9.9,SNR=2.7						
	comp=N,0.3nm,0.4s						
AKTO	Aktyubinsk	16.39	328	Pn	P	09 59 34.3	-0.6
	comp=N,0.8nm,0.3s,baz=142,slow=7.8,SNR=3.6						
ZALV	Zalesovo Beam	19.16	25	P	P	10 00 02.9	-2.5
	comp=N,0.5nm,0.3s,baz=219,slow=10.0,SNR=14						
	comp=N,3.2nm,0.6s						
KBZ	Khabaz	22.62	296	P	P	10 00 42.0	-0.9
	comp=N,7.3nm,1.3s,baz=165,slow=4.4,SNR=4.6						
	comp=N,7.3nm,1.3s						
HFS	Hagfors	42.77	321	P	P	10 03 38.9	0.0
	comp=N,2.5nm,0.6s,baz=96,slow=11,SNR=4.9						
	comp=N,2.5nm,0.6s						
NB2	NORSAR Subarra	44.07	323	P	P	10 03 50.0	+0.6
	comp=Z,1.1nm,0.7s,baz=96,slow=7.9						
NOA	NORSAR Array B	44.07	323	P	P	10 03 49.1	-0.4
	comp=Z,1.1nm,0.7s,baz=95,slow=7.9,SNR=5.3						
	comp=Z,1.1nm,0.7s						
ESDC	Sonseca Array	57.47	298	P	P	10 05 32.1	+1.4
	comp=Z,0.7nm,0.7s,baz=74,slow=8.6,SNR=2.1						
	comp=Z,0.7nm,0.7s						
TORD	Torodi Ar. Bea	66.09	269	P	P	10 06 29.8	+0.8
	comp=Z,1.3nm,0.4s,baz=40,slow=9.1,SNR=1.6						
	comp=Z,1.3nm,0.4s						
ILAR	Eielson Array	74.04	16	P	P	10 07 19.1	+2.1
	comp=Z,0.5nm,1.0s,baz=325,slow=6.9,SNR=4.6						
	comp=Z,0.5nm,1.0s						
YKA	Yellowknife Ar	80.57	3	P	P	10 07 54.6	+1.1
	comp=Z,0.3nm,0.6s,baz=349,slow=5.1,SNR=6.4						
	comp=Z,0.3nm,0.6s						
WRA	Warramunga Arr	82.04	122	P	P	10 08 03.3	+1.4
	comp=Z,0.4nm,0.6s,baz=317,slow=5.1,SNR=4.8						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	84.34	125	P	P	10 08 13.4	-0.4
	comp=Z,0.2nm,0.4s,baz=316,slow=4.8,SNR=3.2						
	comp=Z,0.2nm,0.4s						

IDC 10 10:36:55.6±1.8, 1°.26N×127°.17E, h0km, mb3.5/4, mbtmp3.6/5, ML3.4/1, Error ellipse: s-maj=120.0km s-min=21.6km az=69.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.29	184	P	P	10 41 22.5	+0.3
	0.1nm,0.3s,baz=358,slow=11,SNR=2.4						
	2.2nm,0.9s						
WRA	Warramunga Arr	22.21	162	P	P	10 41 54.0	+0.2
	1.5nm,0.5s,baz=341,slow=10,SNR=50						
	1.5nm,0.5s						
ASAR	Alice Springs	25.62	166	P	P	10 42 26.7	-0.3
	0.7nm,0.4s,baz=340,slow=7.3,SNR=19						
	0.7nm,0.4s						
MKAR	Makanchi Array	59.83	326	P	P	10 47 02.4	-0.5
	0.3nm,0.5s,baz=115,slow=9.7,SNR=3.0						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	64.05	328	P	P	10 47 31.8	+0.6
	0.2nm,0.3s,baz=120,slow=6.9,SNR=1.8						
	0.2nm,0.3s						

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*MEX **10** 10:41:01.4±0.4, 30°.99N×114°.19W, h4km±3km, MD4.2*

*NEIC **10** 10:41:03.5±1.4, 30°.84N±0°.07×114°.31W±0°.07, h10km±2km, mb4.2/5, Error ellipse: s-maj=13.8km s-min=8.7km az=212.0*

*ECX **10** 10:41:03.3±0.4, 30°.82N×114°.20W, h20km±5km, ML4.0, Fault plane solution: NP1:ϕ_s24.00000°, δ56.00000°, λ-82.00000°.*

*IDC **10** 10:41:04.3±1.9, 30°.82N×113°.97W, h0km, mb3.6/1, mbtmp3.5/8, ML3.3/6, MS3.5/4, Error ellipse: s-maj=31.2km s-min=11.5km az=31.0*

ISC 10 10:41:02.0±1.2, 30°.82N±0°.03×114°.23W±0°.03, h3km±9km, n91, σ1ˢ.59/99, 12C-4D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFX	San Felipe	0.58	292		Pb	10 41 14.3	-0.4
SFX	San Felipe	0.58	292	⇑iP	Pg	10 41 14.2	+1.1
SFX				eS	Sb	10 41 22.7	-0.7
SFX				IAML		10 41 24.0	
	comp=E,7μm,0.2s						
SFX				IAML		10 41 24.2	
	comp=N,10μm,0.8s						
PPXB	Puerto Peasco	0.72	45	⇑iP	Pg	10 41 16.1	+0.2
PPXB				eS	Sg	10 41 25.5	+0.3
PPXB				IAML		10 41 34.6	
	comp=N,8μm,0.6s						
PPXB				IAML		10 41 34.6	
	comp=E,10μm,0.8s						
ECBX	El Chinero	0.96	313	⇑iP	Pg	10 41 19.6	-0.8
ECBX				eS	Sg	10 41 32.8	-0.1
ECBX				IAML		10 41 44.1	
	comp=E,5μm,1.0s						
ECBX				IAML		10 41 45.0	
	comp=N,3μm,0.8s						
PIX	Pinacate	0.99	42		Pg	10 41 20.2	-0.8
PIX	Pinacate	0.99	42	⇑iP	Pg	10 41 20.2	-0.8
PIX				IAML		10 41 43.0	
	comp=N,2μm,0.9s						
PIX				IAML		10 41 51.0	
	comp=E,3μm,1.0s						
SLGB	San Luis Gonza	1.00	189	⇓iP	Pg	10 41 20.0	-1.1
SLGB				eS	Sg	10 41 34.1	-0.1
SLGB				IAML		10 41 45.9	
	comp=E,2μm,0.7s						
SLGB				IAML		10 41 53.2	
	comp=N,3μm,1.0s						
SPIG	San Pedro Mart	1.09	282	⇑iP	Pg	10 41 22.4	-0.5
SPIG				IAML		10 41 55.2	
	comp=N,2μm,1.4s						
SPIG				IAML		10 42 04.3	
	comp=E,1μm,0.8s						
SPIG	San Pedro Mart	1.09	282	eP	Pg	10 41 22.4	-0.5
SPIG				i S	Sb	10 41 38.5	+0.1
EDOMX	El Doctor, EDO	1.22	339	eP	Pn	10 41 24.9	-1.1
EDOMX				IAML		10 42 29.1	
	comp=E,5μm,1.0s						
EDOMX				IAML		10 42 40.3	
	comp=N,5μm,1.2s						
SQX	San Quintin	1.44	261	⇑iP	Pn	10 41 27.8	-1.2
SQX				IAML		10 42 01.7	
	comp=E,2μm,0.6s						
SQX				IAML		10 42 04.7	
	comp=N,3μm,0.9s						
VTX	Valle De La Tr	1.45	293		Pn	10 41 27.5	-1.7
VTX	Valle De La Tr	1.45	293	⇑eP	Pn	10 41 27.5	-1.7
RITX	Riito Sonora	1.48	335	⇑eP	Pb	10 41 30.8	+0.6
RHX	Rio Hardy	1.59	326	⇑eP	Pn	10 41 30.8	-0.3
PLIB	Puerto Liberta	1.60	124	eP	Pn	10 41 29.9	-1.3
PLIB				IAML		10 42 08.3	
	comp=N,2μm,0.9s						
PLIB				IAML		10 42 13.2	
	comp=E,1μm,1.1s						
214A	Organ Pipe Nat	1.66	47	Pn	Pn	10 41 29.7	-2.4
LAPR	La Primavera	1.67	101	⇑iP	Pn	10 41 29.3	-2.9
LAPR				IAML		10 42 10.8	
	comp=N,3μm,1.1s						
LAPR				IAML		10 42 10.8	
	comp=E,3μm,0.9s						
SJX	San Joaquin	1.75	303	⇑eP	Pn	10 41 33.5	+0.2
SV2X	San Vicente	1.80	287	⇑eP	Pn	10 41 32.8	-1.1
CPBX	Cerro Prieto	1.84	330	Pn	Pn	10 41 34.6	+0.1
ESJX	Sierra Juarez	1.89	309		Pn	10 41 33.6	-1.7
BAHB	Baha de los	1.96	163	⇓eP	Pg	10 41 39.0	-0.5
BAHB	Baha de los	1.96	163	eP	Pn	10 41 36.2	+0.1
BAHB				i S	Sb	10 42 03.7	+0.6
113A	Mohawk Valley,	1.98	11	Pn	Pn	10 41 34.9	-1.6
GLA	Glamis	2.28	347	Pn	Pn	10 41 39.6	-1.1
YUH	Yuha Desert	2.33	322		Pn	10 41 40.3	-0.9
CCX	Cicese	2.33	297	Pn	Pn	10 41 40.3	-0.9
CCX	Cicese	2.33	297	⇓eP	Pn	10 41 40.1	-1.1
CBX	Cerro Bola	2.56	306		Pn	10 41 43.9	-0.6
CBX	Cerro Bola	2.56	306	⇓eP	Pn	10 41 43.6	-0.9
TJIG	Tijuana	2.63	308	eP	Pn	10 41 44.2	-1.3
TJIG				eS	Sn	10 42 14.6	-3.4
BKIRB	Bahia Kino	2.75	135	eP	Pb	10 41 52.0	+0.2
BAR	Barrett	2.79	312		Pn	10 41 46.8	-0.8
BLYC	Blythe	2.93	355		Pn	10 41 48.9	-0.6
BC3	Big Chuckawall	3.01	340		Pn	10 41 50.0	-0.8
BORC	Borrego Spring	3.07	323		Pn	10 41 51.1	-0.3
DPP	Dos Picos Cty	3.17	314		Pn	10 41 52.8	-0.1
CPE	Camp Elliot	3.20	311		Pn	10 41 52.4	-0.9
Y14A	Wickenburg	3.28	18		Pn	10 41 54.1	-0.2
TUC	Tucson	3.29	62		Pn	10 41 53.3	-1.3
TUC	Tucson	3.29	62	eP	Pn	10 41 51.4	-3.1
TUC				i S	Sn	10 42 29.5	-4.7
PMD	Palm Desert	3.36	328		Pn	10 41 56.1	+0.7
HSIG		3.36	121		Pn	10 41 55.5	0.0
HSIG		3.36	121	eP	Pn	10 41 54.8	-0.6
HSIG				i S	Sb	10 42 43.6	0.0
PFO	Pinyon Flats O	3.37	326	Pn	Pb	10 41 59.6	-2.8
	comp=E,0.4nm,0.3s,baz=143,slow=15,SNR=7.2						
PFO				Lg	Lg	10 42 49.3	
	comp=E,5.3nm,0.3s,baz=176,slow=16,SNR=3.7						
PFO				LR	LR	10 43 18.9	
	comp=E,368nm,18.9s,baz=120,slow=39						
	comp=E,3.7nm,0.7s						
PFO	Pinyon Flats O	3.37	326		Pn	10 41 54.6	-1.0
DNR	Dunn Ranch,Anz	3.41	324		Pn	10 41 58.1	+1.8
IRM	Iron Mountain	3.42	347		Pn	10 41 56.5	+0.3
BELC	Belle Mtn. Jos	3.51	335		Pn	10 41 58.9	+1.3
ELS	Elsinore Mount	3.91	317		Pn	10 42 02.4	-0.6
DANC	Danby, Needles	3.93	346		Pn	10 42 03.6	+0.4
NZIG	Nacozari, Sono	4.05	95	eP	Pn	10 42 03.7	-1.4
NZIG				i S	Sn	10 42 51.9	-1.3
GUYB	Guaymas	4.13	134	eP	Pn	10 42 07.2	+1.2
GUYB				i S	Sn	10 42 56.9	+2.1
GSC	Goldstone, Bar	4.96	335	Pn	Pn	10 42 17.5	-0.1
WUAZ	Wupatki	5.26	26		Pn	10 42 22.7	+1.1
SHPR	Sheep Range	5.72	352		Pn	10 42 28.3	+0.3
U15A	North Rim	5.82	16		Pn	10 42 31.1	+1.6
KNB	Kanab	6.29	10		Pn	10 42 37.1	+1.2
MNTX	Cornudas Mount	7.62	81		Pn	10 42 54.1	+0.1
TASM	ASL Pad, Albuq	7.72	56		Pn	10 42 58.4	+2.9
ANMO	Albuquerque	7.72	56	Pn	Pn	10 42 56.7	+1.2
	comp=E,0.1nm,0.3s,baz=213,slow=13,SNR=5.3						
ANMO				Lg	Lg	10 45 06.5	
	comp=E,0.2nm,0.3s,baz=327,slow=17,SNR=2.1						
ANMO				LR	LR	10 46 12.2	
	comp=E,397nm,19.4s,baz=16,slow=41						
	comp=E,0.5nm,0.4s						
ANMO	Albuquerque	7.72	56		Pn	10 42 56.6	+1.1
VHRN	Van Horn	7.95	88	Pn	Pn	10 42 58.9	+0.3
SPR3	Spring Creek 3	8.16	359		Pn	10 43 02.4	+0.8
NVAR	Mina Array Bea	8.30	337	Pn	Pn	10 43 07.8	+4.3
	comp=E,0.1nm,0.3s,baz=161,slow=14,SNR=5.8						
NVAR				LR	LR	10 46 17.3	
	comp=E,283nm,18.4s,baz=140,slow=38						
	comp=E,0.6nm,0.6s						
PV19	Morning Glory	8.63	29	Pn	Pn	10 43 09.4	+1.4
ALPN	Alpine	9.14	90	Pn	Pn	10 43 16.0	+1.1
TXAR	Lajitas Array	9.27	97	Pn	Pn	10 43 17.0	+0.3
	comp=E,4.0nm,0.5s,baz=268,slow=12,SNR=68						
TXAR				Lg	Lg	10 45 58.1	
	comp=E,0.2nm,0.3s,baz=263,slow=25,SNR=5.6						
TXAR				LR	LR	10 46 58.1	
	comp=E,288nm,18.7s,baz=272,slow=39						
TXAR	Lajitas Array	9.27	97	Pn	Pn	10 43 17.7	+1.0
ELK	Elko	9.94	356	Pn	Pn	10 43 29.3	+3.4
	comp=E,0.1nm,0.3s,baz=184,slow=15,SNR=4.8						
	comp=E,0.8nm,0.7s						
ODSA	Odessa	10.06	80		Pn	10 43 28.5	+1.0
MSTX	Muleshoe	10.18	69		Pn	10 43 30.5	+1.3
TMB01	Midkiff	10.43	82	Pn	Pn	10 43 34.1	+1.6
SAND	Sanderson	10.49	92		Pn	10 43 34.4	+1.0
RTBA	Rita Blanca	11.09	57		Pn	10 43 43.7	+2.1
AMTX	Amarillo	11.30	66		Pn	10 43 45.8	+1.3
PDAR	Pinedale Array	12.49	16	Pn	Pn	10 44 06.3	+5.4
	comp=E,0.1nm,0.3s,baz=179,slow=11,SNR=5.9						
	comp=E,0.8nm,0.8s						
YBH	Yreka Blue Hor	12.85	330	Pn	Pn	10 44 12.9	+7.2
	baz=166,slow=3.6,SNR=4.9						
BRDY	Brady	13.07	84		P	10 44 15.2	-3.9
WMOK	Wichita Mounta	13.57	69		Pn	10 44 17.4	+1.9
435B	Jarrell	14.31	86	Pn	Pn	10 44 26.9	+1.4
LRM	Limekiln Ridge	15.04	5		Pn	10 44 36.6	+0.9
COR	Corvallis	15.49	335		Pn	10 44 41.1	-0.3
RSSD	Black Hills	15.53	28		Pn	10 44 42.9	+0.8
RSSD				IAmb	IAmb	10 44 49.2	
	comp=Z,6.0nm,0.9s						
EGMT	Eagleton	17.52	10		P	10 45 08.2	-0.3
NEW	Newport	17.56	354	P	P	10 45 12.4	+3.5
	comp=Z,0.1nm,0.3s,baz=176,slow=12,SNR=9.5						
	comp=Z,3.9nm,0.9s						
E28A	Huff	18.90	30		Pn	10 45 25.0	+0.8
E28A				IAmb	IAmb	10 45 31.4	
	comp=Z,42nm,1.1s						
R40A	Maddies Statio	19.53	62	IAmb	IAmb	10 45 43.4	
	comp=Z,14nm,1.2s						
ILAR	Eielson Array	39.55	339	P	P	10 48 38.4	+4.4
	comp=Z,0.7nm,0.8s,baz=149,slow=8.1,SNR=9.4						
	comp=Z,0.7nm,0.8s						
HHC	Hu-ho-hao-te	97.06	327	eP	P	10 54 34.1	-1.6
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,5.2s						

IDC 10 10:43:02.0±10.0, 19°.25S×171°.67W, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=444.3km s-min=39.5km az=141.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	50.60	255	P	P	10 52 04.0	+1.0
	0.3nm,0.6s,baz=92,slow=7.7,SNR=6.5						
	0.3nm,0.6s						
WRA	Warramunga Arr	50.68	260	P	P	10 52 02.1	-1.6
	0.4nm,0.8s,baz=102,slow=7.9,SNR=3.2						
	0.4nm,0.8s						
ILAR	Eielson Array	85.89	10	P	P	10 55 43.2	0.0
	0.2nm,0.5s,baz=211,slow=5.4,SNR=7.2						
	0.2nm,0.5s						

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*UPP **10** 10:43:08.3±0.5, 61°.14N×13°.30E, h0km, ML2.8, Suspected explosion*

*DNK **10** 10:43:08.5±0.8, 61°.14N×13°.27E, h0km, ML2.8(UPP), Explosion*

*BER **10** 10:43:11.4±2.9, 61°.00N×13°.01E, h0km, ML1.5, Suspected explosion*

ISC 10 10:43:06.7±0.9, 61°.16N±0°.04×13°.29E±0°.03, h0km, n24, σ0ˢ.28/32, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NC303	NORSAR Array S	0.93	275	eP	Pg	10 43 24.7	+0.2
NC303				eS	Sg	10 43 36.9	+0.3
NC602	NORSAR Array S	0.95	244	eP	Pg	10 43 25.1	+0.2
NB201	NORSAR Array S	0.97	264	eP	Pg	10 43 25.6	+0.3
UDD	Uddeholm	1.09	171	P	Pb	10 43 27.9	-0.4
UDD				S	Sg	10 43 41.7	+0.2
UDD	Uddeholm	1.09	171	P	Pb	10 43 27.9	-0.4
UDD				S	Sg	10 43 41.7	+0.2
NAO01	NORSAR Array S	1.21	256	eP	Pg	10 43 29.8	-0.1
NBO00	NORSAR Array S	1.23	265	eP	Pg	10 43 30.1	0.0
NBO00				eS	Sg	10 43 46.2	+0.2
NBO00				IAML		10 43 50.8	
	comp=Z,6.9nm,0.3s						
NC204	NORSAR Array S	1.23	276	eP	Pg	10 43 30.0	-0.2
NC204				eS	Sg	10 43 45.9	-0.1
NC204				IAML		10 43 52.9	
	comp=Z,5.7nm,0.4s						
ROTU	Roteberg	1.25	77	P	Pb	10 43 31.2	+0.1
ROTU				S	Sn	10 43 48.6	-0.2
ROTU	Roteberg	1.25	77	P	Pb	10 43 31.2	+0.1
ROTU				S	Sn	10 43 48.6	-0.2
OSL	Oslo	1.76	227	eP	Pb	10 43 40.1	+0.3
FINU	Finntorp	1.81	193	P	Pb	10 43 40.6	0.0
FINU	Finntorp	1.81	193	P	Pb	10 43 40.6	0.0
NRAU	Nora	1.82	151	P	Pg	10 43 41.4	-0.1
NRAU	Nora	1.82	151	P	Pg	10 43 41.4	-0.1
HASU	Hassela	1.87	56	P	Pb	10 43 41.9	+0.2
HASU	Hassela	1.87	56	P	Pb	10 43 41.9	+0.2
HUDU	Hudiksvall	1.93	71	P	Pb	10 43 42.8	+0.1
HUDU	Hudiksvall	1.93	71	P	Pb	10 43 42.8	+0.1
IGGU	Iggoen	1.98	97	P	Pb	10 43 43.5	-0.1
IGGU	Iggoen	1.98	97	P	Pb	10 43 43.5	-0.1
ARNU	Arnoeviken	2.04	73	P	Pb	10 43 44.1	-0.4
ARNU	Arnoeviken	2.04	73	P	Pb	10 43 44.1	-0.4
DOMB	Dombas	2.20	296	eP	Pb	10 43 46.5	-0.9
DOMB				eS	Sb	10 44 15.6	+0.4
DOMB				IAML		10 44 16.4	
	comp=Z,28nm,0.4s						

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*ECX **10** 10:45:33.3±0.4, 30°.78N×114°.20W, h18km±3km, ML3.8*

*MEX **10** 10:45:36.1±1.1, 31°.17N×114°.39W, h5km±11km, MD4.1*

ISC 10 10:45:34.6±1.1, 30°.99N±0°.04×114°.21W±0°.03, h31km±12km, n20, σ2ˢ.78/30, 7C-2D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFX	San Felipe	0.55	275	⇑iP	Pb	10 45 44.4	-1.5
SFX				eS	Sb	10 45 53.1	-0.6
SFX				IAML		10 46 05.0	
	comp=E,3μm,0.5s						
SFX				IAML		10 46 05.5	
	comp=N,6μm,0.5s						
PPXB	Puerto Peasco	0.60	55	⇑iP	Pn	10 45 46.3	-0.7
PPXB				eS	Sn	10 45 56.5	+0.9
PPXB				IAML		10 46 08.3	
	comp=N,2μm,0.9s						
PIX	Pinacate	0.86	48	⇑eP	Pn	10 45 50.7	+0.2
ECBX	El Chinero	0.86	304	⇓iP	Pn	10 45 51.0	+0.4
ECBX				eS	Sn	10 46 04.4	+2.2
ECBX				IAML		10 46 25.4	
	comp=E,2μm,0.6s						
SPIG	San Pedro Mart	1.08	273	⇑iP	Pn	10 45 52.4	-1.5
SPIG	San Pedro Mart	1.08	273	eP	Pn	10 45 52.4	-1.5
SPIG				i S	Sn	10 46 08.4	+0.4
SLGB	San Luis Gonza	1.17	188	⇓iP	Pn	10 45 50.1	-4.7
SLGB				IAML		10 46 26.1	
	comp=E,2μm,0.6s						
SLGB				IAML		10 46 34.7	
	comp=N,1μm,1.1s						
VTX	Valle De La Tr	1.41	287	eP	Pn	10 45 57.6	-0.6
VTX				IAML		10 46 50.5	
	comp=N,757nm,0.7s						
RHX	Rio Hardy	1.46	321	eP	Pb	10 46 01.4	+0.2
SQX	San Quintin	1.49	254	⇑iP	Pn	10 45 57.9	-1.3
SQX				⇑eP	Pb	10 46 00.4	-1.3
SQX				IAML		10 46 40.4	
	comp=N,2μm,0.4s						
SQX				IAML		10 46 43.3	
	comp=E,2μm,0.7s						
ALAMX	Rancho Alamar	1.63	309	eP	Pb	10 46 04.8	+0.7
PLIB	Puerto Liberta	1.69	129	eP	Pn	10 46 01.1	-0.9
LAPR	La Primavera	1.70	106	eP	Pn	10 45 59.5	-2.7
LAPR				IAML		10 46 47.6	
	comp=N,1μm,0.8s						
LAPR				IAML		10 46 52.1	
	comp=E,954nm,0.6s						
BAHB	Baha de los	2.12	164	⇑eP	Pb	10 46 14.1	+1.8
BAHB	Baha de los	2.12	164	eP	Pb	10 46 13.3	+1.0
BAHB				i S	Sb	10 46 44.3	+6.1
TJIG	Tijuana	2.54	305	eP	Pn	10 46 13.0	-0.7
TJIG				i S	Sn	10 46 42.2	-1.5
TUC	Tucson	3.20	65	eP	Pb	10 46 27.5	-3.4
TUC				i S	Sb	10 47 14.9	+5.4
HSIG		3.44	124	eP	Pb	10 46 33.3	-1.6
HSIG				i S	Sb	10 47 17.2	+0.8
NZIG	Nacozari, Sono	4.06	98	eP	Pn	10 46 34.5	-0.3
NZIG				i S	Sb	10 47 28.8	-5.4
GUYB	Guaymas	4.24	136	eP	Pb	10 46 53.8	+5.3
GUYB				i S	Sb	10 47 45.1	+5.9

GCG 10 10:46:43.3±0.7, 14°.00N×91°.79W, h6km±25km, MD3.7, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG5	El Palmar, Qui	0.58	47	i P	Pn	10 46 57.5	-0.8
STG2	El Palmar, Qui	0.59	43	eP	Pn	10 46 58.0	-0.3
STG8	El Palmar, Qui	0.62	44	eP	Pn	10 46 58.2	-0.6
STG8				eS	Sn	10 47 10.9	+1.7
ESSG	Sabana Grande	1.00	68	eP	Pg	10 47 02.0	-0.6
FG16	Alotenango, Sa	1.27	78	i P	Pg	10 47 02.4	-5.3
APG	El Apazote	1.62	52	eP	Pn	10 47 13.0	+0.3

IDC 10 10:47:57.9±630.0, 31°.27N×36°.67E, h0km, Error ellipse: s-maj=384.4km s-min=186.5km az=101.0, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I19DJ	I19DJ	20.60	162	I	I	12 53 50.0	
	baz=339,slow=315,SNR=1.4						
I31KZ	AKTYUBINSK INF	24.88	34	I	I	13 18 10.0	
	baz=225,slow=280,SNR=1.1						
I34MN	SONGINO INFRAS	54.45	51	I	I	16 23 30.0	
	baz=270,slow=336,SNR=1.3						

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*ECX **10** 11:05:58.6±0.2, 30°.78N×114°.19W, h20km±5km, ML3.6*

*MEX **10** 11:06:00.0±0.5, 30°.91N×114°.47W, h3km±4km, MD4.1*

ISC 10 11:05:57.0±1.1, 30°.85N±0°.03×114°.15W±0°.03, h15km±10km, n23, σ1ˢ.41/33, 5C-2D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFX	San Felipe	0.63	288	⇑iP	Pg	11 06 09.9	+0.5

SFX				eS	Sg	11 06 18.7	+0.9
PPXB	Puerto Peasco	0.66	42	eP	Pb	11 06 11.6	+1.4
PPXB				eS	Sn	11 06 21.5	-0.4
PPXB				IAML		11 06 22.4	
	comp=E,3µm,0.9s						
PPXB				IAML		11 06 22.4	
	comp=N,2µm,0.9s						
PIX	Pinacate	0.92	40	eP	Pb	11 06 15.3	+0.6
PIX				eS	Sn	11 06 28.7	+0.2
ECBX	El Chinero	0.99	309	eP	Pg	11 06 16.1	-0.2
ECBX				eS	Sb	11 06 29.8	+0.9
SLGB	San Luis Gonza	1.04	192	⇓iP	Pg	11 06 15.2	-1.9
SPIG	San Pedro Mart	1.15	280	⇑iP	Pg	11 06 18.3	-1.0
SPIG	San Pedro Mart	1.15	280	eP	Pg	11 06 17.5	-1.7
SPIG				eS	Sg	11 06 31.9	-2.4
EDOMX	El Doctor, EDO	1.22	335	eP	Pb	11 06 20.0	+0.2
RITX	Riito Sonora	1.49	332	⇑eP	Pg	11 06 26.4	+0.8
VTX	Valle De La Tr	1.50	292	⇓eP	Pn	11 06 25.4	+1.8
SQX	San Quintin	1.51	260	⇑eP	Pn	11 06 23.0	-0.6
SQX				eS	Sn	11 06 42.2	-0.9
PLIB	Puerto Liberta	1.56	126	eP	Pn	11 06 24.6	+0.3
RHX	Rio Hardy	1.61	323	eP	Pn	11 06 26.1	+1.1
LAPR	La Primavera	1.61	102	eP	Pn	11 06 24.4	-0.6
ALAMX	Rancho Alamar	1.77	311	eP	Pb	11 06 29.7	+0.6
MBIG	Mexicali	1.79	330	eP	Pg	11 06 30.3	-1.2
SJX	San Joaquin	1.80	301	eP	Pb	11 06 29.8	+0.1
SV2X	San Vicente	1.86	286	⇑eP	Pn	11 06 30.1	+1.8
BAHB	Baha de los	1.96	165	eP	Pb	11 06 35.0	+2.5
BAHB				eS	Sg	11 07 02.5	+2.3
TJIG	Tijuana	2.67	307	eP	Pn	11 06 40.0	+0.4
TJIG				eS	Sn	11 07 09.3	-2.4
TUC	Tucson	3.22	62	eP	Pb	11 06 53.8	-0.2
HSIG		3.32	122	eP	Pb	11 06 55.7	+0.1
HSIG				eS	Sb	11 07 37.8	+1.9
NZIG	Nacozari, Sono	3.99	96	eP	Pb	11 07 07.2	0.0
NZIG				eS	Sb	11 07 52.6	-2.7

VAO ***10*** *11:06:19.4±0.7, 5°.33S×65°.94W, h0^{km}, mbR3.7, Presumed earthquake*

OSUNB ***10*** *11:06:23.8±0.8, 5°.49S×65°.83W, h0^{km}, mR3.5/5, Error ellipse: s-maj=3.9km s-min=5.0km az=0.0*

ISC 10 11:06:21.7±1.9**, 5°.42S**±0°.08×**65°.9W**±0°.1**, h10^{km}, n10,** σ**1^{s}80**/15**, Western Brazil**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEFE	Tefe	2.29	34	P	Pg	11 07 05.1	-0.6
TEFE				S	Sb	11 07 32.1	+0.5
TEFE	Tefe	2.29	34	eP	Pn	11 06 57.5	-2.1
TEFE				eS	Sn	11 07 26.3	-1.6
SGC2	Sao Gabriel da	5.34	349	P	Pn	11 07 41.5	0.0
MACA	Manacapuru-AM	5.69	67	P	Pb	11 07 53.8	-7.3
MACA				S	Sn	11 08 55.4	+3.6
MACA	Manacapuru-AM	5.69	67	eP	Pn	11 07 45.0	-1.3
MACA				eS	Sn	11 08 51.4	-0.3
BOAV	Boa Vista	9.45	35	P	Pn	11 08 41.4	+3.4
ITTB	Itaituba	10.21	85	S	Sn	11 10 42.2	-0.8
ITTB	Itaituba	10.21	85	eP	Pn	11 08 47.3	-1.1
ITTB				eS	Sn	11 10 43.3	+0.3
PDRB	Porto dos Gac	10.98	125	P	Pn	11 09 02.9	+3.9
PDRB				S	Sn	11 11 01.6	-0.4
PDRB	Porto dos Gac	10.98	125	eP	Pn	11 08 58.6	-0.4
PDRB				eS	Sn	11 11 03.6	+1.6

IDC ***10*** *11:12:59.6±0.8, 14°.66N×94°.31W, h0^{km}, mb4.3/15, mbtmp4.3/18, ML3.5/4, MS3.9/44, Error ellipse: s-maj=29.8km s-min=13.8km az=58.0*

MEX ***10*** *11:13:00.0±0.7, 14°.50N×94°.43W, h5^{km}, MD4.3*

NEIC ***10*** *11:13:02.5±1.5, 14°.82N±0°.09×94°.28W±0°.07, h10^{km}±1^{km}, mb4.7/213, Error ellipse: s-maj=16.3km s-min=10.3km az=210.0*

CATAC ***10*** *11:13:02.5±0.9, 15°N±6°×9°4W±°, h30^{km}±16^{km}, M4.7/12, MLv4.7/12, Error ellipse: s-maj=16.2km s-min=5.5km az=45.7, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.73; M$_{\theta\theta}$-0.11; M$_{\phi\phi}$-0.62; M$_{r\theta}$-0.83; M$_{\theta\phi}$0.63; M$_{\phi r}$0.54; Fault plane solution: M$_{0}$1.36066×10^{16} NP1: φ$_{s}$171.23846°, δ26.27935°, λ131.60937°. NP2: φ$_{s}$306.51171°, δ70.66821°, λ71.84592°. Principal axes: T 1.2518, Plg60.2390°, Azm190.1624°; N 0.1964, Plg17.0980°, Azm312.7067°; P -1.4482, Plg23.5748°, Azm50.4206°; confirmed*

ISC 10 11:13:01.1±3.4**, 14°.70N**±0°.05×**94°.37W**±0°.03**, h11^{km}**±21^{km}**, n241,** σ**2^{s}17**/159**, mb4.6**/84**, MS4.0**/41**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		1.49	48	eP	Pn	11 13 26.0	-1.8
PCIG				eS	Sb	11 13 45.2	-2.5
HUIG	Huatulco	1.99	302	eP	Pn	11 13 31.6	-3.1
HUIG				eS	Sn	11 13 52.7	-6.9
THIG		2.04	84	eP	Pn	11 13 32.9	-2.5
THIG				eS	Sn	11 13 58.3	-2.6
PATR	El Naranjo	2.10	78	eP	Pn	11 13 33.9	-2.6
PATR				iS	Sn	11 14 01.0	-1.7
PAVE	Pavencul	2.17	77	eP	Pn	11 13 35.3	-2.1
PAVE				iS	Sn	11 13 58.8	-5.7
CHUJ	Union Juarez	2.22	80	eP	Pn	11 13 35.7	-2.4
CHUJ				eS	Sn	11 14 02.1	-3.5
CMIG	Matias Romero	2.43	348	Pn	Pn	11 13 39.4	-1.3
	24nm,0.3s,baz=167,slow=11,SNR=379						
CMIG				Sn	Sn	11 14 08.6	-1.9
	79nm,0.3s,baz=139,slow=11,SNR=6.0						
CMIG				LR	LR	11 14 11.9	
	comp=Z,1µm,20.3s,baz=276,slow=29 135nm,0.5s						
CMIG	Matias Romero	2.43	348	eP	Pn	11 13 39.2	-1.5
CMIG				eS	Sn	11 14 05.2	-5.2
RTAL	Retalhuleu	2.59	94		Pn	11 13 43.2	+0.2
RTAL	Retalhuleu	2.59	94	eP	Pn	11 13 38.9	-4.1
RTAL				eS	Sn	11 14 09.0	-5.5
RTAL	Retalhuleu	2.59	94	S	Sn	11 14 12.2	-2.3
RTAL	Retalhuleu	2.59	94	P	Pn	11 13 43.1	+0.2
UXUV	UXUV	2.61	5	eP	Pn	11 13 43.4	+0.1
UXUV				eS	Sn	11 14 14.4	-0.6
CCIG	Comitan	2.66	54		Pn	11 13 44.4	+0.3
CCIG	Comitan	2.66	54	eP	Pn	11 13 44.3	+0.2
CCIG				iS	Sb	11 14 20.5	-1.2
HUEH	Huehuetenango	2.83	77		Pn	11 13 46.5	0.0
HUEH	Huehuetenango	2.83	77	eP	Pn	11 13 47.0	+0.5
HUEH				eS	Sb	11 14 23.0	-3.6
HUEH	Huehuetenango	2.83	77	S	Sn	11 14 20.7	-0.1
HUEH	Huehuetenango	2.83	77	P	Pn	11 13 46.2	-0.3
PEIG	Puerto Escondi	2.98	296	eP	Pn	11 13 45.1	-3.2
PEIG				iS	Sn	11 14 16.8	-7.3
OXLC	Oaxaca	3.25	317	eP	Pn	11 13 45.4	-6.8
OXLC				iS	Sn	11 14 25.9	-5.3
VHO	Vista Hermosa	3.28	316	eP	Pn	11 13 52.5	-0.1
VHO				eS	Sn	11 14 28.2	-3.5
NEUV	Arroyo Zacate	3.30	335	eP	Pn	11 13 51.9	-0.8
NEUV				e		11 14 25.0	
TUIG	Tuzandepetl	3.31	359	eP	Pn	11 13 52.5	-0.4
TUIG				eS	Sn	11 14 32.3	0.0
YOIG	Yosondua	3.74	305	eP	Pn	11 13 51.4	-7.6
YOIG				eS	Sn	11 14 39.5	-3.7
APG	El Apazote	3.78	85	Pn	Pn	11 13 59.5	-0.1
	0.5nm,0.3s,baz=206,slow=15,SNR=21						
APG				Sn	Sb	11 14 49.4	-4.7
	1.0nm,0.3s,baz=223,slow=18,SNR=5.5						
PNIG	Pinotepa	4.00	295	eP	Pn	11 14 00.8	-1.5
PNIG				eS	Sn	11 14 41.0	-8.2
TXIG	Tlaxiaco	4.14	308	eP	Pn	11 14 05.0	+0.5
TXIG				iS	Sn	11 14 47.6	-5.5
TOIG	Toxpalan	4.25	323	eP	Pn	11 14 08.3	+2.3
TOIG				iS	Sn	11 14 55.2	-0.5
FAME	Alcaldia de Sa	4.30	101	P	Pn	11 14 05.5	-1.0
NUBE	Las Nubes	4.52	100	P	Pn	11 14 08.6	-1.0
CEVE	Cerro Verde	4.68	100	P	Pn	11 14 12.2	+0.3
CEVE	Cerro Verde	4.68	100	S	Sn	11 15 05.5	-0.9
TPIG	Tehuac#an	4.68	323	eP	Pn	11 14 13.5	+1.6
TPIG				iS	Sn	11 15 06.3	-0.1
MGIG	Malinaltepec	4.82	302	eP	Pn	11 14 14.2	+0.5
MGIG				eS	Sn	11 15 03.8	-5.8
FTIG	Fresnillo de T	4.82	312	eP	Pn	11 14 14.1	+0.3
FTIG				eS	Sn	11 15 04.8	-4.9
MTO3	Montecristo	4.86	93		Pn	11 14 14.2	-0.2
MTO3	Montecristo	4.86	93	P	Pn	11 14 13.9	-0.4
PETF	Flores	4.86	62		Pn	11 14 14.4	+0.2
PETF	Flores	4.86	62	eP	Pn	11 14 12.5	-1.7
PETF				eS	Sn	11 15 14.6	+4.1
PETF	Flores	4.86	62	P	Pn	11 14 14.2	0.0
ESQI	Esquipulas	4.87	91		Pn	11 14 15.7	+1.3
JAYA	Jayaque - finc	4.88	102	P	Pn	11 14 13.9	-0.7
TLIG	Tlapa	4.94	306		Pn	11 14 16.5	+1.1
TLIG	Tlapa	4.94	306	eP	Pn	11 14 13.7	-1.7
TLIG				iS	Sn	11 15 10.9	-1.7
CRIG	Cruz Grande	5.01	294	eP	Pn	11 14 15.4	-0.9
CRIG				iS	Sn	11 15 05.4	-8.9
JAUV	Jalcomulco	5.19	334	eP	Pn	11 14 23.6	+4.8
JAUV				eS	Sn	11 15 14.1	-4.6
SCIG	Sabancuy	5.22	35	eP	Pn	11 14 18.2	-0.9
SCIG				iS	Sb	11 15 28.5	-6.7
DAIG	Los Arroyos	5.58	295	eP	Pn	11 14 22.9	-1.2
DAIG				eS	Sn	11 15 18.8	-10
IZABA	Izabal, Puerto	5.67	79	eP	Pn	11 14 31.5	+6.1
PPM	Popocatepetl	5.96	317	eP	Pn	11 14 32.7	+2.9
PPM				iS	Sn	11 15 39.0	+0.7
MEIG	Mezcala	5.98	303	eP	Pn	11 14 30.4	+0.7
MEIG				iS	Sn	11 15 31.9	-6.3
YAIG	Yautepec	6.11	313	eP	Pn	11 14 33.4	+1.8
YAIG				iS	Sn	11 15 40.5	-1.2
CAIG	El Cayaco	6.14	293	eP	Pn	11 14 31.8	0.0
CAIG				iS	Sn	11 15 38.9	-3.1
CXUV	Coxquihui	6.25	331	eP	Pn	11 14 32.4	-0.9
CXUV				eS	Sn	11 15 41.6	-3.2
ARIG	Puente Sto Nin	6.75	303	eP	Pn	11 14 42.5	+2.3
ARIG				iS	Sn	11 15 54.9	-2.3
TGUH	Tegucigalpa,Un	6.90	94	Pn	Pn	11 14 42.9	+0.5
CTUV	Llano Grande	7.73	331	eP	Pn	11 14 50.6	-3.0
TEIG	Tepich	8.00	46		Pn	11 14 56.1	-1.1
MOIG	Morelia	8.19	308		Pn	11 15 02.5	+2.4
JUD3	Juan Diaz 3	9.73	117		Pn	11 15 22.3	+1.2
JTS	Las Juntas de	10.18	114	Pn	Pn	11 15 27.9	+0.5
	0.7nm,0.3s,baz=267,slow=14,SNR=5.0 8.4nm,0.9s						
JTS	Las Juntas de	10.18	114		Pn	11 15 29.5	+2.2
ZAIG	Zacatecas	11.16	317		Pn	11 15 42.1	+1.1
BRU2	Volcan	12.85	116		Pn	11 16 04.7	+0.8
HBVL	Hebbronville	12.94	343		Pn	11 16 05.2	+0.2
SOR	Soroa	13.43	52	Pn	Pn	11 16 10.1	-1.6
833A	Chaparral WMA,	14.34	342		Pn	11 16 20.3	-3.8
HNDO	Hondo	15.44	344		Pn	11 16 39.5	+0.6
HNDO				IAmb	IAmb	11 17 08.5	
	comp=Z,49nm,1.5s						
DRIO	Del Rio	15.75	340		Pn	11 16 43.1	+0.1
HPIG		16.10	321		Pn	11 16 48.5	+0.7
435B	Jarrell	16.28	350		Pn	11 16 50.4	+0.6
435B				IAmb	IAmb	11 17 05.2	
	comp=Z,49nm,1.1s						
SAND	Sanderson	16.78	336		Pn	11 16 57.0	+0.7
TXAR	Lajitas Array	16.91	331	Pn	Pn	11 16 59.5	+1.6
	baz=157,slow=13,SNR=27						
TXAR				LR	LR	11 23 42.4	
	comp=Z,321nm,19.0s,baz=163,slow=38 comp=Z,5.3nm,0.9s						
TXAR	Lajitas Array	16.91	331		Pn	11 16 58.0	+0.1
TX31	Lajitas Ar. Si	16.91	331		Pn	11 16 58.5	+0.6
BRDY	Brady	17.05	346		Pn	11 17 00.2	+0.7
OZNA	Ozona	17.30	340		Pn	11 17 03.8	+1.1
OZNA				IAmb	IAmb	11 17 15.6	
	comp=Z,86nm,1.3s						
WHTX	Lake Whitney,	17.44	351	IAmb	IAmb	11 17 15.9	
	comp=Z,32nm,0.9s						
LPIG	La Paz	17.69	304	LR	LR	11 23 12.8	
	comp=Z,151nm,18.9s,baz=96,slow=34						
ALPN	Alpine	17.78	333	P	P	11 17 10.3	+0.7
SGCY	Sterling City	18.21	341	IAmb	IAmb	11 17 34.6	
	comp=Z,38nm,1.0s						
MNHN	Monahans	18.26	337	IAmb	IAmb	11 17 30.7	
	comp=Z,43nm,1.1s						
ABTX	Abilene, Hawle	18.48	346	IAmb	IAmb	11 17 34.8	
	comp=Z,73nm,1.4s						
352A	Blakely	18.80	26	P	Pn	11 17 22.6	+1.4
352A				IAmb	IAmb	11 17 50.1	
	comp=Z,97nm,1.5s						
ODSA	Odessa	18.88	338	IAmb	IAmb	11 17 49.2	
	comp=Z,70nm,1.2s						
SN07	Snyder 07	19.24	343	IAmb	IAmb	11 17 43.7	
	comp=Z,34nm,1.3s						
Z47A	Carrollton	19.28	16	P	P	11 17 25.4	-0.5
Z47A				IAmb	IAmb	11 17 46.5	
	comp=Z,59nm,1.4s						
WTFS	Witchita Falls	19.34	350	IAmb	IAmb	11 17 38.1	
	comp=Z,26nm,1.0s						
MIAR	Mount Ida	19.77	2		P	11 17 30.2	-1.1
DKNS	Dickens	19.80	344	P	P	11 17 32.5	+0.9
DKNS				IAmb	IAmb	11 17 34.2	
	comp=Z,38nm,1.1s						
UALR	University of	20.07	5	P	P	11 17 34.3	-0.2
UALR				IAmb	IAmb	11 17 52.1	
	comp=Z,50nm,1.3s						
WMOK	Wichita Mounta	20.34	349		P	11 17 37.7	+0.1
MSTX	Muleshoe	20.64	340	IAmb	IAmb	11 18 04.3	
	comp=Z,47nm,1.2s						
FNO	Franklin	20.65	353	P	P	11 17 41.3	+0.5
SMWD	Samnorwood	20.99	346	IAmb	IAmb	11 17 48.8	
	comp=Z,49nm,0.9s						
DEOK	Depew	21.14	355	IAmb	IAmb	11 18 01.1	
	comp=Z,51nm,1.4s						
FCAR	Ozark Folk Cen	21.20	5	IAmb	IAmb	11 17 59.0	
	comp=Z,17nm,0.9s						
FPAL	Fort Paine	21.27	20	IAmb	IAmb	11 18 03.1	
	comp=Z,26nm,1.1s						
OTAV	Otavalo	21.31	131	P	P	11 17 46.8	-1.8
OTAV				IAmb	IAmb	11 18 05.9	
	comp=Z,32nm,1.3s						
OK052	Battle Ridge R	21.32	355	IAmb	IAmb	11 17 51.5	
	comp=Z,27nm,0.8s						
QUOK	Quay	21.48	355	IAmb	IAmb	11 17 53.7	
	comp=Z,24nm,0.8s						
319A	Douglas	21.50	323	IAmb	IAmb	11 18 25.9	
	comp=Z,40nm,1.1s						
121A	Cookes Peak, D	21.55	328	IAmb	IAmb	11 18 10.0	
	comp=Z,54nm,1.2s						
PH02	Texas Public H	21.70	343	IAmb	IAmb	11 17 57.5	
	comp=Z,34nm,0.9s						
OK048	Pawnee Station	21.75	354	IAmb	IAmb	11 18 04.6	
	comp=Z,27nm,1.0s						
ELIS	Ellis County	21.75	349	IAmb	IAmb	11 18 06.6	
	comp=Z,38nm,0.9s						
OK051	E0350 and S346	21.83	355	IAmb	IAmb	11 17 57.6	
	comp=Z,40nm,1.0s						
CROK	Carrier	21.95	352	IAmb	IAmb	11 17 57.9	
	comp=Z,32nm,0.8s						
ROSC	El Rosal	22.03	114	P	P	11 17 59.6	+3.3
	comp=Z,30nm,0.9s,baz=32,slow=6.1,SNR=12						
ROSC	El Rosal	22.03	114	P	P	11 17 52.8	-3.4
MGMO	Mountain Grove	22.44	4	IAmb	IAmb	11 18 10.6	
	comp=Z,20nm,1.1s						
FLOC	Florencia	22.62	123	P	P	11 18 04.5	+2.3
KAN08	Anthony NE Sta	22.66	353	IAmb	IAmb	11 18 12.8	
	comp=Z,28nm,0.7s						
RUSC	La Rusia	22.68	111	P	P	11 18 03.0	-0.3
ANMO	Albuquerque	22.91	334	LR	LR	11 28 39.2	
	comp=Z,249nm,19.8s,baz=156,slow=41						
ANMO	Albuquerque	22.91	334	P	P	11 18 06.6	+1.3
TASM	ASL Pad, Albuq	22.91	334	IAmb	IAmb	11 18 16.2	
	comp=Z,7.4nm,0.9s						
TASM	ASL Pad, Albuq	22.91	334	IAmb	IAmb	11 18 16.1	
	comp=Z,8.0nm,0.9s						
TKL	Tuckaleechee C	22.93	23	LR	LR	11 28 52.8	
	comp=Z,180nm,18.1s,baz=190,slow=42						
TKL	Tuckaleechee C	22.93	23	IAmb	IAmb	11 18 37.3	
	comp=Z,49nm,1.4s						
T47A	Sharon Grove	23.12	15	IAmb	IAmb	11 18 17.5	
	comp=Z,31nm,1.3s						
CCM	Cathedral Cave	23.43	6	P	P	11 18 09.4	-0.9
CCM				IAmb	IAmb	11 18 09.8	
	comp=Z,14nm,0.9s						
R40A	Maddies Statio	23.57	4	IAmb	IAmb	11 18 11.9	
	comp=Z,24nm,1.0s						
SDV	Santo Domingo	23.93	101	LR	LR	11 28 26.2	
	comp=Z,82nm,18.5s,baz=288,slow=39						
X18A	Snowflake	24.24	327	P	P	11 18 19.4	+1.0
X18A				IAmb	IAmb	11 18 44.6	
	comp=Z,11nm,0.9s						
KSU1	Kansas State U	24.39	356	P	P	11 18 18.5	-0.9
KSU1				IAmb	IAmb	11 18 28.2	
	comp=Z,13nm,0.8s						
OLIL	Olney	24.57	12	IAmb	IAmb	11 18 21.7	
	comp=Z,23nm,1.1s						
P40A	Paris	24.82	4	IAmb	IAmb	11 18 22.4	
	comp=Z,18nm,0.8s						
P38A	Dawn	24.84	2	IAmb	IAmb	11 18 37.6	
	comp=Z,20nm,1.1s						
SDCO	Great Sand Dun	24.99	339	IAmb	IAmb	11 18 38.0	
	comp=Z,12nm,1.1s						
P48A	Milroy	25.89	16	IAmb	IAmb	11 18 31.1	
	comp=Z,14nm,0.9s						
PV01	Paradox Valley	26.51	334	IAmb	IAmb	11 18 50.8	
	comp=Z,14nm,1.1s						
ATAH	Atahualpa	26.86	143	LR	LR	11 26 40.5	
	comp=Z,175nm,21.1s,baz=324,slow=31						
SCIA	State Center	27.13	2	P	P	11 18 43.3	-0.9
L40A	Anamosa	27.40	5	P	P	11 18 45.2	-1.4
PFO	Pinyon Flats O	27.48	317	LR	LR	11 29 51.4	
	comp=Z,422nm,19.9s,baz=128,slow=37						
MTPU	Mount Pierson	28.10	329	IAmb	IAmb	11 19 11.8	
	comp=Z,13nm,1.4s						
O20A	White River Ci	28.10	337	IAmb	IAmb	11 19 38.0	
	comp=Z,11nm,1.1s						
P18A	Preston Nutter	28.48	334	IAmb	IAmb	11 19 15.8	
	comp=Z,12nm,1.3s						
P17A	Butcher Ranch,	28.56	333	IAmb	IAmb	11 19 08.1	
	comp=Z,8.9nm,1.0s						
SHOC	Shoshone, Teco	28.82	321	IAmb	IAmb	11 19 08.8	
	comp=Z,10nm,0.9s						
ECSD	EROS Data Cent	29.00	357	IAmb	IAmb	11 19 26.0	
	comp=Z,10nm,1.1s						
MPU	Maple Canyon	29.40	332	IAmb	IAmb	11 19 24.8	
	comp=Z,15nm,1.5s						
BSUT	Blindstream Ca	29.45	334	IAmb	IAmb	11 19 18.0	
	comp=Z,11nm,1.2s						
S11A	Rachel	29.70	324	IAmb	IAmb	11 19 40.4	
	comp=Z,21nm,1.4s						
SPR3	Spring Creek 3	29.91	328	IAmb	IAmb	11 19 20.1	
	comp=Z,11nm,1.3s						
VES	Vestal, Richgr	30.55	318	P	P	11 19 15.2	+0.5
BGU	Big Grassy Mou	30.77	332	IAmb	IAmb	11 19 27.8	
	comp=Z,10nm,1.4s						
DSP	Deep Springs	30.81	321	IAmb	IAmb	11 19 22.3	
	comp=Z,11nm,1.4s						
PDAR	Pinedale Array	30.87	338	P	P	11 19 19.0	+1.2
	comp=Z,1.4nm,0.9s,baz=145,slow=8.7,SNR=9.3						
PDAR				PcP	PcP	11 22 15.8	+1.3
	comp=Z,0.3nm,0.7s,baz=110,slow=3.3,SNR=3.3						
PDAR				LR	LR	11 34 34.4	
	comp=Z,166nm,18.1s,baz=160,slow=42 comp=Z,1.4nm,0.9s						
PDAR	Pinedale Array	30.87	338	P	P	11 19 16.5	-1.3
HVU	Hansel Valley	31.34	333	IAmb	IAmb	11 19 32.9	
	comp=Z,11nm,0.9s						
MDPB	Devils Postpil	31.65	321	IAmb	IAmb	11 19 36.4	
	comp=Z,12nm,1.1s						
ELK	Elko	31.68	329	LR	LR	11 32 04.8	
	comp=Z,237nm,18.1s,baz=150,slow=36						
ELK	Elko	31.68	329	IAmb	IAmb	11 19 36.4	
	comp=Z,7.0nm,1.1s						
NVAR	Mina Array Bea	31.71	323	P	P	11 19 27.6	+2.5
	comp=Z,2.0nm,0.6s,baz=138,slow=8.8,SNR=30						
NVAR				LR	LR	11 31 21.4	
	comp=Z,239nm,20.5s,baz=132,slow=35 comp=Z,2.0nm,0.6s						
NVAR	Mina Array Bea	31.71	323	P	P	11 19 26.6	+1.4
RYN	Ryan	31.97	323	IAmb	IAmb	11 19 46.4	
	comp=Z,8.7nm,1.2s						
LOHW	Long Hollow	31.99	337	IAmb	IAmb	11 19 38.2	
	comp=Z,8.0nm,0.8s						
FXWY	Fox Creek	32.17	337	IAmb	IAmb	11 19 45.0	
	comp=Z,8.0nm,1.3s						
WAKR	Walker	32.43	322	IAmb	IAmb	11 19 44.2	
	comp=Z,7.8nm,1.2s						
SADO	Sadowa	32.64	20	LR	LR	11 34 47.6	
	comp=Z,254nm,18.3s,baz=154,slow=40						
RLMT	Red Lodge	32.84	340	IAmb	IAmb	11 19 36.7	
	comp=Z,12nm,1.2s						
YNE	Yellowstone No	32.99	339	IAmb	IAmb	11 20 01.4	
	comp=Z,12nm,1.3s						
YMR	Madison River	33.03	338	IAmb	IAmb	11 19 47.8	
	comp=Z,7.9nm,0.9s						
PAHR	Pah Rah Range	33.18	323	IAmb	IAmb	11 19 56.9	
	comp=Z,15nm,1.5s						
YHL	Hebgen Lake	33.27	338	IAmb	IAmb	11 19 52.6	
	comp=Z,7.3nm,1.2s						
HLID	Hailey	33.49	333	IAmb	IAmb	11 19 48.8	
	comp=Z,15nm,1.4s						
BCYI	Bear Canyon	33.67	335	IAmb	IAmb	11 20 00.8	
	comp=Z,11nm,1.3s						
BEKR	Beckworth	33.85	323	IAmb	IAmb	11 19 55.4	
	comp=Z,6.4nm,1.1s						
EPLO	Experimental L	34.88	1	IAmb	IAmb	11 19 52.3	
	comp=Z,12nm,0.9s						
O03E	Paynes Creek	34.98	322	IAmb	IAmb	11 20 20.3	
	comp=Z,9.9nm,1.1s						
PLID	Pearl Lake	35.39	333	IAmb	IAmb	11 20 07.7	
	comp=Z,19nm,1.1s						
ULM	Lac du Bonnet	35.47	358	P	P	11 19 56.4	-1.1
	comp=Z,3.1nm,0.5s,baz=171,slow=11,SNR=3.2						
ULM				LR	LR	11 35 57.5	
	comp=Z,97nm,20.4s,baz=185,slow=39 comp=Z,3.1nm,0.5s						
ULM	Lac du Bonnet	35.47	358	IAmb	IAmb	11 19 59.5	
	comp=Z,15nm,1.3s						
MSO	Missoula	35.97	337	IAmb	IAmb	11 20 12.7	
	comp=Z,9.9nm,1.2s						
YBH	Yreka Blue Hor	36.42	323	LR	LR	11 34 17.9	
	comp=Z,44nm,18.8s,baz=130,slow=35						
F10A	Beach Ranch, E	36.62	333	IAmb	IAmb	11 20 19.6	
	comp=Z,17nm,1.1s						
J04A	Umpqua Nationa	37.06	326	IAmb	IAmb	11 20 22.6	
	comp=Z,20nm,1.0s						
H04A	Detroit Lake	38.07	327	IAmb	IAmb	11 20 30.1	
	comp=Z,12nm,1.0s						
NEW	Newport	38.38	335	LR	LR	11 38 32.9	
	comp=Z,334nm,20.2s,baz=160,slow=40						
C09A	Chrisman Ranch	38.49	334	IAmb	IAmb	11 20 33.5	
	comp=Z,17nm,1.3s						
LPAZ	La Paz	40.24	139	P	P	11 20 38.4	-0.6
	comp=Z,2.1nm,1.0s,baz=324,slow=8.7,SNR=3.7						
LPAZ				LR	LR	11 35 20.4	
	comp=Z,89nm,20.9s,baz=308,slow=33 comp=Z,2.1nm,1.0s						
LPAZ	La Paz	40.24	139	P	P	11 20 38.0	-1.0
EDM	Edmonton	41.26	343	P	P	11 20 46.6	+0.3
EDM				IAmb	IAmb	11 20 58.0	
	comp=Z,23nm,1.3s						
MDP	Montagnes des	42.12	99	LR	LR	11 38 57.1	
	comp=Z,182nm,21.8s,baz=274,slow=37						
RPN	Rapa Nui	44.05	199	LR	LR	11 36 07.5	
	comp=Z,89nm,19.0s,baz=56,slow=32						
SCHQ	Schefferville	45.40	22	LR	LR	11 41 42.5	
	comp=Z,263nm,19.8s,baz=274,slow=38						
BBB	Bella Bella	46.04	332	LR	LR	11 42 47.0	
	comp=Z,355nm,19.2s,baz=146,slow=39						
AC02	Maricunga	48.02	149	P	P	11 21 41.8	+0.8
AC02				IAmb	IAmb	11 21 53.4	
	comp=Z,9.0nm,0.9s						
YKAW1	Yellowknife Wh	49.81	348		P	11 21 53.7	0.0
YKAW1				IAmb	IAmb	11 21 54.2	
	comp=Z,7.2nm,0.8s						
YKA	Yellowknife Ar	49.84	348	P	P	11 21 53.7	-0.3
	comp=Z,2.3nm,0.8s,baz=159,slow=6.9,SNR=22 comp=Z,2.3nm,0.8s						
CO03	El Pedregal	50.68	153	P	P	11 22 01.2	+0.3
CO03				IAmb	IAmb	11 22 12.7	
	comp=Z,13nm,1.0s						
TAOE	Nuku Hiva Isla	51.07	246	eLR	LR	11 36 32.6	
	comp=Z,70nm,21.0s						
DLBC	Dease Lake	51.09	337	LR	LR	11 45 14.7	
	comp=Z,306nm,18.2s,baz=104,slow=38						
FRB	Frobisher Bay	52.17	14	LR	LR	11 47 02.9	
	comp=Z,155nm,18.2s,baz=182,slow=39						
CFA	Coronel Fontan	52.43	152	P	P	11 22 13.5	-0.4
	comp=Z,1.0nm,0.4s,baz=351,slow=7.6,SNR=5.3 comp=Z,1.0nm,0.4s						
MT08	Bocatoma Ro	53.22	155	P	P	11 22 20.7	+0.8
CPUP	Villa Florida	54.41	138	LR	LR	11 46 33.3	
	comp=Z,29nm,18.0s,baz=188,slow=37						
BDFB	Brasilia	54.84	121	P	P	11 22 30.3	-1.5
	comp=Z,1.9nm,0.6s,baz=270,slow=10,SNR=3.0 comp=Z,1.9nm,0.6s						
BDFB	Brasilia	54.84	121	IAmb	IAmb	11 22 40.1	
	comp=Z,9.5nm,1.1s						
INK	Inuvik	59.13	344	LR	LR	11 50 31.1	
	comp=Z,248nm,19.1s,baz=322,slow=38						
PLCA	Paso Flores	59.41	159	P	P	11 23 02.8	-1.1
	comp=Z,1.8nm,1.0s,baz=319,slow=8.0,SNR=3.4						
PLCA				LR	LR	11 42 27.4	
	comp=Z,60nm,20.9s,baz=353,slow=30 comp=Z,1.8nm,1.0s						

PLCA	Paso Flores	59.41	159	IAmb	IAmb	11 23 19.4	
	comp=Z,8.1nm,1.3s						
SFJD	Kangerlussuaq	59.56	18	LR	LR	11 52 42.5	
	comp=Z,159nm,18.1s,baz=183,slow=40						
J26L	Joseph Creek	59.93	338	IAmb	IAmb	11 23 20.9	
	comp=Z,12nm,1.3s						
RES	Resolute Bay	59.98	360	LR	LR	11 51 01.3	
	comp=Z,66nm,19.0s,baz=12,slow=38						
KDAK	Kodiak Island	60.92	329	LR	LR	11 48 13.2	
	comp=Z,119nm,18.0s,baz=103,slow=35						
IL31		61.30	337	P	P	11 23 17.1	+0.8
ILAR	Eielson Array	61.30	337	P	P	11 23 16.2	-0.1
	comp=Z,3.5nm,1.0s,baz=143,slow=4.4,SNR=19						
ILAR				LR	LR	11 53 13.0	
	comp=Z,237nm,18.5s,baz=108,slow=39						
	comp=Z,3.5nm,1.0s						
ILAR	Eielson Array	61.30	337	P	P	11 23 17.1	+0.8
PPT	Papeete	63.19	241	LR	LR	11 42 28.0	
	comp=Z,58nm,21.1s,baz=116,slow=28						
IMAR	Indian Mountai	64.42	337	P	P	11 23 37.7	+0.7
E22K	Anaktuvuk Pass	64.60	340		P	11 23 39.0	+0.6
C23K	Itkillik River	64.98	341	P	P	11 23 41.6	+1.0
TBI	Tubuai	65.83	236	*e*LR	LR	11 43 35.7	
	comp=Z,576nm,31.8s						
BORG	Borgarnes	69.58	26	LR	LR	11 52 59.2	
	comp=Z,72nm,21.7s,baz=317,slow=34						
EKA	Eskdalemuir Ar	78.74	36	P	P	11 25 03.0	-0.5
	comp=Z,6.8nm,0.8s,baz=280,slow=5.7,SNR=5.7						
	comp=Z,6.8nm,0.8s						
SPITS	Spitsbergen Ar	79.86	11	P	P	11 25 11.3	+2.0
	comp=Z,3.8nm,0.8s,baz=188,slow=1.0,SNR=5.1						
SPITS				LR	LR	12 04 22.5	
	comp=Z,108nm,18.5s,baz=282,slow=39						
	comp=Z,3.8nm,0.8s						
ESDC	Sonseca Array	81.08	51	P	P	11 25 16.9	+0.3
	comp=Z,3.8nm,1.0s,baz=288,slow=4.6,SNR=11						
ESDC				LR	LR	12 00 57.1	
	comp=Z,71nm,18.0s,baz=273,slow=36						
	comp=Z,3.8nm,1.0s						
ESDC	Sonseca Array	81.08	51		P	11 25 16.4	-0.2
ESDC				IAmb	IAmb	11 25 17.4	
	comp=Z,11nm,1.4s						
MDT	Midelt	81.98	58	LR	LR	11 57 37.9	
	comp=Z,56nm,18.9s,baz=277,slow=33						
PMSA	Palmer Station	82.52	167	LR	LR	11 55 11.9	
	comp=Z,83nm,18.7s,baz=314,slow=31						
NOA	NORSAR Array B	84.62	28	P	P	11 25 36.0	+1.4
	comp=Z,0.8nm,0.7s,baz=294,slow=5.2,SNR=1.8						
NOA				LR	LR	12 03 02.5	
	comp=Z,58nm,18.3s,baz=280,slow=36						
	comp=Z,0.8nm,0.7s						
HFS	Hagfors	86.09	28	P	P	11 25 43.2	+1.3
	comp=Z,2.2nm,0.8s,baz=336,slow=3.2,SNR=1.9						
	comp=Z,2.2nm,0.8s						
ARCES	ARCESS Array B	86.18	18	P	P	11 25 44.2	+2.0
	comp=Z,6.1nm,1.0s,baz=316,slow=5.0,SNR=3.6						
	comp=Z,6.1nm,1.0s						
DBIC	Dimbokro	87.86	84	LR	LR	11 58 24.5	
	comp=Z,31nm,21.7s,baz=330,slow=31						
GRF	Grafenberg Arr	88.69	39	*e*P	P	11 25 55.8	+1.1
	comp=Z,12nm,1.4s,baz=291,slow=4.7						
DAVOX	Davos/Dischmat	88.88	42	LR	LR	12 01 11.3	
	comp=Z,113nm,21.7s,baz=258,slow=32						
FINES	FINESS Array B	90.83	24	LR	LR	12 09 49.4	
	comp=Z,79nm,18.0s,baz=317,slow=38						
YAK	Yakutsk	96.06	341	LR	LR	12 14 01.4	
	comp=Z,42nm,18.6s,baz=85,slow=38						
NRIK	Noril'sk	96.17	359	LR	LR	12 15 00.3	
	comp=Z,33nm,18.5s,baz=342,slow=39						
AKASG	Malin Array Be	98.38	32	LR	LR	12 15 22.7	
	comp=Z,65nm,18.0s,baz=315,slow=38						
OBN	Obninsk	99.08	26	LR	LR	12 11 44.7	
	comp=Z,88nm,18.5s,baz=187,slow=36						
MLR	Muntele Rosu	99.45	38	LR	LR	12 12 17.4	
	comp=Z,96nm,18.6s,baz=328,slow=36						
DZM	Mont Dzumac	103.74	251	*e*LR	LR	12 01 09.8	
	comp=Z,85nm,22.8s						
WRA	Warramunga Arr	133.34	256	PKP	PKPdf	11 32 18.5	+0.3
	comp=Z,0.4nm,0.6s,baz=88,slow=2.5,SNR=7.2						
ASAR	Alice Springs	133.73	251	PKP	PKPdf	11 32 19.6	+0.7
	comp=Z,0.2nm,0.6s,baz=112,slow=1.5,SNR=4.3						
CMAR	Chiang Mai Arr	144.54	338	PKP	PKPab	11 32 37.0	0.0
	comp=Z,0.9nm,0.5s,baz=344,slow=4.0,SNR=8.8						
CMAR	Chiang Mai Arr	144.54	338		PKPab	11 32 36.9	-0.1

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*IDC **10** 11:15:01.7±35.0, 41°.88N×145°.09E, h0^{km}, mb4.0/5, mbtmp4.0/5, MS3.4/1, Error ellipse: s-maj=790.8km s-min=88.0km az=158.0*

*MOS **10** 11:15:23.4±0.8, 42°.48N×143°.97E, h140^{km}, mb4.3/1, Error ellipse: s-maj=25.9km s-min=15.7km az=62.0*

*SKHL **10** 11:15:25.9±0.2, 42°.80N×143°.60E, h106^{km}±2^{km}, mb4.9/3, msha5.4/3*

*JMA **10** 11:15:25.4±0.2, 42°.8N±0°.5×143°.5E±0°.7, h111^{km}±1^{km}, MV3.3/36, TOKACHI REGION*

ISC 10 11:15:25.3±0.9, **42°.75N**±0°.05×**143°.63E**±0°.04, **h112**^{km}±6^{km}, **n36, σ0^s.71**/58, **mb4.0**/6, **1C-2D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOB	Onbets	0.21	45	*i* P	Pn	11 15 41.5	+0.5
JOB				S	Sn	11 15 53.5	+0.7
JCH	Churui	0.24	235	*i* P	Pn	11 15 40.9	-0.2
JCH				S	Sn	11 15 52.0	-1.0
JTHR	Tokachihiroo	0.52	208	*i* P	Pn	11 15 42.4	-0.1
JTHR				S	Sn	11 15 54.8	-0.6
JAR	Ashorobuto	0.55	11	*i* P	Pn	11 15 42.9	+0.2
JAR				S	Sn	11 15 55.7	-0.2
JNBK	Urakawa-nobuka	0.80	234	*i* P	Pn	11 15 44.8	+0.1
JNBK				S	Sn	11 15 59.5	+0.1
JEM	Erimo	0.82	206	P	Pn	11 15 45.1	+0.2
JEM				S	Sn	11 16 00.3	+0.7
JAK	Akkeshi	0.82	72	P	Pn	11 15 45.1	+0.2
JAK				S	Sn	11 16 00.2	+0.5
JFR	Furan	0.86	299	P	Pn	11 15 44.4	-0.9
AKK	Akkeshi	0.93	73	*e*P	Pn	11 15 46.2	+0.3
AKK				*e*S	Sn	11 16 01.6	+0.1
JBT2	Biratori 2	0.93	272	P	Pn	11 15 45.6	-0.3
JBT2				S	Sn	11 16 01.0	-0.6
JNK	Nakash	1.15	43	*i* P	Pn	11 15 48.2	0.0
JNK				S	Sn	11 16 05.5	-0.2
JKHN	Kushirohamanak	1.17	73	*i* P	Pn	11 15 48.9	+0.4
JKHN				S	Sn	11 16 06.2	+0.2
JTKR	Abashiri--Toko	1.23	9	*i* P	Pn	11 15 49.1	-0.1
JTKR				S	Sn	11 16 07.1	-0.1
JMP	Maruseppu	1.27	351	*i* P	Pn	11 15 49.3	-0.2
JMP				S	Sn	11 16 07.4	-0.6
JAB	Ashibetsu	1.27	307	P	Pn	11 15 49.8	+0.2
JAB				S	Sn	11 16 08.5	+0.5
JKK2	Kamakawa 2	1.29	330	P	Pn	11 15 49.6	-0.2
JRA	Rausu	1.61	42	P	Pn	11 15 54.0	+0.5
NMR	Nemuro--Hokkai	1.66	67	⇓*i*PN	Pn	11 15 53.7	-0.4
NMR				*e*S	Sn	11 16 13.6	-2.4
NMR	Nemuro--Hokkai	1.66	67	*i* P	Pn	11 15 53.6	-0.5
NMR				*e*S	Sn	11 16 14.6	-1.4
NEM2	Nemuro 2	1.67	68	P	Pn	11 15 53.7	-0.5
NEM2				S	Sn	11 16 14.6	-1.6
GLVR	Golovnino	1.70	54	*e*PN	Pn	11 15 54.9	+0.4
GLVR				*e*S	Sn	11 16 16.8	-0.1
GLVR				pmax	pmax		
	comp=Z,411nm,0.1s						
GLVR				pmax	pmax		
	comp=E,22nm,0.2s						
GLVR				smax	smax		
	comp=N,658nm,0.3s						
GLVR				smax	smax		
	comp=E,691nm,0.2s						
GLVR	Golovnino	1.70	54	*e*P	Pn	11 15 54.9	+0.4
GLVR				AMB	AMB	11 15 55.3	
	comp=E,410nm,0.4s						
GLVR				*e*S	Sn	11 16 16.8	-0.1
GLVR				A	A	11 16 18.4	
	comp=E,660nm,0.5s						
GLVR				A	A	11 16 18.4	
	comp=E,690nm,0.5s						
RUSJ	Misakicho	1.79	41	⇓*i*PN	Pn	11 15 56.3	+0.6
RUSJ				S	Sn	11 16 20.5	+1.5
YUK	Yuzh-Kuril'sk	2.07	51	*e*PN	Pn	11 16 00.0	+0.8
YUK				*e*S	Sn	11 16 24.8	-0.4
YUK				pmax	pmax		
	comp=Z,209nm,0.2s						
YUK				pmax	pmax		
	comp=E,84nm,0.1s						
YUK				pmax	pmax		
	comp=N,77nm,0.2s						
YUK				smax	smax		
	comp=N,329nm,0.4s						
YUK				smax	smax		
	comp=E,533nm,0.4s						
YUK	Yuzh-Kuril'sk	2.07	51	*e*P	Pn	11 15 59.8	+0.6
YUK				AMB	AMB	11 16 02.4	
	comp=E,190nm,0.5s						
YUK				*e*S	Sn	11 16 25.0	-0.2
YUK				A	A	11 16 26.5	
	comp=E,380nm,0.4s						
YUK				A	A	11 16 26.5	
	comp=E,650nm,0.4s						
KUR	Kuril'sk	3.94	50	PN	Pn	11 16 24.0	+0.3
KUR				*e*S	Sn	11 17 08.1	-0.9
KUR	Kuril'sk	3.94	50	*e*P	Pn	11 16 24.0	+0.3
KUR				AMB	AMB	11 16 27.5	
	comp=E,110nm,0.5s						
KUR				*e*S	Sn	11 17 08.9	-0.1
KUR				A	A	11 17 11.9	
	comp=E,140nm,0.6s						
KUR				A	A	11 17 11.9	
	comp=E,140nm,0.6s						
SONM	Songino Array	26.50	294	P	P	11 20 53.5	+1.3
	comp=E,1.0nm,0.6s,baz=69,slow=7.9,SNR=3.7						
	comp=E,1.0nm,0.6s						
ZALV	Zalesovo Beam	39.55	307	LR	LR	11 39 30.5	
	comp=E,44nm,18.3s,baz=1.5,slow=36						
MKAR	Makanchi Array	42.76	297	P	P	11 23 11.7	+0.2
	comp=E,0.7nm,0.9s,baz=81,slow=9.9,SNR=4.5						
	comp=E,0.7nm,0.9s						
COLA	College	43.38	35	⇑*i*P	P	11 23 21.9	+5.9
COLA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KURK	Kurchatov	43.95	304	P	P	11 23 20.5	-0.3
KURK	Kurchatov	43.95	304	*e*P	P	11 23 20.5	-0.3
KURBB	Kurchatov Arra	44.03	304	P	P	11 23 20.5	-1.0
	comp=Z,0.7nm,0.3s,baz=71,slow=8.9,SNR=5.3						
	comp=Z,0.7nm,0.3s						
BVAR	Borovoye Array	48.14	309	P	P	11 23 54.4	+0.7
	comp=Z,1.4nm,0.4s,baz=79,slow=8.3,SNR=11						
	comp=Z,1.4nm,0.4s						
FINES	FINESS Array B	64.57	332	P	P	11 25 48.5	-1.4
	comp=Z,2.1nm,0.9s,baz=46,slow=11,SNR=3.7						
	comp=Z,2.1nm,0.9s						

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*ECX **10** 11:17:03.2±0.3, 30°.81N×114°.19W, h4^{km}±3^{km}, ML3.2*

*MEX **10** 11:17:08.4±0.6, 31°.04N×114°.60W, h5^{km}±5^{km}, MD4.0*

ISC 10 11:17:01.9±1.1, **30°.81N**±0°.05×**114°.20W**±0°.03, **h15**^{km}±10^{km}, **n13, σ1^s.34**/20, **1C-1D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFX	San Felipe	0.60	293	⇑*i*P	Pg	11 17 14.1	+0.3
SFX				*e*S	Sg	11 17 22.7	+0.9
SFX				IAML		11 17 23.4	
	comp=E,1μm,0.4s						
SFX				IAML		11 17 32.7	
	comp=N,2μm,0.7s						
PPXB	Puerto Peasco	0.72	43	*e*P	Pg	11 17 15.6	-0.3
PPXB				*e*S	Sg	11 17 25.4	0.0
PPXB				IAML		11 17 34.1	
	comp=E,909nm,0.5s						
PPXB				IAML		11 17 34.1	
	comp=N,794nm,0.5s						
PIX	Pinacate	0.98	40	⇓*i*P	Pg	11 17 19.9	-1.1
PIX				*e*S	Sg	11 17 33.1	-0.8
ECBX	El Chinero	0.99	313	*e*P	Pg	11 17 20.8	-0.3
ECBX				IAML		11 17 34.8	
	comp=E,872nm,0.5s						
ECBX				IAML		11 17 43.6	
	comp=N,601nm,0.8s						
SLGB	San Luis Gonza	0.99	190	*e*P	Pg	11 17 20.4	-0.7
SLGB				IAML		11 17 43.7	
	comp=N,364nm,0.5s						
SLGB				IAML		11 17 44.0	
	comp=E,315nm,0.6s						
SPIG	San Pedro Mart	1.11	283	*e*P	Pg	11 17 22.8	-0.7
SPIG				*e*S	Sg	11 17 38.1	0.0
SPIG	San Pedro Mart	1.11	283	*e*P	Pg	11 17 23.6	+0.1
SPIG				*e*S	Sg	11 17 35.8	-2.3
SQX	San Quintin	1.46	261	*e*P	Pn	11 17 27.6	-0.2
SQX				*e*S	Sn	11 17 47.2	+0.5
PLIB	Puerto Liberta	1.58	124	*e*P	Pn	11 17 30.1	+0.7
PLIB				IAML		11 18 08.6	
	comp=E,151nm,0.7s						
LAPR	La Primavera	1.65	100	*e*P	Pn	11 17 28.9	-1.5
BAHB	Baha de los	1.94	163	*e*P	Pg	11 17 45.2	+6.0
BAHB				*e*S	Sg	11 18 13.1	+8.8
TJIG	Tijuana	2.66	308	*e*P	Pn	11 17 45.3	+0.9
TJIG				*e*S	Sn	11 18 13.1	-3.3
TUC	Tucson	3.28	62	*e*P	Pb	11 18 01.6	+1.7
TUC				*e*S	Sb	11 18 41.1	+1.3

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*TEH **10** 11:19:22.6, 29°.21N×55°.32E, h8^{km}±37^{km}*

*OMAN **10** 11:19:26.8±0.1, 28°.89N×55°.25E, h16^{km}±3^{km}, mb3.6/3, ml3.3/10, Error ellipse: s-maj=6.7km s-min=1.0km az=14.0*

ISC 10 11:19:22.9±1.1, **29°.12N**±0°.04×**55°.27E**±0°.04, **h10**^{km}, **n42, σ1^s.46**/51, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	Kerman	1.55	56	Pg	Pn	11 19 51.4	+0.4
JHRM	Jahrom	1.61	248	Pg	Pb	11 19 54.2	+1.4
KHGB	Koh Gabri	1.63	40	Pg	Pn	11 19 50.6	-1.3
LAR1	LAR	1.65	209	Pg	Pb	11 19 54.3	+0.8
GENO	Geno	1.89	155	Pn	Pb	11 19 58.0	+0.4
QIR1	Qir	2.06	252	Pn	Pb	11 20 00.6	+0.1
CHMN	Cheshme madani	2.11	69	Pn	Pn	11 19 59.0	+0.4
ZRDN	Zarand Kerman	2.14	30	Pn	Pn	11 19 59.4	+0.5
KHL1	Khalili_Fars	2.28	230	Pn	Pb	11 20 03.8	-0.4
IMEH	Mehriz	2.33	346	Pn	Pn	11 20 02.5	+0.9
KHNJ	Kahnooj	2.44	118	Pn	Pn	11 20 05.2	+2.3
SHI	Shiraz	2.46	283	Pn	Pn	11 20 05.2	+1.8
IBAF	Bafgh	2.47	6	Pn	Pn	11 20 04.3	+0.8
KBAM	BAM	2.78	89	Pn	Pn	11 20 09.4	+1.8
SHME	Shamm	3.15	166	P	Pn	11 20 13.9	+1.2
ICHK	Chekchek	3.20	347	Pn	Pn	11 20 14.2	+0.7
BANOM	Banah	3.31	164	P	Pn	11 20 17.5	+2.6
BANOM				S	Sn	11 20 53.2	-1.1
KLNJ	Kolanjah	3.70	301	Pn	Pn	11 20 21.9	+1.3
MASF	Masafi	3.82	168	P	Pn	11 20 22.4	+0.6
MDH	Madha	3.92	166	P	Pn	11 20 25.4	+2.2
MDH				S	Sn	11 21 07.1	-2.1
TPRV	Parvadeh(Tabas	4.08	17	Pn	Pn	11 20 26.0	+0.5
NAZ	Nazwa, Dubai	4.13	175	P	Pn	11 20 24.4	-1.7
UOSS	Minazif	4.24	168	P	Pn	11 20 28.5	+0.9
ANAR	Anarak	4.27	342	Pn	Pn	11 20 29.1	+1.1
HATD	Hatta, Dubai	4.35	170	P	Pn	11 20 30.4	+1.3
HATD				S	Sn	11 21 20.4	+0.5
BSRN	Basiran	4.37	49	Pn	Pn	11 20 30.4	+0.9
FAQ	Al Faqa, Dubai	4.37	176	P	Pn	11 20 26.0	-3.4
ASHO	Ashiyiah	4.47	171	P	Pn	11 20 32.2	+1.4
	SNR=30						
ASHO				S	Sn	11 21 22.9	-0.1
ASUD	Al Ashush, Dub	4.48	179	P	Pn	11 20 33.2	+2.4
IKOO	Kooshah	4.60	43	Pn	Pn	11 20 33.5	+0.7
TKDS	Koohdasht(Taba	4.75	19	Pn	Pn	11 20 35.2	+0.5
SHMA	Al-Shehemyia	5.02	231	P	Pn	11 20 39.2	+0.8
	SNR=11						
SHMA				S	Sn	11 21 36.4	0.0
SOHO	SOHO	5.09	167	P	Pn	11 20 39.0	-0.3
SOHO				S	Sn	11 21 36.8	-1.5
TRNA	Turayna	5.68	221	P	Pn	11 20 46.9	-0.4
TRNA				S	Sn	11 21 51.6	-1.0
HOQ	Hoqain	5.81	161	P	Pn	11 20 48.2	-1.0
ISFB	Sefidab	5.82	334	Pn	Pn	11 20 50.7	+1.3
ARQ	Araqi	5.87	169	P	Pn	11 20 51.0	+0.9
	SNR=7.7						
ARQ				S	Sn	11 21 54.2	-3.2
SMDO	Samad	6.53	157	P	Pn	11 20 59.8	+0.6
BSY	Bisya	6.58	164	P	Pn	11 21 02.4	+2.6
WSAR	Wadi Sarin	6.59	152	P	Pn	11 20 59.9	0.0
	SNR=6.6						
WSAR				S	Sn	11 22 12.1	-3.0
JMDO	Jabal Madar	7.19	159	P	Pn	11 21 08.0	-0.1
WBK	Wadi Bani Khal	7.29	152	P	Pn	11 21 09.2	-0.3

YARS 10 11:22:31.1, 74°.39N×110°.77E, h30^{km}, ML3.5/8, **Near coast of northern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIXI	Tiksi	5.96	109	*e*Pn	Pn	11 23 58.5	+1.5
	26nm,0.8s						
TIXI				*e*Sn	Sn	11 25 04.5	+0.3
	40nm,0.3s						
TIXI				*e*Sn	Sn	11 25 04.5	+0.3
	20nm,0.1s						

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*ECX **10** 11:26:01.1±0.5, 30°.78N×114°.12W, h15^{km}±5^{km}, ML3.8*

*MEX **10** 11:26:02.6±0.7, 31°.00N×114°.26W, h2^{km}±4^{km}, MD4.1*

ISC 10 11:26:00.1±1.2, **30°.85N**±0°.03×**114°.17W**±0°.02, **h9**^{km}±11^{km}, **n17, σ1^s.19**/30, **2C-1D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFX	San Felipe	0.61	288	*e*P	Pb	11 26 13.2	+0.3
SFX				*e*S	Sb	11 26 22.3	+0.6
SFX				IAML		11 26 23.1	
	comp=N,4μm,0.6s						
SFX				IAML		11 26 30.3	
	comp=E,4μm,0.5s						
PPXB	Puerto Peasco	0.67	43	*e*P	Pb	11 26 14.6	+0.7
PPXB				*e*S	Sb	11 26 24.3	+1.0
PPXB				*e*		11 26 25.5	
PPXB				IAML		11 26 25.5	
	comp=E,3μm,0.8s						
PIX	Pinacate	0.94	40	*e*P	Pg	11 26 17.6	-0.5
PIX				*e*S	Sg	11 26 31.1	+0.9
ECBX	El Chinero	0.98	310	*e*P	Pg	11 26 17.9	-1.0
ECBX				*e*S	Sb	11 26 31.8	-0.3
SLGB	San Luis Gonza	1.03	191	*e*P	Pb	11 26 18.4	-1.7
SPIG	San Pedro Mart	1.13	280	*e*P	Pn	11 26 21.8	-0.6
SPIG				*e*S	Sn	11 26 38.3	+0.2
SPIG	San Pedro Mart	1.13	280	*e*P	Pn	11 26 22.8	+0.5
SPIG				*i* S	Sn	11 26 39.8	+1.7
VTX	Valle De La Tr	1.49	292	*e*P	Pb	11 26 27.4	-0.4
SQX	San Quintin	1.49	260	*e*P	Pn	11 26 26.1	-0.9
SQX				*e*S	Sb	11 26 46.7	-0.3
SQX				⇓*e*		11 26 57.0	
SQX				IAML		11 26 57.0	
	comp=N,1μm,0.5s						
SQX				IAML		11 27 04.9	
	comp=E,773nm,0.7s						
SQX				⇑*e*		11 27 04.9	
PLIB	Puerto Liberta	1.58	126	*e*P	Pn	11 26 29.4	+1.3
PLIB				*e*S	Sn	11 26 49.1	+0.4
RHX	Rio Hardy	1.60	324	*e*P	Pb	11 26 29.4	-0.3
LAPR	La Primavera	1.63	102	*e*P	Pn	11 26 27.7	-1.2
LAPR				IAML		11 27 11.3	
	comp=E,1μm,0.5s						
LAPR				IAML		11 27 11.7	
	comp=N,1μm,0.7s						
LAPR				⇑*e*		11 27 11.7	
BAHB	Baha de los	1.97	164	*e*P	Pg	11 26 38.8	+0.9
BAHB				*e*S	Sg	11 27 05.0	+1.6
TJIG	Tijuana	2.66	307	*e*P	Pn	11 26 43.2	+0.2
TJIG				*i* S	Sn	11 27 15.4	0.0
TUC	Tucson	3.24	62	*e*P	Pb	11 26 57.8	+0.1
TUC				*e*S	Sb	11 27 35.2	-2.0
HSIG		3.34	122	*e*P	Pb	11 26 57.2	-2.1
HSIG				*e*S	Sb	11 27 42.2	+2.1
NZIG	Nacozari, Sono	4.01	96	*e*P	Pb	11 27 10.6	-0.4
NZIG				*e*S	Sb	11 27 57.2	-2.3

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*ECX **10** 11:34:08.3±0.3, 30°.84N×114°.21W, h13^{km}±5^{km}, ML3.5*

*MEX **10** 11:34:09.5±0.6, 30°.75N×114°.39W, h12^{km}±17^{km}, MD4.0*

ISC 10 11:34:05.5±1.5, **30°.82N**±0°.04×**114°.17W**±0°.03, **h15**^{km}±13^{km}, **n16, σ1^s.13**/27, **9C-1D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFX	San Felipe	0.62	290	*e*P	Pn	11 34 18.8	-1.1
SFX				*e*S	Sb	11 34 26.7	-0.1
SFX				IAML		11 34 28.8	
	comp=N,3μm,0.6s						
SFX				⇑*e*		11 34 29.1	
SFX				IAML		11 34 29.1	
	comp=E,3μm,0.3s						
PPXB	Puerto Peasco	0.69	42	⇑*e*P	Pn	11 34 20.7	0.0
PPXB				*e*S	Sn	11 34 30.3	-0.8
PPXB				⇓*e*		11 34 31.5	
PPXB				IAML		11 34 31.5	
	comp=N,1μm,0.8s						
PPXB				IAML		11 34 31.5	
	comp=E,2μm,1.0s						
PPXB				⇑*e*		11 34 31.5	
PIX	Pinacate	0.95	39	⇑*e*P	Pn	11 34 24.8	+0.4
PIX				*e*S	Sn	11 34 38.5	+0.8
ECBX	El Chinero	1.00	311	*e*P	Pn	11 34 24.8	-0.2
ECBX				*e*S	Sb	11 34 37.7	+0.3
ECBX				IAML		11 34 48.7	
	comp=N,779nm,1.0s						
ECBX				⇑*e*		11 34 48.7	
SLGB	San Luis Gonza	1.01	192	*e*S	Sn	11 34 39.9	+0.8
SPIG	San Pedro Mart	1.14	282	⇑*e*P	Pn	11 34 27.2	-0.1
SPIG				*e*S	Sn	11 34 42.3	-0.5
SPIG	San Pedro Mart	1.14	282	*e*P	Pn	11 34 27.1	-0.1
SPIG				*e*S	Sb	11 34 40.5	-1.3
SQX	San Quintin	1.49	261	⇑*e*P	Pb	11 34 32.7	-0.3
SQX				*e*S	Sb	11 34 52.2	+0.5
PLIB	Puerto Liberta	1.56	125	*e*P	Pg	11 34 35.4	-0.2
PLIB				*e*S	Sg	11 34 56.4	+0.5
RHX	Rio Hardy	1.62	324	*e*P	Pb	11 34 35.3	+0.2
LAPR	La Primavera	1.62	101	IAML		11 35 10.5	
	comp=N,583nm,0.7s						
LAPR				⇑*e*		11 35 10.5	
LAPR				⇑*e*		11 35 15.4	
LAPR				IAML		11 35 15.4	
	comp=E,504nm,0.6s						
BAHB	Baha de los	1.95	164	*e*P	Pb	11 34 41.1	+0.4
TJIG	Tijuana	2.67	308	*e*P	Pn	11 34 49.5	+1.4
TJIG				*e*S	Sn	11 35 20.8	+0.5
TUC	Tucson	3.25	62	*e*P	Pb	11 35 01.4	-1.5
TUC				*e*S	Sb	11 35 44.9	+2.6
HSIG		3.32	122	*e*P	Pb	11 35 04.3	+0.1
HSIG				*e*S	Sb	11 35 43.9	-0.5
NZIG	Nacozari, Sono	4.00	95	*e*P	Pb	11 35 16.6	+0.7
NZIG				*e*S	Sb	11 36 00.9	-3.3

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*NNC **10** 11:41:22.6±1.2, 50°.86N×73°.60E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=17.4km s-min=5.7km az=27.0, Suspected Mining explosion.*

*IDC **10** 11:41:27.1±1.5, 50°.93N×73°.78E, h0^{km}, mbtmp2.7/4, ML2.1/4, Error ellipse: s-maj=36.7km s-min=11.7km az=28.0*

ISC 10 11:41:23.9±1.2, **51°.0N**±0°.1×**73°.58E**±0°.08, **h0**^{km}, **n12, σ1^s.32**/8, **6C-5D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BVA0	Borovoye Array	2.82	317	⇓Pg	Pg	11 42 16.3	-1.6
	2.6nm,0.6s,baz=121,slow=15,SNR=13						
BVA0				⇓Lg	Lg	11 42 55.7	
	18nm,0.8s,baz=114,slow=22,SNR=10						
BVAR	Borovoye Array	2.82	317	Pn	Pb	11 42 15.1	0.0
	0.1nm,0.3s,baz=131,slow=15,SNR=8.5						
BVAR				Lg	Lg	11 42 55.4	
	0.2nm,0.3s,baz=130,slow=29,SNR=4.7						
	2.1nm,0.5s						
KURBB	Kurchatov Arra	3.17	95	Pn	Pn	11 42 16.1	+1.1
	0.2nm,0.3s,baz=278,slow=14,SNR=17						
KURBB				Lg	Lg	11 43 01.8	
	0.2nm,0.3s,baz=276,slow=29,SNR=5.1						
	4.3nm,0.8s						
KURBB	Kurchatov Arra	3.17	95	⇑Pg	Pb	11 42 20.6	-0.4
	9.1nm,0.4s						
KURBB				⇓Lg	Lg	11 43 03.7	
	71nm,0.7s						
KURK	Kurchatov	3.21	93	⇓Pg	Pb	11 42 20.3	-1.4
	1.9nm,0.6s						
KURK				⇑Lg	Lg	11 43 02.4	
	21nm,0.8s						
MAKZ	Makanchi	6.95	124	⇑Lg	Lg	11 44 58.2	
	9.9nm,0.8s						
MK31	Makanchi Array	7.13	123	⇓Pg	Pb	11 43 28.7	+0.2
	0.6nm,0.6s,baz=296,slow=14,SNR=4.6						
MK31				⇑Lg	Lg	11 45 07.4	
	8.5nm,0.8s,baz=321,slow=26,SNR=6.7						
MKAR	Makanchi Array	7.13	123	Pn	Pn	11 43 09.7	+0.2

	0.1nm,0.3s,baz=307,slow=11,SNR=4.9						
MKAR				Lg	Lg	11 45 03.2	
	0.4nm,0.3s,baz=318,slow=32,SNR=8.9						
	0.1nm,0.4s						
I46RU	ZALESOVO INFRA	7.46	62	I	I	12 27 00.0	
	baz=247,slow=319,SNR=5.4						
ZALV	Zalesovo Beam	7.46	62	Pn	Pn	11 43 15.6	+1.6
	0.2nm,0.3s,baz=255,slow=12,SNR=2.8						
	0.5nm,0.3s						
KK31	Karatay Array	8.19	196	⇑Lg	Lg	11 45 38.4	
	5.4nm,0.8s,baz=11,slow=27,SNR=5.1						
AAK	Ala-Archa	8.41	175	⇑Lg	Lg	11 45 47.6	
	13nm,1.0s						

KRSC 10 11:53:52.9±1.5, 53°.71N×167°.57E, h43^{km}±32^{km}, Ml4.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	1.77	329	eP	Pn	11 54 22.5	+1.6
BKI				eS	Sn	11 54 44.7	+2.5
KBTR	Krutoberegovo	3.71	314	eP	Pn	11 54 49.7	+2.1
KBTR				eS	Sn	11 55 35.4	+5.3
KBG	Krutoberegovo	3.79	314	eS	Sn	11 55 37.0	+5.0
KZV	Kizimen	4.48	291	eP	Pn	11 55 02.5	+4.2
SPN	Mys Shipunski	4.56	265	eP	Pn	11 55 03.1	+3.9
SPN				eS	Sn	11 55 56.0	+5.1
BZGR	Bezymyannyi-Gr	4.56	302	eP	Pn	11 55 04.2	+4.8
SRKR	Sorokina	4.71	311	eP	Pn	11 55 05.4	+4.1
KMNR	Kamenistaya	4.72	299	eP	Pn	11 55 06.8	+5.2
KLY	Klyuchi	4.76	306	eP	Pn	11 55 05.3	+3.3
KII	Karymskiy	4.82	277	eP	Pn	11 55 07.5	+4.7
NLC	Nalytchevo	4.95	267	eP	Pn	11 55 08.8	+4.2
NLC				eS	Sn	11 56 05.5	+5.0
SDLR	Sedlovina	5.21	269	eP	Pn	11 55 12.9	+4.7
UGLR	Uglovaya	5.25	268	eP	Pn	11 55 13.3	+4.4
SMAR	Somma	5.26	269	eP	Pn	11 55 13.6	+4.5
KRER	Koryakskii	5.28	269	eP	Pn	11 55 14.3	+4.9
AVH	Avacha	5.29	269	eP	Pn	11 55 14.1	+4.7
DALK	Dalny	5.33	266	eP	Pn	11 55 13.8	+4.1
KRX	Arik	5.33	270	eP	Pn	11 55 14.2	+4.2
KOK	Koryaka	5.35	269	eP	Pn	11 55 13.9	+3.7
PET	Petropavlovsk	5.39	266	eP	Pn	11 55 15.4	+4.8
ESO	Esso	5.59	297	eP	Pn	11 55 17.3	+3.9
RUS	Russkaya	5.61	261	eP	Pn	11 55 18.3	+4.7
RUS				eS	Sn	11 56 21.7	+4.9
GNL	Ganaly	5.72	274	eP	Pn	11 55 20.8	+5.5
KRMR	Karymshinskiy	5.74	265	eP	Pn	11 55 19.3	+4.0
KRMR				eS	Sn	11 56 24.2	+4.4
MTVR	Mutnovka	5.79	262	eP	Pn	11 55 21.0	+4.8
GRL	Gorelyy	5.84	262	eP	Pn	11 55 22.0	+5.2
ASAK	Asacha	5.98	261	eP	Pn	11 55 23.7	+4.8
KDTR	Khodutka, Kamc	6.07	256	eP	Pn	11 55 23.7	+3.8
KDTR				eS	Sn	11 56 30.4	+2.3
APC	Apacha	6.29	267	eP	Pn	11 55 28.3	+5.3

GUC 10 12:18:48.4±0.4, 38°.11S×75°.79W, h10^{km}, ML3.7, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BI04	Isla Mocha	1.53	102	eP	Pn	12 19 15.2	-0.6
BI04				IAML		12 19 29.9	
	comp=N,782nm,0.3s						
LC02	Puerto Saavedr	2.01	110	eP	Pn	12 19 22.2	-0.1
LC02				IAML		12 19 44.3	
	comp=E,788nm,0.5s						
BI05	Punta Hualpn	2.48	57	eP	Pn	12 19 29.7	+0.9
BI05				IAML		12 19 56.7	
	comp=N,560nm,0.2s						
LR04	Corral	2.55	135	eP	Pn	12 19 30.7	+0.9
LR04				IAML		12 19 56.7	
	comp=N,601nm,0.2s						
LC01	Cunco	3.17	106	eP	Pn	12 19 39.6	+1.3
LC01				IAML		12 20 12.8	
	comp=E,210nm,0.1s						
GO06	Curarrehue	3.68	115	eP	Pn	12 19 46.9	+1.5
BI02	San Fabin de	3.88	69	eP	Pn	12 19 49.5	+1.4
GO05	Hualane	4.39	46	eP	Pn	12 19 57.5	+2.5
BO03	Pichilemu	4.75	42	eP	Pn	12 20 02.3	+2.2
BO02	Sierra Bellavi	5.22	52	eP	Pn	12 20 08.6	+2.0
BO01	Tunca	5.31	47	eP	Pn	12 20 10.5	+2.7

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*IDC **10** 12:43:54.3±3.2, 5°.43N×126°.06E, h97^{km}±28^{km}, mb3.8/11, mbtmp4.2/13, MS3.2/4, Error ellipse: s-maj=42.4km s-min=13.5km az=71.0*

*NEIC **10** 12:43:57.7±1.8, 5°.30N±0°.07×126°.1E±0°.1, h115^{km}±8^{km}, mb4.3/22, Error ellipse: s-maj=20.0km s-min=9.5km az=74.0*

*DJA **10** 12:44:05.6±0.5, 4°N±4°×12°6E±°, h65^{km}±5^{km}, M4.6/21, mb4.6/21, mB5.2/9, MLv4.7/14, Mw(mB)4.6/9*

ISC 10 12:43:55.1±0.5, 5°.40N±0°.06×126°.36E±0°.10, h100^{km}, n78, σ1^{s}.51/76, mb4.2/20, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	1.83	335	P	Pn	12 44 29.3	+3.8
	317nm,0.5s,baz=42,slow=7.0,SNR=6.4						
DAV	Davao City (W)	1.83	335		Pn	12 44 28.2	+2.6
DAV	Davao City (W)	1.83	335	P	Sn	12 44 47.5	-1.2
SGSI	Sangihe	1.90	206	P	Pn	12 44 25.4	-1.0
MNI	Manado	4.22	201	P	Pn	12 44 55.0	-2.3
TNTI	Ternate	4.71	168	Pn	Pn	12 45 03.4	-0.6
TNTI	Ternate	4.71	168	P	Pn	12 45 03.1	-0.9
GTOI	Gorontalo	5.80	215	P	Pn	12 45 17.5	-1.2
MRSI	Marisa	6.59	222	P	Pn	12 45 29.4	-0.1
TOLI2	Tolitoli	7.01	233		Pn	12 45 33.5	-1.8
LUWI	Luwuk	7.34	209		Pn	12 45 40.3	+0.6
LUWI	Luwuk	7.34	209	P	Pn	12 45 41.5	+1.8
SANI	Sanana	7.41	183	P	Pn	12 45 36.7	-4.0
	0.3nm2μm78nm,0.6s						
MYLDM	Lahad Datu	7.83	269		Pn	12 45 45.3	-1.1
APSI	Ampana	7.84	217	P	Pn	12 45 46.7	+0.1
	0.9nm3μm278nm,1.4s						
SWI	Sorong	7.92	142	P	Pn	12 45 47.2	-0.4
	0.1nm26nm,0.8s						
NLAI	Namlea	8.62	175	P	Pn	12 45 53.3	-3.8
	3μm108nm,0.7s						
KRAI	Karang Ratu	8.90	167	P	Pn	12 46 00.1	-0.9
	0.2nm2μm53nm,0.6s						
PCI	Palu	9.04	226	P	Pn	12 46 04.8	+1.9
	52nm,0.9s						
FAKI	Fak Fak	10.15	144	P	Pn	12 46 17.6	-0.3
	22nm,0.9s						
TTSI	Tana Toraja	10.64	218	P	Pn	12 46 25.9	+1.3
	38nm,1.1s						
MMSI	Mamuju	10.96	223	P	Pn	12 46 30.6	+1.6
	18nm,0.7s						
SPSI	Sidrap Palu	11.40	215	P	Pn	12 46 34.7	-0.2
	411nm19nm,0.7s						
BNSI	Bone	11.57	213	P	Pn	12 46 38.5	+1.3
	28nm,1.0s						
KAPI	Kappang	12.28	213	P	Pn	12 46 44.1	-2.5
	13nm,0.7s,baz=22,slow=5.5,SNR=8.8						
KAPI	Kappang	12.28	213		Pn	12 46 45.6	-0.9
KAPI	Kappang	12.28	213	P	Pn	12 46 45.9	-0.7
	12nm,1.2s						
BKSI	Bulukumba	12.34	210	P	Pn	12 46 46.2	-1.3
EDFI	Ende, Flores	14.81	198	P	P	12 47 22.3	-0.7
SOEI	Soe	15.20	188		Pn	12 47 23.4	-1.3
SOEI	Soe	15.20	188	P	P	12 47 26.8	-0.6
	44nm,1.1s						
BATI	Baumata	15.74	190	P	Pn	12 47 31.8	+0.5
	17nm,0.3s,baz=41,slow=4.9,SNR=6.5						
DBNI	Kabupaten Domp	15.98	210	P	P	12 47 36.2	+0.4
	11nm,0.9s						
PLAI	Plampang	16.53	211	P	P	12 47 43.4	+1.5
	30nm,1.0s						
TWSI	Taliwang, Sumb	16.93	214	P	P	12 47 46.7	+0.3
KLNI	Mataram	17.13	217	P	P	12 47 52.9	+4.3
MTN	Manton Dam	18.74	165	P	P	12 48 06.4	+0.2
MTN				IAmb	IAmb	12 48 38.3	
	comp=Z,9.1nm,0.8s						
GUMO	Guam	19.97	65	LR	LR	12 56 42.2	
	comp=Z,43nm,19.0s,baz=172,slow=38						
KNRA	Kununurra	21.08	174	P	P	12 48 31.5	0.0
FITZ	Fitzroy Crossi	23.36	182	P	P	12 48 54.5	-0.4
COEN	Coen	25.46	139	P	P	12 49 14.6	+0.5
COEN				IAmb	IAmb	12 49 17.4	
	comp=Z,17nm,1.1s						
WB0	Warramunga Arr	26.23	163		P	12 49 21.9	+0.9
WB0				IAmb	IAmb	12 49 41.5	
	comp=Z,9.3nm,0.8s						
WRAB	Tennant Creek	26.38	163	P	P	12 49 23.1	+0.8
WRAB				IAmb	IAmb	12 49 44.5	
	comp=Z,6.7nm,0.9s						
WRA	Warramunga Arr	26.38	163	P	P	12 49 22.9	+0.6
	comp=Z,2.3nm,0.7s,baz=343,slow=10,SNR=17						
	comp=Z,2.3nm,0.7s						
WRA	Warramunga Arr	26.38	163	P	P	12 49 24.1	+1.7
PSA00	Pilbara Seismi	27.56	193	P	P	12 49 32.6	-0.3
PSA00				IAmb	IAmb	12 50 00.2	
	comp=Z,9.7nm,1.4s						
PSA00	Pilbara Seismi	27.56	193	P	P	12 49 32.4	-0.5
PSA00				IAmb	IAmb	12 49 32.6	
	comp=Z,15nm,0.8s						
CMAR	Chiang Mai Arr	29.74	298	LR	LR	13 04 32.8	
	comp=Z,23nm,18.8s,baz=80,slow=42						
AS31	Alice Springs	29.82	166	P	P	12 49 53.6	+0.7
ASAR	Alice Springs	29.82	166	P	P	12 49 52.3	-0.6
	comp=Z,0.6nm,0.5s,baz=349,slow=6.8,SNR=20						
ASAR				PcP	PcP	12 52 54.5	+0.3
	comp=Z,0.7nm,0.6s,baz=0.6,slow=2.2,SNR=5.0						
ASAR				ScP	ScP	12 56 26.4	-1.0
	comp=Z,0.8nm,0.8s,baz=321,slow=2.0,SNR=6.8						
	comp=Z,0.6nm,0.5s						
ASAR	Alice Springs	29.82	166	P	P	12 49 53.8	+0.9
JHJ	Hachijo jima 2	30.28	23	LR	LR	13 05 32.0	
	comp=Z,33nm,18.0s,baz=312,slow=43						
STKA	Stephens Creek	39.82	160	P	P	12 51 19.1	+0.4
	comp=Z,3.0nm,0.7s,baz=297,slow=6.8,SNR=5.5						
	comp=Z,3.0nm,0.7s						
STKA	Stephens Creek	39.82	160	P	P	12 51 19.3	+0.6
MK31	Makanchi Array	55.98	325	P	P	12 53 22.1	-1.1
MKAR	Makanchi Array	55.98	325	P	P	12 53 21.5	-1.7
	comp=Z,0.6nm,0.4s,baz=114,slow=6.9,SNR=15						
	comp=Z,0.6nm,0.4s						
MKAR	Makanchi Array	55.98	325	P	P	12 53 22.0	-1.3
ZALV	Zalesovo Beam	58.94	333	P	P	12 53 40.7	-3.1
	comp=Z,0.2nm,0.3s,baz=141,slow=9.3,SNR=1.9						
	comp=Z,0.2nm,0.3s						
KURBB	Kurchatov Arra	60.14	327	P	P	12 53 50.0	-2.2
	comp=Z,0.6nm,0.6s,baz=118,slow=8.0,SNR=8.8						
	comp=Z,0.6nm,0.6s						
KURK	Kurchatov	60.14	327	P	P	12 53 50.9	-1.3
KURK				IAmb	IAmb	12 54 06.5	
	comp=Z,2.0nm,0.6s						
KK31	Karatay Array	61.77	317	P	P	12 54 03.2	-0.2
KKAR	Karatay Array	61.77	317	P	P	12 54 03.1	-0.3
BKZ	Black Stump Fm	64.07	138	P	P	12 54 19.2	+0.6
AB31	Akbulak array	70.63	320	P	P	12 54 58.4	-1.4
AB31				IAmb	IAmb	12 55 21.6	
	comp=Z,5.4nm,1.5s						
ABKAR	Akbulak array	70.63	320	P	P	12 54 58.4	-1.4
AKTO	Aktyubinsk	72.13	321	LR	LR	13 27 10.0	
	comp=Z,33nm,19.1s,baz=238,slow=36						
L18K	Granite Mounta	79.17	28	P	P	12 55 51.0	+2.2
L18K				IAmb	IAmb	12 55 52.8	
	comp=Z,5.5nm,1.0s						
IMAR	Indian Mountai	80.97	24	P	P	12 56 00.2	+1.8
G24K	Hadweenzic Riv	83.55	24	P	P	12 56 14.3	+2.4
G24K				IAmb	IAmb	12 56 25.5	
	comp=Z,7.8nm,1.3s						
ILAR	Eielson Array	83.76	25	P	P	12 56 12.9	0.0
	comp=Z,1.0nm,0.6s,baz=247,slow=5.2,SNR=15						
	comp=Z,1.0nm,0.6s						
VNDA	Vanda	85.12	173	P	P	12 56 19.4	-0.1
	comp=Z,1.1nm,0.7s,baz=277,slow=3.7,SNR=7.1						
	comp=Z,1.1nm,0.7s						
VNDA	Vanda	85.12	173	P	P	12 56 20.0	+0.5
VNDA				IAmb	IAmb	12 56 20.1	
	comp=Z,4.3nm,1.1s						
E27K	Coleen River	85.78	22	P	P	12 56 24.7	+1.6
E27K				IAmb	IAmb	12 56 25.7	
	comp=Z,2.6nm,0.7s						
ARCES	ARCESS Array B	88.76	340	P	P	12 56 36.8	-0.6
	comp=Z,4.5nm,1.0s,baz=54,slow=4.7,SNR=3.7						
	comp=Z,4.5nm,1.0s						
FIA1	FINESS Array S	90.19	332	P	P	12 56 44.0	-0.2
FINES	FINESS Array B	90.19	332	P	P	12 56 43.5	-0.6
	comp=Z,4.1nm,1.1s,baz=99,slow=7.2,SNR=4.9						
	comp=Z,4.1nm,1.1s						
FINES	FINESS Array B	90.19	332	P	P	12 56 44.0	-0.1
YKA	Yellowknife Ar	98.13	24	P	P	12 57 20.6	0.0
	comp=Z,0.2nm,0.4s,baz=298,slow=5.0,SNR=4.0						
	comp=Z,0.2nm,0.4s						

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*JMA **10** 12:54:41.0±0.2, 23°.9N±0°.7×122°.4E±0°.3, h14^{km}±3^{km}, MV3.2/12, TAIWAN REGION*

*TAP **10** 12:54:41.2, 23°.91N×122°.33E, h12^{km}, ML3.2, C*

ISC 10 12:54:41.0±1.0, 23°.90N±0°.02×122°.36E±0°.02, h14^{km}±8^{km}, n114, σ0^{s}.54/208, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS4	EOS4	0.22	351	i P	Pb	12 54 46.8	+0.1
EOS4				i S	Sg	12 54 50.4	+1.4
EOS3	EOS3	0.39	355	i P	Pb	12 54 49.7	+0.1
EOS3				i S	Sb	12 54 55.7	+0.3
EOS2	EOS2	0.53	348	i P	Pb	12 54 52.5	+0.5
EOS2				i S	Sb	12 55 00.0	+0.5
HWA	Hwalien	0.69	277	eP	Pb	12 54 55.4	+0.5
HWA				eS	Sb	12 55 05.2	+0.9
TEYL	Yanliau Villag	0.70	268	eP	Pb	12 54 54.8	-0.1
TEYL				eS	Sn	12 55 05.6	-1.3
EAHA	Aohua	0.71	307	P	Pb	12 54 55.3	+0.2
EAHA				S	Sb	12 55 05.8	+1.1
ETL	Fush Village	0.72	291	eP	Pn	12 54 56.2	-0.6
ETL				eS	Sb	12 55 05.9	+0.8
TWD	Chiawan	0.72	285	eP	Pb	12 54 55.5	+0.2
TWD				eS	Sb	12 55 05.5	+0.5
SHUL	Shoufeng	0.74	262	eP	Pb	12 54 56.3	+0.7
SHUL				eS	Sn	12 55 06.8	-1.1
NACB	Ninganchiao	0.75	292	P	Pb	12 54 56.0	+0.2
NACB	Ninganchiao	0.75	292	i P	Pb	12 54 55.8	0.0
NACB				S	Sb	12 55 06.7	+0.8
EWUT	Wuta	0.76	316	eP	Pg	12 54 55.7	-0.1
EWUT				eS	Sb	12 55 06.6	+0.5
JYNG	Yonagunijimaku	0.77	44	P	Pg	12 54 55.5	-0.5
JYNG				eS	Sg	12 55 06.0	-0.2
ENA	Nanau	0.77	313	P	Pg	12 54 55.9	-0.1
ENA				S	Sb	12 55 06.7	+0.2
ETM	Tongmen	0.79	275	eP	Pb	12 54 56.8	+0.2
ETM				eS	Sn	12 55 08.6	-0.8
YOJ	Yonaguni jima	0.82	47	P	Pg	12 54 56.5	-0.4
YOJ	Yonaguni jima	0.82	47	S	Sg	12 55 07.7	0.0
YOJ	Yonaguni jima	0.82	47	eP	Pg	12 54 56.6	-0.4
YOJ				eS	Sg	12 55 08.6	+0.9
YOJ	Yonaguni jima	0.82	47	P	Pg	12 54 56.6	-0.4
YOJ				S	Sg	12 55 06.8	-0.9
ESAO	Su ao	0.82	325	P	Pb	12 54 57.0	0.0
ESAO				eS	Sg	12 55 07.4	-0.4
TWC	Suao	0.85	327	i P	Pg	12 54 56.9	-0.5
TWC				eS	Sg	12 55 08.1	-0.5
ESL	Shilin	0.85	265	eP	Pb	12 54 57.4	-0.2
ESL				eS	Sb	12 55 09.4	+0.6
ETLH	Xiulin Townshi	0.86	291	P	Pb	12 54 57.8	+0.1
ETLH				eS	Sb	12 55 09.9	+0.8
LXIB	Xiulin Townshi	0.87	278	P	Pb	12 54 58.1	+0.1
LXIB				eS	Sn	12 55 10.5	-1.0
WARBT	Fenglin Townsh	0.91	259	P	Pg	12 54 58.2	-0.4
WARBT				eS	Sb	12 55 11.3	+0.8
NDS	Dongshan	0.94	321	eP	Pb	12 54 59.0	0.0
NDS				eS	Sg	12 55 11.0	-0.5
HGSD	Ruisui	0.95	245	eP	Pb	12 54 59.3	+0.1
HGSD				eS	Sn	12 55 12.6	-0.5
LATG	Datong	0.99	310	eP	Pb	12 55 00.3	+0.3
LATG				eS	Sb	12 55 13.3	+0.4
EHYH	Wanrong	1.01	247	P	Pb	12 55 00.5	+0.2
EHYH				i S	Sn	12 55 14.4	-0.3
ECBN	Changbin	1.01	235	eP	Pn	12 55 02.5	+1.7
ECBN				eS	Sn	12 55 14.4	-0.3
EGS		1.02	338	eP	Pb	12 55 00.7	+0.3
EHY	Hungye	1.03	248	i P	Pg	12 55 00.5	-0.3
EHY				i S	Sn	12 55 14.7	-0.4
WHF	Hehuan Shan	1.03	284	eP	Pg	12 55 00.7	-0.3
WHF				eS	Sb	12 55 14.7	+0.4
ENTT	Nioudou	1.03	316	eP	Pn	12 55 01.1	0.0
ENTT				eS	Sn	12 55 15.9	+0.6
TWE	Neicheng	1.03	323	eP	Pb	12 55 00.7	+0.1
TWE				eS	Sn	12 55 15.2	-0.1
NNSB	Datong	1.03	301	eP	Pb	12 55 00.8	0.0
NNSB				eS	Sn	12 55 14.9	-0.6
NNSH	Datong	1.03	301	P	Pg	12 55 00.7	-0.3
NNSH				eS	Sb	12 55 14.6	+0.4
NNS	Nan Shan	1.05	301	eP	Pb	12 55 01.1	+0.1
NNS				eS	Sb	12 55 14.9	+0.2
FUSS	Fushou	1.08	289	i P	Pb	12 55 01.6	+0.1
FUSS				S	Sn	12 55 16.5	-0.2
OWD	Renai	1.08	273	P	Pb	12 55 01.3	-0.3
OWD				S	Sb	12 55 15.9	+0.3
YULB	Yu-li	1.09	243	P	Pb	12 55 01.4	-0.3
YULB	Yu-li	1.09	243	S	Sg	12 55 16.5	0.0
YULB	Yu-li	1.09	243	i P	Pb	12 55 01.6	-0.1
YULB				S	Sg	12 55 16.5	0.0
FUSB	Fushanzhiwuyua	1.11	321	eP	Pn	12 55 02.3	+0.2
FUSB				eS	Sn	12 55 17.5	+0.3
TWF1	Yuli	1.11	241	i P	Pb	12 55 02.0	-0.1
TWF1				i S	Sn	12 55 17.2	-0.1
VWDT	VWDT	1.12	263	i P	Pg	12 55 02.3	-0.4
VWDT				S	Sn	12 55 17.5	0.0
TWT	Tachien	1.14	288	eP	Pn	12 55 02.9	+0.3
TWT				eS	Sn	12 55 18.1	0.0
WUSB	Renai	1.14	275	i P	Pb	12 55 02.4	-0.1
WUSB				i S	Sg	12 55 17.6	-0.3
TDCB	Techi	1.15	288	eP	Pn	12 55 03.0	+0.2
TDCB				eS	Sn	12 55 18.3	-0.2
TWB1	Santiao Chiao	1.16	343	eP	Pg	12 55 03.3	0.0
TWB1				eS	Sn	12 55 18.7	+0.4
NWLT	Wulai	1.17	318	eP	Pb	12 55 02.3	-0.7
NWLT				eS	Sn	12 55 19.0	+0.2
TIPB	Shuangxi	1.17	336	eP	Pn	12 55 03.4	+0.3
TIPB				eS	Sb	12 55 18.4	+0.2
YHNB	Yeheng	1.18	311	P	Pn	12 55 03.4	+0.3
YHNB	Yeheng	1.18	311	eP	Pb	12 55 03.1	-0.1
YHNB				eS	Sn	12 55 19.8	+0.8
NSK	Sanguang	1.20	311	eP	Pb	12 55 03.4	-0.1
NSK				eS	Sn	12 55 19.4	0.0
FULB	Fuli	1.20	235	eP	Pb	12 55 02.9	-0.6
FULB				eS	Sg	12 55 19.5	-0.3
SXI1	Grass Mountain	1.27	340	eP	Pn	12 55 04.1	-0.3
WFSB	Wu-fen Shan	1.28	336	eP	Pg	12 55 05.8	+0.1
WFSB				eS	Sg	12 55 22.3	-0.1
TWA	Mucha	1.29	327	P	Pg	12 55 05.6	-0.2
TWA				eS	Sg	12 55 22.3	-0.3
SSLB	Suanglung	1.29	265	P	Pb	12 55 05.0	-0.1
SSLB	Suanglung	1.29	265	eP	Pg	12 55 05.5	-0.3
SSLB				eS	Sg	12 55 22.6	-0.1
EHD	Haiduan	1.29	235	eP	Pb	12 55 05.4	+0.3
EHD				eS	Sg	12 55 22.6	-0.2
DPDB	Guoxing	1.32	276	eP	Pg	12 55 05.8	-0.5
ECS	Chishang	1.32	233	eS	Sg	12 55 23.3	-0.2
IRIF	Iriomote-Funau	1.33	71	P	Pn	12 55 05.2	+0.1
IRIF				eS	Sb	12 55 22.3	-0.2
TATO	Taipei	1.33	324	P	Pg	12 55 06.3	-0.4
TATO	Taipei	1.33	324	eP	Pb	12 55 06.0	+0.2
TATO				eS	Sg	12 55 23.6	-0.4
SMLT	Sun Moon Lake	1.33	270	P	Pn	12 55 05.6	+0.3
SMLT				S	Sn	12 55 22.9	0.0
EDH	Donghe	1.34	227	eP	Pb	12 55 06.0	+0.2
EDH				eS	Sn	12 55 23.1	+0.3
NHY	Taipei	1.34	328	eP	Pg	12 55 06.8	-0.1
WHP	Taichung City	1.34	287	eP	Pg	12 55 06.6	-0.4
WHP				eS	Sn	12 55 23.1	0.0
NFF	Wufeng Townshi	1.35	303	eP	Pg	12 55 06.4	-0.6
NFF				eS	Sg	12 55 24.5	0.0
YUS	Yu-Shan	1.35	253	i P	Pn	12 55 06.0	+0.2
YUS				i S	Sb	12 55 23.5	-0.2
TYC	Yuchr	1.37	271	eP	Pn	12 55 06.2	+0.5
TYC				eS	Sn	12 55 23.8	+0.1
KSHI	Guanxi Townshi	1.39	309	eP	Pg	12 55 07.5	-0.3
KSHI				eS	Sg	12 55 25.9	+0.1
WHYT	Xinyi Township	1.39	262	eP	Pb	12 55 06.7	-0.1
WHYT				eS	Sn	12 55 24.4	+0.2
ELDTW	Lidau	1.42	240	P	Pn	12 55 06.0	-0.4
ELDTW				eS	Sn	12 55 24.7	-0.3
LIOB	Emei	1.43	302	eP	Pb	12 55 07.8	+0.3
LIOB				eS	Sg	12 55 26.5	-0.8
YM01	YM01	1.44	330	eP	Pb	12 55 07.8	+0.3
YM01				eS	Sb	12 55 25.9	+0.2
NSTT	Nanjuang	1.44	301	eP	Pb	12 55 07.9	+0.4
NSTT				eS	Sb	12 55 26.0	+0.3
ZUZH	Zhuzihu	1.46	330	eP	Pb	12 55 08.0	+0.1
LDUT	Ludao	1.47	214	eP	Pn	12 55 07.3	+0.3
LDUT				eS	Sn	12 55 25.7	-0.3
ALS	Alishan	1.48	255	P	Pb	12 55 08.1	-0.3
ALS				S	Sb	12 55 27.2	+0.1
LONT	Longtian	1.50	229	eP	Pn	12 55 07.4	-0.1
LONT				eS	Sn	12 55 27.1	+0.3
TWQ1	Liyutan	1.52	288	eP	Pb	12 55 09.3	+0.4
TWQ1				eS	Sb	12 55 28.3	+0.4
JKRS	Kuro-shima	1.55	77	P	Pn	12 55 08.6	+0.5
CHN5	Tsauling	1.57	259	eP	Pb	12 55 09.7	-0.2
CHN5				eS	Sg	12 55 30.9	-0.7
TTN	Taitung	1.59	225	eS	Sb	12 55 30.1	-0.1
TWGBT	Beinan	1.59	228	P	Pn	12 55 08.6	-0.1
TWGBT	Beinan	1.59	228	P	Pn	12 55 08.7	0.0
TWGBT				eS	Sn	12 55 29.4	+0.3
TWG	Pinlang	1.60	228	eP	Pn	12 55 08.4	-0.4
TWG				eS	Sn	12 55 29.5	+0.3
STYH	Taoyuan	1.62	244	i P	Pn	12 55 09.9	+0.7
STYH				i S	Sn	12 55 30.1	+0.2
STYT	Tauyuan	1.64	244	P	Pn	12 55 10.2	+0.7
STYT				eS	Sb	12 55 31.2	-0.4
WCKO	Fanlu	1.67	254	eP	Pb	12 55 11.4	-0.1
WCKO				eS	Sb	12 55 32.9	+0.4
WDLH	Douliu	1.68	263	eP	Pb	12 55 11.2	-0.5
WDLH				eS	Sb	12 55 32.4	-0.3
TPUB	Ta-pu	1.69	250	P	Pb	12 55 11.6	-0.4
TPUB	Ta-pu	1.69	250	i P	Pb	12 55 11.5	-0.4
TPUB				eS	Sb	12 55 33.9	+0.8
JIJ	Ishigaki jima	1.69	74	eP	Pn	12 55 09.8	-0.3
WTP	Ta-pu	1.73	248	eP	Pb	12 55 11.8	-0.7
WTP				eS	Sb	12 55 34.2	+0.1
PCYT	Pengchaiyu	1.74	351	eP	Pn	12 55 10.2	-0.6
SGST	Jiashian	1.82	244	eP	Pn	12 55 12.5	+0.6
SGST				eS	Sb	12 55 36.3	-0.4
CHN1	Nanshi	1.82	247	eP	Pb	12 55 13.9	-0.3
CHN1				eS	Sb	12 55 36.4	-0.4
TWK	Hsinying	1.83	250	eP	Pb	12 55 13.7	-0.5
TWK				eS	Sb	12 55 36.8	-0.2
RLNB	Erlin	1.83	270	eP	Pb	12 55 13.2	-1.0
RLNB				eS	Sb	12 55 37.4	+0.4
SNST	Tainan City	1.84	249	eP	Pb	12 55 13.6	-0.7
SNST				eS	Sb	12 55 37.7	+0.5
JISG	Ishigakijimahi	1.91	69	P	Pn	12 55 13.0	0.0
JISG				eS	Sn	12 55 35.8	-1.1
SSD	Sandimen	1.96	234	eP	Pb	12 55 15.6	-0.8
SSD				eS	Sb	12 55 40.5	-0.2
LYUB	Lan-yu	2.02	201	eP	Pn	12 55 15.0	+0.4
LYUB				eS	Sn	12 55 41.0	+1.4
MASBT	Mashibuluo	2.04	231	eP	Pn	12 55 15.9	+1.0
MASBT				eS	Sn	12 55 41.6	+1.5
SCZT	Fangliau	2.21	227	eP	Pb	12 55 19.2	-1.4
SCZT				eS	Sn	12 55 46.2	+2.0
TWKBT	Hengchun	2.41	216	eP	Pn	12 55 21.5	+1.5
TWKBT				eS	Sn	12 55 50.5	+1.1
TWK1	Hengchun	2.42	217	eP	Pn	12 55 21.7	+1.7
TWK1				eS	Sn	12 55 50.1	+0.8
PTMZ	Houxiangcun	3.16	292	eP	Pn	12 55 30.4	+0.1
PTMZ				eS	Sn	12 56 07.1	-0.7
ZPLA	Ao Xicun	4.22	271	eP	Pn	12 55 45.1	+0.3
ZPLA				eS	Sn	12 56 33.4	-0.5

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*IDC **10** 12:55:03.6±2.4, 20°.92S×168°.75E, h0^{km}, mb3.9/6, mbtmp3.8/7, ML3.8/1, MS3.3/1, Error ellipse: s-maj=108.2km s-min=23.6km az=151.0*

*NOU **10** 12:55:26.5, 21°.91S×167°.64E, h0^{km}, MLv3.6/7, Loyalty Islands*

ISC 10 12:55:04.2±1.1, 21°.3S±0°.1×168°.9E±0°.1, h10^{km}, n14, σ0^{s}.94/14, mb3.9/6, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINNC	Pines Island,	1.89	225	P	Pg	12 55 40.3	-0.1
YATNC	Mamie plateau,	2.02	247	P	Pn	12 55 39.3	+0.9
YATNC	Mamie plateau,	2.02	247	S	Sn	12 55 49.5	-14
OUENC	Ouen Island, N	2.22	239	P	Pb	12 55 44.4	0.0
DZM	Mont Dzumac	2.42	251	Pn	Pn	12 55 45.2	+1.4
	21nm,0.3s,baz=311,slow=21,SNR=6.5						
DZM				Sn	Sn	12 56 13.0	-0.6

	18nm,0.3s,baz=334,slow=23,SNR=3.0						
	38nm,0.3s						
ONTNC	Ouen Toro	2.49	245	P	Pb	12 55 48.3	-0.7
KOUNC	Koumac, New Ca	4.38	279	P	Pb	12 56 21.2	0.0
WRA	Warramunga Arr	32.34	266	P	P	13 01 33.3	-0.6
	0.3nm,0.5s,baz=93,slow=8.4,SNR=5.3						
	0.3nm,0.5s						
ASAR	Alice Springs	32.38	259	P	P	13 01 34.8	+0.5
	1.0nm,0.7s,baz=88,slow=8.7,SNR=8.2						
ASAR				LR	LR	13 14 13.3	
	comp=Z,55nm,19.4s,baz=320,slow=36						
	1.0nm,0.7s						
FITZ	Fitzroy Crossi	40.76	267	P	P	13 02 45.0	-0.8
	1.2nm,0.6s,baz=63,slow=9.0,SNR=1.6						
	1.2nm,0.6s						
SONM	Songino Array	88.66	323	P	P	13 07 58.3	+0.6
	0.6nm,0.6s,baz=132,slow=6.0,SNR=3.8						
	0.6nm,0.6s						
NVAR	Mina Array Bea	90.39	49	P	P	13 08 06.8	+0.7
	0.7nm,0.7s,baz=223,slow=6.4,SNR=6.6						
	0.7nm,0.7s						
ILAR	Eielson Array	92.27	17	P	P	13 08 12.2	-1.7
	0.5nm,0.8s,baz=246,slow=5.7,SNR=6.3						
	0.5nm,0.8s						
GERES	GERESS Array B	146.12	330	PKPbc	PKPdf	13 14 44.6	+1.0
	0.2nm,0.3s,baz=21,slow=5.3,SNR=6.0						

DJA 10 12:59:05.0±0.3,**3°S**±2°×**12°8E**±°,**h10**^{km},**M4.0**/13,**mb4.2**/2,
MLv3.9/13,**Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	Namlea	0.74	242	P	Pb	12 59 20.1	0.0
KRAI	Karang Ratu	0.76	124	P	Pg	12 59 19.7	-0.1
AAI	Ambon	0.90	151	P	Pg	12 59 21.9	-0.5
AAI				S	Sb	12 59 35.3	+0.4
MSAI	Masohi	1.25	111	P	Pb	12 59 28.9	+0.2
SANI	Sanana	1.96	295	P	Pn	12 59 37.1	-1.2
BNDI	Bandanaira	2.69	127	P	Pn	12 59 48.4	+0.1
SWI	Sorong	4.04	60	P	Pn	13 00 06.6	-0.3
FAKI	Fak Fak	4.48	90	P	Pn	13 00 13.7	+0.6
APSI	Ampana	6.42	288	P	Pn	13 00 40.3	+0.7

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*IDC **10** 13:03:04.8±40.0, 18°.96S×170°.06E, h0^{km}, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=687.9km s-min=112.5km az=77.0*

*NOU **10** 13:03:38.2, 19°.72S×169°.94E, h223^{km}, MLv3.9/6, Vanuatu Islands*

ISC 10 13:03:45.9±1.4,**19°.6S**±0°.1×**167°.7E**±0°.2,**h200**^{km},**n9**,
σ**0^{s}.76**/7,**mb3.8**/4,**Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.90	169	P	Pn	13 04 23.5	+0.2
DVP	Devils Point	1.94	15	P	Pn	13 04 24.7	+0.9
RTV	Rentapao	1.95	22	P	Pn	13 04 23.2	-0.7
DZM	Mont Dzumac	2.70	205	P	Pn	13 04 41.0	+8.9
OUENC	Ouen Island, N	2.90	195	P	Pn	13 04 40.4	+6.1
STKA	Stephens Creek	26.39	237	P	P	13 09 03.5	-0.4
	2.4nm,0.7s,baz=46,slow=7.9,SNR=4.3						
	2.4nm,0.7s						
WRA	Warramunga Arr	31.32	264	P	P	13 09 47.0	-0.8
	0.3nm,0.4s,baz=93,slow=8.0,SNR=13						
	0.3nm,0.4s						
ASAR	Alice Springs	31.59	257	P	P	13 09 49.8	-0.3
	1.6nm,0.6s,baz=84,slow=9.3,SNR=31						
	1.6nm,0.6s						
FITZ	Fitzroy Crossi	39.72	265	P	P	13 10 59.6	+0.5
	3.4nm,1.2s,baz=99,slow=13,SNR=1.6						
	3.4nm,1.2s						

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*IDC **10** 13:09:48.9±2.6, 5°.97S×153°.66E, h0^{km}, mb3.6/5, mbtmp3.6/6, ML1.6/1, MS3.6/2, Error ellipse: s-maj=84.3km s-min=25.8km az=120.0*

ISC 10 13:09:53.5±2.1,**6°.1S**±0°.4×**153°.7E**±0°.3,**h32**^{km},**n9**,σ**0^{s}.69**/8,
mb3.9/5,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.28	242	Pn	Pn	13 11 36.8	-0.9
	0.6nm,0.3s,baz=128,slow=15,SNR=2.1						
PMG				Sn	Sn	13 13 00.1	+0.8
	0.4nm,0.3s,baz=108,slow=19,SNR=1.6						
	2.5nm,0.5s						
WRA	Warramunga Arr	23.33	232	P	P	13 14 59.2	0.0
	0.2nm,0.4s,baz=59,slow=9.3,SNR=4.7						
	0.2nm,0.4s						
ASAR	Alice Springs	25.86	225	P	P	13 15 22.9	+0.4
	0.3nm,0.7s,baz=56,slow=9.0,SNR=6.4						
	0.3nm,0.7s						
BATI	Baumata	30.00	260	LR	LR	13 30 33.4	
	comp=Z,176nm,18.5s,baz=35,slow=42						
JNU	Nakatsue	44.58	332	LR	LR	13 34 02.8	
	comp=Z,38nm,18.8s,baz=254,slow=33						
MKAR	Makanchi Array	81.85	319	P	P	13 22 10.3	+0.6
	1.1nm,0.8s,baz=96,slow=6.5,SNR=7.3						
	1.1nm,0.8s						
ZALV	Zalesovo Beam	82.69	326	P	P	13 22 13.4	-0.5
	0.7nm,0.5s,baz=95,slow=6.4,SNR=4.6						
	0.7nm,0.5s						
KURBB	Kurchatov Arra	85.33	322	P	P	13 22 27.4	0.0
	0.4nm,0.5s,baz=110,slow=3.7,SNR=5.2						
	0.4nm,0.5s						
TORD	Torodi Ar. Bea	151.53	286	PKPbc	PKPbc	13 29 45.9	+0.4
	1.8nm,0.4s,baz=54,slow=3.5,SNR=2.6						

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*JMA **10** 13:10:13.8±0.1, 24°.0N±0°.5×122°.2E±0°.2, h31^{km}±2^{km}, MV2.4/9, TAIWAN REGION*

*TAP **10** 13:10:13.9, 24°.03N×122°.26E, h29^{km}, ML2.9, C*

ISC 10 13:10:13.5±0.9,**23°.98N**±0°.02×**122°.27E**±0°.02,**h31**^{km}±7^{km},
n112,σ**0^{s}.79**/221,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	EOS4	0.15	17	*i* P	Pb	13 10 18.8	0.0
EOS4				*i* S	Sb	13 10 22.5	0.0
EOS3	EOS3	0.31	8	*e*P	Pb	13 10 20.9	-0.1
EOS3				*e*S	Sn	13 10 26.5	-0.7
EOS2	EOS2	0.44	356	*e*P	Pb	13 10 23.0	+0.1
EOS2				*e*S	Sn	13 10 30.0	-0.4
EAHA	Aohua	0.60	306	*e*P	Pn	13 10 25.8	-0.1
EAHA				S	Sn	13 10 34.1	-0.4
HWA	Hwalien	0.61	270	*e*P	Pn	13 10 26.1	+0.1
HWA				*e*S	Sn	13 10 35.2	+0.4
ETL	Fush Village	0.62	287	*i* P	Pb	13 10 25.8	-0.1
ETL				S	Sn	13 10 34.6	-0.5
TEYL	Yanliau Villag	0.62	260	*i* P	Pn	13 10 26.4	+0.2
TEYL				*i* S	Sn	13 10 35.8	+0.6
TWD	Chiawan	0.62	279	*i* P	Pb	13 10 25.8	-0.1
TWD				*i* S	Sb	13 10 34.4	-0.1
EWUT	Wuta	0.65	316	*i* P	Pb	13 10 26.1	-0.2
EWUT				S	Sb	13 10 34.6	-0.5
NACB	Ninganchiao	0.65	288	*i* P	Pb	13 10 26.0	-0.4
NACB				S	Sb	13 10 34.6	-0.5
ENA	Nanau	0.66	313	*i* P	Pb	13 10 26.3	-0.3
ENA				S	Sn	13 10 35.5	-0.6
SHUL	Shoufeng	0.68	254	*i* P	Pb	13 10 26.9	+0.1
SHUL				*i* S	Sn	13 10 36.5	+0.1
ESAO	Su ao	0.71	327	*i* P	Pb	13 10 27.3	-0.1
ESAO				*i* S	Sb	13 10 36.0	-0.8
ETM	Tongmen	0.71	269	*i* P	Pb	13 10 26.4	-1.0
ETM				S	Sb	13 10 36.7	-0.2
TEGC	Jichi Village	0.72	248	*e*P	Pb	13 10 26.1	-1.5
TEGC				S	Sn	13 10 37.6	+0.1
TWC	Suao	0.73	329	*i* P	Pb	13 10 26.8	-1.1
TWC				S	Sb	13 10 36.6	-1.0
ETLH	Xiulin Townshi	0.76	288	*i* P	Pb	13 10 27.8	-0.4
ETLH				*i* S	Sn	13 10 39.0	+0.4
JYNG	Yonagunijimaku	0.78	53	*e*P	Pn	13 10 28.5	+0.2
JYNG				*e*S	Sn	13 10 39.2	+0.3
ESL	Shilin	0.78	258	*i* P	Pn	13 10 27.3	-1.2
ESL				*i* S	Sb	13 10 38.3	-0.7
LXIB	Xiulin Townshi	0.78	273	*i* P	Pn	13 10 28.4	-0.2
LXIB				*i* S	Sb	13 10 38.7	-0.5
NDS	Dongshan	0.82	322	*i* P	Pb	13 10 29.1	-0.2
NDS				*i* S	Sn	13 10 40.1	-0.1
YOJ	Yonaguni jima	0.83	54	*i* P	Pn	13 10 29.3	+0.3
YOJ				S	Sn	13 10 40.9	+0.6
YOJ	Yonaguni jima	0.83	54	*e*P	Pn	13 10 29.4	+0.4
YOJ				*e*S	Sb	13 10 40.6	+0.3
WARBT	Fenglin Townsh	0.85	252	*i* P	Pn	13 10 28.8	-0.6
WARBT				*i* S	Sb	13 10 40.9	+0.1
LATG	Datong	0.88	309	*i* P	Pn	13 10 29.5	-0.3
LATG				*i* S	Sn	13 10 42.3	+0.7
EGS		0.92	340	*i* P	Pn	13 10 28.8	-1.4
EGS				*i* S	Sn	13 10 41.7	-0.7
ILA	Ilan	0.92	329	P	Pb	13 10 30.9	0.0
ILA				*e*S	Sb	13 10 42.5	-0.2
ENTT	Nioudou	0.92	316	*i* P	Pn	13 10 30.4	0.0
ENTT				*i* S	Sb	13 10 42.5	-0.3
TWE	Neicheng	0.92	323	*i* P	Pb	13 10 30.6	-0.3
TWE				*i* S	Sn	13 10 42.1	-0.4
NNSB	Datong	0.93	299	*i* P	Pn	13 10 30.6	+0.1
NNSB				*i* S	Sb	13 10 42.8	-0.3
NNSH	Datong	0.93	299	*i* P	Pn	13 10 30.6	+0.1
NNSH				*i* S	Sb	13 10 42.8	-0.3
WHF	Hehuan Shan	0.93	280	*i* P	Pn	13 10 30.7	-0.2
WHF				*i* S	Sn	13 10 43.1	-0.4
NNS	Nan Shan	0.94	299	*i* P	Pn	13 10 30.8	+0.1
NNS				*i* S	Sn	13 10 42.7	-0.4
EHYH	Wanrong	0.97	240	*i* P	Pb	13 10 32.0	+0.1
EHYH				*i* S	Sn	13 10 44.1	+0.2
FUSS	Fushou	0.97	286	*i* P	Pn	13 10 31.7	+0.4
FUSS				S	Sb	13 10 44.7	0.0
EHY	Hungye	0.99	242	*i* P	Pn	13 10 31.1	-0.1
EHY				*i* S	Sn	13 10 44.1	0.0
ECBN	Changbin	1.00	229	P	Pn	13 10 30.3	-1.1
ECBN				*i* S	Sn	13 10 44.5	0.0
OWD	Renai	1.00	269	*i* P	Pn	13 10 31.8	+0.2
OWD				*i* S	Sn	13 10 44.0	-0.7
TWT	Tachien	1.04	285	*e*P	Pb	13 10 34.6	+1.6
TWT				*e*S	Sb	13 10 46.6	+0.3
TDCB	Techi	1.05	285	*e*P	Pn	13 10 31.4	-0.9
TDCB				S	Sb	13 10 46.8	+0.1
WUSB	Renai	1.05	271	*i* P	Pn	13 10 32.6	+0.3
WUSB				S	Sb	13 10 46.9	+0.2
TWB1	Santiao Chiao	1.06	346	*e*P	Pn	13 10 31.8	-0.3
TWB1				S	Sb	13 10 46.0	-0.7
VWDT	VWDT	1.06	258	*i* P	Pn	13 10 32.5	+0.4
VWDT				*i* S	Sb	13 10 46.6	-0.1
NWLT	Wulai	1.06	319	*i* P	Pb	13 10 32.7	-0.6
NWLT				*i* S	Sb	13 10 46.0	-0.8
YULB	Yu-li	1.07	237	*i* P	Pn	13 10 32.5	+0.2
YULB				*e*S	Sn	13 10 46.3	+0.1
YHNB	Yeheng	1.07	310	*i* P	Pn	13 10 32.8	+0.3
YHNB				*i* S	Sn	13 10 45.8	-0.4
TIPB	Shuangxi	1.07	338	*i* P	Pn	13 10 32.7	+0.3
TIPB				*i* S	Sn	13 10 46.2	0.0
NSK	Sanguang	1.08	310	*i* P	Pn	13 10 32.6	0.0
NSK				*i* S	Sn	13 10 46.0	-0.6
TWF1	Yuli	1.09	235	*i* P	Pn	13 10 32.8	+0.1
TWF1				*i* S	Sn	13 10 45.7	-1.0
CHKH	Chenggong	1.12	226	*i* P	Pn	13 10 32.5	-0.5
CHKH				*i* S	Sn	13 10 46.4	-1.0
SXI1	Grass Mountain	1.17	342	*i* P	Pn	13 10 33.7	-0.1
SXI1				S	Sb	13 10 50.5	+0.5
NWF	Wu-fen Shan	1.18	338	*e*P	Pb	13 10 34.6	-0.7
NWF				*e*S	Sb	13 10 49.6	-0.5
WFSB	Wu-fen Shan	1.18	338	P	Pn	13 10 34.0	+0.2
WFSB				*e*S	Sb	13 10 51.3	+1.3
TWA	Mucha	1.18	328	*i* P	Pb	13 10 35.1	-0.1
TWA				*i* S	Sb	13 10 50.1	0.0
FULB	Fuli	1.19	229	*i* P	Pn	13 10 33.7	-0.3
FULB				*i* S	Sn	13 10 48.5	-0.6
NHDH	Xindian Distri	1.19	325	*i* P	Pb	13 10 35.4	-0.1
NHDH				S	Sb	13 10 51.0	+0.4
CHKT	Chengkung	1.21	224	*i* P	Pn	13 10 34.6	+0.4
CHKT				*i* S	Sn	13 10 48.2	-1.3
SSLB	Suanglung	1.22	261	*i* P	Pn	13 10 34.8	+0.3
SSLB				S	Sb	13 10 51.0	-0.3
TATO	Taipei	1.22	324	*i* P	Pb	13 10 35.8	-0.2
TATO				*e*S	Sb	13 10 51.5	+0.1
DPDB	Guoxing	1.23	273	*i* P	Pb	13 10 35.9	-0.2
DPDB				*e*S	Sn	13 10 50.2	-0.1
NFF	Wufeng Townshi	1.24	302	*i* P	Pn	13 10 35.4	+0.6
NFF				S	Sb	13 10 51.9	0.0
WCS	Beigang Elemen	1.24	274	*i* P	Pb	13 10 35.7	-0.6
WCS				*e*S	Sn	13 10 51.1	+0.6
WHP	Taichung City	1.25	284	*i* P	Pb	13 10 37.3	+0.9
WHP				*i* S	Sb	13 10 53.3	+1.1
SMLT	Sun Moon Lake	1.26	266	*i* P	Pn	13 10 35.8	+0.8
SMLT				S	Sb	13 10 52.8	+0.2
KSHI	Guanxi Townshi	1.27	309	*i* P	Pb	13 10 36.7	-0.2
KSHI				*i* S	Sb	13 10 54.5	+1.6
EHD	Haiduan	1.28	230	*i* P	Pn	13 10 36.4	+1.2
EHD				*e*S	Sb	13 10 52.8	-0.2
YUS	Yu-Shan	1.30	248	*i* P	Pn	13 10 37.1	+1.1
YUS				*i* S	Sn	13 10 52.7	0.0
ECS	Chishang	1.30	228	*e*P	Pn	13 10 36.4	+0.8
ECS				S	Sb	13 10 53.6	-0.2
LIOB	Emei	1.32	300	*i* P	Pb	13 10 37.5	-0.3
LIOB				*i* S	Sb	13 10 54.2	-0.1
YM01	YM01	1.32	331	*i* P	Pn	13 10 36.8	+0.8
YM01				*i* S	Sb	13 10 54.1	-0.4
NSTT	Nanjuang	1.33	300	*i* P	Pb	13 10 37.5	-0.3
NSTT				*i* S	Sb	13 10 53.8	-0.6
WHYT	Xinyi Township	1.33	258	*i* P	Pb	13 10 37.5	-0.3
WHYT				S	Sb	13 10 54.2	-0.2
EDH	Donghe	1.34	222	*i* P	Pn	13 10 35.7	-0.3
EDH				*i* S	Sn	13 10 51.4	-1.4
ZUZH	Zhuzihu	1.35	331	*i* P	Pn	13 10 36.7	+0.4
ZUZH				*i* S	Sb	13 10 53.8	-1.3
YM08	YM08	1.35	333	*i* P	Pn	13 10 36.4	+0.1
YM08				*e*S	Sb	13 10 54.9	-0.3
TWS1	Kuangyinshan	1.36	325	*i* P	Pb	13 10 37.4	-0.9
TWS1				S	Sb	13 10 54.6	-0.7
IRIF	Iriomote-Funau	1.38	75	*e*S	Sn	13 10 55.0	+1.2
ANP	Anpu	1.38	331	*i* P	Pn	13 10 37.1	+0.4
ANP				*i* S	Sb	13 10 55.9	-0.2
ELDTW	Lidau	1.39	236	*i* P	Pn	13 10 36.5	-0.4
ELDTW				*i* S	Sn	13 10 53.8	-0.5
TWQ1	Liyutan	1.42	285	*i* P	Pb	13 10 38.3	-1.0
TWQ1				*i* S	Sb	13 10 58.4	+1.4
ALS	Alishan	1.42	251	*i* P	Pn	13 10 38.5	+1.0
ALS				*i* S	Sb	13 10 56.8	-0.6
WNT	Mingjian	1.45	266	*e*P	Pb	13 10 39.5	-0.4
WNT				S	Sb	13 10 58.8	+0.7
NMLH	Miaoli	1.46	293	P	Pb	13 10 40.3	+0.2
NMLH				S	Sb	13 10 58.8	+0.5
LDUT	Ludao	1.49	210	*i* P	Pn	13 10 38.0	-0.2
LDUT				*i* S	Sn	13 10 55.2	-1.4
LONT	Longtian	1.50	225	*e*P	Pn	13 10 38.3	+0.1
LONT				*i* S	Sn	13 10 57.1	+0.4
CHN5	Tsauling	1.51	256	*i* P	Pb	13 10 40.6	-0.2
CHN5				S	Sb	13 10 59.3	-0.3
WCHH	Zhanghua	1.57	274	*e*P	Pb	13 10 41.7	-0.2
WCHH				*i* S	Sb	13 11 02.1	+0.8
STYH	Taoyuan	1.59	240	*i* P	Pn	13 10 40.2	+0.7
STYH				*i* S	Sn	13 11 00.7	+1.7
TWGBT	Beinan	1.59	224	P	Pn	13 10 39.5	-0.1
TWGBT				*e*S	Sn	13 10 59.1	0.0
TWG	Pinlang	1.59	224	*i* P	Pn	13 10 39.6	0.0
TWG				S	Sn	13 10 57.7	-1.4
WDLH	Douliu	1.61	260	*i* P	Pb	13 10 42.9	+0.3
WDLH				*i* S	Sb	13 11 04.4	+1.8
WCKO	Fanlu	1.62	251	*i* P	Pb	13 10 42.0	-0.7
WCKO				*i* S	Sb	13 11 03.6	+0.8
TPUB	Ta-pu	1.65	246	*i* P	Pb	13 10 42.5	-0.7
TPUB				*i* S	Sb	13 11 03.9	+0.3
CHN4	Tsaushan	1.66	248	*i* P	Pb	13 10 42.8	-0.6
CHN4				*i* S	Sb	13 11 05.2	+1.3
WTP	Ta-pu	1.69	245	*i* P	Pb	13 10 43.4	-0.5
WTP				*i* S	Sb	13 11 05.4	+0.7
JIJ	Ishigaki jima	1.75	77	*e*S	Sn	13 11 04.1	+1.0
TWK	Hsinying	1.78	247	*i* P	Pb	13 10 44.9	-0.6
TWK				*i* S	Sb	13 11 06.5	-0.9
CHN1	Nanshi	1.78	244	*i* P	Pb	13 10 44.7	-0.8
CHN1				*i* S	Sb	13 11 07.7	+0.2
SGST	Jiashian	1.79	240	*i* P	Pb	13 10 44.4	-1.2
SGST				*i* S	Sb	13 11 07.5	-0.1
ECL	Taimali	1.83	222	*e*P	Pn	13 10 43.1	+0.3
ECL				S	Sn	13 11 04.3	-0.7
WSL	Shuilin Townsh	1.93	257	*i* P	Pb	13 10 46.5	-1.4
WSL				S	Sb	13 11 10.9	-0.6
SSD	Sandimen	1.94	231	*i* P	Pn	13 10 46.7	+2.3
SSD				S	Sn	13 11 08.9	+1.2
JISG	Ishigakijimahi	1.96	72	*e*S	Sn	13 11 08.6	+0.4
MASBT	Mashibuluo	2.03	228	*i* P	Pn	13 10 47.0	+1.4
MASBT				*e*S	Sn	13 11 12.2	+2.3
LAY	Lan-yu	2.04	199	*i* P	Pn	13 10 45.4	-0.4
LAY				*i* S	Sn	13 11 08.3	-2.0
EAST	Anshuo	2.06	220	*i* P	Pn	13 10 47.2	+1.2
EAST				*e*S	Sn	13 11 10.1	-0.6
LYUB	Lan-yu	2.07	198	*i* P	Pn	13 10 45.1	-1.0
LYUB				*i* S	Sn	13 11 08.6	-2.2
TSCK	Chigu Township	2.17	248	P	Pn	13 10 49.4	+1.9
TSCK				S	Sn	13 11 16.1	+2.8
SCZT	Fangliau	2.21	224	P	Pn	13 10 50.3	+2.3
SCZT				*e*S	Sn	13 11 15.8	+1.5
SLIU	Shizi	2.22	218	*e*P	Pn	13 10 49.9	+1.8
SLIU				*e*S	Sn	13 11 15.5	+1.0
PHUB	P'eng-hu	2.52	260	*i* P	Pn	13 10 53.8	+1.5
PHUB				*i* S	Sn	13 11 23.6	+1.8
PTMZ	Houxiangcun	3.06	291	*i* P	Pn	13 10 59.6	-0.1
PTMZ				S	Sn	13 11 33.7	-1.5

DNK 10 13:13:38.9±0.4,**57°.69N**×**14°.95E**,**h0**^{km},**ML1.4**(UPP),
Explosion,**Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKSU	Eksjoe	0.22	123	P	Pg	13 13 43.0	-0.2
EKSU				S	Sg	13 13 46.2	+0.2
LNKU	Linkoeping	0.61	29	P	Pg	13 13 50.1	-0.4
VXJU	Vaexsjoe	0.77	181	P	Pg	13 13 53.0	-0.7
OSKU	Oskarshamn	0.80	128	P	Pg	13 13 53.5	-0.7
FKPU	Falk	0.81	306	P	Pg	13 13 53.4	-0.9
VSTU	Vaestervik	0.85	92	P	Pg	13 13 54.5	-0.7
BORU	Boraas	1.17	268	*i* P	Pg	13 13 60.0	-1.4
BORU				*i* S	Sg	13 14 13.7	-2.9
ASKU	Askersund	1.21	357	P	Pg	13 14 01.2	-0.8
VIKU	Vikbolandet	1.23	48	P	Pg	13 14 01.2	-1.3
DEL	Delary	1.36	206	*i* P	Pg	13 14 04.2	-0.8
DEL				*i* S	Sg	13 14 21.8	-0.8
NASU	Vaermlandsnaes	1.55	324	P	Pn	13 14 06.9	-0.8
ONAU	Onsala	1.66	261	*i* P	Pn	13 14 07.2	-2.1
ONAU				*i* S	Sn	13 14 28.0	-3.2
VANU	Vaenersborg	1.73	299	P	Pn	13 14 10.1	-0.1
TJOU	Tjoern	1.81	282	*i* P	Pn	13 14 11.8	+0.5
TJOU				*i* S	Sb	13 14 36.4	+0.3

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*UPP **10** 13:14:41.7±0.1, 58°.00N×13°.83E, h1^{km}±3^{km}, ML1.6, Suspected explosion*

*DNK **10** 13:14:41.9±1.1, 57°.99N×13°.85E, h0^{km}, ML1.6(UPP), Explosion*

ISC 10 13:14:41.0±0.9,**58°.00N**±0°.02×**13°.83E**±0°.03,**h0**^{km},**n30**,
σ**0^{s}.40**/38,**Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FKPU	Falk	0.17	341	P	Pg	13 14 44.9	+0.5
FKPU				S	Sg	13 14 47.0	+0.4
FKPU	Falk	0.17	341	P	Pg	13 14 44.9	+0.5
FKPU				S	Sg	13 14 47.0	+0.4
BORU	Boraas	0.67	238	P	Pg	13 14 54.2	+0.2
BORU	Boraas	0.67	238	*i* P	Pb	13 14 55.6	-0.1
BORU				*i* S	Sg	13 15 03.4	+0.8
BORU	Boraas	0.67	238	P	Pg	13 14 54.2	+0.2
GNOU	Gnosjoe	0.71	183	P	Pg	13 14 54.9	+0.3
GNOU	Gnosjoe	0.71	183	P	Pg	13 14 54.9	+0.3
EKSU	Eksjoe	0.90	118	P	Pg	13 14 58.5	+0.4
EKSU	Eksjoe	0.90	118	P	Pg	13 14 58.5	+0.4
LNKU	Linkoeping	0.92	75	P	Pg	13 14 58.3	-0.3
LNKU	Linkoeping	0.92	75	P	Pg	13 14 58.3	-0.3
NASU	Vaermlandsnaes	0.99	340	P	Pg	13 14 59.9	-0.2
NASU	Vaermlandsnaes	0.99	340	P	Pg	13 14 59.9	-0.2
ASKU	Askersund	1.04	30	P	Pg	13 15 01.2	+0.2
ASKU	Askersund	1.04	30	P	Pg	13 15 01.2	+0.2
VANU	Vaenersborg	1.05	299	P	Pg	13 15 01.1	-0.1
VANU	Vaenersborg	1.05	299	P	Pg	13 15 01.1	-0.1
TJOU	Tjoern	1.18	273	P	Pg	13 15 03.0	-0.5
TJOU	Tjoern	1.18	273	*i* P	Pg	13 15 03.5	0.0
TJOU				*i* S	Sg	13 15 18.1	-0.7
TJOU	Tjoern	1.18	273	P	Pg	13 15 03.0	-0.5
ONAU	Onsala	1.19	240	P	Pg	13 15 03.8	-0.1
ONAU	Onsala	1.19	240	*i* P	Pg	13 15 03.9	0.0
ONAU				*i* S	Sg	13 15 19.8	+0.6
ONAU	Onsala	1.19	240	P	Pg	13 15 03.8	-0.1
VXJU	Vaexsjoe	1.23	150	P	Pg	13 15 04.3	-0.3
VXJU	Vaexsjoe	1.23	150	P	Pg	13 15 04.3	-0.3
OSKU	Oskarshamn	1.46	122	P	Pn	13 15 08.2	-0.5
OSKU	Oskarshamn	1.46	122	P	Pn	13 15 08.2	-0.5
DEL	Delary	1.53	179	*i* P	Pn	13 15 09.4	-0.2
DEL				*i* S	Sn	13 15 30.7	+0.5
STRU	Stroemstad	1.74	308	P	Pb	13 15 13.4	-0.3
STRU				S	Sg	13 15 37.4	+0.6
STRU	Stroemstad	1.74	308	P	Pb	13 15 13.4	-0.3
STRU				S	Sg	13 15 37.4	+0.6

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*IDC **10** 13:23:24.2±1.2, 24°.19N×121°.05E, h0^{km}, mb3.7/4, mbtmp3.7/5, ML3.3/1, MS3.3/1, Error ellipse: s-maj=84.1km s-min=21.1km az=72.0*

*TAP **10** 13:23:25.7, 24°.64N×122°.55E, h12^{km}±1^{km}, ML3.9, D*

*JMA **10** 13:23:26.1±0.1, 24°.6N±0°.8×122°.6E±0°.3, h28^{km}±1^{km}, MV3.1/11, NW OFF ISHIGAKIJIMA IS*

ISC 10 13:23:25.4±1.1,**24°.65N**±0°.05×**122°.56E**±0°.02,**h14**^{km}±8^{km},
n36,σ**0^{s}.83**/51,**mb3.6**/4,**1C**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS2	EOS2	0.38	232	*i* P	Pb	13 23 34.1	+0.2
EOS2				*i* S	Sb	13 23 40.8	+1.2
JYNG	Yonagunijimaku	0.40	120	P	Pb	13 23 34.2	-0.1
JYNG				*e*S	Sb	13 23 39.9	-0.4
EOS3	EOS3	0.43	212	*i* P	Pb	13 23 34.9	+0.2
EOS3				*i* S	Sb	13 23 41.9	+1.0
YOJ	Yonaguni jima	0.45	115	P	Pg	13 23 34.8	+0.4
YOJ	Yonaguni jima	0.45	115	S	Sb	13 23 41.5	-0.2
YOJ	Yonaguni jima	0.45	115	⇑*i*P	Pg	13 23 35.0	+0.6
YOJ				*i* S	Sb	13 23 41.4	-0.3
YOJ	Yonaguni jima	0.45	115	P	Pg	13 23 35.0	+0.6
YOJ				*e*S	Sg	13 23 41.2	+0.8
TWC	Suao	0.65	266	*i* P	Pg	13 23 37.6	-0.6
TWC				*i* S	Sb	13 23 47.9	+0.4
ESAO	Su ao	0.66	263	*i* P	Pb	13 23 39.0	+0.3
ESAO				S	Sb	13 23 48.0	+0.3
EWUT	Wuta	0.74	254	*i* P	Pb	13 23 40.1	0.0
EWUT				*i* S	Sb	13 23 50.0	-0.2
NDS	Dongshan	0.77	269	*i* P	Pg	13 23 40.6	+0.2
NDS				*i* S	Sb	13 23 51.2	+0.2
ENA	Nanau	0.78	253	*i* P	Pg	13 23 40.4	-0.2
ENA				*i* S	Sb	13 23 51.3	+0.1
EAHA	Aohua	0.82	247	*i* P	Pb	13 23 41.6	+0.2
EAHA				*i* S	Sb	13 23 53.0	+0.7
ENTT	Nioudou	0.91	269	*i* P	Pg	13 23 42.8	-0.2
ENTT				*i* S	Sg	13 23 54.9	0.0
LATG	Datong	0.95	263	*i* P	Pg	13 23 43.7	-0.1
LATG				*i* S	Sb	13 23 56.7	+0.4
NACB	Ninganchiao	1.00	242	P	Pg	13 23 44.4	-0.4
TATO	Taipei	1.03	288	P	Pb	13 23 45.0	0.0
TATO	Taipei	1.03	288	S	Sg	13 23 57.7	-1.1
YHNB	Yeheng	1.08	271	P	Pb	13 23 45.7	-0.2
YHNB	Yeheng	1.08	271	S	Sb	13 23 59.8	-0.1
IRIF	Iriomote-Funau	1.11	106	*e*P	Pb	13 23 45.3	-1.1
JKRS	Kuro-shima	1.38	107	P	Pn	13 23 49.7	-0.6
OWD	Renai	1.45	241	*i* P	Pb	13 23 52.1	-0.1
OWD				S	Sg	13 24 12.3	+0.3
JIJ	Ishigaki jima	1.47	101	*e*P	Pn	13 23 50.6	-0.9
JISG	Ishigakijimahi	1.59	92	*e*P	Pn	13 23 52.7	-0.5
SSLB	Suanglung	1.70	240	P	Pn	13 23 55.8	+1.1
SSLB	Suanglung	1.70	240	S	Sb	13 24 18.2	+0.4
YULB	Yu-li	1.71	223	P	Pn	13 23 54.8	0.0
ALS	Alishan	1.97	235	*i* P	Pb	13 24 00.5	-0.7
ALS				*i* S	Sg	13 24 27.3	-1.6
TPUB	Ta-pu	2.22	233	P	Pb	13 24 04.0	-1.4
TWGBT	Beinan	2.28	217	P	Pb	13 24 04.8	-1.5
KSRS	Korea Array	13.56	18	Pn	P	13 26 49.1	+2.8
	0.1nm,0.3s,baz=192,slow=12,SNR=4.7						
	1.1nm,0.7s						
SONM	Songino Array	26.45	335	P	P	13 29 02.1	+0.1
	0.4nm,0.3s,baz=159,slow=8.8,SNR=3.8						
SONM				LR	LR	13 41 19.6	
	comp=Z,57nm,18.1s,baz=190,slow=41						
	0.4nm,0.3s						
ZALV	Zalesovo Beam	40.55	326	P	P	13 31 01.7	-2.4
	0.3nm,0.4s,baz=106,slow=11,SNR=1.5						
	0.3nm,0.4s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.79	164	P	P	13 31 46.9	+0.1
	1.1nm,0.5s,baz=337,slow=9.3,SNR=22						
	1.1nm,0.5s						
ASAR	Alice Springs	49.28	166	P	P	13 32 14.4	+0.5
	0.4nm,0.4s,baz=351,slow=7.5,SNR=16						
	0.4nm,0.4s						

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*DNK **10** 13:29:18.4±0.8, 60°.70N×11°.07E, h0^{km}, ML1.7(UPP), Suspected explosion*

*UPP **10** 13:29:19.1±0.9, 60°.63N×11°.15E, h0^{km}, ML1.7, Presumed earthquake*

BER 10 13:29:19.8±0.8, 60°.69N×11°.24E, h0^{km}±6^{km}, ML1.0, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NC602	NORSAR Array S	0.15	74	eP	Pg	13 29 22.2	-0.5
NC602				eS	Sg	13 29 24.7	0.0
NC602				IAML		13 29 26.5	
	comp=Z,48nm,0.6s						
NAO01	NORSAR Array S	0.23	311	eP	Pg	13 29 23.7	-0.5
NB201	NORSAR Array S	0.36	4	eP	Pg	13 29 26.1	-0.6
NB201				eS	Sg	13 29 31.1	-0.2
NB201				IAML		13 29 36.3	
	comp=Z,26nm,0.8s						
NBO00	NORSAR Array S	0.41	326	eP	Pg	13 29 26.9	-0.7
NBO00				eS	Sg	13 29 32.9	0.0
NBO00				IAML		13 29 40.0	
	comp=Z,18nm,0.9s						
NC303	NORSAR Array S	0.54	7	eP	Pg	13 29 29.4	-0.6
NC303				eS	Sg	13 29 36.8	-0.2
NC204	NORSAR Array S	0.63	338	eP	Pg	13 29 31.1	-0.7
NC204				eS	Sg	13 29 39.5	-0.5
NC204				IAML		13 29 45.2	
	comp=Z,2.3nm,0.2s						
UDD	Uddeholm	1.32	116	P	Pg	13 29 43.6	-1.4
UDD				S	Sg	13 30 02.2	0.0
UDD	Uddeholm	1.32	116	P	Pg	13 29 43.6	-1.4
UDD				S	Sg	13 30 02.2	0.0
UDD	Uddeholm	1.32	116	P	Pg	13 29 43.6	-1.4
UDD				S	Sg	13 30 02.2	0.0
FINU	Finntorp	1.44	154	P	Pn	13 29 45.1	-1.9
FINU				S	Sg	13 30 05.0	-0.8
FINU	Finntorp	1.44	154	P	Pn	13 29 45.1	-1.9
FINU				S	Sg	13 30 05.0	-0.8
FINU	Finntorp	1.44	154	P	Pn	13 29 45.1	-1.9
FINU				S	Sg	13 30 05.0	-0.8
SKAR	Skarslia	1.45	271	eP	Pn	13 29 44.9	-2.4
SKAR				eS	Sg	13 30 04.4	-1.7
SKAR				IAML		13 30 08.3	
	comp=Z,5.2nm,0.2s						
STRU	Stroemstad	1.67	181	P	Pn	13 29 48.6	-1.6
STRU	Stroemstad	1.67	181	eS	Sn	13 30 10.4	-1.8
STRU	Stroemstad	1.67	181	P	Pn	13 29 48.6	-1.6
STRU				iP	Pb	13 29 48.9	-2.3
STRU				iS	Sn	13 30 09.7	-2.5
STRU	Stroemstad	1.67	181	P	Pn	13 29 48.6	-1.6
NRAU	Nora	2.21	119	P	Pn	13 29 57.2	-0.5
NRAU	Nora	2.21	119	P	Pn	13 29 57.2	-0.5
NRAU	Nora	2.21	119	P	Pn	13 29 57.2	-0.5
VANU	Vaenersborg	2.25	169	P	Pn	13 29 56.8	-1.4
VANU	Vaenersborg	2.25	169	P	Pn	13 29 56.8	-1.4
VANU	Vaenersborg	2.25	169	P	Pn	13 29 56.8	-1.4
FALU	Falun	2.27	93	P	Pn	13 29 59.1	+0.6
FALU	Falun	2.27	93	P	Pn	13 29 59.1	+0.6
FALU	Falun	2.27	93	P	Pn	13 29 59.1	+0.6

IDC 10 13:50:50.2±2.8, 30°.29S×176°.48W, h0^{km}, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=62.1km s-min=37.8km az=49.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.62	309	Pn	Pb	13 51 20.9	-0.1
	121nm,0.3s,baz=78,slow=19,SNR=2.2						
RAO				Sn	Sn	13 51 41.5	-0.2
	311nm,0.3s,baz=112,slow=23,SNR=7.5						
ASAR	Alice Springs	44.43	266	P	P	13 59 03.3	+0.2
	0.4nm,0.7s,baz=106,slow=7.3,SNR=11						
	0.4nm,0.7s						
WRA	Warramunga Arr	45.41	271	P	P	13 59 10.4	-0.5
	0.3nm,0.4s,baz=111,slow=8.0,SNR=21						
	0.3nm,0.4s						
FINES	FINESS Array B	145.48	341	PKPbc	PKPdf	14 10 28.6	-1.0
	1.7nm,0.9s,baz=52,slow=5.4,SNR=1.4						

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*UPP **10** 14:15:00.4±0.0, 57°.78N×12°.00E, h0^{km}, ML2.9, Suspected explosion*

*DNK **10** 14:15:00.7±0.6, 57°.78N×11°.99E, h0^{km}, ML2.0, Explosion*

*BER **10** 14:15:01.8±2.4, 57°.81N×12°.04E, h0^{km}, ML1.3, Suspected explosion*

ISC 10 14:14:59.5±0.8, 57°.80N±0°.02×12°.11E±0°.03, h0^{km}, n32, σ0^{s}.40/68, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TJOU	Tjoern	0.35	312	P	Pg	14 15 06.6	+0.4
TJOU				S	Sg	14 15 11.1	+0.3
TJOU	Tjoern	0.35	312	iP	Pg	14 15 06.7	+0.4
TJOU				iS	Sg	14 15 11.1	+0.3
TJOU	Tjoern	0.35	312	P	Pg	14 15 06.6	+0.4
TJOU				iP	Pg	14 15 06.7	+0.4
TJOU				iP	Pg	14 15 06.7	+0.4
TJOU				iS	Sg	14 15 11.1	+0.3
TJOU				iS	Sg	14 15 11.1	+0.3
TJOU				S	Sg	14 15 11.1	+0.3
BORU	Boraas	0.39	115	P	Pb	14 15 08.8	-0.4
BORU	Boraas	0.39	115	iP	Pb	14 15 09.1	-0.2
BORU				iS	Sb	14 15 14.8	-1.0
BORU	Boraas	0.39	115	P	Pb	14 15 08.8	-0.4
BORU				iP	Pb	14 15 09.1	-0.2
BORU				iP	Pb	14 15 09.1	-0.2
BORU				iS	Sb	14 15 14.8	-1.0
BORU				iS	Sb	14 15 14.8	-1.0
ONAU	Onsala	0.42	195	P	Pg	14 15 07.8	+0.4
ONAU	Onsala	0.42	195	iP	Pg	14 15 07.9	+0.4
ONAU				eS	Sg	14 15 13.0	+0.2
ONAU	Onsala	0.42	195	P	Pg	14 15 07.8	+0.4
ONAU				iP	Pg	14 15 07.9	+0.4
ONAU				iP	Pg	14 15 07.9	+0.4
ONAU				eS	Sg	14 15 13.0	+0.2
ONAU				iS	Sg	14 15 13.0	+0.2
VANU	Vaenersborg	0.70	358	P	Pb	14 15 13.9	-0.6
VANU	Vaenersborg	0.70	358	P	Pb	14 15 13.9	-0.6
FKPU	Falk	0.93	66	P	Pb	14 15 18.9	+0.4
FKPU	Falk	0.93	66	P	Pb	14 15 18.9	+0.4
NASU	Vaermlandsnaes	1.27	26	P	Pb	14 15 24.3	+0.1
NASU	Vaermlandsnaes	1.27	26	P	Pb	14 15 24.3	+0.1
STRU	Stroemstad	1.33	339	P	Pg	14 15 24.7	-0.3
STRU	Stroemstad	1.33	339	iP	Pg	14 15 24.8	-0.3
STRU				eS	Sg	14 15 42.3	+0.1
STRU	Stroemstad	1.33	339	P	Pg	14 15 24.7	-0.3
STRU				iP	Pg	14 15 24.8	-0.3
STRU				iP	Pg	14 15 24.8	-0.3
STRU				eS	Sg	14 15 42.3	+0.1
STRU				eS	Sg	14 15 42.3	+0.1
FINU	Finntorp	1.62	7	P	Pb	14 15 30.4	+0.1
FINU	Finntorp	1.62	7	P	Pb	14 15 30.4	+0.1
DEL	Delary	1.64	144	P	Pg	14 15 31.0	+0.1
DEL	Delary	1.64	144	iP	Pb	14 15 30.3	-0.3
DEL				iS	Sg	14 15 52.5	+0.3
DEL	Delary	1.64	144	iP	Pb	14 15 30.3	-0.3
DEL				iP	Pb	14 15 30.3	-0.3
DEL				P	Pg	14 15 31.0	+0.1
DEL				iS	Sg	14 15 52.5	+0.3
DEL				iS	Sg	14 15 52.5	+0.3
EKSU	Eksjoe	1.73	96	P	Pg	14 15 33.2	+0.7
EKSU	Eksjoe	1.73	96	P	Pg	14 15 33.2	+0.7
VXJU	Vaexsjoe	1.77	119	P	Pb	14 15 32.8	+0.1
VXJU	Vaexsjoe	1.77	119	P	Pb	14 15 32.8	+0.1
BJUU	Bjuv	1.80	164	P	Pb	14 15 32.7	-0.6
BJUU	Bjuv	1.80	164	iP	Pb	14 15 32.9	-0.4
BJUU				iS	Sb	14 15 56.3	-0.1
BJUU	Bjuv	1.80	164	P	Pb	14 15 32.7	-0.6
BJUU				iP	Pb	14 15 32.9	-0.4
BJUU				iP	Pb	14 15 32.9	-0.4
BJUU				iS	Sb	14 15 56.3	-0.1
BJUU				iS	Sb	14 15 56.3	-0.1
HOMB	Homborsund	1.98	285	iP	Pn	14 15 34.1	-0.1
HOMB				eS	Sn	14 16 00.0	+0.4
HOMB				IAML		14 16 05.2	
	comp=Z,4.3nm,0.6s						
HOMB	Homborsund	1.98	285	iP	Pn	14 15 34.1	-0.1
HOMB				iP	Pn	14 15 34.1	-0.1
HOMB				iS	Sn	14 15 59.7	+0.1
HOMB				eS	Sn	14 16 00.0	+0.4
HOMB				IAML		14 16 05.2	
	comp=Z,4.3nm,0.6s						

GCG 10 14:32:01.2±1.1, 13°.54N×91°.76W, h10^{km}±38^{km}, MD3.9, ML3.7, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG8	El Palmar, Qui	0.99	24	eP	Pn	14 32 23.5	+2.2
SOKI	Kika Raxquin	1.32	15	eP	Pn	14 32 25.6	-0.5
FG16	Alotenango, Sa	1.41	59	eP	Pn	14 32 24.4	-2.7
FG16				IAML		14 32 48.0	
	comp=N,3μm,0.2s						
PCG5	San Vicente Pa	1.50	63	eP	Pn	14 32 25.1	-3.2
APG	El Apazote	1.92	41	eP	Pn	14 32 34.9	+0.8
JAYA	Jayaque - finc	2.25	87	eP	Pn	14 32 38.6	0.0
JAYA				eS	Sn	14 33 04.7	-1.8

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*FUNV **10** 14:32:11.0, 10°.68N×62°.03W, h37^{km}, MW5.5*

*TRN **10** 14:32:11.3, 10°.91N×62°.14W, h107^{km}, MD3.0, North of the Paria peninsula.*

ISC 10 14:32:11.0±1.5, 10°.92N±0°.06×62°.24W±0°.08, h100^{km}, n10, σ0^{s}.54/13, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DMDM	Guralp CMG5TDE	0.71	108	eS	Sn	14 32 41.6	-0.1
PSMG	Mucurapo Girls	0.74	109	eS	Sn	14 32 41.8	-0.4
TRN	Trinidad (W)	0.86	108	eP	Pn	14 32 30.7	+0.6
TRN				eS	Sn	14 32 43.4	-0.9
GRFF	Grenada Fort F	1.23	24	eP	Pn	14 32 34.1	0.0
GRFF				eS	Sn	14 32 51.5	+0.1
GRGR	Grenville	1.33	25	eS	Sn	14 32 53.7	0.0
GRHS	Sauteurs	1.42	24	eS	Sn	14 32 55.0	-0.6
GRSS	Sisters	1.50	24	eP	Pn	14 32 37.7	+0.3
GRSS				eS	Sn	14 32 58.0	+0.7
GCMP	Grenada, Carri	1.75	27	eP	Pn	14 32 40.5	0.0
GCMP				eS	Sn	14 33 02.0	-0.8
PCRV	Puerto La Cruz	2.47	253	eP	Pn	14 32 49.9	+0.1
CACV	CAICARA DEL OR	5.40	232	eP	Pn	14 33 22.5	-6.7
CACV				eS	Sn	14 34 14.5	-16

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*NOU **10** 14:40:45.7, 43°.52S×172°.38E, h10^{km}, ML4.0/9, South Island, New Zealand*

*WEL **10** 14:40:45.6±0.2, 44°S±2°×17°2E±°, h9^{km}±1^{km}, M3.0/19, ML2.9/22, MLv3.0/19, Error ellipse: s-maj=2.1km s-min=1.8km az=19.8, confirmed*

ISC 10 14:40:46.0±0.8, 43°.51S±0°.02×172°.18E±0°.02, h13^{km}±5^{km}, n106, σ0^{s}.75/116, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DFHS	Darfield	0.06	289	P	Pg	14 40 48.2	-0.2
GDAL	Greendale	0.10	220	P	Pg	14 40 48.6	-0.3
DSLC	Dunsandel Scho	0.16	174	P	Pg	14 40 49.8	+0.1
SHFC	Sheffield Scho	0.16	317	P	Pg	14 40 49.6	-0.2
SHFC				S	Sg	14 40 52.4	0.0
ROLC	Rolleston Scho	0.17	119	P	Pg	14 40 50.2	+0.3
ROLC				S	Sg	14 40 53.3	+0.6
OXZ	Oxford	0.21	331	P	Pg	14 40 50.5	0.0
OXZ				S	Sg	14 40 53.8	+0.1
RACZ	Rakaia	0.22	187	P	Pg	14 40 50.8	+0.1
RACZ				S	Sg	14 40 53.6	-0.4
TPLC	Templeton Scho	0.22	101	P	Pg	14 40 51.2	+0.5
WCSS	Whitecliffs	0.23	283	P	Pg	14 40 50.6	-0.3
LINC	Lincoln Crop a	0.24	118	P	Pg	14 40 51.5	+0.4
LINC				S	Sg	14 40 55.0	+0.5
CSTC	Cust School	0.25	37	P	Pg	14 40 51.8	+0.7
SPRS	Springfield Vo	0.25	314	P	Pg	14 40 51.0	-0.2
SPRS				S	Sg	14 40 54.9	+0.1
CACS	Harewood	0.26	85	P	Pg	14 40 52.0	+0.6
RKAC	Rakaia School	0.27	205	P	Pg	14 40 51.7	+0.1
SMHS	Summerhill	0.27	25	P	Pb	14 40 52.3	-0.4
SMHS				S	Sb	14 40 57.2	-0.1
RHSC	Riccarton High	0.28	95	P	Pg	14 40 52.3	+0.5
HALL	Halswell Schoo	0.30	106	P	Pg	14 40 52.5	+0.4
KOWC	Kowai	0.30	309	P	Pg	14 40 51.9	-0.3
SBRC	Southbridge Sc	0.30	169	P	Pb	14 40 52.5	-0.8
PPHS	Papanui	0.31	87	P	Pg	14 40 53.1	+0.8
PPHS				S	Sg	14 40 58.7	+2.0
SAGC	St Andrews Col	0.32	90	P	Pb	14 40 53.2	-0.3
SMTX	Styx Mill Tran	0.32	83	P	Pb	14 40 53.2	-0.3
CBGS	Christchurch	0.32	94	P	Pb	14 40 53.1	-0.5
MOOR	Moorhouse Ave	0.33	95	P	Pb	14 40 53.1	-0.6
REHS	Christchurch	0.34	92	P	Pb	14 40 53.5	-0.3
STAS	St Albans Chri	0.34	91	P	Pb	14 40 53.6	-0.2
MPSS	Mairehau Prima	0.34	88	P	Pb	14 40 53.6	-0.2
CHCC	Christchurch C	0.34	95	P	Pb	14 40 53.4	-0.6
STKS	Sign of the Ki	0.35	106	P	Pb	14 40 53.5	-0.6
HUNS	Huntsbury	0.36	101	P	Pb	14 40 53.5	-0.7
OPWS	Opawa School	0.36	98	P	Pb	14 40 53.5	-0.7
OHSS	Ouruhia School	0.36	80	P	Pb	14 40 54.0	-0.2
DALS	Dallington	0.36	90	P	Pb	14 40 54.0	-0.2
BWHS	Burwood Hospit	0.37	86	P	Pb	14 40 54.1	-0.3
MTHS	Methven North	0.37	262	P	Pg	14 40 53.5	+0.1
DORC	Dorie	0.39	189	P	Pg	14 40 54.0	+0.3
MENS	Menlo Terrace	0.39	97	P	Pb	14 40 54.2	-0.6
HVSC	Heathcote Vall	0.39	100	P	Pb	14 40 54.2	-0.6
MQZ	McQueen's Vall	0.40	120	P	Pb	14 40 54.0	-0.9
LPDS	Lyttelton Port	0.40	104	P	Pb	14 40 54.2	-0.7
NBLC	New Brighton L	0.40	90	P	Pb	14 40 54.7	-0.3
MTPS	Mount Pleasant	0.41	101	P	Pb	14 40 54.5	-0.6
RCBS	Redcliffs Bore	0.41	97	P	Pb	14 40 54.5	-0.5
DHSS	Diamond Harbou	0.42	107	P	Pb	14 40 54.6	-0.6
PARS	Panorama Road	0.42	98	P	Pb	14 40 54.7	-0.6
SUMS	Sumner	0.43	98	P	Pb	14 40 54.7	-0.6
CSHS	Castle Hill	0.43	310	P	Pg	14 40 54.6	0.0
GODS	Godley Drive	0.44	99	P	Pb	14 40 55.0	-0.6
MHCZ	Mount Hutt	0.44	267	P	Pg	14 40 54.7	-0.1
AMCZ	Amberley	0.48	46	P	Pb	14 40 56.5	+0.3
AMCZ				S	Sb	14 41 04.1	+0.8
WACZ	Wakanui South	0.50	209	P	Pg	14 40 56.0	+0.3
ADCS	Ashburton	0.50	218	P	Pg	14 40 55.9	0.0
AMBC	Amberley HDC	0.54	49	P	Pn	14 40 58.0	-1.4
TOKS	Te Oka Bay Roa	0.54	126	P	Pb	14 40 56.9	-0.5
MNZS	Menzies Bay Ba	0.59	103	P	Pb	14 40 57.9	-0.3
MAYC	Mayfield Schoo	0.63	240	P	Pg	14 40 58.3	0.0
AKCZ	Akaroa Harbour	0.64	124	P	Pb	14 40 58.6	-0.5
AKSS	Akaroa School	0.65	118	P	Pb	14 40 58.6	-0.5
WAKC	Waikari	0.67	35	P	Pn	14 41 00.0	-1.2
OKCZ	Okains Bay	0.68	109	P	Pb	14 40 59.4	-0.2
LSRC	Lake Sumner Ro	0.69	23	P	Pn	14 41 00.6	-0.9
APPS	Arthurs Pass P	0.72	321	P	Pg	14 40 59.8	-0.1
LTZ	Lake Taylor	0.73	6	P	Pb	14 41 00.6	0.0
LTZ				S	Sb	14 41 10.8	+0.2
PEEC	Peel Forest	0.80	238	P	Pg	14 41 01.9	+0.5
GVZ	Greta Valley S	0.83	49	P	Pn	14 41 02.2	-1.2
ARCZ	Arundel	0.85	239	P	Pg	14 41 02.0	-0.3
CULC	Culverden Airl	0.88	32	P	Pn	14 41 03.4	-0.7
INZ	Inchbonnie	0.95	325	P	Pg	14 41 03.9	-0.4
WVZ	Waitaha Valley	1.14	292	P	Pb	14 41 07.4	0.0
TMZ	Timaru	1.22	224	P	Pn	14 41 07.7	-1.0
KHZ	Kahutara	1.48	43	P	Pn	14 41 11.0	-1.3
KHZ	Kahutara	1.48	43	P	Pn	14 41 11.3	-1.0
LBZ	Lake Benmore	1.68	238	P	Pn	14 41 14.5	-0.6
FOZ	Fox Glacier	1.72	268	P	Pn	14 41 16.1	+0.5
DSZ	Denniston Nort	1.79	351	P	Pn	14 41 15.9	-0.7
THZ	Tophouse	1.83	17	P	Pn	14 41 16.2	-1.0
ODZ	Otahua Downs	1.89	215	P	Pb	14 41 20.5	+0.2
ODZ	Otahua Downs	1.89	215	S	Sb	14 41 45.0	+1.2
ODZ	Otahua Downs	1.89	215	P	Pn	14 41 16.4	-1.5
MRNZ	Matariki Terra	2.15	12	P	Pn	14 41 21.6	0.0
BSWZ	Blackbirch Sta	2.19	36	P	Pn	14 41 21.6	-0.5
TUWZ	Tuamarina	2.46	33	P	Pn	14 41 25.0	-0.7
NNZ	Nelson	2.46	22	P	Pn	14 41 25.5	-0.3
JCZ	Jackson Bay	2.52	256	P	Pn	14 41 27.8	+1.1
JCZ	Jackson Bay	2.52	256	P	Pn	14 41 26.8	+0.1
TKNZ	Takaka Hill	2.54	14	P	Pn	14 41 26.7	-0.2
WKZ	Wanaka	2.63	239	P	Pg	14 41 36.2	-0.1
HHSZ	Highcliff Hill	2.63	205	P	Pn	14 41 28.5	+0.4
QRZ	Quartz Range	2.70	6	P	Pn	14 41 28.4	-0.6
QRZ	Quartz Range	2.70	6	P	Pn	14 41 28.5	-0.6
TCW	Tory Channel	2.78	35	P	Pn	14 41 28.9	-1.2
DUWZ	D'Urville Isla	3.00	26	P	Pn	14 41 33.4	+0.1
TUZ	Tuapeka	3.04	216	P	Pn	14 41 33.0	-0.8
MSWZ	Moikau Station	3.09	48	P	Pn	14 41 32.5	-1.9
CAW	Cannon Point	3.22	43	P	Pn	14 41 34.5	-1.7
KIW	Kapiti Island	3.34	38	P	Pn	14 41 38.1	+0.2
SYZ	Scrubby Hill	3.71	214	P	Pn	14 41 43.4	+0.4
MRZ	Mangatainoka R	3.81	43	P	Pn	14 41 42.3	-2.1
BFZ	Birch Farm	4.14	48	P	Pn	14 41 46.0	-2.9
NBEZ	Newall Road No	4.42	17	P	Pn	14 41 53.7	+0.9
KHEZ	Kahui Hut	4.43	19	P	Pn	14 41 53.4	+0.4
KHEZ	Kahui Hut	4.43	19	P	Pn	14 41 53.8	+0.8
PKE	Pukeiti	4.52	18	P	Pn	14 41 54.4	+0.2
PNHZ	Pukenui	4.69	41	P	Pn	14 41 55.4	-1.1
VRZ	Vera Road	4.79	25	P	Pn	14 41 57.9	+0.1
HIZ	Hauiti	5.39	23	P	Pn	14 42 06.8	+0.8

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*WEL **10** 14:48:41.0±0.4, 42°S±3°×17°4E±°, h12^{km}±3^{km}, M3.9/13, ML3.8/13, MLv3.9/13, Error ellipse: s-maj=5.4km s-min=2.7km az=125.8, confirmed*

*NOU **10** 14:48:40.0, 42°.38S×173°.88E, h12^{km}, MLv4.2/15, South Island, New Zealand*

*WEL **10** 14:48:41.5, 42°.25S×173°.75E, h22^{km}, ML4.0, Mw3.8, Moment Tensor Solution. s5 Moment tensor: Scale 10^{14} Nm; M_{rr}-0.30; $M_{\theta\theta}$4.00; $M_{\phi\phi}$-3.70; $M_{r\theta}$2.75; $M_{\theta\phi}$0.39; $M_{\phi r}$3.14; Fault plane solution: $M_0$5.70000×10^{14} NP1: ϕ_s223.00000°, δ88.00000°, λ-133.00000°. NP2: ϕ_s131.00000°, δ43.00000°, λ-3.00000°. Principal axes: T 5.6940, Plg30.0000°, Azm347.0000°; N 0.0050, Plg43.0000°, Azm224.0000°; P -5.6990, Plg33.0000°, Azm98.0000°; Stations used: GVZ LTZ QRZ INZ WVZ OBLIQUE FAULTING*

ISC 10 14:48:39.7±1.2, 42°.35S±0°.03×173°.89E±0°.03, h11^{km}±10^{km}, n121, σ1^{s}.10/132, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIKS	Kaikoura	0.17	243	P	Pb	14 48 46.2	+1.4
KHZ	Kahutara	0.27	255	P	Pb	14 48 46.3	-0.2
KHZ	Kahutara	0.27	255	S	Sg	14 48 50.8	+2.0
KHZ	Kahutara	0.27	255	P	Pb	14 48 46.6	+0.1
KEKS	Kekerengu Vall	0.40	10	P	Pb	14 48 49.2	+0.4
KEKS				S	Sb	14 48 55.3	+0.4
GLOS	29 km south-we	0.49	354	P	Pg	14 48 49.4	0.0
GLOS				S	Sg	14 48 55.0	-0.9
BSWZ	Blackbirch Sta	0.63	359	P	Pg	14 48 52.2	+0.3
BSWZ				S	Sg	14 49 00.4	+0.2
CMWZ	Cape Campbell	0.65	22	P	Pn	14 48 54.7	-0.1
GVZ	Greta Valley S	0.88	225	P	Pn	14 48 58.6	+0.6
GVZ				S	Sn	14 49 11.8	+1.0
TUWZ	Tuamarina	0.92	3	P	Pg	14 48 57.8	+0.4
TUWZ				S	Sb	14 49 10.0	+0.2
THZ	Tophouse	0.94	308	P	Pg	14 48 56.5	-1.2
THZ				S	Sg	14 49 07.2	-2.8
TCW	Tory Channel	1.17	15	P	Pb	14 49 01.8	-0.1
TCW				S	Sb	14 49 17.6	+0.4
NNZ	Nelson	1.19	341	P	Pb	14 49 01.3	-1.0
BHW	Baring Head	1.19	38	P	Pn	14 49 02.6	+0.3
BHW				S	Sb	14 49 18.1	+0.4
SNZO	South Karori	1.21	31	P	Pn	14 49 02.7	+0.3
SNZO	South Karori	1.21	31	S	Sg	14 49 19.0	+0.6
AMCZ	Amberley	1.23	227	P	Pn	14 49 03.1	+0.3
WEL	Wellington	1.25	32	P	Pn	14 49 03.4	+0.4
WEL				S	Sb	14 49 19.7	+0.3
LTZ	Lake Taylor	1.27	250	P	Pn	14 49 03.3	-0.1
LTZ				S	Sb	14 49 19.6	-0.4
MRNZ	Matariki Terra	1.27	318	P	Pn	14 49 02.7	-0.6
MRNZ				S	Sb	14 49 19.0	-0.9
MSWZ	Moikau Station	1.38	48	P	Pn	14 49 05.1	+0.2
TKNZ	Takaka Hill	1.49	332	P	Pn	14 49 06.1	-0.3
OKCZ	Okains Bay	1.50	204	P	Pn	14 49 07.1	+0.5
PAWZ	Paruwai Farm	1.50	50	P	Pn	14 49 06.5	0.0
CAW	Cannon Point	1.52	36	P	Pn	14 49 07.0	+0.2
DUWZ	D'Urville Isla	1.55	1	P	Pn	14 49 06.8	-0.3
MQZ	McQueen's Vall	1.63	213	P	Pn	14 49 07.8	-0.5
TRWZ	Traveller	1.65	55	P	Pn	14 49 08.4	-0.2
DSZ	Denniston Nort	1.66	291	P	Pn	14 49 08.6	-0.2
KIW	Kapiti Island	1.67	28	P	Pn	14 49 09.3	+0.4
OXZ	Oxford	1.67	234	P	Pn	14 49 08.4	-0.5
AKCZ	Akaroa Harbour	1.68	205	P	Pn	14 49 09.2	+0.2
MTW	Mount Morrison	1.70	46	P	Pn	14 49 09.0	-0.2
OGWZ	Otaki Gorge	1.81	33	P	Pn	14 49 10.8	+0.1
QRZ	Quartz Range	1.83	326	P	Pn	14 49 11.6	+0.5
QRZ	Quartz Range	1.83	326	S	Sb	14 49 34.6	-1.5
QRZ	Quartz Range	1.83	326	P	Pn	14 49 11.4	+0.3
INZ	Inchbonnie	1.84	257	P	Pn	14 49 11.2	-0.1
RACZ	Rakaia	1.88	222	P	Pn	14 49 11.5	-0.2
HOWZ	Holdsworth Sta	1.90	41	P	Pn	14 49 11.8	-0.2
TMWZ	Te Maipa	1.95	51	P	Pn	14 49 12.3	-0.3
MHCZ	Mount Hutt	2.07	234	P	Pn	14 49 13.7	-0.7
MRZ	Mangatainoka R	2.11	38	P	Pn	14 49 14.6	-0.3
TIWZ	Tintock	2.17	44	P	Pn	14 49 16.1	+0.3
WACZ	Wakanui South	2.19	223	P	Pn	14 49 15.6	-0.4
CPWZ	Castlepoint	2.25	51	P	Pn	14 49 16.6	-0.3
PRWZ	Pori Road	2.38	42	P	Pn	14 49 18.4	-0.3
OHWZ	Ohakea	2.40	27	P	Pn	14 49 20.4	+1.5
POWZ	Post Office Ro	2.41	37	P	Pn	14 49 19.0	-0.1
BFZ	Birch Farm	2.43	48	P	Pn	14 49 18.7	-0.6
BFZ	Birch Farm	2.43	48	P	Pn	14 49 18.4	-1.0
WVZ	Waitaha Valley	2.43	252	P	Pn	14 49 19.4	+0.1
ARCZ	Arundel	2.55	230	P	Pn	14 49 20.4	-0.5
DVHZ	Dannevirke	2.67	41	P	Pn	14 49 21.4	-1.2
ANWZ	Angora Road	2.71	47	P	Pn	14 49 22.6	-0.5
WAZ	Wanganui	2.72	18	P	Pn	14 49 25.0	+1.7
TSZ	Takapari Road	2.77	35	P	Pn	14 49 23.4	-0.6
TMZ	Timaru	2.92	225	P	Pn	14 49 25.6	-0.5
NMEZ	Namu Road	2.93	360	P	Pn	14 49 29.3	+3.1
PRHZ	Porangahau	2.94	46	P	Pn	14 49 25.1	-1.1
WPHZ	Waipukurau	2.99	41	P	Pn	14 49 27.0	0.0
PNHZ	Pukenui	3.00	36	P	Pn	14 49 26.2	-0.9
PREZ	Palmer Road	3.01	4	P	Pn	14 49 30.4	+3.1
KHEZ	Kahui Hut	3.05	2	P	Pn	14 49 29.6	+1.7
KHEZ	Kahui Hut	3.05	2	P	Pn	14 49 30.9	+2.9
NBEZ	Newall Road No	3.08	360	P	Pn	14 49 30.1	+1.9
PKE	Pukeiti	3.15	1	P	Pn	14 49 31.1	+1.9
DREZ	Durham Road	3.17	4	P	Pn	14 49 31.2	+1.8
FOZ	Fox Glacier	3.21	247	P	Pn	14 49 30.4	+0.3
PKVZ	Pokaka	3.25	20	P	Pn	14 49 32.1	+1.5
VRZ	Vera Road	3.29	12	P	Pn	14 49 32.5	+1.4
KRHZ	Kereru	3.29	36	P	Pn	14 49 30.0	-1.2
TRVZ	Turoa	3.30	23	P	Pn	14 49 32.8	+1.4
WHVZ	Whangaehu Hut	3.32	23	P	Pn	14 49 35.2	+3.4
MAVZ	Matarangi	3.33	23	P	Pb	14 49 37.2	-1.7
FWVZ	Far West T-bar	3.34	23	P	Pn	14 49 33.6	+1.6
TUVZ	Tukino	3.36	24	P	Pn	14 49 33.0	+0.8
LBZ	Lake Benmore	3.38	232	P	Pn	14 49 32.4	0.0
COVZ	Chateau Observ	3.39	22	P	Pn	14 49 33.8	+1.2
KAHZ	Kahuranaki	3.41	43	P	Pn	14 49 31.8	-1.0
NGZ	Ngauruhoe	3.43	23	P	Pn	14 49 34.3	+1.1
SNVZ	South Ngauruho	3.43	23	P	Pn	14 49 34.2	+1.0
OTVZ	Oturere	3.46	24	P	Pn	14 49 34.4	+0.9
NNVZ	North Ngauruho	3.47	23	P	Pn	14 49 35.0	+1.3
TWVZ	Taurewa	3.48	20	P	Pn	14 49 34.7	+0.8
WTVZ	West Tongariro	3.48	22	P	Pn	14 49 34.8	+1.0
ETVZ	East Tongariro	3.50	24	P	Pn	14 49 35.9	+1.8
TMVZ	Te Maari	3.51	24	P	Pn	14 49 35.3	+1.0
KRVZ	Karewarewa	3.51	23	P	Pn	14 49 35.7	+1.3
NTVZ	North Tongarir	3.52	23	P	Pn	14 49 35.2	+0.8
ODZ	Otahua Downs	3.58	220	P	Pn	14 49 34.6	-0.4
ODZ	Otahua Downs	3.58	220	P	Pn	14 49 34.5	-0.6
MCHZ	McNeill Hill	3.60	37	P	Pn	14 49 34.7	-0.7
KATZ	Kakaramea	3.64	23	P	Pn	14 49 38.5	+2.4
BKZ	Black Stump Fm	3.75	33	P	Pn	14 49 37.1	-0.3
BKZ	Black Stump Fm	3.75	33	P	Pn	14 49 36.0	-1.5
HIZ	Hauiti	3.90	11	P	Pn	14 49 41.0	+1.5
HIZ	Hauiti	3.90	11	P	Pn	14 49 40.7	+1.1
JCZ	Jackson Bay	4.11	243	P	Pn	14 49 42.4	0.0
JCZ	Jackson Bay	4.11	243	P	Pn	14 49 42.4	0.0
MTHZ	Maungataniwha	4.15	34	P	Pn	14 49 44.3	+1.3
TLZ	Tolley Road	4.21	18	P	Pn	14 49 44.8	+1.0
HHSZ	Highcliff Hill	4.25	213	P	Pn	14 49 44.5	+0.1
SNGZ	Shannon Statio	4.43	38	P	Pn	14 49 47.8	+1.0
TUZ	Tuapeka	4.73	219	P	Pn	14 49 50.7	-0.2
URZ	Urewera	4.77	32	P	Pn	14 49 52.0	+0.5

URZ	Urewera	4.77	32	P	Pn	14 49 50.5	-1.0
TWGZ	Tauwhareparae	5.21	38	P	Pn	14 49 58.1	+0.5
RUGZ	Raukumara Rang	5.25	35	P	Pn	14 49 56.7	-1.5
AWAZ	Awhitu Peninsu	5.31	7	P	Pn	14 49 59.9	+1.1
MKAZ	Moumakai	5.33	11	P	Pn	14 49 59.4	+0.3
SYZ	Scrubby Hill	5.39	217	P	Pn	14 50 00.1	+0.2
SYZ	Scrubby Hill	5.39	217	P	Pn	14 50 00.1	+0.2
ETAZ	East Tamaki Re	5.45	9	P	Pn	14 50 01.7	+0.9
RVAZ	Riverhead Bore	5.60	6	P	Pn	14 50 03.8	+1.0
MBAZ	Motutapu North	5.63	8	P	Pn	14 50 04.7	+1.5
WIAZ	Waiheke Island	5.63	10	P	Pn	14 50 03.7	+0.4
WCZ	Waipu Caves	6.41	3	P	Pn	14 50 15.2	+1.2
CTZ	Chatham Island	7.09	104	P	Pn	14 50 23.6	+0.2
OUZ	Omahuta	7.12	358	P	Pn	14 50 25.6	+1.8
OUZ	Omahuta	7.12	358	P	Pn	14 50 25.7	+2.0

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*IDC **10** 14:52:30.7±9.0, 14.°98S×173.°80W, h0^{km}, mb3.6/3, mbtmp3.6/3, MS3.9/2, Error ellipse: s-maj=399.1km s-min=37.8km az=139.0*

*NEIC **10** 14:52:31.1±0.7, 15.°1S±0.°1×173.°32W±0.°09, h10^{km}±1^{km}, mb4.6/10, Error ellipse: s-maj=22.0km s-min=13.6km az=156.0*

ISC 10 14:52:33.3±0.9**, 15.°1S**±0.°1×**173.°4W**±0.°1**, h30**^{km}**, n25, σ1^{s}04**/17**, mb4.1**/5**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	1.94	52		Pn	14 53 03.6	-0.7
FUNA	Funafuti	9.80	311	Pn	Pn	14 54 51.8	-0.5
XMAS	Kiritimati	23.20	44	P	P	14 57 37.4	-0.5
XMAS				IAmb	IAmb	14 57 52.0	
	comp=Z,44nm,0.9s						
URZ	Urewera	24.55	198	LR	LR	15 06 03.4	
	comp=Z,65nm,18.4s,baz=336,slow=33						
TKNZ	Takaka Hill	28.43	202	P	P	14 58 25.9	+0.4
WKZ	Wanaka	33.17	203	P	P	14 59 07.3	+0.1
H11S2	WAKE ISLAND Hy	38.74	329	T	T	15 40 36.8	
	baz=149,slow=76,SNR=8.9						
H11S3	WAKE ISLAND Hy	38.76	329	T	T	15 40 38.6	
	baz=149,slow=76,SNR=10						
H11S1	WAKE ISLAND Hy	38.76	329	T	T	15 40 35.9	
	baz=149,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	39.69	330	T	T	15 41 39.4	
	baz=150,slow=76,SNR=9.3						
H11N1	WAKE ISLAND Hy	39.69	330	T	T	15 41 34.9	
	baz=150,slow=76,SNR=11						
H11N2	WAKE ISLAND Hy	39.70	330	T	T	15 41 36.1	
	baz=150,slow=76,SNR=9.7						
WB0	Warramunga Arr	49.91	257	P	P	15 01 24.6	-0.1
WB0				IAmb	IAmb	15 02 04.2	
	comp=Z,9.3nm,1.4s						
WRA	Warramunga Arr	49.95	257	P	P	15 01 23.7	-1.2
	comp=Z,0.3nm,0.7s,baz=91,slow=7.1,SNR=5.1						
	comp=Z,0.3nm,0.7s						
AS31	Alice Springs	50.24	252	P	P	15 01 26.1	-1.0
ASAR	Alice Springs	50.24	252	P	P	15 01 26.2	-0.9
	comp=Z,1.4nm,0.6s,baz=88,slow=7.6,SNR=24						
	comp=Z,1.4nm,0.6s						
ASAR	Alice Springs	50.24	252	P	P	15 01 26.4	-0.8
PET	Petropavlovsk	72.02	343	P	P	15 03 55.2	+1.1
I05D	Terrebonne, OR	75.75	36	P	P	15 04 15.4	-0.8
ILAR	Eielson Array	82.16	11	P	P	15 04 52.8	+2.0
	comp=Z,0.4nm,0.8s,baz=203,slow=5.1,SNR=4.5						
	comp=Z,0.4nm,0.8s						
ILAR	Eielson Array	82.16	11	P	P	15 04 51.9	+1.1
I30M	Mount Dempster	84.82	15	P	P	15 05 05.3	+0.6
H29M	Whitestone	85.18	13	P	P	15 05 07.6	+1.3
B22K	Teshekpuk Lake	86.36	7	P	P	15 05 13.0	+1.0
PSI	Prapat	88.53	273	LR	LR	15 46 07.3	
	comp=Z,221nm,19.3s,baz=116,slow=36						

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*IGQ **10** 14:57:53.8±0.2, 2°S±2°×8°0W±°, h61^{km}±2^{km}, MLv4.1/25*

*RSNC **10** 14:57:53.9±0.7, 2°S±3°×8°0W±°, h71^{km}±26^{km}, M3.9, mb4.3, mB5.6, ML3.3, Mw(mB)5.1*

ISC 10 14:57:53.8±1.3**, 2.°20S**±0.°03×**79.°79W**±0.°04**, h69**^{km}±6^{km}**, n110, σ1^{s}44**/121**, 28C-20D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GYE3	Ecuador-Guayaq	0.12	292	P	Pn	14 58 02.5	-1.5
GYE3				S	Sn	14 58 10.5	-0.9
GYE1	Ecuador-Trinit	0.13	247	P	Pn	14 58 03.8	-0.2
GYE1				S	Sn	14 58 12.3	+0.8
AC07	Ecuador-Guayaq	0.20	284	⇓P	Pn	14 58 04.1	-0.3
AC07				S	Sn	14 58 12.6	+0.5
AGUAY	Guayaquil	0.22	312	⇓P	Pn	14 58 03.9	-0.5
AGUAY				S	Sn	14 58 11.9	-0.2
MILO	Milagro-Astudi	0.25	109	⇓P	Pn	14 58 04.2	-0.4
MILO				S	Sn	14 58 13.2	+0.8
ABAB	Ecuador-Univer	0.48	35	P	Pn	14 58 05.7	-0.7
MORR	Playas El Morr	0.70	231	⇑P	Pn	14 58 08.8	+0.1
MORR				S	Sn	14 58 22.7	+3.1
APLA	Playas - Guaya	0.74	234	P	Pn	14 58 09.7	+0.6
ISPG	Isla Puna-Puer	0.85	206	⇑P	Pn	14 58 11.3	+0.7
ISPG				S	Sn	14 58 27.3	+4.4
JSCH	Cashca Tororas	0.94	60	⇓P	Pn	14 58 10.7	-1.2
PCRA	Pucara 2	1.04	164	⇓P	Pn	14 58 12.3	-0.9
ALIBE	La Libertad	1.06	268	P	Pn	14 58 12.3	-0.7
ACH2	Ecuador-Machal	1.06	181	P	Pn	14 58 13.1	0.0
ACUE	Ecuador-Cuenca	1.09	130	⇑P	Pn	14 58 14.2	+0.5
AZOG	Ecuador-Azogue	1.09	120	⇑P	Pn	14 58 13.8	0.0
JIPI	JIPIJAPA	1.13	317	⇓P	Pn	14 58 14.0	0.0
CHSH	Refugio Sur-Vo	1.16	53	⇑P	Pn	14 58 14.9	0.0
PPLP	Puerto Lpez	1.18	303	P	Pn	14 58 14.6	0.0
PPLP	Puerto Lpez	1.18	303	P	Pn	14 58 14.2	-0.4
PPLP	Puerto Lpez	1.18	303	P	Pn	14 58 14.2	-0.4
PPLP				S	Sn	14 58 29.0	-1.1
SALI	Salinas	1.20	271	⇑P	Pn	14 58 14.5	-0.4
TAMH	Tambohuasha Ch	1.20	57	⇑P	Pn	14 58 15.3	-0.1
ARIO	Riobamba	1.22	64	P	Pn	14 58 15.3	-0.1
PORT	Chimborazo Vol	1.25	54	⇑P	Pn	14 58 16.3	+0.3
IGUA	Igualata	1.35	59	⇑P	Pn	14 58 17.4	+0.1
ARNL	Arenillas	1.37	192	⇓P	Pn	14 58 15.8	-1.2
SANGA	Volcan Sangay	1.43	84	⇑P	Pn	14 58 18.3	0.0
PECV	Mancha de Ca P	1.44	350	⇓P	Pn	14 58 19.2	+1.2
BMAS	Trigal station	1.48	62	⇑P	Pn	14 58 17.0	-1.9
BIL2	Estacion Bilba	1.48	60	P	Pn	14 58 19.4	+0.6
BBIL	Ulba Tungurahu	1.50	60	⇑P	Pn	14 58 19.5	+0.5
BPAT	Tungurahua Vol	1.52	63	⇑P	Pn	14 58 19.7	+0.2
JUI6	Juive	1.53	60	⇑P	Pn	14 58 19.9	+0.4
ISPT	Isla de la Pla	1.58	306	P	Pn	14 58 20.0	+0.1
BOSC	San Juan Bosco	1.60	126	⇑P	Pn	14 58 21.3	+1.0
ABH2	Ecuador-Univer	1.65	338	P	Pn	14 58 20.2	-0.6
ASLC	Ecuador-Salced	1.66	46	P	Pn	14 58 21.5	+0.3
ABH3	Manabi, Bahia	1.71	338	P	Pn	14 58 22.4	+0.8
PIS1	Pisayambo	1.80	51	P	Pn	14 58 25.0	+1.7
ILLI	Illinizas Sur	1.82	36	P	Pn	14 58 24.0	+0.5
FLF1	Flavio Alfaro-	1.83	358	⇓P	Pn	14 58 23.1	-0.2
FLF1	Flavio Alfaro-	1.83	358	P	Pn	14 58 23.0	-0.2
FLF1				S	Sn	14 58 45.5	0.0
ALJ1	Ecuador-Loja-U	1.87	162	P	Pn	14 58 22.9	-1.1
PAST	Pastocalle	1.89	38	P	Pn	14 58 27.6	+3.3
PUYO	Puyo, Santa Ro	1.90	68	P	Pn	14 58 25.3	+1.0
CAB1	Cabo Pasado-Ma	1.91	340	P	Pn	14 58 27.2	+2.9
APUY	Puyo	1.94	68	P	Pn	14 58 24.8	+0.1
PIAT	Ana Tenorio	1.94	52	⇑P	Pn	14 58 25.9	+0.9
PIAT	Ana Tenorio	1.94	52	P	Pn	14 58 25.7	+0.7
SLOR	San Lorenzo -	1.95	42	⇑P	Pn	14 58 26.7	+1.4
VCES	Cotopaxi	1.97	45	⇑P	Pn	14 58 26.5	+0.9
BMOR	Cotopaxi Volca	1.97	42	⇑P	Pn	14 58 26.9	+1.3
CAMI	Rancho Maria	1.98	40	⇑P	Pn	14 58 27.6	+1.9
SUCR	Mariscal Sucre	2.02	40	P	Pn	14 58 27.9	+1.7
BREF	Cotopaxi Volca	2.03	42	P	Pn	14 58 29.1	+2.6
BTAM	Cotopaxi Volca	2.06	43	⇑P	Pn	14 58 28.0	+1.3
BVC2	Cotopaxi Volca	2.06	42	⇑P	Pn	14 58 28.1	+1.3
GONZ	Gonzanam	2.06	169	P	Pn	14 58 26.2	-0.5
TAMB	Tambo	2.06	44	⇓P	Pn	14 58 28.4	+1.5
VC1	Cotopaxi 1	2.08	42	⇓P	Pn	14 58 28.7	+1.7
PITA	Cotopaxi Volc	2.12	40	P	Pn	14 58 29.5	+1.9
AMCR	Ecuador-Macara	2.16	184	P	Pn	14 58 26.5	-1.2
MCRA	Macar, Loja	2.16	184	⇓P	Pn	14 58 26.6	-1.2
MCRA	Macar, Loja	2.16	184	P	Pn	14 58 26.3	-1.4
MCRA				S	Sn	14 58 50.9	-2.7
TOMA	Boca Toma-Volc	2.17	39	P	Pn	14 58 30.4	+2.3
ANTG	Antisana-Guama	2.28	42	⇑P	Pn	14 58 30.7	+1.0
GGPT	Toaza - Volcan	2.28	31	⇓P	Pn	14 58 30.6	+0.9
TAIS	Taisha	2.30	95	P	Pn	14 58 30.2	+0.6
JUA2	San Juan 2	2.30	31	⇑P	Pn	14 58 31.4	+1.4
ARDO	Archidona, Ten	2.32	59	⇑P	Pn	14 58 30.4	+0.5
TING	Casa Alexandra	2.33	35	P	Pn	14 58 31.7	+1.5
GGPC	Guagua Pichinc	2.33	31	⇓P	Pn	14 58 31.6	+1.1
TERV	Terraza Guagua	2.33	31	⇓P	Pn	14 58 31.7	+1.2
ANTS	Antisana-Sarah	2.34	44	⇑P	Pn	14 58 31.6	+1.0
PINO	Pino	2.35	30	⇓P	Pn	14 58 31.7	+1.0
ANTI	Antisana	2.38	43	⇓P	Pn	14 58 32.3	+1.1
YANA	Yana	2.40	31	⇓P	Pn	14 58 32.4	+1.0
BV15	Puerto Quito-O	2.41	14	P	Pn	14 58 29.5	-1.5
PAC1	Pacto, Paraso	2.64	22	P	Pn	14 58 34.2	-0.2
PAC1	Pacto, Paraso	2.64	22	P	Pn	14 58 34.1	-0.2
PAC1				S	Sn	14 58 59.8	-5.6
ZUMB	Zumba	2.73	166	⇓P	Pn	14 58 35.9	+0.4
OTAV	Otavalo	2.77	29	P	Pn	14 58 37.3	+1.0
OTAV	Otavalo	2.77	29	P	Pn	14 58 36.9	+0.6
CAYR	Refugio Cayamb	2.83	39	⇑P	Pn	14 58 39.2	+1.9
CUSE	Cuicocha Este	2.85	29	P	Pn	14 58 38.6	+1.2
CUSE	Cuicocha Este	2.85	29	P	Pn	14 58 38.4	+1.0
ANGU	Angureal	2.85	39	⇑P	Pn	14 58 38.9	+1.2
CUIC	Cuicocha-Domo	2.87	30	P	Pn	14 58 38.7	+1.1
COTA	Cotacachi	2.91	30	P	Pn	14 58 40.8	+2.6
IMBA	Imbabura, San	2.93	33	P	Pn	14 58 41.7	+3.2
REVS	Reventador Sur	3.00	46	P	Pn	14 58 41.3	+2.0
URCU	Urcuqui	3.04	30	P	Pn	14 58 41.8	+1.9
RVRD	Rio Verde	3.27	7	⇓P	Pn	14 58 42.8	+0.1
LITE1	Lita	3.30	26	P	Pn	14 58 44.2	+0.9
LNGL	El Angel-Carch	3.42	31	P	Pn	14 58 47.1	+1.8
BONI	La Bonita	3.47	41	P	Pn	14 58 49.0	+3.3
BONI	La Bonita	3.47	41	P	Pn	14 58 47.2	+1.5
CHL1	Volc¡n Chiles	3.50	32	P	Pn	14 58 48.2	+1.9
CHMA	Chilma	3.50	30	P	Pn	14 58 47.5	+1.3
ECEN	Cerro Negro	3.51	31	P	Pn	14 58 47.8	+1.3
CHL2	Volc¡n Chiles	3.52	32	P	Pn	14 58 48.4	+1.8
TULM	Tulcn-Chalpat	3.52	35	P	Pn	14 58 48.1	+1.5
TULM	Tulcn-Chalpat	3.52	35	P	Pn	14 58 47.8	+1.2
SNLR	San Lorenzo-Es	3.59	15	P	Pn	14 58 47.9	+0.7
BBAC	Balboa, Cauca	4.90	31	P	Pn	14 59 06.6	+1.4
BBAC	Balboa, Cauca	4.90	31	P	Pn	14 59 06.2	+0.9
FLOC	Florencia	5.59	48	P	Pn	14 59 13.8	-0.7
	24nm,1.1s						
POPC	Popayan, Colom	5.64	33	P	Pn	14 59 16.4	+1.0
	10nm,0.7s						
GARC	Garzon, Huila	6.12	45	P	Pn	14 59 21.4	-0.5
	28nm,0.8s						
JAMC	Jamundi, Valle	6.21	30	P	Pn	14 59 23.2	0.0

IDC 10 15:02:57.4±1.8**, 1.°02N**×**127.°46E, h0**^{km}**, mb3.3**/4**, mbtmp3.3**/4**, MS3.2**/1**, Error ellipse: s-maj=138.5km s-min=23.5km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.89	162	P	P	15 07 51.8	-0.4
	0.7nm,0.7s,baz=342,slow=11,SNR=5.2						
	0.7nm,0.7s						
PMG	Port Moresby	22.18	118	LR	LR	15 19 02.9	
	comp=Z,54nm,18.2s,baz=337,slow=44						
ASAR	Alice Springs	25.32	166	P	P	15 08 26.4	+0.3
	0.3nm,0.8s,baz=344,slow=7.9,SNR=11						
	0.3nm,0.8s						
MKAR	Makanchi Array	60.19	326	P	P	15 13 08.3	+1.0
	0.3nm,0.7s,baz=113,slow=7.6,SNR=2.0						
	0.3nm,0.7s						
KURBB	Kurchatov Arra	64.41	328	P	P	15 13 34.3	-1.1
	0.2nm,0.3s,baz=128,slow=5.7,SNR=2.2						
	0.2nm,0.3s						

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*SJA **10** 15:27:59.9±0.6, 22.°71S×68.°79W, h113^{km}±3^{km}, ML3.6, MW3.7*

*GUC **10** 15:28:02.4±0.8, 22.°68S×68.°87W, h97^{km}±4^{km}, ML3.7*

ISC 10 15:28:00.6±1.6**, 22.°68S**±0.°04×**68.°81W**±0.°05**, h117**^{km}±10^{km}**, n27, σ1^{s}30**/43**, 7C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AF01	San Pedro de A	0.64	115	⇑*i*P	Pn	15 28 20.0	+0.5
AF01				*e*S	Sn	15 28 33.6	-0.1
AF01				IAML		15 28 34.0	
	comp=N,31µm,0.2s						
AF01	San Pedro de A	0.64	115	*e*P	Pn	15 28 19.1	-0.4
AF01				*e*S	Sn	15 28 32.8	-0.9
PB06	IPOC Station P	0.70	268	*e*P	Pn	15 28 19.8	-0.1
PB06				*e*S	Sn	15 28 33.0	-1.4
PB06				*e*S		15 28 33.1	
PB06				IAML		15 28 34.2	
	comp=E,4µm,0.1s						
PB06	IPOC Station P	0.70	268	*e*P	Pn	15 28 19.6	-0.2
PB06				*e*S	Sn	15 28 34.0	-0.3
PB06				IAML		15 28 35.5	
	comp=Z,2µm,0.1s						
PB09	IPOC Station P	0.97	335	⇑*i*P	Pn	15 28 23.3	+1.1
PB09				*e*S	Sn	15 28 38.6	0.0
PB09				IAML		15 28 39.7	
	comp=E,2µm,0.3s						
PB09	IPOC Station P	0.97	335	*e*P	Pn	15 28 22.6	+0.4
PB09				*e*S	Sn	15 28 39.1	+0.5
PB09				IAML		15 28 40.0	
	comp=Z,2µm,0.6s						
PB03	IPOC Station P	1.08	306	⇑*i*P	Pn	15 28 23.7	+0.4
PB03				*e*S	Sn	15 28 39.7	-0.7
PB03				IAML		15 28 40.4	
	comp=E,2µm,0.2s						
PB05	IPOC Station P	1.30	262	⇑*i*P	Pn	15 28 26.0	+0.4
PB05				*e*S	Sn	15 28 43.8	-0.7
PB05				IAML		15 28 45.2	
	comp=N,1µm,0.3s						
PB05	IPOC Station P	1.30	262	*e*P	Pn	15 28 25.3	-0.3
PB05				*e*S	Sn	15 28 44.6	+0.1
PB05				IAML		15 28 44.7	
	comp=Z,726nm,0.5s						
PB07	IPOC Station P	1.38	313	⇑*i*P	Pn	15 28 27.5	+0.9
PB07				*e*S	Sn	15 28 45.9	-0.3
PB07				IAML		15 28 47.6	
	comp=E,2µm,0.3s						
PB07	IPOC Station P	1.38	313	*e*P	Pn	15 28 26.8	+0.2
PB07				*e*S	Sn	15 28 47.1	+0.8
PB07				IAML		15 28 51.1	
	comp=Z,938nm,0.3s						
PB02	IPOC Station P	1.69	323	⇑*i*P	Pn	15 28 31.2	+1.0
PB02				*e*S	Sn	15 28 52.8	+0.1
PB02				IAML		15 28 56.5	
	comp=E,2µm,0.3s						
PB01	IPOC Station P	1.75	339	⇑*i*P	Pn	15 28 32.2	+1.3
PB01				*e*S	Sn	15 28 54.5	+0.5
PB01				IAML		15 28 56.1	
	comp=E,1µm,0.1s						
PB01	IPOC Station P	1.75	339	*e*P	Pn	15 28 31.5	+0.6
PB01				*e*S	Sn	15 28 55.1	+1.1
PB01				IAML		15 28 55.7	
	comp=Z,546nm,0.2s						
PB10	IPOC Station P	1.81	242	*e*P	Pn	15 28 32.0	+0.5
PB10				IAML		15 29 02.2	
	comp=N,314nm,0.3s						
PB10	IPOC Station P	1.81	242	*e*P	Pn	15 28 31.8	+0.3
PB10				*e*S	Sn	15 28 55.4	+0.3
PB10				IAML		15 28 58.8	
	comp=Z,219nm,0.6s						
PATCX	Punta Patache	2.23	326	*e*P	Pn	15 28 37.3	+0.4
PATCX				IAML		15 29 13.0	
	comp=E,390nm,0.3s						
PB14	IPOC Station P	2.43	217	*e*P	Pn	15 28 29.4	-10
PB14				*e*S	Sn	15 29 09.4	-0.1
PB14				IAML		15 29 12.2	
	comp=Z,203nm,0.2s						
TA01	Diego Aracena	2.46	329	*e*P	Pn	15 28 40.0	+0.2
PB08	IPOC Station P	2.55	353	⇓*i*P	Pn	15 28 42.9	+1.7
GO02	Mina Guanaco	2.57	196	*e*P	Pn	15 28 42.6	+1.1
HMBC	Humberstone	2.59	337	*e*P	Pn	15 28 42.0	+0.4
PB11	IPOC Station P	3.01	345	*e*P	Pn	15 28 47.8	+0.7
PB11				*e*S	Sn	15 29 16.4	-6.5
PB11				IAML		15 29 52.2	
	comp=Z,119nm,0.3s						
GO01	Chusmiza	3.02	353	*e*P	Pn	15 28 48.5	+1.0
GO01				*e*S	Sn	15 29 12.4	-11
GO01				IAML		15 29 18.9	
	comp=Z,84nm,0.4s						
AC02	Maricunga	4.15	184	*e*P	Pn	15 29 04.1	+1.6
PB12	IPOC Station P	4.29	340	*e*P	Pn	15 29 04.5	+0.4
PB12				*e*S	Sn	15 29 36.7	-17
PB12				IAML		15 30 15.7	
	comp=Z,42nm,0.6s						
GO03	Copiapo	5.06	194	*e*P	Pn	15 29 13.2	-1.1
GO03				IAML		15 30 23.6	
	comp=Z,34nm,0.3s						

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*NEIC **10** 15:40:18.5±1.4, 55.°11N±0.°02×133.°15W±0.°08, h12^{km}±6^{km}, Error ellipse: s-maj=6.8km s-min=3.5km az=89.0*

AEIC 10 15:40:18.7±1.4**, 55.°11N**±0.°02×**133.°1W**±0.°1**, h5**^{km}±1^{km}**, ML3.4, ML3.5**/40(NEIC)**, Error ellipse: s-maj=8.7km s-min=2.3km az=83.0, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRAG	Craig	0.36	359		Pg	15 40 25.7	+0.1
CRAG					Sg	15 40 30.5	+0.1
CRAG				IAML		15 40 31.1	
	comp=E,3µm,0.5s						
V35K	Ketchikan	0.88	75		Pg	15 40 34.7	-0.9
U33K	Whale Pass	1.01	360		Pg	15 40 36.9	-1.1
U33K	Whale Pass	1.01	360		Sg	15 40 50.5	-0.6
NDB	Naden	1.16	175		Pg	15 40 40.5	-0.4
NDB					Sb	15 40 56.3	-0.3
WRAK	Wrangell Islan	1.38	18		Pn	15 40 43.1	-1.4
WRAK				IAML		15 41 02.1	
	comp=E,1µm,0.7s						
WRAK	Wrangell Islan	1.38	18		Sb	15 41 01.6	-1.2
T33K	Petersburg	1.71	3		Sn	15 41 10.4	-0.9
T33K	Petersburg	1.71	3	Pn	Pn	15 40 48.9	-0.1
RUBB	Prince Rupert	1.83	114		Pn	15 40 49.1	-1.6
RUBB					Sn	15 41 13.4	-0.9
RUBB	Prince Rupert	1.83	114	IAML		15 41 17.1	
	comp=E,662nm,0.4s						
U35K	Hyder	1.93	64		Pn	15 40 51.8	-0.3
DIB	Dawson Inlet,	1.95	169		Pn	15 40 51.1	-1.2
DIB					Sn	15 41 14.6	-2.5
DIB	Dawson Inlet,	1.95	169	IAML		15 41 26.7	
	comp=E,279nm,0.6s						
MOBC	Moresby Island	2.08	161		Sn	15 41 20.2	-0.3
MOBC	Moresby Island	2.08	161	Pn	Pn	15 40 53.9	-0.3
MOBC				IAML		15 41 25.5	
	comp=E,194nm,0.6s						
MOBC				IAML		15 41 26.1	
	comp=N,251nm,1.0s						
BNAB	Bonilla	2.17	137		Pn	15 40 54.0	-1.4
SIT	Sitka	2.31	328		Pn	15 40 55.6	-1.7
SIT				IAML		15 41 31.4	
	comp=E,265nm,0.6s						
SIT				IAML		15 41 33.0	
	comp=N,181nm,0.9s						
T35M	Bob Quinn	2.47	39		Pn	15 40 58.4	-1.1
S32K	Killisnoo	2.50	342		Pn	15 40 58.9	-1.0
S32K				IAML		15 41 42.4	
	comp=E,144nm,0.5s						
S34M	Telegraph Cree	3.02	21		Pn	15 41 06.0	-1.0
S34M	Telegraph Cree	3.02	21	IAML		15 41 53.5	
	comp=N,120nm,0.3s						
S34M				IAML		15 41 55.4	
	comp=E,198nm,0.5s						
HG4B	Hotspring	3.04	157	Pn	Pn	15 41 07.1	-0.3
JIS	Juneau Island	3.25	348		Pn	15 41 08.6	-1.6
S31K	Pelican	3.34	330		Pn	15 41 10.3	-1.2
BESE	Bessie Mountai	3.61	345		Pn	15 41 14.2	-1.0
BESE	Bessie Mountai	3.61	345	IAML		15 42 19.0	
	comp=E,150nm,0.8s						
BESE				IAML		15 42 21.4	
	comp=N,87nm,0.8s						
Q32M	Nakina River	3.89	6		Pn	15 41 18.3	-0.9
Q32M	Nakina River	3.89	6	IAML		15 42 25.7	
	comp=E,41nm,1.1s						
Q32M				IAML		15 42 26.7	
	comp=N,54nm,1.1s						
BBB	Bella Bella	4.17	133		Pn	15 41 22.1	-0.8
BBB				IAML		15 42 28.8	
	comp=N,52nm,1.1s						
BBB				IAML		15 42 36.4	
	comp=E,78nm,1.1s						
R33M	Jennings River	4.45	14		Pn	15 41 26.1	-0.7
R33M	Jennings River	4.45	14	IAML		15 42 40.0	
	comp=E,75nm,0.7s						
R33M				IAML		15 42 40.0	
	comp=N,40nm,0.8s						
P32M	Atlin	4.50	356		Pn	15 41 26.9	-0.6
P33M	Teslin, Yukon	5.12	2		Pn	15 41 34.4	-1.5
P33M	Teslin, Yukon	5.12	2	IAML		15 43 07.8	
	comp=N,21nm,1.2s						
WHY	Whitehorse	5.64	351		Pn	15 41 42.5	-0.7
O30N	Mendenhall	5.89	346		Pn	15 41 45.7	-0.9
N32M	Quiet Lake	6.06	0		Pn	15 41 48.6	-0.2

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*BEO **10** 15:40:45.5±0.3, 43.°23N×17.°88E, h11^{km}±4^{km}, ML2.4/11*

*PDG **10** 15:40:45.5±0.1, 43.°20N×17.°97E, h14^{km}, ML2.6/13, Error ellipse: s-maj=0.4km s-min=0.3km az=90.0*

*RHSSO **10** 15:40:46.4±0.4, 43.°19N×18.°02E, h9^{km}, ML2.8/5*

ISC 10 15:40:45.4±1.0**, 43.°21N**±0.°02×**17.°96E**±0.°02**, h7**^{km}±9^{km}**, n44, σ0^{s}93**/85**, 5C-4D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STON	Ston	0.39	210	*e*Pg	Pg	15 40 52.9	+0.1
STON				Sg	Sg	15 40 58.8	+0.9
STON	Ston	0.39	210	*e*Pg	Pg	15 40 53.0	+0.1
STON				*e*Sg	Sb	15 40 59.7	-1.0
KLINJ	Klinje	0.46	94	*e*Pg	Pg	15 40 54.4	+0.1
KLINJ				*e*Sg	Sg	15 41 01.2	+0.9
BRY	Bratogost	0.52	125	⇑*i*Pg	Pg	15 40 55.1	-0.4
BRY				*i* Sg	Sb	15 41 03.4	-1.4
DBRK	Dubrovnik	0.55	166	*e*Pg	Pg	15 40 56.0	0.0
DBRK				Sg	Sb	15 41 04.4	-1.2
TREB	Trebinje	0.57	149	⇑*i*Pg	Pg	15 40 55.9	-0.4
TREB				*e*Sg	Sb	15 41 04.9	-1.1
TREB	Trebinje	0.57	149	*e*Pg	Pg	15 40 56.1	-0.2
TREB				*e*Sg	Sb	15 41 04.9	-1.1
RICI	Ricice	0.67	296	*e*Pg	Pg	15 40 58.0	-0.2
RICI				Sg	Sg	15 41 07.0	+0.1
UPM	Unac-Piva	0.69	90	*e*Pg	Pg	15 40 58.4	-0.3
UPM				*i* Sg	Sb	15 41 09.5	-0.3
MAKA	Makarska	0.69	277	*e*Pg	Pg	15 40 58.1	-0.6
MAKA				Sg	Sg	15 41 08.0	+0.4
NKME	Niksic	0.85	121	⇑*i*Pg	Pg	15 41 01.0	-0.7
NKME				*e*Sg	Sb	15 41 14.6	+0.4
HCY	Herceg Novi	0.85	152	⇓*i*Pg	Pg	15 41 01.2	-0.6
HCY				*i* Sg	Sb	15 41 14.7	+0.5
LSTV	Lastovo	0.90	241	*e*Pg	Pg	15 41 02.3	-0.3
LSTV				Sg	Sb	15 41 15.1	-0.4
CEME	Cevo	0.96	133	⇓*i*Pg	Pg	15 41 03.2	-0.7
CEME				*e*Sg	Sn	15 41 18.7	-0.8
PLE	Pljevlja	1.05	83	⇑*i*Pg	Pg	15 41 05.5	-0.1
PLE				*i* Sg	Sn	15 41 21.4	-0.3
HVAR	Hvar	1.10	269	*e*Pg	Pb	15 41 05.4	-1.4
HVAR				Sg	Sb	15 41 20.2	-1.3
RUDO	Rudo	1.11	68	*e*Pg	Pb	15 41 05.4	-1.5
RUDO				*e*Sg	Sb	15 41 20.3	-1.3
RUDO	Rudo	1.11	68	*e*Pg	Pb	15 41 05.5	-1.5
RUDO				*e*Sg	Sb	15 41 20.7	-0.9
BUM	Brajici-Budva	1.14	142	*e*Pg	Pb	15 41 06.3	-1.1
BUM				*i* Sg	Sn	15 41 24.1	+0.4
KOME	Kolasin	1.20	107	*e*Pg	Pb	15 41 07.5	-0.9
KOME				*e*Sg	Sn	15 41 26.1	+0.9
PDG	Podgorica	1.23	129	*e*Pg	Pg	15 41 08.9	0.0
PDG				*e*Sg	Sn	15 41 28.3	+2.4
PDG	Podgorica	1.23	129	*e*Pg	Pn	15 41 07.9	-1.1
PDG				*i* Sg	Sn	15 41 27.4	+1.5
BBLS	Lazi&#263i	1.24	57	*e*Pg	Pn	15 41 08.8	-0.5
BBLS				*e*Sg	Sn	15 41 26.4	+0.1
DRME	Dracevica, Mon	1.36	138	⇓*i*Pg	Pb	15 41 10.8	-0.4
DRME				*e*Sg	Sg	15 41 31.5	+2.4
KIJV	Kijevo	1.38	306	*e*Pn	Pn	15 41 10.9	-0.3
KIJV				Sg	Sg	15 41 29.7	-0.1
IVA	Berane	1.46	103	*e*Pg	Pb	15 41 12.2	-0.7
IVA				*i* Sg	Sg	15 41 33.9	+1.7
SJES	Sjenica	1.47	87	*e*Pg	Pg	15 41 13.6	0.0
SJES				*e*Sg	Sg	15 41 33.9	+1.2
ULC	Ulcinj	1.56	142	⇓*i*Pg	Pb	15 41 13.8	-0.9
ULC				*i* Sg	Sg	15 41 36.4	+0.8
PVY	Plav	1.59	112	*e*Pn	Pb	15 41 14.4	-0.8
PVY				*i* Sn	Sg	15 41 37.1	+0.6
BLY	Banja Luka	1.64	340	*e*Pn	Pb	15 41 15.4	-0.6
BLY				*e*Sn	Sb	15 41 37.0	+0.1
BLY	Banja Luka	1.64	340	*e*Pg	Pn	15 41 14.7	0.0
BLY				*e*Sg	Sg	15 41 38.2	+0.1
IVAS	Ivanjica	1.64	76	*e*Pg	Pb	15 41 15.2	-0.8
IVAS				*e*Sg	Sg	15 41 38.7	+0.6

DIVS	Divibare	1.72	58	*e*Pg	Pb	15 41 16.4	-1.1
DIVS				*e*Sg	Sg	15 41 41.2	+0.4
ZIRJ	Zirje	1.75	286	*e*Pn	Pn	15 41 16.7	+0.6
ZIRJ				Sn	Sb	15 41 39.0	-0.9
TEKS	Tekeris	1.76	40	*e*Pn	Pn	15 41 15.3	-1.0
TEKS				*e*Sg	Sg	15 41 43.0	+1.1
MORI	Morici	1.77	293	*e*Pn	Pb	15 41 17.2	-0.9
MORI				Sn	Sb	15 41 40.8	+0.3
KNYS	Krupa na Uni	2.06	325	⇑*i*Pn	Pn	15 41 21.5	+1.1
KNYS				*e*Sn	Sb	15 41 48.1	-0.8
GRUS	Gruza	2.12	70	*e*Pg	Pb	15 41 22.8	-1.3
GRUS				*e*Sg	Sg	15 41 54.9	+1.5
DUGI	Dugi Otok	2.25	291	*e*Pn	Pn	15 41 24.1	+1.0
DUGI				Sn	Sn	15 41 52.0	+0.9
SELS	Selova	2.31	89	*e*Pn	Pn	15 41 25.2	+1.3
FRGS	Fruska Gora	2.36	34	*e*Pg	Pb	15 41 28.6	+0.3
VIRC	Vir	2.37	298	*e*Pn	Pn	15 41 26.0	+1.3
VIRC				Sn	Sn	15 41 55.2	+1.3
NVLJ	Novalja	2.61	302	*e*Pn	Pn	15 41 28.7	+0.6
NVLJ				Sn	Sn	15 42 01.0	+1.0
MORH	Mrgy, Hungar	3.05	9	*e*Sn	Sn	15 42 11.8	+1.0

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*NEIC **10** 15:45:35.4±1.2, 7.°9S±0.°1×108.°5E±0.°1, h66^{km}±4^{km}, mb4.4/30, Error ellipse: s-maj=17.5km s-min=12.9km az=222.0*

*IDC **10** 15:45:35.9±5.6, 7.°79S×108.°63E, h69^{km}±50^{km}, mb3.8/17, mbtmp4.1/19, ML4.2/2, MS3.6/1, Error ellipse: s-maj=31.9km s-min=12.5km az=59.0*

*DJA **10** 15:45:40.0±0.2, 8°S±4°×10°9E±°, h56^{km}±12^{km}, M4.6/42, mB5.5/5, mb4.7/13, MLv4.5/42, Mw(mB)4.9/5*

ISC 10 15:45:37.8±0.4**, 8.°22S**±0.°05×**108.°52E**±0.°03**, h100**^{km}**, n123, σ1.^{s}90**/124**, mb4.2**/29**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KPJI	Karang Pucung	0.97	25	P	Pn	15 45 58.5	+0.5
KPJI				S	Sn	15 46 12.7	-0.5
BBJI	Bungbulang	1.14	311	P	Pn	15 46 00.9	+1.0
BBJI	Bungbulang	1.14	311	S	Sn	15 46 16.9	+0.3
BBJI	Bungbulang	1.14	311	P	Pn	15 46 00.8	+0.9
BBJI				S	Sn	15 46 16.7	+0.1
CTJI	Waduk Cacaban	1.38	29	P	Pn	15 46 03.2	+0.6
CTJI				S	Sn	15 46 21.1	-0.3
CNJI	Cibinong	1.65	303	P	Pn	15 46 07.0	+1.1
YOGI	Yogyakarta	1.81	77	P	Pn	15 46 08.7	+0.7
YOGI				S	Sn	15 46 31.1	+0.2
UGM	Wanagama	2.01	81		Pn	15 46 09.4	-1.2
UGM	Wanagama	2.01	81	P	Pn	15 46 11.5	+0.9
UGM	Wanagama	2.01	81	S	Sn	15 46 36.3	+0.6
UGM	Wanagama	2.01	81	P	Pn	15 46 11.3	+0.7
UGM				S	Sn	15 46 35.7	0.0
SMRI	Semarang	2.24	59		Pn	15 46 11.1	-2.4
SMRI	Semarang	2.24	59	P	Pn	15 46 14.7	+1.2
SMRI	Semarang	2.24	59	P	Pn	15 46 15.1	+1.6
SMRI				S	Sn	15 46 42.5	+1.7
SKJI	Sukabumi	2.29	302	P	Pn	15 46 17.2	+3.0
SKJI				S	Sn	15 46 44.9	+2.9
DBJI	Dramaga	2.41	313	P	Pn	15 46 18.6	+2.8
DBJI				S	Sn	15 46 48.6	+3.7
PCJI	Pacitan	2.63	90	P	Pn	15 46 19.8	+1.1
PCJI				S	Sn	15 46 50.6	+0.4
NGJI	Ngawi	3.04	74	P	Pn	15 46 26.1	+2.0
SBJI	Serang	3.16	311	P	Pn	15 46 28.8	+3.1
SNJI	Sawahan-Nganju	3.24	82	P	Pn	15 46 30.2	+3.2
SJI	Sawahan	3.26	82	P	Pn	15 46 29.0	+1.9
XMI	Christmas Isla	3.56	231	P	Pn	15 46 31.5	+0.3
XMI	Christmas Isla	3.56	231	S	Sn	15 47 09.1	-3.3
TBJI	Tambak Boyo	3.59	67	P	Pn	15 46 33.0	+1.5
TBJI				S	Sn	15 47 14.7	+1.7
GRJI	Gresik	4.14	72	P	Pn	15 46 41.0	+2.1
KASI	Kota Agung	4.81	304	P	Pn	15 46 50.8	+2.8
GMJI	Gumukmas	4.88	91	P	Pn	15 46 50.2	+1.3
BLJI	Banyuglugur	5.05	85	P	Pn	15 46 53.3	+2.0
	0.6nm83nm,0.6s						
KLSI		5.14	313	P	Pn	15 46 54.9	+2.3
	27nm,0.6s						
LWLI	Liwa	5.45	305	P	Pn	15 47 00.8	+3.9
TPI	Tanjungpandan	5.50	351	P	Pn	15 47 01.8	+4.4
KMMI	Kalianget	5.53	78	P	Pn	15 46 59.3	+1.5
	0.2nm29nm,0.6s						
JAGI	Jajag, Banyuwa	5.58	93		Pn	15 46 57.7	-0.8
JAGI	Jajag, Banyuwa	5.58	93	P	Pn	15 47 00.3	+1.8
JAGI	Jajag, Banyuwa	5.58	93	P	Pn	15 47 00.1	+1.6
	0.8nm65nm,0.8s						
ABJI	Asem Bagus	5.68	86	P	Pn	15 47 02.5	+2.7
	0.4nm87nm,1.0s						
MDSI	Maura Dua	5.69	310	P	Pn	15 47 02.0	+2.1
RTBI	Rangdo, Negare	6.36	93	P	Pn	15 47 11.3	+2.1
	70nm,1.0s						
RTBI				S	Sn	15 48 23.2	+2.7
	70nm,1.0s						
IGBI	Denpasar	6.58	96	P	Pn	15 47 13.6	+1.5
	3μm46nm,0.5s						
MNAI	Manna	6.73	304	P	Pn	15 47 15.5	+1.4
MNAI	Manna	6.73	304	P	Pn	15 47 15.7	+1.6
	127nm,1.3s						
EGSI	Enggano, Bengk	6.82	294	P	Pn	15 47 16.1	+0.8
KHKI	Kahang-Kahang	7.02	92	P	Pn	15 47 19.6	+1.5
	0.3nm30nm,0.7s						
KLNI	Mataram	7.50	92	P	Pn	15 47 25.4	+0.8
TWSI	Taliwang, Sumb	8.29	94	P	Pn	15 47 36.1	+0.7
	1μm19nm,0.6s						
PLAI	Plampang	9.18	94	P	Pn	15 47 48.3	+0.8
PLAI	Plampang	9.18	94	P	Pn	15 47 48.1	+0.6
	37nm,0.5s						
DBNI	Kabupaten Domp	9.70	92	P	Pn	15 47 57.6	+3.1
WBSI	Waikabubak, Su	10.84	98	P	Pn	15 48 10.8	+0.7
	33nm,1.0s						
LBFI	Labuhan Bajo,	11.26	92	P	Pn	15 48 17.3	+1.6
KAPI	Kappang	11.61	75	P	Pn	15 48 22.8	+2.4
	9.2nm,0.8s,baz=238,slow=9.0,SNR=7.0						
KAPI	Kappang	11.61	75	Pn	Pn	15 48 17.7	-2.7
MMRI	Maumere	13.58	93	Pn	Pn	15 48 45.3	-1.2
BATI	Baumata	15.08	99	P	Pn	15 49 05.4	-0.4
	4.9nm,0.3s,baz=279,slow=6.1,SNR=6.2						
BATI				S	Sn	15 51 41.3	-11
	13nm,0.4s,baz=74,slow=22,SNR=5.7						
	7.8nm,0.3s						
SOEI	Soe	15.63	97	Pn	Pn	15 49 10.9	-1.9
SOEI				IAmb	IAmb	15 49 21.6	
	comp=Z,31nm,0.8s						
MBWA	Marble Bar	16.81	141	P	P	15 49 29.5	+1.8
MBWA				IAmb	IAmb	15 49 42.2	
	comp=Z,33nm,1.4s						
PSA00	Pilbara Seismi	17.19	142		P	15 49 35.3	+3.4
PSA00				IAmb	IAmb	15 50 14.1	
	comp=Z,26nm,1.4s						
FITZ	Fitzroy Crossi	19.33	122	P	Pn	15 49 58.5	+1.0
	comp=Z,0.2nm,0.3s,baz=283,slow=5.3,SNR=5.8						
FITZ				S	S	15 53 22.0	-7.0
	comp=Z,4.0nm,0.6s,baz=23,slow=20,SNR=8.7						
	comp=Z,4.6nm,0.7s						
FITZ	Fitzroy Crossi	19.33	122	Pn	Pn	15 49 58.8	+1.3
TNTI	Ternate	20.81	65		P	15 50 08.9	-2.5
TNTI				IAmb	IAmb	15 50 15.6	
	comp=Z,26nm,0.8s						
KNRA	Kununurra	21.14	112	P	P	15 50 16.1	+1.2
KNRA				IAmb	IAmb	15 50 35.8	
	comp=Z,38nm,1.4s						
MTN	Manton Dam	22.70	104	P	P	15 50 31.9	+0.5
MTN				IAmb	IAmb	15 50 41.4	
	comp=Z,25nm,1.2s						
FAKI	Fak Fak	24.19	79	P	P	15 50 43.9	-1.4
FAKI				IAmb	IAmb	15 50 57.8	
	comp=Z,30nm,1.1s						
H01W3	Cape Leeuwin H	27.03	170	T	T	16 19 00.8	
	baz=342						
H01W1	Cape Leeuwin H	27.05	170	T	T	16 19 01.0	
	baz=342						
H01W2	Cape Leeuwin H	27.05	170	T	T	16 19 02.4	
	baz=342						
WB0	Warramunga Arr	27.56	117	P	P	15 51 16.5	+0.8
WRA	Warramunga Arr	27.58	118	P	P	15 51 17.3	+1.5
	comp=Z,2.6nm,0.8s,baz=292,slow=10,SNR=20						
WRA				PcP	PcP	15 54 32.5	+1.1
	comp=Z,0.4nm,0.6s,baz=303,slow=1.4,SNR=1.0						
	comp=Z,2.6nm,0.8s						
WRA	Warramunga Arr	27.58	118	P	P	15 51 16.8	+1.0
WRAB	Tennant Creek	27.58	118	P	P	15 51 16.9	+1.1
WRAB				IAmb	IAmb	15 51 18.3	
	comp=Z,6.0nm,1.1s						
CMAR	Chiang Mai Arr	28.14	340	P	P	15 51 17.2	-3.6
	comp=Z,1.0nm,0.8s,baz=178,slow=8.1,SNR=12						
CMAR				PcP	PcP	15 54 33.8	+1.2
	comp=Z,0.5nm,0.4s,baz=195,slow=3.5,SNR=4.3						
	comp=Z,1.0nm,0.8s						
AS31	Alice Springs	28.76	125	P	P	15 51 27.7	+1.3
ASAR	Alice Springs	28.76	125	P	P	15 51 28.7	+2.4
	comp=Z,2.6nm,0.6s,baz=302,slow=8.7,SNR=56						
ASAR				PcP	PcP	15 54 35.8	+1.5
	comp=Z,0.7nm,0.4s,baz=307,slow=2.1,SNR=13						
	comp=Z,2.6nm,0.6s						
ASAR	Alice Springs	28.76	125	P	P	15 51 28.2	+1.8
COEN	Coen	34.46	103	P	P	15 52 16.0	-0.4
COEN				IAmb	IAmb	15 52 32.4	
	comp=Z,20nm,1.4s						
PZH	PanZhiHua	35.14	349	P	P	15 52 23.2	+1.1
BBOO	Buckleboo	35.34	138	P	P	15 52 24.6	+0.9
H08S2	Diego Garcia H	35.67	268	T	T	16 30 09.8	
	baz=93,slow=76,SNR=20						
H08S3	Diego Garcia H	35.69	268	T	T	16 30 24.2	
	baz=93,slow=76,SNR=21						
H08S1	Diego Carcia H	35.69	268	T	T	16 30 21.3	
	baz=93,slow=76,SNR=17						
INKA	Innaminka	36.10	127	P	P	15 52 32.2	+1.9
STKA	Stephens Creek	38.71	132	P	P	15 52 55.1	+2.8
	comp=Z,9.0nm,0.4s,baz=317,slow=7.7,SNR=27						
STKA				PcP	PcP	15 55 04.0	+1.7
	comp=Z,1.2nm,0.7s,baz=336,slow=5.9,SNR=3.6						
	comp=Z,9.0nm,0.4s						
STKA	Stephens Creek	38.71	132		P	15 52 54.7	+2.4
JOW	Kunigami	39.77	28	P	P	15 52 59.4	-1.7
NJ2	Nanjing	41.25	13	*e*P	P	15 53 14.5	+1.4
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
LZDM	Lanzhou Array	44.17	354	LR	LR	16 13 53.0	
	comp=Z,64nm,18.0s,baz=160,slow=39						
LZH	Lanzhou	44.29	355	*e*P	P	15 53 39.8	+1.9
LZH				pP	pP	15 53 54.0	-7.5
LZH				pmax	pmax		
	comp=Z,13nm,1.5s						
JMN	Monobe	48.17	29	P	P	15 54 06.4	-1.8
HHC	Hu-ho-hao-te	48.91	3	*e*P	P	15 54 13.9	+0.1
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,70nm,4.8s						
KSRS	Korea Array	48.93	21	P	P	15 54 12.7	-1.2
	comp=Z,1.1nm,0.8s,baz=205,slow=11,SNR=4.1						
	comp=Z,1.1nm,0.8s						
MJAR	Matsushiro Arr	52.54	30	P	P	15 54 38.0	-3.0
	comp=Z,2.0nm,0.8s,baz=188,slow=8.4,SNR=5.7						
	comp=Z,2.0nm,0.8s						
MJAR	Matsushiro Arr	52.54	30	IAmb	IAmb	15 55 11.4	
	comp=Z,2.4nm,1.1s						
SONM	Songino Array	55.84	358	P	P	15 55 03.2	-1.8
	comp=Z,1.0nm,0.6s,baz=178,slow=8.9,SNR=6.1						
SONM				PcP	PcP	15 56 02.8	+0.1
	comp=Z,0.8nm,0.6s,baz=189,slow=3.2,SNR=3.7						
	comp=Z,1.0nm,0.6s						
SONM	Songino Array	55.84	358	IAmb	IAmb	15 55 38.8	
	comp=Z,2.9nm,1.5s						
USRK	Ussuriysk Ar.	56.34	20	P	P	15 55 06.9	-1.5
	comp=Z,1.6nm,0.6s,baz=193,slow=9.8,SNR=5.5						
	comp=Z,1.6nm,0.6s						
MKAR	Makanchi Array	59.55	339	P	P	15 55 29.7	-1.1
	comp=Z,1.3nm,0.5s,baz=156,slow=6.9,SNR=5.8						
	comp=Z,1.3nm,0.5s						
H04N2	CROZET ISLANDS	61.33	221	T	T	17 03 05.2	
	baz=70,slow=74,SNR=72						
H04N1	CROZET ISLANDS	61.35	221	T	T	17 02 53.4	
	baz=70,slow=74,SNR=76						
H04N3	CROZET ISLANDS	61.35	221	T	T	17 02 54.9	
	baz=70,slow=74,SNR=71						
H04S1	CROZET ISLANDS	61.49	221	T	T	17 03 10.1	
	baz=75						
H04S3	CROZET ISLANDS	61.50	221	T	T	17 03 09.7	
	baz=75						
H04S2	CROZET ISLANDS	61.51	221	T	T	17 03 14.8	
	baz=75						
KURBB	Kurchatov Arra	64.11	339	P	P	15 56 00.1	-1.2
	comp=Z,0.6nm,0.4s,baz=162,slow=4.6,SNR=4.5						
	comp=Z,0.6nm,0.4s						
KURK	Kurchatov	64.16	339	P	P	15 56 00.1	-1.5
ZAA0	Zalesovo Array	65.09	345	P	P	15 56 06.5	-1.1
ZALV	Zalesovo Beam	65.09	345	P	P	15 56 05.8	-1.8
	comp=Z,0.9nm,0.4s,baz=151,slow=6.4,SNR=7.7						
	comp=Z,0.9nm,0.4s						
ZALV	Zalesovo Beam	65.09	345	P	P	15 56 06.5	-1.1
BVAR	Borovoye Array	69.08	336	P	P	15 56 32.0	-0.8
	comp=Z,1.1nm,0.5s,baz=147,slow=9.4,SNR=8.2						
	comp=Z,1.1nm,0.5s						
BORK	Borovoye	69.12	336	P	P	15 56 32.4	-0.7
BORK				IAmb	IAmb	15 56 34.9	
	comp=Z,6.8nm,1.5s						
AB31	Akbulak array	71.23	329		P	15 56 45.3	-0.8
AB31				IAmb	IAmb	15 56 46.3	
	comp=Z,4.2nm,0.7s						
ABKAR	Akbulak array	71.23	329	P	P	15 56 45.1	-0.9
YAK	Yakutsk	71.95	10		P	15 56 48.1	-2.0
YAK				IAmb	IAmb	15 56 49.5	
	comp=Z,8.1nm,0.6s						
PETK	Petropavlovsk-	73.94	28	P	P	15 57 01.1	-1.0
	comp=Z,2.3nm,0.8s,baz=230,slow=7.4,SNR=4.3						
	comp=Z,2.3nm,0.8s						
KBZ	Khabaz	78.56	318	P	P	15 57 29.7	+1.3
	comp=Z,1.2nm,0.8s,baz=168,slow=4.7,SNR=4.7						
	comp=Z,1.2nm,0.8s						
MMAI	Mount Meron Ar	80.53	305	P	P	15 57 41.6	+2.1
	comp=Z,0.7nm,0.5s,baz=108,slow=4.7,SNR=2.0						
	comp=Z,0.7nm,0.5s						
TIXI	Tiksi	80.84	6		P	15 57 37.2	-2.9
TIXI				IAmb	IAmb	15 57 39.7	
	comp=Z,5.0nm,0.9s						
QSPA	South Pole Qui	81.77	180	P	P	15 57 48.3	+2.8
	comp=Z,0.3nm,0.3s,baz=272,slow=5.4,SNR=2.4						
	comp=Z,0.3nm,0.3s						
QSPA	South Pole Qui	81.77	180	IAmb	IAmb	15 58 14.2	
	comp=Z,5.5nm,1.4s						
BRTR	Keskin Array B	83.76	312	P	P	15 57 57.1	+0.8
	comp=Z,0.6nm,0.9s,baz=130,slow=5.8,SNR=3.7						
	comp=Z,0.6nm,0.9s						
ATKA	Atka Island	88.74	37	P	P	15 58 18.9	-1.2
IDI	Anoyia	89.53	306	P	P	15 58 24.0	-0.4
PDAR	Pinedale Array	132.06	38	PKP	PKiKP	16 04 42.1	+0.6
	comp=Z,0.1nm,0.4s,baz=351,slow=3.3,SNR=1.7						
TXAR	Lajitas Array	143.20	51	PKP	PKPdf	16 05 00.5	-0.6
	comp=Z,0.4nm,0.4s,baz=290,slow=1.4,SNR=7.2						

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*IDC **10** 16:02:40.3±4.6, 21.°58N×143.°17E, h311^{km}±45^{km}, mb3.4/14, mbtmp4.0/15, Error ellipse: s-maj=21.7km s-min=12.6km az=83.0*

*NEIC **10** 16:02:41.1±1.4, 21.°63N±0.°08×143.°3E±0.°1, h319^{km}±8^{km}, mb4.1/22, Error ellipse: s-maj=18.7km s-min=12.0km az=79.0*

ISC 10 16:02:40.2±0.6**, 21.°63N**±0.°07×**143.°2E**±0.°1**, h311**^{km}**, n46, σ0.^{s}85**/49**, mb3.9**/22**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.52	351	Pn	Pn	16 04 04.3	+0.2
DPSS	Saipan	6.81	158	Pn	Pn	16 04 21.0	+1.4
JMN	Monobe	14.60	328	Pn	Pn	16 05 55.0	+1.4
INU	Inuyama	14.71	340	Pn	Pn	16 05 55.5	+0.8
JGF	Kuroka	14.83	341	P	P	16 05 55.1	+0.2
MJAR	Matsushiro Arr	15.48	345	P	P	16 06 02.5	+0.6
	1.7nm,0.4s,baz=166,slow=10.0,SNR=3.4						
MJAR				S	S	16 08 47.1	-2.3
	0.6nm,0.5s,baz=125,slow=43,SNR=1.5						
MJAR	Matsushiro Arr	15.48	345	P	P	16 06 02.7	+0.8
MJAR				IAmb	IAmb	16 06 09.0	
	comp=Z,7.3nm,1.5s						
MAJO	Matsushiro	15.49	345	P	P	16 06 02.7	+0.7
MAJO				IAmb	IAmb	16 06 30.6	
	comp=Z,12nm,1.4s						
YHNB	Yeheng	20.30	283	P	P	16 06 53.3	-0.4
YHNB				IAmb	IAmb	16 07 23.5	
	comp=Z,29nm,1.2s						
KSRS	Korea Array	20.58	323	P	P	16 06 56.8	+0.6
	comp=Z,1.1nm,0.6s,baz=144,slow=8.7,SNR=6.8						
	comp=Z,1.1nm,0.6s						
SBUM	Sibu	35.66	242	P	P	16 09 09.6	-0.1
SBUM				IAmb	IAmb	16 09 12.6	
	comp=Z,4.0nm,1.2s						
CMAR	Chiang Mai Arr	41.60	274	P	P	16 09 59.3	+0.5
	comp=Z,0.7nm,0.4s,baz=92,slow=6.0,SNR=6.8						
	comp=Z,0.7nm,0.4s						
WB0	Warramunga Arr	42.03	192	P	P	16 10 01.5	-0.7
WB0				IAmb	IAmb	16 10 33.4	
	comp=Z,10nm,1.4s						
WRAB	Tennant Creek	42.20	192	P	P	16 10 02.7	-0.8
WRAB				IAmb	IAmb	16 10 41.1	
	comp=Z,8.1nm,1.5s						
WRA	Warramunga Arr	42.21	192	P	P	16 10 03.0	-0.6
	comp=Z,1.0nm,0.6s,baz=16,slow=8.7,SNR=13						
	comp=Z,1.0nm,0.6s						
FITZ	Fitzroy Crossi	43.06	205	P	P	16 10 09.7	-0.7
KULM	Kulim	44.27	255	P	P	16 10 20.4	+0.3
KULM				IAmb	IAmb	16 10 46.6	
	comp=Z,17nm,1.2s						
ASAR	Alice Springs	45.92	192	P	P	16 10 31.9	-0.9
	comp=Z,0.4nm,0.5s,baz=13,slow=6.5,SNR=10						
	comp=Z,0.4nm,0.5s						
ASAR	Alice Springs	45.92	192	P	P	16 10 31.8	-1.0
GSI	Gunungsitoli	48.79	252	P	P	16 10 54.4	-0.5
EVN	Everest	51.21	289	P	P	16 11 13.2	-0.4
ZALV	Zalesovo Beam	54.28	322	P	P	16 11 34.8	+0.1
	comp=Z,0.7nm,0.4s,baz=98,slow=8.9,SNR=4.1						
ZALV				PcP	PcP	16 12 34.2	-0.3
	comp=Z,1.0nm,0.4s,baz=116,slow=3.4,SNR=5.1						
	comp=Z,0.7nm,0.4s						
ZALV	Zalesovo Beam	54.28	322	P	P	16 11 33.5	-1.1
MKAR	Makanchi Array	54.76	313	P	P	16 11 38.6	+0.2
	comp=Z,0.4nm,0.6s,baz=88,slow=9.0,SNR=3.9						
MKAR				PcP	PcP	16 12 36.6	0.0
	comp=Z,0.3nm,0.4s,baz=93,slow=2.4,SNR=4.1						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	54.76	313	P	P	16 11 38.0	-0.3
MAKZ	Makanchi	54.98	313	P	P	16 11 39.7	-0.1
KURK	Kurchatov	57.54	317	P	P	16 11 57.4	-0.4
KURBB	Kurchatov Arra	57.59	317	P	P	16 11 57.9	-0.1
	comp=Z,1.8nm,0.4s,baz=95,slow=7.6,SNR=20						
	comp=Z,1.8nm,0.4s						
ILSW	Iliamna Southw	58.38	32	P	P	16 12 03.0	-0.5
E19K	Redstone River	58.68	23	P	P	16 12 06.1	+0.8
E19K				IAmb	IAmb	16 12 17.3	
	comp=Z,7.8nm,1.5s						
BRLK	Bradley Lake	59.45	32	P	P	16 12 10.4	-0.3
C23K	Itkillik River	61.71	21	P	P	16 12 27.1	+1.5
C23K				IAmb	IAmb	16 13 04.1	
	comp=Z,12nm,1.4s						
TOLK	Toolik Lake Re	61.78	23	P	P	16 12 27.6	+1.4
TOLK				IAmb	IAmb	16 12 51.3	
	comp=Z,6.8nm,1.4s						
ILAR	Eielson Array	62.09	27	P	P	16 12 28.2	0.0
	comp=Z,0.6nm,0.8s,baz=261,slow=5.5,SNR=8.2						
	comp=Z,0.6nm,0.8s						
J25K	Salcha River,	62.72	27	P	P	16 12 32.4	-0.1
BVAR	Borovoye Array	62.74	320	P	P	16 12 32.9	+0.2
	comp=Z,4.4nm,0.4s,baz=96,slow=7.8,SNR=45						
	comp=Z,4.4nm,0.4s						
BORK	Borovoye	62.78	320	P	P	16 12 33.1	+0.1
BORK				IAmb	IAmb	16 12 33.8	
	comp=Z,4.9nm,0.4s						
KKAR	Karatay Array	63.11	308	P	P	16 12 35.6	+0.2
AB31	Akbulak array	69.61	316	P	P	16 13 15.8	-0.4
AB31				IAmb	IAmb	16 13 16.6	
	comp=Z,2.1nm,0.7s						
YKA	Yellowknife Ar	76.51	28	P	P	16 13 57.0	+0.9
	comp=Z,0.8nm,0.6s,baz=294,slow=6.2,SNR=10.0						
	comp=Z,0.8nm,0.6s						
ARCES	ARCESS Array B	78.99	342	P	P	16 14 10.5	+0.9
	comp=Z,6.8nm,1.1s,baz=77,slow=9.1,SNR=13						
	comp=Z,6.8nm,1.1s						
KBZ	Khabaz	82.43	314	P	P	16 14 28.6	+0.5
	comp=Z,1.1nm,0.7s,baz=59,slow=6.9,SNR=5.1						
	comp=Z,1.1nm,0.7s						
FINES	FINESS Array B	83.25	334	P	P	16 14 31.3	-0.7
	comp=Z,1.6nm,0.4s,baz=63,slow=5.0,SNR=17						
	comp=Z,1.6nm,0.4s						
SZCU	Shurtz Canyon	87.28	51	P	P	16 14 50.2	-2.4
HFS	Hagfors	88.80	337	P	P	16 14 57.8	-1.1
	comp=Z,1.7nm,0.7s,baz=64,slow=3.4,SNR=2.1						
	comp=Z,1.7nm,0.7s						
LPAZ	La Paz	149.93	85	PKPbc	PKiKP	16 21 56.6	+0.3
	comp=Z,1.9nm,0.6s,baz=308,slow=3.7,SNR=4.3						

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*IDC **10** 16:02:53.9±0.9, 25.°04N×99.°38E, h0^{km}, mb3.7/9, mbtmp3.7/10, ML3.9/1, Error ellipse: s-maj=34.5km s-min=15.3km az=75.0*

*NEIC **10** 16:02:54.8±1.3, 25.°02N±0.°07×99.°35E±0.°08, h10^{km}±1^{km}, mb4.5/15, Error ellipse: s-maj=12.1km s-min=11.0km az=129.0*

*BKK **10** 16:03:36.8±5.2, 22°N±41°×10°0E±1°1, h8^{km}, M3.3/5, Mjma3.2/5, ML3.1/4, MLv3.4/5*

ISC 10 16:02:54.2±0.6**, 25.°10N**±0.°06×**99.°30E**±0.°05**, h10**^{km}**, n42, σ1.^{s}77**/45**, mb4.1**/18**, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNCH	TengChong	0.71	264	Pg	Pg	16 03 04.5	-3.6
TNCH				Sg	Sg	16 03 12.8	-4.6
TNCH				smax	smax		
	comp=N,8μm,0.5s						
TNCH				smax	smax		
	comp=E,8μm,0.4s						
TNCH				LR	LR		
	comp=N,5μm,1.1s						
TNCH				LR	LR		
	comp=E,5μm,1.6s						
PZH	PanZhiHua	2.61	57	Pg	Pb	16 03 39.7	-1.4
PZH				Sg	Sb	16 04 15.0	+1.7
PZH				smax	smax		
	comp=N,410nm,1.0s						
PZH				smax	smax		
	comp=E,52nm,1.0s						
MORE	Moreh	4.63	260		Pn	16 04 03.1	-1.2
CMAI	Chiengmai2	5.15	183	P	Pn	16 04 08.3	-3.3
SLVN	Son La	5.66	131		Pn	16 04 16.6	-1.9
CHTO	Chiang Mai	6.27	183		Pn	16 04 25.2	-1.6
LAMP	Lampang	6.55	177	P	Pn	16 04 31.2	+0.4
CM31	Chiang Mai Arr	6.62	183		Pn	16 04 31.1	-0.6
CMAR	Chiang Mai Arr	6.62	183	Pn	Pn	16 04 30.6	-1.0
	comp=E,0.6nm,0.3s,baz=358,slow=14,SNR=30						
CMAR				Pg	Pg	16 04 55.3	-5.8
	comp=E,1.0nm,0.3s,baz=358,slow=17,SNR=8.1						
CMAR				Sn	Sn	16 05 47.7	+0.5
	baz=356,slow=17						
CMAR				Lg	Lg	16 06 15.5	
	comp=E,4.0nm,0.3s,baz=14,slow=31,SNR=16						
	comp=E,2.9nm,0.6s						
CMAR	Chiang Mai Arr	6.62	183		Pn	16 04 31.5	-0.2
CM01	Chiang Mai Arr	6.66	183	P	Pn	16 04 31.2	-1.0
CM13	Chiang Mai Arr	6.66	183	P	Pn	16 04 29.6	-2.6
CM05	Chiang Mai Arr	6.68	183	P	Pn	16 04 32.5	+0.1
CD2	Chengdu	7.00	33	Pg	Pg	16 05 05.5	-2.8
CD2				Sg	Sg	16 06 34.7	-4.2
CD2				smax	smax		
	comp=N,40nm,1.6s						
CD2				smax	smax		
	comp=E,50nm,1.6s						
MHMT	Maesarieng	7.01	191	P	Pn	16 04 34.9	-2.1
LSA	Lhasa	8.57	304		Pn	16 05 00.1	+1.2
UTHA	Uthaitani	9.49	179	P	Pn	16 05 11.4	+0.3
EVN	Everest	11.54	287		Pn	16 05 38.9	-0.7
SONM	Songino Array	23.37	12	P	P	16 08 05.7	+2.6
	comp=E,1.2nm,0.8s,baz=190,slow=8.7,SNR=6.5						
	comp=E,1.2nm,0.8s						
SONM	Songino Array	23.37	12	P	P	16 08 04.5	+1.4
KDJ	Kajisay	24.94	318	P	P	16 08 19.0	+1.0
KDJ				IAmb	IAmb	16 08 23.9	
	comp=Z,3.8nm,0.8s						
MKAR	Makanchi Array	25.55	332	P	P	16 08 25.0	+1.8
	comp=Z,1.2nm,0.6s,baz=140,slow=9.8,SNR=10						
	comp=Z,1.2nm,0.6s						
MKAR	Makanchi Array	25.55	332	P	P	16 08 24.5	+1.3
KURBB	Kurchatov Arra	30.09	333	P	P	16 09 05.6	+1.8
	comp=Z,0.2nm,0.5s,baz=131,slow=10.0,SNR=4.4						
	comp=Z,0.2nm,0.5s						
KURK	Kurchatov	30.13	333	P	P	16 09 04.2	+0.1
ZALV	Zalesovo Beam	30.77	343	P	P	16 09 11.2	+1.4
	comp=Z,1.0nm,0.8s,baz=153,slow=10.0,SNR=5.0						
	comp=Z,1.0nm,0.8s						
ZALV	Zalesovo Beam	30.77	343	P	P	16 09 10.4	+0.6
USRK	Ussuriysk Ar.	32.65	46	P	P	16 09 26.2	-0.1
	comp=Z,2.4nm,0.7s,baz=237,slow=9.1,SNR=5.5						
	comp=Z,2.4nm,0.7s						
BVAR	Borovoye Array	35.35	330	P	P	16 09 51.0	+1.3
	comp=Z,0.7nm,0.7s,baz=130,slow=11,SNR=3.8						
	comp=Z,0.7nm,0.7s						
FITZ	Fitzroy Crossi	50.02	147	P	P	16 11 48.5	-0.6
FITZ				IAmb	IAmb	16 12 25.5	
	comp=Z,3.6nm,1.5s						

WRA	Warramunga Arr	56.27	140	P	P	16 12 34.1	-1.0
	comp=Z,0.6nm,0.7s,baz=329,slow=7.5,SNR=5.5						
	comp=Z,0.6nm,0.7s						
ASAR	Alice Springs	58.95	143	P	P	16 12 56.0	+2.0
	comp=Z,0.5nm,0.8s,baz=318,slow=5.4,SNR=6.5						
	comp=Z,0.5nm,0.8s						
VOI	Vohitsoka	69.15	232	P	P	16 14 01.1	-0.1
C18K	Utukok River	70.26	23	P	P	16 14 08.3	+0.9
C18K				IAmb	IAmb	16 14 11.0	
	comp=Z,4.5nm,1.0s						
C19K	Lookout Ridge	70.66	22	P	P	16 14 11.1	+1.3
C19K				IAmb	IAmb	16 14 47.0	
	comp=Z,13nm,1.3s						
H18K	Honhosa River	72.51	26	P	P	16 14 21.2	+0.3
H18K				IAmb	IAmb	16 14 24.5	
	comp=Z,14nm,1.4s						
C23K	Itkillik River	73.28	20	P	P	16 14 26.7	+1.3
C23K				IAmb	IAmb	16 14 54.2	
	comp=Z,6.0nm,1.4s						
K17K	Iditarod	73.46	28	P	P	16 14 26.8	+0.2
E22K	Anaktuvuk Pass	73.67	22	P	P	16 14 28.3	+0.5
E22K				IAmb	IAmb	16 14 49.3	
	comp=Z,3.9nm,1.4s						
TOLK	Toolik Lake Re	74.17	21	P	P	16 14 31.5	+0.8
TOLK				IAmb	IAmb	16 14 56.1	
	comp=Z,5.7nm,1.4s						
YKA	Yellowknife Ar	88.61	15	P	P	16 15 50.7	+3.5
	comp=Z,0.2nm,0.4s,baz=337,slow=5.5,SNR=2.4						
	comp=Z,0.2nm,0.4s						
BOSA	Boshof	88.96	238	P	P	16 15 49.5	-0.1
BOSA				IAmb	IAmb	16 16 10.7	
	comp=Z,18nm,1.5s						

THE ***10*** *16:08:13.0, 39°.6N±0°.7×2°6E±°,* $h10^{km}\pm3^{km}$*, M2.4/5, MLh2.4/5*

ISK ***10*** *16:08:12.3, 39°.56N×26°.03E,* $h8^{km}$*, ML2.6/25*

ATH ***10*** *16:08:12.9, 39°.54N×26°.02E,* $h17^{km}\pm1^{km}$*, ML2.4/5, Manual Solution by M.Charalampakis First location: 2019/12/10 16:10:08, This location: 2019/12/10 16:35:37 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

AFAD ***10*** *16:08:13.1, 39°.57N×26°.05E,* $h8^{km}\pm1^{km}$*, ML2.2*

ISC 10 16:08:12.9±0.8**, 39°.56N**±0°.02×**26°.03E**±0°.02**, h12**$^{km}\pm6^{km}$**, n56,** σ**0ˢ.36**/77**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	Canakkale, Ayv	0.10	124	P	Pg	16 08 15.6	-0.1
KOCA				*i* IAML		16 08 17.0	
	comp=N,1µm,0.5s						
KOCA				*i* IAML		16 08 17.0	
	comp=E,1µm,0.3s						
GPNR	Gulpinar-Canak	0.13	143	Pg	Pg	16 08 16.0	-0.1
GPNR				Sg	Sg	16 08 18.2	-0.1
BOZC	Bozcaada	0.28	3	P	Pg	16 08 18.8	0.0
BOZC				*i* IAML		16 08 23.0	
	comp=N,770nm,0.3s						
BOZC				*i* IAML		16 08 23.0	
	comp=E,718nm,0.2s						
BOZC				S	Sg	16 08 23.3	+0.6
BOZC	Bozcaada	0.28	3	Pg	Pg	16 08 18.7	0.0
BOZC				Sg	Sg	16 08 23.0	+0.3
EZNE	Ezine-Canakkal	0.32	52	Pg	Pg	16 08 19.2	-0.3
EZN	Ezine	0.35	40	P	Pg	16 08 19.7	-0.2
EZN				S	Sg	16 08 24.7	+0.1
EZN	Ezine	0.35	40	Pg	Pg	16 08 19.8	-0.2
EZN				Sg	Sg	16 08 24.9	+0.3
PRK	Paraskevi	0.36	149	P	Pg	16 08 20.3	+0.1
PRK				S	Sg	16 08 25.3	+0.3
PRK	Paraskevi	0.36	149	P	Pg	16 08 20.3	+0.1
PRK				S	Sg	16 08 25.2	+0.3
SIGR	SIGRI	0.37	202	P	Pg	16 08 20.3	0.0
SIGR				S	Sg	16 08 25.8	+0.5
SIGR	SIGRI	0.37	202	Pg	Pg	16 08 20.4	0.0
SIGR				Sg	Sg	16 08 25.5	+0.2
SIGR	SIGRI	0.37	202	P	Pg	16 08 20.3	0.0
SIGR				S	Sg	16 08 25.2	-0.1
BAYC	CANAKKALE_Bayr	0.44	65	P	Pg	16 08 21.3	-0.2
BAYC				*i* IAML		16 08 27.0	
	comp=N,210nm,0.3s						
BAYC				S	Sg	16 08 27.4	+0.1
BAYC				*i* IAML		16 08 28.0	
	comp=E,129nm,0.3s						
ECEA	Canakkale, Ece	0.50	13	P	Pg	16 08 23.0	+0.3
ECEA				S	Sb	16 08 30.5	-0.4
ECEA				*i* IAML		16 08 31.0	
	comp=N,320nm,0.6s						
ECEA				*i* IAML		16 08 31.0	
	comp=E,520nm,0.5s						
CNKL	anakkale-Mer	0.58	28	P	Pg	16 08 24.0	-0.1
CNKL				*i* IAML		16 08 32.0	
	comp=N,188nm,0.3s						
CNKL				S	Sb	16 08 32.4	-0.7
CNKL				*i* IAML		16 08 34.0	
	comp=E,132nm,0.3s						
GOAD	anakkale-G¶	0.61	351	P	Pg	16 08 24.7	-0.1
GOAD				S	Sg	16 08 33.2	+0.3
GOAD				*i* IAML		16 08 40.0	
	comp=N,88nm,0.5s						
GOAD				*i* IAML		16 08 42.0	
	comp=E,88nm,0.4s						
COMU	Canakkale	0.64	32	Pg	Pg	16 08 25.2	-0.1
GADA	Gvkgeada	0.64	351	P	Pg	16 08 25.1	-0.3
GADA	Gvkgeada	0.64	351	Pg	Pg	16 08 25.0	-0.3
LIA	Limnos Island	0.74	298	P	Pg	16 08 27.5	+0.3
LIA				S	Sb	16 08 38.1	+0.3
LIA	Limnos Island	0.74	298	P	Pg	16 08 27.3	+0.1
YAYO	Edremit-Balk	0.81	86	Pg	Pb	16 08 28.9	0.0
EFSA	Agios Efstrati	0.81	269	P	Pg	16 08 28.7	+0.1
BUHA	Balikesir, Bur	0.81	94	P	Pg	16 08 28.6	+0.1
BUHA				S	Sb	16 08 39.9	0.0
BUHA				*i* IAML		16 08 43.0	
	comp=N,66nm,0.6s						
BUHA				*i* IAML		16 08 44.0	
	comp=E,81nm,0.3s						
DKL	Dikili	0.83	125	Pg	Pb	16 08 29.4	+0.1
GELI	Tayfur-Gelibol	0.91	22	Pg	Pg	16 08 30.0	-0.4
GELI				Sg	Sb	16 08 42.7	+0.1
CANM	Can-anakkale	0.91	60	Pg	Pg	16 08 30.3	-0.1
LAPS	Lapseki, ANA	0.93	42	P	Pg	16 08 30.4	-0.5
LAPS				*i* IAML		16 08 43.0	
	comp=E,161nm,0.5s						
LAPS				S	Sb	16 08 43.3	-0.1
LAPS				*i* IAML		16 08 44.0	
	comp=N,94nm,0.2s						
KARB	zmir-Karabur	0.94	162	P	Pb	16 08 31.5	+0.3
KARB				S	Sn	16 08 45.3	0.0
KARB				*i* IAML		16 08 46.0	
	comp=N,124nm,0.4s						
KARB				*i* IAML		16 08 46.0	
	comp=E,169nm,0.6s						
LPK	Lapseki	0.99	34	Pg	Pg	16 08 31.6	-0.3
SMTH	Samothraki Isl	0.99	337	P	Pg	16 08 31.8	-0.2
SMTH				S	Sg	16 08 45.1	+0.2
SMTH	Samothraki Isl	0.99	337	P	Pg	16 08 31.9	-0.1
ZEDA	zmir-Bergama	1.00	126	P	Pn	16 08 32.7	-0.1
ZEDA				*i* IAML		16 08 47.0	
	comp=N,60nm,0.3s						
ZEDA				S	Sn	16 08 47.8	+0.8
ZEDA				*i* IAML		16 08 49.0	
	comp=E,27nm,0.3s						
ENZZ	Sultanice-Enez	1.05	4	Pg	Pg	16 08 32.8	-0.4
BIGA	Biga-Canakkale	1.12	50	Pn	Pb	16 08 34.1	-0.2
CHOS	Chios island	1.17	179	P	Pb	16 08 34.4	-0.7
CHOS	Chios island	1.17	179	Pn	Pb	16 08 34.7	-0.4
CHOS	Chios island	1.17	179	P	Pb	16 08 34.5	-0.7
ERIK	Erikli-Kesan	1.17	18	Pn	Pb	16 08 34.6	-0.5
ENEZ	Enez	1.18	4	Pn	Pb	16 08 35.1	-0.2
SOMA	Soma-Manisa	1.23	109	Pn	Pg	16 08 36.3	-0.3
URLA	Izmir	1.27	160	Pn	Pn	16 08 35.9	-0.7
KRBG	Karabiga-Canak	1.28	49	Pn	Pn	16 08 36.5	-0.2
GONE	Gonen-Balikesi	1.36	69	Pn	Pb	16 08 38.3	-0.1
RKY	Sarkoy-Tekirda	1.43	38	Pn	Pn	16 08 38.9	+0.1
BALB	Balikesir	1.43	86	Pn	Pn	16 08 38.9	+0.2
THAS	Thassos island	1.45	317	P	Pn	16 08 38.3	-0.7
RDO	Rodhopi	1.63	347	Pn	Pn	16 08 41.9	+0.4
RDO	Rodhopi	1.63	347	P	Pn	16 08 42.1	+0.6
SUSR	Susurluk-Balik	1.63	75	Pn	Pn	16 08 41.8	+0.3
UKOP	Uzunkopru-Edir	1.63	16	Pn	Pn	16 08 41.8	+0.3
OUR	Ouranopolis	1.76	297	P	Pn	16 08 44.0	+0.8
KYMI	Kymi, Euboea I	1.77	239	P	Pn	16 08 42.4	-0.9
KAVA	Kavala	1.85	322	P	Pn	16 08 44.4	-0.1
ODEM	Odemis-Izmir	2.04	128	Pn	Pn	16 08 47.9	+0.7
AYDB	Zeytinkoy-Aydi	2.17	137	Pn	Pn	16 08 49.1	+0.1

AEIC ***10*** *16:35:22.6±2.1, 51°.43N±0°.08×178°.92E±0°.04,* $h55^{km}\pm4^{km}$*, Error ellipse: s-maj=11.7km s-min=1.7km az=198.0*

NEIC ***10*** *16:35:22.7±1.4, 51°.44N±0°.08×178°.89E±0°.08,* $h61^{km}\pm4^{km}$*, mb4.5/154, ML4.4/12, ML4.2(AEIC), Error ellipse: s-maj=11.7km s-min=6.6km az=195.0*

IDC ***10*** *16:35:22.6±0.8, 51°.66N×178°.93E,* $h58^{km}\pm4^{km}$*, mb3.8/18, mbtmp4.1/21, MS3.0/1, Error ellipse: s-maj=24.1km s-min=8.3km az=7.0*

ISC 10 16:35:22.0±0.6**, 51°.42N**±0°.08×**178°.87E**±0°.03**, h60**$^{km}\pm4^{km}$**, n454,** σ**1ˢ.13**/413**, mb4.5**/84**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMKA	Amchitka	0.27	98		Pn	16 35 32.1	+0.2
AMKA				Sn	Sn	16 35 39.7	+0.6
LSSE	Little Sitkin	0.55	340		Pn	16 35 35.1	+0.6
LSPA	Little Sitkin	0.57	341		Pn	16 35 35.4	+0.6
LSPA					Sn	16 35 45.1	+1.0
LSNW	Little Sitkin	0.60	338		Pn	16 35 35.4	+0.4
CESW	Semis' Southwe	0.65	41		Pn	16 35 35.9	+0.2
CERB	Semis' Cerberu	0.70	42		Pn	16 35 36.8	+0.6
CEPE	Semis' Perret	0.73	41		Pn	16 35 37.0	+0.3
GAKI	Gareloi-Kavalg	1.45	84		Pn	16 35 46.7	+0.6
GAKI					Sn	16 36 04.6	+0.5
GASW	Gareloi Southw	1.46	75		Pn	16 35 47.0	+0.8
GANO	Gareloi North	1.50	73		Pn	16 35 47.3	+0.6
GANO					Sn	16 36 06.4	+1.0
GALAA	Gareloi Lava P	1.51	76		Pn	16 35 47.7	+0.9
GANE	Gareloi Northe	1.52	74		Pn	16 35 47.6	+0.6
GANE					Sn	16 36 06.7	+1.0
GAEA	Gareloi East	1.53	75		Pn	16 35 47.9	+0.9
TANO	Tanaga North	1.94	74		Pn	16 35 53.5	+0.9
TANO					Sn	16 36 16.8	+0.9
TASE	Tanaga Southea	1.97	77		Sn	16 36 17.6	+0.9
TAFP	Tanaga Falls P	2.02	75		Pn	16 35 54.3	+0.6
TAPA	Tanaga Point A	2.10	78		Sn	16 36 20.8	+0.9
KIMD	Kanaga Island	2.45	80		Pn	16 36 00.5	+0.9
KICM	Kanaga Island	2.50	77		Pn	16 36 01.4	+1.2
KIKV	Kanaga Island	2.51	78		Sn	16 36 31.1	+1.3
KIWB	Kanaga Island	2.52	78		Sn	16 36 30.7	+0.8
KIWB	Kanaga Island	2.52	78		Pn	16 36 00.9	+0.5
KIWB				IAML		16 36 31.8	
	comp=N,2µm,0.7s						
KIWB				IAML		16 36 33.0	
	comp=E,2µm,0.7s						
KIRH	Kanaga Island	2.56	78		Pn	16 36 01.9	+0.9
ADK	Adak	2.81	79		Sn	16 36 37.6	+0.6
ADK	Adak	2.81	79		Pn	16 36 04.8	+0.4
ADK	Adak	2.81	79	S	Sn	16 36 38.0	+1.0
ADAG	Mount Adagdak	2.87	77		Pn	16 36 06.1	+0.8
ETKA	Kagalaska Isla	2.98	80		Pn	16 36 07.6	+0.8
ETKA					Sn	16 36 41.8	+0.6
GSCK	Great Sitkin C	3.15	77		Pn	16 36 09.8	+0.7
GSCK					Sn	16 36 46.1	+0.7
GSMY	Great Sitkin M	3.21	77		Pn	16 36 10.6	+0.6
GSMY					Sn	16 36 47.9	+0.8
GSTR	Great Sitkin T	3.22	76		Pn	16 36 10.8	+0.7
GSTR	Great Sitkin T	3.22	76	IAML		16 37 06.5	
	comp=E,1µm,1.2s						
SHEM	Shemya Is, Ala	3.23	296	P	Pn	16 36 10.5	+0.4
	comp=E,122nm,0.5s,baz=140,slow=4.2,SNR=11						
SHEM				S	Sn	16 36 47.1	-0.2
	comp=E,200nm,0.3s,baz=307,slow=19,SNR=18						
SMY	Shemya	3.23	296		Pn	16 36 12.4	+2.3
SMY				IAML		16 36 55.8	
	comp=N,931nm,1.0s						
GSIG	Igitkin Island	3.29	78		Pn	16 36 11.5	+0.5
KOWE	Korovin West	4.36	75		Pn	16 36 26.5	+0.7
ATKA	Atka Island	4.37	77		Sn	16 37 16.3	+0.9
ATKA	Atka Island	4.37	77		Pn	16 36 26.3	+0.6
ATKA				IAML		16 37 17.2	
	comp=E,444nm,0.7s						
ATKA				IAML		16 37 36.0	
	comp=N,372nm,0.6s						
ATKA	Atka Island	4.37	77	P	Pn	16 36 26.4	+0.6
KOKL	Mount Kliuchef	4.39	75		Pn	16 36 26.9	+0.8
KOFP	Korovin Flat P	4.44	76		Pn	16 36 28.2	+1.3
CLES	Cleveland East	7.06	74	Pn	Pn	16 37 03.8	+1.2
CLCO	Concord Point,	7.16	74		Pn	16 37 06.1	+2.1
NIKH	Nikolski High	7.70	74		Pn	16 37 13.7	+2.3
NIKH	Nikolski High	7.70	74	P	Pn	16 37 13.3	+1.9
NIKH	Nikolski High	7.70	74	P	Pn	16 37 11.8	+0.4
	baz=263						
OKTU	Okmok Mt. Tuli	8.24	71		Pn	16 37 21.4	+2.6
P08K	Saint George I	8.57	48	P	Pn	16 37 24.0	+0.9
	baz=238						
SPIA	Saint Paul Isl	8.58	44		Pn	16 37 25.7	+2.3
SPIA	Saint Paul Isl	8.58	44	P	Pn	16 37 24.4	+1.0
	baz=232						
MGOD	Makushin Gods	9.00	69		Pn	16 37 31.4	+2.3
MSW	Makushin Switc	9.07	68		Pn	16 37 32.1	+2.0
MREP	Makushin Rep't	9.07	69		Pn	16 37 32.8	+2.6
UNV	Unalaska Valle	9.22	69		Pn	16 37 33.9	+1.8
UNV	Unalaska Valle	9.22	69	P	Pn	16 37 33.3	+1.2
	baz=261						
LVA	Lava Point	9.55	67		Pn	16 37 38.8	+2.2
ZRO	Akutan Zero	9.57	68		Pn	16 37 39.5	+2.6
AKGG	Akutan Green G	9.58	67		Pn	16 37 39.7	+2.6
AKV	Akutan Volcano	9.58	68		Pn	16 37 39.5	+2.4
AKLV	Akutan Long Va	9.59	67		Pn	16 37 39.5	+2.2
AKBBA	Akutan Broad B	9.60	68		Pn	16 37 39.6	+2.4
AKUT	Akutan	9.70	68	P	Pn	16 37 41.5	+2.9
FALS	False Pass	11.18	65		Pn	16 38 00.9	+2.1
FALS	False Pass	11.18	65	P	Pn	16 38 01.6	+2.8
FALS	False Pass	11.18	65	P	Pn	16 37 60.0	+1.2
	baz=259						
S12K	Black Hills	12.11	62	P	Pn	16 38 12.8	+1.2
	baz=257						
M11K	Mekoryuk	12.25	37	Pn	Pn	16 38 16.1	+2.7
M11K	Mekoryuk	12.25	37	P	Pn	16 38 15.2	+1.8
	baz=229						
SDPT	Sand Point	12.93	64	P	Pn	16 38 21.9	-0.7
SDPT	Sand Point	12.93	64	P	Pn	16 38 23.9	+1.2
	baz=261						
PETK	Petropavlovsk-	13.08	286	P	Pn	16 38 26.0	+1.3
	comp=N,4.7nm,0.8s,baz=90,slow=12,SNR=11						
PETK				S	Sn	16 40 43.6	-4.7
	comp=N,1.5nm,0.5s,baz=112,slow=19,SNR=4.3						
GAMB	Gambell	13.36	18	P	Pn	16 38 30.6	+2.1
	baz=206						
CHNA	Chernabura Isl	13.36	67	P	Pn	16 38 27.4	-1.2
CHNA	Chernabura Isl	13.36	67	P	Pn	16 38 28.5	-0.1
	baz=264						
M13K	Dall Lake	13.39	41	P	Pn	16 38 29.5	+0.6
	baz=236						
S14K	Fog Glacier	13.61	61	P	Pn	16 38 32.7	+0.7
	baz=258						
O14K	Tigyukauivet M	13.72	47	P	Pn	16 38 34.5	+1.2
	baz=244						
K13K	Kusilvak Mount	13.84	34	P	Pn	16 38 36.5	+1.5
	baz=228						
N14K	Kuskokwak Cree	13.84	44	P	Pn	16 38 36.6	+1.6
	baz=241						
M14K	Bethel	14.15	41	Pn	Pn	16 38 41.1	+2.0
M14K	Bethel	14.15	41	P	Pn	16 38 40.6	+1.5
	baz=237						
L14K	Kuka Creek	14.20	38	P	Pn	16 38 41.5	+1.8
	baz=234						
O15K	Ungalikthiuk R	14.36	49	P	Pn	16 38 43.3	+1.5
	baz=247						
M15K	Kasigluk River	14.66	43	P	Pn	16 38 47.6	+1.9
	baz=240						
N15K	Kwethluk River	14.66	45	P	Pn	16 38 47.7	+1.9
	baz=243						
L15K	Ungalak Mounta	14.86	39	P	Pn	16 38 49.9	+1.6
	baz=235						
R16K	Pilot Point	14.96	57	P	P	16 38 55.3	+1.5
R16K	Pilot Point	14.96	57	P	Pn	16 38 51.3	+1.7
	baz=256						
P16K	Nushagak River	15.18	51	P	Pn	16 38 54.3	+1.8
	baz=250						
K15K	Wolf Creek Mou	15.21	37	P	Pn	16 38 54.9	+2.1
	baz=233						
O16K	Kokwok River B	15.34	49	P	Pn	16 38 56.2	+1.7
	baz=248						
N16K	Nishlik Lake	15.39	45	P	Pn	16 38 56.8	+1.7
	baz=244						
ANM	Nome	15.53	26	P	P	16 38 59.1	-1.1
	baz=219						
M16K	Timber Creek	15.56	43	P	Pn	16 38 59.0	+1.7
	baz=242						
R17L	Mt. Peulik Vol	15.61	57	P	Pn	16 38 59.0	+0.9
	baz=257						
L16K	Owhat River	15.68	41		P	16 39 01.0	-0.8
L16K				IAmb	IAmb	16 39 06.2	
	comp=Z,31nm,1.4s						
L16K	Owhat River	15.68	41	P	Pn	16 39 00.6	+1.7
	baz=239						
TNA	Tin City	15.72	21	P	Pn	16 39 00.4	+1.2
	baz=212						
Q16K	King Salmon	15.73	53	P	Pn	16 39 00.2	+0.8
	baz=253						
O17K	Koliganek Bris	15.87	49	P	Pn	16 39 02.5	+1.2
	baz=249						
P17K	Kvichak River	15.99	51	P	P	16 39 06.8	+1.5
P17K	Kvichak River	15.99	51	P	Pn	16 39 03.9	+1.1
	baz=252						
Q17K	Contact Creek	16.01	55	P	Pn	16 39 04.6	+1.5
	baz=256						
F14K	Arctic Creek	16.01	23	P	P	16 39 05.5	0.0
	baz=215						
J16K	Anvik River	16.15	35	P	P	16 39 06.6	-0.4
	baz=232						
G15K	Niukluk	16.23	27	P	Pn	16 39 06.9	+1.1
	baz=221						
ACHA	Angle Creek He	16.28	55		P	16 39 08.0	-0.6
L17K	Donlin	16.38	40	P	Pn	16 39 08.8	+1.1
	baz=240						
M17K	Holitna River	16.39	43	P	Pn	16 39 07.7	0.0
	baz=243						
I17K	Unalakleet	16.50	33	P	P	16 39 10.5	-0.3
	baz=230						
H16K	Elim	16.50	29	P	P	16 39 10.6	-0.3
	baz=226						
Q18K	Katmai Hardscr	16.55	54	P	P	16 39 11.3	-0.3
	baz=255						
F15K	North Star Dit	16.62	24	P	P	16 39 12.4	+0.2
	baz=218						
P18K	Big Mountain,	16.64	51	P	Pn	16 39 11.5	+0.5
	baz=253						
K17K	Iditarod	16.68	39	P	P	16 39 12.6	-0.3
	baz=238						
J17K	VABM Dome	16.77	36	P	P	16 39 14.0	+0.1
	baz=235						
N18K	Kilae Creek	16.77	47	P	P	16 39 13.9	0.0
	baz=248						
O18K	Koktuh Hills	16.80	50		P	16 39 14.5	+0.3
O18K				IAmb	IAmb	16 39 18.2	
	comp=Z,22nm,0.8s						
O18K	Koktuh Hills	16.80	50	P	Pn	16 39 13.7	+0.8
	baz=251						
G16K	Koyuk River	17.01	27	P	P	16 39 18.4	+2.0
G16K	Koyuk River	17.01	27	P	P	16 39 17.0	+0.6
	baz=224						
L18K	Granite Mounta	17.08	41	P	P	16 39 17.4	+0.1
	baz=242						
M18K	Stony River	17.12	44	P	Pn	16 39 17.4	+0.5
	baz=245						
OHAK	Old Harbor	17.17	59	P	Pn	16 39 17.5	0.0
	baz=262						
Q19K	Cape Douglas,	17.31	54	P	Pn	16 39 19.5	+0.3
	baz=256						
O19K	Port Alsworth	17.33	49	P	P	16 39 20.2	+0.2
	baz=252						
H17K	Granite Mounta	17.44	31	P	P	16 39 21.7	+0.5
	baz=229						
N19K	Bonanza Creek	17.46	47	P	Pn	16 39 21.3	+0.2
	baz=249						
G17K	Kiwalik Mounta	17.59	29	P	P	16 39 24.0	+1.1
	baz=226						
KDAK	Kodiak Island	17.63	58	P	Pn	16 39 21.2	-1.9
	comp=Z,11nm,0.4s,baz=246,slow=5.6,SNR=16						
KDAK	Kodiak Island	17.63	58	P	Pn	16 39 23.4	+0.3
	baz=261						
J18K	Innoko River	17.69	38	P	P	16 39 24.7	+0.6
	baz=238						
P19K	Oil Pt	17.69	51	P	Pn	16 39 24.3	+0.3
	baz=255						
L19K	White Mountain	17.83	43	P	P	16 39 26.1	+0.4
	baz=245						
Q20K	Shuyak Island	17.87	55	P	Pn	16 39 26.0	-0.2
	baz=259						
H18K	Honhosa River	18.08	32	P	Pn	16 39 29.2	+0.6
	baz=231						
F17K	Baldwin Pennin	18.08	26	P	Pn	16 39 29.2	+0.6
	baz=223						
O20K	Slope Mountain	18.11	50	P	P	16 39 28.7	0.0
	baz=254						
SEY	Seymchan	18.25	319	LR	LR	16 46 24.5	
	comp=Z,46nm,18.4s,baz=86,slow=37						
GCSA	Galena City Sc	18.34	34	P	Pn	16 39 32.2	+0.5
	baz=235						
J19K	Poorman	18.38	37	P	Pn	16 39 33.4	+1.1
J19K	Poorman	18.38	37	P	Pn	16 39 32.6	+0.3
	baz=239						
E17K	Hotham Inlet	18.41	24	P	P	16 39 32.6	+0.7
	baz=221						
M20K	Styx River	18.46	45	P	Pn	16 39 33.3	0.0
	baz=248						
G18K	Tagagawik	18.46	30	P	Pn	16 39 33.9	+0.6
	baz=229						
HOM	Homer	18.48	52	P	P	16 39 32.8	+0.1
	baz=256						
C16K	Lisburne Hills	18.57	19	P	Pn	16 39 34.6	+0.2
	baz=212						
D17K	Noatak River	18.58	22	P	Pn	16 39 35.4	+0.8
	baz=218						
SPCR	Spurr Chakacha	18.64	47	P	Pn	16 39 35.5	+0.1
	baz=251						
F18K	Selawik	18.65	27	P	P	16 39 35.0	+0.5
	baz=226						
K20K	Telida	18.68	40	P	P	16 39 34.8	-0.1
	baz=243						
SPU	Mount Spurr	18.70	47	P	Pn	16 39 36.5	+0.4
RDOG	Red Dog Mine	18.90	21	P	P	16 39 37.8	+0.5
	baz=217						
BRSE	Bradley Lake S	18.94	52	P	P	16 39 37.5	-0.3
	baz=257						
H19K	Roundabout Mou	18.95	32	P	P	16 39 38.3	+0.5
	baz=234						
E18K	Tukpahlearik C	18.98	25	P	P	16 39 39.0	+0.9
	baz=222						
J20K	Nowinta River	19.04	38	IAmb	IAmb	16 39 42.7	
	comp=Z,13nm,0.6s						
J20K	Nowinta River	19.04	38	P	P	16 39 39.6	+0.8
	baz=241						
G19K	Purcell Mounta	19.12	30	P	P	16 39 40.3	+0.6
	baz=231						
SKT	Skwentna	19.20	45		Pn	16 39 41.9	-0.2
SKT				IAmb	IAmb	16 39 45.4	
	comp=Z,33nm,0.9s						
SKT	Skwentna	19.20	45	P	P	16 39 40.8	+0.2
	baz=250,SNR=11						
I20K	Naaghedeneel	19.23	36	P	P	16 39 41.4	+0.5
	baz=238						
PPLA	Purkeypile	19.25	42	IAmb	IAmb	16 39 52.1	
	comp=Z,26nm,1.1s						
PPLA	Purkeypile	19.25	42	P	P	16 39 41.5	+0.1
	baz=247						
F19K	Shaleruckik Mo	19.35	28	P	P	16 39 43.2	+1.0
F19K	Shaleruckik Mo	19.35	28	P	P	16 39 43.4	+1.2
	baz=228,SNR=6.4						
SUA	Susitna One	19.39	47	P	P	16 39 43.3	+0.5
	baz=253						
H20K	Anotleneega Mo	19.46	34	P	P	16 39 44.3	+0.8
	baz=236						
CHUM	Lake Minchumin	19.61	39	P	P	16 39 46.2	+1.2
	baz=244						
SEW	Seward	19.65	51	P	P	16 39 45.8	+0.3
	baz=258						
L22K	Petersville	19.72	44	P	P	16 39 46.8	+0.5
L22K				IAmb	IAmb	16 39 47.5	
	comp=Z,19nm,0.6s						
RC01	Rabbit Creek A	19.75	49	P	P	16 39 46.9	+0.3
	baz=255						
M22K	Willow	19.76	46	P	P	16 39 46.6	0.0
	baz=253						
C18K	Utukok River	19.77	22	P	P	16 39 47.2	+0.4
	baz=219						
CUT	Chulitna	19.90	45	P	P	16 39 47.8	-0.4
	baz=251						
E19K	Redstone River	19.93	27	P	P	16 39 48.8	+0.3
	baz=228						
KTH	Kantishna Hill	20.04	41	P	P	16 39 50.8	+1.0
KTH				IAmb	IAmb	16 39 54.1	

	comp=Z,23nm,0.7s						
F20K	Avaraart Lake	20.11	29	P	P	16 39 50.9	+0.5
	baz=231						
PMR	Palmer	20.17	47	P	P	16 39 51.0	-0.1
	baz=254						
B18K	Kokolik River	20.20	20	P	P	16 39 52.3	+1.0
	baz=217						
BPAW	Bear Paw Mtn.	20.24	40	P	P	16 39 53.2	+1.4
BPAW	Bear Paw Mtn.	20.24	40	P	P	16 39 52.4	+0.5
	baz=245						
TRF	Thorofare Moun	20.26	42	P	P	16 39 52.4	+0.1
	baz=248						
H21K	Melozitna Rive	20.28	35	P	P	16 39 52.5	+0.2
	baz=239						
GHO	Glory Hole Cre	20.31	47	IAmb	IAmb	16 39 56.7	
	comp=Z,26nm,1.0s						
I21K	Tanana	20.34	36	P	P	16 39 53.5	+0.5
	baz=241						
PWL	Port Wells	20.36	50	P	P	16 39 52.5	-0.7
	baz=257						
D19K	Kuna River	20.41	24	P	P	16 39 54.8	+1.1
D19K				IAmb	IAmb	16 40 20.3	
	comp=Z,19nm,1.2s						
D19K	Kuna River	20.41	24	P	P	16 39 54.2	+0.6
	baz=225						
KNK	Knik Glacier	20.43	48	IAmb	IAmb	16 39 57.5	
	comp=Z,18nm,0.6s						
KNK	Knik Glacier	20.43	48	P	P	16 39 53.6	-0.4
	baz=256						
C19K	Lookout Ridge	20.49	22	P	P	16 39 55.7	+1.0
	baz=221						
G21K	Allakaket	20.50	32	P	P	16 39 55.1	+0.4
	baz=236						
SML	Sawmill	20.59	47	P	P	16 39 55.8	0.0
	baz=255						
P23K	Montague Islan	20.64	52	P	P	16 39 56.1	-0.1
	baz=260						
MLY	Manley	20.74	37	P	P	16 39 56.7	-0.6
	baz=243						
E20K	Nigu River	20.76	26	P	P	16 39 57.5	0.0
	baz=228						
WAT1	Susitna Watana	20.79	44	P	P	16 39 57.5	-0.3
	baz=252						
RND	Reindeer	20.85	42	P	P	16 39 58.4	-0.2
M23K	Glacier View	20.86	47	P	P	16 39 58.3	-0.4
	baz=255						
H22K	Ishtalitna Cre	20.91	35	P	P	16 39 58.5	-0.6
	baz=240						
F21K	Alatna River	20.91	30	P	P	16 39 59.2	+0.1
	baz=234						
MCK	McKinley	20.93	42	P	P	16 39 58.8	-0.6
	baz=249						
D20K	Etivluk River	20.95	25	P	P	16 39 59.9	+0.3
	baz=227						
GLI	Glacier Island	20.95	50	P	P	16 39 58.5	-1.1
	baz=258						
A19K	Wainwright	21.03	19	P	P	16 40 00.8	+0.5
	baz=217						
SCM	Sheep Creek Mo	21.06	47	P	P	16 40 00.1	-0.7
	baz=256						
WAT6	Susitna Watana	21.07	45	P	P	16 40 00.4	-0.6
	baz=253,SNR=5.3						
Q23K	Middleton Isla	21.09	54	P	P	16 40 00.4	-0.6
	baz=263						
MID	Middleton Isla	21.09	54	P	P	16 40 07.2	+6.1
NEA2	Nenana	21.20	39	IAmb	IAmb	16 40 03.3	
	comp=Z,14nm,0.7s						
NEA2	Nenana	21.20	39	P	P	16 40 02.4	+0.2
	baz=247,SNR=10						
I23K	Minto, Yukon-K	21.31	38	IAmb	IAmb	16 40 06.2	
	comp=Z,22nm,1.5s						
I23K	Minto, Yukon-K	21.31	38	P	P	16 40 03.5	+0.2
	baz=245						
DHY	Denali Highway	21.38	44	P	P	16 40 04.1	-0.1
	baz=253,SNR=12						
G22K	Bettles	21.39	32	P	P	16 40 04.8	+0.6
	baz=238						
F22K	John River	21.49	31	P	P	16 40 05.8	+0.5
	baz=236						
H23K	Yukon River	21.54	36	P	P	16 40 06.2	+0.4
	baz=243						
EYAK	Cordova Ski Ar	21.55	51	P	P	16 40 10.1	+4.2
EYAK	Cordova Ski Ar	21.55	51	P	P	16 40 05.9	0.0
	baz=261						
KLU	Klutina	21.64	49	IAmb	IAmb	16 40 17.8	
	comp=Z,14nm,0.6s						
KLU	Klutina	21.64	49	P	P	16 40 07.0	+0.1
	baz=258						
M24K	Tolsona, Glenn	21.65	47	P	P	16 40 07.2	+0.1
M24K	Tolsona, Glenn	21.65	47	P	P	16 40 07.3	+0.1
	baz=256						
C21K	Knifeblade Rid	21.74	25	P	P	16 40 08.2	+0.2
	baz=229						
G23K	Bananza Creek	21.79	34	P	P	16 40 08.6	0.0
	baz=241						
COLA	College	21.79	39	P	P	16 40 08.0	-0.5
	baz=248						
E22K	Anaktuvuk Pass	21.96	29	P	P	16 40 10.5	+0.1
E22K	Anaktuvuk Pass	21.96	29	P	P	16 40 10.9	+0.5
	baz=235						
HDA	Harding Lake	21.98	41	IAmb	IAmb	16 40 11.5	
	comp=Z,9.5nm,0.5s						
HDA	Harding Lake	21.98	41	P	P	16 40 11.2	+0.6
	baz=250,SNR=8.3						
COLD	Coldfoot	21.99	32	P	P	16 40 10.9	+0.3
	baz=239						
POKR	Poker Plat Res	22.05	39	IAmb	IAmb	16 40 12.9	
	comp=Z,9.1nm,0.6s						
POKR	Poker Plat Res	22.05	39	P	P	16 40 10.6	-0.7
	baz=248						
B21K	Ikpikpuk River	22.10	25	P	P	16 40 11.1	-0.6
	baz=228						
ILAR	Eielson Array	22.14	40	P	P	16 40 10.2	-2.0
	comp=Z,1.9nm,0.4s,baz=243,slow=9.7,SNR=69						
ILAR				ScP	ScP	16 47 38.4	-0.4
	comp=Z,0.4nm,0.8s,baz=270,slow=3.1,SNR=4.4						
	comp=Z,1.9nm,0.4s						
D22K	Ayikyak River	22.15	27	P	P	16 40 12.4	+0.1
	baz=232						
H24K	Noodor Dome	22.16	37	IAmb	IAmb	16 40 15.6	
	comp=Z,20nm,1.5s						
H24K	Noodor Dome	22.16	37	P	P	16 40 12.7	+0.1
	baz=246						
BMRM	Bremner River	22.17	50	P	P	16 40 11.9	-0.7
	baz=261						
PAX	Paxson	22.18	45	IAmb	IAmb	16 40 14.8	
	comp=Z,8.8nm,0.7s						
PAX	Paxson	22.18	45	P	P	16 40 12.5	-0.4
	baz=255,SNR=7.1						
HARP	HAARP	22.18	46	P	P	16 40 12.9	+0.1
	baz=257						
K24K	Donnelly Dome	22.28	43	IAmb	IAmb	16 40 13.0	
	comp=Z,14nm,0.6s						
K24K	Donnelly Dome	22.28	43	P	P	16 40 12.7	-1.1
	baz=253						
N25K	Chitina, Valde	22.28	49	P	P	16 40 13.2	-0.7
	baz=260						
E23K	Chandalar	22.61	31	P	P	16 40 16.6	-0.8
	baz=238						
GLB	Gilahina Butte	22.62	49	IAmb	IAmb	16 40 18.4	
	comp=Z,14nm,0.6s						
RIDG	Independent Ri	22.66	43	P	P	16 40 16.8	-1.1
	baz=254						
G24K	Hadweenzic Riv	22.68	35	P	P	16 40 17.7	-0.3
	baz=244						
J25K	Salcha River,	22.70	41	P	P	16 40 17.2	-1.1
	baz=252						
VRDI	Verde Repeater	22.76	50	P	P	16 40 17.9	-1.2
VRDI				IAmb	IAmb	16 40 19.9	
	comp=Z,14nm,0.6s						
D23K	Nanushuk River	22.78	28	IAmb	IAmb	16 40 20.9	
	comp=Z,12nm,0.5s						
D23K	Nanushuk River	22.78	28	P	P	16 40 18.4	-0.7
	baz=235,SNR=12						
CRQE	Cirque	22.87	51	P	P	16 40 19.3	-0.9
	baz=263						
B22K	Teshekpuk Lake	22.89	24	P	P	16 40 19.9	-0.2
	baz=228						
F24K	Squaw Lake	22.91	33	P	P	16 40 20.2	-0.3
	baz=242						
TOLK	Toolik Lake Re	22.94	29	IAmb	IAmb	16 40 23.1	
	comp=Z,6.2nm,0.5s						
TOLK	Toolik Lake Re	22.94	29	P	P	16 40 20.5	-0.2
	baz=237						
MENT	Mentasta	22.95	45	IAmb	IAmb	16 40 23.6	
	comp=Z,9.6nm,0.6s						
A22K	Sinclair Lake	22.97	22	P	P	16 40 20.8	-0.1
	baz=225						
DOT	Dot Lake	22.97	44	IAmb	IAmb	16 40 24.7	
	comp=Z,10nm,0.8s						
E24K	Your Creek	22.98	31	P	P	16 40 20.9	-0.3
	baz=240						
MCARA	McCarthy VSAT	22.99	50	P	P	16 40 20.2	-1.0
	baz=262						
SCRK	Sand Creek	23.09	43	IAmb	IAmb	16 40 21.0	
	comp=Z,11nm,0.5s						
SCRK	Sand Creek	23.09	43	P	P	16 40 20.4	-1.9
	baz=255,SNR=8.2						
H25L	Birch Creek	23.11	37	P	P	16 40 21.5	-0.9
	baz=247						
L26K	Log Cabin Wild	23.14	45	IAmb	IAmb	16 40 43.1	
	comp=Z,19nm,1.3s						
L26K	Log Cabin Wild	23.14	45	P	P	16 40 21.6	-1.2
	baz=258						
M26K	Nabesna, AK	23.17	47	P	P	16 40 22.3	-0.8
	baz=259						
G25K	Bearman Lake	23.20	35	P	P	16 40 22.8	-0.5
	baz=246						
C23K	Itkillik River	23.31	26	P	P	16 40 24.3	0.0
	baz=233						
MESA	MESA	23.38	53	P	P	16 40 23.8	-1.5
	baz=266						
J26L	Joseph Creek	23.41	42	IAmb	IAmb	16 40 24.5	
	comp=Z,10nm,0.6s						
J26L	Joseph Creek	23.41	42	P	P	16 40 23.5	-1.9
	baz=254						
D24K	Happy Valley	23.44	29	P	P	16 40 25.2	-0.3
	baz=237						
M27K	Edge Creek, AK	23.68	47	P	P	16 40 26.3	-1.6
	baz=261						
F25K	Christian Rive	23.71	34	P	P	16 40 27.3	-0.8
	baz=245						
CTG	Chitna Glacier	23.75	51	P	P	16 40 27.4	-1.2
	baz=264						
CTGM	Chitina Glacie	23.75	51	P	P	16 40 27.9	-0.7
CTGM				IAmb	IAmb	16 40 28.5	
	comp=Z,14nm,0.6s						
C24K	Franklin Bluff	23.79	28	IAmb	IAmb	16 40 32.6	
	comp=Z,18nm,1.4s						
C24K	Franklin Bluff	23.79	28	P	P	16 40 27.8	-0.9
	baz=236						
I26K	Coal Creek Min	23.81	40	P	P	16 40 27.8	-1.1
	baz=253						
L27K	Beaver Creek,	23.82	46	P	P	16 40 27.9	-1.2
	baz=259						
BCAR	Beaver Creek A	23.84	46	P	P	16 40 28.9	-0.4
K27K	Chicken	23.92	43	IAmb	IAmb	16 40 31.4	
	comp=Z,10nm,0.6s						
K27K	Chicken	23.92	43	P	P	16 40 29.5	-0.4
	baz=257						
E25K	Arctic Village	23.97	32	P	P	16 40 30.4	0.0
	baz=244						
G26K	Porcupine Rive	24.12	36	P	P	16 40 31.3	-0.4
	baz=248						
BVCY	Beaver Creek	24.15	47	P	P	16 40 31.6	-0.5
	baz=262,SNR=5.3						
PINM	Pinnacle	24.22	53	P	P	16 40 32.0	-0.8
	baz=267						
YUK3	Moose Creek	24.26	49	P	P	16 40 32.4	-0.9
	baz=263,SNR=10						
D25K	Kavik River	24.28	30	P	P	16 40 33.5	+0.4
	baz=240						
F26K	Sheenjek River	24.28	34	P	P	16 40 33.0	-0.2
	baz=246						
O28M	Mount Upton	24.29	51	P	P	16 40 32.5	-1.1
	baz=266						
I27K	Kandik River	24.51	40	P	P	16 40 35.8	+0.4
	baz=254						
YUK8	Steele Glacier	24.54	50	P	P	16 40 35.5	-0.4
	baz=265						
H27K	Steamboat Moun	24.73	38	P	P	16 40 37.3	0.0
	baz=253						
G27K	Doyon Strip	24.86	37	P	P	16 40 38.3	-0.2
	baz=251						
O29M	Mount Kennedy	25.07	53	P	P	16 40 39.7	-0.8
	baz=268						
YUK4	Talbot Arm	25.08	50	P	P	16 40 39.7	-1.0
	baz=266						
DAWY	Dawson	25.08	44	IAmb	IAmb	16 40 44.2	
	comp=Z,10.0nm,0.7s						
DAWY	Dawson	25.08	44	P	P	16 40 40.1	-0.5
	baz=260,SNR=7.9						
I28M	Miner Creek	25.15	40	IAmb	IAmb	16 40 43.0	
	comp=Z,7.6nm,0.6s						
I28M	Miner Creek	25.15	40	P	P	16 40 40.3	-0.9
	baz=256						
YUK6	Outpost Mounta	25.19	51	P	P	16 40 40.0	-1.8
	baz=267						
C27K	Jago River	25.25	30	P	P	16 40 41.7	-0.2
	baz=243						
M29M	Somme Creek	25.26	48	P	P	16 40 41.4	-0.9
	baz=264						
E27K	Coleen River	25.36	34	P	P	16 40 42.9	-0.1
	baz=249						
P29M	Windy Craggy	25.48	54	P	P	16 40 43.2	-0.9
	baz=271						
L29M	L29M	25.49	46	P	P	16 40 42.7	-1.6
	baz=263						
HYT	Haines Junctio	25.61	51	P	P	16 40 43.8	-1.7
	baz=268						
J29N	Klondike Camp	25.66	43	P	P	16 40 44.7	-1.1
	baz=260						
F28M	Old Crow	25.77	36	P	P	16 40 46.1	-0.6
	baz=252						
I29M	Ogilvie Camp,	25.79	41	P	P	16 40 46.4	-0.5
	baz=258						
N30M	Aishikik Lake	25.84	50	P	P	16 40 46.4	-1.0
	baz=267						
K29M	Barlow Dome	25.86	44	P	P	16 40 47.1	-0.6
	baz=262						
H29M	Whitestone	25.96	39	P	P	16 40 47.6	-0.8
	baz=256						
D27M	Malcolm River	25.97	32	P	P	16 40 48.1	-0.5
	baz=247						
M30M	Minto, Yukon	26.05	47	P	P	16 40 48.6	-0.7
	baz=265						
PLBC	Pleasant Camp	26.18	55	P	P	16 40 49.2	-1.3
	baz=272						
E28M	Babbage River	26.22	33	P	P	16 40 50.4	-0.3
	baz=250						
G29M	Pine Creek	26.26	38	P	P	16 40 50.7	-0.5
	baz=255						
O30N	Mendenhall	26.30	52	P	P	16 40 50.4	-1.2
	baz=270						
S31K	Pelican	26.35	58	P	P	16 40 50.4	-1.5
	baz=275						
N31M	Braeburn, Yuko	26.46	50	P	P	16 40 51.9	-1.1
	baz=268						
J30M	Hart River	26.48	43	P	P	16 40 52.3	-0.9
	baz=262						
I30M	Mount Dempster	26.56	42	P	P	16 40 52.4	-1.6
	baz=260						
EPYK	Eagle Plains	26.64	39	P	P	16 40 53.5	-1.1
	baz=258						
E29M	Blow River	26.72	34	P	P	16 40 54.4	-0.8
	baz=252						
D28M	Stokes Point	26.74	32	P	P	16 40 54.5	-0.8
	baz=250						
SIT	Sitka	26.94	60	P	P	16 40 55.2	-2.1
	baz=278						
G30M	tAoh Zraii Nji	26.97	38	P	P	16 40 56.1	-1.4
	baz=257						
M31M	Drury Creek, Y	27.14	48	P	P	16 40 56.9	-2.2
	baz=268						
R32K	Eaglecrest	27.22	57	P	P	16 40 57.7	-2.2
	baz=276						
F30M	Barrier River	27.28	36	P	P	16 40 58.9	-1.4
	baz=256						
S32K	Killisnoo	27.29	59	P	P	16 40 58.4	-1.9
	baz=277						
H31M	Peel River	27.49	41	P	P	16 41 00.7	-1.5
	baz=261						
N32M	Quiet Lake	27.77	51	P	P	16 41 02.9	-1.9
	baz=272						
P33M	Teslin, Yukon	27.94	53	P	P	16 41 04.9	-1.4
	baz=274						
INK	Inuvik	28.27	35	P	P	16 41 08.6	-0.4
INK	Inuvik	28.27	35	P	P	16 41 07.7	-1.3
	baz=258						
Q32M	Nakina River	28.32	55	P	P	16 41 07.6	-2.3
	baz=276						
CRAG	Craig	28.42	63	P	P	16 41 08.7	-1.8
	baz=282						
WRAK	Wrangell Islan	28.66	61	P	P	16 41 10.4	-2.3
	baz=281						
R33M	Jennings River	28.94	54	P	P	16 41 13.3	-2.0
	baz=276						
V35K	Ketchikan	29.29	63	P	P	16 41 16.2	-2.0
	baz=283						
DLBC	Dease Lake	29.55	56	P	P	16 41 18.5	-2.1
	baz=279						
WTLY	Watson Lake, Y	29.95	53	P	P	16 41 23.0	-1.1
	baz=277						
A36M	Sachs Harbour	31.76	29	P	P	16 41 40.6	+0.8
A36M				IAmb	IAmb	16 41 41.1	
	comp=Z,5.2nm,0.8s						
A36M	Sachs Harbour	31.76	29	P	P	16 41 39.5	-0.3
	baz=260						
C36M	Paulatuk	31.82	34	P	P	16 41 39.2	-1.1
	baz=266						
USRK	Ussuriysk Ar.	31.84	276	P	P	16 41 40.4	-0.4
	comp=Z,1.0nm,0.5s,baz=78,slow=10.0,SNR=2.7						
	comp=Z,1.0nm,0.5s						
TOAD	Toad River Com	31.94	54	P	P	16 41 40.5	-1.2
	baz=282						
WRGLY	Wrigley	32.14	46	P	P	16 41 42.3	-1.0
	baz=276						
KOTAN	Kotaneelee Air	32.29	52	P	P	16 41 43.7	-1.0
	baz=280						
H11N2	WAKE ISLAND Hy	33.00	201	T	T	17 17 02.7	
	baz=20,slow=75,SNR=23						
H11N3	WAKE ISLAND Hy	33.01	201	T	T	17 16 58.2	
	baz=20,slow=75,SNR=18						
H11N1	WAKE ISLAND Hy	33.01	201	T	T	17 17 05.7	
	baz=20,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy	34.22	201	T	T	17 18 35.0	
	baz=18,slow=76,SNR=14						
H11S2	WAKE ISLAND Hy	34.24	201	T	T	17 18 38.9	
	baz=18,slow=76,SNR=9.5						
H11S3	WAKE ISLAND Hy	34.24	201	T	T	17 18 40.5	
	baz=18,slow=76,SNR=9.6						
YKAW3	Yellowknife Wh	36.24	46	P	P	16 42 18.3	-0.5
YKAW3				IAmb	IAmb	16 42 18.7	
	comp=Z,3.5nm,0.6s						
YKA	Yellowknife Ar	36.26	46	P	P	16 42 18.4	-0.5
	comp=Z,1.8nm,0.7s,baz=283,slow=8.7,SNR=18						
	comp=Z,1.8nm,0.7s						
STCH	Steam Cracks	37.95	138	P	P	16 42 31.9	-1.9
LON	Longmire	38.20	73	P	P	16 42 36.1	+0.4
LON				IAmb	IAmb	16 42 36.9	
	comp=Z,3.4nm,0.8s						
WIFE	Three Sisters-	39.58	77	P	P	16 42 47.6	+0.3
WIFE				IAmb	IAmb	16 43 11.2	
	comp=Z,4.9nm,0.8s						
EDM	Edmonton	40.06	60	P	P	16 42 50.1	-0.9
YBH	Yreka Blue Hor	40.31	80	IAmb	IAmb	16 42 59.5	
	comp=Z,6.2nm,1.3s						
O03E	Paynes Creek	41.70	81	IAmb	IAmb	16 43 09.2	
	comp=Z,11nm,1.1s						
BMO	Blue Mountains	41.88	73	P	P	16 43 06.3	+0.1
JTMT	Jette	42.14	68	P	P	16 43 07.9	-0.4
WVOR	Wild Horse Val	42.42	77	P	P	16 43 11.1	+0.5
BEKR	Beckworth	42.85	81	P	P	16 43 14.5	+0.3
PAHR	Pah Rah Range	43.55	80	P	P	16 43 20.3	+0.5
NRIK	Noril'sk	43.63	329	P	P	16 43 19.8	0.0
	comp=Z,0.6nm,0.4s,baz=99,slow=6.4,SNR=3.6						
	comp=Z,0.6nm,0.4s						
LYMT	Lyon Mountain	43.70	68	P	P	16 43 20.4	-0.6
WAKR	Walker	44.24	82	IAmb	IAmb	16 43 27.5	
	comp=Z,4.1nm,0.6s						
BCYI	Bear Canyon	44.51	71	P	P	16 43 26.9	-0.6
BCYI				IAmb	IAmb	16 43 27.7	
	comp=Z,3.9nm,0.7s						
RYN	Ryan	44.73	81	IAmb	IAmb	16 43 31.1	
	comp=Z,5.5nm,1.0s						
BOZ	Bozeman (W)	44.83	69	IAmb	IAmb	16 43 29.7	
	comp=Z,4.5nm,0.5s						
NVAR	Mina Array Bea	44.99	81	P	P	16 43 32.2	+0.8
	comp=Z,1.8nm,0.5s,baz=292,slow=8.0,SNR=11						
NVAR				pP	pP	16 43 47.3	+0.5
	comp=Z,1.1nm,0.6s,baz=309,slow=7.0,SNR=3.1						
	comp=Z,1.8nm,0.5s						
MDPB	Devils Postpil	45.00	83	IAmb	IAmb	16 43 36.0	
	comp=Z,4.2nm,0.8s						
SONM	Songino Array	45.32	295	P	P	16 43 34.8	+1.0
	comp=Z,2.1nm,0.7s,baz=58,slow=9.1,SNR=17						
SONM				pP	pP	16 43 49.1	0.0
	comp=Z,1.6nm,0.5s,baz=70,slow=7.5,SNR=8.0						
SONM				ScP	ScP	16 49 01.2	+1.6
	comp=Z,0.9nm,0.9s,baz=87,slow=3.0,SNR=4.3						
	comp=Z,2.1nm,0.7s						
SONM	Songino Array	45.32	295	P	P	16 43 34.6	+0.8
ELK	Elko	45.47	77	P	P	16 43 35.8	+0.6
ELK				IAmb	IAmb	16 43 36.5	
	comp=Z,3.2nm,0.6s						
YHL	Hebgen Lake	45.51	69	P	P	16 43 35.0	-0.6
YHL				IAmb	IAmb	16 43 36.3	
	comp=Z,3.2nm,0.5s						
YHB	Horse Butte	45.56	70	IAmb	IAmb	16 43 36.9	
	comp=Z,5.0nm,0.8s						
YHH	Holmes Hill	45.74	69	P	P	16 43 37.2	-0.1
HHC	Hu-ho-hao-te	46.27	284	*e*P	P	16 43 41.8	+0.4
HHC				pmax	pmax		
	comp=Z,14nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,6.0s						
GMN	Gold Mountain	46.34	82	IAmb	IAmb	16 43 45.3	
	comp=Z,2.9nm,0.6s						
R11B	Troy Canyon, C	46.72	79	P	P	16 43 45.4	+0.5
R11B				IAmb	IAmb	16 43 46.2	
	comp=Z,4.4nm,0.6s						
SPR3	Spring Creek 3	47.09	78	IAmb	IAmb	16 43 50.6	
	comp=Z,4.9nm,0.6s						
TPNV	Topopah Spring	47.19	81	P	P	16 43 48.6	0.0
TPNV				IAmb	IAmb	16 43 50.2	
	comp=Z,6.9nm,0.8s						
NJ2	Nanjing	47.35	270	*e*P	P	16 43 50.2	+0.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
PRN	Pahroc Range	47.64	80	IAmb	IAmb	16 43 53.8	
	comp=Z,5.8nm,0.7s						
BW06	Boulder Array	47.68	71	IAmb	IAmb	16 43 53.2	
	comp=Z,4.0nm,0.6s						
PD31	Pinedale Array	47.68	71	IAmb	IAmb	16 43 53.2	
	comp=Z,3.9nm,0.6s						
PDAR	Pinedale Array	47.68	71	P	P	16 43 51.9	-0.6
	comp=Z,3.3nm,0.5s,baz=331,slow=3.2,SNR=53						
PDAR				pP	pP	16 44 08.4	+0.6
	comp=Z,1.3nm,0.7s,baz=310,slow=9.2,SNR=3.9						
	comp=Z,3.3nm,0.5s						
PDAR	Pinedale Array	47.68	71	P	P	16 43 51.7	-0.8
GSC	Goldstone, Bar	47.90	84	P	P	16 43 54.5	+0.4
CCUT	Cedar City	48.59	79	IAmb	IAmb	16 44 00.9	
	comp=Z,2.9nm,0.6s						
TMUT	Trail Mountain	48.80	76	IAmb	IAmb	16 44 02.5	
	comp=Z,3.9nm,0.7s						
MTPU	Mount Pierson	49.00	78	IAmb	IAmb	16 44 04.5	
	comp=Z,3.0nm,0.7s						
LCMT	Little Creek M	49.00	79	IAmb	IAmb	16 44 04.4	
	comp=Z,4.9nm,0.9s						
RDMU	Red Mountain	49.00	73	IAmb	IAmb	16 44 19.3	
	comp=Z,7.1nm,1.2s						
KNB	Kanab	49.26	79	IAmb	IAmb	16 44 06.4	
	comp=Z,4.3nm,0.6s						
SRU	San Rafael Swe	49.34	75	IAmb	IAmb	16 44 22.7	
	comp=Z,5.6nm,1.1s						
U15A	North Rim	49.96	79	P	P	16 44 10.6	+0.5
SPITS	Spitsbergen Ar	50.23	355	P	P	16 44 10.3	-0.9
	comp=Z,2.5nm,0.5s,baz=36,slow=7.2,SNR=7.2						
	comp=Z,2.5nm,0.5s						
PV21	Cone Mtn., Par	50.62	75	P	P	16 44 15.4	+0.4
PV21				IAmb	IAmb	16 44 16.1	
	comp=Z,8.4nm,1.3s						
PV23	Carpenter Ridg	50.67	75	P	P	16 44 15.8	+0.5
PV04	Paradox Valley	50.77	75	IAmb	IAmb	16 44 32.4	
	comp=Z,5.1nm,0.8s						
PV16	Nyswonger Mesa	50.81	75	IAmb	IAmb	16 44 47.6	
	comp=Z,7.4nm,1.2s						
PV12	Saucer Basin,	50.88	75	IAmb	IAmb	16 44 22.7	
	comp=Z,7.5nm,1.1s						
PV02	Paradox Valley	50.99	75	P	P	16 44 17.6	-0.2
X16A	Lo Mia Camp, P	51.80	81	IAmb	IAmb	16 44 25.6	
	comp=Z,2.9nm,0.8s						
XAN	Xi'an	52.22	279	P	P	16 44 27.4	+0.7
XAN				pmax	pmax		
	comp=Z,7.0nm,0.5s						
X18A	Snowflake	52.65	79	IAmb	IAmb	16 44 31.7	
	comp=Z,4.7nm,0.6s						
ZALV	Zalesovo Beam	52.94	312	P	P	16 44 30.7	-1.0
	comp=Z,0.8nm,0.5s,baz=53,slow=7.0,SNR=4.2						
	comp=Z,0.8nm,0.5s						
LZH	Lanzhou	53.97	285	*e*P	P	16 44 38.9	-0.8
LZH				sP	pP	16 44 57.7	+2.3

LZH				pmax	pmax		
	comp=Z,11nm,1.1s						
GTA	Gaotai	54.19	290	*e*P	P	16 44 41.9	+0.6
GTA				pP	pP	16 44 56.9	-0.2
GTA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
LENM	Lemitar	54.72	78	P	P	16 44 45.9	+0.7
KURK	Kurchatov	57.93	312		pP	16 45 23.1	-0.5
KURK	Kurchatov	57.93	312	P	P	16 45 07.2	-0.4
KURK				IAmb	IAmb	16 45 08.1	
	comp=Z,3.9nm,0.8s						
KURBB	Kurchatov Arra	58.03	312	P	P	16 45 08.1	-0.2
	comp=Z,3.9nm,0.7s,baz=42,slow=6.6,SNR=44						
KURBB				pP	pP	16 45 23.1	-1.2
	comp=Z,1.6nm,0.6s,baz=41,slow=6.5,SNR=7.8						
	comp=Z,3.9nm,0.7s						
VHRN	Van Horn	58.25	79	P	P	16 45 10.8	+0.5
VHRN				IAmb	IAmb	16 45 11.6	
	comp=Z,3.6nm,0.7s						
MKAR	Makanchi Array	58.86	307	P	P	16 45 13.6	-0.6
	comp=Z,1.6nm,0.6s,baz=53,slow=6.2,SNR=18						
MKAR				pP	pP	16 45 28.7	-1.4
	comp=Z,0.9nm,0.6s,baz=44,slow=6.6,SNR=4.5						
	comp=Z,1.6nm,0.6s						
MAKZ	Makanchi	59.00	307	P	P	16 45 14.6	-0.6
MAKZ				IAmb	IAmb	16 45 15.2	
	comp=Z,2.4nm,0.6s						
MNHN	Monahans	59.23	77	P	P	16 45 17.0	0.0
BVAR	Borovoye Array	59.91	319	P	P	16 45 21.4	+0.1
	comp=Z,2.8nm,0.5s,baz=49,slow=6.5,SNR=23						
BVAR				pP	pP	16 45 36.6	-0.8
	comp=Z,1.4nm,0.5s,baz=48,slow=7.1,SNR=5.1						
	comp=Z,2.8nm,0.5s						
BORK	Borovoye	59.92	319	P	P	16 45 21.5	+0.2
BORK				IAmb	IAmb	16 45 22.2	
	comp=Z,3.4nm,0.9s						
TX31	Lajitas Ar. Si	60.08	80	P	P	16 45 22.7	-0.2
TXAR	Lajitas Array	60.08	80	P	P	16 45 23.2	+0.3
	comp=Z,4.0nm,0.5s,baz=319,slow=6.8,SNR=60						
	comp=Z,4.0nm,0.5s						
SCHQ	Schefferville	60.87	37	P	P	16 45 26.7	-1.1
	comp=Z,2.0nm,0.5s,baz=232,slow=19,SNR=1.4						
	comp=Z,2.0nm,0.5s						
DRIO	Del Rio	61.89	77	P	P	16 45 34.8	-0.3
PZH	PanZhiHua	61.90	278	P	P	16 45 36.8	+1.5
FCAR	Ozark Folk Cen	62.36	66	P	P	16 45 36.3	-1.8
AB31	Akbulak array	67.01	321	P	P	16 46 08.5	+0.3
ABKAR	Akbulak array	67.01	321	P	P	16 46 08.6	+0.5
KKAR	Karatay Array	67.27	311	P	P	16 46 10.2	+0.2
CMAR	Chiang Mai Arr	69.56	274	P	P	16 46 26.2	+1.7
	comp=Z,0.3nm,0.4s,baz=22,slow=6.5,SNR=6.1						
CMAR				pP	pP	16 46 40.8	-0.1
	comp=Z,0.5nm,0.6s,baz=34,slow=6.9,SNR=2.5						
	comp=Z,0.3nm,0.4s						
GAR	Garm	70.53	308	IAmb	IAmb	16 46 31.6	
	comp=Z,7.5nm,0.9s						
CHGR	Chuyangaron	71.36	309	P	P	16 46 35.8	+0.4
SHAA	Shahritus	72.72	309	P	P	16 46 44.5	+1.0
SHAA				IAmb	IAmb	16 46 45.3	
	comp=Z,12nm,1.2s						
AKASG	Malin Array Be	75.05	341	P	P	16 46 55.7	-1.0
	comp=Z,0.2nm,0.3s,baz=23,slow=6.4,SNR=2.5						
	comp=Z,0.2nm,0.3s						
AKBB	Malin Array Si	75.05	341	P	P	16 46 56.8	+0.1
AKBB				IAmb	IAmb	16 47 03.6	
	comp=Z,7.3nm,1.4s						
BURAR	Bucovina Array	78.79	342	P	P	16 47 17.9	0.0
BRTR	Keskin Array B	84.29	334	P	P	16 47 47.2	0.0
	comp=Z,0.5nm,0.8s,baz=29,slow=3.3,SNR=2.5						
	comp=Z,0.5nm,0.8s						
ASAR	Alice Springs	84.55	221	P	P	16 47 50.0	+1.6
	comp=Z,0.3nm,0.9s,baz=28,slow=5.9,SNR=2.2						
	comp=Z,0.3nm,0.9s						
ASAR	Alice Springs	84.55	221	P	P	16 47 50.0	+1.6
H03N2	Juan Fernandez	122.56	104	T	T	19 08 42.1	
	baz=317,slow=78,SNR=8.3						
H03N1	Juan Fernandez	122.58	104	T	T	19 08 42.1	
	baz=317,slow=78,SNR=9.5						
H03N3	Juan Fernandez	122.58	104	T	T	19 08 43.2	
	baz=317,slow=78,SNR=7.0						

IDC ***10*** *16:51:01.4±4.9, 36°.46N×71°.17E, h199^{km}±41^{km}, mb3.3/8, mbtmp3.8/14, Error ellipse: s-maj=40.2km s-min=18.5km az=36.0*

NNC ***10*** *16:51:05.9±8.6, 37°.16N×70°.70E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=75.5km s-min=62.7km az=141.0*

ISC 10 16:51:02.8±0.9, **36°.62N**±0°.07×**71°.1E**±0°.1, **h200^{km}, n28,** σ**1^s.65**/34, **mb3.5**/8, **1C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMU	Jammu	4.92	140	*e*S	Sn	16 53 16.4	+0.4
JMU				IAML		16 53 17.9	
	comp=E,198nm,0.4s						
JMU				IAML		16 53 19.2	
	comp=N,218nm,0.4s						
DHRM	DHARAMSHALA	6.13	134	*e*P	Pn	16 52 34.5	+2.5
DHRM				*e*S	Sn	16 53 42.1	-0.4
DHRM				IAML		16 53 44.5	
	comp=E,326nm,1.0s						
DHRM				IAML		16 53 45.0	
	comp=N,226nm,0.7s						
UCH	Uchtor	6.20	24	P	Pn	16 52 34.5	+1.6
	SNR=17						
EKS2	Erkin-Say	6.38	18	P	Pn	16 52 36.4	+1.4
	SNR=7.2						
KK31	Karatay Array	6.49	356	⇑P	Pn	16 52 37.0	+0.7
	comp=N,3.0nm,0.4s,baz=178,slow=12,SNR=81						
KK31				S	Sn	16 53 45.3	-5.2
	comp=N,6.1nm,0.4s,baz=184,slow=16,SNR=9.1						
AAK	Ala-Archa	6.56	23	P	Pn	16 52 39.1	+1.8
	SNR=9.4						
AAK	Ala-Archa	6.56	23	P	Pn	16 52 38.5	+1.2
	comp=N,6.2nm,0.3s,baz=160,slow=3.5,SNR=50						
AAK				S	Sn	16 53 52.8	+0.4
	comp=N,3.9nm,0.3s,baz=331,slow=22,SNR=16						
AAK	Ala-Archa	6.56	23	⇓P	Pn	16 52 38.7	+1.3
	comp=N,1.2nm,0.4s						
AAK				⇓S	Sn	16 53 51.1	-1.2
	comp=N,6.0nm,0.7s						
BHK	Bhakra	6.82	138	*e*S	Sn	16 53 57.2	-1.2
BHK				IAML		16 53 59.1	
	comp=E,170nm,0.5s						
BHK				IAML		16 53 59.2	
	comp=N,189nm,0.8s						
ULHL	Ulahol	6.89	34	P	Pn	16 52 43.2	+1.5
	SNR=8.3						
USP	Ospenovka	7.14	21	P	Pn	16 52 46.1	+1.3
	SNR=6.6						
TKM2	Tokmak 2	7.19	28	P	Pn	16 52 47.0	+1.5
	SNR=7.5						
SMLA	Simla	7.46	136	*e*P	Pn	16 52 50.2	+1.2
SMLA				*e*S	Sn	16 54 12.4	-0.9
SMLA				IAML		16 54 13.6	
	comp=N,164nm,0.4s						
SMLA				IAML		16 54 14.8	
	comp=E,172nm,0.3s						
JOSI	Joshimath	9.30	128	*e*P	Pn	16 53 14.6	+1.4
JOSI				*e*S	Sn	16 54 54.5	-3.0
JOSI				IAML		16 54 56.8	
	comp=N,124nm,0.3s						
JOSI				IAML		16 54 56.9	
	comp=E,134nm,0.6s						
MKAR	Makanchi Array	13.15	36	P	Pn	16 54 02.4	+0.3
	comp=E,0.3nm,0.3s,baz=205,slow=9.7,SNR=7.2						
KURBB	Kurchatov Arra	14.99	19	P	Pn	16 54 24.0	-0.6
	comp=E,0.7nm,0.6s,baz=206,slow=10,SNR=7.7						
AB31	Akbulak array	15.01	331	P	P	16 54 27.3	+1.7
	comp=E,1.4nm,0.5s,baz=143,slow=12,SNR=35						
BVAR	Borovoye Array	16.41	359	P	Pn	16 54 42.8	+1.0
	comp=E,1.1nm,0.3s,baz=158,slow=10,SNR=11						
AKTO	Aktyubinsk	16.71	330	P	P	16 54 44.5	+0.2
	comp=E,2.0nm,0.4s,baz=134,slow=11,SNR=8.1						
ZALV	Zalesovo Beam	19.78	25	P	P	16 55 17.1	-0.4
	comp=E,1.5nm,0.3s,baz=213,slow=11,SNR=8.3						
NRIK	Noril'sk	33.99	10	P	P	16 57 27.5	+0.5
	comp=E,1.3nm,0.5s,baz=205,slow=4.2,SNR=4.5						
	comp=E,1.3nm,0.5s						
FINES	FINESS Array B	37.42	326	P	P	16 57 56.2	-0.1
	comp=E,1.4nm,0.4s,baz=111,slow=9.1,SNR=10						
	comp=E,1.4nm,0.4s						
ARCES	ARCESS Array B	41.06	338	P	P	16 58 26.3	0.0
	comp=E,1.5nm,0.6s,baz=104,slow=5.1,SNR=9.3						
	comp=E,1.5nm,0.6s						
HFS	Hagfors	43.01	322	P	P	16 58 42.2	0.0
	comp=E,1.6nm,0.5s,baz=96,slow=4.3,SNR=6.7						
	comp=E,1.6nm,0.5s						
NOA	NORSAR Array B	44.32	323	P	P	16 58 52.1	-0.5
	comp=E,0.8nm,0.6s,baz=96,slow=7.6,SNR=3.6						
	comp=E,0.8nm,0.6s						
YKA	Yellowknife Ar	81.12	3	P	P	17 02 54.9	-0.4
	comp=E,0.2nm,0.6s,baz=351,slow=5.7,SNR=3.1						
	comp=E,0.2nm,0.6s						
WRA	Warramunga Arr	82.00	122	P	P	17 02 57.5	-3.1
	comp=E,0.2nm,0.7s,baz=309,slow=6.2,SNR=1.8						
	comp=E,0.2nm,0.7s						
ASAR	Alice Springs	84.27	125	P	P	17 03 10.7	-1.5
	comp=E,0.3nm,0.7s,baz=312,slow=4.9,SNR=6.2						
	comp=E,0.3nm,0.7s						

BJI ***10*** *17:04:58.1, 30°.69N×141°.94E, h18^{km}, mB5.9/83, mb5.5/86, Ms6.1/92, Ms7 6.0/92*

IDC ***10*** *17:05:00.9±0.4, 30°.68N×141°.60E, h0^{km}, mb5.3/34, mbtmp5.3/38, ML4.8/4, MS5.6/78, Error ellipse: s-maj=12.8km s-min=10.1km az=75.0*

MOS ***10*** *17:05:01.4±1.1, 30°.73N×141°.67E, h15^{km}, mb6.0/80, MS5.8/73, Error ellipse: s-maj=6.5km s-min=3.3km az=116.1*

NEIC ***10*** *17:05:02.1, 30°.73N×141°.72E, h11^{km}*

NEIC ***10*** *17:05:02.1, 30°.73N×141°.72E, h22^{km}*

NIED ***10*** *17:05:02.2, 30°.78N×141°.97E, h42^{km}, MW6.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{18}Nm; M_{rr}0.42; $M_{\theta\theta}$0.07; $M_{\phi\phi}$-0.49; $M_{r\theta}$-0.09; $M_{\theta\phi}$0.13; $M_{\phi r}$1.13; Fault plane solution: $M_0$1.23000×10^{18} NP1: ϕ_s156.00000°, δ12.00000°, λ72.00000°. NP2: ϕ_s355.00000°, δ79.00000°, λ94.00000°.*

NEIC ***10*** *17:05:02.1±1.5, 30°.73N±0°.05×141°.72E±0°.08, h11^{km}±1^{km}, mb5.8/641, Ms_20 5.7/705, Mwb5.8/177, Mww5.8/37 Error ellipse: s-maj=12.7km s-min=7.5km az=69.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}4.55; $M_{\theta\theta}$0.67; $M_{\phi\phi}$-5.22; $M_{r\theta}$1.26; $M_{\theta\phi}$0.07; $M_{\phi r}$4.01; Fault plane solution: $M_0$6.47000×10^{17} NP1:ϕ_s11.75000°, δ65.73000°, λ101.64000°. NP2:ϕ_s165.13000°, δ26.77000°, λ65.89000°. Principal axes: T 6.2491, Plg67.0000°, Azm303.0000°; N 0.4208, Plg11.0000°, Azm187.0000°; P -6.6699, Plg20.0000°, Azm93.0000°;*

ISC-PP ***10*** *17:05:02, 30°.73N×141°.72E, h34^{km}, Mwppsm6.3, Moment Tensor Solution. s44 Moment tensor: Scale 10^{18}Nm; M_{rr}0.25±.14; $M_{\theta\theta}$-0.28±.17; $M_{\phi\phi}$0.00±.14; $M_{r\theta}$-0.04±.12; $M_{\theta\phi}$0.23±.15; $M_{\phi r}$-0.61±.16; Fault plane solution: $M_0$3.76000×10^{18} NP1:ϕ_s272.90000°, δ63.70000°, λ161.80000°. NP2:ϕ_s11.20000°, δ73.70000°, λ27.50000°.*

NEIC ***10*** *17:05:02.1, 30°.63N×141°.95E, h22^{km}, Moment Tensor Solution. Duration: 4^s.0 Moment tensor: Scale 10^{17}Nm; M_{rr}5.10; $M_{\theta\theta}$2.04; $M_{\phi\phi}$-7.14; $M_{r\theta}$1.88; $M_{\theta\phi}$1.97; $M_{\phi r}$2.25; Fault plane solution: $M_0$7.29000×10^{17} NP1: ϕ_s141.38000°, δ44.10000°, λ47.43000°. NP2:ϕ_s13.36000°, δ59.17000°, λ123.24000°. Principal axes: T 6.6040, Plg60.0000°, Azm335.0000°; N 1.2124, Plg28.0000°, Azm175.0000°; P -7.8163, Plg8.0000°, Azm80.0000°;*

IPGP ***10*** *17:05:02.0, 30°.70N×141°.74E, h11^{km}, Mw6.0, Fault plane solution: NP1:ϕ_s162.00000°, δ25.00000°, λ69.00000°. NP2:ϕ_s6.00000°, δ67.00000°, λ100.00000°.*

JMA ***10*** *17:05:02.2±0.3, 31°N±2°×14°2E±°, h42^{km}, MD6.1/35, MW5.8/35, NEAR TORISHIMA IS*

BGR ***10*** *17:05:03.8, 30°.94N×142°.45E, h33^{km}, mb6.0, Ms5.8*

GFZ ***10*** *17:05:03.4, 30°.74N×141°.59E, h19^{km}, MW5.8, Moment Tensor Solution. Moment tensor: M_{rr}5.07; $M_{\theta\theta}$0.53; $M_{\phi\phi}$-5.60; $M_{r\theta}$-0.05; $M_{\theta\phi}$0.69; $M_{\phi r}$3.07; Fault plane solution: NP1:ϕ_s170.00000°, δ30.00000°, λ84.00000°. NP2:ϕ_s357.00000°, δ60.00000°, λ93.00000°. Principal axes: T 5.8900, Plg75.0000°, Azm275.0000°; N 0.6000, Plg3.0000°, Azm175.0000°; P -6.4900, Plg15.0000°, Azm84.0000°;*

GCMT ***10*** *17:05:08.1±0.1, 30°.70N×141°.81E, h18^{km}, MW5.9/158, Moment Tensor Solution. s140,c294; s158,c495; Duration: 2^s.2 Moment tensor: Scale 10^{18}Nm; M_{rr}0.65±.01; $M_{\theta\theta}$0.10±.00; $M_{\phi\phi}$-0.75±.00; $M_{r\theta}$0.05±.01; $M_{\theta\phi}$0.16±.00; $M_{\phi r}$0.49±.01; Best double couple: $M_0$0.87100×10^{18} NP1:ϕ_s158.00000°, δ29.00000°, λ70.00000°. NP2:ϕ_s0.00000°, δ63.00000°, λ101.00000°. Principal axes: T 0.8200, Plg70.0000°, Azm294.0000°; N 0.1030, Plg10.0000°, Azm175.0000°; P -0.9220, Plg17.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 10 17:05:04.1±0.4, **30°.74N**±0°.02×**141°.83E**±0°.03, **h25^{km}**±2^{km}, **h25^{km}:pP-P, n2232,** σ**1^s.90**/1818, **mb5.8**/569, **MS5.8**/499, **139C-61D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	Aogashimamukai	2.46	315	*e*P	Pn	17 05 42.5	-0.1
JAOM				*e*S	Sn	17 06 12.0	+0.1
JAOM	Aogashimamukai	2.46	315	A	A	17 05 42.5	
	comp=N,315nm,6.9s,comp=E,368nm,7.9s						
JHCJ	Hachijojimakas	2.89	324	*e*P	Pn	17 05 48.2	-0.4
JHCJ	Hachijojimakas	2.89	324	A	A	17 05 48.2	
	comp=N,101nm,6.8s,comp=E,212nm,7.1s						
JHJ2	Mitsune	2.92	325		Pn	17 05 47.6	-1.3
JHJ2				Sn	Sn	17 06 17.4	-5.7
JHJ2	Mitsune	2.92	325	P	Pn	17 05 48.7	-0.2
JHJ2	Mitsune	2.92	325	S	Sn	17 06 22.1	-1.0
JHJ2	Mitsune	2.92	325	⇑P	Pn	17 05 48.1	-0.8
JHJ2	Mitsune	2.92	325	P	Pn	17 05 48.1	-0.8
JHJ2				*e*S	Sn	17 06 20.9	-2.2
JHJ2	Mitsune	2.92	325	A	A	17 05 48.1	
	comp=N,130nm,7.3s,comp=E,218nm,5.7s						
JHJ	Hachijo jima 2	2.94	324	Pn	Pn	17 05 48.2	-1.0
	comp=E,230nm,0.3s,baz=174,slow=16,SNR=116						
JHJ				Sn	Sn	17 06 20.1	-3.7
	comp=E,793nm,0.3s,baz=237,slow=23,SNR=6.7						
JHJ				LR	LR	17 07 01.3	
	comp=E,174µm,18.1s,baz=88,slow=42						
	comp=E,851nm,0.2s						
CBIJ	Chichi jima	3.65	175	*e*P	Pn	17 05 57.8	-1.2
CBIJ				*e*S	Sn	17 06 37.8	-3.4
CBIJ	Chichi jima	3.65	175	A	A	17 05 57.8	
	comp=N,80nm,5.2s,comp=E,141nm,12.4s						
JCJ	Chichijima	3.65	175	Pn	Pn	17 05 49.5	-10
	comp=E,119nm,0.3s,baz=345,slow=12,SNR=27						
JCJ				Sn	Sn	17 06 28.4	-13
	comp=E,231nm,0.3s,baz=262,slow=22,SNR=6.3						
JCJ				LR	LR	17 06 57.7	
	comp=E,16µm,21.6s,baz=2.5,slow=32						
JCJ	Chichijima	3.65	175		Pn	17 05 57.6	-1.4
JCJ				Sn	Sn	17 06 38.0	-3.3
JCJ	Chichijima	3.65	175	P	Pn	17 05 59.8	+0.8
JCJ	Chichijima	3.65	175	⇑P	Pn	17 05 58.2	-0.7
JMKN	Mikurajimanish	3.67	330	P	Pn	17 05 58.4	-0.9
JMKN				*e*S	Sn	17 06 39.8	-1.9
JMKN	Mikurajimanish	3.67	330	A	A	17 05 58.4	
	comp=N,169nm,8.4s,comp=E,158nm,10.2s						
JMYK	Miyake Tsubota	3.83	330	*e*P	Pn	17 06 01.6	+0.1
JMYK				*e*S	Sn	17 06 45.3	-0.3
JMYK	Miyake Tsubota	3.83	330	A	A	17 06 01.6	
	comp=N,223nm,5.1s,comp=E,188nm,5.0s						
BSO1	Boso 1	3.96	350	P	Pn	17 06 03.1	+0.3
JHH2	Haha-jima-NKT2	4.11	176	A	A	17 06 04.8	
	comp=N,92nm,10.1s,comp=E,130nm,8.9s						
JSKK	Shikinejimakit	4.21	329	A	A	17 06 06.4	
	comp=N,76nm,4.9s,comp=E,127nm,9.3s						
JTHY	Toshimahigashi	4.34	331	A	A	17 06 08.1	
	comp=N,92nm,7.6s,comp=E,102nm,5.7s						
JIM2	Oshima 3	4.45	334	A	A	17 06 09.6	
	comp=N,70nm,10.6s,comp=E,76nm,3.9s						
TATJ	Tateyama 2	4.58	340	A	A	17 06 11.3	
	comp=N,133nm,6.7s,comp=E,143nm,11.9s						
JKUC	kamogawauchiur	4.61	343	A	A	17 06 11.6	
	comp=N,59nm,6.4s,comp=E,77nm,6.2s						
JIZS	Izushimoda	4.68	329	A	A	17 06 13.0	
	comp=N,35nm,8.6s,comp=E,41nm,9.3s						
JIZS	Izushimoda	4.68	329	P	Pn	17 06 13.2	+0.1
JCCN	Chibachonan	4.82	344	A	A	17 06 14.4	
	comp=N,158nm,8.2s,comp=E,170nm,10.3s						
JYO	Yokosk	4.82	338	A	A	17 06 14.8	
	comp=N,77nm,5.4s,comp=E,97nm,10.0s						
JHTM	Izuhatsuma	4.83	331	A	A	17 06 15.0	
	comp=N,43nm,4.3s,comp=E,67nm,12.0s						
TTO3	TONANKAI O.B.S	4.87	311	A	A	17 06 16.2	
	comp=N,172nm,8.0s,comp=E,121nm,8.1s						
TTO4	TONANKAI O.B.S	4.87	313	A	A	17 06 16.1	
	comp=N,120nm,7.1s,comp=E,105nm,7.9s						
TTO5	TONANKAI O.B.S	4.93	316	A	A	17 06 16.8	
	comp=N,97nm,6.7s,comp=E,140nm,9.6s						
JSG	Sagara	4.98	323		Pn	17 06 16.5	-0.8
JSG	Sagara	4.98	323	P	Pn	17 06 18.9	+1.7
JSG	Sagara	4.98	323	A	A	17 06 17.4	
	comp=N,90nm,16.5s,comp=E,81nm,7.0s						
JSMT	Sammumatsuo	5.02	347	A	A	17 06 17.2	
	comp=N,213nm,8.4s,comp=E,188nm,5.7s						
TTO2	TONANKAI O.B.S	5.04	308	A	A	17 06 18.6	
	comp=N,178nm,10.5s,comp=E,161nm,8.0s						
JOD2	Odawara 2	5.06	334	P	Pn	17 06 18.1	-0.3
JOD2	Odawara 2	5.06	334	A	A	17 06 18.1	
	comp=N,37nm,10.6s,comp=E,38nm,12.7s						
JKKS	Kakegawashinom	5.14	322	A	A	17 06 19.7	
	comp=N,66nm,5.9s,comp=E,99nm,11.5s						
TTO1	TONANKAI O.B.S	5.15	305	*e*P	Pn	17 06 22.2	+2.9
TTO1	TONANKAI O.B.S	5.15	305	A	A	17 06 22.2	
	comp=N,178nm,8.0s,comp=E,185nm,9.7s						
JFNN	Fujinakano	5.17	330	A	A	17 06 19.7	
	comp=N,74nm,5.4s,comp=E,62nm,9.0s						
JFNN	Fujinakano	5.17	330	P	Pn	17 06 20.7	+0.9
TOK	Tokyo	5.23	341	A	A	17 06 20.3	
	comp=N,153nm,7.4s,comp=E,188nm,8.1s						
SHZ3	Shizuoka 3	5.28	326	A	A	17 06 21.5	
	comp=N,30nm,12.6s,comp=E,23nm,8.4s						
SHZ3	Shizuoka 3	5.28	326	P	Pn	17 06 22.4	+1.0
JSGW	Sagamiharawaka	5.32	336	A	A	17 06 21.7	
	comp=N,24nm,8.8s,comp=E,31nm,11.5s						
JIHU	Itakohorinouch	5.32	349	A	A	17 06 21.4	
	comp=N,130nm,4.0s,comp=E,178nm,4.3s						
HMMJ	Hamamatsu 2	5.36	321	A	A	17 06 22.8	
	comp=N,26nm,14.1s,comp=E,18nm,8.5s						
JYN	Shimob	5.48	331	A	A	17 06 24.2	
	comp=N,33nm,9.6s,comp=E,33nm,11.7s						
JYN	Shimob	5.48	331	P	Pn	17 06 24.8	+0.6
JSSY	Shinshiroyabe	5.52	320	A	A	17 06 25.0	
	comp=N,25nm,15.1s,comp=E,19nm,8.0s						
JAA	Atsumi	5.53	316	A	A	17 06 25.4	
	comp=N,21nm,8.5s,comp=E,19nm,11.3s						
JYT	Yasato	5.64	346	A	A	17 06 25.9	
	comp=N,25nm,14.0s,comp=E,50nm,6.9s						
JIE	Ise	5.65	311	*e*P	Pn	17 06 28.4	+1.9
JIE	Ise	5.65	311	A	A	17 06 28.4	
	comp=N,15nm,14.1s,comp=E,14nm,8.0s						
JHYU	Hitachinakayam	5.68	350	A	A	17 06 26.3	
	comp=N,31nm,4.4s,comp=E,28nm,15.8s						
JNY	Yasuok	5.68	325	A	A	17 06 27.1	
	comp=N,20nm,9.8s,comp=E,24nm,4.7s						
JMMH	Miemihama	5.79	304	A	A	17 06 29.2	
	comp=N,16nm,14.2s,comp=E,17nm,13.0s						
JRY	Ryogami san	5.80	336	*e*P	Pn	17 06 29.3	+0.7
JRY				*e*S	Sn	17 07 34.7	+0.3
JRY	Ryogami san	5.80	336	A	A	17 06 29.3	
	comp=N,25nm,6.7s,comp=E,29nm,6.9s						
JWKM	Wakayamakushim	5.81	299	A	A	17 06 29.6	
	comp=N,15nm,18.3s,comp=E,22nm,13.8s						
JKN2	Miekihoku	5.84	308	A	A	17 06 29.8	
	comp=N,22nm,12.7s,comp=E,21nm,11.3s						
JAO	Obara	5.92	321	A	A	17 06 30.6	
	comp=N,25nm,13.0s,comp=E,19nm,13.5s						
JHO	Hitachi	5.95	350	A	A	17 06 30.1	
	comp=N,25nm,4.6s,comp=E,33nm,5.9s						
JNT	Takato	5.98	330	A	A	17 06 31.2	
	comp=N,33nm,7.2s,comp=E,29nm,7.4s						
JAG	Ashikaga	6.00	341	A	A	17 06 31.2	
	comp=N,23nm,4.0s,comp=E,39nm,7.5s						
JAG	Ashikaga	6.00	341	P	Pn	17 06 29.9	-1.5
TSUJ	Tsu 2	6.03	312	A	A	17 06 32.4	
	comp=N,24nm,11.1s,comp=E,14nm,13.5s						
TSUJ	Tsu 2	6.03	312	P	Pn	17 06 33.8	+2.0
JTNC	Tanabenakahech	6.09	302	*e*P	Pn	17 06 33.9	+1.3
JTNC	Tanabenakahech	6.09	302	A	A	17 06 33.9	
	comp=N,10.0nm,9.3s,comp=E,18nm,15.7s						
INU	Inuyama	6.12	320		Pn	17 06 33.0	+0.2
INU	Inuyama	6.12	320	P	Pn	17 06 34.2	+1.3
INU	Inuyama	6.12	320	⇑P	Pn	17 06 34.1	+1.2
JGF	Kuroka	6.12	323		Pn	17 06 34.1	+1.0
JGF	Kuroka	6.12	323	P	Pn	17 06 34.7	+1.7
JGF	Kuroka	6.12	323	⇑P	Pn	17 06 34.2	+1.2
JGF	Kuroka	6.12	323	A	A	17 06 33.4	
	comp=N,17nm,11.0s,comp=E,17nm,13.5s						
JNTK	Naratenkawa	6.13	307	A	A	17 06 33.8	
	comp=N,15nm,12.2s,comp=E,13nm,9.9s						
JICN	Ichinomiyachia	6.18	319	A	A	17 06 34.2	
	comp=N,31nm,13.7s,comp=E,24nm,9.0s						
JWM	Minabe	6.29	301	A	A	17 06 36.3	
	comp=N,12nm,10.5s,comp=E,17nm,15.0s						
JWY	Kouya	6.30	305	P	Pn	17 06 36.9	+1.3
JKT	Katashina	6.38	341	A	A	17 06 36.4	
	comp=N,17nm,19.6s,comp=E,25nm,4.5s						
JGK	Kuni	6.38	336	A	A	17 06 36.6	
	comp=N,31nm,4.7s,comp=E,40nm,4.8s						
ONAJ	Iwakimizuishiy	6.40	353	A	A	17 06 36.3	
	comp=N,18nm,4.7s,comp=E,26nm,5.5s						
JSB	Shiboa	6.41	346	A	A	17 06 36.7	
	comp=N,47nm,4.2s,comp=E,65nm,3.3s						
JFFD	Fukushimafurud	6.42	351	A	A	17 06 36.6	
	comp=N,16nm,4.9s,comp=E,30nm,5.8s						
JNG	Nsakai	6.45	332	A	A	17 06 37.6	
	comp=N,23nm,4.8s,comp=E,23nm,12.6s						
JYTA	Yamagatataniai	6.45	320	P	Pn	17 06 38.5	+1.0
JHE	Heguri	6.48	309	P	Pn	17 06 39.6	+1.7
MJAR	Matsushiro Arr	6.52	333	Pn	Pn	17 06 37.8	-0.7
	comp=E,7.3nm,0.3s,baz=153,slow=10,SNR=511						
MJAR				Sn	Sn	17 07 53.7	+1.6
	comp=E,3.4nm,0.3s,baz=160,slow=18,SNR=5.7						
MJAR				LR	LR	17 09 15.7	
	comp=E,64µm,18.9s,baz=140,slow=39						
	comp=E,310nm,0.9s						
MJAR	Matsushiro Arr	6.52	333		Pn	17 06 38.0	-0.5
MAJO	Matsushiro	6.52	333		Pn	17 06 38.4	-0.1
MAJO	Matsushiro	6.52	333	P	Pn	17 06 39.6	+1.1
MAJO	Matsushiro	6.52	333*c*	*i*P	Pn	17 06 38.8	+0.3
MAJO				MLR	MLR		
	comp=Z,40µm,12.0s						
MAJO	Matsushiro	6.52	333	⇑P	Pn	17 06 38.4	-0.1
MAT	Matsushiro	6.52	333	P	Pn	17 06 38.2	-0.3
MJB9	Matsu-Tunnel	6.53	333		Pn	17 06 38.7	+0.1
JGN	Niukaw	6.64	327	A	A	17 06 40.5	
	comp=N,13nm,20.3s,comp=E,20nm,9.2s						
JFK	Kawauchi	6.66	353	A	A	17 06 39.9	
	comp=N,21nm,10.3s,comp=E,22nm,12.6s						
JFK	Kawauchi	6.66	353	P	Pn	17 06 39.0	-1.3
JUON	Uonuma	6.85	341	A	A	17 06 42.9	
	comp=N,14nm,21.4s,comp=E,22nm,8.2s						
JFY	Yanaizu	6.88	346	A	A	17 06 43.2	
	comp=N,20nm,8.1s,comp=E,41nm,6.3s						
JFY	Yanaizu	6.88	346	P	Pn	17 06 42.2	-1.2
JOTO	OTAMA OYAMA	6.91	350	A	A	17 06 43.5	
	comp=N,23nm,6.5s,comp=E,29nm,2.9s						
JAWN	Awajishima-nag	6.93	304	P	Pn	17 06 46.8	+2.7
JTT	Ttatey	6.94	329	A	A	17 06 44.7	
	comp=N,31nm,4.1s,comp=E,51nm,6.3s						
JAI	Aioi	6.95	298	P	Pn	17 06 45.6	+1.4
JMST	Minamisoumatoc	7.01	354	A	A	17 06 44.7	
	comp=N,15nm,8.1s,comp=E,19nm,6.2s						
JJN	Nakama	7.04	335	A	A	17 06 45.8	
	comp=N,17nm,6.3s,comp=E,29nm,4.3s						
JWT	Wachi	7.04	312	P	Pn	17 06 47.2	+1.6
JMM	Marumori	7.16	353	A	A	17 06 46.9	
	comp=N,14nm,17.5s,comp=E,30nm,3.3s						
JMM	Marumori	7.16	353	P	Pn	17 06 45.6	-1.6
JYAR	Yonezawaarcadi	7.29	349	A	A	17 06 48.7	
	comp=N,17nm,3.5s,comp=E,24nm,8.2s						
JMN	Monobe	7.36	296		Pn	17 06 49.4	-0.6
JMN	Monobe	7.36	296	P	Pn	17 06 49.9	-0.1
JMN	Monobe	7.36	296	⇑P	Pn	17 06 52.5	+2.4
JKY	Yasaka	7.45	313	P	Pn	17 06 53.1	+1.9
JYS	Shirataka	7.60	349	P	Pn	17 06 52.6	-0.7
JOU	Okura	7.67	353	P	Pn	17 06 53.3	-0.9
JAD	Aida	7.68	305	P	Pn	17 06 56.3	+1.9
JKSM	Kasumi	7.71	311	P	Pn	17 06 56.3	+1.6
JOFO	Osakifurukawao	7.88	355	A	A	17 06 56.8	
	comp=N,129nm,2.7s,comp=E,109nm,2.9s						
JTO	Tosashimizu	7.96	288	*e*P	Pn	17 07 00.5	+2.3
JYA	Atsumi	8.02	348	P	Pn	17 06 58.2	-0.9
JMK	Ichinoseki	8.21	357	*e*P	Pn	17 06 59.0	-2.6
JMK				*e*S	Sn	17 08 26.1	-7.4
JYK	Kaneyama	8.24	352	P	Pn	17 07 00.9	-1.2
JHS	Saijyo	8.46	302	*e*P	Pn	17 07 08.5	+3.4
JRG	Rokugo	8.69	354	P	Pn	17 07 07.2	-1.0
JOI	OKI	9.05	310	*e*P	Pn	17 07 14.5	+1.4
JNU	Nakatsue	9.60	287	Pn	Pn	17 07 23.6	+2.8

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      comp=E,1.4nm,0.3s,baz=94,slow=13,SNR=13
JNU                              LR      LR       17 11 03.2
      comp=E,100µm,18.5s,baz=118,slow=38
JNU   Nakatsue         9.60 287          Pn       17 07 21.0 +0.3
JNU   Nakatsue         9.60 287  P       Pn       17 07 20.5 -0.3
JNU   Nakatsue         9.60 287 ⇑P       Pn       17 07 24.6 +3.8
JSJ   Shimokoshiki    10.41 278 eP       Pn       17 07 34.7 +2.9
JOT   Ohata           10.64 357 eP       Pn       17 07 33.9 -1.0
JTU   Tsushima        11.13 293  P       Pn       17 07 42.8 +1.1
JTU   Tsushima        11.13 293 ⇑P       Pn       17 07 44.5 +2.8
ERM   Erimo           11.30   5          Pn       17 07 40.3 -3.6
ERM   Erimo           11.30   5  P       Pn       17 07 40.3 -3.6
ERM   Erimo           11.30   5 ⇑P       Pn       17 07 41.0 -3.0
JOSM  Okushiri--Mats  11.47 351  P       Pn       17 07 45.4 -0.9
JCH   Churui          11.91   6  P       Pn       17 07 49.5 -2.8
JOW   Kunigami        12.51 255  Pn      Pn       17 08 04.2 +3.6
      comp=E,3.1nm,0.3s,baz=99,slow=15,SNR=5.9
JOW                              LR      LR       17 12 16.0
      comp=E,59µm,21.2s,baz=114,slow=35
JOW   Kunigami        12.51 255          Pn       17 07 58.9 -1.7
JOW   Kunigami        12.51 255  P       Pn       17 07 59.8 -0.7
JOW   Kunigami        12.51 255 ⇑P       Pn       17 08 02.8 +2.3
NMR   Nemuro--Hokkai  12.98  13 eP       Pn       17 08 03.0 -3.9
GLVR  Golovnino       13.30  12 eP       Pn       17 08 08.0 -3.2
GLVR                             pmax    pmax
      comp=Z,359nm,0.9s
GLVR                             pmax    pmax
      comp=N,97nm,0.7s
GLVR                             pmax    pmax
      comp=E,165nm,0.7s
GLVR                             pmax    pmax
      comp=Z,1µm,3.2s
GLVR                             MLR     MLR
      comp=Z,2µm,15.0s
GLVR                             MLR     MLR
      comp=N,4µm,11.0s
TJN   Taejon          13.30 299          Pn       17 08 10.9 -0.4
TJN   Taejon          13.30 299  P       Pn       17 08 10.5 -0.8
TJN   Taejon          13.30 299⇓eP       Pn       17 08 09.8 -1.5
KSRS  Korea Array     13.32 304  Pn      Pn       17 08 13.7 +2.1
      comp=N,0.4nm,0.3s,baz=117,slow=14,SNR=44
KSRS                             LR      LR       17 13 20.6
      comp=N,28913µm,18.5s,baz=110,slow=38
KSAR  Wonju Array Be  13.34 304          Pn       17 08 12.3 +0.5
KSAR  Wonju Array Be  13.34 304  P       Pn       17 08 12.4 +0.5
JKA   Kamikawa-asahi  13.36   2          Pn       17 08 09.1 -3.0
JKA   Kamikawa-asahi  13.36   2          Sn       17 10 32.5 -7.4
ASAJ  Asahikawa       13.37   2  Pn      Pn       17 08 11.1 -1.1
      comp=N,17nm,0.3s,baz=206,slow=12,SNR=98
ASAJ                             Sn      Sn       17 10 32.5 -7.4
      comp=N,1.6nm,0.3s,baz=50,slow=24,SNR=4.1
ASAJ                             LR      LR       17 14 16.7
      comp=N,30µm,20.7s,baz=190,slow=41
      comp=N,83nm,0.4s
KS19  Wonju Array Si  13.38 304          Pn       17 08 12.0 -0.3
RUSJ  Misakicho       13.61  11 eP       Pn       17 08 12.3 -3.2
YUK   Yuzh-Kuril'sk   13.65  12 eP       Pn       17 08 12.6 -3.4
YUK                              pmax    pmax
      comp=Z,283nm,0.5s
YUK                              pmax    pmax
      comp=E,39nm,0.2s
YUK                              pmax    pmax
      comp=N,133nm,0.6s
YUK                              pmax    pmax
      comp=Z,883nm,1.3s
YUK                              MLR     MLR
      comp=Z,1µm,14.0s
YUK                              MLR     MLR
      comp=N,1µm,12.0s
INCN  Inchon          14.26 302  P       Pn       17 08 26.7 +2.2
INCN                             P       Pn       17 08 26.7 +2.2
INCN                             P       Pn       17 08 26.7 +2.2
INCN                             S       Sn       17 11 06.3 +4.4
INCN                             S       Sn       17 11 06.3 +4.4
INCN                             S       Sn       17 11 06.3 +4.4
INCN  Inchon          14.26 302          Pn       17 08 24.9 +0.5
INCN  Inchon          14.26 302  P       Pn       17 08 22.9 -1.6
INCN  Inchon          14.26 302  P       Pn       17 08 25.0 +0.5
INCN  Inchon          14.26 302 ⇑P       Pn       17 08 25.6 +1.2
VLA   Vladivostok     14.68 330deP       Pn       17 08 28.3 -1.7
VLA                              pmax    pmax
      comp=Z,150nm,2.6s
VLA                              MLR     MLR
      comp=Z,27µm,16.0s
PSTR  Posyet          14.80 326d iP      Pn       17 08 30.5 -1.1
TEY   Ternei          14.85 345 eP       Pn       17 08 30.4 -1.9
TEY                              MLR     MLR
      comp=E,2µm,14.0s
TEY                              MLR     MLR
      comp=N,9µm,13.0s
TEY                              MLR     MLR
      comp=Z,15µm,14.0s
KUR   Kuril'sk        15.22  16  P       Pn       17 08 37.9 +0.6
KUR                              pmax    pmax
      comp=Z,258nm,0.8s
KUR                              pmax    pmax
      comp=E,152nm,0.7s
KUR                              pmax    pmax
      comp=Z,2µm,2.6s
KUR                              MLR     MLR
      comp=Z,20µm,12.0s
USRK  Ussuriysk Ar.   15.52 333  Pn      Pn       17 08 38.8 -2.4
      comp=Z,1.7nm,0.3s,baz=143,slow=12,SNR=37
      comp=Z,55nm,0.8s
YSS   Yuzhno-Sakhali  16.20   2          Pn       17 08 47.9 -2.1
YSS                              IAmb    IAmb     17 08 54.3
      comp=Z,524nm,0.9s
YSS   Yuzhno-Sakhali  16.20   2κeP       Pn       17 08 48.1 -1.9
YSS                              pmax    pmax
      comp=N,510nm,0.8s
YSS                              pmax    pmax
      comp=E,310nm,0.8s
YSS                              pmax    pmax
      comp=Z,510nm,0.8s
YSS                              pmax    pmax
      comp=Z,3µm,5.4s
YSS                              pmax    pmax
      comp=N,3µm,4.3s
YSS                              pmax    pmax
      comp=E,1µm,4.6s
YSS                              MLR     MLR
      comp=N,21µm,17.0s
YSS                              MLR     MLR
      comp=E,26µm,17.0s
YSS                              MLR     MLR
      comp=Z,31µm,17.0s
YSS   Yuzhno-Sakhali  16.20   2 ⇑P       Pn       17 08 47.5 -2.5
MDJ   Mudanjiang      16.87 329          Pn       17 08 56.3 -2.1
MDJ   Mudanjiang      16.87 329  P       Pn       17 08 55.4 -3.1
MDJ                              PP      PnPn     17 09 08.9 +0.7
MDJ                              pmax    pmax
      comp=Z,64nm,1.6s
MDJ                              LR      LR
      comp=Z,20µm,17.6s
MDJ                              LR      LR
      comp=Z,34µm,15.6s
MDJ                              LR      LR
      comp=Z,41µm,16.6s
MDJ   Mudanjiang      16.87 329  P       Pn       17 08 56.4 -2.1
GUMO  Guam            17.30 170  P       P        17 09 06.7 +1.4
      comp=Z,550nm,0.9s,baz=26,slow=0.2,SNR=18
GUMO                             LR      LR       17 14 11.4
      comp=Z,19µm,20.8s,baz=0.5,slow=32
GUMO  Guam            17.30 170  P       P        17 09 05.9 +0.6
GUMO  Guam            17.30 170  P       P        17 09 05.9 +0.6
GUMO                             pmax    pmax
      comp=Z,2µm,1.2s
SSE   Sheshan         17.72 276  P       P        17 09 09.8  0.0
SSE                              S       Sn       17 12 27.0 +1.2
SSE                              pmax    pmax
      comp=Z,70nm,1.7s
SSE                              pmax    pmax
      comp=Z,3µm,7.8s
SSE                              LR      LR
      comp=Z,6µm,16.4s
SSE                              LR      LR
      comp=Z,8µm,17.1s
YOJ   Yonaguni jima   17.80 254  P       Pn       17 09 09.6 -0.6
YOJ   Yonaguni jima   17.80 254  P       P        17 09 10.4 -0.4
YOJ   Yonaguni jima   17.80 254  P       Pn       17 09 09.6 -0.6
YOJ                              pmax    pmax
      comp=Z,212nm,0.8s
YOJ   Yonaguni jima   17.80 254 ⇑P       P        17 09 10.8 -0.1
UGL   Uglegorsk       18.32   1⇓eP       Pn       17 09 18.6 +2.3
UGL                             eS       S        17 12 45.4 +1.1
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UGL                              pmax    pmax
      comp=Z,174nm,1.2s
UGL                              pmax    pmax
      comp=Z,8µm,9.9s
UGL                              smax    smax
      comp=E,18µm,13.1s
UGL                              smax    smax
      comp=N,8µm,5.1s
UGL                              MLR     MLR
      comp=Z,22µm,17.0s
UGL                              MLR     MLR
      comp=N,22µm,16.0s
UGL                              MLR     MLR
      comp=E,7µm,12.0s
SNY   Shenyang        18.37 312 ⇑P       P        17 09 15.5 -1.4
SNY                              S       Sn       17 12 35.8 -5.6
SNY                              LR      LR
      comp=E,28µm,15.2s
SNY                              LR      LR
      comp=E,20µm,16.8s
SNY                              LR      LR
      comp=E,32µm,16.1s
CN2   Changchun       18.39 320⇑iP       P        17 09 15.5 -1.7
CN2                              pP      pP       17 09 20.4 -2.1
CN2                              sP      sP       17 09 24.4 -0.7
CN2                              S       Sn       17 12 37.8 -4.2
CN2                              pmax    pmax
      comp=E,180nm,1.1s
CN2                              pmax    pmax
      comp=E,5µm,8.0s
CN2                              LR      LR
      comp=E,21µm,14.0s
CN2                              LR      LR
      comp=E,35µm,14.0s
CN2                              LR      LR
      comp=E,32µm,16.0s
DL2   Dalian          18.45 302  P       Pn       17 09 18.4 +0.4
DL2                              S       S        17 12 47.6 +0.5
DL2                              pmax    pmax
      comp=E,140nm,1.1s
DL2                              pmax    pmax
      comp=E,7µm,7.5s
DL2                              LR      LR
      comp=E,39µm,19.9s
DL2                              LR      LR
      comp=E,50µm,18.0s
DL2                              LR      LR
      comp=E,68µm,17.5s
BNX   BinXian         18.73 327 ⇓P       P        17 09 18.6 -2.3
BNX                              sP      pwP      17 09 30.2 -2.3
BNX                              S       Sn       17 12 48.4 -1.7
BNX                              pmax    pmax
      comp=E,120nm,1.0s
BNX                              pmax    pmax
      comp=E,7µm,8.6s
BNX                              LR      LR
      comp=E,29µm,14.0s
BNX                              LR      LR
      comp=E,24µm,14.6s
BNX                              LR      LR
      comp=E,38µm,15.8s
TATO  Taipei          18.87 257  P       Pn       17 09 24.1 +0.9
TATO                             P       Pn       17 09 24.1 +0.9
TATO                             P       Pn       17 09 24.1 +0.9
TATO                             S       Sn       17 12 54.3 +0.6
TATO                             S       Sn       17 12 54.3 +0.6
TATO                             S       Sn       17 12 54.3 +0.6
TATO  Taipei          18.87 257  P       P        17 09 20.9 -1.7
TATO                             IAmb    IAmb     17 09 30.4
      comp=Z,563nm,1.1s
TATO  Taipei          18.87 257  P       Pn       17 09 23.6 +0.4
YHNB  Yeheng          19.08 257          P        17 09 24.2 -0.8
YHNB                             IAmb    IAmb     17 09 37.1
      comp=Z,416nm,1.0s
YHNB  Yeheng          19.08 257  P       P        17 09 25.0  0.0
NACB  Ninganchiao     19.10 255  P       P        17 09 23.4 -1.6
NACB  Ninganchiao     19.10 255  P       P        17 09 24.5 -0.6
NJ2   Nanjing         19.65 280 ⇑P       P        17 09 30.4 -0.7
NJ2                              pP      Pn       17 09 34.0 +1.4
NJ2                              PP      PnPn     17 09 50.2 +3.9
NJ2                              pmax    pmax
      comp=Z,110nm,2.1s
NJ2                              pmax    pmax
      comp=Z,2µm,4.3s
NJ2                              LR      LR
      comp=Z,20µm,14.7s
NJ2                              LR      LR
      comp=Z,36µm,18.5s
NJ2                              LR      LR
      comp=Z,41µm,18.0s
YULB  Yu-li           19.68 253  P       P        17 09 30.8 -0.6
YULB                             IAmb    IAmb     17 09 38.0
      comp=Z,544nm,1.4s
YULB  Yu-li           19.68 253  P       P        17 09 31.1 -0.3
SSLB  Suanglung       19.79 255  P       P        17 09 32.2 -0.4
SSLB  Suanglung       19.79 255  P       P        17 09 32.6 -0.1
TYV   Tymovskoe       20.11   2 eP       Pn       17 09 38.8 +1.0
TYV                             eS       Sn       17 13 25.5 +2.2
TYV                              pmax    pmax
      comp=Z,253nm,1.4s
TYV                              pmax    pmax
      comp=Z,8µm,6.5s
TYV                              smax    smax
      comp=N,51nm,1.7s
TYV                              smax    smax
      comp=N,7µm,7.3s
TYV                              smax    smax
      comp=E,13µm,7.3s
TYV                              MLR     MLR
      comp=N,22µm,17.0s
TYV                              MLR     MLR
      comp=Z,22µm,18.0s
TWGBT Beinan          20.11 252  P       P        17 09 36.9 +0.7
TWG   Pinlang         20.12 252  P       P        17 09 36.0 -0.2
TPUB  Ta-pu           20.27 254  P       P        17 09 38.0 +0.2
TPUB                             IAmb    IAmb     17 09 53.4
      comp=Z,536nm,1.0s
TPUB  Ta-pu           20.27 254  P       P        17 09 38.4 +0.5
GRNR  Gornyy          20.41 350⇑iP       Pn       17 09 40.5 -0.9
GRNR                             pmax    pmax
      comp=N,40nm,0.9s
GRNR                             pmax    pmax
      comp=Z,40nm,0.9s
GRNR                             MLR     MLR
      comp=E,3µm,12.0s
GRNR                             MLR     MLR
      comp=N,8µm,16.0s
GRNR                             MLR     MLR
      comp=Z,13µm,15.0s
TIA   Tai'an          21.29 291  P       P        17 09 46.7 -2.1
TIA                              S       S        17 13 46.9 +2.7
TIA                              pmax    pmax
      comp=Z,63nm,1.7s
TIA                              pmax    pmax
      comp=Z,4µm,6.1s
TIA                              LR      LR
      comp=Z,43µm,14.6s
TIA                              LR      LR
      comp=Z,46µm,15.4s
TIA                              LR      LR
      comp=Z,71µm,14.9s
QZH   Quanzhou        21.32 260⇑iP       P        17 09 47.9 -1.4
QZH                              S       S        17 13 43.7 -1.3
QZH                              pmax    pmax
      comp=Z,110nm,1.0s
QZH                              pmax    pmax
      comp=Z,6µm,7.9s
QZH                              LR      LR
      comp=Z,23µm,19.9s
QZH                              LR      LR
      comp=Z,31µm,21.3s
QZH                              LR      LR
      comp=Z,42µm,21.0s
KNMB  Chin-men Tao    21.67 259  P       P        17 09 51.4 -1.6
KNMB                             IAMs_20 IAMs_20  17 18 14.5
      comp=Z,25µm,19.0s
HEH   HeiHe           22.29 335 eP       P        17 09 58.1 -1.3
HEH                              pP      pP       17 10 01.8 -3.0
HEH                              S       S        17 14 04.2 +1.1
HEH                              sS      pS       17 14 09.0 -0.8
HEH                              pmax    pmax
      comp=Z,220nm,1.4s
HEH                              pmax    pmax
      comp=Z,12µm,7.1s
HEH                              LR      LR
      comp=Z,17µm,16.6s
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HEH                              LR      LR
      comp=Z,20µm,14.7s
HEH                              LR      LR
      comp=Z,32µm,16.2s
SKR   Severo-Kuril's  22.60  24 eP       P        17 10 04.3 +1.6
SKR                             e                 17 10 25.0
SKR                             eS       S        17 13 58.2  -11
SKR                             eSS      SnSn     17 14 41.1 +2.2
SKR                              pmax    pmax
      comp=Z,3µm,3.8s
SKR                              MLR     MLR
      comp=Z,17µm,12.0s
BJT   Baijiatuau      22.81 301  P       P        17 10 02.6 -2.5
BJT   Baijiatuau      22.81 301  P       P        17 10 03.4 -1.7
BJT   Baijiatuau      22.81 301  P       P        17 10 02.6 -2.5
BJT                              pmax    pmax
      comp=Z,179nm,1.0s
BJT                              MLR     MLR
      comp=Z,53µm,18.0s
BJI   Beijing         22.81 301  P       P        17 10 01.1 -4.0
BJI                              S       S        17 14 08.0 -4.8
BJI                              pmax    pmax
      comp=Z,40nm,1.4s
BJI                              pmax    pmax
      comp=Z,2µm,7.9s
BJI                              LR      LR
      comp=Z,10µm,17.7s
BJI                              LR      LR
      comp=Z,23µm,16.9s
BJI                              LR      LR
      comp=Z,31µm,16.7s
HNS   HongShan        23.38 294 ⇑P       P        17 10 07.3 -3.5
HNS                              S       S        17 14 24.9 +2.6
HNS                              pmax    pmax
      comp=Z,88nm,1.1s
HNS                              pmax    pmax
      comp=Z,4µm,9.7s
HNS                              LR      LR
      comp=Z,32µm,17.9s
HNS                              LR      LR
      comp=Z,52µm,18.0s
HNS                              LR      LR
      comp=Z,60µm,17.2s
SZP   Santa           23.45 241  P       P        17 10 11.4 -0.3
WHN   Wuhan           23.62 277 ⇑P       P        17 10 11.3 -2.0
WHN                              pP      pP       17 10 18.8 -0.2
WHN                              sP      sP       17 10 22.2 +0.7
WHN                              PP      PnPn     17 10 42.9 +2.2
WHN                              S       S        17 14 30.7 +4.3
WHN                              pmax    pmax
      comp=Z,2µm,1.8s
WHN                              pmax    pmax
      comp=Z,12µm,9.8s
XLT   XiLinHaoTe      24.21 310 eP       P        17 10 15.3 -3.5
XLT                              PP      PnPn     17 10 48.8 +0.1
XLT                              S       S        17 14 29.6 -6.2
XLT                              pmax    pmax
      comp=Z,5µm,7.5s
XLT                              LR      LR
      comp=Z,3µm,17.8s
XLT                              LR      LR
      comp=Z,16µm,16.9s
XLT                              LR      LR
      comp=Z,14µm,19.2s
HIA   Hailar          24.92 324  P       P        17 10 24.2 -0.9
HIA   Hailar          24.92 324  IAMs_20 IAMs_20  17 20 33.1
      comp=Z,22µm,18.0s
HIA   Hailar          24.92 324  P       P        17 10 24.9 -0.2
HIA   Hailar          24.92 324  P       P        17 10 24.2 -0.9
HIA                              pmax    pmax
      comp=Z,410nm,1.1s
HIA                              MLR     MLR
      comp=Z,22µm,18.0s
LYN   LuoYang         24.97 287⇑iP       P        17 10 23.0 -2.7
LYN                              sP      sP       17 10 34.3 +0.3
LYN                              S       S        17 14 47.6 -0.4
LYN                              pmax    pmax
      comp=Z,120nm,1.2s
LYN                              pmax    pmax
      comp=Z,4µm,8.7s
LYN                              LR      LR
      comp=Z,32µm,18.5s
LYN                              LR      LR
      comp=Z,25µm,19.6s
LYN                              LR      LR
      comp=Z,48µm,15.5s
HILR  Hailar Array B  25.10 325  P       P        17 10 26.8  0.0
      comp=Z,67nm,0.6s,baz=134,slow=12,SNR=55
HILR                             LR      LR       17 20 33.3
      comp=Z,13µm,18.0s,baz=105,slow=37
      comp=Z,67nm,0.6s
H11N2 WAKE ISLAND Hy  25.13 110  P       P        17 10 30.9 +3.9
      baz=274,slow=9.6,SNR=5.6
H11N2                            T       T        17 36 41.5
      baz=306,slow=74,SNR=30
H11N1 WAKE ISLAND Hy  25.14 110  P       P        17 10 29.9 +2.8
      baz=274,slow=9.6,SNR=10.0
H11N1                            T       T        17 36 45.3
      baz=306,slow=74,SNR=14
H11N3 WAKE ISLAND Hy  25.15 110  P       P        17 10 29.9 +2.7
      baz=274,slow=9.6,SNR=6.3
H11N3                            T       T        17 36 46.3
      baz=306,slow=74,SNR=22
PEA0B Petropavlovsk-  25.16  23  P       P        17 10 27.6 +0.3
PEA0B Petropavlovsk-  25.16  23  P       P        17 10 27.6 +0.3
PEA0B                            pmax    pmax
      comp=Z,125nm,1.1s
PETK  Petropavlovsk-  25.16  23  P       P        17 10 28.8 +1.6
      comp=Z,13nm,0.9s,baz=218,slow=7.1,SNR=4.4
PETK                             LR      LR       17 22 22.3
      comp=Z,8µm,19.5s,baz=204,slow=41
      comp=Z,13nm,0.9s
TIY   Taiyuan         25.21 294 eP       P        17 10 26.8 -1.1
TIY                              PP      PnPn     17 11 07.8 +5.4
TIY                              S       S        17 14 55.8 +3.8
TIY                              sS      pS       17 14 58.6 +0.1
TIY                              pmax    pmax
      comp=Z,190nm,0.9s
TIY                              pmax    pmax
      comp=Z,2µm,7.6s
TIY                              LR      LR
      comp=Z,14µm,15.8s
TIY                              LR      LR
      comp=Z,42µm,17.9s
TIY                              LR      LR
      comp=Z,46µm,17.9s
CNSH  ChangSha        25.26 272  P       P        17 10 26.7 -1.7
CNSH                             S       S        17 14 53.4 +0.7
CNSH                             pmax    pmax
      comp=Z,39nm,1.2s
CNSH                             LR      LR
      comp=Z,12µm,14.3s
CNSH                             LR      LR
      comp=Z,21µm,14.9s
CNSH                             LR      LR
      comp=Z,17µm,14.3s
ZEA   Zeya            25.29 340 eP       P        17 10 28.8 +0.4
ZEA                             e                 17 11 02.4
ZEA                             eS       S        17 14 48.8 -3.9
ZEA                              pmax    pmax
      comp=E,600nm,4.0s
ZEA                              pmax    pmax
      comp=N,1µm,3.6s
ZEA                              pmax    pmax
      comp=Z,3µm,3.4s
ZEA                              pmax    pmax
      comp=N,360nm,1.0s
ZEA                              pmax    pmax
      comp=Z,760nm,1.0s
ZEA                              smax    smax
      comp=E,4µm,13.4s
ZEA                              MLR     MLR
      comp=E,6µm,12.0s
ZEA                              MLR     MLR
      comp=N,6µm,17.0s
ZEA                              MLR     MLR
      comp=Z,10µm,14.0s
TGY   Tagaytay City   25.36 234  LR      LR       17 20 52.8
      comp=Z,16µm,18.5s,baz=60,slow=38
PET   Petropavlovsk   25.42  24  P       P        17 10 29.1 -0.4
PET   Petropavlovsk   25.42  24  P       P        17 10 33.9 +4.3
PET   Petropavlovsk   25.42  24 eP       P        17 10 26.6 -3.0
PET                             eS       S        17 14 50.6 -4.2
PET                              pmax    pmax
      comp=Z,1µm,5.4s
PET                              pmax    pmax
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      comp=Z,900nm,6.3s
PET                                pmax     pmax
      comp=Z,83nm,1.0s
PET                                MLR      MLR
      comp=Z,10µm,15.0s
PET                                MLR      MLR
      comp=Z,10µm,14.0s
PET   Petropavlovsk    25.42  24 ⇓P        P        17 10 34.7 +5.1
H11S3 WAKE ISLAND Hy   25.61 113   T        T        17 37 43.2
      baz=304,slow=74,SNR=58
H11S1 WAKE ISLAND Hy   25.62 113   T        T        17 37 19.8
      baz=304,slow=74,SNR=68
H11S2 WAKE ISLAND Hy   25.63 113   T        T        17 37 14.8
      baz=304,slow=74,SNR=86
HKC   Hong Kong Obse   26.08 258 ⇑P        P        17 10 36.0 +0.2
HKPS  Hong Kong Po S   26.12 258   P        P        17 10 34.6 -1.6
HKPS                               IAMs_20  IAMs_20  17 21 00.5
      comp=Z,24µm,20.0s
HKPS  Hong Kong Po S   26.12 258   P        P        17 10 37.1 +0.9
HHC   Hu-ho-hao-te     26.42 301  eP        P        17 10 36.9 -2.0
HHC                                S        S        17 15 09.1 -2.1
HHC                                pmax     pmax
      comp=Z,90nm,0.9s
HHC                                pmax     pmax
      comp=Z,3µm,9.7s
HHC                                LR       LR
      comp=Z,19µm,15.5s
HHC                                LR       LR
      comp=Z,53µm,16.7s
HHC                                LR       LR
      comp=Z,64µm,15.6s
GZH   Guangzhou        26.47 260   P        P        17 10 32.8 -6.5
GZH                                S        S        17 15 06.0 -5.9
GZH                                pmax     pmax
      comp=Z,87nm,1.0s
GZH                                LR       LR
      comp=Z,19µm,16.1s
GZH                                LR       LR
      comp=Z,21µm,16.1s
GZH                                LR       LR
      comp=Z,50µm,17.1s
BTO   Baotou           27.52 300  eP        P        17 10 47.0 -1.8
BTO                                PP       PnPn     17 11 39.9 +5.9
BTO                                S        S        17 15 30.0 +1.5
BTO                                SS       SnSn     17 16 46.8 +7.3
BTO                                pmax     pmax
      comp=Z,16nm,0.5s
BTO                                pmax     pmax
      comp=Z,7µm,6.8s
ENH   Enshi            27.82 277   P        P        17 10 48.6 -2.9
ENH   Enshi            27.82 277   P        P        17 10 49.3 -2.2
XAN   Xi'an            27.91 286 ⇑P        P        17 10 49.5 -2.8
XAN                                S        S        17 15 32.6 -2.1
XAN                                pmax     pmax
      comp=Z,160nm,1.2s
XAN                                pmax     pmax
      comp=Z,3µm,10.4s
XAN                                LR       LR
      comp=Z,19µm,18.5s
XAN                                LR       LR
      comp=Z,16µm,19.9s
XAN                                LR       LR
      comp=Z,20µm,21.3s
DAV   Davao City (W)   28.04 216   LR       LR       17 20 29.9
      comp=Z,11µm,20.2s,baz=52,slow=33
GULI  GuiLin           28.24 267   P        P        17 10 52.0 -3.3
GULI                               S        S        17 15 36.7 -3.2
GULI                               pmax     pmax
      comp=Z,29nm,1.7s
GULI                               pmax     pmax
      comp=Z,2µm,10.7s
GULI                               LR       LR
      comp=Z,16µm,16.3s
GULI                               LR       LR
      comp=Z,12µm,17.7s
GULI                               LR       LR
      comp=Z,21µm,15.5s
PATS  Pohnpei          28.36 144   P        P        17 11 01.3 +4.9
      comp=Z,180nm,1.1s
PATS  Pohnpei          28.36 144            P        17 10 54.9 -1.5
PATS                               IAMs_20  IAMs_20  17 22 49.7
      comp=Z,19µm,19.0s
PATS  Pohnpei          28.36 144   P        P        17 11 01.6 +5.2
MA2   Magadan          29.46   9   LR       LR       17 25 54.8
      comp=Z,7µm,18.1s,baz=200,slow=42
MA2   Magadan          29.46   9   P        P        17 11 05.1 -0.6
MA2                                IAmb     IAmb     17 11 37.1
      comp=Z,411nm,1.9s
MA2   Magadan          29.46   9   P        P        17 11 06.9 +1.2
MA2   Magadan          29.46   9⇑eP        P        17 11 04.5 -1.2
MA2                                pmax     pmax
      comp=Z,53nm,1.4s
MA2                                MLR      MLR
      comp=Z,10µm,19.0s
MA2   Magadan          29.46   9 ⇑P        P        17 11 07.1 +1.3
MA2   Magadan          29.46   9   P        P        17 11 05.1 -0.6
      comp=Z,3µmcomp=Z,110nm,0.9s
CIT   Chita            29.72 324  eP        P        17 11 08.8 +0.6
CIT                               e                  17 11 19.8
CIT                               e                  17 12 01.8
CIT                               e                  17 12 14.2
CIT                               e                  17 16 11.0
CIT                               e                  17 17 55.4
CIT                               eS        ScS      17 21 47.0 +0.1
CIT                                pmax     pmax
      comp=Z,1µm,2.6s
GYA   Guiyang          31.09 271 ⇑P        P        17 11 18.3 -2.3
GYA                                pP       pP       17 11 23.0 -3.7
GYA                                PP       PnPn     17 12 25.1 +2.8
GYA                                PcP      PcP      17 14 17.5 +1.6
GYA                                S        S        17 16 18.8 -6.0
GYA                                sS       sS       17 16 33.5 -1.9
GYA                                pmax     pmax
      comp=Z,47nm,1.0s
GYA                                pmax     pmax
      comp=Z,2µm,10.5s
GYA                                LR       LR
      comp=Z,16µm,15.2s
GYA                                LR       LR
      comp=Z,18µm,18.6s
GYA                                LR       LR
      comp=Z,24µm,18.5s
QIZ   Qiongzhong       31.16 256   IAMs_20  IAMs_20  17 23 15.9
      comp=Z,17µm,20.0s
QIZ   Qiongzhong       31.16 256   P        P        17 11 20.4 -0.8
QIZ                                S        S        17 16 26.4 +0.6
QIZ                                pmax     pmax
      comp=Z,2µm,10.6s
QIZ                                LR       LR
      comp=Z,9µm,15.9s
QIZ                                LR       LR
      comp=Z,7µm,16.7s
QIZ                                LR       LR
      comp=Z,16µm,21.0s
ULN   Ulaanbaatar      31.54 313   P        P        17 11 24.6 +0.2
ULN                                P        P        17 11 24.6 +0.2
ULN                                P        P        17 11 24.6 +0.2
ULN                                S        S        17 16 31.0 -0.6
ULN                                S        S        17 16 31.0 -0.6
ULN                                S        S        17 16 31.0 -0.6
ULN   Ulaanbaatar      31.54 313   P        P        17 11 24.4  0.0
ULN                                IAmb     IAmb     17 12 09.4
      comp=Z,220nm,1.2s
ULN   Ulaanbaatar      31.54 313   IAMs_20  IAMs_20  17 24 36.0
      comp=Z,21µm,18.0s
ULN   Ulaanbaatar      31.54 313   P        P        17 11 24.3 -0.2
      comp=Z,632nm,2.6s
ULN   Ulaanbaatar      31.54 313c iP        P        17 11 24.7 +0.2
ULN                                pmax     pmax
      comp=Z,117nm,1.0s
ULN                                MLR      MLR
      comp=Z,22µm,16.0s
ULN   Ulaanbaatar      31.54 313 ⇑P        P        17 11 24.5  0.0
SONM  Songino Array    31.95 312   P        P        17 11 27.9 -0.1
      comp=Z,36nm,0.8s,baz=124,slow=7.1,SNR=114
SONM                               PcP      PcP      17 14 17.8  0.0
      comp=Z,7.8nm,0.9s,baz=116,slow=2.2,SNR=2.6
SONM                               ScP      ScP      17 18 02.0 +2.3
      comp=Z,1.8nm,0.9s,baz=124,slow=4.2,SNR=2.3
SONM                               LR       LR       17 25 00.9
      comp=Z,20µm,18.4s,baz=114,slow=38
      comp=Z,36nm,0.8s
SONM  Songino Array    31.95 312            P        17 11 27.3 -0.7
SONM                               IAmb     IAmb     17 11 38.0
      comp=Z,219nm,1.4s
LZH   Lanzhou          32.01 290   P        P        17 11 26.4 -2.3
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LZH                                pP       pP       17 11 31.7 -2.9
LZH                                PcP      PcP      17 14 19.7 +1.5
LZH                                S        S        17 16 41.4 +2.3
LZH                                sS       sS       17 16 53.7 +4.3
LZH                                ScS      ScS      17 21 58.3 -0.7
LZH                                pmax     pmax
      comp=Z,55nm,1.1s
LZH                                pmax     pmax
      comp=Z,2µm,9.3s
LZH                                LR       LR
      comp=Z,16µm,17.9s
LZH                                LR       LR
      comp=Z,26µm,15.8s
LZH                                LR       LR
      comp=Z,27µm,18.6s
LZDM  Lanzhou Array    32.13 290   P        P        17 11 28.6 -1.4
      comp=Z,36nm,0.7s,baz=116,slow=6.8,SNR=32
LZDM                               PcP      PcP      17 14 17.9 -0.9
      comp=Z,2.5nm,0.5s,baz=99,slow=8.9,SNR=1.3
LZDM                               LR       LR       17 25 45.8
      comp=Z,14µm,18.0s,baz=80,slow=39
      comp=Z,36nm,0.7s
SHEM  Shemya Is, Ala   32.17  38   LR       LR       17 22 12.0
      comp=Z,4µm,20.3s,baz=239,slow=32
SMY   Shemya           32.17  38   P        P        17 11 29.7 +0.1
SMY   Shemya           32.17  38   P        P        17 11 29.7 +0.1
SMY                                pmax     pmax
      comp=Z,894nm,1.8s
BAKI  Biak             32.22 191   P        P        17 11 31.2 +0.7
      comp=Z,2µmcomp=Z,99nm,0.9s
YAK   Yakutsk          32.29 349   LR       LR       17 24 46.8
      comp=Z,10µm,18.3s,baz=158,slow=37
YAK   Yakutsk          32.29 349   P        P        17 11 30.1 -0.5
YAK   Yakutsk          32.29 349c iP        P        17 11 30.1 -0.5
YAK                               e                  17 12 33.7
YAK                               e                  17 14 18.1
YAK                               eS        S        17 16 42.1 -0.4
YAK                               eSS       SnSn     17 18 35.8 +0.9
YAK                               e                  17 21 52.2
YAK                                pmax     pmax
      comp=Z,483nm,1.3s
YAK                                pmax     pmax
      comp=N,146nm,1.3s
YAK                                pmax     pmax
      comp=E,55nm,1.3s
YAK                                pmax     pmax
      comp=Z,411nm,2.5s
YAK                                pmax     pmax
      comp=N,158nm,2.2s
YAK                                pmax     pmax
      comp=E,190nm,2.8s
YAK                                smax     smax
      comp=E,932nm,5.2s
YAK                                smax     smax
      comp=N,648nm,4.8s
YAK                                MLR      MLR
      comp=Z,11µm,21.0s
YAK                                MLR      MLR
      comp=N,8µm,19.0s
YAK                                MLR      MLR
      comp=E,6µm,17.0s
YAK   Yakutsk          32.29 349 ⇑P        P        17 11 30.3 -0.3
CD2   Chengdu          32.59 280   P        P        17 11 31.5 -2.2
CD2                                pP       pP       17 11 36.2 -3.4
CD2                                sP       sP       17 11 38.5 -3.5
CD2                                PP       PP       17 12 45.1 -2.4
CD2                                S        S        17 16 47.8 -0.2
CD2                                sS       pS       17 16 55.4 +0.4
CD2                                pmax     pmax
      comp=E,100nm,0.7s
CD2                                pmax     pmax
      comp=E,2µm,7.1s
CD2                                LR       LR
      comp=E,38µm,18.9s
SMPI  Sarmi            32.69 186   P        P        17 11 35.3 +0.8
      comp=E,4µmcomp=E,5µmcomp=E,367nm,1.3s
TNTI  Ternate          32.81 207   P        P        17 11 34.4 -1.3
TNTI  Ternate          32.81 207   P        P        17 11 35.9 +0.2
TNTI  Ternate          32.81 207   P        P        17 11 35.3 -0.4
      comp=E,3µmcomp=E,114nm,1.1s
TNTI  Ternate          32.81 207 ⇑P        P        17 11 34.8 -0.9
SRPI  Serui, Papua     32.87 190   P        P        17 11 37.8 +1.7
      comp=E,2µmcomp=E,188nm,1.0s
RKPI  Ransiki, Papua   32.89 194   P        P        17 11 37.4 +1.1
      comp=E,2µmcomp=E,111nm,1.5s
SEY   Seymchan         32.91   9   LR       LR       17 25 44.2
      comp=E,11µm,21.6s,baz=202,slow=38
SEY   Seymchan         32.91   9⇑eP        P        17 11 36.9 +0.8
SEY                                pmax     pmax
      comp=Z,53nm,1.1s
SEY                                MLR      MLR
      comp=Z,11µm,17.0s
SWI   Sorong           33.00 200   P        P        17 11 37.1 -0.2
      comp=Z,2µmcomp=Z,66nm,1.0s
MANU  Manus Island     33.03 170   P        P        17 11 36.2 -1.3
MANU  Manus Island     33.03 170 ⇑P        P        17 11 41.1 +3.6
JAY   Jayapura         33.09 182   P        P        17 11 39.4 +1.3
GENI  Genyem           33.19 183   P        P        17 11 41.2 +2.3
GENI  Genyem           33.19 183   P        P        17 11 40.4 +1.5
      comp=Z,4µmcomp=Z,5µmcomp=Z,350nm,1.8s
MYLDM Lahad Datu       33.59 225   IAMs_20  IAMs_20  17 23 48.7
      comp=Z,21µm,19.0s
MYLDM Lahad Datu       33.59 225   P        P        17 11 43.7 +1.2
MYLDM Lahad Datu       33.59 225   P        P        17 11 42.3 -0.2
      comp=Z,8µmcomp=Z,4µmcomp=Z,242nm,1.1s
MYLDM Lahad Datu       33.59 225 ⇑P        P        17 11 43.4 +1.0
KKM   Kota Kinabalu    34.38 230            P        17 11 47.1 -2.4
KKM                                IAmb     IAmb     17 12 27.9
      comp=Z,112nm,1.1s
KKM                                IAMs_20  IAMs_20  17 24 08.5
      comp=Z,13µm,20.0s
KKM   Kota Kinabalu    34.38 230   P        P        17 11 50.1 +0.6
KKM   Kota Kinabalu    34.38 230   P        P        17 11 49.1 -0.3
      comp=Z,2µmcomp=Z,108nm,1.9s
KKM   Kota Kinabalu    34.38 230 ⇑P        P        17 11 49.1 -0.3
AMKA  Amchitka         34.45  42   P        P        17 11 48.8 -0.8
FAKI  Fak Fak          34.70 197   P        P        17 11 49.8 -2.3
FAKI                               IAMs_20  IAMs_20  17 24 14.1
      comp=Z,14µm,19.0s
FAKI  Fak Fak          34.70 197   P        P        17 11 51.4 -0.7
FAKI  Fak Fak          34.70 197   P        P        17 11 49.7 -2.3
      comp=Z,2µmcomp=Z,100nm,0.9s
FAKI  Fak Fak          34.70 197 ⇑P        P        17 11 51.1 -0.9
ZAK   Zakamensk        34.73 316  eP        P        17 11 51.5 -0.7
ZAK                                pmax     pmax
      comp=Z,357nm,2.3s
IRK   Irkutsk          34.83 319  eP        P        17 11 53.7 +0.8
IRK                               eS        S        17 17 26.9 +4.6
IRK                                pmax     pmax
      comp=Z,960nm,2.9s
KMI   Kunming          34.86 271 ⇑P        P        17 11 51.8 -1.9
KMI                                sP       sP       17 12 02.9 +0.5
KMI                                S        S        17 17 16.0 -7.6
KMI                                pmax     pmax
      comp=Z,24nm,1.9s
KMI                                pmax     pmax
      comp=Z,1µm,10.2s
KMI                                LR       LR
      comp=Z,9µm,16.7s
KMI                                LR       LR
      comp=Z,12µm,18.2s
KMI                                LR       LR
      comp=Z,15µm,15.3s
GTOI  Gorontalo        34.86 214   P        P        17 11 51.9 -1.6
      comp=Z,3µmcomp=Z,149nm,1.2s
TLY   Talaya           34.98 318   P        P        17 11 55.8 +1.6
TLY                                P        P        17 11 55.8 +1.6
TLY                                P        P        17 11 55.8 +1.6
TLY                                S        S        17 17 27.7 +3.2
TLY                                S        S        17 17 27.7 +3.2
TLY                                S        S        17 17 27.7 +3.2
TLY   Talaya           34.98 318            P        17 11 54.8 +0.6
TLY                                IAmb     IAmb     17 12 07.4
      comp=Z,261nm,1.2s
TLY   Talaya           34.98 318ceP        P        17 11 55.6 +1.4
TLY                                pmax     pmax
      comp=Z,163nm,1.0s
TLY   Talaya           34.98 318 ⇑P        P        17 11 55.3 +1.1
GTA   Gaotai           35.19 296   P        P        17 11 54.5 -1.9
GTA                                sP       pwP      17 12 07.3 -1.0
GTA                                PP       PnPn     17 13 10.4 -3.9
GTA                                PcP      PcP      17 14 28.8 +1.7
GTA                                S        S        17 17 25.0 -3.3
GTA                                ScP      ScP      17 18 09.6 -1.7
GTA                                ScS      ScS      17 22 13.8 -1.6
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GTA                                pmax     pmax
      comp=Z,78nm,1.3s
GTA                                pmax     pmax
      comp=Z,2µm,9.8s
GTA                                LR       LR
      comp=Z,20µm,16.4s
GTA                                LR       LR
      comp=Z,53µm,17.4s
SLVN  Son La           35.20 264   P        P        17 11 54.8 -1.7
SLVN                               IAMs_20  IAMs_20  17 26 16.0
      comp=Z,20µm,20.0s
SLVN  Son La           35.20 264   P        P        17 11 55.2 -1.3
PZH   PanZhiHua        35.31 273   P        P        17 11 55.2 -2.3
PZH                                S        S        17 17 27.7 -2.6
PZH                                sS       sS       17 17 45.5 +4.8
PZH                                pmax     pmax
      comp=Z,70nm,1.0s
PZH                                pmax     pmax
      comp=Z,1µm,6.7s
PZH                                LR       LR
      comp=Z,11µm,15.7s
PZH                                LR       LR
      comp=Z,1µm,18.4s
PZH                                LR       LR
      comp=Z,12µm,18.8s
MIDW  Midway           35.48  84   IAMs_20  IAMs_20  17 24 36.2
      comp=Z,10µm,18.0s
MRSI  Marisa           35.53 216   P        P        17 11 58.7 -0.5
      comp=Z,5µmcomp=Z,4µmcomp=Z,284nm,1.4s
TOLI2 Tolitoli         35.59 218   P        P        17 11 57.7 -2.1
TOLI2                              IAmb     IAmb     17 12 08.8
      comp=Z,122nm,1.1s
TOLI2 Tolitoli         35.59 218   P        P        17 11 58.7 -1.1
SANI  Sanana           35.93 208   S        S        17 17 32.1 -7.6
SANI                               P        P        17 12 00.3 -2.4
SANI  Sanana           35.93 208   P        P        17 12 01.1 -1.6
SANI  Sanana           35.93 208   P        P        17 12 00.3 -2.4
      comp=Z,3µmcomp=Z,3µmcomp=Z,183nm,0.7s
DLV    Lat             36.05 246   P        P        17 12 02.2 -1.8
DLV    Lat             36.05 246   P        P        17 12 03.4 -0.6
MSAI  Masohi           36.06 202   P        P        17 12 03.4 -0.4
RABL  Rabaul           36.11 162   P        P        17 12 04.5 +0.3
RABL                               IAmb     IAmb     17 12 48.0
      comp=Z,273nm,1.5s
KRAI  Karang Ratu      36.22 203   P        P        17 12 05.9 +0.8
      comp=Z,4µmcomp=Z,3µmcomp=Z,177nm,1.5s
LUWI  Luwuk            36.44 213   P        P        17 12 03.7 -3.3
LUWI  Luwuk            36.44 213   P        P        17 12 04.9 -2.2
LUWI                               IAmb     IAmb     17 12 32.4
      comp=Z,230nm,1.0s
LUWI  Luwuk            36.44 213   P        P        17 12 07.9 +0.9
LUWI  Luwuk            36.44 213   P        P        17 12 02.4 -4.6
      comp=Z,4µmcomp=Z,237nm,1.1s
LUWI  Luwuk            36.44 213 ⇑P        P        17 12 02.7 -4.4
MOY   Mondy            36.52 317  eP        P        17 12 07.8 +0.3
MOY                                pmax     pmax
      comp=Z,540nm,2.7s
NLAI  Namlea           36.60 205   P        P        17 12 08.4  0.0
      comp=Z,4µmcomp=Z,2µmcomp=Z,118nm,1.1s
AAI   Ambon            36.63 203   P        P        17 12 09.2 +0.6
      comp=Z,4µmcomp=Z,179nm,1.4s
UBPT  Khong Chiam      36.64 253   P        P        17 12 07.9 -0.9
KIWB  Kanaga Island    36.69  43   P        P        17 12 09.1 +0.3
MPSI  Mapaga           36.71 219   P        P        17 12 07.4 -2.0
APSI  Ampana           36.87 215   P        P        17 12 09.7 -1.0
      comp=Z,3µmcomp=Z,281nm,1.2s
BNDI  Bandanaira       36.87 200   P        P        17 12 10.9 +0.2
BNDI  Bandanaira       36.87 200   P        P        17 12 10.2 -0.5
BNDI  Bandanaira       36.87 200 ⇑P        P        17 12 09.9 -0.8
ADK   Adak             36.98  43            P        17 12 10.6 -0.6
ADK                                IAmb     IAmb     17 12 23.5
      comp=Z,172nm,1.0s
ADK   Adak             36.98  43   P        P        17 12 13.5 +2.3
ADK   Adak             36.98  43   P        P        17 12 10.6 -0.6
ADK                                pmax     pmax
      comp=Z,172nm,1.0s
ADK                                MLR      MLR
      comp=Z,9µm,20.0s
ADK   Adak             36.98  43 ⇓P        P        17 12 13.7 +2.4
PCI   Palu             37.79 218   P        P        17 12 17.6 -0.9
KNGR  Kungurtug, Tuv   38.32 314⇑eP        P        17 12 22.9 +0.1
KNGR                               pmax     pmax
      comp=Z,305nm,2.4s
KNGR                               MLR      MLR
      comp=Z,15µm,16.0s
TNCH  TengChong        38.52 272 ⇑P        P        17 12 23.0 -1.9
TNCH                               pP       pP       17 12 24.8 -6.3
TNCH                               sP       sP       17 12 28.1 -5.5
TNCH                               PP       PP       17 13 53.2  0.0
TNCH                               S        S        17 18 13.8 -5.6
TNCH                               pmax     pmax
      comp=Z,100nm,1.5s
TNCH                               pmax     pmax
      comp=Z,2µm,4.1s
TNCH                               LR       LR
      comp=Z,8µm,15.1s
TNCH                               LR       LR
      comp=Z,14µm,15.8s
TNCH                               LR       LR
      comp=Z,26µm,18.4s
ATKA  Atka Island      38.54  43            P        17 12 23.8 -0.6
ATKA                               IAmb     IAmb     17 12 56.2
      comp=Z,418nm,1.8s
ATKA                               IAMs_20  IAMs_20  17 29 47.7
      comp=Z,9µm,19.0s
ATKA  Atka Island      38.54  43 ⇓P        P        17 12 26.4 +2.0
GOMU  GeErMu           39.29 291   P        P        17 12 29.1 -2.4
GOMU                               PcP      PcP      17 14 39.5 -0.5
GOMU                               S        S        17 18 30.7 -0.5
GOMU                               pmax     pmax
      comp=Z,180nm,1.0s
GOMU                               LR       LR
      comp=Z,12µm,15.5s
GOMU                               LR       LR
      comp=Z,17µm,15.1s
TTSI  Tana Toraja      39.62 216   P        P        17 12 32.8 -1.1
      comp=Z,4µmcomp=Z,58nm,1.1s
SBUM  Sibu             39.69 231   P        P        17 12 32.7 -1.8
SBUM                               IAMs_20  IAMs_20  17 30 33.3
      comp=Z,9µm,19.0s
SBUM  Sibu             39.69 231   P        P        17 12 34.4 -0.1
SBUM  Sibu             39.69 231   P        P        17 12 33.6 -0.9
SBUM  Sibu             39.69 231 ⇑P        P        17 12 33.3 -1.2
BKB   Balikpapan       39.70 221   P        P        17 12 32.9 -1.6
BKB                                IAmb     IAmb     17 12 47.9
      comp=Z,138nm,0.9s
BKB                                IAMs_20  IAMs_20  17 26 40.1
      comp=Z,10µm,21.0s
BKB   Balikpapan       39.70 221   P        P        17 12 34.2 -0.3
BKB   Balikpapan       39.70 221   P        P        17 12 33.6 -0.9
      comp=Z,7µmcomp=Z,3µmcomp=Z,142nm,0.6s
MMSI  Mamuju           39.78 217   P        P        17 12 33.9 -1.4
      comp=Z,2µmcomp=Z,127nm,1.0s
SAUI  Saumlaki         39.80 196            P        17 12 34.0 -1.3
SAUI  Saumlaki         39.80 196   P        P        17 12 38.1 +2.7
SAUI  Saumlaki         39.80 196   P        P        17 12 36.7 +1.3
      comp=Z,5µmcomp=Z,360nm,1.6s
BILL  Bilibino         39.99  14   P        P        17 12 36.9 +0.5
PMG   Port Moresby     40.24 172   LR       LR       17 28 29.4
      comp=Z,2µm,20.3s,baz=0.0,slow=35
PMG   Port Moresby     40.24 172            P        17 12 38.0 -1.0
PMG   Port Moresby     40.24 172   P        P        17 12 40.7 +1.7
PMG   Port Moresby     40.24 172   P        P        17 12 40.5 +1.5
      comp=Z,3µmcomp=Z,2µmcomp=Z,112nm,1.1s
PMG   Port Moresby     40.24 172c iP        P        17 12 39.1 +0.1
PMG                                pmax     pmax
      comp=Z,217nm,2.5s
PMG                                MLR      MLR
      comp=Z,3µm,17.0s
PMG   Port Moresby     40.24 172 ⇑P        P        17 12 39.5 +0.5
PASG  PASIGHAT         40.38 278  eP        P        17 12 35.5 -4.6
PASG                               IAmb     IAmb     17 12 41.5
      comp=Z,62nm,0.9s
SPSI  Sidrap Palu      40.44 215   P        P        17 12 39.0 -1.6
      comp=Z,3µmcomp=Z,2µmcomp=Z,107nm,0.9s
PMSI  Majene           40.47 217   P        P        17 12 39.7 -1.3
      comp=Z,4µmcomp=Z,2µmcomp=Z,87nm,1.6s
CHTO  Chiang Mai       40.48 263   P        P        17 12 39.5 -1.5
CHTO                               P        P        17 12 39.5 -1.5
CHTO                               S        S        17 18 48.8 +0.2
CHTO                               S        S        17 18 48.8 +0.2
CHTO  Chiang Mai       40.48 263            P        17 12 38.9 -2.2
CHTO                               IAMs_20  IAMs_20  17 29 35.9
      comp=Z,16µm,20.0s
CHTO  Chiang Mai       40.48 263   P        P        17 12 39.3 -1.8
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CHTO	Chiang Mai	40.48	263	P	P	17 12 38.9	-2.2
CHTO	Chiang Mai	40.48	263	P	P	17 12 38.9	-2.2
CHTO				pmax	pmax		
	comp=Z,44nm,1.0s						
CHTO				MLR	MLR		
	comp=Z,16µm,20.0s						
CHTO	Chiang Mai	40.48	263	⇑P	P	17 12 39.3	-1.8
MTKI	Muara Teweh, K	40.61	224	P	P	17 12 41.9	-0.2
	comp=Z,4µmcomp=Z,229nm,1.0s						
CM31	Chiang Mai Arr	40.63	263	P	P	17 12 40.9	-1.4
	SNR=12						
CM31	Chiang Mai Arr	40.63	263	P	P	17 12 40.0	-2.4
CMAR	Chiang Mai Arr	40.63	263	P	P	17 12 40.8	-1.5
	comp=Z,11nm,0.7s,baz=52,slow=7.4,SNR=74						
CMAR				PcP	PcP	17 14 46.0	+1.9
	comp=Z,12nm,1.0s,baz=69,slow=3.4,SNR=6.7						
CMAR				LR	LR	17 30 01.9	
	comp=Z,17µm,20.1s,baz=65,slow=37						
	comp=Z,11nm,0.7s						
CMAR	Chiang Mai Arr	40.63	263	P	P	17 12 40.0	-2.4
BNSI	Bone	40.65	215	P	P	17 12 41.9	-0.5
	comp=Z,4µmcomp=Z,3µmcomp=Z,147nm,1.3s						
CLES	Cleveland East	41.24	43	P	P	17 12 46.7	-0.2
KAPI	Kappang	41.35	215	LR	LR	17 30 01.3	
	comp=Z,4µm,20.0s,baz=22,slow=36						
KAPI	Kappang	41.35	215	P	P	17 12 47.9	-0.3
KAPI				S	S	17 18 56.2	-5.2
KAPI	Kappang	41.35	215	P	P	17 12 46.9	-1.2
KAPI	Kappang	41.35	215	P	P	17 12 48.6	+0.4
KAPI	Kappang	41.35	215	P	P	17 12 47.6	-0.5
	comp=Z,69nm,1.1s						
KAPI	Kappang	41.35	215	c iP	P	17 12 47.1	-1.1
KAPI				pmax	pmax		
	comp=Z,37nm,1.0s						
KAPI				MLR	MLR		
	comp=Z,5µm,19.0s						
KAPI	Kappang	41.35	215	⇑P	P	17 12 47.7	-0.5
BKSI	Bulukumba	41.44	214	P	P	17 12 47.7	-1.2
	comp=Z,4µmcomp=Z,53nm,1.0s						
TARA	Tarawa	41.50	129	P	P	17 12 55.0	+5.6
MOKO	MOKOCHONG	41.56	276	eP	P	17 12 45.0	-5.1
MOKO				IAmb	IAmb	17 12 51.8	
	comp=Z,130nm,0.9s						
TIXI	Tiksi	41.56	354		P	17 12 48.4	-0.9
TIXI	Tiksi	41.56	354	ceP	P	17 12 49.4	+0.1
TIXI				pmax	pmax		
	comp=Z,20nm,0.8s						
TIXI				MLR	MLR		
	comp=Z,8µm,16.0s						
TIXI	Tiksi	41.56	354	⇑P	P	17 12 49.3	+0.1
ZIRO	ZIRO	41.78	278	eP	P	17 12 46.4	-5.5
ZIRO				IAmb	IAmb	17 12 53.1	
	comp=Z,160nm,0.6s						
NIKH	Nikolski High	41.88	43	P	P	17 12 52.1	0.0
NIKH				IAMs_20	IAMs_20	17 30 12.2	
	comp=Z,9µm,19.0s						
NIKH	Nikolski High	41.88	43	P	P	17 12 56.2	+4.0
NIKH	Nikolski High	41.88	43	P	P	17 12 50.9	-1.2
	baz=258,SNR=6.4						
KOHI	KOHIMA	42.09	275	eP	P	17 12 48.8	-5.6
KOHI				IAmb	IAmb	17 12 56.5	
	comp=Z,91nm,0.2s						
SPIA	Saint Paul Isl	42.20	37	P	P	17 12 54.0	-0.7
	baz=252						
P08K	Saint George I	42.40	38	P	P	17 12 55.2	-1.1
	baz=253						
IMP	Imphal	42.52	274	eP	P	17 12 52.1	-5.7
IMP				IAmb	IAmb	17 13 10.2	
	comp=Z,14nm,0.8s						
TATA	Tatamba Isabel	42.56	153	P	P	17 13 01.6	+3.6
BBKI	Banjar Baru	42.66	222	P	P	17 12 59.4	+0.5
	comp=Z,123nm,1.0s						
TEZP	TEZPUR	42.94	277	eP	P	17 12 55.9	-5.2
TEZP				IAmb	IAmb	17 13 01.9	
	comp=Z,219nm,0.7s						
SAVO	Savo Central	43.26	154	P	P	17 13 06.0	+2.3
MMRI	Maumere	43.43	209	P	P	17 13 02.9	-2.2
MMRI	Maumere	43.43	209	P	P	17 13 04.8	-0.3
MMRI	Maumere	43.43	209	P	P	17 13 04.8	-0.3
MMRI	Maumere	43.43	209	⇑P	P	17 13 04.2	-0.9
UNV	Unalaska Valle	43.44	43	IAMs_20	IAMs_20	17 32 10.3	
	comp=Z,9µm,20.0s						
UNV	Unalaska Valle	43.44	43	P	P	17 13 06.9	+2.2
UNV	Unalaska Valle	43.44	43	P	P	17 13 04.7	0.0
	baz=259						
TAWA	Tawang	43.45	279	eP	P	17 13 00.2	-5.5
TAWA				IAmb	IAmb	17 13 14.0	
	comp=Z,229nm,1.1s						
LSA	Lhasa	43.49	282	P	P	17 13 04.5	-1.6
LSA	Lhasa	43.49	282	P	P	17 13 00.7	-5.4
LSA				S	S	17 19 40.3	+6.4
LSA				LR	LR		
	comp=Z,8µm,17.2s						
LSA				LR	LR		
	comp=Z,11µm,19.6s						
LSA	Lhasa	43.49	282	P	P	17 13 05.2	-1.0
LSA	Lhasa	43.49	282	P	P	17 13 04.5	-1.6
LSA				pmax	pmax		
	comp=Z,41nm,1.2s						
LSA				MLR	MLR		
	comp=Z,20µm,20.0s						
SOEI	Soe	43.65	206	P	P	17 13 05.3	-1.7
SOEI	Soe	43.65	206	P	P	17 13 04.8	-2.2
SOEI	Soe	43.65	206	P	P	17 13 06.5	-0.6
SOEI	Soe	43.65	206	P	P	17 13 06.4	-0.6
SOEI	Soe	43.65	206	⇑P	P	17 13 05.5	-1.6
EDFI	Ende, Flores	43.76	209	P	P	17 13 05.8	-2.1
	comp=Z,4µmcomp=Z,2µmcomp=Z,202nm,1.1s						
AKUT	Akutan	43.91	42	P	P	17 13 08.0	-0.6
AKUT				IAmb	IAmb	17 13 48.8	
	comp=Z,318nm,1.6s						
AKUT	Akutan	43.91	42	⇑P	P	17 13 11.1	+2.5
GAMB	Gambell	44.02	28	P	P	17 13 08.6	-0.7
	baz=244						
SHL	Shillong	44.05	276	P	P	17 13 08.1	-2.2
	SNR=26						
SHL	Shillong	44.05	276	P	P	17 13 07.2	-3.1
SHL	Shillong	44.05	276	P	P	17 13 07.2	-3.1
SHL				pmax	pmax		
	comp=Z,47nm,0.9s						
KDU	Kakadu	44.10	193	P	P	17 13 09.6	-0.8
	comp=Z,59nm,1.4s						
SAIH	SAIHA	44.15	271	eP	P	17 13 05.1	-6.0
SAIH				IAmb	IAmb	17 13 20.1	
	comp=Z,120nm,1.3s						
DRS	Darwin Rock St	44.19	195	P	P	17 13 14.1	+2.9
WMQ	Urumqi	44.27	303	⇑P	P	17 13 11.4	-0.3
WMQ				pP	pP	17 13 17.0	-0.8
WMQ				pmax	pmax		
	comp=Z,56nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,1µm,3.7s						
WMQ				LR	LR		
	comp=Z,15µm,23.7s						
WMQ				LR	LR		
	comp=Z,7µm,19.7s						
WMQ				LR	LR		
	comp=Z,8µm,18.7s						
BATI	Baumata	44.30	206	LR	LR	17 30 24.2	
	comp=Z,8µm,20.9s,baz=11,slow=34						
BATI	Baumata	44.30	206	P	P	17 13 11.4	-0.7
	comp=Z,3µmcomp=Z,3µmcomp=Z,268nm,1.1s						
LBFI	Labuhan Bajo,	44.31	212	P	P	17 13 10.4	-1.8
	comp=Z,1µmcomp=Z,79nm,0.8s						
COEN	Coen	44.46	178	P	P	17 13 13.9	+0.6
	comp=Z,170nm,1.6s,comp=Z,0.0nm						
COEN	Coen	44.46	178	P	P	17 13 12.1	-1.2
COEN				IAmb	IAmb	17 13 23.1	
	comp=Z,315nm,1.4s						
COEN	Coen	44.46	178	P	P	17 13 14.4	+1.1
COEN	Coen	44.46	178	⇑P	P	17 13 14.5	+1.1
MTN	Manton Dam	44.54	195	P	P	17 13 12.7	-1.2
	comp=Z,147nm,1.2s,comp=Z,0.0nm						
MTN	Manton Dam	44.54	195	P	P	17 13 12.9	-1.0
MTN				IAmb	IAmb	17 13 22.6	
	comp=Z,141nm,1.1s						
DGZ	Jazzator, Alta	44.58	311	c iP	P	17 13 14.3	+0.1
DGZ				pmax	pmax		
	comp=Z,125nm,1.0s						
DGZ				MLR	MLR		
	comp=Z,13µm,15.0s						
DBNI	Kabupaten Domp	45.07	214	P	P	17 13 16.6	-1.7
	comp=Z,2µmcomp=Z,89nm,0.9s						
M11K	Mekoryuk	45.18	33	P	P	17 13 18.2	-0.4
	baz=253						
BRDH	Bariadhala	45.24	272	LR	LR	17 35 31.0	
	comp=Z,10µm,18.2s,baz=74,slow=41						
HURO	Huro Makira	45.28	152	P	P	17 13 22.3	+2.4
FALS	False Pass	45.39	42	IAMs_20	IAMs_20	17 34 13.9	
	comp=Z,10µm,19.0s						
FALS	False Pass	45.39	42	P	P	17 13 18.7	-1.6
	baz=261						
DHUB	DHUBRI	45.52	277	eP	P	17 13 16.7	-5.1
DHUB				IAmb	IAmb	17 13 22.6	
	comp=Z,42nm,1.3s						
BASI	Baing, Sumba	45.55	210	P	P	17 13 30.5	+8.5
NGOA	Tingoa Renbel	45.56	155	P	P	17 13 25.0	+2.9
WBSI	Waikabubak, Su	45.57	212	P	P	17 13 20.4	-1.8
	comp=Z,78nm,1.1s						
PLAI	Plampang	45.61	214	P	P	17 13 21.1	-1.4
PLAI	Plampang	45.61	214	P	P	17 13 21.1	-1.4
	comp=Z,4µmcomp=Z,2µmcomp=Z,204nm,1.0s						
COBR	COOCHBEHAR	45.89	278	eP	P	17 13 19.6	-5.1
TWSI	Taliwang, Sumb	45.98	215	P	P	17 13 24.4	-1.0
	comp=Z,5µmcomp=Z,2µmcomp=Z,161nm,1.1s						
MYKOM	Kota Tinggi	46.04	239	P	P	17 13 27.3	+1.3
KMMI	Kalianget	46.09	220	P	P	17 13 26.6	+0.3
	comp=Z,5µmcomp=Z,2µmcomp=Z,140nm,1.2s						
KLNI	Mataram	46.10	217	P	P	17 13 25.9	-0.5
ZSN	Zaisan	46.20	308	⇑iP	P	17 13 26.9	-0.1
	comp=Z,276nm,2.4s						
ZSN				eS	S	17 20 13.6	+1.8
ZSN	Zaisan	46.20	308	c iP	P	17 13 26.8	-0.1
ZSN				eS	S	17 20 13.6	+1.8
ZSN				pmax	pmax		
	comp=Z,276nm,2.4s						
KULM	Kulim	46.22	245	P	P	17 13 24.9	-2.5
KULM				IAmb	IAmb	17 13 34.2	
	comp=Z,81nm,1.0s						
KULM				IAMs_20	IAMs_20	17 34 26.1	
	comp=Z,7µm,19.0s						
KULM	Kulim	46.22	245	P	P	17 13 27.2	-0.2
KULM	Kulim	46.22	245	P	P	17 13 29.3	+1.9
	comp=Z,5µmcomp=Z,2µmcomp=Z,85nm,1.1s						
KULM	Kulim	46.22	245	⇑P	P	17 13 26.7	-0.7
TNA	Tin City	46.24	26	P	P	17 13 26.0	-1.0
	baz=246						
S12K	Black Hills	46.29	41	P	P	17 13 26.8	-0.7
	baz=262						
GTK	Tadong	46.31	280	eP	P	17 13 23.2	-5.0
GTK				IAmb	IAmb	17 13 29.9	
	comp=Z,32nm,1.1s						
KHKI	Kahang-Kahang	46.31	217	P	P	17 13 28.0	0.0
K13K	Kusilvak Mount	46.35	32	P	P	17 13 26.8	-1.1
	baz=253						
IPM	Ipoh	46.43	244	P	P	17 13 26.7	-2.3
IPM				IAmb	IAmb	17 13 40.2	
	comp=Z,89nm,1.2s						
IPM	Ipoh	46.43	244	P	P	17 13 28.6	-0.5
IPM	Ipoh	46.43	244	P	P	17 13 28.4	-0.7
	comp=Z,5µmcomp=Z,2µmcomp=Z,66nm,1.2s						
IPM	Ipoh	46.43	244	⇑P	P	17 13 27.8	-1.3
M13K	Dall Lake	46.55	34	P	P	17 13 28.7	-0.7
	baz=256						
ABJI	Asem Bagus	46.56	219	P	P	17 13 30.7	+0.7
	comp=Z,5µmcomp=Z,201nm,1.3s						
ZAA0	Zalesovo Array	46.58	317	P	P	17 13 28.8	-1.0
ZALV	Zalesovo Beam	46.58	317	P	P	17 13 29.4	-0.4
	comp=Z,23nm,0.8s,baz=97,slow=8.1,SNR=41						
ZALV				PcP	PcP	17 15 03.6	0.0
	comp=Z,20nm,0.7s,baz=105,slow=3.6,SNR=6.7						
ZALV				LR	LR	17 33 48.7	
	comp=Z,17µm,18.4s,baz=99,slow=37						
	comp=Z,23nm,0.8s						
ZALV	Zalesovo Beam	46.58	317	P	P	17 13 28.6	-1.1
TPI	Tanjungpandan	46.59	231	P	P	17 13 30.0	-0.3
	comp=Z,5µmcomp=Z,2µmcomp=Z,62nm,1.3s						
RTBI	Rangdo, Negare	46.74	218	P	P	17 13 31.0	-0.4
	comp=Z,6µmcomp=Z,425nm,1.6s						
DNP	Denpasar	46.78	217	P	P	17 13 30.6	-1.1
	comp=Z,254nm,1.1s						
F14K	Arctic Creek	46.83	27	P	P	17 13 31.2	-0.3
	baz=248						
BLJI	Banyuglugur	46.87	220	P	P	17 13 31.9	-0.5
	comp=Z,5µmcomp=Z,2µmcomp=Z,48nm,1.0s						
ANM	Nome	46.88	28	P	P	17 13 31.6	-0.3
ANM				IAmb	IAmb	17 13 48.9	
	comp=Z,164nm,1.4s						
ANM	Nome	46.88	28	P	P	17 13 31.6	-0.3
ANM				pmax	pmax		
	comp=Z,164nm,1.4s						
ANM	Nome	46.88	28	P	P	17 13 31.3	-0.7
	baz=250						
IGBI	Denpasar	46.93	217	P	P	17 13 30.5	-2.4
	comp=Z,3µmcomp=Z,199nm,1.3s						
L14K	Kuka Creek	47.09	33	IAmb	IAmb	17 13 53.5	
	comp=Z,172nm,1.3s						
L14K	Kuka Creek	47.09	33	P	P	17 13 32.8	-0.9
	baz=256						
TBJI	Tambak Boyo	47.11	223	P	P	17 13 34.1	-0.2
	comp=Z,4µmcomp=Z,200nm,1.2s						
SDPT	Sand Point	47.13	41	P	P	17 13 33.8	-0.3
SDPT	Sand Point	47.13	41	P	P	17 13 38.7	+4.7
SDPT	Sand Point	47.13	41	P	P	17 13 33.1	-0.9
	baz=263						
JAGI	Jajag, Banyuwa	47.17	219	P	P	17 13 32.3	-2.5
JAGI	Jajag, Banyuwa	47.17	219	P	P	17 13 37.4	+2.6
JAGI	Jajag, Banyuwa	47.17	219	P	P	17 13 34.8	0.0
	comp=Z,4µmcomp=Z,2µmcomp=Z,216nm,1.2s						
JAGI	Jajag, Banyuwa	47.17	219	⇑P	P	17 13 32.3	-2.5
N14K	Kuskokwak Cree	47.25	35	P	P	17 13 33.9	-0.9
	baz=258						
M14K	Bethel	47.30	34	P	P	17 13 35.4	+0.2
M14K				IAmb	IAmb	17 14 03.1	
	comp=Z,135nm,1.1s						
M14K	Bethel	47.30	34	P	P	17 13 34.9	-0.4
	baz=257,SNR=7.2						
O14K	Tigyukauivet M	47.32	36	P	P	17 13 34.7	-0.8
	baz=259						
GMJI	Gumukmas	47.39	220	P	P	17 13 35.7	-0.8
	comp=Z,44nm,1.0s						
F15K	North Star Dit	47.56	27	P	P	17 13 36.7	-0.6
	baz=250						
G15K	Niukluk	47.56	28	P	P	17 13 36.9	-0.3
	baz=251						
CNBA	Chernabura Isl	47.58	42	IAmb	IAmb	17 13 46.5	
	comp=Z,110nm,0.9s						
CNBA				IAMs_20	IAMs_20	17 29 54.9	
	comp=Z,8µm,22.0s						
CHNA	Chernabura Isl	47.58	42	P	P	17 13 42.0	+4.5
CHNA	Chernabura Isl	47.58	42	P	P	17 13 36.6	-0.9
	baz=264						
L15K	Ungalak Mounta	47.73	33	P	P	17 13 37.9	-0.7
	baz=256						
S14K	Fog Glacier	47.76	40	P	P	17 13 37.8	-1.3
	baz=263						
NGJI	Ngawi	47.78	223	P	P	17 13 41.6	+2.1
	comp=Z,110nm,1.2s						
KNRA	Kununurra	47.83	197	P	P	17 13 39.3	-0.6
	comp=Z,102nm,1.1s,comp=Z,0.0nm						
KNRA	Kununurra	47.83	197	P	P	17 13 38.3	-1.5
K15K	Wolf Creek Mou	47.86	32	P	P	17 13 38.7	-1.0
	baz=256						
M15K	Kasigluk River	47.89	34	P	P	17 13 39.8	-0.1
	baz=258						
SJI	Sawahan	47.90	222	P	P	17 13 39.7	-0.8
	comp=Z,2µmcomp=Z,108nm,1.3s						
SNJI	Sawahan-Nganju	47.94	222	P	P	17 13 40.8	-0.1
	comp=Z,4µmcomp=Z,2µmcomp=Z,136nm,1.7s						
MK31	Makanchi Array	47.97	307	c iP	P	17 13 40.3	-0.5
MKAR	Makanchi Array	47.97	307	P	P	17 13 40.4	-0.4
	comp=Z,28nm,0.6s,baz=90,slow=9.3,SNR=208						
MKAR				PcP	PcP	17 15 08.7	0.0
	comp=Z,18nm,1.0s,baz=81,slow=5.5,SNR=0.9						
MKAR				LR	LR	17 34 49.4	
	comp=Z,12µm,19.2s,baz=88,slow=37						
	comp=Z,28nm,0.6s						
MKAR	Makanchi Array	47.97	307	P	P	17 13 39.6	-1.2
O15K	Ungalikthiuk R	48.04	36	P	P	17 13 40.0	-1.0
	baz=260						
N15K	Kwethluk River	48.08	35	IAmb	IAmb	17 13 51.0	
	comp=Z,110nm,0.9s						
N15K	Kwethluk River	48.08	35	P	P	17 13 40.2	-1.2
	baz=259						
SMRI	Semarang	48.12	224	P	P	17 13 40.0	-2.2
SMRI	Semarang	48.12	224	P	P	17 13 42.4	+0.2
SMRI	Semarang	48.12	224	P	P	17 13 43.9	+1.7
	comp=Z,6µmcomp=Z,5µmcomp=Z,165nm,1.1s						
H16K	Elim	48.18	29	P	P	17 13 41.2	-0.8
	baz=253,SNR=8.3						
MAKZ	Makanchi	48.19	307	P	P	17 13 41.3	-1.1
MAKZ				IAmb	IAmb	17 13 48.0	
	comp=Z,77nm,0.9s						
MAKZ	Makanchi	48.19	307	P	P	17 13 42.1	-0.3
MAKZ	Makanchi	48.19	307	⇑P	P	17 13 41.0	-1.4
C16K	Lisburne Hills	48.26	23	IAmb	IAmb	17 13 58.8	
	comp=Z,79nm,1.1s						
C16K	Lisburne Hills	48.26	23	P	P	17 13 41.0	-1.6
	baz=247						
G16K	Koyuk River	48.36	28	P	P	17 13 42.4	-1.0
	baz=252						
J16K	Anvik River	48.52	31	P	P	17 13 43.9	-0.7
	baz=256						
I17K	Unalakleet	48.63	30	P	P	17 13 44.3	-1.2
	baz=255						
MTSU	Mount Surprise	48.65	177	P	P	17 13 46.8	+0.6
	comp=Z,32nm,1.2s						
MTSU	Mount Surprise	48.65	177	P	P	17 13 49.4	+3.2
PMBI	Palembang	48.67	233	IAMs_20	IAMs_20	17 32 13.0	
	comp=Z,7µm,20.0s						
L16K	Owhat River	48.68	33	P	P	17 13 44.7	-1.2
	baz=258						
UGM	Wanagama	48.76	223	P	P	17 13 48.3	+1.1
UGM	Wanagama	48.76	223	P	P	17 13 55.5	+8.3
N16K	Nishlik Lake	48.78	35	P	P	17 13 46.5	-0.3
	baz=260,SNR=10						
M16K	Timber Creek	48.79	34	IAmb	IAmb	17 13 55.8	
	comp=Z,62nm,0.8s						
M16K	Timber Creek	48.79	34	P	P	17 13 47.6	+0.8
	baz=260,SNR=8.2						
D17K	Noatak River	48.84	25	P	P	17 13 46.5	-0.6
	baz=250,SNR=26						
CTJI	Waduk Cacaban	48.85	225	P	P	17 13 48.4	+0.6
	comp=Z,6µmcomp=Z,3µmcomp=Z,84nm,1.3s						
P16K	Nushagak River	48.95	37	IAMs_20	IAMs_20	17 34 38.8	
	comp=Z,6µm,18.0s						
P16K	Nushagak River	48.95	37	P	P	17 13 47.7	-0.3
	baz=262						
O16K	Kokwok River B	48.98	36	IAMs_20	IAMs_20	17 33 52.6	
	comp=Z,6µm,18.0s						
O16K	Kokwok River B	48.98	36	P	P	17 13 47.3	-0.9
	baz=262						
RDOG	Red Dog Mine	49.02	24	IAmb	IAmb	17 14 00.1	
	comp=Z,64nm,0.9s						
RDOG	Red Dog Mine	49.02	24	P	P	17 13 47.8	-0.7
	baz=250,SNR=14						
G17K	Kiwalik Mounta	49.07	28	P	P	17 13 48.0	-0.9
	baz=254,SNR=9.0						
C17K	DeLong Mountai	49.08	24	P	P	17 13 48.6	-0.4
	baz=249						
E17K	Hotham Inlet	49.09	26	P	P	17 13 48.9	-0.1
	baz=252,SNR=13						
JMUI	Jamui	49.09	278	eP	P	17 13 44.4	-5.2
PSI	Prapat	49.11	244	LR	LR	17 34 31.0	
	comp=Z,3µm,18.2s,baz=64,slow=36						
PSI	Prapat	49.11	244	P	P	17 13 49.8	-0.2
F17K	Baldwin Pennin	49.11	26	P	P	17 13 48.1	-1.0
	baz=253						
PBA	Port Blair	49.12	258	P	P	17 13 48.4	-1.5
NRIK	Noril'sk	49.16	338	P	P	17 13 49.9	+0.4
	comp=Z,41nm,0.8s,baz=110,slow=9.0,SNR=54						
NRIK				LR	LR	17 34 27.7	
	comp=Z,9µm,22.0s,baz=117,slow=36						
	comp=Z,41nm,0.8s						
NRIK	Noril'sk	49.16	338	P	P	17 13 49.2	-0.3
NRIK	Noril'sk	49.16	338	c iP	P	17 13 49.6	+0.1
NRIK				pmax	pmax		
	comp=Z,145nm,1.0s						
NRIK				MLR	MLR		
	comp=Z,9µm,23.0s						
LHMI	Lhok Sumawe	49.18	248	P	P	17 13 51.7	+1.3
J17K	VABM Dome	49.21	31	IAmb	IAmb	17 14 04.4	
	comp=Z,114nm,0.9s						
J17K	VABM Dome	49.21	31	P	P	17 13 49.5	-0.5
	baz=257						
H17K	Granite Mounta	49.22	29	P	P	17 13 48.9	-1.1
	baz=255						
KPJI	Karang Pucung	49.26	225	P	P	17 13 50.4	-0.5
	comp=Z,3µmcomp=Z,182nm,1.0s						
L17K	Donlin	49.31	32	P	P	17 13 49.4	-1.4
	baz=259						
K17K	Iditarod	49.42	32	IAMs_20	IAMs_20	17 36 31.8	
	comp=Z,6µm,18.0s						
K17K	Iditarod	49.42	32	P	P	17 13 50.6	-1.0
	baz=259,SNR=18						
O17K	Koliganek Bris	49.50	36	P	P	17 13 51.7	-0.6
	baz=262						
KCSI	Kotacane, Aceh	49.56	246	P	P	17 13 52.9	-0.4
N17K	Nushagak Hills	49.56	35	IAmb	IAmb	17 14 02.2	
	comp=Z,86nm,0.9s						
N17K	Nushagak Hills	49.56	35	P	P	17 13 52.0	-0.7
	baz=262						
M17K	Holitna River	49.58	33	IAmb	IAmb	17 14 00.8	
	comp=Z,114nm,0.9s						
M17K	Holitna River	49.58	33	P	P	17 13 51.5	-1.4
	baz=261,SNR=8.9						
Q16K	King Salmon	49.59	37	P	P	17 13 51.8	-1.2
	baz=264						
R17L	Mt. Peulik Vol	49.64	38	P	P	17 13 52.5	-0.9
	baz=265						
PLK4	Peulik 4	49.65	38	IAmb	IAmb	17 14 10.7	
	comp=Z,82nm,0.8s						
E18K	Tukpahlearik C	49.65	25	IAmb	IAmb	17 14 10.3	
	comp=Z,173nm,1.6s						
E18K	Tukpahlearik C	49.65	25	P	P	17 13 52.7	-0.6
	baz=252,SNR=11						
P17K	Kvichak River	49.76	36	P	P	17 13 53.1	-1.1
	baz=263						
F18K	Selawik	49.77	26	P	P	17 13 53.6	-0.6
	baz=254,SNR=12						
C18K	Utukok River	49.83	24	IAmb	IAmb	17 14 11.2	
	comp=Z,173nm,1.6s						
C18K	Utukok River	49.83	24	P	P	17 13 53.6	-1.0
	baz=251,SNR=9.8						
B18K	Kokolik River	49.86	23	P	P	17 13 53.1	-1.8
	baz=250						
MNSI	Mandailing Nat	49.89	242	P	P	17 13 56.7	+0.9
	comp=Z,88nm,1.1s						
H18K	Honhosa River	49.91	29	P	P	17 13 54.5	-0.8
	baz=257						
TV1H	Townsville Har	49.94	174	P	P	17 13 59.7	+3.7
Q17K	Contact Creek	49.95	38	P	P	17 13 55.1	-0.8
	baz=265,SNR=11						
G18K	Tagagawik	49.98	28	IAmb	IAmb	17 14 26.5	
	comp=Z,89nm,1.1s						
G18K	Tagagawik	49.98	28	P	P	17 13 55.7	-0.1
	baz=256,SNR=19						
GAYA	Gaya	49.98	278	eP	P	17 13 51.5	-5.0
KLI	Kotabumi	50.01	231	P	P	17 14 05.6	+8.9
DBJI	Dramaga	50.03	228	P	P	17 13 57.1	+0.3
	comp=Z,4µmcomp=Z,3µmcomp=Z,119nm,1.4s						
L18K	Granite Mounta	50.06	32	IAmb	IAmb	17 14 17.5	
	comp=Z,178nm,1.5s						
L18K	Granite Mounta	50.06	32	P	P	17 13 55.1	-1.4
	baz=261						
PPI	Padang Panjang	50.10	240	P	P	17 13 57.6	+0.2
BBJI	Bungbulang	50.15	227	P	P	17 13 58.9	+1.1
BBJI	Bungbulang	50.15	227	P	P	17 13 57.6	-0.2
MDSI	Maura Dua	50.20	232	P	P	17 13 57.0	-1.1
	comp=Z,3µmcomp=Z,197nm,1.2s						
N18K	Kilae Creek	50.22	35	IAmb	IAmb	17 14 18.5	
	comp=Z,105nm,1.3s						
N18K	Kilae Creek	50.22	35	P	P	17 13 57.0	-0.7
	baz=263						
ACHA	Angle Creek He	50.24	38	P	P	17 13 58.4	+0.4
PDGK	Podgornoye	50.25	303	P	P	17 13 57.5	-0.9
KURK	Kurchatov	50.26	312	P	P	17 13 58.5	+0.4
KURK				P	P	17 13 58.5	+0.4
KURK				S	S	17 21 11.6	+2.7
KURK				S	S	17 21 11.6	+2.7
KURK	Kurchatov	50.26	312	P	P	17 13 57.3	-0.8
KURK	Kurchatov	50.26	312	c iP	P	17 13 57.7	-0.4
KURK				pmax	pmax		
	comp=Z,252nm,1.0s						
KURK				MLR	MLR		
	comp=Z,26µm,16.0s						
J18K	Innoko River	50.27	31	P	P	17 13 56.5	-1.6
	baz=260						
SHLS	Shalkode	50.29	303	⇑iP	P	17 13 55.8	-3.0
	comp=Z,176nm,2.3s						
SHLS	Shalkode	50.29	303	c iP	P	17 13 55.7	-3.0
SHLS				pmax	pmax		
	comp=Z,176nm,2.3s						
KURBB	Kurchatov Arra	50.32	312	P	P	17 13 58.2	-0.4
	comp=Z,154nm,0.9s,baz=88,slow=7.2,SNR=495						
KURBB				LR	LR	17 36 01.5	
	comp=Z,15µm,20.2s,baz=90,slow=37						
	comp=Z,154nm,0.9s						

AUAYR	Ayr State High	50.32	173	P	P	17 14 02.5	+3.7
PDSI	Padang	50.35	239	P	P	17 13 58.9	-0.4
M18K	Stony River	50.36	33	P	P	17 13 58.4	-0.4
	baz=262						
A19K	Wainwright	50.39	22	P	P	17 13 57.9	-0.9
	baz=250						
P18K	Big Mountain,	50.40	36	IAmb	IAmb	17 14 07.8	
	comp=Z,146nm,0.9s						
P18K	Big Mountain,	50.40	36	P	P	17 13 58.8	-0.3
	baz=264,SNR=10						
KRJI	Kerinci	50.42	237	P	P	17 13 59.9	0.0
	comp=Z,5µmcomp=Z,220nm,1.8s						
GCSA	Galena City Sc	50.44	29	P	P	17 13 58.4	-0.9
	baz=258						
Q18K	Katmai Hardscr	50.45	37	P	P	17 13 59.2	-0.4
	baz=265						
O18K	Koktuh Hills	50.46	36	P	P	17 13 58.9	-0.7
	baz=264						
C19K	Lookout Ridge	50.52	23	IAmb	IAmb	17 14 15.9	
	comp=Z,256nm,1.6s						
C19K				IAMs_20	IAMs_20	17 35 17.8	
	comp=Z,6µm,19.0s						
C19K	Lookout Ridge	50.52	23	P	P	17 13 58.8	-1.2
	baz=252						
F19K	Shaleruckik Mo	50.55	26	P	P	17 13 59.6	-0.5
	baz=256,SNR=13						
MASI	Maura Aman, Be	50.59	235	P	P	17 14 00.7	-0.4
UZB	Uzynbulak	50.61	303	⇑*i*P	P	17 14 00.6	-0.6
	comp=Z,162nm,2.1s						
UZB	Uzynbulak	50.61	303	*c i*P	P	17 14 00.5	-0.6
UZB				pmax	pmax		
	comp=Z,162nm,2.1s						
G19K	Purcell Mounta	50.66	27	P	P	17 14 00.7	-0.2
G19K				IAmb	IAmb	17 14 17.2	
	comp=Z,143nm,1.7s						
G19K	Purcell Mounta	50.66	27	P	P	17 14 00.2	-0.8
	baz=257,SNR=14						
LWLI	Liwa	50.67	232	P	P	17 14 01.2	-0.6
	comp=Z,4µmcomp=Z,176nm,1.0s						
KSI	Kapahiang	50.70	235	P	P	17 14 00.9	-1.1
	comp=Z,5µmcomp=Z,4µmcomp=Z,143nm,1.1s						
CTA	Charters Tower	50.72	175	LR	LR	17 36 34.9	
	comp=Z,82nm,19.0s,baz=351,slow=37						
CTA	Charters Tower	50.72	175	P	P	17 14 04.6	+2.7
CTAO	Charters Tower	50.72	175	P	P	17 14 01.3	-0.6
CTAO	Charters Tower	50.72	175	P	P	17 14 04.6	+2.7
CTAO	Charters Tower	50.72	175	P	P	17 14 01.3	-0.6
CTAO				pmax	pmax		
	comp=Z,675nm,1.9s						
CTAO				MLR	MLR		
	comp=Z,5µm,22.0s						
CTAO	Charters Tower	50.72	175	⇑P	P	17 14 02.9	+1.0
WB0	Warramunga Arr	50.72	189	P	P	17 14 01.1	-0.9
KASI	Kota Agung	50.74	231	P	P	17 14 02.0	-0.2
	comp=Z,3µmcomp=Z,63nm,1.1s						
WUS	Wushi	50.75	300	IAmb	IAmb	17 14 05.3	
	comp=Z,294nm,1.7s						
SII	Sitkinak Islan	50.76	40	IAMs_20	IAMs_20	17 30 02.9	
	comp=Z,8µm,21.0s						
SII	Sitkinak Islan	50.76	40	P	P	17 14 01.9	0.0
	baz=268						
H19K	Roundabout Mou	50.78	28	IAmb	IAmb	17 14 19.5	
	comp=Z,100nm,1.1s						
H19K	Roundabout Mou	50.78	28	P	P	17 14 00.7	-1.1
	baz=258,SNR=16						
TDK	Taldyqorghan	50.82	305	⇑*i*P	P	17 14 02.4	-0.1
TDK				LR	LR	17 36 27.4	
	comp=Z,8µm,14.9s						
TDK	Taldyqorghan	50.82	305	*c i*P	P	17 14 02.4	-0.1
TDK				MLR	MLR		
	comp=Z,8µm,15.0s						
J19K	Poorman	50.84	30	IAmb	IAmb	17 14 22.3	
	comp=Z,239nm,1.8s						
J19K				IAMs_20	IAMs_20	17 35 58.6	
	comp=Z,6µm,18.0s						
J19K	Poorman	50.84	30	P	P	17 14 01.5	-0.8
	baz=260						
D19K	Kuna River	50.86	24	IAmb	IAmb	17 14 17.9	
	comp=Z,225nm,1.8s						
D19K	Kuna River	50.86	24	P	P	17 14 02.1	-0.4
	baz=254,SNR=10						
WRAB	Tennant Creek	50.89	189	P	P	17 14 02.2	-1.0
WRAB	Tennant Creek	50.89	189	IAMs_20	IAMs_20	17 35 16.4	
	comp=Z,6µm,19.0s						
WRAB	Tennant Creek	50.89	189	P	P	17 14 02.6	-0.6
WRAB	Tennant Creek	50.89	189	*c i*P	P	17 14 02.8	-0.4
WRAB				pmax	pmax		
	comp=Z,167nm,1.0s						
WRAB				MLR	MLR		
	comp=Z,5µm,18.0s						
WB2	Warramunga Arr	50.90	189	P	P	17 14 02.3	-1.0
WRA	Warramunga Arr	50.91	189	P	P	17 14 03.2	-0.1
	comp=Z,201nm,1.0s,baz=6.5,slow=7.6,SNR=233						
WRA				PcP	PcP	17 15 21.4	+1.8
	comp=Z,19nm,0.7s,baz=11,slow=3.9,SNR=1.4						
WRA				ScP	ScP	17 19 17.8	+3.5
	comp=Z,8.7nm,1.1s,baz=3.4,slow=3.9,SNR=4.3						
WRA				S	S	17 21 13.3	-5.1
	comp=Z,2.9nm,0.8s,baz=11,slow=13,SNR=6.7						
WRA				LR	LR	17 35 45.0	
	comp=Z,5µm,18.4s,baz=5.5,slow=36						
WRA				P4KPbc		17 51 35.7	
	comp=Z,1.8nm,1.0s,baz=9.1,slow=4.9,SNR=6.5						
	comp=Z,201nm,1.0s						
WRA	Warramunga Arr	50.91	189	P	P	17 14 02.3	-1.0
L19K	White Mountain	50.91	33	P	P	17 14 02.0	-1.0
	baz=262						
E19K	Redstone River	50.91	26	IAmb	IAmb	17 14 11.6	
	comp=Z,80nm,0.8s						
E19K	Redstone River	50.91	26	P	P	17 14 02.6	-0.3
	baz=256,SNR=65						
N19K	Bonanza Creek	50.92	34	P	P	17 14 02.0	-1.1
	baz=264						
O19K	Port Alsworth	50.94	35	P	P	17 14 02.1	-1.0
	baz=264						
MNAI	Manna	50.95	234	IAMs_20	IAMs_20	17 35 40.4	
	comp=Z,6µm,19.0s						
FITZ	Fitzroy Crossi	50.99	200	LR	LR	17 35 20.7	
	comp=Z,3µm,20.2s,baz=16,slow=36						
FITZ	Fitzroy Crossi	50.99	200	P	P	17 14 02.9	-1.0
FITZ	Fitzroy Crossi	50.99	200	P	P	17 14 04.3	+0.3
FITZ	Fitzroy Crossi	50.99	200	⇑P	P	17 14 05.0	+1.0
QIS	Mount Isa	51.05	183	P	P	17 14 03.7	-0.7
	comp=Z,225nm,1.5s,comp=Z,0.0nm						
QIS	Mount Isa	51.05	183	P	P	17 14 04.5	+0.1
SATY	Saty	51.07	303	*e*P	P	17 14 04.3	-0.3
	comp=Z,222nm,2.6s						
SATY				*e*S	S	17 21 22.0	+1.1
SATY	Saty	51.07	303	*e*P	P	17 14 04.2	-0.3
SATY				*e*S	S	17 21 21.9	+1.1
SATY				pmax	pmax		
	comp=Z,222nm,2.6s						
GSI	Gunungsitoli	51.09	244	P	P	17 14 03.0	-1.9
GSI	Gunungsitoli	51.09	244	P	P	17 14 04.5	-0.5
GSI	Gunungsitoli	51.09	244	P	P	17 14 04.4	-0.5
GSI	Gunungsitoli	51.09	244	⇑P	P	17 14 03.2	-1.7
PRZ	Przheval'sk	51.16	302	IAmb	IAmb	17 14 08.8	
	comp=Z,127nm,1.2s						
BWNR	Bhubaneshwar	51.17	272	*e*P	P	17 14 00.1	-5.3
Q19K	Cape Douglas,	51.18	37	IAMs_20	IAMs_20	17 33 07.8	
	comp=Z,7µm,19.0s						
Q19K	Cape Douglas,	51.18	37	P	P	17 14 02.6	-2.4
	baz=266						
OHAK	Old Harbor	51.28	39	IAmb	IAmb	17 14 15.6	
	comp=Z,98nm,0.8s						
OHAK	Old Harbor	51.28	39	P	P	17 14 08.1	+2.4
OHAK	Old Harbor	51.28	39	P	P	17 14 03.9	-1.8
	baz=268						
ARXS	Arharly	51.33	304	*e*P	P	17 14 05.9	-0.5
SNSI	Sinabang, Aceh	51.38	246	P	P	17 14 06.2	-0.8
	comp=Z,5µmcomp=Z,4µmcomp=Z,215nm,1.2s						
F20K	Avaraart Lake	51.39	26	P	P	17 14 06.9	+0.5
	baz=258						
H20K	Anotleneega Mo	51.41	28	P	P	17 14 05.6	-1.0
	baz=260						
K20K	Telida	51.42	31	IAmb	IAmb	17 14 16.3	
	comp=Z,109nm,0.9s						
K20K	Telida	51.42	31	P	P	17 14 06.3	-0.5
	baz=262,SNR=49						
P19K	Oil Pt	51.44	36	P	P	17 14 05.9	-1.0
	baz=266						
D20K	Etivluk River	51.45	24	IAmb	IAmb	17 14 42.7	
	comp=Z,102nm,1.1s						
D20K	Etivluk River	51.45	24	P	P	17 14 06.3	-0.6
	baz=256,SNR=34						
I20K	Naaghedeneel	51.46	29	IAmb	IAmb	17 14 16.4	
	comp=Z,92nm,0.9s						
I20K	Naaghedeneel	51.46	29	P	P	17 14 06.1	-0.9
	baz=261						
E20K	Nigu River	51.49	25	P	P	17 14 06.6	-0.6
	baz=256,SNR=28						
J20K	Nowinta River	51.51	30	IAmb	IAmb	17 14 16.7	
	comp=Z,87nm,0.9s						
J20K				IAMs_20	IAMs_20	17 36 17.1	
	comp=Z,6µm,18.0s						
J20K	Nowinta River	51.51	30	P	P	17 14 06.8	-0.6
	baz=262,SNR=35						
B20K	Meade River	51.60	23	IAmb	IAmb	17 14 44.0	
	comp=Z,106nm,1.1s						
B20K				IAMs_20	IAMs_20	17 40 06.1	
	comp=Z,5µm,18.0s						
B20K	Meade River	51.60	23	P	P	17 14 07.8	-0.2
	baz=254						
SISI	Saibi	51.65	240	P	P	17 14 17.5	+8.5
KDAK	Kodiak Island	51.68	38	LR	LR	17 35 07.5	
	comp=Z,8µm,21.2s,baz=252,slow=35						
KDAK	Kodiak Island	51.68	38	P	P	17 14 10.1	+1.4
KDAK	Kodiak Island	51.68	38	IAMs_20	IAMs_20	17 35 06.0	
	comp=Z,10µm,20.0s						
KDAK	Kodiak Island	51.68	38	⇓*e*P	P	17 14 10.1	+1.4
KDAK				pmax	pmax		
	comp=Z,589nm,2.4s						
KDAK	Kodiak Island	51.68	38	⇓P	P	17 14 10.2	+1.5
KDAK	Kodiak Island	51.68	38	P	P	17 14 08.0	-0.6
	baz=268						
M20K	Styx River	51.68	33	P	P	17 14 09.1	+0.3
	baz=264						
TARG	Taragay, Kyrgy	51.71	301	IAmb	IAmb	17 14 35.1	
	comp=Z,163nm,1.4s						
O20K	Slope Mountain	51.77	36	P	P	17 14 08.3	-1.2
	baz=266						
Q20K	Shuyak Island	51.81	37	P	P	17 14 09.0	-0.6
	baz=268						
IMAR	Indian Mountai	51.96	28	P	P	17 14 11.7	+0.9
CHKK	Chushkaly	51.98	304	*e*P	P	17 14 10.9	-0.3
CHKK	Chushkaly	51.98	304	*e*P	P	17 14 10.9	-0.3
SANVU	Saraoutou	52.01	148	P	P	17 14 10.7	-0.9
SANVU	Saraoutou	52.01	148	P	P	17 14 14.6	+3.0
SANVU	Saraoutou	52.01	148	⇓P	P	17 14 14.1	+2.5
MDOK	Medeo	52.04	303	*e*P	P	17 14 11.6	-0.2
MDOK				LR	LR	17 37 25.6	
MDOK	Medeo	52.04	303	*e*P	P	17 14 11.6	-0.2
SPCR	Spurr Chakacha	52.06	34	P	P	17 14 11.6	-0.1
	baz=266,SNR=23						
AAA	Alma-Ata	52.13	303	*e*P	P	17 14 12.2	-0.3
AAA				LR	LR	17 37 12.1	
	comp=Z,8µm,18.0s						
AAA	Alma-Ata	52.13	303	*e*P	P	17 14 12.1	-0.3
AAA				MLR	MLR		
	comp=Z,8µm,18.0s						
TNSS	Tian-Shan	52.13	303	*e*P	P	17 14 12.1	-0.7
TNSS	Tian-Shan	52.13	303	*e*P	P	17 14 12.1	-0.7
BRCI	Bahraich	52.14	283	*e*P	P	17 14 08.3	-4.3
BRCI				IAmb	IAmb	17 14 12.7	
	comp=Z,697nm,0.3s						
A21K	Barrow	52.15	21	P	P	17 14 11.8	-0.2
	baz=254						
G21K	Allakaket	52.15	27	P	P	17 14 12.2	+0.1
	baz=260,SNR=26						
C21K	Knifeblade Rid	52.20	24	P	P	17 14 11.2	-1.2
	baz=257,SNR=19						
PPLA	Purkeypile	52.22	32	P	P	17 14 12.3	-0.6
	baz=264,SNR=14						
HOM	Homer	52.24	36	P	P	17 14 12.8	-0.1
	baz=267						
CHUM	Lake Minchumin	52.27	31	P	P	17 14 12.8	-0.3
	baz=264,SNR=15						
F21K	Alatna River	52.28	26	P	P	17 14 12.8	-0.3
	baz=260						
H21K	Melozitna Rive	52.29	28	P	P	17 14 13.4	+0.2
	baz=262						
E21K	Killik River	52.33	25	P	P	17 14 13.6	+0.1
	baz=258						
JHSG	JHARSUGUGA	52.34	275	*e*P	P	17 14 08.8	-5.4
B21K	Ikpikpuk River	52.36	23	P	P	17 14 13.3	-0.3
	baz=257,SNR=25						
KUU	Kurty	52.43	304	*e*P	P	17 14 14.5	-0.2
KUU				LR	LR	17 37 43.4	
	comp=Z,5µm,14.8s						
KUU	Kurty	52.43	304	*e*P	P	17 14 14.4	-0.2
KUU				MLR	MLR		
	comp=Z,5µm,15.0s						
SKT	Skwentna	52.44	33	IAMs_20	IAMs_20	17 38 49.1	
	comp=Z,5µm,18.0s						
SKT	Skwentna	52.44	33	P	P	17 14 13.3	-1.1
	baz=266,SNR=12						
CNPM	China Poot	52.45	36	IAmb	IAmb	17 14 22.5	
	comp=Z,91nm,0.9s						
CAPN	Captain Cook N	52.55	35	P	P	17 14 14.2	-0.8
	baz=267						
I21K	Tanana	52.57	29	P	P	17 14 15.9	+0.6
I21K				IAmb	IAmb	17 14 33.3	
	comp=Z,185nm,1.5s						
I21K	Tanana	52.57	29	P	P	17 14 14.9	-0.4
	baz=263,SNR=10						
A22K	Sinclair Lake	52.58	22	P	P	17 14 14.7	-0.4
	baz=256						
BRLK	Bradley Lake	52.63	36	IAmb	IAmb	17 14 40.7	
	comp=Z,88nm,0.9s						
BRSE	Bradley Lake S	52.70	36	P	P	17 14 15.7	-0.7
	baz=268						
ALBI	Allahabad	52.72	280	*e*P	P	17 14 12.4	-4.6
ALBI				IAmb	IAmb	17 14 18.3	
	comp=Z,101nm,1.1s						
ULHL	Ulahol	52.77	302	P	P	17 14 18.8	+1.4
	SNR=6.7						
SUA	Susitna One	52.78	34	P	P	17 14 17.5	+0.5
SUA				IAmb	IAmb	17 14 25.6	
	comp=Z,73nm,0.8s						
SUA	Susitna One	52.78	34	P	P	17 14 16.8	-0.2
	baz=267,SNR=14						
F22K	John River	52.83	26	P	P	17 14 16.3	-0.8
	baz=261						
LGTI	Lohaghat	52.83	285	*e*P	P	17 14 13.2	-4.7
L22K	Petersville	52.84	32	IAmb	IAmb	17 14 25.4	
	comp=Z,68nm,0.8s						
KTH	Kantishna Hill	52.85	31	IAmb	IAmb	17 14 56.5	
	comp=Z,352nm,1.8s						
BPAW	Bear Paw Mtn.	52.87	31	IAmb	IAmb	17 14 38.2	
	comp=Z,235nm,1.9s						
BPAW	Bear Paw Mtn.	52.87	31	P	P	17 14 17.1	-0.5
	baz=265						
D22K	Ayikyak River	52.88	24	IAmb	IAmb	17 14 34.6	
	comp=Z,376nm,1.9s						
D22K	Ayikyak River	52.88	24	P	P	17 14 17.2	-0.3
	baz=259						
H22K	Ishtalitna Cre	52.91	28	IAmb	IAmb	17 14 35.0	
	comp=Z,224nm,1.6s						
H22K	Ishtalitna Cre	52.91	28	P	P	17 14 18.0	+0.3
	baz=263						
B22K	Teshekpuk Lake	52.92	23	P	P	17 14 17.9	+0.1
	baz=258,SNR=14						
JOSI	Joshimath	52.92	287	*e*P	P	17 14 14.6	-4.1
BOOM	Boomskoye usch	52.95	302	IAmb	IAmb	17 15 35.4	
	comp=Z,133nm,1.2s						
SLKM	Skilak Lake	52.99	35	IAmb	IAmb	17 15 55.0	
	comp=Z,204nm,1.8s						
G22K	Bettles	52.99	27	P	P	17 14 19.0	+0.7
	baz=262						
FUNA	Funafuti	53.00	131	P	P	17 14 25.2	+6.2
CUT	Chulitna	53.06	33	IAmb	IAmb	17 15 08.5	
	comp=Z,92nm,1.0s						
CUT				IAMs_20	IAMs_20	17 38 58.5	
	comp=Z,7µm,18.0s						
CUT	Chulitna	53.06	33	P	P	17 14 18.8	-0.2
	baz=266						
E22K	Anaktuvuk Pass	53.06	25	P	P	17 14 18.5	-0.4
	baz=261,SNR=36						
MLY	Manley	53.07	29	P	P	17 14 19.0	0.0
	baz=264,SNR=29						
M22K	Willow	53.10	33	P	P	17 14 19.2	+0.1
M22K				IAmb	IAmb	17 14 32.8	
	comp=Z,156nm,0.9s						
M22K	Willow	53.10	33	P	P	17 14 19.5	+0.4
	baz=267						
TKM2	Tokmak 2	53.13	303	P	P	17 14 20.1	+0.1
	SNR=48						
TRF	Thorofare Moun	53.13	31	P	P	17 14 19.9	+0.3
	baz=266,SNR=9.8						
O22K	Cooper Landing	53.24	35	IAMs_20	IAMs_20	17 37 07.0	
	comp=Z,8µm,19.0s						
O22K	Cooper Landing	53.24	35	P	P	17 14 20.0	-0.2
	baz=268						
RC01	Rabbit Creek A	53.25	34	IAmb	IAmb	17 14 39.4	
	comp=Z,324nm,1.9s						
RC01	Rabbit Creek A	53.25	34	P	P	17 14 20.0	-0.3
	baz=268						
SEW	Seward	53.36	36	IAMs_20	IAMs_20	17 38 43.5	
	comp=Z,9µm,19.0s						
SEW	Seward	53.36	36	P	P	17 14 21.1	-0.1
	baz=269,SNR=5.4						
KSH	Kashi	53.50	299	P	P	17 14 25.8	+3.1
KSH				sP	pwP	17 14 36.9	+2.0
KSH				PP	PP	17 16 28.1	+4.9
KSH				S	S	17 22 02.2	+8.0
KSH				ScS	ScS	17 24 13.7	+2.8
KSH				pmax	pmax		
	comp=Z,75nm,1.2s						
KSH				pmax	pmax		
	comp=Z,2µm,7.9s						
KSH				LR	LR		
	comp=Z,10µm,16.5s						
KSH				LR	LR		
	comp=Z,16µm,17.5s						
KSH				LR	LR		
	comp=Z,17µm,17.9s						
COLD	Coldfoot	53.54	27	P	P	17 14 22.3	-0.1
	baz=263,SNR=7.6						
BWN	Browne	53.55	30	P	P	17 14 23.4	+0.9
G23K	Bananza Creek	53.55	27	IAmb	IAmb	17 14 53.7	
	comp=Z,89nm,1.1s						
G23K	Bananza Creek	53.55	27	P	P	17 14 22.3	-0.2
	baz=264,SNR=19						
PMR	Palmer	53.56	34	P	P	17 14 24.6	+2.0
PMR	Palmer	53.56	34	P	P	17 14 21.1	-1.4
	baz=268						
BLSP	Bilaspur	53.58	276	*e*P	P	17 14 18.4	-5.0
D23K	Nanushuk River	53.61	24	IAMs_20	IAMs_20	17 38 20.3	
	comp=Z,5µm,18.0s						
D23K	Nanushuk River	53.61	24	P	P	17 14 23.4	+0.6
	baz=261,SNR=19						
RAGD	RAYAGADA	53.61	272	*e*P	P	17 14 18.5	-5.1
KBK	Karagaybulak	53.64	303	P	P	17 14 24.5	+0.8
	SNR=37						
H23K	Yukon River	53.65	28	P	P	17 14 23.2	0.0
	baz=265,SNR=19						
I23K	Minto, Yukon-K	53.67	29	IAmb	IAmb	17 14 43.8	
	comp=Z,125nm,1.5s						
I23K	Minto, Yukon-K	53.67	29	P	P	17 14 22.8	-0.5
	baz=265,SNR=14						
XMI	Christmas Isla	53.68	226	P	P	17 14 25.7	+1.7
CHMS	Chumysh	53.72	303	P	P	17 14 24.8	+0.6
	SNR=8.5						
SGDS	Sogindy	53.73	304	⇑*i*P	P	17 14 24.1	-0.1
	comp=Z,139nm,2.2s						
NEA2	Nenana	53.75	30	IAmb	IAmb	17 14 32.9	
	comp=Z,106nm,0.9s						
NEA2	Nenana	53.75	30	P	P	17 14 23.8	-0.1
	baz=266,SNR=49						
MCK	McKinley	53.75	31	IAmb	IAmb	17 14 37.2	
	comp=Z,108nm,1.1s						
MCK	McKinley	53.75	31	P	P	17 14 23.7	-0.3
	baz=267,SNR=12						
RND	Reindeer	53.77	31	IAMs_20	IAMs_20	17 40 23.0	
	comp=Z,7µm,19.0s						
C23K	Itkillik River	53.77	23	IAmb	IAmb	17 14 35.5	
	comp=Z,77nm,0.9s						
C23K	Itkillik River	53.77	23	P	P	17 14 23.7	-0.3
	baz=261						
ALCI	Alchi Leh	53.83	292	*e*P	P	17 14 21.5	-4.0
FRU1	Bishkek	53.84	303	IAmb	IAmb	17 14 55.1	
	comp=Z,80nm,1.0s						
USP	Ospenovka	53.86	303	P	P	17 14 24.8	-0.3
	SNR=35						
E23K	Chandalar	53.87	26	IAmb	IAmb	17 14 56.3	
	comp=Z,113nm,1.2s						
E23K	Chandalar	53.87	26	P	P	17 14 25.3	+0.4
	baz=263,SNR=23						
BTLS	Baital	53.88	306	*e*P	P	17 14 24.8	-0.4
BTLS	Baital	53.88	306	*e*P	P	17 14 24.7	-0.4
KNK	Knik Glacier	53.88	34	IAmb	IAmb	17 14 46.8	
	comp=Z,126nm,1.0s						
KNK				IAMs_20	IAMs_20	17 35 32.9	
	comp=Z,6µm,21.0s						
KNK	Knik Glacier	53.88	34	P	P	17 14 24.7	-0.3
	baz=269,SNR=8.1						
WAT1	Susitna Watana	53.88	32	P	P	17 14 24.7	-0.3
	baz=268						
PWL	Port Wells	53.93	35	IAmb	IAmb	17 14 33.7	
	comp=Z,104nm,0.9s						
PWL				IAMs_20	IAMs_20	17 37 09.4	
	comp=Z,7µm,20.0s						
PWL	Port Wells	53.93	35	P	P	17 14 25.2	-0.2
	baz=269,SNR=16						
TKRD	Thakurdwara	53.93	285	*e*P	P	17 14 23.2	-2.6
SML	Sawmill	53.95	33	IAmb	IAmb	17 14 34.2	
	comp=Z,101nm,0.8s						
SML				IAMs_20	IAMs_20	17 39 19.7	
	comp=Z,5µm,19.0s						
SML	Sawmill	53.95	33	P	P	17 14 25.0	-0.5
	baz=269,SNR=18						
TOLK	Toolik Lake Re	53.96	25	P	P	17 14 25.6	+0.1
	baz=262,SNR=15						
AAK	Ala-Archa	53.98	303	P	P	17 14 22.0	-4.1
	SNR=9.4						
AAK	Ala-Archa	53.98	303	LR	LR	17 38 20.1	
	comp=Z,13µm,19.9s,baz=78,slow=37						
AAK	Ala-Archa	53.98	303	P	P	17 14 26.6	+0.4
AAK	Ala-Archa	53.98	303	P	P	17 14 24.9	-1.2
AAK				IAmb	IAmb	17 14 36.5	
	comp=Z,226nm,1.9s						
AAK	Ala-Archa	53.98	303	*i* P	P	17 14 25.9	-0.3
	SNR=15						
AAK	Ala-Archa	53.98	303	*ce*P	P	17 14 26.0	-0.2
AAK				pmax	pmax		
	comp=Z,101nm,2.5s						
AAK				MLR	MLR		
	comp=Z,12µm,19.0s						
AAK	Ala-Archa	53.98	303	⇑P	P	17 14 25.8	-0.3
UCH	Uchtor	54.04	302	P	P	17 14 27.2	+0.2
	SNR=18						
BRZS	Berezniki	54.10	312	*e*P	P	17 14 26.9	+0.1
BRZS	Berezniki	54.10	312	*e*P	P	17 14 26.9	+0.1
M23K	Glacier View	54.23	33	P	P	17 14 27.6	+0.1
	baz=269,SNR=9.8						
WAT6	Susitna Watana	54.24	33	P	P	17 14 28.3	+0.5
	baz=269,SNR=28						
KIP	Kipapa	54.28	85	P	P	17 14 34.7	+6.3
KIP	Kipapa	54.28	85	⇑*e*P	P	17 14 29.2	+0.8
KIP				pmax	pmax		
	comp=Z,259nm,1.9s						
COLA	College	54.29	30	P	P	17 14 28.6	+0.7
COLA	College	54.29	30	P	P	17 14 30.5	+2.7
COLA	College	54.29	30	*de*P	P	17 14 30.2	+2.4
COLA				pmax	pmax		
	comp=Z,125nm,2.5s						
COLA				MLR	MLR		
	comp=Z,3µm,18.0s						
COLA	College	54.29	30	⇑P	P	17 14 30.8	+3.0
COLA	College	54.29	30	P	P	17 14 28.1	+0.3
	baz=267						
E24K	Your Creek	54.29	26	IAmb	IAmb	17 14 50.1	
	comp=Z,194nm,1.8s						
E24K				IAMs_20	IAMs_20	17 39 07.7	
	comp=Z,5µm,20.0s						
E24K	Your Creek	54.29	26	P	P	17 14 28.0	+0.1
	baz=264						
CCB	Clear Creek Bu	54.29	30	IAmb	IAmb	17 14 44.0	
	comp=Z,136nm,1.9s						
D24K	Happy Valley	54.29	24	IAmb	IAmb	17 14 39.4	
	comp=Z,112nm,0.8s						
D24K				IAMs_20	IAMs_20	17 40 58.8	
	comp=Z,6µm,18.0s						
D24K	Happy Valley	54.29	24	P	P	17 14 28.5	+0.6
	baz=263						
H24K	Noodor Dome	54.34	28	P	P	17 14 28.3	+0.1
	baz=266						
P23K	Montague Islan	54.39	36	P	P	17 14 28.7	0.0
	baz=271						
C24K	Franklin Bluff	54.41	24	P	P	17 14 27.7	-1.0
	baz=263						
DHY	Denali Highway	54.42	32	P	P	17 14 29.0	-0.1
DHY	Denali Highway	54.42	32	P	P	17 14 29.2	+0.1
	baz=269,SNR=7.2						
SCM	Sheep Creek Mo	54.42	33	P	P	17 14 28.9	-0.1
	baz=270,SNR=16						
DVP	Devils Point	54.45	149	P	P	17 14 33.6	+4.1
F24K	Squaw Lake	54.46	26	P	P	17 14 29.4	+0.2
	baz=265,SNR=34						
POKR	Poker Plat Res	54.48	29	IAmb	IAmb	17 14 44.7	
	comp=Z,134nm,1.4s						

POKR	Poker Plat Res	54.48	29	P	P	17 14 29.3	0.0
	baz=267,SNR=12						
EKS2	Erkin-Say	54.49	303	P	P	17 14 29.7	-0.2
	SNR=21						
GLI	Glacier Island	54.53	35	IAMs_20	IAMs_20	17 39 15.3	
	comp=Z,6µm,20.0s						
GLI	Glacier Island	54.53	35	P	P	17 14 28.2	-1.5
	baz=270						
G24K	Hadweenzic Riv	54.56	27	IAmb	IAmb	17 14 59.2	
	comp=Z,70nm,1.1s						
G24K	Hadweenzic Riv	54.56	27	P	P	17 14 29.6	-0.2
	baz=266,SNR=11						
AS31	Alice Springs	54.63	189	P	P	17 14 29.9	-1.0
AS31				IAmb	IAmb	17 14 33.6	
	comp=Z,34nm,0.5s						
ASAR	Alice Springs	54.63	189	P	P	17 14 30.6	-0.2
	comp=Z,87nm,0.9s,baz=359,slow=5.5,SNR=605						
ASAR				S	S	17 22 09.8	+0.6
	comp=Z,2.0nm,1.0s,baz=3.6,slow=5.1,SNR=4.4						
ASAR				LR	LR	17 37 50.6	
	comp=Z,7µm,20.3s,baz=16,slow=36						
ASAR				PKPPKP	P'P'df	17 44 43.1	+7.6
	comp=Z,0.7nm,1.0s,baz=191,slow=1.3,SNR=4.2						
ASAR				PKP2bc	P'P'bc	17 45 00.8	+11
	comp=Z,0.7nm,0.8s,baz=167,slow=1.9,SNR=4.1						
ASAR				P4KPbc		17 51 52.9	
	comp=Z,0.8nm,0.8s,baz=2.2,slow=4.3,SNR=7.0						
	comp=Z,87nm,0.9s						
ASAR	Alice Springs	54.63	189	P	P	17 14 30.2	-0.6
HDA	Harding Lake	54.65	30	P	P	17 14 29.8	-0.8
	baz=268,SNR=23						
AUALC	St Philip's Co	54.66	189	P	P	17 14 29.9	-1.1
IL31		54.69	30	IAmb	IAmb	17 14 45.0	
	comp=Z,87nm,1.2s						
ILAR	Eielson Array	54.69	30	P	P	17 14 31.6	+0.7
	comp=Z,24nm,0.6s,baz=260,slow=5.9,SNR=240						
	comp=Z,24nm,0.6s						
ILAR	Eielson Array	54.69	30	P	P	17 14 30.9	+0.1
FID	Port Fidalgo	54.84	35	IAMs_20	IAMs_20	17 39 56.8	
	comp=Z,6µm,18.0s						
Q23K	Middleton Isla	54.94	36	P	P	17 14 32.5	-0.1
	baz=272						
M24K	Tolsona, Glenn	54.97	33	IAmb	IAmb	17 15 00.1	
	comp=Z,144nm,0.9s						
M24K	Tolsona, Glenn	54.97	33	P	P	17 14 33.1	+0.1
	baz=270,SNR=8.5						
GD1S	Gladstone Soft	55.01	170	P	P	17 14 38.7	+5.2
KLU	Klutina	55.10	34	IAmb	IAmb	17 14 53.9	
	comp=Z,104nm,1.1s						
KLU				IAMs_20	IAMs_20	17 40 24.1	
	comp=Z,5µm,19.0s						
KLU	Klutina	55.10	34	P	P	17 14 32.3	-1.6
	baz=271,SNR=14						
G25K	Bearman Lake	55.11	27	P	P	17 14 33.9	+0.2
	baz=267,SNR=6.3						
K24K	Donnelly Dome	55.15	31	IAmb	IAmb	17 15 19.7	
	comp=Z,93nm,1.1s						
K24K				IAMs_20	IAMs_20	17 38 25.5	
	comp=Z,5µm,19.0s						
K24K	Donnelly Dome	55.15	31	P	P	17 14 34.8	+0.6
	baz=270,SNR=12						
DIV	Divide	55.18	34	IAmb	IAmb	17 14 43.2	
	comp=Z,92nm,0.8s						
DIV				IAMs_20	IAMs_20	17 39 26.2	
	comp=Z,5µm,20.0s						
D25K	Kavik River	55.18	24	IAmb	IAmb	17 14 50.0	
	comp=Z,183nm,1.6s						
D25K				IAMs_20	IAMs_20	17 42 22.1	
	comp=Z,6µm,18.0s						
D25K	Kavik River	55.18	24	P	P	17 14 34.4	+0.1
	baz=265						
BVA0	Borovoye Array	55.19	316	iP	P	17 14 34.6	0.0
BVAR	Borovoye Array	55.19	316	P	P	17 14 34.5	0.0
	comp=Z,31nm,0.6s,baz=94,slow=7.8,SNR=115						
BVAR				LR	LR	17 39 07.6	
	comp=Z,15µm,18.6s,baz=82,slow=37						
	comp=Z,31nm,0.6s						
H25L	Birch Creek	55.20	28	P	P	17 14 33.5	-0.9
	baz=268,SNR=6.5						
EYAK	Cordova Ski Ar	55.20	35	IAMs_20	IAMs_20	17 38 21.0	
	comp=Z,9µm,19.0s						
EYAK	Cordova Ski Ar	55.20	35	P	P	17 14 33.7	-0.9
	baz=272						
BORK	Borovoye	55.23	316	P	P	17 14 34.2	-0.6
BORK				IAmb	IAmb	17 14 47.4	
	comp=Z,81nm,1.0s						
BORK	Borovoye	55.23	316	ceP	P	17 14 34.9	0.0
BORK				pmax	pmax		
	comp=Z,91nm,1.3s						
BORK				MLR	MLR		
	comp=Z,15µm,17.0s						
BORK	Borovoye	55.23	316	⇑P	P	17 14 34.9	0.0
BHK	Bhakra	55.27	289	eP	P	17 14 28.5	-7.1
PAX	Paxson	55.29	32	IAMs_20	IAMs_20	17 41 53.2	
	comp=Z,6µm,19.0s						
PAX	Paxson	55.29	32	P	P	17 14 35.5	+0.2
	baz=270,SNR=11						
BISR	Bishrakh	55.29	285	eP	P	17 14 31.9	-3.8
F25K	Christian Rive	55.33	26	IAmb	IAmb	17 15 04.5	
	comp=Z,102nm,1.2s						
F25K	Christian Rive	55.33	26	P	P	17 14 35.7	+0.2
	baz=267,SNR=19						
J25K	Salcha River,	55.34	30	P	P	17 14 35.3	-0.3
	baz=269						
JHNI	Jhansi	55.38	281	eP	P	17 14 31.8	-4.6
E25K	Arctic Village	55.39	26	IAmb	IAmb	17 15 05.4	
	comp=Z,73nm,0.9s						
E25K	Arctic Village	55.39	26	P	P	17 14 36.4	+0.5
	baz=267,SNR=34						
JMIU	JAMIA UNIVERSI	55.42	285	eP	P	17 14 32.5	-4.1
NDI	New Delhi	55.44	285	eP	P	17 14 33.3	-3.5
HARP	HAARP	55.44	33	P	P	17 14 36.0	-0.3
	baz=271,SNR=17						
LDR	Lodi Road	55.48	285	eP	P	17 14 32.9	-4.1
NPLP	NPLP New Delhi	55.50	285	eP	P	17 14 33.2	-4.0
RIDG	Independent Ri	55.57	31	IAMs_20	IAMs_20	17 41 54.4	
	comp=Z,5µm,18.0s						
RIDG	Independent Ri	55.57	31	P	P	17 14 36.9	-0.3
	baz=270						
AYAN	Aya Nagar	55.58	285	eP	P	17 14 33.8	-4.0
N25K	Chitina, Valde	55.73	34	IAMs_20	IAMs_20	17 40 50.8	
	comp=Z,5µm,20.0s						
N25K	Chitina, Valde	55.73	34	P	P	17 14 38.2	-0.3
	baz=272						
C26K	Camden Bay	55.74	24	P	P	17 14 38.3	+0.1
	baz=266						
BMRM	Bremner River	55.75	34	IAMs_20	IAMs_20	17 38 10.4	
	comp=Z,8µm,20.0s						
BMRM	Bremner River	55.75	34	P	P	17 14 38.7	+0.1
	baz=272,SNR=9.5						
SRNI	Srinagar	55.77	292	eP	P	17 14 35.6	-3.6
MBWA	Marble Bar	55.80	205	P	P	17 14 37.3	-1.9
	comp=Z,108nm,0.9s,comp=Z,0.0nm						
MBWA	Marble Bar	55.80	205	P	P	17 14 38.8	-0.4
MBWA				S	S	17 22 21.8	-3.2
MBWA	Marble Bar	55.80	205	P	P	17 14 38.4	-0.9
MBWA				IAmb	IAmb	17 14 44.9	
	comp=Z,91nm,0.9s						
MBWA	Marble Bar	55.80	205	P	P	17 14 39.3	+0.1
MBWA	Marble Bar	55.80	205	⇑P	P	17 14 38.7	-0.6
KAIM	Kayak Island	55.89	36	P	P	17 14 39.6	+0.1
	baz=273						
F26K	Sheenjek River	55.91	26	IAmb	IAmb	17 15 02.1	
	comp=Z,67nm,1.0s						
F26K	Sheenjek River	55.91	26	P	P	17 14 39.5	-0.1
	baz=268,SNR=32						
DOT	Dot Lake	55.92	31	IAMs_20	IAMs_20	17 42 12.6	
	comp=Z,5µm,19.0s						
JHJR	Jhajjar	55.94	286	eP	P	17 14 36.1	-4.3
SCRK	Sand Creek	55.95	31	P	P	17 14 40.3	+0.2
	baz=271,SNR=28						
HMT	Hamilton	55.95	35	IAMs_20	IAMs_20	17 40 54.7	
	comp=Z,8µm,19.0s						
G26K	Porcupine Rive	56.03	27	IAmb	IAmb	17 14 57.9	
	comp=Z,163nm,1.6s						
G26K	Porcupine Rive	56.03	27	P	P	17 14 39.8	-0.6
	baz=269						
MENT	Mentasta	56.09	32	IAmb	IAmb	17 15 06.0	
	comp=Z,70nm,0.9s						
MENT	Mentasta	56.09	32	P	P	17 14 43.6	+2.6
PSAC2	Pilbara Seismi	56.11	205	P	P	17 14 39.0	-2.5
GLB	Gilahina Butte	56.11	34	IAmb	IAmb	17 15 01.3	
	comp=Z,140nm,1.3s						
GLB				IAMs_20	IAMs_20	17 37 31.9	
	comp=Z,5µm,21.0s						
JMU	Jammu	56.12	291	eP	P	17 14 38.3	-3.3
J26L	Joseph Creek	56.12	30	IAmb	IAmb	17 14 47.4	
	comp=Z,47nm,0.7s						
J26L	Joseph Creek	56.12	30	P	P	17 14 41.8	+0.5
	baz=271						
PSA00	Pilbara Seismi	56.14	205	P	P	17 14 39.4	-2.2
PSA00	Pilbara Seismi	56.14	205	P	P	17 14 40.8	-0.8
PSA00				IAmb	IAmb	17 14 47.4	
	comp=Z,99nm,1.0s						
PSA00	Pilbara Seismi	56.14	205	P	P	17 14 40.8	-0.8
PSA00				IAmb	IAmb	17 14 47.4	
	comp=Z,94nm,0.9s						
PSA00	Pilbara Seismi	56.14	205	P	P	17 14 41.7	0.0
C27K	Jago River	56.14	24	IAmb	IAmb	17 14 52.9	
	comp=Z,57nm,0.8s						
C27K	Jago River	56.14	24	P	P	17 14 41.3	+0.1
	baz=268,SNR=17						
PSAB3	Pilbara Seismi	56.15	205	P	P	17 14 42.0	+0.2
	comp=Z,90nm,0.7s						
DZA	Taraz	56.21	304	eP	P	17 14 42.1	-0.1
DZA	Taraz	56.21	304	eP	P	17 14 42.0	-0.1
KUDL	Kundal	56.23	285	eP	P	17 14 38.5	-3.9
L26K	Log Cabin Wild	56.26	32	IAmb	IAmb	17 14 55.4	
	comp=Z,149nm,1.4s						
L26K				IAMs_20	IAMs_20	17 40 23.7	
	comp=Z,5µm,18.0s						
L26K	Log Cabin Wild	56.26	32	P	P	17 14 42.6	+0.5
	baz=272,SNR=16						
I26K	Coal Creek Min	56.28	29	P	P	17 14 41.8	-0.4
	baz=271						
VRDI	Verde Repeater	56.30	34	IAmb	IAmb	17 15 02.7	
	comp=Z,251nm,1.6s						
VRDI				IAMs_20	IAMs_20	17 38 27.8	
	comp=Z,6µm,22.0s						
M26K	Nabesna, AK	56.45	33	IAmb	IAmb	17 15 04.0	
	comp=Z,272nm,1.8s						
M26K				IAMs_20	IAMs_20	17 40 05.8	
	comp=Z,6µm,20.0s						
M26K	Nabesna, AK	56.45	33	P	P	17 14 43.7	+0.2
	baz=273						
BGLC	Bering Glacier	56.45	35	P	P	17 14 43.8	+0.3
	baz=274						
CRQM	Cirque	56.48	35	P	P	17 14 44.5	+0.5
CRQM				IAmb	IAmb	17 15 07.0	
	comp=Z,141nm,1.2s						
CRQM				IAMs_20	IAMs_20	17 41 06.2	
	comp=Z,6µm,19.0s						
MCARA	McCarthy VSAT	56.49	34	P	P	17 14 43.6	-0.2
MCARA				IAmb	IAmb	17 15 04.0	
	comp=Z,121nm,1.0s						
MCARA	McCarthy VSAT	56.49	34	P	P	17 14 43.8	0.0
	baz=274						
EIDS	Eidsvold	56.49	170	P	P	17 14 45.0	+0.9
	comp=Z,117nm,2.0s						
EIDS	Eidsvold	56.49	170	IAmb	IAmb	17 14 54.0	
	comp=Z,173nm,1.2s						
EIDS	Eidsvold	56.49	170	P	P	17 14 46.6	+2.5
CRQE	Cirque	56.50	35	P	P	17 14 43.0	-1.0
	baz=274						
TGL	Tana Glacier	56.63	35	IAMs_20	IAMs_20	17 41 28.6	
	comp=Z,5µm,19.0s						
WAX	Waxell Ridge	56.64	35	IAmb	IAmb	17 15 05.9	
	comp=Z,116nm,1.1s						
SNH	Sunshine Point	56.67	35	IAMs_20	IAMs_20	17 42 58.7	
	comp=Z,7µm,18.0s						
KK31	Karatay Array	56.75	304	iP	P	17 14 45.7	-0.2
KKAR	Karatay Array	56.75	304	P	P	17 14 45.0	-0.9
KKAR	Karatay Array	56.75	304	P	P	17 14 45.1	-0.9
GUNA	GUNA	56.75	281	eP	P	17 14 41.8	-4.5
K27K	Chicken	56.79	31	P	P	17 14 45.6	-0.3
	baz=273,SNR=17						
G27K	Doyon Strip	56.87	27	IAmb	IAmb	17 15 15.8	
	comp=Z,132nm,1.8s						
G27K	Doyon Strip	56.87	27	P	P	17 14 46.1	-0.3
	baz=271,SNR=8.6						
E27K	Coleen River	56.88	26	IAmb	IAmb	17 15 36.8	
	comp=Z,156nm,1.6s						
E27K	Coleen River	56.88	26	P	P	17 14 45.9	-0.5
	baz=270						
ISLE	Juniper Island	56.88	35	IAMs_20	IAMs_20	17 41 19.3	
	comp=Z,5µm,19.0s						
I27K	Kandik River	56.92	29	IAmb	IAmb	17 14 57.5	
	comp=Z,204nm,1.9s						
I27K	Kandik River	56.92	29	P	P	17 14 46.5	-0.3
	baz=272						
H27K	Steamboat Moun	56.94	28	IAmb	IAmb	17 15 00.9	
	comp=Z,169nm,1.3s						
H27K	Steamboat Moun	56.94	28	P	P	17 14 47.0	0.0
	baz=272,SNR=26						
L27K	Beaver Creek,	56.95	32	IAmb	IAmb	17 15 06.6	
	comp=Z,143nm,1.4s						
L27K				IAMs_20	IAMs_20	17 39 45.2	
	comp=Z,6µm,19.0s						
L27K	Beaver Creek,	56.95	32	P	P	17 14 46.4	-0.7
	baz=274,SNR=25						
WRKA	Warakurna	56.96	195	P	P	17 14 47.0	-0.5
	comp=Z,28nm,0.8s,comp=Z,0.0nm						
BCAR	Beaver Creek A	56.97	32	P	P	17 14 48.8	+1.6
M27K	Edge Creek, AK	56.97	33	IAmb	IAmb	17 15 07.6	
	comp=Z,168nm,1.5s						
M27K	Edge Creek, AK	56.97	33	P	P	17 14 47.2	-0.1
	baz=274						
QLP	Quilpie	57.05	177	P	P	17 14 47.9	-0.1
	comp=Z,196nm,0.9s						
QLP	Quilpie	57.05	177	P	P	17 14 48.2	+0.2
POHA	Pohakuloa	57.07	85	P	P	17 14 52.6	+3.8
D27M	Malcolm River	57.10	24	P	P	17 14 48.8	+0.7
	baz=270						
MESA	MESA	57.11	35	IAMs_20	IAMs_20	17 34 47.6	
	comp=Z,6µm,21.0s						
MESA	MESA	57.11	35	P	P	17 14 47.7	-0.7
	baz=275						
NIL	Nilore	57.12	292	P	P	17 14 48.1	-0.6
NIL	Nilore	57.12	292	IAMs_20	IAMs_20	17 43 40.5	
	comp=Z,7µm,19.0s						
NIL	Nilore	57.12	292	P	P	17 14 48.1	-0.6
NIL				pmax	pmax		
	comp=Z,236nm,0.9s						
DAH	Dandelion	57.12	86	P	P	17 14 49.1	-0.2
GRNC	Granite Creek	57.16	35	IAmb	IAmb	17 14 57.4	
	comp=Z,265nm,1.9s						
GRNC				IAMs_20	IAMs_20	17 41 26.6	
	comp=Z,6µm,18.0s						
BARN	Barnard Glacie	57.17	34	IAmb	IAmb	17 15 08.9	
	comp=Z,162nm,1.6s						
YAH	Yahtse	57.20	35	IAMs_20	IAMs_20	17 34 42.8	
	comp=Z,7µm,21.0s						
MANEM	Manem	57.24	297	IAmb	IAmb	17 15 03.6	
	comp=Z,348nm,0.9s						
BRLS	Borolday	57.25	304	⇑iP	P	17 14 50.5	+1.0
	comp=Z,177nm,2.2s						
BRLS	Borolday	57.25	304	c iP	P	17 14 50.5	+1.0
BRLS				pmax	pmax		
	comp=Z,177nm,2.2s						
IUG	Iuzhnay	57.31	303	eP	P	17 14 49.9	-0.2
	comp=Z,131nm,0.8s						
IUG	Iuzhnay	57.31	303	eP	P	17 14 49.9	-0.2
IUG				pmax	pmax		
	comp=Z,131nm,0.8s						
CTG	Chitna Glacier	57.34	34	P	P	17 14 49.4	-0.6
	baz=275						
CTGM	Chitina Glacie	57.34	34	IAmb	IAmb	17 15 10.1	
	comp=Z,220nm,1.8s						
BVCY	Beaver Creek	57.44	33	P	P	17 14 50.7	+0.2
	baz=275,SNR=11						
HIL	Hilo	57.47	85	P	P	17 14 51.4	+0.1
HIL				IAmb	IAmb	17 15 00.7	
	comp=Z,235nm,1.3s						
TABL	Table Mountain	57.48	35	IAMs_20	IAMs_20	17 37 06.5	
	comp=Z,7µm,21.0s						
LOGN	Logan Glacier	57.52	34	IAMs_20	IAMs_20	17 41 47.1	
	comp=Z,5µm,19.0s						
F28M	Old Crow	57.54	26	IAmb	IAmb	17 15 20.5	
	comp=Z,110nm,1.3s						
F28M	Old Crow	57.54	26	P	P	17 14 51.5	+0.4
	baz=272,SNR=33						
KNHH	Kane Nui o Ham	57.54	86	P	P	17 14 52.3	+0.3
CHM	Chimkent	57.58	303	eP	P	17 14 51.8	-0.1
	comp=Z,164nm,2.0s						
CHM				LR	LR	17 40 51.5	
	comp=Z,4µm,15.5s						
CHM	Chimkent	57.58	303	eP	P	17 14 51.7	-0.1
CHM				pmax	pmax		
	comp=Z,164nm,2.0s						
CHM				MLR	MLR		
	comp=Z,4µm,15.0s						
DZM	Mont Dzumac	57.59	153	LR	LR	17 39 13.0	
	comp=Z,8µm,19.4s,baz=348,slow=36						
DZM	Mont Dzumac	57.59	153	eP	P	17 14 57.0	+5.0
	comp=Z,1µm,1.4s						
DZM				eS	S	17 22 50.8	+2.1
	comp=Z,3µm,24.6s						
DZM				eSS	SS	17 26 40.5	+1.0
	comp=Z,2µm,24.8s						
DZM				eLQ	LQ	17 29 12.7	
	comp=Z,8µm,31.1s						
DZM				eLR	LR	17 31 38.0	
	comp=Z,10µm,24.7s						
DZM	Mont Dzumac	57.59	153	P	P	17 14 52.5	+0.5
DZM	Mont Dzumac	57.59	153	P	P	17 14 56.4	+4.4
DZM	Mont Dzumac	57.59	153	⇓P	P	17 14 55.3	+3.3
NRDN	NARMADA NAGAR	57.62	279	eP	P	17 14 47.2	-5.1
I28M	Miner Creek	57.63	29	IAmb	IAmb	17 15 19.8	
	comp=Z,81nm,1.2s						
I28M				IAMs_20	IAMs_20	17 40 27.1	
	comp=Z,6µm,20.0s						
I28M	Miner Creek	57.63	29	P	P	17 14 52.6	+0.7
	baz=274						
E28M	Babbage River	57.63	25	IAmb	IAmb	17 15 05.7	
	comp=Z,106nm,1.1s						
E28M				IAMs_20	IAMs_20	17 42 49.7	
	comp=Z,4µm,19.0s						
E28M	Babbage River	57.63	25	P	P	17 14 52.1	+0.4
	baz=272,SNR=49						
YUK3	Moose Creek	57.68	33	P	P	17 14 52.1	-0.4
	baz=276,SNR=11						
MARNC	Mare, Loyalty	57.70	151	P	P	17 14 57.4	+4.7
YATNC	Mamie plateau,	57.75	152	P	P	17 14 56.8	+3.7
SRGN	SRI GANGA NAGA	57.78	288	eP	P	17 14 49.7	-3.7
ONTNC	Ouen Toro	57.80	153	IAMs_20	IAMs_20	17 39 27.2	
	comp=Z,7µm,20.0s						
ONTNC	Ouen Toro	57.80	153	P	P	17 14 57.6	+4.2
ONTNC	Ouen Toro	57.80	153	⇑P	P	17 14 57.9	+4.5
D28M	Stokes Point	57.89	24	P	P	17 14 54.0	+0.5
	baz=272						
O28M	Mount Upton	57.92	35	P	P	17 14 53.8	-0.4
	baz=276						
DAWY	Dawson	57.96	31	IAmb	IAmb	17 15 22.1	
	comp=Z,96nm,1.2s						
DAWY	Dawson	57.96	31	P	P	17 14 54.5	+0.3
	baz=275,SNR=18						
PINM	Pinnacle	57.96	35	P	P	17 14 54.7	+0.4
	baz=277						
OUENC	Ouen Island, N	58.06	153	P	P	17 14 59.5	+4.3
YUK8	Steele Glacier	58.07	34	P	P	17 14 55.5	+0.2
	baz=276						
H29M	Whitestone	58.22	28	IAmb	IAmb	17 15 18.1	
	comp=Z,171nm,1.5s						
H29M	Whitestone	58.22	28	P	P	17 14 56.1	+0.2
	baz=275						
E29M	Blow River	58.24	25	IAmb	IAmb	17 15 09.9	
	comp=Z,82nm,1.0s						
E29M				IAMs_20	IAMs_20	17 43 00.1	
	comp=Z,5µm,18.0s						
E29M	Blow River	58.24	25	P	P	17 14 56.3	+0.3
	baz=274,SNR=41						
G29M	Pine Creek	58.30	27	IAmb	IAmb	17 15 09.8	
	comp=Z,103nm,0.9s						
G29M	Pine Creek	58.30	27	P	P	17 14 55.1	-1.4
	baz=274						
I29M	Ogilvie Camp,	58.31	29	P	P	17 14 56.4	-0.2
	baz=275						
J29N	Klondike Camp	58.44	30	P	P	17 14 59.4	+1.8
J29N				IAmb	IAmb	17 15 06.8	
	comp=Z,45nm,0.7s						
J29N	Klondike Camp	58.44	30	P	P	17 14 57.5	-0.1
	baz=276,SNR=26						
PINNC	Pines Island,	58.47	152	P	P	17 15 02.5	+4.4
AKL	Akola	58.55	277	eP	P	17 14 54.0	-4.9
AKL				IAmb	IAmb	17 15 10.0	
	comp=Z,403nm,1.9s						
M29M	Somme Creek	58.55	32	IAmb	IAmb	17 15 06.3	
	comp=Z,84nm,0.8s						
M29M				IAMs_20	IAMs_20	17 40 44.2	
	comp=Z,5µm,20.0s						
M29M	Somme Creek	58.55	32	P	P	17 14 58.3	-0.1
	baz=277,SNR=56						
YUK4	Talbot Arm	58.59	34	P	P	17 14 59.4	+0.6
	baz=277,SNR=18						
HYB	Hyderabad	58.60	273	eP	P	17 14 57.7	-1.6
HYB				esP	pP	17 15 03.4	-2.5
HYB				ePcP	PcP	17 15 49.2	-0.2
HYB				ePP	PP	17 17 09.2	+0.1
HYB				eS	S	17 23 02.7	+0.4
HYB				IVMs_BB	IVMs_BB	17 42 50.6	
	comp=Z,1µm,16.6s						
L29M	L29M	58.62	32	IAMs_20	IAMs_20	17 39 17.4	
	comp=Z,5µm,19.0s						
L29M	L29M	58.62	32	P	P	17 14 59.5	+0.7
	baz=277,SNR=83						
TW1H	Toowoomba 1 Ha	58.77	169	P	P	17 15 03.2	+3.0
O29M	Mount Kennedy	58.77	35	P	P	17 15 00.4	+0.4
	baz=278,SNR=13						
YUK6	Outpost Mounta	58.78	34	P	P	17 14 59.8	-0.4
	baz=278						
AUWSH	Wavell State H	58.80	168	P	P	17 15 04.2	+3.9
K29M	Barlow Dome	58.81	31	IAmb	IAmb	17 15 28.6	
	comp=Z,87nm,1.1s						
K29M	Barlow Dome	58.81	31	P	P	17 14 59.9	-0.3
	baz=277						
CHGR	Chuyangaron	58.85	299	P	P	17 15 00.5	-0.4
CHGR	Chuyangaron	58.85	299	P	P	17 15 00.5	-0.4
CHGR				pmax	pmax		
	comp=Z,2µm,1.5s						
EPYK	Eagle Plains	58.87	28	P	P	17 15 00.5	0.0
	baz=276,SNR=57						
BKNR	BIKANER	58.93	286	eP	P	17 14 57.2	-4.3
G30M	tAoh Zraii Nji	59.00	27	IAMs_20	IAMs_20	17 42 01.1	
	comp=Z,4µm,18.0s						
G30M	tAoh Zraii Nji	59.00	27	P	P	17 15 01.8	+0.4
	baz=276,SNR=34						
F30M	Barrier River	59.10	26	IAmb	IAmb	17 15 31.4	
	comp=Z,100nm,0.9s						
F30M	Barrier River	59.10	26	P	P	17 15 02.4	+0.4
	baz=276,SNR=44						
I30M	Mount Dempster	59.13	29	IAmb	IAmb	17 15 38.6	
	comp=Z,70nm,1.1s						
I30M				IAMs_20	IAMs_20	17 41 05.8	
	comp=Z,5µm,20.0s						
I30M	Mount Dempster	59.13	29	P	P	17 15 01.4	-1.0
	baz=277,SNR=30						
HYT	Haines Junctio	59.22	34	IAmb	IAmb	17 15 33.6	
	comp=Z,102nm,1.3s						
HYT	Haines Junctio	59.22	34	P	P	17 15 02.8	-0.3
	baz=279						
J30M	Hart River	59.23	30	IAmb	IAmb	17 15 43.6	
	comp=Z,69nm,1.3s						
J30M	Hart River	59.23	30	P	P	17 15 03.7	+0.6
	baz=277						
P29M	Windy Craggy	59.28	36	IAmb	IAmb	17 15 15.0	
	comp=Z,62nm,0.9s						
P29M	Windy Craggy	59.28	36	P	P	17 15 04.3	+0.8
	baz=279						
M30M	Minto, Yukon	59.30	32	IAmb	IAmb	17 15 15.2	
	comp=Z,50nm,0.9s						
M30M	Minto, Yukon	59.30	32	P	P	17 15 03.6	0.0
	baz=278,SNR=19						
N30M	Aishikik Lake	59.32	33	IAMs_20	IAMs_20	17 43 54.8	
	comp=Z,6µm,18.0s						
N30M	Aishikik Lake	59.32	33	P	P	17 15 02.9	-0.8
	baz=279						
MSVF	Nonsavu	59.47	139	IAMs_20	IAMs_20	17 42 26.2	
	comp=Z,7µm,19.0s						
MSVF	Nonsavu	59.47	139	P	P	17 15 10.7	+5.5
MAYO	Mayo, Yukon	59.56	31	P	P	17 15 05.1	-0.1
	baz=278						
P30M	Million Dollar	59.59	35	P	P	17 15 06.0	+0.3
	baz=280						
GC1S	Gold Coast 1 S	59.63	168	P	P	17 15 09.0	+3.0
INK	Inuvik	59.87	25	LR	LR	17 45 18.9	
	comp=Z,3µm,19.2s,baz=278,slow=40						
INK	Inuvik	59.87	25	IAmb	IAmb	17 15 39.7	
	comp=Z,58nm,1.1s						
INK	Inuvik	59.87	25	P	P	17 15 07.3	+0.1
	baz=278,SNR=42						
H31M	Peel River	59.90	28	IAmb	IAmb	17 15 20.9	
	comp=Z,94nm,0.9s						
H31M	Peel River	59.90	28	P	P	17 15 08.3	+0.8
	baz=278,SNR=20						
F31M	Tsiigehtchic	59.90	26	IAmb	IAmb	17 15 56.9	
	comp=Z,196nm,1.7s						
F31M	Tsiigehtchic	59.90	26	P	P	17 15 08.0	+0.5
	baz=278,SNR=18						
O30N	Mendenhall	59.91	34	IAmb	IAmb	17 15 28.3	
	comp=Z,117nm,1.7s						
O30N	Mendenhall	59.91	34	P	P	17 15 08.0	+0.2

	baz=280						
LATR	**Latur**	59.91	275	*e*P	P	17 15 03.4	-5.0
N31M	**Braeburn, Yuko**	59.94	33	IAmb	IAmb	17 15 28.9	
	comp=Z,127nm,1.2s						
N31M				IAMs_20	IAMs_20	17 44 30.1	
	comp=Z,5µm,20.0s						
N31M	**Braeburn, Yuko**	59.94	33	P	P	17 15 07.5	-0.4
	baz=280						
SHAA	**Shahritus**	59.95	298	P	P	17 15 07.8	-0.6
SHAA				IAmb	IAmb	17 15 22.1	
	comp=Z,513nm,1.0s						
PLBC	**Pleasant Camp**	60.00	36	P	P	17 15 08.0	-0.4
	baz=280,SNR=13						
KBU	**Kabul Universi**	60.10	295	P	P	17 15 09.1	-0.6
AULRC	**Lightning Ridg**	60.12	174	P	P	17 15 10.5	+1.1
KBL	**Kabul**	60.17	295	P	P	17 15 09.8	-0.4
	SNR=89						
KBL				P	P	17 15 09.8	-0.4
	SNR=89						
KBL				S	S	17 23 20.0	-2.5
KBL				S	S	17 23 20.0	-2.5
KBL	**Kabul**	60.17	295	P	P	17 15 08.8	-1.3
KBL	**Kabul**	60.17	295	P	P	17 15 08.9	-1.3
KBL				pmax	pmax		
	comp=Z,144nm,1.0s						
SVE	**Sverdlovsk**	60.17	321	*d i*P	P	17 15 10.4	+0.8
SVE				*e*S	S	17 23 28.1	+6.6
SVE				pmax	pmax		
	comp=Z,206nm,1.2s						
SVE				MLR	MLR		
	comp=Z,7µm,17.0s						
S31K	**Pelican**	60.35	37	P	P	17 15 10.4	-0.3
	baz=281						
M31M	**Drury Creek, Y**	60.46	32	P	P	17 15 12.5	+1.0
M31M				IAMs_20	IAMs_20	17 42 11.9	
	comp=Z,7µm,19.0s						
M31M	**Drury Creek, Y**	60.46	32	P	P	17 15 11.2	-0.3
	baz=280,SNR=15						
WHY	**Whitehorse**	60.52	34	P	P	17 15 11.2	-0.8
	baz=281,SNR=14						
R31K	**City Hall, Gus**	60.52	37	P	P	17 15 11.2	-0.7
	baz=281						
SKAG	**Skagway**	60.52	36	P	P	17 15 15.3	+3.4
SKAG	**Skagway**	60.52	36	P	P	17 15 11.5	-0.4
	baz=281						
COCO	**West Island**	60.75	232	P	P	17 15 13.3	-0.7
SIT	**Sitka**	61.02	38	P	P	17 15 14.1	-1.2
	baz=282						
R32K	**Eaglecrest**	61.18	37	P	P	17 15 15.9	-0.5
	baz=282						
MEEK	**Meekatharra**	61.22	204	P	P	17 15 14.2	-2.8
MEEK	**Meekatharra**	61.22	204	P	P	17 15 17.0	0.0
N32M	**Quiet Lake**	61.28	33	IAMs_20	IAMs_20	17 45 23.8	
	comp=Z,6µm,19.0s						
N32M	**Quiet Lake**	61.28	33	P	P	17 15 15.7	-1.4
	baz=282						
JASL	**Jaisalmer**	61.29	286	*e*P	P	17 15 13.7	-4.0
P32M	**Atlin**	61.30	35	P	P	17 15 18.2	+1.0
P32M	**Atlin**	61.30	35	P	P	17 15 15.9	-1.4
	baz=282						
S32K	**Killisnoo**	61.32	38	P	P	17 15 15.8	-1.6
	baz=283						
ARTI	**Arti**	61.48	321	LR	LR	17 44 21.8	
	comp=Z,10µm,18.1s,baz=84,slow=38						
ARTI	**Arti**	61.48	321	P	P	17 15 18.3	-0.2
ARTI	**Arti**	61.48	321	P	P	17 15 18.3	-0.2
ARTI				pmax	pmax		
	comp=Z,212nm,0.8s						
ARTI				MLR	MLR		
	comp=Z,10µm,18.0s						
ARMA	**Armidale**	61.53	170	P	P	17 15 22.5	+3.3
	comp=Z,56nm,1.2s,comp=Z,0.0nm						
ARMA	**Armidale**	61.53	170	P	P	17 15 19.1	0.0
ARMA	**Armidale**	61.53	170	P	P	17 15 22.7	+3.6
SALM	**Salem**	61.56	267	*e*P	P	17 15 13.8	-5.8
P33M	**Teslin, Yukon**	61.61	34	IAmb	IAmb	17 15 28.6	
	comp=Z,50nm,0.9s						
P33M				IAMs_20	IAMs_20	17 44 34.3	
	comp=Z,6µm,19.0s						
P33M	**Teslin, Yukon**	61.61	34	P	P	17 15 18.5	-0.9
	baz=283,SNR=10						
A36M	**Sachs Harbour**	61.98	21	IAmb	IAmb	17 15 29.1	
	comp=Z,68nm,0.8s						
A36M	**Sachs Harbour**	61.98	21	P	P	17 15 20.8	-0.7
	baz=283,SNR=57						
CMSA	**Cobar Meteorol**	62.05	176	P	P	17 15 24.4	+2.0
	comp=Z,134nm,1.3s,comp=Z,0.0nm						
CMSA	**Cobar Meteorol**	62.05	176	P	P	17 15 24.3	+1.9
AUPHS	**Peel High Scho**	62.10	171	P	P	17 15 25.0	+2.2
Q32M	**Nakina River**	62.17	36	IAmb	IAmb	17 15 44.4	
	comp=Z,88nm,1.3s						
Q32M	**Nakina River**	62.17	36	P	P	17 15 23.2	-0.1
	baz=284						
BHV	**Bhavnagar**	62.27	280	*e*P	P	17 15 19.9	-4.3
STKA	**Stephens Creek**	62.28	180	P	P	17 15 23.0	-1.0
	comp=Z,228nm,1.5s						
STKA	**Stephens Creek**	62.28	180	P	P	17 15 24.4	+0.5
	comp=Z,14nm,0.6s,baz=16,slow=5.9,SNR=19						
STKA				LR	LR	17 43 14.6	
	comp=Z,6µm,20.7s,baz=358,slow=37						
	comp=Z,14nm,0.6s						
STKA	**Stephens Creek**	62.28	180	P	P	17 15 23.5	-0.4
STKA	**Stephens Creek**	62.28	180	P	P	17 15 24.5	+0.5
AB31	**Akbulak array**	62.36	313	*i* P	P	17 15 24.6	+0.1
ABKAR	**Akbulak array**	62.36	313	P	P	17 15 23.9	-0.6
KAD	**Karad**	62.40	275	*e*P	P	17 15 20.3	-5.1
U33K	**Whale Pass**	62.42	39	P	P	17 15 23.7	-1.0
	baz=285						
FORT	**Forrest**	62.57	193	P	P	17 15 26.1	+0.1
	comp=Z,123nm,1.1s						
FORT	**Forrest**	62.57	193	P	P	17 15 25.8	-0.2
CRAG	**Craig**	62.59	40	P	P	17 15 25.1	-0.7
	baz=285						
R33M	**Jennings River**	62.71	35	P	P	17 15 25.5	-1.4
	baz=285						
BOM	**Bombay**	62.89	277	*e*P	P	17 15 23.8	-4.7
AFI	**Afiamalu**	62.93	128	IAMs_20	IAMs_20	17 41 31.8	
	comp=Z,5µm,19.0s						
AUDCS	**Dubbo College**	62.96	174	P	P	17 15 31.9	+3.4
S34M	**Telegraph Cree**	63.01	37	P	P	17 15 29.5	+0.8
S34M				IAmb	IAmb	17 15 57.1	
	comp=Z,77nm,1.2s						
S34M				IAMs_20	IAMs_20	17 42 22.5	
	comp=Z,4µm,19.0s						
S34M	**Telegraph Cree**	63.01	37	P	P	17 15 28.4	-0.3
	baz=285						
C36M	**Paulatuk**	63.02	23	IAmb	IAmb	17 15 34.9	
	comp=Z,62nm,0.7s						
C36M	**Paulatuk**	63.02	23	P	P	17 15 27.6	-0.9
	baz=286,SNR=60						
AKTO	**Aktyubinsk**	63.23	315	LR	LR	17 44 05.6	
	comp=Z,11µm,18.6s,baz=75,slow=37						
AKTO	**Aktyubinsk**	63.23	315	P	P	17 15 29.6	-0.7
DLBC	**Dease Lake**	63.43	36	LR	LR	17 43 50.8	
	comp=Z,2µm,18.9s,baz=269,slow=37						
DLBC	**Dease Lake**	63.43	36	P	P	17 15 31.5	-0.1
	baz=286						
BBOO	**Buckleboo**	63.44	185	P	P	17 15 32.8	+1.1
	comp=Z,123nm,1.7s,comp=Z,0.0nm						
BBOO	**Buckleboo**	63.44	185	P	P	17 15 32.6	+0.9
V35K	**Ketchikan**	63.45	40	P	P	17 15 31.7	+0.1
	baz=286						
WHYH	**Whyalla**	63.56	184	P	P	17 15 35.2	+2.8
WTLY	**Watson Lake, Y**	63.58	34	IAmb	IAmb	17 15 55.4	
	comp=Z,140nm,1.5s						
WTLY	**Watson Lake, Y**	63.58	34	P	P	17 15 32.3	-0.1
	baz=286						
AUJCS	**Jamestown Cent**	63.67	183	P	P	17 15 34.4	+1.2
T35M	**Bob Quinn**	63.72	38	IAMs_20	IAMs_20	17 46 28.4	
	comp=Z,6µm,18.0s						
T35M	**Bob Quinn**	63.72	38	P	P	17 15 33.8	+0.3
	baz=286						
HTT	**Hallett**	63.89	183	P	P	17 15 36.3	+1.6
	comp=Z,46nm,1.9s						
HTT	**Hallett**	63.89	183	P	P	17 15 36.2	+1.6
LHI	**Lord Howe Isla**	64.05	164	P	P	17 15 43.1	+7.4
U35K	**Hyder**	64.15	39	P	P	17 15 36.3	+0.1
	baz=287						
MORW	**Morawa**	64.35	205	P	P	17 15 36.9	-0.9
	comp=Z,49nm,1.1s						
MORW	**Morawa**	64.35	205	P	P	17 15 37.8	0.0
KMBL	**Kambalda**	64.61	199	P	P	17 15 39.5	+0.1
	comp=Z,43nm,1.1s						
SYDH	**Sydney Hard Ro**	64.71	172	P	P	17 15 43.9	+3.9
AUCAS	**Cummins Area S**	64.91	186	P	P	17 15 42.7	+1.4
YNG	**Young**	64.99	174	P	P	17 15 43.9	+2.0
	comp=Z,44nm,2.2s						
WRGLY	**Wrigley**	65.07	30	P	P	17 15 41.7	-0.4
	baz=289						
LIRD	**Liard River Hi**	65.09	34	P	P	17 15 41.9	-0.5
	baz=288,SNR=30						
AUMAR	**Marden Senior**	65.35	183	P	P	17 15 46.2	+2.1
BLDU	**Ballidu**	65.52	204	P	P	17 15 45.9	+0.5
	comp=Z,89nm,1.3s						
BLDU	**Ballidu**	65.52	204	P	P	17 15 45.6	+0.2
KIRV	**Kirov**	65.52	325	LR	LR	17 46 42.8	
	comp=Z,7µm,18.3s,baz=72,slow=38						
KIRV	**Kirov**	65.52	325	*c i*P	P	17 15 45.7	+0.6
AUMBR	**Murray Bridge**	65.57	182	P	P	17 15 47.5	+2.0
TOAD	**Toad River Com**	65.70	35	P	P	17 15 46.0	-0.3
	baz=289,SNR=14						
KOTAN	**Kotaneelee Air**	65.83	33	P	P	17 15 47.7	+0.6
	baz=290						
AUSIS	**Research Schoo**	66.03	173	P	P	17 15 52.0	+3.4
AUMTS	**Mt Stromlo**	66.06	174	P	P	17 15 52.2	+3.4
CAN	**Canberra**	66.06	174	P	P	17 15 52.1	+3.4
	comp=Z,90nm,2.2s						
CAN	**Canberra**	66.06	174	P	P	17 15 52.2	+3.4
CAN	**Canberra**	66.06	174	⇑P	P	17 15 53.3	+4.5
KLBR	**Kellerberrin**	66.07	202	P	P	17 15 48.9	+0.1
	comp=Z,167nm,0.9s						
KLBR	**Kellerberrin**	66.07	202	P	P	17 15 48.6	-0.3
CNB	**Canberra Magne**	66.09	173	P	P	17 15 53.2	+4.2
CNB	**Canberra Magne**	66.09	173	P	P	17 15 53.0	+4.0
AUMHS	**Melrose High S**	66.11	174	P	P	17 15 52.4	+3.3
HOPEN	**Hopen**	66.22	347	*e*P	P	17 15 51.7	+2.4
BBB	**Bella Bella**	66.41	42	LR	LR	17 42 07.9	
	comp=Z,960nm,20.3s,baz=296,slow=33						
AUMAG	**Moama Anglican**	66.55	177	P	P	17 15 55.3	+3.5
SPA0	**Spitsbergen Ar**	66.75	349	*e*P	P	17 15 54.3	+1.6
SPITS	**Spitsbergen Ar**	66.75	349	P	P	17 15 54.0	+1.3
	comp=Z,21nm,0.7s,baz=45,slow=1.0,SNR=14						
SPITS				LR	LR	17 48 02.7	
	comp=Z,4µm,18.2s,baz=41,slow=39						
	comp=Z,21nm,0.7s						
KBS	**Kingsbay**	66.90	351	P	P	17 15 53.4	-0.2
KBS				IAMs_20	IAMs_20	17 46 23.7	
	comp=Z,3µm,18.0s						
KBS	**Kingsbay**	66.90	351	*e*P	P	17 15 57.0	+3.4
KBS	**Kingsbay**	66.90	351	*de*P	P	17 15 55.9	+2.2
KBS				pmax	pmax		
	comp=Z,79nm,1.0s						
KBS				MLR	MLR		
	comp=Z,3µm,17.0s						
KBS	**Kingsbay**	66.90	351	*i* P	P	17 15 55.5	+1.8
AUSMG	**Snowy Mountain**	67.11	174	P	P	17 15 58.9	+3.4
ARPS	**Mount Arapiles**	67.16	180	P	P	17 15 57.4	+1.7
	comp=Z,118nm,1.6s						
NOR	**Nord**	67.34	357	*i* P	P	17 15 57.5	+1.1
NOR				IAmb	IAmb	17 15 59.4	
	comp=Z,18nm,1.0s						
NWAO	**Narrogin (SRO)**	67.47	202	P	P	17 15 58.4	+0.7
	comp=Z,119nm,1.0s,comp=Z,0.0nm						
NWAO	**Narrogin (SRO)**	67.47	202	P	P	17 15 58.4	+0.7
	comp=Z,193nm,0.9s						
NWAO	**Narrogin (SRO)**	67.47	202	P	P	17 15 57.4	-0.3
NWAO				S	S	17 24 51.2	-1.2
NWAO	**Narrogin (SRO)**	67.47	202	P	P	17 15 57.1	-0.6
NWAO	**Narrogin (SRO)**	67.47	202	P	P	17 15 58.3	+0.5
NWAO	**Narrogin (SRO)**	67.47	202	P	P	17 15 58.2	+0.5
NWAO	**Narrogin (SRO)**	67.47	202	P	P	17 15 57.1	-0.6
NWAO				pmax	pmax		
	comp=Z,151nm,1.1s						
NWAO				MLR	MLR		
	comp=Z,2µm,20.0s						
HSPB	**Hornsund (broa**	67.66	349	*e*P	P	17 15 59.8	+1.3
MILA	**Mila**	67.79	174	P	P	17 16 02.0	+2.2
	comp=Z,36nm,1.3s						
NIUE	**Niue**	67.85	130	P	P	17 16 08.1	+7.7
BRAT	**Ballarat**	67.97	178	P	P	17 16 04.3	+3.5
LVZ	**Lovozero**	68.00	337	P	P	17 16 01.1	+0.3
LVZ				IAmb	IAmb	17 16 11.5	
	comp=Z,98nm,1.2s						
LVZ	**Lovozero**	68.00	337	⇓*e*P	P	17 16 01.7	+0.9
LVZ				pmax	pmax		
	comp=Z,60nm,1.1s						
LVZ				MLR	MLR		
	comp=Z,8µm,18.0s						
AUMTC	**Mt Clear Colle**	68.03	178	P	P	17 16 04.3	+3.2
TOO	**Toolangi**	68.05	177	P	P	17 16 03.7	+2.4
	comp=Z,31nm,1.3s,comp=Z,0.0nm						
TOO	**Toolangi**	68.05	177	IAmb	IAmb	17 16 11.7	
	comp=Z,68nm,1.4s						
HMDM	**Hanimaadhoo**	68.22	265	P	P	17 16 02.6	-0.4
HMDM	**Hanimaadhoo**	68.22	265	IAMs_20	IAMs_20	17 45 12.0	
	comp=Z,4µm,21.0s						
VADS	**Vadso**	68.57	340	*e*P	P	17 16 04.7	+0.5
APA	**Apatity**	68.58	337	⇓*i*P	P	17 16 02.6	-1.8
APA				*i*		17 16 25.8	
APA				*i* S	S	17 25 02.5	-2.5
APA				*i* SS	SS	17 29 24.8	-3.7
APA				MLR	MLR		
	comp=Z,11µm,19.0s						
RES	**Resolute Bay**	68.60	14	LR	LR	17 50 43.4	
	comp=Z,2µm,19.3s,baz=316,slow=40						
RES	**Resolute Bay**	68.60	14	P	P	17 16 05.0	+0.6
RES				IAmb	IAmb	17 16 15.2	
	comp=Z,51nm,0.9s						
RES	**Resolute Bay**	68.60	14	P	P	17 16 05.0	+0.6
RES				pmax	pmax		
	comp=Z,51nm,1.0s						
AUSSC	**Sale College,**	68.66	176	P	P	17 16 09.3	+4.2
BELG	**Belogornoye**	68.70	319	*c i*P	P	17 16 05.6	+0.2
BELG				pmax	pmax		
	comp=Z,36nm,0.9s						
BELG				MLR	MLR		
	comp=Z,2µm,16.0s						
YKAW3	**Yellowknife Wh**	69.07	29	IAmb	IAmb	17 16 28.4	
	comp=Z,93nm,1.3s						
YKA	**Yellowknife Ar**	69.10	29	P	P	17 16 09.1	+1.4
	comp=Z,9.4nm,0.8s,baz=295,slow=6.9,SNR=34						
YKA				PKP2bc	P'P'bc	17 44 16.5	-7.9
	comp=Z,1.7nm,1.1s,baz=113,slow=3.3,SNR=4.9						
YKA				LR	LR	17 55 25.3	
	comp=Z,1µm,18.0s,baz=294,slow=44						
	comp=Z,9.4nm,0.8s						
YKA	**Yellowknife Ar**	69.10	29	P	P	17 16 08.1	+0.4
YKAW1	**Yellowknife Wh**	69.16	29	IAmb	IAmb	17 16 28.9	
	comp=Z,124nm,1.4s						
KLMR	**Klimovskoe**	69.29	329	*e*P	P	17 16 07.5	-1.4
KLMR				*e*		17 16 30.2	
KLMR				*e*		17 18 38.0	
KLMR				S	S	17 25 11.4	-2.2
KLMR				SS	SS	17 29 37.5	-2.2
KLMR				pmax	pmax		
	comp=Z,130nm,1.0s						
KEV	**Kevo**	69.45	340	P	P	17 16 09.4	-0.3
KEV				IAmb	IAmb	17 16 16.8	
	comp=Z,77nm,1.0s						
KEV	**Kevo**	69.45	340	P	P	17 16 09.4	-0.3
KEV				pmax	pmax		
	comp=Z,77nm,1.0s						
KEV				MLR	MLR		
	comp=Z,10µm,19.0s						
HAMF	**Hammerfest**	69.87	342	*e*P	P	17 16 13.6	+1.3
NGCH	**Negor - Chabah**	69.96	288	P	P	17 16 14.1	+0.5
ARA0	**ARCESS Array S**	70.01	340	*e*P	P	17 16 14.8	+1.5
ARCES	**ARCESS Array B**	70.01	340	P	P	17 16 14.2	+1.0
	comp=Z,47nm,0.9s,baz=61,slow=5.1,SNR=42						
ARCES				LR	LR	17 51 37.8	
	comp=Z,7µm,18.6s,baz=72,slow=40						
	comp=Z,47nm,0.9s						
ARCES	**ARCESS Array B**	70.01	340	P	P	17 16 13.8	+0.5
ARCES				IAmb	IAmb	17 16 20.4	
	comp=Z,84nm,1.1s						
CLRS	**Cowichan Lake**	70.03	45	P	P	17 16 14.1	+0.4
CLRS				IAmb	IAmb	17 16 34.4	
	comp=Z,150nm,1.5s						
LLLB	**Lillooet**	70.62	42	P	P	17 16 17.4	+0.1
NLWA	**Neilton Lookou**	70.77	46	IAmb	IAmb	17 16 39.6	
	comp=Z,165nm,1.6s						
TULEG	**Thule**	71.28	7	IAmb	IAmb	17 16 31.5	
	comp=Z,172nm,1.4s						
TULEG				IAMs_20	IAMs_20	17 49 46.0	
	comp=Z,5µm,20.0s						
TULEG	**Thule**	71.28	7	*i* P	P	17 16 21.3	+0.5
TULEG				IAmb	IAmb	17 16 23.7	
	comp=Z,118nm,1.4s						
JETT	**Jettan, Norway**	71.43	342	*e*P	P	17 16 24.5	+2.6
GLAD	**Gladstone**	71.60	175	P	P	17 16 25.4	+2.4
KAAM	**Kaadhehdhoo**	71.62	259	IAMs_20	IAMs_20	17 49 00.2	
	comp=Z,4µm,20.0s						
TRO	**Tromso**	71.78	342	*e*P	P	17 16 24.6	+0.7
NEEM	**North Greenlan**	71.78	3	*i* P	P	17 16 25.6	+1.4
NEEM				IAmb	IAmb	17 16 27.5	
	comp=Z,88nm,1.0s						
CORO	**Coronation Par**	72.00	176	P	P	17 16 29.1	+3.6
DAG	**Danmarks Havn**	72.06	355	*i* P	P	17 16 26.0	+0.5
DAG				IAmb	IAmb	17 16 28.7	
	comp=Z,76nm,1.1s						
OUZ	**Omahuta**	72.10	153	P	P	17 16 30.7	+4.5
LON	**Longmire**	72.32	46	P	P	17 16 28.4	+0.7
LON	**Longmire**	72.32	46	P	P	17 16 28.4	+0.7
LON				pmax	pmax		
	comp=Z,40nm,1.2s						
COR	**Corvallis**	72.33	48	IAMs_20	IAMs_20	17 44 55.5	
	comp=Z,5µm,19.0s						
KEBM	**Edson Butte**	72.40	50	IAMs_20	IAMs_20	17 46 43.8	
	comp=Z,6µm,19.0s						
VRH	**Novokhopyorsk**	72.52	320	*c i*P	P	17 16 28.5	-0.2
VRH				pmax	pmax		
	comp=Z,107nm,0.9s						
MOS	**Moscow**	72.54	325	*e*P	P	17 16 26.8	-1.9
MOS				*e*		17 16 43.9	
MOS				*e*		17 19 08.5	
MOS				*e*PPP	PPP	17 20 55.5	
MOS				*e*S	S	17 25 51.0	-0.5
MOS				*e*SS	SS	17 30 35.7	+5.9
MOS				pmax	pmax		
	comp=Z,800nm,1.8s						
MOS				pmax	pmax		
	comp=Z,274nm,1.4s						
MOS				MLR	MLR		
	comp=E,10µm,17.0s						
MOS				MLR	MLR		
	comp=Z,14µm,17.0s						
MOS				MLR	MLR		
	comp=N,6µm,16.0s						
G04A	**Mulino**	72.58	47	IAmb	IAmb	17 16 39.0	
	comp=Z,114nm,0.8s						
MAK	**Makhachkala**	72.68	310	*c i*P	P	17 16 29.6	-0.2
MAK				*e*		17 19 11.2	
MAK				*e*PPP	PPP	17 20 52.2	
MAK				*e*S	S	17 25 56.9	+3.4
MAK				*e*SS	SS	17 30 32.7	+0.2
MAK				pmax	pmax		
	comp=Z,437nm,2.2s						
MAK				pmax	pmax		
	comp=Z,3µm,3.3s						
MAK				smax	smax		
	comp=E,5µm,7.2s						
MAK				smax	smax		
	comp=N,1µm,4.4s						
MAK				MLR	MLR		
	comp=Z,22µm,17.0s						
MAK				MLR	MLR		
	comp=Z,31µm,16.0s						
MAK				MLR	MLR		
	comp=E,30µm,17.0s						
I03D	**Drain, OR**	72.69	49	P	P	17 16 30.1	+0.3
KBO	**Bosley Butte**	72.76	51	IAMs_20	IAMs_20	17 46 35.1	
	comp=Z,6µm,18.0s						
JLN	**Jalan Bani Buh**	72.78	286	P	P	17 16 31.0	+0.2
	SNR=15						
JLN				S	S	17 25 56.7	+1.4
LTY	**Liberty**	72.79	45	P	P	17 16 30.9	+0.4
LTY				IAmb	IAmb	17 16 50.7	
	comp=Z,199nm,1.8s						
K02D	**Willamette Mer**	72.92	50	IAmb	IAmb	17 16 52.0	
	comp=Z,75nm,1.1s						
WSAR	**Wadi Sarin**	72.94	287	LR	LR	17 54 13.0	
	comp=Z,17nm,18.1s,baz=76,slow=41						
WSAR	**Wadi Sarin**	72.94	287	P	P	17 16 32.4	+0.7
	SNR=15						
WSAR				S	S	17 25 54.9	-2.3
WBK	**Wadi Bani Khal**	72.94	286	P	P	17 16 33.0	+1.2
	SNR=22						
MOO	**Moorlands**	72.99	176	P	P	17 16 33.7	+2.3
	comp=Z,84nm,1.5s						
MOO	**Moorlands**	72.99	176	P	P	17 16 34.7	+3.3
H04A	**Detroit Lake**	73.00	48	IAmb	IAmb	17 16 52.2	
	comp=Z,188nm,1.4s						
B08A	**Colville Reser**	73.10	44	IAmb	IAmb	17 16 52.7	
	comp=Z,116nm,1.4s						
AKT	**Akhty**	73.18	308	*e*P	P	17 16 33.0	0.0
AKT				*e*		17 16 49.5	
AKT				*e*		17 19 17.9	
AKT				*e*PPP	PPP	17 21 01.4	
AKT				*e*S	S	17 25 58.2	-1.4
AKT				*e*		17 26 38.3	
AKT				pmax	pmax		
	comp=Z,170nm,0.8s						
AKT				MLR	MLR		
	comp=Z,8µm,16.0s						
BIDO	**Bidbid**	73.23	288	P	P	17 16 35.0	+1.6
	SNR=34						
I04A	**Tendick Farm,**	73.25	49	IAmb	IAmb	17 16 42.2	
	comp=Z,56nm,0.9s						
MXC	**Moxie City**	73.33	46	IAmb	IAmb	17 16 54.3	
	comp=Z,128nm,1.5s						
OBN	**Obninsk**	73.37	325	LR	LR	17 51 06.3	
	comp=Z,9µm,19.4s,baz=4.0,slow=38						
OBN	**Obninsk**	73.37	325	P	P	17 16 33.6	-0.1
OBN	**Obninsk**	73.37	325	⇓P	P	17 16 34.7	+1.0
OBN	**Obninsk**	73.37	325	*c i*P	P	17 16 34.1	+0.4
OBN				*i*		17 16 40.3	
OBN				*i*		17 16 45.7	
OBN				*i*		17 19 17.9	
OBN				*i* S	S	17 25 56.4	-4.6
OBN				*i* SSS	SSS	17 33 54.9	
OBN				pmax	pmax		
	comp=Z,130nm,1.2s						
OBN				MLR	MLR		
	comp=Z,14µm,16.0s						
LPSR	**Galich'ya Gora**	73.39	322	*c i*P	P	17 16 34.0	+0.2
LPSR				pmax	pmax		
	comp=Z,166nm,1.1s						
EPH	**Ephrata**	73.40	45	IAmb	IAmb	17 16 54.2	
	comp=Z,101nm,1.5s						
TAU	**Tasmania Unive**	73.47	176	P	P	17 16 33.0	-1.1
TAU				IAmb	IAmb	17 16 53.5	
	comp=Z,114nm,1.2s						
TAU	**Tasmania Unive**	73.47	176	IAMs_20	IAMs_20	17 49 57.8	
	comp=Z,5µm,18.0s						
TAU	**Tasmania Unive**	73.47	176	P	P	17 16 37.3	+3.2
TAU	**Tasmania Unive**	73.47	176	P	P	17 16 33.0	-1.1
TAU				pmax	pmax		
	comp=Z,114nm,1.3s						
TAU				MLR	MLR		
	comp=Z,5µm,18.0s						
BBOR	**Butler Butte**	73.48	50	P	P	17 16 35.4	+0.6
AUTAR	**Taroona High S**	73.50	176	P	P	17 16 38.4	+4.1
SMDO	**Samad**	73.50	287	P	P	17 16 36.0	+0.8
	SNR=34						
JCC	**Jacoby Creek,**	73.50	52	IAMs_20	IAMs_20	17 45 58.9	
	comp=Z,6µm,20.0s						
WIFE	**Three Sisters-**	73.52	48	IAmb	IAmb	17 16 55.8	
	comp=Z,157nm,1.3s						
E07A	**Sunnyside**	73.61	45	IAmb	IAmb	17 16 56.0	
	comp=Z,177nm,1.5s						
BANOM	**Banah**	73.64	291	P	P	17 16 36.7	+0.9
BANOM				S	S	17 26 07.0	+1.8
BANOM	**Banah**	73.64	291	*i* P	P	17 16 36.4	+0.5
	SNR=8.8						
KHMM	**Horse Mountain**	73.68	52	P	P	17 16 35.3	-0.7
KHMM				IAmb	IAmb	17 16 58.8	
	comp=Z,78nm,1.1s						
VORR	**Voronezh**	73.69	321	*e*P	P	17 16 35.9	+0.3
VORR				pmax	pmax		
	comp=Z,59nm,0.5s						
J04A	**Umpqua Nationa**	73.70	49	IAmb	IAmb	17 16 43.1	
	comp=Z,72nm,0.8s						
SHME	**Shamm**	73.71	291	P	P	17 16 36.9	+0.7
	SNR=18						
SHME				S	SKiKP	17 26 03.1	-1.3
SHME	**Shamm**	73.71	291	*i* P	P	17 16 36.6	+0.4
	SNR=26						
G06A	**Carlson Farm,**	73.73	47	IAmb	IAmb	17 16 56.8	
	comp=Z,194nm,1.5s						
JMDO	**Jabal Madar**	73.76	287	P	P	17 16 37.0	+0.4
	SNR=16						
PUL	**Pulkovo**	73.80	331	⇓*e*P	P	17 16 37.4	+1.3
PUL				pmax	pmax		
	comp=Z,193nm,1.0s						
PUL				MLR	MLR		
	comp=Z,5µm,19.0s						
HOQ	**Hoqain**	73.87	288	P	P	17 16 38.0	+0.8

	SNR=36						
HAWA	Hanford	73.88	45	P	P	17 16 36.9	0.0
HAWA				IAmb	IAmb	17 16 57.5	
	comp=Z,89nm,1.4s						
HAWA				IAMs_20	IAMs_20	17 50 59.6	
	comp=Z,3µm,18.0s						
STEI	Steigen	73.92	342	*e*P	P	17 16 37.0	+0.4
MDH	Madha	73.92	290	P	P	17 16 37.5	+0.1
MDH				S	S	17 26 08.6	+0.4
MDH	Madha	73.92	290	*i* P	P	17 16 36.5	-0.9
	SNR=18						
VSR	Storozhevoye	73.93	320	*e*P	P	17 16 35.8	-1.2
VSR				pmax	pmax		
	comp=Z,80nm,1.0s						
VSR				MLR	MLR		
	comp=Z,11µm,16.0s						
D08A	Wollman Farm,	73.95	45	IAmb	IAmb	17 16 57.6	
	comp=Z,146nm,1.5s						
YBH	Yreka Blue Hor	73.98	51	LR	LR	17 48 05.4	
	comp=Z,330nm,18.4s,baz=284,slow=35						
VORD	Divnogorie	73.98	320	*e*P	P	17 16 36.0	-1.3
VORD				pmax	pmax		
	comp=Z,70nm,1.0s						
VORD				MLR	MLR		
	comp=Z,670nm,7.0s						
C09A	Chrisman Ranch	73.99	44	IAmb	IAmb	17 16 57.9	
	comp=Z,176nm,1.6s						
MASF	Masafi	74.00	290	P	P	17 16 38.6	+0.7
	SNR=13						
MASF				S	S	17 26 10.0	+0.7
MSFE	Esma-Masafi	74.01	290	*i* P	P	17 16 38.1	+0.1
	SNR=25						
L04D	Klamath Falls	74.03	50	IAmb	IAmb	17 16 47.0	
	comp=Z,91nm,1.1s						
M02C	Callahan	74.04	51	IAMs_20	IAMs_20	17 45 23.1	
	comp=Z,6µm,20.0s						
EDM	Edmonton	74.10	37	IAmb	IAmb	17 16 58.1	
	comp=Z,191nm,1.5s						
UOSS	Minazif	74.16	290	P	P	17 16 38.7	-0.1
UOSS				S	S	17 26 08.7	-2.2
UOSS	Minazif	74.16	290	P	P	17 16 38.4	-0.5
KULLO	Kullorsuaq	74.20	5	*i* P	P	17 16 41.6	+3.4
KULLO				IAmb	IAmb	17 16 43.5	
	comp=Z,32nm,0.8s						
J05D	Fort Rock, OR	74.24	49	IAmb	IAmb	17 17 00.2	
	comp=Z,186nm,1.6s						
SOHO	SOHO	74.25	289	P	P	17 16 39.5	+0.1
SOHO				S	S	17 26 11.0	-1.0
SOHO	SOHO	74.25	289	*i* P	P	17 16 38.7	-0.7
	SNR=51						
HATD	Hatta, Dubai	74.27	290	P	P	17 16 41.0	+1.4
	SNR=32						
HATD				S	S	17 26 12.8	+0.6
HATD	Hatta, Dubai	74.27	290	*i* P	P	17 16 39.7	+0.1
	SNR=26						
KUZ	Kuaotunu	74.27	152	P	P	17 16 43.3	+4.3
FAUS	Fauske	74.29	341	*e*P	P	17 16 40.3	+1.5
KCPM	Cahto Peak	74.32	53	IAmb	IAmb	17 17 00.5	
	comp=Z,133nm,1.3s						
UMQ	Umm Al-Quwin	74.33	291	P	P	17 16 40.6	+0.8
UMQ				S	S	17 26 14.9	+2.1
BSY	Bisya	74.34	287	P	P	17 16 41.0	+1.0
	SNR=44						
BSY				S	S	17 26 14.1	+1.0
ASHO	Ashiyiah	74.39	290	P	P	17 16 41.0	+0.7
	SNR=39						
ASHO				S	S	17 26 15.7	+2.0
ASHO	Ashiyiah	74.39	290	*i* P	P	17 16 40.6	+0.3
	SNR=21						
YPT	Yellepit	74.39	46	IAmb	IAmb	17 17 00.6	
	comp=Z,90nm,1.3s						
NEW	Newport	74.45	43	LR	LR	17 44 47.9	
	comp=Z,1µm,21.8s,baz=305,slow=32						
NEW	Newport	74.45	43	IAmb	IAmb	17 17 01.3	
	comp=Z,77nm,1.1s						
MHTO	MHTO	74.50	285	P	P	17 16 41.0	+0.1
	SNR=25						
MHTO				S	S	17 26 13.0	-1.9
DBG	Daneborg	74.54	355	*i* P	P	17 16 41.0	+0.8
DBG				IAmb	IAmb	17 16 46.4	
	comp=Z,47nm,1.1s						
FINES	FINESS Array B	74.55	333	P	P	17 16 41.5	+1.0
	comp=Z,43nm,0.5s,baz=60,slow=5.1,SNR=337						
FINES				LR	LR	17 51 55.6	
	comp=Z,4µm,19.2s,baz=56,slow=38						
	comp=Z,43nm,0.5s						
FINES	FINESS Array B	74.55	333	P	P	17 16 40.6	+0.2
NAZ	Nazwa, Dubai	74.58	290	P	P	17 16 43.0	+1.7
	SNR=10						
NAZ				S	S	17 26 13.7	-1.9
NAZ	Nazwa, Dubai	74.58	290	*i* P	P	17 16 41.3	0.0
	SNR=6.5						
M03C	McCloud	74.58	51	IAmb	IAmb	17 16 48.5	
	comp=Z,70nm,0.8s						
GOF	Gofitskoye	74.59	313	*c i*P	P	17 16 41.8	+0.8
ARQ	Araqi	74.62	288	P	P	17 16 43.0	+1.4
	SNR=33						
ARQ				S	S	17 26 18.3	+2.1
O02D	Mt. Diablo Mer	74.64	52	P	P	17 16 41.1	-0.4
O02D				IAmb	IAmb	17 16 50.9	
	comp=Z,113nm,1.4s						
K05A	Summer Lake	74.72	49	IAmb	IAmb	17 17 03.2	
	comp=Z,169nm,1.2s						
FAQ	Al Faqa, Dubai	74.74	290	P	P	17 16 44.0	+1.7
	SNR=11						
FAQ	Al Faqa, Dubai	74.74	290	*i* P	P	17 16 41.9	-0.4
	SNR=6.4						
ALNE	Al Ain	74.93	289	P	P	17 16 44.0	+0.7
	SNR=26						
ALNE				S	S	17 26 20.0	+0.4
ALNE	Al Ain	74.93	289	*i* P	P	17 16 43.3	-0.1
	SNR=18						
ASUD	Al Ashush, Dub	75.01	290	P	P	17 16 44.8	+1.0
ASUD				S	S	17 26 21.4	+0.9
ASUD	Al Ashush, Dub	75.01	290	*i* P	P	17 16 44.2	+0.4
	SNR=5.2						
BLKN	Baker Lake	75.05	22	IAmb	IAmb	17 17 03.9	
	comp=Z,156nm,1.3s						
HATC	Hat Creek Radi	75.24	51	IAmb	IAmb	17 16 53.9	
	comp=Z,61nm,0.9s						
HATC				IAMs_20	IAMs_20	17 46 20.8	
	comp=Z,5µm,20.0s						
O03E	Paynes Creek	75.25	52	IAmb	IAmb	17 16 53.4	
	comp=Z,75nm,0.9s						
O03E				IAMs_20	IAMs_20	17 47 54.2	
	comp=Z,3µm,19.0s						
RAUS	Rausandaksla	75.31	341	*e*P	P	17 16 45.6	+0.9
VAGH	Vaagaholmen	75.31	341	*e*P	P	17 16 45.6	+0.9
AJN	Ajban	75.32	290	P	P	17 16 46.1	+0.5
	SNR=9.0						
AJN				S	S	17 26 22.6	-1.2
AJN	Ajban	75.32	290	*i* P	P	17 16 44.8	-0.7
	SNR=14						
KBZ	Khabaz	75.32	312	P	P	17 16 46.1	+0.9
	comp=Z,70nm,0.8s,baz=67,slow=3.2,SNR=110						
KBZ				LR	LR	17 50 52.2	
	comp=Z,6µm,20.1s,baz=78,slow=37						
	comp=Z,70nm,0.8s						
KVAR	Kislovodsk Arr	75.34	313	LR	LR	17 50 35.8	
	comp=Z,5µm,20.9s,baz=315,slow=36						
KIV	Kislovodsk	75.34	313	P	P	17 16 46.9	+1.4
KIV				S	S	17 26 24.4	+0.7
KIV	Kislovodsk	75.34	313	P	P	17 16 45.8	+0.3
KIV	Kislovodsk	75.34	313	⇑P	P	17 16 46.6	+1.1
KIV	Kislovodsk	75.34	313	*i* P	P	17 16 46.4	+0.9
	SNR=31						
KIV	Kislovodsk	75.34	313	*e*P	P	17 16 44.2	-1.3
KIV				*e*		17 16 56.9	
KIV				*e*		17 19 33.3	
KIV				*e*S	S	17 26 24.1	+0.4
KIV				*e*SS	SS	17 31 17.2	+3.9
KIV				pmax	pmax		
	comp=Z,313nm,3.8s						
KIV				pmax	pmax		
	comp=Z,100nm,1.0s						
KIV				MLR	MLR		
	comp=Z,6µm,18.0s						
DQM	DQM	75.35	285	P	P	17 16 49.0	+3.2
	SNR=6.7						
DQM				S	S	17 26 22.5	-1.8
MOR8	Moi Rana	75.38	341	*e*P	P	17 16 45.7	+0.5
SHA1	Shidzhatmaz	75.47	312	*ce*P	P	17 16 47.2	+0.8
HIZ	Hauiti	75.47	154	IAMs_20	IAMs_20	17 46 19.1	
	comp=Z,3µm,20.0s						
HIZ	Hauiti	75.47	154	P	P	17 16 49.5	+3.5
MNRC	McLaughlin Min	75.47	53	IAmb	IAmb	17 16 55.6	
	comp=Z,85nm,1.1s						
MNRC				IAMs_20	IAMs_20	17 45 48.1	
	comp=Z,5µm,19.0s						
MCCM	Marconi Confer	75.51	54	IAMs_20	IAMs_20	17 47 33.2	
	comp=Z,4µm,20.0s						
CVS	Carmenet Viney	75.71	54	IAmb	IAmb	17 17 26.7	
	comp=Z,88nm,1.1s						
CVS				IAMs_20	IAMs_20	17 42 37.5	
	comp=Z,3µm,21.0s						
SUTB	Sutter Butte	75.76	53	IAMs_20	IAMs_20	17 46 20.7	
	comp=Z,4µm,20.0s						
GNI	Garni	75.80	308	LR	LR	17 52 56.9	
	comp=Z,3µm,18.3s,baz=64,slow=38						
GNI	Garni	75.80	308	P	P	17 16 50.5	+2.1
GNI				S	S	17 26 30.0	+0.9
GNI	Garni	75.80	308	P	P	17 16 48.8	+0.4
GNI	Garni	75.80	308	IAMs_20	IAMs_20	17 55 50.0	
	comp=Z,4µm,18.0s						
GNI	Garni	75.80	308	*ce*P	P	17 16 49.7	+1.4
GNI				pmax	pmax		
	comp=Z,93nm,1.3s						
ORV	Oroville	75.80	52	IAMs_20	IAMs_20	17 46 54.8	
	comp=Z,5µm,19.0s						
ERBR	Yeremizino-Bor	75.86	315	*e*P	P	17 16 48.2	-0.1
ERBR				*e*S	S	17 26 25.8	-3.4
ERBR				pmax	pmax		
	comp=Z,150nm,1.1s						
ERBR				MLR	MLR		
	comp=Z,10µm,17.0s						
VRZ	Vera Road	75.97	154	P	P	17 16 52.4	+3.7
HAZ	Te Kaha	75.98	151	P	P	17 16 54.6	+5.8
J08A	Circle Bar Ran	75.99	48	IAmb	IAmb	17 17 10.0	
	comp=Z,175nm,1.5s						
BMO	Blue Mountains	75.99	46	IAmb	IAmb	17 17 09.8	
	comp=Z,144nm,1.6s						
BMO				IAMs_20	IAMs_20	17 53 27.4	
	comp=Z,3µm,18.0s						
UPNV	Upernavik	76.02	5	*i* P	P	17 16 49.9	+1.2
UPNV				IAmb	IAmb	17 16 52.0	
	comp=Z,97nm,1.4s						
UMZA	Um Al Zommool	76.02	288	P	P	17 16 49.5	-0.1
UMZA				S	S	17 26 27.6	-4.1
MXZ	Matakaoa Point	76.03	151	IAMs_20	IAMs_20	17 45 23.1	
	comp=Z,5µm,22.0s						
VSU	Vasula	76.07	331	*ce*P	P	17 16 48.9	-0.3
VSU				pmax	pmax		
	comp=Z,168nm,1.0s						
VSU				MLR	MLR		
	comp=Z,3µm,15.0s						
URZ	Urewera	76.14	152	LR	LR	17 47 21.5	
	comp=Z,3µm,21.6s,baz=326,slow=33						
URZ	Urewera	76.14	152	P	P	17 16 52.1	+2.4
KHAM	Kharkiv	76.15	320	P	P	17 16 48.8	-1.2
RAR	Rarotonga	76.23	125	LR	LR	17 43 22.3	
	comp=Z,4µm,21.9s,baz=309,slow=30						
LABN	Labinsk	76.24	314	*e*P	P	17 16 51.4	+0.9
LABN				*e*S	S	17 26 36.3	+2.9
LABN				pmax	pmax		
	comp=Z,88nm,1.2s						
LABN				MLR	MLR		
	comp=N,12µm,14.0s						
LABN				MLR	MLR		
	comp=Z,11µm,16.0s						
WVOR	Wild Horse Val	76.33	49	IAmb	IAmb	17 17 11.8	
	comp=Z,161nm,1.6s						
NGZ	Ngauruhoe	76.33	154	P	P	17 16 54.2	+3.1
DGAR	Diego Garcia	76.37	253	P	P	17 16 51.6	0.0
DGAR	Diego Garcia	76.37	253	IAMs_20	IAMs_20	17 49 46.1	
	comp=Z,4µm,20.0s						
JMIC	Jan Mayen	76.39	350	LR	LR	17 51 19.7	
	comp=Z,1µm,19.8s,baz=64,slow=36						
RTZ	Ruatahuna	76.39	152	P	P	17 16 51.2	-0.1
BEKR	Beckworth	76.43	52	IAmb	IAmb	17 16 58.8	
	comp=Z,59nm,0.8s						
MZWR	Madinat Zayed	76.58	290	P	P	17 16 52.7	-0.1
BKZ	Black Stump Fm	76.67	153	P	P	17 16 53.1	+0.3
BKZ				IAmb	IAmb	17 16 59.1	
	comp=Z,114nm,1.2s						
BKZ	Black Stump Fm	76.67	153	P	P	17 16 56.3	+3.5
BKZ	Black Stump Fm	76.67	153	P	P	17 16 54.1	+1.3
QRZ	Quartz Range	76.67	157	P	P	17 16 55.7	+3.0
MHC	Mount Hamilton	76.75	54	IAMs_20	IAMs_20	17 50 46.1	
	comp=Z,5µm,18.0s						
JRN	Qarnain Island	76.86	291	P	P	17 16 53.8	-0.5
MPK	Martis Peak	76.93	52	IAmb	IAmb	17 17 15.3	
	comp=Z,79nm,1.1s						
SUMG	Summit	76.96	0	P	P	17 16 55.5	+1.0
SUMG	Summit	76.96	0	P	P	17 16 54.1	-0.4
SUMG	Summit	76.96	0	*i* P	P	17 16 56.5	+1.9
SUMG				IAmb	IAmb	17 16 58.6	
	comp=Z,49nm,0.8s						
TKNZ	Takaka Hill	77.00	156	P	P	17 16 54.6	0.0
DUWZ	D'Urville Isla	77.14	156	P	P	17 16 57.9	+2.5
DSZ	Denniston Nort	77.25	157	P	P	17 16 56.1	+0.1
DSZ				IAmb	IAmb	17 17 04.8	
	comp=Z,129nm,1.0s						
DSZ	Denniston Nort	77.25	157	P	P	17 16 59.1	+3.1
MRNZ	Matariki Terra	77.26	157	P	P	17 16 55.5	-0.5
MRNZ	Matariki Terra	77.26	157	P	P	17 16 58.2	+2.2
MZR	Muzera	77.26	289	P	P	17 16 57.1	+0.5
	SNR=13						
MZR				S	S	17 26 43.1	-2.1
MZR	Muzera	77.26	289	*i* P	P	17 16 56.5	-0.2
	SNR=19						
VSLR	Vesyoloye	77.26	313	*c i*P	P	17 16 56.9	+0.6
VSLR				pmax	pmax		
	comp=Z,139nm,0.8s						
VSLR				MLR	MLR		
	comp=Z,7µm,17.0s						
NSS	Namsos	77.29	340	*e*P	P	17 16 56.0	0.0
GHWR	Ruwais	77.30	290	P	P	17 16 56.8	0.0
GHWR				S	S	17 26 42.1	-3.5
NNZ	Nelson	77.31	156	P	P	17 16 58.6	+2.3
PNTR	Pine Nut	77.32	52	IAmb	IAmb	17 17 06.1	
	comp=Z,70nm,0.7s						
SOC	Sochi	77.40	313	*c i*P	P	17 16 56.7	-0.3
SOC				*e**PP	pP	17 17 02.1	-1.3
SOC				*e*PPP	PPP	17 21 35.7	
SOC				pmax	pmax		
	comp=Z,90nm,0.9s						
MRZ	Mangatainoka R	77.62	154	P	P	17 16 57.6	-0.4
MRZ	Mangatainoka R	77.62	154	P	P	17 17 00.4	+2.4
TCW	Tory Channel	77.62	156	P	P	17 16 57.6	-0.4
TCW	Tory Channel	77.62	156	P	P	17 17 00.5	+2.5
MFID	Camas Ranch	77.63	47	IAmb	IAmb	17 17 19.3	
	comp=Z,181nm,1.4s						
THZ	Tophouse	77.63	157	P	P	17 17 00.1	+2.0
HULI	Fort Hunter Li	77.67	55	P	P	17 16 57.8	-0.9
TUWZ	Tuamarina	77.70	156	P	P	17 17 01.3	+2.9
HOWZ	Holdsworth Sta	77.80	155	P	P	17 17 01.8	+2.8
SHAO	Shalim	77.84	284	P	P	17 17 00.4	+0.5
SHAO				S	S	17 26 49.4	-2.2
SNZO	South Karori	77.86	155	P	P	17 16 59.4	0.0
SNZO	South Karori	77.86	155	P	P	17 17 02.0	+2.7
BFZ	Birch Farm	77.89	154	IAMs_20	IAMs_20	17 47 47.2	
	comp=Z,4µm,21.0s						
BFZ	Birch Farm	77.89	154	P	P	17 17 02.0	+2.5
BFZ	Birch Farm	77.89	154	P	P	17 17 01.3	+1.7
PMPB	Monarch Peak	77.89	55	IAmb	IAmb	17 17 43.6	
	comp=Z,66nm,1.1s						
MNK	Minsk	77.92	327	*i* P	P	17 17 01.2	+1.5
	comp=E,40nm,0.9s						
MNK				*i* P	P	17 17 01.2	+1.5
	comp=N,35nm,0.9s						
MNK				*i* P	P	17 17 01.2	+1.5
	comp=Z,165nm,0.9s,baz=53						
MNK				*i* PcP	PcP	17 17 10.5	+1.1
MNK				*i* PP	PP	17 19 57.3	+2.2
MNK				*i* PPP	PPP	17 21 45.0	
MNK				*i* S	S	17 26 56.1	+4.9
MNK				*i* PS	PnS	17 27 46.8	+14
MNK				*i* SS	SS	17 31 58.6	+7.3
MNK				*i* SSS	SSS	17 35 41.9	
MNK				*i* LQ	LQ	17 46 18.5	
MNK				*i* LRM	MLR	17 54 32.9	
	comp=N,5µm,14.2s						
MNK				*i* LRM	MLR	17 55 17.3	
	comp=E,4µm,16.3s						
MNK	Minsk	77.92	327	*i* P	P	17 17 01.2	+1.5
MNK				*i*		17 17 10.5	
MNK				*i*		17 19 57.3	
MNK				*i* PPP	PPP	17 21 45.0	
MNK				*i* S	S	17 26 56.1	+4.8
MNK				*i* PS	PnS	17 27 46.7	+14
MNK				*i* SS	SS	17 31 58.5	+7.2
MNK				pmax	pmax		
	comp=N,35nm,0.9s						
MNK				pmax	pmax		
	comp=E,40nm,0.9s						
MNK				pmax	pmax		
	comp=Z,165nm,0.9s						
MNK				MLR	MLR		
	comp=N,5µm,14.0s						
MNK				MLR	MLR		
	comp=E,4µm,16.0s						
MNK				MLR	MLR		
	comp=Z,9µm,17.0s						
BSWZ	Blackbirch Sta	77.93	156	P	P	17 17 00.9	+1.1
SHMA	Al-Shehemyia	77.94	293	P	P	17 16 59.9	-0.4
BHW	Baring Head	78.01	155	IAmb	IAmb	17 17 06.4	
	comp=Z,147nm,1.2s						
BHW	Baring Head	78.01	155	P	P	17 17 02.2	+2.0
INZ	Inchbonnie	78.01	158	IAmb	IAmb	17 17 06.2	
	comp=Z,132nm,1.0s						
INZ				IAMs_20	IAMs_20	17 47 01.4	
	comp=Z,4µm,21.0s						
INZ	Inchbonnie	78.01	158	P	P	17 17 01.7	+1.6
WVZ	Waitaha Valley	78.10	159	P	P	17 17 02.4	+1.8
MSWZ	Moikau Station	78.16	155	P	P	17 17 03.1	+2.1
ANN	Anapa	78.18	315	*i* P	P	17 17 01.5	+0.2
NACGM	Naroch	78.19	328	⇑*i*P	P	17 17 02.1	+0.9
	comp=Z,216nm,0.9s,baz=53						
PAWZ	Paruwai Farm	78.19	155	P	P	17 17 04.4	+3.1
PKD	Bear Valley Ra	78.20	55	IAmb	IAmb	17 17 22.1	
	comp=Z,80nm,1.2s						
SLWR	Sila	78.20	291	P	P	17 17 02.3	+0.4
FOZ	Fox Glacier	78.24	160	P	P	17 17 01.6	+0.2
FOZ				IAmb	IAmb	17 17 08.2	
	comp=Z,145nm,1.3s						
FOZ				IAMs_20	IAMs_20	17 47 24.4	
	comp=Z,3µm,19.0s						
FOZ	Fox Glacier	78.24	160	P	P	17 17 02.8	+1.4
TRNA	Turayna	78.27	292	P	P	17 17 02.1	-0.1
TRNA				S	S	17 26 51.7	-4.4
SAATT	Saattut	78.28	5	*i* P	P	17 17 02.6	+1.2
SAATT				IAmb	IAmb	17 17 04.7	
	comp=Z,53nm,1.0s						
LTZ	Lake Taylor	78.33	158	IAMs_20	IAMs_20	17 48 04.9	
	comp=Z,4µm,21.0s						
LTZ	Lake Taylor	78.33	158	P	P	17 17 04.8	+2.8
SCO	Scoresbysund	78.39	354	P	P	17 17 02.3	+0.3
SCO				IAmb	IAmb	17 17 14.1	
	comp=Z,135nm,1.3s						
SCO	Scoresbysund	78.39	354	P	P	17 17 02.3	+0.3
SCO				pmax	pmax		
	comp=Z,135nm,1.3s						
SCO	Scoresbysund	78.39	354	*i* P	P	17 17 03.8	+1.8
SCO				IAmb	IAmb	17 17 06.9	
	comp=Z,149nm,1.5s						
JCZ	Jackson Bay	78.43	161	P	P	17 17 06.6	+4.0
JCZ	Jackson Bay	78.43	161	P	P	17 17 05.8	+3.2
KHZ	Kahutara	78.43	157	IAmb	IAmb	17 17 07.6	
	comp=Z,111nm,0.9s						
KHZ	Kahutara	78.43	157	P	P	17 17 03.7	+1.3
HLID	Hailey	78.44	46	IAMs_20	IAMs_20	17 53 17.4	
	comp=Z,3µm,19.0s						
LHV	Little Huntoon	78.48	52	IAmb	IAmb	17 17 12.7	
	comp=Z,103nm,1.0s						
NVAR	Mina Array Bea	78.53	52	P	P	17 17 05.8	+2.1
	comp=Z,30nm,0.6s,baz=293,slow=5.6,SNR=140						
	comp=Z,30nm,0.6s						
NVAR	Mina Array Bea	78.53	52	P	P	17 17 04.9	+1.2
DMTO	DMTO	78.55	284	P	P	17 17 03.9	0.0
DMTO				S	S	17 26 58.5	-0.8
SMRA	Abu-Samra	78.58	292	P	P	17 17 06.0	+2.1
	SNR=5.1						
SMRA				S	S	17 26 55.1	-4.2
DLMT	Dillon	78.60	44	IAmb	IAmb	17 17 37.8	
	comp=Z,126nm,1.2s						
KOPT	Kop Dagi	78.70	310	IAmb	IAmb	17 17 24.8	
	comp=Z,131nm,1.2s						
MSZ	Milford Sound	78.74	161	P	P	17 17 07.0	+2.9
OXZ	Oxford	78.74	158	IAMs_20	IAMs_20	17 47 32.8	
	comp=Z,4µm,22.0s						
OXZ	Oxford	78.74	158	P	P	17 17 06.2	+2.0
GVZ	Greta Valley S	78.75	157	IAMs_20	IAMs_20	17 47 53.0	
	comp=Z,3µm,20.0s						
DOK	Doka	78.80	285	P	P	17 17 06.0	+0.7
	SNR=13						
DOK				S	S	17 26 57.3	-4.6
FFC	Flin Flon	78.82	32	P	P	17 17 05.2	+0.5
FFC				IAmb	IAmb	17 17 25.8	
	comp=Z,231nm,1.9s						
FFC	Flin Flon	78.82	32	IAMs_20	IAMs_20	17 55 05.5	
	comp=Z,4µm,20.0s						
FFC	Flin Flon	78.82	32	P	P	17 17 05.2	+0.5
FFC				pmax	pmax		
	comp=Z,231nm,1.9s						
FFC				MLR	MLR		
	comp=Z,4µm,20.0s						
ARCZ	Arundel	79.03	159	P	P	17 17 08.9	+3.1
BOZ	Bozeman (W)	79.04	43	IAmb	IAmb	17 17 26.9	
	comp=Z,129nm,1.6s						
SAQQ	Saqqaq	79.04	5	*i* P	P	17 17 07.6	+2.0
SAQQ				IAmb	IAmb	17 17 09.2	
	comp=Z,115nm,1.2s						
PABE	Paberze	79.08	329	P	P	17 17 06.1	0.0
LBZ	Lake Benmore	79.12	160	P	P	17 17 06.3	0.0
LBZ				IAmb	IAmb	17 17 13.0	
	comp=Z,167nm,1.2s						
LBZ				IAMs_20	IAMs_20	17 47 51.8	
	comp=Z,5µm,21.0s						
LBZ	Lake Benmore	79.12	160	P	P	17 17 08.1	+1.8
TIN	Tinemaha, Big	79.27	53	IAMs_20	IAMs_20	17 52 39.9	
	comp=Z,4µm,18.0s						
RBK	Rabkut	79.27	284	P	P	17 17 08.0	+0.1
	SNR=11						
RBK				S	S	17 27 02.9	-4.2
VES	Vestal, Richgr	79.28	55	IAmb	IAmb	17 17 15.6	
	comp=Z,157nm,1.2s						
TMZ	Timaru	79.37	159	P	P	17 17 10.1	+2.5
ELK	Elko	79.38	49	P	P	17 17 10.4	+2.0
	comp=Z,20nm,0.9s,baz=302,slow=6.8,SNR=15						
ELK				LR	LR	17 51 17.7	
	comp=Z,5µm,18.5s,baz=296,slow=35						
	comp=Z,20nm,0.9s						
MLZ	Mavora Lakes	79.43	161	P	P	17 17 06.8	-1.2
MLZ				IAmb	IAmb	17 17 14.5	
	comp=Z,133nm,1.3s						
MLZ				IAMs_20	IAMs_20	17 47 45.9	
	comp=Z,4µm,22.0s						
MLZ	Mavora Lakes	79.43	161	P	P	17 17 09.8	+1.9
WHFO	Wadi Hawf	79.43	285	P	P	17 17 09.0	+0.2
	SNR=8.3						
WHFO				S	S	17 27 04.2	-4.6
FCC	Fort Churchill	79.48	26	P	P	17 17 08.2	0.0
FCC	Fort Churchill	79.48	26	P	P	17 17 08.2	0.0
FCC				pmax	pmax		
	comp=Z,77nm,1.4s						
AKASG	Malin Array Be	79.51	323	P	P	17 17 08.7	+0.1
	comp=Z,14nm,0.5s,baz=48,slow=5.7,SNR=86						
AKASG				PP	PP	17 20 08.1	-0.4
	comp=Z,7.4nm,0.9s,baz=56,slow=8.4,SNR=6.3						
AKASG				LR	LR	17 54 49.2	
	comp=Z,12µm,19.7s,baz=50,slow=38						
	comp=Z,14nm,0.5s						
AKASG	Malin Array Be	79.51	323	P	P	17 17 08.2	-0.4
AKASG				IAmb	IAmb	17 17 23.1	
	comp=Z,110nm,1.1s						
AKBB	Malin Array Si	79.51	323	P	P	17 17 07.3	-1.3
AKBB				IAmb	IAmb	17 17 23.0	
	comp=Z,104nm,0.9s						
AKBB	Malin Array Si	79.51	323	⇑*i*P	P	17 17 08.9	+0.4
AKBB	Malin Array Si	79.51	323	P	P	17 17 07.7	-0.8
KIEV	Kiev	79.52	323	P	P	17 17 07.6	-1.0
KIEV				IAmb	IAmb	17 17 23.0	
	comp=Z,93nm,0.9s						
KIEV	Kiev	79.52	323	⇓P	P	17 17 09.4	+0.8
KIEV	Kiev	79.52	323	*i* P	P	17 17 08.6	+0.1
	SNR=6.4						
KIEV	Kiev	79.52	323	P	P	17 17 09.3	+0.8
KIEV	Kiev	79.52	323	P	P	17 17 07.6	-1.0
GDH	Godhavn	79.67	6	*i* P	P	17 17 10.9	+1.9
GDH				IAmb	IAmb	17 17 12.3	
	comp=Z,60nm,1.1s						
CWC	Cottonwood Cre	79.68	54	IAMs_20	IAMs_20	17 52 49.9	
	comp=Z,5µm,19.0s						
YHL	Hebgen Lake	79.72	44	IAmb	IAmb	17 17 31.1	
	comp=Z,153nm,1.4s						
YHB	Horse Butte	79.76	44	IAmb	IAmb	17 17 18.1	

	comp=Z,73nm,0.8s						
ODZ	**Otahua Downs**	79.86	160	IAMs_20	IAMs_20	17 47 17.3	
	comp=Z,4µm,22.0s						
ODZ	**Otahua Downs**	79.86	160	P	P	17 17 12.7	+2.5
WHZ	**Wether Hill Ro**	79.87	162	IAMs_20	IAMs_20	17 55 17.5	
	comp=Z,3µm,19.0s						
ILULI	**Ilulissat**	79.89	5	P	P	17 17 09.4	-0.9
ILULI				IAmb	IAmb	17 17 22.2	
	comp=Z,148nm,1.2s						
ILULI	**Ilulissat**	79.89	5	P	P	17 17 09.4	-0.9
ILULI				pmax	pmax		
	comp=Z,149nm,1.2s						
ILULI	**Ilulissat**	79.89	5	*i* P	P	17 17 11.7	+1.4
ILULI				IAmb	IAmb	17 17 13.6	
	comp=Z,130nm,1.4s						
NC405	**NORSAR Array S**	79.90	338	IAmb	IAmb	17 17 19.3	
	comp=Z,131nm,1.0s						
NC303	**NORSAR Array S**	79.93	338	P	P	17 17 10.5	-0.1
NC303				IAmb	IAmb	17 17 19.4	
	comp=Z,85nm,1.1s						
HFS	**Hagfors**	79.96	336	P	P	17 17 11.1	+0.3
	comp=Z,24nm,0.5s,baz=59,slow=5.6,SNR=83						
HFS				LR	LR	17 55 09.1	
	comp=Z,4µm,19.2s,baz=40,slow=38						
	comp=Z,24nm,0.5s						
SIM	**Simferopol'**	80.09	317	*e*P	P	17 17 13.0	+1.2
SIM						17 20 13.0	
SIM				S	S	17 27 17.0	+2.2
SIM				pmax	pmax		
	comp=Z,71nm,0.9s						
SIM				pmax	pmax		
	comp=Z,450nm,9.4s						
SIM				smax	smax		
	comp=E,440nm,8.5s						
NB201	**NORSAR Array S**	80.09	338	IAmb	IAmb	17 17 18.2	
	comp=Z,151nm,1.2s						
NC204	**NORSAR Array S**	80.09	338	IAmb	IAmb	17 17 14.6	
	comp=Z,159nm,1.1s						
ABTO	**Aybut**	80.10	284	P	P	17 17 12.1	-0.3
ABTO				S	S	17 27 09.1	-6.8
NB2	**NORSAR Subarra**	80.12	338	P	P	17 17 12.3	+0.6
	comp=Z,196nm,1.4s,baz=41,slow=5.3						
NB2	**NORSAR Subarra**	80.12	338	P	P	17 17 12.3	+0.6
	baz=41,slow=5.3						
NOA	**NORSAR Array B**	80.12	338	P	P	17 17 12.0	+0.3
	comp=Z,33nm,0.7s,baz=41,slow=5.3,SNR=95						
NOA				PP	PP	17 20 12.1	-1.2
	comp=Z,7.9nm,1.0s,baz=38,slow=8.4,SNR=3.8						
NOA				LR	LR	17 55 55.5	
	comp=Z,8µm,19.5s,baz=45,slow=38						
	comp=Z,33nm,0.7s						
MI28	**Mi28,Pidlybu**	80.16	324	P	P	17 17 10.9	-1.2
NC602	**NORSAR Array S**	80.24	338	IAmb	IAmb	17 17 33.7	
	comp=Z,266nm,1.9s						
NC602	**NORSAR Array S**	80.24	338	*e*P	P	17 17 12.7	+0.4
TPO	**Tropico Hills**	80.37	55	IAmb	IAmb	17 17 40.8	
	comp=Z,106nm,1.3s						
NAO01	**NORSAR Array S**	80.37	338	P	P	17 17 12.7	-0.4
NAO01				IAmb	IAmb	17 17 26.7	
	comp=Z,140nm,1.4s						
SUW	**Suwalki**	80.39	328	*e*P	P	17 17 13.9	+0.7
HVU	**Hansel Valley**	80.41	47	IAmb	IAmb	17 17 24.9	
	comp=Z,66nm,0.9s						
FURC	**Furnace Creek,**	80.51	53	IAmb	IAmb	17 17 23.1	
	comp=Z,110nm,1.1s						
FURC				IAMs_20	IAMs_20	17 58 10.8	
	comp=Z,3µm,18.0s						
MOOW	**Moose Ponds**	80.58	44	IAMs_20	IAMs_20	17 56 30.0	
	comp=Z,3µm,19.0s						
ARPR	**Arapgir-MALATY**	80.61	310	IAmb	IAmb	17 17 59.6	
	comp=Z,208nm,1.3s						
TPNV	**Topopah Spring**	80.68	53	IAmb	IAmb	17 17 33.5	
	comp=Z,116nm,1.2s						
TPNV				IAMs_20	IAMs_20	17 45 41.3	
	comp=Z,4µm,22.0s						
RLMT	**Red Lodge**	80.69	43	IAmb	IAmb	17 17 36.5	
	comp=Z,72nm,1.0s						
LUBAR	**Lubar, Ukraine**	80.73	323	P	P	17 17 14.3	-0.8
RNPP9	**Sopachiv**	80.75	325	P	P	17 17 14.2	-1.0
QSM	**Queen of Sheba**	80.77	54	IAmb	IAmb	17 17 24.3	
	comp=Z,100nm,1.3s						
SYZ	**Scrubby Hill**	80.79	161	P	P	17 17 18.0	+2.9
GWY	**Greenwater Val**	80.79	53	IAmb	IAmb	17 17 26.7	
	comp=Z,88nm,1.0s						
SPR3	**Spring Creek 3**	80.89	50	IAmb	IAmb	17 17 26.0	
	comp=Z,136nm,1.8s						
AHID	**Auburn Hatcher**	80.91	45	IAMs_20	IAMs_20	17 51 44.8	
	comp=Z,3µm,20.0s						
SHOC	**Shoshone, Teco**	81.21	54	IAMs_20	IAMs_20	17 54 18.3	
	comp=Z,3µm,18.0s						
DUG	**Dugway, Tooele**	81.24	48	IAMs_20	IAMs_20	17 52 04.7	
	comp=Z,5µm,19.0s						
HWUT	**Hardware Ranch**	81.26	47	IAmb	IAmb	17 17 29.8	
	comp=Z,107nm,1.0s						
SKAR	**Skarslia**	81.32	339	*e*P	P	17 17 19.6	+1.5
PMOR	**Pomariorio Ree**	81.38	113	*e*P	P	17 17 22.1	+3.1
	comp=Z,190nm,1.5s						
PMOR	**Pomariorio Ree**	81.38	113	*e*LR	LR	17 42 43.4	
	comp=Z,7µm,23.0s						
SORM	**Soroca**	81.49	322	⇑P	P	17 17 20.3	+1.0
SORM	**Soroca**	81.49	322	P	P	17 17 20.2	+1.0
PPT	**Papeete**	81.54	116	LR	LR	17 46 04.7	
	comp=Z,3µm,21.9s,baz=292,slow=30						
PPT2	**Papeete2**	81.55	116	*e*PKP1	P	17 17 25.4	+5.4
	comp=Z,83nm,1.5s						
DGMT	**Dagmar**	81.56	38	IAMs_20	IAMs_20	17 55 45.3	
	comp=Z,4µm,18.0s						
PPTF	**Pamatai, Papee**	81.56	116	IAMs_20	IAMs_20	17 58 55.9	
	comp=Z,4µm,19.0s						
PAE	**Paea**	81.59	116	*e*PKP1	P	17 17 15.8	-4.3
	comp=Z,42nm,1.4s						
PAE	**Paea**	81.59	116	*e*LR	LR	17 42 50.1	
	comp=Z,917nm,22.2s						
TCUT	**Toone Canyon**	81.63	47	IAmb	IAmb	17 17 29.5	
	comp=Z,99nm,1.1s						
STRU	**Stroemstad**	81.64	337	*i* P	P	17 17 19.8	0.0
CTU	**Camp Tracy**	81.65	47	IAmb	IAmb	17 17 41.1	
	comp=Z,134nm,1.1s						
TIAR	**Tiarei**	81.71	116	*e*PKP1	P	17 17 26.5	+5.7
	comp=Z,140nm,1.2s						
TIAR	**Tiarei**	81.71	116	*e*LR	LR	17 42 52.8	
	comp=Z,5µm,22.7s						
PDAR	**Pinedale Array**	81.85	45	P	P	17 17 23.2	+1.6
	comp=Z,17nm,0.8s,baz=269,slow=1.8,SNR=80						
PDAR				PKKPbc	PKKPbc	17 35 52.0	+0.1
	comp=Z,1.2nm,1.1s,baz=132,slow=2.2,SNR=3.9						
PDAR				LR	LR	17 50 33.9	
	comp=Z,1µm,19.4s,baz=302,slow=33						
	comp=Z,17nm,0.8s						
PDAR	**Pinedale Array**	81.85	45	P	P	17 17 21.9	+0.4
TVO	**Taravao**	81.92	116	*e*PKP1	P	17 17 27.5	+5.6
	comp=Z,55nm,1.4s						
TVO	**Taravao**	81.92	116	*e*LR	LR	17 42 58.1	
	comp=Z,1µm,23.0s						
KIS	**Kishinev**	81.92	320	*e*P	P	17 17 21.0	-0.5
KIS				*e*L	L	17 55 39.0	
KIS				LRM	MLR	17 56 41.0	
	comp=Z,2µm,17.5s						
MILM	**Milestii Mici**	81.97	320	⇓P	P	17 17 22.2	+0.4
MILM	**Milestii Mici**	81.97	320	P	P	17 17 22.2	+0.4
MILM	**Milestii Mici**	81.97	320	*e*P	P	17 17 18.0	-3.8
	comp=Z,2µm,6.6s						
MILM				*e*L	L	17 49 59.0	
MILM				LQM		17 52 45.0	
	comp=Z,5µm,16.5s						
MILM				LRM	MLR	17 56 04.0	
	comp=Z,7µm,15.0s						
SFJD	**Kangerlussuaq**	82.11	5	LR	LR	17 57 26.0	
	comp=Z,849nm,18.8s,baz=344,slow=38						
SFJD	**Kangerlussuaq**	82.11	5	P	P	17 17 22.8	+0.6
SFJD	**Kangerlussuaq**	82.11	5	*i* P	P	17 17 23.6	+1.5
SFJD				IAmb	IAmb	17 17 26.0	
	comp=Z,66nm,1.1s						
BORU	**Boraas**	82.13	335	*i* P	P	17 17 22.4	0.0
CPE	**Camp Elliot**	82.19	56	IAMs_20	IAMs_20	17 53 49.6	
	comp=Z,4µm,20.0s						
KMPD	**K-Podol'skiy**	82.23	323	P	P	17 17 22.0	-1.1
TJOU	**Tjoern**	82.24	336	*i* P	P	17 17 23.6	+0.7
DPP	**Dos Picos Cty**	82.25	56	IAmb	IAmb	17 17 42.7	
	comp=Z,53nm,0.5s						
PFO	**Pinyon Flats O**	82.28	56	P	P	17 17 25.3	+1.5
	comp=Z,37nm,0.8s,baz=304,slow=5.0,SNR=29						
PFO				LR	LR	17 54 29.1	
	comp=Z,8µm,18.0s,baz=290,slow=36						
	comp=Z,37nm,0.8s						
PFO	**Pinyon Flats O**	82.28	56	P	P	17 17 24.4	+0.5
PFO	**Pinyon Flats O**	82.28	56	*de*P	P	17 17 25.1	+1.2
PFO				pmax	pmax		
	comp=Z,46nm,0.8s						
PFO				MLR	MLR		
	comp=Z,13µm,18.0s						
R9F13	**Warsaw-Wawer**	82.49	328	*e*P	P	17 17 25.6	+1.2
DANC	**Danby, Needles**	82.50	54	IAmb	IAmb	17 17 49.6	
	comp=Z,100nm,1.0s						
ILGA	**Ilgaz**	82.51	314	P	P	17 17 24.8	-0.3
DEL	**Delary**	82.57	334	*i* P	P	17 17 24.8	0.0
ONAU	**Onsala**	82.61	335	*i* P	P	17 17 24.6	-0.2
BAR	**Barrett**	82.61	56	IAmb	IAmb	17 17 33.9	
	comp=Z,49nm,0.9s						
LCMT	**Little Creek M**	82.69	51	IAmb	IAmb	17 17 32.9	
	comp=Z,41nm,0.8s						
VASR	**Vaslui**	82.70	321	⇑P	P	17 17 27.2	+1.6
FRB	**Frobisher Bay**	82.81	13	LR	LR	17 58 06.2	
	comp=Z,2µm,20.4s,baz=342,slow=38						
MTPU	**Mount Pierson**	82.83	50	IAmb	IAmb	17 17 36.3	
	comp=Z,70nm,1.3s						
BEL	**Belsk**	82.91	328	*e*P	P	17 17 27.7	+1.1
IRM	**Iron Mountain**	82.92	54	IAmb	IAmb	17 17 47.3	
	comp=Z,64nm,1.2s						
BC3	**Big Chuckawall**	82.97	55	IAmb	IAmb	17 17 36.1	
	comp=Z,60nm,0.9s						
P17A	**Butcher Ranch,**	82.97	48	IAmb	IAmb	17 17 34.3	
	comp=Z,74nm,0.8s						
TLCR		83.02	319	⇑P	P	17 17 28.5	+1.3
TLCR		83.02	319	P	P	17 17 28.5	+1.3
BIR	**Birlad**	83.02	320	⇓P	P	17 17 28.9	+1.6
BIR	**Birlad**	83.02	320	P	P	17 17 28.9	+1.6
VLDR	**Vladesti**	83.03	320	⇑P	P	17 17 29.0	+1.6
PRAR	**RASCA**	83.10	322	⇑P	P	17 17 28.8	+1.1
BSD	**Bornholm Skovb**	83.15	332	*i* P	P	17 17 27.6	-0.2
BSD				IAmb	IAmb	17 17 29.2	
	comp=Z,169nm,1.2s						
SCTR	**Scanteiesti**	83.18	320	⇓P	P	17 17 29.6	+1.5
BJUU	**Bjuv**	83.19	334	*i* P	P	17 17 29.0	+1.1
GIRR	**Girov**	83.21	321	⇑P	P	17 17 29.4	+1.2
JURR	**Jurilovca**	83.23	319	⇓P	P	17 17 29.5	+1.1
GHRR		83.27	320	⇑P	P	17 17 29.7	+1.1
CTZ	**Chatham Island**	83.30	151	P	P	17 17 32.8	+4.3
BR131	**Keskin Array S**	83.31	312	P	P	17 17 30.0	+0.9
	SNR=56						
BR131				S	S	17 27 42.3	-6.3
BR131	**Keskin Array S**	83.31	312	*ce*P	P	17 17 29.6	+0.5
BRTR	**Keskin Array B**	83.31	312	P	P	17 17 29.6	+0.5
	comp=Z,44nm,0.9s,baz=104,slow=3.6,SNR=146						
BRTR				PP	PP	17 20 39.3	-1.1
	comp=Z,4.1nm,0.9s,baz=74,slow=6.2,SNR=2.7						
BRTR				PKKPbc	PKKPbc	17 35 50.0	+1.7
	comp=Z,0.7nm,0.7s,baz=192,slow=1.3,SNR=4.8						
BRTR				LR	LR	17 58 37.3	
	comp=Z,3µm,18.4s,baz=55,slow=39						
	comp=Z,44nm,0.9s						
BRTR	**Keskin Array B**	83.31	312	P	P	17 17 28.7	-0.4
BRTR	**Keskin Array B**	83.31	312	P	P	17 17 28.7	-0.4
BRTR						17 20 39.3	
SRU	**San Rafael Swe**	83.31	48	IAmb	IAmb	17 17 37.9	
	comp=Z,59nm,0.8s						
LUNU	**Lund**	83.35	333	*i* P	P	17 17 29.4	+0.6
SCHLR	**Schela**	83.39	320	⇓P	P	17 17 30.4	+1.2
CFR	**Carcaliu**	83.40	319	⇓P	P	17 17 30.2	+1.0
CFR	**Carcaliu**	83.40	319	P	P	17 17 30.2	+1.0
TESR	**Tescani**	83.40	321	⇑P	P	17 17 29.7	+0.4
RAYN	**Ar Rayn**	83.41	293	P	P	17 17 31.3	+1.5
RAYN				S	S	17 27 43.0	-6.9
RAYN	**Ar Rayn**	83.41	293	P	P	17 17 30.0	+0.2
RAYN	**Ar Rayn**	83.41	293	*i* P	P	17 17 30.7	+0.9
	SNR=262						
RAYN	**Ar Rayn**	83.41	293	P	P	17 17 30.0	+0.2
RAYN				pmax	pmax		
	comp=Z,160nm,0.9s						
RAYN				MLR	MLR		
	comp=Z,8µm,20.0s						
TPGR	**Topolog**	83.44	319	⇓P	P	17 17 30.7	+1.2
KWP	**Kalwaria Pacla**	83.45	325	*e*P	P	17 17 30.4	+0.9
BUR08	**Bucovina Ar. S**	83.47	323	IAmb	IAmb	17 17 45.0	
	comp=Z,68nm,1.1s						
KIRS	**Kirsehir-Merke**	83.47	312	⇑P	P	17 17 30.6	+0.7
BURAR	**Bucovina Array**	83.47	322	P	P	17 17 29.8	0.0
BURAR				IAmb	IAmb	17 17 57.0	
	comp=Z,48nm,0.9s						
BURAR	**Bucovina Array**	83.47	322	⇓P	P	17 17 30.8	+1.0
BURAR	**Bucovina Array**	83.47	322	P	P	17 17 30.8	+1.0
ESJX	**Sierra Juarez**	83.49	57	IAmb	IAmb	17 17 39.0	
	comp=Z,64nm,1.2s						
SNART	**Snartemo**	83.50	338	*e*P	P	17 17 30.5	+1.0
SNART	**Snartemo**	83.50	338	*i* P	P	17 17 30.1	+0.6
GKP	**Gorka Klasztor**	83.51	330	*e*P	P	17 17 30.4	+0.8
PANC	**Panciu**	83.53	320	⇓P	P	17 17 31.9	+2.0
BLYC	**Blythe**	83.57	55	IAmb	IAmb	17 17 39.2	
	comp=Z,55nm,1.1s						
ODBI	**Odobesti**	83.64	320	⇑P	P	17 17 32.5	+2.0
ONER	**Baraj Valea Uz**	83.65	321	⇓P	P	17 17 32.0	+1.4
TIRR	**Tirgusor**	83.68	319	IAmb	IAmb	17 17 54.7	
	comp=Z,77nm,1.2s						
TIRR	**Tirgusor**	83.68	319	⇓P	P	17 17 31.9	+1.1
TIRR	**Tirgusor**	83.68	319	P	P	17 17 31.8	+1.1
COP	**Copenhagen**	83.70	334	*i* P	P	17 17 31.5	+1.0
COP				IAmb	IAmb	17 17 34.1	
	comp=Z,247nm,1.2s						
GLA	**Glamis**	83.73	55	IAmb	IAmb	17 17 40.1	
	comp=Z,62nm,1.0s						
K22A	**Casper**	83.74	44	IAmb	IAmb	17 17 51.5	
	comp=Z,125nm,1.3s						
ANTO	**Ankara**	83.76	313	P	P	17 17 33.2	+1.9
ANTO				S	S	17 27 49.3	-3.7
ANTO	**Ankara**	83.76	313	P	P	17 17 31.4	0.0
ANTO				IAmb	IAmb	17 17 40.4	
	comp=Z,83nm,0.9s						
ANTO	**Ankara**	83.76	313	IAMs_20	IAMs_20	17 56 48.5	
	comp=Z,4µm,21.0s						
ANTO	**Ankara**	83.76	313	⇓P	P	17 17 32.8	+1.5
ANTO	**Ankara**	83.76	313	P	P	17 17 31.4	0.0
ANTO				pmax	pmax		
	comp=Z,83nm,0.9s						
ANTO				MLR	MLR		
	comp=Z,4µm,21.0s						
VRI	**Vrincioaia**	83.76	320	⇑P	P	17 17 33.0	+1.9
VRI	**Vrincioaia**	83.76	320	P	P	17 17 33.0	+1.9
PLOR	**Plostina**	83.81	320	⇓P	P	17 17 32.8	+1.3
PLOR	**Plostina**	83.81	320	P	P	17 17 32.7	+1.3
TLBR	**Topalu**	83.84	319	⇓P	P	17 17 32.7	+1.2
GRER		83.93	320	⇓P	P	17 17 34.7	+2.8
BISRR	**Bisoca**	83.97	320	⇓P	P	17 17 34.1	+1.8
MANR	**Mangalia**	83.97	318	⇑P	P	17 17 34.0	+1.8
TURR	**Turia**	84.03	321	⇓P	P	17 17 34.5	+1.9
COVR	**Voineasa-Covas**	84.06	321	⇓P	P	17 17 33.9	+1.2
OZUR		84.13	321	⇓P	P	17 17 34.8	+1.7
O20A	**White River Ci**	84.17	46	IAmb	IAmb	17 17 42.9	
	comp=Z,84nm,0.9s						
O20A				IAMs_20	IAMs_20	17 52 17.1	
	comp=Z,3µm,20.0s						
RGN	**Rugen**	84.20	333	*e*P	P	17 17 33.0	-0.2
	comp=Z,301nm,1.3s,baz=40,slow=4.8						
PGOR	**Pogoanele**	84.21	320	⇑P	P	17 17 35.6	+2.2
ICOR	**Ion Corvin**	84.24	319	⇓P	P	17 17 35.3	+1.7
ARCR	**ARCALIA**	84.27	322	⇑P	P	17 17 35.7	+2.0
NEHR	**Nehoiu**	84.27	320	⇑P	P	17 17 35.9	+2.1
RSSD	**Black Hills**	84.30	41	P	P	17 17 34.0	-0.2
RSSD				IAmb	IAmb	17 18 07.9	
	comp=Z,115nm,1.8s						
RSSD	**Black Hills**	84.30	41	P	P	17 17 34.0	-0.2
RSSD				pmax	pmax		
	comp=Z,115nm,1.8s						
RSSD				MLR	MLR		
	comp=Z,1µm,19.0s						
MUD	**Monsted U'grnd**	84.31	336	*i* P	P	17 17 34.6	+0.9
STHS	**Stebnicka Huta**	84.31	326	*e*P	P	17 17 34.3	+0.4
STHS				pmax	pmax		
	comp=Z,36nm,1.4s						
STHS	**Stebnicka Huta**	84.31	326	*e*P	P	17 17 34.3	+0.4
ISR	**Istrita**	84.33	320	⇓P	P	17 17 35.7	+1.6
ISR	**Istrita**	84.33	320	P	P	17 17 35.7	+1.6
BMR	**Baia Mare**	84.33	323	⇓P	P	17 17 35.6	+1.6
BMR	**Baia Mare**	84.33	323	P	P	17 17 35.6	+1.6
TAOE	**Nuku Hiva Isla**	84.33	104	*e*PKP1	P	17 17 37.8	+3.2
	comp=Z,250nm,21.9s						
TAOE	**Nuku Hiva Isla**	84.33	104	*e*PP	PP	17 20 45.9	-3.9
	comp=Z,171nm,22.8s						
TAOE				*e*S	SKSac	17 27 56.3	-0.9
	comp=Z,1µm,24.7s						
TAOE				*e*SS	SS	17 33 29.5	-0.3
	comp=Z,647nm,24.4s						
TAOE				*e*LQ	LQ	17 39 53.9	
	comp=Z,4µm,28.6s						
TAOE				*e*LR	LR	17 44 03.6	
	comp=Z,6µm,23.4s						
MDND	**Maddock**	84.34	36	IAmb	IAmb	17 18 01.3	
	comp=Z,58nm,0.9s						
MDND				IAMs_20	IAMs_20	17 51 08.8	
	comp=Z,3µm,20.0s						
SAHE	**Sakarya_HENDEK**	84.39	315	⇑P	P	17 17 35.3	+0.9
MLR	**Muntele Rosu**	84.42	321	LR	LR	17 58 03.0	
	comp=Z,10µm,18.6s,baz=58,slow=38						
MLR	**Muntele Rosu**	84.42	321	⇓P	P	17 17 35.4	+0.7
MLR	**Muntele Rosu**	84.42	321	P	P	17 17 35.4	+0.7
DOPR	**Dopca**	84.43	321	⇑P	P	17 17 35.8	+1.2
OJC	**Ojcow**	84.46	327	*e*P	P	17 17 35.6	+1.0
BEIL	**Beino**	84.52	307	*e*P	P	17 17 35.9	+0.7
Y14A	**Wickenburg**	84.53	54	IAmb	IAmb	17 17 44.1	
	comp=Z,48nm,1.2s						
FKH	**Fakeheh**	84.53	307	*e*P	P	17 17 36.4	+0.9
ULM	**Lac du Bonnet**	84.57	33	P	P	17 17 36.2	+1.1
	comp=Z,3.6nm,0.6s,baz=304,slow=3.6,SNR=4.2						
ULM				LR	LR	17 57 17.1	
	comp=Z,2µm,19.0s,baz=314,slow=37						
	comp=Z,3.6nm,0.6s						
ULM	**Lac du Bonnet**	84.57	33	IAmb	IAmb	17 17 54.7	
	comp=Z,118nm,1.9s						
LEHL	**Lehliu**	84.57	319	⇓P	P	17 17 36.9	+1.6
E28A	**Huff**	84.60	38	IAMs_20	IAMs_20	18 02 07.7	
	comp=Z,2µm,19.0s						
113A	**Mohawk Valley,**	84.64	55	IAmb	IAmb	17 17 44.5	
	comp=Z,65nm,1.2s						
NIE	**Niedzica**	84.77	326	*e*P	P	17 17 37.4	+1.2
WUAZ	**Wupatki**	84.77	52	IAmb	IAmb	17 17 44.1	
	comp=Z,64nm,1.0s						
WUAZ				IAMs_20	IAMs_20	17 48 26.4	
	comp=Z,3µm,22.0s						
NUUK	**Nuuk**	84.79	6	*i* P	P	17 17 37.8	+1.8
NUUK				IAmb	IAmb	17 17 38.5	
	comp=Z,53nm,0.9s						
HWQ	**Hawqa**	84.83	307	*e*P	P	17 17 37.2	+0.3
MDB	**Medias**	84.86	322	⇑P	P	17 17 38.9	+2.2
MDB	**Medias**	84.86	322	P	P	17 17 38.9	+2.2
PV07	**Paradox Valley**	84.90	48	IAmb	IAmb	17 17 57.8	
	comp=Z,103nm,1.4s						
CJR	**Cluj-Napoca**	84.90	323	⇓P	P	17 17 38.8	+1.8
CJR	**Cluj-Napoca**	84.90	323	P	P	17 17 38.7	+1.8
MESR	**Meseseni**	84.95	323	⇑P	P	17 17 37.7	+0.6
TBI	**Tubuai**	85.02	121	*e*P	P	17 17 35.7	-2.0
	comp=Z,1µm,23.8s						
TBI	**Tubuai**	85.02	121	*e*S	SKSac	17 28 04.1	+3.2
	comp=Z,5µm,25.8s						
TBI				*e*SS	SS	17 33 34.5	-5.1
	comp=Z,3µm,26.0s						
TBI				*e*LQ	LQ	17 40 23.0	
	comp=Z,12µm,32.0s						
TBI				*e*LR	LR	17 44 18.2	
	comp=Z,20µm,26.8s						
PV15	**Paradox Valley**	85.06	48	IAmb	IAmb	17 18 05.2	
	comp=Z,72nm,1.1s						
ZAHL	**Zahle**	85.11	307	*e*P	P	17 17 38.6	+0.3
PV01	**Paradox Valley**	85.12	48	P	P	17 17 39.0	+0.4
PV01				IAmb	IAmb	17 17 49.3	
	comp=Z,61nm,0.8s						
MARR	**Marisel-Cluj**	85.18	323	⇑P	P	17 17 40.0	+1.5
ARR	**Arges**	85.22	321	⇑P	P	17 17 39.8	+1.2
BORA	**Eskisehir**	85.22	314	P	P	17 17 38.0	-0.7
TNR	**Turnu Rosu**	85.23	321	⇑P	P	17 17 40.5	+1.9
TNR	**Turnu Rosu**	85.23	321	P	P	17 17 40.5	+1.9
BHL	**Bhannes**	85.24	307	*e*P	P	17 17 39.3	+0.3
ASF	**Jabal al Asfar**	85.33	305	LR	LR	17 59 55.7	
	comp=Z,443µm,20.5s,baz=41,slow=39						
RCY	**Rachaya**	85.34	306	*e*P	P	17 17 39.7	+0.2
LANS	**Liptovska Anna**	85.35	326	*e*P	P	17 17 41.0	+1.9
LANS				pmax	pmax		
	comp=Z,57nm,1.8s						
LANS	**Liptovska Anna**	85.35	326	*e*P	P	17 17 41.0	+1.9
LANS				*e*PP	PP	17 20 56.4	-0.1
DQRL	**Deir Qamar**	85.41	307	*e*P	P	17 17 40.2	+0.4
QRWL	**Qaraoun**	85.42	306	*e*P	P	17 17 40.5	+0.6
SHBL	**Chebaa**	85.49	306	*e*P	P	17 17 40.7	+0.5
OKC	**Ostrava-Krasne**	85.50	327	*e*P	P	17 17 41.1	+1.3
OKC	**Ostrava-Krasne**	85.50	327	*e*P	P	17 17 41.1	+1.3
PIX	**Pinacate**	85.51	56	IAmb	IAmb	17 17 48.8	
	comp=Z,138nm,1.6s						
RUE	**Ruedersdorf**	85.53	331	*e*P	P	17 17 39.8	-0.1
	comp=Z,268nm,1.3s,baz=40,slow=4.8						
STEB	**Steborice**	85.61	328	*e*P	P	17 17 41.6	+1.2
KSP	**Ksiaz**	85.64	329	*e*P	P	17 17 41.1	+0.7
COPA	**Copaceanca**	85.68	320	⇑P	P	17 17 41.4	+0.6
214A	**Organ Pipe Nat**	85.75	55	IAmb	IAmb	17 17 50.5	
	comp=Z,60nm,1.1s						
MORC	**Moravsky Berou**	85.82	328	IAmb	IAmb	17 17 55.8	
	comp=Z,126nm,1.3s						
MORC	**Moravsky Berou**	85.82	328	⇑P	P	17 17 42.1	+0.6
MORC	**Moravsky Berou**	85.82	328	*e*P	P	17 17 41.7	+0.2
MORC	**Moravsky Berou**	85.82	328	*e*S	S	17 28 13.2	+0.2
MORC	**Moravsky Berou**	85.82	328	P	P	17 17 42.1	+0.6
BSEG	**Bad Segeberg**	85.82	334	*e*P	P	17 17 41.1	-0.2
	comp=Z,83nm,1.2s,baz=40,slow=4.8						
OSTC	**Ostas**	85.87	329	*e*P	P	17 17 43.7	+2.0
OSTC				MLR	MLR		
	comp=Z,11µm,16.3s						
OSTC	**Ostas**	85.87	329	*e*P	P	17 17 43.7	+2.0
OSTC				AMS	AMS	18 00 30.0	
	comp=Z,11µm,16.3s						
AGMN	**Agassiz Nation**	85.91	34	IAmb	IAmb	17 18 15.6	
	comp=Z,85nm,1.8s						
AGMN				IAMs_20	IAMs_20	17 58 46.2	
	comp=Z,3µm,20.0s						
MMAI	**Mount Meron Ar**	85.91	306	P	P	17 17 42.9	+0.6
	comp=Z,12nm,0.6s,baz=43,slow=5.1,SNR=22						
MMAI				LR	LR	18 00 46.8	
	comp=Z,4µm,18.4s,baz=50,slow=39						
	comp=Z,12nm,0.6s						
CHVC	**Chvalec**	85.92	329	*e*P	P	17 17 43.1	+1.1
CHVC				*e*		17 28 15.1	
CHVC				MLR	MLR		
	comp=Z,10µm,16.5s						
CHVC	**Chvalec**	85.92	329	*e*P	P	17 17 43.1	+1.1
CHVC				*e*SKS	S	17 28 15.1	+1.1
CHVC				AMS	AMS	18 00 40.0	
	comp=Z,10µm,16.5s						
KRLC	**Kraliky**	85.96	328	*e*P	P	17 17 43.1	+0.9
KRLC				*e*		17 28 13.0	
KRLC				MLR	MLR		
	comp=Z,8µm,14.2s						
KRLC	**Kraliky**	85.96	328	*e*P	P	17 17 43.1	+0.9
KRLC				*e*SKS	S	17 28 13.0	-1.4
KRLC				AMS	AMS	18 00 20.0	
	comp=Z,8µm,14.2s						
DPC	**Dobruska-Polom**	85.97	328	*e*P	P	17 17 43.4	+1.2
DPC				*e*		17 28 12.0	
DPC				MLR	MLR		
	comp=Z,9µm,13.6s						
DPC	**Dobruska-Polom**	85.97	328	*e*P	P	17 17 43.4	+1.2
DPC				*e*SKS	S	17 28 12.0	-2.5
DPC				AMS	AMS	18 00 30.0	
	comp=Z,9µm,13.6s						
PSZ	**Piszkesteto**	85.98	325	IAmb	IAmb	17 18 09.1	
	comp=Z,107nm,1.3s						
PSZ	**Piszkesteto**	85.98	325	⇑P	P	17 17 43.9	+1.5
PSZ	**Piszkesteto**	85.98	325	P	P	17 17 43.8	+1.5
ISCO	**Idaho Springs**	86.00	45	IAMs_20	IAMs_20	17 58 17.1	
	comp=Z,3µm,19.0s						
UPC	**Upice**	86.00	329	*e*P	P	17 17 43.4	+1.1
UPC				MLR	MLR		
	comp=Z,10µm,15.4s						
UPC	**Upice**	86.00	329	*e*P	P	17 17 43.4	+1.1
UPC				AMS	AMS	18 00 30.0	
	comp=Z,10µm,15.4s						
ELND	**Elena**	86.08	319	⇓P	P	17 17 43.8	+1.0
GORT1	**Trebel**	86.16	333	*e*P	P	17 17 42.9	-0.1
	comp=Z,280nm,1.4s,baz=40,slow=4.8						
GZR	**Gura Zlata**	86.20	322	⇓P	P	17 17 44.0	+0.5
GZR	**Gura Zlata**	86.20	322	P	P	17 17 44.0	+0.5
SIRR	**Siria**	86.20	323	⇑P	P	17 17 44.6	+1.2
VLAD	**Vladila**	86.22	320	⇑P	P	17 17 45.3	+1.8
BAND	**Balkesir-Ban**	86.37	315	⇓P	P	17 17 45.0	+0.6
ISP	**Isparta**	86.39	312	IAMs_20	IAMs_20	18 02 13.1	
	comp=Z,4µm,20.0s						
JAVC	**Velka Javorina**	86.41	327	*e*P	P	17 17 45.9	+1.5
PLVB	**Pleven**	86.49	319	⇑P	P	17 17 46.0	+1.2
HLG	**Helgoland**	86.54	335	*e*P	P	17 17 44.5	-0.4
	comp=Z,302nm,1.1s,baz=40,slow=4.8						
VRAC	**Vranov**	86.59	328	LR	LR	17 59 26.1	

	comp=Z,6µm,20.1s,baz=46,slow=38						
VRAC	Vranov	86.59	328	⇓P	P	17 17 46.6	+1.3
VRAC	Vranov	86.59	328	eP	P	17 17 45.4	+0.1
VRAC	Vranov	86.59	328	eS	S	17 28 19.5	-1.0
VRAC	Vranov	86.59	328	P	P	17 17 46.5	+1.3
PVCC	Panska Ves	86.62	329	AMS	AMS	18 01 30.0	
	comp=Z,6µm,16.0s						
BRG	Berggiesshubel	86.64	330	eP	P	17 17 45.2	-0.2
	comp=Z,403nm,2.1s,baz=40,slow=4.8						
BZS	Buzias	86.66	323	⇑P	P	17 17 46.4	+0.7
BZS	Buzias	86.66	323	P	P	17 17 46.3	+0.7
FLTG	Flechtingen	86.68	332	eP	P	17 17 44.7	-0.9
	comp=Z,205nm,1.4s,baz=40,slow=4.8						
CLL	Collm	86.72	331	IAmb	IAmb	17 18 00.4	
	comp=Z,131nm,1.3s						
CLL				IAMs_20	IAMs_20	17 57 21.3	
	comp=Z,5µm,21.0s						
CLL	Collm	86.72	331	i P	P	17 17 45.7	-0.1
CLL				e*PP	sP	17 17 53.0	-1.6
CLL				e		17 28 10.0	
CLL				eS	S	17 28 26.0	+4.4
CLL				pmax	pmax		
	comp=Z,187nm,1.7s						
CLL				MLR	MLR		
	comp=Z,6µm,17.7s						
CLL	Collm	86.72	331	eP	P	17 17 45.2	-0.6
	comp=Z,132nm,1.3s,baz=40,slow=4.8						
CLL	Collm	86.72	331	i P	P	17 17 45.7	-0.1
	comp=Z,187nm,1.7s						
CLL				i x	x	17 17 55.3	
	comp=Z,275nm,1.7s						
CLL				ePP	PP	17 21 07.0	-0.5
CLL				esPP		17 21 17.0	
CLL				ex	x	17 23 36.0	
CLL				eSKSac	SKSac	17 28 10.0	-1.0
CLL				eSKKSac	S	17 28 22.0	+0.4
CLL				eS	ScS	17 28 26.0	-3.7
CLL				ePS	PnS	17 29 24.0	+2.1
CLL				ePPS	PPS	17 29 48.0	
CLL				ex	x	17 30 48.0	
CLL				eSS	SS	17 34 03.0	+1.0
CLL				eSSS	SSS	17 37 30.0	
CLL				ex	x	17 38 36.0	
CLL				eSSSS		17 40 18.0	
HERR	Herculane	86.72	322	⇓P	P	17 17 46.3	+0.4
GHAJ	Ghor Haditha	86.75	305	IAmb	IAmb	17 18 05.8	
	comp=Z,72nm,0.9s						
GHAJ				IAMs_20	IAMs_20	18 02 38.1	
	comp=Z,4µm,18.0s						
SMOL	Smolenice	86.76	327	eP	P	17 17 46.9	+0.8
SMOL				pmax	pmax		
	comp=Z,40nm,1.5s						
RICC	Richard	86.82	330	AMS	AMS	18 01 50.0	
	comp=Z,7µm,15.0s						
KRUC	Moravsky	86.86	328	eP	P	17 17 46.6	+0.1
SUSD	Miller	86.91	39	IAMs_20	IAMs_20	17 58 11.0	
	comp=Z,3µm,20.0s						
MODS	Modra-Piesok	86.93	327	eP	P	17 17 48.0	+1.1
MODS				pmax	pmax		
	comp=Z,409nm,2.0s						
MODS	Modra-Piesok	86.93	327	eP	P	17 17 48.0	+1.1
BALB	Balikesir	86.94	315	IAmb	IAmb	17 18 07.0	
	comp=Z,102nm,1.3s						
TUC	Tucson	86.98	54	P	P	17 17 46.9	-0.7
TUC	Tucson	86.98	54	P	P	17 17 46.9	-0.7
TUC				pmax	pmax		
	comp=Z,49nm,1.4s						
TUC				MLR	MLR		
	comp=Z,10µm,18.0s						
PRA	Prague	87.02	329	AMS	AMS	18 01 30.0	
	comp=Z,6µm,16.2s						
PRU	Pruhonice	87.03	329	eP	P	17 17 49.9	+2.6
PRU				MLR	MLR		
	comp=Z,9µm,16.6s						
PRU	Pruhonice	87.03	329	eP	P	17 17 49.9	+2.6
PRU				AMS	AMS	18 01 20.0	
	comp=Z,9µm,16.6s						
HSKC	Hora Svate Kat	87.06	330	eP	P	17 17 49.0	+1.5
HSKC				eSKS	S	17 28 24.5	-0.5
HSKC				AMS	AMS	18 05 00.0	
	comp=Z,8µm,17.5s						
ASSE	Asse, Remlinge	87.06	332	eP	P	17 17 47.1	-0.3
	comp=Z,449nm,2.1s,baz=40,slow=4.8						
ASSE				eS	S	17 28 25.3	+0.5
	baz=36,slow=9.5						
TREC	Trest	87.11	328	eP	P	17 17 48.7	+0.9
TREC				MLR	MLR		
	comp=Z,7µm,17.3s						
TREC	Trest	87.11	328	eP	P	17 17 48.7	+0.9
TREC				AMS	AMS	17 59 30.0	
	comp=Z,7µm,17.3s						
RETH	Rethem/Aller,	87.11	333	eP	P	17 17 47.3	-0.3
	comp=Z,459nm,2.0s,baz=40,slow=4.8						
MDVR	Moldovita	87.17	322	⇑P	P	17 17 48.9	+0.7
MANT	Manisa	87.23	314	IAmb	IAmb	17 18 07.7	
	comp=Z,161nm,2.0s						
SDCO	Great Sand Dun	87.31	47	IAMs_20	IAMs_20	17 57 50.2	
	comp=Z,3µm,18.0s						
NEUB	Neuenburg	87.31	331	eP	P	17 17 48.2	-0.5
	comp=Z,138nm,1.3s,baz=40,slow=4.8						
NEUB				eS	S	17 28 29.0	+1.7
	baz=36,slow=9.5						
F33A	5 Mile Ranch,	87.37	36	IAmb	IAmb	17 18 11.8	
	comp=Z,50nm,1.0s						
F33A				IAMs_20	IAMs_20	17 52 51.0	
	comp=Z,3µm,21.0s						
CLZ	Clausthal	87.40	332	eP	P	17 17 48.9	-0.3
	comp=Z,170nm,1.4s,baz=40,slow=4.8						
CLZ				eS	S	17 28 24.6	-3.7
	baz=36,slow=9.5						
ZVC	Zvikov	87.58	329	eP	P	17 17 50.8	+0.7
ZVC				AMS	AMS	18 01 40.0	
	comp=Z,12µm,15.2s						
TANN	Tannenbergstha	87.62	330	eP	P	17 17 50.0	-0.3
	comp=Z,259nm,2.2s,baz=40,slow=4.8						
TANN				eS	S	17 28 29.3	-1.2
	baz=36,slow=9.5						
PLN	Plauen	87.69	331	eP	P	17 17 50.3	-0.3
	comp=Z,132nm,2.4s,baz=40,slow=4.8						
MORH	Mrgy, Hungar	87.78	324	⇓P	P	17 17 51.5	+0.5
GTTG	Gottingen	87.79	332	eP	P	17 17 50.7	-0.3
	comp=Z,77nm,1.1s,baz=40,slow=4.8						
MOX	Moxa	87.80	331	eP	P	17 17 50.8	-0.3
	comp=Z,225nm,2.1s,baz=40,slow=4.8						
MOX				eS	S	17 28 30.0	-2.1
	baz=36,slow=9.5						
MOX				eL	L	18 01 27.0	
	comp=Z,4µm,18.2s						
RONA	Rosalia, Austr	87.88	327	ePcP	P	17 17 52.0	+0.5
	comp=Z,34nm,1.3s,SNR=8.3						
RONA				PP	PP	17 21 18.8	+1.8
	comp=Z,30nm,1.6s						
CONA	Conrad Observa	87.92	327	i PcP	P	17 17 52.3	+0.5
	comp=Z,54nm,2.2s,SNR=12						
CONA				ePP	PP	17 21 19.3	+2.0
	comp=Z,27nm,1.6s						
CKRC	Cesky Krumlov	87.98	328	eP	P	17 17 52.2	+0.2
CKRC				e		17 28 24.6	
CKRC				MLR	MLR		
	comp=Z,8µm,17.4s						
CKRC	Cesky Krumlov	87.98	328	eP	P	17 17 52.2	+0.2
CKRC				eSKS	SKSac	17 28 24.6	+5.7
CKRC				AMS	AMS	18 00 10.0	
	comp=Z,8µm,17.4s						
KHC	Kasperske Hory	88.08	329	P	P	17 17 51.2	-1.3
KHC				IAmb	IAmb	17 18 03.9	
	comp=Z,107nm,1.7s						
KHC	Kasperske Hory	88.08	329	⇓eP	P	17 17 53.3	+0.8
KHC				pmax	pmax		
	comp=Z,73nm,2.5s						
KHC	Kasperske Hory	88.08	329	eP	P	17 17 53.3	+0.8
KHC				eSKS	S	17 28 32.9	-2.0
KHC				AMS	AMS	18 02 00.0	
	comp=Z,13µm,14.9s						
MANZ	Manzenberg	88.09	330	eP	P	17 17 52.3	-0.2
	comp=Z,36nm,1.9s,baz=40,slow=4.8						
MANZ				eS	S	17 28 36.6	+1.7
	baz=36,slow=9.5						
ROTZ	Rotzenmuhle	88.21	330	eP	P	17 17 53.0	-0.1
	comp=Z,148nm,2.6s,baz=40,slow=4.8						
ROTZ				eS	S	17 28 37.6	+1.6
	baz=36,slow=9.5						
EYMN	Ely	88.24	33	IAmb	IAmb	17 18 28.8	
	comp=Z,57nm,1.3s						
EYMN	Ely	88.24	33	IAMs_20	IAMs_20	18 02 59.5	
	comp=Z,3µm,19.0s						
GEC2	GERESS Array S	88.24	329	IAmb	IAmb	17 18 04.2	
	comp=Z,89nm,1.7s						
GEC2	GERESS Array S	88.24	329	eP	P	17 17 52.6	-0.8
	comp=Z,125nm,1.9s,baz=40,slow=4.8						
GEC2				eS	S	17 28 37.9	+1.4
	baz=36,slow=9.5						
GERES	GERESS Array B	88.24	329	P	P	17 17 53.3	0.0
	comp=Z,4.9nm,0.8s,baz=38,slow=6.8,SNR=18						
GERES				PP	PP	17 21 19.4	-0.5
	comp=Z,2.4nm,0.8s,baz=47,slow=6.6,SNR=3.5						
GERES				LR	LR	18 00 47.3	
	comp=Z,9µm,18.0s,baz=50,slow=38						
	comp=Z,4.9nm,0.8s						
KSCO	Kaye Shedlock’	88.30	45	IAMs_20	IAMs_20	17 56 26.4	
	comp=Z,3µm,19.0s						
UBBA	Unterbreizbach	88.34	332	eP	P	17 17 53.2	-0.3
	comp=Z,78nm,1.6s,baz=40,slow=4.8						
UBBA				eS	S	17 28 37.3	+0.4
	baz=36,slow=9.5						
T25A	Trinidad	88.36	47	IAMs_20	IAMs_20	17 54 21.2	
	comp=Z,4µm,20.0s						
ANMO	Albuquerque	88.38	50	P	P	17 17 56.4	+2.1
	comp=Z,5.5nm,0.9s,baz=301,slow=2.3,SNR=9.0						
ANMO				LR	LR	17 55 31.5	
	comp=Z,6µm,19.1s,baz=313,slow=34						
	comp=Z,5.5nm,0.9s						
ANMO	Albuquerque	88.38	50	P	P	17 17 53.8	-0.6
WET	Wettzell	88.38	329	eP	P	17 17 53.7	-0.2
	comp=Z,130nm,2.0s,baz=40,slow=4.8						
WET				eS	S	17 28 39.0	+1.3
	baz=36,slow=9.5						
ARSA	Arzberg	88.56	327	IAmb	IAmb	17 18 06.3	
	comp=Z,110nm,1.8s						
ARSA	Arzberg	88.56	327	ePcP	P	17 17 54.8	+0.1
	comp=Z,18nm,1.6s,SNR=5.9						
ECSD	EROS Data Cent	88.64	38	IAMs_20	IAMs_20	18 00 05.7	
	comp=Z,3µm,19.0s						
GRA1	Grafenberg Arr	88.69	330	IAMs_20	IAMs_20	18 00 15.3	
	comp=Z,3µm,20.0s						
GRF	Grafenberg Arr	88.69	330	eP	P	17 17 55.2	-0.1
	comp=Z,122nm,1.3s,baz=40,slow=4.8						
GRF				eS	S	17 28 40.2	-0.3
	baz=36,slow=9.5						
GRF				eL	L	18 00 15.2	
	comp=Z,4µm,20.1s						
MOA	Molln	88.71	328	ePcP	P	17 17 55.6	+0.1
	comp=Z,17nm,1.4s,SNR=6.0						
MOA				ePP	PP	17 21 23.1	-0.5
	comp=Z,23nm,1.6s						
BUG	Bochum--Univer	88.93	334	eP	P	17 17 55.6	-0.7
	comp=Z,64nm,1.1s,baz=40,slow=4.8						
VAY	Valandovo	88.99	319	i P	P	17 17 57.8	+1.0
BIOA	Bad Ischl, Aus	89.12	328	i PcP	P	17 17 57.5	+0.1
	comp=Z,19nm,1.0s,SNR=6.7						
EKA	Eskdalemuir Ar	89.17	341	P	P	17 17 58.0	+0.6
	comp=Z,8.6nm,0.8s,baz=49,slow=3.3,SNR=14						
EKA				LR	LR	18 02 04.3	
	comp=Z,4µm,18.1s,baz=38,slow=38						
	comp=Z,8.6nm,0.8s						
E38A	The Farm, Brul	89.18	34	IAmb	IAmb	17 18 31.1	
	comp=Z,57nm,1.1s						
E38A				IAMs_20	IAMs_20	18 00 03.5	
	comp=Z,3µm,18.0s						
SOKA	Soboth	89.21	327	ePcP	P	17 17 57.6	-0.3
	comp=Z,22nm,1.1s,SNR=6.4						
SOKA				PP	PP	17 21 26.5	-1.2
	comp=Z,16nm,1.8s						
MSEY	Mahe Island	89.23	264	P	P	17 17 59.2	+0.8
MSEY				P	PcP	17 17 59.9	0.0
MSEY	Mahe Island	89.23	264	P	P	17 17 57.0	-1.5
MSEY				IAmb	IAmb	17 18 05.9	
	comp=Z,98nm,1.1s						
MSEY	Mahe Island	89.23	264	IAMs_20	IAMs_20	17 58 40.8	
	comp=Z,3µm,18.0s						
MSEY	Mahe Island	89.23	264	i P	P	17 17 59.0	+0.5
	SNR=11						
MSEY	Mahe Island	89.23	264	P	P	17 17 57.0	-1.5
MSEY				pmax	pmax		
	comp=Z,98nm,1.1s						
MSEY				MLR	MLR		
	comp=Z,3µm,18.0s						
TNS	Taunus Mts	89.43	332	eP	P	17 17 58.5	-0.4
	comp=Z,53nm,1.4s,baz=40,slow=4.8						
OBKA	Obir	89.56	327	i PcP	P	17 17 59.3	-0.3
	comp=Z,9.6nm,0.9s						
OBKA				ePP	PP	17 21 29.6	-0.9
	comp=Z,21nm,1.2s						
SPMN	Marine on St.	89.56	35	IAMs_20	IAMs_20	18 00 26.8	
	comp=Z,3µm,18.0s						
LESA	Schwarzleotal	89.75	328	i PcP	P	17 18 00.2	-0.2
	comp=Z,16nm,1.1s,SNR=7.6						
LESA				PP	PP	17 21 32.4	+0.4
	comp=Z,52nm,1.9s						
FUR	Furstenfeldbru	89.82	329	eP	P	17 18 00.4	-0.3
	comp=Z,158nm,1.5s,baz=40,slow=4.8						
MYKA	Terra Mystica	89.90	327	i P	P	17 18 00.3	-0.8
	comp=Z,13nm,1.1s						
MYKA				ePP	PP	17 21 32.8	-0.3
	comp=Z,47nm,1.2s						
KARP	Karpathos	89.92	312	IAMs_20	IAMs_20	18 03 54.6	
	comp=Z,4µm,22.0s						
L34A	Svendsen Farm,	89.97	39	IAMs_20	IAMs_20	18 01 21.0	
	comp=Z,3µm,20.0s						
MEM	Membach	90.08	334	dP	P	17 17 59.5	-2.3
I37A	Lemond, Waseca	90.12	36	IAMs_20	IAMs_20	18 03 21.7	
	comp=Z,3µm,18.0s						
OHR	Ohrid	90.12	320	i P	P	17 18 03.3	+1.1
CBKS	Cedar Bluff	90.16	43	IAMs_20	IAMs_20	18 02 31.4	
	comp=Z,3µm,19.0s						
EPT	El Paso	90.24	52	IAMs_20	IAMs_20	18 00 28.4	
	comp=Z,4µm,19.0s						
STU	Stuttgart	90.25	331	IAmb	IAmb	17 18 16.4	
	comp=Z,137nm,1.5s						
STU	Stuttgart	90.25	331	eP	P	17 18 02.1	-0.6
	comp=Z,232nm,1.3s,baz=40,slow=4.8						
BSTI	Sart Tilman	90.27	334	dP	P	17 18 02.7	0.0
WATA	Walderalm	90.31	329	ePcP	P	17 18 02.4	-0.7
	comp=Z,40nm,1.9s						
WATA				ePP	PP	17 21 34.3	-2.2
	comp=Z,24nm,1.4s						
ABTA	Abfaltersbach	90.33	328	eP	P	17 18 02.4	-0.8
	comp=Z,23nm,1.1s						
ABTA				ePP	PP	17 21 34.0	-2.6
	comp=Z,17nm,1.4s						
WTTA	Wattenberg	90.34	329	i P	P	17 18 02.4	-1.0
	comp=Z,8.5nm,0.6s						
WTTA				PP	PP	17 21 38.0	+1.3
	comp=Z,34nm,1.7s						
MOTA	Moosalm	90.52	329	ePcP	P	17 18 04.0	-0.1
	comp=Z,32nm,1.6s						
MOTA				ePP	PP	17 21 39.8	+1.6
	comp=Z,37nm,1.8s						
RETA	Reutte	90.56	329	ePcP	P	17 18 04.0	-0.2
	comp=Z,50nm,1.9s,SNR=8.2						
RETA				ePP	PP	17 21 40.9	+2.5
	comp=Z,12nm,1.4s						
SQTA	Sankt Quirin	90.57	329	ePcP	P	17 18 03.7	-0.6
	comp=Z,12nm,0.8s,SNR=6.9						
SQTA				ePP	PP	17 21 39.7	+1.2
	comp=Z,33nm,1.5s						
STAL	STALIGIAL	90.61	327	IAmb	IAmb	17 18 14.0	
	comp=Z,43nm,0.9s						
UBR	Ueberruh	90.70	330	eP	P	17 18 04.2	-0.7
	comp=Z,23nm,1.1s,baz=40,slow=4.8						
RCHB	Rochefort	90.74	334	dP	P	17 18 04.2	-0.7
WLF	Walferdange	90.78	333	P	P	17 18 05.1	+0.1
WLF	Walferdange	90.78	333	eP	P	17 18 05.0	-0.1
	comp=Z,165nm,1.5s,baz=40,slow=4.8						
WLF	Walferdange	90.78	333	dP	P	17 18 03.5	-1.6
	comp=Z,30nm,1.5s						
BMRD	Maredsous	90.80	334	dP	P	17 18 04.9	-0.2
G40A	Rib Lake	90.80	34	IAmb	IAmb	17 18 51.4	
	comp=Z,81nm,1.6s						
G40A				IAMs_20	IAMs_20	17 56 03.5	
	comp=Z,3µm,21.0s						
FETA	Feichten	90.93	329	ePcP	P	17 18 05.5	-0.5
	comp=Z,10nm,1.0s,SNR=6.6						
BFO	Black Forest	90.95	331	P	P	17 18 04.8	-1.2
BFO				IAmb	IAmb	17 18 20.2	
	comp=Z,86nm,1.2s						
BFO	Black Forest	90.95	331	P	P	17 18 04.8	-1.2
BFO				pmax	pmax		
	comp=Z,86nm,1.2s						
BFO				MLR	MLR		
	comp=Z,5µm,18.0s						
BFO	Black Forest	90.95	331	eP	P	17 18 05.2	-0.8
	comp=Z,89nm,1.2s,baz=40,slow=4.8						
R32A	Long Quarter,	91.02	43	IAMs_20	IAMs_20	17 57 41.2	
	comp=Z,2µm,19.0s						
MNTX	Cornudas Mount	91.05	52	IAMs_20	IAMs_20	18 00 03.7	
	comp=Z,3µm,18.0s						
DAVA	Damuels	91.10	330	i PcP	P	17 18 06.4	-0.4
	comp=Z,21nm,1.2s						
N35A	Tabor	91.13	40	IAMs_20	IAMs_20	18 00 34.7	
	comp=Z,3µm,20.0s						
SCHQ	Schefferville	91.27	16	P	P	17 18 09.4	+2.1
	comp=Z,4.3nm,0.8s,baz=328,slow=7.2,SNR=5.9						
SCHQ				PKKPbc	PKKPbc	17 35 27.7	-1.9
	comp=Z,7.5nm,0.9s,baz=223,slow=5.4,SNR=4.1						
SCHQ				LR	LR	18 03 35.6	
	comp=Z,528nm,20.0s,baz=348,slow=38						
	comp=Z,4.3nm,0.8s						
F42A	Maple Grove Fa	91.41	32	IAMs_20	IAMs_20	18 00 49.4	
	comp=Z,3µm,20.0s						
DAVOX	Davos/Dischmat	91.49	329	LR	LR	18 05 17.1	
	comp=Z,3µm,18.8s,baz=37,slow=40						
AMTX	Amarillo	91.50	47	IAMs_20	IAMs_20	18 00 14.2	
	comp=Z,3µm,19.0s						
IDI	Anoyia	91.52	313	P	P	17 18 10.2	+1.3
IDI	Anoyia	91.52	313	LR	LR	18 04 44.2	
	comp=Z,3µm,18.8s,baz=64,slow=39						
ECH	Echery	91.53	332	P	P	17 18 07.5	-1.1
ECH				IAmb	IAmb	17 18 22.9	
	comp=Z,46nm,1.2s						
ECH				IAMs_20	IAMs_20	18 05 25.4	
	comp=Z,4µm,18.0s						
ECH	Echery	91.53	332	P	P	17 18 07.5	-1.1
ECH				pmax	pmax		
	comp=Z,46nm,1.2s						
ECH				MLR	MLR		
	comp=Z,4µm,18.0s						
I40A	Norwalk	91.61	35	IAMs_20	IAMs_20	18 03 45.9	
	comp=Z,3µm,18.0s						
SCIA	State Center	91.71	38	IAMs_20	IAMs_20	18 02 33.8	
	comp=Z,3µm,18.0s						
ATD	Arta Tunnel	91.76	284	LR	LR	18 00 10.9	
	comp=Z,94nm,21.7s,baz=45,slow=36						
ATD	Arta Tunnel	91.76	284	P	P	17 18 11.6	+1.3
ATD				S	SKSac	17 28 46.9	+4.9
ATD	Arta Tunnel	91.76	284	P	P	17 18 08.6	-1.7
ATD				IAmb	IAmb	17 18 23.7	
	comp=Z,87nm,1.5s						
KSU1	Kansas State U	91.79	42	IAmb	IAmb	17 18 29.9	
	comp=Z,35nm,0.8s						
KSU1	Kansas State U	91.79	42	IAMs_20	IAMs_20	17 57 34.3	
	comp=Z,2µm,21.0s						
DSB	Dublin	91.90	342	P	P	17 18 12.5	+2.3
TUE	Stuetta	91.96	329	P	P	17 18 09.5	-1.4
LPIG	La Paz	92.00	60	LR	LR	17 55 12.9	
	comp=Z,5µm,19.4s,baz=301,slow=33						
OK038	West end E0370	92.29	45	IAMs_20	IAMs_20	18 00 23.8	
	comp=Z,2µm,19.0s						
I42A	Draeger Farm,	92.44	34	IAMs_20	IAMs_20	17 56 04.8	
	comp=Z,2µm,20.0s						
JFWS	Jewell Farm	92.50	35	IAMs_20	IAMs_20	18 03 43.7	
	comp=Z,2µm,18.0s						
H43A	Windswept, Lux	92.55	33	IAMs_20	IAMs_20	18 03 38.7	
	comp=Z,2µm,19.0s						
L40A	Anamosa	92.63	37	IAMs_20	IAMs_20	18 05 06.2	
	comp=Z,3µm,19.0s						
E46A	Sault Ste Mari	92.65	30	IAMs_20	IAMs_20	17 56 38.1	
	comp=Z,3µm,22.0s						
MNHN	Monahans	93.03	51	IAmb	IAmb	17 18 36.2	
	comp=Z,88nm,1.6s						
ALPN	Alpine	93.04	52	IAmb	IAmb	17 18 22.9	
	comp=Z,26nm,1.0s						
P38A	Dawn	93.15	40	IAmb	IAmb	17 18 24.5	
	comp=Z,86nm,1.6s						
P38A				IAMs_20	IAMs_20	18 01 55.1	
	comp=Z,2µm,19.0s						
SN07	Snyder 07	93.15	48	IAmb	IAmb	17 18 24.9	
	comp=Z,32nm,1.2s						
AQU	L'Aquila	93.17	324	P	P	17 18 18.0	+1.7
VLC	Villacollemand	93.27	327	P	P	17 18 17.2	+0.5
T35A	Sooner Cattle	93.33	43	IAMs_20	IAMs_20	18 00 07.1	
	comp=Z,2µm,20.0s						
OK048	Pawnee Station	93.41	44	IAMs_20	IAMs_20	18 00 56.4	
	comp=Z,2µm,20.0s						
WMOK	Wichita Mounta	93.41	46	IAMs_20	IAMs_20	17 58 05.7	
	comp=Z,4µm,19.0s						
OK051	E0350 and S346	93.41	44	IAMs_20	IAMs_20	18 07 11.5	
	comp=Z,3µm,19.0s						
L42A	Oliver, Polo	93.46	36	IAMs_20	IAMs_20	18 02 49.1	
	comp=Z,2µm,19.0s						
APMT	Aspermont	93.49	48	IAmb	IAmb	17 18 24.4	
	comp=Z,37nm,0.9s						
I45A	Fountain	93.59	33	IAMs_20	IAMs_20	18 03 18.3	
	comp=Z,4µm,19.0s						
K43A	Burlington	93.61	35	IAMs_20	IAMs_20	18 07 16.8	
	comp=Z,3µm,19.0s						
CUC	Castrocucco	93.63	321	IAMs_20	IAMs_20	18 01 38.3	
	comp=Z,3µm,20.0s						
TXAR	Lajitas Array	93.67	53	P	P	17 18 21.6	+2.7
	comp=Z,37nm,0.8s,baz=308,slow=2.5,SNR=81						
TXAR				PP	PP	17 22 05.7	+2.2
	comp=Z,1.1nm,0.9s,baz=310,slow=7.6,SNR=2.6						
TXAR				PKKPbc	PKKPbc	17 35 22.6	-0.3
	comp=Z,0.7nm,1.0s,baz=136,slow=2.0,SNR=3.9						
TXAR				LR	LR	18 01 57.6	
	comp=Z,6µm,18.1s,baz=311,slow=36						
	comp=Z,37nm,0.8s						
TXAR	Lajitas Array	93.67	53	P	P	17 18 19.5	+0.6
TXAR	Lajitas Array	93.67	53	P	P	17 18 19.5	+0.6
GLMI	Grayling	93.72	31	IAMs_20	IAMs_20	18 06 53.5	
	comp=Z,3µm,20.0s						
SGCY	Sterling City	93.75	49	IAmb	IAmb	17 18 26.1	
	comp=Z,48nm,0.9s						
OK052	Battle Ridge R	93.78	44	IAMs_20	IAMs_20	18 01 58.2	
	comp=Z,2µm,20.0s						
N41A	Harden Midland	93.80	37	IAMs_20	IAMs_20	18 04 17.3	
	comp=Z,4µm,20.0s						
P40A	Paris	94.02	39	IAMs_20	IAMs_20	18 03 33.2	
	comp=Z,2µm,18.0s						
L44A	Lake County Fo	94.21	35	IAMs_20	IAMs_20	18 03 48.7	
	comp=Z,3µm,19.0s						
BNI	Bardonecchia	94.24	330	P	P	17 18 20.3	-1.0
BNI				IAmb	IAmb	17 18 23.4	
	comp=Z,100nm,1.9s						
BNI	Bardonecchia	94.24	330	P	P	17 18 20.3	-1.0
BNI				pmax	pmax		
	comp=Z,100nm,1.9s						
BNI				MLR	MLR		
	comp=Z,6µm,19.0s						
SAND	Sanderson	94.33	51	IAmb	IAmb	17 18 32.8	
	comp=Z,43nm,1.3s						
TUL3	Leonard	94.43	43	IAMs_20	IAMs_20	18 00 18.5	
	comp=Z,3µm,20.0s						
HQIL	Hanson Quary C	94.52	35	IAMs_20	IAMs_20	18 03 26.0	
	comp=Z,3µm,20.0s						
HDIL	Hopedale	94.72	37	IAMs_20	IAMs_20	18 03 42.5	
	comp=Z,3µm,19.0s						
M44A	Midewin, Midew	94.73	35	IAMs_20	IAMs_20	18 05 37.7	
	comp=Z,2µm,20.0s						
R40A	Maddies Statio	94.79	40	IAmb	IAmb	17 18 31.6	
	comp=Z,69nm,1.6s						
R40A				IAMs_20	IAMs_20	18 03 13.5	
	comp=Z,3µm,19.0s						
CEL	Celeste	94.82	320	IAmb	IAmb	17 18 47.7	
	comp=Z,61nm,1.2s						
CEL				IAMs_20	IAMs_20	18 05 56.0	
	comp=Z,4µm,18.0s						
J47A	Sunmer	94.86	32	IAMs_20	IAMs_20	18 05 44.8	
	comp=Z,4µm,19.0s						
U38A	Gravette	94.89	42	IAMs_20	IAMs_20	18 01 22.6	
	comp=Z,3µm,20.0s						
SSB	Saint Sauveur	94.96	331	IAmb	IAmb	17 18 38.9	
	comp=Z,44nm,1.2s						
PLPT	Palo Pinto	94.97	47	IAmb	IAmb	17 18 46.9	
	comp=Z,84nm,1.4s						
L46A	Eue Claire	95.11	34	IAMs_20	IAMs_20	17 57 35.7	
	comp=Z,3µm,22.0s						
I49A	Point Hope	95.21	31	IAMs_20	IAMs_20	18 08 29.8	
	comp=Z,3µm,18.0s						
P43A	Skaggs, Pawnee	95.28	37	IAMs_20	IAMs_20	18 05 21.4	
	comp=Z,4µm,19.0s						
CCM	Cathedral Cave	95.52	39	P	P	17 18 26.9	-0.2
CCM				IAmb	IAmb	17 19 10.0	
	comp=Z,43nm,0.9s						
CCM	Cathedral Cave	95.52	39	IAMs_20	IAMs_20	18 09 29.8	
	comp=Z,2µm,18.0s						
CCM	Cathedral Cave	95.52	39	P	P	17 18 26.9	-0.2
CCM				pmax	pmax		
	comp=Z,43nm,0.9s						
CCM				MLR	MLR		
	comp=Z,2µm,18.0s						
BRDY	Brady	95.54	49	IAmb	IAmb	17 18 49.5	

	comp=Z,32nm,1.1s						
MGMO	Mountain Grove	95.60	41	IAmb	IAmb	17 18 48.8	
	comp=Z,35nm,1.3s						
SFIN	Lafayette	95.97	35	IAMs_20	IAMs_20	18 04 14.3	
	comp=Z,4µm,19.0s						
RKT	Rikitea	96.01	113	*e*LR	LR	17 49 15.1	
	comp=Z,22µm,30.8s						
Q44A	Meyer Farm, Va	96.09	37	IAMs_20	IAMs_20	18 05 55.8	
	comp=Z,3µm,19.0s						
SADO	Sadowa	96.09	28	LR	LR	18 11 54.1	
	comp=Z,1µm,18.1s,baz=352,slow=42						
AAM	Ann Arbor	96.13	32	IAMs_20	IAMs_20	18 05 03.3	
	comp=Z,3µm,19.0s						
VAE	Valguarnera	96.20	321	LR	LR	18 04 55.8	
	comp=Z,2µm,19.2s,baz=36,slow=37						
N47A	Urbana	96.27	34	IAMs_20	IAMs_20	18 09 41.3	
	comp=Z,3µm,19.0s						
P46A	Rosedale	96.49	36	IAMs_20	IAMs_20	17 59 03.1	
	comp=Z,3µm,21.0s						
MIAR	Mount Ida	96.69	43	IAmb	IAmb	17 18 54.3	
	comp=Z,57nm,1.6s						
MIAR				IAMs_20	IAMs_20	18 05 51.1	
	comp=Z,3µm,18.0s						
S44A	Carbondale	96.86	38	IAMs_20	IAMs_20	18 05 37.2	
	comp=Z,3µm,19.0s						
N49A	Columbus Grove	96.96	33	IAMs_20	IAMs_20	18 07 57.5	
	comp=Z,2µm,19.0s						
O48B	Farmland	97.01	34	IAMs_20	IAMs_20	17 58 44.0	
	comp=Z,3µm,21.0s						
M50A	Fremont	97.12	32	IAMs_20	IAMs_20	18 11 27.5	
	comp=Z,3µm,18.0s						
WDD	Wied Dalam	97.32	319	IAMs_20	IAMs_20	18 08 20.2	
	comp=Z,3µm,19.0s						
O49A	Covington	97.46	34	IAMs_20	IAMs_20	18 08 04.8	
	comp=Z,3µm,19.0s						
P48A	Milroy	97.50	35	IAMs_20	IAMs_20	18 10 04.8	
	comp=Z,2µm,18.0s						
T45A	Paducah	97.68	39	IAMs_20	IAMs_20	18 03 17.1	
	comp=Z,2µm,19.0s						
M52A	Chesterland	97.77	31	IAMs_20	IAMs_20	18 10 16.8	
	comp=Z,2µm,19.0s						
N51A	Ashland	97.81	32	IAMs_20	IAMs_20	18 01 12.8	
	comp=Z,3µm,21.0s						
J55A	Hilton	97.87	28	IAMs_20	IAMs_20	18 09 48.1	
	comp=Z,2µm,19.0s						
ERPA	Erie	97.91	30	IAMs_20	IAMs_20	18 08 04.2	
	comp=Z,3µm,19.0s						
E62A	Clayton Lake	97.95	21	IAMs_20	IAMs_20	18 07 27.6	
	comp=Z,3µm,20.0s						
NATX	Nacogdoches	97.96	46	IAMs_20	IAMs_20	18 10 40.2	
	comp=Z,4µm,18.0s						
LONY	Lake Ozonia	97.98	25	IAMs_20	IAMs_20	18 06 13.7	
	comp=Z,3µm,20.0s						
WCI	Wyandotte Cave	98.00	36	IAMs_20	IAMs_20	18 05 25.3	
	comp=Z,3µm,18.0s						
ACSO	Alum Creek Sta	98.07	33	IAMs_20	IAMs_20	18 06 15.8	
	comp=Z,3µm,19.0s						
J57A	Williamstown	98.47	27	IAMs_20	IAMs_20	18 09 44.9	
	comp=Z,3µm,20.0s						
R49A	Shelbyville	98.52	36	IAMs_20	IAMs_20	18 05 52.0	
	comp=Z,3µm,20.0s						
T47A	Sharon Grove	98.52	38	IAMs_20	IAMs_20	18 06 02.2	
	comp=Z,3µm,19.0s						
N53A	Lisbon	98.60	31	IAMs_20	IAMs_20	18 10 03.6	
	comp=Z,2µm,20.0s						
O52A	Adamsville	98.70	32	IAMs_20	IAMs_20	18 09 24.5	
	comp=Z,2µm,20.0s						
WVT	Waverly	98.78	39	IAMs_20	IAMs_20	18 06 45.1	
	comp=Z,2µm,19.0s						
K57A	Scipio Center	98.84	28	IAMs_20	IAMs_20	18 10 42.7	
	comp=Z,3µm,19.0s						
Q51A	Peebles	98.85	34	IAMs_20	IAMs_20	17 59 50.5	
	comp=Z,3µm,22.0s						
G62A	West of Eustis	98.87	23	IAMs_20	IAMs_20	18 11 39.1	
	comp=Z,3µm,19.0s						
L56A	Greenwood	98.92	29	IAMs_20	IAMs_20	18 05 34.8	
	comp=Z,3µm,20.0s						
R50A	Paris	98.95	35	IAMs_20	IAMs_20	18 06 36.3	
	comp=Z,2µm,20.0s						
F64A	Sherman	98.99	21	IAMs_20	IAMs_20	18 06 16.1	
	comp=Z,3µm,20.0s						
J59A	Piesco	99.00	26	IAMs_20	IAMs_20	18 07 51.7	
	comp=Z,3µm,20.0s						
OXF	Oxford	99.11	41	IAMs_20	IAMs_20	18 11 03.0	
	comp=Z,3µm,18.0s						
H62A	Milan	99.23	23	IAMs_20	IAMs_20	18 12 43.7	
	comp=Z,3µm,19.0s						
PKME	Peaks-Kenny Pk	99.23	22	IAMs_20	IAMs_20	18 08 06.6	
	comp=Z,4µm,20.0s						
LBNH	Lisbon	99.26	24	IAMs_20	IAMs_20	18 07 51.5	
	comp=Z,2µm,20.0s						
143A	Socs Landing,	99.27	43	IAMs_20	IAMs_20	18 08 03.5	
	comp=Z,3µm,19.0s						
P53A	Whipple	99.41	32	IAMs_20	IAMs_20	18 10 51.1	
	comp=Z,4µm,19.0s						
Q52A	Bidwell	99.41	33	IAMs_20	IAMs_20	18 09 50.4	
	comp=Z,3µm,19.0s						
PLAL	Pickwick Lake	99.50	40	IAMs_20	IAMs_20	18 11 18.3	
	comp=Z,2µm,19.0s						
U49A	Red Boiling Sp	99.58	37	IAMs_20	IAMs_20	18 11 18.0	
	comp=Z,4µm,19.0s						
HNH	Hanover	99.60	24	IAMs_20	IAMs_20	18 09 55.5	
	comp=Z,3µm,20.0s						
V48A	Smith Brothers	99.61	38	IAMs_20	IAMs_20	18 05 50.1	
	comp=Z,3µm,20.0s						
T50A	Nancy	99.67	36	IAMs_20	IAMs_20	18 05 43.4	
	comp=Z,2µm,19.0s						
WVL	Waterville	99.74	22	IAMs_20	IAMs_20	18 05 26.0	
	comp=Z,3µm,19.0s						
M57A	Sunshine Farm,	99.76	29	IAMs_20	IAMs_20	18 07 50.1	
	comp=Z,3µm,21.0s						
I62A	Tamworth	99.78	24	IAMs_20	IAMs_20	18 11 21.4	
	comp=Z,2µm,20.0s						
S51A	Beattyville	99.81	35	IAMs_20	IAMs_20	18 07 11.1	
	comp=Z,2µm,19.0s						
J61A	Chester	99.82	25	IAMs_20	IAMs_20	18 12 02.3	
	comp=Z,3µm,19.0s						
I63A	Otisfield	99.89	23	IAMs_20	IAMs_20	18 12 01.0	
	comp=Z,3µm,19.0s						
TRY	Troy	99.94	26	IAMs_20	IAMs_20	18 08 37.6	
	comp=Z,3µm,20.0s						
MCWV	Mont Chateau	99.97	31	IAMs_20	IAMs_20	18 07 33.0	
	comp=Z,3µm,20.0s						
SSPA	Standing Stone	100.02	30	IAMs_20	IAMs_20	18 09 58.2	
	comp=Z,2µm,19.0s						
VBMS	Vicksburg	100.14	43	IAMs_20	IAMs_20	18 09 04.4	
	comp=Z,3µm,20.0s						
N58A	Sunbury	100.35	29	IAMs_20	IAMs_20	18 10 49.6	
	comp=Z,2µm,18.0s						
X48A	Hartselle	100.46	39	IAMs_20	IAMs_20	18 09 12.7	
	comp=Z,3µm,18.0s						
K62A	Royalston	100.52	25	IAMs_20	IAMs_20	18 10 06.0	
	comp=Z,3µm,19.0s						
L61B	Northampton	100.55	25	IAMs_20	IAMs_20	18 10 20.7	
	comp=Z,3µm,20.0s						
146A	Union	100.68	42	IAMs_20	IAMs_20	18 07 10.7	
	comp=Z,3µm,20.0s						
TZTN	Tazewell	100.69	36	IAMs_20	IAMs_20	18 11 22.4	
	comp=Z,2µm,19.0s						
Q56A	Snyder Ridge,	100.77	31	IAMs_20	IAMs_20	18 08 05.1	
	comp=Z,3µm,18.0s						
S54A	Dingess, Beckl	100.79	33	IAMs_20	IAMs_20	18 07 57.7	
	comp=Z,2µm,19.0s						
W50A	Signal Mountai	100.82	38	IAMs_20	IAMs_20	18 06 56.9	
	comp=Z,3µm,20.0s						
Z47A	Carrollton	100.83	41	IAMs_20	IAMs_20	18 12 20.3	
	comp=Z,2µm,19.0s						
HRV	Adam Dziewonsk	100.91	24	IAMs_20	IAMs_20	18 12 59.9	
	comp=Z,3µm,19.0s						
P57A	Homestead Farm	100.92	30	IAMs_20	IAMs_20	18 14 05.9	
	comp=Z,3µm,19.0s						
Y49A	Blount Mountai	101.25	39	IAMs_20	IAMs_20	18 08 13.5	
	comp=Z,3µm,20.0s						
346A	Big Creek Wild	101.35	43	IAMs_20	IAMs_20	18 11 37.5	
	comp=Z,3µm,19.0s						
WSPT	Westport, CT	101.41	26	IAMs_20	IAMs_20	18 08 32.5	
	comp=Z,3µm,21.0s						
LRAL	Lakeview Retre	101.55	40	IAMs_20	IAMs_20	18 12 30.3	
	comp=Z,2µm,18.0s						
X51A	Calhoun	101.55	38	IAMs_20	IAMs_20	18 07 29.1	
	comp=Z,3µm,20.0s						
N62A	Caumsett State	101.56	27	IAMs_20	IAMs_20	18 08 26.6	
	comp=Z,3µm,20.0s						
U54A	Nelsons Funny	101.56	35	IAMs_20	IAMs_20	18 06 15.3	
	comp=Z,2µm,20.0s						
W52A	Murphy	101.63	37	IAMs_20	IAMs_20	18 02 52.1	
	comp=Z,2µm,20.0s						
L64A	Middleborough	101.66	24	IAMs_20	IAMs_20	18 11 02.9	
	comp=Z,3µm,19.0s						
BLA	Blacksburg	101.69	33	IAMs_20	IAMs_20	18 13 44.4	
	comp=Z,3µm,19.0s						
M63A	Gales Ferry	101.69	25	IAMs_20	IAMs_20	18 08 31.8	
	comp=Z,3µm,20.0s						
V53A	Saluda	101.75	36	IAMs_20	IAMs_20	18 12 34.2	
	comp=Z,2µm,19.0s						
S57A	Dark Hollow, R	101.92	32	IAMs_20	IAMs_20	18 06 52.5	
	comp=Z,3µm,20.0s						
M65A	Busby, Falmout	102.06	24	P	Pdif	17 18 55.5	-0.9
	baz=332						
P61A	Hammonton	102.12	28	IAMs_20	IAMs_20	18 11 24.3	
	comp=Z,3µm,19.0s						
R58B	Mineral	102.24	31	IAMs_20	IAMs_20	18 09 44.8	
	comp=Z,3µm,19.0s						
CBN	Corbin Frederi	102.26	31	IAMs_20	IAMs_20	18 10 28.4	
	comp=Z,3µm,19.0s						
LODK	Lodwar	102.32	282	IAMs_20	IAMs_20	18 08 58.0	
	comp=Z,2µm,19.0s						
V55A	Taylorsville	102.39	35	IAMs_20	IAMs_20	18 09 10.2	
	comp=Z,3µm,19.0s						
U56A	King	102.40	34	IAMs_20	IAMs_20	18 13 11.3	
	comp=Z,3µm,19.0s						
250A	Grady	102.75	40	IAMs_20	IAMs_20	18 06 05.2	
	comp=Z,3µm,20.0s						
KMSC	Kings Mountain	102.90	35	IAMs_20	IAMs_20	18 02 16.7	
	comp=Z,2µm,20.0s						
BRAL	Brewton	102.91	41	IAMs_20	IAMs_20	18 11 35.6	
	comp=Z,2µm,18.0s						
KIBK	Kibwezi	103.03	275	PP	PKiKP	17 23 14.9	-6.5
KIBK	Kibwezi	103.03	275	IAMs_20	IAMs_20	18 11 04.9	
	comp=Z,2µm,19.0s						
ESDC	Sonseca Array	103.07	334	Pdiff	Pdif	17 19 00.9	-0.1
	comp=Z,1.2nm,0.8s,baz=10,slow=3.6,SNR=5.0						
T59A	Double "B" Far	103.20	31	IAMs_20	IAMs_20	18 06 21.3	
	comp=Z,2µm,19.0s						
W57A	Gilead	103.55	34	IAMs_20	IAMs_20	18 13 48.7	
	comp=Z,3µm,19.0s						
CART	Cartagena	103.65	330	IAMs_20	IAMs_20	18 11 47.3	
	comp=Z,3µm,19.0s						
352A	Blakely	103.87	40	IAMs_20	IAMs_20	18 07 02.2	
	comp=Z,2µm,20.0s						
154A	Montrose	103.98	38	IAMs_20	IAMs_20	18 09 12.6	
	comp=Z,3µm,19.0s						
451A	Vernon	104.06	41	IAMs_20	IAMs_20	18 09 03.1	
	comp=Z,3µm,20.0s						
Y57A	Sumter	104.26	35	IAMs_20	IAMs_20	18 10 54.8	
	comp=Z,3µm,20.0s						
W59A	Clinton	104.28	33	IAMs_20	IAMs_20	18 08 04.9	
	comp=Z,3µm,20.0s						
X58A	Rowland	104.35	34	IAMs_20	IAMs_20	18 14 45.9	
	comp=Z,2µm,18.0s						
V61A	Roper	104.62	31	IAMs_20	IAMs_20	18 06 34.8	
	comp=Z,2µm,19.0s						
TIGA	Tifton	104.63	39	IAMs_20	IAMs_20	18 14 19.9	
	comp=Z,2µm,19.0s						
Y58A	Scranton	104.71	35	IAMs_20	IAMs_20	18 14 17.6	
	comp=Z,2µm,19.0s						
VOI	Vohitsoka	105.00	253	IAMs_20	IAMs_20	18 03 33.7	
	comp=Z,3µm,20.0s						
NHSC	New Hope	105.10	36	IAMs_20	IAMs_20	18 11 31.0	
	comp=Z,3µm,20.0s						
553A	Crawfordville	105.13	40	IAMs_20	IAMs_20	18 07 16.1	
	comp=Z,3µm,20.0s						
Y60A	Bolivia	105.33	34	IAMs_20	IAMs_20	18 16 06.9	
	comp=Z,2µm,20.0s						
257A	Skidaway Islan	105.57	37	IAMs_20	IAMs_20	18 10 47.5	
	comp=Z,3µm,19.0s						
LIS	Lisbon	105.79	337	*e*PP	PP	17 23 36.2	+1.5
LIS				IAMs_20	IAMs_20	18 04 33.9	
	comp=E,6µm,23.0s						
456A	Hilliard	106.03	38	IAMs_20	IAMs_20	18 05 44.8	
	comp=Z,2µm,20.0s						
MESJ	Messejana	106.25	336	*e*PP	PP	17 23 39.6	+1.4
MESJ				IAMs_20	IAMs_20	18 15 22.6	
	comp=Z,5µm,13.2s						
656A	Willston	106.81	40	IAMs_20	IAMs_20	18 08 02.6	
	comp=Z,2µm,20.0s						
MORF	Marmelete	106.89	336	*e*PP	PP	17 23 44.4	+1.5
MORF				IAMs_20	IAMs_20	18 12 17.8	
	comp=Z,5µm,16.2s						
MBAR	Mbarara	108.36	281	IAMs_20	IAMs_20	18 15 20.1	
	comp=Z,2µm,20.0s						
DWPF	Disney Wildern	108.39	40	IAMs_20	IAMs_20	18 09 00.5	
	comp=Z,3µm,20.0s						
060A	Indiantown	109.82	40	IAMs_20	IAMs_20	18 09 12.3	
	comp=Z,2µm,21.0s						
TEIG	Tepich	110.11	50	IAMs_20	IAMs_20	18 07 29.1	
	comp=Z,2µm,20.0s						
TAM	Tamanrasset	112.24	316	IAMs_20	IAMs_20	18 17 59.4	
	comp=Z,3µm,20.0s						
MTDJ	Mount Denham	118.33	43	IAMs_20	IAMs_20	18 20 02.3	
	comp=Z,2µm,19.0s						
VA02	Isla de Pascua	118.52	106	IAMs_20	IAMs_20	18 10 02.3	
	comp=Z,2µm,20.0s						
HDC	Heredia	120.13	55	IAMs_20	IAMs_20	18 10 20.3	
	comp=Z,2µm,21.0s						
QSPA	South Pole Qui	120.50	180	PKP	PKiKP	17 23 52.8	0.0
	comp=Z,1.7nm,0.6s,baz=350,slow=2.8,SNR=16						
QSPA				PKKPbc	PKKPbc	17 33 59.7	-1.0
	comp=Z,2.7nm,0.7s,baz=237,slow=1.2,SNR=14						
QSPA	South Pole Qui	120.50	180		PKPdf	17 23 52.1	-0.6
QSPA	South Pole Qui	120.50	180	IAMs_20	IAMs_20	18 14 28.7	
	comp=Z,2µm,20.0s						
TORD	Torodi Ar. Bea	121.92	313	PKP	PKPdf	17 23 56.9	0.0
	comp=Z,2.8nm,0.5s,baz=22,slow=6.3,SNR=5.6						
TORD				PP	PP	17 25 30.3	+0.3
	comp=Z,7.1nm,0.8s,baz=28,slow=6.8,SNR=4.1						
TORD				PKKPbc	PKKPbc	17 33 51.9	-1.9
	comp=Z,1.4nm,0.3s,baz=336,slow=3.3,SNR=5.7						
TORD	Torodi Ar. Bea	121.92	313		PKPdf	17 23 55.0	-2.0
EDA	Edea	122.54	298	IAMs_20	IAMs_20	18 22 29.8	
	comp=Z,2µm,20.0s						
SYO	Syowa Base	122.70	205	⇓*e*PKPdf	PKiKP	17 23 57.5	+0.6
SYO	Syowa Base	122.70	205	⇑*e*pPKiKP	PKiKP	17 24 02.6	+5.7
BCIP	Isla Barro Col	123.68	52	IAMs_20	IAMs_20	18 17 45.0	
	comp=Z,2µm,20.0s						
SJG	San Juan	124.47	33	IAMs_20	IAMs_20	18 29 16.8	
	comp=Z,2µm,19.0s						
BOSA	Boshof	125.52	255	PKP	PKiKP	17 24 05.7	+1.7
	comp=Z,4.5nm,0.8s,baz=73,slow=1.2,SNR=8.4						
SABA	Saba	126.21	30	IAMs_20	IAMs_20	18 21 29.5	
	comp=Z,2µm,20.0s						
SEUS	St. Eustatius	126.43	30	IAMs_20	IAMs_20	18 15 28.4	
	comp=Z,2µm,22.0s						
ANWB	Willy Bob	126.78	28	IAMs_20	IAMs_20	18 21 33.4	
	comp=Z,1µm,20.0s						
GDHS	Morne Mazeau,	128.04	29	IAMs_20	IAMs_20	18 16 38.5	
	comp=Z,2µm,22.0s						
GDSD	La Dsirade Is	128.29	28	IAMs_20	IAMs_20	18 26 45.5	
	comp=Z,2µm,21.0s						
SVN	Savane Anatole	129.57	29	IAMs_20	IAMs_20	18 18 21.5	
	comp=Z,2µm,21.0s						
SDV	Santo Domingo	129.78	44		PKPdf	17 24 10.0	-2.2
SDV				IAMs_20	IAMs_20	18 33 16.6	
	comp=Z,2µm,19.0s						
SDV	Santo Domingo	129.78	44	*e*P	PKPdf	17 24 10.9	-1.3
BIM	Bigot	129.90	29	IAMs_20	IAMs_20	18 17 57.2	
	comp=Z,2µm,22.0s						
MPOM	Morne Pois Mar	130.05	29	IAMs_20	IAMs_20	18 22 40.2	
	comp=Z,2µm,21.0s						
SUR	Sutherland	130.28	252	IAMs_20	IAMs_20	18 15 56.1	
	comp=Z,1µm,20.0s						
WIN	Windhoek	130.35	265	IAMs_20	IAMs_20	18 32 03.6	
	comp=Z,2µm,20.0s						
ROSC	El Rosal	130.56	51	PKP	PKiKP	17 24 14.8	-0.1
	comp=Z,6.2nm,0.4s,baz=51,slow=6.1,SNR=6.9						
OTAV	Otavalo	130.90	59	IAMs_20	IAMs_20	18 20 14.1	
	comp=Z,1µm,20.0s						
OTAV	Otavalo	130.90	59	*e*P	PKPdf	17 24 13.0	-1.7
DBIC	Dimbokro	130.99	314	PKP	PKPdf	17 24 14.4	+0.1
	comp=Z,5.0nm,0.8s,baz=87,slow=1.5,SNR=8.1						
DBIC				PP	PP	17 26 27.9	-2.3
	comp=Z,9.8nm,0.9s,baz=68,slow=5.4,SNR=4.6						
NVL	N'lazarevskaya	131.55	200	*e*PKIKP	PKPdf	17 24 09.8	-3.8
NVL				*e*SS	SS	17 44 02.5	-2.9
NVL				*e*SSS	SSS	17 48 54.0	
NVL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GRGR	Grenville	131.76	31	IAMs_20	IAMs_20	18 28 06.8	
	comp=Z,1µm,20.0s						
BELA	Belgrano 2	132.75	181		PKPpre	17 24 08.3	
BELA				PKPdf	PKPdf	17 24 15.5	-0.3
TROLL	Troll, Antarti	133.34	196	⇑PKPdf	PKiKP	17 24 18.8	+0.5
	comp=Z,508nm,0.8s						
TROLL				SKPbc	SKPbc	17 27 43.6	-0.2
SNAA	Sanae	134.81	195	⇑PKiKP	PKiKP	17 24 23.5	+2.2
	comp=Z,167nm,0.9s						
SNAA				⇑SKPdf	SKPdf	17 27 54.5	+1.1
SNAA	Sanae	134.81	195	PKhKP	PKPpre	17 24 06.5	
	comp=Z,1.5nm,0.7s,baz=0.2,slow=14,SNR=2.4						
SNAA				PKP	PKiKP	17 24 21.2	-0.1
	comp=Z,7.0nm,0.9s,baz=126,slow=4.8,SNR=6.9						
SNAA				PP	PP	17 26 52.1	-2.0
	comp=Z,19nm,1.1s,baz=121,slow=8.8,SNR=6.5						
SNAA	Sanae	134.81	195		PKPdf	17 24 19.4	-0.4
SNAA				IAMs_20	IAMs_20	18 32 25.8	
	comp=Z,1µm,18.0s						
SNAA	Sanae	134.81	195	PKIKP	PKPdf	17 24 19.4	-0.4
SNAA				MLR	MLR		
	comp=Z,1µm,18.0s						
CZSB	Cruzeiro do Su	140.43	62	*e*P	PKPdf	17 24 30.5	-1.3
BOAV	Boa Vista	140.76	37	*e*P	PKPdf	17 24 31.5	-1.0
TEFE	Tefe	143.16	48	*e*P	PKPdf	17 24 35.3	-1.4
MACA	Manacapuru-AM	145.29	42	*e*P	PKPbc	17 24 39.1	-1.1
H03N2	Juan Fernandez	145.52	105	T	T	20 07 15.2	
	baz=281,slow=75,SNR=6.1						
H03N3	Juan Fernandez	145.53	105	T	T	20 07 26.9	
	baz=281,slow=75,SNR=5.6						
H03N1	Juan Fernandez	145.53	105	T	T	20 07 18.4	
	baz=281,slow=75,SNR=5.3						
AP01	Chacalluta	148.37	75	IAMs_20	IAMs_20	18 45 47.7	
	comp=Z,1µm,20.0s						
PB12	IPOC Station P	148.50	75	IAMs_20	IAMs_20	18 20 44.2	
	comp=Z,2µm,21.0s						
ITTB	Itaituba	148.98	36	*e*P	PKPdf	17 24 45.2	-1.4
LPAZ	La Paz	149.11	69	PKP	PKPdf	17 24 46.8	-0.6
	comp=Z,5.1nm,0.8s,baz=315,slow=4.3,SNR=9.0						
LPAZ				PKPbc	PKiKP	17 24 52.6	-0.2
	comp=Z,16nm,0.9s,baz=305,slow=2.3,SNR=22						
LPAZ	La Paz	149.11	69		PKPdf	17 24 46.0	-1.4
LPAZ	La Paz	149.11	69	*e*P	PKPdf	17 24 45.3	-2.1
COYC	Coyhaique	149.76	129		PKPdf	17 24 45.8	-1.0
TMAB	Tom-Au,PA,Br	150.26	20	*e*P	PKPdf	17 24 47.2	-1.4
PB06	IPOC Station P	150.91	82	IAMs_20	IAMs_20	18 26 05.3	
	comp=Z,2µm,20.0s						
NPGB	Novo Progresso	151.45	38	*e*P	PKPdf	17 24 48.6	-1.9
GO04	Tololo Observa	151.92	97	IAMs_20	IAMs_20	18 29 11.2	
	comp=Z,1µm,20.0s						
PLCA	Paso Flores	152.03	120	PKPbc	PKiKP	17 24 58.5	+0.9
	comp=Z,16nm,0.7s,baz=268,slow=2.6,SNR=38						
PLCA	Paso Flores	152.03	120	PKPdf	PKPdf	17 24 48.1	-2.5
PLCA					pPKPdf	17 24 55.9	-1.0
PLCA	Paso Flores	152.03	120	PKIKP	PKPdf	17 24 48.1	-2.5
PLCA				*e*		17 24 55.9	
PLCA	Paso Flores	152.03	120	*e*P	PKPdf	17 24 49.8	-0.8
AC05	El Transito	152.12	94		PKPdf	17 24 48.4	-2.8
MT03	Universidad Ad	152.53	104		PKPdf	17 24 48.9	-2.8
MT03				PKPbc	PKiKP	17 24 59.2	+0.3
MT03					PKPab	17 25 08.6	-0.5
VILB	Vilhena	153.05	54		PKPdf	17 24 48.7	-4.1
VILB	Vilhena	153.05	54	*e*P	PKPdf	17 24 51.5	-1.4
AROD	Rodeo	153.05	97	*e*P	PKPdf	17 24 54.8	+2.0
AUSP	Uspallata	153.38	101	*e*P	PKPdf	17 24 55.9	+2.7
RTLS	Leoncito	153.42	100	*e*P	PKPdf	17 24 56.0	+2.8
AGUA	GUANDACOL	153.78	95	*e*P	PKPdf	17 24 55.6	+2.0
ASAL	Salagasta	153.88	102	*e*P	PKPdf	17 24 55.9	+2.3
VCA	Vinchina	153.88	93	*e*P	PKPdf	17 24 56.1	+2.2
AAGR	Agrelo	153.92	103	*e*P	PKPdf	17 24 56.4	+2.7
TINO	Tinogasta	154.28	91	*e*P	PKPdf	17 24 56.4	+2.0
CLDB	Colider	154.34	43	*e*P	PKPdf	17 24 53.1	-1.5
PDRB	Porto dos Gac	154.35	46	*e*P	PKPdf	17 24 53.3	-1.4
AVFE	Valle Fertil	154.85	97	*e*P	PKPdf	17 24 56.8	+1.8
ACLC	CERRO LA CRUZ	155.09	94	*e*P	PKPdf	17 24 57.9	+2.4
RCBR	Riachuelo	155.12	355	IAMs_20	IAMs_20	18 50 53.9	
	comp=Z,1µm,20.0s						
FSA	Cafayete	155.15	86	*e*P	PKPdf	17 24 56.7	+1.0
AZAP	Zapla	155.31	81	*e*P	PKPdf	17 24 57.4	+1.4
PTLB	Pontes e Lacer	155.50	56	*e*P	PKPdf	17 24 54.8	-1.4
APLL	PUNTA DE LOS L	155.61	96	*e*P	PKPdf	17 24 57.0	+1.0
NBPV	Pedro Velho	155.65	353	*e*P	PKPdf	17 24 55.0	-1.5
MRA	San Martin	156.50	101	*e*P	PKPdf	17 24 59.2	+2.0
SNDB	Serra Nova Dou	157.72	36	*e*P	PKPdf	17 24 57.6	-1.5
SALV	Santo Antonio	158.20	51	*e*P	PKPdf	17 24 58.2	-1.4
NBTA	Tacaratu-PE	158.49	360	*e*P	PKPdf	17 24 58.6	-1.5
PP1B	Ponte de Pedra	159.95	53	*e*P	PKPdf	17 25 00.3	-1.4
MURT	Porto Murtinho	160.38	67	*e*P	PKPdf	17 25 00.8	-1.3
ARAG	Araguaiana, MT	160.51	43	*e*P	PKPdf	17 25 01.0	-1.3
SDBA	SAO DESIDERIO	160.72	20	*e*P	PKPdf	17 25 01.2	-1.5
AQDB	Aquidauana	161.20	61	*e*P	PKPdf	17 25 01.8	-1.2
BDFB	Brasilia	162.47	33	PKP	PKPdf	17 25 05.1	+0.6
	comp=Z,5.2nm,0.7s,baz=356,slow=1.2,SNR=5.8						
BDFB	Brasilia	162.47	33		PKPdf	17 25 02.5	-2.0
BDFB	Brasilia	162.47	33	PKIKP	PKPdf	17 25 02.5	-2.0
CPUP	Villa Florida	162.61	80	PKP	PKPdf	17 25 04.9	+0.7
	comp=Z,3.1nm,1.1s,baz=315,slow=1.4,SNR=8.8						
CPUP				PKPab	PKPab	17 25 54.9	+2.2
	comp=Z,3.6nm,1.2s,baz=297,slow=2.3,SNR=3.7						
CPUP	Villa Florida	162.61	80		PKPdf	17 25 02.1	-2.1
CPUP					PKPab	17 25 52.9	+0.3
CPUP	Villa Florida	162.61	80	PKIKP	PKPdf	17 25 02.1	-2.1
CPUP				*e*		17 25 52.9	
CPUP	Villa Florida	162.61	80	*e*P	PKPdf	17 25 03.1	-1.1
AMBA	Amambai (Brazi	163.10	67	*e*P	PKPdf	17 25 03.7	-1.2
NBIT	Itapeh - BA	164.22	4	*e*P	PKPdf	17 25 04.7	-1.3
IPMB	Ipameri, GO	164.36	38	*e*P	PKPdf	17 25 04.8	-1.4
CMC01	Camacan, BA	164.64	5	*e*P	PKPdf	17 25 05.4	-1.0
LDASE	Londrina, Braz	166.35	61	*e*P	PKPdf	17 25 06.6	-1.1
PLTB	Pedras Altas	166.76	98	*e*P	PKPdf	17 25 06.7	-1.0
CPSB	Cacapava Do Su	166.84	92	*e*P	PKPdf	17 25 06.8	-1.0
FRTB	Fartura	167.46	57	*e*P	PKPdf	17 25 07.3	-1.2
SJMB	Sao Joao De Ma	167.71	14	*e*P	PKPdf	17 25 07.6	-1.2
BSFB	Barra de Sao F	167.90	12	*e*P	PKPdf	17 25 07.7	-1.2
RCLB	Rio Claro- Sao	168.22	47	*e*P	PKPdf	17 25 07.9	-1.2
VAS01	Vassouras-RJ	170.34	30	*e*P	PKPdf	17 25 09.2	-1.1
CAM01	Campos-RJ	170.59	20	*e*P	PKPdf	17 25 09.3	-1.2

IDC ***10*** *17:26:15.2±4.7, 30°.56N×141°.62E, h0km, mb3.5/4, mbtmp3.5/5, ML2.6/1, Error ellipse: s-maj=190.1km s-min=22.9km az=72.0*

ISC 10 17:26:20.2±3.2**, 30°.6N**±0°.3×**141°.3E**±0°.9**, h28km, n6, σ1s.42**/7**, mb3.6**/4**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	Hachijo jima 2	2.82	334	Sn	Sn	17 27 34.8	-1.6
	11nm,0.3s,baz=216,slow=17,SNR=1.9						
MJAR	Matsushiro Arr	6.46	338	Pn	Pn	17 27 53.1	-0.3
	0.1nm,0.3s,baz=150,slow=10,SNR=8.8						
MJAR				Sn	Sn	17 29 06.5	+0.4
	0.1nm,0.3s,baz=288,slow=33,SNR=2.5						
	3.1nm,0.8s						
MKAR	Makanchi Array	47.67	307	P	P	17 34 54.5	+0.4
	0.1nm,0.3s,baz=98,slow=8.9,SNR=2.1						
	0.1nm,0.3s						
KURBB	Kurchatov Arra	50.06	312	P	P	17 35 14.3	+2.1
	0.3nm,0.8s,baz=95,slow=9.2,SNR=2.3						
	0.3nm,0.8s						
WRA	Warramunga Arr	50.68	188	P	P	17 35 16.5	-0.8
	2.1nm,0.8s,baz=7.3,slow=7.7,SNR=15						
	2.1nm,0.8s						
ASAR	Alice Springs	54.41	188	P	P	17 35 44.3	-0.5
	0.4nm,0.5s,baz=10,slow=6.7,SNR=20						
	0.4nm,0.5s						

BJI ***10*** *17:28:57.9, 30°.68N×141°.97E, h16km, mB5.3/5, mb4.8/66, Ms5.2/13, Ms7 5.2/11*

IDC ***10*** *17:29:00.2±0.5, 30°.71N×141°.63E, h0km, mb4.5/31, mbtmp4.6/35, ML4.3/4, MS4.7/13, Error ellipse: s-maj=15.1km s-min=10.3km az=79.0*

NEIC ***10*** *17:29:00.7, 30°.60N×142°.20E, h18km, Moment Tensor Solution. Duration: 1s.7 Moment tensor: Scale 10^{16}Nm; M_{rr}3.52; $M_{\theta\theta}$0.54; $M_{\phi\phi}$-4.06; $M_{r\theta}$-0.19; $M_{\theta\phi}$2.38; $M_{\phi r}$1.92; Fault plane solution: $M_0$4.89000×10^{16} NP1: ϕ_s142.30000°, δ35.09000°, λ68.01000°. NP2: ϕ_s348.56000°, δ57.79000°, λ104.74000°. Principal axes: T 4.0220, Plg73.0000°, Azm296.0000°; N 1.4244, Plg12.0000°, Azm161.0000°; P -5.4464, Plg12.0000°, Azm68.0000°;*

NEIC ***10*** *17:29:00.7, 30°.70N×141°.73E, h18km*

NEIC ***10*** *17:29:01.1±1.6, 30°.74N±0°.06×141°.73E±0°.07, h11km±3km, mb5.0/148, Mww5.1/18, Error ellipse: s-maj=11.5km s-min=5.0km az=49.0*

JMA ***10*** *17:29:02.2±0.2, 30°.8N±0°.9×14°2E±°, h55km, MV4.9/27, NEAR TORISHIMA IS*

MOS ***10*** *17:29:02.4±1.1, 30°.72N×141°.74E, h30km, mb5.1/59, Error*

ellipse: s-maj=9.2km s-min=4.3km az=118.9

*NIED **10** 17:29:02.2, 30°.82N×142°.06E, h55^{km}, MW5.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}3.11; $M_{\theta\theta}$-0.22; $M_{\phi\phi}$-2.89; $M_{r\theta}$-2.84; $M_{\theta\phi}$1.59; $M_{\phi r}$7.04; Fault plane solution: $M_0$8.31000×10^{16} NP1: ϕ_s151.00000°, δ12.00000°, λ83.00000°. NP2: ϕ_s338.00000°, δ78.00000°, λ91.00000°.*

*GCMT **10** 17:29:07.7±0.2, 30°.79N±0°.02×141°.81E±0°.02, h17^{km}±1^{km}, MW5.2/101, Moment Tensor Solution. s34,c47; s101,c165; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.58±.03; $M_{\theta\theta}$-0.06±.02; $M_{\phi\phi}$-0.52±.02; $M_{r\theta}$-0.21±.05; $M_{\theta\phi}$0.22±.01; $M_{\phi r}$0.54±.05; Best double couple: $M_0$0.83500×10^{17} NP1: ϕ_s158.00000°, δ23.00000°, λ90.00000°. NP2: ϕ_s339.00000°, δ67.00000°, λ90.00000°. Principal axes: T 0.8220, Plg68.0000°, Azm249.0000°; N 0.0270, Plg0.0000°, Azm159.0000°; P -0.8490, Plg22.0000°, Azm69.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 17:29:02.1±0.6**, 30°.74N**±0°.04×**141°.82E**±0°.05**, h18^{km}**±2^{km}**, h18^{km}:pP-P, n447,** σ**1^{s}70**/434**, mb5.0**/174**, MS4.9**/14**, 45C-15D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	2.46	315	*e*P	Pn	17 29 42.5	+1.2
JHCJ	**Hachijojimakas**	2.89	324	*e*P	Pn	17 29 47.4	+0.1
JHJ2	**Mitsune**	2.91	325		Pn	17 29 47.3	-0.2
JHJ2	**Mitsune**	2.91	325	P	Pn	17 29 48.1	+0.6
JHJ2	**Mitsune**	2.91	325	S	Sn	17 30 23.5	+1.4
JHJ2	**Mitsune**	2.91	325	*e*P	Pn	17 29 47.9	+0.3
JHJ2				*e*S	Sn	17 30 23.0	+0.9
JHJ	**Hachijo jima 2**	2.94	324	Pn	Pn	17 29 47.0	-0.8
	94nm,0.3s,baz=145,slow=12,SNR=22						
JHJ				Sn	Sn	17 30 21.4	-1.2
	346nm,0.3s,baz=63,slow=20,SNR=14						
JHJ				LR	LR	17 30 59.4	
	comp=Z,7µm,19.8s,baz=146,slow=42						
	239nm,0.4s						
CBIJ	**Chichi jima**	3.65	175	*e*P	Pn	17 29 58.8	+1.1
CBIJ				*e*S	Sn	17 30 39.9	-0.4
JCJ	**Chichijima**	3.65	175	Pn	Pn	17 29 49.4	-8.2
	77nm,0.3s,baz=330,slow=16,SNR=13						
JCJ				Sn	Sn	17 30 30.1	-10
	137nm,0.3s,baz=310,slow=12,SNR=8.0						
JCJ				LR	LR	17 30 48.4	
	comp=Z,4µm,19.0s,baz=82,slow=30						
JCJ	**Chichijima**	3.65	175		Pn	17 29 57.5	-0.1
JCJ	**Chichijima**	3.65	175	P	Pn	17 30 00.3	+2.6
JMKN	**Mikurajimanish**	3.66	330	*e*P	Pn	17 29 58.1	+0.2
JMKN				*e*S	Sn	17 30 40.4	-0.2
JMYK	**Miyake Tsubota**	3.83	330	*e*S	Sn	17 30 44.9	+0.3
BSO1	**Boso 1**	3.96	350	*e*P	Pn	17 30 02.7	+1.2
BSO1				*e*S	Sn	17 30 47.2	0.0
JSG	**Sagara**	4.98	323		Pn	17 30 16.5	+0.6
JOD2	**Odawara 2**	5.06	334	*e*P	Pn	17 30 17.4	+0.4
JOD2				*e*S	Sn	17 31 14.0	-1.0
TTO1	**TONANKAI O.B.S**	5.15	305	*e*P	Pn	17 30 21.5	+3.5
JIE	**Ise**	5.65	311	*e*P	Pn	17 30 27.6	+2.5
JRY	**Ryogami san**	5.80	336	*e*P	Pn	17 30 28.3	+1.1
JRY				*e*S	Sn	17 31 34.1	+0.9
JTNC	**Tanabenakahech**	6.09	302	P	Pn	17 30 33.8	+2.6
INU	**Inuyama**	6.11	320		Pn	17 30 31.7	+0.2
INU	**Inuyama**	6.11	320	P	Pn	17 30 33.9	+2.4
JGF	**Kuroka**	6.12	323		Pn	17 30 32.1	+0.4
JGF	**Kuroka**	6.12	323	P	Pn	17 30 34.1	+2.4
MJAR	**Matsushiro Arr**	6.52	333	Pn	Pn	17 30 37.6	+0.5
	3.7nm,0.3s,baz=160,slow=12,SNR=97						
MJAR				Sn	Sn	17 31 50.8	-0.3
	1.3nm,0.3s,baz=161,slow=20,SNR=4.2						
	49nm,0.5s						
MAJO	**Matsushiro**	6.52	333		Pn	17 30 36.7	-0.4
MAJO	**Matsushiro**	6.52	333	P	Pn	17 30 38.8	+1.7
MAJO	**Matsushiro**	6.52	333	⇑*e*P	Pn	17 30 36.9	-0.2
JMN	**Monobe**	7.36	296		Pn	17 30 46.0	-2.6
JMN	**Monobe**	7.36	296	P	Pn	17 30 52.1	+3.4
JTO	**Tosashimizu**	7.96	288	*e*P	Pn	17 31 03.2	+6.3
JMK	**Ichinoseki**	8.20	357	*e*P	Pn	17 31 00.1	-0.1
JMK				*e*S	Sn	17 32 25.4	-7.0
JHS	**Saijyo**	8.46	302	*e*P	Pn	17 31 09.6	+5.8
JNU	**Nakatsue**	9.60	287	Pn	Pn	17 31 23.0	+3.6
	0.8nm,0.3s,baz=91,slow=7.7,SNR=7.6						
JNU				LR	LR	17 34 53.6	
	comp=Z,6µm,19.6s,baz=87,slow=37						
JNU	**Nakatsue**	9.60	287		Pn	17 31 17.6	-1.8
JNU	**Nakatsue**	9.60	287	P	Pn	17 31 23.2	+3.8
ERM	**Erimo**	11.30	5		Pn	17 31 37.6	-4.9
ERM	**Erimo**	11.30	5	P	Pn	17 31 40.5	-2.1
ERM	**Erimo**	11.30	5	P	Pn	17 31 37.7	-4.9
JEM	**Erimo**	11.30	5	P	Pn	17 31 42.4	-0.2
JOW	**Kunigami**	12.51	255	LR	LR	17 36 43.8	
	comp=Z,6µm,18.1s,baz=106,slow=38						
NMR	**Nemuro--Hokkai**	12.98	13	*e*P	Pn	17 32 02.3	-3.2
GLVR	**Golovnino**	13.30	12	*e*P	Pn	17 32 07.4	-2.5
KSRS	**Korea Array**	13.31	304	Pn	Pn	17 32 12.9	+2.8
	0.4nm,0.3s,baz=116,slow=14,SNR=12						
KSAR	**Wonju Array Be**	13.34	304		Pn	17 32 05.9	-4.5
KSAR	**Wonju Array Be**	13.34	304	P	Pn	17 32 05.9	-4.5
ASAJ	**Asahikawa**	13.36	2	Pn	Pn	17 32 08.8	-2.0
	3.7nm,0.3s,baz=215,slow=12,SNR=20						
ASAJ				Sn	Sn	17 34 35.3	-3.5
	1.0nm,0.3s,baz=186,slow=19,SNR=2.5						
ASAJ				LR	LR	17 37 42.1	
	comp=Z,4µm,18.1s,baz=186,slow=39						
ASAJ	**Asahikawa**	13.36	2	P	Pn	17 32 06.4	-4.4
ASAJ						17 34 35.3	
JKA	**Kamikawa-asahi**	13.36	2		Pn	17 32 06.3	-4.4
JKA	**Kamikawa-asahi**	13.36	2		Sn	17 34 35.3	-3.5
RUSJ	**Misakicho**	13.61	11	*e*P	Pn	17 32 11.9	-2.2
YUK	**Yuzh-Kuril'sk**	13.65	12	*e*P	Pn	17 32 12.0	-2.6
YUK				pmax	pmax		
	comp=Z,84nm,0.5s						
YUK				pmax	pmax		
	comp=E,24nm,0.2s						
PSTR	**Posyet**	14.79	326	*de*P	Pn	17 32 29.4	-0.9
USRK	**Ussuriysk Ar.**	15.52	333	Pn	Pn	17 32 38.7	-1.2
	comp=E,0.6nm,0.3s,baz=147,slow=13,SNR=14						
	comp=E,7.6nm,0.7s						
YSS	**Yuzhno-Sakhali**	16.20	2		Pn	17 32 46.4	-2.4
YSS				IAmb	IAmb	17 32 51.1	
	comp=Z,87nm,0.8s						
YSS	**Yuzhno-Sakhali**	16.20	2	P	Pn	17 32 48.7	0.0
YSS	**Yuzhno-Sakhali**	16.20	2	α*e*P	Pn	17 32 48.2	-0.5
YSS				pmax	pmax		
	comp=Z,100nm,0.8s						
YSS				pmax	pmax		
	comp=N,100nm,0.6s						
YSS				pmax	pmax		
	comp=E,40nm,0.8s						
YSS				MLR	MLR		
	comp=Z,3µm,17.0s						
YSS				MLR	MLR		
	comp=N,2µm,11.0s						
YSS				MLR	MLR		
	comp=E,2µm,15.0s						
MDJ	**Mudanjiang**	16.87	329		Pn	17 32 54.1	-3.1
MDJ	**Mudanjiang**	16.87	329	P	Pn	17 32 55.8	-1.4
MDJ				pmax	pmax		
	comp=E,13nm,1.3s						
GUMO	**Guam**	17.30	170	P	Pn	17 33 03.4	+0.7
	comp=E,3.9nm,0.3s,baz=356,slow=19,SNR=5.8						
GUMO				LR	LR	17 38 22.0	
	comp=E,3µm,18.6s,baz=331,slow=32						
	comp=E,130nm,1.2s						
SSE	**Sheshan**	17.71	276	P	Pn	17 33 07.7	-0.1
SSE				S	Sn	17 36 24.6	-0.2
SSE				pmax	pmax		
	comp=E,5.0nm,0.7s						
SSE				pmax	pmax		
	comp=E,2µm,12.3s						
SSE				LR	LR		
	comp=E,2µm,14.1s						
SSE				LR	LR		
	comp=E,2µm,12.7s						
SNY	**Shenyang**	18.36	312	⇓P	Pn	17 33 17.0	+1.3
SNY				pmax	pmax		
	comp=E,18nm,0.7s						
CN2	**Changchun**	18.39	320	P	P	17 33 15.8	-0.2
CN2				pP	pwP	17 33 23.8	-1.5
CN2				sP	sP	17 33 28.3	+6.7
CN2				pmax	pmax		
	comp=E,20nm,1.1s						
BNX	**BinXian**	18.73	327	⇑P	P	17 33 19.1	-0.6
BNX				pmax	pmax		
	comp=E,22nm,0.9s						
YHNB	**Yeheng**	19.08	257		P	17 33 19.4	-4.4
YHNB				IAmb	IAmb	17 33 25.7	
	comp=Z,84nm,1.3s						
NACB	**Ninganchiao**	19.09	255	P	P	17 33 20.8	-3.1
NACB				IAmb	IAmb	17 33 33.7	
	comp=Z,163nm,1.7s						
NACB	**Ninganchiao**	19.09	255	P	Pn	17 33 24.7	0.0
NJ2	**Nanjing**	19.65	280	⇓P	Pn	17 33 30.8	-0.5
NJ2				pmax	pmax		
	comp=Z,16nm,1.2s						
YULB	**Yu-li**	19.67	253	P	P	17 33 27.5	-2.7
YULB				IAmb	IAmb	17 33 38.4	
	comp=Z,58nm,0.7s						
SSLB	**Suanglung**	19.79	255		P	17 33 29.1	-2.4
SSLB	**Suanglung**	19.79	255	P	Pn	17 33 33.4	+0.3
TYV	**Tymovskoe**	20.11	2	*e*P	Pn	17 33 38.2	+1.6
TYV				pmax	pmax		
	comp=Z,35nm,1.1s						
TYV				pmax	pmax		
	comp=Z,2µm,7.1s						
TWG	**Pinlang**	20.12	252	P	P	17 33 33.1	-1.9
TWG				IAmb	IAmb	17 33 39.0	
	comp=Z,69nm,1.0s						
TPUB	**Ta-pu**	20.27	254	P	P	17 33 35.6	-1.1
TPUB				IAmb	IAmb	17 33 39.4	
	comp=Z,126nm,1.2s						
GRNR	**Gornyy**	20.41	350	⇑*i*P	Pn	17 33 41.0	+0.9
GRNR				pmax	pmax		
	comp=N,7.0nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TIA	**Tai'an**	21.29	291	P	P	17 33 47.2	-0.4
TIA				pmax	pmax		
	comp=Z,18nm,1.0s						
QZH	**Quanzhou**	21.32	260	*e*P	P	17 33 48.9	+0.8
HEH	**HeiHe**	22.28	335	*e*P	P	17 33 57.7	-0.5
HEH				pmax	pmax		
	comp=Z,39nm,1.2s						
BJT	**Baijiatuau**	22.81	301	IAmb	IAmb	17 34 04.1	
	comp=Z,75nm,1.6s						
BJI	**Beijing**	22.81	301	P	P	17 34 02.4	-1.5
BJI				pmax	pmax		
	comp=Z,13nm,1.3s						
HNS	**HongShan**	23.38	294	⇓P	P	17 34 08.5	-1.2
HNS				pmax	pmax		
	comp=Z,16nm,1.0s						
WHN	**Wuhan**	23.62	277	P	P	17 34 11.6	-0.5
WHN				sP	sP	17 34 18.1	+0.2
XLT	**XiLinHaoTe**	24.21	310	*e*P	P	17 34 16.8	-0.9
XLT				pmax	pmax		
	comp=Z,13nm,1.2s						
HIA	**Hailar**	24.91	324		P	17 34 23.0	-1.0
HIA	**Hailar**	24.91	324	P	P	17 34 23.0	-1.0
HIA				pmax	pmax		
	comp=Z,137nm,1.4s						
LYN	**LuoYang**	24.97	287	P	P	17 34 23.2	-1.4
LYN				pP	pwP	17 34 33.4	-1.3
LYN				pmax	pmax		
	comp=Z,23nm,1.1s						
LYN				LR	LR		
	comp=Z,3µm,14.1s						
LYN				LR	LR		
	comp=Z,3µm,14.1s						
LYN				LR	LR		
	comp=Z,8µm,14.4s						
HILR	**Hailar Array B**	25.09	325	P	P	17 34 25.8	+0.1
	comp=Z,21nm,0.6s,baz=134,slow=11,SNR=14						
	comp=Z,21nm,0.6s						
H11N2	**WAKE ISLAND Hy**	25.13	110	T	T	18 01 12.0	
	baz=304,slow=74,SNR=5.9						
H11N1	**WAKE ISLAND Hy**	25.14	110	T	T	18 00 51.2	
	baz=304,slow=74,SNR=1.0						
H11N3	**WAKE ISLAND Hy**	25.15	110	T	T	18 01 19.4	
	baz=304,slow=74,SNR=4.6						
PETK	**Petropavlovsk-**	25.16	23	P	P	17 34 26.3	+0.1
	comp=Z,2.4nm,0.9s,baz=205,slow=16,SNR=1.7						
	comp=Z,2.4nm,0.9s						
TIY	**Taiyuan**	25.21	294	*e*P	P	17 34 26.0	-0.8
TIY				pmax	pmax		
	comp=Z,50nm,0.7s						
ZEA	**Zeya**	25.29	340	*e*P	P	17 34 28.3	+1.1
ZEA				pmax	pmax		
	comp=E,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=N,40nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,130nm,0.8s						
TGY	**Tagaytay City**	25.36	234	LR	LR	17 43 11.3	
	comp=Z,1µm,19.1s,baz=89,slow=34						
H11S3	**WAKE ISLAND Hy**	25.62	113	T	T	18 01 30.1	
	baz=304,slow=74,SNR=18						
H11S1	**WAKE ISLAND Hy**	25.62	113	T	T	18 01 14.2	
	baz=304,slow=74,SNR=15						
H11S2	**WAKE ISLAND Hy**	25.63	113	T	T	18 01 34.1	
	baz=304,slow=74,SNR=18						
HHC	**Hu-ho-hao-te**	26.42	301	*e*P	P	17 34 35.8	-2.0
HHC				pmax	pmax		
	comp=Z,22nm,0.6s						
BTO	**Baotou**	27.52	300	*e*P	P	17 34 48.4	+0.7
BTO				pP	pwP	17 34 58.1	+0.3
BTO				PP	PnPn	17 35 35.6	+3.0
BTO				S	S	17 39 29.4	+1.4
BTO				pmax	pmax		
	comp=Z,47nm,0.9s						
BTO				LR	LR		
	comp=Z,6µm,15.7s						
BTO				LR	LR		
	comp=Z,10µm,15.1s						
BTO				LR	LR		
	comp=Z,14µm,14.9s						
ENH	**Enshi**	27.82	277	IAmb	IAmb	17 34 56.3	
	comp=Z,22nm,0.6s						
XAN	**Xi'an**	27.91	285	⇑P	P	17 34 50.9	-0.3
XAN				pmax	pmax		
	comp=Z,37nm,1.2s						
DAV	**Davao City (W)**	28.05	216	LR	LR	17 43 57.0	
	comp=Z,631nm,21.3s,baz=38,slow=32						
MA2	**Magadan**	29.46	9	LR	LR	17 50 08.6	
	comp=Z,772nm,18.1s,baz=186,slow=43						
CIT	**Chita**	29.72	324	*e*P	P	17 35 06.4	-0.7
CIT				*e*		17 35 19.4	
CIT				*e*		17 40 05.6	
CIT				*e*		17 41 38.8	
CIT				pmax	pmax		
	comp=Z,147nm,2.5s						
ULN	**Ulaanbaatar**	31.54	313	P	P	17 35 22.1	-1.2
ULN				IAmb	IAmb	17 35 26.8	
	comp=Z,60nm,1.6s						
ULN	**Ulaanbaatar**	31.54	313	P	P	17 35 22.6	-0.8
	comp=Z,90nm,1.4s						
ULN	**Ulaanbaatar**	31.54	313	⇑*e*P	P	17 35 23.6	+0.2
ULN				pmax	pmax		
	comp=Z,30nm,1.3s						
SONM	**Songino Array**	31.95	312	P	P	17 35 27.2	+0.3
	comp=Z,6.8nm,0.7s,baz=122,slow=9.5,SNR=34						
	comp=Z,6.8nm,0.7s						
SONM	**Songino Array**	31.95	312		P	17 35 26.4	-0.4
SONM	**Songino Array**	31.95	312	P	P	17 35 26.5	-0.4
SONM				pmax	pmax		
	comp=Z,11nm,0.9s						
LZH	**Lanzhou**	32.01	290	*e*P	P	17 35 26.8	-0.8
LZH				pP	sP	17 35 32.9	-0.6
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZDM	**Lanzhou Array**	32.13	290	P	P	17 35 28.3	-0.6
	comp=Z,4.7nm,0.6s,baz=96,slow=5.8,SNR=8.4						
LZDM				LR	LR	17 48 49.8	
	comp=Z,2µm,19.0s,baz=95,slow=37						
	comp=Z,4.7nm,0.6s						
YAK	**Yakutsk**	32.28	349	P	P	17 35 28.6	-0.9
YAK				IAmb	IAmb	17 35 37.2	
	comp=Z,26nm,0.8s						
YAK	**Yakutsk**	32.28	349	*e*P	P	17 35 30.4	+0.9
YAK				*e**PP	sP	17 35 36.4	+1.1
YAK				*e*S	S	17 40 43.9	+1.9
YAK				*e**SS	sS	17 41 01.8	+14
YAK				pmax	pmax		
	comp=Z,18nm,0.9s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.7s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.2s						
YAK				smax	smax		
	comp=N,1µm,8.9s						
YAK				smax	smax		
	comp=E,538nm,8.4s						
YAK				MLR	MLR		
	comp=Z,3µm,20.0s						
YAK				MLR	MLR		
	comp=N,2µm,20.0s						
YAK				MLR	MLR		
	comp=E,1µm,20.0s						
CD2	**Chengdu**	32.58	280	P	P	17 35 31.0	-1.6
CD2				pmax	pmax		
	comp=E,30nm,0.5s						
SEY	**Seymchan**	32.91	9	P	P	17 35 37.2	+2.2
	comp=E,3.2nm,0.7s,baz=211,slow=19,SNR=3.2						
SEY				LR	LR	17 52 09.9	
	comp=E,1µm,18.0s,baz=222,slow=42						
	comp=E,3.2nm,0.7s						
SEY	**Seymchan**	32.91	9	⇑*e*P	P	17 35 35.2	+0.2
SEY				pmax	pmax		
	comp=Z,16nm,1.4s						
MYLDM	**Lahad Datu**	33.59	225	P	P	17 35 42.6	+1.2
	comp=Z,44nm,1.1s						
ZAK	**Zakamensk**	34.73	316	*e*P	P	17 35 51.8	+0.7
ZAK				pmax	pmax		
	comp=Z,34nm,1.8s						
IRK	**Irkutsk**	34.83	319	*e*P	P	17 35 52.6	+0.8
IRK				pmax	pmax		
	comp=Z,102nm,1.8s						
TLY	**Talaya**	34.97	318	P	P	17 35 51.9	-1.2
TLY				IAmb	IAmb	17 35 56.0	
	comp=Z,22nm,0.9s						
GTA	**Gaotai**	35.19	296	*e*P	P	17 35 54.8	-0.5
GTA				PcP	PcP	17 38 28.2	+2.0
GTA				S	S	17 41 24.1	-3.7
GTA				ScP	ScP	17 42 12.7	+1.7
GTA				pmax	pmax		
	comp=Z,22nm,0.9s						
GTA				LR	LR		
	comp=Z,2µm,13.5s						
GTA				LR	LR		
	comp=Z,4µm,15.6s						
GTA				LR	LR		
	comp=Z,3µm,16.0s						
SLVN	**Son La**	35.20	264	P	P	17 35 53.6	-1.8
PZH	**PanZhiHua**	35.31	273	P	P	17 35 56.7	+0.3
SANI	**Sanana**	35.93	208	P	P	17 36 00.1	-1.5
	comp=Z,32nm,0.7s						
KRAI	**Karang Ratu**	36.22	203	P	P	17 36 05.3	+1.3
	comp=Z,27nm,0.9s						
LUWI	**Luwuk**	36.44	213		P	17 36 05.0	-1.0
LUWI				IAmb	IAmb	17 36 44.1	
	comp=Z,25nm,0.8s						
LUWI	**Luwuk**	36.44	213	P	P	17 36 05.6	-0.4
	comp=Z,35nm,1.5s						
MOY	**Mondy**	36.52	317	*e*P	P	17 36 07.5	+1.1
MOY				pmax	pmax		
	comp=Z,52nm,2.8s						
NLAI	**Namlea**	36.60	205	P	P	17 36 09.4	+2.1
	comp=Z,21nm,1.3s						
KNGR	**Kungurtug, Tuv**	38.31	314	⇑*e*P	P	17 36 22.3	+0.6
KNGR				pmax	pmax		
	comp=Z,16nm,1.4s						
GOMU	**GeErMu**	39.29	291	P	P	17 36 29.4	-1.0
GOMU				S	S	17 42 28.9	-1.8
GOMU				pmax	pmax		
	comp=Z,36nm,1.3s						
GOMU				LR	LR		
	comp=Z,1µm,17.1s						
GOMU				LR	LR		
	comp=Z,1µm,16.7s						
CHTO	**Chiang Mai**	40.48	263		P	17 36 38.8	-1.2
CHTO	**Chiang Mai**	40.48	263	P	P	17 36 38.8	-1.2
	comp=Z,11nm,0.8s						
CHTO	**Chiang Mai**	40.48	263	P	P	17 36 38.8	-1.2
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CMAR	**Chiang Mai Arr**	40.63	263	P	P	17 36 40.5	-0.8
	comp=Z,1.8nm,0.7s,baz=56,slow=6.7,SNR=16						
CMAR				PcP	PcP	17 38 45.5	+2.4
	comp=Z,1.0nm,0.4s,baz=70,slow=3.2,SNR=4.7						
CMAR				LR	LR	17 53 50.5	
	comp=Z,1µm,19.4s,baz=60,slow=37						
	comp=Z,1.8nm,0.7s						
CMAR	**Chiang Mai Arr**	40.63	263		P	17 36 39.4	-1.9
CMAR	**Chiang Mai Arr**	40.63	263	P	P	17 36 39.4	-1.9
CMAR						17 38 45.6	
KAPI	**Kappang**	41.35	215		P	17 36 46.1	-1.0
KAPI	**Kappang**	41.35	215	P	P	17 36 46.3	-0.8
KAPI	**Kappang**	41.35	215	⇑*e*P	P	17 36 47.0	-0.1
KAPI				pmax	pmax		
	comp=Z,18nm,1.1s						
TIXI	**Tiksi**	41.56	354	P	P	17 36 48.0	-0.2
	comp=Z,2.3nm,0.4s,baz=158,slow=7.0,SNR=5.6						
	comp=Z,2.3nm,0.4s						
TIXI	**Tiksi**	41.56	354		P	17 36 47.5	-0.7
TIXI	**Tiksi**	41.56	354	⇑*e*P	P	17 36 47.0	-1.2
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LSA	**Lhasa**	43.49	282		P	17 37 02.6	-2.5
LSA	**Lhasa**	43.49	282	P	P	17 37 02.6	-2.5
LSA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SOEI	**Soe**	43.66	206		P	17 37 04.2	-1.8
SOEI				IAmb	IAmb	17 37 29.2	
	comp=Z,45nm,1.0s						
SHL	**Shillong**	44.05	276		P	17 37 08.1	-1.1
SHL				IAmb	IAmb	17 37 10.4	
	comp=Z,10nm,0.6s						
SHL	**Shillong**	44.05	276	P	P	17 37 08.1	-1.1
SHL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WMQ	**Urumqi**	44.26	303	*e*P	P	17 37 12.4	+1.8
WMQ				pmax	pmax		
	comp=Z,15nm,1.1s						
COEN	**Coen**	44.46	178	P	P	17 37 13.5	+1.3
	comp=Z,25nm,0.9s						
COEN	**Coen**	44.46	178		P	17 37 11.6	-0.7
COEN				IAmb	IAmb	17 37 22.2	
	comp=Z,19nm,0.8s						
MTN	**Manton Dam**	44.54	195		P	17 37 12.0	-0.9
MTN				IAmb	IAmb	17 37 23.4	
	comp=Z,50nm,1.5s						
DGZ	**Jazzator, Alta**	44.57	311	⇑*e*P	P	17 37 13.6	+0.5
DGZ				pmax	pmax		
	comp=Z,40nm,1.4s						
DBNI	**Kabupaten Domp**	45.07	214	P	P	17 37 16.4	-0.8
	comp=Z,16nm,1.0s						
ZSN	**Zaisan**	46.20	308	*e*P	P	17 37 26.5	+0.6
	comp=Z,21nm,1.2s						
ZSN	**Zaisan**	46.20	308	*e*P	P	17 37 26.4	+0.6
ZSN				pmax	pmax		
	comp=Z,21nm,1.2s						
ZAA0	**Zalesovo Array**	46.57	317		P	17 37 27.2	-1.4
ZAA0				IAmb	IAmb	17 37 43.8	
	comp=Z,58nm,2.0s						
ZALV	**Zalesovo Beam**	46.57	317	P	P	17 37 29.0	+0.3
	comp=Z,3.4nm,0.5s,baz=97,slow=7.8,SNR=19						
ZALV				PcP	PcP	17 39 03.6	+1.0
	comp=Z,4.6nm,0.7s,baz=100,slow=3.8,SNR=5.3						
ZALV				LR	LR	17 56 05.8	
	comp=Z,1µm,18.0s,baz=114,slow=35						
	comp=Z,3.4nm,0.5s						
ZALV	**Zalesovo Beam**	46.57	317		P	17 37 27.2	-1.5
ZALV	**Zalesovo Beam**	46.57	317	P	P	17 37 27.2	-1.5
ZALV						17 39 03.6	
JAGI	**Jajag, Banyuwa**	47.17	219		P	17 37 32.9	-0.8
EVN	**Everest**	47.62	281	P	P	17 37 36.1	-1.9
EVN				IAmb	IAmb	17 37 51.2	
	comp=Z,11nm,0.9s						
MK31	**Makanchi Array**	47.97	307	*de*P	P	17 37 40.5	+0.8
MKAR	**Makanchi Array**	47.97	307	P	P	17 37 40.3	+0.6
	comp=Z,8.8nm,0.6s,baz=90,slow=9.6,SNR=63						
MKAR				PcP	PcP	17 39 06.0	-1.8
	comp=Z,1.0nm,0.6s,baz=75,slow=3.6,SNR=0.7						
MKAR				ScP	ScP	17 43 01.4	0.0
	comp=Z,0.9nm,0.8s,baz=85,slow=5.6,SNR=3.8						
	comp=Z,8.8nm,0.6s						
MKAR	**Makanchi Array**	47.97	307		P	17 37 39.1	-0.6
MKAR	**Makanchi Array**	47.97	307	P	P	17 37 39.1	-0.6
MKAR						17 39 06.0	
MAKZ	**Makanchi**	48.18	307		P	17 37 40.4	-1.0
MAKZ	**Makanchi**	48.18	307	P	P	17 37 40.4	-1.0
MAKZ				pmax	pmax		
	comp=Z,70nm,1.7s						
NRIK	**Noril'sk**	49.16	338	P	P	17 37 49.2	+0.8
	comp=Z,6.7nm,0.9s,baz=114,slow=7.8,SNR=8.7						

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       comp=Z,6.7nm,0.9s
NRIK   Noril'sk            49.16 338   P      P      17 37 47.7 -0.7
NRIK                                   IAmb   IAmb   17 38 07.6
       comp=Z,16nm,0.9s
NRIK   Noril'sk            49.16 338   P      P      17 37 47.7 -0.7
NRIK                                   pmax   pmax
       comp=Z,16nm,1.0s
KLSI                       49.97 232   P      P      17 37 54.2 -1.1
       comp=Z,21nm,0.8s
MDSI   Maura Dua           50.20 232   P      P      17 37 55.6 -1.5
       comp=Z,25nm,0.9s
KURK   Kurchatov           50.25 312   P      P      17 37 56.1 -1.0
KURK                                   IAmb   IAmb   17 37 58.4
       comp=Z,28nm,0.9s
KURK   Kurchatov           50.25 312⇑eP     P      17 37 57.4 +0.3
KURK                                   pmax   pmax
       comp=Z,53nm,1.3s
SHLS   Shalkode            50.29 303  eP      P      17 37 55.5 -2.2
       comp=Z,13nm,1.2s
SHLS   Shalkode            50.29 303  eP      P      17 37 55.4 -2.2
SHLS                                   pmax   pmax
       comp=Z,13nm,1.2s
KURBB  Kurchatov Arra      50.31 312   P      P      17 37 57.8 +0.2
       comp=Z,27nm,1.1s,baz=88,slow=7.3,SNR=111
       comp=Z,27nm,1.1s
UZB    Uzynbulak           50.61 303  eP      P      17 38 00.3 +0.2
UZB    Uzynbulak           50.61 303  eP      P      17 38 00.3 +0.2
WB0    Warramunga Arr      50.73 189   P      P      17 38 00.5 -0.4
WUS    Wushi               50.75 300   IAmb   IAmb   17 38 03.3
       comp=Z,57nm,1.7s
TDK    Taldyqorghan        50.82 305  eP      P      17 38 01.9 +0.4
TDK    Taldyqorghan        50.82 305  eP      P      17 38 01.8 +0.4
WRAB   Tennant Creek       50.90 189   P      P      17 38 01.4 -0.7
WRAB                                   IAmb   IAmb   17 38 08.6
       comp=Z,22nm,0.9s
WRAB   Tennant Creek       50.90 189ceP     P      17 38 02.5 +0.3
WRAB                                   pmax   pmax
       comp=Z,34nm,1.3s
WB2    Warramunga Arr      50.91 189   P      P      17 38 02.2 -0.1
WRA    Warramunga Arr      50.91 189   P      P      17 38 02.4 +0.1
       comp=Z,20nm,0.7s,baz=5.1,slow=7.4,SNR=49
WRA                                    ScP    ScP    17 43 17.2 +3.1
       comp=Z,1.0nm,0.9s,baz=12,slow=4.4,SNR=3.3
WRA                                    S      S      17 45 14.6 -3.5
       comp=Z,1.4nm,1.1s,baz=8.6,slow=13,SNR=4.5
       comp=Z,20nm,0.7s
WRA    Warramunga Arr      50.91 189          P      17 38 01.3 -1.0
WRA    Warramunga Arr      50.91 189  i P     P      17 38 01.3 -1.0
WRA                                    pmax   pmax
       comp=Z,12nm,0.5s
E19K   Redstone River      50.91  26   IAmb   IAmb   17 38 10.9
       comp=Z,17nm,0.8s
FITZ   Fitzroy Crossi      50.99 200   P      P      17 38 03.9 +1.0
       comp=Z,3.6nm,0.9s
FITZ   Fitzroy Crossi      50.99 200   P      P      17 38 02.5 -0.4
QIS    Mount Isa           51.05 183   P      P      17 38 04.2 +0.8
       comp=Z,28nm,1.5s
SATY   Saty                51.07 303  eP      P      17 38 03.8 +0.2
SATY   Saty                51.07 303  eP      P      17 38 03.7 +0.2
GSI    Gunungsitoli        51.09 244   P      P      17 38 05.2 +1.3
       comp=Z,47nm,0.9s
PRZ    Przheval'sk         51.16 302   IAmb   IAmb   17 38 19.4
       comp=Z,13nm,0.7s
J20K   Nowinta River       51.51  30   IAmb   IAmb   17 38 28.4
       comp=Z,53nm,1.7s
TARG   Taragay, Kyrgy      51.71 301   P      P      17 38 07.4 -1.3
TARG                                   IAmb   IAmb   17 38 10.9
       comp=Z,23nm,1.5s
TARG   Taragay, Kyrgy      51.71 301   P      P      17 38 07.4 -1.3
TARG                                   pmax   pmax
       comp=Z,23nm,1.5s
MDOK   Medeo               52.03 303  eP      P      17 38 11.3 +0.5
MDOK   Medeo               52.03 303  eP      P      17 38 11.2 +0.5
KDJ    Kajisay             52.10 302   IAmb   IAmb   17 38 13.5
       comp=Z,31nm,1.8s
AAA    Alma-Ata            52.12 303  eP      P      17 38 11.8 +0.5
       comp=Z,26nm,1.3s
AAA    Alma-Ata            52.12 303  eP      P      17 38 11.8 +0.5
AAA                                    pmax   pmax
       comp=Z,26nm,1.3s
TNSS   Tian-Shan           52.13 303  eP      P      17 38 11.9 +0.1
TNSS   Tian-Shan           52.13 303  eP      P      17 38 11.8 +0.1
B21K   Ikpikpuk River      52.36  23   IAmb   IAmb   17 38 21.3
       comp=Z,11nm,0.8s
H22K   Ishtalitna Cre      52.91  28   P      P      17 38 17.0 +0.3
E22K   Anaktuvuk Pass      53.06  25   P      P      17 38 18.7 +0.8
E22K                                   IAmb   IAmb   17 38 27.1
       comp=Z,9.9nm,0.8s
MLY    Manley              53.07  29   P      P      17 38 19.1 +1.1
MLY                                    IAmb   IAmb   17 38 35.7
       comp=Z,38nm,1.9s
KSH    Kashi               53.50 299   P      P      17 38 26.0 +4.4
KSH                                    pmax   pmax
       comp=Z,17nm,1.0s
KSH                                    LR     LR
       comp=Z,2µm,14.4s
KSH                                    LR     LR
       comp=Z,2µm,14.4s
KSH                                    LR     LR
       comp=Z,2µm,17.9s
SGDS   Sogindy             53.73 304  eP      P      17 38 23.4 +0.3
NEA2   Nenana              53.75  30   P      P      17 38 23.4 +0.5
NEA2                                   IAmb   IAmb   17 38 31.8
       comp=Z,16nm,1.0s
BTLS   Baital              53.87 306  eP      P      17 38 24.0 -0.1
       comp=Z,12nm,0.8s
BTLS   Baital              53.87 306  eP      P      17 38 24.0 -0.1
BTLS                                   pmax   pmax
       comp=Z,12nm,0.8s
AAK    Ala-Archa           53.97 303   P      P      17 38 24.4 -0.7
AAK                                    IAmb   IAmb   17 38 27.2
       comp=Z,29nm,1.9s
AAK    Ala-Archa           53.97 303⇑eP     P      17 38 25.5 +0.4
AAK                                    pmax   pmax
       comp=Z,18nm,2.5s
E24K   Your Creek          54.29  26   IAmb   IAmb   17 39 02.4
       comp=Z,47nm,2.0s
D24K   Happy Valley        54.29  24   IAmb   IAmb   17 38 36.0
       comp=Z,18nm,0.8s
C24K   Franklin Bluff      54.41  24   IAmb   IAmb   17 38 51.2
       comp=Z,13nm,0.9s
AS31   Alice Springs       54.63 189   P      P      17 38 29.6 -0.2
AS31                                   IAmb   IAmb   17 38 43.7
       comp=Z,5.3nm,0.5s
ASAR   Alice Springs       54.63 189   P      P      17 38 30.1 +0.4
       comp=Z,6.4nm,0.5s,baz=360,slow=5.4,SNR=70
ASAR                                   S      S      17 46 09.3 +0.5
       comp=Z,1.1nm,1.1s,baz=16,slow=14,SNR=5.0
       comp=Z,6.4nm,0.5s
ASAR   Alice Springs       54.63 189          P      17 38 29.7 -0.1
ASAR   Alice Springs       54.63 189   P      P      17 38 29.7 -0.1
HDA    Harding Lake        54.65  30   P      P      17 38 30.2 +0.7
IL31                       54.69  30   P      P      17 38 29.5 -0.2
ILAR   Eielson Array       54.69  30   P      P      17 38 31.2 +1.5
       comp=Z,1.7nm,0.7s,baz=254,slow=6.4,SNR=24
       comp=Z,1.7nm,0.7s
D25K   Kavik River         55.18  24   IAmb   IAmb   17 38 56.8
       comp=Z,12nm,1.1s
BVAR   Borovoye Array      55.18 316   P      P      17 38 34.1 +0.6
       comp=Z,4.3nm,0.6s,baz=94,slow=8.3,SNR=30
       comp=Z,4.3nm,0.6s
BORK   Borovoye            55.22 316   P      P      17 38 33.2 -0.6
BORK                                   IAmb   IAmb   17 38 53.7
       comp=Z,9.2nm,0.7s
BORK   Borovoye            55.22 316⇑eP     P      17 38 34.4 +0.6
BORK                                   pmax   pmax
       comp=Z,16nm,1.3s
F26K   Sheenjek River      55.91  26   IAmb   IAmb   17 38 48.2
       comp=Z,12nm,1.1s
PSAC2  Pilbara Seismi      56.11 205   P      P      17 38 41.6 +1.2
       comp=Z,35nm,1.0s
J26L   Joseph Creek        56.12  30   IAmb   IAmb   17 38 57.1
       comp=Z,11nm,0.7s
PSA00  Pilbara Seismi      56.14 205          P      17 38 40.4 -0.2
PSA00                                  IAmb   IAmb   17 38 45.1
       comp=Z,14nm,1.1s
DZA    Taraz               56.20 304  eP      P      17 38 41.5 +0.4
DZA    Taraz               56.20 304  eP      P      17 38 41.5 +0.4
EIDS   Eidsvold            56.50 170   P      P      17 38 44.4 +1.3
       comp=Z,15nm,1.2s
KK31   Karatay Array       56.74 304   P      P      17 38 44.8 -0.1
KK31   Karatay Array       56.74 304   P      P      17 38 44.8 -0.1
KK31                                   pmax   pmax
       comp=Z,82nm,1.8s
KKAR   Karatay Array       56.74 304          P      17 38 44.8 -0.1
KKAR   Karatay Array       56.74 304   P      P      17 38 44.8 -0.1
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H27K   Steamboat Moun      56.94  28   IAmb   IAmb   17 38 58.2
       comp=Z,18nm,1.2s
WRKA   Warakurna           56.96 195   P      P      17 38 46.6 +0.1
       comp=Z,5.3nm,0.9s
QLP    Quilpie             57.05 177   P      P      17 38 47.7 +0.7
       comp=Z,44nm,0.8s
NIL    Nilore              57.12 292          P      17 38 47.6 -0.1
NIL    Nilore              57.12 292   P      P      17 38 47.6 -0.1
NIL                                    pmax   pmax
       comp=Z,54nm,0.8s
MANEM  Manem               57.24 297   IAmb   IAmb   17 38 51.3
       comp=Z,84nm,1.1s
BRLS   Borolday            57.24 304  eP      P      17 38 50.2 +1.7
BRLS   Borolday            57.24 304  eP      P      17 38 50.1 +1.7
IUG    Iuzhnay             57.31 303  eP      P      17 38 49.6 +0.5
       comp=Z,15nm,1.0s
IUG    Iuzhnay             57.31 303  eP      P      17 38 49.5 +0.5
IUG                                    pmax   pmax
       comp=Z,15nm,1.0s
F28M   Old Crow            57.54  26   P      P      17 38 51.0 +0.9
F28M                                   IAmb   IAmb   17 38 56.4
       comp=Z,15nm,1.4s
CHM    Chimkent            57.58 303  eP      P      17 38 51.3 +0.5
       comp=Z,12nm,1.1s
CHM    Chimkent            57.58 303  eP      P      17 38 51.3 +0.5
CHM                                    pmax   pmax
       comp=Z,12nm,1.1s
DZM    Mont Dzumac         57.59 153   P      P      17 38 51.9 +0.9
E28M   Babbage River       57.63  25   IAmb   IAmb   17 39 15.4
       comp=Z,18nm,1.2s
GAR    Garm                57.89 299   P      P      17 38 52.3 -0.9
INKA   Innaminka           58.17 181   P      P      17 38 55.4 +0.6
INKA                                   IAmb   IAmb   17 39 07.4
       comp=Z,8.5nm,0.7s
G29M   Pine Creek          58.30  27   IAmb   IAmb   17 39 28.6
       comp=Z,34nm,1.4s
M29M   Somme Creek         58.55  32   IAmb   IAmb   17 39 17.2
       comp=Z,18nm,0.9s
HYB    Hyderabad           58.60 273  i Pg    P      17 38 57.5 -0.8
HYB                                   esP     pP     17 39 02.2 -0.2
HYB                                   ePcP    PcP    17 39 47.8 -0.7
CHGR   Chuyangaron         58.85 299   P      P      17 39 00.3 +0.5
CHGR   Chuyangaron         58.85 299   P      P      17 39 00.3 +0.5
CHGR                                   pmax   pmax
       comp=Z,160nm,0.7s
EPYK   Eagle Plains        58.86  28   P      P      17 39 00.9 +1.4
EPYK                                   IAmb   IAmb   17 39 34.6
       comp=Z,18nm,1.0s
G30M   tAoh Zraii Nji      59.00  27   IAmb   IAmb   17 39 12.4
       comp=Z,23nm,1.1s
F30M   Barrier River       59.10  26   IAmb   IAmb   17 39 10.6
       comp=Z,18nm,1.1s
I30M   Mount Dempster      59.13  29   IAmb   IAmb   17 39 33.9
       comp=Z,14nm,1.2s
M30M   Minto, Yukon        59.30  32   P      P      17 39 03.2 +0.7
M30M                                   IAmb   IAmb   17 40 21.3
       comp=Z,16nm,1.4s
INK    Inuvik              59.86  25   P      P      17 39 07.1 +0.9
INK    Inuvik              59.86  25   P      P      17 39 07.1 +0.9
INK                                    pmax   pmax
       comp=Z,6.0nm,0.8s
SHAA   Shahritus           59.95 298          P      17 39 05.9 -1.5
SHAA                                   IAmb   IAmb   17 39 09.9
       comp=Z,266nm,1.5s
KBL    Kabul               60.17 295   P      P      17 39 08.0 -1.1
KBL    Kabul               60.17 295   P      P      17 39 08.0 -1.1
KBL                                    pmax   pmax
       comp=Z,29nm,1.0s
SVE    Sverdlovsk          60.17 321deP     P      17 39 09.8 +1.3
SVE                                    pmax   pmax
       comp=Z,47nm,1.3s
ARTI   Arti                61.48 321          P      17 39 16.9 -0.5
ARTI   Arti                61.48 321   P      P      17 39 16.9 -0.5
ARTI                                   pmax   pmax
       comp=Z,40nm,0.6s
STKA   Stephens Creek      62.28 180   P      P      17 39 26.4 +3.4
STKA   Stephens Creek      62.28 180   P      P      17 39 25.4 +2.5
       comp=Z,3.6nm,0.7s,baz=347,slow=8.0,SNR=6.6
       comp=Z,3.6nm,0.7s
STKA   Stephens Creek      62.28 180   P      P      17 39 23.2 +0.2
STKA   Stephens Creek      62.28 180   P      P      17 39 23.2 +0.2
STKA                                   pmax   pmax
       comp=Z,43nm,1.1s
AB31   Akbulak array       62.36 313          P      17 39 23.0 -0.5
ABKAR  Akbulak array       62.36 313          P      17 39 23.4  0.0
FORT   Forrest             62.57 193   P      P      17 39 25.3 +0.4
       comp=Z,17nm,0.8s
FORT   Forrest             62.57 193          P      17 39 24.3 -0.6
FORT                                   IAmb   IAmb   17 39 35.1
       comp=Z,14nm,0.9s
C36M   Paulatuk            63.02  23          P      17 39 28.1 +0.6
C36M                                   IAmb   IAmb   17 39 51.8
       comp=Z,7.2nm,0.7s
HTT    Hallett             63.89 183   P      P      17 39 34.6 +1.0
       comp=Z,5.0nm,1.1s
HRA    Herat               65.50 297          P      17 39 43.2 -1.5
KIRV   Kirov               65.52 325ceP     P      17 39 45.1 +1.0
SPITS  Spitsbergen Ar      66.75 349   P      P      17 39 52.7 +1.0
       comp=Z,15nm,1.1s,baz=72,slow=6.7,SNR=2.6
       comp=Z,15nm,1.1s
ARPS   Mount Arapiles      67.16 180   P      P      17 39 56.3 +1.6
       comp=Z,15nm,1.1s
TOO    Toolangi            68.05 177   P      P      17 40 01.1 +0.7
TOO                                    IAmb   IAmb   17 40 24.4
       comp=Z,38nm,2.0s
TOO    Toolangi            68.05 177   P      P      17 40 01.1 +0.7
TOO                                    pmax   pmax
       comp=Z,38nm,2.0s
APA    Apatity             68.57 337⇓eP     P      17 40 01.6 -1.7
APA                                    MLR    MLR
       comp=Z,2µm,6.8s
BELG   Belogornoye         68.69 319⇑eP     P      17 40 05.3 +1.0
BELG                                   pmax   pmax
       comp=Z,11nm,1.4s
YKA    Yellowknife Ar      69.10  29   P      P      17 40 08.3 +1.6
       comp=Z,2.1nm,0.9s,baz=294,slow=6.7,SNR=11
       comp=Z,2.1nm,0.9s
YKA    Yellowknife Ar      69.10  29   P      P      17 40 06.8 +0.1
YKA    Yellowknife Ar      69.10  29  i P     P      17 40 08.8 +2.1
YKA                                    pmax   pmax
       comp=Z,2.0nm,0.9s
KLMR   Klimovskoe          69.28 329  eP      P      17 40 06.1 -1.8
KLMR                                   pmax   pmax
       comp=Z,28nm,1.7s
ARCES  ARCESS Array B      70.01 340   P      P      17 40 13.2 +1.0
       comp=Z,3.1nm,0.7s,baz=59,slow=4.7,SNR=7.8
       comp=Z,3.1nm,0.7s
VRH    Novokhopyorsk       72.52 320  eP      P      17 40 26.4 -1.3
VRH                                    pmax   pmax
       comp=Z,10.0nm,0.9s
MOS    Moscow              72.54 325  eP      P      17 40 28.1 +0.4
MOS                                    pmax   pmax
       comp=Z,40nm,1.1s
B08A   Colville Reser      73.10  44   P      P      17 40 32.6 +1.3
B08A                                   IAmb   IAmb   17 40 43.3
       comp=Z,10nm,1.1s
AKT    Akhty               73.17 308  eP      P      17 40 32.6 +0.7
AKT                                   e              17 40 47.4
AKT                                    pmax   pmax
       comp=Z,29nm,0.8s
AKT                                    MLR    MLR
       comp=Z,2µm,15.0s
OBN    Obninsk             73.37 325  i P     P      17 40 33.9 +1.3
OBN                                   i              17 40 46.1
OBN                                    pmax   pmax
       comp=Z,30nm,1.3s
LPSR   Galich'ya Gora      73.39 322  eP      P      17 40 31.7 -1.1
LPSR                                   pmax   pmax
       comp=Z,10.0nm,1.2s
VORR   Voronezh            73.69 321  eP      P      17 40 33.8 -0.8
VORR                                   pmax   pmax
       comp=Z,10.0nm,1.0s
VSR    Storozhevoye        73.93 320  eP      P      17 40 35.4 -0.6
VSR                                    pmax   pmax
       comp=Z,10.0nm,1.2s
PINE   Pine Mountain       74.20  48   P      P      17 40 38.3 +0.3
PINE                                   IAmb   IAmb   17 41 00.8
       comp=Z,10nm,0.8s
NEW    Newport             74.45  43   P      P      17 40 39.4 +0.2
NEW    Newport             74.45  43   P      P      17 40 39.4 +0.2
NEW                                    pmax   pmax
       comp=Z,10.0nm,1.1s
FINES  FINESS Array B      74.55 333   P      P      17 40 40.2 +0.7
       comp=Z,4.0nm,0.4s,baz=58,slow=5.6,SNR=63
       comp=Z,4.0nm,0.4s
FINES  FINESS Array B      74.55 333  i P     P      17 40 40.5 +1.1
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FINES                                  pmax   pmax
       comp=Z,4.0nm,0.4s
GOF    Gofitskoye          74.59 313ceP     P      17 40 41.0 +1.0
BLKN   Baker Lake          75.04  22   P      P      17 40 42.9 +0.6
BLKN                                   IAmb   IAmb   17 41 03.9
       comp=Z,22nm,1.3s
KBZ    Khabaz              75.31 312   P      P      17 40 45.0 +0.8
       comp=Z,11nm,0.8s,baz=75,slow=3.0,SNR=16
       comp=Z,11nm,0.8s
KBZ    Khabaz              75.31 312⇓eP     P      17 40 46.1 +1.9
KBZ                                    pmax   pmax
       comp=Z,16nm,0.9s
KIV    Kislovodsk          75.34 313   P      P      17 40 42.5 -2.0
KIV    Kislovodsk          75.34 313  ⇑P      P      17 40 46.8 +2.4
KIV    Kislovodsk          75.34 313  eP      P      17 40 45.8 +1.3
KIV                                    pmax   pmax
       comp=Z,21nm,1.0s
SHA1   Shidzhatmaz         75.46 312⇑eP     P      17 40 46.3 +0.9
GNI    Garni               75.80 308ceP     P      17 40 48.6 +1.3
GNI                                    pmax   pmax
       comp=Z,25nm,1.4s
BMO    Blue Mountains      75.99  46   P      P      17 40 46.4 -1.8
BMO    Blue Mountains      75.99  46   P      P      17 40 46.4 -1.8
BMO                                    pmax   pmax
       comp=Z,7.0nm,1.0s
VSU    Vasula              76.06 331⇑eP     P      17 40 48.6 +0.4
VSU                                    pmax   pmax
       comp=Z,35nm,1.0s
JTMT   Jette               76.36  42   P      P      17 40 49.5 -0.9
BEKR   Beckworth           76.43  52   P      P      17 40 50.8 -0.1
SUMG   Summit              76.96   0   P      P      17 40 53.0 -0.5
VSLR   Vesyoloye           77.26 313⇑eP     P      17 40 56.3 +1.0
VSLR                                   pmax   pmax
       comp=Z,21nm,0.8s
CMB    Columbia Colle      77.29  53   P      P      17 40 55.6  0.0
CMB    Columbia Colle      77.29  53   P      P      17 40 55.6  0.0
CMB                                    pmax   pmax
       comp=Z,6.0nm,0.9s
WAKR   Walker              77.72  53   P      P      17 40 58.1 -0.1
MNK    Minsk               77.91 327  i P     P      17 41 00.5 +1.8
MNK                                   i              17 41 09.7
MNK                                   i              17 43 56.7
MNK                                   i PPP   PPP    17 45 44.4
MNK                                   i S     S      17 50 55.6 +4.7
MNK                                   i SS    SS     17 55 58.2 +7.4
MNK                                    pmax   pmax
       comp=Z,21nm,0.9s
MNK                                    pmax   pmax
       comp=N,9.0nm,1.0s
MNK                                    pmax   pmax
       comp=E,20nm,1.0s
GURO   Guroymak-BITLI      78.41 308   IAmb   IAmb   17 41 17.7
       comp=Z,41nm,1.5s
HLID   Hailey              78.44  46   P      P      17 41 01.7 -0.4
NVAR   Mina Array Bea      78.53  52   P      P      17 41 05.1 +2.3
       comp=Z,3.0nm,0.6s,baz=291,slow=5.8,SNR=11
       comp=Z,3.0nm,0.6s
NVAR   Mina Array Bea      78.53  52   P      P      17 41 02.0 -0.8
FFC    Flin Flon           78.82  32   P      P      17 41 03.6 -0.1
FFC    Flin Flon           78.82  32   P      P      17 41 03.7 -0.1
FFC                                    pmax   pmax
       comp=Z,9.0nm,1.2s
PABE   Paberze             79.08 329   P      P      17 41 03.8 -1.2
AKASG  Malin Array Be      79.50 323   P      P      17 41 07.9 +0.4
       comp=Z,1.6nm,0.4s,baz=48,slow=5.5,SNR=22
       comp=Z,1.6nm,0.4s
AKASG  Malin Array Be      79.50 323   P      P      17 41 06.4 -1.1
AKASG                                  IAmb   IAmb   17 41 09.9
       comp=Z,22nm,1.4s
AKASG  Malin Array Be      79.50 323  i P     P      17 41 08.1 +0.6
AKASG                                  pmax   pmax
       comp=Z,2.0nm,0.4s
AKBB   Malin Array Si      79.50 323   P      P      17 41 06.5 -1.0
AKBB   Malin Array Si      79.50 323⇑eP     P      17 41 08.2 +0.7
KIEV   Kiev                79.52 323   P      P      17 41 06.4 -1.2
KIEV   Kiev                79.52 323  ⇑P      P      17 41 09.0 +1.5
KIEV   Kiev                79.52 323   P      P      17 41 06.4 -1.2
KIEV                                   pmax   pmax
       comp=Z,94nm,2.0s
HFS    Hagfors             79.96 336   P      P      17 41 10.8 +0.9
       comp=Z,3.7nm,0.5s,baz=56,slow=5.4,SNR=17
       comp=Z,3.7nm,0.5s
NB2    NORSAR Subarra      80.12 338   P      P      17 41 11.6 +0.9
       comp=Z,12nm,0.9s,baz=43,slow=5.9
NOA    NORSAR Array B      80.12 338   P      P      17 41 11.4 +0.7
       comp=Z,2.5nm,0.6s,baz=41,slow=5.3,SNR=9.4
       comp=Z,2.5nm,0.6s
SUW    Suwalki             80.38 328  eP      P      17 41 13.5 +1.3
TPNV   Topopah Spring      80.68  53   IAmb   IAmb   17 41 29.2
       comp=Z,10nm,1.0s
GWY    Greenwater Val      80.79  53   IAmb   IAmb   17 41 45.7
       comp=Z,14nm,1.2s
DUG    Dugway, Tooele      81.24  48   P      P      17 41 16.6 -0.7
DUG                                    IAmb   IAmb   17 41 30.7
       comp=Z,8.7nm,0.9s
DUG    Dugway, Tooele      81.24  48   P      P      17 41 16.6 -0.7
DUG                                    pmax   pmax
       comp=Z,9.0nm,0.9s
PRN    Pahroc Range        81.26  52   P      P      17 41 17.3 -0.1
SORM   Soroca              81.49 322  ⇑P      P      17 41 19.6 +1.4
SORM   Soroca              81.49 322  ⇑P      P      17 41 19.6 +1.4
PDAR   Pinedale Array      81.85  45   P      P      17 41 22.3 +1.7
       comp=Z,2.1nm,0.8s,baz=256,slow=1.7,SNR=12
       comp=Z,2.1nm,0.8s
PDAR   Pinedale Array      81.85  45   P      P      17 41 19.4 -1.2
PMD    Palm Desert         82.32  55   IAmb   IAmb   17 41 49.4
       comp=Z,13nm,1.3s
KNB    Kanab               82.97  51   IAmb   IAmb   17 41 38.9
       comp=Z,24nm,1.5s
BC3    Big Chuckawall      82.97  55   P      P      17 41 25.9 -0.6
BC3                                    IAmb   IAmb   17 41 54.1
       comp=Z,7.7nm,1.0s
RDMU   Red Mountain        83.09  47   P      P      17 41 26.3 -0.8
RDMU                                   IAmb   IAmb   17 41 38.8
       comp=Z,15nm,0.8s
BR131  Keskin Array S      83.31 312   IAmb   IAmb   17 41 47.2
       comp=Z,14nm,0.9s
BRTR   Keskin Array B      83.31 312   P      P      17 41 29.2 +1.1
       comp=Z,6.7nm,0.7s,baz=60,slow=3.8,SNR=23
       comp=Z,6.7nm,0.7s
BRTR   Keskin Array B      83.31 312          P      17 41 27.9 -0.2
SRU    San Rafael Swe      83.31  48   P      P      17 41 27.6 -0.6
SRU                                    IAmb   IAmb   17 41 39.5
       comp=Z,9.6nm,0.7s
SRU    San Rafael Swe      83.31  48   P      P      17 41 27.6 -0.6
SRU                                    pmax   pmax
       comp=Z,10.0nm,0.7s
TESR   Tescani             83.40 321  ⇑P      P      17 41 30.0 +1.8
RAYN   Ar Rayn             83.40 293   P      P      17 41 27.5 -1.3
RAYN   Ar Rayn             83.40 293   P      P      17 41 27.5 -1.3
RAYN                                   pmax   pmax
       comp=Z,174nm,1.7s
TPGR   Topolog             83.44 319  ⇑P      P      17 41 30.4 +1.9
KWP    Kalwaria Pacla      83.45 325  eP      P      17 41 30.3 +1.8
BUR08  Bucovina Ar. S      83.46 323   IAmb   IAmb   17 41 51.0
       comp=Z,7.2nm,0.8s
BURAR  Bucovina Array      83.47 322  ⇑P      P      17 41 30.6 +1.9
BURAR  Bucovina Array      83.47 322  ⇑P      P      17 41 30.6 +1.9
VRI    Vrincioaia          83.76 320  ⇑P      P      17 41 33.5 +3.3
VRI    Vrincioaia          83.76 320  ⇑P      P      17 41 33.5 +3.3
PLOR   Plostina            83.81 320  ⇑P      P      17 41 34.2 +3.8
PLOR   Plostina            83.81 320  ⇑P      P      17 41 34.2 +3.8
BISRR  Bisoca              83.97 320  ⇑P      P      17 41 33.7 +2.5
TURR   Turia               84.03 321  ⇓P      P      17 41 34.0 +2.5
OZUR                       84.13 321  ⇓P      P      17 41 34.2 +2.1
ICOR   Ion Corvin          84.24 319  ⇑P      P      17 41 33.9 +1.4
STHS   Stebnicka Huta      84.31 326  eP      P      17 41 37.1 +4.2
STHS                                   pmax   pmax
       comp=Z,3.0nm,0.9s
STHS   Stebnicka Huta      84.31 326  eP      P      17 41 37.1 +4.2
BMR    Baia Mare           84.33 323  ⇓P      P      17 41 36.4 +3.4
BMR    Baia Mare           84.33 323  ⇓P      P      17 41 36.4 +3.4
MLR    Muntele Rosu        84.42 321  ⇓P      P      17 41 35.5 +1.8
MLR    Muntele Rosu        84.42 321  ⇓P      P      17 41 35.5 +1.8
OJC    Ojcow               84.46 327  eP      P      17 41 34.9 +1.3
NIE    Niedzica            84.77 326  eP      P      17 41 36.6 +1.4
PV18   Skein Mesa, Pa      84.84  48   P      P      17 41 34.7 -1.4
PV13   Radium Mtn., P      84.95  48   IAmb   IAmb   17 41 48.4
       comp=Z,11nm,0.9s
PV01   Paradox Valley      85.12  48   P      P      17 41 36.6 -1.0
PV01                                   IAmb   IAmb   17 41 49.2
       comp=Z,10nm,0.8s
MARR   Marisel-Cluj        85.17 323  ⇑P      P      17 41 34.1 -3.4
ARR    Arges               85.21 321  ⇓P      P      17 41 39.8 +2.2
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STEB	Steborice	85.60	328	eP	P	17 41 40.7	+1.3
KSP	Ksiaz	85.63	329	eP	P	17 41 41.0	+1.6
MORC	Moravsky Berou	85.82	328	⇑P	P	17 41 42.4	+1.9
MORC	Moravsky Berou	85.82	328	eP	P	17 41 38.7	-1.8
MORC	Moravsky Berou	85.82	328	⇑P	P	17 41 42.4	+1.9
MMAI	Mount Meron Ar	85.91	306	P	P	17 41 42.3	+1.0
	comp=Z,2.2nm,0.5s,baz=73,slow=8.8,SNR=6.6 comp=Z,2.2nm,0.5s						
KRLC	Kraliky	85.96	328	eP	P	17 41 45.6	+4.4
KRLC	Kraliky	85.96	328	eP	P	17 41 45.6	+4.4
DPC	Dobruska-Polom	85.97	328	eP	P	17 41 43.1	+1.9
DPC	Dobruska-Polom	85.97	328	eP	P	17 41 43.1	+1.9
UPC	Upice	86.00	329	eP	P	17 41 44.7	+3.4
UPC	Upice	86.00	329	eP	P	17 41 44.7	+3.4
VRAC	Vranov	86.59	328	⇑P	P	17 41 46.3	+2.1
VRAC	Vranov	86.59	328	eP	P	17 41 45.0	+0.7
VRAC	Vranov	86.59	328	⇑P	P	17 41 46.3	+2.1
CLL	Collm	86.72	331	i P	P	17 41 45.8	+1.0
CLL				i *SP	pwP	17 41 56.6	+1.1
CLL	Collm	86.72	331	i P	P	17 41 45.8	+1.0
CLL				ePP	PP	17 45 08.0	+1.6
CLL				i pPP		17 45 14.3	
Q24A	Divide	86.79	46	P	P	17 41 45.1	-0.7
Q24A				IAmb	IAmb	17 41 49.8	
	comp=Z,6.3nm,0.8s						
KRUC	Moravsky	86.86	328	eP	P	17 41 46.0	+0.5
RONA	Rosalia, Austr	87.87	327	ePcP	P	17 41 50.8	+0.3
	comp=Z,11nm,1.8s						
CONA	Conrad Observa	87.91	327	ePcP	P	17 41 51.1	+0.3
	comp=Z,7.9nm,1.7s						
KHC	Kasperske Hory	88.08	329	eP	P	17 41 55.8	+4.3
KHC	Kasperske Hory	88.08	329	eP	P	17 41 55.8	+4.3
GERES	GERESS Array B	88.24	329	P	P	17 41 52.7	+0.3
	comp=Z,0.9nm,0.7s,baz=22,slow=4.9,SNR=6.2						
GERES				PP	PP	17 45 22.8	+4.0
	comp=Z,0.2nm,0.3s,baz=31,slow=0.8,SNR=3.7 comp=Z,0.9nm,0.7s						
MOA	Molln	88.71	328	ePcP	P	17 41 55.1	+0.6
	comp=Z,1.2nm,0.5s						
BIOA	Bad Ischl, Aus	89.11	328	ePcP	P	17 41 55.8	-0.6
	comp=Z,9.9nm,1.5s						
EKA	Eskdalemuir Ar	89.17	341	P	P	17 41 58.9	+2.5
	comp=Z,0.4nm,0.4s,baz=54,slow=3.6,SNR=1.1 comp=Z,0.4nm,0.4s						
SOKA	Soboth	89.21	327	ePcP	P	17 41 56.9	-0.1
	comp=Z,15nm,1.4s						
TXAR	Lajitas Array	93.67	53	P	P	17 42 20.3	+2.4
	comp=Z,4.8nm,1.0s,baz=292,slow=3.2,SNR=19 comp=Z,4.8nm,1.0s						
TXAR	Lajitas Array	93.67	53	P	P	17 42 16.0	-2.0
TXAR	Lajitas Array	93.67	53	P	P	17 42 16.0	-2.0
SYO	Syowa Base	122.70	205	⇑ePdiff	Pdif	17 44 27.2	+0.9
SYO	Syowa Base	122.70	205	⇑epPdiff	pPdif	17 44 32.0	+1.3
ITTB	Itaituba	148.98	36	eP	PKPdf	17 48 44.0	-1.7
LPAZ	La Paz	149.11	69	PKPbc	PKPbc	17 48 51.6	+0.9
	comp=Z,2.6nm,0.8s,baz=330,slow=4.0,SNR=5.4						
LPAZ	La Paz	149.11	69	eP	PKPdf	17 48 44.3	-2.3
PB11	IPOC Station P	149.60	76		PKPdf	17 48 43.3	-3.4
PB07	IPOC Station P	150.25	80		PKPdf	17 48 44.2	-3.5
PB10	IPOC Station P	150.37	84		PKPdf	17 48 45.9	-1.7
PB03	IPOC Station P	150.50	81		PKPdf	17 48 45.8	-2.3
PB09	IPOC Station P	150.83	80		PKPdf	17 48 45.7	-2.9
GO02	Mina Guanaco	151.75	86		PKPdf	17 48 46.6	-3.4
PLCA	Paso Flores	152.03	120	PKPbc	PKiKP	17 48 58.3	+1.7
	comp=Z,2.4nm,0.8s,baz=248,slow=1.3,SNR=7.4						
PLCA	Paso Flores	152.03	120	eP	PKPdf	17 48 48.6	-1.1
ARAG	Araguaiana, MT	160.51	43	eP	PKPdf	17 49 00.1	-1.3

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*IDC **10** 17:30:43.2±1.4, 30°.86N×142°.16E, h0^{km}, mb4.3/12, mbtmp4.3/14, Error ellipse: s-maj=59.0km s-min=18.5km az=72.0*

*NEIC **10** 17:30:46.7±2.1, 30°.81N±0°.06×142°.0E±0°.1, h20^{km}±6^{km}, mb4.7/41, Error ellipse: s-maj=14.8km s-min=8.1km az=102.0*

ISC 10 17:30:46.8±0.6**, 30°.79N**±0°.06×**141°.95E**±0°.09**, h24**^{km}**, n76,** σ**1^s.22**/71**, mb4.7**/27**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	2.94	322	Pn	Pn	17 31 31.7	-0.2
JHJ	Hachijo jima 2	2.96	322	Pn	Pn	17 31 31.4	-0.9
	300nm,0.6s,baz=181,slow=17,SNR=0.6						
JHJ				Sn	Sn	17 32 04.4	-2.6
	107nm,0.3s,baz=42,slow=14,SNR=2.3						
JCJ	Chichijima	3.69	177	Pn	Pn	17 31 33.4	-8.9
	baz=336,slow=20						
JCJ				Sn	Sn	17 32 11.9	-13
	35nm,0.3s,baz=92,slow=23,SNR=1.6						
JYT	Yasato	5.61	345	Pn	Pn	17 32 07.2	-1.6
MJAR	Matsushiro Arr	6.53	332	Pn	Pn	17 32 23.8	+2.5
	0.5nm,0.3s,baz=157,slow=11,SNR=1.3						
MJAR				Sn	Sn	17 33 36.7	+1.8
	0.5nm,0.3s,baz=122,slow=20,SNR=1.9						
MAJO	Matsushiro	6.53	332	Pn	Pn	17 32 21.8	+0.5
MJB9	Matsu-Tunnel	6.53	332	Pn	Pn	17 32 22.4	+1.1
JKA	Kamikawa-asahi	13.31	2	Pn	Pn	17 33 54.5	+0.4
KSRS	Korea Array	13.38	304	Pn	Pn	17 33 58.2	+3.1
	1.7nm,0.9s,baz=116,slow=11,SNR=1.0						
YHNB	Yeheng	19.19	257	P	P	17 35 08.3	-0.7
YHNB				IAmb	IAmb	17 35 20.5	
	comp=Z,40nm,1.1s						
NACB	Ninganchiao	19.21	255	P	P	17 35 07.9	-1.2
NACB				IAmb	IAmb	17 35 10.2	
	comp=Z,54nm,1.4s						
YULB	Yu-li	19.79	253	P	P	17 35 15.3	-0.1
YULB				IAmb	IAmb	17 35 29.6	
	comp=Z,63nm,1.4s						
SSLB	Suanglung	19.90	255	P	P	17 35 16.9	+0.2
SSLB				IAmb	IAmb	17 35 19.4	
	comp=Z,43nm,1.0s						
TPUB	Ta-pu	20.38	254	P	P	17 35 22.8	+0.9
H11N2	WAKE ISLAND Hy	25.05	110	T	T	18 02 28.2	
	baz=300						
H11N1	WAKE ISLAND Hy	25.06	110	T	T	18 02 43.8	
	baz=300						
H11N3	WAKE ISLAND Hy	25.07	110	T	T	18 02 33.7	
	baz=300						
HILR	Hailar Array B	25.12	325	P	P	17 36 11.0	+1.3
	comp=Z,14nm,0.6s,baz=128,slow=9.3,SNR=5.6 comp=Z,14nm,0.6s						
H11S3	WAKE ISLAND Hy	25.54	113	T	T	18 03 32.0	
	baz=304						
H11S1	WAKE ISLAND Hy	25.54	113	T	T	18 03 23.7	
	baz=304						
H11S2	WAKE ISLAND Hy	25.56	113	T	T	18 03 41.1	
	baz=304						
SONM	Songino Array	31.99	312	P	P	17 37 12.6	+1.4
	comp=Z,0.8nm,0.5s,baz=105,slow=9.9,SNR=1.0 comp=Z,0.8nm,0.5s						
SONM	Songino Array	31.99	312	P	P	17 37 08.9	-2.2
YAK	Yakutsk	32.26	349	P	P	17 37 11.5	-1.5
YAK				IAmb	IAmb	17 37 20.2	
	comp=Z,8.0nm,0.8s						
TNTI	Ternate	32.91	208	P	P	17 37 18.1	-1.2
CMAR	Chiang Mai Arr	40.74	263	P	P	17 38 23.3	-2.7
TIXI	Tiksi	41.52	354	P	P	17 38 30.5	-1.2
	comp=Z,1.6nm,0.5s,baz=150,slow=12,SNR=2.1 comp=Z,1.6nm,0.5s						
TIXI	Tiksi	41.52	354	P	P	17 38 29.7	-2.0
NIKH	Nikolski High	41.78	43	P	P	17 38 33.7	-0.4
SOEI	Soe	43.74	206	P	P	17 38 50.5	-0.1
SOEI				IAmb	IAmb	17 39 08.5	
	comp=Z,11nm,0.7s						
COEN	Coen	44.51	178	P	P	17 38 57.0	+0.6
COEN				IAmb	IAmb	17 38 59.5	
	comp=Z,15nm,1.1s						
MTN	Manton Dam	44.61	195	P	P	17 38 57.1	-0.3
MTN				IAmb	IAmb	17 39 02.4	
	comp=Z,24nm,1.4s						
ZALV	Zalesovo Beam	46.61	317	PcP	PcP	17 40 47.6	+1.1
	comp=Z,1.1nm,0.6s,baz=66,slow=3.6,SNR=1.9						
KNRA	Kununurra	47.91	197	P	P	17 39 22.3	-0.9
O15K	Ungalikthiuk R	47.93	36	P	P	17 39 22.1	-1.0
MKAR	Makanchi Array	48.02	307	P	P	17 39 23.3	-0.7
	comp=Z,1.4nm,0.5s,baz=94,slow=8.8,SNR=1.6 comp=Z,1.4nm,0.5s						
MAKZ	Makanchi	48.24	307	P	P	17 39 24.3	-1.3
H18K	Honhosa River	49.82	29	P	P	17 39 37.1	-0.3
H18K				IAmb	IAmb	17 39 49.5	
	comp=Z,12nm,1.2s						
KURK	Kurchatov	50.30	312	P	P	17 39 40.3	-0.9
KURK				IAmb	IAmb	17 39 42.5	
	comp=Z,6.6nm,0.8s						
KURBB	Kurchatov Arra	50.36	312	P	P	17 39 42.0	+0.3
	comp=Z,4.0nm,0.9s,baz=87,slow=6.5,SNR=2.2 comp=Z,4.0nm,0.9s						
WB0	Warramunga Arr	50.79	189	P	P	17 39 45.8	+0.6
WRAB	Tennant Creek	50.96	189	P	P	17 39 46.8	+0.3
WRAB				IAmb	IAmb	17 39 48.1	
	comp=Z,14nm,0.9s						
WRA	Warramunga Arr	50.97	189	P	P	17 39 46.9	+0.3
	comp=Z,13nm,0.7s,baz=4.9,slow=7.4,SNR=7.0						
WRA				PcP	PcP	17 41 05.1	+2.5
	comp=Z,1.3nm,0.8s,baz=4.8,slow=3.9,SNR=1.9 comp=Z,13nm,0.7s						
WRA	Warramunga Arr	50.97	189	IAmb	IAmb	17 39 47.8	
	comp=Z,0.8nm,0.7s						
FITZ	Fitzroy Crossi	51.08	200	P	P	17 39 47.8	+0.4
OHAK	Old Harbor	51.17	39	P	P	17 39 47.1	-0.5
GSI	Gunungsitoli	51.21	244	P	P	17 39 48.3	-0.2
B21K	Ikpikpuk River	52.27	23	P	P	17 39 54.4	-1.4
D23K	Nanushuk River	53.52	24	P	P	17 40 05.0	0.0
D23K				IAmb	IAmb	17 40 22.1	
	comp=Z,17nm,1.4s						
RND	Reindeer	53.67	31	P	P	17 40 05.8	-0.4
RND				IAmb	IAmb	17 40 18.2	
	comp=Z,11nm,1.4s						
AS31	Alice Springs	54.70	189	P	P	17 40 14.3	+0.2
ASAR	Alice Springs	54.70	189	P	P	17 40 14.5	+0.4
	comp=Z,3.1nm,0.5s,baz=0.2,slow=5.4,SNR=5.4 comp=Z,3.1nm,0.5s						
ASAR	Alice Springs	54.70	189	P	P	17 40 13.6	-0.4
BVAR	Borovoye Array	55.22	316	P	P	17 40 19.0	+1.4
	comp=Z,1.5nm,0.5s,baz=90,slow=8.6,SNR=1.0 comp=Z,1.5nm,0.5s						
ARSB	Arslanbob	55.41	301	P	P	17 40 19.2	-0.2
ARSB				IAmb	IAmb	17 40 20.9	
	comp=Z,11nm,1.2s						
J26L	Joseph Creek	56.03	30	P	P	17 40 21.6	-1.7
PSA00	Pilbara Seismi	56.23	205	P	P	17 40 24.2	-0.8
PSA00				IAmb	IAmb	17 40 26.4	
	comp=Z,6.1nm,0.9s						
PSA00	Pilbara Seismi	56.23	205	P	P	17 40 24.4	-0.7
PSA00				IAmb	IAmb	17 40 29.1	
	comp=Z,28nm,1.2s						
KK31	Karatay Array	56.80	304	P	P	17 40 29.2	+0.1
KK31				IAmb	IAmb	17 40 37.4	
	comp=Z,12nm,1.4s						
KKAR	Karatay Array	56.80	304	P	P	17 40 29.9	+0.7
GAR	Garm	57.95	299	P	P	17 40 38.5	+1.0
M29M	Somme Creek	58.45	32	P	P	17 40 43.0	+2.6
M29M				IAmb	IAmb	17 40 58.6	
	comp=Z,7.3nm,1.0s						
L29M	L29M	58.52	32	P	P	17 40 43.1	+2.2
CHGR	Chuyangaron	58.92	299	P	P	17 40 45.1	+1.0
ARTI	Arti	61.51	321	P	P	17 41 02.5	+1.1
AB31	Akbulak array	62.40	313	P	P	17 41 08.1	+0.5
AB31				IAmb	IAmb	17 41 09.3	
	comp=Z,4.3nm,0.8s						
ABKAR	Akbulak array	62.40	313	P	P	17 41 08.3	+0.8
FORT	Forrest	62.64	193	P	P	17 41 09.6	+0.4
FORT				IAmb	IAmb	17 41 15.8	
	comp=Z,7.7nm,0.8s						
ARCES	ARCESS Array B	70.00	340	P	P	17 41 56.7	+0.7
FIA1	FINESS Array S	74.55	333	P	P	17 42 23.9	+0.6
FINES	FINESS Array B	74.55	333	P	P	17 42 23.4	+0.1
AKASG	Malin Array Be	79.53	323	P	P	17 42 52.0	+0.6
	comp=Z,0.9nm,0.5s,baz=53,slow=5.4,SNR=2.6 comp=Z,0.9nm,0.5s						
AKASG	Malin Array Be	79.53	323	P	P	17 42 51.6	+0.1
HFS	Hagfors	79.96	336	P	P	17 42 54.3	+0.7
	comp=Z,2.2nm,0.8s,baz=55,slow=11,SNR=1.5 comp=Z,2.2nm,0.8s						
BRTR	Keskin Array B	83.35	313	P	P	17 43 12.7	+0.6
	comp=Z,2.1nm,0.7s,baz=50,slow=5.3,SNR=2.1 comp=Z,2.1nm,0.7s						
MMAI	Mount Meron Ar	85.97	306	P	P	17 43 26.3	+1.0
	comp=Z,1.1nm,0.6s,baz=26,slow=8.3,SNR=1.2 comp=Z,1.1nm,0.6s						

IDC 10 17:45:44.4±7.8**, 20°.26S**×**178°.13W, h0**^{km}**, mb3.5**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=341.3km s-min=39.6km az=145.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	44.46	257	P	P	17 53 57.8	0.0
	0.4nm,0.7s,baz=97,slow=7.9,SNR=6.7 0.4nm,0.7s						
WRA	Warramunga Arr	44.52	262	P	P	17 53 57.9	-0.3
	0.4nm,0.8s,baz=98,slow=7.9,SNR=12 0.4nm,0.8s						
ILAR	Eielson Array	88.11	13	P	P	17 58 36.4	-0.1
	0.4nm,0.8s,baz=194,slow=4.4,SNR=4.9 0.4nm,0.8s						

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*MEX **10** 17:48:03.0±0.8, 13°.82N×92°.41W, h103^{km}±93^{km}, MD4.0*

*GCG **10** 17:48:04.9±1.3, 13°.91N×92°.29W, h0^{km}±180^{km}, MD4.2*

ISC 10 17:48:01.6±2.7**, 13°.6N**±0°.1×**92°.57W**±0°.08**, h35**^{km}**, n12,** σ**1^s.56**/19**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG5	El Palmar, Qui	1.42	57	eP	Pn	17 48 25.8	+0.8
STG8	El Palmar, Qui	1.44	55	eP	Pn	17 48 25.7	+0.3
PATR	El Naranjo	1.52	12	eP	Pn	17 48 25.8	-0.7
PATR				eS	Sn	17 48 45.0	-0.2
CHUJ	Union Juarez	1.52	17	eP	Pn	17 48 26.3	-0.3
CHUJ				eS	Sn	17 48 44.1	-1.3
PAVE	Pavencul	1.60	14	eP	Pn	17 48 27.2	-0.4
PAVE				eS	Sn	17 48 44.8	-2.5
FG16	Alotenango, Sa	2.10	72	eP	Pn	17 48 32.8	-1.7
PCIG		2.16	343	eP	Pn	17 48 34.9	-0.2
PCIG				eS	Sn	17 48 59.2	-1.4
APG	El Apazote	2.46	56	eP	Pn	17 48 42.2	+2.8
CCIG	Comitan	2.67	9	eP	Pn	17 48 43.8	+1.4
CCIG				eS	Sn	17 49 14.7	+1.1
CCIG	Comitan	2.67	9	eP	Pn	17 48 45.4	+3.1
UXUV	UXUV	3.97	338	eP	Pn	17 49 00.6	+0.6
UXUV				eS	Sn	17 49 43.8	-1.6
CMIG	Matias Romero	4.10	327	eP	Pn	17 49 02.4	+0.5
CMIG				eS	Sn	17 49 49.6	+0.9

TRN 10 17:53:36.0, 9°.84N×**62°.27W, h13**^{km}**, MD3.5, Venezuela., Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSMG	Mucurapo Girls	1.10	41	eS	Sn	17 54 13.3	+1.1
DMDM	Guralp CMG5TDE	1.11	39	eP	Pg	17 53 57.5	+0.1
DMDM				eS	Sn	17 54 12.9	+0.5
TRN	Trinidad (W)	1.17	46	eP	Pg	17 53 58.4	-0.2
TRN				eS	Sn	17 54 14.7	+0.7
GRSS	Sisters	2.53	15	eP	Pn	17 54 17.5	+0.7
GRSS				eS	Sn	17 54 48.2	+0.7
GCMP	Grenada, Carri	2.76	17	eP	Pn	17 54 20.2	+0.2
GCMP				eS	Sn	17 54 52.5	-0.6

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*UPP **10** 18:15:50.8±0.1, 67°.19N×20°.68E, h1^{km}, ML3.0, Confirmed Induced event*

*DNK **10** 18:15:51.0±0.3, 67°.19N×20°.69E, h0^{km}, ML3.0(UPP), Suspected explosion*

*HEL **10** 18:15:51.7±0.4, 67°.19N×20°.67E, h0^{km}, ML1.1, Suspected explosion*

ISC 10 18:15:50.9±0.8**, 67°.18N**±0°.02×**20°.72E**±0°.02**, h0**^{km}**, n28,** σ**0^s.97**/36**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	Dundret	0.09	224	P	Pg	18 15 52.5	+0.1
DUNU				S	Sg	18 15 53.6	0.0
DUNU	Dundret	0.09	224	P	Pg	18 15 52.5	+0.1
DUNU				S	Sg	18 15 53.6	0.0
MASU	Masugnsbyn	0.57	60	P	Pg	18 16 01.8	+0.1
MASU	Masugnsbyn	0.57	60	P	Pg	18 16 01.8	+0.1
RATU	Laukkuluspa	0.78	327	P	Pg	18 16 04.9	-0.8
RATU	Laukkuluspa	0.78	327	P	Pg	18 16 04.9	-0.8
KUA	Kurravaara	0.79	349	P	Pg	18 16 05.4	-0.5
KUA	Kurravaara	0.79	349	P	Pg	18 16 05.4	-0.5
ERTU	Ertsjaerv	0.86	137	P	Pg	18 16 06.7	-0.6
ERTU	Ertsjaerv	0.86	137	P	Pg	18 16 06.7	-0.6
ERTU	Ertsjaerv	0.86	137	PG	Pg	18 16 06.9	-0.4
ERTU				SG	Sg	18 16 18.7	+0.4
SALU	Saltoluokta	0.88	284	P	Pg	18 16 06.9	-0.9
SALU	Saltoluokta	0.88	284	P	Pg	18 16 06.9	-0.9
NIKU	Nikkaluokta	0.94	317	P	Pg	18 16 08.1	-0.9
NIKU	Nikkaluokta	0.94	317	P	Pg	18 16 08.1	-0.9
LANU	Lannavaara	1.00	29	SN	Sn	18 16 29.0	+2.1
KLF	Kolari	1.27	86	PG	Pg	18 16 14.1	-0.9
KLF				MSG		18 16 30.3	
	comp=Z,1.2nm,0.2s						
KLF				SB	Sg	18 16 31.6	+0.2
HEF	Hetta	1.66	41	PG	Pn	18 16 20.9	-0.3
	baz=224						
HEF				MSG		18 16 41.5	
	comp=Z,1.0nm,0.2s						
HEF				SN	Sg	18 16 45.1	+0.9
KALU	Kalix	1.70	140	PG	Pb	18 16 22.7	-0.2
KALU				SN	Sg	18 16 45.3	0.0
TOF	Tornio	1.81	126	PG	Pb	18 16 24.2	-0.7
TOF				MSG		18 16 46.4	
	comp=Z,0.8nm,0.2s						
TOF				SN	Sg	18 16 48.8	-0.3
KIF	Kilpisjarvi	1.83	1	PG	Pb	18 16 24.9	-0.3
KIF				MSG		18 16 47.2	
	comp=Z,1.2nm,0.2s						
KIF				SN	Sg	18 16 49.9	+0.3
RNF	Rovaniemi	2.17	103	SG	Sb	18 16 58.9	+0.7
BURU	Burvik	2.62	174	SB	Sb	18 17 11.3	-0.1
RANF	Ranua	2.69	113	SG	Sb	18 17 13.5	+0.1
ARA0	ARCESS Array S	2.95	35	SG	Sb	18 17 21.4	+0.5
OUF	Merijarvi	3.28	148	SN	Sn	18 17 25.6	+2.6
MSF	Maaselka	3.56	107	SG	Sg	18 17 42.5	-2.7
KU6	Riekki	3.84	103	SG	Sg	18 17 52.2	-1.8

IDC 10 18:23:24.5±5.9**, 29°.25S**×**178°.74W, h0**^{km}**, mb3.3**/2**, mbtmp3.3**/2**, Error ellipse: s-maj=316.6km s-min=84.3km az=166.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	42.54	266	P	P	18 31 21.9	-0.2
	0.3nm,1.0s,baz=103,slow=7.2,SNR=5.7 0.3nm,1.0s						
WRA	Warramunga Arr	43.42	271	P	P	18 31 29.3	0.0
	0.3nm,0.4s,baz=109,slow=8.4,SNR=11 0.3nm,0.4s						
FINES	FINESS Array B	143.84	340	PKP	PKPdf	18 43 00.3	-0.7
	1.0nm,0.3s,baz=52,slow=3.1,SNR=12						

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*GCG **10** 18:30:51.3±0.8, 14°.13N×89°.71W, h2^{km}±5^{km}, MD3.2*

*SNET **10** 18:30:51.7±1.1, 14°.13N×89°.67W, h13^{km}±2^{km}, ML1.9*

*CATAC **10** 18:30:52.4±0.4, 14°N±1°×9°0W±°, h5^{km}±1^{km}, M2.4/7, MLv2.4/7, Error ellipse: s-maj=3.8km s-min=2.8km az=104.2, confirmed*

ISC 10 18:30:52.3±0.9**, 14°.14N**±0°.03×**89°.70W**±0°.04**, h14**^{km}±6^{km}**, n24,** σ**0^s.89**/32**, 2C, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RBDL	Robledal	0.03	149	⇑iP	Pg	18 30 55.1	+0.1
RBDL				eS	Sg	18 30 56.9	+0.1
RBDL				IAML		18 30 57.5	
	comp=Z,882nm,0.2s						
JUAM	Asuncion Mita	0.20	359	eS	Sg	18 30 59.9	0.0
UNIC	Universidad Ca	0.21	136	P	Pg	18 30 57.2	+0.1
UNIC	Universidad Ca	0.21	136	S	Sg	18 31 00.7	+0.3
NUBE	Las Nubes	0.25	198	eP	Pb	18 30 57.9	-0.8
NUBE				eS	Sb	18 31 01.8	-1.1
NUBE				IAML		18 31 04.3	
	comp=Z,175nm,0.3s						
NUBE	Las Nubes	0.25	198	i P	Pb	18 30 57.8	-0.9
NUBE				eS	Sg	18 31 01.5	+0.2
NUBE	Las Nubes	0.25	198	P	Pb	18 30 57.9	-0.8
SNJE	San Jose	0.28	161	⇑eP	Pb	18 30 58.7	-0.6
SNJE				eP	Pb	18 30 58.8	-0.6
SNJE				eS	Sb	18 31 03.5	-0.5
SBLS	San Blas	0.30	166	eP	Pb	18 30 59.1	-0.7
SBLS				eS	Sb	18 31 03.6	-1.1
MTO3	Montecristo	0.42	52	eP	Pb	18 31 00.9	-0.7
MTO3				eS	Sb	18 31 07.0	-1.0
MTO3				IAML		18 31 07.6	
	comp=Z,122nm,0.1s						
MTO3	Montecristo	0.42	52	i P	Pb	18 31 01.0	-0.7
MTO3	Montecristo	0.42	52	P	Pb	18 31 00.9	-0.7
MTO3	Montecristo	0.42	52	S	Sb	18 31 06.9	-1.1
FAME	Alcaldia de Sa	0.42	226	P	Pb	18 31 00.8	-0.7
JAYA	Jayaque - finc	0.54	153	eP	Pb	18 31 02.9	-0.8
JAYA	Jayaque - finc	0.54	153	P	Pb	18 31 02.9	-0.8
JAYA	Jayaque - finc	0.54	153	S	Sb	18 31 10.2	-1.1
ESQI	Esquipulas	0.55	40	P	Pb	18 31 03.0	-0.7
ESQI	Esquipulas	0.55	40	S	Sb	18 31 10.9	-0.6
PMON	Piamonte	0.56	138	P	Pb	18 31 03.9	-0.2
PMON	Piamonte	0.56	138	S	Sb	18 31 11.9	-0.2
LLGN	La Laguna	0.73	88	S	Sb	18 31 16.8	-0.2
APG	El Apazote	1.14	319	eP	Pg	18 31 13.2	-1.0
CCIG	Comitan	3.17	313	P	Pn	18 31 43.2	+1.2
CCIG				S	Sn	18 32 22.3	+2.4

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*MOS **10** 18:38:36.4±0.9, 30°.24N×138°.50E, h441^{km}, mb4.4/47, Error ellipse: s-maj=7.9km s-min=4.4km az=105.7*

*JMA **10** 18:38:36.9±0.3, 30°N±2°×13°9E±°, h452^{km}±4^{km}, MV4.0/39, NEAR TORISHIMA IS*

*BJI **10** 18:38:36.3, 30°.19N×138°.67E, h454^{km}, mB5.0/12, mb4.9/63*

*NEIC **10** 18:38:37.5±1.4, 30°.25N±0°.08×138°.6E±0°.1, h438^{km}±1^{km}, mb4.5/294, Error ellipse: s-maj=13.7km s-min=11.6km az=93.0*

*IDC **10** 18:38:38.4±0.7, 30°.25N×138°.51E, h450^{km}±7^{km}, mb3.9/38, mbtmp4.8/46, Error ellipse: s-maj=8.0km s-min=5.4km az=90.0*

ISC 10 18:38:37.1±0.4**, 30°.21N**±0°.03×**138°.63E**±0°.04**, h438**^{km}±4^{km}**, n776,** σ**1^s.01**/755**, mb4.5**/239**, 42C-31D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHCJ	Hachijojimakas	3.03	19	eP	P	18 39 43.7	+0.4
JHCJ				eS	S	18 40 35.1	-2.1
JHJ	Hachijo jima 2	3.07	18	P	P	18 39 44.4	+0.8
	662nm,0.7s,baz=161,slow=2.7,SNR=16						
JHJ				S	S	18 40 36.6	-1.1
	419nm,0.4s,baz=334,slow=21,SNR=7.6						
JHJ2	Mitsune	3.07	19		P	18 39 42.6	-1.0
JHJ2				S	S	18 40 35.7	-2.1
JHJ2	Mitsune	3.07	19	P	P	18 39 44.2	+0.6
JHJ2				eS	S	18 40 35.8	-1.9
CBIJ	Chichi jima	4.40	134	P	P	18 39 54.1	-1.1
CBIJ				eS	S	18 40 54.9	-3.9
JCJ	Chichijima	4.40	134	P	P	18 39 43.8	-11
	186nm,0.3s,baz=288,slow=20,SNR=35						
JCJ				S	S	18 40 44.6	-14
	2µm,0.3s,baz=262,slow=22,SNR=18						
JCJ	Chichijima	4.40	134		P	18 39 54.3	-0.9
JCJ				S	S	18 40 54.7	-4.1
JTNC	Tanabenakahech	4.42	325	P	P	18 39 57.5	+2.3
JSG	Sagara	4.47	355	P	P	18 39 52.1	-3.5
JSG				S	S	18 40 59.9	+0.1
JIE	Ise	4.48	339	P	P	18 39 58.6	+2.9
JIE				eS	S	18 41 02.6	+2.7
JKN2	Miekihoku	4.49	334	P	P	18 39 58.1	+2.3
JHMK	Hamakita	4.66	351	eP	P	18 39 59.0	+1.7
HMMJ	Hamamatsu 2	4.70	351	eP	P	18 39 59.4	+1.6
HMMJ				eS	S	18 41 02.5	-1.2
JHH2	Haha-jima-NKT2	4.74	138	A	A	18 39 58.0	
	comp=N,10.0nm,0.4s,comp=E,16nm,0.4s						
BSO3	Boso 3	4.85	19	eP	P	18 39 59.4	+0.5
BSO3				eS	S	18 41 04.3	-1.6
BSO1	Boso 1	4.86	24	eP	P	18 39 59.4	+0.7
BSO1				eS	S	18 41 04.2	-1.4
INU	Inuyama	5.30	346		P	18 40 05.2	+1.5
INU				S	S	18 41 14.3	-0.2
INU	Inuyama	5.30	346	P	P	18 40 05.6	+1.9
JMN	Monobe	5.35	312		P	18 40 06.9	+2.6
JMN				S	S	18 41 15.0	-0.5
JMN	Monobe	5.35	312	P	P	18 40 07.1	+2.8
JGF	Kuroka	5.49	349		P	18 40 06.7	+1.1
JGF				S	S	18 41 17.2	-0.8
JGF	Kuroka	5.49	349	P	P	18 40 06.8	+1.2
MJAR	Matsushiro Arr	6.33	357	P	P	18 40 13.7	-0.5
	comp=E,83nm,0.7s,baz=178,slow=11,SNR=356						

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MJAR                                S       S      18 41 33.6 -0.3
      comp=E,19nm,0.9s,baz=174,slow=16,SNR=5.9
MJAR  Matsushiro Arr     6.33 357          P      18 40 14.0 -0.3
MAJO  Matsushiro         6.33 357          P      18 40 14.2 -0.1
MAJO  Matsushiro         6.33 357  P       P      18 40 14.0 -0.3
MAJO  Matsushiro         6.33 357diP       P      18 40 13.5 -0.8
MJB9  Matsu-Tunnel       6.33 357  P       P      18 40 15.1 +0.8
JNU   Nakatsue           7.21 296  P       P      18 40 26.0 +2.0
      comp=E,27nm,0.8s,baz=103,slow=8.2,SNR=22
JNU   Nakatsue           7.21 296          P      18 40 24.9 +0.9
JNU   Nakatsue           7.21 296  P       P      18 40 26.7 +2.8
JOW   Kunigami           9.70 252  P       P      18 40 53.1 +2.0
      comp=E,71nm,0.6s,baz=26,slow=4.0,SNR=32
JOW                                S       S      18 42 42.6 +1.2
      comp=E,24nm,1.1s,baz=226,slow=27,SNR=7.1
JOW   Kunigami           9.70 252          P      18 40 52.7 +1.7
JOW   Kunigami           9.70 252  P       P      18 40 53.9 +2.9
TJN   Taejon            11.25 306  P       P      18 41 08.1 +0.3
TJN   Taejon            11.25 306⇑eP       P      18 41 08.4 +0.6
KSRS  Korea Array       11.46 312  P       P      18 41 11.4 +1.4
      comp=E,4.0nm,0.4s,baz=128,slow=10,SNR=21
KSRS                               S       S      18 43 16.4 +0.1
      comp=E,7.5nm,1.1s,baz=114,slow=22,SNR=7.0
KSAR  Wonju Array Be    11.48 312  P       P      18 41 10.1 -0.1
KSAR  Wonju Array Be    11.48 312  P       P      18 41 10.1 -0.1
KS19  Wonju Array Si    11.52 312  P       P      18 41 10.9 +0.2
ERM   Erimo             12.34  16          P      18 41 20.1 +0.6
ERM   Erimo             12.34  16  P       P      18 41 21.1 +1.6
ERM   Erimo             12.34  16  S       S      18 43 35.5 +1.8
ERM   Erimo             12.34  16  P       P      18 41 20.2 +0.6
JEM   Erimo             12.34  16  P       P      18 41 21.2 +1.6
JEM   Erimo             12.34  16  S       S      18 43 35.5 +1.8
PSTR  Posyet            13.91 335deP       P      18 41 36.2 -0.4
VLA   Vladivostok       13.97 339⇑eP       P      18 41 38.1 +0.9
VLA                                pmax    pmax
      comp=Z,36nm,0.8s
ASAJ  Asahikawa         14.24  12  P       P      18 41 41.9 +1.8
      comp=Z,59nm,0.6s,baz=184,slow=7.1,SNR=50
ASAJ                               S       S      18 44 12.9 +1.5
      comp=Z,9.0nm,0.8s,baz=180,slow=17,SNR=1.8
JKA   Kamikawa-asahi    14.24  12          P      18 41 40.4 +0.3
JKA   Kamikawa-asahi    14.24  12          S      18 44 12.9 +1.5
NMR   Nemuro--Hokkai    14.31  21 eP       P      18 41 41.6 +0.7
GLVR  Golovnino         14.58  20 eP       P      18 41 45.2 +1.4
RUSJ  Misakicho         14.84  19 eP       P      18 41 48.4 +1.9
TEY   Ternei            14.89 354⇑eP       P      18 41 47.7 +0.6
TEY                                pmax    pmax
      comp=E,10.0nm,0.6s
TEY                                pmax    pmax
      comp=N,40nm,0.7s
TEY                                pmax    pmax
      comp=Z,70nm,0.6s
USRK  Ussuriysk Ar.     14.93 341  P       P      18 41 48.0 +0.5
      comp=Z,68nm,0.6s,baz=165,slow=11,SNR=122
YUK   Yuzh-Kuril'sk     14.95  21ceP       P      18 41 48.8 +1.1
YOJ   Yonaguni jima     15.01 251  P       P      18 41 48.5 -0.1
YOJ   Yonaguni jima     15.01 251  P       P      18 41 48.5 -0.1
YOJ                                pmax    pmax
      comp=Z,64nm,0.6s
MDJ   Mudanjiang        16.06 336  IAmb    IAmb   18 42 01.0
      comp=Z,20nm,0.8s
MDJ   Mudanjiang        16.06 336  P       P      18 42 00.1 +0.5
MDJ                                pmax    pmax
      comp=Z,31nm,0.9s
MDJ   Mudanjiang        16.06 336  P       P      18 42 00.1 +0.5
YHNB  Yeheng            16.27 254  P       P      18 42 01.1 -1.1
NACB  Ninganchiao       16.29 252  P       P      18 42 00.2 -2.2
YULB  Yu-li             16.88 250  P       P      18 42 06.8 -1.8
YULB  Yu-li             16.88 250  P       P      18 42 08.2 -0.4
SSLB  Suanglung         16.99 252          P      18 42 09.0 -0.8
SSLB  Suanglung         16.99 252  P       P      18 42 10.0 +0.3
YSS   Yuzhno-Sakhali    17.03  10          P      18 42 09.8  0.0
YSS   Yuzhno-Sakhali    17.03  10  P       P      18 42 10.6 +0.8
YSS   Yuzhno-Sakhali    17.03  10 eP       P      18 42 10.4 +0.6
YSS                               eS       S      18 45 05.7 +0.2
YSS                                pmax    pmax
      comp=Z,400nm,5.4s
YSS                                pmax    pmax
      comp=Z,70nm,1.0s
NJ2   Nanjing           17.03 281 ⇓P       P      18 42 08.7 -1.3
NJ2                                pmax    pmax
      comp=Z,40nm,0.9s
TWGBT Beinan            17.33 249  P       P      18 42 15.0 +1.7
TWG   Pinlang           17.34 249  P       P      18 42 12.3 -1.1
TPUB  Ta-pu             17.47 251  P       P      18 42 13.9 -0.9
GUMO  Guam              17.51 159  P       P      18 42 17.0 +1.7
      comp=Z,86nm,0.4s,baz=340,slow=4.4,SNR=13
BNX   BinXian           17.82 334 ⇓P       P      18 42 18.1 -0.1
BNX                                pmax    pmax
      comp=Z,13nm,0.8s
QZH   Quanzhou          18.51 258 eP       P      18 42 24.8 -0.6
KNMB  Chin-men Tao      18.86 257  P       P      18 42 27.9 -0.9
TIA   Tai'an            18.95 294  P       P      18 42 28.2 -1.2
TIA                                pmax    pmax
      comp=Z,120nm,0.6s
GRNR  Gornyy            20.61 356⇑iP       P      18 42 45.3 +0.9
GRNR                               pmax    pmax
      comp=N,10.0nm,1.0s
GRNR                               pmax    pmax
      comp=Z,20nm,1.0s
BJT   Baijiatuau        20.77 304          P      18 42 45.4 -0.6
BJT                                IAmb    IAmb   18 42 47.1
      comp=Z,21nm,0.9s
BJT   Baijiatuau        20.77 304  P       P      18 42 46.7 +0.6
BJT   Baijiatuau        20.77 304  P       P      18 42 45.4 -0.6
BJT                                pmax    pmax
      comp=Z,21nm,0.9s
BJI   Beijing           20.77 304  P       P      18 42 46.1  0.0
BJI                                pmax    pmax
      comp=Z,13nm,0.9s
TYV   Tymovskoe         20.86   7 eP       P      18 42 47.7 +1.0
TYV                               eS       S      18 46 10.8 +1.0
TYV                                pmax    pmax
      comp=Z,37nm,0.9s
TYV                                pmax    pmax
      comp=Z,300nm,2.8s
TYV                                smax    smax
      comp=N,800nm,5.2s
TYV                                smax    smax
      comp=E,600nm,5.2s
WHN   Wuhan             20.94 277 ⇑P       P      18 42 48.4 +0.7
WHN                                pmax    pmax
      comp=E,74nm,0.6s
HNS   HongShan          21.10 296 ⇓P       P      18 42 48.5 -0.6
HNS                                pmax    pmax
      comp=E,53nm,0.8s
HEH   HeiHe             21.73 340 eP       P      18 42 55.2 +0.6
HEH                                pmax    pmax
      comp=E,25nm,1.0s
LYN   LuoYang           22.49 288  P       P      18 43 01.5 -0.2
LYN                                pmax    pmax
      comp=E,45nm,0.8s
HKPS  Hong Kong Po S    23.30 256  P       P      18 43 08.6 -0.6
HHC   Hu-ho-hao-te      24.36 303 eP       P      18 43 18.8 +0.2
HHC                                pmax    pmax
      comp=E,16nm,0.6s
HHC                                pmax    pmax
      comp=E,510nm,5.2s
ZEA   Zeya              24.93 344 eP       P      18 43 23.8 +0.5
ZEA                                pmax    pmax
      comp=N,10.0nm,0.4s
ZEA                                pmax    pmax
      comp=Z,30nm,0.5s
ENH   Enshi             25.15 278          P      18 43 25.1 -0.5
ENH   Enshi             25.15 278  P       P      18 43 25.6  0.0
XAN   Xi'an             25.40 286 ⇑P       P      18 43 27.5 -0.4
XAN                                pmax    pmax
      comp=Z,93nm,0.7s
BTO   Baotou            25.42 302 eP       P      18 43 28.1 +0.1
BTO                                sP      sP     18 45 36.9 +1.3
BTO                                S       S      18 47 29.0 +6.5
BTO                                pmax    pmax
      comp=Z,13nm,0.5s
BTO                                pmax    pmax
      comp=Z,250nm,4.7s
PEA0B Petropavlovsk-    26.79  26  P       P      18 43 40.3 +0.5
PEA0B                              IAmb    IAmb   18 43 54.2
      comp=Z,45nm,1.4s
PEA0B Petropavlovsk-    26.79  26  P       P      18 43 40.3 +0.5
PEA0B                              pmax    pmax
      comp=Z,45nm,1.4s
PETK  Petropavlovsk-    26.79  26  P       P      18 43 40.7 +0.9
      comp=Z,11nm,0.9s,baz=212,slow=6.0,SNR=19
PETK                               ScP     ScP    18 49 44.7 -2.3
      comp=Z,2.1nm,0.7s,baz=188,slow=3.9,SNR=5.0
      comp=Z,11nm,0.9s
PETK  Petropavlovsk-    26.79  26  P       P      18 43 40.2 +0.3
PET   Petropavlovsk     27.10  27  P       P      18 43 42.9 +0.4
PET                                IAmb    IAmb   18 43 52.2
      comp=Z,31nm,1.1s
GYA   Guiyang           28.33 270 ⇓P       P      18 43 53.9  0.0
GYA                                pmax    pmax
      comp=Z,75nm,0.8s
LZH   Lanzhou           29.60 291 eP       P      18 44 04.8 -0.2
LZH                                pP      pwP    18 45 26.6 -0.9
LZH                                pmax    pmax
      comp=Z,56nm,1.1s
LZDM  Lanzhou Array     29.72 290  P       P      18 44 05.7 -0.4
      comp=Z,28nm,0.8s,baz=121,slow=5.7,SNR=39
LZDM                               ScP     ScP    18 49 56.3 -0.6
      comp=Z,1.4nm,0.4s,baz=207,slow=1.7,SNR=5.9
      comp=Z,28nm,0.8s
ULN   Ulaanbaatar       29.92 315  P       P      18 44 07.1 -0.5
ULN   Ulaanbaatar       29.92 315⇓eP       P      18 44 07.8 +0.2
ULN                                pmax    pmax
      comp=Z,4.0nm,0.6s
SONM  Songino Array     30.31 315  P       P      18 44 10.9  0.0
      comp=Z,1.9nm,0.5s,baz=124,slow=8.0,SNR=19
SONM                               PcP     PcP    18 46 58.2  0.0
      comp=Z,1.0nm,0.6s,baz=124,slow=2.2,SNR=4.5
SONM                               ScP     ScP    18 49 57.1 -1.4
      comp=Z,1.4nm,0.7s,baz=130,slow=3.8,SNR=6.4
      comp=Z,1.9nm,0.5s
SONM  Songino Array     30.31 315  P       P      18 44 11.1 +0.2
MA2   Magadan           30.50  12          P      18 44 12.5 +0.3
MA2   Magadan           30.50  12  P       P      18 44 13.2 +1.0
MA2   Magadan           30.50  12ceP       P      18 44 12.8 +0.6
MA2                                pmax    pmax
      comp=Z,61nm,0.8s
MA2   Magadan           30.50  12  P       P      18 44 11.5 -0.7
      comp=Z,95nm,0.8s
TNTI  Ternate           31.17 202  P       P      18 44 06.4  -12
MYLDM Lahad Datu        31.30 221          P      18 44 20.5 +0.8
MYLDM                              IAmb    IAmb   18 44 23.2
      comp=Z,26nm,0.9s
MYLDM Lahad Datu        31.30 221  P       P      18 44 21.1 +1.4
KKM   Kota Kinabalu     31.98 226  P       P      18 44 25.9 +0.2
KKM                                IAmb    IAmb   18 44 36.8
      comp=Z,21nm,0.9s
KMI   Kunming           32.10 270 ⇑P       P      18 44 27.3 +0.5
KMI                                pmax    pmax
      comp=Z,23nm,0.7s
KMI                                LR      LR
      comp=Z,310nm,15.3s
YAK   Yakutsk           32.37 352  P       P      18 44 27.8 -0.4
      comp=Z,8.9nm,0.3s,baz=146,slow=4.8,SNR=16
YAK                                ScP     ScP    18 50 03.0 -1.8
      comp=Z,4.9nm,0.7s,baz=135,slow=1.4,SNR=3.0
      comp=Z,8.9nm,0.3s
YAK   Yakutsk           32.37 352          P      18 44 26.9 -1.4
YAK                                IAmb    IAmb   18 44 28.5
      comp=Z,21nm,0.9s
YAK   Yakutsk           32.37 352 eP       P      18 44 26.4 -1.8
YAK                               e               18 45 55.2
YAK                               e               18 47 01.7
YAK                               eS       S      18 49 09.3 -0.5
YAK                               e               18 54 00.2
YAK                                pmax    pmax
      comp=Z,19nm,0.9s
YAK                                pmax    pmax
      comp=N,8.0nm,1.3s
YAK                                pmax    pmax
      comp=E,3.0nm,1.3s
YAK                                pmax    pmax
      comp=Z,184nm,4.9s
YAK                                pmax    pmax
      comp=N,55nm,2.6s
YAK                                pmax    pmax
      comp=E,148nm,5.8s
YAK                                smax    smax
      comp=E,128nm,4.3s
YAK                                smax    smax
      comp=N,63nm,2.0s
SLVN  Son La            32.39 262          P      18 44 28.7 -0.4
SLVN  Son La            32.39 262  P       P      18 44 30.2 +1.1
PZH   PanZhiHua         32.58 273  P       P      18 44 31.6 +0.9
GTOI  Gorontalo         32.94 210  P       P      18 44 33.3 -0.5
      comp=N,39nm,0.7s
GTA   Gaotai            32.95 297 eP       P      18 44 34.1 +0.3
GTA                                PcP     PcP    18 47 06.4 +0.7
GTA                                S       S      18 49 17.5 -2.2
GTA                                pmax    pmax
      comp=N,40nm,0.7s
MANU  Manus Island      33.14 164  P       P      18 44 35.7 +0.2
MANU                               IAmb    IAmb   18 44 38.0
      comp=Z,14nm,0.7s
FAKI  Fak Fak           33.50 192  P       P      18 44 38.7 +0.2
TOLI2 Tolitoli          33.54 214          P      18 44 38.9  0.0
TOLI2                              IAmb    IAmb   18 44 39.8
      comp=Z,21nm,0.8s
TOLI2 Tolitoli          33.54 214  P       P      18 44 39.3 +0.4
MRSI  Marisa            33.55 211  P       P      18 44 38.6 -0.4
      comp=Z,622nmcomp=Z,66nm,1.2s
UBPT  Khong Chiam       33.84 251  P       P      18 44 42.7 +1.2
SEY   Seymchan          33.92  11⇑eP       P      18 44 42.2 +0.7
SEY                                pmax    pmax
      comp=Z,13nm,1.0s
SANI  Sanana            34.27 203  P       P      18 44 44.5 -0.5
SANI  Sanana            34.27 203  P       P      18 44 44.1 -0.9
      comp=Z,593nmcomp=Z,56nm,0.7s
LUWI  Luwuk             34.55 209          P      18 44 46.3 -1.2
MPSI  Mapaga            34.64 214  P       P      18 44 48.1 -0.1
KRAI  Karang Ratu       34.74 198  P       P      18 44 51.2 +2.2
      comp=Z,53nm,0.8s
APSI  Ampana            34.92 211  P       P      18 44 50.2 -0.3
AAI   Ambon             35.15 198  P       P      18 44 53.6 +1.1
      comp=Z,757nmcomp=Z,88nm,0.6s
PCI   Palu              35.75 213  P       P      18 44 56.8 -0.7
      comp=Z,1µmcomp=Z,61nm,0.5s
AMKA  Amchitka          36.72  43  P       P      18 45 06.5 +1.3
KNGR  Kungurtug, Tuv    36.73 316⇑eP       P      18 45 05.6 +0.2
KNGR                               pmax    pmax
      comp=Z,4.0nm,0.8s
GOMU  GeErMu            36.90 291  P       P      18 45 07.0 -0.4
GOMU                               pmax    pmax
      comp=Z,60nm,0.8s
SBUM  Sibu              37.26 227  P       P      18 45 10.4 +0.3
SBUM  Sibu              37.26 227  P       P      18 45 11.2 +1.1
SBUM  Sibu              37.26 227  P       P      18 45 08.8 -1.3
TTSI  Tana Toraja       37.63 212  P       P      18 45 15.1 +2.0
CHTO  Chiang Mai        37.67 262          P      18 45 13.5  0.0
CHTO  Chiang Mai        37.67 262  P       P      18 45 13.8 +0.3
CHTO  Chiang Mai        37.67 262  P       P      18 45 13.9 +0.4
      comp=Z,65nm,0.8s
CHTO  Chiang Mai        37.67 262  P       P      18 45 13.5  0.0
CHTO                               pmax    pmax
      comp=Z,48nm,0.9s
MMSI  Mamuju            37.75 213  P       P      18 45 14.4 +0.3
      comp=Z,43nm,0.6s
CM31  Chiang Mai Arr    37.82 261  P       P      18 45 14.5 -0.2
CM31                               IAmb    IAmb   18 45 16.2
      comp=Z,22nm,0.8s
CM31                               PcP     PcP    18 47 21.1 +0.7
CMAR  Chiang Mai Arr    37.82 261  P       P      18 45 15.0 +0.3
      comp=Z,13nm,0.7s,baz=58,slow=6.4,SNR=145
CMAR                               PcP     PcP    18 47 20.7 +0.3
      comp=Z,1.6nm,0.4s,baz=38,slow=2.2,SNR=8.8
CMAR                               ScP     ScP    18 50 24.9 -0.7
      comp=Z,1.5nm,0.8s,baz=35,slow=3.5,SNR=10
      comp=Z,13nm,0.7s
CMAR  Chiang Mai Arr    37.82 261          P      18 45 14.8 +0.1
CMAR                                       PcP    18 47 21.1 +0.6
CMAR                                       ScP    18 50 25.5 -0.2
CMAR  Chiang Mai Arr    37.82 261ceP       P      18 45 15.3 +0.6
CMAR                               pmax    pmax
      comp=Z,13nm,0.7s
MTKI  Muara Teweh, K    38.35 220  P       P      18 45 20.2 +1.1
SPSI  Sidrap Palu       38.47 211  P       P      18 45 20.1 +0.1
      comp=Z,23nm,0.7s
BNSI  Bone              38.71 210  P       P      18 45 23.4 +1.4
      comp=Z,57nm,0.9s
KIWB  Kanaga Island     38.97  43  P       P      18 45 23.9 +0.2
ADK   Adak              39.26  44  P       P      18 45 25.9 -0.1
ADK   Adak              39.26  44  P       P      18 45 25.9 -0.1
ADK                                pmax    pmax
      comp=Z,96nm,1.3s
KAPI  Kappang           39.41 211  P       P      18 45 28.2 +0.6
      comp=Z,17nm,0.5s,baz=34,slow=4.2,SNR=20
      comp=Z,17nm,0.5s
KAPI  Kappang           39.41 211          P      18 45 27.6 -0.1
KAPI                               IAmb    IAmb   18 45 30.2
      comp=Z,15nm,0.9s
KAPI  Kappang           39.41 211  P       P      18 45 28.5 +0.8
KAPI  Kappang           39.41 211  P       P      18 45 28.4 +0.8
      comp=Z,13nm,0.7s
BKSI  Bulukumba         39.53 210  P       P      18 45 28.7 +0.1
      comp=Z,23nm,0.7s
PMG   Port Moresby      40.23 167  P       P      18 45 33.7 -0.5
PMG   Port Moresby      40.23 167  P       P      18 45 33.7 -0.5
PMG                                pmax    pmax
      comp=Z,7.0nm,1.0s
BBKI  Banjar Baru       40.47 218  P       P      18 45 36.6 +0.3
      comp=Z,76nm,0.9s
ATKA  Atka Island       40.83  44  P       P      18 45 38.4 -0.2
LSA   Lhasa             40.90 282  P       P      18 45 36.6 -3.5
LSA                                pmax    pmax
      comp=Z,7.0nm,0.7s
LSA   Lhasa             40.90 282  P       P      18 45 41.3 +1.2
BILL  Bilibino          41.21  15  P       P      18 45 41.1 -0.4
BILL                               IAmb    IAmb   18 45 43.2
      comp=Z,18nm,0.7s
SHL   Shillong          41.35 275          P      18 45 42.3 -1.2
SHL                                IAmb    IAmb   18 45 44.7
      comp=Z,13nm,0.8s
SHL   Shillong          41.35 275  P       P      18 45 42.3 -1.2
SHL                                pmax    pmax
      comp=Z,13nm,0.8s
MMRI  Maumere           41.71 205  P       P      18 45 45.2 -0.9
MMRI                               IAmb    IAmb   18 45 48.7
      comp=Z,26nm,0.8s
TIXI  Tiksi             41.84 355  P       P      18 45 45.8 -0.6
      comp=Z,13nm,0.6s,baz=162,slow=5.4,SNR=69
      comp=Z,13nm,0.6s
TIXI  Tiksi             41.84 355          P      18 45 45.6 -0.8
TIXI                               IAmb    IAmb   18 45 46.7
      comp=Z,12nm,0.7s
TIXI  Tiksi             41.84 355⇑eP       P      18 45 46.0 -0.4
TIXI                               pmax    pmax
      comp=Z,12nm,0.7s
EDFI  Ende, Flores      42.01 205  P       P      18 45 48.8 +0.1
      comp=Z,29nm,0.6s
SOEI  Soe               42.06 201          P      18 45 48.4 -0.7
SOEI  Soe               42.06 201  P       P      18 45 49.9 +0.8
SOEI  Soe               42.06 201  P       P      18 45 50.8 +1.7
      comp=Z,38nm,0.5s
WMQ   Urumqi            42.24 303 eP       P      18 45 51.4 +1.2
WMQ                                pmax    pmax
      comp=Z,23nm,0.9s
LBFI  Labuhan Bajo,     42.47 208  P       P      18 45 52.8 +0.6
      comp=Z,37nm,0.7s
BRDH  Bariadhala        42.49 271  P       P      18 45 52.7 +0.4
      comp=Z,173nm,0.3s,baz=200,slow=20,SNR=5.1
BATI  Baumata           42.68 202  P       P      18 45 53.4 -0.5
      comp=Z,23nm,0.5s,baz=2.1,slow=1.5,SNR=11
BATI                               PcP     PcP    18 47 36.7 +0.4
      comp=Z,9.2nm,0.5s,baz=45,slow=2.9,SNR=3.8
BATI                               S       S      18 51 43.6 -0.8
      comp=Z,6.9nm,0.3s,baz=68,slow=19,SNR=1.8
      comp=Z,23nm,0.5s
BATI  Baumata           42.68 202  P       P      18 45 55.1 +1.2
      comp=Z,38nm,1.0s
DGZ   Jazzator, Alta    42.87 312deP       P      18 45 55.8 +0.7
DGZ                                pmax    pmax
      comp=Z,13nm,0.9s
DBNI  Kabupaten Domp    43.15 210  P       P      18 45 57.6  0.0
      comp=Z,19nm,0.7s
MTN   Manton Dam        43.40 191  P       P      18 45 59.2 -0.3
MTN                                IAmb    IAmb   18 46 29.2
      comp=Z,20nm,1.2s
MYKOM Kota Tinggi       43.43 236  P       P      18 46 00.5 +0.7
KULM  Kulim             43.50 243          P      18 46 01.1 +0.7
KULM  Kulim             43.50 243  P       P      18 46 01.3 +0.9
PLAI  Plampang          43.68 211  P       P      18 46 01.0 -0.7
PLAI  Plampang          43.68 211  P       P      18 46 01.4 -0.3
      comp=Z,53nm,0.8s
IPM   Ipoh              43.73 242          P      18 46 01.8 -0.4
IPM                                PcP     PcP    18 47 40.1 +0.2
IPM   Ipoh              43.73 242  P       P      18 46 02.4 +0.2
IPM   Ipoh              43.73 242  P       P      18 46 02.4 +0.2
      comp=Z,48nm,0.7s
TWSI  Taliwang, Sumb    44.00 212  P       P      18 46 04.4 +0.2
      comp=Z,3µmcomp=Z,26nm,0.7s
KLNI  Mataram           44.09 213  P       P      18 46 05.6 +0.7
      comp=Z,65nm,1.1s
COEN  Coen              44.12 174  P       P      18 46 05.9 +0.7
NIKH  Nikolski High     44.17  44  P       P      18 46 04.8 -0.3
NIKH  Nikolski High     44.17  44  P       P      18 46 04.7 -0.4
      baz=260
KHKI  Kahang-Kahang     44.27 214  P       P      18 46 07.9 +1.6
      comp=Z,94nm,0.9s
SPIA  Saint Paul Isl    44.30  37  P       P      18 46 06.3 +0.4
      baz=255
P08K  Saint George I    44.52  38  P       P      18 46 08.0 +0.3
      baz=256
EVN   Everest           45.02 281          P      18 46 12.9 +0.1
EVN                                IAmb    IAmb   18 46 14.2
      comp=Z,20nm,0.6s
EVN                                PcP     PcP    18 47 45.4 +0.3
JAGI  Jajag, Banyuwa    45.08 215  P       P      18 46 12.1 -0.5
JAGI                               IAmb    IAmb   18 46 14.9
      comp=Z,25nm,1.0s
ZAA0  Zalesovo Array    45.09 318  P       P      18 46 11.7 -0.6
ZAA0                                       PcP    18 47 43.0 -0.9
ZALV  Zalesovo Beam     45.09 318  P       P      18 46 11.4 -0.7
      comp=Z,3.7nm,0.4s,baz=103,slow=7.9,SNR=26
ZALV                               PcP     PcP    18 47 43.5 -0.5
      comp=Z,3.3nm,0.4s,baz=116,slow=3.7,SNR=14
ZALV                               ScP     ScP    18 50 52.2 -1.8
      comp=Z,2.7nm,0.7s,baz=113,slow=3.9,SNR=9.9
ZALV                               S       S      18 52 14.8 -3.1
      comp=Z,0.7nm,0.6s,baz=84,slow=13,SNR=2.9
      comp=Z,3.7nm,0.4s
ZALV  Zalesovo Beam     45.09 318          P      18 46 11.6 -0.7
ZALV                                       PcP    18 47 43.0 -0.9
SJI   Sawahan           45.70 219  P       P      18 46 17.2 -0.3
      comp=Z,46nm,0.5s
UNV   Unalaska Valle    45.70  43  P       P      18 46 16.6 -0.2
UNV   Unalaska Valle    45.70  43  P       P      18 46 16.5 -0.4
      baz=262
SNJI  Sawahan-Nganju    45.74 219  P       P      18 46 18.7 +0.8
      comp=Z,49nm,1.2s
MK31  Makanchi Array    46.10 307deP       P      18 46 19.8 -0.3
MKAR  Makanchi Array    46.10 307  P       P      18 46 19.9 -0.2
      comp=Z,8.1nm,0.8s,baz=92,slow=9.3,SNR=62
MKAR                               PcP     PcP    18 47 48.2 +0.5
      comp=Z,2.7nm,0.5s,baz=81,slow=5.5,SNR=15
MKAR                               ScP     ScP    18 50 56.6 -1.8
      comp=Z,2.5nm,0.9s,baz=90,slow=6.1,SNR=7.8
      comp=Z,8.1nm,0.8s
MKAR  Makanchi Array    46.10 307          P      18 46 19.5 -0.7
MKAR                                       pwP    18 47 47.1 -2.3
MKAR  Makanchi Array    46.10 307ceP       P      18 46 20.1  0.0
MKAR                               pmax    pmax
      comp=Z,8.0nm,0.8s
AKUT  Akutan            46.17  42  P       P      18 46 20.0 -0.5
MAKZ  Makanchi          46.31 307          P      18 46 21.2 -0.6
MAKZ                               IAmb    IAmb   18 46 22.6
      comp=Z,25nm,1.5s
MAKZ                               PcP     PcP    18 47 47.8 -0.7
PSI   Prapat            46.41 242  P       P      18 46 22.9 -0.1
      comp=Z,5.8nm,0.3s,baz=30,slow=5.4,SNR=9.7
PSI                                PcP     PcP    18 47 49.7 +0.2
      comp=Z,3.7nm,0.4s,baz=18,slow=3.2,SNR=4.2
      comp=Z,5.8nm,0.3s
PSI   Prapat            46.41 242  P       P      18 46 23.5 +0.5
UGM   Wanagama          46.53 220  P       P      18 46 23.3 -0.4
CTJI  Waduk Cacaban     46.55 222  P       P      18 46 24.8 +0.8
      comp=Z,45nm,1.0s
KNRA  Kununurra         46.59 193          P      18 46 24.5 +0.3
KNRA                               IAmb    IAmb   18 46 31.4
      comp=Z,41nm,1.4s
KPJI  Karang Pucung     46.96 222  P       P      18 46 27.3 +0.2
      comp=Z,79nm,0.9s
M11K  Mekoryuk          47.16  34  P       P      18 46 28.9 +1.1
      baz=256
MNSI  Mandailing Nat    47.22 239  P       P      18 46 29.0 -0.1
      comp=Z,38nm,0.8s
PPI   Padang Panjang    47.46 237  P       P      18 46 32.2 +1.3
      comp=Z,2µmcomp=Z,37nm,0.7s
KLSI                    47.50 229  P       P      18 46 31.8 +0.6
KLI   Kotabumi          47.55 229  P       P      18 46 32.1 +0.6
FALS  False Pass        47.62  42  P       P      18 46 32.1 +0.6
      baz=263
MDSI  Maura Dua         47.71 230  P       P      18 46 32.8  0.0
      comp=Z,1µmcomp=Z,142nm,0.9s
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KRJI	Kerinci	47.83	235	P	P	18 46 36.9	+3.1
	comp=Z,84nm,0.7s						
TNA	Tin City	47.96	27	P	P	18 46 34.3	+0.5
	baz=250						
MASI	Maura Aman, Be	48.04	233	P	P	18 46 36.0	+0.7
KSI	Kapahiang	48.16	232	P	P	18 46 37.1	+0.8
GSI	Gunungsitoli	48.40	241		P	18 46 37.6	-0.3
GSI	Gunungsitoli	48.40	241	P	P	18 46 38.3	+0.4
GSI	Gunungsitoli	48.40	241	P	P	18 46 38.3	+0.4
MNAI	Manna	48.44	231	P	P	18 46 37.7	-0.6
M13K	Dall Lake	48.54	34	P	P	18 46 38.7	+0.4
	baz=258						
F14K	Arctic Creek	48.55	27	P	P	18 46 39.0	+0.6
	baz=251						
KURK	Kurchatov	48.58	313		S	18 53 04.7	-2.1
KURK	Kurchatov	48.58	313		P	18 46 38.0	-0.8
KURK				IAmb	IAmb	18 46 39.2	
	comp=Z,13nm,0.9s						
KURK				PcP	PcP	18 47 55.6	-0.9
KURK	Kurchatov	48.58	313*de*	P	P	18 46 38.3	-0.5
KURK				pmax	pmax		
	comp=Z,12nm,1.0s						
NRIK	Noril'sk	48.62	338		P	18 46 38.5	-0.3
NRIK	Noril'sk	48.62	338*ce*	P	P	18 46 38.7	-0.1
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WUS	Wushi	48.63	300		P	18 46 39.4	-0.1
WUS				IAmb	IAmb	18 46 41.7	
	comp=Z,9.1nm,0.7s						
KURBB	Kurchatov Arra	48.64	313	P	P	18 46 38.9	-0.4
	comp=Z,10nm,0.5s,baz=91,slow=7.8,SNR=200						
KURBB				PcP	PcP	18 47 54.9	-1.8
	comp=Z,0.8nm,0.4s,baz=99,slow=3.5,SNR=4.4						
KURBB				S	S	18 53 04.7	-2.8
	comp=Z,0.5nm,0.4s,baz=90,slow=19,SNR=2.7						
	comp=Z,10nm,0.5s						
ANM	Nome	48.66	28	P	P	18 46 40.0	+0.8
	baz=253						
L14K	Kuka Creek	49.05	33	P	P	18 46 42.9	+0.8
	baz=258						
PRZ	Przheval'sk	49.09	302		P	18 46 43.9	+0.8
PRZ	Przheval'sk	49.09	302	P	P	18 46 43.9	+0.8
PRZ				pmax	pmax		
	comp=Z,37nm,0.6s						
M14K	Bethel	49.28	34	P	P	18 46 44.3	+0.5
	baz=260						
F15K	North Star Dit	49.29	27	IAmb	IAmb	18 46 45.9	
	comp=Z,17nm,0.7s						
F15K	North Star Dit	49.29	27	P	P	18 46 44.3	+0.4
	baz=253						
G15K	Niukluk	49.33	28	P	P	18 46 44.6	+0.4
	baz=254						
SDPT	Sand Point	49.35	41	P	P	18 46 44.1	-0.4
SDPT				PcP	PcP	18 47 58.2	-1.1
SDPT	Sand Point	49.35	41	P	P	18 46 44.4	-0.1
	baz=266						
TARG	Taragay, Kyrgy	49.62	301		P	18 46 47.5	+0.3
TARG				IAmb	IAmb	18 46 48.9	
	comp=Z,13nm,0.9s						
TARG	Taragay, Kyrgy	49.62	301	P	P	18 46 47.6	+0.3
TARG				pmax	pmax		
	comp=Z,13nm,0.9s						
FITZ	Fitzroy Crossi	49.63	196	P	P	18 46 47.3	+0.4
	comp=Z,4.5nm,0.5s,baz=9.5,slow=8.6,SNR=19						
	comp=Z,4.5nm,0.5s						
FITZ	Fitzroy Crossi	49.63	196		P	18 46 47.3	+0.4
FITZ				PcP	PcP	18 48 00.9	+0.1
L15K	Ungalak Mounta	49.68	33	P	P	18 46 47.7	+0.9
	baz=259						
K15K	Wolf Creek Mou	49.77	32	P	P	18 46 48.6	+1.1
	baz=259						
CHNA	Chernabura Isl	49.83	42	P	P	18 46 48.8	+0.8
	baz=267						
WB0	Warramunga Arr	49.85	185		P	18 46 48.7	+0.1
WB0				IAmb	IAmb	18 46 49.4	
	comp=Z,19nm,0.5s						
C16K	Lisburne Hills	49.86	24	P	P	18 46 48.5	+0.5
	baz=250						
M15K	Kasigluk River	49.88	34	P	P	18 46 49.0	+0.6
	baz=261						
H16K	Elim	49.98	29	P	P	18 46 50.4	+1.4
	baz=256						
WRAB	Tennant Creek	50.02	185	P	P	18 46 50.0	+0.1
WRAB	Tennant Creek	50.02	185	P	P	18 46 49.9	+0.1
WRAB	Tennant Creek	50.02	185*de*	P	P	18 46 49.9	+0.1
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.5s						
WRA	Warramunga Arr	50.03	185	P	P	18 46 49.8	-0.2
	comp=Z,13nm,0.5s,baz=1.6,slow=8.1,SNR=140						
WRA				PcP	PcP	18 48 02.6	+0.4
	comp=Z,2.1nm,0.4s,baz=359,slow=4.0,SNR=7.0						
WRA				PP	PP	18 48 49.2	-1.4
	comp=Z,1.7nm,0.5s,baz=11,slow=7.8,SNR=2.7						
WRA				S	S	18 53 27.6	+0.4
	comp=Z,3.7nm,1.1s,baz=4.4,slow=14,SNR=7.7						
	comp=Z,13nm,0.5s						
WRA	Warramunga Arr	50.03	185		P	18 46 48.6	-1.3
WRA				PcP	PcP	18 48 02.9	+0.6
WRA	Warramunga Arr	50.03	185 *i*	P	P	18 46 46.5	-3.4
WRA				pmax	pmax		
	comp=Z,11nm,0.5s						
KDJ	Kajisay	50.03	302	P	P	18 46 49.8	-0.2
KDJ	Kajisay	50.03	302	P	P	18 46 49.8	-0.2
KDJ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
WB1	Warramunga Ar.	50.05	185	P	P	18 46 49.9	-0.2
N15K	Kwethluk River	50.10	35	P	P	18 46 50.9	+0.9
	baz=262						
O15K	Ungalikthiuk R	50.10	36	P	P	18 46 50.9	+0.9
	baz=263						
J16K	Anvik River	50.39	31	P	P	18 46 53.3	+1.2
	baz=259						
I17K	Unalakleet	50.47	30	P	P	18 46 53.9	+1.3
	baz=258						
D17K	Noatak River	50.48	25	P	P	18 46 54.0	+1.4
	baz=253						
L16K	Owhat River	50.63	33	P	P	18 46 55.1	+1.3
	baz=261						
RDOG	Red Dog Mine	50.65	24	P	P	18 46 54.8	+0.8
RDOG				IAmb	IAmb	18 46 56.0	
	comp=Z,20nm,1.1s						
RDOG	Red Dog Mine	50.65	24	P	P	18 46 55.4	+1.5
	baz=253						
C17K	DeLong Mountai	50.68	24	P	P	18 46 55.1	+1.0
	baz=252						
E17K	Hotham Inlet	50.77	26	P	P	18 46 55.7	+1.0
	baz=254						
M16K	Timber Creek	50.77	34	P	P	18 46 55.6	+0.7
	baz=262						
N16K	Nishlik Lake	50.79	35	P	P	18 46 55.9	+0.8
	baz=263						
F17K	Baldwin Pennin	50.83	27	IAmb	IAmb	18 46 57.2	
	comp=Z,15nm,0.8s						
F17K	Baldwin Pennin	50.83	27	P	P	18 46 56.1	+1.0
	baz=256						
G17K	Kiwalik Mounta	50.84	28	P	P	18 46 55.9	+0.6
	baz=257						
BOOM	Boomskoye usch	50.90	302	P	P	18 46 56.5	+0.1
BOOM				IAmb	IAmb	18 46 57.6	
	comp=Z,11nm,0.6s						
BOOM	Boomskoye usch	50.90	302	P	P	18 46 56.5	+0.1
BOOM				pmax	pmax		
	comp=Z,11nm,0.6s						
H17K	Granite Mounta	51.02	29	P	P	18 46 57.7	+1.0
	baz=258						
P16K	Nushagak River	51.02	36	P	P	18 46 58.1	+1.3
P16K	Nushagak River	51.02	36	P	P	18 46 57.7	+1.0
	baz=265						
O16K	Kokwok River B	51.03	36	P	P	18 46 57.5	+0.7
	baz=264						
J17K	VABM Dome	51.09	31	IAmb	IAmb	18 46 59.1	
	comp=Z,16nm,0.8s						
J17K	VABM Dome	51.09	31	P	P	18 46 58.2	+1.1
	baz=260,SNR=6.3						
TKM2	Tokmak 2	51.09	303	P	P	18 46 58.5	+0.6
	SNR=12						
R16K	Pilot Point	51.12	38	P	P	18 46 58.4	+0.9
	baz=266						
L17K	Donlin	51.24	32	P	P	18 46 59.5	+1.2
	baz=262						
E18K	Tukpahlearik C	51.32	26	P	P	18 46 60.0	+1.2
	baz=255						
K17K	Iditarod	51.32	32	IAmb	IAmb	18 47 01.4	
	comp=Z,19nm,0.8s						
K17K	Iditarod	51.32	32	P	P	18 47 00.1	+1.2
	baz=261						
KSH	Kashi	51.33	298	P	P	18 47 03.2	+3.7
KSH				pmax	pmax		
	comp=Z,20nm,0.7s						
B18K	Kokolik River	51.43	23	P	P	18 47 00.8	+1.2
	baz=253						
C18K	Utukok River	51.43	24	IAmb	IAmb	18 47 02.0	
	comp=Z,23nm,1.2s						
C18K	Utukok River	51.43	24	P	P	18 47 00.6	+0.9
	baz=254						
F18K	Selawik	51.48	27	P	P	18 47 01.1	+1.1
	baz=257						
O17K	Koliganek Bris	51.55	36	P	P	18 47 01.5	+0.9
	baz=265						
M17K	Holitna River	51.55	33	P	P	18 47 01.7	+1.2
	baz=263						
N17K	Nushagak Hills	51.58	35	P	P	18 47 01.9	+1.2
	baz=264						
KBK	Karagaybulak	51.60	302	P	P	18 47 02.1	+0.6
	SNR=12						
H18K	Honhosa River	51.71	29	IAmb	IAmb	18 47 03.4	
	comp=Z,12nm,0.7s						
H18K	Honhosa River	51.71	29	P	P	18 47 02.9	+1.2
	baz=259						
G18K	Tagagawik	51.73	28	IAmb	IAmb	18 47 03.6	
	comp=Z,19nm,0.8s						
G18K	Tagagawik	51.73	28	P	P	18 47 02.6	+0.8
	baz=259						
P17K	Kvichak River	51.83	36	P	P	18 47 03.6	+1.0
P17K	Kvichak River	51.83	36	P	P	18 47 03.8	+1.2
	baz=266						
USP	Ospenovka	51.84	303	P	P	18 47 03.3	+0.2
	SNR=9.1						
A19K	Wainwright	51.92	22	P	P	18 47 04.2	+1.1
	baz=253						
AAK	Ala-Archa	51.94	303	P	P	18 47 04.2	+0.2
	SNR=8.4						
AAK	Ala-Archa	51.94	303		P	18 47 03.6	-0.3
AAK	Ala-Archa	51.94	303	P	P	18 47 04.1	+0.2
AAK	Ala-Archa	51.94	303*de*	P	P	18 47 04.1	+0.2
AAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
UCH	Uchtor	51.98	302	P	P	18 47 05.1	+0.5
	SNR=13						
L18K	Granite Mounta	52.00	33	IAmb	IAmb	18 47 06.5	
	comp=Z,24nm,1.0s						
L18K	Granite Mounta	52.00	33	P	P	18 47 05.1	+1.3
	baz=263						
Q17K	Contact Creek	52.06	38	P	P	18 47 04.9	+0.4
	baz=267						
C19K	Lookout Ridge	52.12	24	IAmb	IAmb	18 47 06.5	
	comp=Z,12nm,0.8s						
C19K	Lookout Ridge	52.12	24	P	P	18 47 05.9	+1.2
	baz=255						
J18K	Innoko River	52.15	31	P	P	18 47 05.7	+0.8
	baz=262						
N18K	Kilae Creek	52.23	35	P	P	18 47 06.5	+1.0
	baz=265						
GCSA	Galena City Sc	52.26	29	P	P	18 47 06.4	+0.8
	baz=261						
F19K	Shaleruckik Mo	52.27	27	P	P	18 47 06.0	+0.4
	baz=259						
M18K	Stony River	52.33	33	P	P	18 47 06.8	+0.6
	baz=265						
G19K	Purcell Mounta	52.41	28	P	P	18 47 06.9	+0.2
	baz=260						
EKS2	Erkin-Say	52.45	303	P	P	18 47 07.9	+0.3
	SNR=7.0						
P18K	Big Mountain,	52.47	36	P	P	18 47 07.3	0.0
	baz=267						
D19K	Kuna River	52.49	25	P	P	18 47 08.0	+0.7
	baz=257						
O18K	Koktuh Hills	52.51	36	P	P	18 47 08.4	+0.9
	baz=266						
Q18K	Katmai Hardscr	52.54	37	P	P	18 47 08.5	+0.5
	baz=268						
H19K	Roundabout Mou	52.56	28	IAmb	IAmb	18 47 09.9	
	comp=Z,20nm,0.8s						
H19K	Roundabout Mou	52.56	28	P	P	18 47 08.8	+1.0
	baz=261						
E19K	Redstone River	52.59	26	IAmb	IAmb	18 47 10.0	
	comp=Z,21nm,0.9s						
E19K	Redstone River	52.59	26	P	P	18 47 09.2	+1.1
	baz=259						
J19K	Poorman	52.70	30	IAmb	IAmb	18 47 10.7	
	comp=Z,17nm,0.8s						
J19K	Poorman	52.70	30	P	P	18 47 09.2	+0.4
	baz=263,SNR=9.2						
R18K	Karluk	52.80	38	P	P	18 47 09.8	+0.1
	baz=269						
L19K	White Mountain	52.85	33	P	P	18 47 10.8	+0.8
	baz=265						
N19K	Bonanza Creek	52.92	34	P	P	18 47 11.5	+0.9
N19K				PcP	PcP	18 48 11.5	-1.3
N19K	Bonanza Creek	52.92	34	P	P	18 47 11.5	+0.9
	baz=266,SNR=8.3						
SII	Sitkinak Islan	52.94	40	P	P	18 47 11.5	+0.8
	baz=270						
O19K	Port Alsworth	52.97	35	P	P	18 47 11.9	+1.1
	baz=267,SNR=5.1						
D20K	Etivluk River	53.07	24	IAmb	IAmb	18 47 13.3	
	comp=Z,13nm,0.7s						
D20K	Etivluk River	53.07	24	P	P	18 47 12.2	+0.7
	baz=258						
SANVU	Saraoutou	53.09	145	P	P	18 47 13.3	+1.1
F20K	Avaraart Lake	53.10	27	P	P	18 47 12.2	+0.6
	baz=260						
E20K	Nigu River	53.14	25	P	P	18 47 12.5	+0.5
	baz=259						
B20K	Meade River	53.16	23	IAmb	IAmb	18 47 14.0	
	comp=Z,20nm,0.8s						
B20K	Meade River	53.16	23	P	P	18 47 12.9	+0.9
	baz=257						
H20K	Anotleneega Mo	53.20	29	P	P	18 47 13.4	+1.0
	baz=262						
ARSB	Arslanbob	53.26	301	IAmb	IAmb	18 47 14.9	
	comp=Z,32nm,1.2s						
I20K	Naaghedeneel	53.29	29	P	P	18 47 14.2	+1.2
	baz=263						
K20K	Telida	53.32	31	P	P	18 47 14.6	+1.3
	baz=265,SNR=16						
J20K	Nowinta River	53.36	30	P	P	18 47 15.2	+1.6
	baz=264,SNR=17						
P19K	Oil Pt	53.49	36	P	P	18 47 15.7	+1.0
	baz=268						
M20K	Styx River	53.64	33	P	P	18 47 16.4	+0.7
	baz=267						
BVAR	Borovoye Array	53.64	316	P	P	18 47 15.7	-0.2
	comp=Z,16nm,0.5s,baz=95,slow=7.2,SNR=99						
BVAR				PcP	PcP	18 48 15.6	0.0
	comp=Z,3.1nm,0.4s,baz=68,slow=3.9,SNR=7.8						
BVAR				S	S	18 54 12.2	-3.0
	comp=Z,1.0nm,0.6s,baz=104,slow=10,SNR=1.7						
	comp=Z,16nm,0.5s						
BORK	Borovoye	53.68	316		P	18 47 16.0	-0.1
BORK				IAmb	IAmb	18 47 16.8	
	comp=Z,14nm,0.6s						
BORK	Borovoye	53.68	316*d i*	P	P	18 47 15.9	-0.2
BORK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
IMAR	Indian Mountai	53.73	28	P	P	18 47 16.9	+0.7
AS31	Alice Springs	53.75	185		P	18 47 16.8	-0.1
ASAR	Alice Springs	53.76	185	P	P	18 47 17.1	+0.1
	comp=Z,5.4nm,0.5s,baz=360,slow=6.1,SNR=299						
ASAR				PcP	PcP	18 48 16.4	+0.1
	comp=Z,1.1nm,0.6s,baz=359,slow=4.2,SNR=5.4						
ASAR				S	S	18 54 17.3	0.0
	comp=Z,0.5nm,0.8s,baz=12,slow=9.2,SNR=5.4						
	comp=Z,5.4nm,0.5s						
ASAR	Alice Springs	53.76	185		P	18 47 17.0	+0.1
ASAR				PcP	PcP	18 48 17.4	+1.0
C21K	Knifeblade Rid	53.81	24	P	P	18 47 17.7	+1.0
	baz=260						
O20K	Slope Mountain	53.81	35	P	P	18 47 18.0	+1.0
	baz=269						
G21K	Allakaket	53.89	27	P	P	18 47 18.3	+1.0
	baz=263						
B21K	Ikpikpuk River	53.95	23	IAmb	IAmb	18 47 19.4	
	comp=Z,16nm,0.6s						
B21K	Ikpikpuk River	53.95	23	P	P	18 47 18.5	+0.8
	baz=260						
F21K	Alatna River	53.99	26	P	P	18 47 18.8	+0.7
	baz=263						
H21K	Melozitna Rive	54.08	28	IAmb	IAmb	18 47 21.0	
	comp=Z,18nm,0.8s						
H21K	Melozitna Rive	54.08	28	P	P	18 47 20.0	+1.3
	baz=264,SNR=12						
A22K	Sinclair Lake	54.09	22	P	P	18 47 20.0	+1.3
	baz=258						
SPU	Mount Spurr	54.12	34	IAmb	IAmb	18 47 21.5	
	comp=Z,26nm,1.2s						
PPLA	Purkeypile	54.13	32	IAmb	IAmb	18 47 21.7	
	comp=Z,21nm,0.8s						
PPLA	Purkeypile	54.13	32	P	P	18 47 20.2	+0.9
	baz=267						
CHUM	Lake Minchumin	54.14	31	P	P	18 47 20.5	+1.3
	baz=266,SNR=6.0						
MBWA	Marble Bar	54.21	202	P	P	18 47 20.2	0.0
MBWA				IAmb	IAmb	18 47 21.3	
	comp=Z,23nm,0.8s						
MBWA				PcP	PcP	18 48 17.7	-0.4
I21K	Tanana	54.38	29	P	P	18 47 22.1	+1.3
	baz=266						
SKT	Skwentna	54.40	33		P	18 47 21.7	+0.6
SKT				IAmb	IAmb	18 47 22.4	
	comp=Z,16nm,0.5s						
SKT	Skwentna	54.40	33	P	P	18 47 21.7	+0.6
	baz=268,SNR=5.9						
B22K	Teshekpuk Lake	54.48	23	P	P	18 47 21.9	+0.5
	baz=260						
DRK	Karamyk	54.50	299	P	P	18 47 22.8	+0.3
DRK				IAmb	IAmb	18 47 23.7	
	comp=Z,14nm,0.6s						
DRK	Karamyk	54.50	299	P	P	18 47 22.8	+0.3
DRK				pmax	pmax		
	comp=Z,14nm,0.6s						
D22K	Ayikyak River	54.51	25	IAmb	IAmb	18 47 23.7	
	comp=Z,13nm,0.5s						
D22K	Ayikyak River	54.51	25	P	P	18 47 22.5	+0.8
	baz=262,SNR=12						
F22K	John River	54.52	26	P	P	18 47 23.0	+1.2
	baz=264						
CAPN	Captain Cook N	54.55	35	P	P	18 47 23.1	+1.0
	baz=269						
PSA00	Pilbara Seismi	54.56	202	P	P	18 47 22.4	-0.2
PSA00				IAmb	IAmb	18 47 23.4	
	comp=Z,11nm,0.6s						
PSA00	Pilbara Seismi	54.56	202	P	P	18 47 22.1	-0.6
PSA00				IAmb	IAmb	18 47 23.3	
	comp=Z,6.6nm,0.7s						
H22K	Ishtalitna Cre	54.69	28	IAmb	IAmb	18 47 25.7	
	comp=Z,12nm,0.8s						
H22K	Ishtalitna Cre	54.69	28	P	P	18 47 23.8	+0.8
	baz=266,SNR=9.4						
G22K	Bettles	54.73	27	P	P	18 47 24.1	+0.9
	baz=265						
E22K	Anaktuvuk Pass	54.73	25	IAmb	IAmb	18 47 25.5	
	comp=Z,24nm,1.2s						
E22K	Anaktuvuk Pass	54.73	25	P	P	18 47 24.2	+0.8
	baz=264						
BPAW	Bear Paw Mtn.	54.74	30	P	P	18 47 24.5	+1.1
	baz=267						
KK31	Karatay Array	54.75	304		P	18 47 23.7	-0.2
KK31				IAmb	IAmb	18 47 24.8	
	comp=Z,26nm,0.8s						
KK31	Karatay Array	54.75	304	P	P	18 47 23.7	-0.2
KK31				pmax	pmax		
	comp=Z,26nm,0.8s						
KKAR	Karatay Array	54.75	304		P	18 47 23.9	0.0
KKAR				PcP	PcP	18 48 18.5	-1.6
KKAR	Karatay Array	54.75	304	P	P	18 47 23.9	0.0
KKAR						18 48 18.5	
BRSE	Bradley Lake S	54.76	36	P	P	18 47 24.7	+1.1
	baz=270						
NIL	Nilore	54.76	292		P	18 47 24.5	+0.4
NIL	Nilore	54.76	292	P	P	18 47 24.5	+0.4
NIL				pmax	pmax		
	comp=Z,29nm,0.7s						
SUA	Susitna One	54.76	34	IAmb	IAmb	18 47 24.9	
	comp=Z,31nm,1.0s						
SUA	Susitna One	54.76	34	P	P	18 47 24.1	+0.3
	baz=269,SNR=5.6						
L22K	Petersville	54.77	32	IAmb	IAmb	18 47 25.0	
	comp=Z,27nm,0.7s						
MLY	Manley	54.89	29	P	P	18 47 25.2	+0.6
	baz=267,SNR=7.5						
CUT	Chulitna	55.00	33	P	P	18 47 25.6	+0.4
	baz=269						
TRF	Thorofare Moun	55.02	31	IAmb	IAmb	18 47 26.9	
	comp=Z,31nm,1.4s						
TRF	Thorofare Moun	55.02	31	P	P	18 47 25.8	+0.2
	baz=268,SNR=6.1						
MANEM	Manem	55.03	297		P	18 47 27.0	+0.8
MANEM				IAmb	IAmb	18 47 27.9	
	comp=Z,48nm,0.6s						
M22K	Willow	55.06	33	P	P	18 47 25.8	+0.1
	baz=270						
D23K	Nanushuk River	55.24	25	P	P	18 47 27.5	+0.6
	baz=264,SNR=5.6						
RC01	Rabbit Creek A	55.25	34	P	P	18 47 27.3	+0.3
RC01				IAmb	IAmb	18 47 28.8	
	comp=Z,32nm,1.1s						
RC01	Rabbit Creek A	55.25	34	P	P	18 47 27.4	+0.4
	baz=270						
O22K	Cooper Landing	55.26	35	P	P	18 47 27.1	0.0
	baz=271						
COLD	Coldfoot	55.26	27	P	P	18 47 27.5	+0.5
	baz=266						
G23K	Bananza Creek	55.29	27	IAmb	IAmb	18 47 29.6	
	comp=Z,20nm,0.9s						
G23K	Bananza Creek	55.29	27	P	P	18 47 28.2	+0.9
	baz=266,SNR=12						
C23K	Itkillik River	55.36	23	IAmb	IAmb	18 47 29.2	
	comp=Z,14nm,0.8s						
C23K	Itkillik River	55.36	23	P	P	18 47 28.4	+0.8
	baz=264,SNR=5.9						
SEW	Seward	55.40	35	P	P	18 47 28.5	+0.5
	baz=271						
H23K	Yukon River	55.44	28	P	P	18 47 28.5	+0.2
	baz=267						
I23K	Minto, Yukon-K	55.48	29	P	P	18 47 29.8	+1.2
	baz=268						
PMR	Palmer	55.54	34	IAmb	IAmb	18 47 30.0	
	comp=Z,38nm,1.1s						
PMR	Palmer	55.54	34	P	P	18 47 29.8	+0.8
PMR	Palmer	55.54	34	P	P	18 47 29.3	+0.4
	baz=271						
E23K	Chandalar	55.55	26	P	P	18 47 29.9	+0.7
	baz=266,SNR=6.0						
NEA2	Nenana	55.59	30	IAmb	IAmb	18 47 31.3	
	comp=Z,22nm,1.1s						
NEA2	Nenana	55.59	30	P	P	18 47 29.6	+0.2
	baz=269,SNR=9.6						
TOLK	Toolik Lake Re	55.61	25	P	P	18 47 30.0	+0.5
	baz=265						
MCK	McKinley	55.63	31		P	18 47 29.7	0.0
MCK				IAmb	IAmb	18 47 31.6	
	comp=Z,23nm,0.8s						
MCK	McKinley	55.63	31	P	P	18 47 29.7	0.0
MCK				pmax	pmax		
	comp=Z,23nm,0.8s						
MCK	McKinley	55.63	31	P	P	18 47 30.1	+0.4
	baz=269,SNR=8.1						
GHO	Glory Hole Cre	55.63	33	IAmb	IAmb	18 47 32.2	
	comp=Z,17nm,0.7s						
GAR	Garm	55.73	299	P	P	18 47 30.6	-0.3
WAT1	Susitna Watana	55.80	32	P	P	18 47 31.4	+0.5
	baz=270						
KNK	Knik Glacier	55.86	34	P	P	18 47 31.8	+0.5
	baz=271,SNR=7.5						
SML	Sawmill	55.91	33	P	P	18 47 32.1	+0.3
	baz=271,SNR=5.6						
D24K	Happy Valley	55.92	24	P	P	18 47 32.9	+1.3
	baz=266						
PWL	Port Wells	55.94	34	P	P	18 47 32.2	+0.3
PWL	Port Wells	55.94	34	P	P	18 47 32.0	+0.2
	baz=272,SNR=5.9						
E24K	Your Creek	55.97	26	P	P	18 47 32.9	+0.9
	baz=267						
C24K	Franklin Bluff	56.01	24	IAmb	IAmb	18 47 33.7	
	comp=Z,16nm,0.5s						
C24K	Franklin Bluff	56.01	24	P	P	18 47 32.9	+0.7
	baz=265						
COLA	College	56.12	30	P	P	18 47 34.3	+1.3
COLA	College	56.12	30*de*	P	P	18 47 34.0	+1.0
COLA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
H24K	Noodor Dome	56.12	28	P	P	18 47 34.2	+1.0
H24K				PcP	PcP	18 48 26.9	+1.9
H24K	Noodor Dome	56.12	28	P	P	18 47 34.1	+1.0
	baz=269,SNR=6.4						
F24K	Squaw Lake	56.17	26	IAmb	IAmb	18 47 35.6	
	comp=Z,12nm,0.7s						
F24K	Squaw Lake	56.17	26	P	P	18 47 34.4	+1.0
	baz=268						
WAT6	Susitna Watana	56.18	32	P	P	18 47 34.2	+0.5
	baz=271,SNR=8.7						

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M23K  Glacier View      56.20  33    P      P      18 47 34.2 +0.5
            baz=272
POKR  Poker Plat Res    56.30  29    IAmb   IAmb   18 47 36.5
            comp=Z,20nm,0.6s
POKR  Poker Plat Res    56.30  29    P      P      18 47 35.3 +1.0
            baz=270
G24K  Hadweenzic Riv    56.30  27    P      P      18 47 35.5 +1.1
            baz=269
DHY   Denali Highway    56.34  32    IAmb   IAmb   18 47 37.5
            comp=Z,20nm,1.3s
DHY   Denali Highway    56.34  32    P      P      18 47 35.6 +0.8
            baz=271
SCM   Sheep Creek Mo    56.39  33    P      P      18 47 35.9 +0.8
            baz=272,SNR=6.3
HDA   Harding Lake      56.51  30    IAmb   IAmb   18 47 36.4
            comp=Z,20nm,0.8s
HDA   Harding Lake      56.51  30    P      P      18 47 35.3 -0.5
            baz=271,SNR=12
IL31                    56.53  30           P      18 47 35.1 -0.7
ILAR  Eielson Array     56.53  30    P      P      18 47 35.5 -0.4
            comp=Z,4.9nm,0.7s,baz=259,slow=4.7,SNR=64
            comp=Z,4.9nm,0.7s
GLI   Glacier Island    56.54  34    P      P      18 47 36.2 +0.2
            baz=273
CHGR  Chuyangaron       56.69 299           P      18 47 37.2 -0.4
CHGR  Chuyangaron       56.69 299    P      P      18 47 37.2 -0.4
CHGR                                 pmax   pmax
            comp=Z,112nm,0.7s
D25K  Kavik River       56.80  24    P      P      18 47 38.7 +0.9
            baz=268
G25K  Bearman Lake      56.85  27    P      P      18 47 39.0 +1.0
            baz=270
M24K  Tolsona, Glenn    56.92  33    P      P      18 47 39.6 +0.9
            baz=273
H25L  Birch Creek       56.97  28    P      P      18 47 40.0 +1.2
            baz=270
Q23K  Middleton Isla    57.00  36    P      P      18 47 40.0 +0.8
            baz=274
K24K  Donnelly Dome     57.03  31    IAmb   IAmb   18 47 41.1
            comp=Z,18nm,0.7s
K24K  Donnelly Dome     57.03  31    P      P      18 47 40.2 +0.7
            baz=272,SNR=6.6
F25K  Christian Rive    57.03  26    P      P      18 47 40.5 +1.1
            baz=270,SNR=8.7
E25K  Arctic Village    57.07  26    IAmb   IAmb   18 47 41.8
            comp=Z,8.8nm,0.6s
E25K  Arctic Village    57.07  26    P      P      18 47 40.8 +1.1
            baz=269
KLU   Klutina           57.08  34    P      P      18 47 40.4 +0.6
KLU   Klutina           57.08  34    P      P      18 47 40.9 +1.1
            baz=273
J25K  Salcha River,     57.19  30    P      P      18 47 40.9 +0.3
            baz=272
PAX   Paxson            57.21  32    IAmb   IAmb   18 47 42.4
            comp=Z,14nm,0.9s
PAX   Paxson            57.21  32    P      P      18 47 41.1 +0.4
            baz=273,SNR=7.6
EYAK  Cordova Ski Ar    57.22  35    P      P      18 47 41.7 +1.0
            baz=274
HARP  HAARP             57.38  32    P      P      18 47 42.5 +0.6
            baz=274
RIDG  Independent Ri    57.45  31    IAmb   IAmb   18 47 44.0
            comp=Z,25nm,1.1s
RIDG  Independent Ri    57.45  31    P      P      18 47 42.9 +0.5
            baz=273,SNR=5.9
F26K  Sheenjek River    57.61  26    IAmb   IAmb   18 47 45.7
            comp=Z,14nm,0.5s
F26K  Sheenjek River    57.61  26    P      P      18 47 44.8 +1.5
            baz=271,SNR=12
INKA  Innaminka         57.66 178           P      18 47 44.6 +0.5
N25K  Chitina, Valde    57.70  33    P      P      18 47 44.6 +0.5
            baz=274
C27K  Jago River        57.75  24    P      P      18 47 45.0 +0.7
            baz=270
BMRM  Bremner River     57.75  34           P      18 47 44.8 +0.3
BMRM  Bremner River     57.75  34    P      P      18 47 44.8 +0.3
            baz=275
SHAA  Shahritus         57.76 298           P      18 47 45.1 +0.2
SHAA                                 IAmb   IAmb   18 47 46.3
            comp=Z,42nm,0.7s
G26K  Porcupine Rive    57.77  27    P      P      18 47 45.2 +0.8
            baz=272
SCRK  Sand Creek        57.82  31    P      P      18 47 45.1 +0.2
            baz=274,SNR=21
KBL   Kabul             57.87 294           P      18 47 45.4 -0.5
KBL                                  IAmb   IAmb   18 47 46.5
            comp=Z,11nm,0.8s
KBL   Kabul             57.87 294    P      P      18 47 45.4 -0.5
KBL                                  pmax   pmax
            comp=Z,11nm,0.9s
J26L  Joseph Creek      57.97  30    P      P      18 47 46.1 +0.1
            baz=274,SNR=24
MENT  Mentasta          58.01  32    IAmb   IAmb   18 47 48.8
            comp=Z,15nm,0.6s
MENT  Mentasta          58.01  32    P      P      18 47 47.6 +1.4
I26K  Coal Creek Min    58.09  29    P      P      18 47 46.8 +0.1
            baz=273
L26K  Log Cabin Wild    58.17  32    IAmb   IAmb   18 47 49.3
            comp=Z,34nm,1.2s
L26K  Log Cabin Wild    58.17  32    P      P      18 47 48.1 +0.8
            baz=275,SNR=11
M26K  Nabesna, AK       58.39  32    P      P      18 47 49.7 +1.0
            baz=275
MCARA McCarthy VSAT     58.47  34    P      P      18 47 50.0 +0.7
MCARA                                IAmb   IAmb   18 47 55.3
            comp=Z,17nm,1.0s
MCARA McCarthy VSAT     58.47  34    P      P      18 47 50.0 +0.7
            baz=276
CRQE  Cirque            58.51  34    P      P      18 47 50.4 +0.7
            baz=276
E27K  Coleen River      58.55  26    P      P      18 47 50.5 +0.8
            baz=273
G27K  Doyon Strip       58.61  27    P      P      18 47 51.1 +0.9
            baz=274
K27K  Chicken           58.65  30    IAmb   IAmb   18 47 52.5
            comp=Z,15nm,1.1s
K27K  Chicken           58.65  30    P      P      18 47 51.3 +0.9
            baz=275
H27K  Steamboat Moun    58.70  28    P      P      18 47 51.8 +0.9
            baz=274
I27K  Kandik River      58.72  29    IAmb   IAmb   18 47 53.1
            comp=Z,12nm,0.7s
I27K  Kandik River      58.72  29    P      P      18 47 51.7 +0.7
            baz=275,SNR=9.1
D27M  Malcolm River     58.73  24    P      P      18 47 52.0 +1.0
            baz=273
L27K  Beaver Creek,     58.86  32    P      P      18 47 52.6 +0.7
            baz=276
BCAR  Beaver Creek A    58.88  32    P      P      18 47 52.9 +0.8
M27K  Edge Creek, AK    58.91  32    P      P      18 47 53.0 +0.5
            baz=276
MESA  MESA              59.14  35    P      P      18 47 54.9 +0.8
            baz=278
F28M  Old Crow          59.24  26    P      P      18 47 55.8 +1.3
            baz=275
E28M  Babbage River     59.29  25    IAmb   IAmb   18 47 56.6
            comp=Z,8.8nm,0.6s
E28M  Babbage River     59.29  25    P      P      18 47 56.1 +1.4
            baz=275
CTG   Chitna Glacier    59.33  34    P      P      18 47 56.2 +0.9
            baz=278
CTGM  Chitina Glacie    59.34  34    P      P      18 47 55.6 +0.2
CTGM                                 IAmb   IAmb   18 47 58.8
            comp=Z,30nm,1.4s
BVCY  Beaver Creek      59.37  32    P      P      18 47 56.5 +1.0
            baz=277
I28M  Miner Creek       59.43  29    IAmb   IAmb   18 47 57.4
            comp=Z,17nm,0.6s
I28M  Miner Creek       59.43  29    P      P      18 47 56.8 +1.0
            baz=276
YUK3  Moose Creek       59.64  33    P      P      18 47 58.0 +0.6
            baz=278
DAWY  Dawson            59.82  30    P      P      18 47 59.0 +0.6
            baz=278,SNR=5.3
E29M  Blow River        59.91  25    P      P      18 48 00.0 +1.1
            baz=276
O28M  Mount Upton       59.92  34    P      P      18 47 59.9 +0.5
            baz=279
H29M  Whitestone        59.98  28    P      P      18 48 00.5 +1.1
            baz=277
PCA   Pinnacle          59.99  35    P      P      18 47 59.9 +0.2
G29M  Pine Creek        60.03  27    P      P      18 48 00.8 +1.1
            baz=277,SNR=12
YUK8  Steele Glacier    60.04  33    P      P      18 48 01.0 +0.8
            baz=279
I29M  Ogilvie Camp,     60.12  29    P      P      18 48 01.5 +1.2
            baz=278
ARTI  Arti              60.16 321    P      P      18 48 00.2 -0.5
            comp=Z,11nm,0.5s,baz=76,slow=4.2,SNR=24
            comp=Z,11nm,0.5s
ARTI  Arti              60.16 321           P      18 48 00.0 -0.7
ARTI  Arti              60.16 321⇓eP        P      18 48 00.0 -0.7
ARTI                                 pmax   pmax
            comp=Z,28nm,2.5s
J29N  Klondike Camp     60.28  30    P      P      18 48 02.7 +1.2
            baz=278
M29M  Somme Creek       60.47  32    IAmb   IAmb   18 48 05.4
            comp=Z,22nm,1.1s
M29M  Somme Creek       60.47  32    P      P      18 48 03.9 +1.0
            baz=279,SNR=7.9
L29M  L29M              60.52  31    IAmb   IAmb   18 48 05.8
            comp=Z,25nm,1.0s
L29M  L29M              60.52  31    P      P      18 48 04.3 +1.2
            baz=279,SNR=7.7
YUK4  Talbot Arm        60.57  33    P      P      18 48 04.6 +1.0
            baz=280
EPYK  Eagle Plains      60.62  27    P      P      18 48 04.7 +1.1
            baz=278
K29M  Barlow Dome       60.67  30    IAmb   IAmb   18 48 06.3
            comp=Z,17nm,0.7s
K29M  Barlow Dome       60.67  30    P      P      18 48 05.2 +1.0
            baz=279,SNR=11
AB31  Akbulak array     60.69 313           P      18 48 04.0 -0.5
AB31                                 IAmb   IAmb   18 48 05.0
            comp=Z,16nm,0.8s
ABKAR Akbulak array     60.69 313    P      P      18 48 04.2 -0.2
G30M  tAoh Zraii Nji    60.72  27    IAmb   IAmb   18 48 06.0
            comp=Z,18nm,1.0s
G30M  tAoh Zraii Nji    60.72  27    P      P      18 48 05.1 +0.7
            baz=279,SNR=9.9
YUK6  Outpost Mounta    60.77  34    P      P      18 48 05.8 +0.7
            baz=280
O29M  Mount Kennedy     60.78  34    P      P      18 48 05.7 +0.7
            baz=280
F30M  Barrier River     60.80  26    P      P      18 48 05.6 +0.8
            baz=279,SNR=15
I30M  Mount Dempster    60.94  29    IAmb   IAmb   18 48 07.7
            comp=Z,15nm,0.6s
I30M  Mount Dempster    60.94  29    P      P      18 48 06.5 +0.6
            baz=279,SNR=22
J30M  Hart River        61.06  29    IAmb   IAmb   18 48 08.3
            comp=Z,8.3nm,0.6s
J30M  Hart River        61.06  29    P      P      18 48 07.7 +0.9
            baz=280,SNR=8.7
HYT   Haines Junctio    61.21  34           P      18 48 08.9 +1.1
HYT                                  IAmb   IAmb   18 48 10.3
            comp=Z,12nm,0.9s
HYT   Haines Junctio    61.21  34    P      P      18 48 08.9 +1.1
            baz=281
M30M  Minto, Yukon      61.21  32    IAmb   IAmb   18 48 10.0
            comp=Z,9.2nm,0.9s
M30M  Minto, Yukon      61.21  32    P      P      18 48 09.1 +1.4
            baz=280
N30M  Aishikik Lake     61.28  33    P      P      18 48 08.9 +0.7
            baz=281
P29M  Windy Craggy      61.32  35    P      P      18 48 09.1 +0.6
            baz=281
FORT  Forrest           61.48 190           P      18 48 10.2 +0.5
INK   Inuvik            61.52  25           P      18 48 09.7 +0.2
INK                                  IAmb   IAmb   18 48 10.3
            comp=Z,7.4nm,0.6s
INK   Inuvik            61.52  25    P      P      18 48 09.7 +0.2
INK                                  pmax   pmax
            comp=Z,7.0nm,0.6s
INK   Inuvik            61.52  25    P      P      18 48 10.0 +0.5
            baz=280,SNR=8.4
F31M  Tsiigehtchic      61.60  26    IAmb   IAmb   18 48 11.1
            comp=Z,6.9nm,0.7s
F31M  Tsiigehtchic      61.60  26    P      P      18 48 11.0 +1.0
            baz=281
P30M  Million Dollar    61.61  35    P      P      18 48 11.3 +0.9
            baz=282
H31M  Peel River        61.67  28    P      P      18 48 11.7 +1.0
            baz=281
STKA  Stephens Creek    61.81 177    P      P      18 48 12.2 +0.3
            comp=Z,7.6nm,0.5s,baz=338,slow=7.3,SNR=18
            comp=Z,7.6nm,0.5s
STKA  Stephens Creek    61.81 177    P      P      18 48 12.0 +0.1
STKA  Stephens Creek    61.81 177    P      P      18 48 12.9 +1.0
STKA  Stephens Creek    61.81 177ceP        P      18 48 12.8 +0.9
N31M  Braeburn, Yuko    61.90  33    P      P      18 48 13.7 +1.5
            baz=282
O30N  Mendenhall        61.90  34    P      P      18 48 13.6 +1.4
            baz=282
PLBC  Pleasant Camp     62.04  35    P      P      18 48 14.6 +1.5
            baz=283
M31M  Drury Creek, Y    62.39  32    IAmb   IAmb   18 48 17.2
            comp=Z,13nm,0.8s
M31M  Drury Creek, Y    62.39  32    P      P      18 48 16.7 +1.3
            baz=283
WHY   Whitehorse        62.50  34    P      P      18 48 17.6 +1.3
            baz=283
SKAG  Skagway           62.56  35    P      P      18 48 17.8 +1.4
            baz=283
BBOO  Buckleboo         62.72 182    P      P      18 48 18.3 +0.5
BBOO                                 IAmb   IAmb   18 48 19.2
            comp=Z,8.6nm,0.7s
MORW  Morawa            62.76 202    P      P      18 48 18.0 -0.2
MORW                                 IAmb   IAmb   18 48 18.7
            comp=Z,11nm,0.8s
SIT   Sitka             63.14  38    P      P      18 48 20.6 +0.3
            baz=285
N32M  Quiet Lake        63.24  33    P      P      18 48 21.7 +0.7
            baz=284
HRA   Herat             63.26 296           P      18 48 21.9 +0.1
HRA                                  IAmb   IAmb   18 48 22.9
            comp=Z,10.0nm,0.9s
A36M  Sachs Harbour     63.45  20    P      P      18 48 23.1 +1.1
            baz=286
P33M  Teslin, Yukon     63.60  34    P      P      18 48 24.4 +1.1
            baz=285
KIRV  Kirov             64.36 324    P      P      18 48 28.3 +0.2
            comp=Z,9.5nm,0.6s,baz=76,slow=4.2,SNR=5.1
            comp=Z,9.5nm,0.6s
C36M  Paulatuk          64.60  23    P      P      18 48 29.7 +0.3
            baz=288
R33M  Jennings River    64.73  34    P      P      18 48 31.5 +0.9
            baz=287
S34M  Telegraph Cree    65.08  36    P      P      18 48 33.5 +0.7
            baz=287
DLBC  Dease Lake        65.48  35    P      P      18 48 36.2 +0.9
            baz=288
WTLY  Watson Lake, Y    65.56  33    IAmb   IAmb   18 48 37.4
            comp=Z,9.6nm,0.8s
T35M  Bob Quinn         65.82  37    P      P      18 48 38.2 +0.8
            baz=288
NWAO  Narrogin (SRO)    65.98 200    P      P      18 48 38.5 -0.1
NWAO  Narrogin (SRO)    65.98 200    P      P      18 48 38.5 -0.1
NWAO                                 pmax   pmax
            comp=Z,17nm,0.7s
SPITS Spitsbergen Ar    66.76 349    P      P      18 48 43.5 +0.5
            comp=Z,4.7nm,0.8s,baz=116,slow=9.5,SNR=4.1
            comp=Z,4.7nm,0.8s
BELG  Belogornoye       67.28 318⇓eP        P      18 48 46.2 -0.3
BELG                                 pmax   pmax
            comp=Z,7.0nm,1.4s
TOO   Toolangi          67.73 174    P      P      18 48 50.7 +1.3
TOO   Toolangi          67.73 174    P      P      18 48 50.7 +1.3
TOO                                  pmax   pmax
            comp=Z,4.0nm,1.4s
ARCES ARCESS Array B    69.57 340    P      P      18 49 00.6 +0.3
            comp=Z,3.2nm,0.7s,baz=72,slow=8.5,SNR=19
            comp=Z,3.2nm,0.7s
ARCES ARCESS Array B    69.57 340    P      P      18 49 00.0 -0.2
RES   Resolute Bay      69.77  13    IAmb   IAmb   18 49 09.0
            comp=Z,10nm,1.4s
YKAW3 Yellowknife Wh    70.86  28    P      P      18 49 07.9 -0.1
YKA   Yellowknife Ar    70.89  28    P      P      18 49 08.3 +0.1
            comp=Z,3.2nm,0.8s,baz=296,slow=6.6,SNR=33
            comp=Z,3.2nm,0.8s
YKA   Yellowknife Ar    70.89  28    P      P      18 49 07.8 -0.4
YKA   Yellowknife Ar    70.89  28ceP        P      18 49 08.6 +0.4
YKA                                  pmax   pmax
            comp=Z,3.0nm,0.8s
YKAW1 Yellowknife Wh    70.94  28    IAmb   IAmb   18 49 09.7
            comp=Z,6.6nm,0.8s
VRH   Novokhopyorsk     71.12 319   eP      P      18 49 07.7 -2.1
VRH                                  pmax   pmax
            comp=Z,9.0nm,0.8s
BANOM Banah             71.23 290    P      P      18 49 11.5 +0.5
SHME  Shamm             71.31 290    P      P      18 49 12.1 +0.8
AKT   Akhty             71.33 308d iP       P      18 49 11.2 -0.2
AKT                                                18 49 27.3
AKT                                 e*PP    pP     18 50 44.9 +0.4
AKT                                  pmax   pmax
            comp=Z,26nm,0.8s
MDH   Madha             71.50 289    P      P      18 49 12.9 +0.4
MSFE  Esma-Masafi       71.58 289    P      P      18 49 13.6 +0.5
SOHO  SOHO              71.80 288    P      P      18 49 14.4 +0.1
HATD  Hatta, Dubai      71.83 289    P      P      18 49 14.8 +0.3
LPSR  Galich'ya Gora    72.08 321   eP      P      18 49 13.1 -2.3
LPSR                                 pmax   pmax
            comp=Z,10.0nm,1.0s
TULEG Thule             72.14   7    P      P      18 49 15.6 +0.3
TULEG                                IAmb   IAmb   18 49 35.1
            comp=Z,19nm,1.4s
OBN   Obninsk           72.19 324   i P     P      18 49 15.4 -0.6
OBN                                  pmax   pmax
            comp=Z,7.0nm,0.9s
ALNE  Al Ain            72.48 288    P      P      18 49 18.5 +0.2
VSR   Storozhevoye      72.56 319   eP      P      18 49 16.4 -1.8
VSR                                  pmax   pmax
            comp=Z,10.0nm,0.9s
VORD  Divnogorie        72.60 319   eP      P      18 49 15.8 -2.7
VORD                                 pmax   pmax
            comp=Z,6.0nm,0.8s
KBZ   Khabaz            73.61 311    P      P      18 49 24.6 +0.2
            comp=Z,14nm,0.8s,baz=80,slow=6.5,SNR=50
            comp=Z,14nm,0.8s
KBZ   Khabaz            73.61 311ceP        P      18 49 24.9 +0.5
KBZ                                  pmax   pmax
            comp=Z,14nm,0.9s
KIV   Kislovodsk        73.65 312    P      P      18 49 24.8  0.0
KIV   Kislovodsk        73.65 312    P      P      18 49 25.9 +1.1
KIV   Kislovodsk        73.65 312   eP      P      18 49 23.4 -1.4
KIV                                  pmax   pmax
            comp=Z,17nm,1.1s
KIV   Kislovodsk        73.65 312    P      P      18 49 24.3 -0.5
            comp=Z,16nm,1.0s
SHA1  Shidzhatmaz       73.76 311⇑eP        P      18 49 25.8 +0.2
FIA1  FINESS Array S    73.77 332    P      P      18 49 24.7 -0.3
FIA1                                 IAmb   IAmb   18 49 29.2
            comp=Z,16nm,1.2s
FINES FINESS Array B    73.77 332    P      P      18 49 24.6 -0.4
            comp=Z,2.8nm,0.4s,baz=66,slow=5.2,SNR=47
            comp=Z,2.8nm,0.4s
FINES FINESS Array B    73.77 332    P      P      18 49 24.7 -0.2
FINES FINESS Array B    73.77 332   i P     P      18 49 24.8 -0.2
FINES                                pmax   pmax
            comp=Z,3.0nm,0.4s
GNI   Garni             73.95 307    P      P      18 49 26.8 +0.2
GNI                                  IAmb   IAmb   18 49 29.9
            comp=Z,27nm,1.4s
GNI   Garni             73.95 307deP        P      18 49 27.4 +0.7
GNI                                  pmax   pmax
            comp=Z,19nm,1.3s
MZR   Muzera            74.81 288    P      P      18 49 31.2 -0.4
B08A  Colville Reser    75.37  42    IAmb   IAmb   18 49 36.2
            comp=Z,9.5nm,0.9s
HOOD  Mount Hood Mea    75.43  46    IAmb   IAmb   18 49 40.6
            comp=Z,10nm,0.8s
E07A  Sunnyside         75.94  44    P      P      18 49 38.8 +1.2
E07A                                 IAmb   IAmb   18 49 39.8
            comp=Z,17nm,1.5s
J04A  Umpqua Nationa    76.12  48    P      P      18 49 39.1 +0.2
EDM   Edmonton          76.18  36    IAmb   IAmb   18 49 40.4
            comp=Z,13nm,0.9s
D08A  Wollman Farm,     76.25  43    IAmb   IAmb   18 49 41.0
            comp=Z,9.6nm,0.8s
YBH   Yreka Blue Hor    76.45  50    P      P      18 49 42.0 +1.4
            comp=Z,0.1nm,0.7s,baz=328,slow=7.5,SNR=5.7
YBH   Yreka Blue Hor    76.45  50    P      P      18 49 42.0 +1.4
GURO  Guroymak-BITLI    76.54 307    IAmb   IAmb   18 49 42.6
            comp=Z,12nm,1.1s
ANN   Anapa             76.59 314   eP      P      18 49 39.7 -1.5
ANN                                 e*PP    pwP    18 51 16.5 -5.0
ANN                                  pmax   pmax
            comp=Z,31nm,0.9s
PINE  Pine Mountain     76.60  47    P      P      18 49 41.9 +0.3
J05D  Fort Rock, OR     76.66  48    P      P      18 49 42.6 +0.7
J05D                                 IAmb   IAmb   18 49 44.3
            comp=Z,12nm,0.7s
NEW   Newport           76.70  42    P      P      18 49 42.7 +0.9
            comp=Z,7.6nm,0.8s,baz=306,slow=3.9,SNR=11
            comp=Z,7.6nm,0.8s
NEW   Newport           76.70  42    IAmb   IAmb   18 49 43.5
            comp=Z,8.1nm,0.8s
KOPT  Kop Dagi          76.90 309    IAmb   IAmb   18 49 45.7
            comp=Z,12nm,1.3s
K05A  Summer Lake       77.15  48    IAmb   IAmb   18 49 47.1
            comp=Z,7.6nm,0.8s
AK03  Malin Array Si    78.25 322    P      P      18 49 49.1 -1.0
AKASG Malin Array Be    78.26 322    P      P      18 49 49.3 -0.9
            comp=Z,2.7nm,0.4s,baz=53,slow=5.6,SNR=16
            comp=Z,2.7nm,0.4s
AKASG Malin Array Be    78.26 322ceP        P      18 49 49.5 -0.7
AKASG                                pmax   pmax
            comp=Z,3.0nm,0.4s
AKBB  Malin Array Si    78.26 322    P      P      18 49 49.0 -1.2
AKBB  Malin Array Si    78.26 322⇓eP        P      18 49 49.5 -0.6
AKBB  Malin Array Si    78.26 322    P      P      18 49 49.6 -0.6
KIEV  Kiev              78.27 322    P      P      18 49 48.9 -1.4
KIEV  Kiev              78.27 322    P      P      18 49 49.6 -0.6
KIEV  Kiev              78.27 322    P      P      18 49 48.9 -1.4
KIEV                                 pmax   pmax
            comp=Z,6.0nm,1.3s
AK09  Malin Array Si    78.28 322    P      P      18 49 49.7 -0.6
J08A  Circle Bar Ran    78.38  47    IAmb   IAmb   18 49 52.9
            comp=Z,7.1nm,0.5s
HFS   Hagfors           79.32 335    P      P      18 49 55.0 -0.7
            comp=Z,2.7nm,0.4s,baz=73,slow=4.8,SNR=21
            comp=Z,2.7nm,0.4s
LUBAR Lubar, Ukraine    79.48 322    P      P      18 49 55.7 -1.0
NB2   NORSAR Subarra    79.55 337    P      P      18 49 56.3 -0.7
            comp=Z,1.3nm,0.6s,baz=46,slow=5.3
NOA   NORSAR Array B    79.55 337    P      P      18 49 56.1 -0.9
            comp=Z,1.6nm,0.6s,baz=44,slow=5.5,SNR=6.6
            comp=Z,1.6nm,0.6s
PNTR  Pine Nut          79.81  51    IAmb   IAmb   18 50 04.0
            comp=Z,5.1nm,0.6s
SORM  Soroca            80.17 320 ⇑P        P      18 49 59.5 -0.9
SORM  Soroca            80.17 320 ⇑P        P      18 49 59.5 -0.9
GAZ   Gaziantep         80.54 307    IAmb   IAmb   18 50 04.0
            comp=Z,9.2nm,0.7s
FFC   Flin Flon         80.72  31    P      P      18 50 02.7 -0.5
FFC   Flin Flon         80.72  31    P      P      18 50 02.7 -0.5
FFC                                  pmax   pmax
            comp=Z,6.0nm,0.8s
KMPD  K-Podol'skiy      80.95 321    P      P      18 50 03.2 -1.3
EGMT  Eagleton          80.97  39    IAmb   IAmb   18 50 06.3
            comp=Z,11nm,0.8s
NVAR  Mina Array Bea    81.02  51    P      P      18 50 06.2 +0.8
            comp=Z,1.3nm,0.5s,baz=292,slow=5.7,SNR=12
            comp=Z,1.3nm,0.5s
NVAR  Mina Array Bea    81.02  51    P      P      18 50 05.6 +0.2
RAYN  Ar Rayn           81.06 292    P      P      18 50 05.1 -0.5
RAYN                                 IAmb   IAmb   18 50 06.5
            comp=Z,15nm,0.9s
RAYN  Ar Rayn           81.06 292    P      P      18 50 05.8 +0.2
RAYN  Ar Rayn           81.06 292 ⇑P        P      18 50 05.5 -0.1
BOZ   Bozeman (W)       81.31  42    IAmb   IAmb   18 50 08.3
            comp=Z,6.4nm,0.8s
TLCR                    81.58 318 ⇑P        P      18 50 07.9 +0.1
TLCR                    81.58 318 ⇑P        P      18 50 07.9 +0.1
BR131 Keskin Array S    81.60 311    P      P      18 50 07.5 -0.8
BR131                                IAmb   IAmb   18 50 09.2
            comp=Z,12nm,0.8s
BR131 Keskin Array S    81.60 311d iP       P      18 50 07.9 -0.3
BRTR  Keskin Array B    81.61 311    P      P      18 50 08.0 -0.3
            comp=Z,10.0nm,0.8s,baz=99,slow=3.8,SNR=50
            comp=Z,10.0nm,0.8s
BRTR  Keskin Array B    81.61 311    P      P      18 50 07.5 -0.8
BRTR  Keskin Array B    81.61 311ceP        P      18 50 08.3  0.0
BRTR                                 pmax   pmax
            comp=Z,10.0nm,0.8s
KIRS  Kirsehir-Merke    81.74 311 ⇑P        P      18 50 08.7 -0.2
SCTR  Scanteiesti       81.78 318 ⇓P        P      18 50 08.9 +0.1
ELK   Elko              81.80  48    P      P      18 50 10.2 +0.8
            comp=Z,1.0nm,0.5s,baz=314,slow=16,SNR=4.9
            comp=Z,1.0nm,0.5s
CFR   Carcaliu          81.98 318 ⇑P        P      18 50 09.4 -0.5
CFR   Carcaliu          81.98 318 ⇑P        P      18 50 09.4 -0.5
YHL   Hebgen Lake       81.99  42    IAmb   IAmb   18 50 12.6
            comp=Z,7.6nm,0.9s
YHB   Horse Butte       82.04  42    IAmb   IAmb   18 50 12.8
            comp=Z,8.6nm,0.9s
TESR  Tescani           82.05 320 ⇓P        P      18 50 09.9 -0.3
ANTO  Ankara            82.08 312 ⇑P        P      18 50 10.8 +0.2
ANTO  Ankara            82.08 312 ⇑P        P      18 50 10.8 +0.2
BUR08 Bucovina Ar. S    82.18 321    P      P      18 50 10.7 -0.3
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BUR08				IAmb	IAmb	18 50 12.0	
	comp=Z,6.4nm,0.7s						
BURAR	Bucovina Array	82.19	321	⇑P	P	18 50 11.6	+0.5
BURAR	Bucovina Array	82.19	321	⇑P	P	18 50 11.6	+0.5
YMR	Madison River	82.22	42	IAmb	IAmb	18 50 13.9	
	comp=Z,7.9nm,0.8s						
VRI	Vrincioaia	82.39	319	⇑P	P	18 50 12.8	+0.8
VRI	Vrincioaia	82.39	319	⇑P	P	18 50 12.8	+0.8
TLBR	Topalu	82.39	318	⇑P	P	18 50 12.5	+0.4
PLOR	Plostina	82.44	319	⇓P	P	18 50 13.3	+1.0
PLOR	Plostina	82.44	319	⇓P	P	18 50 13.3	+1.0
H17A	Grant Village	82.61	43	IAmb	IAmb	18 50 17.8	
	comp=Z,12nm,1.0s						
TURR	Turia	82.68	320	⇓P	P	18 50 14.1	+0.7
COVR	Voineasa-Covas	82.69	319	⇓P	P	18 50 13.8	+0.2
HVU	Hansel Valley	82.78	46	IAmb	IAmb	18 50 16.5	
	comp=Z,7.1nm,0.8s						
WCT	Wildcat Mounta	83.02	51	IAmb	IAmb	18 50 17.1	
	comp=Z,9.1nm,1.4s						
MLR	Muntele Rosu	83.05	319	⇑P	P	18 50 15.7	+0.2
MLR	Muntele Rosu	83.05	319	⇑P	P	18 50 15.7	+0.2
DOPR	Dopca	83.08	320	⇑P	P	18 50 16.7	+1.2
TPNV	Topopah Spring	83.19	51	P	P	18 50 16.9	+0.5
TPNV				IAmb	IAmb	18 50 18.2	
	comp=Z,7.8nm,0.8s						
TPNV	Topopah Spring	83.19	51	P	P	18 50 16.9	+0.5
TPNV				pmax	pmax		
	comp=Z,8.0nm,0.9s						
QSM	Queen of Sheba	83.29	52	IAmb	IAmb	18 50 18.6	
	comp=Z,10nm,0.8s						
GWY	Greenwater Val	83.31	52	IAmb	IAmb	18 50 18.7	
	comp=Z,7.2nm,0.9s						
HWUT	Hardware Ranch	83.62	45	IAmb	IAmb	18 50 20.7	
	comp=Z,8.5nm,0.8s						
DUG	Dugway, Tooele	83.64	47	IAmb	IAmb	18 50 20.6	
	comp=Z,5.1nm,0.7s						
ARR	Arges	83.86	320	⇑P	P	18 50 19.7	+0.2
LOZB	Loznitsa	83.93	317	⇓P	P	18 50 20.2	+0.4
MMAI	Mount Meron Ar	83.97	305	P	P	18 50 20.7	+0.4
	comp=Z,1.7nm,0.4s,baz=44,slow=8.5,SNR=9.5						
	comp=Z,1.7nm,0.4s						
TCUT	Toone Canyon	84.00	46	IAmb	IAmb	18 50 22.4	
	comp=Z,8.9nm,0.7s						
PDAR	Pinedale Array	84.16	43	P	P	18 50 21.5	+0.2
	comp=Z,2.1nm,0.8s,baz=296,slow=1.3,SNR=10						
	comp=Z,2.1nm,0.8s						
LOT	Lotru	84.30	320	⇑P	P	18 50 21.7	0.0
ELND	Elena	84.62	317	⇓P	P	18 50 24.3	+1.1
PFO	Pinyon Flats O	84.84	54	P	P	18 50 25.1	+0.4
	comp=Z,4.9nm,0.7s,baz=291,slow=5.4,SNR=7.8						
	comp=Z,4.9nm,0.7s						
PFO	Pinyon Flats O	84.84	54	P	P	18 50 24.3	-0.4
PFO				IAmb	IAmb	18 50 26.2	
	comp=Z,6.3nm,0.8s						
PFO	Pinyon Flats O	84.84	54	⇓eP	P	18 50 24.9	+0.2
PFO				pmax	pmax		
	comp=Z,13nm,0.9s						
BELC	Belle Mtn. Jos	84.95	54	P	P	18 50 25.1	-0.1
HERR	Herculane	85.40	320	⇓P	P	18 50 25.8	-1.2
RDMU	Red Mountain	85.45	45	IAmb	IAmb	18 50 29.5	
	comp=Z,6.8nm,0.7s						
BC3	Big Chuckawall	85.52	54	P	P	18 50 28.5	+0.5
CLL	Collm	85.80	329	eP	P	18 50 29.0	+0.2
MDVR	Moldovita	85.85	320	⇑P	P	18 50 28.5	-0.8
MSEY	Mahe Island	86.42	263	P	P	18 50 32.6	+0.1
PV10	Paradox Valley	87.08	47	IAmb	IAmb	18 50 37.5	
	comp=Z,9.4nm,1.0s						
GERES	GERESS Array B	87.22	327	P	P	18 50 34.6	-1.1
	comp=Z,0.6nm,0.5s,baz=39,slow=5.1,SNR=5.3						
	comp=Z,0.6nm,0.5s						
ANMO	Albuquerque	90.81	48	P	P	18 50 54.0	+1.1
	comp=Z,2.3nm,0.8s,baz=342,slow=3.2,SNR=5.1						
	comp=Z,2.3nm,0.8s						
ANMO	Albuquerque	90.81	48	P	P	18 50 53.5	+0.6
ANMO	Albuquerque	90.81	48	⇓eP	P	18 50 54.2	+1.3
ANMO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SBM	South Baldy	90.94	49	P	P	18 50 54.9	+1.1
TXAR	Lajitas Array	96.17	51	P	P	18 51 19.4	+2.0
	comp=Z,0.7nm,0.6s,baz=292,slow=3.4,SNR=8.5						
	comp=Z,0.7nm,0.6s						
TXAR	Lajitas Array	96.17	51	P	P	18 51 18.2	+0.9
TXAR	Lajitas Array	96.17	51	P	P	18 51 18.2	+0.9
QSPA	South Pole Qui	119.97	180	PKP	PKPdf	18 56 35.3	-0.6
	comp=Z,3.3nm,0.6s,baz=278,slow=1.6,SNR=13						
TORD	Torodi Ar. Bea	120.19	310	PKP	PKPdf	18 56 36.9	-1.0
	comp=Z,0.9nm,0.5s,baz=52,slow=3.1,SNR=15						
BOSA	Boshof	122.71	254	PKP	PKPdf	18 56 42.4	-0.1
	comp=Z,2.2nm,0.9s,baz=98,slow=2.2,SNR=4.7						
DBIC	Dimbokro	129.30	310	PKP	PKPdf	18 56 55.3	-0.1
	comp=Z,3.0nm,0.6s,baz=35,slow=1.0,SNR=3.8						
NVL	N'lazarevskaya	130.10	200	ePKHKP	PKPpre	18 56 44.8	
NVL				pmax	pmax		
	comp=Z,8.0nm,1.0s						

IDC ***10*** *18:47:33.6±4.7, 4°.90S×125°.21E, h492^{km}±65^{km}, mb3.1/4, mbtmp3.9/7, Error ellipse: s-maj=106.8km s-min=18.7km az=53.0*

ISC 10 18:47:34.0±1.4**, 4°.9S**±0°.1×**125°.2E**±0°.3**, h500**^{km}**, n7,** σ**1**^{s}**.05**/8**, mb3.6**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	5.45	196	P	P	18 49 06.2	+1.0
	15nm,0.3s,baz=0.6,slow=12,SNR=6.9						
BATI				S	S	18 50 18.4	-1.1
	57nm,0.3s,baz=308,slow=5.4,SNR=12						
FITZ	Fitzroy Crossi	13.08	178	P	P	18 50 23.8	-0.3
	2.1nm,0.9s,baz=6.8,slow=12,SNR=1.3						
WRA	Warramunga Arr	17.36	150	P	P	18 51 07.9	-0.7
	0.8nm,0.5s,baz=331,slow=9.7,SNR=17						
ASAR	Alice Springs	20.41	157	P	P	18 51 37.5	+1.0
	0.3nm,0.3s,baz=329,slow=9.0,SNR=11						
	0.3nm,0.3s						
MKAR	Makanchi Array	63.95	329	P	P	18 57 18.3	+0.7
	0.6nm,0.4s,baz=121,slow=8.2,SNR=24						
	0.6nm,0.4s						
ZALV	Zalesovo Beam	67.70	336	P	P	18 57 39.9	-0.8
	0.4nm,0.4s,baz=136,slow=4.9,SNR=2.6						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	68.32	330	P	P	18 57 43.9	-0.7
	1.4nm,0.2s,baz=135,slow=5.0,SNR=2.7						
	1.4nm,0.2s						

NEIC ***10*** *18:49:49.0±2.2, 17°.82N±0°.09×145°.6E±0°.1, h161^{km}±5^{km}, mb4.4/25, Error ellipse: s-maj=14.4km s-min=12.6km az=80.0*

IDC ***10*** *18:49:48.1±2.9, 17°.80N×145°.76E, h158^{km}±30^{km}, mb3.1/8, mbtmp3.6/9, Error ellipse: s-maj=28.6km s-min=22.6km az=106.0*

ISC 10 18:49:47.4±0.6**, 17°.88N**±0°.06×**145°.6E**±0°.1**, h150**^{km}**, n44,** σ**1**^{s}**.18**/42**, mb4.1**/16**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DPSS	Saipan	2.63	175	Pn	Pn	18 50 31.9	+1.7
DPSS				Sn	Sn	18 51 02.7	-0.6
GUMO	Guam	4.32	189	P	Pn	18 50 52.8	+0.9
	29nm,0.4s,baz=18,slow=20,SNR=2.1						
GUMO				S	Sn	18 51 42.1	0.0
	33nm,0.3s,baz=170,slow=22,SNR=5.7						
GUMO	Guam	4.32	189	Pn	Pn	18 50 53.4	+1.5
GUMO	Guam	4.32	189	Sn	Sn	18 51 40.1	-1.9
PATS	Pohnpei	16.59	130	Pn	Pn	18 53 32.9	+1.5
JSG	Sagara	17.98	340	P	P	18 53 45.1	-1.2
JOW	Kunigami	18.29	302	P	Pn	18 53 51.6	-0.1
JOW				IAmb	IAmb	18 53 57.6	
	comp=Z,18nm,0.7s						
JGF	Kuroka	19.10	339	P	P	18 53 58.8	+0.1
JGF				IAmb	IAmb	18 54 18.6	
	comp=Z,13nm,1.3s						
MAJO	Matsushiro	19.70	342	P	P	18 54 04.5	-0.5
MAJO				IAmb	IAmb	18 54 43.7	
	comp=Z,18nm,1.5s						
MJB9	Matsu-Tunnel	19.70	342	P	P	18 54 05.4	+0.3
MJB9				IAmb	IAmb	18 54 44.6	
	comp=Z,18nm,1.5s						
H11N1	WAKE ISLAND Hy	20.27	81	T	T	19 15 24.2	
	baz=268						
H11N2	WAKE ISLAND Hy	20.28	81	T	T	19 15 09.3	
	baz=268						
H11N3	WAKE ISLAND Hy	20.29	81	T	T	19 15 25.7	
	baz=268						
YHNB	Yeheng	23.51	291	P	P	18 54 43.0	-1.0
SSLB	Suanglung	23.72	289	P	P	18 54 45.5	-0.4
PETK	Petropavlovsk-	36.41	12	P	P	18 56 35.1	-2.2
CTAO	Charters Tower	37.74	179	P	P	18 56 46.8	-2.1
WB0	Warramunga Arr	38.98	197	P	P	18 56 57.9	-1.4
WRA	Warramunga Arr	39.17	197	P	P	18 57 00.4	-0.4
	comp=Z,0.4nm,0.7s,baz=15,slow=7.9,SNR=1.8						
	comp=Z,0.4nm,0.7s						
WRA	Warramunga Arr	39.17	197	P	P	18 56 59.6	-1.2
ASAR	Alice Springs	42.83	196	P	P	18 57 29.9	-0.8
	comp=Z,0.2nm,0.5s,baz=19,slow=8.8,SNR=1.4						
	comp=Z,0.2nm,0.5s						
CMAR	Chiang Mai Arr	44.20	278	P	P	18 57 44.6	+2.7
	comp=Z,0.9nm,0.9s,baz=69,slow=7.0,SNR=6.1						
	comp=Z,0.9nm,0.9s						
CMAR	Chiang Mai Arr	44.20	278	P	P	18 57 42.3	+0.4
GSI	Gunungsitoli	49.90	256	P	P	18 58 26.9	+0.8
MKAR	Makanchi Array	58.94	314	P	P	18 59 31.4	+0.4
	comp=Z,0.2nm,0.6s,baz=92,slow=7.5,SNR=1.5						
	comp=Z,0.2nm,0.6s						
G18K	Tagagawik	60.12	23	P	P	18 59 38.1	-0.6
G18K				IAmb	IAmb	18 59 59.7	
	comp=Z,8.8nm,1.4s						
C19K	Lookout Ridge	61.22	20	P	P	18 59 46.5	+0.4
C19K				IAmb	IAmb	19 00 04.0	
	comp=Z,10nm,1.4s						
CNPM	China Poot	61.23	31	P	P	18 59 46.1	-0.2
KURK	Kurchatov	61.79	318	P	P	18 59 51.1	+0.9
KURK	Kurchatov	61.79	318	IAmb	IAmb	18 59 52.5	
	comp=Z,4.5nm,1.5s						
KURBB	Kurchatov Arra	61.84	318	P	P	18 59 51.1	+0.6
	comp=Z,0.5nm,0.3s,baz=92,slow=7.1,SNR=4.9						
	comp=Z,0.5nm,0.3s						
D20K	Etivluk River	62.02	20	P	P	18 59 53.2	+1.8
D20K				IAmb	IAmb	19 00 04.9	
	comp=Z,9.3nm,1.4s						
H21K	Melozitna Rive	62.27	24	P	P	18 59 54.3	+1.1
H21K				IAmb	IAmb	19 00 34.5	
	comp=Z,5.7nm,1.4s						
B20K	Meade River	62.38	19	P	P	18 59 54.8	+1.0
B21K	Ikpikpuk River	63.03	20	P	P	18 59 59.1	+1.0
B21K				IAmb	IAmb	19 00 05.1	
	comp=Z,10.0nm,1.5s						
B22K	Teshekpuk Lake	63.69	19	P	P	19 00 02.9	+0.6
B22K				IAmb	IAmb	19 00 21.5	
	comp=Z,3.8nm,1.1s						
TOLK	Toolik Lake Re	64.40	22	P	P	19 00 08.9	+1.7
TOLK				IAmb	IAmb	19 00 25.9	
	comp=Z,8.0nm,1.5s						
ILAR	Eielson Array	64.44	26	P	P	19 00 07.3	-0.1
	comp=Z,0.4nm,0.4s,baz=256,slow=5.2,SNR=8.7						
	comp=Z,0.4nm,0.4s						
C27K	Jago River	66.68	21	P	P	19 00 23.5	+1.8
C27K				IAmb	IAmb	19 00 31.3	
	comp=Z,8.7nm,1.2s						
BVAR	Borovoye Array	67.02	321	P	P	19 00 24.6	+0.5
	comp=Z,1.2nm,0.6s,baz=102,slow=7.9,SNR=8.6						
	comp=Z,1.2nm,0.6s						
BORK	Borovoye	67.06	321	P	P	19 00 25.4	+1.0
H29M	Whitestone	68.17	25	P	P	19 00 32.2	+1.1
ABKAR	Akbulak array	73.85	317	P	P	19 01 05.0	-0.7
YKA	Yellowknife Ar	78.77	28	P	P	19 01 33.4	+0.3
	comp=Z,0.2nm,0.7s,baz=292,slow=6.7,SNR=2.7						
	comp=Z,0.2nm,0.7s						

IDC 10 19:06:28.2±1.6**, 6°.39N**×**125°.65E, h0**^{km}**, mb3.7**/5**, mbtmp3.7**/5**, Error ellipse: s-maj=94.7km s-min=20.1km az=62.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	27.53	162	P	P	19 12 16.9	0.0
	0.4nm,0.5s,baz=341,slow=9.3,SNR=5.3						
	0.4nm,0.5s						
CMAR	Chiang Mai Arr	28.66	297	P	P	19 12 27.3	+0.3
	0.4nm,0.7s,baz=108,slow=7.3,SNR=4.4						
	0.4nm,0.7s						
ASAR	Alice Springs	30.94	165	P	P	19 12 47.1	-0.1
	0.5nm,0.4s,baz=342,slow=7.5,SNR=11						
	0.5nm,0.4s						
MKAR	Makanchi Array	54.78	325	P	P	19 16 00.1	+0.2
	0.7nm,0.5s,baz=117,slow=8.0,SNR=14						
	0.7nm,0.5s						
KURBB	Kurchatov Arra	58.94	327	P	P	19 16 28.8	-0.5
	0.9nm,0.5s,baz=121,slow=6.9,SNR=7.1						
	0.9nm,0.5s						

THE ***10*** *19:13:15.5, 39°.6N±0°.8×24°.3E±0°.9, h6^{km}±1^{km}, M3.3/32, MLh3.3/32*

ISK ***10*** *19:13:15.1, 39°.55N×24°.19E, h21^{km}, ML3.5/25*

ATH ***10*** *19:13:15.5, 39°.56N×24°.28E, h14^{km}±1^{km}, ML3.4/36, Manual Solution by M.Charalampakis First location: 2019/12/10 19:14:22, This location: 2019/12/10 19:44:28 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

ISC 10 19:13:15.6±1.0**, 39°.55N**±0°.02×**24°.27E**±0°.02**, h12**^{km}±9^{km}**, n177,** σ**0**^{s}**.71**/208**, 19C-11D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AOS	Alonnisos	0.49	219	P	Pb	19 13 25.5	-0.6
AOS				S	Sb	19 13 32.6	-0.4
AOS2	Alonissos-2	0.52	220	P	Pg	19 13 25.6	-0.2
AOS2				S	Sg	19 13 32.9	+0.2
EFSA	Agios Efstrati	0.56	91	P	Pg	19 13 26.4	0.0
EFSA				S	Sg	19 13 33.9	+0.1
SKY	Skiros Island	0.71	162	P	Pg	19 13 29.2	0.0
SKY	Skiros Island	0.71	162	P	Pg	19 13 29.3	+0.1
SKY				S	Sg	19 13 38.4	-0.2
LIA	Limnos Island	0.79	64	P	Pg	19 13 30.5	-0.2
LIA				S	Sb	19 13 41.6	-0.1
LIA	Limnos Island	0.79	64	P	Pg	19 13 30.5	-0.2
LIA				S	Sg	19 13 41.2	+0.1
OUR	Ouranopolis	0.81	344	P	Pb	19 13 31.2	-0.4
OUR				S	Sb	19 13 42.2	-0.4
OUR	Ouranopolis	0.81	344	Pg	Pb	19 13 31.4	-0.2
OUR				Sg	Sb	19 13 42.9	+0.4
OUR	Ouranopolis	0.81	344	P	Pb	19 13 31.3	-0.4
OUR				S	Sn	19 13 43.2	-1.5
NEO	Neokhori	0.85	254	P	Pg	19 13 31.7	-0.2
NEO				S	Sb	19 13 43.2	-0.3
NEO	Neokhori	0.85	254	P	Pb	19 13 32.1	0.0
NEO				S	Sb	19 13 43.7	+0.2
KYMI	Kymi, Euboea I	0.93	188	P	Pb	19 13 32.5	-1.0
KYMI				S	Sg	19 13 46.3	+0.8
KYMI	Kymi, Euboea I	0.93	188	P	Pb	19 13 32.9	-0.6
KYMI				S	Sg	19 13 46.3	+0.8
PLG	Polygyros	1.04	323	P	Pb	19 13 34.4	-1.1
PLG				S	Sg	19 13 49.2	+0.1
PLG	Polygyros	1.04	323	P	Pb	19 13 34.5	-0.9
PLG				S	Sg	19 13 48.8	-0.4
THAS	Thassos island	1.11	18	P	Pb	19 13 35.6	-1.0
THAS				S	Sn	19 13 52.7	+0.7
THAS	Thassos island	1.11	18	P	Pb	19 13 35.6	-1.0
THAS				S	Sb	19 13 50.6	-0.4
AIDA	Aidipsos	1.18	234	P	Pn	19 13 37.2	-0.6
AIDA				S	Sg	19 13 54.0	+0.5
THS1	Thassos, Thass	1.21	11	P	Pn	19 13 37.2	-1.1
SIGR	SIGRI	1.27	105	P	Pn	19 13 39.1	-0.1
SIGR				S	Sg	19 13 57.8	+1.2
SIGR	SIGRI	1.27	105	Pn	Pb	19 13 39.5	+0.1
SIGR				Sn	Sg	19 13 56.8	+0.2
SIGR	SIGRI	1.27	105	P	Pn	19 13 38.9	-0.2
SIGR				S	Sn	19 13 56.2	+0.1
ATAL	Atalanti	1.30	229	P	Pn	19 13 38.9	-0.6
ATAL				S	Sg	19 13 57.7	+0.4
ATAL	Atalanti	1.30	229	P	Pn	19 13 38.9	-0.6
ATAL				S	Sn	19 13 56.1	-0.5
SMTH	Samothraki Isl	1.33	46	P	Pn	19 13 38.8	-1.2
SMTH				S	Sg	19 13 59.4	+0.9
SMTH	Samothraki Isl	1.33	46	P	Pn	19 13 39.0	-1.0
SMTH				S	Sg	19 13 58.3	-0.3
LKR	Lokris	1.34	228	P	Pn	19 13 39.5	-0.5
HORT	Hortiatis	1.38	320	P	Pn	19 13 39.8	-0.8
HORT	Hortiatis	1.38	320	P	Pn	19 13 40.4	-0.3
BOZC	Bozcaada	1.41	78	Pn	Pn	19 13 41.2	+0.3
BOZC				Sn	Sb	19 14 00.3	+0.7
GADA	Gvkgeada	1.41	62	P	Pn	19 13 40.3	-0.6
GADA	Gvkgeada	1.41	62	Pn	Pn	19 13 40.7	-0.2
SOH	Sokhos	1.45	331	P	Pn	19 13 41.5	-0.2
SOH	Sokhos	1.45	331	P	Pn	19 13 41.2	-0.4
KAVA	Kavala	1.46	7	P	Pn	19 13 40.6	-1.0
KAVA	Kavala	1.46	7	P	Pn	19 13 40.4	-1.2
LRSO	Larissa Observ	1.46	275	P	Pb	19 13 41.8	-0.8
THE	Thessaloniki	1.47	318	P	Pn	19 13 41.8	-0.1
THE	Thessaloniki	1.47	318	P	Pn	19 13 41.7	-0.1
LIT	Litokhoron	1.48	292	P	Pn	19 13 41.9	0.0
LIT	Litokhoron	1.48	292	P	Pn	19 13 42.0	0.0
AXAR	Agios Charalam	1.48	238	P	Pn	19 13 41.7	-0.3
AXAR	Agios Charalam	1.48	238	P	Pn	19 13 41.6	-0.3
STFN	Stefani	1.48	203	P	Pn	19 13 41.9	-0.2
STFN	Stefani	1.48	203	P	Pn	19 13 42.1	0.0
DION	Dionisos Attik	1.50	190	P	Pn	19 13 41.7	-0.5
DION	Dionisos Attik	1.50	190	P	Pn	19 13 41.8	-0.5
KARY	Karystos	1.52	175	P	Pn	19 13 42.2	-0.3
KARY	Karystos	1.52	175	P	Pn	19 13 42.2	-0.3
ACHAR	Athens-Acharne	1.53	196	P	Pb	19 13 43.3	-0.5
PTL	Penteli	1.53	192	P	Pn	19 13 42.6	-0.1
PTL	Penteli	1.53	192	P	Pn	19 13 42.6	-0.1
VIL2	Platees	1.55	211	P	Pn	19 13 42.8	-0.2
VILL	Villia	1.57	209	P	Pn	19 13 42.7	-0.6
PRK	Paraskevi	1.58	100	P	Pn	19 13 43.4	+0.2
PRK	Paraskevi	1.58	100	P	Pn	19 13 43.5	+0.2
TYRN	Tyrnavos	1.58	276	P	Pn	19 13 43.3	-0.1
TYRN	Tyrnavos	1.58	276	P	Pn	19 13 43.1	-0.2
MAGU	Magoula	1.58	202	P	Pn	19 13 43.3	-0.1
AGG	Agios Georgios	1.60	251	P	Pn	19 13 42.9	-0.7
AGG	Agios Georgios	1.60	251	P	Pn	19 13 42.8	-0.8
EZN	Ezine	1.61	80	P	Pn	19 13 44.0	+0.2
EZN	Ezine	1.61	80	Pn	Pn	19 13 43.9	+0.2
EZN				Sn	Sb	19 14 05.1	-0.3
EZNE	Ezine-Canakkal	1.63	82	Pn	Pn	19 13 44.2	+0.2
NOAC	Athens-Thissio	1.63	196	P	Pn	19 13 44.5	+0.4
ATH	Athens Observa	1.64	196	P	Pn	19 13 44.5	+0.4
SRS	Serrai	1.65	342	P	Pn	19 13 43.5	-0.8
SRS	Serrai	1.65	342	P	Pn	19 13 43.7	-0.6
VLY	Voula,Athens	1.74	193	P	Pn	19 13 45.4	-0.1
VLY	Voula,Athens	1.74	193	P	Pn	19 13 45.5	0.0
THL	Klokotos Trika	1.74	271	P	Pn	19 13 45.3	-0.2
THL	Klokotos Trika	1.74	271	P	Pn	19 13 45.2	-0.3
MAKR	Makrakomi, Fth	1.75	253	P	Pn	19 13 45.6	0.0
COMU	Canakkale	1.78	71	Pn	Pn	19 13 46.7	+0.6
CHOS	Chios island	1.81	129	P	Pn	19 13 46.8	+0.2
CHOS	Chios island	1.81	129	Pn	Pn	19 13 47.1	+0.5
CHOS	Chios island	1.81	129	P	Pn	19 13 46.5	-0.1
LTK	Loutraki	1.83	214	P	Pn	19 13 46.6	-0.3
CAVK	Edirne/Enez-Ca	1.85	51	⇑P	Pn	19 13 47.8	+0.8
CAVK				⇑S	Sg	19 14 14.5	-0.5
LOUT	Loutraki	1.86	213	P	Pn	19 13 46.7	-0.5
RDO	Rodhopi	1.86	31	P	Pn	19 13 46.3	-0.9
RDO	Rodhopi	1.86	31	Pn	Pn	19 13 46.6	-0.6
RDO	Rodhopi	1.86	31	P	Pn	19 13 46.1	-1.1
ENEZ	Enez	1.87	50	Pn	Pn	19 13 47.3	0.0
GELI	Tayfur-Gelibol	1.89	63	Pn	Pn	19 13 47.7	+0.1
KNT	Kendrikon	1.92	327	P	Pn	19 13 48.3	+0.2
KNT	Kendrikon	1.92	327	P	Pn	19 13 48.0	0.0
EVR	Evrytania	2.01	252	P	Pn	19 13 49.5	+0.1
EVR	Evrytania	2.01	252	P	Pn	19 13 49.5	+0.1
MMB	Musomishta	2.03	349	P	Pn	19 13 49.5	-0.1
ERIK	Erikli-Kesan	2.05	56	Pn	Pn	19 13 50.3	+0.5
MET5	Makryloggos,Me	2.06	201	P	Pn	19 13 49.2	-0.7
ANX	Ano Chora	2.06	243	P	Pn	19 13 50.2	+0.2
ANX	Ano Chora	2.06	243	P	Pn	19 13 50.3	+0.2
KZN	Kozani	2.06	292	P	Pn	19 13 50.0	-0.1
SERG	Sergoula	2.07	237	P	Pn	19 13 49.9	-0.1
SERG	Sergoula	2.07	237	P	Pn	19 13 49.7	-0.3
MET2	Kameni Chora,	2.07	201	P	Pn	19 13 50.3	+0.2
LPK	Lapseki	2.08	66	Pn	Pn	19 13 50.5	+0.3
TRIZ	Trizonia	2.08	236	P	Pn	19 13 50.1	-0.1
MET1	Methana Town,	2.09	200	P	Pn	19 13 50.9	+0.6
DKL	Dikili	2.10	102	Pn	Pn	19 13 50.6	+0.1
MG00	Magoula, Dorid	2.14	239	P	Pn	19 13 50.9	0.0
AGEO	AgiosGiorgios,	2.15	234	P	Pn	19 13 51.2	+0.1
EFP	Efpalio	2.16	239	P	Pn	19 13 51.4	+0.2
EFP	Efpalio	2.16	239	P	Pn	19 13 51.5	+0.2
YAYO	Edremit-Balk	2.17	88	Pn	Pn	19 13 51.8	+0.4
URLA	Izmir	2.17	123	Pn	Pn	19 13 51.8	+0.3
CANM	Can-anakkale	2.19	77	Pn	Pn	19 13 52.5	+0.7
VAY	Valandovo	2.19	324	*i* Pn	Pn	19 13 52.9	+1.1
VAY				*i* Sn	Sg	19 14 27.6	+1.5
GUR	Goura	2.21	224	P	Pn	19 13 51.9	-0.2
GUR	Goura	2.21	224	P	Pn	19 13 51.7	-0.3
KDZ	Kurdzhali	2.23	21	Pn	Pn	19 13 52.5	+0.2
KLV	Kalavryta, Ach	2.24	228	P	Pn	19 13 52.3	-0.2
KPRO	Kipourio	2.28	281	P	Pn	19 13 53.7	+0.7
AGRP	Agrapidokambos	2.30	241	P	Pn	19 13 53.5	+0.3
TETR	Tetrakomo, Epi	2.33	266	P	Pn	19 13 53.7	0.0
PVO	Paravola	2.33	247	P	Pn	19 13 54.1	+0.4
PVO	Paravola	2.33	247	P	Pn	19 13 54.1	+0.4
UKOP	Uzunkopru-Edir	2.40	48	Pn	Pn	19 13 54.7	+0.2
KRBG	Karabiga-Canak	2.47	69	Pn	Pn	19 13 56.2	+0.6
DRO	Drossia	2.56	232	P	Pn	19 13 57.1	+0.3
SOMA	Soma-Manisa	2.56	98	Pn	Pn	19 13 57.6	+0.8
PLD	Plovdiv	2.62	8	Pn	Pn	19 13 57.1	-0.5
NEST	Nestorio	2.62	290	P	Pn	19 13 58.6	+0.9
AXS	Araxos	2.63	240	P	Pn	19 13 58.6	+0.8
RLS	Riolos of Patr	2.65	237	P	Pn	19 13 58.9	+0.8
APE	Apeiranthos	2.67	158	Pn	Pn	19 13 58.0	-0.3
APE	Apeiranthos	2.67	158	⇓P	Pn	19 13 58.1	-0.3
APE				⇓S	Sn	19 14 29.0	-1.6
APE	Apeiranthos	2.67	158	P	Pn	19 13 57.7	-0.7
GONE	Gonen-Balikesi	2.68	78	Pn	Pn	19 13 59.6	+1.2
SMG	Samos	2.73	132	P	Pn	19 13 58.8	-0.3
AMT	Artemida-Makis	2.84	226	P	Pn	19 14 01.3	+0.6
NYDR	Nydri-Lefkada	2.90	254	P	Pn	19 14 02.8	+1.3
TSLK	Tsoukalades, L	2.90	257	P	Pn	19 14 02.3	+0.8
LKD2	Lefkada island	2.91	256	P	Pn	19 14 03.5	+1.9
EVGI	Lefkada island	2.96	253	P	Pn	19 14 03.9	+1.5
EDRB	Edirne	2.97	39	Pn	Pn	19 14 03.4	+1.0
SUSR	Susurluk-Balik	2.97	81	Pn	Pn	19 14 03.5	+1.1
ITM	Ithomi	3.00	219	Pn	Pn	19 14 02.3	-0.6
ITM	Ithomi	3.00	219	P	Pn	19 14 04.2	+1.3
VLI	Veliai	3.02	201	P	Pn	19 14 03.1	0.0
IGT	Igoumenitsa	3.04	271	P	Pn	19 14 05.5	+2.0
BAND	Balkesir-Ban	3.05	74	⇑P	Pn	19 14 05.5	+1.9
OHR	Ohrid	3.08	302	*i* Pn	Pb	19 14 09.5	-0.7
OHR				*i* Sn	Sn	19 14 42.9	+2.2
RTZL	Ratzakli, Kefa	3.10	243	P	Pn	19 14 05.7	+1.4
VLS	Valsamata	3.18	246	P	Pn	19 14 06.6	+1.2
SKO	Skopje	3.24	319	*i* Pn	Pn	19 14 07.1	+1.0
DMLN	Damoulianata-K	3.31	248	P	Pn	19 14 08.0	+0.9
PYL	PYLOS	3.32	218	P	Pn	19 14 08.5	+1.3
KTHA	Kythira Island	3.42	197	P	Pn	19 14 09.0	+0.3
ELND	Elena	3.58	19	⇑P	Pn	19 14 11.1	+0.2
PLVB	Pleven	3.84	4	⇓P	Pn	19 14 15.4	+1.0
LOZB	Loznitsa	4.20	24	⇓P	Pn	19 14 19.5	+0.2
RAZG	Razgrad	4.35	22	⇑P	Pn	19 14 21.6	+0.2
VLAD	Vladila	4.45	1	⇓P	Pn	19 14 23.7	+1.0
SAHE	Sakarya_HENDEK	5.21	73	⇑P	Pn	19 14 34.4	+1.2
ICOR	Ion Corvin	5.27	29	⇓P	Pn	19 14 34.6	+0.6
HERR	Herculane	5.50	346	⇑P	Pn	19 14 36.9	-0.3
MDVR	Moldovita	5.56	341	⇓P	Pn	19 14 38.1	0.0
ARR	Arges	5.82	3	⇑P	Pn	19 14 42.2	+0.5
TIP	Timpagrande	5.83	269	⇑P	Pn	19 14 40.4	-1.5
LOT	Lotru	5.91	357	⇑P	Pn	19 14 42.8	0.0
GZR	Gura Zlata	5.94	350	⇑P	Pn	19 14 43.4	+0.1
NEHR	Nehoiu	6.06	14	⇓P	Pn	19 14 45.6	+0.6
MLR	Muntele Rosu	6.06	11	⇑P	Pn	19 14 46.0	+1.0
CFR	Carcaliu	6.31	26	⇓P	Pn	19 14 49.0	+0.7
BZS	Buzias	6.37	343	⇓P	Pn	19 14 48.8	-0.4
COVR	Voineasa-Covas	6.45	12	⇑P	Pn	19 14 51.2	+0.9
DOPR	Dopca	6.46	7	⇓P	Pn	19 14 51.6	+1.1
PLOR	Plostina	6.54	15	⇑P	Pn	19 14 53.2	+1.7
VRI	Vrincioaia	6.56	15	⇑P	Pn	19 14 53.5	+1.6
TURR	Turia	6.63	11	⇑P	Pn	19 14 54.3	+1.6
VLDR	Vladesti	6.89	23	⇑P	Pn	19 14 57.5	+1.3
MARR	Marisel-Cluj	7.17	354	⇑P	Pn	19 15 00.8	+0.5
MORH	Mrgy, Hungar	7.83	330	⇑P	Pn	19 15 09.5	+0.3

IDC ***10*** *19:21:11.3±1.9, 30°.34N×139°.84E, h0^{km}, mb3.3/4, mbtmp3.3/6, ML2.9/2, MS3.1/1, Error ellipse: s-maj=62.2km s-min=20.8km az=73.0*

ISC 10 19:21:16.1±1.5**, 30°.3N**±0°.1×**139°.8E**±0°.2**, h35**^{km}**, n6,** σ**1**^{s}**.56**/7**, mb3.4**/4**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	Matsushiro Arr	6.37	348	Pn	Pn	19 22 46.2	-1.3

```
      0.1nm,0.3s,baz=161,slow=12,SNR=6.4
MJAR                               Sn     Sn     19 24 01.1 +2.1
      baz=170,slow=26,SNR=1.2
MJAR                               LR     LR     19 25 34.5
      comp=Z,144nm,18.5s,baz=16,slow=42
      0.4nm,0.3s
JNU   Nakatsue           8.14 292  Pn     Pn     19 23 11.2 -0.6
      0.2nm,0.3s,baz=19,slow=23,SNR=6.4
      4.2nm,1.0s
MKAR  Makanchi Array    46.88 307  P      P      19 29 43.6 +0.7
      0.1nm,0.4s,baz=84,slow=9.7,SNR=1.5
      0.1nm,0.4s
WRA   Warramunga Arr    50.24 187  P      P      19 30 09.4 +0.5
      0.6nm,0.6s,baz=5.3,slow=7.6,SNR=8.4
      0.6nm,0.6s
ASAR  Alice Springs     53.96 187  P      P      19 30 37.3 +0.7
      0.3nm,0.8s,baz=360,slow=5.3,SNR=6.2
      0.3nm,0.8s
BVAR  Borovoye Array    54.31 316  P      P      19 30 37.4 -1.4
      0.2nm,0.6s,baz=92,slow=8.7,SNR=1.8
      0.2nm,0.6s
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*IDC **10** 19:33:22.7±3.0, 27.°11S×67.°05E, h0^{km}, mb3.5/7, mbtmp3.5/7, Error ellipse: s-maj=92.8km s-min=33.2km az=44.0*

ISC 10 19:33:24.4±2.8**, 27.°1S**±0.°5×**67.°1E**±0.°4**, h10^{km}, n16, σ0.^{s}62**/7**, mb3.6**/7**, Indian Ocean Triple Junction**

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Code  Station Name       Δ°   AZ°  Phase ID         Time      Res
                                   Op     ISC     h  m  s     ISC
H08S1 Diego Carcia H    20.03  16  T      T      19 58 05.7
      baz=194,slow=76,SNR=21
H08S2 Diego Garcia H    20.04  16  T      T      19 58 04.5
      baz=194,slow=76,SNR=19
H08S3 Diego Garcia H    20.05  16  T      T      19 58 06.2
      baz=194,slow=76,SNR=17
H04N2 CROZET ISLANDS    22.55 209  T      T      20 02 31.9
      baz=39,slow=74,SNR=196
H04N1 CROZET ISLANDS    22.55 209  T      T      20 02 18.9
      baz=39,slow=74,SNR=215
H04N3 CROZET ISLANDS    22.56 209  T      T      20 02 16.6
      baz=39,slow=74,SNR=201
H01W2 Cape Leeuwin H    40.78 113  T      T      20 23 59.6
      baz=269,slow=75,SNR=11
H01W3 Cape Leeuwin H    40.78 113  T      T      20 23 59.7
      baz=269,slow=75,SNR=10
H01W1 Cape Leeuwin H    40.80 113  T      T      20 24 00.9
      baz=269,slow=75,SNR=13
CMAR  Chiang Mai Arr    54.84  38  P      P      19 42 54.9 -0.2
      0.2nm,0.4s,baz=230,slow=8.6,SNR=4.4
      0.2nm,0.4s
ASAR  Alice Springs     59.84 103  P      P      19 43 29.9 -0.7
      0.2nm,0.6s,baz=245,slow=6.6,SNR=4.2
      0.2nm,0.6s
WRA   Warramunga Arr    61.47  99  P      P      19 43 42.3 +0.7
      0.3nm,0.9s,baz=249,slow=6.4,SNR=2.2
      0.3nm,0.9s
BRTR  Keskin Array B    73.43 334  P      P      19 44 56.9 -0.1
      0.5nm,0.9s,baz=138,slow=7.6,SNR=2.8
      0.5nm,0.9s
MKAR  Makanchi Array    74.84  11  P      P      19 45 04.5 -0.4
      0.4nm,0.7s,baz=201,slow=5.7,SNR=3.2
      0.4nm,0.7s
ZALV  Zalesovo Beam     82.18  10  P      P      19 45 45.2  0.0
      1.4nm,0.8s,baz=186,slow=4.9,SNR=6.6
      1.4nm,0.8s
SONM  Songino Array     82.56  26  P      P      19 45 48.1 +0.6
      0.4nm,0.7s,baz=211,slow=5.0,SNR=1.4
      0.4nm,0.7s
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*IDC **10** 19:44:38.7±3.6, 9.°20S×112.°64E, h56^{km}±28^{km}, mb3.2/4, mbtmp3.5/5, ML3.8/2, Error ellipse: s-maj=77.7km s-min=17.5km az=42.0*

*DJA **10** 19:44:40.3±0.6, 9°S±3°×11°3E±°, h12^{km}±4^{km}, M4.2/25, mB5.1/1, mb4.4/5, MLv4.1/25, Mw(mB)4.4/1*

ISC 10 19:44:38.6±2.2**, 9.°01S**±0.°07×**113.°05E**±0.°03**, h18^{km}**±11^{km}**, n34, σ1.^{s}99**/45**, mb3.6**/4**, South of Jawa**

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Code  Station Name       Δ°   AZ°  Phase ID         Time      Res
                                   Op     ISC     h  m  s     ISC
GMJI  Gumukmas           0.83  28  P      Pn     19 44 56.2 +0.8
GMJI                               S      Sn     19 45 07.3 +0.1
JAGI  Jajag, Banyuwa     1.21  64  P      Pn     19 45 02.1 +1.4
BLJI  Banyuglugur        1.37  23  P      Pb     19 45 03.9 +0.2
BLJI                               S      Sg     19 45 22.4 -0.5
ABJI  Asem Bagus         1.68  44  P      Pb     19 45 09.3 +0.3
ABJI                               S      Sg     19 45 31.6 -1.2
SNJI  Sawahan-Nganju     1.77 314  P      Pn     19 45 10.1 +1.6
SNJI                               S      Sn     19 45 31.7 +1.0
SJI   Sawahan            1.80 315  P      Pn     19 45 09.5 +0.7
SJI                                S      Sb     19 45 33.0 -0.3
RTBI  Rangdo, Negare     1.95  74  P      Pn     19 45 13.6 +2.8
PCJI  Pacitan            2.02 293  P      Pn     19 45 12.5 +0.6
IGBI  Denpasar           2.08  85  P      Pn     19 45 15.2 +2.6
KMMI  Kalianget          2.15  25  P      Pn     19 45 14.4 +0.8
DNP   Denpasar           2.16  81  P      Pn     19 45 16.7 +3.0
DNP                                S      Sb     19 45 44.7 +1.1
GRJI  Gresik             2.16 345  P      Pn     19 45 14.9 +1.2
NGJI  Ngawi              2.27 316  P      Pb     19 45 18.3 -0.8
NGJI                               S      Sb     19 45 45.1 -1.7
TBJI  Tambak Boyo        2.48 331  P      Pn     19 45 19.4 +1.2
KHKI  Kahang-Kahang      2.61  76  P      Pn     19 45 22.6 +2.7
UGM   Wanagama           2.73 293  P      Pn     19 45 22.8 +1.2
UGM                                S      Sn     19 45 55.7 +1.4
YOGI  Yogyakarta         2.98 293  P      Pn     19 45 27.5 +2.5
YOGI                               S      Sn     19 46 02.1 +1.8
KLNI  Mataram            3.06  79  P      Pn     19 45 28.0 +1.8
SMRI  Semarang           3.24 307  P      Pn     19 45 30.0 +1.4
SMRI                               S      Sn     19 46 08.8 +2.0
TWSI  Taliwang, Sumb     3.79  86  P      Pn     19 45 38.9 +2.7
CTJI  Waduk Cacaban      4.32 297  P      Pn     19 45 46.0 +2.5
KPJI  Karang Pucung      4.41 292  P      Pn     19 45 46.6 +1.9
KPJI                               S      Sn     19 46 37.9 +2.3
PLAI  Plampang           4.67  88  P      Pn     19 45 51.8 +3.5
DBNI  Kabupaten Domp     5.22  85  P      Pn     19 45 58.7 +2.8
      0.1nm14nm,0.4s
BBJI  Bungbulang         5.56 286  P      Pn     19 46 02.1 +1.4
BBKI  Banjar Baru        5.79  18  P      Pn     19 46 05.3 +1.6
WBSI  Waikabubak, Su     6.29  96  P      Pn     19 46 14.0 +3.4
LBFI  Labuhan Bajo,      6.78  86  P      Pn     19 46 20.1 +2.8
BATI  Baumata           10.53  97  P      Pn     19 47 10.3 +1.5
      4.3nm,0.3s,baz=270,slow=16,SNR=7.4
BATI                               S      Sn     19 49 03.3 -3.1
      2.8nm,0.3s,baz=217,slow=18,SNR=1.5
FITZ  Fitzroy Crossi    15.20 128  P      Pn     19 48 12.6  0.0
      0.1nm,0.3s,baz=286,slow=15,SNR=2.0
FITZ                               S      Sn     19 50 50.1  -11
      2.1nm,0.6s,baz=299,slow=21,SNR=2.6
      3.5nm,1.1s
WRA   Warramunga Arr    23.27 120  P      P      19 49 42.5 -2.9
      0.6nm,0.7s,baz=298,slow=9.6,SNR=11
WRA                                S      S      19 53 56.3 -0.9
      0.3nm,0.8s,baz=290,slow=22,SNR=1.2
      0.6nm,0.7s
ASAR  Alice Springs     24.70 129  P      P      19 49 56.7 -2.3
      0.9nm,0.5s,baz=305,slow=9.5,SNR=12
      0.9nm,0.5s
MKAR  Makanchi Array    61.96 337  P      P      19 54 52.6 -4.9
      0.5nm,1.0s,baz=144,slow=6.6,SNR=2.0
      0.5nm,1.0s
KURBB Kurchatov Arra    66.52 337  P      P      19 55 23.9 -3.3
      0.3nm,0.7s,baz=124,slow=4.8,SNR=2.2
      0.3nm,0.7s
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*IDC **10** 20:12:05.0±0.7, 43.°00N×84.°33E, h0^{km}, mb3.8/10, mbtmp3.7/18, ML3.2/7, Error ellipse: s-maj=18.1km s-min=9.8km az=56.0*

*SOME **10** 20:12:12.8, 43.°30N×84.°13E, h15^{km}, MS2.8*

*NNC **10** 20:12:12.2±1.5, 43.°21N×84.°13E, h0^{km}, mb4.2, mpv4.0, Error ellipse: s-maj=12.5km s-min=6.4km az=136.0*

ISC 10 20:12:06.6±0.6**, 43.°15N**±0.°04×**84.°26E**±0.°04**, h10^{km}, n54, σ2.^{s}14**/78**, mb3.8**/9**, 17C-6D, Northern Xinjiang**

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Code  Station Name       Δ°   AZ°  Phase ID         Time      Res
                                   Op     ISC     h  m  s     ISC
KTMS  Ketmen             2.87 277  eP     Pg     20 13 02.4 +0.8
      14nm,0.2s
KTMS                               eS     Sg     20 13 37.4 -1.3
      306nm,0.3s
PDGK  Podgornoye         3.49 275  ⇑Pn    Pb     20 13 05.9 -2.7
      7.3nm,0.3s
PDGK                               ⇑Pg    Pg     20 13 15.8 +2.3
      53nm,0.8s
PDGK                               ⇑Lg    Lg     20 14 02.9
      251nm,0.6s
SHLS  Shalkode           3.51 272  Pg     Pb     20 13 08.6 -0.3
      50nm,0.3s
SHLS                               Lg     Lg     20 13 48.6
      429nm,0.3s
SHLS  Shalkode           3.51 272  eP     Pb     20 13 08.6 -0.3
      49nm,0.3s
SHLS                               eS     Sb     20 13 48.6 -3.1
      429nm,0.3s
UZB   Uzynbulak          3.83 272  eP     Pg     20 13 21.7 +1.7
      50nm,0.4s
UZB                                eS     Sg     20 14 10.8 +1.1
      122nm,0.3s
KNOS  Konyrlen           3.88 290  Pg     Pg     20 13 20.7 -0.1
      39nm,0.4s
KNOS                               Lg     Lg     20 14 09.5
      99nm,0.4s
MK31  Makanchi Array     3.91 340  Pn     Pb     20 13 12.2 -3.3
      1.6nm,0.3s,baz=156,slow=14,SNR=164
MK31                               ⇑Pg    Pg     20 13 22.3 +0.9
      14nm,0.3s,baz=150,slow=16,SNR=49
MK31                               ⇑Lg    Lg     20 14 18.2
      209nm,0.6s,baz=162,slow=28,SNR=5.0
MKAR  Makanchi Array     3.91 340  Pn     Pb     20 13 12.5 -3.1
      1.8nm,0.3s,baz=156,slow=14,SNR=26
MKAR                               Pg     Pg     20 13 21.7 +0.3
      16nm,0.3s,baz=159,slow=17,SNR=62
MKAR                               Sn     Sb     20 13 58.1 -4.8
      13nm,0.3s,baz=178,slow=16,SNR=7.1
MKAR                               Lg     Lg     20 14 14.6
      18nm,0.3s,baz=161,slow=29,SNR=6.6
      3.5nm,0.5s
MAKZ  Makanchi           4.00 337  ⇑Pn    Pb     20 13 13.6 -3.6
      6.4nm,0.6s
MAKZ                               ⇑Pg    Pg     20 13 22.2 -1.0
      61nm,0.7s
MAKZ                               ⇓Lg    Lg     20 14 19.4
      93nm,0.7s
KPKS  Kokpek             4.08 276  Pg     Pg     20 13 25.3 +0.5
KPKS                               Lg     Lg     20 14 16.9
KPKS  Kokpek             4.08 276  eP     Pg     20 13 25.2 +0.5
      0.1nm,0.1s
KPKS                               eS     Sg     20 14 16.9 -0.8
      232nm,0.6s
KAPS  Kapalarasan        4.12 303  Pg     Pg     20 13 25.3 -0.2
      19nm,0.3s
KAPS                               Lg     Lg     20 14 17.2
      113nm,0.3s
SATY  Saty               4.29 271  Pg     Pg     20 13 29.7 +1.0
      27nm,0.3s
SATY                               Lg     Lg     20 14 24.5
      212nm,0.5s
BLB   Baldybastay        4.31 285  Pg     Pg     20 13 28.4 -0.7
      39nm,0.3s
BLB                                Lg     Lg     20 14 22.4
      178nm,0.6s
ZSN   Zaisan             4.33   5  Pg     Pg     20 13 30.1 +0.7
      9.1nm,0.3s
ZSN                                Lg     Lg     20 14 25.6
      65nm,0.6s
ZSN   Zaisan             4.33   5  eP     Pg     20 13 30.1 +0.7
      9.1nm,0.3s
ZSN                                eS     Sg     20 14 25.6 +0.2
      65nm,0.6s
KURS  Kuram              4.46 276  Pg     Pg     20 13 32.6 +0.6
      12nm,0.5s
KURS                               Lg     Lg     20 14 30.0
      81nm,1.0s
TDK   Taldyqorghan       4.61 296  Pg     Pg     20 13 35.0 +0.1
      86nm,0.7s
TDK                                Lg     Lg     20 14 33.7
      310nm,1.1s
TDK   Taldyqorghan       4.61 296  eP     Pg     20 13 35.0 +0.1
      86nm,0.3s
TDK                                eS     Sg     20 14 33.7 -0.9
      266nm,0.4s
ARXS  Arharly            4.79 285  eP     Pg     20 13 37.1 -1.2
      18nm,0.2s
ARXS                               eS     Sg     20 14 37.5 -2.8
      134nm,0.6s
KOTS  Kotyrbulak         5.23 273  eP     Pg     20 13 46.5 -0.2
      12nm,0.3s
KOTS                               eS     Sg     20 14 53.4 -1.0
      104nm,0.5s
KNDC  Almaty             5.34 273  ⇑Pg    Pg     20 13 50.2 +1.5
      21nm,0.5s
KNDC                               ⇓Lg    Lg     20 15 00.3
      210nm,0.8s
CHKK  Chushkaly          5.34 280  eP     Pg     20 13 48.1 -0.7
      2.9nm,0.2s
CHKK                               eS     Sg     20 14 56.5 -1.4
      47nm,0.4s
TNSS  Tian-Shan          5.36 271  Pg     Pg     20 13 49.3 +0.1
      4.5nm,0.7s
TNSS                               Lg     Lg     20 14 58.7
      12nm,1.1s
TNSS  Tian-Shan          5.36 271  eP     Pg     20 13 49.3 +0.1
      1.7nm,0.3s
TNSS                               eS     Sg     20 14 58.7 +0.1
      14nm,0.6s
IZV   Izvestkoviy        5.60 271  eP     Pg     20 13 54.8 +0.9
      16nm,0.3s
IZV                                eS     Sg     20 15 07.6 +1.2
      105nm,0.6s
MTBS  Maitube            5.73 273  eP     Pg     20 13 57.3 +1.0
      2.8nm,0.2s
MTBS                               eS     Sg     20 15 12.2 +1.6
      47nm,0.8s
KUU   Kurty              5.81 280  eP     Pg     20 13 57.8  0.0
      2.6nm,0.1s
KUU                                eS     Sg     20 15 12.7 -0.3
      7.1nm,0.1s
KST   Kastek             6.08 272  eP     Pg     20 14 03.4 +0.5
      6.7nm,0.4s
KST                                eS     Sg     20 15 22.5 +0.9
      53nm,0.6s
AAK   Ala-Archa          7.19 269  Pn     Pn     20 13 55.4 +3.5
      0.3nm,0.3s,baz=121,slow=12,SNR=4.5
AAK                                Lg     Lg     20 15 54.9
      0.9nm,0.3s,baz=151,slow=22,SNR=6.2
      0.9nm,0.3s
AAK   Ala-Archa          7.19 269  ⇓Pn    Pn     20 13 55.9 +4.0
      7.1nm,1.4s
AAK                                ⇑Pg    Pg     20 14 23.3 -1.0
      3.1nm,0.6s
AAK                                ⇑Lg    Lg     20 15 59.1
      15nm,0.9s
KSH   Kashi              7.21 243  Pn     Pb     20 14 06.0 -6.0
KSH                                Sn     Sb     20 15 30.9 -7.2
KSH                                smax   smax
      comp=N,30nm,0.7s
KSH                                smax   smax
      comp=E,41nm,0.9s
KURBB Kurchatov Arra     8.44 334  Pn     Pn     20 14 12.1 +3.2
      comp=E,0.2nm,0.3s,baz=147,slow=13,SNR=13
KURBB                              Sn     Sn     20 15 46.3 +2.1
      comp=E,0.2nm,0.3s,baz=144,slow=24,SNR=4.1
KURBB                              Lg     Lg     20 16 39.4
      comp=E,0.5nm,0.3s,baz=146,slow=23,SNR=11
      comp=E,0.9nm,0.4s
KURBB Kurchatov Arra     8.44 334  ⇑Pn    Pn     20 14 12.5 +3.6
      comp=E,6.1nm,0.8s
KURBB                              ⇑Sn    Sn     20 15 49.6 +5.4
      comp=E,23nm,0.7s
KURBB                              ⇓Lg    Lg     20 16 41.4
      comp=E,62nm,0.7s
KURK  Kurchatov          8.50 335  ⇑Pn    Pn     20 14 12.4 +2.8
      comp=E,1.9nm,0.8s
KURK                               ⇓Lg    Lg     20 16 39.6
      comp=E,16nm,0.8s
KK31  Karatay Array     10.06 274  ⇓Pn    Pn     20 14 38.9 +7.8
      comp=E,0.4nm,0.4s,baz=70,slow=15,SNR=4.9
KK31                               ⇑Lg    Lg     20 17 31.4
      comp=E,6.5nm,0.7s,baz=75,slow=28,SNR=4.4
ZALV  Zalesovo Beam     10.82   2  Pn     Pn     20 14 43.5 +2.1
      comp=E,0.8nm,0.3s,baz=184,slow=14,SNR=22
ZALV                               Sn     Sn     20 16 43.3 +0.9
      comp=E,1.1nm,0.3s,baz=172,slow=24,SNR=10
ZALV                               Lg     Lg     20 17 53.5
      baz=192,slow=25
      comp=E,3.7nm,0.6s
GTA   Gaotai            12.28 102  eP     Pn     20 14 59.5 -2.1
BVA0  Borovoye Array    13.53 322  Pn     P      20 15 26.8 -0.8
      comp=E,2.7nm,0.8s,baz=124,slow=15,SNR=4.0
BVA0                               ⇑Sn    Sn     20 17 55.3 +6.6
      comp=E,4.1nm,1.4s,baz=160,slow=41,SNR=4.7
BVA0                               ⇑Lg    Lg     20 19 23.1
      comp=E,28nm,1.4s
BVAR  Borovoye Array    13.53 322  Pn     Pn     20 15 16.7 -1.7
      baz=120,slow=14,SNR=4.8
BVAR                               Sn     Sn     20 17 46.5 -2.2
      baz=114,slow=25,SNR=3.2
BVAR                               Lg     Lg     20 19 18.6
      baz=126,slow=31,SNR=5.5
      comp=E,0.2nm,0.4s
SONM  Songino Array     16.20  66  Pn     Pn     20 15 54.4 +0.1
      comp=E,0.2nm,0.3s,baz=260,slow=11,SNR=12
SONM                               Lg     Lg     20 20 40.3
      baz=254,slow=21,SNR=1.3
      comp=E,1.1nm,0.8s
LZDM  Lanzhou Array     16.60 109  Pn     Pn     20 15 57.3 -2.3
      comp=E,0.9nm,0.3s,baz=294,slow=11,SNR=1.6
AB31  Akbulak array     17.87 298  ⇑Pn    P      20 16 17.0 +1.2
      comp=E,0.5nm,0.4s,baz=95,slow=9.8,SNR=5.5
AKTO  Aktyubinsk        19.32 301  P      P      20 16 31.7 -0.1
      comp=E,0.2nm,0.3s,baz=85,slow=11,SNR=1.4
      comp=E,0.5nm,0.3s
ARTI  Arti              21.17 318  P      P      20 16 54.2 +2.5
      comp=E,3.7nm,0.6s,baz=113,slow=6.0,SNR=7.6
      comp=E,3.7nm,0.6s
CMAR  Chiang Mai Arr    27.57 149  P      P      20 17 53.7 -0.1
      comp=E,0.7nm,0.7s,baz=321,slow=8.5,SNR=9.7
      comp=E,0.7nm,0.7s
ARCES ARCESS Array B    39.52 332  P      P      20 19 38.9 +1.8
      comp=E,2.3nm,0.8s,baz=88,slow=8.2,SNR=4.0
      comp=E,2.3nm,0.8s
HFS   Hagfors           44.62 318  P      P      20 20 19.9 +1.2
      comp=E,2.5nm,0.8s,baz=101,slow=7.5,SNR=0.9
      comp=E,2.5nm,0.8s
NOA   NORSAR Array B    45.64 319  P      P      20 20 28.4 +1.5
      comp=E,0.4nm,0.3s,baz=78,slow=7.8,SNR=1.7
      comp=E,0.4nm,0.3s
ILAR  Eielson Array     65.23  22  P      P      20 22 47.8 +0.1
      comp=E,0.3nm,0.6s,baz=328,slow=6.2,SNR=2.4
      comp=E,0.3nm,0.6s
YKA   Yellowknife Ar    73.62   9  P      P      20 23 39.8 +0.1
      comp=E,0.3nm,0.7s,baz=338,slow=6.0,SNR=3.9
      comp=E,0.3nm,0.7s
TORD  Torodi Ar. Bea    75.75 275  P      P      20 23 52.9 +0.2
      comp=E,1.7nm,0.6s,baz=36,slow=7.9,SNR=9.3
      comp=E,1.7nm,0.6s
WRA   Warramunga Arr    77.83 132  P      P      20 24 03.2 -1.1
      comp=E,1.1nm,0.8s,baz=307,slow=6.0,SNR=6.9
      comp=E,1.1nm,0.8s
ASAR  Alice Springs     80.64 135  P      P      20 24 18.8 -0.8
      comp=E,0.3nm,0.5s,baz=335,slow=4.7,SNR=4.6
      comp=E,0.3nm,0.5s
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*SOF **10** 20:14:00.8, 39.°52N±0.°09×28.°02E±0.°04, h0^{km}±3^{km}, MD4.8/4*

*BJI **10** 20:14:01.0, 39.°50N×27.°90E, h8^{km}, mB5.1/6, mb4.6/39, Ms4.7/3, Ms7 4.4/5*

*IDC **10** 20:14:01.9±0.6, 39.°50N×27.°99E, h0^{km}, mb4.2/22, mbtmp4.2/37, ML3.8/12, MS3.9/51, Error ellipse: s-maj=9.5km s-min=7.9km az=23.0*

*MED_RC **10** 20:14:02.0±4.8, 39.°85N×27.°61E, h12^{km}±3^{km}, MW4.7/9, Moment Tensor Solution.Mantle waves: s9,c14; Duration: 1.^{s}1 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.62±.13; $M_{\theta\theta}$1.34±.12; $M_{\phi\phi}$-0.73±.05; $M_{r\theta}$-0.21±.20; $M_{\theta\phi}$-0.32±.08; $M_{\phi r}$0.34±.20; Best double couple: $M_0$1.22000×10^{16} NP1:ϕ_s239.00000°, δ58.00000°, λ-155.00000°. NP2: ϕ_s136.00000°, δ69.00000°, λ-35.00000°. Principal axes: T 1.4200, Plg7.0000°, Azm190.0000°; N -0.4000, Plg50.0000°, Azm289.0000°; P -1.0200, Plg39.0000°, Azm94.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*MOS **10** 20:14:02.1±1.1, 39.°52N×28.°01E, h14^{km}, mb4.7/22 Error ellipse: s-maj=4.9km s-min=3.1km az=87.4*

*ISK **10** 20:14:02.7, 39.°45N×27.°92E, h9^{km}, ML5.0/12*

*NEIC **10** 20:14:03.2±1.6, 39.°46N±0.°04×27.°90E±0.°05, h10^{km}±1^{km}, mb4.6/55, Error ellipse: s-maj=7.3km s-min=6.2km az=206.0*

*AFAD **10** 20:14:03.1, 39.°44N×27.°93E, h7^{km}±2^{km}, MW4.6*

*PDG **10** 20:14:03.0±0.8, 39.°47N×27.°92E, h14^{km}, ML4.7/10, Error ellipse: s-maj=0.5km s-min=0.5km az=90.0*

*THE **10** 20:14:04.1, 39°N±3°×2°8E±°, h12^{km}, M4.8/24, MLh4.8/24*

*GCMT **10** 20:14:05.2±0.3, 39.°41N±0.°02×27.°83E±0.°02, h19^{km}±1^{km}, MW4.8/91, Moment Tensor Solution. s13,c13; s91,c112; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.12±.13; $M_{\theta\theta}$1.87±.10; $M_{\phi\phi}$-0.75±.07; $M_{r\theta}$-0.80±.17; $M_{\theta\phi}$-0.97±.06; $M_{\phi r}$0.15±.17; Best double couple: $M_0$1.86500×10^{16} NP1:ϕ_s314.00000°, δ37.00000°, λ-53.00000°. NP2: ϕ_s90.00000°, δ61.00000°, λ-114.00000°. Principal axes: T 2.3790, Plg13.0000°, Azm198.0000°; N -1.0310, Plg21.0000°, Azm103.0000°; P -1.3510, Plg65.0000°, Azm317.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*GFZ **10** 20:14:05.5, 39.°52N×27.°94E, h11^{km}, MW4.6, Moment Tensor Solution. s22 Moment tensor: M_{rr}-0.36; $M_{\theta\theta}$0.95; $M_{\phi\phi}$-0.59; $M_{r\theta}$-0.25; $M_{\theta\phi}$-0.55; $M_{\phi r}$0.10; Fault plane solution: NP1:ϕ_s333.00000°, δ85.00000°, λ9.00000°. NP2:ϕ_s242.00000°, δ81.00000°, λ175.00000°. Principal axes: T 1.1700, Plg10.0000°, Azm198.0000°; N -0.4100, Plg80.0000°, Azm3.0000°; P -0.7700, Plg2.0000°, Azm108.0000°;*

*BEO **10** 20:14:06.6±0.6, 39.°84N×27.°98E, h0^{km}, ML4.7/12*

*GII **10** 20:14:10.6±0.0, 38.°92N±0.°03×27.°866E±0.°009, h40^{km}, Mws4.6, confirmed*

*NAO **10** 20:14:14.7, 39.°45N×27.°91E, h10^{km}, MB4.1*

ISC 10 20:14:03.4±0.8**, 39.°46N**±0.°02×**27.°94E**±0.°02**, h14^{km}**±4^{km}**, n714, σ1.^{s}63**/776**, mb4.5**/69**, MS4.0**/46**, 86C-66D, Turkey**

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Code  Station Name       Δ°   AZ°  Phase ID         Time      Res
                                   Op     ISC     h  m  s     ISC
BALB  Balikesir          0.18 346  Pg     Pb     20 14 07.9 -0.6
BALB                               Sg     Sg     20 14 11.4 +0.8
BALB  Balikesir          0.18 346  Pg     Pb     20 14 07.9 -0.6
BALB                               Sg     Sg     20 14 11.6 +1.1
BALB  Balikesir          0.18 346  ⇑P     Pb     20 14 07.9 -0.6
STEP  BALIKESIR_Sava     0.19 243  P      Pg     20 14 07.5 -0.3
STEP                               S      Sg     20 14 10.4 -0.3
STEP                               i IAML        20 14 12.0
      comp=N,27μm,0.9s
STEP                               i IAML        20 14 12.0
      comp=E,24μm,0.6s
BKES  Balkesir-Mer       0.27 359  P      Pb     20 14 09.3 -0.7
BKES                               S      Sg     20 14 13.7 +0.7
BKES                               i IAML        20 14 14.0
      comp=N,8μm,0.6s
BKES                               i IAML        20 14 16.0
      comp=E,4μm,0.5s
BALY  Balya              0.37 319  P      Pb     20 14 11.1 -0.7
BALY                               S      Sb     20 14 16.7 -0.7
BALY                               i IAML        20 14 17.0
      comp=N,10μm,0.4s
BALY                               i IAML        20 14 17.0
      comp=E,10μm,0.4s
BLKS  Balkesir-Sus       0.41   4  P      Pb     20 14 11.7 -0.7
BLKS                               S      Sb     20 14 17.9 -0.7
BLKS                               i IAML        20 14 24.0
      comp=E,2μm,0.6s
BLKS                               i IAML        20 14 25.0
      comp=N,3μm,0.6s
SOMA  Soma-Manisa        0.44 226  Pg     Pg     20 14 11.4 -0.7
SOMA                               Sg     Sg     20 14 17.8 -0.2
DURS  Dursunbey          0.44  72  P      Pg     20 14 12.2 +0.1
DURS                               S      Sg     20 14 18.3 +0.2
DURS                               i IAML        20 14 19.0
      comp=N,6μm,0.4s
DURS                               i IAML        20 14 19.0
      comp=E,9μm,0.3s
SUSR  Susurluk-Balik     0.51  13  Pg     Pb     20 14 13.4 -0.8
DST   Dursunbey          0.55  75  Pg     Pg     20 14 13.5 -0.7
DST                                Sg     Sg     20 14 21.7 +0.2
GORD  Gordes-Manisa      0.58 161  Pg     Pg     20 14 14.4 -0.5
GORD                               Sg     Sg     20 14 22.7  0.0
AKHS  Akhisar            0.59 189  P      Pg     20 14 14.1 -0.9
AKHS                               S      Sg     20 14 23.7 +0.8
AKHS                               i IAML        20 14 26.0
      comp=E,3μm,0.3s
AKHS                               i IAML        20 14 27.0
      comp=N,13nm,0.9s
AKS   Akhisar            0.59 189  Pg     Pg     20 14 14.0 -1.0
```

AKS				Sg	Sg	20 14 22.9	0.0
GONE	**Gonen-Balikesi**	**0.61**	**342**	Pg	**Pb**	**20 14 15.4**	**-0.5**
GONE				Sg	**Sb**	**20 14 24.5**	**+0.1**
BUHA	**Balikesir, Bur**	**0.67**	**273**	P	**Pb**	**20 14 16.2**	**-0.6**
BUHA				*i* IAML		20 14 29.0	
	comp=E,6µm,0.5s						
BUHA				*i* IAML		20 14 31.0	
	comp=N,5µm,0.3s						
YAYO	**Edremit-Balk**	**0.68**	**283**	Pg	**Pg**	**20 14 16.3**	**-0.4**
YAYO				Sg	**Sb**	**20 14 26.2**	**-0.2**
DEMI	**Demirci**	**0.74**	**125**	P	**Pg**	**20 14 17.4**	**-0.3**
DEMI				S	**Sg**	**20 14 27.5**	**0.0**
DEMI				*i* IAML		20 14 31.0	
	comp=N,5µm,0.5s						
DEMI				*i* IAML		20 14 33.0	
	comp=E,3µm,0.4s						
GOMA	**Golmarmara-Man**	**0.76**	**181**	Pg	**Pg**	**20 14 17.4**	**-0.7**
ZEDA	**zmir-Bergama**	**0.83**	**234**	P	**Pg**	**20 14 19.0**	**-0.5**
ZEDA				S	**Sg**	**20 14 30.8**	**+0.3**
ZEDA				*i* IAML		20 14 34.0	
	comp=N,5µm,0.9s						
ZEDA				*i* IAML		20 14 34.0	
	comp=E,9µm,0.7s						
CANM	**Can-anakkale**	**0.87**	**309**	Pg	**Pb**	**20 14 19.9**	**-0.4**
EDC	**Edincik**	**0.88**	**356**	Pg	**Pb**	**20 14 20.3**	**-0.2**
DKL	**Dikili**	**0.89**	**244**	Pg	**Pg**	**20 14 20.5**	**-0.1**
DKL	**Dikili**	**0.89**	**244**	⇑P	**Pg**	**20 14 20.1**	**-0.5**
SIMA	**Simav-Kutahya**	**0.90**	**115**	Pg	**Pg**	**20 14 20.6**	**-0.2**
BAND	**Balkesir-Ban**	**0.90**	**8**	P	**Pb**	**20 14 20.6**	**-0.1**
BAND				S	**Sn**	**20 14 33.2**	**-1.2**
BAND				*i* IAML		20 14 35.0	
	comp=E,6µm,0.4s						
BAND				*i* IAML		20 14 37.0	
	comp=N,3µm,0.3s						
BAND	**Balkesir-Ban**	**0.90**	**8**	⇑P	**Pn**	**20 14 20.8**	**-0.8**
BAND				⇓S	**Sn**	**20 14 33.4**	**-1.0**
ORLT	**Orhaneli**	**0.94**	**52**	Pg	**Pb**	**20 14 21.6**	**+0.1**
AYVA	**Ayvalik**	**0.98**	**261**	P	**Pb**	**20 14 22.3**	**+0.2**
AYVA				S	**Sn**	**20 14 36.9**	**+0.6**
AYVA				*i* IAML		20 14 38.0	
	comp=N,27µm,0.7s						
AYVA				*i* IAML		20 14 38.0	
	comp=E,13µm,0.5s						
BIGA	**Biga-Canakkale**	**1.02**	**324**	Pg	**Pn**	**20 14 22.7**	**-0.5**
KRBG	**Karabiga-Canak**	**1.05**	**332**	Pg	**Pn**	**20 14 23.3**	**-0.4**
MANT	**Manisa**	**1.09**	**153**	P	**Pb**	**20 14 24.0**	**0.0**
MANT				S	**Sg**	**20 14 37.7**	**-0.9**
MANT				*i* IAML		20 14 40.0	
	comp=N,2µm,0.5s						
MANT				*i* IAML		20 14 40.0	
	comp=E,5µm,0.6s						
MANT	**Manisa**	**1.09**	**153**		**Pb**	**20 14 23.8**	**-0.3**
MANT					**Sg**	**20 14 36.9**	**-1.7**
SHAP	**Saphane-Kutahy**	**1.09**	**113**	Pn	**Pb**	**20 14 24.1**	**0.0**
KULA	**Kula-Manisa**	**1.10**	**149**	Pn	**Pb**	**20 14 24.3**	**0.0**
BAYC	**CANAKKALE_Bayr**	**1.11**	**285**	P	**Pn**	**20 14 24.2**	**-0.3**
BAYC				S	**Sn**	**20 14 39.0**	**-0.6**
BAYC				*i* IAML		20 14 41.0	
	comp=N,3µm,0.7s						
BAYC				*i* IAML		20 14 42.0	
	comp=E,7µm,0.4s						
LAPS	**Lapseki, ANA**	**1.15**	**313**	P	**Pn**	**20 14 25.3**	**+0.1**
LAPS				S	**Sn**	**20 14 40.4**	**-0.4**
LAPS				*i* IAML		20 14 42.0	
	comp=N,3µm,0.6s						
LAPS				*i* IAML		20 14 44.0	
	comp=E,2µm,0.6s						
MDNY	**Mudanya-Bursa**	**1.16**	**39**	Pn	**Pg**	**20 14 25.3**	**-0.5**
MRMT	**Marmara Adasi**	**1.17**	**347**	Pn	**Pn**	**20 14 25.8**	**+0.4**
TVSB	**Tavsanli**	**1.18**	**90**	Pn	**Pb**	**20 14 25.6**	**0.0**
ODEM	**Odemis-Izmir**	**1.19**	**175**	Pn	**Pn**	**20 14 25.3**	**-0.4**
GEDZ	**Gediz**	**1.22**	**110**	Pn	**Pb**	**20 14 26.7**	**+0.4**
EZNE	**Ezine-Canakkal**	**1.25**	**284**	Pn	**Pg**	**20 14 26.6**	**-0.8**
LPK	**Lapseki**	**1.28**	**315**	Pn	**Pg**	**20 14 27.2**	**-0.9**
BLCB	**Balcova**	**1.28**	**213**	P	**Pn**	**20 14 26.0**	**-0.9**
BLCB				S	**Sb**	**20 14 41.8**	**-1.8**
BLCB	**Balcova**	**1.28**	**213**	Pn	**Pn**	**20 14 26.2**	**-0.7**
COMU	**Canakkale**	**1.29**	**300**	Pn	**Pg**	**20 14 27.3**	**-1.0**
EZN	**Ezine**	**1.29**	**287**	P	**Pb**	**20 14 27.1**	**-0.4**
EZN				S	**Sg**	**20 14 45.1**	**0.0**
EZN	**Ezine**	**1.29**	**287**	Pn	**Pb**	**20 14 27.3**	**-0.2**
PRK	**Paraskevi**	**1.31**	**261**	P	**Pn**	**20 14 27.1**	**-0.1**
PRK				S	**Sn**	**20 14 44.7**	**+0.3**
ARMT	**Armutlu**	**1.31**	**33**	Pn	**Pg**	**20 14 27.8**	**-0.8**
RKY	**Sarkoy-Tekirda**	**1.35**	**335**	Pn	**Pg**	**20 14 28.4**	**-1.0**
GPNR	**Gulpinar-Canak**	**1.40**	**270**	Pn	**Pb**	**20 14 29.2**	**0.0**
GELI	**Tayfur-Gelibol**	**1.46**	**310**	Pn	**Pb**	**20 14 29.8**	**-0.5**
BOZC	**Bozcaada**	**1.50**	**285**	Pn	**Pb**	**20 14 30.3**	**-0.7**
AYDB	**Zeytinkoy-Aydi**	**1.52**	**181**	Pn	**Pn**	**20 14 29.7**	**-0.5**
URLA	**Izmir**	**1.52**	**224**	Pn	**Pn**	**20 14 29.6**	**-0.6**
NAZL	**Nazilli-Aydin**	**1.52**	**169**	Pn	**Pn**	**20 14 30.2**	**0.0**
BOTS	**Marmara Eregli**	**1.52**	**1**	Pn	**Pb**	**20 14 31.1**	**-0.3**
TKR	**Tekirdag**	**1.56**	**349**	Pn	**Pb**	**20 14 31.2**	**-0.7**
YLV	**Yalova**	**1.56**	**45**	Pn	**Pb**	**20 14 31.5**	**-0.6**
GMLD	**Gumuldur**	**1.60**	**210**	Pn	**Pn**	**20 14 30.8**	**-0.4**
YKBL	**Yakuplu-Istanb**	**1.62**	**20**	Pn	**Pb**	**20 14 32.6**	**-0.5**
ERIK	**Erikli-Kesan**	**1.63**	**318**	Pn	**Pb**	**20 14 32.2**	**-0.9**
SIGR	**SIGRI**	**1.63**	**262**	P	**Pn**	**20 14 31.7**	**0.0**
SIGR				S	**Sn**	**20 14 52.0**	**-0.5**
SIGR	**SIGRI**	**1.63**	**262**	Pn	**Pn**	**20 14 32.1**	**+0.4**
CAVI	**Cavuskoy**	**1.64**	**63**	Pn	**Pb**	**20 14 32.6**	**-0.9**
AVCI	**Avcilar-stanb**	**1.64**	**21**	Pn	**Pn**	**20 14 32.1**	**+0.3**
YLVH	**Yalova**	**1.65**	**41**	Pn	**Pb**	**20 14 32.9**	**-0.7**
BRGA	**Burgazada-Ista**	**1.66**	**31**	Pn	**Pb**	**20 14 32.7**	**-1.1**
HYBA	**Heybeliada-Ist**	**1.66**	**32**	Pn	**Pb**	**20 14 33.0**	**-0.8**
CRLT	**Corlu**	**1.67**	**355**	Pn	**Pb**	**20 14 32.9**	**-1.0**
BUYA	**Buyukada-Istan**	**1.68**	**33**	Pn	**Pb**	**20 14 33.2**	**-0.8**
KHL	**Karahalli**	**1.68**	**132**	Pn	**Pn**	**20 14 33.2**	**+0.7**
ADVT	**Abdulvahap**	**1.69**	**54**	Pn	**Pb**	**20 14 33.5**	**-0.8**
TUZL	**Tuzla-Istanbul**	**1.69**	**37**	Pn	**Pn**	**20 14 32.9**	**+0.4**
LAFA	**Gebze-Kocaeli**	**1.69**	**40**	Pn	**Pb**	**20 14 33.4**	**-0.9**
CESE	**eme**	**1.71**	**229**	Pn	**Pn**	**20 14 32.4**	**-0.3**
GADA	**Gvkgeada**	**1.73**	**295**	P	**Pn**	**20 14 33.4**	**+0.4**
GADA				S	**Sb**	**20 14 55.3**	**-1.2**
GADA	**Gvkgeada**	**1.73**	**295**	Pn	**Pb**	**20 14 33.6**	**-1.3**
OSMT	**Osmaniye**	**1.77**	**49**	Pn	**Pb**	**20 14 34.6**	**-1.0**
SLVT	**Silivri**	**1.78**	**7**	Pn	**Pb**	**20 14 34.2**	**-1.5**
ENZZ	**Sultanice-Enez**	**1.79**	**310**	Pn	**Pn**	**20 14 34.4**	**+0.6**
ISK	**Istanbul-Kandi**	**1.82**	**28**	Pn	**Pn**	**20 14 34.7**	**+0.5**
CHOS	**Chios island**	**1.82**	**234**	P	**Pn**	**20 14 33.9**	**-0.4**
CHOS				S	**Sn**	**20 14 57.0**	**-0.2**
CHOS	**Chios island**	**1.82**	**234**	Pn	**Pn**	**20 14 34.5**	**+0.2**
CTKS	**Kestanelik-??a**	**1.82**	**14**	Pn	**Pb**	**20 14 35.3**	**-1.2**
CAVK	**Edirne/Enez-Ca**	**1.83**	**313**	⇑P	**Pb**	**20 14 35.9**	**-0.7**
CAVK				⇓S	**Sb**	**20 14 59.7**	**+0.3**
BGKT	**Bogazkoy**	**1.83**	**20**	Pn	**Pb**	**20 14 35.4**	**-1.2**
GCAM	**G?zelcaml?**	**1.84**	**198**	Pn	**Pn**	**20 14 34.7**	**+0.1**
ENEZ	**Enez**	**1.87**	**313**	P	**Pb**	**20 14 35.9**	**-1.4**
ENEZ				S	**Sn**	**20 14 58.7**	**+0.4**
ENEZ	**Enez**	**1.87**	**313**	Pn	**Pb**	**20 14 35.7**	**-1.5**
HRT	**Hereke**	**1.90**	**44**	Pn	**Pn**	**20 14 35.6**	**+0.2**
UKOP	**Uzunkopru-Edir**	**1.94**	**329**	Pn	**Pb**	**20 14 36.8**	**-1.7**
SMG	**Samos**	**1.95**	**207**	P	**Pn**	**20 14 35.1**	**-1.0**
SMG				S	**Sn**	**20 14 59.7**	**-0.7**
KLYT	**Kilyos**	**1.98**	**25**	Pn	**Pn**	**20 14 37.0**	**+0.6**
BORA	**Eskisehir**	**1.99**	**77**		**Pn**	**20 14 37.1**	**+0.5**
GPA	**Golpazari**	**2.00**	**65**	Pn	**Pn**	**20 14 37.5**	**+0.7**
CTYL	**Yalikoy Yolu**	**2.03**	**8**	Pn	**Pn**	**20 14 37.5**	**+0.4**
SMTH	**Samothraki Isl**	**2.10**	**299**	P	**Pn**	**20 14 38.5**	**+0.3**
SMTH				S	**Sn**	**20 15 05.1**	**+0.9**
DIDI	**Didim-Aydin**	**2.15**	**195**	Pn	**Pn**	**20 14 39.7**	**+0.8**
LIA	**Limnos Island**	**2.17**	**282**	P	**Pn**	**20 14 39.6**	**+0.6**
MLSB	**Milas**	**2.17**	**183**	Pn	**Pn**	**20 14 38.8**	**-0.3**
PHSR	**Pinarhisar**	**2.19**	**352**	Pn	**Pn**	**20 14 39.4**	**+0.1**
GULT	**Gulveren**	**2.21**	**63**	Pn	**Pn**	**20 14 40.7**	**+1.0**
SHUT	**Suhut-Afyon**	**2.23**	**113**	Pn	**Pn**	**20 14 41.1**	**+1.1**
SAUV	**Serdivan-Sakar**	**2.23**	**54**	Pn	**Pn**	**20 14 41.1**	**+1.2**
APMY	**Acipayam-Deniz**	**2.26**	**151**	Pn	**Pn**	**20 14 40.9**	**+0.5**
BASM	**Basmaki-Afyon**	**2.26**	**132**	Pn	**Pn**	**20 14 40.9**	**+0.5**
YER	**Yerkesik**	**2.34**	**173**	P	**Pn**	**20 14 41.1**	**-0.4**
YER	**Yerkesik**	**2.34**	**173**	Pn	**Pn**	**20 14 41.8**	**+0.3**
CIFT	**Cifteler, Eski**	**2.42**	**91**	Pn	**Pn**	**20 14 43.7**	**+1.0**
BODT	**Bodrum**	**2.45**	**192**	P	**Pn**	**20 14 42.9**	**0.0**
BODT	**Bodrum**	**2.45**	**192**	Pn	**Pn**	**20 14 43.4**	**+0.5**
RDO	**Rodhopi**	**2.49**	**313**	P	**Pn**	**20 14 44.3**	**+0.9**
RDO	**Rodhopi**	**2.49**	**313**		**Pn**	**20 14 44.3**	**+0.9**
RDO				Sn	**Sn**	**20 15 09.4**	**-4.1**
RDO	**Rodhopi**	**2.49**	**313**	Pn	**Pn**	**20 14 44.6**	**+1.2**
RDO	**Rodhopi**	**2.49**	**313**	⇓P	**Pn**	**20 14 44.2**	**+0.9**
SDAG	**Sultandagi-AFY**	**2.54**	**113**	Pn	**Pn**	**20 14 45.3**	**+1.0**
BLVD	**Bolvadin-AFYON**	**2.55**	**104**	Pn	**Pn**	**20 14 45.6**	**+1.2**
EDRB	**Edirne**	**2.55**	**340**	Pn	**Pn**	**20 14 44.7**	**+0.4**
ISP	**Isparta**	**2.60**	**128**		**Pn**	**20 14 45.5**	**+0.3**
ISP				Sn	**Sn**	**20 15 17.7**	**+1.0**
ISP	**Isparta**	**2.60**	**128**	Pn	**Pn**	**20 14 46.1**	**+0.9**
ISP	**Isparta**	**2.60**	**128**	*de*P	**Pn**	**20 14 45.5**	**+0.3**
ISP				pmax	pmax		
	comp=Z,119nm,0.6s						
ISP	**Isparta**	**2.60**	**128**	⇑P	**Pn**	**20 14 45.5**	**+0.3**
SAHE	**Sakarya_HENDEK**	**2.63**	**57**	⇓P	**Pn**	**20 14 46.4**	**+1.0**
TURN	**Turunc**	**2.69**	**175**	Pn	**Pn**	**20 14 46.1**	**-0.2**
MDUB	**Mudurnu**	**2.70**	**67**		**Pn**	**20 14 47.0**	**+0.5**
MDUB				Sn	**Sn**	**20 15 21.7**	**+2.7**
MDUB	**Mudurnu**	**2.70**	**67**	Pn	**Pn**	**20 14 47.9**	**+1.4**
MDUB	**Mudurnu**	**2.70**	**67**	⇓P	**Pn**	**20 14 47.3**	**+0.8**
DALY	**Dalyan (Mula)**	**2.70**	**168**	Pn	**Pn**	**20 14 47.1**	**+0.7**
THAS	**Thassos island**	**2.72**	**296**	P	**Pn**	**20 14 46.7**	**0.0**
CAME	**Cameli-Denizli**	**2.74**	**156**	Pn	**Pn**	**20 14 48.1**	**+1.1**
DAT	**Datca**	**2.75**	**186**	Pn	**Pn**	**20 14 47.1**	**0.0**
SVRH	**Sivrihisar-ESK**	**2.78**	**89**	Pn	**Pn**	**20 14 48.8**	**+1.3**
BCK	**Bucak**	**2.89**	**133**	Pn	**Pn**	**20 14 50.3**	**+1.3**
KDZ	**Kurdzhali**	**2.93**	**318**	P	**Pn**	**20 14 50.0**	**+0.5**
KDZ	**Kurdzhali**	**2.93**	**318**	Pn	**Pn**	**20 14 50.4**	**+0.8**
KDZ	**Kurdzhali**	**2.93**	**318**	P	**Pn**	**20 14 50.2**	**+0.6**
YUVA	**Yuva-Kibriscik**	**3.03**	**71**	Pn	**Pn**	**20 14 52.5**	**+1.5**
KAVA	**Kavala**	**3.03**	**301**	P	**Pn**	**20 14 51.4**	**+0.5**
APE	**Apeiranthos**	**3.05**	**219**	P	**Pn**	**20 14 50.2**	**-1.1**
APE	**Apeiranthos**	**3.05**	**219**	Pn	**Pn**	**20 14 52.8**	**+1.6**
APE	**Apeiranthos**	**3.05**	**219**	⇓P	**Pn**	**20 14 51.9**	**+0.7**
APE	**Apeiranthos**	**3.05**	**219**	*de*P	**Pn**	**20 14 50.0**	**-1.2**
APE	**Apeiranthos**	**3.05**	**219**	⇑P	**Pn**	**20 14 49.8**	**-1.4**
APE	**Apeiranthos**	**3.05**	**219**	P	**Pn**	**20 14 50.4**	**-0.8**
KARY	**Karystos**	**3.09**	**244**	P	**Pn**	**20 14 51.9**	**+0.2**
KYMI	**Kymi, Euboea I**	**3.10**	**256**	P	**Pn**	**20 14 52.5**	**+0.6**
KORT	**Korkueli**	**3.11**	**142**	Pn	**Pn**	**20 14 53.6**	**+1.5**
KIZT	**Kizilcal**	**3.12**	**100**	Pn	**Pn**	**20 14 51.9**	**-0.4**
ELL	**Elmali**	**3.13**	**150**		**Pn**	**20 14 53.4**	**+1.0**
ELL	**Elmali**	**3.13**	**150**	Pn	**Pn**	**20 14 53.9**	**+1.5**
ELL	**Elmali**	**3.13**	**150**	P	**Pn**	**20 14 53.4**	**+1.0**
ELL	**Elmali**	**3.13**	**150**	⇓P	**Pn**	**20 14 54.5**	**+2.2**
DIM	**Dimitrovgrad**	**3.14**	**326**	P	**Pn**	**20 14 53.3**	**+0.9**
AOS	**Alonnisos**	**3.16**	**266**	P	**Pn**	**20 14 53.8**	**+1.1**
OUR	**Ouranopolis**	**3.16**	**287**	P	**Pn**	**20 14 52.9**	**+0.2**
OUR	**Ouranopolis**	**3.16**	**287**	Pn	**Pn**	**20 14 53.1**	**+0.4**
JMB	**Yambol**	**3.21**	**341**	P	**Pn**	**20 14 53.4**	**+0.1**
JMB	**Yambol**	**3.21**	**341**	P	**Pn**	**20 14 53.7**	**+0.4**
JMB	**Yambol**	**3.21**	**341**	*e*Pn	**Pn**	**20 14 53.5**	**+0.2**
JMB				*e*Sn	**Sn**	**20 15 28.0**	**-3.3**
ARG	**Arkhangelos**	**3.25**	**177**	P	**Pn**	**20 14 53.7**	**-0.1**
ARG	**Arkhangelos**	**3.25**	**177**		**Pn**	**20 14 53.6**	**-0.3**
ARG	**Arkhangelos**	**3.25**	**177**	Pn	**Pn**	**20 14 54.5**	**+0.6**
ARG	**Arkhangelos**	**3.25**	**177**	P	**Pn**	**20 14 53.6**	**-0.3**
ARG	**Arkhangelos**	**3.25**	**177**	⇓P	**Pn**	**20 14 53.8**	**-0.1**
POLA	**Polatl-ANKAR**	**3.28**	**85**	Pn	**Pn**	**20 14 56.4**	**+2.0**
RZN	**Rozhen**	**3.30**	**313**	P	**Pn**	**20 14 55.6**	**+0.8**
RZN	**Rozhen**	**3.30**	**313**	P	**Pn**	**20 14 55.9**	**+1.1**
ANTB	**Antalya**	**3.34**	**139**	Pn	**Pn**	**20 14 56.1**	**+1.0**
DION	**Dionisos Attik**	**3.42**	**247**	P	**Pn**	**20 14 56.6**	**+0.3**
AKAS	**Kas**	**3.49**	**157**		**Pn**	**20 14 58.1**	**+0.8**
AKAS	**Kas**	**3.49**	**157**	Pn	**Pn**	**20 14 59.2**	**+1.9**
KEMT	**Kemer-ANTALYA**	**3.53**	**143**	Pn	**Pn**	**20 14 59.5**	**+1.8**
PLD	**Plovdiv**	**3.61**	**319**	P	**Pn**	**20 14 59.8**	**+0.9**
PLD	**Plovdiv**	**3.61**	**319**	Pn	**Pn**	**20 15 00.0**	**+1.1**
PLD	**Plovdiv**	**3.61**	**319**	*e*Pn	**Pn**	**20 14 59.9**	**+1.1**
PLD				*e*Sn	**Sn**	**20 15 40.3**	**-1.0**
LADK	**Ladik-KONYA**	**3.68**	**109**	Pn	**Pn**	**20 15 01.4**	**+1.4**
SEYD	**Seydisehir-KON**	**3.69**	**123**	Pn	**Pn**	**20 15 01.4**	**+1.3**
SRS	**Serrai**	**3.71**	**298**	P	**Pn**	**20 15 00.8**	**+0.6**
PRD	**Provadia**	**3.71**	**354**	P	**Pn**	**20 15 01.0**	**+0.7**
LOD	**Lodumlu**	**3.75**	**82**	Pn	**Pn**	**20 15 02.2**	**+1.3**
SOH	**Sokhos**	**3.76**	**293**	P	**Pn**	**20 15 01.6**	**+0.6**
ANTO	**Ankara**	**3.77**	**82**		**Pn**	**20 15 01.9**	**+0.7**
ANTO	**Ankara**	**3.77**	**82**	Pn	**Pn**	**20 15 02.7**	**+1.5**
ANTO	**Ankara**	**3.77**	**82**	⇑P	**Pn**	**20 15 02.3**	**+1.1**
ANTO	**Ankara**	**3.77**	**82**	P	**Pn**	**20 15 02.3**	**+1.1**
ANTO	**Ankara**	**3.77**	**82**	⇓P	**Pn**	**20 15 01.7**	**+0.6**
KONT	**Konya--Tatoy**	**3.78**	**112**	Pn	**Pn**	**20 15 03.0**	**+1.8**
ELND	**Elena**	**3.79**	**336**	⇓P	**Pn**	**20 15 02.5**	**+1.1**
MMB	**Musomishta**	**3.81**	**304**	P	**Pn**	**20 15 02.8**	**+1.1**
MMB	**Musomishta**	**3.81**	**304**	P	**Pn**	**20 15 02.6**	**+0.9**
KALB	**Balgarevo**	**3.96**	**5**	⇑P	**Pn**	**20 15 05.5**	**+1.9**
KALB				⇑S	**Sn**	**20 15 51.1**	**+1.4**
CHBY	**Cihanbeyli**	**3.96**	**101**	Pn	**Pn**	**20 15 05.4**	**+1.6**
KARP	**Karpathos**	**3.96**	**189**		**Pn**	**20 15 04.0**	**+0.3**
KARP				Sn	**Sn**	**20 15 49.4**	**-0.5**
KARP	**Karpathos**	**3.96**	**189**	Pn	**Pn**	**20 15 04.2**	**+0.5**
KARP	**Karpathos**	**3.96**	**189**	⇑P	**Pn**	**20 15 03.0**	**-0.7**
AFSR	**Afar-Bala (An**	**3.98**	**89**	Pn	**Pn**	**20 15 06.0**	**+2.0**
LOZB	**Loznitsa**	**4.03**	**346**	⇑P	**Pn**	**20 15 05.3**	**+0.7**
SZH	**Strazhitsa**	**4.07**	**339**	P	**Pn**	**20 15 06.0**	**+0.7**
KNT	**Kendrikon**	**4.21**	**295**	P	**Pn**	**20 15 08.3**	**+1.2**
LIT	**Litokhoron**	**4.24**	**280**	Pn	**Pn**	**20 15 08.1**	**+0.5**
LIT				Sn	**Sn**	**20 15 55.1**	**-1.9**
LIT	**Litokhoron**	**4.24**	**280**	P	**Pn**	**20 15 08.1**	**+0.5**
LIT						20 15 55.1	
LIT	**Litokhoron**	**4.24**	**280**	⇑P	**Pn**	**20 15 08.3**	**+0.7**
KKB	**Krupnik**	**4.36**	**305**	P	**Pn**	**20 15 10.6**	**+1.4**
KURC	**Kurucasile-Bar**	**4.36**	**55**	Pn	**Pn**	**20 15 11.9**	**+2.7**
MANR	**Mangalia**	**4.38**	**6**	⇑P	**Pn**	**20 15 10.7**	**+1.3**
BR131	**Keskin Array S**	**4.41**	**85**		**Pn**	**20 15 10.9**	**+0.8**
BR131				Sn	**Sn**	**20 16 00.3**	**-1.0**
BR131	**Keskin Array S**	**4.41**	**85**	Pn	**Pn**	**20 15 11.1**	**+1.0**
BR131	**Keskin Array S**	**4.41**	**85**	*d i*P	**Pn**	**20 15 10.9**	**+0.8**
BRTR	**Keskin Array B**	**4.41**	**85**	Pn	**Pn**	**20 15 11.1**	**+1.0**
	comp=Z,18nm,0.3s,baz=260,slow=12,SNR=555						
BRTR				Sn	**Sn**	**20 16 01.5**	**+0.1**
	comp=Z,8.0nm,0.3s,baz=51,slow=27,SNR=4.0						
BRTR				Lg	Lg	20 16 19.6	
	comp=Z,9.4nm,0.3s,baz=256,slow=25,SNR=7.9						
	comp=Z,78nm,0.5s						
BRTR	**Keskin Array B**	**4.41**	**85**	Pn	**Pn**	**20 15 10.9**	**+0.8**
VAY	**Valandovo**	**4.50**	**296**	*i* Pn	**Pn**	**20 15 12.7**	**+1.6**
VAY				*i* Sn	**Sg**	**20 16 29.4**	**+1.6**
CIDE	**Kastamonu/Cide**	**4.51**	**56**	⇑P	**Pn**	**20 15 12.8**	**+1.6**
EFOR	**EFORIE**	**4.64**	**6**	⇑P	**Pn**	**20 15 14.3**	**+1.3**
KIRS	**Kirsehir-Merke**	**4.65**	**92**	⇑P	**Pn**	**20 15 15.2**	**+1.9**
ILGA	**Ilgaz**	**4.70**	**68**		**Pn**	**20 15 14.4**	**+0.4**
MFTR	**Murfatlar**	**4.72**	**4**	⇑P	**Pn**	**20 15 15.1**	**+0.9**
VTS	**Vitosha**	**4.75**	**313**	P	**Pn**	**20 15 16.1**	**+1.4**
VTS	**Vitosha**	**4.75**	**313**	*e*Pn	**Pn**	**20 15 15.9**	**+1.2**
VTS				*e*Sn	**Sn**	**20 16 08.2**	**-1.4**
CICN	**Ciocanesti**	**4.78**	**352**	⇑P	**Pn**	**20 15 16.3**	**+1.4**
IDI	**Anoyia**	**4.82**	**211**	Pn	**Pn**	**20 15 15.5**	**-0.1**
	comp=Z,26nm,0.7s,baz=54,slow=15,SNR=16						
IDI				Sn	**Sn**	**20 16 09.3**	**-2.0**
	comp=Z,10nm,0.3s,baz=91,slow=20,SNR=2.1						
IDI				LR	LR	20 17 46.5	
	comp=Z,736nm,20.1s,baz=88,slow=46						
IDI	**Anoyia**	**4.82**	**211**	Pn	**Pn**	**20 15 15.2**	**-0.5**
IDI				Sn	**Sn**	**20 16 07.9**	**-3.4**
CVDA	**Cernavoda**	**4.87**	**1**	⇑P	**Pn**	**20 15 17.1**	**+0.9**
TIRR	**Tirgusor**	**5.00**	**4**		**Pn**	**20 15 18.2**	**+0.2**
TIRR				Sn	**Sn**	**20 16 13.8**	**-1.8**
TIRR	**Tirgusor**	**5.00**	**4**	⇓P	**Pn**	**20 15 18.8**	**+0.7**
TIRR	**Tirgusor**	**5.00**	**4**	P	**Pn**	**20 15 18.7**	**+0.7**
TIRR	**Tirgusor**	**5.00**	**4**	⇑P	**Pn**	**20 15 18.2**	**+0.2**
MPEP	**Malo Peshtene**	**5.01**	**322**	P	**Pn**	**20 15 19.1**	**+1.0**
LEHL	**Lehliu**	**5.08**	**351**	⇓P	**Pn**	**20 15 20.4**	**+1.4**
TLBR	**Topalu**	**5.08**	**1**	⇑P	**Pn**	**20 15 19.8**	**+0.8**
COPA	**Copaceanca**	**5.09**	**337**	⇓P	**Pn**	**20 15 19.9**	**+0.7**
BOSS	**Bosilegrad**	**5.12**	**308**	*e*Pn	**Pn**	**20 15 21.4**	**+1.8**
BOSS				*e*Sn	**Sn**	**20 16 18.5**	**0.0**
AMRR	**Amara**	**5.16**	**355**	⇑P	**Pn**	**20 15 21.6**	**+1.4**
AMRR	**Amara**	**5.16**	**355**	P	**Pn**	**20 15 21.5**	**+1.4**
BZK	**Bozkurt**	**5.24**	**60**	Pn	**Pn**	**20 15 21.8**	**+0.6**
BZK				Sn	**Sn**	**20 16 20.8**	**-0.7**
BZK	**Bozkurt**	**5.24**	**60**	⇑P	**Pn**	**20 15 22.5**	**+1.3**
VLAD	**Vladila**	**5.24**	**331**	⇑P	**Pn**	**20 15 22.2**	**+0.9**
ITM	**Ithomi**	**5.25**	**246**		**Pn**	**20 15 20.6**	**-0.8**
ITM	**Ithomi**	**5.25**	**246**	⇑P	**Pn**	**20 15 23.9**	**+2.5**
JURR	**Jurilovca**	**5.34**	**7**	⇓P	**Pn**	**20 15 23.3**	**+0.7**
SULR		**5.36**	**347**	⇓P	**Pn**	**20 15 24.5**	**+1.6**
PGOR	**Pogoanele**	**5.49**	**353**	⇓P	**Pn**	**20 15 26.9**	**+2.3**
ZAPS	**Zavoj**	**5.51**	**315**	*e*Pn	**Pn**	**20 15 26.5**	**+1.4**
ZAPS				*e*Sn	**Sn**	**20 16 27.2**	**-1.0**
HUMR	**Humele**	**5.52**	**337**	⇑P	**Pn**	**20 15 25.7**	**+0.6**
SKO	**Skopje**	**5.54**	**299**	*i* Pn	**Pn**	**20 15 27.3**	**+2.0**
SKO				*i* Sn	**Sb**	**20 16 44.8**	**-1.2**
OHR	**Ohrid**	**5.70**	**289**	*i* Pn	**Pn**	**20 15 30.1**	**+2.4**
OHR				*i* Sn	**Sn**	**20 16 33.2**	**+0.4**
BAIL	**Bailesti**	**5.70**	**324**	⇑P	**Pn**	**20 15 29.6**	**+2.0**
BARS	**Barje**	**5.71**	**308**	*e*Pn	**Pn**	**20 15 29.3**	**+1.6**
BARS				*e*Sn	**Sn**	**20 16 31.4**	**-1.6**
CFR	**Carcaliu**	**5.71**	**1**	⇑P	**Pn**	**20 15 28.1**	**+0.4**
CFR	**Carcaliu**	**5.71**	**1**	P	**Pn**	**20 15 28.1**	**+0.4**
BLKB	**Belogradchik**	**5.73**	**318**	*e*Pn	**Pn**	**20 15 28.7**	**+0.7**
BLKB				*e*Sn	**Sn**	**20 16 30.2**	**-3.4**
TLCR		**5.75**	**6**	⇑P	**Pn**	**20 15 29.6**	**+1.2**
TLCR		**5.75**	**6**	P	**Pn**	**20 15 29.5**	**+1.2**
GRER		**5.96**	**353**	⇑P	**Pn**	**20 15 33.2**	**+2.1**
SCHLR	**Schela**	**6.00**	**359**	⇑P	**Pn**	**20 15 32.7**	**+1.0**
GIUM	**Giurgiulesti**	**6.02**	**2**	⇑P	**Pn**	**20 15 33.2**	**+1.2**
SCHL	**Schela**	**6.03**	**359**	⇑P	**Pn**	**20 15 33.0**	**+0.8**
NEGRR	**Negrea**	**6.07**	**360**	⇑P	**Pn**	**20 15 33.8**	**+1.2**
IZVR	**Izvoarele**	**6.08**	**359**	⇓P	**Pn**	**20 15 33.6**	**+0.8**
NEHR	**Nehoiu**	**6.08**	**349**	⇓P	**Pn**	**20 15 35.0**	**+2.1**
PUNG	**Punghina**	**6.09**	**324**	⇑P	**Pn**	**20 15 33.3**	**+0.4**
ZAGS	**Zajecar**	**6.09**	**317**	*e*Pn	**Pn**	**20 15 33.6**	**+0.6**
ZAGS				*e*Sn	**Sn**	**20 16 40.4**	**-2.0**
TUDR		**6.13**	**358**	⇓P	**Pn**	**20 15 34.3**	**+0.9**
TATR	**Tatarca**	**6.13**	**1**	⇑P	**Pn**	**20 15 34.8**	**+1.3**
MTUR	**Matau**	**6.14**	**341**	⇓P	**Pn**	**20 15 35.0**	**+1.3**
MTUR	**Matau**	**6.14**	**341**	P	**Pn**	**20 15 35.0**	**+1.3**
BISRR	**Bisoca**	**6.15**	**352**	⇑P	**Pn**	**20 15 36.0**	**+2.2**
BNN	**Bunyan**	**6.18**	**93**		**Pn**	**20 15 34.4**	**+0.1**
BNN	**Bunyan**	**6.18**	**93**	⇑P	**Pn**	**20 15 36.7**	**+2.4**
MLR	**Muntele Rosu**	**6.20**	**347**	Pn	**Pn**	**20 15 36.1**	**+1.5**
	comp=Z,24nm,0.3s,baz=104,slow=3.4,SNR=379						
MLR				Sn	**Sn**	**20 16 46.7**	**+1.4**
	comp=Z,21nm,0.3s,baz=122,slow=21,SNR=3.8						
MLR				Lg	Lg	20 17 17.1	
	comp=Z,12nm,0.3s,baz=137,slow=21,SNR=2.0						
MLR	**Muntele Rosu**	**6.20**	**347**		**Pn**	**20 15 35.6**	**+1.0**
MLR				Sn	**Sn**	**20 16 46.1**	**+0.9**
MLR	**Muntele Rosu**	**6.20**	**347**	⇓P	**Pn**	**20 15 36.9**	**+2.3**
MLR	**Muntele Rosu**	**6.20**	**347**	P	**Pn**	**20 15 35.6**	**+1.0**
MLR						20 16 46.2	
SCTR	**Scanteiesti**	**6.21**	**0**	⇓P	**Pn**	**20 15 36.3**	**+1.7**
CSS	**Mathiatis**	**6.22**	**135**		**Pn**	**20 15 35.0**	**+0.2**
CSS	**Mathiatis**	**6.22**	**135**	⇓P	**Pn**	**20 15 36.2**	**+1.4**
CSS	**Mathiatis**	**6.22**	**135**	P	**Pn**	**20 15 36.1**	**+1.3**
CSS	**Mathiatis**	**6.22**	**135**	S	**Sn**	**20 16 43.4**	**-2.3**
SRE	**Strehaia**	**6.27**	**327**	⇑P	**Pn**	**20 15 36.2**	**+0.8**
SRE	**Strehaia**	**6.27**	**327**	P	**Pn**	**20 15 36.2**	**+0.8**
KEK	**Kerkira**	**6.29**	**275**	Pn	**Pn**	**20 15 35.6**	**-0.1**
ODBI	**Odobesti**	**6.33**	**354**	⇓P	**Pn**	**20 15 38.2**	**+2.0**
SELS	**Selova**	**6.35**	**308**	*e*Pn	**Pn**	**20 15 37.9**	**+1.3**
SELS				*e*Sn	**Sn**	**20 16 46.7**	**-2.3**
VLDR	**Vladesti**	**6.38**	**1**	⇑P	**Pn**	**20 15 38.8**	**+1.9**
ARR	**Arges**	**6.38**	**339**	⇓P	**Pn**	**20 15 37.6**	**+0.6**
BORS2	**Bor- Borsko je**	**6.40**	**318**	*e*Pn	**Pn**	**20 15 36.6**	**-0.6**
PANC	**Panciu**	**6.43**	**355**	⇓P	**Pn**	**20 15 39.1**	**+1.5**
VARL	**Varlezi**	**6.43**	**359**	⇓P	**Pn**	**20 15 39.6**	**+1.9**
PLOR	**Plostina**	**6.45**	**352**	⇓P	**Pn**	**20 15 40.1**	**+2.1**
PLOR	**Plostina**	**6.45**	**352**	P	**Pn**	**20 15 40.0**	**+2.1**
VRI	**Vrincioaia**	**6.46**	**352**	⇑P	**Pn**	**20 15 39.5**	**+1.4**
VRI	**Vrincioaia**	**6.46**	**352**	P	**Pn**	**20 15 39.4**	**+1.4**
COVR	**Voineasa-Covas**	**6.50**	**349**	⇓P	**Pn**	**20 15 40.8**	**+2.1**
DJES	**Djerdap**	**6.58**	**324**	⇓P	**Pn**	**20 15 39.5**	**-0.1**
GHRR		**6.60**	**357**	⇑P	**Pn**	**20 15 41.5**	**+1.5**
TOKA	**Tokat**	**6.63**	**80**		**Pn**	**20 15 40.9**	**+0.5**
SEV	**Sevastopol'**	**6.63**	**38**	⇑*e*P	**Pn**	**20 15 40.5**	**+0.1**
SEV				*e*S	**Sn**	**20 16 51.8**	**-3.9**
SEV				pmax	pmax		
	comp=Z,32nm,0.3s						
SEV				smax	smax		
	comp=N,33nm,0.3s						
SEV				smax	smax		
	comp=E,102nm,0.4s						
GOCS	**Kraljevo Serbi**	**6.70**	**310**	*e*Pn	**Pn**	**20 15 41.8**	**+0.4**
GOCS				*e*Sn	**Sn**	**20 16 54.6**	**-2.9**
LOT	**Lotru**	**6.73**	**334**	⇓P	**Pn**	**20 15 42.5**	**+0.7**
TURR	**Turia**	**6.74**	**349**	⇓P	**Pn**	**20 15 43.8**	**+1.9**
TNR	**Turnu Rosu**	**6.75**	**338**	⇑P	**Pn**	**20 15 43.6**	**+1.5**
TNR	**Turnu Rosu**	**6.75**	**338**	P	**Pn**	**20 15 43.5**	**+1.5**
DOPR	**Dopca**	**6.76**	**345**	⇓P	**Pn**	**20 15 43.8**	**+1.5**
HERR	**Herculane**	**6.79**	**325**	⇑P	**Pn**	**20 15 42.7**	**+0.2**
PVY	**Plav**	**6.79**	**300**	⇓*i*Pn	**Pn**	**20 15 44.7**	**+2.0**
KUBS	**Kucevo**	**6.80**	**319**	*e*Pn	**Pn**	**20 15 42.1**	**-0.6**
KUBS				*e*Sn	**Sn**	**20 16 54.4**	**-5.4**
BIR	**Birlad**	**6.80**	**358**	⇑P	**Pn**	**20 15 44.1**	**+1.4**
BIR	**Birlad**	**6.80**	**358**	P	**Pn**	**20 15 44.1**	**+1.4**
OZUR		**6.81**	**347**	⇓P	**Pn**	**20 15 44.3**	**+1.4**
BOSR	**Bodos**	**6.81**	**347**	⇑P	**Pn**	**20 15 43.0**	**+0.1**
YAL	**Yalta**	**6.83**	**41**	*e*P	**Pn**	**20 15 43.1**	**0.0**
YAL				*e*S	**Sn**	**20 16 57.0**	**-3.6**
YAL				pmax	pmax		
	comp=Z,73nm,0.5s						
YAL				smax	smax		
	comp=N,118nm,0.4s						
YAL				smax	smax		
	comp=E,176nm,0.7s						
SVIS	**Svilajnac**	**6.94**	**316**	*e*Pn	**Pn**	**20 15 46.1**	**+1.5**
IVA	**Berane**	**6.96**	**302**	⇓*i*Pn	**Pn**	**20 15 47.2**	**+2.3**
ONER	**Baraj Valea Uz**	**6.96**	**351**	⇑P	**Pn**	**20 15 46.6**	**+1.7**
GRUS	**Gruza**	**6.98**	**312**	*e*Pn	**Pn**	**20 15 46.2**	**+1.0**
MDVR	**Moldovita**	**7.04**	**321**	⇓P	**Pn**	**20 15 46.8**	**+0.7**
GZR	**Gura Zlata**	**7.05**	**329**	⇑P	**Pn**	**20 15 46.5**	**+0.3**
GZR	**Gura Zlata**	**7.05**	**329**	P	**Pn**	**20 15 46.4**	**+0.3**
ULC	**Ulcinj**	**7.06**	**293**	*e*Pn	**Pn**	**20 15 47.5**	**+1.2**
ULC				*i* Sn	**Sn**	**20 17 05.9**	**-0.4**
SJES	**Sjenica**	**7.09**	**305**	*e*Pn	**Pn**	**20 15 49.0**	**+2.2**
ALU	**Alushta**	**7.09**	**41**	*e*P	**Pn**	**20 15 44.0**	**-2.7**
ALU				*e*S	**Sn**	**20 16 59.1**	**-7.9**
ALU				pmax	pmax		
	comp=Z,83nm,0.6s						
ALU				smax	smax		
	comp=N,86nm,0.5s						
ALU				smax	smax		
	comp=E,111nm,0.7s						
TESR	**Tescani**	**7.11**	**353**	⇑P	**Pn**	**20 15 47.8**	**+0.9**
IVAS	**Ivanjica**	**7.14**	**308**	*e*Pn	**Pn**	**20 15 48.7**	**+1.3**
IVAS				*e*Sn	**Sn**	**20 17 05.0**	**-3.3**
SIM	**Simferopol'**	**7.15**	**38**	*e*P	**Pn**	**20 15 48.7**	**+1.3**
SIM				*e*S	**Sn**	**20 17 06.2**	**-2.2**
SIM				pmax	pmax		
	comp=Z,91nm,0.3s						
SIM				smax	smax		
	comp=N,358nm,1.0s						
SIM				smax	smax		
	comp=E,1µm,1.6s						
MDB	**Medias**	**7.17**	**340**	⇑P	**Pn**	**20 15 49.4**	**+1.6**
MDB	**Medias**	**7.17**	**340**	P	**Pn**	**20 15 49.3**	**+1.6**
DRME	**Dracevica, Mon**	**7.17**	**295**	⇓*i*Pn	**Pn**	**20 15 50.9**	**+3.1**
DRME				*e*Sn	**Sn**	**20 17 08.6**	**-0.4**
VASR	**Vaslui**	**7.17**	**359**	⇑P	**Pn**	**20 15 49.1**	**+1.3**
KOME	**Kolasin**	**7.20**	**301**	⇓*i*Pn	**Pn**	**20 15 50.7**	**+2.5**
KOME				*e*Sn	**Sn**	**20 17 09.7**	**-0.1**
PURM	**Purcari**	**7.20**	**11**	⇑P	**Pn**	**20 15 49.3**	**+1.2**
PDG	**Podgorica**	**7.21**	**297**		**Pn**	**20 15 49.5**	**+1.2**
PDG	**Podgorica**	**7.21**	**297**	⇓P	**Pn**	**20 15 49.4**	**+1.2**
PDG	**Podgorica**	**7.21**	**297**	⇑P	**Pn**	**20 15 51.7**	**+3.4**
PDG	**Podgorica**	**7.21**	**297**	⇑*i*Pn	**Pn**	**20 15 49.9**	**+1.6**
PDG				*i* Sn	**Sn**	**20 17 10.0**	**+0.1**
TRUS	**Trudelj**	**7.36**	**313**	*e*Pn	**Pn**	**20 15 50.8**	**+0.4**
DEV	**Deva**	**7.41**	**332**	⇓P	**Pn**	**20 15 52.9**	**+1.9**
DEV	**Deva**	**7.41**	**332**	P	**Pn**	**20 15 52.9**	**+1.9**
BUM	**Brajici-Budva**	**7.41**	**295**	*e*Pn	**Pn**	**20 15 52.5**	**+1.3**
BUM				*i* Sn	**Sn**	**20 17 15.0**	**-0.1**
MILM	**Milestii Mici**	**7.48**	**5**	⇑*i*P	**Pn**	**20 15 52.0**	**0.0**
	comp=E,80nm,0.3s						
MILM				*e*S	**Sn**	**20 17 18.0**	**+1.5**
MILM				*e*L	L	20 21 41.0	
MILM				LRM	MLR	20 22 33.0	
	comp=E,3µm,6.3s						
VRSS	**Vrsac**	**7.48**	**321**	*e*Pn	**Pn**	**20 15 52.2**	**+0.2**
CEME	**Cevo**	**7.48**	**297**	⇓*i*Pn	**Pn**	**20 15 55.7**	**+3.6**
CEME				*e*Sn	**Sn**	**20 17 16.1**	**-0.7**
PLE	**Pljevlja**	**7.50**	**304**	⇓*i*Pn	**Pn**	**20 15 55.0**	**+2.7**
PLE				*i* Sn	**Sn**	**20 17 16.4**	**-0.8**
DIVS	**Divibare**	**7.53**	**311**	*e*Pn	**Pn**	**20 15 53.5**	**+0.8**
DIVS				*e*Sn	**Sn**	**20 17 13.1**	**-4.8**
NKME	**Niksic**	**7.54**	**299**	⇓*i*Pn	**Pn**	**20 15 55.7**	**+2.8**
NKME				*e*Sn	**Sn**	**20 17 17.1**	**-1.1**
SUDU	**Sudak**	**7.54**	**42**	*e*P	**Pn**	**20 15 52.6**	**-0.3**
SUDU				*e*S	**Sn**	**20 17 14.2**	**-3.9**
SUDU				pmax	pmax		
	comp=Z,52nm,0.6s						
SUDU				smax	smax		
	comp=N,531nm,0.8s						
SUDU				smax	smax		
	comp=E,929nm,1.0s						

KIS	Kishinev	7.56	5	*e*P	Pn	20 15 53.0	-0.1
GIRR	Girov	7.56	353	⇓P	Pn	20 15 54.6	+1.5
AVAS	Avala Beograd	7.60	316	*e*Pn	Pn	20 15 53.6	-0.1
GAZ	Gaziantep	7.64	105		Pn	20 15 53.9	-0.5
GAZ	Gaziantep	7.64	105	⇑P	Pn	20 15 58.0	+3.6
BZS	Buzias	7.72	325	⇑P	Pn	20 15 55.4	+0.1
BZS	Buzias	7.72	325	P	Pn	20 15 55.3	+0.1
BZS	Buzias	7.72	325	⇓P	Pn	20 15 54.9	-0.3
HCY	Herceg Novi	7.74	296	*e*Pn	Pn	20 15 57.5	+1.9
HCY				*i* Sn	Sn	20 17 22.3	-0.8
BBLS	Lazi&#263i	7.75	307	*e*Pn	Pn	20 15 58.2	+2.4
UPM	Unac-Piva	7.75	302	⇓*i*Pn	Pn	20 15 57.3	+1.4
BANR	Banloc	7.76	322	⇓P	Pn	20 15 57.7	+1.8
BRY	Bratogost	7.87	299	*e*Pn	Pn	20 15 59.0	+1.4
CJR	Cluj-Napoca	7.91	338	⇑P	Pn	20 15 58.3	+0.3
CJR	Cluj-Napoca	7.91	338	P	Pn	20 15 58.2	+0.3
PRAR	RASCA	7.99	352	⇑P	Pn	20 16 00.2	+1.2
MARR	Marisel-Cluj	8.02	336	⇑P	Pn	20 16 00.5	+0.9
ARCR	ARCALIA	8.05	342	⇑P	Pn	20 16 01.4	+1.5
TEKS	Tekeris	8.06	312	*e*Pn	Pn	20 16 00.3	+0.3
ARPR	Arapgir-MALATY	8.08	89		Pn	20 16 00.3	-0.1
SIRR	Siria	8.21	328	⇓P	Pn	20 16 02.8	+0.7
DRGR		8.26	334	⇓P	Pn	20 16 03.9	+1.2
DRGR		8.26	334	P	Pn	20 16 03.9	+1.2
FRGS	Fruska Gora	8.28	316	*e*Pn	Pn	20 16 03.3	+0.3
BURAR	Bucovina Array	8.38	347		Pn	20 16 05.2	+0.7
BURAR	Bucovina Array	8.38	347	⇓P	Pn	20 16 06.1	+1.6
BURAR	Bucovina Array	8.38	347	P	Pn	20 16 06.0	+1.6
BUR08	Bucovina Ar. S	8.41	347		Pn	20 16 05.7	+0.7
TIP	Timpagrande	8.67	272	Pn	Pn	20 16 09.2	+0.8
TIP	Timpagrande	8.67	272	⇓P	Pn	20 16 10.3	+1.9
TIP	Timpagrande	8.67	272	⇓P	Pn	20 16 10.2	+1.8
BMR	Baia Mare	8.81	340	⇑P	Pn	20 16 12.0	+1.7
BMR	Baia Mare	8.81	340	P	Pn	20 16 12.0	+1.7
MMA0B	Mount Meron ar	8.82	135	P	Pn	20 16 10.9	+0.4
MMA0B	Mount Meron ar	8.82	135	S	Sn	20 17 46.2	-3.5
MMAI	Mount Meron Ar	8.82	135	Pn	Pn	20 16 10.7	+0.2
	comp=E,8.9nm,0.4s,baz=320,slow=11,SNR=33						
MMAI				Sn	Sn	20 17 50.9	+1.2
	comp=E,4.5nm,0.3s,baz=306,slow=23,SNR=2.8						
GEM	Giv'at Ha'Em	8.82	133	⇑P	Pn	20 16 10.6	+0.2
GEM	Giv'at Ha'Em	8.82	133	P	Pn	20 16 11.9	+1.4
GEM	Giv'at Ha'Em	8.82	133	S	Sn	20 17 46.7	-2.9
NATI	Neve Ativ	8.82	132	P	Pn	20 16 11.7	+1.3
NATI	Neve Ativ	8.82	132	S	Sn	20 17 46.9	-2.7
ANN	Anapa	8.84	50	*e*P	Pn	20 16 08.4	-2.3
ANN				*e*S	Sn	20 17 44.5	-5.5
ANN				pmax	pmax		
	comp=Z,48nm,1.2s						
OFRI	`Ofer	8.90	138	P	Pn	20 16 12.1	+0.5
OFRI	`Ofer	8.90	138	S	Sn	20 17 47.2	-4.4
BLGI	Bet Lehem HaGe	8.92	137	P	Pn	20 16 12.7	+0.9
BLGI	Bet Lehem HaGe	8.92	137	S	Sn	20 17 48.9	-3.1
KSHT	Keshet	9.07	133	P	Pn	20 16 14.9	+1.0
KSHT	Keshet	9.07	133	S	Sn	20 17 52.4	-3.4
MRVN	Minervino Murg	9.12	284	⇓P	Pn	20 16 15.7	+1.1
MMLI	Mount Malkishu	9.27	137	P	Pn	20 16 17.2	+0.5
MMLI	Mount Malkishu	9.27	137	S	Sn	20 17 56.7	-4.0
ACER	Acerenza	9.28	282		Pn	20 16 17.6	+0.8
CUC	Castrocucco	9.35	277		Pn	20 16 18.9	+1.1
CUC	Castrocucco	9.35	277	⇑P	Pn	20 16 20.6	+2.8
SALP	Salfit	9.44	139	⇑P	Pn	20 16 19.6	+0.6
SALP	Salfit	9.44	139	P	Pn	20 16 19.4	+0.4
SALP	Salfit	9.44	139	S	Sn	20 18 01.4	-3.5
HMDT	Nahal Hemdat	9.47	137	P	Pn	20 16 20.1	+0.8
HMDT	Nahal Hemdat	9.47	137	S	Sn	20 18 02.4	-3.1
CEL	Celeste	9.47	267		Pn	20 16 19.7	+0.3
CEL	Celeste	9.47	267	⇓P	Pn	20 16 21.0	+1.6
SGRT	San Giovanni R	9.55	288	Pn	Pn	20 16 19.2	-1.3
BLY	Banja Luka	9.57	307	⇑P	Pn	20 16 22.4	+1.7
MORH	Mrgy, Hungar	9.59	318	⇑P	Pn	20 16 21.8	+0.9
BALJ	Balqa	9.66	137		Pn	20 16 21.2	-0.8
UJAP	Al Uja	9.67	138	P	Pn	20 16 23.2	+1.1
UJAP	Al Uja	9.67	138	S	Sn	20 18 05.7	-4.8
KOPT	Kop Dagi	9.69	83	Pn	Pn	20 16 21.8	-0.8
AMAZ	Amatzia	9.74	142	P	Pn	20 16 23.8	+0.6
AMAZ	Amatzia	9.74	142	S	Sn	20 18 07.0	-5.4
SOC	Sochi	9.74	61	*e*P	Pn	20 16 19.8	-3.3
SOC				*e*S	Sn	20 18 12.7	+0.4
SOC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SOC				MLR	MLR		
	comp=Z,608nm,17.0s						
KOVH	Kovagotottos	9.80	316	⇑P	Pn	20 16 24.6	+0.8
DSI	Dead Sea	9.94	140	P	Pn	20 16 26.4	+0.6
DSI	Dead Sea	9.94	140	S	Sn	20 18 12.5	-4.6
YTIR	Yattir	9.98	142	P	Pn	20 16 27.0	+0.6
YTIR	Yattir	9.98	142	S	Sn	20 18 13.5	-4.8
KZIT	Kziot	10.04	146	⇑P	Pn	20 16 28.2	+1.0
KZIT	Kziot	10.04	146	P	Pn	20 16 27.0	-0.2
KZIT	Kziot	10.04	146	S	Sn	20 18 13.5	-6.1
GHAJ	Ghor Haditha	10.25	140	Pn	Pn	20 16 28.8	-1.2
GHAJ	Ghor Haditha	10.25	140	P	Pn	20 16 30.8	+0.8
PSZ	Piszkesteto	10.26	328	Pn	Pn	20 16 30.7	+0.6
PSZ	Piszkesteto	10.26	328	⇑P	Pn	20 16 31.1	+1.0
PSZ	Piszkesteto	10.26	328	*e*P	Pn	20 16 35.8	+5.7
PSZ	Piszkesteto	10.26	328	P	Pn	20 16 31.1	+1.0
ASF	Jabal al Asfar	10.29	132	Pn	Pn	20 16 32.6	+2.0
	baz=308,slow=11						
PAOL	Paolisi	10.34	283		Pn	20 16 31.4	+0.1
BEHE	Becsehely	10.76	314	Pn	Pn	20 16 36.4	-0.6
PRNI	Paran	10.78	145	P	Pn	20 16 37.4	0.0
PRNI	Paran	10.78	145	S	Sn	20 18 33.0	-4.8
VAE	Valguarnera	10.79	264	Pn	Pn	20 16 40.3	+2.9
	comp=Z,23nm,1.0s,baz=160,slow=13,SNR=4.3						
LABN	Labinsk	10.82	57	*e*P	Pn	20 16 35.0	-2.8
LABN				*e*S	Sn	20 18 36.5	-2.1
LABN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KWP	Kalwaria Pacla	10.82	342	*e*P	Pn	20 16 39.9	+2.0
KWP	Kalwaria Pacla	10.82	342	⇓P	Pn	20 16 40.1	+2.3
KRMI	Paran Flat	10.86	147	P	Pn	20 16 38.8	+0.3
RAFF	Raffo Rosso	10.89	262		Pn	20 16 38.8	-0.1
GURO	Guroymak-BITLI	11.01	90	Pn	Pn	20 16 43.5	+3.0
HRFI	Mount Harif	11.07	146	P	Pn	20 16 41.2	0.0
HRFI	Mount Harif	11.07	146	S	Sn	20 18 39.2	-5.6
ERBR	Yeremizino-Bor	11.15	52	*e*P	Pn	20 16 34.4	-8.0
ERBR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MBRI	Mt Berech	11.22	147	P	Pn	20 16 43.4	-0.1
MBRI	Mt Berech	11.22	147	S	Sn	20 18 43.5	-5.3
WDD	Wied Dalam	11.23	255	Pn	Pn	20 16 41.6	-1.8
KIEV	Kiev	11.27	4		Pn	20 16 43.0	-0.9
KIEV	Kiev	11.27	4	⇑P	Pn	20 16 45.1	+1.2
KIEV	Kiev	11.27	4	P	Pn	20 16 45.0	+1.2
KIEV	Kiev	11.27	4	⇑P	Pn	20 16 43.8	-0.1
AKASG	Malin Array Be	11.27	4	Pn	Pn	20 16 41.9	-2.1
	comp=Z,2.8nm,0.3s,baz=188,slow=12,SNR=9.8						
AKASG				Sn	Sn	20 18 44.7	-5.0
	comp=Z,1.7nm,0.3s,baz=177,slow=23,SNR=4.3						
AKASG				LR	LR	20 21 09.2	
	comp=Z,666nm,21.5s,baz=189,slow=38						
	comp=Z,0.6nm,0.3s						
AKASG	Malin Array Be	11.27	4		Pn	20 16 42.2	-1.8
AKASG	Malin Array Be	11.27	4	*i* P	Pn	20 16 42.5	-1.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKBB	Malin Array Si	11.27	4		Pn	20 16 43.0	-1.0
AKBB	Malin Array Si	11.27	4	⇑*e*P	Pn	20 16 43.5	-0.4
NIE	Niedzica	11.34	334	*e*P	Pn	20 16 47.3	+2.4
EIL	Elat	11.35	147	Pn	Pn	20 16 45.9	+0.8
	comp=Z,1.1nm,0.3s,baz=322,slow=4.1,SNR=8.9						
EIL				Sn	Sn	20 18 44.8	-6.9
	comp=Z,1.4nm,0.3s,baz=316,slow=18,SNR=2.8						
	comp=Z,4.5nm,0.4s						
EIL	Elat	11.35	147	P	Pn	20 16 45.1	+0.1
EIL	Elat	11.35	147	S	Sn	20 18 45.7	-5.9
CAMP	Campotosto	11.40	290	Pn	Pn	20 16 44.8	-1.0
KARS	Kars	11.67	79	Pn	Pn	20 16 51.5	+1.9
KARS	Kars	11.67	79	P	Pn	20 16 51.5	+1.9
NRCA	Norcia	11.67	292	Pn	Pn	20 16 49.5	0.0
FDMO	Fiordimonte	11.73	292	Pn	Pn	20 16 49.9	-0.4
RONA	Rosalia, Austr	11.78	318	*e*Pn	Pn	20 16 52.3	+1.4
	comp=Z,2.6nm,0.5s						
SHA1	Shidzhatmaz	11.82	64	⇑*e*P	Pn	20 16 50.4	-1.3
SOKA	Soboth	11.87	312	*e*Pn	Pn	20 16 54.8	+2.6
	comp=Z,1.9nm,0.5s						
KIV	Kislovodsk	11.90	63	*e*P	Pn	20 16 51.7	-1.0
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,244nm,13.0s						
KVAR	Kislovodsk Arr	11.91	63	Pn	Pn	20 16 53.6	+0.9
	baz=274,slow=19						
KVAR				Sn	Sn	20 19 04.3	-1.1
	baz=266,slow=19						
	comp=Z,0.6nm,0.4s						
ARSA	Arzberg	11.91	315	Pn	Pn	20 16 52.4	-0.4
ARSA	Arzberg	11.91	315	*e*Pn	Pn	20 16 54.6	+1.8
	comp=Z,2.0nm,0.4s						
KBZ	Khabaz	11.98	64	Pn	Pn	20 16 55.4	+1.8
	comp=Z,0.1nm,0.3s,baz=265,slow=10,SNR=11						
KBZ				Sn	Sn	20 19 07.5	+0.4
	comp=Z,0.1nm,0.3s,baz=288,slow=20,SNR=1.4						
	comp=Z,4.5nm,1.0s						
KBZ	Khabaz	11.98	64	⇓*e*P	Pn	20 16 55.1	+1.4
OBKA	Obir	12.06	310	*e*Pn	Pn	20 16 58.6	+3.8
	comp=Z,1.8nm,0.6s						
CONA	Conrad Observa	12.15	318	*e*Pn	Pn	20 16 56.4	+0.3
	comp=Z,8.2nm,0.7s						
MURB	Monte Urbino	12.18	293	Pn	Pn	20 16 56.5	-0.1
OJC	Ojcow	12.20	335	*e*P	Pn	20 16 59.9	+3.3
SABO	M.te Sabotino	12.38	306	Pn	Pn	20 16 58.5	-0.7
NCK	Nalchik	12.41	66	⇑*e*P	Pn	20 16 59.5	-0.1
NCK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KRUC	Moravsky	12.65	323	*e*PN	Pn	20 17 02.3	-0.5
VRAC	Vranov	12.74	324	Pn	Pn	20 17 04.7	+0.7
	comp=Z,0.3nm,0.3s,baz=122,slow=14,SNR=3.8						
VRAC				Sn	Sn	20 19 22.6	-3.0
	comp=Z,0.2nm,0.3s,baz=244,slow=20,SNR=1.3						
VRAC				LR	LR	20 22 24.3	
	comp=Z,256nm,19.3s,baz=146,slow=40						
	comp=Z,0.9nm,0.3s						
VRAC	Vranov	12.74	324	*e*PN	Pn	20 17 04.1	+0.1
GNI	Garni	12.95	82	Pn	Pn	20 17 10.4	+3.3
	comp=Z,0.3nm,0.3s,baz=257,slow=14,SNR=11						
GNI				LR	LR	20 22 33.1	
	comp=Z,601nm,18.5s,baz=288,slow=40						
	comp=Z,23nm,1.0s						
GNI	Garni	12.95	82	⇑*e*P	Pn	20 17 06.6	-0.4
BIOA	Bad Ischl, Aus	13.21	313	*e*Pn	Pn	20 17 12.2	+1.6
	comp=Z,1.2nm,0.3s						
KRLC	Kraliky	13.22	327	*e*P	P	20 17 18.6	-2.0
KRLC	Kraliky	13.22	327	*e*P	P	20 17 18.6	-2.0
TEOL	Teolo	13.38	301	Pn	Pn	20 17 11.0	-1.8
ABTA	Abfaltersbach	13.40	308	*e*Pn	Pn	20 17 16.2	+3.0
	comp=Z,3.9nm,0.9s						
CKRC	Cesky Krumlov	13.52	318	*e*P	P	20 17 25.3	+1.5
CKRC	Cesky Krumlov	13.52	318	*e*P	P	20 17 25.3	+1.5
ZCCA	Zocca	13.54	297	Pn	Pn	20 17 13.9	-1.1
LESA	Schwarzleotal	13.63	311	*e*Pn	Pn	20 17 20.2	+3.9
	comp=Z,2.2nm,0.4s						
CTI	Castel Tesino	13.64	304		Pn	20 17 15.0	-1.5
CTI	Castel Tesino	13.64	304	P	Pn	20 17 15.0	-1.5
GERES	GERESS Array B	13.85	317	Pn	Pn	20 17 20.8	+1.6
	baz=118,slow=14,SNR=5.9						
GERES				LR	LR	20 22 44.0	
	comp=Z,364nm,18.0s,baz=132,slow=38						
	comp=Z,1.3nm,0.9s						
VORD	Divnogorie	13.99	31	*e*P	Pn	20 17 20.4	-0.7
VORD				pmax	pmax		
	comp=Z,20nm,1.0s						
KHC	Kasperske Hory	14.09	318		Pn	20 17 23.2	+0.8
KHC	Kasperske Hory	14.09	318	⇑*e*P	Pn	20 17 25.6	+3.1
KHC				pmax	pmax		
	comp=Z,28nm,3.1s						
KHC	Kasperske Hory	14.09	318	*e*P	P	20 17 28.5	-1.7
VSR	Storozhevoye	14.14	30	*e*P	Pn	20 17 21.5	-1.6
VSR				pmax	pmax		
	comp=Z,20nm,1.0s						
WTTA	Wattenberg	14.17	309	*e*Pn	Pn	20 17 27.0	+3.3
	comp=Z,3.3nm,0.6s						
WATA	Walderalm	14.24	309	*e*Pn	P	20 17 28.7	-3.3
	comp=Z,0.7nm,0.2s						
SQTA	Sankt Quirin	14.41	308	*e*Pn	Pn	20 17 29.7	+2.7
	comp=Z,1.6nm,0.5s						
VORR	Voronezh	14.52	29	*e*P	Pn	20 17 27.6	-0.6
VORR				pmax	pmax		
	comp=Z,55nm,0.4s						
MOTA	Moosalm	14.53	308	*e*Pn	P	20 17 32.0	-3.3
	comp=Z,2.5nm,0.5s						
MSSA	Maissana	14.54	295	Pn	Pn	20 17 28.7	0.0
FETA	Feichten	14.62	307	*e*Pn	P	20 17 34.5	-1.7
	comp=Z,2.9nm,0.6s						
FUORN	Ofenpass-Fuorn	14.75	305	Pn	Pn	20 17 30.4	-1.4
MNK	Minsk	15.04	360	*i* P	Pn	20 17 32.5	-2.9
	comp=E,8.0nm,0.6s						
MNK				*i* P	Pn	20 17 32.5	-2.9
	comp=N,5.0nm,0.7s						
MNK				*i* P	Pn	20 17 32.5	-2.9
	comp=Z,14nm,0.8s,baz=180						
MNK				*i* S	Sn	20 20 18.6	-3.1
MNK				*i* LQ	LQ	20 22 07.3	
MNK				*i* LR	LR	20 22 42.0	
MNK				*i* LRM	MLR	20 23 24.6	
	comp=N,611nm,14.8s						
MNK				*i* LRM	MLR	20 23 47.4	
	comp=Z,296nm,15.8s						
MNK				*i* LRM	MLR	20 23 52.3	
	comp=E,321nm,16.6s						
MNK	Minsk	15.04	360	*i* P	Pn	20 17 32.5	-2.9
MNK				*i* S	Sn	20 20 18.6	-3.1
MNK				pmax	pmax		
	comp=N,5.0nm,0.7s						
MNK				pmax	pmax		
	comp=Z,14nm,0.8s						
MNK				pmax	pmax		
	comp=E,8.0nm,0.6s						
MNK				MLR	MLR		
	comp=N,611nm,15.0s						
MNK				MLR	MLR		
	comp=Z,296nm,16.0s						
MNK				MLR	MLR		
	comp=E,321nm,17.0s						
DAVOX	Davos/Dischmat	15.06	305	Pn	Pn	20 17 38.2	+2.4
	comp=E,0.5nm,0.3s,baz=144,slow=12,SNR=11						
DAVOX				LR	LR	20 23 56.9	
	comp=E,361nm,18.9s,baz=109,slow=40						
	comp=E,1.6nm,0.7s						
LPSR	Galich'ya Gora	15.17	26	*e*P	Pn	20 17 35.5	-1.6
LPSR				pmax	pmax		
	comp=Z,22nm,0.7s						
VRH	Novokhopyorsk	15.19	35	*e*P	Pn	20 17 33.2	-4.1
VRH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KEST	Kesra	15.20	262	Pn	Pn	20 17 39.8	+2.2
	comp=Z,0.3nm,0.3s,baz=86,slow=14,SNR=8.5						
	comp=Z,16nm,1.1s						
KEST	Kesra	15.20	262	Pn	Pn	20 17 38.3	+0.7
KEST				IAmb	IAmb	20 17 50.6	
	comp=Z,60nm,1.1s						
AKT	Akhty	15.20	76	*e*P	Pn	20 17 37.5	-0.2
AKT				*e*S	Sn	20 20 27.1	+1.3
AKT				pmax	pmax		
	comp=Z,17nm,1.1s						
AKT				MLR	MLR		
	comp=Z,324nm,13.0s						
DAVA	Damuels	15.26	307	*e*Pn	Pn	20 17 39.6	+1.1
	comp=Z,1.1nm,0.3s						
TUE	Stuetta	15.29	303	Pn	Pn	20 17 39.6	+0.8
TUE				IAmb	IAmb	20 18 07.4	
	comp=Z,32nm,1.3s						
NACGM	Naroch	15.47	358	*e*P	Pn	20 17 38.3	-2.6
	comp=Z,24nm,0.8s,baz=177						
GRF	Grafenberg Arr	15.66	316	*e*P	P	20 17 50.1	+2.5
	comp=Z,16nm,1.1s,baz=124,slow=12						
CLL	Collm	15.78	324	*i* P	P	20 17 51.7	+2.8
CLL				pmax	pmax		
	comp=Z,12nm,1.3s						
CLL	Collm	15.78	324	*i* PP	P	20 17 51.7	+2.8
	comp=Z,12nm,1.3s						
CLL				*e*x	x	20 18 01.0	
CLL				*e*x	x	20 18 17.0	
CLL				AMS	AMS	20 23 00.0	
	comp=N,1µm,18.7s						
CLL				AMS	AMS	20 23 00.0	
	comp=E,2µm,18.7s						
IIGN	Ignalina	15.94	356	*e*P	P	20 17 51.3	+0.8
ISAL	Salakas	16.16	356	*e*P	P	20 17 53.2	+0.1
PABE	Paberze	16.27	352	Pn	Pn	20 17 48.8	-2.5
PABE				IAmb	IAmb	20 18 02.4	
	comp=Z,49nm,1.0s						
PABE	Paberze	16.27	352	*e*P	P	20 17 54.1	-0.1
SENIN	Lac Senin/Sane	16.59	301	P	Pn	20 17 56.1	+0.4
BNI	Bardonecchia	16.68	296		P	20 17 58.4	-0.7
BNI				IAmb	IAmb	20 18 27.0	
	comp=Z,36nm,1.1s						
BNI	Bardonecchia	16.68	296	P	P	20 17 58.4	-0.7
BNI				pmax	pmax		
	comp=Z,37nm,1.1s						
OBN	Obninsk	16.69	17	Pn	Pn	20 17 54.1	-2.5
	comp=Z,3.1nm,0.3s,baz=138,slow=5.2,SNR=10						
OBN				Sn	Sn	20 20 49.6	-12
	comp=Z,2.3nm,0.3s,baz=233,slow=20,SNR=1.8						
OBN				LR	LR	20 25 35.5	
	comp=Z,186nm,20.1s,baz=164,slow=42						
	comp=Z,13nm,0.5s						
OBN	Obninsk	16.69	17	*i* P	Pn	20 17 53.7	-3.0
OBN				pmax	pmax		
	comp=Z,43nm,1.0s						
OBN				MLR	MLR		
	comp=Z,330nm,20.0s						
MOS	Moscow	17.52	18	*e*P	Pn	20 18 04.1	-2.8
MOS				*e*		20 21 13.1	
MOS				pmax	pmax		
	comp=Z,102nm,1.2s						
SSB	Saint Sauveur	18.21	296		Pn	20 18 15.2	-0.5
SSB	Saint Sauveur	18.21	296	P	Pn	20 18 15.2	-0.5
SSB				pmax	pmax		
	comp=Z,26nm,1.5s						
BELG	Belogornoye	18.75	40	P	P	20 18 20.2	-1.5
	comp=Z,0.9nm,0.3s,baz=203,slow=13,SNR=4.7						
BELG				LR	LR	20 26 36.6	
	comp=Z,210nm,19.5s,baz=235,slow=40						
	comp=Z,48nm,1.1s						
BELG	Belogornoye	18.75	40	⇓*e*P	Pn	20 18 22.4	+0.2
BELG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VSU	Vasula	19.03	358	*e*P	Pn	20 18 25.0	-0.5
VSU	Vasula	19.03	358	⇑*e*P	P	20 18 24.2	-0.5
VSU				pmax	pmax		
	comp=Z,104nm,1.0s						
VSU	Vasula	19.03	358	⇑P	P	20 18 23.2	-1.5
RAYN	Ar Rayn	21.78	132	P	P	20 18 53.4	-1.4
RAYN	Ar Rayn	21.78	132	P	P	20 18 53.4	-1.4
RAYN				pmax	pmax		
	comp=Z,11nm,1.0s						
RAF	Rauma	21.92	352	*e*P	P	20 18 56.3	+0.3
FINES	FINESS Array B	22.04	358	P	P	20 18 56.2	-1.0
	comp=Z,14nm,1.0s,baz=173,slow=8.6,SNR=9.1						
FINES				LR	LR	20 27 47.0	
	comp=Z,442nm,20.3s,baz=168,slow=38						
	comp=Z,14nm,1.0s						
FINES	FINESS Array B	22.04	358	P	P	20 18 56.6	-0.6
FINES	FINESS Array B	22.04	358	*i* P	P	20 18 59.5	+2.3
FINES				pmax	pmax		
	comp=Z,15nm,0.8s						
FIA1	FINESS Array S	22.04	358	P	P	20 18 56.9	-0.3
HFS	Hagfors	22.54	341	P	P	20 19 02.1	-0.6
	comp=Z,5.9nm,0.8s,baz=133,slow=12,SNR=13						
HFS				LR	LR	20 28 55.4	
	comp=Z,366nm,19.5s,baz=155,slow=40						
	comp=Z,5.9nm,0.8s						
KLMR	Klimovskoe	22.59	15	*e*P	P	20 19 01.5	-1.7
KLMR				pmax	pmax		
	comp=Z,81nm,1.1s						
KIRV	Kirov	23.57	29	P	P	20 19 12.6	-0.6
	comp=Z,4.9nm,0.5s,baz=298,slow=5.8,SNR=3.6						
	comp=Z,4.9nm,0.5s						
KIRV	Kirov	23.57	29	⇓*e*P	P	20 19 16.6	+3.4
JOF	Joensuu	23.57	4	*e*P	P	20 19 13.9	+0.7
NC602	NORSAR Array S	23.61	340	P	P	20 19 12.3	-1.3
NC602				IAmb	IAmb	20 19 24.3	
	comp=Z,24nm,1.1s						
AKTO	Aktyubinsk	23.79	53	P	P	20 19 15.3	-0.2
	comp=Z,10nm,1.0s,baz=248,slow=8.4,SNR=12						
AKTO				LR	LR	20 32 22.2	
	comp=Z,236nm,18.2s,baz=286,slow=46						
	comp=Z,10nm,1.0s						
VAF	Ylistaro	23.82	354	*e*P	P	20 19 16.5	+0.9
NAO01	NORSAR Array S	23.88	339	P	P	20 19 15.3	-1.0
NB201	NORSAR Array S	23.95	340	P	P	20 19 16.3	-0.6
NB201				IAmb	IAmb	20 19 40.0	
	comp=Z,37nm,1.4s						
NB2	NORSAR Subarra	23.96	340	P	P	20 19 16.8	-0.2
	comp=Z,2.4nm,0.7s,baz=147,slow=9.3						
NOA	NORSAR Array B	23.96	340	P	P	20 19 16.8	-0.2
	comp=Z,2.8nm,0.9s,baz=142,slow=9.0,SNR=4.8						
NOA				LR	LR	20 28 54.2	
	comp=Z,129nm,18.4s,baz=150,slow=37						
	comp=Z,2.8nm,0.9s						
ESDC	Sonseca Array	24.53	281	P	P	20 19 23.1	+0.6
	comp=Z,5.4nm,1.0s,baz=72,slow=9.7,SNR=17						
ESDC				LR	LR	20 30 36.6	
	comp=Z,226nm,18.1s,baz=76,slow=40						
	comp=Z,5.4nm,1.0s						
AB31	Akbulak array	24.72	56	P	P	20 19 23.7	-0.3
ABKAR	Akbulak array	24.72	56	P	P	20 19 24.4	+0.3
PAB	San Pablo	24.84	281	P	P	20 19 24.8	-0.6
PAB				IAmb	IAmb	20 19 33.4	
	comp=Z,28nm,1.5s						
PAB	San Pablo	24.84	281	P	P	20 19 24.8	-0.6
PAB				pmax	pmax		
	comp=Z,28nm,1.5s						
EKA	Eskdalemuir Ar	26.07	318	P	P	20 19 35.9	-0.3
	comp=Z,1.2nm,0.5s,baz=117,slow=10,SNR=4.4						
EKA				LR	LR	20 30 26.0	
	comp=Z,334nm,18.0s,baz=84,slow=38						
	comp=Z,1.2nm,0.5s						
ARTI	Arti	26.20	40	P	P	20 19 37.5	+0.2
	comp=Z,13nm,0.9s,baz=244,slow=7.8,SNR=8.7						
ARTI				LR	LR	20 30 44.1	
	comp=Z,246nm,18.7s,baz=244,slow=38						
	comp=Z,13nm,0.9s						
ARTI	Arti	26.20	40	P	P	20 19 37.3	-0.1
ARTI	Arti	26.20	40	P	P	20 19 39.7	+2.3
ARTI						20 20 13.1	
ARTI				S	S	20 24 14.9	+6.1
ARTI				SS	SnSn	20 25 14.7	+7.0
ARTI	Arti	26.20	40	⇑P	P	20 19 39.1	+1.7
MVO	Moncorvo	26.61	285	*i* IAMs_20	IAMs_20	20 32 00.4	
	comp=Z,227nm,16.0s						
MTE	Manteigas	27.11	283	*e*P	P	20 19 48.4	+2.5
PCBR	Castelo Branco	27.16	282	*e*P	P	20 19 49.9	+3.7
PBAR	Barrancos	27.18	279	*e*P	P	20 19 49.7	+3.3
PESTR	Estremoz	27.45	280	*e*P	P	20 19 50.2	+1.4
HRA	Herat	27.78	90	P	P	20 19 52.3	+0.2
HRA				IAmb	IAmb	20 19 54.3	
	comp=Z,8.2nm,0.9s						
PARRA	Arraiolos	27.80	280	*e*P	P	20 19 55.2	+3.3
PBEJ	Beja	27.85	279	*e*P	P	20 19 53.4	+1.0
PMTG	Montargil	27.89	281	*e*P	P	20 19 56.7	+4.0
PVAQ	Vaqueiros	27.89	277	P	P	20 19 53.1	+0.3
PVAQ	Vaqueiros	27.89	277	*e*P	P	20 19 53.3	+0.5
PCVE	Castro Verde	28.08	278	*e*P	P	20 19 55.1	+0.6
PBDV	Barranco-do-Ve	28.10	277	*e*P	P	20 19 58.6	+3.9
PBDV				*i* IAmb	IAmb	20 20 04.0	
	comp=Z,38nm,2.0s						
MESJ	Messejana	28.17	278	*e*P	P	20 19 55.7	+0.5
MESJ				*i* IAmb	IAmb	20 20 00.5	
	comp=Z,20nm,1.4s						
MORF	Marmelete	28.64	277	*e*P	P	20 20 00.1	+0.5
ARCES	ARCESS Array B	30.16	358	LR	LR	20 32 37.3	
	comp=Z,328nm,19.7s,baz=175,slow=37						
CHGR	Chuyangaron	31.82	78		P	20 20 28.7	+1.0
CHGR	Chuyangaron	31.82	78	P	P	20 20 28.7	+1.0
CHGR				pmax	pmax		
	comp=Z,26nm,1.0s						
BVAR	Borovoye Array	31.84	51	P	P	20 20 29.1	+1.5
	comp=Z,1.9nm,0.8s,baz=229,slow=15,SNR=2.5						
BVAR				LR	LR	20 35 19.4	
	comp=Z,128nm,21.5s,baz=264,slow=40						
	comp=Z,1.9nm,0.8s						
KKAR	Karatay Array	31.95	69	P	P	20 20 29.1	+0.4
KKAR	Karatay Array	31.95	69	P	P	20 20 29.1	+0.4
GAR	Garm	32.61	77	P	P	20 20 35.0	+0.3
DRK	Karamyk	33.61	76	P	P	20 20 42.8	-0.8
DRK	Karamyk	33.61	76	P	P	20 20 42.8	-0.8
DRK				pmax	pmax		
	comp=Z,21nm,0.4s						
MANEM	Manem	34.04	79	P	P	20 20 46.6	-0.7
MANEM				IAmb	IAmb	20 20 50.8	
	comp=Z,17nm,1.3s						
ARSB	Arslanbob	34.07	72	P	P	20 20 47.9	+0.5
ARSB				IAmb	IAmb	20 20 58.6	
	comp=Z,16nm,1.3s						
ARSB	Arslanbob	34.07	72	P	P	20 20 47.9	+0.5
ARSB				pmax	pmax		
	comp=Z,16nm,1.3s						
AAK	Ala-Archa	34.91	69	P	P	20 20 55.4	+0.7
	comp=Z,3.2nm,0.9s,baz=256,slow=12,SNR=4.3						
	comp=Z,3.2nm,0.9s						

AAK	Ala-Archa	34.91	69	P	P	20 20 55.1	+0.4
AAK				IAmb	IAmb	20 20 57.5	
	comp=Z,7.7nm,1.1s						
AAK	Ala-Archa	34.91	69	⇑*e*P	P	20 20 55.1	+0.4
AAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TORD	Torodi Ar. Bea	34.97	229	P	P	20 20 55.4	+0.2
	comp=Z,2.2nm,0.6s,baz=33,slow=12,SNR=12						
TORD	Torodi Ar. Bea	34.97	229	P	P	20 20 55.0	-0.2
FRU1	Bishkek	34.98	69	P	P	20 20 55.3	+0.1
FRU1	Bishkek	34.98	69	P	P	20 20 55.3	+0.1
FRU1				pmax	pmax		
	comp=Z,23nm,1.0s						
BOOM	Boomskoye usch	35.99	69	P	P	20 21 04.6	+0.6
BOOM				IAmb	IAmb	20 21 07.1	
	comp=Z,9.8nm,1.0s						
BOOM	Boomskoye usch	35.99	69	P	P	20 21 04.6	+0.6
BOOM				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LODK	Lodwar	36.51	167	P	P	20 21 08.5	+0.1
NIL	Nilore	36.56	85	P	P	20 21 09.1	+0.3
NIL				IAmb	IAmb	20 21 14.3	
	comp=Z,14nm,1.0s						
NIL	Nilore	36.56	85	P	P	20 21 09.1	+0.3
NIL				pmax	pmax		
	comp=Z,14nm,1.0s						
KSH	Kashi	36.72	74	P	P	20 21 09.8	-0.4
KSH				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KURBB	Kurchatov Arra	36.77	55	P	P	20 21 10.9	+0.5
	comp=Z,6.6nm,0.2s,baz=279,slow=9.1,SNR=11						
KURBB				LR	LR	20 39 36.0	
	comp=Z,226nm,19.1s,baz=182,slow=42						
	comp=Z,6.6nm,0.2s						
KURK	Kurchatov	36.83	55	P	P	20 21 10.9	+0.2
KURK	Kurchatov	36.83	55	⇑*e*P	P	20 21 11.7	+0.9
KURK				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KDJ	Kajisay	36.96	70		P	20 21 12.8	+0.5
KDJ	Kajisay	36.96	70	P	P	20 21 12.8	+0.5
KDJ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TARG	Taragay, Kyrgy	37.51	70	P	P	20 21 16.8	-0.4
TARG	Taragay, Kyrgy	37.51	70	P	P	20 21 16.8	-0.4
TARG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
PRZ	Przheval'sk	37.77	69	P	P	20 21 18.1	-1.0
PRZ				IAmb	IAmb	20 21 22.4	
	comp=Z,6.7nm,0.7s						
PRZ	Przheval'sk	37.77	69	P	P	20 21 18.1	-1.0
PRZ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BORG	Borgarnes	37.95	328	LR	LR	20 36 52.9	
	comp=Z,130nm,20.8s,baz=356,slow=36						
WUS	Wushi	38.67	70	P	P	20 21 25.6	-1.1
WUS				IAmb	IAmb	20 21 28.6	
	comp=Z,9.9nm,1.2s						
SPITS	Spitsbergen Ar	39.12	356	P	P	20 21 28.7	-1.1
	comp=Z,5.9nm,0.9s,baz=159,slow=4.5,SNR=1.7						
SPITS				LR	LR	20 39 18.2	
	comp=Z,224nm,18.8s,baz=178,slow=39						
	comp=Z,5.9nm,0.9s						
MAKZ	Makanchi	39.44	61	P	P	20 21 31.6	-1.3
MAKZ	Makanchi	39.44	61	P	P	20 21 31.6	-1.3
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MK31	Makanchi Array	39.65	61	⇑*e*P	P	20 21 35.3	+0.6
MKAR	Makanchi Array	39.65	61	P	P	20 21 34.9	+0.2
	comp=Z,2.1nm,0.7s,baz=285,slow=6.9,SNR=8.9						
MKAR				LR	LR	20 39 38.9	
	comp=Z,113nm,21.2s,baz=279,slow=39						
	comp=Z,2.1nm,0.7s						
MKAR	Makanchi Array	39.65	61	P	P	20 21 33.6	-1.1
MKAR	Makanchi Array	39.65	61	P	P	20 21 33.6	-1.1
MBAR	Mbarara	39.96	176	LR	LR	20 41 00.6	
	comp=Z,157nm,18.2s,baz=357,slow=40						
KBS	Kingsbay	40.10	355	P	P	20 21 37.9	0.0
KBS	Kingsbay	40.10	355	P	P	20 21 37.9	0.0
KBS				pmax	pmax		
	comp=Z,43nm,1.5s						
SCO	Scoresbysund	40.20	337	P	P	20 21 38.0	-0.8
SCO				IAmb	IAmb	20 22 12.9	
	comp=Z,22nm,1.2s						
SCO	Scoresbysund	40.20	337	P	P	20 21 38.0	-0.8
SCO				pmax	pmax		
	comp=Z,22nm,1.2s						
ZAA0	Zalesovo Array	40.48	50	P	P	20 21 41.5	+0.1
ZAA0				IAmb	IAmb	20 21 43.1	
	comp=Z,18nm,1.5s						
ZALV	Zalesovo Beam	40.48	50	P	P	20 21 41.8	+0.4
	comp=Z,3.7nm,0.7s,baz=265,slow=9.0,SNR=9.7						
ZALV				LR	LR	20 39 42.7	
	comp=Z,87nm,20.6s,baz=284,slow=38						
	comp=Z,3.7nm,0.7s						
ZALV	Zalesovo Beam	40.48	50	P	P	20 21 41.3	-0.1
ZALV	Zalesovo Beam	40.48	50	*i* P	P	20 21 42.2	+0.8
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DGZ	Jazzator, Alta	42.56	56	⇓*i*P	P	20 21 59.7	+1.0
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.5s						
NRIK	Noril'sk	43.05	27	P	P	20 22 03.9	+1.7
	comp=Z,3.8nm,0.7s,baz=250,slow=13,SNR=3.5						
NRIK				LR	LR	20 42 11.1	
	comp=Z,186nm,20.5s,baz=252,slow=39						
	comp=Z,3.8nm,0.7s						
NRIK	Noril'sk	43.05	27	P	P	20 22 02.6	+0.4
NRIK	Noril'sk	43.05	27	⇓*e*P	P	20 22 04.2	+2.0
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
DBIC	Dimbokro	43.99	231	P	P	20 22 12.0	+1.6
	comp=Z,6.8nm,1.1s,baz=28,slow=8.9,SNR=3.3						
DBIC				LR	LR	20 41 58.7	
	comp=Z,137nm,19.0s,baz=52,slow=38						
	comp=Z,6.8nm,1.1s						
DBIC	Dimbokro	43.99	231	P	P	20 22 09.5	-0.9
DBIC				IAmb	IAmb	20 22 43.2	
	comp=Z,21nm,1.4s						
WMQ	Urumqi	44.03	64	*e*P	P	20 22 12.5	+1.9
WMQ				sP	sP	20 22 19.8	+2.9
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				LR	LR		
	comp=Z,330nm,22.3s						
SUMG	Summit	45.81	337	P	P	20 22 25.0	+0.3
SUMG				IAmb	IAmb	20 22 37.8	
	comp=Z,5.5nm,1.1s						
SUMG	Summit	45.81	337	P	P	20 22 25.0	+0.3
SUMG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
EVN	Everest	49.52	85	P	P	20 22 53.5	-0.9
SFJD	Kangerlussuaq	50.02	330	LR	LR	20 46 10.9	
	comp=Z,145nm,20.2s,baz=115,slow=39						
GOMU	GeErMu	51.82	71	P	P	20 23 11.2	-0.2
GOMU				S	S	20 30 34.2	+0.7
GOMU				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LSA	Lhasa	52.01	80	IAmb	IAmb	20 23 14.5	
	comp=Z,4.3nm,0.8s						
LSA	Lhasa	52.01	80	P	P	20 23 09.6	-3.3
LSA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TULEG	Thule	53.55	343	P	P	20 23 24.1	+1.0
GTA	Gaotai	54.07	65	*e*P	P	20 23 28.2	+0.6
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SHL	Shillong	54.63	84	P	P	20 23 31.2	-0.7
SHL				IAmb	IAmb	20 23 32.2	
	comp=Z,12nm,1.2s						
SHL	Shillong	54.63	84	P	P	20 23 31.3	-0.7
SHL				pmax	pmax		
	comp=Z,12nm,1.2s						
SONM	Songino Array	55.10	54	P	P	20 23 36.0	+1.0
	comp=Z,1.6nm,0.8s,baz=288,slow=7.5,SNR=7.0						
	comp=Z,1.6nm,0.8s						
SONM	Songino Array	55.10	54	IAmb	IAmb	20 23 40.7	
	comp=Z,2.0nm,1.0s						
SONM	Songino Array	55.10	54	P	P	20 23 36.0	+1.0
ULN	Ulaanbaatar	55.50	53	P	P	20 23 38.3	+0.4
ULN				IAmb	IAmb	20 23 45.4	
	comp=Z,4.2nm,0.9s						
ULN	Ulaanbaatar	55.50	53	⇑*e*P	P	20 23 39.1	+1.2
ULN				pmax	pmax		
	comp=Z,8.0nm,1.9s						
BRDH	Bariadhala	55.99	87	LR	LR	20 50 25.3	
	comp=Z,208nm,19.0s,baz=218,slow=39						
TIXI	Tiksi	56.36	22	LR	LR	20 51 42.7	
	comp=Z,205nm,19.0s,baz=237,slow=40						
TIXI	Tiksi	56.36	22	⇑*e*P	P	20 23 47.2	+3.7
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
FRB	Frobisher Bay	58.12	329	LR	LR	20 51 05.9	
	comp=Z,130nm,18.9s,baz=76,slow=38						
LZDM	Lanzhou Array	58.36	67	P	P	20 23 59.1	+0.5
	comp=Z,0.6nm,0.3s,baz=297,slow=6.3,SNR=3.5						
	comp=Z,0.6nm,0.3s						
LZH	Lanzhou	58.41	67	*e*P	P	20 24 00.2	+1.5
LZH				sP	sP	20 24 08.0	+2.9
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				LR	LR		
	comp=Z,200nm,16.1s						
LZH				LR	LR		
	comp=Z,220nm,15.5s						
LZH				LR	LR		
	comp=Z,280nm,17.2s						
TSUM	Tsumeb	59.16	191	LR	LR	20 52 10.6	
	comp=Z,146nm,18.5s,baz=352,slow=39						
MATP	Matopo	59.58	179	LR	LR	20 50 36.3	
	comp=Z,52nm,20.1s,baz=5.0,slow=37						
CD2	Chengdu	60.89	73	P	P	20 24 16.6	+0.9
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
YAK	Yakutsk	61.05	32	LR	LR	20 54 29.8	
	comp=Z,120nm,18.2s,baz=292,slow=40						
YAK	Yakutsk	61.05	32	*e*P	P	20 24 19.6	+3.4
YAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.7s						
SCHQ	Schefferville	61.37	319	P	P	20 24 18.8	+0.2
HHC	Hu-ho-hao-te	61.47	59	*e*P	P	20 24 19.2	-0.4
HHC				pmax	pmax		
	comp=E,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=E,140nm,6.5s						
PZH	PanZhiHua	61.68	78	P	P	20 24 22.7	+1.5
LPHEP	Lephephe	62.53	182	P	P	20 24 27.3	+0.7
XAN	Xi'an	63.04	67	⇓P	P	20 24 30.4	+0.3
XAN				pmax	pmax		
	comp=E,14nm,1.1s						
KMI	Kunming	63.18	79	P	P	20 24 31.7	+0.3
KMI				pmax	pmax		
	comp=E,9.0nm,1.0s						
CMAR	Chiang Mai Arr	64.00	87	P	P	20 24 36.6	-0.1
	comp=E,1.3nm,0.8s,baz=295,slow=11,SNR=7.8						
CMAR				LR	LR	20 57 17.8	
	comp=E,46nm,18.1s,baz=305,slow=41						
	comp=E,1.3nm,0.8s						
LBTB	Lobatse	64.18	182	LR	LR	20 54 47.1	
	comp=E,82nm,18.0s,baz=3.5,slow=38						
BATG	Bathurst New B	64.73	311	P	P	20 24 41.9	+0.9
ENH	Enshi	65.42	70	P	P	20 24 46.1	+0.3
HEH	HeiHe	66.20	44	*e*P	P	20 24 51.5	+1.1
HEH				pmax	pmax		
	comp=E,8.0nm,1.0s						
A36M	Sachs Harbour	67.25	351	P	P	20 24 58.5	+1.8
A36M				IAmb	IAmb	20 25 23.9	
	comp=Z,6.7nm,0.9s						
BOSA	Boshof	67.77	183	LR	LR	20 56 54.9	
	comp=Z,77nm,18.7s,baz=8.0,slow=38						
BOSA	Boshof	67.77	183	P	P	20 25 00.5	-0.2
BOSA				IAmb	IAmb	20 25 21.8	
	comp=Z,7.3nm,1.1s						
BOSA	Boshof	67.77	183	P	P	20 25 00.5	-0.2
BOSA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BNX	BinXian	68.73	48	⇓P	P	20 25 02.1	-4.4
BNX				pmax	pmax		
	comp=Z,11nm,1.8s						
SEY	Seymchan	68.74	24	LR	LR	20 58 02.6	
	comp=Z,125nm,19.0s,baz=315,slow=38						
MA2	Magadan	70.65	27	LR	LR	21 02 01.2	
	comp=Z,136nm,18.3s,baz=302,slow=41						
NJ2	Nanjing	71.11	64	*e*P	P	20 25 21.2	-0.2
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
INK	Inuvik	71.65	353	LR	LR	21 00 16.0	
	comp=Z,72nm,18.7s,baz=310,slow=39						
E29M	Blow River	71.94	355	P	P	20 25 26.6	+0.8
E29M				IAmb	IAmb	20 25 50.7	
	comp=Z,8.6nm,1.1s						
SADO	Sadowa	73.60	315	LR	LR	20 57 29.9	
	comp=Z,88nm,18.8s,baz=334,slow=35						
KSRS	Korea Array	73.95	55	P	P	20 25 38.5	+0.3
	comp=Z,3.9nm,0.9s,baz=305,slow=5.4,SNR=9.6						
	comp=Z,3.9nm,0.9s						
YKAW3	Yellowknife Wh	73.96	343	P	P	20 25 38.2	+0.4
YKAW3				IAmb	IAmb	20 25 44.1	
	comp=Z,7.1nm,1.1s						
YKA	Yellowknife Ar	74.02	343	P	P	20 25 38.5	+0.4
	comp=Z,1.4nm,0.9s,baz=20,slow=5.9,SNR=13						
	comp=Z,1.4nm,0.9s						
YKA	Yellowknife Ar	74.02	343	*i* P	P	20 25 38.2	+0.1
YKA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ILAR	Eielson Array	76.02	358	P	P	20 25 50.7	+1.0
	comp=Z,0.4nm,1.0s,baz=345,slow=3.1,SNR=2.4						
	comp=Z,0.4nm,1.0s						
ULM	Lac du Bonnet	77.95	327	LR	LR	21 04 26.4	
	comp=Z,108nm,19.9s,baz=10.0,slow=39						
PETK	Petropavlovsk-	78.08	28	LR	LR	21 04 10.9	
	comp=Z,110nm,18.8s,baz=312,slow=39						
ASAJ	Asahikawa	78.08	42	LR	LR	21 03 09.8	
	comp=Z,80nm,19.1s,baz=336,slow=38						
JNU	Nakatsue	78.53	57	LR	LR	21 05 59.2	
	comp=Z,94nm,21.3s,baz=312,slow=40						
DLBC	Dease Lake	80.74	348	LR	LR	21 05 10.4	
	comp=Z,110nm,18.6s,baz=274,slow=38						
MJAR	Matsushiro Arr	80.83	50	LR	LR	21 05 36.7	
	comp=Z,58nm,18.1s,baz=306,slow=38						
SJG	San Juan	81.77	287	LR	LR	20 59 49.2	
	comp=Z,28nm,20.4s,baz=172,slow=34						
BBB	Bella Bella	86.37	345	LR	LR	21 05 33.7	
	comp=Z,91nm,18.4s,baz=28,slow=36						
JCJ	Chichijima	89.81	54	LR	LR	21 12 30.3	
	comp=Z,56nm,18.7s,baz=157,slow=39						
SDV	Santo Domingo	90.96	282	LR	LR	21 02 44.2	
	comp=Z,31nm,20.7s,baz=66,slow=32						
ANMO	Albuquerque	94.81	324	LR	LR	21 10 43.4	
	comp=Z,107nm,20.1s,baz=33,slow=36						
ROSC	El Rosal	96.36	282	LR	LR	21 11 37.2	
	comp=Z,55nm,18.4s,baz=45,slow=36						
NVL	N'lazarevskaya	110.54	186	*i* PKIKP	PKiKP	20 32 35.2	+1.1
NVL				*e*		20 33 12.0	
NVL				*e*PPP	PPP	20 35 30.4	
NVL				*e*SS	SS	20 48 40.9	+2.2
NVL				*e*SSS	SSS	20 52 48.3	
NVL				pmax	pmax		
	comp=Z,14nm,1.6s						
NVL				MLR	MLR		
	comp=Z,435nm,21.0s						

SOF ***10*** *20:24:03.2, 39°.5N±0°.1×28°.00E±0°.05, h2^{km}±3^{km}, MD4.5/5*

MOS ***10*** *20:24:03.8±1.4, 39°.49N×28°.11E, h10^{km}, mb4.7/6, Error ellipse: s-maj=6.0km s-min=3.7km az=90.0*

ISK ***10*** *20:24:04.9, 39°.45N×27°.92E, h10^{km}, ML4.5/27*

IDC ***10*** *20:24:05.0±0.7, 39°.39N×28°.07E, h0^{km}, mb3.8/13, mbtmp3.8/24, ML3.0/7, MS3.6/8, Error ellipse: s-maj=11.7km s-min=9.7km az=44.0*

NEIC ***10*** *20:24:05.7±1.4, 39°.46N±0°.05×27°.991E±0°.009, h10^{km}±1^{km}, mb4.2/17, Error ellipse: s-maj=8.5km s-min=2.9km az=186.0*

AFAD ***10*** *20:24:05.4, 39°.44N×27°.91E, h11^{km}±1^{km}, MW4.3*

MED_RC ***10*** *20:24:05.0±0.3, 39°.38N×27°.78E, h20^{km}±1^{km}, MW4.6/15, Moment Tensor Solution. Body waves: s2,c2;Mantle waves: s15,c17; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.51±.11; $M_{\theta\theta}$0.91±.08; $M_{\phi\phi}$-0.40±.05; $M_{r\theta}$-0.39±.09; $M_{\theta\phi}$-0.61±.04; $M_{\phi r}$-0.16±.07; Best double couple: $M_0$1.05000×10^{16} NP1:ϕ_s331.00000°,δ54.00000°, λ-24.00000°. NP2:ϕ_s76.00000°,δ71.00000°, λ-142.00000°. Principal axes: T 1.2000, Plg10.0000°, Azm200.0000°; N -0.3100, Plg48.0000°, Azm98.0000°; P -0.8900, Plg40.0000°, Azm299.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

MCSM ***10*** *20:24:06.4±0.4, 40°N±3°×2°8E±°, h14^{km}, mb4.4, mB5.1, MLv4.8, Mw(mB)4.5*

THE ***10*** *20:24:06.2, 39°N±3°×2°8E±°, h11^{km}, M4.3/29, MLh4.3/29*

GFZ ***10*** *20:24:07.8, 39°.45N×27°.90E, h14^{km}, MW4.4, Moment Tensor Solution. s18 Moment tensor: M_{rr}-0.42; $M_{\theta\theta}$4.28; $M_{\phi\phi}$-3.86; $M_{r\theta}$-0.26; $M_{\theta\phi}$-4.17; $M_{\phi r}$0.86; Fault plane solution: NP1:ϕ_s158.00000°,δ88.00000°, λ-8.00000°. NP2:ϕ_s248.00000°,δ81.00000°,λ-17.00000°. Principal axes: T 6.0900, Plg5.0000°, Azm203.0000°; N -0.3800, Plg81.0000°, Azm327.0000°; P -5.7100, Plg8.0000°, Azm112.0000°;*

GII ***10*** *20:24:09.4±0.0, 39°.07N±0°.05×28°.00E±0°.02, h8^{km}, Mws4.7, confirmed*

ISC 10 20:24:05.6±0.7**, 39°.44N**±0°.02×**27°.94E**±0°.02**, h16**^{km}±5^{km}**, n380, σ1^{s}46**/416**, mb3.9**/22**, MS3.5**/4**, 42C-38D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STEP	BALIKESIR_Sava	0.18	250	P	Pg	20 24 09.5	-0.5
STEP				S	Sg	20 24 12.4	-0.6
STEP				*i* IAML		20 24 14.0	
	comp=N,24µm,0.7s						
STEP				*i* IAML		20 24 14.0	
	comp=E,26µm,0.7s						
BALB	Balikesir	0.20	348		Pg	20 24 10.1	-0.2
BALB				Sg	Sg	20 24 13.6	0.0
BALB	Balikesir	0.20	348	Pg	Pg	20 24 10.2	-0.2
BALB				Sg	Sg	20 24 13.2	-0.4
BKES	Balkesir-Mer	0.29	359	P	Pg	20 24 11.6	-0.2
BKES				S	Sg	20 24 15.9	-0.2
BKES				*i* IAML		20 24 16.0	
	comp=N,2µm,0.8s						
BKES				*i* IAML		20 24 19.0	
	comp=E,2µm,1.1s						
BALY	Balya	0.39	321	P	Pg	20 24 13.2	-0.3
BALY				S	Sg	20 24 18.6	-0.3
BALY				*i* IAML		20 24 19.0	
	comp=N,6µm,0.6s						
BALY				*i* IAML		20 24 19.0	
	comp=E,3µm,0.6s						
SOMA	Soma-Manisa	0.42	228	Pg	Pg	20 24 13.7	-0.4
BLKS	Balkesir-Sus	0.43	3	P	Pg	20 24 14.0	-0.3
BLKS				*i* IAML		20 24 20.0	
	comp=N,9µm,0.5s						
BLKS				S	Sg	20 24 20.1	-0.2
BLKS				*i* IAML		20 24 24.0	
	comp=E,1µm,0.8s						
DURS	Dursunbey	0.45	69	P	Pg	20 24 14.6	+0.1
DURS				*i* IAML		20 24 21.0	
	comp=E,2µm,0.3s						
DURS				S	Sb	20 24 21.4	-0.2
DURS				*i* IAML		20 24 22.0	
	comp=N,1µm,0.6s						
SUSR	Susurluk-Balik	0.53	12	Pg	Pg	20 24 15.7	-0.5
DST	Dursunbey	0.55	73	Pg	Pg	20 24 16.1	-0.4
GORD	Gordes-Manisa	0.56	161	Pg	Pg	20 24 16.9	+0.2
AKS	Akhisar	0.57	190	Pg	Pg	20 24 16.5	-0.3
AKHS	Akhisar	0.57	190	P	Pg	20 24 16.5	-0.3
AKHS				*i* IAML		20 24 25.0	
	comp=N,8.2nm,0.5s						
AKHS				*i* IAML		20 24 25.0	
	comp=E,2µm,0.6s						
AKHS				S	Sb	20 24 25.3	+0.3
GONE	Gonen-Balikesi	0.64	342	Pg	Pg	20 24 17.6	-0.5
GONE				Sg	Sb	20 24 26.5	-0.5
BUHA	Balikesir, Bur	0.67	276	P	Pg	20 24 18.3	-0.3
BUHA				S	Sg	20 24 27.6	0.0
BUHA				*i* IAML		20 24 33.0	
	comp=N,1µm,0.7s						
BUHA				*i* IAML		20 24 37.0	
	comp=E,2µm,0.7s						
YAYO	Edremit-Balk	0.69	285	Pg	Pg	20 24 18.5	-0.6
YAYO				Sg	Sg	20 24 28.0	-0.2
DEMI	Demirci	0.72	123	P	Pb	20 24 20.3	+0.4
DEMI				S	Sb	20 24 30.1	+0.6
DEMI				*i* IAML		20 24 34.0	
	comp=N,9µm,0.5s						
DEMI				*i* IAML		20 24 40.0	
	comp=E,9µm,1.1s						
GOMA	Golmarmara-Man	0.73	181	Pg	Pg	20 24 19.4	-0.4
ZEDA	zmir-Bergama	0.82	235	P	Pb	20 24 21.5	0.0
ZEDA				S	Sb	20 24 32.6	+0.3
ZEDA				*i* IAML		20 24 35.0	
	comp=E,2µm,0.7s						
ZEDA				*i* IAML		20 24 36.0	
	comp=N,2µm,0.7s						
DKL	Dikili	0.88	246	Pg	Pg	20 24 22.1	-0.6
SIMA	Simav-Kutahya	0.89	113	Pg	Pb	20 24 22.9	+0.3
CANM	Can-anakkale	0.89	310	Pg	Pg	20 24 21.9	-0.9
EDC	Edincik	0.91	356	Pg	Pg	20 24 22.7	-0.5
BAND	Balkesir-Ban	0.92	8	P	Pg	20 24 22.9	-0.6
BAND				*i* IAML		20 24 38.0	
	comp=N,1µm,0.3s						
BAND				*i* IAML		20 24 38.0	
	comp=E,2µm,0.2s						
BAND	Balkesir-Ban	0.92	8	⇑P	Pb	20 24 23.6	+0.4
BAND				⇓S	Sb	20 24 35.7	+0.4
ORLT	Orhaneli	0.95	50	Pg	Pg	20 24 23.9	-0.2
AYVA	Ayvalik	0.97	263	P	Pb	20 24 24.2	+0.2
AYVA				S	Sn	20 24 38.5	+0.4
AYVA				*i* IAML		20 24 39.0	
	comp=N,7µm,0.6s						
AYVA				*i* IAML		20 24 39.0	
	comp=E,2µm,0.5s						
BIGA	Biga-Canakkale	1.04	324	Pg	Pg	20 24 24.6	-1.0
MANT	Manisa	1.06	153	P	Pn	20 24 26.5	+0.5
MANT				S	Sg	20 24 40.0	-0.1
MANT				*i* IAML		20 24 42.0	
	comp=N,6µm,0.5s						
MANT				*i* IAML		20 24 42.0	
	comp=E,1µm,0.6s						
MANT	Manisa	1.06	153		Pg	20 24 25.9	-0.3
MANT				Sg	Sg	20 24 39.2	-0.9
KRBG	Karabiga-Canak	1.07	333	Pg	Pg	20 24 25.6	-0.7
SHAP	Saphane-Kutahy	1.08	112	Pn	Pn	20 24 26.7	+0.5
KULA	Kula-Manisa	1.08	148	Pn	Pg	20 24 26.3	-0.2
BAYC	CANAKKALE_Bayr	1.12	286	P	Pb	20 24 26.2	-0.3
BAYC				S	Sg	20 24 41.0	-0.7
BAYC				*i* IAML		20 24 43.0	
	comp=N,1µm,0.8s						
BAYC				*i* IAML		20 24 44.0	
	comp=E,1µm,0.3s						
LAPS	Lapseki, ANA	1.17	314	P	Pb	20 24 27.2	-0.2
LAPS				S	Sn	20 24 43.6	+0.6
LAPS				*i* IAML		20 24 49.0	
	comp=N,1µm,0.8s						
LAPS				*i* IAML		20 24 50.0	
	comp=E,5µm,0.9s						
MDNY	Mudanya-Bursa	1.18	38	Pn	Pb	20 24 27.5	-0.1
TVSB	Tavsanli	1.18	89	Pn	Pb	20 24 27.9	+0.2
MRMT	Marmara Adasi	1.19	347	Pn	Pb	20 24 27.6	-0.2
GEDZ	Gediz	1.21	109	Pn	Pn	20 24 28.4	+0.5
EZNE	Ezine-Canakkal	1.25	285	Pn	Pn	20 24 28.8	+0.3
BLCB	Balcova	1.26	214	P	Pn	20 24 28.4	-0.2
BLCB				S	Sb	20 24 45.9	+0.9
LPK	Lapseki	1.30	316	Pn	Pn	20 24 29.3	+0.2
EZN	Ezine	1.30	288	P	Pn	20 24 29.4	+0.2
EZN				S	Sb	20 24 46.2	0.0
EZN	Ezine	1.30	288	Pn	Pn	20 24 29.2	+0.1
EZN	Ezine	1.30	288	P	Pb	20 24 29.7	0.0
COMU	Canakkale	1.31	301	Pn	Pn	20 24 29.4	+0.2
PRK	Paraskevi	1.31	262	P	Pn	20 24 29.5	+0.3
PRK				S	Sg	20 24 47.2	-0.5
ARMT	Armutlu	1.33	32	Pn	Pg	20 24 31.4	+0.2
RKY	Sarkoy-Tekirda	1.38	335	Pn	Pn	20 24 30.4	+0.2
GPNR	Gulpinar-Canak	1.40	271	Pn	Pn	20 24 30.7	+0.3
GELI	Tayfur-Gelibol	1.48	311	Pn	Pn	20 24 31.9	+0.4
BOTS	Marmara Eregli	1.55	1	Pn	Pn	20 24 33.0	+0.5
SIGR	SIGRI	1.63	263	P	Pn	20 24 33.9	+0.2
SIGR				S	Sn	20 24 54.3	0.0
GADA	Gvkgeada	1.74	296	P	Pn	20 24 35.7	+0.5
CHOS	Chios island	1.81	235	P	Pn	20 24 35.9	-0.3
CHOS				S	Sn	20 24 57.6	-1.2
CAVK	Edirne/Enez-Ca	1.85	313	⇑P	Pn	20 24 37.7	+1.1
ENEZ	Enez	1.88	314	P	Pn	20 24 37.8	+0.7
ENEZ				S	Sn	20 25 01.7	+1.1
SMG	Samos	1.93	207	P	Pn	20 24 37.6	-0.2
BORA	Eskisehir	1.99	76		Pn	20 24 39.2	+0.6
SMTH	Samothraki Isl	2.12	300	P	Pn	20 24 40.3	-0.1
SMTH				S	Sn	20 25 07.5	+1.1
LIA	Limnos Island	2.17	283	P	Pn	20 24 41.5	+0.4
YER	Yerkesik	2.32	173	P	Pn	20 24 43.4	+0.2

BODT	Bodrum	2.42	192	P	Pn	20 24 45.0	+0.4
RDO	Rodhopi	2.50	314	P	Pn	20 24 46.2	+0.5
RDO	Rodhopi	2.50	314		Pn	20 24 46.5	+0.8
ISP	Isparta	2.59	128		Pn	20 24 47.7	+0.8
ISP	Isparta	2.59	128	*d i*P	Pn	20 24 47.7	+0.8
ISP	Isparta	2.59	128	P	Pn	20 24 47.4	+0.5
SAHE	Sakarya_HENDEK	2.64	57	⇑P	Pn	20 24 49.1	+1.5
MDUB	Mudurnu	2.71	67		Pn	20 24 48.3	-0.3
KDZ	Kurdzhali	2.95	319	P	Pn	20 24 52.3	+0.5
KDZ	Kurdzhali	2.95	319	P	Pn	20 24 52.3	+0.5
APE	Apeiranthos	3.03	219	P	Pn	20 24 51.8	-1.1
APE	Apeiranthos	3.03	219	⇑P	Pn	20 24 54.8	+1.9
APE	Apeiranthos	3.03	219	⇓*e*P	Pn	20 24 53.4	+0.4
KAVA	Kavala	3.05	302	P	Pn	20 24 53.5	+0.4
KYMI	Kymi, Euboea I	3.10	256	P	Pn	20 24 54.2	+0.4
ELL	Elmali	3.10	149		Pn	20 24 56.6	+2.6
ELL	Elmali	3.10	149	P	Pn	20 24 56.7	+2.6
AOS	Alonnisos	3.16	266	P	Pn	20 24 55.9	+1.3
DIM	Dimitrovgrad	3.16	326	P	Pn	20 24 55.7	+1.0
DIM	Dimitrovgrad	3.16	326	P	Pn	20 24 55.7	+1.0
OUR	Ouranopolis	3.17	288	P	Pn	20 24 55.1	+0.3
ARG	Arkhangelos	3.22	177	P	Pn	20 24 56.5	+1.0
ARG	Arkhangelos	3.22	177		Pn	20 24 56.8	+1.2
ARG	Arkhangelos	3.22	177	P	Pn	20 24 56.8	+1.2
JMB	Yambol	3.23	341	P	Pn	20 24 56.0	+0.4
JMB	Yambol	3.23	341	P	Pn	20 24 56.2	+0.6
RZN	Rozhen	3.32	314	P	Pn	20 24 57.9	+0.8
RZN	Rozhen	3.32	314	P	Pn	20 24 58.0	+1.0
DION	Dionisos Attik	3.41	248	P	Pn	20 24 58.7	+0.5
AKAS	Kas	3.46	157		Pn	20 25 00.2	+1.2
PLD	Plovdiv	3.63	319	P	Pn	20 25 01.8	+0.7
SRS	Serrai	3.72	298	P	Pn	20 25 02.7	+0.3
ANTO	Ankara	3.77	82		Pn	20 25 03.0	-0.2
ANTO	Ankara	3.77	82	P	Pn	20 25 03.0	-0.2
ANTO	Ankara	3.77	82	P	Pn	20 25 04.3	+1.1
SOH	Sokhos	3.77	293	P	Pn	20 25 03.7	+0.5
ELND	Elena	3.82	337	⇑P	Pn	20 25 05.1	+1.4
MMB	Musomishta	3.82	305	P	Pn	20 25 04.7	+0.9
MMB	Musomishta	3.82	305	P	Pn	20 25 05.5	+1.6
ATAL	Atalanti	3.90	261	P	Pn	20 25 05.1	+0.2
KARP	Karpathos	3.94	189	P	Pn	20 25 06.3	+0.9
KARP	Karpathos	3.94	189		Pn	20 25 06.9	+1.5
KARP	Karpathos	3.94	189	P	Pn	20 25 06.6	+1.2
LOZB	Loznitsa	4.05	346	⇓P	Pn	20 25 08.5	+1.5
SZH	Strazhitsa	4.10	340	P	Pn	20 25 08.1	+0.5
KNT	Kendrikon	4.22	296	P	Pn	20 25 10.4	+1.1
LIT	Litokhoron	4.25	281	P	Pn	20 25 10.8	+1.2
LIT	Litokhoron	4.25	281	Pn	Pn	20 25 10.9	+1.2
LIT	Litokhoron	4.25	281	P	Pn	20 25 10.9	+1.2
RAZG	Razgrad	4.26	346	⇑P	Pn	20 25 11.1	+1.3
AGG	Agios Georgios	4.37	266	P	Pn	20 25 12.4	+1.0
KKB	Krupnik	4.37	305	P	Pn	20 25 12.8	+1.4
BR105	Keskin Array S	4.40	85	P	Pn	20 25 13.3	+1.5
BR106	Keskin Array S	4.40	84	P	Pn	20 25 13.1	+1.3
MANR	Mangalia	4.40	6	⇑P	Pn	20 25 13.6	+1.9
BR131	Keskin Array S	4.42	84		Pn	20 25 12.6	+0.5
BR131	Keskin Array S	4.42	84	*i* P	Pn	20 25 13.0	+0.9
BRTR	Keskin Array B	4.42	84	Pn	Pn	20 25 13.2	+1.2
	3.3nm,0.3s,baz=260,slow=12,SNR=142						
BRTR				Sn	Sn	20 26 02.6	-0.6
	3.1nm,0.3s,baz=250,slow=20,SNR=6.1						
BRTR				Lg	Lg	20 26 25.2	
	4.1nm,0.3s,baz=243,slow=22,SNR=6.4						
BRTR				LR	LR	20 27 18.9	
	comp=Z,754nm,18.6s,baz=256,slow=45						
	21nm,0.6s						
BRTR	Keskin Array B	4.42	84		Pn	20 25 12.6	+0.5
BRTR	Keskin Array B	4.42	84	*i* P	Pn	20 25 13.6	+1.5
BRTR				pmax	pmax		
	comp=Z,21nm,0.5s						
BR104	Keskin Array S	4.42	85	P	Pn	20 25 13.4	+1.3
VAY	Valandovo	4.51	296	*i* Pn	Pg	20 25 29.1	-2.8
CIDE	Kastamonu/Cide	4.52	56	⇑P	Pn	20 25 15.1	+1.7
KIRS	Kirsehir-Merke	4.65	92	⇑P	Pn	20 25 17.6	+2.4
PLVB	Pleven	4.67	329	⇑P	Pn	20 25 16.8	+1.4
ICOR	Ion Corvin	4.67	359	⇓P	Pn	20 25 17.6	+2.1
ILGA	Ilgaz	4.71	68		Pn	20 25 17.4	+1.2
MFTR	Murfatlar	4.75	4	⇓P	Pn	20 25 18.4	+1.9
IDI	Anoyia	4.80	211	Pn	Pn	20 25 17.9	+0.6
	comp=Z,16nm,0.9s,baz=26,slow=12,SNR=9.2						
IDI				Sn	Sn	20 26 12.8	+0.1
	comp=Z,4.1nm,0.3s,baz=238,slow=19,SNR=1.3						
IDI				LR	LR	20 26 53.5	
	comp=Z,441nm,22.0s,baz=77,slow=35						
IDI	Anoyia	4.80	211	Pn	Pn	20 25 18.7	+1.4
CVDA	Cernavoda	4.89	1	⇑P	Pn	20 25 20.4	+2.0
SGRR	Singureni	5.00	344	⇑P	Pn	20 25 21.3	+1.3
MPEP	Malo Peshtene	5.03	322	P	Pn	20 25 21.4	+1.1
TIRR	Tirgusor	5.03	4		Pn	20 25 20.5	+0.2
TIRR	Tirgusor	5.03	4	⇑P	Pn	20 25 22.1	+1.8
TIRR	Tirgusor	5.03	4	P	Pn	20 25 22.1	+1.8
TIRR	Tirgusor	5.03	4	P	Pn	20 25 20.5	+0.2
LEHL	Lehliu	5.10	351	⇑P	Pn	20 25 22.5	+1.2
TLBR	Topalu	5.10	1	⇓P	Pn	20 25 22.7	+1.3
AMRR	Amara	5.19	355	⇓P	Pn	20 25 24.1	+1.6
AMRR	Amara	5.19	355	P	Pn	20 25 24.1	+1.6
ITM	Ithomi	5.24	246		Pn	20 25 24.8	+1.6
BZK	Bozkurt	5.25	59		Pn	20 25 24.6	+1.2
VLAD	Vladila	5.27	331	⇓P	Pn	20 25 25.6	+2.0
JURR	Jurilovca	5.37	7	⇑P	Pn	20 25 26.4	+1.4
SULR		5.38	347	⇑P	Pn	20 25 27.0	+1.9
PGOR	Pogoanele	5.51	353	⇓P	Pn	20 25 28.4	+1.5
SKO	Skopje	5.55	299	*i* Pn	Pn	20 25 31.4	+3.9
PLAR	PLOIESTI	5.65	346	⇑P	Pn	20 25 30.7	+1.8
OHR	Ohrid	5.71	289	*i* Pn	Pn	20 25 32.7	+3.0
CFR	Carcaliu	5.74	1	⇑P	Pn	20 25 31.1	+1.0
CFR	Carcaliu	5.74	1	P	Pn	20 25 31.0	+1.0
ISR	Istrita	5.77	350	P	Pn	20 25 30.6	0.0
	comp=Z,1.4nmcomp=Z,95nm,1.1s						
TLCR		5.78	6	⇑P	Pn	20 25 32.5	+1.8
TLCR		5.78	6	P	Pn	20 25 32.9	+2.3
GRER		5.98	353	⇑P	Pn	20 25 35.5	+2.1
NEGRR	Negrea	6.09	360	⇓P	Pn	20 25 36.5	+1.6
TATR	Tatarca	6.16	1	⇑P	Pn	20 25 37.4	+1.6
BNN	Bunyan	6.18	93		Pn	20 25 34.2	-2.0
CSS	Mathiatis	6.20	134		Pn	20 25 36.4	-0.2
CSS	Mathiatis	6.20	134	P	Pn	20 25 37.3	+0.8
MLR	Muntele Rosu	6.22	347	Pn	Pn	20 25 39.1	+2.2
	comp=Z,7.3nm,0.3s,baz=198,slow=4.8,SNR=93						
MLR				Sn	Sn	20 26 48.8	+1.0
	baz=307,slow=6.8						
MLR				Lg	Lg	20 27 26.1	
	comp=Z,0.4nm,0.3s,baz=234,slow=11,SNR=3.7						
MLR	Muntele Rosu	6.22	347		Pn	20 25 37.8	+0.9
MLR	Muntele Rosu	6.22	347	⇓P	Pn	20 25 39.0	+2.1
SCTR	Scanteiesti	6.23	0	⇑P	Pn	20 25 38.9	+2.0
KEK	Kerkira	6.29	275	Pn	Pn	20 25 39.2	+1.5
ODBI	Odobesti	6.35	354	⇑P	Pn	20 25 40.9	+2.4
VLDR	Vladesti	6.40	1	⇓P	Pn	20 25 41.4	+2.2
ARR	Arges	6.41	339	⇓P	Pn	20 25 41.8	+2.4
VARL	Varlezi	6.46	359	⇑P	Pn	20 25 42.3	+2.3
PLOR	Plostina	6.48	352	⇑P	Pn	20 25 42.4	+2.1
PLOR	Plostina	6.48	352	P	Pn	20 25 42.4	+2.1
VRI	Vrincioaia	6.48	352	⇑P	Pn	20 25 42.6	+2.2
VRI	Vrincioaia	6.48	352	P	Pn	20 25 42.5	+2.2
VRI	Vrincioaia	6.48	352	P	Pn	20 25 40.3	0.0
	comp=Z,0.8nmcomp=Z,86nm,0.7s						
COVR	Voineasa-Covas	6.53	349	⇓P	Pn	20 25 43.1	+2.1
DJES	Djerdap	6.60	324	⇓P	Pn	20 25 43.8	+1.9
GHRR		6.63	357	⇓P	Pn	20 25 43.5	+1.2
GHRR		6.63	357	P	Pn	20 25 42.3	0.0
TOKA	Tokat	6.63	80		Pn	20 25 41.7	-0.7
SEV	Sevastopol'	6.65	38	⇓*e*P	Pn	20 25 43.0	+0.4
SEV				*e*S	Sn	20 26 54.8	-3.2
SEV				pmax	pmax		
	comp=Z,12nm,0.3s						
SEV				smax	smax		
	comp=N,13nm,0.4s						
SEV				smax	smax		
	comp=E,16nm,0.4s						
LOT	Lotru	6.75	334	⇓P	Pn	20 25 45.3	+1.2
TURR	Turia	6.76	349	⇑P	Pn	20 25 46.3	+2.1
TNR	Turnu Rosu	6.77	338	⇑P	Pn	20 25 46.5	+2.1
TNR	Turnu Rosu	6.77	338	P	Pn	20 25 46.4	+2.1
DOPR	Dopca	6.79	345	⇓P	Pn	20 25 46.1	+1.6
HERR	Herculane	6.81	325	⇓P	Pn	20 25 47.0	+2.2
BIR	Birlad	6.83	358	⇓P	Pn	20 25 46.6	+1.6
BIR	Birlad	6.83	358	P	Pn	20 25 46.6	+1.6
OZUR		6.84	347	⇑P	Pn	20 25 47.3	+2.1
YAL	Yalta	6.85	41	*e*P	Pn	20 25 45.6	+0.3
YAL				*e*S	Sn	20 27 00.4	-2.5
YAL				pmax	pmax		
	comp=Z,19nm,0.6s						
YAL				smax	smax		
	comp=N,18nm,0.5s						
YAL				smax	smax		
	comp=E,26nm,0.6s						
ONER	Baraj Valea Uz	6.98	351	⇓P	Pn	20 25 48.7	+1.5
MDVR	Moldovita	7.06	321	⇓P	Pn	20 25 49.7	+1.4
ALU	Alushta	7.11	40	*e*P	Pn	20 25 46.3	-2.6
ALU				*e*S	Sn	20 27 03.3	-6.1
ALU				pmax	pmax		
	comp=Z,7.0nm,0.3s						
ALU				smax	smax		
	comp=N,15nm,0.5s						
ALU				smax	smax		
	comp=E,9.0nm,0.5s						
TESR	Tescani	7.13	353	⇓P	Pn	20 25 50.3	+1.1
TESR	Tescani	7.13	353	P	Pn	20 25 49.3	+0.1
SIM	Simferopol'	7.16	38	*e*P	Pn	20 25 50.5	+0.8
SIM				*e*S	Sn	20 27 08.3	-2.4
SIM				pmax	pmax		
	comp=Z,41nm,0.5s						
SIM				smax	smax		
	comp=N,204nm,1.2s						
SIM				smax	smax		
	comp=E,198nm,1.1s						
MDB	Medias	7.19	340	⇓P	Pn	20 25 51.9	+1.8
MDB	Medias	7.19	340	P	Pn	20 25 51.8	+1.8
PDG	Podgorica	7.22	297		Pn	20 25 51.6	+1.1
PURM	Purcari	7.23	11	⇑P	Pn	20 25 51.7	+1.2
SUDU	Sudak	7.56	42	⇓*e*P	Pn	20 25 55.4	+0.3
SUDU				*e*S	Sn	20 27 18.5	-1.9
SUDU				pmax	pmax		
	comp=Z,83nm,1.0s						
SUDU				smax	smax		
	comp=N,108nm,0.6s						
SUDU				smax	smax		
	comp=E,68nm,0.9s						
GAZ	Gaziantep	7.63	104	Pn	Pn	20 25 55.6	-0.6
BZS	Buzias	7.74	325	⇑P	Pn	20 25 59.7	+2.1
BZS	Buzias	7.74	325	P	Pn	20 25 59.6	+2.1
BANR	Banloc	7.78	322	⇓P	Pn	20 26 00.5	+2.4
CJR	Cluj-Napoca	7.93	338	⇓P	Pn	20 26 01.3	+1.0
CJR	Cluj-Napoca	7.93	338	P	Pn	20 26 01.2	+1.0
PRAR	RASCA	8.02	352	⇑P	Pn	20 26 04.1	+2.7
MARR	Marisel-Cluj	8.04	336	⇑P	Pn	20 26 04.2	+2.4
ARCR	ARCALIA	8.08	342	⇑P	Pn	20 26 03.8	+1.6
SIRR	Siria	8.23	328	⇑P	Pn	20 26 05.8	+1.5
DRGR		8.28	334	⇑P	Pn	20 26 06.4	+1.3
DRGR		8.28	334	P	Pn	20 26 06.3	+1.3
BURAR	Bucovina Array	8.41	347		Pn	20 26 08.3	+1.5
BURAR	Bucovina Array	8.41	347	⇑P	Pn	20 26 08.7	+1.9
BURAR	Bucovina Array	8.41	347	P	Pn	20 26 08.7	+1.9
BAL3X	Bal3x, Balta	8.58	8	P	Pn	20 26 08.8	-0.2
TIP	Timpagrande	8.67	272		Pn	20 26 11.8	+1.4
TIP	Timpagrande	8.67	272	P	Pn	20 26 11.6	+1.2
	comp=E,25nm,1.6s						
MMA0B	Mount Meron ar	8.80	134	P	Pn	20 26 13.0	+0.8
MMA0B	Mount Meron ar	8.80	134	S	Sn	20 27 50.2	-0.9
MMAI	Mount Meron Ar	8.80	134	Pn	Pn	20 26 12.3	0.0
	comp=E,1.7nm,0.3s,baz=331,slow=12,SNR=20						
MMAI				Sn	Sn	20 27 50.4	-0.8
	comp=E,1.0nm,0.3s,baz=355,slow=29,SNR=1.4						
GEM	Giv'at Ha'Em	8.80	133	P	Pn	20 26 13.4	+1.2
NATI	Neve Ativ	8.80	132	P	Pn	20 26 13.1	+0.9
NATI	Neve Ativ	8.80	132	S	Sn	20 27 50.9	-0.2
BMR	Baia Mare	8.84	340	⇓P	Pn	20 26 14.4	+1.8
BMR	Baia Mare	8.84	340	P	Pn	20 26 14.4	+1.8
OFRI	`Ofer	8.88	138	P	Pn	20 26 14.2	+0.9
RAKU	Rahkiv	9.01	344	P	Pn	20 26 17.1	+2.2
KSHT	Keshet	9.05	133	P	Pn	20 26 16.7	+1.0
KSV	Kosov	9.11	348	P	Pn	20 26 16.3	-0.1
MMLI	Mount Malkishu	9.25	137	P	Pn	20 26 19.0	+0.6
MMLI	Mount Malkishu	9.25	137	S	Sn	20 28 01.2	-1.0
ACER	Acerenza	9.29	282		Pn	20 26 19.9	+1.0
CUC	Castrocucco	9.36	277		Pn	20 26 20.6	+0.7
KORU	Korolevo	9.38	340	P	Pn	20 26 20.4	+0.4
SALP	Salfit	9.42	139	P	Pn	20 26 21.7	+1.0
HMDT	Nahal Hemdat	9.45	137	P	Pn	20 26 22.0	+0.9
HMDT	Nahal Hemdat	9.45	137	S	Sn	20 28 06.2	-0.8
CEL	Celeste	9.47	267		Pn	20 26 22.2	+0.8
SGRT	San Giovanni R	9.56	288	Pn	Pn	20 26 23.3	+0.7
MORH	Mrgy, Hungar	9.61	318	⇓P	Pn	20 26 24.2	+1.0
BALJ	Balqa	9.64	137		Pn	20 26 22.2	-1.5
KOPT	Kop Dagi	9.70	83	Pn	Pn	20 26 23.4	-1.3
DSI	Dead Sea	9.92	140	P	Pn	20 26 28.5	+1.0
KZIT	Kziot	10.02	146	P	Pn	20 26 29.6	+0.8
KZIT	Kziot	10.02	146	S	Sn	20 28 18.0	-3.0
MORS	Morshin	10.11	345	P	Pn	20 26 30.0	-0.1
GHAJ	Ghor Haditha	10.23	140	Pn	Pn	20 26 31.4	-0.2
GHAJ	Ghor Haditha	10.23	140	P	Pn	20 26 32.5	+0.8
ASF	Jabal al Asfar	10.27	132	Pn	Pn	20 26 31.7	-0.6
	baz=315,slow=14						
ASF				Sn	Sn	20 28 26.6	-0.6
	baz=294,slow=20						
PSZ	Piszkesteto	10.28	328	Pn	Pn	20 26 32.7	+0.3
PSZ	Piszkesteto	10.28	328	P	Pn	20 26 32.7	+0.3
PAOL	Paolisi	10.35	283		Pn	20 26 34.9	+1.5
PRNI	Paran	10.76	145	P	Pn	20 26 39.6	+0.6
BEHE	Becsehely	10.78	314	Pn	Pn	20 26 40.4	+1.2
VAE	Valguarnera	10.79	264	Pn	Pn	20 26 43.5	+4.1
	comp=E,1.3nm,0.3s,baz=63,slow=4.5,SNR=2.5						
	comp=E,13nm,0.9s						
MPLH	Magyarpolny	10.81	319	P	Pn	20 26 40.2	+0.5
KRMI	Paran Flat	10.84	147	P	Pn	20 26 41.1	+1.0
KRMI	Paran Flat	10.84	147	S	Sn	20 28 38.0	-3.2
RAFF	Raffo Rosso	10.89	263	Pn	Pn	20 26 42.2	+1.4
GURO	Guroymak-BITLI	11.01	90	Pn	Pn	20 26 40.7	-1.8
AK07	Malin Array Si	11.15	4	P	Pn	20 26 43.9	-0.3
MBRI	Mt Berech	11.20	147	P	Pn	20 26 46.4	+1.2
MBRI	Mt Berech	11.20	147	S	Sn	20 28 47.5	-2.6
AK09	Malin Array Si	11.21	4	P	Pn	20 26 44.5	-0.6
WDD	Wied Dalam	11.23	256	Pn	Pn	20 26 46.2	+0.9
AK17	Malin Array Si	11.27	4	P	Pn	20 26 45.9	0.0
KIEV	Kiev	11.29	4	Pn	Pn	20 26 45.5	-0.6
KIEV	Kiev	11.29	4	P	Pn	20 26 45.6	-0.6
AKASG	Malin Array Be	11.30	4	Pn	Pn	20 26 47.3	+1.0
	comp=E,0.2nm,0.3s,baz=193,slow=13,SNR=9.2						
AKASG				Sn	Sn	20 28 52.5	+0.4
	comp=E,0.9nm,0.3s,baz=197,slow=25,SNR=4.2						
AKASG				LR	LR	20 30 58.7	
	comp=E,359nm,20.7s,baz=192,slow=36						
AKASG	Malin Array Be	11.30	4	Pn	Pn	20 26 45.0	-1.3
AKASG	Malin Array Be	11.30	4	*i* P	Pn	20 26 44.2	-2.1
AKBB	Malin Array Si	11.30	4	Pn	Pn	20 26 45.1	-1.2
AKBB	Malin Array Si	11.30	4	⇓*e*P	Pn	20 26 46.1	-0.2
AKBB	Malin Array Si	11.30	4	P	Pn	20 26 46.1	-0.2
EIL	Elat	11.33	147	Pn	Pn	20 26 46.2	-0.6
	comp=E,0.2nm,0.3s,baz=333,slow=13,SNR=2.4						
EIL				Sn	Sn	20 28 47.0	-6.1
	comp=E,0.3nm,0.3s,baz=283,slow=19,SNR=2.0						
	comp=E,1.5nm,0.6s						
EIL	Elat	11.33	147	P	Pn	20 26 48.0	+1.2
EIL	Elat	11.33	147	S	Sn	20 28 49.7	-3.3
NRCA	Norcia	11.68	292	Pn	Pn	20 26 52.5	+0.9
FDMO	Fiordimonte	11.74	293	Pn	Pn	20 26 52.1	-0.3
RONA	Rosalia, Austr	11.80	318	*e*Pn	Pn	20 26 54.0	+0.8
	comp=E,5.7nm,0.7s						
RNPP5	Staryi Chortor	11.88	354	P	Pn	20 26 54.1	-0.1
SOKA	Soboth	11.88	312	*e*Pn	Pn	20 26 55.9	+1.5
	comp=E,0.6nm,0.4s						
KIV	Kislovodsk	11.91	63	*e*P	Pn	20 26 54.1	-0.7
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ARSA	Arzberg	11.93	315	*e*Pn	Pn	20 26 56.3	+1.3
	comp=Z,0.5nm,0.4s						
KBZ	Khabaz	11.99	64	Pn	Pn	20 26 59.0	+3.3
	baz=255,slow=12,SNR=1.9						
KBZ				LR	LR	20 32 03.5	
	comp=Z,253nm,18.3s,baz=260,slow=40						
	comp=Z,1.0nm,0.7s						
KBZ	Khabaz	11.99	64	⇓*e*P	Pn	20 26 54.6	-1.2
KBZ				pmax	pmax		
	comp=Z,2.0nm,1.1s						
CONA	Conrad Observa	12.17	318	*e*Pn	Pn	20 27 00.2	+1.9
	comp=Z,5.9nm,0.8s						
MURB	Monte Urbino	12.20	293	Pn	Pn	20 26 58.3	-0.3
SABO	M.te Sabotino	12.40	306	Pn	Pn	20 27 00.3	-1.0
VRAC	Vranov	12.76	324	Pn	Pn	20 27 14.8	+8.6
	comp=Z,0.5nm,0.3s,baz=150,slow=12,SNR=1.5						
GNI	Garni	12.95	82	⇑*e*P	Pn	20 27 07.3	-1.7
GNI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MOA	Molln	12.97	315	*e*Pn	Pn	20 27 14.1	+4.9
	comp=Z,1.2nm,0.4s						
BIOA	Bad Ischl, Aus	13.23	313	*e*Pn	Pn	20 27 18.0	+5.3
	comp=Z,2.5nm,0.7s						
ABTA	Abfaltersbach	13.42	308	*e*Pn	Pn	20 27 16.6	+1.3
	comp=Z,1.1nm,0.4s						
CKRC	Cesky Krumlov	13.54	318	*e*P	P	20 27 27.4	+1.4
CKRC	Cesky Krumlov	13.54	318	*e*P	P	20 27 27.4	+1.4
CTI	Castel Tesino	13.66	304	Pn	Pn	20 27 17.7	-0.9
CTI	Castel Tesino	13.66	304	P	Pn	20 27 17.7	-0.9
GERES	GERESS Array B	13.87	317	Pn	P	20 27 26.5	-3.2
	baz=135,slow=13,SNR=4.6						
	comp=Z,0.7nm,0.7s						
VORD	Divnogorie	14.01	31	*e*P	Pn	20 27 22.2	-1.1
VORD				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KHC	Kasperske Hory	14.11	318	⇓*e*P	Pn	20 27 25.6	+0.9
KHC	Kasperske Hory	14.11	318	*e*P	P	20 27 30.4	-1.9
VSR	Storozhevoye	14.16	30	*e*P	Pn	20 27 22.9	-2.4
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WTTA	Wattenberg	14.19	309	*e*Pn	P	20 27 31.5	-1.9
	comp=Z,4.6nm,0.5s						
WATA	Walderalm	14.26	309	*e*Pn	P	20 27 31.6	-2.6
	comp=Z,0.8nm,0.2s						
MOTA	Moosalm	14.55	308	*e*Pn	P	20 27 34.8	-2.5
	comp=Z,7.5nm,0.7s						
MSSA	Maissana	14.55	296	Pn	Pn	20 27 30.4	-0.5
FETA	Feichten	14.64	307	*e*Pn	P	20 27 37.5	-0.9
	comp=Z,4.3nm,0.8s						
FUORN	Ofenpass-Fuorn	14.77	305	Pn	Pn	20 27 34.6	+0.7
MNK	Minsk	15.07	360	*i* P	Pn	20 27 36.9	-0.8
	comp=E,7.0nm,0.8s						
MNK				*i* P	Pn	20 27 36.9	-0.8
	comp=N,12nm,0.8s						
MNK				*i* P	Pn	20 27 36.9	-0.8
	comp=Z,2.0nm,0.7s,baz=180						
MNK				*i* S	Sn	20 30 24.0	-0.1
MNK				*i* LQ	LQ	20 32 24.4	
MNK	Minsk	15.07	360	*i* P	Pn	20 27 36.8	-0.8
MNK				*i* S	Sn	20 30 24.0	-0.1
MNK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MNK				pmax	pmax		
	comp=E,7.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,12nm,0.8s						
DAVOX	Davos/Dischmat	15.07	305	Pn	P	20 27 41.4	-1.8
	comp=N,0.2nm,0.3s,baz=121,slow=13,SNR=4.7						
	comp=N,3.2nm,0.8s						
LPSR	Galich'ya Gora	15.19	26	*e*P	Pn	20 27 35.2	-4.1
LPSR				pmax	pmax		
	comp=Z,20nm,1.1s						
AKT	Akhty	15.21	76	*e*P	Pn	20 27 36.8	-2.9
AKT				pmax	pmax		
	comp=Z,2.0nm,1.0s						
VRH	Novokhopyorsk	15.21	35	*e*P	Pn	20 27 36.6	-3.0
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TUE	Stuetta	15.30	303	P	P	20 27 45.4	-0.4
TUE				IAmb	IAmb	20 28 02.7	
	comp=Z,11nm,1.1s						
NACGM	Naroch	15.49	358	*e*P	Pn	20 27 42.1	-1.1
	comp=Z,11nm,0.9s,baz=177						
SENIN	Lac Senin/Sane	16.60	301	P	P	20 27 59.8	-0.4
SENIN				IAmb	IAmb	20 28 13.7	
	comp=Z,8.3nm,0.8s						
BNI	Bardonecchia	16.69	297	P	Pn	20 27 59.9	+1.0
BNI				IAmb	IAmb	20 28 10.5	
	comp=Z,52nm,1.4s						
BNI	Bardonecchia	16.69	297	P	Pn	20 27 59.9	+1.0
BNI				pmax	pmax		
	comp=Z,52nm,1.4s						
OBN	Obninsk	16.72	17	Pn	Pn	20 27 56.7	-2.2
	comp=Z,5.9nm,0.4s,baz=180,slow=6.1,SNR=1.3						
OBN	Obninsk	16.72	17	⇓*i*P	Pn	20 27 58.0	-0.9
OBN				pmax	pmax		
	comp=Z,13nm,1.0s						
MOS	Moscow	17.54	18	*e*P	Pn	20 28 06.9	-2.3
MOS				pmax	pmax		
	comp=Z,77nm,1.3s						
SSB	Saint Sauveur	18.22	296	Pn	Pn	20 28 16.9	-0.9
SSB				IAmb	IAmb	20 28 20.7	
	comp=Z,17nm,1.4s						
SSB	Saint Sauveur	18.22	296	P	Pn	20 28 16.9	-0.9
SSB				pmax	pmax		
	comp=Z,17nm,1.4s						
BELG	Belogornoye	18.77	40	P	P	20 28 24.1	+0.3
	comp=Z,0.1nm,0.3s,baz=238,slow=9.1,SNR=3.0						
	comp=Z,18nm,0.9s						
BELG	Belogornoye	18.77	40	⇑*e*P	P	20 28 24.4	+0.5
BELG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VSU	Vasula	19.05	358	⇓*e*P	P	20 28 27.6	+0.7
VSU				pmax	pmax		
	comp=Z,51nm,1.2s						
RAYN	Ar Rayn	21.76	132	P	P	20 28 54.3	-2.3
RAYN				IAmb	IAmb	20 28 60.0	
	comp=Z,5.6nm,1.1s						
RAYN	Ar Rayn	21.76	132	P	P	20 28 54.3	-2.3
RAYN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
FINES	FINESS Array B	22.06	358	P	P	20 29 01.9	+2.5
	comp=Z,8.4nm,1.0s,baz=172,slow=14,SNR=6.7						
	comp=Z,8.4nm,1.0s						
FINES	FINESS Array B	22.06	358	P	P	20 28 57.7	-1.7
FIA1	FINESS Array S	22.06	358	P	P	20 28 57.2	-2.3
HFS	Hagfors	22.57	341	P	P	20 29 08.0	+3.1
	comp=Z,2.6nm,0.8s,baz=138,slow=14,SNR=4.1						
HFS				LR	LR	20 39 19.3	
	comp=Z,164nm,19.3s,baz=139,slow=40						
	comp=Z,2.6nm,0.8s						
HFS	Hagfors	22.57	341	P	P	20 29 08.0	+3.1
KLMR	Klimovskoe	22.62	15	*e*P	P	20 29 02.6	-2.8
KLMR				pmax	pmax		
	comp=Z,51nm,1.2s						
KIRV	Kirov	23.59	29	LR	LR	20 38 10.8	
	comp=Z,130nm,21.2s,baz=226,slow=36						
NOA	NORSAR Array B	23.98	340	P	P	20 29 21.8	+2.7
	comp=Z,2.1nm,0.9s,baz=148,slow=8.8,SNR=3.7						
NOA				LR	LR	20 40 11.4	
	comp=Z,147nm,20.2s,baz=140,slow=40						
	comp=Z,2.1nm,0.9s						
ESDC	Sonseca Array	24.53	281	P	P	20 29 27.8	+3.3
	comp=Z,1.9nm,0.8s,baz=74,slow=9.7,SNR=11						
	comp=Z,1.9nm,0.8s						
ESDC	Sonseca Array	24.53	281	IAmb	IAmb	20 29 32.6	
	comp=Z,3.1nm,1.4s						
ABKAR	Akbulak array	24.74	56	P	P	20 29 25.2	-1.0
PAB	San Pablo	24.85	281	P	P	20 29 27.6	+0.2
PAB				IAmb	IAmb	20 29 49.5	
	comp=Z,9.8nm,1.1s						
PAB	San Pablo	24.85	281	P	P	20 29 27.6	+0.2
PAB				pmax	pmax		
	comp=Z,10.0nm,1.2s						
EKA	Eskdalemuir Ar	26.08	318	P	P	20 29 39.8	+1.5
	comp=Z,2.7nm,0.8s,baz=108,slow=9.3,SNR=1.7						
	comp=Z,2.7nm,0.8s						
ARTI	Arti	26.22	40	P	P	20 29 39.7	+0.2
	comp=Z,1.9nm,0.8s,baz=225,slow=11,SNR=4.8						
	comp=Z,1.9nm,0.8s						
ARTI	Arti	26.22	40	P	P	20 29 39.4	-0.1
ARTI				IAmb	IAmb	20 30 00.1	
	comp=Z,7.6nm,0.7s						
ARTI	Arti	26.22	40	P	P	20 29 44.0	+4.5
ARTI						20 30 23.6	
ARTI				SS		20 35 26.1	
ARCES	ARCESS Array B	30.18	358	LR	LR	20 41 34.9	
	comp=Z,134nm,19.4s,baz=192,slow=35						
BORK	Borovoye	31.82	51	⇓*e*P	P	20 30 29.4	+0.1
BORK				pmax	pmax		
	comp=Z,17nm,3.4s						
BVAR	Borovoye Array	31.86	51	P	P	20 30 31.8	+2.1
	comp=Z,0.5nm,0.7s,baz=298,slow=3.1,SNR=2.5						
	comp=Z,0.5nm,0.7s						
GAR	Garm	32.62	77	P	P	20 30 35.2	-1.4
AAK	Ala-Archa	34.92	69	P	P	20 30 54.9	-1.8
AAK	Ala-Archa	34.92	69	⇑*e*P	P	20 30 58.3	+1.6
AAK				pmax	pmax		
	comp=Z,13nm,1.3s						
TORD	Torodi Ar. Bea	34.95	229	P	P	20 30 58.4	+1.5
	comp=Z,1.0nm,0.8s,baz=35,slow=12,SNR=6.9						
	comp=Z,1.0nm,0.8s						
TORD	Torodi Ar. Bea	34.95	229	P	P	20 30 57.2	+0.2
FRU1	Bishkek	34.99	69	P	P	20 30 55.1	-2.1
FRU1	Bishkek	34.99	69	P	P	20 30 55.1	-2.1

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FRU1                                 pmax      pmax
          comp=Z,14nm,0.5s
KURBB Kurchatov Arra    36.78  55    P         P          20 31 13.7 +1.3
          comp=Z,0.8nm,0.8s,baz=278,slow=8.8,SNR=5.7
          comp=Z,0.8nm,0.8s
KURK  Kurchatov         36.84  55    P         P          20 31 13.0 +0.2
KURK                                 IAmb      IAmb       20 31 54.4
          comp=Z,6.4nm,1.4s
KURK  Kurchatov         36.84  55⇓eP           P          20 31 11.7 -1.1
KURK                                 pmax      pmax
          comp=Z,18nm,5.2s
MK31  Makanchi Array    39.66  61⇑eP           P          20 31 35.2 -1.5
MKAR  Makanchi Array    39.66  61    P         P          20 31 38.7 +2.0
          comp=Z,0.7nm,0.8s,baz=283,slow=7.4,SNR=4.5
          comp=Z,0.7nm,0.8s
MKAR  Makanchi Array    39.66  61    P         P          20 31 36.1 -0.6
MKAR  Makanchi Array    39.66  61    P         P          20 31 36.1 -0.6
KBS   Kingsbay          40.12 355              P          20 31 39.4 -0.6
KBS   Kingsbay          40.12 355    P         P          20 31 39.4 -0.6
KBS                                  pmax      pmax
          comp=Z,15nm,1.0s
ZALV  Zalesovo Beam     40.50  50    P         P          20 31 44.7 +1.2
          comp=Z,0.7nm,0.5s,baz=265,slow=7.2,SNR=3.8
          comp=Z,0.7nm,0.5s
ZALV  Zalesovo Beam     40.50  50    P         P          20 31 44.2 +0.7
ZALV  Zalesovo Beam     40.50  50  i P         P          20 31 45.2 +1.7
ZALV                                 pmax      pmax
          comp=Z,1.0nm,0.5s
SONM  Songino Array     55.11  54    P         P          20 33 38.5 +1.4
          comp=Z,0.2nm,0.4s,baz=299,slow=6.1,SNR=3.5
          comp=Z,0.2nm,0.4s
ULN   Ulaanbaatar       55.51  53⇑eP           P          20 33 40.4 +0.5
ULN                                  pmax      pmax
          comp=Z,1.0nm,0.9s
LZH   Lanzhou           58.41  67  eP          P          20 34 02.0 +1.3
LZH                                  sP        sP         20 34 11.3 +3.6
LZH                                  pmax      pmax
          comp=Z,16nm,1.4s
HHC   Hu-ho-hao-te      61.48  59  eP          P          20 34 21.6  0.0
HHC                                  pmax      pmax
          comp=Z,4.0nm,0.6s
HHC                                  pmax      pmax
          comp=Z,120nm,5.7s
PZH   PanZhiHua         61.68  78    P         P          20 34 23.5 +0.3
YKA   Yellowknife Ar    74.04 343    P         P          20 35 44.1 +3.9
          comp=Z,0.8nm,0.9s,baz=28,slow=5.7,SNR=6.7
          comp=Z,0.8nm,0.9s
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*SOME **10** 20:29:11.0, 40°.83N×78°.37E, h5km*
*KRNET **10** 20:29:11.0±0.1, 40°.79N×78°.32E, h15km, mb3.3*
*NNC **10** 20:29:12.1±1.0, 40°.84N×78°.34E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=6.8km s-min=4.5km az=167.0*
ISC 10 20:29:13.5±1.4**, 40°.87N**±0°.06×**78°.38E**±0°.04**, h10**km**, n47, σ1s.15**/72**, 27C-7D, Southern Xinjiang**

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Code  Station Name        Δ°  AZ°    Phase ID              Time      Res
                                   Op        ISC        h  m  s    ISC
TARG  Taragay, Kyrgy    0.96 333⇑iP         Pg         20 29 30.6 -1.5
TARG                            ⇑iS         Sg         20 29 44.7  0.0
KDJ   Kajisay           1.55 325⇑iP         Pn         20 29 40.6 -0.8
KDJ                             ⇑iS         Sb         20 30 02.5 +0.3
PRZ   Przheval'sk       1.61   0⇑iP         Pb         20 29 43.0 -0.5
PRZ                             ⇑iS         Sg         20 30 06.3 +0.8
ULHL  Ulahol            2.12 311⇑iP         Pn         20 29 50.0 +0.8
ULHL                            ⇑iS         Sb         20 30 18.5  0.0
SATY  Saty              2.19   0  Pg        Pg         20 29 54.2 -1.3
      16nm,0.3s
SATY                              Lg        Lg         20 30 25.0
      20nm,0.4s
UZB   Uzynbulak         2.33  12  Pg        Pb         20 29 55.5 -0.1
      5.6nm,0.4s
UZB                               Lg        Lg         20 30 27.2
      28nm,0.5s
UZB   Uzynbulak         2.33  12 eP         Pb         20 29 55.5 -0.1
      2.2nm,0.1s
UZB                              eS         Sg         20 30 27.5 -0.8
      28nm,0.5s
TNSS  Tian-Shan         2.42 334  Pg        Pb         20 29 57.4 +0.1
      5.0nm,0.4s
TNSS                              Lg        Lg         20 30 30.3
      14nm,0.7s
TNSS  Tian-Shan         2.42 334 eP         Pb         20 29 57.4 +0.1
      2.4nm,0.2s
TNSS                             eS         Sg         20 30 30.6 -0.6
      14nm,0.5s
SHLS  Shalkode          2.42  19  Pg        Pg         20 29 58.9 -1.1
      6.7nm,0.4s
SHLS                              Lg        Lg         20 30 33.1
      25nm,0.5s
SHLS  Shalkode          2.42  19 eP         Pg         20 29 58.9 -1.1
      6.7nm,0.4s
SHLS                             eS         Sg         20 30 33.1 +1.7
      25nm,0.5s
BOOM  Boomskoye usch    2.44 312⇑iP         Pn         20 29 54.6 +0.9
BOOM                            ⇑iS         Sb         20 30 26.2 -1.7
MDOK  Medeo             2.50 337  Pg        Pb         20 29 58.8 +0.2
      8.9nm,0.3s
MDOK                              Lg        Lg         20 30 32.9
      39nm,0.5s
IZV   Izvestkoviy       2.54 329  Pg        Pb         20 29 59.4 +0.1
      8.3nm,0.3s
IZV                               Lg        Lg         20 30 34.1
      29nm,0.6s
IZV   Izvestkoviy       2.54 329 eP         Pb         20 29 59.4 +0.1
      8.3nm,0.3s
IZV                              eS         Sg         20 30 34.1 -0.9
      29nm,0.6s
KOTS  Kotyrbulak        2.55 339  Pg        Pb         20 29 59.1 -0.3
      8.3nm,0.3s
KOTS                              Lg        Lg         20 30 33.9
      40nm,0.4s
KOTS  Kotyrbulak        2.55 339 eP         Pb         20 29 59.1 -0.3
      7.6nm,0.2s
KOTS                             eS         Sg         20 30 33.5 -1.8
      71nm,0.3s
KNDC  Almaty            2.57 336 ⇑Pg        Pb         20 29 60.0 +0.1
      26nm,0.7s
KNDC                             ⇓Lg        Lg         20 30 34.9
      92nm,0.7s
PDGK  Podgornoye        2.59  18 ⇑Pg        Pb         20 29 59.0 -1.2
      5.4nm,0.5s
PDGK                             ⇓Lg        Lg         20 30 34.4
      32nm,0.6s
KPKS  Kokpek            2.60   5  Pg        Pb         20 30 01.1 +0.7
      0.3nm,0.2s
KPKS                              Lg        Lg         20 30 37.0
      40nm,0.4s
KPKS  Kokpek            2.60   5 eP         Pb         20 30 01.1 +0.7
      0.3nm,0.2s
KPKS                             eS         Sg         20 30 37.0 -0.2
      40nm,0.4s
KURS  Kuram             2.62 357  Pg        Pb         20 30 00.0 -0.6
      14nm,0.4s
KURS                              Lg        Lg         20 30 35.2
      20nm,0.5s
MTBS  Maitube           2.69 328  Pg        Pb         20 30 00.9 -0.9
      8.7nm,0.3s
MTBS                              Lg        Lg         20 30 36.5
      13nm,0.4s
MTBS  Maitube           2.69 328 eP         Pb         20 30 00.9 -0.9
      8.7nm,0.3s
MTBS                             eS         Sb         20 30 36.5 +1.6
      13nm,0.4s
KST   Kastek            2.82 321  Pg        Pb         20 30 03.4 -0.8
      17nm,0.5s
KST                               Lg        Lg         20 30 40.9
      20nm,0.4s
KST   Kastek            2.82 321 eP         Pb         20 30 03.4 -0.8
      17nm,0.5s
KST                              eS         Sb         20 30 40.9 +2.0
      20nm,0.4s
TKM2  Tokmak 2          2.92 316⇑iP         Pn         20 30 01.3 +1.1
TKM2                            ⇑iS         Sn         20 30 38.0 +2.5
KTMS  Ketmen            2.96  29  Pg        Pb         20 30 06.9 +0.4
      1.0nm,0.3s
KTMS                              Lg        Lg         20 30 46.9
      8.1nm,0.1s
KTMS  Ketmen            2.96  29 eP         Pb         20 30 06.9 +0.4
      1.0nm,0.3s
KTMS                             eS         Sg         20 30 46.9 -1.8
      8.1nm,0.1s
DGS   Degeres           3.07 322  Pg        Pb         20 30 08.0 -0.3
      9.7nm,0.4s
DGS                               Lg        Lg         20 30 49.1
      20nm,0.5s
KBK   Karagaybulak      3.13 306⇓iP         Pn         20 30 03.7 +0.6
KBK                             ⇓iS         Sn         20 30 42.6 +2.0
CHKK  Chushkaly         3.16 341  Pg        Pb         20 30 10.1 +0.4
      17nm,0.6s
CHKK                              Lg        Lg         20 30 52.9
      44nm,0.8s
CHKK  Chushkaly         3.16 341 eP         Pb         20 30 10.2 +0.4
      6.6nm,0.4s
CHKK                             eS         Sg         20 30 52.7 -2.2
      44nm,0.8s
ARLS  Aral              3.21 289⇓iP         Pn         20 30 04.7 +0.5
ARLS                            ⇓iS         Sn         20 30 43.6 +1.0
BLB   Baldybastay       3.23   1  Pg        Pb         20 30 11.0  0.0
      7.4nm,0.3s
BLB                               Lg        Lg         20 30 54.5
      38nm,0.4s
ARXS  Arharly           3.37 353  Pg        Pb         20 30 13.6 +0.2
      4.1nm,0.4s
ARXS                              Lg        Lg         20 30 58.8
      30nm,0.5s
ARXS  Arharly           3.37 353 eP         Pb         20 30 13.6 +0.2
      1.9nm,0.2s
ARXS                             eS         Sg         20 30 58.5 -3.2
      34nm,0.6s
AAK   Ala-Archa         3.40 303 ⇑Pg        Pb         20 30 14.0  0.0
      0.9nm,0.4s
AAK                              ⇑Lg        Lg         20 31 00.2
      5.1nm,0.6s
CHMS  Chumysh           3.44 309⇑eP         Pn         20 30 08.2 +0.9
CHMS                            ⇑iS         Sn         20 30 49.8 +1.6
SALK  Salom-Alik        3.46 272⇑eP         Pn         20 30 07.6  0.0
SALK                            ⇑iS         Sn         20 30 49.2 +0.5
KRBS  Karabastau        3.47 325  Pg        Pb         20 30 14.9 -0.2
      4.0nm,0.2s
KRBS                              Lg        Lg         20 31 01.0
      11nm,0.8s
KNOS  Konyrlen          3.54   9  Pg        Pb         20 30 16.4 +0.1
      2.9nm,0.4s
KNOS                              Lg        Lg         20 31 03.3
      10nm,0.4s
USP   Ospenovka         3.75 311⇑iP         Pn         20 30 12.6 +1.0
USP                             ⇑iS         Sn         20 30 57.6 +1.8
SFK   Sufi-Kurgan       3.82 259⇑iP         Pn         20 30 12.5 -0.1
SFK                             ⇑iS         Sn         20 30 57.4 -0.3
EKS2  Erkin-Say         3.88 299⇑iP         Pn         20 30 14.1 +0.7
EKS2                            ⇑iS         Sn         20 31 00.2 +1.1
MRKS  Merke             4.29 298 eP         Pb         20 30 31.0 +2.0
      3.3nm,0.4s
MRKS                             eS         Sg         20 31 28.1 -3.0
      3.5nm,0.5s
KK31  Karatay Array     6.28 293 ⇓Pg        Pb         20 31 04.5 +1.7
      1.5nm,0.8s,baz=111,slow=16,SNR=4.9
KK31                             ⇑Lg        Lg         20 32 29.7
      0.9nm,0.5s
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IDC 10 20:34:24.9±2.2**, 4°.53S**×**130°.56E, h0**km**, mb3.3**/1**, mbtmp3.5**/4**, ML3.4**/3**, Error ellipse: s-maj=81.8km s-min=30.0km az=75.0, Banda Sea**

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Code  Station Name        Δ°  AZ°    Phase ID              Time      Res
                                   Op        ISC        h  m  s    ISC
FITZ  Fitzroy Crossi   14.31 199   Pn        Pn         20 37 49.6 +0.7
      0.1nm,0.3s,baz=19,slow=12,SNR=1.4
FITZ                               Sn        Sn         20 40 07.2  -21
      0.1nm,0.3s,baz=53,slow=20,SNR=1.2
      1.3nm,0.7s
WRA   Warramunga Arr   15.75 167   Pn        Pn         20 38 09.6 +1.3
      0.1nm,0.3s,baz=347,slow=12,SNR=15
WRA                                Sn        Sn         20 40 48.4  -15
      0.2nm,0.3s,baz=346,slow=20,SNR=5.0
      0.2nm,0.3s
ASAR  Alice Springs    19.30 171   P         P          20 38 50.8 -0.8
      0.4nm,0.3s,baz=347,slow=11,SNR=34
ASAR                               S         Sn         20 42 13.2  -16
      0.3nm,0.7s,baz=354,slow=22,SNR=2.3
      1.7nm,0.5s
MKAR  Makanchi Array   66.49 326   P         P          20 45 16.5 +0.1
      0.2nm,0.6s,baz=125,slow=7.2,SNR=1.9
      0.2nm,0.6s
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*IDC **10** 20:46:17.3±0.9, 39°.41N×27°.99E, h0km, mb3.4/9, mbtmp3.5/16, ML3.6/7, MS3.0/4, Error ellipse: s-maj=13.2km s-min=10.7km az=59.0*
*MCSM **10** 20:46:18.9±0.4, 39°N±4°×2°8E±°, h12km, mb4.4, MLv4.4*
*AFAD **10** 20:46:18.4, 39°.44N×27°.90E, h14km±1km, MW4.0*
*ISK **10** 20:46:18.1, 39°.45N×27°.92E, h9km, ML4.3/27*
*THE **10** 20:46:19.3, 39°N±3°×2°8E±°, h11km, M4.1/17, MLh4.1/17*
ISC 10 20:46:18.9±0.8**, 39°.43N**±0°.02×**27°.91E**±0°.02**, h14**km±5km**, n147, σ0s.99**/185**, mb3.4**/8**, 37C-16D, Turkey**

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Code  Station Name        Δ°  AZ°    Phase ID              Time      Res
                                   Op        ISC        h  m  s    ISC
STEP  BALIKESIR_Sava    0.15 249   P         Pb         20 46 22.8 -0.9
STEP                               S         Sg         20 46 25.6 +0.2
STEP                             i IAML                 20 46 26.0
      comp=N,17µm,0.5s
STEP                             i IAML                 20 46 26.0
      comp=E,14µm,0.4s
BALB  Balikesir         0.21 355   Pg        Pg         20 46 23.4 -0.2
BALB                               Sg        Sg         20 46 26.9 +0.2
BKES  Balkesir-Mer      0.30   3   P         Pg         20 46 24.7 -0.5
BKES                             i IAML                 20 46 29.0
      comp=N,2µm,0.4s
BKES                               S         Sg         20 46 29.4  0.0
BKES                             i IAML                 20 46 32.0
      comp=E,1µm,0.5s
BALY  Balya             0.38 324   P         Pg         20 46 26.4 -0.2
BALY                               S         Sg         20 46 31.9 +0.1
BALY                             i IAML                 20 46 32.0
      comp=E,2µm,0.3s
BALY                             i IAML                 20 46 34.0
      comp=N,2µm,0.6s
SOMA  Soma-Manisa       0.40 226   Pg        Pg         20 46 26.7 -0.2
SOMA                               Sg        Sb         20 46 33.1 -0.6
BLKS  Balkesir-Sus      0.45   6   P         Pg         20 46 27.2 -0.6
BLKS                               S         Sg         20 46 33.4 -0.3
BLKS                             i IAML                 20 46 36.0
      comp=E,5µm,1.0s
BLKS                             i IAML                 20 46 37.0
      comp=N,4µm,0.8s
DURS  Dursunbey         0.47  69   P         Pg         20 46 27.8 -0.5
DURS                             i IAML                 20 46 34.0
      comp=E,10µm,0.3s
DURS                               S         Sg         20 46 34.5 -0.1
DURS                             i IAML                 20 46 35.0
      comp=N,1µm,0.5s
SUSR  Susurluk-Balik    0.55  14   Pg        Pg         20 46 28.9 -0.8
SUSR                               Sg        Sg         20 46 35.8 -1.2
AKHS  Akhisar           0.56 187   P         Pb         20 46 29.5 -0.9
AKHS                             i IAML                 20 46 38.0
      comp=N,3.6nm,0.4s
AKHS                               S         Sb         20 46 38.7 +0.4
AKHS                             i IAML                 20 46 41.0
      comp=E,6µm,0.7s
AKS   Akhisar           0.56 187   Pg        Pg         20 46 29.2 -0.6
AKS                                Sg        Sb         20 46 38.3  0.0
GORD  Gordes-Manisa     0.56 158   Pg        Pb         20 46 29.9 -0.7
GORD                               Sg        Sb         20 46 38.4 -0.1
DST   Dursunbey         0.58  72   Pg        Pg         20 46 29.3 -1.0
DST                                Sg        Sg         20 46 37.7 -0.2
GONE  Gonen-Balikesi    0.64 345   Pg        Pg         20 46 30.9 -0.4
BUHA  Balikesir, Bur    0.65 276   P         Pb         20 46 31.5 -0.5
BUHA                               S         Sb         20 46 40.2 -0.6
BUHA                             i IAML                 20 46 42.0
      comp=E,7µm,0.4s
BUHA                             i IAML                 20 46 46.0
      comp=N,7µm,0.4s
YAYO  Edremit-Balk      0.67 286   Pg        Pg         20 46 31.5 -0.4
YAYO                               Sg        Sg         20 46 40.8  0.0
GOMA  Golmarmara-Man    0.72 179   Pg        Pb         20 46 32.8 -0.5
DEMI  Demirci           0.74 121   P         Pb         20 46 33.4 -0.3
DEMI                               S         Sb         20 46 43.5 -0.1
DEMI                             i IAML                 20 46 47.0
      comp=N,1µm,0.3s
DEMI                             i IAML                 20 46 47.0
      comp=E,1µm,0.4s
ZEDA  zmir-Bergama      0.79 234   P         Pb         20 46 34.5  0.0
ZEDA                               S         Sb         20 46 45.4 +0.3
ZEDA                             i IAML                 20 46 49.0
      comp=N,6µm,0.3s
ZEDA                             i IAML                 20 46 49.0
      comp=E,1µm,0.6s
DKL   Dikili            0.86 245   Pg        Pb         20 46 35.3 -0.2
CANM  Can-anakkale      0.88 312   Pg        Pg         20 46 35.0 -0.9
SIMA  Simav-Kutahya     0.91 112   Pg        Pb         20 46 36.2 -0.3
EDC   Edincik           0.91 358   Pg        Pg         20 46 35.7 -0.9
BAND  Balkesir-Ban      0.93   9   P         Pg         20 46 36.0 -0.9
BAND                               S         Sg         20 46 48.6 -0.6
BAND                             i IAML                 20 46 51.0
      comp=N,7µm,0.3s
BAND                             i IAML                 20 46 51.0
      comp=E,9µm,0.5s
BAND  Balkesir-Ban      0.93   9 ⇑P          Pg         20 46 36.1 -0.8
BAND                             ⇑S          Sg         20 46 49.0 -0.2
AYVA  Ayvalik           0.95 263   P         Pn         20 46 37.8  0.0
AYVA                               S         Sb         20 46 50.3 +0.7
ORLT  Orhaneli          0.98  51   Pg        Pg         20 46 37.1 -0.7
BIGA  Biga-Canakkale    1.03 326   Pg        Pb         20 46 38.1 -0.4
KRBG  Karabiga-Canak    1.07 334   Pg        Pb         20 46 38.3 -0.9
MANT  Manisa            1.07 151   P         Pn         20 46 39.5 -0.2
MANT                               S         Sb         20 46 53.2  0.0
MANT                             i IAML                 20 46 55.0
      comp=N,6µm,0.4s
MANT                             i IAML                 20 46 55.0
      comp=E,1µm,0.4s
KULA  Kula-Manisa       1.09 147   Pn        Pn         20 46 39.5 -0.4
BAYC  CANAKKALE_Bayr 1.09 287      P         Pb         20 46 39.3 -0.3
BAYC                             i IAML                 20 46 56.0
      comp=N,6µm,0.5s
BAYC                             i IAML                 20 46 57.0
      comp=E,9µm,0.4s
SHAP  Saphane-Kutahy    1.10 111   Pn        Pn         20 46 39.9 -0.1
USAK  Uak-Merkez        1.12 129   P         Pn         20 46 40.4 +0.1
USAK                               S         Sn         20 46 55.9 +0.2
USAK                             i IAML                 20 46 57.0
      comp=N,2µm,0.7s
USAK                             i IAML                 20 46 57.0
      comp=E,2µm,0.7s
LAPS  Lapseki, ANA      1.16 315   P         Pb         20 46 40.4 -0.4
LAPS                               S         Sn         20 46 56.4 -0.1
LAPS                             i IAML                 20 46 57.0
      comp=N,4µm,0.8s
LAPS                             i IAML                 20 47 07.0
      comp=E,2µm,0.5s
MRMT  Marmara Adasi     1.19 349   Pn        Pn         20 46 40.8 -0.5
MDNY  Mudanya-Bursa     1.20  38   Pn        Pn         20 46 40.7 -0.6
TVSB  Tavsanli          1.21  89   Pn        Pb         20 46 41.2 -0.4
GEDZ  Gediz             1.23 108   Pn        Pg         20 46 42.1 -0.5
EZNE  Ezine-Canakkal    1.23 286   Pn        Pg         20 46 42.1 -0.5
BLCB  Balcova           1.24 213   P         Pn         20 46 41.6 -0.3
BLCB                               S         Sn         20 46 59.0 +0.5
PRK   Paraskevi         1.28 262   P         Pg         20 46 42.8 -0.8
PRK                                S         Sg         20 46 59.6 -0.6
EZN   Ezine             1.28 288   P         Pn         20 46 42.3 -0.1
EZN                                S         Sg         20 47 00.0 -0.3
EZN   Ezine             1.28 288   Pn        Pn         20 46 42.3 -0.1
LPK   Lapseki           1.29 317   Pn        Pn         20 46 42.6 +0.1
LPK                                Sn        Sb         20 46 53.9 -5.5
COMU  Canakkale         1.29 302   Pn        Pb         20 46 42.8 -0.2
ARMT  Armutlu           1.35  33   Pn        Pn         20 46 43.1 -0.3
RKY   Sarkoy-Tekirda    1.37 336   Pn        Pn         20 46 43.6 -0.1
GELI  Tayfur-Gelibol    1.46 312   Pn        Pn         20 46 45.1 +0.2
BOTS  Marmara Eregli    1.56   2   Pn        Pn         20 46 46.4 +0.2
SIGR  SIGRI             1.61 263   P         Pn         20 46 46.9 +0.1
SIGR                               S         Sb         20 47 07.9 -0.6
GADA  Gvkgeada          1.72 297   P         Pn         20 46 48.7 +0.2
GADA                               S         Sg         20 47 13.4 -0.9
CHOS  Chios island      1.78 235   P         Pn         20 46 48.9 -0.4
CHOS                               S         Sn         20 47 12.1 +0.2
CAVK  Edirne/Enez-Ca    1.83 314 ⇑P          Pn         20 46 51.0 +1.0
CAVK                             ⇑S          Sb         20 47 15.0  0.0
ENEZ  Enez              1.87 315   P         Pn         20 46 50.9 +0.4
ENEZ                               S         Sb         20 47 17.5 +1.4
SMG   Samos             1.91 206   P         Pn         20 46 51.2 +0.1
SMTH  Samothraki Isl    2.10 300   P         Pn         20 46 53.6 -0.1
LIA   Limnos Island     2.15 283   P         Pn         20 46 54.6 +0.3
YER   Yerkesik          2.31 173   P         Pn         20 46 56.4 -0.3
BODT  Bodrum            2.41 191   P         Pn         20 46 58.0  0.0
RDO   Rodhopi           2.49 314   P         Pn         20 46 59.3 +0.3
SAHE  Sakarya_HENDEK    2.67  57 ⇑P          Pn         20 47 02.6 +1.1
KDZ   Kurdzhali         2.94 319   P         Pn         20 47 04.9 -0.3
APE   Apeiranthos       3.01 219 ⇑P          Pn         20 47 07.7 +1.5
KAVA  Kavala            3.03 302   P         Pn         20 47 06.5  0.0
ARG   Arkhangelos       3.21 177   P         Pn         20 47 09.2 +0.2
JMB   Yambol            3.23 342   P         Pn         20 47 09.0 -0.1
RZN   Rozhen            3.31 314   P         Pn         20 47 10.9 +0.5
ANTO  Ankara            3.80  82 ⇑P          Pn         20 47 18.3 +1.2
ANTO  Ankara            3.80  82   P         Pn         20 47 18.2 +1.1
ELND  Elena             3.81 337 ⇓P          Pn         20 47 17.7 +0.4
KARP  Karpathos         3.92 189   P         Pn         20 47 18.4 -0.4
KALB  Balgarevo         3.99   5 ⇓P          Pn         20 47 20.1 +0.5
LOZB  Loznitsa          4.06 346 ⇓P          Pn         20 47 20.8 +0.2
RAZG  Razgrad           4.26 346 ⇓P          Pn         20 47 23.8 +0.4
MANR  Mangalia          4.41   6 ⇑P          Pn         20 47 26.5 +1.1
BR105 Keskin Array S    4.42  84   P         Pn         20 47 26.5 +0.7
BR106 Keskin Array S    4.42  84   P         Pn         20 47 26.2 +0.4
BRTR  Keskin Array B    4.44  84   Pn        Pn         20 47 26.3 +0.3
      3.4nm,0.3s,baz=260,slow=12,SNR=119
BRTR                               Sn        Sn         20 48 17.6  0.0
      3.8nm,0.3s,baz=267,slow=26,SNR=6.5
BRTR                               Lg        Lg         20 48 39.8
      3.0nm,0.3s,baz=259,slow=19,SNR=11
BRTR                               LR        LR         20 49 17.3
      comp=Z,106nm,22.0s,baz=273,slow=41
      14nm,0.5s
BR104 Keskin Array S    4.44  85   P         Pn         20 47 26.6 +0.6
VAY   Valandovo         4.49 297 i Pn        Pn         20 47 28.0 +1.5
VAY                              i Sn        Sg         20 48 41.9 -1.1
PLVB  Pleven            4.66 329 ⇑P          Pn         20 47 29.8 +0.9
KIRS  Kirsehir-Merke    4.67  92 ⇓P          Pn         20 47 30.9 +1.7
ICOR  Ion Corvin        4.68 359 ⇑P          Pn         20 47 29.8 +0.6
MFTR  Murfatlar         4.76   4 ⇓P          Pn         20 47 31.7 +1.6
IDI   Anoyia            4.78 211   Pn        Pn         20 47 30.8 +0.2
      5.3nm,0.5s,baz=27,slow=20,SNR=6.9
IDI                                Sn        Sn         20 48 25.9  0.0
      2.1nm,0.3s,baz=291,slow=18,SNR=1.5
CICN  Ciocanesti        4.81 352 ⇓P          Pn         20 47 31.3 +0.5
SGRR  Singureni         5.00 344 ⇑P          Pn         20 47 34.3 +0.8
TIRR  Tirgusor          5.04   4 ⇑P          Pn         20 47 34.1 +0.1
TIRR  Tirgusor          5.04   4   P         Pn         20 47 33.9 -0.1
      0.2nm58nm,0.7s
LEHL  Lehliu            5.10 351 ⇑P          Pn         20 47 36.0 +1.0
COPA  Copaceanca        5.11 338 ⇓P          Pn         20 47 35.0  0.0
TLBR  Topalu            5.11   1 ⇑P          Pn         20 47 35.1 +0.1
BZK   Bozkurt           5.28  59 ⇑P          Pn         20 47 38.2 +0.8
JURR  Jurilovca         5.38   7 ⇑P          Pn         20 47 38.9 +0.2
CFR   Carcaliu          5.75   2 ⇓P          Pn         20 47 43.7 -0.1
TLCR                    5.79   6 ⇑P          Pn         20 47 45.0 +0.6
NEHR  Nehoiu            6.11 349 ⇑P          Pn         20 47 49.8 +1.0
MLR   Muntele Rosu      6.23 347   Pn        Pn         20 47 51.5 +1.1
      2.8nm,0.3s,baz=167,slow=19,SNR=32
MLR                                Sn        Sn         20 49 02.9 +1.4
      2.4nm,0.3s,baz=193,slow=15,SNR=3.6
MLR                                Lg        Lg         20 49 37.4
      1.9nm,0.3s,baz=141,slow=2.2,SNR=5.2
MLR                                LR        LR         20 50 28.8
      comp=Z,120nm,21.3s,baz=138,slow=40
MLR   Muntele Rosu      6.23 347 ⇑P          Pn         20 47 51.9 +1.4
MLR   Muntele Rosu      6.23 347   P         Pn         20 47 51.6 +1.1
      0.4nm49nm,0.7s
SCTR  Scanteiesti       6.24   1 ⇑P          Pn         20 47 51.8 +1.3
SRE   Strehaia          6.29 328 ⇑P          Pn         20 47 52.0 +0.7
ODBI  Odobesti          6.36 355 ⇓P          Pn         20 47 53.4 +1.3
ARR   Arges             6.41 339 ⇑P          Pn         20 47 53.0 +0.1
VLDR  Vladesti          6.41   1 ⇑P          Pn         20 47 54.9 +2.0
VARL  Varlezi           6.46 360 ⇓P          Pn         20 47 54.8 +1.2
PLOR  Plostina          6.48 352 ⇑P          Pn         20 47 55.5 +1.6
VRI   Vrincioaia        6.49 353 ⇓P          Pn         20 47 55.4 +1.4
VRI   Vrincioaia        6.49 353   P         Pn         20 47 54.7 +0.7
      0.3nm47nm,0.7s
COVR  Voineasa-Covas    6.53 349 ⇑P          Pn         20 47 56.3 +1.7
GHRR                    6.63 357 ⇑P          Pn         20 47 57.9 +1.9
LOT   Lotru             6.75 334 ⇑P          Pn         20 47 58.3 +0.7
TURR  Turia             6.76 349 ⇑P          Pn         20 47 59.2 +1.4
DOPR  Dopca             6.79 345 ⇓P          Pn         20 47 59.1 +0.9
HERR  Herculane         6.80 325 ⇓P          Pn         20 47 58.5 +0.2
BIR   Birlad            6.83 358 ⇑P          Pn         20 47 59.9 +1.2
OZUR                    6.84 348 ⇑P          Pn         20 48 00.3 +1.5
ONER  Baraj Valea Uz    6.99 351 ⇑P          Pn         20 48 02.0 +1.1
MDVR  Moldovita         7.05 321 ⇑P          Pn         20 48 02.2 +0.5
TESR  Tescani           7.14 353 ⇑P          Pn         20 48 03.7 +0.8
TESR  Tescani           7.14 353   P         Pn         20 48 03.2 +0.3
      0.5nm41nm,0.8s
MDB   Medias            7.19 340 ⇑P          Pn         20 48 05.5 +1.9
BZS   Buzias            7.73 325 ⇓P          Pn         20 48 10.9 -0.1
MARR  Marisel-Cluj      8.04 336 ⇑P          Pn         20 48 16.6 +1.2
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DRGR		8.28	334	⇑P	Pn	20 48 19.4	+0.8
BURAR	Bucovina Array	8.41	347	⇓P	Pn	20 48 22.0	+1.6
MMAI	Mount Meron Ar	8.81	134	Pn	Pn	20 48 25.9	-0.1
	3.0nm,0.3s,baz=327,slow=12,SNR=21						
MMAI				Sn	Sn	20 50 04.8	-0.3
	1.0nm,0.3s,baz=218,slow=51,SNR=2.1						
	2.9nm,0.4s						
CEL	Celeste	9.45	267	P	Pn	20 48 34.2	-0.4
	24nm,1.2s						
MORH	Mrgy, Hungar	9.60	318	⇑P	Pn	20 48 37.8	+1.2
MORH	Mrgy, Hungar	9.60	318	P	Pn	20 48 36.9	+0.3
HORU	Horodok	9.84	354	P	Pn	20 48 40.5	+0.6
AK10	Malin Array Si	11.21	4	P	Pn	20 48 58.0	-0.6
AK08	Malin Array Si	11.24	4	P	Pn	20 48 58.6	-0.5
AKASG	Malin Array Be	11.31	4	Pn	Pn	20 48 57.8	-2.1
	0.7nm,0.3s,baz=194,slow=13,SNR=1.6						
AKASG				Sn	Sn	20 51 05.3	-0.8
	0.5nm,0.3s,baz=195,slow=20,SNR=1.5						
AKASG				LR	LR	20 52 49.5	
	comp=Z,99nm,21.3s,baz=218,slow=35						
	0.2nm,0.3s						
EIL	Elat	11.33	147	Pn	Pn	20 48 58.6	-1.9
	0.3nm,0.3s,baz=339,slow=13,SNR=2.4						
EIL				Sn	Sn	20 51 01.5	-5.4
	0.6nm,0.3s,baz=304,slow=14,SNR=4.5						
	1.3nm,0.5s						
AK20	Malin Array Si	11.34	4	P	Pn	20 49 00.7	+0.3
GERES	GERESS Array B	13.86	317	Pn	Pn	20 49 35.6	+0.7
	baz=124,slow=8.4,SNR=1.7						
	0.2nm,0.5s						
DAVOX	Davos/Dischmat	15.06	305	Pn	Pn	20 49 53.1	+1.7
	0.2nm,0.3s,baz=117,slow=16,SNR=1.5						
	0.6nm,0.3s						
FINES	FINESS Array B	22.07	358	P	P	20 51 14.9	+1.8
	1.4nm,0.7s,baz=186,slow=5.2,SNR=6.6						
	1.4nm,0.7s						
HFS	Hagfors	22.57	341	P	P	20 51 19.8	+1.3
	0.9nm,0.6s,baz=166,slow=13,SNR=2.1						
	0.9nm,0.6s						
NOA	NORSAR Array B	23.98	340	P	P	20 51 34.2	+1.4
	2.8nm,1.2s,baz=145,slow=10.0,SNR=2.5						
NOA				LR	LR	21 02 41.1	
	comp=Z,65nm,18.5s,baz=285,slow=41						
	2.8nm,1.2s						
ESDC	Sonseca Array	24.51	281	P	P	20 51 39.2	+1.3
	0.7nm,0.8s,baz=85,slow=10,SNR=4.9						
	0.7nm,0.8s						
TORD	Torodi Ar. Bea	34.93	229	P	P	20 53 12.2	+1.8
	1.0nm,1.0s,baz=31,slow=12,SNR=4.6						
	1.0nm,1.0s						
KURBB	Kurchatov Arra	36.81	55	P	P	20 53 26.3	+0.1
	0.3nm,0.5s,baz=276,slow=8.4,SNR=4.9						
	0.3nm,0.5s						
MKAR	Makanchi Array	39.69	61	P	P	20 53 50.6	0.0
	0.2nm,0.5s,baz=270,slow=8.3,SNR=4.3						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	40.52	50	P	P	20 53 57.1	-0.2
	0.3nm,0.5s,baz=296,slow=11,SNR=1.9						
	0.3nm,0.5s						
SONM	Songino Array	55.14	54	P	P	20 55 50.8	-0.1
	0.2nm,0.5s,baz=282,slow=7.2,SNR=1.5						
	0.2nm,0.5s						

IDC 10 20:55:41.2±2.2**, 5.°23S×152.°86E, h0^{km}, mb3.5**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=145.6km s-min=29.8km az=128.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.21	229	P	P	21 00 49.7	-0.3
	0.6nm,0.4s,baz=55,slow=10.0,SNR=8.6						
	0.6nm,0.4s						
ASAR	Alice Springs	25.88	223	P	P	21 01 15.2	+0.2
	0.3nm,0.5s,baz=58,slow=9.0,SNR=8.7						
	0.3nm,0.5s						
ILAR	Eielson Array	82.53	22	P	P	21 08 05.7	+0.1
	0.3nm,0.6s,baz=257,slow=5.7,SNR=4.3						
	0.3nm,0.6s						

NNC 10 20:59:34.4±9.7**, 38.°83N×69.°64E, h0^{km}, mb4.1, mpv3.6, 3C-2D, Error ellipse: s-maj=70.7km s-min=58.8km az=50.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	Iuzhnay	3.33	5	Pg	Pn	21 00 30.8	+2.9
	37nm,0.2s						
IUG				Lg	Lg	21 01 16.2	
	193nm,0.6s						
BRLS	Borolday	4.20	2	Pg	Pn	21 00 41.9	+2.1
	2.9nm,0.2s						
BRLS				Lg	Lg	21 01 35.4	
	36nm,0.8s						
KK31	Karatay Array	4.32	8	Pn	Pn	21 00 43.7	+2.3
	1.8nm,0.3s,baz=195,slow=14,SNR=53						
KK31				⇑Sn	Sn	21 01 37.6	+5.1
	6.3nm,0.6s						
KK31				⇓Lg	Lg	21 01 53.6	
	9.2nm,0.5s,baz=181,slow=30,SNR=4.8						
EKS2	Erkin-Say	4.95	38	P	Pb	21 00 56.4	-5.7
	SNR=6.1						
UCH	Uchtor	5.03	46	P	Pn	21 00 53.2	+1.7
	SNR=12						
AAK	Ala-Archa	5.30	43	⇑Pn	Pn	21 00 55.3	+0.3
	2.3nm,0.5s						
AAK				⇑Sn	Sn	21 01 57.1	+0.3
	5.2nm,0.8s						
AAK				⇓Lg	Lg	21 02 18.4	
	8.7nm,0.9s						
KBK	Karagaybulak	5.56	45	P	Pn	21 01 01.2	+2.7
	SNR=12						
USP	Ospenovka	5.76	38	P	Pn	21 01 05.6	+4.5
	SNR=7.4						
TKM2	Tokmak 2	6.09	46	P	Pn	21 01 05.2	-0.6
	SNR=36						
KRBS	Karabastau	6.66	41	Pg	Pb	21 01 25.5	-5.6
	1.5nm,0.5s						
KRBS				Lg	Lg	21 02 50.8	
	4.4nm,0.9s						

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*IDC **10** 21:05:54.1±2.4, 43.°49N×105.°31W, h0^{km}, mb4.5/1, mbtmp3.9/4, ML3.6/3, Error ellipse: s-maj=63.9km s-min=8.4km az=152.0*

*NEIC **10** 21:05:55.0±1.0, 43.°72N±0.°09×105.°4W±0.°1, h0^{km}±1^{km}, ML3.4/60, Error ellipse: s-maj=19.2km s-min=10.0km az=40.0*

ISC 10 21:05:55.4±0.9**, 43.°74N**±0.°07×**105.°30W**±0.°07**, h0^{km}, n78, σ0.^{s}95**/77**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.99	67	Pg	Pb	21 06 15.3	-0.2
K22A	Casper	1.41	220		Pn	21 06 20.6	-1.9
K22A				IAML		21 06 44.5	
	505nm,0.3s						
K22A				IAML		21 06 46.6	
	542nm,0.3s						
RLMT	Red Lodge	3.16	297	Pn	Pn	21 06 46.5	0.0
RLMT				IAML		21 07 38.1	
	120nm,0.3s						
RLMT				IAML		21 07 43.7	
	129nm,0.3s						
PD31	Pinedale Array	3.26	254	Pn	Pn	21 06 48.7	+0.8
PDAR	Pinedale Array	3.26	254	Pn	Pn	21 06 48.6	+0.8
	4.0nm,0.3s,baz=70,slow=16,SNR=86						
PDAR				Lg	Lg	21 07 33.6	
	6.4nm,0.3s,baz=68,slow=33,SNR=7.0						
	3.8nm,0.3s						
PDAR	Pinedale Array	3.26	254	Pn	Pn	21 06 48.3	+0.4
BW06	Boulder Array	3.26	254	Pn	Pn	21 06 48.8	+0.9
BW06				IAML		21 07 40.9	
	101nm,0.8s						
HAYD	Hayden	3.53	205	Pn	Pn	21 06 52.9	+1.1
HAYD				IAML		21 08 00.4	
	comp=N,103nm,1.1s						
HAYD				IAML		21 08 31.4	
	comp=E,76nm,1.5s						
YNE	Yellowstone No	3.60	292	Pn	Pn	21 06 53.5	+0.9
YNE				IAML		21 07 51.0	
	comp=E,92nm,0.3s						
YMP	Mirror Lake Pl	3.63	288	Pn	Pn	21 06 53.9	+0.8
OGNE	Ogallala	3.70	138	Pn	Pn	21 06 55.2	+1.3
LKWY	Lake	3.76	284	Pn	Pn	21 06 55.8	+0.9
LKWY				IAML		21 07 18.6	
	comp=E,95nm,0.7s						
LKWY				IAML		21 08 11.2	
	comp=E,64nm,2.5s						
LOHW	Long Hollow	3.85	270	Pn	Pn	21 06 56.2	+0.2
LOHW				IAML		21 08 04.5	
	comp=E,47nm,1.1s						
LOHW				IAML		21 08 04.7	
	comp=E,47nm,1.9s						
H17A	Grant Village	3.86	282	Pn	Pn	21 06 57.7	+1.5
H17A				IAML		21 08 02.3	
	comp=E,53nm,2.0s						
H17A				IAML		21 08 05.3	
	comp=N,65nm,1.4s						
MOOW	Moose Ponds	3.94	272	Pn	Pn	21 06 59.2	+1.9
ISCO	Idaho Springs	3.95	183	Pn	Pn	21 06 58.3	+0.9
ISCO				IAML		21 08 04.0	
	comp=N,41nm,1.2s						
YPP	Pitchstone Pla	4.00	279	Pn	Pn	21 06 58.5	+0.2
YPP				IAML		21 08 16.3	
	comp=E,41nm,1.2s						
YHH	Holmes Hill	4.12	287	Pn	Pn	21 07 00.6	+0.8
FXWY	Fox Creek	4.15	271	Pn	Pn	21 07 00.7	+0.5
YMR	Madison River	4.17	285	Pn	Pn	21 07 01.0	+0.5
O20A	White River Ci	4.22	212	Pn	Pn	21 07 01.6	+0.5
E28A	Huff	4.32	47	Pn	Pn	21 07 04.1	+1.8
YHL	Hebgen Lake	4.36	287	Pn	Pn	21 07 03.2	0.0
YHL				IAML		21 08 24.6	
	comp=N,54nm,1.3s						
RDMU	Red Mountain	4.48	226	Pn	Pn	21 07 06.3	+1.6
RDMU				IAML		21 08 19.3	
	comp=N,58nm,1.2s						
RDMU				IAML		21 08 20.1	
	comp=E,46nm,1.3s						
QLMT	Earthquake Lak	4.53	286	Pn	Pn	21 07 07.5	+2.1
DGMT	Dagmar	4.79	9	Pn	Pn	21 07 10.9	+2.1
BOZ	Bozeman (W)	4.88	295	Pn	Pn	21 07 10.6	+0.5
BOZ				IAML		21 08 29.7	
	comp=E,35nm,1.6s						
BOZ				IAML		21 08 33.7	
	comp=E,37nm,1.2s						
KSCO	Kaye Shedlock'	5.14	156	Pn	Pn	21 07 13.8	+0.2
BSUT	Blindstream Ca	5.17	234	Pn	Pn	21 07 14.4	+0.1
BSUT				IAML		21 08 45.0	
	comp=N,34nm,2.1s						
BSUT				IAML		21 09 03.5	
	comp=E,26nm,2.4s						
DLMT	Dillon	5.46	290	Pn	Pn	21 07 19.7	+1.6
LRM	Limekiln Ridge	5.50	295	Pn	Pn	21 07 19.9	+1.3
P18A	Preston Nutter	5.53	224	Pn	Pn	21 07 19.7	+0.4
CTU	Camp Tracy	5.67	240	Pn	Pn	21 07 21.6	+0.5
MDND	Maddock	5.72	42	Pn	Pn	21 07 21.6	+0.1
SPUT	South Promonto	5.81	248		Pn	21 07 24.3	+1.4
PV22	Blue Mesa, Par	5.83	208	Pn	Pn	21 07 24.2	+1.0
HVU	Hansel Valley	5.84	253	Pn	Pn	21 07 23.4	+0.1
PV07	Paradox Valley	5.87	207	Pn	Pn	21 07 24.7	+0.9
PV21	Cone Mtn., Par	5.87	209	Pn	Pn	21 07 23.8	0.0
P17A	Butcher Ranch,	5.90	226	Pn	Pn	21 07 24.8	+0.7
PV15	Paradox Valley	5.91	205	Pn	Pn	21 07 25.6	+1.2
PV23	Carpenter Ridg	5.98	209	Pn	Pn	21 07 25.3	-0.1
SDCO	Great Sand Dun	5.99	182	Pn	Pn	21 07 27.0	+1.5
PV04	Paradox Valley	6.00	208	Pn	Pn	21 07 26.2	+0.7
PV14	Lion Creek, Pa	6.06	209	Pn	Pn	21 07 26.8	+0.4
PV10	Paradox Valley	6.06	209	Pn	Pn	21 07 27.8	+1.4
PV20	West Nyswonger	6.07	208	Pn	Pn	21 07 26.7	+0.2
SRU	San Rafael Swe	6.07	222	Pn	Pn	21 07 26.1	-0.4
PV11	David Mesa, Pa	6.07	208	Pn	Pn	21 07 27.7	+1.2
PV16	Nyswonger Mesa	6.08	208	Pn	Pn	21 07 27.6	+1.0
PV19	Morning Glory	6.10	208	Pn	Pn	21 07 28.1	+1.1
PV03	Paradox Valley	6.10	207	Pn	Pn	21 07 26.8	-0.2
PV02	Paradox Valley	6.11	206	Pn	Pn	21 07 26.5	-0.6
PV17	East Wray Mesa	6.12	208	Pn	Pn	21 07 27.9	+0.7
PV01	Paradox Valley	6.12	205	Pn	Pn	21 07 28.0	+0.7
PV18	Skein Mesa, Pa	6.13	208	Pn	Pn	21 07 27.3	-0.1
PV13	Radium Mtn., P	6.18	207	Pn	Pn	21 07 28.5	+0.4
TMUT	Trail Mountain	6.27	227	Pn	Pn	21 07 30.2	+0.8
ECSD	EROS Data Cent	6.29	87	Pn	Pn	21 07 30.8	+1.3
PV05	Paradox Valley	6.35	208	Pn	Pn	21 07 30.2	-0.1
BPMT	Black Pine Rid	6.36	298	Pn	Pn	21 07 30.2	-0.4
BGU	Big Grassy Mou	6.38	246	Pn	Pn	21 07 31.0	+0.3
CBKS	Cedar Bluff	6.47	138	Pn	Pn	21 07 31.1	-0.7
Q16A	Castle Valley	6.54	224	Pn	Pn	21 07 33.2	+0.3
DUG	Dugway, Tooele	6.62	240	Pn	Pn	21 07 34.8	+0.7
JTMT	Jette	7.45	306	Pn	Pn	21 07 46.3	+0.9
RTBA	Rita Blanca	7.56	164	Pn	Pn	21 07 47.5	+0.7
ELK	Elko	7.96	251	Pn	Pn	21 07 53.5	+1.0
	comp=E,0.2nm,0.3s,baz=75,slow=12,SNR=2.5						
ELK				Lg	Lg	21 10 01.4	
	comp=E,0.1nm,0.3s,baz=164,slow=19,SNR=3.6						
	comp=E,0.3nm,0.3s						
AGMN	Agassiz Nation	7.99	52	Pn	Pn	21 07 53.4	+0.7
PKCU	Pink Cliffs	8.24	223	Pn	Pn	21 07 55.6	-0.8
PSUT	Pine Spring	8.29	234	Pn	Pn	21 07 56.3	-0.7
I10CA	LAC DU BONNET	9.05	41	I	I	22 04 10.0	
	comp=E,0.1nm,1.1s,baz=221,slow=294,SNR=0.8						
U15A	North Rim	9.05	219	Pn	Pn	21 08 08.2	+0.6
ULM	Lac du Bonnet	9.15	41	Pn	Pn	21 08 08.0	-0.6
	comp=E,3.5nm,0.3s,baz=225,slow=11,SNR=14						
ULM				Lg	Lg	21 10 40.2	
	comp=E,0.6nm,0.3s,baz=120,slow=18,SNR=2.9						
	comp=E,5.6nm,0.3s						
EPLO	Experimental L	9.91	49	Pn	Pn	21 08 17.2	-1.8
EYMN	Ely	10.51	62	Pn	Pn	21 08 26.3	-0.8
FFC	Flin Flon	11.20	10	Pn	Pn	21 08 36.4	-0.3
ARCES	ARCESS Array B	61.42	18	P	P	21 16 12.6	-0.2
	comp=E,6.1nm,1.1s,baz=328,slow=8.5,SNR=1.6						
	comp=E,6.1nm,1.1s						

IGQ 10 21:07:20.4±0.3**, 4°S**±2°×**8°0W**±°**, h44^{km}**±4^{km}**, MLv3.7**/27**, 6C-9D, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMCR	Ecuador-Macara	0.42	157	⇑P	Pn	21 07 31.7	+1.2
AMCR				S	Sn	21 07 40.8	+3.3
MCRA	Macar, Loja	0.42	157	⇓P	Pn	21 07 31.6	+1.1
MCRA				S	Sn	21 07 40.5	+3.0
ARNL	Arenillas	0.43	7	⇑P	Pn	21 07 31.5	+1.0
ARNL				S	Sn	21 07 40.9	+3.4
GONZ	Gonzanam	0.77	110	⇓P	Pn	21 07 35.3	0.0
GONZ				S	Sn	21 07 46.6	+0.6
ACH2	Ecuador-Machal	0.78	24	⇓P	Pn	21 07 35.6	+0.6
ALJ1	Ecuador-Loja-U	0.92	91	⇓P	Pn	21 07 37.2	0.0
ALJ1				S	Sn	21 07 50.1	+0.6
PCRA	Pucara 2	0.98	39	⇑P	Pn	21 07 36.7	-1.5
PCRA				S	Sn	21 07 50.1	-1.1
ISPG	Isla Puna-Puer	1.00	357	⇓P	Pn	21 07 39.7	+1.6
ZUMB	Zumba	1.31	132	⇓P	Pn	21 07 42.8	+0.3
MORR	Playas El Morr	1.34	351	⇓P	Pn	21 07 43.0	+0.2
APLA	Playas - Guaya	1.36	349	P	Pn	21 07 43.0	+0.1
GYE1	Ecuador-Trinit	1.73	7	P	Pn	21 07 47.5	-0.5
COHC	Cochancay	1.73	30	⇓P	Pn	21 07 47.4	-0.7
AZOG	Ecuador-Azogue	1.76	46	P	Pn	21 07 48.2	-0.5
MILO	Milagro-Astudi	1.78	19	⇑P	Pn	21 07 49.0	+0.3
AC07	Ecuador-Guayaq	1.82	4	P	Pn	21 07 48.7	-0.6
BOSC	San Juan Bosco	1.82	63	P	Pn	21 07 49.0	-0.4
ALIBE	La Libertad	1.87	337	P	Pn	21 07 49.6	-0.4
AGUAY	Guayaquil	1.92	5	P	Pn	21 07 49.1	-1.5
SALI	Salinas	1.98	334	⇑P	Pn	21 07 51.4	-0.1
PPLP	Puerto Lpez	2.50	345	P	Pn	21 07 58.4	-0.3
JSCH	Cashca Tororas	2.52	27	P	Pn	21 07 59.8	+0.5
JIPI	JIPIJAPA	2.63	350	P	Pn	21 07 59.2	-1.3
ARIO	Riobamba	2.71	32	P	Pn	21 08 07.6	+5.7
TAMH	Tambohuasha Ch	2.77	29	P	Pn	21 08 01.7	-1.0
CHSH	Refugio Sur-Vo	2.77	27	P	Pn	21 08 03.0	+0.1
ISPT	Isla de la Pla	2.86	341	⇓P	Pn	21 08 03.0	-0.6
IGUA	Igualata	2.88	31	P	Pn	21 08 03.6	-0.8
BMAS	Trigal station	2.96	34	⇑P	Pn	21 08 03.0	-2.2
BPAT	Tungurahua Vol	2.98	35	P	Pn	21 08 05.3	-0.4
JUI6	Juive	3.03	33	P	Pn	21 08 05.9	-0.2
PIS1	Pisayambo	3.38	31	P	Pn	21 08 12.3	+1.2
ILLI	Illinizas Sur	3.53	23	P	Pn	21 08 13.6	+0.4
VCES	Cotopaxi	3.60	29	P	Pn	21 08 15.0	+0.8
SLOR	San Lorenzo -	3.61	27	P	Pn	21 08 12.3	-2.0
BVC2	Cotopaxi Volca	3.71	27	P	Pn	21 08 19.2	+3.4
VC1	Cotopaxi 1	3.73	27	P	Pn	21 08 18.8	+2.8
PITA	Cotopaxi Volc	3.79	26	P	Pn	21 08 21.4	+4.6
ANTS	Antisana-Sarah	3.97	29	P	Pn	21 08 18.8	-0.5
ANTI	Antisana	4.02	29	P	Pn	21 08 20.4	+0.4
GGPT	Toaza - Volcan	4.02	22	P	Pn	21 08 20.2	+0.3
JUA2	San Juan 2	4.03	22	P	Pn	21 08 20.2	+0.1
GGPC	Guagua Pichinc	4.07	22	P	Pn	21 08 20.9	+0.2
TERV	Terraza Guagua	4.07	22	P	Pn	21 08 20.2	-0.5
PINO	Pino	4.08	22	P	Pn	21 08 21.3	+0.3
YANA	Yana	4.13	22	P	Pn	21 08 21.8	+0.3
PAC1	Pacto, Paraso	4.42	18	P	Pn	21 08 23.4	-1.8
CAYR	Refugio Cayamb	4.50	28	P	Pn	21 08 25.2	-1.5
OTAV	Otavalo	4.51	22	P	Pn	21 08 26.3	-0.3
ANGU	Angureal	4.52	28	P	Pn	21 08 26.9	0.0
COTA	Cotacachi	4.64	23	P	Pn	21 08 28.5	0.0
URCU	Urcuqui	4.77	23	P	Pn	21 08 32.3	+2.1

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*IDC **10** 21:08:21.2±0.6, 9.°98S×160.°34E, h0^{km}, mb4.4/20, mbtmp4.4/21, ML2.0/1, MS3.7/12, Error ellipse: s-maj=23.5km s-min=14.7km az=102.0*

*NOU **10** 21:08:23.8, 10.°25S×160.°34E, h0^{km}, MLv4.8/6, Solomon Islands*

*NEIC **10** 21:08:25.4±1.3, 10.°0S±0.°1×160.°3E±0.°1, h22^{km}±5^{km}, mb4.8/39, Error ellipse: s-maj=17.4km s-min=14.6km az=60.0*

ISC 10 21:08:26.7±0.4**, 10.°11S**±0.°06×**160.°27E**±0.°07**, h35^{km}, n86, σ1.^{s}07**/76**, mb4.6**/36**, MS3.7**/12**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAVO	Savo Central	1.05	335	P	Pn	21 08 46.2	+1.2
ALEG	Aligegeo Malai	1.41	17	P	Pn	21 08 53.6	+3.8
NGOA	Tingoa Renbel	1.45	188	P	Pn	21 08 49.2	-1.3
HURO	Huro Makira	1.65	103	P	Pn	21 08 51.7	-1.4
TATA	Tatamba Isabel	1.77	345	P	Pn	21 08 58.2	+3.4
LUES	Luesalemba Tem	5.58	96	P	Pn	21 09 49.2	+2.0
	63nm,1.1s						
SANVU	Saraoutou	8.60	129		Pn	21 10 27.7	-0.9
PMG	Port Moresby	12.94	272	Pn	Pn	21 11 29.0	+0.8
	0.3nm,0.3s,baz=90,slow=20,SNR=5.5						
PMG				LR	LR	21 16 17.3	
	comp=Z,618nm,19.2s,baz=132,slow=37						
	2.3nm,0.3s						
PMG	Port Moresby	12.94	272	P	P	21 11 35.1	-3.2
	21nm,1.1s						
DZM	Mont Dzumac	13.29	154	Pn	Pn	21 11 33.7	+0.7
CTA	Charters Tower	16.77	232	LR	LR	21 18 34.4	
	comp=Z,9.5nm,18.9s,baz=43,slow=36						
CTAO	Charters Tower	16.77	232		Pn	21 12 20.5	+1.5
CTAO				IAmb	IAmb	21 12 26.1	
	comp=Z,42nm,1.0s						
COEN	Coen	17.15	255		P	21 12 25.2	+0.1
EIDS	Eidsvold	17.51	209		P	21 12 31.1	+2.1
INKA	Innaminka	25.40	224	P	P	21 13 52.1	+1.1
INKA				IAmb	IAmb	21 13 53.9	
	comp=Z,15nm,0.6s						
WB0	Warramunga Arr	26.75	246	P	P	21 14 03.7	+0.4
WB0				IAmb	IAmb	21 14 04.7	
	comp=Z,22nm,1.1s						
WRAB	Tennant Creek	26.84	246	P	P	21 14 03.9	-0.2
WRAB				IAmb	IAmb	21 14 05.5	
	comp=Z,13nm,1.1s						
WRA	Warramunga Arr	26.85	246	P	P	21 14 04.6	+0.4
	comp=Z,11nm,0.9s,baz=72,slow=9.2,SNR=41						
	comp=Z,11nm,0.9s						
WRA	Warramunga Arr	26.85	246	P	P	21 14 03.5	-0.7
STKA	Stephens Creek	27.72	216	P	P	21 14 12.5	+0.7
	comp=Z,3.3nm,0.5s,baz=50,slow=13,SNR=7.2						
STKA				LR	LR	21 25 17.5	
	comp=Z,123nm,19.4s,baz=35,slow=36						
	comp=Z,3.3nm,0.5s						
STKA	Stephens Creek	27.72	216	P	P	21 14 12.7	+0.9
STKA				IAmb	IAmb	21 14 52.4	
	comp=Z,43nm,1.2s						
GUMO	Guam	28.07	327	LR	LR	21 24 11.8	
	comp=Z,69nm,21.8s,baz=161,slow=34						
AS31	Alice Springs	28.54	238	P	P	21 14 18.6	-0.7
ASAR	Alice Springs	28.54	238	P	P	21 14 18.9	-0.4
	comp=Z,2.4nm,0.6s,baz=61,slow=10,SNR=45						
ASAR				PcP	PcP	21 17 30.9	+0.4
	comp=Z,1.2nm,0.7s,baz=62,slow=2.3,SNR=5.5						
ASAR				LR	LR	21 25 21.6	
	comp=Z,216nm,18.7s,baz=55,slow=36						
	comp=Z,2.4nm,0.6s						
ASAR	Alice Springs	28.54	238	P	P	21 14 18.5	-0.9
KNRA	Kununurra	31.19	256	P	P	21 14 43.2	+0.4
KNRA				IAmb	IAmb	21 14 43.9	
	comp=Z,20nm,0.7s						
BBOO	Buckleboo	31.76	221	P	P	21 14 47.7	0.0
BBOO				IAmb	IAmb	21 14 58.5	
	comp=Z,19nm,1.1s						
FITZ	Fitzroy Crossi	34.47	253	LR	LR	21 29 20.6	
	comp=Z,125nm,19.2s,baz=28,slow=36						
FITZ	Fitzroy Crossi	34.47	253	P	P	21 15 10.5	-0.9
SANI	Sanana	34.99	281	P	P	21 15 06.3	-10
	comp=Z,8.2nm,1.2s						
PSA00	Pilbara Seismi	40.41	249	P	P	21 16 02.2	+0.4
MBWA	Marble Bar	40.44	249	P	P	21 16 01.7	-0.4
MBWA				IAmb	IAmb	21 16 03.5	
	comp=Z,21nm,1.0s						
JCJ	Chichijima	40.93	335	LR	LR	21 32 05.5	
	comp=Z,70nm,19.3s,baz=170,slow=35						
NWAO	Narrogin (SRO)	45.60	233	LR	LR	21 36 22.5	
	comp=Z,250nm,18.1s,baz=304,slow=37						
PPT	Papeete	49.14	104	LR	LR	21 34 45.2	
	comp=Z,59nm,18.9s,baz=151,slow=32						
MJAR	Matsushiro Arr	50.83	337	P	P	21 17 22.5	-1.4
	comp=Z,1.0nm,0.5s,baz=169,slow=7.7,SNR=5.9						
	comp=Z,1.0nm,0.5s						
MJAR	Matsushiro Arr	50.83	337	P	P	21 17 22.8	-1.1
MAJO	Matsushiro	50.84	337	P	P	21 17 22.7	-1.2
MAJO				IAmb	IAmb	21 17 51.2	
	comp=Z,8.0nm,1.1s						
MJB9	Matsu-Tunnel	50.84	337	P	P	21 17 23.3	-0.7
MJB9				IAmb	IAmb	21 17 52.2	
	comp=Z,7.8nm,1.1s						
KSRS	Korea Array	56.19	329	P	P	21 18 02.8	-0.4
	comp=Z,1.4nm,0.7s,baz=138,slow=9.7,SNR=4.4						
KSRS				LR	LR	21 40 40.0	
	comp=Z,10µm,19.9s,baz=205,slow=34						
	comp=Z,1.4nm,0.7s						
JKA	Kamikawa-asahi	56.30	345	P	P	21 18 04.3	+0.5
JKA				IAmb	IAmb	21 18 05.4	
	comp=Z,31nm,1.4s						
ASAJ	Asahikawa	56.30	345	LR	LR	21 40 37.2	
	comp=Z,37nm,20.4s,baz=254,slow=34						
USRK	Ussuriysk Ar.	59.83	337	P	P	21 18 27.7	-0.8
	comp=Z,4.8nm,0.8s,baz=75,slow=6.7,SNR=5.2						
	comp=Z,4.8nm,0.8s						
PETK	Petropavlovsk-	63.00	358	P	P	21 18 47.1	-2.7
	comp=Z,4.6nm,0.9s,baz=170,slow=5.8,SNR=5.0						
	comp=Z,4.6nm,0.9s						
PETK	Petropavlovsk-	63.00	358	P	P	21 18 49.4	-0.4
CMAR	Chiang Mai Arr	66.82	295	P	P	21 19 16.3	+0.9
	comp=Z,1.0nm,0.5s,baz=121,slow=4.8,SNR=9.9						
	comp=Z,1.0nm,0.5s						
CMAR	Chiang Mai Arr	66.82	295	P	P	21 19 15.7	+0.3
VNDA	Vanda	67.40	180	P	P	21 19 19.3	+1.2
	comp=Z,2.8nm,0.8s,baz=332,slow=6.0,SNR=14						
VNDA				LR	LR	21 44 20.8	
	comp=Z,54nm,19.7s,baz=275,slow=32						
	comp=Z,2.8nm,0.8s						
VNDA	Vanda	67.40	180	P	P	21 19 18.8	+0.8
FALS	False Pass	71.55	21	P	P	21 19 43.2	-0.7
SEY	Seymchan	73.07	356	P	P	21 19 52.6	-0.2
	comp=Z,3.7nm,0.8s,baz=141,slow=4.6,SNR=7.3						
	comp=Z,3.7nm,0.8s						
SONM	Songino Array	74.79	326	P	P	21 20 04.0	+0.5
	comp=Z,2.8nm,0.7s,baz=142,slow=5.7,SNR=23						
	comp=Z,2.8nm,0.7s						
SONM	Songino Array	74.79	326	P	P	21 20 03.9	+0.5
O14K	Tigyukauivet M	75.73	19	P	P	21 20 08.5	+0.1
ACHA	Angle Creek He	77.03	22	P	P	21 20 15.2	-0.7
ACHA				IAmb	IAmb	21 20 36.7	
	comp=Z,13nm,1.1s						
KDAK	Kodiak Island	77.79	24	LR	LR	21 51 04.8	
	comp=Z,79nm,20.7s,baz=204,slow=33						
CNPM	China Poot	79.48	23	P	P	21 20 29.9	+0.5
QSPA	South Pole Qui	79.89	180	P	P	21 20 32.3	+0.6
	comp=Z,4.8nm,0.7s,baz=349,slow=0.9,SNR=16						
	comp=Z,4.8nm,0.7s						
QSPA	South Pole Qui	79.89	180	P	P	21 20 33.0	+1.3
QSPA				IAmb	IAmb	21 20 33.2	
	comp=Z,5.1nm,0.8s						
RDOG	Red Dog Mine	82.26	13	P	P	21 20 44.1	+0.1
GLB	Gilahina Butte	83.55	24	P	P	21 20 50.4	-0.6
TABL	Table Mountain	84.08	25	P	P	21 20 54.1	+0.3
CTGM	Chitina Glacie	84.29	25	P	P	21 20 54.9	+0.1
CTGM				IAmb	IAmb	21 21 04.4	
	comp=Z,12nm,1.0s						
ILAR	Eielson Array	84.41	20	P	P	21 20 54.3	-0.8

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         comp=Z,4.4nm,0.5s,baz=257,slow=5.1,SNR=2.5
         comp=Z,4.4nm,0.5s
ILAR  Eielson Array     84.41  20  P      P      21 20 53.7 -1.4
M27K  Edge Creek, AK    84.83  23  P      P      21 20 58.0 +0.5
M27K                               IAmb   IAmb   21 21 23.6
         comp=Z,7.6nm,1.0s
D22K  Ayikyak River     85.37  15  P      P      21 21 00.7 +0.8
L29M  L29M              86.69  24  P      P      21 21 07.6 +1.0
L29M                               IAmb   IAmb   21 21 08.2
         comp=Z,10nm,0.8s
N31M  Braeburn, Yuko    86.87  26  P      P      21 21 07.8 +0.3
M30M  Minto, Yukon      86.97  24  P      P      21 21 07.9  0.0
M30M                               IAmb   IAmb   21 21 36.8
         comp=Z,12nm,1.5s
J29N  Klondike Camp     87.33  22  P      P      21 21 10.5 +0.8
MKAR  Makanchi Array    89.19 318  P      P      21 21 18.4 -0.5
         comp=Z,1.8nm,0.8s,baz=103,slow=5.4,SNR=11
         comp=Z,1.8nm,0.8s
MKAR  Makanchi Array    89.19 318  P      P      21 21 18.6 -0.2
PFO   Pinyon Flats O    89.99  56  LR     LR     21 53 22.5
         comp=Z,53nm,20.4s,baz=260,slow=30
INK   Inuvik            90.81  20  P      P      21 21 25.4 -0.5
         comp=Z,0.8nm,0.4s,baz=284,slow=6.7,SNR=4.6
         comp=Z,0.8nm,0.4s
INK   Inuvik            90.81  20  P      P      21 21 25.0 -0.9
INK                                IAmb   IAmb   21 21 41.3
         comp=Z,4.1nm,1.4s
F10A  Beach Ranch, E    92.02  44  P      P      21 21 32.5 +0.3
F10A                               IAmb   IAmb   21 21 33.3
         comp=Z,4.0nm,0.8s
KURBB Kurchatov Arra    92.54 321  P      P      21 21 32.7 -1.6
         comp=Z,0.7nm,0.8s,baz=90,slow=6.5,SNR=4.6
         comp=Z,0.7nm,0.8s
YKA   Yellowknife Ar    96.64  28  P      P      21 21 51.5 -1.3
         comp=Z,1.4nm,0.8s,baz=263,slow=5.3,SNR=23
         comp=Z,1.4nm,0.8s
YKA   Yellowknife Ar    96.64  28  P      P      21 21 51.2 -1.6
PDAR  Pinedale Array    96.90  48  P      P      21 21 55.5 +0.7
         comp=Z,1.0nm,0.9s,baz=236,slow=1.6,SNR=6.3
         comp=Z,1.0nm,0.9s
SNAA  Sanae             97.63 185  P      P      21 21 57.6 +0.2
         comp=Z,1.2nm,0.7s,baz=247,slow=3.4,SNR=5.4
         comp=Z,1.2nm,0.7s
SNAA  Sanae             97.63 185  P      P      21 21 57.8 +0.5
SNAA                               IAmb   IAmb   21 22 37.2
         comp=Z,7.8nm,1.5s
BVAR  Borovoye Array    97.92 322  P      P      21 21 58.0 -0.9
         comp=Z,0.2nm,0.5s,baz=94,slow=5.8,SNR=2.3
         comp=Z,0.2nm,0.5s
ESDC  Sonseca Array    147.38 337  PKPbc  PKPbc  21 28 06.5 -0.6
         comp=Z,0.2nm,0.4s,baz=22,slow=3.5,SNR=4.3
ESDC  Sonseca Array    147.38 337         PKPbc  21 28 06.2 -1.0
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*MEX **10** 21:13:04.1±0.6, 30.°72N×114.°33W, h10^{km}±14^{km}, MD4.2*
*ECX **10** 21:13:04.3±0.5, 30.°82N×114.°19W, h15^{km}±5^{km}, ML3.6*
ISC 10 21:13:02.7±1.2**, 30.°83N**±0.°04×**114.°22W**±0.°03**,**
h11^{km}±10^{km}**, n18,** σ**1^{s}00**/31**, 2C-2D, Gulf of California**

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Code  Station Name       Δ°   AZ°    Phase ID        Time      Res
                                   Op     ISC      h  m  s    ISC
SFX   San Felipe         0.58 291⇑iP     Pb       21 13 15.1 +0.2
SFX                              eS      Sb       21 13 23.9 +0.8
SFX                               IAML            21 13 24.8
         comp=N,3μm,0.6s
SFX                               IAML            21 13 32.0
         comp=E,2μm,0.4s
SFX   San Felipe         0.58 291 eP     Pb       21 13 14.9  0.0
SFX                              eS      Sb       21 13 24.0 +0.8
PPXB  Puerto Peasco      0.71  45⇑iP     Pg       21 13 16.8 +0.2
PPXB                             eS      Sg       21 13 26.2 +0.2
PPXB                              IAML            21 13 35.0
         comp=E,3μm,0.7s
PPXB                              IAML            21 13 35.0
         comp=N,3μm,0.6s
ECBX  El Chinero         0.96 312⇓eP     Pg       21 13 21.6 +0.3
ECBX                             eS      Sb       21 13 35.1 +1.1
ECBX                              IAML            21 13 44.4
         comp=N,778nm,0.8s
ECBX                              IAML            21 13 44.7
         comp=E,1μm,0.6s
PIX   Pinacate           0.98  42⇓eP     Pg       21 13 21.1 -0.5
SLGB  San Luis Gonza     1.01 189 eP     Pg       21 13 21.8 -0.3
SPIG  San Pedro Mart     1.09 282 eP     Pg       21 13 23.6 -0.2
SPIG                             eS      Sn       21 13 39.6 +0.1
SPIG  San Pedro Mart     1.09 282 eP     Pg       21 13 23.4 -0.4
SPIG                             eS      Sg       21 13 37.1 -1.0
SQX   San Quintin        1.45 260 eP     Pn       21 13 28.9 +0.1
SQX                              eS      Sb       21 13 48.4 +0.3
PLIB  Puerto Liberta     1.60 124 eP     Pn       21 13 31.4 +0.5
LAPR  La Primavera       1.67 101 eP     Pn       21 13 32.6 +0.7
LAPR                              IAML            21 14 13.4
         comp=E,614nm,0.7s
LAPR                              IAML            21 14 23.6
         comp=N,718nm,0.8s
MBIG  Mexicali           1.78 332 eP     Pn       21 13 32.8 -0.6
CBX   Cerro Bola         2.56 306 eP     Pn       21 13 43.8 -0.5
CBX                              eS      Sn       21 14 14.3 -1.1
TJIG  Tijuana            2.64 308 eP     Pn       21 13 47.3 +2.1
TJIG                             eS      Sn       21 14 16.2 -1.0
TUC   Tucson             3.28  62 eP     Pn       21 13 55.2 +1.0
TUC                              eS      Sn       21 14 32.5 -0.8
HSIG                     3.36 122 eP     Pn       21 13 56.6 +1.4
HSIG                             eS      Sn       21 14 35.6 +0.5
NZIG  Nacozari, Sono     4.05  95 eP     Pn       21 14 06.1 +1.4
NZIG                             eS      Sn       21 14 49.9 -2.3
CGIG                     5.40  93 eP     Pn       21 14 21.7 -1.6
CGIG                             eS      Sn       21 15 24.8 -0.9
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*BJI **10** 21:58:24.9, 35.°37N×26.°04E, h62^{km}, mB5.2/37, mb5.0/75, Ms4.9/53, Ms7 4.6/55*
*NAO **10** 21:58:25.4, 35.°08N×24.°47E, h33^{km}, MB4.8*
*ISK **10** 21:58:26.7, 35.°34N×26.°52E, h87^{km}, ML5.3/28*
*PDG **10** 21:58:26.0±0.6, 35.°40N×25.°83E, h53^{km}±1^{km}, Error ellipse: s-maj=58.7km s-min=72.9km az=0.0*
*HLW **10** 21:58:26.2, 35.°24N×26.°71E, h63^{km}±19^{km}, Ml5.2*
*AFAD **10** 21:58:27.8, 35.°36N×26.°80E, h23^{km}±3^{km}, MW5.1*
*GII **10** 21:58:27.2±0.0, 34.°985N±0.°004×26.°689E±0.°001, h60^{km}, Mws5.3, confirmed*
*MCSM **10** 21:58:27.6±0.9, 35°N±10°×2°6E±°, h43^{km}±14^{km}, mb5.3, mB5.4, MLv5.1, Mw(mB)4.9*
*NEIC **10** 21:58:28.7, 35.°50N×26.°41E, h46^{km}*
*GFZ **10** 21:58:28.4, 35.°31N×26.°51E, h71^{km}, MW5.3, Moment Tensor Solution. s103 Moment tensor: M_{rr}0.35; $M_{\theta\theta}$0.90; $M_{\phi\phi}$-1.25; $M_{r\theta}$0.49; $M_{\theta\phi}$0.00; $M_{\phi r}$0.04; Fault plane solution: NP1:ϕ_s139.00000°, δ68.00000°, λ21.00000°. NP2:ϕ_s41.00000°, δ70.00000°, λ156.00000°. Principal axes: T 1.1900, Plg30.0000°, Azm359.0000°; N 0.0600, Plg60.0000°, Azm183.0000°; P -1.2500, Plg2.0000°, Azm90.0000°;*
*NEIC **10** 21:58:28.9, 35.°51N×26.°45E, h58^{km}*
*NEIC **10** 21:58:28.9±1.7, 35.°50N±0.°07×26.°45E±0.°05, h58^{km}±4^{km}, mb5.4/453, Mwr5.4/18, Mww5.4/21, Error ellipse: s-maj=11.0km s-min=5.4km az=169.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.01; $M_{\theta\theta}$1.49; $M_{\phi\phi}$-1.48; $M_{r\theta}$-0.84; $M_{\theta\phi}$-0.05; $M_{\phi r}$-0.29; Fault plane solution: $M_0$1.73000×10^{17} NP1:ϕ_s224.94000°, δ82.41000°, λ153.06000°. NP2:ϕ_s318.78000°, δ63.32000°, λ8.50000°. Principal axes: T 1.8676, Plg24.0000°, Azm179.0000°; N -0.3158, Plg62.0000°, Azm30.0000°; P -1.5517, Plg13.0000°, Azm275.0000°;*
*NEIC **10** 21:58:28.7, 35.°30N×26.°29E, h46^{km}, Moment Tensor Solution. Duration: 2^{s}6 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.22; $M_{\theta\theta}$1.77; $M_{\phi\phi}$-1.55; $M_{r\theta}$0.49; $M_{\theta\phi}$-0.26; $M_{\phi r}$-0.02; Fault plane solution: $M_0$1.76000×10^{17} NP1: ϕ_s140.28000°, δ80.14000°, λ8.63000°. NP2:ϕ_s48.79000°, δ81.50000°, λ170.03000°. Principal axes: T 1.9046, Plg13.0000°, Azm4.0000°; N -0.3331, Plg77.0000°, Azm189.0000°; P -1.5715, Plg1.0000°, Azm95.0000°;*
*GCMT **10** 21:58:28.9±0.1, 35.°33N±0.°01×26.°51E±0.°01, h84^{km}±1^{km}, MW5.4/116, Moment Tensor Solution. s116,c187; s103,c156; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}0.26±.02; $M_{\theta\theta}$1.54±.03; $M_{\phi\phi}$-1.80±.03; $M_{r\theta}$0.65±.02; $M_{\theta\phi}$-0.06±.03; $M_{\phi r}$0.16±.03; Best double couple: $M_0$1.81400×10^{17} NP1:ϕ_s138.00000°, δ70.00000°, λ13.00000°. NP2:ϕ_s44.00000°, δ78.00000°, λ160.00000°. Principal axes: T 1.8110, Plg23.0000°, Azm360.0000°; N 0.0080, Plg67.0000°, Azm194.0000°; P -1.8170, Plg5.0000°, Azm92.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MED_RC **10** 21:58:29.0±0.3, 35.°35N×26.°48E, h52^{km}±2^{km}, MW5.4/35, Moment Tensor Solution. Body waves: s5,c5;Mantle waves: s35,c46; Duration: 1^{s}8 Moment tensor: Scale 10^{17}Nm; M_{rr}0.33±.06; $M_{\theta\theta}$1.40±.04; $M_{\phi\phi}$-1.73±.06; $M_{r\theta}$0.51±.04; $M_{\theta\phi}$-0.08±.06; $M_{\phi r}$0.20±.06; Best double couple: $M_0$1.68000×10^{17} NP1:ϕ_s138.00000°, δ70.00000°, λ12.00000°. NP2:ϕ_s44.00000°, δ79.00000°, λ160.00000°. Principal axes: T 1.6000, Plg22.0000°, Azm0.0000°; N 0.1500, Plg67.0000°, Azm197.0000°; P -1.7500, Plg6.0000°, Azm92.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=40s.*
*MOS **10** 21:58:29.2±1.0, 35.°47N×26.°48E, h78^{km}, mb5.5/47, MS4.4/8 Error ellipse: s-maj=4.8km s-min=2.6km az=85.7*
*THE **10** 21:58:29.7, 35°N±3°×2°6E±°, h54^{km}±6^{km}, M5.3/36, mb5.7/9, MLh5.3/36, MwMwp5.1/5, Mwp5.3/5*
*IDC **10** 21:58:30.5±0.7, 35.°59N×26.°40E, h70^{km}±5^{km}, mb4.9/32, mbtmp5.2/42, MS4.4/70, Error ellipse: s-maj=9.5km s-min=6.2km az=148.0*
*ATH **10** 21:58:30.0, 35.°39N×26.°50E, h33^{km}, Mw5.4, Moment Tensor Solution. s6 Moment tensor: M_{rr}0.01; $M_{\theta\theta}$1.42; $M_{\phi\phi}$-1.44; $M_{r\theta}$0.66; $M_{\theta\phi}$-0.18; $M_{\phi r}$0.33; Fault plane solution: NP1:ϕ_s140.00000°, δ64.00000°, λ5.00000°. NP2:ϕ_s48.00000°, δ85.00000°, λ154.00000°.*
ISC 10 21:58:28.3±0.2**, 35.°36N**±0.°03×**26.°51E**±0.°02**, h60**^{km}±1^{km}**,**
h61^{km}**:pP-P, n1647,** σ**1^{s}70**/1641**, mb5.4**/360**, 96C-80D,**
Crete

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Code  Station Name       Δ°   AZ°    Phase ID        Time      Res
                                   Op     ISC      h  m  s    ISC
ZKR   Zakros             0.34 225  P      Pn      21 58 38.8 +0.1
ZKR   Zakros             0.34 225  Pg     Pn      21 58 38.8 +0.1
ZKR   Zakros             0.34 225  P      Pn      21 58 38.8 +0.1
ZKR                                S      Sn      21 58 44.0 -2.3
KARP  Karpathos          0.56  70  P      Pn      21 58 41.8 +0.8
KARP                               S      Sn      21 58 51.3 +1.0
KARP  Karpathos          0.56  70  Pn     Pn      21 58 41.6 +0.6
KARP                               Sn     Sn      21 58 51.5 +1.2
KARP  Karpathos          0.56  70  Pg     Pn      21 58 41.8 +0.8
KARP                               Sg     Sn      21 58 53.0 +2.7
KARP  Karpathos          0.56  70 eP      Pn      21 58 40.9 -0.1
KARP  Karpathos          0.56  70  P      Pn      21 58 40.4 -0.6
KARP  Karpathos          0.56  70  P      Pn      21 58 41.9 +0.9
KARP                               S      Sn      21 58 49.5 -0.7
NPS   Neapolis           0.74 263  P      Pn      21 58 44.0 +1.0
NPS                                S      Sn      21 58 55.1 +1.3
NPS   Neapolis           0.74 263  P      Pn      21 58 44.2 +1.2
NPS                                S      Sn      21 58 53.1 -0.7
IACM  Heraklion          1.18 268  P      Pn      21 58 49.5 +0.9
IACM                               S      Sn      21 59 06.5 +2.8
IACM  Heraklion          1.18 268  P      Pn      21 58 50.4 +1.8
IACM                               S      Sn      21 59 04.2 +0.4
ASTA  Astypalaia         1.19 354  P      Pn      21 58 49.2 +0.4
THERA Ancient Thera,     1.31 320  P      Pn      21 58 51.3 +0.8
THERA                              S      Sn      21 59 07.3 +0.3
THERA Ancient Thera,     1.31 320  P      Pn      21 58 51.7 +1.2
THERA                              S      Sn      21 59 06.4 -0.6
IDI   Anoyia             1.32 267  S      Sn      21 59 07.6 +0.1
IDI                                P      Pn      21 58 51.7 +1.1
IDI   Anoyia             1.32 267  P      Pn      21 58 52.5 +1.9
      12μm,0.5s,baz=52,slow=4.0,SNR=1637
IDI                                S      Sn      21 59 09.4 +1.9
      28μm,0.7s,baz=331,slow=22,SNR=14
IDI   Anoyia             1.32 267  P      Pn      21 58 51.5 +0.9
IDI                                S      Sn      21 59 08.6 +1.1
IDI   Anoyia             1.32 267  Pn     Pn      21 58 51.4 +0.7
IDI                                Sn     Sn      21 59 07.9 +0.5
IDI   Anoyia             1.32 267  Pn     Pn      21 58 51.6 +0.9
IDI                                Sn     Sn      21 59 09.4 +1.9
IDI   Anoyia             1.32 267  P      Pn      21 58 52.3 +1.7
IDI                                S      Sn      21 59 08.9 +1.5
RGE1  Gennadi, Rhode     1.34  60  P      Pn      21 58 52.3 +1.5
THR8  Santorini-Mono     1.34 322  P      Pn      21 58 51.3 +0.5
THR6  Thira Island,      1.34 318  P      Pn      21 58 51.8 +1.0
NISR  Nisiros            1.35  22  P      Pn      21 58 51.4 +0.5
NISR                               S      Sn      21 59 09.2 +1.3
NISR  Nisiros            1.35  22  P      Pn      21 58 51.5 +0.5
NISR                               S      Sn      21 59 09.0 +1.2
THRA  Thira              1.37 321  P      Pn      21 58 52.6 +1.4
THRA                               S      Sn      21 59 09.4 +1.0
SNT5  Nea Kammeni, S     1.38 319  P      Pn      21 58 52.4 +1.0
SNT5                               S      Sn      21 59 09.9 +1.2
THR3  Thira Island,      1.38 320  P      Pn      21 58 52.2 +0.8
THR2  Thira island,      1.39 322  P      Pn      21 58 52.1 +0.6
SAP3  Santorini-Thir     1.43 319  P      Pn      21 58 53.1 +1.1
SAP3                               S      Sn      21 59 11.4 +1.6
SAP3  Santorini-Thir     1.43 319  P      Pn      21 58 53.2 +1.1
YAZI  Mula-Dat§a-        1.53  30  P      Pn      21 58 54.2 +0.8
YAZI                               S      Sn      21 59 14.1 +1.9
YAZI                             i IAML           21 59 15.0
         comp=N,1μm,1.7s
YAZI                             i IAML           21 59 28.0
         comp=E,7μm,0.9s
ARG   Arkhangelos        1.57  56  P      Pn      21 58 55.5 +1.6
ARG                                S      Sn      21 59 15.2 +2.0
ARG   Arkhangelos        1.57  56  Pn     Pn      21 58 55.4 +1.6
ARG                                Sn     Sn      21 59 13.5 +0.3
ARG   Arkhangelos        1.57  56  Pn     Pn      21 58 54.5 +0.6
ARG                                Sn     Sn      21 59 14.5 +1.3
ARG   Arkhangelos        1.57  56  P      Pn      21 58 55.4 +1.6
ARG                                               21 59 13.5
ARG   Arkhangelos        1.57  56  P      Pn      21 58 56.0 +2.1
ARG                                S      Sn      21 59 14.9 +1.7
DAT   Datca              1.62  32  P      Pn      21 58 56.5 +1.8
DAT                                S      Sn      21 59 16.1 +1.5
DAT                              i IAML           21 59 28.0
         comp=N,6μm,0.6s
DAT                              i IAML           21 59 34.0
         comp=E,6μm,0.5s
DAT   Datca              1.62  32  Pn     Pn      21 58 55.3 +0.6
DAT                                Sn     Sn      21 59 15.9 +1.3
KLNA  Kalymnos           1.64  13  P      Pn      21 58 55.5 +0.7
DATC  Datca-Mugla        1.68  33  Pn     Pn      21 58 56.0 +0.6
RODB  Rodos              1.77  51  P      Pn      21 58 57.9 +1.4
BODT  Bodrum             1.82  21  P      Pn      21 58 58.7 +1.4
BODT  Bodrum             1.82  21  Pn     Pn      21 58 57.8 +0.5
BDRM  Kayabasi           1.86  24  P      Pn      21 58 58.6 +0.7
BDRM                               S      Sn      21 59 18.0 -2.4
BDRM                             i IAML           21 59 33.0
         comp=E,6μm,1.4s
YKAV  Yalikavak-Bodr     1.87  19  Pn     Pn      21 58 58.7 +0.8
APE   Apeiranthos        1.88 335  P      Pn      21 58 58.9 +0.7
APE   Apeiranthos        1.88 335  Pn     Pn      21 58 58.2  0.0
APE   Apeiranthos        1.88 335c iP     Pn      21 58 58.6 +0.4
APE   Apeiranthos        1.88 335  P      Pn      21 58 58.5 +0.4
APE   Apeiranthos        1.88 335  P      Pn      21 58 59.3 +1.1
APE                                S      Sn      21 59 22.5 +1.6
VAM   Vamos              1.89 272  P      Pn      21 58 58.6 +0.5
VAM   Vamos              1.89 272  P      Pn      21 58 59.8 +1.7
NAX1  Naxos Island       1.97 333  P      Pn      21 59 00.5 +1.3
NAX1                               S      Sn      21 59 23.9 +1.1
TURN  Turunc             2.00  44  P      Pn      21 59 01.0 +1.4
TURN                               S      Sn      21 59 25.1 +1.6
TURN                             i IAML           21 59 35.0
         comp=E,8μm,0.3s
TURN                             i IAML           21 59 41.0
         comp=N,8μm,0.4s
TURN  Turunc             2.00  44  Pn     Pn      21 59 00.5 +0.9
TURN                               Sn     Sn      21 59 24.5 +1.0
CHNB  Souda              2.00 274  P      Pn      21 59 01.2 +1.5
CHAN  Chania             2.02 275  P      Pn      21 59 00.8 +0.8
CHAN                               S      Sn      21 59 25.1 +1.0
CHAN  Chania             2.02 275  P      Pn      21 59 01.3 +1.3
CHAN                               S      Sn      21 59 24.9 +0.8
GVD   Gavdhos            2.05 256  P      Pn      21 59 01.4 +1.0
GVD   Gavdhos            2.05 256  Pn     Pn      21 59 01.2 +0.8
GVD   Gavdhos            2.05 256  P      Pn      21 59 01.7 +1.3
DIDI  Didim-Aydin        2.10  16  Pn     Pn      21 59 01.7 +0.6
MHLO  Agia Marina, M     2.16 309  P      Pn      21 59 04.2 +2.2
MHLO  Agia Marina, M     2.16 309  P      Pn      21 59 03.9 +1.9
DDIM  Aydin, Didim       2.18  16  P      Pn      21 59 04.2 +2.0
DDIM                             i IAML           21 59 56.0
         comp=E,2μm,1.2s
DDIM                             i IAML           22 00 11.0
         comp=N,1μm,2.1s
MLSB  Milas              2.19  28  Pn     Pn      21 59 02.9 +0.6
DALY  Dalyan (Mula)      2.27  49  Pn     Pn      21 59 03.8 +0.5
YER   Yerkesik           2.28  38  P      Pn      21 59 04.8 +1.2
YER   Yerkesik           2.28  38  Pn     Pn      21 59 04.1 +0.5
SMG   Samos              2.36   6  P      Pn      21 59 05.1 +0.5
SMG   Samos              2.36   6  P      Pn      21 59 05.5 +0.8
KNDR  Palaiochora Ch     2.36 268  P      Pn      21 59 06.2 +1.5
KNDR  Palaiochora Ch     2.36 268  Pn     Pn      21 59 05.2 +0.6
KNDR  Palaiochora Ch     2.36 268  P      Pn      21 59 06.1 +1.5
MULA  Mugla, Merkez-     2.39  37  P      Pn      21 59 07.2 +2.0
MULA                               S      Sn      21 59 35.6 +2.2
MULA                             i IAML           21 59 41.0
         comp=N,3μm,0.8s
MULA                             i IAML           21 59 45.0
         comp=E,5μm,0.7s
GCAM  G?zelcaml?         2.41  14  P      Pn      21 59 06.5 +1.2
GCAM                             i IAML           22 00 01.0
         comp=E,6μm,0.8s
GCAM                             i IAML           22 00 20.0
         comp=N,5μm,1.0s
GCAM  G?zelcaml?         2.41  14  Pn     Pn      21 59 05.5 +0.2
TNSA  Tinos              2.43 334  P      Pn      21 59 06.8 +1.3
KRL1  Karlovasi Samo     2.44   4  P      Pn      21 59 06.9 +1.3
IZZE  Mula-Seydike       2.46  63  P      Pn      21 59 06.6 +0.7
IZZE                               S      Sn      21 59 35.0 +0.2
IZZE                             i IAML           21 59 55.0
         comp=E,6μm,1.2s
IZZE                             i IAML           21 59 58.0
         comp=N,1μm,0.5s
KUSD  Kusadasi-Aydin     2.58  14  Pn     Pn      21 59 08.2 +0.6
ANKY  Antikythira Is     2.66 282  P      Pn      21 59 09.6 +0.9
ANKY  Antikythira Is     2.66 282  P      Pn      21 59 10.2 +1.5
AKAS  Kas                2.67  70  P      Pn      21 59 09.3 +0.4
AKAS                               S      Sn      21 59 39.2 -0.9
AKAS                             i IAML           22 00 09.0
         comp=E,7μm,0.9s
AKAS                             i IAML           22 00 25.0
         comp=N,1μm,1.4s
AKAS  Kas                2.67  70         Pn      21 59 08.8 -0.1
AKAS                               Sn     Sn      21 59 39.0 -1.1
AKAS  Kas                2.67  70  Pn     Pn      21 59 08.5 -0.4
GMLD  Gumuldur           2.73   7  Pn     Pn      21 59 09.9 +0.2
CAME  Cameli-Denizli     2.76  54  Pn     Pn      21 59 11.2 +1.0
DNZT  Denizli-Tavas-     2.79  46  P      Pn      21 59 12.6 +1.9
DNZT                               S      Sn      21 59 45.6 +2.4
DNZT                             i IAML           21 59 52.0
         comp=N,6μm,1.2s
DNZT                             i IAML           22 00 06.0
         comp=E,5μm,1.4s
AYDB  Zeytinkoy-Aydi     2.81  23  Pn     Pn      21 59 11.3 +0.4
ESEN  Aydn-Nazilli       2.85  31  P      Pn      21 59 12.9 +1.6
ESEN                               S      Sn      21 59 46.7 +2.3
ESEN                             i IAML           21 59 55.0
         comp=N,3μm,0.8s
ESEN                             i IAML           22 00 08.0
         comp=E,5μm,1.3s
TAVA  DENIZLI_Tavas      2.86  42  P      Pn      21 59 13.4 +1.8
TAVA                               S      Sn      21 59 48.5 +3.7
TAVA                             i IAML           22 00 17.0
         comp=N,4μm,1.3s
TAVA                             i IAML           22 00 20.0
         comp=E,5μm,1.5s
KNIK  Mula-Seydike       2.89  58  P      Pn      21 59 12.9 +0.9
KNIK                               S      Sn      21 59 47.3 +1.6
KNIK                             i IAML           21 59 51.0
         comp=E,3μm,0.9s
KNIK                             i IAML           22 00 05.0
         comp=N,2μm,0.9s
DEMR  Demre-Antalya      2.90  71  Pn     Pn      21 59 11.7 -0.2
KTHA  Kythira Island     2.94 289  P      Pn      21 59 13.0 +0.5
KTHA  Kythira Island     2.94 289  Pn     Pn      21 59 12.9 +0.3
NAZL  Nazilli-Aydin      2.97  28  Pn     Pn      21 59 13.4 +0.4
CESE  eme                2.97 357  Pn     Pn      21 59 13.6 +0.6
URLA  Izmir              3.00   1  P      Pn      21 59 13.9 +0.6
URLA                             i IAML           22 00 09.0
         comp=N,8μm,1.2s
URLA                             i IAML           22 00 24.0
         comp=E,1μm,1.0s
URLA  Izmir              3.00   1  Pn     Pn      21 59 13.5 +0.1
NPS1  Neapolis Lacon     3.02 293  P      Pn      21 59 15.3 +1.6
CHOS  Chios island       3.04 353  P      Pn      21 59 14.7 +0.7
CHOS  Chios island       3.04 353  Pn     Pn      21 59 14.5 +0.5
CHOS  Chios island       3.04 353  P      Pn      21 59 14.7 +0.7
BLCB  Balcova            3.05   8  P      Pn      21 59 14.9 +0.8
BLCB  Balcova            3.05   8  Pn     Pn      21 59 14.1  0.0
LVRA  Laurium            3.07 321  P      Pn      21 59 15.9 +1.6
ELL   Elmali             3.08  62  Pn     Pn      21 59 15.7 +1.1
ELL   Elmali             3.08  62  Pn     Pn      21 59 15.1 +0.5
ELL   Elmali             3.08  62  P      Pn      21 59 15.7 +1.1
APMY  Acipayam-Deniz     3.09  46  Pn     Pn      21 59 15.0 +0.4
GOLH  Golhisar           3.10  52  P      Pn      21 59 16.6 +1.8
GOLH                             i IAML           22 00 15.0
         comp=E,6μm,0.6s
GOLH                             i IAML           22 00 30.0
         comp=N,1μm,1.6s
MNVA  Monemvasia         3.11 296  P      Pn      21 59 16.4 +1.6
KARY  Karystos           3.15 329  P      Pn      21 59 16.8 +1.5
KARY  Karystos           3.15 329  P      Pn      21 59 16.9 +1.5
ODEM  Odemis-Izmir       3.17  23  Pn     Pn      21 59 16.5 +0.7
EAG2  Marmaro, Chios     3.20 354  P      Pn      21 59 17.5 +1.5
VLI   Veliai             3.20 296  P      Pn      21 59 17.0 +0.9
VLI   Veliai             3.20 296  P      Pn      21 59 17.5 +1.4
VLY   Voula,Athens       3.31 320  P      Pn      21 59 18.8 +1.2
VLY   Voula,Athens       3.31 320  P      Pn      21 59 19.2 +1.6
MET1  Methana Town,      3.35 312  P      Pn      21 59 19.8 +1.6
MET4  Agioi Theodoro     3.37 313  P      Pn      21 59 20.3 +1.8
MET5  Makryloggos,Me     3.40 313  P      Pn      21 59 20.9 +2.1
MET2  Kameni Chora,      3.41 312  P      Pn      21 59 20.5 +1.5
DION  Dionisos Attik     3.41 323  P      Pn      21 59 20.5 +1.5
DION  Dionisos Attik     3.41 323  P      Pn      21 59 21.1 +2.0
PTL   Penteli            3.42 322  P      Pn      21 59 20.7 +1.6
PTL   Penteli            3.42 322  P      Pn      21 59 21.1 +1.9
ATH5  Athens Parliam     3.43 320  P      Pn      21 59 20.6 +1.3
ATH   Athens Observa     3.44 320  P      Pn      21 59 21.0 +1.6
ACHAR Athens-Acharne     3.51 321  P      Pn      21 59 22.6 +2.4
MANT  Manisa             3.53  27  Pn     Pn      21 59 22.0 +1.1
ELFA  Athens-Elefsin     3.59 319  P      Pn      21 59 23.5 +2.1
MAGU  Magoula            3.63 319  P      Pn      21 59 23.7 +1.8
MAGU  Magoula            3.63 319  P      Pn      21 59 24.0 +2.1
STFN  Stefani            3.69 321  P      Pn      21 59 24.9 +2.2
STFN  Stefani            3.69 321  P      Pn      21 59 25.0 +2.2
KYMI  Kymi, Euboea I     3.79 330  P      Pn      21 59 25.8 +1.5
KYMI  Kymi, Euboea I     3.79 330  P      Pn      21 59 25.7 +1.5
ARS1  Argos              3.80 308  P      Pn      21 59 26.6 +2.3
VILL  Villia             3.80 318  P      Pn      21 59 26.4 +2.1
SKY   Skiros Island      3.85 337  P      Pn      21 59 26.7 +1.8
SKY   Skiros Island      3.85 337  P      Pn      21 59 27.3 +2.4
VIL2  Platees            3.86 319  P      Pn      21 59 26.4 +1.3
SIGR  SIGRI              3.88 352  P      Pn      21 59 26.5 +1.1
SIGR  SIGRI              3.88 352  P      Pn      21 59 26.7 +1.3
PRK   Paraskevi          3.89 357  P      Pn      21 59 26.3 +0.8
PRK   Paraskevi          3.89 357  P      Pn      21 59 26.7 +1.3
LTK   Loutraki           3.90 314  P      Pn      21 59 27.9 +2.3
LTK   Loutraki           3.90 314  P      Pn      21 59 27.4 +1.8
SLUM  Salum              4.00 196  P      Pn      21 59 24.6 -2.5
MATC  Matruh             4.05 171  P      Pn      21 59 24.5 -3.2
ISP   Isparta            4.06  52  Pn     Pn      21 59 27.8 -0.2
ISP   Isparta            4.06  52 eP      Pn      21 59 29.3 +1.3
ISP   Isparta            4.06  52d iP     Pn      21 59 28.6 +0.6
ISP   Isparta            4.06  52  P      Pn      21 59 28.6 +0.6
ISP   Isparta            4.06  52  P      Pn      21 59 29.2 +1.2
ITM   Ithomi             4.12 297  P      Pn      21 59 29.6 +0.8
ITM   Ithomi             4.12 297  Pn     Pn      21 59 29.6 +0.8
ITM   Ithomi             4.12 297  P      Pn      21 59 29.9 +1.1
ATAL  Atalanti           4.34 321  P      Pn      21 59 33.7 +1.9
AOS   Alonnisos          4.34 332  P      Pn      21 59 33.5 +1.7
KLV   Kalavryta, Ach     4.41 309  P      Pn      21 59 33.1 +0.4
BALB  Balikesir          4.41  14  Pn     Pn      21 59 33.8 +1.1
EZN   Ezine              4.46 358  P      Pn      21 59 34.7 +1.3
EZN   Ezine              4.46 358  P      Pn      21 59 35.4 +2.1
AXAR  Agios Charalam     4.59 319  P      Pn      21 59 37.8 +2.7
KALE  Kalithea           4.63 312  P      Pn      21 59 37.9 +2.2
DRO   Drossia            4.65 305  P      Pn      21 59 37.8 +1.9
LIA   Limnos Island      4.65 347  P      Pn      21 59 37.4 +1.4
SERG  Sergoula           4.69 312  P      Pn      21 59 38.3 +1.8
NEO   Neokhori           4.73 327  P      Pn      21 59 39.1 +2.0
UPR   University Cam     4.78 309  P      Pn      21 59 42.1 +4.3
EFP   Efpalio            4.79 311  P      Pn      21 59 39.6 +1.7
GADA  Gvkgeada           4.85 354  P      Pn      21 59 40.1 +1.5
RLS   Riolos of Patr     4.87 305  P      Pn      21 59 41.0 +2.1
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ANX	Ano Chora	4.89	313	P	Pn	21 59 40.8	+1.5
AGG	Agios Georgios	4.95	319	P	Pn	21 59 42.0	+1.9
BAND	Balkesir-Ban	5.14	14	⇓P	Pn	21 59 44.2	+1.5
PVO	Paravola	5.15	311	P	Pn	21 59 45.2	+2.5
SMTH	Samothraki Isl	5.16	352	P	Pn	21 59 43.7	+0.8
EVR	Evrytania	5.17	315	P	Pn	21 59 45.9	+2.8
CAVK	Edirne/Enez-Ca	5.33	357	⇓P	Pn	21 59 47.7	+2.4
OUR	Ouranopolis	5.36	339	P	Pn	21 59 47.5	+1.9
ENEZ	Enez	5.38	357	P	Pn	21 59 47.6	+1.8
THAS	Thassos island	5.43	345	P	Pn	21 59 47.8	+1.3
BORA	Eskisehir	5.49	34	Pn	Pn	21 59 48.3	+0.8
THL	Klokotos Trika	5.51	321	P	Pn	21 59 50.5	+2.8
TYRN	Tyrnavos	5.51	323	P	Pn	21 59 50.2	+2.4
AMPL	Ampelaki	5.53	312	P	Pn	21 59 48.9	+1.0
	4.5nm9µm975nm,1.0s						
CSS	Mathiatis	5.60	92	Pn	Pn	21 59 46.0	-3.0
CSS	Mathiatis	5.60	92	P	Pn	21 59 46.4	-2.6
EVGI	Lefkada island	5.71	307	P	Pn	21 59 50.6	+0.2
LIT	Litokhoron	5.71	327	P	Pn	21 59 52.8	+2.4
LIT	Litokhoron	5.71	327	Pn	Pn	21 59 52.6	+2.2
LIT	Litokhoron	5.71	327	P	Pn	21 59 52.6	+2.2
DRAG	Dragano-Lefkad	5.79	307	P	Pn	21 59 51.6	0.0
RDO	Rodhopi	5.83	353	P	Pn	21 59 53.2	+1.2
RDO	Rodhopi	5.83	353	Pn	Pn	21 59 53.2	+1.2
THE	Thessaloniki	5.96	333	P	Pn	21 59 56.3	+2.4
SOH	Sokhos	6.00	336	P	Pn	21 59 57.2	+2.8
KPRO	Kipourio	6.14	320	P	Pn	21 59 59.6	+3.2
	988nm,1.1s						
SWA2		6.16	189	P	Pn	21 59 54.4	-2.3
SRS	Serrai	6.19	339	P	Pn	21 59 59.2	+2.2
	556nm,1.6s						
KDZ	Kurdzhali	6.33	352	P	Pn	22 00 00.9	+1.9
	10µm533nm,1.0s						
KDZ	Kurdzhali	6.33	352	P	Pn	22 00 00.1	+1.2
KNT	Kendrikon	6.45	335	P	Pn	22 00 03.2	+2.5
	514nm,0.9s						
SAHE	Sakarya_HENDEK	6.47	31	⇓P	Pn	22 00 03.1	+2.3
RZN	Rozhen	6.48	348	P	Pn	22 00 03.2	+2.1
	597nm,0.9s						
RZN	Rozhen	6.48	348	P	Pn	22 00 02.5	+1.4
MMB	Musomishta	6.55	342	P	Pn	22 00 04.4	+2.5
	8µm966nm,0.9s						
MMB	Musomishta	6.55	342	P	Pn	22 00 04.2	+2.3
NEST	Nestorio	6.64	321	P	Pn	22 00 07.4	+4.1
VAY	Valandovo	6.71	334	*i* Pn	Pn	22 00 06.8	+2.7
DIM	Dimitrovgrad	6.72	354	P	Pn	22 00 06.2	+2.0
DIM	Dimitrovgrad	6.72	354	P	Pn	22 00 06.7	+2.5
ANTO	Ankara	6.72	46	Pn	Pn	22 00 05.3	+1.0
ANTO	Ankara	6.72	46	⇑P	Pn	22 00 06.2	+1.9
ANTO	Ankara	6.72	46	P	Pn	22 00 06.2	+1.9
ANTO	Ankara	6.72	46	P	Pn	22 00 03.4	-0.9
	0.7nm2µm160nm,0.9s						
KEK	Kerkira	6.88	311	Pn	Pn	22 00 09.9	+3.5
PLD	Plovdiv	6.92	349	P	Pn	22 00 08.6	+1.7
KKB	Krupnik	6.99	339	P	Pn	22 00 11.0	+2.9
	907nm,1.7s						
KKB	Krupnik	6.99	339	P	Pn	22 00 10.0	+2.0
KIRS	Kirsehir-Merke	7.01	55	⇓P	Pn	22 00 09.5	+1.2
JMB	Yambol	7.12	0	P	Pn	22 00 10.8	+1.0
BR105	Keskin Array S	7.13	50	P	Pn	22 00 09.2	-0.8
	0.4nm1µm107nm,0.9s						
BR104	Keskin Array S	7.14	50	P	Pn	22 00 09.3	-0.8
	0.5nm1µm93nm,0.8s						
BR106	Keskin Array S	7.14	50	P	Pn	22 00 09.3	-0.8
	0.4nm1µm90nm,0.7s						
BR131	Keskin Array S	7.15	50	P	Pn	22 00 11.0	+0.7
	SNR=56						
BR131				S	Sn	22 01 29.9	-0.2
BR131	Keskin Array S	7.15	50	*c i*P	Pn	22 00 10.9	+0.7
BRTR	Keskin Array B	7.15	50	P	Pn	22 00 11.0	+0.7
	47nm,0.9s,baz=222,slow=15,SNR=178						
BRTR				S	Sn	22 01 29.6	-0.4
	71nm,0.8s,baz=221,slow=22,SNR=5.5						
BRTR	Keskin Array B	7.15	50	Pn	Pn	22 00 09.9	-0.3
OHR	Ohrid	7.29	324	*i* Pn	Pn	22 00 16.6	+4.4
OHR				*i* Sn	Sn	22 01 31.2	-2.2
PGB	Panagyurishte	7.37	346	P	Pn	22 00 15.5	+2.3
PLNA	Plana	7.50	342	P	Pn	22 00 17.6	+2.5
HNTI	Hanita	7.53	105	P	Pn	22 00 11.4	-4.0
HNTI	Hanita	7.53	105	S	Sn	22 01 33.2	-6.1
OFRI	\`Ofer	7.55	109	P	Pn	22 00 10.8	-5.0
ELND	Elena	7.58	356	⇑P	Pn	22 00 18.5	+2.5
DQRL	Deir Qamar	7.66	100	*e*P	Pn	22 00 13.4	-3.8
BLGI	Bet Lehem HaGe	7.67	107	P	Pn	22 00 13.0	-4.3
BHL	Bhannes	7.68	98	*e*P	Pn	22 00 13.2	-4.3
VTS	Vitosha	7.68	342	P	Pn	22 00 18.9	+1.4
VTS	Vitosha	7.68	342	P	Pn	22 00 19.6	+2.0
SKO	Skopje	7.70	331	*i* Pn	Pn	22 00 21.7	+4.0
MMA0B	Mount Meron ar	7.73	105	P	Pn	22 00 14.1	-4.2
MMA0B	Mount Meron ar	7.73	105	S	Sn	22 01 38.4	-5.9
MMAI	Mount Meron Ar	7.73	105	P	Pn	22 00 15.0	-3.2
	55nm,0.3s,baz=293,slow=11,SNR=420						
MMAI				S	Sn	22 01 38.7	-5.7
	166nm,0.4s,baz=293,slow=26,SNR=5.2						
SLTI	Sal'it	7.75	111	P	Pn	22 00 13.8	-4.6
QRWL	Qaraoun	7.79	101	*e*P	Pn	22 00 15.8	-3.2
PRD	Provadia	7.82	5	P	Pn	22 00 21.3	+2.0
PVL	Pavlikeni	7.82	353	P	Pn	22 00 21.3	+2.0
HWQ	Hawqa	7.84	95	*e*P	Pn	22 00 16.5	-3.2
GEM	Giv'at Ha'Em	7.87	103	P	Pn	22 00 16.2	-3.9
GEM	Giv'at Ha'Em	7.87	103	S	Sn	22 01 42.4	-5.3
ZAHL	Zahle	7.88	98	*e*P	Pn	22 00 17.1	-3.2
SHBL	Chebaa	7.90	102	*e*P	Pn	22 00 16.9	-3.6
SZH	Strazhitsa	7.91	357	P	Pn	22 00 21.7	+1.2
SZH	Strazhitsa	7.91	357	P	Pn	22 00 22.0	+1.5
NATI	Neve Ativ	7.92	103	P	Pn	22 00 17.3	-3.4
NATI	Neve Ativ	7.92	103	S	Sn	22 01 42.2	-6.6
NEF	NEVSHA	7.92	4	P	Pn	22 00 22.1	+1.4
ZAF	Zafarana	7.92	138	P	Pn	22 00 17.3	-3.5
RCY	Rachaya	7.93	101	*e*P	Pn	22 00 17.7	-3.3
SALP	Salfit	7.94	112	P	Pn	22 00 17.0	-4.1
KZIT	Kziot	7.97	122	P	Pn	22 00 17.4	-4.0
KZIT	Kziot	7.97	122	S	Sn	22 01 41.2	-8.9
BEIL	Beino	7.99	93	*e*P	Pn	22 00 18.5	-3.1
AMAZ	Amatzia	7.99	116	P	Pn	22 00 17.6	-4.2
AMAZ	Amatzia	7.99	116	S	Sn	22 01 42.4	-8.3
LOZB	Loznitsa	8.00	0	⇑P	Pn	22 00 23.1	+1.3
ILGA	Ilgaz	8.03	43	Pn	Pn	22 00 23.5	+1.1
KSHT	Keshet	8.06	104	P	Pn	22 00 19.5	-3.3
HMDT	Nahal Hemdat	8.12	110	P	Pn	22 00 19.5	-4.0
HMDT	Nahal Hemdat	8.12	110	S	Sn	22 01 46.9	-6.8
PLVB	Pleven	8.15	350	⇓P	Pn	22 00 25.9	+2.1
KALB	Balgarevo	8.17	10	⇓P	Pn	22 00 25.9	+1.8
RAZG	Razgrad	8.20	360	⇓P	Pn	22 00 26.3	+1.8
UJAP	Al Uja	8.20	112	P	Pn	22 00 20.6	-3.9
FKH	Fakeheh	8.22	95	*e*P	Pn	22 00 22.1	-2.8
YTIR	Yattir	8.23	117	P	Pn	22 00 20.8	-4.2
YTIR	Yattir	8.23	117	S	Sn	22 01 49.2	-7.4
CIDE	Kastamonu/Cide	8.23	36	⇑P	Pn	22 00 27.9	+2.9
DSI	Dead Sea	8.32	115	P	Pn	22 00 22.3	-3.9
DSI	Dead Sea	8.32	115	S	Sn	22 01 50.9	-7.7
ZIMR		8.34	354	P	Pn	22 00 28.9	+2.6
GHAJ	Ghor Haditha	8.59	116	Pn	Pn	22 00 26.5	-3.3
MANR	Mangalia	8.60	10	⇑P	Pn	22 00 32.2	+2.2
IDAN	Idan	8.63	119	P	Pn	22 00 26.5	-3.9
VALD	Valchedram	8.65	345	P	Pn	22 00 32.6	+1.9
TIP	Timpagrande	8.66	299	⇓P	Pn	22 00 30.9	0.0
TIP	Timpagrande	8.66	299	P	Pn	22 00 28.8	-2.0
	3µm298nm,1.2s						
KRMI	Paran Flat	8.67	125	P	Pn	22 00 25.5	-5.6
KRMI	Paran Flat	8.67	125	S	Sn	22 01 57.2	-10
ULC	Ulcinj	8.70	321	⇑*i*Pn	Pn	22 00 29.4	-2.0
ULC				*i* Sn	Sn	22 02 02.9	-5.1
PRNI	Paran	8.72	123	P	Pn	22 00 27.3	-4.4
PRNI	Paran	8.72	123	S	Sn	22 01 59.4	-9.0
ZFRI	Zfri	8.72	121	P	Pn	22 00 26.9	-4.7
ZFRI	Zfri	8.72	121	S	Sn	22 01 59.7	-8.7
VLAD	Vladila	8.78	350	⇑P	Pn	22 00 34.5	+2.1
ICOR	Ion Corvin	8.80	6	⇑P	Pn	22 00 35.1	+2.3
BZK	Bozkurt	8.82	39	⇑P	Pn	22 00 36.1	+3.2
COPA	Copaceanca	8.82	354	⇑P	Pn	22 00 34.5	+1.5
CICN	Ciocanesti	8.84	2	⇑P	Pn	22 00 35.3	+2.1
PVY	Plav	8.84	327	⇑*i*Pn	Pn	22 00 36.1	+2.7
PVY				*i* Sn	Sn	22 02 07.7	-3.9
EFOR	EFORIE	8.86	10	⇑P	Pn	22 00 35.2	+1.7
SGRR	Singureni	8.86	358	⇑P	Pn	22 00 34.7	+1.2
DRME	Dracevica, Mon	8.90	322	⇑*i*Pn	Pn	22 00 33.1	-0.9
DRME				*e*Sn	Sn	22 02 07.6	-5.1
HRFI	Mount Harif	8.93	124	P	Pn	22 00 30.2	-4.4
HRFI	Mount Harif	8.93	124	S	Sn	22 02 04.7	-9.0
MFTR	Murfatlar	8.93	9	⇑P	Pn	22 00 36.4	+1.9
BAIL	Bailesti	8.99	345	⇑P	Pn	22 00 37.2	+1.9
CEL	Celeste	8.99	292	Pn	Pn	22 00 32.8	-2.6
CEL	Celeste	8.99	292	P	Pn	22 00 33.5	-1.9
	3µm322nm,0.9s						
CVDA	Cernavoda	9.04	7	⇓P	Pn	22 00 38.7	+2.8
PDG	Podgorica	9.04	324	Pn	Pn	22 00 34.2	-1.8
PDG	Podgorica	9.04	324	⇑P	Pn	22 00 37.1	+1.1
PDG	Podgorica	9.04	324	⇑*i*Pn	Pn	22 00 35.9	-0.1
PDG				*i* Sn	Sn	22 02 11.0	-5.3
BOVS	Bovan	9.06	337	⇓P	Pn	22 00 38.7	+2.5
IVA	Berane	9.09	328	⇑*i*Pn	Pn	22 00 36.5	-0.3
IVA				*i* Sn	Sn	22 02 13.2	-4.4
EIL	Elat	9.11	126	P	Pn	22 00 34.6	-2.4
	106nm,0.3s,baz=303,slow=3.5,SNR=480						
EIL				S	Sn	22 02 07.4	-11
	820nm,0.5s,baz=227,slow=9.8,SNR=11						
EIL	Elat	9.11	126	P	Pn	22 00 32.2	-4.8
LEHL	Lehliu	9.11	1	⇓P	Pn	22 00 39.0	+2.1
BUM	Brajici-Budva	9.13	322	⇓*i*Pn	Pn	22 00 35.5	-1.7
BUM				*i* Sn	Sn	22 02 13.3	-5.1
CRAR	CRAIOVA	9.19	348	⇑P	Pn	22 00 40.1	+2.0
CRAR	CRAIOVA	9.19	348	P	Pn	22 00 40.0	+2.0
TIRR	Tirgusor	9.21	9	⇓P	Pn	22 00 40.8	+2.6
TIRR	Tirgusor	9.21	9	P	Pn	22 00 40.4	+2.2
ASF	Jabal al Asfar	9.21	107	P	Pn	22 00 36.6	-1.9
ASF				S	Sn	22 02 15.0	-5.7
	16µm,0.4s,baz=49,slow=19,SNR=1.8						
ASF				LR	LR	22 06 05.5	
	comp=Z,319µm,19.1s,baz=270,slow=49						
HUMR	Humele	9.23	353	⇑P	Pn	22 00 40.1	+1.5
KOME	Kolasin	9.24	326	⇓*i*Pn	Pn	22 00 38.2	-0.7
KOME				*e*Sn	Sn	22 02 17.2	-4.2
TLBR	Topalu	9.25	7	⇓P	Pn	22 00 41.1	+2.3
AMRR	Amara	9.26	4	⇑P	Pn	22 00 41.1	+2.1
AMRR	Amara	9.26	4	P	Pn	22 00 41.1	+2.1
CEME	Cevo	9.30	323	⇑*i*Pn	Pn	22 00 37.7	-1.9
CEME				*e*Sn	Sn	22 02 17.1	-5.5
SULR		9.31	359	⇓P	Pn	22 00 42.7	+3.0
PUNG	Punghina	9.32	344	⇑P	Pn	22 00 42.2	+2.3
MATE	Matera	9.37	307	⇑P	Pn	22 00 42.5	+2.1
MATE	Matera	9.37	307	*e*P	Pn	22 00 41.3	+0.9
HCY	Herceg Novi	9.44	321	⇓*i*Pn	Pn	22 00 41.7	+0.3
HCY				*i* Sn	Sn	22 02 20.4	-5.5
NKME	Niksic	9.44	324	⇓*i*Pn	Pn	22 00 40.2	-1.4
NKME				*e*Sn	Sn	22 02 21.2	-5.0
PGOR	Pogoanele	9.55	2	⇓P	Pn	22 00 44.9	+2.0
PLAR	PLOIESTI	9.55	358	⇑P	Pn	22 00 45.5	+2.6
JURR	Jurilovca	9.57	10	⇓P	Pn	22 00 45.4	+2.2
SRE	Strehaia	9.63	346	⇓P	Pn	22 00 46.2	+2.1
SRE	Strehaia	9.63	346	P	Pn	22 00 46.2	+2.1
PLE	Pljevlja	9.68	327	⇓*i*Pn	Pn	22 00 43.6	-1.3
PLE				*i* Sn	Sn	22 02 27.9	-4.2
TREB	Trebinje	9.71	322	*e*Pn	Pn	22 00 41.9	-3.2
RMGR	Halanga-Turnu	9.74	344	⇓P	Pn	22 00 48.1	+2.5
BRY	Bratogost	9.75	323	⇑*i*Pn	Pn	22 00 44.6	-1.2
BRY				*i* Sn	Sn	22 02 29.0	-4.7
ISR	Istrita	9.75	0	⇑P	Pn	22 00 48.2	+2.5
ISR	Istrita	9.75	0	P	Pn	22 00 48.2	+2.5
WDD	Wied Dalam	9.77	276	Pn	Pn	22 00 43.9	-2.2
DJES	Djerdap	9.79	343	⇑P	Pn	22 00 48.1	+1.9
UPM	Unac-Piva	9.80	325	⇑*i*Pn	Pn	22 00 45.8	-0.7
UPM				*i* Sn	Sn	22 02 30.4	-4.7
CFR	Carcaliu	9.89	7	⇓P	Pn	22 00 49.4	+1.8
CFR	Carcaliu	9.89	7	P	Pn	22 00 49.3	+1.8
MTUR	Matau	9.92	354	⇓P	Pn	22 00 49.8	+1.7
MTUR	Matau	9.92	354	P	Pn	22 00 49.7	+1.7
RUDO	Rudo	9.92	328	*e*Pn	Pn	22 00 45.1	-2.9
KLINJ	Klinje	9.92	324	*e*Pn	Pn	22 00 48.5	+0.3
ACER	Acerenza	9.93	306	Pn	Pn	22 00 45.4	-2.9
TLCR		9.97	9	⇓P	Pn	22 00 50.9	+2.2
TLCR		9.97	9	P	Pn	22 00 50.9	+2.2
VAE	Valguarnera	9.98	286	P	Pn	22 00 49.3	+0.4
	160nm,0.7s,baz=6.9,slow=4.7,SNR=51						
VAE				S	Sn	22 02 33.2	-6.0
	290nm,0.6s,baz=147,slow=2.8,SNR=4.6						
RAFF	Raffo Rosso	9.98	284	Pn	Pn	22 00 47.5	-1.4
HERR	Herculane	10.01	343	⇓P	Pn	22 00 51.6	+2.3
GRER		10.02	2	⇑P	Pn	22 00 52.2	+2.8
NEHR	Nehoiu	10.06	359	⇑P	Pn	22 00 52.0	+2.0
ARR	Arges	10.10	352	⇓P	Pn	22 00 51.7	+1.2
MDVR	Moldovita	10.10	340	⇑P	Pn	22 00 53.1	+2.5
MLR	Muntele Rosu	10.13	358	P	Pn	22 00 49.9	-1.1
	64nm,0.9s,baz=192,slow=4.1,SNR=92						
MLR				LR	LR	22 05 35.0	
	comp=Z,3µm,18.6s,baz=189,slow=43						
MLR	Muntele Rosu	10.13	358	Pn	Pn	22 00 52.8	+1.8
MLR	Muntele Rosu	10.13	358	⇓P	Pn	22 00 53.8	+2.8
MLR	Muntele Rosu	10.13	358	P	Pn	22 00 52.8	+1.8
SCHLR	Schela	10.15	5	⇓P	Pn	22 00 52.8	+1.7
BISRR	Bisoca	10.18	1	⇑P	Pn	22 00 54.5	+2.8
BISRR	Bisoca	10.18	1	P	Pn	22 00 49.5	-2.1
	25µm752nm,1.3s						
SCHL	Schela	10.18	5	⇑P	Pn	22 00 53.8	+2.2
GIUM	Giurgiulesti	10.20	7	⇓P	Pn	22 00 54.1	+2.4
IZVR	Izvoarele	10.22	5	⇑P	Pn	22 00 54.5	+2.4
NEGRR	Negrea	10.22	5	⇓P	Pn	22 00 54.1	+2.0
TUDR		10.26	5	⇓P	Pn	22 00 54.9	+2.2
LOT	Lotru	10.29	349	⇑P	Pn	22 00 54.6	+1.4
TATR	Tatarca	10.30	6	⇓P	Pn	22 00 56.0	+2.9
SCTR	Scanteiesti	10.37	6	⇑P	Pn	22 00 55.7	+1.6
ODBI	Odobesti	10.40	2	⇑P	Pn	22 00 57.2	+2.7
GZR	Gura Zlata	10.42	345	⇑P	Pn	22 00 56.2	+1.3
GZR	Gura Zlata	10.42	345	P	Pn	22 00 56.1	+1.3
TNR	Turnu Rosu	10.42	351	⇑P	Pn	22 00 57.6	+2.6
TNR	Turnu Rosu	10.42	351	P	Pn	22 00 57.5	+2.6
COVR	Voineasa-Covas	10.48	359	⇑P	Pn	22 00 58.1	+2.4
PLOR	Plostina	10.48	1	⇑P	Pn	22 00 58.7	+3.0
PLOR	Plostina	10.48	1	P	Pn	22 00 58.7	+3.0
VRI	Vrincioaia	10.50	1	⇓P	Pn	22 00 58.0	+2.1
VRI	Vrincioaia	10.50	1	P	Pn	22 00 58.0	+2.1
VRI	Vrincioaia	10.50	1	P	Pn	22 00 53.9	-2.0
	6µm243nm,1.1s						
PANC	Panciu	10.52	2	⇑P	Pn	22 00 59.7	+3.6
VLDR	Vladesti	10.54	6	⇑P	Pn	22 00 59.2	+2.7
SGRT	San Giovanni R	10.57	310	Pn	Pn	22 00 54.4	-2.6
VARL	Varlezi	10.58	5	⇑P	Pn	22 00 58.9	+1.9
DOPR	Dopca	10.63	356	⇑P	Pn	22 00 59.7	+2.0
TURR	Turia	10.69	358	⇓P	Pn	22 01 01.6	+3.0
GHRR		10.71	3	⇓P	Pn	22 01 00.1	+1.3
BOSR	Bodos	10.72	357	⇓P	Pn	22 01 00.8	+1.7
OZUR		10.74	357	⇓P	Pn	22 01 00.9	+1.7
DEV	Deva	10.86	347	⇑P	Pn	22 01 02.6	+1.7
DEV	Deva	10.86	347	P	Pn	22 01 02.6	+1.7
MDB	Medias	10.89	352	⇓P	Pn	22 01 04.1	+2.8
MDB	Medias	10.89	352	P	Pn	22 01 04.1	+2.8
BZS	Buzias	10.90	342	⇑P	Pn	22 01 02.4	+1.0
BZS	Buzias	10.90	342	P	Pn	22 01 02.3	+1.0
BIR	Birlad	10.93	4	⇓P	Pn	22 01 03.6	+1.8
BIR	Birlad	10.93	4	P	Pn	22 01 03.6	+1.8
ONER	Baraj Valea Uz	10.97	360	⇓P	Pn	22 01 04.8	+2.5
TESR	Tescani	11.14	1	⇑P	Pn	22 01 07.5	+2.8
SIM	Simferopol'	11.20	29	*e*P	Pn	22 01 09.6	+4.1
SIM				*e*		22 03 11.5	
SIM				pmax	pmax		
	comp=Z,780µm,1.9s						
SIM				smax	smax		
	comp=E,1µm,5.9s						
SIM				MLR	MLR		
	comp=Z,960nm,20.0s						
TGMR	Targu Mures	11.26	353	⇑P	Pn	22 01 07.3	+1.0
VASR	Vaslui	11.31	5	⇓P	Pn	22 01 09.7	+2.7
PURM	Purcari	11.45	12	⇓P	Pn	22 01 10.0	+1.2
SIRR	Siria	11.50	343	⇑P	Pn	22 01 10.5	+0.9
CJR	Cluj-Napoca	11.55	350	⇑P	Pn	22 01 12.0	+1.7
CJR	Cluj-Napoca	11.55	350	P	Pn	22 01 12.0	+1.7
MARR	Marisel-Cluj	11.59	348	⇑P	Pn	22 01 13.1	+2.2
MILM	Milestii Mici	11.68	8	⇑P	Pn	22 01 13.9	+1.9
MILM	Milestii Mici	11.68	8	P	Pn	22 01 13.9	+1.9
MILM	Milestii Mici	11.68	8	*e*P	Pn	22 01 11.0	-1.0
	comp=Z,4µm,1.9s						
KIS	Kishinev	11.76	8	⇓P	Pn	22 01 15.3	+2.2
KIS	Kishinev	11.76	8	P	Pn	22 01 15.2	+2.2
KIS	Kishinev	11.76	8	*e*P	Pn	22 01 13.0	-0.1
	comp=Z,1µm,3.6s						
DRGR		11.77	347	⇓P	Pn	22 01 14.8	+1.3
DRGR		11.77	347	P	Pn	22 01 14.7	+1.3
NE56	Odesa	11.78	15	P	Pn	22 01 11.7	-1.7
BLY	Banja Luka	11.78	326	*e*Pn	Pn	22 01 13.4	0.0
BLY	Banja Luka	11.78	326	⇑P	Pn	22 01 14.1	+0.7
ARCR	ARCALIA	11.83	353	⇑P	Pn	22 01 15.2	+1.1
IASR	Iasi	11.84	4	⇑P	Pn	22 01 16.4	+2.3
PRAR	RASCA	11.99	359	⇑P	Pn	22 01 19.2	+2.8
KOPT	Kop Dagi	12.02	63	Pn	Pn	22 01 18.7	+1.8
MESR	Meseseni	12.08	348	⇑P	Pn	22 01 19.1	+1.6
KNYS	Krupa na Uni	12.30	324	*e*Pn	Pn	22 01 20.4	0.0
MORH	Mrgy, Hungar	12.37	334	*e*Pn	Pn	22 01 22.0	+0.6
MORH	Mrgy, Hungar	12.37	334	⇓P	Pn	22 01 23.1	+1.7
AQU	L'Aquila	12.37	308	P	Pn	22 01 21.6	+0.1
AQU	L'Aquila	12.37	308	*e*Pn	Pn	22 01 22.3	+0.8
CAMP	Campotosto	12.46	309	Pn	Pn	22 01 20.4	-2.3
LTVH	Ltavrtes, Hu	12.50	345	⇑P	Pn	22 01 24.2	+1.0
BMR	Baia Mare	12.51	351	⇑P	Pn	22 01 24.8	+1.5
BMR	Baia Mare	12.51	351	P	Pn	22 01 24.8	+1.5
ANN	Anapa	12.60	38	*e*P	Pn	22 01 28.8	+4.3
ANN				pmax	pmax		
	comp=Z,45nm,0.9s						
RAKU	Rahkiv	12.78	353	P	Pn	22 01 27.2	+0.2
NRCA	Norcia	12.79	310	Pn	Pn	22 01 26.6	-0.8
SORM	Soroca	12.84	6	⇑P	Pn	22 01 29.6	+1.8
SORM	Soroca	12.84	6	P	Pn	22 01 29.6	+1.8
FDMO	Fiordimonte	12.92	310	Pn	Pn	22 01 27.4	-1.5
TRSU	Trosnyk	13.00	349	P	Pn	22 01 28.6	-1.4
SOC	Sochi	13.09	47	*e*P	Pn	22 01 31.0	-0.2
SOC				*e*S	Sn	22 03 55.7	+0.7
SOC				pmax	pmax		
	comp=Z,32nm,1.0s						
SOC				MLR	MLR		
	comp=Z,514nm,12.0s						
KMPD	K-Podol'skiy	13.20	360	P	Pn	22 01 30.6	-2.0
VSLR	Vesyoloye	13.21	48	⇑*e*P	Pn	22 01 33.6	+0.7
VSLR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BOJS	Bojanci	13.26	323	*i* Pn	Pn	22 01 32.3	-1.3
BOJS				*e*Sn	Sn	22 03 49.0	-10
BEHE	Becsehely	13.31	329	Pn	Pn	22 01 35.2	+1.1
BEHE	Becsehely	13.31	329	*e*Pn	Pn	22 01 33.9	-0.3
STNU	Starunia	13.43	354	P	Pn	22 01 33.7	-2.1
PSZ	Piszkesteto	13.48	341	Pn	Pn	22 01 36.5	-0.1
PSZ	Piszkesteto	13.48	341	⇑P	Pn	22 01 37.2	+0.6
PSZ	Piszkesteto	13.48	341	*e*P	P	22 01 40.4	-3.5
PSZ	Piszkesteto	13.48	341	P	Pn	22 01 37.2	+0.6
UZHM	Uzhgorod	13.62	348	P	Pn	22 01 36.3	-2.1
KECS	Kecovo	13.85	343	*e*P	P	22 01 47.3	-0.7
KECS	Kecovo	13.85	343	*e*PN	P	22 01 47.3	-0.7
KECS				*e*PG		22 02 45.6	
SRO	Srobarova	13.86	336	*e*P	P	22 01 47.0	-1.1
SRO	Srobarova	13.86	336	*e*PN	P	22 01 47.0	-1.1
KEST	Kesra	13.98	277	P	Pn	22 01 44.2	+0.8
	comp=Z,44nm,0.8s,baz=107,slow=2.8,SNR=15						
KEST				S	Sn	22 04 11.7	-5.3
	comp=Z,20nm,0.6s,baz=126,slow=23,SNR=6.8						
KEST				LR	LR	22 08 36.1	
	comp=Z,693nm,19.1s,baz=88,slow=44						
KEST	Kesra	13.98	277	P	P	22 01 48.2	-1.4
	SNR=6.3						
KEST				S	Sn	22 04 24.4	+7.3
LJU	Ljubljana	14.00	323	*i* P	P	22 01 49.4	-0.2
MOZS	Mozjanca	14.22	324	*i* Pn	Pn	22 01 43.3	-3.1
MOZS				*i* P	P	22 01 51.9	-0.2
SOKA	Soboth	14.23	326	*e*Pn	Pn	22 01 46.8	+0.2
	comp=Z,8.9nm,0.6s,SNR=20						
SOKA	Soboth	14.23	326	*e*P	ScP	22 10 29.3	+0.2
	comp=Z,1.4nm,0.5s						
LABN	Labinsk	14.29	45	*e*P	P	22 01 52.1	-0.7
LABN				pmax	pmax		
	comp=Z,339nm,0.8s						
OBKA	Obir	14.33	325	*e*Pn	Pn	22 01 48.1	+0.2
	comp=Z,8.2nm,0.8s,SNR=9.0						
ARSA	Arzberg	14.45	329	*e*Pn	Pn	22 01 50.1	+0.7
	comp=Z,32nm,1.1s,SNR=24						
RONA	Rosalia, Austr	14.49	331	*i* Pn	Pn	22 01 50.7	+0.7
	comp=Z,7.1nm,0.6s,SNR=18						
KWP	Kalwaria Pacla	14.53	350	*e*P	P	22 01 55.1	-0.5
STHS	Stebnicka Huta	14.57	346	*e*P	P	22 01 56.3	+0.3
STHS	Stebnicka Huta	14.57	346	*e*PN	P	22 01 56.3	+0.3
LUBAR	Lubar, Ukraine	14.58	3	P	Pn	22 01 49.5	-1.6
MODS	Modra-Piesok	14.70	335	*e*P	P	22 01 57.1	-0.3
MODS	Modra-Piesok	14.70	335	*e*PN	P	22 01 57.1	-0.3
LANS	Liptovska Anna	14.72	342	*e*P	P	22 01 56.8	-0.9
LANS	Liptovska Anna	14.72	342	*e*PN	P	22 01 56.8	-0.9
NIE	Niedzica	14.77	344	*e*P	Pn	22 01 54.6	+1.0
ERBR	Yeremizino-Bor	14.81	41	*e*P	P	22 01 58.5	-0.1
ERBR				pmax	pmax		
	comp=Z,579nm,0.9s						
CONA	Conrad Observa	14.85	331	*e*Pn	Pn	22 01 54.4	-0.3
	comp=Z,6.0nm,0.5s,SNR=21						
MYKA	Terra Mystica	14.85	323	*e*Pn	Pn	22 01 54.0	-0.7
	comp=Z,1.5nm,0.3s						
ZCCA	Zocca	14.91	312	Pn	Pn	22 01 54.6	-0.9
JAVC	Velka Javorina	14.98	337	*e*PN	Pn	22 01 57.7	+1.3
KIV	Kislovodsk	15.11	51	P	P	22 02 01.0	-1.2
KIV				S	Sn	22 04 48.2	+3.8
KIV	Kislovodsk	15.11	51	P	P	22 02 01.6	-0.5
KIV	Kislovodsk	15.11	51	⇑P	P	22 02 01.4	-0.7
KIV	Kislovodsk	15.11	51	*i* P	P	22 02 01.4	-0.7
	SNR=14						
KIV	Kislovodsk	15.11	51	*e*P	Pn	22 01 58.9	+0.8
KIV				*e*S	Sn	22 04 45.4	+1.0
KIV				pmax	pmax		
	comp=Z,130nm,1.0s						
KIV				MLR	MLR		
	comp=Z,356nm,14.0s						
KBZ	Khabaz	15.14	52	P	Pn	22 02 00.0	+1.7
	comp=Z,26nm,1.1s,baz=247,slow=7.4,SNR=64						
KBZ				LR	LR	22 09 34.8	
	comp=Z,1µm,21.7s,baz=251,slow=44						
KBZ	Khabaz	15.14	52	⇓*e*P	Pn	22 01 58.6	+0.3
VLC	Villacollemand	15.18	310	P	Pn	22 02 00.6	+1.6
GNI	Garni	15.19	66	P	Pn	22 02 00.4	+1.2
	comp=Z,32nm,0.8s,baz=267,slow=3.2,SNR=29						
GNI				LR	LR	22 07 59.2	
	comp=Z,2µm,18.2s,baz=283,slow=38						
GNI	Garni	15.19	66	P	Pn	22 02 00.1	+0.9
GNI	Garni	15.19	66		Pn	22 01 57.5	-1.7
GNI				IAmb	IAmb	22 02 03.0	
	comp=Z,371nm,1.8s						
GNI	Garni	15.19	66	P	P	22 02 01.3	-1.8
GNI	Garni	15.19	66	*d i*P	Pn	22 02 00.3	+1.1
GNI				pmax	pmax		
	comp=Z,73nm,1.2s						
AK13	Malin Array Si	15.36	6	P	Pn	22 01 59.7	-1.4
AK09	Malin Array Si	15.38	7	P	Pn	22 02 00.0	-1.4
MAUC	Maruska	15.38	338	*e*P	Pn	22 02 02.3	+0.8
AK11	Malin Array Si	15.43	6	P	Pn	22 02 00.6	-1.5
KIEV	Kiev	15.45	6	Pn	Pn	22 02 00.6	-1.7
KIEV	Kiev	15.45	6	⇑P	Pn	22 02 03.6	+1.3
KIEV	Kiev	15.45	6	*i* P	Pn	22 02 02.8	+0.5
	SNR=5.2						
KIEV	Kiev	15.45	6	P	Pn	22 02 03.6	+1.3
MOA	Molln	15.45	328	*e*Pn	Pn	22 02 02.2	-0.2
	comp=Z,70nm,0.8s,SNR=14						
AKASG	Malin Array Be	15.46	6	P	Pn	22 02 01.5	-0.9
	comp=Z,39nm,0.5s,baz=196,slow=11,SNR=54						
AKASG				S	S	22 05 01.0	-4.4
	comp=Z,54nm,1.0s,baz=193,slow=22,SNR=18						
AKASG				LR	LR	22 08 42.9	
	comp=Z,1µm,18.3s,baz=182,slow=40						
AKASG				ScP	ScP	22 10 30.9	-0.1
	comp=Z,6.3nm,1.1s,baz=183,slow=1.4,SNR=7.6						
AKASG	Malin Array Be	15.46	6	Pn	Pn	22 02 01.2	-1.3
AKASG				IAmb	IAmb	22 02 06.8	
	comp=Z,188nm,0.6s						
AKBB	Malin Array Si	15.46	6	Pn	Pn	22 02 00.6	-1.8
AKBB	Malin Array Si	15.46	6	*de*P	Pn	22 02 02.5	0.0
AKBB	Malin Array Si	15.46	6	P	Pn	22 02 01.0	-1.5
AK18	Malin Array Si	15.47	6	P	Pn	22 02 01.1	-1.4
NCK	Nalchik	15.48	53	⇑*e*P	Pn	22 02 02.3	-0.6
NCK				pmax	pmax		
	comp=Z,15nm,1.1s						
ABTA	Abfaltersbach	15.49	321	*e*Pn	Pn	22 02 02.7	-0.4
	comp=Z,49nm,0.8s,SNR=8.2						
CTI	Castel Tesino	15.50	318		Pn	22 02 00.2	-2.8
CTI	Castel Tesino	15.50	318	P	Pn	22 02 00.3	-2.8
CTI				pmax	pmax		
	comp=Z,176nm,1.3s						
KRUC	Moravsky	15.59	335	*e*PN	Pn	22 02 03.3	-0.8
BIOA	Bad Ischl, Aus	15.62	326	*e*Pn	Pn	22 02 04.5	0.0
	comp=Z,56nm,1.2s,SNR=17						
OJC	Ojcow	15.64	344	*e*P	Pn	22 02 04.6	-0.1
OJC	Ojcow	15.64	344		Pn	22 02 03.5	-1.2
OJC	Ojcow	15.64	344	P	Pn	22 02 03.5	-1.2
OKC	Ostrava-Krasne	15.71	340	*e*P	P	22 02 07.8	-0.8
OKC	Ostrava-Krasne	15.71	340	*e*P	P	22 02 07.8	-0.8
VRAC	Vranov	15.73	335	P	Pn	22 02 05.7	-0.3

	comp=Z,61nm,0.8s,baz=142,slow=10.0,SNR=34						
VRAC				LR	LR	22 09 29.7	
	comp=Z,2µm,19.8s,baz=160,slow=43						
VRAC	**Vranov**	**15.73**	**335**	*e*PN	**Pn**	**22 02 05.3**	**-0.6**
CBBAR	**Babar**	**15.79**	**275**	P	**P**	**22 02 08.8**	**-0.9**
MORC	**Moravsky Berou**	**15.83**	**338**	*e*PN	**Pn**	**22 02 06.2**	**-1.1**
RNPP5	**Staryi Chortor**	**15.87**	**359**	P	**Pn**	**22 02 06.2**	**-1.5**
LESA	**Schwarzleotal**	**15.88**	**324**	*e*Pn	**Pn**	**22 02 08.0**	**+0.1**
	comp=Z,59nm,0.8s,SNR=13						
LESA	**Schwarzleotal**	**15.88**	**324**	*e*P	**ScP**	**22 10 31.5**	**-0.6**
	comp=Z,1.8nm,0.5s						
LESA	**Schwarzleotal**	**15.88**	**324**	*e*P	**ScS**	**22 14 07.7**	**-3.0**
	comp=Z,2.2nm,0.7s						
GOF	**Gofitskoye**	**15.89**	**47**	*ce*P	**P**	**22 02 12.2**	**+1.5**
GOF				*e*S	**S**	**22 05 12.0**	**-2.3**
STEB	**Steborice**	**15.90**	**339**	*e*P	**Pn**	**22 02 09.3**	**+1.2**
CSGS	**Sigus**	**16.09**	**279**	P	**P**	**22 02 13.2**	**+0.1**
TREC	**Trest**	**16.11**	**333**	*e*P	**Pn**	**22 02 11.5**	**+0.7**
TREC	**Trest**	**16.11**	**333**	*e*P	**Pn**	**22 02 11.5**	**+0.7**
CKRC	**Cesky Krumlov**	**16.19**	**330**	*e*P	**Pn**	**22 02 11.7**	**0.0**
CKRC	**Cesky Krumlov**	**16.19**	**330**	*e*P	**Pn**	**22 02 11.7**	**0.0**
CASM	**Ain Smara**	**16.27**	**279**	P	**P**	**22 02 17.1**	**+2.2**
CTGD	**Timgad**	**16.28**	**276**	P	**P**	**22 02 14.4**	**-0.8**
WTTA	**Wattenberg**	**16.29**	**321**	*e*Pn	**Pn**	**22 02 13.3**	**+0.2**
	comp=Z,7.6nm,0.5s,SNR=27						
WTTA	**Wattenberg**	**16.29**	**321**	*e*P	**ScP**	**22 10 32.1**	**-1.0**
	comp=Z,3.9nm,0.7s						
WTTA	**Wattenberg**	**16.29**	**321**	*e*P	**ScS**	**22 14 10.0**	**-2.0**
	comp=Z,5.2nm,0.8s						
KRLC	**Kraliky**	**16.33**	**337**	*e*P	**Pn**	**22 02 14.4**	**+0.9**
KRLC	**Kraliky**	**16.33**	**337**	*e*P	**Pn**	**22 02 14.4**	**+0.9**
CTEI	**Djebel Teioual**	**16.35**	**278**	P	**P**	**22 02 15.3**	**-0.6**
WATA	**Walderalm**	**16.36**	**322**	*e*Pn	**Pn**	**22 02 14.4**	**+0.4**
	comp=Z,33nm,0.6s,SNR=33						
WATA	**Walderalm**	**16.36**	**322**	*e*P	**ScP**	**22 10 32.8**	**-0.3**
	comp=Z,1.3nm,0.4s						
CBHR	**Beni Haroun da**	**16.43**	**280**	P	**P**	**22 02 19.2**	**+2.5**
COAT	**Oued Athmania**	**16.43**	**279**	P	**P**	**22 02 17.1**	**+0.3**
GERES	**GERESS Array B**	**16.46**	**329**	P	**Pn**	**22 02 14.6**	**-0.7**
	comp=Z,47nm,0.7s,baz=134,slow=11,SNR=100						
GERES				LR	LR	22 10 06.9	
	comp=Z,2µm,18.1s,baz=148,slow=43						
GERES				ScP	**ScP**	**22 10 32.3**	**-0.9**
	comp=Z,2.3nm,0.9s,baz=134,slow=2.8,SNR=5.0						
SQTA	**Sankt Quirin**	**16.48**	**321**	*e*Pn	**Pn**	**22 02 15.4**	**-0.1**
	comp=Z,14nm,0.5s,SNR=16						
SQTA	**Sankt Quirin**	**16.48**	**321**	*e*P	**ScP**	**22 10 32.9**	**-0.4**
	comp=Z,4.2nm,0.7s						
SQTA	**Sankt Quirin**	**16.48**	**321**	*e*P	**ScS**	**22 14 10.6**	**-1.9**
	comp=Z,0.4nm,0.2s						
FETA	**Feichten**	**16.60**	**319**	*e*Pn	**Pn**	**22 02 16.5**	**-0.6**
	comp=Z,1.9nm,0.5s,SNR=46						
FUORN	**Ofenpass-Fuorn**	**16.61**	**318**	P	**P**	**22 02 19.3**	**+0.5**
MOTA	**Moosalm**	**16.61**	**321**	*e*Pn	**Pn**	**22 02 16.8**	**-0.4**
	comp=Z,35nm,0.8s,SNR=15						
MOTA	**Moosalm**	**16.61**	**321**	*e*P	**ScP**	**22 10 34.0**	**+0.4**
	comp=Z,3.4nm,0.8s						
DPC	**Dobruska-Polom**	**16.72**	**337**	*e*P	**Pn**	**22 02 18.1**	**-0.3**
DPC	**Dobruska-Polom**	**16.72**	**337**	*e*P	**Pn**	**22 02 18.1**	**-0.3**
ZVC	**Zvikov**	**16.72**	**331**	*e*P	**Pn**	**22 02 18.4**	**0.0**
CJSR	**Ain Djasser**	**16.73**	**278**	P	**P**	**22 02 20.7**	**+0.6**
KHC	**Kasperske Hory**	**16.73**	**329**		**Pn**	**22 02 17.4**	**-1.1**
KHC	**Kasperske Hory**	**16.73**	**329**	*ce*P	**Pn**	**22 02 17.8**	**-0.7**
KHC				pmax	pmax		
	comp=Z,367nm,1.7s						
KHC	**Kasperske Hory**	**16.73**	**329**	*e*P	**Pn**	**22 02 18.0**	**-0.5**
KHC				*e*sP	**pwP**	**22 02 37.0**	**+4.5**
KHC				AMS	AMS	22 10 00.0	
	comp=Z,2µm,17.7s						
RETA	**Reutte**	**16.88**	**321**	*e*Pn	**Pn**	**22 02 19.9**	**-0.6**
	comp=Z,24nm,0.5s,SNR=17						
RETA	**Reutte**	**16.88**	**321**	*e*P	**ScP**	**22 10 34.6**	**+0.5**
	comp=Z,0.2nm,0.2s						
RETA	**Reutte**	**16.88**	**321**	*e*P	**ScS**	**22 14 12.0**	**-1.5**
	comp=Z,1.0nm,0.4s						
DAVOX	**Davos/Dischmat**	**16.91**	**317**	P	**Pn**	**22 02 21.0**	**0.0**
	comp=Z,18nm,0.6s,baz=139,slow=11,SNR=35						
DAVOX				S	**Sn**	**22 05 23.2**	**-5.0**
	comp=Z,8.5nm,0.5s,baz=118,slow=22,SNR=1.7						
DAVOX				LR	LR	22 09 34.5	
	comp=Z,2µm,21.6s,baz=116,slow=40						
OSTC	**Ostas**	**16.93**	**337**	*e*P	**P**	**22 02 21.6**	**-0.5**
OSTC	**Ostas**	**16.93**	**337**	*e*P	**P**	**22 02 21.6**	**-0.5**
UPC	**Upice**	**16.95**	**336**	*e*P	**Pn**	**22 02 21.5**	**+0.3**
UPC				MLR	MLR		
	comp=Z,2µm,15.3s						
UPC	**Upice**	**16.95**	**336**	*e*P	**Pn**	**22 02 21.5**	**+0.3**
UPC				AMS	AMS	22 10 00.0	
	comp=Z,2µm,15.3s						
BEL	**Belsk**	**16.98**	**348**	*e*P	**Pn**	**22 02 21.8**	**+0.3**
CKTS	**El Kantara**	**17.00**	**276**	P	**P**	**22 02 24.6**	**+1.5**
CHVC	**Chvalec**	**17.01**	**337**	*e*P	**Pn**	**22 02 22.1**	**+0.1**
CHVC	**Chvalec**	**17.01**	**337**	*e*P	**Pn**	**22 02 22.1**	**+0.1**
PRU	**Pruhonice**	**17.03**	**333**	*e*P	**Pn**	**22 02 21.9**	**-0.3**
PRU	**Pruhonice**	**17.03**	**333**	*e*P	**Pn**	**22 02 21.9**	**-0.3**
PRA	**Prague**	**17.14**	**333**	*e*P	**P**	**22 02 24.2**	**-0.2**
PRA	**Prague**	**17.14**	**333**	*e*P	**P**	**22 02 24.2**	**-0.2**
SET	**Setif**	**17.15**	**279**	P	**P**	**22 02 30.0**	**+5.2**
KSP	**Ksiaz**	**17.15**	**338**	*e*P	**Pn**	**22 02 23.6**	**-0.2**
DAVA	**Damuels**	**17.22**	**319**	*e*Pn	**Pn**	**22 02 24.9**	**+0.1**
	comp=Z,44nm,0.6s,SNR=21						
R9F13	**Warsaw-Wawer**	**17.29**	**349**	*e*P	**Pn**	**22 02 25.3**	**0.0**
R9F13				*e*S	**S**	**22 05 42.9**	**+0.4**
CAZD	**Ain Tagrout**	**17.35**	**279**	P	**P**	**22 02 28.2**	**+1.3**
PVCC	**Panska Ves**	**17.46**	**334**	*e*P	**Pn**	**22 02 27.0**	**-0.5**
PVCC	**Panska Ves**	**17.46**	**334**	*e*P	**Pn**	**22 02 27.0**	**-0.5**
RICC	**Richard**	**17.65**	**333**	*e*P	**Pn**	**22 02 29.6**	**-0.2**
AKT	**Akhty**	**17.70**	**63**	*e*P	**P**	**22 02 31.0**	**+0.2**
AKT				*e*S	**Sn**	**22 05 46.8**	**-0.3**
AKT				pmax	pmax		
	comp=Z,80nm,1.2s						
MAK	**Makhachkala**	**17.94**	**59**	*c i*P	**Pn**	**22 02 35.0**	**+1.6**
MAK				*e*S	**S**	**22 05 55.3**	**-0.3**
MAK				pmax	pmax		
	comp=Z,114nm,0.9s						
MAK				MLR	MLR		
	comp=Z,1µm,19.0s						
HSKC	**Hora Svate Kat**	**17.95**	**332**	*e*P	**P**	**22 02 32.8**	**-0.6**
VORD	**Divnogorie**	**18.13**	**27**	*e*P	**Pn**	**22 02 35.5**	**-0.2**
VORD				*e*S	**Sn**	**22 05 57.1**	**-0.1**
VORD				pmax	pmax		
	comp=Z,100nm,0.6s						
VORD				smax	smax		
	comp=E,30nm,1.6s						
ATKB	**Taksebt**	**18.16**	**281**	P	**Pn**	**22 02 37.0**	**+0.9**
GRA1	**Grafenberg Arr**	**18.17**	**327**	IAmb	IAmb	22 02 38.2	
	comp=Z,401nm,1.5s						
GRF	**Grafenberg Arr**	**18.17**	**327**	*e*P	**P**	**22 02 34.6**	**-1.2**
	comp=Z,266nm,1.6s,baz=136,slow=13						
MAHO	**Mahon**	**18.18**	**291**	P	**P**	**22 02 35.7**	**-0.3**
ABSD	**Ouled Sidi Bra**	**18.19**	**277**	P	**P**	**22 02 36.0**	**-0.1**
VSR	**Storozhevoye**	**18.29**	**26**	*e*P	**P**	**22 02 36.2**	**-0.9**
VSR				*e*S	**Sn**	**22 05 58.1**	**-2.9**
VSR				pmax	pmax		
	comp=Z,80nm,1.0s						
VSR				smax	smax		
	comp=E,190nm,1.5s						
AKET	**Djebel Ketaf**	**18.39**	**279**	P	**Pn**	**22 02 39.7**	**+0.6**
STU	**Stuttgart**	**18.51**	**322**	*e*P	**Pn**	**22 02 40.3**	**0.0**
CLL	**Collm**	**18.68**	**333**		**P**	**22 02 40.1**	**-1.2**
CLL	**Collm**	**18.68**	**333**	⇓*i*P	**P**	**22 02 40.4**	**-0.9**
CLL				*e*S	**Sn**	**22 06 07.0**	**-3.3**
CLL				pmax	pmax		
	comp=Z,117nm,1.1s						
CLL	**Collm**	**18.68**	**333**	⇓*i*P	**P**	**22 02 40.4**	**-0.9**
	comp=Z,117nm,1.1s						
CLL				*i* pP	**pP**	**22 02 52.1**	**-1.9**
CLL				*i* (sP)	**sP**	**22 02 58.2**	**-3.3**
CLL				*i* x	x	22 03 08.0	
CLL				*e*x	x	22 03 15.0	
CLL				*e*x	x	22 03 22.0	
CLL				*e*S	**Sn**	**22 06 07.0**	**-3.3**
CLL				*e*x	x	22 06 36.0	
CLL	**Collm**	**18.68**	**333**	*e*Px	Px	22 10 37.0	
VORR	**Voronezh**	**18.68**	**25**	*e*P	**P**	**22 02 41.1**	**-0.2**
VORR				*e*S	**Sn**	**22 06 09.0**	**-1.4**
VORR				pmax	pmax		
	comp=Z,60nm,0.4s						
VORR				smax	smax		
	comp=E,190nm,1.4s						
BFO	**Black Forest**	**18.68**	**319**	P	**P**	**22 02 40.7**	**-0.8**
BFO	**Black Forest**	**18.68**	**319**	P	**P**	**22 02 40.7**	**-0.8**
BFO				pmax	pmax		
	comp=Z,72nm,1.0s						
ADJB	**Djebel Djouab**	**18.74**	**279**	P	**Pn**	**22 02 43.7**	**+0.5**
SUW	**Suwalki**	**18.80**	**354**	*e*P	**P**	**22 02 41.8**	**-0.8**
SUW	**Suwalki**	**18.80**	**354**	*e*P	**Pn**	**22 02 44.0**	**+0.4**
ADCK	**Dar Chioukh**	**18.86**	**275**	P	**Pn**	**22 02 44.5**	**-0.3**
GKP	**Gorka Klasztor**	**19.07**	**343**	*e*P	**P**	**22 02 44.8**	**-0.8**
GKP	**Gorka Klasztor**	**19.07**	**343**	*e*P	**P**	**22 02 45.7**	**+0.1**
MNK	**Minsk**	**19.17**	**2**	*i* P	**P**	**22 02 44.8**	**-1.9**
	comp=E,82nm,0.8s						
MNK				*i* P	**P**	**22 02 44.8**	**-1.9**
	comp=N,31nm,0.8s						
MNK				*i* P	**P**	**22 02 44.8**	**-1.9**
	comp=Z,117nm,0.7s,baz=183						
MNK				*i* PP	**PnPn**	**22 03 01.2**	**-1.3**
MNK				*i* S	**S**	**22 06 20.5**	**-0.1**
MNK				*i* SS	**SnSn**	**22 06 36.4**	**-0.7**
MNK				*i* LQ	LQ	22 08 45.3	
MNK				*i* LR	LR	22 10 05.2	
MNK				*i* LRM	MLR	22 10 51.7	
	comp=Z,714nm,16.7s						
MNK				*i* LRM	MLR	22 11 27.9	
	comp=N,480nm,15.1s						
MNK				*i* LRM	MLR	22 11 59.8	
	comp=E,531nm,16.5s						
MNK	**Minsk**	**19.17**	**2**	*i* P	**P**	**22 02 44.7**	**-1.9**
MNK				*i* S	**S**	**22 06 20.4**	**-0.1**
MNK				pmax	pmax		
	comp=E,82nm,0.8s						
MNK				pmax	pmax		
	comp=Z,117nm,0.7s						
MNK				pmax	pmax		
	comp=N,31nm,0.8s						
MNK				MLR	MLR		
	comp=Z,714nm,17.0s						
MNK				MLR	MLR		
	comp=N,480nm,15.0s						
MNK				MLR	MLR		
	comp=E,531nm,17.0s						
VRH	**Novokhopyorsk**	**19.26**	**30**	*e*P	**P**	**22 02 47.5**	**-0.2**
VRH				*e*S	**S**	**22 06 16.0**	**-6.5**
VRH				pmax	pmax		
	comp=Z,270nm,0.6s						
VRH				smax	smax		
	comp=E,710nm,1.9s						
RUE	**Ruedersdorf**	**19.37**	**336**	*e*P	**P**	**22 02 48.3**	**-0.5**
LPSR	**Galich'ya Gora**	**19.37**	**23**	*e*P	**P**	**22 02 48.2**	**-0.6**
LPSR				pmax	pmax		
	comp=Z,349nm,1.0s						
NACGM	**Naroch**	**19.55**	**0**	*e*P	**P**	**22 02 49.5**	**-1.2**
	comp=N,143nm,1.3s						
EJON	**La Jonquera**	**19.66**	**298**	P	**P**	**22 02 52.9**	**+0.7**
IIGN	**Ignalina**	**20.00**	**360**	*e*P	**P**	**22 02 55.8**	**+0.1**
ISAL	**Salakas**	**20.22**	**359**	*e*P	**P**	**22 02 58.6**	**+0.6**
PABE	**Paberze**	**20.23**	**356**	P	**P**	**22 02 56.5**	**-1.6**
PABE	**Paberze**	**20.23**	**356**	*e*P	**P**	**22 02 57.4**	**-0.7**
RAYN	**Ar Rayn**	**20.28**	**120**	P	Pn	22 03 00.8	-0.7
RAYN				S	**S**	**22 06 41.0**	**-2.2**
RAYN	**Ar Rayn**	**20.28**	**120**	P	**P**	**22 02 59.6**	**+0.6**
RAYN	**Ar Rayn**	**20.28**	**120**	*i* P	Pn	22 03 00.6	-0.9
	SNR=140						
RAYN	**Ar Rayn**	**20.28**	**120**	P	Pn	22 03 01.4	-0.1
EIBI	**Ibiza**	**20.36**	**288**	P	**P**	**22 02 59.9**	**+0.2**
IZAR	**Zarasai**	**20.39**	**360**	*e*P	**P**	**22 02 59.6**	**-0.3**
WLF	**Walferdange**	**20.63**	**320**	P	**P**	**22 03 02.1**	**-0.5**
WLF	**Walferdange**	**20.63**	**320**	P	**P**	**22 03 02.1**	**-0.5**
WLF	**Walferdange**	**20.63**	**320**	P	**P**	**22 03 02.1**	**-0.5**
WLF				pmax	pmax		
	comp=Z,103nm,0.9s						
WLF	**Walferdange**	**20.63**	**320**	*d*P	**P**	**22 03 02.4**	**-0.3**
VSVD	**Vaisvydziai**	**20.70**	**356**	*e*P	**P**	**22 03 02.4**	**-0.9**
CEST	**Esterri de Car**	**20.87**	**298**	P	**P**	**22 03 05.2**	**-0.3**
CEST				IAmb	IAmb	22 03 23.8	
	comp=Z,179nm,1.0s						
OBN	**Obninsk**	**20.95**	**16**	P	**P**	**22 03 04.5**	**-1.4**
	comp=Z,127nm,0.6s,baz=133,slow=6.2,SNR=19						
OBN				S	**S**	**22 06 51.8**	**-4.0**
	comp=Z,12nm,0.6s,baz=357,slow=21,SNR=1.7						
OBN				LR	LR	22 12 02.2	
	comp=Z,1µm,19.1s,baz=154,slow=39						
	comp=Z,127nm,0.6s						
OBN	**Obninsk**	**20.95**	**16**	P	**P**	**22 03 04.4**	**-1.4**
OBN				IAmb	IAmb	22 03 09.4	
	comp=Z,235nm,0.9s						
OBN	**Obninsk**	**20.95**	**16**	⇑P	**P**	**22 03 06.9**	**+1.0**
OBN	**Obninsk**	**20.95**	**16**	*d i*P	**P**	**22 03 04.7**	**-1.2**
OBN				pmax	pmax		
	comp=Z,163nm,1.0s						
OBN				MLR	MLR		
	comp=Z,1µm,18.0s						
BHOU	**Houvegnez**	**21.12**	**321**	*d*P	**P**	**22 03 08.0**	**+0.1**
BTNL	**Ternell**	**21.20**	**322**	*d*P	**P**	**22 03 08.8**	**+0.1**
	comp=Z,128nm,0.9s						
MEM	**Membach**	**21.28**	**322**	*d*P	**P**	**22 03 09.2**	**-0.3**
	comp=Z,198nm,0.8s						
BSD	**Bornholm Skovb**	**21.32**	**341**	*e*P	**P**	**22 03 07.0**	**-2.9**
BSD	**Bornholm Skovb**	**21.32**	**341**	*i* P	**P**	**22 03 07.6**	**-2.3**
BSD				IAmb	IAmb	22 03 08.6	
	comp=Z,46nm,0.6s						
RCHB	**Rochefort**	**21.41**	**320**	*d*P	**P**	**22 03 09.8**	**-1.1**
	comp=Z,60nm,0.8s						
BSTI	**Sart Tilman**	**21.48**	**322**	*d*P	**P**	**22 03 12.1**	**+0.4**
BCLA	**Clavier**	**21.52**	**321**	*d*P	**P**	**22 03 11.9**	**-0.2**
BEBN	**Eben Emael**	**21.56**	**322**	*d*P	**P**	**22 03 12.6**	**+0.1**
BGES	**Gesves**	**21.61**	**321**	*d*P	**P**	**22 03 12.5**	**-0.6**
DOU	**Dourbes**	**21.70**	**319**	*d*P	**P**	**22 03 13.2**	**-0.9**
BMRD	**Maredsous**	**21.73**	**320**	*d*P	**P**	**22 03 13.8**	**-0.6**
MOS	**Moscow**	**21.77**	**17**	*e*P	**P**	**22 03 12.8**	**-1.8**
MOS				*e*S	**S**	**22 07 07.2**	**-4.7**
MOS				*e*SS	Sn	22 07 31.5	+7.2
MOS				pmax	pmax		
	comp=Z,203nm,2.0s						
MOS				MLR	MLR		
	comp=Z,2µm,18.0s						
CLF	**Chambon-Foret**	**21.98**	**313**	P	**P**	**22 03 16.1**	**-1.0**
TAM	**Tamanrasset**	**22.15**	**241**	P	**P**	**22 03 19.3**	**0.0**
TAM	**Tamanrasset**	**22.15**	**241**	P	**P**	**22 03 19.3**	**0.0**
TAM				pmax	pmax		
	comp=Z,194nm,0.7s						
ECHE	**Chera**	**22.17**	**289**	P	**P**	**22 03 18.4**	**-0.9**
LUNU	**Lund**	**22.17**	**340**	*e*P	**P**	**22 03 16.9**	**-2.2**
CART	**Cartagena**	**22.21**	**284**	P	**P**	**22 03 18.4**	**-1.2**
UCC	**Uccle**	**22.23**	**321**	P	**P**	**22 03 18.4**	**-1.3**
UCC				IAmb	IAmb	22 03 21.1	
	comp=Z,202nm,0.9s						
UCC	**Uccle**	**22.23**	**321**	P	**P**	**22 03 18.4**	**-1.3**
UCC				pmax	pmax		
	comp=Z,202nm,0.9s						
UCC	**Uccle**	**22.23**	**321**	*d*P	**P**	**22 03 19.1**	**-0.6**
	comp=Z,130nm,1.1s						
EMUR	**La Murta**	**22.39**	**285**	P	**P**	**22 03 18.1**	**-3.5**
ETOB	**Tobarra**	**22.61**	**287**	P	**P**	**22 03 23.2**	**-0.8**
BJUU	**Bjuv**	**22.68**	**340**	*i* P	**P**	**22 03 24.0**	**-0.4**
BELG	**Belogornoye**	**22.70**	**35**	LR	LR	22 14 45.4	
	comp=Z,517nm,18.8s,baz=227,slow=43						
BELG	**Belogornoye**	**22.70**	**35**	*d i*P	**P**	**22 03 24.6**	**-0.1**
BELG				pmax	pmax		
	comp=Z,55nm,0.9s						
DEL	**Delary**	**22.80**	**342**	*e*P	**P**	**22 03 22.6**	**-3.2**
SHMA	**Al-Shehemyia**	**23.03**	**108**	P	**P**	**22 03 29.2**	**+0.8**
SHMA				S	**S**	**22 07 35.1**	**+0.7**
VSU	**Vasula**	**23.11**	**0**	*e*P	**P**	**22 03 27.0**	**-1.9**
VSU	**Vasula**	**23.11**	**0**	*de*P	**P**	**22 03 26.7**	**-2.1**
VSU				pmax	pmax		
	comp=Z,76nm,1.0s						
ENIJ	**Nijar**	**23.20**	**282**	P	**P**	**22 03 27.0**	**-3.0**
SMRA	**Abu-Samra**	**23.50**	**110**	P	**P**	**22 03 33.6**	**+0.8**
TRNA	**Turayna**	**23.80**	**110**	P	**P**	**22 03 36.9**	**+1.3**
EALB	**Alboran**	**23.98**	**280**	P	**P**	**22 03 34.4**	**-2.7**
WMELI	**Melilla**	**24.00**	**279**	P	**P**	**22 03 36.8**	**-0.5**
ARBE	**Arbavere**	**24.09**	**359**	*e*P	**P**	**22 03 37.8**	**0.0**
BORU	**Boraas**	**24.11**	**342**	*e*P	**P**	**22 03 37.4**	**-0.7**
ESBB	**Sonseca Array**	**24.49**	**289**	IAmb	IAmb	22 03 44.2	
	comp=Z,289nm,1.6s						
ESDC	**Sonseca Array**	**24.49**	**289**	P	**P**	**22 03 41.9**	**0.0**
	comp=Z,36nm,0.9s,baz=82,slow=9.0,SNR=113						
ESDC				ScP	**ScP**	**22 10 51.6**	**-0.9**
	comp=Z,1.1nm,0.7s,baz=65,slow=1.8,SNR=5.5						
ESDC				LR	LR	22 13 31.2	
	comp=Z,538nm,21.2s,baz=82,slow=37						
	comp=Z,36nm,0.9s						
ESDC	**Sonseca Array**	**24.49**	**289**	P	**P**	**22 03 41.1**	**-0.7**
ESDC				IAmb	IAmb	22 03 44.1	
	comp=Z,176nm,1.6s						
SLWR	**Sila**	**24.53**	**110**	P	**P**	**22 03 43.8**	**+1.7**
PUL	**Pulkovo**	**24.55**	**5**	*de*P	**P**	**22 03 41.8**	**-0.3**
PUL				pmax	pmax		
	comp=Z,230nm,1.0s						
ELMS	**Elmsett, Ipswi**	**24.70**	**321**	*e*P	**P**	**22 03 42.9**	**-0.6**
ELMS				IAmb	IAmb	22 03 45.4	
	comp=Z,146nm,0.7s						
TJOU	**Tjoern**	**24.76**	**341**	*i* P	**P**	**22 03 44.3**	**+0.4**
PAB	**San Pablo**	**24.79**	**289**	P	**P**	**22 03 44.5**	**-0.1**
PAB				IAmb	IAmb	22 03 47.2	
	comp=Z,164nm,1.5s						
PAB	**San Pablo**	**24.79**	**289**	P	**P**	**22 03 44.5**	**-0.1**
PAB				pmax	pmax		
	comp=Z,164nm,1.5s						
MEF	**Metsahovi**	**24.91**	**357**	*e*P	**P**	**22 03 45.6**	**+0.3**
JRN	**Qarnain Island**	**24.96**	**107**	P	**P**	**22 03 47.9**	**+1.7**
	SNR=5.5						
AAL	**Aland**	**25.19**	**352**	*e*P	**P**	**22 03 46.6**	**-1.3**
WACR	**West Acre**	**25.23**	**321**	*e*P	**P**	**22 03 47.4**	**-1.0**
GHWR	**Ruwais**	**25.49**	**109**	P	**P**	**22 03 52.6**	**+1.6**
MDT	**Midelt**	**25.84**	**273**	LR	LR	22 15 56.9	
	comp=Z,856nm,21.1s,baz=79,slow=41						
RAF	**Rauma**	**25.86**	**355**	*e*P	**P**	**22 03 53.3**	**-0.6**
SWN1	**Swindon**	**25.91**	**317**	*e*P	**P**	**22 03 53.7**	**-0.8**
SWN1				IAmb	IAmb	22 03 55.1	
	comp=Z,192nm,0.6s						
MD01	**Midelt array s**	**25.95**	**274**		**P**	**22 03 55.9**	**+0.6**
MD31	**MD31**	**25.95**	**274**	P	**P**	**22 03 55.5**	**+0.3**
MD31				IAmb	IAmb	22 04 15.6	
	comp=Z,165nm,1.1s						
IFR	**Ifrane**	**26.10**	**275**	P	**P**	**22 03 57.3**	**+0.6**
FINES	**FINESS Array B**	**26.11**	**360**	P	**P**	**22 03 55.1**	**-1.0**
	comp=Z,13nm,0.5s,baz=157,slow=11,SNR=148						
FINES				PcP	**PcP**	**22 07 22.6**	**+0.5**
	comp=Z,6.5nm,0.5s,baz=178,slow=3.9,SNR=2.7						
FINES				S	**S**	**22 08 18.1**	**-5.0**
	comp=Z,7.9nm,0.8s,baz=175,slow=18,SNR=2.1						
FINES				ScP	**ScP**	**22 10 55.7**	**-0.8**
	comp=Z,5.3nm,0.6s,baz=83,slow=1.4,SNR=7.7						
	comp=Z,13nm,0.5s						
FINES	**FINESS Array B**	**26.11**	**360**	P	**P**	**22 03 54.8**	**-1.3**
HFS	**Hagfors**	**26.15**	**345**	P	**P**	**22 03 54.9**	**-1.6**
	comp=Z,8.4nm,0.4s,baz=101,slow=7.7,SNR=54						
HFS				LR	LR	22 16 41.3	
	comp=Z,1µm,19.2s,baz=163,slow=42						
	comp=Z,8.4nm,0.4s						
STRD	**Stroud**	**26.24**	**318**	*e*P	**P**	**22 03 56.6**	**-0.8**
STRD				IAmb	IAmb	22 03 59.3	
	comp=Z,127nm,0.6s						
CWF	**Charnwood Fore**	**26.24**	**320**	*e*P	**P**	**22 03 56.0**	**-1.5**
CWF				IAmb	IAmb	22 03 59.7	
	comp=Z,43nm,0.8s						
CNIL	**Conil**	**26.34**	**282**	P	**P**	**22 03 58.2**	**-0.4**
MZWR	**Madinat Zayed**	**26.38**	**109**	P	**P**	**22 04 00.4**	**+1.4**
MZR	**Muzera**	**26.48**	**110**	P	**P**	**22 04 01.6**	**+1.6**
	SNR=8.8						
MZR	**Muzera**	**26.48**	**110**	*i* P	**P**	**22 04 01.2**	**+1.2**
	SNR=23						
MONM	**Monmouth**	**26.62**	**317**	*e*P	**P**	**22 03 59.9**	**-1.0**
MONM				IAmb	IAmb	22 04 01.8	
	comp=Z,38nm,0.7s						
OSL	**Oslo**	**26.65**	**342**	*e*P	**P**	**22 03 58.6**	**-2.4**
PBRG	**Braganca**	**26.66**	**294**	*e*P	**P**	**22 04 01.3**	**-0.2**
PBRG				*e*pP	**pwP**	**22 04 18.6**	**+0.8**
PBRG				*i* IAmb	IAmb	22 04 30.3	
	comp=Z,259nm,1.3s						
MCH1	**Michaelchurch**	**26.80**	**318**	*e*P	**P**	**22 04 01.5**	**-0.9**
MCH1				IAmb	IAmb	22 04 02.4	
	comp=Z,23nm,0.6s						
AJN	**Ajban**	**26.83**	**106**	P	**P**	**22 04 04.6**	**+1.5**
KLMR	**Klimovskoe**	**26.85**	**14**	*e*P	**P**	**22 04 01.3**	**-1.5**
KLMR				S	**S**	**22 08 34.2**	**-0.5**
KLMR				pmax	pmax		
	comp=Z,92nm,1.1s						
MVO	**Moncorvo**	**26.86**	**293**	*e*P	**P**	**22 04 03.4**	**+0.1**
MVO				*e*pP	**pwP**	**22 04 19.4**	**-0.3**
MVO				*i* IAmb	IAmb	22 04 29.9	
	comp=Z,228nm,1.2s						
MVO				*e*S	**S**	**22 08 33.5**	**-2.0**
MVO				*i* IAMs_20	IAMs_20	22 15 38.3	
	comp=Z,392nm,18.0s						
STNC	**Stoke**	**26.89**	**320**	*e*P	**P**	**22 04 02.7**	**-0.6**
STNC				IAmb	IAmb	22 04 04.0	
	comp=Z,115nm,0.6s						
GDLE	**Glaisdale, N Y**	**26.89**	**324**	*e*P	**P**	**22 04 02.3**	**-1.0**
UMQ	**Umm Al-Quwin**	**26.89**	**103**	P	**P**	**22 04 06.2**	**+2.6**
PBAR	**Barrancos**	**26.94**	**286**	*e*P	**P**	**22 04 03.9**	**-0.1**
PBAR				*e*pP	**pP**	**22 04 16.5**	**-1.9**
PBAR				*i* IAmb	IAmb	22 04 24.5	
	comp=Z,212nm,1.5s						
HLM1	**Long Mynd**	**26.97**	**319**	*e*P	**P**	**22 04 02.9**	**-1.2**
HLM1				IAmb	IAmb	22 04 04.0	
	comp=Z,48nm,0.6s						
SHME	**Shamm**	**27.03**	**102**	P	**P**	**22 04 05.9**	**+1.0**
	SNR=5.3						
SHME	**Shamm**	**27.03**	**102**	*i* P	**P**	**22 04 06.4**	**+1.6**
	SNR=5.5						
HPK	**Haverah Park**	**27.04**	**322**	*e*P	**P**	**22 04 04.4**	**-0.2**
HPK				IAmb	IAmb	22 04 05.3	
	comp=Z,32nm,0.6s						
ASUD	**Al Ashush, Dub**	**27.07**	**105**	P	**P**	**22 04 06.5**	**+1.3**
	SNR=5.4						
ASUD	**Al Ashush, Dub**	**27.07**	**105**	*i* P	**P**	**22 04 06.2**	**+1.0**
	SNR=7.4						
PMRV	**Marv??o**	**27.14**	**289**	*e*P	**P**	**22 04 05.6**	**-0.1**
PMRV				*e*pP	**pP**	**22 04 17.3**	**-2.9**
PMRV				*i* IAmb	IAmb	22 04 42.4	
	comp=Z,191nm,1.3s						
PMRV				*e*S	**S**	**22 08 46.0**	**+6.0**
PMRV				*i* IAMs_20	IAMs_20	22 15 24.9	
	comp=Z,350nm,20.0s						
NAZ	**Nazwa, Dubai**	**27.15**	**104**	P	**P**	**22 04 07.3**	**+1.3**
	SNR=13						
NAZ	**Nazwa, Dubai**	**27.15**	**104**	*i* P	**P**	**22 04 07.1**	**+1.1**
	SNR=30						
NC602	**NORSAR Array S**	**27.16**	**344**	*e*P	**P**	**22 04 03.6**	**-2.0**
PCBR	**Castelo Branco**	**27.20**	**290**	*e*P	**P**	**22 04 06.3**	**+0.1**
PCBR				*e*pP	**pP**	**22 04 17.9**	**-2.9**
PCBR				*i* IAmb	IAmb	22 04 32.7	
	comp=Z,105nm,1.2s						
FAQ	**Al Faqa, Dubai**	**27.21**	**105**	P	**P**	**22 04 07.8**	**+1.2**
	SNR=7.8						
FAQ	**Al Faqa, Dubai**	**27.21**	**105**	*i* P	**P**	**22 04 07.4**	**+0.9**
	SNR=7.3						
BANOM	**Banah**	**27.22**	**102**	P	**P**	**22 04 07.6**	**+1.0**
BANOM	**Banah**	**27.22**	**102**	*i* P	**P**	**22 04 06.9**	**+0.3**
	SNR=11						
MTE	**Manteigas**	**27.24**	**291**	*e*P	**P**	**22 04 07.6**	**+0.9**
MTE				*i* IAmb	IAmb	22 04 10.5	
	comp=Z,107nm,1.5s						
MTE				*e*S	**S**	**22 08 47.7**	**+6.1**
MTE				*i* IAMs_20	IAMs_20	22 15 27.2	
	comp=Z,461nm,20.0s						
MTE	**Manteigas**	**27.24**	**291**	*e*P	**P**	**22 04 09.2**	**+2.5**
AKTO	**Aktyubinsk**	**27.31**	**47**	LR	LR	22 18 02.1	
	comp=Z,545nm,20.5s,baz=224,slow=43						
FOEL	**Foel Wylfa**	**27.32**	**319**	*e*P	**P**	**22 04 06.2**	**-1.0**
FOEL				IAmb	IAmb	22 04 07.7	
	comp=Z,74nm,0.6s						
PESTR	**Estremoz**	**27.32**	**288**	IAmb	IAmb	22 04 32.4	
	comp=Z,140nm,1.2s						
PESTR	**Estremoz**	**27.32**	**288**	*e*P	**P**	**22 04 06.9**	**-0.5**
PESTR				*i* IAmb	IAmb	22 04 27.8	
	comp=Z,144nm,1.5s						
MASF	**Masafi**	**27.36**	**103**	P	**P**	**22 04 08.9**	**+1.0**
MASF				P	pP	22 04 10.7	-12
	SNR=7.1						
MSFE	**Esma-Masafi**	**27.37**	**103**	*i* P	**P**	**22 04 08.5**	**+0.6**
	SNR=8.6						
PVRL	**Vila Real**	**27.38**	**293**	*e*P	**P**	**22 04 07.8**	**-0.1**
PVRL				*i* IAmb	IAmb	22 04 36.1	
	comp=Z,117nm,1.6s						
POLO	**Lamas de Olo**	**27.44**	**293**	*e*P	**P**	**22 04 09.1**	**+0.6**
POLO				*i* IAmb	IAmb	22 04 34.5	
	comp=Z,55nm,1.2s						
NB2	**NORSAR Subarra**	**27.50**	**344**	P	**P**	**22 04 06.7**	**-2.1**
	comp=Z,10nm,0.7s,baz=156,slow=9.3						
NB2	**NORSAR Subarra**	**27.50**	**344**	P	**P**	**22 04 06.7**	**-2.1**
	baz=156,slow=9.3						
NOA	**NORSAR Array B**	**27.50**	**344**	P	**P**	**22 04 06.4**	**-2.4**
	comp=Z,2.5nm,0.4s,baz=143,slow=8.9,SNR=26						
NOA				PcP	**PcP**	**22 07 26.1**	**+0.6**
	comp=Z,3.9nm,0.7s,baz=134,slow=2.5,SNR=4.0						
NOA				ScP	**ScP**	**22 10 59.6**	**-1.2**
	comp=Z,5.4nm,0.9s,baz=136,slow=3.2,SNR=3.2						
NOA				LR	LR	22 17 11.0	
	comp=Z,850nm,18.3s,baz=155,slow=41						
	comp=Z,2.5nm,0.4s						

PVIS	Viseu	27.50	292	eP	P	22 04 09.2	+0.2
MDH	Madha	27.51	103	P	P	22 04 09.7	+0.6
	SNR=8.4						
MDH	Madha	27.51	103	i P	P	22 04 09.5	+0.4
	SNR=9.7						
PVAQ	Vaqueiros	27.55	284	IAmb	IAmb	22 04 25.2	
	comp=Z,159nm,1.0s						
PVAQ	Vaqueiros	27.55	284	eP	P	22 04 10.0	+0.6
PVAQ				i IAmb	IAmb	22 04 27.9	
	comp=Z,164nm,1.0s						
PVAQ				eS	S	22 08 43.4	-2.9
PVAQ				i IAMs_20	IAMs_20	22 11 14.5	
	comp=Z,361nm,18.0s						
NBO00	NORSAR Array S	27.59	343	IAmb	IAmb	22 04 33.5	
	comp=Z,220nm,1.5s						
PBEJ	Beja	27.60	286	eP	P	22 04 11.1	+1.3
PBEJ				epP	pP	22 04 19.8	-4.5
PBEJ				i IAmb	IAmb	22 04 28.1	
	comp=Z,185nm,1.3s						
UOSS	Minazif	27.60	104	P	P	22 04 10.8	+0.8
UOSS	Minazif	27.60	104	P	P	22 04 10.4	+0.4
UOSS				IAmb	IAmb	22 04 11.8	
	comp=Z,147nm,1.2s						
HATD	Hatta, Dubai	27.60	104	P	P	22 04 10.9	+0.9
	SNR=18						
HATD	Hatta, Dubai	27.60	104	i P	P	22 04 10.4	+0.4
	SNR=35						
ASHO	Ashiyiah	27.61	105	P	P	22 04 11.0	+0.9
	SNR=18						
ASHO	Ashiyiah	27.61	105	i P	P	22 04 10.5	+0.4
	SNR=11						
PCAB	Cabril	27.62	294	eP	P	22 04 10.1	+0.1
PCAB				epP	pP	22 04 25.0	+0.9
PCAB				i IAmb	IAmb	22 04 34.6	
	comp=Z,171nm,1.4s						
EDMD	Edmundbyers	27.68	324	eP	P	22 04 09.3	-1.0
EDMD				IAmb	IAmb	22 04 12.9	
	comp=Z,53nm,0.6s						
EVO	Evora	27.68	287	P	P	22 04 08.4	-2.1
EVO	Evora	27.68	287	eP	P	22 04 11.1	+0.6
EVO				i IAmb	IAmb	22 04 28.8	
	comp=Z,110nm,1.5s						
PARRA	Arraiolos	27.68	287	eP	P	22 04 11.5	+1.0
PARRA				epP	pP	22 04 22.8	-2.2
PARRA				i IAmb	IAmb	22 04 56.8	
	comp=Z,80nm,1.4s						
ALNE	Al Ain	27.68	106	P	P	22 04 11.9	+1.2
	SNR=19						
ALNE	Al Ain	27.68	106	i P	P	22 04 11.7	+0.9
	SNR=44						
PSARD	Sardoal	27.73	289	eP	P	22 04 11.8	+0.8
PSARD				epP	pP	22 04 27.0	+1.5
PSARD				i IAmb	IAmb	22 04 39.6	
	comp=Z,68nm,1.6s						
PBDV	Barranco-do-Ve	27.73	284	eP	P	22 04 11.9	+0.8
KIRV	Kirov	27.73	26	ceP	P	22 04 09.4	-1.4
JOF	Joensuu	27.75	5	eP	P	22 04 08.3	-2.6
PCVE	Castro Verde	27.78	285	eP	P	22 04 12.1	+0.7
PCVE				i IAmb	IAmb	22 04 34.5	
	comp=Z,92nm,1.5s						
PMTG	Montargil	27.81	288	eP	P	22 04 11.3	-0.4
PMTG				epP	pP	22 04 20.9	-5.3
PMTG				i IAmb	IAmb	22 04 38.3	
	comp=Z,106nm,1.3s						
PGAV	Gavieira, Arco	27.81	294	eP	P	22 04 13.0	+1.2
PGAV				eS	S	22 08 54.7	+4.1
PGAV				i IAMs_20	IAMs_20	22 19 01.9	
	comp=Z,520nm,18.0s						
VAF	Ylistaro	27.81	356	eP	P	22 04 10.7	-0.8
MESJ	Messejana	27.90	285	eP	P	22 04 13.1	+0.6
MESJ				IAmb	IAmb	22 04 28.4	
	comp=Z,82nm,1.3s						
MESJ				eS	S	22 08 53.7	+1.9
MESJ	Messejana	27.90	285	eP	P	22 04 13.5	+1.0
MESJ				i IAmb	IAmb	22 04 43.5	
	comp=Z,76nm,1.6s						
MESJ	Messejana	27.90	285	eP	P	22 04 13.1	+0.6
MESJ				eS	S	22 08 53.7	+1.9
SKAR	Skarslia	27.91	341	eP	P	22 04 12.6	+0.1
UMZA	Um Al Zommool	27.93	109	P	P	22 04 13.9	+0.9
MOE	Montemor	27.94	287	eP	P	22 04 13.8	+0.9
MOE				i IAmb	IAmb	22 04 32.1	
	comp=Z,133nm,1.7s						
ATD	Arta Tunnel	27.97	144	LR	LR	22 16 01.4	
	comp=Z,34nm,18.2s,baz=340,slow=37						
PCAS	Casmilo, Conde	27.98	290	eP	P	22 04 14.4	+1.2
PCAS				i IAmb	IAmb	22 04 42.8	
	comp=Z,99nm,1.3s						
PTO	Porto	28.04	292	eP	P	22 04 14.6	+0.9
PTO				epP	pwP	22 04 29.4	-1.4
PTO				i IAmb	IAmb	22 04 43.4	
	comp=Z,142nm,1.3s						
AB31	Akbulak array	28.10	50	P	P	22 04 14.3	+0.1
ABKAR	Akbulak array	28.10	50	P	P	22 04 14.1	-0.1
SOHO	SOHO	28.26	105	P	P	22 04 16.8	+1.0
SOHO	SOHO	28.26	105	i P	P	22 04 16.6	+0.8
	SNR=30						
PTEO	Sao Teotonio	28.33	285	eP	P	22 04 17.9	+1.6
PTEO				epP	pP	22 04 31.3	+0.5
PTEO				i IAmb	IAmb	22 04 54.9	
	comp=Z,150nm,1.8s						
EKA	Eskdalemuir Ar	28.52	324	P	P	22 04 17.1	-0.8
	comp=Z,18nm,0.5s,baz=131,slow=11,SNR=99						
EKA				PcP	PcP	22 07 28.5	+0.5
	comp=Z,2.4nm,0.5s,baz=123,slow=3.1,SNR=2.3						
EKA				ScP	ScP	22 11 03.5	-0.5
	comp=Z,4.4nm,0.7s,baz=131,slow=3.3,SNR=5.0						
EKA				LR	LR	22 17 07.5	
	comp=Z,628nm,21.2s,baz=131,slow=40						
	comp=Z,18nm,0.5s						
TIO	Tiouine	28.54	271	P	P	22 04 17.4	-1.1
ESK	Eskdalemuir	28.54	324	P	P	22 04 16.5	-1.5
ESK				IAmb	IAmb	22 04 49.4	
	comp=Z,126nm,1.1s						
ESK	Eskdalemuir	28.54	324	eP	P	22 04 16.6	-1.5
ESK				IAmb	IAmb	22 04 18.4	
	comp=Z,28nm,0.5s						
ESK	Eskdalemuir	28.54	324	P	P	22 04 16.5	-1.5
ESK				pmax	pmax		
	comp=Z,126nm,1.1s						
ARQ	Araqi	28.66	107	P	P	22 04 20.8	+1.3
	SNR=19						
IOMK	Kirk Michael	28.69	321	eP	P	22 04 19.1	-0.3
IOMK				IAmb	IAmb	22 04 19.8	
	comp=Z,17nm,0.7s						
EDI	Edinburgh	28.86	325	eP	P	22 04 19.9	-0.9
EDI				IAmb	IAmb	22 04 21.0	
	comp=Z,58nm,0.6s						
DOMB	Dombas	28.88	343	eP	P	22 04 20.3	-0.8
NEWG	New Galloway	28.94	323	eP	P	22 04 20.7	-0.8
NEWG				IAmb	IAmb	22 04 22.8	
	comp=Z,23nm,0.7s						
GAL1	Galloway	29.05	322	eP	P	22 04 21.9	-0.7
GAL1				IAmb	IAmb	22 04 23.0	
	comp=Z,46nm,0.7s						
IWEX	Carrickbyrne,	29.07	316	P	P	22 04 24.2	+1.5
HOQ	Hoqain	29.15	105	P	P	22 04 24.4	+0.6
	SNR=29						
DSB	Dublin	29.19	318	P	P	22 04 21.9	-2.0
DSB	Dublin	29.19	318	P	P	22 04 23.2	-0.6
HRA	Herat	29.24	81	P	P	22 04 25.4	+0.7
BSY	Bisya	29.50	107	P	P	22 04 28.0	+1.1
	SNR=21						
ILTH	Belurgan, Co L	29.51	319	P	P	22 04 27.4	+0.8
INVG	Invergeldie, C	29.53	325	eP	P	22 04 25.5	-1.3
INVG				IAmb	IAmb	22 04 27.5	
	comp=Z,16nm,0.7s						
WHFO	Wadi Hawf	29.78	119	P	P	22 04 30.5	+1.1
ABTO	Aybut	29.81	120	P	P	22 04 31.5	+1.7
	SNR=6.1						
BIDO	Bidbid	29.83	105	P	P	22 04 30.3	+0.6
	SNR=8.9						
CLGH	Cloghs, Cushen	29.87	322	eP	P	22 04 28.8	-1.0
CLGH				IAmb	IAmb	22 04 30.5	
	comp=Z,59nm,0.8s						
SMDO	Samad	30.00	106	P	P	22 04 33.0	+1.5
	SNR=36						
LAWE	Loch Awe, Argy	30.09	324	eP	P	22 04 30.6	-1.1
LAWE				IAmb	IAmb	22 04 31.9	
	comp=Z,28nm,1.2s						
ARTI	Arti	30.14	36	LR	LR	22 20 08.6	
	comp=Z,660nm,19.2s,baz=238,slow=43						
ARTI	Arti	30.14	36	P	P	22 04 31.4	-0.8
ARTI	Arti	30.14	36	c iP	P	22 04 32.0	-0.2
ARTI				*PP	pP	22 04 46.6	+0.3
ARTI						22 05 28.1	
ARTI				S	S	22 09 26.9	+0.3
ARTI				SS	SnSn	22 11 02.0	-2.6
ARTI				pmax	pmax		
	comp=Z,82nm,0.8s						
ARTI	Arti	30.14	36	P	P	22 04 32.2	+0.1
RBK	Rabkut	30.36	119	P	P	22 04 36.2	+1.6
	SNR=5.1						
WSAR	Wadi Sarin	30.37	105	P	P	22 04 35.9	+1.3
	SNR=5.5						
JMDO	Jabal Madar	30.41	107	P	P	22 04 36.1	+1.2
	SNR=13						
NSS	Namsos	30.51	348	eP	P	22 04 33.0	-2.3
IDGL	Inch Island, C	30.58	321	P	P	22 04 35.7	-0.3
DMTO	DMTO	30.76	117	P	P	22 04 40.0	+2.0
	SNR=5.2						
IGLA	Glengowla, Co	30.92	317	P	P	22 04 39.5	+0.4
VAL	Valentia	30.92	314	P	P	22 04 38.8	-0.3
WBK	Wadi Bani Khal	30.96	105	P	P	22 04 41.4	+1.6
	SNR=12						
MHTO	MHTO	31.06	109	P	P	22 04 42.3	+1.7
	SNR=14						
SHAO	Shalim	31.06	116	P	P	22 04 42.5	+1.9
DQM	DQM	31.33	111	P	P	22 04 44.4	+1.4
	SNR=11						
SVE	Sverdlovsk	31.44	36	deP	P	22 04 44.2	+0.6
SVE				eS	S	22 09 46.9	-0.1
SVE				pmax	pmax		
	comp=Z,106nm,1.0s						
TORD	Torodi Ar. Bea	31.47	232	P	P	22 04 44.7	+0.4
	comp=Z,45nm,0.7s,baz=35,slow=12,SNR=237						
	comp=Z,45nm,0.7s						
TORD	Torodi Ar. Bea	31.47	232	P	P	22 04 44.0	-0.3
TORD				pP	pP	22 04 58.6	-0.7
TORD				IAmb	IAmb	22 05 03.2	
	comp=Z,52nm,0.8s						
JLN	Jalan Bani Buh	31.55	106	P	P	22 04 46.7	+1.7
	SNR=23						
MOR8	Moi Rana	31.66	351	eP	P	22 04 44.3	-1.2
LEIR	Leirfjorden	31.79	350	eP	P	22 04 45.4	-1.2
RAUS	Rausandaksla	31.97	351	eP	P	22 04 46.9	-1.2
STOK	Stokkvaagen	32.01	350	eP	P	22 04 46.8	-1.7
VAGH	Vaagaholmen	32.35	350	eP	P	22 04 50.7	-0.8
APA	Apatity	32.50	5	⇓iP	P	22 04 50.8	-2.0
APA				i		22 05 59.5	
APA				i S	S	22 09 58.3	-4.9
APA				i SS	SnSn	22 11 57.8	-3.9
APA				MLR	MLR		
	comp=Z,3µm,6.7s						
FAUS	Fauske	32.72	352	eP	P	22 04 53.4	-1.3
LODK	Lodwar	32.82	164	P	P	22 04 59.0	+2.8
	SNR=11						
LODK	Lodwar	32.82	164	P	P	22 04 58.1	+2.0
LVZ	Lovozero	32.92	6	P	P	22 04 54.1	-2.4
LVZ	Lovozero	32.92	6	⇑eP	P	22 04 53.7	-2.8
LVZ				pmax	pmax		
	comp=Z,74nm,1.5s						
LVZ				MLR	MLR		
	comp=Z,378nm,13.0s						
STEI	Steigen	33.25	352	eP	P	22 04 58.2	-1.1
CHM	Chimkent	33.99	65	eP	P	22 05 07.3	+1.1
	comp=Z,9.3nm,0.5s						
CHM	Chimkent	33.99	65	eP	P	22 05 07.2	+1.1
CHM				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BRLS	Borolday	34.14	64	eP	P	22 05 07.5	0.0
BRLS	Borolday	34.14	64	eP	P	22 05 07.4	0.0
ARA0	ARCESS Array S	34.24	359	eP	P	22 05 06.6	-1.3
ARCES	ARCESS Array B	34.24	359	P	P	22 05 06.2	-1.7
	comp=Z,20nm,0.4s,baz=179,slow=9.5,SNR=334						
ARCES				PcP	PcP	22 07 43.1	0.0
	comp=Z,6.9nm,0.5s,baz=168,slow=3.2,SNR=8.5						
ARCES				S	S	22 10 27.4	-2.7
	comp=Z,5.2nm,0.8s,baz=182,slow=21,SNR=2.6						
ARCES				LR	LR	22 19 53.7	
	comp=Z,772nm,19.1s,baz=178,slow=38						
	comp=Z,20nm,0.4s						
IUG	Iuzhnay	34.32	65	eP	P	22 05 10.3	+1.1
	comp=Z,23nm,0.6s						
IUG	Iuzhnay	34.32	65	eP	P	22 05 10.2	+1.1
IUG				pmax	pmax		
	comp=Z,23nm,0.6s						
JETT	Jettan, Norway	34.42	356	eP	P	22 05 08.2	-1.3
TRO	Tromso	34.58	355	eP	P	22 05 09.1	-1.7
KK31	Karatay Array	34.63	64	P	P	22 05 12.8	+1.2
KK31				IAmb	IAmb	22 05 40.8	
	comp=Z,88nm,1.2s						
KK31	Karatay Array	34.63	64	P	P	22 05 12.8	+1.2
KK31				pmax	pmax		
	comp=Z,88nm,1.2s						
KKAR	Karatay Array	34.63	64	P	P	22 05 12.7	+1.1
KKAR	Karatay Array	34.63	64	P	P	22 05 12.7	+1.1
VADS	Vadso	34.85	2	eP	P	22 05 12.5	-0.7
EDA	Edea	34.88	209	P	P	22 05 14.4	+0.4
EDA				IAmb	IAmb	22 05 30.2	
	comp=Z,39nm,1.0s						
DZA	Taraz	35.24	64	eP	P	22 05 18.2	+1.2
	comp=Z,15nm,0.7s						
DZA	Taraz	35.24	64	eP	P	22 05 18.1	+1.2
DZA				pmax	pmax		
	comp=Z,15nm,0.7s						
BORK	Borovoye	35.38	46	P	P	22 05 18.8	+0.8
BORK				IAmb	IAmb	22 05 20.8	
	comp=Z,56nm,1.1s						
BORK	Borovoye	35.38	46	ceP	P	22 05 18.6	+0.7
BORK				pmax	pmax		
	comp=Z,119nm,1.7s						
BORK	Borovoye	35.38	46	P	P	22 05 19.2	+1.2
HAMF	Hammerfest	35.38	358	eP	P	22 05 16.0	-1.7
BVAR	Borovoye Array	35.41	46	P	P	22 05 17.9	-0.3
	comp=Z,74nm,1.1s,baz=255,slow=5.7,SNR=122						
BVAR				S	S	22 10 49.0	+0.4
	comp=Z,4.9nm,1.0s,baz=280,slow=18,SNR=2.2						
BVAR				LR	LR	22 23 08.1	
	comp=Z,488nm,18.9s,baz=263,slow=42						
	comp=Z,74nm,1.1s						
PMAR	Madeira	35.87	279	eP	P	22 05 23.7	+1.1
PMAR				i IAmb	IAmb	22 05 53.6	
	comp=Z,194nm,1.3s						
MBAR	Mbarara	35.99	173	LR	LR	22 22 23.5	
	comp=Z,670nm,19.0s,baz=358,slow=40						
MBAR	Mbarara	35.99	173	P	P	22 05 27.5	+3.7
MBAR	Mbarara	35.99	173	P	P	22 05 24.9	+1.1
MBAR				pP	pP	22 05 37.2	-1.2
MBAR	Mbarara	35.99	173	⇓eP	P	22 05 26.1	+2.4
MBAR				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BRZS	Berezniki	36.35	52	eP	P	22 05 27.4	+1.0
BRZS	Berezniki	36.35	52	eP	P	22 05 27.3	+1.0
BTLS	Baital	37.11	60	eP	P	22 05 33.5	+0.6
	comp=Z,18nm,0.9s						
BTLS	Baital	37.11	60	eP	P	22 05 33.4	+0.6
BTLS				pmax	pmax		
	comp=Z,18nm,0.9s						
AAK	Ala-Archa	37.58	64	P	P	22 05 38.5	+1.5
	comp=Z,18nm,0.5s,baz=248,slow=6.9,SNR=18						
AAK				S	S	22 11 23.9	+1.7
	comp=Z,4.2nm,1.1s,baz=319,slow=10.0,SNR=4.2						
AAK				LR	LR	22 23 22.2	
	comp=Z,568nm,20.2s,baz=294,slow=40						
	comp=Z,18nm,0.5s						
AAK	Ala-Archa	37.58	64	P	P	22 05 39.6	+2.6
AAK	Ala-Archa	37.58	64	P	P	22 05 38.1	+1.1
AAK				IAmb	IAmb	22 06 06.0	
	comp=Z,80nm,1.1s						
AAK	Ala-Archa	37.58	64	i P	P	22 05 39.1	+2.1
	SNR=6.6						
AAK	Ala-Archa	37.58	64	deP	P	22 05 38.8	+1.8
AAK				pmax	pmax		
	comp=Z,40nm,1.3s						
SGDS	Sogindy	37.61	63	eP	P	22 05 38.3	+1.1
ACRG	Accra	38.47	226	P	P	22 05 44.3	-0.3
ACRG				IAmb	IAmb	22 06 04.1	
	comp=Z,47nm,0.8s						
BOOM	Boomskoye usch	38.66	64	IAmb	IAmb	22 06 32.7	
	comp=Z,48nm,1.0s						
KIBK	Kibwezi	39.03	161	P	P	22 05 49.7	+0.4
KIBK	Kibwezi	39.03	161	P	P	22 05 51.9	+2.7
KIBK	Kibwezi	39.03	161	P	P	22 05 50.4	+1.2
KSH	Kashi	39.10	69	P	P	22 05 50.6	+0.8
KSH				pP	pP	22 06 04.1	-0.8
KSH				ScP	ScP	22 11 41.6	-0.1
KSH				ScS	ScS	22 15 51.2	-2.2
KSH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,600nm,5.8s						
KSH				LR	LR		
	comp=Z,410nm,17.9s						
KSH				LR	LR		
	comp=Z,430nm,19.9s						
KSH				LR	LR		
	comp=Z,690nm,20.3s						
CHKK	Chushkaly	39.28	62	eP	P	22 05 52.4	+1.2
CHKK	Chushkaly	39.28	62	eP	P	22 05 52.3	+1.2
AAA	Alma-Ata	39.29	63	eP	P	22 05 52.4	+1.1
	comp=Z,26nm,0.7s						
AAA	Alma-Ata	39.29	63	eP	P	22 05 52.4	+1.1
AAA				pmax	pmax		
	comp=Z,25nm,0.7s						
TNSS	Tian-Shan	39.34	63	eP	P	22 05 52.8	+0.7
TNSS	Tian-Shan	39.34	63	eP	P	22 05 52.7	+0.7
MDOK	Medeo	39.40	63	eP	P	22 05 53.3	+1.0
MDOK	Medeo	39.40	63	eP	P	22 05 53.2	+1.0
BJO1	Bjornoya	39.40	357	eP	P	22 05 50.4	-1.3
KDJ	Kajisay	39.61	64	IAmb	IAmb	22 06 18.3	
	comp=Z,52nm,0.8s						
TARG	Taragay, Kyrgy	40.13	65	IAmb	IAmb	22 06 28.4	
	comp=Z,49nm,1.0s						
KURBB	Kurchatov Arra	40.14	51	P	P	22 05 58.5	+0.4
	comp=Z,47nm,0.4s,baz=278,slow=8.8,SNR=208						
KURBB				ScP	ScP	22 11 45.4	+0.1
	comp=Z,2.3nm,0.9s,baz=272,slow=4.5,SNR=4.5						
KURBB				S	S	22 12 01.5	+1.4
	comp=Z,19nm,1.2s,baz=283,slow=17,SNR=16						
KURBB				LR	LR	22 26 31.2	
	comp=Z,323nm,19.6s,baz=300,slow=42						
	comp=Z,47nm,0.4s						
TDK	Taldyqorghan	40.20	60	eP	P	22 05 59.9	+1.1
	comp=Z,19nm,0.7s						
TDK	Taldyqorghan	40.20	60	eP	P	22 05 59.8	+1.1
TDK				pmax	pmax		
	comp=Z,19nm,0.7s						
KURK	Kurchatov	40.20	51	P	P	22 06 00.0	+1.4
KURK	Kurchatov	40.20	51	P	P	22 05 58.2	-0.4
KURK				IAmb	IAmb	22 06 01.4	
	comp=Z,65nm,0.7s						
KURK	Kurchatov	40.20	51	ceP	P	22 05 59.2	+0.6
KURK				pmax	pmax		
	comp=Z,78nm,0.9s						
KURK	Kurchatov	40.20	51	P	P	22 05 59.4	+0.8
KURK				sP	sP	22 06 20.1	+0.2
JMIC	Jan Mayen	40.21	343	LR	LR	22 24 26.1	
	comp=Z,348nm,18.2s,baz=130,slow=39						
SATY	Saty	40.40	63	eP	P	22 06 01.6	+1.0
	comp=Z,22nm,0.8s						
SATY	Saty	40.40	63	eP	P	22 06 01.5	+1.0
SATY				pmax	pmax		
	comp=Z,22nm,0.8s						
DBIC	Dimbokro	40.56	233	P	P	22 06 01.8	-0.2
	comp=Z,17nm,0.5s,baz=67,slow=7.9,SNR=38						
DBIC				LR	LR	22 25 58.9	
	comp=Z,968nm,18.4s,baz=52,slow=41						
	comp=Z,17nm,0.5s						
DBIC	Dimbokro	40.56	233	P	P	22 06 01.8	-0.2
UZB	Uzynbulak	40.83	63	eP	P	22 06 05.2	+1.0
UZB	Uzynbulak	40.83	63	eP	P	22 06 05.1	+1.0
SHLS	Shalkode	41.15	63	eP	P	22 06 10.3	+3.5
SHLS	Shalkode	41.15	63	eP	P	22 06 10.2	+3.5
HOPEN	Hopen	41.25	359	eP	P	22 06 05.9	-1.1
WUS	Wushi	41.26	66	P	P	22 06 09.5	+1.8
WUS				pP	pP	22 06 24.9	+2.0
MAKZ	Makanchi	42.53	57	P	P	22 06 18.6	+0.9
MAKZ	Makanchi	42.53	57	P	P	22 06 18.7	+0.9
MAKZ				pmax	pmax		
	comp=Z,47nm,1.3s						
MK31	Makanchi Array	42.74	57	P	P	22 06 20.4	+0.8
MK31	Makanchi Array	42.74	57	ceP	P	22 06 20.4	+0.8
MKAR	Makanchi Array	42.74	57	P	P	22 06 20.5	+1.0
	comp=Z,18nm,0.3s,baz=270,slow=8.6,SNR=244						
MKAR				ScP	ScP	22 11 55.2	-0.7
	comp=Z,3.8nm,0.7s,baz=270,slow=3.6,SNR=5.7						
MKAR				S	S	22 12 39.3	+0.4
	comp=Z,8.6nm,1.1s,baz=306,slow=7.1,SNR=4.9						
MKAR				LR	LR	22 26 52.0	
	comp=Z,423nm,20.5s,baz=257,slow=40						
	comp=Z,18nm,0.3s						
MKAR	Makanchi Array	42.74	57	P	P	22 06 20.3	+0.7
SPB2	Spitsbergen Ar	43.14	357	P	P	22 06 21.1	-1.2
SPB2				IAmb	IAmb	22 06 22.5	
	comp=Z,109nm,1.2s						
SPA0	Spitsbergen Ar	43.15	357	eP	P	22 06 21.4	-1.0
SPITS	Spitsbergen Ar	43.15	357	P	P	22 06 21.5	-0.8
	comp=Z,30nm,0.5s,baz=147,slow=9.6,SNR=105						
SPITS				LR	LR	22 24 53.2	
	comp=Z,539nm,21.3s,baz=168,slow=37						
	comp=Z,30nm,0.5s						
SCO	Scoresbysund	43.55	339	i P	P	22 06 25.7	+0.1
ZALV	Zalesovo Beam	44.07	46	P	P	22 06 30.1	+0.1
	comp=Z,73nm,0.4s,baz=269,slow=8.8,SNR=454						
ZALV				ScP	ScP	22 12 01.0	0.0
	comp=Z,1.2nm,0.6s,baz=227,slow=3.2,SNR=2.6						
ZALV				S	S	22 12 56.8	-1.2
	comp=Z,2.2nm,0.8s,baz=181,slow=25,SNR=4.3						
ZALV				LR	LR	22 28 33.5	
	comp=Z,257nm,20.1s,baz=269,slow=41						
	comp=Z,73nm,0.4s						
ZALV	Zalesovo Beam	44.07	46	P	P	22 06 29.9	-0.2
KBS	Kingsbay	44.10	356	P	P	22 06 29.5	-0.5
KBS	Kingsbay	44.10	356	eP	P	22 06 29.2	-0.7
KBS	Kingsbay	44.10	356	deP	P	22 06 29.5	-0.5
KBS				pmax	pmax		
	comp=Z,85nm,0.6s						
KBS	Kingsbay	44.10	356	P	P	22 06 29.4	-0.5
KBS	Kingsbay	44.10	356	i P	P	22 06 29.6	-0.3
ZSN	Zaisan	44.43	56	eP	P	22 06 34.1	+1.1
ZSN	Zaisan	44.43	56	eP	P	22 06 34.1	+1.1
DBG	Daneborg	45.02	344	i P	P	22 06 37.3	-0.1
DBG				IAmb	IAmb	22 06 38.5	
	comp=Z,23nm,1.1s						
DGZ	Jazzator, Alta	45.89	52	ceP	P	22 06 45.5	+0.7
DGZ				pmax	pmax		
	comp=Z,25nm,0.8s						
DAG	Danmarks Havn	46.10	347	i P	P	22 06 44.9	-1.0
DAG				IAmb	IAmb	22 06 46.0	
	comp=Z,26nm,0.8s						
WMQ	Urumqi	46.95	60	eP	P	22 06 55.2	+2.1
WMQ				pP	pwP	22 07 10.4	-0.3
WMQ				sP	sP	22 07 18.3	+3.7
WMQ				S	S	22 13 39.8	-0.1
WMQ				pmax	pmax		
	comp=Z,21nm,1.1s						
WMQ				LR	LR		
	comp=Z,540nm,24.5s						
NRIK	Noril'sk	47.23	25	P	P	22 06 55.7	+0.9
	comp=Z,44nm,0.5s,baz=255,slow=4.9,SNR=84						
NRIK				LR	LR	22 29 18.7	
	comp=Z,337nm,18.9s,baz=258,slow=39						
	comp=Z,44nm,0.5s						
NRIK	Noril'sk	47.23	25	P	P	22 06 55.0	+0.3
NRIK	Noril'sk	47.23	25	c iP	P	22 06 55.1	+0.3
NRIK				pmax	pmax		
	comp=Z,57nm,1.0s						
MSEY	Mahe Island	48.23	140	P	P	22 07 05.9	+2.7
MSEY	Mahe Island	48.23	140	P	P	22 07 04.4	+1.2
MSEY				IAmb	IAmb	22 07 06.4	
	comp=Z,61nm,1.1s						
MSEY	Mahe Island	48.23	140	P	P	22 07 04.4	+1.2
MSEY				pmax	pmax		
	comp=Z,61nm,1.2s						
NOR	Nord	48.89	352	i P	P	22 07 05.7	-1.8
NOR				IAmb	IAmb	22 07 07.2	
	comp=Z,54nm,0.4s						
SUMG	Summit	49.19	339	P	P	22 07 08.9	-1.4
SUMG	Summit	49.19	339	P	P	22 07 09.3	-1.0
SUMG	Summit	49.19	339	i P	P	22 07 10.2	-0.1
SUMG				IAmb	IAmb	22 07 14.0	
	comp=Z,2µm,5.4s						
HYB	Hyderabad	49.36	97	eP	P	22 07 12.3	+0.5
HYB				epP	pP	22 07 28.9	+1.6
HYB				ePP	PP	22 09 07.6	+1.3
HYB				eScP	ScP	22 12 24.3	+0.5
EVN	Everest	51.18	80	P	P	22 07 26.5	+0.2
KNGR	Kungurtug, Tuv	52.16	50	ceP	P	22 07 33.9	+1.2
KNGR				pmax	pmax		
	comp=Z,33nm,1.1s						
IVI	Ivigtut	52.51	324	P	P	22 07 34.5	-0.4
IVI	Ivigtut	52.51	324	P	P	22 07 34.7	-0.2
IVI	Ivigtut	52.51	324	i P	P	22 07 34.5	-0.4
IVI				IAmb	IAmb	22 07 36.4	

	comp=Z,116nm,1.0s						
KSANE	**Kasane**	**52.88**	**182**	*i* P	**P**	**22 07 40.1**	**+1.9**
SFJD	**Kangerlussuaq**	**53.04**	**331**	LR	LR	22 31 33.0	
	comp=Z,382nm,19.4s,baz=88,slow=38						
SFJD	**Kangerlussuaq**	**53.04**	**331**	P	**P**	**22 07 37.2**	**-1.5**
SFJD	**Kangerlussuaq**	**53.04**	**331**	*i* P	**P**	**22 07 38.7**	**0.0**
SFJD				IAmb	IAmb	22 07 39.2	
	comp=Z,60nm,0.7s						
ILULI	**Ilulissat**	**53.08**	**334**	*i* P	**P**	**22 07 38.2**	**-0.7**
ILULI				IAmb	IAmb	22 07 38.8	
	comp=Z,88nm,0.9s						
NEEM	**North Greenlan**	**53.09**	**345**	*i* P	**P**	**22 07 38.9**	**-0.5**
NEEM				IAmb	IAmb	22 07 40.4	
	comp=Z,58nm,0.8s						
SAATT	**Saattut**	**53.18**	**336**	*i* P	**P**	**22 07 39.5**	**-0.2**
SAATT				IAmb	IAmb	22 07 39.7	
	comp=Z,97nm,1.1s						
SAQQ	**Saqqaq**	**53.33**	**335**	*i* P	**P**	**22 07 40.1**	**-0.7**
SAQQ				IAmb	IAmb	22 07 40.7	
	comp=Z,70nm,0.8s						
SBV	**Sambava**	**53.38**	**151**	P	**P**	**22 07 45.7**	**+3.9**
NUUG	**Nuugaatsiaq**	**53.66**	**337**	*i* P	**P**	**22 07 42.0**	**-1.2**
NUUG				IAmb	IAmb	22 07 43.2	
	comp=Z,40nm,0.6s						
NUUK	**Nuuk**	**53.78**	**328**	*i* P	**P**	**22 07 43.0**	**-1.2**
NUUK				IAmb	IAmb	22 07 44.7	
	comp=Z,83nm,1.1s						
GDH	**Godhavn**	**53.94**	**334**	*i* P	**P**	**22 07 44.6**	**-0.6**
GDH				IAmb	IAmb	22 07 45.5	
	comp=Z,98nm,0.7s						
LSA	**Lhasa**	**53.95**	**77**	P	**P**	**22 07 47.3**	**+0.8**
MOY	**Mondy**	**54.06**	**48**	*e*P	**P**	**22 07 49.0**	**+2.4**
MOY				*e*		22 08 04.8	
MOY				pmax	pmax		
	comp=Z,52nm,1.6s						
GOMU	**GeErMu**	**54.33**	**68**	P	**P**	**22 07 49.4**	**+0.3**
GOMU				pP	pP	22 08 03.9	-0.7
GOMU				PcP	**PcP**	**22 08 52.4**	**-0.1**
GOMU				S	**S**	**22 15 24.3**	**+1.3**
GOMU				pmax	pmax		
	comp=Z,23nm,1.9s						
UPNV	**Upernavik**	**54.47**	**339**	*i* P	**P**	**22 07 48.3**	**-0.8**
UPNV				IAmb	IAmb	22 07 49.4	
	comp=Z,74nm,0.7s						
KULLO	**Kullorsuaq**	**54.62**	**341**	*i* P	**P**	**22 07 49.6**	**-0.6**
KULLO				IAmb	IAmb	22 07 50.2	
	comp=Z,77nm,0.8s						
TSUM	**Tsumeb**	**54.92**	**190**	LR	LR	22 33 04.0	
	comp=Z,1µm,19.8s,baz=6.0,slow=38						
TSUM	**Tsumeb**	**54.92**	**190**	P	**P**	**22 07 54.9**	**+1.9**
TSUM				IAmb	IAmb	22 08 09.4	
	comp=Z,54nm,1.0s						
ALE	**Alert**	**55.02**	**351**	P	**P**	**22 07 52.0**	**-1.0**
ALE				sP	**sP**	**22 08 14.3**	**-0.7**
MATP	**Matopo**	**55.51**	**178**	LR	LR	22 32 59.3	
	comp=Z,402nm,18.6s,baz=6.0,slow=37						
TLY	**Talaya**	**55.66**	**47**	P	**P**	**22 08 00.7**	**+2.6**
TLY	**Talaya**	**55.66**	**47**	P	**P**	**22 07 59.5**	**+1.4**
TLY	**Talaya**	**55.66**	**47**	*ce*P	**P**	**22 08 00.8**	**+2.8**
TLY				pmax	pmax		
	comp=Z,28nm,1.3s						
ZAK	**Zakamensk**	**55.78**	**49**	*e*P	**P**	**22 08 00.1**	**+1.0**
ZAK				pmax	pmax		
	comp=Z,43nm,1.4s						
IRK	**Irkutsk**	**55.88**	**47**	*e*P	**P**	**22 08 00.0**	**+0.4**
IRK				*e*		22 08 16.5	
IRK				*e*S	**S**	**22 15 42.3**	**-0.3**
IRK				*e*		22 16 09.8	
IRK				pmax	pmax		
	comp=Z,90nm,1.6s						
BROLN	**Tlhalogang**	**56.15**	**179**	*i* P	**P**	**22 08 03.7**	**+1.8**
SHL	**Shillong**	**56.30**	**81**	P	**P**	**22 08 03.4**	**+0.2**
	SNR=8.0						
SHL	**Shillong**	**56.30**	**81**	P	**P**	**22 08 02.6**	**-0.6**
SHL				IAmb	IAmb	22 08 33.4	
	comp=Z,67nm,1.2s						
SHL	**Shillong**	**56.30**	**81**	P	**P**	**22 08 02.6**	**-0.6**
SHL				pmax	pmax		
	comp=Z,67nm,1.2s						
GRTLG	**Ghanzi**	**56.63**	**186**	*i* P	**P**	**22 08 07.0**	**+1.6**
GTA	**Gaotai**	**56.90**	**62**	*e*P	**P**	**22 08 07.4**	**+0.2**
GTA				pP	pP	22 08 23.9	+1.0
GTA				S	**S**	**22 15 57.3**	**+0.7**
GTA				sS	sS	22 16 25.1	+1.7
GTA				ScS	**ScS**	**22 17 50.2**	**-1.1**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
GTA				LR	LR		
	comp=Z,240nm,16.0s						
GTA				LR	LR		
	comp=Z,240nm,18.2s						
GTA				LR	LR		
	comp=Z,400nm,20.7s						
KHWEE	**KHWEE**	**57.00**	**181**	*i* P	**P**	**22 08 10.3**	**+2.4**
OPO	**Ambohidratompo**	**57.11**	**156**	LR	LR	22 33 02.3	
	comp=Z,237nm,21.9s,baz=172,slow=36						
TULEG	**Thule**	**57.16**	**344**	IAmb	IAmb	22 08 08.1	
	comp=Z,87nm,0.8s						
TULEG	**Thule**	**57.16**	**344**	*i* P	**P**	**22 08 07.5**	**-0.8**
TULEG				IAmb	IAmb	22 08 08.2	
	comp=Z,147nm,1.2s						
BRDH	**Bariadhala**	**57.43**	**84**	LR	LR	22 39 44.2	
	comp=Z,183nm,18.7s,baz=301,slow=43						
KGCAE	**Kacgae**	**58.04**	**185**	*i* P	**P**	**22 08 16.8**	**+1.6**
WIN	**Windhoek**	**58.29**	**190**	P	**P**	**22 08 18.9**	**+1.8**
WIN				pP	**pP**	**22 08 32.0**	**-0.8**
KOOLE	**Kule**	**58.34**	**187**	*i* P	**P**	**22 08 18.7**	**+1.4**
LPHEP	**Lephephe**	**58.40**	**181**	*i* P	**P**	**22 08 19.4**	**+1.7**
SONM	**Songino Array**	**58.51**	**51**	P	**P**	**22 08 19.7**	**+1.4**
	comp=Z,15nm,0.5s,baz=289,slow=7.3,SNR=90						
SONM				ScP	**ScP**	**22 13 04.0**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=282,slow=2.7,SNR=3.0						
SONM				S	**S**	**22 16 19.1**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=236,slow=40,SNR=2.0						
SONM				LR	LR	22 36 37.4	
	comp=Z,631nm,21.3s,baz=295,slow=39						
	comp=Z,15nm,0.5s						
SONM	**Songino Array**	**58.51**	**51**	P	**P**	**22 08 19.2**	**+0.8**
SONM				IAmb	IAmb	22 08 37.1	
	comp=Z,45nm,1.0s						
ULN	**Ulaanbaatar**	**58.91**	**51**	P	**P**	**22 08 23.0**	**+1.8**
ULN	**Ulaanbaatar**	**58.91**	**51**	P	**P**	**22 08 22.1**	**+0.8**
ULN	**Ulaanbaatar**	**58.91**	**51**	P	**P**	**22 08 22.3**	**+1.0**
ULN	**Ulaanbaatar**	**58.91**	**51**	*ce*P	**P**	**22 08 22.2**	**+1.0**
ULN				pmax	pmax		
	comp=Z,28nm,1.0s						
ULN	**Ulaanbaatar**	**58.91**	**51**	P	**P**	**22 08 22.4**	**+1.2**
SKOMA	**Sekoma**	**59.60**	**183**	*i* P	**P**	**22 08 27.6**	**+1.6**
LBTB	**Lobatse**	**60.05**	**181**	LR	LR	22 35 29.8	
	comp=Z,295nm,18.4s,baz=2.0,slow=37						
LBTB	**Lobatse**	**60.05**	**181**	P	**P**	**22 08 31.1**	**+2.0**
LBTB				pP	**pP**	**22 08 44.7**	**-0.2**
LBTB				IAmb	IAmb	22 08 46.5	
	comp=Z,60nm,1.2s						
LBTB	**Lobatse**	**60.05**	**181**	P	**P**	**22 08 31.1**	**+2.0**
LBTB				pmax	pmax		
	comp=Z,60nm,1.2s						
DRLN	**Deer Lake**	**60.59**	**312**	P	**P**	**22 08 32.7**	**+0.2**
TIXI	**Tiksi**	**60.59**	**21**	LR	LR	22 38 21.2	
	comp=Z,548nm,18.6s,baz=302,slow=40						
TIXI	**Tiksi**	**60.59**	**21**	P	**P**	**22 08 31.8**	**-0.3**
TIXI	**Tiksi**	**60.59**	**21**	*ce*P	**P**	**22 08 31.8**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,58nm,0.8s						
TIXI				MLR	MLR		
	comp=Z,609nm,20.0s						
TIXI	**Tiksi**	**60.59**	**21**	P	**P**	**22 08 32.3**	**+0.2**
PHPEN	**Phepeng**	**60.60**	**184**	*i* P	**P**	**22 08 34.5**	**+1.7**
POIN	**Pond Inlet**	**60.75**	**341**	P	**P**	**22 08 32.4**	**-0.8**
MAKGR	**Makgori**	**60.86**	**182**	*i* P	**P**	**22 08 36.6**	**+2.1**
FRB	**Frobisher Bay**	**61.06**	**330**	LR	LR	22 35 21.7	
	comp=Z,409nm,21.2s,baz=74,slow=36						
LZDM	**Lanzhou Array**	**61.06**	**65**	P	**P**	**22 08 38.4**	**+2.0**
	comp=Z,5.0nm,0.5s,baz=289,slow=4.5,SNR=13						
	comp=Z,5.0nm,0.5s						
LZH	**Lanzhou**	**61.12**	**64**	*e*P	**P**	**22 08 38.4**	**+1.9**
LZH				pP	pP	22 08 54.5	+2.1
LZH				S	**S**	**22 16 50.8**	**-0.6**
LZH				sS	sS	22 17 16.9	-0.9
LZH				SS	**SS**	**22 20 49.4**	**-2.3**
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				LR	LR		
	comp=Z,450nm,19.9s						
LZH				LR	LR		
	comp=Z,380nm,20.4s						
LZH				LR	LR		
	comp=Z,730nm,20.0s						
TNCH	**TengChong**	**61.88**	**78**	⇑P	**P**	**22 08 43.1**	**+1.3**
TNCH				pP	pP	22 08 58.5	+0.7
TNCH				sP	sP	22 09 03.3	-1.2
TNCH				S	**S**	**22 17 00.4**	**-0.9**
TNCH				SS	**SS**	**22 21 05.8**	**+1.8**
TNCH				pmax	pmax		
	comp=Z,28nm,1.3s						
TNCH				pmax	pmax		
	comp=Z,240nm,4.8s						
TNCH				LR	LR		
	comp=Z,220nm,14.4s						
TNCH				LR	LR		
	comp=Z,200nm,14.2s						
TNCH				LR	LR		
	comp=Z,290nm,24.5s						
KUQ	**Kuujjuuaa**	**63.19**	**324**	P	**P**	**22 08 49.6**	**-0.1**
CD2	**Chengdu**	**63.29**	**70**	P	**P**	**22 08 52.1**	**+1.1**
CD2				pP	pP	22 09 06.6	-0.1
CD2				sP	sP	22 09 13.8	+0.5
CD2				S	**S**	**22 17 17.9**	**-0.7**
CD2				pmax	pmax		
	comp=Z,50nm,1.0s						
CD2				pmax	pmax		
	comp=Z,2µm,4.9s						
CD2				LR	LR		
	comp=Z,660nm,19.0s						
CD2				LR	LR		
	comp=Z,700nm,18.4s						
CD2				LR	LR		
	comp=Z,500nm,18.0s						
ILON	**Igloolik, Nuna**	**63.41**	**338**	P	**P**	**22 08 50.1**	**-0.9**
BOSA	**Boshof**	**63.64**	**181**	P	**P**	**22 08 54.4**	**+1.2**
	comp=Z,8.0nm,0.6s,baz=1.0,slow=6.8,SNR=28						
	comp=Z,8.0nm,0.6s						
BOSA	**Boshof**	**63.64**	**181**	P	**P**	**22 08 55.0**	**+1.9**
BOSA				pP	**pP**	**22 09 07.9**	**-1.2**
BOSA				IAmb	IAmb	22 09 10.8	
	comp=Z,80nm,1.2s						
BOSA	**Boshof**	**63.64**	**181**	P	**P**	**22 08 55.0**	**+1.9**
BOSA				pmax	pmax		
	comp=Z,80nm,1.3s						
BOSA	**Boshof**	**63.64**	**181**	P	**P**	**22 08 54.4**	**+1.2**
BOSA				sP	**sP**	**22 09 16.7**	**+0.9**
BTO	**Baotou**	**63.65**	**58**	*e*P	**P**	**22 08 53.4**	**+0.1**
BTO				sP	**sP**	**22 09 19.3**	**+3.2**
BTO				S	**S**	**22 17 22.6**	**-0.4**
BTO				pmax	pmax		
	comp=Z,14nm,0.5s						
BTO				pmax	pmax		
	comp=Z,390nm,4.2s						
BTO				LR	LR		
	comp=Z,780nm,6.3s						
BTO				LR	LR		
	comp=Z,710nm,17.1s						
BTO				LR	LR		
	comp=Z,700nm,15.2s						
PZH	**PanZhiHua**	**63.74**	**75**	P	**P**	**22 08 55.7**	**+1.6**
SCHQ	**Schefferville**	**63.75**	**320**	P	**P**	**22 08 53.4**	**-0.2**
	comp=Z,74nm,0.6s,baz=67,slow=4.9,SNR=138						
SCHQ				LR	LR	22 37 08.8	
	comp=Z,230nm,18.0s,baz=85,slow=36						
	comp=Z,74nm,0.6s						
RES	**Resolute Bay**	**63.76**	**345**	LR	LR	22 39 20.0	
	comp=Z,217nm,19.0s,baz=22,slow=39						
HHC	**Hu-ho-hao-te**	**64.61**	**57**	*e*P	**P**	**22 09 00.8**	**+1.2**
HHC				pP	pP	22 09 17.2	+1.5
HHC				sP	sP	22 09 22.7	+0.3
HHC				S	**S**	**22 17 33.0**	**-1.8**
HHC				SS	**SS**	**22 21 43.4**	**-2.4**
HHC				pmax	pmax		
	comp=Z,33nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,4.6s						
HHC				LR	LR		
	comp=Z,220nm,17.6s						
HHC				LR	LR		
	comp=Z,230nm,16.2s						
HHC				LR	LR		
	comp=Z,310nm,18.7s						
YAK	**Yakutsk**	**65.15**	**30**	LR	LR	22 41 11.3	
	comp=Z,343nm,19.5s,baz=290,slow=39						
YAK	**Yakutsk**	**65.15**	**30**	P	**P**	**22 09 01.7**	**-0.8**
YAK	**Yakutsk**	**65.15**	**30**	*e*P	**P**	**22 09 01.3**	**-1.2**
YAK				e*PP	**sP**	**22 09 24.1**	**-0.9**
YAK				*e*		22 09 32.8	
YAK				*e*		22 11 25.7	
YAK				*e*PPP	PPP	22 12 59.0	
YAK				*e*S	**S**	**22 17 38.2**	**-2.3**
YAK				e*SS	sS	22 18 17.9	+11
YAK				*e*		22 18 48.1	
YAK				*e*SS	**SS**	**22 21 48.7**	**-4.3**
YAK				pmax	pmax		
	comp=Z,65nm,1.1s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,14nm,1.6s						
YAK				pmax	pmax		
	comp=Z,169nm,5.6s						
YAK				pmax	pmax		
	comp=N,146nm,4.6s						
YAK				pmax	pmax		
	comp=E,155nm,5.4s						
YAK				smax	smax		
	comp=E,107nm,3.0s						
YAK				smax	smax		
	comp=N,104nm,2.8s						
KMI	**Kunming**	**65.19**	**76**	P	**P**	**22 09 04.3**	**+0.6**
KMI				pP	pwP	22 09 21.8	+0.1
KMI				S	**S**	**22 17 41.4**	**-1.3**
KMI				pmax	pmax		
	comp=N,22nm,1.1s						
KMI				LR	LR		
	comp=N,280nm,21.7s						
KMI				LR	LR		
	comp=N,260nm,23.0s						
KMI				LR	LR		
	comp=N,520nm,23.2s						
CHTO	**Chiang Mai**	**65.27**	**84**	P	**P**	**22 09 05.1**	**+1.0**
CHTO	**Chiang Mai**	**65.27**	**84**	P	**P**	**22 09 04.2**	**+0.2**
CHTO	**Chiang Mai**	**65.27**	**84**	P	**P**	**22 09 04.4**	**+0.4**
CHTO	**Chiang Mai**	**65.27**	**84**	P	**P**	**22 09 04.2**	**+0.2**
	comp=N,463nmcomp=N,19nm,1.0s						
CHTO	**Chiang Mai**	**65.27**	**84**	P	**P**	**22 09 04.2**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,38nm,1.2s						
CHTO	**Chiang Mai**	**65.27**	**84**	P	**P**	**22 09 04.5**	**+0.5**
CM31	**Chiang Mai Arr**	**65.45**	**84**	P	**P**	**22 09 06.3**	**+1.0**
CM31	**Chiang Mai Arr**	**65.45**	**84**	P	**P**	**22 09 05.8**	**+0.6**
CM31				IAmb	IAmb	22 09 34.0	
	comp=Z,36nm,0.9s						
CMAR	**Chiang Mai Arr**	**65.45**	**84**	P	**P**	**22 09 06.0**	**+0.8**
	comp=Z,10nm,0.8s,baz=300,slow=8.2,SNR=66						
CMAR				S	**S**	**22 17 45.7**	**+0.1**
	comp=Z,1.3nm,0.3s,baz=0.0,slow=40,SNR=2.2						
	comp=Z,10nm,0.8s						
XAN	**Xi'an**	**65.76**	**65**	⇑P	**P**	**22 09 07.9**	**+0.9**
XAN				S	**S**	**22 17 48.9**	**-0.1**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,220nm,3.7s						
HIA	**Hailar**	**66.10**	**46**	IAmb	IAmb	22 09 27.9	
	comp=Z,54nm,1.1s						
HIA	**Hailar**	**66.10**	**46**	P	**P**	**22 09 10.2**	**+1.2**
HIA				pP	**pP**	**22 09 25.7**	**+1.1**
XLT	**XiLinHaoTe**	**66.27**	**52**	*e*P	**P**	**22 09 11.4**	**+1.2**
XLT				S	**S**	**22 17 54.3**	**-0.7**
XLT				ScS	**SKSac**	**22 18 58.7**	**-2.6**
XLT				SS	**SS**	**22 22 10.0**	**-1.4**
XLT				pmax	pmax		
	comp=Z,27nm,1.3s						
XLT				pmax	pmax		
	comp=Z,160nm,6.1s						
XLT				LR	LR		
	comp=Z,400nm,19.6s						
XLT				LR	LR		
	comp=Z,550nm,22.1s						
LMN	**Caledonia Moun**	**66.49**	**310**	IAmb	IAmb	22 09 12.9	
	comp=Z,63nm,1.0s						
BATG	**Bathurst New B**	**66.61**	**312**	IAmb	IAmb	22 09 30.6	
	comp=Z,51nm,1.0s						
TIY	**Taiyuan**	**66.61**	**60**	*e*P	**P**	**22 09 15.0**	**+2.5**
TIY				sP	**sP**	**22 09 37.8**	**+2.5**
TIY				S	**S**	**22 17 57.9**	**-1.4**
TIY				sS	**sS**	**22 18 29.6**	**+3.6**
TIY				pmax	pmax		
	comp=Z,27nm,0.6s						
GYA	**Guiyang**	**67.63**	**73**	P	**P**	**22 09 23.2**	**+4.0**
GYA				pP	pP	22 09 37.6	+2.6
GYA				PcP	**PcP**	**22 09 48.4**	**+2.5**
GYA				S	**S**	**22 18 08.1**	**-3.9**
GYA				pmax	pmax		
	comp=Z,23nm,0.9s						
GYA				pmax	pmax		
	comp=Z,220nm,5.2s						
ENH	**Enshi**	**67.95**	**68**	IAmb	IAmb	22 09 47.5	
	comp=Z,48nm,1.1s						
SLVN	**Son La**	**68.00**	**79**	P	**P**	**22 09 21.7**	**+0.3**
SLVN	**Son La**	**68.00**	**79**	P	**P**	**22 09 22.3**	**+0.8**
BJI	**Beijing**	**68.11**	**56**	P	**P**	**22 09 23.5**	**+1.7**
BJI				sP	**sP**	**22 09 44.2**	**-0.2**
BJI				S	**S**	**22 18 18.9**	**+1.9**
BJI				sS	**sS**	**22 18 42.7**	**-1.6**
BJI				SS	**SS**	**22 22 46.1**	**+6.2**
BJI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BJI				LR	LR		
	comp=Z,200nm,21.9s						
BJI				LR	LR		
	comp=Z,120nm,18.5s						
BJI				LR	LR		
	comp=Z,160nm,23.2s						
LYN	**LuoYang**	**68.11**	**63**	*e*P	**P**	**22 09 22.0**	**+0.1**
LYN				pP	sP	22 09 43.7	-1.0
LYN				S	**S**	**22 18 18.6**	**+1.3**
LYN				sS	sS	22 18 51.9	+7.9
LYN				pmax	pmax		
	comp=Z,16nm,0.5s						
LYN				pmax	pmax		
	comp=Z,150nm,6.1s						
LYN				LR	LR		
	comp=Z,380nm,24.4s						
LYN				LR	LR		
	comp=Z,370nm,22.7s						
LYN				LR	LR		
	comp=Z,460nm,21.6s						
HNS	**HongShan**	**68.35**	**59**	⇓P	**P**	**22 09 25.2**	**+1.8**
HNS				S	**S**	**22 18 22.0**	**+2.0**
HNS				pmax	pmax		
	comp=Z,15nm,1.4s						
HNS				LR	LR		
	comp=Z,220nm,22.0s						
HNS				LR	LR		
	comp=Z,320nm,21.2s						
HNS				LR	LR		
	comp=Z,380nm,24.0s						
D62A	**Allapoint, All**	**68.50**	**313**	P	**P**	**22 09 24.5**	**+0.4**
E62A	**Clayton Lake**	**69.01**	**313**	IAmb	IAmb	22 09 45.7	
	comp=Z,58nm,1.0s						
HEH	**HeiHe**	**69.97**	**42**	*e*P	**P**	**22 09 33.8**	**+0.6**
HEH				pP	**pP**	**22 09 49.4**	**+0.5**
HEH				PcP	**sP**	**22 09 57.0**	**+1.6**
HEH				S	**S**	**22 18 37.5**	**-1.2**
HEH				pmax	pmax		
	comp=Z,52nm,1.1s						
HEH				pmax	pmax		
	comp=Z,210nm,3.6s						
HEH				LR	LR		
	comp=Z,430nm,16.0s						
HEH				LR	LR		
	comp=Z,160nm,16.7s						
HEH				LR	LR		
	comp=Z,590nm,20.5s						
TIA	**Tai'an**	**70.62**	**59**	P	**P**	**22 09 38.7**	**+1.3**
TIA				S	**S**	**22 18 43.9**	**-2.9**
TIA				pmax	pmax		
	comp=Z,15nm,1.1s						
TIA				pmax	pmax		
	comp=Z,170nm,4.4s						
TIA				LR	LR		
	comp=Z,300nm,18.4s						
TIA				LR	LR		
	comp=Z,320nm,17.1s						
TIA				LR	LR		
	comp=Z,210nm,22.4s						
BLKN	**Baker Lake**	**70.91**	**337**	IAmb	IAmb	22 09 39.0	
	comp=Z,55nm,0.8s						
GULI	**GuiLin**	**71.10**	**72**	P	**P**	**22 09 39.6**	**-0.9**
GULI				S	**S**	**22 18 47.8**	**-4.8**
GULI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GULI				LR	LR		
	comp=Z,170nm,23.1s						
GULI				LR	LR		
	comp=Z,260nm,24.7s						
GULI				LR	LR		
	comp=Z,260nm,22.6s						
A36M	**Sachs Harbour**	**71.13**	**351**	P	**P**	**22 09 39.2**	**-0.6**
A36M				IAmb	IAmb	22 10 03.6	
	comp=Z,61nm,0.9s						
A36M	**Sachs Harbour**	**71.13**	**351**	P	**P**	**22 09 39.4**	**-0.3**
	baz=24						
RCBR	**Riachuelo**	**71.43**	**248**	*e*P	**P**	**22 09 44.0**	**+1.5**
WHN	**Wuhan**	**71.47**	**65**	P	P	22 09 56.0	+13
WHN				pP	sP	22 10 11.1	+5.8
WHN				S	**S**	**22 18 56.0**	**-0.7**
CN2	**Changchun**	**72.22**	**49**	P	**P**	**22 09 47.9**	**+1.0**
CN2				PcP	**PcP**	**22 10 03.9**	**-0.9**
CN2				S	**S**	**22 19 02.7**	**-2.2**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2				pmax	pmax		
	comp=Z,300nm,4.0s						
CN2				LR	LR		
	comp=Z,400nm,14.0s						
CN2				LR	LR		
	comp=Z,300nm,14.0s						
CN2				LR	LR		
	comp=Z,400nm,15.0s						
NBPA	**Parau_RN**	**72.30**	**249**	*e*P	**P**	**22 09 50.3**	**+2.6**
DL2	**Dalian**	**72.34**	**55**	*e*P	**P**	**22 09 48.6**	**+1.0**
DL2				pP	**PcP**	**22 10 05.4**	**0.0**
DL2				S	**S**	**22 19 04.6**	**-1.8**
DL2				pmax	pmax		
	comp=Z,51nm,1.0s						
DL2				pmax	pmax		
	comp=Z,130nm,6.6s						
DL2				LR	LR		
	comp=Z,420nm,19.8s						
DL2				LR	LR		
	comp=Z,320nm,16.6s						
DL2				LR	LR		
	comp=Z,540nm,21.1s						
BNX	**BinXian**	**72.36**	**46**	⇓P	**P**	**22 09 48.4**	**+0.7**
BNX				pP	**pP**	**22 10 04.0**	**+0.5**
BNX				sP	**sP**	**22 10 11.4**	**+1.5**
BNX				S	**S**	**22 19 05.2**	**-1.3**
BNX				pmax	pmax		
	comp=Z,44nm,1.3s						
BNX				pmax	pmax		
	comp=Z,130nm,6.3s						
BNX				LR	LR		
	comp=Z,260nm,14.9s						
BNX				LR	LR		
	comp=Z,310nm,23.5s						
BNX				LR	LR		
	comp=Z,310nm,21.5s						
BILL	**Bilibino**	**72.60**	**15**	P	**P**	**22 09 48.3**	**-0.4**
BILL				IAmb	IAmb	22 09 49.6	
	comp=Z,115nm,1.8s						
BILL	**Bilibino**	**72.60**	**15**	P	**P**	**22 09 48.6**	**-0.1**
KCSI	**Kotacane, Aceh**	**72.71**	**98**	P	**P**	**22 09 51.8**	**+1.6**
	comp=Z,17nm,0.9s						
VLDQ	**Val d'Or**	**72.82**	**317**	IAmb	IAmb	22 09 52.9	
	comp=Z,109nm,1.6s						
SEY	**Seymchan**	**72.95**	**23**	P	**P**	**22 09 51.6**	**+0.7**
	comp=Z,18nm,0.6s,baz=315,slow=6.3,SNR=42						
SEY				LR	LR	22 45 49.5	
	comp=Z,322nm,18.7s,baz=319,slow=39						
	comp=Z,18nm,0.6s						
SEY	**Seymchan**	**72.95**	**23**	⇑*e*P	**P**	**22 09 50.6**	**-0.3**
SEY				pmax	pmax		
	comp=Z,19nm,0.9s						
NBMO	**Morrinhos-CE**	**73.04**	**253**	*e*P	**P**	**22 09 52.0**	**-0.1**
C36M	**Paulatuk**	**73.38**	**350**	P	**P**	**22 09 52.5**	**-0.7**
	baz=25						
A21K	**Barrow**	**73.59**	**1**	P	**P**	**22 09 54.4**	**-0.1**
	baz=357						

A22K	Sinclair Lake	73.93	1	P	P	22 09 56.9	+0.4
	baz=359						
QIZ	Qiongzhong	73.95	78	P	P	22 09 57.9	+0.4
QIZ				S	S	22 19 26.4	+1.1
QIZ				LR	LR		
	comp=Z,250nm,21.1s						
QIZ				LR	LR		
	comp=Z,240nm,20.5s						
QIZ				LR	LR		
	comp=Z,220nm,29.6s						
NJ2	Nanjing	73.99	62	eP	P	22 09 59.2	+1.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KULM	Kulim	74.03	95	P	P	22 09 59.0	+1.0
	comp=Z,39nm,0.9s						
FCC	Fort Churchill	74.05	332	IAmb	IAmb	22 09 58.7	
	comp=Z,129nm,1.8s						
PSI	Prapat	74.06	98	LR	LR	22 49 49.3	
	comp=Z,235nm,18.4s,baz=341,slow=42						
MDJ	Mudanjiang	74.27	46	P	P	22 10 01.2	+2.3
MDJ				pmax	pmax		
	comp=Z,19nm,1.0s						
GRNR	Gornyy	74.44	38⇓	iP	P	22 09 59.5	-0.3
GRNR				pmax	pmax		
	comp=Z,20nm,1.1s						
GRNR				MLR	MLR		
	comp=E,220nm,15.0s						
GRNR				MLR	MLR		
	comp=N,100nm,12.0s						
GRNR				MLR	MLR		
	comp=Z,260nm,17.0s						
A19K	Wainwright	74.60	3	P	P	22 10 01.1	+0.7
	baz=354						
B22K	Teshekpuk Lake	74.61	360	IAmb	IAmb	22 10 01.6	
	comp=Z,83nm,1.4s						
B22K	Teshekpuk Lake	74.61	360	P	P	22 10 00.7	+0.3
	baz=0.1						
NBPS	Pedro II - PI	74.81	253	eP	P	22 10 03.5	+1.0
MA2	Magadan	74.83	26	P	P	22 10 03.0	+1.0
	comp=Z,23nm,0.5s,baz=326,slow=10,SNR=9.8						
MA2				LR	LR	22 47 35.9	
	comp=Z,211nm,18.1s,baz=308,slow=40						
	comp=Z,23nm,0.5s						
MA2	Magadan	74.83	26	P	P	22 10 02.3	+0.4
MA2				IAmb	IAmb	22 10 31.4	
	comp=Z,86nm,1.3s						
MA2	Magadan	74.83	26⇑	eP	P	22 10 02.7	+0.8
MA2				pmax	pmax		
	comp=Z,30nm,0.9s						
MA2	Magadan	74.83	26	P	P	22 10 02.9	+1.0
MA2				pP	pP	22 10 18.2	+0.3
C26K	Camden Bay	74.84	357	P	P	22 10 02.1	+0.3
	baz=7.3						
B20K	Meade River	74.91	1	IAmb	IAmb	22 10 04.0	
	comp=Z,62nm,1.1s						
B20K	Meade River	74.91	1	P	P	22 10 02.5	+0.4
	baz=357						
D28M	Stokes Point	75.06	355	P	P	22 10 03.7	+0.7
	baz=12						
C27K	Jago River	75.08	356	P	P	22 10 03.3	+0.2
	baz=8.3						
C23K	Itkillik River	75.09	359	P	P	22 10 04.0	+0.8
	baz=2.5,SNR=24						
C24K	Franklin Bluff	75.17	358	IAmb	IAmb	22 10 05.7	
	comp=Z,77nm,1.4s						
C24K	Franklin Bluff	75.17	358	P	P	22 10 04.3	+0.6
	baz=4.1						
NBTA	Tacaratu-PE	75.18	247	eP	P	22 10 06.0	+1.4
BINY	Binghamton	75.28	311	IAmb	IAmb	22 10 27.2	
	comp=Z,68nm,1.1s						
D27M	Malcolm River	75.30	355	P	P	22 10 04.4	-0.1
	baz=11						
B21K	Ikpikpuk River	75.33	0	IAmb	IAmb	22 10 06.4	
	comp=Z,38nm,0.7s						
B21K	Ikpikpuk River	75.33	0	P	P	22 10 05.3	+0.7
	baz=359						
B18K	Kokolik River	75.41	3	P	P	22 10 05.8	+0.7
	baz=353						
D25K	Kavik River	75.50	357	IAmb	IAmb	22 10 07.2	
	comp=Z,78nm,1.6s						
D25K	Kavik River	75.50	357	P	P	22 10 05.8	+0.1
	baz=6.1						
INK	Inuvik	75.57	352	LR	LR	22 46 59.2	
	comp=Z,167nm,19.3s,baz=334,slow=39						
INK	Inuvik	75.57	352	P	P	22 10 05.1	-0.9
	baz=17						
SADO	Sadowa	75.68	315	LR	LR	22 43 29.3	
	comp=Z,150nm,19.0s,baz=86,slow=36						
D24K	Happy Valley	75.74	358	P	P	22 10 07.3	+0.3
	baz=4.0						
C19K	Lookout Ridge	75.75	2	P	P	22 10 07.8	+0.7
	baz=355						
C21K	Knifeblade Rid	75.79	0	P	P	22 10 07.7	+0.4
	baz=359						
E28M	Babbage River	75.83	355	IAmb	IAmb	22 10 08.9	
	comp=Z,80nm,1.4s						
E28M	Babbage River	75.83	355	P	P	22 10 07.4	-0.1
	baz=12						
E29M	Blow River	75.91	354	P	P	22 10 07.9	0.0
	baz=13						
USRK	Ussuriysk Ar.	75.92	46	P	P	22 10 08.7	+0.3
	comp=Z,31nm,0.5s,baz=288,slow=4.9,SNR=97						
	comp=Z,31nm,0.5s						
D23K	Nanushuk River	75.97	359	IAmb	IAmb	22 10 10.3	
	comp=Z,96nm,1.4s						
D23K	Nanushuk River	75.97	359	P	P	22 10 08.7	+0.4
	baz=2.4,SNR=32						
D22K	Ayikyak River	76.07	360	P	P	22 10 09.0	+0.1
D22K				IAmb	IAmb	22 10 10.8	
	comp=Z,106nm,1.5s						
D22K	Ayikyak River	76.07	360	P	P	22 10 09.3	+0.4
	baz=0.8,SNR=16						
PSTR	Posyet	76.11	47⇑	eP	P	22 10 09.8	+0.3
C18K	Utukok River	76.15	3	IAmb	IAmb	22 10 10.8	
	comp=Z,42nm,0.9s						
C18K	Utukok River	76.15	3	P	P	22 10 09.3	-0.1
	baz=354						
D20K	Etivluk River	76.22	1	IAmb	IAmb	22 10 11.3	
	comp=Z,47nm,1.1s						
D20K	Etivluk River	76.22	1	P	P	22 10 09.8	+0.1
	baz=358						
C17K	DeLong Mountai	76.23	4	P	P	22 10 09.7	-0.1
	baz=352						
TOLK	Toolik Lake Re	76.27	359	P	P	22 10 10.2	+0.1
	baz=3.4						
L56A	Greenwood	76.27	312	IAmb	IAmb	22 10 32.2	
	comp=Z,62nm,1.0s						
C16K	Lisburne Hills	76.30	5	P	P	22 10 09.5	-0.6
	baz=350						
E27K	Coleen River	76.38	355	P	P	22 10 10.8	+0.1
	baz=10.0						
D19K	Kuna River	76.40	2	IAmb	IAmb	22 10 12.3	
	comp=Z,74nm,1.2s						
D19K	Kuna River	76.40	2	P	P	22 10 11.0	+0.2
	baz=356						
F31M	Tsiigehtchic	76.43	352	P	P	22 10 10.5	-0.3
	baz=17						
F30M	Barrier River	76.48	353	IAmb	IAmb	22 10 12.2	
	comp=Z,86nm,1.3s						
F30M	Barrier River	76.48	353	P	P	22 10 10.8	-0.4
	baz=15						
VLA	Vladivostok	76.49	47	ceP	P	22 10 12.4	+0.7
VLA				pmax	pmax		
	comp=Z,47nm,0.9s						
N58A	Sunbury	76.50	311	IAmb	IAmb	22 10 33.4	
	comp=Z,59nm,0.9s						
E21K	Killik River	76.51	0	IAmb	IAmb	22 10 12.5	
	comp=Z,27nm,0.7s						
E21K	Killik River	76.51	0	P	P	22 10 11.3	-0.1
	baz=360						
RDOG	Red Dog Mine	76.66	4	P	P	22 10 12.0	-0.2
	baz=352						
E25K	Arctic Village	76.66	357	P	P	22 10 12.1	-0.2
E25K				IAmb	IAmb	22 10 14.0	
	comp=Z,95nm,1.6s						
E25K	Arctic Village	76.66	357	P	P	22 10 12.3	0.0
	baz=6.7						
E20K	Nigu River	76.68	1	P	P	22 10 12.4	0.0
	baz=358						
MVL	Millersville	76.76	310	IAmb	IAmb	22 10 35.0	
	comp=Z,36nm,1.0s						
E24K	Your Creek	76.81	358	IAmb	IAmb	22 10 14.5	
	comp=Z,19nm,0.5s						
E24K	Your Creek	76.81	358	P	P	22 10 13.3	+0.1
	baz=4.3						
E22K	Anaktuvuk Pass	76.81	359	IAmb	IAmb	22 10 14.6	
	comp=Z,35nm,0.6s						
E22K	Anaktuvuk Pass	76.81	359	P	P	22 10 13.3	+0.1
	baz=1.5						
F28M	Old Crow	76.83	355	P	P	22 10 12.8	-0.5
	baz=12						
E23K	Chandalar	76.86	359	P	P	22 10 13.8	+0.3
	baz=3.3,SNR=23						
D17K	Noatak River	77.00	4	P	P	22 10 13.6	-0.5
	baz=352,SNR=18						
F26K	Sheenjek River	77.02	356	IAmb	IAmb	22 10 16.4	
	comp=Z,71nm,1.4s						
F26K	Sheenjek River	77.02	356	P	P	22 10 14.6	+0.3
	baz=7.9,SNR=19						
G30M	tAoh Zraii Nji	77.13	353	IAmb	IAmb	22 10 15.7	
	comp=Z,54nm,1.2s						
G30M	tAoh Zraii Nji	77.13	353	P	P	22 10 14.4	-0.6
	baz=14,SNR=9.1						
F25K	Christian Rive	77.19	357	P	P	22 10 15.9	+0.6
	baz=6.6,SNR=13						
KS19	Wonju Array Si	77.22	53	P	P	22 10 17.1	+1.2
KSAR	Wonju Array Be	77.27	53	P	P	22 10 16.4	+0.3
KSAR	Wonju Array Be	77.27	53	P	P	22 10 16.4	+0.3
KSRS	Korea Array	77.28	53	P	P	22 10 17.1	+0.8
	comp=Z,8.4nm,0.5s,baz=305,slow=4.8,SNR=34						
	comp=Z,8.4nm,0.5s						
SSPA	Standing Stone	77.34	311	P	P	22 10 17.4	+0.8
SSPA				IAmb	IAmb	22 10 46.6	
	comp=Z,61nm,1.2s						
F24K	Squaw Lake	77.35	358	IAmb	IAmb	22 10 18.2	
	comp=Z,45nm,1.0s						
F24K	Squaw Lake	77.35	358	P	P	22 10 16.8	+0.6
	baz=4.8						
G29M	Pine Creek	77.37	354	IAmb	IAmb	22 10 51.0	
	comp=Z,52nm,1.1s						
G29M	Pine Creek	77.37	354	P	P	22 10 16.0	-0.3
	baz=13,SNR=13						
E18K	Tukpahlearik C	77.40	3	IAmb	IAmb	22 10 17.6	
	comp=Z,27nm,0.8s						
E18K	Tukpahlearik C	77.40	3	P	P	22 10 16.1	-0.2
	baz=354						
F22K	John River	77.45	359	P	P	22 10 17.3	+0.6
	baz=1.2						
E19K	Redstone River	77.46	1	IAmb	IAmb	22 10 18.2	
	comp=Z,57nm,0.9s						
E19K	Redstone River	77.46	1	P	P	22 10 16.9	+0.2
	baz=357						
PDSI	Padang	77.48	100	P	P	22 10 18.7	+1.0
	comp=Z,60nm,1.2s						
YKAW1	Yellowknife Wh	77.57	343	IAmb	IAmb	22 10 18.3	
	comp=Z,36nm,1.0s						
YKA	Yellowknife Ar	77.59	343	P	P	22 10 17.2	-0.3
	comp=Z,13nm,0.6s,baz=26,slow=5.4,SNR=176						
YKA				S	S	22 20 03.4	-0.6
	comp=Z,0.1nm,0.4s,baz=178,slow=32,SNR=2.2						
YKA				LR	LR	22 44 52.4	
	comp=Z,210nm,20.0s,baz=62,slow=36						
	comp=Z,13nm,0.6s						
YKA	Yellowknife Ar	77.59	343	P	P	22 10 16.6	-0.9
E46A	Sault Ste Mari	77.61	318	IAmb	IAmb	22 10 19.8	
	comp=Z,38nm,0.9s						
E17K	Hotham Inlet	77.68	3	P	P	22 10 17.3	-0.6
	baz=353						
COLD	Coldfoot	77.70	359	IAmb	IAmb	22 10 19.6	
	comp=Z,45nm,1.3s						
COLD	Coldfoot	77.70	359	P	P	22 10 18.4	+0.4
	baz=2.8						
F21K	Alatna River	77.74	360	IAmb	IAmb	22 10 20.1	
	comp=Z,84nm,1.2s						
F21K	Alatna River	77.74	360	P	P	22 10 18.8	+0.5
	baz=0.1,SNR=34						
G26K	Porcupine Rive	77.74	356	IAmb	IAmb	22 10 19.7	
	comp=Z,88nm,1.4s						
G26K	Porcupine Rive	77.74	356	P	P	22 10 18.7	+0.4
	baz=8.2						
G27K	Doyon Strip	77.75	355	P	P	22 10 18.4	0.0
	baz=9.9						
EPYK	Eagle Plains	77.78	353	P	P	22 10 17.9	-0.6
	baz=14						
F20K	Avaraart Lake	77.90	1	IAmb	IAmb	22 10 20.7	
	comp=Z,50nm,1.3s						
F20K	Avaraart Lake	77.90	1	P	P	22 10 19.4	+0.2
	baz=358						
G22K	Bettles	78.03	359	P	P	22 10 20.0	+0.1
	baz=1.7						
G25K	Bearman Lake	78.04	357	P	P	22 10 21.1	+1.1
	baz=6.2,SNR=7.1						
H31M	Peel River	78.07	352	P	P	22 10 19.4	-0.8
	baz=16						
H29M	Whitestone	78.08	354	IAmb	IAmb	22 10 21.1	
	comp=Z,28nm,0.8s						
H29M	Whitestone	78.08	354	P	P	22 10 19.7	-0.5
	baz=13,SNR=16						
F19K	Shaleruckik Mo	78.08	2	IAmb	IAmb	22 10 21.0	
	comp=Z,60nm,1.2s						
F19K	Shaleruckik Mo	78.08	2	P	P	22 10 19.7	-0.4
	baz=356						
P57A	Homestead Farm	78.10	310	P	P	22 10 21.5	+0.7
P57A				IAmb	IAmb	22 11 04.3	
	comp=Z,38nm,1.1s						
G24K	Hadweenzic Riv	78.16	358	IAmb	IAmb	22 10 22.4	
	comp=Z,103nm,1.9s						
G24K	Hadweenzic Riv	78.16	358	P	P	22 10 21.0	+0.4
	baz=5.1,SNR=8.1						
G23K	Bananza Creek	78.22	359	IAmb	IAmb	22 10 22.9	
	comp=Z,59nm,1.3s						
G23K	Bananza Creek	78.22	359	P	P	22 10 21.5	+0.5
	baz=3.0,SNR=14						
MDP	Montagnes des	78.22	268	LR	LR	22 45 43.1	
	comp=Z,128nm,18.9s,baz=74,slow=36						
F18K	Selawik	78.25	3	P	P	22 10 20.5	-0.5
	baz=355,SNR=12						
H27K	Steamboat Moun	78.31	355	P	P	22 10 22.1	+0.5
	baz=10.0						
F17K	Baldwin Pennin	78.35	3	P	P	22 10 21.1	-0.5
	baz=354						
G21K	Allakaket	78.45	0	IAmb	IAmb	22 10 23.8	
	comp=Z,56nm,1.1s						
G21K	Allakaket	78.45	0	P	P	22 10 22.5	+0.3
	baz=0.1						
H25L	Birch Creek	78.53	357	P	P	22 10 23.1	+0.5
	baz=6.5						
TNA	Tin City	78.78	6	P	P	22 10 24.0	-0.1
	baz=348						
G19K	Purcell Mounta	78.78	1	IAmb	IAmb	22 10 25.6	
	comp=Z,41nm,1.1s						
G19K	Purcell Mounta	78.78	1	P	P	22 10 24.2	+0.2
	baz=357						
TBO	Thunder Bay	78.80	323	IAmb	IAmb	22 10 47.5	
	comp=Z,40nm,1.0s						
I30M	Mount Dempster	78.86	353	IAmb	IAmb	22 10 25.7	
	comp=Z,38nm,0.8s						
I30M	Mount Dempster	78.86	353	P	P	22 10 24.4	-0.2
	baz=14,SNR=47						
WRGLY	Wrigley	78.86	347	P	P	22 10 24.9	+0.4
	baz=25						
TMAB	Tom-Au,PA,Br	78.86	259	eP	P	22 10 25.8	+0.5
TMAB				epP	pP	22 10 42.3	+0.3
F15K	North Star Dit	78.89	5	P	P	22 10 24.5	-0.1
	baz=351						
I29M	Ogilvie Camp,	78.91	354	IAmb	IAmb	22 10 25.7	
	comp=Z,50nm,0.8s						
I29M	Ogilvie Camp,	78.91	354	P	P	22 10 24.5	-0.3
	baz=13						
I27K	Kandik River	78.94	355	P	P	22 10 25.1	+0.1
	baz=9.9						
I28M	Miner Creek	78.97	354	IAmb	IAmb	22 10 26.4	
	comp=Z,136nm,1.9s						
I28M	Miner Creek	78.97	354	P	P	22 10 24.9	-0.3
	baz=11						
IMAR	Indian Mountai	78.98	0	P	P	22 10 25.1	0.0
G18K	Tagagawik	78.99	2	IAmb	IAmb	22 10 26.4	
	comp=Z,40nm,1.1s						
G18K	Tagagawik	78.99	2	P	P	22 10 25.0	-0.3
	baz=356						
F14K	Arctic Creek	79.00	5	P	P	22 10 25.1	-0.1
	baz=349						
H24K	Noodor Dome	79.04	358	IAmb	IAmb	22 10 27.1	
	comp=Z,66nm,1.8s						
H24K	Noodor Dome	79.04	358	P	P	22 10 25.8	+0.3
	baz=4.7						
H22K	Ishtalitna Cre	79.06	359	IAmb	IAmb	22 10 27.9	
	comp=Z,59nm,1.2s						
H22K	Ishtalitna Cre	79.06	359	P	P	22 10 26.5	+0.9
	baz=1.8,SNR=18						
Q56A	Snyder Ridge,	79.09	310	IAmb	IAmb	22 10 52.8	
	comp=Z,54nm,1.1s						
H23K	Yukon River	79.10	358	IAmb	IAmb	22 10 28.1	
	comp=Z,56nm,1.1s						
H23K	Yukon River	79.10	358	P	P	22 10 26.3	+0.5
	baz=3.4						
H21K	Melozitna Rive	79.31	360	IAmb	IAmb	22 10 29.2	
	comp=Z,50nm,1.1s						
H21K	Melozitna Rive	79.31	360	P	P	22 10 27.6	+0.6
	baz=0.7,SNR=25						
G17K	Kiwalik Mounta	79.31	3	P	P	22 10 26.6	-0.4
	baz=354						
G16K	Koyuk River	79.34	4	P	P	22 10 27.1	0.0
	baz=353						
I26K	Coal Creek Min	79.34	356	P	P	22 10 27.0	-0.1
	baz=8.6						
H19K	Roundabout Mou	79.42	1	P	P	22 10 27.8	+0.4
	baz=358						
H20K	Anotleneega Mo	79.47	1	P	P	22 10 28.0	+0.2
	baz=359						
J30M	Hart River	79.48	353	P	P	22 10 28.2	+0.1
	baz=14,SNR=50						
G15K	Niukluk	79.64	5	P	P	22 10 28.6	-0.1
	baz=351						
POKR	Poker Plat Res	79.74	357	IAmb	IAmb	22 10 30.9	
	comp=Z,52nm,1.1s						
POKR	Poker Plat Res	79.74	357	P	P	22 10 29.5	+0.2
	baz=5.1,SNR=10						
H18K	Honhosa River	79.75	2	P	P	22 10 29.5	+0.2
	baz=356						
I23K	Minto, Yukon-K	79.77	358	P	P	22 10 29.8	+0.4
	baz=3.5,SNR=8.6						
I21K	Tanana	79.78	359	P	P	22 10 30.3	+0.8
	baz=1.3						
J29N	Klondike Camp	79.79	353	P	P	22 10 29.7	0.0
	baz=13						
N51A	Ashland	79.90	313	IAmb	IAmb	22 10 32.1	
	comp=Z,62nm,1.2s						
H17K	Granite Mounta	79.91	3	P	P	22 10 29.9	-0.3
	baz=355						
MLY	Manley	79.92	359	P	P	22 10 30.6	+0.3
	baz=2.4,SNR=13						
ANM	Nome	79.97	5	IAmb	IAmb	22 10 31.6	
	comp=Z,54nm,1.1s						
ANM	Nome	79.97	5	P	P	22 10 30.3	-0.3
	baz=350						
FFC	Flin Flon	79.97	333	P	P	22 10 30.5	-0.2
FFC	Flin Flon	79.97	333	P	P	22 10 30.5	-0.2
FFC				pmax	pmax		
	comp=Z,28nm,0.8s						
FFC	Flin Flon	79.97	333	P	P	22 10 31.2	+0.5
COLA	College	80.00	358	P	P	22 10 30.6	0.0
COLA				IAmb	IAmb	22 10 32.0	
	comp=Z,55nm,1.4s						
COLA	College	80.00	358	P	P	22 10 31.3	+0.7
COLA	College	80.00	358	ceP	P	22 10 30.4	-0.2
COLA				pmax	pmax		
	comp=Z,16nm,1.1s						
COLA	College	80.00	358	P	P	22 10 30.7	0.0
	baz=4.7						
ILAR	Eielson Array	80.07	357	P	P	22 10 30.8	-0.3
	comp=Z,6.2nm,0.7s,baz=340,slow=4.2,SNR=94						
ILAR				PKPPKP	P'P'df	22 37 26.6	+3.7
	comp=Z,1.2nm,1.1s,baz=249,slow=3.4,SNR=4.1						
ILAR				LR	LR	22 47 34.4	
	comp=Z,118nm,20.6s,baz=347,slow=37						
	comp=Z,6.2nm,0.7s						
ILAR	Eielson Array	80.07	357	P	P	22 10 30.6	-0.5
YSS	Yuzhno-Sakhali	80.09	39	P	P	22 10 31.7	+0.2
YSS				IAmb	IAmb	22 10 33.7	
	comp=Z,86nm,1.2s						
YSS	Yuzhno-Sakhali	80.09	39	P	P	22 10 32.8	+1.3
YSS	Yuzhno-Sakhali	80.09	39	ceP	P	22 10 32.4	+0.9
YSS				eS	S	22 20 30.7	-0.5
YSS				pmax	pmax		
	comp=Z,300nm,4.9s						
YSS				pmax	pmax		
	comp=Z,50nm,1.2s						
YSS				MLR	MLR		
	comp=Z,500nm,20.0s						
YSS				MLR	MLR		
	comp=N,400nm,19.0s						
YSS				MLR	MLR		
	comp=E,300nm,17.0s						
H16K	Elim	80.10	4	P	P	22 10 30.9	-0.3
	baz=353,SNR=7.1						
R55A	Marlinton	80.13	310	IAmb	IAmb	22 10 54.5	
	comp=Z,99nm,1.6s						
GAMB	Gambell	80.14	8	P	P	22 10 31.1	-0.3
	baz=345						
J25K	Salcha River,	80.15	356	P	P	22 10 31.0	-0.6
	baz=6.8						
J26L	Joseph Creek	80.16	356	IAmb	IAmb	22 10 32.7	
	comp=Z,138nm,1.9s						
J26L	Joseph Creek	80.16	356	P	P	22 10 31.5	-0.2
	baz=8.3,SNR=15						
I20K	Naaghedeneel	80.17	0	P	P	22 10 32.0	+0.4
	baz=359						
P53A	Whipple	80.18	312	IAmb	IAmb	22 10 58.8	
	comp=Z,114nm,1.6s						
GCSA	Galena City Sc	80.19	1	P	P	22 10 32.2	+0.5
	baz=357						
DAWY	Dawson	80.28	354	IAmb	IAmb	22 10 33.7	
	comp=Z,58nm,1.1s						
DAWY	Dawson	80.28	354	P	P	22 10 32.3	0.0
	baz=12,SNR=24						
CMC01	Camacan, BA	80.28	243	eP	P	22 10 35.5	+2.5
CMC01				epP	pP	22 10 48.9	-0.8
NEA2	Nenana	80.32	358	P	P	22 10 32.0	-0.5
	baz=3.7,SNR=9.0						
K29M	Barlow Dome	80.32	353	IAmb	IAmb	22 10 34.3	
	comp=Z,148nm,1.9s						
K29M	Barlow Dome	80.32	353	P	P	22 10 32.7	+0.1
	baz=13,SNR=13						
MAYO	Mayo, Yukon	80.39	352	P	P	22 10 33.1	+0.3
	baz=15						
HDA	Harding Lake	80.43	357	IAmb	IAmb	22 10 33.9	
	comp=Z,42nm,0.7s						
HDA	Harding Lake	80.43	357	P	P	22 10 32.6	-0.4
	baz=5.5,SNR=26						
K27K	Chicken	80.53	355	IAmb	IAmb	22 10 35.5	
	comp=Z,98nm,1.3s						
K27K	Chicken	80.53	355	P	P	22 10 33.9	+0.3
	baz=9.5						
P52A	Corning	80.55	312	IAmb	IAmb	22 11 00.1	
	comp=Z,128nm,1.8s						
SCRK	Sand Creek	80.71	356	IAmb	IAmb	22 10 36.5	
	comp=Z,59nm,1.3s						
SCRK	Sand Creek	80.71	356	P	P	22 10 35.0	+0.3
	baz=7.9,SNR=19						
ULM	Lac du Bonnet	80.75	327	P	P	22 10 35.0	-0.1
	comp=Z,17nm,0.6s,baz=46,slow=4.8,SNR=22						
ULM				LR	LR	22 47 03.1	
	comp=Z,265nm,20.6s,baz=36,slow=36						
	comp=Z,17nm,0.6s						
ULM	Lac du Bonnet	80.75	327	deP	P	22 10 34.8	-0.2
J20K	Nowinta River	80.80	0	IAmb	IAmb	22 10 36.8	
	comp=Z,42nm,1.0s						
J20K	Nowinta River	80.80	0	P	P	22 10 35.4	+0.4
	baz=360						
KSI	Kapahiang	80.81	101	P	P	22 10 36.0	+0.1
	comp=Z,93nm,0.9s						
BPAW	Bear Paw Mtn.	80.86	359	IAmb	IAmb	22 10 36.1	
	comp=Z,44nm,1.1s						
BPAW	Bear Paw Mtn.	80.86	359	P	P	22 10 34.6	-0.7
	baz=2.1,SNR=8.7						
I17K	Unalakleet	80.92	3	P	P	22 10 36.0	+0.4
	baz=354						
J19K	Poorman	80.97	1	P	P	22 10 36.2	+0.2
J19K				IAmb	IAmb	22 10 37.8	
	comp=Z,75nm,1.2s						
J19K	Poorman	80.97	1	P	P	22 10 36.1	+0.2
	baz=358,SNR=12						
K24K	Donnelly Dome	80.98	357	IAmb	IAmb	22 11 08.0	
	comp=Z,50nm,0.8s						
K24K	Donnelly Dome	80.98	357	P	P	22 10 35.9	-0.1
	baz=6.4,SNR=11						
RIDG	Independent Ri	81.00	356	IAmb	IAmb	22 10 37.7	
	comp=Z,51nm,1.1s						
RIDG	Independent Ri	81.00	356	P	P	22 10 36.4	+0.3
	baz=7.2,SNR=9.7						
DOT	Dot Lake	81.04	356	IAmb	IAmb	22 10 38.1	
	comp=Z,41nm,1.0s						
CHUM	Lake Minchumin	81.09	359	P	P	22 10 36.6	+0.1
	baz=1.1,SNR=14						
L29M	L29M	81.10	353	P	P	22 10 37.0	+0.3
	baz=13,SNR=8.9						
MCK	McKinley	81.18	358	IAmb	IAmb	22 10 37.9	
	comp=Z,54nm,1.1s						
MCK	McKinley	81.18	358	P	P	22 10 36.6	-0.5
	baz=3.8,SNR=12						
GUA01	Guaratinga, BA	81.29	243	eP	P	22 10 39.3	+1.1
GUA01				epP	pP	22 10 54.7	-0.3
BCAR	Beaver Creek A	81.47	355	P	P	22 10 38.5	-0.2

L27K	Beaver Creek,	81.47	355	IAmb	IAmb	22 10 40.5	
	comp=Z,46nm,1.1s						
L27K	Beaver Creek,	81.47	355	P	P	22 10 39.1	+0.4
	baz=9.7						
J18K	Innoko River	81.48	1	IAmb	IAmb	22 10 40.4	
	comp=Z,83nm,1.6s						
J18K	Innoko River	81.48	1	P	P	22 10 38.8	+0.2
	baz=357						
J17K	VABM Dome	81.48	3	IAmb	IAmb	22 10 40.0	
	comp=Z,62nm,1.3s						
J17K	VABM Dome	81.48	3	P	P	22 10 38.8	+0.2
	baz=356						
M30M	Minto, Yukon	81.48	352	P	P	22 10 38.6	-0.1
	baz=14						
TRF	Thorofare Moun	81.49	359	P	P	22 10 38.6	-0.4
	baz=2.7,SNR=8.5						
J16K	Anvik River	81.53	3	IAmb	IAmb	22 10 40.4	
	comp=Z,54nm,1.2s						
J16K	Anvik River	81.53	3	P	P	22 10 39.0	+0.1
	baz=354						
M31M	Drury Creek, Y	81.56	351	IAmb	IAmb	22 10 41.2	
	comp=Z,51nm,1.0s						
M31M	Drury Creek, Y	81.56	351	P	P	22 10 39.9	+0.8
	baz=16,SNR=15						
L26K	Log Cabin Wild	81.62	355	P	P	22 10 39.8	+0.4
L26K	Log Cabin Wild	81.62	355	P	P	22 10 39.9	+0.5
	baz=8.4,SNR=11						
K20K	Telida	81.62	0	IAmb	IAmb	22 10 40.9	
	comp=Z,49nm,1.2s						
K20K	Telida	81.62	0	P	P	22 10 39.6	+0.3
	baz=360,SNR=8.7						
Q51A	Peebles	81.66	312	IAmb	IAmb	22 11 06.2	
	comp=Z,51nm,1.1s						
MENT	Mentasta	81.73	356	P	P	22 10 41.0	+1.0
DHY	Denali Highway	81.78	357	IAmb	IAmb	22 10 41.6	
	comp=Z,56nm,1.0s						
DHY	Denali Highway	81.78	357	P	P	22 10 40.2	-0.2
	baz=5.1,SNR=17						
M29M	Somme Creek	81.79	353	P	P	22 10 40.9	+0.5
	baz=12						
PAX	Paxson	81.80	356	P	P	22 10 40.0	-0.4
	baz=6.7,SNR=5.4						
KOTAN	Kotaneelee Air	81.81	346	P	P	22 10 41.4	+1.0
	baz=24,SNR=12						
SJG	San Juan	81.84	286	LR	LR	22 42 56.3	
	comp=Z,58nm,21.6s,baz=34,slow=33						
N47A	Urbana	81.87	315	IAmb	IAmb	22 11 02.3	
	comp=Z,62nm,1.2s						
ASAJ	Asahikawa	81.91	41	LR	LR	22 52 07.6	
	comp=Z,362nm,20.1s,baz=321,slow=39						
ASAJ	Asahikawa	81.91	41	P	P	22 10 41.0	-0.2
O48B	Farmland	81.96	314	IAmb	IAmb	22 11 07.5	
	comp=Z,84nm,1.6s						
BVCY	Beaver Creek	82.03	354	P	P	22 10 42.1	+0.4
	baz=10,SNR=20						
WAT1	Susitna Watana	82.07	358	P	P	22 10 40.7	-1.1
	baz=4.1						
PPLA	Purkeypile	82.08	359	P	P	22 10 40.8	-1.2
PPLA				IAmb	IAmb	22 11 14.2	
	comp=Z,32nm,0.8s						
PPLA	Purkeypile	82.08	359	P	P	22 10 41.2	-0.7
	baz=1.1,SNR=8.9						
M27K	Edge Creek, AK	82.17	355	IAmb	IAmb	22 10 44.7	
	comp=Z,62nm,1.2s						
M27K	Edge Creek, AK	82.17	355	P	P	22 10 43.0	+0.5
	baz=9.6						
K17K	Iditarod	82.19	2	IAmb	IAmb	22 10 43.8	
	comp=Z,71nm,1.1s						
K17K	Iditarod	82.19	2	P	P	22 10 42.4	+0.1
	baz=356						
M26K	Nabesna, AK	82.21	355	IAmb	IAmb	22 10 44.3	
	comp=Z,44nm,1.2s						
M26K	Nabesna, AK	82.21	355	P	P	22 10 42.9	+0.3
	baz=8.7						
PETK	Petropavlovsk-	82.24	27	P	P	22 10 41.8	-1.0
	comp=Z,5.1nm,0.6s,baz=273,slow=17,SNR=6.1						
PETK				LR	LR	22 53 45.6	
	comp=Z,228nm,19.0s,baz=313,slow=40						
	comp=Z,5.1nm,0.6s						
PETK	Petropavlovsk-	82.24	27	P	P	22 10 40.7	-2.1
WAT6	Susitna Watana	82.29	357	P	P	22 10 42.8	-0.3
	baz=4.8,SNR=11						
SMTB	Santa Maria do	82.35	254	*e*P	P	22 10 46.4	+2.4
SMTB				*e*pP	pP	22 11 00.9	+0.2
HARP	HAARP	82.35	356	P	P	22 10 43.6	+0.4
	baz=6.9						
N32M	Quiet Lake	82.40	350	P	P	22 10 43.9	+0.3
	baz=17						
N31M	Braeburn, Yuko	82.43	352	IAmb	IAmb	22 10 44.8	
	comp=Z,40nm,1.1s						
N31M	Braeburn, Yuko	82.43	352	P	P	22 10 43.4	-0.3
	baz=15						
L22K	Petersville	82.43	359	IAmb	IAmb	22 11 15.6	
	comp=Z,26nm,0.7s						
SDBA	SAO DESIDERIO	82.44	249	*e*P	P	22 10 45.3	+0.9
SDBA				*e*pP	pP	22 11 00.9	-0.3
K15K	Wolf Creek Mou	82.47	4	IAmb	IAmb	22 11 02.5	
	comp=Z,30nm,0.9s						
K15K	Wolf Creek Mou	82.47	4	P	P	22 10 44.0	+0.2
	baz=354						
PRPB	Parauapebas	82.49	257	*e*P	P	22 10 46.9	+2.1
CUT	Chulitna	82.54	358	P	P	22 10 44.4	+0.2
	baz=2.7						
MDSI	Maura Dua	82.57	101	P	P	22 10 44.5	-0.6
	comp=Z,775nmcomp=Z,39nm,1.0s						
N30M	Aishikik Lake	82.60	352	P	P	22 10 44.7	0.0
	baz=14						
K13K	Kusilvak Mount	82.63	5	P	P	22 10 44.4	-0.2
	baz=351						
YUK3	Moose Creek	82.63	354	P	P	22 10 45.5	+0.5
	baz=11,SNR=17						
M24K	Tolsona, Glenn	82.70	357	P	P	22 10 45.4	+0.3
	baz=6.1						
WTLY	Watson Lake, Y	82.72	348	P	P	22 10 46.1	+0.9
	baz=20,SNR=19						
R50A	Paris	82.73	312	IAmb	IAmb	22 11 11.2	
	comp=Z,70nm,1.7s						
L18K	Granite Mounta	82.73	2	IAmb	IAmb	22 10 47.0	
	comp=Z,68nm,1.3s						
L18K	Granite Mounta	82.73	2	P	P	22 10 45.1	-0.1
	baz=357						
L17K	Donlin	82.77	2	P	P	22 10 45.2	-0.2
	baz=356						
LWLI	Liwa	82.79	101	P	P	22 10 47.6	+1.2
L19K	White Mountain	82.80	1	IAmb	IAmb	22 10 47.2	
	comp=Z,40nm,1.1s						
L19K	White Mountain	82.80	1	P	P	22 10 45.9	+0.3
	baz=359						
SPMN	Marine on St.	82.83	322	P	P	22 10 45.5	-0.5
SPMN				IAmb	IAmb	22 10 48.1	
	comp=Z,85nm,1.6s						
YUK4	Talbot Arm	82.88	353	P	P	22 10 46.2	-0.1
	baz=12,SNR=9.7						
LIRD	Liard River Hi	82.88	346	P	P	22 10 47.0	+0.9
	baz=22,SNR=10						
SKT	Skwentna	82.99	359	IAmb	IAmb	22 11 19.1	
	comp=Z,43nm,1.0s						
SKT	Skwentna	82.99	359	P	P	22 10 45.4	-1.1
	baz=1.7,SNR=8.3						
SCM	Sheep Creek Mo	83.02	357	P	P	22 10 47.0	+0.2
	baz=5.1,SNR=7.7						
YUK8	Steele Glacier	83.05	353	P	P	22 10 47.3	+0.1
	baz=11						
M23K	Glacier View	83.08	357	P	P	22 10 46.8	-0.2
	baz=4.8,SNR=10						
SML	Sawmill	83.09	358	P	P	22 10 47.2	+0.1
	baz=4.3,SNR=7.0						
L15K	Ungalak Mounta	83.09	4	P	P	22 10 46.7	-0.4
	baz=354						
M20K	Styx River	83.10	360	IAmb	IAmb	22 10 48.1	
	comp=Z,39nm,1.1s						
M20K	Styx River	83.10	360	P	P	22 10 46.6	-0.6
	baz=0.4						
N25K	Chitina, Valde	83.11	356	P	P	22 10 47.1	-0.2
	baz=7.4,SNR=5.3						
WHY	Whitehorse	83.11	351	P	P	22 10 47.0	-0.4
	baz=15,SNR=5.4						
KLSI		83.14	101	P	P	22 10 47.8	-0.3
	comp=Z,36nm,1.0s						
L16K	Owhat River	83.15	3	P	P	22 10 47.1	-0.3
	baz=355						
O30N	Mendenhall	83.16	351	P	P	22 10 47.2	-0.3
	baz=14,SNR=8.4						
M22K	Willow	83.19	358	P	P	22 10 47.1	-0.4
	baz=2.8,SNR=8.1						
MCARA	McCarthy VSAT	83.22	355	P	P	22 10 46.7	-1.0
MCARA	McCarthy VSAT	83.22	355	P	P	22 10 47.8	0.0
	baz=8.7						
R49A	Shelbyville	83.23	313	IAmb	IAmb	22 11 07.5	
	comp=Z,35nm,0.8s						
TOAD	Toad River Com	83.23	346	P	P	22 10 48.3	+0.4
	baz=23,SNR=29						
YUK6	Outpost Mounta	83.25	353	P	P	22 10 48.8	+0.6
	baz=12,SNR=6.7						
P33M	Teslin, Yukon	83.26	350	P	P	22 10 48.3	+0.2
	baz=17,SNR=8.6						
HYT	Haines Junctio	83.27	352	P	P	22 10 48.6	+0.4
	baz=13,SNR=12						
KLU	Klutina	83.30	356	IAmb	IAmb	22 11 23.5	
	comp=Z,110nm,1.7s						
KLU	Klutina	83.30	356	P	P	22 10 48.1	-0.2
	baz=6.3						
PMR	Palmer	83.33	358	P	P	22 10 48.1	-0.2
	baz=3.6,SNR=8.0						
L14K	Kuka Creek	83.35	4	P	P	22 10 48.4	0.0
	baz=352						
L42A	Oliver, Polo	83.38	318	IAmb	IAmb	22 11 11.4	
	comp=Z,37nm,0.9s						
KASI	Kota Agung	83.44	101	P	P	22 10 49.9	+0.3
BLO	Bloomington	83.46	314	P	P	22 10 48.7	-0.7
BLO				IAmb	IAmb	22 11 09.0	
	comp=Z,42nm,0.7s						
BLO	Bloomington	83.46	314	P	P	22 10 48.7	-0.7
BLO				pmax	pmax		
	comp=Z,42nm,0.7s						
M18K	Stony River	83.48	1	P	P	22 10 49.4	+0.4
	baz=358						
KNK	Knik Glacier	83.48	358	IAmb	IAmb	22 10 50.7	
	comp=Z,57nm,1.0s						
KNK	Knik Glacier	83.48	358	P	P	22 10 49.4	+0.2
	baz=4.2,SNR=7.4						
SUA	Susitna One	83.50	359	IAmb	IAmb	22 10 50.7	
	comp=Z,60nm,1.0s						
SUA	Susitna One	83.50	359	P	P	22 10 49.3	-0.1
	baz=2.3,SNR=6.7						
CTG	Chitna Glacier	83.51	354	P	P	22 10 49.8	+0.4
	baz=10.0						
M17K	Holitna River	83.53	2	IAmb	IAmb	22 10 51.4	
	comp=Z,71nm,1.1s						
M17K	Holitna River	83.53	2	P	P	22 10 50.0	+0.6
	baz=357						
O28M	Mount Upton	83.60	353	P	P	22 10 50.4	+0.3
	baz=11						
LOGN	Logan Glacier	83.62	354	IAmb	IAmb	22 10 51.7	
	comp=Z,71nm,1.3s						
JANB	Januaria	83.64	247	*e*P	P	22 10 51.6	+1.0
JANB				*e*pP	pP	22 11 07.6	+0.2
DIV	Divide	83.65	356	IAmb	IAmb	22 10 51.5	
	comp=Z,52nm,1.3s						
SJMB	Sao Joao De Ma	83.66	242	*e*P	P	22 10 52.4	+1.8
SJMB				*e*pP	pP	22 11 06.9	-0.5
JOW	Kunigami	83.70	62	LR	LR	22 52 33.9	
	comp=Z,182nm,19.1s,baz=18,slow=39						
BMRM	Bremner River	83.74	356	IAmb	IAmb	22 11 32.0	
	comp=Z,85nm,1.4s						
BMRM	Bremner River	83.74	356	P	P	22 10 50.6	+0.1
	baz=7.3						
R33M	Jennings River	83.76	349	P	P	22 10 52.1	+1.4
	baz=18						
GRNC	Granite Creek	83.77	354	P	P	22 10 49.7	-1.2
GRNC				IAmb	IAmb	22 10 52.5	
	comp=Z,63nm,1.1s						
SPCR	Spurr Chakacha	83.78	359	P	P	22 10 50.1	-0.7
	baz=1.1						
TGL	Tana Glacier	83.83	355	IAmb	IAmb	22 11 10.4	
	comp=Z,61nm,1.3s						
T50A	Nancy	83.84	311	IAmb	IAmb	22 11 11.1	
	comp=Z,29nm,0.8s						
RC01	Rabbit Creek A	83.85	358	IAmb	IAmb	22 10 52.3	
	comp=Z,69nm,1.1s						
RC01	Rabbit Creek A	83.85	358	P	P	22 10 51.1	+0.1
	baz=3.1,SNR=6.1						
CRQM	Cirque	83.86	355	IAmb	IAmb	22 11 24.5	
	comp=Z,50nm,0.9s						
CRQE	Cirque	83.86	355	P	P	22 10 51.0	-0.1
	baz=8.6						
M16K	Timber Creek	83.86	3	IAmb	IAmb	22 10 53.0	
	comp=Z,61nm,1.1s						
M16K	Timber Creek	83.86	3	P	P	22 10 51.4	+0.4
	baz=356						
P30M	Million Dollar	83.89	352	P	P	22 10 52.1	+0.8
	baz=14						
O29M	Mount Kennedy	83.90	353	IAmb	IAmb	22 11 14.0	
	comp=Z,44nm,1.1s						
O29M	Mount Kennedy	83.90	353	P	P	22 10 51.5	+0.1
	baz=12						
WCI	Wyandotte Cave	83.94	313	P	P	22 10 51.6	-0.3
WCI				IAmb	IAmb	22 11 18.5	
	comp=Z,41nm,0.8s						
WCI	Wyandotte Cave	83.94	313	P	P	22 10 51.6	-0.3
WCI				pmax	pmax		
	comp=Z,41nm,0.8s						
ISLE	Juniper Island	83.95	354	IAmb	IAmb	22 10 53.0	
	comp=Z,43nm,1.0s						
GLI	Glacier Island	83.97	357	P	P	22 10 51.8	+0.2
	baz=5.3						
M14K	Bethel	83.98	4	P	P	22 10 52.0	+0.3
	baz=353						
P32M	Atlin	83.99	350	IAmb	IAmb	22 10 52.7	
	comp=Z,32nm,0.9s						
P32M	Atlin	83.99	350	P	P	22 10 52.4	+0.6
	baz=16,SNR=8.1						
M11K	Mekoryuk	84.03	6	P	P	22 10 52.5	+0.6
	baz=350						
PWL	Port Wells	84.03	357	IAmb	IAmb	22 10 53.3	
	comp=Z,61nm,1.2s						
PWL	Port Wells	84.03	357	P	P	22 10 52.0	0.0
	baz=4.3						
TKL	Tuckaleechee C	84.05	310	LR	LR	22 49 20.9	
	comp=Z,210nm,19.7s,baz=60,slow=36						
TKL	Tuckaleechee C	84.05	310	IAmb	IAmb	22 11 35.3	
	comp=Z,86nm,1.8s						
M15K	Kasigluk River	84.11	4	P	P	22 10 52.5	+0.2
	baz=354						
F33A	5 Mile Ranch,	84.12	324	IAmb	IAmb	22 10 53.7	
	comp=Z,44nm,1.3s						
N19K	Bonanza Creek	84.17	0	P	P	22 10 53.0	+0.2
	baz=359						
MDND	Maddock	84.18	327	IAmb	IAmb	22 10 54.5	
	comp=Z,56nm,1.0s						
EYAK	Cordova Ski Ar	84.23	356	P	P	22 10 53.3	+0.5
	baz=6.4						
M13K	Dall Lake	84.23	5	P	P	22 10 53.8	+1.0
	baz=352						
PINM	Pinnacle	84.27	353	P	P	22 10 53.6	+0.4
	baz=11						
N18K	Kilae Creek	84.29	1	IAmb	IAmb	22 10 55.2	
	comp=Z,35nm,1.0s						
N18K	Kilae Creek	84.29	1	P	P	22 10 53.8	+0.6
	baz=358						
MESA	MESA	84.34	354	P	P	22 10 53.7	0.0
	baz=9.5						
SKAG	Skagway	84.34	351	P	P	22 10 53.9	+0.5
	baz=15						
MJB9	Matsu-Tunnel	84.36	49	IAmb	IAmb	22 11 31.5	
	comp=Z,36nm,1.1s						
MAJO	Matsushiro	84.37	49	P	P	22 10 54.1	-0.1
MAJO				IAmb	IAmb	22 11 30.6	
	comp=Z,36nm,1.1s						
MAJO	Matsushiro	84.37	49	*ce*P	P	22 10 54.0	-0.1
MAJO				pmax	pmax		
	comp=Z,22nm,1.1s						
MJAR	Matsushiro Arr	84.37	49	P	P	22 10 55.1	+0.9
	comp=Z,19nm,1.0s,baz=308,slow=4.8,SNR=32						
MJAR				LR	LR	22 51 25.0	
	comp=Z,254nm,21.8s,baz=318,slow=38						
	comp=Z,19nm,1.0s						
MJAR	Matsushiro Arr	84.37	49	P	P	22 10 54.3	+0.2
MJAR				IAmb	IAmb	22 11 20.7	
	comp=Z,34nm,1.1s						
Q32M	Nakina River	84.38	349	IAmb	IAmb	22 11 13.3	
	comp=Z,30nm,0.8s						
Q32M	Nakina River	84.38	349	P	P	22 10 54.7	+0.7
	baz=17						
N17K	Nushagak Hills	84.41	2	P	P	22 10 54.8	+1.0
	baz=357						
N16K	Nishlik Lake	84.42	3	P	P	22 10 54.7	+0.8
	baz=356						
JGF	Kuroka	84.44	50	IAmb	IAmb	22 11 33.5	
	comp=Z,60nm,1.4s						
JGF	Kuroka	84.44	50	P	P	22 10 55.8	+1.3
O22K	Cooper Landing	84.46	358	P	P	22 10 54.3	+0.3
	baz=3.2						
P29M	Windy Craggy	84.46	352	IAmb	IAmb	22 10 55.8	
	comp=Z,67nm,1.4s						
P29M	Windy Craggy	84.46	352	P	P	22 10 54.2	0.0
	baz=13						
PLBC	Pleasant Camp	84.47	351	P	P	22 10 54.8	+0.7
	baz=14						
DLBC	Dease Lake	84.52	348	LR	LR	22 51 03.5	
	comp=Z,274nm,19.5s,baz=350,slow=37						
DLBC	Dease Lake	84.52	348	P	P	22 10 55.2	+0.7
	baz=19,SNR=5.3						
CPCT	Cooper Cave	84.66	310	IAmb	IAmb	22 11 20.7	
	comp=Z,24nm,0.8s						
N15K	Kwethluk River	84.67	3	P	P	22 10 55.9	+0.7
	baz=355						
OLIL	Olney	84.68	314	IAmb	IAmb	22 11 15.1	
	comp=Z,34nm,0.8s						
U49A	Red Boiling Sp	84.75	312	IAmb	IAmb	22 11 31.8	
	comp=Z,52nm,1.0s						
KAIM	Kayak Island	84.77	355	P	P	22 10 56.5	+0.9
	baz=7.5						
O19K	Port Alsworth	84.79	0	IAmb	IAmb	22 10 56.6	
	comp=Z,34nm,1.1s						
O19K	Port Alsworth	84.79	0	P	P	22 10 56.3	+0.6
	baz=359						
N14K	Kuskokwak Cree	84.83	4	P	P	22 10 56.0	+0.1
	baz=353						
SEW	Seward	84.83	358	P	P	22 10 56.1	+0.2
	baz=3.4						
P23K	Montague Islan	84.86	357	P	P	22 10 56.1	0.0
	baz=5.0						
P43A	Skaggs, Pawnee	84.89	316	IAmb	IAmb	22 11 16.3	
	comp=Z,30nm,0.7s						
O20K	Slope Mountain	84.91	360	P	P	22 10 56.0	-0.4
	baz=0.8						
BESE	Bessie Mountai	85.12	350	IAmb	IAmb	22 11 46.0	
	comp=Z,35nm,1.1s						
O18K	Koktuh Hills	85.13	1	IAmb	IAmb	22 10 58.9	
	comp=Z,42nm,1.0s						
O18K	Koktuh Hills	85.13	1	P	P	22 10 57.4	-0.1
	baz=359						
O17K	Koliganek Bris	85.17	2	P	P	22 10 57.9	+0.3
	baz=357						
S34M	Telegraph Cree	85.20	348	P	P	22 10 58.7	+0.8
	baz=18,SNR=17						
BRSE	Bradley Lake S	85.22	359	P	P	22 10 58.1	+0.1
	baz=2.3						
W50A	Signal Mountai	85.31	310	P	P	22 10 59.4	+0.5
W50A				IAmb	IAmb	22 11 01.1	
	comp=Z,49nm,1.1s						
HOM	Homer	85.32	359	P	P	22 10 59.2	+0.8
	baz=1.6						
O16K	Kokwok River B	85.32	2	P	P	22 10 58.9	+0.5
	baz=356						
P19K	Oil Pt	85.34	360	P	P	22 10 58.8	+0.2
	baz=0.3						
Q23K	Middleton Isla	85.38	356	P	P	22 10 58.8	+0.1
	baz=5.9						
Y52A	Lilburn	85.38	309	IAmb	IAmb	22 11 01.3	
	comp=Z,22nm,0.7s						
TGY	Tagaytay City	85.51	76	LR	LR	22 53 09.2	
	comp=Z,104nm,20.6s,baz=50,slow=38						
O14K	Tigyukauivet M	85.52	4	P	P	22 10 59.7	+0.3
	baz=354						
O15K	Ungalikthiuk R	85.67	3	P	P	22 11 00.5	+0.4
	baz=355						
P17K	Kvichak River	85.77	2	P	P	22 11 00.5	0.0
	baz=358						
ECSD	EROS Data Cent	85.81	323	IAmb	IAmb	22 11 02.5	
	comp=Z,60nm,1.5s						
P16K	Nushagak River	85.89	2	P	P	22 11 02.9	+1.7
	baz=356						
V48A	Smith Brothers	85.89	312	IAmb	IAmb	22 11 37.6	
	comp=Z,33nm,1.2s						
S31K	Pelican	85.91	351	P	P	22 11 02.4	+1.0
	baz=14						
FPAL	Fort Paine	85.92	310	IAmb	IAmb	22 11 03.9	
	comp=Z,77nm,1.8s						
T35M	Bob Quinn	85.94	347	P	P	22 11 02.8	+1.2
	baz=19						
SIUC	Southern Illin	86.01	314	IAmb	IAmb	22 11 21.9	
	comp=Z,33nm,0.8s						
Q19K	Cape Douglas,	86.06	0	P	P	22 11 02.0	-0.1
	baz=360						
ITTB	Itaituba	86.19	262	*e*P	P	22 11 06.0	+2.5
BOAV	Boa Vista	86.20	270	P	P	22 11 04.5	+1.0
BOAV				IAmb	IAmb	22 11 22.6	
	comp=Z,28nm,1.2s						
BOAV	Boa Vista	86.20	270	*e*P	P	22 11 05.4	+1.9
WVT	Waverly	86.25	312	P	P	22 11 02.3	-1.2
WVT				IAmb	IAmb	22 11 34.1	
	comp=Z,18nm,0.8s						
WVT	Waverly	86.25	312	P	P	22 11 02.3	-1.2
WVT				pmax	pmax		
	comp=Z,18nm,0.8s						
WVT	Waverly	86.25	312	P	P	22 11 03.2	-0.2
Q18K	Katmai Hardscr	86.34	1	P	P	22 11 02.9	-0.7
	baz=359						
Q20K	Shuyak Island	86.38	359	P	P	22 11 03.6	-0.1
	baz=1.0						
CGM3	Cape Girardeau	86.55	314	IAmb	IAmb	22 11 40.5	
	comp=Z,30nm,1.1s						
152A	Waverly Hall	86.57	308	IAmb	IAmb	22 11 07.0	
	comp=Z,43nm,1.3s						
SIT	Sitka	86.67	350	P	P	22 11 05.4	+0.4
	baz=15						
Q17K	Contact Creek	86.71	1	P	P	22 11 04.5	-0.9
	baz=358						
BDFB	Brasilia	86.80	248	P	P	22 11 08.6	+2.1
	comp=Z,7.6nm,0.7s,baz=47,slow=7.0,SNR=8.7						
BDFB				LR	LR	22 52 18.0	
	comp=Z,324nm,18.1s,baz=60,slow=37						
	comp=Z,7.6nm,0.7s						
BDFB	Brasilia	86.80	248	IAmb	IAmb	22 11 28.9	
	comp=Z,23nm,0.9s						
Y49A	Blount Mountai	86.87	310	IAmb	IAmb	22 11 31.4	
	comp=Z,24nm,0.8s						
X48A	Hartselle	86.88	311	IAmb	IAmb	22 11 42.0	
	comp=Z,38nm,1.0s						
CCM	Cathedral Cave	86.95	316	P	P	22 11 06.9	0.0
CCM	Cathedral Cave	86.95	316	P	P	22 11 06.9	0.0
CCM				pmax	pmax		
	comp=Z,96nm,1.5s						
CCM	Cathedral Cave	86.95	316	P	P	22 11 07.1	+0.3
SNDB	Serra Nova Dou	87.12	253	*e*P	P	22 11 09.8	+1.8
PLAL	Pickwick Lake	87.16	312	IAmb	IAmb	22 11 43.5	
	comp=Z,42nm,1.1s						
KDAK	Kodiak Island	87.21	360	LR	LR	22 52 46.0	
	comp=Z,100nm,20.2s,baz=5.8,slow=37						
KDAK	Kodiak Island	87.21	360	P	P	22 11 07.7	0.0
	baz=0.8						
PBMO	Poplar Bluff	87.36	314	IAmb	IAmb	22 11 40.2	
	comp=Z,29nm,0.9s						
R16K	Pilot Point	87.37	2	P	P	22 11 08.4	0.0
	baz=357						
P08K	Saint George I	87.39	9	P	P	22 11 08.3	-0.2
	baz=347						
R18K	Karluk	87.43	1	P	P	22 11 08.4	-0.4
	baz=359						
NPGB	Novo Progresso	87.44	260	*e*P	P	22 11 10.9	+1.3
JHJ	Hachijo jima 2	87.58	50	LR	LR	22 58 12.0	
	comp=Z,94nm,18.1s,baz=326,slow=41						
BSCB	Bom Sucesso	87.72	242	*e*P	P	22 11 11.2	+0.4
V35K	Ketchikan	87.75	348	P	P	22 11 09.6	-0.8
	baz=18						
OHAK	Old Harbor	87.78	360	P	P	22 11 10.4	0.0
	baz=0.2						
SHEM	Shemya Is, Ala	87.84	19	LR	LR	22 55 13.0	
	comp=Z,159nm,18.7s,baz=296,slow=39						
CRAG	Craig	87.87	349	P	P	22 11 10.3	-0.6
	baz=17						
250A	Grady	88.01	308	P	P	22 11 12.1	0.0
LCAR	Lake Charles	88.27	314	IAmb	IAmb	22 11 49.1	
	comp=Z,24nm,1.0s						
SII	Sitkinak Islan	88.44	0	P	P	22 11 13.2	-0.4
	baz=360						
S14K	Fog Glacier	88.57	3	P	P	22 11 14.7	+0.4
	baz=355						
FCAR	Ozark Folk Cen	88.96	315	IAmb	IAmb	22 11 56.9	
	comp=Z,46nm,1.6s						
S12K	Black Hills	89.00	5	P	P	22 11 15.6	-0.7
	baz=353						
RSSD	Black Hills	89.03	327	P	P	22 11 16.8	-0.1
RSSD				IAmb	IAmb	22 11 18.5	
	comp=Z,39nm,1.2s						
RSSD	Black Hills	89.03	327	P	P	22 11 16.8	-0.1
RSSD				pmax	pmax		
	comp=Z,39nm,1.2s						
RSSD	Black Hills	89.03	327	P	P	22 11 17.6	+0.6
RSSD				pP	pP	22 11 33.3	-0.4
SDPT	Sand Point	89.46	4	P	P	22 11 18.6	+0.2
	baz=354						

MACA	Manacapuru-AM	89.52	266	eP	P	22 11 20.5	+1.1
FALS	False Pass	89.74	6	P	P	22 11 19.3	-0.4
	baz=352						
ARAG	Araguaiana, MT	89.75	251	eP	P	22 11 22.1	+1.8
CHNA	Chernabura Isl	90.02	4	P	P	22 11 20.9	-0.1
	baz=355						
CLDB	Colider	90.03	257	eP	P	22 11 23.3	+1.6
BBB	Bella Bella	90.04	345	LR	LR	22 54 04.4	
	comp=Z,119nm,18.4s,baz=39,slow=37						
RLO	Rose Lookout	90.43	316	IAmb	IAmb	22 11 45.8	
	comp=Z,15nm,0.8s						
RLMT	Red Lodge	90.45	330	IAmb	IAmb	22 11 53.0	
	comp=Z,36nm,1.4s						
NEW	Newport	90.64	337	LR	LR	22 54 57.1	
	comp=Z,382nm,18.1s,baz=34,slow=38						
NEW	Newport	90.64	337	IAmb	IAmb	22 11 43.0	
	comp=Z,34nm,1.1s						
SDV	Santo Domingo	90.69	281	LR	LR	22 51 21.8	
	comp=Z,55nm,19.3s,baz=67,slow=35						
SDV	Santo Domingo	90.69	281	P	P	22 11 24.9	-0.3
SDV				IAmb	IAmb	22 11 42.7	
	comp=Z,31nm,1.1s						
SDV	Santo Domingo	90.69	281	eP	P	22 11 26.4	+1.2
SDV				epP	pP	22 11 41.6	-0.4
MIAR	Mount Ida	90.75	314	IAmb	IAmb	22 12 08.0	
	comp=Z,38nm,1.3s						
MSO	Missoula	90.80	334	IAmb	IAmb	22 11 43.3	
	comp=Z,26nm,1.1s						
YNE	Yellowstone No	90.84	331	IAmb	IAmb	22 11 27.9	
	comp=Z,27nm,1.2s						
NIKH	Nikolski High	91.02	9	P	P	22 11 25.9	+0.2
	baz=348						
OK051	E0350 and S346	91.19	318	P	P	22 11 26.8	-0.1
PDRB	Porto dos Gac	91.20	257	eP	P	22 11 27.4	+0.3
PDRB				epP	pP	22 11 44.3	+0.1
YHL	Hebgen Lake	91.44	331	IAmb	IAmb	22 11 55.6	
	comp=Z,16nm,1.1s						
YHB	Horse Butte	91.52	331	IAmb	IAmb	22 11 48.6	
	comp=Z,15nm,1.1s						
DLMT	Dillon	91.55	333	IAmb	IAmb	22 11 56.0	
	comp=Z,16nm,1.1s						
EPH	Ephrata	92.23	338	IAmb	IAmb	22 12 04.5	
	comp=Z,15nm,1.1s						
PDAR	Pinedale Array	92.50	329	P	P	22 11 32.8	-0.4
	comp=Z,2.5nm,0.8s,baz=60,slow=3.6,SNR=14						
PDAR				LR	LR	22 55 19.6	
	comp=Z,165nm,19.5s,baz=26,slow=37						
	comp=Z,2.5nm,0.8s						
PDAR	Pinedale Array	92.50	329	P	P	22 11 31.1	-2.0
E09A	Wood Farm, Sta	92.51	336	IAmb	IAmb	22 11 50.5	
	comp=Z,17nm,1.1s						
LTY	Liberty	92.64	338	IAmb	IAmb	22 12 05.1	
	comp=Z,16nm,1.2s						
SALV	Santo Antonio	92.87	253	eP	P	22 11 36.8	+2.0
JCJ	Chichijima	93.14	54	LR	LR	22 59 43.4	
	comp=Z,147nm,18.7s,baz=252,slow=40						
DAV	Davao City (W)	93.29	79	LR	LR	22 58 58.4	
	comp=Z,110nm,21.5s,baz=314,slow=39						
HAYD	Hayden	93.34	327	IAmb	IAmb	22 12 16.0	
	comp=Z,29nm,1.7s						
LON	Longmire	93.44	339	IAmb	IAmb	22 12 08.6	
	comp=Z,21nm,1.4s						
WMOK	Wichita Mounta	93.56	318	P	P	22 11 37.9	0.0
WMOK	Wichita Mounta	93.56	318	P	P	22 11 37.9	0.0
WMOK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
F07A	Phinny Hill Vi	93.63	337	IAmb	IAmb	22 11 57.3	
	comp=Z,17nm,1.1s						
HWUT	Hardware Ranch	94.30	330	IAmb	IAmb	22 11 59.3	
	comp=Z,16nm,0.9s						
RDMU	Red Mountain	94.32	328	IAmb	IAmb	22 11 59.2	
	comp=Z,13nm,1.0s						
RTBA	Rita Blanca	94.38	321	IAmb	IAmb	22 11 42.2	
	comp=Z,18nm,1.2s						
G06A	Carlson Farm,	94.44	337	IAmb	IAmb	22 12 00.8	
	comp=Z,22nm,1.0s						
PLPT	Palo Pinto	94.72	316	P	P	22 11 43.5	+0.3
PLPT				IAmb	IAmb	22 12 08.8	
	comp=Z,10nm,0.8s						
BSUT	Blindstream Ca	94.86	329	IAmb	IAmb	22 12 13.7	
	comp=Z,44nm,1.9s						
I07A	Izee	95.11	336	IAmb	IAmb	22 11 46.9	
	comp=Z,17nm,1.3s						
BGU	Big Grassy Mou	95.47	330	IAmb	IAmb	22 12 05.2	
	comp=Z,25nm,1.6s						
PV01	Paradox Valley	95.86	326	P	P	22 11 48.4	-0.3
PV03	Paradox Valley	95.89	326	IAmb	IAmb	22 11 52.2	
	comp=Z,31nm,1.7s						
ELK	Elko	96.50	332	LR	LR	22 58 07.6	
	comp=Z,206nm,19.2s,baz=44,slow=37						
ANMO	Albuquerque	97.42	323	LR	LR	22 55 43.6	
	comp=Z,176nm,21.6s,baz=40,slow=35						
YBH	Yreka Blue Hor	98.25	337	LR	LR	22 58 19.7	
	comp=Z,11nm,18.1s,baz=36,slow=37						
NVAR	Mina Array Bea	99.67	333	LR	LR	22 58 11.3	
	comp=Z,308nm,21.7s,baz=33,slow=36						
SYO	Syowa Base	104.51	175	⇓ePdiff	Pdif	22 12 28.6	+2.7
SYO	Syowa Base	104.51	175	⇓epPdiff	pPdif	22 12 44.1	+1.3
WRA	Warramunga Arr	115.52	97	PKP	PKiKP	22 17 04.1	+0.3
	comp=Z,0.6nm,0.5s,baz=308,slow=1.5,SNR=8.4						
WRA	Warramunga Arr	115.52	97		PKPdf	22 17 03.8	0.0
PLCA	Paso Flores	116.80	238	PKP	PKiKP	22 17 06.6	+0.9
	comp=Z,1.3nm,0.8s,baz=185,slow=18,SNR=2.0						
PLCA	Paso Flores	116.80	238	PKPdf	PKPdf	22 17 05.8	0.0
ASAR	Alice Springs	117.00	101	PKP	PKiKP	22 17 07.4	+0.8
	comp=Z,1.0nm,0.3s,baz=311,slow=1.5,SNR=16						
ASAR				PKKPab	PKKPab	22 27 35.6	+0.5
	comp=Z,0.4nm,0.8s,baz=125,slow=4.1,SNR=4.7						
ASAR	Alice Springs	117.00	101	PKPdf	PKPdf	22 17 06.3	-0.3
BELA	Belgrano 2	118.66	192	PKPdf	PKiKP	22 17 08.3	+0.1
QSPA	South Pole Qui	125.21	180	PKP	PKiKP	22 17 22.5	+1.0
	comp=Z,6.4nm,0.6s,baz=264,slow=1.4,SNR=17						
QSPA	South Pole Qui	125.21	180	PKPdf	PKiKP	22 17 21.9	+0.5
STKA	Stephens Creek	126.70	106	PKP	PKiKP	22 17 26.4	+1.0
	comp=Z,2.5nm,0.8s,baz=338,slow=7.5,SNR=3.9						
DZM	Mont Dzumac	142.70	80	eLR	LR	23 04 34.6	
	comp=Z,262nm,24.3s						
TAOE	Nuku Hiva Isla	150.93	332	eLR	LR	23 08 20.2	
	comp=Z,260nm,25.3s						
PPT2	Papeete2	161.96	348	eLR	LR	23 13 22.3	
	comp=Z,255nm,25.8s						
PPT2				eLR	LR	23 13 23.0	
	comp=Z,290nm,24.5s						
TBI	Tubuai	167.53	343	eSS	SS	22 44 06.8	+3.9
	comp=Z,2μm,35.5s						
TBI	Tubuai	167.53	343	eLR	LR	23 15 58.6	
	comp=Z,2μm,30.0s						
TBI				eLR	LR	23 16 03.1	
	comp=Z,973nm,24.2s						

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*IDC **10** 22:02:52.3±5.3, 36°.32N×71°.27E, $h201^{km}\pm50^{km}$, mb3.6/8, mbtmp4.2/9, Error ellipse: s-maj=50.1km s-min=15.1km az=37.0*

*NEIC **10** 22:02:55.7±1.0, 36°.57N±0°.06×71°.20E±0°.10, $h230^{km}\pm6^{km}$, mb4.2/10, Error ellipse: s-maj=11.4km s-min=9.1km az=98.0*

ISC 10 22:02:57.0±0.7, **36°.58N**±0°.07×**71°.49E**±0°.09, **$h250^{km}$, n51,** σ**$1^{s}.99$**/50, **mb3.9**/11, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANEM	Manem	0.97	9		Pn	22 03 29.5	-2.7
GAR	Garm	2.59	339	Pn	Pn	22 03 41.7	-3.6
CHGR	Chuyangaron	2.78	319	Pn	Pn	22 03 42.7	-4.5
KBL	Kabul	2.85	225	Pn	Pn	22 03 43.6	-4.6
SHAA	Shahritus	2.87	291	Pn	Pn	22 03 43.1	-5.0
DRK	Karamyk	2.91	5	Pn	Pn	22 03 46.9	-1.9
NIL	Nilore	3.26	153	Pn	Pn	22 03 51.2	-1.2
JMU	Jammu	4.68	143	eP	Pn	22 04 05.5	-4.5
JMU				eS	S	22 04 58.0	-10
JMU				IAML		22 05 05.0	
	comp=E,245nm,0.7s						
JMU				IAML		22 05 07.3	
	comp=N,267nm,0.4s						
ARSB	Arslanbob	4.88	13	Pn	Pn	22 04 09.7	-1.7
ALCI	Alchi Leh	5.21	115	eP	Pn	22 04 14.1	-1.7
ALCI				eS	S	22 05 11.6	-6.9
ALCI				IAML		22 05 17.0	
	comp=E,274nm,0.3s						
ALCI				IAML		22 05 17.3	
	comp=N,279nm,0.0s						
UCH	Uchtor	6.11	22	P	Pn	22 04 26.1	-0.8
	SNR=22						
EKS2	Erkin-Say	6.33	15	P	Pn	22 04 29.2	-0.1
	SNR=8.7						
AAK	Ala-Archa	6.48	20	P	Pn	22 04 30.9	-0.3
	SNR=8.9						
AAK	Ala-Archa	6.48	20	P	Pn	22 04 31.0	-0.3
	comp=N,4.6nm,0.3s,baz=162,slow=5.1,SNR=43						
AAK				S	S	22 05 43.4	-3.3
	comp=N,21nm,0.5s,baz=290,slow=16,SNR=5.2						
AAK	Ala-Archa	6.48	20	Pn	Pn	22 04 30.6	-0.6
KK31	Karatay Array	6.56	354	Pn	Pn	22 04 29.9	-2.2
KKAR	Karatay Array	6.56	354	Pn	Pn	22 04 29.7	-2.4
BHK	Bhakra	6.57	140	eP	Pn	22 04 34.5	+2.1
BHK				eS	S	22 05 46.5	-2.3
BHK				IAML		22 05 47.2	
	comp=N,174nm,0.2s						
BHK				IAML		22 05 47.5	
	comp=E,157nm,0.3s						
FRU1	Bishkek	6.68	20	Pn	Pn	22 04 32.6	-1.0
ULHL	Ulahol	6.75	32	P	Pn	22 04 34.1	-0.6
	SNR=6.5						
BOOM	Boomskoye usch	6.83	29	Pn	Pn	22 04 35.4	-0.3
TKM2	Tokmak 2	7.08	25	P	Pn	22 04 38.5	-0.3
	SNR=5.8						
KDJ	Kajisay	7.08	37	Pn	Pn	22 04 37.6	-1.3
TARG	Taragay, Kyrgy	7.11	42	Pn	Pn	22 04 39.3	-0.1
SMLA	Simla	7.20	137	eP	Pn	22 04 39.2	-1.0
SMLA				eS	S	22 05 55.1	-8.0
SMLA				IAML		22 06 01.8	
	comp=N,252nm,0.7s						
SMLA				IAML		22 06 02.2	
	comp=E,204nm,0.7s						
DDI	Dehra Dun	8.30	137	eP	Pn	22 04 53.1	-1.2
DDI				eS	S	22 06 20.0	-8.8
JOSI	Joshimath	9.02	129	eP	Pn	22 05 02.8	-0.7
JOSI				eS	S	22 06 36.4	-9.2
JOSI				IAML		22 06 39.2	
	comp=N,154nm,1.1s						
JOSI				IAML		22 06 40.6	
	comp=E,206nm,1.2s						
MAKZ	Makanchi	12.87	34	Pn	Pn	22 05 51.5	+0.3
MKAR	Makanchi Array	13.00	35	P	Pn	22 05 51.6	-1.2
	comp=E,0.7nm,0.3s,baz=211,slow=13,SNR=19						
MKAR	Makanchi Array	13.00	35	Pn	P	22 05 53.5	-1.1
BHUJ	Bhuj	13.37	187	ex	x	22 05 52.4	
EVN	Everest	15.54	119	P	Pn	22 06 25.4	+1.0
SHL	Shillong	20.59	116	P	P	22 07 18.8	+1.2
SHL				IAmb	IAmb	22 07 21.7	
	comp=Z,6.1nm,0.6s						
GTA	Gaotai	22.46	74	eP	P	22 07 40.0	+4.7
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CMAR	Chiang Mai Arr	30.14	119	P	P	22 08 43.1	-0.9
	comp=Z,1.6nm,0.3s,baz=311,slow=8.4,SNR=7.1						
	comp=Z,1.6nm,0.3s						
FINES	FINESS Array B	37.64	326	P	P	22 09 48.6	+0.8
	comp=Z,3.9nm,0.8s,baz=110,slow=9.7,SNR=1.6						
	comp=Z,3.9nm,0.8s						
FINES	FINESS Array B	37.64	326	P	P	22 09 48.3	+0.5
ARCES	ARCESS Array B	41.23	337	P	P	22 10 18.4	+1.1
	comp=Z,1.9nm,0.8s,baz=119,slow=7.8,SNR=0.9						
	comp=Z,1.9nm,0.8s						
GSI	Gunungsitoli	42.59	139	P	P	22 10 29.6	+0.8
HFS	Hagfors	43.25	322	P	P	22 10 33.8	+0.2
	comp=Z,3.9nm,0.8s,baz=108,slow=9.5,SNR=1.6						
	comp=Z,3.9nm,0.8s						
NOA	NORSAR Array B	44.56	323	P	P	22 10 44.2	+0.2
	comp=Z,1.2nm,0.7s,baz=94,slow=8.4,SNR=2.5						
	comp=Z,1.2nm,0.7s						
TORD	Torodi Ar. Bea	66.12	269	P	P	22 13 16.9	-1.0
	comp=Z,0.9nm,0.6s,baz=37,slow=9.0,SNR=4.3						
	comp=Z,0.9nm,0.6s						
TORD	Torodi Ar. Bea	66.12	269	P	P	22 13 16.7	-1.2
TORD				IAmb	IAmb	22 13 25.1	
	comp=Z,1.2nm,1.1s						
FITZ	Fitzroy Crossi	74.62	127	P	P	22 14 10.5	+1.4
KNRA	Kununurra	74.94	123	P	P	22 14 11.9	+1.0
KNRA				IAmb	IAmb	22 14 26.3	
	comp=Z,11nm,1.1s						
WB0	Warramunga Arr	81.61	122	P	P	22 14 48.6	+1.3
WB0				IAmb	IAmb	22 15 16.6	
	comp=Z,3.2nm,1.1s						
WRA	Warramunga Arr	81.69	122	P	P	22 14 48.9	+1.1
	comp=Z,1.2nm,0.5s,baz=323,slow=4.9,SNR=27						
	comp=Z,1.2nm,0.5s						
WRA	Warramunga Arr	81.69	122	P	P	22 14 48.4	+0.6
ASAR	Alice Springs	83.97	125	P	P	22 15 00.6	+1.1
	comp=Z,1.5nm,0.6s,baz=311,slow=4.9,SNR=15						
	comp=Z,1.5nm,0.6s						
ASAR	Alice Springs	83.97	125	P	P	22 15 00.3	+0.8
ODZ	Otahua Downs	120.61	126	PKPdf	PKiKP	22 21 21.3	+2.6

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*SJA **10** 22:04:59.0±0.7, 31°.83S×71°.44W, $h24^{km}\pm2^{km}$, ML4.0, MW4.1*

*NEIC **10** 22:05:02.0±1.1, 31°.83S±0°.03×71°.35W±0°.07, $h50^{km}\pm3^{km}$, mb4.2/5, ML4.2(GUC), Error ellipse: s-maj=8.7km s-min=3.8km az=92.0*

*GUC **10** 22:05:01.7±0.8, 31°.83S×71°.29W, $h57^{km}\pm3^{km}$, ML4.2*

*IDC **10** 22:05:03.0±3.4, 31°.92S×71°.30W, $h68^{km}\pm30^{km}$, mb3.4/1, mbtmp3.7/5, ML3.9/4, MS3.3/2, Error ellipse: s-maj=35.7km s-min=24.5km az=140.0*

ISC 10 22:05:01.0±0.9, **31°.83S**±0°.02×**71°.41W**±0°.04, **$h46^{km}$**$\pm8^{km}$**, n138,** σ**$2^{s}.13$**/167, **mb4.2**/3, **7C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO04	Los Peladeros	0.42	120	⇑iP	Pn	22 05 12.1	+0.8
CO04				eS	Sn	22 05 19.5	+0.9
CO04				IAML		22 05 20.2	
	comp=E,36μm,0.2s						
CO02	Combarbal	0.72	29	Pn	Pn	22 05 15.2	+0.3
CO02				Sn	Sn	22 05 25.3	+0.4
CO02	Combarbal	0.72	29	⇑iP	Pn	22 05 15.4	+0.5
CO02				eS	Sn	22 05 25.4	+0.4
CO02	Combarbal	0.72	29	eP	Pn	22 05 09.8	-5.1
CO02				eS	Sn	22 05 24.7	-0.3
CO02				IAML		22 05 26.9	
	comp=Z,10μm,0.2s						
VA06	Catapilco	0.73	173		Pn	22 05 16.1	+1.1
VA06				Sn	Sn	22 05 26.3	+1.2
VA06	Catapilco	0.73	173	⇓iP	Pn	22 05 16.2	+1.2
VA06				eS	Sn	22 05 27.1	+2.0
VA06				IAML		22 05 29.5	
	comp=E,27μm,0.4s						
CO03	El Pedregal	1.16	32	Pn	Pn	22 05 21.6	+0.7
CO03				Sn	Sn	22 05 35.9	+0.2
CO06	Fray Jorge	1.17	350	Pn	Pn	22 05 22.1	+1.2
CO06				Sn	Sn	22 05 38.1	+2.3
CO06	Fray Jorge	1.17	350	eP	Pn	22 05 22.1	+1.1
CO06				eS	Sn	22 05 38.1	+2.3
CO06				IAML		22 05 43.0	
	comp=N,5μm,0.1s						
VA03	San Esteban	1.18	142	Pn	Pn	22 05 21.7	+0.5
VA03				Sn	Sn	22 05 36.2	+0.1
VA03	San Esteban	1.18	142	eP	Pn	22 05 21.7	+0.5
VA03				eS	Sn	22 05 36.3	+0.2
VA03				IAML		22 05 38.9	
	comp=E,8μm,0.3s						
VA03	San Esteban	1.18	142	eP	Pn	22 05 21.7	+0.5
VA03				eS	Sn	22 05 36.0	0.0
VA03				IAML		22 05 40.3	
	comp=Z,3μm,0.5s						
ROCH	El Roble	1.18	164	eP	Pn	22 05 22.3	+0.9
ROCH				eS	Sn	22 05 38.4	+2.0
ROCH				IAML		22 05 40.6	
	comp=N,11μm,0.3s						
ROC1	El Roble	1.19	164	eP	Pn	22 05 21.8	+0.4
ROC1				eS	Sn	22 05 37.5	+1.0
VA01	Torpederas	1.21	190	Pn	Pn	22 05 22.3	+0.8
VA01	Torpederas	1.21	190	eP	Pn	22 05 22.7	+1.3
VA01	Torpederas	1.21	190	eP	Pn	22 05 22.7	+1.3
VA01				eS	Sn	22 05 41.0	+4.4
VA01				IAML		22 05 42.1	
	comp=Z,2μm,0.3s						
PEL	Peldehue	1.44	155	Pn	Pn	22 05 25.4	+0.7
PEL	Peldehue	1.44	155	eP	Pn	22 05 25.4	+0.7
PEL	Peldehue	1.44	155	eP	Pn	22 05 25.6	+0.9
PEL				eS	Sn	22 05 47.0	+4.4
PEL				IAML		22 05 49.0	
	comp=Z,1μm,0.3s						
MT10	Hacienda Santa	1.61	153	eP	Pn	22 05 28.0	+0.9
MT10				eS	Sn	22 05 47.5	+0.7
MT10				IAML		22 05 50.1	
	comp=E,7μm,0.3s						
MT05	Renca	1.65	160	Pn	Pn	22 05 28.6	+1.0
MT05	Renca	1.65	160	eP	Pn	22 05 28.8	+1.2
MT05				IAML		22 05 52.1	
	comp=E,6μm,0.3s						
MT05	Renca	1.65	160	eP	Pn	22 05 28.8	+1.2
MT05				eS	Sn	22 05 45.1	-2.6
MT05				IAML		22 05 56.0	
	comp=Z,1μm,0.6s						
MT14	Cerro Cal¡n	1.72	155	eP	Pn	22 05 29.5	+0.9
MT14				IAML		22 06 07.3	
	comp=E,4μm,0.4s						
GO04	Tololo Observa	1.73	18	Pn	Pn	22 05 29.5	+0.6
GO04	Tololo Observa	1.73	18	eP	Pn	22 05 30.0	+1.1
GO04	Tololo Observa	1.73	18	eP	Pn	22 05 30.4	+1.5
GO04				eS	Sn	22 05 52.5	+2.6
GO04				IAML		22 05 55.1	
	comp=Z,5μm,0.2s						
MT16	CCHEN	1.76	155	Pn	Pn	22 05 30.2	+1.2
MT16	CCHEN	1.76	155	eP	Pn	22 05 30.1	+1.1
RTLS	Leoncito	1.79	89	eP	Pn	22 05 31.7	+1.9
RTLS				IAML		22 05 58.2	
	comp=Z,3μm,0.5s						
MT03	Universidad Ad	1.82	156	Pn	Pn	22 05 31.1	+1.1
MT03	Universidad Ad	1.82	156	eP	Pn	22 05 31.0	+1.1
MT03				IAML		22 06 00.4	
	comp=N,4μm,0.2s						
MT03	Universidad Ad	1.82	156	eP	Pn	22 05 31.6	+1.6
MT03				eS	Sn	22 05 55.1	+3.2
MT03				IAML		22 06 00.8	
	comp=Z,2μm,0.1s						
VA05	Santo Domingo	1.83	185	Pn	Pn	22 05 30.9	+1.0
VA05	Santo Domingo	1.83	185	eP	Pn	22 05 30.8	+0.8
VA05				IAML		22 06 00.1	
	comp=E,4μm,0.4s						
MT04	Ro Olivares	1.90	146	eP	Pn	22 05 32.5	+1.4
MT04				IAML		22 06 01.1	
	comp=E,2μm,0.4s						
MT04	Ro Olivares	1.90	146	eP	Pn	22 05 32.8	+1.6
MT04				eS	Sn	22 05 58.6	+4.6
MT04				IAML		22 06 02.7	
	comp=Z,1μm,0.7s						
MT15	Las Vizcachas	1.92	157	eP	Pn	22 05 32.0	+0.8
MT15				IAML		22 06 00.7	
	comp=E,5μm,0.3s						
MT09	Talagante	1.97	170	Pn	Pn	22 05 33.5	+1.5
MT09	Talagante	1.97	170	⇑iP	Pn	22 05 33.6	+1.5
MT09				IAML		22 06 01.9	
	comp=E,3μm,0.4s						
MT08	Bocatoma Ro	1.99	144	Pn	Pn	22 05 34.1	+1.8
MT08	Bocatoma Ro	1.99	144	eP	Pn	22 05 34.8	+2.4
MT08	Bocatoma Ro	1.99	144	eP	Pn	22 05 34.8	+2.4
MT08				eS	Sn	22 06 01.1	+4.8
MT08				IAML		22 06 03.9	
	comp=Z,628nm,0.6s						
MT12	Pirque	2.03	159	eP	Pn	22 05 33.6	+0.9
MT12				IAML		22 06 00.0	
	comp=N,3μm,0.3s						
MT01	Popeta	2.03	176	Pn	Pn	22 05 34.1	+1.3
MT01	Popeta	2.03	176	⇑eP	Pn	22 05 34.0	+1.3
MT01				IAML		22 06 04.2	
	comp=E,2μm,0.2s						
MT01	Popeta	2.03	176	eP	Pn	22 05 34.0	+1.3
MT01				eS	Sn	22 06 02.8	+5.9
MT01				IAML		22 06 05.2	
	comp=Z,1μm,0.2s						
MT13	San Alfonso	2.13	154	eP	Pn	22 05 35.6	+1.5
MT13				IAML		22 06 11.9	
	comp=E,2μm,0.3s						
MT13	San Alfonso	2.13	154	eP	Pn	22 05 36.0	+1.8
MT13				eS	Sn	22 06 03.7	+4.2
MT13				IAML		22 06 09.3	
	comp=Z,1μm,0.3s						
CO01	Juntas del Tor	2.17	32		Pn	22 05 35.9	+1.0
CO01	Juntas del Tor	2.17	32	eP	Pn	22 05 36.2	+1.4
CO01	Juntas del Tor	2.17	32	eP	Pn	22 05 30.6	-4.2
CO01				eP		22 05 36.3	
CO01				eS	Sn	22 06 03.5	+3.0
CO01				IAML		22 06 06.9	
	comp=Z,810nm,0.5s						
LMEL	Las Melosas	2.25	154	Pn	Pn	22 05 37.5	+1.7
LMEL	Las Melosas	2.25	154	eP	Pn	22 05 37.6	+1.7
LMEL				IAML		22 06 10.4	
	comp=N,2μm,0.3s						
LMEL	Las Melosas	2.25	154	eP	Pn	22 05 37.8	+1.9
LMEL				eS	Sn	22 06 06.4	+3.9
LMEL				IAML		22 06 08.8	
	comp=Z,1μm,0.3s						
BO04	La Punta	2.25	163	Pn	Pn	22 05 36.6	+0.7
BO04	La Punta	2.25	163	eP	Pn	22 05 36.9	+1.0
BO04				IAML		22 06 08.2	
	comp=E,1μm,0.2s						
ASAL	Salagasta	2.31	110	eP	Pn	22 05 39.7	+3.1
ASAL				eS	Sn	22 06 06.7	+2.9
ARCO	CERRO ARCO	2.32	116	eP	Pn	22 05 40.5	+3.6
ARCO				IAML		22 06 16.7	
	comp=Z,580nm,0.5s						
AROD	Rodeo	2.35	45	eP	Pn	22 05 40.5	+3.1
AROD				eS	Sn	22 06 05.5	+0.3
ACCO	Cerro Coronel	2.36	59	eP	Pn	22 05 40.5	+3.0
ACCO				eS	Sn	22 06 06.6	+1.2
SJA	San Juan	2.44	84	eP	Pn	22 05 25.8	-13
SJA				IAML		22 06 20.7	
	comp=Z,276nm,0.2s						
AAGR	Agrelo	2.51	121	eP	Pn	22 05 43.0	+3.6
AAGR				eS	Sn	22 06 02.5	-6.3
AAGR				IAML		22 06 20.6	
	comp=Z,492nm,0.5s						
RTLL	Cerro Villicun	2.55	79	eP	Pn	22 05 41.3	+1.4
RTLL	Cerro Villicun	2.55	79	eP	Pn	22 05 42.0	+2.1
RTLL				eS	Sn	22 06 13.3	+3.5
RTLL				IAML		22 06 16.7	
	comp=Z,715nm,0.4s						
ACDV	Cuesta del Vie	2.57	50	eP	Pn	22 05 44.2	+4.0
ACDV				eS	Sn	22 06 17.2	+6.9
ACDV				IAML		22 06 20.5	
	comp=Z,332nm,0.4s						
BO01	Tunca	2.57	174	Pn	Pn	22 05 40.9	+0.8
BO01	Tunca	2.57	174	⇑eP	Pn	22 05 41.0	+1.0
BO01	Tunca	2.57	174	eP	Pn	22 05 41.1	+1.0
BO01				eS	Sn	22 05 59.3	-11
BO01				IAML		22 06 32.9	
	comp=Z,513nm,0.9s						
BO03	Pichilemu	2.70	190	eP	Pn	22 05 42.1	+0.2
CFA	Coronel Fontan	2.71	86	P	Pn	22 05 44.1	+2.1
	comp=Z,51nm,0.3s,baz=253,slow=9.7,SNR=266						
CFA				S	Sn	22 06 14.4	+0.8
	comp=Z,53nm,0.4s,baz=302,slow=9.9,SNR=4.5						
	comp=Z,206nm,0.4s						
CFA	Coronel Fontan	2.71	86	eP	Pn	22 05 43.9	+1.8
CFA				eS	Sn	22 06 19.2	+5.5
CFA				IAML		22 06 23.6	
	comp=Z,356nm,0.6s						
LCO	Las Campanas	2.88	12	Pn	Pn	22 05 45.4	+0.8
LCO	Las Campanas	2.88	12	⇑eP	Pn	22 05 45.5	+0.8
LCO	Las Campanas	2.88	12	eP	Pn	22 05 46.1	+1.5
LCO				eS	Sn	22 06 21.9	+3.7
LCO				IAML		22 06 28.3	
	comp=Z,1μm,0.2s						
AVIZ	Vizcacheras	2.94	125	eP	Pn	22 05 49.0	+3.7
BO02	Sierra Bellavi	3.00	170	Pn	Pn	22 05 47.2	+1.1
BO02	Sierra Bellavi	3.00	170	⇑eP	Pn	22 05 47.3	+1.2
BO02	Sierra Bellavi	3.00	170	eP	Pn	22 05 47.7	+1.6
BO02				eS	Sn	22 06 23.0	+2.1
BO02				IAML		22 06 41.4	
	comp=Z,564nm,0.8s						
AC05	El Transito	3.14	18	Pn	Pn	22 05 49.8	+1.6
AC05	El Transito	3.14	18	⇓eP	Pn	22 05 49.8	+1.6
AC05	El Transito	3.14	18	eP	Pn	22 05 49.8	+1.6
AC05				eS	Sn	22 06 26.8	+2.3
AC05				IAML		22 06 47.4	
	comp=Z,498nm,0.8s						
GO05	Hualane	3.20	188	eP	Pn	22 05 48.9	0.0
GO05	Hualane	3.20	188	eP	Pn	22 05 49.2	+0.4
GO05				eS	Sn	22 06 30.6	+4.9
GO05				IAML		22 06 43.3	
	comp=Z,271nm,0.6s						
AGUA	GUANDACOL	3.43	48	eP	Pn	22 05 34.5	-18
AGUA				IAML		22 06 50.8	
	comp=Z,503nm,0.5s						
AVFE	Valle Fertil	3.58	72	eP	Pn	22 05 55.6	+1.5
AVFE				eS	Sn	22 06 37.6	+2.4

AVFE				IAML		22 06 46.2	
	comp=Z,443nm,0.6s						
ACAN	Cantantal	3.61	98	eP	Pn	22 05 55.1	+0.7
ACAN				IAML		22 07 03.2	
	comp=Z,681nm,0.5s						
AC04	Llanos de Chal	3.63	5	Pn	Pn	22 05 54.2	-0.4
AC04	Llanos de Chal	3.63	5	eP	Pn	22 05 55.0	+0.3
RFA	San Rafael	3.83	141	eP	Pn	22 05 59.1	+1.7
RFA				eS	Sn	22 06 57.6	+16
ML02	Panimavida	3.92	180	eP	Pn	22 05 59.2	+0.5
ACHE	Chepes	4.10	82	eP	Pn	22 06 02.7	+1.4
ACHE				eS	Sn	22 06 46.8	-1.4
VCA	Vinchina	4.14	43	eP	Pn	22 06 05.1	+3.2
VCA	Vinchina	4.14	43	eP	Pn	22 06 05.4	+3.5
VCA				eS	Sn	22 06 53.1	+3.9
VCA				IAML		22 07 02.1	
	comp=Z,568nm,0.5s						
GO03	Copiapo	4.34	14	eP	Pn	22 06 05.8	+1.2
GO03				eS	Sn	22 06 56.0	+2.0
GO03				IAML		22 07 14.4	
	comp=Z,331nm,0.5s						
APLL	PUNTA DE LOS L	4.42	72	eP	Pn	22 06 06.7	+1.1
APLL				eS	Sn	22 06 55.4	-0.4
APLL				IAML		22 07 21.4	
	comp=Z,122nm,0.9s						
ACLC	CERRO LA CRUZ	4.53	59	eP	Pn	22 06 08.8	+1.6
ACLC				eS	Sn	22 06 57.9	-0.7
ACLC				IAML		22 07 11.8	
	comp=Z,225nm,0.3s						
BI02	San Fabin de	4.82	179	eP	Pn	22 06 11.9	+0.8
BI02				IAML		22 07 38.4	
	comp=Z,59nm,0.5s						
MRA	San Martin	4.86	98	eP	Pn	22 06 12.0	+0.3
MRA				eS	Sn	22 07 07.1	+0.3
MRA				IAML		22 07 13.3	
	comp=Z,291nm,0.8s						
TINO	Tinogasta	5.02	43	eP	Pn	22 06 16.0	+2.1
TINO				eS	Sn	22 07 17.1	+6.5
BI05	Punta Hualpn	5.12	196	Pn	Pn	22 06 14.2	-1.0
BI05	Punta Hualpn	5.12	196	eP	Pn	22 06 14.7	-0.4
BI05				IAML		22 07 55.9	
	comp=Z,42nm,0.9s						
AC02	Maricunga	5.36	22	Pn	Pn	22 06 19.9	+1.0
TCA	Tanti	5.83	87	⇓eP	Pn	22 06 24.4	-0.6
CYA	Choya	5.91	57	eP	Pn	22 06 26.1	0.0
H03N1	Juan Fernandez	6.53	254	T	T	22 13 13.3	
	baz=86,slow=73						
H03N3	Juan Fernandez	6.55	254	T	T	22 13 21.2	
	baz=86,slow=73						
H03N2	Juan Fernandez	6.55	254	T	T	22 13 22.8	
	baz=86,slow=73						
H03S3	Juan Fernandez	6.62	251	T	T	22 13 18.4	
	baz=82,slow=75						
H03S1	Juan Fernandez	6.62	250	T	T	22 13 16.0	
	baz=82,slow=75						
H03S2	Juan Fernandez	6.64	250	T	T	22 13 19.1	
	baz=82,slow=75						
PLCA	Paso Flores	8.91	176	P	Pn	22 07 07.7	+0.6
	comp=Z,0.3nm,0.3s,baz=341,slow=9.6,SNR=10						
	comp=Z,1.0nm,0.4s						
PLCA	Paso Flores	8.91	176	Pn	Pn	22 07 07.8	+0.7
TRQA	Tornquist	9.92	131	Pn	Pn	22 07 21.2	+0.3
CPUP	Villa Florida	13.47	70	P	Pn	22 08 09.2	-0.3
	comp=Z,0.1nm,0.3s,baz=225,slow=2.9,SNR=4.7						
CPUP				S	Sn	22 10 34.6	-3.2
	comp=Z,1.3nm,0.7s,baz=96,slow=16,SNR=3.4						
	comp=Z,0.4nm,0.4s						
CPUP	Villa Florida	13.47	70	Pn	Pn	22 08 08.5	-1.0
PLTB	Pedras Altas	15.14	94	Pn	Pn	22 08 30.0	-1.9
PLTB				IAmb	IAmb	22 09 01.9	
	comp=Z,12nm,1.3s						
LPAZ	La Paz	15.76	12	P	Pn	22 08 41.8	+1.3
	comp=Z,0.1nm,0.3s,baz=166,slow=11,SNR=2.7						
	comp=Z,0.9nm,0.6s						
LPAZ	La Paz	15.76	12		Pn	22 08 40.1	-0.3
BDFB	Brasilia	26.71	58	LR	LR	22 22 34.2	
	comp=Z,77nm,19.9s,baz=50,slow=39						
RPN	Rapa Nui	33.24	268	LR	LR	22 21 12.0	
	comp=Z,50nm,19.7s,baz=83,slow=29						
BELA	Belgrano 2	48.92	170	P	P	22 13 42.0	0.0
BELA				IAmb	IAmb	22 14 04.8	
	comp=Z,6.3nm,1.3s						
SNAA	Sanae	53.39	158	P	P	22 14 14.7	-1.0
SNAA				IAmb	IAmb	22 14 38.0	
	comp=Z,2.5nm,0.9s						
TEIG	Tepich	54.23	340	P	P	22 14 21.8	-0.5
TXAR	Lajitas Array	68.12	330	P	P	22 15 56.6	+0.3
	comp=Z,0.5nm,0.6s,baz=144,slow=6.0,SNR=3.4						
	comp=Z,0.5nm,0.6s						
TXAR	Lajitas Array	68.12	330	P	P	22 15 57.0	+0.7
WRA	Warramunga Arr	122.91	209	PKP	PKPdf	22 23 51.4	-1.4
	comp=Z,0.6nm,0.4s,baz=154,slow=1.7,SNR=11						
H11S2	WAKE ISLAND Hy	126.31	270	T	T	00 43 01.1	
	baz=118,slow=75,SNR=55						
H11S1	WAKE ISLAND Hy	126.33	270	T	T	00 43 02.6	
	baz=118,slow=75,SNR=40						
H11S3	WAKE ISLAND Hy	126.33	270	T	T	00 43 08.6	
	baz=118,slow=75,SNR=37						
H11N3	WAKE ISLAND Hy	126.67	272	T	T	00 43 27.2	
	baz=117,slow=75,SNR=22						
H11N1	WAKE ISLAND Hy	126.69	272	T	T	00 43 24.1	
	baz=117,slow=75,SNR=82						
H11N2	WAKE ISLAND Hy	126.69	272	T	T	00 43 28.5	
	baz=117,slow=75,SNR=35						
BVAR	Borovoye Array	145.32	41	PKPbc	PKPdf	22 24 32.5	-0.7
	comp=Z,0.8nm,0.5s,baz=314,slow=2.4,SNR=6.8						
KURBB	Kurchatov Arra	150.91	41	PKPbc	PKPbc	22 24 47.2	-1.0
	comp=Z,0.4nm,0.7s,baz=294,slow=2.8,SNR=5.6						
ZALV	Zalesovo Beam	152.10	31	PKPbc	PKPbc	22 24 49.8	-1.0
	comp=Z,1.0nm,0.3s,baz=314,slow=3.4,SNR=5.9						
ZALV	Zalesovo Beam	152.10	31		PKPbc	22 24 49.5	-1.3

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*ISK **10** 22:08:24.4, 35°.28N×26°.54E, h86^{km}, ML3.0/25*
*THE **10** 22:08:27.8, 35°N±4°×2°6E±°, h52^{km}±9^{km}, M3.1/5, MLh3.1/5*
*ATH **10** 22:08:27.4, 35°.46N×26°.49E, h28^{km}±3^{km}, ML3.3/11, Manual Solution by F.Xalaris First location: 2019/12/10 22:09:40, This location: 2019/12/10 22:57:14 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*GII **10** 22:08:28.2±0.0, 34°.89N±0°.04×27°.03E±0°.01, h20^{km}, Mws3.3, confirmed*
ISC 10 22:08:23.9±1.1, **35°.20N**±0°.04×**26°.69E**±0°.05, **h68**^{km}±11^{km}, **n102**, σ**1^s.81**/115, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.39	258	P	Pn	22 08 36.6	+1.1
ZKR	Zakros	0.39	258	Pg	Pn	22 08 36.7	+1.1
ZKR	Zakros	0.39	258	P	Pn	22 08 36.4	+0.8
ZKR				S	Sn	22 08 42.1	-1.9
KARP	Karpathos	0.52	48	P	Pn	22 08 39.7	+2.8
KARP				S	Sn	22 08 49.4	+3.1
KARP	Karpathos	0.52	48	Pg	Pn	22 08 39.7	+2.8
KARP	Karpathos	0.52	48	P	Pn	22 08 39.4	+2.5
KARP				S	Sn	22 08 46.3	0.0
NPS	Neapolis	0.88	275	P	Pn	22 08 42.0	+1.2
NPS				S	Sn	22 08 52.8	-0.5
NPS	Neapolis	0.88	275	P	Pn	22 08 42.0	+1.2
NPS				S	Sn	22 08 52.0	-1.3
NISR	Nisiros	1.46	14	P	Pn	22 08 49.1	+0.8
NISR	Nisiros	1.46	14	P	Pn	22 08 49.0	+0.8
NISR				S	Sn	22 09 05.3	-1.3
IDI	Anoyia	1.47	274	P	Pn	22 08 49.4	+0.9
IDI	Anoyia	1.47	274	Pn	Pn	22 08 49.2	+0.7
IDI				Sn	Sn	22 09 07.1	+0.1
IDI	Anoyia	1.47	274	P	Pn	22 08 49.3	+0.8
IDI				S	Sn	22 09 07.0	-0.1
THERA	Ancient Thera,	1.53	320	P	Pn	22 08 49.5	+0.3
THERA				S	Sn	22 09 05.0	-3.3
ARG	Arkhangelos	1.55	49	P	Pn	22 08 53.3	+3.7
ARG	Arkhangelos	1.55	49	Pn	Pn	22 08 52.3	+2.8
ARG	Arkhangelos	1.55	49	P	Pn	22 08 53.6	+4.0
ARG				S	Sn	22 09 12.0	+3.1
THR8	Santorini-Mono	1.56	321	P	Pn	22 08 49.2	-0.4
THR6	Thira Island,	1.56	318	P	Pn	22 08 50.3	+0.6
THR3	Thira Island,	1.60	320	P	Pn	22 08 50.4	+0.2
THR2	Thira island,	1.61	321	P	Pn	22 08 50.0	-0.3
DAT	Datca	1.69	25	Pn	Pn	22 08 53.3	+1.8
BODT	Bodrum	1.93	15	P	Pn	22 08 56.5	+1.8
BODT	Bodrum	1.93	15	Pn	Pn	22 08 56.2	+1.6
TURN	Turunc	2.02	38	Pn	Pn	22 08 58.3	+2.5
APE	Apeiranthos	2.09	334	P	Pn	22 08 56.4	-0.4
APE				S	Sn	22 09 19.0	-2.9
APE	Apeiranthos	2.09	334	Pn	Pn	22 08 57.1	+0.3
APE	Apeiranthos	2.09	334	P	Pn	22 08 56.4	-0.4
APE				S	Sn	22 09 18.3	-3.5
GVD	Gavdhos	2.16	261	P	Pn	22 08 59.5	+1.8
GVD	Gavdhos	2.16	261	Pn	Pn	22 08 58.6	+0.9
GVD	Gavdhos	2.16	261	P	Pn	22 08 59.6	+1.9
CHAN	Chania	2.18	279	P	Pn	22 08 59.8	+1.8
DALY	Dalyan (Mula)	2.27	44	Pn	Pn	22 09 02.1	+2.9
MLSB	Milas	2.27	22	Pn	Pn	22 09 01.4	+2.1
YER	Yerkesik	2.33	33	P	Pn	22 09 02.6	+2.6
YER	Yerkesik	2.33	33	Pn	Pn	22 09 02.6	+2.6
KNDR	Palaiochora Ch	2.51	272	Pn	Pn	22 09 02.9	+0.5
SMG	Samos	2.51	3	P	Pn	22 09 02.9	+0.4
SMG	Samos	2.51	3	P	Pn	22 09 02.8	+0.4
SMG				S	Sn	22 09 29.5	-2.6
GCAM	G?zelcaml?	2.54	10	Pn	Pn	22 09 04.2	+1.4
AKAS	Kas	2.59	66	Pn	Pn	22 09 06.9	+3.2
CAME	Cameli-Denizli	2.75	50	Pn	Pn	22 09 08.7	+2.9
ANKY	Antikythira Is	2.84	285	P	Pn	22 09 08.4	+1.5
AYDB	Zeytinkoy-Aydi	2.91	19	Pn	Pn	22 09 09.7	+1.7
ELL	Elmali	3.04	58	Pn	Pn	22 09 12.9	+3.1
NAZL	Nazilli-Aydin	3.05	25	Pn	Pn	22 09 11.9	+2.1
APMY	Acipayam-Deniz	3.10	42	Pn	Pn	22 09 13.0	+2.4
KTHA	Kythira Island	3.13	291	P	Pn	22 09 11.2	+0.3
KTHA	Kythira Island	3.13	291	Pn	Pn	22 09 10.6	-0.3
URLA	Izmir	3.16	359	Pn	Pn	22 09 12.5	+1.2
BLCB	Balcova	3.20	5	Pn	Pn	22 09 12.6	+0.8
CHOS	Chios island	3.23	351	P	Pn	22 09 12.6	+0.3
CHOS	Chios island	3.23	351	Pn	Pn	22 09 13.1	+0.8
ODEM	Odemis-Izmir	3.27	20	Pn	Pn	22 09 14.6	+1.7
VLI	Veliai	3.40	298	P	Pn	22 09 14.3	-0.3
VLI	Veliai	3.40	298	P	Pn	22 09 15.1	+0.5
VLY	Voula,Athens	3.53	320	P	Pn	22 09 16.9	+0.6
DION	Dionisos Attik	3.63	323	P	Pn	22 09 19.0	+1.3
DION	Dionisos Attik	3.63	323	P	Pn	22 09 17.8	+0.1
LTK	Loutraki	4.11	314	P	Pn	22 09 25.1	+0.8
CSS	Mathiatis	5.45	91	P	Pn	22 09 44.2	+1.6
CSS	Mathiatis	5.45	91	S	Sn	22 10 45.1	+1.1
MMA0B	Mount Meron ar	7.55	104	P	Pn	22 10 12.4	+1.0
MMA0B	Mount Meron ar	7.55	104	S	Sn	22 11 34.4	-1.1
SLTI	Sal'it	7.56	111	P	Pn	22 10 12.5	+1.0
SLTI	Sal'it	7.56	111	S	Sn	22 11 34.2	-1.5
GEM	Giv'at Ha'Em	7.70	102	P	Pn	22 10 14.1	+0.8
GEM	Giv'at Ha'Em	7.70	102	S	Sn	22 11 38.9	-0.1
NATI	Neve Ativ	7.74	102	P	Pn	22 10 15.2	+1.3
NATI	Neve Ativ	7.74	102	S	Sn	22 11 39.3	-0.7
SALP	Salfit	7.75	111	P	Pn	22 10 15.5	+1.4
SALP	Salfit	7.75	111	S	Sn	22 11 39.1	-1.2
KZIT	Kziot	7.76	121	P	Pn	22 10 14.5	+0.3
KZIT	Kziot	7.76	121	S	Sn	22 11 37.4	-3.1
MMLI	Mount Malkishu	7.77	108	P	Pn	22 10 15.2	+0.8
MMLI	Mount Malkishu	7.77	108	S	Sn	22 11 39.7	-1.2
AMAZ	Amatzia	7.79	116	P	Pn	22 10 15.4	+0.8
AMAZ	Amatzia	7.79	116	S	Sn	22 11 39.1	-2.3
KSHT	Keshet	7.88	104	P	Pn	22 10 17.3	+1.3
KSHT	Keshet	7.88	104	S	Sn	22 11 41.9	-1.8
HMDT	Nahal Hemdat	7.93	109	P	Pn	22 10 17.5	+1.0
HMDT	Nahal Hemdat	7.93	109	S	Sn	22 11 43.4	-1.3
UJAP	Al Uja	8.01	111	P	Pn	22 10 18.9	+1.3
UJAP	Al Uja	8.01	111	S	Sn	22 11 45.0	-1.5
YTIR	Yattir	8.03	116	P	Pn	22 10 19.4	+1.5
YTIR	Yattir	8.03	116	S	Sn	22 11 44.7	-2.5
DSI	Dead Sea	8.12	114	P	Pn	22 10 19.7	+0.6
DSI	Dead Sea	8.12	114	S	Sn	22 11 47.7	-1.7
GHAJ	Ghor Haditha	8.39	115	P	Pn	22 10 24.4	+1.7
GHAJ	Ghor Haditha	8.39	115	S	Sn	22 11 54.7	-1.2
KRMI	Paran Flat	8.46	125	P	Pn	22 10 24.7	+0.9
KRMI	Paran Flat	8.46	125	S	Sn	22 11 54.6	-3.1
PRNI	Paran	8.51	122	P	Pn	22 10 26.0	+1.6
PRNI	Paran	8.51	122	S	Sn	22 11 55.7	-3.2
ZFRI	Zfri	8.51	121	P	Pn	22 10 25.9	+1.4
ZFRI	Zfri	8.51	121	S	Sn	22 11 55.7	-3.2
HRFI	Mount Harif	8.72	124	P	Pn	22 10 28.9	+1.6
HRFI	Mount Harif	8.72	124	S	Sn	22 12 01.9	-2.2
MBRI	Mt Berech	8.79	125	P	Pn	22 10 29.8	+1.5
MBRI	Mt Berech	8.79	125	S	Sn	22 12 03.2	-2.7
EIL	Elat	8.89	126	P	Pn	22 10 31.4	+1.7
EIL	Elat	8.89	126	S	Sn	22 12 06.2	-2.1

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*IDC **10** 22:09:27.0±12.0, 42°.83N×148°.76E, h0^{km}, mb3.9/6, mbtmp3.9/7, ML3.8/1, Error ellipse: s-maj=292.9km s-min=56.3km az=165.0*
*NEIC **10** 22:09:29.3±2.1, 42°.74N±0°.07×148°.7E±0°.2, h10^{km}±2^{km}, mb4.2/12, Error ellipse: s-maj=20.4km s-min=11.8km az=98.0*
*SKHL **10** 22:09:33.4±0.1, 43°.30N×148°.40E, h40^{km}±1^{km}, mb4.4/2*
*JMA **10** 22:09:35.5±0.6, 43°N±2°×14°8E±°, h4^{km}, MV3.3/21, E OFF HOKKAIDO*
*MOS **10** 22:09:36.2±1.4, 43°.23N×148°.04E, h46^{km}, mb4.3/3, Error ellipse: s-maj=20.5km s-min=10.6km az=34.4*
ISC 10 22:09:32.9±2.9, **43°.38N**±0°.07×**147°.98E**±0°.08, **h2**^{km}±15^{km}, **n51**, σ**1^s.14**/62, **mb4.2**/12, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.63	270	eP	Pb	22 10 03.1	-0.6
NEM2				eS	Sn	22 10 23.0	-1.0
NMR	Nemuro--Hokkai	1.64	271	ePN	Pn	22 10 03.0	+0.3
NMR				eS	Sg	22 10 25.2	-0.4
NMR	Nemuro--Hokkai	1.64	271	eP	Pb	22 10 03.2	-0.6
NMR				eS	Sg	22 10 25.5	-0.1
YUK	Yuzh-Kuril'sk	1.67	294	ePN	Pb	22 10 04.2	-0.2
YUK				eS	Sg	22 10 27.6	+1.0
YUK				pmax	pmax		
	comp=Z,117nm,0.2s						
YUK				smax	smax		
	comp=E,445nm,0.5s						
YUK				smax	smax		
	comp=N,295nm,0.3s						
YUK	Yuzh-Kuril'sk	1.67	294	eP	Pb	22 10 04.1	-0.3
YUK				AMB	AMB	22 10 05.1	
	comp=N,220nm,0.5s						
YUK				eS	Sg	22 10 27.3	+0.7
YUK				A	A	22 10 36.6	
	comp=N,720nm,0.6s						
YUK				A	A	22 10 36.6	
	comp=N,660nm,0.6s						
GLVR	Golovnino	1.82	282	ePN	Pn	22 10 05.3	+0.1
GLVR				eS	Sg	22 10 30.9	-0.6
GLVR				smax	smax		
	comp=N,249nm,0.3s						
GLVR				smax	smax		
	comp=E,121nm,0.3s						
GLVR	Golovnino	1.82	282	eP	Pn	22 10 05.3	+0.1
GLVR				eS	Sg	22 10 30.9	-0.6
GLVR				A	A	22 10 31.7	
	comp=E,250nm,0.3s						
GLVR				A	A	22 10 31.7	
	comp=E,120nm,0.3s						
KUR	Kuril'sk	1.86	358	PN	Pb	22 10 09.1	+1.5
KUR				S	Sb	22 10 31.7	+0.5
KUR				pmax	pmax		
	comp=Z,35nm,0.4s						
KUR				smax	smax		
	comp=E,115nm,0.5s						
KUR				smax	smax		
	comp=N,94nm,0.4s						
KUR	Kuril'sk	1.86	358	eP	Pn	22 10 04.8	-0.9
KUR				AMB	AMB	22 10 09.1	
	comp=N,90nm,0.5s						
KUR				eS	Sn	22 10 28.3	-1.4
KUR				A	A	22 10 35.2	
	comp=N,120nm,0.6s						
KUR				A	A	22 10 35.2	
	comp=N,130nm,0.6s						
JKHN	Kushirohamanak	2.08	263	eP	Pb	22 10 10.6	-0.7
RUSJ	Misakicho	2.11	291	ePN	Pb	22 10 10.6	-1.2
RUSJ				eS	Sg	22 10 39.9	-0.8
AKK	Akkeshi	2.32	262	eP	Pb	22 10 13.9	-1.5
JAK	Akkeshi	2.43	262	eS	Sn	22 10 43.8	0.0
JTKR	Abashiri--Toko	3.01	283	eP	Pn	22 10 23.8	+2.2
JAR	Ashorobuto	3.07	270	eP	Pn	22 10 23.9	+1.5
JAR				eS	Sn	22 10 59.6	0.0
JCH	Churui	3.47	259	eP	Pn	22 10 29.8	+2.0
ERM	Erimo	3.81	251		Pn	22 10 34.2	+1.7
ERM	Erimo	3.81	251	PN	Pn	22 10 34.2	+1.7
JEM	Erimo	3.81	251	eP	Pn	22 10 34.2	+1.7
JKA	Kamikawa-asahi	3.97	283	Pn	Pb	22 10 41.0	-2.5
ASAJ	Asahikawa	3.97	283	Pn	Pn	22 10 38.5	+3.8
	comp=N,3.5nm,0.3s,baz=44,slow=1.8,SNR=25						
	comp=N,10.0nm,0.4s						
JNBK	Urakawa-nobuka	4.00	256	eP	Pn	22 10 36.2	+1.1
SONM	Songino Array	29.17	293	P	P	22 15 36.0	+0.5
	comp=N,2.0nm,1.0s,baz=87,slow=9.1,SNR=4.6						
	comp=N,2.0nm,1.0s						
SONM	Songino Array	29.17	293	IAmb	IAmb	22 15 37.6	
	comp=Z,4.2nm,1.3s						
SONM				P	P	22 15 37.7	+2.1
SONM	Songino Array	29.17	293	P	P	22 15 36.0	+0.5
E19K	Redstone River	37.48	31	P	P	22 16 47.3	-0.1
D20K	Etivluk River	37.98	29	P	P	22 16 51.3	-0.4
D20K				IAmb	IAmb	22 17 10.1	
	comp=Z,5.8nm,1.2s						
B20K	Meade River	38.10	27	P	P	22 16 52.2	-0.4
B21K	Ikpikpuk River	38.87	28	P	P	22 16 57.5	-1.6
B21K				IAmb	IAmb	22 17 21.8	
	comp=Z,11nm,1.4s						
C23K	Itkillik River	40.28	28	P	P	22 17 08.7	-2.2
MKAR	Makanchi Array	45.29	298	P	P	22 17 52.5	+0.7
	comp=Z,1.1nm,0.7s,baz=83,slow=7.1,SNR=8.5						
	comp=Z,1.1nm,0.7s						
MKAR	Makanchi Array	45.29	298	P	P	22 17 52.4	+0.5
MKAR	Makanchi Array	45.29	298	P	P	22 17 52.4	+0.5
MAKZ	Makanchi	45.49	298	P	P	22 17 53.2	-0.2
MAKZ				IAmb	IAmb	22 18 16.1	
	comp=Z,3.6nm,1.1s						
MAKZ	Makanchi	45.49	298	P	P	22 17 53.2	-0.2
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KURK	Kurchatov	46.24	305	P	P	22 17 59.2	0.0
KURK				IAmb	IAmb	22 18 01.3	
	comp=Z,1.7nm,0.8s						
KURK	Kurchatov	46.24	305	P	P	22 17 59.2	0.0
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	Kurchatov	46.24	305	eP	P	22 17 59.2	0.0
KURBB	Kurchatov Arra	46.32	304	P	P	22 18 00.3	+0.4
	comp=Z,0.5nm,0.4s,baz=76,slow=7.8,SNR=7.4						
	comp=Z,0.5nm,0.4s						
BVAR	Borovoye Array	50.21	310	P	P	22 18 31.3	+1.4
	comp=Z,0.5nm,0.6s,baz=71,slow=12,SNR=2.5						
	comp=Z,0.5nm,0.6s						
KK31	Karatay Array	54.42	298	P	P	22 19 01.6	+0.3
KK31	Karatay Array	54.42	298	P	P	22 19 01.6	+0.3
KK31				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KKAR	Karatay Array	54.42	298	P	P	22 19 01.8	+0.5
KKAR	Karatay Array	54.42	298	P	P	22 19 01.8	+0.5
ARTI	Arti	55.14	317	P	P	22 19 05.8	-0.5
	comp=Z,2.1nm,0.6s,baz=90,slow=7.1,SNR=4.3						
	comp=Z,2.1nm,0.6s						
ARTI	Arti	55.14	317	P	P	22 19 06.5	+0.2
AB31	Akbulak array	57.77	309	P	P	22 19 25.3	+0.2
AB31				IAmb	IAmb	22 19 39.4	
	comp=Z,1.4nm,0.6s						
ABKAR	Akbulak array	57.77	309	P	P	22 19 25.5	+0.4
FINES	FINESS Array B	65.48	333	P	P	22 20 16.1	-0.9
	comp=Z,1.3nm,0.6s,baz=40,slow=5.4,SNR=8.5						
	comp=Z,1.3nm,0.6s						
FINES	FINESS Array B	65.48	333	P	P	22 20 16.3	-0.6
BURAR	Bucovina Array	76.29	324	P	P	22 21 22.9	-0.2

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*IDC **10** 22:41:53.0±1.7, 55°.89N×150°.06W, h0^{km}, mb3.5/4, mbtmp3.6/9, ML3.6/5, Error ellipse: s-maj=33.8km s-min=22.1km az=19.0*
*NEIC **10** 22:41:55.0±2.0, 56°.03N±0°.09×150°.2W±0°.1, h10^{km}±2^{km}, mb3.7/3, ML3.9/70, ML3.7(AEIC), Error ellipse: s-maj=16.5km s-min=11.0km az=144.0*
*AEIC **10** 22:41:57.1±2.6, 55°.9N±0°.1×150°.1W±0°.1, h10^{km}±8^{km}, Error ellipse: s-maj=18.4km s-min=6.6km az=157.0*
ISC 10 22:41:54.1±0.9, **56°.08N**±0°.07×**150°.16W**±0°.05, **h10**^{km}, **n184**, σ**1^s.30**/192, **mb3.7**/4, **Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHAK	Old Harbor	2.07	305		Pn	22 42 28.7	-0.2
OHAK					Sn	22 42 53.6	-1.1
KDAK	Kodiak Island	2.16	323	Pn	Pn	22 42 31.0	+0.9
	25nm,0.3s,baz=22,slow=1.1,SNR=608						
KDAK				Sn	Sn	22 42 57.1	+0.1
	11nm,0.3s,baz=12,slow=21,SNR=16						
	60nm,0.2s						
KDAK	Kodiak Island	2.16	323	Pn	Pn	22 42 30.6	+0.5
KDAK	Kodiak Island	2.16	323	Sn	Sn	22 42 56.8	-0.2
SII	Sitkinak Islan	2.29	284	Pn	Pn	22 42 31.1	-0.9
SII				Sn	Sn	22 42 58.4	-1.9
SII				IAML		22 43 02.2	
	comp=N,368nm,0.6s						
R18K	Karluk	2.79	304	Pn	Pn	22 42 39.3	+0.6
R18K				IAML		22 43 14.6	
	comp=N,237nm,0.4s						
R18K				IAML		22 43 21.4	
	comp=E,272nm,0.4s						
SYI	Shuyak Island	2.81	335	Pn	Pn	22 42 40.0	+1.0
KAHG	Katmai Hook Gl	3.39	317		Pn	22 42 48.9	+1.8
Q19K	Cape Douglas,	3.42	328	Pn	Pn	22 42 49.6	+2.2
Q19K				Sn	Sn	22 43 29.5	+1.5
KAWH	Katmai	3.42	314		Pn	22 42 49.3	+1.9
KAWH					Sn	22 43 27.9	-0.1
KAWH					Sb	22 43 29.6	-6.7
KARR	Katmai Rainbow	3.46	316		Pn	22 42 49.9	+1.9
KARR					Sn	22 43 30.9	+2.0
KAKN	Katmai Knife C	3.47	312		Pn	22 42 49.8	+1.6
KAKN					Sn	22 43 30.2	+0.9
CNPM	China Poot	3.50	351	Pn	Pn	22 42 48.8	+0.2
CNPM				Sn	Sn	22 43 28.8	-1.2
CNPM				IAML		22 43 32.3	
	comp=E,210nm,0.7s						
ACHA	Angle Creek He	3.53	309	Pn	Pn	22 42 50.5	+1.5
ACHA				Sn	Sn	22 43 31.8	+0.9
KABU	Katmai Buttres	3.55	310		Pn	22 42 50.8	+1.6
ANCK	Angle Creek	3.60	308		Pn	22 42 50.9	+1.0
KAHC	Katmai Hardscr	3.68	316		Pn	22 42 53.0	+2.0
KAHC					Sn	22 43 35.3	+0.9
BRSE	Bradley Lake S	3.68	355		Pn	22 42 51.2	+0.2
AUI	Augustine Isla	3.70	333		Pn	22 42 53.8	+2.5
AUI					Sn	22 43 37.1	+2.2
BRLK	Bradley Lake	3.71	354	Pn	Pn	22 42 51.4	-0.1
BRLK				IAML		22 43 37.7	
	comp=E,128nm,0.5s						
BRLK				IAML		22 43 39.7	
	comp=N,135nm,0.6s						
PLK3	Peulik 3	3.72	298		Pn	22 42 52.6	+1.1
AUCH	Augustine Cone	3.73	333		Pn	22 42 53.4	+1.6
PLK4	Peulik 4	3.74	297	Pn	Pn	22 42 52.3	+0.3
PLK4				Sn	Sn	22 43 34.9	-1.1
PLK4				IAML		22 43 39.5	
	comp=E,144nm,0.6s						
PLK2	Peulik 2	3.78	299		Pn	22 42 53.7	+1.3
CNTC	Contact Creek	3.81	307		Pn	22 42 54.0	+1.2
MID	Middleton Isla	3.93	30	Pn	Pn	22 42 54.5	+0.2
MID				IAML		22 45 09.6	
	comp=N,207nm,1.5s						
PLK1	Peulik 1	3.93	299		Pn	22 42 54.9	+0.4
P19K	Oil Pt	3.94	337	Pn	Pn	22 42 56.4	+1.9
PLBL	Peulik Blue Cr	4.00	297		Pn	22 42 56.1	+0.7
SEW	Seward	4.05	5	Pn	Pn	22 42 55.8	-0.2
ILS	Iliamna Low So	4.18	339		Pn	22 42 58.8	+0.8
P23K	Montague Islan	4.19	19	Pn	Pn	22 42 57.7	-0.2
P23K				IAML		22 43 48.3	
	comp=E,151nm,0.7s						
P23K				IAML		22 43 48.8	
	comp=N,147nm,0.7s						
ILSW	Iliamna Southw	4.22	339	Pn	Pn	22 42 59.4	+0.9
ILSW				IAML		22 43 50.8	
	comp=E,97nm,0.6s						
ILSW				IAML		22 43 51.2	
	comp=N,86nm,0.2s						
IVE	Iliamna Volcan	4.23	340		Pn	22 42 59.3	+0.7
P18K	Big Mountain,	4.29	323	Pn	Pn	22 43 00.2	+0.8
R16K	Pilot Point	4.34	293	Pn	Pn	22 43 00.2	+0.2
R16K				IAML		22 43 36.9	
	comp=N,158nm,1.4s						
R16K				IAML		22 45 36.6	
	comp=E,153nm,1.5s						
O22K	Cooper Landing	4.42	3	Pn	Pn	22 43 02.0	+1.0
SLKM	Skilak Lake	4.44	360	Pn	Pn	22 43 01.5	+0.1
SLKM				IAML		22 43 55.3	

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         comp=N,98nm,0.2s
SLKM                                IAML          22 43 56.6
         comp=E,172nm,0.3s
RED      Redoubt Volcan   4.56 343  Pn     Pn     22 43 02.6 -0.6
RED                                 IAML          22 43 59.2
         comp=E,81nm,0.4s
RED                                 IAML          22 43 60.0
         comp=N,78nm,1.1s
ANPB     Aniakchak Plen   4.57 282         Pn     22 43 03.2  0.0
P17K     Kvichak River    4.60 315  Pn     Pn     22 43 05.6 +2.0
RDWB     Redoubt West     4.64 343         Pn     22 43 04.3  0.0
O18K     Koktuh Hills     4.64 327  Pn     Pn     22 43 04.4 +0.2
O18K                                IAML          22 44 15.1
         comp=E,78nm,0.8s
O18K                                IAML          22 44 17.0
         comp=N,84nm,0.9s
O19K     Port Alsworth    4.67 334  Pn     Pn     22 43 06.4 +1.8
HIN      Hinchinbrook I   4.74  23  Pn     Pn     22 43 05.3 -0.2
HIN                                 IAML          22 44 01.5
         comp=N,94nm,1.1s
HIN                                 IAML          22 44 07.4
         comp=E,85nm,1.2s
PWL      Port Wells       4.88  11  Pn     Pn     22 43 07.1 -0.4
PWL                                 IAML          22 44 06.3
         comp=N,78nm,0.6s
KAIM     Kayak Island     4.91  36  Pn     Pn     22 43 07.5 -0.4
KAIM                                IAML          22 44 37.4
         comp=N,118nm,1.4s
RC01     Rabbit Creek A   5.03   2  Pn     Pn     22 43 09.5  0.0
RC01                                IAML          22 44 13.1
         comp=N,57nm,0.3s
RC01                                IAML          22 44 14.6
         comp=E,75nm,0.5s
VNHG     Veniaminof 1     5.04 275         Pn     22 43 10.2 +0.5
EYAK     Cordova Ski Ar   5.04  26  Pn     Pn     22 43 10.2 +0.6
EYAK                                IAML          22 44 09.1
         comp=N,55nm,0.8s
EYAK                                IAML          22 44 09.4
         comp=E,51nm,0.6s
FID      Port Fidalgo     5.06  21  Pn     Pn     22 43 10.1 +0.1
FID                                 IAML          22 44 06.7
         comp=E,71nm,0.7s
FID                                 IAML          22 44 09.5
         comp=N,62nm,1.5s
GLI      Glacier Island   5.07  17  Pn     Pn     22 43 09.7 -0.4
GLI                                 IAML          22 44 07.8
         comp=E,59nm,1.3s
GLI                                 IAML          22 44 08.2
         comp=N,44nm,0.9s
P16K     Nushagak River   5.15 308  Pn     Pn     22 43 12.0 +0.8
P16K                                IAML          22 44 12.9
         comp=N,83nm,1.2s
P16K                                IAML          22 44 20.6
         comp=E,100nm,1.5s
RAGM     Ragged Mountai   5.20  32  Pn     Pn     22 43 11.9 +0.1
SPU      Mount Spurr      5.21 350  Pn     Pn     22 43 12.8 +0.7
O17K     Koliganek Bris   5.23 318         Pn     22 43 13.3 +1.0
SUCK     Suckling Hills   5.24  38  Pn     Pn     22 43 12.5 +0.1
SUCK                                IAML          22 44 20.2
         comp=N,79nm,1.4s
SUCK                                IAML          22 46 28.9
         comp=E,95nm,1.3s
SPCR     Spurr Chakacha   5.24 349         Pn     22 43 13.5 +1.0
N19K     Bonanza Creek    5.26 336  Pn     Pn     22 43 13.4 +0.7
HMT      Hamilton         5.28  34  Pn     Pn     22 43 13.3 +0.3
NICHA    Nichawak Mount   5.30  36         Pn     22 43 13.6 +0.4
GOAT     Goat Mountain    5.34  30         Pn     22 43 14.3 +0.4
SUA      Susitna One      5.41 357  Pn     Pn     22 43 15.0 +0.3
KNK      Knik Glacier     5.42   9  Pn     Pn     22 43 16.1 +1.2
STLK     Strandline Lak   5.50 352  Pn     Pn     22 43 16.3 +0.2
BERG     Berg Lake        5.50  36  Pn     Pn     22 43 16.1  0.0
N18K     Kilae Creek      5.51 329  Pn     Pn     22 43 16.6 +0.5
CNBA     Chernabura Isl   5.52 261  Pn     Pn     22 43 15.1 -1.1
DIV      Divide           5.55  23  Pn     Pn     22 43 16.7 -0.1
SNH      Sunshine Point   5.65  40  Pn     Pn     22 43 17.8 -0.3
KHIT     Khitrov Hills    5.69  37         Pn     22 43 18.8 +0.2
BMRM     Bremner River    5.69  28  Pn     Pn     22 43 18.8 +0.1
GHO      Glory Hole Cre   5.74   6  Pn     Pn     22 43 20.9 +1.5
N17K     Nushagak Hills   5.79 323  Pn     Pn     22 43 20.9 +0.9
SML      Sawmill          5.82   9  Pn     Pn     22 43 21.3 +0.9
WAX      Waxell Ridge     5.83  38  Pn     Pn     22 43 20.9 +0.3
KLU      Klutina          5.85  20  Pn     Pn     22 43 21.6 +0.7
SDPT     Sand Point       5.88 267  Pn     Pn     22 43 20.3 -0.9
SCM      Sheep Creek Mo   5.95  13  Pn     Pn     22 43 23.5 +1.3
CRQM     Cirque           5.96  35  Pn     Pn     22 43 22.2 -0.3
MESA     MESA             5.98  43  Pn     Pn     22 43 22.7  0.0
M20K     Styx River       6.01 346  Pn     Pn     22 43 22.6 -0.6
O15K     Ungalikthiuk R   6.05 305  Pn     Pn     22 43 25.0 +1.5
TGL      Tana Glacier     6.06  36  Pn     Pn     22 43 24.0 +0.2
ISLE     Juniper Island   6.12  39  Pn     Pn     22 43 24.4 -0.2
BAGL     Bagley Icefiel   6.13  41         Pn     22 43 24.6  0.0
M18K     Stony River      6.17 334         Pn     22 43 25.7 +0.5
YAH      Yahtse           6.17  43  Pn     Pn     22 43 25.3 -0.2
VRDI     Verde Repeater   6.23  31  Pn     Pn     22 43 26.4 +0.2
N25K     Chitina, Valde   6.24  25  Pn     Pn     22 43 27.1 +0.8
GLB      Gilahina Butte   6.30  29  Pn     Pn     22 43 27.2 +0.1
N16K     Nishlik Lake     6.32 318         Pn     22 43 29.1 +1.9
M24K     Tolsona, Glenn   6.38  17  Pn     Pn     22 43 28.9 +0.8
GRNC     Granite Creek    6.42  40  Pn     Pn     22 43 29.0 +0.3
TABL     Table Mountain   6.46  44  Pn     Pn     22 43 29.2 -0.1
L22K     Petersville      6.47 357  Pn     Pn     22 43 30.4 +1.0
MCARA    McCarthy VSAT    6.48  32  Pn     Pn     22 43 29.9 +0.5
PTPK     Patty Peak       6.50  35         Pn     22 43 30.4 +0.5
M17K     Holitna River    6.54 328  Pn     Pn     22 43 31.2 +1.0
L19K     White Mountain   6.58 340  Pn     Pn     22 43 31.2 +0.4
PS1A     Pavlof South-1   6.58 269         Pn     22 43 30.5 -0.2
PCA      Pinnacle         6.61  48  Pn     Pn     22 43 31.8 +0.5
N15K     Kwethluk River   6.67 312  Pn     Pn     22 43 34.0 +2.0
BARN     Barnard Glacie   6.68  38  Pn     Pn     22 43 32.5 +0.2
DOL      Dolgoi Island    6.70 267         Pn     22 43 31.7 -0.8
S12K     Black Hills      6.71 272  Pn     Pn     22 43 31.3 -1.3
PN7A     Pavlof North-7   6.72 269         Pn     22 43 32.0 -0.8
CTGM     Chitina Glacie   6.73  40  Pn     Pn     22 43 32.9  0.0
O14K     Tigyukauivet M   6.75 303  Pn     Pn     22 43 34.8 +1.6
LOGN     Logan Glacier    6.75  42  Pn     Pn     22 43 33.1 -0.2
M16K     Timber Creek     6.76 321  Pn     Pn     22 43 34.8 +1.5
DT1      Dutton Round H   6.94 267         Pn     22 43 35.0 -0.7
O28M     Mount Upton      7.03  44  Pn     Pn     22 43 37.0 -0.2
DHY      Denali Highway   7.15  10  Pn     Pn     22 43 39.9 +1.1
N14K     Kuskokwak Cree   7.23 307  Pn     Pn     22 43 41.0 +1.3
PAX      Paxson           7.30  17  Pn     Pn     22 43 42.0 +1.2
M26K     Nabesna, AK      7.32  27  Pn     Pn     22 43 42.5 +1.6
L17K     Donlin           7.37 329         Pn     22 43 43.7 +2.1
L16K     Owhat River      7.42 323  Pn     Pn     22 43 43.0 +0.7
O29M     Mount Kennedy    7.43  51  Pn     Pn     22 43 43.0 +0.4
KTH      Kantishna Hill   7.50 357  Pn     Pn     22 43 45.7 +2.2
P29M     Windy Craggy     7.51  57  Pn     Pn     22 43 42.3 -1.4
M27K     Edge Creek, AK   7.59  31  Pn     Pn     22 43 45.8 +1.1
MENT     Mentasta         7.61  23  Pn     Pn     22 43 46.4 +1.5
L26K     Log Cabin Wild   7.77  24  Pn     Pn     22 43 49.0 +1.9
S31K     Pelican          7.83  70  Pn     Pn     22 43 45.4 -2.5
K17K     Iditarod         7.84 331  Pn     Pn     22 43 49.2 +1.2
ISNN     Isanotski Nort   7.85 266         Pn     22 43 47.4 -0.8
P30M     Million Dollar   8.07  54  Pn     Pn     22 43 51.4 +0.1
L15K     Ungalak Mounta   8.11 318         Pn     22 43 53.3 +1.5
RIDG     Independent Ri   8.13  17  Pn     Pn     22 43 53.4 +1.3
L27K     Beaver Creek,    8.17  28  Pn     Pn     22 43 52.8 +0.2
DOT      Dot Lake         8.18  19  Pn     Pn     22 43 55.1 +2.4
BCAR     Beaver Creek A   8.18  28  Pn     Pn     22 43 53.6 +0.8
M13K     Dall Lake        8.20 307  Pn     Pn     22 43 54.9 +2.0
L14K     Kuka Creek       8.38 314  Pn     Pn     22 43 56.9 +1.6
J19K     Poorman          8.39 343  Pn     Pn     22 43 55.7 +0.2
HDA      Harding Lake     8.50   9  Pn     Pn     22 43 59.0 +1.9
BESE     Bessie Mountai   8.65  67  Pn     Pn     22 43 57.1 -2.0
N30M     Aishikik Lake    8.66  46  Pn     Pn     22 43 59.6 +0.3
M29M     Somme Creek      8.74  38  Pn     Pn     22 44 01.6 +1.2
IL31                      8.86   9  Pn     Pn     22 44 04.0 +1.9
ILAR     Eielson Array    8.86   9  Pn     Pn     22 44 02.6 +0.6
         comp=E,0.4nm,0.3s,baz=187,slow=13,SNR=17
ILAR                                Sn     Sn     22 45 38.0 -3.8
         comp=E,0.7nm,0.3s,baz=195,slow=20,SNR=6.4
         comp=E,1.1nm,0.5s
ILAR     Eielson Array    8.86   9         Pn     22 44 03.1 +1.0
J25K     Salcha River,    8.88  13  Pn     Pn     22 44 03.9 +1.5
J16K     Anvik River      8.94 328  Pn     Pn     22 44 04.2 +1.1
J26L     Joseph Creek     9.05  18  Pn     Pn     22 44 05.3 +0.6
N31M     Braeburn, Yuko   9.21  48  Pn     Pn     22 44 07.2 +0.3
L29M     L29M             9.30  36  Pn     Pn     22 44 08.5 +0.3
M30M     Minto, Yukon     9.42  41  Pn     Pn     22 44 09.7  0.0
P32M     Atlin            9.44  61  Pn     Pn     22 44 09.8 -0.2
U33K     Whale Pass       9.52  83  Pn     Pn     22 44 07.7 -3.4
DAWY     Dawson           9.63  29  Pn     Pn     22 44 13.6 +1.0
H21K     Melozitna Rive   9.69 353  Pn     Pn     22 44 13.8 +0.3
K29M     Barlow Dome     10.01  34  Pn     Pn     22 44 18.7 +0.7
P33M     Teslin, Yukon   10.04  59  Pn     Pn     22 44 17.7 -0.6
H17K     Granite Mounta  10.08 336  Pn     Pn     22 44 21.2 +2.4
M31M     Drury Creek, Y  10.14  46  Pn     Pn     22 44 20.7 +1.1
I27K     Kandik River    10.41  20  Pn     Pn     22 44 25.4 +2.2
J30M     Hart River      10.90  33  Pn     Pn     22 44 31.8 +1.7
H27K     Steamboat Moun  10.98  19  Pn     Pn     22 44 32.1 +1.0
DLBC     Dease Lake      11.14  69  Pn     Pn     22 44 32.8 -0.6
         comp=E,0.2nm,0.3s,baz=270,slow=20,SNR=2.1
         comp=E,0.7nm,0.3s
F20K     Avaraart Lake   11.31 349  Pn     Pn     22 44 38.0 +2.5
I30M     Mount Dempster  11.36  31  Pn     Pn     22 44 38.8 +2.5
F24K     Squaw Lake      11.53   4  Pn     Pn     22 44 40.4 +1.9
F15K     North Star Dit  11.92 330  Pn     Pn     22 44 46.5 +2.7
D23K     Nanushuk River  12.93 359  Pn     Pn     22 44 59.8 +2.1
B22K     Teshekpuk Lake  14.38 356  Pn     Pn     22 45 18.9 +1.4
INK      Inuvik          14.43  25  Pn     Pn     22 45 20.1 +2.0
         comp=E,0.1nm,0.3s,baz=213,slow=14,SNR=7.5
         comp=E,3.2nm,0.9s
A36M     Sachs Harbour   19.06  24  P      P      22 46 16.4 +0.3
A36M                                IAmb   IAmb   22 46 19.6
         comp=Z,8.7nm,0.8s
YKA      Yellowknife Ar  19.06  56  P      Pn     22 46 17.4 +0.4
         comp=Z,0.2nm,0.3s,baz=268,slow=10,SNR=14
         comp=Z,0.9nm,0.7s
YKA      Yellowknife Ar  19.06  56         P      22 46 15.6 -0.6
YKAW3    Yellowknife Wh  19.06  56  P      Pn     22 46 17.1 +0.2
YKAW3                               IAmb   IAmb   22 46 18.1
         comp=Z,7.5nm,1.4s
YKAW1    Yellowknife Wh  19.11  56  P      Pn     22 46 17.4 -0.2
YKAW1                               IAmb   IAmb   22 46 18.8
         comp=Z,2.4nm,0.7s
TXAR     Lajitas Array   42.22 110  P      P      22 49 47.4 +0.2
         comp=Z,0.5nm,0.9s,baz=320,slow=4.8,SNR=3.8
         comp=Z,0.5nm,0.9s
H11N2    WAKE ISLAND Hy  48.36 239  T      T      23 42 38.7
         baz=30
H11N3    WAKE ISLAND Hy  48.37 239  T      T      23 43 10.9
         baz=30,slow=74
H11N1    WAKE ISLAND Hy  48.38 239  T      T      23 42 38.9
         baz=30,slow=74
H11S1    WAKE ISLAND Hy  49.50 239  T      T      23 44 37.9
         baz=28,slow=76
H11S2    WAKE ISLAND Hy  49.52 239  T      T      23 44 44.0
         baz=28,slow=76
H11S3    WAKE ISLAND Hy  49.52 239  T      T      23 44 40.2
         baz=28,slow=76
SONM     Songino Array   58.39 310  P      P      22 51 51.2 +1.8
         comp=Z,0.7nm,0.9s,baz=36,slow=7.6,SNR=3.7
         comp=Z,0.7nm,0.9s
ZALV     Zalesovo Beam   61.46 327  P      P      22 52 11.7 +1.4
         comp=Z,0.4nm,0.4s,baz=54,slow=9.7,SNR=2.3
         comp=Z,0.4nm,0.4s
MKAR     Makanchi Array  68.47 324  P      P      22 52 57.3 +1.2
         comp=Z,0.5nm,0.9s,baz=19,slow=4.8,SNR=2.8
         comp=Z,0.5nm,0.9s
```

NEIC ***10*** *22:50:38.7±1.6, 56°.16N±0°.05×150°.1W±0°.1, h10^{km}±2^{km}, ML3.6/66, ML3.5(AEIC), Error ellipse: s-maj=12.0km s-min=5.0km az=231.0*

AEIC ***10*** *22:50:40.4±3.1, 55°.9N±0°.1×150°.0W±0°.2, h12^{km}±9^{km}, Error ellipse: s-maj=18.4km s-min=13.6km az=151.0*

IDC ***10*** *22:50:42.9±3.3, 56°.17N×148°.99W, h0^{km}, mb3.6/1, mbtmp3.5/4, ML3.2/3, Error ellipse: s-maj=53.8km s-min=39.8km az=128.0*

ISC 10 22:50:35.6±1.3**, 55°.98N**±0°.08×**150°.05W**±0°.05**, h10**^{km}**, n164,** σ1**.29**/174**, Gulf of Alaska**

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Code     Station Name      Δ°  AZ°  Phase ID      Time       Res
                                    Op     ISC    h  m  s    ISC
OHAK     Old Harbor       2.18 306         Pn     22 51 11.5 -0.4
OHAK                                       Sn     22 51 36.1 -2.9
KDAK     Kodiak Island    2.28 323  Pn     Pn     22 51 14.0 +0.7
KDAK     Kodiak Island    2.28 323  Sn     Sn     22 51 39.6 -1.9
SII      Sitkinak Islan   2.38 286  Pn     Pn     22 51 14.2 -0.5
SII                                 Sn     Sn     22 51 40.3 -3.6
R18K     Karluk           2.90 305  Pn     Pn     22 51 22.4 +0.6
SYI      Shuyak Island    2.93 335  Pn     Pn     22 51 22.3 +0.1
SYI                                 Sn     Sn     22 51 56.1 -1.3
KAHG     Katmai Hook Gl   3.51 318         Pn     22 51 31.8 +1.5
KAWH     Katmai           3.54 315         Pn     22 51 32.4 +1.8
KAWH                                       Sn     22 52 11.2 -1.3
Q19K     Cape Douglas,    3.54 328  Pn     Pn     22 51 32.3 +1.7
Q19K                                Sn     Sn     22 52 12.0 -0.6
CAHL     Cahill           3.55 308         Pn     22 51 31.4 +0.6
KARR     Katmai Rainbow   3.58 317         Pn     22 51 32.7 +1.6
KARR                                       Sn     22 52 12.8 -0.6
KAKN     Katmai Knife C   3.59 312         Pn     22 51 32.8 +1.4
KAKN                                       Sn     22 52 13.4 -0.4
CNPM     China Poot       3.61 350  Pn     Pn     22 51 31.6  0.0
CNPM                                Sn     Sn     22 52 12.2 -2.2
CNPM                                IAML          22 52 15.2
         comp=E,100nm,0.6s
ACHA     Angle Creek He   3.65 310  Pn     Pn     22 51 33.3 +1.1
KABU     Katmai Buttres   3.66 311         Pn     22 51 33.7 +1.3
KABU                                       Sn     22 52 15.0 -0.7
ANCK     Angle Creek      3.71 309         Pn     22 51 34.6 +1.6
BRSE     Bradley Lake S   3.79 355         Pn     22 51 34.3 +0.2
BRSE                                       Sn     22 52 16.7 -2.0
KAHC     Katmai Hardscr   3.79 317         Pn     22 51 36.2 +2.0
KAHC                                       Sn     22 52 18.8 -0.1
BRLK     Bradley Lake     3.82 354  Pn     Pn     22 51 33.8 -0.7
BRLK                                Sn     Sn     22 52 17.9 -1.6
BRLK                                IAML          22 52 20.1
         comp=E,108nm,0.5s
BRLK                                IAML          22 52 21.9
         comp=N,82nm,0.5s
PLK3     Peulik 3         3.82 299         Pn     22 51 35.6 +1.1
PLK4     Peulik 4         3.84 298  Pn     Pn     22 51 35.0 +0.1
PLK4                                Sn     Sn     22 52 18.2 -1.9
PLK4                                IAML          22 52 22.0
         comp=E,99nm,1.0s
PLK4                                IAML          22 52 40.6
         comp=N,67nm,1.4s
AGU      Augustine-Summ   3.85 333         Pn     22 51 35.8 +0.8
AUCH     Augustine Cone   3.85 333         Pn     22 51 35.5 +0.5
AUCH                                       Sn     22 52 19.9 -0.3
AUW      Augustine West   3.87 333         Pn     22 51 35.9 +0.8
AUW                                        Sn     22 52 20.6 +0.1
CNTC     Contact Creek    3.92 308         Pn     22 51 37.0 +1.1
MID      Middleton Isla   3.99  28  Pn     Pn     22 51 37.1 +0.3
PLK1     Peulik 1         4.04 300         Pn     22 51 38.6 +1.2
P19K     Oil Pt           4.06 337  Pn     Pn     22 51 40.1 +2.4
P19K                                IAML          22 52 29.4
         comp=E,163nm,0.5s
SEW      Seward           4.15   4  Pn     Pn     22 51 37.9 -1.0
SEW                                 Sn     Sn     22 52 24.5 -3.0
SEW                                 IAML          22 52 29.4
         comp=E,48nm,1.5s
P23K     Montague Islan   4.27  18  Pn     Pn     22 51 41.2 +0.6
P23K                                IAML          22 52 31.9
         comp=N,108nm,0.9s
P23K                                IAML          22 52 54.9
         comp=E,91nm,1.4s
ILS      Iliamna Low So   4.30 339         Pn     22 51 42.0 +0.8
ILSW     Iliamna Southw   4.34 339  Pn     Pn     22 51 43.6 +1.9
ILSW                                IAML          22 52 40.6
         comp=N,50nm,0.8s
ILSW                                IAML          22 52 41.0
         comp=E,70nm,1.0s
IVE      Iliamna Volcan   4.35 340         Pn     22 51 41.7  0.0
P18K     Big Mountain,    4.41 323  Pn     Pn     22 51 43.5 +0.9
O22K     Cooper Landing   4.52   2  Pn     Pn     22 51 45.0 +0.9
SLKM     Skilak Lake      4.54 359  Pn     Pn     22 51 44.6 +0.2
SLKM                                IAML          22 52 39.6
         comp=E,83nm,0.5s
SLKM                                IAML          22 52 44.0
         comp=N,57nm,1.2s
RED      Redoubt Volcan   4.68 343  Pn     Pn     22 51 47.6 +1.3
P17K     Kvichak River    4.71 316  Pn     Pn     22 51 48.3 +1.6
O18K     Koktuh Hills     4.76 327  Pn     Pn     22 51 48.3 +0.9
O18K                                IAML          22 52 43.8
         comp=E,39nm,0.6s
O18K                                IAML          22 53 00.3
         comp=N,44nm,0.9s
O19K     Port Alsworth    4.80 334  Pn     Pn     22 51 49.2 +1.4
HIN      Hinchinbrook I   4.81  21  Pn     Pn     22 51 48.5 +0.4
HIN                                 IAML          22 52 44.9
         comp=E,80nm,1.3s
HIN                                 IAML          22 52 51.8
         comp=N,69nm,1.1s
KAIM     Kayak Island     4.96  35  Pn     Pn     22 51 50.9 +0.7
KAIM                                IAML          22 52 47.0
         comp=E,77nm,1.4s
KAIM                                IAML          22 52 52.2
         comp=N,88nm,1.3s
PWL      Port Wells       4.98  10  Pn     Pn     22 51 50.3  0.0
PWL                                 IAML          22 52 48.8
         comp=N,47nm,0.6s
PWL                                 IAML          22 52 49.3
         comp=E,62nm,0.3s
EYAK     Cordova Ski Ar   5.11  25  Pn     Pn     22 51 52.9 +0.7
EYAK                                IAML          22 52 52.9
         comp=E,36nm,0.8s
EYAK                                IAML          22 52 53.3
         comp=N,34nm,1.5s
RC01     Rabbit Creek A   5.13   2  Pn     Pn     22 51 52.5 +0.1
RC01                                IAML          22 52 56.0
         comp=N,36nm,1.1s
RC01                                IAML          22 52 57.5
         comp=E,46nm,0.5s
FID      Port Fidalgo     5.14  20  Pn     Pn     22 51 52.8 +0.2
FID                                 IAML          22 52 51.4
         comp=N,50nm,1.4s
FID                                 IAML          22 52 53.5
         comp=E,49nm,0.5s
GLI      Glacier Island   5.15  16  Pn     Pn     22 51 53.0 +0.2
GLI                                 IAML          22 52 51.3
         comp=E,38nm,0.5s
GLI                                 IAML          22 52 53.7
         comp=N,31nm,1.5s
RAGM     Ragged Mountai   5.25  31  Pn     Pn     22 51 54.1 -0.1
RAGM                                IAML          22 54 24.4
         comp=E,77nm,0.5s
P16K     Nushagak River   5.26 309  Pn     Pn     22 51 55.4 +1.1
SUCK     Suckling Hills   5.29  36  Pn     Pn     22 51 55.6 +1.0
SPU      Mount Spurr      5.32 349  Pn     Pn     22 51 56.0 +0.9
HMT      Hamilton         5.33  33  Pn     Pn     22 51 56.3 +1.0
NICHA    Nichawak Mount   5.35  35         Pn     22 51 56.4 +1.0
O17K     Koliganek Bris   5.35 318         Pn     22 51 56.4 +1.0
SPCR     Spurr Chakacha   5.36 349         Pn     22 51 56.5 +0.8
N19K     Bonanza Creek    5.38 336  Pn     Pn     22 51 56.8 +0.8
KNK      Knik Glacier     5.51   8  Pn     Pn     22 51 58.3 +0.6
KNK                                 IAML          22 53 10.2
         comp=N,24nm,1.1s
KNK                                 IAML          22 53 10.5
         comp=E,25nm,1.3s
SUA      Susitna One      5.51 356  Pn     Pn     22 51 57.4 -0.4
SUA                                 IAML          22 53 03.1
         comp=E,28nm,1.4s
SUA                                 IAML          22 53 14.1
         comp=N,30nm,1.4s
BERG     Berg Lake        5.55  35  Pn     Pn     22 51 59.1 +0.9
CNBA     Chernabura Isl   5.56 262  Pn     Pn     22 51 56.5 -1.9
STLK     Strandline Lak   5.62 351  Pn     Pn     22 51 59.7 +0.6
O16K     Kokwok River B   5.63 313  Pn     Pn     22 52 00.7 +1.4
DIV      Divide           5.63  22  Pn     Pn     22 51 59.7 +0.4
N18K     Kilae Creek      5.63 329  Pn     Pn     22 51 59.8 +0.5
SNH      Sunshine Point   5.69  39  Pn     Pn     22 52 00.8 +0.6
KHIT     Khitrov Hills    5.74  36         Pn     22 52 01.7 +0.8
BMRM     Bremner River    5.76  27  Pn     Pn     22 52 01.5 +0.4
GHO      Glory Hole Cre   5.84   5  Pn     Pn     22 52 03.3 +1.1
WAX      Waxell Ridge     5.88  37  Pn     Pn     22 52 03.1 +0.4
SML      Sawmill          5.91   8  Pn     Pn     22 52 03.4 +0.2
N17K     Nushagak Hills   5.92 323  Pn     Pn     22 52 03.7 +0.5
KLU      Klutina          5.93  20  Pn     Pn     22 52 04.4 +0.9
SDPT     Sand Point       5.94 268  Pn     Pn     22 52 04.0 +0.5
BARK     Barkley Ridge    5.97  39         Pn     22 52 04.9 +0.9
CRQM     Cirque           6.01  34  Pn     Pn     22 52 05.5 +0.8
MESA     MESA             6.01  42  Pn     Pn     22 52 06.4 +1.6
SCM      Sheep Creek Mo   6.04  12  Pn     Pn     22 52 06.2 +1.2
SKT      Skwentna         6.07 353  Pn     Pn     22 52 05.7 +0.4
TGL      Tana Glacier     6.11  35  Pn     Pn     22 52 07.0 +1.0
M20K     Styx River       6.13 346  Pn     Pn     22 52 07.1 +0.9
O15K     Ungalikthiuk R   6.16 305  Pn     Pn     22 52 07.7 +1.2
ISLE     Juniper Island   6.16  38  Pn     Pn     22 52 07.4 +0.7
BAGL     Bagley Icefiel   6.17  40         Pn     22 52 07.7 +1.0
YAH      Yahtse           6.21  42  Pn     Pn     22 52 08.1 +0.6
VRDI     Verde Repeater   6.29  30  Pn     Pn     22 52 09.3 +0.8
M18K     Stony River      6.29 334         Pn     22 52 08.8 +0.5
N25K     Chitina, Valde   6.31  24  Pn     Pn     22 52 09.8 +1.1
GLB      Gilahina Butte   6.37  28  Pn     Pn     22 52 10.1 +0.6
KIAG     Kiagna River     6.39  36         Pn     22 52 10.7 +0.8
GRNC     Granite Creek    6.46  39  Pn     Pn     22 52 11.7 +0.8
M24K     Tolsona, Glenn   6.46  16  Pn     Pn     22 52 12.7 +1.9
BALM     Baldy            6.48  35         Pn     22 52 11.9 +0.8
TABL     Table Mountain   6.49  43  Pn     Pn     22 52 12.6 +1.3
MCARA    McCarthy VSAT    6.54  31  Pn     Pn     22 52 13.0 +1.2
PTPK     Patty Peak       6.55  34         Pn     22 52 13.1 +1.0
L22K     Petersville      6.58 357  Pn     Pn     22 52 13.2 +0.9
PCA      Pinnacle         6.63  48  Pn     Pn     22 52 15.0 +1.9
PS1A     Pavlof South-1   6.64 270         Pn     22 52 13.1 -0.1
M17K     Holitna River    6.66 328  Pn     Pn     22 52 14.4 +1.0
L19K     White Mountain   6.70 340  Pn     Pn     22 52 14.8 +0.9
BARN     Barnard Glacie   6.72  37  Pn     Pn     22 52 15.4 +0.9
WAT6     Susitna Watana   6.73   9         Pn     22 52 15.2 +0.7
DOL      Dolgoi Island    6.76 268         Pn     22 52 14.5 -0.3
CTGM     Chitina Glacie   6.77  39  Pn     Pn     22 52 16.3 +1.2
S12K     Black Hills      6.77 273  Pn     Pn     22 52 15.1 +0.1
N15K     Kwethluk River   6.78 312  Pn     Pn     22 52 17.2 +2.1
LOGN     Logan Glacier    6.79  41  Pn     Pn     22 52 16.2 +0.8
BCPM     Bancas Point     6.82  50  Pn     Pn     22 52 16.7 +1.1
O14K     Tigyukauivet M   6.86 303  Pn     Pn     22 52 17.0 +0.8
M16K     Timber Creek     6.88 321  Pn     Pn     22 52 17.8 +1.3
WAT7     Susitna Watana   6.90   5         Pn     22 52 18.3 +1.4
HARP     HAARP            6.91  19         Pn     22 52 18.6 +1.7
DTNA     Dutton South F   6.97 268         Pn     22 52 17.9 +0.1
DT1      Dutton Round H   7.00 268         Pn     22 52 18.0 -0.1
PPLA     Purkeypile       7.03 352  Pn     Pn     22 52 20.7 +2.1
O28M     Mount Upton      7.06  43  Pn     Pn     22 52 20.7 +1.5
L18K     Granite Mounta   7.13 334  Pn     Pn     22 52 19.9  0.0
DHY      Denali Highway   7.25  10  Pn     Pn     22 52 23.2 +1.6
N14K     Kuskokwak Cree   7.34 307  Pn     Pn     22 52 24.4 +1.6
M26K     Nabesna, AK      7.38  26  Pn     Pn     22 52 25.6 +2.1
PAX      Paxson           7.39  16  Pn     Pn     22 52 24.2 +0.8
O29M     Mount Kennedy    7.46  50  Pn     Pn     22 52 26.3 +1.9
RND      Reindeer         7.48   4  Pn     Pn     22 52 26.1 +1.4
TRF      Thorofare Moun   7.50 359  Pn     Pn     22 52 25.2 +0.2
P29M     Windy Craggy     7.52  56  Pn     Pn     22 52 25.9 +0.6
KTH      Kantishna Hill   7.61 357  Pn     Pn     22 52 28.8 +2.2
MENT     Mentasta         7.69  22  Pn     Pn     22 52 28.4 +0.9
S31K     Pelican          7.81  70  Pn     Pn     22 52 28.1 -1.0
L26K     Log Cabin Wild   7.84  23  Pn     Pn     22 52 31.2 +1.5
HYT      Haines Junctio   8.18  48  Pn     Pn     22 52 35.7 +1.3
RIDG     Independent Ri   8.21  16  Pn     Pn     22 52 36.9 +2.2
BC01     Beaver Creek A   8.23  27         Pn     22 52 36.2 +1.2
L14K     Kuka Creek       8.49 314  Pn     Pn     22 52 39.6 +1.1
SCRK     Sand Creek       8.57  18  Pn     Pn     22 52 41.2 +1.4
HDA      Harding Lake     8.60   9  Pn     Pn     22 52 40.9 +1.0
N30M     Aishikik Lake    8.69  45  Pn     Pn     22 52 42.8 +1.5
O30N     Mendenhall       8.76  51  Pn     Pn     22 52 43.4 +1.2
M29M     Somme Creek      8.78  38  Pn     Pn     22 52 44.3 +1.7
IL31                      8.96   9  Pn     Pn     22 52 45.7 +0.8
ILAR     Eielson Array    8.96   9  Pn     Pn     22 52 46.5 +1.5
         comp=N,0.3nm,0.3s,baz=187,slow=14,SNR=6.9
ILAR                                Sn     Sn     22 54 21.7 -4.0
         comp=N,0.4nm,0.3s,baz=200,slow=22,SNR=5.0
         comp=N,1.0nm,0.5s
ILAR     Eielson Array    8.96   9  Pn     Pn     22 52 45.8 +0.9
J25K     Salcha River,    8.97  13  Pn     Pn     22 52 47.9 +2.9
J16K     Anvik River      9.06 328  Pn     Pn     22 52 47.1 +0.8
J26L     Joseph Creek     9.13  18  Pn     Pn     22 52 47.5 +0.2
L29M     L29M             9.35  35  Pn     Pn     22 52 51.7 +1.3
U33K     Whale Pass       9.47  82  Pn     Pn     22 52 50.8 -1.2
H24K     Noodor Dome      9.95   5  Pn     Pn     22 53 00.4 +1.9
H18K     Honhosa River   10.06 340  Pn     Pn     22 53 01.0 +1.0
K29M     Barlow Dome     10.07  33  Pn     Pn     22 53 01.8 +1.6
I27K     Kandik River    10.48  20  Pn     Pn     22 53 07.6 +1.7
I28M     Miner Creek     10.70  23  Pn     Pn     22 53 11.3 +2.5
R33M     Jennings River  10.76  64  Pn     Pn     22 53 10.9 +1.1
B22K     Teshekpuk Lake  14.49 355  Pn     Pn     22 54 00.2 -0.3
INK      Inuvik          14.50  25  Pn     Pn     22 54 02.9 +2.3
         comp=N,0.1nm,0.3s,baz=210,slow=13,SNR=5.6
         comp=N,2.8nm,1.0s
INK      Inuvik          14.50  25         Pn     22 54 01.9 +1.3
YKA      Yellowknife Ar  19.07  56  P      Pn     22 55 00.2 +1.6
         comp=N,0.1nm,0.3s,baz=269,slow=10,SNR=7.8
         comp=N,0.4nm,0.7s
YKA      Yellowknife Ar  19.07  56         Pn     22 55 00.4 +1.9
H11N2    WAKE ISLAND Hy  48.36 239  T      T      23 51 19.8
         baz=30,slow=76
H11N3    WAKE ISLAND Hy  48.36 239  T      T      23 51 38.7
         baz=30,slow=76
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H11N1	WAKE ISLAND Hy	48.38	239	T	T	23 51 53.1	
	baz=30,slow=76						
H11S1	WAKE ISLAND Hy	49.50	239	T	T	23 53 25.8	
	baz=28,slow=76						
H11S2	WAKE ISLAND Hy	49.51	239	T	T	23 53 28.6	
	baz=28,slow=76						
H11S3	WAKE ISLAND Hy	49.52	239	T	T	23 53 36.5	
	baz=28,slow=76						
MKAR	Makanchi Array	68.59	324	P	P	23 01 48.5	+10
	comp=N,0.7nm,1.0s,baz=26,slow=7.3,SNR=2.3						
	comp=N,0.7nm,1.0s						

GCG 10 23:39:36.5±1.4, 13°.95N×91°.71W, h23km±14km, MD4.0, ML3.7, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG5	El Palmar, Qui	0.57	38	eP	Pn	23 39 50.7	+1.3
STG8	El Palmar, Qui	0.61	35	eP	Pn	23 39 51.6	+1.7
STG8				eS	Sn	23 40 04.0	+4.8
FG16	Alotenango, Sa	1.21	74	eP	Pn	23 39 54.7	-3.5
FG16				eS	Sn	23 40 08.5	-5.5
FG16				IAML		23 40 15.7	
	comp=N,6μm,0.3s						
APG	El Apazote	1.60	49	eP	Pb	23 40 04.9	-0.6
NUBE	Las Nubes	1.88	91	eP	Pn	23 40 06.7	-0.7

DNK 10 23:49:31.2±3.3, 71°.09N×9°.50W, h16km±266km, ML1.4, Presumed earthquake
BER 10 23:49:32.8±0.5, 71°.17N×8°.67W, h0km±21km, ML2.6, Confirmed Earthquake
ISC 10 23:49:29.7±1.1, 71°.3N±0°.1×9°.3W±0°.1, h10km, n8, σ1^{s}45/14, 3C, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNW	Jan Mayen West	0.35	128	⇑iP	Pb	23 49 37.6	-0.5
JNW				eS	Sg	23 49 40.7	-0.7
JNW				IAML		23 49 43.9	
	comp=Z,976nm,0.3s						
JMIC	Jan Mayen	0.36	135	⇑iP	Pb	23 49 37.9	-0.4
JMIC				eS	Sg	23 49 41.4	-0.3
JMIC				IAML		23 49 42.5	
	comp=Z,997nm,0.2s						
JMIC	Jan Mayen	0.36	135	⇑iP	Pb	23 49 37.9	-0.4
JMIC				i S	Sg	23 49 41.8	+0.1
JMI	Jan Mayen	0.37	150	eP	Pb	23 49 38.7	+0.4
JMI				eS	Sb	23 49 43.3	-0.7
JMI				IAML		23 49 45.0	
	comp=Z,428nm,0.2s						
JNE	Jan Mayen East	0.41	128	eP	Pg	23 49 38.2	+0.4
DBG	Daneborg	4.47	319	i P	Pn	23 50 38.7	+1.3
DBG				i S	Sn	23 51 27.1	-2.3
DBG				IAML		23 51 28.7	
	comp=Z,2.3nm,1.1s						
DAG	Danmarks Havn	6.12	339	i P	Pn	23 51 01.7	+1.8
DAG				i S	Sn	23 52 07.2	-2.7
DAG				IAML		23 52 13.0	
	comp=Z,1.0nm,0.8s						
NOR	Nord	10.54	354	i P	Pn	23 52 02.5	+2.0

ISK 10 23:58:48.3, 39°.45N×27°.92E, h9km, ML3.7/18
AFAD 10 23:58:48.7, 39°.43N×27°.92E, h7km±1km, ML3.2
THE 10 23:58:50.6, 39°N±4°×2°8E±1°0, h20km±26km, M3.4/11, MLh3.4/11
ISC 10 23:58:48.9±0.9, 39°.43N±0°.02×27°.92E±0°.02, h12km±6km, n57, σ0^{s}47/78, 5C-3D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STEP	BALIKESIR_Sava	0.16	250	P	Pg	23 58 52.8	0.0
STEP				S	Sg	23 58 55.5	+0.1
STEP				i IAML		23 58 56.0	
	comp=N,1μm,0.6s						
STEP				i IAML		23 58 56.0	
	comp=E,2μm,0.3s						
BALB	Balikesir	0.21	352	Pg	Pg	23 58 52.9	-0.6
BALB				Sg	Sg	23 58 57.0	+0.4
BKES	Balkesir-Mer	0.30	2	P	Pg	23 58 55.0	-0.1
BKES				S	Sg	23 58 59.4	+0.2
BKES				i IAML		23 59 01.0	
	comp=N,2μm,0.3s						
BKES				i IAML		23 59 03.0	
	comp=E,2μm,0.2s						
BALY	Balya	0.38	323	P	Pg	23 58 56.5	-0.1
BALY				i IAML		23 59 02.0	
	comp=N,4μm,0.6s						
BALY				i IAML		23 59 02.0	
	comp=E,4μm,0.3s						
BALY				S	Sg	23 59 02.2	+0.4
SOMA	Soma-Manisa	0.41	227	Pg	Pg	23 58 57.1	+0.1
SOMA				Sg	Sb	23 59 03.2	-1.0
BLKS	Balkesir-Sus	0.44	5	P	Pg	23 58 57.4	-0.3
BLKS				S	Sg	23 59 03.6	0.0
BLKS				i IAML		23 59 06.0	
	comp=E,624nm,0.6s						
BLKS				i IAML		23 59 10.0	
	comp=N,692nm,0.6s						
DURS	Dursunbey	0.46	69	P	Pg	23 58 57.9	-0.2
DURS				S	Sg	23 59 04.5	+0.2
DURS				i IAML		23 59 05.0	
	comp=N,2μm,0.3s						
DURS				i IAML		23 59 05.0	
	comp=E,4μm,0.4s						
SUSR	Susurluk-Balik	0.55	14	Pg	Pg	23 58 59.3	-0.3
SUSR				Sg	Sg	23 59 06.3	-0.6
AKHS	Akhisar	0.56	188	P	Pg	23 58 59.8	-0.1
AKHS				S	Sb	23 59 08.3	-0.3
AKHS				i IAML		23 59 09.0	
	comp=E,1μm,0.3s						
AKS	Akhisar	0.56	188	Pg	Pg	23 58 59.7	-0.2
AKS				Sg	Sb	23 59 08.4	-0.2
GORD	Gordes-Manisa	0.56	159	Pg	Pg	23 59 00.1	+0.2
DST	Dursunbey	0.57	72	Pg	Pg	23 58 59.6	-0.5
DST				Sg	Sg	23 59 07.8	+0.1
GONE	Gonen-Balikesi	0.64	344	Pg	Pg	23 59 01.1	-0.3
GONE				Sg	Sg	23 59 10.2	+0.4
BUHA	Balikesir, Bur	0.65	276	P	Pg	23 59 01.6	0.0
BUHA				S	Sb	23 59 11.5	+0.2
BUHA				i IAML		23 59 14.0	
	comp=E,2μm,0.3s						
BUHA				i IAML		23 59 16.0	
	comp=N,2μm,0.9s						
YAYO	Edremit-Balk	0.68	286	Pg	Pg	23 59 01.6	-0.5
GOMA	Golmarmara-Man	0.72	180	Pg	Pb	23 59 03.1	-0.4
ZEDA	zmir-Bergama	0.80	235	P	Pb	23 59 04.6	-0.1
ZEDA				S	Sb	23 59 15.6	+0.1
ZEDA				i IAML		23 59 18.0	
	comp=N,2μm,0.3s						
ZEDA				i IAML		23 59 19.0	
	comp=E,2μm,0.4s						
CANM	Can-anakkale	0.88	311	Pg	Pg	23 59 05.5	-0.5
SIMA	Simav-Kutahya	0.90	113	Pg	Pb	23 59 06.5	0.0
EDC	Edincik	0.91	357	Pg	Pg	23 59 05.9	-0.7
BAND	Balkesir-Ban	0.93	9	⇓P	Pg	23 59 06.3	-0.7
BAND				⇑S	Sg	23 59 18.8	-0.3
ORLT	Orhaneli	0.97	51	Pg	Pg	23 59 07.5	-0.2
BIGA	Biga-Canakkale	1.03	325	Pg	Pg	23 59 07.9	-0.9
SHAP	Saphane-Kutahy	1.09	112	Pn	Pb	23 59 09.9	+0.1
MRMT	Marmara Adasi	1.19	348	Pn	Pb	23 59 11.1	-0.5
MDNY	Mudanya-Bursa	1.20	38	Pn	Pb	23 59 11.3	-0.2
GEDZ	Gediz	1.22	108	Pn	Pb	23 59 12.1	+0.1
EZNE	Ezine-Canakkal	1.24	286	Pn	Pn	23 59 11.9	-0.2
BLCB	Balcova	1.25	213	P	Pn	23 59 11.8	-0.4
BLCB				S	Sn	23 59 29.7	+0.8
EZN	Ezine	1.29	288	P	Pn	23 59 12.6	-0.1
EZN				S	Sb	23 59 29.1	-0.5
PRK	Paraskevi	1.29	262	P	Pn	23 59 12.8	+0.1
PRK				S	Sn	23 59 30.2	+0.4
COMU	Canakkale	1.29	301	Pn	Pn	23 59 12.9	0.0
ARMT	Armutlu	1.34	32	Pn	Pn	23 59 13.5	0.0
GPNR	Gulpinar-Canak	1.38	272	Pn	Pn	23 59 13.9	-0.1
SIGR	SIGRI	1.61	263	P	Pn	23 59 17.1	-0.1
SIGR				S	Sb	23 59 39.2	+0.3
GADA	Gvkgeada	1.73	297	P	Pn	23 59 18.8	0.0
GADA				S	Sn	23 59 40.4	-0.3
CHOS	Chios island	1.79	235	P	Pn	23 59 19.4	-0.3
CAVK	Edirne/Enez-Ca	1.84	314	⇑P	Pn	23 59 20.7	+0.4
CAVK				⇓S	Sn	23 59 44.2	+0.8
ENEZ	Enez	1.88	314	P	Pn	23 59 21.6	+0.7
SMG	Samos	1.92	206	P	Pn	23 59 21.2	-0.2
SMTH	Samothraki Isl	2.11	300	P	Pn	23 59 24.0	0.0
LIA	Limnos Island	2.16	283	P	Pn	23 59 25.0	+0.3
RDO	Rodhopi	2.50	314	P	Pn	23 59 30.1	+0.8
SAHE	Sakarya_HENDEK	2.66	57	⇑P	Pb	23 59 37.9	+1.4
KDZ	Kurdzhali	2.94	319	P	Pn	23 59 35.6	+0.1
KDZ	Kurdzhali	2.94	319	P	Pn	23 59 36.1	+0.6
KAVA	Kavala	3.04	302	P	Pn	23 59 36.9	+0.1
DIM	Dimitrovgrad	3.16	327	P	Pn	23 59 38.8	+0.4
JMB	Yambol	3.23	341	P	Pn	23 59 40.0	+0.6
RZN	Rozhen	3.31	314	P	Pn	23 59 41.2	+0.5
RZN	Rozhen	3.31	314	P	Pn	23 59 41.5	+0.8
ANTO	Ankara	3.79	82	⇑P	Pb	23 59 54.7	-1.1
ELND	Elena	3.82	337	⇑P	Pn	23 59 48.3	+0.8
NEF	NEVSHA	3.86	353	P	Pn	23 59 48.4	+0.3
LOZB	Loznitsa	4.06	346	⇓P	Pn	23 59 51.3	+0.5
SZH	Strazhitsa	4.10	340	P	Pn	23 59 52.0	+0.6
PVL	Pavlikeni	4.23	332	P	Pn	23 59 54.0	+0.9

GCG 11 00:04:33.8±0.4, 15°.13N×92°.29W, h82km±8km, MD3.5
MEX 11 00:04:34.0±0.7, 14°.70N×92°.45W, h87km±7km, MD4.0
ISC 11 00:04:30.9±1.6, 14°.5N±0°.1×92°.55W±0°.08, h75km±17km, n14, σ1^{s}87/25, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.54	31	eP	Pn	00 04 45.6	+1.0
THIG				eS	Sn	00 04 54.4	-0.2
SMCA	Catarina	0.62	49	eP	Pn	00 04 46.8	+1.4
SMCA				eS	Sn	00 04 56.6	+0.6
PATR	El Naranjo	0.73	25	eP	Pn	00 04 46.5	-0.4
PATR				eS	Sn	00 04 57.2	-1.4
CHUJ	Union Juarez	0.77	34	eP	Pn	00 04 47.4	0.0
CHUJ				eS	Sn	00 04 58.3	-1.1
PAVE	Pavencul	0.83	26	eP	Pn	00 04 48.3	+0.4
PAVE				eS	Sn	00 04 59.4	-1.1
RTAL	Retalhuleu	0.83	85	eP	Pn	00 04 49.4	+1.7
RTAL				eS	Sn	00 05 01.3	+1.0
STG8	El Palmar, Qui	1.17	90	eP	Pn	00 04 51.2	-0.8
STG8				eS	Sn	00 05 05.2	-2.5
STG5	El Palmar, Qui	1.17	92	eP	Pn	00 04 51.3	-0.6
STG5				eS	Sn	00 05 04.9	-2.7
PCIG		1.41	333	eP	Pn	00 04 55.8	+1.0
PCIG				eS	Sn	00 05 11.3	-1.5
ESSG	Sabana Grande	1.67	92	eS	Sn	00 05 22.1	+2.9
CCIG	Comitan	1.87	12	eP	Pn	00 04 47.0	-14
CCIG				eS	Sn	00 05 21.2	-2.8
UXUV	UXUV	3.24	332	eP	Pn	00 05 21.6	+2.1
UXUV				eS	Sn	00 05 59.5	+2.6
CMIG	Matias Romero	3.46	320	eP	Pn	00 05 23.8	+1.3
CMIG				eS	Sn	00 05 59.6	-2.6
HUIG	Huatulco	3.67	291	eS	Sn	00 06 04.8	-2.8

AEIC 11 00:18:48.2±0.9, 56°.26N±0°.09×148°.6W±0°.2, h10km±9km, Error ellipse: s-maj=13.6km s-min=11.5km az=141.0
NEIC 11 00:18:42.7±1.0, 56°.2N±0°.1×148°.6W±0°.2, h10km±2km, ML3.7/80, ML3.4(AEIC), Error ellipse: s-maj=23.3km s-min=13.3km az=150.0, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.71	307		Pn	00 19 26.1	-0.1
KDAK					Sn	00 19 54.2	-4.8
OHAK	Old Harbor	2.80	293	Pn	Pn	00 19 27.2	-0.3
OHAK				Sn	Sn	00 19 56.8	-4.5
SII	Sitkinak Islan	3.15	279	Pn	Pn	00 19 31.4	-0.9
SII				IAML		00 20 08.0	
	comp=N,137nm,0.6s						
SII				IAML		00 20 19.9	
	comp=E,150nm,1.3s						
SII	Sitkinak Islan	3.15	279		Sn	00 20 07.0	-2.9
SYI	Shuyak Island	3.18	321	Pn	Pn	00 19 32.3	-0.4
SYI				Sn	Sn	00 20 07.2	-3.4
MID	Middleton Isla	3.44	19	Pn	Pn	00 19 36.4	+0.2
MID				Sn	Sn	00 20 11.4	-5.6
MID				IAML		00 20 17.3	
	comp=E,190nm,1.4s						
MID				IAML		00 20 40.4	
	comp=N,150nm,1.3s						
R18K	Karluk	3.51	295	Pn	Pn	00 19 37.3	+0.1
R18K				IAML		00 20 18.0	
	comp=N,146nm,0.5s						
R18K				IAML		00 20 25.6	
	comp=E,177nm,0.4s						
R18K	Karluk	3.51	295		Sn	00 20 15.1	-3.7
CNPM	China Poot	3.62	338	Pn	Pn	00 19 38.6	-0.2
CNPM				Sn	Sn	00 20 18.1	-3.4
BRSE	Bradley Lake S	3.73	343		Pn	00 19 39.5	-0.8
BRSE					Sn	00 20 19.9	-4.3
BRLK	Bradley Lake	3.77	342	Pn	Pn	00 19 39.2	-1.8
BRLK				Sn	Sn	00 20 20.7	-4.7
HOM	Homer	3.83	336	Pn	Pn	00 19 42.2	+0.5
HOM	Homer	3.83	336		Sn	00 20 23.2	-3.5
P23K	Montague Islan	3.85	9	Pn	Pn	00 19 41.1	-0.8
P23K				IAML		00 20 29.3	
	comp=E,131nm,1.5s						
P23K				IAML		00 20 30.2	
	comp=N,109nm,1.3s						
P23K	Montague Islan	3.85	9		Sn	00 20 22.3	-4.9
Q19K	Cape Douglas,	3.87	317	Pn	Pn	00 19 43.1	+0.9
Q19K				Sn	Sn	00 20 23.9	-3.7
Q19K				IAML		00 20 38.8	
	comp=N,143nm,1.2s						
SEW	Seward	3.94	353	Pn	Pn	00 19 41.9	-1.2
SEW				Sn	Sn	00 20 24.4	-4.9
KAPH	Katmai Pasha	3.94	310		Pn	00 19 43.5	+0.2
KAPH					Sn	00 20 26.4	-3.2
KAHG	Katmai Hook Gl	3.97	308		Pn	00 19 43.8	+0.1
KAHG					Sn	00 20 26.9	-3.4
KAWH	Katmai	4.03	305		Pn	00 19 44.6	+0.2
KAWH					Sn	00 20 28.2	-3.5
KARR	Katmai Rainbow	4.04	307		Pn	00 19 44.7	+0.1
KARR					Sn	00 20 28.5	-3.5
MGLS	Mageik Landsli	4.08	301		Pn	00 19 45.2	+0.1
AUJK	Augustine Jueg	4.08	323		Pn	00 19 45.1	0.0
AUCH	Augustine Cone	4.10	322		Pn	00 19 45.8	+0.3
KAKN	Katmai Knife C	4.11	303		Pn	00 19 45.8	+0.3
KAKN					Sn	00 20 29.9	-3.8
AUW	Augustine West	4.12	322		Pn	00 19 45.5	-0.1
ACHA	Angle Creek He	4.19	301	Pn	Pn	00 19 48.4	+1.7
KABU	Katmai Buttres	4.20	302		Pn	00 19 47.3	+0.5
P19K	Oil Pt	4.26	326	Pn	Pn	00 19 47.8	+0.2
KAHC	Katmai Hardscr	4.26	308		Pn	00 19 47.7	0.0
ANCK	Angle Creek	4.27	301		Pn	00 19 47.9	+0.2
KAIM	Kayak Island	4.33	29	Pn	Pn	00 19 49.8	+1.3
KAIM				IAML		00 20 50.5	
	comp=N,98nm,1.3s						
O22K	Cooper Landing	4.33	352	Sn	Sn	00 20 33.9	-5.0
O22K	Cooper Landing	4.33	352		Pn	00 19 48.9	+0.4
HIN	Hinchinbrook I	4.34	14	Pn	Pn	00 19 48.6	-0.1
HIN				IAML		00 20 35.0	
	comp=N,88nm,1.1s						
HIN				IAML		00 20 35.4	
	comp=E,81nm,1.3s						
SLKM	Skilak Lake	4.40	349	Pn	Pn	00 19 48.5	-1.0
SLKM				IAML		00 20 38.4	
	comp=N,69nm,0.4s						
SLKM				IAML		00 20 40.8	
	comp=E,70nm,0.4s						
O20K	Slope Mountain	4.44	333		Pn	00 19 49.8	-0.4
ILS	Iliamna Low So	4.46	329		Pn	00 19 50.2	-0.2
PLK3	Peulik 3	4.47	293		Pn	00 19 50.8	+0.2
CNTC	Contact Creek	4.48	300		Pn	00 19 51.1	+0.4
IVE	Iliamna Volcan	4.49	330		Pn	00 19 49.7	-1.2
ILSW	Iliamna Southw	4.50	329		Pn	00 19 50.3	-0.7
ILSW	Iliamna Southw	4.50	329	IAML		00 20 46.0	
	comp=N,65nm,1.3s						
ILSW				IAML		00 20 49.2	
	comp=E,56nm,0.9s						
PLK4	Peulik 4	4.51	292	Pn	Pn	00 19 51.6	+0.6
PLK4				IAML		00 20 45.3	
	comp=E,65nm,1.2s						
PLK4				IAML		00 20 51.6	
	comp=N,57nm,1.3s						
ILW	Iliamna West	4.56	330		Pn	00 19 51.9	0.0
EYAK	Cordova Ski Ar	4.60	18	Pn	Pn	00 19 52.1	-0.1
EYAK				IAML		00 20 44.5	
	comp=E,38nm,0.8s						
EYAK				IAML		00 20 48.1	
	comp=N,43nm,0.7s						
SUCK	Suckling Hills	4.63	31	Pn	Pn	00 19 54.6	+1.9
SUCK				IAML		00 20 59.7	
	comp=N,100nm,1.3s						
SUCK				IAML		00 21 19.9	
	comp=E,87nm,1.4s						
RAGM	Ragged Mountai	4.66	24	Pn	Pn	00 19 50.1	-3.1
PWL	Port Wells	4.67	1	Pn	Pn	00 19 52.5	-0.7
PWL				IAML		00 20 42.8	
	comp=N,34nm,1.5s						
PWL				IAML		00 20 49.1	
	comp=E,36nm,0.6s						
FID	Port Fidalgo	4.68	13	Pn	Pn	00 19 52.3	-1.1
FID				IAML		00 20 44.3	
	comp=N,37nm,1.4s						
FID				IAML		00 20 45.3	
	comp=E,41nm,1.1s						
NICHA	Nichawak Mount	4.71	29		Pn	00 19 53.8	0.0
HMT	Hamilton	4.72	27	Pn	Pn	00 19 54.8	+0.9
GLI	Glacier Island	4.75	9	Pn	Pn	00 19 54.6	+0.3
GLI				IAML		00 20 46.2	
	comp=E,37nm,1.1s						
GLI				IAML		00 20 49.5	
	comp=N,33nm,1.0s						
P18K	Big Mountain,	4.79	315	Pn	Pn	00 19 54.6	-0.3
GOAT	Goat Mountain	4.83	23		Pn	00 19 55.5	+0.1
RDWB	Redoubt West	4.85	334		Pn	00 19 54.8	-1.0
BERG	Berg Lake	4.92	29	Pn	Pn	00 19 56.7	+0.1
BERG				IAML		00 20 52.1	
	comp=N,80nm,0.6s						
RC01	Rabbit Creek A	4.93	353	Pn	Pn	00 19 56.0	-0.8
RC01				IAML		00 20 52.5	
	comp=E,39nm,0.9s						
RC01				IAML		00 20 55.7	
	comp=N,28nm,0.8s						
SNH	Sunshine Point	5.00	35	Pn	Pn	00 19 57.6	-0.2
O19K	Port Alsworth	5.03	325	Pn	Pn	00 19 57.1	-1.0
O19K				IAML		00 21 04.0	
	comp=N,66nm,0.4s						
O18K	Koktuh Hills	5.08	319	Pn	Pn	00 19 58.0	-0.9
DIV	Divide	5.14	15	Pn	Pn	00 20 00.2	+0.4
P17K	Kvichak River	5.18	309	Pn	Pn	00 20 00.7	+0.6
BMRM	Bremner River	5.20	22	Pn	Pn	00 20 01.1	+0.5
BMRM				IAML		00 21 05.2	
	comp=N,42nm,1.4s						
BMRM				IAML		00 21 06.0	
	comp=E,31nm,0.9s						
WAX	Waxell Ridge	5.21	33	Pn	Pn	00 20 00.7	0.0
MESA	MESA	5.30	39	Pn	Pn	00 20 03.2	+1.3
MESA				IAML		00 21 06.3	
	comp=E,54nm,1.3s						
MESA				IAML		00 21 10.3	
	comp=N,48nm,1.4s						
SPU	Mount Spurr	5.31	341	Pn	Pn	00 20 01.7	-0.4
CRQM	Cirque	5.37	30	Pn	Pn	00 20 03.0	0.0
CRQM				IAML		00 21 03.5	
	comp=N,45nm,1.5s						
CRQM				IAML		00 21 09.7	
	comp=E,36nm,0.8s						
CKL	Chakachamna La	5.38	340		Pn	00 20 02.1	-0.9
SUA	Susitna One	5.39	349	Pn	Pn	00 20 01.7	-1.6
SUA				IAML		00 22 21.7	
	comp=E,33nm,1.3s						
SUA				IAML		00 22 23.8	
	comp=N,35nm,1.4s						
SPCG	Spurr Capps Gl	5.41	342		Pn	00 20 02.6	-0.8
ANPB	Aniakchak Plen	5.42	280		Pn	00 20 02.9	-0.7
TGL	Tana Glacier	5.46	31	Pn	Pn	00 20 04.5	+0.4
KLU	Klutina	5.47	13	Pn	Pn	00 20 05.0	+0.7
ISLE	Juniper Island	5.49	34	Pn	Pn	00 20 04.7	+0.1
YAH	Yahtse	5.50	38	Pn	Pn	00 20 04.8	0.0
N19K	Bonanza Creek	5.56	329	Pn	Pn	00 20 05.0	-0.5
STLK	Strandline Lak	5.57	344	Pn	Pn	00 20 05.5	-0.1
GHO	Glory Hole Cre	5.58	358	Pn	Pn	00 20 06.2	+0.3
RKAV	Rock Avalanche	5.59	40		Pn	00 20 06.9	+0.8
SPNN	North Nagishla	5.60	339		Pn	00 20 06.0	-0.1
SML	Sawmill	5.62	1	Pn	Pn	00 20 06.4	+0.1
SCM	Sheep Creek Mo	5.68	6	Pn	Pn	00 20 07.6	+0.5
VRDI	Verde Repeater	5.69	26	Pn	Pn	00 20 08.1	+0.7
KIAG	Kiagna River	5.73	32		Pn	00 20 08.0	+0.1
TABL	Table Mountain	5.77	40	Pn	Pn	00 20 09.3	+0.8
GRNC	Granite Creek	5.77	35	Pn	Pn	00 20 09.7	+1.2
N25K	Chitina, Valde	5.79	19	Pn	Pn	00 20 09.6	+0.9
GLB	Gilahina Butte	5.80	23	Pn	Pn	00 20 09.4	+0.7
P16K	Nushagak River	5.80	303	Pn	Pn	00 20 10.0	+1.3
BALM	Baldy	5.83	31		Pn	00 20 09.4	+0.2
N18K	Kilae Creek	5.91	322	Pn	Pn	00 20 09.8	-0.4
PTPK	Patty Peak	5.92	30		Pn	00 20 11.0	+0.5
MCARA	McCarthy VSAT	5.93	27	Pn	Pn	00 20 12.0	+1.5
SKT	Skwentna	5.99	346	Pn	Pn	00 20 10.9	-0.4
M24K	Tolsona, Glenn	6.04	11	Pn	Pn	00 20 13.0	+0.9
BARN	Barnard Glacie	6.05	34	Pn	Pn	00 20 12.7	+0.4
CTGM	Chitina Glacie	6.08	35	Pn	Pn	00 20 13.2	+0.5
LOGN	Logan Glacier	6.09	37	Pn	Pn	00 20 13.2	+0.4
O16K	Kokwok River B	6.11	308	Pn	Pn	00 20 13.6	+0.6
VNFG	Fog Glacier, M	6.13	275		Pn	00 20 15.3	+1.9
M20K	Styx River	6.16	339	Pn	Pn	00 20 13.1	-0.7
N17K	Nushagak Hills	6.27	317	Pn	Pn	00 20 14.7	-0.5
O28M	Mount Upton	6.34	40	Pn	Pn	00 20 17.3	+0.9
WAT6	Susitna Watana	6.41	3		Pn	00 20 17.1	-0.1
CNBA	Chernabura Isl	6.42	262	Pn	Pn	00 20 17.8	+0.6
L22K	Petersville	6.44	351	Pn	Pn	00 20 16.6	-0.9
M18K	Stony River	6.50	328		Pn	00 20 17.6	-0.7
WAT7	Susitna Watana	6.65	359		Pn	00 20 20.5	+0.1
O29M	Mount Kennedy	6.67	48	Pn	Pn	00 20 22.5	+1.6
P29M	Windy Craggy	6.71	55	Pn	Pn	00 20 22.1	+1.0
O15K	Ungalikthiuk R	6.73	301	Pn	Pn	00 20 23.0	+1.6
SDPT	Sand Point	6.78	268	Pn	Pn	00 20 23.8	+1.6
L19K	White Mountain	6.80	334	Pn	Pn	00 20 21.0	-1.6
M26K	Nabesna, AK	6.83	22		Pn	00 20 23.1	+0.2
YUK2	White River	6.86	32		Pn	00 20 23.7	+0.3
N16K	Nishlik Lake	6.87	313		Pn	00 20 23.5	+0.2
DHY	Denali Highway	6.92	4	Pn	Pn	00 20 25.2	+1.1
M17K	Holitna River	6.95	322	Pn	Pn	00 20 24.6	+0.1
PAX	Paxson	6.96	12	Pn	Pn	00 20 26.6	+1.9
M27K	Edge Creek, AK	7.05	26	Pn	Pn	00 20 27.5	+1.5
YUK6	Outpost Mounta	7.13	44		Pn	00 20 27.8	+0.5
M16K	Timber Creek	7.26	316	Pn	Pn	00 20 28.6	-0.1
N15K	Kwethluk River	7.27	308	Pn	Pn	00 20 30.3	+1.4
PLBC	Pleasant Camp	7.28	58		Pn	00 20 29.9	+1.0
L18K	Granite Mounta	7.33	329		Pn	00 20 28.9	-0.7
HYT	Haines Junctio	7.41	47	Pn	Pn	00 20 32.2	+1.3
O14K	Tigyukauivet M	7.45	299	Pn	Pn	00 20 33.5	+2.1
KTH	Kantishna Hill	7.46	352		Pn	00 20 31.7	+0.1
DOL	Dolgoi Island	7.60	268		Pn	00 20 34.3	+0.8
BCAR	Beaver Creek A	7.68	24	Pn	Pn	00 20 36.4	+1.8
S32K	Killisnoo	7.77	75		Pn	00 20 35.1	-0.6
SKAG	Skagway	7.77	60	Pn	Pn	00 20 37.3	+1.6
BESE	Bessie Mountai	7.78	67		Pn	00 20 36.5	+0.6
DTNA	Dutton South F	7.82	268		Pn	00 20 36.6	+0.2
DT1	Dutton Round H	7.84	268		Pn	00 20 36.9	+0.2
L16K	Owhat River	7.88	319	Pn	Pn	00 20 37.2	-0.1
N30M	Aishikik Lake	7.94	44	Pn	Pn	00 20 39.3	+1.2
M29M	Somme Creek	8.10	35	Pn	Pn	00 20 41.3	+1.0
K17K	Iditarod	8.19	327		Pn	00 20 40.9	-0.6
WHY	Whitehorse	8.44	52	Pn	Pn	00 20 46.5	+1.4
K27K	Chicken	8.48	20	Pn	Pn	00 20 46.3	+0.9
P32M	Atlin	8.60	61		Pn	00 20 48.1	+1.0
IL31		8.63	5		Pn	00 20 47.8	+0.4
J26L	Joseph Creek	8.68	14	Pn	Pn	00 20 49.0	+0.8
ISNN	Isanotski Nort	8.75	267		Pn	00 20 49.3	+0.1
L14K	Kuka Creek	8.95	311	Pn	Pn	00 20 53.6	+1.8
I21K	Tanana	9.15	351	Pn	Pn	00 20 54.0	-0.6
Q32M	Nakina River	9.17	66	Pn	Pn	00 20 56.0	+0.9
P33M	Teslin, Yukon	9.22	58		Pn	00 20 55.6	0.0
M31M	Drury Creek, Y	9.41	45	Pn	Pn	00 21 00.2	+1.9
H21K	Melozitna Rive	9.70	350	Pn	Pn	00 21 01.8	-0.3
R33M	Jennings River	9.91	64	Pn	Pn	00 21 06.5	+1.3
I27K	Kandik River	10.01	17	Pn	Pn	00 21 07.3	+0.9
T35M	Bob Quinn	10.13	78	Pn	Pn	00 21 09.7	+1.7
I28M	Miner Creek	10.17	21	Pn	Pn	00 21 11.4	+2.8
UNV	Unalaska Valle	10.57	265	Pn	Pn	00 21 14.4	+0.4
F20K	Avaraart Lake	11.39	346	Pn	Pn	00 21 25.3	+0.1
E21K	Killik River	12.53	351	Pn	Pn	00 21 40.8	+0.1
B22K	Teshekpuk Lake	14.35	353	Pn	Pn	00 22 05.5	-0.1
B20K	Meade River	14.36	348	Pn	Pn	00 22 06.0	+0.2

IDC 11 00:22:25.9±5.2, 12°.14N×61°.48W, h88km±37km, mb3.2/5, mbtmp3.6/5, Error ellipse: s-maj=42.8km s-min=23.7km az=24.0
TRN 11 00:22:25.9, 12°.09N×61°.21W, h81km, MD4.1, East of

Grenada. Felt in Grenada, MMI IV, V

ISC 11 00:22:26.6±0.8**, 12°12N**±0°04×**61°34W**±0°06**, h91**km±5km**,**
n40, σ1s14/57**, mb3.5**/4**, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRGR	**Grenville**	**0.31**	**273**	*e*P	**Pn**	**00 22 40.3**	**+0.1**
GRGR				*e*S	**Sn**	**00 22 51.1**	**+0.8**
GRHS	**Sauteurs**	**0.32**	**290**	*e*P	**Pn**	**00 22 40.1**	**-0.1**
GRHS				*e*S	**Sn**	**00 22 50.6**	**+0.3**
GRW	**Mount Saint Ca**	**0.32**	**278**	*e*P	**Pn**	**00 22 41.5**	**+1.2**
GRW				*e*S	**Sn**	**00 22 52.2**	**+1.7**
GRSS	**Sisters**	**0.33**	**304**	*e*P	**Pn**	**00 22 40.1**	**-0.1**
GRSS				*e*S	**Sn**	**00 22 50.5**	**+0.1**
GCMP	**Grenada, Carri**	**0.38**	**347**	*e*P	**Pn**	**00 22 40.5**	**-0.1**
GCMP				*e*S	**Sn**	**00 22 51.0**	**+0.1**
GRFF	**Grenada Fort F**	**0.40**	**260**	*e*P	**Pn**	**00 22 40.6**	**-0.1**
GRFF				*e*S	**Sn**	**00 22 51.5**	**+0.3**
SVB	**Belmont**	**1.15**	**4**	*e*P	**Pn**	**00 22 48.0**	**-0.2**
SVB				*e*S	**Sn**	**00 23 04.5**	**+0.1**
DMDM	**Guralp CMG5TDE**	**1.43**	**188**	*e*S	**Sn**	**00 23 10.7**	**+0.4**
TRN	**Trinidad (W)**	**1.46**	**183**	*e*P	**Pn**	**00 22 51.9**	**0.0**
TRN				*e*S	**Sn**	**00 23 10.4**	**-0.6**
MCLT	**Moule a Chique**	**1.63**	**14**	*e*P	**Pn**	**00 22 53.8**	**-0.3**
MCLT				*e*S	**Sn**	**00 23 13.4**	**-1.5**
SLAC	**Saint Lucia, A**	**1.82**	**14**	*e*P	**Pn**	**00 22 56.5**	**-0.1**
SLAC				*e*S	**Sn**	**00 23 19.1**	**-0.2**
SLCP	**Castries, St.**	**1.91**	**10**	*e*P	**Pn**	**00 22 58.2**	**+0.5**
SLCP				*e*S	**Sn**	**00 23 21.9**	**+0.5**
SLBI	**Saint Lucia, B**	**1.93**	**11**	*e*P	**Pn**	**00 22 58.3**	**+0.3**
SLBI				*e*S	**Sn**	**00 23 21.6**	**-0.1**
BBGH	**Gun Hill**	**2.01**	**59**	*e*P	**Pn**	**00 23 00.6**	**+1.6**
BBGH				*e*S	**Sn**	**00 23 25.9**	**+2.1**
H05S1	**Guadeloupe/Mar**	**2.35**	**12**	P	**Pn**	**00 23 03.6**	**+0.2**
H05S1				S	**Sn**	**00 23 31.6**	**0.0**
BIM	**Bigot**	**2.40**	**6**	*e*P	**Pn**	**00 23 04.6**	**+0.4**
BIM				*e*S	**Sn**	**00 23 33.5**	**+0.5**
ILAM	**Ilet Lapin Mar**	**2.68**	**10**	*e*P	**Pn**	**00 23 07.9**	**0.0**
ILAM				*e*S	**Sn**	**00 23 40.3**	**+0.7**
SVN	**Savane Anatole**	**2.71**	**3**	*e*P	**Pn**	**00 23 08.2**	**-0.2**
SVN				*e*S	**Sn**	**00 23 40.3**	**-0.2**
DSLB	**Salisbury**	**3.30**	**359**	*e*P	**Pn**	**00 23 16.8**	**+0.5**
TBG	**Guadaloupe-3**	**3.73**	**355**	*e*P	**Pn**	**00 23 24.3**	**+2.4**
TBG				*e*S	**Sn**	**00 24 05.2**	**+0.4**
PCRV	**Puerto La Cruz**	**3.77**	**240**	*e*P	**Pn**	**00 23 23.3**	**+0.7**
PCRV				*e*S	**Sn**	**00 24 07.3**	**+1.3**
MMLZ	**Guadeloupe Bro**	**3.92**	**355**	*e*P	**Pn**	**00 23 26.5**	**+1.9**
MMLZ				*e*S	**Sn**	**00 24 09.8**	**+0.3**
ATGZ	**Broadband at L**	**3.97**	**355**	*e*P	**Pn**	**00 23 26.9**	**+1.5**
DHSZ	**Broadband at M**	**4.15**	**354**	*e*P	**Pn**	**00 23 29.8**	**+2.1**
DHSZ				*e*S	**Sn**	**00 24 14.2**	**-1.0**
DSDZ	**La Diserade, G**	**4.18**	**4**	*e*P	**Pn**	**00 23 28.7**	**+0.6**
H05N1	**Guadeloupe/Mar**	**4.18**	**4**	P	**Pn**	**00 23 26.8**	**-1.4**
H05N1				S	**Sn**	**00 24 15.4**	**-0.6**
MBWH	**Windy Hill**	**4.67**	**350**	*e*P	**Pn**	**00 23 36.6**	**+1.7**
SKI	**Saint Kitts**	**5.36**	**346**	*e*P	**Pn**	**00 23 44.7**	**+0.5**
SKI	**Saint Kitts**	**5.36**	**346**	*e*	**Pn**	**00 23 48.1**	**+3.9**
ANWB	**Willy Bob**	**5.54**	**356**	*e*P	**Pn**	**00 23 48.4**	**+1.8**
H10N3	**ASCENSION HYDR**	**50.61**	**111**	T	T	01 26 19.3	
	baz=293,slow=75,SNR=99						
H10N2	**ASCENSION HYDR**	**50.62**	**111**	T	T	01 26 01.2	
	baz=293,slow=75,SNR=90						
H10N1	**ASCENSION HYDR**	**50.63**	**111**	T	T	01 26 02.5	
	baz=293,slow=75,SNR=93						
H10S3	**ASCENSION HYDR**	**50.89**	**112**	T	T	01 26 41.6	
	baz=288,slow=75,SNR=130						
H10S2	**ASCENSION HYDR**	**50.91**	**112**	T	T	01 26 36.9	
	baz=292,slow=75,SNR=132						
PDAR	**Pinedale Array**	**51.62**	**316**	P	**P**	**00 31 22.6**	**-1.6**
	0.2nm,0.4s,baz=119,slow=7.8,SNR=5.7						
	0.2nm,0.4s						
ESDC	**Sonseca Array**	**57.34**	**51**	P	**P**	**00 32 06.1**	**+0.5**
	0.5nm,0.5s,baz=260,slow=7.0,SNR=6.6						
	0.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**61.37**	**82**	P	**P**	**00 32 33.6**	**+0.1**
	0.4nm,0.3s,baz=280,slow=7.2,SNR=9.9						
	0.4nm,0.3s						
YKA	**Yellowknife Ar**	**62.85**	**335**	P	**P**	**00 32 40.7**	**-2.0**
	0.3nm,0.5s,baz=118,slow=6.3,SNR=10						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**77.23**	**334**	P	**P**	**00 34 11.6**	**+1.0**
	0.2nm,0.5s,baz=73,slow=6.0,SNR=4.4						
	0.2nm,0.5s						

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*IDC **11** 00:30:16.2±1.9, 41°29N×19°13E, h0km, mb3.6/3, mbtmp3.6/7, ML3.1/3, MS3.6/2, Error ellipse: s-maj=23.7km s-min=14.7km az=27.0*
*BEO **11** 00:30:20.6±0.5, 41°41N×19°50E, h5km±2km, ML3.0/18*
*SKO **11** 00:30:20.5, 41°48N×19°36E, h0km, ML3.2*
*THE **11** 00:30:21.1, 42°N±5°×1°9E±°, h15km, M3.1/19, MLh3.1/19*
*TIR **11** 00:30:21.5, 41°54N×19°33E, h35km±2km, Ml3.6/3*
*PDG **11** 00:30:22.4±0.3, 41°54N×19°57E, h5km±1km, MD3.2/4, ML3.2/13, Error ellipse: s-maj=1.1km s-min=1.4km az=0.0*

ISC 11 00:30:20.9±1.0**, 41°48N**±0°02×**19°43E**±0°02**, h10**km±8km**,**
n143, σ1s50/212**, 28C-17D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.35**	**113**	Pg	**Pg**	**00 30 27.7**	**-0.2**
TIR				Sg	**Sg**	**00 30 32.2**	**-0.5**
TIR				AML	AML	00 30 32.7	
	33nm,0.2s						
TIR	**Tirane**	**0.35**	**113**	*i* Pg	**Pg**	**00 30 27.7**	**-0.2**
TIR				*i* Sg	**Sg**	**00 30 32.7**	**+0.1**
ULC	**Ulcinj**	**0.50**	**344**	⇑*i*Pg	**Pb**	**00 30 31.3**	**-0.5**
ULC				*i* Sg	**Sb**	**00 30 39.3**	**+0.1**
SDA	**Shkodra**	**0.57**	**5**	Pg	**Pb**	**00 30 32.2**	**-0.7**
SDA				S	**Sb**	**00 30 41.3**	**+0.2**
DRME	**Dracevica, Mon**	**0.73**	**345**	⇑*i*Pg	**Pb**	**00 30 35.4**	**-0.3**
DRME				*e*Sg	**Sn**	**00 30 47.2**	**-1.2**
BUM	**Brajici-Budva**	**0.91**	**334**	⇓*i*Pg	**Pn**	**00 30 39.7**	**-0.1**
BUM				*i* Sg	**Sn**	**00 30 53.8**	**+0.8**
PDG	**Podgorica**	**0.95**	**352**	Pn	**Pb**	**00 30 39.4**	**-0.2**
PDG				Sn	**Sn**	**00 30 54.1**	**+0.1**
PDG	**Podgorica**	**0.95**	**352**	⇑P	**Pb**	**00 30 39.7**	**+0.1**
PDG				⇑S	**Sb**	**00 30 52.8**	**+0.6**
PDG	**Podgorica**	**0.95**	**352**	*e*Pg	**Pb**	**00 30 39.1**	**-0.4**
PDG				*e*Sg	**Sn**	**00 30 54.5**	**+0.5**
PDG	**Podgorica**	**0.95**	**352**	⇑*i*Pg	**Pg**	**00 30 38.8**	**-0.5**
PDG				*i* Sg	**Sn**	**00 30 54.3**	**+0.3**
VLO	**Vlora**	**1.02**	**177**	Pg	**Pn**	**00 30 42.0**	**+0.8**
VLO				Sg	**Sn**	**00 30 57.1**	**+1.6**
VLO				AML	AML	00 31 00.1	
	5.6nm,0.2s						
VLO	**Vlora**	**1.02**	**177**	P	**Pn**	**00 30 41.9**	**+0.7**
VLO				S	**Sn**	**00 30 57.9**	**+2.4**
OHR	**Ohrid**	**1.09**	**109**	*i* Pg	**Pg**	**00 30 40.8**	**-1.2**
OHR				*i* Sg	**Sb**	**00 30 57.7**	**+1.4**
OHR				*e*Lg	Lg	00 30 58.5	
	comp=N,898nm,1.0s						
OHR				*e*Lg	Lg	00 30 59.7	
	comp=E,551nm,0.5s						
CEME	**Cevo**	**1.13**	**340**	⇓*i*Pg	**Pn**	**00 30 42.9**	**+0.1**
CEME				*e*Sg	**Sn**	**00 31 00.8**	**+2.4**
PVY	**Plav**	**1.18**	**19**	⇓*i*Pg	**Pg**	**00 30 42.3**	**-1.3**
PVY				*i* Sg	**Sn**	**00 30 59.9**	**+0.2**
HCY	**Herceg Novi**	**1.19**	**324**	⇓*i*Pg	**Pn**	**00 30 45.0**	**+1.4**
HCY				*i* Sg	**Sn**	**00 31 03.0**	**+3.1**
NKME	**Niksic**	**1.33**	**345**	⇓*i*Pg	**Pg**	**00 30 46.8**	**+0.3**
NKME				*e*Sg	**Sn**	**00 31 06.7**	**+3.3**
KBN	**Korca**	**1.34**	**130**	Pg	**Pg**	**00 30 47.0**	**+0.4**
KBN				Sg	**Sn**	**00 31 05.9**	**+2.3**
KBN	**Korca**	**1.34**	**130**	P	**Pn**	**00 30 45.7**	**0.0**
KBN				S	**Sn**	**00 31 06.8**	**+3.2**
KOME	**Kolasin**	**1.37**	**3**	⇓*i*Pg	**Pg**	**00 30 46.6**	**-0.6**
KOME				*e*Sg	**Sn**	**00 31 07.2**	**+2.8**
IVA	**Berane**	**1.43**	**14**	⇑*i*Pg	**Pn**	**00 30 47.3**	**+0.3**
IVA				*i* Sg	**Sg**	**00 31 08.2**	**+1.3**
TREB	**Trebinje**	**1.47**	**327**	*e*Pn	**Pb**	**00 30 48.1**	**-0.3**
TREB	**Trebinje**	**1.47**	**327**	*e*Pg	**Pb**	**00 30 48.3**	**-0.1**
TREB				*e*Sg	**Sg**	**00 31 11.1**	**+2.8**
BRY	**Bratogost**	**1.56**	**335**	⇓*i*Pg	**Pg**	**00 30 50.6**	**-0.4**
BRY				*i* Sg	**Sg**	**00 31 13.2**	**+1.9**
SKO	**Skopje**	**1.58**	**71**	*i* Pg	**Pb**	**00 30 50.0**	**-0.2**
SKO				*i* Sg	**Sg**	**00 31 12.2**	**+0.4**
NEST	**Nestorio**	**1.62**	**131**	P	**Pb**	**00 30 51.0**	**0.0**
NEST				S	**Sg**	**00 31 13.8**	**+0.6**
UPM	**Unac-Piva**	**1.76**	**347**	⇓*i*Pn	**Pg**	**00 30 54.3**	**-0.4**
UPM				*i* Sn	**Sg**	**00 31 19.4**	**+1.8**
KLINJ	**Klinje**	**1.80**	**340**	*e*Pn	**Pb**	**00 30 54.2**	**+0.2**
SJES	**Sjenica**	**1.82**	**13**	*e*Pn	**Pb**	**00 30 54.6**	**+0.2**
SJES				*e*Sn	**Sg**	**00 31 18.8**	**-0.7**
PLE	**Pljevlja**	**1.84**	**359**	⇓*i*Pn	**Pb**	**00 30 55.0**	**+0.2**
PLE				*i* Sn	**Sg**	**00 31 21.2**	**+1.0**
STON	**Ston**	**1.89**	**318**	*e*Pn	**Pn**	**00 30 54.3**	**+1.1**
STON				*e*Sn	**Sb**	**00 31 18.9**	**-0.3**
NOCI	**Noci**	**1.92**	**250**	Pn	**Pn**	**00 30 53.5**	**-0.1**
NOCI				S	**Sn**	**00 31 18.5**	**+0.7**
IGT	**Igoumenitsa**	**2.07**	**160**	P	**Pn**	**00 30 55.9**	**+0.3**
IGT	**Igoumenitsa**	**2.07**	**160**	*i* Pn	**Pn**	**00 30 56.2**	**+0.5**
IGT				*i* Sn	**Sb**	**00 31 26.5**	**+2.2**
KPRO	**Kipourio**	**2.12**	**136**	P	**Pn**	**00 30 58.2**	**+1.8**
KZN	**Kozani**	**2.13**	**123**	P	**Pn**	**00 30 57.5**	**+1.0**
KZN				S	**Sn**	**00 31 24.6**	**+1.5**
RUDO	**Rudo**	**2.13**	**359**	*e*Pn	**Pb**	**00 30 58.4**	**-1.3**
RUDO	**Rudo**	**2.13**	**359**	*e*Pn	**Pb**	**00 30 58.7**	**-1.0**
RUDO				*e*Sn	**Sb**	**00 31 24.9**	**-1.3**
SELS	**Selova**	**2.14**	**35**	*e*Pn	**Pn**	**00 30 57.6**	**+0.9**
SELS				*e*Sn	**Sb**	**00 31 25.0**	**-1.3**
IVAS	**Ivanjica**	**2.16**	**14**	*e*Pn	**Pn**	**00 30 57.8**	**+0.8**
IVAS				*e*Sn	**Sb**	**00 31 26.1**	**-0.8**
BARS	**Barje**	**2.22**	**52**	*i* Pn	**Pn**	**00 30 58.4**	**+0.6**
BARS				*i* Sn	**Sb**	**00 31 28.2**	**-0.4**
BARS	**Barje**	**2.22**	**52**	*e*Pn	**Pn**	**00 30 58.6**	**+0.9**
BARS				*e*Sn	**Sn**	**00 31 26.3**	**+1.1**
MATE	**Matera**	**2.23**	**249**	⇓P	**Pn**	**00 30 58.4**	**+0.6**
MATE				⇑S	**Sn**	**00 31 24.0**	**-1.3**
PRMD	**Pramanda**	**2.33**	**146**	P	**Pn**	**00 31 01.0**	**+1.7**
PRMD				S	**Sb**	**00 31 31.1**	**-0.8**
GOCS	**Kraljevo Serbi**	**2.33**	**27**	*e*Pn	**Pn**	**00 31 01.1**	**+1.7**
GOCS				*e*Sn	**Sb**	**00 31 30.6**	**-1.4**
VAY	**Valandovo**	**2.37**	**93**	*i* Pn	**Pn**	**00 31 00.4**	**+0.6**
VAY				*i* Sn	**Sn**	**00 31 30.3**	**+1.4**
VAY				*e*Lg	Lg	00 31 35.4	
	comp=N,98nm,0.7s						
VAY				*e*Lg	Lg	00 31 36.7	
	comp=E,68nm,0.7s						
BBLS	**Lazi&#263i**	**2.38**	**360**	*e*Pn	**Pb**	**00 31 02.0**	**-1.9**
BBLS				*e*Sn	**Sb**	**00 31 32.9**	**-0.5**
BOSS	**Bosilegrad**	**2.49**	**65**	*e*Pn	**Pn**	**00 31 02.2**	**+0.7**
BOSS				*e*Sn	**Sn**	**00 31 32.4**	**+0.5**
TETR	**Tetrakomo, Epi**	**2.56**	**146**	P	**Pn**	**00 31 04.1**	**+1.5**
TETR				S	**Sn**	**00 31 35.8**	**+2.1**
GRUS	**Gruza**	**2.58**	**21**	*e*Pn	**Pn**	**00 31 03.8**	**+1.0**
GRUS				*e*Sn	**Sn**	**00 31 36.4**	**+2.2**
KNT	**Kendrikon**	**2.63**	**96**	P	**Pn**	**00 31 04.1**	**+0.6**
KNT	**Kendrikon**	**2.63**	**96**	*i* Pn	**Pn**	**00 31 04.3**	**+0.8**
KNT				*i* Sn	**Sn**	**00 31 36.0**	**+0.7**
DIVS	**Divibare**	**2.65**	**9**	*e*Pn	**Pn**	**00 31 04.5**	**+0.8**
LIT	**Litokhoron**	**2.70**	**120**	P	**Pn**	**00 31 05.4**	**+0.9**
BOVS	**Bovan**	**2.73**	**37**	⇓P	**Pn**	**00 31 05.8**	**+1.1**
BOVS				⇓S	**Sn**	**00 31 40.1**	**+2.4**
BOVS	**Bovan**	**2.73**	**37**	*e*Pn	**Pn**	**00 31 05.6**	**+0.8**
BOVS				*e*Sn	**Sn**	**00 31 39.1**	**+1.3**
TRAN	**Tran**	**2.75**	**60**	P	**Pn**	**00 31 06.4**	**+1.3**
KKB	**Krupnik**	**2.79**	**81**	P	**Pn**	**00 31 06.6**	**+1.0**
KKB	**Krupnik**	**2.79**	**81**	P	**Pn**	**00 31 06.8**	**+1.1**
KKB	**Krupnik**	**2.79**	**81**	*i* Pn	**Pn**	**00 31 06.7**	**+1.1**
THE	**Thessaloniki**	**2.80**	**107**	P	**Pn**	**00 31 06.0**	**+0.2**
THE	**Thessaloniki**	**2.80**	**107**	*i* Pn	**Pn**	**00 31 06.0**	**+0.2**
THE				*i* Sn	**Sn**	**00 31 38.9**	**-0.7**
TSLK	**Tsoukalades, L**	**2.82**	**160**	P	**Pn**	**00 31 06.1**	**+0.1**
TRUS	**Trudelj**	**2.83**	**14**	*e*Pn	**Pn**	**00 31 07.1**	**+0.9**
LKD2	**Lefkada island**	**2.85**	**160**	P	**Pn**	**00 31 06.3**	**-0.2**
AMPL	**Ampelaki**	**2.90**	**151**	P	**Pn**	**00 31 07.9**	**+0.8**
HORT	**Hortiatis**	**2.91**	**107**	P	**Pn**	**00 31 07.3**	**-0.1**
DRAG	**Dragano-Lefkad**	**2.93**	**162**	P	**Pn**	**00 31 06.8**	**-0.8**
NYDR	**Nydri-Lefkada**	**2.93**	**160**	P	**Pn**	**00 31 07.2**	**-0.4**
ZAPS	**Zavoj**	**2.97**	**52**	*e*Pn	**Pn**	**00 31 09.3**	**+1.2**
ZAPS				*e*Sn	**Sn**	**00 31 43.8**	**0.0**
EVGI	**Lefkada island**	**3.01**	**161**	P	**Pn**	**00 31 08.0**	**-0.6**
SOH	**Sokhos**	**3.03**	**101**	P	**Pn**	**00 31 09.8**	**+0.7**
SOH	**Sokhos**	**3.03**	**101**	*i* Pn	**Pn**	**00 31 09.6**	**+0.6**
SOH				*i* Sn	**Sn**	**00 31 45.9**	**+0.5**
VTS	**Vitosha**	**3.05**	**67**	P	**Pn**	**00 31 10.2**	**+0.9**
VTS	**Vitosha**	**3.05**	**67**	P	**Pn**	**00 31 10.1**	**+0.8**
TEKS	**Tekeris**	**3.06**	**1**	*e*Pn	**Pn**	**00 31 09.8**	**+0.4**
TIP	**Timpagrande**	**3.08**	**222**	⇓P	**Pn**	**00 31 09.8**	**+0.1**
ZAGS	**Zajecar**	**3.11**	**41**	*e*Pn	**Pn**	**00 31 10.9**	**+0.9**
ZAGS				*e*Sn	**Sn**	**00 31 48.0**	**+0.8**
PLNA	**Plana**	**3.14**	**70**	P	**Pn**	**00 31 12.3**	**+1.8**
SRS	**Serrai**	**3.15**	**95**	*i* Pn	**Pn**	**00 31 10.8**	**+0.2**
SRS				*i* Sn	**Sn**	**00 31 50.7**	**+2.4**
BLSH	**Balsha**	**3.17**	**63**	P	**Pn**	**00 31 13.1**	**+2.2**
BLKB	**Belogradchik**	**3.21**	**47**	⇓S	**Sn**	**00 31 52.0**	**+2.3**
BORS2	**Bor- Borsko je**	**3.23**	**35**	*e*Pn	**Pn**	**00 31 11.3**	**-0.3**
BORS2				*e*Sn	**Sn**	**00 31 50.3**	**+0.2**
MMB	**Musomishta**	**3.24**	**87**	*i* Pn	**Pn**	**00 31 13.0**	**+1.1**
AVAS	**Avala Beograd**	**3.31**	**13**	*e*Pn	**Pn**	**00 31 13.1**	**+0.4**
AVAS				*e*Sn	**Sn**	**00 31 53.3**	**+1.2**
KUBS	**Kucevo**	**3.36**	**29**	*e*Pn	**Pn**	**00 31 13.0**	**-0.4**
KUBS				*e*Sn	**Sn**	**00 31 52.6**	**-0.7**
BLY	**Banja Luka**	**3.65**	**334**	*e*Pn	**Pn**	**00 31 18.6**	**+1.1**
BLY	**Banja Luka**	**3.65**	**334**	*e*Pn	**Pn**	**00 31 18.7**	**+1.2**
FRGS	**Fruska Gora**	**3.68**	**4**	*e*Pn	**Pn**	**00 31 18.1**	**+0.2**
MDVR	**Moldovita**	**3.69**	**26**	⇑P	**Pn**	**00 31 19.2**	**+1.1**
MPEP	**Malo Peshtene**	**3.70**	**58**	P	**Pn**	**00 31 19.9**	**+1.8**
VRSS	**Vrsac**	**3.89**	**20**	*e*Pn	**Pn**	**00 31 21.1**	**+0.4**
DJES	**Djerdap**	**3.90**	**34**	⇑P	**Pn**	**00 31 22.7**	**+1.8**
PLD	**Plovdiv**	**4.03**	**79**	*i* Pn	**Pn**	**00 31 24.1**	**+1.5**
PLD				*i* Sn	**Sn**	**00 32 09.6**	**-0.2**
HERR	**Herculane**	**4.04**	**32**	⇓P	**Pn**	**00 31 23.9**	**+1.2**
KNYS	**Krupa na Uni**	**4.09**	**327**	*e*Pn	**Pn**	**00 31 24.3**	**+0.8**
SRE	**Strehaia**	**4.21**	**40**	⇓P	**Pn**	**00 31 26.8**	**+1.6**
PLVB	**Pleven**	**4.29**	**62**	⇑P	**Pn**	**00 31 28.1**	**+1.9**
BZS	**Buzias**	**4.42**	**20**	⇑P	**Pn**	**00 31 29.0**	**+0.9**
AQU	**L'Aquila**	**4.58**	**283**	*e*Pn	**Pn**	**00 31 31.9**	**+1.6**
GZR	**Gura Zlata**	**4.60**	**31**	⇓P	**Pn**	**00 31 32.0**	**+1.4**
MORH	**Mrgy, Hungar**	**4.76**	**353**	*e*Pn	**Pn**	**00 31 33.3**	**+0.6**
MORH	**Mrgy, Hungar**	**4.76**	**353**	⇑P	**Pn**	**00 31 33.5**	**+0.8**
ELND	**Elena**	**5.00**	**71**	⇑P	**Pn**	**00 31 37.5**	**+1.6**
SIRR	**Siria**	**5.04**	**18**	⇑P	**Pn**	**00 31 38.0**	**+1.4**
LOT	**Lotru**	**5.07**	**37**	⇑P	**Pn**	**00 31 38.3**	**+1.3**
HUMR	**Humele**	**5.08**	**51**	⇑P	**Pn**	**00 31 39.0**	**+2.0**
ARR	**Arges**	**5.42**	**43**	⇑P	**Pn**	**00 31 44.2**	**+2.4**
TNR	**Turnu Rosu**	**5.45**	**39**	⇑P	**Pn**	**00 31 43.7**	**+1.5**
SGRR	**Singureni**	**5.53**	**58**	⇑P	**Pn**	**00 31 45.2**	**+1.9**
DRGR		**5.81**	**23**	⇑P	**Pn**	**00 31 48.7**	**+1.6**
MARR	**Marisel-Cluj**	**5.83**	**26**	⇑P	**Pn**	**00 31 48.4**	**+0.9**
SOKA	**Soboth**	**6.08**	**330**	*i* Pn	**Pn**	**00 31 52.0**	**+1.1**
	comp=E,1.6nm,0.5s						
SOKA				*i* Sn	**Sn**	**00 32 57.9**	**-2.7**
	comp=E,1.2nm,0.4s						
OBKA	**Obir**	**6.13**	**327**	*i* Pn	**Pn**	**00 31 52.4**	**+0.8**
	comp=E,0.7nm,0.2s						
OBKA				*i* Sn	**Sn**	**00 33 01.8**	**-0.1**
	comp=E,2.0nm,0.3s						
MLR	**Muntele Rosu**	**6.20**	**48**	Pn	**Pn**	**00 31 55.1**	**+2.5**
	comp=E,0.8nm,0.3s,baz=263,slow=8.1,SNR=17						
MLR				Sn	**Sn**	**00 33 08.9**	**+5.3**
	comp=E,0.5nm,0.3s,baz=258,slow=20,SNR=2.0						
	comp=E,2.7nm,0.4s						
MLR	**Muntele Rosu**	**6.20**	**48**	⇑P	**Pn**	**00 31 55.2**	**+2.6**
NEHR	**Nehoiu**	**6.36**	**49**	⇑P	**Pn**	**00 31 56.7**	**+2.0**
SRO	**Srobarova**	**6.38**	**353**	*e*PG	**Pg**	**00 32 23.8**	**+0.8**
PSZ	**Piszkesteto**	**6.44**	**3**	⇑P	**Pn**	**00 31 57.1**	**+1.3**
COVR	**Voineasa-Covas**	**6.56**	**46**	⇑P	**Pn**	**00 32 00.1**	**+2.6**
MYKA	**Terra Mystica**	**6.62**	**323**	*i* Sn	**Sn**	**00 33 12.6**	**-1.2**
	comp=E,1.1nm,0.3s						
ICOR	**Ion Corvin**	**6.69**	**64**	⇑P	**Pn**	**00 32 01.0**	**+1.8**
PLOR	**Plostina**	**6.81**	**48**	⇑P	**Pn**	**00 32 02.3**	**+1.3**
VRI	**Vrincioaia**	**6.87**	**48**	⇑P	**Pn**	**00 32 04.2**	**+2.6**
MODS	**Modra-Piesok**	**7.06**	**348**	*e*PG	**Pg**	**00 32 32.7**	**-3.3**
MODS				*e*SN	Sn	00 33 03.3	-21
ABTA	**Abfaltersbach**	**7.24**	**319**	*e*Pn	**Pn**	**00 32 07.1**	**+0.2**
	comp=E,1.3nm,0.3s						
ABTA				*i* Sn	**Sn**	**00 33 27.3**	**-1.8**
	comp=E,1.0nm,0.2s						
MOA	**Molln**	**7.35**	**332**	*i* Pn	**Pn**	**00 32 10.7**	**+2.4**
	comp=E,0.8nm,0.3s						
MOA				*e*Sn	**Sn**	**00 33 33.9**	**+2.2**
	comp=E,1.8nm,0.5s						
BIOA	**Bad Ischl, Aus**	**7.46**	**328**	*i* Pn	**Pn**	**00 32 09.9**	**+0.2**
	comp=E,1.4nm,0.4s						
IDI	**Anoyia**	**7.52**	**144**	Pn	**Pn**	**00 32 07.9**	**-2.8**
	comp=E,14nm,1.1s,baz=324,slow=14,SNR=6.7						
IDI				Sn	**Sn**	**00 33 29.6**	**-6.5**
	comp=E,0.4nm,0.3s,baz=202,slow=5.1,SNR=2.5						
LESA	**Schwarzleotal**	**7.65**	**323**	*i* Pn	**Pn**	**00 32 13.0**	**+0.5**
	comp=E,1.4nm,0.4s						
LESA				*e*Sn	**Sn**	**00 33 38.1**	**-1.2**
	comp=E,0.9nm,0.3s						
WTTA	**Wattenberg**	**8.03**	**319**	*i* Pn	**Pn**	**00 32 20.1**	**+2.3**
	comp=E,1.5nm,0.3s						
WTTA				*e*Sn	**Sn**	**00 33 50.1**	**+1.4**
	comp=E,2.9nm,0.5s						
STHS	**Stebnicka Huta**	**8.03**	**8**	*e*PN	**Pn**	**00 32 14.7**	**-2.9**
STHS				*e*PG	**Pg**	**00 32 51.8**	**-2.9**
STHS				*e*SN	Sn	00 33 33.3	-15
STHS				*e*SG	**Sg**	**00 34 41.1**	**+2.5**
WATA	**Walderalm**	**8.11**	**319**	*i* Pn	**Pn**	**00 32 20.7**	**+1.9**
	comp=E,2.4nm,0.4s						
SQTA	**Sankt Quirin**	**8.22**	**317**	*i* Pn	**Pn**	**00 32 22.2**	**+1.9**
	comp=E,2.0nm,0.4s						
MOTA	**Moosalm**	**8.36**	**317**	*i* Pn	**Pn**	**00 32 23.2**	**+1.1**
	comp=E,0.6nm,0.4s						
MOTA				*e*Sn	**Sn**	**00 33 57.6**	**+1.0**
	comp=E,3.6nm,0.5s						
GERES	**GERESS Array B**	**8.40**	**333**	Pn	**Pn**	**00 32 20.4**	**-2.3**
	baz=143,slow=13,SNR=3.6						
GERES				Sn	**Sn**	**00 33 56.8**	**-0.8**
	baz=151,slow=23,SNR=1.3						
	comp=E,0.4nm,0.5s						
RETA	**Reutte**	**8.62**	**317**	*i* Pn	**Pn**	**00 32 28.1**	**+2.4**
	comp=E,4.9nm,1.3s						
RETA				*e*Sn	**Sn**	**00 34 02.4**	**-0.7**
	comp=E,1.1nm,0.4s						
DAVOX	**Davos/Dischmat**	**8.67**	**311**	Pn	**Pn**	**00 32 23.1**	**-3.4**
	comp=E,0.4nm,0.3s,baz=129,slow=22,SNR=5.7						
DAVOX				Sn	**Sn**	**00 34 04.4**	**0.0**
	comp=E,0.3nm,0.3s,baz=126,slow=14,SNR=4.1						
	comp=E,1.2nm,0.9s						
FINES	**FINESS Array B**	**20.39**	**9**	P	**P**	**00 34 58.5**	**+0.9**
	comp=E,0.7nm,0.5s,baz=168,slow=12,SNR=6.8						
	comp=E,0.7nm,0.5s						
ZALV	**Zalesovo Beam**	**44.17**	**50**	P	**P**	**00 38 28.4**	**-1.2**
	comp=E,0.8nm,0.5s,baz=273,slow=9.3,SNR=5.9						
	comp=E,0.8nm,0.5s						
MKAR	**Makanchi Array**	**44.36**	**61**	P	**P**	**00 38 30.2**	**-1.1**
	comp=E,0.9nm,0.6s,baz=281,slow=7.5,SNR=13						
	comp=E,0.9nm,0.6s						
RES	**Resolute Bay**	**56.36**	**343**	LR	LR	01 03 23.4	
	comp=E,50nm,19.3s,baz=316,slow=35						
ILAR	**Eielson Array**	**73.54**	**354**	LR	LR	01 15 40.7	
	comp=E,38nm,18.1s,baz=248,slow=37						

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*IDC **11** 00:49:16.0±2.7, 30°68N×141°84E, h0km, mb3.6/5, mbtmp3.6/6, ML2.6/1, Error ellipse: s-maj=118.3km s-min=23.4km az=75.0*

ISC 11 00:49:20.4±2.8**, 30°7N**±0°3×**141°7E**±0°8**, h28**km**, n6,**
σ**0s71**/6**, mb3.5**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**6.52**	**334**	Pn	**Pn**	**00 50 53.8**	**-0.7**
	0.1nm,0.3s,baz=148,slow=13,SNR=4.0						
	0.9nm,0.3s						
MKAR	**Makanchi Array**	**47.93**	**307**	P	**P**	**00 57 56.9**	**+0.6**
	0.1nm,0.4s,baz=88,slow=9.4,SNR=2.0						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**50.28**	**312**	P	**P**	**00 58 14.1**	**-0.1**
	0.4nm,0.8s,baz=88,slow=7.7,SNR=4.0						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**50.85**	**189**	P	**P**	**00 58 18.5**	**-0.2**
	0.5nm,0.5s,baz=6.9,slow=7.6,SNR=6.4						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**54.58**	**189**	P	**P**	**00 58 45.9**	**-0.4**
	0.1nm,0.3s,baz=9.5,slow=7.0,SNR=2.0						
	0.1nm,0.3s						
FINES	**FINESS Array B**	**74.55**	**333**	P	**P**	**01 00 57.0**	**+0.7**
	7.4nm,1.2s,baz=50,slow=7.2,SNR=5.0						
	7.4nm,1.2s						

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*IDC **11** 00:50:36.4±1.7, 2°53S×76°73W, h129km±17km, mb3.6/13, mbtmp4.0/18, MS3.4/1, Error ellipse: s-maj=18.9km s-min=12.0km az=86.0*
*NEIC **11** 00:50:37.5±2.7, 2°43S±0°07×76°67W±0°10, h130km±7km, mb4.2/40, Error ellipse: s-maj=14.3km s-min=9.9km az=84.0*
*IGQ **11** 00:50:37.0±0.5, 3°S±2°×7°7W±°, h126km±5km, MLv4.0/12*

ISC 11 00:50:35.6±0.7**, 2°53S**±0°04×**76°76W**±0°05**, h126**km±7km**,**
n167, σ1s43/172**, mb4.1**/20**, 13C-39D, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAIS	**Taisha**	**0.75**	**281**	P	**Pn**	**00 50 57.3**	**+1.3**
TAIS				S	**Sn**	**00 51 13.6**	**+2.1**
APUY	**Puyo**	**1.63**	**311**	P	**Pn**	**00 51 04.8**	**-0.3**
PUYO	**Puyo, Santa Ro**	**1.63**	**309**	⇓P	**Pn**	**00 51 05.7**	**+0.6**
PUYO				S	**Sn**	**00 51 27.2**	**-0.3**
BOSC	**San Juan Bosco**	**1.84**	**250**	P	**Pn**	**00 51 06.6**	**-1.0**
BOSC				S	**Sn**	**00 51 30.3**	**-1.7**
ARDO	**Archidona, Ten**	**1.84**	**326**	⇓P	**Pn**	**00 51 07.8**	**+0.2**
ARDO				S	**Sn**	**00 51 31.6**	**-0.4**
BPAT	**Tungurahua Vol**	**1.96**	**301**	⇓P	**Pn**	**00 51 09.4**	**+0.1**
BPAT				S	**Sn**	**00 51 34.9**	**-0.2**
BMAS	**Trigal station**	**2.00**	**301**	S	**Sn**	**00 51 34.1**	**-1.6**
BMAS				⇓P	**Pn**	**00 51 07.7**	**-2.0**
JUI6	**Juive**	**2.03**	**303**	P	**Pn**	**00 51 10.1**	**+0.1**
BBIL	**Ulba Tungurahu**	**2.03**	**302**	⇓P	**Pn**	**00 51 10.2**	**+0.1**
BIL2	**Estacion Bilba**	**2.04**	**301**	P	**Pn**	**00 51 10.3**	**+0.1**
AZOG	**Ecuador-Azogue**	**2.10**	**264**	⇓P	**Pn**	**00 51 11.4**	**+0.5**
ARIO	**Riobamba**	**2.12**	**294**	P	**Pn**	**00 51 11.9**	**+0.7**
PIAT	**Ana Tenorio**	**2.14**	**315**	⇓P	**Pn**	**00 51 11.6**	**+0.2**
IGUA	**Igualata**	**2.14**	**299**	⇓P	**Pn**	**00 51 12.3**	**+0.6**
PIS1	**Pisayambo**	**2.18**	**312**	⇓P	**Pn**	**00 51 12.5**	**+0.3**
TAMH	**Tambohuasha Ch**	**2.24**	**296**	⇑P	**Pn**	**00 51 13.7**	**+0.9**
CHSH	**Refugio Sur-Vo**	**2.34**	**296**	⇑P	**Pn**	**00 51 14.6**	**+0.3**
JSCH	**Cashca Tororas**	**2.36**	**290**	P	**Pn**	**00 51 14.8**	**+0.6**
VCES	**Cotopaxi**	**2.37**	**316**	⇓P	**Pn**	**00 51 15.2**	**+0.7**
TAMB	**Tambo**	**2.43**	**319**	⇓P	**Pn**	**00 51 16.4**	**+1.2**
ANTM	**Antisana-La Mi**	**2.46**	**324**	⇓P	**Pn**	**00 51 16.1**	**+0.5**
ANTS	**Antisana-Sarah**	**2.46**	**325**	⇓P	**Pn**	**00 51 16.2**	**+0.5**
BTAM	**Cotopaxi Volca**	**2.46**	**318**	⇓P	**Pn**	**00 51 16.9**	**+1.2**
BMOR	**Cotopaxi Volca**	**2.46**	**316**	⇓P	**Pn**	**00 51 16.8**	**+1.1**
BVC2	**Cotopaxi Volca**	**2.48**	**318**	P	**Pn**	**00 51 17.1**	**+1.1**
SLOR	**San Lorenzo -**	**2.49**	**316**	⇓P	**Pn**	**00 51 17.3**	**+1.3**
VC1	**Cotopaxi 1**	**2.49**	**319**	P	**Pn**	**00 51 17.4**	**+1.3**
COHC	**Cochancay**	**2.49**	**271**	⇑P	**Pn**	**00 51 15.1**	**-0.4**
COHC	**Cochancay**	**2.49**	**271**	P	**Pn**	**00 51 15.6**	**+0.1**
ANTI	**Antisana**	**2.49**	**326**	⇓P	**Pn**	**00 51 16.5**	**+0.4**
BREF	**Cotopaxi Volca**	**2.50**	**318**	⇓P	**Pn**	**00 51 17.5**	**+1.3**
ANTG	**Antisana-Guama**	**2.50**	**323**	⇓P	**Pn**	**00 51 16.9**	**+0.7**
CAMI	**Rancho Maria**	**2.53**	**317**	⇓P	**Pn**	**00 51 18.4**	**+1.9**
SUCR	**Mariscal Sucre**	**2.55**	**317**	⇓P	**Pn**	**00 51 18.5**	**+1.7**
REVS	**Reventador Sur**	**2.56**	**340**	⇓P	**Pn**	**00 51 16.8**	**+0.2**
PITA	**Cotopaxi Volc**	**2.57**	**319**	⇓P	**Pn**	**00 51 18.6**	**+1.6**
REVN	**San Rafael**	**2.58**	**340**	⇓P	**Pn**	**00 51 17.3**	**+0.2**
ILLI	**Illinizas Sur**	**2.67**	**312**	⇓P	**Pn**	**00 51 19.3**	**+1.1**
AZAM	**Ecuador-Zamora**	**2.67**	**235**	⇓P	**Pn**	**00 51 16.2**	**-1.8**
MILO	**Milagro-Astudi**	**2.80**	**275**	⇑P	**Pn**	**00 51 19.2**	**-0.3**
CAYR	**Refugio Cayamb**	**2.82**	**334**	⇑P	**Pn**	**00 51 21.4**	**+1.0**
PCRA	**Pucara 2**	**2.82**	**256**	⇑P	**Pn**	**00 51 17.8**	**-2.4**
ANGU	**Angureal**	**2.84**	**334**	⇓P	**Pn**	**00 51 21.9**	**+1.1**
JUA2	**San Juan 2**	**2.95**	**321**	⇓P	**Pn**	**00 51 23.3**	**+1.4**
GGPT	**Toaza - Volcan**	**2.95**	**321**	⇓P	**Pn**	**00 51 22.9**	**+1.1**
GGPC	**Guagua Pichinc**	**2.97**	**322**	⇓P	**Pn**	**00 51 23.5**	**+1.2**
TERV	**Terraza Guagua**	**2.98**	**322**	⇓P	**Pn**	**00 51 23.6**	**+1.2**
PINO	**Pino**	**2.99**	**322**	⇑P	**Pn**	**00 51 23.7**	**+1.1**
YANA	**Yana**	**3.00**	**323**	⇑P	**Pn**	**00 51 23.9**	**+1.3**
BONI	**La Bonita**	**3.06**	**345**	⇓P	**Pn**	**00 51 23.5**	**+0.3**
BONI	**La Bonita**	**3.06**	**345**	P	**Pn**	**00 51 23.1**	**0.0**
GONZ	**Gonzanam**	**3.13**	**237**	P	**Pn**	**00 51 24.0**	**-0.2**
IMBA	**Imbabura, San**	**3.13**	**333**	P	**Pn**	**00 51 26.7**	**+2.4**
OTAV	**Otavalo**	**3.23**	**328**		**Pn**	**00 51 24.9**	**-0.6**
OTAV	**Otavalo**	**3.23**	**328**	⇓P	**Pn**	**00 51 26.3**	**+0.8**
OTAV	**Otavalo**	**3.23**	**328**	P	**Pn**	**00 51 26.3**	**+0.8**
CUIC	**Cuicocha-Domo**	**3.24**	**330**	⇓P	**Pn**	**00 51 27.1**	**+1.5**
COTA	**Cotacachi**	**3.25**	**331**	P	**Pn**	**00 51 27.5**	**+1.6**
URCU	**Urcuqui**	**3.30**	**333**	⇓P	**Pn**	**00 51 28.3**	**+1.8**
ZUMB	**Zumba**	**3.32**	**226**	⇑P	**Pn**	**00 51 25.9**	**-0.6**
PTLC	**Puerto Leguiza**	**3.32**	**36**	P	**Pn**	**00 51 24.2**	**-2.2**
TULM	**Tulcn-Chalpat**	**3.38**	**342**	P	**Pn**	**00 51 28.9**	**+1.3**
TULM	**Tulcn-Chalpat**	**3.38**	**342**	P	**Pn**	**00 51 28.2**	**+0.6**
ISPG	**Isla Puna-Puer**	**3.43**	**263**	⇓P	**Pn**	**00 51 26.7**	**-1.2**
ARNL	**Arenillas**	**3.45**	**253**	⇑P	**Pn**	**00 51 25.2**	**-2.8**
LNGL	**El Angel-Carch**	**3.48**	**339**	⇓P	**Pn**	**00 51 31.1**	**+2.3**
CHL2	**Volc¡n Chiles**	**3.50**	**341**	⇑P	**Pn**	**00 51 32.3**	**+3.1**
CHL1	**Volc¡n Chiles**	**3.50**	**340**	P	**Pn**	**00 51 31.5**	**+2.2**
ECEN	**Cerro Negro**	**3.54**	**340**	P	**Pn**	**00 51 31.9**	**+2.1**
MORR	**Playas El Morr**	**3.57**	**268**	⇑P	**Pn**	**00 51 27.9**	**-1.7**

AMCR	Ecuador-Macara	3.67	240	⇓P	Pn	00 51 28.7	-2.3
MCRA	Macar, Loja	3.67	240	⇑P	Pn	00 51 28.6	-2.4
MCRA	Macar, Loja	3.67	240	P	Pn	00 51 28.5	-2.5
MCRA				S	Sn	00 52 10.5	-3.4
FLF1	Flavio Alfaro-	3.76	305	P	Pn	00 51 30.6	-1.5
PPLP	Puerto Lpez	4.13	284	P	Pn	00 51 33.9	-3.1
FLOC	Florencia	4.23	15	Pn	Pn	00 51 38.1	-0.3
FLOC	Florencia	4.23	15	P	Pn	00 51 38.6	+0.2
FLOC	Florencia	4.23	15	P	Pn	00 51 38.1	-0.3
FLOC				S	Sn	00 52 17.2	-10
SALI	Salinas	4.24	275	⇓P	Pn	00 51 36.7	-1.7
ISPT	Isla de la Pla	4.49	286	P	Pn	00 51 40.4	-1.4
BBAC	Balboa, Cauca	4.54	354	P	Pn	00 51 44.2	+1.4
BBAC	Balboa, Cauca	4.54	354	P	Pn	00 51 43.5	+0.7
GARC	Garzon, Huila	4.85	15	P	Pn	00 51 47.0	+0.1
ATAH	Atahualpa	4.86	200	P	Pn	00 51 49.0	+1.9
	183nm,0.7s,baz=21,slow=9.3,SNR=146						
ATAH				S	Sn	00 52 43.5	+0.8
	161nm,0.7s,baz=148,slow=15,SNR=8.6						
POPC	Popayan, Colom	5.04	1	P	Pn	00 51 50.1	+0.7
	291nm20nm,1.6s						
MACC	Macarena, Meta	5.48	32	P	Pn	00 51 54.8	-0.4
	810nm57nm,0.8s						
JAMC	Jamundi, Valle	5.71	1	P	Pn	00 51 59.5	+1.1
	528nm43nm,0.8s						
URMC	La Uribe, Meta	6.21	23	P	Pn	00 52 06.3	+1.2
	637nm62nm,0.9s						
PRAC	Prado	6.48	17	P	Pn	00 52 10.2	+1.6
	35nm,1.4s						
YOTC	Yotoco, Valle	6.48	4	P	Pn	00 52 08.4	-0.3
	12nm,0.6s						
ORTC	Ortega, Tolima	6.57	13	P	Pn	00 52 11.1	+1.2
	73nm,1.1s						
VILC	Villavicencio,	7.27	25	P	Pn	00 52 20.9	+1.5
	632nm60nm,0.6s						
PLMC	San Jos del P	7.40	4	P	Pn	00 52 18.1	-3.0
	9.3nm,0.9s						
ROSC	El Rosal	7.71	18	P	Pn	00 52 27.1	+1.5
	5.4nm,0.4s,baz=222,slow=14,SNR=4.0						
ROSC	El Rosal	7.71	18	Pn	Pn	00 52 25.1	-0.6
CHIC	Chingaza	7.73	23	P	Pn	00 52 26.4	+0.6
	515nm42nm,1.2s						
GUY2C	Guyana, Caldas	7.83	10	P	Pn	00 52 29.2	+2.0
	23nm,1.1s						
CBOC	Ciudad Bolivar	8.37	5	P	Pn	00 52 35.9	+1.6
	13nm,0.8s						
RUSC	La Rusia	9.14	24		Pn	00 52 46.4	+1.5
RUSC	La Rusia	9.14	24	P	Pn	00 52 46.8	+1.9
NNA	Nana	9.40	180	P	Pn	00 52 48.8	+0.8
	6.8nm,0.3s,baz=351,slow=5.2,SNR=6.3						
NNA				S	Sn	00 54 25.1	-6.9
	15nm,0.3s,baz=110,slow=20,SNR=6.6						
NNA	Nana	9.40	180	Pn	Pn	00 52 50.9	+2.9
NNA	Nana	9.40	180	P	Pn	00 52 49.1	+1.1
SDV	Santo Domingo	12.88	28	P	Pn	00 53 34.0	-0.4
	4.8nm,0.7s,baz=237,slow=13,SNR=5.8						
SDV	Santo Domingo	12.88	28	Pn	Pn	00 53 34.6	+0.3
MACA	Manacapuru-AM	16.07	93	Pn	Pn	00 54 13.2	-1.3
LPAZ	La Paz	16.10	149	P	P	00 54 16.1	-0.3
	0.6nm,0.5s,baz=338,slow=13,SNR=4.1						
LPAZ	La Paz	16.10	149	P	P	00 54 16.9	+0.5
PB12	IPOC Station P	17.18	159	P	Pn	00 54 29.7	+1.5
PB12				IAmb	IAmb	00 54 37.2	
	comp=Z,18nm,1.1s						
PB16	IPOC Station P	17.24	156	P	Pn	00 54 30.6	+1.2
CRIN	San Cristobal	18.26	326	P	P	00 54 39.6	0.0
PB11	IPOC Station P	18.48	158	P	Pn	00 54 44.0	+0.2
PB11				IAmb	IAmb	00 54 57.7	
	comp=Z,17nm,1.0s						
GO01	Chusmiza	18.57	157	P	Pn	00 54 45.7	+0.6
GO01				IAmb	IAmb	00 54 54.8	
	comp=Z,4.8nm,0.6s						
HMBC	Humberstone	18.88	160	P	Pn	00 54 48.2	-0.1
HMBC				IAmb	IAmb	00 54 56.3	
	comp=Z,12nm,0.8s						
PB08	IPOC Station P	19.02	158	P	Pn	00 54 50.8	+0.5
PB08				IAmb	IAmb	00 54 54.4	
	comp=Z,6.8nm,0.7s						
TA01	Diego Aracena	19.04	161	P	Pn	00 54 50.8	+0.6
PATCX	Punta Patache	19.29	161	P	Pn	00 54 52.3	-0.9
PB01	IPOC Station P	19.72	159	P	Pn	00 54 58.3	+0.2
PB01				IAmb	IAmb	00 55 03.6	
	comp=Z,7.9nm,0.8s						
PB02	IPOC Station P	19.84	161	P	Pn	00 54 58.9	-0.7
PB02				IAmb	IAmb	00 55 23.4	
	comp=Z,14nm,1.0s						
PB07	IPOC Station P	20.22	161	P	Pn	00 55 02.8	-1.3
PB07				IAmb	IAmb	00 55 23.2	
	comp=Z,13nm,1.1s						
PB09	IPOC Station P	20.50	160	P	Pn	00 55 07.1	-0.3
PB09				IAmb	IAmb	00 55 09.4	
	comp=Z,7.7nm,0.8s						
PTLB	Pontes e Lacer	21.60	128	P	P	00 55 16.1	+0.4
GO02	Mina Guanaco	23.54	164	P	P	00 55 37.6	+2.7
GO02				IAmb	IAmb	00 55 38.2	
	comp=Z,8.4nm,0.9s						
LCO	Las Campanas	26.96	168	P	P	00 56 08.1	+2.4
LCO				IAmb	IAmb	00 56 08.7	
	comp=Z,4.9nm,0.8s						
CFA	Coronel Fontan	30.02	165	LR	LR	01 08 12.7	
	comp=Z,67nm,21.1s,baz=184,slow=35						
BDFB	Brasilia	31.17	116	P	P	00 56 44.3	+1.2
	comp=Z,1.2nm,0.4s,baz=278,slow=13,SNR=3.2						
	comp=Z,1.2nm,0.4s						
MT09	Talagante	31.55	171	P	P	00 56 48.2	+2.0
MT09				IAmb	IAmb	00 57 15.9	
	comp=Z,6.0nm,1.1s						
LMEL	Las Melosas	31.76	170	P	P	00 56 50.9	+2.9
BI02	San Fabin de	34.34	172	P	P	00 57 13.1	+2.7
BI02				IAmb	IAmb	00 57 13.1	
	comp=Z,3.9nm,1.1s						
PLCA	Paso Flores	38.44	172	P	P	00 57 45.3	+0.1
	comp=Z,3.4nm,0.8s,baz=341,slow=8.5,SNR=7.3						
	comp=Z,3.4nm,0.8s						
PLCA	Paso Flores	38.44	172	P	P	00 57 46.7	+1.5
TXAR	Lajitas Array	40.84	323	P	P	00 58 05.4	+0.3
	comp=Z,0.1nm,0.5s,baz=131,slow=7.8,SNR=2.2						
	comp=Z,0.1nm,0.5s						
TXAR	Lajitas Array	40.84	323	P	P	00 58 06.6	+1.4
WMOK	Wichita Mounta	42.45	333	P	P	00 58 17.1	-1.0
VHRN	Van Horn	42.67	323	P	P	00 58 20.5	+0.4
ABQ	Albuquerque	46.53	326	P	P	00 58 51.3	+0.5
ABQ				IAmb	IAmb	00 58 53.1	
	comp=Z,2.4nm,0.6s						
ANMO	Albuquerque	46.53	326	P	P	00 58 51.6	+0.8
	comp=Z,2.5nm,0.6s,baz=119,slow=7.7,SNR=10						
	comp=Z,2.5nm,0.6s						
PV13	Radium Mtn., P	50.17	327	P	P	00 59 20.5	+1.7
PV13				IAmb	IAmb	00 59 21.1	
	comp=Z,3.1nm,1.1s						
PV18	Skein Mesa, Pa	50.28	327	P	P	00 59 20.7	+1.2
PV18				IAmb	IAmb	00 59 21.8	
	comp=Z,3.4nm,0.8s						
AGMN	Agassiz Nation	53.29	344	P	P	00 59 39.5	-1.9
PDAR	Pinedale Array	53.93	330	P	P	00 59 46.6	+0.1
	comp=Z,0.2nm,0.7s,baz=113,slow=10,SNR=2.3						
	comp=Z,0.2nm,0.7s						
NVAR	Mina Array Bea	55.93	321	P	P	01 00 01.8	+0.8
	comp=Z,0.6nm,0.7s,baz=122,slow=5.5,SNR=2.5						
	comp=Z,0.6nm,0.7s						
ILON	Igloolik, Nuna	71.84	358	P	P	01 01 42.2	-1.9
ILON				IAmb	IAmb	01 01 56.6	
	comp=Z,5.7nm,1.2s						
DBIC	Dimbokro	72.35	82	P	P	01 01 47.7	-0.7
	comp=Z,1.7nm,0.4s,baz=314,slow=4.6,SNR=6.0						
	comp=Z,1.7nm,0.4s						
DBIC	Dimbokro	72.35	82	P	P	01 01 47.1	-1.3
DBIC				IAmb	IAmb	01 01 48.2	
	comp=Z,4.3nm,1.1s						
MD01	Midelt array s	76.34	55	P	P	01 02 11.3	-0.1
ESDC	Sonseca Array	78.45	49	P	P	01 02 22.3	-0.6
	comp=Z,0.4nm,0.5s,baz=249,slow=5.4,SNR=2.4						
	comp=Z,0.4nm,0.5s						
TORD	Torodi Ar. Bea	79.35	76	P	P	01 02 28.9	+0.7
	comp=Z,0.8nm,0.4s,baz=294,slow=4.2,SNR=10						
	comp=Z,0.8nm,0.4s						
I30M	Mount Dempster	80.03	338	P	P	01 02 30.6	-0.3
INK	Inuvik	80.62	342	P	P	01 02 32.0	-1.9
F30M	Barrier River	81.00	341	P	P	01 02 35.4	-0.6
SNAA	Sanae	82.58	162	P	P	01 02 44.6	+0.3
	comp=Z,1.5nm,0.8s,baz=252,slow=6.4,SNR=8.2						
	comp=Z,1.5nm,0.8s						
SNAA	Sanae	82.58	162	P	P	01 02 44.8	+0.5
SNAA				IAmb	IAmb	01 03 08.2	
	comp=Z,2.8nm,1.1s						
PPLA	Purkeypile	85.63	334	P	P	01 02 58.8	-1.1
C24K	Franklin Bluff	86.16	341	P	P	01 03 02.1	-0.1
QSPA	South Pole Qui	87.54	180	P	P	01 03 10.2	+1.1
	comp=Z,6.4nm,1.0s,baz=154,slow=1.3,SNR=12						
	comp=Z,6.4nm,1.0s						
QSPA	South Pole Qui	87.54	180	P	P	01 03 10.1	+0.9
B22K	Teshekpuk Lake	87.89	341	P	P	01 03 10.0	-0.5
B21K	Ikpikpuk River	88.13	340	P	P	01 03 11.3	-0.4
NOA	NORSAR Array B	91.21	29	P	P	01 03 26.7	+0.3
	comp=Z,0.7nm,0.6s,baz=204,slow=3.9,SNR=3.2						
	comp=Z,0.7nm,0.6s						
GERES	GERESS Array B	92.19	41	P	P	01 03 32.3	+1.1
	comp=Z,0.1nm,0.3s,baz=329,slow=6.9,SNR=1.5						
	comp=Z,0.1nm,0.3s						
ASAR	Alice Springs	140.39	227	PKhKP	PKPpre	01 09 45.2	
	comp=Z,0.4nm,0.5s,baz=98,slow=2.5,SNR=3.0						
ASAR				PKP	PKPdf	01 09 50.0	-0.7
	comp=Z,0.4nm,0.6s,baz=122,slow=2.9,SNR=2.6						
WRA	Warramunga Arr	142.18	232	PKhKP	PKPpre	01 09 48.6	
	comp=Z,0.5nm,0.5s,baz=119,slow=2.2,SNR=6.3						
WRA				PKP	PKPdf	01 09 53.8	-0.2
	comp=Z,0.8nm,0.5s,baz=119,slow=1.8,SNR=7.0						
WB0	Warramunga Arr	142.23	233	PKPpre	PKPpre	01 09 48.9	
FITZ	Fitzroy Crossi	149.88	226	PKPbc	PKPbc	01 10 11.4	-0.6
PSA00	Pilbara Seismi	151.06	213	PKPbc	PKPbc	01 10 13.9	-0.8
MBWA	Marble Bar	151.45	214	PKPbc	PKPbc	01 10 15.2	-0.4

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*NOU **11** 00:58:51.7, 37°.68S×178°.20E, h58^{km}, ML3.6/10, Off E. Coast of N. Island, N.Z.*

*WEL **11** 00:58:52.3±0.6, 38°S±4°×17°8E±°, h51^{km}±5^{km}, M2.8/17, ML2.8/22, MLv2.8/17, Error ellipse: s-maj=6.0km s-min=4.9km az=100.3, confirmed*

ISC 11 00:58:50.9±2.1**, 37°.63S**±0°.06×**178°.23E**±0°.07**, h75**^{km}±11^{km}**, n71,** σ**0^s.76**/83**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	0.09	42	P	Pn	00 59 01.5	-0.2
MXZ	Matakaoa Point	0.09	42	P	Pn	00 59 01.5	-0.2
MXZ				S	Sn	00 59 09.0	-0.6
WMGZ	Waiomatatini S	0.24	142	P	Pn	00 59 02.6	+0.3
WMGZ				S	Sn	00 59 11.2	+0.6
PKGZ	Pakihiroa	0.26	207	P	Pn	00 59 02.3	-0.2
PKGZ				S	Sn	00 59 10.1	-0.8
HAZ	Te Kaha	0.37	251	P	Pn	00 59 03.1	0.0
HAZ				S	Sn	00 59 11.6	-0.5
PUZ	Puketiti	0.44	177	P	Pn	00 59 03.8	0.0
PUZ				S	Sn	00 59 12.8	-0.3
RUGZ	Raukumara Rang	0.55	233	P	Pn	00 59 04.6	-0.2
RUGZ				S	Sn	00 59 14.8	-0.2
TWGZ	Tauwhareparae	0.58	200	P	Pn	00 59 05.6	+0.6
TWGZ				S	Sn	00 59 16.5	+1.1
CNGZ	Carnagh Statio	0.85	181	P	Pn	00 59 08.8	+0.9
TKGZ	Te Karaka	0.86	200	P	Pn	00 59 08.4	+0.5
TKGZ				S	Sn	00 59 21.5	+0.9
MWZ	Matawai	0.89	218	P	Pn	00 59 08.9	+0.4
MWZ				S	Sn	00 59 21.5	0.0
WHRZ	Whale Island	1.02	257	P	Pn	00 59 10.2	+0.3
WHRZ				S	Sn	00 59 23.5	-0.6
RAGZ	Rawiri	1.07	216	P	Pn	00 59 11.3	+0.6
RAGZ				S	Sn	00 59 25.8	+0.4
URZ	Urewera	1.08	234	P	Pn	00 59 10.3	-0.4
URZ	Urewera	1.08	234	P	Sn	00 59 24.4	-1.0
URZ	Urewera	1.08	234	P	Pn	00 59 10.6	-0.1
RIGZ	Rimuhau	1.13	199	P	Pn	00 59 12.0	+0.7
OPRZ	Ohinepanea	1.34	260	P	Pn	00 59 13.5	-0.5
SNGZ	Shannon Statio	1.34	211	P	Pn	00 59 14.8	+0.7
SNGZ				S	Sn	00 59 32.6	+1.2
RTZ	Ruatahuna	1.39	225	P	Pn	00 59 14.7	0.0
MUGZ	Murupara	1.43	233	P	Pn	00 59 15.0	-0.1
TARZ	Mount Tarawera	1.49	246	P	Pn	00 59 17.3	+1.3
MHGZ	Mahia Peninsul	1.54	189	P	Pn	00 59 16.8	+0.2
RAHZ	Arahi	1.56	215	P	Pn	00 59 17.5	+0.6
KARZ	Kaharoa	1.62	256	P	Pn	00 59 18.5	+0.9
MTHZ	Maungataniwha	1.64	221	P	Pn	00 59 18.3	+0.4
KMRZ	Kaimai	1.82	263	P	Pn	00 59 20.4	+0.1
NMHZ	Naumai	1.84	217	P	Pn	00 59 21.1	+0.5
ARHZ	Aropaoanui	1.89	210	P	Pn	00 59 21.4	+0.1
BKZ	Black Stump Fm	2.05	221	P	Pn	00 59 23.2	-0.2
BKZ	Black Stump Fm	2.05	221	S	Sn	00 59 47.8	-0.4
BKZ	Black Stump Fm	2.05	221	P	Pn	00 59 23.5	+0.1
TOZ	Tahuroa Road	2.17	267	P	Pn	00 59 25.1	+0.2
MCHZ	McNeill Hill	2.17	213	P	Pn	00 59 25.2	+0.2
KUZ	Kuaotunu	2.19	293	P	Pn	00 59 24.9	-0.3
KUZ	Kuaotunu	2.19	293	P	Pn	00 59 24.9	-0.3
CKHZ	Cape Kidnapper	2.21	204	P	Pn	00 59 24.1	-1.4
KWHZ	Kaweka Forest	2.28	218	P	Pn	00 59 26.2	-0.3
KAHZ	Kahuranaki	2.40	206	P	Pn	00 59 27.6	-0.6
TMVZ	Te Maari	2.48	232	P	Pn	00 59 29.2	0.0
KRHZ	Kereru	2.48	215	P	Pn	00 59 28.4	-0.7
NTVZ	North Tongarir	2.48	233	P	Pn	00 59 29.4	+0.1
MKAZ	Moumakai	2.50	281	P	Pn	00 59 29.5	+0.1
KRVZ	Karewarewa	2.50	234	P	Pn	00 59 29.4	-0.1
OTVZ	Oturere	2.53	232	P	Pn	00 59 29.9	0.0
NNVZ	North Ngauruho	2.54	233	P	Pn	00 59 30.3	+0.2
WTVZ	West Tongariro	2.55	234	P	Pn	00 59 30.7	+0.5
SNVZ	South Ngauruho	2.56	232	P	Pn	00 59 30.3	-0.1
NGZ	Ngauruhoe	2.58	232	P	Pn	00 59 30.7	+0.1
TUVZ	Tukino	2.60	230	P	Pn	00 59 30.8	0.0
WIAZ	Waiheke Island	2.61	288	P	Pn	00 59 31.1	+0.2
GRZ	Great Barrier	2.61	301	P	Pn	00 59 31.2	+0.3
PXZ	Pawanui	2.62	204	P	Pn	00 59 32.6	+1.5
TWVZ	Taurewa	2.62	236	P	Pn	00 59 31.7	+0.6
MOVZ	Moawhango	2.63	227	P	Pn	00 59 30.9	-0.4
WHVZ	Whangaehu Hut	2.65	231	P	Pn	00 59 31.1	-0.5
FWVZ	Far West T-bar	2.65	232	P	Pn	00 59 31.6	-0.1
MAVZ	Matarangi	2.66	231	P	Pn	00 59 31.7	-0.1
WNVZ	Wahianoa	2.67	230	P	Pn	00 59 31.6	-0.2
TRVZ	Turoa	2.68	231	P	Pn	00 59 31.9	-0.2
PNHZ	Pukenui	2.77	214	P	Pn	00 59 31.7	-1.5
MBAZ	Motutapu North	2.79	287	P	Pn	00 59 33.6	+0.2
HIZ	Hauiti	2.80	251	P	Pn	00 59 34.6	+1.1
HIZ	Hauiti	2.80	251	P	Pn	00 59 34.7	+1.1
BFZ	Birch Farm	3.41	206	P	Pn	00 59 39.6	-2.2
BFZ	Birch Farm	3.41	206	P	Pn	00 59 39.6	-2.2
MRZ	Mangatainoka R	3.66	213	P	Pn	00 59 42.8	-2.4
OUZ	Omahuta	4.44	301	P	Pn	00 59 56.9	+1.1
OUZ	Omahuta	4.44	301	P	Pn	00 59 57.0	+1.1
CTZ	Chatham Island	7.25	149	P	Pn	01 00 35.3	+1.3
CTZ	Chatham Island	7.25	149	P	Pn	01 00 35.1	+1.1

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*IDC **11** 01:12:49.0±1.4, 22°.60S×171°.16E, h0^{km}, mb4.0/5, mbtmp4.0/6, ML4.0/1, MS3.4/4, Error ellipse: s-maj=41.3km s-min=34.2km az=10.0*

*NOU **11** 01:12:50.8, 22°.58S×171°.11E, h0^{km}, mb6.5/9, Southeast of Loyalty Islands*

ISC 11 01:12:55.4±1.1**, 22°.7S**±0°.2×**171°.1E**±0°.1**, h42**^{km}**, n21,** σ**1^s.16**/18**, mb4.0**/5**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	3.05	293	P	Pn	01 13 40.1	-1.0
MARNC	Mare, Loyalty	3.05	293	S	Sn	01 14 18.2	+1.8
PINNC	Pines Island,	3.33	271	P	Pn	01 13 44.9	-0.1
OUENC	Ouen Island, N	3.90	273	P	Pn	01 13 52.2	-0.7
YATNC	Mamie plateau,	3.90	278	P	Pn	01 13 51.8	-1.1
ONTNC	Ouen Toro	4.27	274	P	Pn	01 13 58.2	+0.3
DZM	Mont Dzumac	4.31	277	Pn	Pn	01 13 58.1	-0.5
	7.3nm,0.3s,baz=110,slow=12,SNR=336						
DZM				Sn	Sn	01 14 45.6	-2.0
	5.1nm,0.3s,baz=89,slow=23,SNR=3.1						
	21nm,0.3s						
DZM	Mont Dzumac	4.31	277	*e*Pn	Pn	01 13 57.5	-1.1
	49nm,0.8s						
DZM				*e*Sn	Sn	01 14 49.7	+2.1
	152nm,0.9s						
DZM				*e*LR	LR	01 15 05.3	
	462nm,22.2s						
DZM	Mont Dzumac	4.31	277	P	Pn	01 13 58.0	-0.5
RAO	Raoul Island	11.88	126	LR	LR	01 19 11.7	
	comp=Z,255nm,21.9s,baz=345,slow=32						
URZ	Urewera	16.37	163	LR	LR	01 21 38.1	
	comp=Z,213nm,21.4s,baz=338,slow=32						
PMG	Port Moresby	26.43	296	LR	LR	01 27 27.8	
	comp=Z,88nm,21.3s,baz=164,slow=33						
RAR	Rarotonga	27.08	92	LR	LR	01 26 56.7	
	comp=Z,30nm,21.2s,baz=248,slow=31						
ASAR	Alice Springs	34.10	261	P	P	01 19 36.2	-0.2
	1.3nm,0.8s,baz=83,slow=9.5,SNR=14						
	1.3nm,0.8s						
WRA	Warramunga Arr	34.26	268	P	P	01 19 36.2	-1.5
	0.3nm,0.5s,baz=97,slow=8.3,SNR=2.4						
	0.3nm,0.5s						
PPT2	Papeete2	37.24	89	*e*LR	LR	01 29 46.9	
	86nm,24.5s						
PPT2				*e*LR	LR	01 29 48.8	
	61nm,23.0s						
QSPA	South Pole Qui	67.39	180	P	P	01 23 46.7	+0.4
	1.0nm,0.2s,baz=23,slow=4.9,SNR=3.8						
	1.0nm,0.2s						
CMAR	Chiang Mai Arr	81.45	294	P	P	01 25 10.0	+1.4
	0.8nm,0.3s,baz=132,slow=4.5,SNR=6.9						
	0.8nm,0.3s						
SONM	Songino Array	90.97	322	P	P	01 25 54.9	-0.1
	0.3nm,0.4s,baz=104,slow=4.6,SNR=2.3						
	0.3nm,0.4s						
EKA	Eskdalemuir Ar	147.11	354	PKPbc	PKPdf	01 32 31.0	-0.3
	2.2nm,0.8s,baz=11,slow=2.5,SNR=3.6						
GERES	GERESS Array B	148.31	331	PKPbc	PKPbc	01 32 37.0	-0.1
	1.1nm,0.7s,baz=40,slow=3.2,SNR=7.0						

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*MOS **11** 01:13:55.8±1.1, 39°.87N×77°.99E, h11^{km}, mb4.7/19, Error ellipse: s-maj=7.5km s-min=4.3km az=102.8*

*IDC **11** 01:13:56.2±0.7, 39°.93N×77°.97E, h0^{km}, mb4.1/18, mbtmp4.1/24, ML3.3/6, MS3.5/14, Error ellipse: s-maj=15.9km s-min=11.1km az=44.0*

*SOME **11** 01:13:56.5, 40°.00N×78°.02E, h10^{km}, MS4.0*

*KRNET **11** 01:13:57.0±0.1, 39°.82N×77°.96E, mb4.8*

*BJI **11** 01:13:57.0, 39°.90N×78°.00E, h10^{km}, mB4.3/1, mb4.4/17, ML4.3/10, Ms3.9/4, Ms7 3.9/2*

*NEIC **11** 01:13:57.8±1.8, 39°.93N±0°.04×78°.02E±0°.04, h10^{km}±1^{km}, mb4.7/46, Error ellipse: s-maj=8.4km s-min=2.8km az=213.0*

*NNC **11** 01:13:59.8±0.9, 40°.12N×77°.95E, h0^{km}, mb4.8, mpv4.7, Error ellipse: s-maj=7.0km s-min=5.2km az=153.0*

ISC 11 01:13:58.2±1.2**, 39°.94N**±0°.03×**78°.04E**±0°.03**, h13**^{km}±8^{km}**, n265,** σ**1^s.67**/294**, mb4.5**/49**, MS3.6**/8**, 45C-29D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WUS	Wushi	1.54	35		Pn	01 14 25.5	-0.1
WUS				Sn	Sb	01 14 46.0	-0.3
KSH	Kashi	1.65	256	Pn	Pg	01 14 33.1	+3.3
KSH				Sn	Sg	01 15 01.9	+11
KSH				smax	smax		
	comp=N,5μm,0.6s						
KSH				smax	smax		
	comp=E,2μm,0.6s						
TARG	Taragay, Kyrgy	1.79	354		Pn	01 14 29.8	+0.5
TARG	Taragay, Kyrgy	1.79	354	PN	Pn	01 14 29.8	+0.5
KDJ	Kajisay	2.28	344	Pn	Pb	01 14 38.0	-1.3
KDJ	Kajisay	2.28	344	⇓*i*P	Pb	01 14 38.1	-1.3
KDJ				⇓*i*S	Sb	01 15 08.3	+0.8
KDJ	Kajisay	2.28	344	PN	Pb	01 14 38.0	-1.3
PRZ	Przheval'sk	2.55	6		Pn	01 14 41.5	+2.0
PRZ	Przheval'sk	2.55	6	⇑*i*P	Pb	01 14 42.6	-1.4
PRZ				⇑*i*S	Sb	01 15 15.9	+0.5
PRZ	Przheval'sk	2.55	6	PN	Pn	01 14 41.5	+2.0
ULHL	Ulahol	2.67	330	P	Pn	01 14 43.2	+2.1
	SNR=61						
ULHL	Ulahol	2.67	330	⇑*i*P	Pb	01 14 43.5	-2.5
ULHL				⇑*i*S	Sb	01 15 17.3	-1.5
BOOM	Boomskoye usch	3.00	329	Pn	Pn	01 14 47.1	+1.5
BOOM	Boomskoye usch	3.00	329	⇑*i*P	Pn	01 14 47.8	+2.2
BOOM				⇑*i*S	Sb	01 15 25.0	-3.1
BOOM	Boomskoye usch	3.00	329	PN	Pn	01 14 47.1	+1.5
SATY	Saty	3.13	5	Pg	Pb	01 14 53.9	+0.2
	417nm,0.8s						
SATY				Lg	Lg	01 15 35.2	
	1μm,0.7s						
TNSS	Tian-Shan	3.20	346	Pg	Pb	01 14 54.7	-0.4
	161nm,0.5s						
TNSS				Lg	Lg	01 15 36.8	
	454nm,1.0s						
TNSS	Tian-Shan	3.20	346	*e*P	Pb	01 14 54.7	-0.4
	161nm,0.5s						
TNSS				*e*S	Sb	01 15 36.8	+2.6
	454nm,1.0s						
IZV	Izvestkoviy	3.27	341	Pg	Pb	01 14 56.4	+0.2
	360nm,0.6s						
IZV				Lg	Lg	01 15 39.7	
	1μm,0.6s						
IZV	Izvestkoviy	3.27	341	*e*P	Pb	01 14 56.4	+0.2
	360nm,0.6s						
IZV				*e*S	Sg	01 15 39.7	-3.5
	1μm,0.6s						
UZB	Uzynbulak	3.29	13	Pg	Pb	01 14 56.4	0.0
	189nm,0.6s						
UZB				Lg	Lg	01 15 39.7	
	618nm,0.9s						
UZB	Uzynbulak	3.29	13	*e*P	Pb	01 14 56.4	0.0
	189nm,0.6s						
UZB				*e*S	Sb	01 15 39.7	+3.3
	618nm,0.9s						
MDOK	Medeo	3.30	347	Pg	Pb	01 14 56.6	-0.1
	376nm,0.4s						
MDOK				Lg	Lg	01 15 39.9	
	857nm,0.6s						
SALK	Salom-Alik	3.35	288	⇑*i*P	Pn	01 14 51.5	+1.1
SALK				⇑*i*S	Sn	01 15 31.3	+1.1
KOTS	Kotyrbulak	3.36	348	Pg	Pb	01 14 57.4	-0.3
	324nm,0.4s						
KOTS				Lg	Lg	01 15 41.4	
	2μm,0.6s						
KOTS	Kotyrbulak	3.36	348	*e*P	Pb	01 14 57.4	-0.3
	324nm,0.4s						
KOTS				*e*S	Sb	01 15 41.4	+2.8
	2μm,0.6s						
KNDC	Almaty	3.37	347	⇑Pn	Pn	01 14 52.5	+1.9
	624nm,0.8s						
KNDC				⇑Lg	Lg	01 15 40.7	
	3μm,0.8s						
KNDC	Almaty	3.37	347	PN	Pn	01 14 52.5	+1.9
AAA	Alma-Ata	3.37	346	Pg	Pb	01 14 58.8	+1.0
AAA				Lg	Lg	01 15 43.6	
AAA	Alma-Ata	3.37	346	*e*P	Pb	01 14 58.8	+1.0
AAA				*e*S	Sg	01 15 43.6	-2.8
SHLS	Shalkode	3.38	18	Pg	Pb	01 14 59.6	+1.5
	288nm,0.5s						
SHLS				Lg	Lg	01 15 45.0	
	1μm,0.6s						
SHLS	Shalkode	3.38	18	*e*P	Pb	01 14 59.6	+1.5
	288nm,0.5s						
SHLS				*e*S	Sg	01 15 45.0	-1.9
	1μm,0.6s						
ARLS	Aral	3.40	305	⇑*i*P	Pn	01 14 52.8	+1.6
ARLS				⇑*i*S	Sn	01 15 33.2	+1.7
MTBS	Maitube	3.41	340	Pg	Pb	01 14 58.0	-0.4
	275nm,0.5s						
MTBS				Lg	Lg	01 15 42.3	
	811nm,0.6s						
MTBS	Maitube	3.41	340	*e*P	Pb	01 14 58.0	-0.4
	275nm,0.5s						
MTBS				*e*S	Sb	01 15 42.2	+2.5
	811nm,0.6s						
SFK	Sufi-Kurgan	3.48	273	⇑*i*P	Pn	01 14 52.9	+0.6
SFK				⇑*i*S	Sn	01 15 33.8	+0.3
TKM2	Tokmak 2	3.50	329	P	Pn	01 14 55.0	+2.5
	SNR=62						
TKM2	Tokmak 2	3.50	329	⇑*i*P	Pn	01 14 54.8	+2.4
TKM2				⇑*i*S	Sn	01 15 37.0	+3.2
UCH	Uchtor	3.51	312	P	Pn	01 14 54.6	+1.8
	SNR=29						
UCH	Uchtor	3.51	312	⇑*i*P	Pn	01 14 54.5	+1.7
UCH				⇑*i*S	Sn	01 15 36.6	+2.2
KURS	Kuram	3.54	2	Pg	Pb	01 15 00.8	0.0
	244nm,0.7s						
KURS				Lg	Lg	01 15 46.9	
	355nm,1.1s						
KPKS	Kokpek	3.55	8	Pg	Pb	01 15 00.4	-0.6
	253nm,0.6s						
KPKS				Lg	Lg	01 15 46.4	
	356nm,0.4s						
PDGK	Podgornoye	3.56	17	⇑Pn	Pn	01 14 55.7	+2.5
	94nm,0.5s						
PDGK				⇓Lg	Lg	01 15 44.3	
	444nm,0.7s						
PDGK	Podgornoye	3.56	17	PN	Pn	01 14 55.7	+2.5
KBK	Karagaybulak	3.57	320	P	Pb	01 14 57.9	-3.4
	SNR=24						
KBK	Karagaybulak	3.57	320	⇑*i*P	Pn	01 14 55.8	+2.3
KBK				⇑*i*S	Sn	01 15 38.3	+2.6
DGS	Degeres	3.71	333	Pg	Pb	01 15 03.7	+0.1

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      197nm,0.7s
DGS                                  Lg     Lg     01 15 52.1
      517nm,0.5s
AAK   Ala-Archa          3.79 316    P      Pn     01 14 58.8 +2.3
      SNR=17
AAK   Ala-Archa          3.79 316    Pn     Pn     01 14 58.6 +2.1
      4.2nm,0.3s,baz=125,slow=8.4,SNR=37
AAK                                  Pg     Pb     01 15 04.8  -0.2
      22nm,0.3s,baz=127,slow=10,SNR=53
AAK                                  Lg     Lg     01 15 53.2
      29nm,0.3s,baz=342,slow=20,SNR=10
AAK                                  LR     LR     01 16 33.0
      comp=Z,386nm,19.8s,baz=98,slow=42
      8.8nm,0.4s
AAK   Ala-Archa          3.79 316    Pn     Pn     01 14 58.0 +1.5
AAK   Ala-Archa          3.79 316 ⇑iP     Pn     01 14 58.4 +1.9
AAK                               ⇑iS     Sn     01 15 43.3 +2.3
AAK   Ala-Archa          3.79 316  ⇓Pn    Pn     01 14 59.4 +2.9
      556nm,0.7s
AAK                                ⇓Lg    Lg     01 15 54.3
      1µm,0.7s
AAK   Ala-Archa          3.79 316   ePN    Pn     01 14 58.7 +2.3
FRU1  Bishkek            3.84 319          Pn     01 14 56.6  -0.5
FRU1  Bishkek            3.84 319 ⇓iP     Pn     01 14 59.6 +2.5
FRU1                              ⇓iS     Sn     01 15 45.3 +3.1
FRU1  Bishkek            3.84 319    PN     Pn     01 14 56.6  -0.5
KTMS  Ketmen             3.91  26    Pg     Pb     01 15 08.0 +1.0
      50nm,0.6s
KTMS                                 Lg     Lg     01 15 59.5
      149nm,0.7s
KTMS  Ketmen             3.91  26   eP     Pb     01 15 08.0 +1.0
      50nm,0.6s
KTMS                                eS     Sg     01 15 59.5  -4.1
      149nm,0.7s
CHMS  Chumysh            3.92 322    P      Pn     01 15 00.8 +2.6
      SNR=17
CHMS  Chumysh            3.92 322 ⇓iP     Pn     01 15 00.5 +2.3
CHMS                              ⇓iS     Sn     01 15 46.6 +2.4
CHKK  Chushkaly          3.99 349    Pg     Pb     01 15 09.1 +0.8
      165nm,0.5s
CHKK                                 Lg     Lg     01 16 01.4
      551nm,0.4s
CHKK  Chushkaly          3.99 349   eP     Pb     01 15 09.1 +0.8
      165nm,0.5s
CHKK                                eS     Sg     01 16 01.4  -4.7
      551nm,0.4s
OHH   Osh                4.06 280 ⇑iP     Pn     01 15 00.9 +0.8
OHH                               ⇑iS     Sn     01 15 47.8 +0.2
ARSB  Arslanbob          4.08 291          Pn     01 15 01.1 +0.7
ARSB  Arslanbob          4.08 291 ⇑iP     Pn     01 15 01.9 +1.4
ARSB                              ⇑iS     Sn     01 15 49.2 +0.9
ARSB  Arslanbob          4.08 291    PN     Pn     01 15 01.2 +0.7
KRBS  Karabastau         4.14 336    Pg     Pb     01 15 12.0 +1.0
      121nm,0.5s
KRBS                                 Lg     Lg     01 16 06.3
      82nm,0.7s
KUU   Kurty              4.14 343    Pg     Pb     01 15 11.4 +0.4
      52nm,0.9s
KUU                                  Lg     Lg     01 16 05.2
      408nm,0.8s
KUU   Kurty              4.14 343   eP     Pb     01 15 11.4 +0.4
      52nm,0.9s
KUU                                 eS     Sb     01 16 05.2 +4.2
      408nm,0.8s
BLB   Baldybastay        4.16   4    Pg     Pb     01 15 12.7 +1.3
      216nm,0.5s
BLB                                  Lg     Lg     01 16 07.5
      531nm,0.4s
EKS2  Erkin-Say          4.20 312    P      Pn     01 15 04.9 +2.8
      SNR=34
EKS2  Erkin-Say          4.20 312 ⇓iP     Pn     01 15 04.2 +2.1
EKS2                              ⇓iS     Sn     01 15 52.9 +1.8
USP   Ospenovka          4.25 323    P      Pb     01 15 12.5  -0.3
      SNR=76
USP   Ospenovka          4.25 323 ⇓iP     Pn     01 15 04.9 +2.2
USP                               ⇓iS     Sn     01 15 54.6 +2.4
ARXS  Arharly            4.27 358    Pg     Pb     01 15 14.3 +1.1
      129nm,0.8s
ARXS                                 Lg     Lg     01 16 10.2
      442nm,0.8s
ARXS  Arharly            4.27 358   eP     Pb     01 15 14.3 +1.1
ARXS                                eS     Sg     01 16 10.2  -5.0
SGDS  Sogindy            4.33 325    Pg     Pb     01 15 15.8 +1.6
      98nm,0.8s
SGDS                                 Lg     Lg     01 16 12.7
      184nm,0.5s
KNOS  Konyrlen           4.49  11    Pg     Pb     01 15 18.3 +1.3
      72nm,0.4s
KNOS                                 Lg     Lg     01 16 17.2
      159nm,0.6s
MRKS  Merke              4.58 309    Pg     Pb     01 15 19.4 +1.0
      78nm,0.7s
MRKS                                 Lg     Lg     01 16 19.1
      98nm,0.8s
MRKS  Merke              4.58 309   eP     Pb     01 15 19.4 +1.0
      78nm,0.7s
MRKS                                eS     Sg     01 16 19.1  -6.0
      98nm,0.8s
DRK   Karamyk            4.83 267          Pn     01 15 11.0 +0.1
DRK   Karamyk            4.83 267 ⇑iP     Pn     01 15 11.4 +0.5
DRK                               ⇑iS     Sn     01 16 05.5  -1.4
DRK   Karamyk            4.83 267    PN     Pn     01 15 11.0 +0.1
MNAS  Manas              4.88 303 ⇑iP     Pn     01 15 13.3 +1.8
MNAS                              ⇑iS     Sn     01 16 08.9 +0.9
ARK   Arkit              4.96 294 ⇓iP     Pn     01 15 14.0 +1.5
ARK                               ⇓iS     Sn     01 16 10.2 +0.3
TDK   Taldyqorghan       5.06   3    Pg     Pb     01 15 28.4 +1.8
      370nm,0.9s
TDK                                  Lg     Lg     01 16 34.6
      399nm,0.6s
TDK   Taldyqorghan       5.06   3   eP     Pb     01 15 28.4 +1.8
      239nm,0.6s
TDK                                 eS     Sg     01 16 34.6  -6.1
      399nm,0.6s
KAPS  Kapalarasan        5.43  10    Pg     Pb     01 15 36.9 +4.1
      49nm,0.7s
KAPS                                 Lg     Lg     01 16 49.3
      147nm,0.6s
TRKS  Terek-Say          5.47 289 ⇓eP     Pn     01 15 20.1 +0.5
TRKS                              ⇓iS     Sn     01 16 21.1  -1.4
MANEM Manem              5.52 246    Pn     Pn     01 15 21.8 +1.5
ALCI  Alchi Leh          5.76 187   eP     Pn     01 15 23.6  -0.2
ALCI                                eS     Sn     01 16 31.7 +1.8
ALCI                                 IAML          01 17 09.0
      comp=E,391nm,0.6s
ALCI                                 IAML          01 17 11.6
      comp=N,432nm,0.6s
DZA   Taraz              5.84 302    Pg     Pb     01 15 44.8 +5.0
      comp=N,60nm,0.1s
DZA                                  Lg     Lg     01 17 02.5
      comp=N,78nm,0.3s
DZA   Taraz              5.84 302   eP     Pb     01 15 44.8 +5.0
      comp=N,60nm,0.1s
DZA                                 eS     Sg     01 17 02.5  -3.0
      comp=N,78nm,0.3s
BTLS  Baital             5.89 331   eP     Pb     01 15 42.3 +1.7
      comp=N,65nm,0.9s
BTLS                                eS     Sb     01 16 57.8 +6.8
      comp=N,123nm,0.6s
GAR   Garm               6.05 264    Pn     Pn     01 15 26.5  -1.0
IUG   Iuzhnay            6.44 293    Pg     Pb     01 15 55.9 +5.8
      comp=N,80nm,0.8s
IUG                                  Lg     Lg     01 17 21.9
      comp=N,255nm,1.0s
KK31  Karatay Array      6.47 302          Pn     01 15 33.8 +0.7
KK31  Karatay Array      6.47 302    Pn     Pn     01 15 36.2 +3.1
      comp=N,1.0nm,0.4s,baz=128,slow=12,SNR=16
KK31                               ⇑Pg    Pb     01 15 55.3 +4.7
      comp=N,24nm,0.6s,baz=133,slow=17,SNR=6.6
KK31                               ⇓Lg    Lg     01 17 21.1
      comp=N,31nm,0.7s
KK31  Karatay Array      6.47 302    PN     Pn     01 15 33.8 +0.7
KKAR  Karatay Array      6.47 302    Pn     Pn     01 15 33.6 +0.6
KKAR  Karatay Array      6.47 302    PN     Pn     01 15 33.7 +0.6
CHM   Chimkent           6.79 293   eP     Pg     01 16 02.7  -5.5
      comp=N,101nm,0.1s
CHM                                 eS     Sg     01 17 33.4  -2.8
      comp=N,161nm,0.3s
BRLS  Borolday           6.88 299    Pg     Pg     01 16 04.3  -5.6
      comp=N,17nm,1.3s
BRLS                                 Lg     Lg     01 17 36.5
      comp=N,25nm,0.8s
BRLS  Borolday           6.88 299   eP     Pg     01 16 04.3  -5.6
      comp=N,17nm,1.3s
BRLS                                eS     Sg     01 17 36.5  -2.6
      comp=N,25nm,0.8s
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CHGR  Chuyangaron        7.00 262    Pn     Pn     01 15 38.4  -2.1
CHGR  Chuyangaron        7.00 262    PN     Pn     01 15 38.4  -2.1
TSSA  Tissa              7.25 193   eP     Pn     01 15 46.4 +2.3
TSSA                                eS     Sn     01 17 09.2 +2.8
TSSA                                 IAML          01 17 12.9
      comp=N,361nm,0.4s
TSSA                                 IAML          01 17 14.2
      comp=E,322nm,1.3s
NIL   Nilore             7.36 213    Pn     Pn     01 15 46.8 +1.5
NIL   Nilore             7.36 213    P      Pn     01 15 46.8 +1.5
MAKZ  Makanchi           7.44  21    Pn     Pn     01 15 47.5 +1.1
MAKZ  Makanchi           7.44  21  ⇓Pn    Pn     01 15 48.1 +1.7
      comp=E,3.6nm,0.7s
MAKZ                               ⇑Pg    Pb     01 16 13.2 +6.1
      comp=E,9.0nm,0.8s
MAKZ                               ⇑Lg    Lg     01 17 51.1
      comp=E,51nm,1.4s
MAKZ  Makanchi           7.44  21    P      Pn     01 15 47.5 +1.1
MK31  Makanchi Array     7.51  23          Pn     01 15 48.8 +1.3
MK31  Makanchi Array     7.51  23    Pn     Pn     01 15 49.0 +1.6
      comp=E,2.5nm,0.5s,baz=203,slow=12,SNR=124
MK31                               ⇑Pg    Pg     01 16 16.0  -6.0
      comp=E,15nm,0.8s,baz=207,slow=19,SNR=4.1
MK31                               ⇓Lg    Lg     01 17 55.8
      comp=E,21nm,0.6s
MK31  Makanchi Array     7.51  23 deP     Pn     01 15 48.8 +1.3
MKAR  Makanchi Array     7.51  23    Pn     Pn     01 15 48.7 +1.2
      comp=E,2.4nm,0.3s,baz=209,slow=14,SNR=77
MKAR                                 Sn     Sn     01 17 09.6  -2.9
      comp=E,1.1nm,0.3s,baz=207,slow=21,SNR=3.7
MKAR                                 Lg     Lg     01 17 52.4
      comp=E,1.5nm,0.3s,baz=208,slow=27,SNR=2.5
MKAR                                 LR     LR     01 18 17.0
      comp=E,63nm,19.4s,baz=190,slow=35
      comp=E,3.4nm,0.4s
MKAR  Makanchi Array     7.51  23    Pn     Pn     01 15 48.5 +1.1
SHAA  Shahritus          8.10 256    Pn     Pn     01 15 52.9  -2.7
WMQ   Urumqi             8.18  59    P      Pn     01 16 00.2 +3.6
WMQ                                  S      Sn     01 17 32.9 +3.9
WMQ                                  smax   smax
      comp=E,63nm,1.7s
WMQ                                  smax   smax
      comp=E,65nm,1.7s
BHK   Bhakra             8.63 189   eP     Pn     01 16 05.9 +3.4
BHK                                 eS     Sn     01 17 39.0  -0.5
BHK                                  IAML          01 17 42.3
      comp=E,366nm,0.6s
BHK                                  IAML          01 17 47.2
      comp=N,388nm,0.7s
KBL   Kabul              8.97 236    Pn     Pn     01 16 05.8  -1.8
KBL   Kabul              8.97 236    P      Pn     01 16 05.8  -1.8
ZSN   Zaisan             8.98  31    Pg     Pn     01 16 43.2  +36
      comp=N,6.4nm,0.7s
ZSN                                  Lg     Lg     01 18 43.3
      comp=N,25nm,1.0s
ZSN   Zaisan             8.98  31   eP     Pn     01 16 43.2  +36
      comp=N,6.4nm,0.7s
ZSN                                 eS     Sn     01 18 43.3  +55
      comp=N,25nm,1.0s
JOSI  Joshimath          9.45 172   eP     Pn     01 16 14.8 +0.6
JOSI                                eS     Sn     01 18 01.0 +0.6
JOSI                                 IAML          01 20 05.6
      comp=N,227nm,0.4s
JOSI                                 IAML          01 20 05.8
      comp=E,229nm,0.2s
SEM   Semipalatinsk     10.58   8    Pg     Pn     01 17 12.6  +43
      comp=E,4.0nm,0.1s
SEM                                  Lg     Lg     01 19 33.7
      comp=E,20nm,0.5s
SEM   Semipalatinsk     10.58   8   eP     Pn     01 17 12.6  +43
      comp=E,4.0nm,0.1s
SEM                                 eS            01 19 33.7
      comp=E,20nm,0.5s
KURBB Kurchatov Arra    10.69   2    Pn     Pn     01 16 31.0 +0.1
      comp=E,0.2nm,0.3s,baz=189,slow=12,SNR=24
KURBB                                Lg     Lg     01 19 29.4
      comp=E,0.3nm,0.3s,baz=192,slow=26,SNR=6.5
KURBB                                LR     LR     01 20 55.8
      comp=E,135nm,19.3s,baz=180,slow=39
      comp=E,1.9nm,0.7s
KURBB Kurchatov Arra    10.69   2  ⇓Pn    Pn     01 16 31.1 +0.2
      comp=E,4.8nm,0.7s
KURBB                              ⇑Lg    Lg     01 19 34.4
      comp=E,82nm,0.8s
KURBB Kurchatov Arra    10.69   2    P      Pn     01 16 31.8 +1.0
BRZS  Berezniki         10.73 341    Pg     Pn     01 17 15.0  +44
      comp=E,0.8nm,0.3s
BRZS                                 Lg     Lg     01 19 37.8
      comp=E,55nm,1.8s
BRZS  Berezniki         10.73 341   eP     Pn     01 17 15.0  +44
      comp=E,0.8nm,0.3s
BRZS                                eS            01 19 37.8
      comp=E,55nm,1.8s
KURK  Kurchatov         10.78   2    Pn     Pn     01 16 32.1  -0.1
KURK  Kurchatov         10.78   2  ⇓Pn    Pn     01 16 32.1  -0.1
      comp=E,4.2nm,1.1s
KURK                               ⇑Lg    Lg     01 19 35.4
      comp=E,41nm,1.2s
KURK  Kurchatov         10.78   2 ⇓eP     Pn     01 16 32.3 +0.2
KURK                                 pmax   pmax
      comp=Z,12nm,1.3s
DGZ   Jazzator, Alta    11.81  31 ceP     Pn     01 16 47.9 +1.5
GOMU  GeErMu            13.74 100    P      Pn     01 17 11.6  -1.4
GOMU                                 pmax   pmax
      comp=Z,5.0nm,0.5s
EVN   Everest           13.99 146    Pn     Pn     01 17 14.9  -1.8
BVA0  Borovoye Array    14.09 341  ⇓Pn    Pn     01 17 17.0  -0.4
      comp=Z,14nm,0.8s,baz=145,slow=14,SNR=12
BVA0                               ⇑Lg    Lg     01 21 22.1
      comp=Z,1.8nm,0.9s,baz=153,slow=29,SNR=4.5
BVA0  Borovoye Array    14.09 341    P      Pn     01 17 17.0  -0.4
BVAR  Borovoye Array    14.09 341    Pn     Pn     01 17 15.5  -1.9
      baz=153,slow=13,SNR=12
BVAR                                 Lg     Lg     01 21 14.1
      comp=Z,0.1nm,0.3s,baz=159,slow=25,SNR=4.3
BVAR                                 LR     LR     01 22 42.6
      comp=Z,195nm,19.2s,baz=164,slow=37
      comp=Z,3.6nm,1.0s
BORK  Borovoye          14.13 341    Pn     Pn     01 17 16.7  -1.2
BORK  Borovoye          14.13 341    P      Pn     01 17 16.7  -1.2
BRVK  Borovoye          14.15 341  ⇓Pn    Pn     01 17 16.0  -2.1
BRVK                               ⇑Lg    Lg     01 21 20.9
ZAA0  Zalesovo Array    14.74  16    Pn     Pn     01 17 25.3  -1.0
ZALV  Zalesovo Beam     14.74  16    Pn     Pn     01 17 24.2  -2.1
      comp=Z,0.2nm,0.3s,baz=196,slow=9.2,SNR=8.8
ZALV                                 Lg     Lg     01 21 39.4
      baz=198,slow=27
ZALV                                 LR     LR     01 23 18.9
      comp=Z,112nm,20.1s,baz=186,slow=38
      comp=Z,1.5nm,0.7s
ZALV  Zalesovo Beam     14.74  16    Pn     Pn     01 17 24.6  -1.7
ZALV  Zalesovo Beam     14.74  16  i P      Pn     01 17 26.3   0.0
ZALV                                 pmax   pmax
      comp=Z,1.0nm,0.4s
GUNA  GUNA              15.26 182   eP     Pn     01 17 33.8 +0.4
GUNA                                eS     Sn     01 20 24.2 +1.9
GUNA                                 IAML          01 20 28.4
      comp=N,324nm,1.4s
GUNA                                 IAML          01 20 28.4
      comp=E,215nm,0.0s
AB31  Akbulak array     15.86 312    Pn     Pn     01 17 40.2  -0.9
AB31  Akbulak array     15.86 312    Pn     Pn     01 17 42.3 +1.2
      comp=E,4.6nm,0.8s,baz=117,slow=7.1,SNR=32
AB31  Akbulak array     15.86 312    P      Pn     01 17 42.3 +1.2
ABKAR Akbulak array     15.86 312    Pn     Pn     01 17 40.1  -1.0
GAYA  Gaya              16.26 156   eP     Pn     01 17 46.6 +0.3
GAYA                                eS     Sn     01 20 49.3 +2.7
GTA   Gaotai            16.77  85   eP     Pn     01 17 52.4  -0.5
GTA                                  pP     P      01 17 57.7 +2.6
GTA                                  pmax   pmax
      comp=E,4.0nm,0.9s
AKTO  Aktyubinsk        17.53 313    Pn     Pn     01 18 00.0  -2.1
      comp=E,0.2nm,0.3s,baz=101,slow=9.4,SNR=11
AKTO                                 LR     LR     01 25 07.1
      comp=E,148nm,19.3s,baz=34,slow=38
      comp=E,2.9nm,0.8s
AKTO  Aktyubinsk        17.53 313  ⇓Pn    Pn     01 18 01.4  -0.8
      comp=E,3.5nm,0.9s
SHL   Shillong          18.44 137          P      01 18 12.1  -1.5
SHL   Shillong          18.44 137    P      P      01 18 12.1  -1.5
SHL                                  pmax   pmax
      comp=Z,8.0nm,0.7s
SVE   Sverdlovsk        20.37 332   eP     Pn     01 18 35.9  -0.4
LZH   Lanzhou           20.67  93   eP     Pn     01 18 43.3 +3.0
LZH                                  sP     sP     01 18 49.5 +5.7
LZH                                  pmax   pmax
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      comp=Z,43nm,1.1s
ARTI  Arti              20.91 328    P      Pn     01 18 41.4  -1.4
      comp=Z,15nm,0.8s,baz=143,slow=5.7,SNR=21
ARTI                                 LR     LR     01 26 55.4
      comp=Z,103nm,19.4s,baz=92,slow=37
      comp=Z,15nm,0.8s
ARTI  Arti              20.91 328          P      01 18 40.3 +0.1
ARTI                                 IAmb   IAmb   01 18 44.8
      comp=Z,21nm,0.5s
ARTI  Arti              20.91 328c iP     Pn     01 18 44.0 +1.3
ARTI                                               01 19 02.5
ARTI                                 SS     Sn     01 23 01.4  +23
ARTI                                 pmax   pmax
      comp=Z,12nm,0.7s
SONM  Songino Array     21.82  59    P      P      01 18 51.6 +1.4
      comp=Z,2.9nm,0.8s,baz=257,slow=11,SNR=18
      comp=Z,2.9nm,0.8s
SONM  Songino Array     21.82  59    P      P      01 18 50.1  -0.1
ULN   Ulaanbaatar       22.26  60 ⇑eP     P      01 18 55.5 +0.6
ULN                                  pmax   pmax
      comp=Z,3.0nm,0.9s
PZH   PanZhiHua         23.85 117    P      P      01 19 10.7  -0.6
BELG  Belogornoye       24.27 311 ⇑eP     P      01 19 15.1 +0.3
BELG                                 pmax   pmax
      comp=Z,4.0nm,1.1s
BTO   Baotou            24.35  78   eP     P      01 19 13.2  -2.7
BTO                                  PP     PnPn   01 19 48.3 +2.4
BTO                                  S      S      01 23 32.2  -2.7
BTO                                  pmax   pmax
      comp=Z,9.0nm,0.6s
BTO                                  LR     LR
      comp=Z,220nm,6.4s
XAN   Xi'an             25.29  94   eP     P      01 19 24.0  -0.3
HHC   Hu-ho-hao-te      25.47  77   eP     P      01 19 25.4  -0.6
HHC                                  pmax   pmax
      comp=Z,8.0nm,0.8s
KIRV  Kirov             26.07 325 ⇓eP     P      01 19 31.5 +0.4
KIV   Kislovodsk        26.47 290   eP     P      01 19 33.4  -1.6
KIV                                  pmax   pmax
      comp=Z,3.0nm,1.0s
CMAR  Chiang Mai Arr    28.00 134    P      P      01 19 51.1 +2.2
      comp=Z,1.2nm,0.3s,baz=336,slow=9.1,SNR=4.9
      comp=Z,1.2nm,0.3s
CMAR  Chiang Mai Arr    28.00 134    P      P      01 19 48.0  -0.9
VSLR  Vesyoloye         28.43 290 ⇑eP     P      01 19 53.5 +1.0
VSLR                                 pmax   pmax
      comp=Z,11nm,0.9s
NRIK  Noril'sk          29.89   7 ⇑eP     P      01 20 05.3 +0.1
NRIK                                 pmax   pmax
      comp=Z,2.0nm,1.1s
KLMR  Klimovskoe        31.56 324   eP     P      01 20 18.7  -1.3
KLMR                                 pmax   pmax
      comp=Z,14nm,1.2s
RAYN  Ar Rayn           31.93 249    P      P      01 20 22.4  -1.3
RAYN  Ar Rayn           31.93 249    P      P      01 20 22.4  -1.3
RAYN                                 pmax   pmax
      comp=Z,3.0nm,0.8s
NJ2   Nanjing           33.72  91   eP     P      01 20 38.5  -0.7
NJ2                                  pmax   pmax
      comp=Z,13nm,0.6s
BR131 Keskin Array S    33.83 284    P      P      01 20 40.5 +0.2
BR131 Keskin Array S    33.83 284    P      P      01 20 40.5 +0.2
BR131                                pmax   pmax
      comp=Z,6.0nm,1.3s
BRTR  Keskin Array B    33.83 284    P      P      01 20 40.2   0.0
      comp=Z,0.9nm,0.6s,baz=100,slow=6.4,SNR=9.6
      comp=Z,0.9nm,0.6s
BRTR  Keskin Array B    33.83 284    P      P      01 20 39.7  -0.6
BRTR  Keskin Array B    33.83 284  i P      P      01 20 40.5 +0.2
BRTR                                 pmax   pmax
      comp=Z,1.0nm,0.5s
AKASG Malin Array Be    35.37 304    P      P      01 20 52.0  -1.2
      comp=Z,0.2nm,0.3s,baz=76,slow=9.5,SNR=1.9
AKASG                                LR     LR     01 36 38.0
      comp=Z,158nm,18.0s,baz=40,slow=38
      comp=Z,0.2nm,0.3s
AKASG Malin Array Be    35.37 304    P      P      01 20 52.0  -1.2
LVZ   Lovozero          36.55 334    P      P      01 21 03.2   0.0
LVZ   Lovozero          36.55 334    P      P      01 21 03.2   0.0
LVZ                                  pmax   pmax
      comp=Z,109nm,1.5s
FIA1  FINESS Array S    37.96 322    P      P      01 21 15.2 +0.1
FINES FINESS Array B    37.96 322    P      P      01 21 15.2   0.0
      comp=Z,2.6nm,0.6s,baz=104,slow=9.2,SNR=28
      comp=Z,2.6nm,0.6s
FINES FINESS Array B    37.96 322  i P      P      01 21 15.3 +0.1
FINES                                pmax   pmax
      comp=Z,3.0nm,0.6s
MLR   Muntele Rosu      38.11 296    LR     LR     01 39 06.3
      comp=Z,95nm,20.1s,baz=4.0,slow=40
MLR   Muntele Rosu      38.11 296    P      P      01 21 17.3 +0.4
MLR   Muntele Rosu      38.11 296    P      P      01 21 17.3 +0.4
MLR                                  pmax   pmax
      comp=Z,3.0nm,0.8s
BURAR Bucovina Array    38.26 299    P      P      01 21 17.6  -0.5
BURAR Bucovina Array    38.26 299    P      P      01 21 17.6  -0.5
BURAR                                pmax   pmax
      comp=Z,2.0nm,0.9s
BUR08 Bucovina Ar. S    38.26 300    P      P      01 21 17.0  -1.1
ARCES ARCESS Array B    40.26 334    P      P      01 21 34.8 +0.4
      comp=Z,5.4nm,0.7s,baz=102,slow=8.3,SNR=19
      comp=Z,5.4nm,0.7s
ARCES ARCESS Array B    40.26 334    P      P      01 21 34.4 +0.1
ARCES                                IAmb   IAmb   01 21 37.9
      comp=Z,33nm,1.4s
TIXI  Tiksi             40.50  22    P      P      01 21 36.3  -0.1
      comp=Z,3.8nm,0.3s,baz=277,slow=4.2,SNR=4.0
TIXI                                 LR     LR     01 39 08.1
      comp=Z,63nm,18.9s,baz=199,slow=37
      comp=Z,3.8nm,0.3s
TIXI  Tiksi             40.50  22    P      P      01 21 36.4 +0.1
TIXI  Tiksi             40.50  22 ⇓eP     P      01 21 36.4 +0.1
TIXI                                 pmax   pmax
      comp=Z,3.0nm,0.8s
VRAC  Vranov            43.61 304    LR     LR     01 44 18.4
      comp=Z,64nm,20.0s,baz=5.0,slow=42
HFS   Hagfors           43.92 319    P      P      01 22 03.9  -0.5
      comp=Z,3.9nm,0.8s,baz=81,slow=13,SNR=1.9
      comp=Z,3.9nm,0.8s
NC602 NORSAR Array S    44.96 320    P      P      01 22 12.4  -0.2
NC602                                IAmb   IAmb   01 22 47.8
      comp=Z,24nm,1.3s
NORES NORESS Array B    44.96 320    P      P      01 22 13.4 +0.8
NB2   NORSAR Subarra    45.10 321    P      P      01 22 13.2  -0.6
      comp=Z,1.0nm,0.7s,baz=86,slow=7.9
NOA   NORSAR Array B    45.10 321    P      P      01 22 13.1  -0.7
      comp=Z,1.1nm,0.7s,baz=87,slow=7.9,SNR=4.4
NOA                                  LR     LR     01 41 42.3
      comp=Z,78nm,18.4s,baz=260,slow=37
      comp=Z,1.1nm,0.7s
SPITS Spitsbergen Ar    45.49 345    P      P      01 22 17.3 +0.6
      comp=Z,2.7nm,0.8s,baz=111,slow=9.1,SNR=1.2
      comp=Z,2.7nm,0.8s
GEC2  GERESS Array S    45.57 304    P      P      01 22 17.1  -0.7
GEC2                                 IAmb   IAmb   01 22 18.9
      comp=Z,6.4nm,1.1s
GERES GERESS Array B    45.57 304    P      P      01 22 18.1 +0.3
      comp=Z,2.3nm,0.7s,baz=64,slow=9.2,SNR=15
      comp=Z,2.3nm,0.7s
TRI   Trieste           46.36 299    P      P      01 22 23.0  -0.9
TRI   Trieste           46.36 299    P      P      01 22 23.0  -0.9
TRI                                  pmax   pmax
      comp=Z,20nm,1.1s
SABO  M.te Sabotino     46.39 300    P      P      01 22 23.1  -1.1
FUORN Ofenpass-Fuorn    48.41 301    P      P      01 22 39.4  -0.8
DAVOX Davos/Dischmat    48.61 302    LR     LR     01 47 54.5
      comp=Z,105nm,18.4s,baz=76,slow=42
ZCCA  Zocca             48.66 298    P      P      01 22 42.5 +0.5
BNI   Bardonecchia      51.30 301    P      P      01 23 01.3  -0.7
BNI                                  IAmb   IAmb   01 23 19.3
      comp=Z,14nm,1.3s
BNI   Bardonecchia      51.30 301    P      P      01 23 01.3  -0.7
BNI                                  pmax   pmax
      comp=Z,14nm,1.3s
DAV   Davao City (W)    53.61 115    LR     LR     01 46 54.6
      comp=Z,134nm,19.3s,baz=360,slow=37
ESDC  Sonseca Array     60.71 299    P      P      01 24 08.6  -0.7
      comp=Z,0.6nm,0.7s,baz=45,slow=6.6,SNR=4.6
      comp=Z,0.6nm,0.7s
C18K  Utukok River      63.19  21    P      P      01 24 25.8 +0.2
C18K                                 IAmb   IAmb   01 24 49.7
      comp=Z,5.8nm,1.1s
E22K  Anaktuvuk Pass    65.97  18    P      P      01 24 43.6  -0.2
TOLK  Toolik Lake Re    66.10  17    P      P      01 24 44.8 +0.2
TOLK                                 IAmb   IAmb   01 25 09.6
      comp=Z,10nm,1.5s
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J16K	Anvik River	67.07	25	P	P	01 24 51.7	+1.0
F24K	Squaw Lake	67.38	17	P	P	01 24 52.7	0.0
F24K				IAmb	IAmb	01 25 33.0	
	comp=Z,3.6nm,1.4s						
J20K	Nowinta River	68.38	22	P	P	01 24 59.7	+0.7
J20K				IAmb	IAmb	01 25 02.3	
	comp=Z,3.8nm,0.8s						
E29M	Blow River	68.69	13	P	P	01 25 01.0	+0.1
E29M				IAmb	IAmb	01 25 05.0	
	comp=Z,3.8nm,1.1s						
L18K	Granite Mounta	69.09	24	P	P	01 25 04.5	+1.1
L18K				IAmb	IAmb	01 25 23.4	
	comp=Z,3.1nm,1.1s						
INK	Inuvik	69.51	12	P	P	01 25 05.5	-0.4
INK				IAmb	IAmb	01 25 06.8	
	comp=Z,4.4nm,1.1s						
INK	Inuvik	69.51	12	P	P	01 25 05.5	-0.4
INK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KTH	Kantishna Hill	69.77	21	P	P	01 25 07.3	-0.5
KTH				IAmb	IAmb	01 25 41.0	
	comp=Z,7.6nm,1.2s						
C36M	Paulatuk	69.81	8	P	P	01 25 07.0	-0.7
C36M				IAmb	IAmb	01 25 07.8	
	comp=Z,10nm,1.2s						
ILAR	Eielson Array	69.85	19	P	P	01 25 07.2	-0.9
	comp=Z,1.3nm,0.8s,baz=313,slow=5.0,SNR=15						
	comp=Z,1.3nm,0.8s						
ILAR	Eielson Array	69.85	19	P	P	01 25 07.4	-0.7
ILAR	Eielson Array	69.85	19	P	P	01 25 07.4	-0.7
PPLA	Purkeypile	69.93	22	P	P	01 25 08.8	0.0
L22K	Petersville	70.63	22	P	P	01 25 13.0	0.0
L22K				IAmb	IAmb	01 25 35.2	
	comp=Z,5.9nm,1.1s						
J26L	Joseph Creek	70.88	18	P	P	01 25 14.0	-0.6
J26L				IAmb	IAmb	01 25 43.4	
	comp=Z,9.4nm,1.5s						
TORD	Torodi Ar. Bea	71.25	272	P	P	01 25 16.1	-1.4
	comp=Z,1.5nm,0.3s,baz=48,slow=4.7,SNR=2.8						
	comp=Z,1.5nm,0.3s						
H31M	Peel River	71.64	13	P	P	01 25 18.0	-1.0
H31M				IAmb	IAmb	01 25 22.7	
	comp=Z,4.2nm,1.1s						
SCM	Sheep Creek Mo	72.15	21	P	P	01 25 21.7	-0.5
SCM	Sheep Creek Mo	72.15	21	P	P	01 25 21.7	-0.5
SCM				pmax	pmax		
	comp=Z,11nm,0.8s						
BCAR	Beaver Creek A	72.52	18	P	P	01 25 24.6	+0.2
N25K	Chitina, Valde	73.06	20	P	P	01 25 27.5	-0.2
N25K				IAmb	IAmb	01 25 53.5	
	comp=Z,18nm,1.4s						
KDAK	Kodiak Island	73.82	26	P	P	01 25 32.4	+0.3
KDAK	Kodiak Island	73.82	26	P	P	01 25 32.4	+0.3
KDAK				pmax	pmax		
	comp=Z,66nm,1.5s						
HYT	Haines Junctio	75.47	17	P	P	01 25 42.1	+0.4
HYT				IAmb	IAmb	01 26 21.2	
	comp=Z,9.6nm,1.3s						
YKA	Yellowknife Ar	77.40	6	P	P	01 25 51.9	-0.7
	comp=Z,0.9nm,0.9s,baz=341,slow=5.7,SNR=8.7						
	comp=Z,0.9nm,0.9s						
WB0	Warramunga Arr	79.27	127	P	P	01 26 02.6	-0.8
WB0				IAmb	IAmb	01 26 06.1	
	comp=Z,5.0nm,1.0s						
WRA	Warramunga Arr	79.37	127	P	P	01 26 04.0	0.0
	comp=Z,3.6nm,1.0s,baz=326,slow=5.2,SNR=15						
	comp=Z,3.6nm,1.0s						
WRA	Warramunga Arr	79.37	127	P	P	01 26 02.8	-1.2
WRA	Warramunga Arr	79.37	127	*i* P	P	01 26 04.0	0.0
WRA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WB2	Warramunga Arr	79.38	127	P	P	01 26 03.5	-0.5
WB2				IAmb	IAmb	01 26 06.6	
	comp=Z,16nm,1.5s						
ASAR	Alice Springs	81.94	130	P	P	01 26 17.9	+0.2
	comp=Z,3.1nm,0.8s,baz=321,slow=5.4,SNR=28						
	comp=Z,3.1nm,0.8s						
ASAR	Alice Springs	81.94	130	P	P	01 26 18.2	+0.5
ASAR	Alice Springs	81.94	130	P	P	01 26 18.2	+0.5
I02E	Swisshome, OR	94.03	16	P	P	01 27 15.0	-1.0
NVL	N'lazarevskaya	120.04	201	*i* PKIKP	PKiKP	01 32 48.3	+0.9
NVL				*e*		01 34 12.3	
NVL				*e*PPP	PPP	01 36 44.6	
NVL				*e*SS	SS	01 50 39.7	+1.2
NVL				*e*SSS	SSS	01 55 05.6	
NVL				pmax	pmax		
	comp=Z,13nm,1.2s						
PB11	IPOC Station P	145.78	296	PKPdf	PKPdf	01 33 36.2	-0.9
TRQA	Tornquist	149.04	260	PKPbc	PKPbc	01 33 45.5	-0.4
TRQA	Tornquist	149.04	260	PKP2	PKPbc	01 33 45.5	-0.4

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*CATAC **11** 01:20:43.6±0.5, 13°N±3°×9°0W±°, h28^{km}±2^{km}, M3.3/19, MLv3.3/19, Error ellipse: s-maj=6.1km s-min=2.8km az=21.8, confirmed*

*GCG **11** 01:20:43.4±0.9, 13°.42N×90°.35W, h17^{km}±8^{km}, MD3.6*

*SNET **11** 01:20:44.0±0.7, 13°.45N×90°.29W, h46^{km}±12^{km}, ML3.3*

ISC 11 01:20:46.1±1.7, **13°.47N**±0°.07×**90°.25W**±0°.05, **h35**^{km}±4^{km}, **n60,** σ**0^{s}84**/66, **4D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	0.43	31	P	Pb	01 20 55.0	-0.8
NUBE	Las Nubes	0.62	46	⇓*i*P	Pn	01 20 57.6	-1.0
NUBE				*e*S	Sn	01 21 07.7	+0.1
NUBE	Las Nubes	0.62	46	*e*P	Pn	01 20 57.6	-1.0
NUBE				*e*S	Sn	01 21 08.0	+0.5
NUBE	Las Nubes	0.62	46	S	Sn	01 21 08.1	+0.6
NUBE	Las Nubes	0.62	46	P	Pn	01 20 57.6	-1.0
CEVE	Cerro Verde	0.70	59	*e*P	Pn	01 20 59.2	-0.6
CEVE	Cerro Verde	0.70	59	P	Pn	01 20 59.2	-0.6
CEVE	Cerro Verde	0.70	59	S	Sn	01 21 10.2	+0.6
SBLS	San Blas	0.71	59	⇓*e*P	Pn	01 20 58.9	-1.0
RTR	El Retiro	0.72	54	*e*P	Pn	01 20 59.3	-0.7
SNJE	San Jose	0.74	57	⇓*i*P	Pn	01 20 59.3	-1.0
PCG5	San Vicente Pa	0.76	350	*e*P	Pb	01 21 01.7	+0.7
PCG5				*e*P	Pb	01 21 01.7	+0.7
JAYA	Jayaque - finc	0.80	76	⇓*e*P	Pn	01 20 59.8	-1.2
JAYA				*e*S	Sn	01 21 11.5	-0.2
JAYA	Jayaque - finc	0.80	76	*e*P	Pn	01 20 59.8	-1.2
JAYA	Jayaque - finc	0.80	76	P	Pn	01 20 59.7	-1.2
RBDL	Robledal	0.84	40	*e*P	Pn	01 21 01.0	-0.6
UNIC	Universidad Ca	0.85	53	P	Pn	01 21 00.7	-0.9
UNIC	Universidad Ca	0.85	53	S	Sb	01 21 13.8	+0.1
CEDA	San Andres	0.89	68	P	Pn	01 21 01.6	-0.6
CEDA	San Andres	0.89	68	S	Sb	01 21 15.0	+0.2
LALI	Alcalda de L	0.90	89	S	Sn	01 21 14.5	+0.5
LALI	Alcalda de L	0.90	89	P	Pn	01 21 01.5	-0.7
PMON	Piamonte	0.94	75	*e*P	Pn	01 21 01.9	-1.0
PMON	Piamonte	0.94	75	S	Sn	01 21 16.4	+1.2
PMON	Piamonte	0.94	75	P	Pn	01 21 01.9	-1.0
BOQS	Boqueron	0.97	74	*e*P	Pn	01 21 02.6	-0.9
UEES	Universidad Ev	1.01	76	S	Sn	01 21 17.9	+1.0
UTEC	Universidad Te	1.04	77	P	Pn	01 21 03.4	-0.9
UTEC	Universidad Te	1.04	77	S	Sn	01 21 18.3	+0.6
PANCS	Alcalda de	1.05	82	S	Sn	01 21 18.3	+0.5
PANCS	Alcalda de	1.05	82	P	Pn	01 21 03.5	-0.9
LOMA	Loma Larga	1.06	80	P	Pn	01 21 03.8	-0.8
LOMA	Loma Larga	1.06	80	S	Sn	01 21 18.1	-0.2
IGN	Direccin Gen	1.07	77	S	Sn	01 21 19.2	+0.7
IGN	Direccin Gen	1.07	77	P	Pn	01 21 03.8	-0.9
ESSG	Sabana Grande	1.07	328	*e*P	Pn	01 21 02.9	-1.9
ESSG				*e*S	Sn	01 21 18.2	-0.4
UDBS	Universidad Do	1.09	77	P	Pn	01 21 04.2	-0.7
UDBS	Universidad Do	1.09	77	S	Sn	01 21 19.5	+0.7
LFRS	El Faro	1.16	82	*e*P	Pn	01 21 05.5	-0.5
MTO3	Montecristo	1.26	43	*e*P	Pn	01 21 06.7	-0.9
MTO3	Montecristo	1.26	43	P	Pn	01 21 06.6	-0.9
MTO3	Montecristo	1.26	43	S	Sn	01 21 23.8	+0.4
PAVA	Las Pavas	1.29	79	S	Sn	01 21 24.8	+0.8
PAVA	Las Pavas	1.29	79	P	Pn	01 21 07.2	-0.6
ESQI	Esquipulas	1.40	39	P	Pn	01 21 08.3	-0.9
ESQI	Esquipulas	1.40	39	S	Sn	01 21 27.2	+0.6
STG5	El Palmar, Qui	1.42	311	*e*P	Pb	01 21 13.3	+1.2
TECO	Alcaldia de Te	1.43	87	S	Sn	01 21 28.0	+0.8
TECO	Alcaldia de Te	1.43	87	P	Pn	01 21 08.7	-0.8
UESV	Universidad de	1.43	83	P	Pn	01 21 08.7	-0.9
UESV	Universidad de	1.43	83	S	Sn	01 21 28.0	+0.8
LLGN	La Laguna	1.44	61	S	Sn	01 21 28.3	+0.7
LLGN	La Laguna	1.44	61	P	Pn	01 21 09.1	-0.8
STG8	El Palmar, Qui	1.45	312	*e*P	Pb	01 21 13.3	+0.6
APG	El Apazote	1.54	352	*e*P	Pn	01 21 11.1	-0.2
PACA	Pacayal	1.87	90	S	Sn	01 21 39.7	+1.4
PACA	Pacayal	1.87	90	P	Pn	01 21 14.6	-1.1
CNCH	Conchagua	2.35	94	P	Pn	01 21 21.4	-1.0
CNCH	Conchagua	2.35	94	S	Sn	01 21 50.5	+0.3
CSGN	Cosiguina Volc	2.66	100	P	Pn	01 21 26.1	-0.6
CSGN				S	Sn	01 21 57.9	+0.1

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*IDC **11** 01:34:21.8±0.5, 18°.46S×168°.31E, h0^{km}, mb4.7/19, mbtmp4.7/20, ML4.2/1, MS3.9/28, Error ellipse: s-maj=20.3km s-min=14.6km az=103.0*

*MOS **11** 01:34:22.8±0.9, 18°.47S×168°.19E, h13^{km}, mb5.1/22, Error ellipse: s-maj=10.7km s-min=9.7km az=11.2*

*NOU **11** 01:34:25.0, 18°.50S×168°.10E, h1^{km}, mb4.8/50, Vanuatu Islands*

*NEIC **11** 01:34:28.4±1.8, 18°.58S±0°.07×168°.18E±0°.09, h33^{km}±4^{km}, mb5.1/62, Error ellipse: s-maj=11.9km s-min=10.0km az=93.0*

ISC 11 01:34:26.9±0.7, **18°.50S**±0°.03×**168°.26E**±0°.05, **h30**^{km}±4^{km}, **n304,** σ**1^{s}15**/288, **mb5.0**/87, **MS3.9**/29, **21C-13D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	0.72	13	P	Pn	01 34 40.1	-0.9
RTV	Rentapao	0.72	13	S	Sb	01 34 49.7	-0.8
DVP	Devils Point	0.77	355	P	Pn	01 34 41.1	-0.6
DVP	Devils Point	0.77	355	S	Sb	01 34 50.5	-1.4
INH	Isangel	1.42	138	P	Pb	01 34 52.7	0.0
MARNC	Mare, Loyalty	2.98	184		Pn	01 35 10.9	-1.2
MARNC				Sn	Sn	01 35 44.0	-2.8
MARNC	Mare, Loyalty	2.98	184	P	Pn	01 35 12.3	+0.2
SANVU	Saraoutou	3.20	341	Pn	Pn	01 35 13.6	-1.6
SANVU	Saraoutou	3.20	341	P	Pn	01 35 14.2	-1.0
YATNC	Mamie plateau,	3.77	200	P	Pn	01 35 22.5	-0.5
DZM	Mont Dzumac	3.94	205	Pn	Pn	01 35 25.0	-0.5
	17nm,0.3s,baz=29,slow=19,SNR=54						
DZM				Sn	Sn	01 36 09.7	-1.1
	91nm,0.3s,baz=326,slow=22,SNR=12						
DZM				LR	LR	01 36 52.5	
	comp=Z,2μm,19.5s,baz=281,slow=38						
	55nm,0.4s						
DZM	Mont Dzumac	3.94	205	*e*Pn	Pn	01 35 24.8	-0.7
	87nm,0.7s						
DZM				*e*Sn	Sn	01 36 08.4	-2.4
	366nm,0.7s						
DZM	Mont Dzumac	3.94	205	Pn	Pn	01 35 24.7	-0.7
DZM	Mont Dzumac	3.94	205	P	Pn	01 35 26.1	+0.6
OUENC	Ouen Island, N	4.12	199	P	Pn	01 35 28.0	+0.2
ONTNC	Ouen Toro	4.15	204	Pn	Pn	01 35 27.2	-1.0
ONTNC	Ouen Toro	4.15	204	P	Pn	01 35 28.4	+0.2
PINNC	Pines Island,	4.16	190	Pn	Pn	01 35 29.2	+0.8
PINNC	Pines Island,	4.16	190	P	Pn	01 35 30.5	+2.1
KOUNC	Koumac, New Ca	4.27	241	P	Pn	01 35 31.1	+1.2
MSVF	Nonsavu	9.34	87	Pn	Pn	01 36 41.7	+2.1
MSVF	Nonsavu	9.34	87	P	Pn	01 36 44.7	+5.1
MSVF	Nonsavu	9.34	87	P	Pn	01 36 41.7	+2.1
SAVO	Savo Central	12.39	317	P	Pn	01 37 22.6	+1.2
TATA	Tatamba Isabel	12.98	320	P	Pn	01 37 29.4	0.0
EIDS	Eidsvold	17.33	244		P	01 38 27.4	-0.5
EIDS	Eidsvold	17.33	244	P	Pn	01 38 26.8	+0.1
ARMA	Armidale	19.21	229	P	P	01 38 47.9	-0.8
ARMA	Armidale	19.21	229	P	Pn	01 38 51.1	+1.4
AUPHS	Peel High Scho	20.12	228	P	Pn	01 39 00.0	-0.4
TARA	Tarawa	20.25	14	P	Pn	01 39 03.0	+0.9
CTA	Charters Tower	20.83	262	LR	LR	01 46 38.2	
	comp=Z,12nm,18.9s,baz=56,slow=35						
CTA	Charters Tower	20.83	262	P	Pn	01 39 08.1	-0.7
CTAO	Charters Tower	20.83	262	P	P	01 39 05.9	-0.4
CTAO	Charters Tower	20.83	262	P	Pn	01 39 08.1	-0.7
CTAO	Charters Tower	20.83	262	P	P	01 39 05.9	-0.4
CTAO				pmax	pmax		
	comp=Z,20nm,1.0s						
URZ	Urewera	21.15	160	P	P	01 39 11.1	+1.6
	comp=Z,16nm,0.7s,baz=293,slow=4.0,SNR=3.9						
URZ				LR	LR	01 46 08.4	
	comp=Z,310nm,20.9s,baz=348,slow=33						
RTZ	Ruatahuna	21.43	161	P	P	01 39 13.2	+0.5
BKZ	Black Stump Fm	21.80	163	P	P	01 39 18.1	+1.6
PMG	Port Moresby	22.36	291	P	P	01 39 22.8	+0.1
PMG	Port Moresby	22.36	291	P	P	01 39 23.4	+0.6
PMG	Port Moresby	22.36	291	P	P	01 39 24.8	+2.0
	comp=Z,40nm,0.9s						
PMG	Port Moresby	22.36	291	*de*P	P	01 39 23.6	+0.8
PMG				pmax	pmax		
	comp=Z,29nm,0.8s						
MTSU	Mount Surprise	22.73	267	P	P	01 39 26.8	+0.1
SNZO	South Karori	23.40	168	P	P	01 39 33.5	+0.4
SNZO				IAmb	IAmb	01 39 37.7	
	comp=Z,53nm,1.1s						
QLP	Quilpie	23.58	246	P	P	01 39 35.7	+0.6
CNB	Canberra Magne	23.69	221	P	P	01 39 38.2	+2.0
AUSIS	Research Schoo	23.83	222	P	P	01 39 39.7	+2.2
CAN	Canberra	23.92	222	P	P	01 39 38.7	+0.3
CAN	Canberra	23.92	222	P	P	01 39 38.7	+0.3
CAN				pmax	pmax		
	comp=Z,26nm,1.1s						
CMSA	Cobar Meteorol	24.16	233	P	P	01 39 41.4	+0.8
COEN	Coen	24.50	277	P	P	01 39 43.9	+0.1
JCZ	Jackson Bay	25.50	179	P	P	01 39 54.9	+2.2
INKA	Innaminka	26.88	245	P	P	01 40 04.8	-0.4
QIS	Mount Isa	27.07	261	P	P	01 40 07.3	+0.2
STKA	Stephens Creek	27.47	236	P	P	01 40 11.2	+0.6
	comp=Z,10nm,0.6s,baz=73,slow=10.0,SNR=20						
STKA				PcP	PcP	01 43 28.4	-0.2
	comp=Z,12nm,1.3s,baz=162,slow=2.3,SNR=3.9						
STKA				LR	LR	01 49 56.7	
	comp=Z,183nm,21.2s,baz=26,slow=34						
	comp=Z,10nm,0.6s						
STKA	Stephens Creek	27.47	236	P	P	01 40 10.6	0.0
STKA	Stephens Creek	27.47	236	P	P	01 40 11.9	+1.3
STKA	Stephens Creek	27.47	236	*c i*P	P	01 40 11.3	+0.7
RAR	Rarotonga	30.16	101	LR	LR	01 52 24.6	
	comp=Z,52nm,18.1s,baz=276,slow=36						
JAY	Jayapura	31.32	297	LR	LR	01 53 11.6	
	comp=Z,187nm,19.4s,baz=336,slow=36						
WB0	Warramunga Arr	31.99	262	P	P	01 40 48.9	-1.9
WRAB	Tennant Creek	32.02	262	P	P	01 40 50.0	-1.0
WRAB	Tennant Creek	32.02	262	⇑*e*P	P	01 40 50.6	-0.4
WRAB				pmax	pmax		
	comp=Z,16nm,1.3s						
WRAB	Tennant Creek	32.02	262	P	P	01 40 49.7	-1.4
WRAB				PcP	PcP	01 43 40.0	-0.5
WRA	Warramunga Arr	32.03	262	P	P	01 40 49.9	-1.2
	comp=Z,7.7nm,0.9s,baz=93,slow=8.9,SNR=21						
WRA				PcP	PcP	01 43 39.8	-0.8
	comp=Z,2.2nm,0.7s,baz=93,slow=2.8,SNR=7.5						
	comp=Z,7.7nm,0.9s						
WRA	Warramunga Arr	32.03	262	P	P	01 40 49.1	-2.0
WRA				PcP	PcP	01 43 40.1	-0.5
BBOO	Buckleboo	32.19	237	P	P	01 40 52.2	-0.2
BBOO				IAmb	IAmb	01 40 53.8	
	comp=Z,21nm,0.8s						
BBOO	Buckleboo	32.19	237	P	P	01 40 52.8	+0.5
AS31	Alice Springs	32.41	255	P	P	01 40 53.8	-0.7
AS31				IAmb	IAmb	01 40 54.9	
	comp=Z,14nm,0.6s						
ASAR	Alice Springs	32.42	255	P	P	01 40 54.0	-0.5
	comp=Z,40nm,0.8s,baz=81,slow=9.0,SNR=318						
ASAR				PcP	PcP	01 43 41.0	-0.5
	comp=Z,1.9nm,0.8s,baz=96,slow=3.1,SNR=5.6						
ASAR				LR	LR	01 53 50.4	
	comp=Z,332nm,19.3s,baz=102,slow=36						
	comp=Z,40nm,0.8s						
ASAR	Alice Springs	32.42	255	P	P	01 40 54.0	-0.5
ASAR					PcP	01 43 40.4	-1.2
AUALC	St Philip's Co	32.44	255	P	P	01 40 54.3	-0.4
KNRA	Kununurra	37.81	268	P	P	01 41 39.9	-1.1
KNRA				IAmb	IAmb	01 41 41.3	
	comp=Z,29nm,1.2s						
FORT	Forrest	38.34	244	P	P	01 41 45.2	-0.1
FORT				IAmb	IAmb	01 41 46.2	
	comp=Z,17nm,0.7s						
FAKI	Fak Fak	38.50	289	P	P	01 41 45.6	-1.2
FAKI				IAmb	IAmb	01 41 46.8	
	comp=Z,23nm,1.0s						
GUMO	Guam	39.35	322	LR	LR	01 55 25.4	
	comp=Z,130nm,20.8s,baz=126,slow=32						
TBI	Tubuai	39.68	104	*e*LR	LR	01 52 46.3	
	comp=Z,759nm,26.2s						
TBI				*e*LR	LR	01 52 47.9	
	comp=Z,1μm,27.2s						
PPT2	Papeete2	40.03	96	*e*S	S	01 48 15.0	+11
	comp=Z,68nm,25.8s						
PPT2				*e*SS	SnSn	01 51 06.6	+0.6
	comp=Z,246nm,26.8s						
PPT2				*e*LR	LR	01 53 00.5	
	comp=Z,254nm,27.5s						
PPT2				*e*LR	LR	01 53 06.2	
	comp=Z,205nm,26.5s						
FITZ	Fitzroy Crossi	40.40	264	LR	LR	01 58 18.2	
	comp=Z,310nm,20.1s,baz=90,slow=36						
FITZ	Fitzroy Crossi	40.40	264	P	P	01 42 02.5	-0.1
FITZ	Fitzroy Crossi	40.40	264	P	P	01 42 03.0	+0.4
NLAI	Namlea	43.03	286	P	P	01 42 25.7	+1.5
	comp=Z,938nmcomp=Z,16nm,0.9s						
SOEI	Soe	43.44	275	P	P	01 42 27.0	-0.7
BATI	Baumata	43.89	274	LR	LR	02 00 50.5	
	comp=Z,218nm,18.8s,baz=252,slow=36						
SANI	Sanana	44.52	287	P	P	01 42 36.7	+0.5
SANI	Sanana	44.52	287	P	P	01 42 35.8	-0.4
	comp=Z,19nm,0.7s						
MBWA	Marble Bar	45.59	258	P	P	01 42 44.0	-0.7
MBWA				IAmb	IAmb	01 42 45.9	
	comp=Z,57nm,1.4s						
MBWA	Marble Bar	45.59	258	P	P	01 42 45.2	+0.5
MBWA	Marble Bar	45.59	258	P	P	01 42 43.3	-1.4
MBWA				pP	pP	01 42 52.7	+0.1
EDFI	Ende, Flores	46.17	276	P	P	01 42 47.6	-1.8
	comp=Z,14nm,1.1s						
MEEK	Meekatharra	46.32	251	P	P	01 42 50.4	0.0
KLBR	Kellerberrin	47.20	244	P	P	01 42 56.5	-0.7
NWAO	Narrogin (SRO)	47.73	242	LR	LR	02 03 51.0	
	comp=Z,134nm,18.8s,baz=94,slow=37						
NWAO	Narrogin (SRO)	47.73	242	P	P	01 43 00.6	-0.7
NWAO				IAmb	IAmb	01 43 01.8	
	comp=Z,29nm,0.8s						
NWAO	Narrogin (SRO)	47.73	242	P	P	01 43 00.6	-0.7
NWAO				pmax	pmax		
	comp=Z,29nm,0.9s						
NWAO	Narrogin (SRO)	47.73	242	P	P	01 43 01.0	-0.3
MORW	Morawa	48.59	247	P	P	01 43 07.3	-0.8
MORW				IAmb	IAmb	01 43 08.4	
	comp=Z,14nm,0.7s						
BKSI	Bulukumba	48.73	279	P	P	01 43 09.3	+0.1
	comp=Z,8.0nm,1.0s						
BNSI	Bone	49.06	280	P	P	01 43 12.7	+1.0
	comp=Z,14nm,1.3s						
KAPI	Kappang	49.18	280	P	P	01 43 12.0	-0.7
KAPI				IAmb	IAmb	01 43 13.9	
	comp=Z,16nm,1.1s						
KAPI	Kappang	49.18	280	P	P	01 43 13.2	+0.6
KAPI	Kappang	49.18	280	P	P	01 43 11.4	-1.2
	comp=Z,9.4nm,1.2s						
KAPI	Kappang	49.18	280	⇑*i*P	P	01 43 12.5	-0.1
KAPI				pmax	pmax		
	comp=Z,19nm,1.3s						
KAPI	Kappang	49.18	280	P	P	01 43 12.8	+0.1
KAPI				x	x	01 43 24.1	
MRSI	Marisa	49.25	287	P	P	01 43 04.6	-8.6
DBNI	Kabupaten Domp	49.43	275	P	P	01 43 13.9	-0.7
	comp=Z,18nm,1.3s						
TOLI2	Tolitoli	50.57	287	P	P	01 43 22.0	-1.2
TOLI2				IAmb	IAmb	01 43 23.5	
	comp=Z,32nm,1.3s						
TOLI2	Tolitoli	50.57	287	P	P	01 43 23.0	-0.2
TWSI	Taliwang, Sumb	50.72	274	P	P	01 43 23.5	-0.8
	comp=Z,35nm,1.3s						
TAOE	Nuku Hiva Isla	50.89	86	*e*SS	SKiKP	01 54 23.5	-33
	comp=Z,116nm,26.3s						
TAOE				*e*LR	LR	01 58 00.1	
	comp=Z,178nm,23.0s						
MPSI	Mapaga	51.05	286	P	P	01 43 26.8	0.0
	comp=Z,16nm,0.6s						
DRV	Dumont d'Urvil	51.52	194	P	P	01 43 29.1	-0.4
JHJ	Hachijo jima 2	58.09	332	LR	LR	02 08 14.3	
	comp=Z,22nm,19.1s,baz=62,slow=35						
VNDA	Vanda	59.14	182	P	P	01 44 24.4	+0.1
	comp=Z,1.7nm,0.9s,baz=356,slow=4.8,SNR=5.6						
VNDA				LR	LR	02 05 49.9	
	comp=Z,96nm,21.1s,baz=356,slow=32						
	comp=Z,1.7nm,0.9s						
VNDA	Vanda	59.14	182	P	P	01 44 24.0	-0.3
VNDA	Vanda	59.14	182	P	P	01 44 24.6	+0.3
SBA	Scott Base	59.39	180	P	P	01 44 26.9	+0.9
SBA				IAmb	IAmb	01 44 33.7	
	comp=Z,13nm,0.9s						
SBA	Scott Base	59.39	180	P	P	01 44 27.0	+0.9
SBA				pmax	pmax		
	comp=Z,13nm,0.9s						
JGF	Kuroka	61.26	331	P	P	01 44 40.5	+1.1
JGF				IAmb	IAmb	01 46 39.0	
	comp=Z,37nm,1.7s						
MJAR	Matsushiro Arr	61.67	333	P	P	01 44 40.0	-2.1
	comp=Z,7.8nm,1.1s,baz=166,slow=7.6,SNR=9.8						
MJAR				LR	LR	02 13 07.4	
	comp=Z,26nm,18.5s,baz=132,slow=38						
	comp=Z,7.8nm,1.1s						
MJAR	Matsushiro Arr	61.67	333	P	P	01 44 40.0	-2.1
MAJO	Matsushiro	61.67	333	⇑*e*P	P	01 44 41.7	-0.4
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
JNU	Nakatsue	62.53	325	LR	LR	02 12 30.8	
	comp=Z,48nm,18.1s,baz=115,slow=37						
ASAJ	Asahikawa	66.59	340	P	P	01 45 14.4	+0.1
	comp=Z,9.2nm,0.8s,baz=117,slow=9.0,SNR=5.6						
ASAJ				LR	LR	02 08 36.9	
	comp=Z,94nm,20.0s,baz=175,slow=31						
	comp=Z,9.2nm,0.8s						
KSRS	Korea Array	67.38	326	P	P	01 45 19.4	0.0
	comp=Z,3.0nm,0.9s,baz=124,slow=6.7,SNR=5.6						
	comp=Z,3.0nm,0.9s						
NJ2	Nanjing	69.03	316	*e*P	P	01 45 33.2	+3.3
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
YSS	Yuzhno-Sakhali	69.09	342	*e*P	P	01 45 29.9	0.0
YSS				*e*S	S	01 54 32.7	-0.4
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
PSTR	Posyet	69.95	331	*de*P	P	01 45 35.4	+0.1
USRK	Ussuriysk Ar.	70.66	333	P	P	01 45 39.5	-0.1
	comp=Z,6.6nm,0.9s,baz=171,slow=5.9,SNR=7.8						
	comp=Z,6.6nm,0.9s						
QSPA	South Pole Qui	71.55	180	P	P	01 45 45.3	+0.3
	comp=Z,16nm,0.8s,baz=351,slow=1.5,SNR=44						
QSPA				LR	LR	02 12 33.5	
	comp=Z,77nm,20.4s,baz=34,slow=32						
	comp=Z,16nm,0.8s						
QSPA	South Pole Qui	71.55	180	P	P	01 45 45.0	0.0
QSPA				IAmb	IAmb	01 45 45.8	
	comp=Z,15nm,0.8s						
QSPA	South Pole Qui	71.55	180	P	P	01 45 45.4	+0.4
QSPA				pP	pP	01 45 54.8	+0.7
PEA0B	Petropavlovsk-	71.89	353	P	P	01 45 48.1	+1.2
PEA0B	Petropavlovsk-	71.89	353	P	P	01 45 48.1	+1.2
PEA0B				pmax	pmax		
	comp=Z,179nm,1.9s						
PETK	Petropavlovsk-	71.89	353	P	P	01 45 46.2	-0.7
	comp=Z,3.3nm,0.6s,baz=145,slow=5.4,SNR=5.1						
	comp=Z,3.3nm,0.6s						
PETK	Petropavlovsk-	71.89	353	P	P	01 45 47.6	+0.7
PETK	Petropavlovsk-	71.89	353	P	P	01 45 47.6	+0.7
MDJ	Mudanjiang	72.04	332	P	P	01 45 47.4	-0.6
MDJ				IAmb	IAmb	01 45 49.2	
	comp=Z,24nm,0.9s						
MDJ	Mudanjiang	72.04	332	P	P	01 45 48.1	+0.2
MDJ				pmax	pmax		
	comp=Z,34nm,1.0s						
MDJ	Mudanjiang	72.04	332	P	P	01 45 47.8	-0.1
CN2	Changchun	73.35	329	P	P	01 45 55.5	-0.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BNX	BinXian	73.89	332	⇓P	P	01 45 58.4	-0.5
BNX				pmax	pmax		
	comp=Z,12nm,0.7s						
GRNR	Gornyy	74.44	340	⇑*i*P	P	01 46 02.6	+0.6
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LYN	LuoYang	74.79	315	*e*P	P	01 46 05.6	+1.2
LYN				pmax	pmax		
	comp=Z,16nm,0.8s						
HNS	HongShan	75.03	318	⇑P	P	01 46 06.8	+1.1
HNS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KMI	Kunming	77.10	302	⇑P	P	01 46 19.5	+1.4
KMI				pmax	pmax		
	comp=Z,28nm,0.9s						
CM31	Chiang Mai Arr	77.36	294	P	P	01 46 19.8	+0.4

CM31				IAmb	IAmb	01 46 21.7	
	comp=Z,22nm,0.9s						
CMAR	**Chiang Mai Arr**	**77.36**	**294**	P	**P**	**01 46 20.3**	**+0.9**
	comp=Z,12nm,0.8s,baz=127,slow=4.3,SNR=58						
	comp=Z,12nm,0.8s						
CMAR	**Chiang Mai Arr**	**77.36**	**294**	P	**P**	**01 46 19.9**	**+0.5**
CMAR	**Chiang Mai Arr**	**77.36**	**294**	*c i*P	**P**	**01 46 20.8**	**+1.4**
CMAR				pmax	pmax		
	comp=Z,14nm,0.9s						
CHTO	**Chiang Mai**	**77.50**	**295**	P	**P**	**01 46 20.5**	**+0.3**
CHTO				IAmb	IAmb	01 46 22.2	
	comp=Z,18nm,0.9s						
CHTO	**Chiang Mai**	**77.50**	**295**	P	**P**	**01 46 20.1**	**-0.1**
	comp=Z,23nm,1.0s						
CHTO	**Chiang Mai**	**77.50**	**295**	P	**P**	**01 46 20.5**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,18nm,0.9s						
CHTO	**Chiang Mai**	**77.50**	**295**	P	**P**	**01 46 21.4**	**+1.2**
CHTO				PcP	**pP**	**01 46 29.7**	**+0.7**
XLT	**XiLinHaoTe**	**78.30**	**324**	*e*P	**P**	**01 46 24.1**	**-0.1**
XLT				pmax	pmax		
	comp=Z,12nm,0.7s						
XLT				pmax	pmax		
	comp=Z,190nm,7.0s						
PZH	**PanZhiHua**	**78.53**	**303**	P	**P**	**01 46 28.6**	**+2.7**
CD2	**Chengdu**	**79.05**	**308**	P	**P**	**01 46 29.9**	**+1.3**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
HHC	**Hu-ho-hao-te**	**79.06**	**320**	*e*P	**P**	**01 46 31.1**	**+2.6**
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
MA2	**Magadan**	**79.10**	**351**	LR	LR	02 17 52.1	
	comp=Z,50nm,20.1s,baz=162,slow=33						
BTO	**Baotou**	**79.87**	**319**	*e*P	**P**	**01 46 34.2**	**+1.3**
BTO				PP	**PP**	**01 49 38.1**	**+3.2**
BTO				S	**S**	**01 56 39.2**	**+4.7**
BTO				pmax	pmax		
	comp=Z,21nm,0.7s						
BTO				pmax	pmax		
	comp=Z,130nm,3.7s						
ZEA	**Zeya**	**80.11**	**337**	*e*P	**P**	**01 46 33.6**	**-0.1**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HILR	**Hailar Array B**	**80.21**	**330**	P	**P**	**01 46 33.9**	**-0.5**
	comp=Z,28nm,0.8s,baz=106,slow=7.1,SNR=1.9						
	comp=Z,28nm,0.8s						
TNCH	**TengChong**	**80.48**	**300**	*e*P	**P**	**01 46 39.4**	**+2.8**
TNCH				pP	PcP	01 46 42.1	-1.4
TNCH				pmax	pmax		
	comp=Z,150nm,3.0s						
LZH	**Lanzhou**	**81.55**	**312**	*e*P	**P**	**01 46 43.0**	**+0.9**
LZH				sP	PcP	01 46 49.8	+1.9
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
SEY	**Seymchan**	**82.12**	**353**	LR	LR	02 19 57.2	
	comp=Z,109nm,20.1s,baz=144,slow=33						
SEY	**Seymchan**	**82.12**	**353**	*e*P	**P**	**01 46 42.3**	**-1.9**
SEY				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ACHA	**Angle Creek He**	**82.14**	**18**	P	**P**	**01 46 45.8**	**+1.3**
ACHA				IAmb	IAmb	01 47 21.2	
	comp=Z,65nm,1.9s						
KDAK	**Kodiak Island**	**82.65**	**20**	LR	LR	02 20 07.1	
	comp=Z,121nm,19.1s,baz=213,slow=33						
BELA	**Belgrano 2**	**82.91**	**175**	P	**P**	**01 46 47.5**	**-0.8**
BELA				IAmb	IAmb	01 46 48.7	
	comp=Z,19nm,1.4s						
J16K	**Anvik River**	**85.08**	**14**	P	**P**	**01 46 59.5**	**+0.1**
K17K	**Iditarod**	**85.12**	**15**	P	**P**	**01 46 59.5**	**-0.1**
SYO	**Syowa Base**	**85.38**	**196**	⇑*e*P	**P**	**01 47 01.0**	**0.0**
SYO	**Syowa Base**	**85.38**	**196**	⇑*e*pP	pP	01 47 11.8	+2.1
ULN	**Ulaanbaatar**	**85.72**	**324**	P	**P**	**01 47 03.0**	**-0.2**
ULN				IAmb	IAmb	01 47 04.1	
	comp=Z,8.7nm,0.9s						
ULN	**Ulaanbaatar**	**85.72**	**324**	P	**P**	**01 47 02.6**	**-0.6**
ULN	**Ulaanbaatar**	**85.72**	**324**	*c i*P	**P**	**01 47 02.8**	**-0.4**
ULN				pmax	pmax		
	comp=Z,17nm,1.7s						
ULN	**Ulaanbaatar**	**85.72**	**324**	P	**P**	**01 47 03.1**	**0.0**
KCPM	**Cahto Peak**	**85.88**	**46**	P	**P**	**01 47 05.0**	**+0.9**
YAK	**Yakutsk**	**85.89**	**343**	P	**P**	**01 47 03.0**	**-0.5**
	comp=Z,15nm,0.4s,baz=133,slow=3.7,SNR=5.3						
	comp=Z,15nm,0.4s						
YAK	**Yakutsk**	**85.89**	**343**	P	**P**	**01 47 02.7**	**-0.8**
YAK	**Yakutsk**	**85.89**	**343**	*e*P	**P**	**01 47 02.9**	**-0.5**
YAK				*e**PP	**PcP**	**01 47 06.5**	**+0.4**
YAK				*e*		01 50 20.9	
YAK				*e*PPP	PPP	01 52 15.2	
YAK				*e*S	**SKSac**	**01 57 28.0**	**+1.3**
YAK				*e*SS	**SS**	**02 03 15.9**	**+3.0**
YAK				*e*SSS	SSS	02 06 44.7	
YAK				pmax	pmax		
	comp=N,10.0nm,1.8s						
YAK				pmax	pmax		
	comp=Z,35nm,1.3s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.8s						
YAK				pmax	pmax		
	comp=Z,337nm,8.9s						
YAK				pmax	pmax		
	comp=N,115nm,4.7s						
YAK				pmax	pmax		
	comp=E,151nm,4.4s						
YAK				smax	smax		
	comp=E,161nm,6.8s						
YAK				smax	smax		
	comp=N,120nm,6.3s						
HOPS	**Hopland Field**	**85.91**	**47**	P	**P**	**01 47 06.0**	**+1.9**
DCMP	**DeCamp, Califo**	**85.94**	**46**	P	**P**	**01 47 06.4**	**+2.1**
DCMP				IAmb	IAmb	01 48 51.2	
	comp=Z,48nm,1.9s						
GTA	**Gaotai**	**85.95**	**314**	*e*P	**P**	**01 47 05.1**	**+0.6**
GTA				sP	pP	01 47 13.8	+0.6
GTA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SAO	**San Andreas Ge**	**86.04**	**49**	P	**P**	**01 47 06.2**	**+1.5**
SAO	**San Andreas Ge**	**86.04**	**49**	P	**P**	**01 47 06.3**	**+1.5**
SAO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KMRM	**Mail Ridge**	**86.05**	**45**	P	**P**	**01 47 07.0**	**+2.1**
SONM	**Songino Array**	**86.08**	**323**	P	**P**	**01 47 04.9**	**0.0**
	comp=Z,3.8nm,0.8s,baz=138,slow=5.8,SNR=20						
	comp=Z,3.8nm,0.8s						
SONM	**Songino Array**	**86.08**	**323**	P	**P**	**01 47 04.8**	**-0.1**
SHL	**Shillong**	**86.19**	**298**		**P**	**01 47 05.5**	**-0.5**
SHL	**Shillong**	**86.19**	**298**	P	**P**	**01 47 05.5**	**-0.5**
SHL				pmax	pmax		
	comp=Z,24nm,0.9s						
KHMM	**Horse Mountain**	**86.34**	**45**	P	**P**	**01 47 08.7**	**+2.3**
KHBM	**Hayfork Bally**	**86.58**	**45**	P	**P**	**01 47 09.7**	**+2.1**
KHBM				IAmb	IAmb	01 47 11.7	
	comp=Z,10nm,0.8s						
L04D	**Klamath Falls**	**87.91**	**44**	P	**P**	**01 47 15.8**	**+1.8**
L04D				IAmb	IAmb	01 47 17.3	
	comp=Z,17nm,0.9s						
PMSA	**Palmer Station**	**87.92**	**160**	LR	LR	02 20 51.2	
	comp=Z,90nm,20.0s,baz=335,slow=32						
GOMU	**GeErMu**	**88.09**	**309**	P	**P**	**01 47 16.6**	**+1.3**
GOMU				pP	PcP	01 47 19.1	+2.1
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MPK	**Martis Peak**	**88.16**	**47**	P	**P**	**01 47 16.6**	**+1.2**
MPK				IAmb	IAmb	01 47 19.6	
	comp=Z,16nm,1.1s						
PFO	**Pinyon Flats O**	**88.43**	**54**	⇑*e*P	**P**	**01 47 18.0**	**+1.4**
PFO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
IMAR	**Indian Mountai**	**88.95**	**15**	P	**P**	**01 47 19.8**	**+1.7**
NVAR	**Mina Array Bea**	**89.01**	**49**	P	**P**	**01 47 19.6**	**+0.2**
	comp=Z,2.9nm,0.9s,baz=228,slow=8.8,SNR=8.8						
NVAR				LR	LR	02 18 53.8	
	comp=Z,43nm,19.3s,baz=278,slow=30						
	comp=Z,2.9nm,0.9s						
TROLL	**Troll, Antarti**	**89.20**	**184**	⇑P	**P**	**01 47 19.4**	**-0.3**
	comp=Z,314nm,0.6s						
BBB	**Bella Bella**	**89.37**	**33**	LR	LR	02 16 45.0	
	comp=Z,62nm,21.3s,baz=214,slow=28						
NVL	**N'lazarevskaya**	**89.47**	**188**	*e*P	**P**	**01 47 17.4**	**-3.3**
NVL				*e*		01 50 49.9	
NVL				*e*S	**SKSac**	**01 57 47.1**	**-1.5**
NVL				*e*SS	**SS**	**02 04 04.3**	**+1.0**
NVL				*e*SSS	SSS	02 07 39.8	
NVL				pmax	pmax		
	comp=Z,20nm,1.5s						
NVL				MLR	MLR		
	comp=Z,689nm,22.0s						
PINE	**Pine Mountain**	**89.51**	**43**	P	**P**	**01 47 21.3**	**-0.2**
PINE				IAmb	IAmb	01 47 25.9	
	comp=Z,14nm,0.9s						
IL31		**89.81**	**18**		**P**	**01 47 20.9**	**-1.2**
IL31				IAmb	IAmb	01 49 43.1	
	comp=Z,16nm,1.6s						
ILAR	**Eielson Array**	**89.81**	**18**	P	**P**	**01 47 21.1**	**-1.0**
	comp=Z,1.4nm,0.6s,baz=235,slow=5.1,SNR=21						
ILAR				LR	LR	02 21 10.2	
	comp=Z,79nm,19.3s,baz=212,slow=31						
	comp=Z,1.4nm,0.6s						
SNAA	**Sanae**	**89.85**	**183**	⇑P	**P**	**01 47 21.8**	**-0.8**
	comp=Z,42nm,0.5s						
SNAA	**Sanae**	**89.85**	**183**	P	**P**	**01 47 21.7**	**-0.9**
	comp=Z,1.1nm,0.4s,baz=207,slow=14,SNR=13						
	comp=Z,1.1nm,0.4s						
SNAA	**Sanae**	**89.85**	**183**	P	**P**	**01 47 21.3**	**-1.3**
SNAA				IAmb	IAmb	01 47 31.3	
	comp=Z,21nm,1.8s						
SNAA	**Sanae**	**89.85**	**183**	⇑*e*P	**P**	**01 47 21.5**	**-1.1**
SNAA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
LPIG	**La Paz**	**89.93**	**65**	LR	LR	02 21 10.9	
	comp=Z,83nm,18.2s,baz=246,slow=31						
D05A	**Enumclaw**	**90.38**	**40**	P	**P**	**01 47 26.2**	**+1.0**
WVOR	**Wild Horse Val**	**90.45**	**45**	P	**P**	**01 47 25.9**	**+0.1**
WVOR				IAmb	IAmb	01 47 29.6	
	comp=Z,8.6nm,0.9s						
WVOR	**Wild Horse Val**	**90.45**	**45**	P	**P**	**01 47 26.0**	**+0.1**
WVOR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
VNA3	**Neumayer Olymp**	**90.48**	**181**	⇑P	**P**	**01 47 24.2**	**-1.3**
	comp=Z,4.1nm,0.6s						
I07A	**Izee**	**90.57**	**43**	P	**P**	**01 47 25.9**	**-0.4**
I07A				IAmb	IAmb	01 47 30.5	
	comp=Z,13nm,0.8s						
VNA2	**Neumayer--Watz**	**90.76**	**181**	⇑P	**P**	**01 47 23.1**	**-3.7**
	comp=Z,34nm,0.4s,baz=135,slow=47						
G08A	**Pilot Rock**	**91.44**	**42**	P	**P**	**01 47 29.4**	**-1.0**
B21K	**Ikpikpuk River**	**91.74**	**12**	P	**P**	**01 47 31.3**	**+0.3**
B21K				IAmb	IAmb	01 50 45.9	
	comp=Z,18nm,1.6s						
DLBC	**Dease Lake**	**91.81**	**28**	LR	LR	02 20 58.6	
	comp=Z,70nm,20.3s,baz=271,slow=30						
X16A	**Lo Mia Camp, P**	**92.59**	**55**	P	**P**	**01 47 37.0**	**+0.9**
319A	**Douglas**	**93.26**	**58**	P	**P**	**01 47 39.2**	**0.0**
319A				IAmb	IAmb	01 47 43.1	
	comp=Z,6.6nm,0.8s						
TIXI	**Tiksi**	**93.83**	**348**	LR	LR	02 25 05.9	
	comp=Z,45nm,21.8s,baz=192,slow=32						
WMQ	**Urumqi**	**96.03**	**314**	*e*P	**P**	**01 47 51.2**	**-0.3**
WMQ				S	**S**	**01 59 08.9**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,18nm,1.3s						
INK	**Inuvik**	**96.14**	**19**	LR	LR	02 25 02.7	
	comp=Z,59nm,20.2s,baz=302,slow=32						
ANMO	**Albuquerque**	**96.64**	**56**	LR	LR	02 26 44.7	
	comp=Z,27nm,18.6s,baz=336,slow=32						
PDAR	**Pinedale Array**	**96.79**	**47**	P	**P**	**01 47 55.6**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=164,slow=42,SNR=1.8						
	comp=Z,0.2nm,0.6s						
PDAR	**Pinedale Array**	**96.79**	**47**	P	**P**	**01 47 55.7**	**+0.5**
TXAR	**Lajitas Array**	**97.23**	**62**	P	**P**	**01 47 57.2**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=215,slow=4.0,SNR=5.6						
TXAR				PP	**PP**	**01 51 54.7**	**+0.5**
	comp=Z,0.2nm,0.8s,baz=250,slow=9.1,SNR=3.6						
	comp=Z,0.5nm,0.8s						
TXAR	**Lajitas Array**	**97.23**	**62**	P	**P**	**01 47 55.6**	**-1.7**
YKA	**Yellowknife Ar**	**100.44**	**27**	P	**Pdif**	**01 48 09.7**	**-1.0**
	comp=Z,0.5nm,0.7s,baz=260,slow=5.4,SNR=7.8						
MKAR	**Makanchi Array**	**100.56**	**316**	P	**Pdif**	**01 48 11.8**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=96,slow=4.8,SNR=4.2						
ZALV	**Zalesovo Beam**	**100.97**	**323**	P	**Pdif**	**01 48 12.8**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=86,slow=7.4,SNR=1.7						
CPUP	**Villa Florida**	**117.18**	**134**	PKP	**PKPdf**	**01 53 08.6**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=245,slow=1.5,SNR=3.6						
SPITS	**Spitsbergen Ar**	**118.76**	**354**	PKP	**PKPdf**	**01 53 09.4**	**-2.0**
	comp=Z,3.2nm,0.6s,baz=54,slow=2.5,SNR=9.2						
ARCES	**ARCESS Array B**	**124.12**	**345**	PKP	**PKPdf**	**01 53 20.3**	**-1.6**
	comp=Z,2.4nm,0.5s,baz=67,slow=1.8,SNR=30						
KIV	**Kislovodsk**	**128.09**	**312**	*e*PKIKP	**PKPdf**	**01 53 29.6**	**-0.7**
KIV				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SHA1	**Shidzhatmaz**	**128.15**	**311**	*c i*PKIKP	**PKiKP**	**01 53 31.4**	**+0.2**
FINES	**FINESS Array B**	**129.55**	**338**	PKP	**PKPdf**	**01 53 31.4**	**-1.0**
	comp=Z,2.8nm,0.8s,baz=29,slow=4.4,SNR=6.9						
BDFB	**Brasilia**	**130.74**	**131**	PKP	**PKPdf**	**01 53 35.2**	**-1.0**
	comp=Z,4.3nm,0.8s,baz=16,slow=2.1,SNR=6.0						
NOA	**NORSAR Array B**	**134.49**	**345**	PKP	**PKPdf**	**01 53 41.4**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=30,slow=2.0,SNR=2.5						
BR131	**Keskin Array S**	**135.63**	**308**	⇑*i*PKIKP	**PKiKP**	**01 53 46.1**	**-0.2**
BRTR	**Keskin Array B**	**135.63**	**308**	PKhKP	PKPpre	01 53 39.6	
	comp=Z,0.3nm,0.7s,baz=108,slow=3.0,SNR=3.7						
BRTR	**Keskin Array B**	**135.63**	**308**	*c i*PKIKP	**PKiKP**	**01 53 47.7**	**+1.4**
KRLC	**Kraliky**	**141.12**	**331**	*e*PKIKP	**PKPdf**	**01 53 51.9**	**-2.5**
KRLC	**Kraliky**	**141.12**	**331**	*e*PKP	**PKPdf**	**01 53 51.9**	**-2.5**
EKA	**Eskdalemuir Ar**	**142.65**	**352**	PKhKP	PKPpre	01 53 51.0	
	comp=Z,0.4nm,0.3s,baz=24,slow=2.3,SNR=4.3						
EKA				PKP	**PKPdf**	**01 53 57.2**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=9.1,slow=1.9,SNR=1.7						
CONA	**Conrad Observa**	**143.03**	**329**	*i* PKP	PKPbc	01 53 55.4	+0.6
	comp=Z,2.5nm,0.8s						
CKRC	**Cesky Krumlov**	**143.15**	**331**	*e*PKIKP	PKPbc	01 53 54.5	-0.4
CKRC	**Cesky Krumlov**	**143.15**	**331**	*e*PKP	PKPbc	01 53 54.5	-0.4
KHC	**Kasperske Hory**	**143.25**	**332**	*e*PKIKP	PKPbc	01 53 56.6	+1.4
KHC				*e*		01 54 01.1	
KHC	**Kasperske Hory**	**143.25**	**332**	*e*PKP	PKPbc	01 53 56.6	+1.4
KHC				*e*x	x	01 54 01.1	
GERES	**GERESS Array B**	**143.40**	**332**	PKhKP	PKPpre	01 53 55.0	
	comp=Z,1.0nm,0.6s,baz=46,slow=2.6,SNR=7.3						
GRF	**Grafenberg Arr**	**143.83**	**335**	*e*PKP	PKPab	01 53 56.1	-0.1
	baz=39,slow=3.1						
MOA	**Molln**	**143.86**	**330**	*e*PKP	PKPab	01 53 56.8	+0.4
	comp=Z,2.4nm,0.5s						
SOKA	**Soboth**	**144.30**	**328**	*i* PKP	**PKPab**	**01 53 57.9**	**-0.3**
	comp=Z,4.4nm,0.7s						
BLY	**Banja Luka**	**144.40**	**324**	⇑P	PKPbc	01 53 59.0	+0.3
OBKA	**Obir**	**144.66**	**328**	*i* PKP	**PKPab**	**01 53 58.9**	**-0.6**
	comp=Z,5.0nm,0.7s						
KBA	**Koelnbreinsper**	**144.85**	**330**	*i* PKP	**PKPab**	**01 53 59.2**	**-1.1**
	comp=Z,5.5nm,0.7s						
LESA	**Schwarzleotal**	**144.91**	**331**	*i* PKP	**PKPab**	**01 53 59.6**	**-0.8**
	comp=Z,9.9nm,0.6s,SNR=6.8						
BTNL	**Ternell**	**144.96**	**340**	*d*PKP	**PKPab**	**01 54 00.3**	**-0.1**
MEM	**Membach**	**144.98**	**340**	*d*PKP	**PKPab**	**01 53 59.0**	**-1.3**
MYKA	**Terra Mystica**	**145.02**	**329**	*e*PKP	PKPbc	01 53 59.3	-1.4
	comp=Z,6.9nm,0.6s						
BSTI	**Sart Tilman**	**145.14**	**341**	*d*PKP	**PKPbc**	**01 54 00.4**	**-0.5**
BHOU	**Houvegnez**	**145.20**	**340**	*d*PKP	**PKPbc**	**01 54 00.9**	**-0.3**
UCC	**Uccle**	**145.32**	**342**	*d*PKP	**PKPbc**	**01 54 00.7**	**-0.8**
STU	**Stuttgart**	**145.37**	**335**		**PKPbc**	**01 54 01.1**	**-0.6**
STU	**Stuttgart**	**145.37**	**335**	PKIKP	**PKPbc**	**01 54 01.1**	**-0.6**
BGES	**Gesves**	**145.46**	**341**	*d*PKP	**PKPdf**	**01 54 01.1**	**-0.9**
WATA	**Walderalm**	**145.48**	**332**	*i* PKP	**PKPdf**	**01 54 01.4**	**-0.9**
	comp=Z,13nm,1.0s						
ABTA	**Abfaltersbach**	**145.48**	**330**	*e*PKP	**PKPdf**	**01 54 00.9**	**-1.3**
	comp=Z,19nm,0.7s,SNR=8.6						
WTTA	**Wattenberg**	**145.51**	**332**	*i* PKP	**PKPdf**	**01 54 01.6**	**-0.8**
	comp=Z,6.8nm,0.6s						
RCHB	**Rochefort**	**145.62**	**341**	*d*PKP	**PKPdf**	**01 54 01.4**	**-0.8**
BMRD	**Maredsous**	**145.63**	**341**	*d*PKP	**PKPdf**	**01 54 01.6**	**-0.6**
MOTA	**Moosalm**	**145.68**	**332**	*i* PKP	**PKPdf**	**01 54 02.4**	**-0.2**
	comp=Z,26nm,0.8s,SNR=12						
RETA	**Reutte**	**145.73**	**333**	*i* PKP	**PKPdf**	**01 54 02.3**	**-0.3**
	comp=Z,4.4nm,0.5s						
SQTA	**Sankt Quirin**	**145.73**	**332**	*i* PKP	**PKPdf**	**01 54 02.4**	**-0.3**
	comp=Z,27nm,0.7s,SNR=9.5						
STAL	**STALIGIAL**	**145.74**	**329**		**PKPdf**	**01 54 01.5**	**-1.1**
WLF	**Walferdange**	**145.74**	**339**		**PKPbc**	**01 54 02.9**	**0.0**
WLF	**Walferdange**	**145.74**	**339**	PKP2	**PKPbc**	**01 54 02.9**	**0.0**
WLF	**Walferdange**	**145.74**	**339**	*d*PKP	**PKPbc**	**01 54 02.9**	**0.0**
DOU	**Dourbes**	**145.87**	**341**	*d*PKPdf	**PKPdf**	**01 54 02.3**	**-0.3**
RCBR	**Riachuelo**	**146.06**	**133**	PKPdf	**PKPdf**	**01 54 02.7**	**-1.4**
RCBR	**Riachuelo**	**146.06**	**133**	PKIKP	**PKPdf**	**01 54 02.7**	**-1.4**
BFO	**Black Forest**	**146.07**	**336**		**PKPdf**	**01 54 03.2**	**+0.1**
BFO	**Black Forest**	**146.07**	**336**	PKP2	**PKPdf**	**01 54 03.2**	**+0.1**
FETA	**Feichten**	**146.10**	**332**	*i* PKP	**PKPdf**	**01 54 03.7**	**+0.4**
	comp=Z,11nm,0.7s,SNR=7.8						
DAVA	**Damuels**	**146.26**	**333**	*i* PKP	**PKPdf**	**01 54 04.3**	**+0.6**
	comp=Z,8.9nm,0.6s						
FUORN	**Ofenpass-Fuorn**	**146.61**	**332**		**PKPbc**	**01 54 05.7**	**-0.2**
TUE	**Stuetta**	**147.13**	**333**		**PKPbc**	**01 54 06.8**	**-0.5**
SENIN	**Lac Senin/Sane**	**148.07**	**335**		**PKPbc**	**01 54 09.0**	**-0.9**
POLO	**Lamas de Olo**	**156.95**	**352**	*e*PKPab	**PKPab**	**01 54 49.2**	**-0.6**
PVRL	**Vila Real**	**157.04**	**352**	*e*PKPdf	**PKPdf**	**01 54 19.8**	**-0.1**
PVRL				*e*PKPab	**PKPab**	**01 54 49.7**	**-0.4**
ESDC	**Sonseca Array**	**157.85**	**344**	PKPab	**PKPab**	**01 54 52.8**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=16,slow=3.2,SNR=7.0						
MTE	**Manteigas**	**157.88**	**351**	*e*PKPab	**PKPab**	**01 54 53.8**	**0.0**
PCAS	**Casmilo, Conde**	**158.34**	**353**	*e*PKPab	**PKPab**	**01 54 55.6**	**-0.1**
PARRA	**Arraiolos**	**159.50**	**352**	*e*PKPab	**PKPab**	**01 55 00.2**	**-0.5**
LIS	**Lisbon**	**159.73**	**354**	*e*PKPab	**PKPab**	**01 55 01.2**	**-0.5**
PBEJ	**Beja**	**160.25**	**351**	*e*PKPab	**PKPab**	**01 55 04.1**	**+0.1**
MESJ	**Messejana**	**160.49**	**352**	*e*PKPab	**PKPab**	**01 55 05.5**	**+0.4**
PCVE	**Castro Verde**	**160.66**	**351**	*e*PKPab	**PKPab**	**01 55 06.2**	**+0.4**
FUL	**Funchal**	**165.17**	**17**	*e*PKPab	**PKPab**	**01 55 29.2**	**+3.5**
TORD	**Torodi Ar. Bea**	**166.02**	**250**	PKPab	**PKPab**	**01 55 29.3**	**-0.9**
	comp=Z,1.4nm,0.4s,baz=107,slow=3.8,SNR=2.3						

IDC ***11*** *01:51:08.2±1.2, 7°.21S×104°.17E, h0^{km}, mb3.9/10, mbtmp3.9/10, Error ellipse: s-maj=52.0km s-min=18.3km az=58.0*

DJA ***11*** *01:51:13.8±0.9, 7°S±3°×10°4E±°, h14^{km}±8^{km}, M4.2/19, mb4.4/2, MLv4.1/19, MwMwp5.3/1, Mwp5.5/1*

ISC 11 01:51:15.5±1.9**, 7°.14S**±0°.10×**104°.42E**±0°.09**, h49**^{km}±17^{km}**, n39, σ0^{s}.80**/35**, mb4.0**/10**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	**1.60**	**3**	P	**Pn**	**01 51 40.6**	**-0.9**
KASI				S	**Sn**	**01 52 01.3**	**+0.3**
BLSI	**Bandar Lampung**	**1.94**	**25**	P	**Pn**	**01 51 45.1**	**-1.0**
BLSI				S	**Sn**	**01 52 09.1**	**-0.2**
SBJI	**Serang**	**1.98**	**59**	P	**Pn**	**01 51 44.7**	**-1.9**
SKJI	**Sukabumi**	**2.13**	**87**	P	**Pn**	**01 51 49.0**	**+0.3**
LWLI	**Liwa**	**2.13**	**350**	P	**Pn**	**01 51 48.4**	**-0.4**
KLI	**Kotabumi**	**2.30**	**11**	P	**Pn**	**01 51 50.0**	**-1.0**
DBJI	**Dramaga**	**2.39**	**76**	P	**Pn**	**01 51 51.3**	**-0.9**
DBJI				S	**Sn**	**01 52 20.7**	**+0.4**
KLSI		**2.45**	**7**	P	**Pn**	**01 51 53.3**	**+0.2**
MDSI	**Maura Dua**	**2.64**	**355**	P	**Pn**	**01 51 55.3**	**-0.4**
MDSI				S	**Sn**	**01 52 28.2**	**+1.7**
CNJI	**Cibinong**	**2.70**	**94**	P	**Pn**	**01 51 55.4**	**-1.1**
CNJI				S	**Sn**	**01 52 28.5**	**+0.6**
EGSI	**Enggano, Bengk**	**2.77**	**310**	P	**Pn**	**01 51 56.8**	**-0.6**
MNAI	**Manna**	**3.12**	**332**	P	**Pn**	**01 52 01.3**	**-0.9**
BBJI	**Bungbulang**	**3.23**	**96**	P	**Pn**	**01 52 02.4**	**-1.4**
KSI	**Kapahiang**	**3.91**	**332**	P	**Pn**	**01 52 13.2**	**+0.1**
UBSI	**University, Be**	**3.97**	**327**	P	**Pn**	**01 52 14.1**	**+0.1**
KPJI	**Karang Pucung**	**4.49**	**93**	P	**Pn**	**01 52 21.3**	**+0.3**
MASI	**Maura Aman, Be**	**4.52**	**331**	P	**Pn**	**01 52 21.9**	**+0.4**
SNJI	**Sawahan-Nganju**	**7.31**	**96**	P	**Pn**	**01 53 00.8**	**+0.9**
SJI	**Sawahan**	**7.32**	**95**	P	**Pn**	**01 53 00.8**	**+0.9**
H01W3	**Cape Leeuwin H**	**29.03**	**163**	T	T	02 27 43.7	
	baz=344,slow=75						
H01W2	**Cape Leeuwin H**	**29.04**	**163**	T	T	02 27 43.3	
	baz=344,slow=75						
H01W1	**Cape Leeuwin H**	**29.04**	**163**	T	T	02 27 43.0	
	baz=344,slow=75						
H08S2	**Diego Garcia H**	**31.66**	**267**	T	T	02 31 01.6	
	baz=91,slow=75,SNR=6.9						
H08S3	**Diego Garcia H**	**31.67**	**267**	T	T	02 30 56.5	
	baz=91,slow=75,SNR=12						
H08S1	**Diego Carcia H**	**31.68**	**267**	T	T	02 30 59.6	
	baz=91,slow=75,SNR=5.7						
WRA	**Warramunga Arr**	**31.68**	**117**	P	**P**	**01 57 35.1**	**+0.4**
	0.5nm,0.8s,baz=287,slow=12,SNR=2.5						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**32.73**	**123**	P	**P**	**01 57 44.2**	**+0.4**
	0.3nm,0.3s,baz=297,slow=8.2,SNR=5.5						
	0.3nm,0.3s						
STKA	**Stephens Creek**	**42.48**	**130**	P	**P**	**01 59 06.7**	**+0.6**
	1.8nm,0.5s,baz=297,slow=8.0,SNR=4.9						
	1.8nm,0.5s						
SONM	**Songino Array**	**54.76**	**2**	P	**P**	**02 00 40.4**	**+0.1**
	0.3nm,0.5s,baz=190,slow=7.3,SNR=2.4						
	0.3nm,0.5s						
USRK	**Ussuriysk Ar.**	**56.84**	**23**	P	**P**	**02 00 55.4**	**+0.3**
	1.4nm,0.6s,baz=241,slow=5.9,SNR=4.0						
	1.4nm,0.6s						
MKAR	**Makanchi Array**	**57.18**	**342**	P	**P**	**02 00 57.4**	**-0.1**
	0.7nm,0.6s,baz=146,slow=8.7,SNR=8.1						
	0.7nm,0.6s						
H04N2	**CROZET ISLANDS**	**59.50**	**220**	T	T	03 05 54.6	
	baz=67,slow=74,SNR=9.9						
H04N1	**CROZET ISLANDS**	**59.52**	**220**	T	T	03 05 50.2	
	baz=67,slow=74,SNR=9.9						
H04N3	**CROZET ISLANDS**	**59.52**	**220**	T	T	03 05 48.9	
	baz=67,slow=74,SNR=9.0						
KURBB	**Kurchatov Arra**	**61.73**	**342**	P	**P**	**02 01 28.3**	**-0.4**
	1.7nm,0.2s,baz=154,slow=5.4,SNR=2.0						
	1.7nm,0.2s						
ZALV	**Zalesovo Beam**	**63.06**	**347**	P	**P**	**02 01 36.7**	**-0.8**
	0.5nm,0.3s,baz=145,slow=5.3,SNR=3.5						
	0.5nm,0.3s						
BVAR	**Borovoye Array**	**66.52**	**338**	P	**P**	**02 01 59.1**	**-1.0**
	0.5nm,0.6s,baz=117,slow=5.2,SNR=3.1						
	0.5nm,0.6s						
QSPA	**South Pole Qui**	**82.86**	**180**	P	**P**	**02 03 34.0**	**-0.7**
	0.7nm,0.3s,baz=292,slow=1.3,SNR=3.7						
	0.7nm,0.3s						
TXAR	**Lajitas Array**	**145.55**	**47**	PKPbc	**PKPab**	**02 10 49.8**	**+0.1**
	0.3nm,0.6s,baz=326,slow=0.8,SNR=4.2						

NEIC ***11*** *02:11:04.4±2.2, 19°.35N±0°.03×67°.20W±0°.03, h10^{km}±1^{km}, ML2.5/20, Md3.0/11(RSPR), Error ellipse: s-maj=6.0km s-min=4.0km az=153.0*

SDD ***11*** *02:11:10.7±2.0, 19°.17N×67°.06W, h16^{km}±10^{km}, MD3.1, ML2.9, MW2.7, Presumed earthquake*

OSPL ***11*** *02:11:11.0±0.7, 19°.10N×67°.36W, h18^{km}±3^{km}, ML2.3, Presumed earthquake*

RSPR ***11*** *02:11:13.1, 19°.06N×67°.24W, h10^{km}±31^{km}, MD3.0/11*

ISC 11 02:11:05.9±1.5**, 19°.29N**±0°.06×**67°.17W**±0°.03**, h12**^{km}±10^{km}**, n52, σ0^{s}.91**/70**, 17C-9D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.82**	**176**	Pg	**Pb**	**02 11 22.2**	**+0.1**
AGPR				Sg	**Sg**	**02 11 31.8**	**-0.7**
AGPR				IAML		02 11 33.6	
	160nm,0.3s						
AGPR				IAML		02 11 33.9	
	145nm,0.3s						
AGPR	**Aguadilla, PR**	**0.82**	**176**	⇓*e*P	**Pn**	**02 11 23.1**	**-0.2**
AGPR	**Aguadilla, PR**	**0.82**	**176**	*e*S	**Sb**	**02 11 33.3**	**+0.2**
AGPR	**Aguadilla, PR**	**0.82**	**176**	⇑*i*P	**Pb**	**02 11 22.1**	**0.0**
AGPR				⇑*i*S	**Sg**	**02 11 32.2**	**-0.2**
AGPR				IAML		02 11 34.0	
	comp=N,2μm,0.2s						
AGPR	**Aguadilla, PR**	**0.82**	**176**	*i* P	**Pn**	**02 11 23.0**	**-0.3**
AGPR				*e*S	**Sg**	**02 11 32.1**	**-0.3**
AGPR				IAML		02 11 35.1	
	comp=Z,127nm,0.6s						
IDE	**Isla Desecheo**	**0.94**	**198**		**Pb**	**02 11 24.5**	**+0.3**
IDE					**Sg**	**02 11 35.6**	**-0.7**
IDE	**Isla Desecheo**	**0.94**	**198**	⇓*e*P	**Pb**	**02 11 24.5**	**+0.3**
IDE	**Isla Desecheo**	**0.94**	**198**	*e*S	**Sg**	**02 11 35.6**	**-0.7**
AOPR	**Arecibo Observ**	**1.02**	**157**		**Pn**	**02 11 26.2**	**+0.1**
AOPR					**Sg**	**02 11 36.6**	**-2.2**
AOPR				IAML		02 11 47.1	
	comp=E,208nm,0.5s						
AOPR				IAML		02 11 48.1	
	comp=N,123nm,1.5s						
AOPR	**Arecibo Observ**	**1.02**	**157**	⇓*e*P	**Pn**	**02 11 26.3**	**+0.1**
AOPR	**Arecibo Observ**	**1.02**	**157**	*e*S	**Sb**	**02 11 39.1**	**+0.2**
AOPR	**Arecibo Observ**	**1.02**	**157**	⇑*i*P	**Pn**	**02 11 26.2**	**+0.1**
AOPR				*i* S	**Sg**	**02 11 38.3**	**-0.4**
PRSN	**Puerto Rico Se**	**1.06**	**179**		**Pb**	**02 11 26.1**	**-0.2**
PRSN	**Puerto Rico Se**	**1.06**	**179**	*i* P	**Pn**	**02 11 28.3**	**+1.6**
PRSN				⇑*i*S	**Sg**	**02 11 39.5**	**-0.8**
PRSN				IAML		02 11 44.2	
	comp=N,343nm,0.3s						
LSP	**Las Mesas**	**1.11**	**176**		**Pn**	**02 11 27.7**	**+0.3**
LSP					**Sg**	**02 11 41.6**	**-0.1**
LSP	**Las Mesas**	**1.11**	**176**	⇓*e*P	**Pn**	**02 11 27.7**	**+0.3**
LSP	**Las Mesas**	**1.11**	**176**	*e*S	**Sg**	**02 11 41.6**	**-0.1**
UUPR	**Utuado, UPR, P**	**1.11**	**157**		**Sb**	**02 11 41.5**	**-0.1**
UUPR	**Utuado, UPR, P**	**1.11**	**157**		**Pb**	**02 11 26.9**	**-0.3**
UUPR	**Utuado, UPR, P**	**1.11**	**157**	⇓*e*P	**Pn**	**02 11 28.5**	**+1.1**
UUPR	**Utuado, UPR, P**	**1.11**	**157**	*e*S	**Sb**	**02 11 41.5**	**-0.1**
ECPR	**Experimental S**	**1.23**	**141**	Pn	**Pg**	**02 11 29.4**	**-0.3**
ECPR				IAML		02 11 49.2	
	comp=N,170nm,0.3s						
ECPR	**Experimental S**	**1.23**	**141**	⇓*e*P	**Pg**	**02 11 31.9**	**+2.3**
ECPR	**Experimental S**	**1.23**	**141**	*e*S	**Sn**	**02 11 47.4**	**+1.8**
CRPR	**Cabo Rojo, PR**	**1.27**	**177**		**Pn**	**02 11 29.2**	**-0.4**

CRPR					Sb	02 11 44.2	-2.0
CRPR	Cabo Rojo, PR	1.27	177	IAML		02 11 55.0	
	comp=N,52nm,0.8s						
CRPR	Cabo Rojo, PR	1.27	177	⇑eP	Pn	02 11 29.7	+0.1
CRPR	Cabo Rojo, PR	1.27	177	i P	Pb	02 11 29.9	0.0
CRPR				i S	Sb	02 11 44.7	-1.6
CRPR				IAML		02 11 47.0	
	comp=N,439nm,0.3s						
CRPR	Cabo Rojo, PR	1.27	177	i P	Pb	02 11 29.8	-0.1
CRPR				eS	Sb	02 11 44.4	-1.9
CRPR				IAML		02 11 46.3	
	comp=Z,61nm,0.5s						
MLPR	Magueyes Islan	1.32	175	⇑eP	Pn	02 11 30.4	+0.2
MLPR	Magueyes Islan	1.32	175	eS	Sb	02 11 46.4	-1.0
MLPR	Magueyes Islan	1.32	175	⇑iP	Pg	02 11 31.1	-0.1
MLPR				⇑iS	Sb	02 11 45.9	-1.6
MLPR				IAML		02 11 47.9	
	comp=N,189nm,0.3s						
GBPR	Guanica, Bosqu	1.33	168		Pg	02 11 32.6	+1.0
GBPR	Guanica, Bosqu	1.33	168	⇑eP	Pg	02 11 32.6	+1.0
OBIP	Obispado Ponce	1.35	156		Pb	02 11 31.0	-0.2
OBIP					Sb	02 11 48.0	-0.4
OBIP				IAML		02 11 51.4	
	comp=E,53nm,0.3s						
OBIP				IAML		02 11 53.7	
	comp=N,46nm,0.3s						
OBIP	Obispado Ponce	1.35	156	⇓eP	Pg	02 11 32.5	+0.6
OBIP	Obispado Ponce	1.35	156	eS	Sb	02 11 48.1	-0.4
PCDR	Punta Cana, DR	1.38	236	⇑iP	Pg	02 11 35.5	+3.0
PCDR				⇑iS	Sg	02 11 50.0	-0.4
PCDR				IAML		02 12 30.6	
	comp=N,176nm,1.3s						
GCPR	Guaynabo City	1.42	133		Pn	02 11 30.9	-0.7
GCPR					Sn	02 11 50.0	-0.2
GCPR	Guaynabo City	1.42	133	⇓eP	Pg	02 11 33.9	+0.7
GCPR	Guaynabo City	1.42	133	eS	Sg	02 11 51.7	+0.1
SJG	San Juan	1.52	140	Pn	Pn	02 11 32.4	-0.6
SJG				IAML		02 12 00.8	
	comp=N,37nm,0.2s						
SJG	San Juan	1.52	140	i P	Pg	02 11 36.0	+0.9
SJG				eS	Sb	02 11 53.6	+0.3
SJG				IAML		02 12 00.5	
	comp=Z,22nm,1.4s						
HIDR	Higuey Centro	1.62	245	⇑iP	Pg	02 11 36.7	-0.3
HIDR				i S	Sg	02 11 57.6	-0.4
HIDR				IAML		02 11 58.8	
	comp=N,153nm,0.3s						
HUMP	Col San Antoni	1.69	132		Pn	02 11 35.4	0.0
HUMP					Sb	02 11 58.1	-0.3
HUMP	Col San Antoni	1.69	132	IAML		02 12 04.5	
	comp=N,50nm,0.2s						
HUMP	Col San Antoni	1.69	132	⇓eP	Pg	02 11 38.3	-0.2
HUMP	Col San Antoni	1.69	132	eS	Sg	02 12 00.1	-0.4
MIDR	Miches	1.80	261	⇑eP	Pg	02 11 40.5	0.0
MIDR	Miches	1.80	261	⇑iP	Pg	02 11 40.4	-0.1
MIDR				⇑iS	Sb	02 12 02.6	+1.2
MIDR				IAML		02 12 33.4	
	comp=N,49nm,2.2s						
DR12	Loma Pena Alta	2.15	257	Pn	Pn	02 11 39.9	-1.8
HATOM	Hato Mayor del	2.15	257	⇑iP	Pb	02 11 44.7	-0.1
HATOM				⇑iS	Sb	02 12 12.2	+0.7
HATOM				IAML		02 12 14.9	
	comp=N,63nm,0.3s						

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*IDC **11** 02:13:02.6±0.4, 0.°13S×124.°27E, h0^{km}, mb4.5/28, mbtmp4.5/29, ML4.2/1, MS3.3/7, Error ellipse: s-maj=24.4km s-min=10.8km az=75.0*

*MOS **11** 02:13:09.9±1.0, 0.°15S×124.°37E, h70^{km}, mb5.0/28, Error ellipse: s-maj=13.5km s-min=7.1km az=109.4*

*DJA **11** 02:13:09.0±2.0, 0°S±2°×12°4E±°, h13^{km}±16^{km}, M4.9/32, mB5.3/13, mb5.2/18, MLv4.9/32, Mw(mB)4.8/13, MwMwp4.9/1, Mwp5.2/1*

*NEIC **11** 02:13:12.1±2.3, 0.°23S±0.°07×124.°47E±0.°05, h69^{km}±2^{km}, mb5.0/73, Error ellipse: s-maj=10.3km s-min=7.3km az=165.0*

ISC 11 02:13:09.7±0.5, **0.°23S**±0.°04×**124.°48E**±0.°04, **h51**^{km}±3^{km}, **h51^{km}:pP-P, n255,** σ1^{s}41/266, **mb4.9**/87, **MS3.4**/6, **8C-11D, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	Manado	1.71	12	P	Pn	02 13 39.0	+1.9
MNI				S	Sn	02 14 01.3	+3.5
LUWI	Luwuk	1.89	245		Pn	02 13 41.3	+1.8
LUWI				Sn	Sn	02 14 07.1	+4.9
LUWI	Luwuk	1.89	245	P	Pn	02 13 42.2	+2.6
LUWI	Luwuk	1.89	245	P	Pn	02 13 41.0	+1.4
SANI	Sanana	2.35	140	P	Pn	02 13 45.6	-0.3
SANI	Sanana	2.35	140	S	Sn	02 14 12.9	-0.7
SANI	Sanana	2.35	140	P	Pn	02 13 45.1	-0.8
MRSI	Marisa	2.64	286	P	Pn	02 13 48.3	-1.5
TNTI	Ternate	3.05	71	Pn	Pn	02 13 57.8	+2.2
TNTI				Sn	Sn	02 14 34.9	+4.0
TNTI	Ternate	3.05	71	P	Pn	02 13 58.0	+2.5
TNTI	Ternate	3.05	71	P	Pn	02 13 57.4	+1.9
GAMI	Galela, Maluku	3.90	58	P	Pn	02 14 09.9	+2.8
TOLI2	Tolitoli	3.93	290	Pn	Pn	02 14 07.4	-0.2
TOLI2	Tolitoli	3.93	290	P	Pn	02 14 08.7	+1.1
NLAI	Namlea	3.97	139	P	Pn	02 14 08.9	+0.8
SGSI	Sangihe	4.03	15	P	Pn	02 14 10.7	+1.7
KDI	Kendari	4.14	207	P	Pn	02 14 12.1	+1.6
MPSI	Mapaga	4.62	277	P	Pn	02 14 18.5	+1.5
PCI	Palu	4.69	262	P	Pn	02 14 19.0	+1.0
KRAI	Karang Ratu	4.97	128	P	Pn	02 14 24.1	+2.3
AAI	Ambon	5.05	133	P	Pn	02 14 24.2	+1.2
	1.6nm7µm282nm,0.6s						
MSAI	Masohi	5.41	125	P	Pn	02 14 29.6	+1.6
TTSI	Tana Toraja	5.43	239	P	Pn	02 14 30.3	+2.1
BBSI	Bau Bau	5.56	200	P	Pn	02 14 32.4	+2.5
	0.5nm1µm78nm,0.7s						
SPSI	Sidrap Palu	5.99	232	P	Pn	02 14 38.1	+2.2
	0.9nm4µm209nm,0.7s						
BNSI	Bone	6.02	226	P	Pn	02 14 38.4	+2.2
	0.8nm2µm221nm,0.6s						
MMSI	Mamuju	6.08	246	P	Pn	02 14 38.6	+1.5
	1.0nm2µm147nm,0.8s						
PMSI	Majene	6.44	240	P	Pn	02 14 43.8	+1.7
	1.0nm2µm141nm,0.8s						
BKSI	Bulukumba	6.67	221	P	Pn	02 14 47.6	+2.4
	0.6nm729nm62nm,0.5s						
KAPI	Kappang	6.70	225	Pn	Pn	02 14 47.1	+1.6
	14nm,0.3s,baz=244,slow=21,SNR=24						
KAPI				Sn	Sn	02 16 00.7	+0.2
	20nm,0.3s,baz=29,slow=23,SNR=11						
KAPI	Kappang	6.70	225	Pn	Pn	02 14 47.4	+1.8
KAPI	Kappang	6.70	225	P	Pn	02 14 47.0	+1.4
KAPI	Kappang	6.70	225	S	Sn	02 16 02.0	+1.4
KAPI	Kappang	6.70	225	P	Pn	02 14 46.6	+1.0
	0.2nm32nm,0.5s						
KAPI	Kappang	6.70	225	P	Pn	02 14 47.4	+1.8
SWI	Sorong	6.81	95	P	Pn	02 14 48.2	+1.1
BNDI	Bandanaira	6.89	128	P	Pn	02 14 50.2	+2.0
BNDI	Bandanaira	6.89	128	P	Pn	02 14 49.5	+1.3
MKS	Makassar	7.04	225	P	Pn	02 14 52.6	+2.4
	0.7nm2µm203nm,0.6s						
DAV	Davao City (W)	7.34	9	LR	LR	02 17 55.4	
	comp=Z,310nm,20.7s,baz=157,slow=40						
BKB	Balikpapan	7.65	262	Pn	Pn	02 15 00.3	+1.6
MYLDM	Lahad Datu	8.04	312	Pn	Pn	02 15 05.9	+2.0
MYLDM	Lahad Datu	8.04	312	P	Pn	02 15 07.5	+3.5
FAKI	Fak Fak	8.21	109	Pn	Pn	02 15 06.0	-0.3
FAKI	Fak Fak	8.21	109	P	Pn	02 15 06.5	+0.2
FAKI	Fak Fak	8.21	109	P	Pn	02 15 06.0	-0.3
	1µm58nm,0.5s						
EDFI	Ende, Flores	8.90	198	P	Pn	02 15 17.4	+1.5
SOEI	Soe	9.46	181	P	Pn	02 15 23.6	0.0
BATI	Baumata	9.94	185	LR	LR	02 19 38.0	
	comp=Z,313nm,20.2s,baz=339,slow=39						
SAUI	Saumlaki	10.27	139	Pn	Pn	02 15 37.0	+2.5
KKM	Kota Kinabalu	10.34	307	Pn	Pn	02 15 37.5	+1.8
KKM	Kota Kinabalu	10.34	307	P	Pn	02 15 38.4	+2.8
KKM	Kota Kinabalu	10.34	307	P	Pn	02 15 38.0	+2.4
PLAI	Plampang	10.84	218	P	Pn	02 15 43.9	+1.6
MTN	Manton Dam	14.16	152	Pn	Pn	02 16 28.1	+0.5
KNRA	Kununurra	15.92	165	Pn	Pn	02 16 50.9	+0.4
JAY	Jayapura	16.38	98	LR	LR	02 24 14.1	
	comp=Z,85nm,18.6s,baz=340,slow=40						
FITZ	Fitzroy Crossi	17.79	176	P	Pn	02 17 13.9	+0.1
	0.5nm,0.3s,baz=5.1,slow=9.8,SNR=14						
	2.7nm,0.5s						
FITZ	Fitzroy Crossi	17.79	176	P	P	02 17 15.2	+1.2
BBJI	Bungbulang	18.25	246	P	Pn	02 17 22.2	+2.6
MBWA	Marble Bar	21.31	192	P	P	02 17 52.7	+0.3
PSA00	Pilbara Seismi	21.69	192	P	P	02 17 56.6	+0.2
PSA00	Pilbara Seismi	21.69	192	P	P	02 17 56.0	-0.4
PSA00				IAmb	IAmb	02 17 57.9	
	comp=Z,6.7nm,1.1s						
WB0	Warramunga Arr	21.71	154	P	P	02 17 55.8	-0.9
WRAB	Tennant Creek	21.83	154	P	P	02 17 57.1	-0.9
WRAB	Tennant Creek	21.83	154	⇑eP	P	02 17 56.0	-2.0
WRA	Warramunga Arr	21.84	154	P	P	02 17 57.8	-0.3
	comp=Z,8.9nm,0.8s,baz=331,slow=12,SNR=28						
WRA				PcP	PcP	02 21 57.4	+0.7
	comp=Z,1.0nm,0.5s,baz=330,slow=2.1,SNR=5.2						
	comp=Z,8.9nm,0.8s						
WRA	Warramunga Arr	21.84	154	i P	P	02 17 58.7	+0.6
COEN	Coen	22.99	127	P	P	02 18 11.0	+0.6
COEN	Coen	22.99	127	P	P	02 18 10.9	+0.6
TPUB	Ta-pu	23.69	351	P	P	02 18 16.0	-1.0
TPUB				IAmb	IAmb	02 18 20.9	
	comp=Z,42nm,0.8s						
TPUB	Ta-pu	23.69	351	P	P	02 18 20.5	+3.5
IPM	Ipoh	23.90	282	P	P	02 18 17.7	-1.3
AS31	Alice Springs	25.02	159	P	P	02 18 30.3	+1.1
ASAR	Alice Springs	25.02	159	P	P	02 18 30.1	+0.8
	comp=Z,2.1nm,0.6s,baz=343,slow=14,SNR=26						
ASAR				PcP	PcP	02 22 04.0	+0.7
	comp=Z,3.0nm,0.4s,baz=352,slow=2.0,SNR=20						
ASAR				LR	LR	02 29 08.8	
	comp=Z,41nm,19.2s,baz=297,slow=38						
	comp=Z,2.1nm,0.6s						
QIS	Mount Isa	25.04	145	P	P	02 18 30.7	+1.3
MEEK	Meekatharra	26.85	192	P	P	02 18 45.6	-0.1
JOW	Kunigami	27.16	7	LR	LR	02 29 37.6	
	comp=Z,49nm,19.9s,baz=203,slow=37						
FORT	Forrest	30.57	174	P	P	02 19 18.4	-0.3
CMAR	Chiang Mai Arr	31.22	308	P	P	02 19 23.2	-1.4
	comp=Z,2.7nm,0.7s,baz=138,slow=7.5,SNR=14						
CMAR				PcP	PcP	02 22 19.1	+0.5
	comp=Z,2.0nm,0.5s,baz=180,slow=2.0,SNR=11						
CMAR				LR	LR	02 32 37.3	
	comp=Z,35nm,20.1s,baz=120,slow=38						
	comp=Z,2.7nm,0.7s						
CMAR	Chiang Mai Arr	31.22	308	P	P	02 19 23.8	-0.8
CMAR	Chiang Mai Arr	31.22	308	ceP	P	02 19 25.8	+1.1
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CHTO	Chiang Mai	31.42	308	P	P	02 19 25.9	-0.5
CHTO				IAmb	IAmb	02 19 28.3	
	comp=Z,11nm,0.8s						
CHTO	Chiang Mai	31.42	308	P	P	02 19 25.9	-0.5
CHTO				pmax	pmax		
	comp=Z,11nm,0.8s						
CHTO	Chiang Mai	31.42	308	P	P	02 19 27.3	+0.9
NJ2	Nanjing	32.55	351	eP	P	02 19 38.1	+2.0
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ENH	Enshi	33.53	336	P	P	02 19 44.7	-0.1
ENH				IAmb	IAmb	02 19 47.4	
	comp=Z,14nm,0.6s						
JNU	Nakatsue	33.72	10	P	P	02 19 45.2	-1.2
	comp=Z,11nm,0.8s,baz=97,slow=2.9,SNR=5.2						
	comp=Z,11nm,0.8s						
JNU	Nakatsue	33.72	10	P	P	02 19 45.6	-0.8
JNU				IAmb	IAmb	02 19 47.9	
	comp=Z,15nm,0.9s						
BBOO	Buckleboo	34.19	162	P	P	02 19 50.2	-0.2
BBOO				IAmb	IAmb	02 21 01.8	
	comp=Z,67nm,1.9s						
PZH	PanZhiHua	34.45	322	P	P	02 19 54.8	+1.9
JMN	Monobe	34.92	14	P	P	02 19 56.5	-0.2
JMN				IAmb	IAmb	02 20 12.7	
	comp=Z,24nm,1.0s						
JMN	Monobe	34.92	14	P	P	02 19 58.0	+1.3
STKA	Stephens Creek	35.39	154	P	P	02 20 02.5	+1.7
	comp=Z,1.5nm,0.3s,baz=14,slow=4.6,SNR=4.0						
	comp=Z,1.5nm,0.3s						
STKA	Stephens Creek	35.39	154	P	P	02 20 01.4	+0.6
STKA				IAmb	IAmb	02 20 21.1	
	comp=Z,66nm,1.6s						
LYN	LuoYang	36.39	343	P	P	02 20 11.0	+1.7
LYN				pmax	pmax		
	comp=Z,16nm,0.8s						
CD2	Chengdu	36.70	329	P	P	02 20 12.8	+0.8
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
XAN	Xi'an	37.09	338	P	P	02 20 16.2	+0.9
XAN				pP	sP	02 20 29.7	-3.4
XAN				pmax	pmax		
	comp=Z,16nm,0.8s						
JGF	Kuroka	37.62	17	P	P	02 20 19.5	-0.2
JGF				IAmb	IAmb	02 21 28.4	
	comp=Z,22nm,1.4s						
KSRS	Korea Array	37.64	4	P	P	02 20 17.8	-2.0
	comp=Z,1.5nm,0.5s,baz=175,slow=9.8,SNR=6.2						
KSRS				LR	LR	02 38 13.1	
	comp=Z,11µm,19.1s,baz=185,slow=40						
	comp=Z,1.5nm,0.5s						
MAJO	Matsushiro	38.75	18	deP	P	02 20 28.9	-0.3
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MJAR	Matsushiro Arr	38.75	18	P	P	02 20 27.9	-1.3
	comp=Z,4.5nm,0.6s,baz=193,slow=9.3,SNR=9.5						
MJAR				PP	PP	02 21 56.6	-2.2
	comp=Z,2.3nm,0.4s,baz=202,slow=8.5,SNR=5.2						
	comp=Z,4.5nm,0.6s						
MJAR	Matsushiro Arr	38.75	18	P	P	02 20 28.9	-0.3
MJAR	Matsushiro Arr	38.75	18	P	P	02 20 28.9	-0.3
MJAR				pmax	pmax		
	comp=Z,19nm,1.9s						
JSD	Sado	40.15	17	P	P	02 20 40.4	-0.4
JSD				IAmb	IAmb	02 21 05.6	
	comp=Z,97nm,2.0s						
JSD	Sado	40.15	17	P	P	02 20 42.3	+1.5
SHL	Shillong	40.61	312	P	P	02 20 44.1	-1.0
SHL	Shillong	40.61	312	P	P	02 20 44.1	-1.0
SHL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BJI	Beijing	40.80	350	P	P	02 20 47.6	+1.5
BJI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LZDM	Lanzhou Array	40.87	334	P	P	02 20 45.8	-1.5
	comp=Z,1.1nm,0.3s,baz=156,slow=3.9,SNR=1.5						
	comp=Z,1.1nm,0.3s						
LZH	Lanzhou	40.92	334	eP	P	02 20 44.5	-3.0
LZH				sP	sP	02 21 08.2	+2.9
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
HHC	Hu-ho-hao-te	42.55	345	eP	P	02 21 01.8	+1.2
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,79nm,6.6s						
BTO	Baotou	42.73	344	eP	P	02 21 03.9	+1.8
BTO				PP	PP	02 22 47.7	+5.7
BTO				S	S	02 27 25.2	+2.9
BTO				pmax	pmax		
	comp=Z,13nm,0.5s						
BTO				pmax	pmax		
	comp=Z,98nm,5.3s						
CN2	Changchun	43.85	1	P	P	02 21 16.2	+5.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USRK	Ussuriysk Ar.	44.74	8	P	P	02 21 17.9	-0.2
	comp=Z,6.7nm,0.3s,baz=185,slow=7.0,SNR=24						
	comp=Z,6.7nm,0.3s						
MDJ	Mudanjiang	44.89	5	P	P	02 21 19.4	+0.2
MDJ				IAmb	IAmb	02 21 21.1	
	comp=Z,19nm,1.1s						
MDJ	Mudanjiang	44.89	5	P	P	02 21 19.9	+0.7
MDJ				pmax	pmax		
	comp=Z,17nm,0.6s						
GTA	Gaotai	45.46	333	eP	P	02 21 25.4	+1.4
GTA				sP	sP	02 21 42.1	+0.1
GTA				PcP	PcP	02 23 04.3	+1.9
GTA				pmax	pmax		
	comp=Z,20nm,1.2s						
GOMU	GeErMu	45.54	326	P	P	02 21 25.6	+0.6
GOMU				pP	pP	02 21 37.3	-0.2
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
EVN	Everest	45.70	311	P	P	02 21 26.4	-0.4
EVN				IAmb	IAmb	02 21 28.3	
	comp=Z,10nm,0.5s						
BNX	BinXian	45.85	3	⇓P	P	02 21 27.6	+0.7
BNX				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ASAJ	Asahikawa	47.02	18	P	P	02 21 35.6	-0.4
	comp=Z,4.0nm,0.3s,baz=220,slow=7.6,SNR=6.1						
	comp=Z,4.0nm,0.3s						
ASAJ	Asahikawa	47.02	18	P	P	02 21 36.6	+0.6
ASAJ				pmax	pmax		
	comp=Z,59nm,1.9s						
JKA	Kamikawa-asahi	47.02	18	P	P	02 21 36.6	+0.5
JKA				IAmb	IAmb	02 22 38.9	
	comp=Z,59nm,1.9s						
HYB	Hyderabad	48.48	294	eP	P	02 21 47.9	+0.1
HYB				epP	sP	02 22 05.3	-0.6
HILR	Hailar Array B	49.77	356	P	P	02 21 57.0	-0.1
	comp=Z,12nm,0.5s,baz=173,slow=10,SNR=12						
	comp=Z,12nm,0.5s						
ULN	Ulaanbaatar	50.25	345	P	P	02 22 00.5	-0.5
ULN				IAmb	IAmb	02 22 02.8	
	comp=Z,5.6nm,0.7s						
ULN	Ulaanbaatar	50.25	345	ceP	P	02 22 00.9	-0.1
ULN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HEH	HeiHe	50.36	2	eP	P	02 22 01.8	+0.2
HEH				pmax	pmax		
	comp=Z,28nm,0.7s						
SONM	Songino Array	50.40	344	P	P	02 22 01.5	-0.6
	comp=Z,5.8nm,0.7s,baz=161,slow=7.9,SNR=31						
	comp=Z,5.8nm,0.7s						
SONM	Songino Array	50.40	344	P	P	02 22 01.0	-1.1
SONM				IAmb	IAmb	02 22 04.1	
	comp=Z,7.4nm,0.9s						
WMQ	Urumqi	54.77	328	eP	P	02 22 34.2	-0.2
WMQ				pmax	pmax		
	comp=Z,16nm,1.1s						
SKR	Severo-Kuril's	57.42	23	⇓eP	P	02 22 53.3	+0.2
WUS	Wushi	58.10	321		P	02 22 58.1	-0.2
WUS				IAmb	IAmb	02 23 00.3	
	comp=Z,15nm,1.2s						
DGZ	Jazzator, Alta	58.99	333	⇑eP	P	02 23 03.3	-1.1
KSH	Kashi	59.34	318	P	P	02 23 08.6	+1.6
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MK31	Makanchi Array	59.60	328	c iP	P	02 23 07.2	-1.2
MKAR	Makanchi Array	59.60	328	P	P	02 23 07.3	-1.1
	comp=Z,4.5nm,0.5s,baz=124,slow=7.9,SNR=58						
MKAR				PcP	PcP	02 23 54.7	-0.6
	comp=Z,2.1nm,0.6s,baz=129,slow=3.4,SNR=5.8						
	comp=Z,4.5nm,0.5s						
MAKZ	Makanchi	59.77	328	P	P	02 23 08.4	-1.2
MAKZ				IAmb	IAmb	02 23 10.6	
	comp=Z,5.8nm,0.7s						
MAKZ	Makanchi	59.77	328	P	P	02 23 08.5	-1.2
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MAKZ	Makanchi	59.77	328	P	P	02 23 08.4	-1.2
MAKZ				sP	pwP	02 23 33.8	+6.6
MAKZ				PcP	PcP	02 23 55.4	-0.6
KDJ	Kajisay	59.89	321	P	P	02 23 09.5	-1.2
KDJ				IAmb	IAmb	02 23 12.4	
	comp=Z,11nm,0.9s						
KDJ	Kajisay	59.89	321	P	P	02 23 09.5	-1.2
KDJ				pmax	pmax		
	comp=Z,11nm,0.9s						
PEA0B	Petropavlovsk-	59.93	22	P	P	02 23 12.0	+1.5
PEA0B	Petropavlovsk-	59.93	22	P	P	02 23 12.0	+1.5
PEA0B				pmax	pmax		
	comp=Z,62nm,1.4s						
PETK	Petropavlovsk-	59.93	22	P	P	02 23 10.9	+0.4
	comp=Z,6.4nm,0.6s,baz=178,slow=3.9,SNR=4.8						
	comp=Z,6.4nm,0.6s						
PETK	Petropavlovsk-	59.93	22	P	P	02 23 12.1	+1.6
BOOM	Boomskoye usch	60.86	321	P	P	02 23 16.8	-0.6
BOOM	Boomskoye usch	60.86	321	P	P	02 23 16.8	-0.6
BOOM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BKZ	Black Stump Fm	61.25	136	P	P	02 23 20.5	+0.6
BKZ				IAmb	IAmb	02 24 18.8	
	comp=Z,50nm,1.9s						
MANEM	Manem	61.44	314	P	P	02 23 20.7	-0.8
MANEM				IAmb	IAmb	02 23 24.5	
	comp=Z,45nm,1.8s						
AAK	Ala-Archa	61.85	320	LR	LR	02 53 16.0	
	comp=Z,46nm,18.0s,baz=156,slow=39						
AAK	Ala-Archa	61.85	320	P	P	02 23 23.7	-0.3
AAK				IAmb	IAmb	02 23 26.1	
	comp=Z,4.6nm,0.7s						
AAK	Ala-Archa	61.85	320	⇓eP	P	02 23 23.5	-0.5
AAK				pmax	pmax		
	comp=Z,12nm,1.7s						
AAK	Ala-Archa	61.85	320	P	P	02 23 23.6	-0.5
AAK				pP	pwP	02 23 41.5	-0.2
AAK				PcP	PcP	02 24 04.0	-0.6
KBL	Kabul	62.23	310	P	P	02 23 24.9	-1.8
KBL				IAmb	IAmb	02 23 25.8	
	comp=Z,5.4nm,0.7s						
KBL	Kabul	62.23	310	P	P	02 23 24.9	-1.8
KBL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
YAK	Yakutsk	62.23	3	P	P	02 23 26.0	+0.1
YAK	Yakutsk	62.23	3	eP	P	02 23 26.3	+0.4
YAK				e		02 24 06.1	
YAK				e		02 25 42.9	
YAK				ePPP	PPP	02 27 09.8	
YAK				eS	S	02 31 49.6	+1.8
YAK				e*SS	sS	02 32 08.0	-2.7
YAK				e		02 33 13.9	
YAK				eSS	SS	02 35 52.5	+0.7
YAK				pmax	pmax		
	comp=Z,36nm,1.4s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.7s						
YAK				pmax	pmax		
	comp=E,8.0nm,2.5s						
YAK				pmax	pmax		
	comp=Z,406nm,8.7s						
YAK				pmax	pmax		
	comp=N,180nm,5.6s						
YAK				pmax	pmax		
	comp=E,155nm,5.2s						
YAK				smax	smax		
	comp=E,126nm,3.7s						
YAK				smax	smax		
	comp=N,97nm,5.3s						
YAK	Yakutsk	62.23	3	P	P	02 23 26.2	+0.3
YAK				sP	pwP	02 23 51.8	+8.2
GAR	Garm	63.02	315	P	P	02 23 30.2	-1.7
GAR				IAmb	IAmb	02 23 32.8	
	comp=Z,7.6nm,0.6s						
MA2	Magadan	63.08	15	P	P	02 23 31.4	-0.3
MA2	Magadan	63.08	15	P	P	02 23 31.4	-0.3
MA2				pmax	pmax		
	comp=Z,142nm,1.9s						
ZAA0	Zalesovo Array	63.14	335	P	P	02 23 30.4	-1.7
ZALV	Zalesovo Beam	63.14	335	P	P	02 23 30.1	-2.1
	comp=Z,2.6nm,0.4s,baz=132,slow=6.1,SNR=18						
	comp=Z,2.6nm,0.4s						
CHGR	Chuyangaron	63.71	314	P	P	02 23 34.3	-2.1
CHGR	Chuyangaron	63.71	314	P	P	02 23 34.3	-2.1
CHGR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KURBB	Kurchatov Arra	63.91	329	P	P	02 23 35.9	-1.5
	comp=Z,6.1nm,0.5s,baz=133,slow=5.9,SNR=41						
	comp=Z,6.1nm,0.5s						
KURK	Kurchatov	63.92	329	P	P	02 23 36.1	-1.3
KURK				IAmb	IAmb	02 23 38.6	
	comp=Z,16nm,0.8s						
KURK	Kurchatov	63.92	329	d iP	P	02 23 36.0	-1.3
KURK				pmax	pmax		
	comp=Z,13nm,0.7s						
KURK	Kurchatov	63.92	329	P	P	02 23 36.1	-1.3
KURK				pP	pwP	02 23 54.2	-0.9
KK31	Karatay Array	64.66	319	P	P	02 23 40.6	-1.8
KK31	Karatay Array	64.66	319	P	P	02 23 40.6	-1.8
KKAR	Karatay Array	64.66	319	P	P	02 23 40.8	-1.6
KKAR	Karatay Array	64.66	319	P	P	02 23 40.8	-1.6
BVAR	Borovoye Array	69.45	328	P	P	02 24 11.2	-1.4
	comp=Z,3.7nm,0.6s,baz=129,slow=8.5,SNR=15						
	comp=Z,3.7nm,0.6s						
BORK	Borovoye	69.50	328	P	P	02 24 11.4	-1.5
BORK	Borovoye	69.50	328	⇑eP	P	02 24 11.5	-1.4
BORK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
TIXI	Tiksi	71.82	1	P	P	02 24 25.9	-0.8
TIXI				IAmb	IAmb	02 24 31.3	
	comp=Z,6.8nm,0.5s						
TIXI	Tiksi	71.82	1	⇓eP	P	02 24 25.8	-0.8
TIXI				pmax	pmax		

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       comp=Z,7.0nm,0.8s
TIXI   Tiksi              71.82   1   P       P        02 24 26.2 -0.4
TIXI                                  pP      pwP      02 24 44.0 -0.6
ATKA   Atka Island        73.02  34   P       P        02 24 33.9 -0.2
NRIK   Noril'sk           73.75 347   P       P        02 24 37.5 -0.6
       comp=Z,4.0nm,0.4s,baz=126,slow=6.9,SNR=8.7
       comp=Z,4.0nm,0.4s
NRIK   Noril'sk           73.75 347   P       P        02 24 37.2 -0.9
NRIK   Noril'sk           73.75 347deP      P        02 24 37.9 -0.2
NRIK                                  pmax    pmax
       comp=Z,4.0nm,0.9s
AB31   Akbulak array      73.82 322   P       P        02 24 37.2 -1.8
ABKAR  Akbulak array      73.82 322   P       P        02 24 37.3 -1.7
ARTI   Arti               77.17 329   P       P        02 24 55.6 -2.4
ARTI                                  IAmb    IAmb     02 24 56.7
       comp=Z,9.0nm,0.5s
ARTI   Arti               77.17 329   P       P        02 24 55.6 -2.4
ARTI                                  pmax    pmax
       comp=Z,9.0nm,0.5s
ARTI   Arti               77.17 329   P       P        02 24 56.1 -2.0
ARTI                                  pP      pwP      02 25 14.3 -1.6
ABPO   Ambohimpanom       77.87 251   P       P        02 25 02.2 -0.7
ABPO                                  IAmb    IAmb     02 26 04.9
       comp=Z,43nm,1.7s
ABPO   Ambohimpanom       77.87 251   P       P        02 25 02.3 -0.7
ABPO                                  pmax    pmax
       comp=Z,43nm,1.7s
UNV    Unalaska Valle     77.94  34   P       P        02 25 03.0 +0.7
AKUT   Akutan             78.44  34   P       P        02 25 06.1 +1.0
VOI    Vohitsoka          78.49 248   P       P        02 25 05.5 -0.8
VOI                                   IAmb    IAmb     02 26 31.6
       comp=Z,86nm,1.8s
VNDA   Vanda              79.81 172   P       P        02 25 13.0 +0.8
       comp=Z,0.9nm,0.6s,baz=345,slow=6.4,SNR=5.6
       comp=Z,0.9nm,0.6s
VNDA   Vanda              79.81 172   P       P        02 25 10.4 -1.8
FALS   False Pass         79.96  34   P       P        02 25 14.2 +0.9
SDPT   Sand Point         81.72  34   P       P        02 25 23.0 +0.3
BELG   Belogornoye        82.18 323⇓eP      P        02 25 23.9 -1.3
GNI    Garni              82.30 310⇓eP      P        02 25 27.6 +1.2
GNI                                   pmax    pmax
       comp=Z,9.0nm,1.1s
G16K   Koyuk River        83.25  24   P       P        02 25 32.4 +1.8
G16K                                  IAmb    IAmb     02 25 32.7
       comp=Z,65nm,1.8s
O16K   Kokwok River B     83.84  30   P       P        02 25 34.9 +1.2
O16K                                  IAmb    IAmb     02 26 19.4
       comp=Z,80nm,1.9s
KBZ    Khabaz             84.07 314   P       P        02 25 33.6 -1.6
       comp=Z,1.4nm,0.8s,baz=121,slow=2.6,SNR=5.7
       comp=Z,1.4nm,0.8s
KBZ    Khabaz             84.07 314⇓eP      P        02 25 34.3 -0.9
KBZ                                   pmax    pmax
       comp=Z,5.0nm,1.1s
L18K   Granite Mounta     85.00  27   P       P        02 25 40.8 +1.3
L18K                                  IAmb    IAmb     02 27 59.6
       comp=Z,62nm,2.0s
ACHA   Angle Creek He     85.03  32   P       P        02 25 40.1 +0.3
ACHA                                  IAmb    IAmb     02 26 05.3
       comp=Z,33nm,1.5s
OHAK   Old Harbor         85.98  33   P       P        02 25 45.4 +1.0
IMAR   Indian Mountai     86.85  24   P       P        02 25 49.3 +0.7
ARPR   Arapgir-MALATY     87.15 309   P       P        02 25 51.1 +0.2
ARPR                                  IAmb    IAmb     02 25 53.6
       comp=Z,7.0nm,0.9s
KLMR   Klimovskoe         87.74 331  eP       P        02 25 50.1 -2.9
KLMR                                  pmax    pmax
       comp=Z,26nm,1.4s
L22K   Petersville        87.77  28   P       P        02 25 52.7 -0.5
L22K                                  IAmb    IAmb     02 26 09.1
       comp=Z,30nm,1.8s
SYO    Syowa Base         87.94 201⇓eP      P        02 25 54.8 +1.0
SYO    Syowa Base         87.94 201⇑esP     sP       02 26 20.9 +7.8
I23K   Minto, Yukon-K     88.59  25   P       P        02 25 57.0 +0.1
I23K                                  IAmb    IAmb     02 28 45.0
       comp=Z,31nm,1.9s
C24K   Franklin Bluff     89.11  20   P       P        02 25 59.7 +0.4
C24K                                  IAmb    IAmb     02 26 42.7
       comp=Z,47nm,1.8s
H24K   Noodor Dome        89.24  24   P       P        02 26 00.5 +0.4
H24K                                  IAmb    IAmb     02 26 18.2
       comp=Z,27nm,2.0s
MMAI   Mount Meron Ar     89.35 303   P       P        02 26 00.4 -1.0
       comp=Z,1.0nm,0.6s,baz=161,slow=3.3,SNR=1.8
       comp=Z,1.0nm,0.6s
ILAR   Eielson Array      89.62  25   P       P        02 26 01.2 -0.6
       comp=Z,0.6nm,0.5s,baz=246,slow=4.7,SNR=17
       comp=Z,0.6nm,0.5s
ILAR   Eielson Array      89.62  25   P       P        02 26 01.0 -0.8
QSPA   South Pole Qui     89.70 180   P       P        02 26 02.7 +0.5
       comp=Z,1.0nm,0.3s,baz=321,slow=2.9,SNR=5.3
       comp=Z,1.0nm,0.3s
N25K   Chitina, Valde     90.64  29   P       P        02 26 06.8  0.0
BRTR   Keskin Array B     90.80 310   P       P        02 26 06.8 -1.3
       comp=Z,0.7nm,0.7s,baz=104,slow=4.9,SNR=5.8
       comp=Z,0.7nm,0.7s
BRTR   Keskin Array B     90.80 310   P       P        02 26 07.2 -0.9
BRTR   Keskin Array B     90.80 310ceP      P        02 26 08.3 +0.3
GLB    Gilahina Butte     91.03  29   P       P        02 26 08.5  0.0
VRDI   Verde Repeater     91.20  29   P       P        02 26 09.7 +0.2
WAX    Waxell Ridge       91.52  30   P       P        02 26 11.3 +0.4
BCAR   Beaver Creek A     91.91  27   P       P        02 26 13.5 +1.0
ARCES  ARCESS Array B     93.36 340   P       P        02 26 17.2 -1.8
       comp=Z,2.0nm,0.7s,baz=76,slow=5.1,SNR=9.5
       comp=Z,2.0nm,0.7s
ARCES  ARCESS Array B     93.36 340   P       P        02 26 17.7 -1.4
ARCES  ARCESS Array B     93.36 340   P       P        02 26 17.7 -1.4
ARCES                                 pmax    pmax
       comp=Z,156nm,1.9s
EPYK   Eagle Plains       93.75  24   P       P        02 26 21.0 +0.1
SPITS  Spitsbergen Ar     93.90 349   P       P        02 26 20.4 -0.9
       comp=Z,5.2nm,0.8s,baz=82,slow=9.5,SNR=7.5
       comp=Z,5.2nm,0.8s
SPITS  Spitsbergen Ar     93.90 349   P       P        02 26 20.5 -0.9
SPITS                                 pmax    pmax
       comp=Z,142nm,1.8s
FINES  FINESS Array B     94.23 332   P       P        02 26 21.3 -1.9
       comp=Z,3.3nm,1.0s,baz=41,slow=6.1,SNR=11
       comp=Z,3.3nm,1.0s
FINES  FINESS Array B     94.23 332   P       P        02 26 21.0 -2.2
F31M   Tsiigehtchic       94.73  22   P       P        02 26 24.9 -0.4
WHY    Whitehorse         95.42  29   P       P        02 26 29.0 +0.2
MLR    Muntele Rosu       96.16 316   P       P        02 26 31.6 -1.0
       comp=Z,2.1nm,0.8s,baz=140,slow=7.9,SNR=2.5
       comp=Z,2.1nm,0.8s
BURAR  Bucovina Array     96.43 318   P       P        02 26 32.0 -1.6
BURAR                                 IAmb    IAmb     02 26 34.7
       comp=Z,3.3nm,1.2s
BURAR  Bucovina Array     96.43 318   P       P        02 26 32.6 -1.1
BURAR                                 pmax    pmax
       comp=Z,3.0nm,1.3s
NVL    N'lazarevskaya     97.11 198  eP       P        02 26 34.2 -1.9
NVL                                  e                 02 30 32.6
NVL                                  ePPP     PPP      02 32 36.3
NVL                                  eS       SKSac    02 37 05.7 -3.0
NVL                                  eSS      SS       02 44 31.9 -0.3
NVL                                  eSSS     SSS      02 48 17.8
NVL                                   pmax    pmax
       comp=Z,9.0nm,0.8s
NVL                                   MLR     MLR
       comp=Z,427nm,23.0s
HFS    Hagfors           100.44 332   P       Pdif     02 26 48.4 -2.8
       comp=Z,2.0nm,0.5s,baz=140,slow=3.4,SNR=7.3
PDAR   Pinedale Array    115.80  41           PKiKP    02 31 46.7 -0.6
PV10   Paradox Valley    118.02  46   PKPdf   PKiKP    02 31 52.6 +0.9
KUQ    Kuujjuuaa         121.39   8   PKPdf   PKPdf    02 31 57.3  0.0
MD01   Midelt array s    122.31 310   PKPdf   PKPdf    02 32 00.4 +0.4
SCHQ   Schefferville     124.79   8   PKP     PKiKP    02 32 04.5 +0.3
       comp=Z,2.5nm,0.6s,baz=18,slow=3.2,SNR=3.7
SCHQ   Schefferville     124.79   8           PKPdf    02 32 04.3 +0.4
TXAR   Lajitas Array     125.77  53   PKP     PKiKP    02 32 08.0 +0.9
       comp=Z,0.2nm,0.6s,baz=315,slow=0.5,SNR=3.5
R40A   Maddies Statio    129.27  37   PKPdf   PKiKP    02 32 13.7  0.0
VA06   Catapilco         144.14 157   PKPdf   PKPbc    02 32 39.2 +0.5
CPUP   Villa Florida     153.53 176   PKPbc   PKiKP    02 33 05.3 +1.7
       comp=Z,0.1nm,0.3s,baz=54,slow=3.2,SNR=4.2
CPUP                                  PKPab   pPKPbc   02 33 17.7 -0.1
       comp=Z,0.3nm,0.4s,baz=243,slow=6.8,SNR=3.6
LPAZ   La Paz            159.40 143   PKPab   PKPab    02 33 42.4 +0.3
       comp=Z,1.3nm,0.6s,baz=208,slow=4.9,SNR=4.8
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BEO ***11*** *02:29:23.0±3.2, 37.°05N×23.°32E, h70km±2km, ML4.1/8*
IDC ***11*** *02:29:24.3±0.7, 37.°49N×23.°93E, h150km±8km, mb3.7/20, mbtmp4.2/32, Error ellipse: s-maj=11.0km s-min=8.0km az=33.0*
HLW ***11*** *02:29:24.4, 37.°16N×23.°88E, h7km±25km, Ml4.4*
NEIC ***11*** *02:29:25.8±1.6, 37.°59N±0.°07×23.°97E±0.°06, h157km±5km, mb4.4/64, Error ellipse: s-maj=10.2km s-min=6.3km az=196.0*
MOS ***11*** *02:29:25.2±0.9, 37.°60N×24.°01E, h168km, mb4.4/20, Error ellipse: s-maj=6.3km s-min=3.5km az=93.0*
THE ***11*** *02:29:26.7, 38°N±2°×2°4E±°, h148km±2km, M4.0/62, MLh4.0/62*
ISK ***11*** *02:29:26.7, 37.°45N×24.°02E, h151km±2km, ML4.7/7*
ATH ***11*** *02:29:27.4, 37.°55N×24.°01E, h142km±1km, ML4.1/27, Manual Solution by F.Xalaris First location: 2019/12/11 02:30:04, This location: 2019/12/11 02:56:45 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*
PDG ***11*** *02:29:27.6±0.3, 37.°86N×23.°39E, h12km±24km, ML4.6/13, Error ellipse: s-maj=20.7km s-min=26.3km az=0.0*
GII ***11*** *02:29:29.8±0.0, 36.°866N±0.°002×24.°296E±0.°001, h142km, Mws4.8, confirmed*
NAO ***11*** *02:29:50.1, 41.°99N×25.°44E, h10km, MB3.5*
ISC 11 02:29:24.3±0.5, **37.°54N**±0.°04×**23.°98E**±0.°03, **h148**km±4km, **n606**, σ**2.s30**/670, **mb4.3**/61, **41C-38D**, **Southern Greece**

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Code   Station Name        Δ°   AZ°    Phase ID          Time     Res
                                      Op      ISC       h  m  s   ISC
LVRA   Laurium             0.19  20   P       Pn       02 29 46.7 +2.5
VLY    Voula,Athens        0.35 336   P       Pn       02 29 47.4 +2.6
VLY                                   S       Sn       02 30 01.7 +1.3
VLY    Voula,Athens        0.35 336   P       Pn       02 29 47.3 +2.6
VLY                                   S       Sn       02 30 01.5 +1.1
MET4   Agioi Theodoro      0.47 281   P       Pn       02 29 48.0 +2.8
MET1   Methana Town,       0.47 276   P       Pn       02 29 47.7 +2.5
ATH5   Athens Parliam      0.48 337   P       Pn       02 29 47.1 +1.9
ATH5                                  S       Sn       02 30 02.5 +1.2
ATH    Athens Observa      0.48 335   P       Pn       02 29 48.2 +2.9
ATH                                   S       Sn       02 30 03.5 +2.1
ATH    Athens Observa      0.48 335   P       Pn       02 29 47.0 +1.7
ATH                                   S       Sn       02 30 03.0 +1.6
ATH    Athens Observa      0.48 335   P       Pn       02 29 48.0 +2.7
ATH                                   S       Sn       02 30 03.6 +2.2
NOAC   Athens-Thissio      0.48 335   P       Pn       02 29 48.1 +2.8
ATHP   Athens-Neo Psi      0.49 341   P       Pn       02 29 48.2 +2.9
MET5   Makryloggos,Me      0.50 280   P       Pn       02 29 48.1 +2.7
MET2   Kameni Chora,       0.52 279   P       Pn       02 29 48.2 +2.7
PTL    Penteli             0.52 350   P       Pn       02 29 48.3 +2.8
PTL                                   S       Sn       02 30 03.5 +1.7
PTL    Penteli             0.52 350   P       Pn       02 29 48.1 +2.6
PTL                                   S       Sn       02 30 03.0 +1.2
DION   Dionisos Attik      0.54 356   P       Pn       02 29 48.3 +2.7
DION                                  S       Sn       02 30 03.9 +1.8
DION   Dionisos Attik      0.54 356   P       Pn       02 29 48.2 +2.6
DION                                  S       Sn       02 30 03.6 +1.6
ACHAR  Athens-Acharne      0.57 341   P       Pn       02 29 48.7 +2.9
KARY   Karystos            0.62  36   P       Pn       02 29 48.6 +2.6
KARY                                  S       Sn       02 30 04.0 +1.4
KARY   Karystos            0.62  36   P       Pn       02 29 48.5 +2.5
KARY                                  S       Sn       02 30 04.0 +1.4
MAGU   Magoula             0.66 326   P       Pn       02 29 48.9 +2.7
STFN   Stefani             0.73 332   P       Pn       02 29 49.5 +2.7
VILL   Villia              0.82 320   P       Pn       02 29 50.2 +2.7
VILL                                  S       Sn       02 30 07.6 +2.4
VIL2   Platees             0.88 321   P       Pn       02 29 50.1 +2.2
VIL2                                  S       Sn       02 30 07.7 +1.7
MHLO   Agia Marina, M      0.91 158   P       Pn       02 29 51.0 +2.9
MHLO   Agia Marina, M      0.91 158   P       Pn       02 29 50.7 +2.6
NPLA   Nafplio             0.94 272   P       Pn       02 29 51.0 +2.8
LTK    Loutraki            0.94 302   P       Pn       02 29 51.1 +2.8
LTK                                   S       Sn       02 30 08.8 +2.1
LTK    Loutraki            0.94 302   P       Pn       02 29 51.0 +2.6
LTK                                   S       Sn       02 30 09.1 +2.4
TNSA   Tinos               0.94  89   P       Pn       02 29 50.7 +2.4
ARS1   Argos               0.99 276   P       Pn       02 29 51.8 +3.0
KIAA   Kiato               1.08 297   P       Pn       02 29 52.5 +3.0
KYMI   Kymi, Euboea I      1.10   5   P       Pn       02 29 52.2 +2.4
MNVA   Monemvasia          1.13 222   P       Pn       02 29 52.6 +2.6
VLI    Veliai              1.16 226   P       Pn       02 29 52.8 +2.4
VLI    Veliai              1.16 226   P       Pn       02 29 52.7 +2.4
VLI                                   S       Sn       02 30 11.7 +1.5
NAX1   Naxos Island        1.20 111   P       Pn       02 29 53.1 +2.5
NPS1   Neapolis Lacon      1.25 216   P       Pn       02 29 53.8 +2.6
APE    Apeiranthos         1.32 110   P       Pn       02 29 54.4 +2.4
APE    Apeiranthos         1.32 110   Pn      Pn       02 29 54.0 +2.1
APE                                   Sn      Sn       02 30 14.6 +1.6
APE    Apeiranthos         1.32 110 ⇓P      Pn       02 29 55.1 +3.1
APE    Apeiranthos         1.32 110diP      Pn       02 29 54.3 +2.4
APE    Apeiranthos         1.32 110   P       Pn       02 29 54.0 +2.1
APE    Apeiranthos         1.32 110   P       Pn       02 29 54.2 +2.2
APE                                   S       Sn       02 30 14.9 +1.9
LKR    Lokris              1.35 326   P       Pn       02 29 54.3 +2.1
GUR    Goura               1.36 288   P       Pn       02 29 54.7 +2.4
GUR                                   S       Sn       02 30 16.4 +2.7
ATAL   Atalanti            1.38 327   P       Pn       02 29 54.8 +2.4
ATAL   Atalanti            1.38 327   P       Pn       02 29 54.8 +2.4
KTHA   Kythira Island      1.47 210   P       Pn       02 29 56.1 +2.7
KTHA   Kythira Island      1.47 210   Pn      Pn       02 29 56.1 +2.7
KTHA                                  Sn      Sn       02 30 17.3 +1.6
DLFA   Delphi              1.50 309   P       Pn       02 29 56.1 +2.4
AIDA   Aidipsos            1.51 331   P       Pn       02 29 56.2 +2.5
KLV    Kalavryta, Ach      1.53 290   P       Pn       02 29 56.4 +2.3
KLV    Kalavryta, Ach      1.53 290   P       Pn       02 29 56.4 +2.3
SAP3   Santorini-Thir      1.55 135   P       Pn       02 29 57.0 +2.8
KLV1   Kalavrita           1.56 289   P       Pn       02 29 57.4 +3.0
THR5   Thira Island,       1.57 135   P       Pn       02 29 57.2 +2.8
THR2   Thira island,       1.59 132   P       Pn       02 29 57.3 +2.6
THR2   Thira island,       1.59 132   P       Pn       02 29 57.3 +2.6
THR3   Thira Island,       1.60 134   P       Pn       02 29 57.7 +2.9
THR3   Thira Island,       1.60 134   P       Pn       02 29 57.6 +2.9
SNT5   Nea Kammeni, S      1.60 134   P       Pn       02 29 57.6 +2.8
AXAR   Agios Charalam      1.61 320   P       Pn       02 29 57.5 +2.7
AOS2   Alonissos-2         1.61 356   P       Pn       02 29 57.0 +2.1
THR9   Santorini-Faro      1.61 136   P       Pn       02 29 57.9 +2.9
THRA   Thira               1.61 133   P       Pn       02 29 57.9 +2.9
AOS    Alonnisos           1.64 357   P       Pn       02 29 56.9 +1.8
THR6   Thira Island,       1.64 135   P       Pn       02 29 57.3 +2.2
THR6   Thira Island,       1.64 135   P       Pn       02 29 57.4 +2.2
THR8   Santorini-Mono      1.65 133   P       Pn       02 29 57.8 +2.5
THR8   Santorini-Mono      1.65 133   P       Pn       02 29 57.8 +2.5
ITM    Ithomi              1.67 258   P       Pn       02 29 59.2 +3.6
ITM    Ithomi              1.67 258           Pn       02 29 59.2 +3.6
ITM                                   Sn      Sn       02 30 22.1 +2.6
ITM    Ithomi              1.67 258   Pn      Pn       02 29 59.1 +3.6
ITM                                   Sn      Sn       02 30 22.2 +2.7
ITM    Ithomi              1.67 258   P       Pn       02 29 59.1 +3.6
ITM                                   S       Sn       02 30 22.6 +3.1
THERA  Ancient Thera,      1.67 134   P       Pn       02 29 58.1 +2.5
THERA  Ancient Thera,      1.67 134   P       Pn       02 29 58.1 +2.5
AGEO   AgiosGiorgios,      1.68 296   P       Pn       02 29 58.3 +2.7
KALE   Kalithea            1.68 301   P       Pn       02 29 58.2 +2.5
KALE   Kalithea            1.68 301   P       Pn       02 29 58.2 +2.5
TRIZ   Trizonia            1.72 299   P       Pn       02 29 58.5 +2.5
ANKY   Antikythira Is      1.75 198   P       Pn       02 29 58.9 +2.5
ANKY   Antikythira Is      1.75 198   P       Pn       02 29 58.9 +2.5
ANKY                                  S       Sn       02 30 22.7 +1.7
SERG   Sergoula            1.75 301   P       Pn       02 29 58.9 +2.4
SERG   Sergoula            1.75 301   P       Pn       02 29 58.9 +2.4
AMT    Artemida-Makis      1.80 271   P       Pn       02 30 00.7 +3.7
LAM2   Lamia               1.83 319   P       Pn       02 30 00.2 +3.0
DRO    Drossia             1.84 284   P       Pn       02 30 01.1 +3.6
DRO    Drossia             1.84 284   P       Pn       02 30 01.0 +3.5
CHOS   Chios island        1.85  62   P       Pn       02 29 59.9 +2.3
CHOS   Chios island        1.85  62   Pn      Pn       02 29 59.3 +1.7
CHOS                                  Sn      Sn       02 30 26.0 +2.8
CHOS   Chios island        1.85  62   P       Pn       02 29 59.8 +2.2
ZARO   Zacharo             1.85 269   P       Pn       02 30 01.1 +3.6
EFP    Efpalio             1.86 299   P       Pn       02 30 00.1 +2.5
EFP    Efpalio             1.86 299   P       Pn       02 30 00.3 +2.7
NEO    Neokhori            1.86 342   P       Pn       02 29 59.9 +2.2
NEO    Neokhori            1.86 342   P       Pn       02 29 59.9 +2.2
UPR    University Cam      1.89 294   P       Pn       02 30 01.4 +3.5
PYL    PYLOS               1.89 251   P       Pn       02 30 00.5 +2.4
PATG   Patra B             1.91 292   P       Pn       02 30 02.0 +3.8
PYL1   Pylos               1.92 252   P       Pn       02 30 01.0 +2.6
ANX    Ano Chora           1.94 304   P       Pn       02 30 01.2 +2.6
ANX    Ano Chora           1.94 304   P       Pn       02 30 01.6 +3.0
MTHA   Methoni             1.95 249   P       Pn       02 30 02.0 +3.4
EAG2   Marmaro, Chios      1.96  58   P       Pn       02 30 01.1 +2.3
AGG    Agios Georgios      1.97 319   P       Pn       02 30 01.5 +2.5
AGG    Agios Georgios      1.97 319   P       Pn       02 30 01.0 +2.0
AGG    Agios Georgios      1.97 319   P       Pn       02 30 01.4 +2.4
AGRP   Agrapidokambos      1.98 296   P       Pn       02 30 02.5 +3.5
CHAN   Chania              2.01 178   P       Pn       02 30 01.2 +1.7
CHAN   Chania              2.01 178   P       Pn       02 30 01.1 +1.6
CHNB   Souda               2.04 178   P       Pn       02 30 01.7 +1.9
RLS    Riolos of Patr      2.06 285   P       Pn       02 30 03.9 +4.0
RLS    Riolos of Patr      2.06 285   P       Pn       02 30 03.8 +3.9
MAKR   Makrakomi, Fth      2.07 316   P       Pn       02 30 02.8 +2.7
AXS    Araxos              2.16 289   P       Pn       02 30 04.7 +3.6
KRL1   Karlovasi Samo      2.18  82   P       Pn       02 30 03.8 +2.4
MSL1   Messolongi          2.18 293   P       Pn       02 30 05.1 +3.7
EVR    Evrytania           2.19 310   P       Pn       02 30 04.1 +2.5
PVO    Paravola            2.21 300   P       Pn       02 30 06.0 +4.2
URLA   Izmir               2.23  68   Pn      Pn       02 30 04.5 +2.5
URLA                                  Sn      Sn       02 30 33.8 +2.8
SIGR   SIGRI               2.23  41   P       Pn       02 30 04.1 +2.1
SMG    Samos               2.28  85   P       Pn       02 30 04.9 +2.3
KNDR   Palaiochora Ch      2.31 187   P       Pn       02 30 05.7 +2.6
KNDR   Palaiochora Ch      2.31 187   Pn      Pn       02 30 05.8 +2.8
IDI    Anoyia              2.36 162   P       Pn       02 30 04.6 +0.9
       104nm,0.3s,baz=15,slow=6.1,SNR=779
IDI                                   S       Sn       02 30 34.1 +0.1
       476nm,0.3s,baz=342,slow=9.4,SNR=10
IDI    Anoyia              2.36 162   P       Pn       02 30 04.9 +1.2
IDI    Anoyia              2.36 162           Pn       02 30 04.8 +1.2
IDI                                   Sn      Sn       02 30 33.5 -0.5
IDI    Anoyia              2.36 162   Pn      Pn       02 30 05.1 +1.4
IDI                                   Sn      Sn       02 30 34.4 +0.4
IACM   Heraklion           2.39 158   P       Pn       02 30 05.4 +1.3
LRSO   Larissa Observ      2.47 330   P       Pn       02 30 07.3 +2.5
PRK    Paraskevi           2.48  46   P       Pn       02 30 07.3 +2.2
PRK    Paraskevi           2.48  46   P       Pn       02 30 07.0 +1.9
AST1   Astakos             2.49 295   P       Pn       02 30 08.1 +3.0
LTHK   Lithakia            2.50 275   P       Pn       02 30 07.5 +2.3
LIA    Limnos Island       2.54  21   P       Pn       02 30 07.6 +1.8
THL    Klokotos Trika      2.54 323   P       Pn       02 30 07.7 +1.9
TYRN   Tyrnavos            2.57 328   P       Pn       02 30 08.3 +2.2
BLCB   Balcova             2.57  70   P       Pn       02 30 08.1 +2.0
AMPL   Ampelaki            2.58 303   P       Pn       02 30 09.4 +3.1
RTZL   Ratzakli, Kefa      2.59 283   P       Pn       02 30 09.1 +2.6
NPS    Neapolis            2.62 149   P       Pn       02 30 07.8 +1.0
YKAV   Yalikavak-Bodr      2.67  98   Pn      Pn       02 30 10.2 +2.9
NISR   Nisiros             2.68 109   P       Pn       02 30 10.4 +2.9
GVD    Gavdhos             2.69 178   P       Pn       02 30 09.6 +1.9
GVD    Gavdhos             2.69 178   Pn      Pn       02 30 09.6 +1.9
BODT   Bodrum              2.70  99   P       Pn       02 30 11.3 +3.5
BODT   Bodrum              2.70  99   Pn      Pn       02 30 10.7 +2.9
VLS    Valsamata           2.76 284   P       Pn       02 30 10.0 +1.5
TETR   Tetrakomo, Epi      2.79 311   P       Pn       02 30 12.3 +3.3
OUR    Ouranopolis         2.80   0   P       Pn       02 30 10.9 +2.0
LIT    Litokhoron          2.81 336   P       Pn       02 30 11.4 +2.2
LIT    Litokhoron          2.81 336   Pn      Pn       02 30 11.4 +2.2
LIT    Litokhoron          2.81 336   P       Pn       02 30 11.4 +2.2
ARG2   Argostoli           2.83 284   P       Pn       02 30 11.3 +1.9
EVGI   Lefkada island      2.83 294   P       Pn       02 30 11.8 +2.3
NYDR   Nydri-Lefkada       2.84 295   P       Pn       02 30 11.8 +2.3
PLG    Polygyros           2.87 352   P       Pn       02 30 11.7 +1.8
PLG    Polygyros           2.87 352   P       Pn       02 30 11.0 +1.1
LXR1   Lixouri, Cepha      2.88 284   P       Pn       02 30 12.1 +2.2
LKD2   Lefkada island      2.90 297   P       Pn       02 30 12.9 +2.6
TSLK   Tsoukalades, L      2.92 297   P       Pn       02 30 13.2 +2.7
DRAG   Dragano-Lefkad      2.92 294   P       Pn       02 30 12.7 +2.2
DMLN   Damoulianata-K      2.94 285   P       Pn       02 30 12.8 +2.0
PRMD   Pramanda            3.01 312   P       Pn       02 30 15.2 +3.4
ZKR    Zakros              3.02 142   P       Pn       02 30 13.7 +1.8
ZKR    Zakros              3.02 142   Pn      Pn       02 30 14.3 +2.5
KPRO   Kipourio            3.16 321   P       Pn       02 30 15.8 +2.1
SMTH   Samothraki Isl      3.17  22   P       Pn       02 30 14.9 +1.2
THE    Thessaloniki        3.19 346   P       Pn       02 30 16.1 +2.1
THE    Thessaloniki        3.19 346   P       Pn       02 30 16.8 +2.9
JAN    Janina              3.24 312   P       Pn       02 30 17.4 +2.8
JAN    Janina              3.24 312   P       Pn       02 30 17.0 +2.4
KARP   Karpathos           3.24 127   P       Pn       02 30 16.2 +1.5
KARP   Karpathos           3.24 127   Pn      Pn       02 30 16.2 +1.5
KARP   Karpathos           3.24 127   Pn      Pn       02 30 16.7 +2.0
KZN    Kozani              3.26 329   P       Pn       02 30 16.6 +1.7
KZN    Kozani              3.26 329   P       Pn       02 30 16.0 +1.1
SOH    Sokhos              3.32 352   P       Pn       02 30 18.0 +2.4
SOH    Sokhos              3.32 352   P       Pn       02 30 18.2 +2.6
YER    Yerkesik            3.46  95   P       Pn       02 30 20.8 +3.4
IGT    Igoumenitsa         3.48 306   P       Pn       02 30 19.3 +1.6
ARG    Arkhangelos         3.58 110   P       Pn       02 30 22.2 +3.2
ARG    Arkhangelos         3.58 110   Pn      Pn       02 30 21.6 +2.6
ARG    Arkhangelos         3.58 110   P       Pn       02 30 21.6 +2.6
SRS    Serrai              3.59 355   P       Pn       02 30 21.0 +1.8
SRS    Serrai              3.59 355   P       Pn       02 30 21.2 +2.1
LFKM   Lefkimmi            3.62 303   P       Pn       02 30 21.7 +2.2
NEST   Nestorio            3.67 322   P       Pn       02 30 22.5 +2.3
BALB   Balikesir           3.71  54   Pn      Pn       02 30 22.5 +1.9
KNT    Kendrikon           3.72 347   P       Pn       02 30 23.2 +2.5
KNT    Kendrikon           3.72 347   P       Pn       02 30 23.5 +2.7
MANT   Manisa              3.74  74   Pn      Pn       02 30 23.6 +2.3
RDO    Rodhopi             3.81  18   P       Pn       02 30 23.2 +1.3
RDO    Rodhopi             3.81  18   Pn      Pn       02 30 23.3 +1.4
VAY    Valandovo           3.94 344  i P      Pn       02 30 25.7 +2.2
KBN    Korca               3.96 322   P       Pn       02 30 26.0 +2.0
KBN    Korca               3.96 322   P       Pn       02 30 25.9 +1.9
MMB    Musomishta          4.01 358   P       Pn       02 30 26.8 +2.2
KDZ    Kurdzhali           4.22  14   P       Pn       02 30 28.7 +1.4
BAND   Balkesir-Ban        4.27  48 ⇑P      Pn       02 30 29.6 +1.6
OHR    Ohrid               4.34 326  i P      Pn       02 30 30.8 +1.9
KKB    Krupnik             4.35 352   P       Pn       02 30 31.1 +2.1
VLO    Vlora               4.56 311   P       Pn       02 30 33.2 +1.5
PLD    Plovdiv             4.64   7   P       Pn       02 30 34.8 +1.9
AKAS   Kas                 4.70 104   Pn      Pn       02 30 36.5 +2.7
ELL    Elmali              4.80  98   Pn      Pn       02 30 38.2 +3.1
ELL    Elmali              4.80  98   P       Pn       02 30 38.3 +3.1
SKO    Skopje              4.84 337  i P      Pn       02 30 37.5 +1.9
BOSS   Bosilegrad          5.09 347  ePn      Pn       02 30 40.9 +2.1
VTS    Vitosha             5.11 354   P       Pn       02 30 41.1 +1.9
VTS    Vitosha             5.11 354  ePn      Pn       02 30 41.3 +2.1
ISP    Isparta             5.20  85   Pn      Pn       02 30 43.1 +2.7
ISP    Isparta             5.20  85⇑iP      Pn       02 30 42.3 +1.9
ISP                                   pmax    pmax
       comp=Z,29nm,0.9s
BARS   Barje               5.53 343  ePn      Pn       02 30 46.7 +2.1
ELND   Elena               5.58  14 ⇓P      Pn       02 30 45.8 +0.5
ULC    Ulcinj              5.73 322⇓iPn     Pn       02 30 46.7 -0.7
ULC                                  i Sn     Sn       02 31 46.5 -5.8
ZAPS   Zavoj               5.82 350  ePn      Pn       02 30 51.2 +2.6
PLVB   Pleven              5.87   5 ⇓P      Pn       02 30 49.9 +0.8
TIP    Timpagrande         5.91 288   Pn      Pn       02 30 50.6 +0.8
TIP    Timpagrande         5.91 288 ⇑P      Pn       02 30 50.9 +1.2
PVY    Plav                5.92 330⇓iPn     Pn       02 30 49.4 -0.5
PVY                                  i Sn     Sn       02 31 51.8 -5.1
DRME   Dracevica, Mon      5.93 323⇑iPn     Pn       02 30 49.6 -0.4
DRME                                 eSn      Sn       02 31 51.1 -5.9
SELS   Selova              6.08 340  ePn      Pn       02 30 53.1 +1.1
SELS                                 eSn      Sn       02 31 59.0 -1.7
PDG    Podgorica           6.09 325   Pn      Pn       02 30 51.9 -0.1
PDG    Podgorica           6.09 325 ⇑P      Pn       02 30 52.4 +0.4
PDG    Podgorica           6.09 325  ePn      Pn       02 30 51.4 -0.6
PDG                                  eSn      Sn       02 31 53.7 -7.0
PDG    Podgorica           6.09 325⇑iPn     Pn       02 30 51.7 -0.3
PDG                                  i Sn     Sn       02 31 55.0 -5.7
BUM    Brajici-Budva       6.16 322⇑iPn     Pn       02 30 52.3 -0.8
BUM                                  i Sn     Sn       02 31 56.5 -6.0
LOZB   Loznitsa            6.16  18 ⇑P      Pn       02 30 53.8 +0.7
BLKB   Belogradchik        6.16 351  ePn      Pn       02 30 55.3 +2.2
IVA    Berane              6.18 331⇓iPn     Pn       02 30 53.9 +0.5
IVA                                  i Sn     Sn       02 31 57.9 -5.2
KOME   Kolasin             6.31 329⇓iPn     Pn       02 30 55.5 +0.3
KOME                                 eSn      Sn       02 32 00.2 -6.1
RAZG   Razgrad             6.33  17 ⇓P      Pn       02 30 56.1 +0.8
CEME   Cevo                6.33 324⇑iPn     Pn       02 30 54.6 -0.8
CEME                                 eSn      Sn       02 32 00.8 -5.9
BOVS   Bovan               6.33 345 ⇑P      Pn       02 30 56.6 +1.3
BOVS   Bovan               6.33 345  ePn      Pn       02 30 57.2 +1.9
ZAGS   Zajecar             6.41 349  ePn      Pn       02 30 58.4 +2.1
CEL    Celeste             6.43 279   Pn      Pn       02 30 57.7 +1.0
MATE   Matera              6.45 301 ⇓P      Pn       02 30 56.8 -0.1
HCY    Herceg Novi         6.46 321⇓iPn     Pn       02 30 56.6 -0.5
HCY                                  i Sn     Sn       02 32 03.2 -6.6
GOCS   Kraljevo Serbi      6.47 340  ePn      Pn       02 30 58.7 +1.5
GOCS                                 eSn      Sn       02 32 07.7 -2.3
SJES   Sjenica             6.48 333  ePn      Pn       02 30 57.8 +0.3
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SJES                                 eSn   Sn     02 32 04.0 -6.4
NKME  Niksic            6.49 325 ⇓iPn  Pn     02 30 56.7 -0.8
NKME                                 eSn   Sn     02 32 04.9 -5.5
IVAS  Ivanjica          6.70 335  ePn  Pn     02 30 59.8 -0.5
IVAS                                 eSn   Sn     02 32 11.4 -4.1
MATC  Matruh            6.73 156   P   Pn     02 30 59.6 -1.2
TREB  Trebinje          6.74 322  ePn  Pn     02 30 59.1 -1.6
PLE   Pljevlja          6.76 330 ⇑iPn  Pn     02 31 01.1 -0.1
PLE                                  i Sn  Sn     02 32 11.8 -5.3
BRY   Bratogost         6.78 324 ⇓iPn  Pn     02 31 01.5  0.0
BRY                                  i Sn  Sn     02 32 11.7 -6.0
GRUS  Gruza             6.81 340  ePn  Pn     02 31 03.0 +1.3
GRUS                                 eSn   Sn     02 32 16.6 -1.5
CUC   Castrocucco       6.83 294   Pn  Pn     02 31 03.3 +1.2
UPM   Unac-Piva         6.86 327 ⇓iPn  Pn     02 31 02.4 -0.1
UPM                                  i Sn  Sn     02 32 13.1 -6.4
KLINJ Klinje            6.97 326  ePn  Pn     02 31 03.3 -0.7
RUDO  Rudo              7.01 331  ePn  Pn     02 31 02.2 -2.2
HUMR  Humele            7.03   6 ⇓P    Pn     02 31 04.6  0.0
ACER  Acerenza          7.04 300   Pn  Pn     02 31 04.8  0.0
KUBS  Kucevo            7.09 347  ePn  Pn     02 31 06.1 +0.7
ICOR  Ion Corvin        7.19  23 ⇑P    Pn     02 31 07.8 +1.1
TRUS  Trudelj           7.21 339  ePn  Pn     02 31 07.4 +0.4
BBLS  Lazi&#263i        7.21 333  ePn  Pn     02 31 06.6 -0.6
BBLS                                 eSn   Sn     02 32 22.6 -5.3
DIVS  Divibare          7.22 337  ePn  Pn     02 31 07.3 +0.1
DIVS                                 eSn   Sn     02 32 23.9 -4.1
HERR  Herculane         7.43 351 ⇑P    Pn     02 31 11.5 +1.4
MDVR  Moldovita         7.44 347 ⇑P    Pn     02 31 11.6 +1.4
VAE   Valguarnera       7.60 272   P   Pn     02 31 13.4 +1.0
      comp=Z,10nm,0.3s,baz=134,slow=22,SNR=16
VAE                                   S    Sn     02 32 35.0 -2.3
      comp=Z,53nm,0.4s,baz=2.7,slow=4.8,SNR=12
AVAS  Avala Beograd     7.62 341  ePn  Pn     02 31 13.4 +0.9
SGRT  San Giovanni R    7.62 306   Pn  Pn     02 31 12.0 -0.6
RAFF  Raffo Rosso       7.66 271   Pn  Pn     02 31 13.4 +0.3
MTUR  Matau             7.73   6 ⇓P    Pn     02 31 16.0 +1.9
MTUR  Matau             7.73   6 ⇓P    Pn     02 31 16.0 +1.9
TEKS  Tekeris           7.77 336  ePn  Pn     02 31 13.7 -0.8
TEKS                                 eSn   Sn     02 32 36.5 -4.7
WDD   Wied Dalam        7.78 260   Pn  Pn     02 31 15.5 +0.8
VRSS  Vrsac             7.84 346  ePn  Pn     02 31 17.0 +1.6
ARR   Arges             7.84   3 ⇓P    Pn     02 31 16.8 +1.2
BR131 Keskin Array S    7.87  71 ⇓iP   Pn     02 31 18.2 +2.1
BRTR  Keskin Array B    7.87  71   P   Pn     02 31 17.5 +1.4
      comp=Z,0.9nm,0.7s,baz=248,slow=15,SNR=4.7
BRTR  Keskin Array B    7.87  71       Pn     02 31 16.9 +0.8
BRTR  Keskin Array B    7.87  71  i P  Pn     02 31 19.2 +3.1
BRTR                                  pmax pmax
      comp=Z,1.0nm,0.7s
GZR   Gura Zlata        7.90 354 ⇑P    Pn     02 31 17.9 +1.5
GZR   Gura Zlata        7.90 354 ⇑P    Pn     02 31 17.9 +1.5
LOT   Lotru             7.91 359 ⇓P    Pn     02 31 17.1 +0.6
KIRS  Kirsehir-Merke    7.97  75 ⇑P    Pn     02 31 19.6 +2.2
CSS   Mathiatis         7.98 106   Pn  Pn     02 31 17.6 +0.1
CSS   Mathiatis         7.98 106   P   Pn     02 31 17.6 +0.1
CSS   Mathiatis         7.98 106   S   Sn     02 32 42.2 -4.2
NEHR  Nehoiu            8.07  12 ⇓P    Pn     02 31 20.0 +1.4
MLR   Muntele Rosu      8.09  10   P   Pn     02 31 19.6 +0.8
      comp=Z,2.1nm,0.6s,baz=138,slow=23,SNR=4.1
MLR   Muntele Rosu      8.09  10   Pn  Pn     02 31 19.4 +0.6
MLR   Muntele Rosu      8.09  10 ⇑P    Pn     02 31 20.0 +1.1
PAOL  Paolisi           8.09 298   Pn  Pn     02 31 20.2 +1.3
FRGS  Fruska Gora       8.23 339  ePn  Pn     02 31 20.9 +0.2
FRGS                                 eSn   Sn     02 32 48.6 -3.7
BZS   Buzias            8.27 348 ⇑P    Pn     02 31 22.1 +1.0
BZS   Buzias            8.27 348 ⇑P    Pn     02 31 22.1 +1.0
SWA2                    8.36 171   P   Pn     02 31 21.7 -0.8
SWA2                                  S    Sn     02 32 46.6 -8.9
TLCR                    8.46  24 ⇓P    Pn     02 31 24.1 +0.4
TLCR                    8.46  24 ⇓P    Pn     02 31 24.1 +0.4
DOPR  Dopca             8.49   7 ⇑P    Pn     02 31 25.2 +1.1
PLOR  Plostina          8.55  13 ⇓P    Pn     02 31 25.7 +0.8
PLOR  Plostina          8.55  13 ⇓P    Pn     02 31 25.7 +0.8
VRI   Vrincioaia        8.57  13 ⇑P    Pn     02 31 26.2 +0.9
VRI   Vrincioaia        8.57  13 ⇑P    Pn     02 31 26.2 +0.9
BLY   Banja Luka        8.84 327  ePn  Pn     02 31 27.5 -1.3
BLY   Banja Luka        8.84 327 ⇓P    Pn     02 31 28.4 -0.3
SIRR  Siria             8.89 350 ⇓P    Pn     02 31 30.1 +0.6
MARR  Marisel-Cluj      9.16 356 ⇑P    Pn     02 31 34.7 +1.6
TESR  Tescani           9.19  12 ⇑P    Pn     02 31 35.3 +1.9
DRGR                    9.30 355 ⇑P    Pn     02 31 35.9 +0.9
DRGR                    9.30 355 ⇑P    Pn     02 31 35.9 +0.9
KNYS  Krupa na Uni      9.34 324  ePn  Pn     02 31 34.8 -0.6
AQU   L'Aquila          9.44 304  ePn  Pn     02 31 37.6 +0.8
CAMP  Campotosto        9.52 305   Pn  Pn     02 31 38.3 +0.3
MORH  Mrgy, Hungar      9.54 337  ePn  Pn     02 31 37.1 -1.0
MORH  Mrgy, Hungar      9.54 337 ⇑P    Pn     02 31 37.5 -0.5
GUMA  Gualdo di Mace    9.82 308   Pn  Pn     02 31 40.9 -1.0
NRCA  Norcia            9.85 306   Pn  Pn     02 31 42.4 +0.1
FDMO  Fiordimonte       9.97 307   Pn  Pn     02 31 44.1 +0.3
CESX  Cesi             10.10 304   Pn  Pn     02 31 46.6 +1.1
BURAR Bucovina Array   10.12   5   Pn  Pn     02 31 45.8  0.0
BURAR Bucovina Array   10.12   5   P   Pn     02 31 46.8 +1.0
BUR08 Bucovina Ar. S   10.14   5   Pn  Pn     02 31 46.7 +0.5
HNTI  Hanita           10.17 113   P   Pn     02 31 45.8 -0.8
HNTI  Hanita           10.17 113   S   Sn     02 33 33.7 -5.4
OFRI  `Ofer            10.27 115   P   Pn     02 31 46.3 -1.6
OFRI  `Ofer            10.27 115   S   Sn     02 33 35.7 -5.7
MMC7  Mount Meron ar   10.36 112   P   Pn     02 31 48.3 -0.8
MMA0B Mount Meron ar   10.37 112   P   Pn     02 31 48.6 -0.7
MMA0B Mount Meron ar   10.37 112   S   Sn     02 33 38.5 -5.6
MMAI  Mount Meron Ar   10.37 112   P   Pn     02 31 48.5 -0.9
      comp=Z,10nm,0.3s,baz=326,slow=12,SNR=93
MMAI                                  S    Sn     02 33 36.8 -7.2
      comp=Z,2.8nm,0.3s,baz=307,slow=25,SNR=6.2
BEHE  Becsehely        10.41 331  ePn  Pn     02 31 49.7 +0.1
MURB  Monte Urbino     10.44 307   Pn  Pn     02 31 50.6 +0.5
GEM   Giv'at Ha'Em     10.47 111   P   Pn     02 31 49.4 -1.1
GEM   Giv'at Ha'Em     10.47 111   S   Sn     02 33 41.0 -5.4
NATI  Neve Ativ        10.50 110   P   Pn     02 31 50.4 -0.5
NATI  Neve Ativ        10.50 110   S   Sn     02 33 42.5 -4.6
SLTI  Sal'it           10.51 117   P   Pn     02 31 49.6 -1.4
SLTI  Sal'it           10.51 117   S   Sn     02 33 40.7 -6.5
MMLI  Mount Malkishu   10.67 115   P   Pn     02 31 52.5 -0.8
MMLI  Mount Malkishu   10.67 115   S   Sn     02 33 45.2 -6.1
KSHT  Keshet           10.69 112   P   Pn     02 31 53.1 -0.4
KSHT  Keshet           10.69 112   S   Sn     02 33 46.7 -4.9
SALP  Salfit           10.71 117   P   Pn     02 31 52.4 -1.3
SALP  Salfit           10.71 117   S   Sn     02 33 45.5 -6.7
PSZ   Piszkesteto      10.80 345   Pn  Pn     02 31 56.0 +1.2
PSZ   Piszkesteto      10.80 345 ⇓P    Pn     02 31 56.1 +1.2
PSZ   Piszkesteto      10.80 345 ⇓P    Pn     02 31 56.1 +1.2
AMAZ  Amatzia          10.82 120   P   Pn     02 31 53.9 -1.4
AMAZ  Amatzia          10.82 120   S   Sn     02 33 47.7 -7.2
HMDT  Nahal Hemdat     10.85 116   P   Pn     02 31 54.5 -1.0
HMDT  Nahal Hemdat     10.85 116   S   Sn     02 33 48.7 -6.7
KZIT  Kziot            10.86 124   P   Pn     02 31 53.4 -2.4
KZIT  Kziot            10.86 124   S   Sn     02 33 48.0 -7.9
UJAP  Al Uja           10.97 117   P   Pn     02 31 55.6 -1.4
UJAP  Al Uja           10.97 117   S   Sn     02 33 51.5 -6.7
HFRF  Wahat Farafira   10.98 159   P   Pn     02 31 56.5 -0.8
HFRF                                  S    Sn     02 33 50.5 -8.2
LJU   Ljubljana        11.04 323   P   Pn     02 31 57.6 -0.3
LJU                                   pmax pmax
      comp=Z,203nm,1.5s
YTIR  Yattir           11.06 121   P   Pn     02 31 57.1 -1.3
YTIR  Yattir           11.06 121   S   Sn     02 33 53.5 -7.3
SORM  Soroca           11.07  15 ⇓P    Pn     02 31 58.5 +0.3
SORM  Soroca           11.07  15 ⇓P    Pn     02 31 58.5 +0.3
SRO   Srobarova        11.08 340  eP   Pn     02 31 58.9 +0.5
SRO   Srobarova        11.08 340  ePN  Pn     02 31 58.9 +0.5
DSI   Dead Sea         11.12 119   P   Pn     02 31 57.9 -1.3
DSI   Dead Sea         11.12 119   S   Sn     02 33 54.7 -7.3
SOKA  Soboth           11.29 327  i Pn Pn     02 32 00.3 -1.0
      comp=Z,1.2nm,0.2s,SNR=5.0
SOKA                                 eSn   Sn     02 34 00.3 -5.6
      comp=Z,2.2nm,0.6s
RMNI  Mount Ramon      11.30 125   P   Pn     02 31 59.9 -1.7
RMNI  Mount Ramon      11.30 125   S   Sn     02 33 58.5 -8.1
OBKA  Obir             11.37 325  ePn  Pn     02 32 01.5 -0.9
      comp=Z,2.7nm,0.3s
OBKA                                 eSn   Sn     02 34 05.4 -2.7
      comp=Z,3.4nm,0.3s
GHAJ  Ghor Haditha     11.41 120   Pn  Pn     02 32 03.4 +0.5
GHAJ  Ghor Haditha     11.41 120   P   Pn     02 32 03.1 +0.3
GHAJ  Ghor Haditha     11.41 120   S   Sn     02 34 01.8 -7.2
SABO  M.te Sabotino    11.45 321   Pn  Pn     02 32 02.1 -1.2
IDAN  Idan             11.49 122   P   Pn     02 32 02.3 -1.7
IDAN  Idan             11.49 122   S   Sn     02 34 02.8 -8.2
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ARSA  Arzberg          11.54 330   Pn  Pn     02 32 03.9 -0.6
ARSA  Arzberg          11.54 330  ePn  Pn     02 32 04.9 +0.4
      comp=Z,2.0nm,0.4s,SNR=7.3
KRMI  Paran Flat       11.60 126   P   Pn     02 32 03.1 -2.3
KRMI  Paran Flat       11.60 126   S   Sn     02 34 05.3 -8.3
VSL   Villasalto       11.60 284   Pn  Pn     02 32 05.7 +0.3
ZFRI  Zfri             11.61 124   P   Pn     02 32 03.4 -2.0
ZFRI  Zfri             11.61 124   S   Sn     02 34 05.5 -8.2
RONA  Rosalia, Austr   11.62 333  i Pn Pn     02 32 06.0 +0.5
      comp=Z,0.9nm,0.3s
PRNI  Paran            11.62 125   P   Pn     02 32 03.9 -1.8
PRNI  Paran            11.62 125   S   Sn     02 34 05.8 -8.4
HRFI  Mount Harif      11.85 126   P   Pn     02 32 06.4 -2.3
HRFI  Mount Harif      11.85 126   S   Sn     02 34 11.5 -8.2
ASF   Jabal al Asfar   11.88 113   P   Pn     02 32 09.6 +0.4
      baz=301,slow=14
KEST  Kesra            11.89 266   P   Pn     02 32 09.0 -0.3
      comp=Z,2.0nm,0.6s,baz=74,slow=7.1,SNR=12
KEST                                  S    Sn     02 34 15.3 -5.4
      comp=Z,7.0nm,0.8s,baz=85,slow=23,SNR=7.2
KEST  Kesra            11.89 266       Pn     02 32 12.3 +3.0
MBRI  Mt Berech        11.94 127   P   Pn     02 32 07.7 -2.2
MBRI  Mt Berech        11.94 127   S   Sn     02 34 13.0 -8.8
CONA  Conrad Observa   11.97 333  i Pn Pn     02 32 12.0 +1.8
      comp=Z,0.5nm,0.3s
EIL   Elat             12.04 127   P   Pn     02 32 09.9 -1.3
      comp=Z,30nm,0.6s,baz=283,slow=2.5,SNR=139
EIL                                   S    Sn     02 34 17.3 -7.0
      comp=Z,32nm,0.4s,baz=331,slow=16,SNR=4.0
EIL   Elat             12.04 127   P   Pn     02 32 08.9 -2.3
EIL   Elat             12.04 127   S   Sn     02 34 15.5 -8.8
CTI   Castel Tesino    12.52 317   Pn  Pn     02 32 16.6 -0.7
CTI   Castel Tesino    12.52 317   P   Pn     02 32 16.6 -0.7
ABTA  Abfaltersbach    12.52 321  i Pn Pn     02 32 17.1 -0.2
      comp=Z,9.3nm,0.5s,SNR=5.0
MOA   Molln            12.53 328  ePn  Pn     02 32 18.5 +1.1
      comp=Z,0.8nm,0.3s
MOA                                  eSn   Sn     02 34 34.1 -1.6
      comp=Z,1.7nm,0.3s
MAUC  Maruska          12.63 341  eP   P      02 32 27.1 +2.9
BIOA  Bad Ischl, Aus   12.68 326  i Pn Pn     02 32 19.8 +0.5
      comp=Z,1.5nm,0.2s
BIOA                                 eSn   Sn     02 34 35.7 -3.6
      comp=Z,1.3nm,0.4s
KRUC  Moravsky         12.77 337  eP   P      02 32 28.4 +2.7
SALO  Salr             12.90 313   Pn  Pn     02 32 21.8 -0.3
LESA  Schwarzleotal    12.92 323  ePn  Pn     02 32 22.5 +0.1
      comp=Z,1.3nm,0.4s
LESA                                 i Sn  Sn     02 34 41.1 -4.0
      comp=Z,3.1nm,0.6s
VRAC  Vranov           12.93 338   P   Pn     02 32 21.9 -0.6
      comp=Z,0.6nm,0.4s,baz=173,slow=15,SNR=5.0
VRAC  Vranov           12.93 338  eP   P      02 32 29.6 +2.2
MORC  Moravsky Berou   13.09 341  eP   P      02 32 30.6 +1.3
CKRC  Cesky Krumlov    13.29 331  eP   P      02 32 32.5 +1.0
CKRC  Cesky Krumlov    13.29 331  eP   P      02 32 32.5 +1.0
WTTA  Wattenberg       13.31 321  ePn  Pn     02 32 28.5 +0.9
      comp=Z,1.6nm,0.2s,SNR=5.8
WTTA                                 eSn   Sn     02 34 50.8 -4.0
      comp=Z,10nm,0.5s
WATA  Walderalm        13.39 321  ePn  Pn     02 32 29.4 +0.8
      comp=Z,4.2nm,0.4s,SNR=10
WATA                                 eSn   Sn     02 34 52.4 -4.3
      comp=Z,5.1nm,0.4s
SQTA  Sankt Quirin     13.50 320  ePn  Pn     02 32 31.1 +1.2
      comp=Z,16nm,0.7s,SNR=18
SQTA                                 eSn   Sn     02 34 52.5 -6.8
      comp=Z,1.1nm,0.4s
GEC2  GERESS Array S   13.55 330   Pn  Pn     02 32 30.9 +0.4
GERES GERESS Array B   13.55 330   P   Pn     02 32 32.2 +1.7
      comp=Z,0.5nm,0.3s,baz=168,slow=14,SNR=23
GERES                                 S    Sn     02 34 58.6 -1.8
      comp=Z,0.7nm,0.4s,baz=149,slow=22,SNR=4.3
KRLC  Kraliky          13.56 340  eP   P      02 32 36.6 +2.1
KRLC  Kraliky          13.56 340  eP   P      02 32 36.6 +2.1
FETA  Feichten         13.62 318  ePn  Pn     02 32 33.3 +1.8
      comp=Z,3.2nm,0.5s,SNR=9.0
FETA                                 eSn   Sn     02 34 57.0 -5.2
      comp=Z,2.4nm,0.6s
FUORN Ofenpass-Fuorn   13.63 316   Pn  Pn     02 32 32.2 +0.5
MOTA  Moosalm          13.64 320  i Pn Pn     02 32 32.8 +1.2
      comp=Z,4.4nm,0.7s,SNR=7.8
MOTA                                 eSn   Sn     02 34 57.2 -5.4
      comp=Z,6.2nm,0.7s
KIEV  Kiev             13.68  14 ⇑P    Pn     02 32 32.1 +0.1
KIEV  Kiev             13.68  14 ⇑P    Pn     02 32 32.1 +0.1
AKASG Malin Array Be   13.69  14   P   Pn     02 32 31.8 -0.4
      comp=Z,1.1nm,0.3s,baz=203,slow=12,SNR=11
AKASG Malin Array Be   13.69  14       Pn     02 32 31.5 -0.6
AKASG Malin Array Be   13.69  14  i P  Pn     02 32 31.7 -0.4
AKASG                                 pmax pmax
      comp=Z,3.0nm,0.3s
AKBB  Malin Array Si   13.69  14   Pn  Pn     02 32 31.8 -0.3
AKBB  Malin Array Si   13.69  14⇑iP    Pn     02 32 31.7 -0.4
AKBB                                  pmax pmax
      comp=Z,13nm,0.9s
GUZR  Guzeripl'        13.82  57⇑iP    Pn     02 32 37.3 +3.3
GUZR                                  pmax pmax
      comp=Z,34nm,0.8s
KHC   Kasperske Hory   13.82 330   Pn  Pn     02 32 35.0 +1.0
KHC   Kasperske Hory   13.82 330⇑iP    Pn     02 32 33.0 -0.9
KHC                                   pmax pmax
      comp=Z,1.0nm,1.0s
KHC   Kasperske Hory   13.82 330  eP   P      02 32 40.3 +2.8
ZVC   Zvikov           13.84 332  eP   P      02 32 39.8 +2.2
RETA  Reutte           13.90 320  ePn  Pn     02 32 35.6 +0.6
      comp=Z,1.6nm,0.5s
RETA                                 eSn   Sn     02 35 02.3 -6.6
      comp=Z,3.0nm,0.6s
DAVOX Davos/Dischmat   13.93 316   P   Pn     02 32 35.2 -0.3
      comp=Z,1.5nm,0.4s,baz=120,slow=9.8,SNR=14
DAVOX                                 S    Sn     02 35 07.8 -2.0
      comp=Z,4.5nm,0.6s,baz=232,slow=19,SNR=5.6
DPC   Dobruska-Polom   13.94 339  eP   P      02 32 40.9 +2.2
DPC   Dobruska-Polom   13.94 339  eP   P      02 32 40.9 +2.2
TUE   Stuetta          14.05 314   Pn  Pn     02 32 37.6 +0.6
OSTC  Ostas            14.15 339  eP   P      02 32 43.3 +2.2
OSTC  Ostas            14.15 339  eP   P      02 32 43.3 +2.2
DAVA  Damuels          14.24 318  ePn  Pn     02 32 42.9 +3.5
      comp=Z,1.6nm,0.3s
DAVA                                 eSn   Sn     02 35 12.3 -4.8
      comp=Z,3.1nm,0.5s
GURO  Guroymak-BITLI   14.27  80   Pn  Pn     02 32 41.2 +1.4
PRA   Prague           14.28 334  eP   P      02 32 44.1 +1.6
PRA   Prague           14.28 334  eP   P      02 32 44.1 +1.6
ARXR  Arkhyz           14.46  60⇑iP    Pn     02 32 45.2 +3.2
ARXR                                  pmax pmax
      comp=Z,19nm,1.1s
DOMR  Dombai           14.61  61⇑iP    Pn     02 32 44.5 +0.5
DOMR                                  pmax pmax
      comp=Z,2.0nm,1.2s
SENIN Lac Senin/Sane   15.20 311       Pn     02 32 52.9 +1.6
KIV   Kislovodsk       15.55  60  eP   Pn     02 32 56.1 +0.5
KIV                                   pmax pmax
      comp=Z,5.0nm,1.0s
KBZ   Khabaz           15.63  61   P   Pn     02 32 57.0 +0.6
      comp=Z,4.6nm,0.9s,baz=261,slow=9.9,SNR=11
KBZ   Khabaz           15.63  61⇑iP    P      02 32 59.5 +2.1
KBZ                                   pmax pmax
      comp=Z,5.0nm,0.9s
BFO   Black Forest     15.71 318       Pn     02 32 57.9 +0.5
BFO                                   IAmb IAmb   02 33 10.7
      comp=Z,22nm,1.4s
BFO   Black Forest     15.71 318   P   Pn     02 32 57.9 +0.5
BFO                                   pmax pmax
      comp=Z,23nm,1.4s
PYA1  Pyatigorsk       15.86  60⇓iP    Pn     02 33 01.5 +2.1
NCK   Nalchik          16.05  62⇓iP    P      02 33 04.8 +2.6
NCK                                   pmax pmax
      comp=Z,4.0nm,1.0s
SUW   Suwalki          16.49 358   P   Pn     02 33 06.6 -0.2
SUW   Suwalki          16.49 358   P   Pn     02 33 06.6 -0.2
MNK   Minsk            17.18   8  i P  P      02 33 14.0 -0.5
      comp=E,39nm,0.9s
MNK                                  i P   P      02 33 14.0 -0.5
      comp=N,8.0nm,0.9s
MNK                                  i P   P      02 33 14.0 -0.5
      comp=Z,36nm,0.9s,baz=191
MNK                                  i pP  pP     02 33 41.1 +1.3
MNK                                  i sP  sP     02 33 55.4 -3.2
MNK                                  i S   S      02 36 23.7 -2.1
MNK   Minsk            17.18   8  i P  P      02 33 14.0 -0.5
MNK                                  i S   S      02 36 23.7 -2.1
MNK                                   pmax pmax
      comp=N,8.0nm,0.9s
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MNK                                   pmax pmax
      comp=Z,36nm,0.9s
MNK                                   pmax pmax
      comp=E,39nm,0.9s
VORD  Divnogorie       17.29  34  eP   P      02 33 15.0 -0.7
VORD                                  pmax pmax
      comp=Z,10.0nm,0.8s
VSR   Storozhevoye     17.41  33  eP   P      02 33 15.1 -2.0
VSR                                   pmax pmax
      comp=Z,9.0nm,1.0s
CORI  Orista           17.42 292   P   P      02 33 18.3 +1.1
CORI                                  IAmb IAmb   02 33 44.3
      comp=Z,39nm,1.4s
NACGM Naroch           17.48   5  eP   P      02 33 18.5 +0.7
      comp=Z,13nm,0.9s,baz=187
VORR  Voronezh         17.76  32  eP   P      02 33 17.4 -3.5
VORR                                  pmax pmax
      comp=Z,10.0nm,0.9s
IIGN  Ignalina         17.89   4  eP   P      02 33 24.2 +2.0
PABE  Paberze          17.98 360   P   P      02 33 23.4 +0.3
PABE  Paberze          17.98 360  eP   P      02 33 24.1 +0.9
ISAL  Salakas          18.10   4  eP   P      02 33 26.6 +2.0
LPSR  Galich'ya Gora   18.34  30  eP   P      02 33 25.6 -1.5
LPSR                                  pmax pmax
      comp=Z,20nm,0.8s
VRH   Novokhopyorsk    18.58  37  eP   P      02 33 29.1 -0.6
VRH                                   pmax pmax
      comp=Z,30nm,0.9s
BSD   Bornholm Skovb   18.64 344  eP   P      02 33 30.3  0.0
BSD   Bornholm Skovb   18.64 344  i P  Pg     02 33 30.3 -1.3
AKT   Akhty            18.73  70  eP   P      02 33 31.3 -0.4
AKT                                   pmax pmax
      comp=Z,5.0nm,0.7s
LUNU  Lund             19.45 342  i P  Pn     02 33 39.7 -2.1
OBN   Obninsk          19.56  22   P   P      02 33 41.7 +1.3
      comp=Z,26nm,0.4s,baz=306,slow=1.4,SNR=6.6
OBN   Obninsk          19.56  22⇑iP    P      02 33 40.8 +0.5
OBN                                  i S   S      02 37 08.4 -4.6
OBN                                   pmax pmax
      comp=Z,15nm,0.8s
OBN                                   MLR  MLR
      comp=Z,86nm,6.0s
BJUU  Bjuv             19.96 342  i P  Pn     02 33 45.8 -0.1
DEL   Delary           20.12 344  i P  Pg     02 33 46.6 +2.3
SLIT  Slitere, Latvi   20.14 357  eP   P      02 33 45.9 -0.6
MOS   Moscow           20.41  22  eP   P      02 33 47.9 -1.6
VSU   Vasula           21.02   4  eP   P      02 33 55.5 -0.5
VSU   Vasula           21.02   4⇑iP    P      02 33 58.8 +2.9
VSU                                   pmax pmax
      comp=Z,17nm,0.9s
BORU  Boraas           21.43 343  i P  Pn     02 34 00.3 +0.1
ESBB  Sonseca Array    21.91 284   P   P      02 34 05.3 -0.4
ESBB                                  IAmb IAmb   02 34 32.0
      comp=Z,15nm,1.5s
ESDC  Sonseca Array    21.91 284   P   P      02 34 06.5 +0.8
      comp=Z,1.9nm,0.7s,baz=86,slow=10,SNR=20
      comp=Z,1.9nm,0.7s
ESDC  Sonseca Array    21.91 284   P   P      02 34 05.5 -0.1
ARBE  Arbavere         21.96   3  eP   P      02 34 05.5 -0.4
PAB   San Pablo        22.21 284   P   P      02 34 09.6 +0.8
PAB                                   IAmb IAmb   02 34 13.5
      comp=Z,12nm,1.2s
PAB   San Pablo        22.21 284   P   P      02 34 09.6 +0.8
PAB                                   pmax pmax
      comp=Z,12nm,1.3s
BELG  Belogornoye      22.23  41⇓iP    P      02 34 08.1 -0.6
BELG                                  pmax pmax
      comp=Z,13nm,2.8s
MEF   Metsahovi        22.70   1  eP   P      02 34 13.1  0.0
AAL   Aland            22.80 355  eP   P      02 34 12.9 -1.1
RAYN  Ar Rayn          23.14 121   P   P      02 34 18.0 +0.4
RAYN  Ar Rayn          23.14 121   P   P      02 34 18.0 +0.4
RAYN                                  pmax pmax
      comp=Z,3.0nm,0.9s
HFS   Hagfors          23.55 347   P   P      02 34 19.6 -1.3
      comp=Z,1.9nm,0.4s,baz=157,slow=11,SNR=20
      comp=Z,1.9nm,0.4s
RAF   Rauma            23.55 357  eP   P      02 34 20.3 -0.5
FINES FINESS Array B   23.97   2   P   P      02 34 24.7  0.0
      comp=Z,7.5nm,0.3s,baz=170,slow=10,SNR=154
FINES                                 PcP  PcP    02 38 02.9 +0.4
      comp=Z,1.3nm,0.5s,baz=176,slow=1.3,SNR=5.3
      comp=Z,7.5nm,0.3s
FINES FINESS Array B   23.97   2   P   P      02 34 24.5 -0.2
FIA1  FINESS Array S   23.97   2   P   P      02 34 24.6 -0.1
NC602 NORSAR Array S   24.52 345   P   P      02 34 28.9 -0.7
NC602                                 IAmb IAmb   02 34 33.7
      comp=Z,19nm,1.1s
NORES NORESS Array B   24.52 345   P   P      02 34 29.9 +0.2
KEF   Keuruu           24.66   1  eP   P      02 34 31.9 +0.9
NAO01 NORSAR Array S   24.75 345   P   P      02 34 31.5 -0.3
NB2   NORSAR Subarra   24.86 345   P   P      02 34 32.5 -0.4
      comp=Z,1.3nm,0.5s,baz=149,slow=11
NB2   NORSAR Subarra   24.86 345   P   P      02 34 34.5 +1.6
NOA   NORSAR Array B   24.86 345   P   P      02 34 33.3 +0.4
      comp=Z,0.6nm,0.5s,baz=156,slow=9.1,SNR=5.3
      comp=Z,0.6nm,0.5s
PVAQ  Vaqueiros        25.10 279   P   P      02 34 34.1 -1.1
PVAQ                                  IAmb IAmb   02 34 50.1
      comp=Z,23nm,1.4s
KLMR  Klimovskoe       25.32  18  eP   P      02 34 34.4 -2.5
KLMR                                  pmax pmax
      comp=Z,13nm,0.9s
EKA   Eskdalemuir Ar   25.56 323   P   P      02 34 40.5 +1.3
      comp=Z,6.2nm,0.5s,baz=118,slow=9.7,SNR=23
      comp=Z,6.2nm,0.5s
ESK   Eskdalemuir      25.58 323   P   P      02 34 39.8 +0.5
ESK   Eskdalemuir      25.58 323   P   P      02 34 39.8 +0.5
ESK                                   pmax pmax
      comp=Z,60nm,1.4s
KIRV  Kirov            26.77  30⇓iP    P      02 34 49.9 -0.1
ARTI  Arti             29.66  39   P   P      02 35 15.0 -0.7
ARTI  Arti             29.66  39d iP   P      02 35 14.4 -1.3
ARTI                                              02 36 14.6
ARTI                                  S    S      02 39 59.6 -0.6
ARTI                                  SS   SnSn   02 41 50.8 +3.3
ARTI                                  pmax pmax
      comp=Z,21nm,2.3s
ARCES ARCESS Array B   32.07   1   P   P      02 35 36.4 -0.3
      comp=Z,2.3nm,0.5s,baz=194,slow=10,SNR=23
ARCES                                 PcP  PcP    02 38 22.5 +0.1
      comp=Z,4.9nm,1.0s,baz=184,slow=3.4,SNR=7.7
      comp=Z,2.3nm,0.5s
ARCES ARCESS Array B   32.07   1   P   P      02 35 35.9 -0.8
ARCES                                      PcP    02 38 22.5 +0.1
BVAR  Borovoye Array   35.46  49   P   P      02 36 06.8 +0.6
      comp=Z,0.7nm,0.5s,baz=259,slow=7.2,SNR=4.8
      comp=Z,0.7nm,0.5s
BOOM  Boomskoye usch   39.59  66   P   P      02 36 41.5 +0.2
BOOM                                  IAmb IAmb   02 37 06.0
      comp=Z,6.9nm,1.2s
BOOM  Boomskoye usch   39.59  66   P   P      02 36 41.5 +0.2
BOOM                                  pmax pmax
      comp=Z,7.0nm,1.2s
KURBB Kurchatov Arra   40.42  53   P   P      02 36 47.6 -0.1
      comp=Z,2.3nm,0.7s,baz=281,slow=8.7,SNR=18
KURBB                                 PcP  PcP    02 38 47.1 -0.6
      comp=Z,0.2nm,0.4s,baz=274,slow=4.1,SNR=8.7
KURBB                                 ScP  ScP    02 42 21.8 -1.3
      comp=Z,0.3nm,0.7s,baz=282,slow=4.6,SNR=4.4
      comp=Z,2.3nm,0.7s
KURK  Kurchatov        40.47  53   P   P      02 36 47.6 -0.6
KURK  Kurchatov        40.47  53⇑iP    P      02 36 48.5 +0.3
SCO   Scoresbysund     40.78 338   P   P      02 36 50.9 +0.4
SCO   Scoresbysund     40.78 338   P   P      02 36 50.9 +0.4
SCO                                   pmax pmax
      comp=Z,36nm,1.5s
SPB2  Spitsbergen Ar   40.87 358   P   P      02 36 51.4 +0.3
SPITS Spitsbergen Ar   40.88 358   P   P      02 36 51.8 +0.6
      comp=Z,0.6nm,0.3s,baz=158,slow=11,SNR=18
      comp=Z,0.6nm,0.3s
KBS   Kingsbay         41.80 357   P   P      02 36 59.2 +0.5
KBS                                   IAmb IAmb   02 37 00.7
      comp=Z,20nm,1.1s
KBS                                   PcP  PcP    02 38 51.1 -0.7
MAKZ  Makanchi         43.09  59   P   P      02 37 09.2 -0.4
MAKZ  Makanchi         43.09  59   P   P      02 37 09.2 -0.4
MAKZ                                  pmax pmax
      comp=Z,4.0nm,1.3s
MK31  Makanchi Array   43.31  58d iP   P      02 37 11.2 -0.1
MKAR  Makanchi Array   43.31  58   P   P      02 37 11.2 -0.1
      comp=Z,2.3nm,0.4s,baz=272,slow=8.0,SNR=54
MKAR                                  ScP  ScP    02 42 34.1 -0.7
      comp=Z,0.6nm,0.6s,baz=276,slow=3.5,SNR=6.8
      comp=Z,2.3nm,0.4s
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MKAR  Makanchi Array     43.31  58  P      P       02 37 11.0 -0.3
MKAR                                       ScP     02 42 33.9 -0.9
MKAR  Makanchi Array     43.31  58  P      P       02 37 11.0 -0.3
ZAA0  Zalesovo Array     44.09  48  P      P       02 37 16.9 -0.5
ZALV  Zalesovo Beam      44.09  48  P      P       02 37 17.3 -0.1
      comp=Z,5.2nm,0.3s,baz=275,slow=8.1,SNR=27
      comp=Z,5.2nm,0.3s
NRIK  Noril'sk           46.16  26  P      P       02 37 34.1 +0.6
      comp=Z,1.9nm,0.3s,baz=235,slow=4.2,SNR=7.4
      comp=Z,1.9nm,0.3s
NRIK  Noril'sk           46.16  26  P      P       02 37 33.9 +0.4
NRIK                                IAmb   IAmb    02 37 35.2
      comp=Z,4.4nm,0.8s
NRIK  Noril'sk           46.16  26⇑iP      P       02 37 33.8 +0.4
SUMG  Summit             46.42 338  P      P       02 37 37.1 +1.1
SUMG  Summit             46.42 338  P      P       02 37 37.1 +1.1
WMQ   Urumqi             47.67  61 eP      P       02 37 48.8 +3.1
WMQ                                 sP     sP      02 38 40.6 +5.0
WMQ                                 pmax   pmax
      comp=Z,12nm,1.1s
POIN  Pond Inlet         58.02 340  P      P       02 39 01.9 +0.9
POIN                                IAmb   IAmb    02 39 06.8
      comp=Z,8.0nm,1.4s
SONM  Songino Array      58.74  51  P      P       02 39 05.8 -0.8
      comp=Z,0.6nm,0.7s,baz=309,slow=9.4,SNR=3.9
      comp=Z,0.6nm,0.7s
ULN   Ulaanbaatar        59.13  51⇑iP      P       02 39 08.2 -1.2
ULN                                 pmax   pmax
      comp=Z,2.0nm,0.9s
TIXI  Tiksi              59.29  21⇓iP      P       02 39 09.1 -0.7
TIXI                                pmax   pmax
      comp=Z,7.0nm,2.0s
SCHQ  Schefferville      60.77 318  P      P       02 39 20.5 +0.3
      comp=Z,5.3nm,0.5s,baz=72,slow=4.9,SNR=16
      comp=Z,5.3nm,0.5s
SCHQ  Schefferville      60.77 318  P      P       02 39 20.6 +0.4
RES   Resolute Bay       61.13 345  P      P       02 39 22.8 +0.5
RES   Resolute Bay       61.13 345  P      P       02 39 22.8 +0.5
RES                                 pmax   pmax
      comp=Z,3.0nm,1.2s
HHC   Hu-ho-hao-te       65.12  57 eP      P       02 39 49.7 +0.4
HHC                                 pmax   pmax
      comp=Z,10.0nm,0.7s
PZH   PanZhiHua          65.15  75  P      P       02 39 51.6 +1.8
D62A  Allapoint, All     65.53 311  P      P       02 39 53.0 +1.3
XAN   Xi'an              66.66  64 eP      P       02 39 55.1 -4.1
CMAR  Chiang Mai Arr     67.25  84  P      P       02 40 02.8 -0.3
      comp=Z,1.1nm,0.3s,baz=301,slow=5.9,SNR=1.5
      comp=Z,1.1nm,0.3s
BLKN  Baker Lake         68.10 336  P      P       02 40 07.9 +0.3
BLKN                                IAmb   IAmb    02 40 08.1
      comp=Z,8.4nm,1.3s
A36M  Sachs Harbour      68.65 350  P      P       02 40 11.3 +0.4
A36M                                IAmb   IAmb    02 40 44.6
      comp=Z,6.8nm,1.1s
C36M  Paulatuk           70.86 349  P      P       02 40 24.1 -0.3
FCC   Fort Churchill     71.16 331  P      P       02 40 26.7 +0.2
FCC   Fort Churchill     71.16 331  P      P       02 40 26.7 +0.2
FCC                                 pmax   pmax
      comp=Z,2.0nm,1.1s
C23K  Itkillik River     72.87 358  P      P       02 40 37.1 +0.7
INK   Inuvik             73.14 351  P      P       02 40 37.3 -0.7
INK   Inuvik             73.14 351  P      P       02 40 37.3 -0.7
INK                                 pmax   pmax
      comp=Z,6.0nm,1.4s
N58A  Sunbury            73.54 309  P      P       02 40 42.2 +1.2
F31M  Tsiigehtchic       73.99 351  P      P       02 40 43.1 +0.1
F31M                                IAmb   IAmb    02 41 03.7
      comp=Z,7.5nm,1.4s
E22K  Anaktuvuk Pass     74.60 358  P      P       02 40 47.2 +0.5
NJ2   Nanjing            74.75  61 eP      P       02 40 38.4  -10
NJ2                                 pmax   pmax
      comp=Z,5.0nm,0.6s
YKAW3 Yellowknife Wh     74.84 341  P      P       02 40 48.2 +0.2
YKA   Yellowknife Ar     74.90 341  P      P       02 40 48.5 +0.1
      comp=Z,0.8nm,0.6s,baz=110,slow=5.9,SNR=13
      comp=Z,0.8nm,0.6s
YKA   Yellowknife Ar     74.90 341  P      P       02 40 48.4  0.0
E19K  Redstone River     75.33   0         P       02 40 51.2 +0.5
E19K                                IAmb   IAmb    02 40 52.1
      comp=Z,5.6nm,0.8s
Q56A  Snyder Ridge,      76.14 309  P      P       02 40 57.0 +1.1
IMAR  Indian Mountai     76.80 359  P      P       02 40 59.5 +0.4
J30M  Hart River         77.05 351  P      P       02 41 00.8 +0.1
H21K  Melozitna Rive     77.11 359  P      P       02 41 01.5 +0.6
ILAR  Eielson Array      77.78 356  P      P       02 41 04.5 -0.1
      comp=Z,0.2nm,0.5s,baz=342,slow=3.5,SNR=6.1
      comp=Z,0.2nm,0.5s
ILAR  Eielson Array      77.78 356  P      P       02 41 04.2 -0.4
J26L  Joseph Creek       77.83 355  P      P       02 41 04.9 -0.1
DAWY  Dawson             77.88 353  P      P       02 41 05.5 +0.2
WRH   Wood River Hil     78.14 356  P      P       02 41 06.3 -0.3
WRH                                 IAmb   IAmb    02 41 37.3
      comp=Z,10nm,1.4s
J19K  Poorman            78.81 360  P      P       02 41 10.4 +0.1
J19K                                IAmb   IAmb    02 41 51.1
      comp=Z,6.7nm,1.3s
BCAR  Beaver Creek A     79.09 353  P      P       02 41 12.3 +0.4
DHY   Denali Highway     79.49 356  P      P       02 41 14.3 +0.2
DHY                                 IAmb   IAmb    02 41 45.2
      comp=Z,6.5nm,1.4s
PPLA  Purkeypile         79.86 358  P      P       02 41 16.1 -0.1
L22K  Petersville        80.19 358  P      P       02 41 16.8 -1.0
L22K                                IAmb   IAmb    02 41 49.6
      comp=Z,11nm,1.4s
SKT   Skwentna           80.76 358  P      P       02 41 20.2 -0.6
SKT                                 IAmb   IAmb    02 42 02.9
      comp=Z,8.7nm,1.3s
ECSD  EROS Data Cent     82.84 321  P      P       02 41 32.8 +0.7
ECSD                                IAmb   IAmb    02 41 34.3
      comp=Z,6.5nm,1.1s
WVT   Waverly            83.28 311  P      P       02 41 34.6 +0.2
WVT                                 IAmb   IAmb    02 42 04.5
      comp=Z,9.8nm,1.4s
WVT   Waverly            83.28 311  P      P       02 41 34.6 +0.2
WVT                                 pmax   pmax
      comp=Z,10.0nm,1.4s
CCM   Cathedral Cave     83.97 314  P      P       02 41 38.7 +0.7
CCM                                 IAmb   IAmb    02 41 39.7
      comp=Z,4.4nm,0.5s
CCM   Cathedral Cave     83.97 314  P      P       02 41 38.7 +0.7
CCM                                 pmax   pmax
      comp=Z,4.0nm,0.5s
P38A  Dawn               84.16 316  P      P       02 41 39.6 +0.7
P38A                                IAmb   IAmb    02 41 40.7
      comp=Z,4.4nm,0.5s
R40A  Maddies Statio     84.39 315  P      P       02 41 40.7 +0.7
R40A                                IAmb   IAmb    02 42 05.1
      comp=Z,9.0nm,1.2s
LRAL  Lakeview Retre     84.83 308  P      P       02 41 43.2 +0.9
LRAL                                IAmb   IAmb    02 41 44.6
      comp=Z,5.3nm,0.7s
MGMO  Mountain Grove     85.18 314  P      P       02 41 45.2 +1.1
BDFB  Brasilia           85.74 247  P      P       02 41 45.0 -2.1
      comp=Z,1.1nm,0.4s,baz=44,slow=10,SNR=3.0
      comp=Z,1.1nm,0.4s
JTMT  Jette              87.28 333  P      P       02 41 55.2 +0.9
NEW   Newport            87.82 335  P      P       02 41 57.1 +0.4
NEW                                 IAmb   IAmb    02 41 58.7
      comp=Z,4.8nm,0.8s
NEW   Newport            87.82 335  P      P       02 41 57.1 +0.4
NEW                                 pmax   pmax
      comp=Z,5.0nm,0.8s
LRM   Limekiln Ridge     88.23 331  P      P       02 41 59.4 +0.5
PDAR  Pinedale Array     89.59 328  P      P       02 42 03.4 -2.0
      comp=Z,0.5nm,0.8s,baz=79,slow=7.7,SNR=5.0
      comp=Z,0.5nm,0.8s
PDAR  Pinedale Array     89.59 328  P      P       02 42 05.2 -0.2
WMOK  Wichita Mounta     90.58 316  P      P       02 42 10.3 +0.4
WMOK                                IAmb   IAmb    02 42 12.1
      comp=Z,2.3nm,0.8s
WMOK  Wichita Mounta     90.58 316  P      P       02 42 10.3 +0.4
WMOK                                pmax   pmax
      comp=Z,2.0nm,0.8s
PV19  Morning Glory      92.96 325  P      P       02 42 21.5 +0.4
PV19                                IAmb   IAmb    02 42 46.9
      comp=Z,7.8nm,1.5s
PKCU  Pink Cliffs        95.17 326  P      P       02 42 31.9 +0.6
PKCU                                IAmb   IAmb    02 42 33.0
      comp=Z,1.5nm,0.6s
TXAR  Lajitas Array      97.37 316  P      P       02 42 42.2 +1.0
      comp=Z,0.3nm,0.7s,baz=54,slow=5.1,SNR=2.3
      comp=Z,0.3nm,0.7s
NVL   N'lazarevskaya    108.35 184 eP      Pdif    02 43 45.1  +16
NVL                                 pmax   pmax
      comp=Z,8.0nm,1.0s
ASAR  Alice Springs     119.38  98  PKP    PKPdf   02 47 56.3 -0.1
      comp=Z,0.5nm,0.3s,baz=313,slow=1.5,SNR=8.4
ASAR  Alice Springs     119.38  98         PKPdf   02 47 56.1 -0.3
ASAR  Alice Springs     119.38  98  PKIKP  PKPdf   02 47 56.1 -0.3
BELA  Belgrano 2        120.36 192  PKPdf  PKPdf   02 47 57.0 +0.4
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*IDC **11** 02:33:40.0±4.5, 26°.20S×179°.68E, h452km±47km, mb3.6/6, mbtmp4.4/8, Error ellipse: s-maj=32.3km s-min=19.1km az=47.0*

*NEIC **11** 02:33:43.4±1.4, 26°.1S±0°.1×179°.76E±0°.07, h500km±9km, mb4.3/20, Error ellipse: s-maj=22.5km s-min=5.7km az=199.0*

ISC 11 02:33:43.7±0.6**, 26°.23S**±0°.09×**179°.68E**±0°.10**, h503**km**, n42, σ1s.04**/43**, mb4.4**/15**, South of Fiji Islands**

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Code  Station Name         Δ°  AZ°  Phase ID       Time       Res
                                    Op     ISC     h  m  s    ISC
RAO   Raoul Island        3.69 145  P      P       02 34 59.5 -0.2
PINNC Pines Island,      11.71 285  P      P       02 36 18.5 -0.6
URZ   Urewera            12.19 190  P      P       02 36 22.8 -1.2
      8.6nm,0.9s,baz=286,slow=3.5,SNR=6.1
URZ                                 S      S       02 38 33.3 -3.0
      5.8nm,0.7s,baz=18,slow=14,SNR=1.9
RTZ   Ruatahuna          12.56 190  P      P       02 36 28.7 +0.7
ONTNC Ouen Toro          12.67 285  P      P       02 36 28.6 -0.8
DZM   Mont Dzumac        12.77 286  P      P       02 36 29.0 -1.5
      15nm,0.7s,baz=101,slow=16,SNR=14
DZM   Mont Dzumac        12.77 286  P      P       02 36 30.1 -0.4
MRZ   Mangatainoka R     14.79 192  P      P       02 36 53.5 +2.1
LTZ   Lake Taylor        17.59 198  P      P       02 37 20.3 +0.3
LTZ                                 IAmb   IAmb    02 38 02.6
      comp=Z,13nm,1.2s
LHI   Lord Howe Isla     18.80 249  P      P       02 37 32.4 +1.3
ARMA  Armidale           25.01 254  P      P       02 38 28.8 +1.6
ARMA                                IAmb   IAmb    02 38 35.2
      comp=Z,16nm,1.4s
EIDS  Eidsvold           25.74 266  P      P       02 38 33.7 +0.1
CTAO  Charters Tower     31.27 274  P      P       02 39 21.9 -0.1
STKA  Stephens Creek     33.64 251  P      P       02 39 40.6 -1.4
      comp=Z,3.4nm,0.4s,baz=103,slow=12,SNR=9.8
      comp=Z,3.4nm,0.4s
INKA  Innaminka          34.63 259  P      P       02 39 50.9 +0.5
INKA                                IAmb   IAmb    02 39 52.8
      comp=Z,6.2nm,0.8s
COEN  Coen               36.26 282  P      P       02 40 03.4 -0.7
BBOO  Buckleboo          38.31 250  P      P       02 40 21.1 +0.4
BBOO                                IAmb   IAmb    02 40 57.7
      comp=Z,17nm,1.3s
AS31  Alice Springs      41.42 263  P      P       02 40 46.1 +0.2
AS31                                IAmb   IAmb    02 40 47.5
      comp=Z,5.5nm,0.5s
ASAR  Alice Springs      41.42 263  P      P       02 40 46.0 +0.2
      comp=Z,5.7nm,0.4s,baz=91,slow=7.7,SNR=191
      comp=Z,5.7nm,0.4s
ASAR  Alice Springs      41.42 263  P      P       02 40 45.5 -0.4
WRA   Warramunga Arr     42.01 269  P      P       02 40 50.0 -0.6
      comp=Z,7.3nm,0.4s,baz=105,slow=7.9,SNR=47
      comp=Z,7.3nm,0.4s
WRA   Warramunga Arr     42.01 269  P      P       02 40 49.7 -0.9
WB0   Warramunga Arr     42.01 269  P      P       02 40 49.7 -0.9
WB0                                 IAmb   IAmb    02 40 51.3
      comp=Z,11nm,0.7s
FORT  Forrest            45.27 252  P      P       02 41 15.3 -0.5
FORT                                IAmb   IAmb    02 41 17.2
      comp=Z,8.1nm,0.7s
KNRA  Kununurra          48.43 272  P      P       02 41 39.6 -0.3
FITZ  Fitzroy Crossi     50.40 268  P      P       02 41 54.7 +0.3
VNDA  Vanda              52.05 185  P      P       02 42 05.4 -0.1
      comp=Z,0.6nm,0.7s,baz=15,slow=6.7,SNR=3.5
      comp=Z,0.6nm,0.7s
MORW  Morawa             55.83 251  P      P       02 42 32.4 -0.7
MORW                                IAmb   IAmb    02 42 52.4
      comp=Z,23nm,1.4s
QSPA  South Pole Qui     63.87 180  P      P       02 43 27.4 +1.2
      comp=Z,2.3nm,0.5s,baz=27,slow=1.1,SNR=10
      comp=Z,2.3nm,0.5s
QSPA  South Pole Qui     63.87 180  P      P       02 43 27.7 +1.5
QSPA                                IAmb   IAmb    02 43 28.8
      comp=Z,3.0nm,0.7s
BELA  Belgrano 2         74.17 173  P      P       02 44 28.5 +0.6
SNAA  Sanae              82.36 179  P      P       02 45 12.4 +0.4
PINE  Pine Mountain      88.39  39  P      P       02 45 40.3 -1.4
PINE                                IAmb   IAmb    02 46 11.5
      comp=Z,10nm,1.5s
MTPU  Mount Pierson      90.32  47  P      P       02 45 50.4 -0.7
PZH   PanZhiHua          91.54 299  P      P       02 45 57.6 +1.0
HHC   Hu-ho-hao-te       91.85 315 eP      P       02 45 57.9 +0.2
HHC                                 pmax   pmax
      comp=Z,17nm,0.6s
TXAR  Lajitas Array      91.90  58  P      P       02 45 57.2 -1.0
      comp=Z,0.7nm,0.8s,baz=220,slow=5.8,SNR=5.9
      comp=Z,0.7nm,0.8s
TXAR  Lajitas Array      91.90  58  P      P       02 45 57.0 -1.2
ARPR  Arapgir-MALATY    145.27 301  PKPbc  PKPdf   02 52 24.0 -0.1
BRTR  Keskin Array B    148.69 304  PKPbc  PKiKP   02 52 36.6 +1.5
      comp=Z,0.6nm,0.8s,baz=90,slow=1.5,SNR=4.1
BURAR Bucovina Array    150.69 323  PKPbc  PKPbc   02 52 38.1 -0.4
EKA   Eskdalemuir Ar    150.85   3  PKPbc  PKiKP   02 52 40.5 +1.5
      comp=Z,0.4nm,0.4s,baz=352,slow=5.6,SNR=3.7
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*KRSC **11** 02:42:26.4±0.6, 60°.93N×166°.10E, h6km±11km, Ml4.1, Felt [II] at Levtirinivayam, Khailino.*

*IDC **11** 02:42:32.4±6.4, 59°.73N×164°.51E, h253km±44km, mb2.9/6, mbtmp3.5/7, Error ellipse: s-maj=94.5km s-min=18.2km az=179.0*

ISC 11 02:42:23.1±1.0**, 60°.86N**±0°.06×**167°.18E**±0°.08**, h22**km**, n11, σ2s.31**/11**, mb3.5**/5**, Eastern Siberia**

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Code  Station Name         Δ°  AZ°  Phase ID       Time       Res
                                    Op     ISC     h  m  s    ISC
TILK  Tilichiki           0.66 231 eP      Pb      02 42 36.6 +0.8
TILK                               eS      Sb      02 42 44.4 -0.1
KMSK  Kamenskaya          1.68 344 eP      Pb      02 42 55.0 +1.7
KMSK                               eS      Sb      02 43 15.0 +1.0
OSSR  Ossora              2.62 234 eP      Pn      02 43 06.2 +2.2
PALN  Palana              4.04 247 eP      Pn      02 43 25.5 +2.1
SEY   Seymchan            7.29 293  P      Pn      02 44 09.0 +0.9
      1.2nm,0.4s,baz=106,slow=15,SNR=4.6
SEY                                 S      Sn      02 45 25.9 -4.2
      3.1nm,0.8s,baz=33,slow=18,SNR=2.0
ILAR  Eielson Array      20.97  59  P      Pn      02 47 11.8 +5.0
      1.6nm,0.6s,baz=275,slow=8.8,SNR=26
      1.6nm,0.6s
YKA   Yellowknife Ar     35.04  52  P      P       02 49 15.2 +1.6
      0.4nm,0.9s,baz=309,slow=8.7,SNR=3.8
      0.4nm,0.9s
MKAR  Makanchi Array     48.43 294  P      P       02 50 42.9  -20
      0.4nm,0.9s,baz=44,slow=8.6,SNR=2.4
      0.4nm,0.9s
PDAR  Pinedale Array     50.78  71  P      P       02 51 19.5 -2.0
      0.1nm,0.4s,baz=329,slow=7.2,SNR=4.7
      0.1nm,0.4s
ULM   Lac du Bonnet      50.91  55  P      P       02 51 20.1 -1.9
      0.9nm,0.4s,baz=336,slow=6.6,SNR=3.1
      0.9nm,0.4s
AKTO  Aktyubinsk         55.41 313  P      P       02 51 38.4  -17
      0.5nm,0.4s,baz=27,slow=4.5,SNR=2.0
      0.5nm,0.4s
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*NEIC **11** 02:48:17.6±1.5, 31°.64N±0°.02×116°.22W±0°.02, h10km±2km, Error ellipse: s-maj=3.7km s-min=3.0km az=207.0*

*PAS **11** 02:48:20.0±1.4, 31°.70N±0°.02×116°.16W±0°.03, h20km±6km, Mwr3.9/6, mb4.1/2(NEIC), ML3.9/61(NEIC), Error ellipse: s-maj=4.0km s-min=2.4km az=48.0*

*ECX **11** 02:48:20.7±0.3, 31°.71N×116°.13W, h5km±2km, MD4.0, ML4.3, Fault plane solution: NP1:φs115.00000°, δ86.00000°, λ138.00000°.*

*MEX **11** 02:48:20.4±0.6, 31°.67N×116°.21W, h22km±999km, MD4.1*

*IDC **11** 02:48:25.9±2.0, 32°.14N×115°.43W, h0km, mb3.4/1, mbtmp3.3/6, ML3.6/4, MS2.6/4, Error ellipse: s-maj=31.8km s-min=12.0km az=42.0*

ISC 11 02:48:20.6±0.9**, 31°.70N**±0°.02×**116°.19W**±0°.02**, h24**km±7km**, n187, σ1s.20**/207**, 11C-11D, Baja California**

```
Code  Station Name         Δ°  AZ°  Phase ID       Time       Res
                                    Op     ISC     h  m  s    ISC
SJX   San Joaquin         0.21  71⇓iP      Pb      02 48 26.9 +0.7
SJX                                eS      Sb      02 48 31.7 +1.6
SJX                                 IAML           02 48 31.8
      comp=E,53µm,0.1s
SJX                                 IAML           02 48 31.9
      comp=N,60µm,0.2s
SV2X  San Vicente         0.36 186⇓iP      Pb      02 48 27.7 -0.7
SV2X                               eS      Sb      02 48 33.1 -0.6
SV2X                                IAML           02 48 33.4
      comp=N,48µm,0.1s
SV2X                                IAML           02 48 34.0
      comp=E,31µm,0.1s
ESJX  Sierra Juarez       0.37  34         Pb      02 48 26.9 -1.9
ESJX                                Sg     Sb      02 48 31.6 -2.7
CCX   Cicese              0.44 293  Pg     Pb      02 48 29.3 -0.4
CCX                                 Sg     Sb      02 48 35.5 -0.4
CCX                                 IAML           02 48 37.0
      comp=N,17µm,0.2s
CCX   Cicese              0.44 293⇑iP      Pb      02 48 29.3 -0.4
CCX                                eS      Sb      02 48 35.8 -0.1
CCX                                 IAML           02 48 36.5
      comp=E,40µm,0.3s
CCX                                 IAML           02 48 37.0
      comp=N,17µm,0.2s
PBX   Punta Banda         0.46 276⇑iP      Pb      02 48 29.8 -0.2
PBX                                eS      Sb      02 48 36.7 +0.2
PBX                                 IAML           02 48 37.6
      comp=E,8µm,0.1s
VTX   Valle De La Tr      0.46 131  Pg     Pb      02 48 28.6 -1.6
VTX                                 Sg     Sb      02 48 34.6 -2.0
VTX   Valle De La Tr      0.46 131⇓iP      Pb      02 48 28.6 -1.6
VTX                                eS      Sb      02 48 34.8 -1.9
VTX                                 IAML           02 48 35.4
      comp=N,23µm,0.1s
ALAMX Rancho Alamar       0.52  53⇑iP      Pb      02 48 29.2 -1.8
ALAMX                              eS      Sb      02 48 35.4 -2.7
ALAMX                               IAML           02 48 36.1
      comp=N,32µm,0.1s
ALAMX                               IAML           02 48 36.1
      comp=E,28µm,0.2s
CBX   Cerro Bola          0.73 327  Pg     Pb      02 48 33.4 -1.3
CBX                                 Sg     Sb      02 48 43.0 -1.5
CBX                                 IAML           02 48 44.5
      comp=N,10µm,0.5s
CBX                                 IAML           02 48 45.1
      comp=E,9µm,0.4s
CBX   Cerro Bola          0.73 327⇓iP      Pb      02 48 33.5 -1.3
CBX                                eS      Sb      02 48 43.1 -1.5
CBX                                 IAML           02 48 44.6
      comp=N,9µm,0.5s
CBX                                 IAML           02 48 45.4
      comp=E,7µm,0.3s
CBX   Cerro Bola          0.73 327 i P     Pb      02 48 33.4 -1.3
CBX                                i S     Sb      02 48 43.0 -1.5
TJIG  Tijuana             0.84 331         Pb      02 48 35.0 -1.6
TJIG                                       Sb      02 48 45.6 -1.8
TJIG  Tijuana             0.84 331⇓iP      Pb      02 48 35.1 -1.5
TJIG                                IAML           02 48 46.5
      comp=N,4µm,0.2s
TJIG                                IAML           02 48 46.7
      comp=E,8µm,0.1s
TJIG  Tijuana             0.84 331 eP      Pb      02 48 35.0 -1.6
TJIG                               eS      Sb      02 48 45.6 -1.8
RHX   Rio Hardy           0.89  60⇑iP      Pb      02 48 35.7 -1.5
RHX                                 IAML           02 48 47.6
      comp=E,2µm,0.5s
RHX                                 IAML           02 48 47.8
      comp=N,2µm,0.2s
SPIG  San Pedro Mart      0.90 136         Pb      02 48 36.1 -1.6
SPIG                                       Sb      02 48 47.6 -1.7
SPIG  San Pedro Mart      0.90 136⇓iP      Pb      02 48 36.2 -1.5
SPIG                                IAML           02 48 49.5
      comp=N,3µm,0.1s
SPIG  San Pedro Mart      0.90 136 eP      Pb      02 48 36.1 -1.6
SPIG                               eS      Sb      02 48 47.6 -1.7
RMX   La Rumorosa         0.91   6         Pb      02 48 35.6 -2.2
RMX                                        Pn      02 48 46.5 +8.5
RMX   La Rumorosa         0.91   6⇓iP      Pb      02 48 35.6 -2.2
RMX                                 IAML           02 48 46.8
      comp=N,4µm,0.3s
RMX                                 IAML           02 48 47.4
      comp=E,5µm,0.1s
TKX   Tecate              0.94 338         Pb      02 48 36.5 -1.7
TKX   Tecate              0.94 338⇓iP      Pb      02 48 36.5 -1.7
TKX                                 IAML           02 48 49.2
      comp=E,12µm,0.1s
TKX                                 IAML           02 48 49.4
      comp=N,6µm,0.2s
IKP   In-Ko-Pah, Jac      0.95   4         Pb      02 48 37.2 -1.3
IKP   In-Ko-Pah, Jac      0.95   4⇓iP      Pb      02 48 37.2 -1.3
YUH   Yuha Desert         0.97  13  Pg     Pn      02 48 37.2 -1.5
YUH                                 Sg     Sb      02 48 49.1 -2.2
YUH                                 IAML           02 48 50.2
      comp=N,3µm,0.2s
YUH                                 IAML           02 48 50.5
      comp=E,4µm,0.2s
YUH2  Yuha Desert         0.97  13⇓iP      Pn      02 48 37.3 -1.5
YUH2                                IAML           02 48 50.1
      comp=E,4µm,0.1s
JARAX Ej. Heriberto       0.98  32⇑eP      Pn      02 48 37.9 -1.0
JARAX                               IAML           02 48 52.0
      comp=N,25µm,0.4s
JARAX                               IAML           02 49 05.8
      comp=E,37µm,0.7s
ECBX  El Chinero          1.00 103⇑iP      Pn      02 48 37.7 -1.3
ECBX                                IAML           02 48 51.6
      comp=N,4µm,0.3s
SGL   Mount Signal        1.03  22         Pn      02 48 38.3 -1.2
SGL                                        Sb      02 48 51.3 -1.5
DUZA  Dulzura             1.03 332         Pn      02 48 38.2 -1.4
DUZA                                       Sb      02 48 51.5 -1.5
CPBX  Cerro Prieto        1.04  46         Pn      02 48 38.5 -1.2
CPBX  Cerro Prieto        1.04  46⇑iP      Pn      02 48 38.5 -1.2
CPBX                                IAML           02 48 55.6
      comp=E,35µm,0.4s
CPBX                                IAML           02 49 00.6
      comp=N,33µm,0.6s
AGSX  Ej. Aguas Cali      1.04  57⇑iP      Pn      02 48 38.5 -1.2
AGSX                                IAML           02 48 53.9
      comp=N,17µm,0.4s
AGSX                                IAML           02 48 54.2
      comp=E,11µm,0.2s
CEA0  Mexicali            1.05  25  IAML           02 48 54.7
      comp=E,29µm,0.3s
CEA0                                IAML           02 48 59.5
      comp=N,27µm,0.6s
BAR   Barrett             1.06 338         Sb      02 48 51.9 -1.9
BAR   Barrett             1.06 338  Pn     Pn      02 48 38.4 -1.6
BAR                                 IAML           02 48 52.4
      comp=N,3µm,0.2s
BAR                                 IAML           02 48 54.2
      comp=E,3µm,0.3s
BAR   Barrett             1.06 338⇓iP      Pn      02 48 38.5 -1.6
BAR                                 IAML           02 48 52.5
      comp=N,3µm,0.2s
BAR                                 IAML           02 48 54.2
      comp=E,3µm,0.3s
TJX   Tijuana             1.09 318  Pn     Pn      02 48 39.6 -0.8
TJX                                        Sb      02 48 53.9 -0.8
TJX                                 IAML           02 48 56.6
      comp=N,7µm,0.6s
TJX   Tijuana             1.09 318  IAML           02 48 56.7
      comp=N,5µm,0.4s
TJX                                 IAML           02 48 57.2
      comp=E,7µm,0.3s
MBIG  Mexicali            1.10  50⇑iP      Pn      02 48 39.6 -0.9
MBIG                                IAML           02 48 56.7
      comp=N,35µm,0.4s
MBIG                                IAML           02 48 56.9
      comp=E,25µm,0.5s
MBIG  Mexicali            1.10  50 eP      Pn      02 48 38.6 -1.9
MBIG                               eS      Sb      02 48 52.7 -2.1
OLP   Otay Lakes Par      1.10 326         Pn      02 48 39.1 -1.5
OLP                                        Sb      02 48 54.1 -0.9
OLP   Otay Lakes Par      1.10 326  IAML           02 48 54.5
      comp=N,3µm,0.3s
GUVIX Guadalupe Vict      1.12  57         Pn      02 48 39.1 -1.7
GUVIX                                      Sn      02 48 56.2 +0.7
GUVIX Guadalupe Vict      1.12  57⇑eP      Pn      02 48 39.6 -1.2
WESC  Westside Schoo      1.13  20         Pn      02 48 40.5 -0.4
WESC                                       Sn      02 48 55.5 -0.1
WESC  Westside Schoo      1.13  20  IAML           02 48 59.4
      comp=E,13µm,0.5s
WESC                                IAML           02 49 00.7
      comp=N,23µm,0.7s
UABX  UABC, Campus M      1.13  34         Sn      02 48 55.9 +0.3
UABX  UABC, Campus M      1.13  34⇑eP      Pb      02 48 41.2 -0.2
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5053	Calexico	1.14	31		Pn	02 48 41.2	+0.2
5053					Sb	02 48 57.0	+1.2
ICBC	Inst. de Cultu	1.14	32	IAML		02 48 57.3	
	comp=N,30µm,0.4s						
ICBC				IAML		02 49 01.6	
	comp=E,26µm,0.7s						
RITX	Riito Sonora	1.15	66	IAML		02 48 57.6	
	comp=N,11µm,0.2s						
CORX	Isla Coronado	1.15	309	IAML		02 48 56.9	
	comp=N,5µm,0.3s						
CORX				IAML		02 48 57.4	
	comp=E,6µm,0.3s						
SQX	San Quintin	1.15	166	IAML		02 48 59.8	
	comp=E,3µm,0.5s						
SQX				IAML		02 48 60.0	
	comp=N,4µm,0.3s						
POT2	Potabilizadora	1.15	36	IAML		02 48 57.6	
	comp=N,52µm,0.3s						
POT2				IAML		02 48 57.8	
	comp=E,57µm,0.6s						
CRR	Carrizo Plain	1.20	9		Pn	02 48 41.6	-0.3
CRR					Sb	02 48 57.9	+0.1
COK2	Cook Ranch 2	1.22	19		Pn	02 48 42.2	+0.2
COK2					Sb	02 48 58.5	+0.3
SDRC	San Diego Road	1.22	329		Pn	02 48 41.3	-0.8
SDRC					Sn	02 48 56.4	-1.4
SDRC	San Diego Road	1.22	329	IAML		02 48 57.4	
	comp=E,6µm,0.1s						
SDRC				IAML		02 48 57.4	
	comp=N,5µm,0.2s						
DREC	Desert Rsrch C	1.27	30		Pn	02 48 42.8	0.0
DREC					Sb	02 49 01.0	+1.2
DREC	Desert Rsrch C	1.27	30	IAML		02 49 01.5	
	comp=E,15µm,0.4s						
DREC				IAML		02 49 01.8	
	comp=N,16µm,0.4s						
PESCX	Ej. Pescaderos	1.27	54		Pn	02 48 41.7	-1.2
PESCX					Sb	02 49 00.9	+1.0
SWSC	Sam W. Stewart	1.29	15		Pn	02 48 43.0	-0.1
SWSC					Sn	02 48 59.6	0.0
EML	El Monte Cty P	1.31	335		Pn	02 48 42.5	-0.9
EML					Sn	02 48 59.5	-0.7
IMPE	Imperial	1.31	24		Pn	02 48 43.9	+0.5
IMPE					Sb	02 49 02.1	+1.1
SFX	San Felipe	1.32	119	Pn	Pn	02 48 42.4	-1.2
SFX				IAML		02 49 03.0	
	comp=E,3µm,0.8s						
SFX	San Felipe	1.32	119	*e*P	Pn	02 48 41.9	-1.6
SFX				*e*S	Sn	02 48 57.6	-2.8
SNR	Schaffner Ranc	1.33	29		Pn	02 48 43.2	-0.4
SNR					Sn	02 49 00.7	+0.2
MTRP	Mission Trails	1.34	327		Pn	02 48 43.8	0.0
MTRP					Sn	02 49 00.8	0.0
SDMC	San Diego Miss	1.35	324		Sn	02 49 01.6	+0.6
CPE	Camp Elliot	1.42	327	Pn	Pn	02 48 44.5	-0.4
JUEM	Julian Eagle M	1.42	346		Pn	02 48 44.5	-0.6
DPP	Dos Picos Cty	1.45	334	Pn	Pn	02 48 44.7	-0.6
DPP				IAML		02 49 03.8	
	comp=E,2µm,0.2s						
DPP				IAML		02 49 06.4	
	comp=N,1µm,0.2s						
ERRC	Elmore Ranch	1.45	12		Pb	02 48 46.7	-0.2
ERRC					Sb	02 49 06.3	+1.4
EMSC	East Mesa	1.46	44		Pn	02 48 44.5	-0.9
EMSC					Sb	02 49 06.2	+1.1
EMSC	East Mesa	1.46	44	IAML		02 49 07.1	
	comp=N,3µm,0.4s						
EMSC				IAML		02 49 07.1	
	comp=E,6µm,0.3s						
BRGC	Borrego Mounta	1.47	1		Pn	02 48 45.3	-0.3
COA	Coachella	1.47	38		Pn	02 48 44.8	-0.8
SLH	Sleepy Hollow	1.49	358		Pn	02 48 46.0	+0.1
SLH					Sb	02 49 06.7	+0.5
MATG	Mataguay Scout	1.55	346		Pn	02 48 46.7	-0.1
MATG	Mataguay Scout	1.55	346	IAML		02 49 08.0	
	comp=E,3µm,0.3s						
MATG				IAML		02 49 08.2	
	comp=N,2µm,0.2s						
BORC	Borrego Spring	1.58	353	Pn	Pn	02 48 46.9	-0.2
BORC				IAML		02 49 10.0	
	comp=E,1µm,0.7s						
SALN	Salton City	1.59	6	Pn	Pn	02 48 46.7	-0.5
RUN	Ruthven	1.64	39		Pn	02 48 46.8	-1.1
COY	Coyote Mountai	1.67	357		Pn	02 48 48.0	-0.3
GORC	Green Oak Ranc	1.70	329		Pn	02 48 48.9	+0.2
SLVP	Salvation Pass	1.71	26		Pn	02 48 48.0	-0.9
PLM	Palomar	1.75	341		Pn	02 48 49.8	+0.3
GLA	Glamis	1.78	40	Pn	Pn	02 48 48.8	-1.1
GLA				IAML		02 49 11.2	
	comp=N,1µm,0.4s						
GLA				IAML		02 49 25.2	
	comp=E,1µm,0.8s						
FRD	Ford Ranch, An	1.83	349		Pn	02 48 51.0	+0.3
FRD	Ford Ranch, An	1.83	349		Pn	02 48 50.9	+0.3
BZNA	Buzz No.'s Pla	1.83	347		Pn	02 48 51.2	+0.5
SNDA	J Saunders Pla	1.88	349		Pn	02 48 51.9	+0.5
DNR	Dunn Ranch,Anz	1.90	349	Pn	Pn	02 48 51.5	-0.2
CRY	Cary Ranch	1.92	346		Pn	02 48 52.5	+0.6
XPFO	Pinon Flat	1.92	353		Pn	02 48 52.1	+0.1
PFO	Pinyon Flats O	1.92	353	Pn	Pn	02 48 51.9	0.0
	comp=E,47nm,0.3s,baz=166,slow=12,SNR=160						
PFO				Lg	Lg	02 49 18.1	
	comp=E,87nm,0.3s,baz=266,slow=21,SNR=14						
PFO	Pinyon Flats O	1.92	353		Pn	02 48 52.0	0.0
PFO	Pinyon Flats O	1.92	353	Pn	Pn	02 48 51.6	-0.3
PFO				IAML		02 49 24.2	
	comp=E,406nm,0.9s						
PFO				IAML		02 49 30.1	
	comp=E,267nm,1.1s						
PMD	Palm Desert	1.95	355	Pn	Pn	02 48 52.2	0.0
CTW	Cottonwood Mou	1.99	8		Pn	02 48 52.6	-0.2
BACC	Bachelor Mtn.	2.04	340		Pn	02 48 54.0	+0.5
BC3	Big Chuckawall	2.05	17	Pn	Pn	02 48 53.0	-0.6
BC3				IAML		02 49 33.4	
	comp=E,466nm,1.1s						
HAY	Hayfield	2.05	12		Pn	02 48 54.0	+0.4
DGR	Domenigoni Val	2.07	341		Pn	02 48 52.6	-1.3
MURC	Murrieta	2.08	336		Pb	02 48 55.9	-1.7
POB	Polly Butte	2.08	343		Pn	02 48 54.7	+0.7
HMTC	Hemet	2.12	341		Pn	02 48 55.2	+0.6
ELS	Elsinore Mount	2.21	332	Pn	Pn	02 48 56.1	+0.3
ELS				IAML		02 49 31.5	
	comp=E,679nm,0.6s						
ELS				IAML		02 49 32.9	
	comp=N,586nm,0.7s						
PPXB	Puerto Peasco	2.21	99	IAML		02 49 37.5	
	comp=N,302nm,0.5s						
PPXB				IAML		02 49 38.0	
	comp=E,278nm,0.7s						
EW2	E Wide Canyon	2.25	355		Pn	02 48 56.7	+0.4
BELC	Belle Mtn. Jos	2.30	4	Pn	Pn	02 48 57.2	0.0
113A	Mohawk Valley,	2.32	62	Pn	Pn	02 48 56.4	-0.8
PIX	Pinacate	2.33	93	Pn	Pn	02 48 55.4	-2.0
BLAC	Blackrock camp	2.37	356		Pb	02 49 02.5	-0.2
RAY	Raywood Flat	2.39	348		Pb	02 49 01.8	-1.3
SLGB	San Luis Gonza	2.41	140	IAML		02 49 41.0	
	comp=N,655nm,0.6s						
MLL	Mill Creek	2.47	345		Pn	02 49 00.8	+1.4
BLYC	Blythe	2.48	34	Pn	Pn	02 48 59.2	-0.4
BLYC				IAML		02 49 44.3	
	comp=N,440nm,0.7s						
BLYC				IAML		02 49 47.7	
	comp=E,386nm,0.7s						
CIAC	Catalina I. Ai	2.53	313		Pn	02 48 59.8	-0.4
GTM	Goat Mountain	2.59	357		Pn	02 49 01.9	+0.8
IRM	Iron Mountain	2.61	19	Pn	Pn	02 49 01.3	0.0
SIL	Silver Peak	2.70	349		Pn	02 49 04.2	+1.6
214A	Organ Pipe Nat	2.89	84	Pn	Pn	02 49 03.6	-1.6
MWC	Mount Wilson	2.97	329	Pn	Pn	02 49 06.9	+0.5
MWC				IAML		02 49 52.5	
	comp=E,262nm,0.6s						
MWC				IAML		02 49 53.3	
	comp=N,318nm,0.7s						
PASC	Pasadena Art C	2.98	326	Pn	Pn	02 49 06.6	+0.2
DANC	Danby, Needles	3.01	13	Pn	Pn	02 49 06.3	-0.5
CHFC	Chilao Flat St	3.05	330		Pn	02 49 08.1	+0.6
NEE2	Needles Airpor	3.33	23	Pn	Pn	02 49 10.4	-0.8
Y14A	Wickenburg	3.49	49	Pn	Pn	02 49 13.2	-0.2
BAHB	Baha de los	3.56	140		Pb	02 49 24.0	+1.1
BAHB	Baha de los	3.56	140	*e*P	Pb	02 49 24.0	+1.1
BAHB				*e*S	Sb	02 50 08.0	+2.3
OSI	Osito Audit: C	3.60	325	Pn	Pn	02 49 14.4	-0.5
OSI				IAML		02 50 24.6	
	comp=N,167nm,0.7s						
OSI				IAML		02 50 31.0	
	comp=E,178nm,1.1s						
TPO	Tropico Hills	3.60	332	Pn	Pn	02 49 16.1	+1.1
GSC	Goldstone, Bar	3.63	352	Pn	Pn	02 49 16.0	+0.6
GSC				IAML		02 50 21.8	
	comp=E,185nm,0.7s						
GSC				IAML		02 50 28.0	
	comp=N,152nm,1.1s						
MTPC	Mountain Pass	3.82	8	Pn	Pn	02 49 18.6	+0.6
W13A	Hualapai Mount	3.90	29	Pn	Pn	02 49 19.8	+0.6
CCCA	Chr Cany lake	3.94	346	Pn	Pn	02 49 20.1	+0.5
LRMC	Laurel Mtn Rad	3.97	342	Pn	Pn	02 49 21.4	+1.2
WSHM	Spangler Hills	4.04	345	Pn	Pn	02 49 21.9	+0.8
V12A	Nelson	4.17	15	Pn	Pn	02 49 23.3	+0.4
SHOC	Shoshone, Teco	4.19	359	Pn	Pn	02 49 23.4	+0.3
CLC	China Lake	4.27	344	Pn	Pn	02 49 24.8	+0.7
QSM	Queen of Sheba	4.29	353	Pn	Pn	02 49 25.3	+0.8
ISA	Isabella, Lake	4.39	335	Pn	Pn	02 49 26.7	+0.9
ISA				IAML		02 50 46.8	
	comp=E,68nm,1.4s						
GWY	Greenwater Val	4.50	355	Pn	Pn	02 49 28.2	+0.9
TUC	Tucson	4.63	81	Pn	Pn	02 49 28.2	-1.0
VES	Vestal, Richgr	4.79	331	Pn	Pn	02 49 32.8	+1.7
FURC	Furnace Creek,	4.79	354	Pn	Pn	02 49 31.7	+0.5
X16A	Lo Mia Camp, P	4.82	54	Pn	Pn	02 49 32.4	+0.5
SHPR	Sheep Range	4.87	10	Pn	Pn	02 49 34.0	+1.5
WCT	Wildcat Mounta	5.10	356	Pn	Pn	02 49 36.8	+1.3
TPNV	Topopah Spring	5.24	359	Pn	Pn	02 49 39.4	+1.8
TPNV				IAML		02 51 23.8	
	comp=E,35nm,1.8s						
GRAC	Grapevine Rang	5.38	350	Pn	Pn	02 49 40.9	+1.5
GRAC				IAML		02 51 25.5	
	comp=E,74nm,1.1s						
GRAC				IAML		02 51 27.7	
	comp=N,80nm,1.1s						
WUAZ	Wupatki	5.54	45	Pn	Pn	02 49 43.3	+1.6
PKD	Bear Valley Ra	5.57	321	Pn	Pn	02 49 42.6	+0.6
U15A	North Rim	5.72	33	Pn	Pn	02 49 46.1	+1.8
PRN	Pahroc Range	5.77	9	Pn	Pn	02 49 46.9	+2.1
319A	Douglas	5.91	91	Pn	Pn	02 49 47.1	+0.4
X18A	Snowflake	5.95	60	Pn	Pn	02 49 47.8	+0.4
DUN6	Lazy B Ranch	6.08	80	Pn	Pn	02 49 49.1	-0.1
W18A	Petrified Fore	6.39	56	Pn	Pn	02 49 54.4	+1.1
SAO	San Andreas Ge	6.67	321	Pn	Pn	02 49 57.8	+0.7
NVAR	Mina Array Bea	6.94	346	Pn	Pn	02 50 06.0	+5.1
	comp=N,0.2nm,0.3s,baz=162,slow=12,SNR=4.3						
NVAR				Lg	Lg	02 52 02.6	
	comp=N,0.2nm,0.3s,baz=252,slow=20,SNR=4.5						
	comp=N,0.2nm,0.3s						
NVAR	Mina Array Bea	6.94	346	Pn	Pn	02 50 02.5	+1.6
CMB	Columbia Colle	7.20	333	Pn	Pn	02 50 04.9	+0.5
Y22A	Socorro	8.08	71	Pn	Pn	02 50 16.5	-0.1
LENM	Lemitar	8.13	70	Pn	Pn	02 50 17.3	+0.1
CRNM	Carthage	8.27	72	Pn	Pn	02 50 19.5	+0.3
TASM	ASL Pad, Albuq	8.76	66	Pn	Pn	02 50 26.1	+0.1
ANMO	Albuquerque	8.77	66	Pn	Pn	02 50 24.3	-1.7
	comp=N,0.6nm,0.6s,baz=278,slow=4.0,SNR=4.5						
ANMO				Lg	Lg	02 52 39.9	
	comp=N,0.1nm,0.3s,baz=260,slow=12,SNR=1.8						
ELK	Elko	9.06	5	Pn	Pn	02 50 32.5	+2.4
	comp=N,0.3nm,0.3s,baz=184,slow=9.5,SNR=12						
ELK				Lg	Lg	02 52 57.1	
	comp=N,0.1nm,0.3s,baz=139,slow=9.3,SNR=2.3						
ELK				LR	LR	02 53 24.8	
	comp=N,39nm,18.2s,baz=21,slow=35						
	comp=N,0.8nm,0.4s						
ELK	Elko	9.06	5	Pn	Pn	02 50 32.1	+2.0
LPIG	La Paz	9.18	144	LR	LR	02 53 24.1	
	comp=N,63nm,20.5s,baz=46,slow=32						
MNTX	Cornudas Mount	9.21	87	Pn	Pn	02 50 32.7	+0.7
VHRN	Van Horn	9.64	92	Pn	Pn	02 50 39.5	+1.6
S22A	4UR Ranch, Cre	9.78	49	Pn	Pn	02 50 41.9	+1.8
TX31	Lajitas Ar. Si	11.05	99	Pn	Pn	02 50 59.1	+1.8
TXAR	Lajitas Array	11.05	99	Pn	Pn	02 50 59.3	+2.0
	comp=N,0.4nm,0.3s,baz=276,slow=12,SNR=33						
TXAR				Lg	Lg	02 53 57.0	
	baz=279,slow=28,SNR=1.9						
	comp=N,2.3nm,0.6s						
TXAR	Lajitas Array	11.05	99	Pn	Pn	02 50 59.4	+2.1
YBH	Yreka Blue Hor	11.29	334	LR	LR	02 55 14.0	
	comp=N,4.2nm,18.8s,baz=298,slow=36						
JTMT	Jette	16.10	5	Pn	P	02 52 07.0	-1.5
NEW	Newport	16.56	358	Pn	P	02 52 16.6	+3.0
	comp=N,0.1nm,0.3s,baz=172,slow=14,SNR=4.2						
	comp=N,1.2nm,0.8s						
KSU1	Kansas State U	17.57	60		P	02 52 24.4	-0.4
KSU1				IAmb	IAmb	02 52 29.1	
	comp=Z,15nm,1.1s						
CMIG	Matias Romero	24.18	122	LR	LR	03 02 51.6	
	comp=Z,58nm,19.0s,baz=292,slow=36						
ILAR	Eielson Array	38.14	339	P	P	02 55 45.2	+7.7
	comp=Z,0.3nm,0.6s,baz=152,slow=7.9,SNR=11						
	comp=Z,0.3nm,0.6s						

ISN ***11*** *02:53:11.1±0.5, 35°.39N×46°.51E, h12^{km}±12^{km}, ML2.9*
TEH ***11*** *02:53:12.4, 35°.33N×46°.46E, h10^{km}±102^{km}*
ISC 11 02:53:12.7±1.0**, 35°.34N**±0°.04×**46°.48E**±0°.05**, h10**^{km}**, n12,**
σ**0.^{s}77**/16**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDHR	Dehrash	0.64	187	Pg	Pg	02 53 24.5	-0.6
IDHR				Sg	Sb	02 53 34.4	-0.7
IGHG	Ghaleghazi	1.01	176	Pg	Pg	02 53 31.8	-0.3
SNQR	Sonqor, Kerman	1.05	117	Pg	Pb	02 53 33.2	0.0
KCHF	Cheshme Sefid,	1.15	156	Pg	Pb	02 53 34.6	-0.3
GLG1	Gilan-e-Gharb	1.31	201	Pg	Pg	02 53 38.0	+0.2
IBZA	Bozab	1.43	127	Pg	Pg	02 53 39.8	-0.3
IALM	Almabolaq	1.46	108	Pg	Pg	02 53 41.2	+0.4
IKRK	Kirkuk	1.75	273	*e*Pn	Pn	02 53 43.0	-0.2
IKRK				*e*Sn	Sb	02 54 07.0	0.0
IKRK				AML	AML	02 54 15.5	
	comp=N,162nm,0.5s						
IKRK				AML	AML	02 54 17.5	
	comp=E,150nm,0.3s						
HGHA	Hamedan- Ghaye	1.95	85	Pn	Pg	02 53 49.9	-0.1
IHSH	Hashtrud	2.06	18	Pn	Pg	02 53 51.8	-0.5
IBDR	Badra	2.27	192	*e*Pn	Pn	02 53 51.0	+0.8
IBDR				*e*Sn	Sb	02 54 20.0	-1.8
BHD	Baghdad	2.70	221	*e*Pn	Pn	02 53 57.0	+0.9
BHD				*e*Sn	Sn	02 54 30.0	+1.2

IDC ***11*** *03:08:24.7±3.9, 18°.37S×177°.82W, h576^{km}±46^{km},*
mb3.2/11, mbtmp4.1/11, Error ellipse: s-maj=23.0km
s-min=19.6km az=154.0
NEIC ***11*** *03:08:25.6±1.3, 18°.4S±0°.1×177°.7W±0°.2, h584^{km}±8^{km},*
mb4.5/26, Error ellipse: s-maj=25.4km s-min=8.4km
az=123.0
ISC 11 03:08:23.2±0.6**, 18°.3S**±0°.1×**177°.8W**±0°.1**, h557**^{km}**, n51,**
σ**1.^{s}29**/57**, mb4.0**/22**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.98	278	P	P	03 09 50.2	+4.7
URZ	Urewera	20.35	192	P	P	03 12 21.0	-0.9
	5.1nm,0.4s,baz=307,slow=5.1,SNR=6.7						
	5.1nm,0.4s						
BFZ	Birch Farm	22.86	192	P	P	03 12 44.6	+0.2
BFZ				IAmb	IAmb	03 12 51.4	
	comp=Z,31nm,1.3s						
TCW	Tory Channel	23.80	195	P	P	03 12 53.0	+0.2
TKNZ	Takaka Hill	23.98	197	P	P	03 12 53.4	-1.0
THZ	Tophouse	24.67	197	P	P	03 13 00.4	-0.2
THZ				IAmb	IAmb	03 13 04.7	
	comp=Z,23nm,1.3s						
FOZ	Fox Glacier	27.21	200	P	P	03 13 22.3	-0.6
FOZ				IAmb	IAmb	03 13 34.0	
	comp=Z,27nm,1.3s						
MLZ	Mavora Lakes	29.40	200	P	P	03 13 42.7	+0.8
MLZ				IAmb	IAmb	03 14 07.3	
	comp=Z,27nm,1.4s						
TOO	Toolangi	37.35	232	P	P	03 14 50.3	+1.3
COEN	Coen	37.67	271	P	P	03 14 52.6	+0.7
COEN				IAmb	IAmb	03 14 53.0	
	comp=Z,9.2nm,1.2s						
STKA	Stephens Creek	38.93	242	P	P	03 15 02.7	+0.9
	comp=Z,2.3nm,0.7s,baz=84,slow=9.2,SNR=4.2						
	comp=Z,2.3nm,0.7s						
STKA	Stephens Creek	38.93	242	P	P	03 15 03.2	+1.4
STKA				IAmb	IAmb	03 15 03.5	
	comp=Z,36nm,1.2s						
BBOO	Buckleboo	43.70	241	P	P	03 15 40.0	+0.4
BBOO				IAmb	IAmb	03 15 43.1	
	comp=Z,19nm,1.4s						
WR8	Warramunga Arr	44.96	260	P	P	03 15 49.7	+0.3
WB0	Warramunga Arr	45.08	260	P	P	03 15 50.4	0.0
WB0				IAmb	IAmb	03 16 03.9	
	comp=Z,6.3nm,1.5s						
WB0				PcP	PcP	03 17 18.5	-0.7
WRA	Warramunga Arr	45.11	260	P	P	03 15 50.5	-0.1
	comp=Z,1.1nm,0.6s,baz=97,slow=7.0,SNR=7.4						
WRA				PcP	PcP	03 17 18.7	-0.6
	comp=Z,0.3nm,0.4s,baz=90,slow=4.0,SNR=4.8						
WRA				S	S	03 21 44.3	-5.6
	comp=Z,0.3nm,0.7s,baz=99,slow=16,SNR=0.9						
	comp=Z,1.1nm,0.6s						
WRA	Warramunga Arr	45.11	260	P	P	03 15 50.1	-0.6
WRA					PcP	03 17 18.8	-0.6
ASAR	Alice Springs	45.22	255	P	P	03 15 51.8	+0.3
	comp=Z,1.5nm,0.4s,baz=87,slow=8.9,SNR=22						
ASAR				PcP	PcP	03 17 19.1	-0.6
	comp=Z,0.7nm,0.5s,baz=102,slow=3.8,SNR=5.9						
ASAR				S	S	03 21 48.9	-2.6
	comp=Z,1.4nm,0.8s,baz=89,slow=14,SNR=13						
	comp=Z,1.5nm,0.4s						
NWAO	Narrogin (SRO)	59.51	242	P	P	03 17 34.4	+0.9
NWAO				IAmb	IAmb	03 17 43.6	
	comp=Z,27nm,1.4s						
MJAR	Matsushiro Arr	68.58	323	P	P	03 18 30.4	-0.5
	comp=Z,0.8nm,0.3s,baz=178,slow=9.7,SNR=4.1						
	comp=Z,0.8nm,0.3s						
MJAR	Matsushiro Arr	68.58	323	P	P	03 18 30.1	-0.8
AMKA	Amchitka	69.45	358	P	P	03 18 36.0	+0.3
QSPA	South Pole Qui	71.73	180	P	P	03 18 49.1	-0.1
	comp=Z,0.7nm,0.3s,baz=128,slow=1.9,SNR=3.8						
	comp=Z,0.7nm,0.3s						
UNV	Unalaska Valle	72.53	7	P	P	03 18 54.6	+0.9
PETK	Petropavlovsk-	74.23	345	P	P	03 19 03.3	-0.2
	comp=Z,1.6nm,0.6s,baz=106,slow=8.0,SNR=4.4						
	comp=Z,1.6nm,0.6s						
PETK	Petropavlovsk-	74.23	345	P	P	03 19 03.5	+0.1
ESJX	Sierra Juarez	77.55	50	P	P	03 19 21.1	-1.4
ESJX				IAmb	IAmb	03 19 24.5	
	comp=Z,9.8nm,1.4s						
PNTR	Pine Nut	78.87	42	P	P	03 19 29.0	-0.4
M11K	Mekoryuk	79.00	6	P	P	03 19 29.3	0.0
N14K	Kuskokwak Cree	79.07	8	P	P	03 19 30.1	+0.5
NVAR	Mina Array Bea	79.34	44	P	P	03 19 32.6	+0.6
	comp=Z,0.8nm,0.7s,baz=224,slow=8.3,SNR=6.6						
	comp=Z,0.8nm,0.7s						
NVAR	Mina Array Bea	79.34	44	P	P	03 19 32.0	+0.1
N15K	Kwethluk River	79.53	9	P	P	03 19 32.8	+0.6
N15K				IAmb	IAmb	03 20 09.8	
	comp=Z,35nm,1.5s						
QIZ	Qiongzhong	80.14	294	P	P	03 19 35.8	-0.4
P19K	Oil Pt	80.25	12	P	P	03 19 36.5	+0.6
J05D	Fort Rock, OR	80.30	38	P	P	03 19 37.8	+1.0
TXAR	Lajitas Array	85.74	57	P	P	03 20 05.2	+0.9
	comp=Z,1.2nm,0.8s,baz=211,slow=6.1,SNR=12						
	comp=Z,1.2nm,0.8s						
TXAR	Lajitas Array	85.74	57	P	P	03 20 03.9	-0.4
DOT	Dot Lake	85.83	14	P	P	03 20 04.0	+0.2
DOT				IAmb	IAmb	03 20 05.3	
	comp=Z,16nm,1.4s						
CCB	Clear Creek Bu	85.87	12	P	P	03 20 02.8	-1.0
CCB				IAmb	IAmb	03 20 27.5	
	comp=Z,5.4nm,1.5s						
ILAR	Eielson Array	86.17	13	P	P	03 20 04.1	-1.2
	comp=Z,0.5nm,0.4s,baz=218,slow=4.6,SNR=19						
	comp=Z,0.5nm,0.4s						
ILAR	Eielson Array	86.17	13	P	P	03 20 04.2	-1.1
PDAR	Pinedale Array	87.27	43	P	P	03 20 11.2	-0.1
	comp=Z,0.3nm,0.6s,baz=204,slow=3.3,SNR=3.7						
	comp=Z,0.3nm,0.6s						
PDAR	Pinedale Array	87.27	43	P	P	03 20 10.9	-0.4
MKAR	Makanchi Array	109.83	314	PKiKP	PKiKP	03 25 49.2	-2.2
	comp=Z,0.3nm,0.8s,baz=85,slow=3.0,SNR=2.2						
ARCES	ARCESS Array B	126.82	350	PKP	PKPdf	03 26 21.8	-1.5
	comp=Z,3.5nm,0.9s,baz=58,slow=2.7,SNR=8.6						
FINES	FINESS Array B	133.74	344	PKP	PKPdf	03 26 36.0	-0.6
	comp=Z,5.3nm,1.1s,baz=124,slow=2.7,SNR=3.5						
BR131	Keskin Array S	145.47	315		PKPbc	03 26 59.9	-0.1
BRTR	Keskin Array B	145.47	315	PKPbc	PKPdf	03 26 58.8	+0.2
	comp=Z,1.5nm,0.9s,baz=29,slow=5.6,SNR=6.9						
BRTR	Keskin Array B	145.47	315		PKPbc	03 26 59.5	-0.5
GERES	GERESS Array B	148.16	346	PKPbc	PKPbc	03 27 06.5	-0.4
	comp=Z,1.1nm,0.6s,baz=18,slow=3.4,SNR=9.5						

BEO ***11*** *03:40:20.0±0.3, 43°.24N×17°.96E, h6^{km}±1^{km}, ML2.4/17*
RHSSO ***11*** *03:40:20.3±0.4, 43°.20N×18°.04E, h8^{km}, ML2.8/6*
PDG ***11*** *03:40:20.4±0.2, 43°.18N×18°.03E, h10^{km}±1^{km}, ML2.8/13,*
Error ellipse: s-maj=0.6km s-min=0.5km az=90.0
VIE ***11*** *03:40:23.6±1.1, 43°.54N×18°.19E, h5^{km}, mb2.8/5, ml2.3/5,*
Error ellipse: s-maj=20.9km s-min=11.4km az=55.0 38
km SSW of Sarajevo
ISC 11 03:40:19.7±1.1**, 43°.19N**±0°.02×**18°.00E**±0°.01**, h6**^{km}±9^{km}**,**
n63, σ**0.^{s}94**/119**, 7C-7D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STON	Ston	0.38	215	*i* Pg	Pb	03 40 27.7	-1.2
STON				Sg	Sb	03 40 34.6	-0.5
STON	Ston	0.38	215	*e*Pg	Pb	03 40 27.8	-1.2
STON				*e*Sg	Sb	03 40 33.5	-1.6
KLINJ	Klinje	0.43	92	*e*Pg	Pg	03 40 28.0	0.0
KLINJ				*e*Sg	Sg	03 40 34.6	+0.9
BRY	Bratogost	0.49	126	⇑*i*Pg	Pg	03 40 29.3	+0.2
BRY				*i* Sg	Sb	03 40 36.9	-1.4
DBRK	Dubrovnik	0.53	168	*e*Pg	Pb	03 40 30.6	-0.8
DBRK				Sg	Sb	03 40 38.5	-0.9
TREB	Trebinje	0.54	151	⇑*i*Pg	Pg	03 40 30.0	0.0
TREB				*e*Sg	Sb	03 40 38.5	-1.0
TREB	Trebinje	0.54	151	*e*Pg	Pg	03 40 30.1	0.0
TREB				*e*Sg	Sb	03 40 39.0	-0.5
UPM	Unac-Piva	0.66	88	⇓*i*Pg	Pg	03 40 32.4	-0.1
UPM				*i* Sg	Sg	03 40 42.3	+1.2
RICI	Ricice	0.70	296	*e*Pg	Pg	03 40 32.8	-0.4
RICI				Sg	Sg	03 40 42.2	-0.1
MAKA	Makarska	0.72	278	*e*Pg	Pg	03 40 33.1	-0.5
MAKA				Sg	Sg	03 40 43.6	+0.7
NKME	Niksic	0.82	121	⇓*i*Pg	Pg	03 40 35.0	-0.4
NKME				*e*Sg	Sb	03 40 47.6	-0.1
HCY	Herceg Novi	0.82	154	⇓*i*Pg	Pg	03 40 35.5	0.0
HCY				*i* Sg	Sn	03 40 48.6	-1.8
LSTV	Lastovo	0.91	243	*e*Pg	Pg	03 40 36.5	-0.7
LSTV				Sg	Sb	03 40 50.8	+0.4
CEME	Cevo	0.93	133	⇓*i*Pg	Pg	03 40 36.9	-0.7
CEME				*e*Sg	Sb	03 40 51.4	+0.4
PLE	Pljevlja	1.03	82	⇑*i*Pg	Pg	03 40 39.3	-0.1
PLE				*i* Sg	Sb	03 40 54.6	+0.8
RUDO	Rudo	1.09	66	*e*Pg	Pg	03 40 39.1	-1.5
RUDO				*e*Sg	Sg	03 40 53.6	-1.1
RUDO	Rudo	1.09	66	*e*Pg	Pg	03 40 39.3	-1.3
RUDO				*e*Sg	Sg	03 40 53.6	-1.1
RUDO				*e*Sg	Sb	03 40 53.8	-1.7
BUM	Brajici-Budva	1.10	143	⇑*i*Pg	Pb	03 40 41.0	-0.3
BUM				*i* Sg	Sn	03 40 57.2	-0.2
HVAR	Hvar	1.13	270	*e*Pg	Pg	03 40 40.3	-1.1
HVAR				Sg	Sb	03 40 56.2	-0.5
KOME	Kolasin	1.16	106	⇓*i*Pg	Pg	03 40 41.6	-0.4
KOME				*e*Sg	Sn	03 40 59.1	+0.2
PDG	Podgorica	1.20	129	*e*Pg	Pg	03 40 41.6	-1.0
PDG				*e*Sg	Sn	03 40 59.4	-0.1
PDG	Podgorica	1.20	129	⇓*i*Pg	Pg	03 40 41.4	-1.2
PDG				*i* Sg	Sn	03 41 00.6	+1.1
BBLS	Lazi&#263i	1.23	56	*e*Pg	Pg	03 40 42.4	-0.8
BBLS				*e*Sg	Sg	03 40 59.3	+0.1
DRME	Dracevica, Mon	1.33	138	⇑*i*Pg	Pg	03 40 44.9	-0.3
DRME				*e*Sg	Sn	03 41 05.2	+2.3
IVA	Berane	1.43	102	⇑*i*Pg	Pn	03 40 45.8	-0.4
IVA				*i* Sg	Sg	03 41 08.0	+2.5
SJES	Sjenica	1.45	86	*e*Pg	Pb	03 40 47.0	-0.1
SJES				*e*Sg	Sb	03 41 06.3	+0.5
ULC	Ulcinj	1.53	143	⇑*i*Pg	Pn	03 40 46.9	-0.7
ULC				*i* Sg	Sg	03 41 10.2	+1.3
PVY	Plav	1.56	112	⇓*i*Pg	Pn	03 40 48.4	+0.3
PVY				*i* Sg	Sg	03 41 11.3	+1.5
IVAS	Ivanjica	1.62	75	*e*Pn	Pn	03 40 48.4	-0.5
IVAS				*e*Sn	Sb	03 41 11.0	+0.3
BLY	Banja Luka	1.67	340	*e*Pn	Pn	03 40 50.1	+0.6
BLY				*e*Sn	Sn	03 41 11.4	+0.2
BLY	Banja Luka	1.67	340	*e*Pg	Pb	03 40 50.7	-0.1
BLY				*e*Sg	Sb	03 41 12.8	+0.7

DIVS	Divibare	1.71	57	*e*Pn	Pn	03 40 49.2	-1.0
DIVS				*e*Sn	Sn	03 41 12.7	+0.3
TEKS	Tekeris	1.75	39	*e*Pn	Pn	03 40 50.8	+0.1
TEKS				*e*Sn	Sn	03 41 13.4	0.0
ZIRJ	Zirje	1.78	286	*e*Pn	Pn	03 40 51.2	+0.2
ZIRJ				Sn	Sb	03 41 14.7	-0.5
MORI	Morici	1.80	293	*e*Pn	Pn	03 40 51.8	+0.5
MORI				Sn	Sb	03 41 15.5	-0.3
TRUS	Trudelj	2.03	59	*e*Pn	Pn	03 40 54.7	+0.2
TRUS				*e*Sn	Sn	03 41 20.5	+0.3
KNYS	Krupa na Uni	2.09	325	*e*Pn	Pn	03 40 55.6	+0.3
KNYS				*e*Sn	Sn	03 41 21.9	+0.3
GRUS	Gruza	2.10	70	*e*Pn	Pn	03 40 54.7	-0.7
GRUS				*e*Sn	Sn	03 41 22.1	+0.3
GOCS	Kraljevo Serbi	2.13	79	*e*Pn	Pn	03 40 57.0	+1.1
GOCS				*e*Sn	Sn	03 41 22.5	-0.3
DUGI	Dugi Otok	2.28	292	*e*Pn	Pn	03 40 58.5	+0.6
DUGI				Sn	Sn	03 41 27.0	+0.6
SELS	Selova	2.28	88	*e*Pn	Pn	03 40 58.1	+0.1
SELS				*e*Sn	Sn	03 41 27.4	+1.0
AVAS	Avala Beograd	2.36	49	*e*Pn	Pn	03 40 58.5	-0.5
AVAS				*e*Sn	Sn	03 41 26.6	-1.8
FRGS	Fruska Gora	2.36	33	*e*Pn	Pn	03 40 57.3	-1.8
VIRC	Vir	2.40	298	*e*Pn	Pn	03 41 00.2	+0.7
VIRC				Sn	Sn	03 41 29.8	+0.5
PLIT	Plitvice	2.41	315	*e*Pn	Pn	03 41 00.2	+0.5
PLIT				Sn	Sn	03 41 29.0	-0.5
NVLJ	Novalja	2.65	302	*e*Pn	Pn	03 41 02.7	-0.3
NVLJ				Sn	Sn	03 41 36.2	+0.8
BOVS	Bovan	2.74	79	*e*Pn	Pn	03 41 05.4	+1.2
BOVS				*e*Sn	Sn	03 41 37.4	-0.2
RABC	Rab	2.80	305	*e*Pn	Pn	03 41 04.9	-0.1
RABC				Sn	Sn	03 41 40.0	+0.9
BARS	Barje	2.83	96	*e*Pn	Pn	03 41 06.4	+1.0
BARS				*e*Sn	Sn	03 41 40.5	+0.7
BOJS	Bojanci	3.04	321	*i* Pn	Pn	03 41 10.0	+1.6
BOJS				*i* Sn	Sn	03 41 46.8	+1.7
BOJS				IAML		03 41 48.6	
	comp=Z,12nm,0.5s						
MORH	Mrgy, Hungar	3.06	8	*e*Pn	Pn	03 41 08.8	+0.2
MORH				*e*Sn	Sn	03 41 45.5	-0.1
VRSS	Vrsac	3.08	50	*e*Pn	Pn	03 41 09.4	+0.5
ZAGS	Zajecar	3.14	77	*e*Pn	Pn	03 41 10.7	+0.9
ZAGS				*e*Sn	Sn	03 41 47.2	-0.4
GCIS	Gornji Cirnik	3.17	328	*i* Pn	Pn	03 41 10.9	+0.8
CRES	Cresnjevec Ost	3.20	326	*i* Pn	Pn	03 41 11.8	+1.2
CRES				*i* Sn	Sn	03 41 48.9	-0.2
GBRS	Gornja Briga	3.27	317	*i* Pn	Pn	03 41 14.2	+2.6
ZAPS	Zavoj	3.39	87	*e*Pn	Pn	03 41 13.9	+0.7
ZAPS				*e*Sn	Sn	03 41 54.5	+0.8
BEHE	Becsehely	3.40	346	*e*Pn	Pn	03 41 13.5	+0.3
BEHE				*e*Sn	Sn	03 41 53.4	-0.4
VISS	Visnje	3.46	320	*i* Pn	Pn	03 41 16.6	+2.5
SOKA	Soboth	4.08	330	*e*Pn	Pn	03 41 23.5	+0.8
	comp=Z,3.5nm,0.4s						
SOKA				*i* Sn	Sn	03 42 10.3	-0.4
	comp=Z,1.0nm,0.3s						
OBKA	Obir	4.13	325	*i* Pn	Pn	03 41 25.6	+2.2
	comp=Z,0.3nm,0.1s						
ARSA	Arzberg	4.42	338	*i* Pn	Pn	03 41 28.1	+0.8
	comp=Z,1.9nm,0.3s						
LESA	Schwarzleotal	5.66	320	*e*Pn	Pn	03 41 45.8	+1.4
	comp=Z,1.4nm,0.3s						

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*SJA **11** 04:24:54.1±0.8, 20.°63S×68.°72W, h122^{km}±6^{km}, ML3.5, MW3.5*

*GUC **11** 04:24:58.1±0.7, 20.°54S×68.°84W, h112^{km}±3^{km}, ML3.3*

ISC 11 04:24:57.3±1.5, **20.°61S**±0.°03×**68.°79W**±0.°06, **h109**^{km}±11^{km}, **n27**, σ**1^{s}54**/49, **9C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.58	323	⇑*i*P	Pn	04 25 15.0	0.0
PB08				*i* S	Sn	04 25 27.9	-0.4
PB08				IAML		04 25 30.0	
	comp=N,791nm,0.3s						
PB08	IPOC Station P	0.58	323	*e*P	Pn	04 25 14.3	-0.8
PB08				*e*S	Sn	04 25 29.0	+0.7
PB08				IAML		04 25 30.2	
	comp=Z,627nm,0.2s						
PB01	IPOC Station P	0.79	236	⇑*i*P	Pn	04 25 16.8	+0.3
PB01				*i* S	Sn	04 25 31.4	+0.6
PB01				IAML		04 25 32.3	
	comp=E,3µm,0.2s						
PB01	IPOC Station P	0.79	236	*e*P	Pn	04 25 14.7	-1.7
PB01				*e*S	Sn	04 25 31.8	+1.0
PB01				IAML		04 25 32.0	
	comp=Z,798nm,0.2s						
GO01	Chusmiza	1.01	338	⇑*i*P	Pn	04 25 18.7	-0.4
GO01				*i* S	Sn	04 25 35.1	-0.2
GO01				IAML		04 25 39.3	
	comp=N,1µm,0.1s						
GO01	Chusmiza	1.01	338	*e*P	Pn	04 25 18.6	-0.4
GO01				*e*S	Sn	04 25 36.3	+1.0
GO01				IAML		04 25 39.3	
	comp=Z,416nm,0.2s						
HMBC	Humberstone	1.08	287	⇑*i*P	Pn	04 25 18.8	-0.6
HMBC				*i* S	Sn	04 25 35.5	-0.6
HMBC				IAML		04 25 36.4	
	comp=N,2µm,0.3s						
HMBC	Humberstone	1.08	287	*e*P	Pn	04 25 18.8	-0.6
HMBC				*e*S	Sn	04 25 35.7	-0.4
HMBC				IAML		04 25 35.8	
	comp=Z,921nm,0.4s						
PB11	IPOC Station P	1.17	316	⇑*i*P	Pn	04 25 19.9	-0.6
PB11				*i* S	Sn	04 25 37.0	-0.9
PB11				IAML		04 25 38.2	
	comp=N,1µm,0.3s						
PB11	IPOC Station P	1.17	316	*e*P	Pn	04 25 19.8	-0.6
PB11				*e*S	Sn	04 25 37.4	-0.5
PB11				IAML		04 25 38.2	
	comp=Z,614nm,0.3s						
PB02	IPOC Station P	1.25	235	⇑*i*P	Pn	04 25 21.7	+0.4
PB02				*i* S	Sn	04 25 40.1	+0.6
PB02				IAML		04 25 42.3	
	comp=E,1µm,0.2s						
PB09	IPOC Station P	1.26	200	*e*P	Pn	04 25 22.9	+1.4
PB09				*i* S	Sn	04 25 42.2	+2.5
PATCX	Punta Patache	1.29	260	⇑*i*P	Pn	04 25 21.5	-0.3
PATCX				*i* S	Sn	04 25 40.0	-0.2
PATCX				IAML		04 25 44.5	
	comp=E,515nm,0.3s						
PATCX	Punta Patache	1.29	260	*e*P	Pn	04 25 21.1	-0.6
PATCX				*e*S	Sn	04 25 42.5	+2.3
PATCX				IAML		04 25 42.5	
	comp=Z,374nm,0.5s						
TA02	Huaiquique	1.30	285	*e*P	Pn	04 25 21.4	-0.3
TA02				*e*S	Sn	04 25 39.6	-0.6
TA02				IAML		04 25 40.9	
	comp=E,2µm,0.1s						
TA02	Huaiquique	1.30	285	*e*P	Pn	04 25 20.8	-0.9
TA01	Diego Aracena	1.30	272	⇑*i*P	Pn	04 25 21.2	-0.5
TA01				*i* S	Sn	04 25 39.7	-0.6
TA01				IAML		04 25 41.9	
	comp=E,304nm,0.3s						
TA01	Diego Aracena	1.30	272	*e*P	Pn	04 25 20.5	-1.3
TA01				*e*S	Sn	04 25 41.0	+0.8
PB07	IPOC Station P	1.51	222	*e*P	Pn	04 25 24.9	+0.5
PB07				*i* S	Sn	04 25 45.7	+0.7
PB07				IAML		04 25 47.6	
	comp=E,294nm,0.3s						
PB03	IPOC Station P	1.69	212	⇑*i*P	Pn	04 25 27.7	+1.1
PB03				*i* S	Sn	04 25 49.6	+0.7
PB06	IPOC Station P	2.21	199	*e*P	Pn	04 25 34.2	+1.1
PB06				*e*S	Sn	04 26 01.4	+0.9
PB06	IPOC Station P	2.21	199	*e*P	Pn	04 25 34.3	+1.1
PB06				*e*S	Sn	04 25 53.2	-7.3
PB12	IPOC Station P	2.46	324	*e*P	Pn	04 25 34.4	-1.9
PB05	IPOC Station P	2.59	210	*e*P	Pn	04 25 38.4	+0.3
AP01	Chacalluta	2.66	326	*e*P	Pn	04 25 38.6	-0.3
AP01				*e*S	Sn	04 26 12.5	+1.7
HJA	Humahuaca	4.07	130	*e*P	Pn	04 25 55.7	-2.2
LPAZ	La Paz	4.34	8	*e*P	Pn	04 26 04.5	+2.7

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*IDC **11** 04:35:26.1±1.0, 51.°46N×177.°87W, h0^{km}, mb3.6/7, mbtmp3.7/9, ML3.3/2, Error ellipse: s-maj=45.8km s-min=19.8km az=160.0*

*AEIC **11** 04:35:29.7±2.4, 51.°48N±0.°03×177.°69W±0.°02, h13^{km}±3^{km}, Error ellipse: s-maj=4.5km s-min=1.7km az=172.0*

*NEIC **11** 04:35:31.2±1.8, 51.°56N±0.°09×177.°72W±0.°03, h32^{km}±5^{km}, mb4.2/33, ML3.9/10, ML3.5(AEIC), Error ellipse: s-maj=12.6km s-min=2.9km az=174.0*

ISC 11 04:35:30.8±1.0, **51.°56N**±0.°07×**177.°73W**±0.°02, **h31**^{km}±6^{km}, **n91**, σ**0^{s}87**/97, **mb4.1**/20, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAFL	Tanaga Flats	0.23	333		Pn	04 35 37.0	-1.0
TAFL					Sn	04 35 42.5	0.0
TAPA	Tanaga Point A	0.27	349		Pn	04 35 37.7	-0.9
TAPA					Sn	04 35 43.6	0.0
TASE	Tanaga Southea	0.34	326		Pb	04 35 38.9	0.0
TASE					Sb	04 35 45.8	+1.3
KIMD	Kanaga Island	0.37	56		Pb	04 35 38.4	-0.9
KIMD					Sb	04 35 44.8	-0.4
TANO	Tanaga North	0.43	326		Pb	04 35 40.3	+0.1
KIWB	Kanaga Island	0.47	50		Pb	04 35 40.0	-0.7
KIWB					Sb	04 35 47.4	-0.2
KIWB				IAML		04 35 48.2	
	comp=N,8µm,0.5s						
KIWB				IAML		04 35 48.2	
	comp=E,12µm,0.7s						
KIKV	Kanaga Island	0.48	47		Pb	04 35 40.3	-0.6
KIKV					Sb	04 35 48.1	+0.2
GAEA	Gareloi East	0.67	290		Pn	04 35 43.9	-0.2
GAEA					Sn	04 35 54.3	+0.8
GAKI	Gareloi-Kavalg	0.67	270		Pn	04 35 42.9	-1.2
GAKI					Sn	04 35 52.7	-0.8
GALAA	Gareloi Lava P	0.68	288		Pn	04 35 43.9	-0.3
GALAA					Sn	04 35 54.6	+0.9
GANE	Gareloi Northe	0.70	292		Pn	04 35 44.3	-0.2
GANO	Gareloi North	0.72	292		Pn	04 35 44.3	-0.4
ADK	Adak	0.73	63		Sn	04 35 54.2	-0.7
ADK	Adak	0.73	63		Pn	04 35 43.5	-1.4
ADAG	Mount Adagdak	0.82	58		Pn	04 35 45.8	-0.4
ADAG					Sb	04 35 58.0	+0.6
ETKA	Kagalaska Isla	0.88	69		Pn	04 35 45.9	-1.1
ETKA					Sn	04 35 58.1	-0.6
GSSP	Great Sitkin S	1.11	60		Pn	04 35 50.8	+0.7
GSSP					Sb	04 36 06.2	+0.8
GSTD	Great Sitkin T	1.11	62		Pn	04 35 50.3	+0.2
GSTD					Sb	04 36 05.7	+0.3
GSMY	Great Sitkin M	1.15	64		Pn	04 35 50.5	-0.2
GSMY					Sb	04 36 06.7	+0.1
GSTR	Great Sitkin T	1.17	62		Pn	04 35 51.0	0.0
CEPE	Semis' Perret	1.68	285		Pn	04 35 58.9	+1.0
CERB	Semis' Cerberu	1.68	284		Pn	04 35 59.2	+1.3
CESW	Semis' Southwe	1.72	283		Pn	04 35 59.2	+0.8
AMKA	Amchitka	1.86	266		Sb	04 36 27.1	+0.1
AMKA	Amchitka	1.86	266		Pn	04 35 60.0	-0.5
AMKA				IAML		04 36 27.2	
	comp=N,644nm,0.5s						
AMKA				IAML		04 36 28.5	
	comp=E,610nm,0.5s						
ATKA	Atka Island	2.29	72		Sn	04 36 34.0	+0.8
ATKA	Atka Island	2.29	72		Pn	04 36 06.3	+0.1
ATKA				IAML		04 36 38.6	
	comp=E,656nm,1.1s						
ATKA				IAML		04 36 38.9	
	comp=N,840nm,0.6s						
KOWE	Korovin West	2.30	68		Pn	04 36 07.9	+1.4
KOWE					Sn	04 36 36.4	+2.6
KOKL	Mount Kliuchef	2.32	69		Pn	04 36 08.1	+1.3
KOKL					Sn	04 36 36.6	+2.4
LSPA	Little Sitkin	2.33	281		Pn	04 36 08.6	+1.7
LSSE	Little Sitkin	2.33	281		Pn	04 36 08.5	+1.6
KOFP	Korovin Flat P	2.36	71		Pn	04 36 08.9	+1.5
LSNW	Little Sitkin	2.37	282		Pn	04 36 09.7	+2.3
PETK	Petropavlovsk-	15.08	286	Pn	Pn	04 38 59.7	-1.6
	comp=N,0.2nm,0.3s,baz=83,slow=14,SNR=2.2						
	comp=N,3.3nm,1.0s						
KDAK	Kodiak Island	15.77	57	Pn	Pn	04 39 10.4	+0.2
	comp=N,0.5nm,0.3s,baz=298,slow=9.7,SNR=1.4						
	comp=N,7.8nm,0.8s						
KDAK	Kodiak Island	15.77	57	IAmb	IAmb	04 39 32.9	
	comp=Z,40nm,1.2s						
D19K	Kuna River	19.44	22	P	P	04 39 54.2	-0.2
DHY	Denali Highway	19.82	43	P	P	04 39 58.7	+0.2
D20K	Etivluk River	19.97	23		P	04 40 01.2	+1.2
D20K				IAmb	IAmb	04 40 39.3	
	comp=Z,9.7nm,1.5s						
ILAR	Eielson Array	20.69	38	P	P	04 40 08.9	+1.0
	comp=Z,0.4nm,0.8s,baz=226,slow=9.7,SNR=4.7						
	comp=Z,0.4nm,0.8s						
SCRK	Sand Creek	21.56	42	P	P	04 40 16.8	-0.5
D23K	Nanushuk River	21.69	26	P	P	04 40 17.8	-0.7
BCAR	Beaver Creek A	22.24	45	P	P	04 40 23.4	-1.1
C23K	Itkillik River	22.27	25	P	P	04 40 25.1	+0.3
C23K				IAmb	IAmb	04 41 01.9	
	comp=Z,8.8nm,1.4s						
DAWY	Dawson	23.52	43	P	P	04 40 36.8	-1.0
I28M	Miner Creek	23.67	40	P	P	04 40 38.7	-0.6
L29M	L29M	23.87	46	P	P	04 40 41.0	0.0
K29M	Barlow Dome	24.28	44	P	P	04 40 44.9	0.0
K29M				IAmb	IAmb	04 41 24.7	
	comp=Z,5.9nm,1.4s						
I30M	Mount Dempster	25.05	41	P	P	04 40 51.7	-0.3
I30M				IAmb	IAmb	04 41 25.9	
	comp=Z,5.3nm,1.3s						
H11N2	WAKE ISLAND Hy	33.98	207	T	T	05 18 13.1	
	baz=17,slow=76,SNR=370						
H11N3	WAKE ISLAND Hy	33.99	207	T	T	05 18 15.4	
	baz=17,slow=76,SNR=309						
H11N1	WAKE ISLAND Hy	34.00	207	T	T	05 18 14.5	
	baz=17,slow=76,SNR=238						
H11S1	WAKE ISLAND Hy	35.20	206	T	T	05 19 42.7	
	baz=17,slow=76,SNR=438						
H11S2	WAKE ISLAND Hy	35.21	206	T	T	05 19 45.2	
	baz=17,slow=76,SNR=286						
H11S3	WAKE ISLAND Hy	35.21	206	T	T	05 19 42.4	
	baz=17,slow=76,SNR=213						
NEW	Newport	38.20	70	P	P	04 42 47.9	+0.7
NEW				IAmb	IAmb	04 42 57.9	
	comp=Z,4.1nm,1.3s						
I07A	Izee	38.88	77	P	P	04 42 53.3	+0.1
I07A				IAmb	IAmb	04 43 30.6	
	comp=Z,4.9nm,1.5s						
WVOR	Wild Horse Val	40.31	79	P	P	04 43 05.0	-0.1
WVOR				IAmb	IAmb	04 43 19.7	
	comp=Z,3.8nm,1.2s						
LYMT	Lyon Mountain	41.67	70	P	P	04 43 16.3	-0.1
MCMT	McKenzie Canyo	42.49	73	P	P	04 43 23.9	+0.8
NVAR	Mina Array Bea	42.87	84	P	P	04 43 26.8	+0.6
	comp=Z,0.2nm,0.5s,baz=317,slow=6.8,SNR=1.8						
	comp=Z,0.2nm,0.5s						
YHL	Hebgen Lake	43.47	72	P	P	04 43 31.2	+0.2
YHL				IAmb	IAmb	04 43 39.1	
	comp=Z,2.8nm,1.2s						
YHH	Holmes Hill	43.70	71	P	P	04 43 34.2	+1.3
BW06	Boulder Array	45.62	73	P	P	04 43 48.2	+0.1
BW06				IAmb	IAmb	04 43 49.6	
	comp=Z,2.1nm,0.7s						
PD31	Pinedale Array	45.62	73	P	P	04 43 48.3	+0.1
PD31				IAmb	IAmb	04 43 49.6	
	comp=Z,2.0nm,0.7s						
PDAR	Pinedale Array	45.62	73	P	P	04 43 49.0	+0.8
	comp=Z,1.3nm,0.5s,baz=329,slow=3.0,SNR=20						
	comp=Z,1.3nm,0.5s						
PDAR	Pinedale Array	45.62	73	P	P	04 43 48.3	+0.1
U15A	North Rim	47.85	82	P	P	04 44 07.1	+1.4
U15A				IAmb	IAmb	04 44 07.8	
	comp=Z,2.7nm,1.0s						
O20A	White River Ci	47.99	75	P	P	04 44 07.0	+0.4
O20A				IAmb	IAmb	04 44 17.7	
	comp=Z,3.2nm,1.0s						
PV13	Radium Mtn., P	48.87	78	P	P	04 44 14.2	+0.7
PV13				IAmb	IAmb	04 44 22.4	
	comp=Z,4.1nm,0.8s						
PV02	Paradox Valley	48.90	77	P	P	04 44 14.0	+0.3
PV01	Paradox Valley	49.04	77	P	P	04 44 15.2	+0.4
PV01				IAmb	IAmb	04 44 32.6	
	comp=Z,2.6nm,1.1s						
LZDM	Lanzhou Array	56.15	287	P	P	04 45 06.8	-0.7
	comp=Z,1.0nm,0.3s,baz=41,slow=13,SNR=1.2						
	comp=Z,1.0nm,0.3s						
KAN01	Argonia South	56.18	71	P	P	04 45 07.6	+0.2
TXAR	Lajitas Array	57.97	82	P	P	04 45 20.3	+0.1
	comp=Z,0.3nm,0.6s,baz=269,slow=5.0,SNR=3.4						
	comp=Z,0.3nm,0.6s						
TXAR	Lajitas Array	57.97	82	P	P	04 45 20.1	-0.1
ARTI	Arti	62.89	329	P	P	04 45 53.3	0.0
J59A	Piesco	64.44	52	P	P	04 46 03.3	-0.5
EKB	Eskdalemuir	73.38	3	P	P	04 46 59.1	0.0
UCC	Uccle	78.01	359	P	P	04 47 26.1	+0.5
MORC	Moravsky Berou	78.21	350	P	P	04 47 26.7	-0.1
HRA	Herat	79.58	313	P	P	04 47 34.7	-0.1
WB0	Warramunga Arr	82.43	225	P	P	04 47 49.9	+0.2
WB0				IAmb	IAmb	04 47 49.9	
	comp=Z,4.0nm,1.1s						
WR8	Warramunga Arr	82.55	225	P	P	04 47 50.0	-0.4
WR8				IAmb	IAmb	04 48 21.0	
	comp=Z,6.0nm,1.2s						
WRA	Warramunga Arr	82.61	225	P	P	04 47 49.7	-1.0
	comp=Z,0.3nm,0.5s,baz=28,slow=5.0,SNR=1.0						
	comp=Z,0.3nm,0.5s						
WRA	Warramunga Arr	82.61	225	P	P	04 47 48.5	-2.1
ASAR	Alice Springs	86.07	223	P	P	04 48 08.6	+0.5
	comp=Z,0.5nm,0.5s,baz=30,slow=4.3,SNR=6.1						
	comp=Z,0.5nm,0.5s						
ASAR	Alice Springs	86.07	223	P	P	04 48 07.9	-0.3
H03N2	Juan Fernandez	120.55	106	T	T	07 06 45.7	
	baz=317,slow=77,SNR=22						
H03N1	Juan Fernandez	120.57	106	T	T	07 06 48.6	
	baz=317,slow=77,SNR=16						
H03N3	Juan Fernandez	120.57	106	T	T	07 06 45.8	
	baz=317,slow=77,SNR=23						

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*IDC **11** 04:37:14.6±4.4, 29.°07S×69.°98W, h91^{km}±35^{km}, mb3.9/1, mbtmp3.5/4, MS3.6/1, Error ellipse: s-maj=62.6km s-min=20.7km az=90.0*

*GUC **11** 04:37:15.2±0.8, 29.°01S×69.°80W, h110^{km}±4^{km}, ML3.4*

*NEIC **11** 04:37:16.2±1.4, 29.°02S±0.°03×69.°77W±0.°07, h109^{km}±7^{km}, mb4.3/7, Error ellipse: s-maj=9.6km s-min=4.1km az=98.0*

ISC 11 04:37:16.1±0.7, **29.°02S**±0.°03×**69.°79W**±0.°06, **h115**^{km}±6^{km}, **n65**, σ**0^{s}97**/74, **mb4.4**/4, **2C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC05	El Transito	0.46	293	Pn	Pn	04 37 33.0	-0.4
AC05				Sn	Sn	04 37 45.9	-0.5
AC05	El Transito	0.46	293	*e*P	Pn	04 37 33.3	-0.2
AC05				*i* S	Sn	04 37 46.0	-0.5
AC05				IAML		04 37 46.7	
	comp=E,5µm,0.3s						
LCO	Las Campanas	0.80	270	Pn	Pn	04 37 36.2	+0.1
LCO				Sn	Sn	04 37 50.9	-0.3
LCO	Las Campanas	0.80	270	*e*P	Pn	04 37 35.6	-0.5
LCO				*e*S	Sn	04 37 51.3	+0.1
CO01	Juntas del Tor	0.99	195		Pn	04 37 38.1	+0.2
CO01				Sn	Sn	04 37 54.9	+0.5
CO01	Juntas del Tor	0.99	195	⇑*i*P	Pn	04 37 38.2	+0.3
CO01				*i* S	Sn	04 37 55.0	+0.6
CO01				IAML		04 37 56.0	
	comp=N,380nm,0.2s						
AC04	Llanos de Chal	1.39	305		Pn	04 37 42.3	+0.3
AC04	Llanos de Chal	1.39	305	*e*P	Pn	04 37 42.3	+0.3
AC04				*i* S	Sn	04 38 01.4	-0.1
AC04				IAML		04 38 02.6	
	comp=E,2µm,0.1s						
GO04	Tololo Observa	1.45	217		Pn	04 37 42.7	-0.1
GO04	Tololo Observa	1.45	217	*e*P	Pn	04 37 42.8	-0.1
GO04				*i* S	Sn	04 38 03.8	+0.7
GO04				IAML		04 38 08.4	
	comp=E,848nm,0.3s						
GO03	Copiapo	1.47	345		Pn	04 37 42.7	-0.3
GO03	Copiapo	1.47	345	*e*P	Pn	04 37 42.6	-0.3
GO03				*i* S	Sn	04 38 03.2	-0.2
GO03				IAML		04 38 03.8	
	comp=E,902nm,0.4s						
CO05	La Serena	1.55	234		Pn	04 37 43.6	-0.2
AC06	Mina Casimiro	1.73	343		Pn	04 37 46.0	-0.1
AC06	Mina Casimiro	1.73	343	*e*P	Pn	04 37 45.7	-0.4
AC06				*i* S	Sn	04 38 08.0	-0.8
AC06				IAML		04 38 10.4	
	comp=E,238nm,0.2s						
CO03	El Pedregal	1.97	203		Pn	04 37 49.2	+0.1
CO03	El Pedregal	1.97	203	*e*P	Pn	04 37 49.4	+0.2
AC02	Maricunga	2.25	15		Pn	04 37 53.2	+0.2
AC02	Maricunga	2.25	15	⇑*i*P	Pn	04 37 53.3	+0.2
CO06	Fray Jorge	2.30	224		Pn	04 37 52.4	-0.7
CO06	Fray Jorge	2.30	224	*e*P	Pn	04 37 52.5	-0.7
CO02	Combarbal	2.42	205		Pn	04 37 54.4	-0.3
CO02	Combarbal	2.42	205	*e*P	Pn	04 37 54.6	-0.2
CFA	Coronel Fontan	2.91	153	P	Pn	04 38 00.6	-0.5
	comp=E,4.6nm,0.2s,baz=336,slow=14,SNR=93						
CFA				S	Sn	04 38 34.0	-1.7
	comp=E,16nm,0.3s,baz=252,slow=20,SNR=19						
AC01	Pan de Azucar	2.95	346	Pn	Pn	04 38 01.6	-0.1
VA06	Catapilco	3.76	200		Pn	04 38 11.3	-1.0
VA03	San Esteban	3.79	190		Pn	04 38 12.8	0.0
GO02	Mina Guanaco	3.85	3		Pn	04 38 13.2	-0.6
PEL	Peldehue	4.18	190	Pn	Pn	04 38 17.5	-0.5
VA01	Torpederas	4.30	201	Pn	Pn	04 38 17.2	-2.3
PB14	IPOC Station P	4.41	353		Pn	04 38 19.9	-1.5
MT08	Bocatoma Ro	4.42	182		Pn	04 38 21.0	-0.3
MT05	Renca	4.43	190		Pn	04 38 20.7	-0.7
MT16	CCHEN	4.44	188		Pn	04 38 20.9	-0.6
MT03	Universidad Ad	4.50	188		Pn	04 38 21.9	-0.5
MT13	San Alfonso	4.73	185		Pn	04 38 25.1	-0.4
LMEL	Las Melosas	4.83	184		Pn	04 38 26.8	0.0
MT09	Talagante	4.85	192		Pn	04 38 25.0	-2.1
VA05	Santo Domingo	4.88	198		Pn	04 38 25.0	-2.3
MT01	Popeta	4.99	194		Pn	04 38 26.4	-2.4
BO04	La Punta	5.00	188		Pn	04 38 27.6	-1.5
BO01	Tunca	5.47	191		Pn	04 38 32.8	-2.5
BO02	Sierra Bellavi	5.82	188		Pn	04 38 37.9	-2.2
H03N1	Juan Fernandez	8.96	238	P	Pn	04 39 21.8	-0.6
	baz=116,slow=20,SNR=9.8						
H03N2	Juan Fernandez	8.98	238	P	Pn	04 39 22.3	-0.3
	baz=116,slow=20,SNR=7.5						
H03N3	Juan Fernandez	8.98	238	P	Pn	04 39 21.9	-0.8
	baz=116,slow=20,SNR=6.7						
CPUP	Villa Florida	11.37	79	P	Pn	04 39 57.2	+2.1
	comp=E,0.2nm,0.4s,baz=192,slow=1.9,SNR=2.8						
CPUP	Villa Florida	11.37	79	Pn	Pn	04 39 56.0	+0.9
LPAZ	La Paz	12.76	7	P	Pn	04 40 12.7	-1.4
	comp=E,0.6nm,0.6s,baz=238,slow=6.4,SNR=2.2						
LPAZ	La Paz	12.76	7	Pn	Pn	04 40 12.6	-1.5
ITAB	Concordia	15.69	88		P	04 40 51.2	-1.2
VILB	Vilhena	18.31	31	P	P	04 41 21.1	-0.3
VILB				IAmb	IAmb	04 41 53.4	
	comp=Z,15nm,1.4s						
ROSC	El Rosal	33.95	352	P	P	04 43 48.5	-0.5
ROSC				IAmb	IAmb	04 44 15.9	
	comp=Z,9.2nm,1.1s						
PCRV	Puerto La Cruz	39.28	8	LR	LR	05 01 13.8	
	comp=Z,94nm,20.8s,slow=37						
SNAA	Sanae	55.51	159	P	P	04 46 39.2	+0.4
SNAA				IAmb	IAmb	04 46 46.1	
	comp=Z,3.9nm,1.1s						
QSPA	South Pole Qui	61.20	180	P	P	04 47 19.4	+0.8
	comp=Z,1.0nm,0.3s,baz=76,slow=3.0,SNR=4.1						
	comp=Z,1.0nm,0.3s						
QSPA	South Pole Qui	61.20	180	P	P	04 47 19.5	+0.9
QSPA				IAmb	IAmb	04 47 20.4	
	comp=Z,1.5nm,0.8s						
LBTB	Lobatse	82.63	114	P	P	04 49 33.4	+6.2
LBTB				IAmb	IAmb	04 49 36.9	
	comp=Z,8.2nm,1.3s						
LTZ	Lake Taylor	88.59	221	P	P	04 49 57.9	+1.6
WRA	Warramunga Arr	126.04	208	PKP	PKiKP	04 56 06.2	+0.4
	comp=Z,0.3nm,0.4s,baz=164,slow=3.3,SNR=5.3						
WRA	Warramunga Arr	126.04	208		PKiKP	04 56 06.5	+0.7
KURBB	Kurchatov Arra	147.87	39	PKPbc	PKiKP	04 56 48.5	-0.7
	comp=Z,0.3nm,0.4s,baz=306,slow=2.8,SNR=4.4						
ZALV	Zalesovo Beam	148.98	29	PKPbc	PKiKP	04 56 51.6	+0.2
	comp=Z,1.4nm,0.4s,baz=297,slow=3.7,SNR=6.6						
MKAR	Makanchi Array	151.93	43	PKPbc	PKiKP	04 56 58.4	+0.6
	comp=Z,0.2nm,0.4s,baz=262,slow=1.4,SNR=2.2						
MKAR	Makanchi Array	151.93	43		PKiKP	04 56 58.6	+0.8

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*NOU **11** 04:51:10.2, 21.°02S×168.°82E, h0^{km}, MLv4.4/15, Loyalty Islands*

*IDC **11** 04:51:11.6±1.0, 21.°08S×168.°58E, h0^{km}, mb4.1/10, mbtmp4.1/11, ML3.2/1, MS3.3/3, Error ellipse: s-maj=33.1km s-min=20.3km az=143.0*

*NEIC **11** 04:51:12.8±1.1, 21.°06S±0.°08×168.°68E±0.°06, h10^{km}±1^{km}, mb4.6/12, Error ellipse: s-maj=15.9km s-min=2.9km az=143.0*

ISC 11 04:51:15.1±0.6, **21.°01S**±0.°06×**168.°62E**±0.°07, **h30**^{km}, **n45**,

σ1^{s}23/48, mb4.2/12, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	0.72	229		Pb	04 51 27.6	-1.6
MARNC				Sg	Sb	04 51 37.0	-1.9
MARNC	Mare, Loyalty	0.72	229	P	Pb	04 51 27.8	-1.4
LIFNC	LIFOU	1.31	280	P	Pb	04 51 39.1	0.0
INH	Isangel	1.58	23	P	Pn	04 51 38.8	-2.3
INH	Isangel	1.58	23	S	Sn	04 51 57.5	-3.0
YATNC	Mamie plateau,	1.92	237	P	Pn	04 51 44.8	-1.0
PINNC	Pines Island,	1.93	214		Pn	04 51 44.9	-1.0
PINNC				Sn	Sn	04 52 09.2	0.0
PINNC	Pines Island,	1.93	214	P	Pn	04 51 46.0	0.0
PINNC	Pines Island,	1.93	214	S	Sb	04 52 11.7	-1.7
OUENC	Ouen Island, N	2.17	229	P	Pn	04 51 49.9	+0.7
OUENC	Ouen Island, N	2.17	229	S	Sb	04 52 18.3	-1.9
DZM	Mont Dzumac	2.28	242	Pn	Pn	04 51 50.4	-0.4
	6.3nm,0.3s,baz=102,slow=13,SNR=36						
DZM				Sn	Sn	04 52 17.3	-0.7
	64nm,0.3s,baz=125,slow=22,SNR=21						
DZM				LR	LR	04 52 39.4	
	comp=Z,237nm,19.9s,baz=338,slow=40						
	16nm,0.3s						
DZM	Mont Dzumac	2.28	242		Pn	04 51 50.1	-0.7
DZM				Sn	Sn	04 52 16.3	-1.7
DZM	Mont Dzumac	2.28	242	P	Pn	04 51 51.6	+0.7
ONTNC	Ouen Toro	2.39	237		Pn	04 51 52.3	+0.1
ONTNC	Ouen Toro	2.39	237	P	Pn	04 51 53.2	+0.9
ONTNC	Ouen Toro	2.39	237	S	Sb	04 52 24.1	-2.5
TOZ	Tahuroa Road	17.70	162		Pn	04 55 19.1	-0.3
TOZ				IAmb	IAmb	04 55 57.7	
	comp=Z,35nm,0.5s						
STKA	Stephens Creek	26.44	240	P	P	04 56 51.0	+1.6
	comp=Z,1.2nm,0.3s,baz=353,slow=16,SNR=3.0						
	comp=Z,1.2nm,0.3s						
STKA	Stephens Creek	26.44	240	P	P	04 56 49.4	-0.1
WRA	Warramunga Arr	32.09	266	P	P	04 57 39.3	-0.6
	comp=Z,0.6nm,0.8s,baz=103,slow=8.0,SNR=2.5						
	comp=Z,0.6nm,0.8s						
WRA	Warramunga Arr	32.09	266	P	P	04 57 38.3	-1.5
AS31	Alice Springs	32.17	259	P	P	04 57 39.9	-0.6
ASAR	Alice Springs	32.17	259	P	P	04 57 41.0	+0.4
	comp=Z,4.4nm,0.7s,baz=82,slow=9.0,SNR=49						
ASAR				LR	LR	05 10 14.5	
	comp=Z,57nm,19.0s,baz=316,slow=36						
	comp=Z,4.4nm,0.7s						
ASAR	Alice Springs	32.17	259	P	P	04 57 40.6	+0.1
FITZ	Fitzroy Crossi	40.52	266	LR	LR	05 16 43.6	
	comp=Z,85nm,19.1s,baz=358,slow=38						
CASY	Casey	58.28	204	P	P	05 01 05.3	-1.3
CASY				IAmb	IAmb	05 01 21.0	
	comp=Z,12nm,1.4s						
JTM	Tenmabayashi	66.60	338	P	P	05 02 03.9	+1.4
QSPA	South Pole Qui	69.06	180	P	P	05 02 18.3	+0.3
	comp=Z,0.7nm,0.3s,baz=350,slow=6.1,SNR=1.6						
	comp=Z,0.7nm,0.3s						
QSPA	South Pole Qui	69.06	180	P	P	05 02 18.3	+0.3
QSPA				IAmb	IAmb	05 02 30.7	
	comp=Z,6.2nm,1.3s						
USRK	Ussuriysk Ar.	73.04	333	P	P	05 02 44.0	+2.0
	comp=Z,1.9nm,0.7s,baz=168,slow=9.9,SNR=3.1						
	comp=Z,1.9nm,0.7s						
CMAR	Chiang Mai Arr	78.70	295	P	P	05 03 15.9	+0.9
	comp=Z,0.8nm,0.3s,baz=112,slow=5.9,SNR=1.2						
	comp=Z,0.8nm,0.3s						
CMAR	Chiang Mai Arr	78.70	295	P	P	05 03 14.8	-0.3
BELA	Belgrano 2	80.40	175	P	P	05 03 23.7	+0.4
BELA				IAmb	IAmb	05 03 24.6	
	comp=Z,4.7nm,1.0s						
BRLK	Bradley Lake	87.01	19	P	P	05 03 58.0	+0.8
MCCM	Marconi Confer	87.09	47	P	P	05 03 58.3	+0.2
SNAA	Sanae	87.38	183	P	P	05 03 59.6	+0.5
	comp=Z,1.4nm,0.8s,baz=258,slow=2.2,SNR=3.0						
	comp=Z,1.4nm,0.8s						
SNAA	Sanae	87.38	183	P	P	05 03 59.4	+0.3
SNAA				IAmb	IAmb	05 04 05.2	
	comp=Z,5.7nm,1.2s						
SONM	Songino Array	88.28	323	P	P	05 04 04.4	+0.7
	comp=Z,0.8nm,0.8s,baz=145,slow=5.4,SNR=3.8						
	comp=Z,0.8nm,0.8s						
SONM	Songino Array	88.28	323	P	P	05 04 03.8	0.0
SONM				IAmb	IAmb	05 04 16.5	
	comp=Z,1.6nm,0.9s						
NVAR	Mina Array Bea	90.40	49	P	P	05 04 16.0	+2.0
	comp=Z,0.3nm,0.3s,baz=240,slow=4.2,SNR=4.5						
	comp=Z,0.3nm,0.3s						
NVAR	Mina Array Bea	90.40	49	P	P	05 04 14.5	+0.5
ILAR	Eielson Array	92.08	17	P	P	05 04 22.6	+1.7
	comp=Z,1.2nm,1.2s,baz=236,slow=4.8,SNR=6.7						
	comp=Z,1.2nm,1.2s						
ILAR	Eielson Array	92.08	17	P	P	05 04 21.9	+1.0
GERES	GERESS Array B	145.75	330	PKPbc	PKPab	05 10 52.1	+0.5
	comp=Z,1.1nm,0.6s,baz=28,slow=6.0,SNR=7.2						

NOU 11 05:05:00.1, 15°.37S×167°.44E, h65^{km}, MLv4.3/12, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.24	251	P	Pn	05 05 13.0	+2.7
SANVU	Saraoutou	0.24	251	S	Sn	05 05 19.7	+1.9
DVP	Devils Point	2.45	163	P	Pn	05 05 37.9	+0.1
YATNC	Mamie plateau,	6.67	184	P	Pn	05 06 33.9	-1.6
DZM	Mont Dzumac	6.73	188	P	Pn	05 06 36.0	-0.4
TATA	Tatamba Isabel	10.20	312	P	Pn	05 07 23.6	-0.2

IDC ***11*** *05:18:35.5±0.6, 20°.94S×168°.64E, h0^{km}, mb4.6/19, mbtmp4.5/21, ML3.6/2, MS3.8/20, Error ellipse: s-maj=17.1km s-min=16.2km az=7.0*

NOU ***11*** *05:18:36.1, 20°.84S×168°.56E, h0^{km}, MLv4.9/18, Loyalty Islands*

NEIC ***11*** *05:18:38.3±2.0, 21°.02S±0°.06×168°.60E±0°.06, h10^{km}±1^{km}, mb4.8/35, Error ellipse: s-maj=12.9km s-min=6.8km az=139.0*

ISC 11 05:18:40.3±0.4**, 20°.91S**±0°.05×**168°.55E**±0°.06**, h30^{km}, n114, σ1^{s}09**/96**, mb4.8**/37**, MS3.9**/20**, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	0.75	220		Pb	05 18 52.2	-2.7
MARNC	Mare, Loyalty	0.75	220	P	Pb	05 18 51.8	-3.1
MARNC	Mare, Loyalty	0.75	220	S	Sb	05 19 02.6	-2.2
INH	Isangel	1.51	27	P	Pn	05 19 02.9	-2.5
INH	Isangel	1.51	27	S	Sn	05 19 22.5	-1.6
YATNC	Mamie plateau,	1.92	233	P	Pn	05 19 10.5	-0.5
PINNC	Pines Island,	1.98	211		Pn	05 19 10.0	-1.9
PINNC	Pines Island,	1.98	211	P	Pn	05 19 10.9	-0.9
OUENC	Ouen Island, N	2.19	226	P	Pn	05 19 15.2	+0.5
DZM	Mont Dzumac	2.28	239	Pn	Pn	05 19 14.6	-1.3
	11nm,0.3s,baz=98,slow=10,SNR=176						
DZM				Sn	Sn	05 19 42.3	-0.8
	86nm,0.3s,baz=324,slow=22,SNR=11						
DZM				LR	LR	05 20 03.9	
	comp=Z,1µm,20.9s,baz=38,slow=38						
	33nm,0.3s						
DZM	Mont Dzumac	2.28	239	*e*Pn	Pn	05 19 14.7	-1.3
	172nm,1.4s						
DZM	Mont Dzumac	2.28	239		Pn	05 19 14.8	-1.2
DZM	Mont Dzumac	2.28	239	P	Pn	05 19 15.5	-0.5
DZM	Mont Dzumac	2.28	239	S	Sn	05 19 44.0	+0.9
ONTNC	Ouen Toro	2.40	234		Pn	05 19 16.8	-0.7
ONTNC	Ouen Toro	2.40	234	P	Pn	05 19 18.3	+0.8
ONTNC	Ouen Toro	2.40	234	S	Sn	05 19 47.1	+1.2
RTV	Rentapao	3.10	358	P	Pn	05 19 25.6	-1.6
DVP	Devils Point	3.18	354	P	Pn	05 19 26.1	-2.2
KOUNC	Koumac, New Ca	4.00	274	P	Pn	05 19 39.8	+0.2
SANVU	Saraoutou	5.58	347	Pn	Pn	05 20 07.3	+6.0
MSVF	Nonsavu	9.51	72		Pn	05 20 59.5	+4.2
URZ	Urewera	18.81	159	P	P	05 22 57.7	+0.2
	0.3nm,0.3s,baz=20,slow=8.6,SNR=3.9						
	8.3nm,0.8s						
BKZ	Black Stump Fm	19.44	161		P	05 23 05.2	+0.7
BKZ				IAmb	IAmb	05 23 18.3	
	comp=Z,59nm,1.4s						
MRZ	Mangatainoka R	20.58	165		P	05 23 17.1	+0.4
MRZ				IAmb	IAmb	05 23 17.9	
	comp=Z,35nm,1.0s						
TCW	Tory Channel	20.82	168	P	P	05 23 20.7	+1.3
CTA	Charters Tower	20.90	268	LR	LR	05 31 01.2	
	comp=Z,6.5nm,19.1s,baz=95,slow=36						
CTAO	Charters Tower	20.90	268	P	Pn	05 23 21.5	-1.5
INZ	Inchbonnie	21.89	174	P	P	05 23 31.3	+0.5
INZ				IAmb	IAmb	05 23 45.2	
	comp=Z,49nm,1.0s						
OXZ	Oxford	22.55	173	P	P	05 23 38.5	+0.6
OXZ				IAmb	IAmb	05 23 50.2	
	comp=Z,58nm,1.4s						
PMG	Port Moresby	23.56	296	P	P	05 23 49.4	+0.9
	comp=Z,17nm,0.6s,baz=147,slow=4.0,SNR=6.5						
PMG				LR	LR	05 31 41.5	
	comp=Z,101nm,18.1s,baz=166,slow=33						
	comp=Z,17nm,0.6s						
PMG	Port Moresby	23.56	296	P	P	05 23 49.6	+1.1
PMG				IAmb	IAmb	05 24 01.1	
	comp=Z,34nm,0.9s						
COEN	Coen	25.15	282		P	05 24 04.3	+1.1
STKA	Stephens Creek	26.43	240	P	P	05 24 15.4	+0.8
	comp=Z,4.3nm,0.7s,baz=81,slow=9.1,SNR=9.8						
STKA				LR	LR	05 34 29.6	
	comp=Z,321nm,18.8s,baz=29,slow=36						
	comp=Z,4.3nm,0.7s						
STKA	Stephens Creek	26.43	240		P	05 24 14.5	0.0
RAR	Rarotonga	29.54	96	LR	LR	05 34 03.5	
	comp=Z,44nm,21.5s,baz=284,slow=32						
BBOO	Buckleboo	31.19	241	P	P	05 24 56.7	-0.2
WR8	Warramunga Arr	31.89	266	P	P	05 25 03.2	0.0
WB0	Warramunga Arr	32.01	266	IAmb	IAmb	05 25 14.5	
	comp=Z,10nm,1.1s						
WRA	Warramunga Arr	32.04	266	P	P	05 25 04.0	-0.6
	comp=Z,3.8nm,0.9s,baz=96,slow=8.8,SNR=13						
	comp=Z,3.8nm,0.9s						
WRA	Warramunga Arr	32.04	266		P	05 25 04.1	-0.5
AS31	Alice Springs	32.13	259	IAmb	IAmb	05 25 16.4	
	comp=Z,6.9nm,0.8s						
ASAR	Alice Springs	32.13	259	P	P	05 25 05.3	0.0
	comp=Z,15nm,0.8s,baz=82,slow=9.1,SNR=142						
ASAR				LR	LR	05 38 36.7	
	comp=Z,232nm,18.2s,baz=96,slow=37						
	comp=Z,15nm,0.8s						
ASAR	Alice Springs	32.13	259		P	05 25 05.7	+0.4
JAY	Jayapura	32.71	300	P	P	05 25 11.1	+0.6
	comp=Z,23nm,0.8s,baz=196,slow=7.4,SNR=3.9						
	comp=Z,23nm,0.8s						
TBI	Tubuai	38.88	102	*e*SS	SS	05 34 59.7	+8.0
	comp=Z,871nm,21.2s						
TBI				*e*LR	LR	05 36 45.8	
	comp=Z,371nm,25.8s						
PPT2	Papeete2	39.59	93	*e*SS	SS	05 35 11.2	+4.9
	comp=Z,35nm,23.5s						
PPT2				*e*LR	LR	05 37 03.9	
	comp=Z,123nm,31.2s						
PPT2				*e*LR	LR	05 37 09.5	
	comp=Z,190nm,28.2s						
PPT	Papeete	39.60	93	P	P	05 26 09.5	+0.1
	comp=Z,21nm,0.8s,baz=300,slow=11,SNR=2.0						
PPT				LR	LR	05 38 24.1	
	comp=Z,117nm,20.1s,baz=268,slow=30						
	comp=Z,21nm,0.8s						
FITZ	Fitzroy Crossi	40.46	266	P	P	05 26 17.0	+0.5
	comp=Z,11nm,0.8s,baz=118,slow=7.9,SNR=17						
FITZ				LR	LR	05 43 01.9	
	comp=Z,180nm,19.5s,baz=96,slow=36						
	comp=Z,11nm,0.8s						
FITZ	Fitzroy Crossi	40.46	266		P	05 26 17.3	+0.8
BATI	Baumata	44.39	277	LR	LR	05 44 09.7	
	comp=Z,231nm,20.7s,baz=274,slow=34						
PSA00	Pilbara Seismi	45.25	260	P	P	05 26 56.0	+0.7
PSA00				IAmb	IAmb	05 27 07.4	
	comp=Z,18nm,1.4s						
MBWA	Marble Bar	45.42	261		P	05 26 56.8	+0.2
NWAO	Narrogin (SRO)	46.89	244	P	P	05 27 07.9	-0.2
	comp=Z,17nm,1.0s,baz=53,slow=5.8,SNR=4.1						
NWAO				LR	LR	05 46 50.0	
	comp=Z,272nm,19.4s,baz=80,slow=36						
	comp=Z,17nm,1.0s						
KAPI	Kappang	49.88	281	P	P	05 27 32.3	+0.9
	comp=Z,9.7nm,0.9s,baz=78,slow=2.0,SNR=5.9						
	comp=Z,9.7nm,0.9s						
KAPI	Kappang	49.88	281		P	05 27 32.4	+1.0
TAOE	Nuku Hiva Isla	50.81	84	*e*LR	LR	05 42 21.6	
	comp=Z,171nm,28.6s						
TOLI2	Tolitoli	51.57	289		P	05 27 43.4	-0.8
VNDA	Vanda	56.75	182	P	P	05 28 20.3	-0.7
	comp=Z,0.9nm,0.7s,baz=19,slow=8.3,SNR=3.0						
VNDA				LR	LR	05 48 31.1	
	comp=Z,53nm,19.2s,baz=350,slow=32						
	comp=Z,0.9nm,0.7s						
MJAR	Matsushiro Arr	63.92	333	P	P	05 29 10.3	-0.2
	comp=Z,2.0nm,0.8s,baz=165,slow=7.1,SNR=2.6						
	comp=Z,2.0nm,0.8s						
QSPA	South Pole Qui	69.16	180	P	P	05 29 43.2	-0.5
	comp=Z,8.7nm,1.0s,baz=30,slow=1.9,SNR=13						
QSPA				LR	LR	05 57 18.0	
	comp=Z,49nm,19.2s,baz=10,slow=34						
	comp=Z,8.7nm,1.0s						
QSPA	South Pole Qui	69.16	180	P	P	05 29 43.8	0.0
QSPA				IAmb	IAmb	05 29 55.4	
	comp=Z,15nm,1.2s						
USRK	Ussuriysk Ar.	72.92	333	P	P	05 30 06.5	-0.1
	comp=Z,6.6nm,0.8s,baz=167,slow=4.0,SNR=11						
	comp=Z,6.6nm,0.8s						
SHEM	Shemya Is, Ala	73.48	4	LR	LR	05 55 54.2	
	comp=Z,75nm,20.8s,baz=300,slow=30						
PETK	Petropavlovsk-	74.30	353	LR	LR	05 56 02.5	
	comp=Z,35nm,21.3s,baz=126,slow=30						
CN2	Changchun	75.54	329	P	P	05 30 33.5	+12
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CMAR	Chiang Mai Arr	78.60	295	P	P	05 30 40.3	+0.6
	comp=Z,2.2nm,0.5s,baz=130,slow=4.9,SNR=9.2						
	comp=Z,2.2nm,0.5s						
XAN	Xi'an	78.76	313	*e*P	P	05 30 41.5	+1.2
PZH	PanZhiHua	80.06	303	P	P	05 30 52.9	+5.3
HHC	Hu-ho-hao-te	81.06	320	*e*P	P	05 30 59.1	+6.4
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
LZH	Lanzhou	83.36	312	*e*P	P	05 31 03.8	-1.1
LZH				pP	pP	05 31 12.7	-0.3
LZH				sP	pwP	05 31 17.7	-1.3
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZDM	Lanzhou Array	83.40	312	P	P	05 31 05.5	+0.2
	comp=Z,0.8nm,0.3s,baz=101,slow=7.5,SNR=1.9						
	comp=Z,0.8nm,0.3s						
SNAA	Sanae	87.48	183	P	P	05 31 22.9	-1.9
	comp=Z,4.1nm,0.9s,baz=171,slow=5.2,SNR=7.6						
	comp=Z,4.1nm,0.9s						
SNAA	Sanae	87.48	183		P	05 31 23.5	-1.3
SNAA				IAmb	IAmb	05 31 26.8	
	comp=Z,6.2nm,1.0s						
GTA	Gaotai	87.80	314	*e*P	P	05 31 28.5	+1.7
GTA				pP	sP	05 31 39.0	+1.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SONM	Songino Array	88.16	323	P	P	05 31 29.1	+0.8
	comp=Z,3.1nm,0.8s,baz=144,slow=5.4,SNR=15						
	comp=Z,3.1nm,0.8s						
ISA	Isabella, Lake	89.03	51	IAmb	IAmb	05 31 44.4	
	comp=Z,4.5nm,1.0s						
PFO	Pinyon Flats O	89.62	54	LR	LR	06 10 52.2	
	comp=Z,40nm,18.0s,baz=289,slow=35						
CLC	China Lake	89.73	51	IAmb	IAmb	05 31 47.7	
	comp=Z,6.2nm,1.1s						
BELC	Belle Mtn. Jos	90.14	54	IAmb	IAmb	05 31 50.1	
	comp=Z,4.7nm,0.9s						
DSP	Deep Springs	90.15	50		P	05 31 38.3	+0.6
DSP				IAmb	IAmb	05 31 49.6	
	comp=Z,5.5nm,1.0s						
NVAR	Mina Array Bea	90.38	49	P	P	05 31 39.0	-0.1
	comp=Z,1.7nm,0.8s,baz=230,slow=8.2,SNR=12						
NVAR				LR	LR	06 03 32.1	
	comp=Z,47nm,20.9s,baz=273,slow=30						
	comp=Z,1.7nm,0.8s						
NVAR	Mina Array Bea	90.38	49	P	P	05 31 39.3	+0.2
NV11	Mina Array Sit	90.49	49	IAmb	IAmb	05 31 51.6	
	comp=Z,4.2nm,0.9s						
GWY	Greenwater Val	90.57	51	IAmb	IAmb	05 32 04.8	
	comp=Z,8.4nm,1.4s						
LPIG	La Paz	90.72	65	LR	LR	06 02 43.2	
	comp=Z,49nm,19.1s,baz=228,slow=29						
WCT	Wildcat Mounta	90.86	51	IAmb	IAmb	05 31 53.9	
	comp=Z,3.7nm,1.0s						
PINE	Pine Mountain	91.07	43		P	05 31 43.0	+0.8
BBB	Bella Bella	91.22	33	LR	LR	06 12 43.9	
	comp=Z,36nm,18.3s,baz=225,slow=36						
ILAR	Eielson Array	92.01	18	P	P	05 31 43.9	-1.8
	comp=Z,0.4nm,0.7s,baz=259,slow=4.5,SNR=5.2						
ILAR				LR	LR	06 08 25.1	
	comp=Z,62nm,19.3s,baz=167,slow=32						
	comp=Z,0.4nm,0.7s						
PRN	Pahroc Range	92.27	51	IAmb	IAmb	05 32 00.3	
	comp=Z,5.4nm,1.0s						
DLBC	Dease Lake	93.81	28	LR	LR	06 05 09.9	
	comp=Z,60nm,21.7s,baz=268,slow=30						
WMQ	Urumqi	97.88	314	*e*P	Pdif	05 32 17.6	+4.3
WMQ				pmax	pmax		
	comp=Z,20nm,1.3s						
TXAR	Lajitas Array	98.13	62	LR	LR	06 06 17.7	
	comp=Z,31nm,21.1s,baz=330,slow=29						
MKAR	Makanchi Array	102.46	315	P	Pdif	05 32 32.8	-0.8
	comp=Z,0.2nm,0.6s,baz=106,slow=4.7,SNR=2.5						
BRTR	Keskin Array B	137.30	306	PKP	PKPdf	05 38 01.5	+0.3
	comp=Z,0.5nm,0.7s,baz=40,slow=9.1,SNR=2.5						
ZVC	Zvikov	144.98	331	*e*PKP	PKPdf	05 38 14.7	+0.2
ZVC				*e*x	x	05 38 25.2	
EKA	Eskdalemuir Ar	145.06	352	PKPbc	PKPbc	05 38 13.2	-0.7
	comp=Z,0.4nm,0.5s,baz=338,slow=1.8,SNR=3.5						
RONA	Rosalia, Austr	145.13	327	*e*PKP	PKPdf	05 38 15.8	+0.9
	comp=Z,9.0nm,0.8s						
RONA				*e*pPKP	sPKPdf	05 38 26.4	+0.6
	comp=Z,35nm,1.1s						
CONA	Conrad Observa	145.21	327	*e*PKP	PKPdf	05 38 16.0	+0.9
	comp=Z,22nm,1.6s						
CONA				*e*pPKP	sPKPdf	05 38 26.8	+0.9
	comp=Z,34nm,1.7s						
CKRC	Cesky Krumlov	145.36	330	*e*PKP	PKPdf	05 38 16.2	+1.0
CKRC				*e*x	x	05 38 26.3	
KHC	Kasperske Hory	145.48	331	*e*PKP	PKPab	05 38 16.3	+0.6
KHC				*e*x	x	05 38 27.0	
GERES	GERESS Array B	145.63	330	PKPbc	PKPbc	05 38 16.4	+0.4
	comp=Z,6.3nm,0.8s,baz=35,slow=4.9,SNR=32						
ARSA	Arzberg	145.82	327	*e*PKP	PKPab	05 38 17.8	+0.8
	comp=Z,2.0nm,0.5s						
ARSA				*e*pPKP	sPKPab	05 38 29.5	+1.7
	comp=Z,8.9nm,1.1s						
MOA	Molln	146.05	328	*e*PKP	PKPab	05 38 18.1	+0.2
	comp=Z,0.8nm,0.3s						
MOA				*e*pPKP	sPKPab	05 38 30.1	+1.5
	comp=Z,22nm,1.6s						
SOKA	Soboth	146.45	326	*e*PKP	PKPbc	05 38 18.5	-0.1
	comp=Z,5.0nm,0.9s						
LESA	Schwarzleotal	147.12	329	*e*PKP	PKPbc	05 38 20.9	+0.4
	comp=Z,1.2nm,0.3s						
LESA				*e*pPKP	sPKPbc	05 38 32.0	+0.7
	comp=Z,12nm,1.1s						
MYKA	Terra Mystica	147.20	327	*i* PKP	PKPbc	05 38 20.2	-0.5
	comp=Z,2.6nm,0.5s						
ABTA	Abfaltersbach	147.68	329	*i* PKP	PKPbc	05 38 21.8	-0.2
	comp=Z,3.4nm,0.6s						
ABTA				*e*pPKP	pPKPab	05 38 32.9	+0.6
	comp=Z,9.4nm,1.1s						
WATA	Walderalm	147.70	330	*e*PKP	PKPbc	05 38 22.3	+0.1
	comp=Z,11nm,1.4s						
WATA				*e*pPKP	sPKPbc	05 38 33.7	+0.6
	comp=Z,19nm,1.6s						
WTTA	Wattenberg	147.73	330	*i* PKP	PKPbc	05 38 23.3	+1.1
	comp=Z,12nm,1.2s						
WTTA				*e*pPKP	sPKPbc	05 38 34.1	+1.0
	comp=Z,21nm,1.2s						
MOTA	Moosalm	147.91	331	*i* PKP	PKPbc	05 38 22.1	-0.7
	comp=Z,9.4nm,1.0s						
MOTA				*e*pPKP	sPKPbc	05 38 34.3	+0.7
	comp=Z,18nm,1.1s						
SQTA	Sankt Quirin	147.96	330	*i* PKP	PKPbc	05 38 23.2	+0.4
	comp=Z,3.7nm,0.6s						
SQTA				*e*pPKP	sPKPbc	05 38 34.3	+0.6
	comp=Z,14nm,1.2s						
FETA	Feichten	148.33	331	*e*PKP	PKPbc	05 38 24.2	+0.4
	comp=Z,8.1nm,1.1s						
FETA				*e*pPKP	pPKPab	05 38 35.6	+0.6
	comp=Z,9.0nm,1.0s						

IDC ***11*** *05:22:56.1±0.7, 3°.77S×129°.64E, h0^{km}, mb4.1/11, mbtmp4.2/14, ML3.9/3, MS3.2/2, Error ellipse: s-maj=33.9km s-min=15.0km az=74.0*

DJA ***11*** *05:23:00.4±0.2, 4°S±3°×12°9E±°, h10^{km}, M4.4/12, mB5.0/3, mb4.6/6, MLv4.3/12, Mw(mB)4.3/3*

NEIC ***11*** *05:23:02.1±2.3, 3°.84S±0°.07×129°.40E±0°.07, h35^{km}±2^{km}, mb4.3/18, Error ellipse: s-maj=12.8km s-min=11.5km az=57.0*

ISC 11 05:23:01.9±0.5**, 3°.81S**±0°.05×**129°.36E**±0°.06**, h36^{km}, n74, σ1^{s}37**/72**, mb4.2**/12**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.63	317	P	Pn	05 23 12.3	-2.2
BNDI	Bandanaira	0.89	142	P	Pn	05 23 17.5	-0.4
BNDI	Bandanaira	0.89	142	P	Pn	05 23 17.3	-0.6
KRAI	Karang Ratu	1.08	297	P	Pn	05 23 19.2	-1.3
KRAI				S	Sn	05 23 33.6	-0.6
AAI	Ambon	1.17	276	P	Pn	05 23 19.6	-2.1
NLAI	Namlea	2.33	284	P	Pn	05 23 37.3	-0.3
FAKI	Fak Fak	3.02	73		Pn	05 23 48.7	+1.5
FAKI	Fak Fak	3.02	73	P	Pn	05 23 50.0	+2.8
FAKI	Fak Fak	3.02	73	P	Pn	05 23 49.2	+2.0
SWI	Sorong	3.49	33	P	Pn	05 23 53.8	+0.1
SANI	Sanana	3.79	297	P	Pn	05 23 57.6	-0.3
SANI	Sanana	3.79	297	P	Pn	05 23 56.8	-1.1
KMPI	Kaimana, Papua	4.34	88	P	Pn	05 24 07.4	+2.0
TNTI	Ternate	4.97	336	Pn	Pn	05 24 13.5	-0.5
RKPI	Ransiki, Papua	5.33	65	P	Pn	05 24 21.2	+2.2
GTOI	Gorontalo	7.73	305	P	Pn	05 24 53.8	+1.8
	0.2nm466nm47nm,0.9s						
EDFI	Ende, Flores	9.06	237	P	Pn	05 25 11.3	+0.9
	18nm,0.8s						
MTN	Manton Dam	9.14	169		Pn	05 25 11.0	-0.4
BNSI	Bone	9.25	266	P	Pn	05 25 13.0	+0.2
	22nm,0.9s						
BKSI	Bulukumba	9.33	260	P	Pn	05 25 14.7	+0.8
	27nm,0.6s						
SPSI	Sidrap Palu	9.57	269	P	Pn	05 25 17.5	+0.3
	1µm17nm,0.7s						
KAPI	Kappang	9.65	263	Pn	Pn	05 25 21.2	+2.8
	3.9nm,0.3s,baz=120,slow=6.1,SNR=33						
KAPI				LR	LR	05 28 43.5	
	comp=Z,71nm,20.2s,baz=84,slow=35						
	28nm,0.6s						
KAPI	Kappang	9.65	263		Pn	05 25 19.2	+0.8
KAPI	Kappang	9.65	263	P	Pn	05 25 20.1	+1.7
KAPI	Kappang	9.65	263	P	Pn	05 25 19.9	+1.5
	21nm,0.7s						
KNRA	Kununurra	11.80	183		Pn	05 25 47.2	-0.6
DBNI	Kabupaten Domp	11.93	246	P	Pn	05 26 02.6	+13
PLAI	Plampang	12.54	246	P	P	05 26 10.2	+1.2
FITZ	Fitzroy Crossi	14.66	194	Pn	Pn	05 26 26.8	0.0
	0.3nm,0.3s,baz=95,slow=10,SNR=15						
FITZ				Sn	Sn	05 29 13.0	+4.9
	0.1nm,0.3s,baz=305,slow=23,SNR=1.9						
	21nm,0.9s						
JAGI	Jajag, Banyuwa	15.81	252	Pn	Pn	05 26 41.6	-0.3
JAGI				IAmb	IAmb	05 26 47.2	
	comp=Z,46nm,1.4s						
WB0	Warramunga Arr	16.60	163		Pn	05 26 49.9	-2.1
WRAB	Tennant Creek	16.75	163	P	Pn	05 26 53.6	-0.2
WRA	Warramunga Arr	16.75	164	Pn	Pn	05 26 50.7	-3.2
	comp=Z,0.3nm,0.3s,baz=346,slow=13,SNR=6.1						
WRA				Sn	Sn	05 29 42.4	-17
	baz=333,slow=22						
	comp=Z,1.6nm,0.8s						
WRA	Warramunga Arr	16.75	164		Pn	05 26 51.6	-2.3
WR8	Warramunga Arr	16.81	163	Pn	Pn	05 26 52.9	-1.8
COEN	Coen	16.95	127	P	Pn	05 26 56.5	-0.1
COEN	Coen	16.95	127	P	P	05 26 57.5	-0.6
QIS	Mount Isa	19.41	150	P	Pn	05 27 26.1	-0.3
MBWA	Marble Bar	19.62	208	P	P	05 27 26.6	-0.8
MBWA				IAmb	IAmb	05 27 29.1	
	comp=Z,41nm,1.5s						
MBWA	Marble Bar	19.62	208	P	Pn	05 27 28.2	-0.8
PSA00	Pilbara Seismi	19.93	207	P	P	05 27 30.3	-0.4
PSA00				IAmb	IAmb	05 27 43.3	
	comp=Z,8.5nm,1.0s						
PSA00	Pilbara Seismi	19.93	207	P	P	05 27 29.8	-1.0
PSA00				IAmb	IAmb	05 27 32.7	
	comp=Z,14nm,0.7s						
PSA00	Pilbara Seismi	19.93	207	P	Pn	05 27 31.6	-1.0
AS31	Alice Springs	20.22	168	P	P	05 27 34.1	+0.1
AS31				IAmb	IAmb	05 27 46.3	
	comp=Z,3.5nm,0.7s						
ASAR	Alice Springs	20.22	168	P	P	05 27 34.5	+0.5
	comp=Z,3.4nm,0.7s,baz=347,slow=9.8,SNR=22						
ASAR				S	S	05 31 15.9	-3.2
	comp=Z,1.4nm,0.9s,baz=347,slow=22,SNR=5.4						
ASAR				PcP	PcP	05 31 46.8	-0.7
	comp=Z,1.0nm,0.6s,baz=347,slow=2.1,SNR=6.6						

	comp=Z,3.4nm,0.7s						
ASAR	Alice Springs	20.22	168		Pn	05 27 36.2	+0.1
BBJI	Bungbulang	21.90	260	P	P	05 27 52.6	+0.4
GIRL	Giralia	23.77	217	P	P	05 28 11.4	+0.1
IPM	Ipoh	29.48	286		P	05 29 02.7	-0.2
BBOO	Buckleboo	29.52	168	P	P	05 29 02.5	-0.5
BBOO	Buckleboo	29.52	168	P	P	05 29 03.3	+0.3
MNSI	Mandailing Nat	30.11	278	P	P	05 29 08.6	+0.1
CMAR	Chiang Mai Arr	37.25	307	P	P	05 30 12.1	+1.6
	comp=Z,2.8nm,0.6s,baz=137,slow=7.4,SNR=18						
	comp=Z,2.8nm,0.6s						
CMAR	Chiang Mai Arr	37.25	307	P	P	05 30 10.9	+0.4
CHTO	Chiang Mai	37.45	308		P	05 30 12.8	+0.7
CHTO				IAmb	IAmb	05 30 14.2	
	comp=Z,9.5nm,0.8s						
CHTO	Chiang Mai	37.45	308	P	P	05 30 13.5	+1.4
USRK	Ussuriysk Ar.	47.85	3	P	P	05 31 36.4	+0.2
	comp=Z,1.3nm,0.5s,baz=194,slow=9.2,SNR=1.9						
	comp=Z,1.3nm,0.5s						
SONM	Songino Array	55.24	341	P	P	05 32 30.9	-0.7
	comp=Z,0.7nm,0.8s,baz=146,slow=8.0,SNR=1.7						
	comp=Z,0.7nm,0.8s						
SONM	Songino Array	55.24	341	IAmb	IAmb	05 32 43.5	
	comp=Z,3.4nm,1.4s						
MKAR	Makanchi Array	65.23	326	P	P	05 33 40.2	+0.4
	comp=Z,1.0nm,0.7s,baz=126,slow=7.0,SNR=8.0						
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	65.23	326	P	P	05 33 39.9	+0.1
ZALV	Zalesovo Beam	68.46	334	P	P	05 33 59.5	-0.7
	comp=Z,1.4nm,0.7s,baz=106,slow=5.3,SNR=7.1						
	comp=Z,1.4nm,0.7s						
KURBB	Kurchatov Arra	69.48	328	P	P	05 34 06.9	+0.3
	comp=Z,6.7nm,0.2s,baz=128,slow=5.8,SNR=11						
KURK	Kurchatov	69.48	328	P	P	05 34 06.5	-0.1
BVAR	Borovoye Array	75.05	328	P	P	05 34 40.1	+0.3
	comp=Z,1.3nm,0.8s,baz=126,slow=7.5,SNR=5.6						
	comp=Z,1.3nm,0.8s						
VNDA	Vanda	75.67	173	P	P	05 34 42.4	-0.6
	comp=Z,1.3nm,0.6s,baz=319,slow=7.0,SNR=9.9						
VNDA				LR	LR	06 06 56.8	
	comp=Z,30nm,18.1s,baz=329,slow=35						
	comp=Z,1.3nm,0.6s						
VNDA	Vanda	75.67	173	IAmb	IAmb	05 34 45.8	
	comp=Z,3.9nm,1.2s						
NRIK	Noril'sk	78.33	346	P	P	05 34 58.6	+0.6
	comp=Z,2.7nm,0.7s,baz=122,slow=7.4,SNR=5.2						
	comp=Z,2.7nm,0.7s						
NRIK	Noril'sk	78.33	346	IAmb	IAmb	05 34 59.5	
	comp=Z,2.6nm,0.8s						
QSPA	South Pole Qui	86.14	180	P	P	05 35 38.4	-0.8
	comp=Z,1.3nm,0.5s,baz=349,slow=1.3,SNR=1.8						
	comp=Z,1.3nm,0.5s						
QSPA	South Pole Qui	86.14	180	IAmb	IAmb	05 35 38.5	
	comp=Z,2.5nm,1.1s						
ILAR	Eielson Array	90.75	25	P	P	05 36 00.1	-0.9
	comp=Z,0.5nm,0.9s,baz=276,slow=5.8,SNR=2.7						
	comp=Z,0.5nm,0.9s						
CPUP	Villa Florida	149.34	168	PKPbc	PKPbc	05 42 47.4	-0.4
	comp=Z,0.5nm,0.8s,baz=185,slow=1.1,SNR=6.3						
LPAZ	La Paz	153.58	140	PKPbc	PKiKP	05 42 59.7	+0.9
	comp=Z,0.4nm,0.4s,baz=230,slow=5.5,SNR=2.2						

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*IDC **11** 05:23:29.3±1.1, 20°.95S×168°.66E, h0^{km}, mb4.2/12, mbtmp4.1/13, ML2.9/1, Error ellipse: s-maj=32.4km s-min=21.5km az=138.0*

*NEIC **11** 05:23:31.3±1.4, 20°.98S±0°.08×168°.69E±0°.05, h10^{km}±1^{km}, mb4.4/8, Error ellipse: s-maj=14.7km s-min=6.9km az=162.0*

ISC 11 05:23:34.7±0.8, **21°.0S**±0°.1×**168°.5E**±0°.1, **h30**^{km}, **n32**, σ**2^{s}92**/29, **mb4.2**/13, **3C, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	0.67	224	Pg	Pb	05 23 46.4	-1.6
PINNC	Pines Island,	1.90	212	Pn	Pn	05 24 04.8	-0.2
DZM	Mont Dzumac	2.22	241	Pn	Pn	05 24 09.0	-0.6
	2.8nm,0.3s,baz=88,slow=21,SNR=0.9						
DZM				Sn	Sn	05 24 36.8	+0.8
	85nm,0.3s,baz=139,slow=20,SNR=9.9						
	21nm,0.3s						
ONTNC	Ouen Toro	2.33	236	Pn	Pn	05 24 12.7	+1.7
STKA	Stephens Creek	26.37	240	P	P	05 29 09.1	+0.7
	1.7nm,0.5s,baz=70,slow=7.7,SNR=4.7						
	1.7nm,0.5s						
STKA	Stephens Creek	26.37	240	IAmb	IAmb	05 29 13.2	
	comp=Z,30nm,1.3s						
WRA	Warramunga Arr	32.02	266	P	P	05 29 57.6	-1.1
	comp=Z,1.1nm,0.8s,baz=93,slow=9.2,SNR=4.0						
	comp=Z,1.1nm,0.8s						
AS31	Alice Springs	32.09	259	P	P	05 29 59.3	-0.1
AS31				IAmb	IAmb	05 30 00.5	
	comp=Z,2.8nm,0.8s						
ASAR	Alice Springs	32.10	259	P	P	05 29 58.9	-0.5
	comp=Z,5.3nm,0.7s,baz=83,slow=9.1,SNR=17						
	comp=Z,5.3nm,0.7s						
FITZ	Fitzroy Crossi	40.44	266	P	P	05 31 10.8	+0.2
	comp=Z,4.6nm,0.9s,baz=155,slow=7.5,SNR=4.0						
	comp=Z,4.6nm,0.9s						
FITZ	Fitzroy Crossi	40.44	266	IAmb	IAmb	05 31 12.1	
	comp=Z,1.3nm,0.9s						
KAPI	Kappang	49.88	282	P	P	05 32 25.7	-0.1
	comp=Z,1.9nm,0.3s,baz=110,slow=12,SNR=4.1						
	comp=Z,1.9nm,0.3s						
KAPI	Kappang	49.88	282	P	P	05 32 25.9	+0.1
KAPI				IAmb	IAmb	05 32 27.5	
	comp=Z,5.7nm,0.9s						
MJAR	Matsushiro Arr	64.00	333	P	P	05 34 03.9	-1.5
	comp=Z,0.8nm,0.3s,baz=180,slow=6.8,SNR=1.9						
	comp=Z,0.8nm,0.3s						
MJAR	Matsushiro Arr	64.00	333	IAmb	IAmb	05 34 16.7	
	comp=Z,2.2nm,0.9s						
QSPA	South Pole Qui	69.07	180	P	P	05 34 37.1	-0.5
	comp=Z,1.8nm,0.6s,baz=350,slow=3.2,SNR=4.6						
	comp=Z,1.8nm,0.6s						
USRK	Ussuriysk Ar.	72.99	333	P	P	05 35 01.2	-0.2
	comp=Z,2.3nm,0.8s,baz=140,slow=1.3,SNR=4.5						
	comp=Z,2.3nm,0.8s						
CMAR	Chiang Mai Arr	78.63	295	P	P	05 35 35.0	+0.8
	comp=Z,1.1nm,0.3s,baz=131,slow=3.7,SNR=5.0						
	comp=Z,1.1nm,0.3s						
SONM	Songino Array	88.22	323	P	P	05 36 22.4	-0.6
	comp=Z,0.6nm,0.4s,baz=131,slow=5.9,SNR=5.7						
	comp=Z,0.6nm,0.4s						
SONM	Songino Array	88.22	323	IAmb	IAmb	05 36 35.2	
	comp=Z,2.7nm,1.0s						
NVAR	Mina Array Bea	90.45	49	P	P	05 36 32.6	-1.2
	comp=Z,0.4nm,0.7s,baz=231,slow=9.4,SNR=3.6						
	comp=Z,0.4nm,0.7s						
ILAR	Eielson Array	92.10	18	P	P	05 36 38.4	-2.1
	comp=Z,0.3nm,0.8s,baz=232,slow=5.3,SNR=1.4						
	comp=Z,0.3nm,0.8s						
MK31	Makanchi Array	102.52	315	Pg	Pdif	05 37 22.2	-5.9
	comp=Z,2.8nm,1.1s,baz=117,slow=11,SNR=4.3						
MK31				⇑Lg	Lg	05 38 29.3	
	comp=Z,7.0nm,1.1s,baz=120,slow=32,SNR=5.3						
MAKZ	Makanchi	102.73	315	⇑Pg	Pdif	05 37 26.5	-2.6
	comp=Z,5.7nm,1.1s						
MAKZ				⇑Lg	Lg	05 38 36.4	
	comp=Z,16nm,1.4s						
ZVC	Zvikov	145.05	330	*e*PKP	PKiKP	05 43 19.8	+7.0
RONA	Rosalia, Austr	145.20	327	*e*PKP	PKPdf	05 43 09.4	+0.1
	comp=Z,5.7nm,1.1s						
CONA	Conrad Observa	145.28	327	*e*PKP	PKPdf	05 43 10.1	+0.5
	comp=Z,7.8nm,1.1s						
CKRC	Cesky Krumlov	145.43	330	*e*PKP	PKiKP	05 43 21.2	+7.5
KHC	Kasperske Hory	145.55	331	*e*PKP	PKiKP	05 43 21.4	+7.5
GERES	GERESS Array B	145.70	330	PKPbc	PKPbc	05 43 10.3	-0.3
	comp=Z,1.8nm,0.8s,baz=25,slow=4.4,SNR=8.2						
MOA	Molln	146.12	328	*e*PKP	PKPab	05 43 12.0	-0.5
	comp=Z,12nm,1.6s						
FETA	Feichten	148.40	330	*e*PKP	PKPdf	05 43 15.7	+0.8
	comp=Z,6.9nm,1.0s						

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*IDC **11** 05:50:11.7±1.1, 21°.11S×168°.67E, h0^{km}, mb4.0/9, mbtmp4.0/10, ML3.5/1, MS3.2/2, Error ellipse: s-maj=34.0km s-min=21.2km az=141.0*

*NEIC **11** 05:50:13.6±1.6, 21°.11S±0°.10×168°.67E±0°.09, h10^{km}±1^{km}, mb4.3/8, Error ellipse: s-maj=17.2km s-min=13.6km az=149.0*

ISC 11 05:50:16.3±0.7, **21°.1S**±0°.1×**168°.62E**±0°.10, **h30**^{km}, **n22**, σ**0^{s}67**/21, **mb4.2**/12, **Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	0.67	235	Pn	Pb	05 50 28.8	-0.7
PINNC	Pines Island,	1.86	216		Pn	05 50 46.8	+0.7
DZM	Mont Dzumac	2.25	244	Pn	Pn	05 50 51.1	-0.4
	12nm,0.3s,baz=123,slow=16,SNR=6.4						
DZM				Sn	Sn	05 51 18.4	+0.1
	baz=360,slow=19						
DZM				LR	LR	05 51 39.5	
	comp=Z,308nm,19.4s,baz=26,slow=39						
	28nm,0.3s						
ONTNC	Ouen Toro	2.35	239	Pn	Pn	05 50 54.1	+1.3
TCW	Tory Channel	20.61	168	P	P	05 54 52.5	-0.6
WRA	Warramunga Arr	32.09	266	P	P	05 56 40.9	-0.1
	0.8nm,0.8s,baz=105,slow=8.5,SNR=2.6						
	0.8nm,0.8s						
WRA	Warramunga Arr	32.09	266	IAmb	IAmb	05 56 41.2	
	comp=Z,0.3nm,1.2s						
AS31	Alice Springs	32.16	259	P	P	05 56 41.3	-0.2
AS31				IAmb	IAmb	05 56 42.8	
	comp=Z,1.8nm,0.9s						
ASAR	Alice Springs	32.16	259	P	P	05 56 41.6	+0.1
	comp=Z,3.9nm,0.8s,baz=82,slow=9.1,SNR=34						
ASAR				LR	LR	06 09 03.6	
	comp=Z,64nm,18.7s,baz=231,slow=35						
	comp=Z,3.9nm,0.8s						
MTN	Manton Dam	36.71	277	P	P	05 57 19.6	-1.4
MTN				IAmb	IAmb	05 57 38.5	
	comp=Z,6.5nm,0.8s						
FITZ	Fitzroy Crossi	40.52	267	P	P	05 57 53.5	+0.6
QSPA	South Pole Qui	68.96	180	P	P	06 01 18.6	+0.1
	comp=Z,2.2nm,0.9s,baz=2.1,slow=3.3,SNR=6.0						
	comp=Z,2.2nm,0.9s						
USRK	Ussuriysk Ar.	73.12	333	P	P	06 01 43.9	+0.2
	comp=Z,1.3nm,0.8s,baz=107,slow=7.7,SNR=1.5						
	comp=Z,1.3nm,0.8s						
PETK	Petropavlovsk-	74.50	353	P	P	06 01 52.1	+0.5
	comp=Z,2.4nm,0.9s,baz=189,slow=8.3,SNR=2.8						
	comp=Z,2.4nm,0.9s						
CMAR	Chiang Mai Arr	78.75	295	P	P	06 02 17.5	+1.1
	comp=Z,1.4nm,0.3s,baz=118,slow=5.2,SNR=4.3						
	comp=Z,1.4nm,0.3s						
BELA	Belgrano 2	80.30	175	P	P	06 02 24.0	+0.1
BELA				IAmb	IAmb	06 02 25.4	
	comp=Z,4.7nm,1.0s						
SNAA	Sanae	87.29	183	P	P	06 02 59.6	-0.2
SONM	Songino Array	88.36	323	P	P	06 03 04.4	-0.9
	comp=Z,1.2nm,0.8s,baz=116,slow=3.4,SNR=1.6						
	comp=Z,1.2nm,0.8s						
SONM	Songino Array	88.36	323	IAmb	IAmb	06 03 08.0	
	comp=Z,2.7nm,1.3s						
NVAR	Mina Array Bea	90.46	49	P	P	06 03 15.1	-0.3
	comp=Z,0.3nm,0.7s,baz=255,slow=8.4,SNR=1.6						
	comp=Z,0.3nm,0.7s						
ILAR	Eielson Array	92.17	17	P	P	06 03 22.4	-0.1
	comp=Z,0.3nm,0.7s,baz=248,slow=6.1,SNR=5.0						
	comp=Z,0.3nm,0.7s						
GERES	GERESS Array B	145.83	330	PKPbc	PKPab	06 09 53.0	0.0
	comp=Z,0.2nm,0.4s,baz=42,slow=4.2,SNR=6.1						

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*NEIC **11** 06:09:42.0±0.7, 51°.36N±0°.07×174°.23W±0°.04, h35^{km}±2^{km}, ML3.0(AEIC), Error ellipse: s-maj=12.4km s-min=3.1km az=340.0*

AEIC 11 06:09:41.8±1.4, **51°.39N**±0°.04×**174°.31W**±0°.03, **h33**^{km}±7^{km}, **ML3.5**/10(NEIC), **Error ellipse: s-maj=5.7km s-min=2.7km az=162.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	Atka Island	0.82	5		Pn	06 09 56.8	-0.2
ATKA					Sb	06 10 08.6	+0.3
ATKA	Atka Island	0.82	5	IAML		06 10 09.4	
	comp=N,1μm,0.6s						
ATKA				IAML		06 10 09.4	
	comp=E,1μm,0.5s						
KOFP	Korovin Flat P	0.90	9		Pn	06 09 58.5	+0.4
KOFP					Sb	06 10 10.5	-0.2
KOKL	Mount Kliuchef	0.94	4		Pn	06 09 59.0	+0.3
KOKL					Sb	06 10 11.7	-0.2
KOWE	Korovin West	0.98	2		Pn	06 09 59.5	+0.3
KOWE					Sn	06 10 12.4	+0.5
GSIG	Igitkin Island	1.17	301		Pn	06 10 01.8	0.0
GSMY	Great Sitkin M	1.27	302		Pn	06 10 03.4	+0.3
GSMY					Sb	06 10 20.7	-0.4
GSTR	Great Sitkin T	1.29	304	Pn	Pn	06 10 03.7	+0.2
GSTR					Sb	06 10 21.2	-0.8
GSTD	Great Sitkin T	1.32	301		Pn	06 10 04.6	+0.6
GSTD					Sb	06 10 22.1	-0.6
ETKA	Kagalaska Isla	1.39	291		Pn	06 10 05.3	+0.5
ETKA					Sb	06 10 23.9	-0.6
ADK	Adak	1.56	289		Pn	06 10 07.6	+0.5
ADK				IAML		06 10 29.6	
	comp=E,577nm,0.3s						
ADK				IAML		06 10 30.9	
	comp=E,688nm,0.3s						
ADK	Adak	1.56	289		Sb	06 10 27.9	-1.5
KIRH	Kanaga Island	1.81	287		Pn	06 10 11.4	+0.8
KIWB	Kanaga Island	1.83	286		Pn	06 10 11.9	+1.0
KIWB					Sn	06 10 34.4	+1.6
KIMD	Kanaga Island	1.86	283		Pn	06 10 12.0	+0.7
KIMD					Sb	06 10 35.9	-2.2
TAPA	Tanaga Point A	2.22	282		Pn	06 10 17.7	+1.4
TAPA					Sn	06 10 44.6	+2.0
TAFL	Tanaga Flats	2.27	281		Pn	06 10 18.1	+1.2
TAFL					Sn	06 10 45.9	+2.2
TAFP	Tanaga Falls P	2.34	284		Pn	06 10 18.9	+0.9
TAFP					Sn	06 10 47.4	+1.9
NIKH	Nikolski High	3.71	63	Pn	Pn	06 10 36.5	-0.2
NIKH				IAML		06 11 24.4	
	comp=E,87nm,1.3s						
NIKH				IAML		06 11 42.9	
	comp=N,100nm,1.5s						

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*IDC **11** 06:30:00.3±7.3, 7°.18S×128°.19E, h85^{km}±70^{km}, mb3.4/4, mbtmp3.7/6, ML3.8/2, MS4.2/1, Error ellipse: s-maj=89.5km s-min=21.3km az=55.0*

*NEIC **11** 06:30:05.5±2.1, 7°.44S±0°.04×127°.84E±0°.08, h130^{km}±12^{km}, mb4.1/10, Error ellipse: s-maj=11.6km s-min=5.4km az=71.0*

*DJA **11** 06:30:07.4±0.3, 8°S±4°×12°8E±°, h147^{km}±6^{km}, M4.3/12, mb4.2/12, mB5.0/3, MLv4.5/10, Mw(mB)4.3/3*

ISC 11 06:30:05.9±0.7, **7°.59S**±0°.07×**127°.77E**±0°.07, **h142**^{km}, **n37**, σ**1^{s}37**/34, **mb3.7**/6, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.52	97	Pn	Pn	06 30 57.5	-2.2
SOEI	Soe	4.07	238		Pn	06 31 08.1	+1.0
SOEI	Soe	4.07	238	P	Pn	06 31 08.5	+1.4
BATI	Baumata	4.81	237	P	Pn	06 31 18.1	+1.4
	316nm,0.5s,baz=106,slow=4.1,SNR=34						
BATI				S	Sn	06 32 11.1	-0.9
	98nm,0.3s,baz=106,slow=9.4,SNR=11						
BATI	Baumata	4.81	237	P	Pn	06 31 18.2	+1.4
EDFI	Ende, Flores	6.12	259	P	Pn	06 31 35.8	+1.4
	9.6nm,0.6s						
MTN	Manton Dam	6.18	148	Pn	Pn	06 31 35.9	+0.9
FAKI	Fak Fak	6.44	44	Pn	Pn	06 31 38.4	-0.1
FAKI	Fak Fak	6.44	44	P	Pn	06 31 40.8	+2.3
	0.1nm12nm,0.6s						
BASI	Baing, Sumba	7.57	249	P	Pn	06 31 53.8	+0.2
KNRA	Kununurra	8.09	173		Pn	06 31 59.6	-1.0
LUWI	Luwuk	8.20	322	P	Pn	06 32 01.6	-0.4
WBSI	Waikabubak, Su	8.53	256	P	Pn	06 32 05.3	-1.2
	37nm,0.7s						
PLAI	Plampang	9.96	262	P	Pn	06 32 25.9	+0.2
	15nm,0.8s						
FITZ	Fitzroy Crossi	10.64	191	P	Pn	06 32 31.8	-2.9
	4.6nm,0.3s,baz=28,slow=9.6,SNR=34						
FITZ				S	Sn	06 34 21.0	-11
	5.7nm,0.3s,baz=4.8,slow=19,SNR=7.8						
FITZ	Fitzroy Crossi	10.64	191		Pn	06 32 31.6	-3.1
TWSI	Taliwang, Sumb	10.84	263	P	Pn	06 32 38.2	+0.9
	27nm,1.4s						
WB0	Warramunga Arr	13.70	153		Pn	06 33 12.7	-1.8
WRA	Warramunga Arr	13.83	153	P	Pn	06 33 13.9	-2.2
	0.3nm,0.3s,baz=325,slow=12,SNR=6.4						
WRA				S	Sn	06 35 37.8	-11
	1.7nm,0.7s,baz=329,slow=22,SNR=5.9						
	0.2nm,0.3s						
WR8	Warramunga Arr	13.91	153	Pn	Pn	06 33 15.8	-1.4
MBWA	Marble Bar	15.56	209	Pn	Pn	06 33 38.8	+1.1
MBWA				IAmb	IAmb	06 33 49.3	
	comp=Z,28nm,1.5s						
PSA00	Pilbara Seismi	15.86	208	Pn	Pn	06 33 41.2	-0.3
PSA00				IAmb	IAmb	06 33 54.5	
	comp=Z,25nm,1.4s						
COEN	Coen	16.40	114		P	06 33 49.7	+1.4
COEN				IAmb	IAmb	06 34 18.2	
	comp=Z,8.6nm,1.4s						
AS31	Alice Springs	17.03	160	P	P	06 33 56.5	+1.3
ASAR	Alice Springs	17.03	160	P	P	06 33 57.3	+2.1
	comp=Z,0.8nm,0.3s,baz=340,slow=12,SNR=47						
ASAR				S	S	06 36 54.2	-11
	comp=Z,1.1nm,0.5s,baz=315,slow=18,SNR=7.1						
	comp=Z,2.5nm,0.4s						
ASAR	Alice Springs	17.03	160	P	P	06 33 56.4	+1.1
CTAO	Charters Tower	21.80	127	P	P	06 34 45.6	-1.3
CTAO				IAmb	IAmb	06 35 19.6	
	comp=Z,14nm,1.3s						
BBOO	Buckleboo	26.25	164	P	P	06 35 29.7	+1.9
STKA	Stephens Creek	27.38	154	P	P	06 35 39.7	+1.6
	comp=Z,1.3nm,0.5s,baz=335,slow=8.6,SNR=6.0						
	comp=Z,1.3nm,0.5s						
ARMA	Armidale	31.86	139	P	P	06 36 16.1	-1.7
RAO	Raoul Island	55.31	120	LR	LR	07 03 12.7	
	comp=Z,216nm,18.1s,baz=10.0,slow=36						
SONM	Songino Array	58.33	343	P	P	06 39 44.7	-1.5
	comp=Z,0.2nm,0.5s,baz=150,slow=6.7,SNR=1.9						
	comp=Z,0.2nm,0.5s						
MKAR	Makanchi Array	67.53	328	P	P	06 40 47.0	+0.1
	comp=Z,0.3nm,0.5s,baz=119,slow=7.5,SNR=3.0						
	comp=Z,0.3nm,0.5s						
KURBB	Kurchatov Arra	71.88	329	P	P	06 41 13.2	-0.1
	comp=Z,0.6nm,0.5s,baz=134,slow=5.2,SNR=8.8						
	comp=Z,0.6nm,0.5s						
KURK	Kurchatov	71.89	330	P	P	06 41 13.2	-0.2
KURK	Kurchatov	71.89	330	IAmb	IAmb	06 41 15.5	
	comp=Z,1.1nm,0.5s						
LPAZ	La Paz	151.53	147	PKPbc	PKPbc	06 49 45.8	+0.7
	comp=Z,0.6nm,0.4s,baz=270,slow=5.1,SNR=2.7						

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*AZER **11** 06:30:26.7, 41°.85N×46°.07E, h13^{km}, ml3.0*

*NORS **11** 06:30:26.8, 42°.11N×46°.21E, h8^{km}, MPVA3.9*

*MOS **11** 06:30:26.4, 42°.07N×46°.28E, h20^{km}, MPVA4.0*

*TIF **11** 06:30:26.2, 42°.07N×46°.16E, h21^{km}±1^{km}*

*DRS **11** 06:30:27.8, 42°.09N×46°.22E, h18^{km}*

ISC 11 06:30:27.8±0.8, **42°.04N**±0°.01×**46°.20E**±0°.01, **h17**^{km}±5^{km}, **n114**, σ**1^{s}20**/217, **3C-3D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLTR	Tlyarata	0.14	59	*i* Pg	Pg	06 30 31.5	-0.4
TLTR				*e*Sg	Sg	06 30 34.8	+0.1
TLTR	Tlyarata	0.14	59	*i* PG	Pg	06 30 31.5	-0.4
TLTR				*e*S	Sg	06 30 34.8	+0.1
ZKTA	Zakatala	0.51	141	P	Pg	06 30 37.1	-0.8
ZKTA				S	Sg	06 30 45.3	+0.5
BTLR	Botlikh	0.63	2	*i* Pg	Pg	06 30 39.2	-1.1
BTLR				*e*Sg	Sg	06 30 48.0	-0.7
BTLR	Botlikh	0.63	2	⇓*i*PG	Pg	06 30 39.1	-1.1
BTLR				*e*S	Sg	06 30 47.9	-0.7
BTLR				pmax	pmax		
	comp=Z,401nm,0.2s						
XNZR	Khunzakh	0.63	36	*e*Pg	Pg	06 30 39.8	-0.5
XNZR				*e*Sg	Sg	06 30 48.9	+0.1
HNZR	Khunzah	0.65	36	*e*PG	Pg	06 30 39.7	-0.9
HNZR				*e*S	Sg	06 30 48.9	-0.4
HNZR				pmax	pmax		
	comp=Z,189nm,0.2s						
KMKR	Kumukh	0.68	82	*e*Pg	Pg	06 30 40.5	-0.7
KMKR				*e*Sg	Sg	06 30 50.1	-0.2
KMKR	Kumukh	0.68	82	*e*PG	Pg	06 30 40.5	-0.7
KMKR				*e*S	Sg	06 30 50.0	-0.2
KMKR				pmax	pmax		
	comp=Z,364nm,0.4s						
UNCR	Uncukul	0.81	33	*e*Pg	Pb	06 30 42.5	-0.9
UNCR				*e*Sg	Sb	06 30 53.8	-0.3
UNCR	Uncukul	0.81	33	*e*PG	Pb	06 30 42.5	-0.9
UNCR				*e*S	Sb	06 30 53.7	-0.3
UNCR				pmax	pmax		
	comp=Z,147nm,0.3s						
VSHL	Vashlovani	0.82	169	P	Pb	06 30 43.5	-0.1
VSHL				S	Sn	06 30 57.5	+1.2
VSHL	Vashlovani	0.82	169	*e*Pg	Pb	06 30 43.5	-0.1
VSHL				*e*Sg	Sn	06 30 57.5	+1.2
ARKR	Arakani	0.82	46	*i* Pg	Pb	06 30 42.9	-0.8
ARKR				*e*Sg	Sb	06 30 54.2	-0.2
ARKR	Arakani	0.82	46	⇓*i*PG	Pb	06 30 42.8	-0.8
ARKR				*e*S	Sb	06 30 54.2	-0.2
ARKR				pmax	pmax		
	comp=Z,104nm,0.3s						
DGRG	David-gareji	0.85	227	P	Pb	06 30 43.5	-0.6
DGRG				S	Sn	06 30 57.3	+0.2
DGRG	David-gareji	0.85	227	*e*Pg	Pb	06 30 43.5	-0.6
DGRG				*e*Sg	Sn	06 30 57.3	+0.2
DGRG	David-gareji	0.85	227	*e*PG	Pb	06 30 43.7	-0.4
DVE	Vedeno	0.92	357	*e*Pg	Pb	06 30 44.4	-1.0
DVE				*e*Sg	Sb	06 30 57.0	-0.4
DVE	Vedeno	0.92	357	*e*PG	Pb	06 30 44.4	-1.0
DVE				*e*S	Sb	06 30 56.9	-0.4
DVE				pmax	pmax		
	comp=Z,131nm,0.3s						
KRNR	Karanay	0.95	33	*e*Pg	Pb	06 30 44.7	-1.2
KRNR				*e*Sg	Sb	06 30 57.6	-0.6
KRNR	Karanay	0.95	33	*e*PG	Pb	06 30 44.6	-1.2
KRNR				*e*S	Sb	06 30 57.6	-0.6
KRNR				pmax	pmax		
	comp=Z,76nm,0.3s						
BUJR	Buynaksk	1.04	40	*e*Pg	Pb	06 30 46.6	-0.7
BUJR				*e*Sg	Sb	06 31 01.0	+0.4
BUJR	Buynaksk	1.04	40	*e*PG	Pb	06 30 46.6	-0.7
BUJR				*e*S	Sb	06 31 01.0	+0.4
BUJR				pmax	pmax		
	comp=Z,151nm,0.4s						
SEAG	Tbilisi Sea	1.08	256	P	Pb	06 30 46.5	-1.4
SEAG				S	Sb	06 31 01.6	-0.1
SEAG	Tbilisi Sea	1.08	256	PG	Pb	06 30 46.5	-1.4
SEAG				S	Sb	06 31 01.6	-0.1
URKR	Urkarakh	1.08	83	*e*Pg	Pb	06 30 47.4	-0.6
URKR				*e*Sg	Sb	06 31 02.4	+0.6
URKR	Urkarakh	1.08	83	*e*PG	Pb	06 30 47.4	-0.6
URKR				*e*S	Sb	06 31 02.4	+0.6
BTNK	Botanikuri	1.10	252	PG	Pb	06 30 46.7	-1.7
BTNK				S	Sb	06 31 02.0	-0.5
SEKA	Sheki	1.11	137	Pg	Pb	06 30 47.0	-1.7
SEKA				Sg	Sb	06 31 02.5	-0.4
SEKA	Sheki	1.11	137	PG	Pb	06 30 46.9	-1.7
TBLG	Delisi	1.13	255	P	Pn	06 30 47.2	-1.7
TBLG				S	Sb	06 31 02.9	-0.4
TBLG	Delisi	1.13	255	PG	Pn	06 30 47.2	-1.7
TBLG				S	Sb	06 31 02.9	-0.4
QZX	Qazax, Azerbai	1.16	213	P	Pn	06 30 47.4	-1.8
QZX				S	Sb	06 31 03.5	-0.6
SGKR	Sergokala	1.16	68	*e*Pg	Pn	06 30 48.5	-0.8
SGKR				*e*Sg	Sb	06 31 04.4	+0.1
SGKR	Sergokala	1.16	68	*e*PG	Pn	06 30 48.5	-0.8
SGKR				*e*S	Sb	06 31 04.3	+0.1
SGKR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GROC	Groznyy	1.20	346	*e*Pg	Pn	06 30 49.3	-0.5
GROC				*e*Sg	Sg	06 31 06.8	0.0
GROC	Groznyy	1.20	346	*e*PG	Pn	06 30 49.3	-0.5
GROC				*e*S	Sg	06 31 06.8	0.0
AKT	Akhty	1.27	115	*e*Pg	Pn	06 30 50.9	0.0
AKT				*e*Sg	Sn	06 31 08.5	+0.9
AKT	Akhty	1.27	115	*e*PG	Pn	06 30 50.1	-0.8
AKT				*e*S	Sb	06 31 06.7	-0.8
AKT				pmax	pmax		
	comp=Z,75nm,0.2s						
AKT				smax	smax		
	comp=E,312nm,0.3s						
AKT				smax	smax		
	comp=E,252nm,0.3s						
AKT				smax	smax		
	comp=N,210nm,0.4s						
MAK	Makhachkala	1.34	46	*e*Pg	Pn	06 30 51.0	-0.6
MAK				*e*Sg	Sn	06 31 08.7	-0.3
MAK	Makhachkala	1.34	46	*e*PG	Pn	06 30 50.3	-1.3
MAK				*e*S	Sn	06 31 08.9	-0.1
MAK				pmax	pmax		
	comp=Z,139nm,0.2s						
MAK				smax	smax		
	comp=N,490nm,0.6s						
MAK				smax	smax		
	comp=N,564nm,0.5s						
GDB	GEDABAY	1.35	194	P	Pn	06 30 50.0	-2.1

GDB				S	**Sn**	**06 31 08.1**	**-1.6**
GANJ	**Ganja**	**1.39**	**176**	P	**Pn**	**06 30 51.1**	**-1.3**
GANJ				S	**Sn**	**06 31 09.7**	**-0.7**
GANJ	**Ganja**	**1.39**	**176**	PG	**Pn**	**06 30 51.1**	**-1.3**
KMGR	**Komgaron**	**1.42**	**317**	*e*Pg	**Pg**	**06 30 55.6**	**+0.5**
KMGR				*e*Sg	**Sg**	**06 31 14.3**	**+0.7**
KMGR	**Komgaron**	**1.42**	**317**	*e*PG	**Pg**	**06 30 55.6**	**+0.5**
KMGR				*e*S	**Sg**	**06 31 14.3**	**+0.7**
MNGR	**Mingechevir, A**	**1.43**	**152**	Pn	**Pn**	**06 30 52.8**	**-0.1**
MNGR				Sn	**Sg**	**06 31 14.5**	**+0.7**
MNGR	**Mingechevir, A**	**1.43**	**152**	PG	**Pn**	**06 30 52.7**	**-0.1**
KZR	**Kazreti**	**1.49**	**245**	P	Pn	06 30 49.3	-4.5
KZR				S	**Sn**	**06 31 09.2**	**-3.6**
KZRT	**Kazreti**	**1.50**	**245**	PG	Pn	06 30 49.3	-4.6
KANR	**Karaman**	**1.50**	**39**	*e*Pg	**Pb**	**06 30 55.1**	**0.0**
KANR				*e*Sg	**Sb**	**06 31 14.5**	**+0.6**
KANR	**Karaman**	**1.50**	**39**	*e*PG	**Pb**	**06 30 55.1**	**0.0**
KANR				*e*S	**Sb**	**06 31 14.5**	**+0.6**
KSMR	**Kasumkent**	**1.51**	**106**	*e*Pg	**Pn**	**06 30 54.1**	**+0.1**
KSMR				*e*Sg	**Sb**	**06 31 14.4**	**+0.3**
KSMR	**Kasumkent**	**1.51**	**106**	*e*PG	**Pn**	**06 30 54.1**	**+0.1**
KSMR				*e*S	**Sb**	**06 31 14.4**	**+0.3**
DRN	**Derbent**	**1.59**	**89**	*e*PG	**Pn**	**06 30 55.4**	**+0.3**
DRN				*e*S	**Sb**	**06 31 17.0**	**+0.6**
DRN				pmax	pmax		
	comp=Z,60nm,0.3s						
LACR	**Lac**	**1.61**	**300**	*e*Pg	**Pb**	**06 30 57.5**	**+0.3**
LACR				*e*Sg	**Sg**	**06 31 20.4**	**+0.5**
LACR	**Lac**	**1.61**	**300**	*e*PN	**Pb**	**06 30 58.0**	**+0.8**
LACR				*e*S	**Sg**	**06 31 20.4**	**+0.5**
QSAR	**Qusar**	**1.63**	**108**	Pn	**Pb**	**06 30 57.9**	**+0.5**
QSAR				Sn	**Sg**	**06 31 22.3**	**+2.0**
QBL	**Gabala**	**1.64**	**131**	Pn	**Pb**	**06 30 57.2**	**-0.4**
QBL				Sn	**Sb**	**06 31 19.6**	**+1.6**
TRLG	**Trialeti**	**1.64**	**253**	P	**Pn**	**06 30 54.7**	**-1.3**
TRLG				S	**Sn**	**06 31 16.7**	**-0.1**
TRLG	**Trialeti**	**1.64**	**253**	PN	**Pn**	**06 30 54.7**	**-1.3**
TRLG				S	**Sn**	**06 31 16.7**	**-0.1**
XNQ	**Khinaliq**	**1.69**	**120**	Pn	**Pn**	**06 30 57.9**	**+1.1**
XNQ				Sn	**Sg**	**06 31 24.2**	**+1.8**
BTKR	**Batakoyurt**	**1.81**	**318**	*e*Pg	**Pg**	**06 31 02.6**	**+0.1**
BTKR				*e*Sg	**Sb**	**06 31 24.7**	**+1.8**
BTKR	**Batakoyurt**	**1.81**	**318**	*e*PN	**Pg**	**06 31 02.6**	**+0.1**
BTKR				*e*S	**Sb**	**06 31 24.7**	**+1.8**
ARNR	**Ardon**	**1.82**	**310**	*e*Pg	**Pb**	**06 31 00.3**	**-0.3**
ARNR				*e*Sg	**Sg**	**06 31 25.1**	**-1.2**
ARNR	**Ardon**	**1.82**	**310**	*e*PN	**Pb**	**06 31 00.6**	**0.0**
ARNR				*e*S	**Sg**	**06 31 26.1**	**-0.2**
QUBA	**Quba, Azerbaij**	**1.85**	**111**	Pn	**Pb**	**06 31 02.2**	**+1.1**
QUBA				Sn	**Sg**	**06 31 28.3**	**+1.0**
KORR	**Kora**	**1.89**	**304**	*e*Pg	**Pb**	**06 31 02.2**	**+0.3**
KORR				*e*Sg	**Sg**	**06 31 29.2**	**+0.5**
KORR	**Kora**	**1.89**	**304**	*e*PN	**Pb**	**06 31 02.2**	**+0.3**
KORR				*e*S	**Sg**	**06 31 29.2**	**+0.5**
ALIG	**Mtskhetisjvari**	**1.90**	**273**	P	**Pn**	**06 30 59.0**	**-0.4**
ALIG				S	**Sn**	**06 31 23.7**	**+0.7**
ALIG	**Mtskhetisjvari**	**1.90**	**273**	PN	**Pn**	**06 30 59.0**	**-0.4**
BRDA	**Brd**	**1.92**	**157**	Pn	**Pn**	**06 31 00.3**	**+0.7**
BRDA				Sn	**Sb**	**06 31 26.3**	**+0.4**
IML	**Ismayilli**	**1.94**	**129**	Pn	**Pn**	**06 31 00.3**	**+0.3**
IML				Sn	**Sb**	**06 31 28.6**	**+2.0**
AGDM	**Agdam**	**2.04**	**160**	Pn	**Pn**	**06 31 02.1**	**+0.7**
AGDM				Sn	**Sb**	**06 31 28.8**	**-0.8**
STDR	**Stavd-Durt**	**2.06**	**311**	*e*Pg	**Pb**	**06 31 05.2**	**+0.4**
STDR				*i* Sg	**Sb**	**06 31 31.7**	**+1.6**
STDR	**Stavd-Durt**	**2.06**	**311**	*e*PN	**Pb**	**06 31 05.2**	**+0.4**
STDR				*i* S	**Sb**	**06 31 31.7**	**+1.6**
ZRD	**Zardab**	**2.08**	**147**	Pn	**Pn**	**06 31 03.7**	**+1.8**
ZRD				Sn	**Sg**	**06 31 34.4**	**-0.4**
BGD	**Bogdanovka**	**2.10**	**249**	P	**Pn**	**06 31 02.2**	**-0.1**
BGD				S	**Sn**	**06 31 29.8**	**+1.8**
BGD	**Bogdanovka**	**2.10**	**249**	PN	**Pn**	**06 31 02.2**	**-0.1**
BGD				S	**Sn**	**06 31 29.8**	**+1.8**
GARIG	**Gari**	**2.10**	**287**	P	**Pn**	**06 31 02.7**	**+0.5**
DIGR	**Digorskoe uzhe**	**2.12**	**295**	*e*Pg	**Pb**	**06 31 04.8**	**-1.0**
DIGR				*e*Sg	**Sb**	**06 31 33.6**	**+1.7**
DIGR	**Digorskoe uzhe**	**2.12**	**295**	*e*PN	**Pb**	**06 31 05.9**	**0.0**
DIGR				*e*S	**Sg**	**06 31 34.8**	**-1.2**
LSNR	**Lesken**	**2.15**	**306**	*e*Pg	**Pb**	**06 31 05.8**	**-0.4**
LSNR				*e*Sg	**Sg**	**06 31 35.6**	**-1.1**
LSNR	**Lesken**	**2.15**	**306**	*e*PN	**Pb**	**06 31 05.8**	**-0.4**
LSNR				*e*S	**Sg**	**06 31 35.7**	**-1.1**
GNI	**Garni**	**2.18**	**211**	*i* PN	**Pn**	**06 31 04.1**	**+0.7**
GNI				*i* S	**Sb**	**06 31 34.8**	**+1.1**
GNI				pmax	pmax		
	comp=Z,59nm,0.5s						
PQL	**Pirkuli**	**2.19**	**124**	Pn	**Pn**	**06 31 05.2**	**+1.7**
PQL				Sn	**Sb**	**06 31 35.6**	**+1.7**
SIZA	**Siyzn**	**2.24**	**114**	Pg	**Pb**	**06 31 07.9**	**+0.1**
SIZA				Sg	**Sg**	**06 31 39.5**	**-0.4**
ATGJ	**Altiaghaj**	**2.37**	**119**	Pg	**Pb**	**06 31 09.1**	**-1.0**
ATGJ				Sg	**Sg**	**06 31 43.0**	**-1.0**
HYR	**Heyderabad**	**2.53**	**204**	Pg	**Pn**	**06 31 08.9**	**+0.8**
HYR				Sg	**Sb**	**06 31 42.0**	**-1.6**
BLQ	**Beylaqan**	**2.53**	**155**	Pg	**Pn**	**06 31 09.4**	**+1.3**
BLQ				Sg	**Sb**	**06 31 42.8**	**-0.8**
GBS	**Qobustan**	**2.55**	**125**	Pg	**Pb**	**06 31 12.1**	**-1.1**
GBS				Sg	**Sb**	**06 31 46.0**	**+1.7**
SBZ	**Shahbuz**	**2.68**	**191**	Pg	**Pn**	**06 31 12.3**	**+2.0**
SBZ				Sg	**Sb**	**06 31 47.1**	**-0.8**
IGDI	**IGDIR**	**2.69**	**217**	Pg	**Pn**	**06 31 11.8**	**+1.4**
IGDI				Sg	**Sb**	**06 31 46.8**	**-1.6**
NAX	**Nakhchivan**	**2.91**	**191**	Pg	**Pn**	**06 31 16.1**	**+2.8**
NAX				Sg	**Sb**	**06 31 54.7**	**+0.2**
KBZ	**Khabaz**	**2.96**	**306**	*e*Pn	**Pn**	**06 31 15.5**	**+1.6**
KBZ				*e*Sn	**Sn**	**06 31 50.4**	**+1.4**
KBZ	**Khabaz**	**2.96**	**306**	*e*PN	**Pn**	**06 31 15.5**	**+1.6**
KBZ				*e*S	**Sn**	**06 31 50.4**	**+1.4**
ORD	**Ordubad**	**3.11**	**183**	Pg	**Pn**	**06 31 19.0**	**+2.9**
ORD				Sg	**Sb**	**06 32 01.2**	**+1.0**
SHA1	**Shidzhatmaz**	**3.11**	**304**	*e*Pn	**Pn**	**06 31 18.8**	**+2.6**
SHA1				*e*Sn	**Sn**	**06 31 56.1**	**+3.0**
SHA1	**Shidzhatmaz**	**3.11**	**304**	*e*PN	**Pn**	**06 31 18.8**	**+2.6**
SHA1				*e*S	**Sn**	**06 31 56.1**	**+3.0**
BEYR	**Belyy Ugol+**	**3.17**	**310**	*e*Pn	**Pn**	**06 31 18.3**	**+1.4**
BEYR				*e*Sn	**Sn**	**06 31 55.9**	**+1.6**
BEYR	**Belyy Ugol+**	**3.17**	**310**	*e*PN	**Pn**	**06 31 18.3**	**+1.4**
BEYR				*e*S	**Sn**	**06 31 55.9**	**+1.6**
KIV	**Kislovodsk**	**3.21**	**308**	*i* Pn	**Pn**	**06 31 20.0**	**+2.5**
KIV				*e*Sn	**Sn**	**06 31 57.2**	**+1.8**
KIV	**Kislovodsk**	**3.21**	**308**	*i* PN	**Pn**	**06 31 20.0**	**+2.5**
KIV				*e*S	**Sn**	**06 31 57.2**	**+1.8**
YRD	**Yardimli**	**3.48**	**153**	Pn	**Pn**	**06 31 21.2**	**-0.1**
YRD				Sn	**Sn**	**06 32 02.5**	**+0.2**
ALER	**Alexandrovskoy**	**3.63**	**320**	*e*Pn	**Pn**	**06 31 22.6**	**-0.6**
ALER				*e*Sn	**Sn**	**06 32 06.2**	**+0.6**
ALER	**Alexandrovskoy**	**3.63**	**320**	*e*PN	**Pn**	**06 31 22.6**	**-0.6**
ALER				*e*S	**Sn**	**06 32 06.2**	**+0.6**
ARXR	**Arkhyz**	**3.93**	**294**	*e*PN	**Pn**	**06 31 26.0**	**-1.4**
ARXR				*e*S	**Sn**	**06 32 11.6**	**-1.6**
ASTR	**Astara**	**4.00**	**149**	Sg	**Sb**	**06 32 28.1**	**+2.4**
AKTO	**Aktyubinsk**	**11.71**	**40**	⇓Pn	**Pn**	**06 33 15.3**	**+1.3**
	comp=Z,0.8nm,0.8s						
AKTO				⇑Sn	**Sn**	**06 35 20.5**	**-3.8**
	comp=Z,2.6nm,1.3s						
AKTO	**Aktyubinsk**	**11.71**	**40**	P	**Pn**	**06 33 15.3**	**+1.3**
AKTO				S	**Sn**	**06 35 20.5**	**-3.8**
AB31	**Akbulak array**	**12.02**	**48**	⇑Pn	**Pn**	**06 33 19.6**	**+1.5**
	comp=Z,0.7nm,0.7s,baz=243,slow=11,SNR=10.0						
AB31				⇑Sn	**Sn**	**06 35 29.5**	**-2.1**
	comp=Z,3.1nm,1.0s,baz=240,slow=24						
AB31	**Akbulak array**	**12.02**	**48**	P	**Pn**	**06 33 19.6**	**+1.5**
AB31				S	**Sn**	**06 35 29.5**	**-2.1**
KLMR	**Klimovskoe**	**19.28**	**350**	*e*P	**P**	**06 34 51.6**	**+0.2**
KLMR				pmax	pmax		
	comp=Z,20nm,1.0s						

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*IDC **11** 06:51:04.3±0.7, 53°.03S×46°.15W, h0^{km}, mb4.2/10, mbtmp4.2/10, MS3.5/13, Error ellipse: s-maj=28.5km s-min=16.9km az=59.0*

*NEIC **11** 06:51:05.7±2.6, 53°.28S±0°.05×46°.5W±0°.1, h10^{km}±1^{km}, mb4.6/30, Error ellipse: s-maj=14.0km s-min=8.3km az=255.0*

ISC 11 06:51:05.5±0.5**, 53°.16S**±0°.08×**46°.43W**±0°.08**, h10^{km}, n69, σ1^{s}33**/50**, mb4.5**/20**, MS3.5**/12**, 5C, South Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**6.01**	**105**		**Pn**	**06 52 34.5**	**+0.2**
EFI	**East Falkland**	**7.27**	**277**	Pn	**Pn**	**06 52 50.7**	**-0.9**
MG02	**Cerro Sombrero**	**13.73**	**262**	Pn	Pn	06 54 12.1	-7.9
PMSA	**Palmer Station**	**14.70**	**211**	Pn	**P**	**06 54 39.6**	**+0.3**
	0.3nm,0.3s,baz=322,slow=16,SNR=1.1						
PMSA				LR	LR	06 59 01.8	
	comp=Z,256nm,21.2s,baz=70,slow=32						
MG05	**Puerto Natales**	**15.95**	**265**	Pn	**Pn**	**06 54 45.8**	**-3.9**
MG05				IAmb	IAmb	06 54 55.8	
	comp=Z,74nm,1.5s						
GO09	**Cerro Castillo**	**15.96**	**266**	Pn	**Pn**	**06 54 48.3**	**-1.6**
TRQA	**Tornquist**	**18.55**	**318**		**Pn**	**06 55 22.8**	**+0.5**
TRQA				IAmb	IAmb	06 55 25.1	
	comp=Z,28nm,0.7s						
LL02	**Futaleuf**	**19.57**	**290**		**P**	**06 55 33.0**	**-0.3**
LL02				IAmb	IAmb	06 55 37.7	
	comp=Z,17nm,0.8s						
PLCA	**Paso Flores**	**20.51**	**298**	P	**P**	**06 55 44.8**	**+1.1**
	comp=Z,13nm,0.8s,baz=134,slow=9.7,SNR=25						
PLCA				S	S	06 59 21.9	-11
	comp=Z,1.7nm,1.0s,baz=201,slow=19,SNR=1.6						
PLCA				LR	LR	07 03 54.7	
	comp=Z,127nm,20.4s,baz=132,slow=37						
	comp=Z,13nm,0.8s						
PLCA	**Paso Flores**	**20.51**	**298**		**P**	**06 55 45.1**	**+1.4**
PLCA				IAmb	IAmb	06 56 00.7	
	comp=Z,16nm,0.7s						
PLTB	**Pedras Altas**	**22.00**	**344**	P	**P**	**06 56 01.4**	**+1.7**
PLTB				IAmb	IAmb	06 56 12.1	
	comp=Z,15nm,0.7s						
VNA3	**Neumayer Olymp**	**24.29**	**152**	⇑P	**P**	**06 56 24.3**	**+1.8**
	comp=Z,13nm,0.6s						
VNA1	**Neumayer--Stat**	**24.43**	**150**	⇑P	**P**	**06 56 26.1**	**+2.3**
	comp=Z,27nm,0.9s						
VNA2	**Neumayer--Watz**	**24.80**	**150**	⇑P	**P**	**06 56 29.3**	**+2.0**
	comp=Z,18nm,0.7s,baz=76,slow=17						
BO02	**Sierra Bellavi**	**25.18**	**307**	P	**P**	**06 56 31.7**	**+0.8**
BO02				IAmb	IAmb	06 56 57.1	
	comp=Z,9.1nm,0.9s						
BELA	**Belgrano 2**	**25.19**	**174**	P	**P**	**06 56 29.9**	**-0.7**
MT01	**Popeta**	**26.16**	**308**	P	**P**	**06 56 38.7**	**-1.1**
MT01				IAmb	IAmb	06 57 02.5	
	comp=Z,8.5nm,0.8s						
SNAA	**Sanae**	**26.45**	**151**	⇑P	**P**	**06 56 43.8**	**+1.6**
	comp=Z,46nm,0.7s						
SNAA	**Sanae**	**26.45**	**151**	P	**P**	**06 56 43.6**	**+1.4**
	comp=Z,1.1nm,0.5s,baz=276,slow=12,SNR=14						
	comp=Z,1.1nm,0.5s						
SNAA	**Sanae**	**26.45**	**151**	P	**P**	**06 56 41.6**	**-0.6**
VA05	**Santo Domingo**	**26.50**	**307**	P	**P**	**06 56 43.0**	**+0.2**
VA06	**Catapilco**	**27.25**	**309**	P	**P**	**06 56 48.6**	**-1.0**
VA06				IAmb	IAmb	06 57 01.6	
	comp=Z,17nm,0.9s						
CPUP	**Villa Florida**	**28.01**	**339**	P	**P**	**06 56 55.6**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=92,slow=13,SNR=3.8						
	comp=Z,0.3nm,0.3s						
TROLL	**Troll, Antarti**	**28.15**	**150**	⇑P	**P**	**06 56 59.3**	**+1.8**
	comp=Z,222nm,0.6s						
CO01	**Juntas del Tor**	**28.90**	**314**	P	**P**	**06 57 05.9**	**+1.2**
CO01				IAmb	IAmb	06 57 19.1	
	comp=Z,11nm,0.9s						
AC05	**El Transito**	**29.96**	**315**		**P**	**06 57 15.6**	**+1.6**
LCO	**Las Campanas**	**30.00**	**314**	P	**P**	**06 57 16.0**	**+1.5**
PB05	**IPOC Station P**	**35.25**	**320**	P	**P**	**06 58 01.7**	**+1.5**
QSPA	**South Pole Qui**	**37.10**	**180**	P	**P**	**06 58 16.9**	**+1.2**
	comp=Z,4.5nm,0.5s,baz=170,slow=3.1,SNR=11						
QSPA				LR	LR	07 14 59.6	
	comp=Z,55nm,18.4s,baz=166,slow=39						
	comp=Z,4.5nm,0.5s						
QSPA	**South Pole Qui**	**37.10**	**180**	P	**P**	**06 58 16.3**	**+0.6**
QSPA				IAmb	IAmb	06 58 27.9	
	comp=Z,8.6nm,0.8s						
BDFB	**Brasilia**	**37.45**	**357**	P	**P**	**06 58 18.3**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=149,slow=9.8,SNR=3.9						
	comp=Z,0.9nm,0.4s						
BDFB	**Brasilia**	**37.45**	**357**	IAmb	IAmb	06 58 38.8	
	comp=Z,12nm,1.4s						
GO01	**Chusmiza**	**37.78**	**323**	P	**P**	**06 58 22.7**	**+0.5**
GO01				IAmb	IAmb	06 58 37.2	
	comp=Z,6.7nm,0.7s						
PB11	**IPOC Station P**	**37.86**	**323**		**P**	**06 58 22.9**	**+0.3**
PB11				IAmb	IAmb	06 58 40.8	
	comp=Z,16nm,1.0s						
PTLB	**Pontes e Lacer**	**38.94**	**340**	P	**P**	**06 58 31.8**	**+0.4**
PB16	**IPOC Station P**	**39.12**	**324**	P	**P**	**06 58 35.1**	**+1.5**
LPAZ	**La Paz**	**40.55**	**327**	P	**P**	**06 58 46.3**	**+0.8**
	comp=Z,1.3nm,0.6s,baz=116,slow=6.6,SNR=6.1						
LPAZ				LR	LR	07 16 36.3	
	comp=Z,44nm,21.6s,baz=142,slow=38						
	comp=Z,1.3nm,0.6s						
LPAZ	**La Paz**	**40.55**	**327**		**P**	**06 58 46.4**	**+0.8**
NNA	**Nana**	**47.71**	**318**	P	**P**	**06 59 44.3**	**+1.9**
	comp=Z,3.4nm,0.3s,baz=216,slow=7.8,SNR=1.8						
	comp=Z,3.4nm,0.3s						
NNA	**Nana**	**47.71**	**318**	IAmb	IAmb	06 59 53.6	
	comp=Z,7.9nm,0.6s						
VNDA	**Vanda**	**48.41**	**188**	LR	LR	07 18 50.6	
	comp=Z,36nm,20.4s,baz=178,slow=34						
H10S3	**ASCENSION HYDR**	**51.01**	**42**	T	T	07 55 03.7	
	baz=15,slow=74,SNR=15						
H10S2	**ASCENSION HYDR**	**51.01**	**42**	T	T	07 55 02.9	
	baz=205,slow=74,SNR=15						
H10N3	**ASCENSION HYDR**	**52.08**	**42**	T	T	07 56 30.5	
	baz=204,slow=75,SNR=17						
H10N1	**ASCENSION HYDR**	**52.08**	**42**	T	T	07 56 29.7	
	baz=204,slow=75,SNR=15						
H10N2	**ASCENSION HYDR**	**52.10**	**42**	T	T	07 56 30.7	
	baz=204,slow=75,SNR=17						
RPN	**Rapa Nui**	**52.66**	**274**	LR	LR	07 19 12.4	
	comp=Z,58nm,18.3s,baz=144,slow=32						
BOSA	**Boshof**	**56.86**	**95**	P	**P**	**07 00 49.6**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=234,slow=4.8,SNR=5.4						
BOSA				LR	LR	07 22 30.1	
	comp=Z,48nm,18.5s,baz=216,slow=33						
	comp=Z,1.3nm,0.6s						
BOSA	**Boshof**	**56.86**	**95**	P	**P**	**07 00 50.2**	**-0.2**
BOSA				IAmb	IAmb	07 01 00.8	
	comp=Z,9.4nm,1.2s						
MDP	**Montagnes des**	**58.28**	**353**	LR	LR	07 26 07.9	
	comp=Z,49nm,20.9s,baz=232,slow=36						
H04S2	**CROZET ISLANDS**	**58.61**	**127**	T	T	08 05 32.7	
	baz=225,slow=74,SNR=4.3						
H04S3	**CROZET ISLANDS**	**58.62**	**127**	T	T	08 05 31.9	
	baz=225,slow=74,SNR=4.2						
H04S1	**CROZET ISLANDS**	**58.63**	**127**	T	T	08 05 35.5	
	baz=225,slow=74,SNR=4.0						
OTAV	**Otavalo**	**59.52**	**322**	P	**P**	**07 01 10.5**	**+1.1**
OTAV				IAmb	IAmb	07 01 23.4	
	comp=Z,4.6nm,0.9s						
LBTB	**Lobatse**	**59.72**	**92**	P	**P**	**07 01 09.6**	**-0.7**
MATP	**Matopo**	**64.92**	**91**	LR	LR	07 27 06.0	
	comp=Z,48nm,18.6s,baz=228,slow=33						
SDV	**Santo Domingo**	**65.15**	**333**	LR	LR	07 31 59.1	
	comp=Z,32nm,21.0s,baz=232,slow=38						
DBIC	**Dimbokro**	**69.18**	**45**	P	**P**	**07 02 12.5**	**+0.4**
	comp=Z,1.9nm,1.0s,baz=294,slow=10,SNR=1.2						
DBIC				LR	LR	07 25 07.4	
	comp=Z,47nm,19.9s,baz=296,slow=30						
	comp=Z,1.9nm,1.0s						
SJG	**San Juan**	**72.99**	**340**	LR	LR	07 37 43.7	
	comp=Z,17nm,20.2s,baz=140,slow=38						
TORD	**Torodi Ar. Bea**	**77.81**	**48**	P	**P**	**07 03 01.1**	**-1.8**
	comp=Z,1.5nm,0.3s,baz=218,slow=3.1,SNR=1.8						
	comp=Z,1.5nm,0.3s						
TORD	**Torodi Ar. Bea**	**77.81**	**48**	IAmb	IAmb	07 03 14.2	
	comp=Z,3.0nm,0.8s						
PPT	**Papeete**	**83.75**	**249**	LR	LR	07 33 31.1	
	comp=Z,58nm,20.2s,baz=114,slow=30						
YKA	**Yellowknife Ar**	**127.09**	**327**	PKP	**PKPdf**	**07 10 06.7**	**-1.7**
	comp=Z,0.2nm,0.8s,baz=127,slow=1.6,SNR=1.9						
FINES	**FINESS Array B**	**127.82**	**35**	PKP	**PKPdf**	**07 10 08.4**	**-1.4**
	comp=Z,4.8nm,0.9s,baz=266,slow=15,SNR=2.3						
ILAR	**Eielson Array**	**140.19**	**319**	PKP	**PKPdf**	**07 10 32.2**	**-0.7**
	comp=Z,0.3nm,0.9s,baz=135,slow=2.8,SNR=2.0						
KURBB	**Kurchatov Arra**	**146.64**	**72**	PKPbc	**PKPbc**	**07 10 46.6**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=244,slow=3.8,SNR=14						
KURK	**Kurchatov**	**146.73**	**72**		**PKPab**	**07 10 47.1**	**-0.6**
MKAR	**Makanchi Array**	**147.02**	**80**	PKPbc	**PKPbc**	**07 10 46.4**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=225,slow=1.5,SNR=3.7						
ZALV	**Zalesovo Beam**	**151.48**	**69**	PKPbc	**PKPbc**	**07 10 57.4**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=236,slow=1.6,SNR=1.6						

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*IDC **11** 07:00:07.6±0.7, 10°.26N×124°.86E, h0^{km}, mb3.7/11, mbtmp3.8/12, ML4.6/1, MS3.3/7, Error ellipse: s-maj=53.6km s-min=14.5km az=72.0*

ISC 11 07:00:11.9±0.7**, 10°.2N**±0°.1×**124°.8E**±0°.4**, h30^{km}, n17, σ1^{s}00**/14**, mb3.9**/11**, MS3.4**/4**, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**3.19**	**166**	Pn	**Pn**	**07 01 00.4**	**+0.4**
	69nm,0.3s,baz=62,slow=14,SNR=1.7						
DAV				Sn	**Sb**	**07 01 44.2**	**-2.1**
	33nm,0.3s,baz=311,slow=20,SNR=1.3						
DAV				LR	LR	07 01 57.5	
	comp=Z,219nm,19.2s,baz=14,slow=34						
	172nm,0.4s						
KAPI	**Kappang**	**15.92**	**199**	LR	LR	07 09 51.4	
	comp=Z,75nm,21.2s,baz=340,slow=36						
JOW	**Kunigami**	**16.88**	**11**	LR	LR	07 11 50.3	
	comp=Z,49nm,18.0s,baz=224,slow=42						
JHJ	**Hachijo jima 2**	**26.66**	**29**	LR	LR	07 13 54.9	
	comp=Z,38nm,21.8s,baz=125,slow=31						
MJAR	**Matsushiro Arr**	**28.91**	**23**	LR	LR	07 17 24.8	
	comp=Z,41nm,20.2s,baz=210,slow=36						
WRA	**Warramunga Arr**	**31.38**	**163**	P	**P**	**07 06 30.1**	**-0.1**
	0.4nm,0.5s,baz=329,slow=11,SNR=4.8						
	0.4nm,0.5s						
USRK	**Ussuriysk Ar.**	**34.45**	**9**	P	**P**	**07 06 56.0**	**-0.8**
	2.3nm,0.8s,baz=190,slow=9.6,SNR=5.0						
	2.3nm,0.8s						
ASAR	**Alice Springs**	**34.80**	**165**	P	**P**	**07 07 00.9**	**+0.8**
	0.8nm,0.5s,baz=342,slow=6.7,SNR=12						
ASAR				PcP	**PcP**	**07 09 32.7**	**-0.5**
	0.4nm,0.8s,baz=329,slow=3.6,SNR=2.6						
	0.8nm,0.5s						
SONM	**Songino Array**	**40.61**	**341**	P	**P**	**07 07 48.0**	**-1.2**
	0.7nm,0.9s,baz=161,slow=9.2,SNR=3.0						
	0.7nm,0.9s						
STKA	**Stephens Creek**	**44.81**	**160**	P	**P**	**07 08 24.2**	**+1.0**
	1.1nm,0.6s,baz=51,slow=5.2,SNR=4.2						
	1.1nm,0.6s						
MKAR	**Makanchi Array**	**51.23**	**323**	P	**P**	**07 09 13.1**	**+0.4**
	0.4nm,0.6s,baz=120,slow=7.6,SNR=7.9						
	0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**54.02**	**332**	P	**P**	**07 09 32.4**	**-0.8**
	0.4nm,0.4s,baz=112,slow=6.7,SNR=4.2						
	0.4nm,0.4s						
AAK	**Ala-Archa**	**54.38**	**316**	LR	LR	07 33 40.8	
	comp=Z,95nm,18.6s,baz=91,slow=37						
KURBB	**Kurchatov Arra**	**55.33**	**326**	P	**P**	**07 09 43.0**	**+0.2**
	1.3nm,0.8s,baz=128,slow=6.8,SNR=8.3						
KURBB				LR	LR	07 36 03.3	
	comp=Z,68nm,18.7s,baz=170,slow=39						
	1.3nm,0.8s						
BVAR	**Borovoye Array**	**60.92**	**326**	P	**P**	**07 10 22.5**	**+0.6**
	0.3nm,0.4s,baz=78,slow=9.0,SNR=2.3						
	0.3nm,0.4s						
ILAR	**Eielson Array**	**80.14**	**26**	P	**P**	**07 12 19.6**	**+0.7**
	0.3nm,0.6s,baz=252,slow=4.9,SNR=1.6						
	0.3nm,0.6s						
VNDA	**Vanda**	**90.03**	**172**	P	**P**	**07 13 08.9**	**+0.9**
	0.6nm,0.7s,baz=351,slow=5.4,SNR=3.6						
	0.6nm,0.7s						

IDC 11 07:11:41.4±2.8**, 51°.16N×108°.57E, h0^{km}, mbtmp3.3**/3**, ML3.3**/3**, Error ellipse: s-maj=28.7km s-min=20.4km az=161.0, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**3.62**	**204**	Pn	Pn	07 12 40.2	+1.3
	3.9nm,0.3s,baz=22,slow=12,SNR=92						
SONM				Pg	Pb	07 12 47.0	+0.6
	15nm,0.3s,baz=18,slow=17,SNR=30						
SONM				Lg	Lg	07 13 35.8	
	15nm,0.3s,baz=24,slow=23,SNR=17						
	6.8nm,0.3s						
HILR	**Hailar Array B**	**7.33**	**98**	Pn	Pn	07 13 29.4	-0.3
	baz=293,slow=14						
HILR				Lg	Lg	07 15 33.7	
	baz=286,slow=31						
	0.6nm,0.3s						
ZALV	**Zalesovo Beam**	**14.70**	**290**	Pn	Pn	07 15 10.8	+0.4
	0.1nm,0.3s,baz=93,slow=15,SNR=1.5						
ZALV				Lg	Lg	07 19 26.8	
	0.1nm,0.3s,baz=95,slow=25,SNR=1.8						
	0.3nm,0.3s						

DJA 11 07:30:21.3±0.8**, 3°S**±7°×**14°0E**±°**, h69^{km}**±12^{km}**, M3.9**/7**, mb4.0**/1**, MLv3.9**/7**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**0.42**	**62**	P	Pn	07 30 34.4	+1.1
GENI				S	Sn	07 30 45.5	+3.5
JAY	**Jayapura**	**0.94**	**73**	P	Pn	07 30 39.1	0.0
JAY				S	Sn	07 30 53.1	+0.8
SMPI	**Sarmi**	**1.35**	**306**	P	Pn	07 30 44.6	+0.4
SMPI				S	Sn	07 31 01.8	+0.3
WAMI	**Wamena**	**1.54**	**225**	P	Pn	07 30 46.9	+0.2
SRPI	**Serui, Papua**	**3.67**	**284**	P	Pn	07 31 15.7	0.0
BAKI	**Biak**	**4.02**	**293**	P	Pn	07 31 20.7	+0.3
FAKI	**Fak Fak**	**7.54**	**269**	P	Pn	07 32 08.5	-0.2

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*NNC **11** 08:06:14.0±2.4, 51°.27N×81°.83E, h0^{km}, mb2.7, mpv2.3, Error ellipse: s-maj=23.8km s-min=11.9km az=37.0, Suspected Mining explosion.*

*IDC **11** 08:06:15.1±1.8, 51°.17N×81°.70E, h0^{km}, mbtmp2.1/2, ML1.7/2, Error ellipse: s-maj=18.0km s-min=13.8km az=10.0*

ISC 11 08:06:14.8±1.1**, 51°.17N**±0°.06×**81°.58E**±0°.07**, h0^{km}, n8, σ1^{s}43**/8**, 6C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**1.93**	**258**	⇑Pn	**Pb**	**08 06 50.8**	**0.0**
	0.2nm,0.3s						
KURK				⇑Lg	Lg	08 07 20.6	
	2.5nm,0.6s						
KURBB	**Kurchatov Arra**	**2.01**	**255**	Pg	**Pb**	**08 06 52.3**	**+0.1**
	0.1nm,0.3s,baz=71,slow=18,SNR=11						
KURBB				Lg	Lg	08 07 22.7	
	0.2nm,0.3s,baz=72,slow=32,SNR=9.0						
KURBB	**Kurchatov Arra**	**2.01**	**255**	⇑Pn	**Pn**	**08 06 51.2**	**+1.3**
	1.1nm,0.3s						
KURBB				⇑Lg	Lg	08 07 22.8	
	12nm,0.6s						
I46RU	**ZALESOVO INFRA**	**3.42**	**34**	I	I	08 24 00.0	
	0.1nm,0.9s,baz=209,slow=315,SNR=2.0						
ZALV	**Zalesovo Beam**	**3.42**	**34**	Pn	**Pn**	**08 07 10.0**	**+0.7**
	0.2nm,0.3s,baz=219,slow=17,SNR=3.6						
ZALV				Sn	**Sn**	**08 07 50.1**	**-0.3**
	0.3nm,0.3s,baz=215,slow=25,SNR=4.0						
	0.6nm,0.4s						
MAKZ	**Makanchi**	**4.37**	**176**	⇓Pg	**Pg**	**08 07 36.3**	**-2.2**
	1.1nm,1.0s						
MAKZ				⇑Lg	Lg	08 08 37.9	
	2.0nm,1.1s						
MK31	**Makanchi Array**	**4.40**	**174**	⇓Pg	**Pb**	**08 07 34.1**	**+1.1**
	0.3nm,0.5s,baz=117,slow=20,SNR=3.9						
MK31				⇑Lg	Lg	08 08 37.4	
	1.3nm,0.7s,baz=12,slow=28,SNR=3.0						
MKAR	**Makanchi Array**	**4.40**	**174**	Pn	**Pn**	**08 07 24.2**	**+1.3**
	0.1nm,0.3s,baz=0.7,slow=11,SNR=5.1						
MKAR				Lg	Lg	08 08 34.1	
	0.2nm,0.3s,baz=352,slow=28,SNR=6.5						
	0.1nm,0.3s						

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*SJA **11** 08:07:30.4±0.7, 34°.77S×72°.55W, h8^{km}±4^{km}, ML4.3, MW3.9*

*GUC **11** 08:07:34.4±0.8, 34°.81S×72°.46W, h22^{km}±5^{km}, ML4.3*

*IDC **11** 08:07:38.0±3.2, 34°.82S×72°.39W, h50^{km}±34^{km}, mb3.7/4, mbtmp3.7/8, ML3.7/4, MS3.4/5, Error ellipse: s-maj=40.0km s-min=18.1km az=105.0*

ISC 11 08:07:32.4±0.7**, 34°.80S**±0°.02×**72°.35W**±0°.05**, h10^{km}, n69, σ1^{s}46**/83**, mb3.9**/3**, MS3.5**/3**, 4C-8D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO05	**Hualane**	**0.40**	**121**	*e*P	**Pn**	**08 07 43.5**	**-0.8**
GO05				*e*S	**Sb**	**08 07 49.8**	**+1.9**
GO05				IAML		08 07 50.9	
	comp=N,59µm,0.3s						
GO05	**Hualane**	**0.40**	**121**	*e*P	**Pg**	**08 07 36.9**	**-3.5**
GO05				*e*P	**Pn**	**08 07 42.8**	**-1.5**
GO05				*e*S	**Sg**	**08 07 43.4**	**-2.2**
GO05				IAML		08 07 50.8	
	comp=Z,42µm,0.2s						

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BO03  Pichilemu          0.44  46⇑iP    Pn     08 07 44.2 -0.6
BO03                             eS     Sb     08 07 51.6 +2.7
BO03                              IAML         08 07 52.4
      comp=N,37µm,0.4s
BO01  Tunca              1.12  69⇓iP    Pn     08 07 54.6 +0.5
BO01                             eS     Sn     08 08 10.4 +0.8
BO01                              IAML         08 08 11.7
      comp=N,3µm,0.6s
BO01  Tunca              1.12  69 eP    Pn     08 07 54.0 -0.1
ML02  Panimavida         1.23 142⇓eP    Pg     08 07 56.2 +0.3
ML02                              IAML         08 08 18.9
      comp=N,12µm,0.5s
ML02  Panimavida         1.23 142 eP    Pg     08 07 56.2 +0.3
ML02                             eS     Sn     08 08 14.6 +2.4
ML02                              IAML         08 08 20.1
      comp=Z,4µm,0.7s
BO02  Sierra Bellavi     1.29  90⇓iP    Pg     08 07 57.7 +0.5
BO02                             eS     Sg     08 08 15.2 +1.3
BO02                              IAML         08 08 17.9
      comp=E,16µm,0.2s
BO02  Sierra Bellavi     1.29  90 eP    Pg     08 07 57.0 -0.2
VA05  Santo Domingo      1.29  28 eP    Pg     08 07 57.0 -0.2
VA05                              IAML         08 08 20.9
      comp=N,8µm,0.3s
MT01  Popeta             1.30  44⇓eP    Pg     08 07 56.9 -0.5
MT01  Popeta             1.30  44 eP    Pg     08 07 57.0 -0.4
MT01                             eS     Sg     08 08 15.4 +1.1
MT01                              IAML         08 08 17.2
      comp=Z,2µm,0.2s
MT09  Talagante          1.52  48 i P   Pg     08 08 00.6 -1.0
BO04  La Punta           1.65  61 eP    Pg     08 08 03.4 -0.6
BO04                             eS     Sg     08 08 25.6 +0.1
BO04                              IAML         08 08 31.3
      comp=E,4µm,0.6s
MT12  Pirque             1.83  55 i P   Pg     08 08 06.4 -1.1
MT12                             eS     Sg     08 08 30.2 -1.1
VA01  Torpederas         1.87  18 eP    Pb     08 08 04.7 -1.9
VA01  Torpederas         1.87  18 eP    Pb     08 08 04.2 -2.4
MT05  Renca              1.94  44 eP    Pg     08 08 08.1 -1.4
MT05  Renca              1.94  44 eP    Pb     08 08 07.1 -0.7
MT05                             eS     Sn     08 08 29.6 -0.3
MT05                              IAML         08 08 39.4
      comp=Z,1µm,0.6s
MT15  Las Vizcachas      1.94  52 eP    Pg     08 08 08.5 -1.1
MT15                             eS     Sg     08 08 32.8 -1.9
MT15                              IAML         08 08 40.5
      comp=N,6µm,0.4s
MT03  Universidad Ad     2.00  50 eP    Pb     08 08 08.4 -0.6
MT03                             i S    Sg     08 08 35.3 -1.6
MT03                              IAML         08 08 38.0
      comp=N,5µm,0.3s
MT03  Universidad Ad     2.00  50 eP    Pb     08 08 08.4 -0.6
MT03                             eS     Sg     08 08 36.5 -0.4
MT03                              IAML         08 08 41.0
      comp=Z,2µm,0.4s
MT13  San Alfonso        2.01  59 eP    Pg     08 08 09.9 -1.0
MT13                              IAML         08 08 41.1
      comp=E,7µm,0.3s
MT13  San Alfonso        2.01  59 eP    Pg     08 08 09.2 -1.7
MT13                             eS     Sg     08 08 36.9  0.0
MT13                              IAML         08 08 40.0
      comp=Z,3µm,0.7s
LMEL  Las Melosas        2.01  62⇓eP    Pg     08 08 09.3 -1.7
LMEL                             eS     Sg     08 08 35.9 -1.3
LMEL                              IAML         08 08 42.5
      comp=E,3µm,0.7s
LMEL  Las Melosas        2.01  62 eP    Pb     08 08 09.0 -0.2
LMEL                             eS     Sg     08 08 37.5 +0.4
LMEL                              IAML         08 08 41.3
      comp=Z,4µm,0.8s
MT16  CCHEN              2.04  48 i P   Pb     08 08 09.5 -0.1
MT16                             eS     Sg     08 08 37.9 -0.1
MT16                              IAML         08 08 41.1
      comp=N,2µm,0.6s
BI02  San Fabin de       2.05 155⇑iP    Pb     08 08 08.6 -1.3
BI02                             eS     Sb     08 08 36.6 +1.1
BI02                              IAML         08 08 38.5
      comp=N,1µm,0.5s
BI02  San Fabin de       2.05 155 eP    Pb     08 08 08.0 -1.8
MT14  Cerro Cal¡n        2.06  48⇑iP    Pg     08 08 10.0 -1.8
MT14                             eS     Sg     08 08 36.6 -1.8
MT14                              IAML         08 08 42.9
      comp=N,5µm,0.5s
BI05  Punta Hualpn       2.06 199 eP    Pn     08 08 07.4 +0.3
ROCH  El Roble           2.14  32 eP    Pb     08 08 09.0 -2.4
ROCH                            ⇑iP     Pn     08 08 09.1 +0.7
ROCH                             eS     Sb     08 08 36.9 -1.1
ROCH                              IAML         08 08 45.9
      comp=N,2µm,0.5s
MT10  Hacienda Santa     2.14  45 eP    Pb     08 08 10.0 -1.3
MT10                             eS     Sg     08 08 40.0 -1.2
PEL   Peldehue           2.15  40 eP    Pb     08 08 10.3 -1.3
PEL                               IAML         08 08 45.7
      comp=N,2µm,0.4s
MT04  Ro Olivares        2.30  53⇓eP    Pb     08 08 12.9 -1.3
MT04                              IAML         08 08 50.1
      comp=N,2µm,0.5s
MT04  Ro Olivares        2.30  53 eP    Pb     08 08 12.8 -1.3
MT04                             eS     Sg     08 08 45.4 -1.0
MT04                              IAML         08 08 48.5
      comp=Z,1µm,0.5s
MT08  Bocatoma Ro        2.36  56⇓eP    Pb     08 08 15.2 +0.1
MT08  Bocatoma Ro        2.36  56 eP    Pb     08 08 14.8 -0.4
VA06  Catapilco          2.40  22 eP    Pn     08 08 12.2 +0.4
VA03  San Esteban        2.52  37 eP    Pb     08 08 15.0 -2.8
VA03  San Esteban        2.52  37 eP    Pn     08 08 14.4 +0.8
CO04  Los Peladeros      2.98  23 eP    Pn     08 08 20.0  0.0
RFA   San Rafael         3.19  91 eP    Pb     08 08 26.6 -2.7
CO02  Combarbal          3.76  18⇓eP    Pn     08 08 22.2 -8.4
RTLS  Leoncito           3.94  41 eP    Pb     08 08 36.8 -5.3
CFA   Coronel Fontan     4.69  48  P    Pn     08 08 46.5 +3.2
      comp=Z,1.2nm,0.3s,baz=242,slow=15,SNR=16
CFA                               S     Sn     08 09 41.4 +3.5
      comp=Z,14nm,0.6s,baz=239,slow=19,SNR=3.8
      comp=Z,2.7nm,0.3s
CFA   Coronel Fontan     4.69  48 eP    Pn     08 08 46.3 +2.9
GO04  Tololo Observa     4.80  16 eP    Pn     08 08 45.8 +0.8
GO06  Curarrehue         4.83 172 eP    Pn     08 08 46.4 +1.2
ACCO  Cerro Coronel      5.03  34 eP    Pn     08 08 51.0 +2.8
LR04  Corral             5.14 189 eP    Pn     08 08 49.3 -0.2
CO01  Juntas del Tor     5.17  22 eP    Pn     08 08 51.9 +1.8
H03S1 Juan Fernandez     5.51 278  T    T      08 14 49.1
      baz=97,slow=75,SNR=4525
H03S3 Juan Fernandez     5.52 278  T    T      08 14 50.3
      baz=97,slow=75,SNR=4398
H03S2 Juan Fernandez     5.53 278  T    T      08 14 49.6
      baz=97,slow=75,SNR=5124
H03N1 Juan Fernandez     5.61 282  T    T      08 14 59.2
      baz=112,slow=76,SNR=54
H03N3 Juan Fernandez     5.62 282  T    T      08 14 44.5
      baz=112,slow=76,SNR=79
H03N2 Juan Fernandez     5.63 282  T    T      08 14 49.5
      baz=112,slow=76,SNR=58
PLCA  Paso Flores        6.09 167  P    Pn     08 09 04.3 +1.8
      comp=Z,1.1nm,0.3s,baz=334,slow=12,SNR=44
PLCA                              LR    LR     08 11 30.6
      comp=Z,140nm,18.2s,baz=354,slow=38
      comp=Z,5.2nm,0.5s
TCA   Tanti              7.37  64 eP    Pn     08 09 19.7 -0.4
CPUP  Villa Florida     15.43  61  P    P      08 11 14.4 -0.4
      baz=238,slow=19,SNR=2.2
CPUP                              LR    LR     08 17 34.3
      comp=Z,44nm,18.9s,baz=85,slow=38
      comp=Z,0.2nm,0.5s
LPAZ  La Paz            18.82  13  P    Pn     08 11 54.5 +1.1
      comp=Z,0.1nm,0.3s,baz=191,slow=11,SNR=4.9
      comp=Z,1.1nm,0.6s
BDFB  Brasilia          29.00  55  LR   LR     08 26 23.4
      comp=Z,90nm,19.9s,baz=281,slow=39
RPN   Rapa Nui          32.49 273  LR   LR     08 23 49.2
      comp=Z,96nm,18.1s,baz=89,slow=30
QSPA  South Pole Qui    55.44 180  P    P      08 17 07.9 +1.0
      comp=Z,1.1nm,0.8s,baz=155,slow=1.7,SNR=5.7
      comp=Z,1.1nm,0.8s
TXAR  Lajitas Array     70.31 331  P    P      08 18 46.5 +0.3
      comp=Z,0.9nm,0.7s,baz=144,slow=6.4,SNR=9.5
      comp=Z,0.9nm,0.7s
BOSA  Boshof            79.92 118  LR   LR     08 55 22.5
      comp=Z,37nm,18.3s,baz=16,slow=36
NVAR  Mina Array Bea    84.39 325  P    P      08 20 04.9 -0.2
      comp=Z,0.4nm,0.7s,baz=150,slow=3.5,SNR=3.0
      comp=Z,0.4nm,0.7s
TORD  Torodi Ar. Bea    84.72  70  P    P      08 20 06.0 -0.9
      comp=Z,1.5nm,0.3s,baz=231,slow=6.2,SNR=2.4
      comp=Z,1.5nm,0.3s
```

IDC ***11*** *08:15:57.8±7.1, 6°72S×129°84E, h148km±71km, mb3.5/6, mbtmp4.1/10, Error ellipse: s-maj=75.5km s-min=19.7km az=57.0*

NEIC ***11*** *08:16:01.2±2.8, 6°80S±0°07×129°66E±0°07, h178km±8km, mb4.4/10, Error ellipse: s-maj=10.8km s-min=8.3km az=140.0*

DJA ***11*** *08:16:01.2±0.2, 7°S±2°×13°0E±°, h177km±4km, M4.3/17, mb4.2/17, mB4.8/6, MLv4.5/16, Mw(mB)4.1/6*

ISC 11 08:16:01.8±0.6**, 6°89S**±0°06×**129°59E**±0°06**, h200**km**, n46, σ2^{s}08**/48**, mb4.0**/10**, Banda Sea**

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Code  Station Name        Δ°   AZ°     Phase ID         Time     Res
                                   Op         ISC       h  m  s    ISC
SAUI  Saumlaki           2.01 123  Pn         Pn     08 16 39.2 -1.2
SAUI  Saumlaki           2.01 123  P          Pn     08 16 39.4 -1.1
SAUI                               S          Sn     08 17 08.2 -2.3
BNDI  Bandanaira         2.38   8  P          Pn     08 16 41.4 -3.0
MSAI  Masohi             3.59 349  P          Pn     08 16 57.4 -1.2
KRAI  Karang Ratu        3.75 341  P          Pn     08 17 00.2 -0.4
NLAI  Namlea             4.40 326  P          Pn     08 17 07.3 -1.4
FAKI  Fak Fak            4.75  34             Pn     08 17 09.0 -4.2
FAKI  Fak Fak            4.75  34  P          Pn     08 17 08.8 -4.4
KMPI  Kaimana, Papua     5.20  52  P          Pn     08 17 15.9 -3.0
      1.3nm5µm68nm,0.6s
SOEI  Soe                5.99 241             Pn     08 17 29.2 +0.1
SOEI  Soe                5.99 241  P          Pn     08 17 28.1 -1.0
      0.3nm42nm,0.9s
SANI  Sanana             6.01 323  P          Pn     08 17 28.7 -0.5
      19nm,0.9s
MTN   Manton Dam         6.10 166             Pn     08 17 29.8 -0.6
SWI   Sorong             6.22  16  P          Pn     08 17 28.0 -4.0
BATI  Baumata            6.72 240  P          Pn     08 17 38.9 +0.3
      67nm,0.6s,baz=71,slow=1.3,SNR=6.4
BATI                               S          Sn     08 18 52.2 -3.0
      38nm,0.4s,baz=170,slow=19,SNR=3.7
BATI  Baumata            6.72 240  P          Pn     08 17 38.4 -0.2
      0.3nm77nm,0.7s
RKPI  Ransiki, Papua     7.04  41  P          Pn     08 17 40.5 -2.1
MWPI  Manokwari, Pap     7.40  37  P          Pn     08 17 46.0 -1.4
EDFI  Ende, Flores       8.04 256  P          Pn     08 17 56.4 +0.6
BAKI  Biak               8.62  49  P          Pn     08 18 01.8 -1.4
      71nm,0.9s
KNRA  Kununurra          8.77 185             Pn     08 18 04.5 -0.6
DBNI  Kabupaten Domp    11.29 261  P          Pn     08 18 36.3 -1.5
      26nm,0.7s
FITZ  Fitzroy Crossi    11.78 199  P          Pn     08 18 43.6 -0.4
      2.4nm,0.3s,baz=29,slow=19,SNR=17
FITZ                               S          Sn     08 20 47.2 -8.3
      5.4nm,0.4s,baz=68,slow=19,SNR=6.5
FITZ  Fitzroy Crossi    11.78 199             Sn     08 20 50.0 -5.5
WB0   Warramunga Arr    13.62 160             Pn     08 19 05.2 -2.0
WRA   Warramunga Arr    13.77 161  P          Pn     08 19 06.0 -2.9
      1.7nm,0.6s,baz=344,slow=13,SNR=15
WRA                                S          S      08 21 30.6  -12
      4.0nm,0.6s,baz=334,slow=21,SNR=7.9
WRA   Warramunga Arr    13.77 161  Pn         Pn     08 19 07.2 -1.7
WRA                                           S      08 21 34.1 -8.3
WR8   Warramunga Arr    13.83 160             Pn     08 19 07.7 -2.1
COEN  Coen              15.08 119  Pn         Pn     08 19 24.0 -1.2
COEN                               IAmb       IAmb   08 19 28.4
      comp=Z,7.5nm,0.6s
AS31  Alice Springs     17.18 167  P          Pn     08 19 51.0 +0.6
AS31                               IAmb       IAmb   08 19 52.1
      comp=Z,3.9nm,0.5s
ASAR  Alice Springs     17.18 167  P          Pn     08 19 51.5 +1.1
      comp=Z,4.5nm,0.4s,baz=348,slow=11,SNR=93
ASAR                               S          S      08 22 59.2 +1.7
      comp=Z,1.4nm,0.6s,baz=347,slow=26,SNR=5.9
ASAR  Alice Springs     17.18 167  P          Pn     08 19 51.4 +1.0
PSA00 Pilbara Seismi    17.37 212  P          Pn     08 19 53.4 +0.8
CTAO  Charters Tower    20.82 131  P          P      08 20 29.1 +1.1
CTAO                               IAmb       IAmb   08 21 01.7
      comp=Z,17nm,1.4s
BBOO  Buckleboo         26.48 168  P          P      08 21 23.0 +2.3
BBOO                               IAmb       IAmb   08 21 34.5
      comp=Z,15nm,1.2s
STKA  Stephens Creek    27.27 157  P          P      08 21 29.1 +1.4
      comp=Z,1.3nm,0.4s,baz=344,slow=7.0,SNR=6.6
      comp=Z,1.3nm,0.4s
CAN   Canberra          33.44 150  P          P      08 22 25.0 +3.0
CAN                                IAmb       IAmb   08 22 33.9
      comp=Z,28nm,1.5s
XLT   XiLinHaoTe        52.02 348 eP          P      08 24 52.4 +1.5
XLT                                pmax       pmax
      comp=Z,6.0nm,1.0s
HILR  Hailar Array B    56.87 352  P          P      08 25 26.5 +0.9
      comp=Z,0.4nm,0.4s,baz=142,slow=7.3,SNR=1.6
      comp=Z,0.4nm,0.4s
SONM  Songino Array     58.22 342  P          P      08 25 36.4 +1.2
      comp=Z,0.4nm,0.6s,baz=142,slow=7.3,SNR=2.3
      comp=Z,0.4nm,0.6s
MKAR  Makanchi Array    67.92 327  P          P      08 26 40.6 +1.7
      comp=Z,1.2nm,0.5s,baz=117,slow=8.1,SNR=11
      comp=Z,1.2nm,0.5s
ZALV  Zalesovo Beam     71.31 334  P          P      08 26 59.8 +0.3
      comp=Z,0.5nm,0.3s,baz=138,slow=4.9,SNR=1.7
      comp=Z,0.5nm,0.3s
KURBB Kurchatov Arra    72.21 329  P          P      08 27 06.3 +1.4
      comp=Z,1.0nm,0.5s,baz=130,slow=5.1,SNR=7.4
      comp=Z,1.0nm,0.5s
KURK  Kurchatov         72.22 329  P          P      08 27 06.3 +1.4
KURK  Kurchatov         72.22 329  IAmb       IAmb   08 27 50.8
      comp=Z,4.5nm,0.7s
N19K  Bonanza Creek     89.17  28  P          P      08 28 36.5 +1.9
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MOS ***11*** *08:17:18.1±1.2, 42°42N×141°53E, h131km, mb4.3/10, Error ellipse: s-maj=9.3km s-min=7.1km az=75.8*

NIED ***11*** *08:17:19.1, 42°46N×141°51E, h125km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-5.38; M$_{\theta\theta}$1.27; M$_{\phi\phi}$4.12; M$_{r\theta}$0.78; M$_{\theta\phi}$3.01; M$_{\phi r}$4.81; Fault plane solution: M$_0$7.52000×10^{14} NP1:ϕ_s48.00000°, δ28.00000°, λ-62.00000°. NP2:ϕ_s197.00000°, δ66.00000°, λ-104.00000°.*

NEIC ***11*** *08:17:19.8±1.3, 42°54N±0°06×141°6E±0°1, h129km±7km, mb4.3/41 Error ellipse: s-maj=11.5km s-min=8.6km az=106.0*

SKHL ***11*** *08:17:19.9±0.7, 42°50N×141°60E, h135km±5km, mb5.4/3, msha6.3/2*

IDC ***11*** *08:17:19.1±1.2, 42°48N×141°53E, h127km±8km, mb3.8/20, mbtmp4.2/23, Error ellipse: s-maj=14.2km s-min=10.9km az=155.0*

JMA ***11*** *08:17:19.1±0.1, 42°5N±0°4×141°5E±0°5, h125km±1km, MV3.8/38, S OFF TOMAKOMAI*

ISC 11 08:17:19.0±0.6**, 42°44N**±0°04×**141°57E**±0°03**, h126**km±5km**, n141, σ1^{s}14**/155**, mb4.2**/43**, 7C-23D, Hokkaido region**

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Code  Station Name        Δ°   AZ°     Phase ID         Time     Res
                                   Op         ISC       h  m  s    ISC
JIAM  Iburiatsuma        0.32  55 ⇓P          Pn     08 17 37.2 +0.5
JIAM                              ⇓S          Sn     08 17 51.1 +1.1
JNB   Noboribetsu        0.40 274⇓iP          Pn     08 17 36.8 -0.2
JNB                               ⇓S          Sn     08 17 50.2 -0.4
JBT2  Biratori 2         0.67  60⇓iP          Pn     08 17 39.2 +0.4
JBT2                              ⇓S          Sn     08 17 55.0 +1.3
JKB   Kayabe             0.68 216⇓iP          Pn     08 17 38.8  0.0
JKB                               ⇓S          Sn     08 17 53.4 -0.4
JISS  Ishikarishitsu     0.84 352⇓iP          Pn     08 17 40.4 +0.4
JISS                              ⇓S          Sn     08 17 56.1 +0.1
JNBK  Urakawa-nobuka     0.89 100 i P         Pn     08 17 41.4 +0.9
JYM2  Yakumo 2           0.95 250⇓iP          Pn     08 17 41.1 +0.1
JFR   Furan              1.04  46 ⇓P          Pn     08 17 41.9  0.0
JFR                              ⇓eS          Sn     08 17 59.2 -0.2
JOT   Ohata              1.13 200⇓iP          Pn     08 17 43.1 +0.3
JOT                               ⇓S          Sn     08 18 01.0 +0.2
JSH   Shimam             1.15 281 ⇓P          Pn     08 17 42.8 -0.1
JSH                               ⇓S          Sn     08 18 01.8 +0.7
ERM   Erimo              1.25 109             Pn     08 17 45.3 +1.3
ERM   Erimo              1.25 109  PN         Pn     08 17 45.3 +1.3
JHR   Hokuryu            1.30   5⇓iP          Pn     08 17 45.3 +0.7
JHR                               ⇓S          Sn     08 18 04.8 +0.7
JCH   Churui             1.33  82 i P         Pn     08 17 45.7 +0.7
JCH                                S          Sn     08 18 05.2 +0.5
JOMM  Oshimamatsumae     1.48 232  P          Pn     08 17 47.0 +0.4
JOSM  Okushiri--Mats     1.60 258⇓iP          Pn     08 17 47.8 -0.2
JKK2  Kamakawa 2         1.67  31  P          Pn     08 17 49.0 +0.3
JKK2                               S          Sn     08 18 11.3 -0.2
JAR   Ashorobuto         1.83  61 i P         Pn     08 17 50.6 -0.1
JAR                                S          Sn     08 18 14.3 -0.5
ASAJ  Asahikawa          1.83  24  P          Pn     08 17 51.2 +0.5
      38nm,0.2s,baz=219,slow=17,SNR=53
ASAJ                               S          Sn     08 18 15.0  0.0
      97nm,0.5s,baz=239,slow=32,SNR=16
JKA   Kamikawa-asahi     1.83  24             Pn     08 17 50.3 -0.4
JKA   Kamikawa-asahi     1.83  24             Sn     08 18 15.0  0.0
JKA   Kamikawa-asahi     1.83  24 eP          Pn     08 17 51.3 +0.6
JSS   Shosan             1.97   6  P          Pn     08 17 53.3 +1.0
JANG  Nango              2.07 181 i P         Pn     08 17 53.0 -0.7
AKK   Akkeshi            2.48  75 eP          Pn     08 17 58.3 -0.4
AKK                               eS          Sn     08 18 26.4 -2.8
RUSJ  Misakicho          3.16  57 ePN         Pn     08 18 08.7 +1.2
RUSJ                              i S         Sn     08 18 49.6 +4.7
GLVR  Golovnino          3.17  65⇑iPN         Pn     08 18 08.6 +1.0
GLVR                              i S         Sn     08 18 45.0 -0.2
GLVR                               pmax       pmax
      comp=Z,161nm,0.2s
GLVR                               pmax       pmax
      comp=E,44nm,0.1s
GLVR                               smax       smax
      comp=E,446nm,0.3s
GLVR                               smax       smax
      comp=N,1µm,0.2s
GLVR  Golovnino          3.17  65 eP          Pn     08 18 08.6 +1.0
GLVR                               AMB        AMB    08 18 09.9
      comp=N,160nm,0.2s
GLVR                              eS          Sn     08 18 45.0 -0.2
GLVR                               A          A      08 18 46.5
      comp=N,1µm,0.3s
GLVR                               A          A      08 18 46.5
      comp=N,450nm,0.3s
NMR   Nemuro--Hokkai     3.19  72⇑iPN         Pn     08 18 07.1 -0.8
NMR                               i S         Sn     08 18 42.6 -3.1
NMR   Nemuro--Hokkai     3.19  72 eP          Pn     08 18 07.3 -0.6
NMR                               eS          Sn     08 18 43.4 -2.3
YUK   Yuzh-Kuril'sk      3.52  62 ePN         Pn     08 18 12.7 +0.5
YUK                               i S         Sn     08 18 53.7 +0.4
YUK                                pmax       pmax
      comp=N,78nm,0.2s
YUK                                pmax       pmax
      comp=Z,640nm,0.2s
YUK                                smax       smax
      comp=E,1µm,0.4s
YUK                                smax       smax
      comp=N,906nm,0.3s
YUK   Yuzh-Kuril'sk      3.52  62 eP          Pn     08 18 13.2 +1.0
YUK                                AMB        AMB    08 18 14.5
      comp=N,670nm,0.2s
YUK                               eS          Sn     08 18 52.3 -1.0
YUK                                A          A      08 18 54.8
      comp=N,760nm,0.5s
YUK                                A          A      08 18 54.8
      comp=N,1µm,0.5s
TEY   Ternei             4.44 307⇑ePN         Pn     08 18 23.8 -0.7
TEY                                pmax       pmax
      comp=E,30nm,0.6s
TEY                                pmax       pmax
      comp=Z,70nm,0.6s
TEY                                pmax       pmax
      comp=N,30nm,0.6s
TEY   Ternei             4.44 307 eP          Pn     08 18 23.7 -0.7
TEY                                AMB        AMB    08 18 24.4
      comp=N,50nm,0.6s
YSS   Yuzhno-Sakhali     4.59  10  Pn         Pn     08 18 26.4 -0.1
YSS   Yuzhno-Sakhali     4.59  10 ePN         Pn     08 18 27.9 +1.5
YSS                               eS          Sn     08 19 19.8 +0.9
YSS                                pmax       pmax
      comp=Z,20nm,0.5s
YSS                                smax       smax
      comp=N,20nm,1.0s
YSS                                smax       smax
      comp=E,20nm,1.0s
YSS   Yuzhno-Sakhali     4.59  10 eP          Pn     08 18 27.9 +1.5
YSS                                AMB        AMB    08 18 29.1
      comp=E,20nm,0.5s
YSS                               eS          Sn     08 19 19.8 +0.9
YSS                                A          A      08 19 23.6
      comp=E,20nm,0.5s
YSS                                A          A      08 19 23.6
      comp=E,20nm,0.5s
JSD   Sado               5.08 211  Pn         Pn     08 18 34.9 +1.9
KUR   Kuril'sk           5.34  56  PN         Pn     08 18 40.1 +3.6
KUR                               eS          Sn     08 19 38.4 +1.5
KUR                                smax       smax
      comp=N,88nm,0.2s
KUR                                smax       smax
      comp=E,66nm,0.2s
KUR   Kuril'sk           5.34  56 eP          Pn     08 18 35.8 -0.7
KUR                               eS          Sn     08 19 35.1 -1.8
MJB9  Matsu-Tunnel       6.44 205  Pn         Pn     08 18 52.1 +0.7
MAJO  Matsushiro         6.44 205  Pn         Pn     08 18 51.3 -0.1
MAJO  Matsushiro         6.44 205  PN         Pn     08 18 51.3 -0.1
MJAR  Matsushiro Arr     6.44 205  P          Pn     08 18 52.5 +1.1
      comp=E,0.6nm,0.4s,baz=24,slow=14,SNR=1.7
USRK  Ussuriysk Ar.      7.21 287  P          Pn     08 19 01.8 +0.1
      comp=E,4.9nm,0.6s,baz=88,slow=15,SNR=17
JGF   Kuroka             7.58 207  Pn         Pn     08 19 09.2 +2.4
BNX   BinXian           10.71 293 ⇓P          Pn     08 19 48.1 -0.7
BNX                                pmax       pmax
      comp=Z,7.0nm,1.4s
CN2   Changchun         11.86 282  P          Pn     08 20 04.1  0.0
CN2                                pmax       pmax
      comp=Z,10.0nm,0.6s
ZEA   Zeya              14.78 325 eP          P      08 20 42.5 -1.7
ZEA                                pmax       pmax
      comp=Z,10.0nm,0.5s
ZEA   Zeya              14.78 325 eP          Pn     08 20 41.5  0.0
PEA0B Petropavlovsk-    15.17  40  Pn         Pn     08 20 45.4 -1.1
PEA0B Petropavlovsk-    15.17  40  P          Pn     08 20 45.4 -1.1
PEA0B                              pmax       pmax
      comp=Z,38nm,1.4s
PETK  Petropavlovsk-    15.17  40  P          Pn     08 20 45.4 -1.1
      comp=Z,1.2nm,0.6s,baz=227,slow=7.7,SNR=2.0
HILR  Hailar Array B    16.71 303  P          Pn     08 21 03.3 -2.3
      comp=Z,4.8nm,0.3s,baz=107,slow=11,SNR=22
YAK   Yakutsk           20.86 344ceP          P      08 21 47.6 -3.0
YAK                                pmax       pmax
      comp=Z,12nm,0.6s
SEY   Seymchan          21.49  14  P          P      08 21 55.4 -1.9
      comp=Z,0.8nm,0.3s,baz=194,slow=9.9,SNR=6.2
      comp=Z,0.8nm,0.3s
SEY   Seymchan          21.49  14ceP          P      08 21 53.9 -3.4
SEY                                pmax       pmax
      comp=Z,15nm,2.5s
SONM  Songino Array     25.24 294  P          P      08 22 32.5 -0.8
      comp=Z,1.4nm,0.5s,baz=92,slow=8.8,SNR=5.9
      comp=Z,1.4nm,0.5s
SONM  Songino Array     25.24 294  IAmb       IAmb   08 22 33.4
      comp=Z,2.3nm,1.0s
SONM  Songino Array     25.24 294 eP          P      08 22 35.5 +2.2
H11N2 WAKE ISLAND Hy    31.14 129  T          T      08 56 17.1
      baz=322,slow=75,SNR=37
H11N1 WAKE ISLAND Hy    31.15 129  T          T      08 56 18.0
      baz=322,slow=75,SNR=38
H11N3 WAKE ISLAND Hy    31.16 129  T          T      08 56 17.4
      baz=322,slow=75,SNR=6.9
H11S1 WAKE ISLAND Hy    32.00 130  T          T      08 56 35.7
      baz=320,slow=74
H11S3 WAKE ISLAND Hy    32.00 131  T          T      08 56 39.7
      baz=320,slow=74
H11S2 WAKE ISLAND Hy    32.01 131  T          T      08 56 42.1
      baz=320
ZAA0  Zalesovo Array    38.54 307             P      08 24 28.6 -0.4
ZALV  Zalesovo Beam     38.54 307  P          P      08 24 28.4 -0.5
      comp=Z,4.9nm,0.4s,baz=90,slow=8.9,SNR=23
      comp=Z,4.9nm,0.4s
M16K  Timber Creek      39.61  41  P          P      08 24 38.0 +0.1
M16K                               IAmb       IAmb   08 24 39.1
      comp=Z,4.5nm,1.1s
B20K  Meade River       41.09  27  P          P      08 24 49.1 -0.7
MK31  Makanchi Array    41.55 297c iP         P      08 24 53.3 -0.7
MKAR  Makanchi Array    41.55 297  P          P      08 24 53.2 -0.8
      comp=Z,1.5nm,0.6s,baz=84,slow=9.5,SNR=18
      comp=Z,1.5nm,0.6s
MAKZ  Makanchi          41.76 297             P      08 24 54.9 -0.7
MAKZ  Makanchi          41.76 297  P          P      08 24 54.9 -0.7
MAKZ                               pmax       pmax
      comp=Z,2.0nm,0.8s
B21K  Ikpikpuk River    41.91  28  P          P      08 24 56.2 -0.3
B22K  Teshekpuk Lake    42.39  27  P          P      08 24 59.5 -0.9
B22K                               IAmb       IAmb   08 25 12.6
      comp=Z,8.8nm,1.4s
E22K  Anaktuvuk Pass    42.82  30  P          P      08 25 03.6 -0.5
E22K                               IAmb       IAmb   08 25 05.3
      comp=Z,2.5nm,0.6s
KURK  Kurchatov         42.86 304             P      08 25 04.2 -0.3
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KURK	Kurchatov	42.86	304	ceP	P	08 25 04.1	-0.3
KURK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KURK	Kurchatov	42.86	304	eP	P	08 25 04.1	-0.3
KURBB	Kurchatov Arra	42.94	304	P	P	08 25 04.5	-0.7
	comp=Z,4.7nm,0.3s,baz=77,slow=8.9,SNR=70						
	comp=Z,4.7nm,0.3s						
C23K	Itkillik River	43.32	28	P	P	08 25 07.8	-0.1
TOLK	Toolik Lake Re	43.66	30	P	P	08 25 10.4	-0.4
TOLK				IAmb	IAmb	08 25 17.1	
	comp=Z,9.2nm,1.4s						
D24K	Happy Valley	43.93	29	P	P	08 25 12.6	-0.2
D24K				IAmb	IAmb	08 25 13.9	
	comp=Z,4.7nm,0.6s						
E24K	Your Creek	44.07	30	P	P	08 25 11.9	-2.1
F24K	Squaw Lake	44.32	31	P	P	08 25 15.8	-0.2
D25K	Kavik River	44.80	29	P	P	08 25 19.3	-0.5
D25K				IAmb	IAmb	08 25 24.5	
	comp=Z,6.4nm,1.4s						
ILAR	Eielson Array	44.93	35	P	P	08 25 20.3	-0.5
	comp=Z,1.3nm,0.8s,baz=276,slow=6.9,SNR=14						
	comp=Z,1.3nm,0.8s						
ILAR	Eielson Array	44.93	35	eP	P	08 25 21.5	+0.7
C27K	Jago River	45.72	28	P	P	08 25 26.8	-0.2
C27K				IAmb	IAmb	08 25 34.1	
	comp=Z,12nm,1.3s						
FAKI	Fak Fak	45.93	193	P	P	08 25 30.1	+0.9
FAKI				IAmb	IAmb	08 25 37.1	
	comp=Z,10.0nm,1.1s						
EVN	Everest	46.26	270	P	P	08 25 32.9	+0.4
EVN				IAmb	IAmb	08 25 33.7	
	comp=Z,3.6nm,0.7s						
SCRK	Sand Creek	46.29	36	P	P	08 25 31.3	-0.4
BVAR	Borovoye Array	47.15	309	P	P	08 25 38.0	-0.4
	comp=Z,9.6nm,0.4s,baz=65,slow=9.1,SNR=45						
	comp=Z,9.6nm,0.4s						
BVAR	Borovoye Array	47.15	309	P	P	08 25 38.0	-0.4
BORK	Borovoye	47.19	309		P	08 25 38.8	+0.1
BORK	Borovoye	47.19	309	⇓iP	P	08 25 40.9	+2.3
BORK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BOOM	Boomskoye usch	47.28	294	P	P	08 25 39.7	-0.1
BOOM				IAmb	IAmb	08 25 54.5	
	comp=Z,9.2nm,1.3s						
BOOM	Boomskoye usch	47.28	294	P	P	08 25 39.7	-0.1
BOOM				pmax	pmax		
	comp=Z,9.0nm,1.3s						
BCAR	Beaver Creek A	47.43	37	P	P	08 25 41.6	+1.1
I28M	Miner Creek	47.73	34	P	P	08 25 43.7	+0.8
I28M				IAmb	IAmb	08 25 45.1	
	comp=Z,5.2nm,1.2s						
BARN	Barnard Glacie	47.94	40	P	P	08 25 45.2	+0.6
E29M	Blow River	47.96	29	P	P	08 25 44.7	+0.3
EPYK	Eagle Plains	48.83	32	P	P	08 25 51.5	+0.4
EPYK				IAmb	IAmb	08 25 52.1	
	comp=Z,5.8nm,1.1s						
I30M	Mount Dempster	49.24	33	IAmb	IAmb	08 25 56.3	
	comp=Z,4.1nm,0.8s						
INK	Inuvik	49.56	29	P	P	08 25 56.7	+0.1
INK				IAmb	IAmb	08 25 57.2	
	comp=Z,2.3nm,0.7s						
INK	Inuvik	49.56	29	P	P	08 25 56.7	+0.1
HYT	Haines Junctio	49.96	39	P	P	08 26 01.6	+1.7
A36M	Sachs Harbour	51.23	23	P	P	08 26 09.3	+0.2
A36M				IAmb	IAmb	08 26 10.6	
	comp=Z,2.4nm,0.8s						
C36M	Paulatuk	52.51	26	P	P	08 26 18.6	0.0
ARTI	Arti	52.58	316	P	P	08 26 19.0	-0.3
	comp=Z,1.8nm,0.3s,baz=103,slow=9.0,SNR=3.6						
	comp=Z,1.8nm,0.3s						
ARTI	Arti	52.58	316	IAmb	IAmb	08 26 24.1	
	comp=Z,5.8nm,0.8s						
ARTI	Arti	52.58	316	d iP	P	08 26 20.9	+1.6
ARTI				S	S	08 33 38.5	+2.1
ARTI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AB31	Akbulak array	54.65	307	IAmb	IAmb	08 26 42.8	
	comp=Z,2.3nm,0.5s						
ABKAR	Akbulak array	54.65	307	P	P	08 26 34.5	0.0
AKTO	Aktyubinsk	55.25	309	P	P	08 26 40.1	+1.3
	comp=Z,0.6nm,0.3s,baz=72,slow=8.7,SNR=1.9						
	comp=Z,0.6nm,0.3s						
ARCES	ARCESS Array B	59.00	338	P	P	08 27 04.5	-0.4
	comp=Z,4.2nm,0.9s,baz=38,slow=6.5,SNR=5.0						
	comp=Z,4.2nm,0.9s						
ARCES	ARCESS Array B	59.00	338	eP	P	08 27 05.6	+0.7
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YKA	Yellowknife Ar	59.11	32	P	P	08 27 05.2	-0.6
	comp=Z,0.4nm,0.7s,baz=306,slow=7.4,SNR=6.8						
	comp=Z,0.4nm,0.7s						
WB0	Warramunga Arr	62.25	188	P	P	08 27 26.8	-0.7
WRA	Warramunga Arr	62.43	188	P	P	08 27 27.9	-0.7
	comp=Z,0.9nm,0.5s,baz=7.0,slow=7.0,SNR=7.1						
	comp=Z,0.9nm,0.5s						
WRA	Warramunga Arr	62.43	188	i P	P	08 27 28.2	-0.4
FINES	FINESS Array B	64.11	331	P	P	08 27 38.6	-0.7
	comp=Z,1.5nm,0.5s,baz=36,slow=7.1,SNR=13						
	comp=Z,1.5nm,0.5s						
FINES	FINESS Array B	64.11	331	i P	P	08 27 40.5	+1.2
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
LON	Longmire	64.56	49	P	P	08 27 43.4	+0.8
LON				IAmb	IAmb	08 27 50.8	
	comp=Z,8.1nm,1.5s						
LON	Longmire	64.56	49	P	P	08 27 43.4	+0.8
LON				pmax	pmax		
	comp=Z,8.0nm,1.5s						
LTY	Liberty	64.90	48	P	P	08 27 45.2	+0.4
LTY				IAmb	IAmb	08 28 26.6	
	comp=Z,5.5nm,1.3s						
B08A	Colville Reser	64.98	47	P	P	08 27 45.8	+0.6
B08A				IAmb	IAmb	08 28 10.2	
	comp=Z,3.3nm,1.2s						
ASAR	Alice Springs	66.16	188	P	P	08 27 53.0	+0.1
	comp=Z,0.8nm,0.7s,baz=10,slow=5.5,SNR=4.3						
	comp=Z,0.8nm,0.7s						
ASAR	Alice Springs	66.16	188	P	P	08 27 53.0	+0.1
HFS	Hagfors	69.23	335	P	P	08 28 11.2	-0.5
	comp=Z,2.4nm,0.4s,baz=45,slow=5.8,SNR=15						
	comp=Z,2.4nm,0.4s						
NB2	NORSAR Subarra	69.26	337	P	P	08 28 14.4	+2.4
	comp=Z,0.4nm,0.4s,baz=30,slow=6.2						
NOA	NORSAR Array B	69.26	337	P	P	08 28 11.4	-0.7
	comp=Z,0.8nm,0.6s,baz=42,slow=6.0,SNR=2.1						
	comp=Z,0.8nm,0.6s						
AKASG	Malin Array Be	70.13	321	P	P	08 28 18.0	+0.6
	comp=Z,0.6nm,0.4s,baz=44,slow=6.5,SNR=5.0						
	comp=Z,0.6nm,0.4s						
AKASG	Malin Array Be	70.13	321	eP	P	08 28 21.9	+4.5
NVAR	Mina Array Bea	71.70	55	P	P	08 28 28.4	+0.9
	comp=Z,1.6nm,0.6s,baz=294,slow=5.9,SNR=16						
	comp=Z,1.6nm,0.6s						
NV11	Mina Array Sit	71.79	54	P	P	08 28 28.5	+0.6
NV11				IAmb	IAmb	08 28 41.8	
	comp=Z,5.2nm,1.5s						
PD31	Pinedale Array	73.82	47	IAmb	IAmb	08 28 40.6	
	comp=Z,2.3nm,0.5s						
PDAR	Pinedale Array	73.82	47	P	P	08 28 40.0	0.0
	comp=Z,1.7nm,0.5s,baz=1.1,slow=0.7,SNR=23						
	comp=Z,1.7nm,0.5s						
PFO	Pinyon Flats O	75.97	57	i P	P	08 28 54.9	+2.6
TXAR	Lajitas Array	86.73	53	P	P	08 29 49.5	+0.4
	comp=Z,0.3nm,0.5s,baz=298,slow=3.5,SNR=9.0						
	comp=Z,0.3nm,0.5s						

IDC 11 08:46:05.7±999.0**, 63°.83N×38°.27E, h0^{km}, Error ellipse: s-maj=1062.0km s-min=300.0km az=106.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	17.09	133	I	I	10 29 29.8	
	0.1nm,1.1s,baz=327,slow=318,SNR=4.8						
I46RU	ZALESOVO INFRA	25.41	91	I	I	11 20 05.0	
	baz=314,slow=303,SNR=2.1						
I34MN	SONGINO INFRAS	39.35	81	I	I	12 48 20.0	
	baz=317,slow=323,SNR=1.2						

IDC 11 08:51:17.4±999.0**, 54°.57N×0°.79E, h0^{km}, Error ellipse: s-maj=747.9km s-min=223.6km az=106.0, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I26DE	FREYUNG INFRAS	9.84	120	I	I	09 50 20.0	
	0.2nm,1.1s,baz=310,slow=313,SNR=5.1						
I43RU	DUBNA INFRASON	20.52	69	I	I	10 55 42.1	
	baz=282,slow=315,SNR=12						
I31KZ	AKTYUBINSK INF	34.27	73	I	I	12 20 00.0	
	0.1nm,2.1s,baz=298,slow=320,SNR=5.6						

IDC 11 09:06:30.9±999.0**, 63°.09N×51°.16E, h0^{km}, Error ellipse: s-maj=471.4km s-min=198.1km az=134.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	13.25	160	I	I	10 21 55.0	
	baz=348,slow=328						
I46RU	ZALESOVO INFRA	19.59	102	I	I	11 06 01.6	
	baz=316,slow=302,SNR=4.8						
I34MN	SONGINO INFRAS	33.64	91	I	I	12 33 30.0	
	baz=317,slow=326,SNR=0.3						

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*IDC **11** 09:09:34.6±0.9, 11°.87S×165°.08E, h0^{km}, mb4.1/10, mbtmp4.0/10, MS3.7/2, Error ellipse: s-maj=35.3km s-min=22.8km az=134.0*

*NEIC **11** 09:09:37.0±1.2, 11°.91S±0°.06×165°.1E±0°.2, h10^{km}±1^{km}, mb4.3/14, Error ellipse: s-maj=27.6km s-min=5.7km az=71.0*

ISC 11 09:09:40.0±0.6**, 12°.0S**±0°.1×**165°.0E**±0°.1**, h35^{km}, n33,** σ**0ˢ.72**/31**, mb4.1**/17**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	4.06	149		Pn	09 10 39.9	+0.1
DZM	Mont Dzumac	10.15	173	Pn	Pn	09 12 02.5	-0.9
COEN	Coen	21.39	262	P	P	09 14 24.6	-0.3
H11S2	WAKE ISLAND Hy	30.30	3	T	T	09 47 41.4	
	baz=184,slow=76,SNR=21						
H11S3	WAKE ISLAND Hy	30.30	3	T	T	09 47 40.6	
	baz=184,slow=76,SNR=16						
H11S1	WAKE ISLAND Hy	30.32	3	T	T	09 47 42.1	
	baz=184,slow=76,SNR=14						
WR0	Warramunga Arr	30.33	251	P	P	09 15 48.7	+0.1
WR0				IAmb	IAmb	09 16 16.9	
	comp=Z,2.1nm,1.0s						
WR8	Warramunga Arr	30.37	251	P	P	09 15 49.1	+0.2
WR8				IAmb	IAmb	09 15 55.0	
	comp=Z,1.8nm,0.9s						
WB0	Warramunga Arr	30.43	251	P	P	09 15 50.2	+0.7
WB0				IAmb	IAmb	09 16 09.2	
	comp=Z,2.7nm,0.8s						
WRA	Warramunga Arr	30.52	251	P	P	09 15 50.5	+0.2
	comp=Z,1.5nm,0.7s,baz=81,slow=9.3,SNR=9.3						
WRA				PcP	PcP	09 18 48.1	-0.8
	comp=Z,0.3nm,0.7s,baz=86,slow=2.5,SNR=1.9						
	comp=Z,1.5nm,0.7s						
WRA	Warramunga Arr	30.52	251	P	P	09 15 49.1	-1.2
ASAR	Alice Springs	31.76	244	P	P	09 16 00.9	-0.3
	comp=Z,1.0nm,0.8s,baz=75,slow=9.2,SNR=13						
ASAR				PcP	PcP	09 18 52.6	+0.4
	comp=Z,0.2nm,0.6s,baz=75,slow=2.2,SNR=4.1						
ASAR				LR	LR	09 28 08.6	
	comp=Z,81nm,18.4s,baz=16,slow=35						
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	31.76	244	P	P	09 16 00.6	-0.6
KNRA	Kununurra	35.38	260	P	P	09 16 32.4	-0.4
KNRA				IAmb	IAmb	09 16 49.0	
	comp=Z,7.8nm,1.1s						
FITZ	Fitzroy Crossi	38.47	256	P	P	09 16 59.4	+0.3
PPT	Papeete	44.17	103	LR	LR	09 33 42.5	
	comp=Z,115nm,18.0s,baz=226,slow=33						
USRK	Ussuriysk Ar.	63.45	334	P	P	09 20 06.0	-0.4
	comp=Z,1.3nm,0.6s,baz=132,slow=8.0,SNR=4.2						
	comp=Z,1.3nm,0.6s						
CMAR	Chiang Mai Arr	71.83	294	P	P	09 21 01.2	+1.4
	comp=Z,1.1nm,0.3s,baz=105,slow=4.4,SNR=5.5						
	comp=Z,1.1nm,0.3s						
QSPA	South Pole Qui	78.05	180	P	P	09 21 36.2	+1.1
	comp=Z,0.8nm,0.3s,baz=28,slow=1.4,SNR=4.4						
	comp=Z,0.8nm,0.3s						
SONM	Songino Array	78.98	324	P	P	09 21 40.1	-0.3
	comp=Z,0.5nm,0.7s,baz=128,slow=9.3,SNR=3.0						
	comp=Z,0.5nm,0.7s						
K17K	Iditarod	79.69	16	P	P	09 21 44.5	+0.7
J17K	VABM Dome	80.03	16	P	P	09 21 46.2	+0.6
J17K				IAmb	IAmb	09 21 46.8	
	comp=Z,4.7nm,1.1s						
E19K	Redstone River	83.77	14	P	P	09 22 05.7	+0.5
ILAR	Eielson Array	84.60	19	P	P	09 22 08.9	-0.5
	comp=Z,1.2nm,0.6s,baz=240,slow=4.9,SNR=15						
	comp=Z,1.2nm,0.6s						
ILAR	Eielson Array	84.60	19	P	P	09 22 09.5	0.0
L26K	Log Cabin Wild	84.62	21	P	P	09 22 09.9	+0.3
L26K				IAmb	IAmb	09 22 13.1	
	comp=Z,3.1nm,0.9s						
D20K	Etivluk River	84.92	13	P	P	09 22 11.2	+0.1
J25K	Salcha River,	84.97	19	P	P	09 22 11.6	+0.2
J25K				IAmb	IAmb	09 22 38.2	
	comp=Z,3.6nm,1.2s						
G26K	Porcupine Rive	87.00	18	P	P	09 22 22.2	+0.9
NVAR	Mina Array Bea	87.15	50	P	P	09 22 23.6	+0.6
	comp=Z,0.7nm,0.8s,baz=218,slow=7.0,SNR=4.7						
	comp=Z,0.7nm,0.8s						
MKAR	Makanchi Array	93.70	317	P	P	09 22 53.1	-0.1
	comp=Z,0.3nm,0.4s,baz=95,slow=6.1,SNR=5.5						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	93.70	317	P	P	09 22 52.8	-0.4
YKA	Yellowknife Ar	96.10	27	P	P	09 23 01.8	-1.9
	comp=Z,0.4nm,0.7s,baz=266,slow=5.3,SNR=7.8						
	comp=Z,0.4nm,0.7s						

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*SKHL **11** 09:11:48.3±0.8, 45°.90N×150°.20E, h173^{km}±7^{km}, mb4.7/4, msha5.2/4*

*MOS **11** 09:11:49.1±1.5, 46°.27N×149°.84E, h192^{km}, mb4.2/1, Error ellipse: s-maj=18.6km s-min=9.9km az=51.4*

*JMA **11** 09:11:50.0±0.7, 45°N±5°×15°0E±°, h182^{km}, MV3.7/12, KURILE ISLANDS REGION*

*IDC **11** 09:11:51.4±2.0, 46°.40N×149°.70E, h196^{km}±19^{km}, mb3.2/12, mbtmp3.7/16, MS3.3/1, Error ellipse: s-maj=20.3km s-min=14.8km az=129.0*

ISC 11 09:11:49.1±0.8**, 45°.91N**±0°.10×**150°.07E**±0°.10**, h200^{km}, n52,** σ**1ˢ.74**/56**, mb3.3**/12**, 3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.69	247	⇓iPN	Pn	09 12 26.2	+1.7
KUR				eS	Sn	09 12 50.7	-1.2
KUR				pmax	pmax		
	comp=N,29nm,0.1s						
KUR				pmax	pmax		
	comp=Z,51nm,0.1s						
KUR				smax	smax		
	comp=N,203nm,0.2s						
KUR				smax	smax		
	comp=E,161nm,0.2s						
KUR	Kuril'sk	1.69	247	i P	Pn	09 12 25.5	+1.0
KUR				AMB	AMB	09 12 27.0	
	comp=E,30nm,0.2s						
KUR				eS	Sn	09 12 52.6	+0.7
KUR				A	A	09 12 53.4	
	comp=E,240nm,0.4s						
KUR				A	A	09 12 53.4	
	comp=E,290nm,0.4s						
SHO	Shikotan	3.08	230	eP	Pn	09 12 46.9	+7.3
SHO				eS	Sn	09 13 23.5	+4.4
YUK	Yuzh-Kuril'sk	3.53	239	⇓iPN	Pn	09 12 45.3	+0.3
YUK				i S	Sn	09 13 28.4	-0.4
YUK				pmax	pmax		
	comp=Z,163nm,0.3s						
YUK				pmax	pmax		
	comp=N,17nm,0.2s						
YUK				pmax	pmax		
	comp=E,30nm,0.1s						
YUK				smax	smax		
	comp=N,39nm,0.2s						
YUK				smax	smax		
	comp=E,180nm,0.2s						
YUK	Yuzh-Kuril'sk	3.53	239	i P	Pn	09 12 45.4	+0.4
YUK				AMB	AMB	09 12 45.7	
	comp=E,110nm,0.3s						
YUK				i S	Sn	09 13 29.2	+0.4
YUK				A	A	09 13 30.2	
	comp=E,100nm,0.3s						
YUK				A	A	09 13 30.2	
	comp=E,140nm,0.3s						
RUSJ	Misakicho	3.87	244	ePN	Pn	09 12 49.3	+0.1
RUSJ				eS	Sn	09 13 40.9	+4.6
GLVR	Golovnino	3.90	238	ePN	Pn	09 12 49.9	+0.3
GLVR				eS	Sn	09 13 37.1	+0.1
GLVR				pmax	pmax		
	comp=Z,71nm,0.1s						
GLVR				smax	smax		
	comp=N,163nm,0.4s						
GLVR				smax	smax		
	comp=E,226nm,0.4s						
GLVR	Golovnino	3.90	238	eP	Pn	09 12 49.9	+0.3
GLVR				AMB	AMB	09 12 51.1	
	comp=E,70nm,0.2s						
GLVR				eS	Sn	09 13 37.1	+0.1
GLVR				A	A	09 13 39.9	
	comp=E,160nm,0.4s						
GLVR				A	A	09 13 39.9	
	comp=E,230nm,0.4s						
NEM2	Nemuro 2	4.00	232	P	Pn	09 12 49.7	-1.2
NEM2				S	Sn	09 13 35.0	-4.3
NMR	Nemuro--Hokkai	4.01	232	⇓iPN	Pn	09 12 49.6	-1.3
NMR	Nemuro--Hokkai	4.01	232	i P	Pn	09 12 49.9	-1.0
JRA	Rausu	4.03	242	P	Pn	09 12 51.5	+0.3
JNK	Nakash	4.46	240	S	Sn	09 13 49.9	+0.1
JTKR	Abashiri--Toko	4.79	248	P	Pn	09 13 01.2	+0.5
JAK	Akkeshi	4.83	235	P	Pn	09 13 00.3	-0.9
JAK				S	Sn	09 13 54.3	-3.7
YSS	Yuzhno-Sakhali	5.16	284	ePN	Pn	09 13 05.2	-0.3
YSS	Yuzhno-Sakhali	5.16	284	eP	Pn	09 13 05.2	-0.3
JAR	Ashorobuto	5.20	242	P	Pn	09 13 07.2	+1.2
JAR				eS	Sn	09 14 06.2	-0.5
JOB	Onbets	5.38	238	P	Pn	09 13 08.2	-0.1
JOB				S	Sn	09 14 07.8	-3.0
JKK2	Kamakawa 2	5.59	251	eP	Pn	09 13 12.2	+1.2
JKA	Kamikawa-asahi	5.59	254	eP	Pn	09 13 12.9	+1.9
ASAJ	Asahikawa	5.59	254	P	Pn	09 13 12.8	+1.8
	comp=E,17nm,0.5s,baz=70,slow=14,SNR=43						
JCH	Churui	5.84	238	P	Pn	09 13 13.5	-0.7
JCH				S	Sn	09 14 18.1	-3.3
SKR	Severo-Kuril’s	6.25	38	eP	Pn	09 13 18.1	-1.3
JNBK	Urakawa-nobuka	6.40	238	P	Pn	09 13 19.9	-1.5
PAU	Pauzhetka	7.13	36	eP	Pn	09 13 30.8	0.0
PAU				eS	Sn	09 14 50.1	-1.5
JANG	Nango	8.35	231	P	Pn	09 13 44.6	-2.2
JANG				eS	Sn	09 15 12.0	-8.7
PETK	Petropavlovsk-	8.74	32	P	Pn	09 13 49.1	-2.8
	comp=E,4.7nm,1.1s,baz=167,slow=7.4,SNR=5.9						
USRK	Ussuriysk Ar.	12.90	269	P	Pn	09 14 44.5	-0.6
	comp=E,1.2nm,0.5s,baz=71,slow=14,SNR=2.2						
MJAR	Matsushiro Arr	12.92	228	P	P	09 14 51.0	+2.1
	comp=E,0.8nm,0.5s,baz=27,slow=9.3,SNR=5.3						
HILR	Hailar Array B	20.64	291	LR	LR	09 25 37.7	
	comp=E,87nm,18.8s,baz=45,slow=41						
H11N2	WAKE ISLAND Hy	29.57	146	T	T	09 48 52.9	
	baz=338,slow=77						
H11N1	WAKE ISLAND Hy	29.58	146	T	T	09 49 18.0	
	baz=338,slow=77						
H11N3	WAKE ISLAND Hy	29.58	146	T	T	09 49 10.4	
	baz=338,slow=77						
H11S1	WAKE ISLAND Hy	30.61	148	T	T	09 50 12.3	
	baz=337,slow=76,SNR=8.8						
H11S3	WAKE ISLAND Hy	30.61	148	T	T	09 50 15.8	
	baz=337,slow=76,SNR=6.7						
H11S2	WAKE ISLAND Hy	30.62	148	T	T	09 50 13.5	
	baz=337,slow=76,SNR=6.1						
ILAR	Eielson Array	38.51	38	P	P	09 18 52.5	+0.9
	comp=E,0.2nm,0.5s,baz=278,slow=8.2,SNR=1.9						
	comp=E,0.2nm,0.5s						
MKAR	Makanchi Array	45.44	297	P	P	09 19 46.9	-1.0
	comp=E,0.5nm,0.6s,baz=67,slow=7.2,SNR=5.9						
	comp=E,0.5nm,0.6s						
KURK	Kurchatov	46.06	303	P	P	09 19 51.8	-0.8
KURK	Kurchatov	46.06	303	eP	P	09 19 51.8	-0.8
KURBB	Kurchatov Arra	46.15	303	P	P	09 19 51.8	-1.5
	comp=E,1.1nm,0.7s,baz=67,slow=8.5,SNR=4.8						
	comp=E,1.1nm,0.7s						
YKA	Yellowknife Ar	52.84	35	P	P	09 20 45.4	+1.8
	comp=E,0.3nm,0.7s,baz=298,slow=8.1,SNR=2.7						
	comp=E,0.3nm,0.7s						
FINES	FINESS Array B	63.88	334	P	P	09 21 59.5	-0.3
	comp=E,1.5nm,0.5s,baz=47,slow=7.5,SNR=9.6						
	comp=E,1.5nm,0.5s						
WRA	Warramunga Arr	67.08	196	P	P	09 22 25.0	+4.2
	comp=E,0.2nm,0.6s,baz=7.5,slow=6.5,SNR=2.3						
	comp=E,0.2nm,0.6s						
NB2	NORSAR Subarra	68.31	340	P	P	09 22 28.1	0.0
	comp=Z,0.6nm,0.4s,baz=29,slow=6.5						
NOA	NORSAR Array B	68.31	340	P	P	09 22 26.8	-1.4
	comp=Z,1.0nm,0.5s,baz=28,slow=6.5,SNR=4.9						
	comp=Z,1.0nm,0.5s						
HFS	Hagfors	68.48	338	P	P	09 22 27.7	-1.4
	comp=Z,3.5nm,0.9s,baz=4.5,slow=7.4,SNR=1.7						
	comp=Z,3.5nm,0.9s						
ASAR	Alice Springs	70.79	196	P	P	09 22 48.9	+5.2
	comp=Z,0.3nm,0.6s,baz=8.8,slow=5.9,SNR=5.4						
	comp=Z,0.3nm,0.6s						
AKASG	Malin Array Be	71.04	325	P	P	09 22 44.3	-0.6
	comp=Z,0.5nm,0.4s,baz=39,slow=6.6,SNR=4.1						
	comp=Z,0.5nm,0.4s						
EKA	Eskdalemuir Ar	76.62	345	P	P	09 23 17.6	+0.4
	comp=Z,0.6nm,0.4s,baz=9.1,slow=5.5,SNR=1.5						
	comp=Z,0.6nm,0.4s						
TXAR	Lajitas Array	79.73	58	P	P	09 23 37.8	+2.9
	comp=Z,0.1nm,0.5s,baz=300,slow=4.4,SNR=5.0						
	comp=Z,0.1nm,0.5s						

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*CATAC **11** 09:21:44.3±0.5, 12°N±2°×8°7W±°, h27^{km}±4^{km}, M3.3/25, MLv3.3/25, Error ellipse: s-maj=5.0km s-min=2.6km az=36.8, confirmed*

*UCR **11** 09:21:45.0±1.5, 11°.71N×86°.86W, h91^{km}±22^{km}, MW3.9*

ISC 11 09:21:43.4±1.4**, 11°.58N**±0°.04×**87°.01W**±0°.04**, h10^{km}**±10^{km}**, n59,** σ**0ˢ.76**/81**, 7C-12D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	0.73	34	⇓P	Pn	09 21 59.4	-0.4
COPN	Copaltepe	0.73	34	⇓iP	Pn	09 21 59.3	-0.4
COPN				eS	Sn	09 22 11.8	+0.9
APQ2	Apoyeque	0.91	47	P	Pb	09 22 01.3	0.0
APQ2				S	Sn	09 22 14.8	-0.7
APYN	Apoyeque	0.92	45	P	Pn	09 22 02.4	0.0
APYN				S	Sn	09 22 15.6	-0.1
ALLN	Telcor Managua	0.92	51	S	Sn	09 22 15.2	-0.5
ALLN	Telcor Managua	0.92	51	P	Pb	09 22 01.6	+0.1
MAS3	Al N del Volca	0.93	61	⇑P	Pb	09 22 01.8	+0.2
MAS3				S	Sn	09 22 15.8	-0.2
APQ3	Volcan Apoyequ	0.94	42	S	Sn	09 22 18.0	+2.0
MGAN	Managua	0.94	53	S	Sn	09 22 15.7	-0.4
MGAN	Managua	0.94	53	⇓P	Pb	09 22 02.2	+0.4
MGAN	Managua	0.94	53	eP	Pb	09 22 02.0	+0.2
MGAN				eS	Sg	09 22 12.6	-1.1
MOMN	Momotombo	0.95	29	⇑P	Pb	09 22 02.3	+0.4
CNGA	Al SSO del Vol	0.96	18	⇑P	Pb	09 22 02.7	+0.6
CNGA				S	Sn	09 22 17.0	+0.2
CNGN	Cerro Negro	0.97	19	⇓P	Pb	09 22 02.7	+0.4
CNGN	Cerro Negro	0.97	19	⇓iP	Pg	09 22 02.5	+0.5
NADN	Granada	0.98	80	P	Pb	09 22 02.7	+0.3
NADN				S	Sn	09 22 16.3	-0.7
NADN	Granada	0.98	80	eP	Pg	09 22 02.4	+0.2
NADN				eS	Sn	09 22 18.0	+1.0
MOM2	El Cardon	1.00	31	⇓P	Pb	09 22 03.3	+0.5
MOM2				S	Sn	09 22 17.1	-0.5
AERN	Aeropuerto Man	1.00	56	S	Sn	09 22 17.8	+0.1
QUEN	Al S del Volca	1.02	9	⇓P	Pg	09 22 02.6	-0.4
ILCN	San Idelfonso	1.04	17	⇓P	Pg	09 22 02.8	-0.6
ILCN				S	Sn	09 22 18.2	-0.4
MOM3	MOM3	1.05	28	⇓P	Pg	09 22 03.8	+0.2
MOM3				S	Sn	09 22 19.8	+1.0
POLN	Al Sur del Vol	1.08	10	P	Pb	09 22 04.4	+0.2
POLN				S	Sb	09 22 18.7	+0.2
PKGN	Cerro Pekin	1.09	2	⇓P	Pb	09 22 04.3	0.0
PKGN				S	Sn	09 22 19.5	-0.3
CRIN	San Cristobal	1.12	358	⇓P	Pb	09 22 05.0	+0.1
CRIN	San Cristobal	1.12	358	eP	Pb	09 22 04.8	0.0
CRIN				eS	Sn	09 22 21.1	+0.5
MORN	Al O del Volca	1.34	91	P	Pn	09 22 07.4	-0.7
CONN	Concepcion	1.36	90	⇑P	Pn	09 22 07.5	-1.0
CONN				S	Sb	09 22 25.9	-0.5
LCRUZ	La Cruz	1.44	110	eP	Pn	09 22 09.1	-0.5
LCRUZ				eS	Sn	09 22 28.1	-0.4
CSGN	Cosiguina Volc	1.49	339	P	Pn	09 22 10.1	-0.1
CSGN				S	Sn	09 22 29.4	-0.4
CSGN	Cosiguina Volc	1.49	339	eP	Pn	09 22 10.3	0.0

CSGN				eS	Sn	09 22 30.2	+0.4
POTN	Potosi Cosigui	1.49	341	P	Pn	09 22 10.2	0.0
POTN				S	Sn	09 22 29.1	-0.7
POTN	Potosi Cosigui	1.49	341	eP	Pn	09 22 09.2	-1.0
BOAB	BOACO BROADBAN	1.58	57	P	Pn	09 22 10.6	-0.8
BOAB	BOACO BROADBAN	1.58	57	S	Sn	09 22 31.2	-0.6
LIMN	Finca el Limon	1.61	23	⇑P	Pn	09 22 11.9	0.0
LIMN				S	Sb	09 22 33.2	-0.4
MATN	Matagalpa	1.71	38	P	Pn	09 22 12.1	-1.3
MATN	Matagalpa	1.71	38	S	Sn	09 22 34.6	-0.8
ALIBA	Liberia Airpor	1.74	124	eS	Sg	09 22 40.3	+0.9
ALIBA				eP	Pn	09 22 13.6	-0.1
LAPC	Finca la Perla	1.75	117	eP	Pn	09 22 11.7	-2.0
VRLE	La Escondida,	1.80	116	eP	Pn	09 22 14.2	-0.3
DELF	Filadelfia	1.82	128	eP	Pn	09 22 15.3	+0.5
CNCH	Conchagua	1.87	335	P	Pn	09 22 15.6	+0.1
CNCH	Conchagua	1.87	335	S	Sn	09 22 39.5	+0.3
CLARA	Aguas Claras	1.97	113	eP	Pn	09 22 16.9	+0.1
SAJU	San Juanillo,	1.97	139	eP	Pn	09 22 15.0	-1.8
VMAR	Armenia, Volca	2.01	112	eP	Pn	09 22 17.0	-0.4
JUD3	Juan Diaz 3	2.02	134	eP	Pb	09 22 20.2	+0.1
CUI	Cuipilapa	2.03	117	eP	Pn	09 22 17.9	+0.2
RCON	San Juan de Ri	2.07	24	⇓P	Pn	09 22 19.0	+0.7
RCPN	Sur Rio San Ju	2.13	25	P	Pn	09 22 20.5	+1.3
RCVN	Varillal2	2.15	22	P	Pn	09 22 19.9	+0.5
RCVN	Varillal2	2.15	22	S	Sn	09 22 47.1	+0.9
PACA	Pacayal	2.27	326	S	Sn	09 22 47.8	-1.5
NYURE	Nandayure	2.34	132	eP	Pn	09 22 23.7	+1.9
YUSH	Yuscaran	2.37	4	⇑P	Pn	09 22 23.2	+0.8
JTS	Las Juntas de	2.39	122	eP	Pn	09 22 21.4	-1.3
TGUH	Tegucigalpa,Un	2.48	354	⇑P	Pn	09 22 24.5	+0.6
TGUH				S	Sn	09 22 53.8	-0.5
PIEC	Cerro El Cedra	3.58	123	eP	Pn	09 22 41.1	+2.0

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*IDC **11** 09:30:53.1±0.8, 42°.55N×83°.07E, h0km, mb4.1/14, mbtmp4.0/21, ML3.6/6, MS3.0/4, Error ellipse: s-maj=15.0km s-min=12.4km az=70.0*

*MOS **11** 09:30:53.1±1.3, 42°.51N×83°.16E, h11km, mb4.3/8, Error ellipse: s-maj=7.7km s-min=6.2km az=128.6*

*NEIC **11** 09:30:54.9±1.5, 42°.57N±0°.09×83°.20E±0°.03, h10km±1km, mb4.3/15, Error ellipse: s-maj=14.6km s-min=3.6km az=190.0*

*SOME **11** 09:30:57.0, 42°.50N×82°.87E, h15km*

*NNC **11** 09:30:59.8±1.2, 42°.72N×82°.77E, h9km±6km, mb4.5, mpv4.2, Error ellipse: s-maj=8.7km s-min=5.6km az=143.0*

ISC 11 09:30:54.4±0.5**, 42°.48N**±0°.04×**83°.12E**±0°.03**, h10km, n146, σ2s13**/164**, mb4.1**/20**, 11C-14D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	2.25	296	Pg	Pb	09 31 35.2	0.0
	62nm,0.3s						
KTMS				Lg	Lg	09 32 03.0	
	308nm,0.3s						
KTMS	Ketmen	2.25	296	eP	Pb	09 31 35.2	0.0
	62nm,0.3s						
KTMS				eS	Sb	09 32 03.0	-0.2
	308nm,0.3s						
SHLS	Shalkode	2.78	285	Pg	Pn	09 31 39.3	+0.2
	185nm,0.4s						
SHLS				Lg	Lg	09 32 10.0	
	1µm,0.6s						
SHLS	Shalkode	2.78	285	eP	Pn	09 31 39.3	+0.2
	185nm,0.4s						
SHLS				eS	Sn	09 32 10.0	-2.7
	1µm,0.6s						
SHLS	Shalkode	2.78	285	eP	Pn	09 31 38.4	-0.7
PDGK	Podgornoye	2.80	289	⇑Pn	Pn	09 31 42.1	+2.7
	15nm,0.3s						
PDGK				⇑Pg	Pb	09 31 46.7	+2.1
	90nm,0.4s						
PDGK				⇑Lg	Lg	09 32 19.6	
	452nm,0.5s						
PDGK	Podgornoye	2.80	289	P	Pn	09 31 42.1	+2.7
PDGK						09 32 19.2	
UZB	Uzynbulak	3.09	284	Pg	Pb	09 31 49.9	+0.3
	27nm,0.3s						
UZB				Lg	Lg	09 32 28.3	
	323nm,0.5s						
UZB	Uzynbulak	3.09	284	eP	Pb	09 31 49.9	+0.3
	27nm,0.3s						
UZB				eS	Sb	09 32 28.3	+0.9
	323nm,0.5s						
UZB	Uzynbulak	3.09	284	eP	Pn	09 31 46.6	+3.2
WUS	Wushi	3.18	248	Pn	Pn	09 31 45.8	+1.1
KPKS	Kokpek	3.40	288	Pg	Pb	09 31 55.6	+0.8
KPKS				Lg	Lg	09 32 38.1	
	308nm,0.5s						
KNOS	Konyrlen	3.43	305	Pg	Pb	09 31 56.3	+0.9
	53nm,0.5s						
KNOS				Lg	Lg	09 32 39.2	
	281nm,0.3s						
PRZ	Przheval'sk	3.49	272		Pn	09 31 50.1	+1.2
PRZ	Przheval'sk	3.49	272	P	Pn	09 31 50.1	+1.2
SATY	Saty	3.52	281	Pg	Pb	09 31 57.4	+0.6
	49nm,0.2s						
SATY				Lg	Lg	09 32 41.0	
	207nm,0.5s						
WMQ	Urumqi	3.61	67	Pn	Pb	09 31 58.3	0.0
WMQ				Sn	Sb	09 32 40.0	-2.2
WMQ				smax	smax		
	comp=N,160nm,0.9s						
WMQ				smax	smax		
	comp=E,180nm,1.3s						
BLB	Baldybastay	3.76	297	Pg	Pb	09 32 01.9	+1.0
	comp=E,116nm,0.4s						
BLB				Lg	Lg	09 32 48.9	
	comp=E,314nm,0.5s						
KURS	Kuram	3.77	287	Pg	Pb	09 32 02.2	+1.1
	comp=E,28nm,0.8s						
KURS				Lg	Lg	09 32 49.4	
	comp=E,151nm,0.5s						
KAPS	Kapalarasan	3.91	317	Pg	Pb	09 32 05.6	+2.1
	comp=E,148nm,0.6s						
KAPS				Lg	Lg	09 32 55.3	
	comp=E,302nm,0.3s						
TARG	Taragay, Kyrgy	4.02	261		Pn	09 31 58.3	+1.8
TARG	Taragay, Kyrgy	4.02	261	P	Pn	09 31 58.3	+1.8
ARXS	Arharly	4.23	296	Pg	Pb	09 32 10.9	+2.0
	comp=E,54nm,0.6s						
ARXS				Lg	Lg	09 33 04.3	
	comp=E,164nm,0.7s						
ARXS	Arharly	4.23	296	eP	Pb	09 32 10.9	+2.0
ARXS				eS	Sb	09 33 04.3	+4.2
MK31	Makanchi Array	4.36	352	⇑Pn	Pn	09 32 03.4	+2.7
	comp=E,4.9nm,0.3s,baz=181,slow=13,SNR=376						
MK31				⇓Pg	Pb	09 32 14.1	+3.0
	comp=E,36nm,0.6s,baz=169,slow=15,SNR=16						
MK31				⇓Sn	Sn	09 32 51.3	-0.3
	comp=E,40nm,0.5s,baz=158,slow=38,SNR=4.1						
MK31				⇑Lg	Lg	09 33 05.9	
	comp=E,161nm,0.7s,baz=166,slow=26,SNR=5.9						
MK31	Makanchi Array	4.36	352	i P	Pn	09 32 03.1	+2.4
MKAR	Makanchi Array	4.36	352	Pn	Pn	09 32 03.1	+2.4
	comp=E,5.1nm,0.3s,baz=189,slow=11,SNR=176						
MKAR				Sn	Sn	09 32 51.5	0.0
	comp=E,16nm,0.3s,baz=174,slow=16,SNR=4.6						
MKAR				Lg	Lg	09 33 07.6	
	comp=E,23nm,0.3s,baz=167,slow=29,SNR=5.9						
MKAR				LR	LR	09 33 50.9	
	comp=E,123nm,19.1s,baz=192,slow=42						
	comp=E,9.2nm,0.4s						
MKAR	Makanchi Array	4.36	352		Pn	09 32 03.9	+3.1
MAKZ	Makanchi	4.41	350		Pn	09 32 04.0	+2.6
MAKZ	Makanchi	4.41	350	⇓Pn	Pn	09 32 03.7	+2.3
	comp=E,5.6nm,0.3s						
MAKZ				⇑Pg	Pb	09 32 14.4	+2.5
	comp=E,31nm,0.6s						
MAKZ				⇑Sn	Sn	09 32 52.0	-0.8
	comp=E,112nm,0.8s						
MAKZ				⇓Lg	Lg	09 33 07.4	
	comp=E,133nm,1.1s						
MAKZ	Makanchi	4.41	350	P	Pn	09 32 03.7	+2.3
MAKZ						09 32 51.9	
KDJ	Kajisay	4.42	268		Pn	09 32 03.6	+1.9
KDJ	Kajisay	4.42	268	P	Pn	09 32 03.6	+1.9
KOTS	Kotyrbulak	4.48	282	Pg	Pb	09 32 15.4	+2.2
	comp=E,43nm,0.6s						
KOTS				Lg	Lg	09 33 12.0	
	comp=E,214nm,0.7s						
KOTS	Kotyrbulak	4.48	282	eP	Pb	09 32 15.4	+2.2
	comp=E,43nm,0.6s						
KOTS				eS	Sb	09 33 12.0	+4.6
	comp=E,214nm,0.7s						
MDOK	Medeo	4.52	281	Pg	Pb	09 32 16.2	+2.3
	comp=E,17nm,0.5s						
MDOK				Lg	Lg	09 33 13.1	
	comp=E,104nm,0.5s						
TNSS	Tian-Shan	4.58	279	Pg	Pb	09 32 17.5	+2.4
	comp=E,11nm,0.6s						
TNSS				Lg	Lg	09 33 15.4	
	comp=E,57nm,1.0s						
TNSS	Tian-Shan	4.58	279	eP	Pb	09 32 17.5	+2.4
	comp=E,11nm,0.6s						
TNSS				eS	Sb	09 33 15.4	+4.9
	comp=E,57nm,1.0s						
KNDC	Almaty	4.58	281	⇓Pg	Pg	09 32 20.0	-2.2
	comp=E,61nm,0.6s						
KNDC				⇓Lg	Lg	09 33 19.1	
	comp=E,176nm,0.8s						
CHKK	Chushkaly	4.69	289	Pg	Pb	09 32 19.1	+2.4
	comp=E,15nm,0.4s						
CHKK				Lg	Lg	09 33 18.3	
	comp=E,91nm,0.5s						
CHKK	Chushkaly	4.69	289	eP	Pb	09 32 19.1	+2.4
	comp=E,15nm,0.4s						
CHKK				eS	Sb	09 33 18.3	+5.0
	comp=E,91nm,0.5s						
IZV	Izvestkoviy	4.82	279	Pg	Pb	09 32 21.9	+2.8
	comp=E,36nm,0.4s						
IZV				Lg	Lg	09 33 23.3	
	comp=E,192nm,0.9s						
IZV	Izvestkoviy	4.82	279	eP	Pb	09 32 21.9	+2.8
	comp=E,36nm,0.4s						
IZV				eS	Sb	09 33 23.3	+6.0
	comp=E,192nm,0.9s						
KTBS	Karatobe	4.87	287	Pg	Pb	09 32 22.5	+2.7
	comp=E,24nm,0.5s						
KTBS				Lg	Lg	09 33 24.3	
	comp=E,0.5nm,0.6s						
MTBS	Maitube	4.97	280	Pg	Pb	09 32 24.2	+2.8
	comp=E,28nm,0.5s						
MTBS				Lg	Lg	09 33 26.7	
	comp=E,92nm,0.5s						
MTBS	Maitube	4.97	280	eP	Pb	09 32 24.2	+2.8
	comp=E,28nm,0.5s						
MTBS				eS	Sb	09 33 26.7	+5.5
	comp=E,92nm,0.5s						
ZSN	Zaisan	5.13	13	Pg	Pg	09 32 32.0	-0.5
	comp=E,34nm,0.5s						
ZSN				Lg	Lg	09 33 40.0	
	comp=E,141nm,0.8s						
ZSN	Zaisan	5.13	13	eP	Pg	09 32 32.0	-0.5
	comp=E,34nm,0.5s						
ZSN				eS	Sg	09 33 40.0	+1.1
	comp=E,141nm,0.8s						
KUU	Kurty	5.16	288	Pg	Pb	09 32 27.8	+3.1
	comp=E,4.3nm,0.1s						
KUU				Lg	Lg	09 33 33.0	
	comp=E,82nm,0.8s						
KUU	Kurty	5.16	288	eP	Pb	09 32 27.8	+3.1
	comp=E,4.3nm,0.1s						
KUU				eS	Sb	09 33 33.0	+6.3
	comp=E,82nm,0.8s						
KST	Kastek	5.30	279	Pg	Pb	09 32 30.2	+3.0
	comp=E,24nm,0.7s						
KST				Lg	Lg	09 33 37.4	
	comp=E,68nm,0.5s						
KST	Kastek	5.30	279	eP	Pb	09 32 30.2	+3.0
	comp=E,24nm,0.7s						
KST				eS	Sb	09 33 37.4	+6.5
	comp=E,68nm,0.5s						
BOOM	Boomskoye usch	5.31	273		Pn	09 32 14.9	+1.0
BOOM	Boomskoye usch	5.31	273	P	Pn	09 32 14.9	+1.0
KRBS	Karabastau	5.59	285	Pg	Pb	09 32 36.9	+4.8
	comp=E,11nm,0.5s						
KRBS				Lg	Lg	09 33 48.9	
	comp=E,35nm,0.5s						
KSH	Kashi	6.16	244	Pn	Pn	09 32 31.5	+5.9
KSH				Sn	Sb	09 33 48.8	-6.9
KSH				smax	smax		
	comp=N,59nm,0.8s						
KSH				smax	smax		
	comp=E,47nm,0.7s						
AAK	Ala-Archa	6.37	274	Pn	Pn	09 32 31.6	+3.1
	comp=E,0.8nm,0.3s,baz=96,slow=7.9,SNR=5.5						
AAK				Sn	Sn	09 33 41.5	+0.1
	comp=E,2.5nm,0.3s,baz=62,slow=15,SNR=3.9						
AAK				Lg	Lg	09 34 13.7	
	comp=E,3.3nm,0.3s,baz=187,slow=23,SNR=4.2						
	comp=E,1.1nm,0.3s						
AAK	Ala-Archa	6.37	274		Pn	09 32 29.1	+0.6
AAK	Ala-Archa	6.37	274	⇑Pg	Pb	09 32 51.1	+5.6
	comp=E,8.3nm,0.7s						
AAK				⇓Lg	Lg	09 34 16.7	
	comp=E,28nm,0.7s						
AAK	Ala-Archa	6.37	274	⇑iP	Pn	09 32 32.0	+3.5
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MRKS	Merke	7.30	275	Pg	Pb	09 33 08.5	+7.2
	comp=Z,10nm,0.7s						
MRKS				Lg	Lg	09 34 43.2	
	comp=Z,20nm,0.6s						
MRKS	Merke	7.30	275	eP	Pb	09 33 08.5	+7.2
	comp=Z,10nm,0.7s						
MRKS				eS	Sg	09 34 43.2	-5.6
	comp=Z,20nm,0.6s						
KURBB	Kurchatov Arra	8.74	340	Pn	Pn	09 33 01.2	+0.4
	comp=Z,0.6nm,0.3s,baz=157,slow=13,SNR=8.2						
KURBB				Sn	Sn	09 34 35.8	-3.5
	comp=Z,0.8nm,0.3s,baz=151,slow=24,SNR=10.0						
KURBB				Lg	Lg	09 35 28.0	
	comp=Z,0.6nm,0.3s,baz=162,slow=31,SNR=5.1						
KURBB				LR	LR	09 36 41.2	
	comp=Z,97nm,21.5s,baz=160,slow=40						
	comp=Z,4.1nm,0.4s						
KURBB	Kurchatov Arra	8.74	340	⇓Pn	Pn	09 32 58.4	-2.4
	comp=Z,14nm,0.7s						
KURBB	Kurchatov Arra	8.74	340	P	Pn	09 32 57.3	-3.5
KURK	Kurchatov	8.80	341		Pn	09 32 58.3	-3.3
KURK	Kurchatov	8.80	341	⇓Pn	Pn	09 33 01.4	-0.2
	comp=Z,3.2nm,0.8s						
KURK	Kurchatov	8.80	341	P	Pn	09 33 01.2	-0.4
KURK						09 34 35.8	
DRK	Karamyk	9.07	255	Pn	Pn	09 33 06.1	+0.5
DRK	Karamyk	9.07	255	P	Pn	09 33 06.1	+0.5
KK31	Karatay Array	9.29	278	Pn	Pn	09 33 09.2	+0.8
KK31	Karatay Array	9.29	278	⇓Pg	Pn	09 33 44.7	+36
	comp=Z,2.1nm,0.6s,baz=77,slow=16,SNR=4.5						
KK31				⇑Lg	Lg	09 35 48.0	
	comp=Z,10nm,0.6s,baz=84,slow=25,SNR=4.9						
KK31	Karatay Array	9.29	278	P	Pn	09 33 09.2	+0.8
KKAR	Karatay Array	9.29	278	Pn	Pn	09 33 09.2	+0.8
KKAR	Karatay Array	9.29	278	P	Pn	09 33 09.2	+0.8
BRLS	Borolday	9.79	278	Pg	Pn	09 33 56.8	+42
	comp=Z,5.3nm,1.1s						
BRLS				Lg	Lg	09 36 06.4	
	comp=Z,8.7nm,1.0s						
BRLS	Borolday	9.79	278	eP	Pn	09 33 56.8	+42
	comp=Z,5.3nm,1.1s						
BRLS				eS		09 36 06.4	
	comp=Z,8.7nm,1.0s						
MANEM	Manem	10.06	244		Pn	09 33 19.9	+0.7
GAR	Garm	10.32	255		Pn	09 33 23.4	+0.8
GOMU	GeErMu	11.01	121	P	Pn	09 33 33.1	+0.8
GOMU				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CHGR	Chuyangaron	11.28	255	Pn	Pn	09 33 37.3	+1.5
CHGR	Chuyangaron	11.28	255	P	Pn	09 33 37.3	+1.5
ZAA0	Zalesovo Array	11.54	5		Pn	09 33 37.2	-1.8
ZALV	Zalesovo Beam	11.54	5	Pn	Pn	09 33 39.0	0.0
	comp=Z,0.7nm,0.3s,baz=190,slow=13,SNR=16						
ZALV				Sn	Sn	09 35 42.9	-4.9
	comp=Z,0.8nm,0.3s,baz=192,slow=20,SNR=3.6						
ZALV				Lg	Lg	09 36 57.4	
	baz=204,slow=24						
ZALV				LR	LR	09 38 21.9	
	comp=Z,67nm,20.1s,baz=4.5,slow=39						
	comp=Z,3.4nm,0.5s						
ZALV	Zalesovo Beam	11.54	5		Pn	09 33 37.2	-1.8
NIL	Nilore	11.74	225		Pn	09 33 43.7	+1.7
NIL	Nilore	11.74	225	P	Pn	09 33 43.7	+1.7
SHAA	Shahritus	12.50	252	Pn	Pn	09 33 53.6	+1.3
BVAR	Borovoye Array	13.57	325	Pn	Pn	09 34 05.6	-1.2
	comp=Z,0.8nm,0.5s,baz=133,slow=10,SNR=1.4						
BVAR				Lg	Lg	09 38 02.5	
	comp=Z,0.1nm,0.3s,baz=144,slow=28,SNR=4.2						
BVAR				LR	LR	09 39 23.0	
	comp=Z,90nm,18.4s,baz=127,slow=38						
LSA	Lhasa	14.29	151	Pn	Pn	09 34 17.3	0.0
LSA	Lhasa	14.29	151	P	Pn	09 34 17.3	0.0
EVN	Everest	14.79	167		Pn	09 34 24.4	+0.1
SONM	Songino Array	17.24	64	P	P	09 34 56.6	-0.3
	comp=Z,0.5nm,0.3s,baz=262,slow=13,SNR=11						
	comp=Z,2.2nm,0.6s						
SONM	Songino Array	17.24	64	P	Pn	09 34 53.5	-1.8
AB31	Akbulak array	17.47	301		Pn	09 34 57.7	-0.3
AB31	Akbulak array	17.47	301	P	Pn	09 34 56.5	-1.5
	comp=Z,1.6nm,0.7s,baz=101,slow=13,SNR=16						
AB31	Akbulak array	17.47	301	P	Pn	09 34 56.5	-1.5
ABKAR	Akbulak array	17.47	301	P	Pn	09 34 57.0	-1.0
ULN	Ulaanbaatar	17.68	64	Pn	Pn	09 34 58.4	-2.4
ULN	Ulaanbaatar	17.68	64	⇓iP	P	09 35 02.0	+0.2
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AKTO	Aktyubinsk	18.97	303	P	P	09 35 15.8	0.0
	comp=Z,0.2nm,0.3s,baz=108,slow=13,SNR=6.3						
	comp=Z,2.7nm,0.8s						
AKTO	Aktyubinsk	18.97	303	⇑P	P	09 35 16.6	+0.8
	comp=Z,3.4nm,1.1s						
ARTI	Arti	21.12	320	P	P	09 35 38.6	-0.4
	comp=Z,4.7nm,0.5s,baz=135,slow=8.4,SNR=9.4						
	comp=Z,4.7nm,0.5s						
ARTI	Arti	21.12	320		P	09 35 39.0	0.0
ARTI				IAmb	IAmb	09 35 39.7	
	comp=Z,9.3nm,0.5s						
ARTI	Arti	21.12	320	d iP	P	09 35 38.2	-0.8
ARTI				S	S	09 39 34.7	+1.0
ARTI				SS	SnSn	09 39 56.6	+1.6
ARTI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC	Hu-ho-hao-te	21.27	85	eP	P	09 35 41.4	+0.4
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
PZH	PanZhiHua	22.05	130	P	P	09 35 50.6	+1.2
BJT	Baijiatuau	24.88	84	P	P	09 36 16.0	-1.2
BJT				IAmb	IAmb	09 36 39.6	
	comp=Z,4.5nm,0.6s						
BJT	Baijiatuau	24.88	84	P	P	09 36 16.0	-1.2
BJT				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BELG	Belogornoye	25.74	305	⇓iP	P	09 36 23.5	-1.3
BELG				pmax	pmax		
	comp=Z,9.0nm,3.8s						
NRIK	Noril'sk	27.03	3	P	P	09 36 35.4	-0.9
	comp=Z,2.7nm,0.5s,baz=175,slow=7.5,SNR=5.9						
	comp=Z,2.7nm,0.5s						
NRIK	Noril'sk	27.03	3		P	09 36 36.2	-0.1
NRIK				IAmb	IAmb	09 36 55.2	
	comp=Z,8.7nm,1.1s						
NRIK	Noril'sk	27.03	3	⇓iP	P	09 36 36.2	-0.1
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BRTR	Keskin Array B	36.97	283	P	P	09 38 04.2	+0.2
	comp=Z,0.7nm,0.7s,baz=103,slow=10,SNR=4.5						
	comp=Z,0.7nm,0.7s						
BRTR	Keskin Array B	36.97	283	i P	P	09 38 05.1	+1.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	FINESS Array B	38.42	320	P	P	09 38 15.2	-0.5
	comp=Z,2.6nm,0.7s,baz=98,slow=9.5,SNR=10						
	comp=Z,2.6nm,0.7s						
FINES	FINESS Array B	38.42	320	P	P	09 38 14.7	-1.0
FINES	FINESS Array B	38.42	320	i P	P	09 38 16.2	+0.4
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARCES	ARCESS Array B	39.72	332	P	P	09 38 25.9	-0.6
	comp=Z,2.8nm,0.5s,baz=88,slow=8.8,SNR=24						
	comp=Z,2.8nm,0.5s						
ARCES	ARCESS Array B	39.72	332	P	P	09 38 26.5	-0.1
ARCES				IAmb	IAmb	09 38 46.8	
	comp=Z,3.3nm,0.8s						
ARCES	ARCESS Array B	39.72	332	P	P	09 38 26.5	-0.1
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SPITS	Spitsbergen Ar	44.06	344	P	P	09 39 02.0	0.0
	comp=Z,4.4nm,0.9s,baz=102,slow=6.1,SNR=1.3						
	comp=Z,4.4nm,0.9s						
SPITS	Spitsbergen Ar	44.06	344	P	P	09 39 02.0	0.0
HFS	Hagfors	44.55	318	P	P	09 39 05.7	-0.3
	comp=Z,7.0nm,1.0s,baz=128,slow=9.6,SNR=5.0						
	comp=Z,7.0nm,1.0s						
NB2	NORSAR Subarra	45.61	320	P	P	09 39 13.8	-0.7
	comp=Z,1.0nm,0.5s,baz=80,slow=8.6						
NOA	NORSAR Array B	45.61	320	P	P	09 39 13.8	-0.7
	comp=Z,2.0nm,0.7s,baz=80,slow=8.0,SNR=5.2						
	comp=Z,2.0nm,0.7s						
A36M	Sachs Harbour	64.09	9		P	09 41 27.9	-0.2
J19K	Poorman	64.24	25	P	P	09 41 29.1	-0.1
J19K				IAmb	IAmb	09 41 30.7	
	comp=Z,4.2nm,1.2s						
F25K	Christian Rive	64.25	19	P	P	09 41 30.1	+0.9
F25K				IAmb	IAmb	09 41 49.2	
	comp=Z,1.4nm,0.9s						
J18K	Innoko River	64.27	26	P	P	09 41 29.9	+0.6
K17K	Iditarod	64.28	27	P	P	09 41 30.0	+0.6
E28M	Babbage River	64.77	16	P	P	09 41 32.9	+0.3
E28M				IAmb	IAmb	09 41 50.2	
	comp=Z,1.9nm,1.0s						
L18K	Granite Mounta	65.16	27	P	P	09 41 36.0	+0.8
L18K				IAmb	IAmb	09 41 50.8	
	comp=Z,3.3nm,1.0s						
ILAR	Eielson Array	66.17	21	P	P	09 41 40.8	-0.8
	comp=Z,0.6nm,0.7s,baz=318,slow=5.9,SNR=7.5						
	comp=Z,0.6nm,0.7s						
ILAR	Eielson Array	66.17	21	P	P	09 41 41.2	-0.4
ILAR	Eielson Array	66.17	21	P	P	09 41 41.2	-0.4
INK	Inuvik	66.18	14	P	P	09 41 42.0	+0.4
INK				IAmb	IAmb	09 42 10.5	
	comp=Z,1.0nm,0.9s						
INK	Inuvik	66.18	14	P	P	09 41 42.0	+0.4
INK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
YKA	Yellowknife Ar	74.41	8	P	P	09 42 31.7	-0.4
	comp=Z,0.5nm,0.7s,baz=337,slow=5.8,SNR=8.4						
	comp=Z,0.5nm,0.7s						
YKA	Yellowknife Ar	74.41	8	P	P	09 42 32.0	-0.1
TORD	Torodi Ar. Bea	74.96	274	P	P	09 42 35.3	-0.7
	comp=Z,0.8nm,0.3s,baz=36,slow=5.7,SNR=1.7						
	comp=Z,0.8nm,0.3s						
WRA	Warramunga Arr	78.00	131	P	P	09 42 54.6	+1.6
	comp=Z,0.2nm,0.5s,baz=320,slow=5.7,SNR=1.1						
	comp=Z,0.2nm,0.5s						
ASAR	Alice Springs	80.77	134	P	P	09 43 08.7	+0.5
	comp=Z,0.5nm,0.7s,baz=315,slow=4.9,SNR=2.6						
	comp=Z,0.5nm,0.7s						
DBIC	Dimbokro	84.05	274	P	P	09 43 24.9	-0.6
	comp=Z,2.1nm,0.7s,baz=59,slow=5.9,SNR=1.4						
	comp=Z,2.1nm,0.7s						
DBIC	Dimbokro	84.05	274	P	P	09 43 25.5	-0.1
DBIC	Dimbokro	84.05	274	P	P	09 43 25.5	-0.1
DBIC				pmax	pmax		
	comp=Z,8.0nm,1.2s						

IDC 11 09:33:49.9±999.0**, 44°.31N×35°.76E, h0km, Error ellipse: s-maj=8116.0km s-min=328.0km az=59.0, Crimea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	16.25	60	I	I	11 10 51.7	
	0.2nm,0.6s,baz=256,slow=296,SNR=2.8						
I46RU	ZALESOVO INFRA	32.91	55	I	I	12 54 47.6	
	baz=273,slow=318,SNR=1.2						
I34MN	SONGINO INFRAS	47.58	59	I	I	14 25 20.0	
	baz=295,slow=323,SNR=0.4						

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*IDC **11** 09:39:02.2±0.4, 37°.74N×141°.76E, h0km, mb5.1/34, mbtmp5.1/38, ML4.3/2, MS4.6/67, Error ellipse: s-maj=12.7km s-min=10.2km az=106.0*

*BJI **11** 09:39:05.7, 37°.73N×141°.92E, h57km, mB5.2/57, mb5.4/89, Ms4.9/93, Ms7 4.9/86*

*MOS **11** 09:39:07.5±0.9, 37°.95N×141°.70E, h38km, mb5.6/95, Error ellipse: s-maj=5.8km s-min=3.6km az=112.8*

*NIED **11** 09:39:07.6, 37°.73N×141°.80E, h41km, MW5.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}6.22; $M_{\theta\theta}$0.56; $M_{\phi\phi}$-6.78; $M_{r\theta}$1.23; $M_{\theta\phi}$-2.12; $M_{\phi r}$6.34; Fault plane solution: $M_0$9.37000×10^{16} NP1: ϕ_s199.00000°, δ23.00000°, λ97.00000°. NP2: ϕ_s12.00000°, δ67.00000°, λ87.00000°.*

*JMA **11** 09:39:07.6±0.1, 37°.7N±0°.3×141°.8E±0°.6, h41km±1km, MD5.3/40, MW5.3/40, E OFF FUKUSHIMA PREF*

JMA Felt III J1 at E OFF FUKUSHIMA PREF .

*NEIC **11** 09:39:08.2, 37°.56N×141°.96E, h50^{km}, Moment Tensor Solution. Duration: 2^{s}2 Moment tensor: Scale 10^{16}Nm; M_{rr}6.86; $M_{\theta\theta}$-0.84; $M_{\phi\phi}$-6.02; $M_{r\theta}$0.72; $M_{\theta\phi}$-2.19; $M_{\phi r}$5.24; Fault plane solution: $M_0$8.65000×10^{16} NP1: ϕ_s207.14000°, δ26.81000°, λ102.93000°. NP2: ϕ_s12.72000°, δ63.93000°, λ83.55000°. Principal axes: T 8.7219, Plg70.0000°, Azm269.0000°; N -0.1504, Plg6.0000°, Azm16.0000°; P -8.5716, Plg19.0000°, Azm108.0000°;*

*GFZ **11** 09:39:08.8, 37°.70N×141°.87E, h53^{km}, MW5.2, Moment Tensor Solution. s77 Moment tensor: M_{rr}5.21; $M_{\theta\theta}$0.72; $M_{\phi\phi}$-5.93; $M_{r\theta}$0.53; $M_{\theta\phi}$-3.29; $M_{\phi r}$5.46; Fault plane solution: NP1: ϕ_s222.00000°, δ27.00000°, λ120.00000°. NP2: ϕ_s8.00000°, δ67.00000°, λ75.00000°. Principal axes: T 7.5300, Plg65.0000°, Azm253.0000°; N 1.6900, Plg13.0000°, Azm14.0000°; P -9.2200, Plg20.0000°, Azm109.0000°;*

*NEIC **11** 09:39:08.2, 37°.76N×141°.84E, h50^{km}*

*NEIC **11** 09:39:08.9±1.3, 37°.76N±0°.06×141°.83E±0°.10, h45^{km}±4^{km}, mb5.3/436, Mww5.2/20, Error ellipse: s-maj=11.7km s-min=8.3km az=112.0*

*GCMT **11** 09:39:11.2±0.1, 37°.71N±0°.01×141°.80E±0°.01, h41^{km}, MW5.3/135, Moment Tensor Solution. s116,c192; s135,c246; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.79±.02; $M_{\theta\theta}$-0.03±.01; $M_{\phi\phi}$-0.75±.01; $M_{r\theta}$0.14±.01; $M_{\theta\phi}$-0.25±.01; $M_{\phi r}$0.80±.02; Best double couple: $M_0$1.14700×10^{17} NP1: ϕ_s203.00000°, δ23.00000°, λ100.00000°. NP2: ϕ_s12.00000°, δ67.00000°, λ86.00000°. Principal axes: T 1.1290, Plg67.0000°, Azm274.0000°; N 0.0350, Plg4.0000°, Azm13.0000°; P -1.1650, Plg22.0000°, Azm105.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **11** 09:39:12.8, 38°.16N×141°.65E, h47^{km}±12^{km}, mb5.3, Ms4.9*

ISC 11 09:39:08.4±0.3**, 37°.75N**±0°.03×**141°.84E**±0°.03**, h44**^{km}±2^{km}**, h44**^{km}**:pP-P, n1400, σ1^{s}40**/1231**, mb5.3**/401**, MS4.7**/97**, 71C-56D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.64	332	⇓iP	Pn	09 39 20.3	-0.8
JIKH				⇓S	Sn	09 39 28.9	-1.2
JIKH	Ishinomakikobu	0.64	332	A	A	09 39 20.3	
	comp=N,105nm,1.4s,comp=E,294nm,0.9s						
JMST	Minamisoumatoc	0.76	269	⇓iP	Pn	09 39 21.4	-1.2
JMST				⇓S	Sn	09 39 31.2	-1.8
JMST	Minamisoumatoc	0.76	269	A	A	09 39 21.4	
	comp=N,151nm,1.0s,comp=E,194nm,0.9s						
JIO	Ouri	0.81	331	⇓iP	Pn	09 39 22.7	-0.6
JIO				⇓S	Sn	09 39 32.9	-1.3
JIO	Ouri	0.81	331	A	A	09 39 22.7	
	comp=N,76nm,1.8s,comp=E,143nm,1.1s						
JMM	Marumori	0.84	278	⇓iP	Pn	09 39 22.8	-1.0
JMM				⇓S	Sn	09 39 33.8	-1.2
JMM	Marumori	0.84	278	A	A	09 39 22.8	
	comp=N,87nm,1.9s,comp=E,109nm,0.9s						
JFK	Kawauchi	0.86	244	⇓iP	Pn	09 39 22.7	-1.4
JFK	Kawauchi	0.86	244	A	A	09 39 22.7	
	comp=N,160nm,1.9s,comp=E,109nm,1.4s						
ONAJ	Iwakimizuishiy	1.05	233	⇓iP	Pn	09 39 25.3	-1.4
ONAJ				⇓S	Sn	09 39 38.6	-1.7
ONAJ	Iwakimizuishiy	1.05	233	A	A	09 39 25.3	
	comp=N,210nm,1.7s,comp=E,311nm,0.3s						
JKMT	Kesennumamotoy	1.10	345	⇓iP	Pn	09 39 26.9	-0.4
JKMT				⇓S	Sn	09 39 40.4	-1.0
JKMT	Kesennumamotoy	1.10	345	A	A	09 39 26.9	
	comp=N,55nm,3.7s,comp=E,86nm,3.9s						
JOU	Okura	1.12	304	⇓iP	Pn	09 39 27.1	-0.5
JOU				⇓S	Sn	09 39 41.9	+0.1
JOU	Okura	1.12	304	A	A	09 39 27.1	
	comp=N,198nm,2.3s,comp=E,142nm,1.1s						
JOFO	Osakifurukawao	1.13	320	A	A	09 39 27.2	
	comp=N,454nm,2.8s,comp=E,404nm,1.5s						
JOTO	OTAMA OYAMA	1.21	262	i P	Pn	09 39 28.7	-0.2
JOTO				S	Sn	09 39 43.9	-0.3
JOTO	OTAMA OYAMA	1.21	262	A	A	09 39 28.7	
	comp=N,362nm,4.2s,comp=E,216nm,1.4s						
JFFD	Fukushimafurud	1.21	238	A	A	09 39 28.0	
	comp=N,78nm,2.9s,comp=E,73nm,3.1s						
JMK	Ichinoseki	1.30	338	⇓iP	Pn	09 39 29.9	-0.1
JMK				⇓S	Sn	09 39 45.7	-0.5
JMK	Ichinoseki	1.30	338	A	A	09 39 29.9	
	comp=N,45nm,4.4s,comp=E,77nm,3.3s						
OFUJ	Ofunato	1.34	354	A	A	09 39 30.7	
	comp=N,43nm,1.4s,comp=E,60nm,4.7s						
JYAR	Yonezawaarcadi	1.36	277	A	A	09 39 30.2	
	comp=N,210nm,1.0s,comp=E,191nm,1.5s						
JYS	Shirataka	1.48	289	⇓iP	Pn	09 39 32.2	-0.3
JYS				⇓eS	Sn	09 39 49.8	-0.9
JYS	Shirataka	1.48	289	A	A	09 39 32.2	
	comp=N,94nm,1.5s,comp=E,105nm,1.9s						
JHO	Hitachi	1.52	222	A	A	09 39 32.6	
	comp=N,52nm,0.9s,comp=E,28nm,2.4s						
JYK	Kaneyama	1.65	315	⇓iP	Pn	09 39 34.8	-0.1
JYK	Kaneyama	1.65	315	A	A	09 39 34.8	
	comp=N,37nm,3.0s,comp=E,46nm,2.1s						
JSB	Shiboa	1.72	244	A	A	09 39 35.4	
	comp=N,104nm,1.1s,comp=E,177nm,3.1s						
JHYU	Hitachinakayam	1.73	216	A	A	09 39 35.5	
	comp=N,52nm,1.7s,comp=E,45nm,2.6s						
JFY	Yanaizu	1.73	259	⇓iP	Pn	09 39 35.7	-0.3
JFY	Yanaizu	1.73	259	A	A	09 39 35.7	
	comp=N,36nm,2.2s,comp=E,39nm,4.6s						
JOM	Ohasama	1.78	346	⇓iP	Pn	09 39 36.8	+0.2
JOM	Ohasama	1.78	346	A	A	09 39 36.8	
	comp=N,25nm,3.1s,comp=E,54nm,1.5s						
MIYJ	Miyakonagasawa	1.83	359	A	A	09 39 37.7	
	comp=N,33nm,1.2s,comp=E,34nm,3.1s						
JYA	Atsumi	1.88	297	A	A	09 39 38.0	
	comp=N,47nm,0.8s,comp=E,51nm,2.0s						
JRG	Rokugo	1.90	330	A	A	09 39 38.6	
	comp=N,70nm,1.4s,comp=E,77nm,1.3s						
JYYZ	Yamagatayuza	1.97	311	A	A	09 39 39.3	
	comp=N,119nm,2.6s,comp=E,83nm,2.4s						
JNS	Sasagawa	2.00	273	A	A	09 39 39.6	
	comp=N,21nm,2.1s,comp=E,29nm,1.9s						
JYT	Yasato	2.01	222	A	A	09 39 39.6	
	comp=N,79nm,1.5s,comp=E,72nm,0.4s						
JIHU	Itakohorinouch	2.07	211	A	A	09 39 40.5	
	comp=N,191nm,2.6s,comp=E,312nm,1.5s						
JSZI	Iwateshizukuis	2.11	341	A	A	09 39 41.6	
	comp=N,138nm,2.0s,comp=E,136nm,2.8s						
JAW	Awa shima	2.17	290	A	A	09 39 42.0	
	comp=N,27nm,5.0s,comp=E,36nm,3.7s						
JCAJ	Choshiashikaji	2.17	202	A	A	09 39 42.0	
	comp=N,76nm,3.0s,comp=E,52nm,1.3s						
JYW	Yuwa	2.20	325	A	A	09 39 42.8	
	comp=N,92nm,0.8s,comp=E,108nm,2.0s						
JKZ	Kuzumaki	2.27	350	A	A	09 39 44.1	
	comp=N,29nm,0.9s,comp=E,69nm,1.9s						
JUON	Uonuma	2.28	257	A	A	09 39 43.5	
	comp=N,29nm,5.4s,comp=E,14nm,1.9s						
JKT	Katashina	2.29	245	A	A	09 39 43.6	
	comp=N,33nm,4.2s,comp=E,23nm,2.4s						
JTB	Tobi-shima	2.30	310	A	A	09 39 44.2	
	comp=N,19nm,3.7s,comp=E,20nm,3.9s						
JSMT	Sammumatsuo	2.38	209	A	A	09 39 44.9	
	comp=N,119nm,2.6s,comp=E,116nm,4.4s						
JKEN	Kujiedanarisaw	2.46	358	A	A	09 39 46.7	
	comp=N,90nm,1.0s,comp=E,102nm,1.9s						
JIZZ	Izumozaki	2.50	266	A	A	09 39 46.6	
	comp=N,80nm,2.9s,comp=E,114nm,3.8s						
JAH	Hinai	2.61	339	A	A	09 39 48.9	
	comp=N,72nm,3.0s,comp=E,108nm,3.5s						
JANG	Nango	2.63	355	A	A	09 39 49.3	
	comp=N,22nm,2.3s,comp=E,27nm,1.9s						
TOK	Tokyo	2.65	220	A	A	09 39 48.8	
	comp=N,112nm,2.9s,comp=E,100nm,4.1s						
JCCN	Chibachonan	2.69	209	A	A	09 39 49.4	
	comp=N,97nm,4.1s,comp=E,83nm,3.2s						
I30JP	ISUMI INFRASON	2.73	207	Pn	Pn	09 39 50.0	+0.3
	baz=50,slow=25						
I30JP				I	I	09 51 30.0	
	baz=18,slow=314,SNR=0.8						
JGK	Kuni	2.82	246	A	A	09 39 51.1	
	comp=N,52nm,3.4s,comp=E,28nm,1.9s						
JNTW	Noshirotokiwa	2.84	333	A	A	09 39 52.0	
	comp=N,141nm,2.5s,comp=E,244nm,4.1s						
JSD	Sado	2.85	277		Pn	09 39 51.1	-0.3
JSD	Sado	2.85	277	P	Pn	09 39 52.0	+0.7
JKUC	kamogawauchiur	2.90	208	A	A	09 39 52.4	
	comp=N,72nm,2.0s,comp=E,48nm,2.4s						
JRY	Ryogami san	2.92	235	A	A	09 39 52.6	
	comp=N,22nm,3.1s,comp=E,20nm,3.2s						
JJN	Nakama	3.00	259	A	A	09 39 53.7	
	comp=N,33nm,4.6s,comp=E,46nm,3.3s						
JSGW	Sagamiharawaka	3.01	225	A	A	09 39 53.9	
	comp=N,27nm,1.5s,comp=E,41nm,1.6s						
JOG3	Oga3	3.06	316	A	A	09 39 49.7	
	comp=N,53nm,4.2s,comp=E,43nm,2.8s						
JYO	Yokosk	3.07	216	A	A	09 39 54.7	
	comp=N,63nm,1.7s,comp=E,90nm,4.2s						
JTM	Tenmabayashi	3.09	349	A	A	09 39 55.8	
	comp=N,21nm,4.7s,comp=E,31nm,4.3s						
JHHS	Hirosakihyakuz	3.12	339	A	A	09 39 56.0	
	comp=N,94nm,4.4s,comp=E,99nm,4.8s						
TATJ	Tateyama 2	3.14	211	A	A	09 39 55.6	
	comp=N,172nm,2.5s,comp=E,149nm,2.0s						
MJAR	Matsushiro Arr	3.14	249	Pn	Pn	09 39 55.9	+0.5
	comp=E,14nm,0.3s,baz=61,slow=11,SNR=495						
MJAR				Sn	Sn	09 40 35.6	+3.9
	comp=E,19nm,0.3s,baz=98,slow=8.0,SNR=5.1						
MJAR				LR	LR	09 41 25.6	
	comp=E,20µm,20.3s,baz=77,slow=46						
MJAR	Matsushiro Arr	3.14	249		Pn	09 39 56.8	+1.4
MJAR	Matsushiro Arr	3.14	249	P	Pn	09 39 56.8	+1.4
MAJO	Matsushiro	3.15	249		Pn	09 39 56.6	+1.2
MAJO	Matsushiro	3.15	249	P	Pn	09 39 56.9	+1.5
MAJO	Matsushiro	3.15	249	d iP	Pn	09 39 56.5	+1.1
MJB9	Matsu-Tunnel	3.15	249		Pn	09 39 57.5	+2.1
JIW	Iwasaki	3.18	334	A	A	09 39 56.8	
	comp=N,23nm,3.6s,comp=E,41nm,3.0s						
JARK	Aomorirokkasho	3.28	354	A	A	09 39 58.3	
	comp=N,15nm,1.1s,comp=E,29nm,1.3s						
JOD2	Odawara 2	3.33	223	A	A	09 39 58.3	
	comp=N,49nm,1.6s,comp=E,33nm,2.3s						
JYN	Shimob	3.48	231	A	A	09 40 00.4	
	comp=N,44nm,1.7s,comp=E,58nm,1.9s						
JSI2	Shiura 2	3.49	342	A	A	09 40 01.3	
	comp=N,30nm,4.0s,comp=E,35nm,3.0s						
JNT	Takato	3.51	239	A	A	09 40 01.0	
	comp=N,16nm,4.9s,comp=E,14nm,4.6s						
JAHD	Aomorihigashid	3.53	354	A	A	09 40 02.0	
	comp=N,55nm,2.0s,comp=E,48nm,2.5s						
JSZ	Suzu	3.57	267	A	A	09 40 01.8	
	comp=N,19nm,3.2s,comp=E,14nm,4.7s						
JIM2	Oshima 3	3.60	214	A	A	09 40 02.2	
	comp=N,34nm,1.3s,comp=E,30nm,3.8s						
JFNN	Fujinakano	3.60	226	A	A	09 40 02.2	
	comp=N,40nm,3.6s,comp=E,49nm,2.2s						
JHTM	Izuhatsuma	3.60	220	A	A	09 40 02.2	
	comp=N,57nm,1.9s,comp=E,46nm,1.5s						
JOT	Ohata	3.68	351	A	A	09 40 04.1	
	comp=N,14nm,2.6s,comp=E,14nm,3.5s						
JTT	Ttatey	3.78	254	A	A	09 40 04.7	
	comp=N,25nm,6.5s,comp=E,20nm,3.6s						
JTHY	Toshimahigashi	3.83	213	A	A	09 40 05.4	
	comp=N,31nm,1.7s,comp=E,29nm,2.4s						
JIZS	Izushimoda	3.86	219	A	A	09 40 05.8	
	comp=N,17nm,2.9s,comp=E,13nm,1.3s						
JHG	Hegura jima	3.90	273	A	A	09 40 06.5	
	comp=N,9.0nm,2.8s,comp=E,7.0nm,2.2s						
JSR	Shiriuchi	3.93	344	A	A	09 40 07.6	
	comp=N,19nm,2.1s,comp=E,20nm,4.2s						
SHZ3	Shizuoka 3	3.97	229	A	A	09 40 07.4	
	comp=N,29nm,2.3s,comp=E,26nm,2.0s						
JNY	Yasuok	4.00	235	A	A	09 40 07.7	
	comp=N,30nm,1.2s,comp=E,26nm,3.1s						
JSKK	Shikinejimakit	4.02	213	A	A	09 40 08.1	
	comp=N,16nm,4.5s,comp=E,20nm,2.2s						
JJH	Hakui	4.12	260	A	A	09 40 09.5	
	comp=N,11nm,5.6s,comp=E,8.0nm,4.8s						
JMYK	Miyake Tsubota	4.12	208	A	A	09 40 09.6	
	comp=N,16nm,3.6s,comp=E,15nm,4.3s						
JKB	Kayabe	4.18	352	A	A	09 40 11.1	
	comp=N,10.0nm,2.7s,comp=E,17nm,2.6s						
JGF	Kuroka	4.20	241		Pn	09 40 11.9	+2.0
JGF	Kuroka	4.20	241	P	Pn	09 40 12.2	+2.3
JGF	Kuroka	4.20	241	A	A	09 40 10.5	
	comp=N,12nm,2.5s,comp=E,12nm,2.1s						
JMKN	Mikurajimanish	4.26	206	A	A	09 40 11.5	
	comp=N,9.0nm,3.5s,comp=E,10.0nm,4.3s						
JSG	Sagara	4.26	225		Pn	09 40 12.9	+2.2
JSG	Sagara	4.26	225	P	Pn	09 40 13.4	+2.7
JSG	Sagara	4.26	225	A	A	09 40 11.5	
	comp=N,29nm,3.5s,comp=E,25nm,1.6s						
JKKS	Kakegawashinom	4.32	227	A	A	09 40 12.3	
	comp=N,25nm,2.6s,comp=E,37nm,1.9s						
ERM	Erimo	4.38	13		Pn	09 40 12.3	0.0
ERM	Erimo	4.38	13	P	Pn	09 40 12.5	+0.2
ERM	Erimo	4.38	13	P	Pn	09 40 12.3	0.0
JEM	Erimo	4.38	13	P	Pn	09 40 17.5	+5.2
JEM	Erimo	4.38	13	S	Sn	09 41 06.0	+4.0
HMMJ	Hamamatsu 2	4.41	230	A	A	09 40 13.5	
	comp=N,10.0nm,2.5s,comp=E,8.0nm,2.6s						
JAO	Obara	4.45	238	A	A	09 40 14.1	
	comp=N,14nm,2.3s,comp=E,13nm,2.1s						
JSSY	Shinshiroyabe	4.50	232	A	A	09 40 14.8	
	comp=N,9.0nm,6.5s,comp=E,6.0nm,2.6s						
JYM2	Yakumo 2	4.51	346	A	A	09 40 15.7	
	comp=N,13nm,2.2s,comp=E,13nm,3.2s						
INU	Inuyama	4.56	240		Pn	09 40 16.6	+1.7
INU	Inuyama	4.56	240	P	Pn	09 40 16.3	+1.4
JNBK	Urakawa-nobuka	4.58	8	A	A	09 40 16.9	
	comp=N,19nm,3.1s,comp=E,19nm,4.2s						
JKG	Kaga	4.65	253	A	A	09 40 16.9	
	comp=N,9.0nm,3.6s,comp=E,5.0nm,2.6s						
JTHR	Tokachihiroo	4.67	13	A	A	09 40 18.2	
	comp=N,8.0nm,4.4s,comp=E,7.0nm,3.1s						
JSHD	Hidakashinhida	4.68	6	A	A	09 40 18.2	
	comp=N,22nm,1.8s,comp=E,25nm,1.9s						
JICN	Ichinomiyachia	4.71	240	A	A	09 40 17.7	
	comp=N,29nm,2.1s,comp=E,16nm,1.9s						
JIAM	Iburiatsuma	4.87	1	A	A	09 40 20.8	
	comp=N,21nm,2.1s,comp=E,22nm,4.7s						
JHST	Hiyamasetana	4.91	343	A	A	09 40 21.2	
	comp=N,8.0nm,2.8s,comp=E,15nm,4.4s						
JAA	Atsumi	4.91	232	A	A	09 40 20.6	
	comp=N,8.0nm,5.5s,comp=E,8.0nm,2.3s						
JHJ2	Mitsune	4.91	200		Pn	09 40 20.0	+0.3
JHJ2	Mitsune	4.91	200	P	Pn	09 40 20.1	+0.4
JHJ2	Mitsune	4.91	200	S	Sn	09 41 14.6	-0.6
JHJ	Hachijo jima 2	4.92	201	Pn	Pn	09 40 19.0	-0.7
	comp=E,764nm,0.3s,baz=94,slow=5.6,SNR=63						
JHJ				Sn	Sn	09 41 08.7	-6.6
	comp=E,284nm,0.3s,baz=239,slow=18,SNR=4.0						
JHJ				LR	LR	09 42 27.0	
	comp=E,5µm,21.4s,baz=11,slow=42						
JCH	Churui	5.00	13	A	A	09 40 22.7	
	comp=N,10.0nm,2.1s,comp=E,11nm,3.2s						
JBT2	Biratori 2	5.04	4	A	A	09 40 23.3	
	comp=N,7.0nm,1.6s,comp=E,9.0nm,2.7s						
TTO4	TONANKAI O.B.S	5.11	224	A	A	09 40 23.4	
	comp=N,22nm,2.7s,comp=E,26nm,2.3s						
JFM	Mihama	5.21	247	A	A	09 40 24.7	
	comp=N,10.0nm,4.3s,comp=E,8.0nm,2.8s						
TTO3	TONANKAI O.B.S	5.30	224	A	A	09 40 26.0	
	comp=N,26nm,5.0s,comp=E,26nm,2.2s						
JIE	Ise	5.34	233	A	A	09 40 26.6	
	comp=N,8.0nm,2.8s,comp=E,6.0nm,4.4s						
JISS	Ishikarishitsu	5.53	357	A	A	09 40 30.0	
	comp=N,14nm,7.7s,comp=E,12nm,2.6s						
JAOM	Aogashimamukai	5.54	199	A	A	09 40 29.5	
	comp=N,13nm,3.5s,comp=E,16nm,5.8s						
TTO2	TONANKAI O.B.S	5.60	226	A	A	09 40 30.3	
	comp=N,30nm,3.8s,comp=E,28nm,3.5s						
JAK	Akkeshi	5.68	22	A	A	09 40 32.3	
	comp=N,9.0nm,2.8s,comp=E,11nm,2.1s						
JAR	Ashorobuto	5.73	14	A	A	09 40 33.0	
	comp=N,7.0nm,4.1s,comp=E,7.0nm,2.8s						
JAB	Ashibetsu	5.76	3	A	A	09 40 33.3	
	comp=N,9.0nm,2.9s,comp=E,12nm,2.0s						
JKY	Yasaka	5.81	251	A	A	09 40 33.2	
	comp=N,7.0nm,2.7s,comp=E,5.0nm,2.6s						
JKHN	Kushirohamanak	5.90	24	A	A	09 40 35.4	
	comp=N,9.0nm,1.2s,comp=E,7.0nm,5.8s						
JHR	Hokuryu	5.99	359	A	A	09 40 36.5	
	comp=N,7.0nm,2.1s,comp=E,7.0nm,2.3s						
JMIK	Miki	6.22	244	A	A	09 40 38.9	
	comp=N,7.0nm,3.1s,comp=E,6.0nm,1.8s						
NMR	Nemuro--Hokkai	6.35	27	⇓iP	Pn	09 40 36.8	-2.5
NMR				i S	Sn	09 41 43.7	-6.7
JKA	Kamikawa-asahi	6.39	5		Pn	09 40 39.6	-0.2
ASAJ	Asahikawa	6.39	5	Pn	Pn	09 40 39.6	-0.3
	comp=E,11nm,0.3s,baz=217,slow=11,SNR=53						
ASAJ				Sn	Sn	09 41 46.0	-5.5
	comp=E,12nm,0.3s,baz=250,slow=15,SNR=3.5						
	comp=E,34nm,0.3s						
ASAJ	Asahikawa	6.39	5	P	Pn	09 40 39.7	-0.2
GLVR	Golovnino	6.60	24	eP	Pn	09 40 41.1	-1.7
GLVR				i S	Sn	09 41 52.0	-4.7
GLVR				pmax	pmax		
	comp=Z,187nm,0.2s						
GLVR				pmax	pmax		
	comp=E,30nm,0.1s						
RUSJ	Misakicho	6.85	21	⇑iP	Pn	09 40 45.0	-1.2
RUSJ				eS	Sn	09 42 00.7	-2.1
YUK	Yuzh-Kuril'sk	6.98	25	eP	Pn	09 40 46.0	-1.9
YUK				i S	Sn	09 42 00.5	-5.4
YUK				pmax	pmax		
	comp=N,109nm,0.2s						
YUK				pmax	pmax		
	comp=Z,361nm,0.2s						
YUK				pmax	pmax		
	comp=E,125nm,0.1s						
YUK				MLR	MLR		
	comp=Z,3µm,15.0s						
JMN	Monobe	7.62	241		Pn	09 40 57.3	+0.5
JMN	Monobe	7.62	241	P	Pn	09 40 58.8	+2.0
TEY	Ternei	8.28	333	⇑eP	Pn	09 41 11.2	+5.5
TEY				pmax	pmax		
	comp=N,90nm,1.0s						
TEY				pmax	pmax		
	comp=Z,90nm,1.0s						
TEY				pmax	pmax		
	comp=E,30nm,0.9s						
KUR	Kuril'sk	8.73	29	eP	Pn	09 41 09.6	-2.4
KUR				eS	Sn	09 42 42.3	-6.8
KUR				pmax	pmax		
	comp=E,52nm,0.4s						
KUR				pmax	pmax		
	comp=Z,168nm,0.4s						
KUR				pmax	pmax		
	comp=N,57nm,0.3s						
KUR				smax	smax		
	comp=E,455nm,0.4s						
KUR				smax	smax		
	comp=N,122nm,0.2s						
KUR				smax	smax		
	comp=E,1µm,1.5s						
KUR				smax	smax		
	comp=N,1µm,2.1s						
YSS	Yuzhno-Sakhali	9.22	4		Pn	09 41 18.1	-0.6
YSS	Yuzhno-Sakhali	9.22	4	P	Pn	09 41 18.1	-0.6
YSS	Yuzhno-Sakhali	9.22	4	S	Sn	09 43 02.6	+1.5
YSS	Yuzhno-Sakhali	9.22	4	⇓iP	Pn	09 41 18.2	-0.5
YSS				eS	Sn	09 42 58.6	-2.5
YSS				pmax	pmax		
	comp=Z,80nm,0.9s						
YSS				pmax	pmax		
	comp=Z,300nm,2.4s						
YSS				smax	smax		
	comp=N,120nm,1.0s						
YSS				smax	smax		
	comp=E,80nm,1.0s						
YSS				smax	smax		
	comp=E,800nm,3.5s						
YSS				MLR	MLR		
	comp=N,2µm,14.0s						
YSS				MLR	MLR		
	comp=E,2µm,14.0s						
YSS				MLR	MLR		
	comp=Z,2µm,14.0s						
USRK	Ussuriysk Ar.	9.85	314	Pn	Pn	09 41 28.3	+1.1
	comp=Z,9.4nm,0.3s,baz=79,slow=28,SNR=100						
JNU	Nakatsue	10.06	246	Pn	Pn	09 41 31.5	+1.2
	comp=Z,3.2nm,0.3s,baz=72,slow=4.2,SNR=38						
JNU				LR	LR	09 45 45.6	
	comp=Z,7µm,20.1s,baz=60,slow=40						
JNU	Nakatsue	10.06	246		Pn	09 41 31.4	+1.0
JNU	Nakatsue	10.06	246	P	Pn	09 41 31.9	+1.6
JCJ	Chichijima	10.63	178	Pn	Pn	09 41 24.3	-14
	comp=Z,99nm,0.3s,baz=280,slow=22,SNR=46						
JCJ				Sn	Sn	09 43 11.3	-24
	comp=Z,129nm,0.3s,baz=302,slow=23,SNR=10						
JCJ	Chichijima	10.63	178		Pn	09 41 35.7	-2.3
JCJ	Chichijima	10.63	178	P	Pn	09 41 36.4	-1.6
KSRS	Korea Array	11.05	273	Pn	Pn	09 41 46.6	+2.9
	comp=Z,1.8nm,0.3s,baz=87,slow=13,SNR=68						
KSRS				LR	LR	09 45 40.1	
	comp=Z,3046µm,19.6s,baz=80,slow=36						
KSRS				PcP	PcP	09 47 39.4	+0.5
	comp=Z,3.0nm,0.8s,baz=233,slow=0.4,SNR=4.8						
KSAR	Wonju Array Be	11.08	273		Pn	09 41 45.5	+1.3
KSAR	Wonju Array Be	11.08	273	P	Pn	09 41 45.5	+1.3
KS19	Wonju Array Si	11.09	273		Pn	09 41 44.7	+0.4
UGL	Uglegorsk	11.33	1	eP	Pn	09 41 59.8	+12
UGL				MLR	MLR		
	comp=N,1µm,13.0s						
UGL				MLR	MLR		
	comp=Z,2µm,15.0s						
MDJ	Mudanjiang	11.49	310		Pn	09 41 49.8	0.0
MDJ	Mudanjiang	11.49	310	P	Pn	09 41 54.6	+4.8
MDJ				PP	PnPn	09 42 01.1	+3.5
MDJ				S	Sn	09 43 59.6	+2.9
MDJ				SS	SnSn	09 44 14.7	+5.9
MDJ				pmax	pmax		
	comp=Z,220nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,1µm,3.7s						
MDJ				LR	LR		
	comp=Z,4µm,17.2s						
MDJ				LR	LR		
	comp=Z,4µm,17.2s						
MDJ				LR	LR		
	comp=Z,7µm,17.9s						
MDJ	Mudanjiang	11.49	310	P	Pn	09 41 54.1	+4.3
TJN	Taejon	11.65	268		Pn	09 41 51.5	-0.5
TJN	Taejon	11.65	268	P	Pn	09 41 55.0	+3.0
TJN	Taejon	11.65	268	P	Pn	09 41 51.5	-0.5
INCN	Inchon	12.07	273	P	Pn	09 41 56.6	-1.1
INCN				P	Pn	09 41 56.6	-1.1
INCN				S	Sn	09 44 08.7	-2.2
INCN				S	Sn	09 44 08.7	-2.2
INCN	Inchon	12.07	273		Pn	09 41 57.0	-0.7
INCN	Inchon	12.07	273	P	Pn	09 42 01.0	+3.3
INCN	Inchon	12.07	273	P	Pn	09 41 57.0	-0.7
TYV	Tymovskoe	13.12	2	eP	Pn	09 42 14.5	+2.5
TYV				pmax	pmax		
	comp=Z,22nm,0.9s						
TYV				pmax	pmax		
	comp=Z,300nm,5.4s						
TYV				MLR	MLR		
	comp=Z,1µm,13.0s						
BNX	BinXian	13.40	311	⇓P	Pn	09 42 15.2	-0.6
BNX				pP	P	09 42 25.9	+1.7
BNX				S	Sn	09 44 44.5	+1.2
BNX				pmax	pmax		
	comp=Z,24nm,1.2s						
BNX				pmax	pmax		
	comp=Z,880nm,11.3s						
BNX				LR	LR		
	comp=Z,2µm,17.1s						
BNX				LR	LR		
	comp=Z,3µm,17.4s						
BNX				LR	LR		
	comp=Z,5µm,17.4s						
GRNR	Gornyy	13.58	345	⇓iP	Pn	09 42 16.5	-1.7
GRNR				pmax	pmax		
	comp=N,9.0nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GRNR				MLR	MLR		
	comp=Z,2µm,14.0s						
CN2	Changchun	13.81	301	P	Pn	09 42 23.2	+1.8
CN2				pP	P	09 42 30.5	+1.7
CN2				S	Sn	09 44 54.6	+1.4
CN2				pmax	pmax		
	comp=Z,20nm,1.5s						
CN2				pmax	pmax		
	comp=Z,700nm,9.0s						
CN2				LR	LR		
	comp=Z,2µm,18.0s						
CN2				LR	LR		
	comp=Z,3µm,18.0s						
CN2				LR	LR		
	comp=Z,3µm,18.0s						
SNY	Shenyang	14.62	292	⇓P	Pn	09 42 33.6	+1.3
SNY				pP	P	09 42 46.5	+8.7
SNY				pmax	pmax		
	comp=Z,37nm,1.5s						
SNY				pmax	pmax		
	comp=Z,130nm,4.4s						

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SNY                                LR      LR
      comp=Z,1µm,15.7s
SNY                                LR      LR
      comp=Z,4µm,19.8s
SNY                                LR      LR
      comp=Z,6µm,17.7s
JOW   Kunigami         15.80 230   Pn      Pn      09 42 45.8  -1.9
      comp=Z,1.1nm,0.3s,baz=57,slow=17,SNR=4.5
      comp=Z,99nm,1.0s
JOW   Kunigami         15.80 230           Pn      09 42 46.3  -1.4
JOW   Kunigami         15.80 230   P       P       09 42 49.7  -1.3
DL2   Dalian           15.91 280   P       Pn      09 42 49.0  -0.1
DL2                                S       Sn      09 45 45.0  +0.7
DL2                                pmax    pmax
      comp=Z,280nm,1.2s
DL2                                pmax    pmax
      comp=Z,430nm,3.6s
DL2                                LR      LR
      comp=Z,540nm,8.5s
DL2                                LR      LR
      comp=Z,3µm,13.3s
DL2                                LR      LR
      comp=Z,4µm,19.6s
HEH   HeiHe           16.21 325  eP      Pn      09 42 53.5  +0.6
HEH                                pP      pP      09 43 02.8  -3.0
HEH                                sP      sP      09 43 09.2  -2.2
HEH                                S       Sn      09 45 53.0  +1.5
HEH                                SS      SnSn    09 46 12.5  +7.7
HEH                                pmax    pmax
      comp=Z,23nm,1.1s
HEH                                pmax    pmax
      comp=Z,490nm,4.9s
HEH                                LR      LR
      comp=Z,2µm,16.1s
HEH                                LR      LR
      comp=Z,2µm,15.7s
HEH                                LR      LR
      comp=Z,4µm,15.8s
SKR   Severo-Kuril's   16.45  34  eP      P       09 43 08.4  +10
SKR                                pmax    pmax
      comp=Z,800nm,5.4s
SSE   Sheshan          18.27 255   P       Pn      09 43 18.8  +0.3
SSE                                S       Sn      09 46 40.7  -0.9
SSE                                pmax    pmax
      comp=Z,89nm,1.4s
SSE                                pmax    pmax
      comp=Z,220nm,6.0s
SSE                                LR      LR
      comp=Z,710nm,15.3s
SSE                                LR      LR
      comp=Z,760nm,15.2s
ZEA   Zeya             18.90 332  eP      P       09 43 23.4  -1.6
ZEA                                pmax    pmax
      comp=Z,100nm,1.3s
ZEA                                pmax    pmax
      comp=E,20nm,0.9s
ZEA                                pmax    pmax
      comp=N,30nm,1.1s
ZEA                                pmax    pmax
      comp=Z,100nm,0.9s
ZEA                                smax    smax
      comp=E,100nm,9.5s
ZEA                                smax    smax
      comp=N,200nm,8.2s
ZEA                                MLR     MLR
      comp=N,800nm,16.0s
PEA0B Petropavlovsk-   18.90  31   P       P       09 43 24.0  -1.0
PEA0B Petropavlovsk-   18.90  31ceP       Pn      09 43 25.7  -0.3
PETK  Petropavlovsk-   18.90  31   P       P       09 43 22.8  -2.2
      comp=N,8.0nm,0.9s,baz=208,slow=12,SNR=10
PETK                               LR      LR      09 50 36.5
      comp=N,829nm,21.7s,baz=221,slow=37
PETK  Petropavlovsk-   18.90  31   P       P       09 43 24.9  -0.2
PETK  Petropavlovsk-   18.90  31   P       P       09 43 24.9  -0.2
PET   Petropavlovsk    19.23  32  eP      Pn      09 43 32.9  +3.0
PET                               eS      S       09 46 55.7  -8.2
PET                                pmax    pmax
      comp=Z,75nm,1.3s
PET                                MLR     MLR
      comp=Z,600nm,11.0s
PET                                MLR     MLR
      comp=Z,400nm,10.0s
HIA   Hailar           19.66 313   P       P       09 43 32.5  -0.9
HIA   Hailar           19.66 313   P       Pn      09 43 37.5  +2.4
HIA   Hailar           19.66 313   P       P       09 43 32.5  -0.9
HIA                                pmax    pmax
      comp=Z,35nm,1.0s
NJ2   Nanjing          19.67 260⇑iP       P       09 43 32.8  -0.9
NJ2                                sS      sS      09 47 26.4  -3.5
NJ2                                pmax    pmax
      comp=Z,58nm,0.9s
NJ2                                pmax    pmax
      comp=Z,310nm,9.2s
NJ2                                LR      LR
      comp=Z,560nm,12.8s
NJ2                                LR      LR
      comp=Z,3µm,15.2s
NJ2                                LR      LR
      comp=Z,2µm,16.6s
HILR  Hailar Array B   19.79 314   P       P       09 43 30.9  -4.0
      comp=Z,5.6nm,0.3s,baz=112,slow=12,SNR=14
HILR                               LR      LR      09 51 23.3
      comp=Z,3µm,18.6s,baz=105,slow=38
TIA   Tai'an           19.80 273   P       P       09 43 33.6  -1.4
TIA                                sP      sP      09 43 49.7  -1.4
TIA                                S       S       09 47 11.2  -4.4
TIA                                SS      SnSn    09 47 43.5  +11
TIA                                pmax    pmax
      comp=Z,210nm,1.1s
TIA                                pmax    pmax
      comp=Z,440nm,4.0s
TIA                                LR      LR
      comp=Z,1µm,15.8s
TIA                                LR      LR
      comp=Z,2µm,15.6s
TIA                                LR      LR
      comp=Z,3µm,14.9s
BJI   Beijing          20.09 285   P       P       09 43 36.2  -1.9
BJI                                S       Sn      09 47 25.5  +0.2
BJI                                pmax    pmax
      comp=Z,36nm,1.7s
BJI                                pmax    pmax
      comp=Z,120nm,3.7s
BJI                                LR      LR
      comp=Z,490nm,18.5s
BJI                                LR      LR
      comp=Z,440nm,21.0s
BJI                                LR      LR
      comp=Z,780nm,21.9s
BJT   Baijiatuau       20.10 284   P       P       09 43 36.2  -2.1
BJT   Baijiatuau       20.10 284   P       P       09 43 36.1  -2.1
BJT   Baijiatuau       20.10 284   P       P       09 43 36.2  -2.1
BJT                                pmax    pmax
      comp=Z,137nm,1.4s
XLT   XiLinHaoTe       20.40 296  eP      P       09 43 39.0  -2.6
XLT                                PP      PnPn    09 44 00.2  +0.5
XLT                                S       S       09 47 21.2  -6.4
XLT                                sS      Sn      09 47 37.0  +4.2
XLT                                SS      SnSn    09 47 52.7  +5.0
XLT                                pmax    pmax
      comp=Z,82nm,0.8s
XLT                                pmax    pmax
      comp=Z,280nm,3.6s
XLT                                LR      LR
      comp=Z,2µm,22.0s
XLT                                LR      LR
      comp=Z,2µm,20.6s
HNS   HongShan         21.49 277 ⇑P       P       09 43 49.8  -3.4
HNS                                pP      sP      09 44 09.3  -0.1
HNS                                S       S       09 47 39.8  -9.3
HNS                                SS      SnSn    09 48 15.6  +1.3
HNS                                pmax    pmax
      comp=Z,270nm,0.7s
HNS                                LR      LR
      comp=Z,1µm,15.9s
HNS                                LR      LR
      comp=Z,2µm,19.0s
HNS                                LR      LR
      comp=Z,2µm,21.2s
TATO  Taipei           21.49 240   P       P       09 43 52.7  -0.6
YHNB  Yeheng           21.77 239   P       P       09 43 54.8  -1.6
YHNB  Yeheng           21.77 239   P       P       09 43 54.5  -1.9
NACB  Ninganchiao      21.95 238   P       P       09 43 58.7  +0.4
MA2   Magadan          22.59  12   P       P       09 44 03.7  -1.0
      comp=Z,25nm,0.7s,baz=192,slow=9.4,SNR=13
MA2                                LR      LR      09 53 16.1
      comp=Z,536nm,18.4s,baz=200,slow=38
      comp=Z,25nm,0.7s
MA2   Magadan          22.59  12   P       P       09 44 05.0  +0.2
MA2   Magadan          22.59  12ceP       P       09 44 04.7  -0.1
MA2                                pmax    pmax
      comp=Z,28nm,0.8s
SSLB  Suanglung        22.64 238   P       P       09 44 02.7  -3.1
SSLB                               IAmb    IAmb    09 44 10.9
      comp=Z,117nm,1.0s
SSLB  Suanglung        22.64 238   P       P       09 44 03.4  -2.4
YULB  Yu-li            22.68 237   P       P       09 44 06.8  +0.6
TPUB  Ta-pu            23.19 238   P       P       09 44 08.2  -3.1
TPUB                               IAmb    IAmb    09 44 11.7
      comp=Z,200nm,1.0s
TPUB  Ta-pu            23.19 238   P       P       09 44 08.4  -3.0
TIY   Taiyuan          23.22 279   P       P       09 44 08.4  -3.2
TIY                                SS      Sn      09 49 06.4  +26
TIY                                pmax    pmax
      comp=Z,89nm,0.6s
TIY                                LR      LR
      comp=Z,1µm,15.0s
TIY                                LR      LR
      comp=Z,1µm,17.7s
TIY                                LR      LR
      comp=Z,2µm,20.2s
TWGBT Beinan           23.23 236   P       P       09 44 13.3  +1.6
TWG   Pinlang          23.23 236   IAmb    IAmb    09 44 29.2
      comp=Z,108nm,0.9s
QZH   Quanzhou         23.53 244   P       P       09 44 12.9  -1.7
QZH                                S       S       09 48 24.3  -1.1
QZH                                pmax    pmax
      comp=Z,390nm,6.9s
QZH                                LR      LR
      comp=Z,1µm,22.0s
QZH                                LR      LR
      comp=Z,2µm,22.0s
QZH                                LR      LR
      comp=Z,2µm,22.0s
HHC   Hu-ho-hao-te     23.58 287⇑iP       P       09 44 12.9  -2.2
HHC                                PP      PnPn    09 44 41.2  -2.1
HHC                                S       S       09 48 21.2  -5.0
HHC                                SS      SnSn    09 49 05.6  -0.1
HHC                                pmax    pmax
      comp=Z,49nm,1.1s
HHC                                pmax    pmax
      comp=Z,110nm,5.7s
HHC                                LR      LR
      comp=Z,370nm,12.9s
HHC                                LR      LR
      comp=Z,1µm,15.8s
HHC                                LR      LR
      comp=Z,2µm,14.1s
WHN   Wuhan            23.81 261   P       P       09 44 16.5  -0.6
WHN                                pP      pP      09 44 23.0  -5.6
WHN                                S       S       09 48 25.8  -4.0
WHN                                pmax    pmax
      comp=Z,200nm,0.8s
WHN                                pmax    pmax
      comp=Z,1µm,2.7s
WHN                                LR      LR
      comp=Z,3µm,11.5s
WHN                                LR      LR
      comp=Z,3µm,7.5s
WHN                                LR      LR
      comp=Z,8µm,14.8s
LYN   LuoYang          23.89 271   P       P       09 44 14.1  -3.8
LYN                                S       S       09 48 20.6  -10
LYN                                SS      SnSn    09 49 14.6  +1.4
LYN                                pmax    pmax
      comp=Z,280nm,0.8s
LYN                                pmax    pmax
      comp=Z,490nm,6.5s
LYN                                LR      LR
      comp=Z,2µm,18.9s
LYN                                LR      LR
      comp=Z,3µm,18.5s
LYN                                LR      LR
      comp=Z,4µm,17.9s
GUMO  Guam             24.21 173   LR      LR      09 53 21.4
      comp=Z,401nm,21.6s,baz=18,slow=36
CIT   Chita            24.41 315  eP      P       09 44 22.4  -0.1
CIT                               e                09 44 31.0
CIT                               e                09 44 36.2
CIT                               e                09 45 04.4
CIT                               e                09 48 01.2
CIT                               e                09 49 43.8
CIT                                pmax    pmax
      comp=Z,823nm,1.2s
BTO   Baotou           24.76 287  eP      P       09 44 24.2  -1.8
BTO                                pP      pP      09 44 35.4  -2.2
BTO                                PP      PnPn    09 45 02.5  +3.0
BTO                                S       S       09 48 42.2  -3.1
BTO                                pmax    pmax
      comp=Z,29nm,0.7s
BTO                                pmax    pmax
      comp=Z,720nm,6.1s
BTO                                LR      LR
      comp=Z,3µm,13.8s
BTO                                LR      LR
      comp=Z,3µm,15.9s
BTO                                LR      LR
      comp=Z,4µm,17.7s
YAK   Yakutsk          25.45 347   LR      LR      09 54 54.3
      comp=Z,2µm,18.8s,baz=158,slow=37
YAK   Yakutsk          25.45 347   P       P       09 44 31.4  -0.4
YAK   Yakutsk          25.45 347c iP      P       09 44 30.9  -0.9
YAK                               ePPP    PPP     09 45 05.9
YAK                               eS      S       09 48 46.7  -8.8
YAK                               e*SS    sS      09 48 59.2  -16
YAK                                pmax    pmax
      comp=Z,265nm,1.3s
YAK                                pmax    pmax
      comp=N,96nm,1.6s
YAK                                pmax    pmax
      comp=E,43nm,1.8s
YAK                                smax    smax
      comp=E,257nm,2.8s
YAK                                smax    smax
      comp=N,120nm,1.7s
YAK                                MLR     MLR
      comp=Z,2µm,19.0s
YAK                                MLR     MLR
      comp=N,979nm,14.0s
YAK                                MLR     MLR
      comp=E,707nm,25.0s
CNSH  ChangSha         25.98 257   P       P       09 44 36.4  -0.5
CNSH                               S       S       09 49 01.0  -3.5
CNSH                               pmax    pmax
      comp=E,82nm,1.0s
CNSH                               LR      LR
      comp=E,1µm,19.0s
CNSH                               LR      LR
      comp=E,920nm,23.1s
CNSH                               LR      LR
      comp=E,1µm,27.7s
SEY   Seymchan         26.02  11   LR      LR      09 57 10.4
      comp=E,439nm,18.2s,baz=187,slow=42
SEY   Seymchan         26.02  11  eP      P       09 44 35.2  -1.8
SEY                                pmax    pmax
      comp=Z,63nm,1.1s
XAN   Xi'an            26.85 272   P       P       09 44 43.3  -1.5
XAN                                pP      pP      09 44 55.2  -1.3
XAN                                S       S       09 49 16.6  -1.7
XAN                                pmax    pmax
      comp=Z,170nm,0.7s
XAN                                pmax    pmax
      comp=Z,780nm,3.5s
XAN                                LR      LR
      comp=Z,1µm,22.0s
XAN                                LR      LR
      comp=Z,880nm,22.7s
XAN                                LR      LR
      comp=Z,1µm,20.6s
SHEM  Shemya Is, Ala   26.92  46   LR      LR      09 53 32.9
      comp=Z,650nm,21.2s,baz=264,slow=32
ULN   Ulaanbaatar      27.25 303   P       P       09 44 48.0  -0.3
ULN                                P       P       09 44 48.0  -0.3
ULN                                S       S       09 49 23.8  -0.7
ULN                                S       S       09 49 23.8  -0.7
ULN   Ulaanbaatar      27.25 303   P       P       09 44 48.1  -0.3
ULN   Ulaanbaatar      27.25 303   P       P       09 44 47.8  -0.6
ULN   Ulaanbaatar      27.25 303ceP       P       09 44 48.8  +0.4
ULN                                pmax    pmax
      comp=Z,69nm,1.3s
SZP   Santa            27.52 229   P       P       09 44 52.2  +1.4
SONM  Songino Array    27.68 303   P       P       09 44 51.5  -0.7
      comp=Z,58nm,0.9s,baz=101,slow=7.4,SNR=182
SONM                               LR      LR      09 56 06.2
      comp=Z,1µm,18.8s,baz=116,slow=37
      comp=Z,58nm,0.9s
SONM  Songino Array    27.68 303   P       P       09 44 51.6  -0.6
SONM                               IAmb    IAmb    09 44 54.0
      comp=Z,58nm,0.9s
SONM  Songino Array    27.68 303   P       P       09 44 51.6  -0.6
SONM                               pmax    pmax
      comp=Z,58nm,0.9s
ENH   Enshi            27.74 264   P       P       09 44 52.4  -0.5
ENH   Enshi            27.74 264   P       P       09 44 51.7  -1.1
H11N2 WAKE ISLAND Hy 28.23 123     T       T       10 15 11.3
      baz=315,slow=75,SNR=1380
H11N1 WAKE ISLAND Hy 28.24 123     T       T       10 15 18.9
      baz=315,slow=75,SNR=2191
H11N3 WAKE ISLAND Hy 28.25 123     T       T       10 15 13.9
      baz=315,slow=75,SNR=1305
HKPS  Hong Kong Po S   28.38 245   P       P       09 44 59.5  +1.0
GZH   Guangzhou        28.45 247   P       P       09 44 53.8  -5.4
GZH                                S       S       09 49 33.5  -10
GZH                                LR      LR
      comp=Z,2µm,15.9s
GZH                                LR      LR
      comp=Z,2µm,16.1s
GZH                                LR      LR
      comp=Z,4µm,16.0s
H11S1 WAKE ISLAND Hy 28.97 125     T       T       10 15 27.7
      baz=316,slow=74
H11S3 WAKE ISLAND Hy 28.97 125     T       T       10 15 26.3
      baz=316
H11S2 WAKE ISLAND Hy 28.99 125     T       T       10 15 27.3
      baz=316,slow=74
GULI  GuiLin           29.43 254   P       P       09 45 08.5  +0.7
GULI                               pP      pP      09 45 19.6  +0.1
GULI                               S       S       09 50 01.6  +2.8
GULI                               pmax    pmax
      comp=Z,140nm,0.9s
GULI                               pmax    pmax
      comp=Z,230nm,4.0s
GULI                               LR      LR
      comp=Z,780nm,16.9s
GULI                               LR      LR
      comp=Z,510nm,17.9s
GULI                               LR      LR
      comp=Z,1µm,28.0s
IRK   Irkutsk          29.88 311  eP      P       09 45 10.1  -1.5
IRK                                pmax    pmax
      comp=Z,45nm,1.3s
TGY   Tagaytay City    30.00 224   P       P       09 45 11.9  -1.1
      comp=Z,113nm,0.4s,baz=198,slow=3.6,SNR=7.2
ZAK   Zakamensk        30.10 307  eP      P       09 45 12.0  -1.7
ZAK                                pmax    pmax
      comp=Z,67nm,1.2s
TLY   Talaya           30.13 310   P       P       09 45 14.2  +0.4
TLY                                P       P       09 45 14.2  +0.4
TLY                                S       S       09 50 08.6  -0.9
TLY                                S       S       09 50 08.6  -0.9
TLY   Talaya           30.13 310   P       P       09 45 14.1  +0.4
TLY   Talaya           30.13 310ceP       P       09 45 14.3  +0.5
TLY                                pmax    pmax
      comp=Z,48nm,1.3s
TLY   Talaya           30.13 310   P       P       09 45 13.8   0.0
TLY                                pP      pP      09 45 26.1  +0.6
LZH   Lanzhou          30.29 279  eP      P       09 45 15.1  -0.5
LZH                                pP      pP      09 45 27.9  +0.6
LZH                                PP      PnPn    09 46 17.0  +2.4
LZH                                S       S       09 50 11.8  -0.8
LZH                                pmax    pmax
      comp=Z,120nm,1.3s
LZH                                pmax    pmax
      comp=Z,340nm,5.3s
LZH                                LR      LR
      comp=Z,660nm,17.5s
LZH                                LR      LR
      comp=Z,2µm,19.2s
LZH                                LR      LR
      comp=Z,2µm,19.1s
LZDM  Lanzhou Array    30.44 278   P       P       09 45 15.9  -1.2
      comp=Z,39nm,0.8s,baz=108,slow=4.8,SNR=35
LZDM                               LR      LR      09 58 17.7
      comp=Z,1µm,19.1s,baz=70,slow=38
      comp=Z,39nm,0.8s
GYA   Guiyang          31.68 260 ⇑P       P       09 45 26.9  -1.0
GYA                                pP      pP      09 45 38.6  -1.0
GYA                                S       S       09 50 28.3  -6.1
GYA                                pmax    pmax
      comp=Z,320nm,1.1s
GYA                                LR      LR
      comp=Z,650nm,21.1s
GYA                                LR      LR
      comp=Z,940nm,24.6s
GYA                                LR      LR
      comp=Z,2µm,25.4s
MOY   Mondy            31.75 309  eP      P       09 45 27.9  -0.3
MOY                                pmax    pmax
      comp=Z,41nm,1.4s
CD2   Chengdu          32.02 269   P       P       09 45 29.2  -1.5
CD2                                pP      pP      09 45 40.2  -2.3
CD2                                sP      sP      09 45 45.7  -2.0
CD2                                S       S       09 50 35.9  -3.6
CD2                                sS      sS      09 50 55.6  -3.5
CD2                                pmax    pmax
      comp=Z,120nm,0.9s
CD2                                pmax    pmax
      comp=Z,260nm,5.6s
CD2                                LR      LR
      comp=Z,3µm,16.9s
CD2                                LR      LR
      comp=Z,2µm,17.3s
CD2                                LR      LR
      comp=Z,2µm,18.2s
GTA   Gaotai           32.69 286   P       P       09 45 36.0  -0.6
GTA                                pP      pP      09 45 48.5  +0.1
GTA                                PcP     PcP     09 48 22.2  +0.7
GTA                                S       S       09 50 50.2  +0.3
GTA                                PcS     PcS     09 52 07.2  +0.4
GTA                                ScS     ScS     09 56 00.0  -1.7
GTA                                pmax    pmax
      comp=Z,69nm,1.2s
GTA                                pmax    pmax
      comp=Z,260nm,5.0s
GTA                                LR      LR
      comp=Z,340nm,19.3s
GTA                                LR      LR
      comp=Z,2µm,18.5s
GTA                                LR      LR
      comp=Z,2µm,20.7s
BILL  Bilibino         33.25  16   P       P       09 45 41.0  +0.1
BILL                               IAmb    IAmb    09 45 54.8
      comp=Z,57nm,1.7s
BILL  Bilibino         33.25  16   P       P       09 45 41.3  +0.3
BILL                               pP      pP      09 45 53.7  +1.0
QIZ   Qiongzhong       33.54 245   P       P       09 45 43.6  -0.4
QIZ   Qiongzhong       33.54 245   P       P       09 45 44.0   0.0
QIZ                                S       S       09 51 03.6  +0.5
QIZ                                pmax    pmax
      comp=Z,37nm,1.6s
QIZ                                LR      LR
      comp=Z,950nm,18.0s
QIZ                                LR      LR
      comp=Z,710nm,17.6s
QIZ                                LR      LR
      comp=Z,1µm,19.6s
KNGR  Kungurtug, Tuv   33.78 307 i P       P       09 45 45.7  -0.3
DAV   Davao City (W)   33.92 210   LR      LR      09 57 42.5
      comp=Z,641nm,21.7s,baz=64,slow=33
TIXI  Tiksi            34.62 353   LR      LR      10 01 11.8
      comp=Z,907nm,18.7s,baz=184,slow=38
TIXI  Tiksi            34.62 353   P       P       09 45 52.1  -0.8
TIXI  Tiksi            34.62 353⇑eP       P       09 45 52.5  -0.3
TIXI                               pmax    pmax
      comp=Z,36nm,1.7s
TIXI  Tiksi            34.62 353   P       P       09 45 52.4  -0.4
TIXI                               sP      sP      09 46 10.3  +0.5
TIXI                               PcP     PcP     09 48 27.2  +1.1
KMI   Kunming          35.41 261 ⇑P       P       09 45 59.7  -0.7
KMI                                pP      pP      09 46 13.9  +1.6
KMI                                sP      sP      09 46 16.9  -0.6
KMI                                PP      PP      09 47 21.1  -0.2
KMI                                pmax    pmax
      comp=Z,150nm,1.2s
KMI                                LR      LR
      comp=Z,1µm,15.4s
KMI                                LR      LR
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	comp=Z,1µm,17.1s						
KMI				LR	LR		
	comp=Z,2µm,19.5s						
PZH	PanZhiHua	35.52	263	P	P	09 46 00.5	-0.7
PZH				S	S	09 51 32.2	-1.7
PZH				pmax	pmax		
	comp=Z,120nm,1.2s						
PZH				pmax	pmax		
	comp=Z,200nm,5.1s						
PZH				LR	LR		
	comp=Z,720nm,19.4s						
PZH				LR	LR		
	comp=Z,2µm,15.6s						
PZH				LR	LR		
	comp=Z,2µm,16.5s						
SLVN	Son La	36.55	254	P	P	09 46 09.2	-0.8
SLVN				IAmb	IAmb	09 46 11.0	
	comp=Z,27nm,0.9s						
SLVN	Son La	36.55	254	P	P	09 46 09.9	-0.1
SPIA	Saint Paul Isl	36.81	42	P	P	09 46 11.1	-0.6
	baz=259						
NIKH	Nikolski High	37.05	50	P	P	09 46 12.5	-1.3
	baz=266						
P08K	Saint George I	37.08	43	P	P	09 46 13.1	-0.9
	baz=260						
GOMU	GeErMu	37.30	282	P	P	09 46 13.6	-3.0
GOMU				pP	pP	09 46 25.4	-3.1
GOMU				S	S	09 51 58.6	-2.7
GOMU				pmax	pmax		
	comp=Z,86nm,1.1s						
GOMU				LR	LR		
	comp=Z,730nm,16.9s						
GOMU				LR	LR		
	comp=Z,550nm,15.3s						
GAMB	Gambell	37.93	32	P	P	09 46 21.1	0.0
	baz=249						
UNV	Unalaska Valle	38.51	48	P	P	09 46 24.7	-1.4
	baz=267						
TNCH	TengChong	38.77	264	P	P	09 46 29.0	+0.1
TNCH				pP	sP	09 46 44.0	-2.1
TNCH				S	S	09 52 24.2	+0.7
TNCH				pmax	pmax		
	comp=Z,150nm,0.5s						
TNCH				LR	LR		
	comp=Z,770nm,14.6s						
TNCH				LR	LR		
	comp=Z,1µm,16.8s						
TNCH				LR	LR		
	comp=Z,2µm,15.4s						
MYLDM	Lahad Datu	38.78	219	P	P	09 46 29.9	+1.1
KKM	Kota Kinabalu	39.24	223	P	P	09 46 34.0	+1.3
DLV	Lat	39.35	238	IAmb	IAmb	09 46 36.7	
	comp=Z,110nm,1.2s						
DLV	Lat	39.35	238	P	P	09 46 34.8	+1.0
M11K	Mekoryuk	39.49	38	P	P	09 46 33.9	-0.3
	baz=259						
TNA	Tin City	40.06	30	P	P	09 46 38.9	-0.1
	baz=251						
JAY	Jayapura	40.07	182	LR	LR	10 01 51.6	
	comp=Z,240nm,21.3s,baz=18,slow=34						
DGZ	Jazzator, Alta	40.26	305	*i* P	P	09 46 41.6	+0.6
DGZ				pmax	pmax		
	comp=Z,363nm,0.9s						
FALS	False Pass	40.36	47	P	P	09 46 41.0	-0.6
	baz=268						
K13K	Kusilvak Mount	40.52	36	P	P	09 46 42.5	-0.3
	baz=259						
F14K	Arctic Creek	40.67	30	P	P	09 46 43.4	-0.6
	baz=253						
GTOI	Gorontalo	40.81	210	P	P	09 46 45.1	-0.5
ANM	Nome	40.81	32	P	P	09 46 44.4	-0.7
	baz=255						
WMQ	Urumqi	40.83	296	*e*P	P	09 46 46.3	+0.6
WMQ				pP	pP	09 46 58.2	+0.5
WMQ				pmax	pmax		
	comp=Z,61nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,790nm,5.7s						
WMQ				LR	LR		
	comp=Z,910nm,19.3s						
WMQ				LR	LR		
	comp=Z,870nm,23.3s						
WMQ				LR	LR		
	comp=Z,1µm,24.0s						
WMQ	Urumqi	40.83	296	P	P	09 46 46.5	+0.8
M13K	Dall Lake	40.89	38	P	P	09 46 46.1	+0.3
	baz=262						
S12K	Black Hills	41.16	46	P	P	09 46 48.6	+0.4
	baz=268						
J14K	Nanvaranak Lak	41.19	35	P	P	09 46 48.6	+0.3
	baz=259						
TOLI2	Tolitoli	41.29	213	P	P	09 46 49.1	-0.6
TOLI2	Tolitoli	41.29	213	P	P	09 46 49.9	+0.3
L14K	Kuka Creek	41.35	37	P	P	09 46 49.8	+0.2
	baz=261						
MRSI	Marisa	41.38	211	P	P	09 46 51.1	+0.8
	comp=Z,1µmcomp=Z,78nm,1.3s						
F15K	North Star Dit	41.41	30	P	P	09 46 49.8	-0.3
	baz=254						
FAKI	Fak Fak	41.43	195	P	P	09 46 50.7	-0.1
FAKI				IAmb	IAmb	09 46 52.7	
	comp=Z,67nm,0.8s						
FAKI	Fak Fak	41.43	195	P	P	09 46 51.3	+0.6
FAKI	Fak Fak	41.43	195	P	P	09 46 50.6	-0.1
G15K	Niukluk	41.47	31	P	P	09 46 49.7	-0.8
	baz=256						
M14K	Bethel	41.62	38	P	P	09 46 52.4	+0.6
	baz=263						
N14K	Kuskokwak Cree	41.65	39	P	P	09 46 52.0	-0.1
	baz=264						
ZAA0	Zalesovo Array	41.69	312	P	P	09 46 52.3	-0.2
ZAA0				IAmb	IAmb	09 46 53.5	
	comp=Z,77nm,0.8s						
ZALV	Zalesovo Beam	41.69	312	P	P	09 46 52.2	-0.3
	comp=Z,74nm,0.8s,baz=88,slow=7.2,SNR=188						
ZALV				PcP	PcP	09 48 47.8	-0.6
	comp=Z,11nm,0.7s,baz=100,slow=3.3,SNR=4.1						
ZALV				LR	LR	10 04 52.6	
	comp=Z,2µm,18.2s,baz=84,slow=37						
	comp=Z,74nm,0.8s						
ZALV	Zalesovo Beam	41.69	312	P	P	09 46 52.9	+0.4
ZALV	Zalesovo Beam	41.69	312	P	P	09 46 52.9	+0.4
CHTO	Chiang Mai	41.80	255	P	P	09 46 53.6	-0.2
CHTO				P	P	09 46 53.6	-0.2
CHTO	Chiang Mai	41.80	255	P	P	09 46 53.1	-0.7
CHTO	Chiang Mai	41.80	255	P	P	09 46 53.7	-0.2
CHTO	Chiang Mai	41.80	255	P	P	09 46 53.5	-0.3
	comp=Z,33nm,1.4s						
CHTO	Chiang Mai	41.80	255	P	P	09 46 53.1	-0.7
CHTO				pmax	pmax		
	comp=Z,36nm,1.1s						
O14K	Tigyukauivet M	41.80	40	P	P	09 46 53.2	-0.1
	baz=265						
C16K	Lisburne Hills	41.91	26	P	P	09 46 54.1	0.0
	baz=251						
L15K	Ungalak Mounta	41.97	37	P	P	09 46 55.0	+0.4
	baz=262						
CM31	Chiang Mai Arr	42.01	255	P	P	09 46 55.5	-0.1
	SNR=8.6						
CM31				P	P	09 46 55.5	-0.1
	SNR=8.6						
CMAR	Chiang Mai Arr	42.01	255	P	P	09 46 55.4	-0.2
	comp=Z,5.9nm,0.7s,baz=47,slow=6.5,SNR=45						
CMAR				PcP	PcP	09 48 50.6	+0.6
	comp=Z,4.7nm,0.7s,baz=12,slow=3.0,SNR=5.8						
CMAR				LR	LR	10 06 56.1	
	comp=Z,481nm,19.1s,baz=55,slow=40						
	comp=Z,5.9nm,0.7s						
CMAR	Chiang Mai Arr	42.01	255	P	P	09 46 55.0	-0.5
K15K	Wolf Creek Mou	42.03	36	P	P	09 46 55.3	+0.1
	baz=261						
SDPT	Sand Point	42.06	46	P	P	09 46 55.7	+0.3
	baz=270						
H16K	Elim	42.14	32	P	P	09 46 55.6	-0.4
	baz=258						
ZSN	Zaisan	42.19	302	*e*P	P	09 46 57.0	+0.2
	comp=Z,86nm,0.9s						
ZSN				*e*S	S	09 53 15.7	+2.0
ZSN	Zaisan	42.19	302	*e*P	P	09 46 56.9	+0.2
ZSN				*e*S	S	09 53 15.6	+2.0
ZSN				pmax	pmax		
	comp=Z,86nm,0.9s						
M15K	Kasigluk River	42.23	38	P	P	09 46 56.7	-0.1
	baz=264						
SANI	Sanana	42.23	204	P	P	09 46 55.9	-1.4
SANI	Sanana	42.23	204	P	P	09 46 56.1	-1.2
G16K	Koyuk River	42.26	31	P	P	09 46 57.4	+0.4
	baz=257						
LUWI	Luwuk	42.43	209	P	P	09 46 58.1	-0.8
LUWI				IAmb	IAmb	09 47 02.0	
	comp=Z,83nm,0.9s						
LUWI	Luwuk	42.43	209	P	P	09 46 59.7	+0.8
N15K	Kwethluk River	42.47	39	P	P	09 46 59.9	+1.1
	baz=265						
LSA	Lhasa	42.49	275	P	P	09 46 59.8	-0.1
LSA				IAmb	IAmb	09 47 04.4	
	comp=Z,64nm,0.9s						
LSA	Lhasa	42.49	275	P	P	09 46 55.9	-4.0
LSA				S	S	09 53 16.8	-2.5
LSA				pmax	pmax		
	comp=Z,73nm,0.9s						
LSA				LR	LR		
	comp=Z,440nm,21.1s						
LSA				LR	LR		
	comp=Z,380nm,22.1s						
LSA	Lhasa	42.49	275	P	P	09 47 01.0	+1.1
LSA	Lhasa	42.49	275	P	P	09 46 59.8	-0.1
LSA				pmax	pmax		
	comp=Z,64nm,0.9s						
O15K	Ungalikthiuk R	42.53	40	P	P	09 46 59.0	-0.3
O15K				IAmb	IAmb	09 47 14.8	
	comp=Z,203nm,1.9s						
O15K	Ungalikthiuk R	42.53	40	P	P	09 46 59.9	+0.6
	baz=266						
D17K	Noatak River	42.55	28	P	P	09 46 59.5	+0.2
	baz=254,SNR=19						
CHNA	Chernabura Isl	42.57	47	P	P	09 46 59.4	-0.3
	baz=271						
S14K	Fog Glacier	42.58	45	P	P	09 46 59.6	-0.2
	baz=270						
J16K	Anvik River	42.61	34	P	P	09 46 59.9	0.0
	baz=261						
MSAI	Masohi	42.61	199	P	P	09 47 01.4	+1.1
	comp=Z,2µmcomp=Z,10µmcomp=Z,84nm,1.0s						
I17K	Unalakleet	42.66	33	P	P	09 47 01.4	+1.2
	baz=260						
RDOG	Red Dog Mine	42.71	27	P	P	09 47 01.0	+0.3
	baz=254,SNR=11						
KRAI	Karang Ratu	42.72	200	P	P	09 47 02.3	+1.0
C17K	DeLong Mountai	42.74	26	P	P	09 47 00.9	+0.1
	baz=253,SNR=8.1						
APSI	Ampana	42.76	211	P	P	09 47 01.8	+0.3
NRIK	Noril'sk	42.77	335	P	P	09 47 00.8	-0.3
	comp=Z,9.2nm,0.3s,baz=108,slow=8.9,SNR=32						
NRIK				LR	LR	10 05 49.9	
	comp=Z,2µm,18.5s,baz=108,slow=38						
	comp=Z,9.2nm,0.3s						
NRIK	Noril'sk	42.77	335	P	P	09 47 00.2	-0.8
NRIK				IAmb	IAmb	09 47 02.0	
	comp=Z,172nm,1.9s						
NRIK	Noril'sk	42.77	335	*i* P	P	09 47 00.3	-0.7
NRIK				pmax	pmax		
	comp=Z,43nm,1.0s						
E17K	Hotham Inlet	42.86	29	P	P	09 47 02.1	+0.3
	baz=256,SNR=10						
L16K	Owhat River	42.92	37	P	P	09 47 02.6	+0.2
	baz=264						
F17K	Baldwin Pennin	42.93	30	P	P	09 47 03.0	+0.7
	baz=257						
G17K	Kiwalik Mounta	42.97	31	P	P	09 47 02.8	0.0
	baz=259						
M16K	Timber Creek	43.10	38	P	P	09 47 04.1	+0.2
	baz=265						
AAI	Ambon	43.13	200	P	P	09 47 05.6	+1.0
N16K	Nishlik Lake	43.15	39	P	P	09 47 03.2	-1.1
	baz=266						
H17K	Granite Mounta	43.18	32	P	P	09 47 03.2	-1.2
	baz=260						
J17K	VABM Dome	43.30	34	P	P	09 47 04.9	-0.6
	baz=262						
E18K	Tukpahlearik C	43.40	28	P	P	09 47 04.8	-1.4
	baz=257,SNR=6.4						
O16K	Kokwok River B	43.44	40	P	P	09 47 05.4	-1.2
	baz=268						
B18K	Kokolik River	43.47	25	P	P	09 47 06.9	+0.2
	baz=254,SNR=9.2						
P16K	Nushagak River	43.47	41	P	P	09 47 06.2	-0.6
	baz=268						
C18K	Utukok River	43.49	26	IAmb	IAmb	09 47 34.9	
	comp=Z,38nm,0.9s						
C18K	Utukok River	43.49	26	P	P	09 47 06.2	-0.8
	baz=255,SNR=18						
BNDI	Bandanaira	43.50	197	P	P	09 47 08.3	+0.8
BNDI	Bandanaira	43.50	197	P	P	09 47 07.5	0.0
L17K	Donlin	43.52	36	P	P	09 47 07.0	-0.3
	baz=265						
K17K	Iditarod	43.57	35	IAmb	IAmb	09 47 24.0	
	comp=Z,129nm,1.9s						
K17K	Iditarod	43.57	35	P	P	09 47 06.6	-1.0
	baz=264						
F18K	Selawik	43.59	30	P	P	09 47 07.8	+0.1
	baz=259,SNR=5.0						
R16K	Pilot Point	43.67	43	P	P	09 47 08.2	-0.3
	baz=270						
SHL	Shillong	43.76	269	P	P	09 47 09.3	-0.5
	SNR=33						
SHL	Shillong	43.76	269	P	P	09 47 09.4	-0.5
G18K	Tagagawik	43.86	31	IAmb	IAmb	09 47 25.7	
	comp=Z,104nm,1.9s						
G18K	Tagagawik	43.86	31	P	P	09 47 09.9	0.0
	baz=260						
H18K	Honhosa River	43.86	32	P	P	09 47 10.0	+0.1
	baz=261						
M17K	Holitna River	43.87	37	P	P	09 47 09.3	-0.7
	baz=266						
N17K	Nushagak Hills	43.94	39	P	P	09 47 10.4	-0.2
	baz=267						
A19K	Wainwright	43.95	24	P	P	09 47 09.9	-0.7
	baz=254						
O17K	Koliganek Bris	43.95	40	P	P	09 47 10.7	0.0
	baz=268						
MK31	Makanchi Array	44.03	302	*ce*P	P	09 47 11.5	-0.1
MKAR	Makanchi Array	44.03	302	P	P	09 47 11.5	-0.1
	comp=Z,25nm,0.6s,baz=84,slow=9.1,SNR=238						
MKAR				LR	LR	10 06 45.9	
	comp=Z,537nm,18.5s,baz=79,slow=38						
	comp=Z,25nm,0.6s						
Q16K	King Salmon	44.16	41	P	P	09 47 12.2	-0.2
	baz=270						
C19K	Lookout Ridge	44.16	26	IAmb	IAmb	09 47 15.4	
	comp=Z,55nm,1.1s						
C19K	Lookout Ridge	44.16	26	P	P	09 47 11.9	-0.5
	baz=256						
MAKZ	Makanchi	44.24	302	P	P	09 47 13.2	0.0
MAKZ				IAmb	IAmb	09 47 14.7	
	comp=Z,132nm,1.4s						
MAKZ	Makanchi	44.24	302	P	P	09 47 13.3	0.0
MAKZ	Makanchi	44.24	302	P	P	09 47 13.5	+0.2
MAKZ				pP	pP	09 47 25.6	+0.2
P17K	Kvichak River	44.28	40	P	P	09 47 13.1	-0.2
	baz=269						
L18K	Granite Mounta	44.28	36	P	P	09 47 12.7	-0.6
	baz=266						
R17L	Mt. Peulik Vol	44.32	43	P	P	09 47 14.6	+0.9
	baz=271						
J18K	Innoko River	44.37	34	P	P	09 47 13.5	-0.5
	baz=265						
F19K	Shaleruckik Mo	44.37	29	P	P	09 47 13.6	-0.3
	baz=260						
SBUM	Sibu	44.41	225	P	P	09 47 14.4	-0.5
SBUM	Sibu	44.41	225	P	P	09 47 15.6	+0.7
SBUM	Sibu	44.41	225	P	P	09 47 14.4	-0.5
	comp=Z,19nm,1.3s						
GCSA	Galena City Sc	44.43	33	P	P	09 47 14.1	-0.3
	baz=263						
G19K	Purcell Mounta	44.53	31	P	P	09 47 15.4	+0.1
	baz=262,SNR=6.4						
D19K	Kuna River	44.55	27	IAmb	IAmb	09 47 45.7	
	comp=Z,64nm,1.1s						
D19K	Kuna River	44.55	27	P	P	09 47 15.7	+0.2
	baz=258						
N18K	Kilae Creek	44.58	38	P	P	09 47 16.1	+0.3
	baz=268						
M18K	Stony River	44.65	37	P	P	09 47 16.5	+0.3
	baz=268						
E19K	Redstone River	44.68	29	P	P	09 47 16.7	+0.2
	baz=260,SNR=11						
H19K	Roundabout Mou	44.71	31	P	P	09 47 16.6	-0.1
	baz=263,SNR=11						
CHIR	Chirikof Islan	44.80	45	P	P	09 47 16.8	-0.7
	baz=273						
P18K	Big Mountain,	44.90	40	P	P	09 47 18.4	+0.1
	baz=270						
J19K	Poorman	44.90	34	P	P	09 47 18.3	+0.1
	baz=265,SNR=6.7						
O18K	Koktuh Hills	44.91	40	P	P	09 47 18.6	+0.2
	baz=270						
Q18K	Katmai Hardscr	45.02	41	P	P	09 47 19.0	-0.4
	baz=271						
D20K	Etivluk River	45.13	27	IAmb	IAmb	09 47 23.1	
	comp=Z,53nm,1.1s						
D20K	Etivluk River	45.13	27	P	P	09 47 20.7	+0.7
	baz=260,SNR=29						
L19K	White Mountain	45.13	36	P	P	09 47 20.3	+0.1
	baz=268						
F20K	Avaraart Lake	45.20	29	P	P	09 47 20.9	+0.4
	baz=262						
B20K	Meade River	45.20	25	IAmb	IAmb	09 47 23.2	
	comp=Z,65nm,1.1s						
B20K	Meade River	45.20	25	P	P	09 47 20.9	+0.4
	baz=258						
E20K	Nigu River	45.21	28	P	P	09 47 20.8	0.0
	baz=260						
N19K	Bonanza Creek	45.28	38	P	P	09 47 21.1	-0.3
	baz=269						
H20K	Anotleneega Mo	45.35	32	P	P	09 47 22.5	+0.6
	baz=264						
O19K	Port Alsworth	45.35	39	P	P	09 47 21.6	-0.3
	baz=270						
BRDH	Bariadhala	45.39	265	P	P	09 47 22.8	+0.2
	comp=Z,108nm,0.4s,baz=58,slow=11,SNR=12						
BRDH				LR	LR	10 10 25.7	
	comp=Z,787nm,18.5s,baz=68,slow=42						
	comp=Z,108nm,0.4s						
I20K	Naaghedeneel	45.46	33	P	P	09 47 23.2	+0.6
	baz=265						
MMSI	Mamuju	45.51	213	P	P	09 47 23.4	-0.2
	comp=Z,592nmcomp=Z,30nm,0.8s						
K20K	Telida	45.55	35	IAmb	IAmb	09 47 38.5	
	comp=Z,73nm,1.8s						
K20K	Telida	45.55	35	P	P	09 47 24.2	+0.8
	baz=267						
SII	Sitkinak Islan	45.55	44	P	P	09 47 24.3	+0.7
	baz=274						
J20K	Nowinta River	45.56	33	P	P	09 47 23.7	+0.3
	baz=266						
A21K	Barrow	45.67	23	P	P	09 47 24.5	+0.3
	baz=257						
Q19K	Cape Douglas,	45.72	41	P	P	09 47 24.9	+0.1
	baz=272						
KURK	Kurchatov	45.77	308	P	P	09 47 25.4	+0.2
KURK				P	P	09 47 25.4	+0.2
KURK				S	S	09 54 03.2	-2.4
KURK				S	S	09 54 03.2	-2.4
KURK	Kurchatov	45.77	308	P	P	09 47 25.1	-0.2
KURK	Kurchatov	45.77	308	*ce*P	P	09 47 24.9	-0.4
KURK				pmax	pmax		
	comp=Z,236nm,1.3s						
KURBB	Kurchatov Arra	45.84	307	P	P	09 47 25.6	-0.2
	comp=Z,57nm,0.6s,baz=83,slow=7.9,SNR=404						
KURBB				LR	LR	10 07 25.5	
	comp=Z,2µm,18.4s,baz=118,slow=37						
	comp=Z,57nm,0.6s						
MTKI	Muara Teweh, K	45.85	219	P	P	09 47 27.1	+0.8
C21K	Knifeblade Rid	45.86	26	P	P	09 47 25.9	+0.1
	baz=261						
IMAR	Indian Mountai	45.86	31	P	P	09 47 25.5	-0.4
P19K	Oil Pt	45.91	40	P	P	09 47 25.8	-0.5
	baz=272						
M20K	Styx River	45.94	37	P	P	09 47 26.6	0.0
	baz=270						
B21K	Ikpikpuk River	46.00	26	IAmb	IAmb	09 47 30.0	
	comp=Z,72nm,1.1s						
B21K	Ikpikpuk River	46.00	26	P	P	09 47 26.6	-0.2
	baz=261,SNR=39						
OHAK	Old Harbor	46.00	43	P	P	09 47 27.0	0.0
	baz=274						
G21K	Allakaket	46.01	30	P	P	09 47 28.1	+1.1
	baz=265						
E21K	Killik River	46.05	28	P	P	09 47 27.8	+0.5
	baz=262						
F21K	Alatna River	46.09	29	P	P	09 47 27.7	0.0
	baz=264						
A22K	Sinclair Lake	46.12	24	P	P	09 47 27.8	+0.1
	baz=259						
O20K	Slope Mountain	46.21	39	P	P	09 47 28.5	-0.2
	baz=272						
H21K	Melozitna Rive	46.23	31	P	P	09 47 28.6	-0.1
	baz=266						
SPSI	Sidrap Palu	46.29	211	P	P	09 47 28.4	-1.3
	comp=Z,2µmcomp=Z,51nm,1.1s						
KDAK	Kodiak Island	46.34	42	LR	LR	10 06 28.5	
	comp=Z,835nm,20.6s,baz=242,slow=36						
KDAK	Kodiak Island	46.34	42	P	P	09 47 30.2	+0.6
	baz=274						
CHUM	Lake Minchumin	46.35	34	P	P	09 47 30.5	+0.8
	baz=268						
N20K	Mount Spurr	46.38	38	P	P	09 47 30.9	+0.8
	baz=271						
SPCR	Spurr Chakacha	46.38	38	P	P	09 47 30.6	+0.5
	baz=271						
PPLA	Purkeypile	46.39	35	P	P	09 47 30.7	+0.5
	baz=269						
Q20K	Shuyak Island	46.39	41	P	P	09 47 29.9	-0.1
	baz=273						
B22K	Teshekpuk Lake	46.52	25	IAmb	IAmb	09 47 33.1	
	comp=Z,28nm,0.8s						
B22K	Teshekpuk Lake	46.52	25	P	P	09 47 30.9	0.0
	baz=261,SNR=15						
I21K	Tanana	46.54	32	P	P	09 47 31.6	+0.4
	baz=267						
BNSI	Bone	46.55	211	P	P	09 47 32.5	+0.7
D22K	Ayikyak River	46.57	27	IAmb	IAmb	09 47 34.6	
	comp=Z,40nm,1.0s						
D22K	Ayikyak River	46.57	27	P	P	09 47 31.6	+0.2
	baz=263						
EVN	Everest	46.67	275	P	P	09 47 33.5	+0.1
SKT	Skwentna	46.70	37	P	P	09 47 33.0	+0.5
	baz=271						
HOM	Homer	46.72	40	P	P	09 47 32.5	-0.2
	baz=273						
SHLS	Shalkode	46.81	297	⇑*i*P	P	09 47 31.5	-2.3
	comp=Z,22nm,0.5s						
SHLS	Shalkode	46.81	297	*c i*P	P	09 47 31.4	-2.3
SHLS				pmax	pmax		
	comp=Z,22nm,0.5s						
E22K	Anaktuvuk Pass	46.81	28	IAmb	IAmb	09 48 00.7	
	comp=Z,31nm,0.9s						
E22K	Anaktuvuk Pass	46.81	28	P	P	09 47 31.6	-1.7
	baz=265,SNR=16						
H22K	Ishtalitna Cre	46.83	31	P	P	09 47 33.2	-0.2
	baz=267						
G22K	Bettles	46.83	30	P	P	09 47 33.2	-0.3
	baz=266						
CAPN	Captain Cook N	46.91	38	P	P	09 47 33.5	-0.5
	baz=272						
BPAW	Bear Paw Mtn.	46.94	34	P	P	09 47 33.6	-0.7
	baz=269						
KTH	Kantishna Hill	46.97	34	IAmb	IAmb	09 47 59.9	
	comp=Z,33nm,1.1s						
L22K	Petersville	47.04	36	IAmb	IAmb	09 47 56.7	
	comp=Z,39nm,1.5s						
MLY	Manley	47.06	32	P	P	09 47 35.2	-0.2
	baz=269						
TDK	Taldyqorghan	47.07	300	⇑*i*P	P	09 47 35.9	+0.3
	comp=Z,33nm,0.6s						
TDK	Taldyqorghan	47.07	300	*c i*P	P	09 47 35.9	+0.3
TDK				pmax	pmax		
	comp=Z,33nm,0.6s						
SUA	Susitna One	47.08	37	P	P	09 47 34.3	-1.3
	baz=272						
UZB	Uzynbulak	47.12	297	⇑*i*P	P	09 47 36.3	0.0
	comp=Z,25nm,0.9s						
UZB	Uzynbulak	47.12	297	*c i*P	P	09 47 36.2	0.0
UZB				pmax	pmax		
	comp=Z,25nm,0.9s						
BRSE	Bradley Lake S	47.17	40	P	P	09 47 35.4	-0.8
	baz=274						
PMG	Port Moresby	47.17	173	LR	LR	10 06 55.8	
	comp=Z,182nm,21.8s,baz=344,slow=36						
TRF	Thorofare Moun	47.25	35	P	P	09 47 35.9	-1.0
	baz=271						
KAPI	Kappang	47.25	211	LR	LR	10 06 18.4	
	comp=Z,142nm,21.9s,baz=6.0,slow=35						
KAPI	Kappang	47.25	211	P	P	09 47 38.8	+1.6
KAPI				S	S	09 54 28.7	+1.3
KAPI	Kappang	47.25	211	P	P	09 47 37.8	+0.5
KAPI	Kappang	47.25	211	P	P	09 47 37.9	+0.7
KAPI	Kappang	47.25	211	P	P	09 47 37.9	+0.7
	comp=Z,789nmcomp=Z,75nm,1.5s						
KAPI	Kappang	47.25	211	P	P	09 47 37.8	+0.5

KAPI				pmax	pmax		
	comp=Z,203nm,1.3s						
D23K	Nanushuk River	47.30	27	P	P	09 47 37.5	+0.4
	baz=265,SNR=7.9						
COLD	Coldfoot	47.36	29	P	P	09 47 38.2	+0.6
	baz=267						
BKSI	Bulukumba	47.38	210	P	P	09 47 38.1	-0.2
	comp=Z,556nmcomp=Z,50nm,1.1s						
C23K	Itkillik River	47.41	26	P	P	09 47 37.8	0.0
	baz=264,SNR=35						
G23K	Bananza Creek	47.41	30	P	P	09 47 38.3	+0.3
	baz=268						
WUS	Wushi	47.54	295	P	P	09 47 40.2	+0.7
WUS				pP	pP	09 47 52.5	+0.7
WUS				sP	sP	09 47 57.3	+0.5
MKS	Makassar	47.55	211	P	P	09 47 41.4	+1.8
H23K	Yukon River	47.58	31	IAmb	IAmb	09 48 06.1	
	comp=Z,31nm,1.1s						
H23K	Yukon River	47.58	31	P	P	09 47 39.6	+0.3
	baz=269,SNR=6.2						
SATY	Saty	47.58	297⇑	*i*P	P	09 47 39.9	0.0
	comp=Z,11nm,0.5s						
SATY	Saty	47.58	297*c*	*i*P	P	09 47 39.8	0.0
SATY				pmax	pmax		
	comp=Z,11nm,0.5s						
RC01	Rabbit Creek A	47.59	38	P	P	09 47 39.3	-0.1
	baz=273						
O22K	Cooper Landing	47.63	39	P	P	09 47 40.5	+0.8
	baz=274						
E23K	Chandalar	47.63	28	IAmb	IAmb	09 47 43.0	
	comp=Z,34nm,1.1s						
E23K	Chandalar	47.63	28	P	P	09 47 40.1	+0.4
	baz=267,SNR=20						
I23K	Minto, Yukon-K	47.65	32	IAmb	IAmb	09 49 25.4	
	comp=Z,26nm,1.1s						
I23K	Minto, Yukon-K	47.65	32	P	P	09 47 40.4	+0.6
	baz=270						
TOLK	Toolik Lake Re	47.68	27	P	P	09 47 40.4	+0.3
	baz=266,SNR=11						
PRZ	Przheval'sk	47.75	297	P	P	09 47 42.0	+0.8
PRZ				pmax	pmax		
	comp=Z,122nm,1.1s						
NEA2	Nenana	47.77	33	P	P	09 47 40.9	+0.1
	baz=271						
SEW	Seward	47.79	39	P	P	09 47 40.8	-0.1
	baz=274						
PMR	Palmer	47.85	37	IAmb	IAmb	09 47 56.6	
	comp=Z,26nm,1.1s						
PMR	Palmer	47.85	37	P	P	09 47 43.2	+1.8
PMR	Palmer	47.85	37	P	P	09 47 41.6	+0.2
	baz=273						
MCK	McKinley	47.85	34	P	P	09 47 41.6	+0.2
	baz=272						
GHO	Glory Hole Cre	47.94	37	IAmb	IAmb	09 48 05.7	
	comp=Z,37nm,1.1s						
D24K	Happy Valley	47.98	27	IAmb	IAmb	09 47 45.3	
	comp=Z,42nm,1.1s						
D24K	Happy Valley	47.98	27	P	P	09 47 41.8	-0.5
	baz=267						
BBKI	Banjar Baru	48.05	218	P	P	09 47 43.3	-0.2
E24K	Your Creek	48.05	28	IAmb	IAmb	09 47 46.2	
	comp=Z,24nm,1.1s						
E24K	Your Creek	48.05	28	P	P	09 47 43.6	+0.6
	baz=268,SNR=17						
WAT1	Susitna Watana	48.06	35	P	P	09 47 43.0	-0.1
	baz=273						
C24K	Franklin Bluff	48.06	26	P	P	09 47 43.4	+0.5
	baz=266						
KNK	Knik Glacier	48.18	37	P	P	09 47 43.5	-0.5
	baz=274						
WRH	Wood River Hil	48.20	33	IAmb	IAmb	09 49 26.2	
	comp=Z,22nm,1.0s						
SML	Sawmill	48.22	37	IAmb	IAmb	09 48 12.9	
	comp=Z,33nm,1.0s						
SML	Sawmill	48.22	37	P	P	09 47 44.3	0.0
	baz=274						
H24K	Noodor Dome	48.27	31	P	P	09 47 45.4	+0.7
	baz=271						
F24K	Squaw Lake	48.27	29	P	P	09 47 44.6	0.0
	baz=269						
PWL	Port Wells	48.28	38	P	P	09 47 44.7	-0.1
	baz=275						
COLA	College	48.29	33	P	P	09 47 46.4	+1.6
COLA	College	48.29	33	*i* P	P	09 47 46.3	+1.5
COLA				pmax	pmax		
	comp=Z,53nm,2.2s						
COLA	College	48.29	33	P	P	09 47 44.4	-0.3
	baz=271						
CHKK	Chushkaly	48.35	299	*e*P	P	09 47 45.6	-0.1
CHKK	Chushkaly	48.35	299	*e*P	P	09 47 45.5	-0.1
TARG	Taragay, Kyrgy	48.40	296	P	P	09 47 47.2	+0.8
TARG				pmax	pmax		
	comp=Z,117nm,0.9s						
G24K	Hadweenzic Riv	48.42	30	IAmb	IAmb	09 48 01.3	
	comp=Z,27nm,1.2s						
G24K	Hadweenzic Riv	48.42	30	P	P	09 47 44.6	-1.2
	baz=270,SNR=5.9						
WAT6	Susitna Watana	48.44	36	P	P	09 47 46.3	+0.1
	baz=274						
POKR	Poker Plat Res	48.46	32	IAmb	IAmb	09 48 12.7	
	comp=Z,42nm,0.9s						
POKR	Poker Plat Res	48.46	32	P	P	09 47 46.6	+0.4
	baz=272,SNR=6.2						
M23K	Glacier View	48.50	37	P	P	09 47 47.0	+0.5
	baz=274						
MDOK	Medeo	48.51	298	*e*P	P	09 47 47.1	+0.2
MDOK	Medeo	48.51	298	*e*P	P	09 47 47.1	+0.2
DHY	Denali Highway	48.58	35	P	P	09 47 48.1	+0.9
	baz=274						
AAA	Alma-Ata	48.59	298	*e*P	P	09 47 47.8	+0.3
	comp=Z,52nm,1.1s						
AAA	Alma-Ata	48.59	298	*e*P	P	09 47 47.8	+0.3
AAA				pmax	pmax		
	comp=Z,52nm,1.1s						
TNSS	Tian-Shan	48.61	298	*e*P	P	09 47 47.8	-0.3
TNSS	Tian-Shan	48.61	298	*e*P	P	09 47 47.7	-0.3
SCM	Sheep Creek Mo	48.69	37	P	P	09 47 48.6	+0.6
	baz=275						
HDA	Harding Lake	48.70	33	P	P	09 47 47.8	-0.1
	baz=273						
IL31		48.71	33	IAmb	IAmb	09 48 05.5	
	comp=Z,18nm,0.8s						
ILAR	Eielson Array	48.71	33	P	P	09 47 48.6	+0.6
	comp=Z,4.1nm,0.9s,baz=268,slow=5.9,SNR=30						
ILAR				LR	LR	10 09 39.8	
	comp=Z,327nm,20.9s,baz=270,slow=38						
	comp=Z,4.1nm,0.9s						
P23K	Montague Islan	48.83	39	P	P	09 47 49.0	0.0
	baz=276						
D25K	Kavik River	48.86	27	IAmb	IAmb	09 48 05.7	
	comp=Z,23nm,0.9s						
D25K	Kavik River	48.86	27	P	P	09 47 49.9	+0.8
	baz=269,SNR=14						
GLI	Glacier Island	48.89	38	P	P	09 47 49.9	+0.5
	baz=276						
G25K	Bearman Lake	48.97	30	P	P	09 47 50.5	+0.6
	baz=271						
H25L	Birch Creek	49.10	31	P	P	09 47 51.6	+0.7
	baz=272						
F25K	Christian Rive	49.13	29	P	P	09 47 51.3	0.0
	baz=271,SNR=5.6						
E25K	Arctic Village	49.15	28	IAmb	IAmb	09 48 07.9	
	comp=Z,95nm,1.9s						
E25K	Arctic Village	49.15	28	P	P	09 47 52.6	+1.2
	baz=271,SNR=12						
M24K	Tolsona, Glenn	49.21	36	P	P	09 47 52.1	+0.2
	baz=275						
K24K	Donnelly Dome	49.25	34	IAmb	IAmb	09 48 17.5	
	comp=Z,27nm,1.0s						
K24K	Donnelly Dome	49.25	34	P	P	09 47 53.2	+1.0
	baz=274						
ULHL	Ulahol	49.35	297	P	P	09 47 53.7	+0.2
	SNR=18						
J25K	Salcha River,	49.37	33	P	P	09 47 53.8	+0.7
	baz=274						
C26K	Camden Bay	49.38	26	P	P	09 47 54.1	+1.1
	baz=270						
KLU	Klutina	49.39	37	IAmb	IAmb	09 48 09.8	
	comp=Z,18nm,0.8s						
KLU	Klutina	49.39	37	P	P	09 47 54.4	+1.1
	baz=276						
Q23K	Middleton Isla	49.42	40	P	P	09 47 53.7	+0.2
	baz=278						
PAX	Paxson	49.45	35	P	P	09 47 54.2	+0.4
	baz=275						
KULM	Kulim	49.47	240	IAmb	IAmb	09 48 07.7	
	comp=Z,47nm,1.2s						
KULM	Kulim	49.47	240	P	P	09 47 56.0	+1.6
EYAK	Cordova Ski Ar	49.58	38	P	P	09 47 55.2	+0.5
	baz=277						
TKM2	Tokmak 2	49.59	298	P	P	09 47 56.0	+0.7
	SNR=163						
BRZS	Berezniki	49.64	308	*e*P	P	09 47 55.2	-0.2
BRZS	Berezniki	49.64	308	*e*P	P	09 47 55.1	-0.2
MMRI	Maumere	49.65	206	P	P	09 47 56.2	+0.5
MMRI	Maumere	49.65	206	P	P	09 47 58.2	+2.5
	comp=Z,45nm,1.7s						
HARP	HAARP	49.65	36	P	P	09 47 55.5	+0.2
	baz=276						
RIDG	Independent Ri	49.66	34	P	P	09 47 56.2	+0.8
	baz=275						
F26K	Sheenjek River	49.70	29	IAmb	IAmb	09 47 59.4	
	comp=Z,33nm,1.1s						
F26K	Sheenjek River	49.70	29	P	P	09 47 56.1	+0.5
	baz=272,SNR=26						
C27K	Jago River	49.80	26	P	P	09 47 56.6	+0.3
	baz=271						
IPM	Ipoh	49.80	239	IAmb	IAmb	09 48 09.5	
	comp=Z,54nm,1.0s						
IPM	Ipoh	49.80	239	P	P	09 47 56.7	-0.3
IPM	Ipoh	49.80	239	P	P	09 47 56.6	-0.4
	comp=Z,45nm,1.0s						
G26K	Porcupine Rive	49.88	30	P	P	09 47 56.6	-0.2
	baz=273,SNR=5.6						
EDFI	Ende, Flores	49.95	206	P	P	09 47 57.2	-0.9
	comp=Z,775nmcomp=Z,38nm,1.3s						
MYKOM	Kota Tinggi	49.96	233	P	P	09 47 59.4	+1.3
N25K	Chitina, Valde	50.01	37	P	P	09 47 58.2	+0.1
	baz=277						
DOT	Dot Lake	50.02	34	IAmb	IAmb	09 48 35.7	
	comp=Z,40nm,1.6s						
SCRK	Sand Creek	50.02	34	P	P	09 47 58.4	+0.2
	baz=276,SNR=7.2						
SOEI	Soe	50.04	203	P	P	09 47 59.3	+0.5
SOEI	Soe	50.04	203	P	P	09 48 07.7	+8.9
BMRM	Bremner River	50.08	38	IAmb	IAmb	09 48 17.1	
	comp=Z,34nm,0.9s						
BMRM	Bremner River	50.08	38	P	P	09 47 58.7	+0.1
	baz=278						
SGDS	Sogindy	50.11	299⇑	*i*P	P	09 47 59.2	+0.1
	comp=Z,16nm,0.9s						
KBK	Karagaybulak	50.13	298	P	P	09 47 59.8	+0.4
	SNR=66						
J26L	Joseph Creek	50.16	33	P	P	09 47 59.5	+0.4
	baz=276						
CHMS	Chumysh	50.16	298	P	P	09 47 59.7	+0.3
	SNR=9.9						
I26K	Coal Creek Min	50.25	32	P	P	09 47 59.9	+0.2
	baz=275						
MENT	Mentasta	50.25	35	P	P	09 48 01.9	+2.1
USP	Ospenovka	50.25	299	P	P	09 48 00.0	-0.2
	SNR=37						
KAIM	Kayak Island	50.32	39	P	P	09 48 00.4	0.0
	baz=279						
BVAR	Borovoye Array	50.35	312	P	P	09 48 00.1	-0.5
	comp=Z,18nm,0.7s,baz=76,slow=7.9,SNR=48						
BVAR				PcP	PcP	09 49 18.9	+0.1
	comp=Z,16nm,0.7s,baz=119,slow=1.9,SNR=6.4						
BVAR				LR	LR	10 10 21.2	
	comp=Z,1µm,18.7s,baz=78,slow=37						
	comp=Z,18nm,0.7s						
LBFI	Labuhan Bajo,	50.36	209	P	P	09 48 02.4	+1.3
	comp=Z,719nmcomp=Z,42nm,0.7s						
BORK	Borovoye	50.38	312	P	P	09 48 00.7	-0.3
BORK				IAmb	IAmb	09 48 02.0	
	comp=Z,30nm,1.0s						
BORK	Borovoye	50.38	312*c*	*e*P	P	09 48 00.8	-0.1
BORK				pmax	pmax		
	comp=Z,48nm,1.3s						
L26K	Log Cabin Wild	50.41	35	IAmb	IAmb	09 48 27.6	
	comp=Z,20nm,0.8s						
L26K	Log Cabin Wild	50.41	35	P	P	09 48 01.6	+0.6
	baz=277,SNR=6.1						
KSH	Kashi	50.43	294	P	P	09 48 05.4	+3.8
KSH				sP	sP	09 48 21.1	+2.1
KSH				pmax	pmax		
	comp=Z,54nm,0.8s						
KSH				LR	LR		
	comp=Z,1µm,16.5s						
KSH				LR	LR		
	comp=Z,1µm,16.8s						
KSH				LR	LR		
	comp=Z,2µm,15.1s						
AAK	Ala-Archa	50.45	298	P	P	09 48 02.2	+0.4
	SNR=13						
AAK	Ala-Archa	50.45	298	LR	LR	10 10 58.7	
	comp=Z,1µm,18.2s,baz=77,slow=38						
AAK	Ala-Archa	50.45	298	P	P	09 48 02.3	+0.4
AAK				P	P	09 48 02.3	+0.4
AAK	Ala-Archa	50.45	298	P	P	09 48 01.6	-0.3
AAK				IAmb	IAmb	09 48 02.5	
	comp=Z,29nm,0.6s						
AAK	Ala-Archa	50.45	298	*i* P	P	09 48 01.9	+0.1
	SNR=13						
AAK	Ala-Archa	50.45	298*c*	*e*P	P	09 48 02.2	+0.4
AAK				pmax	pmax		
	comp=Z,61nm,1.7s						
AAK	Ala-Archa	50.45	298	P	P	09 48 02.1	+0.3
AAK				pP	pP	09 48 14.6	+0.5
UCH	Uchtor	50.57	297	P	P	09 48 03.7	+0.6
	SNR=25						
E27K	Coleen River	50.63	28	IAmb	IAmb	09 48 37.3	
	comp=Z,38nm,1.6s						
E27K	Coleen River	50.63	28	P	P	09 48 03.1	+0.5
	baz=274,SNR=7.3						
M26K	Nabesna, AK	50.65	36	IAmb	IAmb	09 48 50.5	
	comp=Z,26nm,1.2s						
M26K	Nabesna, AK	50.65	36	P	P	09 48 03.2	+0.3
	baz=278						
G27K	Doyon Strip	50.72	30	P	P	09 48 03.8	+0.5
	baz=275						
MCARA	McCarthy VSAT	50.78	37	P	P	09 48 04.5	+0.7
	baz=279						
D27M	Malcolm River	50.79	27	P	P	09 48 03.9	+0.1
	baz=274						
H27K	Steamboat Moun	50.83	31	IAmb	IAmb	09 48 20.0	
	comp=Z,77nm,1.8s						
H27K	Steamboat Moun	50.83	31	P	P	09 48 05.1	+0.9
	baz=276,SNR=9.6						
CRQE	Cirque	50.85	38	P	P	09 48 04.9	+0.4
	baz=279						
K27K	Chicken	50.85	33	P	P	09 48 04.3	0.0
	baz=277						
I27K	Kandik River	50.86	31	P	P	09 48 05.4	+1.0
	baz=276						
KDU	Kakadu	50.93	192	P	P	09 48 05.5	+0.2
	comp=Z,20nm,1.3s						
EKS2	Erkin-Say	50.95	298	P	P	09 48 05.3	-0.2
	SNR=32						
DBNI	Kabupaten Domp	51.00	211	P	P	09 48 05.4	-0.5
	comp=Z,32nm,1.1s						
L27K	Beaver Creek,	51.09	35	P	P	09 48 07.4	+1.2
	baz=278						
BCAR	Beaver Creek A	51.11	35	P	P	09 48 08.5	+2.2
M27K	Edge Creek, AK	51.17	36	IAmb	IAmb	09 48 29.3	
	comp=Z,28nm,1.2s						
M27K	Edge Creek, AK	51.17	36	P	P	09 48 07.7	+0.7
	baz=279						
TPI	Tanjungpandan	51.26	226	P	P	09 48 08.5	+0.6
	comp=Z,753nmcomp=Z,67nm,0.9s						
F28M	Old Crow	51.33	29	IAmb	IAmb	09 48 27.0	
	comp=Z,41nm,1.6s						
F28M	Old Crow	51.33	29	P	P	09 48 08.4	+0.5
	baz=276,SNR=6.8						
E28M	Babbage River	51.36	27	P	P	09 48 09.0	+1.0
	baz=276,SNR=9.2						
COEN	Coen	51.45	178	P	P	09 48 10.5	+1.3
	comp=Z,38nm,1.3s						
COEN	Coen	51.45	178	P	P	09 48 10.1	+0.9
COEN				IAmb	IAmb	09 48 11.1	
	comp=Z,40nm,1.1s						
COEN	Coen	51.45	178	P	P	09 48 10.3	+1.1
MESA	MESA	51.50	38	P	P	09 48 10.2	+0.8
	baz=280						
PLAI	Plampang	51.51	211	P	P	09 48 08.1	-1.6
	comp=Z,71nm,1.1s						
D28M	Stokes Point	51.57	26	P	P	09 48 11.1	+1.6
	baz=276						
I28M	Miner Creek	51.58	31	P	P	09 48 11.1	+1.3
	baz=278,SNR=7.2						
KMMI	Kalianget	51.60	216	P	P	09 48 11.1	+0.7
BVCY	Beaver Creek	51.63	35	P	P	09 48 11.2	+1.0
	baz=280						
CTG	Chitna Glacier	51.66	37	P	P	09 48 12.1	+1.5
	baz=280						
TWSI	Taliwang, Sumb	51.80	212	P	P	09 48 11.2	-0.7
KLNI	Mataram	51.85	213	P	P	09 48 12.4	+0.1
YUK3	Moose Creek	51.93	36	P	P	09 48 14.1	+1.4
	baz=280						
E29M	Blow River	51.98	28	IAmb	IAmb	09 48 34.4	
	comp=Z,27nm,1.1s						
E29M	Blow River	51.98	28	P	P	09 48 13.9	+1.2
	baz=277,SNR=13						
KHKI	Kahang-Kahang	52.01	214	P	P	09 48 14.3	+0.8
DAWY	Dawson	52.02	33	P	P	09 48 14.4	+1.3
	baz=280						
H29M	Whitestone	52.10	30	IAmb	IAmb	09 48 52.1	
	comp=Z,37nm,1.4s						
H29M	Whitestone	52.10	30	P	P	09 48 15.1	+1.5
	baz=279,SNR=7.8						
G29M	Pine Creek	52.14	29	P	P	09 48 15.5	+1.6
	baz=278,SNR=11						
O28M	Mount Upton	52.25	37	P	P	09 48 15.9	+0.8
	baz=281						
I29M	Ogilvie Camp,	52.26	31	IAmb	IAmb	09 48 33.0	
	comp=Z,26nm,0.9s						
I29M	Ogilvie Camp,	52.26	31	P	P	09 48 15.9	+1.0
	baz=279,SNR=14						
YUK8	Steele Glacier	52.35	37	P	P	09 48 17.0	+1.1
	baz=281						
PINM	Pinnacle	52.35	38	P	P	09 48 16.3	+0.7
	baz=282						
OHH	Osh	52.37	296	P	P	09 48 13.8	-2.3
OHH				pmax	pmax		
	comp=Z,38nm,1.2s						
PSI	Prapat	52.45	239	LR	LR	10 11 02.0	
	comp=Z,542nm,20.1s,baz=30,slow=37						
PSI	Prapat	52.45	239	P	P	09 48 16.8	-0.2
	comp=Z,30nm,1.0s						
ARK	Arkit	52.51	298	P	P	09 48 17.8	+0.7
ARK				pmax	pmax		
	comp=Z,62nm,1.1s						
DZA	Taraz	52.57	299	*e*P	P	09 48 17.7	+0.2
	comp=Z,20nm,0.7s						
DZA	Taraz	52.57	299	*e*P	P	09 48 17.6	+0.2
DZA				pmax	pmax		
	comp=Z,20nm,0.7s						
M29M	Somme Creek	52.73	35	P	P	09 48 19.7	+1.3
	baz=282,SNR=5.3						
EPYK	Eagle Plains	52.74	30	IAmb	IAmb	09 48 21.6	
	comp=Z,48nm,1.1s						
EPYK	Eagle Plains	52.74	30	P	P	09 48 19.5	+1.1
	baz=280,SNR=21						
L29M	L29M	52.74	34	IAmb	IAmb	09 48 37.9	
	comp=Z,27nm,0.9s						
L29M	L29M	52.74	34	P	P	09 48 19.9	+1.4
	baz=281,SNR=10						
JAGI	Jajag, Banyuwa	52.76	215	P	P	09 48 18.7	-0.3
	comp=Z,51nm,1.1s						
G30M	tAoh Zraii Nji	52.83	29	P	P	09 48 20.1	+1.1
	baz=280,SNR=8.8						
YUK4	Talbot Arm	52.87	36	P	P	09 48 20.6	+1.1
	baz=282						
K29M	Barlow Dome	52.87	33	P	P	09 48 20.4	+1.0
	baz=281,SNR=8.1						
BKNI	Bangkinang	52.88	235	P	P	09 48 21.5	+1.5
F30M	Barrier River	52.88	28	P	P	09 48 20.4	+1.0
	baz=280,SNR=16						
KKAR	Karatay Array	53.07	300	P	P	09 48 21.1	0.0
KKAR	Karatay Array	53.07	300	P	P	09 48 21.1	0.0
YUK6	Outpost Mounta	53.09	37	P	P	09 48 22.1	+0.8
	baz=283						
I30M	Mount Dempster	53.09	31	IAmb	IAmb	09 48 45.9	
	comp=Z,38nm,0.9s						
I30M	Mount Dempster	53.09	31	P	P	09 48 21.8	+0.7
	baz=281,SNR=29						
O29M	Mount Kennedy	53.13	38	P	P	09 48 23.0	+1.6
	baz=283						
TRKS	Terek-Say	53.18	298	P	P	09 48 22.3	+0.2
TRKS				pmax	pmax		
	comp=Z,83nm,1.0s						
J30M	Hart River	53.23	32	P	P	09 48 24.1	+2.0
	baz=282						
SJI	Sawahan	53.25	218	P	P	09 48 22.3	-0.5
	comp=Z,79nm,1.3s						
SNJI	Sawahan-Nganju	53.30	218	P	P	09 48 23.8	+0.6
	comp=Z,66nm,0.9s						
M30M	Minto, Yukon	53.45	35	IAmb	IAmb	09 48 42.8	
	comp=Z,38nm,1.6s						
M30M	Minto, Yukon	53.45	35	P	P	09 48 24.7	+1.0
	baz=283,SNR=6.0						
HYT	Haines Junctio	53.52	37	P	P	09 48 25.8	+1.5
	baz=283,SNR=5.7						
BRLS	Borolday	53.55	300⇑	*i*P	P	09 48 26.2	+1.5
	comp=Z,26nm,1.1s						
BRLS	Borolday	53.55	300*c*	*i*P	P	09 48 26.2	+1.5
BRLS				pmax	pmax		
	comp=Z,26nm,1.1s						
N30M	Aishikik Lake	53.57	36	P	P	09 48 24.3	-0.2
	baz=283						
INK	Inuvik	53.59	27	P	P	09 48 26.1	+1.6
INK				pmax	pmax		
	comp=Z,21nm,1.4s						
INK	Inuvik	53.59	27	P	P	09 48 25.2	+0.6
	baz=281,SNR=16						
MAYO	Mayo, Yukon	53.63	33	IAmb	IAmb	09 48 59.6	
	comp=Z,27nm,0.8s						
MAYO	Mayo, Yukon	53.63	33	P	P	09 48 25.0	+0.1
	baz=283						
F31M	Tsiigehtchic	53.69	28	IAmb	IAmb	09 48 41.6	
	comp=Z,80nm,1.4s						
F31M	Tsiigehtchic	53.69	28	P	P	09 48 26.3	+1.1
	baz=282,SNR=10						
P29M	Windy Craggy	53.69	38	P	P	09 48 26.7	+1.3
	baz=284						
IUG	Iuzhnay	53.73	299	*e*P	P	09 48 26.2	+0.1
	comp=Z,57nm,1.0s						
IUG	Iuzhnay	53.73	299	*e*P	P	09 48 26.2	+0.1
IUG				pmax	pmax		
	comp=Z,57nm,1.0s						
H31M	Peel River	53.80	31	P	P	09 48 27.2	+1.1
	baz=282,SNR=30						
CTJI	Waduk Cacaban	53.95	221	P	P	09 48 28.1	+0.3
P30M	Million Dollar	53.95	38	P	P	09 48 28.6	+1.2
	baz=284						
CHM	Chimkent	53.97	299	*e*P	P	09 48 27.8	+0.1
	comp=Z,20nm,0.7s						
CHM	Chimkent	53.97	299	*e*P	P	09 48 27.8	+0.1
CHM				pmax	pmax		
	comp=Z,20nm,0.7s						
UGM	Wanagama	54.02	220	P	P	09 48 28.3	-0.1
N31M	Braeburn, Yuko	54.17	36	IAmb	IAmb	09 48 56.5	
	comp=Z,28nm,1.0s						
N31M	Braeburn, Yuko	54.17	36	P	P	09 48 30.1	+1.2
	baz=284						
O30N	Mendenhall	54.21	37	P	P	09 48 30.6	+1.4
	baz=285						
MANEM	Manem	54.29	293	P	P	09 48 31.3	+0.9
MANEM				IAmb	IAmb	09 48 32.7	
	comp=Z,173nm,0.8s						
KPJI	Karang Pucung	54.35	222	P	P	09 48 30.0	-0.7
PLBC	Pleasant Camp	54.41	38	P	P	09 48 32.0	+1.3
	baz=285						
GSI	Gunungsitoli	54.46	239	P	P	09 48 31.2	-0.4
GSI	Gunungsitoli	54.46	239	P	P	09 48 31.5	-0.1
GSI	Gunungsitoli	54.46	239	P	P	09 48 32.0	+0.4
KLSI		54.51	228	P	P	09 48 32.3	+0.4
KNRA	Kununurra	54.55	196	P	P	09 48 33.0	+1.0
	comp=Z,106nm,1.1s						
KNRA	Kununurra	54.55	196	P	P	09 48 31.9	-0.1
TNG	Tangerang	54.62	225	P	P	09 48 33.1	+0.4
TNG				P	P	09 48 33.1	+0.4
M31M	Drury Creek, Y	54.63	35	P	P	09 48 33.3	+1.0
	baz=285						
MDSI	Maura Dua	54.67	228	P	P	09 48 32.6	-0.5
GAR	Garm	54.70	295	P	P	09 48 33.0	-0.3
NIL	Nilore	54.72	288	P	P	09 48 32.4	-0.9
NIL	Nilore	54.72	288	P	P	09 48 33.6	+0.3
NIL	Nilore	54.72	288	P	P	09 48 33.6	+0.3
NIL				pmax	pmax		
	comp=Z,54nm,0.9s						
MASI	Maura Aman, Be	54.78	231	P	P	09 48 35.2	+1.3
WHY	Whitehorse	54.81	37	P	P	09 48 34.6	+0.9
	baz=286						
SVE	Sverdlovsk	54.84	318*d*	*i*P	P	09 48 34.4	+0.6
SVE				pmax	pmax		
	comp=Z,159nm,1.0s						
SVE				MLR	MLR		
	comp=Z,1µm,15.0s						
S31K	Pelican	54.89	40	P	P	09 48 34.5	+0.4
	baz=286						

SKAG	Skagway	54.92	38	P	P	09 48 35.5	+1.2
	baz=286						
A36M	Sachs Harbour	55.47	22	IAmb	IAmb	09 48 54.7	
	comp=Z,38nm,0.9s						
A36M	Sachs Harbour	55.47	22	P	P	09 48 39.9	+1.8
	baz=286,SNR=26						
N32M	Quiet Lake	55.52	36	P	P	09 48 40.1	+1.4
	baz=287						
SIT	Sitka	55.62	41	P	P	09 48 40.7	+1.3
	baz=288						
MTSU	Mount Surprise	55.63	177	P	P	09 48 41.0	+1.1
	comp=Z,15nm,1.1s						
MTSU	Mount Surprise	55.63	177	P	P	09 48 40.7	+0.8
CHGR	Chuyangaron	55.67	295	P	P	09 48 40.2	0.0
CHGR				pmax	pmax		
	comp=Z,400nm,1.0s						
P32M	Atlin	55.67	38	P	P	09 48 41.0	+1.2
	baz=287						
JIS	Juneau Island	55.74	39	P	P	09 48 41.5	+1.3
S32K	Killisnoo	55.88	40	P	P	09 48 42.7	+1.4
	baz=288						
PPSI	Pulau Pagai	55.89	234	P	P	09 48 42.6	+0.7
P33M	Teslin, Yukon	55.92	37	IAmb	IAmb	09 48 58.1	
	comp=Z,38nm,1.2s						
P33M	Teslin, Yukon	55.92	37	P	P	09 48 42.7	+1.1
	baz=288,SNR=5.6						
ARTI	Arti	56.16	318	P	P	09 48 43.2	0.0
	comp=Z,113nm,0.5s,baz=78,slow=4.1,SNR=190						
ARTI				LR	LR	10 15 03.9	
	comp=Z,2µm,18.1s,baz=74,slow=38						
	comp=Z,113nm,0.5s						
ARTI	Arti	56.16	318	P	P	09 48 43.3	0.0
ARTI	Arti	56.16	318	c *i*P	P	09 48 43.2	0.0
ARTI						09 49 37.1	
ARTI						09 50 45.9	
ARTI				S	S	09 56 32.0	+2.9
ARTI				SS	SS	10 00 14.6	-0.8
ARTI				pmax	pmax		
	comp=Z,169nm,0.9s						
ARTI				MLR	MLR		
	comp=Z,2µm,17.0s						
ARTI	Arti	56.16	318	P	P	09 48 43.5	+0.2
ARTI				pP	pP	09 48 55.7	0.0
Q32M	Nakina River	56.58	38	P	P	09 48 47.8	+1.3
	baz=289						
C36M	Paulatuk	56.64	25	P	P	09 48 47.2	+0.7
	baz=289,SNR=18						
SHAA	Shahritus	56.86	294	P	P	09 48 49.2	+0.6
SHAA				IAmb	IAmb	09 48 50.5	
	comp=Z,319nm,1.0s						
T33K	Petersburg	56.93	41	P	P	09 48 50.5	+1.8
	baz=290						
R33M	Jennings River	57.07	38	P	P	09 48 51.3	+1.4
	baz=289						
U33K	Whale Pass	57.08	42	P	P	09 48 51.1	+1.3
	baz=290						
CRAG	Craig	57.30	42	P	P	09 48 52.4	+1.1
	baz=290						
WRAK	Wrangell Islan	57.38	41	P	P	09 48 53.2	+1.3
	baz=290						
KBL	Kabul	57.48	291	P	P	09 48 52.9	-0.4
	SNR=43						
KBL				P	P	09 48 52.9	-0.4
	SNR=43						
KBL	Kabul	57.48	291	P	P	09 48 52.8	-0.4
KBL	Kabul	57.48	291	P	P	09 48 52.8	-0.4
KBL				pmax	pmax		
	comp=Z,105nm,1.1s						
S34M	Telegraph Cree	57.49	39	P	P	09 48 54.3	+1.6
	baz=290						
FITZ	Fitzroy Crossi	57.60	198	P	P	09 48 53.9	+0.1
	comp=Z,39nm,0.8s,baz=17,slow=7.4,SNR=86						
	comp=Z,39nm,0.8s						
FITZ	Fitzroy Crossi	57.60	198	P	P	09 48 54.2	+0.4
FITZ				IAmb	IAmb	09 48 55.7	
	comp=Z,36nm,1.5s						
WB0	Warramunga Arr	57.64	188	P	P	09 48 53.6	-0.5
WB9	Warramunga Arr	57.66	188	P	P	09 48 54.0	-0.3
CTA	Charters Tower	57.68	175	P	P	09 48 58.3	+4.0
CTA	Charters Tower	57.68	175	P	P	09 48 56.3	+2.0
ABKAR	Akbulak array	57.74	310	P	P	09 48 54.2	-0.4
WRAB	Tennant Creek	57.80	188	P	P	09 48 54.8	-0.5
WRAB	Tennant Creek	57.80	188	P	P	09 48 54.3	-0.9
WRAB	Tennant Creek	57.80	188	*i* P	P	09 48 54.4	-0.8
WRAB				pmax	pmax		
	comp=Z,63nm,0.9s						
WR0	Warramunga Arr	57.81	188	P	P	09 48 55.0	-0.3
WR8	Warramunga Arr	57.81	188	P	P	09 48 54.8	-0.5
WB2	Warramunga Arr	57.81	188	P	P	09 48 55.1	-0.2
WR1	Warramunga Arr	57.81	188	P	P	09 48 55.2	-0.1
WRA	Warramunga Arr	57.81	188	P	P	09 48 54.7	-0.7
	comp=Z,47nm,0.6s,baz=6.3,slow=7.1,SNR=206						
	comp=Z,47nm,0.6s						
WRA	Warramunga Arr	57.81	188	P	P	09 48 53.5	-1.9
WB1	Warramunga Ar.	57.83	188	P	P	09 48 54.9	-0.5
WB1	Warramunga Ar.	57.83	188	P	P	09 48 54.4	-1.0
DLBC	Dease Lake	57.85	38	LR	LR	10 12 37.6	
	comp=Z,264nm,21.9s,baz=286,slow=35						
DLBC	Dease Lake	57.85	38	P	P	09 48 56.5	+1.1
	baz=291						
WTLY	Watson Lake, Y	57.85	36	P	P	09 48 56.8	+1.5
	baz=291						
QIS	Mount Isa	58.03	182	P	P	09 48 56.8	0.0
	comp=Z,34nm,1.3s						
QIS	Mount Isa	58.03	182	P	P	09 48 56.1	-0.7
V35K	Ketchikan	58.16	42	P	P	09 48 59.1	+1.7
	baz=291						
T35M	Bob Quinn	58.27	40	IAmb	IAmb	09 49 15.4	
	comp=Z,47nm,1.2s						
T35M	Bob Quinn	58.27	40	P	P	09 49 00.4	+2.2
	baz=291						
AKTO	Aktyubinsk	58.45	312	LR	LR	10 15 19.5	
	comp=Z,933nm,19.0s,baz=73,slow=37						
HYB	Hyderabad	58.57	268	*e*P	P	09 49 00.6	-0.2
HYB				*e*sP	sP	09 49 19.2	+0.8
HYB				*e*PP	PP	09 51 11.1	+0.4
HYB				*e*S	S	09 57 02.1	+0.3
WRGLY	Wrigley	59.06	32	IAmb	IAmb	09 49 19.9	
	comp=Z,37nm,1.0s						
WRGLY	Wrigley	59.06	32	P	P	09 49 04.8	+1.3
	baz=293,SNR=6.0						
ALE	Alert	59.38	4	P	P	09 49 06.2	+0.7
ALE				pP	pP	09 49 19.8	+1.7
LIRD	Liard River Hi	59.38	36	P	P	09 49 07.8	+1.9
	baz=293,SNR=6.2						
KIRV	Kirov	59.89	323	LR	LR	10 18 12.5	
	comp=Z,544nm,19.5s,baz=70,slow=39						
KIRV	Kirov	59.89	323	*ce*P	P	09 49 09.6	+0.3
SPITS	Spitsbergen Ar	59.89	349	P	P	09 49 08.9	-0.2
	comp=Z,23nm,1.1s,baz=76,slow=7.8,SNR=10						
SPITS				LR	LR	10 16 49.5	
	comp=Z,533nm,20.8s,baz=37,slow=38						
	comp=Z,23nm,1.1s						
KBS	Kingsbay	60.01	350	*ce*P	P	09 49 12.1	+2.2
KBS				pmax	pmax		
	comp=Z,103nm,2.5s						
TOAD	Toad River Com	60.02	37	P	P	09 49 12.2	+2.0
	baz=294						
KOTAN	Kotaneelee Air	60.04	35	P	P	09 49 12.3	+1.9
	baz=294						
NOR	Nord	60.36	356	P	P	09 49 12.6	+0.3
NOR				pmax	pmax		
	comp=Z,26nm,1.3s						
BBB	Bella Bella	61.31	45	LR	LR	10 13 22.8	
	comp=Z,224nm,21.0s,baz=290,slow=34						
AS31	Alice Springs	61.54	188	P	P	09 49 20.9	-0.1
ASAR	Alice Springs	61.54	188	P	P	09 49 20.8	-0.2
	comp=Z,20nm,0.7s,baz=12,slow=5.9,SNR=230						
ASAR				LR	LR	10 15 39.5	
	comp=Z,201nm,21.2s,baz=355,slow=36						
ASAR				PKP2bc	P'P'bc	10 18 42.1	+6.2
	comp=Z,1.0nm,0.9s,baz=176,slow=2.8,SNR=6.5						
	comp=Z,20nm,0.7s						
AUALC	St Philip's Co	61.57	188	P	P	09 49 20.7	-0.4
RES	Resolute Bay	61.82	15	IAmb	IAmb	09 49 23.6	
	comp=Z,26nm,1.1s						
RES	Resolute Bay	61.82	15	P	P	09 49 22.6	+0.4
RES				pmax	pmax		
	comp=Z,26nm,1.0s						
APA	Apatity	62.18	336	⇓*e*P	P	09 49 20.7	-4.0
APA				*e*		09 49 58.6	
APA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
APA				MLR	MLR		
	comp=Z,2µm,6.3s						
MBWA	Marble Bar	62.18	203	P	P	09 49 25.4	+0.2
	comp=Z,104nm,1.2s						
MBWA	Marble Bar	62.18	203	P	P	09 49 25.0	-0.2
MBWA	Marble Bar	62.18	203	P	P	09 49 24.8	-0.4
MBWA	Marble Bar	62.18	203	P	P	09 49 25.4	+0.2
PSAC2	Pilbara Seismi	62.50	203	P	P	09 49 27.6	+0.2
	comp=Z,69nm,1.2s						
PSAC1	Pilbara Seismi	62.51	203	P	P	09 49 27.9	+0.5
	comp=Z,75nm,1.1s						
PSA00	Pilbara Seismi	62.53	203	P	P	09 49 27.8	+0.2
	comp=Z,59nm,1.0s						
PSA00	Pilbara Seismi	62.53	203	P	P	09 49 27.3	-0.3
PSA00				IAmb	IAmb	09 49 28.6	
	comp=Z,30nm,0.9s						
PSA00	Pilbara Seismi	62.53	203	IAmb	IAmb	09 49 28.6	
	comp=Z,42nm,0.9s						
PSA00	Pilbara Seismi	62.53	203	P	P	09 49 27.2	-0.3
PSAB3	Pilbara Seismi	62.55	203	P	P	09 49 27.9	+0.2
	comp=Z,69nm,1.1s						
YKAW3	Yellowknife Wh	62.98	30	IAmb	IAmb	09 49 45.5	
	comp=Z,29nm,1.2s						
YKA	Yellowknife Ar	63.02	30	P	P	09 49 31.4	+1.0
	comp=Z,5.2nm,1.0s,baz=297,slow=7.3,SNR=29						
YKA				LR	LR	10 16 35.8	
	comp=Z,183nm,21.9s,baz=261,slow=36						
	comp=Z,5.2nm,1.0s						
YKA	Yellowknife Ar	63.02	30	P	P	09 49 30.8	+0.4
YKAW1	Yellowknife Wh	63.07	30	IAmb	IAmb	09 49 46.1	
	comp=Z,39nm,1.4s						
KLMR	Klimovskoe	63.34	328	*e*P	P	09 49 31.1	-1.4
KLMR				*e**PP	pP	09 49 41.8	-3.3
KLMR				*e*		09 51 50.0	
KLMR				pmax	pmax		
	comp=Z,91nm,1.4s						
EIDS	Eidsvold	63.38	171	P	P	09 49 34.1	+1.0
	comp=Z,23nm,1.0s						
EIDS	Eidsvold	63.38	171	IAmb	IAmb	09 49 47.4	
	comp=Z,19nm,0.9s						
EIDS	Eidsvold	63.38	171	P	P	09 49 34.3	+1.2
ARCES	ARCESS Array B	63.45	339	P	P	09 49 33.6	+0.4
	comp=Z,6.5nm,0.8s,baz=55,slow=7.9,SNR=13						
ARCES				LR	LR	10 22 12.0	
	comp=Z,678nm,18.1s,baz=39,slow=41						
	comp=Z,6.5nm,0.8s						
ARCES	ARCESS Array B	63.45	339	P	P	09 49 33.2	0.0
BELG	Belogornoye	63.51	317	LR	LR	10 18 53.7	
	comp=Z,708nm,19.1s,baz=63,slow=38						
BELG	Belogornoye	63.51	317	*i* P	P	09 49 33.6	-0.2
BELG				pmax	pmax		
	comp=Z,33nm,0.9s						
WRKA	Warakurna	63.74	194	P	P	09 49 35.9	+0.3
	comp=Z,17nm,1.2s						
DZM	Mont Dzumac	63.84	155	*e*P	P	09 49 43.3	+6.9
	comp=Z,79nm,1.3s						
DZM				*e*S	S	09 58 12.2	+3.6
	comp=Z,218nm,27.8s						
DZM				*e*SS	SS	10 02 19.8	+1.9
	comp=Z,202nm,25.1s						
DZM				*e*LQ	LQ	10 06 02.0	
	comp=Z,2µm,35.5s						
DZM				*e*LR	LR	10 08 35.5	
	comp=Z,1µm,21.5s						
DZM	Mont Dzumac	63.84	155	P	P	09 49 37.1	+0.7
QLP	Quilpie	64.03	178	P	P	09 49 38.1	+0.8
	comp=Z,83nm,1.1s						
QLP	Quilpie	64.03	178	P	P	09 49 38.0	+0.6
TULEG	Thule	64.35	8	IAmb	IAmb	09 49 40.0	
	comp=Z,58nm,1.2s						
SGF	Sodankyl	64.43	337	P	P	09 49 39.4	-0.2
SGF				pmax	pmax		
	comp=Z,58nm,1.7s						
MSF	Maaselka	64.55	335	P	P	09 49 40.8	+0.4
DAG	Danmarks Havn	65.09	355	P	P	09 49 43.9	+0.1
LLLB	Lillooet	65.50	44	P	P	09 49 48.2	+1.3
LLLB				IAmb	IAmb	09 50 02.1	
	comp=Z,35nm,1.1s						
TW1H	Toowoomba 1 Ha	65.64	170	P	P	09 49 49.0	+1.1
MOS	Moscow	66.88	323	*e*P	P	09 49 53.8	-1.8
MOS				*e*		09 50 21.0	
MOS				*e*		09 52 20.2	
MOS				pmax	pmax		
	comp=Z,111nm,1.2s						
AULRC	Lightning Ridg	67.07	174	P	P	09 49 57.8	+0.8
VRH	Novokhopyorsk	67.28	318	*e*P	P	09 49 57.0	-1.2
VRH				pmax	pmax		
	comp=Z,89nm,0.8s						
PNT	Penticton	67.42	44	P	P	09 50 00.9	+1.7
MEEK	Meekatharra	67.66	202	P	P	09 50 00.9	+0.1
	comp=Z,21nm,1.4s						
MEEK	Meekatharra	67.66	202	P	P	09 50 00.9	+0.1
OBN	Obninsk	67.73	323	LR	LR	10 22 10.9	
	comp=Z,590nm,18.0s,baz=9.0,slow=38						
OBN	Obninsk	67.73	323	P	P	09 50 01.1	+0.2
OBN	Obninsk	67.73	323	*d i*P	P	09 50 01.2	+0.2
OBN				*e**SP	pP	09 50 11.9	-1.8
OBN						09 50 26.0	
OBN				PPP	PPP	09 54 03.0	
OBN				PS	PnS	09 59 24.0	+1.8
OBN				pmax	pmax		
	comp=Z,150nm,1.7s						
OBN				MLR	MLR		
	comp=Z,499nm,17.0s						
PUL	Pulkovo	67.75	329	*ce*P	P	09 50 02.5	+1.5
PUL				pmax	pmax		
	comp=Z,89nm,0.5s						
LPSR	Galich'ya Gora	67.97	320	*e*P	P	09 50 02.1	-0.4
LPSR				pmax	pmax		
	comp=Z,146nm,1.2s						
B08A	Colville Reser	68.09	45	IAmb	IAmb	09 50 18.6	
	comp=Z,33nm,1.2s						
MAK	Makhachkala	68.29	308	*d i*P	P	09 50 02.8	-1.9
MAK				*e**PP	pP	09 50 17.4	0.0
MAK				*e*		09 52 33.6	
MAK				*e*S	S	09 59 00.8	-1.4
MAK				*e**SS	sS	09 59 26.8	+3.3
MAK				*e*SS	SS	10 03 24.2	-1.0
MAK				pmax	pmax		
	comp=Z,89nm,1.0s						
MAK				MLR	MLR		
	comp=Z,726nm,16.0s						
FIA1	FINESS Array S	68.34	332	P	P	09 50 05.0	+0.3
FINES	FINESS Array B	68.34	332	P	P	09 50 04.9	+0.2
	comp=Z,44nm,0.9s,baz=62,slow=8.9,SNR=43						
FINES				LR	LR	10 21 40.2	
	comp=Z,407nm,18.2s,baz=38,slow=37						
	comp=Z,44nm,0.9s						
VORR	Voronezh	68.34	319	*e*P	P	09 50 04.2	-0.7
VORR				pmax	pmax		
	comp=Z,101nm,1.0s						
H04A	Detroit Lake	68.38	50	IAmb	IAmb	09 50 26.9	
	comp=Z,47nm,1.3s						
ARMA	Armidale	68.43	171	P	P	09 50 06.4	+0.8
EDM	Edmonton	68.57	39	IAmb	IAmb	09 50 21.8	
	comp=Z,59nm,1.1s						
BLKN	Baker Lake	68.60	23	IAmb	IAmb	09 50 21.8	
	comp=Z,34nm,0.9s						
VSR	Storozhevoye	68.62	319	*e*P	P	09 50 03.8	-2.8
VSR				pmax	pmax		
	comp=Z,60nm,1.0s						
VORD	Divnogorie	68.69	319	*e*P	P	09 50 05.3	-1.8
VORD				pmax	pmax		
	comp=Z,50nm,1.0s						
AKT	Akhty	68.93	307	*e*P	P	09 50 08.4	-0.5
AKT				*e*		09 50 29.6	
AKT				pmax	pmax		
	comp=Z,87nm,1.0s						
AKT				MLR	MLR		
	comp=Z,2µm,19.0s						
C09A	Chrisman Ranch	68.99	45	IAmb	IAmb	09 50 24.2	
	comp=Z,48nm,1.2s						
AUPHS	Peel High Scho	69.01	172	P	P	09 50 10.2	+1.1
CMSA	Cobar Meteorol	69.02	176	P	P	09 50 10.7	+1.5
	comp=Z,35nm,1.0s						
CMSA	Cobar Meteorol	69.02	176	P	P	09 50 10.5	+1.3
STKA	Stephens Creek	69.27	180	P	P	09 50 11.1	+0.5
	comp=Z,99nm,0.9s						
STKA	Stephens Creek	69.27	180	P	P	09 50 11.0	+0.3
	comp=Z,7.3nm,0.7s,baz=348,slow=7.0,SNR=12						
STKA				LR	LR	10 20 07.2	
	comp=Z,116nm,21.3s,baz=20,slow=36						
	comp=Z,7.3nm,0.7s						
STKA	Stephens Creek	69.27	180	P	P	09 50 10.9	+0.2
STKA	Stephens Creek	69.27	180	P	P	09 50 11.2	+0.5
NEW	Newport	69.38	44	IAmb	IAmb	09 50 26.6	
	comp=Z,31nm,1.2s						
NEW	Newport	69.38	44	P	P	09 50 09.9	-1.6
NEW				pmax	pmax		
	comp=Z,25nm,1.3s						
FORT	Forrest	69.38	193	P	P	09 50 11.9	+0.6
	comp=Z,42nm,0.8s						
FORT	Forrest	69.38	193	P	P	09 50 11.2	-0.2
FORT				IAmb	IAmb	09 50 12.7	
	comp=Z,29nm,0.7s						
SEKA	Sheki	69.41	307	P	P	09 50 11.3	-0.5
L04D	Klamath Falls	69.63	52	IAmb	IAmb	09 50 28.8	
	comp=Z,62nm,1.1s						
MNGR	Mingechevir, A	69.72	306	P	P	09 50 13.8	+0.2
LKRN	Lenkeran, Azer	69.72	304	P	P	09 50 13.1	-0.6
E09A	Wood Farm, Sta	69.77	46	IAmb	IAmb	09 50 29.3	
	comp=Z,53nm,1.4s						
GOF	Gofitskoye	69.87	312	*ce*P	P	09 50 14.7	+0.2
AUDCS	Dubbo College	69.91	174	P	P	09 50 15.5	+0.9
SUMG	Summit	69.97	0	IAmb	IAmb	09 50 17.2	
	comp=Z,43nm,1.1s						
SUMG	Summit	69.97	0	P	P	09 50 16.6	+1.5
SUMG				pmax	pmax		
	comp=Z,42nm,1.1s						
VSU	Vasula	70.01	330	*ce*P	P	09 50 15.1	0.0
VSU				pmax	pmax		
	comp=Z,75nm,1.7s						
K05A	Summer Lake	70.23	51	IAmb	IAmb	09 50 35.3	
	comp=Z,68nm,1.2s						
GANJ	Ganja	70.27	306	P	P	09 50 16.7	-0.4
BBOO	Buckleboo	70.40	185	P	P	09 50 14.7	-2.9
BBOO	Buckleboo	70.40	185	IAmb	IAmb	09 50 33.3	
	comp=Z,36nm,1.1s						
BBOO	Buckleboo	70.40	185	P	P	09 50 18.7	+1.0
AUJCS	Jamestown Cent	70.65	183	P	P	09 50 20.3	+1.1
TBLG	Delisi	70.68	308	P	P	09 50 19.6	+0.1
KVAR	Kislovodsk Arr	70.69	311	LR	LR	10 23 07.6	
	comp=Z,346nm,18.5s,baz=279,slow=37						
KBZ	Khabaz	70.70	311	P	P	09 50 19.8	+0.3
	comp=Z,44nm,0.9s,baz=62,slow=5.1,SNR=88						
KBZ				LR	LR	10 25 52.3	
	comp=Z,323nm,18.6s,baz=48,slow=40						
	comp=Z,44nm,0.9s						
KBZ	Khabaz	70.70	311	*ce*P	P	09 50 20.0	+0.5
KBZ				pmax	pmax		
	comp=Z,80nm,1.0s						
KIV	Kislovodsk	70.70	311	P	P	09 50 20.4	+0.7
KIV	Kislovodsk	70.70	311	P	P	09 50 20.1	+0.4
KIV	Kislovodsk	70.70	311	*i* P	P	09 50 20.2	+0.4
	SNR=18						
KIV	Kislovodsk	70.70	311	*e*P	P	09 50 17.9	-1.8
KIV				pmax	pmax		
	comp=Z,141nm,1.1s						
KIV				MLR	MLR		
	comp=Z,451nm,18.0s						
KIV	Kislovodsk	70.70	311	P	P	09 50 20.1	+0.4
MORW	Morawa	70.73	204	P	P	09 50 19.8	+0.1
	comp=Z,25nm,1.8s						
MORW	Morawa	70.73	204	IAmb	IAmb	09 50 20.3	
	comp=Z,28nm,1.1s						
MORW	Morawa	70.73	204	P	P	09 50 20.1	+0.4
SHA1	Shidzhatmaz	70.84	311	*i* P	P	09 50 20.8	+0.1
HTT	Hallett	70.87	183	P	P	09 50 21.9	+1.3
	comp=Z,15nm,1.0s						
HTT	Hallett	70.87	183	P	P	09 50 21.2	+0.7
HTT	Hallett	70.87	183	P	P	09 50 21.8	+1.3
WSAR	Wadi Sarin	71.01	285	P	P	09 50 22.0	+0.1
JLN	Jalan Bani Buh	71.02	284	P	P	09 50 22.1	+0.3
NEUR	Neytrino	71.08	310	*i* P	P	09 50 22.8	+0.7
NEUR				pmax	pmax		
	comp=Z,29nm,1.5s						
WBK	Wadi Bani Khal	71.10	284	P	P	09 50 22.8	+0.5
BMO	Blue Mountains	71.19	48	P	P	09 50 24.3	+1.6
KMBL	Kambalda	71.24	198	P	P	09 50 22.8	0.0
	comp=Z,10.0nm,1.9s						
BIDO	Bidbid	71.24	286	P	P	09 50 23.8	+0.6
BANOM	Banah	71.31	289	P	P	09 50 24.1	+0.5
BANOM	Banah	71.31	289	*i* P	P	09 50 23.6	+0.1
	SNR=7.1						
J08A	Circle Bar Ran	71.35	49	IAmb	IAmb	09 50 39.4	
	comp=Z,33nm,1.1s						
SHME	Shamm	71.36	289	P	P	09 50 24.3	+0.4
SHME	Shamm	71.36	289	P	P	09 50 24.1	+0.3
GNI	Garni	71.55	307	LR	LR	10 24 29.2	
	comp=Z,448nm,18.9s,baz=62,slow=38						
GNI	Garni	71.55	307	P	P	09 50 25.8	+0.7
GNI	Garni	71.55	307	P	P	09 50 26.0	+1.0
GNI	Garni	71.55	307	*ce*P	P	09 50 26.4	+1.4
GNI				pmax	pmax		
	comp=Z,75nm,1.7s						
SMDO	Samad	71.56	285	P	P	09 50 25.7	+0.4
	SNR=5.8						
NAX	Nakhchivan	71.61	306	P	P	09 50 24.9	-0.4
MDH	Madha	71.65	288	P	P	09 50 24.6	-1.0
MASF	Masafi	71.72	288	P	P	09 50 26.5	+0.4
MSFE	Esma-Masafi	71.72	288	P	P	09 50 26.5	+0.4
HOQ	Hoqain	71.83	286	P	P	09 50 26.9	+0.1
JMDO	Jabal Madar	71.90	285	P	P	09 50 27.4	+0.2
	SNR=5.2						
UOSS	Minazif	71.92	288	P	P	09 50 27.4	+0.1
UOSS	Minazif	71.92	288	P	P	09 50 27.2	0.0
UOSS				IAmb	IAmb	09 50 27.9	
	comp=Z,32nm,0.8s						
BLDU	Ballidu	71.95	203	P	P	09 50 26.9	-0.2
	comp=Z,37nm,1.4s						
BLDU	Ballidu	71.95	203	P	P	09 50 27.4	+0.3
HATD	Hatta, Dubai	72.04	288	*i* P	P	09 50 28.2	+0.3
	SNR=6.6						
MNK	Minsk	72.10	326	*i* P	P	09 50 27.9	+0.1
MNK				*i*		09 53 08.8	
MNK				*i* PPP	PPP	09 54 53.0	
MNK				*i* S	S	09 59 48.9	+2.6
MNK				*i* SS	SS	10 04 26.9	+3.8
MNK				pmax	pmax		
	comp=Z,73nm,0.9s						
MNK				pmax	pmax		
	comp=N,31nm,1.1s						
MNK				pmax	pmax		
	comp=E,54nm,0.9s						
MNK				MLR	MLR		
	comp=N,309nm,15.0s						
MNK				MLR	MLR		
	comp=Z,816nm,18.0s						
MNK				MLR	MLR		
	comp=E,457nm,17.0s						
SOHO	SOHO	72.12	287	P	P	09 50 28.4	0.0
SOHO	SOHO	72.12	287	*i* P	P	09 50 29.0	+0.6
	SNR=6.6						
ASHO	Ashiyiah	72.17	288	P	P	09 50 29.0	+0.2
ASHO	Ashiyiah	72.17	288	P	P	09 50 29.1	+0.2
NAZ	Nazwa, Dubai	72.30	288	P	P	09 50 29.7	+0.1
KARS	Kars	72.33	308	IAmb	IAmb	09 50 31.9	
	comp=Z,70nm,1.4s						
BSY	Bisya	72.38	285	P	P	09 50 30.3	+0.2
	SNR=6.3						
FAQ	Al Faqa, Dubai	72.49	288	P	P	09 50 30.4	-0.3
VSLR	Vesyoloye	72.56	312	*i* P	P	09 50 31.1	+0.3
VSLR				pmax	pmax		
	comp=Z,128nm,1.2s						
ARQ	Araqi	72.57	286	P	P	09 50 31.6	+0.4
SOC	Sochi	72.68	312	*e*P	P	09 50 31.0	-0.5
SOC				*e*		09 53 14.3	
SOC				*e*PPP	PPP	09 54 57.6	
SOC				*e*S	S	09 59 56.2	+2.9
SOC				*e*SS	SS	10 04 38.0	+5.5
SOC				*e*SSS	SSS	10 07 48.7	
SOC				pmax	pmax		
	comp=Z,36nm,0.9s						
SOC				MLR	MLR		
	comp=Z,476nm,17.0s						
ALNE	Al Ain	72.75	287	P	P	09 50 32.4	+0.1
ALNE	Al Ain	72.75	287	*i* P	P	09 50 32.4	+0.1
	SNR=8.4						
ASUD	Al Ashush, Dub	72.75	288	P	P	09 50 32.6	+0.3
MHTO	MHTO	72.78	283	P	P	09 50 32.6	+0.2
	SNR=17						
PAHR	Pah Rah Range	72.86	53	IAmb	IAmb	09 50 48.2	
	comp=Z,30nm,1.1s						
FFC	Flin Flon	72.92	33	P	P	09 50 33.5	+0.8
FFC				IAmb	IAmb	09 50 48.1	
	comp=Z,33nm,1.1s						
FFC	Flin Flon	72.92	33	P	P	09 50 33.5	+0.8
FFC				pmax	pmax		
	comp=Z,33nm,1.1s						
FCC	Fort Churchill	73.21	27	IAmb	IAmb	09 50 49.3	
	comp=Z,49nm,1.2s						
EGMT	Eagleton	73.51	42	IAmb	IAmb	09 50 51.5	
	comp=Z,64nm,1.1s						
HFS	Hagfors	73.58	336	P	P	09 50 36.7	+0.2

	comp=Z,41nm,0.9s,baz=36,slow=7.9,SNR=25						
HFS				LR	LR	10 25 49.5	
	comp=Z,1µm,19.5s,baz=35,slow=38						
	comp=Z,41nm,0.9s						
DLMT	**Dillon**	**73.59**	**45**	IAmb	IAmb	09 50 53.0	
	comp=Z,37nm,0.9s						
NC204	**NORSAR Array S**	**73.61**	**338**	P	**P**	**09 50 37.5**	**+0.7**
NB201	**NORSAR Array S**	**73.63**	**337**	IAmb	IAmb	09 50 51.8	
	comp=Z,45nm,1.0s						
NB2	**NORSAR Subarra**	**73.66**	**337**	P	**P**	**09 50 37.0**	**0.0**
	comp=Z,50nm,1.0s,baz=41,slow=6.2						
NB2	**NORSAR Subarra**	**73.66**	**337**	P	**P**	**09 50 37.0**	**0.0**
	baz=41,slow=6.2						
NB2	**NORSAR Subarra**	**73.66**	**337**	P	**P**	**09 50 34.2**	**-2.8**
NOA	**NORSAR Array B**	**73.66**	**337**	P	**P**	**09 50 37.2**	**+0.2**
	comp=Z,18nm,0.8s,baz=39,slow=5.8,SNR=40						
NOA				LR	LR	10 25 32.5	
	comp=Z,799nm,21.2s,baz=40,slow=38						
	comp=Z,18nm,0.8s						
DQM	**DQM**	**73.70**	**283**	P	**P**	**09 50 37.7**	**-0.2**
NORES	**NORESS Array B**	**73.80**	**337**	P	**P**	**09 50 39.0**	**+1.2**
NBO00	**NORSAR Array S**	**73.80**	**338**	IAmb	IAmb	09 50 52.2	
	comp=Z,61nm,1.1s						
AKASG	**Malin Array Be**	**73.94**	**322**	P	**P**	**09 50 38.6**	**-0.2**
	comp=Z,21nm,0.6s,baz=47,slow=6.1,SNR=83						
AKASG				LR	LR	10 24 25.0	
	comp=Z,552nm,20.8s,baz=51,slow=37						
	comp=Z,21nm,0.6s						
AKASG	**Malin Array Be**	**73.94**	**322**	P	**P**	**09 50 38.0**	**-0.8**
AKASG	**Malin Array Be**	**73.94**	**322**	*i* P	**P**	**09 50 38.5**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,12nm,0.4s						
AKBB	**Malin Array Si**	**73.94**	**322**	*ce*P	**P**	**09 50 38.7**	**-0.1**
KIEV	**Kiev**	**73.95**	**322**	P	**P**	**09 50 38.9**	**+0.1**
KIEV	**Kiev**	**73.95**	**322**	⇑P	**P**	**09 50 38.2**	**-0.6**
KIEV	**Kiev**	**73.95**	**322**	*i* P	**P**	**09 50 38.7**	**-0.2**
	SNR=18						
KIEV	**Kiev**	**73.95**	**322**	P	**P**	**09 50 38.9**	**+0.1**
KIEV				pmax	pmax		
	comp=Z,120nm,1.5s						
KIEV	**Kiev**	**73.95**	**322**	P	**P**	**09 50 38.5**	**-0.3**
KIEV				sP	**sP**	**09 50 56.8**	**+0.1**
NWAO	**Narrogin (SRO)**	**73.96**	**201**	P	**P**	**09 50 39.0**	**+0.1**
	comp=Z,27nm,1.3s						
NWAO	**Narrogin (SRO)**	**73.96**	**201**	P	**P**	**09 50 38.9**	**0.0**
NWAO				IAmb	IAmb	09 50 40.2	
	comp=Z,36nm,1.1s						
NWAO	**Narrogin (SRO)**	**73.96**	**201**	P	**P**	**09 50 39.2**	**+0.3**
NWAO	**Narrogin (SRO)**	**73.96**	**201**	P	**P**	**09 50 38.9**	**0.0**
NWAO				pmax	pmax		
	comp=Z,36nm,1.2s						
BOZ	**Bozeman (W)**	**73.99**	**44**	IAmb	IAmb	09 50 54.7	
	comp=Z,33nm,1.1s						
BOZ	**Bozeman (W)**	**73.99**	**44**	P	**P**	**09 50 40.9**	**+1.5**
LHV	**Little Huntoon**	**74.26**	**54**	IAmb	IAmb	09 50 57.8	
	comp=Z,62nm,1.2s						
NVAR	**Mina Array Bea**	**74.29**	**54**	P	**P**	**09 50 42.6**	**+1.2**
	comp=Z,3.9nm,0.8s,baz=281,slow=6.0,SNR=28						
NVAR				LR	LR	10 16 47.5	
	comp=Z,196nm,21.7s,baz=296,slow=30						
	comp=Z,3.9nm,0.8s						
NVAR	**Mina Array Bea**	**74.29**	**54**	P	**P**	**09 50 43.2**	**+1.9**
KOPT	**Kop Dagi**	**74.30**	**309**	IAmb	IAmb	09 50 43.8	
	comp=Z,50nm,1.4s						
SUW	**Suwalki**	**74.47**	**327**	*e*P	**P**	**09 50 41.8**	**+0.1**
SUW				*e*pP	**pP**	**09 50 55.0**	**+0.3**
YHL	**Hebgen Lake**	**74.70**	**45**	IAmb	IAmb	09 50 59.3	
	comp=Z,25nm,1.0s						
YMR	**Madison River**	**74.93**	**45**	IAmb	IAmb	09 51 00.8	
	comp=Z,32nm,1.1s						
SIM	**Simferopol'**	**75.06**	**316**	*e*P	**P**	**09 50 45.4**	**0.0**
SIM				*e*S	**S**	**10 00 15.0**	**-5.1**
SIM				pmax	pmax		
	comp=Z,81nm,1.1s						
SIM				smax	smax		
	comp=E,78nm,14.9s						
MZR	**Muzera**	**75.06**	**288**	P	**P**	**09 50 45.5**	**-0.3**
DSP	**Deep Springs**	**75.12**	**54**	IAmb	IAmb	09 51 01.8	
	comp=Z,37nm,1.2s						
VES	**Vestal, Richgr**	**75.30**	**56**	IAmb	IAmb	09 51 02.3	
	comp=Z,64nm,1.2s						
RLMT	**Red Lodge**	**75.59**	**44**	IAmb	IAmb	09 51 04.4	
	comp=Z,36nm,1.3s						
GRAC	**Grapevine Rang**	**75.73**	**54**	IAmb	IAmb	09 51 05.1	
	comp=Z,36nm,1.1s						
SLWR	**Sila**	**75.80**	**289**	P	**P**	**09 50 49.4**	**-0.5**
SNOW	**Snow King Moun**	**75.80**	**46**	IAmb	IAmb	09 51 08.3	
	comp=Z,32nm,1.1s						
FRB	**Frobisher Bay**	**76.00**	**13**	P	**P**	**09 50 49.6**	**-0.8**
FRB				pmax	pmax		
	comp=Z,51nm,1.1s						
SORM	**Soroca**	**76.06**	**321**	⇑P	**P**	**09 50 50.5**	**-0.5**
SORM	**Soroca**	**76.06**	**321**	P	**P**	**09 50 50.8**	**-0.2**
SMRA	**Abu-Samra**	**76.06**	**290**	P	**P**	**09 50 50.6**	**-0.8**
SHAO	**Shalim**	**76.28**	**282**	P	**P**	**09 50 52.5**	**-0.3**
SHAO	**Shalim**	**76.28**	**282**	P	**P**	**09 50 52.4**	**-0.3**
FURC	**Furnace Creek,**	**76.37**	**54**	IAmb	IAmb	09 51 08.5	
	comp=Z,43nm,1.1s						
S11A	**Rachel**	**76.38**	**53**	IAmb	IAmb	09 51 08.9	
	comp=Z,50nm,1.1s						
TPO	**Tropico Hills**	**76.43**	**56**	IAmb	IAmb	09 51 09.8	
	comp=Z,59nm,1.2s						
SPR3	**Spring Creek 3**	**76.44**	**51**	IAmb	IAmb	09 51 10.0	
	comp=Z,52nm,1.6s						
TPNV	**Topopah Spring**	**76.48**	**54**	IAmb	IAmb	09 51 09.3	
	comp=Z,37nm,1.1s						
HWUT	**Hardware Ranch**	**76.50**	**48**	IAmb	IAmb	09 51 10.4	
	comp=Z,55nm,1.2s						
RAO	**Raoul Island**	**76.56**	**145**	LR	LR	10 18 00.1	
	comp=Z,354nm,21.6s,baz=344,slow=30						
CCCA	**Chr Cany lake**	**76.61**	**55**	IAmb	IAmb	09 51 09.9	
	comp=Z,51nm,1.4s						
DUG	**Dugway, Tooele**	**76.63**	**49**	IAmb	IAmb	09 51 10.4	
	comp=Z,33nm,1.1s						
DUG	**Dugway, Tooele**	**76.63**	**49**	P	**P**	**09 50 55.7**	**+1.1**
DUG				pmax	pmax		
	comp=Z,32nm,1.1s						
GWY	**Greenwater Val**	**76.67**	**55**	IAmb	IAmb	09 51 15.5	
	comp=Z,43nm,1.3s						
QSM	**Queen of Sheba**	**76.67**	**55**	IAmb	IAmb	09 51 10.7	
	comp=Z,75nm,1.3s						
PDAR	**Pinedale Array**	**76.92**	**46**	P	**P**	**09 50 57.0**	**+0.6**
	comp=Z,3.3nm,0.8s,baz=282,slow=2.9,SNR=24						
	comp=Z,3.3nm,0.8s						
PDAR	**Pinedale Array**	**76.92**	**46**	P	**P**	**09 50 57.6**	**+1.2**
CTU	**Camp Tracy**	**76.96**	**48**	IAmb	IAmb	09 51 12.0	
	comp=Z,30nm,1.2s						
PRN	**Pahroc Range**	**76.96**	**53**	IAmb	IAmb	09 51 14.5	
	comp=Z,28nm,1.1s						
DMTO	**DMTO**	**76.98**	**282**	P	**P**	**09 50 56.2**	**-0.5**
BZK	**Bozkurt**	**77.00**	**313**	⇑P	**P**	**09 50 55.9**	**-0.6**
PSUT	**Pine Spring**	**77.02**	**51**	IAmb	IAmb	09 51 16.1	
	comp=Z,36nm,1.1s						
BEL	**Belsk**	**77.04**	**327**	*e*P	**P**	**09 50 57.4**	**+0.9**
DOK	**Doka**	**77.09**	**284**	P	**P**	**09 50 57.0**	**-0.3**
	SNR=7.5						
SHOC	**Shoshone, Teco**	**77.09**	**55**	IAmb	IAmb	09 51 20.4	
	comp=Z,32nm,1.3s						
VASR	**Vaslui**	**77.34**	**320**	⇑P	**P**	**09 50 58.4**	**+0.1**
MPU	**Maple Canyon**	**77.45**	**49**	IAmb	IAmb	09 51 14.9	
	comp=Z,30nm,1.1s						
BSUT	**Blindstream Ca**	**77.64**	**48**	IAmb	IAmb	09 51 18.1	
	comp=Z,28nm,1.2s						
RBK	**Rabkut**	**77.68**	**283**	P	**P**	**09 51 00.2**	**-0.5**
VLDR	**Vladesti**	**77.72**	**319**	⇓P	**P**	**09 51 00.1**	**-0.3**
KWP	**Kalwaria Pacla**	**77.75**	**324**	*e*P	**P**	**09 51 01.2**	**+0.7**
KWP				*e*pP	**pP**	**09 51 13.4**	**-0.1**
WHFO	**Wadi Hawf**	**77.77**	**283**	P	**P**	**09 51 00.1**	**-1.1**
BNN	**Bunyan**	**77.86**	**310**	IAmb	IAmb	09 51 03.4	
	comp=Z,39nm,1.0s						
CCUT	**Cedar City**	**77.93**	**52**	IAmb	IAmb	09 51 17.9	
	comp=Z,29nm,1.2s						
BUR08	**Bucovina Ar. S**	**77.95**	**322**	IAmb	IAmb	09 51 03.0	
	comp=Z,23nm,0.9s						
BURAR	**Bucovina Array**	**77.96**	**322**	P	**P**	**09 51 02.2**	**+0.3**
BURAR				IAmb	IAmb	09 51 03.3	
	comp=Z,23nm,0.8s						
BURAR	**Bucovina Array**	**77.96**	**322**	⇑P	**P**	**09 51 01.5**	**-0.4**
BURAR	**Bucovina Array**	**77.96**	**322**	P	**P**	**09 51 02.6**	**+0.7**
TESR	**Tescani**	**78.00**	**320**	⇑P	**P**	**09 51 02.5**	**+0.5**
GAZ	**Gaziantep**	**78.06**	**308**	IAmb	IAmb	09 51 04.8	
	comp=Z,55nm,1.1s						
V12A	**Nelson**	**78.11**	**54**	IAmb	IAmb	09 51 18.6	
	comp=Z,31nm,1.3s						
CFR	**Carcaliu**	**78.14**	**319**	⇑P	**P**	**09 51 02.9**	**+0.2**
CFR	**Carcaliu**	**78.14**	**319**	P	**P**	**09 51 02.9**	**+0.2**
TMUT	**Trail Mountain**	**78.16**	**49**	IAmb	IAmb	09 51 19.0	
	comp=Z,35nm,1.3s						
PANC	**Panciu**	**78.19**	**320**	⇓P	**P**	**09 51 03.7**	**+0.7**
TPGR	**Topolog**	**78.20**	**318**	⇑P	**P**	**09 51 02.8**	**-0.3**
P17A	**Butcher Ranch,**	**78.33**	**49**	IAmb	IAmb	09 51 19.9	
	comp=Z,51nm,1.1s						
LCMT	**Little Creek M**	**78.34**	**52**	IAmb	IAmb	09 51 20.1	
	comp=Z,39nm,1.2s						
MTPU	**Mount Pierson**	**78.35**	**51**	IAmb	IAmb	09 51 20.8	
	comp=Z,25nm,1.0s						
PFO	**Pinyon Flats O**	**78.36**	**57**	LR	LR	10 18 46.1	
	comp=Z,443nm,21.6s,baz=280,slow=30						
PFO	**Pinyon Flats O**	**78.36**	**57**	P	**P**	**09 51 05.7**	**+1.3**
PFO				pmax	pmax		
	comp=Z,32nm,1.3s						
VRI	**Vrincioaia**	**78.41**	**320**	⇑P	**P**	**09 51 04.9**	**+0.7**
VRI	**Vrincioaia**	**78.41**	**320**	P	**P**	**09 51 06.2**	**+1.9**
Q16A	**Castle Valley**	**78.42**	**50**	IAmb	IAmb	09 51 21.4	
	comp=Z,43nm,1.3s						
PLOR	**Plostina**	**78.45**	**320**	⇑P	**P**	**09 51 04.7**	**+0.1**
PLOR	**Plostina**	**78.45**	**320**	P	**P**	**09 51 04.6**	**+0.1**
ABTO	**Aybut**	**78.47**	**283**	P	**P**	**09 51 04.4**	**-0.7**
P18A	**Preston Nutter**	**78.52**	**49**	IAmb	IAmb	09 51 21.2	
	comp=Z,42nm,1.2s						
STHS	**Stebnicka Huta**	**78.57**	**325**	*e*P	**P**	**09 51 05.7**	**+0.6**
STHS				pmax	pmax		
	comp=Z,23nm,1.3s						
STHS	**Stebnicka Huta**	**78.57**	**325**	*e*P	**P**	**09 51 05.7**	**+0.6**
KNB	**Kanab**	**78.60**	**52**	IAmb	IAmb	09 51 26.4	
	comp=Z,80nm,1.5s						
BR131	**Keskin Array S**	**78.63**	**312**	P	**P**	**09 51 06.1**	**+0.2**
	SNR=11						
BR131	**Keskin Array S**	**78.63**	**312**	IAmb	IAmb	09 51 07.3	
	comp=Z,27nm,1.1s						
BR131	**Keskin Array S**	**78.63**	**312**	*i* P	**P**	**09 51 05.3**	**-0.5**
BRTR	**Keskin Array B**	**78.63**	**312**	P	**P**	**09 51 06.0**	**+0.2**
	comp=Z,18nm,1.0s,baz=100,slow=4.3,SNR=45						
BRTR				LR	LR	10 30 30.7	
	comp=Z,247nm,18.5s,baz=54,slow=39						
	comp=Z,18nm,1.0s						
BRTR	**Keskin Array B**	**78.63**	**312**	P	**P**	**09 51 05.1**	**-0.7**
OJC	**Ojcow**	**78.64**	**326**	*e*P	**P**	**09 51 06.1**	**+0.7**
OJC				*e*pP	**pP**	**09 51 19.6**	**+1.2**
OJC	**Ojcow**	**78.64**	**326**	P	**P**	**09 51 06.1**	**+0.7**
OJC				pmax	pmax		
	comp=Z,56nm,1.1s						
TURR	**Turia**	**78.64**	**320**	⇑P	**P**	**09 51 06.3**	**+0.7**
COVR	**Voineasa-Covas**	**78.69**	**320**	⇑P	**P**	**09 51 06.0**	**+0.2**
SRU	**San Rafael Swe**	**78.69**	**49**	IAmb	IAmb	09 51 21.6	
	comp=Z,35nm,1.0s						
K22A	**Casper**	**78.70**	**44**	IAmb	IAmb	09 51 21.1	
	comp=Z,35nm,1.1s						
ULM	**Lac du Bonnet**	**78.72**	**34**	P	**P**	**09 51 07.1**	**+1.2**
	comp=Z,5.3nm,0.9s,baz=289,slow=7.2,SNR=4.7						
	comp=Z,5.3nm,0.9s						
ULM	**Lac du Bonnet**	**78.72**	**34**	P	**P**	**09 51 06.2**	**+0.3**
ULM				IAmb	IAmb	09 51 20.2	
	comp=Z,37nm,1.2s						
OZUR		**78.73**	**320**	⇑P	**P**	**09 51 06.4**	**+0.3**
ARCR	**ARCALIA**	**78.75**	**322**	⇑P	**P**	**09 51 06.8**	**+0.7**
KIRS	**Kirsehir-Merke**	**78.85**	**311**	⇑P	**P**	**09 51 06.6**	**-0.3**
NEHR	**Nehoiu**	**78.93**	**320**	⇑P	**P**	**09 51 07.4**	**+0.3**
BC3	**Big Chuckawall**	**79.00**	**56**	IAmb	IAmb	09 51 23.1	
	comp=Z,37nm,1.4s						
NIE	**Niedzica**	**79.00**	**325**	*e*P	**P**	**09 51 08.6**	**+1.1**
NIE				*e*pP	**pP**	**09 51 22.2**	**+1.8**
NIE	**Niedzica**	**79.00**	**325**	P	**P**	**09 51 08.5**	**+1.0**
DOPR	**Dopca**	**79.02**	**320**	⇑P	**P**	**09 51 08.7**	**+1.1**
ANTO	**Ankara**	**79.04**	**312**	P	**P**	**09 51 07.7**	**-0.3**
ANTO				IAmb	IAmb	09 51 09.6	
	comp=Z,39nm,0.9s						
ANTO	**Ankara**	**79.04**	**312**	⇑P	**P**	**09 51 07.4**	**-0.6**
ANTO	**Ankara**	**79.04**	**312**	P	**P**	**09 51 07.7**	**-0.3**
ANTO				pmax	pmax		
	comp=Z,39nm,0.9s						
ANTO	**Ankara**	**79.04**	**312**	P	**P**	**09 51 07.4**	**-0.6**
MLR	**Muntele Rosu**	**79.06**	**320**	LR	LR	10 30 05.3	
	comp=Z,919nm,18.5s,baz=46,slow=39						
MLR	**Muntele Rosu**	**79.06**	**320**	IAmb	IAmb	09 51 09.8	
	comp=Z,52nm,1.4s						
MLR	**Muntele Rosu**	**79.06**	**320**	⇓P	**P**	**09 51 08.7**	**+0.7**
MLR	**Muntele Rosu**	**79.06**	**320**	P	**P**	**09 51 08.7**	**+0.7**
RSSD	**Black Hills**	**79.07**	**42**	P	**P**	**09 51 07.8**	**-0.4**
RSSD	**Black Hills**	**79.07**	**42**	P	**P**	**09 51 07.8**	**-0.4**
RSSD				pmax	pmax		
	comp=Z,26nm,1.1s						
U15A	**North Rim**	**79.30**	**52**	IAmb	IAmb	09 51 25.7	
	comp=Z,42nm,1.2s						
CJR	**Cluj-Napoca**	**79.38**	**322**	⇑P	**P**	**09 51 10.4**	**+0.7**
CJR	**Cluj-Napoca**	**79.38**	**322**	P	**P**	**09 51 10.3**	**+0.7**
RUE	**Ruedersdorf**	**79.43**	**331**	*e*P	**P**	**09 51 09.9**	**+0.2**
	comp=Z,102nm,1.4s,baz=37,slow=5.4						
LANS	**Liptovska Anna**	**79.57**	**326**	*e*P	**P**	**09 51 11.7**	**+1.1**
LANS				pmax	pmax		
	comp=Z,15nm,1.0s						
LANS	**Liptovska Anna**	**79.57**	**326**	*e*P	**P**	**09 51 11.7**	**+1.1**
BSEG	**Bad Segeberg**	**79.58**	**333**	P	**P**	**09 51 11.3**	**+0.8**
BSEG				pmax	pmax		
	comp=Z,31nm,1.0s						
BSEG	**Bad Segeberg**	**79.58**	**333**	*e*P	**P**	**09 51 10.6**	**+0.2**
	comp=Z,29nm,1.0s,baz=37,slow=5.4						
BSEG				*e*pP	**pP**	**09 51 24.4**	**+1.0**
MARR	**Marisel-Cluj**	**79.64**	**322**	⇑P	**P**	**09 51 10.4**	**-0.7**
KSP	**Ksiaz**	**79.67**	**328**	*e*P	**P**	**09 51 11.3**	**+0.2**
KSP				*e*pP	**pP**	**09 51 25.2**	**+1.1**
KSP	**Ksiaz**	**79.67**	**328**	P	**P**	**09 51 12.0**	**+0.9**
ESJX	**Sierra Juarez**	**79.68**	**58**	IAmb	IAmb	09 51 27.2	
	comp=Z,52nm,1.2s						
STEB	**Steborice**	**79.73**	**327**	*e*P	**P**	**09 51 11.6**	**+0.2**
STEB				*e*pP	**pP**	**09 51 25.7**	**+1.3**
DRGR		**79.76**	**322**	P	**P**	**09 51 12.8**	**+1.1**
DRGR				pmax	pmax		
	comp=Z,17nm,1.6s						
TNR	**Turnu Rosu**	**79.80**	**321**	⇓P	**P**	**09 51 11.0**	**-0.9**
TNR	**Turnu Rosu**	**79.80**	**321**	P	**P**	**09 51 11.0**	**-0.9**
ARR	**Arges**	**79.81**	**320**	⇑P	**P**	**09 51 13.0**	**+0.9**
MORC	**Moravsky Berou**	**79.95**	**327**	P	**P**	**09 51 13.0**	**+0.3**
MORC				IAmb	IAmb	09 51 14.5	
	comp=Z,34nm,1.0s						
MORC	**Moravsky Berou**	**79.95**	**327**	*e*P	**P**	**09 51 12.9**	**+0.3**
MORC	**Moravsky Berou**	**79.95**	**327**	P	**P**	**09 51 13.4**	**+0.7**
PV21	**Cone Mtn., Par**	**79.96**	**49**	IAmb	IAmb	09 51 28.8	
	comp=Z,36nm,1.0s						
CHVC	**Chvalec**	**79.97**	**328**	*e*P	**P**	**09 51 13.7**	**+1.0**
CHVC	**Chvalec**	**79.97**	**328**	*e*P	**P**	**09 51 13.7**	**+1.0**
GORT1	**Trebel**	**79.97**	**332**	*e*P	**P**	**09 51 13.1**	**+0.6**
	comp=Z,56nm,1.3s,baz=37,slow=5.4						
DPC	**Dobruska-Polom**	**80.03**	**328**	*e*P	**P**	**09 51 14.2**	**+1.1**
DPC	**Dobruska-Polom**	**80.03**	**328**	*e*P	**P**	**09 51 14.2**	**+1.1**
UPC	**Upice**	**80.05**	**328**	*e*P	**P**	**09 51 14.0**	**+0.9**
UPC				*e**PP	**pP**	**09 51 27.2**	**+1.1**
UPC	**Upice**	**80.05**	**328**	*e*P	**P**	**09 51 14.0**	**+0.9**
UPC				*e*pP	**pP**	**09 51 27.2**	**+1.1**
KRLC	**Kraliky**	**80.05**	**328**	*e*P	**P**	**09 51 14.1**	**+0.9**
KRLC	**Kraliky**	**80.05**	**328**	*e*P	**P**	**09 51 14.1**	**+0.9**
PV14	**Lion Creek, Pa**	**80.06**	**49**	IAmb	IAmb	09 51 29.3	
	comp=Z,53nm,1.0s						
EPLO	**Experimental L**	**80.08**	**33**	IAmb	IAmb	09 51 28.1	
	comp=Z,61nm,1.2s						
PV22	**Blue Mesa, Par**	**80.09**	**49**	IAmb	IAmb	09 51 29.4	
	comp=Z,48nm,1.1s						
PV04	**Paradox Valley**	**80.11**	**49**	IAmb	IAmb	09 51 29.7	
	comp=Z,68nm,1.2s						
PV17	**East Wray Mesa**	**80.16**	**49**	IAmb	IAmb	09 51 29.9	
	comp=Z,70nm,1.1s						
PV16	**Nyswonger Mesa**	**80.16**	**49**	IAmb	IAmb	09 51 29.9	
	comp=Z,47nm,1.2s						
PV11	**David Mesa, Pa**	**80.20**	**49**	IAmb	IAmb	09 51 30.8	
	comp=Z,82nm,1.3s						
PV03	**Paradox Valley**	**80.24**	**49**	IAmb	IAmb	09 51 30.3	
	comp=Z,51nm,1.3s						
PV07	**Paradox Valley**	**80.24**	**49**	IAmb	IAmb	09 51 30.2	
	comp=Z,45nm,1.3s						
PSZ	**Piszkesteto**	**80.28**	**325**	IAmb	IAmb	09 51 16.5	
	comp=Z,58nm,1.1s						
PSZ	**Piszkesteto**	**80.28**	**325**	⇑P	**P**	**09 51 15.1**	**+0.6**
PSZ	**Piszkesteto**	**80.28**	**325**	P	**P**	**09 51 15.1**	**+0.6**
RAR	**Rarotonga**	**80.30**	**126**	LR	LR	10 20 00.3	
	comp=Z,459nm,19.7s,baz=294,slow=31						
PV13	**Radium Mtn., P**	**80.32**	**49**	IAmb	IAmb	09 51 30.8	
	comp=Z,69nm,1.1s						
WUAZ	**Wupatki**	**80.45**	**52**	IAmb	IAmb	09 51 31.6	
	comp=Z,42nm,1.1s						
PV01	**Paradox Valley**	**80.48**	**49**	IAmb	IAmb	09 51 31.6	
	comp=Z,44nm,1.2s						
FLTG	**Flechtingen**	**80.52**	**332**	*e*P	**P**	**09 51 15.1**	**-0.5**
	comp=Z,40nm,0.9s,baz=37,slow=5.4						
FLTG				*e*pP	**pP**	**09 51 28.7**	**+0.2**
JAVC	**Velka Javorina**	**80.58**	**326**	*e*P	**P**	**09 51 17.4**	**+1.3**
BRG	**Berggiesshubel**	**80.61**	**330**	P	**P**	**09 51 16.6**	**+0.5**
BRG				pmax	pmax		
	comp=Z,31nm,2.0s						
BRG	**Berggiesshubel**	**80.61**	**330**	*e*P	**P**	**09 51 16.1**	**0.0**
	comp=Z,32nm,1.2s,baz=37,slow=5.4						
BRG				*e*pP	**pP**	**09 51 30.1**	**+1.1**
PVCC	**Panska Ves**	**80.62**	**329**	P	**P**	**09 51 17.1**	**+0.9**
PVCC				pmax	pmax		
	comp=Z,59nm,1.2s						
CLL	**Collm**	**80.65**	**330**	IAmb	IAmb	09 51 17.5	
	comp=Z,49nm,1.0s						
CLL	**Collm**	**80.65**	**330**	⇑*i*P	**P**	**09 51 16.4**	**+0.1**
CLL				*i* *PP	**pP**	**09 51 29.6**	**+0.3**
CLL				pmax	pmax		
	comp=Z,52nm,1.0s						
CLL				MLR	MLR		
	comp=Z,600nm,19.1s						
CLL	**Collm**	**80.65**	**330**	*e*P	**P**	**09 51 16.0**	**-0.3**
	comp=Z,47nm,1.0s,baz=37,slow=5.4						
CLL				*e*pP	**pP**	**09 51 29.8**	**+0.5**
CLL	**Collm**	**80.65**	**330**	⇑*i*P	**P**	**09 51 16.4**	**+0.1**
	comp=Z,52nm,1.0s						
CLL				*i* pP	**pP**	**09 51 29.6**	**+0.3**
	comp=Z,47nm,1.0s						
CLL				*e*sP	**sP**	**09 51 36.0**	**+1.8**
CLL				*e*PP	**PP**	**09 54 20.0**	**+0.3**
CLL				AMS	AMS	10 31 00.0	
	comp=N,300nm,21.1s						
CLL				AMS	AMS	10 31 00.0	
	comp=E,400nm,19.0s						
CLL				AMS	AMS	10 31 00.0	
	comp=Z,600nm,19.1s						
RAYN	**Ar Rayn**	**80.70**	**292**	P	**P**	**09 51 17.2**	**0.0**
RAYN	**Ar Rayn**	**80.70**	**292**	P	**P**	**09 51 16.9**	**-0.3**
RAYN				IAmb	IAmb	09 51 18.0	
	comp=Z,26nm,1.0s						
RAYN	**Ar Rayn**	**80.70**	**292**	*i* P	**P**	**09 51 17.3**	**+0.1**
	SNR=19						
RAYN	**Ar Rayn**	**80.70**	**292**	P	**P**	**09 51 16.9**	**-0.3**
RAYN				pmax	pmax		
	comp=Z,26nm,1.0s						
RAYN	**Ar Rayn**	**80.70**	**292**	P	**P**	**09 51 16.8**	**-0.3**
RAYN				pP	**pP**	**09 51 30.2**	**+0.1**
VRAC	**Vranov**	**80.71**	**327**	LR	LR	10 29 58.2	
	comp=Z,409nm,18.0s,baz=24,slow=38						
VRAC	**Vranov**	**80.71**	**327**	⇑P	**P**	**09 51 17.7**	**+1.0**
VRAC	**Vranov**	**80.71**	**327**	*e*P	**P**	**09 51 17.4**	**+0.7**
VRAC	**Vranov**	**80.71**	**327**	P	**P**	**09 51 17.7**	**+1.0**
GZR	**Gura Zlata**	**80.72**	**321**	⇑P	**P**	**09 51 17.4**	**+0.4**
GZR	**Gura Zlata**	**80.72**	**321**	P	**P**	**09 51 17.3**	**+0.4**
RICC	**Richard**	**80.80**	**329**	*e*P	**P**	**09 51 18.4**	**+1.2**
ELND	**Elena**	**80.86**	**318**	⇑P	**P**	**09 51 17.5**	**-0.2**
RETH	**Rethem/Aller,**	**80.88**	**333**	*e*P	**P**	**09 51 17.6**	**+0.2**
	comp=Z,26nm,1.0s,baz=37,slow=5.4						
RETH				*e*pP	**pP**	**09 51 31.0**	**+0.5**
ASSE	**Asse, Remlinge**	**80.89**	**332**	*e*P	**P**	**09 51 17.6**	**+0.1**
	comp=Z,17nm,1.0s,baz=37,slow=5.4						
KRUC	**Moravsky**	**80.98**	**327**	*e*P	**P**	**09 51 18.4**	**+0.3**
KRUC	**Moravsky**	**80.98**	**327**	P	**P**	**09 51 18.8**	**+0.7**
KRUC				pmax	pmax		
	comp=Z,44nm,1.1s						
HSKC	**Hora Svate Kat**	**81.02**	**330**	*e*P	**P**	**09 51 19.0**	**+0.6**
HSKC				*e*pP	**pP**	**09 51 32.0**	**+0.6**
HSKC				AMS	AMS	10 30 00.0	
	comp=Z,2µm,21.4s						
PRA	**Prague**	**81.03**	**329**	*e*P	**P**	**09 51 18.9**	**+0.5**
PRA	**Prague**	**81.03**	**329**	*e*P	**P**	**09 51 18.9**	**+0.5**
PRU	**Pruhonice**	**81.05**	**329**	*e*P	**P**	**09 51 19.2**	**+0.7**
PRU	**Pruhonice**	**81.05**	**329**	*e*P	**P**	**09 51 19.2**	**+0.7**
X16A	**Lo Mia Camp, P**	**81.11**	**53**	IAmb	IAmb	09 51 38.8	
	comp=Z,34nm,1.1s						
MODS	**Modra-Piesok**	**81.11**	**326**	*e*P	**P**	**09 51 19.9**	**+1.0**
MODS				pmax	pmax		
	comp=Z,74nm,1.2s						
MODS	**Modra-Piesok**	**81.11**	**326**	*e*P	**P**	**09 51 19.9**	**+1.0**
MVCO	**Mesa Verde**	**81.13**	**50**	IAmb	IAmb	09 51 35.1	
	comp=Z,40nm,1.2s						
BZS	**Buzias**	**81.13**	**322**	⇓P	**P**	**09 51 18.6**	**-0.4**
BZS	**Buzias**	**81.13**	**322**	P	**P**	**09 51 19.1**	**+0.1**
TREC	**Trest**	**81.19**	**328**	*e*P	**P**	**09 51 20.0**	**+0.7**
TREC	**Trest**	**81.19**	**328**	*e*P	**P**	**09 51 20.0**	**+0.7**
NEUB	**Neuenburg**	**81.20**	**331**	*e*P	**P**	**09 51 19.2**	**-0.1**
	comp=Z,40nm,0.9s,baz=37,slow=5.4						
NEUB				*e*pP	**pP**	**09 51 33.0**	**+0.8**
CLZ	**Clausthal**	**81.23**	**332**	*e*P	**P**	**09 51 19.7**	**+0.2**
	comp=Z,43nm,0.9s,baz=37,slow=5.4						
CLZ				*e*pP	**pP**	**09 51 34.1**	**+1.7**
HERR	**Herculane**	**81.27**	**321**	⇓P	**P**	**09 51 19.6**	**-0.1**
ASF	**Jabal al Asfar**	**81.39**	**304**	LR	LR	10 31 08.8	
	comp=Z,99µm,19.2s,baz=49,slow=38						
BAND	**Balkesir-Ban**	**81.41**	**315**	⇑P	**P**	**09 51 20.2**	**-0.5**
TANN	**Tannenbergstha**	**81.56**	**330**	*e*P	**P**	**09 51 21.4**	**+0.1**
	comp=Z,16nm,1.1s,baz=37,slow=5.4						
ZVC	**Zvikov**	**81.62**	**329**	*e*P	**P**	**09 51 22.3**	**+0.8**
ZVC				*e*pP	**pP**	**09 51 35.5**	**+1.0**
GTTG	**Gottingen**	**81.62**	**332**	*e*P	**P**	**09 51 21.6**	**+0.1**
	comp=Z,28nm,0.8s,baz=37,slow=5.4						
PLN	**Plauen**	**81.62**	**330**	*e*P	**P**	**09 51 21.7**	**+0.2**
	comp=Z,11nm,1.4s,baz=37,slow=5.4						
PLN				*e*pP	**pP**	**09 51 35.5**	**+1.0**
MDVR	**Moldovita**	**81.69**	**322**	⇑P	**P**	**09 51 22.3**	**+0.2**
MOX	**Moxa**	**81.71**	**331**	P	**P**	**09 51 22.4**	**+0.4**
MOX				pmax	pmax		
	comp=Z,24nm,2.9s						
MOX	**Moxa**	**81.71**	**331**	*e*P	**P**	**09 51 22.0**	**0.0**
	comp=Z,20nm,0.9s,baz=37,slow=5.4						
MOX				*e*pP	**pP**	**09 51 35.9**	**+1.0**
MOX				*e*L	L	10 30 58.1	
	comp=Z,413nm,18.3s						
S22A	**4UR Ranch, Cre**	**81.77**	**48**	IAmb	IAmb	09 51 39.0	
	comp=Z,29nm,1.1s						
MMAI	**Mount Meron Ar**	**81.83**	**306**	P	**P**	**09 51 23.1**	**0.0**
	comp=Z,23nm,0.8s,baz=46,slow=6.4,SNR=20						
MMAI				LR	LR	10 31 13.3	
	comp=Z,298nm,18.7s,baz=40,slow=38						
	comp=Z,23nm,0.8s						
SOP	**Sopron**	**81.95**	**326**	P	**P**	**09 51 24.3**	**+1.0**
SOP				pmax	pmax		
	comp=Z,54nm,1.5s						
MANZ	**Manzenberg**	**82.04**	**330**	*e*P	**P**	**09 51 23.8**	**+0.1**
	comp=Z,4.0nm,0.8s,baz=37,slow=5.4						
MANZ				*e*pP	**pP**	**09 51 38.0**	**+1.2**
CKRC	**Cesky Krumlov**	**82.05**	**328**	*e*P	**P**	**09 51 24.4**	**+0.6**
CKRC				*e**PP	**pP**	**09 51 37.5**	**+0.7**
CKRC	**Cesky Krumlov**	**82.05**	**328**	*e*P	**P**	**09 51 24.4**	**+0.6**
CKRC				*e*pP	**pP**	**09 51 37.5**	**+0.7**
RONA	**Rosalia, Austr**	**82.06**	**326**	*i* P	**P**	**09 51 24.9**	**+1.0**
	comp=Z,30nm,0.8s,SNR=12						
CONA	**Conrad Observa**	**82.07**	**327**	*e*P	**P**	**09 51 24.9**	**+0.8**
	comp=Z,33nm,1.2s,SNR=11						
MORH	**Mrgy, Hungar**	**82.11**	**324**	⇑P	**P**	**09 51 23.8**	**-0.4**
KHC	**Kasperske Hory**	**82.11**	**329**	IAmb	IAmb	09 51 25.9	
	comp=Z,42nm,1.1s						
KHC	**Kasperske Hory**	**82.11**	**329**	*ce*P	**P**	**09 51 25.0**	**+0.8**
KHC				pmax	pmax		
	comp=Z,48nm,1.3s						
KHC	**Kasperske Hory**	**82.11**	**329**	*e*P	**P**	**09 51 24.5**	**+0.3**
KHC				*e*pP	**pP**	**09 51 35.9**	**-1.3**
ROTZ	**Rotzenmuhle**	**82.17**	**330**	*e*P	**P**	**09 51 24.9**	**+0.5**
	comp=Z,21nm,1.6s,baz=37,slow=5.4						
UBBA	**Unterbreizbach**	**82.19**	**332**	*e*P	**P**	**09 51 24.4**	**+0.1**
	comp=Z,15nm,1.2s,baz=37,slow=5.4						
UBBA				*e*pP	**pP**	**09 51 38.5**	**+1.2**
RDO	**Rodhopi**	**82.28**	**317**	IAmb	IAmb	09 51 27.1	
	comp=Z,78nm,1.7s						
GEC2	**GERESS Array S**	**82.28**	**328**	*e*P	**P**	**09 51 25.0**	**-0.2**
	comp=Z,16nm,0.9s,baz=37,slow=5.4						
GEC2				*e*pP	**pP**	**09 51 39.1**	**+1.0**
GERES	**GERESS Array B**	**82.28**	**328**	P	**P**	**09 51 24.8**	**-0.4**
	comp=Z,13nm,0.9s,baz=31,slow=6.2,SNR=42						
GERES				LR	LR	10 32 18.4	
	comp=Z,420nm,18.6s,baz=29,slow=39						
	comp=Z,13nm,0.9s						
URZ	**Urewera**	**82.32**	**153**	LR	LR	10 23 03.5	
	comp=Z,376nm,21.9s,baz=343,slow=32						
EYMN	**Ely**	**82.35**	**33**	P	**P**	**09 51 25.0**	**-0.5**
EYMN				IAmb	IAmb	09 51 40.6	
	comp=Z,62nm,1.4s						
WET	**Wettzell**	**82.39**	**329**	P	**P**	**09 51 26.3**	**+0.7**
WET				pmax	pmax		
	comp=Z,32nm,1.1s						

WET	Wettzell	82.39	329	eP	P	09 51 26.0	+0.3
	comp=Z,23nm,1.1s,baz=37,slow=5.4						
WET				epP	pP	09 51 39.6	+1.0
MANT	Manisa	82.42	313	IAmb	IAmb	09 51 26.7	
	comp=Z,23nm,1.1s						
BOVS	Bovan	82.52	321	⇑P	P	09 51 25.0	-1.3
EKA	Eskdalemuir Ar	82.57	341	P	P	09 51 26.5	+0.1
	comp=Z,8.0nm,0.9s,baz=34,slow=5.5,SNR=5.8						
EKA				LR	LR	10 32 08.5	
	comp=Z,428nm,18.3s,baz=21,slow=39						
	comp=Z,8.0nm,0.9s						
GRA1	Grafenberg Arr	82.62	330	IAmb	IAmb	09 51 28.7	
	comp=Z,51nm,1.0s						
GRF	Grafenberg Arr	82.62	330	P	P	09 51 27.7	+0.9
GRF				pmax	pmax		
	comp=Z,62nm,1.2s						
GRF	Grafenberg Arr	82.62	330	eP	P	09 51 27.3	+0.5
	comp=Z,57nm,1.1s,baz=37,slow=5.4						
GRF				epP	pP	09 51 40.1	+0.3
GRF				eL	L	10 32 57.6	
	comp=Z,547nm,18.3s						
GRFO	Grafenberg	82.62	330	P	P	09 51 27.3	+0.5
GRFO				pP	pP	09 51 41.2	+1.4
BUG	Bochum--Univer	82.69	333	eP	P	09 51 27.2	+0.2
	comp=Z,25nm,0.8s,baz=37,slow=5.4						
BUG				epP	pP	09 51 40.7	+0.6
GRB1	Grafenberg Arr	82.69	330	P	P	09 51 28.3	+1.1
GRB1				pmax	pmax		
	comp=Z,52nm,1.0s						
ARSA	Arzberg	82.74	326	eP	P	09 51 28.1	+0.6
	comp=Z,18nm,1.1s,SNR=6.7						
ELL	Elmali	82.80	311	IAmb	IAmb	09 51 36.2	
	comp=Z,42nm,0.8s						
MOA	Molln	82.82	327	i P	P	09 51 27.6	-0.3
	comp=Z,29nm,1.2s,SNR=7.3						
GRC1	Grafenberg Arr	83.06	330	P	P	09 51 29.4	+0.3
GRC1				pmax	pmax		
	comp=Z,54nm,1.1s						
ECSD	EROS Data Cent	83.14	38	IAmb	IAmb	09 51 44.2	
	comp=Z,40nm,1.1s						
BIOA	Bad Ischl, Aus	83.21	328	eP	P	09 51 30.4	+0.5
	comp=Z,31nm,0.9s,SNR=7.1						
TNS	Taunus Mts	83.26	332	P	P	09 51 29.8	-0.3
TNS				pmax	pmax		
	comp=Z,23nm,1.4s						
TNS	Taunus Mts	83.26	332	eP	P	09 51 30.1	0.0
	comp=Z,11nm,0.9s,baz=37,slow=5.4						
TNS				epP	pP	09 51 43.9	+0.7
SRS	Serrai	83.35	318	P	P	09 51 30.0	-0.7
SRS				pmax	pmax		
	comp=Z,29nm,1.4s						
GROS	Grobnik	83.35	326	i P	P	09 51 30.6	-0.1
E38A	The Farm, Brul	83.36	34	IAmb	IAmb	09 51 45.4	
	comp=Z,52nm,1.0s						
PERS	Pernice	83.39	326	i P	P	09 51 31.0	+0.1
PERS				i		09 51 44.2	
SOKA	Soboth	83.39	326	i P	P	09 51 31.2	+0.2
	comp=Z,39nm,1.0s,SNR=12						
T25A	Trinidad	83.60	47	IAmb	IAmb	09 51 47.9	
	comp=Z,32nm,1.0s						
DOBS	Dobrina	83.61	326	i P	P	09 51 31.8	-0.1
KNT	Kendrikon	83.68	318	P	P	09 51 32.5	+0.1
KNT				pmax	pmax		
	comp=Z,35nm,1.6s						
OBKA	Obir	83.73	326	eP	P	09 51 32.7	0.0
	comp=Z,15nm,1.0s						
VAY	Valandovo	83.74	319	i P	P	09 51 33.1	+0.4
BTNL	Ternell	83.80	333	dP	P	09 51 32.5	-0.4
	comp=Z,13nm,0.9s						
KBA	Koelnbreinsper	83.81	327	eP	P	09 51 33.3	+0.1
	comp=Z,28nm,0.9s,SNR=8.4						
FUR	Furstenfeldbru	83.82	329	eP	P	09 51 33.2	+0.2
	comp=Z,64nm,0.9s,baz=37,slow=5.4						
FUR				epP	pP	09 51 46.5	+0.5
LESA	Schwarzleotal	83.82	328	i P	P	09 51 33.4	+0.3
	comp=Z,26nm,0.8s,SNR=10						
MEM	Membach	83.83	333	dP	P	09 51 33.2	+0.3
MEM				dpP	pP	09 51 46.4	+0.4
SKO	Skopje	83.86	320	i P	P	09 51 34.4	+1.1
TASM	ASL Pad, Albuq	83.86	50	IAmb	IAmb	09 51 50.3	
	comp=Z,37nm,1.1s						
TASM	ASL Pad, Albuq	83.86	50	IAmb	IAmb	09 51 50.3	
	comp=Z,38nm,1.1s						
TASM	ASL Pad, Albuq	83.86	50	IAmb	IAmb	09 51 50.3	
	comp=Z,36nm,1.1s						
TASM	ASL Pad, Albuq	83.86	50	IAmb	IAmb	09 51 50.3	
	comp=Z,37nm,1.1s						
ANMO	Albuquerque	83.87	50	P	P	09 51 33.8	0.0
ANMO				IAmb	IAmb	09 51 50.2	
	comp=Z,35nm,1.1s						
ANMO	Albuquerque	83.87	50	i P	P	09 51 33.8	0.0
ANMO				pmax	pmax		
	comp=Z,12nm,1.2s						
ABQ	Albuquerque	83.87	50	IAmb	IAmb	09 51 50.3	
	comp=Z,39nm,1.1s						
BLY	Banja Luka	83.89	324	⇓P	P	09 51 33.5	+0.1
MYKA	Terra Mystica	84.04	327	eP	P	09 51 33.8	-0.4
	comp=Z,15nm,0.7s						
BHOU	Houvegnez	84.04	333	dP	P	09 51 34.7	+0.6
STU	Stuttgart	84.15	331	P	P	09 51 35.2	+0.5
STU				pmax	pmax		
	comp=Z,39nm,1.3s						
STU	Stuttgart	84.15	331	eP	P	09 51 34.7	0.0
	comp=Z,86nm,0.9s,baz=37,slow=5.4						
STU				epP	pP	09 51 48.4	+0.7
Y22A	Socorro	84.23	51	IAmb	IAmb	09 51 51.3	
	comp=Z,36nm,1.2s						
BCLA	Clavier	84.23	334	dP	P	09 51 35.1	+0.1
BCLA				dpP	pP	09 51 48.6	+0.5
UCC	Uccle	84.24	334	dP	P	09 51 34.6	-0.4
EIL	Elat	84.27	303	LR	LR	10 33 27.7	
	comp=Z,329nm,18.4s,baz=1.0,slow=39						
BGES	Gesves	84.34	334	dP	P	09 51 35.2	-0.4
BGES				dpP	pP	09 51 48.2	-0.4
WATA	Walderalm	84.35	329	eP	P	09 51 36.0	+0.1
	comp=Z,15nm,1.0s						
WTTA	Wattenberg	84.39	328	eP	P	09 51 36.2	+0.1
	comp=Z,14nm,1.0s						
ABTA	Abfaltersbach	84.43	328	eP	P	09 51 35.5	-0.7
	comp=Z,12nm,0.8s						
319A	Douglas	84.46	54	IAmb	IAmb	09 51 52.3	
	comp=Z,49nm,1.1s						
RCHB	Rochefort	84.48	334	dP	P	09 51 36.3	+0.1
RCHB				dpP	pP	09 51 49.1	-0.2
BMRD	Maredsous	84.52	334	dP	P	09 51 36.1	-0.3
BMRD				dpP	pP	09 51 49.5	0.0
SCHQ	Schefferville	84.56	16	P	P	09 51 36.9	+0.3
	comp=Z,9.3nm,0.7s,baz=352,slow=6.6,SNR=9.6						
SCHQ				LR	LR	10 32 47.6	
	comp=Z,218nm,19.4s,baz=286,slow=38						
	comp=Z,9.3nm,0.7s						
WLF	Walferdange	84.56	333	eP	P	09 51 37.1	+0.4
	comp=Z,40nm,1.2s,baz=37,slow=5.4						
WLF	Walferdange	84.56	333	dP	P	09 51 36.9	+0.2
RETA	Reutte	84.57	329	i P	P	09 51 37.3	+0.4
	comp=Z,39nm,0.9s,SNR=6.9						
PHP	Peshkopia	84.58	320	P	P	09 51 36.7	-0.3
PHP				pmax	pmax		
	comp=Z,37nm,1.1s						
SQTA	Sankt Quirin	84.60	329	eP	P	09 51 36.8	-0.3
	comp=Z,14nm,0.8s						
PPT	Papeete	84.65	117	LR	LR	10 23 39.9	
	comp=Z,374nm,19.8s,baz=293,slow=32						
PPT2	Papeete2	84.66	117	eS	S	10 02 00.8	-1.2
	comp=Z,124nm,24.8s						
PPT2				eSS	SS	10 07 31.2	-3.5
	comp=Z,125nm,25.0s						
PPT2				eLQ	LQ	10 14 44.5	
	comp=Z,180nm,24.0s						
PPT2				eLR	LR	10 18 12.1	
	comp=Z,698nm,27.8s						
PPT2				eLR	LR	10 18 18.2	
	comp=Z,955nm,24.8s						
UBR	Ueberruh	84.67	330	eP	P	09 51 37.0	-0.4
	comp=Z,11nm,0.9s,baz=37,slow=5.4						
UBR				epP	pP	09 51 50.4	-0.1
STAL	STALIGIAL	84.73	327	IAmb	IAmb	09 51 50.6	
	comp=Z,22nm,0.7s						
DOU	Dourbes	84.75	334	dP	P	09 51 37.5	-0.1
DOU				dpP	pP	09 51 50.9	+0.2
OHR	Ohrid	84.81	319	i P	P	09 51 38.4	+0.1
BFO	Black Forest	84.85	331	P	P	09 51 37.6	-0.6
BFO	Black Forest	84.85	331	P	P	09 51 37.6	-0.6
BFO				pmax	pmax		
	comp=Z,46nm,0.9s						
BFO	Black Forest	84.85	331	eP	P	09 51 38.1	-0.1
	comp=Z,56nm,1.0s,baz=37,slow=5.4						
BFO	Black Forest	84.85	331	P	P	09 51 37.9	-0.3
BFO				PcP	PcP	09 51 42.5	+1.0
BFO				pP	pP	09 51 51.4	+0.2
FETA	Feichten	84.95	329	i P	P	09 51 39.0	0.0
	comp=Z,21nm,0.9s,SNR=6.3						
RTBA	Rita Blanca	85.06	47	IAmb	IAmb	09 51 54.9	
	comp=Z,46nm,1.1s						
DAVA	Damuels	85.08	329	i P	P	09 51 39.6	0.0
	comp=Z,44nm,0.9s,SNR=7.7						
CTI	Castel Tesino	85.34	328	IAmb	IAmb	09 51 40.8	
	comp=Z,16nm,0.8s						
ECH	Echery	85.39	332	IAmb	IAmb	09 51 55.3	
	comp=Z,33nm,0.9s						
ECH	Echery	85.39	332	P	P	09 51 41.1	+0.2
ECH				pmax	pmax		
	comp=Z,40nm,1.2s						
ECH	Echery	85.39	332	P	P	09 51 40.9	-0.1
ECH				pP	pP	09 51 54.3	+0.3
DAVOX	Davos/Dischmat	85.49	329	LR	LR	10 33 24.0	
	comp=Z,812nm,18.9s,baz=18,slow=38						
TUE	Stuetta	85.96	329	IAmb	IAmb	09 51 58.5	
	comp=Z,20nm,0.9s						
TAOE	Nuku Hiva Isla	86.01	104	eS	SKSac	10 02 09.2	+2.0
	comp=Z,121nm,26.6s						
TAOE	Nuku Hiva Isla	86.01	104	eLR	LR	10 18 46.8	
	comp=Z,1μm,25.9s						
SENIN	Lac Senin/Sane	86.86	330	IAmb	IAmb	09 52 02.1	
	comp=Z,18nm,1.1s						
LOR	Lormes	87.40	333	P	P	09 51 50.7	-0.1
LOR				pmax	pmax		
	comp=Z,51nm,1.1s						
VHRN	Van Horn	87.59	52	IAmb	IAmb	09 52 07.5	
	comp=Z,38nm,1.5s						
L42A	Oliver, Polo	87.78	36	IAmb	IAmb	09 52 08.6	
	comp=Z,31nm,1.0s						
PECS	Pecos	87.89	51	IAmb	IAmb	09 52 10.2	
	comp=Z,22nm,1.2s						
TIP	Timpagrande	88.31	320	⇑P	P	09 51 55.5	+0.1
WMOK	Wichita Mounta	88.53	46	IAmb	IAmb	09 52 11.6	
	comp=Z,29nm,1.1s						
WMOK	Wichita Mounta	88.53	46	P	P	09 51 57.0	+0.5
WMOK				pmax	pmax		
	comp=Z,24nm,1.1s						
LPIG	La Paz	88.54	60	LR	LR	10 26 40.4	
	comp=Z,144nm,18.6s,baz=304,slow=32						
TBI	Tubuai	88.60	121	eS	S	10 02 37.4	-2.4
	comp=Z,1μm,23.8s						
TBI	Tubuai	88.60	121	eLR	LR	10 19 57.2	
	comp=Z,4μm,32.0s						
TBI				eLR	LR	10 20 03.5	
	comp=Z,1μm,29.0s						
TX31	Lajitas Ar. Si	89.41	53	IAmb	IAmb	09 52 16.0	
	comp=Z,15nm,1.1s						
TXAR	Lajitas Array	89.42	53	P	P	09 52 01.9	+1.1
	comp=Z,2.8nm,0.8s,baz=295,slow=3.1,SNR=29						
TXAR				PKKPbc	PKKPbc	10 09 36.6	+2.1
	comp=Z,0.4nm,0.8s,baz=136,slow=4.6,SNR=5.7						
TXAR				LR	LR	10 26 03.3	
	comp=Z,180nm,21.0s,baz=315,slow=32						
	comp=Z,2.8nm,0.8s						
TXAR	Lajitas Array	89.42	53	P	P	09 52 00.4	-0.4
ATD	Arta Tunnel	90.02	285	LR	LR	10 36 58.7	
	comp=Z,7.3nm,18.6s,baz=35,slow=39						
CCM	Cathedral Cave	90.09	39	P	P	09 52 03.3	-0.4
CCM	Cathedral Cave	90.09	39	P	P	09 52 03.3	-0.4
CCM				pmax	pmax		
	comp=Z,81nm,1.2s						
PLPT	Palo Pinto	90.19	47	IAmb	IAmb	09 52 19.4	
	comp=Z,31nm,1.2s						
VAE	Valguarnera	90.80	321	LR	LR	10 37 03.8	
	comp=Z,791nm,19.0s,baz=38,slow=38						
JCT	Junction City	90.99	49	IAmb	IAmb	09 52 27.4	
	comp=Z,16nm,1.0s						
DRIO	Del Rio	91.25	51	IAmb	IAmb	09 52 24.1	
	comp=Z,27nm,1.2s						
MIAR	Mount Ida	91.56	43	P	P	09 52 11.5	+0.9
MIAR				pmax	pmax		
	comp=Z,40nm,1.2s						
KEST	Kesra	94.66	323	LR	LR	10 40 21.1	
	comp=Z,521nm,18.6s,baz=21,slow=39						
KEST	Kesra	94.66	323	P	P	09 52 25.1	+0.2
ESDC	Sonseca Array	96.80	334	P	P	09 52 33.3	-1.2
	comp=Z,2.7nm,1.0s,baz=17,slow=2.9,SNR=6.9						
ESDC				LR	LR	10 41 00.9	
	comp=Z,672nm,20.5s,baz=18,slow=38						
	comp=Z,2.7nm,1.0s						
RKT	Rikitea	98.71	112	eLR	LR	10 24 49.1	
	comp=Z,4μm,27.8s						
LPHEP	Lephephe	124.02	265		PKiKP	09 58 02.6	+0.1
SDV	Santo Domingo	124.56	40		PKiKP	09 58 03.9	-0.1
SDV	Santo Domingo	124.56	40	eP	PKPdf	09 58 03.4	-0.3
LBTB	Lobatse	125.06	264		PKiKP	09 58 04.5	0.0
LBTB	Lobatse	125.06	264	PKIKP	PKiKP	09 58 04.5	0.0
DBIC	Dimbokro	126.00	318	PKP	PKPdf	09 58 05.4	-0.8
	comp=Z,4.0nm,0.7s,baz=190,slow=1.2,SNR=4.4						
BOSA	Boshof	127.04	260	PKP	PKPdf	09 58 07.8	-0.1
	comp=Z,6.9nm,0.8s,baz=79,slow=3.6,SNR=10						
BOSA	Boshof	127.04	260		PKiKP	09 58 08.6	+0.2
BOSA	Boshof	127.04	260	PKIKP	PKiKP	09 58 08.6	+0.2
QSPA	South Pole Qui	127.49	180	PKP	PKPdf	09 58 07.3	-0.2
	comp=Z,7.4nm,0.8s,baz=318,slow=1.2,SNR=16						
QSPA	South Pole Qui	127.49	180		PKiKP	09 58 08.3	+0.3
SYO	Syowa Base	129.00	207	⇑epPKPdf	pPKPdf	09 58 25.2	+1.5
SYO	Syowa Base	129.00	207	⇓epPKiKP	PKiKP	09 58 26.8	+16
NVL	N'lazarevskaya	138.08	202	ePKIKP	PKiKP	09 58 31.9	+2.7
NVL				ePPP	PPP	10 04 20.7	
NVL				eSS	SS	10 19 30.4	+6.5
NVL				eSSS	SSS	10 24 38.9	
NVL				pmax	pmax		
	comp=Z,18nm,1.3s						
TEFE	Tefe	138.18	42	eP	PKPdf	09 58 29.6	+0.4
SNAA	Sanae	141.53	197	PKhKP	PKPpre	09 58 26.5	
	comp=Z,7.4nm,0.9s,baz=135,slow=4.2,SNR=14						
ITTB	Itaituba	143.09	30	eP	PKPdf	09 58 37.0	-1.0
TMAB	Tom-Au,PA,Br	143.63	17	eP	PKPdf	09 58 37.9	-1.1
NPGB	Novo Progresso	145.68	31	eP	PKPbc	09 58 43.0	+0.2
NBMO	Morrinhos-CE	145.68	3	eP	PKPbc	09 58 43.0	+0.2
LPAZ	La Paz	146.03	59	PKPbc	PKPbc	09 58 44.8	+0.2
	comp=Z,21nm,0.9s,baz=354,slow=5.2,SNR=46						
LPAZ	La Paz	146.03	59	eP	PKPbc	09 58 44.6	0.0
NBPS	Pedro II - PI	146.67	6	eP	PKPbc	09 58 45.9	0.0
H03N2	Juan Fernandez	146.75	95	T	T	12 43 35.4	
	baz=292,slow=76,SNR=101						
H03N3	Juan Fernandez	146.76	95	T	T	12 43 25.1	
	baz=292,slow=76,SNR=106						
H03N1	Juan Fernandez	146.77	95	T	T	12 43 25.7	
	baz=292,slow=76,SNR=102						
PRPB	Parauapebas	146.83	22	eP	PKPdf	09 58 43.8	-0.7
H03S2	Juan Fernandez	146.88	96	T	T	12 43 38.3	
	baz=286						
H03S3	Juan Fernandez	146.89	96	T	T	12 43 39.2	
	baz=286						
H03S1	Juan Fernandez	146.90	96	T	T	12 43 42.3	
	baz=286						
NBPA	Parau_RN	148.14	358	eP	PKPdf	09 58 45.8	-0.8
VILB	Vilhena	148.44	44		PKPbc	09 58 49.2	-1.4
VILB	Vilhena	148.44	44	eP	PKPbc	09 58 48.9	-1.7
NBPV	Pedro Velho	148.70	355	eP	PKPdf	09 58 48.5	+1.0
CLDB	Colider	148.90	35	eP	PKPdf	09 58 49.5	+1.7
SMTB	Santa Maria do	150.00	19	eP	PKPdf	09 58 50.7	+1.1
PTLB	Pontes e Lacer	151.06	46	eP	PKPdf	09 58 50.7	-0.4
NBTA	Tacaratu-PE	151.50	360	eP	PKPdf	09 58 52.7	+0.8
LCO	Las Campanas	151.57	82		PKiKP	09 58 59.4	+0.8
LCO	Las Campanas	151.57	82	PKIKP	PKiKP	09 58 59.4	+0.8
SNDB	Serra Nova Dou	151.77	28	eP	PKPdf	09 58 52.9	+0.6
BO02	Sierra Bellavi	153.60	94		PKiKP	09 59 03.3	+0.9
BI02	San Fabin de	153.67	98		PKiKP	09 59 03.1	+0.6
MT13	San Alfonso	153.69	91		PKiKP	09 59 03.7	+1.0
PLCA	Paso Flores	154.81	107	PKP	PKPdf	09 58 55.4	-0.7
	comp=Z,1.9nm,1.0s,baz=153,slow=2.3,SNR=2.3						
ARAG	Araguaiana, MT	154.94	32	eP	PKPdf	09 58 56.9	+0.1
BDFB	Brasilia	156.32	24	PKPab	PKPab	09 59 26.8	-0.1
	comp=Z,1.1nm,0.4s,baz=0.0,slow=2.0,SNR=3.3						
CPUP	Villa Florida	160.20	60	PKPab	PKPab	09 59 45.8	+2.3
	comp=Z,0.4nm,0.9s,baz=225,slow=1.4,SNR=2.9						

IDC **11** 09:59:17.0±0.8,25°.35N×127°.39E,h0^{km},mb4.0/15, mbtmp4.0/17,ML3.9/2,Error ellipse: s-maj=23.0km s-min=16.4km az=88.0

NEIC **11** 09:59:19.4±1.1,25°.39N±0°.02×127°.4E±0°.1,h10^{km}±1^{km}, mb4.3/16,Error ellipse: s-maj=16.2km s-min=3.8km az=279.0

JMA **11** 09:59:20.4±0.3,25°N±2°×127°.6E±0°.9,h65^{km}±3^{km}, MV3.3/22,NEAR OKINAWAJIMA ISLAND

ISC 11 09:59:20.4±0.6,**25°.29N**±0°.06×**127°.63E**±0°.07,**h27**^{km}**,n59,** σ1^{s}**22**/62,**mb4.1**/22,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJT3	Tamagusuku3	0.86	9	P	Pb	09 59 36.0	-0.7
JJT3				eS	Sn	09 59 47.9	-0.4
JNTH	Nagotoyohara	1.27	16	P	Pn	09 59 41.3	-1.1
JKE	Kume jima 2	1.28	324	i P	Pn	09 59 41.3	-1.2
JAGN	Aguni-jima	1.34	345	i P	Pn	09 59 42.3	-0.9
JOW	Kunigami	1.64	21	Pn	Pn	09 59 46.6	-0.8
	11nm,0.3s,baz=134,slow=26,SNR=40						
JOW				Sn	Sb	10 00 12.6	+2.4
	56nm,0.3s,baz=209,slow=28,SNR=7.1						
JOW	Kunigami	1.64	21	P	Pn	09 59 46.5	-0.9
JIH	Iheya	1.76	10	P	Pn	09 59 48.5	-0.6
JYRO	Yoronjima	1.87	23	P	Pn	09 59 49.8	-0.9
JMJ2	Miyako jima3	2.16	256	P	Pn	09 59 54.4	-0.2
JOKE	Okinoerabujima	2.22	22	P	Pn	09 59 54.7	-0.8
JIRB	Irabujima	2.28	259	P	Pn	09 59 55.8	-0.4
JTK	Tokunoshima	2.75	25	P	Pn	10 00 01.9	-0.8
JTK				eS	Sn	10 00 31.9	-3.2
JAMN	Amaminishikomi	3.25	25	P	Pn	10 00 09.9	+0.4
JKDJ	Kitadaitoujima	3.37	78	P	Pn	10 00 09.8	-1.5
JKDJ				S	Sn	10 00 46.7	-3.7
JAM	Amami Oshima	3.57	29	P	Pn	10 00 13.6	-0.4
JZK	Kikaishima	3.66	34	P	Pn	10 00 15.6	+0.3
JTAJ	Takarajima	4.09	20	P	Pn	10 00 21.0	-0.1
NACB	Ninganchiao	5.60	260	Pn	Pn	10 00 39.9	-2.0
JNU	Nakatsue	8.30	19	Pn	Pn	10 01 18.7	-0.3
	2.2nm,0.3s,baz=217,slow=6.1,SNR=16						
	9.2nm,0.4s						
JNU	Nakatsue	8.30	19		Pn	10 01 19.9	+0.9
JMN	Monobe	10.01	31	Pn	Pn	10 01 41.6	-0.8
USRK	Ussuriysk Ar.	19.19	10	P	Pn	10 03 43.8	+0.7
	0.1nm,0.3s,baz=202,slow=10,SNR=4.2						
	1.5nm,0.6s						
JKA	Kamikawa-asahi	22.38	29	P	P	10 04 17.6	+1.0
JKA				IAmb	IAmb	10 04 31.6	
	comp=Z,6.4nm,1.1s						
LZDM	Lanzhou Array	23.12	303	P	P	10 04 23.4	-1.3
	comp=Z,8.1nm,0.6s,baz=140,slow=9.4,SNR=13						
	comp=Z,8.1nm,0.6s						
HIA	Hailar	24.71	348	P	P	10 04 38.9	-0.3
HIA				IAmb	IAmb	10 04 44.8	
	comp=Z,6.4nm,0.9s						
YSS	Yuzhno-Sakhali	24.74	25	P	P	10 04 39.0	-0.5
SONM	Songino Array	28.06	329	P	P	10 05 08.0	-1.6
	comp=Z,1.4nm,0.8s,baz=141,slow=11,SNR=5.0						
	comp=Z,1.4nm,0.8s						
SONM	Songino Array	28.06	329	P	P	10 05 07.8	-1.8
PET	Petropavlovsk	36.17	32	P	P	10 06 21.7	+1.3
YAK	Yakutsk	36.75	2	P	P	10 06 25.0	-0.2
KNRA	Kununurra	40.74	178	P	P	10 07 00.8	+1.7
KNRA				IAmb	IAmb	10 07 18.4	
	comp=Z,5.8nm,0.9s						
MKAR	Makanchi Array	41.76	313	P	P	10 07 06.3	-1.0
	comp=Z,2.0nm,0.5s,baz=98,slow=11,SNR=18						
	comp=Z,2.0nm,0.5s						
MKAR	Makanchi Array	41.76	313	P	P	10 07 06.6	-0.8
MAKZ	Makanchi	41.98	313	P	P	10 07 08.7	-0.4
ZAA0	Zalesovo Array	42.67	324	P	P	10 07 14.4	-0.2
ZALV	Zalesovo Beam	42.67	324	P	P	10 07 13.6	-1.0
	comp=Z,1.3nm,0.5s,baz=105,slow=7.3,SNR=5.6						
	comp=Z,1.3nm,0.5s						
KURBB	Kurchatov Arra	45.16	317	P	P	10 07 33.2	-1.5
	comp=Z,0.6nm,0.4s,baz=104,slow=8.5,SNR=5.6						
	comp=Z,0.6nm,0.4s						
WB0	Warramunga Arr	45.27	171	P	P	10 07 37.1	+1.3
WB0				IAmb	IAmb	10 07 46.3	
	comp=Z,3.4nm,1.1s						
WRA	Warramunga Arr	45.44	171	P	P	10 07 38.0	+0.9
	comp=Z,1.0nm,0.9s,baz=354,slow=7.8,SNR=6.2						
	comp=Z,1.0nm,0.9s						
WR8	Warramunga Arr	45.47	171	P	P	10 07 38.8	+1.4
WR8				IAmb	IAmb	10 07 39.3	
	comp=Z,4.1nm,1.1s						
ASAR	Alice Springs	49.05	172	P	P	10 08 06.8	+1.5
	comp=Z,0.5nm,0.5s,baz=351,slow=8.5,SNR=10						
	comp=Z,0.5nm,0.5s						
ASAR	Alice Springs	49.05	172	P	P	10 08 06.9	+1.7
KKAR	Karatay Array	49.52	306	P	P	10 08 08.4	-0.3
BVAR	Borovoye Array	50.62	319	P	P	10 08 16.4	-0.5
	comp=Z,0.4nm,0.3s,baz=106,slow=6.6,SNR=3.1						
	comp=Z,0.4nm,0.3s						
AB31	Akbulak array	56.90	314		P	10 09 02.7	-0.1
ABKAR	Akbulak array	56.90	314	P	P	10 09 02.9	0.0
C18K	Utukok River	59.84	24	P	P	10 09 24.8	+1.6
C18K				IAmb	IAmb	10 09 36.2	
	comp=Z,3.5nm,1.1s						
D19K	Kuna River	60.95	24	P	P	10 09 32.8	+2.0
D19K				IAmb	IAmb	10 09 49.7	
	comp=Z,2.0nm,1.0s						
ILAR	Eielson Array	65.51	28	P	P	10 10 02.9	+1.9
	comp=Z,0.3nm,0.7s,baz=277,slow=6.4,SNR=1.9						
	comp=Z,0.3nm,0.7s						
A36M	Sachs Harbour	71.28	18	P	P	10 10 42.7	+5.8
FINES	FINESS Array B	73.41	331	P	P	10 10 49.7	-0.1
	comp=Z,1.3nm,0.6s,baz=46,slow=5.5,SNR=6.7						
	comp=Z,1.3nm,0.6s						
FINES	FINESS Array B	73.41	331	P	P	10 10 49.6	-0.2
AKASG	Malin Array Be	75.89	320	P	P	10 11 04.8	+0.4
	comp=Z,0.8nm,0.4s,baz=65,slow=6.2,SNR=3.5						
	comp=Z,0.8nm,0.4s						
BR131	Keskin Array S	77.18	308	P	P	10 11 11.6	-0.6
BR131				IAmb	IAmb	10 11 13.6	
	comp=Z,4.1nm,1.1s						
BRTR	Keskin Array B	77.18	308	P	P	10 11 12.6	+0.5
	comp=Z,1.1nm,0.8s,baz=79,slow=6.4,SNR=5.6						
	comp=Z,1.1nm,0.8s						
BRTR	Keskin Array B	77.18	308	P	P	10 11 11.9	-0.2
HFS	Hagfors	79.39	332	P	P	10 11 23.2	-0.6
	comp=Z,5.9nm,1.0s,baz=63,slow=6.6,SNR=2.3						
	comp=Z,5.9nm,1.0s						
NOA	NORSAR Array B	79.91	334	P	P	10 11 25.8	-0.9
	comp=Z,2.0nm,0.8s,baz=57,slow=4.8,SNR=4.0						
	comp=Z,2.0nm,0.8s						
GERES	GERESS Array B	85.61	323	P	P	10 11 57.0	+0.4
	comp=Z,0.3nm,0.5s,baz=58,slow=9.3,SNR=1.7						
	comp=Z,0.3nm,0.5s						

IDC **11** 10:12:01.3±0.3,48°.73N×154°.99E,h0^{km},mb5.3/33, mbtmp5.3/39,ML5.8/5,MS4.3/70,Error ellipse: s-maj=9.8km s-min=9.2km az=103.0

BJI **11** 10:12:04.4,48°.91N×155°.38E,h52^{km},mB5.0/27,mb5.4/72, Ms4.7/66,Ms7 4.5/64

KRSC **11** 10:12:05.3±2.0,48°.64N×155°.28E,h80^{km}±36^{km},Mc4.8, Ml5.9,Felt [II] at Podgornay.

MOS **11** 10:12:08.3±1.1,48°.92N×154°.79E,h59^{km},mb5.5/90, MS4.5/12,Error ellipse: s-maj=5.2km s-min=2.7km az=81.8

SKHL **11** 10:12:08.3±0.7,48°.70N×155°.40E,h71^{km}±8^{km},mb6.2/12, ms5.0/6

GFZ **11** 10:12:08.7,48°.82N×154°.90E,h48^{km},MW5.1,Moment Tensor Solution. s23 Moment tensor: M_{rr}4.71; $M_{\theta\theta}$-0.79; $M_{\phi\phi}$-3.93; $M_{r\theta}$0.35; $M_{\theta\phi}$-2.87; $M_{\phi r}$1.61; Fault plane solution: NP1:ϕ_s218.00000°,δ37.00000°, λ102.00000°. NP2:ϕ_s24.00000°,δ54.00000°,λ81.00000°. Principal axes: T 5.0100, Plg79.0000°, Azm260.0000°; N 0.8500, Plg7.0000°, Azm29.0000°; P -5.8600, Plg8.0000°, Azm120.0000°;

NEIC **11** 10:12:09.4±1.6,48°.89N±0°.08×154°.8E±0°.1,h55^{km}±4^{km}, mb5.5/946,Mww5.1/14 Error ellipse: s-maj=12.8km s-min=9.0km az=135.0

NEIC **11** 10:12:09.2,48°.89N×154°.77E,h60^{km}

NEIC **11** 10:12:09.2,48°.39N×156°.14E,h60^{km},Moment Tensor Solution. Duration: 1^{s}8 Moment tensor: Scale 10^{16}Nm; M_{rr}5.45; $M_{\theta\theta}$-2.37; $M_{\phi\phi}$-3.09; $M_{r\theta}$0.72; $M_{\theta\phi}$-4.19; $M_{\phi r}$0.44; Fault plane solution: $M_0$6.38000×10^{16} NP1: ϕ_s219.16000°,δ41.38000°,λ85.06000°. NP2:ϕ_s45.73000°, δ48.80000°,λ94.34000°. Principal axes: T 5.5190, Plg85.0000°, Azm354.0000°; N 1.4665, Plg3.0000°, Azm223.0000°; P -6.9856, Plg4.0000°, Azm133.0000°;

GCMT **11** 10:12:10.4±0.1,48°.75N±0°.01×155°.28E±0°.02,h49^{km}, MW5.2/115,Moment Tensor Solution. s111,c175; s115,c203; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}6.71±.15; $M_{\theta\theta}$-1.35±.11; $M_{\phi\phi}$-5.36±.11; $M_{r\theta}$0.93±.10;

$M_{\theta\phi}$-3.61±.08; $M_{\phi r}$1.74±.10; Best double couple: $M_0$7.36600×10^{16} NP1:ϕ_s211.00000°,δ37.00000°, λ91.00000°. NP2:ϕ_s30.00000°,δ53.00000°,λ89.00000°. Principal axes: T 6.9790, Plg82.0000°, Azm295.0000°; N 0.7730, Plg1.0000°, Azm30.0000°; P -7.7530, Plg8.0000°, Azm120.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

*BGR **11** 10:12:13.4, 49°.48N×153°.69E, h14^{km}, mb5.5*

ISC 11 10:12:08.6±0.3**, 48°.80N**±0°.03×**154°.98E**±0°.03**, h53**^{km}±2^{km}**, h53**^{km}**:pP-P, n1704,** σ**1**^{s}**39**/1394**, mb5.5**/658**, MS4.5**/92**, 46C-35D, Kuril Islands**

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Code  Station Name         Δ°   AZ°     Phase ID         Time      Res
                                        Op     ISC       h  m  s   ISC
SKR   Severo-Kuril's      2.02  21⇓iPN    Pn     10 12 40.1 -0.2
SKR                                eS     Sn     10 13 03.8 -0.6
SKR                                pmax   pmax
      comp=Z,2μm,0.4s
SKR                                smax   smax
      comp=E,23μm,0.6s
SKR                                smax   smax
      comp=N,11μm,0.3s
SKR   Severo-Kuril's      2.02  21 eP     Pn     10 12 40.0 -0.2
SKR                                eS     Sn     10 13 04.1 -0.3
SKR   Severo-Kuril's      2.02  21 i P    Pn     10 12 40.1 -0.2
SKR                                AMB    AMB    10 12 41.6
      comp=N,3μm,0.5s
SKR                                eS     Sn     10 13 03.8 -0.6
SKR                                A      A      10 13 06.5
      comp=N,14μm,0.5s
SKR                                A      A      10 13 06.5
      comp=N,8μm,0.5s
SKR                                AMS    AMS    10 13 35.1
      comp=N,22μm,12.0s
SKR                                AMS    AMS    10 13 35.1
      comp=N,17μm,12.0s
PAU   Pauzhetka           2.92  23  PN    Pn     10 12 52.7 +0.3
PAU                                 S     Sn     10 13 26.4 +0.2
PAU   Pauzhetka           2.92  23 eP     Pn     10 12 52.8 +0.3
PAU                                eS     Sn     10 13 26.5 +0.2
PAU   Pauzhetka           2.92  23 eP     Pn     10 12 52.9 +0.4
PAU                                AMB    AMB    10 12 56.8
      comp=N,1μm,0.4s
PAU                                eS     Sn     10 13 26.5 +0.2
PAU                                A      A      10 13 32.2
      comp=N,14μm,0.7s
PAU                                A      A      10 13 32.2
      comp=N,19μm,0.7s
KDTR  Khodutka, Kamc      3.61  32  PN    Pn     10 13 01.3 -0.6
KDTR                                S     Sn     10 13 40.4 -2.8
KDTR  Khodutka, Kamc      3.61  32 eP     Pn     10 13 01.4 -0.6
KDTR                               eS     Sn     10 13 40.4 -2.8
KDTR  Khodutka, Kamc      3.61  32 eP     Pn     10 13 01.3 -0.6
KDTR                               eS     Sn     10 13 40.4 -2.8
MIPR  Malaya Ipel'ka      3.66  17  PN    Pn     10 13 03.5 +0.8
MIPR  Malaya Ipel'ka      3.66  17 eP     Pn     10 13 03.5 +0.8
ASAK  Asacha              4.04  26  PN    Pn     10 13 09.3 +1.4
ASAK  Asacha              4.04  26 eP     Pn     10 13 09.4 +1.4
MTVR  Mutnovka            4.21  28  PN    Pn     10 13 11.4 +1.1
MTVR                                S     Sn     10 13 58.8 +0.5
MTVR  Mutnovka            4.21  28 eP     Pn     10 13 11.5 +1.1
MTVR                               eS     Sn     10 13 58.9 +0.5
GRL   Gorelyy             4.24  26  PN    Pn     10 13 12.1 +1.4
GRL   Gorelyy             4.24  26 eP     Pn     10 13 12.1 +1.4
RUS   Russkaya            4.28  30  PN    Pn     10 13 10.8 -0.3
RUS                                 S     Sn     10 13 57.3 -2.3
RUS   Russkaya            4.28  30 eP     Pn     10 13 10.8 -0.3
RUS                                eS     Sn     10 13 57.3 -2.3
APC   Apacha              4.36  18  PN    Pn     10 13 13.8 +1.7
APC   Apacha              4.36  18 eP     Pn     10 13 13.9 +1.7
KRMR  Karymshinskiy       4.50  25  PN    Pn     10 13 15.7 +1.6
KRMR  Karymshinskiy       4.50  25 eP     Pn     10 13 15.7 +1.6
KRMR  Karymshinskiy       4.50  25 eP     Pn     10 13 15.7 +1.6
PEA0B Petropavlovsk-      4.64  21        Pn     10 13 18.0 +1.9
PEA0B Petropavlovsk-      4.64  21ceePN   Pn     10 13 16.5 +0.4
PETK  Petropavlovsk-      4.64  21  Pn    Pn     10 13 17.2 +1.1
      comp=N,77nm,0.3s,baz=253,slow=30,SNR=742
PETK                                Sn    Sn     10 14 08.3 -0.4
      comp=N,31nm,0.3s,baz=204,slow=13,SNR=3.5
PETK                                LR    LR     10 15 20.3
      comp=N,5μm,21.5s,baz=200,slow=42
PETK  Petropavlovsk-      4.64  21        Pn     10 13 17.5 +1.3
PETK  Petropavlovsk-      4.64  21  PN    Pn     10 13 17.5 +1.3
PET   Petropavlovsk       4.83  27        Pn     10 13 19.2 +0.6
PET   Petropavlovsk       4.83  27  P     Pn     10 13 19.6 +1.0
PET   Petropavlovsk       4.83  27 ePN    Pn     10 13 19.4 +0.8
PET                                eS     Sn     10 14 14.9 +1.8
PET                                pmax   pmax
      comp=Z,738nm,0.6s
PET                                smax   smax
      comp=E,5μm,0.7s
PET                                smax   smax
      comp=N,6μm,1.0s
PET                                MLR    MLR
      comp=Z,2μm,9.0s
PET   Petropavlovsk       4.83  27 eP     Pn     10 13 19.4 +0.8
PET                                eS     Sn     10 14 14.0 +0.9
PET   Petropavlovsk       4.83  27 eP     Pn     10 13 19.3 +0.7
PET                                AMB    AMB    10 13 21.4
      comp=Z,730nm,0.6s
PET                                eS     Sn     10 14 13.1  0.0
PET                                A      A      10 14 30.2
      comp=Z,6μm,0.7s
PET                                A      A      10 14 30.2
      comp=Z,5μm,0.7s
INSR  Institute           4.85  27  PN    Pn     10 13 19.9 +1.0
INSR                                S     Sn     10 14 14.9 +1.3
INSR  Institute           4.85  27 eP     Pn     10 13 20.0 +1.0
INSR                               eS     Sn     10 14 14.9 +1.3
DALK  Dalny               4.86  28  PN    Pn     10 13 19.7 +0.6
DALK                                S     Sn     10 14 13.9 -0.1
DALK  Dalny               4.86  28 eP     Pn     10 13 19.8 +0.6
DALK                               eS     Sn     10 14 13.9 -0.1
UGLR  Uglovaya            5.04  27  PN    Pn     10 13 23.0 +1.4
UGLR  Uglovaya            5.04  27 eP     Sn     10 14 13.5 -5.0
UGLR  Uglovaya            5.04  27 eP     Pn     10 13 23.0 +1.4
KOK   Koryaka             5.05  26  PN    Pn     10 13 24.2 +2.4
KOK   Koryaka             5.05  26 eP     Pn     10 13 24.2 +2.4
KOK   Koryaka             5.05  26 eP     Pn     10 13 24.2 +2.4
AVH   Avacha              5.06  26  PN    Pn     10 13 23.9 +2.0
AVH   Avacha              5.06  26 eP     Pn     10 13 23.9 +2.0
SMAR  Somma               5.08  27  PN    Pn     10 13 23.5 +1.3
SMAR  Somma               5.08  27 eP     Pn     10 13 23.6 +1.3
KRER  Koryakskii          5.10  26  PN    Pn     10 13 24.1 +1.6
KRER                                S     Sn     10 14 22.2 +2.1
KRER  Koryakskii          5.10  26 eP     Pn     10 13 24.2 +1.6
KRER                               eS     Sn     10 14 22.3 +2.1
SDLR  Sedlovina           5.12  27  PN    Pn     10 13 23.4 +0.7
SDLR  Sedlovina           5.12  27 eP     Pn     10 13 23.4 +0.7
KRX   Arik                5.12  25  PN    Pn     10 13 24.5 +1.8
KRX                                 S     Sn     10 14 24.0 +3.5
KRX   Arik                5.12  25 eP     Pn     10 13 24.5 +1.8
KRX                                eS     Sn     10 14 24.0 +3.5
NLC   Nalytchevo          5.17  31  PN    Pn     10 13 22.2 -1.1
NLC   Nalytchevo          5.17  31 eP     Pn     10 13 22.2 -1.1
GNL   Ganaly              5.24  20  PN    Pn     10 13 26.7 +2.3
GNL   Ganaly              5.24  20 eP     Pn     10 13 26.8 +2.3
SPN   Mys Shipunski       5.36  35  PN    Pn     10 13 25.2 -0.6
SPN   Mys Shipunski       5.36  35 eP     Pn     10 13 25.2 -0.6
SPN                                eS     Sn     10 14 23.9 -2.2
KII   Karymskiy           5.94  26  PN    Pn     10 13 34.8 +0.9
KII   Karymskiy           5.94  26 eP     Pn     10 13 34.9 +0.9
KUR   Kuril'sk            6.03 236d iPN   Pn     10 13 36.4 +1.3
KUR                                i S    Sn     10 14 45.0 +2.2
KUR                                pmax   pmax
      comp=Z,2μm,0.7s
KUR                                pmax   pmax
      comp=N,527nm,0.4s
KUR                                pmax   pmax
      comp=E,237nm,0.4s
KUR                                smax   smax
      comp=E,21μm,2.0s
KUR                                smax   smax
      comp=N,7μm,1.6s
KUR                                smax   smax
      comp=E,2μm,0.7s
KUR                                smax   smax
      comp=N,1μm,0.8s
KUR   Kuril'sk            6.03 236 eP     Pn     10 13 36.5 +1.3
KUR                                eS     Sn     10 14 46.0 +3.2
KUR   Kuril'sk            6.03 236 eP     Pn     10 13 38.0 +2.9
KUR                                AMB    AMB    10 13 38.2
      comp=N,4μm,0.7s
KUR                                i S    Sn     10 14 43.9 +1.1
KUR                                A      A      10 14 51.8
      comp=N,3μm,0.7s
KUR                                A      A      10 14 51.8
      comp=N,3μm,0.7s
KUR                                A      A      10 14 56.9
      comp=N,7μm,2.0s
KUR                                A      A      10 14 56.9
      comp=N,21μm,2.0s
KZV   Kizimen             7.12  25  PN    Pn     10 13 50.8 +0.6
KZV   Kizimen             7.12  25 eP     Pn     10 13 50.9 +0.6
ESO   Esso                7.49  16  PN    Pn     10 13 57.3 +2.2
ESO   Esso                7.49  16 eP     Pn     10 13 57.3 +2.2
KMNR  Kamenistaya         7.67  23  PN    Pn     10 13 59.2 +1.5
KMNR  Kamenistaya         7.67  23 eP     Pn     10 13 59.2 +1.5
KOZ   Kozyrevsk           7.86  20  PN    Pn     10 14 01.7 +1.6
KOZ   Kozyrevsk           7.86  20 eP     Pn     10 14 01.8 +1.6
KPT   Kopyto              7.86  22  PN    Pn     10 14 02.2 +2.0
KPT   Kopyto              7.86  22 eP     Pn     10 14 02.2 +2.0
KIRR  Kirishev            7.88  23  PN    Pn     10 14 02.5 +2.0
KIRR  Kirishev            7.88  23 eP     Pn     10 14 02.5 +2.0
YUK   Yuzh-Kuril'sk       7.90 236c iPN   Pn     10 14 01.9 +1.2
YUK                                pmax   pmax
      comp=Z,5μm,0.4s
YUK                                pmax   pmax
      comp=N,303nm,0.2s
YUK                                MLR    MLR
      comp=Z,4μm,16.0s
YUK                                MLR    MLR
      comp=E,2μm,12.0s
YUK                                MLR    MLR
      comp=N,2μm,15.0s
YUK   Yuzh-Kuril'sk       7.90 236 eP     Pn     10 14 02.0 +1.2
YUK   Yuzh-Kuril'sk       7.90 236 i P    Pn     10 14 02.2 +1.5
YUK                                AMB    AMB    10 14 03.1
      comp=N,4μm,0.3s
YUK                                i S    Sn     10 15 29.2 +0.6
YUK                                A      A      10 15 48.2
      comp=N,2μm,0.7s
YUK                                A      A      10 15 48.2
      comp=N,2μm,0.7s
YUK                                AMS    AMS    10 15 55.5
      comp=N,2μm,14.0s
YUK                                AMS    AMS    10 15 55.5
      comp=N,2μm,14.0s
BZWR  Bezymyannyi-We      7.93  23  PN    Pn     10 14 02.7 +1.5
BZWR  Bezymyannyi-We      7.93  23 eP     Pn     10 14 02.8 +1.5
BZGR  Bezymyannyi-Gr      7.96  24  PN    Pn     10 14 02.6 +1.0
BZGR  Bezymyannyi-Gr      7.96  24 eP     Pn     10 14 02.6 +1.0
RUSJ  Misakicho           8.20 239 ePN    Pn     10 14 06.4 +1.6
RUSJ                               eS     Sn     10 15 41.4 +5.5
TYV   Tymovskoe           8.23 289 ePN    Pn     10 14 09.5 +4.2
TYV                                eS     Sn     10 15 39.7 +2.9
TYV                                pmax   pmax
      comp=Z,287nm,0.7s
TYV                                pmax   pmax
      comp=Z,900nm,2.3s
TYV                                smax   smax
      comp=N,60nm,1.1s
TYV                                smax   smax
      comp=E,55nm,1.1s
TYV                                smax   smax
      comp=N,300nm,7.2s
TYV   Tymovskoe           8.23 289 eP     Pn     10 14 08.0 +2.7
TYV   Tymovskoe           8.23 289 eP     Pn     10 14 10.2 +4.9
TYV                                AMB    AMB    10 14 11.6
      comp=N,290nm,0.7s
TYV                                AMB    AMB    10 14 12.1
      comp=N,900nm,2.0s
TYV                                eS     Sn     10 15 41.0 +4.2
TYV                                AMS    AMS    10 17 29.9
      comp=N,4μm,16.0s
TYV                                AMS    AMS    10 17 29.9
      comp=N,3μm,16.0s
GLVR  Golovnino           8.28 236⇑iPN    Pn     10 14 06.5 +0.6
GLVR                               pmax   pmax
      comp=Z,2μm,0.5s
GLVR  Golovnino           8.28 236 i P    Pn     10 14 06.5 +0.6
GLVR                               AMB    AMB    10 14 10.5
      comp=Z,2μm,0.5s
GLVR                               eS     Sn     10 15 36.5 -1.4
KLY   Klyuchi             8.28  22  PN    Pn     10 14 07.6 +1.8
KLY   Klyuchi             8.28  22 eP     Pn     10 14 07.7 +1.8
NMR   Nemuro--Hokkai      8.41 233⇑iPN    Pn     10 14 06.0 -1.8
NMR   Nemuro--Hokkai      8.41 233 i P    Pn     10 14 06.8 -1.0
YSS   Yuzhno-Sakhali      8.43 262        Pn     10 14 11.4 +3.4
YSS   Yuzhno-Sakhali      8.43 262  S     Sn     10 15 42.6 +1.1
YSS   Yuzhno-Sakhali      8.43 262κ iPN   Pn     10 14 11.5 +3.6
YSS                                pmax   pmax
      comp=Z,890nm,0.6s
YSS                                pmax   pmax
      comp=N,510nm,0.4s
YSS                                pmax   pmax
      comp=E,550nm,0.4s
YSS                                pmax   pmax
      comp=Z,900nm,2.7s
YSS                                MLR    MLR
      comp=N,600nm,14.0s
YSS                                MLR    MLR
      comp=E,1μm,14.0s
YSS   Yuzhno-Sakhali      8.43 262 eP     Pn     10 14 11.5 +3.6
YSS                                AMB    AMB    10 14 12.4
      comp=E,890nm,0.5s
YSS                                eS     Sn     10 15 41.7 +0.2
YSS                                A      A      10 15 48.3
      comp=E,500nm,3.0s
YSS                                A      A      10 15 48.3
      comp=E,400nm,3.0s
UGL   Uglegorsk           8.51 277 ePN    Pn     10 14 11.1 +2.0
UGL                                pmax   pmax
      comp=Z,1μm,0.9s
UGL                                MLR    MLR
      comp=N,2μm,8.0s
UGL                                MLR    MLR
      comp=E,2μm,8.0s
UGL                                MLR    MLR
      comp=Z,2μm,9.0s
UGL   Uglegorsk           8.51 277 eP     Pn     10 14 13.4 +4.3
UGL                                AMB    AMB    10 14 14.8
      comp=Z,1μm,0.9s
UGL                                eS     Sn     10 15 46.6 +3.0
UGL                                AMS    AMS    10 17 57.0
      comp=Z,2μm,1.0s
UGL                                AMS    AMS    10 17 57.0
      comp=Z,2μm,1.0s
SRKR  Sorokina            8.71  23  PN    Pn     10 14 12.6 +0.7
SRKR  Sorokina            8.71  23 eP     Pn     10 14 12.6 +0.7
KBTR  Krutoberegovo       8.82  30  PN    Pn     10 14 11.9 -1.4
KBTR  Krutoberegovo       8.82  30 eP     Pn     10 14 11.9 -1.4
KBG   Krutoberegovo       8.82  29  PN    Pn     10 14 11.7 -1.6
KBG   Krutoberegovo       8.82  29 eP     Pn     10 14 11.8 -1.6
KBG   Krutoberegovo       8.82  29 i P    Pn     10 14 13.7 +0.4
KBG                                eS     Sn     10 15 47.8 -3.3
OKH   Okha                8.94 307d iPN   Pn     10 14 12.4 -2.5
OKH                                pmax   pmax
      comp=Z,400nm,5.0s
OKH                                MLR    MLR
      comp=N,1μm,15.0s
OKH                                MLR    MLR
      comp=Z,1μm,13.0s
OKH   Okha                8.94 307 eP     Pn     10 14 17.9 +3.0
OKH                                AMB    AMB    10 14 19.0
      comp=Z,270nm,0.4s
OKH                                eS     Sn     10 15 57.3 +3.3
OKH                                AMS    AMS    10 18 25.6
      comp=Z,1μm,15.0s
OKH                                AMS    AMS    10 18 25.6
      comp=Z,2μm,15.0s
AKK   Akkeshi             9.13 234 eP     Pn     10 14 17.0 -0.5
BKI   Bering              9.32  42  PN    Pn     10 14 18.0 -2.1
BKI   Bering              9.32  42 eP     Pn     10 14 18.0 -2.1
JKA   Kamikawa-asahi      9.74 246        Pn     10 14 29.8 +3.8
JKA   Kamikawa-asahi      9.74 246 eP     Pn     10 14 29.8 +3.8
ASAJ  Asahikawa           9.74 246  Pn    Pn     10 14 29.4 +3.5
      comp=Z,124nm,0.3s,baz=72,slow=13,SNR=2046
ASAJ                                Sn    Sn     10 16 18.1 +4.3
      comp=Z,1.3nm,0.3s,baz=314,slow=21,SNR=0.8
ASAJ                                LR    LR     10 17 48.9
      comp=Z,3μm,21.6s,baz=48,slow=36
ASAJ  Asahikawa           9.74 246  PN    Pn     10 14 29.8 +3.8
NKL   Nikolayevsk        10.01 301 ePN    Pn     10 14 26.3 -3.3
NKL                                eS     Sn     10 16 20.3  0.0
NKL                                pmax   pmax
      comp=N,424nm,1.0s
NKL                                pmax   pmax
      comp=E,539nm,1.4s
NKL                                pmax   pmax
      comp=Z,1μm,1.4s
NKL                                smax   smax
      comp=E,523nm,2.6s
NKL                                smax   smax
      comp=N,225nm,3.3s
NKL                                MLR    MLR
      comp=E,25μm,23.0s
NKL                                MLR    MLR
      comp=N,3μm,14.0s
NKL                                MLR    MLR
      comp=Z,18μm,22.0s
NKL   Nikolayevsk        10.01 301 eP     Pn     10 14 33.2 +3.6
NKL                                AMB    AMB    10 14 36.1
      comp=Z,500nm,0.7s
NKL                                eS     Sn     10 16 23.8 +3.5
NKL                                AMS    AMS    10 18 39.5
      comp=Z,3μm,20.0s
NKL                                AMS    AMS    10 18 39.5
      comp=Z,25μm,20.0s
ERM   Erimo              10.72 235        Pn     10 14 38.0 -1.3
ERM   Erimo              10.72 235  P     Pn     10 14 38.9 -0.4
ERM   Erimo              10.72 235  PN    Pn     10 14 38.0 -1.3
JEM   Erimo              10.72 235  P     Pn     10 14 37.0 -2.3
MA2   Magadan            11.07 349  Pn    Pn     10 14 45.6 +1.6
      comp=Z,17nm,0.3s,baz=162,slow=12,SNR=89
MA2                                 LR    LR     10 19 26.4
      comp=Z,2μm,19.1s,baz=180,slow=40
      comp=Z,78nm,0.5s
MA2   Magadan            11.07 349        Pn     10 14 45.5 +1.4
MA2   Magadan            11.07 349  P     Pn     10 14 45.7 +1.6
MA2   Magadan            11.07 349ceePN   Pn     10 14 45.3 +1.2
MA2                                pmax   pmax
      comp=Z,133nm,1.3s
MA2   Magadan            11.07 349 eP     Pn     10 14 45.3 +1.2
OSSR  Ossora             11.49  21  PN    Pn     10 14 49.7 +0.1
OSSR  Ossora             11.49  21 eP     Pn     10 14 49.7 +0.1
GRNR  Gornyy             12.16 286⇓iPN    Pn     10 15 03.7 +4.8
GRNR                               pmax   pmax
      comp=E,50nm,0.8s
GRNR                               pmax   pmax
      comp=Z,30nm,0.8s
GRNR  Gornyy             12.16 286 eP     Pn     10 15 03.7 +4.8
SHEM  Shemya Is, Ala     12.72  65  Pn    Pn     10 15 04.6 -1.9
      comp=Z,124nm,0.3s,baz=263,slow=1.1,SNR=47
SHEM                                Sn    Sn     10 17 15.9  -10
      comp=Z,26nm,0.3s,baz=331,slow=20,SNR=7.4
SHEM                                LR    LR     10 21 02.6
      comp=Z,521nm,18.9s,baz=278,slow=42
      comp=Z,573nm,0.5s
SMY   Shemya             12.72  65        Pn     10 15 04.6 -1.9
SMY   Shemya             12.72  65  P     Pn     10 15 05.0 -1.5
SMY   Shemya             12.72  65  PN    Pn     10 15 04.8 -1.7
TEY   Ternei             13.11 260⇑ePN    Pn     10 15 15.8 +3.9
TEY                                pmax   pmax
      comp=E,10.0nm,0.8s
TEY                                pmax   pmax
      comp=Z,30nm,1.1s
TEY                                pmax   pmax
      comp=N,10.0nm,1.1s
TEY   Ternei             13.11 260 eP     Pn     10 15 15.8 +3.9
SEY   Seymchan           14.24 355  Pn    Pn     10 15 27.6 +0.5
      comp=N,4.3nm,0.3s,baz=161,slow=10,SNR=65
SEY                                 LR    LR     10 21 10.5
      comp=N,1μm,20.9s,baz=166,slow=38
      comp=N,53nm,0.9s
SEY   Seymchan           14.24 355 eP     Pn     10 15 26.0 -1.1
SEY                                pmax   pmax
      comp=Z,107nm,1.3s
SEY   Seymchan           14.24 355 eP     Pn     10 15 26.0 -1.1
JSD   Sado               16.19 235        Pn     10 15 48.0 -4.4
JSD                                IAmb   IAmb   10 15 57.1
      comp=Z,204nm,0.7s
JSD   Sado               16.19 235  P     Pn     10 15 48.8 -3.6
USRK  Ussuriysk Ar.      16.46 262  Pn    Pn     10 15 56.5 +0.6
      comp=Z,7.2nm,0.3s,baz=57,slow=11,SNR=81
USRK                                PcP   PcP    10 20 43.4 -1.4
      comp=Z,2.3nm,0.8s,baz=19,slow=1.9,SNR=4.4
MJB9  Matsu-Tunnel       17.34 231  P     Pn     10 16 05.3 -1.4
MAJO  Matsushiro         17.34 231        Pn     10 16 04.0 -2.8
MAJO  Matsushiro         17.34 231  P     Pn     10 16 05.2 -1.5
MAJO  Matsushiro         17.34 231 i P    Pn     10 16 04.4 -2.3
MAJO                               pmax   pmax
      comp=Z,138nm,0.9s
MJAR  Matsushiro Arr     17.34 231  P     Pn     10 16 04.0 -2.7
      comp=Z,85nm,1.1s,baz=29,slow=14,SNR=88
MJAR                                PcP   PcP    10 20 45.6 -0.6
      comp=Z,5.1nm,0.8s,baz=71,slow=1.7,SNR=4.0
MJAR                                LR    LR     10 23 26.1
      comp=Z,1μm,20.7s,baz=32,slow=40
MJAR  Matsushiro Arr     17.34 231  P     Pn     10 16 03.4 -3.4
MDJ   Mudanjiang         17.88 266  P     Pn     10 16 12.7 -0.6
MDJ   Mudanjiang         17.88 266  P     P      10 16 13.4  0.0
MDJ                                 S     Sn     10 19 29.6 -2.0
MDJ                                pmax   pmax
      comp=Z,970nm,0.9s
MDJ                                 LR    LR
      comp=Z,950nm,22.1s
MDJ                                 LR    LR
      comp=Z,910nm,19.9s
MDJ                                 LR    LR
      comp=Z,2μm,23.2s
MDJ   Mudanjiang         17.88 266  P     P      10 16 13.7 +0.3
HEH   HeiHe              17.92 285 eP     P      10 16 15.1 +1.3
HEH                                 pP    pP     10 16 25.5  0.0
HEH                                 sP    sP     10 16 33.1 +0.9
HEH                                 S     S      10 19 34.9 -1.7
HEH                                 SS    SnSn   10 19 59.8  +13
HEH                                pmax   pmax
      comp=Z,320nm,1.1s
HEH                                pmax   pmax
      comp=Z,460nm,6.3s
HEH                                 LR    LR
      comp=Z,430nm,19.5s
HEH                                 LR    LR
      comp=Z,2μm,20.0s
HEH                                 LR    LR
      comp=Z,3μm,19.9s
PSTR  Posyet             17.93 259 i P    P      10 16 14.1 +0.2
ZEA   Zeya               17.98 296 eP     Pn     10 16 15.0 +0.5
ZEA                                eS     Sn     10 19 24.5  -10
ZEA                                pmax   pmax
      comp=N,40nm,0.7s
ZEA                                pmax   pmax
      comp=E,50nm,0.7s
ZEA                                pmax   pmax
      comp=Z,60nm,0.9s
ZEA                                smax   smax
      comp=E,200nm,9.9s
ZEA                                smax   smax
      comp=N,200nm,5.0s
ZEA                                MLR    MLR
      comp=N,200nm,14.0s
ZEA   Zeya               17.98 296 eP     Pn     10 16 15.0 +0.5
JGF   Kuroka             18.50 231  P     P      10 16 19.8 -0.5
JGF   Kuroka             18.50 231  P     Pn     10 16 21.1 +0.1
INU   Inuyama            18.87 231        P      10 16 23.4 -1.0
INU   Inuyama            18.87 231  P     P      10 16 23.9 -0.4
BNX   BinXian            18.92 271 ⇑P     P      10 16 23.8 -1.0
BNX                                 sP    sP     10 16 39.9 -3.2
BNX                                 S     S      10 19 57.9 +1.0
BNX                                pmax   pmax
      comp=N,290nm,6.1s
BNX                                 LR    LR
      comp=N,910nm,18.8s
BNX                                 LR    LR
      comp=N,1μm,20.0s
BNX                                 LR    LR
      comp=N,1μm,23.8s
JHJ2  Mitsune            19.35 221        P      10 16 28.6 -1.0
JHJ2                               IAmb   IAmb   10 16 36.1
      comp=Z,291nm,0.9s
JHJ   Hachijo jima 2     19.36 222  P     P      10 16 27.8 -1.9
      comp=Z,13nm,0.3s,baz=82,slow=19,SNR=5.7
JHJ                                 LR    LR     10 26 20.6
      comp=Z,161nm,18.5s,baz=318,slow=44
      comp=Z,98nm,0.6s
YAK   Yakutsk            19.37 323  P     P      10 16 29.5  0.0
      comp=Z,34nm,0.3s,baz=101,slow=1.2,SNR=37
YAK                                 S     S      10 20 04.3 -1.2
      comp=Z,8.9nm,0.4s,baz=187,slow=20,SNR=1.2
YAK                                 PcP   PcP    10 20 49.5 +0.3
      comp=Z,41nm,0.7s,baz=350,slow=3.8,SNR=4.7
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YAK                                LR       LR       10 23 57.1
       comp=Z,1µm,19.8s,baz=118,slow=37
       comp=Z,148nm,0.4s
YAK    Yakutsk          19.37 323  P        P        10 16 29.5  0.0
YAK    Yakutsk          19.37 323⥣eP      P        10 16 29.6  0.0
YAK                                pmax     pmax
       comp=Z,437nm,0.8s
ATKA   Atka Island      19.82  68  P        P        10 16 34.5  0.0
BILL   Bilibino         20.11  12  P        P        10 16 36.4 -1.2
BILL                               IAmb     IAmb     10 16 37.8
       comp=Z,165nm,0.8s
BILL   Bilibino         20.11  12  P        P        10 16 35.9 -1.7
CN2    Changchun        20.93 267  P        P        10 16 44.0 -2.7
CN2                                S        S        10 20 29.0 -7.9
CN2                                pmax     pmax
       comp=Z,60nm,0.8s
CN2                                LR       LR
       comp=Z,800nm,20.0s
CN2                                LR       LR
       comp=Z,800nm,20.0s
CN2                                LR       LR
       comp=Z,800nm,20.0s
JMN    Monobe           21.77 234  P        P        10 16 56.1 +0.4
JMN    Monobe           21.77 234  P        P        10 16 55.6 -0.1
SPIA   Saint Paul Isl   22.33  55  P        P        10 17 01.2 -0.4
SPIA                               IAmb     IAmb     10 17 03.3
       comp=Z,472nm,1.6s
SPIA   Saint Paul Isl   22.33  55  P        P        10 17 01.3 -0.2
       baz=263
KSRS   Korea Array      22.65 250  P        P        10 17 04.8 -0.3
       comp=Z,109nm,0.7s,baz=48,slow=9.8,SNR=88
KSRS                               PcP      PcP      10 20 57.0 +1.1
       comp=Z,9.6nm,0.8s,baz=30,slow=0.8,SNR=9.3
KSRS                               LR       LR       10 25 19.1
       comp=Z,556µm,19.3s,baz=50,slow=35
       comp=Z,109nm,0.7s
P08K   Saint George I   22.65  56  P        P        10 17 05.0 +0.1
       baz=265
KS19   Wonju Array Si   22.66 250  P        P        10 17 04.9 -0.3
KS19                               IAmb     IAmb     10 17 08.3
       comp=Z,142nm,0.8s
KSAR   Wonju Array Be   22.68 250  P        P        10 17 05.6 +0.2
KSAR   Wonju Array Be   22.68 250  P        P        10 17 05.6 +0.2
HILR   Hailar Array B   22.92 285  P        P        10 17 06.6 -1.3
       comp=Z,26nm,0.5s,baz=76,slow=9.7,SNR=16
HILR                               PcP      PcP      10 20 56.5 +0.1
       comp=Z,16nm,0.6s,baz=84,slow=4.5,SNR=7.2
HILR                               LR       LR       10 27 02.5
       comp=Z,2µm,18.2s,baz=80,slow=39
       comp=Z,26nm,0.5s
HIA    Hailar           22.99 285  P        P        10 17 06.7 -1.9
HIA    Hailar           22.99 285  P        P        10 17 09.7 +1.1
HIA    Hailar           22.99 285  P        P        10 17 06.7 -1.9
HIA                                pmax     pmax
       comp=Z,54nm,1.2s
NIKH   Nikolski High    23.03  66  P        P        10 17 08.5 -0.4
       baz=274
GAMB   Gambell          23.42  38  P        P        10 17 12.6  0.0
GAMB                               IAmb     IAmb     10 17 35.0
       comp=Z,338nm,1.8s
GAMB   Gambell          23.42  38  P        P        10 17 12.4 -0.1
       baz=246
INCN   Inchon           23.44 252  P        P        10 17 13.3 +0.3
INCN   Inchon           23.44 252  P        P        10 17 13.4 +0.4
INCN                               IAmb     IAmb     10 17 14.8
       comp=Z,184nm,1.1s
INCN   Inchon           23.44 252  P        P        10 17 13.4 +0.4
INCN                               pmax     pmax
       comp=Z,185nm,1.2s
TJN    Taejon           23.68 249  P        P        10 17 16.0 +0.8
TJN    Taejon           23.68 249  P        P        10 17 15.9 +0.7
TJN    Taejon           23.68 249 iP        P        10 17 15.9 +0.7
TJN                                pmax     pmax
       comp=Z,7.0nm,0.7s
JTU    Tsushima         23.70 242  P        P        10 17 15.1 -0.3
JCJ    Chichijima       23.84 209  LR       LR       10 25 38.7
       comp=Z,140nm,21.3s,baz=55,slow=34
JNU    Nakatsue         23.87 238  LR       LR       10 27 21.2
       comp=Z,284nm,18.2s,baz=40,slow=39
JNU    Nakatsue         23.87 238  P        P        10 17 18.0 +1.0
JNU                                IAmb     IAmb     10 17 23.4
       comp=Z,219nm,1.0s
JNU    Nakatsue         23.87 238  P        P        10 17 18.0 +1.0
UNV    Unalaska Valle   24.37  63  P        P        10 17 22.1 +0.7
       baz=274
M11K   Mekoryuk         24.91  48  IAmb     IAmb     10 17 30.3
       comp=Z,113nm,0.9s
M11K   Mekoryuk         24.91  48  P        P        10 17 26.7 +0.5
       baz=260
TNA    Tin City         25.63  35  P        P        10 17 33.5 +0.8
       baz=248,SNR=21
DL2    Dalian           25.82 260  P        P        10 17 35.8 +1.1
DL2                                S        S        10 22 00.4 +0.1
DL2                                pmax     pmax
       comp=Z,99nm,0.8s
DL2                                pmax     pmax
       comp=Z,290nm,4.9s
DL2                                LR       LR
       comp=Z,640nm,15.9s
DL2                                LR       LR
       comp=Z,740nm,17.5s
DL2                                LR       LR
       comp=Z,460nm,11.2s
TIXI   Tiksi            25.89 341  P        P        10 17 33.0 -2.0
TIXI                               IAmb     IAmb     10 17 52.1
       comp=Z,160nm,0.8s
TIXI   Tiksi            25.89 341diP        P        10 17 33.6 -1.4
TIXI                               pmax     pmax
       comp=Z,86nm,0.9s
K13K   Kusilvak Mount   25.94  44  P        P        10 17 36.5 +0.9
       baz=259,SNR=11
FALS   False Pass       26.11  61  P        P        10 17 37.8 +0.7
       baz=274
F14K   Arctic Creek     26.21  36  P        P        10 17 39.1 +1.1
       baz=250,SNR=13
ANM    Nome             26.30  38           P        10 17 39.4 +0.7
ANM                                IAmb     IAmb     10 17 43.9
       comp=Z,300nm,1.8s
ANM    Nome             26.30  38  P        P        10 17 39.4 +0.7
ANM                                pmax     pmax
       comp=Z,300nm,1.8s
ANM    Nome             26.30  38  P        P        10 17 39.7 +1.0
       baz=252,SNR=12
M13K   Dall Lake        26.31  48  P        P        10 17 39.8 +1.0
       baz=263,SNR=5.1
J14K   Nanvaranak Lak   26.61  43  P        P        10 17 42.2 +0.7
       baz=258,SNR=14
L14K   Kuka Creek       26.76  46  P        P        10 17 44.2 +1.3
       baz=262
S12K   Black Hills      26.83  59  P        P        10 17 45.5 +1.8
       baz=274
F15K   North Star Dit   26.95  36  P        P        10 17 45.7 +1.0
       baz=251,SNR=7.7
G15K   Niukluk          26.97  38  P        P        10 17 45.3 +0.5
       baz=253,SNR=14
M14K   Bethel           27.03  48  P        P        10 17 46.5 +1.2
M14K   Bethel           27.03  48  P        P        10 17 46.5 +1.2
       baz=264,SNR=13
N14K   Kuskokwak Cree   27.08  49  IAmb     IAmb     10 17 47.9
       comp=Z,84nm,1.0s
N14K   Kuskokwak Cree   27.08  49  P        P        10 17 47.1 +1.2
       baz=266
XLT    XiLinHaoTe       27.08 274 eP        P        10 17 45.6 -0.6
XLT                                pP       pP       10 17 58.6 -0.7
XLT                                PcP      PcP      10 21 06.5 +0.7
XLT                                S        S        10 22 14.4 -6.0
XLT                                pmax     pmax
       comp=Z,110nm,0.7s
XLT                                LR       LR
       comp=Z,95nm,18.6s
XLT                                LR       LR
       comp=Z,940nm,18.0s
XLT                                LR       LR
       comp=Z,1µm,20.2s
O14K   Tigyukauivet M   27.25  51  P        P        10 17 48.6 +1.3
       baz=267
L15K   Ungalak Mounta   27.38  46  P        P        10 17 49.6 +1.1
       baz=262
K15K   Wolf Creek Mou   27.45  44  P        P        10 17 50.1 +1.0
       baz=261,SNR=14
H16K   Elim             27.62  39  P        P        10 17 51.2 +0.6
       baz=256,SNR=13
M15K   Kasigluk River   27.65  48  P        P        10 17 51.7 +0.9
       baz=265,SNR=21
C16K   Lisburne Hills   27.66  31  IAmb     IAmb     10 17 52.0
       comp=Z,128nm,1.1s
C16K   Lisburne Hills   27.66  31  P        P        10 17 51.2 +0.3
       baz=246,SNR=22
SDPT   Sand Point       27.75  59  P        P        10 17 53.3 +1.5
       baz=275
G16K   Koyuk River      27.77  38  P        P        10 17 52.3 +0.4
       baz=254
N15K   Kwethluk River   27.90  49  IAmb     IAmb     10 17 55.3
       comp=Z,66nm,0.8s
N15K   Kwethluk River   27.90  49  P        P        10 17 54.3 +1.1
       baz=267,SNR=10
O15K   Ungalikthiuk R   27.99  51  P        P        10 17 54.9 +0.9
       baz=269,SNR=8.2
J16K   Anvik River      28.03  42  P        P        10 17 55.2 +0.9
       baz=260,SNR=12
I17K   Unalakleet       28.11  41  P        P        10 17 56.0 +1.0
       baz=259,SNR=6.6
S14K   Fog Glacier      28.20  57  P        P        10 17 57.6 +1.6
       baz=274
D17K   Noatak River     28.22  33  P        P        10 17 56.5 +0.6
       baz=249,SNR=45
CHNA   Chernabura Isl   28.31  60  P        P        10 17 58.1 +1.2
       baz=277
L16K   Owhat River      28.33  46  P        P        10 17 57.5 +0.6
       baz=264,SNR=9.2
RDOG   Red Dog Mine     28.41  32  IAmb     IAmb     10 17 59.0
       comp=Z,214nm,1.4s
RDOG   Red Dog Mine     28.41  32  P        P        10 17 58.2 +0.5
       baz=249,SNR=35
E17K   Hotham Inlet     28.47  34  P        P        10 17 59.1 +1.0
       baz=252,SNR=81
C17K   DeLong Mountai   28.47  31  P        P        10 17 58.9 +0.7
       baz=248,SNR=48
G17K   Kiwalik Mounta   28.48  38  P        P        10 17 59.2 +1.0
       baz=256,SNR=25
F17K   Baldwin Pennin   28.50  36  P        P        10 17 59.4 +1.0
       baz=254,SNR=28
M16K   Timber Creek     28.52  47  P        P        10 17 59.6 +1.0
       baz=266,SNR=15
N16K   Nishlik Lake     28.57  48  P        P        10 18 00.4 +1.2
       baz=267
H17K   Granite Mounta   28.65  39  P        P        10 18 00.9 +1.1
       baz=258,SNR=12
J17K   VABM Dome        28.73  42  P        P        10 18 01.7 +1.2
       baz=262,SNR=19
BJI    Beijing          28.80 267  P        P        10 18 01.0 -0.4
BJI                                pmax     pmax
       comp=Z,11nm,1.1s
BJI                                LR       LR
       comp=Z,280nm,18.5s
BJI                                LR       LR
       comp=Z,130nm,19.3s
BJT    Baijiatuau       28.82 267  P        P        10 18 00.7 -0.8
BJT    Baijiatuau       28.82 267  P        P        10 18 00.7 -0.8
BJT                                pmax     pmax
       comp=Z,40nm,1.3s
O16K   Kokwok River B   28.88  50  P        P        10 18 03.0 +1.1
       baz=269,SNR=5.3
L17K   Donlin           28.93  45  P        P        10 18 03.5 +1.2
       baz=265,SNR=15
P16K   Nushagak River   28.93  51  P        P        10 18 03.3 +1.0
P16K                               IAmb     IAmb     10 18 05.5
       comp=Z,124nm,1.1s
P16K   Nushagak River   28.93  51  P        P        10 18 03.5 +1.2
       baz=270,SNR=5.8
K17K   Iditarod         28.99  44  IAmb     IAmb     10 18 05.1
       comp=Z,81nm,0.9s
K17K   Iditarod         28.99  44  P        P        10 18 04.0 +1.1
       baz=264,SNR=21
E18K   Tukpahlearik C   29.03  34  P        P        10 18 04.0 +0.9
       baz=253,SNR=21
F18K   Selawik          29.16  36  P        P        10 18 05.3 +1.1
       baz=255,SNR=21
C18K   Utukok River     29.22  31  IAmb     IAmb     10 18 06.9
       comp=Z,105nm,0.8s
C18K   Utukok River     29.22  31  P        P        10 18 05.3 +0.5
       baz=250,SNR=86
B18K   Kokolik River    29.27  30  P        P        10 18 06.0 +0.8
       baz=248,SNR=58
M17K   Holitna River    29.28  47  IAmb     IAmb     10 18 07.7
       comp=Z,125nm,0.8s
M17K   Holitna River    29.28  47  P        P        10 18 06.7 +1.3
       baz=267,SNR=31
H18K   Honhosa River    29.34  39  P        P        10 18 06.8 +0.8
       baz=259,SNR=24
N17K   Nushagak Hills   29.36  48  P        P        10 18 07.2 +1.1
       baz=269,SNR=16
G18K   Tagagawik        29.38  37  P        P        10 18 07.0 +0.7
       baz=258
O17K   Koliganek Bris   29.39  50  P        P        10 18 07.5 +1.1
       baz=270,SNR=14
Q16K   King Salmon      29.63  52  P        P        10 18 09.6 +1.0
       baz=272
L18K   Granite Mounta   29.69  45  P        P        10 18 10.2 +1.2
       baz=266,SNR=16
P17K   Kvichak River    29.73  51  P        P        10 18 10.5 +1.1
       baz=272
J18K   Innoko River     29.79  42  P        P        10 18 10.7 +0.8
       baz=264,SNR=20
A19K   Wainwright       29.83  28  P        P        10 18 11.0 +0.8
       baz=248
GCSA   Galena City Sc   29.89  40  P        P        10 18 10.8 +0.1
       baz=261,SNR=6.6
C19K   Lookout Ridge    29.92  31  IAmb     IAmb     10 18 14.1
       comp=Z,65nm,0.7s
C19K   Lookout Ridge    29.92  31  P        P        10 18 11.8 +0.7
       baz=251,SNR=79
F19K   Shaleruckik Mo   29.94  36  P        P        10 18 11.6 +0.4
       baz=257,SNR=19
N18K   Kilae Creek      30.00  48  IAmb     IAmb     10 18 14.3
       comp=Z,91nm,0.8s
N18K   Kilae Creek      30.00  48  P        P        10 18 13.4 +1.5
       baz=269,SNR=26
G19K   Purcell Mounta   30.06  37  P        P        10 18 12.6 +0.4
       baz=259,SNR=23
M18K   Stony River      30.06  46  P        P        10 18 13.0 +0.7
       baz=268,SNR=18
JOW    Kunigami         30.16 233  LR       LR       10 32 01.6
       comp=Z,337nm,18.6s,baz=334,slow=40
JOW    Kunigami         30.16 233  P        P        10 18 13.5 -0.1
JOW    Kunigami         30.16 233  P        P        10 18 14.6 +1.1
H19K   Roundabout Mou   30.20  38  IAmb     IAmb     10 18 15.3
       comp=Z,132nm,1.0s
H19K   Roundabout Mou   30.20  38  P        P        10 18 14.3 +0.9
       baz=260,SNR=69
D19K   Kuna River       30.24  32  IAmb     IAmb     10 18 16.7
       comp=Z,113nm,0.9s
D19K   Kuna River       30.24  32  P        P        10 18 14.4 +0.5
       baz=254
E19K   Redstone River   30.29  34  IAmb     IAmb     10 18 16.0
       comp=Z,53nm,0.7s
E19K   Redstone River   30.29  34  P        P        10 18 14.9 +0.6
       baz=256,SNR=52
TIA    Tai'an           30.29 260  P        P        10 18 14.8 +0.1
TIA                                pP       pP       10 18 25.3 -2.6
TIA                                pmax     pmax
       comp=Z,28nm,1.0s
TIA                                LR       LR
       comp=Z,270nm,12.9s
TIA                                LR       LR
       comp=Z,520nm,15.7s
TIA                                LR       LR
       comp=Z,500nm,14.5s
J19K   Poorman          30.34  42  IAmb     IAmb     10 18 16.2
       comp=Z,55nm,0.8s
J19K   Poorman          30.34  42  P        P        10 18 15.2 +0.4
       baz=264
O18K   Koktuh Hills     30.34  50  P        P        10 18 16.0 +1.1
       baz=271,SNR=7.1
P18K   Big Mountain,    30.35  51  IAmb     IAmb     10 18 16.8
       comp=Z,69nm,0.9s
P18K   Big Mountain,    30.35  51  P        P        10 18 15.9 +1.0
       baz=272,SNR=7.6
CHIR   Chirikof Islan   30.44  58  P        P        10 18 15.6 -0.1
       baz=278
Q18K   Katmai Hardscr   30.50  52  P        P        10 18 16.3  0.0
       baz=274,SNR=5.8
L19K   White Mountain   30.54  45  P        P        10 18 17.6 +1.0
       baz=268,SNR=14
H11N2  WAKE ISLAND Hy   30.55 158  T        T        10 50 44.0
       baz=340,slow=74
H11N1  WAKE ISLAND Hy   30.56 158  T        T        10 50 10.3
       baz=340
H11N3  WAKE ISLAND Hy   30.56 157  T        T        10 50 53.0
       baz=340,slow=74
N19K   Bonanza Creek    30.69  48  IAmb     IAmb     10 18 20.2
       comp=Z,53nm,0.8s
N19K   Bonanza Creek    30.69  48  P        P        10 18 19.3 +1.3
       baz=270,SNR=13
F20K   Avaraart Lake    30.77  36  P        P        10 18 18.9 +0.4
       baz=259
O19K   Port Alsworth    30.78  49  P        P        10 18 19.6 +1.0
       baz=272
D20K   Etivluk River    30.83  32  P        P        10 18 19.7 +0.6
       baz=255,SNR=120
H20K   Anotleneega Mo   30.84  39  P        P        10 18 19.8 +0.6
       baz=262,SNR=36
E20K   Nigu River       30.87  33  P        P        10 18 20.1 +0.6
       baz=256
I20K   Naaghedeneel     30.92  40  IAmb     IAmb     10 18 21.8
       comp=Z,112nm,1.6s
I20K   Naaghedeneel     30.92  40  P        P        10 18 20.6 +0.8
       baz=264
K20K   Telida           30.97  43  P        P        10 18 21.3 +0.9
       baz=266
J20K   Nowinta River    31.00  41  IAmb     IAmb     10 18 23.1
       comp=Z,82nm,1.1s
J20K   Nowinta River    31.00  41  P        P        10 18 21.2 +0.7
       baz=265,SNR=52
B20K   Meade River      31.02  30  P        P        10 18 21.3 +0.7
       baz=252
SSE    Sheshan          31.03 248  P        P        10 18 20.5 -0.6
SSE                                S        S        10 23 23.0 +0.7
SSE                                pmax     pmax
       comp=Z,18nm,0.7s
SSE                                LR       LR
       comp=Z,200nm,16.8s
SSE                                LR       LR
       comp=Z,170nm,18.0s
HNS    HongShan         31.19 264 ⥣P        P        10 18 22.2 -0.3
HNS                                S        S        10 23 23.9 -0.8
HNS                                SS       SnSn     10 25 13.9 +3.1
HNS                                pmax     pmax
       comp=Z,100nm,1.1s
HNS                                LR       LR
       comp=Z,390nm,17.7s
HNS                                LR       LR
       comp=Z,670nm,17.1s
HNS                                LR       LR
       comp=Z,790nm,21.8s
M20K   Styx River       31.35  46  IAmb     IAmb     10 18 26.1
       comp=Z,51nm,0.8s
M20K   Styx River       31.35  46  P        P        10 18 25.1 +1.3
       baz=270,SNR=19
P19K   Oil Pt           31.35  50  P        P        10 18 24.8 +1.1
       baz=273
IMAR   Indian Mountai   31.37  38  P        P        10 18 24.2 +0.4
ILSW   Iliamna Southw   31.38  49  IAmb     IAmb     10 18 42.8
       comp=Z,113nm,1.1s
HHC    Hu-ho-hao-te     31.45 272⥥iP        P        10 18 24.8 -0.1
HHC                                S        S        10 23 26.4 -2.6
HHC                                SS       SnSn     10 25 17.2 +0.1
HHC                                pmax     pmax
       comp=Z,67nm,1.0s
HHC                                pmax     pmax
       comp=Z,140nm,6.6s
HHC                                LR       LR
       comp=Z,690nm,18.8s
HHC                                LR       LR
       comp=Z,740nm,19.4s
HHC                                LR       LR
       comp=Z,890nm,22.6s
ULN    Ulaanbaatar      31.46 287  P        P        10 18 23.6 -1.4
ULN                                S        S        10 23 29.4 +0.2
ULN    Ulaanbaatar      31.46 287  P        P        10 18 22.9 -2.2
ULN    Ulaanbaatar      31.46 287  P        P        10 18 22.8 -2.2
       comp=Z,58nm,1.2s
ULN                                pP       pP       10 18 36.8 -1.6
       comp=Z,58nm,1.2s
ULN    Ulaanbaatar      31.46 287diP        P        10 18 24.2 -0.8
ULN                                pmax     pmax
       comp=Z,13nm,0.8s
ULN    Ulaanbaatar      31.46 287 eP        P        10 18 24.2 -0.8
ULN    Ulaanbaatar      31.46 287  P        P        10 18 23.9 -1.2
ULN                                pP       pP       10 18 37.5 -0.8
ULN                                PcP      PcP      10 21 17.3 +0.3
OHAK   Old Harbor       31.54  55  P        P        10 18 25.8 +0.4
       baz=277
G21K   Allakaket        31.54  37  IAmb     IAmb     10 18 27.2
       comp=Z,68nm,1.0s
G21K   Allakaket        31.54  37  P        P        10 18 26.3 +0.9
       baz=262
C21K   Knifeblade Rid   31.58  32  P        P        10 18 26.8 +1.1
       baz=256
A21K   Barrow           31.61  27  P        P        10 18 26.2 +0.4
       baz=251,SNR=8.3
O20K   Slope Mountain   31.64  49  P        P        10 18 26.9 +0.6
       baz=273
F21K   Alatna River     31.66  36  P        P        10 18 27.0 +0.5
       baz=261,SNR=24
H11S1  WAKE ISLAND Hy   31.67 158  T        T        10 52 07.5
       baz=342,slow=76
H11S3  WAKE ISLAND Hy   31.68 158  T        T        10 51 34.7
       baz=342
H11S2  WAKE ISLAND Hy   31.69 158  T        T        10 51 36.6
       baz=342,slow=76
E21K   Killik River     31.71  33  IAmb     IAmb     10 18 28.2
       comp=Z,61nm,0.9s
E21K   Killik River     31.71  33  P        P        10 18 27.1 +0.3
       baz=258,SNR=14
H21K   Melozitna Rive   31.72  39  IAmb     IAmb     10 18 28.7
       comp=Z,59nm,0.8s
H21K   Melozitna Rive   31.72  39  P        P        10 18 27.7 +0.8
       baz=264
B21K   Ikpikpuk River   31.76  31  P        P        10 18 28.1 +0.9
       baz=256,SNR=264
CHUM   Lake Minchumin   31.78  42  P        P        10 18 28.7 +1.3
       baz=267,SNR=12
N20K   Mount Spurr      31.80  47  P        P        10 18 28.9 +1.2
       baz=272
SPCR   Spurr Chakacha   31.80  47  P        P        10 18 29.1 +1.4
       baz=272,SNR=20
PPLA   Purkeypile       31.80  44  IAmb     IAmb     10 18 42.7
       comp=Z,81nm,1.0s
PPLA   Purkeypile       31.80  44  P        P        10 18 29.1 +1.3
       baz=269,SNR=12
NJ2    Nanjing          31.82 252⥥iP        P        10 18 28.8 +0.7
NJ2                                pmax     pmax
       comp=Z,40nm,0.8s
NJ2                                pmax     pmax
       comp=Z,270nm,5.5s
NJ2                                LR       LR
       comp=Z,610nm,21.8s
NJ2                                LR       LR
       comp=Z,700nm,18.9s
NJ2                                LR       LR
       comp=Z,990nm,18.9s
KDAK   Kodiak Island    31.85  54  P        P        10 18 28.6 +0.5
       baz=277
Q20K   Shuyak Island    31.86  52  P        P        10 18 28.5 +0.3
       baz=276
SPU    Mount Spurr      31.87  47  P        P        10 18 29.1 +0.7
SPU                                IAmb     IAmb     10 18 30.6
       comp=Z,67nm,1.1s
SONM   Songino Array    31.89 287  P        P        10 18 27.7 -1.1
       comp=Z,3.7nm,0.6s,baz=73,slow=8.4,SNR=17
SONM                               PcP      PcP      10 21 18.3 +0.2
       comp=Z,18nm,0.7s,baz=111,slow=2.1,SNR=18
SONM                               LR       LR       10 32 42.2
       comp=Z,2µm,18.2s,baz=79,slow=39
       comp=Z,3.7nm,0.6s
SONM   Songino Array    31.89 287  P        P        10 18 27.2 -1.5
STLK   Strandline Lak   31.97  46  IAmb     IAmb     10 18 31.4
       comp=Z,81nm,0.8s
I21K   Tanana           32.01  40  IAmb     IAmb     10 18 32.0
       comp=Z,55nm,0.8s
I21K   Tanana           32.01  40  P        P        10 18 30.5 +1.0
       baz=266,SNR=22
A22K   Sinclair Lake    32.02  28  P        P        10 18 30.1 +0.7
       baz=253
SKT    Skwentna         32.10  46  IAmb     IAmb     10 18 33.0
       comp=Z,57nm,0.9s
SKT    Skwentna         32.10  46  P        P        10 18 31.5 +1.1
       baz=271,SNR=26
D22K   Ayikyak River    32.26  33  P        P        10 18 32.6 +0.9
       baz=259
H22K   Ishtalitna Cre   32.33  38  IAmb     IAmb     10 18 34.4
       comp=Z,50nm,0.8s
H22K   Ishtalitna Cre   32.33  38  P        P        10 18 33.4 +1.2
       baz=265,SNR=34
CAPN   Captain Cook N   32.33  48  P        P        10 18 33.2 +1.0
       baz=273
B22K   Teshekpuk Lake   32.34  30  P        P        10 18 32.7 +0.5
B22K   Teshekpuk Lake   32.34  30  P        P        10 18 32.9 +0.7
       baz=256,SNR=151
BPAW   Bear Paw Mtn.    32.38  42  IAmb     IAmb     10 18 34.7
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      comp=Z,61nm,0.8s
BPAW  Bear Paw Mtn.      32.38  42   P     P     10 18 33.7 +1.0
      baz=268,SNR=22
G22K  Bettles            32.39  36   P     P     10 18 33.1 +0.5
      baz=263
TLY   Talaya             32.41 295   P     P     10 18 31.9 -1.2
TLY   Talaya             32.41 295 ceP     P     10 18 33.4 +0.3
TLY                                  pmax  pmax
      comp=Z,53nm,1.3s
E22K  Anaktuvuk Pass     32.44  34   P     P     10 18 34.0 +0.8
E22K  Anaktuvuk Pass     32.44  34   P     P     10 18 34.1 +0.8
      baz=261,SNR=148
L22K  Petersville        32.45  45   IAmb  IAmb  10 18 34.7
      comp=Z,50nm,0.8s
SUA   Susitna One        32.49  47   IAmb  IAmb  10 18 34.9
      comp=Z,64nm,0.9s
SUA   Susitna One        32.49  47   P     P     10 18 33.9 +0.1
      baz=273,SNR=11
MLY   Manley             32.53  40   P     P     10 18 34.8 +0.7
MLY                                  IAmb  IAmb  10 18 36.1
      comp=Z,50nm,0.9s
MLY   Manley             32.53  40   P     P     10 18 35.1 +1.1
      baz=267,SNR=34
BRLK  Bradley Lake       32.53  50   IAmb  IAmb  10 18 34.7
      comp=Z,47nm,0.6s
BTO   Baotou             32.59 273  eP     P     10 18 33.7 -1.2
BTO                                  sP    sP    10 18 51.6 -2.7
BTO                                  S     S     10 23 45.3 -1.4
BTO                                  pmax  pmax
      comp=Z,26nm,1.2s
BTO                                  pmax  pmax
      comp=Z,190nm,7.4s
BTO                                  LR    LR
      comp=Z,1µm,13.2s
BTO                                  LR    LR
      comp=Z,2µm,19.3s
BTO                                  LR    LR
      comp=Z,2µm,17.9s
BRSE  Bradley Lake S     32.60  50   P     P     10 18 35.4 +0.6
      baz=275,SNR=6.6
TRF   Thorofare Moun     32.67  43   IAmb  IAmb  10 18 37.2
      comp=Z,63nm,0.9s
TRF   Thorofare Moun     32.67  43   P     P     10 18 36.0 +0.6
      baz=270,SNR=18
CUT   Chulitna           32.69  45   IAmb  IAmb  10 18 36.5
      comp=Z,81nm,0.8s
CUT   Chulitna           32.69  45   P     P     10 18 35.4  0.0
      baz=272,SNR=6.9
M22K  Willow             32.78  46   IAmb  IAmb  10 18 36.9
      comp=Z,62nm,0.8s
M22K  Willow             32.78  46   P     P     10 18 36.2 +0.1
      baz=273
SLKM  Skilak Lake        32.80  48   IAmb  IAmb  10 18 37.8
      comp=Z,58nm,0.9s
COLD  Coldfoot           32.93  36   IAmb  IAmb  10 18 39.1
      comp=Z,68nm,0.7s
COLD  Coldfoot           32.93  36   P     P     10 18 38.0 +0.6
      baz=264,SNR=75
G23K  Bananza Creek      32.95  37   IAmb  IAmb  10 18 39.3
      comp=Z,57nm,0.9s
G23K  Bananza Creek      32.95  37   P     P     10 18 38.2 +0.5
      baz=265,SNR=30
D23K  Nanushuk River     32.99  33   IAmb  IAmb  10 18 40.5
      comp=Z,76nm,0.8s
D23K  Nanushuk River     32.99  33   P     P     10 18 38.9 +0.9
      baz=261,SNR=64
RC01  Rabbit Creek A     33.00  47   IAmb  IAmb  10 18 39.8
      comp=Z,52nm,0.8s
RC01  Rabbit Creek A     33.00  47   P     P     10 18 38.5 +0.4
      baz=274,SNR=7.5
ZAK   Zakamensk          33.00 293  eP     P     10 18 36.9 -1.5
ZAK                                e             10 21 21.1
ZAK                                  pmax  pmax
      comp=Z,27nm,1.2s
O22K  Cooper Landing     33.05  48   P     P     10 18 38.4 -0.1
      baz=275,SNR=6.5
H23K  Yukon River        33.07  38   IAmb  IAmb  10 18 41.1
      comp=Z,69nm,0.9s
H23K  Yukon River        33.07  38   P     P     10 18 40.0 +1.2
      baz=267
I23K  Minto, Yukon-K     33.12  40   P     P     10 18 40.0 +0.9
      baz=268,SNR=40
C23K  Itkillik River     33.16  31   P     P     10 18 40.2 +0.7
      baz=260,SNR=170
SEW   Seward             33.22  49   IAmb  IAmb  10 18 50.2
      comp=Z,69nm,0.9s
SEW   Seward             33.22  49   P     P     10 18 40.6 +0.5
      baz=276,SNR=6.2
NEA2  Nenana             33.23  41   P     P     10 18 40.8 +0.7
      baz=269,SNR=54
E23K  Chandalar          33.25  34   P     P     10 18 41.4 +1.1
      baz=263,SNR=102
PMR   Palmer             33.26  46   P     P     10 18 41.3 +0.9
      baz=274,SNR=12
MCK   McKinley           33.28  42   P     P     10 18 41.1 +0.5
      baz=271,SNR=43
TOLK  Toolik Lake Re     33.34  33   P     P     10 18 42.0 +0.9
      baz=262,SNR=92
GHO   Glory Hole Cre     33.35  46   IAmb  IAmb  10 18 50.5
      comp=Z,59nm,1.0s
JMJ   Miyako jima 2      33.37 235   P     P     10 18 43.4 +1.7
WAT1  Susitna Watana     33.47  44   P     P     10 18 42.3  0.0
      baz=272
KNK   Knik Glacier       33.59  46   P     P     10 18 43.7 +0.4
      baz=275,SNR=40
SML   Sawmill            33.63  46   P     P     10 18 44.2 +0.6
      baz=274,SNR=76
WRH   Wood River Hil     33.65  41   IAmb  IAmb  10 18 58.5
      comp=Z,96nm,1.2s
E24K  Your Creek         33.67  34   P     P     10 18 45.2 +1.2
      baz=264,SNR=155
D24K  Happy Valley       33.68  32   P     P     10 18 44.5 +0.6
      baz=262,SNR=236
PWL   Port Wells         33.70  47   P     P     10 18 44.0 -0.3
      baz=276,SNR=15
COLA  College            33.75  40   P     P     10 18 45.5 +1.0
COLA  College            33.75  40   P     P     10 18 45.5 +1.0
COLA  College            33.75  40c iP     P     10 18 45.6 +1.0
COLA                                 pmax  pmax
      comp=Z,183nm,0.8s
COLA  College            33.75  40   P     P     10 18 45.6 +1.0
      baz=270
COLA  College            33.75  40   P     P     10 18 45.6 +1.0
H24K  Noodor Dome        33.76  38   IAmb  IAmb  10 18 47.0
      comp=Z,46nm,0.9s
H24K  Noodor Dome        33.76  38   P     P     10 18 45.9 +1.1
      baz=268,SNR=30
CCB   Clear Creek Bu     33.77  41   IAmb  IAmb  10 18 46.5
      comp=Z,73nm,1.0s
C24K  Franklin Bluff     33.80  31   P     P     10 18 45.6 +0.6
      baz=262
F24K  Squaw Lake         33.85  35   IAmb  IAmb  10 18 48.7
      comp=Z,63nm,0.8s
F24K  Squaw Lake         33.85  35   P     P     10 18 46.3 +0.8
      baz=266,SNR=94
WAT6  Susitna Watana     33.86  44   P     P     10 18 46.7 +0.9
      baz=273,SNR=14
M23K  Glacier View       33.91  46   P     P     10 18 46.3 +0.2
      baz=275,SNR=20
POKR  Poker Plat Res     33.93  40   P     P     10 18 47.5 +1.3
      baz=270,SNR=42
G24K  Hadweenzic Riv     33.96  37   P     P     10 18 47.9 +1.5
      baz=268,SNR=83
DHY   Denali Highway     34.00  43   IAmb  IAmb  10 18 48.2
      comp=Z,76nm,1.0s
DHY   Denali Highway     34.00  43   P     P     10 18 47.2 +0.3
      baz=273,SNR=32
SCM   Sheep Creek Mo     34.10  46   P     P     10 18 48.2 +0.4
      baz=275,SNR=36
HDA   Harding Lake       34.14  41   IAmb  IAmb  10 18 49.8
      comp=Z,59nm,0.7s
HDA   Harding Lake       34.14  41   P     P     10 18 47.7 -0.3
      baz=271,SNR=45
IL31                     34.16  40   IAmb  IAmb  10 18 49.6
      comp=Z,58nm,0.9s
ILAR  Eielson Array      34.16  40   P     P     10 18 48.3 +0.1
      comp=Z,30nm,0.7s,baz=257,slow=7.8,SNR=204
ILAR                                 PcP   PcP   10 21 23.1 -0.9
      comp=Z,4.6nm,0.7s,baz=274,slow=3.6,SNR=5.0
ILAR                                 LR    LR    10 32 51.1
      comp=Z,271nm,21.3s,baz=252,slow=36
      comp=Z,30nm,0.7s
ILAR  Eielson Array      34.16  40   P     P     10 18 48.1 -0.2
ILAR  Eielson Array      34.16  40   P     P     10 18 48.1 -0.2
P23K  Montague Islan     34.25  49   P     P     10 18 49.4 +0.4
      baz=278
GLI   Glacier Island     34.30  47   P     P     10 18 49.3 -0.1
      baz=276,SNR=9.1
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LYN   LuoYang            34.33 262   P     P     10 18 49.9 -0.1
LYN                                  pP    pP    10 19 03.9 +0.6
LYN                                  PcP   PcP   10 21 25.0 +0.1
LYN                                  pmax  pmax
      comp=Z,88nm,0.7s
LYN                                  LR    LR
      comp=Z,790nm,17.2s
LYN                                  LR    LR
      comp=Z,380nm,18.5s
LYN                                  LR    LR
      comp=Z,830nm,19.8s
G25K  Bearman Lake       34.51  37   P     P     10 18 52.5 +1.4
      baz=269,SNR=19
D25K  Kavik River        34.56  32   P     P     10 18 52.3 +0.6
      baz=265
H25L  Birch Creek        34.61  38   P     P     10 18 53.4 +1.4
      baz=270,SNR=22
M24K  Tolsona, Glenn     34.62  45   P     P     10 18 53.0 +0.8
M24K  Tolsona, Glenn     34.62  45   P     P     10 18 53.6 +1.3
      baz=275,SNR=12
K24K  Donnelly Dome      34.68  42   P     P     10 18 52.7  0.0
      baz=273,SNR=60
F25K  Christian Rive     34.71  35   IAmb  IAmb  10 18 55.4
      comp=Z,82nm,1.4s
F25K  Christian Rive     34.71  35   P     P     10 18 54.4 +1.4
      baz=268,SNR=35
E25K  Arctic Village     34.77  34   IAmb  IAmb  10 18 55.8
      comp=Z,81nm,0.9s
E25K  Arctic Village     34.77  34   P     P     10 18 54.8 +1.4
      baz=267,SNR=67
KLU   Klutina            34.80  46   IAmb  IAmb  10 18 56.1
      comp=Z,90nm,1.0s
KLU   Klutina            34.80  46   P     P     10 18 54.5 +0.6
      baz=276,SNR=18
J25K  Salcha River,      34.82  41   IAmb  IAmb  10 18 54.3
      comp=Z,41nm,0.8s
J25K  Salcha River,      34.82  41   P     P     10 18 53.3 -0.6
      baz=272,SNR=51
Q23K  Middleton Isla     34.86  50   P     P     10 18 55.0 +0.7
      baz=279
PAX   Paxson             34.87  44   P     P     10 18 55.1 +0.6
      baz=275,SNR=14
EYAK  Cordova Ski Ar     35.00  48   IAmb  IAmb  10 18 57.2
      comp=Z,50nm,0.8s
EYAK  Cordova Ski Ar     35.00  48   P     P     10 18 56.3 +0.9
EYAK  Cordova Ski Ar     35.00  48   P     P     10 18 56.0 +0.6
      baz=278,SNR=6.3
HARP  HAARP              35.07  45   P     P     10 18 57.0 +1.0
      baz=276,SNR=18
RIDG  Independent Ri     35.10  42   P     P     10 18 56.1 -0.3
      baz=274,SNR=22
C26K  Camden Bay         35.13  31   P     P     10 18 57.9 +1.4
      baz=265,SNR=12
F26K  Sheenjek River     35.29  35   IAmb  IAmb  10 19 00.5
      comp=Z,55nm,1.1s
F26K  Sheenjek River     35.29  35   P     P     10 18 59.5 +1.5
      baz=269,SNR=40
N25K  Chitina, Valde     35.42  46   P     P     10 18 60.0 +0.8
N25K                                 IAmb  IAmb  10 19 01.1
      comp=Z,60nm,0.7s
N25K  Chitina, Valde     35.42  46   P     P     10 19 00.1 +1.0
      baz=277,SNR=19
G26K  Porcupine Rive     35.42  37   P     P     10 19 00.6 +1.6
      baz=270,SNR=79
DOT   Dot Lake           35.45  42   IAmb  IAmb  10 19 00.8
      comp=Z,46nm,0.7s
SCRK  Sand Creek         35.46  42   IAmb  IAmb  10 19 01.1
      comp=Z,79nm,1.1s
SCRK  Sand Creek         35.46  42   P     P     10 18 59.3 -0.2
      baz=275,SNR=48
BMRM  Bremner River      35.50  47   P     P     10 19 00.5 +0.7
      baz=278,SNR=20
C27K  Jago River         35.52  32   P     P     10 19 01.1 +1.2
      baz=267
J26L  Joseph Creek       35.60  41   P     P     10 19 01.0 +0.3
      baz=274,SNR=18
YHNB  Yeheng             35.67 240   P     P     10 19 02.3 +0.6
MENT  Mentasta           35.67  43   IAmb  IAmb  10 19 06.6
      comp=Z,38nm,0.9s
WHN   Wuhan              35.68 254   P     P     10 19 01.5 -0.1
WHN                                  pP    pP    10 19 12.5 -2.5
WHN                                  sP    sP    10 19 18.1 -3.0
WHN                                  PcP   PcP   10 21 29.7 +0.8
WHN                                  S     S     10 24 32.7 -1.7
I26K  Coal Creek Min     35.73  39   P     P     10 19 02.1 +0.4
      baz=273
KAIM  Kayak Island       35.75  49   P     P     10 19 03.2 +1.3
      baz=280
GLB   Gilahina Butte     35.81  46   P     P     10 19 03.1 +0.6
GLB                                  IAmb  IAmb  10 19 05.3
      comp=Z,67nm,1.4s
L26K  Log Cabin Wild     35.83  43   IAmb  IAmb  10 19 05.5
      comp=Z,33nm,0.8s
L26K  Log Cabin Wild     35.83  43   P     P     10 19 03.5 +0.9
      baz=276,SNR=26
NACB  Ninganchiao        35.93 239   P     P     10 19 03.9 +0.1
VRDI  Verde Repeater     36.01  46   IAmb  IAmb  10 19 05.9
      comp=Z,39nm,0.7s
BERG  Berg Lake          36.02  48   IAmb  IAmb  10 19 07.0
      comp=Z,93nm,1.2s
M26K  Nabesna, AK        36.06  44   P     P     10 19 06.4 +1.7
      baz=278,SNR=76
GUMO  Guam               36.09 197   LR    LR    10 31 27.1
      comp=Z,231nm,20.1s,baz=15,slow=32
MCARA McCarthy VSAT      36.19  46   IAmb  IAmb  10 19 19.3
      comp=Z,35nm,0.8s
MCARA McCarthy VSAT      36.19  46   P     P     10 19 06.9 +1.2
      baz=279,SNR=9.8
E27K  Coleen River       36.25  34   IAmb  IAmb  10 19 08.5
      comp=Z,49nm,0.8s
E27K  Coleen River       36.25  34   P     P     10 19 07.2 +1.1
      baz=271,SNR=38
CRQE  Cirque             36.26  47   P     P     10 19 07.7 +1.3
      baz=280,SNR=33
G27K  Doyon Strip        36.27  37   P     P     10 19 07.5 +1.2
      baz=273,SNR=22
BGLC  Bering Glacier     36.28  48   P     P     10 19 08.1 +1.7
      baz=280
K27K  Chicken            36.29  41   P     P     10 19 07.5 +1.0
      baz=276
H27K  Steamboat Moun     36.35  38   P     P     10 19 08.7 +1.7
      baz=274,SNR=48
I27K  Kandik River       36.35  39   P     P     10 19 07.2 +0.2
      baz=274,SNR=15
TGL   Tana Glacier       36.39  47   IAmb  IAmb  10 19 09.7
      comp=Z,74nm,0.9s
KNGR  Kungurtug, Tuv     36.41 295 i P     P     10 19 07.8  0.0
KNGR                                 pmax  pmax
      comp=Z,19nm,1.0s
D27M  Malcolm River      36.48  33   P     P     10 19 09.5 +1.3
      baz=270
L27K  Beaver Creek,      36.52  43   P     P     10 19 10.0 +1.5
      baz=278
BCAR  Beaver Creek A     36.53  43   P     P     10 19 09.9 +1.2
M27K  Edge Creek, AK     36.59  44   IAmb  IAmb  10 19 12.0
      comp=Z,78nm,0.9s
M27K  Edge Creek, AK     36.59  44   P     P     10 19 10.9 +1.6
      baz=278,SNR=38
SSLB  Suanglung          36.59 239   P     P     10 19 10.3 +0.8
YULB  Yu-li              36.71 238   P     P     10 19 11.0 +0.5
MESA  MESA               36.92  48   P     P     10 19 13.8 +1.7
      baz=281,SNR=8.3
F28M  Old Crow           36.92  35   IAmb  IAmb  10 19 14.4
      comp=Z,65nm,0.8s
F28M  Old Crow           36.92  35   P     P     10 19 13.4 +1.6
      baz=273,SNR=79
XAN   Xi'an              36.97 264   P     P     10 19 12.2 -0.4
XAN                                  pP    pP    10 19 22.1 -4.0
XAN                                  S     S     10 24 55.8 +1.7
XAN                                  pmax  pmax
      comp=Z,33nm,0.8s
XAN                                  LR    LR
      comp=Z,650nm,20.6s
XAN                                  LR    LR
      comp=Z,510nm,20.6s
XAN                                  LR    LR
      comp=Z,660nm,19.2s
XAN   Xi'an              36.97 264   P     P     10 19 12.6 -0.1
XAN                                 ⇓pP    pP    10 19 26.1  0.0
XAN                                  sP    sP    10 19 32.5 +0.3
XAN                                  PcP   PcP   10 21 32.5 -0.3
E28M  Babbage River      37.01  34   IAmb  IAmb  10 19 15.7
      comp=Z,53nm,0.7s
E28M  Babbage River      37.01  34   P     P     10 19 13.9 +1.4
      baz=272,SNR=61
BVCY  Beaver Creek       37.05  44   P     P     10 19 14.6 +1.6
      baz=279,SNR=15
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I28M  Miner Creek        37.06  39   IAmb  IAmb  10 19 15.2
      comp=Z,79nm,0.9s
I28M  Miner Creek        37.06  39   P     P     10 19 14.2 +1.0
      baz=276,SNR=52
CTG   Chitna Glacier     37.07  47   P     P     10 19 14.9 +1.5
      baz=281,SNR=42
QZH   Quanzhou           37.08 243 ⇑iP     P     10 19 14.5 +0.9
QZH                                 eS     S     10 24 59.8 +4.0
QZH                                  pmax  pmax
      comp=Z,160nm,0.7s
TPUB  Ta-pu              37.16 239   P     P     10 19 13.9 -0.4
TPUB  Ta-pu              37.16 239   P     P     10 19 15.1 +0.8
LOGN  Logan Glacier      37.26  47   IAmb  IAmb  10 19 17.1
      comp=Z,74nm,0.8s
D28M  Stokes Point       37.27  32   P     P     10 19 15.8 +1.0
      baz=272,SNR=8.8
TWGBT Beinan             37.29 238   P     P     10 19 15.7 +0.3
YUK3  Moose Creek        37.34  45   P     P     10 19 16.8 +1.1
      baz=280,SNR=33
DAWY  Dawson             37.46  41   P     P     10 19 17.4 +0.9
      baz=278,SNR=28
E29M  Blow River         37.62  34   P     P     10 19 19.4 +1.7
      baz=274,SNR=87
H29M  Whitestone         37.62  38   IAmb  IAmb  10 19 20.4
      comp=Z,69nm,0.8s
H29M  Whitestone         37.62  38   P     P     10 19 19.4 +1.6
      baz=276,SNR=59
O28M  Mount Upton        37.66  47   P     P     10 19 19.6 +1.1
      baz=282,SNR=32
NRIK  Noril'sk           37.68 328   P     P     10 19 16.8 -1.5
      comp=Z,13nm,0.9s,baz=92,slow=11,SNR=12
NRIK                                 LR    LR    10 35 01.5
      comp=Z,433nm,20.9s,baz=77,slow=37
      comp=Z,13nm,0.9s
NRIK  Noril'sk           37.68 328   P     P     10 19 16.7 -1.5
NRIK  Noril'sk           37.68 328 i P     P     10 19 16.9 -1.3
NRIK                                 pmax  pmax
      comp=Z,18nm,0.9s
G29M  Pine Creek         37.69  36   P     P     10 19 20.2 +1.8
      baz=276,SNR=48
I29M  Ogilvie Camp,      37.75  39   IAmb  IAmb  10 19 20.9
      comp=Z,58nm,0.8s
I29M  Ogilvie Camp,      37.75  39   P     P     10 19 19.8 +0.9
      baz=278,SNR=42
YUK8  Steele Glacier     37.76  46   P     P     10 19 20.2 +0.9
      baz=282,SNR=10
PINM  Pinnacle           37.77  48   P     P     10 19 20.4 +1.2
      baz=283,SNR=12
J29N  Klondike Camp      37.91  40   P     P     10 19 21.0 +0.6
      baz=279,SNR=6.9
M29M  Somme Creek        38.14  44   IAmb  IAmb  10 19 24.9
      comp=Z,47nm,0.8s
M29M  Somme Creek        38.14  44   P     P     10 19 24.1 +1.7
      baz=281,SNR=43
L29M  L29M               38.17  43   P     P     10 19 24.4 +1.9
      baz=280,SNR=62
EPYK  Eagle Plains       38.27  37   IAmb  IAmb  10 19 25.6
      comp=Z,67nm,0.9s
EPYK  Eagle Plains       38.27  37   P     P     10 19 24.5 +1.2
      baz=278,SNR=32
YUK4  Talbot Arm         38.28  45   P     P     10 19 24.9 +1.3
      baz=282,SNR=16
K29M  Barlow Dome        38.31  41   IAmb  IAmb  10 19 26.9
      comp=Z,39nm,0.8s
K29M  Barlow Dome        38.31  41   P     P     10 19 24.9 +1.2
      baz=280,SNR=30
G30M  tAoh Zraii Nji     38.39  36   IAmb  IAmb  10 19 26.3
      comp=Z,37nm,0.8s
G30M  tAoh Zraii Nji     38.39  36   P     P     10 19 25.3 +1.0
      baz=277,SNR=23
F30M  Barrier River      38.48  35   P     P     10 19 26.8 +1.8
      baz=277,SNR=55
YUK6  Outpost Mounta     38.50  46   P     P     10 19 26.7 +1.2
      baz=283,SNR=8.7
O29M  Mount Kennedy      38.54  47   P     P     10 19 26.8 +1.0
      baz=284,SNR=8.8
I30M  Mount Dempster     38.57  39   P     P     10 19 27.0 +1.0
      baz=279,SNR=98
J30M  Hart River         38.70  40   P     P     10 19 28.1 +1.1
      baz=280,SNR=19
M30M  Minto, Yukon       38.88  43   P     P     10 19 30.0 +1.6
      baz=282,SNR=18
HYT   Haines Junctio     38.93  46   IAmb  IAmb  10 19 31.9
      comp=Z,78nm,0.9s
HYT   Haines Junctio     38.93  46   P     P     10 19 30.8 +1.8
      baz=284,SNR=30
N30M  Aishikik Lake      38.98  45   P     P     10 19 30.6 +1.3
      baz=283,SNR=8.8
ENH   Enshi              38.99 259   P     P     10 19 28.6 -1.1
ENH                                  IAmb  IAmb  10 19 30.3
      comp=Z,61nm,0.8s
ENH   Enshi              38.99 259   P     P     10 19 28.8 -0.9
ENH   Enshi              38.99 259   P     P     10 19 29.1 -0.6
ENH                                  pP    pP    10 19 44.0 +0.8
ENH                                  PcP   PcP   10 21 39.6 +0.5
MAYO  Mayo, Yukon        39.07  42   P     P     10 19 31.9 +1.9
      baz=282,SNR=41
LZH   Lanzhou            39.11 271   P     P     10 19 31.2 +0.4
LZH                                  pP    pP    10 19 43.4 -0.9
LZH                                  PcP   PcP   10 21 40.6 +1.0
LZH                                  pmax  pmax
      comp=Z,84nm,1.1s
LZH                                  pmax  pmax
      comp=Z,240nm,5.2s
LZH                                  LR    LR
      comp=Z,530nm,16.8s
LZH                                  LR    LR
      comp=Z,530nm,17.0s
LZH                                  LR    LR
      comp=Z,740nm,17.3s
P29M  Windy Craggy       39.11  48   IAmb  IAmb  10 19 33.8
      comp=Z,71nm,0.8s
P29M  Windy Craggy       39.11  48   P     P     10 19 32.1 +1.7
      baz=285
INK   Inuvik             39.24  34   IAmb  IAmb  10 19 33.5
      comp=Z,68nm,0.7s
INK   Inuvik             39.24  34   P     P     10 19 32.7 +1.4
INK                                  pmax  pmax
      comp=Z,114nm,0.8s
INK   Inuvik             39.24  34   P     P     10 19 32.6 +1.4
      baz=278,SNR=85
LZDM  Lanzhou Array      39.28 271   P     P     10 19 31.6 -0.8
      comp=Z,15nm,0.6s,baz=54,slow=2.6,SNR=26
LZDM                                 PcP   PcP   10 21 41.2 +0.9
      comp=Z,12nm,0.7s,baz=146,slow=0.5,SNR=5.3
LZDM                                 LR    LR    10 37 17.0
      comp=Z,344nm,18.5s,baz=50,slow=39
      comp=Z,15nm,0.6s
F31M  Tsiigehtchic       39.28  35   IAmb  IAmb  10 19 33.7
      comp=Z,73nm,1.1s
F31M  Tsiigehtchic       39.28  35   P     P     10 19 32.8 +1.1
      baz=279,SNR=30
H31M  Peel River         39.31  38   IAmb  IAmb  10 19 34.2
      comp=Z,47nm,0.9s
H31M  Peel River         39.31  38   P     P     10 19 33.1 +1.1
      baz=280,SNR=28
P30M  Million Dollar     39.37  47   P     P     10 19 34.7 +2.2
      baz=285,SNR=13
N31M  Braeburn, Yuko     39.59  45   IAmb  IAmb  10 19 37.6
      comp=Z,88nm,0.8s
N31M  Braeburn, Yuko     39.59  45   P     P     10 19 36.6 +2.3
      baz=284,SNR=23
O30N  Mendenhall         39.62  46   P     P     10 19 36.7 +2.1
      baz=285,SNR=44
PLBC  Pleasant Camp      39.83  48   P     P     10 19 38.3 +2.0
      baz=286,SNR=20
GTA   Gaotai             39.92 278   P     P     10 19 37.5  0.0
GTA                                  PcP   PcP   10 21 42.6 +0.5
GTA                                  PcS   PcS   10 25 33.4 +1.0
GTA                                  pmax  pmax
      comp=Z,51nm,1.1s
GTA                                  LR    LR
      comp=Z,470nm,15.6s
GTA                                  LR    LR
      comp=Z,770nm,15.6s
GTA                                  LR    LR
      comp=Z,1µm,16.7s
M31M  Drury Creek, Y     40.05  43   IAmb  IAmb  10 19 41.1
      comp=Z,62nm,0.8s
M31M  Drury Creek, Y     40.05  43   P     P     10 19 40.2 +2.0
      baz=284,SNR=47
WHY   Whitehorse         40.22  46   P     P     10 19 41.6 +1.9
WHY   Whitehorse         40.22  46   P     P     10 19 41.8 +2.1
      baz=286,SNR=34
S31K  Pelican            40.34  50   P     P     10 19 42.4 +2.0
      baz=288
SKAG  Skagway            40.34  48   IAmb  IAmb  10 19 43.9
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	comp=Z,143nm,1.7s						
SKAG	Skagway	40.34	48	P	P	10 19 42.5	+2.0
SKAG	Skagway	40.34	48	P	P	10 19 43.0	+2.5
	baz=287,SNR=11						
R31K	City Hall, Gus	40.45	49	P	P	10 19 43.3	+1.9
	baz=288						
N32M	Quiet Lake	40.93	45	IAmb	IAmb	10 19 47.9	
	comp=Z,61nm,0.8s						
N32M	Quiet Lake	40.93	45	P	P	10 19 46.9	+1.4
	baz=287						
P32M	Atlin	41.09	47	P	P	10 19 48.7	+1.9
	baz=288,SNR=9.6						
SIT	Sitka	41.09	51	P	P	10 19 49.8	+3.1
SIT	Sitka	41.09	51	P	P	10 19 48.9	+2.3
	baz=290						
JIS	Juneau Island	41.17	49	P	P	10 19 49.4	+2.1
P33M	Teslin, Yukon	41.33	46	IAmb	IAmb	10 19 52.4	
	comp=Z,141nm,1.1s						
P33M	Teslin, Yukon	41.33	46	P	P	10 19 50.8	+2.0
	baz=288,SNR=54						
S32K	Killisnoo	41.34	50	P	P	10 19 50.7	+2.0
	baz=290						
A36M	Sachs Harbour	41.45	28	P	P	10 19 50.9	+1.4
	baz=281,SNR=266						
GULI	GuiLin	41.86	252	P	P	10 19 54.5	+1.1
GULI				pmax	pmax		
	comp=Z,160nm,0.8s						
Q32M	Nakina River	41.99	48	P	P	10 19 56.8	+2.5
	baz=290						
CD2	Chengdu	42.32	264	P	P	10 19 56.7	-0.5
CD2				pP	pP	10 20 05.9	-5.0
CD2				S	S	10 26 13.8	-0.5
CD2				pmax	pmax		
	comp=Z,70nm,0.5s						
CD2				pmax	pmax		
	comp=Z,180nm,4.3s						
CD2				LR	LR		
	comp=Z,770nm,15.9s						
CD2				LR	LR		
	comp=Z,780nm,20.8s						
CD2				LR	LR		
	comp=Z,780nm,15.9s						
T33K	Petersburg	42.39	51	P	P	10 19 59.8	+2.5
	baz=291						
C36M	Paulatuk	42.41	31	P	P	10 19 58.3	+1.0
C36M	Paulatuk	42.41	31	P	P	10 19 58.4	+1.0
	baz=285,SNR=185						
ZAA0	Zalesovo Array	42.46	305	P	P	10 19 56.7	-1.3
ZALV	Zalesovo Beam	42.46	305	P	P	10 19 56.1	-1.8
	comp=Z,8.8nm,0.4s,baz=58,slow=7.1,SNR=25						
ZALV				PcP	PcP	10 21 50.4	+0.5
	comp=Z,20nm,0.8s,baz=85,slow=1.8,SNR=18						
ZALV				PKiKP	PKiKP	10 28 52.9	-1.4
	comp=Z,1.8nm,0.6s,baz=17,slow=1.5,SNR=5.6						
ZALV				LR	LR	10 38 48.9	
	comp=Z,614nm,18.7s,baz=72,slow=38						
	comp=Z,8.8nm,0.4s						
ZALV	Zalesovo Beam	42.46	305	P	P	10 19 56.5	-1.4
R33M	Jennings River	42.48	47	P	P	10 20 00.7	+2.4
	baz=290,SNR=72						
U33K	Whale Pass	42.56	52	P	P	10 20 01.2	+2.5
	baz=292						
DGZ	Jazzator, Alta	42.74	298	*i* P	P	10 19 59.8	-0.7
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CRAG	Craig	42.80	53	P	P	10 20 03.2	+2.5
	baz=293						
WRAK	Wrangell Islan	42.85	51	IAmb	IAmb	10 20 04.6	
	comp=Z,64nm,0.8s						
WRAK	Wrangell Islan	42.85	51	P	P	10 20 03.3	+2.3
	baz=292,SNR=5.7						
S34M	Telegraph Cree	42.92	49	P	P	10 20 03.9	+2.3
	baz=291,SNR=14						
WTLY	Watson Lake, Y	43.26	45	P	P	10 20 06.2	+1.8
	baz=291,SNR=30						
DLBC	Dease Lake	43.27	48	LR	LR	10 40 39.2	
	comp=Z,138nm,18.9s,baz=288,slow=40						
DLBC	Dease Lake	43.27	48	P	P	10 20 07.1	+2.6
	baz=292,SNR=43						
GYA	Guiyang	43.40	257	⇑P	P	10 20 06.1	+0.1
GYA				pP	pP	10 20 17.9	-1.8
GYA				pmax	pmax		
	comp=Z,200nm,0.7s						
V35K	Ketchikan	43.65	53	P	P	10 20 09.4	+1.9
	baz=294						
T35M	Bob Quinn	43.71	50	IAmb	IAmb	10 20 12.2	
	comp=Z,122nm,0.9s						
T35M	Bob Quinn	43.71	50	P	P	10 20 11.2	+3.1
	baz=293,SNR=26						
U35K	Hyder	44.24	51	IAmb	IAmb	10 20 15.8	
	comp=Z,92nm,1.1s						
U35K	Hyder	44.24	51	P	P	10 20 14.6	+2.3
	baz=294						
WRGLY	Wrigley	44.53	40	P	P	10 20 16.2	+1.7
	baz=291,SNR=14						
LIRD	Liard River Hi	44.79	45	P	P	10 20 18.7	+2.1
	baz=293,SNR=19						
GOMU	GeErMu	44.99	277	P	P	10 20 17.0	-2.0
GOMU				PcP	PcP	10 21 59.9	+0.6
GOMU				S	S	10 26 52.9	-1.0
GOMU				pmax	pmax		
	comp=Z,64nm,1.3s						
GOMU				LR	LR		
	comp=Z,270nm,14.1s						
GOMU				LR	LR		
	comp=Z,570nm,14.7s						
ZSN	Zaisan	45.28	296	*e*P	P	10 20 20.4	-0.4
ZSN	Zaisan	45.28	296	*e*P	P	10 20 20.3	-0.4
WMQ	Urumqi	45.38	290	*e*P	P	10 20 16.3	-5.3
WMQ				PcP	PcP	10 22 01.1	+1.0
WMQ				pmax	pmax		
	comp=Z,28nm,1.1s						
WMQ				LR	LR		
	comp=N,820nm,16.7s						
WMQ				LR	LR		
	comp=E,460nm,19.3s						
WMQ				LR	LR		
	comp=Z,700nm,22.1s						
TOAD	Toad River Com	45.43	46	P	P	10 20 23.7	+2.0
	baz=294,SNR=81						
KOTAN	Kotaneelee Air	45.46	44	P	P	10 20 23.6	+1.7
	baz=294,SNR=16						
PZH	PanZhiHua	46.56	261	P	P	10 20 31.6	+0.4
PZH				pmax	pmax		
	comp=Z,60nm,1.1s						
PZH				pmax	pmax		
	comp=Z,130nm,5.2s						
QIZ	Qiongzhong	46.81	247	P	P	10 20 35.0	+1.9
QIZ				IAmb	IAmb	10 20 35.7	
	comp=Z,131nm,1.6s						
QIZ	Qiongzhong	46.81	247	P	P	10 20 34.4	+1.4
QIZ				sP	pP	10 20 48.9	+2.0
QIZ				S	S	10 27 21.9	+2.3
QIZ				pmax	pmax		
	comp=Z,51nm,1.3s						
QIZ				LR	LR		
	comp=Z,170nm,16.9s						
QIZ				LR	LR		
	comp=Z,320nm,17.3s						
QIZ				LR	LR		
	comp=Z,310nm,17.1s						
KMI	Kunming	46.86	259	⇑P	P	10 20 33.8	+0.1
KMI				PcP	PcP	10 22 07.0	+1.2
KMI				pmax	pmax		
	comp=Z,140nm,0.7s						
KMI				pmax	pmax		
	comp=Z,280nm,3.0s						
KMI				LR	LR		
	comp=Z,230nm,16.1s						
KMI				LR	LR		
	comp=Z,260nm,20.2s						
KMI				LR	LR		
	comp=Z,220nm,18.0s						
KMI	Kunming	46.86	259	P	P	10 20 33.8	+0.1
KMI				PcP	PcP	10 22 06.1	+0.3
BBB	Bella Bella	46.89	55	LR	LR	10 39 07.9	
	comp=Z,140nm,21.8s,baz=288,slow=35						
MK31	Makanchi Array	47.14	297	*i* P	P	10 20 33.6	-1.7
MKAR	Makanchi Array	47.14	297	P	P	10 20 33.9	-1.4
	comp=Z,9.6nm,0.5s,baz=68,slow=8.1,SNR=75						
MKAR				PcP	PcP	10 22 06.2	-0.1
	comp=Z,4.3nm,0.6s,baz=70,slow=4.1,SNR=4.6						
MKAR				LR	LR	10 41 48.6	
	comp=Z,1µm,18.9s,baz=34,slow=38						
	comp=Z,9.6nm,0.5s						
MKAR	Makanchi Array	47.14	297	P	P	10 20 34.1	-1.2
MKAR	Makanchi Array	47.14	297	P	P	10 20 34.1	-1.2
KURK	Kurchatov	47.30	303	P	P	10 20 35.3	-1.1
KURK	Kurchatov	47.30	303	P	P	10 20 35.1	-1.2
KURK				IAmb	IAmb	10 20 37.9	
	comp=Z,32nm,0.7s						
KURK	Kurchatov	47.30	303	*ce*P	P	10 20 35.2	-1.2
KURK				pmax	pmax		
	comp=Z,36nm,0.7s						
KURK	Kurchatov	47.30	303	*e*P	P	10 20 35.2	-1.2
MAKZ	Makanchi	47.31	297	P	P	10 20 35.5	-1.1
MAKZ	Makanchi	47.31	297	P	P	10 20 35.6	-1.1
KURBB	Kurchatov Arra	47.39	303	P	P	10 20 36.0	-1.2
	comp=Z,29nm,0.6s,baz=65,slow=8.2,SNR=81						
KURBB				PcP	PcP	10 22 07.2	+0.2
	comp=Z,17nm,0.8s,baz=63,slow=3.6,SNR=11						
KURBB				LR	LR	10 41 32.4	
	comp=Z,783nm,20.3s,baz=111,slow=37						
	comp=Z,29nm,0.6s						
KURBB	Kurchatov Arra	47.39	303	P	P	10 20 35.0	-2.2
ALE	Alert	47.57	6	P	P	10 20 38.3	+0.1
ALE				pP	pP	10 20 52.1	-0.1
ALE				PcP	PcP	10 22 08.5	+1.3
DAV	Davao City (W)	48.44	221	LR	LR	10 40 44.7	
	comp=Z,71nm,21.9s,baz=12,slow=36						
RES	Resolute Bay	48.49	19	IAmb	IAmb	10 20 47.0	
	comp=Z,75nm,1.0s						
RES	Resolute Bay	48.49	19	P	P	10 20 46.1	+0.8
RES				pmax	pmax		
	comp=Z,94nm,2.1s						
YKAW3	Yellowknife Wh	48.50	38	IAmb	IAmb	10 20 47.6	
	comp=Z,64nm,0.8s						
YKA	Yellowknife Ar	48.53	38	P	P	10 20 46.6	+0.9
	comp=Z,43nm,0.8s,baz=299,slow=8.3,SNR=243						
YKA				PcP	PcP	10 22 11.8	+1.0
	comp=Z,7.4nm,0.8s,baz=298,slow=4.2,SNR=6.7						
	comp=Z,43nm,0.8s						
YKA	Yellowknife Ar	48.53	38	P	P	10 20 46.8	+1.0
YKA	Yellowknife Ar	48.53	38	P	P	10 20 46.8	+1.0
YKAW1	Yellowknife Wh	48.59	38	IAmb	IAmb	10 20 48.3	
	comp=Z,66nm,0.9s						
TNCH	TengChong	49.68	263	⇑P	P	10 20 55.9	+0.6
TNCH				pP	pP	10 21 04.7	-4.6
TNCH				S	S	10 28 03.6	+3.3
TNCH				pmax	pmax		
	comp=Z,260nm,1.5s						
TNCH				LR	LR		
	comp=Z,360nm,8.7s						
TNCH				LR	LR		
	comp=Z,410nm,9.0s						
TNCH				LR	LR		
	comp=Z,520nm,18.2s						
PASG	PASIGHAT	49.74	268	*e*P	P	10 20 54.7	-0.8
PASG				IAmb	IAmb	10 20 57.3	
	comp=Z,27nm,0.5s						
TDK	Taldyqorghan	50.39	296	*e*P	P	10 20 59.8	-0.4
	comp=Z,26nm,0.8s						
TDK	Taldyqorghan	50.39	296	*e*P	P	10 20 59.8	-0.4
TDK				pmax	pmax		
	comp=Z,26nm,0.8s						
BVA0	Borovoye Array	50.54	309	P	P	10 20 59.3	-2.0
BVAR	Borovoye Array	50.54	309	P	P	10 21 00.1	-1.2
	comp=Z,19nm,0.5s,baz=57,slow=7.1,SNR=83						
BVAR				PcP	PcP	10 22 18.7	+0.3
	comp=Z,24nm,0.6s,baz=69,slow=4.9,SNR=11						
BVAR				LR	LR	10 43 30.0	
	comp=Z,874nm,21.9s,baz=65,slow=37						
	comp=Z,19nm,0.5s						
BORK	Borovoye	50.57	309	P	P	10 21 00.2	-1.3
BORK				IAmb	IAmb	10 22 19.7	
	comp=Z,24nm,0.7s						
BORK	Borovoye	50.57	309	*i* P	P	10 21 00.0	-1.4
BORK				pmax	pmax		
	comp=Z,18nm,0.7s						
BORK	Borovoye	50.57	309	P	P	10 21 00.1	-1.3
BORK				pP	pP	10 21 14.2	-1.2
BORK				PcP	PcP	10 22 18.8	+0.3
KBS	Kingsbay	50.66	351	P	P	10 21 00.7	-1.1
KBS	Kingsbay	50.66	351	*e*		10 23 01.0	
KBS	Kingsbay	50.66	351	P	P	10 21 00.7	-1.1
KBS				pmax	pmax		
	comp=Z,187nm,1.9s						
PDGK	Podgornoye	50.67	294	P	P	10 21 01.2	-1.3
SHLS	Shalkode	50.78	294	*e*P	P	10 21 00.9	-2.5
	comp=Z,8.3nm,0.5s						
SHLS	Shalkode	50.78	294	*e*P	P	10 21 00.8	-2.5
SHLS				pmax	pmax		
	comp=Z,8.0nm,0.5s						
SPA0	Spitsbergen Ar	50.82	350	*e*P	P	10 21 01.2	-1.8
SPA0				*e*		10 22 21.1	
SPITS	Spitsbergen Ar	50.82	350	P	P	10 21 01.4	-1.6
	comp=Z,11nm,0.5s,baz=56,slow=9.2,SNR=61						
SPITS				PcP	PcP	10 22 19.7	+0.6
	comp=Z,26nm,0.8s,baz=99,slow=5.2,SNR=4.9						
	comp=Z,11nm,0.5s						
SPB2	Spitsbergen Ar	50.82	350	P	P	10 21 01.3	-1.7
SPB2				IAmb	IAmb	10 22 20.7	
	comp=Z,34nm,0.8s						
BRZS	Berezniki	50.94	305	*e*P	P	10 21 04.1	-0.2
BRZS	Berezniki	50.94	305	*e*P	P	10 21 04.1	-0.2
UZB	Uzynbulak	51.05	294	*e*P	P	10 21 04.8	-0.7
UZB	Uzynbulak	51.05	294	*e*P	P	10 21 04.7	-0.7
MANU	Manus Island	51.07	190	P	P	10 21 05.7	+0.1
MANU				IAmb	IAmb	10 21 06.8	
	comp=Z,45nm,0.8s						
ARXS	Arharly	51.17	296	*e*P	P	10 21 05.7	-0.5
PGC	Sidney	51.26	57	P	P	10 21 07.5	+0.9
PGC				IAmb	IAmb	10 21 25.9	
	comp=Z,93nm,1.9s						
LSA	Lhasa	51.43	273	P	P	10 21 10.2	+1.4
LSA	Lhasa	51.43	273	P	P	10 21 10.2	+1.4
LSA				pmax	pmax		
	comp=Z,45nm,0.6s						
LSA	Lhasa	51.43	273	P	P	10 21 09.6	+0.8
MOKO	MOKOCHONG	51.44	267	*e*P	P	10 21 07.4	-1.1
MOKO				IAmb	IAmb	10 21 11.0	
	comp=Z,86nm,0.6s						
A04D	Lummi Island	51.63	57	IAmb	IAmb	10 21 11.2	
	comp=Z,30nm,0.8s						
NLWA	Neilton Lookou	51.72	59	IAmb	IAmb	10 21 12.7	
	comp=Z,39nm,1.0s						
TULEG	Thule	51.87	12	IAmb	IAmb	10 21 11.3	
	comp=Z,79nm,0.8s						
WUS	Wushi	52.05	292	IAmb	IAmb	10 22 26.1	
	comp=Z,44nm,1.1s						
KOHI	KOHIMA	52.11	267	*e*P	P	10 21 12.3	-1.2
KOHI				IAmb	IAmb	10 21 15.2	
	comp=Z,19nm,1.2s						
MDOK	Medeo	52.23	295	*e*P	P	10 21 13.5	-0.8
MDOK	Medeo	52.23	295	*e*P	P	10 21 13.4	-0.8
AAA	Alma-Ata	52.28	295	*e*P	P	10 21 13.1	-1.4
	comp=Z,18nm,0.6s						
AAA	Alma-Ata	52.28	295	*e*P	P	10 21 13.9	-0.6
AAA				pmax	pmax		
	comp=Z,18nm,0.6s						
AAA	Alma-Ata	52.28	295	*e*P	P	10 21 13.9	-0.6
GAMI	Galela, Maluku	52.29	215	P	P	10 21 22.7	+8.0
TNSS	Tian-Shan	52.36	295	*e*P	P	10 21 14.7	-0.9
TNSS	Tian-Shan	52.36	295	*e*P	P	10 21 14.6	-0.9
TEZP	TEZPUR	52.37	269	*e*P	P	10 21 13.6	-1.6
TEZP				IAmb	IAmb	10 21 17.4	
	comp=Z,15nm,0.5s						
BAKI	Biak	52.41	204	P	P	10 21 16.0	+0.4
SMPI	Sarmi	52.52	201	P	P	10 21 16.8	+0.4
JAY	Jayapura	52.59	198	LR	LR	10 41 29.3	
	comp=Z,93nm,21.7s,baz=18,slow=34						
TARG	Taragay, Kyrgy	52.60	293	IAmb	IAmb	10 22 29.0	
	comp=Z,41nm,1.0s						
TARG	Taragay, Kyrgy	52.60	293	P	P	10 21 17.5	+0.2
TARG				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KDJ	Kajisay	52.75	294	P	P	10 21 17.8	-0.3
KDJ				pmax	pmax		
	comp=Z,26nm,0.7s						
GENI	Genyem	52.78	199	P	P	10 21 18.7	+0.4
IMP	Imphal	52.83	266	*e*P	P	10 21 17.4	-1.4
IMP				IAmb	IAmb	10 21 20.2	
	comp=Z,27nm,0.3s						
RABL	Rabaul	52.83	184	P	P	10 21 19.1	+0.5
PNT	Penticton	52.99	55	P	P	10 21 20.2	+0.6
SVE	Sverdlovsk	53.19	317	*e*P	P	10 21 20.2	-0.7
SVE				pmax	pmax		
	comp=Z,31nm,0.7s						
BOOM	Boomskoye usch	53.28	295	IAmb	IAmb	10 22 30.7	
	comp=Z,39nm,0.8s						
MYLDM	Lahad Datu	53.36	228	P	P	10 21 23.0	+0.4
POIN	Pond Inlet	53.37	17	P	P	10 21 22.1	+0.1
GUWA	GUWAHATI	53.39	269	*e*P	P	10 21 21.8	-0.9
GUWA				IAmb	IAmb	10 21 24.3	
	comp=Z,22nm,0.6s						
SGDS	Sogindy	53.50	297	*e*P	P	10 21 22.9	-0.6
COR	Corvallis	53.64	61	P	P	10 21 26.5	+2.2
COR	Corvallis	53.64	61	P	P	10 21 26.5	+2.2
COR				pmax	pmax		
	comp=Z,300nm,1.7s						
SHL	Shillong	53.69	268	P	P	10 21 25.0	-0.2
	SNR=12						
SHL	Shillong	53.69	268	P	P	10 21 25.2	0.0
SHL	Shillong	53.69	268	*e*P	P	10 21 23.5	-1.7
SHL	Shillong	53.69	268	P	P	10 21 25.2	0.0
SHL				pmax	pmax		
	comp=Z,68nm,0.6s						
B08A	Colville Reser	53.69	56	IAmb	IAmb	10 21 26.6	
	comp=Z,57nm,1.4s						
G04A	Mulino	53.75	60	IAmb	IAmb	10 22 33.4	
	comp=Z,37nm,0.9s						
KKM	Kota Kinabalu	53.76	231	P	P	10 21 25.8	+0.1
KKM				IAmb	IAmb	10 21 27.7	
	comp=Z,71nm,1.1s						
KKM	Kota Kinabalu	53.76	231	P	P	10 21 25.9	+0.2
	comp=Z,63nm,1.0s						
CHTO	Chiang Mai	53.82	257	P	P	10 21 27.2	+1.2
CHTO	Chiang Mai	53.82	257	P	P	10 21 26.9	+0.9
CHTO	Chiang Mai	53.82	257	P	P	10 21 26.8	+0.9
CHTO	Chiang Mai	53.82	257	P	P	10 21 26.2	+0.2
CHTO	Chiang Mai	53.82	257	P	P	10 21 26.9	+0.9
CHTO				pmax	pmax		
	comp=Z,225nm,0.9s						
CHTO	Chiang Mai	53.82	257	P	P	10 21 27.0	+0.9
H04D	Lebanon	54.00	61	IAmb	IAmb	10 22 34.9	
	comp=Z,80nm,1.6s						
AAK	Ala-Archa	54.06	296	LR	LR	10 45 46.9	
	comp=Z,713nm,20.2s,baz=46,slow=37						
AAK	Ala-Archa	54.06	296	P	P	10 21 26.8	-0.9
AAK	Ala-Archa	54.06	296	P	P	10 21 26.8	-0.9
AAK				pmax	pmax		
	comp=Z,26nm,1.0s						
CM31	Chiang Mai Arr	54.08	256	P	P	10 21 29.4	+1.5
	SNR=67						
CM31	Chiang Mai Arr	54.08	256	P	P	10 21 29.1	+1.2
CMAR	Chiang Mai Arr	54.08	256	P	P	10 21 29.2	+1.3
	comp=Z,103nm,0.6s,baz=34,slow=7.3,SNR=569						
CMAR				LR	LR	10 46 05.9	
	comp=Z,241nm,19.1s,baz=45,slow=38						
CMAR				PKP2bc	P'P'bc	10 51 58.6	+0.1
	comp=Z,0.7nm,0.3s,baz=244,slow=3.0,SNR=4.4						
	comp=Z,103nm,0.6s						
EPH	Ephrata	54.13	57	IAmb	IAmb	10 21 29.3	
	comp=Z,26nm,1.0s						
HOOD	Mount Hood Mea	54.16	60	IAmb	IAmb	10 21 31.1	
	comp=Z,42nm,0.8s						
G05A	Wamic	54.40	60	IAmb	IAmb	10 21 38.1	
	comp=Z,34nm,0.8s						
BLKN	Baker Lake	54.45	30	P	P	10 21 30.6	+0.7
ARTI	Arti	54.46	317	LR	LR	10 46 44.9	
	comp=Z,343nm,18.6s,baz=54,slow=38						
ARTI	Arti	54.46	317	P	P	10 21 29.0	-1.2
ARTI	Arti	54.46	317	*c i*P	P	10 21 28.6	-1.6
ARTI				*PP	pP	10 21 43.0	-1.4
ARTI						10 22 32.1	
ARTI						10 23 30.9	
ARTI				S	S	10 29 05.5	+0.8
ARTI				SS	SS	10 32 48.4	+1.5
ARTI				pmax	pmax		
	comp=Z,44nm,0.7s						
I04A	Tendick Farm,	54.62	62	IAmb	IAmb	10 21 34.1	
	comp=Z,39nm,1.1s						
ARLS	Aral	54.62	295	P	P	10 21 31.2	-0.6
ARLS				pmax	pmax		
	comp=Z,18nm,0.7s						
DAG	Danmarks Havn	54.64	358	P	P	10 21 29.3	-1.9
DAG				pmax	pmax		
	comp=Z,23nm,1.6s						
GTK	Tadong	54.68	272	*e*P	P	10 21 31.1	-1.3
GTK				IAmb	IAmb	10 21 34.8	
	comp=Z,25nm,0.4s						
F07A	Phinny Hill Vi	54.80	58	IAmb	IAmb	10 21 35.0	
	comp=Z,43nm,0.7s						
WIFE	Three Sisters-	54.81	61	IAmb	IAmb	10 21 35.9	
	comp=Z,47nm,1.0s						
L02F	Cave Junction	54.94	64	IAmb	IAmb	10 21 37.1	
	comp=Z,54nm,1.2s						
NEW	Newport	54.94	55	LR	LR	10 46 15.2	
	comp=Z,117nm,18.6s,baz=306,slow=37						
NEW	Newport	54.94	55	P	P	10 21 34.7	+0.8
NEW				pmax	pmax		
	comp=Z,23nm,1.2s						
BBOR	Butler Butte	55.01	63	IAmb	IAmb	10 21 37.4	
	comp=Z,39nm,1.1s						
KSH	Kashi	55.04	292	P	P	10 21 38.1	+3.3
KSH				PcP	PcP	10 22 38.7	+2.9
KSH				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KSH				LR	LR		
	comp=Z,790nm,19.6s						
KSH				LR	LR		
	comp=Z,770nm,16.8s						
KSH				LR	LR		
	comp=Z,1µm,23.0s						
SAIH	SAIHA	55.08	265	*e*P	P	10 21 34.1	-1.1
SAIH				IAmb	IAmb	10 21 36.2	
	comp=Z,78nm,1.0s						
FAKI	Fak Fak	55.17	208	P	P	10 21 35.4	-0.4
FAKI	Fak Fak	55.17	208	P	P	10 21 35.3	-0.4
FAKI	Fak Fak	55.17	208	P	P	10 21 35.5	-0.3
GTOI	Gorontalo	55.31	220	P	P	10 21 36.2	-0.6
E09A	Wood Farm, Sta	55.42	57	IAmb	IAmb	10 21 39.2	
	comp=Z,39nm,0.8s						
PINE	Pine Mountain	55.48	61	IAmb	IAmb	10 21 41.0	
	comp=Z,50nm,0.9s						
KHMM	Horse Mountain	55.60	65	IAmb	IAmb	10 21 42.0	
	comp=Z,46nm,1.1s						
KMPM	Mount Pierce	55.64	66	IAmb	IAmb	10 21 42.8	
	comp=Z,70nm,1.0s						
YBH	Yreka Blue Hor	55.68	64	LR	LR	10 42 04.9	
	comp=Z,13nm,21.8s,baz=296,slow=32						
YBH	Yreka Blue Hor	55.68	64	IAmb	IAmb	10 21 43.0	
	comp=Z,52nm,1.2s						
K04D	Chiloquin, OR	55.71	63	IAmb	IAmb	10 21 42.2	
	comp=Z,54nm,0.8s						
DZA	Taraz	55.77	298	*e*P	P	10 21 39.3	-0.7
DZA	Taraz	55.77	298	*e*P	P	10 21 39.2	-0.7
BRDH	Bariadhala	55.83	266	P	P	10 21 41.1	+0.6
	comp=Z,148nm,0.3s,baz=63,slow=10,SNR=10						
BRDH				LR	LR	10 49 11.8	
	comp=Z,491nm,18.1s,baz=349,slow=40						
TOLI2	Tolitoli	55.86	223	P	P	10 21 40.4	-0.3
MRSI	Marisa	55.91	221	P	P	10 21 40.9	-0.2
APA	Apatity	55.95	337	⇓*e*P	P	10 21 39.1	-1.6
APA				*e*		10 22 43.1	
APA				*e*		10 23 43.0	
APA				*e*S	S	10 29 13.9	-10
APA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KMRM	Mail Ridge	56.01	66	IAmb	IAmb	10 21 44.9	
	comp=Z,43nm,1.0s						
ARK	Arkit	56.07	297	P	P	10 21 42.1	0.0
ARK				pmax	pmax		
	comp=Z,18nm,1.0s						
KK31	Karatay Array	56.12	299	P	P	10 21 41.5	-0.9
KK31	Karatay Array	56.12	299	*i* P	P	10 21 40.7	-1.7
KKAR	Karatay Array	56.12	299	P	P	10 21 41.5	-0.8
KKAR	Karatay Array	56.12	299	P	P	10 21 41.5	-0.8
I07A	Izee	56.13	60	IAmb	IAmb	10 21 45.0	
	comp=Z,34nm,1.1s						
K05A	Summer Lake	56.15	62	P	P	10 21 45.1	+2.4
M03C	McCloud	56.31	64	IAmb	IAmb	10 21 46.5	
	comp=Z,39nm,1.0s						
ARA0	ARCESS Array S	56.33	341	*e*P	P	10 21 41.5	-1.9
ARCES	ARCESS Array B	56.33	341	P	P	10 21 41.5	-2.0
	comp=Z,11nm,0.8s,baz=42,slow=7.7,SNR=28						
ARCES				PcP	PcP	10 22 39.9	-0.3
	comp=Z,8.7nm,0.7s,baz=31,slow=5.0,SNR=5.4						
ARCES				LR	LR	10 51 34.6	
	comp=Z,616nm,18.3s,baz=30,slow=42						
ARCES	ARCESS Array B	56.33	341	P	P	10 21 41.6	-1.8
ARCES				IAmb	IAmb	10 21 49.9	
	comp=Z,55nm,1.3s						
ARCES	ARCESS Array B	56.33	341	P	P	10 21 41.6	-1.8
ARCES				pmax	pmax		
	comp=Z,55nm,1.3s						
KCPM	Cahto Peak	56.42	66	IAmb	IAmb	10 21 47.3	

	comp=Z,86nm,1.4s						
SANI	Sanana	56.54	215	P	P	10 21 44.7	-0.9
SANI	Sanana	56.54	215	P	P	10 21 44.3	-1.3
BRLS	Borolday	56.56	299	*e*P	P	10 21 46.7	+1.2
BRLS	Borolday	56.56	299	*e*P	P	10 21 46.7	+1.2
MSAI	Masohi	56.67	212	P	P	10 21 48.5	+2.1
TRKS	Terek-Say	56.72	297	P	P	10 21 46.3	-0.5
TRKS				pmax	pmax		
	comp=Z,19nm,0.8s						
KRAI	Karang Ratu	56.83	212	P	P	10 21 49.1	+1.5
	comp=Z,5μmcomp=Z,13nm,0.5s						
KIRV	Kirov	56.90	323	LR	LR	10 47 15.9	
	comp=Z,342nm,21.9s,baz=34,slow=37						
KIRV	Kirov	56.90	323	*i* P	P	10 21 46.5	-1.1
BMO	Blue Mountains	56.90	58	P	P	10 21 49.4	+1.4
LUWI	Luwuk	56.92	219	P	P	10 21 47.0	-1.3
LUWI	Luwuk	56.92	219	P	P	10 21 46.9	-1.3
MPSI	Mapaga	56.95	223	P	P	10 21 47.9	-0.5
	comp=Z,46nm,0.9s						
IUG	Iuzhnay	56.99	298	*e*P	P	10 21 48.0	-0.6
	comp=Z,6.6nm,0.4s						
IUG	Iuzhnay	56.99	298	*e*P	P	10 21 48.0	-0.6
IUG				pmax	pmax		
	comp=Z,7.0nm,0.4s						
HATC	Hat Creek Radi	56.99	64	IAmb	IAmb	10 21 51.8	
	comp=Z,49nm,0.9s						
TATA	Tatamba Isabel	57.10	174	P	P	10 21 49.6	+0.2
CHM	Chimkent	57.13	298	*e*P	P	10 21 48.9	-0.6
CHM	Chimkent	57.13	298	*e*P	P	10 21 48.8	-0.7
DBG	Daneborg	57.14	358	*e*P	P	10 21 47.3	-1.8
J08A	Circle Bar Ran	57.16	60	IAmb	IAmb	10 21 52.6	
	comp=Z,55nm,1.1s						
KTK1	Kautokeino	57.23	341	*e*P	P	10 21 48.2	-1.7
AAI	Ambon	57.24	212	P	P	10 21 51.9	+1.4
APSI	Ampana	57.28	221	P	P	10 21 50.2	-0.6
HNLY	HANLEY	57.39	284	*e*P	P	10 21 50.4	-1.8
HNLY				IAmb	IAmb	10 21 55.9	
	comp=Z,86nm,0.1s						
BNDI	Bandanaira	57.43	210	P	P	10 21 52.0	+0.2
MSO	Missoula	57.53	54	IAmb	IAmb	10 21 55.2	
	comp=Z,58nm,1.1s						
DRK	Karamyk	57.60	294	IAmb	IAmb	10 22 01.6	
	comp=Z,34nm,0.7s						
ALCI	Alchi Leh	57.61	286	*e*P	P	10 21 51.8	-1.6
ALCI				IAML		10 21 56.8	
	comp=Z,53nm,0.7s						
MNRC	McLaughlin Min	57.61	66	IAmb	IAmb	10 21 56.0	
	comp=Z,31nm,1.0s						
SUTB	Sutter Butte	57.79	66	IAmb	IAmb	10 21 55.8	
	comp=Z,36nm,1.2s						
AB31	Akbulak array	58.08	310	P	P	10 21 54.4	-1.7
AB31				IAmb	IAmb	10 21 55.4	
	comp=Z,18nm,0.4s						
AB31	Akbulak array	58.08	310	*i* P	P	10 21 54.2	-1.9
ABKAR	Akbulak array	58.08	310	P	P	10 21 54.3	-1.7
BEKR	Beckworth	58.24	64	IAmb	IAmb	10 22 00.1	
	comp=Z,30nm,0.9s						
AKTO	Aktyubinsk	58.30	312	LR	LR	10 49 48.6	
	comp=Z,387nm,18.9s,baz=42,slow=39						
AKTO	Aktyubinsk	58.30	312	P	P	10 21 56.2	-1.4
PMG	Port Moresby	58.36	189	LR	LR	10 43 17.2	
	comp=Z,138nm,21.1s,baz=346,slow=32						
PMG	Port Moresby	58.36	189	P	P	10 21 58.5	+0.2
PMG				IAmb	IAmb	10 21 59.5	
	comp=Z,24nm,0.8s						
PMG	Port Moresby	58.36	189	P	P	10 21 58.7	+0.4
	comp=Z,44nm,0.9s						
PMG	Port Moresby	58.36	189	P	P	10 21 58.5	+0.2
PMG				pmax	pmax		
	comp=Z,24nm,0.8s						
FFC	Flin Flon	58.36	42	P	P	10 21 59.0	+1.0
FFC	Flin Flon	58.36	42	P	P	10 21 59.0	+1.0
FFC				pmax	pmax		
	comp=Z,57nm,0.8s						
FFC	Flin Flon	58.36	42	P	P	10 21 59.0	+1.0
JOSI	Joshimath	58.47	282	*e*P	P	10 21 58.2	-1.1
SUMG	Summit	58.56	5	IAmb	IAmb	10 22 00.8	
	comp=Z,148nm,0.9s						
MFID	Camas Ranch	58.63	59	IAmb	IAmb	10 22 02.6	
	comp=Z,26nm,1.0s						
KLP	Kalpa	58.67	283	*e*P	P	10 21 59.2	-1.6
KLP				IAmb	IAmb	10 22 03.4	
	comp=Z,40nm,0.9s						
PTH	Pithoragarh	58.70	280	*e*P	P	10 21 60.0	-0.9
PTH				IAmb	IAmb	10 22 03.4	
	comp=Z,33nm,0.8s						
MPK	Martis Peak	58.80	65	IAmb	IAmb	10 22 04.5	
	comp=Z,48nm,0.9s						
FCC	Fort Churchill	58.86	35	P	P	10 22 02.0	+0.7
FCC	Fort Churchill	58.86	35	P	P	10 22 02.0	+0.7
FCC				pmax	pmax		
	comp=Z,53nm,0.6s						
BOK	Bokaro	58.86	271	*e*P	P	10 22 00.8	-1.0
BOK				IAmb	IAmb	10 22 03.8	
	comp=Z,29nm,0.5s						
SBUM	Sibu	58.88	232	P	P	10 22 01.8	-0.2
SBUM	Sibu	58.88	232	P	P	10 22 03.5	+1.5
	comp=Z,14nm,1.0s						
MANEM	Manem	58.90	293	IAmb	IAmb	10 22 52.9	
	comp=Z,37nm,0.8s						
PAHR	Pah Rah Range	58.92	64	IAmb	IAmb	10 22 04.5	
	comp=Z,28nm,0.9s						
KLMR	Klimovskoe	59.00	329	*e*P	P	10 22 00.7	-1.6
KLMR				pmax	pmax		
	comp=Z,87nm,1.1s						
DLMT	Dillon	59.18	55	IAmb	IAmb	10 22 07.4	
	comp=Z,104nm,1.8s						
HLID	Hailey	59.33	58	IAmb	IAmb	10 22 07.7	
	comp=Z,42nm,1.3s						
DHRM	DHARAMSHALA	59.45	285	*e*P	P	10 22 04.7	-1.3
DHRM				IAmb	IAmb	10 22 09.0	
	comp=Z,42nm,0.7s						
BOZ	Bozeman (W)	59.55	54	P	P	10 22 07.4	+0.9
BOZ	Bozeman (W)	59.55	54	P	P	10 22 07.4	+0.9
BOZ				pmax	pmax		
	comp=Z,100nm,1.3s						
SAO	San Andreas Ge	59.57	68	P	P	10 22 07.3	+0.7
SMLA	Simla	59.63	284	*e*P	P	10 22 06.0	-1.1
SMLA				IAmb	IAmb	10 22 09.5	
	comp=Z,37nm,0.7s						
WAKR	Walker	59.66	65	IAmb	IAmb	10 22 10.0	
	comp=Z,30nm,0.8s						
CHGR	Chuyangaron	59.71	295	P	P	10 22 06.6	-1.0
CHGR				pmax	pmax		
	comp=Z,78nm,0.7s						
BKB	Balikpapan	59.74	226	P	P	10 22 08.9	+1.0
BHK	Bhakra	59.92	284	*e*P	P	10 22 05.5	-3.6
BBGB	Big Mountain B	59.94	68	P	P	10 22 11.0	+1.8
BBGB				IAmb	IAmb	10 22 13.1	
	comp=Z,56nm,1.0s						
TTSI	Tana Toraja	59.99	222	P	P	10 22 09.6	0.0
	comp=Z,22nm,0.9s						
MMSI	Mamuju	60.07	223	P	P	10 22 10.0	-0.2
RYN	Ryan	60.13	64	IAmb	IAmb	10 22 12.9	
	comp=Z,35nm,0.9s						
HULI	Fort Hunter Li	60.18	68	P	P	10 22 11.8	+1.0
HULI				IAmb	IAmb	10 22 13.1	
	comp=Z,41nm,1.0s						
KKSI	Kolaka, Sulawe	60.21	219	P	P	10 22 12.4	+1.3
FAUS	Fauske	60.21	343	*e*P	P	10 22 08.6	-1.9
SAUI	Saumlaki	60.25	207	P	P	10 22 13.4	+2.0
YHL	Hebgen Lake	60.27	55	IAmb	IAmb	10 22 14.4	
	comp=Z,74nm,1.3s						
NVAR	Mina Array Bea	60.39	64	P	P	10 22 12.9	+0.4
	comp=Z,30nm,0.8s,baz=294,slow=7.3,SNR=158						
NVAR				PcP	PcP	10 22 58.3	+1.3
	comp=Z,6.4nm,0.7s,baz=311,slow=6.0,SNR=4.4						
NVAR				PKP2bc	P'P'bc	10 51 40.9	-6.5
	comp=Z,0.6nm,0.8s,baz=154,slow=4.8,SNR=3.5						
	comp=Z,30nm,0.8s						
NVAR	Mina Array Bea	60.39	64	P	P	10 22 13.6	+1.1
MTKI	Muara Teweh, K	60.42	228	P	P	10 22 13.9	+1.3
NIL	Nilore	60.46	288	P	P	10 22 12.3	-0.5
NIL	Nilore	60.46	288	P	P	10 22 12.3	-0.5
NIL				pmax	pmax		
	comp=Z,49nm,0.8s						
NV11	Mina Array Sit	60.47	64	IAmb	IAmb	10 22 15.3	
	comp=Z,31nm,1.1s						
YMR	Madison River	60.51	55	IAmb	IAmb	10 22 16.0	
	comp=Z,51nm,1.1s						
YNM	Yellowstone No	60.61	55	IAmb	IAmb	10 22 18.4	
	comp=Z,34nm,0.9s						
YNR	Norris Junctio	60.63	55	IAmb	IAmb	10 22 18.0	
	comp=Z,43nm,1.0s						
ELK	Elko	60.68	61	LR	LR	10 45 37.5	
	comp=Z,135nm,21.7s,baz=298,slow=33						
ELK	Elko	60.68	61	P	P	10 22 15.8	+1.3
ELK				IAmb	IAmb	10 22 18.2	
	comp=Z,26nm,0.8s						
ELK	Elko	60.68	61	P	P	10 22 15.8	+1.3
ELK				pmax	pmax		
	comp=Z,26nm,0.8s						
YFT	Old Faithful	60.72	55	IAmb	IAmb	10 22 20.1	
	comp=Z,46nm,0.9s						
YNE	Yellowstone No	60.80	54	IAmb	IAmb	10 22 17.9	
	comp=Z,44nm,1.0s						
SPSI	Sidrap Palu	60.83	221	P	P	10 22 14.9	-0.4
YPP	Pitchstone Pla	60.86	55	IAmb	IAmb	10 22 33.2	
	comp=Z,93nm,1.8s						
LKWY	Lake	60.88	55	IAmb	IAmb	10 22 19.8	
	comp=Z,40nm,0.9s						
YMP	Mirror Lake Pl	60.90	54	IAmb	IAmb	10 22 19.6	
	comp=Z,38nm,1.0s						
SHAA	Shahritus	61.04	295	P	P	10 22 16.0	-0.7
SHAA				IAmb	IAmb	10 23 00.7	
	comp=Z,64nm,0.7s						
BNSI	Bone	61.07	221	P	P	10 22 17.3	+0.3
NDI	New Delhi	61.23	282	*e*P	P	10 22 17.0	-1.0
MOOW	Moose Ponds	61.23	56	IAmb	IAmb	10 22 21.2	
	comp=Z,26nm,1.0s						
DSP	Deep Springs	61.28	65	IAmb	IAmb	10 22 21.5	
	comp=Z,44nm,1.0s						
RAUS	Rausandaksla	61.28	343	*e*P	P	10 22 17.5	-0.3
NPLP	NPLP New Delhi	61.29	282	*e*P	P	10 22 17.4	-1.0
NPLP				IAmb	IAmb	10 22 32.8	
	comp=Z,38nm,0.8s						
LOHW	Long Hollow	61.40	56	IAmb	IAmb	10 22 22.5	
	comp=Z,56nm,1.1s						
HVU	Hansel Valley	61.41	58	IAmb	IAmb	10 22 21.8	
	comp=Z,24nm,0.9s						
SNOW	Snow King Moun	61.42	56	IAmb	IAmb	10 22 22.8	
	comp=Z,49nm,1.0s						
MOR8	Moi Rana	61.44	343	*e*P	P	10 22 15.9	-2.9
VES	Vestal, Richgr	61.61	67	IAmb	IAmb	10 22 21.9	
	comp=Z,40nm,1.0s						
LEIR	Leirfjorden	61.75	343	*e*P	P	10 22 19.4	-1.5
KAPI	Kappang	61.78	221	P	P	10 22 21.1	-0.6
KAPI				IAmb	IAmb	10 22 23.1	
	comp=Z,38nm,0.8s						
KAPI	Kappang	61.78	221	P	P	10 22 22.3	+0.6
	comp=Z,29nm,0.9s						
KAPI	Kappang	61.78	221	P	P	10 22 21.1	-0.6
KAPI				pmax	pmax		
	comp=Z,38nm,0.9s						
BELG	Belogornoye	61.84	318	LR	LR	10 50 39.2	
	comp=Z,213nm,21.6s,baz=62,slow=38						
BELG	Belogornoye	61.84	318	*i* P	P	10 22 20.5	-1.2
BELG				pmax	pmax		
	comp=Z,18nm,1.0s						
DGPR	DIGLIPUR	61.85	257	*e*P	P	10 22 21.9	-0.4
DGPR				IAmb	IAmb	10 22 23.8	
	comp=Z,33nm,1.1s						
BKSI	Bulukumba	61.89	220	P	P	10 22 22.2	-0.3
R11B	Troy Canyon, C	62.05	63	IAmb	IAmb	10 22 25.7	
	comp=Z,34nm,0.9s						
KUDL	Kundal	62.06	282	*e*P	P	10 22 22.6	-1.1
KUDL				IAmb	IAmb	10 22 26.0	
	comp=Z,39nm,0.5s						
HWUT	Hardware Ranch	62.20	58	IAmb	IAmb	10 22 28.2	
	comp=Z,29nm,0.7s						
DUG	Dugway, Tooele	62.43	60	P	P	10 22 27.8	+1.7
DUG				pmax	pmax		
	comp=Z,69nm,1.0s						
WCT	Wildcat Mounta	62.47	65	IAmb	IAmb	10 22 29.4	
	comp=Z,26nm,1.0s						
KBL	Kabul	62.48	292	P	P	10 22 25.2	-1.4
	SNR=11						
KBL	Kabul	62.48	292	P	P	10 22 24.6	-2.0
KBL				IAmb	IAmb	10 22 28.6	
	comp=Z,23nm,0.8s						
KBL	Kabul	62.48	292	P	P	10 22 24.6	-2.0
KBL				pmax	pmax		
	comp=Z,23nm,0.9s						
JHNI	Jhansi	62.51	278	*e*P	P	10 22 25.6	-1.3
JHNI				IAmb	IAmb	10 22 29.5	
	comp=Z,12nm,0.3s						
CLC	China Lake	62.53	66	IAmb	IAmb	10 22 28.7	
	comp=Z,43nm,1.0s						
PDAR	Pinedale Array	62.53	56	P	P	10 22 27.6	+0.7
	comp=Z,48nm,0.9s,baz=308,slow=2.0,SNR=248						
PDAR				PKP2bc	P'P'bc	10 51 33.6	-8.9
	comp=Z,1.2nm,1.0s,baz=96,slow=3.1,SNR=5.5						
	comp=Z,48nm,0.9s						
PDAR	Pinedale Array	62.53	56	P	P	10 22 28.2	+1.3
TPNV	Topopah Spring	62.59	64	IAmb	IAmb	10 22 29.4	
	comp=Z,54nm,0.9s						
TCUT	Toone Canyon	62.61	58	IAmb	IAmb	10 22 30.0	
	comp=Z,32nm,0.9s						
BBKI	Banjar Baru	62.64	226	P	P	10 22 27.8	+0.2
OSI	Osito Audit: C	62.65	68	IAmb	IAmb	10 22 29.6	
	comp=Z,40nm,0.8s						
FRB	Frobisher Bay	62.70	20	P	P	10 22 26.9	-0.4
FRB				pmax	pmax		
	comp=Z,147nm,0.9s						
CTU	Camp Tracy	62.70	59	IAmb	IAmb	10 22 30.3	
	comp=Z,26nm,0.9s						
FIA1	FINESS Array S	62.72	335	P	P	10 22 26.4	-1.0
FINES	FINESS Array B	62.72	335	P	P	10 22 26.2	-1.3
	comp=Z,18nm,0.5s,baz=35,slow=7.4,SNR=100						
FINES				LR	LR	10 52 24.2	
	comp=Z,788nm,19.9s,baz=36,slow=39						
	comp=Z,18nm,0.5s						
FINES	FINESS Array B	62.72	335	P	P	10 22 26.3	-1.2
WSHM	Spangler Hills	62.74	66	IAmb	IAmb	10 22 30.0	
	comp=Z,37nm,1.0s						
TPO	Tropico Hills	62.77	67	IAmb	IAmb	10 22 30.6	
	comp=Z,72nm,1.5s						
PUL	Pulkovo	62.82	332	*i* P	P	10 22 27.1	-1.0
PUL				pmax	pmax		
	comp=Z,104nm,0.4s						
GWY	Greenwater Val	62.84	65	IAmb	IAmb	10 22 30.9	
	comp=Z,41nm,0.9s						
QSM	Queen of Sheba	62.87	66	IAmb	IAmb	10 22 31.1	
	comp=Z,37nm,0.9s						
SFJD	Kangerlussuaq	62.90	11	P	P	10 22 28.6	0.0
SFJD	Kangerlussuaq	62.90	11	P	P	10 22 28.6	0.0
SFJD				pmax	pmax		
	comp=Z,85nm,0.5s						
SFJD	Kangerlussuaq	62.90	11	P	P	10 22 28.4	-0.2
KULM	Kulim	63.09	245	P	P	10 22 31.9	+1.3
KULM	Kulim	63.09	245	P	P	10 22 31.5	+1.0
KULM	Kulim	63.09	245	P	P	10 22 31.6	+1.0
MPU	Maple Canyon	63.22	59	IAmb	IAmb	10 22 34.0	
	comp=Z,46nm,0.8s						
SHOC	Shoshone, Teco	63.27	65	IAmb	IAmb	10 22 33.6	
	comp=Z,34nm,0.9s						
MWC	Mount Wilson	63.32	68	IAmb	IAmb	10 22 34.0	
	comp=Z,47nm,1.2s						
COEN	Coen	63.35	193	P	P	10 22 32.8	+0.6
	comp=Z,54nm,1.2s						
COEN	Coen	63.35	193	IAmb	IAmb	10 22 33.7	
	comp=Z,61nm,1.1s						
COEN	Coen	63.35	193	P	P	10 22 32.5	+0.4
GSC	Goldstone, Bar	63.35	66	IAmb	IAmb	10 22 34.1	
	comp=Z,29nm,0.9s						
BSUT	Blindstream Ca	63.37	58	IAmb	IAmb	10 22 37.1	
	comp=Z,41nm,0.9s						
NSS	Namsos	63.38	343	*e*P	P	10 22 32.6	+0.8
MOS	Moscow	63.46	326	*e*P	P	10 22 44.4	+12
MOS				*e*		10 23 06.0	
IPM	Ipoh	63.51	244	P	P	10 22 33.4	0.0
IPM				IAmb	IAmb	10 22 34.7	
	comp=Z,44nm,0.9s						
IPM	Ipoh	63.51	244	P	P	10 22 33.8	+0.4
RAGD	RAYAGADA	63.66	269	*e*P	P	10 22 33.2	-1.1
TCRU	Three Creeks R	63.71	61	IAmb	IAmb	10 22 37.4	
	comp=Z,27nm,0.8s						
CCUT	Cedar City	63.89	62	IAmb	IAmb	10 22 38.4	
	comp=Z,40nm,0.9s						
GUNA	GUNA	63.91	278	*e*P	P	10 22 34.9	-1.0
GUNA				IAmb	IAmb	10 22 37.9	
	comp=Z,30nm,0.7s						
TMUT	Trail Mountain	63.95	60	IAmb	IAmb	10 22 39.7	
	comp=Z,49nm,0.9s						
MMRI	Maumere	64.02	217	P	P	10 22 36.7	+0.1
MYKOM	Kota Tinggi	64.02	240	IAmb	IAmb	10 22 39.2	
	comp=Z,57nm,1.0s						
MYKOM	Kota Tinggi	64.02	240	P	P	10 22 38.6	+1.9
P17A	Butcher Ranch,	64.10	59	IAmb	IAmb	10 22 39.7	
	comp=Z,54nm,1.0s						
ULM	Lac du Bonnet	64.15	42	P	P	10 22 36.8	-0.4
	comp=Z,37nm,0.7s,baz=309,slow=6.2,SNR=45						
ULM				LR	LR	10 51 28.7	
	comp=Z,288nm,20.7s,baz=0.5,slow=37						
	comp=Z,37nm,0.7s						
ULM	Lac du Bonnet	64.15	42	IAmb	IAmb	10 22 38.4	
	comp=Z,42nm,0.8s						
Q16A	Castle Valley	64.23	60	IAmb	IAmb	10 22 40.6	
	comp=Z,40nm,0.9s						
MTPU	Mount Pierson	64.24	61	IAmb	IAmb	10 22 41.2	
	comp=Z,36nm,0.8s						
K22A	Casper	64.25	54	IAmb	IAmb	10 22 40.4	
	comp=Z,24nm,0.7s						
P18A	Preston Nutter	64.27	59	IAmb	IAmb	10 22 41.0	
	comp=Z,44nm,1.1s						
SOEI	Soe	64.28	214	P	P	10 22 37.9	-0.5
LCMT	Little Creek M	64.32	63	IAmb	IAmb	10 22 41.3	
	comp=Z,62nm,0.8s						
OBN	Obninsk	64.33	326	LR	LR	10 52 46.9	
	comp=Z,379nm,18.6s,baz=360,slow=38						
OBN	Obninsk	64.33	326⥣	*e*P	P	10 22 37.4	-0.7
OBN				*PP	pP	10 22 54.0	+1.4
OBN				*SP	sP	10 23 00.0	+1.4
OBN				*i*		10 23 12.5	
OBN				*e**SS	sS	10 31 26.3	-10
OBN				pmax	pmax		
	comp=Z,18nm,0.6s						
OBN				MLR	MLR		
	comp=Z,318nm,17.0s						
OBN	Obninsk	64.33	326	*e*P	P	10 22 37.4	-0.7
EDFI	Ende, Flores	64.34	217	P	P	10 22 37.5	-1.4
	comp=Z,40nm,1.2s						
KDU	Kakadu	64.38	204	P	P	10 22 39.1	+0.2
	comp=Z,42nm,1.0s						
AJM	Ajmer	64.40	282	*e*P	P	10 22 38.4	-0.8
AJM				IAML		10 22 42.3	
	comp=Z,25nm,0.8s						
E28A	Huff	64.52	48	IAmb	IAmb	10 22 41.5	
	comp=Z,47nm,0.9s						
RSSD	Black Hills	64.55	52	P	P	10 22 41.1	+0.9
RSSD	Black Hills	64.55	52	P	P	10 22 41.1	+0.9
RSSD				pmax	pmax		
	comp=Z,246nm,1.6s						
RSSD	Black Hills	64.55	52	P	P	10 22 41.0	+0.9
KNB	Kanab	64.57	62	IAmb	IAmb	10 22 43.1	
	comp=Z,70nm,0.9s						
PKCU	Pink Cliffs	64.58	62	IAmb	IAmb	10 22 43.4	
	comp=Z,29nm,0.8s						
DNR	Dunn Ranch,Anz	64.63	67	IAmb	IAmb	10 22 42.7	
	comp=Z,48nm,1.1s						
DANC	Danby, Needles	64.66	66	IAmb	IAmb	10 22 43.1	
	comp=Z,43nm,0.9s						
PFO	Pinyon Flats O	64.71	67	P	P	10 22 41.9	+0.7
PFO	Pinyon Flats O	64.71	67	P	P	10 22 41.9	+0.7
PFO				pmax	pmax		
	comp=Z,15nm,1.2s						
PFO	Pinyon Flats O	64.71	67	P	P	10 22 41.9	+0.7
BHPL	Bhopal	64.83	277	*e*P	P	10 22 41.1	-0.9
BHPL				IAmb	IAmb	10 22 45.0	
	comp=Z,29nm,0.2s						
VIS	Vishakhapatnam	64.83	268	*e*P	P	10 22 41.2	-0.8
VIS				IAmb	IAmb	10 22 43.4	
	comp=Z,66nm,1.0s						
MTN	Manton Dam	64.91	206	P	P	10 22 42.8	+0.4
	comp=Z,117nm,1.0s						
BATI	Baumata	64.92	214	P	P	10 22 44.8	+2.3
NEE2	Needles Airpor	65.03	65	IAmb	IAmb	10 22 44.9	
	comp=Z,32nm,0.9s						
O20A	White River Ci	65.05	57	IAmb	IAmb	10 22 45.5	
	comp=Z,37nm,1.0s						
IRM	Iron Mountain	65.13	66	IAmb	IAmb	10 22 45.9	
	comp=Z,41nm,0.9s						
VRH	Novokhopyorsk	65.24	320	*e*P	P	10 22 42.4	-1.8
VRH				pmax	pmax		
	comp=Z,32nm,0.7s						
U15A	North Rim	65.28	62	IAmb	IAmb	10 22 47.7	
	comp=Z,38nm,0.9s						
LPSR	Galich'ya Gora	65.33	323	*e*P	P	10 22 43.6	-1.2
LPSR				pmax	pmax		
	comp=Z,50nm,0.7s						
NRDN	NARMADA NAGAR	65.36	277	*e*P	P	10 22 44.7	-0.7
NRDN				IAmb	IAmb	10 22 53.5	
	comp=Z,26nm,0.4s						
CBX	Cerro Bola	65.47	68	IAmb	IAmb	10 22 48.0	
	comp=Z,38nm,0.9s						
DSRI	Dabo	65.47	238	P	P	10 22 48.0	+1.9
DBNI	Kabupaten Domp	65.52	220	P	P	10 22 46.5	+0.1
	comp=Z,23nm,1.0s						
EPLO	Experimental L	65.52	42	IAmb	IAmb	10 22 47.2	
	comp=Z,50nm,1.0s						
AGMN	Agassiz Nation	65.57	44	IAmb	IAmb	10 22 47.7	
	comp=Z,44nm,0.9s						
TPI	Tanjungpandan	65.68	234	P	P	10 22 48.5	+1.0
	comp=Z,47nm,1.1s						
PV21	Cone Mtn., Par	65.72	59	IAmb	IAmb	10 22 50.1	
	comp=Z,55nm,0.9s						
BLYC	Blythe	65.79	66	IAmb	IAmb	10 22 50.1	
	comp=Z,35nm,0.8s						
PV14	Lion Creek, Pa	65.83	59	IAmb	IAmb	10 22 50.6	
	comp=Z,44nm,0.8s						
PV22	Blue Mesa, Par	65.85	59	IAmb	IAmb	10 22 50.7	
	comp=Z,66nm,0.9s						
VORR	Voronezh	65.92	322	*e*P	P	10 22 44.8	-3.8
VORR				pmax	pmax		
	comp=Z,23nm,1.7s						
MOL	Molde	65.99	344	*e*P	P	10 22 47.5	-1.4
PV07	Paradox Valley	65.99	59	IAmb	IAmb	10 22 51.7	
	comp=Z,41nm,1.1s						
PPBI	Pangkal Pinang	66.00	235	P	P	10 22 51.8	+2.2
PV03	Paradox Valley	66.01	59	IAmb	IAmb	10 22 51.8	
	comp=Z,66nm,1.0s						
PLAI	Plampang	66.04	221	P	P	10 22 48.5	-1.3
PLAI	Plampang	66.04	221	P	P	10 22 48.4	-1.3
GLA	Glamis	66.08	67	IAmb	IAmb	10 22 52.1	
	comp=Z,46nm,0.9s						
WBSI	Waikabubak, Su	66.09	219	P	P	10 22 49.7	-0.4
PSI	Prapat	66.10	245	P	P	10 22 50.2	-0.1
	comp=Z,58nm,0.8s,baz=13,slow=6.7,SNR=37						
PSI				LR	LR	10 54 58.4	
	comp=Z,232nm,18.3s,baz=38,slow=39						
	comp=Z,58nm,0.8s						
PSI	Prapat	66.10	245	P	P	10 22 50.6	+0.2
PV02	Paradox Valley	66.10	59	IAmb	IAmb	10 22 52.5	
	comp=Z,81nm,1.1s						
ESJX	Sierra Juarez	66.12	68	IAmb	IAmb	10 22 52.4	
	comp=Z,34nm,1.0s						
PV15	Paradox Valley	66.15	59	IAmb	IAmb	10 22 53.6	
	comp=Z,54nm,0.9s						
KMMI	Kalianget	66.19	225	P	P	10 22 52.9	+2.2
DOMB	Dombas	66.20	343	*e*P	P	10 22 49.9	-0.4
KCSI	Kotacane, Aceh	66.22	246	P	P	10 22 50.9	-0.1
	comp=Z,16nm,1.1s						
PV01	Paradox Valley	66.25	59	IAmb	IAmb	10 22 53.5	
	comp=Z,40nm,1.2s						
VSR	Storozhevoye	66.29	322	*e*P	P	10 22 48.4	-2.5
VSR				*e*		10 23 17.8	
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TWSI	Taliwang, Sumb	66.35	222	P	P	10 22 51.4	-0.3
KLNI	Mataram	66.42	223	P	P	10 22 52.5	+0.3
VORD	Divnogorie	66.43	322	*e*P	P	10 22 49.2	-2.6
VORD				*e*		10 23 19.1	
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WUAZ	Wupatki	66.45	63	IAmb	IAmb	10 22 55.1	
	comp=Z,44nm,0.9s						
MLSI	Meulaboh, Aceh	66.47	248	P	P	10 22 52.1	-0.5
NC405	NORSAR Array S	66.52	342	IAmb	IAmb	10 22 52.6	
	comp=Z,28nm,0.8s						
NC204	NORSAR Array S	66.56	342	IAmb	IAmb	10 22 52.9	
	comp=Z,51nm,0.9s						
Y14A	Wickenburg	66.57	65	IAmb	IAmb	10 22 55.2	
	comp=Z,32nm,0.8s						
KHKI	Kahang-Kahang	66.59	223	P	P	10 22 53.5	+0.3
VTX	Valle De La Tr	66.64	69	IAmb	IAmb	10 22 55.5	
	comp=Z,32nm,0.9s						
NB2	NORSAR Subarra	66.69	342	P	P	10 22 52.0	-1.4
	comp=Z,10nm,0.6s,baz=26,slow=6.5						
NB2	NORSAR Subarra	66.69	342	P	P	10 22 52.0	-1.4
	baz=26,slow=6.5						
NOA	NORSAR Array B	66.69	342	P	P	10 22 52.3	-1.1
	comp=Z,13nm,0.6s,baz=26,slow=6.4,SNR=47						
NOA				LR	LR	10 56 10.1	
	comp=Z,376nm,19.9s,baz=25,slow=40						
	comp=Z,13nm,0.6s						
BORG	Borgarnes	66.76	358	*i* P	P	10 23 00.2	+6.5
SUSD	Miller	66.89	48	IAmb	IAmb	10 22 56.2	

	comp=Z,39nm,0.9s						
NC602	**NORSAR Array S**	**66.89**	**341**	*e*P	**P**	**10 22 52.8**	**-1.9**
NORES	**NORESS Array B**	**66.89**	**341**	P	**P**	**10 22 53.5**	**-1.2**
MVCO	**Mesa Verde**	**66.93**	**60**	IAmb	IAmb	10 22 57.8	
	comp=Z,46nm,0.8s						
HFS	**Hagfors**	**66.97**	**340**	P	**P**	**10 22 53.9**	**-1.2**
	comp=Z,20nm,0.5s,baz=58,slow=3.7,SNR=71						
HFS				LR	LR	10 55 42.2	
	comp=Z,380nm,18.9s,baz=18,slow=39						
	comp=Z,20nm,0.5s						
F33A	**5 Mile Ranch,**	**67.17**	**46**	IAmb	IAmb	10 22 58.1	
	comp=Z,59nm,0.9s						
X16A	**Lo Mia Camp, P**	**67.17**	**64**	IAmb	IAmb	10 22 59.7	
	comp=Z,45nm,0.9s						
MTSU	**Mount Surprise**	**67.31**	**191**	P	**P**	**10 22 58.3**	**+0.6**
	comp=Z,30nm,0.9s						
MTSU	**Mount Surprise**	**67.31**	**191**	P	**P**	**10 22 57.8**	**+0.1**
MNSI	**Mandailing Nat**	**67.31**	**243**	P	**P**	**10 22 58.6**	**+0.7**
VJD	**Vijayawada**	**67.47**	**270**	*e*P	**P**	**10 22 58.3**	**-0.6**
SKAR	**Skarslia**	**67.60**	**343**	*e*P	**P**	**10 22 59.1**	**-0.1**
EYMN	**Ely**	**67.79**	**42**	IAmb	IAmb	10 23 02.3	
	comp=Z,57nm,0.8s						
SJI	**Sawahan**	**67.84**	**227**	P	**P**	**10 23 01.2**	**-0.1**
PPI	**Padang Panjang**	**67.84**	**242**	P	**P**	**10 23 01.5**	**+0.3**
	comp=Z,1µmcomp=Z,31nm,0.8s						
MNK	**Minsk**	**67.87**	**330**	*i* P	**P**	**10 22 59.9**	**-1.0**
MNK				*i* *PP	**pP**	**10 23 16.2**	**+0.7**
MNK				*i* *SP	**sP**	**10 23 23.2**	**+1.8**
MNK				*i*		10 25 29.9	
MNK				*i* PPP	PPP	10 27 07.3	
MNK				*i* S	**S**	**10 31 54.6**	**-0.3**
MNK				*i* *SS	**sS**	**10 32 23.2**	**+3.5**
MNK				*i* SS	**SS**	**10 36 19.3**	**+3.1**
MNK				pmax	pmax		
	comp=E,12nm,0.5s						
MNK				pmax	pmax		
	comp=N,22nm,0.8s						
MNK				pmax	pmax		
	comp=Z,67nm,0.9s						
MNK				MLR	MLR		
	comp=N,241nm,20.0s						
MNK				MLR	MLR		
	comp=E,369nm,19.0s						
MNK				MLR	MLR		
	comp=Z,442nm,21.0s						
SNJI	**Sawahan-Nganju**	**67.88**	**227**	P	**P**	**10 23 03.3**	**+1.7**
NACGM	**Naroch**	**67.90**	**331**	*e*P	**P**	**10 23 00.6**	**-0.5**
	comp=N,23nm,0.9s						
X18A	**Snowflake**	**67.97**	**63**	IAmb	IAmb	10 23 04.7	
	comp=Z,44nm,1.0s						
GSI	**Gunungsitoli**	**68.10**	**245**	P	**P**	**10 23 03.0**	**+0.1**
GSI	**Gunungsitoli**	**68.10**	**245**	P	**P**	**10 23 03.9**	**+1.0**
GSI	**Gunungsitoli**	**68.10**	**245**	P	**P**	**10 23 04.5**	**+1.6**
PDSI	**Padang**	**68.17**	**241**	P	**P**	**10 23 03.2**	**-0.2**
HYB	**Hyderabad**	**68.20**	**272**	*e*P	**P**	**10 23 03.3**	**-0.3**
HYB				IVmB_BB		10 23 04.0	
	comp=Z,843nm,0.7s						
HYB				*e*pP	**pP**	**10 23 18.6**	**+0.4**
HYB				*e*pP	**sP**	**10 23 19.0**	**-5.0**
HYB				*e*PcP	**PcP**	**10 23 29.0**	**-0.1**
KNRA	**Kununurra**	**68.29**	**207**	P	**P**	**10 23 04.4**	**+0.5**
	comp=Z,93nm,0.9s						
KNRA	**Kununurra**	**68.29**	**207**	IAmb	IAmb	10 23 05.2	
	comp=Z,56nm,0.8s						
KONO	**Kongsberg**	**68.29**	**342**	*e*P	**P**	**10 23 04.0**	**+0.6**
KRJI	**Kerinci**	**68.55**	**240**	P	**P**	**10 23 07.1**	**+1.3**
ECSD	**EROS Data Cent**	**68.56**	**48**	IAmb	IAmb	10 23 06.8	
	comp=Z,59nm,0.9s						
ODD1	**Odda**	**68.63**	**344**	*e*P	**P**	**10 23 07.6**	**+2.0**
IVI	**Ivigtut**	**68.77**	**12**	P	**P**	**10 23 06.9**	**+0.5**
E38A	**The Farm, Brul**	**68.78**	**43**	IAmb	IAmb	10 23 07.7	
	comp=Z,45nm,0.7s						
KLSI		**68.87**	**235**	P	**P**	**10 23 07.6**	**-0.1**
KSCO	**Kaye Shedlock'**	**68.91**	**55**	IAmb	IAmb	10 23 09.8	
	comp=Z,98nm,1.7s						
MASI	**Maura Aman, Be**	**68.97**	**238**	P	**P**	**10 23 08.7**	**+0.4**
MDSI	**Maura Dua**	**69.00**	**236**	P	**P**	**10 23 07.7**	**-0.8**
CTA	**Charters Tower**	**69.01**	**189**	P	**P**	**10 23 08.5**	**+0.1**
CTAO	**Charters Tower**	**69.01**	**189**	P	**P**	**10 23 08.0**	**-0.4**
CTAO				IAmb	IAmb	10 23 09.2	
	comp=Z,49nm,1.1s						
CTAO	**Charters Tower**	**69.01**	**189**	P	**P**	**10 23 07.9**	**-0.4**
CTAO	**Charters Tower**	**69.01**	**189**	P	**P**	**10 23 08.0**	**-0.4**
CTAO				pmax	pmax		
	comp=Z,49nm,1.1s						
TUC	**Tucson**	**69.04**	**65**	P	**P**	**10 23 09.4**	**+0.7**
TUC	**Tucson**	**69.04**	**65**	P	**P**	**10 23 09.4**	**+0.7**
TUC				pmax	pmax		
	comp=Z,23nm,0.9s						
SPMN	**Marine on St.**	**69.26**	**44**	IAmb	IAmb	10 23 11.0	
	comp=Z,49nm,0.8s						
T25A	**Trinidad**	**69.28**	**57**	IAmb	IAmb	10 23 12.5	
	comp=Z,50nm,1.2s						
SISI	**Saibi**	**69.30**	**242**	P	**P**	**10 23 12.8**	**+2.4**
MSVF	**Nonsavu**	**69.35**	**156**	P	**P**	**10 23 12.6**	**+2.0**
MSVF	**Nonsavu**	**69.35**	**156**	P	**P**	**10 23 12.6**	**+2.0**
LWLI	**Liwa**	**69.51**	**236**	P	**P**	**10 23 11.0**	**-0.8**
BGNE	**Belgrade**	**69.51**	**50**	IAmb	IAmb	10 23 12.6	
	comp=Z,82nm,1.1s						
AKT	**Akhty**	**69.66**	**310**	*e*P	**P**	**10 23 09.6**	**-2.8**
AKT				*e**PP	**pP**	**10 23 28.2**	**+1.1**
AKT				*e*		10 25 43.5	
AKT				*e*PPP	PPP	10 27 30.1	
AKT				*e*S	**S**	**10 32 11.6**	**-5.2**
AKT				pmax	pmax		
	comp=Z,22nm,0.7s						
AKT				MLR	MLR		
	comp=Z,1µm,22.0s						
TASM	**ASL Pad, Albuq**	**69.70**	**60**	IAmb	IAmb	10 23 15.2	
	comp=Z,29nm,0.9s						
TASM	**ASL Pad, Albuq**	**69.70**	**60**	IAmb	IAmb	10 23 15.2	
	comp=Z,29nm,0.8s						
ANMO	**Albuquerque**	**69.70**	**60**	LR	LR	10 50 51.5	
	comp=Z,77nm,21.6s,baz=326,slow=33						
ANMO	**Albuquerque**	**69.70**	**60**	P	**P**	**10 23 14.2**	**+1.3**
ANMO	**Albuquerque**	**69.70**	**60**	*i* P	**P**	**10 23 14.0**	**+1.1**
ANMO				pmax	pmax		
	comp=Z,32nm,0.9s						
ANMO	**Albuquerque**	**69.70**	**60**	P	**P**	**10 23 14.2**	**+1.3**
ERBR	**Yeremizino-Bor**	**69.93**	**317**	*e*P	**P**	**10 23 13.3**	**-0.6**
ERBR				pmax	pmax		
	comp=Z,23nm,0.8s						
L34A	**Svendsen Farm,**	**69.99**	**49**	IAmb	IAmb	10 23 15.2	
	comp=Z,73nm,0.9s						
KIV	**Kislovodsk**	**70.26**	**315**	*e*P	**P**	**10 23 15.5**	**-0.6**
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
KIV				MLR	MLR		
	comp=Z,240nm,18.0s						
KBZ	**Khabaz**	**70.33**	**314**	P	**P**	**10 23 16.2**	**-0.1**
	comp=Z,14nm,0.8s,baz=96,slow=3.1,SNR=29						
KBZ				LR	LR	10 57 13.3	
	comp=Z,506nm,21.6s,baz=32,slow=38						
	comp=Z,14nm,0.8s						
KBZ	**Khabaz**	**70.33**	**314**	*i* P	**P**	**10 23 16.0**	**-0.3**
KBZ				pmax	pmax		
	comp=Z,18nm,0.8s						
QIS	**Mount Isa**	**70.39**	**195**	P	**P**	**10 23 16.7**	**-0.2**
	comp=Z,38nm,1.4s						
QIS	**Mount Isa**	**70.39**	**195**	P	**P**	**10 23 16.2**	**-0.7**
G40A	**Rib Lake**	**70.42**	**43**	IAmb	IAmb	10 23 17.9	
	comp=Z,39nm,0.9s						
POO	**Poona**	**70.51**	**276**	*e*P	**P**	**10 23 17.0**	**-0.8**
POO				IAmb	IAmb	10 23 20.4	
	comp=Z,58nm,0.9s						
AKASG	**Malin Array Be**	**70.53**	**327**	P	**P**	**10 23 17.0**	**-0.5**
	comp=Z,9.8nm,0.4s,baz=34,slow=6.2,SNR=47						
AKASG				LR	LR	10 56 53.3	
	comp=Z,564nm,18.5s,baz=32,slow=38						
	comp=Z,9.8nm,0.4s						
AKASG	**Malin Array Be**	**70.53**	**327**	P	**P**	**10 23 17.4**	**-0.1**
AKASG	**Malin Array Be**	**70.53**	**327**	P	**P**	**10 23 17.4**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,15nm,0.9s						
AKBB	**Malin Array Si**	**70.53**	**327**	*i* P	**P**	**10 23 16.9**	**-0.5**
AKBB				pmax	pmax		
	comp=Z,21nm,0.8s						
GUDG	**Gudauri**	**70.53**	**313**	P	**P**	**10 23 18.9**	**+1.0**
KIEV	**Kiev**	**70.54**	**327**	P	**P**	**10 23 16.2**	**-1.3**
KIEV	**Kiev**	**70.54**	**327**	P	**P**	**10 23 16.5**	**-1.0**
CBKS	**Cedar Bluff**	**70.60**	**53**	IAmb	IAmb	10 23 19.1	
	comp=Z,131nm,1.6s						
LABN	**Labinsk**	**70.65**	**316**	*e*P	**P**	**10 23 16.0**	**-2.3**
LABN				pmax	pmax		
	comp=Z,41nm,0.6s						
WB0	**Warramunga Arr**	**70.69**	**201**	IAmb	IAmb	10 23 19.6	
	comp=Z,81nm,1.0s						
WR0	**Warramunga Arr**	**70.84**	**200**	P	**P**	**10 23 19.5**	**-0.1**
WR0				IAmb	IAmb	10 23 20.5	
	comp=Z,59nm,0.8s						
WR8	**Warramunga Arr**	**70.84**	**200**	P	**P**	**10 23 19.7**	**+0.1**
WR8				IAmb	IAmb	10 23 20.5	
	comp=Z,56nm,0.8s						
WRAB	**Tennant Creek**	**70.86**	**201**	P	**P**	**10 23 19.6**	**-0.1**
WRAB				IAmb	IAmb	10 23 20.7	
	comp=Z,60nm,1.0s						
WRAB	**Tennant Creek**	**70.86**	**201**	P	**P**	**10 23 19.6**	**-0.1**
WRAB	**Tennant Creek**	**70.86**	**201**	P	**P**	**10 23 19.6**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,60nm,1.0s						
WRAB	**Tennant Creek**	**70.86**	**201**	P	**P**	**10 23 19.6**	**-0.1**
WRA	**Warramunga Arr**	**70.87**	**201**	P	**P**	**10 23 19.2**	**-0.6**
	comp=Z,35nm,0.6s,baz=18,slow=6.7,SNR=166						
WRA				PKP2bc	**P'P'bc**	**10 51 12.1**	**+2.6**
	comp=Z,1.5nm,1.0s,baz=198,slow=2.7,SNR=5.9						
	comp=Z,35nm,0.6s						
WRA	**Warramunga Arr**	**70.87**	**201**	P	**P**	**10 23 18.4**	**-1.4**
WRA	**Warramunga Arr**	**70.87**	**201**	*i* P	**P**	**10 23 18.7**	**-1.1**
WRA				pmax	pmax		
	comp=Z,45nm,0.8s						
SCHQ	**Schefferville**	**70.93**	**24**	P	**P**	**10 23 20.3**	**+0.5**
	comp=Z,42nm,0.4s,baz=332,slow=5.3,SNR=175						
	comp=Z,42nm,0.4s						
F42A	**Maple Grove Fa**	**70.95**	**41**	IAmb	IAmb	10 23 21.4	
	comp=Z,38nm,0.7s						
GANJ	**Ganja**	**70.99**	**310**	P	**P**	**10 23 19.6**	**-0.9**
KAD	**Karad**	**71.17**	**275**	*e*P	**P**	**10 23 20.9**	**-0.9**
KAD				IAmb	IAmb	10 23 24.2	
	comp=Z,43nm,1.2s						
N35A	**Tabor**	**71.18**	**49**	IAmb	IAmb	10 23 22.8	
	comp=Z,63nm,0.8s						
DZM	**Mont Dzumac**	**71.29**	**169**	LR	LR	10 48 13.9	
	comp=Z,168nm,21.6s,baz=26,slow=30						
DZM	**Mont Dzumac**	**71.29**	**169**	*e*LR	LR	10 45 00.8	
	comp=Z,541nm,24.9s						
I40A	**Norwalk**	**71.29**	**44**	IAmb	IAmb	10 23 23.2	
	comp=Z,49nm,0.8s						
FITZ	**Fitzroy Crossi**	**71.54**	**209**	P	**P**	**10 23 24.9**	**+1.0**
	comp=Z,25nm,0.9s						
FITZ	**Fitzroy Crossi**	**71.54**	**209**	LR	LR	10 54 09.2	
	comp=Z,76nm,20.5s,baz=18,slow=35						
FITZ	**Fitzroy Crossi**	**71.54**	**209**	P	**P**	**10 23 24.8**	**+1.0**
PH02	**Texas Public H**	**71.92**	**57**	IAmb	IAmb	10 23 28.2	
	comp=Z,20nm,1.1s						
SOC	**Sochi**	**71.92**	**316**	*e*P	**P**	**10 23 24.4**	**-1.6**
SOC				*e*		10 26 00.4	
SOC				*e*PPP	PPP	10 27 54.7	
SOC				*e*S	**S**	**10 32 37.7**	**-5.1**
SOC				pmax	pmax		
	comp=Z,21nm,0.6s						
SOC				MLR	MLR		
	comp=Z,200nm,12.0s						
EPT	**El Paso**	**71.96**	**62**	IAmb	IAmb	10 23 28.5	
	comp=Z,47nm,1.0s						
ANN	**Anapa**	**72.00**	**318**	*e*P	**P**	**10 23 27.8**	**+1.4**
ANN				*e**PP	**sP**	**10 23 47.7**	**+0.7**
ANN				*e*S	**S**	**10 32 46.4**	**+2.8**
ANN				pmax	pmax		
	comp=Z,25nm,0.8s						
I42A	**Draeger Farm,**	**72.06**	**43**	IAmb	IAmb	10 23 27.4	
	comp=Z,36nm,0.8s						
E46A	**Sault Ste Mari**	**72.10**	**39**	IAmb	IAmb	10 23 27.5	
	comp=Z,74nm,1.2s						
GNI	**Garni**	**72.15**	**311**	LR	LR	10 57 49.5	
	comp=Z,391nm,21.7s,baz=26,slow=38						
BEL	**Belsk**	**72.40**	**332**	*e*PKP	**P**	**10 23 28.8**	**+0.1**
L40A	**Anamosa**	**72.42**	**46**	IAmb	IAmb	10 23 29.7	
	comp=Z,57nm,0.8s						
AMTX	**Amarillo**	**72.44**	**57**	IAmb	IAmb	10 23 32.0	
	comp=Z,38nm,0.9s						
MSTX	**Muleshoe**	**72.50**	**58**	IAmb	IAmb	10 23 32.1	
	comp=Z,57nm,1.0s						
NAX	**Nakhchivan**	**72.51**	**310**	P	**P**	**10 23 28.8**	**-0.9**
SALM	**Salem**	**72.62**	**268**	*e*P	**P**	**10 23 30.2**	**-0.4**
SALM				IAmb	IAmb	10 23 32.8	
	comp=Z,45nm,1.4s						
ELIS	**Ellis County**	**72.80**	**55**	IAmb	IAmb	10 23 33.1	
	comp=Z,50nm,0.9s						
OK038	**West end E0370**	**72.86**	**54**	IAmb	IAmb	10 23 33.1	
	comp=Z,58nm,1.2s						
SORM	**Soroca**	**72.98**	**326**	⇑P	**P**	**10 23 31.1**	**-1.1**
SORM	**Soroca**	**72.98**	**326**	P	**P**	**10 23 31.0**	**-1.1**
SMWD	**Samnorwood**	**73.07**	**56**	IAmb	IAmb	10 23 35.1	
	comp=Z,86nm,1.2s						
P38A	**Dawn**	**73.17**	**49**	IAmb	IAmb	10 23 34.6	
	comp=Z,66nm,0.9s						
L42A	**Oliver, Polo**	**73.19**	**45**	IAmb	IAmb	10 23 34.1	
	comp=Z,52nm,0.8s						
CROK	**Carrier**	**73.25**	**54**	IAmb	IAmb	10 23 35.3	
	comp=Z,86nm,1.6s						
K43A	**Burlington**	**73.26**	**43**	IAmb	IAmb	10 23 35.1	
	comp=Z,68nm,0.9s						
SIM	**Simferopol'**	**73.30**	**320**	*e*P	**P**	**10 23 33.2**	**-1.0**
SIM				*e*S	**S**	**10 32 57.6**	**-0.9**
SIM				pmax	pmax		
	comp=Z,47nm,1.4s						
VLDQ	**Val d'Or**	**73.34**	**34**	IAmb	IAmb	10 23 34.2	
	comp=Z,89nm,1.1s						
BSEG	**Bad Segeberg**	**73.38**	**339**	P	**P**	**10 23 35.2**	**+0.8**
BSEG				pmax	pmax		
	comp=Z,17nm,1.3s						
VHRN	**Van Horn**	**73.56**	**62**	IAmb	IAmb	10 23 38.3	
	comp=Z,39nm,0.9s						
INVG	**Invergeldie, C**	**73.69**	**348**	*e*P	**P**	**10 23 36.5**	**+0.2**
KWP	**Kalwaria Pacla**	**73.70**	**330**	*e*PKP	**P**	**10 23 36.7**	**+0.3**
DKNS	**Dickens**	**73.76**	**57**	IAmb	IAmb	10 23 38.9	
	comp=Z,47nm,0.8s						
OK048	**Pawnee Station**	**73.86**	**53**	IAmb	IAmb	10 23 38.8	
	comp=Z,76nm,1.7s						
POST	**Post**	**73.88**	**58**	IAmb	IAmb	10 23 39.7	
	comp=Z,74nm,1.1s						
EIDS	**Eidsvold**	**73.91**	**184**	P	**P**	**10 23 38.9**	**+1.2**
	comp=Z,58nm,0.9s						
EIDS	**Eidsvold**	**73.91**	**184**	P	**P**	**10 23 38.7**	**+0.9**
EIDS				IAmb	IAmb	10 23 39.8	
	comp=Z,39nm,0.9s						
P40A	**Paris**	**73.98**	**48**	IAmb	IAmb	10 23 39.5	
	comp=Z,73nm,1.0s						
ODSA	**Odessa**	**73.99**	**60**	IAmb	IAmb	10 23 40.3	
	comp=Z,57nm,0.9s						
LAWE	**Loch Awe, Argy**	**74.04**	**349**	*e*P	**P**	**10 23 38.1**	**-0.1**
LAWE				IAmb	IAmb	10 23 39.5	
	comp=Z,48nm,0.7s						
OJC	**Ojcow**	**74.12**	**332**	*e*PKP	**P**	**10 23 39.0**	**+0.1**
OJC	**Ojcow**	**74.12**	**332**	P	**P**	**10 23 39.3**	**+0.4**
OJC				pmax	pmax		
	comp=Z,41nm,1.0s						
KOD	**Kodaikanal**	**74.15**	**267**	*e*P	**P**	**10 23 39.0**	**-0.9**
KOD				IAmb	IAmb	10 23 41.2	
	comp=Z,45nm,0.7s						
QUOK	**Quay**	**74.17**	**53**	IAmb	IAmb	10 23 40.8	
	comp=Z,64nm,1.2s						
SN07	**Snyder 07**	**74.20**	**58**	IAmb	IAmb	10 23 41.4	
	comp=Z,81nm,1.4s						
OK052	**Battle Ridge R**	**74.26**	**53**	IAmb	IAmb	10 23 41.3	
	comp=Z,57nm,0.8s						
STHS	**Stebnicka Huta**	**74.36**	**331**	*e*P	**P**	**10 23 40.7**	**+0.4**
STHS				pmax	pmax		
	comp=Z,20nm,0.7s						
STHS	**Stebnicka Huta**	**74.36**	**331**	*e*P	**P**	**10 23 40.7**	**+0.4**
M44A	**Midewin, Midew**	**74.43**	**44**	IAmb	IAmb	10 23 41.6	
	comp=Z,71nm,0.8s						
MNHN	**Monahans**	**74.44**	**60**	IAmb	IAmb	10 23 42.9	
	comp=Z,51nm,0.8s						
APMT	**Aspermont**	**74.46**	**57**	IAmb	IAmb	10 23 42.7	
	comp=Z,60nm,0.7s						
DEOK	**Depew**	**74.53**	**53**	IAmb	IAmb	10 23 42.5	
	comp=Z,51nm,0.7s						
BURAR	**Bucovina Array**	**74.56**	**327**	P	**P**	**10 23 41.2**	**-0.4**
BURAR				IAmb	IAmb	10 23 43.2	
	comp=Z,33nm,0.7s						
BURAR	**Bucovina Array**	**74.56**	**327**	⇓P	**P**	**10 23 40.6**	**-1.0**
BURAR	**Bucovina Array**	**74.56**	**327**	P	**P**	**10 23 41.7**	**+0.1**
ASAR	**Alice Springs**	**74.56**	**200**	P	**P**	**10 23 42.5**	**+0.8**
	comp=Z,39nm,0.6s,baz=13,slow=5.4,SNR=514						
ASAR				LR	LR	10 54 06.3	
	comp=Z,99nm,21.8s,baz=360,slow=34						
	comp=Z,39nm,0.6s						
KSP	**Ksiaz**	**74.62**	**334**	*e*PKP	**P**	**10 23 41.8**	**+0.1**
EKA	**Eskdalemuir Ar**	**74.63**	**347**	P	**P**	**10 23 41.7**	**0.0**
	comp=Z,18nm,0.5s,baz=20,slow=5.4,SNR=52						
	comp=Z,18nm,0.5s						
ESK	**Eskdalemuir**	**74.65**	**347**	P	**P**	**10 23 41.7**	**-0.1**
ESK				IAmb	IAmb	10 23 42.4	
	comp=Z,130nm,1.4s						
ESK	**Eskdalemuir**	**74.65**	**347**	*e*P	**P**	**10 23 41.8**	**-0.1**
ESK				IAmb	IAmb	10 23 43.1	
	comp=Z,30nm,0.7s						
ESK	**Eskdalemuir**	**74.65**	**347**	P	**P**	**10 23 41.7**	**-0.1**
ESK				pmax	pmax		
	comp=Z,130nm,1.5s						
ESK	**Eskdalemuir**	**74.65**	**347**	P	**P**	**10 23 41.9**	**0.0**
NIE	**Niedzica**	**74.66**	**331**	*e*PKP	**P**	**10 23 42.8**	**+0.7**
R40A	**Maddies Statio**	**74.83**	**49**	IAmb	IAmb	10 23 44.1	
	comp=Z,54nm,0.9s						
BUKO	**Buck Lake**	**74.83**	**36**	IAmb	IAmb	10 23 43.9	
	comp=Z,49nm,1.1s						
OSTC	**Ostas**	**74.89**	**334**	*e*P	**P**	**10 23 43.7**	**+0.3**
OSTC	**Ostas**	**74.89**	**334**	*e*P	**P**	**10 23 43.7**	**+0.3**
CHVC	**Chvalec**	**74.91**	**334**	*e*P	**P**	**10 23 43.4**	**-0.1**
CHVC	**Chvalec**	**74.91**	**334**	*e*P	**P**	**10 23 43.4**	**-0.1**
EDMD	**Edmundbyers**	**74.94**	**346**	*e*P	**P**	**10 23 43.2**	**-0.3**
EDMD				IAmb	IAmb	10 23 45.4	
	comp=Z,21nm,0.7s						
OKC	**Ostrava-Krasne**	**74.96**	**333**	*e*P	**P**	**10 23 44.7**	**+1.0**
OKC	**Ostrava-Krasne**	**74.96**	**333**	*e*P	**P**	**10 23 44.7**	**+1.0**
TESR	**Tescani**	**74.97**	**326**	⇓P	**P**	**10 23 43.5**	**-0.4**
STEB	**Steborice**	**74.99**	**333**	*e*P	**P**	**10 23 44.4**	**+0.5**
VLDR	**Vladesti**	**74.99**	**325**	⇑P	**P**	**10 23 43.9**	**-0.1**
NEWG	**New Galloway**	**74.99**	**348**	*e*P	**P**	**10 23 43.4**	**-0.4**
NEWG				IAmb	IAmb	10 23 45.0	
	comp=Z,27nm,0.8s						
UPC	**Upice**	**75.00**	**334**	*e*P	**P**	**10 23 44.5**	**+0.5**
UPC	**Upice**	**75.00**	**334**	*e*P	**P**	**10 23 44.5**	**+0.5**
WTFS	**Witchita Falls**	**75.04**	**56**	IAmb	IAmb	10 23 45.9	
	comp=Z,67nm,1.4s						
DPC	**Dobruska-Polom**	**75.05**	**334**	*e*P	**P**	**10 23 44.7**	**+0.4**
DPC	**Dobruska-Polom**	**75.05**	**334**	*e*P	**P**	**10 23 44.7**	**+0.4**
RLO	**Rose Lookout**	**75.06**	**52**	IAmb	IAmb	10 23 45.8	
	comp=Z,64nm,1.2s						
CLL	**Collm**	**75.11**	**336**	⇓*i*P	**P**	**10 23 44.6**	**+0.1**
CLL				pmax	pmax		
	comp=Z,37nm,1.1s						
CLL				MLR	MLR		
	comp=Z,500nm,18.6s						
CLL	**Collm**	**75.11**	**336**	⇓*i*P	**P**	**10 23 44.6**	**+0.1**
	comp=Z,37nm,1.1s						
CLL				*i* x	x	10 23 50.5	
	comp=Z,35nm,1.0s						
CLL				*e*PP	**PP**	**10 26 32.0**	**-0.4**
CLL				AMS	AMS	11 00 00.0	
	comp=N,300nm,19.4s						
CLL				AMS	AMS	11 00 00.0	
	comp=E,300nm,21.9s						
CLL				AMS	AMS	11 00 00.0	
	comp=Z,500nm,18.6s						
P43A	**Skaggs, Pawnee**	**75.11**	**46**	IAmb	IAmb	10 23 45.9	
	comp=Z,58nm,0.9s						
KRLC	**Kraliky**	**75.16**	**334**	*e*P	**P**	**10 23 45.4**	**+0.5**
KRLC	**Kraliky**	**75.16**	**334**	*e*P	**P**	**10 23 45.4**	**+0.5**
LANS	**Liptovska Anna**	**75.16**	**332**	*e*P	**P**	**10 23 46.2**	**+1.2**
LANS				pmax	pmax		
	comp=Z,27nm,1.0s						
LANS	**Liptovska Anna**	**75.16**	**332**	*e*P	**P**	**10 23 46.2**	**+1.2**
MORC	**Moravsky Berou**	**75.20**	**333**	IAmb	IAmb	10 23 47.2	
	comp=Z,49nm,0.9s						
MORC	**Moravsky Berou**	**75.20**	**333**	*e*P	**P**	**10 23 44.7**	**-0.5**
MORC	**Moravsky Berou**	**75.20**	**333**	P	**P**	**10 23 46.3**	**+1.1**
ONER	**Baraj Valea Uz**	**75.22**	**326**	⇓P	**P**	**10 23 45.2**	**-0.1**
LPIG	**La Paz**	**75.22**	**70**	LR	LR	10 50 09.3	
	comp=Z,102nm,21.0s,baz=307,slow=30						
ABTX	**Abilene, Hawle**	**75.25**	**57**	IAmb	IAmb	10 23 47.6	
	comp=Z,76nm,1.3s						
TLCR		**75.26**	**324**	⇑P	**P**	**10 23 45.3**	**-0.2**
TLCR		**75.26**	**324**	P	**P**	**10 23 45.4**	**-0.1**
CLGH	**Cloghs, Cushen**	**75.28**	**349**	*e*P	**P**	**10 23 45.1**	**-0.3**
CLGH				IAmb	IAmb	10 23 46.9	
	comp=Z,78nm,0.8s						
GAL1	**Galloway**	**75.31**	**348**	*e*P	**P**	**10 23 45.1**	**-0.4**
GAL1				IAmb	IAmb	10 23 46.4	
	comp=Z,36nm,0.7s						
KESW	**Keswick, Cumbr**	**75.34**	**347**	*e*P	**P**	**10 23 45.6**	**-0.3**
KESW				IAmb	IAmb	10 23 47.0	
	comp=Z,50nm,0.8s						
TX31	**Lajitas Ar. Si**	**75.40**	**62**	IAmb	IAmb	10 23 48.9	
	comp=Z,60nm,0.9s						
TXAR	**Lajitas Array**	**75.40**	**62**	P	**P**	**10 23 47.7**	**+0.9**
	comp=Z,57nm,0.9s,baz=299,slow=4.2,SNR=435						
	comp=Z,57nm,0.9s						
IDGL	**Inch Island, C**	**75.46**	**350**	P	**P**	**10 23 46.8**	**+0.3**
IDGL	**Inch Island, C**	**75.46**	**350**	*e*P	**P**	**10 23 46.7**	**+0.2**
IDGL				IAmb	IAmb	10 23 47.9	
	comp=Z,73nm,0.8s						
VRI	**Vrincioaia**	**75.49**	**325**	⇓P	**P**	**10 23 45.8**	**-1.1**
VRI	**Vrincioaia**	**75.49**	**325**	P	**P**	**10 23 45.8**	**-1.1**
SADO	**Sadowa**	**75.49**	**37**	LR	LR	10 59 42.2	
	comp=Z,162nm,19.1s,baz=342,slow=38						
CCM	**Cathedral Cave**	**75.52**	**48**	P	**P**	**10 23 47.1**	**0.0**
CCM				IAmb	IAmb	10 23 48.3	
	comp=Z,55nm,1.1s						
CCM	**Cathedral Cave**	**75.52**	**48**	P	**P**	**10 23 47.1**	**0.0**
CCM				pmax	pmax		
	comp=Z,55nm,1.2s						
PLOR	**Plostina**	**75.53**	**326**	⇓P	**P**	**10 23 47.4**	**+0.3**
PLOR	**Plostina**	**75.53**	**326**	P	**P**	**10 23 47.4**	**+0.3**
CFR	**Carcaliu**	**75.53**	**324**	⇑P	**P**	**10 23 46.7**	**-0.3**
CFR	**Carcaliu**	**75.53**	**324**	P	**P**	**10 23 46.7**	**-0.3**
HHAR	**Hobbs**	**75.53**	**51**	IAmb	IAmb	10 23 48.1	
	comp=Z,29nm,0.7s						
SLM	**Saint Louis**	**75.56**	**47**	IAmb	IAmb	10 23 48.6	
	comp=Z,95nm,1.2s						
HSKC	**Hora Svate Kat**	**75.63**	**336**	*e*P	**P**	**10 23 48.1**	**+0.5**
LDAQ	**Lac Daran**	**75.64**	**30**	IAmb	IAmb	10 23 49.0	
	comp=Z,41nm,0.8s						
OZUR		**75.64**	**326**	⇓P	**P**	**10 23 48.1**	**+0.3**
QLP	**Quilpie**	**75.65**	**190**	P	**P**	**10 23 48.7**	**+0.9**
	comp=Z,248nm,1.0s						
QLP	**Quilpie**	**75.65**	**190**	P	**P**	**10 23 48.9**	**+1.1**
AAM	**Ann Arbor**	**75.66**	**41**	IAmb	IAmb	10 23 49.4	
	comp=Z,62nm,0.8s						
SFIN	**Lafayette**	**75.67**	**44**	IAmb	IAmb	10 23 48.9	
	comp=Z,37nm,0.7s						
TPGR	**Topolog**	**75.69**	**324**	⇓P	**P**	**10 23 47.9**	**-0.1**
COVR	**Voineasa-Covas**	**75.70**	**326**	⇑P	**P**	**10 23 48.3**	**+0.2**
HPK	**Haverah Park**	**75.73**	**346**	*e*P	**P**	**10 23 48.6**	**+0.5**
HPK				IAmb	IAmb	10 23 49.2	
	comp=Z,83nm,0.7s						
SLBS	**Sierra La Lagu**	**75.75**	**70**	P	**P**	**10 23 49.3**	**+0.5**
SLBS				IAmb	IAmb	10 23 51.4	
	comp=Z,45nm,1.0s						
PLPT	**Palo Pinto**	**75.84**	**56**	IAmb	IAmb	10 23 50.6	
	comp=Z,43nm,0.9s						
IOMK	**Kirk Michael**	**75.87**	**348**	*e*P	**P**	**10 23 48.9**	**0.0**
IOMK				IAmb	IAmb	10 23 50.5	
	comp=Z,22nm,0.7s						
PRU	**Pruhonice**	**75.88**	**335**	*e*P	**P**	**10 23 49.8**	**+0.8**
PRU	**Pruhonice**	**75.88**	**335**	*e*P	**P**	**10 23 49.8**	**+0.8**
VRAC	**Vranov**	**75.90**	**333**	LR	LR	11 00 15.4	
	comp=Z,727nm,21.0s,baz=20,slow=38						
VRAC	**Vranov**	**75.90**	**333**	⇑P	**P**	**10 23 48.9**	**-0.3**
VRAC	**Vranov**	**75.90**	**333**	*e*P	**P**	**10 23 49.6**	**+0.4**
VRAC	**Vranov**	**75.90**	**333**	P	**P**	**10 23 48.8**	**-0.3**
N47A	**Urbana**	**75.90**	**43**	IAmb	IAmb	10 23 50.0	
	comp=Z,46nm,0.8s						
Q44A	**Meyer Farm, Va**	**75.93**	**46**	IAmb	IAmb	10 23 50.7	
	comp=Z,51nm,0.8s						
FVM	**French Village**	**75.97**	**48**	IAmb	IAmb	10 23 50.5	
	comp=Z,33nm,0.7s						
JAVC	**Velka Javorina**	**75.97**	**333**	*e*P	**P**	**10 23 51.0**	**+1.3**
HPIG		**75.99**	**65**	IAmb	IAmb	10 23 52.1	
	comp=Z,45nm,0.8s						
WIM	**Isle of Man**	**76.00**	**348**	*e*P	**P**	**10 23 49.6**	**0.0**
Z35A	**Perchaven, San**	**76.03**	**55**	IAmb	IAmb	10 23 51.2	
	comp=Z,34nm,0.7s						
MOX	**Moxa**	**76.07**	**337**	P	**P**	**10 23 50.7**	**+0.6**
MOX				pmax	pmax		
	comp=Z,23nm,1.2s						
MLR	**Muntele Rosu**	**76.10**	**326**	LR	LR	11 01 47.9	
	comp=Z,300nm,18.1s,baz=36,slow=39						
MLR	**Muntele Rosu**	**76.10**	**326**	IAmb	IAmb	10 23 53.0	
	comp=Z,123nm,1.7s						
MLR	**Muntele Rosu**	**76.10**	**326**	⇓P	**P**	**10 23 50.5**	**0.0**
MLR	**Muntele Rosu**	**76.10**	**326**	P	**P**	**10 23 50.5**	**0.0**
PSZ	**Piszkesteto**	**76.11**	**331**	⇑P	**P**	**10 23 50.4**	**0.0**
PSZ	**Piszkesteto**	**76.11**	**331**	P	**P**	**10 23 50.4**	**0.0**
FW06	**Azle**	**76.14**	**56**	IAmb	IAmb	10 23 52.1	

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        comp=Z,32nm,0.8s
DRGR                      76.14 328  P      P       10 23 51.1 +0.4
DRGR                                 pmax   pmax
        comp=Z,19nm,1.1s
KRUC    Moravsky          76.18 333 eP      P       10 23 51.1 +0.4
KRUC    Moravsky          76.18 333  P      P       10 23 51.2 +0.5
KRUC                                 pmax   pmax
        comp=Z,46nm,1.1s
LBWR    Ladybower, Pea    76.28 346 eP      P       10 23 51.5 +0.3
LBWR                                 IAmb   IAmb    10 23 53.3
        comp=Z,68nm,0.8s
DELO    Deloro Mine       76.30  36  IAmb   IAmb    10 23 52.2
        comp=Z,43nm,0.8s
LMQ     La Malbaie        76.30  30  IAmb   IAmb    10 23 52.7
        comp=Z,92nm,1.2s
BANOM   Banah             76.33 294  P      P       10 23 52.1 +0.1
ILTH    Belurgan, Co L    76.34 349  P      P       10 23 51.4 -0.1
BUG     Bochum--Univer    76.39 340  P      P       10 23 52.3 +0.4
BUG                                  pmax   pmax
        comp=Z,44nm,1.2s
MBWA    Marble Bar        76.42 214  P      P       10 23 52.6 +0.4
        comp=Z,51nm,1.0s
MBWA    Marble Bar        76.42 214  P      P       10 23 52.5 +0.2
MBWA                                 IAmb   IAmb    10 23 53.5
        comp=Z,88nm,1.4s
MBWA    Marble Bar        76.42 214  P      P       10 23 52.8 +0.5
ZVC     Zvikov            76.47 335 eP      P       10 23 53.1 +0.7
OLIL    Olney             76.50  46  IAmb   IAmb    10 23 55.3
        comp=Z,47nm,0.8s
MODS    Modra-Piesok      76.53 333 eP      P       10 23 53.4 +0.7
MODS                                 pmax   pmax
        comp=Z,59nm,1.1s
MODS    Modra-Piesok      76.53 333 eP      P       10 23 53.4 +0.7
ARR     Arges             76.69 326 ⇑P      P       10 23 53.7  0.0
PSAC2   Pilbara Seismi    76.73 213  P      P       10 23 53.6 -0.4
        comp=Z,49nm,1.1s
PSAC1   Pilbara Seismi    76.73 213  P      P       10 23 54.5 +0.4
        comp=Z,49nm,1.3s
PSA00   Pilbara Seismi    76.76 213  P      P       10 23 54.4 +0.3
        comp=Z,35nm,1.2s
PSA00   Pilbara Seismi    76.76 213  P      P       10 23 54.3 +0.1
PSA00                                IAmb   IAmb    10 23 55.5
        comp=Z,50nm,1.4s
PSA00   Pilbara Seismi    76.76 213  IAmb   IAmb    10 23 54.9
        comp=Z,25nm,0.8s
PSA00   Pilbara Seismi    76.76 213  P      P       10 23 54.6 +0.4
BUD     Budapest          76.77 331  P      P       10 23 52.9 -1.2
BUD                                  pmax   pmax
        comp=Z,29nm,0.6s
PSAB3   Pilbara Seismi    76.77 213  P      P       10 23 53.8 -0.5
        comp=Z,26nm,0.8s
S44A    Carbondale        76.77  47  IAmb   IAmb    10 23 55.6
        comp=Z,41nm,0.8s
WBO     Williamsburg      76.78  34  IAmb   IAmb    10 23 54.6
        comp=Z,43nm,0.7s
CWF     Charnwood Fore    76.85 345 eP      P       10 23 54.3 -0.2
CWF                                  IAmb   IAmb    10 23 55.3
        comp=Z,38nm,0.5s
WSAR    Wadi Sarin        76.88 290  P      P       10 23 55.5 +0.4
BLO     Bloomington       76.89  45  IAmb   IAmb    10 23 56.1
        comp=Z,29nm,0.8s
PBMO    Poplar Bluff      76.92  49  IAmb   IAmb    10 23 56.7
        comp=Z,120nm,1.6s
KHC     Kasperske Hory    76.92 335  IAmb   IAmb    10 24 01.2
        comp=Z,31nm,0.8s
KHC     Kasperske Hory    76.92 335 eP      P       10 23 55.8 +0.8
KHC                                  MLR    MLR
        comp=Z,2µm,23.7s
KHC     Kasperske Hory    76.92 335 eP      P       10 23 55.8 +0.8
KHC                                  AMS    AMS     11 00 30.0
        comp=Z,2µm,23.7s
WHTX    Lake Whitney,     76.94  56  IAmb   IAmb    10 23 57.0
        comp=Z,50nm,0.8s
MNTQ    Montreal, Queb    76.95  33  IAmb   IAmb    10 23 56.0
        comp=Z,58nm,0.8s
SIRR    Siria             76.96 329 ⇑P      P       10 23 54.7 -0.5
CKRC    Cesky Krumlov     77.00 335 eP      P       10 23 55.9 +0.5
CKRC    Cesky Krumlov     77.00 335 eP      P       10 23 55.9 +0.5
FOEL    Foel Wylfa        77.01 347 eP      P       10 23 55.5 +0.2
FOEL                                 IAmb   IAmb    10 23 56.8
        comp=Z,50nm,0.8s
PECO    Prince Edward     77.03  36  IAmb   IAmb    10 23 56.3
        comp=Z,45nm,0.7s
GRF     Grafenberg Arr    77.05 337 eP      P       10 23 56.1 +0.5
        comp=Z,32nm,0.9s,baz=24,slow=4.9
GRF                                 epP     PcP     10 24 00.2 -6.2
O49A    Covington         77.07  43  IAmb   IAmb    10 23 57.0
        comp=Z,37nm,1.0s
DRIO    Del Rio           77.10  60  IAmb   IAmb    10 23 58.5
        comp=Z,55nm,0.9s
WET     Wettzell          77.11 336  P      P       10 23 56.6 +0.6
WET                                  pmax   pmax
        comp=Z,35nm,1.4s
DSB     Dublin            77.11 349  P      P       10 23 56.2 +0.3
DSB     Dublin            77.11 349 eP      P       10 23 55.8 -0.1
D62A    Allapoint, All    77.13  29  IAmb   IAmb    10 23 57.4
        comp=Z,46nm,0.7s
WBK     Wadi Bani Khal    77.13 289  P      P       10 23 57.6 +1.1
WHAR    Wooly Hollow      77.15  51  IAmb   IAmb    10 23 57.6
        comp=Z,100nm,1.5s
GERES   GERESS Array B    77.15 335  P      P       10 23 55.9 -0.4
        comp=Z,4.7nm,0.4s,baz=33,slow=5.9,SNR=31
GERES                                LR     LR      11 01 24.8
        comp=Z,1µm,19.6s,baz=21,slow=38
        comp=Z,4.7nm,0.4s
P48A    Milroy            77.17  44  IAmb   IAmb    10 23 57.4
        comp=Z,64nm,1.0s
JLN     Jalan Bani Buh    77.19 289  P      P       10 23 57.4 +0.6
HATD    Hatta, Dubai      77.24 293  P      P       10 23 57.5 +0.3
WRKA    Warakurna         77.28 205  P      P       10 23 58.0 +0.9
        comp=Z,50nm,0.8s
IGLA    Glengowla, Co     77.30 350  P      P       10 23 56.9  0.0
IGLA    Glengowla, Co     77.30 350 eP      P       10 23 56.8 -0.1
IGLA                                 IAmb   IAmb    10 23 58.0
        comp=Z,106nm,0.7s
Z38A    Mt. Pleasant      77.31  54  IAmb   IAmb    10 23 58.8
        comp=Z,28nm,0.8s
HLM1    Long Mynd         77.32 346 eP      P       10 23 57.2 +0.1
HLM1                                 IAmb   IAmb    10 23 58.1
        comp=Z,30nm,0.8s
GZR     Gura Zlata        77.33 328 ⇑P      P       10 23 57.1 -0.3
GZR     Gura Zlata        77.33 328  P      P       10 23 57.0 -0.3
N51A    Ashland           77.34  41  IAmb   IAmb    10 23 58.5
        comp=Z,59nm,0.8s
CONA    Conrad Observa    77.35 333 eP      P       10 23 58.1 +0.7
        comp=Z,12nm,0.6s,SNR=8.8
BEBN    Eben Emael        77.35 341 dP      P       10 23 57.7 +0.4
        comp=Z,64nm,0.8s
LONY    Lake Ozonia       77.36  34  IAmb   IAmb    10 23 58.0
        comp=Z,32nm,0.8s
SOP     Sopron            77.36 333  P      P       10 23 58.8 +1.4
SOP                                  pmax   pmax
        comp=Z,39nm,0.8s
SMDO    Samad             77.37 290  P      P       10 23 58.3 +0.3
ASHO    Ashiyiah          77.39 293  P      P       10 23 58.2 +0.2
RONA    Rosalia, Austr    77.43 333 eP      P       10 23 58.3 +0.5
        comp=Z,45nm,1.5s,SNR=12
HOQ     Hoqain            77.44 291  P      P       10 23 58.4 +0.2
BTNL    Ternell           77.45 340 dP      P       10 23 57.9 +0.1
        comp=Z,32nm,0.8s
MEM     Membach           77.46 340  P      P       10 23 57.9  0.0
MEM                                  pmax   pmax
        comp=Z,84nm,1.0s
MEM     Membach           77.46 340 dP      P       10 23 57.9  0.0
        comp=Z,51nm,1.0s
COPA    Copaceanca        77.52 325 ⇑P      P       10 23 58.5 +0.1
BZS     Buzias            77.54 328 ⇑P      P       10 23 58.3 -0.2
BZS     Buzias            77.54 328  P      P       10 23 58.5 +0.1
BSTI    Sart Tilman       77.58 341 dP      P       10 23 59.2 +0.6
        comp=Z,12nm,0.0s
ACSO    Alum Creek Sta    77.64  42  IAmb   IAmb    10 24 00.3
        comp=Z,40nm,0.9s
UCC     Uccle             77.64 341  IAmb   IAmb    10 23 59.2
        comp=Z,22nm,0.6s
UCC     Uccle             77.64 341 dP      P       10 23 58.7 -0.2
MMNY    Mt. Morris Dam    77.69  37  IAmb   IAmb    10 24 00.2
        comp=Z,58nm,0.8s
BHOU    Houvegnez         77.70 340 dP      P       10 23 59.2 -0.1
HICK    Hickman           77.70  48  IAmb   IAmb    10 24 01.1
        comp=Z,76nm,1.0s
BR131   Keskin Array S    77.74 318  P      P       10 24 01.0 +1.1
        SNR=9.1
BRTR    Keskin Array B    77.74 318  P      P       10 23 60.0 +0.1
        comp=Z,10.0nm,0.9s,baz=73,slow=2.4,SNR=30
BRTR                                 LR     LR      11 03 45.5
        comp=Z,174nm,18.5s,baz=42,slow=40

        comp=Z,10.0nm,0.9s
BRTR    Keskin Array B    77.74 318 i P     P       10 24 01.1 +1.2
BRTR                                 pmax   pmax
        comp=Z,11nm,0.9s
WCI     Wyandotte Cave    77.76  45  P      P       10 24 00.2 +0.4
WCI     Wyandotte Cave    77.76  45  P      P       10 24 00.2 +0.4
WCI                                  pmax   pmax
        comp=Z,102nm,0.8s
WCI     Wyandotte Cave    77.76  45  P      P       10 24 00.3 +0.5
HBAR    Harrisburg        77.77  49  IAmb   IAmb    10 24 02.3
        comp=Z,79nm,1.0s
BCLA    Clavier           77.79 341 dP      P       10 23 60.0 +0.2
        comp=Z,36nm,0.8s
237A    Washetta, Mont    77.83  55  IAmb   IAmb    10 24 01.8
        comp=Z,38nm,0.8s
MCH1    Michaelchurch     77.84 346 eP      P       10 23 59.8 -0.2
MCH1                                 IAmb   IAmb    10 24 00.9
        comp=Z,29nm,0.8s
JMDO    Jabal Madar       77.84 290  P      P       10 24 01.0 +0.5
BGES    Gesves            77.87 341 dP      P       10 24 00.3 +0.1
        comp=Z,30nm,1.1s
BATG    Bathurst New B    77.89  27  IAmb   IAmb    10 24 01.8
        comp=Z,48nm,0.8s
MOA     Molln             77.89 334 i P     P       10 24 00.6 +0.2
        comp=Z,13nm,0.8s
HERR    Herculane         77.90 328 ⇑P      P       10 23 59.9 -0.6
STRD    Stroud            77.92 346 eP      P       10 24 00.5  0.0
STRD                                 IAmb   IAmb    10 24 02.4
        comp=Z,114nm,0.9s
MONM    Monmouth          77.96 346 eP      P       10 24 00.9 +0.3
MONM                                 IAmb   IAmb    10 24 02.2
        comp=Z,93nm,0.8s
PAOC    Oil Creek Stat    77.98  39  IAmb   IAmb    10 24 02.3
        comp=Z,64nm,1.0s
ANTO    Ankara            78.00 318  P      P       10 24 01.2 +0.1
ANTO    Ankara            78.00 318  P      P       10 24 01.3 +0.1
ANTO                                 pmax   pmax
        comp=Z,14nm,0.7s
MORH    Mrgy, Hungar      78.01 331 ⇑P      P       10 24 00.5 -0.6
IWEX    Carrickbyrne,     78.01 349  P      P       10 24 01.3 +0.4
IWEX    Carrickbyrne,     78.01 349 eP      P       10 24 01.1 +0.2
BMRD    Maredsous         78.02 341 dP      P       10 24 01.2 +0.2
        comp=Z,42nm,1.0s
NCB     Newcomb           78.05  34  IAmb   IAmb    10 24 02.2
        comp=Z,47nm,0.8s
RCHB    Rochefort         78.05 341 dP      P       10 24 01.1 -0.1
        comp=Z,28nm,0.9s
ARSA    Arzberg           78.06 333  IAmb   IAmb    10 24 03.1
        comp=Z,64nm,1.6s
ARSA    Arzberg           78.06 333 eP      P       10 24 01.7 +0.4
        comp=Z,35nm,1.5s,SNR=8.9
N53A    Lisbon            78.09  40  IAmb   IAmb    10 24 02.9
        comp=Z,71nm,1.0s
KIRS    Kirsehir-Merke    78.10 317 ⇑P      P       10 24 01.9 +0.1
ARQ     Araqi             78.11 292  P      P       10 24 02.4 +0.5
SWN1    Swindon           78.11 345 eP      P       10 24 01.9 +0.4
BSY     Bisya             78.13 291  P      P       10 24 02.6 +0.5
RSBS    Rosebush, Pemb    78.15 347 eP      P       10 24 01.4 -0.3
RSBS                                 IAmb   IAmb    10 24 03.5
        comp=Z,21nm,0.9s
GAZ     Gaziantep         78.16 314  IAmb   IAmb    10 24 04.9
        comp=Z,50nm,1.5s
MDUB    Mudurnu           78.20 320  IAmb   IAmb    10 24 04.2
        comp=Z,27nm,0.8s
BIOA    Bad Ischl, Aus    78.21 334 eP      P       10 24 02.6 +0.4
        comp=Z,26nm,0.9s,SNR=7.7
R49A    Shelbyville       78.23  44  IAmb   IAmb    10 24 04.0
        comp=Z,50nm,1.3s
O52A    Adamsville        78.23  41  IAmb   IAmb    10 24 03.5
        comp=Z,57nm,0.8s
K57A    Scipio Center     78.23  36  IAmb   IAmb    10 24 03.0
        comp=Z,31nm,0.8s
MDVR    Moldovita         78.24 328 ⇑P      P       10 24 01.8 -0.6
DOU     Dourbes           78.25 341 dP      P       10 24 02.4 +0.1
        comp=Z,20nm,0.0s
VT1     Waterbury         78.27  33  IAmb   IAmb    10 24 03.8
        comp=Z,55nm,0.7s
G62A    West of Eustis    78.27  31  IAmb   IAmb    10 24 04.4
        comp=Z,60nm,0.8s
PAMR    Moraine State     78.29  39  IAmb   IAmb    10 24 04.0
        comp=Z,57nm,0.9s
L56A    Greenwood         78.33  37  IAmb   IAmb    10 24 03.9
        comp=Z,49nm,0.9s
HMNX    Herstmonceux      78.36 344 eP      P       10 24 03.7 +0.9
T47A    Sharon Grove      78.37  46  IAmb   IAmb    10 24 05.0
        comp=Z,94nm,1.2s
J59A    Piesco            78.38  34  IAmb   IAmb    10 24 03.8
        comp=Z,51nm,0.7s
PLVB    Pleven            78.39 325 ⇑P      P       10 24 03.2  0.0
F64A    Sherman           78.43  29  IAmb   IAmb    10 24 04.5
        comp=Z,44nm,0.8s
H06N1   SOCORRO T-PHAS    78.64  74  T      T       11 51 02.8
        SNR=45
WVT     Waverly           78.71  47  P      P       10 24 05.6 +0.5
WVT     Waverly           78.71  47  P      P       10 24 05.6 +0.5
WVT                                  pmax   pmax
        comp=Z,22nm,0.9s
SOKA    Soboth            78.72 333 i P     P       10 24 05.4 +0.3
        comp=Z,26nm,0.8s,SNR=13
LESA    Schwarzleotal     78.73 335 i P     P       10 24 05.8 +0.6
        comp=Z,28nm,0.6s,SNR=6.9
PERS    Pernice           78.74 333 i P     P       10 24 05.5 +0.3
EF02    Christine         78.78  59  IAmb   IAmb    10 24 08.1
        comp=Z,54nm,1.1s
O54A    Avella            78.80  40  IAmb   IAmb    10 24 06.9
        comp=Z,72nm,1.2s
VAL     Valentia          78.85 351  P      P       10 24 06.2 +0.7
KBA     Koelnbreinsper    78.85 334 eP      P       10 24 06.5 +0.6
        comp=Z,60nm,0.5s,SNR=30
EF04    Eagle Ford 04     78.87  58  IAmb   IAmb    10 24 08.1
        comp=Z,35nm,0.9s
ARMA    Armidale          78.92 183  P      P       10 24 07.7 +1.6
        comp=Z,54nm,0.9s
ARMA    Armidale          78.92 183  P      P       10 24 06.9 +0.8
ARMA                                 IAmb   IAmb    10 24 08.4
        comp=Z,50nm,1.0s
ARMA    Armidale          78.92 183  P      P       10 24 07.3 +1.2
P53A    Whipple           78.94  41  IAmb   IAmb    10 24 07.6
        comp=Z,52nm,1.2s
MHTO    MHTO              78.95 289  P      P       10 24 07.3 +0.7
        SNR=11
Q52A    Bidwell           78.99  42  IAmb   IAmb    10 24 07.6
        comp=Z,33nm,0.8s
OBKA    Obir              79.02 333 i P     P       10 24 06.8 +0.1
        comp=Z,19nm,0.6s
BFO     Black Forest      79.04 338  P      P       10 24 06.9 +0.2
BFO     Black Forest      79.04 338  P      P       10 24 06.9 +0.2
BFO                                  pmax   pmax
        comp=Z,45nm,1.2s
HTL     Hartland          79.04 347 eP      P       10 24 06.9 +0.3
HTL                                  IAmb   IAmb    10 24 08.2
        comp=Z,78nm,0.8s
WATA    Walderalm         79.11 336 eP      P       10 24 07.7 +0.4
        comp=Z,76nm,1.4s,SNR=13
WTTA    Wattenberg        79.16 336 eP      P       10 24 08.0 +0.4
        comp=Z,64nm,0.8s,SNR=15
M57A    Sunshine Farm,    79.17  37  IAmb   IAmb    10 24 08.8
        comp=Z,63nm,0.8s
MYKA    Terra Mystica     79.18 334 eP      P       10 24 07.4 -0.2
        comp=Z,12nm,0.5s,SNR=5.3
RETA    Reutte            79.19 336 i P     P       10 24 08.1 +0.4
        comp=Z,16nm,0.7s
J61A    Chester           79.20  33  IAmb   IAmb    10 24 09.0
        comp=Z,38nm,0.8s
OXF     Oxford            79.22  49  IAmb   IAmb    10 24 09.9
        comp=Z,54nm,0.8s
BOVS    Bovan             79.24 327 ⇑P      P       10 24 07.4 -0.5
L59A    Walton            79.26  35  IAmb   IAmb    10 24 08.6
        comp=Z,60nm,0.9s
G65A    Princeton         79.27  29  IAmb   IAmb    10 24 10.1
        comp=Z,136nm,1.5s
SQTA    Sankt Quirin      79.32 336 eP      P       10 24 08.8 +0.5
        comp=Z,34nm,0.7s,SNR=14
U49A    Red Boiling Sp    79.38  46  IAmb   IAmb    10 24 10.2
        comp=Z,34nm,0.8s
ABTA    Abfaltersbach     79.39 335 eP      P       10 24 08.9 +0.1
        comp=Z,11nm,0.6s,SNR=7.4
UMZA    Um Al Zommool     79.41 292  P      P       10 24 09.2 +0.1
T50A    Nancy             79.41  45  IAmb   IAmb    10 24 10.3
        comp=Z,53nm,0.9s
ECH     Echery            79.43 339  IAmb   IAmb    10 24 09.9
        comp=Z,40nm,1.0s
ECH     Echery            79.43 339  P      P       10 24 09.1 +0.2
ECH                                  pmax   pmax
        comp=Z,42nm,1.0s
SSPA    Standing Stone    79.46  38  P      P       10 24 09.3 +0.2

SSPA                                 IAmb   IAmb    10 24 10.4
        comp=Z,38nm,0.9s
SSPA    Standing Stone    79.46  38  P      P       10 24 09.3 +0.2
SSPA                                 PcP    PcP     10 24 16.9 -0.2
MCWV    Mont Chateau      79.46  40  IAmb   IAmb    10 24 10.9
        comp=Z,70nm,1.0s
S51A    Beattyville       79.48  44  IAmb   IAmb    10 24 10.6
        comp=Z,37nm,0.9s
PLAL    Pickwick Lake     79.50  48  IAmb   IAmb    10 24 10.4
        comp=Z,122nm,1.6s
SLE     Schleitheim       79.53 338  P      P       10 24 09.5 +0.1
SLE                                  pmax   pmax
        comp=Z,53nm,1.3s
LMN     Caledonia Moun    79.55  27  IAmb   IAmb    10 24 10.7
        comp=Z,58nm,0.9s
BAND    Balkesir-Ban      79.59 322 ⇓P      P       10 24 10.8 +1.0
Q54A    Coxs Mills        79.60  41  IAmb   IAmb    10 24 11.5
        comp=Z,75nm,1.2s
DAVA    Damuels           79.61 337 eP      P       10 24 10.0  0.0
        comp=Z,30nm,0.9s,SNR=8.8
FETA    Feichten          79.63 336 eP      P       10 24 10.5 +0.4
        comp=Z,32nm,0.9s,SNR=13
CEY     Cerknica          79.75 333 i P     P       10 24 10.1 -0.6
N58A    Sunbury           79.76  37  IAmb   IAmb    10 24 11.8
        comp=Z,49nm,0.9s
CCA1    Carnmenellis      79.94 347 eP      P       10 24 11.5  0.0
CCA1                                 IAmb   IAmb    10 24 13.0
        comp=Z,82nm,0.8s
RDO     Rodhopi           79.95 324  IAmb   IAmb    10 24 13.0
        comp=Z,48nm,0.9s
DAVOX   Davos/Dischmat    80.08 336  LR     LR      11 03 21.2
        comp=Z,312nm,19.5s,baz=11,slow=38
MZR     Muzera            80.21 294  P      P       10 24 13.4 -0.1
Q56A    Snyder Ridge,     80.26  40  IAmb   IAmb    10 24 15.0
        comp=Z,50nm,1.1s
PAGS    Pennsylvania G    80.28  38  IAmb   IAmb    10 24 14.5
        comp=Z,77nm,1.0s
HRV     Adam Dziewonsk    80.29  33  P      P       10 24 14.2 +0.6
HRV                                  IAmb   IAmb    10 24 15.1
        comp=Z,41nm,0.9s
HRV     Adam Dziewonsk    80.29  33  P      P       10 24 13.2 -0.3
BALB    Balikesir         80.29 321  IAmb   IAmb    10 24 14.5
        comp=Z,86nm,1.1s
SWET    Sewanee           80.36  47  IAmb   IAmb    10 24 15.1
        comp=Z,108nm,1.3s
S54A    Dingess, Beckl    80.37  42  IAmb   IAmb    10 24 15.5
        comp=Z,34nm,0.8s
CMSA    Cobar Meteorol    80.41 188  P      P       10 24 15.2 +1.2
        comp=Z,74nm,0.9s
CMSA    Cobar Meteorol    80.41 188  P      P       10 24 14.9 +0.9
VBMS    Vicksburg         80.47  51  IAmb   IAmb    10 24 16.9
        comp=Z,83nm,1.3s
R55A    Marlinton         80.49  41  IAmb   IAmb    10 24 16.4
        comp=Z,72nm,0.9s
TUE     Stuetta           80.50 337  IAmb   IAmb    10 24 16.6
        comp=Z,70nm,0.9s
RAR     Rarotonga         80.53 138  LR     LR      10 54 45.4
        comp=Z,85nm,21.6s,baz=294,slow=32
TAOE    Nuku Hiva Isla    80.63 115 eS      S       10 34 11.8 -7.3
        comp=Z,60nm,22.8s
TAOE    Nuku Hiva Isla    80.63 115 eLR     LR      10 49 35.7
        comp=Z,683nm,22.9s
UCCT    U. Connecticut    80.66  34  IAmb   IAmb    10 24 16.8
        comp=Z,81nm,1.0s
CLF     Chambon-Foret     80.70 342  P      P       10 24 16.4 +0.7
PAL     Palisades         80.72  35  IAmb   IAmb    10 24 16.9
        comp=Z,47nm,0.8s
CPNY    Central Park      80.88  35  IAmb   IAmb    10 24 17.5
        comp=Z,56nm,0.9s
TEOL    Teolo             80.90 335  IAmb   IAmb    10 24 20.4
        comp=Z,84nm,1.0s
Z47A    Carrollton        80.93  49  IAmb   IAmb    10 24 18.5
        comp=Z,55nm,0.8s
VAY     Valandovo         80.94 326 i P     P       10 24 17.0  0.0
KNT     Kendrikon         80.95 325  P      P       10 24 17.6 +0.5
KNT                                  pmax   pmax
        comp=Z,64nm,1.0s
MANT    Manisa            80.97 320  IAmb   IAmb    10 24 18.4
        comp=Z,52nm,0.9s
SALO    Salr              80.98 336  IAmb   IAmb    10 24 18.1
        comp=Z,75nm,0.9s
TKL     Tuckaleechee C    81.02  45  LR     LR      11 04 15.3
        comp=Z,177nm,18.4s,baz=334,slow=39
L64A    Middleborough     81.04  33  IAmb   IAmb    10 24 19.0
        comp=Z,74nm,0.8s
LOR     Lormes            81.08 341  P      P       10 24 17.0 -0.7
PDG     Podgorica         81.15 328  IAmb   IAmb    10 24 18.5
        comp=Z,56nm,0.7s
STKA    Stephens Creek    81.20 191  P      P       10 24 18.9 +0.6
        comp=Z,129nm,1.2s
STKA    Stephens Creek    81.20 191  P      P       10 24 17.9 -0.4
        comp=Z,18nm,0.7s,baz=11,slow=6.8,SNR=27
STKA                                 LR     LR      10 58 05.0
        comp=Z,166nm,21.8s,baz=24,slow=34
        comp=Z,18nm,0.7s
STKA    Stephens Creek    81.20 191  P      P       10 24 18.5 +0.2
U54A    Nelsons Funny     81.20  43  IAmb   IAmb    10 24 20.0
        comp=Z,38nm,0.9s
Y49A    Blount Mountai    81.22  48  IAmb   IAmb    10 24 19.8
        comp=Z,105nm,1.6s
BLA     Blacksburg        81.26  42  IAmb   IAmb    10 24 20.4
        comp=Z,44nm,1.0s
RAO     Raoul Island      81.39 156  LR     LR      10 59 21.2
        comp=Z,119nm,18.4s,baz=348,slow=35
PHP     Peshkopia         81.39 327  P      P       10 24 19.3 -0.2
PHP                                  pmax   pmax
        comp=Z,54nm,1.2s
X51A    Calhoun           81.40  46  IAmb   IAmb    10 24 21.0
        comp=Z,54nm,1.3s
ROSF    Rostrenen         81.43 346  P      P       10 24 20.1 +0.6
ROSF                                 pmax   pmax
        comp=Z,206nm,1.0s
346A    Big Creek Wild    81.67  51  IAmb   IAmb    10 24 23.0
        comp=Z,44nm,0.8s
OHR     Ohrid             81.77 327 i P     P       10 24 21.1 -0.4
CSS     Mathiatis         81.78 315  IAmb   IAmb    10 24 24.2
        comp=Z,33nm,0.8s
MEEK    Meekatharra       81.84 212  P      P       10 24 21.9 +0.1
        comp=Z,47nm,1.0s
ELL     Elmali            81.85 318  IAmb   IAmb    10 24 23.3
        comp=Z,38nm,0.9s
BG3     Lake Jocassee     81.96  45  IAmb   IAmb    10 24 24.3
        comp=Z,48nm,1.0s
U56A    King              81.99  42  IAmb   IAmb    10 24 24.1
        comp=Z,37nm,1.1s
ASF     Jabal al Asfar    82.33 311  LR     LR      11 04 45.1
        comp=Z,73µm,20.1s,baz=25,slow=38
PPT     Papeete           82.37 128  LR     LR      10 53 49.5
        comp=Z,213nm,21.8s,baz=303,slow=30
MMAI    Mount Meron Ar    82.38 313  P      P       10 24 25.3 +0.4
        comp=Z,27nm,0.5s,baz=36,slow=6.2,SNR=51
MMAI                                 LR     LR      11 04 39.1
        comp=Z,139nm,19.0s,baz=17,slow=38
        comp=Z,27nm,0.5s
PPT2    Papeete2          82.39 128 eS      S       10 34 40.8 +3.8
        comp=Z,391nm,29.2s
PPT2    Papeete2          82.39 128 eLR     LR      10 50 13.8
        comp=Z,371nm,22.0s
PPT2                                eLR     LR      10 50 22.4
        comp=Z,334nm,23.2s
MSSA    Maissana          82.46 336  IAmb   IAmb    10 24 26.3
        comp=Z,61nm,1.0s
BNI     Bardonecchia      82.51 338  IAmb   IAmb    10 24 27.4
        comp=Z,44nm,0.7s
BNI     Bardonecchia      82.51 338  P      P       10 24 26.4 +1.0
BNI                                  pmax   pmax
        comp=Z,67nm,0.8s
KMSC    Kings Mountain    82.57  43  IAmb   IAmb    10 25 54.7
        comp=Z,28nm,0.5s
SHAO    Shalim            82.62 289  P      P       10 24 26.5 +0.3
OSSC    Osservatorio P    82.70 334  IAmb   IAmb    10 24 28.2
        comp=Z,65nm,0.9s
FORT    Forrest           82.80 203  P      P       10 24 27.5 +0.9
        comp=Z,114nm,0.8s
SSB     Saint Sauveur     82.81 339  P      P       10 24 27.6 +0.7
SSB                                  sP     sP      10 24 49.7 +2.0
ORIF    Oris-en-Rattie    82.83 338  P      P       10 24 28.3 +1.2
ORIF                                 pmax   pmax
        comp=Z,52nm,0.6s
YNG     Young             82.94 185  P      P       10 24 28.5 +1.2
        comp=Z,36nm,1.3s
CAMP    Campotosto        82.97 332  IAmb   IAmb    10 24 30.3
        comp=Z,49nm,0.8s
BBOO    Buckleboo         82.98 196  P      P       10 24 28.1 +0.5
        comp=Z,53nm,1.0s
BBOO    Buckleboo         82.98 196  IAmb   IAmb    10 24 28.8
        comp=Z,29nm,0.8s
```

BBOO	Buckleboo	82.98	196	P	P	10 24 27.7	+0.1
152A	Waverly Hall	83.01	47	IAmb	IAmb	10 24 29.3	
	comp=Z,73nm,1.5s						
DOK	Doka	83.11	290	P	P	10 24 28.7	-0.1
	SNR=9.7						
HTT	Hallett	83.11	193	P	P	10 24 29.1	+0.8
	comp=Z,15nm,1.2s						
HTT	Hallett	83.11	193	P	P	10 24 28.8	+0.5
HTT	Hallett	83.11	193	P	P	10 24 29.1	+0.8
CESX	Cesi	83.15	333	IAmb	IAmb	10 24 31.2	
	comp=Z,37nm,1.0s						
W57A	Gilead	83.16	43	IAmb	IAmb	10 24 30.2	
	comp=Z,36nm,1.0s						
DMTO	DMTO	83.28	289	P	P	10 24 29.7	+0.1
BIRD	Birdtown, Kers	83.38	43	IAmb	IAmb	10 24 31.4	
	comp=Z,63nm,1.1s						
GHAJ	Ghor Haditha	83.69	311	IAmb	IAmb	10 24 33.0	
	comp=Z,72nm,1.2s						
WHFO	Wadi Hawf	83.86	290	P	P	10 24 32.5	-0.2
	SNR=8.1						
CNB	Canberra Magne	83.89	185	P	P	10 24 32.9	+0.6
RBK	Rabkut	83.90	289	P	P	10 24 32.6	-0.3
CAN	Canberra	83.92	185	P	P	10 24 30.4	-2.0
CAN	Canberra	83.92	185	P	P	10 24 33.4	+1.0
X58A	Rowland	83.96	42	IAmb	IAmb	10 24 34.4	
	comp=Z,75nm,1.1s						
RAYN	Ar Rayn	84.53	300	P	P	10 24 36.3	+0.3
RAYN	Ar Rayn	84.53	300	P	P	10 24 36.1	0.0
RAYN				IAmb	IAmb	10 24 37.1	
	comp=Z,43nm,0.7s						
RAYN	Ar Rayn	84.53	300	P	P	10 24 36.1	0.0
RAYN				pmax	pmax		
	comp=Z,43nm,0.7s						
RAYN	Ar Rayn	84.53	300	P	P	10 24 36.1	0.0
ABTO	Aybut	84.58	290	P	P	10 24 36.4	0.0
	SNR=6.0						
MORW	Morawa	84.97	214	P	P	10 24 38.4	+0.6
	comp=Z,42nm,0.9s						
MORW	Morawa	84.97	214	IAmb	IAmb	10 24 39.0	
	comp=Z,49nm,1.1s						
MORW	Morawa	84.97	214	P	P	10 24 38.2	+0.4
KMBL	Kambalda	85.11	208	P	P	10 24 38.3	-0.1
	comp=Z,13nm,1.0s						
IDI	Anoyia	85.23	321	IAmb	IAmb	10 24 39.5	
	comp=Z,61nm,1.1s						
OUZ	Omahuta	85.28	165	P	P	10 24 41.3	+2.2
EIL	Elat	85.33	311	LR	LR	11 06 39.7	
	comp=Z,305nm,21.9s,baz=360,slow=38						
ARPS	Mount Arapiles	85.99	191	P	P	10 24 43.4	+0.8
	comp=Z,30nm,0.9s						
CEST	Esterri de Car	86.09	341	IAmb	IAmb	10 24 45.5	
	comp=Z,28nm,0.8s						
BLDU	Ballidu	86.14	212	P	P	10 24 43.6	+0.1
	comp=Z,46nm,0.8s						
BLDU	Ballidu	86.14	212	P	P	10 24 43.2	-0.4
TOO	Toolangi	86.41	188	P	P	10 24 46.2	+1.5
	comp=Z,20nm,1.5s						
TOO	Toolangi	86.41	188	P	P	10 24 46.2	+1.5
CORI	Orista	86.51	340	IAmb	IAmb	10 25 13.8	
	comp=Z,28nm,1.1s						
KLBR	Kellerberrin	86.66	211	P	P	10 24 46.1	0.0
	comp=Z,139nm,0.7s						
KLBR	Kellerberrin	86.66	211	P	P	10 24 45.7	-0.4
VAE	Valguarnera	87.24	330	LR	LR	11 08 16.1	
	comp=Z,352nm,18.0s,baz=30,slow=39						
TBI	Tubuai	87.25	131	eLR	LR	10 52 32.7	
	comp=Z,2μm,24.8s						
TBI				eLR	LR	10 52 33.2	
	comp=Z,1μm,25.5s						
MUN	Mundaring	87.55	212	P	P	10 24 50.2	-0.2
	comp=Z,42nm,1.0s						
MUN	Mundaring	87.55	212	P	P	10 24 50.6	+0.2
MUN	Mundaring	87.55	212	P	P	10 24 50.2	-0.2
NWAO	Narrogin (SRO)	88.06	211	P	P	10 24 52.3	-0.5
	comp=Z,75nm,0.9s						
NWAO	Narrogin (SRO)	88.06	211	P	P	10 24 51.6	-1.2
NWAO	Narrogin (SRO)	88.06	211	LR	LR	11 03 57.0	
	comp=Z,54nm,20.9s,baz=296,slow=35						
NWAO	Narrogin (SRO)	88.06	211	P	P	10 24 51.6	-1.2
NWAO	Narrogin (SRO)	88.06	211	P	P	10 24 53.1	+0.3
NWAO	Narrogin (SRO)	88.06	211	P	P	10 24 51.6	-1.2
NWAO				pmax	pmax		
	comp=Z,50nm,0.8s						
NWAO	Narrogin (SRO)	88.06	211	P	P	10 24 53.0	+0.1
PGAV	Gavieira, Arco	88.42	348	eP	P	10 24 54.7	-0.1
HIZ	Hauiti	88.70	165	P	P	10 24 57.3	+1.6
URZ	Urewera	88.88	163	LR	LR	10 55 29.4	
	comp=Z,97nm,21.5s,baz=356,slow=29						
POLO	Lamas de Olo	88.93	347	eP	P	10 24 56.2	-1.0
PVRL	Vila Real	89.02	347	eP	P	10 24 57.4	-0.2
MVO	Moncorvo	89.02	347	eLR	LR	10 35 01.9	
MVO				i IAMs_20	IAMs_20	10 39 22.2	
	comp=Z,533nm,20.0s						
RTZ	Ruatahuna	89.20	163	IAmb	IAmb	10 24 58.1	
	comp=Z,35nm,1.0s						
PVIS	Viseu	89.59	347	eP	P	10 24 59.5	-0.8
BKZ	Black Stump Fm	89.64	163	IAmb	IAmb	10 24 59.8	
	comp=Z,32nm,1.3s						
MTE	Manteigas	89.85	347	eP	P	10 25 01.2	-0.3
MTE				eLR	LR	10 33 52.4	
MTE				i IAMs_20	IAMs_20	10 39 46.2	
	comp=Z,424nm,20.0s						
CMIG	Matias Romero	89.92	64	LR	LR	11 00 56.9	
	comp=Z,66nm,21.3s,baz=358,slow=33						
ESBB	Sonseca Array	89.95	344	IAmb	IAmb	10 25 02.9	
	comp=Z,28nm,1.3s						
ESDC	Sonseca Array	89.95	344	P	P	10 25 01.2	-0.8
	comp=Z,9.0nm,0.9s,baz=6.5,slow=4.0,SNR=32						
ESDC				LR	LR	11 10 16.9	
	comp=Z,380nm,20.7s,baz=20,slow=39						
	comp=Z,9.0nm,0.9s						
ESDC	Sonseca Array	89.95	344	P	P	10 25 01.2	-0.8
PAB	San Pablo	90.15	344	P	P	10 25 02.4	-0.6
PAB				IAmb	IAmb	10 25 03.1	
	comp=Z,40nm,1.7s						
PAB	San Pablo	90.15	344	P	P	10 25 02.4	-0.6
PAB				pmax	pmax		
	comp=Z,40nm,1.7s						
PCAS	Casmilo, Conde	90.33	347	eP	P	10 25 03.1	-0.6
PCBR	Castelo Branco	90.39	347	eP	P	10 25 03.6	-0.3
KEST	Kesra	90.45	333	P	P	10 25 03.9	-0.6
	comp=Z,29nm,0.8s,baz=43,slow=2.4,SNR=15						
KEST				LR	LR	11 10 43.0	
	comp=Z,341nm,19.7s,baz=30,slow=39						
	comp=Z,29nm,0.8s						
KEST	Kesra	90.45	333	P	P	10 25 04.8	+0.4
KEST	Kesra	90.45	333	P	P	10 25 04.7	+0.3
PMRV	Marv??o	90.78	346	eLR	LR	10 33 55.7	
PMRV				i IAMs_20	IAMs_20	10 40 23.4	
	comp=Z,520nm,22.0s						
MRZ	Mangatainoka R	90.92	164	IAmb	IAmb	10 25 06.0	
	comp=Z,13nm,0.9s						
BFZ	Birch Farm	91.06	164	P	P	10 25 06.8	+0.1
PESTR	Estremoz	91.36	346	eP	P	10 25 07.6	-0.9
PARRA	Arraiolos	91.47	347	eP	P	10 25 08.4	-0.7
TAU	Tasmania Unive	91.57	186	P	P	10 25 09.1	+0.2
MOE	Montemor	91.81	347	eP	P	10 25 11.3	+0.7
PBAR	Barrancos	91.94	346	eP	P	10 25 10.5	-0.7
MESJ	Messejana	92.46	347	eP	P	10 25 13.4	-0.2
PCVE	Castro Verde	92.63	347	eP	P	10 25 14.0	-0.4
PVAQ	Vaqueiros	92.81	346	eLR	LR	10 35 32.0	
PVAQ				i IAMs_20	IAMs_20	10 41 23.1	
	comp=Z,620nm,22.0s						
ATD	Arta Tunnel	95.46	294	LR	LR	11 13 55.8	
	comp=Z,18nm,20.1s,baz=16,slow=39						
TORD	Torodi Ar. Bea	113.94	331	PKP	PKiKP	10 30 41.2	-0.5
	comp=Z,3.0nm,0.6s,baz=27,slow=4.1,SNR=4.1						
DBIC	Dimbokro	122.00	336	PKP	PKPdf	10 30 56.3	-1.0
	comp=Z,14nm,0.8s,baz=29,slow=1.7,SNR=11						
DBIC	Dimbokro	122.00	336		PKPdf	10 30 57.1	-0.2
TEFE	Tefe	123.64	50	eP	PKiKP	10 31 00.7	0.0
LSZ	Lusaka	125.36	289		PKiKP	10 31 04.8	+0.7
LSZ	Lusaka	125.36	289	PKIKP	PKiKP	10 31 04.8	+0.7
VNDA	Vanda	126.12	178	PKP	PKPdf	10 31 02.5	-0.8
	comp=Z,3.7nm,0.6s,baz=295,slow=3.2,SNR=23						
VNDA	Vanda	126.12	178		PKPdf	10 31 03.3	+0.1
ITTB	Itaituba	128.58	41	eP	PKPdf	10 31 09.8	0.0
TMAB	Tom-Au,PA,Br	129.69	31	eP	PKPdf	10 31 11.7	-0.3
BROLN	Tlhalogang	130.21	285	i P	PKiKP	10 31 13.3	-0.3
NPGB	Novo Progresso	131.13	42	eP	PKPdf	10 31 14.4	-0.3
MREMI	Moremi	131.20	283	i P	PKiKP	10 31 15.5	-0.1
KHWEE	KHWEE	132.03	285	i P	PKiKP	10 31 17.2	-0.1
LPAZ	La Paz	132.27	63	PKP	PKiKP	10 31 18.1	-0.5
	comp=Z,12nm,0.9s,baz=354,slow=3.6,SNR=28						
LPAZ	La Paz	132.27	63	eP	PKPdf	10 31 16.6	-0.9
PRPB	Parauapebas	132.60	35	eP	PKPdf	10 31 17.1	-0.5
LPHEP	Lephephe	132.78	284	i P	PKiKP	10 31 18.4	-0.4
VILB	Vilhena	133.94	51	eP	PKPdf	10 31 19.7	-0.3
GRTLG	Ghanzi	134.27	290	i P	PKPdf	10 31 20.9	+0.4
CLDB	Colider	134.32	45	eP	PKPdf	10 31 20.4	-0.3
PDRB	Porto dos Gac	134.52	46	eP	PKPdf	10 31 20.8	-0.3
KGCAE	Kacgae	134.74	288	i P	PKiKP	10 31 23.5	+0.7
SKOMA	Sekoma	134.84	284	i P	PKiKP	10 31 23.0	+0.1
SMTB	Santa Maria do	135.91	33	eP	PKPdf	10 31 23.2	-0.4
PTLB	Pontes e Lacer	136.59	52		PKiKP	10 31 25.8	-0.8
PTLB	Pontes e Lacer	136.59	52	eP	PKPdf	10 31 24.6	-0.2
BOSA	Boshof	136.80	279	PKhKP	PKPpre	10 31 14.4	
	comp=Z,3.7nm,0.9s,baz=4.7,slow=6.2,SNR=5.5						
BOSA				PKP	PKPdf	10 31 25.9	+0.9
	comp=Z,13nm,0.6s,baz=76,slow=1.7,SNR=23						
SNDB	Serra Nova Dou	137.29	40	eP	PKPdf	10 31 25.9	-0.3
H03N2	Juan Fernandez	137.49	89	T	T	13 04 34.6	
	baz=310,slow=77,SNR=235						
H03N1	Juan Fernandez	137.50	89	T	T	13 04 35.7	
	baz=310,slow=77,SNR=235						
H03N3	Juan Fernandez	137.50	89	T	T	13 04 35.4	
	baz=310,slow=77,SNR=307						
QSPA	South Pole Qui	138.54	180	PKhKP	PKPpre	10 31 15.7	
	comp=Z,5.6nm,0.6s,baz=304,slow=0.9,SNR=15						
QSPA				PKP	PKiKP	10 31 28.2	-0.8
	comp=Z,8.8nm,0.8s,baz=312,slow=1.5,SNR=6.8						
SALV	Santo Antonio	138.72	48	eP	PKPdf	10 31 28.5	-0.2
NBTA	Tacaratu-PE	138.96	20	eP	PKPdf	10 31 28.8	-0.5
BDFB	Brasilia	141.94	38	PKhKP	PKPpre	10 31 29.6	
	comp=Z,6.8nm,0.6s,baz=284,slow=5.1,SNR=9.2						
BDQN	Bodoquena, MS	141.99	53	eP	PKPdf	10 31 34.2	-0.3
C2SB	Chapadao do Su	142.56	47	eP	PKPdf	10 31 35.4	-0.2
AQDB	Aquidauana	142.56	52		PKPdf	10 31 34.0	-1.5
AQDB	Aquidauana	142.56	52	eP	PKPdf	10 31 35.4	-0.2
SYO	Syowa Base	143.32	213	⇑ePdiff	Pdif	10 29 01.4	+2.1
CFA	Coronel Fontan	143.36	78	PKhKP	PKPpre	10 31 31.8	
	comp=Z,5.3nm,0.5s,baz=299,slow=3.1,SNR=10						
IPMB	Ipameri, GO	143.97	40	eP	PKPbc	10 31 36.7	+0.6
NBIT	Itapeh - BA	144.21	24	eP	PKPdf	10 31 37.9	-0.7
ITRB	Iturama	144.53	44	eP	PKPbc	10 31 38.3	+0.5
CMC01	Camacan, BA	144.59	25	eP	PKPdf	10 31 38.7	-0.6
AMBA	Amambai (Brazi	144.95	53	eP	PKPdf	10 31 39.9	+0.2
PMNB	Patos De Minas	145.19	37	eP	PKPab	10 31 40.1	0.0
GUA01	Guaratinga, BA	145.68	26	eP	PKPbc	10 31 41.5	0.0
DIAM	Diamantina, MG	146.03	33	eP	PKPbc	10 31 42.3	-0.4
CPUP	Villa Florida	146.35	60	PKPbc	PKPbc	10 31 43.0	-0.2
	comp=Z,12nm,0.6s,baz=175,slow=2.9,SNR=128						
CPUP	Villa Florida	146.35	60	eP	PKPbc	10 31 43.1	-0.2
BB19B	Bebedouro	146.55	43	eP	PKPdf	10 31 42.7	+0.2
PLCA	Paso Flores	147.10	93	PKPbc	PKPbc	10 31 44.5	-0.7
	comp=Z,33nm,0.9s,baz=276,slow=2.9,SNR=50						
PLCA	Paso Flores	147.10	93		PKPdf	10 31 43.6	+0.7
PLCA	Paso Flores	147.10	93	PKIKP	PKPdf	10 31 43.6	+0.7
PLCA	Paso Flores	147.10	93	eP	PKPbc	10 31 44.5	-0.7
SJMB	Sao Joao De Ma	147.25	29	eP	PKPdf	10 31 43.0	-0.7
LDASE	Londrina, Braz	147.32	48	eP	PKPdf	10 31 44.7	+0.9
LL02	Futaleuf	147.40	98		PKPbc	10 31 46.4	+0.6
BSFB	Barra de Sao F	147.48	29	eP	PKPdf	10 31 44.7	+0.6
PTGB	Pitanga	147.94	51	eP	PKPdf	10 31 44.7	-0.1
FRTB	Fartura	148.04	46	eP	PKPdf	10 31 45.9	+1.0
BSCB	Bom Sucesso	148.07	37	eP	PKPdf	10 31 45.5	+0.4
RIB01	Linhares ES	148.07	28	eP	PKPdf	10 31 45.5	+0.4
RCLB	Rio Claro- Sao	148.18	42	eP	PKPdf	10 31 45.7	+0.5
VAO	Valinhos	148.94	42	eP	PKPbc	10 31 48.5	-2.0
SPB	Sao Paulo	149.24	43	eP	PKPdf	10 31 47.5	+0.7
PSAL	Palomas, Salto	149.70	66	eP	PKPdf	10 31 48.7	+1.4
ITAB	Concordia	149.94	54	eP	PKPdf	10 31 49.9	+2.0
TRQA	Tornquist	151.35	82		PKiKP	10 31 56.1	-0.2
TRQA	Tornquist	151.35	82	PKIKP	PKiKP	10 31 56.1	-0.2
CPSB	Cacapava Do Su	151.66	60	eP	PKPdf	10 31 51.9	+1.4
NVL	N'lazarevskaya	152.03	205	ePKIKP	PKPbc	10 31 54.9	-1.4
NVL				i		10 32 02.6	
NVL				e		10 35 43.3	
NVL				ePPP	PPP	10 39 09.0	
NVL				eSS	SS	10 55 09.4	+7.9
NVL				eSSS	SSS	11 00 55.8	
NVL				pmax	pmax		
	comp=Z,49nm,0.9s						
NVL				pmax	pmax		
	comp=Z,39nm,0.9s						
PLTB	Pedras Altas	152.57	62		PKPdf	10 31 53.0	+1.3
PLTB					PKiKP	10 31 59.4	+0.4
PLTB	Pedras Altas	152.57	62	eP	PKPdf	10 31 52.5	+0.7
TROLL	Troll, Antarti	153.54	199	⇓PKPab	PKPab	10 32 12.5	-0.1
TROLL				⇑PKPdf	PKPdf	10 31 51.9	-0.1
	comp=Z,2μm,1.5s						
PMSA	Palmer Station	153.89	142		PKPab	10 32 15.5	+1.5
SNAA	Sanae	154.88	196	⇑PKPab	PKPab	10 32 17.8	-0.3
SNAA				⇑PKPdf	PKPbc	10 32 01.5	-1.0
	comp=Z,184nm,1.0s						
SNAA	Sanae	154.88	196	PKPbc	PKPbc	10 32 01.8	-0.8
	comp=Z,8.6nm,0.9s,baz=183,slow=3.4,SNR=11						
SNAA				PKPab	PKPab	10 32 17.9	-0.2
	comp=Z,25nm,0.8s,baz=110,slow=3.3,SNR=27						
SNAA	Sanae	154.88	196		PKPdf	10 31 55.3	+1.5
SNAA					PKPbc	10 32 02.2	-0.4
SNAA					pPKPbc	10 32 18.5	+0.1
SNAA	Sanae	154.88	196	PKIKP	PKPdf	10 31 54.1	+0.2
VNA2	Neumayer--Watz	156.30	194	⇑PKPab	PKPab	10 32 23.1	-1.1
	baz=128,slow=5.0						
VNA2				⇑PKPdf	PKPdf	10 32 00.1	+4.4
	comp=Z,12nm,0.2s,baz=34,slow=36						
VNA3	Neumayer Olymp	156.37	192	⇑PKPab	PKPab	10 32 24.0	-0.5
VNA3				⇑PKPdf	PKPdf	10 32 04.8	+9.0
	comp=Z,11nm,0.9s						
VNA1	Neumayer--Stat	156.68	194	⇑PKPab	PKPab	10 32 25.8	0.0
VNA1				⇑PKPdf	PKPdf	10 32 06.0	+10
	comp=Z,3.2nm,0.2s						

SOME ***11*** *10:25:45.9, 41°.82N×80°.42E, h15^{km}*
NNC ***11*** *10:25:46.4±1.2, 41°.79N×80°.36E, h0^{km}, mb3.9, mpv3.6,*
Error ellipse: s-maj=7.9km s-min=5.9km az=148.0
KRNET ***11*** *10:25:46.6±0.1, 41°.77N×80°.38E, mb3.2*
ISC 11 10:25:49.4±1.7**, 41°.91N**±0°.06×**80°.35E**±0°.06**, h10^{km}, n56,**
σ**1^{s}.47**/88**, 18C-22D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SHLS	Shalkode	1.41	332	P	Pn	10 26 13.2	-2.0
	88nm,0.2s						
SHLS				S	Sn	10 26 33.2	-0.6
	238nm,0.2s						
SHLS	Shalkode	1.41	332	eP	Pn	10 26 13.2	-2.0
	88nm,0.2s						
SHLS				eS	Sn	10 26 33.2	-0.6
	238nm,0.2s						
KTMS	Ketmen	1.53	0	P	Pn	10 26 16.7	-0.2
	22nm,0.2s						
KTMS				S	Sg	10 26 38.8	+0.2
	30nm,0.2s						
KTMS	Ketmen	1.53	0	eP	Pn	10 26 16.7	-0.2
	22nm,0.2s						
KTMS				eS	Sg	10 26 38.8	+0.2
	30nm,0.2s						
PDGK	Podgornoye	1.55	336	⇓P	Pb	10 26 17.2	-1.1
	12nm,0.3s						
PDGK				⇓S	Sg	10 26 39.7	+0.5
	57nm,0.6s						
PRZ	Przheval'sk	1.56	292	⇑iP	Pb	10 26 17.5	-0.9
PRZ				⇑iS	Sg	10 26 39.4	-0.1
UZB	Uzynbulak	1.57	322	P	Pb	10 26 18.1	-0.6
	85nm,0.2s						
UZB				S	Sg	10 26 41.5	+1.4
	80nm,0.2s						
UZB	Uzynbulak	1.57	322	eP	Pb	10 26 18.1	-0.6
	85nm,0.2s						
UZB				eS	Sg	10 26 41.5	+1.4
	80nm,0.2s						
TARG	Taragay, Kyrgy	1.91	265	⇑iP	Pb	10 26 22.4	-2.2
TARG				⇑iS	Sb	10 26 48.5	-0.1
KPKS	Kokpek	1.98	322	Pg	Pb	10 26 25.0	-0.5
	0.3nm,0.1s						
KPKS				Lg	Lg	10 26 53.3	
	46nm,0.4s						
KURS	Kuram	2.25	315	Pg	Pb	10 26 29.7	-0.4
	26nm,0.3s						
KURS				Lg	Lg	10 27 01.7	
	57nm,0.6s						
KDJ	Kajisay	2.37	276	⇑iP	Pn	10 26 29.2	+0.7
KDJ				⇑iS	Sb	10 27 00.1	-1.6
BLB	Baldybastay	2.58	328	Pg	Pb	10 26 33.1	-2.7
	17nm,0.2s						
BLB				Lg	Lg	10 27 07.2	
	128nm,0.4s						
KNOS	Konyrlen	2.59	341	Pg	Pb	10 26 33.3	-2.7
	10.0nm,0.2s						
KNOS				Lg	Lg	10 27 07.6	
	87nm,0.4s						
KOTS	Kotyrbulak	2.73	300	Pg	Pb	10 26 36.0	-2.4
	15nm,0.3s						
KOTS				Lg	Lg	10 27 12.1	
	72nm,0.5s						
KOTS	Kotyrbulak	2.73	300	eP	Pb	10 26 36.0	-2.4
	15nm,0.3s						
KOTS				eS	Sb	10 27 12.1	+0.1
	72nm,0.5s						
MDOK	Medeo	2.74	298	Pg	Pb	10 26 37.7	-0.9
	19nm,0.4s						
MDOK				Lg	Lg	10 27 15.3	
	34nm,0.6s						
TNSS	Tian-Shan	2.76	295	Pg	Pb	10 26 38.2	-0.7
	4.7nm,0.2s						
TNSS				Lg	Lg	10 27 15.7	
	17nm,0.4s						
TNSS	Tian-Shan	2.76	295	eP	Pb	10 26 38.2	-0.7
	4.7nm,0.2s						
TNSS				eS	Sg	10 27 15.7	-2.2
	17nm,0.4s						
ARXS	Arharly	2.95	322	Pg	Pb	10 26 42.6	+0.5
	4.9nm,0.2s						
ARXS				Lg	Lg	10 27 23.4	
	91nm,0.5s						
ARXS	Arharly	2.95	322	eP	Pb	10 26 42.5	+0.5
ARXS				eS	Sg	10 27 23.4	-0.7
IZV	Izvestkoviy	2.98	293	Pg	Pb	10 26 41.4	-1.3
	4.3nm,0.2s						
IZV				Lg	Lg	10 27 21.4	
	79nm,0.5s						
IZV	Izvestkoviy	2.98	293	eP	Pb	10 26 41.4	-1.3
	4.3nm,0.2s						
IZV				eS	Sb	10 27 21.4	+2.1
	79nm,0.5s						
ULHL	Ulahol	3.08	278	⇓iP	Pn	10 26 38.7	+0.5
ULHL				⇓iS	Sn	10 27 17.3	+2.1
CHKK	Chushkaly	3.14	309	Pg	Pb	10 26 45.5	+0.2
	5.3nm,0.2s						
CHKK				Lg	Lg	10 27 28.4	
	78nm,0.2s						
CHKK	Chushkaly	3.14	309	eP	Pb	10 26 45.5	+0.2
	5.3nm,0.2s						
CHKK				eS	Sg	10 27 28.4	-1.9
	78nm,0.2s						
MTBS	Maitube	3.14	294	Pg	Pb	10 26 44.1	-1.3
	9.1nm,0.4s						
MTBS				Lg	Lg	10 27 26.1	
	39nm,0.3s						
MTBS	Maitube	3.14	294	eP	Pb	10 26 44.1	-1.3
	9.1nm,0.4s						
MTBS				eS	Sb	10 27 26.1	+2.3
	39nm,0.3s						
KTBS	Karatobe	3.24	305	Pg	Pb	10 26 47.1	+0.1
	8.4nm,0.4s						
KTBS				Lg	Lg	10 27 30.8	
	0.4nm,0.3s						
BOOM	Boomskoye usch	3.33	281	⇑iP	Pn	10 26 42.6	+1.0
BOOM				⇑iS	Sn	10 27 23.4	+2.1
TDK	Taldyqorghan	3.40	336	Pg	Pb	10 26 50.0	+0.3
	41nm,0.2s						
TDK				Lg	Lg	10 27 35.9	
	94nm,0.4s						
TDK	Taldyqorghan	3.40	336	eP	Pb	10 26 50.0	+0.3
	41nm,0.2s						
TDK				eS	Sg	10 27 35.9	-2.6
	94nm,0.4s						
KST	Kastek	3.44	291	Pg	Pb	10 26 50.7	+0.3
	3.8nm,0.3s						
KST				Lg	Lg	10 27 37.1	
	52nm,0.5s						
KST	Kastek	3.44	291	eP	Pb	10 26 50.7	+0.3
	3.8nm,0.3s						
KST				eS	Sg	10 27 37.1	-2.6
	52nm,0.5s						
KUU	Kurty	3.55	305	Pg	Pb	10 26 52.6	+0.3
	3.5nm,0.0s						
KUU				Lg	Lg	10 27 40.4	
	22nm,0.2s						
KUU	Kurty	3.55	305	eP	Pb	10 26 52.6	+0.3
	3.5nm,0.0s						
KUU				eS	Sg	10 27 40.4	-2.9
	22nm,0.2s						
JNKS	Jany-Kuch	3.63	258	⇓iP	Pn	10 26 45.9	0.0
JNKS				⇓iS	Sn	10 27 29.5	+0.6
DGS	Degeres	3.63	293	Pg	Pb	10 26 51.3	-2.4
	2.3nm,0.3s						
DGS				Lg	Lg	10 27 38.1	
	19nm,0.5s						
TKM2	Tokmak 2	3.66	288	⇓iP	Pn	10 26 47.5	+1.2
TKM2				⇓iS	Sn	10 27 31.8	+2.2
KRBS	Karabastau	3.87	299	Pg	Pb	10 26 58.0	+0.2
	1.6nm,0.2s						
KRBS				Lg	Lg	10 27 49.6	
	18nm,0.4s						
KBK	Karagaybulak	4.08	282	⇑iP	Pn	10 26 52.9	+1.0
KBK				⇑iS	Sn	10 27 41.6	+1.8
UCH	Uchtor	4.36	276	⇓iP	Pn	10 26 57.0	+1.0
UCH				⇓iS	Sn	10 27 48.3	+1.2
AAK	Ala-Archa	4.40	281	⇑iP	Pn	10 26 57.7	+1.3
AAK				⇑iS	Sn	10 27 49.5	+1.6
AAK	Ala-Archa	4.40	281	⇓Pg	Pb	10 27 08.1	+1.2
	1.0nm,0.4s						
AAK				⇑Lg	Lg	10 28 07.1	
	6.9nm,0.8s						
SGDS	Sogindy	4.49	292	Pg	Pb	10 27 08.5	+0.2
	1.1nm,0.2s						
SGDS				Lg	Lg	10 28 07.7	
	5.1nm,0.4s						
ARLS	Aral	4.50	271	⇓iP	Pn	10 26 58.4	+0.7
ARLS				⇓iS	Sn	10 27 51.0	+0.8
USP	Ospenovka	4.53	289	⇓iP	Pn	10 26 59.5	+1.5
USP				⇓iS	Sn	10 27 52.6	+1.9
EKS2	Erkin-Say	4.93	281	⇓eP	Pn	10 27 04.8	+1.1
EKS2				⇓iS	Sn	10 28 01.8	+1.0
SALK	Salom-Alik	5.02	260	⇑eP	Pn	10 27 05.4	+0.5
SALK				⇑iS	Sn	10 28 02.6	-0.4
MAKZ	Makanchi	5.03	13	⇑Pn	Pn	10 27 05.8	+0.9
	3.2nm,0.6s						
MAKZ				⇓Sn	Sn	10 28 03.8	+0.8
	1.1nm,0.3s						
MK31	Makanchi Array	5.07	15	⇓Pn	Pn	10 27 06.2	+0.7
	0.3nm,0.2s,baz=196,slow=15,SNR=33						
MK31				⇑Sn	Sn	10 28 04.5	+0.3
	1.7nm,0.5s,baz=191,slow=24,SNR=5.4						
MRKS	Merke	5.34	281	Pg	Pb	10 27 24.9	+2.0
	1.7nm,0.3s						
MRKS				Lg	Lg	10 28 35.7	
	4.8nm,0.4s						
MRKS	Merke	5.34	281	eP	Pb	10 27 24.9	+2.0
	1.7nm,0.3s						
MRKS				eS	Sg	10 28 35.7	-5.2
	4.8nm,0.4s						
SFK	Sufi-Kurgan	5.52	252	⇓iP	Pn	10 27 11.8	0.0
SFK				⇓iS	Sn	10 28 14.2	-1.3
KK31	Karatay Array	7.37	283	⇑Lg	Lg	10 29 40.4	
	1.3nm,0.5s,baz=110,slow=28,SNR=5.1						
KURK	Kurchatov	8.88	353	⇓Lg	Lg	10 30 30.7	
	2.7nm,1.0s						

IDC ***11*** *10:32:31.5±1.4, 8°.98S×157°.61E, h0^{km}, mb3.9/7,*
mbtmp3.9/7, Error ellipse: s-maj=51.1km s-min=28.4km
az=132.0
NEIC ***11*** *10:32:34.1±0.6, 8°.7S±0°.1×157°.47E±0°.09, h10^{km}±1^{km},*
mb4.3/14, Error ellipse: s-maj=25.4km s-min=13.4km
az=14.0
ISC 11 10:32:34.5±1.0**, 8°.8S**±0°.1×**157°.4E**±0°.2**, h17^{km}, n26,**
σ**0^{s}.91**/28**, mb4.2**/15**, Bougainville-Solomon Islands**
region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RABL	Rabaul	6.99	311	Pn	Pn	10 34 15.2	-0.9
PMG	Port Moresby	10.17	266	Pn	Pn	10 35 00.3	+0.5
EIDS	Eidsvold	17.52	199	P	Pn	10 36 37.1	-1.0
WR0	Warramunga Arr	24.75	241	P	P	10 37 56.0	+0.6
WR0				IAmb	IAmb	10 37 57.9	
	comp=Z,8.9nm,1.1s						
WR8	Warramunga Arr	24.78	241	P	P	10 37 56.2	+0.5
WR8				IAmb	IAmb	10 37 57.7	
	comp=Z,6.5nm,1.0s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WB0	Warramunga Arr	24.80	242	P	P	10 37 56.6	+0.8
WB0				IAmb	IAmb	10 38 02.6	
	comp=Z,7.2nm,1.1s						
WRAB	Tennant Creek	24.90	241	P	P	10 37 57.4	+0.6
WRAB				IAmb	IAmb	10 37 58.9	
	comp=Z,5.6nm,0.9s						
WB2	Warramunga Arr	24.90	241	P	P	10 37 57.3	+0.5
WB2				IAmb	IAmb	10 37 59.0	
	comp=Z,7.9nm,1.1s						
WRA	Warramunga Arr	24.91	241	P	P	10 37 57.4	+0.5
	comp=Z,6.8nm,1.1s,baz=68,slow=9.2,SNR=14						
WRA				PcP	PcP	10 41 31.5	-1.1
	comp=Z,0.5nm,0.7s,baz=69,slow=2.2,SNR=2.6						
	comp=Z,6.8nm,1.1s						
WRA	Warramunga Arr	24.91	241	P	P	10 37 56.4	-0.5
ASAR	Alice Springs	26.91	234	P	P	10 38 15.0	0.0
	comp=Z,0.9nm,0.9s,baz=68,slow=8.6,SNR=5.8						
ASAR				PcP	PcP	10 41 37.3	+0.2
	comp=Z,0.2nm,0.5s,baz=47,slow=2.2,SNR=2.0						
	comp=Z,0.9nm,0.9s						
KNRA	Kununurra	28.81	254	P	P	10 38 32.1	+0.1
KNRA				IAmb	IAmb	10 39 00.6	
	comp=Z,4.3nm,0.7s						
FITZ	Fitzroy Crossi	32.22	250	P	P	10 39 01.2	-0.9
MGBR	Mount Gambier	32.55	205		P	10 39 04.9	+0.2
JAGI	Jajag, Banyuwa	42.78	267	P	P	10 40 30.8	-0.8
NWAO	Narrogin (SRO)	44.16	231		P	10 40 42.7	+0.2
CMAR	Chiang Mai Arr	63.76	296	P	P	10 43 08.8	+2.9
	comp=Z,1.0nm,0.3s,baz=111,slow=6.9,SNR=4.1						
	comp=Z,1.0nm,0.3s						
CMAR	Chiang Mai Arr	63.76	296	P	P	10 43 05.5	-0.5
CHTO	Chiang Mai	63.88	296	P	P	10 43 07.5	+0.8
CHTO				IAmb	IAmb	10 43 28.1	
	comp=Z,2.2nm,0.8s						
SONM	Songino Array	72.19	327	P	P	10 43 59.0	+0.4
	comp=Z,0.3nm,0.3s,baz=126,slow=7.4,SNR=1.4						
	comp=Z,0.3nm,0.3s						
MKAR	Makanchi Array	86.38	318	P	P	10 45 15.1	-0.9
	comp=Z,0.8nm,0.6s,baz=110,slow=4.9,SNR=4.9						
	comp=Z,0.8nm,0.6s						
MKAR	Makanchi Array	86.38	318	P	P	10 45 16.0	+0.1
KURK	Kurchatov	89.77	321	P	P	10 45 32.5	+0.6
KURK				IAmb	IAmb	10 45 46.2	
	comp=Z,0.7nm,0.7s						
KURBB	Kurchatov Arra	89.81	321	P	P	10 45 33.9	+1.8
	comp=Z,0.2nm,0.7s,baz=123,slow=6.8,SNR=2.0						
	comp=Z,0.2nm,0.7s						
NVAR	Mina Array Bea	90.96	51	P	P	10 45 38.4	+0.2
	comp=Z,1.1nm,1.0s,baz=245,slow=7.1,SNR=6.4						
	comp=Z,1.1nm,1.0s						
NVAR	Mina Array Bea	90.96	51	P	P	10 45 37.7	-0.4

SJA 11 10:44:57.0±0.6**,22°.81S×66°.28W,h270**^{km}±4^{km}**,ML3.7, MW3.5,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HJA	Humahuaca	0.90	116	eP	Pn	10 45 34.2	0.0
YJA	Yavi	0.95	48	eP	Pn	10 45 35.1	+0.6
YJA				eS	S	10 46 01.1	-3.0
SALTA		1.41	182	eP	Pn	10 45 29.7	-7.5
SALTA				eP		10 45 37.6	
SALTA				eP		10 45 39.1	
SALTA				eS	S	10 46 07.2	-1.7
AF01	San Pedro de A	1.75	265	eP	Pn	10 45 47.0	+7.6
AZAP	Zapla	1.79	142	eP	Pn	10 45 42.0	+2.3
AZAP				eS	S	10 46 04.5	-9.0
ASTB	Santa Barbara	2.03	124	eP	Pn	10 45 42.9	+1.4
PB09	IPOC Station P	2.92	290	eP	Pn	10 45 51.3	+1.1
PB09				eS	S	10 46 31.6	-0.7
PB06	IPOC Station P	3.04	271	eP	Pn	10 45 52.2	+0.8
PB06				eS	S	10 46 32.0	-2.4
PB06				IAML		10 46 33.7	
	comp=Z,64nm,0.2s						
FSA	Cafayete	3.30	175	eP	Pn	10 45 54.5	+0.5
PB03	IPOC Station P	3.30	283	eP	Pn	10 45 54.1	-0.1
PB03				eS	S	10 46 36.4	-3.2
PB03				IAML		10 46 36.6	
	comp=Z,105nm,0.5s						
PB01	IPOC Station P	3.46	300	eP	Pn	10 45 56.1	+0.3
PB01				eS	S	10 46 41.4	-1.2
PB01				IAML		10 46 43.1	
	comp=Z,46nm,0.1s						
PB07	IPOC Station P	3.51	287	eP	Pn	10 45 56.5	+0.1
PB07				eS	S	10 46 41.0	-2.7
PB07				IAML		10 46 41.1	
	comp=Z,61nm,0.5s						
PB05	IPOC Station P	3.62	269	eP	Pn	10 45 57.9	+0.3
PB05				eS	S	10 46 42.3	-3.5
PB05				IAML		10 46 43.5	
	comp=Z,66nm,0.4s						
PB02	IPOC Station P	3.67	293	eP	Pn	10 45 58.2	+0.1
PB02				eS	S	10 46 43.8	-3.0
PB02				IAML		10 46 46.5	
	comp=Z,125nm,0.2s						
PB08	IPOC Station P	3.77	314	eP	Pn	10 46 01.0	+1.5
PB08				eS	S	10 46 48.9	-0.5
PB08				IAML		10 46 50.2	
	comp=Z,65nm,0.8s						
PB10	IPOC Station P	3.99	259	eP	Pn	10 46 02.2	+0.5
PB10				eS	S	10 46 48.2	-5.0
PB10				IAML		10 46 50.8	
	comp=Z,68nm,0.3s						
PATCX	Punta Patache	4.11	298	eP	Pn	10 46 03.6	+0.5
PATCX				eS	S	10 46 52.8	-3.0
PATCX				IAML		10 46 56.0	
	comp=Z,53nm,0.4s						
GO01	Chusmiza	4.14	318	eP	Pn	10 46 05.7	+1.7
GO01				eS	S	10 46 58.8	+1.6
GO01				IAML		10 47 01.9	
	comp=Z,47nm,0.5s						
PB14	IPOC Station P	4.19	244	eP	Pn	10 46 04.3	+0.1
PB14				eS	S	10 46 53.8	-3.9
PB14				IAML		10 46 57.1	
	comp=Z,102nm,0.3s						
TA01	Diego Aracena	4.26	301	eP	Pn	10 46 05.5	+0.8
TA01				eS	S	10 46 55.8	-3.0
TA01				IAML		10 46 56.8	
	comp=Z,34nm,0.8s						
PB11	IPOC Station P	4.37	313	eP	Pn	10 46 06.3	+0.1
PB11				eS	S	10 46 59.3	-2.2
PB11				IAML		10 47 03.6	
	comp=Z,50nm,0.4s						
AC02	Maricunga	4.77	212	eP	Pn	10 46 11.2	+0.1
AC02				eS	S	10 47 05.0	-5.4
AC01	Pan de Azucar	5.15	229	eP	Pn	10 46 14.4	-0.8
AC01				eS	S	10 47 07.7	-10
AC01				IAML		10 47 14.2	
	comp=Z,32nm,0.2s						
TINO	Tinogasta	5.36	192	eP	Pn	10 46 18.8	+1.0

IDC 11 10:48:53.1±5.4**,8°.62S×156°.69E,h0**^{km}**,mb3.4**/3**, mbtmp3.4**/3**,Error ellipse: s-maj=157.0km s-min=47.2km az=117.0,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	24.37	240	P	P	10 54 13.1	-0.2
	1.4nm,0.9s,baz=66,slow=9.4,SNR=9.2						
	1.4nm,0.9s						
ASAR	Alice Springs	26.45	233	P	P	10 54 32.5	+0.4
	0.2nm,0.4s,baz=70,slow=9.1,SNR=2.2						
	0.2nm,0.4s						
MKAR	Makanchi Array	85.73	318	P	P	11 01 34.1	-0.2
	0.3nm,0.6s,baz=90,slow=5.8,SNR=2.6						
	0.3nm,0.6s						

IDC 11 11:17:26.8±999.0**,45°.88N×39°.82E,h0**^{km}**,Error ellipse: s-maj=6994.0km s-min=270.0km az=62.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I31KZ	AKTYUBINSK INF	12.97	63	I	I	12 35 37.1	
	0.2nm,0.6s,baz=255,slow=301,SNR=3.5						
I46RU	ZALESOVO INFRA	29.64	58	I	I	14 16 55.5	
	baz=272,slow=309,SNR=1.0						
I34MN	SONGINO INFRAS	44.31	62	I	I	15 50 40.0	
	baz=298,slow=325,SNR=0.4						

*SDD **11** 11:30:48.3±1.0,20°.03N×70°.81W,h20^{km}±7^{km},MD3.1, ML2.8,MW3.2,Presumed earthquake*

*OSPL **11** 11:30:50.2±1.4,19°.84N×70°.75W,h0^{km}±6^{km},ML2.5, Presumed earthquake*

ISC 11 11:30:49.2±1.1**,19°.89N**±0°.04×**70°.77W**±0°.05**,h12**^{km}±9^{km}**, n11,σ1^{s}18**/19**,Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUDR	Luperon	0.17	272	ePg	Pg	11 30 53.4	+0.3
LUDR				eSg	Sg	11 30 56.5	+0.6
LUDR				IAML		11 31 00.5	
	comp=E,37µm,0.3s						
LOPP1	Punta Rusia, P	0.41	265	iP	Pb	11 30 58.1	-0.2
LOPP1				eS	Sg	11 31 03.4	+0.7
LOPP1				IAML		11 31 06.2	
	comp=Z,94nm,1.5s						
SC01	Santiago de lo	0.46	175	iP	Pg	11 30 57.8	-0.5
SDDR	Presa de Saban	1.02	209	iP	Pg	11 31 07.0	-2.0
SDDR				eS	Sg	11 31 21.1	-1.2
SDDR				IAML		11 31 21.5	
	comp=Z,97nm,0.5s						
LONE3	El Aguacate, B	1.43	207	iP	Pn	11 31 14.4	-0.8
LONE3				eS	Sn	11 31 33.3	-0.7
LONE3				IAML		11 31 36.2	
	comp=Z,26nm,1.2s						
GRTK	Grand Turk	1.65	348	iP	Pb	11 31 19.1	-0.5
GRTK				eS	Sg	11 31 40.5	-1.9
GRTK				IAML		11 31 45.9	
	comp=Z,61nm,1.0s						
LODU1	El Espartillar	1.67	204	iP	Pn	11 31 19.2	+0.9
LODU1				IAML		11 31 46.0	
	comp=Z,69nm,1.8s						
HATOM	Hato Mayor del	1.71	130	ePg	Pn	11 31 19.4	+0.5
HATOM				eSg	Sb	11 31 43.3	+1.2
HATOM				IAML		11 31 45.7	
	comp=N,338nm,0.3s						
JIDR	Jimani	1.72	216	ePg	Pn	11 31 20.4	+1.4
JIDR				eSg	Sn	11 31 42.6	+1.6
JIDR				IAML		11 31 45.5	
	comp=N,1.7nm,0.3s						
MIDR	Miches	1.86	119	ePg	Pn	11 31 21.8	+0.9
MIDR				eSg	Sb	11 31 47.2	+0.9
MIDR				IAML		11 31 53.0	
	comp=N,41nm,2.4s						
LOBH	Bahia de las A	2.18	202	iP	Pn	11 31 25.4	+0.1
LOBH				IAML		11 32 04.2	
	comp=Z,47nm,1.5s						

*IDC **11** 11:32:19.3±1.1,30°.28N×131°.71E,h0^{km},mb3.5/8, mbtmp3.5/12,ML3.1/4,Error ellipse: s-maj=25.3km s-min=19.7km az=109.0*

*JMA **11** 11:32:22.4±0.2,30°.3N±0°.6×13°2E±°,h51^{km}±2^{km}, MV3.7/38,E OFF TANEGASHIMA ISLAND*

ISC 11 11:32:23.1±1.9**,30°.27N**±0°.05×**131°.65E**±0°.07**,h26**^{km}±12^{km}**, n27,σ0^{s}78**/39**,mb3.6**/9**,Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMTN	Minamitane	0.66	281	iP	Pb	11 32 36.4	+0.3
JMTN				S	Sn	11 32 47.2	+1.0
JTN	Tanegashima 3	0.69	304	iP	Pb	11 32 36.7	+0.1
JTN				S	Sn	11 32 48.2	+1.1
JYAK	Yakushimahirau	0.98	268	iP	Pn	11 32 40.9	-0.4
JYAK				S	Sb	11 32 54.0	-0.1
JTSR	Tashiro 2	1.09	325	iP	Pn	11 32 42.3	-0.4
JTSR				S	Sb	11 32 56.5	-0.7
JKC	Kuchinoerabu	1.27	279	P	Pn	11 32 45.1	-0.1
JKC				S	Sb	11 33 02.4	+0.1
JNAR	Kushima--Naru	1.29	346	iP	Pn	11 32 45.4	-0.2
JNAR				S	Sn	11 33 01.8	-0.2
JNN	Nakanoshima	1.59	255	P	Pn	11 32 49.7	0.0
JSU	Suzuyama	1.60	321	P	Pn	11 32 49.2	-0.6
JSU				S	Sn	11 33 09.2	-0.5
JTZ	Takazaki	1.69	344	P	Pn	11 32 51.1	+0.1
JTZ				S	Sn	11 33 11.8	-0.1
JTSN	Tsuno	1.97	356	P	Pn	11 32 54.5	-0.3
JTSN				S	Sn	11 33 17.6	-1.2
JZO	Okuchi	2.07	335	P	Pn	11 32 56.1	-0.1
JSJ	Shimokoshiki	2.17	311	iP	Pn	11 32 56.2	-1.4
JSJ				S	Sn	11 33 22.4	-1.3
JIU3	Izumi3	2.38	343	P	Pn	11 33 00.5	0.0
JTAJ	Takarajima	2.40	243	P	Pn	11 33 01.1	+0.4
JNU	Nakatsue	2.92	347	Pn	Pn	11 33 08.7	+0.7
	6.2nm,0.3s,baz=185,slow=17,SNR=117						
JNU				Sn	Sn	11 33 42.5	+0.4
	10nm,0.3s,baz=56,slow=15,SNR=9.2						
	14nm,0.3s						
JOW	Kunigami	4.53	222	Pn	Pn	11 33 30.9	+0.8
	1.5nm,0.3s,baz=102,slow=25,SNR=5.3						
JOW				Sn	Sn	11 34 20.4	-1.5
	3.2nm,0.3s,baz=138,slow=26,SNR=6.4						
	4.9nm,0.3s						
KSRS	Korea Array	7.80	338	Pn	Pn	11 34 16.3	+1.4
	0.2nm,0.3s,baz=157,slow=15,SNR=2.2						
	1.3nm,0.8s						
MJAR	Matsushiro Arr	8.32	40	Pn	Pn	11 34 22.3	+0.2
	0.2nm,0.3s,baz=242,slow=15,SNR=9.9						
	1.7nm,0.5s						
CMAR	Chiang Mai Arr	31.91	256	P	P	11 38 48.5	+1.8
	0.4nm,0.3s,baz=71,slow=10,SNR=1.2						
	0.4nm,0.3s						
MKAR	Makanchi Array	41.27	308	P	P	11 40 05.4	-0.8
	0.3nm,0.7s,baz=98,slow=11,SNR=1.6						
	0.3nm,0.7s						
KURBB	Kurchatov Arra	44.16	313	P	P	11 40 28.5	-0.9
	0.3nm,0.6s,baz=101,slow=8.4,SNR=3.2						
	0.3nm,0.6s						
BVAR	Borovoye Array	49.38	316	P	P	11 41 09.8	-0.6
	0.5nm,0.5s,baz=96,slow=9.4,SNR=3.0						
	0.5nm,0.5s						
WRA	Warramunga Arr	49.99	177	P	P	11 41 14.8	-0.4
	0.2nm,0.8s,baz=352,slow=8.0,SNR=1.8						
	0.2nm,0.8s						
ILAR	Eielson Array	59.46	29	P	P	11 42 23.1	-0.3
	0.4nm,0.7s,baz=277,slow=7.9,SNR=5.0						
	0.4nm,0.7s						
FINES	FINESS Array B	70.84	331	P	P	11 43 38.3	+1.1
	14nm,1.2s,baz=62,slow=5.5,SNR=2.2						
YKA	Yellowknife Ar	73.59	26	P	P	11 43 53.1	-0.6
	0.2nm,0.6s,baz=310,slow=4.6,SNR=2.4						
	0.2nm,0.6s						
NVAR	Mina Array Bea	85.56	48	P	P	11 45 00.2	+0.7
	0.7nm,0.6s,baz=278,slow=7.4,SNR=4.2						
	0.7nm,0.6s						

*SJA **11** 11:35:33.9±1.7,33°.76S×70°.37W,h113^{km}±10^{km},ML3.8, MW3.8*

*NEIC **11** 11:35:34.7±1.1,33°.76S±0°.04×70°.29W±0°.08,h113^{km}±4^{km}, mb4.2/6,ML4.2(GUC),Error ellipse: s-maj=9.7km s-min=6.4km az=76.0*

*GUC **11** 11:35:35.8±0.9,33°.75S×70°.39W,h113^{km}±2^{km},ML4.2*

*IDC **11** 11:35:36.2±2.3,33°.82S×70°.12W,h111^{km}±18^{km},mb3.8/3, mbtmp3.8/7,Error ellipse: s-maj=34.4km s-min=19.0km az=116.0*

ISC 11 11:35:34.5±0.7**,33°.76S**±0°.03×**70°.36W**±0°.03**,h111**^{km}±4^{km}**, n126,σ1^{s}08**/168**,mb4.3**/4**,15C-3D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MT13	San Alfonso	0.06	74		Pn	11 35 50.5	+0.6
MT13				Sn	Sn	11 36 02.1	+0.6
MT13	San Alfonso	0.06	74	⇓iP	Pn	11 35 50.6	+0.6
MT13				eS	Sn	11 36 02.3	+0.7
MT13				IAML		11 36 03.3	
	comp=E,22µm,0.3s						
MT13	San Alfonso	0.06	74	iP	Pn	11 35 49.9	-0.1
MT13				IAML		11 36 03.0	
	comp=Z,5µm,0.3s						
LMEL	Las Melosas	0.15	124		Pn	11 35 50.4	+0.3
LMEL				Sn	Sn	11 36 02.2	+0.2
LMEL	Las Melosas	0.15	124	iP	Pn	11 35 50.5	+0.3
LMEL				eS	Sn	11 36 01.9	-0.1
LMEL				IAML		11 36 03.0	
	comp=N,11µm,0.2s						
LMEL	Las Melosas	0.15	124	iP	Pn	11 35 49.8	-0.4
LMEL				IAML		11 36 07.0	
	comp=Z,4µm,0.4s						
MT12	Pirque	0.16	280	⇑iP	Pn	11 35 50.7	+0.7
MT12				eS	Sn	11 36 00.7	-1.1
MT12				IAML		11 36 03.6	
	comp=E,25µm,0.3s						
MT15	Las Vizcachas	0.20	323	⇑iP	Pn	11 35 50.9	+0.7
MT15				eS	Sn	11 36 02.4	+0.5
MT03	Universidad Ad	0.30	335		Pn	11 35 51.1	+0.5
MT03				Sn	Sn	11 36 03.1	+0.5
MT03	Universidad Ad	0.30	335	iP	Pn	11 35 51.1	+0.5
MT03				eS	Sn	11 36 03.1	+0.5
MT03				IAML		11 36 04.2	
	comp=E,28µm,0.2s						
MT03	Universidad Ad	0.30	335	iP	Pn	11 35 50.5	-0.1
MT03				IAML		11 36 04.0	
	comp=Z,12µm,0.2s						
BO04	La Punta	0.31	223		Pn	11 35 51.2	+0.6
BO04	La Punta	0.31	223	⇑iP	Pn	11 35 51.1	+0.6
BO04				eS	Sn	11 36 03.1	+0.5
BO04				IAML		11 36 04.2	
	comp=E,18µm,0.2s						
MT16	CCHEN	0.36	338		Pn	11 35 51.4	+0.6
MT16				Sn	Sn	11 36 03.4	+0.5
MT16	CCHEN	0.36	338	iP	Pn	11 35 51.5	+0.6
MT16				eS	Sn	11 36 03.5	+0.5
MT16				IAML		11 36 04.3	
	comp=N,7µm,0.2s						
MT14	Cerro Cal¡n	0.39	338	iP	Pn	11 35 51.9	+0.9
MT14				eS	Sn	11 36 04.2	+0.8
MT14				IAML		11 36 05.4	
	comp=N,27µm,0.3s						
MT04	Ro Olivares	0.40	27	iP	Pn	11 35 51.6	+0.3
MT04				eS	Sn	11 36 04.3	+0.5
MT04				IAML		11 36 06.4	
	comp=N,5µm,0.3s						
MT04	Ro Olivares	0.40	27	iP	Pn	11 35 50.9	-0.4
MT04				IAML		11 36 07.6	
	comp=Z,2µm,0.7s						
MT08	Bocatoma Ro	0.42	42		Pn	11 35 52.1	+0.7
MT08				Sn	Sn	11 36 03.9	-0.1
MT08	Bocatoma Ro	0.42	42	iP	Pn	11 35 52.0	+0.6
MT08				eS	Sn	11 36 04.9	+0.9
MT08	Bocatoma Ro	0.42	42	iP	Pn	11 35 51.2	-0.1
MT08				IAML		11 36 11.4	
	comp=Z,1µm,0.8s						
MT05	Renca	0.49	319		Pn	11 35 52.1	+0.6
MT05				Sn	Sn	11 36 04.8	+0.6
MT05	Renca	0.49	319	⇑iP	Pn	11 35 52.1	+0.6
MT05				eS	Sn	11 36 04.8	+0.6
MT05	Renca	0.49	319	iP	Pn	11 35 51.5	0.0
MT05				IAML		11 36 06.4	
	comp=Z,4µm,0.2s						
MT10	Hacienda Santa	0.51	343	iP	Pn	11 35 52.5	+0.7
MT10				eS	Sn	11 36 05.4	+0.7
MT10				IAML		11 36 10.1	
	comp=E,11µm,0.4s						
MT09	Talagante	0.53	268		Pn	11 35 52.5	+0.7
MT09	Talagante	0.53	268	⇑iP	Pn	11 35 52.7	+0.8
MT09				eS	Sn	11 36 05.6	+0.7
MT09				IAML		11 36 06.0	
	comp=E,17µm,0.2s						
PEL	Peldehue	0.67	336		Pn	11 35 53.4	+0.5
PEL	Peldehue	0.67	336	eP	Pn	11 35 53.3	+0.4
PEL				eS	Sn	11 36 07.3	+0.6
PEL				IAML		11 36 08.3	
	comp=N,19µm,0.3s						
MT01	Popeta	0.75	262		Pn	11 35 54.2	+0.8
MT01	Popeta	0.75	262	⇑iP	Pn	11 35 54.2	+0.8
MT01				eS	Sn	11 36 07.9	+0.2
MT01				IAML		11 36 08.5	
	comp=N,11µm,0.2s						
MT01	Popeta	0.75	262	iP	Pn	11 35 53.4	-0.1
MT01				IAML		11 36 08.5	
	comp=Z,3µm,0.2s						
BO01	Tunca	0.87	224		Pn	11 35 55.2	+0.7
BO01	Tunca	0.87	224	⇑iP	Pn	11 35 55.4	+0.9
BO01				eS	Sn	11 36 10.7	+1.0
BO01				IAML		11 36 11.5	
	comp=N,4µm,0.5s						
BO01	Tunca	0.87	224	iP	Pn	11 35 54.7	+0.1
BO01				IAML		11 36 11.2	
	comp=Z,2µm,0.9s						
ROCH	El Roble	0.96	325	⇑iP	Pn	11 35 56.3	+0.7
ROCH				⇑iP	Pn	11 35 56.3	+0.7
ROCH				eS	Sn	11 36 11.9	+0.4
ROCH				eS		11 36 12.6	
ROCH				IAML		11 36 14.2	
	comp=E,2µm,0.2s						
ROCH				IAML		11 36 14.2	
	comp=N,6µm,0.2s						
VA03	San Esteban	1.01	351		Pn	11 35 57.1	+1.1
VA03	San Esteban	1.01	351	⇑iP	Pn	11 35 57.3	+1.2
VA03				eS	Sn	11 36 13.4	+1.1
VA03				IAML		11 36 15.7	
	comp=E,9µm,0.1s						
VA03	San Esteban	1.01	351	iP	Pn	11 35 56.5	+0.5
VA03				IAML		11 36 15.6	
	comp=Z,4µm,0.2s						
VA05	Santo Domingo	1.05	275		Pn	11 35 56.9	+0.5
VA05	Santo Domingo	1.05	275	⇑iP	Pn	11 35 57.0	+0.7
VA05				eS	Sn	11 36 12.7	-0.1
VA05				IAML		11 36 16.3	
	comp=E,10µm,0.3s						
BO02	Sierra Bellavi	1.09	199		Pn	11 35 58.5	+1.6
BO02	Sierra Bellavi	1.09	199	⇑iP	Pn	11 35 58.3	+1.5
BO02				eS	Sn	11 36 15.7	+2.0
BO02	Sierra Bellavi	1.09	199	iP	Pn	11 35 57.6	+0.8
BO02				IAML		11 36 17.7	
	comp=Z,6µm,0.2s						
VA01	Torpederas	1.31	304		Pn	11 36 00.3	+1.2
VA01	Torpederas	1.31	304	⇑iP	Pn	11 36 00.5	+1.3
VA01				eS	Sn	11 36 19.2	+1.4
VA01				IAML		11 36 22.2	
	comp=N,4µm,0.1s						
VA01	Torpederas	1.31	304	iP	Pn	11 35 59.8	+0.7
VA01				IAML		11 36 21.6	
	comp=Z,2µm,0.4s						
VA06	Catapilco	1.43	326		Pn	11 36 01.2	+0.6
VA06	Catapilco	1.43	326	⇑iP	Pn	11 36 01.2	+0.6
VA06				eS	Sn	11 36 20.2	-0.2
VA06				IAML		11 36 22.2	
	comp=N,5µm,0.3s						
AAGR	Agrelo	1.45	63	iP	Pn	11 36 02.2	+1.3
AAGR				IAML		11 36 26.6	
	comp=Z,365nm,0.8s						
ARCO	CERRO ARCO	1.51	53	iP	Pn	11 36 03.0	+1.3
ARCO				IAML		11 36 27.4	
	comp=Z,256nm,0.3s						
BO03	Pichilemu	1.52	241	⇓iP	Pn	11 36 02.2	+0.6
BO03				eS	Sn	11 36 22.9	+0.7
BO03				IAML		11 36 27.2	
	comp=E,957nm,0.5s						
AVIZ	Vizcacheras	1.56	80	iP	Pn	11 36 03.7	+1.4
CO04	Los Peladeros	1.79	343	⇑iP	Pn	11 36 06.1	+0.8
CO04				eS	Sn	11 36 29.1	+0.5
CO04				IAML		11 36 29.9	
	comp=E,2µm,0.3s						
GO05	Hualane	1.80	226	eP	Pn	11 36 05.7	+0.6
GO05				eS	Sn	11 36 28.5	+0.2
GO05				IAML		11 36 30.3	
	comp=E,2µm,0.2s						
GO05	Hualane	1.80	226	iP	Pn	11 36 05.3	+0.2
GO05				IAML		11 36 30.3	
	comp=Z,1µm,0.1s						
RFA	San Rafael	1.86	123	iP	Pn	11 36 06.1	+0.2
RFA				IAML		11 36 41.4	
	comp=Z,85nm,1.1s						
RTLS	Leoncito	2.15	25	iP	Pn	11 36 12.4	+2.5
RTLS				IAML		11 36 43.2	
	comp=Z,779nm,0.5s						
ML02	Panimavida	2.18	203		Pn	11 36 10.8	+1.0
ML02	Panimavida	2.18	203	eP	Pn	11 36 11.3	+1.5
ML02				eS	Sn	11 36 37.9	+1.0
ML02				IAML		11 36 39.5	
	comp=N,1µm,0.2s						
ML02	Panimavida	2.18	203	iP	Pn	11 36 10.6	+0.8
ML02				IAML		11 36 55.5	
	comp=Z,424nm,1.0s						
CO02	Combarbal	2.61	348		Pn	11 36 16.2	+0.6
CO02	Combarbal	2.61	348	eP	Pn	11 36 16.1	+0.6
CO02	Combarbal	2.61	348	iP	Pn	11 36 15.4	-0.2
CO02				IAML		11 36 53.8	
	comp=Z,319nm,0.3s						
CFA	Coronel Fontan	2.80	40	P	Pn	11 36 18.8	+0.8
	comp=Z,42nm,0.3s,baz=210,slow=9.9,SNR=252						
CFA				S	Sn	11 36 51.9	+0.5

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           comp=Z,89nm,0.3s,baz=317,slow=17,SNR=24
CFA    Coronel Fontan    2.80  40 i P     Pn      11 36 18.1 +0.1
CFA                                IAML            11 36 55.9
           comp=Z,171nm,0.1s
RTLL   Cerro Villicun    2.90  34 i P     Pn      11 36 20.1 +0.7
RTLL                               IAML            11 36 56.9
           comp=Z,291nm,0.3s
CO03   El Pedregal       2.93 354         Pn      11 36 21.0 +1.3
CO03   El Pedregal       2.93 354  eP     Pn      11 36 21.0 +1.3
CO03                               eS     Sn      11 36 55.1 +0.6
CO03                               IAML            11 36 58.3
           comp=E,524nm,0.3s
CO03   El Pedregal       2.93 354 i P     Pn      11 36 20.3 +0.6
CO03                               IAML            11 36 59.8
           comp=Z,251nm,0.4s
BI02   San Fabin de      2.99 194         Pn      11 36 21.8 +1.3
BI02   San Fabin de      2.99 194  eP     Pn      11 36 22.0 +1.5
BI02   San Fabin de      2.99 194 i P     Pn      11 36 21.6 +1.1
BI02                               IAML            11 37 23.1
           comp=Z,194nm,1.4s
ACAN   Cantantal         3.05  62 i P     Pn      11 36 21.5 +0.3
ACAN                               IAML            11 36 58.8
           comp=Z,724nm,0.4s
CO06   Fray Jorge        3.26 340         Pn      11 36 24.6 +0.6
CO06   Fray Jorge        3.26 340⇓eP      Pn      11 36 24.7 +0.6
ACCO   Cerro Coronel     3.35  19 i P     Pn      11 36 27.0 +1.5
GO04   Tololo Observa    3.60 354         Pn      11 36 29.4 +0.6
GO04   Tololo Observa    3.60 354  eP     Pn      11 36 29.2 +0.5
GO04   Tololo Observa    3.60 354 i P     Pn      11 36 29.0 +0.2
GO04                               IAML            11 37 39.0
           comp=Z,332nm,0.6s
AROD   Rodeo             3.66  12 i P     Pn      11 36 31.7 +2.0
ACDV   Cuesta del Vie    3.73  17 i P     Pn      11 36 32.2 +1.7
ACDV                               IAML            11 37 25.5
           comp=Z,57nm,0.9s
BI05   Punta Hualpn      3.77 217         Pn      11 36 30.4 -0.4
BI05   Punta Hualpn      3.77 217  eP     Pn      11 36 30.2 -0.6
CO01   Juntas del Tor    3.78   3         Pn      11 36 32.7 +1.5
CO01   Juntas del Tor    3.78   3  eP     Pn      11 36 33.1 +1.9
CO01   Juntas del Tor    3.78   3 i P     Pn      11 36 32.4 +1.2
CO01                               IAML            11 37 50.4
           comp=Z,42nm,0.3s
AVFE   Valle Fertil      3.95  39 i P     Pn      11 36 33.7 +0.4
AVFE                               IAML            11 37 22.5
           comp=Z,114nm,0.3s
MRA    San Martin        4.12  72 i P     Pn      11 36 36.3 +0.7
MRA                                IAML            11 37 42.5
           comp=Z,94nm,1.1s
MRA                                IAML            11 37 42.5
           comp=Z,94nm,1.1s
AGUA   GUANDACOL         4.55  21 i P     Pn      11 36 42.4 +1.0
AGUA                               IAML            11 37 41.0
           comp=Z,117nm,0.3s
APLL   PUNTA DE LOS L    4.67  45 i P     Pn      11 36 42.6 -0.4
APLL                              i P     Pn      11 36 42.6 -0.4
APLL                               IAML            11 37 36.2
           comp=Z,74nm,0.3s
LCO    Las Campanas      4.75 356         Pn      11 36 43.8 -0.5
LCO    Las Campanas      4.75 356  IAML            11 37 39.8
           comp=Z,140nm,0.2s
AC05   El Transito       4.91   1         Pn      11 36 46.8 +0.5
AC05   El Transito       4.91   1 i P     Pn      11 36 46.3  0.0
AC05                               IAML            11 37 45.2
           comp=Z,35nm,0.2s
ACLC   CERRO LA CRUZ     5.21  35 i P     Pn      11 36 49.4 -1.0
ACLC                               IAML            11 37 51.4
           comp=Z,27nm,0.5s
VCA    Vinchina          5.34  21 i P     Pn      11 36 52.4 +0.3
VCA                                IAML            11 37 56.9
           comp=Z,60nm,0.3s
TCA    Tanti             5.43  65  eP     Pn      11 36 53.2 -0.2
AC04   Llanos de Chal    5.57 353  Pn     Pn      11 36 54.7 -0.5
GO03   Copiapo           6.15   1  Pn     Pn      11 37 02.3 -0.7
AC06   Mina Casimiro     6.38   0  Pn     Pn      11 37 05.8 -0.3
PLCA   Paso Flores       6.96 181  P      Pn      11 37 14.7 +0.8
           comp=Z,1.0nm,0.4s,baz=358,slow=4.8,SNR=4.4
PLCA   Paso Flores       6.96 181  Pn     Pn      11 37 14.5 +0.6
AC02   Maricunga         6.99   9  Pn     Pn      11 37 14.5 -0.2
VA04   Juan Fernndez     7.06 269  Pn     Pn      11 37 16.7 +1.5
H03S1  Juan Fernandez    7.12 267  P      Pn      11 37 17.4 +1.7
           baz=53,slow=15,SNR=18
H03S1                              S      Sn      11 38 31.5 -3.4
           baz=7.1,slow=75,SNR=8.3
H03S3  Juan Fernandez    7.12 267  P      Pn      11 37 17.7 +2.0
           baz=53,slow=15,SNR=23
H03S3                              S      Sn      11 38 34.3 -0.7
           baz=7.1,slow=75,SNR=11
H03S2  Juan Fernandez    7.13 267  P      Pn      11 37 17.8 +1.8
           baz=53,slow=15,SNR=34
H03S2                              S      Sn      11 38 33.3 -2.0
           baz=7.1,slow=75,SNR=11
H03N1  Juan Fernandez    7.14 270  P      Pn      11 37 19.1 +3.0
           baz=127,slow=23,SNR=20
H03N1                              S      Sn      11 38 34.8 -0.8
           SNR=4.6
H03N3  Juan Fernandez    7.15 270  P      Pn      11 37 19.2 +2.9
           baz=127,slow=23,SNR=13
H03N3                              S      Sn      11 38 36.7 +0.8
           SNR=4.2
H03N2  Juan Fernandez    7.16 270  P      Pn      11 37 19.0 +2.6
           baz=127,slow=23,SNR=13
H03N2                              S      Sn      11 38 37.8 +1.8
           SNR=4.4
TRQA   Tornquist         8.03 125         Pn      11 37 28.4 -0.1
PB14   IPOC Station P    9.10 360  Pn     Pn      11 37 41.1 -2.2
CPUP   Villa Florida    13.49  60  P      Pn      11 38 42.3 +0.9
           comp=Z,0.4nm,0.7s,baz=273,slow=1.7,SNR=2.2
CPUP                               S      Sn      11 41 08.8 -1.2
           comp=Z,0.4nm,0.6s,baz=38,slow=9.9,SNR=1.9
GO01   Chusmiza         14.08   5  Pn     Pn      11 38 49.9 +0.4
ITAB   Concordia        16.99  72         Pn      11 39 23.1 -2.4
ITAB                               IAmb   IAmb    11 39 29.9
           comp=Z,16nm,1.5s
LPAZ   La Paz           17.52   7  P      Pn      11 39 33.9 +1.5
           comp=Z,0.9nm,0.3s,baz=169,slow=7.4,SNR=4.0
LPAZ   La Paz           17.52   7  P      P       11 39 29.8 -2.1
EFI    East Falkland    20.00 157  P      P       11 39 57.7 -0.4
PTLB   Pontes e Lacer   20.86  32  P      P       11 40 06.7 -1.0
PTLB                               IAmb   IAmb    11 40 10.9
           comp=Z,3.4nm,1.0s
BDFB   Brasilia         27.06  54  P      P       11 41 06.8  0.0
           comp=Z,6.9nm,0.7s,baz=216,slow=7.0,SNR=9.4
           comp=Z,6.9nm,0.7s
SNAA   Sanae            51.28 158  P      P       11 44 24.2 -2.4
SNAA                               IAmb   IAmb    11 44 48.6
           comp=Z,9.0nm,1.4s
VNDA   Vanda            64.60 191  P      P       11 45 59.6 +0.1
VNDA                               IAmb   IAmb    11 46 06.2
           comp=Z,6.3nm,1.5s
TXAR   Lajitas Array    70.23 329  P      P       11 46 38.3 +2.7
           comp=Z,0.2nm,0.5s,baz=156,slow=8.9,SNR=5.5
           comp=Z,0.2nm,0.5s
TXAR   Lajitas Array    70.23 329  P      P       11 46 34.8 -0.8
TORD   Torodi Ar. Bea   82.82  69  P      P       11 47 48.2 +1.4
           comp=Z,1.2nm,0.3s,baz=245,slow=3.0,SNR=3.3
           comp=Z,1.2nm,0.3s
```

TIR ***11*** *11:38:13.1, 41°.49N×19°.52E, h11km, Md3.0/4, Ml2.7/3*
SKO ***11*** *11:38:14.0, 41°.53N×19°.40E, h0km, ML2.6*
PDG ***11*** *11:38:15.9±0.5, 41°.60N×19°.61E, h8km±1km, ML2.8/13, Error ellipse: s-maj=1.9km s-min=1.9km az=0.0*
THE ***11*** *11:38:45.3, 39°N±30°×2°0E±2°7, h27km±12km, M2.2/8, MLh2.2/8*
ISC 11 11:38:14.8±1.0**, 41°.53N**±0°.02×**19°.56E**±0°.02**, h12**km±8km**, n36, σ0ˢ.89**/59**, 12C-9D, Albania**

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Code   Station Name      Δ°   AZ°   Phase ID         Time       Res
                                   Op     ISC      h  m  s     ISC
TIR    Tirane            0.29 128  Pg     Pg      11 38 20.8  0.0
TIR                                Sg     Sg      11 38 23.8 -0.9
TIR                                AML    AML     11 38 26.1
           2.8nm,0.2s
TIR    Tirane            0.29 128 i Pg    Pg      11 38 21.0 +0.2
TIR                               i Sg    Sb      11 38 26.2 -0.6
ULC    Ulcinj            0.49 331⇑iPg     Pg      11 38 24.1 -0.4
ULC                               i Sg    Sb      11 38 32.1 -0.6
SDA    Shkodra           0.52 355  Pg     Pg      11 38 24.2 -0.9
SDA                                Sg     Sb      11 38 32.5 -1.0
SDA                                AMd            11 39 22.8
PHP    Peshkopia         0.68  76  Pg     Pg      11 38 26.9 -1.0
PHP                                Sg     Sg      11 38 37.3 +0.4
PHP                                AML    AML     11 38 42.2
           1.3nm,0.3s
PHP                                AMd            11 39 14.1
DRME   Dracevica, Mon    0.71 337⇓iPg     Pg      11 38 28.0 -0.6
DRME                               eSg    Sb      11 38 39.3 +0.3
BUM    Brajici-Budva     0.92 327⇓iPg     Pb      11 38 32.8 +0.1
BUM                               i Sg    Sn      11 38 46.4 -0.4
PDG    Podgorica         0.93 346  Pg     Pg      11 38 31.7 -1.0
PDG                                Sg     Sb      11 38 45.7 +0.6
PDG                                AMd            11 39 34.1
PDG    Podgorica         0.93 346 ⇑P      Pg      11 38 32.0 -0.7
PDG                               ⇑S      Sn      11 38 46.1 -0.9
PDG    Podgorica         0.93 346⇑iPg     Pg      11 38 32.3 -0.4
PDG                               i Sg    Sn      11 38 46.6 -0.4
OHR    Ohrid             1.02 114 i Pg    Pb      11 38 34.7 +0.2
OHR                               i Sg    Sn      11 38 50.4 +1.0
OHR                                eLg    Lg      11 38 51.5
           comp=N,155nm,0.8s
OHR                                eLg    Lg      11 38 53.6
           comp=E,114nm,0.6s
PVY    Plav              1.10  15⇑iPg     Pg      11 38 34.3 -1.8
PVY                               i Sg    Sn      11 38 51.2 -0.3
CEME   Cevo              1.12 335⇑iPg     Pg      11 38 35.8 -0.6
CEME                               eSg    Sn      11 38 53.4 +1.5
HCY    Herceg Novi       1.22 319⇓iPg     Pg      11 38 38.1  0.0
HCY                               i Sg    Sn      11 38 56.1 +2.0
NKME   Niksic            1.32 340⇓iPg     Pn      11 38 39.1  0.0
NKME                               eSg    Sg      11 38 58.1 +0.9
KOME   Kolasin           1.32 358⇑iPg     Pg      11 38 40.1 -0.1
KOME                               eSg    Sg      11 38 59.9 +2.6
IVA    Berane            1.36  10⇑iPg     Pn      11 38 39.3 -0.5
IVA                               i Sg    Sg      11 39 00.0 +1.3
SKO    Skopje            1.47  72 i Pg    Pb      11 38 42.4 +0.3
SKO                               i Sg    Sg      11 39 02.7 +0.6
BRY    Bratogost         1.57 331⇑iPg     Pb      11 38 43.3 -0.5
BRY                               i Sg    Sg      11 39 06.3 +1.0
UPM    Unac-Piva         1.74 344⇑iPn     Pb      11 38 46.5 -0.3
UPM                               i Sn    Sg      11 39 11.7 +0.9
PLE    Pljevlja          1.80 356⇓iPn     Pb      11 38 47.9  0.0
PLE                               i Sn    Sg      11 39 13.0 +0.2
NOCI   Noci              2.03 249  Pn     Pn      11 38 47.5 -1.3
NOCI                               Sn     Sb      11 39 17.2 +0.5
NOCI                               AML    AML     11 39 23.6
           comp=E,0.4nm,0.3s
NOCI                               AMd            11 40 06.0
IGT    Igoumenitsa       2.08 163  P      Pn      11 38 50.1 +0.5
IGT    Igoumenitsa       2.08 163 i Pn    Pn      11 38 50.4 +0.9
BARS   Barje             2.11  52 i Pn    Pn      11 38 50.7 +0.7
MATE   Matera            2.33 249 ⇓P      Pg      11 38 58.9 -0.6
MATE                              ⇓S      Sg      11 39 30.4 +0.7
BOVS   Bovan             2.63  36 ⇑P      Pn      11 38 50.8 -6.3
BOVS                              ⇑S      Sn      11 39 27.4 -1.7
TSLK   Tsoukalades, L    2.83 162  P      Pn      11 38 59.0 -0.8
AMPL   Ampelaki          2.90 154  P      Pn      11 39 02.0 +1.2
NYDR   Nydri-Lefkada     2.94 162  P      Pn      11 39 01.2 -0.1
DRAG   Dragano-Lefkad    2.95 164  P      Pn      11 39 00.9 -0.6
EVGI   Lefkada island    3.02 164  P      Pn      11 39 01.6 -0.9
BLKB   Belogradchik      3.11  47 ⇓S      Sn      11 39 41.3 +0.5
FSK    Fiskardo          3.16 166  P      Pn      11 39 03.6 -0.8
VLS    Valsamata         3.44 166  P      Pn      11 39 07.4 -0.8
MDVR   Moldovita         3.61  25 ⇓P      Pn      11 39 11.3 +0.7
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SJA ***11*** *11:40:30.2±1.5, 21°.71S×68°.42W, h140km, ML3.6, MW3.4*
GUC ***11*** *11:40:32.5±0.6, 21°.68S×68°.46W, h136km±4km, ML3.6*
ISC 11 11:40:30.4±1.6**, 21°.68S**±0°.04×**68°.54W**±0°.06**, h156**km±12km**, n32, σ0ˢ.65**/56**, 7C-3D, Chile-Bolivia border region**

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Code   Station Name      Δ°   AZ°   Phase ID         Time       Res
                                   Op     ISC      h  m  s     ISC
PB09   IPOC Station P    0.66 260⇑iP      Pn      11 40 53.5 -0.1
PB09                              i S     Sn      11 41 10.3 -0.9
PB01   IPOC Station P    1.08 306⇑iP      Pn      11 40 56.7  0.0
PB01                              i S     Sn      11 41 15.3 -1.3
PB01                               IAML            11 41 16.7
           comp=N,1µm,0.4s
PB01   IPOC Station P    1.08 306  eP     Pn      11 40 54.7 -1.9
PB01                               eS     Sn      11 41 16.2 -0.5
PB01                               IAML            11 41 17.6
           comp=Z,560nm,0.2s
PB03   IPOC Station P    1.18 252⇑iP      Pn      11 40 58.0 +0.5
PB03                              i S     Sn      11 41 17.7 -0.7
PB03                               IAML            11 41 18.5
           comp=N,400nm,0.1s
PB03   IPOC Station P    1.18 252  eP     Pn      11 40 57.9 +0.3
PB03                               eS     Sn      11 41 19.1 +0.7
PB07   IPOC Station P    1.25 268⇑iP      Pn      11 40 58.7 +0.5
PB07                               eS     Sn      11 41 19.0 -0.4
PB07                               IAML            11 41 20.1
           comp=N,1µm,0.2s
PB07   IPOC Station P    1.25 268  eP     Pn      11 40 58.7 +0.5
PB07                               eS     Sn      11 41 20.2 +0.7
PB02   IPOC Station P    1.31 286⇑iP      Pn      11 40 59.2 +0.5
PB02                              i S     Sn      11 41 19.8 -0.5
PB02                               IAML            11 41 20.9
           comp=N,1µm,0.4s
PB02   IPOC Station P    1.31 286  eP     Pn      11 40 59.2 +0.5
PB02                               eS     Sn      11 41 20.8 +0.5
PB06   IPOC Station P    1.40 223⇑iP      Pn      11 41 00.1 +0.5
PB06                               eS     Sn      11 41 21.2 -0.8
PB06                               IAML            11 41 22.8
           comp=E,565nm,0.2s
PB06   IPOC Station P    1.40 223  eP     Pn      11 41 00.2 +0.5
PB06                               eS     Sn      11 41 22.3 +0.3
PB08   IPOC Station P    1.63 339⇓iP      Pn      11 41 03.1 +0.8
PB08                              i S     Sn      11 41 26.6 -0.2
PB08                               IAML            11 41 27.8
           comp=E,302nm,0.2s
PB08   IPOC Station P    1.63 339  eP     Pn      11 41 02.4 +0.1
PB08                               eS     Sn      11 41 27.5 +0.8
PATCX  Punta Patache     1.73 299  eP     Pn      11 41 03.9 +0.9
PATCX                             i S     Sn      11 41 27.9 -0.1
PATCX                              IAML            11 41 30.4
           comp=N,1µm,0.3s
PATCX  Punta Patache     1.73 299  eP     Pn      11 41 03.4 +0.4
PATCX                              eS     Sn      11 41 28.5 +0.5
TA01   Diego Aracena     1.89 306  eP     Pn      11 41 05.2 +0.5
TA01                               eS     Sn      11 41 30.4 -0.6
TA01                               IAML            11 41 32.0
           comp=E,652nm,0.2s
TA01   Diego Aracena     1.89 306  eP     Pn      11 41 05.3 +0.6
TA01                               eS     Sn      11 41 31.2 +0.2
PB05   IPOC Station P    1.93 232⇑iP      Pn      11 41 06.1 +0.8
PB05                              i S     Sn      11 41 31.7 -0.5
PB05                               IAML            11 41 36.3
           comp=E,123nm,0.4s
PB05   IPOC Station P    1.93 232  eP     Pn      11 41 05.5 +0.3
PB05                               eS     Sn      11 41 32.8 +0.7
GO01   Chusmiza          2.09 343⇓iP      Pn      11 41 08.0 +0.5
GO01                               eS     Sn      11 41 35.7 -0.4
GO01                               IAML            11 41 38.9
           comp=N,444nm,0.2s
GO01   Chusmiza          2.09 343  eP     Pn      11 41 07.5 -0.1
GO01                               eS     Sn      11 41 37.3 +1.3
PB11   IPOC Station P    2.17 331⇓iP      Pn      11 41 08.3 +0.1
PB11                              i S     Sn      11 41 36.6 -0.6
PB11                               IAML            11 41 38.1
           comp=E,578nm,0.2s
PB11   IPOC Station P    2.17 331  eP     Pn      11 41 08.3 +0.1
PB11                               eS     Sn      11 41 37.3 +0.1
PB10   IPOC Station P    2.61 225  eP     Pn      11 41 13.3 +0.2
PB10                               eS     Sn      11 41 45.3 -0.9
SALTA                    3.25 142  eP     Pn      11 41 22.7 +1.0
HJA    Humahuaca         3.27 118  eP     Pn      11 41 22.1 +0.3
PB14   IPOC Station P    3.40 210  eP     Pn      11 41 23.6 +0.3
PB12   IPOC Station P    3.48 331  eP     Pn      11 41 23.3 -1.0
GO02   Mina Guanaco      3.60 195  eP     Pn      11 41 25.9  0.0
AZAP   Zapla             4.08 129  eP     Pn      11 41 31.8 -0.3
AC01   Pan de Azucar     4.83 203  eP     Pn      11 41 41.0 -0.7
AC02   Maricunga         5.16 186  eP     Pn      11 41 46.6 +0.1
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SJA ***11*** *11:48:35.8±0.7, 20°.81S×67°.42W, h225km±5km, ML3.6, MW3.7*
SCB ***11*** *11:48:38.4±1.1, 20°.86S×67°.42W, h192km±9km, ML3.8/3, Error ellipse: s-maj=3.7km s-min=3.3km az=0.0*
IDC ***11*** *11:48:40.3±2.6, 20°.68S×67°.57W, h200km±22km, mb3.1/4, mbtmp3.6/5, Error ellipse: s-maj=147.3km s-min=20.5km az=85.0*
ISC 11 11:48:38.6±0.9**, 20°.84S**±0°.04×**67°.44W**±0°.04**, h200**km±7km**, n45, σ1ˢ.27**/65**, mb3.2**/3**, Southern Bolivia**

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Code   Station Name      Δ°   AZ°   Phase ID         Time       Res
                                   Op     ISC      h  m  s     ISC
MOCB   Mochara           1.74 104  Pg     Pn      11 49 14.2 -0.8
MOCB                               IAML   Sn      11 49 41.3 -1.8
           471nm,0.4s
MOCB                               Sg     Sn      11 49 41.3 -1.8
PB08   IPOC Station P    1.75 293  Pg     Pn      11 49 15.3 +0.3
PB08   IPOC Station P    1.75 293  eP     Pn      11 49 15.4 +0.3
PB08                               eS     Sn      11 49 44.3 +1.1
PB08                               IAML            11 49 44.6
           comp=Z,86nm,0.8s
PB01   IPOC Station P    1.92 264  Pg     Pn      11 49 16.5 +0.1
PB01                               Sg     Sn      11 49 44.7 -1.0
PB01                               IAML            11 49 47.0
           comp=Z,173nm,0.2s
PB01   IPOC Station P    1.92 264  eP     Pn      11 49 16.2 -0.2
PB01                               eS     Sn      11 49 46.1 +0.4
PB01                               IAML            11 49 49.2
           comp=Z,120nm,0.1s
PB09   IPOC Station P    1.93 240  Pg     Pn      11 49 17.1 +0.6
PB09   IPOC Station P    1.93 240  eP     Pn      11 49 12.5 -4.0
PB09                               eS     Sn      11 49 47.2 +1.2
PB09                               IAML            11 49 48.0
           comp=Z,152nm,0.5s
GO01   Chusmiza          2.02 305  Pg     Pn      11 49 17.9 +0.1
GO01   Chusmiza          2.02 305  eP     Pn      11 49 18.2 +0.4
GO01                               eS     Sn      11 49 51.4 +3.2
GO01                               IAML            11 49 57.3
           comp=Z,76nm,0.1s
AF01   San Pedro de A    2.21 198  eP     Pn      11 49 22.7 +3.1
AF01                               IAML            11 50 13.2
           comp=Z,117nm,1.1s
YJA    Yavi              2.23 127  Pg     Pn      11 49 19.6 -0.4
YJA    Yavi              2.23 127  eP     Pn      11 49 19.8 -0.3
YJA                                eS     Sn      11 49 52.1 -0.1
SOEO   Opoqueri          2.30 349  Pg     Pn      11 49 20.7 -0.2
PB11   IPOC Station P    2.34 297  Pg     Pn      11 49 20.4 -0.5
PB11   IPOC Station P    2.34 297  eP     Pn      11 49 20.3 -0.6
PB11                               eS     Sn      11 49 53.3 -0.4
PB11                               IAML            11 49 55.2
           comp=Z,237nm,0.4s
PB02   IPOC Station P    2.34 258  Pg     Pn      11 49 21.0 +0.2
PB02                               Sg     Sn      11 49 52.7 -1.0
PB02                               IAML            11 49 52.9
           comp=Z,685nm,0.3s
PB02   IPOC Station P    2.34 258  eP     Pn      11 49 20.9 +0.1
PB02                               eS     Sn      11 49 53.3 -0.4
HMBC   Humberstone       2.36 283  eP     Pn      11 49 20.3 -0.8
HMBC                               eS     Sn      11 49 53.4 -0.7
HMBC                               IAML            11 49 56.7
           comp=Z,238nm,0.7s
PB07   IPOC Station P    2.44 248  eP     Pn      11 49 17.2 -4.8
PB07                               eS     Sn      11 49 54.9 -0.9
PB07                               IAML            11 49 55.8
           comp=Z,356nm,0.3s
PB03   IPOC Station P    2.46 240  eP     Pn      11 49 22.7 +0.4
PB03                               eS     Sn      11 49 56.1 -0.1
PB03                               IAML            11 49 57.3
           comp=Z,177nm,0.2s
PATCX  Punta Patache     2.53 270  eP     Pn      11 49 22.5 -0.4
PATCX                              eS     Sn      11 49 57.4 -0.1
PATCX                              IAML            11 49 59.6
           comp=Z,128nm,0.3s
TA01   Diego Aracena     2.58 276  eP     Pn      11 49 22.0 -1.4
TA01                               eS     Sn      11 49 56.0 -2.2
TA01                               IAML            11 49 57.5
           comp=Z,116nm,0.3s
TA02   Huaiquique        2.58 282  eP     Pn      11 49 22.8 -0.6
TA02                               eS     Sn      11 49 57.2 -1.0
TA02                               IAML            11 49 59.6
           comp=Z,323nm,0.1s
PB06   IPOC Station P    2.71 226  Pg     Pn      11 49 25.7 +0.7
PB06   IPOC Station P    2.71 226  eP     Pn      11 49 09.1  -16
PB06                               eS     Sn      11 50 02.1 +0.7
PB06                               IAML            11 50 03.4
           comp=Z,147nm,0.5s
HJA    Humahuaca         3.02 142  eP     Pn      11 49 28.9 +0.1
HJA                                eS     Sn      11 50 07.6 -0.6
HJA                                IAML            11 50 07.9
           comp=Z,89nm,0.6s
PB05   IPOC Station P    3.25 231  eP     Pn      11 49 15.7  -16
PB05                               eS     Sn      11 50 11.4 -1.3
PB05                               IAML            11 50 15.3
           comp=Z,47nm,0.2s
PB12   IPOC Station P    3.50 309  eP     Pn      11 49 33.0 -1.5
PB12                               eS     Sn      11 50 14.9 -3.1
PB12                               IAML            11 50 19.0
           comp=Z,66nm,0.2s
SALTA                    3.52 163  eP     Pn      11 49 36.2 +1.3
BBOJ   La Paz, Jacaqu    3.91 349  Pg     Pn      11 49 40.8 +1.0
PB10   IPOC Station P    3.92 227  eP     Pn      11 49 38.8 -0.6
PB10                               eS     Sn      11 50 25.2 -2.0
PB10                               IAML            11 50 42.8
           comp=Z,24nm,0.6s
AZAP   Zapla             4.02 147  eP     Pn      11 49 40.1 -0.7
AZAP                               IAML            11 50 33.6
           comp=Z,60nm,0.6s
BBOE   La Paz, Chanca    4.04 353  Pg     Pn      11 49 41.4 -0.1
BBOD   La Paz, Gloria    4.32 345  Pg     Pn      11 49 46.0 +1.0
LPAZ   La Paz            4.58 352  P      Pn      11 49 48.0 -0.2
           comp=Z,2.3nm,0.3s,baz=182,slow=8.9,SNR=23
LPAZ                               S      Sn      11 50 41.0 -1.9
           comp=Z,3.4nm,0.7s,baz=35,slow=24,SNR=4.7
LPAZ   La Paz            4.58 352  Pg     Pn      11 49 48.0 -0.2
LPAZ   La Paz            4.58 352  eP     Pn      11 49 48.1 -0.2
PB14   IPOC Station P    4.65 215  Pg     Pn      11 49 48.6 -0.3
PB14   IPOC Station P    4.65 215  eP     Pn      11 49 48.0 -0.9
PB14                               eS     Sn      11 50 41.3 -3.0
PB14                               IAML            11 50 43.2
           comp=Z,48nm,0.4s
GO02   Mina Guanaco      4.74 204  Pg     Pn      11 49 49.6 -0.3
GO02   Mina Guanaco      4.74 204  eP     Pn      11 49 35.1  -15
GO02                               eS     Sn      11 50 45.5 -0.6
GO02                               IAML            11 50 49.0
           comp=Z,94nm,0.1s
PLCA   Paso Flores      20.01 187  P      Pn      11 52 59.3 -1.2
           comp=Z,2.5nm,0.8s,baz=0.0,slow=14,SNR=3.9
           comp=Z,2.5nm,0.8s
TXAR   Lajitas Array    60.89 324  P      P       11 58 30.8 +0.3
           comp=Z,0.3nm,0.6s,baz=149,slow=8.4,SNR=6.4
           comp=Z,0.3nm,0.6s
PDAR   Pinedale Array   74.24 329  P      P       11 59 54.7 +0.8
           comp=Z,0.2nm,0.5s,baz=76,slow=5.0,SNR=3.9
           comp=Z,0.2nm,0.5s
YKA    Yellowknife Ar   91.03 340  P      P       12 01 20.2 +0.6
           comp=Z,0.5nm,0.7s,baz=135,slow=3.8,SNR=8.0
           comp=Z,0.5nm,0.7s
```

GCG ***11*** *11:53:05.9±0.7, 12°.97N×90°.29W, h7km±20km, MD4.0*
SNET ***11*** *11:53:06.4±0.9, 12°.91N×90°.13W, h15km±9km, ML3.0*
ISC 11 11:53:07.1±3.6**, 12°.9N**±0°.2×**90°.1W**±0°.1**, h29**km**, n17, σ0ˢ.57**/21**, Off coast of central America**

```
Code   Station Name      Δ°   AZ°   Phase ID         Time       Res
                                   Op     ISC      h  m  s     ISC
JAYA   Jayaque - finc    1.00  40  eP     Pn      11 53 24.9 -0.4
JAYA                               eS     Sn      11 53 37.8 -0.6
JAYA   Jayaque - finc    1.00  40 i P     Pn      11 53 25.5 +0.3
CEVE   Cerro Verde       1.04  27  eP     Pn      11 53 25.6 -0.4
CEVE                               IAML            11 53 50.8
           comp=Z,382nm,0.3s
NUBE   Las Nubes         1.06  18  eP     Pn      11 53 25.3 -0.8
NUBE                               eS     Sn      11 53 39.8 -0.1
NUBE   Las Nubes         1.06  18 i P     Pn      11 53 25.3 -0.8
NUBE                              i S     Sb      11 53 41.1 +0.7
SBLS   San Blas          1.06  27  eP     Pn      11 53 25.6 -0.6
SNJE   San Jose          1.09  27  eP     Pn      11 53 26.3 -0.3
RTR    El Retiro         1.10  24  eP     Pn      11 53 26.5 -0.2
PMON   Piamonte          1.13  43  eP     Pn      11 53 26.2 -0.9
PMON                               eS     Sb      11 53 42.3 -0.1
BOQS   Boqueron          1.17  44  eP     Pn      11 53 28.0 +0.3
LFRS   El Faro           1.25  54  eP     Pn      11 53 28.8  0.0
RBDL   Robledal          1.28  19  eP     Pn      11 53 29.1 -0.1
PAVA   Las Pavas         1.41  54  eP     Pn      11 53 31.2 +0.3
MTO3   Montecristo       1.67  26  eP     Pn      11 53 35.0 +0.4
MTO3   Montecristo       1.67  26 i P     Pn      11 53 35.6 +1.1
ESQI   Esquipulas        1.82  24  eP     Pn      11 53 37.4 +0.8
APG    El Apazote        2.13 351 i P     Pn      11 53 41.0 +0.1
```

MOS ***11*** *11:54:19.7±0.9, 47°.95N×147°.32E, h422km, mb4.2/32, Error ellipse: s-maj=7.8km s-min=5.4km az=92.0*

SKHL **11** *11:54:20.2±0.5, 47.°80N×147.°40E, h419^{km}±12^{km}, mb5.1/9, msh5.1/2, msha5.4/9*

JMA **11** *11:54:20.5±0.5, 47°N±3°×14°8E±°, h473^{km}, MV4.1/33, SOUTHERN SEA OF OKHOTSK*

NIED **11** *11:54:20.5, 47.°26N×147.°69E, h473^{km}, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}1.26; $M_{\theta\theta}$-0.20; $M_{\phi\phi}$-1.06; $M_{r\theta}$-0.61; $M_{\theta\phi}$-0.44; $M_{\phi r}$0.19; Fault plane solution: $M_0$1.38000×10^{16} NP1:ϕ_s2.00000°, δ48.00000°, λ59.00000°. NP2:ϕ_s224.00000°, δ51.00000°, λ119.00000°.*

NEIC **11** *11:54:22.0±1.4, 48.°01N±0.°10×147.°2E±0.°1, h426^{km}±7^{km}, mb4.2/147 Error ellipse: s-maj=15.8km s-min=12.7km az=135.0*

IDC **11** *11:54:22.1±1.1, 48.°03N×147.°19E, h430^{km}±12^{km}, mb3.7/32, mbtmp4.5/41, Error ellipse: s-maj=9.0km s-min=7.1km az=138.0*

ISC 11 11:54:20.7±0.5**, 47.°85N**±0.°04×**147.°35E**±0.°04**, h422**^{km}±5^{km}**, n336, σ1^{s}35**/336**, mb4.2**/141**, 16C-5D, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.64	172	⇑*i*PN	P	11 55 23.6	+0.8
KUR				*i* S	S	11 56 14.1	+0.9
KUR				pmax	pmax		
	comp=E,28nm,0.4s						
KUR				pmax	pmax		
	comp=Z,240nm,0.4s						
KUR				pmax	pmax		
	comp=N,78nm,0.3s						
KUR				smax	smax		
	comp=E,249nm,1.0s						
KUR				smax	smax		
	comp=N,171nm,0.7s						
KUR	Kuril'sk	2.64	172	*i* P	P	11 55 22.5	-0.3
KUR				AMB	AMB	11 55 23.5	
	comp=N,490nm,0.8s						
KUR				*i* S	S	11 56 13.0	-0.2
KUR				A	A	11 56 14.5	
	comp=N,170nm,0.7s						
KUR				A	A	11 56 14.5	
	comp=N,940nm,0.7s						
YSS	Yuzhno-Sakhali	3.24	256		P	11 55 29.3	+1.9
YSS	Yuzhno-Sakhali	3.24	256	κ*e*PN	P	11 55 29.1	+1.7
YSS				*e*S	S	11 56 22.0	+0.4
YSS				pmax	pmax		
	comp=Z,220nm,0.7s						
YSS				pmax	pmax		
	comp=Z,100nm,2.4s						
YSS				pmax	pmax		
	comp=N,200nm,3.7s						
YSS				smax	smax		
	comp=N,230nm,1.0s						
YSS				smax	smax		
	comp=E,120nm,1.2s						
YSS				smax	smax		
	comp=N,700nm,2.8s						
YSS				smax	smax		
	comp=E,2μm,4.2s						
YSS	Yuzhno-Sakhali	3.24	256	*e*P	P	11 55 28.6	+1.2
YSS				AMB	AMB	11 55 30.1	
	comp=E,190nm,0.6s						
YSS				*e*S	S	11 56 22.3	+0.7
YSS				A	A	11 56 25.0	
	comp=E,70nm,0.8s						
YSS				A	A	11 56 25.0	
	comp=E,130nm,0.8s						
UGL	Uglegorsk	3.72	291	*e*PN	P	11 55 32.3	+1.0
UGL				*e*S	S	11 56 29.0	0.0
UGL				pmax	pmax		
	comp=Z,100nm,0.6s						
UGL				smax	smax		
	comp=E,500nm,0.6s						
UGL				smax	smax		
	comp=N,200nm,1.0s						
UGL	Uglegorsk	3.72	291	*e*P	P	11 55 32.3	+1.0
UGL				AMB	AMB	11 55 32.8	
	comp=N,120nm,0.6s						
UGL				*e*S	S	11 56 29.0	0.0
UGL				A	A	11 56 30.8	
	comp=N,180nm,0.8s						
UGL				A	A	11 56 30.8	
	comp=N,540nm,0.8s						
YUK	Yuzh-Kuril'sk	3.95	196	*c i*PN	P	11 55 33.5	-0.1
YUK				*i* S	S	11 56 31.0	-1.9
YUK				pmax	pmax		
	comp=Z,212nm,0.4s						
YUK				pmax	pmax		
	comp=N,80nm,0.3s						
YUK				pmax	pmax		
	comp=E,37nm,0.3s						
YUK				smax	smax		
	comp=N,666nm,1.5s						
YUK				smax	smax		
	comp=E,1μm,1.3s						
YUK				smax	smax		
	comp=E,623nm,0.5s						
YUK				smax	smax		
	comp=N,158nm,0.6s						
YUK	Yuzh-Kuril'sk	3.95	196	*i* P	P	11 55 33.5	-0.1
YUK				AMB	AMB	11 55 36.3	
	comp=N,210nm,0.4s						
YUK				*i* S	S	11 56 31.9	-1.0
YUK				A	A	11 56 33.5	
	comp=N,670nm,1.5s						
YUK				A	A	11 56 33.5	
	comp=N,1μm,1.5s						
YUK				A	A	11 56 38.2	
	comp=N,160nm,0.5s						
YUK				A	A	11 56 38.2	
	comp=N,620nm,0.5s						
RUSJ	Misakicho	4.02	202	*e*PN	P	11 55 34.2	0.0
JRA	Rausu	4.21	202	P	P	11 55 36.0	+0.1
JRA				*e*S	S	11 56 36.2	-1.0
TYV	Tymovskoe	4.30	316	*e*PN	P	11 55 37.8	+1.2
TYV				*e*S	S	11 56 38.3	-0.3
TYV				pmax	pmax		
	comp=Z,200nm,3.6s						
TYV				pmax	pmax		
	comp=Z,62nm,0.8s						
TYV				smax	smax		
	comp=N,900nm,2.3s						
TYV				smax	smax		
	comp=E,500nm,2.3s						
TYV				smax	smax		
	comp=N,107nm,1.2s						
TYV				smax	smax		
	comp=E,144nm,1.2s						
TYV	Tymovskoe	4.30	316	*e*P	P	11 55 37.2	+0.6
TYV				*e*S	S	11 56 38.5	-0.1
TYV				A	A	11 56 40.4	
	comp=E,110nm,1.2s						
TYV				A	A	11 56 40.4	
	comp=E,140nm,1.2s						
TYV				A	A	11 56 40.9	
	comp=E,900nm,2.3s						
TYV				A	A	11 56 40.9	
	comp=E,500nm,2.3s						
GLVR	Golovnino	4.30	198	*e*PN	P	11 55 36.5	-0.3
GLVR				*e*S	S	11 56 38.4	-0.5
GLVR				pmax	pmax		
	comp=Z,127nm,0.1s						
GLVR				smax	smax		
	comp=E,105nm,0.2s						
GLVR				smax	smax		
	comp=N,497nm,0.3s						
GLVR	Golovnino	4.30	198	*e*P	P	11 55 36.5	-0.3
GLVR				AMB	AMB	11 55 38.9	
	comp=N,130nm,0.2s						
GLVR				*e*S	S	11 56 38.4	-0.5
GLVR				A	A	11 56 42.8	
	comp=N,500nm,0.3s						
GLVR				A	A	11 56 42.8	
	comp=N,110nm,0.3s						
JSE	Soyaes	4.38	231	P	P	11 55 39.0	+1.5
JSE				*e*S	S	11 56 40.8	+0.6
JWK2	Keihoku	4.53	238	P	P	11 55 41.3	+2.4
JTKR	Abashiri--Toko	4.56	213	P	P	11 55 39.9	+0.7
JTKR				S	S	11 56 42.0	-1.3
NMR	Nemuro--Hokkai	4.62	195	⇓*i*PN	P	11 55 37.6	-2.2
NMR				*i* S	S	11 56 39.0	-5.4
NMR	Nemuro--Hokkai	4.62	195	*i* P	P	11 55 37.9	-1.9
NMR				*i* S	S	11 56 40.5	-3.9
NEM2	Nemuro 2	4.62	195	P	P	11 55 37.6	-2.3
NEM2				S	S	11 56 38.9	-5.5
JNK	Nakash	4.64	204	*e*P	P	11 55 39.8	-0.3
JNK				*e*S	S	11 56 42.6	-2.3
JMP	Maruseppu	4.74	217	P	P	11 55 41.7	+0.6
JMP				S	S	11 56 46.3	-0.4
JRBN	Rebuntou	4.96	243	P	P	11 55 44.3	+1.2
JKA	Kamikawa-asahi	4.99	223		P	11 55 44.8	+1.4
JKA	Kamikawa-asahi	4.99	223	*e*P	P	11 55 44.8	+1.4
ASAJ	Asahikawa	4.99	223	P	P	11 55 45.0	+1.6
	comp=N,79nm,0.7s,baz=33,slow=4.6,SNR=114						
ASAJ	Asahikawa	4.99	223	PN	P	11 55 44.8	+1.3
JKK2	Kamakawa 2	5.11	221	P	P	11 55 45.7	+1.0
AKK	Akkeshi	5.14	201	*e*P	P	11 55 43.8	-1.2
JSS	Shosan	5.14	230	P	P	11 55 47.2	+2.2
JAK	Akkeshi	5.20	202	P	P	11 55 43.7	-1.8
JAK				S	S	11 56 49.5	-5.5
JAR	Ashorobuto	5.20	210	P	P	11 55 45.7	+0.1
JAR				*e*S	S	11 56 53.1	-1.9
JHR	Hokuryu	5.68	226	*e*P	P	11 55 52.2	+1.6
JFR	Furan	5.75	217	P	P	11 55 52.1	+0.8
JCH	Churui	5.94	210	P	P	11 55 51.5	-1.8
JCH				*e*S	S	11 57 03.1	-5.9
JBT2	Biratori 2	6.17	217	P	P	11 55 55.5	-0.1
JBT2				*e*S	S	11 57 10.9	-2.5
SKR	Severo-Kuril's	6.40	60	*e*PN	P	11 55 57.0	-0.9
SKR				*e*S	S	11 57 15.4	-2.4
SKR				pmax	pmax		
	comp=Z,426nm,0.7s						
SKR				pmax	pmax		
	comp=Z,1μm,4.5s						
SKR				smax	smax		
	comp=N,284nm,0.5s						
SKR				smax	smax		
	comp=E,188nm,0.4s						
SKR				MLR	MLR		
	comp=Z,400nm,15.0s						
SKR	Severo-Kuril's	6.40	60	*e*P	P	11 55 57.3	-0.6
SKR				AMB	AMB	11 56 00.0	
	comp=Z,430nm,0.7s						
SKR				*e*S	S	11 57 16.0	-1.8
SKR				A	A	11 57 25.2	
	comp=Z,280nm,0.4s						
SKR				A	A	11 57 25.2	
	comp=Z,190nm,0.4s						
JNBK	Urakawa-nobuka	6.45	212	P	P	11 55 56.8	-1.8
ERM	Erimo	6.54	209	P	P	11 55 59.5	-0.7
ERM	Erimo	6.54	209	PN	P	11 55 59.5	-0.7
NKL	Nikolayevsk	6.80	324	*e*P	P	11 56 03.1	+0.5
NKL				AMB	AMB	11 56 04.0	
	comp=Z,100nm,0.5s						
PAU	Pauzhetka	7.13	56	*e*P	P	11 56 06.4	+0.1
PAU				AMB	AMB	11 56 07.8	
	comp=Z,840nm,0.6s						
PAU				*e*S	S	11 57 31.9	-0.4
PAU				A	A	11 57 35.1	
	comp=Z,180nm,0.6s						
PAU				A	A	11 57 35.1	
	comp=Z,160nm,0.6s						
GRNR	Gornyy	7.72	296	⇓*i*PN	P	11 56 13.6	+0.9
GRNR				pmax	pmax		
	comp=N,20nm,0.7s						
GRNR				pmax	pmax		
	comp=E,70nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,70nm,0.7s						
GRNR				MLR	MLR		
	comp=N,130nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,140nm,12.0s						
GRNR	Gornyy	7.72	296	*e*P	P	11 56 13.6	+0.9
JOT	Ohata	7.87	217	P	P	11 56 12.1	-2.4
JOT				S	S	11 57 39.7	-7.9
TEY	Ternei	7.94	253	*e*PN	P	11 56 16.4	+1.2
TEY				*e*		11 57 49.4	
TEY	Ternei	7.94	253	*e*P	P	11 56 16.4	+1.2
JOSM	Okushiri--Mats	8.02	227	P	P	11 56 14.2	-1.8
JOSM				S	S	11 57 43.9	-6.8
JSI2	Shiura 2	8.40	219	P	P	11 56 18.6	-1.7
JSI2				*e*S	S	11 57 50.8	-7.8
PEA0B	Petropavlovsk-	8.44	48		P	11 56 21.2	+0.7
PEA0B	Petropavlovsk-	8.44	48	*ce*PN	P	11 56 20.8	+0.3
PETK	Petropavlovsk-	8.44	48	P	P	11 56 20.1	-0.4
	comp=Z,26nm,0.7s,baz=224,slow=7.6,SNR=83						
PETK	Petropavlovsk-	8.44	48	P	P	11 56 20.5	0.0
PETK	Petropavlovsk-	8.44	48	PN	P	11 56 20.5	0.0
JANG	Nango	8.57	211	*e*P	P	11 56 20.2	-2.0
JANG				*e*S	S	11 57 53.6	-8.3
PET	Petropavlovsk	8.88	50	P	P	11 56 26.4	+1.1
PET	Petropavlovsk	8.88	50	*ce*PN	P	11 56 25.1	-0.2
PET				pmax	pmax		
	comp=Z,66nm,1.3s						
PET	Petropavlovsk	8.88	50	*e*P	P	11 56 25.1	-0.2
JIW	Iwasaki	8.96	219	P	P	11 56 25.3	-1.1
USRK	Ussuriysk Ar.	11.28	257	P	P	11 56 52.2	+0.3
	comp=Z,8.0nm,0.7s,baz=60,slow=12,SNR=14						
JSD	Sado	11.84	217	P	P	11 56 59.3	+1.1
MA2	Magadan	11.92	8	P	P	11 56 58.9	+0.2
	comp=Z,1.9nm,0.3s,baz=186,slow=18,SNR=1.2						
MSHR	Mys Shultsa	12.57	251	*i* PN	P	11 57 07.0	+1.0
MDJ	Mudanjiang	12.71	262	P	P	11 57 08.2	+0.7
PSTR	Posyet	12.76	252	*i* PN	P	11 57 08.8	+0.7
MJB9	Matsu-Tunnel	13.16	214	P	P	11 57 15.1	+2.5
MAJO	Matsushiro	13.16	214		P	11 57 14.2	+1.6
MAJO	Matsushiro	13.16	214	*i* PN	P	11 57 14.0	+1.4
MJAR	Matsushiro Arr	13.16	214	P	P	11 57 14.6	+2.0
	comp=Z,22nm,1.0s,baz=17,slow=11,SNR=30						
MJAR	Matsushiro Arr	13.16	214		P	11 57 14.2	+1.6
MJAR	Matsushiro Arr	13.16	214	PN	P	11 57 14.2	+1.6
HEH	HeiHe	13.29	288	*e*P	P	11 57 13.8	0.0
HEH				sP		11 58 44.6	
HEH				S	S	11 59 35.8	-1.1
HEH				pmax	pmax		
	comp=Z,63nm,1.0s						
HEH				pmax	pmax		
	comp=Z,190nm,4.1s						
ZEA	Zeya	13.99	302	*e*P	P	11 57 21.2	-0.1
ZEA				pmax	pmax		
	comp=N,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA	Zeya	13.99	302	*e*P	P	11 57 21.2	-0.1
JGF	Kuroka	14.31	215		P	11 57 26.8	+1.7
INU	Inuyama	14.67	215		P	11 57 30.7	+1.8
SEY	Seymchan	15.38	9	P	P	11 57 35.6	-0.5
	comp=Z,1.7nm,0.3s,baz=195,slow=9.0,SNR=6.6						
SEY	Seymchan	15.38	9	*e*P	P	11 57 34.6	-1.6
SEY				pmax	pmax		
	comp=Z,10.0nm,1.4s						
SEY	Seymchan	15.38	9	*e*P	P	11 57 34.6	-1.6
CN2	Changchun	15.78	263	P	P	11 57 38.9	-1.8
CN2				pmax	pmax		
	comp=Z,30nm,0.8s						
JMN	Monobe	17.37	221	P	P	11 57 59.8	+2.0
YAK	Yakutsk	17.37	331	P	P	11 57 55.9	-1.4
	comp=Z,125nm,0.8s,baz=344,slow=3.2,SNR=28						
YAK	Yakutsk	17.37	331	P	P	11 57 56.2	-1.1
YAK	Yakutsk	17.37	331	*ce*P	P	11 57 55.3	-2.0
YAK				pmax	pmax		
	comp=Z,133nm,0.8s						
YAK	Yakutsk	17.37	331	*e*P	P	11 57 55.3	-2.0
KSRS	Korea Array	17.62	241	P	P	11 58 01.5	+1.2
	comp=Z,9.9nm,0.7s,baz=45,slow=11,SNR=20						
KSRS				PcP	PcP	12 02 15.6	+0.1
	comp=Z,2.6nm,0.7s,baz=331,slow=0.9,SNR=6.4						
KS19	Wonju Array Si	17.62	241	P	P	11 58 01.6	+1.2
KS19				IAmb	IAmb	11 58 02.9	
	comp=Z,10nm,0.8s						
KSAR	Wonju Array Be	17.65	241	P	P	11 57 58.9	-1.7
KSAR	Wonju Array Be	17.65	241	P	P	11 57 58.9	-1.7
HILR	Hailar Array B	18.26	286	P	P	11 58 07.6	+0.6
	comp=Z,6.6nm,0.4s,baz=76,slow=10,SNR=10						
JNU	Nakatsue	19.26	226	P	P	11 58 16.7	-0.3
AMKA	Amchitka	20.91	68	P	P	11 58 32.7	+0.9
BILL	Bilibino	22.41	19	P	P	11 58 45.9	+0.7
BILL				IAmb	IAmb	11 59 28.3	
	comp=Z,10nm,1.4s						
TIK	Tiksi	25.38	346	*e*P	P	11 59 10.8	-0.8
TIXI	Tiksi	25.39	346		P	11 59 10.7	-1.0
TIXI	Tiksi	25.39	346	*ce*P	P	11 59 10.8	-1.0
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC	Hu-ho-hao-te	26.35	268	*e*P	P	11 59 21.9	+1.1
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SONM	Songino Array	27.26	285	P	P	11 59 30.0	+1.2
	comp=Z,0.6nm,0.5s,baz=101,slow=7.7,SNR=3.7						
SONM				PcP	PcP	12 02 35.0	-0.5
	comp=Z,1.0nm,0.6s,baz=112,slow=1.6,SNR=5.0						
	comp=Z,0.6nm,0.5s						
K13K	Kusilvak Mount	30.19	44	P	P	11 59 54.6	+0.6
K13K				IAmb	IAmb	12 00 33.8	
	comp=Z,22nm,1.4s						
J16K	Anvik River	32.16	42	IAmb	IAmb	12 00 17.0	
	comp=Z,10nm,0.7s						
L16K	Owhat River	32.63	45	P	P	12 00 16.4	+1.3
L16K				IAmb	IAmb	12 00 50.8	
	comp=Z,11nm,1.2s						
CNBA	Chernabura Isl	33.17	58	P	P	12 00 20.1	+0.3
LZDM	Lanzhou Array	34.16	266	P	P	12 00 30.1	+1.2
	comp=Z,2.0nm,0.3s,baz=72,slow=4.7,SNR=4.0						
	comp=Z,2.0nm,0.3s						
GTA	Gaotai	34.95	274	*e*P	P	12 00 36.1	+0.8
GTA				sP	PP	12 02 05.7	-0.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
NRIK	Noril'sk	35.78	328	P	P	12 00 41.2	-0.5
	comp=Z,2.0nm,0.4s,baz=84,slow=9.2,SNR=6.3						
	comp=Z,2.0nm,0.4s						
NRIK	Noril'sk	35.78	328	P	P	12 00 39.5	-2.2
NRIK	Noril'sk	35.78	328	*i* P	P	12 00 39.8	-1.9
NRIK				pmax	pmax		
	comp=Z,10.0nm,1.5s						
E22K	Anaktuvuk Pass	36.08	34	P	P	12 00 44.4	+0.2
OHAK	Old Harbor	36.21	52	P	P	12 00 46.0	+0.6
SPU	Mount Spurr	36.22	46	P	P	12 00 46.9	+1.4
SPU				IAmb	IAmb	12 00 55.1	
	comp=Z,12nm,1.3s						
SKT	Skwentna	36.38	44	P	P	12 00 47.7	+0.8
D24K	Happy Valley	37.20	32	IAmb	IAmb	12 00 54.1	
	comp=Z,9.6nm,0.6s						
NEA2	Nenana	37.24	40	P	P	12 00 54.7	+0.7
NEA2				IAmb	IAmb	12 00 55.6	
	comp=Z,9.6nm,0.8s						
RC01	Rabbit Creek A	37.34	45	P	P	12 00 55.3	+0.4
D25K	Kavik River	38.08	32	IAmb	IAmb	12 01 01.2	
	comp=Z,8.1nm,0.9s						
ILAR	Eielson Array	38.16	39	P	P	12 01 01.9	+0.3
	comp=Z,5.2nm,0.8s,baz=276,slow=8.1,SNR=30						
ILAR				PcP	PcP	12 03 04.7	-1.1
	comp=Z,0.5nm,0.4s,baz=276,slow=3.1,SNR=4.7						
	comp=Z,5.2nm,0.8s						
ILAR	Eielson Array	38.16	39	P	P	12 01 01.3	-0.2
DGZ	Jazzator, Alta	38.62	296	*i* P	P	12 01 05.8	+0.2
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZALV	Zalesovo Beam	38.75	303	P	P	12 01 05.3	-1.2
	comp=Z,0.4nm,0.4s,baz=86,slow=7.4,SNR=2.7						
ZALV				PcP	PcP	12 03 06.7	-1.0
	comp=Z,5.9nm,0.7s,baz=75,slow=2.7,SNR=23						
ZALV	Zalesovo Beam	38.75	303	P	P	12 01 05.2	-1.3
G26K	Porcupine Rive	39.19	36	IAmb	IAmb	12 01 11.5	
	comp=Z,7.5nm,0.8s						
SCRK	Sand Creek	39.52	40		P	12 01 12.3	-0.5
GOMU	GeErMu	40.00	273	P	P	12 01 17.3	-0.1
GOMU				pmax	pmax		
	comp=Z,7.0nm,0.6s						
M26K	Nabesna, AK	40.26	43	IAmb	IAmb	12 01 21.5	
	comp=Z,16nm,1.1s						
K27K	Chicken	40.34	40	IAmb	IAmb	12 01 21.1	
	comp=Z,10.0nm,0.9s						
F28M	Old Crow	40.61	34		P	12 01 21.4	-0.1
L27K	Beaver Creek,	40.65	41	IAmb	IAmb	12 01 24.4	
	comp=Z,8.5nm,0.9s						
BCAR	Beaver Creek A	40.66	41	P	P	12 01 23.3	+1.4
M27K	Edge Creek, AK	40.78	42	IAmb	IAmb	12 01 25.6	
	comp=Z,15nm,1.0s						
I28M	Miner Creek	40.97	37	IAmb	IAmb	12 01 26.0	
	comp=Z,6.7nm,0.6s						
I29M	Ogilvie Camp,	41.65	37	IAmb	IAmb	12 01 31.1	
	comp=Z,8.6nm,1.0s						
KMI	Kunming	41.69	253	P	P	12 01 31.0	+0.1
KMI				pmax	pmax		
	comp=Z,14nm,0.9s						
EPYK	Eagle Plains	42.06	36	IAmb	IAmb	12 01 34.2	
	comp=Z,7.3nm,0.8s						
F30M	Barrier River	42.15	34	IAmb	IAmb	12 01 35.5	
	comp=Z,14nm,0.8s						
L29M	L29M	42.27	41	IAmb	IAmb	12 01 37.7	
	comp=Z,13nm,0.8s						
I30M	Mount Dempster	42.47	37	IAmb	IAmb	12 01 37.7	
	comp=Z,8.3nm,0.8s						
INK	Inuvik	42.83	32	P	P	12 01 38.9	-0.1
	comp=Z,4.6nm,0.4s,baz=304,slow=10,SNR=24						
	comp=Z,4.6nm,0.4s						
INK	Inuvik	42.83	32		P	12 01 39.2	+0.2
INK				IAmb	IAmb	12 01 39.2	
	comp=Z,6.2nm,0.4s						
MK31	Makanchi Array	42.93	294	*ce*P	P	12 01 39.9	-0.3
MKAR	Makanchi Array	42.93	294	P	P	12 01 39.4	-0.8
	comp=Z,1.2nm,0.6s,baz=67,slow=7.3,SNR=13						
MKAR				PcP	PcP	12 03 21.2	-0.5
	comp=Z,1.7nm,0.7s,baz=57,slow=5.1,SNR=9.9						
	comp=Z,1.2nm,0.6s						
MKAR	Makanchi Array	42.93	294		P	12 01 39.7	-0.5
MKAR	Makanchi Array	42.93	294	*i* P	P	12 01 40.0	-0.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	42.93	294	*e*P	P	12 01 40.0	-0.2
F31M	Tsiigehtchic	42.96	34		P	12 01 40.2	+0.2
M30M	Minto, Yukon	43.00	41	P	P	12 01 41.8	+1.2
MAKZ	Makanchi	43.12	294	P	P	12 01 41.4	-0.3
MAKZ	Makanchi	43.12	294	P	P	12 01 41.4	-0.3
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.4s						
H31M	Peel River	43.14	36	IAmb	IAmb	12 01 43.2	
	comp=Z,7.4nm,0.7s						
HYT	Haines Junctio	43.21	44		P	12 01 44.2	+1.9
HYT				IAmb	IAmb	12 01 45.6	
	comp=Z,15nm,0.9s						
KURK	Kurchatov	43.46	301		P	12 01 43.7	-0.6
KURK	Kurchatov	43.46	301	*ce*P	P	12 01 43.6	-0.6
KURK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
KURK	Kurchatov	43.46	301	*e*P	P	12 01 43.6	-0.6
KURBB	Kurchatov Arra	43.55	300	P	P	12 01 44.1	-0.9
	comp=Z,2.4nm,0.7s,baz=70,slow=8.6,SNR=12						
KURBB				PcP	PcP	12 03 23.7	0.0
	comp=Z,4.1nm,0.6s,baz=70,slow=3.3,SNR=30						
	comp=Z,2.4nm,0.7s						
WHY	Whitehorse	44.48	43	P	P	12 01 53.7	+1.5
WHY				IAmb	IAmb	12 02 17.1	
	comp=Z,14nm,1.2s						
A36M	Sachs Harbour	44.61	26		P	12 01 53.0	+0.1
C36M	Paulatuk	45.82	30	P	P	12 02 01.9	-0.4
LSA	Lhasa	46.34	268	P	P	12 02 08.4	+0.9
LSA				pmax	pmax		
	comp=Z,12nm,0.6s						
BVAR	Borovoye Array	47.09	307	P	P	12 02 11.7	-0.6
	comp=Z,2.0nm,0.7s,baz=56,slow=8.0,SNR=9.8						
BVAR				PcP	pP	12 03 35.9	+0.9
	comp=Z,1.7nm,0.4s,baz=63,slow=3.0,SNR=11						
	comp=Z,2.0nm,0.7s						
BORK	Borovoye	47.12	307	*ce*P	P	12 02 12.4	-0.1
BORK				pmax	pmax		
	comp=Z,9.0nm,2.5s						
WUS	Wushi	47.60	288	IAmb	IAmb	12 02 18.0	
	comp=Z,16nm,1.4s						
DLBC	Dease Lake	47.62	45	P	P	12 02 17.9	+1.6
	comp=Z,1.3nm,0.6s,baz=214,slow=7.5,SNR=8.1						
	comp=Z,1.3nm,0.6s						
TARG	Taragay, Kyrgy	48.22	290	P	P	12 02 22.4	+0.9
TARG				pmax	pmax		
	comp=Z,4.0nm,1.5s						
SHL	Shillong	48.54	263	P	P	12 02 23.8	0.0
CHTO	Chiang Mai	48.66	251		P	12 02 25.6	+1.0
CHTO	Chiang Mai	48.66	251	P	P	12 02 25.6	+1.0
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CMAR	Chiang Mai Arr	48.92	250	P	P	12 02 27.8	+1.2
	comp=Z,1.5nm,0.6s,baz=34,slow=6.7,SNR=11						
CMAR				PcP	PcP	12 03 44.5	+1.2
	comp=Z,1.0nm,0.4s,baz=15,slow=3.3,SNR=9.2						
	comp=Z,1.5nm,0.6s						
CMAR	Chiang Mai Arr	48.92	250	P	P	12 02 26.0	-0.6
BOOM	Boomskoye usch	48.98	292	P	P	12 02 27.3	+0.4
BOOM				pmax	pmax		
	comp=Z,7.0nm,1.7s						
AAK	Ala-Archa	49.81	293	*ce*P	P	12 02 33.5	+0.5
AAK				pmax	pmax		

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      comp=Z,5.0nm,0.9s
AAK   Ala-Archa         49.81 293 eP     P      12 02 33.5 +0.5
EVN   Everest           50.37 269        P      12 02 38.6 +0.6
KSH   Kashi             50.59 288  P     P      12 02 42.6 +3.8
KSH                                pmax  pmax
      comp=Z,5.0nm,0.8s
SPITS Spitsbergen Ar    50.79 348  P     P      12 02 39.6  0.0
SPITS                              pmax  pmax
      comp=Z,60nm,1.5s
RES   Resolute Bay      51.01  18  P     P      12 02 40.2 -0.9
      comp=Z,10.0nm,0.5s,baz=324,slow=4.2,SNR=34
RES                                PcP   PcP    12 03 50.2  0.0
      comp=Z,3.9nm,0.9s,baz=16,slow=4.3,SNR=4.2
      comp=Z,10.0nm,0.5s
RES   Resolute Bay      51.01  18        P      12 02 40.7 -0.5
ARTI  Arti              51.61 315  P     P      12 02 44.6 -1.2
      comp=Z,7.9nm,0.8s,baz=77,slow=4.3,SNR=13
ARTI                               PcP   PcP    12 03 51.7 -1.0
      comp=Z,2.8nm,0.4s,baz=88,slow=4.7,SNR=4.0
      comp=Z,7.9nm,0.8s
ARTI  Arti              51.61 315        P      12 02 44.9 -0.9
ARTI                               IAmb  IAmb   12 02 45.7
      comp=Z,13nm,0.7s
ARTI  Arti              51.61 315d iP    P      12 02 45.3 -0.5
ARTI                                            12 03 51.8
ARTI                               S     S      12 09 36.0 +2.4
ARTI                               SS    SS     12 13 11.4 -4.4
ARTI                               pmax  pmax
      comp=Z,15nm,0.9s
KPA   Kalaupapa         51.67 101  P     P      12 02 52.0 +5.2
KPA   Kalaupapa         51.67 101  P     P      12 02 52.0 +5.2
ARK   Arkit             51.84 293  P     P      12 02 47.8 -0.1
ARK                                pmax  pmax
      comp=Z,10.0nm,2.6s
YKA   Yellowknife Ar    52.35  35  P     P      12 02 50.9 -0.2
      comp=Z,2.0nm,0.8s,baz=304,slow=7.7,SNR=23
YKA                                PcP   PcP    12 03 55.6 +0.3
      comp=Z,1.0nm,0.8s,baz=309,slow=4.1,SNR=11
      comp=Z,2.0nm,0.8s
TRKS  Terek-Say         52.50 293  P     P      12 02 53.2 +0.4
TRKS                               pmax  pmax
      comp=Z,11nm,0.9s
MANEM Manem             54.48 289  IAmb  IAmb   12 03 08.2
      comp=Z,9.6nm,0.8s
AB31  Akbulak array     54.66 307        P      12 03 07.4 -0.5
ABKAR Akbulak array     54.66 307        P      12 03 07.3 -0.6
AKTO  Aktyubinsk        55.02 309  P     P      12 03 09.2 -1.2
      comp=Z,0.8nm,0.3s,baz=77,slow=5.0,SNR=4.6
      comp=Z,0.8nm,0.3s
CHGR  Chuyangaron       55.41 291        P      12 03 13.3 -0.1
CHGR  Chuyangaron       55.41 291  P     P      12 03 13.3 -0.1
CHGR                               pmax  pmax
      comp=Z,27nm,0.6s
ARCES ARCESS Array B    55.47 339  P     P      12 03 12.1 -1.2
      comp=Z,3.7nm,1.0s,baz=32,slow=6.5,SNR=5.7
ARCES                              PcP   PcP    12 04 06.3 -1.0
      comp=Z,4.7nm,0.9s,baz=74,slow=4.4,SNR=4.1
      comp=Z,3.7nm,1.0s
LLLB  Lillooet          55.67  50  P     P      12 03 16.5 +1.5
POIN  Pond Inlet        55.70  15  P     P      12 03 13.7 -1.1
NIL   Nilore            55.83 284        P      12 03 16.4  0.0
NIL   Nilore            55.83 284  P     P      12 03 16.4  0.0
NIL                                pmax  pmax
      comp=Z,21nm,1.0s
SHAA  Shahritus         56.72 291  P     P      12 03 22.4 -0.2
SHAA                               IAmb  IAmb   12 03 23.5
      comp=Z,13nm,0.7s
KLMR  Klimovskoe        57.08 326 eP     P      12 03 21.8 -2.7
KLMR                               pmax  pmax
      comp=Z,53nm,1.7s
BLKN  Baker Lake        57.75  27  P     P      12 03 28.2 -0.8
KBL   Kabul             58.00 288  P     P      12 03 30.7 -0.9
KBL   Kabul             58.00 288  P     P      12 03 30.7 -0.9
KBL                                pmax  pmax
      comp=Z,10.0nm,0.7s
OUL   Oulu              58.62 335  P     P      12 03 33.6 -1.4
SUMG  Summit            59.81   2  IAmb  IAmb   12 03 44.0
      comp=Z,11nm,0.9s
SOEI  Soe               60.90 206  P     P      12 03 51.2 +0.1
PSI   Prapat            61.16 239  P     P      12 03 53.3 +0.4
PSI                                pmax  pmax
      comp=Z,5.0nm,0.8s
FIA1  FINESS Array S    61.30 332  P     P      12 03 52.1 -0.9
FINES FINESS Array B    61.30 332  P     P      12 03 51.9 -1.2
      comp=Z,13nm,0.6s,baz=36,slow=8.4,SNR=51
      comp=Z,13nm,0.6s
FINES FINESS Array B    61.30 332  P     P      12 03 52.1 -0.9
COEN  Coen              61.64 185        P      12 03 57.2 +1.4
J08A  Circle Bar Ran    61.98  55  P     P      12 03 59.3 +1.4
J08A                               IAmb  IAmb   12 04 00.8
      comp=Z,7.8nm,1.1s
OBN   Obninsk           62.12 323⇑eP     P      12 03 58.0 -0.5
OBN                                             12 06 20.0
OBN                                S     S      12 11 46.0 -3.3
OBN                                SSS   SSS    12 19 02.0
OBN                                pmax  pmax
      comp=Z,5.0nm,0.7s
OBN   Obninsk           62.12 323 eP     P      12 03 58.0 -0.5
MTN   Manton Dam        62.12 198  P     P      12 03 60.0 +1.0
MTN                                IAmb  IAmb   12 04 35.8
      comp=Z,11nm,1.2s
PLID  Pearl Lake        62.20  53        P      12 04 00.4 +0.8
PLID                               IAmb  IAmb   12 04 01.4
      comp=Z,5.8nm,1.0s
FCC   Fort Churchill    62.42  31  P     P      12 04 00.1 -0.3
FCC   Fort Churchill    62.42  31  P     P      12 04 00.1 -0.3
DLMT  Dillon            63.82  51  IAmb  IAmb   12 04 12.2
      comp=Z,5.5nm,0.8s
PAHR  Pah Rah Range     63.85  59  IAmb  IAmb   12 04 12.5
      comp=Z,4.9nm,1.0s
NVAR  Mina Array Bea    65.33  60  P     P      12 04 21.2 +1.4
      comp=Z,2.1nm,0.8s,baz=285,slow=6.6,SNR=17
      comp=Z,2.1nm,0.8s
NVAR  Mina Array Bea    65.33  60  P     P      12 04 20.8 +1.0
LHV   Little Huntoon    65.33  60  IAmb  IAmb   12 04 22.6
      comp=Z,4.8nm,1.0s
RLMT  Red Lodge         65.69  49  IAmb  IAmb   12 04 23.7
      comp=Z,8.6nm,1.1s
NB2   NORSAR Subarra    65.84 338  P     P      12 04 21.4 -0.9
      comp=Z,3.3nm,0.5s,baz=28,slow=6.5
NOA   NORSAR Array B    65.84 338  P     P      12 04 21.4 -0.9
      comp=Z,5.2nm,0.6s,baz=30,slow=6.5,SNR=17
      comp=Z,5.2nm,0.6s
MOOW  Moose Ponds       65.89  51        P      12 04 25.0 +1.8
MOOW                               IAmb  IAmb   12 04 26.0
      comp=Z,5.8nm,1.2s
HFS   Hagfors           65.97 337  P     P      12 04 21.6 -1.6
      comp=Z,9.1nm,0.5s,baz=42,slow=4.6,SNR=37
      comp=Z,9.1nm,0.5s
DSP   Deep Springs      66.24  60  IAmb  IAmb   12 04 28.7
      comp=Z,5.3nm,1.3s
HWUT  Hardware Ranch    66.93  53  IAmb  IAmb   12 04 32.1
      comp=Z,3.6nm,0.9s
KIV   Kislovodsk        67.16 311 eP     P      12 04 31.5 +0.5
KIV                                pmax  pmax
      comp=Z,17nm,1.0s
BW06  Boulder Array     67.19  51  IAmb  IAmb   12 04 33.1
      comp=Z,7.2nm,1.1s
PD31  Pinedale Array    67.19  51  IAmb  IAmb   12 04 33.1
      comp=Z,6.7nm,1.1s
PDAR  Pinedale Array    67.19  51  P     P      12 04 32.1 +0.8
      comp=Z,3.9nm,0.7s,baz=8.1,slow=0.8,SNR=38
      comp=Z,3.9nm,0.7s
SPR3  Spring Creek 3    67.22  57        P      12 04 34.0 +2.3
KBZ   Khabaz            67.22 310  P     P      12 04 31.4 +0.2
      comp=Z,8.6nm,0.9s,baz=56,slow=3.8,SNR=17
      comp=Z,8.6nm,0.9s
KBZ   Khabaz            67.22 310ceP     P      12 04 31.8 +0.7
KBZ                                pmax  pmax
      comp=Z,11nm,0.9s
SHA1  Shidzhatmaz       67.33 311ceP     P      12 04 33.4 +1.2
TPNV  Topopah Spring    67.53  59  IAmb  IAmb   12 04 35.9
      comp=Z,7.2nm,1.1s
CTAO  Charters Tower    67.63 181  P     P      12 04 35.4 +1.5
CTAO                               pmax  pmax
      comp=Z,9.0nm,2.2s
MPU   Maple Canyon      68.01  54  IAmb  IAmb   12 04 38.2
      comp=Z,3.4nm,0.6s
WB0   Warramunga Arr    68.30 193  IAmb  IAmb   12 04 39.4
      comp=Z,10nm,1.1s
AKASG Malin Array Be    68.38 323  P     P      12 04 37.0 -1.2
      comp=Z,12nm,0.6s,baz=38,slow=6.3,SNR=23
      comp=Z,12nm,0.6s
AKASG Malin Array Be    68.38 323  P     P      12 04 37.1 -1.1
AKASG                              IAmb  IAmb   12 04 37.5
      comp=Z,5.2nm,1.3s
AKASG Malin Array Be    68.38 323  P     P      12 04 37.0 -1.2
AKBB  Malin Array Si    68.38 323ceP     P      12 04 36.5 -1.7
AKBB                               pmax  pmax
      comp=Z,10.0nm,0.8s
FITZ  Fitzroy Crossi    68.47 202  P     P      12 04 40.3 +1.2
      comp=Z,6.7nm,0.9s,baz=37,slow=4.0,SNR=9.6
      comp=Z,6.7nm,0.9s
FITZ  Fitzroy Crossi    68.47 202  P     P      12 04 40.2 +1.1
WR8   Warramunga Arr    68.47 193  P     P      12 04 40.0 +0.9
WR8                                IAmb  IAmb   12 04 40.1
      comp=Z,4.7nm,0.6s
WRAB  Tennant Creek     68.47 193  P     P      12 04 40.0 +0.9
WRAB                               IAmb  IAmb   12 04 40.6
      comp=Z,6.6nm,1.0s
WRAB  Tennant Creek     68.47 193  P     P      12 04 40.0 +0.9
WRAB                               pmax  pmax
      comp=Z,7.0nm,1.0s
WRA   Warramunga Arr    68.48 193  P     P      12 04 39.6 +0.5
      comp=Z,3.3nm,0.5s,baz=9.0,slow=6.5,SNR=64
      comp=Z,3.3nm,0.5s
WRA   Warramunga Arr    68.48 193        P      12 04 39.4 +0.3
WRA   Warramunga Arr    68.48 193 iP     P      12 04 39.5 +0.3
WRA                                pmax  pmax
      comp=Z,3.0nm,0.5s
RDMU  Red Mountain      68.73  53  IAmb  IAmb   12 04 43.0
      comp=Z,7.0nm,0.8s
TMUT  Trail Mountain    68.75  55  IAmb  IAmb   12 04 43.1
      comp=Z,3.8nm,0.8s
RSSD  Black Hills       69.03  47        P      12 04 43.0 +0.5
RSSD                               IAmb  IAmb   12 04 43.4
      comp=Z,4.6nm,0.8s
RSSD  Black Hills       69.03  47  P     P      12 04 43.1 +0.5
RSSD                               pmax  pmax
      comp=Z,5.0nm,0.8s
P18A  Preston Nutter    69.04  54  IAmb  IAmb   12 04 56.2
      comp=Z,8.5nm,1.4s
SRU   San Rafael Swe    69.25  54  P     P      12 04 44.9 +0.9
SRU                                IAmb  IAmb   12 04 46.0
      comp=Z,6.1nm,0.7s
SRU   San Rafael Swe    69.25  54  P     P      12 04 44.9 +0.9
SRU                                pmax  pmax
      comp=Z,6.0nm,0.7s
U15A  North Rim         70.17  57  IAmb  IAmb   12 04 52.2
      comp=Z,5.0nm,0.9s
PV04  Paradox Valley    70.65  54  IAmb  IAmb   12 04 54.5
      comp=Z,3.5nm,0.8s
PV16  Nyswonger Mesa    70.70  54  IAmb  IAmb   12 04 54.9
      comp=Z,6.9nm,1.2s
BLYC  Blythe            70.77  61  IAmb  IAmb   12 04 55.2
      comp=Z,4.9nm,0.8s
X16A  Lo Mia Camp, P    72.09  58  IAmb  IAmb   12 05 03.5
      comp=Z,5.7nm,0.9s
AS31  Alice Springs     72.20 193        P      12 05 03.3 +2.0
ASAR  Alice Springs     72.20 193  P     P      12 05 03.0 +1.7
      comp=Z,3.9nm,0.5s,baz=4.2,slow=5.4,SNR=63
      comp=Z,3.9nm,0.5s
ASAR  Alice Springs     72.20 193        P      12 05 03.2 +1.9
BUR08 Bucovina Ar. S    72.41 323        P      12 05 02.2 -0.3
BUR08                              IAmb  IAmb   12 05 02.7
      comp=Z,6.1nm,0.7s
BURAR Bucovina Array    72.43 323  P     P      12 05 02.1 -0.5
BURAR                              IAmb  IAmb   12 05 02.8
      comp=Z,6.1nm,0.7s
ECSD  EROS Data Cent    72.85  43  IAmb  IAmb   12 05 05.8
      comp=Z,6.8nm,0.8s
ARPR  Arapgir-MALATY    72.94 310  IAmb  IAmb   12 05 07.5
      comp=Z,7.5nm,0.9s
DPC   Dobruska-Polom    73.48 330 eP     P      12 05 08.7 +0.2
DPC   Dobruska-Polom    73.48 330 eP     P      12 05 08.7 +0.2
KRLC  Kraliky           73.56 329  P     P      12 05 08.4 -0.6
KRLC                               pmax  pmax
      comp=Z,8.0nm,1.3s
CLL   Collm             73.75 332  P     P      12 05 09.2 -0.7
CLL   Collm             73.75 332 iP     P      12 05 08.9 -1.1
CLL                                pmax  pmax
      comp=Z,14nm,0.6s
CLL   Collm             73.75 332 iP     P      12 05 08.9 -1.1
      comp=Z,14nm,0.6s
CLL                               ePcP   PcP    12 05 22.0 -1.2
MLR   Muntele Rosu      73.83 321  P     P      12 05 11.2 +0.5
MLR                                pmax  pmax
      comp=Z,9.0nm,1.2s
HSKC  Hora Svate Kat    74.22 332 eP     P      12 05 12.3 -0.4
EKA   Eskdalemuir Ar    74.24 343  P     P      12 05 11.6 -1.1
      comp=Z,0.8nm,0.4s,baz=30,slow=3.8,SNR=4.5
      comp=Z,0.8nm,0.4s
VRAC  Vranov            74.28 329  P     P      12 05 12.4 -0.6
      comp=Z,4.3nm,0.6s,baz=277,slow=7.0,SNR=4.1
      comp=Z,4.3nm,0.6s
ANMO  Albuquerque       74.51  55ceP     P      12 05 15.4 +0.5
ANMO                               pmax  pmax
      comp=Z,1.0nm,0.9s
BR131 Keskin Array S    74.83 313  P     P      12 05 16.1 -0.5
BR131                              IAmb  IAmb   12 05 17.4
      comp=Z,4.6nm,1.0s
BR131 Keskin Array S    74.83 313 iP     P      12 05 16.1 -0.5
BRTR  Keskin Array B    74.83 313  P     P      12 05 16.6  0.0
      comp=Z,2.3nm,0.8s,baz=92,slow=3.8,SNR=11
      comp=Z,2.3nm,0.8s
BRTR  Keskin Array B    74.83 313  P     P      12 05 16.4 -0.1
BRTR  Keskin Array B    74.83 313  P     P      12 05 16.4 -0.1
KHC   Kasperske Hory    75.45 331        P      12 05 19.5 -0.1
KHC                                IAmb  IAmb   12 05 20.3
      comp=Z,6.9nm,0.8s
KHC   Kasperske Hory    75.45 331ceP     P      12 05 20.1 +0.4
KHC                                pmax  pmax
      comp=Z,17nm,2.5s
KHC   Kasperske Hory    75.45 331 eP     P      12 05 19.6 -0.1
BZS   Buzias            75.50 324  P     P      12 05 19.4 -0.6
BZS                                pmax  pmax
      comp=Z,8.0nm,1.5s
GEC2  GERESS Array S    75.66 330  P     P      12 05 20.3 -0.7
GEC2                               IAmb  IAmb   12 06 02.1
      comp=Z,5.4nm,1.2s
GEC2  GERESS Array S    75.66 330  P     P      12 05 20.2 -0.7
GERES GERESS Array B    75.66 330  P     P      12 05 20.1 -0.9
      comp=Z,2.9nm,0.7s,baz=33,slow=5.1,SNR=13
      comp=Z,2.9nm,0.7s
WET   Wettzell          75.67 331  P     P      12 05 20.8 -0.1
WET                                pmax  pmax
      comp=Z,9.0nm,1.1s
CONA  Conrad Observa    75.71 329 eP     P      12 05 19.4 -1.8
      comp=Z,5.9nm,0.8s
RONA  Rosalia, Austr    75.75 328 eP     P      12 05 19.7 -1.7
      comp=Z,8.4nm,1.2s
MOA   Molln             76.33 330 eP     P      12 05 22.8 -1.8
      comp=Z,1.1nm,0.2s
MEM   Membach           76.44 336  P     P      12 05 24.4 -0.7
MEM                                pmax  pmax
      comp=Z,15nm,1.7s
PH02  Texas Public H    76.61  52  IAmb  IAmb   12 06 01.6
      comp=Z,20nm,0.8s
LESA  Schwarzleotal     77.23 330 iP     P      12 05 29.4 -0.3
      comp=Z,8.4nm,0.8s
KBA   Koelnbreinsper    77.31 330 iP     P      12 05 30.2  0.0
      comp=Z,5.6nm,0.5s
OBKA  Obir              77.38 329 eP     P      12 05 29.8 -0.7
      comp=Z,2.8nm,0.6s
WATA  Walderalm         77.67 331 eP     P      12 05 31.9 -0.3
      comp=Z,5.8nm,0.5s
WTTA  Wattenberg        77.71 331 iP     P      12 05 32.2 -0.2
      comp=Z,7.0nm,0.5s
WTTA                              ePcP   PcP    12 05 39.6 -1.0
      comp=Z,2.4nm,0.5s
MOTA  Moosalm           77.82 331 eP     P      12 05 32.4 -0.6
      comp=Z,10nm,0.9s
ABTA  Abfaltersbach     77.88 330 iP     P      12 05 32.2 -1.0
      comp=Z,3.9nm,0.6s
SQTA  Sankt Quirin      77.89 331 eP     P      12 05 33.1 -0.3
      comp=Z,7.2nm,0.7s
FETA  Feichten          78.22 331 eP     P      12 05 33.8 -1.4
      comp=Z,11nm,1.3s
DAVA  Damuels           78.26 332 eP     P      12 05 34.8 -0.5
      comp=Z,5.4nm,0.7s
SRS   Serrai            78.38 320  P     P      12 05 34.7 -1.2
SRS                                pmax  pmax
      comp=Z,28nm,1.5s
MMAI  Mount Meron Ar    79.09 307  P     P      12 05 40.3 +0.4
      comp=Z,3.0nm,0.5s,baz=42,slow=6.7,SNR=4.8
      comp=Z,3.0nm,0.5s
MNHN  Monahans          79.25  55  IAmb  IAmb   12 05 42.7
      comp=Z,9.3nm,1.4s
STKA  Stephens Creek    79.53 185  P     P      12 05 43.8 +1.9
      comp=Z,1.4nm,0.5s,baz=333,slow=9.0,SNR=2.9
      comp=Z,1.4nm,0.5s
LOR   Lormes            80.06 336  P     P      12 05 44.2 -0.6
FORT  Forrest           80.16 197  P     P      12 05 47.0 +1.7
FORT                               IAmb  IAmb   12 05 51.9
      comp=Z,7.0nm,0.9s
TX31  Lajitas Ar. Si    80.28  57        P      12 05 47.7 +1.3
TX31                               IAmb  IAmb   12 05 48.4
      comp=Z,9.0nm,1.2s
TXAR  Lajitas Array     80.28  57  P     P      12 05 47.5 +1.1
      comp=Z,4.9nm,0.7s,baz=287,slow=3.7,SNR=97
      comp=Z,4.9nm,0.7s
TXAR  Lajitas Array     80.28  57  P     P      12 05 47.6 +1.2
RAYN  Ar Rayn           80.42 294        P      12 05 47.0 -0.2
RAYN                               IAmb  IAmb   12 05 47.9
      comp=Z,7.7nm,0.9s
RAYN  Ar Rayn           80.42 294  P     P      12 05 47.0 -0.2
RAYN                               pmax  pmax
      comp=Z,8.0nm,1.0s
OZNA  Ozona             80.47  54  IAmb  IAmb   12 05 49.8
      comp=Z,7.1nm,0.9s
SAND  Sanderson         80.67  55  IAmb  IAmb   12 05 50.0
      comp=Z,4.0nm,0.7s
BRDY  Brady             81.34  52  IAmb  IAmb   12 05 53.0
      comp=Z,4.2nm,0.7s
NWAO  Narrogin (SRO)    84.83 205  P     P      12 06 09.8 +0.8
NWAO                               pmax  pmax
      comp=Z,14nm,1.1s
VNDA  Vanda            125.42 176  PKP   PKPdf  12 12 31.6 +0.7
      comp=Z,1.2nm,0.8s,baz=349,slow=2.5,SNR=5.2
VNDA  Vanda            125.42 176        PKPdf  12 12 31.9 +1.0
LPAZ  La Paz           137.12  55  PKP   PKPdf  12 12 54.9 -0.7
      comp=Z,1.7nm,0.8s,baz=1.5,slow=5.8,SNR=5.2
QSPA  South Pole Qui   137.58 180  PKP   PKPdf  12 12 55.1 +0.9
      comp=Z,1.3nm,0.5s,baz=321,slow=3.8,SNR=4.5
BDFB  Brasilia         145.47  27  PKPbc PKPbc  12 13 11.1 +0.3
      comp=Z,4.7nm,0.8s,baz=211,slow=2.7,SNR=9.2
BDFB  Brasilia         145.47  27        PKPbc  12 13 11.4 +0.6
AQDB  Aquidauana       146.95  42        PKPbc  12 13 15.2 +0.5
CPUP  Villa Florida    151.09  51  PKPbc PKPbc  12 13 24.6 -0.1
      comp=Z,0.8nm,0.7s,baz=163,slow=3.4,SNR=8.0
CPUP  Villa Florida    151.09  51        PKPbc  12 13 24.8 +0.1
PLCA  Paso Flores      152.17  89  PKPbc PKPbc  12 13 27.3 +0.4
      comp=Z,1.2nm,0.5s,baz=121,slow=3.8,SNR=4.2
SNAA  Sanae            152.38 200  PKPbc PKPbc  12 13 26.2 -0.2
      comp=Z,1.6nm,0.5s,baz=208,slow=7.3,SNR=13
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*IDC **11** 12:33:59.0±2.1, 36°16N×142°11E, h0^{km}, mb3.4/4, mbtmp3.5/7, ML3.3/3, Error ellipse: s-maj=46.2km s-min=24.4km az=81.0*

*JMA **11** 12:34:03.7±0.3, 36°2N±0°6×14°2E±°, h56^{km}, MV3.4/33, FAR E OFF IBARAKI PREF*

ISC 11 12:34:02.3±1.0**, 36°18N**±0°04×**141°89E**±0°08**, h23^{km}, n26, σ1^{s}97**/25**, mb3.3**/4**, Near east coast of eastern Honshu**

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Code  Station Name      Δ°   AZ°   Phase ID       Time     Res
                                  Op    ISC    h  m  s    ISC
JHYU  Hitachinakayam     1.07 279 eP    Pb     12 34 23.0 +0.9
JHYU                              eS    Sn     12 34 37.0 +1.0
JIHU  Itakohorinouch     1.13 260 eP    Pb     12 34 24.1 +1.0
JHO   Hitachi            1.15 292 eP    Pb     12 34 23.1 -0.4
ONAJ  Iwakimizuishiy     1.27 317 eP    Pb     12 34 24.9 -0.7
JFK   Kawauchi           1.44 326 eP    Pb     12 34 27.7 -0.8
BSO3  Boso 3             1.78 220 eP    Pb     12 34 33.0 -1.1
JOTO  OTAMA OYAMA        1.86 318 eP    Pb     12 34 34.6 -1.1
JOTO                              eS    Sb     12 34 57.9 -0.6
JMM   Marumori           1.90 333 eP    Pb     12 34 33.9 -2.4
JAG   Ashikaga           1.99 278 eP    Pb     12 34 35.4 -2.3
JFY   Yanaizu            2.14 306 eP    Pb     12 34 38.5 -1.9
JKT   Katashina          2.21 286 eP    Pb     12 34 39.3 -2.3
JRY   Ryogami san        2.43 267 eP    Pb     12 34 41.7 -3.6
JOD2  Odawara 2          2.46 249 eP    Pb     12 34 42.8 -3.0
MJAR  Matsushiro Arr     3.00 278  Pn   Pb     12 34 50.4 -4.6
      1.4nm,0.3s,baz=106,slow=8.9,SNR=63
MJAR                               Sn   Sn     12 35 24.5 +0.9
      0.6nm,0.3s,baz=235,slow=21,SNR=5.3
      6.1nm,0.4s
JHJ   Hachijo jima 2     3.51 210  Pn   Pn     12 34 56.3 +0.8
      9.9nm,0.3s,baz=346,slow=23,SNR=9.1
JHJ                                Sn   Sn     12 35 34.4 -1.9
      19nm,0.3s,baz=324,slow=23,SNR=5.6
      66nm,0.4s
ASAJ  Asahikawa          7.95   4  Pn   Pn     12 35 57.0 +0.7
      0.5nm,0.3s,baz=213,slow=19,SNR=6.7
ASAJ                               Sn   Sn     12 37 23.3 -2.2
      0.1nm,0.3s,baz=335,slow=19,SNR=2.2
      1.4nm,0.4s
H11N2 WAKE ISLAND Hy    27.38 120  T    T      13 08 24.5
      baz=312,slow=75,SNR=6.8
H11N1 WAKE ISLAND Hy    27.39 120  T    T      13 08 23.3
      baz=312,slow=75,SNR=6.9
H11N3 WAKE ISLAND Hy    27.40 120  T    T      13 08 24.1
      baz=312,slow=75,SNR=6.4
H11S1 WAKE ISLAND Hy    28.07 122  T    T      13 09 14.2
      baz=314,slow=75,SNR=7.5
H11S3 WAKE ISLAND Hy    28.07 122  T    T      13 09 16.9
      baz=314,slow=75,SNR=6.0
H11S2 WAKE ISLAND Hy    28.09 122  T    T      13 09 04.9
      baz=314,slow=75,SNR=5.6
SONM  Songino Array     28.59 305  P    P      12 39 58.1 +1.4
      0.2nm,0.4s,baz=98,slow=7.4,SNR=3.6
      0.2nm,0.4s
MKAR  Makanchi Array    44.90 303  P    P      12 42 16.2 +1.1
      0.3nm,0.6s,baz=94,slow=8.7,SNR=5.3
      0.3nm,0.6s
KURBB Kurchatov Arra    46.83 309  P    P      12 42 31.2 +1.0
      0.4nm,0.4s,baz=82,slow=7.4,SNR=4.6
      0.4nm,0.4s
WRA   Warramunga Arr    56.27 189  P    P      12 43 41.3 +0.3
      0.1nm,0.3s,baz=6.8,slow=7.1,SNR=5.4
      0.1nm,0.3s
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*IDC **11** 12:35:21.8±1.1, 54°72N×164°37E, h0^{km}, mb3.5/5, mbtmp3.5/6, ML2.8/1, MS2.4/1, Error ellipse: s-maj=44.0km s-min=21.2km az=151.0*

*KRSC **11** 12:35:22.3±1.6, 54°70N×164°52E, h47^{km}±25^{km}, Ml3.9*

ISC 11 12:35:21.8±1.7**, 54°78N**±0°04×**164°38E**±0°05**, h3^{km}**±13^{km}**, n40, σ1^{s}62**/54**, mb3.6**/5**, Komandorsky Islands region**

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Code  Station Name      Δ°   AZ°   Phase ID       Time     Res
                                  Op    ISC    h  m  s    ISC
BKI   Bering             1.01  64 eP    Pg     12 35 41.5 +0.3
BKI                               eS    Sg     12 35 53.4 -0.8
KBTR  Krutoberegovo      1.69 329 eP    Pn     12 35 51.7 -0.5
KBTR                              eS    Sn     12 36 11.3 -2.9
KBG   Krutoberegovo      1.76 328 eP    Pn     12 35 52.9 -0.3
KBG                               eS    Sn     12 36 14.8 -1.3
KZV   Kizimen            2.38 280 eP    Pn     12 36 03.3 +1.4
KZV                               eS    Sn     12 36 31.1 -0.6
ZLN   Zelenaya           2.39 303 eP    Pn     12 36 04.0 +2.1
ZLN                               eS    Sn     12 36 32.2 +0.5
BZGR  Bezymyannyi-Gr     2.41 300 eP    Pb     12 36 04.5 -1.2
BZGR                              eS    Sb     12 36 34.7 -1.2
CIRR  Tsirk              2.46 304 eP    Pb     12 36 07.0 +0.2
BZWR  Bezymyannyi-We     2.52 300 eP    Pn     12 36 06.1 +2.3
BZWR                              eS    Sb     12 36 38.1 -1.0
BDR   Baidarnaya         2.54 316 eS    Sb     12 36 39.0 -0.7
KMNR  Kamenistaya        2.57 294 eP    Pn     12 36 06.4 +2.0
KIRR  Kirishev           2.59 299 eP    Pb     12 36 07.5 -1.4
KIRR                              eS    Sb     12 36 40.8 -0.4
SRKR  Sorokina           2.61 317 eP    Pn     12 36 06.7 +1.7
KLY   Klyuchi            2.62 307 eP    Pn     12 36 05.4 +0.4
KLY                               eS    Sn     12 36 36.8 -0.4
KPT   Kopyto             2.66 298 eP    Pn     12 36 08.2 +2.6
KPT                               eS    Sn     12 36 40.8 +2.5
KOZ   Kozyrevsk          2.87 298 eP    Pn     12 36 11.4 +2.9
KOZ                               eS    Sb     12 36 47.9 -1.3
KII   Karymskiy          2.98 258 eP    Pn     12 36 12.1 +2.1
SPN   Mys Shipunski      3.08 239 eP    Pn     12 36 11.5 +0.2
SPN                               eS    Sn     12 36 45.0 -3.6
NLC   Nalytchevo         3.38 244 eP    Pn     12 36 16.5 +1.0
ESO   Esso               3.44 292 eP    Pn     12 36 17.8 +1.5
SDLR  Sedlovina          3.58 247 eP    Pn     12 36 20.2 +1.9
SDLR                              eS    Sn     12 37 00.2 -0.9
SMAR  Somma              3.63 247 eP    Pn     12 36 21.1 +2.0
SMAR                              eS    Sn     12 37 01.5 -1.0
KRER  Koryakskii         3.64 248 eP    Pn     12 36 20.9 +1.7
KRER                              eS    Sn     12 37 01.5 -1.2
UGLR  Uglovaya           3.64 247 eP    Pn     12 36 20.8 +1.7
AVH   Avacha             3.66 248 eP    Pn     12 36 21.4 +2.1
KRX   Arik               3.67 249 eP    Pn     12 36 21.2 +1.6
KOK   Koryaka            3.70 249 eP    Pn     12 36 22.2 +2.2
DALK  Dalny              3.76 245 eP    Pn     12 36 22.0 +1.3
DALK                              eS    Sn     12 37 03.4 -2.0
GNL   Ganaly             3.93 257 eP    Pn     12 36 25.7 +2.6
KRMR  Karymshinskiy      4.19 245 eP    Pn     12 36 28.6 +2.1
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KRMR				eS	Sn	12 37 14.8	-1.2
PETK	Petropavlovsk-	4.29	250	Pn	Pn	12 36 29.2	+1.2
	2.8nm,0.3s,baz=68,slow=17,SNR=41						
PETK				Sn	Sn	12 37 17.4	-1.1
	1.5nm,0.3s,baz=76,slow=40,SNR=5.4						
	3.4nm,0.3s						
MTVR	Mutnovka	4.35	241	eP	Pn	12 36 28.9	0.0
MA2	Magadan	8.81	309	LR	LR	12 41 32.4	
	comp=Z,23nm,19.3s,baz=77,slow=42						
ILAR	Eielson Array	25.81	48	P	P	12 40 54.5	+0.7
	0.7nm,0.9s,baz=257,slow=8.8,SNR=5.9						
	0.7nm,0.9s						
H11N2	WAKE ISLAND Hy	35.04	176	T	T	13 21 06.6	
	baz=359,slow=76						
H11N3	WAKE ISLAND Hy	35.06	176	T	T	13 20 43.8	
	baz=359,slow=76						
H11N1	WAKE ISLAND Hy	35.06	176	T	T	13 20 52.3	
	baz=359,slow=76						
KURBB	Kurchatov Arra	49.08	303	P	P	12 44 10.0	+0.1
	0.2nm,0.5s,baz=55,slow=7.6,SNR=2.4						
	0.2nm,0.5s						
TXAR	Lajitas Array	67.66	71	P	P	12 46 20.9	+0.7
	0.3nm,0.5s,baz=285,slow=3.9,SNR=6.0						
	0.3nm,0.5s						
WRA	Warramunga Arr	78.73	209	P	P	12 47 25.4	0.0
	0.5nm,0.9s,baz=22,slow=6.0,SNR=2.7						
	0.5nm,0.9s						
ASAR	Alice Springs	82.39	208	P	P	12 47 45.3	+0.3
	0.4nm,0.7s,baz=7.4,slow=6.2,SNR=5.5						
	0.4nm,0.7s						

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*UPP **11** 12:43:18.6±0.1, 67°.83N×20°.22E, h0^{km}, ML2.7, Confirmed Induced event*

*HEL **11** 12:43:20.1±0.2, 67°.84N×20°.25E, h0^{km}, ML1.3, Suspected explosion*

ISC 11 12:43:18.4±0.8**, 67°.82N**±0°.02×**20°.25E**±0°.02**, h0^{km}, n25, σ0^{s}67**/43**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.14	14	P	Pg	12 43 21.2	+0.2
KUA				S	Sg	12 43 22.9	+0.1
RATU	Laukkuluspa	0.25	271	P	Pg	12 43 23.5	+0.3
RATU				S	Sg	12 43 27.3	+1.0
KOVU	Salmi	0.41	355	P	Pg	12 43 26.2	+0.1
KOVU				S	Sg	12 43 31.4	-0.1
NIKU	Nikkaluokta	0.46	276	P	Pg	12 43 26.9	-0.3
NIKU				S	Sg	12 43 33.5	+0.3
LANU	Lannavaara	0.70	70	PG	Pg	12 43 32.4	+0.7
LANU				SG	Sg	12 43 41.5	+0.7
DUNU	Dundret	0.71	170	S	Sb	12 43 42.8	-1.2
SALU	Saltoluokta	0.80	237	P	Pg	12 43 33.3	-0.4
SALU				S	Sg	12 43 44.3	+0.3
SALU	Saltoluokta	0.80	237	eP	Pg	12 43 33.9	+0.2
KIF	Kilpisjarvi	1.21	10	eP	Pg	12 43 41.8	+0.3
KIF	Kilpisjarvi	1.21	10	PG	Pn	12 43 42.4	-0.1
KIF				SG	Sg	12 43 57.4	+0.3
KIF				MSG		12 43 57.4	
	comp=Z,4.2nm,0.2s						
PAJU	Pajala	1.36	125	P	Pg	12 43 44.2	-0.3
PAJU				S	Sn	12 44 03.2	-0.2
PAJU	Pajala	1.36	125	PG	Pg	12 43 44.2	-0.3
PAJU				SG	Sn	12 44 03.3	-0.2
HEF	Hetta	1.41	64	PG	Pn	12 43 45.2	-0.1
	baz=250						
HEF				MSG		12 44 02.4	
	comp=Z,1.5nm,0.2s						
HEF				SG	Sg	12 44 03.7	+0.1
ERTU	Ertsjaerv	1.48	148	P	Pb	12 43 46.9	+0.2
ERTU				S	Sn	12 44 07.3	+1.0
ERTU	Ertsjaerv	1.48	148	PG	Pb	12 43 46.9	+0.2
ERTU				SN	Sn	12 44 07.9	+1.6
KLF	Kolari	1.54	111	PG	Pg	12 43 48.0	+0.1
KLF				MSG		12 44 06.5	
	comp=Z,1.9nm,0.2s						
KLF				SN	Sg	12 44 08.8	+0.8
KTK1	Kautokeino	1.63	41	PN	Pg	12 43 49.7	+0.1
KTK1				SN	Sg	12 44 11.1	+0.4
HARU	Harads	1.69	170	P	Pb	12 43 50.1	-0.1
TRO	Tromso	1.88	346	SG	Sb	12 44 17.6	0.0
KALU	Kalix	2.32	147	PB	Pb	12 44 00.2	-0.9
KALU				SG	Sg	12 44 32.8	-0.1
TOF	Tornio	2.37	136	PG	Pb	12 44 01.5	-0.4
TOF				MSG		12 44 30.6	
	comp=Z,1.5nm,0.2s						
TOF				SG	Sg	12 44 33.9	-0.6
RNF	Rovaniemi	2.55	116	PG	Pb	12 44 04.5	-0.5
RNF				SG	Sb	12 44 37.8	+0.9
ARA0	ARCESS Array S	2.58	46	PB	Pb	12 44 04.2	-1.3
ARA0				SB	Sb	12 44 36.1	-1.6
RAJF	Raja-Jooseppi	3.09	74	SB	Sb	12 44 52.4	+0.1
KEV	Kevo	3.13	49	SN	Sn	12 44 48.4	+1.4

VIE 11 12:43:38.1±0.3**, 47°.50N**×**14°.92E, h0^{km}, mb1.9**/3**, ml1.5**/5**, Error ellipse: s-maj=2.4km s-min=1.8km az=147.0 2 km SSE of Erzberg Mining explosion., Austria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOA	Molln	0.56	309	eSg	Sg	12 43 53.6	-2.6
	1.0nm,0.3s						
MOA	Molln	0.56	309	Pg	Pg	12 43 48.9	0.0
	0.7nm,0.1s						
MOA				eSg	Sg	12 43 57.6	+1.4
	4.8nm,0.3s						
CONA	Conrad Observa	0.77	56	ePg	Pg	12 43 52.0	-0.8
	0.5nm,0.1s						
CONA				eSg	Sg	12 44 04.0	+1.3
	9.5nm,0.5s						
RONA	Rosalia, Austr	0.95	77	ePg	Pg	12 43 56.6	+0.2
	1.5nm,0.2s						
LESA	Schwarzleotal	1.52	268	ePg	Pg	12 44 09.0	+1.7
	0.8nm,0.2s						
LESA				eSg	Sn	12 44 28.5	+1.2
	3.1nm,0.3s						
KRUC	Moravsky	1.85	32	ePN	Pn	12 44 10.1	-1.0
KRUC				eSG	Sn	12 44 33.3	-1.8

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*DJA **11** 13:11:54.3±0.3, 7°S±7°×10°9E±°, h229^{km}±3^{km}, M3.9/19, mB5.7/1, mb4.1/10, MLv3.8/19, Mw(mB)5.3/1*

*IDC **11** 13:12:10.5±9.4, 10°.16S×112°.14E, h0^{km}, mb3.7/3, mbtmp3.8/3, MS3.6/1, Error ellipse: s-maj=154.9km s-min=116.8km az=153.0*

ISC 11 13:11:54.9±1.0**, 6°.9S**±0°.2×**109°.17E**±0°.07**, h200^{km}, n29, σ2^{s}47**/34**, mb3.7**/3**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTJI	Waduk Cacaban	0.10	174	P	Pn	13 12 24.8	+3.7
CTJI				S	Sn	13 12 47.9	+6.3
KPJI	Karang Pucung	0.48	210	P	Pn	13 12 24.9	+3.0
KPJI				S	Sn	13 12 47.9	+4.9
SMRI	Semarang	1.27	96	P	Pn	13 12 30.5	+3.9
YOGI	Yogyakarta	1.43	129	P	Pn	13 12 30.6	+2.6
YOGI				S	Sn	13 12 57.1	+3.4
BBJI	Bungbulang	1.61	250	P	Pn	13 12 30.4	+0.8
BBJI				S	Sn	13 12 58.6	+2.0
UGM	Wanagama	1.67	127	P	Pn	13 12 32.4	+2.2
UGM				S	Sn	13 13 01.2	+3.6
CNJI	Cibinong	2.07	259	P	Pn	13 12 34.5	+0.4
PCJI	Pacitan	2.36	123	P	Pn	13 12 38.5	+1.3
PCJI				S	Sn	13 13 11.4	+1.2
SKJI	Sukabumi	2.60	268	P	Pn	13 12 41.1	+1.2
SJI	Sawahan	2.70	108	P	Pn	13 12 43.6	+2.5
SNJI	Sawahan-Nganju	2.71	109	P	Pn	13 12 44.5	+3.2
GMJI	Gumukmas	4.45	108	P	Pn	13 13 02.8	+0.6
KASI	Kota Agung	4.85	286	P	Pn	13 13 08.7	+1.3
JAGI	Jajag, Banyuwa	5.17	108	P	Pn	13 13 11.5	0.0
	0.2nm30nm,0.9s						
RTBI	Rangdo, Negare	5.92	105	P	Pn	13 13 20.4	-0.8
	0.3nm73nm,1.2s						
KHKI	Kahang-Kahang	6.54	103	P	Pn	13 13 29.6	+0.4
	0.1nm13nm,0.9s						
MNAI	Manna	6.69	292	P	Pn	13 13 31.0	-0.1
KLNI	Mataram	7.02	103	P	Pn	13 13 35.6	+0.1
	0.1nm16nm,1.4s						
EGSI	Enggano, Bengk	7.03	282	P	Pn	13 13 33.9	-1.7
	13µm108nm,0.6s						
UBSI	University, Be	7.55	294	P	Pn	13 13 41.8	-0.5
	289nm,1.9s						
TWSI	Taliwang, Sumb	7.85	104	P	Pn	13 13 45.1	-1.1
	0.1nm14nm,0.8s						
PLAI	Plampang	8.73	103	P	Pn	13 13 57.1	-0.6
	15nm,1.0s						
DBNI	Kabupaten Domp	9.19	100	P	Pn	13 14 03.0	-0.7
	4.8nm,1.3s						
WBSI	Waikabubak, Su	10.47	106	P	Pn	13 14 17.6	-2.7
EDFI	Ende, Flores	12.54	99	P	Pn	13 14 45.5	-1.2
WRA	Warramunga Arr	27.64	120	P	P	13 17 22.4	-1.8
	0.2nm,0.3s,baz=290,slow=12,SNR=18						
	0.2nm,0.3s						
ASAR	Alice Springs	29.01	128	P	P	13 17 34.7	-1.7
	0.7nm,0.5s,baz=302,slow=7.9,SNR=12						
	0.7nm,0.5s						
STKA	Stephens Creek	39.12	134	P	P	13 19 01.9	-1.2
	2.9nm,0.5s,baz=304,slow=9.8,SNR=6.1						
	2.9nm,0.5s						
LZDM	Lanzhou Array	42.95	353	LR	LR	13 41 53.5	
	comp=Z,64nm,18.8s,baz=275,slow=38						

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*ISK **11** 13:15:45.3, 39°.44N×27°.94E, h10^{km}, ML3.6/25*

*AFAD **11** 13:15:45.5, 39°.45N×27°.92E, h13^{km}±1^{km}, MW3.7*

*THE **11** 13:15:47.8, 39°N±3°×2°8E±°, h20^{km}±25^{km}, M3.2/9, MLh3.2/9*

ISC 11 13:15:45.8±0.9**, 39°.43N**±0°.01×**27°.94E**±0°.01**, h14^{km}**±6^{km}**, n93, σ0^{s}91**/133**, 10C-3D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STEP	BALIKESIR_Sava	0.18	252	P	Pg	13 15 49.9	-0.1
STEP				i IAML		13 15 53.0	
	comp=E,3µm,0.4s						
STEP				S	Sg	13 15 53.0	+0.2
BALB	Balikesir	0.21	348	Pg	Pg	13 15 50.6	+0.1
BALB				Sg	Sb	13 15 54.1	-1.1
BALY	Balya	0.39	322	P	Pg	13 15 53.8	+0.1
BALY				S	Sg	13 15 59.0	-0.1
BALY				i IAML		13 16 02.0	
	comp=E,2µm,0.6s						
SOMA	Soma-Manisa	0.42	229	Pg	Pg	13 15 54.1	0.0
BLKS	Balkesir-Sus	0.44	3	P	Pg	13 15 54.1	-0.5
BLKS				S	Sg	13 15 59.9	-0.7
BLKS				i IAML		13 16 01.0	
	comp=E,719nm,0.4s						
SUSR	Susurluk-Balik	0.54	12	Pg	Pg	13 15 55.9	-0.5
DST	Dursunbey	0.56	72	Pg	Pg	13 15 55.9	-0.8
GORD	Gordes-Manisa	0.56	160	Pg	Pg	13 15 56.8	+0.1
AKS	Akhisar	0.56	190	Pg	Pg	13 15 56.3	-0.5
GONE	Gonen-Balikesi	0.64	343	Pg	Pg	13 15 58.1	-0.2
BUHA	Balikesir, Bur	0.67	276	P	Pg	13 15 58.7	-0.1
BUHA				S	Sn	13 16 11.0	-0.2
BUHA				i IAML		13 16 13.0	
	comp=N,1µm,0.3s						
YAYO	Edremit-Balk	0.69	285	Pg	Pg	13 15 59.0	-0.2
GOMA	Golmarmara-Man	0.72	181	Pg	Pg	13 15 59.8	0.0
ZEDA	zmir-Bergama	0.81	235	P	Pb	13 16 01.7	0.0
ZEDA				S	Sg	13 16 12.2	0.0
ZEDA				i IAML		13 16 16.0	
	comp=E,2µm,0.5s						
DKL	Dikili	0.88	246	Pg	Pg	13 16 02.5	-0.2
SMAA	Simav-Kutahya	0.88	112	Pg	Pb	13 16 03.1	+0.3
SIMA	Simav-Kutahya	0.89	113	Pg	Pb	13 16 02.9	-0.1
CANM	Can-anakkale	0.89	311	Pg	Pg	13 16 02.7	-0.4
EDC	Edincik	0.92	357	Pg	Pg	13 16 02.9	-0.6
BAND	Balkesir-Ban	0.93	8	P	Pg	13 16 03.2	-0.6
BAND				S	Sg	13 16 15.6	-0.4
BAND				i IAML		13 16 18.0	
	comp=N,2µm,0.3s						
ORLT	Orhaneli	0.96	50	Pg	Pg	13 16 04.1	-0.3
AYVA	Ayvalik	0.97	263	P	Pg	13 16 04.3	-0.2
AYVA				S	Sn	13 16 18.4	-0.2
AYVA				i IAML		13 16 20.0	
	comp=E,4µm,0.5s						
MANT	Manisa	1.06	153	P	Pn	13 16 06.2	-0.2
MANT				S	Sb	13 16 19.2	-0.6
MANT				i IAML		13 16 22.0	
	comp=N,1µm,0.3s						
EMET	Ktahya-Emet	1.07	93	P	Pn	13 16 06.8	+0.3
EMET				S	Sn	13 16 20.9	-0.4
EMET				i IAML		13 16 26.0	
	comp=N,1µm,0.4s						
KRBG	Karabiga-Canak	1.08	333	Pg	Pn	13 16 06.3	-0.2
KULA	Kula-Manisa	1.08	148	Pn	Pn	13 16 06.4	-0.1
SHAP	Saphane-Kutahy	1.08	112	Pn	Pn	13 16 06.8	+0.2
USAK	Uak-Merkez	1.11	130	P	Pg	13 16 06.9	-0.2
USAK				S	Sb	13 16 21.1	0.0
USAK				i IAML		13 16 25.0	
	comp=N,482nm,0.3s						
BAYC	CANAKKALE_Bayr	1.12	286	P	Pg	13 16 06.9	-0.3
BAYC				S	Sn	13 16 22.4	+0.2
BAYC				i IAML		13 16 24.0	
	comp=E,838nm,0.5s						
ODEM	Odemis-Izmir	1.16	175	Pn	Pg	13 16 07.8	-0.3
ULDT	Uludag	1.17	52	P	Pn	13 16 07.7	-0.2
ULDT				S	Sb	13 16 22.7	-0.1
ULDT				i IAML		13 16 27.0	
	comp=N,2µm,0.5s						
LAPS	Lapseki, ANA	1.18	314	P	Pb	13 16 07.7	-0.2
LAPS				S	Sg	13 16 23.3	-0.5
LAPS				i IAML		13 16 29.0	
	comp=N,431nm,1.0s						
TVSB	Tavsanli	1.18	89	Pn	Pg	13 16 08.1	-0.5
MDNY	Mudanya-Bursa	1.19	38	Pn	Pb	13 16 07.9	-0.1
MADA	Marmara adas	1.19	346	P	Pb	13 16 08.1	-0.1
MADA				S	Sg	13 16 24.6	+0.3
MADA				i IAML		13 16 26.0	
	comp=N,698nm,0.5s						
MRMT	Marmara Adasi	1.20	348	Pn	Pg	13 16 08.3	-0.6
GEDZ	Gediz	1.21	108	Pn	Pg	13 16 08.9	-0.2
GDZ	Gediz	1.25	105	P	Pg	13 16 09.7	-0.1
GDZ				S	Sn	13 16 25.6	0.0
GDZ				i IAML		13 16 29.0	
	comp=E,613nm,0.2s						
BLCB	Balcova	1.26	214	P	Pb	13 16 09.3	0.0
BLCB				S	Sg	13 16 26.2	-0.2
BLCB	Balcova	1.26	214	Pn	Pb	13 16 09.1	-0.1
KIRA	zmir-Kiraz	1.29	163	P	Pg	13 16 10.6	+0.1
KIRA				S	Sb	13 16 26.2	0.0
KIRA				i IAML		13 16 30.0	
	comp=E,502nm,0.3s						
IZMR	zmir-demi	1.29	179	P	Pn	13 16 09.5	+0.1
IZMR				S	Sb	13 16 25.9	-0.4
IZMR				i IAML		13 16 29.0	
	comp=E,568nm,0.9s						
LPK	Lapseki	1.30	316	Pn	Pg	13 16 10.2	-0.7
PRK	Paraskevi	1.30	262	P	Pb	13 16 10.2	+0.1
PRK				S	Sg	13 16 27.3	-0.5
EZN	Ezine	1.30	288	P	Pb	13 16 10.1	0.0
EZN				S	Sg	13 16 28.5	+0.7
EZN	Ezine	1.30	288	Pn	Pb	13 16 09.9	-0.1
COMU	Canakkale	1.31	301	Pn	Pb	13 16 10.1	-0.1
ARMT	Armutlu	1.34	32	Pn	Pb	13 16 10.7	+0.1
RKY	Sarkoy-Tekirda	1.38	335	Pn	Pb	13 16 10.9	-0.5
KOCA	Canakkale, Ayv	1.39	273	P	Pg	13 16 11.9	-0.7
KOCA				S	Sg	13 16 30.7	0.0
KOCA				i IAML		13 16 32.0	
	comp=E,828nm,0.5s						
DOMA	Ktahya-Doman	1.41	75	P	Pg	13 16 12.1	-0.7
DOMA				S	Sn	13 16 28.9	-0.5
DOMA				i IAML		13 16 34.0	
	comp=N,603nm,0.3s						
KARB	zmir-Karabur	1.41	238	P	Pb	13 16 11.4	-0.5
KARB				S	Sn	13 16 28.3	-1.1
KARB				i IAML		13 16 34.0	
	comp=E,430nm,0.8s						
GELI	Tayfur-Gelibol	1.48	311	Pn	Pb	13 16 12.7	-0.4
ECEA	Canakkale, Ece	1.49	295	P	Pb	13 16 13.1	-0.1
ECEA				S	Sg	13 16 32.8	-0.9
ECEA				i IAML		13 16 39.0	
	comp=E,642nm,0.6s						
ANDZ	Kutahya, Merke	1.52	86	P	Pb	13 16 13.7	-0.2
ANDZ				S	Sg	13 16 34.0	-0.8
ANDZ				i IAML		13 16 37.0	
	comp=N,636nm,0.7s						
YLV	Yalova	1.58	44	Pn	Pn	13 16 13.4	-0.1
GOKT	Kean, EDRN	1.59	321	P	Pn	13 16 13.7	+0.2
GOKT				S	Sb	13 16 35.5	+0.7
GOKT				i IAML		13 16 38.0	
	comp=E,808nm,0.5s						
SIGR	SIGRI	1.63	263	P	Pb	13 16 14.6	-0.9
SIGR				S	Sn	13 16 35.0	+0.2
ZEYE	Izmir, Urla-Ze	1.63	224	P	Pb	13 16 14.9	-0.8
ZEYE				S	Sg	13 16 37.3	-1.0
ZEYE				i IAML		13 16 45.0	
	comp=E,370nm,0.7s						
ERIK	Erikli-Kesan	1.65	319	Pn	Pn	13 16 14.6	+0.3
ESEN	Aydn-Nazilli	1.66	169	P	Pn	13 16 15.1	+0.5
ESEN				S	Sb	13 16 37.3	+0.3
ESEN				i IAML		13 16 42.0	
	comp=E,127nm,0.6s						
BNAZ	Uak-Banaz	1.69	116	P	Pb	13 16 16.9	+0.2
BNAZ				S	Sg	13 16 39.2	-1.0
BNAZ				i IAML		13 16 50.0	
	comp=E,460nm,0.6s						
CRLT	Corlu	1.70	355	Pn	Pb	13 16 15.8	-1.0
GADA	Gvkgeada	1.74	296	P	Pn	13 16 16.2	+0.6
MURA	Muratl, TEK	1.75	349	P	Pn	13 16 16.4	+0.7
MURA				S	Sg	13 16 42.1	0.0
MURA				i IAML		13 16 45.0	
	comp=E,376nm,0.6s						
CHOS	Chios island	1.80	235	P	Pn	13 16 16.6	+0.2
HISA	Bilecik-Osmane	1.84	55	P	Pg	13 16 21.4	+0.3
HISA				S	Sg	13 16 45.2	+0.1
HISA				i IAML		13 16 50.0	
	comp=N,948nm,0.4s						
CAVK	Edirne/Enez-Ca	1.85	313	⇓P	Pb	13 16 18.3	-1.1
SATE	Sancaktepe,	1.89	33	P	Pg	13 16 20.8	-1.2
SATE				S	Sg	13 16 45.4	-1.1
SATE				i IAML		13 16 46.0	
	comp=E,756nm,0.5s						
ENEZ	Enez	1.89	314	P	Pb	13 16 18.6	-1.4
ENEZ				S	Sb	13 16 42.5	-1.0
SMG	Samos	1.93	207	P	Pb	13 16 19.3	-1.4
CATL	atalca, ST	1.93	9	P	Pn	13 16 18.4	+0.1
CATL				S	Sn	13 16 42.6	+0.3
CATL				i IAML		13 16 48.0	
	comp=N,452nm,0.7s						
SEMS	Kocaeli-K¶rfe	1.99	43	P	Pb	13 16 22.4	+0.6
SEMS				S	Sg	13 16 49.5	-0.4
SEMS				i IAML		13 16 50.0	
	comp=N,502nm,0.4s						
SMTH	Samothraki Isl	2.12	300	P	Pn	13 16 22.1	+1.2
LIA	Limnos Island	2.17	283	P	Pn	13 16 22.4	+0.9
SGAZ	Eskisehir, Sey	2.25	87	P	Pn	13 16 23.4	+0.7
SGAZ				S	Sg	13 16 56.8	-1.3
SGAZ				i IAML		13 17 09.0	
	comp=E,181nm,0.4s						
YER	Yerkesik	2.31	173	P	Pn	13 16 23.6	+0.1
SUSU	Bolu-G¶ynk-	2.41	67	P	Pn	13 16 25.7	+0.8
SUSU				S	Sg	13 17 04.8	+1.5
SUSU				i IAML		13 17 12.0	
	comp=N,123nm,0.5s						
BODT	Bodrum	2.42	192	P	Pn	13 16 25.7	+0.8
RDO	Rodhopi	2.51	314	P	Pn	13 16 26.8	+0.6
SAHE	Sakarya_HENDEK	2.65	57	⇑P	Pb	13 16 31.6	-1.4
CTIK	Konya-Celtik	2.90	97	P	Pg	13 16 40.2	-1.2
CTIK				S	Sg	13 17 21.5	+2.4
CTIK				i IAML		13 17 25.0	
	comp=N,214nm,0.5s						
ANTO	Ankara	3.78	82	⇑P	Pn	13 16 46.9	+3.3
ELND	Elena	3.82	337	⇑P	Pn	13 16 45.5	+1.2
MLR	Muntele Rosu	6.23	347	⇑P	Pn	13 17 20.0	+2.6
BOVS	Bovan	6.28	314	⇓P	Pn	13 17 19.9	+1.9
PLOR	Plostina	6.48	352	⇑P	Pn	13 17 23.8	+3.0
VRI	Vrincioaia	6.49	353	⇑P	Pn	13 17 23.1	+2.2
COVR	Voineasa-Covas	6.54	349	⇓P	Pn	13 17 23.8	+2.3
TURR	Turia	6.77	349	⇑P	Pn	13 17 27.6	+2.9
ONER	Baraj Valea Uz	6.99	351	⇑P	Pn	13 17 29.4	+1.7
GZR	Gura Zlata	7.07	329	⇑P	Pn	13 17 29.8	+0.9
BURAR	Bucovina Array	8.41	347	⇑P	Pn	13 17 49.9	+2.6

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*IDC **11** 13:23:57.7±1.2, 24°.46N×121°.18E, h0^{km}, mb3.5/5, mbtmp3.5/6, ML3.4/1, Error ellipse: s-maj=72.6km s-min=21.0km az=68.0*

*TAP **11** 13:23:58.3, 24°.79N×121°.89E, h10^{km}, ML4.0, B*

*JMA **11** 13:23:58.6±0.1, 24°.8N±0°.4×121°.9E±0°.4, h27^{km}, MV3.8/12, TAIWAN REGION*

ISC 11 13:23:58.2±0.7**, 24°.79N**±0°.01×**121°.95E**±0°.02**, h12^{km}**±4^{km}**, n148, σ0^{s}77**/225**, mb3.5**/5**, 17C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		0.06	342	⇓iP	Pg	13 24 00.9	+0.2
EGS				iS	Sg	13 24 02.7	+0.3
NTC	Toucheng	0.13	301	⇑P	Pg	13 24 01.2	-0.3
NTC				S	Sg	13 24 03.3	-0.5
TWC	Suao	0.20	208	⇑iP	Pg	13 24 02.6	+0.1
TWC				iS	Sg	13 24 05.1	-0.4
TIPB	Shuangxi	0.22	328	⇑iP	Pg	13 24 02.8	-0.1
TIPB				iS	Sg	13 24 05.7	-0.4
TWB1	Santiao Chiao	0.22	8	⇓iP	Pg	13 24 03.3	+0.4
TWB1				S	Sg	13 24 06.5	+0.3
ESAO	Su ao	0.23	205	eP	Pg	13 24 03.3	+0.3
ESAO				eS	Sg	13 24 06.1	-0.3
NDS	Dongshan	0.26	235	⇑iP	Pg	13 24 03.5	-0.2
NDS				eS	Sg	13 24 06.6	-0.7
TWE	Neicheng	0.27	256	⇑iP	Pg	13 24 03.2	-0.6
TWE				S	Sg	13 24 06.4	-1.1
SXI1	Grass Mountain	0.32	347	⇑iP	Pb	13 24 05.0	-0.8
SXI1				S	Sg	13 24 09.2	+0.2
NWF	Wu-fen Shan	0.33	331	⇑iP	Pg	13 24 05.0	+0.2
NWF				S	Sg	13 24 09.5	+0.3
WFSB	Wu-fen Shan	0.33	331	⇑iP	Pg	13 24 05.0	+0.2
WFSB				S	Sg	13 24 09.1	-0.1
FUSB	Fushanzhiwuyua	0.33	266	⇑iP	Pg	13 24 04.4	-0.6
FUSB				S	Sg	13 24 08.1	-1.4
EWUT	Wuta	0.37	205	eP	Pg	13 24 05.5	-0.2
EWUT				eS	Sg	13 24 10.3	-0.4
ENTT	Nioudou	0.38	248	P	Pg	13 24 05.1	-0.7
ENTT				eS	Sg	13 24 10.1	-0.8
TWA	Mucha	0.39	300	⇑iP	Pg	13 24 05.7	-0.2
TWA				S	Sg	13 24 10.4	-0.7
TNOU	National Taiwa	0.40	336	i P	Pb	13 24 06.4	-0.7
TNOU				S	Sg	13 24 11.1	-0.4
ENA	Nanau	0.41	209	⇑iP	Pg	13 24 06.1	-0.1
ENA				S	Sg	13 24 11.2	-0.4
NWLT	Wulai	0.41	269	P	Pg	13 24 05.7	-0.6
NWLT				S	Sg	13 24 10.0	-1.8
NHDH	Xindian Distri	0.43	295	⇑iP	Pg	13 24 06.7	0.0
NHDH				S	Sg	13 24 12.0	-0.3
NHY	Taipei	0.43	306	eP	Pg	13 24 07.0	+0.2
NHY				eS	Sg	13 24 12.5	0.0
EOS2	EOS2	0.44	145	eP	Pb	13 24 08.6	+0.7
LATG	Datong	0.46	237	⇑P	Pg	13 24 06.8	-0.5
LATG				eS	Sg	13 24 12.9	-0.5
TATO	Taipei	0.46	294	P	Pg	13 24 07.1	-0.2
TATO	Taipei	0.46	294	S	Sg	13 24 13.2	-0.3
TAP	Taipei	0.48	302	eP	Pg	13 24 07.8	+0.2
TAP				eS	Sg	13 24 13.7	-0.3
EAHA	Aohua	0.49	203	eP	Pg	13 24 07.9	0.0
EAHA				eS	Sg	13 24 14.7	+0.2
YM01	YM01	0.50	316	P	Pb	13 24 08.4	-0.5
YM08	YM08	0.52	321	⇑iP	Pg	13 24 08.5	+0.1
YM08				eS	Sb	13 24 18.2	+1.5
ZUZH	Zhuzihu	0.53	315	⇑iP	Pb	13 24 08.9	-0.5
YHNB	Yeheng	0.54	258	P	Pg	13 24 07.8	-0.9
YHNB	Yeheng	0.54	258	⇑iP	Pg	13 24 07.9	-0.8
YHNB				S	Sg	13 24 13.7	-2.2
NSK	Sanguang	0.55	259	⇑iP	Pg	13 24 08.1	-0.9
NSK				eS	Sg	13 24 14.2	-2.1
ANP	Anpu	0.56	316	i P	Pg	13 24 09.2	0.0
TWS1	Kuangyinshan	0.58	303	i P	Pb	13 24 10.1	-0.1
TWY	Chenhua	0.58	327	i P	Pb	13 24 10.0	-0.4
NTST	Danshui	0.59	310	i P	Pb	13 24 10.4	0.0
EOS3	EOS3	0.60	146	P	Pn	13 24 11.3	-1.0
EOS3				eS	Sn	13 24 21.5	-0.3
NNSB	Datong	0.63	236	P	Pg	13 24 09.6	-0.8
NNS	Nan Shan	0.63	237	P	Pg	13 24 09.6	-0.9
NACB	Ninganchiao	0.69	208	P	Pg	13 24 11.4	-0.2
NACB	Ninganchiao	0.69	208	S	Sb	13 24 21.2	-0.4
NACB	Ninganchiao	0.69	208	P	Pg	13 24 11.2	-0.4
NACB				S	Sg	13 24 20.2	-0.5
ETL	Fush Village	0.69	206	P	Pg	13 24 11.6	-0.1
ETL				eS	Sg	13 24 20.3	-0.4
KSHI	Guanxi Townshi	0.71	269	P	Pg	13 24 12.1	+0.2
KSHI				eS	Sg	13 24 21.1	-0.1
ETLH	Xiulin Townshi	0.72	217	eP	Pg	13 24 11.7	-0.5
ETLH				eS	Sb	13 24 22.2	-0.3
NCU	National Centr	0.72	285	i P	Pg	13 24 11.0	-1.1
NCU				S	Sg	13 24 21.2	-0.4
NCUH	Zhongli	0.72	285	P	Pb	13 24 12.8	+0.1
NCUH				eS	Sb	13 24 22.7	+0.2

EOS4	**EOS4**	**0.74**	**153**	*e*P	**Pn**	**13 24 13.4**	**-0.7**
TWD	**Chiawan**	**0.77**	**205**	*i* P	**Pg**	**13 24 13.0**	**-0.2**
TWD				S	**Sg**	**13 24 23.0**	**-0.3**
NFF	**Wufeng Townshi**	**0.78**	**259**	*e*P	**Pb**	**13 24 14.2**	**+0.5**
NFF				*e*S	**Sb**	**13 24 25.1**	**+1.0**
PCYT	**Pengchaiyu**	**0.85**	**7**	P	**Pb**	**13 24 15.0**	**+0.2**
LIOB	**Emei**	**0.86**	**261**	*i* P	**Pb**	**13 24 15.2**	**+0.1**
LIOB				*e*S	**Sb**	**13 24 27.7**	**+1.1**
HWA	**Hwalien**	**0.86**	**202**	*e*P	**Pb**	**13 24 15.1**	**0.0**
HWA				*e*S	**Sb**	**13 24 27.3**	**+0.6**
NSTT	**Nanjuang**	**0.88**	**260**	*e*P	**Pg**	**13 24 15.2**	**+0.1**
NSTT				*e*S	**Sg**	**13 24 27.1**	**+0.4**
SBCB	**Hsinchu**	**0.88**	**271**	P	**Pb**	**13 24 15.8**	**+0.4**
SBCB				*e*S	**Sb**	**13 24 28.1**	**+1.0**
TWT	**Tachien**	**0.88**	**233**	*i* P	**Pg**	**13 24 14.7**	**-0.6**
HSN	**Hsinchu**	**0.89**	**271**	*e*P	**Pg**	**13 24 15.2**	**-0.2**
HSN				*e*S	**Sg**	**13 24 27.0**	**-0.1**
WHF	**Hehuan Shan**	**0.89**	**225**	*e*P	**Pg**	**13 24 15.2**	**-0.3**
TDCB	**Techi**	**0.90**	**234**	P	**Pg**	**13 24 14.7**	**-0.8**
TDCB				*e*S	**Sg**	**13 24 25.2**	**-2.1**
LXIB	**Xiulin Townshi**	**0.91**	**213**	P	**Pg**	**13 24 15.0**	**-0.7**
LXIB				*e*S	**Sg**	**13 24 26.6**	**-0.9**
ETM	**Tongmen**	**0.92**	**207**	P	**Pg**	**13 24 15.6**	**-0.3**
ETM				S	**Sg**	**13 24 26.9**	**-1.0**
JYNG	**Yonagunijimaku**	**0.96**	**110**	*e*P	**Pn**	**13 24 17.4**	**-0.1**
JYNG				*e*S	**Sn**	**13 24 31.1**	**0.0**
TEYL	**Yanliau Villag**	**0.97**	**200**	P	**Pb**	**13 24 16.6**	**-0.2**
YOJ	**Yonaguni jima**	**1.01**	**108**	P	**Pn**	**13 24 18.3**	**+0.1**
YOJ	**Yonaguni jima**	**1.01**	**108**	S	**Sn**	**13 24 33.0**	**+0.6**
YOJ	**Yonaguni jima**	**1.01**	**108**	*e*P	**Pn**	**13 24 18.2**	**+0.1**
YOJ				*e*S	**Sn**	**13 24 32.7**	**+0.4**
YOJ	**Yonaguni jima**	**1.01**	**108**	*e*P	**Pn**	**13 24 18.0**	**-0.2**
YOJ				*e*S	**Sn**	**13 24 32.1**	**-0.2**
WHP	**Taichung City**	**1.05**	**241**	*e*P	**Pg**	**13 24 17.9**	**-0.4**
SHUL	**Shoufeng**	**1.05**	**200**	P	**Pn**	**13 24 18.9**	**+0.1**
SHUL				*e*S	**Sb**	**13 24 33.0**	**+0.9**
ESL	**Shilin**	**1.08**	**206**	P	**Pg**	**13 24 18.2**	**-0.8**
ESL				*e*S	**Sg**	**13 24 31.8**	**-1.2**
NMLH	**Miaoli**	**1.09**	**257**	*e*P	**Pn**	**13 24 19.6**	**+0.4**
NMLH				*e*S	**Sn**	**13 24 35.0**	**+0.9**
OWD	**Renai**	**1.09**	**221**	*e*P	**Pg**	**13 24 18.5**	**-0.7**
WUSB	**Renai**	**1.10**	**224**	*e*P	**Pg**	**13 24 18.5**	**-0.8**
WUSB				*e*S	**Sg**	**13 24 32.7**	**-0.9**
NSY	**Sanyi**	**1.15**	**252**	*e*P	**Pn**	**13 24 20.7**	**+0.7**
NSY				*e*S	**Sn**	**13 24 36.4**	**+0.7**
TWQ1	**Liyutan**	**1.16**	**248**	P	**Pn**	**13 24 20.6**	**+0.3**
TWQ1				*e*S	**Sn**	**13 24 37.0**	**+1.0**
WARBT	**Fenglin Townsh**	**1.18**	**206**	P	**Pg**	**13 24 20.0**	**-1.0**
WCS	**Beigang Elemen**	**1.20**	**233**	*e*P	**Pg**	**13 24 20.2**	**-1.0**
EGFH	**Guangfu**	**1.21**	**203**	*e*P	**Pg**	**13 24 20.5**	**-1.0**
VWDT	**VWDT**	**1.27**	**216**	P	**Pn**	**13 24 21.9**	**+0.3**
VWDT				*e*S	**Sn**	**13 24 39.1**	**+0.5**
SMLT	**Sun Moon Lake**	**1.31**	**227**	*e*P	**Pb**	**13 24 23.0**	**+0.1**
TYC	**Yuchr**	**1.33**	**229**	*e*P	**Pb**	**13 24 23.1**	**0.0**
SSLB	**Suanglung**	**1.35**	**223**	P	**Pn**	**13 24 23.3**	**+0.5**
SSLB	**Suanglung**	**1.35**	**223**	*e*P	**Pn**	**13 24 22.9**	**+0.1**
HGSD	**Ruisui**	**1.38**	**201**	*e*P	**Pb**	**13 24 23.8**	**0.0**
EHY	**Hungye**	**1.40**	**204**	*e*P	**Pn**	**13 24 23.1**	**-0.4**
EHYH	**Wanrong**	**1.40**	**203**	*e*P	**Pn**	**13 24 23.1**	**-0.4**
WCHH	**Zhanghua**	**1.45**	**241**	*e*P	**Pg**	**13 24 25.8**	**-0.3**
WNT	**Mingjian**	**1.47**	**232**	*e*P	**Pg**	**13 24 26.6**	**+0.2**
WNT				*e*S	**Sg**	**13 24 45.9**	**+0.4**
WJS	**Zhushan**	**1.47**	**230**	*e*P	**Pg**	**13 24 26.8**	**+0.3**
WJS				*e*S	**Sg**	**13 24 47.1**	**+1.5**
WHYT	**Xinyi Township**	**1.48**	**223**	*e*P	**Pg**	**13 24 26.2**	**-0.3**
YULB	**Yu-li**	**1.51**	**204**	P	**Pn**	**13 24 25.7**	**+0.7**
YULB	**Yu-li**	**1.51**	**204**	*e*P	**Pn**	**13 24 25.0**	**-0.1**
TWF1	**Yuli**	**1.55**	**203**	*e*P	**Pn**	**13 24 25.3**	**-0.3**
YUS	**Yu-Shan**	**1.58**	**216**	*e*P	**Pb**	**13 24 27.5**	**-0.2**
ALS	**Alishan**	**1.65**	**220**	*e*P	**Pg**	**13 24 29.5**	**-0.3**
ALS				*e*S	**Sg**	**13 24 53.4**	**+2.2**
CHN5	**Tsauling**	**1.66**	**225**	P	**Pg**	**13 24 29.4**	**-0.7**
CHN5				*e*S	**Sg**	**13 24 51.8**	**+0.1**
CHKH	**Chenggong**	**1.67**	**198**	*e*P	**Pn**	**13 24 27.7**	**+0.6**
WDL	**Douliou City**	**1.67**	**231**	*e*S	**Sg**	**13 24 53.1**	**+1.0**
IRIF	**Iriomote-Funau**	**1.68**	**105**	*e*P	**Pn**	**13 24 27.6**	**+0.2**
IRIF				*e*S	**Sn**	**13 24 48.8**	**+0.1**
WDLH	**Douliu**	**1.69**	**230**	*e*P	**Pn**	**13 24 28.6**	**+1.1**
WDLH				*e*S	**Sg**	**13 24 52.8**	**+0.2**
EHD	**Haiduan**	**1.77**	**203**	*e*P	**Pn**	**13 24 28.8**	**+0.2**
ELDTW	**Lidau**	**1.81**	**209**	*e*P	**Pn**	**13 24 29.9**	**+0.7**
WCKO	**Fanlu**	**1.82**	**223**	*e*P	**Pb**	**13 24 31.7**	**+0.3**
WCKO				*e*S	**Sg**	**13 24 56.3**	**-0.5**
HATJ	**Hateruma jima**	**1.84**	**113**	*e*P	**Pb**	**13 24 30.2**	**-1.5**
CHY	**Chiayi**	**1.90**	**228**	*e*P	**Pb**	**13 24 32.2**	**-0.5**
EDH	**Donghe**	**1.90**	**198**	*e*P	**Pn**	**13 24 31.1**	**+0.7**
TPUB	**Ta-pu**	**1.91**	**220**	P	**Pb**	**13 24 33.2**	**+0.2**
TPUB	**Ta-pu**	**1.91**	**220**	P	**Pb**	**13 24 33.0**	**0.0**
TPUB				*e*S	**Sg**	**13 24 59.7**	**+0.1**
STYH	**Taoyuan**	**1.94**	**214**	*e*P	**Pb**	**13 24 33.4**	**0.0**
WSF	**Szhu**	**1.95**	**235**	*e*S	**Sn**	**13 24 57.3**	**+1.8**
JKRS	**Kuro-shima**	**1.95**	**106**	*e*P	**Pn**	**13 24 31.6**	**+0.5**
JKRS				*e*S	**Sn**	**13 24 55.4**	**-0.1**
WTP	**Ta-pu**	**1.96**	**219**	P	**Pb**	**13 24 33.9**	**+0.1**
WTP				*e*S	**Sg**	**13 25 01.3**	**+0.1**
WSL	**Shuilin Townsh**	**2.02**	**232**	*e*P	**Pn**	**13 24 33.5**	**+1.6**
WSL				*e*S	**Sb**	**13 24 59.6**	**-0.2**
LONT	**Longtian**	**2.02**	**202**	*e*P	**Pn**	**13 24 32.3**	**+0.3**
TWK	**Hsinying**	**2.02**	**222**	*e*P	**Pb**	**13 24 34.5**	**-0.4**
TWK				*e*S	**Sg**	**13 25 02.6**	**-0.6**
JIJ	**Ishigaki jima**	**2.04**	**101**	*e*P	**Pn**	**13 24 32.4**	**+0.1**
JIJ				*e*S	**Sn**	**13 24 57.0**	**-0.7**
SNST	**Tainan City**	**2.05**	**221**	*e*P	**Pb**	**13 24 35.0**	**-0.3**
SNST				*e*S	**Sg**	**13 25 03.1**	**-1.0**
CHN1	**Nanshi**	**2.06**	**220**	*e*P	**Pb**	**13 24 35.3**	**-0.2**
CHN1				*e*S	**Sg**	**13 25 04.0**	**-0.4**
SGST	**Jiashian**	**2.11**	**217**	*e*P	**Pb**	**13 24 35.2**	**-1.2**
SGST				*e*S	**Sg**	**13 25 04.8**	**-1.2**
TWG	**Pinlang**	**2.12**	**203**	*e*P	**Pn**	**13 24 34.2**	**+0.8**
TWGBT	**Beinan**	**2.12**	**202**	P	**Pn**	**13 24 34.0**	**+0.6**
TWGBT	**Beinan**	**2.12**	**202**	*e*P	**Pn**	**13 24 33.6**	**+0.2**
CHN8	**Yiju**	**2.14**	**228**	*e*P	**Pn**	**13 24 35.4**	**+1.7**
CHN8				*e*S	**Sb**	**13 25 02.9**	**-0.6**
JISG	**Ishigakijimahi**	**2.15**	**95**	*e*P	**Pn**	**13 24 34.6**	**+0.8**
MATB	**Ma-tsu**	**2.27**	**307**	*e*P	**Pn**	**13 24 34.3**	**-1.1**
MATB				*e*S	**Sn**	**13 25 01.4**	**-2.0**
ECL	**Taimali**	**2.36**	**203**	*e*P	**Pn**	**13 24 38.4**	**+1.6**
SSD	**Sandimen**	**2.36**	**211**	*e*P	**Pb**	**13 24 39.7**	**-1.0**
SSD				*e*S	**Sb**	**13 25 12.1**	**+2.3**
MASBT	**Mashibuluo**	**2.48**	**209**	*e*P	**Pb**	**13 24 40.9**	**-1.7**
MASBT				*e*S	**Sb**	**13 25 12.8**	**-0.3**
JTJ	**Tarama**	**2.50**	**93**	*e*P	**Pb**	**13 24 40.6**	**-2.4**
PNG	**Penghu**	**2.50**	**242**	*e*P	**Pn**	**13 24 38.8**	**+0.1**
PHUB	**P'eng-hu**	**2.52**	**240**	*e*P	**Pn**	**13 24 38.8**	**0.0**
PHUB				*e*S	**Sn**	**13 25 08.4**	**-1.1**
PTMZ	**Houxiangcun**	**2.58**	**276**	P	**Pn**	**13 24 38.6**	**-1.2**
EAST	**Anshuo**	**2.60**	**203**	*e*P	**Pb**	**13 24 43.5**	**-1.2**
LYJJ	**Jianjiangzhen**	**2.65**	**312**	*e*P	**Pn**	**13 24 39.2**	**-1.4**
LYJJ				*e*S	**Sn**	**13 25 11.0**	**-1.6**
XPSS	**Dashiqiu**	**2.66**	**324**	*e*P	**Pn**	**13 24 39.3**	**-1.5**
VCHM	**Qimei**	**2.79**	**236**	*e*P	**Pn**	**13 24 42.9**	**+0.3**
VCHM				*e*S	**Sn**	**13 25 16.5**	**+0.2**
LYUB	**Lan-yu**	**2.79**	**187**	*e*P	**Pn**	**13 24 42.1**	**-0.6**
LYUB				*e*S	**Sn**	**13 25 15.5**	**-0.8**
KNM	**Kinmen**	**3.23**	**264**	*e*P	**Pn**	**13 24 49.6**	**+1.0**
KNMB	**Chin-men Tao**	**3.26**	**265**	P	**Pn**	**13 24 48.0**	**-1.0**
AXDP	**Jialang**	**3.62**	**273**	P	**Pn**	**13 24 53.2**	**-0.8**
ZPLA	**Ao Xicun**	**3.93**	**258**	*e*P	**Pn**	**13 24 57.3**	**-1.0**
DSXP	**Dongshan**	**4.27**	**256**	*e*P	**Pn**	**13 25 02.2**	**-0.8**
KSRS	**Korea Array**	**13.62**	**21**	Pn	**P**	**13 27 20.8**	**+0.7**
	0.2nm,0.3s,baz=198,slow=13,SNR=2.3						
	1.0nm,0.5s						
SONM	**Songino Array**	**26.10**	**336**	P	**P**	**13 29 32.5**	**+0.7**
	0.8nm,0.5s,baz=151,slow=9.5,SNR=5.0						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**38.40**	**315**	P	**P**	**13 31 19.7**	**+0.3**
	0.2nm,0.6s,baz=105,slow=9.0,SNR=2.5						
	0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**40.13**	**326**	P	**P**	**13 31 33.5**	**-0.2**
	0.7nm,0.7s,baz=99,slow=8.9,SNR=2.7						
	0.7nm,0.7s						
WRA	**Warramunga Arr**	**46.06**	**164**	P	**P**	**13 32 22.0**	**0.0**
	0.4nm,0.6s,baz=347,slow=8.5,SNR=5.4						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**49.54**	**166**	P	**P**	**13 32 49.9**	**+0.9**
	0.1nm,0.5s,baz=328,slow=5.5,SNR=4.2						
	0.1nm,0.5s						

IDC 11 13:39:43.5±3.2,**16°.19S×165°.57E**,**h0**^{km},**mb3.7**/3,
mbtmp3.8/4,**ML3.8**/1,**Error ellipse: s-maj=66.9km s-min=31.7km az=69.0**,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.91**	**172**	Pn	Pn	13 41 11.9	-0.6
	2.6nm,0.3s,baz=18,slow=19,SNR=29						
DZM				Sn	Sn	13 42 23.5	+2.5
	0.2nm,0.3s,baz=180,slow=20,SNR=1.2						
	4.3nm,0.3s						
WRA	**Warramunga Arr**	**29.90**	**258**	P	P	13 45 53.5	+0.2
	0.2nm,0.9s,baz=78,slow=6.1,SNR=1.4						
	0.2nm,0.9s						
ASAR	**Alice Springs**	**30.64**	**251**	P	P	13 45 59.6	-0.2
	0.4nm,0.6s,baz=77,slow=8.9,SNR=10						
	0.4nm,0.6s						
LZDM	**Lanzhou Array**	**78.14**	**313**	P	P	13 51 45.3	+0.2
	2.2nm,0.4s,baz=108,slow=4.7,SNR=2.5						
	2.2nm,0.4s						

MOS ***11*** *13:49:42.1±0.8, 31°.97N×137°.85E, h376^{km}, mb4.3/31, Error ellipse: s-maj=9.0km s-min=5.4km az=116.2*

IDC ***11*** *13:49:42.9±0.6, 32°.00N×137°.93E, h370^{km}±5^{km}, mb3.7/26, mbtmp4.4/31, Error ellipse: s-maj=10.6km s-min=8.4km az=70.0*

NEIC ***11*** *13:49:43.3±1.6, 32°.02N±0°.05×137°.85E±0°.08, h368^{km}±6^{km}, mb4.3/79, Error ellipse: s-maj=12.4km s-min=4.0km az=123.0*

JMA ***11*** *13:49:43.0±0.3, 32°N±1°×138°.0E±0°.9, h379^{km}±2^{km}, MV3.9/36, NEAR TORISHIMA IS*

NIED ***11*** *13:49:43.0, 31°.99N×138°.03E, h379^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.36; M$_{\theta\theta}$-0.18; M$_{\phi\phi}$0.54; M$_{r\theta}$-1.07; M$_{\theta\phi}$-0.76; M$_{\phi r}$-3.19; Fault plane solution: M$_0$3.47000×10^{15} NP1: ϕ_s114.00000°, δ14.00000°, λ-172.00000°. NP2: ϕ_s16.00000°, δ88.00000°, λ-76.00000°.*

ISC 11 13:49:41.9±0.5,**31°.89N**±0°.05×**138°.00E**±0°.04,**h364**^{km}±3^{km},
h363^{km}**:pP-P**,**n234**,σ**1**^{s}**39**/285,**mb4.2**/86,**11C-1D**,
Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.60**	**69**	*e*P	**Pn**	**13 50 34.8**	**+2.8**
JHCJ	**Hachijojimakas**	**1.92**	**52**	*e*P	**Pn**	**13 50 36.0**	**+2.1**
JHCJ				*e*S	**S**	**13 51 16.7**	**+1.0**
JHJ	**Hachijo jima 2**	**1.94**	**51**	P	**Pn**	**13 50 36.2**	**+2.2**
	258nm,0.3s,baz=331,slow=14,SNR=37						
JHJ				S	**S**	**13 51 17.7**	**+1.8**
	339nm,0.3s,baz=264,slow=23,SNR=8.4						
JHJ2	**Mitsune**	**1.96**	**51**	Pn	**Pn**	**13 50 36.0**	**+1.9**
JHJ2				Sn	**S**	**13 51 17.0**	**+0.8**
JHJ2	**Mitsune**	**1.96**	**51**	*e*P	**Pn**	**13 50 36.1**	**+2.0**
TTO1	**TONANKAI O.B.S**	**2.00**	**330**	P	**Pn**	**13 50 37.1**	**+3.0**
TTO3	**TONANKAI O.B.S**	**2.03**	**346**	*e*P	**Pn**	**13 50 37.4**	**+3.1**
TK02	**Tokai 2**	**2.06**	**354**	P	**Pn**	**13 50 37.3**	**+2.8**
TTO4	**TONANKAI O.B.S**	**2.14**	**350**	*e*P	**Pn**	**13 50 37.9**	**+2.8**
JIE	**Ise**	**2.72**	**337**	P	**Pn**	**13 50 42.0**	**+2.2**
JIE				*e*S	**S**	**13 51 28.1**	**+1.6**
JTNC	**Tanabenakahech**	**2.78**	**314**	P	**Pn**	**13 50 42.3**	**+2.0**
JTNC				*e*S	**S**	**13 51 28.6**	**+1.1**
JWY	**Kouya**	**3.07**	**320**	P	**Pn**	**13 50 45.3**	**+2.4**
JWY				*e*S	**S**	**13 51 33.5**	**+1.3**
JOD2	**Odawara 2**	**3.48**	**15**	P	**Pn**	**13 50 47.6**	**+1.0**
JOD2				*e*S	**S**	**13 51 38.3**	**-0.6**
JAI	**Aioi**	**3.53**	**303**	P	**Pn**	**13 50 49.1**	**+2.0**
INU	**Inuyama**	**3.54**	**347**		**Pn**	**13 50 48.6**	**+1.4**
JYN	**Shimob**	**3.62**	**7**	*e*P	**Pn**	**13 50 49.9**	**+1.9**
BSO1	**Boso 1**	**3.72**	**41**	*e*P	**Pn**	**13 50 47.8**	**-0.4**
BSO1				*e*S	**S**	**13 51 38.8**	**-3.1**
JGF	**Kuroka**	**3.73**	**352**		**Pn**	**13 50 50.0**	**+0.9**
JYTA	**Yamagatataniai**	**3.84**	**344**	P	**Pn**	**13 50 51.6**	**+1.6**
JYTA				*e*S	**S**	**13 51 45.8**	**+0.7**
JMN	**Monobe**	**3.92**	**299**		**Pn**	**13 50 52.6**	**+1.7**
JMN	**Monobe**	**3.92**	**299**	P	**Pn**	**13 50 53.1**	**+2.2**
JWT	**Wachi**	**4.01**	**328**	P	**Pn**	**13 50 53.5**	**+1.7**
JWT				*e*S	**S**	**13 51 49.3**	**+1.0**
JRY	**Ryogami san**	**4.18**	**10**	P	**Pn**	**13 50 54.5**	**+1.1**
JTO	**Tosashimizu**	**4.50**	**284**	P	**Pn**	**13 50 58.9**	**+2.1**
MJAR	**Matsushiro Arr**	**4.64**	**2**	P	**Pn**	**13 50 58.7**	**+0.5**
	52nm,0.7s,baz=176,slow=11,SNR=108						
MJAR				S	**S**	**13 51 59.7**	**-0.3**
	7.2nm,0.5s,baz=105,slow=25,SNR=7.5						
MJAR	**Matsushiro Arr**	**4.64**	**2**		**Pn**	**13 50 58.6**	**+0.4**
MAJO	**Matsushiro**	**4.64**	**2**		**Pn**	**13 50 58.4**	**+0.1**
MAJO				Sn	**S**	**13 51 56.6**	**-3.4**
MAJO	**Matsushiro**	**4.64**	**2**	*i* P	**Pn**	**13 50 58.3**	**+0.1**
MJB9	**Matsu-Tunnel**	**4.64**	**2**		**Pn**	**13 50 59.5**	**+1.3**
JHS	**Saijyo**	**5.12**	**309**	P	**Pn**	**13 51 05.2**	**+1.8**
CBIJ	**Chichi jima**	**6.01**	**142**	*e*P	**Pn**	**13 51 12.0**	**-1.5**
CBIJ				*e*S	**S**	**13 52 24.3**	**-3.4**
JCJ	**Chichijima**	**6.01**	**142**	P	Pn	13 51 02.9	-11
	63nm,0.3s,baz=356,slow=19,SNR=39						
JCJ				S	S	13 52 13.0	-15
	202nm,0.4s,baz=290,slow=23,SNR=19						
JCJ	**Chichijima**	**6.01**	**142**		**Pn**	**13 51 13.0**	**-0.5**
JSD	**Sado**	**6.13**	**2**	Pn	**Pn**	**13 51 14.1**	**-0.5**
JNU	**Nakatsue**	**6.14**	**283**	P	**Pn**	**13 51 16.9**	**+2.2**
	56nm,0.8s,baz=119,slow=4.2,SNR=27						
JNU	**Nakatsue**	**6.14**	**283**		**Pn**	**13 51 16.7**	**+1.9**
TJN	**Taejon**	**9.88**	**300**		**P**	**13 51 59.1**	**-0.2**
TJN	**Taejon**	**9.88**	**300**	P	**P**	**13 51 59.1**	**-0.2**
KSRS	**Korea Array**	**9.98**	**307**	P	**P**	**13 52 00.5**	**+0.1**
	2.6nm,0.6s,baz=120,slow=11,SNR=12						
KSAR	**Wonju Array Be**	**10.00**	**306**		**Pn**	**13 51 59.2**	**-0.5**
KSAR	**Wonju Array Be**	**10.00**	**306**	P	**Pn**	**13 51 59.2**	**-0.5**
KS19	**Wonju Array Si**	**10.04**	**307**		**Pn**	**13 51 58.8**	**-1.4**
INCN	**Inchon**	**10.89**	**304**		**Pn**	**13 52 09.2**	**-1.0**
INCN	**Inchon**	**10.89**	**304**	P	**Pn**	**13 52 09.3**	**-1.0**
ERM	**Erimo**	**10.91**	**21**		**P**	**13 52 10.9**	**+0.3**
ERM	**Erimo**	**10.91**	**21**	P	**P**	**13 52 11.0**	**+0.3**
ASAJ	**Asahikawa**	**12.73**	**15**	P	**Pn**	**13 52 32.1**	**+0.3**
	2.9nm,0.3s,baz=218,slow=13,SNR=13						
ASAJ				S	**S**	**13 54 47.9**	**-2.9**
	4.6nm,0.5s,baz=89,slow=32,SNR=3.7						
JKA	**Kamikawa-asahi**	**12.73**	**15**		**P**	**13 52 29.7**	**-1.1**
NMR	**Nemuro--Hokkai**	**12.98**	**26**	*e*P	**Pn**	**13 52 35.6**	**+0.8**
NMR				*e*S	**S**	**13 54 54.0**	**-1.8**
USRK	**Ussuriysk Ar.**	**13.16**	**341**	P	**P**	**13 52 34.8**	**-0.7**
	7.3nm,0.7s,baz=163,slow=11,SNR=12						
RUSJ	**Misakicho**	**13.46**	**23**	P	**Pn**	**13 52 42.7**	**+2.4**
RUSJ				*e*S	**S**	**13 55 07.6**	**+2.3**
YUK	**Yuzh-Kuril'sk**	**13.61**	**25**	P	**Pn**	**13 52 44.3**	**+2.2**
YUK				*e*S	**S**	**13 55 11.5**	**+3.2**
MDJ	**Mudanjiang**	**14.30**	**335**	P	**P**	**13 52 47.1**	**-1.0**
CN2	**Changchun**	**15.46**	**324**	P	**P**	**13 52 54.8**	**-5.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YSS	**Yuzhno-Sakhali**	**15.48**	**12**		**P**	**13 53 02.2**	**+1.4**
YSS	**Yuzhno-Sakhali**	**15.48**	**12**	*e*P	**Pn**	**13 53 05.6**	**+2.0**
YSS				*e*S	**S**	**13 55 50.0**	**+4.3**
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS				pmax	pmax		
	comp=Z,100nm,3.0s						
YSS				smax	smax		
	comp=N,20nm,1.1s						
YSS				smax	smax		
	comp=E,10.0nm,1.2s						
BNX	**BinXian**	**16.08**	**332**	P	**P**	**13 53 07.1**	**-0.3**
BNX				pmax	pmax		
	comp=Z,35nm,0.9s						
YHNB	**Yeheng**	**16.30**	**248**	P	**P**	**13 53 08.7**	**-1.5**
YULB	**Yu-li**	**17.03**	**244**	P	**P**	**13 53 16.7**	**-1.2**
YULB				IAmb	IAmb	13 53 33.0	
	comp=Z,33nm,1.3s						
SSLB	**Suanglung**	**17.09**	**246**	P	**P**	**13 53 16.5**	**-2.1**
TPUB	**Ta-pu**	**17.60**	**245**	P	**P**	**13 53 23.4**	**-0.6**
HEH	**HeiHe**	**19.96**	**340**	*e*P	**P**	**13 53 47.8**	**-0.5**
HEH				pmax	pmax		
	comp=Z,15nm,1.0s						
XLT	**XiLinHaoTe**	**20.97**	**311**	*e*P	**P**	**13 53 57.7**	**0.0**
XLT				S	**S**	**13 57 26.0**	**-0.7**
XLT				pmax	pmax		
	comp=Z,25nm,0.7s						
HILR	**Hailar Array B**	**22.32**	**328**	P	**P**	**13 54 09.6**	**-0.3**
	comp=Z,7.2nm,0.4s,baz=131,slow=11,SNR=15						
	comp=Z,7.2nm,0.4s						
HHC	**Hu-ho-hao-te**	**23.02**	**300**	*e*P	**P**	**13 54 17.2**	**+0.8**
HHC				pmax	pmax		
	comp=Z,18nm,0.7s						
ZEA	**Zeya**	**23.16**	**344**	*e*P	**P**	**13 54 17.6**	**+0.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BTO	**Baotou**	**24.10**	**299**	*e*P	**P**	**13 54 27.4**	**+1.2**
BTO				sP	**sP**	**13 56 08.8**	**-4.7**
BTO				S	**S**	**13 58 22.8**	**+6.1**
BTO				pmax	pmax		
	comp=Z,31nm,0.6s						
BTO				pmax	pmax		
	comp=Z,470nm,4.3s						
BTO				LR	LR		
	comp=N,440nm,7.0s						
BTO				LR	LR		
	comp=E,280nm,4.2s						
BTO				LR	LR		
	comp=Z,240nm,8.7s						
XAN	**Xi'an**	**24.45**	**283**	P	**P**	**13 54 28.9**	**-0.5**
XAN				pmax	pmax		
	comp=Z,15nm,1.3s						
PETK	**Petropavlovsk-**	**25.54**	**28**	P	**P**	**13 54 39.4**	**+0.7**
	comp=Z,2.5nm,0.9s,baz=214,slow=7.6,SNR=5.1						
	comp=Z,2.5nm,0.9s						
PETK	**Petropavlovsk-**	**25.54**	**28**	P	**P**	**13 54 39.0**	**+0.3**
ULN	**Ulaanbaatar**	**28.36**	**313**		**P**	**13 55 02.8**	**-1.1**
ULN				IAmb	IAmb	13 55 05.2	
	comp=Z,15nm,1.0s						
ULN	**Ulaanbaatar**	**28.36**	**313**	*i* P	**P**	**13 55 04.2**	**+0.2**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.3s						
LZH	**Lanzhou**	**28.54**	**288**	*e*P	P	13 55 10.9	+5.2
LZH				pmax	pmax		
	comp=Z,18nm,1.6s						
SONM	**Songino Array**	**28.76**	**313**	P	**P**	**13 55 07.6**	**+0.1**
	comp=Z,4.9nm,0.7s,baz=118,slow=8.3,SNR=28						
SONM				ScP	**ScP**	**14 01 11.8**	**-1.3**
	comp=Z,0.5nm,0.6s,baz=108,slow=2.4,SNR=4.1						
	comp=Z,4.9nm,0.7s						
SONM	**Songino Array**	**28.76**	**313**	P	**P**	**13 55 05.5**	**-2.0**
YAK	**Yakutsk**	**30.63**	**352**	P	**P**	**13 55 21.9**	**-1.4**
YAK				IAmb	IAmb	13 55 23.4	
	comp=Z,7.3nm,0.7s						
YAK	**Yakutsk**	**30.63**	**352**	*ce*P	**P**	**13 55 22.6**	**-0.8**
YAK				pmax	pmax		
	comp=Z,11nm,0.8s						
GTA	**Gaotai**	**31.74**	**294**	P	**P**	**13 55 33.1**	**-0.5**
GTA				pmax	pmax		
	comp=Z,15nm,0.9s						
TLY	**Talaya**	**31.93**	**318**	P	**P**	**13 55 35.1**	**+0.1**
GOMU	**GeErMu**	**35.82**	**289**	P	**P**	**13 56 08.4**	**-0.3**
GOMU				pmax	pmax		
	comp=Z,32nm,0.9s						
CM31	**Chiang Mai Arr**	**37.59**	**259**	P	**P**	**13 56 21.9**	**-1.4**
CM31				IAmb	IAmb	13 56 46.0	
	comp=Z,5.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**37.59**	**259**	P	**P**	**13 56 23.5**	**+0.3**
	comp=Z,1.8nm,0.3s,baz=49,slow=7.2,SNR=9.5						
	comp=Z,1.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**37.59**	**259**	P	**P**	**13 56 21.7**	**-1.6**
LSA	**Lhasa**	**40.06**	**280**	P	**P**	**13 56 43.4**	**-0.6**
LSA	**Lhasa**	**40.06**	**280**	P	**P**	**13 56 43.4**	**-0.6**
LSA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TIXI	**Tiksi**	**40.12**	**356**	P	**P**	**13 56 42.2**	**-0.9**
TIXI	**Tiksi**	**40.12**	**356**	*ce*P	**P**	**13 56 42.3**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WMQ	**Urumqi**	**40.88**	**302**	*e*P	**P**	**13 56 50.8**	**+0.8**
WMQ				pP	pP	13 58 02.2	+1.7
WMQ				pmax	pmax		
	comp=Z,20nm,1.1s						
DGZ	**Jazzator, Alta**	**41.35**	**311**	*i* P	**P**	**13 56 53.8**	**+0.1**
DGZ				pmax	pmax		
	comp=Z,15nm,0.9s						
ZAA0	**Zalesovo Array**	**43.49**	**317**		**P**	**13 57 08.3**	**-2.2**
ZAA0				PcP	**PcP**	**13 58 50.4**	**-0.6**
ZALV	**Zalesovo Beam**	**43.49**	**317**	P	**P**	**13 57 09.5**	**-1.0**
	comp=Z,1.8nm,0.3s,baz=70,slow=9.4,SNR=12						
ZALV				PcP	**PcP**	**13 58 50.5**	**-0.5**
	comp=Z,2.7nm,0.7s,baz=113,slow=3.0,SNR=9.8						
	comp=Z,1.8nm,0.3s						
ZALV	**Zalesovo Beam**	**43.49**	**317**		**P**	**13 57 08.3**	**-2.2**
ZALV	**Zalesovo Beam**	**43.49**	**317**	*i* P	**P**	**13 57 09.8**	**-0.7**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
EVN	**Everest**	**44.20**	**279**		**P**	**13 57 17.0**	**-0.3**
EVN				IAmb	IAmb	13 57 18.2	
	comp=Z,9.6nm,0.7s						
EVN				PcP	**PcP**	**13 58 54.8**	**0.0**
MK31	**Makanchi Array**	**44.66**	**306**	*ce*P	**P**	**13 57 19.4**	**-0.4**
MKAR	**Makanchi Array**	**44.66**	**306**	P	**P**	**13 57 19.5**	**-0.3**
	comp=Z,12nm,0.7s,baz=90,slow=9.9,SNR=122						
MKAR				PcP	**PcP**	**13 58 54.6**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=81,slow=3.8,SNR=2.6						
MKAR				ScP	**ScP**	**14 02 10.5**	**-1.6**
	comp=Z,1.9nm,0.6s,baz=82,slow=5.7,SNR=20						
	comp=Z,12nm,0.7s						
MKAR	**Makanchi Array**	**44.66**	**306**		**P**	**13 57 18.9**	**-0.9**
MKAR				PcP	**PcP**	**13 58 55.0**	**-0.3**
MAKZ	**Makanchi**	**44.87**	**306**		**P**	**13 57 20.3**	**-1.2**
MAKZ				IAmb	IAmb	13 57 22.0	
	comp=Z,9.0nm,0.6s						
MAKZ	**Makanchi**	**44.87**	**306**	P	**P**	**13 57 20.3**	**-1.2**
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NRIK	**Noril'sk**	**46.86**	**338**	P	**P**	**13 57 36.1**	**-0.3**
	comp=Z,3.3nm,0.4s,baz=110,slow=11,SNR=8.2						
	comp=Z,3.3nm,0.4s						
NRIK	**Noril'sk**	**46.86**	**338**		**P**	**13 57 35.7**	**-0.7**
NRIK	**Noril'sk**	**46.86**	**338**	*i* P	**P**	**13 57 36.2**	**-0.3**
NRIK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KURK	**Kurchatov**	**47.05**	**312**		**P**	**13 57 37.1**	**-1.1**
KURK				IAmb	IAmb	13 57 38.7	
	comp=Z,14nm,0.9s						
KURK				PcP	**PcP**	**13 59 02.8**	**-0.7**
KURK	**Kurchatov**	**47.05**	**312**	*ce*P	**P**	**13 57 37.6**	**-0.6**
KURK				pmax	pmax		
	comp=Z,21nm,1.3s						
KURBB	**Kurchatov Arra**	**47.11**	**312**	P	**P**	**13 57 37.8**	**-0.8**
	comp=Z,6.1nm,0.6s,baz=92,slow=9.1,SNR=100						
KURBB				PcP	**PcP**	**13 59 03.0**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=101,slow=3.8,SNR=2.9						
	comp=Z,6.1nm,0.6s						
WUS	**Wushi**	**47.33**	**299**		**P**	**13 57 40.6**	**-0.1**
WUS				IAmb	IAmb	13 57 41.8	
	comp=Z,31nm,1.5s						
PRZ	**Przheval'sk**	**47.76**	**300**		**P**	**13 57 44.1**	**+0.2**
PRZ	**Przheval'sk**	**47.76**	**300**	P	**P**	**13 57 44.2**	**+0.2**
PRZ				pmax	pmax		
	comp=Z,26nm,0.6s						
F15K	**North Star Dit**	**48.05**	**28**	P	**P**	**13 57 47.2**	**+1.6**
F15K				IAmb	IAmb	13 57 52.3	
	comp=Z,20nm,1.4s						
M14K	**Bethel**	**48.19**	**35**	P	**P**	**13 57 48.1**	**+1.4**
M14K				IAmb	IAmb	13 58 06.7	
	comp=Z,39nm,1.5s						
TARG	**Taragay, Kyrgy**	**48.31**	**300**		**P**	**13 57 48.2**	**-0.2**
TARG				IAmb	IAmb	13 57 50.2	
	comp=Z,14nm,1.1s						
TARG	**Taragay, Kyrgy**	**48.31**	**300**	P	**P**	**13 57 48.2**	**-0.2**
TARG				pmax	pmax		
	comp=Z,14nm,1.1s						
C16K	**Lisburne Hills**	**48.54**	**25**	P	**P**	**13 57 49.6**	**+0.4**
C16K				IAmb	IAmb	13 57 54.6	
	comp=Z,11nm,1.4s						
K15K	**Wolf Creek Mou**	**48.64**	**33**	P	**P**	**13 57 51.2**	**+1.1**
KDJ	**Kajisay**	**48.71**	**300**		**P**	**13 57 50.6**	**-0.6**
KDJ				IAmb	IAmb	13 57 51.9	
	comp=Z,7.2nm,0.8s						
KDJ	**Kajisay**	**48.71**	**300**	P	**P**	**13 57 50.6**	**-0.6**
KDJ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GSI	**Gunungsitoli**	**48.76**	**240**	P	**P**	**13 57 51.7**	**+0.1**
GSI				IAmb	IAmb	13 57 52.4	
	comp=Z,22nm,0.8s						
N15K	**Kwethluk River**	**49.03**	**36**	P	**P**	**13 57 53.7**	**+0.7**
N15K				IAmb	IAmb	13 57 56.9	
	comp=Z,29nm,1.4s						
O15K	**Ungalikthiuk R**	**49.07**	**37**	P	**P**	**13 57 54.0**	**+0.7**
O15K				IAmb	IAmb	13 58 16.9	
	comp=Z,17nm,1.4s						
BOOM	**Boomskoye usch**	**49.56**	**301**		**P**	**13 57 57.3**	**-0.2**
BOOM	**Boomskoye usch**	**49.56**	**301**	P	**P**	**13 57 57.3**	**-0.2**
BOOM				pmax	pmax		
	comp=Z,5.0nm,0.7s						
F17K	**Baldwin Pennin**	**49.57**	**27**	P	**P**	**13 57 57.7**	**+0.8**
KSH	**Kashi**	**50.07**	**297**	P	**P**	**13 58 04.4**	**+3.1**

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KSH                                 pmax     pmax
      comp=Z,15nm,0.7s
K17K  Iditarod           50.19  33  P        P         13 58 02.5 +0.9
K17K                                IAmb     IAmb      13 58 03.1
      comp=Z,16nm,1.5s
K17K                                PcP      PcP       13 59 13.3 -1.5
M17K  Holitna River      50.45  34  P        P         13 58 04.8 +1.1
M17K                                IAmb     IAmb      13 58 14.4
      comp=Z,19nm,1.4s
AAK   Ala-Archa          50.59 301ceP        P         13 58 04.5 -0.6
AAK                                 pmax     pmax
      comp=Z,6.0nm,1.3s
C19K  Lookout Ridge      50.80  24  P        P         13 58 07.4 +1.3
ARLS  Aral               50.85 300  P        P         13 58 07.6 +0.5
E19K  Redstone River     51.32  27  P        P         13 58 10.9 +1.0
E19K                                IAmb     IAmb      13 58 12.0
      comp=Z,5.8nm,0.6s
E19K                                PcP      pP        13 59 23.0 -1.6
WRA   Warramunga Arr     51.66 184  P        P         13 58 13.5 +0.5
      comp=Z,1.0nm,0.5s,baz=0.5,slow=7.6,SNR=23
      comp=Z,1.0nm,0.5s
ARSB  Arslanbob          51.94 300           P         13 58 14.5 -0.6
ARSB                                IAmb     IAmb      13 58 16.2
      comp=Z,23nm,1.4s
ARSB  Arslanbob          51.94 300  P        P         13 58 14.5 -0.6
ARSB                                pmax     pmax
      comp=Z,23nm,1.4s
BVAR  Borovoye Array     52.07 315  P        P         13 58 14.9 -0.7
      comp=Z,2.5nm,0.3s,baz=101,slow=8.6,SNR=37
BVAR                                PcP      PcP       13 59 21.9 -0.1
      comp=Z,2.3nm,0.4s,baz=94,slow=4.3,SNR=9.3
BVAR                                ScP      ScP       14 02 42.1 -1.3
      comp=Z,0.9nm,0.7s,baz=90,slow=4.5,SNR=5.7
      comp=Z,2.5nm,0.3s
BORK  Borovoye           52.11 315           P         13 58 14.9 -1.0
BORK                                IAmb     IAmb      13 58 16.8
      comp=Z,5.2nm,0.4s
BORK                                PcP      PcP       13 59 21.9 -0.2
BORK  Borovoye           52.11 315ceP        P         13 58 14.9 -1.0
BORK                                pmax     pmax
      comp=Z,4.0nm,0.4s
IMAR  Indian Mountai     52.50  29  P        P         13 58 19.4 +0.8
ARK   Arkit              52.59 301  P        P         13 58 20.1 +0.3
ARK                                 pmax     pmax
      comp=Z,18nm,0.9s
DRK   Karamyk            53.23 298  P        P         13 58 24.3 -0.3
DRK                                 IAmb     IAmb      13 58 25.5
      comp=Z,12nm,0.7s
DRK   Karamyk            53.23 298  P        P         13 58 24.3 -0.3
DRK                                 pmax     pmax
      comp=Z,12nm,0.7s
TRKS  Terek-Say          53.25 301  P        P         13 58 24.4 -0.2
TRKS                                pmax     pmax
      comp=Z,11nm,0.9s
KK31  Karatay Array      53.38 303           P         13 58 24.4 -0.9
KK31                                IAmb     IAmb      13 58 25.9
      comp=Z,13nm,0.8s
KK31  Karatay Array      53.38 303  P        P         13 58 24.4 -0.9
KK31                                pmax     pmax
      comp=Z,13nm,0.9s
KKAR  Karatay Array      53.38 303           P         13 58 24.4 -0.9
KKAR                                PcP      PcP       13 59 26.7 -0.6
KKAR  Karatay Array      53.38 303  P        P         13 58 24.4 -0.9
KKAR                                                   13 59 26.7
NIL   Nilore             53.65 290           P         13 58 27.4  0.0
NIL                                 IAmb     IAmb      13 58 28.6
      comp=Z,16nm,0.7s
NIL   Nilore             53.65 290  P        P         13 58 27.4  0.0
NIL                                 pmax     pmax
      comp=Z,16nm,0.7s
SUA   Susitna One        53.67  34  P        P         13 58 27.2  0.0
MANEM Manem              53.80 296           P         13 58 29.1 +0.4
MANEM                               IAmb     IAmb      13 58 30.1
      comp=Z,32nm,0.6s
IL31                     55.34  30  P        P         13 58 39.1 +0.3
ILAR  Eielson Array      55.34  30  P        P         13 58 38.6 -0.3
      comp=Z,0.8nm,0.6s,baz=268,slow=6.2,SNR=16
      comp=Z,0.8nm,0.6s
ILAR  Eielson Array      55.34  30  P        P         13 58 38.8 -0.1
ILAR  Eielson Array      55.34  30  P        P         13 58 38.8 -0.1
ASAR  Alice Springs      55.39 185  P        P         13 58 40.6 +0.9
      comp=Z,0.8nm,0.8s,baz=12,slow=13,SNR=12
ASAR                                ScP      ScP       14 02 58.5 +0.3
      comp=Z,0.2nm,0.7s,baz=5.5,slow=5.2,SNR=4.6
      comp=Z,0.8nm,0.8s
CHGR  Chuyangaron        55.42 298           P         13 58 39.5 -0.5
CHGR  Chuyangaron        55.42 298  P        P         13 58 39.5 -0.5
CHGR                                pmax     pmax
      comp=Z,88nm,0.7s
F26K  Sheenjek River     56.34  27  P        P         13 58 47.4 +1.5
SHAA  Shahritus          56.51 297           P         13 58 47.0 -0.6
SHAA                                IAmb     IAmb      13 58 48.8
      comp=Z,40nm,0.7s
KBL   Kabul              56.71 293           P         13 58 48.5 -0.7
KBL                                 IAmb     IAmb      13 58 49.6
      comp=Z,12nm,0.8s
KBL   Kabul              56.71 293  P        P         13 58 48.5 -0.7
KBL                                 pmax     pmax
      comp=Z,12nm,0.8s
BERG  Berg Lake          57.18  35  P        P         13 58 53.0 +1.2
I28M  Miner Creek        58.21  29  P        P         13 58 59.6 +0.6
ARTI  Arti               58.52 320           P         13 58 59.9 -1.2
ARTI  Arti               58.52 320c iP       P         13 59 00.5 -0.5
ARTI                                *PP      pP        14 00 16.0 -1.5
ARTI                                                   14 01 11.0
ARTI                                S        S         14 06 36.1 +0.9
ARTI                                SS       SS        14 10 33.4 -0.7
ARTI                                pmax     pmax
      comp=Z,69nm,4.0s
AB31  Akbulak array      59.16 312           P         13 59 05.0 -0.6
ABKAR Akbulak array      59.16 312           P         13 59 04.9 -0.7
M29M  Somme Creek        59.34  32  P        P         13 59 08.3 +1.6
DZM   Mont Dzumac        60.18 149  P        P         13 59 15.1 +2.3
      comp=Z,5.9nm,0.8s,baz=347,slow=18,SNR=2.9
      comp=Z,5.9nm,0.8s
G31M  Satah River        60.23  27  P        P         13 59 12.4  0.0
A36M  Sachs Harbour      62.06  20  P        P         13 59 25.5 +1.0
KIRV  Kirov              62.68 324ceP        P         13 59 28.2 -0.6
STKA  Stephens Creek     63.52 177  P        P         13 59 36.0 +1.5
      comp=Z,2.7nm,0.6s,baz=349,slow=7.2,SNR=6.0
      comp=Z,2.7nm,0.6s
STKA  Stephens Creek     63.52 177  P        P         13 59 35.5 +1.0
STKA  Stephens Creek     63.52 177  P        P         13 59 36.0 +1.5
SPITS Spitsbergen Ar     65.01 349  P        P         13 59 44.1 +0.5
      comp=Z,18nm,1.1s,baz=85,slow=12,SNR=2.3
      comp=Z,18nm,1.1s
KEV   Kevo               67.24 339  P        P         13 59 57.2 -0.4
KEV   Kevo               67.24 339  P        P         13 59 57.3 -0.4
KEV                                 pmax     pmax
      comp=Z,41nm,1.5s
ARCES ARCESS Array B     67.81 339  P        P         14 00 01.2  0.0
      comp=Z,2.9nm,0.5s,baz=65,slow=9.1,SNR=19
      comp=Z,2.9nm,0.5s
ARCES ARCESS Array B     67.81 339  P        P         14 00 00.8 -0.5
ARCES                               IAmb     IAmb      14 00 02.0
      comp=Z,11nm,1.4s
RES   Resolute Bay       68.25  13  P        P         14 00 03.6 -0.3
RES                                 IAmb     IAmb      14 00 08.9
      comp=Z,4.1nm,1.4s
RES   Resolute Bay       68.25  13  P        P         14 00 03.6 -0.3
RES                                 pmax     pmax
      comp=Z,4.0nm,1.4s
YKA   Yellowknife Ar     69.66  28  P        P         14 00 12.4 -0.2
      comp=Z,0.7nm,0.7s,baz=299,slow=6.8,SNR=9.0
      comp=Z,0.7nm,0.7s
YKA   Yellowknife Ar     69.66  28 iP        P         14 00 12.3 -0.3
YKA                                 pmax     pmax
      comp=Z,1.0nm,0.8s
OBN   Obninsk            70.52 323⇓iP        P         14 00 18.2 +0.3
OBN                                                    14 00 38.0
OBN                                 S        S         14 09 05.0 +4.2
OBN                                 pmax     pmax
      comp=Z,5.0nm,0.7s
OBN                                 MLR      MLR
      comp=Z,132nm,14.0s
DAG   Danmarks Havn      70.62 354  P        P         14 00 18.2  0.0
DAG                                 pmax     pmax
      comp=Z,11nm,2.0s
CLRS  Cowichan Lake      71.48  44  P        P         14 00 25.3 +1.5
FIA1  FINESS Array S     72.03 332  P        P         14 00 26.1 -0.6
FINES FINESS Array B     72.03 332  P        P         14 00 26.4 -0.4
      comp=Z,6.5nm,0.4s,baz=68,slow=5.4,SNR=77
      comp=Z,6.5nm,0.4s
FINES FINESS Array B     72.03 332           P         14 00 26.1 -0.6
KBZ   Khabaz             72.10 311  P        P         14 00 27.4 -0.1
      comp=Z,8.9nm,0.8s,baz=85,slow=4.4,SNR=29
      comp=Z,8.9nm,0.8s
KBZ   Khabaz             72.10 311ceP        P         14 00 27.2 -0.3
KBZ                                 pmax     pmax
      comp=Z,11nm,0.9s
KIV   Kislovodsk         72.13 311 eP        P         14 00 28.8 +0.9
KIV                                 pmax     pmax
      comp=Z,13nm,1.1s
SHA1  Shidzhatmaz        72.25 311ceP        P         14 00 28.7 -0.1
I03D  Drain, OR          74.39  48  P        P         14 00 42.1 +1.4
MXC   Moxie City         74.84  44  P        P         14 00 44.4 +1.1
MXC                                 IAmb     IAmb      14 00 45.5
      comp=Z,2.5nm,0.7s
MNK   Minsk              75.14 325 iP        P         14 00 45.0 +0.2
      comp=E,18nm,0.8s
MNK                                iP        P         14 00 45.0 +0.2
      comp=N,11nm,0.7s
MNK                                iP        P         14 00 45.0 +0.2
      comp=Z,16nm,0.8s,baz=55
MNK                                ipP       pwP       14 02 07.4 -1.7
MNK                                isP       sP        14 02 46.5 +2.6
MNK                                iPP       PP        14 03 38.7 +0.5
MNK                                iPPP      PPP       14 05 25.9
MNK                                iS        S         14 09 52.4 -0.1
MNK                                isS       sS        14 12 18.1 +1.2
MNK                                iSS       SS        14 14 52.2 +2.6
MNK                                iSSS      SSS       14 18 15.9
MNK                                iLR       LR        14 34 41.2
MNK                                iLRM      MLR       14 37 28.6
      comp=Z,192nm,16.3s
MNK                                iLRM      MLR       14 37 45.8
      comp=N,122nm,12.0s
MNK                                iLRM      MLR       14 37 57.2
      comp=E,108nm,16.5s
MNK   Minsk              75.14 325 iP        P         14 00 45.0 +0.2
MNK                                i*PP      pwP       14 02 07.4 -1.7
MNK                                i*SP      sP        14 02 46.4 +2.6
MNK                                i                   14 03 38.7
MNK                                iPPP      PPP       14 05 25.8
MNK                                iS        S         14 09 52.4 -0.1
MNK                                iSS       SS        14 14 52.2 +2.6
MNK                                iSSS      SSS       14 18 15.8
MNK                                 pmax     pmax
      comp=E,18nm,0.8s
MNK                                 pmax     pmax
      comp=N,11nm,0.7s
MNK                                 pmax     pmax
      comp=Z,16nm,0.8s
MNK                                 MLR      MLR
      comp=Z,192nm,16.0s
MNK                                 MLR      MLR
      comp=N,122nm,12.0s
MNK                                 MLR      MLR
      comp=E,108nm,16.0s
L04D  Klamath Falls      75.78  49  P        P         14 00 50.2 +1.3
NEW   Newport            75.80  42  P        P         14 00 49.7 +0.9
PINE  Pine Mountain      75.85  47  P        P         14 00 50.8 +1.4
PINE                                IAmb     IAmb      14 00 52.1
      comp=Z,6.7nm,0.9s
N02D  Trinity Center     76.15  50  P        P         14 00 52.9 +2.0
N02D                                IAmb     IAmb      14 00 56.0
      comp=Z,8.1nm,1.2s
MARD  Mardin             76.58 306  P        P         14 00 52.6 -0.8
AKASG Malin Array Be     76.60 322  P        P         14 00 52.5 -0.5
      comp=Z,2.9nm,0.4s,baz=52,slow=6.0,SNR=17
      comp=Z,2.9nm,0.4s
AKASG Malin Array Be     76.60 322  P        P         14 00 52.1 -1.0
AKBB  Malin Array Si     76.60 322  P        P         14 00 51.9 -1.2
AKBB  Malin Array Si     76.60 322ceP        P         14 00 53.1  0.0
KIEV  Kiev               76.61 322  P        P         14 00 52.2 -1.0
KIEV                                IAmb     IAmb      14 00 53.3
      comp=Z,7.3nm,0.8s
KIEV  Kiev               76.61 322  P        P         14 00 52.2 -1.0
KIEV                                pmax     pmax
      comp=Z,7.0nm,0.8s
HFS   Hagfors            77.57 335  P        P         14 00 57.2 -1.1
      comp=Z,2.5nm,0.6s,baz=119,slow=1.9,SNR=8.0
      comp=Z,2.5nm,0.6s
NC405 NORSAR Array S     77.57 336  P        P         14 00 57.6 -0.7
NC405                               IAmb     IAmb      14 01 18.4
      comp=Z,5.1nm,1.0s
NC204 NORSAR Array S     77.78 337  P        P         14 00 58.7 -0.8
NB2   NORSAR Subarra     77.79 336  P        P         14 00 59.1 -0.4
      comp=Z,1.2nm,0.5s,baz=45,slow=5.3
NOA   NORSAR Array B     77.79 336  P        P         14 00 58.5 -1.0
      comp=Z,1.8nm,0.6s,baz=45,slow=5.3,SNR=6.3
      comp=Z,1.8nm,0.6s
BEKR  Beckworth          78.25  50           P         14 01 03.1 +0.5
BEKR                                IAmb     IAmb      14 01 04.4
      comp=Z,3.9nm,0.8s
PAHR  Pah Rah Range      78.98  50  P        P         14 01 07.4 +0.8
PAHR                                IAmb     IAmb      14 01 08.9
      comp=Z,2.9nm,0.9s
RAYN  Ar Rayn            79.94 291  P        P         14 01 11.5 -0.3
RAYN  Ar Rayn            79.94 291  P        P         14 01 11.5 -0.3
RAYN                                pmax     pmax
      comp=Z,7.0nm,0.7s
BR131 Keskin Array S     80.09 311           P         14 01 12.0 -0.5
BR131                               IAmb     IAmb      14 01 13.8
      comp=Z,6.8nm,0.9s
BR131 Keskin Array S     80.09 311  P        P         14 01 12.0 -0.5
BR131                               pmax     pmax
      comp=Z,7.0nm,1.0s
BRTR  Keskin Array B     80.09 311  P        P         14 01 11.9 -0.5
      comp=Z,3.6nm,0.8s,baz=98,slow=4.5,SNR=14
      comp=Z,3.6nm,0.8s
BRTR  Keskin Array B     80.09 311           P         14 01 12.4 -0.1
BRTR  Keskin Array B     80.09 311 iP        P         14 01 12.6 +0.1
BRTR                                pmax     pmax
      comp=Z,4.0nm,0.8s
PKD   Bear Valley Ra     80.20  54  P        P         14 01 14.6 +1.6
PKD                                 IAmb     IAmb      14 01 30.7
      comp=Z,13nm,1.5s
NVAR  Mina Array Bea     80.37  51  P        P         14 01 15.1 +1.0
      comp=Z,0.9nm,0.6s,baz=297,slow=5.2,SNR=12
      comp=Z,0.9nm,0.6s
NVAR  Mina Array Bea     80.37  51  P        P         14 01 15.2 +1.2
BURAR Bucovina Array     80.54 321  P        P         14 01 14.0 -0.6
BURAR                               IAmb     IAmb      14 01 15.5
      comp=Z,2.3nm,0.8s
VRI   Vrincioaia         80.76 319  P        P         14 01 16.5 +0.8
VRI                                 pmax     pmax
      comp=Z,18nm,2.0s
GMN   Gold Mountain      81.68  51  P        P         14 01 22.0 +1.1
DUG   Dugway, Tooele     82.89  47  P        P         14 01 28.3 +1.3
PDAR  Pinedale Array     83.31  43  P        P         14 01 28.9 -0.2
      comp=Z,1.4nm,1.0s,baz=338,slow=1.6,SNR=8.3
      comp=Z,1.4nm,1.0s
PFO   Pinyon Flats O     84.29  54  P        P         14 01 34.6 +0.5
PFO                                 IAmb     IAmb      14 01 35.5
      comp=Z,3.2nm,0.7s
PFO   Pinyon Flats O     84.29  54  P        P         14 01 34.6 +0.5
PFO                                 pmax     pmax
      comp=Z,3.0nm,0.7s
PV19  Morning Glory      86.39  47  P        P         14 01 45.5 +1.0
TXAR  Lajitas Array      95.52  51  P        P         14 02 28.0 +1.3
      comp=Z,0.7nm,0.7s,baz=301,slow=3.3,SNR=10
      comp=Z,0.7nm,0.7s
TXAR  Lajitas Array      95.52  51  P        P         14 02 27.5 +0.7
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*DJA **11** 14:01:59.2±0.8, 10°S±4°×11°8E±°, h16^{km}±7^{km}, M4.0/14, mb4.2/6, MLv3.9/14*
*IDC **11** 14:02:14.3±2.9, 8°.61S×118°.84E, h211^{km}±23^{km}, mb2.8/2, mbtmp3.3/5, Error ellipse: s-maj=46.0km s-min=11.2km az=52.0*
ISC 11 14:01:57.4±0.8**, 9°.55S**±0°.07×**117°.72E**±0°.05**, h71**^{km}**, n26,** σ**3^{s}33**/23**, Sumbawa region**

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Code  Station Name        Δ°  AZ°   Phase ID           Time     Res
                                    Op       ISC       h  m  s  ISC
PLAI  Plampang           0.72   5   P        Pn        14 02 13.7 +1.1
PLAI                                S        Sn        14 02 24.1 +0.2
TWSI  Taliwang, Sumb     1.16 314   P        Pn        14 02 17.6 -0.3
TWSI                                S        Sn        14 02 31.2 -2.0
DBNI  Kabupaten Domp     1.20  29   P        Pn        14 02 21.7 +3.2
DBNI                                S        Sn        14 02 38.8 +4.6
WBSI  Waikabubak, Su     1.65  93   P        Pn        14 02 29.4 +5.0
KLNI  Mataram            1.96 305   P        Pn        14 02 29.1 +0.6
KHKI  Kahang-Kahang      2.40 299   P        Pn        14 02 36.9 +2.5
LBFI  Labuhan Bajo,      2.40  64   P        Pn        14 02 40.1 +5.7
WSI   Waingapu           2.55  93   P        Pn        14 02 43.1 +6.7
DNP   Denpasar           2.62 289   S        Sn        14 03 08.4 +0.1
IGBI  Denpasar           2.64 286   P        Pn        14 02 38.1 +0.4
RTBI  Rangdo, Negare     2.95 291   P        Pn        14 02 43.4 +1.4
RTBI                                S        Sn        14 03 16.6 +0.3
JAGI  Jajag, Banyuwa     3.68 287   P        Pn        14 02 52.3 +0.4
EDFI  Ende, Flores       4.00  79   P        Pn        14 03 01.5 +5.1
GMJI  Gumukmas           4.41 286   P        Pn        14 03 01.7 -0.2
MMRI  Maumere            4.55  79   P        Pn        14 03 11.1 +7.2
BKSI  Bulukumba          4.83  30   P        Pn        14 03 12.0 +4.4
KAPI  Kappang            4.94  24   P        Pn        14 03 13.2 +4.1
      6.3nm,0.3s,baz=180,slow=14,SNR=1.8
KAPI                                S        Sn        14 03 58.6 -6.4
      11nm,0.3s,baz=162,slow=19,SNR=1.3
BATI  Baumata            5.89  97   P        Pn        14 03 28.6 +6.4
      4.6nm,0.3s,baz=330,slow=14,SNR=1.1
BATI                                S        Sn        14 04 30.2 +1.8
      8.7nm,0.4s,baz=118,slow=17,SNR=1.7
BATI  Baumata            5.89  97   P        Pn        14 03 29.0 +6.8
      0.1nm11nm,1.0s
SNJI  Sawahan-Nganju     6.15 286   P        Pn        14 03 27.3 +1.5
PCJI  Pacitan            6.60 281   P        Pn        14 03 33.8 +1.9
      59nm,1.6s
UGM   Wanagama           7.30 282   P        Pn        14 03 42.4 +1.0
FITZ  Fitzroy Crossi    11.46 139   P        Pn        14 04 39.9 +1.7
      2.8nm,0.8s,baz=331,slow=6.4,SNR=9.7
FITZ                                S        Sn        14 06 38.6 -5.9
      1.9nm,0.5s,baz=183,slow=22,SNR=12
WRA   Warramunga Arr    19.09 125   P        Pn        14 06 19.0 +3.0
      0.3nm,0.6s,baz=298,slow=14,SNR=4.6
WRA                                 S        S         14 09 39.1 -8.4
      0.3nm,1.0s,baz=293,slow=23,SNR=1.3
ASAR  Alice Springs     20.89 134   P        P         14 06 39.0 +5.0
      0.4nm,0.5s,baz=314,slow=11,SNR=8.0
ASAR                                S        S         14 10 21.2 -1.9
      0.3nm,0.9s,baz=305,slow=22,SNR=2.4
      0.4nm,0.5s
MKAR  Makanchi Array    64.38 334   P        P         14 12 25.7 -0.2
      0.2nm,0.4s,baz=150,slow=6.6,SNR=5.7
      0.2nm,0.4s
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*IDC **11** 14:02:03.1±2.0, 24°.98N×122°.42E, h0^{km}, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=179.3km s-min=21.7km az=66.0*
*ASIES **11** 14:02:05.7, 24°.79N×121°.89E, h8^{km}, Mw3.6, Fault plane solution: NP1:ϕ_s63.00000°, δ44.00000°, λ-67.00000°. NP2:ϕ_s212.00000°, δ50.00000°, λ-111.00000°.*
*TAP **11** 14:02:05.6, 24°.79N×121°.89E, h11^{km}, ML4.1, B*
*JMA **11** 14:02:06.1±0.2, 24°.8N±0°.6×121°.8E±0°.9, h31^{km}, MV3.7/14, TAIWAN REGION*
ISC 11 14:02:05.6±0.7**, 24°.80N**±0°.01×**121°.90E**±0°.01**, h13**^{km}±4^{km}**, n149,** σ**0^{s}80**/239**, mb3.4**/5**, 31C-6D, Taiwan**

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Code  Station Name        Δ°  AZ°   Phase ID           Time     Res
                                    Op       ISC       h  m  s  ISC
EGS                      0.06  30⇓iP         Pg        14 02 08.1  0.0
EGS                                iS        Sg        14 02 10.1 +0.2
NTC   Toucheng           0.09 312  iP        Pg        14 02 08.4  0.0
NTC                                iS        Sg        14 02 10.5 +0.1
TIPB  Shuangxi           0.19 339⇑iP         Pg        14 02 10.0 +0.1
TIPB                               iS        Sg        14 02 12.6 -0.2
TWC   Suao               0.19 194⇑iP         Pg        14 02 09.9  0.0
TWC                                iS        Sg        14 02 12.5 -0.3
ESAO  Su ao              0.23 193⇑iP         Pg        14 02 10.6 +0.1
ESAO                               iS        Sg        14 02 13.5 -0.2
TWE   Neicheng           0.23 251⇑iP         Pg        14 02 10.4 -0.1
TWE                                 S        Sg        14 02 13.6 -0.1
TWB1  Santiao Chiao      0.23  21 ⇓P         Pg        14 02 10.5  0.0
TWB1                               iS        Sg        14 02 13.4 -0.4
NDS   Dongshan           0.23 226⇑iP         Pg        14 02 10.6  0.0
NDS                                 S        Sg        14 02 13.8 -0.1
FUSB  Fushanzhiwuyua     0.29 263⇑iP         Pg        14 02 11.6  0.0
FUSB                               iS        Sg        14 02 15.1 -0.5
NWF   Wu-fen Shan        0.29 338⇑iP         Pg        14 02 12.2 +0.4
NWF                                iS        Sg        14 02 16.5 +0.6
WFSB  Wu-fen Shan        0.29 338⇑iP         Pg        14 02 12.2 +0.5
WFSB                               iS        Sg        14 02 16.4 +0.6
SXI1  Grass Mountain     0.30 356⇑iP         Pg        14 02 12.2 +0.3
SXI1                               iS        Sg        14 02 16.2 +0.2
ENTT  Nioudou            0.34 243⇑iP         Pg        14 02 12.4 -0.2
TWA   Mucha              0.34 303⇑iP         Pg        14 02 12.9 +0.3
TWA                                iS        Sg        14 02 17.8 +0.6
NWLT  Wulai              0.36 267⇑iP         Pg        14 02 12.9  0.0
NWLT                               iS        Sg        14 02 17.3 -0.6
EWUT  Wuta               0.37 198   P        Pg        14 02 13.0  0.0
TNOU  National Taiwa     0.37 342⇑iP         Pg        14 02 13.6 +0.4
TNOU                               iS        Sg        14 02 18.3 +0.2
NHDH  Xindian Distri     0.38 296  iP        Pb        14 02 14.0 -0.3
NHDH                               iS        Sg        14 02 19.1 +0.7
NHY   Taipei             0.39 309  iP        Pb        14 02 14.2 -0.2
NHY                                iS        Sb        14 02 19.6 -0.7
ENA   Nanau              0.39 202⇑iP         Pg        14 02 13.3 -0.2
ENA                                iS        Sg        14 02 18.5 -0.3
TATO  Taipei             0.42 296   P        Pb        14 02 14.4 -0.5
TATO  Taipei             0.42 296   S        Sg        14 02 20.0 +0.5
LATG  Datong             0.43 233⇑iP         Pg        14 02 14.1 -0.1
LATG                               iS        Sg        14 02 20.3 +0.4
TAP   Taipei             0.43 304⇑iP         Pb        14 02 14.9 -0.2
TAP                                iS        Sb        14 02 20.8 -0.8
YM01  YM01               0.46 319⇑iP         Pb        14 02 15.6 -0.1
EOS2  EOS2               0.48 141   P        Pg        14 02 15.6 +0.6
EOS2                                S        Sb        14 02 24.6 +1.7
YM08  YM08               0.48 324⇑iP         Pg        14 02 15.6 +0.5
EAHA  Aohua              0.49 198  iP        Pg        14 02 15.4 +0.2
EAHA                               iS        Sg        14 02 21.7 -0.1
ZUZH  Zhuzihu            0.49 319  iP        Pb        14 02 16.0 -0.2
YHNB  Yeheng             0.49 255   P        Pg        14 02 15.2 -0.2
YHNB  Yeheng             0.49 255⇑iP         Pg        14 02 15.2 -0.2
YHNB                               iS        Sg        14 02 21.0 -1.0
EHP   Heping Village     0.51 197  eS        Sg        14 02 22.2 -0.1
NSK   Sanguang           0.51 257⇑iP         Pg        14 02 15.3 -0.3
NSK                                iS        Sg        14 02 21.2 -1.2
ANP   Anpu               0.52 318⇑iP         Pb        14 02 16.4 -0.4
TWS1  Kuangyinshan       0.53 305⇑iP         Pb        14 02 17.3 +0.4
NTST  Danshui            0.55 312⇑iP         Pb        14 02 17.6 +0.4
TWY   Chenhua            0.55 330  iP        Pb        14 02 17.2  0.0
NNS   Nan Shan           0.60 234⇑iP         Pg        14 02 16.8 -0.5
NNS                                iS        Sg        14 02 24.7 -0.6
NNSB  Datong             0.60 232  iP        Pg        14 02 16.9 -0.4
EOS3  EOS3               0.63 143  iP        Pb        14 02 18.5  0.0
EOS3                               iS        Sb        14 02 29.1 +1.9
KSHI  Guanxi Townshi     0.66 269  iP        Pb        14 02 19.3 +0.3
KSHI                                S        Sb        14 02 28.7 +0.6
NCU   National Centr     0.67 285⇑iP         Pg        14 02 18.3 -0.4
NCU                                iS        Sb        14 02 28.0 -0.5
NCUH  Zhongli            0.67 285  iP        Pb        14 02 20.1 +0.8
NACB  Ninganchiao        0.68 204   P        Pg        14 02 19.1 +0.3
NACB  Ninganchiao        0.68 204   S        Sb        14 02 28.6 -0.1
NACB  Ninganchiao        0.68 204⇑iP         Pg        14 02 18.3 -0.6
NACB                               iS        Sg        14 02 27.2 -0.6
ETL   Fush Village       0.68 202  iP        Pg        14 02 18.8 -0.2
ETL                                iS        Sg        14 02 27.4 -0.6
ETLH  Xiulin Townshi     0.70 213  iP        Pg        14 02 18.9 -0.4
ETLH                                S        Sg        14 02 27.6 -0.9
NFF   Wufeng Townshi     0.73 257   P        Pb        14 02 20.2 -0.1
NFF                                iS        Sn        14 02 32.2 -0.6
TWD   Chiawan            0.77 201  iP        Pg        14 02 20.1 -0.4
TWD                                iS        Sg        14 02 29.8 -0.7
EOS4  EOS4               0.77 150  iP        Pg        14 02 20.7 +0.1
EOS4                               iS        Sn        14 02 32.9 -0.3
LIOB  Emei               0.82 260   P        Pb        14 02 22.4 +0.6
SBCB  Hsinchu            0.83 270⇑iP         Pn        14 02 23.1  0.0
SBCB                               iS        Sn        14 02 35.0 -0.2
NSTT  Nanjuang           0.83 259⇑iP         Pb        14 02 22.0  0.0
NSTT                                S        Sb        14 02 33.9 +0.7
PCYT  Pengchaiyu         0.84  10   P        Pg        14 02 22.2 +0.2
HSN   Hsinchu            0.85 271  iP        Pb        14 02 22.5 +0.3
HSN                                iS        Sb        14 02 34.4 +0.9
TWT   Tachien            0.85 231⇓iP         Pg        14 02 21.8 -0.4
TWT                                 S        Sg        14 02 33.1 -0.2
HWA   Hwalien            0.86 198  iP        Pb        14 02 22.6 +0.2
HWA                                iS        Sg        14 02 33.6 +0.1
TDCB  Techi              0.87 232⇓iP         Pg        14 02 21.9 -0.5
TDCB                               iS        Sg        14 02 32.9 -0.8
WHF   Hehuan Shan        0.87 222  iP        Pg        14 02 22.3 -0.3
WHF                                 S        Sg        14 02 33.6 -0.4
LXIB  Xiulin Townshi     0.89 210   P        Pg        14 02 22.2 -0.6
LXIB                                S        Sg        14 02 34.6  0.0
ETM   Tongmen            0.91 204  iP        Pg        14 02 22.6 -0.5
ETM                                 S        Sg        14 02 34.1 -0.9
TEYL  Yanliau Villag     0.96 197   P        Pg        14 02 24.0 -0.3
TEYL                               iS        Sg        14 02 36.7 -0.2
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JYNG	**Yonagunijimaku**	**1.01**	**110**	*e*P	**Pg**	**14 02 24.9**	**-0.2**
JYNG				S	**Sg**	**14 02 38.4**	**+0.1**
WHP	**Taichung City**	**1.01**	**240**	P	**Pg**	**14 02 25.0**	**-0.1**
NMLH	**Miaoli**	**1.04**	**256**	*i* P	**Pn**	**14 02 26.8**	**+0.8**
NMLH				S	**Sn**	**14 02 40.9**	**+0.4**
SHUL	**Shoufeng**	**1.05**	**197**	P	**Pb**	**14 02 26.0**	**+0.3**
YOJ	**Yonaguni jima**	**1.06**	**108**	P	**Pg**	**14 02 26.5**	**+0.4**
YOJ	**Yonaguni jima**	**1.06**	**108**	S	**Sb**	**14 02 40.9**	**+1.1**
YOJ	**Yonaguni jima**	**1.06**	**108**	⇓*i*P	**Pb**	**14 02 25.3**	**-0.6**
YOJ				S	**Sg**	**14 02 39.8**	**-0.2**
YOJ	**Yonaguni jima**	**1.06**	**108**	*e*P	**Pb**	**14 02 25.3**	**-0.6**
YOJ				*e*S	**Sg**	**14 02 39.8**	**-0.2**
ESL	**Shilin**	**1.07**	**204**	⇑*i*P	**Pg**	**14 02 25.2**	**-1.0**
ESL				S	**Sg**	**14 02 38.0**	**-2.1**
OWD	**Renai**	**1.07**	**218**	P	**Pg**	**14 02 25.4**	**-0.9**
OWD				S	**Sb**	**14 02 40.4**	**+0.4**
WUSB	**Renai**	**1.07**	**222**	P	**Pg**	**14 02 25.6**	**-0.7**
WUSB				S	**Sb**	**14 02 40.8**	**+0.6**
NSY	**Sanyi**	**1.10**	**250**	S	**Sn**	**14 02 43.6**	**+1.6**
TWQ1	**Liyutan**	**1.12**	**247**	*i* P	**Pn**	**14 02 28.1**	**+1.1**
TWQ1				S	**Sn**	**14 02 44.8**	**+2.4**
WCS	**Beigang Elemen**	**1.16**	**231**	*i* P	**Pb**	**14 02 27.8**	**+0.1**
WARBT	**Fenglin Townsh**	**1.17**	**204**	P	**Pb**	**14 02 27.3**	**-0.5**
EGFH	**Guangfu**	**1.20**	**201**	*i* P	**Pb**	**14 02 28.0**	**-0.3**
EGFH				S	**Sb**	**14 02 43.6**	**-0.2**
VWDT	**VWDT**	**1.25**	**214**	⇓*i*P	**Pn**	**14 02 28.9**	**+0.1**
VWDT				*i* S	**Sg**	**14 02 45.6**	**-0.3**
SMLT	**Sun Moon Lake**	**1.29**	**225**	*i* P	**Pb**	**14 02 30.0**	**+0.2**
TCU	**Taichung**	**1.29**	**240**	P	**Pg**	**14 02 30.3**	**-0.1**
TYC	**Yuchr**	**1.30**	**227**	*i* P	**Pb**	**14 02 30.2**	**+0.3**
SSLB	**Suanglung**	**1.32**	**221**	P	**Pg**	**14 02 31.2**	**+0.1**
SSLB	**Suanglung**	**1.32**	**221**	*i* P	**Pb**	**14 02 30.5**	**+0.1**
SSLB				*i* S	**Sg**	**14 02 48.7**	**+0.4**
HGSD	**Ruisui**	**1.37**	**199**	*i* P	**Pb**	**14 02 31.5**	**+0.4**
HGSD				*i* S	**Sg**	**14 02 52.6**	**+2.8**
EHY	**Hungye**	**1.39**	**203**	*i* P	**Pn**	**14 02 30.3**	**-0.5**
WCHH	**Zhanghua**	**1.42**	**240**	P	**Pg**	**14 02 32.8**	**-0.1**
WCHH				*i* S	**Sg**	**14 02 51.9**	**+0.6**
WCH1	**Changhua City**	**1.43**	**240**	S	**Sg**	**14 02 53.6**	**+1.9**
WNT	**Mingjian**	**1.44**	**231**	*i* P	**Pg**	**14 02 33.6**	**+0.4**
WNT				*i* S	**Sg**	**14 02 53.5**	**+1.6**
WJS	**Zhushan**	**1.44**	**228**	*i* S	**Sg**	**14 02 54.3**	**+2.1**
WHYT	**Xinyi Township**	**1.45**	**221**	*i* P	**Pg**	**14 02 34.6**	**+1.1**
WHYT				S	**Sg**	**14 02 52.9**	**+0.4**
YULB	**Yu-li**	**1.50**	**202**	P	**Pb**	**14 02 33.9**	**+0.5**
YULB	**Yu-li**	**1.50**	**202**	*i* P	**Pn**	**14 02 32.4**	**+0.1**
YULB				*i* S	**Sn**	**14 02 52.3**	**+0.4**
TWF1	**Yuli**	**1.54**	**201**	*i* P	**Pb**	**14 02 34.1**	**0.0**
TWF1				*i* S	**Sb**	**14 02 54.0**	**+0.5**
ALS	**Alishan**	**1.62**	**218**	*i* P	**Pb**	**14 02 36.1**	**+0.5**
ALS				*i* S	**Sg**	**14 02 59.6**	**+1.6**
CHN5	**Tsauling**	**1.63**	**223**	⇑*i*P	**Pg**	**14 02 37.4**	**+0.4**
CHN5				*i* S	**Sg**	**14 03 00.2**	**+1.9**
WGK	**Gukeng**	**1.65**	**228**	P	**Pg**	**14 02 37.5**	**+0.3**
CHKH	**Chenggong**	**1.66**	**196**	P	**Pb**	**14 02 35.9**	**-0.3**
CHKH				S	**Sg**	**14 02 58.1**	**-1.0**
WDLH	**Douliu**	**1.66**	**229**	P	**Pg**	**14 02 37.2**	**-0.3**
WDLH				S	**Sg**	**14 03 00.2**	**+1.0**
IRIF	**Iriomote-Funau**	**1.73**	**105**	*e*P	**Pn**	**14 02 34.6**	**-0.8**
IRIF				*e*S	**Sn**	**14 02 56.7**	**-0.7**
CHKT	**Chengkung**	**1.76**	**196**	*i* P	**Pb**	**14 02 37.6**	**-0.2**
CHKT				*i* S	**Sb**	**14 02 59.7**	**0.0**
EHD	**Haiduan**	**1.76**	**201**	*i* P	**Pn**	**14 02 36.1**	**+0.2**
EHD				*i* S	**Sb**	**14 02 59.6**	**-0.2**
ELDTW	**Lidau**	**1.79**	**207**	*i* P	**Pb**	**14 02 37.7**	**-0.8**
ELDTW				*i* S	**Sb**	**14 03 01.2**	**+0.3**
WCKO	**Fanlu**	**1.80**	**222**	*i* P	**Pg**	**14 02 39.5**	**-0.6**
WCKO				*i* S	**Sg**	**14 03 03.8**	**+0.3**
CHN2	**Minshiung**	**1.81**	**226**	*i* S	**Sg**	**14 03 04.2**	**+0.3**
CHY	**Chiayi**	**1.87**	**227**	*i* P	**Pb**	**14 02 39.5**	**-0.1**
CHY				*i* S	**Sg**	**14 03 05.1**	**-0.7**
HATJ	**Hateruma jima**	**1.89**	**113**	*e*S	**Sn**	**14 03 00.1**	**-1.1**
TPUB	**Ta-pu**	**1.89**	**218**	P	**Pb**	**14 02 40.8**	**+0.8**
TPUB	**Ta-pu**	**1.89**	**218**	*i* P	**Pb**	**14 02 40.8**	**+0.8**
TPUB				*i* S	**Sg**	**14 03 07.0**	**+0.6**
EDH	**Donghe**	**1.90**	**197**	*i* P	**Pn**	**14 02 39.0**	**+1.2**
EDH				S	**Sb**	**14 03 04.5**	**+0.8**
STYH	**Taoyuan**	**1.92**	**213**	P	**Pb**	**14 02 40.8**	**+0.3**
WSF	**Szhu**	**1.92**	**233**	*e*P	**Pb**	**14 02 39.5**	**-0.9**
WSF				*i* S	**Sb**	**14 03 05.1**	**+0.7**
WTP	**Ta-pu**	**1.94**	**218**	P	**Pb**	**14 02 41.5**	**+0.6**
WTP				S	**Sg**	**14 03 06.5**	**-1.5**
WSL	**Shuilin Townsh**	**1.98**	**231**	P	**Pb**	**14 02 40.6**	**-1.1**
WSL				S	**Sb**	**14 03 06.1**	**-0.2**
TWK	**Hsinying**	**2.00**	**221**	P	**Pb**	**14 02 42.1**	**+0.2**
TWK				S	**Sb**	**14 03 08.0**	**+1.3**
JKRS	**Kuro-shima**	**2.00**	**106**	*e*P	**Pn**	**14 02 39.0**	**-0.1**
SNST	**Tainan City**	**2.03**	**220**	P	**Pb**	**14 02 42.9**	**+0.6**
SNST				*i* S	**Sg**	**14 03 10.2**	**-0.7**
CHN1	**Nanshi**	**2.04**	**218**	P	**Pb**	**14 02 42.5**	**-0.1**
CHN1				S	**Sg**	**14 03 10.8**	**-0.4**
JIJ	**Ishigaki jima**	**2.09**	**101**	*e*P	**Pn**	**14 02 39.9**	**-0.4**
JIJ				*e*S	**Sn**	**14 03 04.9**	**-1.3**
SGST	**Jiashian**	**2.09**	**216**	⇑*i*P	**Pb**	**14 02 42.9**	**-0.5**
SGST				S	**Sg**	**14 03 12.0**	**-0.8**
TWG	**Pinlang**	**2.11**	**201**	*e*P	**Pb**	**14 02 42.5**	**-1.3**
TWGBT	**Beinan**	**2.11**	**201**	P	**Pb**	**14 02 42.8**	**-0.9**
TWGBT	**Beinan**	**2.11**	**201**	*e*P	**Pn**	**14 02 41.3**	**+0.6**
CHN8	**Yiju**	**2.11**	**227**	P	**Pb**	**14 02 43.1**	**-0.8**
CHN8				S	**Sb**	**14 03 10.9**	**+0.9**
JISG	**Ishigakijimahi**	**2.20**	**95**	*e*P	**Pn**	**14 02 41.6**	**-0.3**
MATB	**Ma-tsu**	**2.22**	**308**	*e*P	**Pn**	**14 02 41.3**	**-1.0**
TSCK	**Chigu Township**	**2.33**	**226**	*e*P	**Pb**	**14 02 46.4**	**-1.2**
SSD	**Sandimen**	**2.35**	**210**	*e*P	**Pb**	**14 02 47.6**	**-0.2**
SSD				*e*S	**Sb**	**14 03 17.3**	**+0.6**
ECL	**Taimali**	**2.35**	**202**	*e*P	**Pn**	**14 02 45.8**	**+1.8**
MASBT	**Mashibuluo**	**2.46**	**208**	*e*P	**Pb**	**14 02 48.6**	**-1.2**
PNG	**Penghu**	**2.47**	**241**	*e*P	**Pn**	**14 02 46.4**	**+0.8**
PHUB	**P'eng-hu**	**2.48**	**240**	*e*P	**Pn**	**14 02 46.3**	**+0.5**
PHUB				*e*S	**Sn**	**14 03 16.1**	**+0.1**
PTMZ	**Houxiangcun**	**2.54**	**276**	*e*P	**Pn**	**14 02 46.0**	**-0.5**
JTJ	**Tarama**	**2.55**	**93**	*e*P	**Pn**	**14 02 48.2**	**+1.4**
LYJJ	**Jianjiangzhen**	**2.60**	**313**	*e*P	**Pn**	**14 02 46.9**	**-0.6**
XPSS	**Dashiqiu**	**2.62**	**324**	*e*P	**Pn**	**14 02 46.8**	**-1.0**
SCZT	**Fangliau**	**2.68**	**206**	*e*P	**Pb**	**14 02 51.9**	**-1.7**
VCHM	**Qimei**	**2.76**	**236**	*e*P	**Pn**	**14 02 50.7**	**+1.1**
VCHM				*e*S	**Sn**	**14 03 23.8**	**+1.0**
LYUB	**Lan-yu**	**2.80**	**186**	*e*P	**Pn**	**14 02 49.0**	**-1.1**
LYUB				*e*S	**Sn**	**14 03 24.3**	**+0.5**
KNM	**Kinmen**	**3.18**	**264**	*e*P	**Pn**	**14 02 56.7**	**+1.3**
KNM				*e*S	**Sn**	**14 03 34.1**	**+1.0**
KNMB	**Chin-men Tao**	**3.21**	**265**	*e*P	**Pn**	**14 02 55.2**	**-0.6**
KNMB				*e*S	**Sn**	**14 03 31.5**	**-2.5**
AXDP	**Jialang**	**3.57**	**272**	*e*P	**Pn**	**14 03 00.7**	**-0.1**
AXDP				*e*S	**Sn**	**14 03 40.1**	**-2.8**
ZPLA	**Ao Xicun**	**3.88**	**258**	*e*P	**Pn**	**14 03 04.2**	**-0.9**
ZPLA				*e*S	**Sn**	**14 03 47.0**	**-3.5**
SONM	**Songino Array**	**26.07**	**336**	P	**P**	**14 07 38.8**	**-0.2**
	2.0nm,0.9s,baz=139,slow=8.5,SNR=9.4 2.0nm,0.9s						
MKAR	**Makanchi Array**	**38.36**	**315**	P	**P**	**14 09 27.7**	**+1.2**
	0.2nm,0.6s,baz=110,slow=7.8,SNR=2.4 0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**40.09**	**326**	P	**P**	**14 09 40.9**	**+0.1**
	0.4nm,0.4s,baz=130,slow=4.5,SNR=2.2 0.4nm,0.4s						
WRA	**Warramunga Arr**	**46.09**	**164**	P	**P**	**14 10 29.2**	**-0.4**
	0.6nm,0.7s,baz=345,slow=7.7,SNR=4.8 0.6nm,0.7s						
ASAR	**Alice Springs**	**49.56**	**165**	P	**P**	**14 10 56.5**	**-0.1**
	0.1nm,0.3s,baz=344,slow=8.4,SNR=2.3 0.1nm,0.3s						

WEL 11 14:22:11.0±1.0**,35˚S**±6˚×**18˚0E**±˚**,h12**^{km}**,M3.6**/9**,**
ML3.6/17**,MLv3.6**/9**,Error ellipse: s-maj=12.6km**
s-min=7.7km az=107.3,confirmed,Off east coast of
North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**2.92**	**205**	P	Pn	14 22 57.9	+0.6
WMGZ				S	Sn	14 23 34.3	+2.1
PKGZ	**Pakihiroa**	**3.08**	**209**	P	Pn	14 22 59.5	-0.1
HAZ	**Te Kaha**	**3.12**	**214**	P	Pn	14 22 59.2	-0.8
PUZ	**Puketiti**	**3.20**	**205**	P	Pn	14 22 59.9	-1.2
PUZ				S	Sn	14 23 40.7	+1.5
RUGZ	**Raukumara Rang**	**3.34**	**213**	P	Pn	14 23 03.3	+0.1
RUGZ				S	Sn	14 23 45.7	+2.9
TWGZ	**Tauwhareparae**	**3.39**	**208**	P	Pn	14 23 03.8	-0.1
TWGZ				S	Sn	14 23 44.9	+0.9
CNGZ	**Carnagh Statio**	**3.59**	**203**	P	Pn	14 23 06.3	-0.2
MWZ	**Matawai**	**3.71**	**211**	P	Pn	14 23 08.1	-0.1
MWZ				S	Sn	14 23 52.2	+0.3
KUZ	**Kuaotunu**	**3.79**	**245**	P	Pn	14 23 09.0	-0.2
KUZ				S	Sn	14 23 54.3	+0.4
URZ	**Urewera**	**3.84**	**216**	P	Pn	14 23 09.8	-0.1
MARZ	**Manawahe**	**3.86**	**223**	P	Pn	14 23 11.4	+1.1
TGRZ	**Tauranga**	**3.93**	**229**	P	Pn	14 23 11.0	-0.2
RIGZ	**Rimuhau**	**3.94**	**206**	P	Pn	14 23 10.8	-0.6
RIGZ				S	Sn	14 23 56.5	-1.0
KARZ	**Kaharoa**	**4.13**	**226**	P	Pn	14 23 14.1	+0.1
SNGZ	**Shannon Statio**	**4.17**	**210**	P	Pn	14 23 14.5	0.0
SNGZ				S	Sn	14 24 00.7	-2.4
MUGZ	**Murupara**	**4.18**	**217**	P	Pn	14 23 14.1	-0.5
MUGZ				S	Sn	14 24 04.0	+0.7
RTZ	**Ruatahuna**	**4.19**	**214**	P	Pn	14 23 14.2	-0.6
RTZ				S	Sn	14 24 04.3	+0.7
RAHZ	**Arahi**	**4.39**	**211**	P	Pn	14 23 17.7	+0.2
RAHZ				S	Sn	14 24 08.5	-0.1
TOZ	**Tahuroa Road**	**4.42**	**234**	P	Pn	14 23 18.2	+0.4
MTHZ	**Maungataniwha**	**4.44**	**214**	P	Pn	14 23 18.9	+0.7
MTHZ				S	Sn	14 24 11.8	+1.9
WCZ	**Waipu Caves**	**4.66**	**259**	P	Pn	14 23 21.6	+0.4

WEL 11 14:38:56.1±0.8**,34˚S**±17˚×**17˚9E**±3˚4**,h301**^{km}±15^{km}**,**
M3.8/6**,MLv3.8**/6**,Error ellipse: s-maj=48.9km**
s-min=6.8km az=115.2,confirmed,South of Kermadec
Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.67**	**195**	S	S	14 40 47.1	-1.7
WMGZ	**Waiomatatini S**	**3.90**	**193**	P	Pn	14 39 59.0	-2.1
WMGZ				S	S	14 40 54.8	+1.5
HAZ	**Te Kaha**	**3.98**	**200**	P	Pn	14 40 01.1	-1.0
HAZ				S	S	14 40 56.7	+1.7
PKGZ	**Pakihiroa**	**4.01**	**196**	P	Pn	14 40 02.2	-0.3
PKGZ				S	S	14 40 55.1	-0.5
PUZ	**Puketiti**	**4.17**	**193**	P	Pn	14 40 07.0	+2.8
PUZ				S	S	14 40 58.7	-0.1
RUGZ	**Raukumara Rang**	**4.21**	**200**	P	Pn	14 40 04.7	0.0
RUGZ				S	S	14 40 58.8	-0.9
TWGZ	**Tauwhareparae**	**4.33**	**196**	P	Pn	14 40 06.4	+0.4
TWGZ				S	S	14 41 03.2	+1.2
MWZ	**Matawai**	**4.59**	**200**	P	Pn	14 40 05.3	-3.7
MWZ				S	S	14 41 08.0	+0.5
TKGZ	**Te Karaka**	**4.61**	**196**	S	S	14 41 08.7	+0.9
URZ	**Urewera**	**4.65**	**204**	P	Pn	14 40 09.9	+0.3
URZ				S	S	14 41 09.0	+0.4
RTZ	**Ruatahuna**	**5.02**	**203**	P	Pn	14 40 13.2	-0.7
RTZ				S	S	14 41 17.1	+0.7
GLKZ	**Green Lake**	**5.23**	**26**	P	Pn	14 40 17.3	+0.9
BKZ	**Black Stump Fm**	**5.68**	**204**	P	Pn	14 40 22.9	+1.3
BKZ				S	S	14 41 32.9	+2.5
MCHZ	**McNeill Hill**	**5.87**	**202**	P	Pn	14 40 25.0	+1.2
MCHZ				S	S	14 41 36.4	+2.0
PNHZ	**Pukenui**	**6.45**	**203**	P	Pn	14 40 29.4	-1.4
PNHZ				S	S	14 41 46.7	-0.5
DVHZ	**Dannevirke**	**6.81**	**202**	P	Pn	14 40 35.2	0.0
DVHZ				S	S	14 41 55.5	+0.4
ANWZ	**Angora Road**	**6.87**	**200**	P		14 41 58.3	
BFZ	**Birch Farm**	**7.14**	**200**	P	Pn	14 40 39.2	+0.1
BFZ				S	S	14 42 03.1	+0.7
MRZ	**Mangatainoka R**	**7.33**	**204**	P	Pn	14 40 40.0	-1.4
MRZ				S	S	14 42 04.4	-2.2

HEL 11 15:04:56.4±0.5**,67˚.86N**×**20˚.13E,h0**^{km}**,ML1.1,**
Suspected explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANU	**Lannavaara**	**0.73**	**74**	PG	Pg	15 05 09.9	-0.4
LANU				SG	Sg	15 05 17.9	-1.8
KIF	**Kilpisjarvi**	**1.17**	**12**	PN	Pn	15 05 20.2	+0.2
KIF				MSG		15 05 33.0	
	comp=Z,1.7nm,0.2s						
KIF				SN	Sn	15 05 35.9	-0.7
PAJU	**Pajala**	**1.43**	**125**	PG	Pn	15 05 21.8	-1.7
PAJU				SG	Sg	15 05 40.6	-1.5
HEF	**Hetta**	**1.43**	**66**	MSG		15 05 39.4	
	comp=Z,0.9nm,0.2s						
HEF				SN	Sg	15 05 42.0	-0.2
ERTU	**Ertsjaerv**	**1.54**	**148**	PG	Pn	15 05 23.6	-1.5
ERTU				SG	Sn	15 05 44.7	-1.0
KLF	**Kolari**	**1.60**	**111**	PG	Pn	15 05 26.0	+0.1
KLF				MSG		15 05 44.4	
	comp=Z,1.2nm,0.2s						
KLF				SN	Sn	15 05 46.7	-0.5
KTK1	**Kautokeino**	**1.63**	**43**	PN	Pg	15 05 27.5	-0.1
TOF	**Tornio**	**2.43**	**135**	PB	Pn	15 05 38.9	+1.6
TOF				MSG		15 06 08.4	
	comp=Z,0.6nm,0.2s						
TOF				SG	Sb	15 06 11.0	-0.5
ARA0	**ARCESS Array S**	**2.58**	**47**	SG	Sb	15 06 15.6	-0.2
RNF	**Rovaniemi**	**2.61**	**116**	PB	Pn	15 05 41.7	+2.0
RNF				SB	Sb	15 06 15.0	-1.5
RAJF	**Raja-Jooseppi**	**3.12**	**75**	PN	Pn	15 05 46.0	-0.7
KU6	**Riekki**	**4.26**	**111**	PG	Pb	15 06 12.5	+0.5

*KOLA **11** 15:05:03.0,67˚.67N×33˚.83E,h0^{km},ML1.9,Error ellipse:*
s-maj=3.0km s-min=1.8km az=120.0,Khibiny Mines

HEL 11 15:05:03.0±0.2**,67˚.59N**×**33˚.73E,h0**^{km}**,ML1.6,**
Suspected explosion,Baltic
States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA	**Apatity**	**0.12**	**262**	P	Pg	15 05 05.7	+0.3
APA				S	Sg	15 05 09.0	+2.0
APA0	**Apatity Array**	**0.28**	**274**	P	Pg	15 05 08.6	+0.2
APA0				S	Sg	15 05 13.0	+1.0
LVZ	**Lovozero**	**0.47**	**48**	S	Sg	15 05 16.9	-1.2
LVZ	**Lovozero**	**0.47**	**48**	PG	Pg	15 05 11.8	-0.2
	baz=225						
LVZ				SG	Sg	15 05 16.9	-1.2
KVDA	**Kovda**	**0.96**	**201**	P	Pg	15 05 21.1	-0.2
KVDA				S	Sb	15 05 35.6	0.0
VRF	**Varrio**	**1.58**	**278**	PN	Pn	15 05 32.0	-0.2
VRF				MSG		15 05 50.4	
	comp=Z,5.3nm,0.2s						
VRF				SN	Sg	15 05 54.2	+0.4
TERR	**Teriberka**	**1.70**	**17**	P	Pn	15 05 32.5	-1.3
TERR				S	Sn	15 05 51.7	-4.6
KU6	**Riekki**	**2.18**	**226**	PG	Pn	15 05 41.8	+1.3
KU6				MSG		15 06 07.8	
	comp=Z,2.3nm,0.2s						
RAJF	**Raja-Jooseppi**	**2.23**	**296**	PB	Pn	15 05 41.5	+0.4
RAJF				SG	Sb	15 06 11.8	-0.2
MSF	**Maaselka**	**2.51**	**230**	PG	Pb	15 05 48.4	-0.5
KU1	**Kurvinen**	**2.63**	**221**	SN	Sn	15 06 14.1	-5.0
RANF	**Ranua**	**3.17**	**243**	PG	Pb	15 05 59.9	-0.2
	baz=53						
RNF	**Rovaniemi**	**3.17**	**256**	PG	Pb	15 05 59.2	-1.0
KEV	**Kevo**	**3.28**	**315**	PN	Pn	15 05 55.1	-0.5
KEV				SG	Sg	15 06 45.6	-2.7
ARA0	**ARCESS Array S**	**3.60**	**307**	PB	Pn	15 06 03.6	+3.7
ARCES	**ARCESS Array B**	**3.60**	**307**	P	Pn	15 05 58.6	-1.3
ARCES				S	Sn	15 06 41.5	-1.6
RMF	**Romuvaara**	**3.72**	**206**	PN	Pn	15 06 02.2	+0.5
OUL	**Oulu**	**4.03**	**235**	SG	Sb	15 07 04.8	+0.8

*ROM **11** 15:29:55.2±0.3,39˚.51N±0˚.02×15˚.12E±0˚.05,h335^{km}±2^{km},*
ML3.3/41,Error ellipse: s-maj=3.9km s-min=1.9km
az=108.0

*IDC **11** 15:29:58.5±1.6,39˚.73N×14˚.69E,h342^{km}±20^{km},mb3.0/9,*
mbtmp3.7/18,Error ellipse: s-maj=21.3km s-min=15.3km
az=37.0

ISC 11 15:29:56.7±0.7**,39˚.61N**±0˚.08×**14˚.91E**±0˚.07**,h320**^{km}±7^{km}**,**
n68,σ**1**^{s}**.49**/76**,mb3.2**/8**,Tyrrhenian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BULG	**Bulgheria - Ca**	**0.59**	**37**	P	**Pn**	**15 30 39.1**	**+1.3**
MGR	**Morigerati**	**0.72**	**43**	P	**Pn**	**15 30 39.4**	**+1.3**
CMPR	**Campora**	**0.77**	**23**	P	**Pn**	**15 30 39.8**	**+1.4**
CET2	**Cetraro**	**0.81**	**95**	P	**Pn**	**15 30 39.1**	**+0.5**
CET2				S	**S**	**15 31 12.2**	**+0.3**
MMN	**Mormanno**	**0.88**	**71**	P	**Pn**	**15 30 39.7**	**+1.0**
CDRU	**Civita di Ruta**	**0.93**	**19**	P	**Pn**	**15 30 40.3**	**+1.2**
SLCN	**Sala Consilina**	**0.96**	**35**	P	**Pn**	**15 30 40.4**	**+1.2**
MCEL	**Monticello**	**0.99**	**43**	P	**Pn**	**15 30 40.9**	**+1.6**
CAR1	**CAROLEI**	**1.07**	**109**	P	**Pn**	**15 30 39.8**	**+0.1**
CAR1				S	**S**	**15 31 12.6**	**-1.2**
CAR1				AML	AML		
	comp=E,270µm,1.1s						
CAR1				AML	AML		
	comp=N,233µm,0.8s						
CAR1				AML	AML		
	comp=N,233µm,0.8s						
CAR1				AML	AML		
	comp=E,260µm,0.5s						
CAR1				AML	AML		
	comp=N,234µm,0.5s						
CAR1				AML	AML		
	comp=E,254µm,0.5s						
SCHR	**S. Chirico Rap**	**1.07**	**56**	P	**Pn**	**15 30 41.1**	**+1.4**
TDS	**Terranova Siba**	**1.10**	**87**	P	**Pn**	**15 30 41.0**	**+1.3**
TDS				AML	AML		
	comp=E,103µm,0.9s						
TDS				AML	AML		
	comp=N,91µm,1.9s						
TDS				AML	AML		
	comp=N,91µm,0.1s						
TDS				AML	AML		
	comp=E,103µm,1.1s						
SALB	**San Lorenzo Be**	**1.14**	**76**	AML	AML		
	comp=N,87µm,1.4s						
SALB				AML	AML		
	comp=E,143µm,1.6s						
SALB				AML	AML		
	comp=E,103µm,0.4s						
SALB				AML	AML		
	comp=E,103µm,1.6s						
SALB				AML	AML		
	comp=N,73µm,0.3s						
SPS2	**Spezzano della**	**1.15**	**105**	P	**Pn**	**15 30 40.8**	**+0.8**
SPS2				S	**S**	**15 31 14.3**	**-0.3**
VPL	**Vulcano Piano**	**1.23**	**177**	P	**Pn**	**15 30 42.0**	**+1.6**
CELI	**Celico**	**1.25**	**99**	P	**Pn**	**15 30 41.9**	**+1.2**
CELI				S	**S**	**15 31 16.2**	**+0.5**
CELI				AML	AML		
	comp=E,152µm,0.6s						
CELI				AML	AML		
	comp=N,174µm,0.5s						
CELI				AML	AML		
	comp=E,176µm,0.5s						
CELI				AML	AML		
	comp=N,178µm,0.5s						
CELI				AML	AML		
	comp=E,176µm,0.5s						
CELI				AML	AML		
	comp=E,442µm,0.5s						
CELI				AML	AML		
	comp=N,452µm,0.5s						
CELI				AML	AML		
	comp=E,176µm,0.5s						
CELI				AML	AML		
	comp=N,178µm,0.5s						
CELI				AML	AML		
	comp=E,442µm,0.5s						
CELI				AML	AML		
	comp=N,452µm,0.5s						
CELI				AML	AML		
	comp=E,176µm,1.5s						
CELI				AML	AML		
	comp=E,442µm,1.5s						
JOPP	**Joppolo**	**1.25**	**142**	P	**Pn**	**15 30 40.6**	**0.0**
JOPP				S	**S**	**15 31 14.0**	**-1.5**
JOPP				AML	AML		
	comp=N,153µm,1.3s						
JOPP				AML	AML		
	comp=E,140µm,1.5s						
JOPP				AML	AML		
	comp=E,139µm,0.3s						
JOPP				AML	AML		
	comp=N,114µm,0.3s						
GRI	**Girifalco**	**1.41**	**123**	AML	AML		
	comp=E,216µm,0.5s						
GRI				AML	AML		
	comp=N,197µm,0.5s						
GRI				AML	AML		
	comp=N,197µm,0.5s						
GRI				AML	AML		
	comp=E,216µm,0.5s						
MSRU	**Castanea**	**1.42**	**161**	P	**Pn**	**15 30 41.8**	**+0.3**
MSRU				S	**S**	**15 31 17.1**	**-0.1**
TIP	**Timpagrande**	**1.49**	**106**	P	**Pn**	**15 30 42.6**	**+0.7**
TIP				S	**S**	**15 31 16.8**	**-1.2**
TIP				AML	AML		
	comp=N,88µm,2.0s						
TIP				AML	AML		
	comp=N,110µm,0.8s						
TIP				AML	AML		
	comp=E,134µm,0.4s						
TIP				AML	AML		
	comp=E,147µm,0.7s						
TIP				AML	AML		
	comp=N,88µm,0.0s						
MPNC	**Port Mandanici**	**1.50**	**167**	P	**Pn**	**15 30 42.5**	**+0.6**
MPNC				S	**S**	**15 31 18.2**	**+0.1**
CEL	**Celeste**	**1.55**	**150**	P	**Pn**	**15 30 42.1**	**-0.2**
CEL				S	**S**	**15 31 17.0**	**-1.7**
CEL				AML	AML		
	comp=E,174µm,1.5s						
CEL				AML	AML		
	comp=N,166µm,0.6s						
CEL				AML	AML		
	comp=N,164µm,0.7s						
CEL				AML	AML		
	comp=E,157µm,0.5s						
CEL				AML	AML		
	comp=N,165µm,0.6s						
CEL				AML	AML		
	comp=E,169µm,0.3s						
CEL				AML	AML		
	comp=N,165µm,1.4s						
CEL				AML	AML		
	comp=N,164µm,1.3s						
MUCR	**Ucria**	**1.56**	**181**	P	**Pn**	**15 30 43.5**	**+1.0**
NOV	**Novara**	**1.59**	**174**	P	**Pn**	**15 30 44.1**	**+1.5**
LADO	**San Nicola del**	**1.63**	**101**	P	**Pn**	**15 30 43.3**	**+0.5**
LADO				AML	AML		
	comp=N,9µm,0.3s						
LADO				AML	AML		
	comp=N,9µm,1.7s						
LADO				AML	AML		
	comp=E,15µm,0.3s						
AIO	**Antillo**	**1.65**	**171**	P	**Pn**	**15 30 44.1**	**+1.0**
AIO				AML	AML		
	comp=E,159µm,0.5s						
AIO				AML	AML		
	comp=N,202µm,0.5s						
AIO				AML	AML		
	comp=E,159µm,0.5s						
AIO				AML	AML		
	comp=N,202µm,0.5s						
AIO				AML	AML		
	comp=E,159µm,1.5s						
PLAC	**Placanica**	**1.66**	**134**	P	**Pn**	**15 30 43.1**	**+0.1**
PLAC				S	**S**	**15 31 17.5**	**-2.4**
PLAC				AML	AML		
	comp=E,182µm,1.5s						
PLAC				AML	AML		
	comp=N,178µm,1.6s						
PLAC				AML	AML		
	comp=E,139µm,0.3s						
PLAC				AML	AML		
	comp=N,137µm,0.5s						
PLAC				AML	AML		
	comp=E,132µm,0.5s						
PLAC				AML	AML		
	comp=N,136µm,0.4s						
PLAC				AML	AML		
	comp=N,137µm,1.5s						
PLAC				AML	AML		
	comp=E,132µm,1.5s						
PLLN	**Pollina**	**1.72**	**201**	P	**Pn**	**15 30 45.1**	**+1.6**
GIB	**Gibilmanna**	**1.76**	**203**	P	**Pn**	**15 30 45.5**	**+1.8**
SOI	**Samo**	**1.77**	**149**	P	**Pn**	**15 30 43.9**	**+0.1**
SOI				S	**S**	**15 31 19.7**	**-1.6**
SOI				AML	AML		
	comp=E,169µm,1.6s						
SOI				AML	AML		
	comp=N,138µm,0.7s						

SOI				AML	AML		
	comp=E,126µm,0.6s						
SOI				AML	AML		
	comp=N,369µm,5.6s						
SOI				AML	AML		
	comp=E,126µm,1.4s						
SOI				AML	AML		
	comp=N,369µm,0.4s						
CSLB	**Castelbuono**	**1.79**	**202**	P	**Pn**	**15 30 45.0**	**+1.0**
CSLB				AML	AML		
	comp=E,58µm,1.5s						
CSLB				AML	AML		
	comp=N,83µm,1.5s						
CSLB				AML	AML		
	comp=N,83µm,0.5s						
ALJA	**Alia**	**2.06**	**206**	P	**Pn**	**15 30 48.7**	**+2.8**
ALJA				AML	AML		
	comp=N,141µm,0.9s						
ALJA				AML	AML		
	comp=N,141µm,1.1s						
HLNI	**Lentini**	**2.25**	**181**	P	**Pn**	**15 30 48.3**	**+0.9**
HLNI				AML	AML		
	comp=E,155µm,1.6s						
HLNI				AML	AML		
	comp=N,112µm,1.0s						
HLNI				AML	AML		
	comp=E,158µm,1.7s						
HLNI				AML	AML		
	comp=N,119µm,2.1s						
HLNI				AML	AML		
	comp=N,119µm,0.1s						
HLNI				AML	AML		
	comp=E,158µm,0.3s						
HAGA	**Augusta**	**2.33**	**175**	P	**Pn**	**15 30 48.2**	**+0.2**
HAGA				AML	AML		
	comp=E,251µm,1.0s						
HAGA				AML	AML		
	comp=N,280µm,1.1s						
MTGR	**Montagna Grand**	**2.40**	**225**	AML	AML		
MTGR				AML	AML		
HPAC	**Pachino**	**2.91**	**177**	P	**Pn**	**15 30 54.5**	**+1.4**
HPAC				AML	AML		
	comp=E,371µm,1.3s						
HPAC				AML	AML		
	comp=N,486µm,1.5s						
HPAC				AML	AML		
	comp=E,371µm,0.7s						
VSL	**Villasalto**	**4.28**	**270**	P	**Pn**	**15 31 08.9**	**+1.9**
KEST	**Kesra**	**5.87**	**231**	P	**Pn**	**15 31 27.4**	**+2.2**
	comp=E,6.9nm,0.7s,baz=105,slow=8.1,SNR=4.9						
OBKA	**Obir**	**6.91**	**358**	*e*Pn	**Pn**	**15 31 39.7**	**+2.4**
	comp=E,2.0nm,0.4s						
SOKA	**Soboth**	**7.07**	**1**	*i* Pn	**Pn**	**15 31 43.6**	**+4.4**
	comp=E,1.9nm,0.3s						
MYKA	**Terra Mystica**	**7.08**	**353**	*e*Pn	**Pn**	**15 31 42.6**	**+3.3**
	comp=E,2.3nm,0.3s						
ABTA	**Abfaltersbach**	**7.35**	**347**	*e*Pn	**Pn**	**15 31 43.7**	**+1.1**
	comp=E,3.1nm,0.2s						
ARSA	**Arzberg**	**7.65**	**3**	*e*Pn	**Pn**	**15 31 49.0**	**+2.8**
	comp=E,2.9nm,0.3s						
FETA	**Feichten**	**8.01**	**339**	*i* Pn	**Pn**	**15 31 53.2**	**+2.6**
	comp=E,15nm,0.7s						
WTTA	**Wattenberg**	**8.02**	**344**	*e*Pn	**Pn**	**15 31 53.2**	**+2.5**
	comp=E,3.7nm,0.5s						
DAVOX	**Davos/Dischmat**	**8.06**	**335**	P	**P**	**15 31 54.2**	**-1.5**
	comp=E,6.3nm,0.4s,baz=333,slow=8.7,SNR=12						
SQTA	**Sankt Quirin**	**8.07**	**342**	*i* Pn	**Pn**	**15 31 53.4**	**+2.0**
	comp=E,15nm,0.6s						
WATA	**Walderalm**	**8.10**	**344**	*e*Pn	**P**	**15 31 54.6**	**-1.4**
	comp=E,6.6nm,0.5s						
BIOA	**Bad Ischl, Aus**	**8.13**	**354**	*e*Pn	**P**	**15 31 55.2**	**-1.2**
	comp=E,3.5nm,0.3s						
MOA	**Molln**	**8.25**	**357**	*e*Pn	**P**	**15 31 56.8**	**-0.9**
	comp=E,1.1nm,0.3s						
DAVA	**Damuels**	**8.50**	**336**	*e*Pn	**Pn**	**15 31 58.5**	**+1.9**
	comp=E,2.1nm,0.3s						
IDI	**Anoyia**	**9.03**	**115**	P	**Pn**	**15 32 04.6**	**+1.5**
	comp=E,9.3nm,1.0s,baz=305,slow=14,SNR=1.8						
GERES	**GERESS Array B**	**9.28**	**355**	P	**Pn**	**15 32 05.8**	**-0.1**
	comp=E,0.5nm,0.3s,baz=177,slow=12,SNR=4.0						
VRAC	**Vranov**	**9.77**	**6**	P	**Pn**	**15 32 11.7**	**-0.1**
	comp=E,2.2nm,0.4s,baz=212,slow=13,SNR=2.0						
MLR	**Muntele Rosu**	**10.04**	**51**	P	**P**	**15 32 17.4**	**-0.5**
	comp=E,9.4nm,0.7s,baz=283,slow=16,SNR=11						
BRTR	**Keskin Array B**	**14.43**	**84**	P	**Pn**	**15 33 08.7**	**+0.8**
	comp=E,2.8nm,0.8s,baz=265,slow=11,SNR=13						
ESDC	**Sonseca Array**	**14.55**	**276**	P	**P**	**15 33 07.2**	**-0.6**
	comp=E,0.4nm,0.6s,baz=84,slow=11,SNR=1.4						
AKASG	**Malin Array Be**	**14.97**	**37**	P	**P**	**15 33 13.4**	**+1.2**
	comp=E,2.3nm,0.5s,baz=232,slow=9.3,SNR=10						
MMAI	**Mount Meron Ar**	**17.76**	**105**	P	**P**	**15 33 45.1**	**+2.3**
	comp=E,0.8nm,0.4s,baz=313,slow=9.6,SNR=2.3						
EKA	**Eskdalemuir Ar**	**19.82**	**328**	P	**P**	**15 34 02.5**	**-1.8**
	comp=E,1.4nm,0.3s,baz=142,slow=11,SNR=10						
HFS	**Hagfors**	**20.56**	**358**	P	**P**	**15 34 10.0**	**-1.6**
	comp=E,1.3nm,0.5s,baz=173,slow=11,SNR=11						
	comp=E,1.3nm,0.5s						
NOA	**NORSAR Array B**	**21.58**	**355**	P	**P**	**15 34 20.6**	**-0.4**
	comp=E,0.9nm,0.7s,baz=174,slow=9.5,SNR=2.2						
	comp=E,0.9nm,0.7s						
FINES	**FINESS Array B**	**22.92**	**14**	P	**P**	**15 34 32.8**	**-0.3**
	comp=E,1.2nm,0.3s,baz=191,slow=8.8,SNR=15						
	comp=E,1.2nm,0.3s						
ARCES	**ARCESS Array B**	**30.52**	**7**	P	**P**	**15 35 39.4**	**-1.2**
	comp=E,1.4nm,0.8s,baz=197,slow=8.3,SNR=6.2						
	comp=E,1.4nm,0.8s						
BVAR	**Borovoye Array**	**39.60**	**51**	P	**P**	**15 36 58.7**	**+0.9**
	comp=E,0.6nm,0.5s,baz=280,slow=9.1,SNR=4.6						
	comp=E,0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**44.92**	**54**	P	**P**	**15 37 40.4**	**+0.1**
	comp=E,0.5nm,0.6s,baz=289,slow=9.0,SNR=4.3						
	comp=E,0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**48.01**	**48**	P	**P**	**15 38 04.4**	**+0.4**
	comp=E,0.5nm,0.3s,baz=286,slow=7.5,SNR=2.9						
	comp=E,0.5nm,0.3s						
MKAR	**Makanchi Array**	**48.28**	**58**	P	**P**	**15 38 06.9**	**+0.6**
	comp=E,0.5nm,0.4s,baz=290,slow=7.1,SNR=12						
	comp=E,0.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**73.97**	**79**	P	**P**	**15 40 57.5**	**-0.5**
	comp=E,0.3nm,0.5s,baz=308,slow=5.7,SNR=4.9						
	comp=E,0.3nm,0.5s						

IDC ***11*** *16:09:45.8±0.5, 45°.18N×141°.81E, h0^{km}, mb4.0/22, mbtmp4.0/24, ML5.3/1, MS3.3/12, Error ellipse: s-maj=14.9km s-min=12.4km az=61.0*

SKHL ***11*** *16:09:47.6±0.3, 45°.00N×141°.40E, h83^{km}±11^{km}*

NEIC ***11*** *16:09:48.5±1.8, 45°.13N±0°.06×141°.9E±0°.1, h16^{km}±4^{km}, mb4.5/73, Error ellipse: s-maj=10.6km s-min=8.2km az=97.0*

JMA ***11*** *16:09:49.6±0.1, 45°.1N±0°.4×141°.9E±0°.8, h7^{km}±3^{km}, MD4.2/20, MV4.3/20, SOYA REGION*

JMA Felt V J1 at SOYA REGION .

NIED ***11*** *16:09:49.6, 45°.11N×141°.88E, h7^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.47; $M_{\theta\theta}$-0.09; $M_{\phi\phi}$-1.38; $M_{r\theta}$0.16; $M_{\theta\phi}$0.72; $M_{\phi r}$-1.09; Fault plane solution: $M_0$1.93000×10^{15} NP1: ϕ_s325.00000°, δ29.00000°, λ71.00000°. NP2: ϕ_s166.00000°, δ63.00000°, λ100.00000°.*

MOS ***11*** *16:09:51.3±1.0, 45°.04N×141°.05E, h83^{km}, mb4.5/16 Error ellipse: s-maj=8.9km s-min=5.7km az=100.8*

ISC 11 16:09:48.5±1.1**, 45°.11N**±0°.03×**141°.84E**±0°.03**, h15**^{km}±7^{km}**, n218, σ1^{s}.38**/211**, mb4.4**/73**, MS3.6**/8**, 6C-10D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWK2	**Keihoku**	**0.21**	**11**	⇓*i*P	**Pb**	**16 09 54.0**	**+0.1**
JWK2				⇓S	**Sb**	**16 09 58.8**	**+1.2**
JWK2	**Keihoku**	**0.21**	**11**	A	A	16 09 54.0	
	comp=N,86nm,2.1s,comp=E,169nm,0.3s						
JRR	**Rishiri**	**0.38**	**274**	⇓*i*P	**Pb**	**16 09 57.2**	**+0.4**
JRR				⇓*e*S	**Sn**	**16 10 04.7**	**-1.6**
JRR	**Rishiri**	**0.38**	**274**	A	A	16 09 57.2	
	comp=N,173nm,1.6s,comp=E,150nm,4.7s						
JSE	**Soyaes**	**0.55**	**106**	⇓P	**Pg**	**16 09 59.0**	**-0.4**
JSE				⇓*e*S	**Sg**	**16 10 06.4**	**-0.2**
JSE	**Soyaes**	**0.55**	**106**	A	A	16 09 59.0	
	comp=N,13nm,1.7s,comp=E,24nm,1.2s						
JRBN	**Rebuntou**	**0.63**	**300**	⇓P	**Pg**	**16 10 00.3**	**-0.5**
JRBN				⇓S	**Sb**	**16 10 09.7**	**0.0**
JRBN	**Rebuntou**	**0.63**	**300**	A	A	16 10 00.3	
	comp=N,10.0nm,2.3s,comp=E,7.0nm,0.6s						
JSS	**Shosan**	**0.71**	**179**	*i* P	**Pb**	**16 10 02.8**	**+0.3**
JSS				S	**Sn**	**16 10 13.9**	**-0.6**
JSS	**Shosan**	**0.71**	**179**	A	A	16 10 02.8	
	comp=N,26nm,1.4s,comp=E,41nm,0.7s						
JYG	**Yagishiri**	**0.75**	**203**	P	**Pg**	**16 10 02.0**	**-1.0**
JYG				S	**Sb**	**16 10 12.7**	**-0.3**
JYG	**Yagishiri**	**0.75**	**203**	A	A	16 10 02.0	
	comp=N,12nm,3.7s,comp=E,9.0nm,6.1s						
ASAJ	**Asahikawa**	**1.13**	**151**	Pg	**Pn**	**16 10 08.9**	**-0.8**
	comp=E,198nm,0.3s,baz=13,slow=2.4,SNR=1162						
ASAJ				Lg	Lg	16 10 29.9	
	comp=E,147nm,0.3s,baz=233,slow=20,SNR=6.3						
ASAJ				LR	LR	16 10 42.9	
	comp=E,588nm,20.8s,baz=136,slow=48						
ASAJ	**Asahikawa**	**1.13**	**151**	A	A	16 10 10.5	
	comp=N,7.0nm,4.7s,comp=E,7.0nm,2.5s						
ASAJ	**Asahikawa**	**1.13**	**151**	P	**Pn**	**16 10 08.6**	**-1.1**
JKA	**Kamikawa-asahi**	**1.14**	**151**	Pn	**Pn**	**16 10 08.7**	**-1.1**
JHR	**Hokuryu**	**1.37**	**183**	A	A	16 10 14.8	
	comp=N,9.0nm,0.6s,comp=E,10.0nm,0.8s						
JKK2	**Kamakawa 2**	**1.40**	**152**	P	**Pn**	**16 10 13.0**	**-0.4**
JMP	**Maruseppu**	**1.55**	**135**	A	A	16 10 17.3	
	comp=N,5.0nm,0.8s,comp=E,4.0nm,1.1s						
JMP	**Maruseppu**	**1.55**	**135**	P	**Pn**	**16 10 15.2**	**-0.3**
JAB	**Ashibetsu**	**1.63**	**170**	A	A	16 10 18.7	
	comp=N,4.0nm,4.0s,comp=E,6.0nm,3.4s						
JISS	**Ishikarishitsu**	**1.86**	**190**	A	A	16 10 22.4	
	comp=N,11nm,1.1s,comp=E,13nm,1.6s						
JISS	**Ishikarishitsu**	**1.86**	**190**	P	**Pb**	**16 10 20.7**	**-1.4**
JTKR	**Abashiri--Toko**	**1.87**	**127**	P	**Pn**	**16 10 19.6**	**-0.2**
YSS	**Yuzhno-Sakhali**	**1.95**	**19**	Pn	**Pn**	**16 10 21.2**	**+0.3**
YSS	**Yuzhno-Sakhali**	**1.95**	**19**	*αe*PN	**Pn**	**16 10 21.9**	**+1.0**
YSS				*e*S	**Sb**	**16 10 48.8**	**+1.1**
YSS				pmax	pmax		
	comp=Z,300nm,1.3s						
YSS				pmax	pmax		
	comp=N,450nm,1.4s						
YSS				pmax	pmax		
	comp=E,500nm,2.8s						
YSS				pmax	pmax		
	comp=Z,600nm,2.8s						
YSS				pmax	pmax		
	comp=N,600nm,2.6s						
YSS				smax	smax		
	comp=N,2µm,3.0s						
YSS				smax	smax		
	comp=E,1µm,3.4s						
YSS				smax	smax		
	comp=N,2µm,0.7s						
YSS				smax	smax		
	comp=E,800nm,0.6s						
YSS	**Yuzhno-Sakhali**	**1.95**	**19**	*e*P	**Pn**	**16 10 22.0**	**+1.0**
YSS				AMB	AMB	16 10 28.7	
	comp=E,300nm,1.4s						
YSS				AMB	AMB	16 10 33.1	
	comp=E,600nm,2.7s						
YSS				*e*S	**Sb**	**16 10 47.8**	**+0.1**
YSS				A	A	16 10 51.3	
	comp=E,2µm,3.2s						
YSS				A	A	16 10 51.3	
	comp=E,1µm,3.2s						
YSS				A	A	16 10 51.5	
	comp=E,2µm,0.6s						
YSS				A	A	16 10 51.5	
	comp=E,800nm,0.6s						
YSS				AMS	AMS	16 11 30.6	
	comp=E,2µm,12.0s						
YSS				AMS	AMS	16 11 30.6	
	comp=E,1µm,12.0s						
JFR	**Furan**	**2.02**	**164**	P	**Pn**	**16 10 22.3**	**+0.3**
JAR	**Ashorobuto**	**2.29**	**142**	A	A	16 10 28.2	
	comp=N,2.0nm,3.4s,comp=E,4.0nm,4.7s						
JAR	**Ashorobuto**	**2.29**	**142**	P	**Pn**	**16 10 25.6**	**0.0**
JNSB	**Nemuroshibetsu**	**2.63**	**119**	A	A	16 10 33.2	
	comp=N,6.0nm,3.5s,comp=E,4.0nm,5.4s						
RUSJ	**Misakicho**	**2.63**	**111**	*e*PN	**Pn**	**16 10 30.6**	**+0.3**
JAK	**Akkeshi**	**2.95**	**135**	A	A	16 10 37.7	
	comp=N,3.0nm,2.2s,comp=E,2.0nm,2.0s						
GLVR	**Golovnino**	**2.97**	**116**	*e*PN	**Pn**	**16 10 35.6**	**+0.6**
GLVR				S	**Sn**	**16 11 11.7**	**+1.4**
GLVR				pmax	pmax		
	comp=Z,83nm,0.3s						
GLVR				smax	smax		
	comp=N,196nm,0.4s						
GLVR				smax	smax		
	comp=E,131nm,0.4s						
AKK	**Akkeshi**	**3.01**	**133**	*e*P	**Pn**	**16 10 36.0**	**+0.5**
YUK	**Yuzh-Kuril'sk**	**3.07**	**109**	*c i*PN	**Pn**	**16 10 36.9**	**+0.6**
YUK				*i* S	**Sn**	**16 11 13.0**	**+0.3**
YUK				pmax	pmax		
	comp=Z,363nm,0.4s						
YUK				smax	smax		
	comp=E,613nm,0.5s						
YUK				smax	smax		
	comp=N,164nm,0.6s						
YUK				smax	smax		
	comp=N,813nm,1.0s						
YUK				smax	smax		
	comp=E,1µm,1.1s						
ERM	**Erimo**	**3.24**	**162**	Pn	**Pn**	**16 10 39.1**	**+0.4**
ERM	**Erimo**	**3.24**	**162**	PN	**Pn**	**16 10 39.1**	**+0.4**
NMR	**Nemuro--Hokkai**	**3.29**	**121**	⇓*i*PN	**Pn**	**16 10 39.8**	**+0.4**
NMR	**Nemuro--Hokkai**	**3.29**	**121**	*e*P	**Pn**	**16 10 40.4**	**+1.0**
TEY	**Ternei**	**3.71**	**271**	*e*PN	**Pb**	**16 10 50.3**	**-3.3**
UGL	**Uglegorsk**	**3.97**	**2**	*e*PN	**Pb**	**16 10 54.3**	**-3.7**
UGL				*e*S	**Sn**	**16 11 34.7**	**-0.2**
UGL				pmax	pmax		
	comp=Z,100nm,0.6s						
UGL				smax	smax		
	comp=E,100nm,0.7s						
UGL				smax	smax		
	comp=N,100nm,0.9s						
UGL	**Uglegorsk**	**3.97**	**2**	*e*P	**Pb**	**16 10 54.3**	**-3.7**
UGL				AMB	AMB	16 10 58.0	
	comp=N,100nm,0.6s						
UGL				*e*S	**Sn**	**16 11 34.7**	**-0.2**
UGL				A	A	16 11 36.0	
	comp=N,100nm,0.8s						
UGL				A	A	16 11 36.0	
	comp=N,100nm,0.8s						
KUR	**Kuril'sk**	**4.26**	**86**	PN	**Pn**	**16 10 54.6**	**+1.8**
KUR				S	**Sn**	**16 11 43.4**	**+1.3**
KUR	**Kuril'sk**	**4.26**	**86**	*e*P	**Pn**	**16 10 54.5**	**+1.8**
KUR				*e*S	**Sn**	**16 11 42.5**	**+0.4**
TYV	**Tymovskoe**	**5.78**	**5**	*e*PN	Pn	16 11 18.9	+5.4
TYV				*e*S	**Sn**	**16 12 24.6**	**+5.1**
TYV				pmax	pmax		
	comp=Z,12nm,0.8s						
TYV				pmax	pmax		
	comp=Z,200nm,3.3s						
TYV				smax	smax		
	comp=N,17nm,1.0s						
TYV				smax	smax		
	comp=E,11nm,1.0s						
TYV				smax	smax		
	comp=E,400nm,4.3s						
TYV	**Tymovskoe**	**5.78**	**5**	*e*P	Pn	16 11 18.9	+5.4
TYV				AMB	AMB	16 11 23.2	
	comp=E,10.0nm,0.8s						
TYV				AMB	AMB	16 11 26.5	
	comp=E,200nm,3.3s						
TYV				*e*S	**Sn**	**16 12 24.6**	**+5.1**
TYV				A	A	16 12 25.7	
	comp=E,20nm,1.0s						
TYV				A	A	16 12 25.7	
	comp=E,10.0nm,1.0s						
TYV				A	A	16 12 28.4	
	comp=E,400nm,4.3s						
GRNR	**Gornyy**	**6.73**	**329**	⇓*i*PN	**Pn**	**16 11 27.4**	**+0.8**
GRNR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
GRNR				MLR	MLR		
	comp=E,240nm,11.0s						
GRNR				MLR	MLR		
	comp=N,260nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,370nm,12.0s						
USRK	**Ussuriysk Ar.**	**7.08**	**266**	Pn	**Pn**	**16 11 32.3**	**+0.8**
	comp=Z,1.5nm,0.6s,baz=68,slow=15,SNR=5.4						
OKH	**Okha**	**8.47**	**4**	*e*P	**Pb**	**16 12 11.3**	**-3.4**
OKH				*e*S	Sb	16 13 42.0	-13
OKH				AMS	AMS	16 16 26.5	
	comp=Z,300nm,13.0s						
OKH				AMS	AMS	16 16 26.5	
	comp=Z,300nm,13.0s						
OKH				AMS	AMS	16 16 26.5	
	comp=Z,100nm,13.0s						
MDJ	**Mudanjiang**	**8.72**	**271**	Pn	**Pn**	**16 11 54.6**	**+0.8**
MAJO	**Matsushiro**	**8.99**	**199**	Pn	**Pn**	**16 11 60.0**	**+2.3**
MAJO	**Matsushiro**	**8.99**	**199**	*i* PN	**Pn**	**16 12 01.2**	**+3.5**
MJAR	**Matsushiro Arr**	**8.99**	**199**	Pn	**Pn**	**16 12 01.0**	**+3.3**
	baz=2.5,slow=13,SNR=5.1						
MJAR				LR	LR	16 16 11.4	
	comp=Z,72nm,18.5s,baz=48,slow=43						
MJAR	**Matsushiro Arr**	**8.99**	**199**	Pn	**Pn**	**16 11 58.5**	**+0.8**
MJAR	**Matsushiro Arr**	**8.99**	**199**	PN	**Pn**	**16 11 58.5**	**+0.8**
HEH	**HeiHe**	**11.00**	**303**	*e*P	**Pn**	**16 12 28.7**	**+3.7**
HEH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PEA0B	**Petropavlovsk-**	**13.09**	**47**	Pn	**Pn**	**16 12 54.1**	**+0.4**
PEA0B	**Petropavlovsk-**	**13.09**	**47**	PN	**Pn**	**16 12 54.1**	**+0.4**
PETK	**Petropavlovsk-**	**13.09**	**47**	Pn	**Pn**	**16 12 57.0**	**+3.4**
	comp=Z,0.3nm,0.3s,baz=212,slow=14,SNR=7.7						
PETK				LR	LR	16 17 40.0	
	comp=Z,75nm,19.2s,baz=228,slow=36						
PETK	**Petropavlovsk-**	**13.09**	**47**	Pn	**Pn**	**16 12 54.3**	**+0.6**
PETK	**Petropavlovsk-**	**13.09**	**47**	PN	**Pn**	**16 12 54.3**	**+0.6**
JNU	**Nakatsue**	**14.67**	**219**	LR	LR	16 18 37.3	
	comp=Z,37nm,19.3s,baz=28,slow=36						
MA2	**Magadan**	**15.46**	**17**	LR	LR	16 20 25.2	
	comp=Z,50nm,18.8s,baz=175,slow=42						
HIA	**Hailar**	**15.57**	**293**	Pn	**P**	**16 13 29.2**	**-2.3**
HIA	**Hailar**	**15.57**	**293**	P	**P**	**16 13 29.2**	**-2.3**
HIA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HILR	**Hailar Array B**	**15.60**	**294**	Pn	**P**	**16 13 33.2**	**+1.3**
	baz=95,slow=12						
YAK	**Yakutsk**	**18.36**	**342**	P	**P**	**16 14 02.0**	**-0.2**
	comp=Z,6.7nm,0.3s,baz=96,slow=0.6,SNR=7.2						
	comp=Z,6.3nm,0.3s						
YAK	**Yakutsk**	**18.36**	**342**	P	**P**	**16 14 00.9**	**-1.3**
YAK	**Yakutsk**	**18.36**	**342**	*e*P	**Pn**	**16 14 02.7**	**+0.5**
YAK				*e*S	**S**	**16 17 29.4**	**-2.0**
YAK				pmax	pmax		
	comp=Z,16nm,2.0s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK				smax	smax		
	comp=E,121nm,4.2s						
YAK				smax	smax		
	comp=N,99nm,5.6s						
SEY	**Seymchan**	**18.85**	**15**	P	**Pn**	**16 14 09.6**	**+1.5**
	comp=N,4.8nm,0.7s,baz=205,slow=8.1,SNR=12						
SEY	**Seymchan**	**18.85**	**15**	*e*P	**Pn**	**16 14 09.9**	**+1.8**
SEY				pmax	pmax		
	comp=Z,12nm,1.1s						
BJI	**Beijing**	**19.53**	**264**	P	**Pn**	**16 14 21.1**	**+4.6**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
JOW	**Kunigami**	**21.24**	**215**	LR	LR	16 22 13.1	
	comp=Z,78nm,21.0s,baz=115,slow=35						
HNS	**HongShan**	**21.73**	**259**	⇑P	**P**	**16 14 42.5**	**+3.5**
HNS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NJ2	**Nanjing**	**22.11**	**242**	*e*P	**P**	**16 14 44.0**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SHEM	**Shemya Is, Ala**	**22.38**	**58**	LR	LR	16 23 39.4	
	comp=Z,23nm,20.0s,baz=265,slow=37						
HHC	**Hu-ho-hao-te**	**22.49**	**270**	*e*P	**P**	**16 14 48.3**	**+1.1**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SONM	**Songino Array**	**24.43**	**289**	P	**P**	**16 15 06.6**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=91,slow=7.0,SNR=8.6						
SONM				LR	LR	16 25 10.4	
	comp=Z,41nm,18.3s,baz=28,slow=38						
	comp=Z,2.4nm,0.8s						
SONM	**Songino Array**	**24.43**	**289**	P	**P**	**16 15 06.6**	**+0.2**
TIXI	**Tiksi**	**27.34**	**351**	P	**P**	**16 15 32.4**	**+0.2**
TIXI	**Tiksi**	**27.34**	**351**	*i* P	**P**	**16 15 31.8**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,7.0nm,2.7s						
GTA	**Gaotai**	**31.35**	**275**	*e*P	**P**	**16 16 11.6**	**+3.2**
GTA				pP	sP	16 16 15.9	+0.8
GTA				pmax	pmax		
	comp=Z,1.0nm,1.3s						
G16K	**Koyuk River**	**36.11**	**36**	P	**P**	**16 16 48.6**	**-0.7**
G16K				IAmb	IAmb	16 17 08.3	
	comp=Z,12nm,1.4s						
NRIK	**Noril'sk**	**36.21**	**331**	*i* P	**P**	**16 16 49.8**	**-0.3**
NRIK				pmax	pmax		
	comp=Z,7.0nm,2.4s						
GOMU	**GeErMu**	**36.33**	**273**	P	**P**	**16 16 52.0**	**+0.1**
GOMU				sP	pP	16 16 55.8	-0.9
GOMU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
N15K	**Kwethluk River**	**36.99**	**45**	P	**P**	**16 16 56.8**	**0.0**
PZH	**PanZhiHua**	**36.99**	**254**	P	**P**	**16 16 58.5**	**+1.2**
ZALV	**Zalesovo Beam**	**37.12**	**305**	P	**P**	**16 16 57.7**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=96,slow=9.4,SNR=3.9						
ZALV				PcP	**PcP**	**16 19 17.4**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=90,slow=1.6,SNR=2.4						
	comp=Z,0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**37.12**	**305**	P	**P**	**16 16 58.2**	**+0.2**
ZALV	**Zalesovo Beam**	**37.12**	**305**	*i* P	**P**	**16 17 00.4**	**+2.4**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
C19K	**Lookout Ridge**	**37.67**	**30**	P	**P**	**16 17 02.2**	**-0.4**
C19K				IAmb	IAmb	16 17 23.9	
	comp=Z,7.8nm,1.4s						
G18K	**Tagagawik**	**37.68**	**35**	P	**P**	**16 17 01.8**	**-0.9**
G18K				IAmb	IAmb	16 17 03.8	
	comp=Z,10nm,1.4s						
H18K	**Honhosa River**	**37.77**	**37**	P	**P**	**16 17 02.7**	**-0.7**
H18K				IAmb	IAmb	16 17 04.2	
	comp=Z,7.1nm,1.2s						
F19K	**Shaleruckik Mo**	**38.10**	**34**	P	**P**	**16 17 05.2**	**-0.9**
F19K				IAmb	IAmb	16 17 33.4	
	comp=Z,12nm,1.4s						
D19K	**Kuna River**	**38.12**	**31**	P	**P**	**16 17 05.0**	**-1.4**
D19K				IAmb	IAmb	16 17 07.0	
	comp=Z,12nm,1.4s						
E19K	**Redstone River**	**38.35**	**33**	P	**P**	**16 17 06.1**	**-2.2**
E19K				IAmb	IAmb	16 17 08.5	
	comp=Z,11nm,1.5s						
H19K	**Roundabout Mou**	**38.58**	**36**	P	**P**	**16 17 08.5**	**-1.7**
H19K				IAmb	IAmb	16 17 11.1	
	comp=Z,19nm,1.2s						
D20K	**Etivluk River**	**38.69**	**31**	P	**P**	**16 17 09.5**	**-1.6**
D20K				IAmb	IAmb	16 17 29.5	
	comp=Z,9.7nm,1.5s						
B21K	**Ikpikpuk River**	**39.48**	**30**	P	**P**	**16 17 16.2**	**-1.5**
B21K				IAmb	IAmb	16 17 18.6	
	comp=Z,10nm,1.4s						
J20K	**Nowinta River**	**39.58**	**38**	P	**P**	**16 17 18.5**	**-0.1**
IMAR	**Indian Mountai**	**39.70**	**35**	P	**P**	**16 17 18.2**	**-1.4**
E22K	**Anaktuvuk Pass**	**40.44**	**32**	P	**P**	**16 17 24.8**	**-1.0**
MK31	**Makanchi Array**	**40.57**	**294**	*i* P	**P**	**16 17 27.2**	**+0.1**
MKAR	**Makanchi Array**	**40.57**	**294**	P	**P**	**16 17 25.1**	**-1.9**
	comp=Z,0.4nm,0.6s,baz=82,slow=10.0,SNR=5.5						
MKAR				LR	LR	16 36 26.5	
	comp=Z,70nm,18.9s,baz=290,slow=40						
	comp=Z,0.4nm,0.6s						
MKAR	**Makanchi Array**	**40.57**	**294**	P	**P**	**16 17 27.3**	**+0.2**
MKAR	**Makanchi Array**	**40.57**	**294**	*ce*P	**P**	**16 17 28.7**	**+1.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
H22K	**Ishtalitna Cre**	**40.67**	**35**	P	**P**	**16 17 26.3**	**-1.3**
H23K	**Yukon River**	**41.43**	**35**	P	**P**	**16 17 33.6**	**-0.3**
H23K				IAmb	IAmb	16 17 34.6	
	comp=Z,7.9nm,1.3s						
KURK	**Kurchatov**	**41.59**	**301**	*ce*P	**P**	**16 17 34.3**	**-1.1**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
NEA2	**Nenana**	**41.75**	**37**	P	**P**	**16 17 35.5**	**-1.0**
NEA2				IAmb	IAmb	16 17 37.1	
	comp=Z,4.5nm,0.8s						
F24K	**Squaw Lake**	**41.95**	**33**	P	**P**	**16 17 36.5**	**-1.6**
COLA	**College**	**42.23**	**37**	*i* P	**P**	**16 17 37.9**	**-2.5**
COLA				pmax	pmax		
	comp=Z,29nm,2.3s						
D25K	**Kavik River**	**42.38**	**30**	P	**P**	**16 17 40.0**	**-1.7**
IL31		**42.66**	**37**	P	**P**	**16 17 43.6**	**-0.2**
IL31				IAmb	IAmb	16 17 47.1	
	comp=Z,10nm,1.3s						
ILAR	**Eielson Array**	**42.66**	**37**	P	**P**	**16 17 43.0**	**-0.9**
	comp=Z,1.9nm,0.8s,baz=282,slow=8.1,SNR=20						
	comp=Z,1.9nm,0.8s						
ILAR	**Eielson Array**	**42.66**	**37**	P	**P**	**16 17 42.0**	**-1.9**
ILAR	**Eielson Array**	**42.66**	**37**	P	**P**	**16 17 42.0**	**-1.9**
DHY	**Denali Highway**	**42.71**	**39**	P	**P**	**16 17 43.3**	**-1.3**

F25K	Christian Rive	42.80	33	P	P	16 17 44.4	-0.7
C27K	Jago River	43.29	29	P	P	16 17 47.8	-1.2
C27K				IAmb	IAmb	16 17 56.1	
	comp=Z,22nm,1.5s						
F26K	Sheenjek River	43.36	32	P	P	16 17 49.5	-0.1
SCRK	Sand Creek	44.04	38	P	P	16 17 53.5	-1.6
SCRK				IAmb	IAmb	16 18 07.3	
	comp=Z,13nm,1.5s						
CMAR	Chiang Mai Arr	44.39	247	P	P	16 17 59.5	+1.1
	comp=Z,0.7nm,0.7s,baz=39,slow=5.5,SNR=4.9						
	comp=Z,0.7nm,0.7s						
CMAR	Chiang Mai Arr	44.39	247	*i* P	P	16 18 00.0	+1.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
H27K	Steamboat Moun	44.61	34	P	P	16 17 59.4	-0.3
I27K	Kandik River	44.70	35	P	P	16 18 00.4	0.0
I27K				IAmb	IAmb	16 18 30.3	
	comp=Z,13nm,1.5s						
K27K	Chicken	44.85	37	P	P	16 18 00.6	-0.9
K27K				IAmb	IAmb	16 18 02.0	
	comp=Z,6.1nm,1.1s						
F28M	Old Crow	44.98	32	P	P	16 18 02.7	+0.2
BCAR	Beaver Creek A	45.20	39	P	P	16 18 03.3	-1.1
I28M	Miner Creek	45.42	35	P	P	16 18 05.0	-1.2
I28M				IAmb	IAmb	16 18 06.4	
	comp=Z,2.7nm,0.7s						
ISLE	Juniper Island	45.59	42	P	P	16 18 07.0	-0.6
BVAR	Borovoye Array	45.67	307	P	P	16 18 08.2	0.0
	comp=Z,0.7nm,0.5s,baz=78,slow=10,SNR=7.5						
BVAR				PcP	PcP	16 19 45.9	-0.1
	comp=Z,0.7nm,0.5s,baz=52,slow=3.1,SNR=6.1						
	comp=Z,0.7nm,0.5s						
BORK	Borovoye	45.70	307	*i* P	P	16 18 08.8	+0.4
BORK				pmax	pmax		
	comp=Z,15nm,2.8s						
KDJ	Kajisay	45.78	290	P	P	16 18 10.6	+1.1
KDJ				IAmb	IAmb	16 18 13.1	
	comp=Z,4.6nm,0.8s						
KDJ	Kajisay	45.78	290	P	P	16 18 10.6	+1.1
KDJ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
H29M	Whitestone	45.87	34	P	P	16 18 08.8	-0.8
F30M	Barrier River	46.51	32	P	P	16 18 14.7	+0.1
F30M				IAmb	IAmb	16 18 17.3	
	comp=Z,7.1nm,1.2s						
I30M	Mount Dempster	46.92	35	P	P	16 18 16.7	-1.3
G31M	Satah River	47.26	32	P	P	16 18 19.4	-1.0
G31M				IAmb	IAmb	16 18 58.9	
	comp=Z,6.7nm,1.4s						
AAK	Ala-Archa	47.33	292	LR	LR	16 41 55.8	
	comp=Z,70nm,20.1s,baz=348,slow=41						
H31M	Peel River	47.56	34	P	P	16 18 22.1	-0.8
HYT	Haines Junctio	47.79	41	P	P	16 18 25.4	+0.6
ARSB	Arslanbob	48.94	291	P	P	16 18 35.3	+1.3
ARSB	Arslanbob	48.94	291	P	P	16 18 35.3	+1.3
ARSB				pmax	pmax		
	comp=Z,13nm,1.1s						
CHGR	Chuyangaron	52.82	290	P	P	16 19 03.1	-0.1
CHGR	Chuyangaron	52.82	290	P	P	16 19 03.1	-0.1
CHGR				pmax	pmax		
	comp=Z,12nm,0.9s						
AB31	Akbulak array	53.21	306	P	P	16 19 05.4	-0.4
ABKAR	Akbulak array	53.21	306	P	P	16 19 05.4	-0.4
SHAA	Shahritus	54.10	290	P	P	16 19 13.1	+0.5
SHAA				IAmb	IAmb	16 19 15.9	
	comp=Z,9.5nm,0.6s						
RES	Resolute Bay	54.72	16	P	P	16 19 15.5	-0.9
RES				IAmb	IAmb	16 19 19.6	
	comp=Z,7.7nm,1.5s						
RES	Resolute Bay	54.72	16	P	P	16 19 15.5	-0.9
RES				pmax	pmax		
	comp=Z,8.0nm,1.5s						
BBB	Bella Bella	56.22	48	LR	LR	16 43 11.4	
	comp=Z,43nm,18.0s,baz=210,slow=36						
ARCES	ARCESS Array B	56.60	338	P	P	16 19 30.2	+0.2
	comp=Z,4.7nm,1.0s,baz=60,slow=6.5,SNR=1.6						
	comp=Z,4.7nm,1.0s						
ARCES	ARCESS Array B	56.60	338	P	P	16 19 29.1	-0.9
ARCES	ARCESS Array B	56.60	338	P	P	16 19 29.1	-0.9
ARCES				pmax	pmax		
	comp=Z,12nm,1.5s						
YKAW3	Yellowknife Wh	56.70	33	P	P	16 19 30.2	-0.6
YKAW3				IAmb	IAmb	16 19 38.0	
	comp=Z,4.5nm,1.2s						
YKA	Yellowknife Ar	56.75	33	P	P	16 19 30.3	-0.8
	comp=Z,1.3nm,0.8s,baz=306,slow=7.6,SNR=16						
	comp=Z,1.3nm,0.8s						
YKA	Yellowknife Ar	56.75	33	P	P	16 19 29.8	-1.3
YKA	Yellowknife Ar	56.75	33	*i* P	P	16 19 30.8	-0.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KNRA	Kununurra	61.66	194	P	P	16 20 05.7	+0.2
FINES	FINESS Array B	61.88	331	P	P	16 20 05.5	-1.1
	comp=Z,1.2nm,0.5s,baz=44,slow=8.2,SNR=12						
	comp=Z,1.2nm,0.5s						
FINES	FINESS Array B	61.88	331	P	P	16 20 05.7	-0.9
NEW	Newport	64.23	47	LR	LR	16 48 58.7	
	comp=Z,60nm,18.3s,baz=34,slow=37						
FITZ	Fitzroy Crossi	64.61	197	P	P	16 20 25.4	+0.2
WB0	Warramunga Arr	64.92	188	P	P	16 20 26.5	-0.6
WB0				IAmb	IAmb	16 20 32.2	
	comp=Z,5.9nm,1.4s						
WR8	Warramunga Arr	65.10	188	P	P	16 20 27.2	-1.1
WR8				IAmb	IAmb	16 21 09.6	
	comp=Z,4.8nm,1.1s						
WRA	Warramunga Arr	65.10	188	P	P	16 20 27.4	-0.9
	comp=Z,0.8nm,0.5s,baz=7.4,slow=6.9,SNR=12						
	comp=Z,0.8nm,0.5s						
WRA	Warramunga Arr	65.10	188	P	P	16 20 26.4	-1.9
WRA	Warramunga Arr	65.10	188	*i* P	P	16 20 27.7	-0.6
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KIV	Kislovodsk	65.98	309	*e*P	P	16 20 32.7	-1.3
KIV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KBZ	Khabaz	66.01	308	P	P	16 20 34.7	+0.6
	comp=Z,0.4nm,0.3s,baz=40,slow=7.9,SNR=2.5						
	comp=Z,0.4nm,0.3s						
FCC	Fort Churchill	66.68	28	P	P	16 20 36.7	-1.4
FCC				IAmb	IAmb	16 20 37.8	
	comp=Z,3.8nm,1.0s						
FCC	Fort Churchill	66.68	28	P	P	16 20 36.7	-1.4
FCC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NB201	NORSAR Array S	66.86	336	P	P	16 20 38.0	-1.3
NOA	NORSAR Array B	66.89	336	P	P	16 20 38.0	-1.5
	comp=Z,0.7nm,0.5s,baz=38,slow=6.3,SNR=3.4						
	comp=Z,0.7nm,0.5s						
HFS	Hagfors	66.89	335	P	P	16 20 38.2	-1.3
	comp=Z,1.7nm,0.4s,baz=46,slow=6.4,SNR=12						
	comp=Z,1.7nm,0.4s						
AKASG	Malin Array Be	68.17	321	P	P	16 20 46.1	-1.6
	comp=Z,1.5nm,0.5s,baz=41,slow=6.4,SNR=8.4						
	comp=Z,1.5nm,0.5s						
AKASG	Malin Array Be	68.17	321	P	P	16 20 46.7	-1.0
AKASG				IAmb	IAmb	16 21 07.4	
	comp=Z,5.1nm,1.4s						
KIEV	Kiev	68.19	321	P	P	16 20 46.0	-1.7
KIEV				IAmb	IAmb	16 20 51.0	
	comp=Z,4.3nm,1.0s						
KIEV	Kiev	68.19	321	P	P	16 20 46.0	-1.7
KIEV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ASAR	Alice Springs	68.83	188	P	P	16 20 52.4	+0.4
	comp=Z,0.7nm,0.7s,baz=359,slow=5.5,SNR=16						
	comp=Z,0.7nm,0.7s						
ASAR	Alice Springs	68.83	188	P	P	16 20 52.2	+0.2
ASAR	Alice Springs	68.83	188	P	P	16 20 52.2	+0.2
NVAR	Mina Array Bea	70.01	55	P	P	16 21 00.6	+0.9
	comp=Z,1.7nm,0.7s,baz=295,slow=6.2,SNR=8.8						
	comp=Z,1.7nm,0.7s						
NVAR	Mina Array Bea	70.01	55	P	P	16 21 00.7	+1.1
R11B	Troy Canyon, C	71.63	54	P	P	16 21 08.8	-0.6
PDAR	Pinedale Array	71.86	47	P	P	16 21 10.9	+0.1
	comp=Z,1.7nm,0.8s,baz=322,slow=1.3,SNR=14						
	comp=Z,1.7nm,0.8s						
PDAR	Pinedale Array	71.86	47	P	P	16 21 10.6	-0.2
TPNV	Topopah Spring	72.21	55	P	P	16 21 13.8	+1.0
TPNV				IAmb	IAmb	16 21 19.8	
	comp=Z,4.5nm,0.8s						
TPNV	Topopah Spring	72.21	55	P	P	16 21 13.9	+1.0
TPNV				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BUR08	Bucovina Ar. S	72.21	321	P	P	16 21 12.3	-0.4
BUR08				IAmb	IAmb	16 21 20.8	
	comp=Z,5.1nm,1.2s						
BURAR	Bucovina Array	72.22	321	P	P	16 21 12.2	-0.5
BURAR				IAmb	IAmb	16 21 13.3	
	comp=Z,4.7nm,1.4s						
BURAR	Bucovina Array	72.22	321	P	P	16 21 22.0	+9.3
BURAR				pmax	pmax		
	comp=Z,5.0nm,1.5s						
QSM	Queen of Sheba	72.52	57	P	P	16 21 14.5	0.0
QSM				IAmb	IAmb	16 21 16.1	
	comp=Z,4.1nm,1.0s						
ULM	Lac du Bonnet	72.63	35	P	P	16 21 14.3	-0.6
	comp=Z,3.2nm,0.7s,baz=309,slow=5.4,SNR=4.3						
	comp=Z,3.2nm,0.7s						
ULM	Lac du Bonnet	72.63	35	IAmb	IAmb	16 21 25.7	
	comp=Z,11nm,1.4s						
BRTR	Keskin Array B	73.80	310	P	P	16 21 20.6	-1.7
	comp=Z,0.6nm,0.8s,baz=45,slow=8.4,SNR=2.4						
	comp=Z,0.6nm,0.8s						
BRTR	Keskin Array B	73.80	310	P	P	16 21 21.5	-0.8
EPLO	Experimental L	73.94	34	P	P	16 21 21.6	-1.1
EPLO				IAmb	IAmb	16 21 27.6	
	comp=Z,9.3nm,1.4s						
EKA	Eskdalemuir Ar	75.64	340	P	P	16 21 31.2	-1.2
	comp=Z,1.0nm,0.6s,baz=11,slow=5.0,SNR=4.2						
	comp=Z,1.0nm,0.6s						
KHC	Kasperske Hory	75.85	328	P	P	16 21 33.8	0.0
KHC				IAmb	IAmb	16 21 58.9	
	comp=Z,9.3nm,1.5s						
KHC	Kasperske Hory	75.85	328	P	P	16 21 33.8	0.0
KHC				pmax	pmax		
	comp=Z,9.0nm,1.5s						
GERES	GERESS Array B	76.04	328	P	P	16 21 33.6	-1.4
	comp=Z,0.5nm,0.5s,baz=56,slow=3.4,SNR=5.1						
	comp=Z,0.5nm,0.5s						
EYMN	Ely	76.20	34	P	P	16 21 34.7	-1.1
ECSD	EROS Data Cent	77.41	39	P	P	16 21 42.4	-0.4
ECSD				IAmb	IAmb	16 22 16.5	
	comp=Z,6.4nm,0.9s						
WATA	Walderalm	78.09	328	*e*P	P	16 21 46.4	-0.2
	comp=Z,2.7nm,0.4s						
WTTA	Wattenberg	78.13	328	*i* P	P	16 21 46.9	0.0
	comp=Z,2.7nm,0.4s						
SQTA	Sankt Quirin	78.32	328	*e*P	P	16 21 47.9	0.0
	comp=Z,3.5nm,0.6s						
FUORN	Ofenpass-Fuorn	79.18	328	P	P	16 21 52.3	-0.5
FUORN				IAmb	IAmb	16 21 52.8	
	comp=Z,3.4nm,0.8s						
EIL	Elat	80.29	302	LR	LR	17 03 42.1	
	comp=Z,54nm,18.6s,baz=188,slow=40						
NRCA	Norcia	81.23	325	P	P	16 22 03.1	-0.5
D62A	Allapoint, All	84.25	21	P	P	16 22 18.9	-0.2
TXAR	Lajitas Array	84.96	53	P	P	16 22 23.5	+0.3
	comp=Z,1.2nm,0.8s,baz=282,slow=4.0,SNR=10.0						
	comp=Z,1.2nm,0.8s						
TXAR	Lajitas Array	84.96	53	P	P	16 22 23.6	+0.4
PAOC	Oil Creek Stat	86.09	30	P	P	16 22 27.0	-1.5
Q54A	Coxs Mills	87.90	32	P	P	16 22 36.3	-1.0
NVL	N'lazarevskaya	144.79	206	*e*PKIKP	PKiKP	16 29 27.2	+0.2
NVL				*e*		16 32 39.2	
NVL				*e*PPP	PPP	16 35 52.0	
NVL				*e*SS	SS	16 51 29.8	+1.1
NVL				*e*SSS	SSS	16 56 55.7	
NVL				pmax	pmax		
	comp=Z,7.0nm,0.6s						

IDC ***11*** *16:11:36.6±0.7, 6°.75N×72°.95W, h158^{km}±9^{km}, mb2.8/3, mbtmp3.6/5, Error ellipse: s-maj=31.2km s-min=7.6km az=131.0*

RSNC ***11*** *16:11:37.5±0.0, 7°N±1°×7°3W±°, h150^{km}±1^{km}, M3.9, mB4.8, mb4.2, ML3.5, Mw(mB)4.1*

ISC 11 16:11:36.7±0.7**, 6°.85N**±0°.03×**73°.11W**±0°.04**, h154**^{km}±5^{km}**, n55,** σ**1^s.75**/94**, mb3.2**/3**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.27	195	P	Pn	16 11 57.9	-0.1
BARC				S	Sn	16 12 13.1	-1.1
PAMC	Pamplona, Colo	0.64	40	P	Pn	16 12 00.7	+0.8
PAMC				S	Sn	16 12 17.8	+0.3
BRJC	Barrancabermej	0.64	281	P	Pn	16 11 59.6	+0.3
BRJC				S	Sn	16 12 16.3	-0.2
RUSC	La Rusia	0.95	178	P	Pn	16 12 01.9	-0.2
RUSC				S	Sn	16 12 20.3	-1.2
PTBC	PUERTO BERRIO,	1.37	257	P	Pn	16 12 04.3	-1.0
PTBC				S	Sn	16 12 25.1	-2.1
OCAC	Ocana	1.40	352	P	Pn	16 12 05.9	+0.1
OCAC				S	Sn	16 12 27.0	-1.0
SPBC	San Pablo de B	1.52	219	P	Pn	16 12 06.6	-0.4
SPBC				S	Sn	16 12 28.8	-1.4
NORC	Norcasia	2.16	234	P	Pn	16 12 13.8	-0.3
NORC				S	Sn	16 12 41.4	-1.5
CHIC	Chingaza	2.29	196	P	Pn	16 12 15.9	-0.1
CHIC				S	Sn	16 12 45.3	-0.9
ROSC	El Rosal	2.33	211	P	Pn	16 12 17.9	+1.4
	400nm,0.3s,baz=290,slow=10,SNR=184						
ROSC				S	Sn	16 12 47.4	+0.4
	513nm,0.3s,baz=217,slow=22,SNR=10						
ROSC	El Rosal	2.33	211	P	Pn	16 12 17.5	+1.1
ROSC				S	Sn	16 12 47.2	+0.2
HELC	Santa Helena	2.49	255	P	Pn	16 12 18.8	+0.5
HELC				S	Sn	16 12 47.7	-2.6
CVER	Cruz Verde, Cu	2.50	203	P	Pn	16 12 19.3	+0.7
CVER				S	Sn	16 12 51.1	+0.2
UREC	San Jos de Ur	2.56	291	P	Pn	16 12 18.2	-0.7
UREC				S	Sn	16 12 49.0	-2.4
GUY2C	Guyana, Caldas	2.76	234	P	Pn	16 12 22.5	+0.7
GUY2C				S	Sn	16 12 56.5	0.0
VILC	Villavicencio,	2.78	192	P	Pn	16 12 21.3	-0.4
VILC				S	Sn	16 12 55.5	-1.0
PTGC	Puerto Gaitan,	2.81	160	P	Pn	16 12 21.1	-0.8
PTGC				S	Sn	16 12 54.7	-2.2
CBOC	Ciudad Bolivar	3.04	251	P	Pn	16 12 25.6	+0.6
CBOC				S	Sn	16 13 01.3	-1.0
DBBC	Dabeiba	3.08	273	P	Pn	16 12 25.3	-0.1
DBBC				S	Sn	16 13 00.3	-2.7
SDV	Santo Domingo	3.18	50	P	Pn	16 12 27.6	+0.9
	54nm,0.3s,baz=202,slow=3.2,SNR=98						
SDV				S	Sn	16 13 04.3	-1.2
	192nm,0.4s,baz=31,slow=14,SNR=42						
SDV	Santo Domingo	3.18	50	P	Pn	16 12 27.4	+0.6
SDV				S	Sn	16 13 04.8	-0.7
ARGC	Ariguani, Magd	3.19	340	P	Pn	16 12 28.4	+1.6
ARGC				S	Sn	16 13 06.6	+1.1
PRAC	Prado	3.58	210	P	Pn	16 12 31.2	-0.6
PRAC				S	Sn	16 13 13.7	-0.8
ORTC	Ortega, Tolima	3.61	216	P	Pn	16 12 32.2	0.0
ORTC				S	Sn	16 13 15.5	+0.3
SJCC	San Jacinto, C	3.65	326	P	Pn	16 12 31.8	-0.9
SJCC				S	Sn	16 13 13.2	-3.0
PLMC	San Jos del P	3.70	239	P	Pn	16 12 33.5	+0.2
PLMC				S	Sn	16 13 16.1	-1.1
LCBC	Los crdobas,	3.79	302	P	Pn	16 12 34.0	-0.4
URMC	La Uribe, Meta	3.79	199	P	Pn	16 12 34.5	-0.1
URMC				S	Sn	16 13 18.0	-1.5
GUVC	San Jose del G	4.30	174	P	Pn	16 12 40.8	-0.3
GUVC				S	Sn	16 13 29.8	-1.5
SMRC	Santa Marta, M	4.42	346	P	Pn	16 12 43.2	+0.5
SMRC				S	Sn	16 13 31.2	-2.9
CAPC	Capurgana	4.56	293	P	Pn	16 12 44.2	-0.3
PTAC	Punta Ardita,	4.67	274	P	Pn	16 12 45.3	-0.6
PTAC				S	Sn	16 13 38.8	-1.0
MACC	Macarena, Meta	4.73	189	P	Pn	16 12 44.9	-1.9
MACC				S	Sn	16 13 37.4	-4.0
BETC	Betania	4.75	209	P	Pn	16 12 45.9	-1.1
BETC				S	Sn	16 13 38.5	-3.3
URIC	Uribia, Colomb	4.95	13	P	Pn	16 12 48.3	-1.3
URIC				S	Sn	16 13 42.6	-3.8
JAMC	Jamundi, Valle	5.06	225	P	Pn	16 12 51.3	0.0
	1μm24nm,0.8s						
GARC	Garzon, Huila	5.20	207	P	Pn	16 12 52.0	-1.2
POPC	Popayan, Colom	5.56	220	P	Pn	16 12 57.8	-0.2
	20nm,0.8s						
FLOC	Florencia	5.81	206	P	Pn	16 13 00.4	-0.7
	1μm45nm,1.0s						
GR1C	Gorgona, Isla	6.32	233	P	Pn	16 13 07.6	-0.2
BBAC	Balboa, Cauca	6.32	221	P	Pn	16 13 09.1	+1.0
	672nm19nm,0.5s						
MTDJ	Mount Denham	12.10	340	*e*P	Pn	16 14 26.8	+2.5
MTDJ				*e*S	Sn	16 16 29.1	-9.3
MTDJ				IAmb	IAmb	16 16 44.1	
	91nm,1.1s						
MTDJ				IAmb	IAmb	16 16 44.6	
	comp=Z,110nm,1.3s						
SDDR	Presa de Saban	12.19	8	*e*P	P	16 14 29.9	-1.6
SDDR				*e*S	Sn	16 16 33.5	-6.9
GTBY	Guantanamo Bay	13.14	352	*e*P	P	16 14 41.3	-0.8
GTBY				*i* P	Pn	16 14 41.5	+3.8
RCC	Rio Carpintero	13.30	349	*i* P	P	16 14 43.6	-0.3
RCC				*e*P	Pn	16 14 44.2	+4.5
QMBU	Quimbuelo	13.37	353	*i* P	P	16 14 43.3	-1.4
QMBU				*e*P	Pn	16 14 44.5	+3.8
LMGC	Las Mercedes	13.67	344	*i* P	Pn	16 14 38.0	-6.3
LMGC				*e*P	P	16 14 45.9	-2.0
YAR	Yar	13.80	347	*e*P	P	16 14 49.6	+0.1
YAR				*i* P	Pn	16 14 49.7	+3.6
CBCY	The Bluff, Cay	14.35	334	*i* P	P	16 14 57.7	+2.2
CBCY				*e*P	Pn	16 14 58.8	+5.9
LCCY	Blossom Villag	14.43	333	*e*P	P	16 14 58.8	+2.4
LCCY				*i* P	Pn	16 14 58.9	+5.0
TXAR	Lajitas Array	36.45	312	P	P	16 18 27.7	+0.6
	0.4nm,0.6s,baz=124,slow=9.6,SNR=4.1						
	0.4nm,0.6s						
PDAR	Pinedale Array	48.06	324	P	P	16 20 01.5	+0.5
	0.2nm,0.6s,baz=119,slow=7.5,SNR=2.4						
	0.2nm,0.6s						
YKA	Yellowknife Ar	63.24	340	P	P	16 21 49.4	+0.9
	0.2nm,0.6s,baz=142,slow=6.1,SNR=2.9						
	0.2nm,0.6s						
ASAR	Alice Springs	149.13	234	PKPbc	PKPbc	16 31 06.6	-1.2
	0.9nm,0.7s,baz=120,slow=3.4,SNR=20						
WRA	Warramunga Arr	150.36	241	PKP	PKPdf	16 31 04.5	-1.0
	0.2nm,0.3s,baz=107,slow=3.0,SNR=11						
WRA				PKPbc	PKPbc	16 31 09.8	-1.0
	0.6nm,0.4s,baz=108,slow=2.8,SNR=20						

JMA ***11*** *16:32:26.7±0.2, 43°.3N±0°.5×145°.5E±0°.7, h70^{km}±1^{km}, MV2.8/39, NEMURO REGION*

SKHL ***11*** *16:32:27.2±0.2, 43°.30N×145°.60E, h66^{km}±2^{km}, mb4.7/2*

ISC 11 16:32:27.3±2.5**, 43°.33N**±0°.06×**145°.52E**±0°.08**, h66**^{km}±15^{km}**, n13,** σ**0^s.41**/25**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NMR	Nemuro--Hokkai	0.16	74	*i* P	Pn	16 32 37.2	0.0
NMR				*i* S	Sn	16 32 44.6	+0.2
NEM2	Nemuro 2	0.17	77	P	Pn	16 32 37.2	-0.1
NEM2				S	Sn	16 32 44.6	+0.2
JKHN	Kushirohamanak	0.35	227	P	Pn	16 32 38.5	+0.1
JKHN				S	Sn	16 32 46.7	+0.2
GLVR	Golovnino	0.41	0	*i* P	Pn	16 32 38.9	0.0
GLVR				AMB	AMB	16 32 39.5	
	410nm,0.2s						
GLVR				*i* S	Sn	16 32 48.2	+0.9
GLVR				A	A	16 32 49.0	
	880nm,0.2s						
GLVR				A	A	16 32 49.0	
	2μm,0.2s						
AKK	Akkeshi	0.58	238	*e*P	Pn	16 32 39.9	-0.7
JNSB	Nemuroshibetsu	0.58	321	*i* P	Pn	16 32 40.4	-0.2
JNSB				S	Sn	16 32 50.4	0.0
JNK	Nakash	0.64	294	*i* P	Pn	16 32 40.6	-0.5
JNK				S	Sn	16 32 50.6	-0.8
JRA	Rausu	0.68	335	*i* P	Pn	16 32 41.5	0.0
JRA				S	Sn	16 32 52.8	+0.7
JAK	Akkeshi	0.68	241	*i* P	Pn	16 32 41.4	-0.3
JAK				S	Sn	16 32 52.2	-0.1
YUK	Yuzh-Kuril'sk	0.75	19	*i* P	Pn	16 32 42.1	-0.4
YUK				AMB	AMB	16 32 42.6	
	440nm,0.3s						
YUK				*i* S	Sn	16 32 53.2	-0.5
YUK				A	A	16 32 54.4	
	2μm,0.3s						
YUK				A	A	16 32 54.4	
	580nm,0.3s						
JAR	Ashorobuto	1.27	269	P	Pn	16 32 49.3	+0.1
JAR				S	Sn	16 33 05.7	+0.2
JOB	Onbets	1.30	252	P	Pn	16 32 49.6	+0.2
JOB				S	Sn	16 33 06.5	+0.4
JTKR	Abashiri--Toko	1.33	299	P	Pn	16 32 50.1	+0.2
JTKR				S	Sn	16 33 06.8	0.0

CATAC ***11*** *17:20:17.9±0.9, 13°N±4°×9°0W±°, h18^{km}±6^{km}, M3.3/7, MLv3.3/7, Error ellipse: s-maj=9.5km s-min=6.5km az=14.9, confirmed*

SNET ***11*** *17:20:18.9±1.5, 13°.28N×90°.36W, h16^{km}, ML3.3*

GCG ***11*** *17:20:19.8±0.9, 13°.36N×90°.39W, h13^{km}±13^{km}, MD4.2*

ISC 11 17:20:19.6±1.8**, 13°.22N**±0°.08×**90°.25W**±0°.05**, h18**^{km}±7^{km}**, n35,** σ**0^s.71**/41**, 1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	0.66	21	S	Sn	17 20 42.6	-1.6
FAME	Alcaldia de Sa	0.66	21	P	Pb	17 20 32.4	-0.3
NUBE	Las Nubes	0.82	34	*e*P	Pb	17 20 34.8	-0.6
NUBE				*e*S	Sb	17 20 46.4	+0.1
NUBE	Las Nubes	0.82	34	*e*P	Pb	17 20 35.0	-0.4
NUBE				*e*S	Sg	17 20 47.1	+0.5
NUBE	Las Nubes	0.82	34	P	Pb	17 20 35.0	-0.4
CEVE	Cerro Verde	0.86	45	*e*P	Pb	17 20 35.9	-0.3
CEVE	Cerro Verde	0.86	45	P	Pb	17 20 36.3	+0.1
CEVE	Cerro Verde	0.86	45	S	Sg	17 20 48.9	+1.0
SBLS	San Blas	0.87	45	*e*P	Pb	17 20 36.2	-0.1
JAYA	Jayaque - finc	0.90	61	*e*P	Pb	17 20 36.5	-0.2
JAYA				*e*S	Sb	17 20 48.9	+0.5
JAYA	Jayaque - finc	0.90	61	⇓*i*P	Pb	17 20 36.6	-0.1
JAYA				*e*S	Sb	17 20 50.2	+1.8
JAYA	Jayaque - finc	0.90	61	S	Sb	17 20 49.8	+1.4
JAYA	Jayaque - finc	0.90	61	P	Pb	17 20 36.7	-0.1
RTR	El Retiro	0.90	41	*e*P	Pb	17 20 36.6	-0.2
RTR				*e*S	Sb	17 20 49.4	+0.9
SNJE	San Jose	0.90	44	*e*P	Pb	17 20 36.6	-0.2
SNJE				*e*P	Pg	17 20 36.8	-0.5
LALI	Alcalda de L	0.95	73	P	Pb	17 20 37.4	0.0
UNIC	Universidad Ca	1.02	42	*e*P	Pb	17 20 38.2	-0.7
UNIC	Universidad Ca	1.02	42	P	Pb	17 20 37.6	-1.3
UNIC	Universidad Ca	1.02	42	S	Sg	17 20 53.4	+0.5
PMON	Piamonte	1.04	62	*e*P	Pb	17 20 38.7	-0.4
PMON	Piamonte	1.04	62	P	Pb	17 20 38.8	-0.3
RBDL	Robledal	1.05	32	*e*P	Pb	17 20 38.9	-0.5
BOQS	Boqueron	1.08	61	*e*P	Pn	17 20 39.7	-0.3
FG16	Alotenango, Sa	1.08	347	*e*P	Pn	17 20 41.7	+1.7
LOMA	Loma Larga	1.14	68	S	Sb	17 20 55.7	+0.4
LFRS	El Faro	1.23	71	*e*P	Pn	17 20 41.7	-0.3
MTO3	Montecristo	1.46	36	*e*P	Pn	17 20 45.2	-0.1
MTO3	Montecristo	1.46	36	S	Sb	17 21 05.7	+1.0
MTO3	Montecristo	1.46	36	P	Pn	17 20 45.2	-0.1
STG5	El Palmar, Qui	1.59	318	*e*P	Pg	17 20 49.6	-0.5
STG8	El Palmar, Qui	1.62	319	*e*P	Pg	17 20 50.9	0.0
APG	El Apazote	1.79	353	*e*P	Pn	17 20 49.3	-0.5
PACA	Pacayal	1.90	82	*e*P	Pn	17 20 51.4	+0.2
RANC	El Ranchito	1.93	83	*e*P	Pn	17 20 51.5	-0.1
CNCH	Conchagua	2.36	88	*e*P	Pn	17 20 57.7	+0.1

MOS ***11*** *17:28:18.7±1.5, 44°.13N×146°.70E, h146^{km}, mb4.2/1, Error ellipse: s-maj=31.8km s-min=21.5km az=47.4*

SKHL ***11*** *17:28:20.3±0.6, 44°.00N×146°.70E, h142^{km}±5^{km}, mb4.3/4, msha5.5/3*

JMA ***11*** *17:28:21.1±0.3, 44°N±1°×14°7E±°, h132^{km}±2^{km}, MV3.5/38, NEAR KUNASHIRI ISLAND*

NEIC ***11*** *17:28:21.9±1.3, 44°.10N±0°.06×146°.5E±0°.2, h149^{km}±12^{km}, mb4.2/11, Error ellipse: s-maj=21.1km s-min=7.4km az=74.0*

IDC ***11*** *17:28:24.7±5.2, 44°.58N×146°.20E, h156^{km}±97^{km}, mb3.4/3, mbtmp3.9/4, Error ellipse: s-maj=326.3km s-min=41.3km az=171.0*

ISC 11 17:28:19.7±0.9**, 44°.00N**±0°.07×**146°.74E**±0°.07**, h136**^{km}±6^{km}**, n54,** σ**1^s.08**/67**, mb4.2**/10**, 2C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	0.63	274	*d i*PN	Pn	17 28 40.4	+0.2
YUK				*i* S	Sn	17 28 54.9	-0.9
YUK				pmax	pmax		
	comp=Z,157nm,0.2s						
YUK				smax	smax		
	comp=N,840nm,0.2s						
YUK				smax	smax		
	comp=E,3μm,0.4s						
YUK	Yuzh-Kuril'sk	0.63	274	*i* P	Pn	17 28 40.3	+0.1
YUK				AMB	AMB	17 28 43.0	
	comp=E,90nm,0.2s						

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YUK                          i S     Sn      17 28 55.4 -0.4
YUK                           A      A       17 28 56.4
         comp=E,2µm,0.4s
YUK                           A      A       17 28 56.4
         comp=E,4µm,0.4s
GLVR  Golovnino       0.92 254⇑iPN   Pn      17 28 43.2 +0.8
GLVR                         i S     Sn      17 28 59.9 +0.3
GLVR                          pmax   pmax
         comp=Z,182nm,0.1s
GLVR                          smax   smax
         comp=N,2µm,0.3s
GLVR                          smax   smax
         comp=E,2µm,0.2s
GLVR  Golovnino       0.92 254 i P   Pn      17 28 43.2 +0.8
GLVR                          AMB    AMB     17 28 43.5
         comp=E,180nm,0.4s
GLVR                         i S     Sn      17 28 59.9 +0.3
GLVR                          A      A       17 29 01.0
         comp=E,2µm,0.5s
GLVR                          A      A       17 29 01.0
         comp=E,2µm,0.5s
NEM2  Nemuro 2        0.96 229 i P   Pn      17 28 43.3 +0.6
NEM2                          S      Sn      17 28 59.6 -0.7
NMR   Nemuro--Hokkai  0.96 230⇑iPN   Pn      17 28 43.2 +0.4
NMR                          i S     Sn      17 28 59.4 -0.9
NMR   Nemuro--Hokkai  0.96 230 eP    Pn      17 28 43.4 +0.6
NMR                          i S     Sn      17 28 59.6 -0.7
RUSJ  Misakicho       1.08 276⇓iPN   Pn      17 28 44.1 +0.3
JRA   Rausu           1.17 268  P    Pn      17 28 45.0 +0.3
JNSB  Nemuroshibetsu  1.27 261 i P   Pn      17 28 46.5 +0.8
JNSB                          eS     Sn      17 29 06.0 +0.4
JKHN  Kushirohamanak  1.47 232  P    Pn      17 28 48.5 +0.7
JKHN                          eS     Sn      17 29 08.6 -0.7
KUR   Kuril'sk        1.48  33diPN   Pn      17 28 47.1 -0.8
KUR                          i S     Sn      17 29 08.4 -1.1
KUR   Kuril'sk        1.48  33 eP    Pn      17 28 48.4 +0.5
KUR                           AMB    AMB     17 28 48.8
         comp=E,30nm,0.2s
KUR                          i S     Sn      17 29 10.0 +0.5
KUR                           A      A       17 29 10.7
         comp=E,140nm,0.2s
KUR                           A      A       17 29 10.7
         comp=E,110nm,0.2s
JNK   Nakash          1.52 255  P    Pn      17 28 49.1 +0.7
JNK                           eS     Sn      17 29 10.1 -0.2
AKK   Akkeshi         1.69 235 i P   Pn      17 28 51.0 +0.7
AKK                           eS     Sn      17 29 12.8 -0.9
JAK   Akkeshi         1.79 237 eP    Pn      17 28 52.1 +0.6
JAK                           eS     Sn      17 29 14.9 -0.8
JTKR  Abashiri--Toko  2.04 270  P    Pn      17 28 54.7 +0.3
JTKR                          S      Sn      17 29 20.2 -0.8
JAR   Ashorobuto      2.26 253  P    Pn      17 28 58.4 +1.2
JAR                           eS     Sn      17 29 26.4 +0.4
JOB   Onbets          2.38 244 eP    Pn      17 28 59.8 +1.2
JOB                           eS     Sn      17 29 28.4  0.0
JMP   Maruseppu       2.44 271  P    Pn      17 28 59.7 +0.3
JCH   Churui          2.82 242  P    Pn      17 29 04.9 +0.7
JCH                           S      Sn      17 29 37.1 -1.5
JKK2  Kamakawa 2      2.88 269  P    Pn      17 29 05.8 +0.8
JKA   Kamikawa-asahi  2.98 274       Pn      17 29 07.0 +0.7
JKA   Kamikawa-asahi  2.98 274 eP    Pn      17 29 07.6 +1.3
ASAJ  Asahikawa       2.99 274  P    Pn      17 29 07.6 +1.3
         comp=E,35nm,0.4s,baz=78,slow=15,SNR=76
ASAJ  Asahikawa       2.99 274  P    Pn      17 29 07.1 +0.8
JFR   Furan           3.12 256 eP    Pn      17 29 09.4 +1.3
JSE   Soyaes          3.12 289 eP    Pn      17 29 07.9 -0.1
ERM   Erimo           3.29 234  Pn   Pn      17 29 11.9 +1.7
ERM                                  Sn      17 29 44.5 -4.7
JNBK  Urakawa-nobuka  3.38 241 eP    Pn      17 29 11.3 -0.2
H11N2 WAKE ISLAND Hy 29.48 139  T    T       18 05 19.6
         baz=329,slow=75,SNR=19
H11N1 WAKE ISLAND Hy 29.50 139  T    T       18 05 23.4
         baz=329,slow=75,SNR=21
H11N3 WAKE ISLAND Hy 29.50 139  T    T       18 05 20.6
         baz=329,slow=75,SNR=19
H11S1 WAKE ISLAND Hy 30.45 140  T    T       18 06 29.4
         baz=330,slow=76,SNR=47
H11S3 WAKE ISLAND Hy 30.45 140  T    T       18 06 30.5
         baz=330,slow=76,SNR=34
H11S2 WAKE ISLAND Hy 30.47 140  T    T       18 06 34.0
         baz=330,slow=76,SNR=28
M16K  Timber Creek   35.94  42  P    P       17 35 08.5 +1.8
G18K  Tagagawik      36.60  34  P    P       17 35 13.0 +0.7
G18K                            IAmb IAmb    17 35 54.9
         comp=Z,5.5nm,1.5s
H18K  Honhosa River  36.61  35  P    P       17 35 13.4 +1.2
H19K  Roundabout Mou 37.45  35  P    P       17 35 20.5 +1.2
H19K                            IAmb IAmb    17 36 03.6
         comp=Z,7.0nm,1.5s
B20K  Meade River    37.96  28  P    P       17 35 22.9 -0.7
B20K                            IAmb IAmb    17 35 39.0
         comp=Z,7.3nm,1.4s
ILAR  Eielson Array  41.47  36  P    P       17 35 53.6 +1.0
         comp=Z,0.6nm,0.8s,baz=270,slow=7.3,SNR=5.6
         comp=Z,0.6nm,0.8s
C27K  Jago River     42.55  29  P    P       17 36 01.8 +0.4
C27K                            IAmb IAmb    17 36 02.0
         comp=Z,17nm,1.5s
BCAR  Beaver Creek A 43.89  39  P    P       17 36 12.9 +0.7
I28M  Miner Creek    44.33  35  P    P       17 36 17.4 +1.7
I30M  Mount Dempster 45.84  35  P    P       17 36 29.2 +1.5
I30M                            IAmb IAmb    17 36 31.4
         comp=Z,8.2nm,1.5s
G31M  Satah River    46.33  32  P    P       17 36 31.9 +0.5
G31M                            IAmb IAmb    17 37 11.5
         comp=Z,8.2nm,1.4s
H31M  Peel River     46.54  34  P    P       17 36 33.5 +0.4
H31M                            IAmb IAmb    17 37 02.2
         comp=Z,8.3nm,1.5s
AB31  Akbulak array  56.67 308  P    P       17 37 48.8 +0.3
ABKAR Akbulak array  56.67 308  P    P       17 37 48.5  0.0
FINES FINESS Array B 64.52 333  P    P       17 38 39.6 -1.8
         comp=Z,3.8nm,1.0s,baz=36,slow=6.3,SNR=4.3
         comp=Z,3.8nm,1.0s
FINES FINESS Array B 64.52 333  P    P       17 38 39.6 -1.8
FINES                           pmax pmax
         comp=Z,1.0nm,0.5s
NB2   NORSAR Subarra 69.26 339  P    P       17 39 11.3 -0.2
         comp=Z,1.1nm,0.5s,baz=32,slow=6.5
NOA   NORSAR Array B 69.26 339  P    P       17 39 10.3 -1.2
         comp=Z,0.4nm,0.4s,baz=26,slow=3.4,SNR=4.5
         comp=Z,0.4nm,0.4s
```

BJI **11** *17:48:27.2, 0°.66S×125°.31E, h47^{km}, mB5.1/11, mb4.8/57, Ms4.7/5, Ms7 4.5/4*

MOS **11** *17:48:28.0±1.1, 0°.26S×125°.10E, h36^{km}, mb5.1/44, Error ellipse: s-maj=12.8km s-min=5.3km az=122.5*

IDC **11** *17:48:29.3±4.0, 0°.18S×125°.05E, h25^{km}±26^{km}, mb4.6/25, mbtmp4.7/27, ML4.2/2, MS3.7/20, Error ellipse: s-maj=23.6km s-min=11.0km az=73.0*

NEIC **11** *17:48:30.2±2.7, 0°.12S±0°.06×125°.23E±0°.05, h31^{km}±5^{km}, mb5.0/108, Error ellipse: s-maj=9.1km s-min=7.4km az=167.0*

DJA **11** *17:48:32.6±0.1, 0°S±2°×12°5E±°, h41^{km}±3^{km}, M4.8/51, mb4.9/51, mB5.3/17, MLv5.0/28, Mw(mB)4.7/17, MwMwp4.4/1, Mwp4.8/1*

GCMT **11** *17:48:32.2±0.4, 0°.37S±0°.03×125°.17E±0°.04, h36^{km}±1^{km}, MW4.8/52, Moment Tensor Solution. s31,c38; s52,c64; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.17±.17; $M_{\theta\theta}$-0.92±.11; $M_{\phi\phi}$-1.25±.12; $M_{r\theta}$0.59±.09; $M_{\theta\phi}$-0.87±.06; $M_{\phi r}$0.78±.11; Best double couple: $M_0$2.28900×10^{16} NP1:ϕ_s220.00000°, δ32.00000°, λ92.00000°. NP2: ϕ_s39.00000°, δ58.00000°, λ89.00000°. Principal axes: T 2.3910, Plg77.0000°, Azm305.0000°; N -0.2030, Plg1.0000°, Azm39.0000°; P -2.1870, Plg13.0000°, Azm129.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 17:48:31.0±0.4, **0°.20S**±0°.04×**125°.22E**±0°.05, **h41**^{km}±3^{km}, **h41**^{km}**:pP-P, n530,** σ**1°.46**/494, **mb5.0**/131, **MS3.9**/21, **13C-4D, Southern Molucca Sea**

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Code  Station Name      Δ°  AZ°   Phase ID        Time    Res
                                  Op    ISC      h  m  s  ISC
MNI   Manado          1.68 347  P    Pn      17 48 59.2 +1.3
SANI  Sanana          1.99 157  P    Pn      17 49 02.2  0.0
SANI  Sanana          1.99 157  P    Pn      17 49 01.3 -0.9
SANI                            S    Sn      17 49 23.8 -2.2
TNTI  Ternate         2.36  66       Pn      17 49 08.6 +1.3
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TNTI  Ternate         2.36  66  P    Pn      17 49 09.9 +2.6
TNTI  Ternate         2.36  66  P    Pn      17 49 08.8 +1.5
LUWI  Luwuk           2.58 251       Pn      17 49 12.0 +1.7
LUWI  Luwuk           2.58 251  P    Pn      17 49 12.8 +2.4
LUWI  Luwuk           2.58 251  P    Pn      17 49 11.7 +1.3
MRSI  Marisa          3.34 282  P    Pn      17 49 20.4 -0.4
NLAI  Namlea          3.56 148  P    Pn      17 49 23.7 -0.1
APSI  Ampana          3.64 259  P    Pn      17 49 27.1 +2.3
SGSI  Sangihe         3.87   5  P    Pn      17 49 30.4 +2.3
KRAI  Karang Ratu     4.44 134  P    Pn      17 49 37.0 +1.1
KDI   Kendari         4.54 215  P    Pn      17 49 38.4 +1.1
AAI   Ambon           4.57 139  P    Pn      17 49 38.4 +0.8
TOLI2 Tolitoli        4.62 286       Pn      17 49 39.5 +1.1
TOLI2 Tolitoli        4.62 286  P    Pn      17 49 40.3 +1.9
MSAI  Masohi          4.85 130  P    Pn      17 49 42.8 +1.2
MPSI  Mapaga          5.34 276  P    Pn      17 49 49.4 +1.1
      1.1nm2µm3µm251nm,0.8s
PCI   Palu            5.42 263  P    Pn      17 49 50.8 +1.4
SWI   Sorong          6.08  96  P    Pn      17 49 59.8 +1.4
      36nm,0.7s
TTSI  Tana Toraja     6.09 242  P    Pn      17 50 00.2 +1.6
BNDI  Bandanaira      6.35 133  P    Pn      17 50 02.4 +0.2
BNDI  Bandanaira      6.35 133  P    Pn      17 50 02.2  0.0
BNSI  Bone            6.59 231  P    Pn      17 50 07.1 +1.6
SPSI  Sidrap Palu     6.60 235  P    Pn      17 50 07.5 +1.9
MMSI  Mamuju          6.77 249  P    Pn      17 50 09.7 +1.7
      1.0nm1µm106nm,0.8s
PMSI  Majene          7.10 242  P    Pn      17 50 15.1 +2.6
      2µm129nm,0.9s
BKSI  Bulukumba       7.19 225  P    Pn      17 50 15.9 +2.2
      0.4nm993nm74nm,0.5s
DAV   Davao City (W)  7.23   3  LR   LR      17 53 27.1
      comp=Z,1µm,18.8s,baz=188,slow=41
KAPI  Kappang         7.25 229  Pn   Pn      17 50 17.7 +3.1
      20nm,0.3s,baz=45,slow=6.5,SNR=26
KAPI                            Sn   Sn      17 51 36.6 +0.8
      18nm,0.3s,baz=134,slow=23,SNR=7.8
KAPI                            LR   LR      17 53 51.5
      comp=Z,962nm,20.2s,baz=52,slow=45
KAPI  Kappang         7.25 229       Pn      17 50 15.6 +1.0
KAPI  Kappang         7.25 229  P    Pn      17 50 18.3 +3.7
KAPI  Kappang         7.25 229  P    Pn      17 50 16.9 +2.3
      0.2nm33nm,0.4s
FAKI  Fak Fak         7.53 111       Pn      17 50 17.1 -1.3
FAKI  Fak Fak         7.53 111  P    Pn      17 50 17.3 -1.1
FAKI  Fak Fak         7.53 111  P    Pn      17 50 17.0 -1.4
      0.2nm39nm,0.8s
BKB   Balikpapan      8.38 263       Pn      17 50 29.2 -0.9
BKB   Balikpapan      8.38 263  P    Pn      17 50 32.9 +2.8
      1µm165nm,0.9s
MYLDM Lahad Datu      8.58 309  Pn   Pn      17 50 31.8 -1.0
MYLDM Lahad Datu      8.58 309  P    Pn      17 50 37.4 +4.7
MYLDM Lahad Datu      8.58 309  P    Pn      17 50 35.4 +2.7
      1µm182nm,0.8s
MWPI  Manokwari, Pap  8.85  95  P    Pn      17 50 38.1 +1.6
      109nm,1.2s
MMRI  Maumere         8.89 199  P    Pn      17 50 38.9 +1.9
      33nm,1.4s
RKPI  Ransiki, Papua  9.05  98  P    Pn      17 50 42.7 +3.4
      53nm,1.0s
KMPI  Kaimana, Papua  9.15 112  P    Pn      17 50 41.4 +0.8
      1µm126nm,0.7s
EDFI  Ende, Flores    9.19 202  P    Pn      17 50 42.8 +1.6
      14nm,0.7s
SOEI  Soe             9.54 186       Pn      17 50 46.9 +0.9
SOEI  Soe             9.54 186  P    Pn      17 50 49.5 +3.5
SOEI  Soe             9.54 186  P    Pn      17 50 47.4 +1.4
      1µm60nm,0.7s
BATI  Baumata        10.06 189  Pn   Pn      17 50 58.9 +5.8
      4.7nm,0.3s,baz=24,slow=1.2,SNR=18
BATI  Baumata        10.06 189  P    Pn      17 50 56.2 +3.1
      57nm,1.0s
KKM   Kota Kinabalu  10.92 305  Pn   Pn      17 51 03.5 -1.4
KKM   Kota Kinabalu  10.92 305  P    Pn      17 51 08.1 +3.2
KKM   Kota Kinabalu  10.92 305  P    Pn      17 51 07.8 +2.9
      32nm,1.0s
BAKI  Biak           10.94  95  P    Pn      17 51 09.5 +4.4
      38nm,1.1s
PLAI  Plampang       11.33 221  P    Pn      17 51 13.8 +3.4
SBUM  Sibu           13.26 282  P    Pn      17 51 39.8 +3.0
DRS   Darwin Rock St 13.39 155  P    Pn      17 51 40.7 +2.0
JAGI  Jajag, Banyuwa 13.75 233  Pn   Pn      17 51 44.6 +1.1
MTN   Manton Dam     13.86 155       Pn      17 51 45.2 +0.1
JAY   Jayapura       15.65  99  Pn   Pn      17 52 09.9 +1.0
      1.1nm,0.3s,baz=210,slow=6.7,SNR=4.0
      22nm,0.9s
JAY   Jayapura       15.65  99  P    P       17 52 11.0 -1.5
      22nm,1.0s
JAY   Jayapura       15.65  99  P    Pn      17 52 10.0 +1.0
KNRA  Kununurra      15.77 167       Pn      17 52 10.6 +0.2
KNRA                            IAmb IAmb    17 52 11.4
      comp=Z,75nm,0.8s
PCJI  Pacitan        16.09 240  P    P       17 52 18.1 +0.8
      comp=Z,80nm,1.8s
UGM   Wanagama       16.53 242  P    P       17 52 24.3 +2.1
      comp=Z,91nm,1.8s
CTJI  Waduk Cacaban  17.36 247  P    P       17 52 34.4 +3.0
      comp=Z,27nm,0.9s
KPJI  Karang Pucung  17.72 246  P    P       17 52 37.9 +2.6
      comp=Z,108nm,0.8s
FITZ  Fitzroy Crossi 17.79 179  P    P       17 52 35.9 -0.2
      comp=Z,0.5nm,0.3s,baz=6.2,slow=9.1,SNR=16
FITZ                            LR   LR      17 59 35.6
      comp=Z,139nm,18.7s,baz=6.0,slow=37
      comp=Z,2.5nm,0.4s
FITZ  Fitzroy Crossi 17.79 179  P    P       17 52 35.9 -0.2
FITZ  Fitzroy Crossi 17.79 179  P    P       17 52 37.1 +1.0
BBJI  Bungbulang     18.94 247  P    Pn      17 52 50.2 +0.4
BBJI  Bungbulang     18.94 247  P    Pn      17 52 50.0 +0.2
      comp=Z,76nm,0.8s
CNJI  Cibinong       19.37 248  P    Pn      17 52 54.4 -0.5
      comp=Z,56nm,1.3s
KLSI                 20.94 257  P    Pn      17 53 12.9 -0.5
      comp=Z,32nm,1.3s
KASI  Kota Agung     21.35 255  P    P       17 53 17.1 +2.1
      comp=Z,48nm,1.2s
WB0   Warramunga Arr 21.42 156  P    P       17 53 14.8 -1.0
MDSI  Maura Dua      21.44 258  P    P       17 53 18.3 +2.3
MBWA  Marble Bar     21.51 194  P    P       17 53 16.8 +0.2
WRAB  Tennant Creek  21.55 156  P    P       17 53 16.2 -0.9
WRAB  Tennant Creek  21.55 156  P    P       17 53 16.0 -1.1
WRAB  Tennant Creek  21.55 156 i P   P       17 53 14.2 -2.9
WRAB                            pmax pmax
      comp=Z,23nm,0.7s
WRA   Warramunga Arr 21.56 156  P    P       17 53 16.3 -0.9
      comp=Z,15nm,0.7s,baz=333,slow=9.6,SNR=57
      comp=Z,15nm,0.7s
WRA   Warramunga Arr 21.56 156  P    P       17 53 14.9 -2.3
WRA   Warramunga Arr 21.56 156 i P   P       17 53 16.1 -1.1
WRA                             pmax pmax
      comp=Z,11nm,0.5s
WR8   Warramunga Arr 21.64 156  IAmb IAmb    17 53 35.4
      comp=Z,37nm,0.9s
PSA00 Pilbara Seismi 21.88 194  P    P       17 53 20.5 -0.1
PSA00 Pilbara Seismi 21.88 194  P    P       17 53 20.9 +0.4
PSA00                           IAmb IAmb    17 53 38.7
      comp=Z,32nm,1.8s
PSA00 Pilbara Seismi 21.88 194  P    P       17 53 22.7 +2.1
COEN  Coen           22.43 128  IAmb IAmb    17 53 33.3
      comp=Z,56nm,0.9s
COEN  Coen           22.43 128  P    P       17 53 27.0 +0.4
MNAI  Manna          22.62 259  P    P       17 53 30.5 +1.9
PMG   Port Moresby   23.68 113  P    P       17 53 38.8 -0.4
PMG   Port Moresby   23.68 113  P    P       17 53 39.8 +0.6
      comp=Z,28nm,1.0s
PMG   Port Moresby   23.68 113 i P   P       17 53 38.4 -0.8
PMG                             pmax pmax
      comp=Z,12nm,0.9s
YULB  Yu-li          23.76 351  P    P       17 53 35.9 -4.0
YULB  Yu-li          23.76 351  P    P       17 53 41.6 +1.7
TPUB  Ta-pu          23.78 349  P    P       17 53 37.6 -2.4
TPUB                            IAmb IAmb    17 53 46.0
      comp=Z,86nm,1.2s
TPUB  Ta-pu          23.78 349  P    P       17 53 38.1 -2.0
SSLB  Suanglung      24.20 350  P    P       17 53 39.1 -4.9
SSLB  Suanglung      24.20 350  P    P       17 53 46.0 +2.0
IPM   Ipoh           24.61 281  P    P       17 53 46.4 -1.4
IPM                             IAmb IAmb    17 53 50.5
      comp=Z,62nm,1.7s
QIS   Mount Isa      24.64 146  P    P       17 53 48.9 +0.8
AS31  Alice Springs  24.80 161  P    P       17 53 49.5  0.0
ASAR  Alice Springs  24.80 161  P    P       17 53 49.7 +0.2
      comp=Z,22nm,1.1s,baz=345,slow=12,SNR=112
ASAR                            PcP  PcP     17 57 25.9 +0.6
      comp=Z,1.0nm,0.4s,baz=353,slow=2.1,SNR=6.7
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ASAR                            S    S       17 58 06.3 -3.2
      comp=Z,4.4nm,1.1s,baz=354,slow=23,SNR=5.4
ASAR                            ScP  ScP     18 01 02.2 +0.9
      comp=Z,1.2nm,1.0s,baz=344,slow=2.3,SNR=6.0
      comp=Z,22nm,1.1s
YHNB  Yeheng         25.00 352  P    P       17 53 49.7 -1.6
YHNB  Yeheng         25.00 352  P    P       17 53 52.5 +1.2
KULM  Kulim          25.13 283  P    P       17 53 52.9 +0.3
KULM  Kulim          25.13 283  P    P       17 53 52.3 -0.2
PSI   Prapat         26.45 277  LR   LR      18 05 33.2
      comp=Z,200nm,20.8s,baz=100,slow=39
JOW   Kunigami       27.04   6  LR   LR      18 05 07.5
      comp=Z,126nm,21.2s,baz=276,slow=37
MEEK  Meekatharra    27.04 193  P    P       17 54 09.7  0.0
GSI   Gunungsitoli   27.68 273  P    P       17 54 14.1 -1.4
CTAO  Charters Tower 28.55 135  P    P       17 54 22.9 -0.3
CTAO                            IAmb IAmb    17 55 05.0
      comp=Z,40nm,1.7s
CTAO  Charters Tower 28.55 135  P    P       17 54 22.9 -0.3
CTAO                            pmax pmax
      comp=Z,40nm,1.7s
MORW  Morawa         30.01 196  P    P       17 54 35.4 -0.7
MORW                            IAmb IAmb    17 55 15.2
      comp=Z,28nm,1.3s
FORT  Forrest        30.53 175  P    P       17 54 39.2 -1.4
BLDU  Ballidu        31.31 194  P    P       17 54 47.5  0.0
CM31  Chiang Mai Arr 31.79 307  P    P       17 54 51.7 -0.2
CMAR  Chiang Mai Arr 31.79 307  P    P       17 54 51.4 -0.5
      comp=Z,2.3nm,0.8s,baz=136,slow=7.3,SNR=32
CMAR                            PcP  PcP     17 57 44.0 +1.4
      comp=Z,1.8nm,0.8s,baz=170,slow=2.1,SNR=15
CMAR                            LR   LR      18 08 23.4
      comp=Z,60nm,20.2s,baz=115,slow=38
      comp=Z,2.3nm,0.8s
CMAR  Chiang Mai Arr 31.79 307       PcP     17 57 43.4 +0.7
CHTO  Chiang Mai     31.98 308  P    P       17 54 53.0 -0.6
CHTO                            IAmb IAmb    17 54 54.3
      comp=Z,12nm,0.8s
CHTO  Chiang Mai     31.98 308  P    P       17 54 53.6  0.0
      comp=Z,17nm,1.2s
CHTO  Chiang Mai     31.98 308  P    P       17 54 53.0 -0.6
CHTO                            pmax pmax
      comp=Z,12nm,0.9s
CHTO  Chiang Mai     31.98 308  P    P       17 54 53.4 -0.2
CHTO                            pP   pP      17 55 02.4 -1.6
KLBR  Kellerberrin   32.01 192  P    P       17 54 55.0 +1.3
NJ2   Nanjing        32.64 350 eP    P       17 55 00.7 +1.6
NJ2                             pmax pmax
      comp=Z,7.0nm,0.7s
JNU   Nakatsue       33.57   9  LR   LR      18 10 43.6
      comp=Z,56nm,18.1s,baz=198,slow=40
ENH   Enshi          33.80 335  P    P       17 55 09.1 -0.3
ENH                             IAmb IAmb    17 55 12.3
      comp=Z,18nm,1.1s
BBOO  Buckleboo      34.01 164  P    P       17 55 13.5 +2.4
JMN   Monobe         34.72  13  P    P       17 55 19.6 +2.3
PZH   PanZhiHua      34.88 321  P    P       17 55 21.3 +2.4
STKA  Stephens Creek 35.11 155  P    P       17 55 21.9 +1.3
      comp=Z,15nm,1.0s,baz=337,slow=8.7,SNR=15
      comp=Z,15nm,1.0s
STKA  Stephens Creek 35.11 155  P    P       17 55 21.7 +1.1
STKA  Stephens Creek 35.11 155 i P   P       17 55 18.5 -2.1
HTT   Hallett        35.48 160  P    P       17 55 26.3 +2.4
LYN   LuoYang        36.58 342  P    P       17 55 34.3 +1.1
LYN                             SS   SS      18 03 48.3 -6.1
LYN                             pmax pmax
      comp=Z,21nm,0.6s
CMSA  Cobar Meteorol 36.70 150  P    P       17 55 35.6 +1.3
CD2   Chengdu        37.05 329  P    P       17 55 37.9 +0.6
XAN   Xi'an          37.34 337  P    P       17 55 40.2 +0.5
XAN                             pP   sP      17 55 53.8 -1.1
XAN                             pmax pmax
      comp=Z,20nm,0.7s
KSRS  Korea Array    37.55   4  P    P       17 55 42.1 +0.8
      comp=Z,6.6nm,0.9s,baz=182,slow=10.0,SNR=14
KSRS                            LR   LR      18 10 49.0
      comp=Z,53µm,21.8s,baz=200,slow=36
      comp=Z,6.6nm,0.9s
MAJO  Matsushiro     38.50  17  P    P       17 55 49.5 +0.1
MAJO  Matsushiro     38.50  17 i P   P       17 55 47.4 -2.0
MAJO                            pmax pmax
      comp=Z,12nm,0.8s
MJAR  Matsushiro Arr 38.50  17  P    P       17 55 48.6 -0.8
      comp=Z,5.9nm,0.7s,baz=189,slow=8.4,SNR=22
MJAR                            PcP  PcP     17 58 02.3 +0.4
      comp=Z,2.6nm,0.8s,baz=175,slow=2.1,SNR=5.4
      comp=Z,5.9nm,0.7s
HNS   HongShan       38.66 347 ⇑P    P       17 55 52.0 +1.3
HNS                             pmax pmax
      comp=Z,7.0nm,0.7s
DL2   Dalian         39.06 356  P    P       17 55 55.7 +1.7
DL2                             pmax pmax
      comp=Z,42nm,0.8s
ARMA  Armidale       39.16 143  P    P       17 55 56.2 +1.0
LZDM  Lanzhou Array  41.17 333  LR   LR      18 13 38.6
      comp=Z,95nm,20.6s,baz=35,slow=37
LZH   Lanzhou        41.21 333 eP    P       17 56 13.4 +1.2
LZH                             pP   pP      17 56 22.8 -0.1
LZH                             sP   sP      17 56 30.6 +3.2
LZH                             PcP  PcP     17 58 11.6 +0.8
LZH                             pmax pmax
      comp=Z,18nm,1.0s
LZH                             LR   LR
      comp=Z,260nm,16.1s
LZH                             LR   LR
      comp=Z,270nm,16.3s
CAN   Canberra       41.38 150  P    P       17 56 15.1 +1.6
CAN   Canberra       41.38 150  P    P       17 56 15.6 +2.2
CAN                             pP   pwP     17 56 25.4 -2.3
CAN                             sP   sP      17 56 29.5 +1.0
HHC   Hu-ho-hao-te   42.70 345 eP    P       17 56 27.0 +2.8
HHC                             pmax pmax
      comp=Z,6.0nm,0.7s
HHC                             pmax pmax
      comp=Z,120nm,6.6s
BTO   Baotou         42.91 343 eP    P       17 56 29.0 +3.1
BTO                             S    S       18 02 57.0 +9.0
BTO                             pmax pmax
      comp=Z,12nm,0.5s
BTO                             pmax pmax
      comp=Z,220nm,3.6s
BTO                             LR   LR
      comp=Z,530nm,7.2s
BTO                             LR   LR
      comp=Z,410nm,7.3s
BTO                             LR   LR
      comp=Z,460nm,16.3s
LSA   Lhasa          44.03 315  P    P       17 56 35.7 +0.2
LSA   Lhasa          44.03 315  P    P       17 56 35.7 +0.2
LSA                             pmax pmax
      comp=Z,10.0nm,0.7s
LSA   Lhasa          44.03 315  P    P       17 56 37.1 +1.6
LSA                             sP   sP      17 56 50.9 +0.3
USRK  Ussuriysk Ar.  44.62   7  P    P       17 56 40.1 +0.7
      comp=Z,11nm,0.8s,baz=192,slow=6.2,SNR=12
      comp=Z,11nm,0.8s
MDJ   Mudanjiang     44.79   4  P    P       17 56 42.0 +1.2
MDJ                             pmax pmax
      comp=Z,20nm,1.4s
MDJ   Mudanjiang     44.79   4  P    P       17 56 42.0 +1.2
DZM   Mont Dzumac    45.66 121 eLR   LR      18 09 35.7
      comp=Z,247nm,25.1s
GTA   Gaotai         45.77 332 eP    P       17 56 50.6 +1.8
GTA                             pmax pmax
      comp=Z,21nm,1.0s
BNX   BinXian        45.79   2 ⇓P    P       17 56 48.3 -0.4
BNX                             pmax pmax
      comp=Z,9.0nm,1.0s
GOMU  GeErMu         45.93 325  P    P       17 56 50.3 -0.1
GOMU                            pmax pmax
      comp=Z,6.0nm,1.3s
EVN   Everest        46.24 310  P    P       17 56 52.3 -1.0
EVN                             IAmb IAmb    17 56 55.9
      comp=Z,12nm,0.7s
HYB   Hyderabad      49.14 293 eP    P       17 57 14.6 -0.7
HYB                            esP   pwP     17 57 27.9 -1.8
HYB                            ePcP  PcP     17 58 38.2 -0.2
HYB                            ePP   PP      17 59 10.1 +0.8
HILR  Hailar Array B 49.79 355  P    P       17 57 21.1 +1.4
      comp=Z,8.7nm,0.5s,baz=177,slow=9.3,SNR=14
      comp=Z,8.7nm,0.5s
HEH   HeiHe          50.30   2 eP    P       17 57 23.2 -0.3
HEH                             pmax pmax
      comp=Z,19nm,1.0s
ULN   Ulaanbaatar    50.42 344  P    P       17 57 24.2 -0.4
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ULN	**Ulaanbaatar**	50.42	344	*ce*P	P	17 57 24.3	-0.3
ULN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SONM	**Songino Array**	50.57	344	P	P	17 57 25.3	-0.4
	comp=Z,6.9nm,0.9s,baz=158,slow=9.5,SNR=20						
SONM				LR	LR	18 19 42.8	
	comp=Z,96nm,18.9s,baz=160,slow=37						
	comp=Z,6.9nm,0.9s						
SONM	**Songino Array**	50.57	344	P	P	17 57 25.1	-0.7
ZEA	**Zeya**	53.78	1	*e*P	P	17 57 49.6	+0.3
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ	**Urumqi**	55.13	328	*e*P	P	17 58 01.4	+1.9
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
JCZ	**Jackson Bay**	58.35	144	P	P	17 58 24.6	+2.2
WUS	**Wushi**	58.54	320	IAmb	IAmb	17 58 26.6	
	comp=Z,11nm,1.0s						
WUS	**Wushi**	58.54	320	P	P	17 58 25.4	+1.7
ZSN	**Zaisan**	59.02	329	*e*P	P	17 58 26.5	-0.3
ZSN	**Zaisan**	59.02	329	*e*P	P	17 58 26.5	-0.3
NIL	**Nilore**	59.20	310	P	P	17 58 26.8	-1.5
NIL				IAmb	IAmb	17 58 42.3	
	comp=Z,10nm,0.8s						
NIL	**Nilore**	59.20	310	P	P	17 58 26.8	-1.5
NIL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DGZ	**Jazzator, Alta**	59.30	332	*i* P	P	17 58 27.9	-1.0
DGZ				pmax	pmax		
	comp=Z,12nm,1.0s						
SHLS	**Shalkode**	59.46	323	*e*P	P	17 58 27.6	-2.4
	comp=Z,8.1nm,1.0s						
SHLS	**Shalkode**	59.46	323	*e*P	P	17 58 27.6	-2.4
SHLS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PEA0B	**Petropavlovsk-**	59.62	22	P	P	17 58 32.0	+1.2
PEA0B	**Petropavlovsk-**	59.62	22	P	P	17 58 32.0	+1.2
PEA0B				pmax	pmax		
	comp=Z,28nm,0.9s						
PETK	**Petropavlovsk-**	59.62	22	P	P	17 58 31.9	+1.2
	comp=Z,19nm,0.8s,baz=204,slow=5.6,SNR=22						
	comp=Z,19nm,0.8s						
PETK	**Petropavlovsk-**	59.62	22	P	P	17 58 31.7	+0.9
PETK	**Petropavlovsk-**	59.62	22	P	P	17 58 32.0	+1.2
UZB	**Uzynbulak**	59.72	322	*e*P	P	17 58 31.2	-0.7
UZB	**Uzynbulak**	59.72	322	*e*P	P	17 58 31.1	-0.8
TARG	**Taragay, Kyrgy**	59.72	320	IAmb	IAmb	17 58 56.1	
	comp=Z,13nm,1.2s						
TARG	**Taragay, Kyrgy**	59.72	320	P	P	17 58 33.3	+1.0
TARG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PRZ	**Przheval'sk**	59.74	321	IAmb	IAmb	17 58 35.1	
	comp=Z,12nm,0.6s						
KSH	**Kashi**	59.81	317	P	P	17 58 34.4	+1.8
KSH				pP	pwP	17 58 45.2	-1.7
KSH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MK31	**Makanchi Array**	59.96	327	*ce*P	P	17 58 32.8	-0.6
MKAR	**Makanchi Array**	59.96	327	P	P	17 58 32.5	-0.9
	comp=Z,9.2nm,0.7s,baz=122,slow=8.3,SNR=53						
MKAR				LR	LR	18 25 11.3	
	comp=Z,119nm,18.9s,baz=87,slow=37						
	comp=Z,9.2nm,0.7s						
MKAR	**Makanchi Array**	59.96	327	P	P	17 58 31.7	-1.7
SATY	**Saty**	60.05	322	*e*P	P	17 58 33.5	-0.6
	comp=Z,8.1nm,0.8s						
SATY	**Saty**	60.05	322	*e*P	P	17 58 33.5	-0.6
SATY				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MAKZ	**Makanchi**	60.14	327	P	P	17 58 33.3	-1.3
MAKZ				IAmb	IAmb	17 58 36.3	
	comp=Z,10nm,0.6s						
MAKZ	**Makanchi**	60.14	327	P	P	17 58 33.3	-1.3
MAKZ				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MAKZ	**Makanchi**	60.14	327	P	P	17 58 33.5	-1.1
KHZ	**Kahutara**	60.35	140	P	P	17 58 37.7	+1.7
	comp=Z,14nm,2.2s						
BKZ	**Black Stump Fm**	60.76	136	P	P	17 58 40.8	+1.8
TNSS	**Tian-Shan**	60.94	321	*e*P	P	17 58 39.6	-1.0
TNSS	**Tian-Shan**	60.94	321	*e*P	P	17 58 39.6	-1.0
MDOK	**Medeo**	60.95	321	*e*P	P	17 58 39.7	-0.7
MDOK	**Medeo**	60.95	321	*e*P	P	17 58 39.6	-0.7
AAA	**Alma-Ata**	61.05	321	*e*P	P	17 58 40.5	-0.4
	comp=Z,12nm,1.1s						
AAA	**Alma-Ata**	61.05	321	*e*P	P	17 58 40.5	-0.4
AAA				pmax	pmax		
	comp=Z,12nm,1.1s						
TDK	**Taldyqorghan**	61.11	324	*e*P	P	17 58 40.8	-0.5
	comp=Z,5.3nm,0.7s						
TDK	**Taldyqorghan**	61.11	324	*e*P	P	17 58 40.7	-0.5
TDK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MANEM	**Manem**	61.95	314	IAmb	IAmb	17 58 50.9	
	comp=Z,24nm,1.0s						
YAK	**Yakutsk**	62.16	2	LR	LR	18 27 49.4	
	comp=Z,29nm,18.6s,baz=64,slow=38						
YAK	**Yakutsk**	62.16	2	P	P	17 58 47.0	-0.9
YAK	**Yakutsk**	62.16	2	*e*P	P	17 58 48.1	+0.2
YAK				*e**PP	sP	17 59 02.6	-1.0
YAK				pmax	pmax		
	comp=Z,56nm,1.3s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.1s						
YAK	**Yakutsk**	62.16	2	P	P	17 58 47.9	0.0
AAK	**Ala-Archa**	62.30	320	LR	LR	18 26 48.3	
	comp=E,102nm,22.0s,baz=85,slow=37						
AAK	**Ala-Archa**	62.30	320	*ce*P	P	17 58 49.1	-0.4
AAK				pmax	pmax		
	comp=Z,11nm,0.9s						
SGDS	**Sogindy**	62.61	321	*e*P	P	17 58 50.8	-0.6
	comp=Z,11nm,1.4s						
DRK	**Karamyk**	62.67	316	IAmb	IAmb	17 58 54.3	
	comp=Z,15nm,0.8s						
ARSB	**Arslanbob**	62.68	318	IAmb	IAmb	17 58 54.1	
	comp=Z,15nm,0.9s						
KBL	**Kabul**	62.77	310	P	P	17 58 50.5	-2.3
KBL				IAmb	IAmb	17 58 54.5	
	comp=Z,12nm,0.7s						
KBL	**Kabul**	62.77	310	P	P	17 58 50.5	-2.3
KBL				pmax	pmax		
	comp=Z,12nm,0.7s						
MA2	**Magadan**	62.86	14	*ce*P	P	17 58 52.8	+0.2
MA2				pmax	pmax		
	comp=Z,16nm,1.3s						
ZALV	**Zalesovo Beam**	63.43	335	P	P	17 58 54.6	-1.8
	comp=Z,2.4nm,0.4s,baz=122,slow=5.4,SNR=15						
	comp=Z,2.4nm,0.4s						
ZALV	**Zalesovo Beam**	63.43	335	P	P	17 58 54.2	-2.3
ZALV	**Zalesovo Beam**	63.43	335	*i* P	P	17 58 54.5	-2.0
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BTLS	**Baital**	63.76	322	*e*P	P	17 58 58.4	-0.6
	comp=Z,4.9nm,0.8s						
BTLS	**Baital**	63.76	322	*e*P	P	17 58 58.3	-0.6
BTLS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CHGR	**Chuyangaron**	64.22	314	P	P	17 59 02.4	+0.3
CHGR				pmax	pmax		
	comp=Z,35nm,1.1s						
KURBB	**Kurchatov Arra**	64.26	329	P	P	17 59 00.9	-1.1
	comp=Z,12nm,0.7s,baz=128,slow=6.1,SNR=53						
	comp=Z,12nm,0.7s						
KURK	**Kurchatov**	64.27	329	P	P	17 58 60.0	-2.1
KURK	**Kurchatov**	64.27	329	*ce*P	P	17 59 00.7	-1.4
KURK				pmax	pmax		
	comp=Z,31nm,1.0s						
KURK	**Kurchatov**	64.27	329	P	P	17 59 00.4	-1.7
DZA	**Taraz**	64.48	319	*e*P	P	17 59 03.2	-0.6
DZA	**Taraz**	64.48	319	*e*P	P	17 59 03.1	-0.6
IUG	**Iuzhnay**	65.02	318	*e*P	P	17 59 06.7	-0.7
	comp=Z,12nm,0.7s						
IUG	**Iuzhnay**	65.02	318	*e*P	P	17 59 06.6	-0.7
IUG				pmax	pmax		
	comp=Z,12nm,0.7s						
KK31	**Karatay Array**	65.11	319	IAmb	IAmb	17 59 10.1	
	comp=Z,9.2nm,0.8s						
KKAR	**Karatay Array**	65.11	319	P	P	17 59 06.2	-1.6
KKAR	**Karatay Array**	65.11	319	P	P	17 59 06.2	-1.6
BRLS	**Borolday**	65.53	318	*e*P	P	17 59 10.0	-0.6
	comp=Z,5.8nm,0.8s						
BRLS	**Borolday**	65.53	318	*e*P	P	17 59 09.9	-0.6
BRLS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SEY	**Seymchan**	66.18	13	*ce*P	P	17 59 15.4	+1.2
SEY				pmax	pmax		
	comp=Z,6.0nm,1.7s						
BRZS	**Berezniki**	67.05	326	*e*P	P	17 59 19.7	-0.4
BRZS	**Berezniki**	67.05	326	*e*P	P	17 59 19.6	-0.4
BVAR	**Borovoye Array**	69.81	328	P	P	17 59 36.3	-1.0
	comp=Z,7.8nm,0.8s,baz=126,slow=7.7,SNR=29						
	comp=Z,7.8nm,0.8s						
BORK	**Borovoye**	69.86	328	P	P	17 59 35.7	-1.8
BORK				IAmb	IAmb	17 59 40.0	
	comp=Z,21nm,1.1s						
BORK	**Borovoye**	69.86	328	*ce*P	P	17 59 37.3	-0.3
BORK				pmax	pmax		
	comp=Z,22nm,1.3s						
BORK	**Borovoye**	69.86	328	P	P	17 59 37.2	-0.3
BORK				pP	pP	17 59 47.0	-1.8
TIXI	**Tiksi**	71.77	1	LR	LR	18 32 13.5	
	comp=Z,57nm,21.6s,baz=192,slow=37						
TIXI	**Tiksi**	71.77	1	P	P	17 59 48.2	-0.5
TIXI				IAmb	IAmb	17 59 54.8	
	comp=Z,13nm,1.1s						
TIXI	**Tiksi**	71.77	1	*ce*P	P	17 59 48.1	-0.7
TIXI				pmax	pmax		
	comp=Z,14nm,1.3s						
TIXI	**Tiksi**	71.77	1	P	P	17 59 48.3	-0.5
TIXI				PcP	PcP	18 00 07.7	+0.1
NRIK	**Noril'sk**	73.88	347	P	P	18 00 01.8	+0.4
	comp=Z,21nm,0.7s,baz=127,slow=5.8,SNR=46						
NRIK				LR	LR	18 35 36.0	
	comp=Z,59nm,18.4s,baz=142,slow=38						
	comp=Z,21nm,0.7s						
NRIK	**Noril'sk**	73.88	347	IAmb	IAmb	18 00 02.4	
	comp=Z,21nm,0.8s						
NRIK	**Noril'sk**	73.88	347	*i* P	P	18 00 01.0	-0.3
NRIK				pmax	pmax		
	comp=Z,22nm,0.8s						
ABKAR	**Akbulak array**	74.25	322	P	P	18 00 02.4	-1.5
AKTO	**Aktyubinsk**	75.81	323	LR	LR	18 36 16.4	
	comp=Z,113nm,18.3s,baz=122,slow=38						
SVE	**Sverdlovsk**	76.52	329	*e*P	P	18 00 16.5	-0.3
SVE				pmax	pmax		
	comp=Z,19nm,0.8s						
SPIA	**Saint Paul Isl**	76.63	30	P	P	18 00 16.8	-0.6
	baz=248						
P08K	**Saint George I**	76.78	31	P	P	18 00 18.2	0.0
	baz=249						
ARTI	**Arti**	77.53	328	P	P	18 00 21.2	-1.3
ARTI				IAmb	IAmb	18 00 24.4	
	comp=Z,11nm,0.7s						
ARTI	**Arti**	77.53	328	*c i*P	P	18 00 22.2	-0.3
ARTI				S	S	18 10 10.1	-0.6
ARTI				SS	SS	18 15 07.0	-3.5
ARTI				pmax	pmax		
	comp=Z,74nm,4.0s						
ABPO	**Ambohimpanom**	78.58	251	P	P	18 00 29.6	+0.3
LKRN	**Lenkeran, Azer**	79.55	309	P	P	18 00 35.4	+1.4
M11K	**Mekoryuk**	79.73	28	P	P	18 00 35.1	+0.6
	baz=251						
VNDA	**Vanda**	79.75	172	P	P	18 00 35.4	+1.1
	comp=Z,1.9nm,1.0s,baz=39,slow=6.5,SNR=2.7						
	comp=Z,1.9nm,1.0s						
S12K	**Black Hills**	80.49	33	P	P	18 00 39.6	+0.8
	baz=256						
RAYN	**Ar Rayn**	80.65	294	P	P	18 00 39.1	-1.2
RAYN	**Ar Rayn**	80.65	294	P	P	18 00 39.1	-1.2
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
RAYN	**Ar Rayn**	80.65	294	P	P	18 00 39.3	-1.0
AKT	**Akhty**	80.76	312	*e*P	P	18 00 40.8	+0.1
AKT				*e*		18 00 47.3	
AKT				*e**PP	pwP	18 00 54.4	-0.9
AKT				pmax	pmax		
	comp=Z,14nm,0.6s						
TNA	**Tin City**	80.78	23	P	P	18 00 41.1	+1.1
	baz=249						
K13K	**Kusilvak Mount**	80.93	27	P	P	18 00 42.4	+1.5
	baz=252						
M13K	**Dall Lake**	81.08	28	P	P	18 00 43.4	+1.7
	baz=254						
SEKA	**Sheki**	81.12	312	P	P	18 00 43.9	+1.4
MNGR	**Mingechevir, A**	81.14	311	P	P	18 00 43.8	+1.3
SDPT	**Sand Point**	81.28	34	P	P	18 00 44.2	+1.3
	baz=257						
F14K	**Arctic Creek**	81.37	23	P	P	18 00 44.8	+1.7
	baz=250						
ANM	**Nome**	81.45	24	P	P	18 00 45.9	+2.3
	baz=251						
L14K	**Kuka Creek**	81.66	28	P	P	18 00 46.7	+1.9
	baz=254						
J14K	**Nanvaranak Lak**	81.66	26	P	P	18 00 46.8	+2.0
	baz=253						
CHNA	**Chernabura Isl**	81.66	34	P	P	18 00 46.5	+1.6
	baz=258						
GANJ	**Ganja**	81.70	311	P	P	18 00 46.9	+1.3
N14K	**Kuskokwak Cree**	81.75	29	P	P	18 00 47.1	+1.8
	baz=255						
O14K	**Tigyukauivet M**	81.79	30	P	P	18 00 47.6	+2.0
	baz=256						
M14K	**Bethel**	81.84	28	P	P	18 00 47.5	+1.8
	baz=255						
S14K	**Fog Glacier**	82.00	33	P	P	18 00 48.7	+1.9
	baz=258						
F15K	**North Star Dit**	82.10	23	P	P	18 00 48.8	+1.7
	baz=252						
G15K	**Niukluk**	82.13	24	P	P	18 00 49.2	+2.0
	baz=252						
NAX	**Nakhchivan**	82.15	309	P	P	18 00 49.1	+1.1
L15K	**Ungalak Mounta**	82.30	27	P	P	18 00 50.1	+2.0
	baz=255						
M15K	**Kasigluk River**	82.43	29	P	P	18 00 50.5	+1.6
	baz=256						
K15K	**Wolf Creek Mou**	82.44	27	IAmb	IAmb	18 00 52.2	
	comp=Z,16nm,0.8s						
K15K	**Wolf Creek Mou**	82.44	27	P	P	18 00 50.2	+1.3
	baz=255						
O15K	**Ungalikthiuk R**	82.49	30	P	P	18 00 50.5	+1.2
	baz=257						
N15K	**Kwethluk River**	82.59	29	P	P	18 00 51.4	+1.7
	baz=257						
BELG	**Belogornoye**	82.59	323	*i* P	P	18 00 49.2	-0.7
BELG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
C16K	**Lisburne Hills**	82.67	21	IAmb	IAmb	18 00 52.8	
	comp=Z,15nm,1.1s						
C16K	**Lisburne Hills**	82.67	21	P	P	18 00 51.8	+1.8
	baz=251						
H16K	**Elim**	82.76	24	P	P	18 00 52.0	+1.5
	baz=254,SNR=12						
KIRV	**Kirov**	82.79	329	*ce*P	P	18 00 50.9	+0.2
GNI	**Garni**	82.84	310	LR	LR	18 43 13.5	
	comp=Z,30nm,18.3s,baz=32,slow=40						
G16K	**Koyuk River**	82.92	24	IAmb	IAmb	18 00 54.3	
	comp=Z,20nm,0.9s						
G16K	**Koyuk River**	82.92	24	P	P	18 00 53.0	+1.7
	baz=254,SNR=10						
J16K	**Anvik River**	83.10	26	P	P	18 00 54.3	+2.0
	baz=256						
I17K	**Unalakleet**	83.21	25	P	P	18 00 55.0	+2.1
	baz=256						
L16K	**Owhat River**	83.24	28	P	P	18 00 54.4	+1.3
L16K				IAmb	IAmb	18 00 55.9	
	comp=Z,18nm,0.8s						
L16K	**Owhat River**	83.24	28	P	P	18 00 54.7	+1.7
	baz=257,SNR=6.8						
N16K	**Nishlik Lake**	83.30	29	P	P	18 00 55.0	+1.6
	baz=258						
D17K	**Noatak River**	83.30	21	P	P	18 00 55.3	+2.0
	baz=253,SNR=24						
R16K	**Pilot Point**	83.32	32	P	P	18 00 54.3	+0.8
	baz=259						
M16K	**Timber Creek**	83.33	28	P	P	18 00 55.2	+1.7
	baz=258						
P16K	**Nushagak River**	83.39	30	P	P	18 00 56.0	+2.2
	baz=259						
O16K	**Kokwok River B**	83.45	30	P	P	18 00 55.9	+1.7
	baz=258						
RDOG	**Red Dog Mine**	83.47	21	P	P	18 00 55.9	+1.8
	baz=253						
C17K	**DeLong Mountai**	83.50	21	P	P	18 00 55.2	+0.9
	baz=253,SNR=12						
E17K	**Hotham Inlet**	83.59	22	P	P	18 00 56.7	+1.9
	baz=254,SNR=11						
G17K	**Kiwalik Mounta**	83.64	24	P	P	18 00 56.4	+1.4
	baz=255,SNR=12						
F17K	**Baldwin Pennin**	83.64	23	P	P	18 00 56.4	+1.4
	baz=255						
J17K	**VABM Dome**	83.80	26	P	P	18 00 57.2	+1.3
	baz=257,SNR=7.4						
H17K	**Granite Mounta**	83.80	24	IAmb	IAmb	18 00 59.0	
	comp=Z,18nm,0.9s						
H17K	**Granite Mounta**	83.80	24	P	P	18 00 57.9	+2.0
	baz=256,SNR=6.9						
L17K	**Donlin**	83.88	27	P	P	18 00 57.5	+1.2
	baz=258						
R17L	**Mt. Peulik Vol**	83.97	32	P	P	18 00 58.5	+1.6
	baz=260						
O17K	**Koliganek Bris**	83.98	30	P	P	18 00 58.8	+1.9
	baz=259						
K17K	**Iditarod**	84.00	27	P	P	18 00 58.7	+1.8
	baz=258						
CHIR	**Chirikof Islan**	84.08	34	P	P	18 00 59.2	+1.8
	baz=261						
N17K	**Nushagak Hills**	84.08	29	P	P	18 00 59.1	+1.8
	baz=259						
E18K	**Tukpahlearik C**	84.14	22	IAmb	IAmb	18 01 00.7	
	comp=Z,14nm,0.7s						
E18K	**Tukpahlearik C**	84.14	22	P	P	18 00 59.8	+2.2
	baz=255						
KARS	**Kars**	84.15	311	IAmb	IAmb	18 01 01.3	
	comp=Z,13nm,0.8s						
B18K	**Kokolik River**	84.23	20	P	P	18 01 00.2	+2.3
	baz=254,SNR=8.5						
C18K	**Utukok River**	84.25	21	IAmb	IAmb	18 01 00.8	
	comp=Z,12nm,0.8s						
C18K	**Utukok River**	84.25	21	P	P	18 00 59.7	+1.6
	baz=255,SNR=7.4						
F18K	**Selawik**	84.30	23	P	P	18 01 00.6	+2.2
	baz=256						
Q17K	**Contact Creek**	84.33	31	P	P	18 00 59.9	+1.1
	baz=260						
H18K	**Honhosa River**	84.49	24	P	P	18 01 01.1	+1.8
	baz=258						
KBZ	**Khabaz**	84.58	314	P	P	18 01 00.3	+0.1
	comp=Z,6.3nm,0.9s,baz=130,slow=3.8,SNR=13						
	comp=Z,6.3nm,0.9s						
KBZ	**Khabaz**	84.58	314	*ce*P	P	18 01 01.0	+0.8
KBZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
L18K	**Granite Mounta**	84.63	27	P	P	18 01 02.0	+1.8
	baz=259						
A19K	**Wainwright**	84.71	19	P	P	18 01 02.2	+1.9
	baz=255						
KIV	**Kislovodsk**	84.75	314	*e*P	P	18 01 00.0	-1.3
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SHA1	**Shidzhatmaz**	84.75	314	*ce*P	P	18 00 59.6	-1.9
J18K	**Innoko River**	84.85	26	P	P	18 01 02.5	+1.3
	baz=259						
M18K	**Stony River**	84.91	28	P	P	18 01 03.3	+1.8
	baz=260						
C19K	**Lookout Ridge**	84.93	20	IAmb	IAmb	18 01 22.9	
	comp=Z,12nm,1.0s						
C19K	**Lookout Ridge**	84.93	20	P	P	18 01 03.2	+1.7
	baz=256,SNR=5.9						
O18K	**Koktuh Hills**	84.93	30	P	P	18 01 02.6	+0.9
	baz=261						
SII	**Sitkinak Islan**	84.98	33	P	P	18 01 02.8	+0.7
	baz=262						
G19K	**Purcell Mounta**	85.21	24	IAmb	IAmb	18 01 05.4	
	comp=Z,6.5nm,0.8s						
G19K	**Purcell Mounta**	85.21	24	P	P	18 01 04.8	+1.8
	baz=259						
D19K	**Kuna River**	85.31	21	IAmb	IAmb	18 01 06.5	
	comp=Z,11nm,0.8s						
D19K	**Kuna River**	85.31	21	P	P	18 01 04.6	+1.1
	baz=258,SNR=7.0						
H19K	**Roundabout Mou**	85.35	24	IAmb	IAmb	18 01 06.1	
	comp=Z,8.1nm,0.7s						
H19K	**Roundabout Mou**	85.35	24	P	P	18 01 05.0	+1.3
	baz=259						
PPT2	**Papeete2**	85.37	108	*e*S	S	18 11 32.7	-0.7
	comp=Z,34nm,24.0s						
PPT2	**Papeete2**	85.37	108	*e*LR	LR	18 27 59.7	
	comp=Z,68nm,26.5s						
E19K	**Redstone River**	85.42	22	P	P	18 01 05.0	+1.0
	baz=258,SNR=18						
J19K	**Poorman**	85.43	26	P	P	18 01 05.4	+1.3
	baz=260						
N19K	**Bonanza Creek**	85.44	29	P	P	18 01 05.4	+1.0
	baz=261						
L19K	**White Mountain**	85.47	28	P	P	18 01 05.8	+1.4
	baz=261						
Q19K	**Cape Douglas,**	85.59	31	P	P	18 01 06.2	+1.1
	baz=262						
TBI	**Tubuai**	85.62	113	*e*LR	LR	18 28 08.1	
	comp=Z,775nm,34.8s						
D20K	**Etivluk River**	85.89	21	IAmb	IAmb	18 01 09.4	
	comp=Z,5.7nm,0.8s						
D20K	**Etivluk River**	85.89	21	P	P	18 01 07.9	+1.6
	baz=259						
F20K	**Avaraart Lake**	85.92	23	P	P	18 01 08.2	+1.7
	baz=260						
B20K	**Meade River**	85.96	20	P	P	18 01 08.2	+1.6
	baz=258						
E20K	**Nigu River**	85.96	21	P	P	18 01 08.3	+1.5
	baz=259						
H20K	**Anotleneega Mo**	85.99	24	P	P	18 01 08.1	+1.2
	baz=261						
VRH	**Novokhopyorsk**	86.07	321	*e*P	P	18 01 05.1	-2.4
VRH				pmax	pmax		
	comp=Z,20nm,0.9s						
KOPT	**Kop Dagi**	86.08	310	IAmb	IAmb	18 01 14.7	
	comp=Z,12nm,1.0s						
J20K	**Nowinta River**	86.09	26	P	P	18 01 08.4	+1.0
	baz=262						
M20K	**Styx River**	86.23	28	P	P	18 01 09.6	+1.4
	baz=263						
A21K	**Barrow**	86.40	18	P	P	18 01 09.9	+1.1
	baz=259						
C21K	**Knifeblade Rid**	86.62	21	P	P	18 01 11.6	+1.7
	baz=261						
G21K	**Allakaket**	86.70	23	IAmb	IAmb	18 01 12.8	
	comp=Z,7.3nm,1.0s						
G21K	**Allakaket**	86.70	23	P	P	18 01 11.5	+1.1
	baz=262						
B21K	**Ikpikpuk River**	86.76	20	P	P	18 01 12.0	+1.4
	baz=261						
PPLA	**Purkeypile**	86.79	27	P	P	18 01 12.2	+1.1
	baz=263						
H21K	**Melozitna Rive**	86.87	24	P	P	18 01 11.4	+0.2
	baz=263						
A22K	**Sinclair Lake**	86.87	19	P	P	18 01 12.5	+1.5
	baz=260						
SKT	**Skwentna**	87.00	28	P	P	18 01 12.9	+1.0
	baz=264						
I21K	**Tanana**	87.15	25	P	P	18 01 13.9	+1.4
	baz=263						
B22K	**Teshekpuk Lake**	87.28	20	IAmb	IAmb	18 01 19.0	
	comp=Z,7.0nm,1.1s						
B22K	**Teshekpuk Lake**	87.28	20	P	P	18 01 14.2	+1.2
	baz=262						
D22K	**Ayikyak River**	87.33	21	P	P	18 01 14.5	+1.1
	baz=263						
F22K	**John River**	87.35	22	P	P	18 01 15.0	+1.5
	baz=263						
H22K	**Ishtalitna Cre**	87.48	24	P	P	18 01 15.2	+1.0
	baz=264						
G22K	**Bettles**	87.54	23	P	P	18 01 15.6	+1.3
	baz=264						
E22K	**Anaktuvuk Pass**	87.56	22	IAmb	IAmb	18 01 17.1	
	comp=Z,9.4nm,1.1s						
E22K	**Anaktuvuk Pass**	87.56	22	P	P	18 01 15.6	+1.1
	baz=263						
VORD	**Divnogorie**	87.58	321	*e*P	P	18 01 13.5	-1.4
VORD				pmax	pmax		
	comp=Z,20nm,1.1s						
MLY	**Manley**	87.66	25	IAmb	IAmb	18 01 16.5	
	comp=Z,6.2nm,1.0s						
MLY	**Manley**	87.66	25	P	P	18 01 16.0	+0.9
	baz=264						
VORR	**Voronezh**	87.67	322	*e*P	P	18 01 13.4	-1.9
VORR				pmax	pmax		
	comp=Z,20nm,1.0s						
VSR	**Storozhevoye**	87.67	321	*e*P	P	18 01 12.9	-2.4
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LPSR	**Galich'ya Gora**	87.89	322	*e*P	P	18 01 13.8	-2.6
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
D23K	**Nanushuk River**	88.06	21	IAmb	IAmb	18 01 19.4	
	comp=Z,14nm,1.3s						
D23K	**Nanushuk River**	88.06	21	P	P	18 01 18.4	+1.6
	baz=264						
KLMR	**Klimovskoe**	88.07	331	*e*P	P	18 01 14.5	-2.5
KLMR				*e**PP	pP	18 01 28.3	-0.3

KLMR				pmax	pmax		
	comp=Z,23nm,1.1s						
COLD	Coldfoot	88.08	23	IAmb	IAmb	18 01 19.6	
	comp=Z,9.5nm,1.0s						
COLD	Coldfoot	88.08	23	P	P	18 01 18.2	+1.2
	baz=265						
G23K	Bananza Creek	88.10	23	IAmb	IAmb	18 01 19.8	
	comp=Z,9.6nm,1.0s						
G23K	Bananza Creek	88.10	23	P	P	18 01 18.2	+1.0
	baz=265						
C23K	Itkillik River	88.17	20	IAmb	IAmb	18 01 43.9	
	comp=Z,22nm,1.5s						
C23K	Itkillik River	88.17	20	P	P	18 01 18.5	+1.2
	baz=264						
H23K	Yukon River	88.22	24	P	P	18 01 19.0	+1.2
	baz=266						
SYO	Syowa Base	88.24	201	⇓*e*P	P	18 01 18.4	+0.8
SYO	Syowa Base	88.24	201	⇓*e*sP	sP	18 01 33.2	-0.3
I23K	Minto, Yukon-K	88.25	25	P	P	18 01 18.9	+1.1
	baz=266						
NEA2	Nenana	88.33	25	P	P	18 01 19.2	+0.9
	baz=266						
MCK	McKinley	88.33	26	P	P	18 01 18.8	+0.5
	baz=266						
E23K	Chandalar	88.37	22	IAmb	IAmb	18 01 21.1	
	comp=Z,7.3nm,0.8s						
E23K	Chandalar	88.37	22	P	P	18 01 19.4	+0.9
	baz=266						
TOLK	Toolik Lake Re	88.43	21	P	P	18 01 19.2	+0.6
	baz=266						
PWL	Port Wells	88.44	29	P	P	18 01 18.8	0.0
	baz=267						
WAT1	Susitna Watana	88.45	27	P	P	18 01 19.6	+0.7
	baz=267						
SML	Sawmill	88.49	28	P	P	18 01 19.8	+0.7
	baz=267						
D24K	Happy Valley	88.74	21	P	P	18 01 21.1	+1.1
	baz=266						
M23K	Glacier View	88.78	28	P	P	18 01 21.1	+0.7
	baz=267						
WAT6	Susitna Watana	88.81	28	P	P	18 01 21.2	+0.5
	baz=267						
C24K	Franklin Bluff	88.82	20	P	P	18 01 21.6	+1.2
	baz=266						
H24K	Noodor Dome	88.91	24	P	P	18 01 22.1	+1.1
	baz=267						
SCM	Sheep Creek Mo	88.97	28	P	P	18 01 21.8	+0.4
	baz=268						
F24K	Squaw Lake	88.99	23	P	P	18 01 22.6	+1.3
	baz=267						
GLI	Glacier Island	89.04	29	P	P	18 01 22.1	+0.4
	baz=268						
G24K	Hadweenzic Riv	89.11	23	P	P	18 01 23.3	+1.4
	baz=268						
HDA	Harding Lake	89.24	26	P	P	18 01 22.4	-0.1
	baz=268						
ILAR	Eielson Array	89.28	25	P	P	18 01 21.7	-1.0
	comp=Z,0.9nm,0.6s,baz=239,slow=5.2,SNR=14						
	comp=Z,0.9nm,0.6s						
OBN	Obninsk	89.39	325	⇓*i*P	P	18 01 22.6	-0.7
OBN				*e**PP	pwP	18 01 36.2	-2.0
OBN				PPP	PPP	18 06 50.0	
OBN				*e*S	SKSac	18 11 48.9	-1.3
OBN				*e*		18 12 03.3	
OBN				SSS	SSS	18 21 42.0	
OBN				pmax	pmax		
	comp=Z,30nm,1.3s						
OBN				MLR	MLR		
	comp=Z,285nm,19.0s						
D25K	Kavik River	89.62	21	P	P	18 01 24.9	+0.6
	baz=268						
G25K	Bearman Lake	89.66	23	P	P	18 01 25.9	+1.5
	baz=269						
QSPA	South Pole Qui	89.73	180	P	P	18 01 25.9	+1.0
	comp=Z,3.0nm,0.8s,baz=321,slow=1.4,SNR=16						
	comp=Z,3.0nm,0.8s						
QSPA	South Pole Qui	89.73	180	P	P	18 01 25.4	+0.5
QSPA	South Pole Qui	89.73	180	P	P	18 01 25.9	+1.0
K24K	Donnelly Dome	89.74	26	P	P	18 01 25.2	+0.3
	baz=269						
GHAJ	Ghor Haditha	89.80	301	IAmb	IAmb	18 01 27.6	
	comp=Z,11nm,0.9s						
F25K	Christian Rive	89.86	23	P	P	18 01 26.4	+1.0
	baz=269						
PAX	Paxson	89.86	27	P	P	18 01 26.3	+0.8
	baz=269						
E25K	Arctic Village	89.89	22	IAmb	IAmb	18 03 24.7	
	comp=Z,29nm,1.9s						
E25K	Arctic Village	89.89	22	P	P	18 01 27.2	+1.7
	baz=269						
MMAI	Mount Meron Ar	89.95	303	P	P	18 01 27.7	+1.1
	comp=Z,2.0nm,0.5s,baz=95,slow=6.8,SNR=6.2						
	comp=Z,2.0nm,0.5s						
HARP	HAARP	90.00	28	P	P	18 01 27.2	+1.1
	baz=270						
F26K	Sheenjek River	90.43	22	P	P	18 01 29.5	+1.5
	baz=270						
C27K	Jago River	90.56	20	P	P	18 01 29.9	+1.3
	baz=271						
G26K	Porcupine Rive	90.58	23	P	P	18 01 29.7	+1.1
	baz=271						
J26L	Joseph Creek	90.71	26	P	P	18 01 29.7	+0.2
	baz=271						
L26K	Log Cabin Wild	90.83	27	P	P	18 01 30.7	+0.7
	baz=271						
I26K	Coal Creek Min	90.87	25	P	P	18 01 30.8	+0.8
	baz=271						
CRQE	Cirque	91.00	29	P	P	18 01 31.5	+0.5
	baz=271						
MCARA	McCarthy VSAT	91.02	29	P	P	18 01 30.1	-0.8
	baz=272						
BR104	Keskin Array S	91.34	310	P	P	18 01 31.7	-1.3
	comp=Z,3.0nm,0.8s						
BR131	Keskin Array S	91.34	310	IAmb	IAmb	18 04 17.2	
	comp=Z,8.2nm,1.4s						
BRTR	Keskin Array B	91.34	310	P	P	18 01 32.0	-1.0
	comp=Z,1.9nm,0.9s,baz=138,slow=4.1,SNR=9.2						
	comp=Z,1.9nm,0.9s						
BR105	Keskin Array S	91.36	310	P	P	18 01 31.9	-1.2
	comp=Z,4.4nm,1.0s						
BR106	Keskin Array S	91.36	310	P	P	18 01 31.8	-1.3
	comp=Z,1.9nm,1.0s						
K27K	Chicken	91.37	26	P	P	18 01 33.6	+1.2
	baz=272						
E27K	Coleen River	91.38	22	IAmb	IAmb	18 01 34.4	
	comp=Z,8.1nm,1.1s						
E27K	Coleen River	91.38	22	P	P	18 01 33.3	+0.9
	baz=273						
G27K	Doyon Strip	91.42	23	P	P	18 01 33.7	+1.1
	baz=273						
I27K	Kandik River	91.50	25	P	P	18 01 33.9	+0.8
	baz=273						
H27K	Steamboat Moun	91.50	24	P	P	18 01 34.4	+1.3
	baz=273						
L27K	Beaver Creek,	91.52	27	P	P	18 01 34.8	+1.6
	baz=273						
M27K	Edge Creek, AK	91.53	28	P	P	18 01 34.8	+1.4
	baz=272						
F28M	Old Crow	92.06	22	IAmb	IAmb	18 01 37.5	
	comp=Z,8.1nm,1.0s						
F28M	Old Crow	92.06	22	P	P	18 01 37.0	+1.4
	baz=274						
E28M	Babbage River	92.11	21	IAmb	IAmb	18 01 37.7	
	comp=Z,5.4nm,0.9s						
E28M	Babbage River	92.11	21	P	P	18 01 36.6	+0.8
	baz=275						
I28M	Miner Creek	92.21	25	P	P	18 01 37.3	+0.9
	baz=274						
YUK3	Moose Creek	92.23	28	P	P	18 01 37.2	+0.5
	baz=274						
D28M	Stokes Point	92.33	21	P	P	18 01 37.7	+0.9
	baz=276						
O28M	Mount Upton	92.43	29	P	P	18 01 38.6	+0.8
	baz=274						
PINM	Pinnacle	92.44	30	P	P	18 01 38.3	+0.7
	baz=274						
DAWY	Dawson	92.55	26	P	P	18 01 38.8	+0.9
	baz=275						
YUK8	Steele Glacier	92.60	29	P	P	18 01 38.3	-0.2
	baz=274						
E29M	Blow River	92.73	22	P	P	18 01 39.6	+1.0
	baz=276						
H29M	Whitestone	92.78	24	P	P	18 01 40.2	+1.3
	baz=276						
G29M	Pine Creek	92.85	23	P	P	18 01 40.3	+1.1
	baz=276						
I29M	Ogilvie Camp,	92.89	25	P	P	18 01 40.4	+0.9
	baz=276						
M29M	Somme Creek	93.11	28	P	P	18 01 42.2	+1.5
	baz=276						
L29M	L29M	93.20	27	IAmb	IAmb	18 01 43.6	
	comp=Z,12nm,1.1s						
L29M	L29M	93.20	27	P	P	18 01 42.6	+1.6
	baz=276						
K29M	Barlow Dome	93.39	26	P	P	18 01 43.0	+1.1
	baz=276						
EPYK	Eagle Plains	93.43	24	P	P	18 01 42.9	+1.0
	baz=277						
G30M	tAoh Zraii Nji	93.54	23	P	P	18 01 42.8	+0.3
	baz=278						
ARCES	ARCESS Array B	93.59	340	P	P	18 01 41.1	-1.5
	comp=Z,2.4nm,0.7s,baz=80,slow=6.7,SNR=7.9						
	comp=Z,2.4nm,0.7s						
F30M	Barrier River	93.62	22	P	P	18 01 43.8	+1.0
	baz=278						
I30M	Mount Dempster	93.72	25	P	P	18 01 43.9	+0.4
	baz=278						
HYT	Haines Junctio	93.73	29	P	P	18 01 44.6	+1.0
	baz=276						
P29M	Windy Craggy	93.75	30	P	P	18 01 45.0	+1.4
	baz=276						
J30M	Hart River	93.82	25	P	P	18 01 45.3	+1.4
	baz=278						
M30M	Minto, Yukon	93.87	27	P	P	18 01 45.2	+1.1
	baz=277						
AK09	Malin Array Si	93.93	321	P	P	18 01 43.7	-0.8
AK10	Malin Array Si	93.95	321	P	P	18 01 43.6	-1.0
AK03	Malin Array Si	93.96	321	P	P	18 01 43.7	-1.0
AKASG	Malin Array Be	93.96	321	P	P	18 01 42.8	-1.9
	comp=Z,1.7nm,0.6s,baz=72,slow=4.5,SNR=5.3						
	comp=Z,1.7nm,0.6s						
AKASG	Malin Array Be	93.96	321	*i* P	P	18 01 44.0	-0.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKBB	Malin Array Si	93.96	321	P	P	18 01 42.1	-2.6
AKBB	Malin Array Si	93.96	321	P	P	18 01 43.4	-1.3
AK01	Malin Array Si	93.97	321	P	P	18 01 43.5	-1.2
KIEV	Kiev	93.97	321	P	P	18 01 43.6	-1.1
AK04	Malin Array Si	94.00	321	P	P	18 01 43.6	-1.2
SPITS	Spitsbergen Ar	94.02	349	P	P	18 01 43.9	-0.6
	comp=Z,13nm,0.9s,baz=107,slow=7.9,SNR=5.7						
SPITS				LR	LR	18 50 01.4	
	comp=Z,43nm,19.2s,baz=196,slow=39						
	comp=Z,13nm,0.9s						
G31M	Satah River	94.31	23	IAmb	IAmb	18 01 47.4	
	comp=Z,9.5nm,0.9s						
G31M	Satah River	94.31	23	P	P	18 01 46.4	+0.5
	baz=280						
INK	Inuvik	94.35	21	P	P	18 01 46.5	+0.5
	baz=280						
F31M	Tsiigehtchic	94.42	22	P	P	18 01 46.8	+0.4
	baz=280						
H31M	Peel River	94.47	24	P	P	18 01 47.5	+0.8
	baz=280						
N31M	Braeburn, Yuko	94.48	28	P	P	18 01 47.6	+0.7
	baz=278						
TAOE	Nuku Hiva Isla	94.55	99	*e*LR	LR	18 32 25.1	
	comp=Z,143nm,28.4s						
FINES	FINESS Array B	94.55	332	P	P	18 01 45.6	-1.5
	comp=Z,12nm,1.1s,baz=93,slow=9.5,SNR=6.3						
	comp=Z,12nm,1.1s						
LUBAR	Lubar, Ukraine	94.97	320	P	P	18 01 47.2	-2.1
P32M	Atlin	95.78	30	P	P	18 01 53.9	+1.0
	baz=280						
N32M	Quiet Lake	95.82	29	P	P	18 01 54.3	+1.2
	baz=280						
HORU	Horodok	95.90	319	P	P	18 01 52.5	-1.1
KMPD	K-Podol'skiy	95.95	319	P	P	18 01 52.3	-1.5
TESR	Tescani	96.05	317	P	P	18 01 53.6	-0.8
MATP	Matopo	96.23	250	LR	LR	18 41 59.3	
	comp=Z,68nm,18.4s,baz=92,slow=33						
STNU	Starunia	97.22	319	P	P	18 01 58.6	-1.0
NVL	N'lazarevskaya	97.37	198	*e*P	P	18 01 55.7	-4.0
NVL				*e*		18 05 54.2	
NVL				*e*PPP	PPP	18 08 00.0	
NVL				*e*S	SKSac	18 12 28.5	-5.1
NVL				*e*SS	SS	18 19 56.9	-2.1
NVL				*e*SSS	SSS	18 23 43.1	
NVL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
NVL				MLR	MLR		
	comp=Z,800nm,23.0s						
DLBC	Dease Lake	97.87	31	P	P	18 02 02.4	0.0
	baz=283						
SHIU	Shidnytsya	97.89	320	P	P	18 02 02.4	-0.3
BRIU	Brid	98.25	319	P	P	18 02 03.4	-0.8
LBTB	Lobatse	98.63	245	LR	LR	18 44 30.9	
	comp=Z,32nm,18.5s,baz=62,slow=34						
BOSA	Boshof	98.65	241	LR	LR	18 43 38.6	
	comp=Z,38nm,18.8s,baz=52,slow=34						

NEIC ***11*** *17:58:48.3±2.3, 19°.17N±0°.02×67°.12W±0°.04, h10^{km}±1^{km}, ML2.2/8, Md3.0/7(RSPR), Error ellipse: s-maj=6.8km s-min=3.0km az=61.0*

SDD ***11*** *17:58:50.3±1.4, 19°.17N×67°.15W, h19^{km}±75^{km}, MD3.1, ML2.7, MW2.5, Presumed earthquake*

RSPR ***11*** *17:58:53.0, 19°.09N×67°.10W, h50^{km}±12^{km}, MD3.0/7*

ISC 11 17:58:47.4±2.0**, 19°.15N**±0°.08×**67°.12W**±0°.05**, h2**^{km}±12^{km}**, n31, σ0^{s}.63**/38**, 6C-1D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.68	180	Pg	Pb	17 59 01.5	-0.6
AGPR	Aguadilla, PR	0.68	180	⇑*e*P	Pn	17 59 03.2	-0.9
AGPR	Aguadilla, PR	0.68	180	*e*S	Sb	17 59 13.3	+1.4
AGPR	Aguadilla, PR	0.68	180	*e*Pg	Pn	17 59 03.1	-1.0
AGPR				*e*Sg	Sb	17 59 12.6	+0.7
AGPR				IAML		17 59 14.1	
	comp=N,148nm,0.3s						
AOPR	Arecibo Observ	0.87	157		Sb	17 59 18.1	+0.7
AOPR	Arecibo Observ	0.87	157		Pg	17 59 04.0	-0.2
AOPR				IAML		17 59 18.2	
	comp=N,106nm,4.2s						
AOPR	Arecibo Observ	0.87	157	⇓*e*P	Pn	17 59 06.5	-0.2
AOPR	Arecibo Observ	0.87	157	*e*S	Sb	17 59 18.1	+0.7
AOPR	Arecibo Observ	0.87	157	*e*Pg	Pn	17 59 06.5	-0.2
AOPR				*e*Sg	Sb	17 59 18.5	+1.1
EMPR	Esperanza - Ma	0.87	140		Sn	17 59 19.4	-0.6
EMPR	Esperanza - Ma	0.87	140	*e*S	Sn	17 59 19.4	-0.6
LSP	Las Mesas	0.97	178		Pn	17 59 08.0	-0.2
LSP					Sb	17 59 20.9	+0.6
LSP	Las Mesas	0.97	178	⇑*e*P	Pn	17 59 08.0	-0.2
LSP	Las Mesas	0.97	178	*e*S	Sb	17 59 20.9	+0.6
ECPR	Experimental S	1.09	139	⇑*e*P	Pn	17 59 10.7	+0.9
ECPR	Experimental S	1.09	139	*e*S	Sn	17 59 25.6	+0.1
CRPR	Cabo Rojo, PR	1.14	180		Pn	17 59 10.0	-0.4
CRPR					Sb	17 59 25.3	+0.1
CRPR	Cabo Rojo, PR	1.14	180	⇑*e*P	Pn	17 59 10.0	-0.4
CRPR	Cabo Rojo, PR	1.14	180	*e*S	Sb	17 59 25.3	+0.1
CRPR	Cabo Rojo, PR	1.14	180	*e*Pg	Pn	17 59 10.1	-0.4
CRPR				*e*Sg	Sg	17 59 25.1	+0.9
CRPR				IAML		17 59 32.4	
	comp=N,218nm,0.3s						
MLPR	Magueyes Islan	1.18	177	⇑*e*P	Pn	17 59 10.5	-0.4
MLPR	Magueyes Islan	1.18	177	*e*S	Sg	17 59 25.9	+0.5
MLPR	Magueyes Islan	1.18	177	*e*Pg	Pn	17 59 10.7	-0.2
MLPR				*e*Sg	Sg	17 59 25.9	+0.5
MLPR				IAML		17 59 34.7	
	comp=N,164nm,0.3s						
OBIP	Obispado Ponce	1.21	156		Pn	17 59 11.8	+0.5
OBIP					Sb	17 59 26.9	-0.1
OBIP	Obispado Ponce	1.21	156	IAML		17 59 49.3	
	comp=N,39nm,3.6s						
OBIP	Obispado Ponce	1.21	156	⇑*e*P	Pn	17 59 11.8	+0.5
OBIP	Obispado Ponce	1.21	156	*e*S	Sb	17 59 26.9	-0.1
HUMP	Col San Antoni	1.57	130	Pn	Pg	17 59 17.1	-0.4
HUMP				IAML		17 59 44.3	
	comp=N,27nm,0.9s						
HUMP				IAML		18 00 15.5	
	comp=E,33nm,3.0s						
MIDR	Miches	1.84	265	*e*S	Sn	17 59 44.3	+0.5
DR12	Loma Pena Alta	2.17	261	Pn	Pn	17 59 25.4	+0.8
HATOM	Hato Mayor del	2.17	261	*e*Pg	Pb	17 59 26.6	-0.9
HATOM				*e*Sg	Sb	17 59 55.2	+0.2
HATOM				IAML		18 00 01.8	
	comp=N,66nm,0.3s						

IDC ***11*** *17:59:52.4±3.3, 7°.64S×128°.18E, h146^{km}±32^{km}, mb3.6/9, mbtmp4.2/13, MS3.5/3, Error ellipse: s-maj=29.4km s-min=17.8km az=57.0*

NEIC ***11*** *17:59:53.7±1.5, 7°.55S±0°.08×128°.16E±0°.08, h153^{km}±7^{km}, mb4.0/12, Error ellipse: s-maj=11.8km s-min=10.3km az=140.0*

ISC 11 17:59:52.3±0.6**, 7°.60S**±0°.07×**128°.18E**±0°.08**, h142**^{km}**, n42, σ1^{s}.46**/39**, mb4.0**/15**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.12	97		Pn	18 00 42.8	+2.0
SOEI	Soe	4.42	241		Pn	18 00 59.9	+1.9
BATI	Baumata	5.16	240	P	Pn	18 01 09.7	+1.9
	286nm,0.4s,baz=137,slow=2.7,SNR=99						
BATI				S	Sn	18 02 06.2	-0.4
	139nm,0.3s,baz=104,slow=17,SNR=17						
MTN	Manton Dam	5.97	151		Pn	18 01 19.6	+1.1
MMRI	Maumere	5.97	260		Pn	18 01 19.4	+0.8
FAKI	Fak Fak	6.17	41		Pn	18 01 20.5	-0.7
KNRA	Kununurra	8.05	176		Pn	18 01 46.4	0.0
FITZ	Fitzroy Crossi	10.72	193	P	Pn	18 02 20.2	-1.8
	14nm,0.4s,baz=28,slow=11,SNR=70						
FITZ	Fitzroy Crossi	10.72	193		Pn	18 02 20.1	-2.0
WB0	Warramunga Arr	13.51	154		Pn	18 02 56.5	-1.9
WRAB	Tennant Creek	13.64	155		Pn	18 02 58.1	-2.0
WRA	Warramunga Arr	13.65	155	P	Pn	18 02 58.4	-1.7
	6.0nm,0.5s,baz=324,slow=14,SNR=72						
WRA	Warramunga Arr	13.65	155		Pn	18 02 57.4	-2.7
WR8	Warramunga Arr	13.73	154		Pn	18 02 59.0	-2.1
PSA00	Pilbara Seismi	16.05	209	P	P	18 03 31.1	+0.3
AS31	Alice Springs	16.89	162		Pn	18 03 40.5	+0.2
ASAR	Alice Springs	16.89	162	P	Pn	18 03 40.5	+0.1
	5.9nm,0.4s,baz=344,slow=8.9,SNR=110						
ASAR	Alice Springs	16.89	162		Pn	18 03 42.1	+1.7
CMAR	Chiang Mai Arr	38.76	312	P	P	18 07 03.5	+0.3
	0.8nm,0.6s,baz=138,slow=6.5,SNR=14						
	0.8nm,0.6s						
JNU	Nakatsue	40.58	3	LR	LR	18 23 12.0	
	comp=Z,41nm,19.7s,baz=122,slow=34						
KSRS	Korea Array	44.82	360	P	P	18 07 51.7	-0.3
	0.8nm,0.5s,baz=176,slow=8.9,SNR=5.2						
	0.8nm,0.5s						
MJAR	Matsushiro Arr	44.91	11	LR	LR	18 25 15.0	
	comp=Z,62nm,20.0s,baz=162,slow=34						
BRDH	Bariadhala	46.74	311	LR	LR	18 29 21.6	
	comp=Z,109nm,21.0s,baz=251,slow=38						
HHC	Hu-ho-hao-te	50.58	344	*e*P	P	18 08 40.8	+4.2
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
EVN	Everest	53.35	313		P	18 08 57.7	-0.3
EVN				IAmb	IAmb	18 08 59.1	
	comp=Z,5.6nm,1.1s						
GTA	Gaotai	53.65	333	*e*P	P	18 09 00.4	+1.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONM	Songino Array	58.46	343	P	P	18 09 34.9	+1.5
	comp=Z,1.2nm,0.7s,baz=172,slow=6.1,SNR=6.7						
	comp=Z,1.2nm,0.7s						
SONM	Songino Array	58.46	343	IAmb	IAmb	18 09 35.5	
	comp=Z,1.3nm,0.8s						
PETK	Petropavlovsk-	65.46	19	P	P	18 10 19.7	-0.2
	comp=Z,2.2nm,0.9s,baz=175,slow=5.1,SNR=4.2						
	comp=Z,2.2nm,0.9s						
NIL	Nilore	66.25	312	P	P	18 10 24.8	-0.6
MKAR	Makanchi Array	67.75	328	P	P	18 10 34.4	-0.2
	comp=Z,1.2nm,0.5s,baz=115,slow=8.5,SNR=29						
	comp=Z,1.2nm,0.5s						
MKAR	Makanchi Array	67.75	328	P	P	18 10 34.1	-0.4
MAKZ	Makanchi	67.93	328	P	P	18 10 34.2	-1.5
MAKZ				IAmb	IAmb	18 10 46.3	
	comp=Z,2.4nm,1.3s						
ZALV	Zalesovo Beam	71.33	335	P	P	18 10 55.4	-0.9
	comp=Z,1.6nm,0.6s,baz=141,slow=5.5,SNR=6.1						
	comp=Z,1.6nm,0.6s						
KURBB	Kurchatov Arra	72.09	329	P	P	18 11 00.6	-0.3
	comp=Z,1.3nm,0.6s,baz=133,slow=5.0,SNR=22						
	comp=Z,1.3nm,0.6s						
KURK	Kurchatov	72.10	329	P	P	18 11 00.6	-0.4
KURK				IAmb	IAmb	18 11 02.0	
	comp=Z,2.1nm,0.8s						
BVAR	Borovoye Array	77.62	328	P	P	18 11 32.1	-0.6
	comp=Z,0.8nm,0.5s,baz=128,slow=11,SNR=6.8						
	comp=Z,0.8nm,0.5s						
TIXI	Tiksi	79.08	0	P	P	18 11 39.4	-1.0
TIXI				IAmb	IAmb	18 11 41.0	
	comp=Z,3.3nm,1.0s						
AB31	Akbulak array	81.86	322	P	P	18 11 54.5	-1.1
ABKAR	Akbulak array	81.86	322	P	P	18 11 54.2	-1.5
QSPA	South Pole Qui	82.38	180	P	P	18 11 58.7	+0.4
	comp=Z,0.8nm,0.8s,baz=46,slow=2.1,SNR=5.5						
	comp=Z,0.8nm,0.8s						
QSPA	South Pole Qui	82.38	180	P	P	18 11 58.8	+0.5

BJI ***11*** *18:00:38.9, 6°.96S×130°.34E, h149^{km}, mB5.1/18, mb5.2/69*

MOS ***11*** *18:00:42.8±0.9, 6°.58S×130°.14E, h154^{km}, mb5.0/37, Error ellipse: s-maj=10.4km s-min=5.3km az=122.6*

NEIC ***11*** *18:00:43.3, 6°.58S×130°.08E, h150^{km}*

NEIC ***11*** *18:00:43.3, 6°.68S×130°.28E, h150^{km}, Moment Tensor Solution. Duration: 1^{s}.4 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.31; M$_{\theta\theta}$1.00; M$_{\phi\phi}$-0.69; M$_{r\theta}$0.49; M$_{\theta\phi}$0.17; M$_{\phi r}$2.38; Fault plane solution: M$_{0}$2.60000×10^{16} NP1: φ$_{s}$109.07000°, δ15.02000°, λ0.45000°. NP2:φ$_{s}$18.64000°, δ89.88000°, λ105.02000°. Principal axes: T 2.0997, Plg43.0000°, Azm303.0000°; N 0.8018, Plg15.0000°, Azm199.0000°; P -2.9016, Plg43.0000°, Azm94.0000°;*

NEIC ***11*** *18:00:43.3±2.0, 6°.59S±0°.06×130°.08E±0°.06, h141^{km}±5^{km}, mb5.2/108, Mww4.9/12 Error ellipse: s-maj=9.3km s-min=9.0km az=130.0*

DJA ***11*** *18:00:44.0±0.1, 7°S±1°×13°0E±°, h150^{km}±2^{km}, M5.1/105, mb5.5/105, mB5.6/72, MLv5.8/20, Mw(mB)5.1/72, MwMwp6.0/3, Mwp6.0/3*

IDC ***11*** *18:00:44.8±1.1, 6°.60S×130°.16E, h156^{km}±9^{km}, mb4.5/23, mbtmp5.0/27, MS3.7/3, Error ellipse: s-maj=13.3km s-min=8.3km az=75.0*

GCMT ***11*** *18:00:47.3±0.2, 6°.71S±0°.02×130°.11E±0°.02, h170^{km}±3^{km}, MW5.0/105, Moment Tensor Solution. s25,c29; s105,c148; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.24±.12; M$_{\theta\theta}$-0.46±.12; M$_{\phi\phi}$1.69±.14; M$_{r\theta}$0.56±.08; M$_{\theta\phi}$-0.49±.13; M$_{\phi r}$3.31±.11; Best double couple: M$_{0}$3.71000×10^{16} NP1:φ$_{s}$320.00000°, δ16.00000°, λ-137.00000°. NP2:φ$_{s}$189.00000°, δ79.00000°, λ-78.00000°. Principal axes: T 3.8470, Plg33.0000°, Azm268.0000°; N -0.2830, Plg12.0000°, Azm6.0000°; P -3.5720, Plg54.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 18:00:43.3±0.3**, 6°.68S**±0°.03×**130°.13E**±0°.03**, h148**^{km}±2^{km}**, h149**^{km}**:pP-P, n646, σ1^{s}.56**/658**, mb5.1**/153**, 7C-3D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.74	138	Pn	Pn	18 01 17.0	+1.7
SAUI	Saumlaki	1.74	138	P	Pn	18 01 16.6	+1.2
SAUI	Saumlaki	1.74	138	P	Pn	18 01 16.1	+0.7
SAUI				S	Sn	18 01 40.6	+0.7
BNDI	Bandanaira	2.16	354	P	Pn	18 01 22.0	+1.7
BNDI	Bandanaira	2.16	354	S	Sn	18 01 51.7	+3.0
BNDI	Bandanaira	2.16	354	P	Pn	18 01 22.0	+1.7
BNDI				S	Sn	18 01 51.2	+2.5
MSAI	Masohi	3.52	340	P	Pn	18 01 39.6	+2.2
AAI	Ambon	3.54	327	P	Pn	18 01 39.8	+2.1
KRAI	Karang Ratu	3.76	333	P	Pn	18 01 43.4	+2.9
FAKI	Fak Fak	4.30	30	Pn	Pn	18 01 45.9	-1.6
FAKI				Sn	Sn	18 02 29.9	-7.5
FAKI	Fak Fak	4.30	30	P	Pn	18 01 46.5	-1.0
FAKI	Fak Fak	4.30	30	P	Pn	18 01 46.3	-1.2
NLAI	Namlea	4.56	318	P	Pn	18 01 53.3	+2.4
KMPI	Kaimana, Papua	4.66	50	P	Pn	18 01 51.8	-0.4
DRS	Darwin Rock St	5.76	172	P	Pn	18 02 07.7	+0.8
SWI	Sorong	5.89	11	P	Pn	18 02 07.5	-1.1
	7.2nm6µm237nm,0.8s						
SANI	Sanana	6.18	318	P	Pn	18 02 14.9	+2.4
SANI	Sanana	6.18	318	P	Pn	18 02 14.3	+1.8
	1.5nm4µm409nm,0.9s						
MTN	Manton Dam	6.20	171	P	Pn	18 02 13.6	+0.9
	comp=Z,842nm,0.5s						
MTN	Manton Dam	6.20	171	Pn	Pn	18 02 12.9	+0.2
MTN				Sn	Sn	18 03 18.3	-4.4
KDU	Kakadu	6.40	159	P	Pn	18 02 15.4	+0.1

RKPI	Ransiki, Papua	6.54	38	P	Pn	18 02 17.1	-0.1
	comp=Z,4µmcomp=Z,17µmcomp=Z,1µm,0.7s						
SOEI	Soe	6.55	242	Pn	Pn	18 02 19.1	+1.5
SOEI				Sn	Sn	18 03 28.4	-2.9
SOEI	Soe	6.55	242	P	Pn	18 02 18.9	+1.3
MWPI	Manokwari, Pap	6.92	34	P	Pn	18 02 23.1	+0.7
	comp=Z,11nmcomp=Z,9µmcomp=Z,879nm,0.9s						
BATI	Baumata	7.29	241	P	Pn	18 02 28.8	+1.5
	comp=Z,2µm,0.7s,baz=76,slow=2.3,SNR=44						
BATI				S	Sn	18 03 46.1	-2.7
	comp=Z,4µm,0.5s,baz=46,slow=19,SNR=13						
BATI	Baumata	7.29	241	P	Pn	18 02 28.6	+1.3
SRPI	Serui, Papua	7.75	52	P	Pn	18 02 32.9	-0.5
	comp=Z,3.0nmcomp=Z,3µmcomp=Z,234nm,0.7s						
TNTI	Ternate	7.90	340		Pn	18 02 34.6	-0.9
TNTI	Ternate	7.90	340	P	Pn	18 02 36.1	+0.6
TNTI	Ternate	7.90	340	P	Pn	18 02 35.9	+0.4
MMRI	Maumere	8.06	256	Pn	Pn	18 02 38.6	+1.1
MMRI	Maumere	8.06	256	P	Pn	18 02 39.7	+2.2
MMRI	Maumere	8.06	256	P	Pn	18 02 38.6	+1.1
	comp=Z,8µmcomp=Z,634nm,0.6s						
BAKI	Biak	8.08	48	P	Pn	18 02 39.5	+1.6
EDFI	Ende, Flores	8.61	256	P	Pn	18 02 45.6	+0.6
	comp=Z,4µmcomp=Z,319nm,1.0s						
KKSI	Kolaka, Sulawe	8.80	286	P	Pn	18 02 49.7	+2.2
KNRA	Kununurra	9.04	188	P	Pn	18 02 50.2	-0.4
	comp=Z,465nm,0.6s						
KNRA	Kununurra	9.04	188	Pn	Pn	18 02 49.9	-0.7
LUWI	Luwuk	9.23	307		Pn	18 02 56.4	+3.2
LUWI	Luwuk	9.23	307	P	Pn	18 02 56.0	+2.8
LUWI	Luwuk	9.23	307	P	Pn	18 02 56.4	+3.2
	comp=Z,3µmcomp=Z,254nm,1.0s						
MNI	Manado	9.64	327	P	Pn	18 02 59.7	+1.0
	comp=Z,2µmcomp=Z,169nm,0.6s						
SMPI	Sarmi	9.74	62	P	Pn	18 02 59.9	-0.1
	comp=Z,1µmcomp=Z,147nm,0.9s						
BKSI	Bulukumba	10.04	277	P	Pn	18 03 06.0	+2.0
	comp=Z,2µmcomp=Z,182nm,0.7s						
BASI	Baing, Sumba	10.08	249	P	Pn	18 03 04.1	-0.3
WSI	Waingapu	10.17	252	P	Pn	18 03 04.5	-1.2
APSI	Ampana	10.22	304	P	Pn	18 03 10.3	+4.0
	comp=Z,5µmcomp=Z,446nm,1.1s						
BNSI	Bone	10.23	282	P	Pn	18 03 07.5	+1.0
	comp=Z,2µmcomp=Z,220nm,1.1s						
LBFI	Labuhan Bajo,	10.30	259	P	Pn	18 03 08.1	+0.6
MMPI	Merauke	10.32	101	P	Pn	18 03 07.8	+0.1
KAPI	Kappang	10.45	279	P	Pn	18 03 11.3	+1.8
	comp=Z,36nm,0.8s,baz=84,slow=7.8,SNR=20						
KAPI	Kappang	10.45	279	P	Pn	18 03 11.4	+2.0
KAPI				S	Sn	18 05 12.0	+6.8
KAPI	Kappang	10.45	279		Pn	18 03 11.8	+2.3
KAPI	Kappang	10.45	279	P	Pn	18 03 12.6	+3.2
KAPI	Kappang	10.45	279	P	Pn	18 03 11.5	+2.0
SPSI	Sidrap Palu	10.66	284	P	Pn	18 03 14.4	+2.2
	comp=Z,2µmcomp=Z,234nm,0.8s						
GENI	Genyem	10.80	68	P	Pn	18 03 15.7	+1.7
GENI	Genyem	10.80	68	P	Pn	18 03 13.3	-0.7
	comp=Z,192nm,0.6s						
MRSI	Marisa	10.83	311	P	Pn	18 03 17.0	+2.6
TTSI	Tana Toraja	10.89	289	P	Pn	18 03 18.5	+3.3
	comp=Z,1µmcomp=Z,82nm,1.0s						
WBSI	Waikabubak, Su	11.03	254	P	Pn	18 03 15.6	-1.4
JAY	Jayapura	11.33	69	P	Pn	18 03 21.8	+0.8
	comp=Z,48nm,0.5s,baz=219,slow=9.7,SNR=38						
JAY				S	Sn	18 05 24.4	-1.9
	comp=Z,133nm,1.0s,baz=144,slow=13,SNR=7.5						
JAY	Jayapura	11.33	69	P	Pn	18 03 21.7	+0.8
	comp=Z,86nm,0.6s						
PMSI	Majene	11.61	285	P	Pn	18 03 27.4	+2.8
	comp=Z,3µmcomp=Z,323nm,0.9s						
PCI	Palu	11.76	299	P	P	18 03 30.7	-3.0
	comp=Z,5µmcomp=Z,536nm,0.9s						
DBNI	Kabupaten Domp	11.85	260	P	Pn	18 03 26.5	-1.3
	comp=Z,4µmcomp=Z,273nm,0.6s						
MMSI	Mamuju	11.86	289	P	P	18 03 31.8	-3.1
	comp=Z,3µmcomp=Z,131nm,0.8s						
TOLI2	Tolitoli	12.12	309		Pn	18 03 33.7	+2.4
TOLI2	Tolitoli	12.12	309	P	Pn	18 03 33.8	+2.4
FITZ	Fitzroy Crossi	12.16	201	P	Pn	18 03 30.9	-0.8
FITZ	Fitzroy Crossi	12.16	201	P	Pn	18 03 31.2	-0.6
	comp=Z,36nm,0.3s,baz=31,slow=12,SNR=10						
FITZ				S	Sn	18 05 35.8	-10
	comp=Z,65nm,0.3s,baz=32,slow=8.8,SNR=4.9						
FITZ				LR	LR	18 09 12.3	
	comp=Z,245nm,19.1s,baz=25,slow=41						
FITZ	Fitzroy Crossi	12.16	201	P	Pn	18 03 32.6	+0.8
MPSI	Mapaga	12.36	304	P	Pn	18 03 37.4	+3.0
	comp=Z,2µmcomp=Z,115nm,0.8s						
PLAI	Plampang	12.42	259	P	Pn	18 03 34.4	-0.8
PLAI	Plampang	12.42	259	P	Pn	18 03 32.4	-2.8
TWSI	Taliwang, Sumb	13.28	260	P	Pn	18 03 44.0	-2.3
	comp=Z,3µmcomp=Z,281nm,0.7s						
WB0	Warramunga Arr	13.65	163	Pn	Pn	18 03 48.3	-2.6
WRAB	Tennant Creek	13.79	163	Pn	Pn	18 03 50.3	-2.4
WRAB	Tennant Creek	13.79	163	P	Pn	18 03 50.8	-2.0
WRAB	Tennant Creek	13.79	163	*i* P	Pn	18 03 50.6	-2.2
WRA	Warramunga Arr	13.80	163	P	Pn	18 03 50.7	-2.2
	comp=Z,43nm,0.5s,baz=347,slow=13,SNR=47						
WRA				S	Sn	18 06 15.5	-10
	comp=Z,264nm,0.8s,baz=348,slow=22,SNR=21						
WRA	Warramunga Arr	13.80	163	Pn	Pn	18 03 50.4	-2.5
WRA	Warramunga Arr	13.80	163	P	Pn	18 03 50.4	-2.5
KLNI	Mataram	14.02	262	P	Pn	18 03 53.1	-2.5
	comp=Z,4µmcomp=Z,306nm,0.8s						
BKB	Balikpapan	14.25	292	P	P	18 04 03.4	+1.9
BKB	Balikpapan	14.25	292	P	P	18 04 01.9	+0.5
KHKI	Kahang-Kahang	14.49	262	P	Pn	18 03 59.2	-2.4
	comp=Z,4µmcomp=Z,2µmcomp=Z,345nm,0.8s						
COEN	Coen	14.73	120	P	Pn	18 04 04.5	0.0
	comp=Z,591nm,0.8s						
COEN	Coen	14.73	120		Pn	18 04 04.0	-0.5
COEN	Coen	14.73	120	P	Pn	18 04 05.5	+1.0
DNP	Denpasar	14.91	261	P	Pn	18 04 06.7	-0.2
IGBI	Denpasar	14.99	261	P	Pn	18 04 07.6	-0.3
	comp=Z,9µmcomp=Z,443nm,0.4s						
RTBI	Rangdo, Negare	15.16	262	P	Pn	18 04 10.5	+0.6
	comp=Z,3µmcomp=Z,171nm,0.6s						
BBKI	Banjar Baru	15.56	281	P	P	18 04 18.5	+2.6
	comp=Z,10µmcomp=Z,1µm,0.9s						
ABJI	Asem Bagus	15.80	265	P	P	18 04 19.4	+0.7
	comp=Z,3µmcomp=Z,386nm,0.8s						
JAGI	Jajag, Banyuwa	15.93	263		Pn	18 04 16.1	-3.4
JAGI	Jajag, Banyuwa	15.93	263	P	Pn	18 04 18.1	-1.4
JAGI	Jajag, Banyuwa	15.93	263	P	Pn	18 04 16.6	-2.9
	comp=Z,4µmcomp=Z,297nm,0.5s						
KMMI	Kalianget	16.05	268	P	P	18 04 23.3	+1.9
	comp=Z,3µmcomp=Z,439nm,0.9s						
MTKI	Muara Teweh, K	16.23	290	P	P	18 04 27.1	+3.7
	comp=Z,3µmcomp=Z,319nm,0.8s						
BLJI	Banyuglugur	16.43	265	P	P	18 04 26.3	+0.7
MYLDM	Lahad Datu	16.54	315		P	18 04 23.8	-3.0
MYLDM	Lahad Datu	16.54	315	P	Pn	18 04 28.6	+1.8
MYLDM	Lahad Datu	16.54	315	P	Pn	18 04 29.5	+2.7
QIS	Mount Isa	16.57	147	P	P	18 04 26.5	-0.7
	comp=Z,239nm,0.5s						
QIS	Mount Isa	16.57	147	P	P	18 04 27.0	-0.1
GMJI	Gumukmas	16.62	264	P	P	18 04 24.8	-2.8
	comp=Z,2µmcomp=Z,144nm,0.8s						
PKKI	Palangkaraya	16.70	285	P	Pn	18 04 30.0	+1.2
PMG	Port Moresby	17.08	100	P	P	18 04 32.7	-0.1
	comp=Z,171nm,0.8s,baz=290,slow=8.2,SNR=53						
PMG				S	S	18 07 34.9	-8.4
	comp=Z,83nm,0.7s,baz=192,slow=23,SNR=10.0						
PMG	Port Moresby	17.08	100	P	P	18 04 32.5	-0.2
PMG	Port Moresby	17.08	100	P	P	18 04 32.8	+0.1
PMG	Port Moresby	17.08	100	P	Pn	18 04 33.2	-0.2
PMG	Port Moresby	17.08	100	P	P	18 04 32.3	-0.4
	comp=Z,4µmcomp=Z,315nm,1.1s						
PMG	Port Moresby	17.08	100	*i* P	Pn	18 04 33.1	-0.3
ASAR	Alice Springs	17.27	168	P	Pn	18 04 35.6	-0.1
	comp=Z,234nm,0.9s,baz=345,slow=10,SNR=146						
ASAR				S	S	18 07 42.7	-4.7
	comp=Z,70nm,0.9s,baz=353,slow=26,SNR=7.8						
ASAR				LR	LR	18 12 18.3	
	comp=Z,226nm,18.7s,baz=340,slow=40						
AUALC	St Philip's Co	17.29	168	P	Pn	18 04 37.1	+1.2
GRJI	Gresik	17.52	268	P	Pn	18 04 39.7	+1.0
MBWA	Marble Bar	17.56	214	P	Pn	18 04 38.7	-0.3
	comp=Z,107nm,0.5s						
MBWA	Marble Bar	17.56	214	P	Pn	18 04 39.6	+0.6
MBWA	Marble Bar	17.56	214		Pn	18 04 38.6	-0.5
MBWA	Marble Bar	17.56	214	P	Pn	18 04 39.7	+0.6
PSAC2	Pilbara Seismi	17.79	213	P	Pn	18 04 41.7	-0.2
	comp=Z,170nm,0.7s						
MANU	Manus Island	17.79	76	P	Pn	18 04 43.0	+1.0
PSA00	Pilbara Seismi	17.83	213	P	Pn	18 04 41.9	-0.4
PSA00	Pilbara Seismi	17.83	213		Pn	18 04 42.0	-0.2
PSA00	Pilbara Seismi	17.83	213	P	Pn	18 04 42.8	+0.5
MTSU	Mount Surprise	17.91	131	P	Pn	18 04 43.1	-0.2
	comp=Z,93nm,0.6s						
MTSU	Mount Surprise	17.91	131	P	Pn	18 04 43.7	+0.3
TBJI	Tambak Boyo	18.15	269	P	Pn	18 04 46.4	+0.2
	comp=Z,7µmcomp=Z,775nm,1.3s						
SJI	Sawahan	18.25	266	P	P	18 04 46.2	+0.6
	comp=Z,463nm,0.6s						
SNJI	Sawahan-Nganju	18.25	265	P	P	18 04 46.4	+0.6
	comp=Z,6µmcomp=Z,874nm,0.8s						
WRKA	Warakurna	18.33	185	P	Pn	18 04 48.1	-0.2
	comp=Z,66nm,0.7s						
NGJI	Ngawi	18.54	267	P	P	18 04 49.4	+0.7
	comp=Z,215nm,0.9s						
KKM	Kota Kinabalu	18.78	312	P	P	18 04 50.6	-0.8
KKM	Kota Kinabalu	18.78	312	P	P	18 04 52.0	+0.6
KKM	Kota Kinabalu	18.78	312	P	P	18 04 51.7	+0.3
	comp=Z,77nm,0.6s						
PCJI	Pacitan	18.85	264	P	P	18 04 50.3	-1.8
	comp=Z,5µmcomp=Z,480nm,0.9s						
UGM	Wanagama	19.48	265	P	P	18 04 58.1	-1.0
UGM	Wanagama	19.48	265	P	Pn	18 05 00.9	-0.9
UGM	Wanagama	19.48	265	P	P	18 04 57.7	-1.3
	comp=Z,185nm,0.7s						
SMRI	Semarang	19.55	268	P	P	18 04 59.1	-0.6
SMRI	Semarang	19.55	268	P	Pn	18 05 01.6	-1.0
SBUM	Sibu	20.05	296	P	P	18 05 06.1	+1.1
SBUM	Sibu	20.05	296	P	Pn	18 05 07.8	-0.6
SBUM	Sibu	20.05	296	P	Pn	18 05 07.7	-0.7
TV1H	Townsville Har	20.47	129	P	P	18 05 11.4	+1.9
CTA	Charters Tower	20.55	132	P	P	18 05 11.9	+1.5
	comp=Z,107nm,0.7s						
CTA	Charters Tower	20.55	132	P	P	18 05 12.2	+1.8
	comp=Z,190nm,0.7s,baz=302,slow=10,SNR=129						
	comp=Z,190nm,0.7s						
CTA	Charters Tower	20.55	132	P	Pn	18 05 12.5	-1.9
CTAO	Charters Tower	20.55	132		P	18 05 11.0	+0.6
CTAO	Charters Tower	20.55	132	P	Pn	18 05 12.5	-1.9
CTAO	Charters Tower	20.55	132	P	P	18 05 11.0	+0.6
CTJI	Waduk Cacaban	20.80	268	P	P	18 05 12.3	-0.8
	comp=Z,204nm,1.2s						
KPJI	Karang Pucung	21.05	267	P	P	18 05 15.5	-0.3
	comp=Z,174nm,0.7s						
GIRL	Giralia	22.05	222	P	P	18 05 27.5	+1.2
	comp=Z,107nm,1.2s						
GIRL	Giralia	22.05	222		P	18 05 27.8	+1.5
GIRL				IAmb	IAmb	18 05 29.7	
	comp=Z,76nm,0.8s						
BBJI	Bungbulang	22.32	267	P	P	18 05 27.7	-1.4
BBJI	Bungbulang	22.32	267	P	P	18 05 26.8	-2.3
	comp=Z,4µmcomp=Z,463nm,0.7s						
LEM	Lembang	22.35	268	P	P	18 05 29.0	-0.5
MEEK	Meekatharra	22.67	208	P	P	18 05 32.8	+0.5
	comp=Z,32nm,0.7s						
MEEK	Meekatharra	22.67	208	P	P	18 05 33.2	+0.9
TPI	Tanjungpandan	22.73	279	P	P	18 05 34.6	+1.7
	comp=Z,1µmcomp=Z,169nm,1.0s						
CNJI	Cibinong	22.83	267	P	P	18 05 32.3	-1.6
	comp=Z,4µmcomp=Z,530nm,1.0s						
INKA	Innaminka	23.24	156	P	P	18 05 38.3	+0.9
SKJI	Sukabumi	23.40	268	P	P	18 05 39.6	+0.5
	comp=Z,6µmcomp=Z,646nm,0.9s						
QLP	Quilpie	23.92	147	P	P	18 05 44.2	+0.6
	comp=Z,251nm,0.9s						
QLP	Quilpie	23.92	147	P	P	18 05 44.5	+0.8
FORT	Forrest	24.05	184	P	P	18 05 45.2	+0.5
	comp=Z,74nm,0.7s						
FORT	Forrest	24.05	184		P	18 05 45.4	+0.6
FORT				IAmb	IAmb	18 05 58.5	
	comp=Z,54nm,0.6s						
XMI	Christmas Isla	24.45	259	P	P	18 05 50.8	+2.2
KLSI		25.35	273	P	P	18 05 58.3	+1.5
	comp=Z,56nm,1.0s						
KASI	Kota Agung	25.51	271	P	P	18 05 57.2	-1.1
	comp=Z,171nm,0.9s						
PMBI	Palembang	25.54	277	P	P	18 06 01.6	+3.1
KMBL	Kambalda	25.74	196	P	P	18 06 00.9	+0.7
	comp=Z,17nm,0.8s						
MDSI	Maura Dua	25.91	273	P	P	18 06 03.0	+1.1
	comp=Z,56nm,1.0s						
MORW	Morawa	25.93	209	P	P	18 06 02.7	+0.7
	comp=Z,22nm,1.1s						
MORW	Morawa	25.93	209	P	P	18 06 02.3	+0.4
MORW				IAmb	IAmb	18 06 41.5	
	comp=Z,49nm,1.1s						
DSRI	Dabo	26.22	283	P	P	18 06 06.3	+1.6
	comp=Z,77nm,1.2s						
GD1S	Gladstone Soft	26.45	132	P	P	18 06 08.0	+1.4
BBOO	Buckleboo	26.57	169	P	P	18 06 08.3	+0.7
	comp=Z,84nm,0.6s						
BBOO	Buckleboo	26.57	169		P	18 06 07.6	0.0
BBOO	Buckleboo	26.57	169	P	P	18 06 08.3	+0.7
BLDU	Ballidu	26.93	206	P	P	18 06 11.8	+0.9
	comp=Z,22nm,1.4s						
WHYH	Whyalla	27.12	166	P	P	18 06 13.5	+1.1
STKA	Stephens Creek	27.26	158	P	P	18 06 14.1	+0.4
	comp=Z,377nm,0.7s						
STKA	Stephens Creek	27.26	158	P	P	18 06 14.7	+1.0
	comp=Z,45nm,0.4s,baz=330,slow=9.4,SNR=76						
	comp=Z,45nm,0.4s						
STKA	Stephens Creek	27.26	158		P	18 06 14.4	+0.6
STKA	Stephens Creek	27.26	158	P	P	18 06 14.3	+0.6
STKA	Stephens Creek	27.26	158	*i* P	P	18 06 14.6	+0.9
EIDS	Eidsvold	27.32	135	P	P	18 06 14.5	+0.1
	comp=Z,17nm,0.7s						
EIDS	Eidsvold	27.32	135	P	P	18 06 14.2	-0.1
EIDS	Eidsvold	27.32	135	P	P	18 06 14.8	+0.4
KLBR	Kellerberrin	27.35	203	P	P	18 06 15.2	+0.7
	comp=Z,72nm,0.7s						
KLBR	Kellerberrin	27.35	203	P	P	18 06 16.0	+1.4
AUJCS	Jamestown Cent	27.54	164	P	P	18 06 17.0	+0.8
MYKOM	Kota Tinggi	27.55	287	P	P	18 06 16.6	+0.1
MYKOM	Kota Tinggi	27.55	287	P	P	18 06 18.6	+2.1
MYKOM	Kota Tinggi	27.55	287	P	P	18 06 16.9	+0.4
	comp=Z,207nm,0.8s						
HTT	Hallett	27.84	164	P	P	18 06 20.2	+1.3
	comp=Z,28nm,0.7s						
HTT	Hallett	27.84	164	P	P	18 06 19.4	+0.5
	comp=Z,11nm,0.7s						
HTT	Hallett	27.84	164	P	P	18 06 20.2	+1.3
HTT	Hallett	27.84	164	P	P	18 06 19.4	+0.5
AUCAS	Cummins Area S	27.93	170	P	P	18 06 21.0	+1.4
AULRC	Lightning Ridg	28.20	146	P	P	18 06 22.8	+0.7
CMSA	Cobar Meteorol	28.69	151	P	P	18 06 27.3	+0.9
	comp=Z,233nm,0.8s						
CMSA	Cobar Meteorol	28.69	151	P	P	18 06 27.7	+1.2
NWAO	Narrogin (SRO)	28.73	203	P	P	18 06 25.4	-1.4
NWAO	Narrogin (SRO)	28.73	203	P	P	18 06 28.4	+1.6
	comp=Z,9.3nm,0.3s,baz=42,slow=6.7,SNR=13						
	comp=Z,9.3nm,0.3s						
NWAO	Narrogin (SRO)	28.73	203	P	P	18 06 28.5	+1.6
NWAO	Narrogin (SRO)	28.73	203		P	18 06 27.1	+0.3
NWAO				IAmb	IAmb	18 07 32.8	
	comp=Z,28nm,0.7s						
NWAO	Narrogin (SRO)	28.73	203	P	P	18 06 28.4	+1.6
AUMAR	Marden Senior	29.15	166	P	P	18 06 31.9	+1.4
GHSS	Government Hou	29.16	166	P	P	18 06 32.3	+1.7
TW1H	Toowoomba 1 Ha	29.33	138	P	P	18 06 33.7	+1.4
TATA	Tatamba Isabel	29.47	95	P	P	18 06 33.2	-0.4
SAVO	Savo Central	29.50	97	P	P	18 06 33.5	-0.4
AUMBR	Murray Bridge	29.54	165	P	P	18 06 35.1	+1.2
AUWSH	Wavell State H	29.96	136	P	P	18 06 38.8	+1.0
PDSI	Padang	30.14	280	P	P	18 06 40.4	+0.9
	comp=Z,59nm,0.9s						
AUDCS	Dubbo College	30.72	148	P	P	18 06 45.3	+0.9
ARMA	Armidale	31.07	142	P	P	18 06 48.7	+1.1
	comp=Z,65nm,1.0s						
ARMA	Armidale	31.07	142	IAmb	IAmb	18 06 50.4	
	comp=Z,43nm,0.9s						
ARMA	Armidale	31.07	142	P	P	18 06 49.4	+1.8
IPM	Ipoh	31.09	290	P	P	18 06 46.4	-1.6
IPM				IAmb	IAmb	18 06 51.3	
	comp=Z,35nm,0.6s						
IPM	Ipoh	31.09	290	P	P	18 06 50.6	+2.7
AUPHS	Peel High Scho	31.11	144	P	P	18 06 49.4	+1.5
KULM	Kulim	31.73	291	P	P	18 06 52.6	-0.9
KULM	Kulim	31.73	291	P	P	18 06 53.3	-0.2
ARPS	Mount Arapiles	31.80	162	P	P	18 06 55.2	+1.4
	comp=Z,73nm,0.7s						
YNG	Young	32.25	151	P	P	18 06 59.2	+1.4
	comp=Z,216nm,0.8s						
MGBR	Mount Gambier	32.33	164	P	P	18 07 00.5	+2.1
PBSI	Pulau Batu	32.45	280	P	P	18 07 00.2	+0.4
	comp=Z,64nm,0.6s						
PSI	Prapat	32.54	286	P	P	18 07 01.9	+1.1
	comp=Z,976nmcomp=Z,112nm,1.1s						
UBPT	Khong Chiam	32.76	312	P	P	18 07 02.8	+0.4
MGCD	Mangrove Creek	32.80	146	P	P	18 07 04.3	+1.7
	comp=Z,155nm,0.7s						
MGCD	Mangrove Creek	32.80	146	P	P	18 07 05.1	+2.5
SYDH	Sydney Hard Ro	33.02	147	P	P	18 07 06.7	+2.2
AUKHS	Kincumber High	33.14	146	P	P	18 07 07.9	+2.4
BRAT	Ballarat	33.19	160	P	P	18 07 08.5	+2.6
JOW	Kunigami	33.37	357	P	P	18 07 08.2	+0.6
	comp=Z,31nm,0.6s,baz=194,slow=14,SNR=6.3						
	comp=Z,31nm,0.6s						
JOW	Kunigami	33.37	357	IAmb	IAmb	18 07 54.2	
	comp=Z,89nm,1.2s						
AUMTS	Mt Stromlo	33.37	151	P	P	18 07 09.5	+1.9
CAN	Canberra	33.37	151	P	P	18 07 09.0	+1.4
	comp=Z,206nm,1.0s						
CAN	Canberra	33.37	151	P	P	18 07 09.4	+1.8
CAN	Canberra	33.37	151	P	P	18 07 08.9	+1.4
CAN	Canberra	33.37	151	P	P	18 07 09.7	+2.1
CAN				sP	sP	18 07 56.8	+1.0
AUSIS	Research Schoo	33.39	151	P	P	18 07 10.0	+2.3
AUMHS	Melrose High S	33.44	151	P	P	18 07 10.2	+2.0
GSI	Gunungsitoli	33.44	283	P	P	18 07 06.8	-1.7
CNB	Canberra Magne	33.54	151	P	P	18 07 10.4	+1.3
	comp=Z,90nm,1.5s						
CNB	Canberra Magne	33.54	151	P	P	18 07 10.8	+1.7
WOLH	Wollongong Har	33.59	148	P	P	18 07 11.6	+2.2
TOO	Toolangi	33.77	158	P	P	18 07 13.1	+2.0
	comp=Z,15nm,1.3s						
TOO	Toolangi	33.77	158	P	P	18 07 13.0	+2.0
KCSI	Kotacane, Aceh	33.85	286	P	P	18 07 12.4	+0.4
	comp=Z,28nm,0.9s						
AUSMG	Snowy Mountain	34.09	153	P	P	18 07 16.1	+2.3
TPTI		34.34	286	P	P	18 07 15.3	-0.9
	comp=Z,64nm,1.1s						
MILA	Mila	34.86	153	P	P	18 07 22.3	+1.9
	comp=Z,20nm,0.8s						
LHMI	Lhok Sumawe	35.17	289	P	P	18 07 25.5	+2.2
AUBRN	Burnie High Sc	36.98	160	P	P	18 07 39.9	+1.6
SANVU	Saraoutou	37.36	107	P	P	18 07 42.5	+0.6
SANVU	Saraoutou	37.36	107	P	P	18 07 43.3	+1.4
SANVU	Saraoutou	37.36	107	P	P	18 07 43.1	+1.2
SANVU				sP	sP	18 08 29.8	-0.1
GLAD	Gladstone	37.70	158	P	P	18 07 46.2	+1.8
CORO	Coronation Par	37.79	159	P	P	18 07 47.7	+2.5
SLVN	Son La	37.91	318	P	P	18 07 47.1	+0.6
DZM	Mont Dzumac	38.23	117	P	P	18 07 50.3	+1.1
ONTNC	Ouen Toro	38.31	118	P	P	18 07 50.3	+0.6
ONTNC				IAmb	IAmb	18 07 52.3	
	comp=Z,41nm,0.6s						
ONTNC	Ouen Toro	38.31	118	P	P	18 07 51.0	+1.2
YATNC	Mamie plateau,	38.62	117	P	P	18 07 53.8	+1.4
MOO	Moorlands	38.68	160	P	P	18 07 54.9	+2.3
	comp=Z,84nm,0.9s						
MOO	Moorlands	38.68	160	P	P	18 07 55.4	+2.8
OUENC	Ouen Island, N	38.68	118	P	P	18 07 54.4	+1.5
TAU	Tasmania Unive	39.14	160	P	P	18 07 58.2	+1.8
TAU	Tasmania Unive	39.14	160	P	P	18 07 58.7	+2.3
PINNC	Pines Island,	39.27	118	P	P	18 08 00.0	+2.2
MARNC	Mare, Loyalty	39.46	116	P	P	18 07 59.0	-0.4
MARNC	Mare, Loyalty	39.46	116	P	P	18 08 00.9	+1.5
CM31	Chiang Mai Arr	39.63	310	P	P	18 08 01.1	+0.3
	SNR=16						
CM31	Chiang Mai Arr	39.63	310	IAmb	IAmb	18 08 08.3	
	comp=Z,33nm,0.8s						
CMAR	Chiang Mai Arr	39.63	310	P	P	18 08 01.1	+0.3
	comp=Z,10.0nm,0.6s,baz=136,slow=6.7,SNR=103						
CMAR				ScP	ScP	18 13 40.0	-0.1
	comp=Z,3.8nm,0.8s,baz=152,slow=3.5,SNR=15						
	comp=Z,10.0nm,0.6s						
CMAR	Chiang Mai Arr	39.63	310	P	P	18 08 00.3	-0.5
CMAR					ScP	18 13 40.0	-0.1
CHTO	Chiang Mai	39.84	310	P	P	18 08 02.7	+0.2
CHTO	Chiang Mai	39.84	310	P	P	18 08 02.2	-0.3
CHTO				IAmb	IAmb	18 08 10.4	
	comp=Z,43nm,0.7s						
CHTO	Chiang Mai	39.84	310	P	P	18 08 02.4	-0.1
CHTO	Chiang Mai	39.84	310	P	P	18 08 02.6	+0.1
	comp=Z,449nmcomp=Z,67nm,0.8s						
CHTO	Chiang Mai	39.84	310	P	P	18 08 02.2	-0.3
CHTO				pmax	pmax		
	comp=Z,43nm,0.7s						
CHTO	Chiang Mai	39.84	310	P	P	18 08 02.7	+0.2
CHTO				sP	sP	18 08 49.2	-0.8
WHN	Wuhan	39.99	339	P	P	18 08 04.5	+1.0
WHN				pmax	pmax		
	comp=Z,82nm,0.9s						
NJ2	Nanjing	39.99	345	⇓P	P	18 08 04.4	+0.9
NJ2				pmax	pmax		
	comp=Z,23nm,0.7s						
GYA	Guiyang	40.04	326	⇑P	P	18 08 04.3	+0.1
GYA				pmax	pmax		
	comp=Z,28nm,0.6s						
KMI	Kunming	41.35	321	⇑P	P	18 08 16.1	+1.0
KMI				pmax	pmax		
	comp=Z,33nm,0.9s						
KMI				pmax	pmax		
	comp=Z,140nm,3.5s						
ENH	Enshi	41.74	333	IAmb	IAmb	18 08 18.4	
	comp=Z,27nm,0.7s						
ENH	Enshi	41.74	333	P	P	18 08 17.7	-0.3
ENH	Enshi	41.74	333	P	P	18 08 17.3	-0.7
ENH				sP	sP	18 09 04.4	-1.6
ENH				PcP	PcP	18 10 11.2	-0.4
PZH	PanZhiHua	42.97	321	P	P	18 08 30.6	+2.5
MJAR	Matsushiro Arr	43.66	9	P	P	18 08 32.2	-1.2
	comp=Z,4.4nm,0.6s,baz=187,slow=9.4,SNR=19						
MJAR				ScP	ScP	18 13 54.4	-1.4
	comp=Z,2.0nm,0.7s,baz=169,slow=6.0,SNR=6.4						
	comp=Z,4.4nm,0.6s						
MAJO	Matsushiro	43.66	9	*i* P	P	18 08 31.2	-2.1
MAJO				pmax	pmax		
	comp=Z,45nm,2.4s						
KSRS	Korea Array	43.96	357	P	P	18 08 36.2	+0.6
	comp=Z,2.8nm,0.6s,baz=178,slow=9.3,SNR=11						
	comp=Z,2.8nm,0.6s						
TNCH	TengChong	44.05	317	⇑P	P	18 08 37.0	+0.2
TNCH				pP	pwP	18 09 11.9	-2.4
TNCH				pmax	pmax		
	comp=Z,43nm,0.8s						
LYN	LuoYang	44.28	339	*e*P	P	18 08 38.2	-0.1
LYN				pP	pwP	18 09 16.1	+1.1
LYN				pmax	pmax		
	comp=Z,39nm,0.5s						
TIA	Tai'an	44.38	345	P	P	18 08 38.8	-0.3
TIA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2	Chengdu	45.11	327	P	P	18 08 45.8	+0.8
CD2				pP	pP	18 09 16.0	-1.1
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CD2				pmax	pmax		
	comp=Z,230nm,7.2s						
XAN	Xi'an	45.21	335	P	P	18 08 44.8	-0.9
XAN				pP	pP	18 09 18.9	+1.1
XAN				pmax	pmax		
	comp=Z,48nm,0.9s						
XAN	Xi'an	45.21	335	P	P	18 08 44.7	-1.0
HNS	HongShan	46.16	343	⇑P	P	18 08 53.0	0.0
HNS				ScP	ScP	18 14 05.3	-0.7
HNS				pmax	pmax		
	comp=Z,43nm,0.9s						
MSVF	Nonsavu	47.98	108	P	P	18 09 08.6	+0.9
MSVF	Nonsavu	47.98	108	P	P	18 09 09.5	+1.9
MSVF	Nonsavu	47.98	108	*i* P	P	18 09 07.6	0.0
MSVF				pmax	pmax		
	comp=Z,28nm,1.2s						
BJT	Baijiatuau	48.22	346	P	P	18 09 08.3	-0.7
BJT				IAmb	IAmb	18 09 09.9	
	comp=Z,34nm,0.6s						
BJT	Baijiatuau	48.22	346	P	P	18 09 09.3	+0.3
BJT	Baijiatuau	48.22	346	P	P	18 09 08.3	-0.7
BJT				pmax	pmax		
	comp=Z,34nm,0.6s						
BJT	Baijiatuau	48.22	346	P	P	18 09 08.8	-0.2
BJT				PcP	PcP	18 10 33.9	0.0
BJI	Beijing	48.24	346	P	P	18 09 09.2	+0.1
BJI				pmax	pmax		
	comp=Z,23nm,0.6s						
OUZ	Omahuta	48.96	132	P	P	18 09 16.9	+2.1
SHL	Shillong	49.08	312	P	P	18 09 15.7	-0.4
	SNR=24						

SHL	Shillong	49.08	312	P	P	18 09 14.9	-1.1
SHL				IAmb	IAmb	18 09 17.8	
	comp=Z,57nm,0.9s						
SHL	Shillong	49.08	312	P	P	18 09 14.9	-1.1
SHL				pmax	pmax		
	comp=Z,57nm,0.9s						
LZDM	Lanzhou Array	49.15	331	P	P	18 09 17.2	+0.6
	comp=Z,9.5nm,0.5s,baz=180,slow=10,SNR=12						
LZDM				ScP	ScP	18 14 19.0	-0.2
	comp=Z,1.9nm,0.3s,baz=205,slow=6.6,SNR=3.7						
	comp=Z,9.5nm,0.5s						
LZH	Lanzhou	49.19	332	eP	P	18 09 17.5	+0.9
LZH				pmax	pmax		
	comp=Z,41nm,1.0s						
MSZ	Milford Sound	50.13	145	P	P	18 09 25.6	+2.1
DCZ	Deep Cove	50.19	147	IAmb	IAmb	18 09 26.4	
	comp=Z,52nm,1.2s						
DCZ	Deep Cove	50.19	147	P	P	18 09 25.4	+1.5
JCZ	Jackson Bay	50.27	144	P	P	18 09 26.9	+2.3
JCZ	Jackson Bay	50.27	144	P	P	18 09 26.4	+1.7
HHC	Hu-ho-hao-te	50.28	342	eP	P	18 09 27.8	+3.0
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CN2	Changchun	50.43	356	P	P	18 09 24.9	-0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
FOZ	Fox Glacier	50.56	143	IAmb	IAmb	18 09 29.0	
	comp=Z,49nm,1.1s						
FOZ	Fox Glacier	50.56	143	P	P	18 09 27.9	+1.2
BTO	Baotou	50.56	340	eP	P	18 09 34.7	+7.8
BTO				pP	pwP	18 10 08.0	+4.0
BTO				PP	PP	18 11 24.0	-0.3
BTO				S	S	18 16 42.5	+13
BTO				pmax	pmax		
	comp=Z,12nm,0.6s						
BTO				pmax	pmax		
	comp=Z,210nm,3.8s						
BTO				LR	LR		
	comp=N,410nm,7.3s						
BTO				LR	LR		
	comp=E,350nm,10.9s						
BTO				LR	LR		
	comp=Z,440nm,8.7s						
MLZ	Mavora Lakes	50.66	146	P	P	18 09 28.5	+0.9
USRK	Ussuriysk Ar.	50.67	2	P	P	18 09 26.7	-0.7
	comp=Z,3.0nm,0.6s,baz=131,slow=5.9,SNR=3.7						
	comp=Z,3.0nm,0.6s						
QRZ	Quartz Range	50.81	139	P	P	18 09 30.2	+1.6
QRZ	Quartz Range	50.81	139	P	P	18 09 30.5	+1.9
WHZ	Wether Hill Ro	50.89	147	IAmb	IAmb	18 09 31.0	
	comp=Z,60nm,0.9s						
WHZ	Wether Hill Ro	50.89	147	P	P	18 09 30.1	+0.9
INZ	Inchbonnie	51.10	141	IAmb	IAmb	18 09 34.5	
	comp=Z,27nm,0.7s						
LBZ	Lake Benmore	51.27	144	P	P	18 09 32.8	+0.8
LBZ				IAmb	IAmb	18 09 34.1	
	comp=Z,40nm,0.8s						
LBZ	Lake Benmore	51.27	144	P	P	18 09 33.2	+1.1
APZ	The Paps	51.50	147	P	P	18 09 35.0	+1.2
THZ	Tophouse	51.53	140	P	P	18 09 35.4	+1.3
THZ				IAmb	IAmb	18 09 36.8	
	comp=Z,29nm,0.6s						
THZ	Tophouse	51.53	140	P	P	18 09 35.1	+1.1
NNZ	Nelson	51.56	139	P	P	18 09 34.9	+0.6
LTZ	Lake Taylor	51.65	141	P	P	18 09 35.8	+0.9
TLZ	Tolley Road	51.70	134	P	P	18 09 37.4	+2.0
DUWZ	D'Urville Isla	51.72	138	P	P	18 09 37.2	+1.8
TMZ	Timaru	51.75	143	P	P	18 09 36.3	+0.6
OXZ	Oxford	51.80	142	IAmb	IAmb	18 09 39.7	
	comp=Z,141nm,1.9s						
OXZ	Oxford	51.80	142	P	P	18 09 37.0	+1.0
TUZ	Tuapeka	51.87	146	P	P	18 09 37.2	+0.8
XLT	XiLinHaoTe	51.93	347	eP	P	18 09 37.0	+0.1
XLT				pP	pP	18 10 11.2	+1.1
XLT				sP	sP	18 10 31.9	+5.7
XLT				pmax	pmax		
	comp=Z,16nm,0.9s						
XLT				pmax	pmax		
	comp=Z,200nm,5.2s						
TUWZ	Tuamarina	52.03	139	P	P	18 09 38.9	+1.2
LSA	Lhasa	52.06	316	P	P	18 09 39.4	+0.7
LSA	Lhasa	52.06	316	P	P	18 09 34.8	-3.9
LSA				pmax	pmax		
	comp=Z,82nm,0.6s						
LSA	Lhasa	52.06	316	P	P	18 09 39.6	+0.9
LSA	Lhasa	52.06	316	P	P	18 09 39.5	+0.9
WTVZ	West Tongariro	52.08	135	P	P	18 09 41.0	+2.8
NNVZ	North Ngauruho	52.10	135	P	P	18 09 40.8	+2.3
NGZ	Ngauruhoe	52.11	135	P	P	18 09 40.7	+2.2
TRVZ	Turoa	52.13	136	P	P	18 09 41.9	+3.1
SNVZ	South Ngauruho	52.14	135	P	P	18 09 40.8	+1.9
OTVZ	Oturere	52.15	135	P	P	18 09 40.9	+2.0
TCW	Tory Channel	52.15	138	P	P	18 09 39.3	+0.7
WNVZ	Wahianoa	52.17	136	P	P	18 09 40.9	+1.9
GVZ	Greta Valley S	52.23	141	P	P	18 09 40.1	+1.0
KHZ	Kahutara	52.26	140	IAmb	IAmb	18 09 40.6	
	comp=Z,26nm,0.7s						
KHZ	Kahutara	52.26	140	P	P	18 09 40.1	+0.7
MOVZ	Moawhango	52.32	136	P	P	18 09 40.7	+0.7
HHSZ	Highcliff Hill	52.37	145	P	P	18 09 42.0	+1.8
KIW	Kapiti Island	52.40	138	P	P	18 09 41.6	+1.1
OGWZ	Otaki Gorge	52.56	137	P	P	18 09 41.6	0.0
BHW	Baring Head	52.64	138	P	P	18 09 42.2	0.0
BKZ	Black Stump Fm	52.73	135	P	P	18 09 43.1	+0.1
BKZ				IAmb	IAmb	18 09 44.9	
	comp=Z,46nm,1.0s						
BKZ	Black Stump Fm	52.73	135	P	P	18 09 44.0	+1.0
BKZ	Black Stump Fm	52.73	135	P	P	18 09 43.8	+0.8
TSZ	Takapari Road	52.75	136	P	P	18 09 43.5	+0.4
MRZ	Mangatainoka R	52.76	137	IAmb	IAmb	18 09 46.6	
	comp=Z,31nm,0.9s						
MRZ	Mangatainoka R	52.76	137	P	P	18 09 43.3	+0.2
URZ	Urewera	52.79	134	P	P	18 09 43.5	+0.2
HOWZ	Holdsworth Sta	52.83	137	P	P	18 09 44.2	+0.5
MTHZ	Maungataniwha	52.84	135	P	P	18 09 44.9	+1.0
RTZ	Ruatahuna	52.84	134	IAmb	IAmb	18 09 45.2	
	comp=Z,25nm,0.8s						
RTZ	Ruatahuna	52.84	134	P	P	18 09 44.2	+0.3
KRHZ	Kereru	52.85	136	P	P	18 09 44.6	+0.7
PNHZ	Pukenui	52.85	136	P	P	18 09 44.5	+0.6
MSWZ	Moikau Station	52.89	138	P	P	18 09 43.9	-0.2
NMHZ	Naumai	52.92	135	P	P	18 09 46.2	+1.8
PAWZ	Paruwai Farm	52.99	138	P	P	18 09 44.7	-0.2
DVHZ	Dannevirke	53.00	136	P	P	18 09 45.2	+0.3
HAZ	Te Kaha	53.07	133	P	P	18 09 46.6	+1.1
RUGZ	Raukumara Rang	53.08	133	P	P	18 09 45.2	-0.5
RAGZ	Rawiri	53.10	134	P	P	18 09 46.9	+1.1
MWZ	Matawai	53.12	134	P	P	18 09 47.0	+1.2
SNGZ	Shannon Statio	53.17	134	P	P	18 09 46.7	+0.5
TRWZ	Traveller	53.17	138	P	P	18 09 46.7	+0.5
TMWZ	Te Maipa	53.18	137	P	P	18 09 46.7	+0.5
BFZ	Birch Farm	53.22	137	P	P	18 09 47.4	+0.9
TWGZ	Tauwhareparae	53.38	133	P	P	18 09 49.2	+1.4
WMGZ	Waiomatatini S	53.56	133	P	P	18 09 50.2	+1.2
GTA	Gaotai	53.76	331	P	P	18 09 51.7	+1.2
GTA				pP	pwP	18 10 26.7	-2.0
GTA				ScP	ScP	18 14 38.6	-0.2
GTA				S	S	18 17 11.7	-1.9
GTA				pmax	pmax		
	comp=Z,37nm,1.2s						
GOMU	GeErMu	54.01	325	P	P	18 09 52.4	-0.3
GOMU				PcP	PcP	18 10 57.2	+1.2
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
YSS	Yuzhno-Sakhali	54.57	11	eP	P	18 10 00.0	+4.0
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
HYB	Hyderabad	56.29	296	eP	P	18 10 08.2	-0.7
HYB				esP	sP	18 10 57.4	-1.6
HYB				ePcP	PcP	18 11 05.0	+0.3
HYB				ePP	PP	18 12 15.8	-0.2
HYB				eScP	ScP	18 14 51.3	+1.0
HILR	Hailar Array B	56.73	352	P	P	18 10 12.3	+0.7
	comp=Z,2.2nm,0.5s,baz=144,slow=12,SNR=2.4						
	comp=Z,2.2nm,0.5s						
HEH	HeiHe	56.75	358	eP	P	18 10 11.2	-0.4
HEH				pmax	pmax		
	comp=Z,17nm,1.1s						
AFI	Afiamalu	57.49	102	P	P	18 10 19.4	+1.8
AFI	Afiamalu	57.49	102	P	P	18 10 19.4	+1.8
AFI				pmax	pmax		
	comp=Z,64nm,1.0s						
ULN	Ulaanbaatar	58.01	342	P	P	18 10 20.2	-0.4
ULN	Ulaanbaatar	58.01	342	P	P	18 10 21.2	+0.6
ULN				IAmb	IAmb	18 10 22.6	
	comp=Z,33nm,0.7s						
ULN	Ulaanbaatar	58.01	342	P	P	18 10 21.6	+1.0
	comp=Z,2µmcomp=Z,202nm,0.7s						
ULN	Ulaanbaatar	58.01	342	i P	P	18 10 21.7	+1.1
ULN				pmax	pmax		
	comp=Z,32nm,0.7s						
ULN	Ulaanbaatar	58.01	342	P	P	18 10 21.7	+1.1
SONM	Songino Array	58.18	341	P	P	18 10 22.6	+0.7
	comp=Z,7.8nm,0.5s,baz=155,slow=6.3,SNR=26						
	comp=Z,7.8nm,0.5s						
SONM	Songino Array	58.18	341	P	P	18 10 22.4	+0.6
ZEA	Zeya	60.24	358	eP	P	18 10 36.9	+1.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
DRV	Dumont d'Urvil	60.27	175	P	P	18 10 37.1	+1.4
DRV				PcP	PcP	18 11 20.6	+1.1
ZAK	Zakamensk	61.41	341	eP	P	18 10 44.0	+0.2
ZAK				pmax	pmax		
	comp=Z,13nm,1.5s						
TLY	Talaya	62.42	342	P	P	18 10 51.8	+1.4
IRK	Irkutsk	62.71	342	eP	P	18 10 51.9	-0.4
IRK				pmax	pmax		
	comp=Z,65nm,1.3s						
WMQ	Urumqi	63.20	327	⇑P	P	18 10 56.8	+1.0
WMQ				sP	sP	18 11 48.0	+2.2
WMQ				pmax	pmax		
	comp=Z,37nm,0.9s						
WMQ	Urumqi	63.20	327	P	P	18 10 56.6	+0.8
MOY	Mondy	63.26	340	eP	P	18 10 57.4	+1.3
MOY				pmax	pmax		
	comp=Z,40nm,1.9s						
KNGR	Kungurtug, Tuv	63.64	337	i P	P	18 10 59.0	+0.4
KNGR				pmax	pmax		
	comp=Z,12nm,1.0s						
PETK	Petropavlovsk-	63.99	18	P	P	18 11 01.2	+0.6
	comp=Z,5.1nm,0.5s,baz=180,slow=3.9,SNR=32						
	comp=Z,5.1nm,0.5s						
WUS	Wushi	66.62	320	IAmb	IAmb	18 11 20.4	
	comp=Z,59nm,1.4s						
WUS	Wushi	66.62	320	P	P	18 11 19.1	+1.0
ZSN	Zaisan	67.07	328	eP	P	18 11 20.8	+0.1
ZSN	Zaisan	67.07	328	eP	P	18 11 20.7	+0.1
NIL	Nilore	67.11	311	P	P	18 11 21.6	+0.4
NIL	Nilore	67.11	311	P	P	18 11 21.4	+0.2
NIL	Nilore	67.11	311	P	P	18 11 21.4	+0.2
NIL				pmax	pmax		
	comp=Z,39nm,0.6s						
DGZ	Jazzator, Alta	67.29	331	i P	P	18 11 22.3	+0.1
DGZ				pmax	pmax		
	comp=Z,17nm,0.6s						
SHLS	Shalkode	67.55	322	eP	P	18 11 22.3	-1.6
	comp=Z,24nm,0.8s						
SHLS	Shalkode	67.55	322	eP	P	18 11 22.3	-1.6
SHLS				pmax	pmax		
	comp=Z,24nm,0.8s						
PDGK	Podgornoye	67.63	322	P	P	18 11 24.0	-0.4
TARG	Taragay, Kyrgy	67.80	320	IAmb	IAmb	18 11 37.8	
	comp=Z,27nm,1.2s						
UZB	Uzynbulak	67.81	322	eP	P	18 11 25.4	-0.2
	comp=Z,21nm,0.9s						
UZB	Uzynbulak	67.81	322	eP	P	18 11 25.4	-0.2
UZB				pmax	pmax		
	comp=Z,21nm,0.9s						
PRZ	Przheval'sk	67.83	321	IAmb	IAmb	18 11 28.7	
	comp=Z,55nm,0.9s						
KSH	Kashi	67.87	317	P	P	18 11 27.2	+1.2
KSH				pP	pwP	18 12 03.4	-1.7
MK31	Makanchi Array	68.03	327	i P	P	18 11 27.4	+0.7
MKAR	Makanchi Array	68.03	327	P	P	18 11 27.8	+1.1
	comp=Z,57nm,0.5s,baz=120,slow=8.1,SNR=472						
MKAR				S	S	18 20 12.8	-1.4
	comp=Z,0.7nm,0.9s,baz=139,slow=9.0,SNR=3.6						
	comp=Z,57nm,0.5s						
MKAR	Makanchi Array	68.03	327	P	P	18 11 27.3	+0.6
SATY	Saty	68.14	322	eP	P	18 11 27.6	0.0
	comp=Z,29nm,0.8s						
SATY	Saty	68.14	322	eP	P	18 11 27.6	0.0
SATY				pmax	pmax		
	comp=Z,29nm,0.8s						
MAKZ	Makanchi	68.21	327	P	P	18 11 28.4	+0.6
MAKZ	Makanchi	68.21	327	P	P	18 11 28.4	+0.6
MAKZ				pmax	pmax		
	comp=Z,50nm,0.6s						
CCD	Concordia, Ant	68.48	182	P	P	18 11 31.1	+1.6
YAK	Yakutsk	68.51	360	P	P	18 11 29.6	+0.3
YAK				IAmb	IAmb	18 11 31.6	
	comp=Z,47nm,0.8s						
YAK	Yakutsk	68.51	360	eP	P	18 11 29.8	+0.5
YAK				e		18 11 52.7	
YAK				e*PP	pwP	18 12 12.1	+3.8
YAK				e		18 14 00.0	
YAK				ePPP	PPP	18 15 44.6	
YAK				eS	S	18 20 17.5	-1.6
YAK				e		18 21 12.5	
YAK				eSS	SS	18 24 45.9	-0.4
YAK				pmax	pmax		
	comp=Z,34nm,0.6s						
YAK				pmax	pmax		
	comp=N,15nm,1.4s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,101nm,3.0s						
YAK				pmax	pmax		
	comp=N,157nm,6.9s						
YAK				pmax	pmax		
	comp=E,121nm,3.5s						
YAK				smax	smax		
	comp=E,143nm,5.6s						
YAK				smax	smax		
	comp=N,31nm,2.2s						
TNSS	Tian-Shan	69.03	321	eP	P	18 11 33.1	-0.4
TNSS	Tian-Shan	69.03	321	eP	P	18 11 33.0	-0.4
MDOK	Medeo	69.04	321	eP	P	18 11 33.1	-0.1
MDOK	Medeo	69.04	321	eP	P	18 11 33.0	-0.1
ULHL	Ulahol	69.07	320	P	P	18 11 34.8	+1.3
	SNR=6.3						
AAA	Alma-Ata	69.14	321	eP	P	18 11 33.8	0.0
	comp=N,21nm,0.5s						
AAA	Alma-Ata	69.14	321	eP	P	18 11 33.7	0.0
AAA				pmax	pmax		
	comp=Z,21nm,0.5s						
CHKK	Chushkaly	69.44	322	eP	P	18 11 35.4	-0.1
CHKK	Chushkaly	69.44	322	eP	P	18 11 35.4	-0.1
TKM2	Tokmak 2	69.82	320	P	P	18 11 39.2	+1.1
	SNR=59						
MANEM	Manem	69.94	314	IAmb	IAmb	18 11 41.2	
	comp=Z,65nm,0.8s						
KBK	Karagaybulak	70.10	320	P	P	18 11 41.3	+1.5
	SNR=21						
AAK	Ala-Archa	70.38	320	P	P	18 11 43.0	+1.6
	SNR=16						
AAK	Ala-Archa	70.38	320	P	P	18 11 42.8	+1.3
AAK	Ala-Archa	70.38	320	P	P	18 11 42.2	+0.8
AAK				IAmb	IAmb	18 11 43.9	
	comp=Z,43nm,0.7s						
AAK	Ala-Archa	70.38	320	i P	P	18 11 42.6	+1.1
	SNR=20						
AAK	Ala-Archa	70.38	320	P	P	18 11 42.5	+1.1
CHMS	Chumysh	70.40	320	P	P	18 11 42.3	+0.9
	SNR=5.8						
KBL	Kabul	70.66	310	P	P	18 11 44.0	+0.6
	SNR=13						
KBL	Kabul	70.66	310	P	P	18 11 43.4	0.0
KBL				IAmb	IAmb	18 11 44.9	
	comp=Z,33nm,0.9s						
KBL	Kabul	70.66	310	P	P	18 11 43.4	0.0
KBL				pmax	pmax		
	comp=Z,33nm,1.0s						
USP	Ospenovka	70.69	320	P	P	18 11 44.3	+1.1
	SNR=86						
SGDS	Sogindy	70.70	321	eP	P	18 11 43.2	-0.1
	comp=Z,7.0nm,0.5s						
EKS2	Erkin-Say	70.86	319	P	P	18 11 45.9	+1.6
	SNR=72						
ZALV	Zalesovo Beam	71.36	334	P	P	18 11 46.5	-0.4
	comp=Z,12nm,0.7s,baz=122,slow=5.2,SNR=50						
ZALV				S	S	18 20 44.8	-7.9
	comp=Z,0.7nm,0.5s,baz=112,slow=11,SNR=5.5						
	comp=Z,12nm,0.7s						
ZALV	Zalesovo Beam	71.36	334	P	P	18 11 45.9	-0.9
SEY	Seymchan	71.47	11	eP	P	18 11 47.6	+0.2
SEY				pmax	pmax		
	comp=Z,15nm,1.5s						
BTLS	Baital	71.86	322⇑	iP	P	18 11 50.1	+0.1
BTLS	Baital	71.86	322c	iP	P	18 11 50.1	+0.1
CHGR	Chuyangaron	72.21	314	P	P	18 11 52.6	+0.2
CHGR	Chuyangaron	72.21	314	P	P	18 11 52.6	+0.2
CHGR				pmax	pmax		
	comp=Z,114nm,0.8s						
KURBB	Kurchatov Arra	72.31	328	P	P	18 11 53.0	+0.4
	comp=Z,16nm,0.7s,baz=129,slow=4.9,SNR=121						
KURBB				S	S	18 20 57.3	-6.4
	comp=Z,1.4nm,1.1s,baz=134,slow=10,SNR=8.7						
	comp=Z,16nm,0.7s						
KURBB	Kurchatov Arra	72.31	328	P	P	18 11 51.7	-0.9
KURK	Kurchatov	72.31	329	P	P	18 11 53.0	+0.4
KURK	Kurchatov	72.31	329	P	P	18 11 52.5	-0.1
KURK				IAmb	IAmb	18 12 36.6	
	comp=Z,27nm,0.9s						
KURK	Kurchatov	72.31	329	i P	P	18 11 52.7	+0.1
KURK				pmax	pmax		
	comp=Z,20nm,0.9s						
SHAA	Shahritus	72.52	313	IAmb	IAmb	18 12 22.0	
	comp=Z,37nm,0.7s						
DZA	Taraz	72.56	319	eP	P	18 11 54.3	0.0
	comp=Z,13nm,0.7s						
DZA	Taraz	72.56	319	eP	P	18 11 54.3	0.0
DZA				pmax	pmax		
	comp=Z,13nm,0.7s						
VNDA	Vanda	72.74	173	P	P	18 11 56.0	+1.2
	comp=Z,14nm,0.8s,baz=321,slow=7.0,SNR=47						
	comp=Z,14nm,0.8s						
VNDA	Vanda	72.74	173	P	P	18 11 56.2	+1.4
VNDA	Vanda	72.74	173	P	P	18 11 56.2	+1.4
VNDA				pmax	pmax		
	comp=Z,15nm,1.0s						
VNDA	Vanda	72.74	173	P	P	18 11 55.8	+1.0
IUG	Iuzhnay	73.08	318	eP	P	18 11 57.6	0.0
	comp=Z,34nm,0.9s						
IUG	Iuzhnay	73.08	318	eP	P	18 11 57.5	0.0
IUG				pmax	pmax		
	comp=Z,34nm,0.9s						
KK31	Karatay Array	73.19	319	IAmb	IAmb	18 11 59.8	
	comp=Z,35nm,1.1s						
KK31	Karatay Array	73.19	319	i P	P	18 11 57.9	-0.1
KKAR	Karatay Array	73.19	319	P	P	18 11 58.3	+0.3
KKAR	Karatay Array	73.19	319	P	P	18 11 58.3	+0.3
BRLS	Borolday	73.60	318	eP	P	18 12 00.4	0.0
	comp=Z,17nm,0.7s						
BRLS	Borolday	73.60	318	eP	P	18 12 00.4	0.0
BRLS				pmax	pmax		
	comp=Z,17nm,0.7s						
NGCH	Negor - Chabah	74.16	299	P	P	18 12 06.0	+2.0
MSEY	Mahe Island	74.25	267	P	P	18 12 06.5	+1.6
JLN	Jalan Bani Buh	74.88	295	P	P	18 12 08.6	+0.4
WBK	Wadi Bani Khal	75.39	295	P	P	18 12 12.4	+1.2
WSAR	Wadi Sarin	75.84	296	P	P	18 12 15.0	+1.2
MHTO	MHTO	75.92	294	P	P	18 12 14.8	+0.6
	SNR=7.4						
DQM	DQM	76.08	292	P	P	18 12 16.1	+1.0
JMDO	Jabal Madar	76.11	295	P	P	18 12 16.3	+1.0
SMDO	Samad	76.32	296	P	P	18 12 17.6	+1.0
BIDO	Bidbid	76.36	296	P	P	18 12 17.9	+1.3
	SNR=7.7						
BSY	Bisya	77.01	295	P	P	18 12 21.1	+0.7
HOQ	Hoqain	77.10	296	P	P	18 12 22.1	+1.3
	SNR=5.5						
SHAO	Shalim	77.47	290	P	P	18 12 24.0	+1.1
SHAO	Shalim	77.47	290	i P	P	18 12 23.7	+0.7
	SNR=6.6						
ARQ	Araqi	77.75	296	P	P	18 12 25.5	+1.1
BVA0	Borovoye Array	77.86	328	i P	P	18 12 24.1	-0.3
BVAR	Borovoye Array	77.86	328	P	P	18 12 24.6	+0.2
	comp=Z,12nm,0.8s,baz=131,slow=6.1,SNR=41						
	comp=Z,12nm,0.8s						
BORK	Borovoye	77.91	328	P	P	18 12 24.3	-0.4
BORK	Borovoye	77.91	328	i P	P	18 12 24.0	-0.7
BORK				pmax	pmax		
	comp=Z,18nm,0.9s						
BORK	Borovoye	77.91	328	P	P	18 12 24.8	+0.1
BORK				pP	pP	18 13 00.8	+0.5
SOHO	SOHO	77.92	296	P	P	18 12 26.3	+1.0
SOHO	SOHO	77.92	296	i P	P	18 12 25.4	+0.1
	SNR=14						
DMTO	DMTO	78.04	290	P	P	18 12 27.0	+0.9
TIXI	Tiksi	78.18	360	P	P	18 12 25.4	-0.3
TIXI	Tiksi	78.18	360	i P	P	18 12 25.4	-0.3
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
UOSS	Minazif	78.39	297	P	P	18 12 28.5	+0.6
UOSS	Minazif	78.39	297	P	P	18 12 28.6	+0.6
HATD	Hatta, Dubai	78.43	297	P	P	18 12 29.5	+1.3
HATD	Hatta, Dubai	78.43	297	P	P	18 12 29.3	+1.1
ASHO	Ashiyiah	78.46	297	P	P	18 12 29.6	+1.2
ASHO	Ashiyiah	78.46	297	i P	P	18 12 29.4	+1.0
	SNR=6.0						
MSFE	Esma-Masafi	78.52	297	P	P	18 12 30.1	+1.4
MASF	Masafi	78.53	297	P	P	18 12 30.4	+1.6
BANOM	Banah	78.53	298	P	P	18 12 30.5	+1.8
BANOM	Banah	78.53	298	P	P	18 12 30.4	+1.6
ALNE	Al Ain	78.60	296	P	P	18 12 30.4	+1.3
ALNE	Al Ain	78.60	296	i P	P	18 12 30.8	+1.7
	SNR=8.8						
SHME	Shamm	78.70	298	P	P	18 12 31.2	+1.6
RBK	Rabkut	78.70	289	P	P	18 12 30.8	+1.0
UMZA	Um Al Zommool	78.84	295	P	P	18 12 31.2	+0.7
NAZ	Nazwa, Dubai	78.88	297	P	P	18 12 31.7	+1.1
NAZ	Nazwa, Dubai	78.88	297	i P	P	18 12 32.0	+1.3
	SNR=6.2						
FAQ	Al Faqa, Dubai	78.89	297	P	P	18 12 32.0	+1.3
FAQ	Al Faqa, Dubai	78.89	297	P	P	18 12 31.4	+0.7
DOK	Doka	78.98	290	P	P	18 12 31.5	+0.2
ASUD	Al Ashush, Dub	79.10	297	P	P	18 12 32.8	+1.0
WHFO	Wadi Hawf	79.18	290	P	P	18 12 32.5	0.0
	SNR=5.2						
ABTO	Aybut	79.52	289	P	P	18 12 35.0	+0.7
	SNR=5.8						
MZWR	Madinat Zayed	80.21	295	P	P	18 12 38.3	+0.5
MZR	Muzera	80.42	295	P	P	18 12 39.7	+0.8
MZR	Muzera	80.42	295	i P	P	18 12 39.7	+0.8
	SNR=7.1						
NRIK	Noril'sk	81.28	346	P	P	18 12 43.1	+0.6
	comp=Z,9.8nm,0.9s,baz=137,slow=3.2,SNR=11						
	comp=Z,9.8nm,0.9s						
NRIK	Noril'sk	81.28	346	i P	P	18 12 42.5	0.0
NRIK				pmax	pmax		
	comp=Z,25nm,1.5s						
VOI	Vohitsoka	81.37	249	P	P	18 12 46.0	+1.8
VOI	Vohitsoka	81.37	249	P	P	18 12 43.8	-0.4
VOI				IAmb	IAmb	18 12 50.4	
	comp=Z,17nm,0.6s						
AB31	Akbulak array	82.34	322	i P	P	18 12 47.7	-0.8
ABKAR	Akbulak array	82.34	322	P	P	18 12 48.2	-0.3
SMRA	Abu-Samra	83.14	296	P	P	18 12 54.0	+0.8
QSPA	South Pole Qui	83.29	180	P	P	18 12 54.1	+0.8
	comp=Z,11nm,0.6s,baz=316,slow=1.2,SNR=82						
	comp=Z,11nm,0.6s						
QSPA	South Pole Qui	83.29	180	P	P	18 12 53.3	0.0
QSPA	South Pole Qui	83.29	180	P	P	18 12 53.7	+0.4
QSPA				sP	sP	18 13 42.5	-1.9
AKTO	Aktyubinsk	83.90	322	P	P	18 12 56.3	-0.2
SVE	Sverdlovsk	84.56	329	eP	P	18 13 00.2	+0.5
SVE				pmax	pmax		
	comp=Z,24nm,1.1s						
ARTI	Arti	85.58	328	P	P	18 13 04.4	-0.4
ARTI				IAmb	IAmb	18 13 05.4	
	comp=Z,18nm,0.7s						
ARTI	Arti	85.58	328d	iP	P	18 13 04.5	-0.3
ARTI				*PP	pP	18 13 41.4	-0.1
ARTI				S	SKSac	18 23 16.0	-0.1
ARTI				pmax	pmax		
	comp=Z,13nm,0.7s						
J16K	Anvik River	86.80	25	IAmb	IAmb	18 13 47.8	
	comp=Z,58nm,2.0s						
LKRN	Lenkeran, Azer	87.43	309	P	P	18 13 15.4	+1.2
J17K	VABM Dome	87.49	25	IAmb	IAmb	18 15 11.3	
	comp=Z,52nm,1.8s						
RAYN	Ar Rayn	87.73	294	P	P	18 13 16.9	+0.9
RAYN	Ar Rayn	87.73	294	P	P	18 13 16.2	+0.2
RAYN				IAmb	IAmb	18 13 17.4	
	comp=Z,17nm,0.7s						
RAYN	Ar Rayn	87.73	294	i P	P	18 13 16.5	+0.5
	SNR=27						
RAYN	Ar Rayn	87.73	294	P	P	18 13 16.2	+0.2
RAYN				pmax	pmax		
	comp=Z,17nm,0.7s						

RAYN	**Ar Rayn**	**87.73**	**294**	P	**P**	**18 13 16.5**	**+0.5**
RAYN				pP	**pP**	**18 13 53.8**	**+0.8**
AKT	**Akhty**	**88.71**	**312**	*e*P	**P**	**18 13 16.7**	**-3.7**
AKT				*e**PP	**pP**	**18 13 52.9**	**-4.2**
AKT				*e**SP	**sP**	**18 14 08.2**	**-4.2**
AKT				*e*PPP	PPP	18 18 46.3	
AKT				pmax	pmax		
	comp=Z,14nm,1.0s						
ELIB	**Princess Elisa**	**88.83**	**197**	*d*P	**P**	**18 13 22.1**	**+1.8**
	comp=Z,3.5nm,0.8s						
SEKA	**Sheki**	**89.06**	**312**	P	**P**	**18 13 23.0**	**+1.1**
MNGR	**Mingechevir, A**	**89.07**	**311**	P	**P**	**18 13 23.2**	**+1.3**
D19K	**Kuna River**	**89.59**	**20**	IAmb	IAmb	18 14 06.8	
	comp=Z,36nm,2.0s						
GANJ	**Ganja**	**89.62**	**311**	P	**P**	**18 13 25.8**	**+1.3**
J20K	**Nowinta River**	**89.81**	**25**	IAmb	IAmb	18 15 41.3	
	comp=Z,27nm,1.7s						
NAX	**Nakhchivan**	**90.03**	**309**	P	**P**	**18 13 27.7**	**+1.2**
SML	**Sawmill**	**91.86**	**28**	P	**P**	**18 13 33.7**	**-0.7**
SML	**Sawmill**	**91.86**	**28**	P	**P**	**18 13 33.7**	**-0.7**
SML				pmax	pmax		
	comp=Z,84nm,1.8s						
RND	**Reindeer**	**91.92**	**26**	P	**P**	**18 13 34.0**	**-0.6**
RND				IAmb	IAmb	18 16 20.8	
	comp=Z,33nm,1.6s						
RND	**Reindeer**	**91.92**	**26**	P	**P**	**18 13 34.1**	**-0.6**
RND				pmax	pmax		
	comp=Z,33nm,1.6s						
I23K	**Minto, Yukon-K**	**92.04**	**25**	IAmb	IAmb	18 14 25.8	
	comp=Z,30nm,1.7s						
G23K	**Bananza Creek**	**92.09**	**23**	P	**P**	**18 13 35.4**	**0.0**
G23K				IAmb	IAmb	18 14 34.4	
	comp=Z,28nm,1.8s						
H23K	**Yukon River**	**92.10**	**24**	IAmb	IAmb	18 15 58.4	
	comp=Z,37nm,2.0s						
COLD	**Coldfoot**	**92.13**	**23**	P	**P**	**18 13 35.6**	**+0.1**
KBZ	**Khabaz**	**92.57**	**314**	P	**P**	**18 13 37.8**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=117,slow=0.4,SNR=5.0						
	comp=Z,1.3nm,0.7s						
KBZ	**Khabaz**	**92.57**	**314**	*i* P	**P**	**18 13 37.9**	**-0.2**
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CCB	**Clear Creek Bu**	**92.60**	**25**	IAmb	IAmb	18 14 49.1	
	comp=Z,21nm,1.7s						
KMBO	**Kilima Mbogo**	**92.72**	**269**	*i* P	**P**	**18 13 37.5**	**-2.3**
KIV	**Kislovodsk**	**92.75**	**314**	*e*P	**P**	**18 13 39.4**	**+0.4**
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
H24K	**Noodor Dome**	**92.78**	**24**	IAmb	IAmb	18 14 39.3	
	comp=Z,22nm,1.6s						
IL31		**93.01**	**25**	P	**P**	**18 13 37.6**	**-2.0**
IL31				IAmb	IAmb	18 15 43.0	
	comp=Z,23nm,1.8s						
ILAR	**Eielson Array**	**93.01**	**25**	P	**P**	**18 13 38.0**	**-1.7**
	comp=Z,1.9nm,0.7s,baz=276,slow=4.3,SNR=20						
ILAR				LR	LR	18 56 14.1	
	comp=Z,46nm,20.5s,baz=224,slow=36						
	comp=Z,1.9nm,0.7s						
ILAR	**Eielson Array**	**93.01**	**25**	P	**P**	**18 13 38.1**	**-1.5**
ILAR	**Eielson Array**	**93.01**	**25**	P	**P**	**18 13 38.1**	**-1.5**
SOC	**Sochi**	**94.85**	**313**	*e*P	P	18 13 42.8	-5.8
SOC				*e*PPP	PPP	18 19 41.9	
SOC				*e*S	**SKSac**	**18 24 03.1**	**-7.1**
SOC				*e*SS	**SS**	**18 31 13.9**	**-4.0**
SOC				*e*SSS	SSS	18 34 54.7	
SOC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BELA	**Belgrano 2**	**95.14**	**183**	P	**P**	**18 13 49.6**	**+0.4**
BELA				IAmb	IAmb	18 13 54.4	
	comp=Z,5.0nm,0.5s						
I27K	**Kandik River**	**95.31**	**25**	IAmb	IAmb	18 13 56.8	
	comp=Z,5.8nm,0.8s						
SNAA	**Sanae**	**96.00**	**193**	P	**P**	**18 13 54.7**	**+1.3**
	comp=Z,2.1nm,0.8s,baz=236,slow=11,SNR=5.1						
	comp=Z,2.1nm,0.8s						
SNAA	**Sanae**	**96.00**	**193**	IAmb	IAmb	18 14 39.5	
	comp=Z,6.4nm,1.2s						
I28M	**Miner Creek**	**96.00**	**25**	IAmb	IAmb	18 13 54.8	
	comp=Z,5.7nm,0.8s						
BRTR	**Keskin Array B**	**99.22**	**309**	P	**Pdif**	**18 14 07.2**	**-1.4**
	comp=Z,0.8nm,0.8s,baz=115,slow=6.5,SNR=5.1						
	comp=Z,0.8nm,0.8s						
BRTR	**Keskin Array B**	**99.22**	**309**	*i* P	**Pdif**	**18 14 07.9**	**-0.6**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARCES	**ARCESS Array B**	**101.33**	**340**	P	**Pdif**	**18 14 16.4**	**-0.7**
	comp=Z,4.4nm,1.0s,baz=59,slow=4.4,SNR=3.9						
MNK	**Minsk**	**102.52**	**324**	*i* P	**Pdif**	**18 14 21.6**	**-1.1**
MNK				*i*		18 18 36.8	
MNK				*i* PPP	PPP	18 20 47.7	
MNK				*i* S	**SKSac**	**18 24 47.7**	**-0.5**
MNK				*i* *SS	**Sdif**	**18 25 51.1**	**-3.0**
MNK				*i* SS	**SS**	**18 33 04.0**	**-0.4**
MNK				*i* SSS	SSS	18 37 01.0	
MNK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,7.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,24nm,1.1s						
HFS	**Hagfors**	**108.75**	**332**	PKKPbc	PKKPbc	18 30 02.5	-3.6
	comp=E,5.6nm,0.9s,baz=64,slow=3.4,SNR=4.5						
GERES	**GERESS Array B**	**112.26**	**320**	PKiKP	**PKiKP**	**18 19 01.0**	**-0.6**
	comp=E,0.5nm,0.6s,baz=42,slow=1.6,SNR=3.8						
GERES				PP	**PP**	**18 19 42.2**	**-6.5**
	comp=E,0.8nm,0.6s,baz=71,slow=8.6,SNR=4.6						
PDAR	**Pinedale Array**	**116.58**	**45**	PKKPbc	PKKPbc	18 29 37.7	-1.9
	comp=E,0.2nm,0.5s,baz=118,slow=2.6,SNR=2.8						
EKA	**Eskdalemuir Ar**	**118.95**	**332**	PKP	**PKiKP**	**18 19 14.9**	**+0.7**
	comp=E,0.6nm,0.5s,baz=34,slow=5.1,SNR=1.8						
MNTX	**Cornudas Mount**	**122.68**	**57**		**PKPdf**	**18 19 21.7**	**-0.4**
TXAR	**Lajitas Array**	**124.66**	**59**	PKP	**PKiKP**	**18 19 27.1**	**+0.6**
	comp=E,0.8nm,0.8s,baz=228,slow=1.5,SNR=5.2						
ESDC	**Sonseca Array**	**127.37**	**316**	PP	**PP**	**18 21 31.6**	**-0.7**
	comp=E,0.9nm,0.6s,baz=70,slow=7.9,SNR=5.3						
TORD	**Torodi Ar. Bea**	**128.87**	**281**	PKP	**PKPdf**	**18 19 33.3**	**-1.0**
	comp=E,2.0nm,0.5s,baz=64,slow=3.7,SNR=2.5						
TORD				SKPab	SKPab	18 22 40.6	
	comp=E,2.0nm,0.4s,baz=67,slow=5.3,SNR=5.0						
PLCA	**Paso Flores**	**129.13**	**160**	SKPab	SKPbc	18 22 41.6	-0.5
	comp=E,6.2nm,0.8s,baz=211,slow=5.0,SNR=9.6						
PMRV	**Marv??o**	**129.83**	**317**	*e*PKP	**PKiKP**	**18 19 38.0**	**+1.7**
PMRV				*e*SKP	SKPab	18 22 43.9	-0.1
SCHQ	**Schefferville**	**130.09**	**13**	SKPab	**SKPab**	**18 22 43.7**	**-0.9**
	comp=E,21nm,0.9s,baz=348,slow=3.3,SNR=9.9						
PBAR	**Barrancos**	**130.18**	**315**	*e*SKP	**SKPbc**	**18 22 45.3**	**-0.4**
PSARD	**Sardoal**	**130.26**	**318**	*e*SKP	**SKPbc**	**18 22 45.6**	**-0.3**
PVAQ	**Vaqueiros**	**131.02**	**315**	*e*SKP	**SKPbc**	**18 22 49.2**	**+0.5**
MESJ	**Messejana**	**131.16**	**316**	*e*SKP	**SKPbc**	**18 22 50.1**	**+0.8**
DBIC	**Dimbokro**	**135.30**	**273**	PKhKP	PKPpre	18 19 38.3	
	comp=E,3.5nm,1.0s,baz=90,slow=4.0,SNR=2.2						
DBIC				PKP	**PKiKP**	**18 19 48.5**	**+0.5**
	comp=E,2.8nm,0.6s,baz=135,slow=4.3,SNR=4.3						
DBIC				SKPbc	**SKPbc**	**18 23 02.5**	**-1.4**
	comp=E,9.4nm,0.8s,baz=116,slow=4.0,SNR=9.8						
BOAB	**BOACO BROADBAN**	**144.27**	**78**		**PKPdf**	**18 20 02.5**	**-0.2**
ITAB	**Concordia**	**146.21**	**176**		**PKPab**	**18 20 08.2**	**+0.3**
CPUP	**Villa Florida**	**146.39**	**168**	PKPbc	**PKPbc**	**18 20 07.6**	**0.0**
	comp=E,5.5nm,0.8s,baz=63,slow=2.2,SNR=38						
CPUP				SKPbc	**SKPbc**	**18 23 32.1**	**-0.6**
	comp=E,3.8nm,1.0s,baz=104,slow=1.4,SNR=9.4						
CPUP	**Villa Florida**	**146.39**	**168**		**PKPbc**	**18 20 07.4**	**-0.2**
CPUP	**Villa Florida**	**146.39**	**168**	PKP2	**PKPbc**	**18 20 07.4**	**-0.2**
HMBC	**Humberstone**	**146.75**	**144**		**PKPbc**	**18 20 09.3**	**+0.4**
PB08	**IPOC Station P**	**147.28**	**145**		**PKPbc**	**18 20 10.7**	**0.0**
PB11	**IPOC Station P**	**147.29**	**144**		**PKPbc**	**18 20 11.6**	**+1.0**
NNA	**Nana**	**147.39**	**125**		**PKPbc**	**18 20 11.5**	**+0.7**
NNA	**Nana**	**147.39**	**125**	PKP2	**PKPbc**	**18 20 11.5**	**+0.7**
GO01	**Chusmiza**	**147.63**	**144**		**PKiKP**	**18 20 13.0**	**-0.9**
PB12	**IPOC Station P**	**147.77**	**142**		**PKiKP**	**18 20 12.8**	**-0.8**
PB18	**Visviri**	**149.07**	**141**		**PKiKP**	**18 20 18.5**	**+1.6**
LPAZ	**La Paz**	**150.89**	**142**	PKPbc	**PKiKP**	**18 20 22.1**	**+1.3**
	comp=E,12nm,0.4s,baz=46,slow=3.1,SNR=31						
LPAZ	**La Paz**	**150.89**	**142**		**PKiKP**	**18 20 21.5**	**+0.7**
LPAZ	**La Paz**	**150.89**	**142**	PKIKP	**PKiKP**	**18 20 21.5**	**+0.7**
AQDB	**Aquidauana**	**152.41**	**168**		**PKiKP**	**18 20 23.3**	**+0.2**
FLOC	**Florencia**	**153.80**	**100**		**PKPbc**	**18 20 26.0**	**-0.1**
ROSC	**El Rosal**	**155.61**	**93**	PKPbc	PKPbc	18 20 31.7	
	comp=E,12nm,0.4s,baz=101,slow=10,SNR=4.3						

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*AEIC **11** 18:11:25.0±0.9, 53°.30N±0°.08×162°.1W±0°.1, h33^{km}±8^{km}, Error ellipse: s-maj=12.4km s-min=8.2km az=141.0*

NEIC 11 18:11:23.6±0.7**, 53°.40N**±0°.06×**162°.24W**±0°.09**, h10**^{km}±2^{km}**, ML3.2**/14**, ML3.0**(AEIC)**, Error ellipse: s-maj=11.0km s-min=8.6km az=146.0, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FALS	**False Pass**	**1.61**	**335**	Pn	Pn	18 11 51.7	-0.4
FALS					Pb	18 11 51.9	-1.5
FALS	**False Pass**	**1.61**	**335**		Sn	18 12 12.7	-0.3
FALS	**False Pass**	**1.61**	**335**	IAML		18 12 19.9	
	comp=E,517nm,0.4s						
FALS				IAML		18 12 21.1	
	comp=N,516nm,0.8s						
SSLS	**Shishaldin Sou**	**1.67**	**322**		Pn	18 11 53.0	0.0
SSLS					Sn	18 12 14.3	-0.2
ISNN	**Isanotski Nort**	**1.70**	**328**		Pn	18 11 53.4	+0.1
DT1	**Dutton Round H**	**1.71**	**359**		Pn	18 11 52.5	-0.9
DT1					Sn	18 12 15.3	0.0
DTNA	**Dutton South F**	**1.75**	**360**		Pn	18 11 53.6	-0.4
DTNA					Sn	18 12 16.4	0.0
SSBA	**Shishaldin**	**1.77**	**322**		Pn	18 11 54.4	+0.2
SSBA					Sn	18 12 16.9	0.0
WEBT	**Westdahl Beart**	**1.91**	**310**		Pn	18 11 56.1	-0.1
PS4A	**Pavlof South-4**	**1.96**	**6**		Pn	18 11 56.8	-0.1
PS4A					Sn	18 12 21.4	-0.1
PN7A	**Pavlof North-7**	**2.04**	**4**		Pn	18 11 58.3	+0.3
PS1A	**Pavlof South-1**	**2.04**	**8**		Pn	18 11 58.0	0.0
SDPT	**Sand Point**	**2.21**	**27**		Pn	18 11 58.6	-1.6
SDPT				IAML		18 12 28.5	
	comp=E,100nm,0.5s						
SDPT				IAML		18 12 28.7	
	comp=N,99nm,1.0s						
AKUT	**Akutan**	**2.22**	**291**		Pn	18 12 00.5	0.0
AKUT				IAML		18 12 32.0	
	comp=E,82nm,0.8s						
AKUT	**Akutan**	**2.22**	**291**	P	Pn	18 12 00.5	0.0
S12K	**Black Hills**	**2.31**	**2**		Pn	18 12 01.8	+0.2
ZRO	**Akutan Zero**	**2.33**	**289**		Pn	18 12 01.9	0.0
LVA	**Lava Point**	**2.38**	**290**	Pn	Pn	18 12 02.4	-0.3
LVA				IAML		18 12 35.8	
	comp=E,127nm,1.1s						
LVA				IAML		18 12 57.1	
	comp=N,200nm,0.9s						
UNV	**Unalaska Valle**	**2.58**	**282**		Pn	18 12 04.8	-0.6
MNAT	**Makushin Natee**	**2.69**	**282**		Pn	18 12 06.4	-0.5
OKTU	**Okmok Mt. Tuli**	**3.48**	**272**		Pn	18 12 17.8	0.0
OKNC	**Okmok New Cone**	**3.52**	**273**		Pn	18 12 18.5	+0.2
NIKH	**Nikolski High**	**4.01**	**266**		Pn	18 12 24.3	-0.7
NIKH	**Nikolski High**	**4.01**	**266**	IAML		18 13 27.1	
	comp=E,51nm,1.1s						
O14K	**Tigyukauivet M**	**5.89**	**5**	Pn	Pn	18 12 50.0	-0.8
O15K	**Ungalikthiuk R**	**5.94**	**12**	Pn	Pn	18 12 50.9	-0.7
N14K	**Kuskokwak Cree**	**6.54**	**2**	Pn	Pn	18 12 59.5	-0.3
N15K	**Kwethluk River**	**6.88**	**9**	Pn	Pn	18 13 04.3	-0.2
ATKA	**Atka Island**	**7.35**	**265**	Pn	Pn	18 13 10.9	0.0
L14K	**Kuka Creek**	**7.96**	**358**	Pn	Pn	18 13 19.9	+0.6
K13K	**Kusilvak Mount**	**8.65**	**352**	Pn	Pn	18 13 29.2	+0.6

RSNC 11 18:20:20.6±0.0**, 10°N**±2°×**7°3W**±°**, h118**^{km}±3^{km}**, M2.2, mb3.8, ML2.2, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARGC	**Ariguani, Magd**	**1.01**	**252**	P	Pn	18 20 42.9	+0.3
ARGC				S	Sn	18 20 59.6	+0.4
SJCC	**San Jacinto, C**	**1.90**	**262**	P	Pn	18 20 52.0	-0.8
SJCC				S	Sn	18 21 16.3	-1.1
OCAC	**Ocana**	**1.93**	**181**	P	Pn	18 20 52.6	-0.7
OCAC				S	Sn	18 21 17.2	-1.0
URIC	**Uribia, Colomb**	**1.96**	**40**	P	Pn	18 20 53.1	-0.4
URIC				S	Sn	18 21 17.9	-0.8
PAMC	**Pamplona, Colo**	**2.88**	**169**	P	Pn	18 21 05.7	0.0
PAMC				S	Sn	18 21 39.5	-0.9
UREC	**San Jos de Ur**	**3.29**	**223**	P	Pn	18 21 10.3	-0.4
UREC				S	Sn	18 21 45.2	-4.2
BARC	**Barichara**	**3.57**	**179**	P	Pn	18 21 14.7	+0.1
BARC				S	Sn	18 21 56.3	0.0
GUY2C	**Guyana, Caldas**	**5.34**	**203**	P	Pn	18 21 39.2	+0.6
	16nm,0.8s						

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*IDC **11** 18:20:42.3±1.0, 14°.99N×147°.15E, h0^{km}, mb4.0/15, mbtmp4.1/16, ML4.2/1, MS3.1/2, Error ellipse: s-maj=27.0km s-min=16.0km az=102.0*

*NEIC **11** 18:20:43.8±2.3, 14°.90N±0°.09×147°.24E±0°.06, h12^{km}±3^{km}, mb4.5/22, Error ellipse: s-maj=12.8km s-min=7.0km az=161.0*

ISC 11 18:20:46.3±0.7**, 14°.91N**±0°.08×**147°.22E**±0°.09**, h32**^{km}**, n38,** σ**0^{s}96**/35**, mb4.4**/24**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DPSS	**Saipan**	**1.42**	**284**		**Pn**	**18 21 09.7**	**-0.2**
GUMO	**Guam**	**2.63**	**240**	Pn	**Pn**	**18 21 26.3**	**-0.2**
	44nm,0.3s,baz=125,slow=4.6,SNR=26						
GUMO				Sn	**Sn**	**18 21 57.7**	**+0.3**
	54nm,0.3s,baz=110,slow=21,SNR=10						
GUMO				LR	LR	18 22 38.9	
	comp=Z,201nm,21.2s,baz=145,slow=45						
	88nm,0.3s						
PATS	**Pohnpei**	**13.52**	**125**	Pn	**Pn**	**18 23 54.5**	**-1.6**
MJAR	**Matsushiro Arr**	**23.00**	**341**	P	**P**	**18 25 47.1**	**-1.4**
	0.7nm,0.6s,baz=166,slow=9.5,SNR=1.3						
	0.7nm,0.6s						
MJAR	**Matsushiro Arr**	**23.00**	**341**	IAmb	IAmb	18 25 50.2	
	comp=Z,7.0nm,1.4s						
FAKI	**Fak Fak**	**23.10**	**221**	P	**P**	**18 25 49.5**	**-0.2**
KSRS	**Korea Array**	**28.24**	**326**	P	**P**	**18 26 35.8**	**-0.7**
	comp=Z,1.6nm,0.9s,baz=146,slow=8.6,SNR=2.5						
	comp=Z,1.6nm,0.9s						
CTA	**Charters Tower**	**34.79**	**182**	LR	LR	18 41 13.9	
	comp=Z,46nm,18.7s,baz=325,slow=35						
WB0	**Warramunga Arr**	**36.69**	**200**	P	**P**	**18 27 51.8**	**+1.2**
WB0				IAmb	IAmb	18 28 05.8	
	comp=Z,5.6nm,1.1s						
WR8	**Warramunga Arr**	**36.83**	**200**	P	**P**	**18 27 52.9**	**+1.2**
WR8				IAmb	IAmb	18 28 17.8	
	comp=Z,12nm,1.4s						
WRAB	**Tennant Creek**	**36.86**	**200**	P	**P**	**18 27 52.9**	**+0.9**
WRAB				IAmb	IAmb	18 27 54.2	
	comp=Z,5.1nm,0.8s						
WRA	**Warramunga Arr**	**36.88**	**200**	P	**P**	**18 27 52.8**	**+0.7**
	comp=Z,4.2nm,0.8s,baz=23,slow=9.6,SNR=17						
	comp=Z,4.2nm,0.8s						
AS31	**Alice Springs**	**40.48**	**199**	P	**P**	**18 28 23.5**	**+1.1**
ASAR	**Alice Springs**	**40.49**	**199**	P	**P**	**18 28 23.7**	**+1.3**
	comp=Z,1.4nm,0.8s,baz=22,slow=8.1,SNR=18						
	comp=Z,1.4nm,0.8s						
LZDM	**Lanzhou Array**	**44.09**	**307**	P	**P**	**18 28 53.4**	**+1.3**
	comp=Z,8.8nm,0.7s,baz=130,slow=6.2,SNR=5.2						
	comp=Z,8.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**46.27**	**281**	P	**P**	**18 29 09.6**	**+0.4**
	comp=Z,1.1nm,0.9s,baz=79,slow=6.4,SNR=10.0						
	comp=Z,1.1nm,0.9s						
SONM	**Songino Array**	**47.01**	**323**	P	**P**	**18 29 14.6**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=129,slow=7.4,SNR=5.8						
	comp=Z,0.9nm,0.7s						
GSI	**Gunungsitoli**	**50.83**	**259**	P	**P**	**18 29 43.9**	**-0.4**
SHL	**Shillong**	**52.67**	**291**	P	**P**	**18 29 56.9**	**-1.3**
SHL				IAmb	IAmb	18 29 58.5	
	comp=Z,4.7nm,0.8s						
LSA	**Lhasa**	**53.45**	**296**	P	**P**	**18 30 04.7**	**+0.5**
LSA				IAmb	IAmb	18 30 06.4	
	comp=Z,5.0nm,1.1s						
EVN	**Everest**	**57.20**	**294**	P	**P**	**18 30 30.2**	**-1.3**
EVN				IAmb	IAmb	18 30 43.9	
	comp=Z,3.4nm,1.0s						
ZALV	**Zalesovo Beam**	**61.90**	**324**	P	**P**	**18 31 02.5**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=81,slow=9.5,SNR=3.7						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**62.15**	**315**	P	**P**	**18 31 05.0**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=95,slow=8.8,SNR=19						
	comp=Z,1.3nm,0.5s						
MKAR	**Makanchi Array**	**62.15**	**315**		**P**	**18 31 03.9**	**-0.6**
MAKZ	**Makanchi**	**62.36**	**315**		**P**	**18 31 04.8**	**-1.2**
MAKZ				IAmb	IAmb	18 31 07.4	
	comp=Z,3.5nm,0.8s						
KURK	**Kurchatov**	**65.06**	**319**	P	**P**	**18 31 23.0**	**-0.7**
KURK				IAmb	IAmb	18 31 44.4	
	comp=Z,3.5nm,0.8s						
KURBB	**Kurchatov Arra**	**65.11**	**319**	P	**P**	**18 31 23.9**	**0.0**
	comp=Z,4.7nm,0.7s,baz=97,slow=7.4,SNR=68						
	comp=Z,4.7nm,0.7s						
ILAR	**Eielson Array**	**66.41**	**25**	P	**P**	**18 31 32.6**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=252,slow=7.6,SNR=5.2						
	comp=Z,0.3nm,0.5s						
NIL	**Nilore**	**68.67**	**301**	P	**P**	**18 31 46.5**	**-0.5**
KK31	**Karatay Array**	**70.31**	**311**	IAmb	IAmb	18 31 58.3	
	comp=Z,3.4nm,0.9s						
KKAR	**Karatay Array**	**70.31**	**311**	P	**P**	**18 31 57.0**	**0.0**
BVAR	**Borovoye Array**	**70.32**	**321**	P	**P**	**18 31 57.0**	**+0.2**
	comp=Z,2.4nm,0.6s,baz=111,slow=8.6,SNR=8.9						
	comp=Z,2.4nm,0.6s						
CHGR	**Chuyangaron**	**71.60**	**306**	P	**P**	**18 32 03.8**	**-1.1**
YKA	**Yellowknife Ar**	**80.64**	**28**	P	**P**	**18 32 58.4**	**+2.6**
	comp=Z,0.2nm,0.8s,baz=290,slow=6.8,SNR=2.5						
	comp=Z,0.2nm,0.8s						
ARCES	**ARCESS Array B**	**86.53**	**343**	P	**P**	**18 33 26.1**	**+0.2**
	comp=Z,4.6nm,1.0s,baz=38,slow=6.1,SNR=4.4						
	comp=Z,4.6nm,1.0s						
ARCES	**ARCESS Array B**	**86.53**	**343**	IAmb	IAmb	18 33 46.2	
	comp=Z,5.8nm,1.1s						
FINES	**FINESS Array B**	**90.92**	**336**	P	**P**	**18 33 46.0**	**-0.8**
	comp=Z,2.9nm,0.9s,baz=62,slow=5.5,SNR=4.1						
	comp=Z,2.9nm,0.9s						
DBIC	**Dimbokro**	**144.98**	**306**	PKP	**PKPab**	**18 40 20.6**	**-0.1**
	comp=Z,2.4nm,0.7s,baz=41,slow=4.6,SNR=4.9						

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*IDC **11** 18:30:04.0±4.0, 47°.47N×92°.79W, h0^{km}, mbtmp2.9/2, ML1.4/1, Error ellipse: s-maj=46.2km s-min=19.5km az=85.0*

*OTT **11** 18:30:07.9±0.5, 47°.58N×92°.75W, h0^{km}, MN2.7/8, Blast, Minnesota, U.S. 124km southeast from Fort Frances, On Mining explosion.*

ISC 11 18:30:03.5±1.3**, 47°.42N**±0°.09×**92°.90W**±0°.05**, h0**^{km}**, n11,** σ**1^{s}47**/19**, Minnesota**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKO	**Atikokan Iron**	**1.65**	**31**	PG	**Pg**	**18 30 35.5**	**+0.4**
ATKO				SG	**Sn**	**18 30 53.1**	**-2.5**
ATKO				Trac		18 31 01.6	
	comp=Z,30nm,0.2s						
EPLO	**Experimental L**	**2.32**	**347**	PN	**Pn**	**18 30 44.6**	**+1.6**
EPLO				SN	**Sn**	**18 31 13.1**	**+0.9**
EPLO				Trac		18 31 26.7	
	comp=Z,55nm,0.4s						
TBO	**Thunder Bay**	**2.65**	**61**	PN	**Pn**	**18 30 48.7**	**+1.3**
TBO				SN	**Sn**	**18 31 19.5**	**-0.7**
TBO				Trac		18 31 34.7	
	comp=Z,8.3nm,0.1s						
SOLO	**Sioux Lookout**	**2.66**	**11**	PN	**Pn**	**18 30 48.8**	**+1.3**
SOLO				SN	**Sn**	**18 31 19.5**	**-1.0**
SOLO				Trac		18 31 26.7	
	comp=Z,6.3nm,0.1s						
ULM	**Lac du Bonnet**	**3.45**	**326**	Pn	**Pn**	**18 30 58.1**	**-0.3**
	0.5nm,0.3s,baz=148,slow=16,SNR=3.3						
ULM				Pg	**Pb**	**18 31 05.7**	**+0.3**
	0.5nm,0.3s,baz=148,slow=16,SNR=2.8						
ULM				Lg	Lg	18 31 49.6	
	0.5nm,0.3s,baz=92,slow=19,SNR=3.8						
	1.1nm,0.3s						
ULM	**Lac du Bonnet**	**3.45**	**326**	PN	**Pn**	**18 30 58.7**	**+0.3**
ULM				SN	**Sn**	**18 31 40.9**	**+1.0**
ULM				Trac		18 31 53.2	
	comp=Z,1.2nm,0.0s						
I10CA	**LAC DU BONNET**	**3.47**	**325**	I	I	18 55 50.0	
	baz=137,slow=346,SNR=1.1						
PKLO	**Pickle Lake**	**4.41**	**21**	PN	**Pn**	**18 31 12.2**	**+0.6**
PKLO				SN	**Sn**	**18 32 00.9**	**-2.7**
PKLO				Trac		18 32 09.6	
	comp=Z,1.6nm,0.1s						
GTOO	**Geraldton**	**4.58**	**57**	PN	**Pn**	**18 31 15.6**	**+1.7**
GTOO				SN	**Sn**	**18 32 06.3**	**-1.5**
GTOO				Trac		18 32 32.6	
	comp=Z,0.7nm,0.0s						
PNPO	**Pukaskwa Natio**	**4.59**	**73**	PN	**Pn**	**18 31 15.8**	**+1.7**
PNPO				SN	**Sn**	**18 32 07.1**	**-1.1**
PNPO				Trac		18 32 17.5	
	comp=Z,5.7nm,0.2s						
PDAR	**Pinedale Array**	**12.65**	**255**	Pn	**Pn**	**18 33 03.6**	**-1.2**
	0.3nm,0.7s,baz=37,slow=9.8,SNR=2.0						

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*IDC **11** 18:37:55.1±2.8, 8°.09S×113°.68E, h0^{km}, mb3.1/3, mbtmp3.1/3, MS3.2/1, Error ellipse: s-maj=164.2km s-min=29.5km az=49.0*

*DJA **11** 18:38:01.4±0.2, 9°S±4°×11°3E±°, h10^{km}, M3.9/22, mb4.0/11, MLv3.9/22*

ISC 11 18:38:02.9±1.1**, 8°.9S**±0°.1×**113°.03E**±0°.08**, h63**^{km}**, n32,** σ**1^{s}51**/22**, mb3.0**/3**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**0.76**	**33**	P	**Pn**	**18 38 17.9**	**-0.2**
JAGI	**Jajag, Banyuwa**	**1.20**	**68**	P	**Pn**	**18 38 24.1**	**+0.4**
BLJI	**Banyuglugur**	**1.29**	**26**	P	**Pn**	**18 38 25.9**	**+1.0**
ABJI	**Asem Bagus**	**1.63**	**47**	P	Pn	18 38 31.6	+2.1
SNJI	**Sawahan-Nganju**	**1.69**	**312**	P	Pn	18 38 32.4	+2.0
SJI	**Sawahan**	**1.71**	**313**	P	**Pn**	**18 38 31.8**	**+1.1**
RTBI	**Rangdo, Negare**	**1.95**	**77**	P	**Pn**	**18 38 35.2**	**+1.4**
PCJI	**Pacitan**	**1.96**	**291**	P	**Pn**	**18 38 34.7**	**+0.7**
KMMI	**Kalianget**	**2.08**	**27**	P	**Pn**	**18 38 37.0**	**+1.5**
IGBI	**Denpasar**	**2.10**	**88**	P	**Pn**	**18 38 37.1**	**+1.3**
DNP	**Denpasar**	**2.17**	**84**	P	Pn	18 38 39.7	+2.9
NGJI	**Ngawi**	**2.18**	**315**	P	Pn	18 38 39.2	+2.2
KHKI	**Kahang-Kahang**	**2.61**	**78**	P	Pn	18 38 45.3	+2.5
UGM	**Wanagama**	**2.67**	**292**	P	**Pn**	**18 38 44.9**	**+1.3**
YOGI	**Yogyakarta**	**2.92**	**292**	P	Pn	18 38 49.4	+2.5
KLNI	**Mataram**	**3.07**	**81**	P	**Pn**	**18 38 49.1**	**0.0**
TWSI	**Taliwang, Sumb**	**3.81**	**88**	P	**Pn**	**18 39 00.7**	**+1.5**
KPJI	**Karang Pucung**	**4.35**	**291**	P	Pn	18 39 08.8	+2.3
PLAI	**Plampang**	**4.70**	**89**	P	**Pn**	**18 39 13.6**	**+2.3**
DBNI	**Kabupaten Domp**	**5.24**	**86**	P	Pn	18 39 21.5	+2.7
BBJI	**Bungbulang**	**5.51**	**285**	P	**Pn**	**18 39 23.9**	**+1.3**
	0.1nm11nm,1.0s						
CNJI	**Cibinong**	**6.05**	**285**	P	Pn	18 39 32.6	+2.7
	23nm,1.3s						
WBSI	**Waikabubak, Su**	**6.32**	**97**	P	**Pn**	**18 39 35.4**	**+1.7**
	0.1nm23nm,1.0s						
LBFI	**Labuhan Bajo,**	**6.80**	**87**	P	**Pn**	**18 39 42.1**	**+2.0**
	0.1nm15nm,0.8s						
WSI	**Waingapu**	**7.22**	**97**	P	**Pn**	**18 39 47.2**	**+1.4**
BKSI	**Bulukumba**	**7.89**	**64**	P	**Pn**	**18 39 56.8**	**+1.7**
	0.0nm5.9nm,1.0s						
EDFI	**Ende, Flores**	**8.56**	**90**	P	**Pn**	**18 40 04.9**	**+0.5**
	4.8nm,1.0s						
KASI	**Kota Agung**	**9.11**	**291**	P	**Pn**	**18 40 13.4**	**+1.7**
FITZ	**Fitzroy Crossi**	**15.28**	**128**	LR	LR	18 48 56.2	
	comp=Z,73nm,18.1s,baz=343,slow=43						
WRA	**Warramunga Arr**	**23.34**	**120**	P	**P**	**18 43 04.8**	**-1.2**
	0.5nm,0.9s,baz=299,slow=11,SNR=6.3						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**24.78**	**129**	P	**P**	**18 43 18.1**	**-1.0**
	0.2nm,0.6s,baz=304,slow=8.9,SNR=4.4						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**61.86**	**337**	P	**P**	**18 48 13.1**	**-2.5**
	0.1nm,0.4s,baz=146,slow=8.0,SNR=1.5						
	0.1nm,0.4s						

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*IDC **11** 18:44:20.8±1.7, 61°.72N×149°.93W, h40^{km}±16^{km}, mb3.4/8, mbtmp3.7/12, ML3.5/4, MS3.3/3, Error ellipse: s-maj=19.4km s-min=9.7km az=106.0*

*NEIC **11** 18:44:22.1±1.4, 61°.75N±0°.04×149°.53W±0°.05, h43^{km}±6^{km}, Error ellipse: s-maj=5.3km s-min=3.3km az=178.0*

*AEIC **11** 18:44:22.7±1.1, 61°.73N±0°.02×149°.54W±0°.05, h40^{km}±5^{km}, ML3.7, ML3.9/234(NEIC), Error ellipse: s-maj=3.3km s-min=2.2km az=74.0*

ISC 11 18:44:21.7±0.8**, 61°.74N**±0°.03×**149°.57W**±0°.03**, h44**^{km}±7^{km}**, n228,** σ**0^{s}81**/190**, mb3.7**/8**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLRM	**Palmer USGS**	**0.25**	**124**		**Pn**	**18 44 29.4**	**-0.4**
PMR	**Palmer**	**0.25**	**124**		**Pn**	**18 44 29.3**	**-0.6**
PMR				IAML		18 44 36.4	
	comp=E,9µm,0.4s						
M22K	**Willow**	**0.26**	**274**		**Pn**	**18 44 29.7**	**-0.2**
M22K					**Sn**	**18 44 36.5**	**+0.8**
M22K	**Willow**	**0.26**	**274**	IAML		18 44 37.0	
	comp=E,17µm,0.7s						
M22K				IAML		18 44 41.4	
	comp=N,16µm,0.5s						
GHO	**Glory Hole Cre**	**0.31**	**83**		**Pn**	**18 44 30.1**	**-0.4**
GHO				IAML		18 44 37.9	
	comp=N,18µm,0.7s						

GHO				IAML		18 44 38.0	
	comp=E,14µm,0.6s						
SML	Sawmill	0.59	82		Pn	18 44 33.4	-0.5
SML				Sn	Sn	18 44 42.2	-0.3
SML				IAML		18 44 43.5	
	comp=N,6µm,0.5s						
KNK	Knik Glacier	0.62	121		Pn	18 44 34.1	-0.1
KNK				IAML		18 44 45.3	
	comp=E,9µm,0.5s						
KNK	Knik Glacier	0.62	121		Sn	18 44 44.0	+0.9
SUA	Susitna One	0.63	245		Pn	18 44 34.2	-0.2
SUA					Sn	18 44 44.2	+0.8
SUA	Susitna One	0.63	245	IAML		18 44 45.0	
	comp=E,7µm,0.7s						
SUA				IAML		18 44 45.1	
	comp=N,4µm,0.6s						
RC01	Rabbit Creek A	0.65	187		Pn	18 44 34.9	+0.3
RC01	Rabbit Creek A	0.65	187	IAML		18 44 45.4	
	comp=E,6µm,0.3s						
RC01				IAML		18 44 48.1	
	comp=N,7µm,0.4s						
CUT	Chulitna	0.75	334		Pn	18 44 35.2	-0.6
CUT				IAML		18 44 47.2	
	comp=N,6µm,0.6s						
CUT	Chulitna	0.75	334		Sn	18 44 46.4	+0.3
M23K	Glacier View	0.88	85		Sn	18 44 49.8	+0.5
SKT	Skwentna	0.96	286		Pn	18 44 38.5	-0.3
SKT				IAML		18 44 52.8	
	comp=N,3µm,0.3s						
SKT				IAML		18 44 53.6	
	comp=E,4µm,0.5s						
SKT	Skwentna	0.96	286		Sn	18 44 51.9	+0.5
L22K	Petersville	0.97	325		Pn	18 44 38.8	-0.2
L22K				IAML		18 44 52.3	
	comp=E,4µm,0.5s						
L22K				IAML		18 44 53.1	
	comp=N,2µm,0.3s						
L22K	Petersville	0.97	325		Sn	18 44 51.8	+0.1
PWL	Port Wells	1.06	145		Pn	18 44 39.9	-0.3
PWL				IAML		18 44 56.6	
	comp=E,4µm,0.4s						
PWL				IAML		18 44 56.7	
	comp=N,4µm,0.6s						
PWL	Port Wells	1.06	145		Sn	18 44 54.2	+0.5
SCM	Sheep Creek Mo	1.07	84		Pn	18 44 40.5	+0.1
SCM				IAML		18 44 59.8	
	comp=N,5µm,0.6s						
SCM	Sheep Creek Mo	1.07	84		Sn	18 44 54.5	+0.5
STLK	Strandline Lak	1.11	259		Pn	18 44 41.2	+0.3
STLK					Sn	18 44 56.0	+1.0
STLK	Strandline Lak	1.11	259	IAML		18 44 56.8	
	comp=N,3µm,0.4s						
STLK				IAML		18 44 57.8	
	comp=E,2µm,0.4s						
WAT7	Susitna Watana	1.15	17		Pn	18 44 41.5	0.0
WAT7					Sn	18 44 56.8	+0.6
WAT1	Susitna Watana	1.20	23		Sn	18 44 57.7	+0.6
WAT6	Susitna Watana	1.21	45		Pn	18 44 42.2	-0.1
WAT6					Sn	18 44 58.1	+0.6
CAPN	Captain Cook N	1.24	219		Pn	18 44 44.4	+1.9
SPCG	Spurr Capps Gl	1.26	250		Pn	18 44 43.6	+0.7
SPCG					Sn	18 44 59.9	+1.2
O22K	Cooper Landing	1.26	184		Pn	18 44 43.0	+0.2
O22K	Cooper Landing	1.26	184		Sn	18 44 59.8	+1.2
SLKM	Skilak Lake	1.27	195		Pn	18 44 43.3	+0.2
SLKM				IAML		18 45 03.8	
	comp=N,4µm,0.2s						
SLKM				IAML		18 45 04.2	
	comp=E,4µm,0.2s						
SLKM	Skilak Lake	1.27	195		Sn	18 44 59.5	+0.6
SPU	Mount Spurr	1.32	246		Pn	18 44 44.3	+0.6
SPCP	Crater Peak Br	1.33	250		Pn	18 44 44.6	+0.7
SPCR	Spurr Chakacha	1.38	248		Pn	18 44 45.0	+0.5
GLI	Glacier Island	1.47	125		Pn	18 44 46.4	+0.6
SEW	Seward	1.64	178		Pn	18 44 48.3	+0.3
SEW				IAML		18 45 14.9	
	comp=N,990nm,0.5s						
SEW				IAML		18 45 16.0	
	comp=E,1µm,0.4s						
M24K	Tolsona, Glenn	1.65	75		Pn	18 44 49.6	+1.4
DHY	Denali Highway	1.69	36		Pn	18 44 49.0	+0.1
DHY				IAML		18 45 13.8	
	comp=E,910nm,0.8s						
DHY				IAML		18 45 14.2	
	comp=N,997nm,0.4s						
PPLA	Purkeypile	1.69	315		Pn	18 44 49.3	+0.4
PPLA				IAML		18 45 11.4	
	comp=E,2µm,0.6s						
PPLA				IAML		18 45 11.7	
	comp=N,1µm,0.5s						
M20K	Styx River	1.70	277		Pn	18 44 49.6	+0.7
M20K	Styx River	1.70	277	IAML		18 45 12.8	
	comp=N,920nm,0.9s						
M20K				IAML		18 45 12.9	
	comp=E,1µm,0.6s						
RND	Reindeer	1.71	11		Pn	18 44 49.6	+0.6
RND				IAML		18 45 12.9	
	comp=N,1µm,0.6s						
RND				IAML		18 45 14.7	
	comp=E,836nm,0.3s						
TRF	Thorofare Moun	1.75	349		Pn	18 44 50.6	+0.8
TRF				IAML		18 45 15.8	
	comp=N,844nm,0.3s						
RDT	Redoubt	1.80	231		Pn	18 44 50.9	+0.5
DFR	Drift River	1.90	234		Pn	18 44 52.3	+0.7
DIV	Divide	1.92	107		Pn	18 44 52.5	+0.5
DIV				IAML		18 45 17.8	
	comp=E,1µm,0.3s						
KTH	Kantishna Hill	1.93	342	IAML		18 45 18.3	
	comp=E,990nm,0.6s						
KTH				IAML		18 45 18.3	
	comp=N,992nm,0.5s						
RDJH	Redoubt Jeurge	1.94	235		Pn	18 44 53.1	+0.8
HIN	Hinchinbrook I	2.01	131		Pn	18 44 53.7	+0.6
NCT	North Crescent	2.01	236		Pn	18 44 54.1	+0.9
RDWB	Redoubt West	2.02	233		Pn	18 44 54.1	+0.7
MCK	McKinley	2.03	8		Pn	18 44 54.6	+1.2
MCK				IAML		18 45 20.2	
	comp=E,730nm,0.6s						
MCK				IAML		18 45 21.3	
	comp=N,770nm,0.7s						
P23K	Montague Islan	2.04	148		Pn	18 44 53.0	-0.5
P23K				IAML		18 45 27.5	
	comp=N,882nm,0.5s						
P23K				IAML		18 45 29.2	
	comp=E,930nm,0.5s						
RED	Redoubt Volcan	2.04	231		Pn	18 44 54.1	+0.5
RED				IAML		18 45 22.2	
	comp=E,1µm,0.9s						
RED				IAML		18 45 22.7	
	comp=N,1µm,0.7s						
BRLK	Bradley Lake	2.08	199		Pn	18 44 54.2	+0.1
BRLK				IAML		18 45 26.1	
	comp=E,852nm,0.3s						
BRLK				IAML		18 45 28.4	
	comp=N,723nm,0.2s						
BRSE	Bradley Lake S	2.08	197		Pn	18 44 54.1	0.0
HARP	HAARP	2.18	70		Pn	18 44 56.2	+0.7
EYAK	Cordova Ski Ar	2.20	121		Pn	18 44 56.7	+1.0
EYAK				IAML		18 45 32.8	
	comp=E,624nm,0.6s						
EYAK				IAML		18 45 35.8	
	comp=N,688nm,0.5s						
O20K	Slope Mountain	2.23	223		Pn	18 44 57.1	+0.8
PAX	Paxson	2.28	55		Pn	18 44 58.5	+1.6
PAX				IAML		18 45 29.4	
	comp=N,842nm,0.5s						
PAX				IAML		18 45 29.4	
	comp=E,627nm,0.6s						
HOM	Homer	2.32	207		Pn	18 44 58.4	+1.1
CNPM	China Poot	2.37	201		Pn	18 44 59.6	+1.6
CNPM				IAML		18 45 34.9	
	comp=E,805nm,0.4s						
CNPM				IAML		18 45 35.7	
	comp=N,658nm,0.4s						
N25K	Chitina, Valde	2.37	91		Pn	18 44 59.1	+0.9
N25K				IAML		18 45 38.8	
	comp=N,694nm,0.8s						
N25K				IAML		18 45 38.0	
	comp=E,631nm,0.6s						
BWN	Browne	2.45	1	IAML		18 45 50.2	
	comp=E,886nm,0.8s						
BPAW	Bear Paw Mtn.	2.46	345		Pn	18 44 59.8	+0.5
ILSW	Iliamna Southw	2.48	226		Pn	18 45 00.3	+0.7
WACK	Wrangell Chich	2.50	82		Pn	18 45 01.0	+1.0
CHUM	Lake Minchumin	2.50	331		Pn	18 45 00.5	+0.7
BMRM	Bremner River	2.51	106		Pn	18 44 60.0	-0.1
BMRM	Bremner River	2.51	106	IAML		18 45 38.3	
	comp=N,871nm,0.5s						
BMRM				IAML		18 45 39.3	
	comp=E,716nm,0.6s						
L19K	White Mountain	2.54	282	IAML		18 45 33.3	
	comp=E,436nm,0.5s						
N19K	Bonanza Creek	2.55	251		Pn	18 45 01.2	+0.6
GOAT	Goat Mountain	2.62	114		Pn	18 45 01.6	+0.1
RAGM	Ragged Mountai	2.74	117		Pn	18 45 03.8	+0.7
P19K	Oil Pt	2.76	222	IAML		18 45 45.5	
	comp=N,626nm,0.5s						
GLB	Gilahina Butte	2.77	94	IAML		18 45 46.8	
	comp=N,639nm,0.4s						
GLB				IAML		18 45 50.1	
	comp=E,328nm,0.5s						
O19K	Port Alsworth	2.79	238		Pn	18 45 04.3	+0.6
O19K				IAML		18 45 50.3	
	comp=N,566nm,0.4s						
O19K				IAML		18 45 54.5	
	comp=E,753nm,0.5s						
WRH	Wood River Hil	2.83	13	IAML		18 45 53.0	
	comp=E,391nm,0.7s						
WRH				IAML		18 45 53.1	
	comp=N,277nm,0.7s						
NEA2	Nenana	2.88	4		Pn	18 45 05.2	+0.2
HDA	Harding Lake	2.94	23		Pn	18 45 06.5	+0.7
HDA				IAML		18 45 47.9	
	comp=E,521nm,0.3s						
HMT	Hamilton	2.94	116		Pn	18 45 06.6	+0.7
RIDG	Independent Ri	2.96	45		Pn	18 45 07.0	+0.8
VRDI	Verde Repeater	2.98	97		Pn	18 45 06.9	+0.4
VRDI	Verde Repeater	2.98	97	IAML		18 45 56.1	
	comp=N,308nm,0.7s						
VRDI				IAML		18 45 56.3	
	comp=E,254nm,0.7s						
MENT	Mentasta	2.98	64		Pn	18 45 07.4	+1.0
MENT				IAML		18 46 11.0	
	comp=N,590nm,0.5s						
NICHA	Nichawak Mount	3.12	116		Pn	18 45 08.6	+0.4
MCARA	McCarthy VSAT	3.15	94		Pn	18 45 09.9	+1.1
MCARA				IAML		18 46 08.3	
	comp=E,603nm,1.0s						
BERG	Berg Lake	3.15	113		Pn	18 45 09.5	+0.7
M26K	Nabesna, AK	3.16	75		Pn	18 45 09.9	+0.9
M26K	Nabesna, AK	3.16	75	IAML		18 46 03.8	
	comp=N,279nm,0.5s						
M26K				IAML		18 46 08.4	
	comp=E,330nm,0.8s						
L26K	Log Cabin Wild	3.17	63	IAML		18 46 11.1	
	comp=E,462nm,0.5s						
L26K				IAML		18 46 11.4	
	comp=N,358nm,0.5s						
DOT	Dot Lake	3.18	50		Pn	18 45 10.0	+0.8
DOT				IAML		18 46 03.2	
	comp=E,500nm,0.9s						
J20K	Nowinta River	3.22	322		Pn	18 45 10.3	+0.6
J20K	Nowinta River	3.22	322	IAML		18 45 48.9	
	comp=N,433nm,0.5s						
J20K				IAML		18 45 49.9	
	comp=E,411nm,0.4s						
N18K	Kilae Creek	3.24	254		Pn	18 45 10.3	+0.3
COLA	College	3.25	13		Pn	18 45 10.6	+0.6
CRQM	Cirque	3.26	105		Pn	18 45 11.0	+0.6
ILAR	Eielson Array	3.28	21	P	Pn	18 45 10.9	+0.4
	comp=E,6.3nm,0.3s,baz=205,slow=14,SNR=61						
ILAR				S	Sn	18 45 49.3	+1.0
	comp=E,41nm,0.6s,baz=214,slow=16,SNR=12						
	comp=E,14nm,0.4s						
ILAR	Eielson Array	3.28	21		Pn	18 45 10.7	+0.2
KHIT	Khitrov Hills	3.33	110		Pn	18 45 11.9	+0.6
O18K	Koktuh Hills	3.35	238	IAML		18 46 17.6	
	comp=N,225nm,0.8s						
MLY	Manley	3.35	351		Pn	18 45 12.2	+0.6
GRIN	Grindle Hills	3.37	113		Pn	18 45 12.2	+0.4
L18K	Granite Mounta	3.40	281		Pn	18 45 12.5	+0.4
TGL	Tana Glacier	3.40	104		Pn	18 45 12.7	+0.4
SCRK	Sand Creek	3.41	46		Pn	18 45 12.8	+0.4
SCRK	Sand Creek	3.41	46	IAML		18 45 56.3	
	comp=E,227nm,0.7s						
SCRK				IAML		18 46 07.8	
	comp=N,221nm,0.9s						
I23K	Minto, Yukon-K	3.43	1	IAML		18 45 54.1	
	comp=N,216nm,0.8s						
SYI	Shuyak Island	3.44	205		Pn	18 45 13.4	+0.8
SYI	Shuyak Island	3.44	205	IAML		18 46 06.2	
	comp=N,184nm,0.9s						
PTPK	Patty Peak	3.45	96		Pn	18 45 13.7	+0.6
J25K	Salcha River,	3.46	32	IAML		18 45 59.1	
	comp=E,444nm,0.7s						
J25K				IAML		18 46 00.0	
	comp=N,409nm,0.7s						
Q19K	Cape Douglas,	3.47	218	IAML		18 46 18.2	
	comp=N,407nm,0.8s						
WAX	Waxell Ridge	3.51	109		Pn	18 45 14.5	+0.8
POKR	Poker Plat Res	3.53	15		Pn	18 45 14.6	+0.7
POKR	Poker Plat Res	3.53	15	IAML		18 45 56.6	
	comp=N,173nm,0.6s						
BALM	Baldy	3.54	98		Pn	18 45 14.4	+0.1
KIAG	Kiagna River	3.57	100		Pn	18 45 14.8	+0.2
J19K	Poorman	3.58	312		Pn	18 45 15.1	+0.4
J19K	Poorman	3.58	312	IAML		18 46 18.3	
	comp=N,167nm,0.7s						
I21K	Tanana	3.62	344		Pn	18 45 16.0	+0.8
M27K	Edge Creek, AK	3.67	77		Pn	18 45 17.6	+1.5
M27K	Edge Creek, AK	3.67	77	IAML		18 46 20.4	
	comp=N,265nm,0.8s						
ISLE	Juniper Island	3.68	105		Pn	18 45 16.9	+0.7
ISLE	Juniper Island	3.68	105	IAML		18 46 22.1	
	comp=E,360nm,0.8s						
BARK	Barkley Ridge	3.69	108		Pn	18 45 16.7	+0.5
J18K	Innoko River	3.73	301		Pn	18 45 17.1	+0.4
M17K	Holitna River	3.78	268		Pn	18 45 17.7	+0.3
M17K	Holitna River	3.78	268	IAML		18 46 37.4	
	comp=E,311nm,0.8s						
I20K	Naaghedeneel	3.79	326		Pn	18 45 18.3	+0.8
BC01	Beaver Creek A	3.84	66		Pn	18 45 19.4	+1.1
BCAR	Beaver Creek A	3.86	66		Pn	18 45 19.2	+0.7
BARN	Barnard Glacie	3.86	97		Pn	18 45 19.3	+0.6
BARN	Barnard Glacie	3.86	97	IAML		18 46 23.0	
	comp=N,183nm,0.8s						
BARN				IAML		18 46 23.4	
	comp=E,225nm,0.5s						
N17K	Nushagak Hills	3.89	255		Pn	18 45 19.2	+0.4
N17K	Nushagak Hills	3.89	255	IAML		18 46 32.2	
	comp=N,139nm,0.8s						
GRNC	Granite Creek	3.91	101		Pn	18 45 19.7	+0.4
GRNC	Granite Creek	3.91	101	IAML		18 46 24.4	
	comp=E,142nm,0.8s						
GRNC				IAML		18 46 25.9	
	comp=N,278nm,0.6s						
CTGM	Chitina Glacie	4.04	97		Pn	18 45 21.7	+0.7
CTGM	Chitina Glacie	4.04	97	IAML		18 46 27.9	
	comp=E,138nm,0.8s						
CTGM				IAML		18 46 31.4	
	comp=N,156nm,0.6s						
L17K	Donlin	4.14	279		Pn	18 45 22.7	+0.3
YUK2	White River	4.15	85		Pn	18 45 23.2	+0.6
BVCY	Beaver Creek	4.15	77		Pn	18 45 23.1	+0.6
H24K	Noodor Dome	4.19	10	IAML		18 46 42.7	
	comp=E,116nm,1.0s						
K17K	Iditarod	4.21	287	IAML		18 46 46.8	
	comp=N,176nm,1.0s						
K17K				IAML		18 46 55.9	
	comp=E,144nm,1.1s						
LOGN	Logan Glacier	4.23	99		Pn	18 45 23.7	0.0
LOGN	Logan Glacier	4.23	99	IAML		18 46 31.3	
	comp=N,146nm,0.5s						
LOGN				IAML		18 46 34.1	
	comp=E,155nm,1.1s						
KDAK	Kodiak Island	4.25	202	P	Pn	18 45 23.1	-0.7
	comp=E,2.1nm,0.3s,baz=48,slow=4.4,SNR=12						
KDAK				S	Sn	18 46 08.5	-3.5
	comp=E,12nm,0.3s,baz=37,slow=20,SNR=1.2						
KDAK				LR	LR	18 47 25.0	
	comp=E,194nm,19.6s,baz=64,slow=44						
	comp=E,10.0nm,0.5s						
KDAK	Kodiak Island	4.25	202	IAML		18 46 32.1	
	comp=E,99nm,1.2s						
RKAV	Rock Avalanche	4.25	106		Pn	18 45 24.7	+0.7
KAWH	Katmai	4.26	220		Pn	18 45 24.7	+0.6
TABL	Table Mountain	4.29	104	IAML		18 46 39.8	
	comp=E,162nm,0.7s						
TABL				IAML		18 46 39.8	
	comp=N,175nm,0.8s						
YUK3	Moose Creek	4.33	85		Pn	18 45 25.6	+0.5
H20K	Anotleneega Mo	4.45	330		Pn	18 45 27.5	+0.9
KABU	Katmai Buttres	4.51	222		Pn	18 45 28.0	+0.6
M16K	Timber Creek	4.57	265		Pn	18 45 28.7	+0.4
M16K	Timber Creek	4.57	265	IAML		18 46 54.8	
	comp=N,98nm,1.1s						
O28M	Mount Upton	4.63	98	IAML		18 46 41.3	
	comp=E,77nm,0.6s						
O28M				IAML		18 46 43.5	
	comp=N,104nm,0.7s						
N16K	Nishlik Lake	4.64	258		Pn	18 45 29.8	+0.6
IMAR	Indian Mountai	4.65	338		Pn	18 45 29.7	+0.4
IM01	Indian Mountai	4.66	339		Pn	18 45 30.0	+0.7
J17K	VABM Dome	4.71	295		Pn	18 45 30.1	+0.1
J17K	VABM Dome	4.71	295	IAML		18 46 51.6	
	comp=N,84nm,0.8s						
J17K				IAML		18 47 04.7	
	comp=E,67nm,1.1s						
O16K	Kokwok River B	4.71	247		Pn	18 45 30.6	+0.5
O16K	Kokwok River B	4.71	247	IAML		18 46 56.2	
	comp=E,64nm,0.6s						
L16K	Owhat River	4.71	274		Pn	18 45 30.2	0.0
P16K	Nushagak River	4.98	241		Pn	18 45 34.7	+0.9
G24K	Hadweenzic Riv	5.07	9	IAML		18 47 12.4	
	comp=N,90nm,1.1s						
G21K	Allakaket	5.10	342		Pn	18 45 36.4	+0.9
G21K	Allakaket	5.10	342	IAML		18 46 36.7	
	comp=E,50nm,0.6s						
DAWY	Dawson	5.21	59		Pn	18 45 37.7	+0.7
DAWY	Dawson	5.21	59	IAML		18 47 09.9	
	comp=N,86nm,0.7s						
DAWY				IAML		18 47 15.0	
	comp=E,76nm,0.7s						
H18K	Honhosa River	5.23	315		Pn	18 45 37.6	+0.4
I27K	Kandik River	5.25	39	IAML		18 46 58.6	
	comp=N,114nm,0.8s						
M29M	Somme Creek	5.27	77		Pn	18 45 39.0	+1.2
J16K	Anvik River	5.34	292		Pn	18 45 38.8	0.0
J16K	Anvik River	5.34	292	IAML		18 47 27.3	
	comp=N,43nm,1.1s						
N15K	Kwethluk River	5.37	258		Pn	18 45 39.4	+0.2
N15K	Kwethluk River	5.37	258	IAML		18 47 22.8	
	comp=E,99nm,0.7s						
N15K				IAML		18 47 25.8	
	comp=N,80nm,0.8s						
YUK6	Outpost Mounta	5.45	93		Pn	18 45 41.0	+0.5
M15K	Kasigluk River	5.48	264		Pn	18 45 40.9	+0.3
I17K	Unalakleet	5.54	298		Pn	18 45 42.2	+0.7
H17K	Granite Mounta	5.66	309		Pn	18 45 43.1	0.0
L15K	Ungalak Mounta	5.67	275		Pn	18 45 43.4	+0.1
O15K	Ungalikthiuk R	5.69	248		Pn	18 45 43.5	0.0
G18K	Tagagawik	5.79	320		Pn	18 45 45.7	+0.7
HYT	Haines Junctio	5.89	94		Pn	18 45 46.1	-0.3
F20K	Avaraart Lake	5.96	336		Pn	18 45 48.2	+1.0
N30M	Aishikik Lake	5.96	87		Pn	18 45 47.4	0.0
M14K	Bethel	6.06	266		Pn	18 45 49.5	+0.8
N14K	Kuskokwak Cree	6.20	258		Pn	18 45 51.0	+0.6
G17K	Kiwalik Mounta	6.22	312		Pn	18 45 50.7	-0.1
F19K	Shaleruckik Mo	6.24	329		Pn	18 45 51.6	+0.6
L14K	Kuka Creek	6.29	272		Pn	18 45 52.5	+0.8
H16K	Elim	6.43	302		Pn	18 45 53.5	-0.1
F18K	Selawik	6.57	322		Pn	18 45 56.5	+0.9
J14K	Nanvaranak Lak	6.61	285		Pn	18 45 56.7	+0.5
E25K	Arctic Village	6.63	13		Pn	18 45 57.9	+1.4
H29M	Whitestone	6.67	43	Pn	Pn	18 45 59.5	+2.5
G16K	Koyuk River	6.78	308		Pn	18 45 59.4	+0.9
TOLK	Toolik Lake Re	6.94	360		Pn	18 46 00.9	+0.3
F17K	Baldwin Pennin	6.96	318		Pn	18 46 02.1	+1.2
M31M	Drury Creek, Y	7.17	80		Pn	18 46 03.4	-0.4
F28M	Old Crow	7.21	31		Pn	18 46 04.3	-0.1
E17K	Hotham Inlet	7.54	321		Pn	18 46 08.5	-0.3
ANM	Nome	7.69	299		Pn	18 46 11.7	+0.7
F15K	North Star Dit	7.78	307		Pn	18 46 11.9	-0.3
G31M	Satah River	8.42	45		Pn	18 46 20.6	-0.3
INK	Inuvik	9.43	39	P	Pn	18 46 36.6	+1.9
	comp=N,0.6nm,0.3s,baz=233,slow=17,SNR=16						
INK				S	Sn	18 48 19.9	+0.7
	comp=N,6.6nm,0.4s,baz=188,slow=31,SNR=9.2						
	comp=N,6.4nm,0.8s						
INK	Inuvik	9.43	39		Pn	18 46 33.6	-1.1
DLBC	Dease Lake	10.29	100	LR	LR	18 50 31.6	
	comp=N,107nm,19.8s,baz=271,slow=36						
C36M	Paulatuk	12.93	43		Pn	18 47 22.9	+0.5
A36M	Sachs Harbour	13.89	32		P	18 47 42.6	-0.1
YKA	Yellowknife Ar	16.25	72	P	Pn	18 48 08.3	+1.7
	comp=N,0.1nm,0.3s,baz=280,slow=12,SNR=7.3						
	comp=N,0.3nm,0.7s						
NVAR	Mina Array Bea	30.24	126	P	P	18 50 29.4	+1.2
	comp=N,1.2nm,0.8s,baz=310,slow=10,SNR=5.5						
	comp=N,1.2nm,0.8s						
PDAR	Pinedale Array	30.29	110	P	P	18 50 29.0	+0.3
	comp=N,0.2nm,0.5s,baz=316,slow=7.5,SNR=3.0						
	comp=N,0.2nm,0.5s						
TXAR	Lajitas Array	44.12	116	P	P	18 52 26.6	+1.0
	comp=N,0.2nm,0.6s,baz=339,slow=6.7,SNR=3.8						
	comp=N,0.2nm,0.6s						
ZALV	Zalesovo Beam	56.94	325	P	P	18 54 02.5	+0.7
	comp=N,0.4nm,0.5s,baz=47,slow=6.4,SNR=2.2						
	comp=N,0.4nm,0.5s						
EKA	Eskdalemuir Ar	60.32	21	P	P	18 54 23.6	-1.6
	comp=N,1.1nm,0.5s,baz=346,slow=6.8,SNR=5.4						
	comp=N,1.1nm,0.5s						
MKAR	Makanchi Array	64.09	323	P	P	18 54 49.7	-1.0
	comp=N,0.2nm,0.4s,baz=11,slow=4.5,SNR=4.6						
	comp=N,0.2nm,0.4s						
AKTO	Aktyubinsk	66.03	341	LR	LR	19 25 25.7	
	comp=N,60nm,18.7s,baz=202,slow=37						
AKASG	Malin Array Be	67.91	1	P	P	18 55 13.0	-2.1
	comp=N,0.4nm,0.4s,baz=3.5,slow=6.2,SNR=2.4						
	comp=N,0.4nm,0.4s						
CMAR	Chiang Mai Arr	83.61	297	P	P	18 56 43.8	-1.5
	comp=N,1.2nm,0.9s,baz=6.8,slow=5.6,SNR=8.3						
	comp=N,1.2nm,0.9s						
BOSA	Boshof	146.70	8	PKPbc	PKPdf	19 03 58.2	+1.7
	comp=N,5.2nm,1.1s,baz=359,slow=3.6,SNR=4.8						
QSPA	South Pole Qui	151.54	180	PKPbc	PKPbc	19 04 08.5	-0.6
	comp=N,1.7nm,0.4s,baz=349,slow=1.8,SNR=7.3						

NEIC ***11*** *18:47:07.9±2.3, 30°.55N±0°.06×141°.9E±0°.2, h10km±1km, mb4.1/6, Error ellipse: s-maj=27.2km s-min=5.2km az=72.0*

IDC ***11*** *18:47:07.1±0.8, 30°.63N×141°.68E, h0km, mb4.0/13, mbtmp3.9/15, ML3.1/2, MS3.1/5, Error ellipse: s-maj=30.1km s-min=17.3km az=77.0*

NIED ***11*** *18:47:09.5, 30°.72N×141°.86E, h31km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.54; $M_{\theta\theta}$0.07; $M_{\phi\phi}$-0.61; $M_{r\theta}$0.40; $M_{\theta\phi}$-0.14; $M_{\phi r}$1.50; Fault plane solution: $M_0$1.66000×10^{15} NP1: ϕ_s186.00000°, δ10.00000°, λ81.00000°. NP2: ϕ_s15.00000°, δ80.00000°, λ92.00000°.*

JMA ***11*** *18:47:09.5±0.1, 30°.7N±0°.8×14°2E±°, h31km, MV4.1/15, NEAR TORISHIMA IS*

ISC 11 18:47:11.2±0.7**, 30°.65N**±0°.06×**141°.7E**±0°.1**, h28km, n43, σ1s.41**/33**, mb4.0**/15**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.91	328	Pn	Pn	18 47 56.3	+0.7
JHJ2	Mitsune	2.91	328	*e*P	Pn	18 47 56.0	+0.3
JHJ	Hachijo jima 2	2.93	327	Pn	Pn	18 47 55.9	-0.1
	13nm,0.3s,baz=252,slow=20,SNR=2.2						
JHJ				Sn	Sn	18 48 27.0	-3.3
	14nm,0.3s,baz=48,slow=16,SNR=2.1						
	120nm,0.8s						
CBIJ	Chichi jima	3.57	173	*e*S	Sn	18 48 45.7	-0.4
JCJ	Chichijima	3.58	173	Pn	Pn	18 47 53.4	-11
	8.1nm,0.3s,baz=95,slow=23,SNR=5.1						
JCJ				Sn	Sn	18 48 34.7	-11
	15nm,0.3s,baz=269,slow=20,SNR=4.1						
JCJ	Chichijima	3.58	173	Pn	Pn	18 48 00.4	-4.4
BSO1	Boso 1	4.03	352	*e*P	Pn	18 48 10.6	+0.1
BSO3	Boso 3	4.25	347	*e*P	Pn	18 48 14.4	+0.6
BSO3				*e*S	Sn	18 49 03.4	+1.1
JOD2	Odawara 2	5.08	335	*e*P	Pn	18 48 26.1	+0.6
JRY	Ryogami san	5.83	337	*e*P	Pn	18 48 36.8	+1.0
JGF	Kuroka	6.11	325	Pn	Pn	18 48 40.1	+0.4
MJAR	Matsushiro Arr	6.54	335	Pn	Pn	18 48 45.9	+0.3
	0.2nm,0.3s,baz=152,slow=11,SNR=19						
MJAR				Sn	Sn	18 49 56.2	-3.1
	0.1nm,0.3s,baz=144,slow=15,SNR=5.0						
MJAR				LR	LR	18 51 22.0	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,138nm,18.3s,baz=134,slow=39						
	6.0nm,0.8s						
MJAR	Matsushiro Arr	6.54	335		Pn	18 48 46.6	+1.1
MAJO	Matsushiro	6.54	335	Pn	Pn	18 48 45.5	-0.1
MJB9	Matsu-Tunnel	6.55	335	Pn	Pn	18 48 46.1	+0.5
JMK	Ichinoseki	8.29	358	*e*P	Pn	18 49 07.6	-1.9
JNU	Nakatsue	9.49	288	LR	LR	18 52 50.2	
	comp=Z,230nm,18.9s,baz=98,slow=36						
JKA	Kamikawa-asahi	13.46	3	Pn	Pn	18 50 13.4	-6.9
GUMO	Guam	17.24	169	LR	LR	18 55 48.7	
	comp=Z,30nm,21.8s,baz=80,slow=30						
HILR	Hailar Array B	25.09	325	P	P	18 52 33.5	+0.1
	0.9nm,0.3s,baz=123,slow=10,SNR=1.8						
	0.9nm,0.3s						
H11S3	WAKE ISLAND Hy	25.71	112	T	T	19 19 12.2	
	baz=305,slow=74,SNR=3.8						
H11S1	WAKE ISLAND Hy	25.71	112	T	T	19 19 13.9	
	baz=305,slow=74,SNR=3.3						
H11S2	WAKE ISLAND Hy	25.73	112	T	T	19 19 17.2	
	baz=305						
SONM	Songino Array	31.90	313	P	P	18 53 35.2	+0.9
	0.6nm,0.8s,baz=124,slow=8.6,SNR=3.7						
	0.6nm,0.8s						
SONM	Songino Array	31.90	313	IAmb	IAmb	18 53 49.6	
	comp=Z,1.7nm,1.0s						
YAK	Yakutsk	32.35	349	LR	LR	19 06 29.5	
	comp=Z,35nm,18.4s,baz=266,slow=36						
CMAR	Chiang Mai Arr	40.48	263	LR	LR	19 11 46.7	
	comp=Z,29nm,20.6s,baz=165,slow=36						
TIXI	Tiksi	41.64	354	P	P	18 54 54.8	-1.8
	comp=Z,1.2nm,0.4s,baz=43,slow=4.0,SNR=1.7						
	comp=Z,1.2nm,0.4s						
TIXI	Tiksi	41.64	354	IAmb	IAmb	18 54 55.4	
	comp=Z,2.4nm,0.5s						
MKAR	Makanchi Array	47.91	307	P	P	18 55 47.4	+0.4
	comp=Z,0.5nm,0.6s,baz=92,slow=9.8,SNR=5.5						
	comp=Z,0.5nm,0.6s						
KURK	Kurchatov	50.21	312	P	P	18 56 04.5	0.0
KURK	Kurchatov	50.21	312	IAmb	IAmb	18 56 15.0	
	comp=Z,1.9nm,0.9s						
KURBB	Kurchatov Arra	50.27	312	P	P	18 56 04.5	-0.4
	comp=Z,0.8nm,0.3s,baz=88,slow=7.5,SNR=8.0						
	comp=Z,0.8nm,0.3s						
WB0	Warramunga Arr	50.62	189	P	P	18 56 07.4	-0.4
WB0				IAmb	IAmb	18 56 08.2	
	comp=Z,3.3nm,0.6s						
WRA	Warramunga Arr	50.80	189	P	P	18 56 08.9	-0.2
	comp=Z,1.6nm,0.6s,baz=7.1,slow=7.7,SNR=20						
	comp=Z,1.6nm,0.6s						
WRA	Warramunga Arr	50.80	189	IAmb	IAmb	18 56 09.6	
	comp=Z,0.2nm,0.7s						
ASAR	Alice Springs	54.52	189	P	P	18 56 36.5	-0.1
	comp=Z,0.6nm,0.5s,baz=5.7,slow=5.8,SNR=11						
	comp=Z,0.6nm,0.5s						
ILAR	Eielson Array	54.84	30	P	P	18 56 37.9	-0.6
	comp=Z,0.3nm,0.6s,baz=271,slow=7.6,SNR=4.6						
	comp=Z,0.3nm,0.6s						
FINES	FINESS Array B	74.57	333	P	P	18 58 47.6	+0.4
	comp=Z,9.7nm,1.1s,baz=64,slow=3.2,SNR=5.1						
	comp=Z,9.7nm,1.1s						
KBZ	Khabaz	75.27	312	P	P	18 58 52.2	+0.6
	comp=Z,1.1nm,0.8s,baz=102,slow=9.3,SNR=3.1						
	comp=Z,1.1nm,0.8s						
BRTR	Keskin Array B	83.26	312	P	P	18 59 36.4	+0.8
	comp=Z,0.5nm,0.8s,baz=95,slow=7.2,SNR=2.5						
	comp=Z,0.5nm,0.8s						
ULM	Lac du Bonnet	84.72	33	P	P	18 59 44.7	+2.2
	comp=Z,2.6nm,0.7s,baz=0.0,slow=5.1,SNR=3.3						
	comp=Z,2.6nm,0.7s						
TXAR	Lajitas Array	93.83	53	P	P	19 00 27.2	+0.9
	comp=Z,0.2nm,0.3s,baz=344,slow=4.2,SNR=3.7						
	comp=Z,0.2nm,0.3s						

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*IDC **11** 18:49:35.1±3.0, 20°.95S×168°.40E, h33^{km}±6^{km}, mb3.6/4, mbtmp3.7/5, ML3.2/1, MS2.7/2, Error ellipse: s-maj=101.1km s-min=25.9km az=138.0*

ISC 11 18:49:34.2±2.7**, 21°.1S**±0°.5×**168°.5E**±0°.4**, h30^{km}, n7, σ1ˢ30**/9**, mb3.6**/4**, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.18	242	Pn	Pn	18 50 07.3	-1.4
	8.2nm,0.3s,baz=116,slow=17,SNR=40						
DZM				LR	LR	18 50 32.5	
	comp=Z,72nm,19.1s,baz=185,slow=27						
DZM				Sn	Sn	18 50 35.5	+0.8
	47nm,0.3s,baz=152,slow=21,SNR=18						
	18nm,0.2s						
CTA	Charters Tower	20.88	269	LR	LR	19 01 33.5	
	comp=Z,47nm,20.1s,baz=38,slow=35						
STKA	Stephens Creek	26.34	240	P	P	18 55 08.8	+1.1
	1.3nm,0.6s,baz=84,slow=9.2,SNR=3.5						
	1.3nm,0.6s						
WRA	Warramunga Arr	32.01	266	P	P	18 55 57.3	-1.0
	0.4nm,0.7s,baz=102,slow=7.8,SNR=2.5						
	0.4nm,0.7s						
ASAR	Alice Springs	32.08	259	P	P	18 55 58.1	-0.7
	2.3nm,0.7s,baz=82,slow=9.3,SNR=38						
ASAR				pP	pP	18 56 08.2	+1.7
	0.9nm,0.6s,baz=91,slow=9.0,SNR=7.1						
	2.3nm,0.7s						
CMAR	Chiang Mai Arr	78.65	295	P	P	19 01 33.6	-0.2
	0.2nm,0.4s,baz=112,slow=6.1,SNR=2.0						
CMAR				pP	PcP	19 01 44.0	+1.3
	0.6nm,0.8s,baz=138,slow=4.5,SNR=3.1						
	0.2nm,0.4s						
GERES	GERESS Array B	145.75	330	PKPbc	PKPdf	19 09 09.3	-0.6
	0.9nm,0.8s,baz=38,slow=6.8,SNR=5.0						
GERES				pPKPbc	pPKPab	19 09 20.2	+1.1
	1.6nm,0.7s,baz=57,slow=7.2,SNR=9.0						

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*MDD **11** 18:54:39.3±0.9, 36°.65N×11°.38W, h20^{km}±10^{km}, Mb4.3/13, M_mb3.7/14, Error ellipse: s-maj=10.2km s-min=4.8km az=74.0*

*IGIL **11** 18:54:42.3, 36°.68N×11°.26W, h24^{km}, ML2.3*

*INMG **11** 18:54:42.3±1.3, 36°.67N×11°.26W, h23^{km}±11^{km}, ML2.4, Error ellipse: s-maj=10.1km s-min=3.7km az=67.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*

*CNRM **11** 18:54:46.5, 36°.35N×10°.62W, h93^{km}*

ISC 11 18:54:35.4±2.2**, 36°.62N**±0°.05×**11°.28W**±0°.09**, h16^{km}**±11^{km}**, n77, σ2ˢ45**/122**, 11C, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.03	75	Pn	Pb	18 55 12.9	+1.0
PFVI				Sn	Sn	18 55 35.4	+1.4
PFVI	Vila Bisbo	2.03	75	*e*P	Pb	18 55 13.1	+1.1
PFVI				*e*S	Sn	18 55 35.9	+1.9
PFVI				*i* IAML		18 55 36.7	
PFVI				*i* IAML		18 55 36.8	
PFVI				*i* IAML		18 55 37.1	
PFVI	Vila Bisbo	2.03	75	P	Pg	18 55 14.2	-0.1
PFVI	Vila Bisbo	2.03	75	S	Sn	18 55 36.6	+2.6
MORF	Marmelete	2.21	71	*e*P	Pb	18 55 15.7	+0.6
MORF				*e*S	Sn	18 55 40.0	+1.5
MORF				IAML		18 55 42.6	
	comp=E,34nm,0.2s						
MORF	Marmelete	2.21	71	*e*P	Pb	18 55 15.6	+0.6
MORF				*e*S	Sn	18 55 40.2	+1.7
MORF				*i* IAML		18 55 41.2	
MORF				*i* IAML		18 55 42.7	
MORF				*i* IAML		18 55 44.3	
PTEO	Sao Teotonio	2.24	65	*e*P	Pb	18 55 16.1	+0.6
PTEO				*e*S	Sn	18 55 41.2	+2.1
PTEO				*i* IAML		18 55 42.1	
PTEO				*i* IAML		18 55 43.7	
PTEO				*i* IAML		18 55 46.7	
MESJ	Messejana	2.73	63	*e*P	Pb	18 55 22.6	-1.1
MESJ				*e*S	Sn	18 55 52.2	+1.1
MESJ				IAML		18 55 55.0	
	comp=N,6.1nm,0.1s						
MESJ	Messejana	2.73	63	*e*P	Pb	18 55 22.7	-1.1
MESJ				*e*S	Sn	18 55 52.3	+1.2
MESJ				*i* IAML		18 55 57.2	
MESJ				*i* IAML		18 55 57.9	
MESJ				*i* IAML		18 56 01.2	
PBDV	Barranco-do-Ve	2.75	76	Pn	Pb	18 55 23.1	-1.1
PBDV				Sn	Sn	18 55 53.9	+2.1
PBDV	Barranco-do-Ve	2.75	76	*e*P	Pb	18 55 23.3	-1.0
PBDV				*e*S	Sn	18 55 54.5	+2.7
PBDV				*i* IAML		18 55 57.9	
PBDV				*i* IAML		18 55 58.9	
PBDV				*i* IAML		18 56 01.7	
PCVE	Castro Verde	2.78	68	Pn	Pb	18 55 23.5	-1.1
PCVE				Sn	Sn	18 55 53.5	+1.1
PCVE	Castro Verde	2.78	68	*e*P	Pb	18 55 23.6	-1.1
PCVE				*e*S	Sn	18 55 53.9	+1.5
PCVE				*i* IAML		18 55 56.5	
PCVE				*i* IAML		18 55 57.1	
PCVE				*i* IAML		18 56 00.1	
PMAFR	Mafra	2.81	34	Pn	Pb	18 55 23.5	-1.7
PMAFR				Sn	Sn	18 55 54.1	+0.8
PMAFR	Mafra	2.81	34	*e*P	Pn	18 55 23.1	+3.4
PMAFR				*e*S	Sn	18 55 54.8	+1.5
PMAFR				*i* IAML		18 55 56.1	
PMAFR				*i* IAML		18 55 57.5	
PMAFR				*i* IAML		18 55 58.1	
PVAQ	Vaqueiros	2.96	74	*e*P	Pb	18 55 26.2	-1.5
PVAQ				*e*S	Sn	18 55 58.4	+1.6
PVAQ				*i* IAML		18 56 00.3	
PVAQ				*i* IAML		18 56 01.2	
PVAQ				*i* IAML		18 56 03.5	
PVAQ	Vaqueiros	2.96	74	P	Pb	18 55 26.5	-1.1
PVAQ	Vaqueiros	2.96	74	S	Sn	18 55 56.0	-0.8
MOE	Montemor	3.00	50	*e*P	Pb	18 55 26.3	-2.2
MOE				*e*S	Sn	18 55 58.9	+1.0
MOE				*i* IAML		18 56 00.3	
MOE				*i* IAML		18 56 00.8	
MOE				*i* IAML		18 56 03.2	
PBEJ	Beja	3.06	62	*e*P	Pn	18 55 27.1	+4.0
PBEJ				*e*S	Sn	18 56 00.5	+1.1
PBEJ				*i* IAML		18 56 03.0	
PBEJ				*i* IAML		18 56 03.0	
PBEJ				*i* IAML		18 56 03.1	
EGRO	El Granado	3.17	72	Sn	Sn	18 56 02.8	+0.8
EGRO				Pn	Pb	18 55 29.2	-2.1
EGRO	El Granado	3.17	72	Pn	Pn	18 55 27.9	+3.4
EGRO				Pn	Pn	18 55 28.0	+3.4
EGRO				Sn	Sn	18 56 03.6	+1.5
EGRO				Sn	Sb	18 56 03.7	-5.9
EVO	Evora	3.22	53	Pn	Pb	18 55 29.7	-2.4
EVO				Sn	Sn	18 56 04.1	+0.8
EVO	Evora	3.22	53	*e*P	Pn	18 55 28.7	+3.5
EVO				*e*S	Sn	18 56 04.2	+0.9
EVO				*i* IAML		18 56 05.9	
EVO				*i* IAML		18 56 06.2	
EVO				*i* IAML		18 56 07.9	
PARRA	Arraiolos	3.37	49	*e*P	Pn	18 55 31.2	+3.9
PARRA				*e*S	Sn	18 56 08.2	+1.1
PARRA				*i* IAML		18 56 09.0	
PARRA				*i* IAML		18 56 10.8	
PARRA				*i* IAML		18 56 11.7	
PMTG	Montargil	3.44	44	*e*P	Pn	18 55 31.7	+3.5
PMTG				*e*S	Sn	18 56 09.0	+0.4
PMTG				*i* IAML		18 56 12.0	
PMTG				*i* IAML		18 56 13.2	
PMTG				*i* IAML		18 56 14.7	
PSBE	So Bento	3.49	33	*e*P	Pn	18 55 32.5	+3.5
PSBE				*e*S	Sn	18 56 10.3	+0.3
PSBE				*i* IAML		18 56 13.9	
PSBE				*i* IAML		18 56 15.7	
PESTR	Estremoz	3.68	51	Sn	Sn	18 56 15.4	+0.7
PESTR	Estremoz	3.68	51	*e*S	Sn	18 56 16.2	+1.5
PESTR				*i* IAML		18 56 21.9	
PESTR				*i* IAML		18 56 22.5	
PESTR				*i* IAML		18 56 22.8	
PBAR	Barrancos	3.71	64	Pn	Pn	18 55 36.7	+4.6
PBAR				Sn	Sn	18 56 16.0	+0.5
PBAR	Barrancos	3.71	64	*e*P	Pn	18 55 37.0	+4.9
PBAR				*e*S	Sn	18 56 16.3	+0.8
PBAR				*i* IAML		18 56 18.5	
PBAR				*i* IAML		18 56 18.5	
PBAR				*i* IAML		18 56 18.9	
EMIN	Mina Concepcio	3.85	71	Pn	Pn	18 55 38.2	+4.2
EMIN				Sn	Sn	18 56 19.7	+0.9
EMIN	Mina Concepcio	3.85	71	Pn	Pn	18 55 37.6	+3.6
EMIN				⇑*i*IVmb_VC		18 55 43.2	
	comp=N,151nm,SNR=1.5						
EMIN				Sn	Sn	18 56 20.7	+1.8
PSARD	Sardoal	3.86	39	*e*P	Pn	18 55 38.0	+4.0
PSARD				*e*S	Sn	18 56 19.3	+0.3
PSARD				*i* IAML		18 56 22.1	
PSARD				*i* IAML		18 56 22.3	
PSARD				*i* IAML		18 56 23.2	
EBAD	Badajoz	4.00	57	Pn	Pn	18 55 40.2	+4.2
EBAD				Sn	Sn	18 56 23.2	+0.7
EBAD	Badajoz	4.00	57	Pn	Pn	18 55 39.6	+3.7
EBAD				⇑*i*IVmb_VC		18 55 45.9	
	comp=N,155nm,SNR=1.2						
EBAD				Sn	Sn	18 56 22.9	+0.5
PCAS	Casmilo, Conde	4.06	32	*e*P	Pn	18 55 40.5	+3.6
PCAS				*e*S	Sn	18 56 24.7	+0.7
PCAS				*i* IAML		18 56 27.4	
PCAS				*i* IAML		18 56 30.1	
PCAS				*i* IAML		18 56 30.9	
PMRV	Marv??o	4.16	46	*e*P	Pn	18 55 41.6	+3.4
PMRV				*e*S	Sn	18 56 26.2	-0.2
PMRV				*i* IAML		18 56 28.0	
PMRV				*i* IAML		18 56 28.9	
PMRV				*i* IAML		18 56 30.3	
ESPR	Espera	4.36	85	Pn	Pn	18 55 46.1	+5.1
ESPR				Sn	Sn	18 56 33.2	+1.7
ESPR	Espera	4.36	85	Pn	Pn	18 55 44.8	+3.9
ESPR				⇑*i*IVmb_VC		18 55 52.9	
	comp=N,124nm,SNR=0.8						
ESPR				Sn	Sn	18 56 32.9	+1.4
PCBR	Castelo Branco	4.39	42	*e*P	Pn	18 55 45.5	+4.2
PCBR				*e*S	Sn	18 56 32.3	+0.2
PCBR				*i* IAML		18 56 33.0	
PCBR				*i* IAML		18 56 34.3	
PCBR				*i* IAML		18 56 34.5	
MTE	Manteigas	4.77	37	*e*S	Sn	18 56 40.9	-0.8
MTE				*i* IAML		18 56 43.5	
MTE				*i* IAML		18 56 47.0	
PVIS	Viseu	4.87	32	*e*P	Pn	18 55 52.3	+4.3
PVIS				*e*S	Sn	18 56 43.6	-0.4
ECAB	El Cabril	4.89	71	Pn	Pn	18 55 52.4	+4.1
ECAB				Sn	Sn	18 56 43.7	-0.8
ECAB	El Cabril	4.89	71	Pn	Pn	18 55 52.2	+4.0
ECAB				⇑*i*IVmb_VC		18 55 54.9	
	comp=N,138nm,SNR=1.2						
ECAB				Sn	Sn	18 56 44.2	-0.3
EPLA	Plasencia	5.34	48	⇑*i*IVmb_VC		18 55 57.6	
	comp=N,269nm,SNR=2.4						
EPLA				Sn	Sn	18 56 55.6	0.0
POLO	Lamas de Olo	5.46	29	*e*S	Sn	18 56 57.0	-1.8
POLO				*i* IAML		18 56 58.9	
POLO				*i* IAML		18 56 59.1	
POLO				*i* IAML		18 57 00.8	
EADA	Adamuz	5.55	72	Pn	Pn	18 56 01.8	+4.4
EADA				Sn	Sn	18 57 00.5	-0.4
EADA	Adamuz	5.55	72	Pn	Pn	18 56 00.9	+3.5
EADA				⇑*i*IVmb_VC		18 56 02.3	
	comp=N,125nm,SNR=1.0						
EADA				Sn	Sn	18 57 01.1	+0.1
MVO	Moncorvo	5.62	35	*e*P	Pn	18 56 01.4	+3.1
MVO				*e*S	Sn	18 57 01.4	-1.1
MVO				*i* IAML		18 57 03.6	
MVO				*i* IAML		18 57 04.3	
MVO				*i* IAML		18 57 04.4	
PCAB	Cabril	5.67	25	*e*P	Pn	18 56 02.5	+3.5
PCAB				*e*S	Sn	18 57 02.7	-1.1
PCAB				*i* IAML		18 57 06.3	
ELOB	Lobios	5.80	25	⇑*i*IVmb_VC		18 56 02.3	
	comp=N,231nm,SNR=1.0						
ELOB				Pn	Pn	18 56 03.0	+2.2
ELOB				Sn	Sn	18 57 05.5	-1.6
PGAV	Gavieira, Arco	5.82	23	*e*P	Pn	18 56 04.4	+3.3
PGAV				*e*S	Sn	18 57 06.4	-1.2
PGAV				*i* IAML		18 57 10.5	
PGAV				*i* IAML		18 57 11.4	
OUK	Oukaimeden	6.10	151	P	Pn	18 56 07.9	+2.7
OUK	Oukaimeden	6.10	151	S	Sn	18 57 11.2	-3.7
PALE	Palemas	6.12	101	P	Pn	18 56 06.0	+0.9
PAB	San Pablo	6.20	60	Pn	Pn	18 56 09.2	+3.0
PAB				⇑*i*IVmb_VC		18 56 10.5	
	comp=N,109nm,SNR=1.1						
PAB				Sn	Sn	18 57 15.1	-1.7
PBRG	Braganca	6.26	33	*e*S	Sn	18 57 17.3	-0.9
TISM	Timmit	6.33	139	P	Pn	18 56 09.2	+1.2
TISM	Timmit	6.33	139	S	Sn	18 57 15.1	-4.7
PSIM	Granatula de C	6.35	68	Pn	Pn	18 56 11.4	+3.0
PSIM				Sn	Sn	18 57 19.6	-1.0
ECAL	Calabor	6.37	32	Sn	Sn	18 57 20.2	-0.9
ECAL	Calabor	6.37	32	⇑*i*IVmb_VC		18 56 17.9	
	comp=N,300nm,SNR=1.1						
ECAL				Sn	Sn	18 57 18.8	-2.3
AKLM	AKL	6.40	107	P	Pn	18 56 08.4	-0.7
AKLM	AKL	6.40	107	S	Sn	18 57 14.3	-7.6
MD31	MD31	6.55	123	P	Pn	18 56 12.9	+1.9
MD31	MD31	6.55	123	S	Sn	18 57 19.3	-6.1
TIO	Tiouine	6.59	148	Pn	Pn	18 56 16.0	+4.2
TIO				Sn	Sn	18 57 25.4	-1.3
TIO	Tiouine	6.59	148	P	Pn	18 56 14.1	+2.3
TIO	Tiouine	6.59	148	S	Sn	18 57 23.8	-2.9
EAGO	Agolada(Pontev	6.64	21	Pn	Pn	18 56 14.9	+2.6
EAGO				⇑*i*IVmb_VC		18 56 18.1	
	comp=N,499nm,SNR=1.7						
EAGO				Sn	Sn	18 57 24.5	-3.2
EQES	Quesada	6.66	77	⇑*i*IVmb_VC		18 56 17.0	
	comp=N,255nm,SNR=2.1						
EQES				Sn	Sn	18 57 27.6	-0.6
MDT	Midelt	6.68	123	P	Pn	18 56 14.6	+1.7
MDT	Midelt	6.68	123	S	Sn	18 57 21.6	-7.1
OUZM	OUZ	6.83	145	P	Pn	18 56 17.9	+2.9
OUZM	OUZ	6.83	145	S	Sn	18 57 30.4	-2.1
EIBI	Ibiza	10.27	73	Pn	Pn	18 57 07.1	+5.0

GCG 11 19:17:18.3±0.8**, 14°.27N×91°.17W, h126^{km}**±8^{km}**, MD3.9, ML3.0, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG5	El Palmar, Qui	0.22	306	*e*P	Pn	19 17 38.0	+2.2
STG8	El Palmar, Qui	0.25	315	*e*P	Pn	19 17 38.9	+2.8
STG8				*e*S	Sn	19 17 53.8	+4.3
STG8				IAML		19 17 57.0	
	comp=E,248nm,0.2s						
ESSG	Sabana Grande	0.34	71	*e*P	Pn	19 17 36.4	+0.2
	comp=Z,164nm,2.6s						
FG16	Alotenango, Sa	0.64	90	*e*P	Pn	19 17 36.5	-1.5
APG	El Apazote	0.99	43	*e*P	Pn	19 17 41.8	+0.8

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*JMA **11** 19:24:48.5±0.1, 42°.7N±0°.3×142°.0E±0°.3, h36^{km}, MV3.1/39, ISHIKARI DEPRESSION*

JMA Felt II J1 at ISHIKARI DEPRESSION .

*IDC **11** 19:24:52.2±1.8, 42°.84N×141°.88E, h77^{km}±22^{km}, mb3.5/3, mbtmp3.7/4, Error ellipse: s-maj=35.9km s-min=18.8km az=97.0*

ISC 11 19:24:48.3±1.1**, 42°.67N**±0°.04×**141°.93E**±0°.04**, h38^{km}**±1^{km}**, n17, σ1ˢ28**/24**, mb3.8**/3**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIAM	Iburiatsuma	0.05	191	*i* P	Pn	19 24 54.3	-0.2
JIAM				S	Sn	19 24 59.1	+0.4
JBT2	Biratori 2	0.33	71	*i* P	Pn	19 24 55.9	-0.8
JBT2				S	Sn	19 25 01.6	-1.9
JSHD	Hidakashinhida	0.47	124	P	Pn	19 24 59.2	+0.7
JSHD				S	Sn	19 25 07.8	+2.2
JFR	Furan	0.69	44	*i* P	Pn	19 25 00.9	-0.8
JNB	Noboribetsu	0.69	253	*i* P	Pn	19 25 01.9	+0.3
JNB				S	Sn	19 25 12.1	+1.0
JISS	Ishikarishitsu	0.71	328	*i* P	Pn	19 25 02.4	+0.5
JISS				S	Sn	19 25 12.9	+1.3
JNBK	Urakawa-nobuka	0.72	123	*i* P	Pn	19 25 02.3	+0.3
JAB	Ashibetsu	0.86	14	*i* P	Pn	19 25 04.8	+0.9
JKB	Kayabe	1.03	221	*i* P	Pn	19 25 07.1	+0.9
JKB				S	Sn	19 25 21.0	+1.6
JCH	Churui	1.05	93	P	Pn	19 25 06.4	-0.1
JCH				S	Sn	19 25 20.0	0.0
JHR	Hokuryu	1.08	352	*e*P	Pn	19 25 07.9	+1.0
JEM	Erimo	1.12	125	P	Pn	19 25 09.1	+1.7
ASAJ	Asahikawa	1.52	18	P	Pn	19 25 14.4	+1.5
	25nm,0.3s,baz=208,slow=19,SNR=65						
ASAJ				S	Sn	19 25 33.8	+2.3
	54nm,0.5s,baz=127,slow=20,SNR=5.4						
MJAR	Matsushiro Arr	6.76	206	P	Pn	19 26 32.7	+7.7
	0.5nm,0.4s,baz=26,slow=12,SNR=4.7						
KURBB	Kurchatov Arra	43.04	303	P	P	19 32 42.1	-1.9
	0.4nm,0.6s,baz=77,slow=9.1,SNR=1.7						
	0.4nm,0.6s						
WRA	Warramunga Arr	62.69	188	P	P	19 35 09.2	-0.1
	0.7nm,0.9s,baz=7.9,slow=6.9,SNR=6.0						
	0.7nm,0.9s						
FINES	FINESS Array B	64.04	331	P	P	19 35 17.5	-0.2
	4.8nm,1.0s,baz=27,slow=7.6,SNR=3.9						
	4.8nm,1.0s						

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*NIED **11** 19:27:54.4, 36°.43N×141°.01E, h45^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$2.90; M$_{\theta\theta}$-0.93; M$_{\phi\phi}$-1.97; M$_{r\theta}$-0.84; M$_{\theta\phi}$-2.18; M$_{\phi r}$0.59; Fault plane solution: M$_0$3.50000×10^{14} NP1:ϕ$_s$18.00000°, δ49.00000°, λ60.00000°. NP2:ϕ$_s$239.00000°, δ50.00000°, λ120.00000°.*

*JMA **11** 19:27:54.4±0.1, 36°.4N±0°.3×141°.0E±0°.8, h45^{km}±1^{km}, MV3.6/38, E OFF IBARAKI PREF*

JMA Felt I J1 at E OFF IBARAKI PREF .

*IDC **11** 19:27:55.9±2.7, 36°.34N×141°.11E, h49^{km}±26^{km}, mb3.4/9, mbtmp3.7/12, ML3.2/3, Error ellipse: s-maj=25.6km s-min=11.9km az=63.0*

ISC 11 19:27:54.4±1.2**, 36°.44N**±0°.04×**141°.09E**±0°.06**, h33^{km}**±5^{km}**, n29, σ1ˢ29**/35**, mb3.7**/9**, 15D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	0.42	257	⇓*i*P	Pb	19 28 03.7	-0.1
JHYU				⇓S	Sb	19 28 10.0	-0.1
JHO	Hitachi	0.46	293	⇓*i*P	Pb	19 28 04.0	-0.3
JHO				⇓S	Sb	19 28 10.6	-0.6
JIHU	Itakohorinouch	0.66	225	P	Pb	19 28 07.4	-0.1
JIHU				S	Sb	19 28 16.6	+0.2
ONAJ	Iwakimizuishiy	0.71	341	⇓*i*P	Pn	19 28 07.5	-0.7
ONAJ				⇓*e*S	Sn	19 28 16.7	-1.3
JYT	Yasato	0.75	254	⇓*i*P	Pn	19 28 07.7	-1.0
JYT				⇓S	Sn	19 28 16.8	-2.3
JFK	Kawauchi	0.95	349	⇓*i*P	Pn	19 28 10.8	-0.7
JFK				⇓S	Sn	19 28 22.3	-1.6
JOTO	OTAMA OYAMA	1.28	332	*i* P	Pn	19 28 16.5	+0.5
JOTO				S	Sn	19 28 32.8	+0.8
JAG	Ashikaga	1.32	270	⇓*i*P	Pn	19 28 15.8	-0.8
JAG				⇓*e*S	Sn	19 28 31.0	-2.1
JMM	Marumori	1.45	351	*i* P	Pn	19 28 18.1	-0.2
JMM				S	Sn	19 28 35.9	-0.3
JFY	Yanaizu	1.48	312	⇓*i*P	Pn	19 28 18.8	0.0
JKT	Katashina	1.52	283	⇓*i*P	Pn	19 28 19.4	0.0
JKT				⇓S	Sn	19 28 37.6	-0.5
MJAR	Matsushiro Arr	2.33	273	P	Pn	19 28 29.9	-0.5
	3.7nm,0.3s,baz=106,slow=9.2,SNR=261						
MJAR				S	Sn	19 28 59.5	+1.6
	20nm,0.5s,baz=86,slow=30,SNR=4.9						
	25nm,0.5s						
JHJ	Hachijo jima 2	3.48	198	P	Pn	19 28 47.0	+0.8
	7.8nm,0.3s,baz=59,slow=19,SNR=1.6						
JHJ				S	Sn	19 29 26.0	-0.3
	44nm,0.3s,baz=24,slow=18,SNR=1.5						
	193nm,1.1s						
KSRS	Korea Array	10.59	279	P	Pn	19 30 27.6	+3.8
	0.2nm,0.3s,baz=91,slow=14,SNR=2.0						
	2.3nm,0.9s						
SONM	Songino Array	27.91	305	P	P	19 33 43.9	+2.4
	1.2nm,0.5s,baz=106,slow=9.3,SNR=9.1						
	1.2nm,0.5s						
H11N2	WAKE ISLAND Hy	28.07	119	T	T	20 03 35.7	
	baz=312,slow=75,SNR=18						
H11N1	WAKE ISLAND Hy	28.08	119	T	T	20 03 36.3	
	baz=312,slow=75,SNR=17						
H11N3	WAKE ISLAND Hy	28.09	119	T	T	20 03 37.1	
	baz=312,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	28.76	122	T	T	20 04 29.3	
	baz=314,slow=76,SNR=58						
H11S3	WAKE ISLAND Hy	28.76	122	T	T	20 04 29.3	
	baz=314,slow=76,SNR=46						
H11S2	WAKE ISLAND Hy	28.77	122	T	T	20 04 31.1	
	baz=314,slow=76,SNR=30						
ZALV	Zalesovo Beam	42.13	313	P	P	19 35 43.1	-0.2
	0.7nm,0.5s,baz=91,slow=6.2,SNR=5.2						
	0.7nm,0.5s						
MKAR	Makanchi Array	44.22	303	P	P	19 36 02.3	+1.9
	0.2nm,0.5s,baz=82,slow=10,SNR=2.9						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	46.17	308	P	P	19 36 14.6	-1.1
	1.3nm,0.6s,baz=84,slow=7.6,SNR=12						

	1.3nm,0.6s						
ILAR	Eielson Array	50.14	32	P	P	19 36 45.9	-0.4
	0.6nm,0.7s,baz=265,slow=6.2,SNR=5.0						
	0.6nm,0.7s						
BVAR	Borovoye Array	50.78	313	P	P	19 36 50.4	-0.9
	0.3nm,0.5s,baz=54,slow=7.3,SNR=2.5						
	0.3nm,0.5s						
WRA	Warramunga Arr	56.43	188	P	P	19 37 31.5	-1.4
	0.5nm,0.4s,baz=6.7,slow=7.1,SNR=6.3						
	0.5nm,0.4s						
ASAR	Alice Springs	60.16	188	P	P	19 37 57.6	-1.3
	0.4nm,0.7s,baz=13,slow=6.5,SNR=6.3						
	0.4nm,0.7s						
PDAR	Pinedale Array	78.27	45	P	P	19 39 51.8	+0.4
	0.2nm,0.6s,baz=321,slow=8.9,SNR=2.8						
	0.2nm,0.6s						

DJA 11 19:27:55.1±0.2,3°S±2°×11°9E±°,h10^{km},M3.5/13,mb3.8/3, MLv3.4/13,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	Tana Toraja	0.47	106	P	Pg	19 28 03.1	-1.1
TTSI				S	Sg	19 28 09.9	-0.5
MMSI	Mamuju	0.51	296	P	Pg	19 28 04.4	-0.7
MMSI				S	Sg	19 28 12.5	+0.6
PMSI	Majene	0.73	218	P	Pb	19 28 09.7	-0.3
PMSI				S	Sn	19 28 21.9	-1.0
SPSI	Sidrap Palu	1.11	159	P	Pb	19 28 14.6	-1.8
BNSI	Bone	1.64	153	P	Pn	19 28 24.8	+0.7
BNSI				S	Sg	19 28 49.0	+1.0
PCI	Palu	2.06	13	P	Pn	19 28 30.7	+1.0
PCI				S	Sb	19 28 58.1	-0.1
KAPI	Kappang	2.12	170	P	Pn	19 28 30.9	+0.3
BKSI	Bulukumba	2.50	163	P	Pn	19 28 36.6	+0.7
BKSI				S	Sn	19 29 08.3	+1.8
KKSI	Kolaka, Sulawe	2.59	119	P	Pn	19 28 38.9	+1.7
APSI	Ampana	3.03	49	P	Pn	19 28 43.2	+0.1
MPSI	Mapaga	3.28	9	P	Pn	19 28 46.7	+0.1
LUWI	Luwuk	3.88	61	P	Pn	19 28 55.0	+0.2
GTOI	Gorontalo	5.07	46	P	Pn	19 29 11.8	+0.6
	0.1nm16nm,0.9s						
DBNI	Kabupaten Domp	5.64	191	P	Pn	19 29 17.4	-1.7
	0.0nm6.4nm,1.2s						
WBSI	Waikabubak, Su	6.68	180	P	Pn	19 29 32.5	-0.9

IDC 11 19:29:32.2±3.3,3°.39S×136°.17E,h0^{km},mb3.3/2, mbtmp3.4/3,ML2.9/1,MS3.1/1,Error ellipse: s-maj=134.5km s-min=32.8km az=80.0,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.55	186	Pn	P	19 33 27.3	-1.3
	baz=8.1,slow=12,SNR=2.6						
	0.5nm,0.8s						
ASAR	Alice Springs	20.28	186	P	P	19 34 09.1	-0.5
	1.1nm,0.7s,baz=9.1,slow=11,SNR=18						
	1.1nm,0.7s						
TGY	Tagaytay City	23.03	319	LR	LR	19 45 38.9	
	comp=Z,48nm,19.3s,baz=188,slow=42						
MKAR	Makanchi Array	68.80	323	P	P	19 40 38.4	+0.1
	0.2nm,0.5s,baz=123,slow=6.7,SNR=2.6						
	0.2nm,0.5s						

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*IDC **11** 19:38:28.1±2.4,35°.96N×142°.22E,h0^{km},mb3.5/4, mbtmp3.5/5,ML2.7/1,Error ellipse: s-maj=63.0km s-min=31.1km az=51.0*

*JMA **11** 19:38:33.5±0.3,36°.2N±0°.5×14°2E±°,h53^{km},MV3.1/27, FAR E OFF IBARAKI PREF*

ISC 11 19:38:31.8±1.4,36°.11N±0°.08×142°.1E±0°.1,h23^{km},n15, σ1^{s}.41/18,mb3.5/4,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	1.26	281	*e*P	Pn	19 38 52.9	-1.0
JHYU				*e*S	Sn	19 39 07.9	-2.2
JHO	Hitachi	1.34	292	*e*P	Pn	19 38 53.4	-1.8
ONAJ	Iwakimizuishiy	1.45	313	*e*P	Pn	19 38 55.4	-1.3
JFK	Kawauchi	1.60	322	*e*P	Pn	19 38 58.0	-0.7
BSO1	Boso 1	1.72	213	*e*P	Pb	19 39 01.9	-0.5
JOTO	OTAMA OYAMA	2.04	316	*e*P	Pn	19 39 04.9	+0.2
JOTO				*e*S	Sn	19 39 27.6	-1.8
JMM	Marumori	2.05	329	*e*P	Pn	19 39 04.0	-0.8
JAG	Ashikaga	2.17	279	*e*P	Pn	19 39 05.9	-0.6
JKT	Katashina	2.40	287	*e*P	Pn	19 39 09.8	0.0
JRY	Ryogami san	2.61	269	*e*P	Pn	19 39 12.3	-0.2
MJAR	Matsushiro Arr	3.18	279	Pn	Pn	19 39 20.8	+0.3
	0.8nm,0.3s,baz=109,slow=8.8,SNR=54						
MJAR				Sn	Sn	19 39 59.5	+1.8
	0.3nm,0.3s,baz=194,slow=15,SNR=5.3						
	4.9nm,0.4s						
SONM	Songino Array	28.77	305	P	P	19 44 30.6	+2.8
	0.3nm,0.5s,baz=96,slow=10,SNR=2.8						
	0.3nm,0.5s						
MKAR	Makanchi Array	45.09	303	P	P	19 46 47.2	+1.1
	0.4nm,0.6s,baz=78,slow=9.2,SNR=4.8						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	47.02	309	P	P	19 47 00.7	-0.4
	0.6nm,0.6s,baz=88,slow=8.6,SNR=4.5						
	0.6nm,0.6s						
WRA	Warramunga Arr	56.23	189	P	P	19 48 09.1	-1.1
	0.3nm,0.7s,baz=8.5,slow=7.1,SNR=0.8						
	0.3nm,0.7s						

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*IDC **11** 19:50:42.8±0.9,7°.88S×158°.90E,h46^{km}±6^{km},mb4.1/18, mbtmp4.4/19,ML4.7/1,MS3.5/13,Error ellipse: s-maj=24.4km s-min=14.6km az=128.0*

*NEIC **11** 19:50:42.2±1.6,7°.8S±0°.1×158°.88E±0°.08,h35^{km}±2^{km}, mb4.7/35,Error ellipse: s-maj=21.7km s-min=3.0km az=216.0*

ISC 11 19:50:43.6±0.4,7°.81S±0°.06×158°.87E±0°.06,h55^{km},n81, σ1^{s}.08/67,mb4.6/34,MS3.5/11,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TATA	Tatamba Isabel	1.08	122	P	Pn	19 51 02.4	-0.1
SAVO	Savo Central	1.62	145	P	Pn	19 51 09.4	-0.4
NGOA	Tingoa Renbel	3.90	163	P	Pn	19 51 41.1	+0.1
NGOA	Tingoa Renbel	3.90	163	S	Sn	19 52 26.0	+0.5
HURO	Huro Makira	3.98	132	P	Pn	19 51 43.1	+0.9
HURO	Huro Makira	3.98	132	S	Sn	19 52 27.6	-0.1
RABL	Rabaul	7.58	298	Pn	Pn	19 52 30.2	-1.3
PMG	Port Moresby	11.69	261	LR	LR	19 57 41.1	
	comp=Z,119nm,18.2s,baz=106,slow=36						
DZM	Mont Dzumac	15.94	154	P	P	19 54 27.4	+0.2
	10nm,0.9s,baz=156,slow=20,SNR=6.0						
DZM	Mont Dzumac	15.94	154		Pn	19 54 24.0	-0.5
CTA	Charters Tower	17.27	224	LR	LR	20 00 52.6	
	comp=Z,92nm,19.6s,baz=42,slow=35						
JAY	Jayapura	18.84	285	P	P	19 54 59.9	+0.6
	2.1nm,0.3s,baz=99,slow=3.9,SNR=11						
	42nm,0.9s						
EIDS	Eidsvold	18.98	202	P	Pn	19 55 02.5	+0.8
ARMA	Armidale	23.49	196		P	19 55 48.7	0.0
ARMA				IAmb	IAmb	19 55 51.5	
	comp=Z,20nm,0.9s						
GUMO	Guam	25.41	327	LR	LR	20 05 20.5	
	comp=Z,55nm,21.8s,baz=125,slow=34						
INKA	Innaminka	26.21	219	P	P	19 56 13.3	0.0
WR8	Warramunga Arr	26.52	240	P	P	19 56 15.7	-0.6
WR8				IAmb	IAmb	19 56 30.2	
	comp=Z,8.0nm,0.8s						
WB0	Warramunga Arr	26.53	241	P	P	19 56 16.2	-0.2
WRAB	Tennant Creek	26.64	241	P	P	19 56 16.3	-1.0
WRA	Warramunga Arr	26.65	241	P	P	19 56 17.4	0.0
	comp=Z,4.1nm,0.7s,baz=64,slow=9.0,SNR=27						
WRA				pP	pP	19 56 29.9	-0.7
	comp=Z,6.5nm,0.8s,baz=67,slow=9.1,SNR=16						
	comp=Z,4.1nm,0.7s						
WRA	Warramunga Arr	26.65	241	P	P	19 56 16.9	-0.6
H11S3	WAKE ISLAND Hy	27.25	16	T	T	20 24 55.5	
	baz=196,slow=76,SNR=454						
H11S2	WAKE ISLAND Hy	27.26	16	T	T	20 24 54.9	
	baz=196,slow=76,SNR=474						
H11S1	WAKE ISLAND Hy	27.27	16	T	T	20 24 54.4	
	baz=196,slow=76,SNR=409						
H11N1	WAKE ISLAND Hy	28.47	16	T	T	20 26 28.9	
	baz=196,slow=76,SNR=804						
H11N3	WAKE ISLAND Hy	28.48	16	T	T	20 26 26.4	
	baz=196,slow=76,SNR=834						
H11N2	WAKE ISLAND Hy	28.49	16	T	T	20 26 30.3	
	baz=196,slow=76,SNR=777						
AS31	Alice Springs	28.66	234	P	P	19 56 34.7	-0.7
ASAR	Alice Springs	28.66	234	P	P	19 56 34.8	-0.7
	comp=Z,1.5nm,0.7s,baz=64,slow=9.5,SNR=26						
ASAR				pP	pP	19 56 47.0	-1.7
	comp=Z,2.0nm,0.7s,baz=57,slow=8.5,SNR=5.7						
ASAR				S	S	20 01 24.3	+3.7
	comp=Z,1.0nm,1.0s,baz=54,slow=14,SNR=6.6						
ASAR				LR	LR	20 07 15.6	
	comp=Z,66nm,21.4s,baz=106,slow=35						
	comp=Z,1.5nm,0.7s						
ASAR	Alice Springs	28.66	234	P	P	19 56 33.3	-2.1
STKA	Stephens Creek	28.85	212	P	P	19 56 36.8	-0.1
	comp=Z,0.7nm,0.4s,baz=63,slow=15,SNR=1.9						
	comp=Z,0.7nm,0.4s						
STKA	Stephens Creek	28.85	212	IAmb	IAmb	19 56 52.0	
	comp=Z,31nm,1.2s						
KNRA	Kununurra	30.47	252	P	P	19 56 50.5	-1.0
KNRA				IAmb	IAmb	19 57 13.9	
	comp=Z,14nm,1.1s						
FITZ	Fitzroy Crossi	33.90	249	P	P	19 57 20.2	-1.3
URZ	Urewera	34.50	154	LR	LR	20 09 16.0	
	comp=Z,61nm,19.5s,baz=314,slow=32						
BKZ	Black Stump Fm	35.01	156	P	P	19 57 28.9	-1.9
BKZ				IAmb	IAmb	19 57 37.6	
	comp=Z,25nm,1.5s						
THZ	Tophouse	36.02	162	P	P	19 57 38.8	-0.8
TUWZ	Tuamarina	36.05	161	P	P	19 57 40.0	+0.3
LTZ	Lake Taylor	36.77	163	P	P	19 57 45.8	-0.1
LTZ				IAmb	IAmb	19 58 03.7	
	comp=Z,18nm,1.4s						
KHZ	Kahutara	36.81	162	P	P	19 57 45.7	-0.5
KHZ				IAmb	IAmb	19 58 09.6	
	comp=Z,18nm,1.3s						
FOZ	Fox Glacier	36.85	167	P	P	19 57 46.4	-0.1
GVZ	Greta Valley S	37.16	163	P	P	19 57 48.5	-0.7
GVZ				IAmb	IAmb	19 57 51.3	
	comp=Z,19nm,0.9s						
LBZ	Lake Benmore	37.74	167	P	P	19 57 52.9	-1.2
LBZ				IAmb	IAmb	19 58 05.3	
	comp=Z,30nm,1.5s						
JCJ	Chichijima	38.29	336	LR	LR	20 12 19.7	
	comp=Z,80nm,18.3s,baz=4.0,slow=34						
MJAR	Matsushiro Arr	48.20	338	P	P	19 59 18.5	-0.2
	comp=Z,2.3nm,0.6s,baz=172,slow=8.6,SNR=14						
MJAR				LR	LR	20 22 07.5	
	comp=Z,22nm,18.4s,baz=206,slow=39						
	comp=Z,2.3nm,0.6s						
MJAR	Matsushiro Arr	48.20	338	P	P	19 59 18.1	-0.6
MJAR				IAmb	IAmb	19 59 31.6	
	comp=Z,5.6nm,1.4s						
MAJO	Matsushiro	48.20	338	P	P	19 59 18.2	-0.5
JNU	Nakatsue	48.64	328	LR	LR	20 16 42.0	
	comp=Z,53nm,20.7s,baz=36,slow=32						
PPT	Papeete	51.08	106	LR	LR	20 19 18.6	
	comp=Z,51nm,18.0s,baz=334,slow=34						
KSRS	Korea Array	53.53	329	P	P	19 59 59.8	+1.0
	comp=Z,4.2nm,0.8s,baz=140,slow=6.8,SNR=9.8						
	comp=Z,4.2nm,0.8s						
USRK	Ussuriysk Ar.	57.19	337	P	P	20 00 25.4	+0.5
	comp=Z,7.4nm,0.8s,baz=131,slow=5.5,SNR=8.4						
	comp=Z,7.4nm,0.8s						
PETK	Petropavlovsk-	60.69	359	P	P	20 00 49.4	+0.3
	comp=Z,11nm,1.0s,baz=152,slow=6.5,SNR=9.4						
PETK				LR	LR	20 24 39.4	
	comp=Z,38nm,19.8s,baz=129,slow=34						
	comp=Z,11nm,1.0s						
CMAR	Chiang Mai Arr	64.61	295	P	P	20 01 17.1	+1.2
	comp=Z,2.4nm,0.8s,baz=114,slow=5.1,SNR=22						
	comp=Z,2.4nm,0.8s						
CMAR	Chiang Mai Arr	64.61	295	P	P	20 01 16.4	+0.5
HILR	Hailar Array B	66.54	333	P	P	20 01 29.3	+1.5
	comp=Z,0.9nm,0.4s,baz=138,slow=16,SNR=3.9						
	comp=Z,0.9nm,0.4s						
VNDA	Vanda	69.69	179	LR	LR	20 27 06.9	
	comp=Z,32nm,20.7s,baz=342,slow=31						
SEY	Seymchan	70.72	357	P	P	20 01 53.9	+0.5
	comp=Z,1.6nm,0.6s,baz=186,slow=18,SNR=8.6						
	comp=Z,1.6nm,0.6s						
ULN	Ulaanbaatar	71.79	326		P	20 02 01.5	+1.1
ULN				IAmb	IAmb	20 02 03.0	
	comp=Z,9.1nm,0.8s						
SONM	Songino Array	72.14	326	P	P	20 02 04.2	+1.6
	comp=Z,12nm,0.8s,baz=139,slow=6.0,SNR=72						
	comp=Z,12nm,0.8s						
SONM	Songino Array	72.14	326		P	20 02 03.2	+0.7
SONM				IAmb	IAmb	20 02 04.7	
	comp=Z,13nm,0.8s						
SHL	Shillong	73.03	300		P	20 02 08.9	+0.6
SHL				IAmb	IAmb	20 02 10.2	
	comp=Z,15nm,1.2s						
YAK	Yakutsk	73.22	346	P	P	20 02 08.9	+0.5
LSA	Lhasa	74.92	304	IAmb	IAmb	20 02 21.9	
	comp=Z,4.4nm,0.8s						
BILL	Bilibino	75.85	3	P	P	20 02 23.0	-0.6
BILL				IAmb	IAmb	20 02 25.3	
	comp=Z,10nm,1.0s						
EVN	Everest	78.05	301	IAmb	IAmb	20 02 39.8	
	comp=Z,7.9nm,0.8s						
E19K	Redstone River	81.33	16	IAmb	IAmb	20 03 14.7	
	comp=Z,5.9nm,0.9s						
ILAR	Eielson Array	82.75	21	P	P	20 03 00.6	-0.7
	comp=Z,0.9nm,0.7s,baz=229,slow=5.6,SNR=9.9						
	comp=Z,0.9nm,0.7s						
ILAR	Eielson Array	82.75	21	P	P	20 03 00.3	-0.9
MKAR	Makanchi Array	86.57	318	P	P	20 03 21.6	+0.6
	comp=Z,4.8nm,0.8s,baz=98,slow=6.2,SNR=8.0						
MKAR				pP	pP	20 03 35.6	-1.2
	comp=Z,2.8nm,0.7s,baz=96,slow=6.1,SNR=7.2						
	comp=Z,4.8nm,0.8s						
MKAR	Makanchi Array	86.57	318	P	P	20 03 21.3	+0.3
MAKZ	Makanchi	86.78	318	P	P	20 03 22.2	+0.2
MAKZ				IAmb	IAmb	20 03 23.3	
	comp=Z,4.0nm,0.9s						
DLBC	Dease Lake	86.91	30	LR	LR	20 42 41.6	
	comp=Z,68nm,18.1s,baz=263,slow=36						
ZALV	Zalesovo Beam	87.02	325	P	P	20 03 21.6	-1.4
	comp=Z,0.6nm,0.5s,baz=74,slow=6.3,SNR=3.5						
	comp=Z,0.6nm,0.5s						
NVAR	Mina Array Bea	89.22	51	P	P	20 03 35.8	+1.7
	comp=Z,1.5nm,0.7s,baz=245,slow=6.3,SNR=6.9						
	comp=Z,1.5nm,0.7s						
PFO	Pinyon Flats O	89.86	56	LR	LR	20 39 26.0	
	comp=Z,42nm,18.1s,baz=23,slow=32						
SPR3	Spring Creek 3	92.38	51	P	P	20 03 49.1	+0.2
SPR3				IAmb	IAmb	20 03 51.8	
	comp=Z,5.9nm,1.1s						
YKA	Yellowknife Ar	95.26	28	P	P	20 04 01.6	+0.5
	comp=Z,0.8nm,0.8s,baz=265,slow=5.4,SNR=14						
YKA				pP	pP	20 04 15.5	-1.5
	comp=Z,0.6nm,0.8s,baz=264,slow=5.0,SNR=4.6						
	comp=Z,0.8nm,0.8s						
BVAR	Borovoye Array	95.27	323	P	P	20 04 00.4	-1.1
	comp=Z,1.5nm,0.6s,baz=93,slow=4.9,SNR=12						
	comp=Z,1.5nm,0.6s						
PDAR	Pinedale Array	96.39	48	P	P	20 04 08.3	+1.2
	comp=Z,0.3nm,0.6s,baz=299,slow=2.3,SNR=3.3						
	comp=Z,0.3nm,0.6s						
GERES	GERESS Array B	129.69	331	PKP	PKiKP	20 09 48.0	+0.4
	comp=Z,0.6nm,0.6s,baz=67,slow=1.7,SNR=5.2						
BDFB	Brasilia	144.61	131	PKP	PKPab	20 10 14.1	+0.3
	comp=Z,1.1nm,0.4s,baz=333,slow=4.5,SNR=3.3						
BDFB				pPKP	pPKPdf	20 10 28.4	-3.3
	comp=Z,2.1nm,0.4s,baz=200,slow=6.8,SNR=3.7						

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*NNC **11** 19:58:58.7±2.9,43°.27N×85°.47E,h0^{km},mb3.5,mpv3.3, Error ellipse: s-maj=24.2km s-min=14.0km az=139.0*

*SOME **11** 19:59:03.5,42°.75N×85°.17E,h20^{km}*

ISC 11 19:58:58.4±3.1,42°.3N±0°.3×85°.2E±0°.1,h10^{km},n20, σ1^{s}.98/24,6C-2D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	3.76	290	Pg	Pb	20 00 07.9	+3.0
	1.4nm,0.3s						
KTMS				Lg	Lg	20 00 54.5	
	6.8nm,0.2s						
KTMS	Ketmen	3.76	290	*e*P	Pb	20 00 07.9	+3.0
	1.4nm,0.3s						
KTMS				*e*S	Sb	20 00 54.5	+3.9
	6.8nm,0.2s						
SHLS	Shalkode	4.33	284	Pg	Pb	20 00 14.1	-0.5
	5.8nm,0.5s						
SHLS				Lg	Lg	20 01 05.9	
	15nm,0.3s						
SHLS	Shalkode	4.33	284	*e*P	Pb	20 00 14.1	-0.5
	5.8nm,0.5s						
SHLS				*e*S	Sb	20 01 05.0	-1.9
	15nm,0.3s						
PDGK	Podgornoye	4.34	286	⇓Pn	Pn	20 00 03.9	-0.7
	2.6nm,1.0s						
PDGK				⇓Pg	Pb	20 00 17.4	+2.6
	1.6nm,0.4s						
PDGK				⇑Lg	Lg	20 01 18.5	
	8.2nm,0.6s						
UZB	Uzynbulak	4.64	283	Pg	Pg	20 00 25.8	-1.6
	1.8nm,0.1s						
UZB				Lg	Lg	20 01 25.4	
	6.8nm,0.2s						
UZB	Uzynbulak	4.64	283	*e*P	Pg	20 00 25.8	-1.6
	1.8nm,0.1s						
UZB				*e*S	Sg	20 01 25.4	-2.0
	6.8nm,0.2s						
KPKS	Kokpek	4.94	286	Pg	Pg	20 00 30.6	-2.4
	0.3nm,0.1s						
KPKS				Lg	Lg	20 01 33.5	
	8.3nm,0.4s						
MK31	Makanchi Array	4.99	336	⇑Pn	Pn	20 00 01.5	-12
	0.3nm,0.3s,baz=145,slow=14,SNR=14						
MK31				⇑Pg	Pb	20 00 16.7	-9.1
	2.0nm,0.7s						
MK31				Lg	Lg	20 01 14.2	
	9.2nm,0.7s,baz=136,slow=29,SNR=6.5						
SATY	Saty	5.08	281	Pg	Pg	20 00 33.6	-2.0
	1.2nm,0.1s						
SATY				Lg	Lg	20 01 39.2	
	13nm,0.4s						
MAKZ	Makanchi	5.10	334	⇑Lg	Lg	20 01 16.7	
	6.7nm,0.7s						
KURS	Kuram	5.31	286	Pg	Pg	20 00 38.3	-1.9
	1.5nm,0.4s						
KURS				Lg	Lg	20 01 46.3	
	3.1nm,0.5s						
ARXS	Arharly	5.73	292	Pg	Pg	20 00 46.6	-1.5
	1.0nm,0.3s						
ARXS				Lg	Lg	20 02 00.7	
	6.7nm,0.6s						
ARXS	Arharly	5.73	292	*e*P	Pg	20 00 46.6	-1.5
ARXS				*e*S	Sg	20 02 00.7	-1.7
KOTS	Kotyrbulak	6.04	282	Pg	Pg	20 00 53.4	-0.7
	1.1nm,0.2s						
KOTS				Lg	Lg	20 02 12.1	
	7.6nm,0.8s						
KOTS	Kotyrbulak	6.04	282	*e*P	Pg	20 00 53.4	-0.7
	1.1nm,0.2s						
KOTS				*e*S	Sg	20 02 12.1	-0.2
	7.6nm,0.8s						
IZV	Izvestkoviy	6.38	280	Pg	Pg	20 01 01.3	+0.6
	0.9nm,0.2s						
IZV				Lg	Lg	20 02 25.6	
	4.6nm,0.6s						
IZV	Izvestkoviy	6.38	280	*e*P	Pg	20 01 01.3	+0.6
	0.9nm,0.2s						
IZV				*e*S	Sg	20 02 25.6	+2.3
	4.6nm,0.6s						
DGS	Degeres	7.01	281	Pg	Pg	20 01 11.4	-1.3
	1.2nm,0.3s						
DGS				Lg	Lg	20 02 43.1	
	3.6nm,0.5s						
KURK	Kurchatov	9.59	334	⇑Pn	Pn	20 01 05.3	-11
	0.5nm,0.6s						
KURK				⇑Lg	Lg	20 03 38.8	
	1.2nm,0.6s						

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*SNET **11** 20:07:32.6±2.5,12°.85N×88°.64W,h53^{km},ML3.6*

*CATAC **11** 20:07:33.0±0.8,13°N±5°×8°9W±°,h30^{km}±6^{km},M3.6/12, MLv3.6/12,Error ellipse: s-maj=11.0km s-min=3.0km az=27.0,confirmed*

*GCG **11** 20:07:35.4±0.3,13°.06N×88°.75W,h75^{km}±11^{km},MD4.1*

ISC 11 20:07:30.6±1.5,12°.79N±0°.08×88°.69W±0°.05,h18^{km}±5^{km}, n33,σ0^{s}.54/42,1C,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCY	Lacayo	0.74	31	*e*P	Pn	20 07 46.9	+0.6
TECO	Alcaldia de Te	0.75	353	S	Sn	20 07 57.2	-0.1
TECO	Alcaldia de Te	0.75	353	P	Pn	20 07 47.0	+0.6
PACA	Pacayal	0.76	27	S	Sn	20 07 57.6	-0.2
PACA	Pacayal	0.76	27	P	Pn	20 07 47.3	+0.7
BLLM	Bellamira	0.78	34	⇑*i*P	Pn	20 07 47.5	+0.7
UESV	Universidad de	0.85	353	S	Sn	20 07 59.9	+0.1
UESV	Universidad de	0.85	353	P	Pn	20 07 48.5	+0.8
SCLA	Alcaldia de Sa	0.91	357	S	Sn	20 08 01.9	+0.7
SCLA	Alcaldia de Sa	0.91	357	P	Pn	20 07 49.5	+0.9
PAVA	Las Pavas	0.95	345	*e*P	Pn	20 07 49.3	+0.1
PAVA				*e*S	Sn	20 08 01.9	-0.5
PAVA	Las Pavas	0.95	345	S	Sn	20 08 03.1	+0.7
PAVA	Las Pavas	0.95	345	P	Pn	20 07 50.0	+0.8
CNCH	Conchagua	0.96	60	P	Pn	20 07 49.4	0.0
LOMA	Loma Larga	0.97	331	*e*P	Pb	20 07 48.7	-0.4
LOMA				*e*S	Sg	20 08 01.5	-1.0
PMON	Piamonte	1.10	326	S	Sg	20 08 06.6	0.0
PMON	Piamonte	1.10	326	P	Pg	20 07 52.1	0.0
CSGN	Cosiguina Volc	1.11	80	P	Pg	20 07 52.1	-0.2
CSGN				S	Sg	20 08 07.4	+0.5
JAYA	Jayaque - finc	1.14	319	*e*P	Pg	20 07 53.1	+0.3
JAYA				*e*S	Sg	20 08 07.5	-0.2
JAYA	Jayaque - finc	1.14	319	*e*P	Pg	20 07 53.0	+0.3
JAYA				*e*S	Sn	20 08 06.6	-0.4
JAYA	Jayaque - finc	1.14	319	P	Pg	20 07 52.8	+0.1
POTN	Potosi Cosigui	1.17	79	S	Sn	20 08 07.2	-0.4
CEVE	Cerro Verde	1.38	319	S	Sg	20 08 14.3	-1.1
LLGN	La Laguna	1.39	350	P	Pb	20 07 55.9	-0.3
UNIC	Universidad Ca	1.45	325	S	Sb	20 08 15.1	-0.3
NUBE	Las Nubes	1.54	316	*e*P	Pb	20 07 58.8	+0.1
NUBE				*e*S	Sb	20 08 17.5	-0.4
NUBE	Las Nubes	1.54	316	*e*P	Pb	20 07 58.6	-0.1
NUBE				*e*S	Sn	20 08 16.9	0.0
PKGN	Cerro Pekin	1.67	94	P	Pb	20 08 00.6	-0.3
PKGN				S	Sn	20 08 20.7	+0.7
MTO3	Montecristo	1.73	338	*e*P	Pn	20 08 00.9	+0.8
QUEN	Al S del Volca	1.80	96	P	Pn	20 08 01.6	+0.8
TEL3	Telica 3	1.81	97	P	Pn	20 08 00.8	-0.2
YUSH	Yuscaran	2.14	57	P	Pn	20 08 05.9	+0.4
LIMN	Finca el Limon	2.28	83	P	Pn	20 08 07.9	+0.4
LIMN				S	Sn	20 08 34.8	-0.4

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*SOF **11** 20:25:51.9,41°.31N±0°.01×23°.64E±0°.01,h17^{km}±2^{km}, MD2.5/5*

*SKO **11** 20:25:52.6,41°.31N×23°.67E,h1^{km},ML1.9*

ISC 11 20:25:52.3±0.9,41°.29N±0°.03×23°.66E±0°.03,h11^{km}±7^{km}, n18,σ0^{s}.46/34,Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRS	Serrai	0.18	197	*i* Pg	Pg	20 25 56.4	+0.1
SRS				*i* Sg	Sg	20 25 59.4	+0.4
MMB	Musomishta	0.27	15	Sg	Sg	20 26 01.6	0.0
MMB				*i* Pg	Pg	20 25 57.6	-0.2
MMB	Musomishta	0.27	15	*i* Pg	Pg	20 25 57.7	-0.2
MMB				*i* Sg	Sg	20 26 01.9	+0.3
SOH	Sokhos	0.52	206	*i* Pg	Pg	20 26 02.2	-0.3
SOH				*i* Sg	Sg	20 26 09.7	+0.2
KNT	Kendrikon	0.59	258	*i* Pg	Pg	20 26 03.6	-0.2
KNT				*i* Sg	Sg	20 26 12.1	+0.6
KKB	Krupnik	0.68	324	*i* Pg	Pg	20 26 05.3	-0.3
KKB				Sg	Sb	20 26 15.2	-0.4
KKB	Krupnik	0.68	324	*i* Pg	Pg	20 26 05.2	-0.3
KKB				*i* Sg	Sg	20 26 14.5	0.0
VAY	Valandovo	0.82	273	*i* Pg	Pg	20 26 07.9	-0.3
VAY				*i* Sg	Sg	20 26 18.9	0.0
VAY				*e*Lg	Lg	20 26 19.6	
	comp=N,19nm,0.3s						
VAY				*e*Lg	Lg	20 26 22.4	
	comp=E,18nm,0.2s						
THE	Thessaloniki	0.84	219	*i* Pg	Pg	20 26 08.0	-0.6
THE				*i* Sg	Sg	20 26 19.4	-0.2
RZN	Rozhen	0.91	63	Pg	Pn	20 26 10.9	-0.2
GRG	Griva	1.01	251	*i* Sg	Sb	20 26 25.2	+0.2
PLD	Plovdiv	1.18	43	*e*Pg	Pb	20 26 14.6	-0.1
PLD				Sg	Sg	20 26 30.4	0.0
PLD	Plovdiv	1.18	43	*i* Pg	Pb	20 26 14.5	-0.2
PLD				*i* Sg	Sn	20 26 31.4	+0.6
PLNA	Plana	1.20	352	Pg	Pn	20 26 15.5	+0.4
PLNA				Sg	Sn	20 26 31.9	+0.5
PGB	Panagyurishte	1.28	17	P	Pn	20 26 16.2	0.0
PGB				Sg	Sn	20 26 34.6	+1.3

KDZ	Kurdzhali	1.31	74	P	Pn	20 26 16.2	-0.3
KDZ				S	Sb	20 26 33.6	0.0
VTS	Vitosha	1.36	347	P	Pn	20 26 17.3	-0.1
VTS				S	Sb	20 26 34.3	-1.1
BLSH	Balsha	1.59	350	P	Pg	20 26 22.6	-0.3
BLSH				S	Sg	20 26 44.5	+0.9

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*BJI **11** 20:28:18.7, 2.°61N×128.°67E, h50^{km}, mB5.3/7, mb4.8/49*
*IDC **11** 20:28:24.6±2.8, 3.°19N×128.°26E, h39^{km}±25^{km}, mb4.4/23, mbtmp4.5/24, ML3.8/1, MS3.6/16, Error ellipse: s-maj=23.1km s-min=10.3km az=79.0*
*NEIC **11** 20:28:27.7±1.7, 3.°14N±0.°05×128.°24E±0.°08, h70^{km}±6^{km}, mb4.8/72, Error ellipse: s-maj=12.2km s-min=6.2km az=76.0*
*DJA **11** 20:28:28.7±0.3, 3˚N±2˚×12˚8E±˚, h69^{km}±3^{km}, M4.6/60, mb4.8/60, mB5.1/15, MLv4.8/19, Mw(mB)4.4/15*
ISC 11 20:28:25.4±0.3, **3.°25N**±0.°05×**128.°27E**±0.°05, **h45^{km}, n231,** σ1.^{s}55/186, **mb4.8**/83, **MS3.6**/15, **2C, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.63	200		Pn	20 29 06.0	+0.6
TNTI	Ternate	2.63	200	P	Pn	20 29 07.1	+1.8
TNTI	Ternate	2.63	200	P	Pn	20 29 06.6	+1.3
SGSI	Sangihe	2.77	279	P	Pn	20 29 07.1	-0.2
MNI	Manado	3.87	242	P	Pn	20 29 22.7	+0.3
DAV	Davao City (W)	4.64	325	Pn	Pn	20 29 38.9	+5.8
	53nm,0.3s,baz=275,slow=20,SNR=4.5						
DAV				Sn	Sn	20 30 34.8	+9.1
	89nm,0.3s,baz=254,slow=17,SNR=3.8						
DAV	Davao City (W)	4.64	325	P	Pn	20 29 38.3	+5.2
SWI	Sorong	5.07	144	P	Pn	20 29 40.2	+1.3
	48nm,0.4s						
SANI	Sanana	5.74	203	P	Pn	20 29 49.5	+1.4
SANI	Sanana	5.74	203	P	Pn	20 29 48.3	+0.2
	0.3nm1µm80nm,0.9s						
GTOI	Gorontalo	5.86	244	P	Pn	20 29 51.0	+1.2
	0.3nm1µm118nm,0.8s						
KRAI	Karang Ratu	6.53	179	P	Pn	20 30 02.9	+3.9
	0.2nm60nm,1.0s						
NLAI	Namlea	6.55	190	P	Pn	20 30 01.4	+2.1
	0.2nm52nm,0.6s						
MSAI	Masohi	6.59	174	P	Pn	20 30 03.8	+4.0
	0.3nm3µm68nm,1.0s						
AAI	Ambon	6.89	181	P	Pn	20 30 08.7	+4.7
	0.2nm1µm77nm,1.0s						
MRSI	Marisa	6.90	247	P	Pn	20 30 05.2	+1.1
LUWI	Luwuk	6.96	232		Pn	20 30 06.0	+1.2
LUWI	Luwuk	6.96	232	P	Pn	20 30 07.4	+2.6
LUWI	Luwuk	6.96	232	S	Sn	20 31 26.7	+4.0
LUWI	Luwuk	6.96	232	P	Pn	20 30 07.0	+2.2
	1µm77nm,0.5s						
MWPI	Manokwari, Pap	7.11	126	P	Pn	20 30 10.7	+3.8
	0.5nm71nm,1.2s						
FAKI	Fak Fak	7.31	147		Pn	20 30 10.2	+0.5
FAKI	Fak Fak	7.31	147	P	Pn	20 30 11.1	+1.4
FAKI	Fak Fak	7.31	147	P	Pn	20 30 12.3	+2.6
	0.1nm40nm,0.9s						
RKPI	Ransiki, Papua	7.57	129	P	Pn	20 30 18.0	+4.8
	0.3nm46nm,0.8s						
TOLI2	Tolitoli	7.78	254		Pn	20 30 14.8	-1.3
APSI	Ampana	7.80	238	P	Pn	20 30 18.0	+1.5
	0.7nm1µm177nm,1.1s						
BNDI	Bandanaira	7.89	168	P	Pn	20 30 20.8	+3.1
	0.5nm132nm,1.4s						
MPSI	Mapaga	8.85	251	P	Pn	20 30 31.2	+0.3
	723nm58nm,0.8s						
BAKI	Biak	8.99	119	P	Pn	20 30 38.1	+5.3
	41nm,1.0s						
PCI	Palu	9.39	244	P	Pn	20 30 39.7	+1.5
	60nm,0.9s						
KKSI	Kolaka, Sulawe	9.91	222	P	Pn	20 30 44.2	-1.1
	36nm,0.8s						
MYLDM	Lahad Datu	9.93	281		Pn	20 30 47.2	+1.7
MYLDM	Lahad Datu	9.93	281	P	Pn	20 30 50.1	+4.5
MYLDM	Lahad Datu	9.93	281	P	Pn	20 30 48.2	+2.6
	887nm63nm,1.1s						
TTSI	Tana Toraja	10.51	234	P	Pn	20 30 53.1	-0.5
	664nm39nm,0.7s						
SPSI	Sidrap Palu	11.12	230	P	Pn	20 31 00.5	-1.3
	26nm,1.1s						
BNSI	Bone	11.15	227	P	Pn	20 31 02.0	-0.3
	39nm,0.9s						
PMSI	Majene	11.51	234	P	Pn	20 31 08.0	+0.8
	21nm,0.8s						
BKSI	Bulukumba	11.78	224	P	Pn	20 31 09.4	-1.5
	31nm,0.7s						
KAPI	Kappang	11.83	226	Pn	Pn	20 31 12.6	+1.1
	1.5nm,0.3s,baz=29,slow=9.8,SNR=6.3						
KAPI				Sn	Sn	20 33 19.9	-2.3
	1.3nm,0.3s,baz=143,slow=23,SNR=3.7						
KAPI	Kappang	11.83	226		Pn	20 31 10.5	-1.1
KAPI	Kappang	11.83	226	P	Pn	20 31 10.7	-0.9
KKM	Kota Kinabalu	12.33	283	P	Pn	20 31 22.7	+4.2
SOEI	Soe	13.53	197	P	P	20 31 40.0	-2.9
SOEI	Soe	13.53	197	P	Pn	20 31 37.4	+2.5
	28nm,0.8s						
EDFI	Ende, Flores	13.61	209	P	Pn	20 31 37.3	+1.3
	29nm,0.8s						
JAY	Jayapura	13.69	115	Pn	Pn	20 31 38.0	+0.9
	0.4nm,0.3s,baz=315,slow=20,SNR=1.8						
	7.0nm,0.8s						
JAY	Jayapura	13.69	115	P	P	20 31 44.4	-0.3
	25nm,0.9s						
MTKI	Muara Teweh, K	14.00	253	P	Pn	20 31 40.9	-0.4
	76nm,1.0s						
BATI	Baumata	14.14	199	Pn	Pn	20 31 46.5	+3.4
	2.0nm,0.3s,baz=342,slow=0.6,SNR=8.1						
BATI	Baumata	14.14	199	P	Pn	20 31 44.8	+1.7
	29nm,1.2s						
LBFI	Labuhan Bajo,	14.34	216	P	Pn	20 31 44.6	-1.3
	59nm,0.8s						
WSI	Waingapu	15.10	212	P	Pn	20 31 54.7	-1.1
	2µm77nm,1.2s						
PKKI	Palangkaraya	15.30	249	P	Pn	20 31 57.5	-1.0
DBNI	Kabupaten Domp	15.33	220	P	Pn	20 31 59.7	+0.8
	25nm,0.8s						
WBSI	Waikabubak, Su	15.57	215	P	Pn	20 32 04.0	+2.0
	42nm,0.8s						
PLAI	Plampang	15.92	221	P	P	20 32 09.4	-0.1
PLAI	Plampang	15.92	221	P	Pn	20 32 06.9	+0.4
	928nm68nm,0.9s						
SBUM	Sibu	16.05	268		Pn	20 32 08.7	+0.5
SBUM	Sibu	16.05	268	P	P	20 32 12.7	+1.8
SBUM	Sibu	16.05	268	P	P	20 32 10.2	-0.7
MTN	Manton Dam	16.24	170		Pn	20 32 12.2	+1.7
TWSI	Taliwang, Sumb	16.46	224	P	Pn	20 32 14.0	+0.7
	70nm,0.9s						
KLNI	Mataram	16.79	226	P	Pn	20 32 18.0	+0.5
	35nm,0.7s						
KHKI	Kahang-Kahang	17.11	228	P	Pn	20 32 20.6	-0.8
	45nm,1.0s						
BLJI	Banyuglugur	18.27	233	P	Pn	20 32 36.2	+0.5
	50nm,0.6s						
JAGI	Jajag, Banyuwa	18.27	230		P	20 32 33.5	-2.0
JAGI	Jajag, Banyuwa	18.27	230	P	Pn	20 32 38.8	+3.0
JAGI	Jajag, Banyuwa	18.27	230	P	P	20 32 34.5	-1.0
	1µm40nm,1.1s						
GMJI	Gumukmas	18.70	232	P	P	20 32 40.0	-0.2
	54nm,1.1s						
KNRA	Kununurra	18.82	179		P	20 32 41.3	-0.1
GUMO	Guam	19.35	57	LR	LR	20 39 11.4	
	comp=Z,161nm,21.3s,baz=218,slow=33						
SJI	Sawahan	19.75	236	P	P	20 32 49.3	-2.6
	27nm,0.8s						
SNJI	Sawahan-Nganju	19.79	236	P	P	20 32 52.3	0.0
	38nm,0.9s						
MANU	Manus Island	19.80	105	P	P	20 32 52.9	+0.6
TPUB	Ta-pu	21.26	340	P	P	20 33 05.0	-2.9
TPUB				IAmb	IAmb	20 33 11.2	
	comp=Z,43nm,0.9s						
FITZ	Fitzroy Crossi	21.38	187	P	P	20 33 08.5	-0.7
	comp=Z,2.3nm,0.6s,baz=13,slow=8.9,SNR=9.8						
	comp=Z,2.3nm,0.6s						
SSLB	Suanglung	21.60	342	P	P	20 33 11.5	-0.1
SSLB				IAmb	IAmb	20 33 17.5	
	comp=Z,31nm,0.7s						
KPJI	Karang Pucung	21.98	241	P	P	20 33 13.4	-2.4
	comp=Z,43nm,0.8s						
BBJI	Bungbulang	23.17	243	P	P	20 33 28.2	-0.1
WB0	Warramunga Arr	23.66	165	P	P	20 33 31.3	-1.6
WB0				IAmb	IAmb	20 33 47.3	
	comp=Z,33nm,0.8s						
WRAB	Tennant Creek	23.80	166	P	P	20 33 32.3	-2.0
WRAB				IAmb	IAmb	20 33 35.9	
	comp=Z,27nm,0.7s						
WRA	Warramunga Arr	23.81	166	P	P	20 33 33.6	-0.7
	comp=Z,20nm,0.6s,baz=345,slow=10.0,SNR=131						
	comp=Z,20nm,0.6s						
WRA	Warramunga Arr	23.81	166	P	P	20 33 31.7	-2.7
WR8	Warramunga Arr	23.86	165	IAmb	IAmb	20 33 35.6	
	comp=Z,20nm,0.7s						
KLSI		24.81	252	P	P	20 33 44.5	+0.9
	comp=Z,56nm,0.9s						
RABL	Rabaul	25.00	107	P	P	20 33 44.5	-0.8
MDSI	Maura Dua	25.27	252	P	P	20 33 48.1	+0.4
	comp=Z,32nm,0.9s						
PSA00	Pilbara Seismi	26.02	198	P	P	20 33 52.9	-1.5
ASAR	Alice Springs	27.32	169	P	P	20 34 05.0	-1.2
	comp=Z,3.9nm,0.6s,baz=353,slow=7.9,SNR=61						
ASAR				PcP	PcP	20 37 24.4	-0.5
	comp=Z,1.2nm,0.5s,baz=352,slow=2.2,SNR=8.4						
ASAR				LR	LR	20 46 09.2	
	comp=Z,88nm,18.2s,baz=302,slow=39						
	comp=Z,3.9nm,0.6s						
ASAR	Alice Springs	27.32	169	P	P	20 34 04.0	-2.1
CTA	Charters Tower	29.16	143	LR	LR	20 47 42.8	
	comp=Z,116nm,18.6s,baz=353,slow=40						
PSI	Prapat	29.31	270	LR	LR	20 46 33.8	
	comp=Z,151nm,19.1s,baz=118,slow=37						
SLVN	Son La	29.74	309	P	P	20 34 26.9	-0.8
JNU	Nakatsue	29.81	4	LR	LR	20 45 30.7	
	comp=Z,160nm,18.7s,baz=174,slow=34						
NJ2	Nanjing	29.98	344	*e*P	P	20 34 31.5	+1.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WHN	Wuhan	30.17	336	P	P	20 34 36.1	+4.7
WHN				pmax	pmax		
	comp=Z,46nm,1.0s						
KCSI	Kotacane, Aceh	30.45	271	P	P	20 34 33.8	-0.3
	comp=Z,8.9nm,1.1s						
JHJ	Hachijo jima 2	31.61	19	LR	LR	20 45 34.7	
	comp=Z,73nm,20.6s,baz=72,slow=32						
CM31	Chiang Mai Arr	32.44	300	IAmb	IAmb	20 34 54.7	
	comp=Z,33nm,1.8s						
CMAR	Chiang Mai Arr	32.44	300	P	P	20 34 52.5	+0.9
	comp=Z,3.2nm,0.8s,baz=119,slow=7.5,SNR=27						
CMAR				ScP	ScP	20 41 19.9	+1.3
	comp=Z,0.3nm,0.6s,baz=58,slow=1.6,SNR=4.1						
CMAR				LR	LR	20 50 00.9	
	comp=Z,30nm,18.1s,baz=115,slow=40						
	comp=Z,3.2nm,0.8s						
CMAR	Chiang Mai Arr	32.44	300	P	P	20 34 50.6	-1.0
CHTO	Chiang Mai	32.58	301	P	P	20 34 53.0	+0.1
CHTO	Chiang Mai	32.58	301	P	P	20 34 53.8	+0.9
	comp=Z,11nm,0.9s						
CHTO	Chiang Mai	32.58	301	P	P	20 34 52.6	-0.2
KMI	Kunming	32.81	314	⇑P	P	20 34 58.5	+3.5
KMI				pmax	pmax		
	comp=Z,36nm,1.1s						
KSRS	Korea Array	34.04	360	P	P	20 35 05.2	0.0
	comp=Z,5.0nm,0.8s,baz=176,slow=9.1,SNR=10						
	comp=Z,5.0nm,0.8s						
PZH	PanZhiHua	34.36	315	P	P	20 35 10.1	+1.7
MJAR	Matsushiro Arr	34.37	14	P	P	20 35 07.2	-1.0
	comp=Z,8.9nm,0.6s,baz=181,slow=9.9,SNR=29						
MJAR				LR	LR	20 46 59.6	
	comp=Z,128nm,20.0s,baz=187,slow=32						
	comp=Z,8.9nm,0.6s						
MJAR	Matsushiro Arr	34.37	14	P	P	20 35 06.7	-1.5
MAJO	Matsushiro	34.37	14	P	P	20 35 07.4	-0.8
MAJO				IAmb	IAmb	20 35 08.2	
	comp=Z,10nm,0.6s						
MJB9	Matsu-Tunnel	34.37	14	P	P	20 35 08.4	+0.2
MJB9				IAmb	IAmb	20 35 09.2	
	comp=Z,10nm,0.5s						
XAN	Xi'an	35.55	332	P	P	20 35 18.8	+0.4
XAN				pP	sP	20 35 35.8	+0.9
XAN				pmax	pmax		
	comp=Z,30nm,1.1s						
TNCH	TengChong	35.90	310	P	P	20 35 23.2	+1.5
TNCH				pP	sP	20 35 39.4	+1.6
TNCH				pmax	pmax		
	comp=Z,22nm,1.2s						
CD2	Chengdu	35.94	323	P	P	20 35 21.8	0.0
HNS	HongShan	36.19	342	⇑P	P	20 35 24.0	+0.2
HNS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
STKA	Stephens Creek	37.16	161	P	P	20 35 31.0	-1.2
	comp=Z,9.3nm,0.6s,baz=338,slow=9.6,SNR=20						
	comp=Z,9.3nm,0.6s						
BJI	Beijing	38.22	345	P	P	20 35 41.4	+0.4
BJI				pmax	pmax		
	comp=Z,4.0nm,0.5s						
LZDM	Lanzhou Array	39.68	328	P	P	20 35 54.6	+1.0
	comp=Z,2.1nm,0.3s,baz=187,slow=10,SNR=4.8						
	comp=Z,2.1nm,0.3s						
LZH	Lanzhou	39.70	328	*e*P	P	20 35 55.3	+1.7
LZH				pP	sP	20 36 11.6	+1.3
LZH				pmax	pmax		
	comp=Z,30nm,1.2s						
LZH				pmax	pmax		
	comp=Z,270nm,4.8s						
HHC	Hu-ho-hao-te	40.34	340	*e*P	P	20 36 01.5	+2.7
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CN2	Changchun	40.45	357	P	P	20 36 00.4	+0.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
H11S3	WAKE ISLAND Hy	40.52	65	T	T	21 19 16.4	
	baz=253,slow=74,SNR=56						
H11S1	WAKE ISLAND Hy	40.54	65	T	T	21 19 18.0	
	baz=253,slow=74,SNR=22						
H11S2	WAKE ISLAND Hy	40.54	65	T	T	21 19 17.3	
	baz=253,slow=74,SNR=48						
USRK	Ussuriysk Ar.	40.91	4	P	P	20 36 04.4	+1.1
	comp=Z,16nm,0.8s,baz=184,slow=7.5,SNR=20						
	comp=Z,16nm,0.8s						
H11N1	WAKE ISLAND Hy	41.08	63	T	T	21 20 05.7	
	baz=249,slow=74,SNR=3.9						
H11N2	WAKE ISLAND Hy	41.09	63	T	T	21 20 07.2	
	baz=249						
H11N3	WAKE ISLAND Hy	41.10	63	T	T	21 20 05.4	
	baz=249,slow=74,SNR=4.9						
MDJ	Mudanjiang	41.21	1	P	P	20 36 07.0	+1.3
MDJ				pmax	pmax		
	comp=Z,20nm,1.1s						
MDJ	Mudanjiang	41.21	1	P	P	20 36 06.5	+0.7
SHL	Shillong	41.40	306	P	P	20 36 07.7	-0.1
ASAJ	Asahikawa	42.62	15	P	P	20 36 18.5	+1.2
	comp=Z,13nm,0.5s,baz=234,slow=9.0,SNR=18						
ASAJ				LR	LR	20 52 34.9	
	comp=Z,57nm,21.0s,baz=294,slow=34						
	comp=Z,13nm,0.5s						
JKA	Kamikawa-asahi	42.62	15	P	P	20 36 18.5	+1.2
JKA	Kamikawa-asahi	42.62	15	IAmb	IAmb	20 36 20.4	
	comp=Z,163nm,1.9s						
LSA	Lhasa	43.91	311	P	P	20 36 27.3	-1.2
LSA				pmax	pmax		
	comp=Z,14nm,1.2s						
LSA	Lhasa	43.91	311	P	P	20 36 31.8	+3.3
GTA	Gaotai	44.30	328	*e*P	P	20 36 32.7	+1.6
GTA				pP	sP	20 36 46.9	-0.9
GTA				pmax	pmax		
	comp=Z,12nm,0.9s						
DZM	Mont Dzumac	45.01	126	*e*LR	LR	20 49 16.0	
	comp=Z,59nm,22.6s						
GOMU	GeErMu	45.01	321	P	P	20 36 37.8	+0.7
GOMU				S	S	20 43 12.0	-1.1
GOMU				pmax	pmax		
	comp=Z,7.0nm,1.2s						
EVN	Everest	46.51	306	P	P	20 36 49.7	+0.3
HILR	Hailar Array B	46.70	352	P	P	20 36 50.2	+0.4
	comp=Z,1.2nm,0.4s,baz=160,slow=8.5,SNR=4.1						
	comp=Z,1.2nm,0.4s						
ULN	Ulaanbaatar	48.06	341	P	P	20 37 00.4	-0.1
ULN	Ulaanbaatar	48.06	341	P	P	20 36 59.8	-0.7
ULN	Ulaanbaatar	48.06	341	P	P	20 37 01.7	+1.2
SONM	Songino Array	48.25	340	P	P	20 37 02.0	0.0
	comp=Z,1.4nm,0.5s,baz=154,slow=8.6,SNR=7.9						
SONM				LR	LR	20 58 12.2	
	comp=Z,58nm,20.2s,baz=76,slow=37						
	comp=Z,1.4nm,0.5s						
SONM	Songino Array	48.25	340	IAmb	IAmb	20 37 06.4	
	comp=Z,2.2nm,0.9s						
WMQ	Urumqi	54.00	324	*e*P	P	20 37 46.3	+1.2
WMQ				pmax	pmax		
	comp=Z,14nm,1.1s						
PETK	Petropavlovsk-	55.30	21	P	P	20 37 54.7	+0.4
	comp=Z,15nm,0.8s,baz=180,slow=4.5,SNR=16						
	comp=Z,15nm,0.8s						
PETK	Petropavlovsk-	55.30	21	P	P	20 37 54.4	+0.1
ZSN	Zaisan	57.74	327	*e*P	P	20 38 11.5	-0.3
YAK	Yakutsk	58.65	1	LR	LR	21 02 19.5	
	comp=Z,45nm,20.9s,baz=306,slow=35						
SHLS	Shalkode	58.69	320	*e*P	P	20 38 16.2	-2.5
	comp=Z,8.8nm,0.9s						
MA2	Magadan	58.80	13	LR	LR	21 01 02.2	
	comp=Z,25nm,21.6s,baz=207,slow=33						
MKAR	Makanchi Array	58.82	325	P	P	20 38 19.7	+0.3
	comp=Z,5.3nm,0.5s,baz=117,slow=8.3,SNR=152						
	comp=Z,5.3nm,0.5s						
MKAR	Makanchi Array	58.82	325	P	P	20 38 18.5	-0.9
UZB	Uzynbulak	58.97	320	*e*P	P	20 38 20.1	-0.5
	comp=Z,4.5nm,0.6s						
MAKZ	Makanchi	59.01	325	P	P	20 38 20.2	-0.5
MAKZ	Makanchi	59.01	325	P	P	20 38 20.9	+0.2
TARG	Taragay, Kyrgy	59.13	318	P	P	20 38 21.7	-0.4
TARG				IAmb	IAmb	20 38 37.3	
	comp=Z,7.0nm,0.9s						
SATY	Saty	59.33	319	*e*P	P	20 38 22.6	-0.5
	comp=Z,6.9nm,0.9s						
NIL	Nilore	59.43	307		P	20 38 23.7	-0.2
KSH	Kashi	59.47	315	P	P	20 38 26.0	+1.9
KSH				pmax	pmax		
	comp=Z,13nm,1.1s						
TDK	Taldyqorghan	60.24	321	*e*P	P	20 38 28.8	-0.4
	comp=Z,6.4nm,0.8s						
MDOK	Medeo	60.27	319	*e*P	P	20 38 29.1	-0.5
AAA	Alma-Ata	60.37	319	*e*P	P	20 38 29.9	-0.3
	comp=Z,4.6nm,0.6s						
URZ	Urewera	61.15	137	LR	LR	21 05 48.6	
	comp=Z,103nm,19.1s,baz=324,slow=37						
ZALV	Zalesovo Beam	61.71	333	P	P	20 38 37.9	-1.0
	comp=Z,1.0nm,0.4s,baz=99,slow=7.7,SNR=8.2						
	comp=Z,1.0nm,0.4s						
AAK	Ala-Archa	61.74	317		P	20 38 39.3	-0.4
AAK				IAmb	IAmb	20 39 44.3	
	comp=Z,16nm,1.8s						
MANEM	Manem	61.89	311	IAmb	IAmb	20 38 45.9	
	comp=Z,21nm,1.1s						
SGDS	Sogindy	61.98	318	*e*P	P	20 38 40.8	-0.4
KURBB	Kurchatov Arra	62.97	327	P	P	20 38 47.2	-0.2
	comp=Z,4.1nm,0.4s,baz=126,slow=6.2,SNR=22						
	comp=Z,4.1nm,0.4s						
KURK	Kurchatov	62.97	327	P	P	20 38 46.4	-1.0
KURK	Kurchatov	62.97	327	P	P	20 38 46.9	-0.5
BTLS	Baital	63.03	320	*e*P	P	20 38 47.7	-0.2
KBL	Kabul	63.03	307	P	P	20 38 46.9	-1.6
KBL				IAmb	IAmb	20 38 52.4	
	comp=Z,12nm,1.1s						
GAR	Garm	63.38	312	IAmb	IAmb	20 39 02.7	
	comp=Z,14nm,0.9s						
IUG	Iuzhnay	64.63	316	*e*P	P	20 38 58.2	-0.5
	comp=Z,6.1nm,0.7s						
KK31	Karatay Array	64.63	317	P	P	20 38 57.4	-1.1
KK31				IAmb	IAmb	20 39 02.1	
	comp=Z,6.3nm,0.8s						
KKAR	Karatay Array	64.63	317	P	P	20 38 57.8	-0.7
BRLS	Borolday	65.06	316	*e*P	P	20 39 01.1	-0.3
TIXI	Tiksi	68.30	0	LR	LR	21 08 24.0	
	comp=Z,51nm,20.9s,baz=200,slow=35						
TIXI	Tiksi	68.30	0	P	P	20 39 20.7	-0.8
TIXI	Tiksi	68.30	0	P	P	20 39 21.0	-0.4
BVAR	Borovoye Array	68.56	327	P	P	20 39 23.4	0.0
	comp=Z,4.6nm,0.7s,baz=111,slow=6.9,SNR=15						
	comp=Z,4.6nm,0.7s						
BORK	Borovoye	68.60	327	P	P	20 39 23.0	-0.7
BORK				IAmb	IAmb	20 39 31.4	
	comp=Z,12nm,0.8s						
NRIK	Noril'sk	71.26	346	P	P	20 39 39.2	-0.5
	comp=Z,3.7nm,0.6s,baz=353,slow=4.2,SNR=8.6						
	comp=Z,3.7nm,0.6s						
NRIK	Noril'sk	71.26	346	IAmb	IAmb	20 39 39.9	
	comp=Z,4.1nm,0.7s						
NRIK	Noril'sk	71.26	346		P	20 39 39.5	-0.2
ABKAR	Akbulak array	73.49	321	P	P	20 39 52.2	-1.2
ARTI	Arti	76.24	327	P	P	20 40 07.3	-1.8
CCD	Concordia, Ant	78.30	181	P	P	20 40 20.8	0.0
E18K	Tukpahlearik C	79.82	22	IAmb	IAmb	20 40 30.9	
	comp=Z,8.3nm,0.8s						
E19K	Redstone River	81.09	22	IAmb	IAmb	20 40 38.9	
	comp=Z,15nm,1.0s						
RAYN	Ar Rayn	82.08	293	P	P	20 40 41.3	-0.5
RAYN	Ar Rayn	82.08	293	P	P	20 40 41.6	-0.2
G21K	Allakaket	82.34	23	IAmb	IAmb	20 40 45.5	
	comp=Z,8.1nm,0.9s						
I21K	Tanana	82.75	25	IAmb	IAmb	20 40 46.7	
	comp=Z,23nm,1.2s						
VNDA	Vanda	82.77	173	P	P	20 40 43.6	-0.5
	comp=Z,6.4nm,0.9s,baz=311,slow=7.0,SNR=9.6						
	comp=Z,6.4nm,0.9s						
VNDA	Vanda	82.77	173	P	P	20 40 43.0	-1.2
VNDA				IAmb	IAmb	20 40 44.8	
	comp=Z,7.9nm,0.9s						
L22K	Petersville	82.95	27	IAmb	IAmb	20 40 46.3	
	comp=Z,9.9nm,0.7s						
E22K	Anaktuvuk Pass	83.24	22	P	P	20 40 48.3	+1.4
E22K				IAmb	IAmb	20 40 49.9	
	comp=Z,20nm,1.2s						
MLY	Manley	83.26	25	P	P	20 40 46.7	-0.3
MLY				IAmb	IAmb	20 40 48.8	
	comp=Z,8.0nm,0.8s						
PPT2	Papeete2	83.51	108	*e*LR	LR	21 07 01.0	
	comp=Z,55nm,25.5s						
PPT2				*e*LR	LR	21 07 02.8	
	comp=Z,114nm,26.5s						
COLD	Coldfoot	83.73	23	IAmb	IAmb	20 40 51.7	
	comp=Z,12nm,0.7s						
D23K	Nanushuk River	83.76	21	IAmb	IAmb	20 40 52.7	
	comp=Z,17nm,1.2s						
I23K	Minto, Yukon-K	83.85	25	IAmb	IAmb	20 40 51.5	
	comp=Z,11nm,1.0s						
RND	Reindeer	83.91	27	IAmb	IAmb	20 40 51.1	
	comp=Z,9.4nm,0.7s						
NEA2	Nenana	83.92	25	IAmb	IAmb	20 40 52.1	
	comp=Z,9.9nm,1.2s						
TOLK	Toolik Lake Re	84.12	21	IAmb	IAmb	20 40 53.8	
	comp=Z,6.4nm,0.8s						
TBI	Tubuai	84.19	114	*e*LR	LR	21 07 27.6	
	comp=Z,1µm,28.0s						
TBI				*e*LR	LR	21 07 30.9	
	comp=Z,1µm,40.8s						
KBZ	Khabaz	84.42	313	LR	LR	21 25 03.5	
	comp=Z,87nm,18.2s,baz=344,slow=40						
D24K	Happy Valley	84.45	21	IAmb	IAmb	20 40 55.7	
	comp=Z,10nm,0.8s						
F24K	Squaw Lake	84.65	23	IAmb	IAmb	20 41 59.4	
	comp=Z,23nm,1.8s						
ILAR	Eielson Array	84.87	25	P	P	20 40 55.0	-0.2
	comp=Z,1.1nm,0.8s,baz=241,slow=5.1,SNR=11						
	comp=Z,1.1nm,0.8s						
ILAR	Eielson Array	84.87	25	P	P	20 40 54.6	-0.6
GURO	Guroymak-BITLI	85.05	308	IAmb	IAmb	20 41 01.5	
	comp=Z,7.5nm,1.0s						
E25K	Arctic Village	85.57	22	IAmb	IAmb	20 41 48.9	
	comp=Z,22nm,1.9s						
J26L	Joseph Creek	86.29	26	IAmb	IAmb	20 43 38.2	
	comp=Z,24nm,2.0s						
I27K	Kandik River	87.11	25	IAmb	IAmb	20 41 08.2	
	comp=Z,5.2nm,0.8s						
ARCES	ARCESS Array B	91.42	340	P	P	20 41 24.9	-1.5
	comp=Z,2.9nm,0.9s,baz=94,slow=6.4,SNR=6.9						
	comp=Z,2.9nm,0.9s						
TAOE	Nuku Hiva Isla	92.06	99	*e*LR	LR	21 11 04.3	
	comp=Z,108nm,25.9s						
FINES	FINESS Array B	92.97	332	P	P	20 41 31.3	-2.4
	comp=Z,9.0nm,1.1s,baz=130,slow=3.0,SNR=4.1						
QSPA	South Pole Qui	93.16	180	P	P	20 41 33.9	-0.8
	comp=Z,5.4nm,0.8s,baz=303,slow=1.9,SNR=9.4						
	comp=Z,5.4nm,0.8s						
QSPA	South Pole Qui	93.16	180	P	P	20 41 33.5	-1.2
DLBC	Dease Lake	93.36	31	LR	LR	21 15 07.3	
	comp=Z,35nm,21.8s,baz=258,slow=30						
YKA	Yellowknife Ar	99.29	25	P	Pdif	20 42 01.9	-0.5
	comp=Z,0.4nm,0.6s,baz=291,slow=5.8,SNR=6.4						
	comp=Z,0.4nm,0.6s						
TXAR	Lajitas Array	120.66	53	PKP	PKiKP	20 47 14.2	+0.8
	comp=Z,0.2nm,0.4s,baz=67,slow=2.1,SNR=4.5						
TORD	Torodi Ar. Bea	124.53	288	PKP	PKPdf	20 47 20.5	-0.4
	comp=Z,1.0nm,0.3s,baz=20,slow=4.6,SNR=3.1						
DBIC	Dimbokro	132.18	282	PKP	PKPdf	20 47 36.0	+0.5
	comp=Z,5.5nm,1.0s,baz=115,slow=4.7,SNR=3.4						

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*IDC **11** 20:28:54.0±1.1, 15.°00N×147.°11E, h0^{km}, mb4.2/8, mbtmp4.2/9, ML4.2/1, MS3.2/3, Error ellipse: s-maj=30.1km*

s-min=19.4km az=108.0

*NEIC **11** 20:28:55.9±2.0, 14.°84N±0.°08×147.°19E±0.°08, h10km±1km, mb4.7/4, Error ellipse: s-maj=14.8km s-min=11.4km az=51.0*

ISC 11 20:28:57.9±0.8**, 14.°9N**±0.°1×**147.°24E**±0.°09**, h32**km**, n22, σ0.s93**/17**, mb4.5**/10**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DPSS	**Saipan**	1.45	285		Pn	20 29 21.2	-0.7
GUMO	**Guam**	2.63	241	Pn	Pn	20 29 37.5	-0.7
	48nm,0.3s,baz=117,slow=5.7,SNR=22						
GUMO				Sn	Sn	20 30 08.7	-0.3
	50nm,0.3s,baz=115,slow=21,SNR=9.4						
GUMO				LR	LR	20 30 23.2	
	comp=Z,120nm,21.5s,baz=129,slow=34						
	104nm,0.3s						
PATS	**Pohnpei**	13.48	125	Pn	Pn	20 32 05.5	-1.6
H11S3	**WAKE ISLAND Hy**	18.97	76	T	T	20 52 53.8	
	baz=264,SNR=6.4						
H11S1	**WAKE ISLAND Hy**	18.98	76	T	T	20 53 00.3	
	baz=264,SNR=5.2						
H11S2	**WAKE ISLAND Hy**	18.99	76	T	T	20 52 59.3	
	baz=264,SNR=2.8						
JOW	**Kunigami**	21.32	307	LR	LR	20 40 58.6	
	comp=Z,125nm,21.7s,baz=296,slow=34						
FAKI	**Fak Fak**	23.09	221	P	P	20 34 01.2	+0.1
FAKI				IAmb	IAmb	20 34 04.1	
	comp=Z,16nm,0.8s						
WRA	**Warramunga Arr**	36.85	201	P	P	20 36 04.4	+1.0
	comp=Z,3.0nm,0.8s,baz=20,slow=8.7,SNR=5.7						
	comp=Z,3.0nm,0.8s						
ASAR	**Alice Springs**	40.46	199	P	P	20 36 35.4	+1.7
	comp=Z,0.7nm,0.6s,baz=16,slow=10,SNR=3.6						
	comp=Z,0.7nm,0.6s						
LZDM	**Lanzhou Array**	44.13	307	P	P	20 37 04.2	+0.2
	comp=Z,5.1nm,0.6s,baz=131,slow=6.6,SNR=4.3						
	comp=Z,5.1nm,0.6s						
CMAR	**Chiang Mai Arr**	46.30	281	P	P	20 37 20.8	-0.3
	comp=Z,0.6nm,0.3s,baz=81,slow=7.5,SNR=5.6						
	comp=Z,0.6nm,0.3s						
LSA	**Lhasa**	53.48	296	P	P	20 38 15.6	-0.4
ZALV	**Zalesovo Beam**	61.95	324	LR	LR	21 04 37.9	
	comp=Z,60nm,20.1s,baz=54,slow=35						
MKAR	**Makanchi Array**	62.19	315	P	P	20 39 16.5	+0.2
	comp=Z,1.8nm,0.5s,baz=94,slow=7.9,SNR=1.9						
	comp=Z,1.8nm,0.5s						
KURK	**Kurchatov**	65.11	319	P	P	20 39 35.1	-0.3
KURK	**Kurchatov**	65.11	319	IAmb	IAmb	20 39 46.6	
	comp=Z,4.2nm,0.8s						
KURBB	**Kurchatov Arra**	65.15	319	P	P	20 39 35.1	-0.6
	comp=Z,4.0nm,0.6s,baz=101,slow=6.7,SNR=7.2						
	comp=Z,4.0nm,0.6s						
ILAR	**Eielson Array**	66.43	25	P	P	20 39 44.4	+0.7
	comp=Z,0.4nm,0.5s,baz=263,slow=5.6,SNR=7.2						
	comp=Z,0.4nm,0.5s						
BVAR	**Borovoye Array**	70.36	321	P	P	20 40 08.0	-0.5
	comp=Z,2.7nm,0.6s,baz=98,slow=7.7,SNR=1.9						
	comp=Z,2.7nm,0.6s						
DBIC	**Dimbokro**	145.02	306	PKP	PKPdf	20 48 32.8	-0.2
	comp=Z,2.6nm,0.8s,baz=107,slow=2.4,SNR=3.9						
CPUP	**Villa Florida**	154.38	120	PKP	PKPdf	20 48 49.2	+1.8
	comp=Z,1.1nm,0.8s,baz=138,slow=5.8,SNR=4.0						

IDC 11 21:03:51.5±1.8**, 3.°00N×128.°87E, h0**km**, mb3.6**/5**, mbtmp3.6**/5**, Error ellipse: s-maj=111.2km s-min=18.9km az=72.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	21.20	189	P	P	21 08 39.8	+0.9
	1.6nm,0.7s,baz=1.4,slow=7.1,SNR=6.6						
	1.6nm,0.7s						
WRA	**Warramunga Arr**	23.42	167	P	P	21 09 01.8	-0.7
	0.3nm,0.3s,baz=343,slow=10.0,SNR=14						
	0.3nm,0.3s						
ASAR	**Alice Springs**	26.95	170	P	P	21 09 33.6	-1.3
	0.4nm,0.5s,baz=355,slow=8.0,SNR=8.3						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	59.38	325	P	P	21 13 56.5	+0.8
	0.4nm,0.4s,baz=112,slow=7.8,SNR=10						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	63.51	327	P	P	21 14 23.6	+0.1
	0.7nm,0.4s,baz=126,slow=6.0,SNR=5.9						
	0.7nm,0.4s						

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*RSNC **11** 21:07:58.9±0.0, 7°N±1°×7°5W±°, h12km±2km, M3.7, ML3.3*

*IDC **11** 21:08:00.3±4.5, 7.°09N×75.°39W, h74km±48km, mb3.2/2, mbtmp3.7/4, ML2.7/2, MS3.0/1, Error ellipse: s-maj=70.3km s-min=20.6km az=92.0*

ISC 11 21:07:58.8±1.0**, 7.°04N**±0.°04×**75.°35W**±0.°04**, h50**km±10km**, n24, σ1.s49**/32**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UREC	**San Jos de Ur**	0.73	345	P	Pn	21 08 12.6	-0.3
UREC				S	Sn	21 08 23.4	+0.2
MEDEC	**Medelln, Ant**	0.80	198	P	Sn	21 08 24.6	-0.5
DBBC	**Dabeiba**	0.86	268	P	Pn	21 08 15.0	+0.3
DBBC				S	Sn	21 08 28.0	+1.6
HELC	**Santa Helena**	0.87	192	P	Pn	21 08 14.3	-0.8
HELC				S	Sn	21 08 25.7	-1.2
PTBC	**PUERTO BERRIO,**	1.01	119	P	Pn	21 08 15.8	-0.9
PTBC				S	Sn	21 08 28.8	-1.1
CBOC	**Ciudad Bolivar**	1.35	210	P	Pn	21 08 21.7	+0.3
CBOC				S	Sn	21 08 39.2	+1.0
APAC	**Apartado, Choc**	1.49	305	P	Pn	21 08 24.7	+1.5
NORC	**Norcasia**	1.54	162	P	Pn	21 08 23.8	-0.1
NORC				S	Sn	21 08 43.3	+0.4
BRJC	**Barrancabermej**	1.59	92	P	Pn	21 08 25.1	+0.6
BRJC				S	Sn	21 08 45.4	+1.5
GUY2C	**Guyana, Caldas**	1.81	181	P	Pn	21 08 28.6	+0.7
GUY2C				S	Sn	21 08 51.7	+1.8
SPBC	**San Pablo de B**	1.87	137	P	Pn	21 08 28.7	+0.2
LCBC	**Los crdobas,**	2.07	331	P	Pn	21 08 32.8	+1.7
BARC	**Barichara**	2.19	102	P	Pn	21 08 33.9	+0.9
PLMC	**San Jos del P**	2.32	204	P	Pn	21 08 36.5	+1.9
PLMC				P		21 08 37.0	
PLMC				P		21 08 37.2	
ROSC	**El Rosal**	2.41	155	P	Pn	21 08 38.3	+2.1
	30nm,0.3s,baz=318,slow=22,SNR=16						
ROSC				S	Sn	21 09 09.1	+4.3
	177nm,0.3s,baz=188,slow=22,SNR=12						
	70nm,0.3s						
RUSC	**La Rusia**	2.52	117	P	Pn	21 08 38.2	+0.5
PAMC	**Pamplona, Colo**	2.64	83	P	Pn	21 08 40.7	+1.4
PAMC				P		21 08 41.2	
PAMC				P		21 08 41.4	
SDV	**Santo Domingo**	5.01	68	P	Pn	21 09 13.5	+1.8
	3.1nm,0.3s,baz=313,slow=4.0,SNR=7.9						
	6.4nm,0.3s						
ATAH	**Atahualpa**	14.41	192	LR	LR	21 17 25.3	
	comp=Z,62nm,19.1s,baz=17,slow=39						
YKA	**Yellowknife Ar**	62.31	341	P	P	21 18 14.0	-1.6
	0.4nm,0.6s,baz=141,slow=5.9,SNR=7.8						
	0.4nm,0.6s						
ILAR	**Eielson Array**	75.83	335	P	P	21 19 38.4	-1.0
	0.3nm,0.7s,baz=90,slow=6.0,SNR=3.5						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	122.83	18	PKP	PKPdf	21 26 47.6	-1.9
	0.1nm,0.4s,baz=353,slow=0.9,SNR=1.4						
ASAR	**Alice Springs**	147.42	236	PKPbc	PKPdf	21 27 35.9	+0.4
	0.4nm,0.4s,baz=112,slow=3.7,SNR=7.7						
WRA	**Warramunga Arr**	148.49	243	PKPbc	PKPdf	21 27 38.5	+1.2
	0.4nm,0.5s,baz=104,slow=3.5,SNR=5.8						

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*IDC **11** 21:17:29.9±1.0, 11.°08N×85.°10W, h205km±23km, mb2.8/3, mbtmp3.3/3, Error ellipse: s-maj=64.5km s-min=42.7km az=173.0*

*UCR **11** 21:17:29.6±0.8, 11.°23N×85.°64W, h196km±4km, MW4.2*

*CATAC **11** 21:17:31.8±0.2, 11°N±2°×8°6W±°, h179km±2km, M4.0/49, mb3.8/1, mB4.6/1, MLv4.1/49, Mw(mB)3.8/1, Error ellipse: s-maj=6.6km s-min=2.0km az=45.9, confirmed*

*SNET **11** 21:17:38.2±0.8, 10.°94N×86.°26W, h35km±632km, ML3.8*

ISC 11 21:17:30.3±0.7**, 11.°24N**±0.°05×**85.°57W**±0.°05**, h193**km±5km**, n151, σ1.s10**/172**, mb3.3**/4**, 14C-3D, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CARN	**Rivas**	0.07	136	⇑P	Pn	21 17 56.1	+0.3
CARN				S	S	21 18 15.2	-0.1
CARN	**Rivas**	0.07	136	*e*P	Pn	21 17 56.1	+0.3
CARN				*e*S	S	21 18 15.8	+0.5
LCRUZ	**La Cruz**	0.17	200	*e*P	Pn	21 17 55.8	-0.1
LCRUZ				*e*S	S	21 18 15.4	-0.2
JAPN	**Al SSO del Vol**	0.30	340	⇑P	Pn	21 17 56.9	+0.8
JAPN	**Al SSO del Vol**	0.30	340	*e*P	Pn	21 17 56.9	+0.8
MORN	**Al O del Volca**	0.32	346	⇑P	Pn	21 17 56.5	+0.4
PEJA	**Penjamo Buenos**	0.43	143	*e*P	Pn	21 17 56.9	+0.4
BUAI	**Buenos Aires**	0.43	147	*e*P	Pn	21 17 57.1	+0.6
BUAI				*e*S	S	21 18 16.6	-0.1
VORI	**VORI**	0.47	152	*e*P	Pn	21 17 57.3	+0.4
LAPC	**Finca la Perla**	0.49	164	*e*P	Pn	21 17 56.5	-0.2
LAPC				*e*S	S	21 18 16.6	-0.5
VRLE	**La Escondida,**	0.49	155	*e*P	Pn	21 17 57.0	+0.2
GPS1	**Guardaparques**	0.51	155	*e*P	Pn	21 17 57.0	+0.2
GPS3	**Bodega del ICE**	0.52	157	*e*P	Pn	21 17 57.2	+0.3
GPS2	**Hotel Rincn d**	0.53	156	*e*P	Pn	21 17 57.1	+0.1
ELI1	**Hacienda Flor**	0.59	178	P	Pn	21 17 57.3	+0.3
ELI1	**Hacienda Flor**	0.59	178	S	S	21 18 18.3	+0.4
ELI1	**Hacienda Flor**	0.59	178	*e*P	Pn	21 17 57.4	+0.3
ERIA	**Liberia**	0.61	168	*e*P	Pn	21 17 57.4	+0.2
VMAR	**Armenia, Volca**	0.62	133	*e*P	Pn	21 17 57.8	+0.5
MESS	**Mesas**	0.62	143	*e*P	Pn	21 17 57.7	+0.4
ALIBA	**Liberia Airpor**	0.64	178	*e*P	Pn	21 17 57.6	+0.3
UPAL	**Upala**	0.65	122	P	Pn	21 17 57.4	+0.1
UPAL	**Upala**	0.65	122	S	S	21 18 17.4	-0.7
COLC	**Colonia**	0.68	148	*e*P	Pn	21 17 57.9	+0.3
NADN	**Granada**	0.68	318	⇑P	Pn	21 17 57.9	+0.4
NADN				S	S	21 18 19.6	+1.1
NADN	**Granada**	0.68	318	*e*P	Pn	21 17 57.7	+0.2
CUI	**Cuipilapa**	0.70	145	*e*P	Pn	21 17 58.3	+0.6
MOTZ	**Rio Naranjo**	0.74	138	*e*P	Pn	21 17 58.4	+0.6
BAGA	**Bagaces**	0.77	157	*e*P	Pn	21 17 58.2	+0.2
DELF	**Filadelfia**	0.79	179	*e*P	Pn	21 17 58.5	+0.5
TENO	**El Achiote**	0.79	132	*e*P	Pn	21 17 58.8	+0.6
TIMP	**Tierras Morena**	0.85	140	*e*P	Pn	21 17 58.9	+0.3
QUEB	**Quebradon, Cot**	0.90	133	*e*P	Pn	21 17 59.3	+0.5
INVE	**Universidad In**	0.91	146	*e*P	Pn	21 17 59.2	+0.4
PLVR	**Palo Verde**	0.91	166	*e*P	Pn	21 17 59.3	+0.2
MASN	**Masaya**	0.94	323	P	Pn	21 17 59.3	+0.2
TILA	**Tilaran**	0.97	142	*e*P	Pn	21 17 59.7	+0.4
MAS3	**Al N del Volca**	0.98	323	P	Pn	21 17 60.0	+0.7
CHIK	**Chiripa**	1.03	140	*e*P	Pn	21 18 00.1	+0.4
JUD3	**Juan Diaz 3**	1.07	178	*e*P	Pn	21 18 00.3	+0.3
TABAC	**Tabacon**	1.08	133	*e*P	Pn	21 18 01.1	+1.0
NICO	**Nicoya**	1.10	174	*e*P	Pn	21 18 00.5	+0.3
REZ	**Monterrey de S**	1.11	129	*e*P	Pn	21 18 01.3	+1.0
MGAN	**Managua**	1.12	324	⇑P	Pn	21 18 01.3	+1.0
MGAN	**Managua**	1.12	324	S	S	21 18 23.6	0.0
JTS	**Las Juntas de**	1.12	147	P	Pn	21 18 00.7	+0.3
	483nm,0.3s,baz=317,slow=15,SNR=201						
JTS				S	S	21 18 22.1	-1.5
	815nm,0.3s,baz=140,slow=23,SNR=36						
JTS	**Las Juntas de**	1.12	147	⇑P	Pn	21 18 00.7	+0.3
JTS				S	S	21 18 21.7	-1.9
JTS	**Las Juntas de**	1.12	147	*e*P	Pn	21 18 00.6	+0.3
ABCN	**Banco Central**	1.14	321	P	Pn	21 18 01.2	+0.8
ALLN	**Telcor Managua**	1.14	323	P	Pn	21 18 01.1	+0.7
ARE1	**Arenal 1**	1.14	133	*e*P	Pn	21 18 01.6	+1.1
VARE2	**V. Arenal**	1.14	133	*e*P	Pn	21 18 01.4	+0.8
CASO	**Castillo**	1.15	134	*e*P	Pn	21 18 01.4	+0.8
VACR	**Volcan Arenal**	1.16	131	*e*P	Pn	21 18 01.6	+1.0
MTEVE	**Monteverde**	1.17	141	*e*P	Pn	21 18 01.5	+0.6
FORC	**Fortuna**	1.17	131	*e*P	Pn	21 18 01.7	+1.0
APQ2	**Apoyeque**	1.21	322	P	Pn	21 18 01.6	+0.7
BOAB	**BOACO BROADBAN**	1.21	356	P	Pn	21 18 01.5	+0.5
BOAB	**BOACO BROADBAN**	1.21	356	S	S	21 18 23.9	-0.9
CMARA	**Lajas Hojancha**	1.22	173	S	S	21 18 24.5	-0.6
CMARA	**Lajas Hojancha**	1.22	173	⇑P	Pn	21 18 01.5	+0.4
CMARA	**Lajas Hojancha**	1.22	173	*e*P	Pn	21 18 01.3	+0.1
APYN	**Apoyeque**	1.25	322	P	Pn	21 18 03.0	+1.7
COVE	**Coope Vega, Sa**	1.26	114	⇓P	Pn	21 18 01.9	+0.5
COVE	**Coope Vega, Sa**	1.26	114	S	S	21 18 24.6	-0.8
SOCE	**Pocosol**	1.27	132	⇑P	Pn	21 18 02.3	+0.8
SOCE	**Pocosol**	1.27	132	S	S	21 18 24.4	-1.2
SOCE	**Pocosol**	1.27	132	*e*P	Pn	21 18 02.3	+0.8
NYURE	**Nandayure**	1.27	166	*e*P	Pn	21 18 01.9	+0.3
AMTN	**Mateare**	1.30	320	S	S	21 18 26.2	+0.1
COPN	**Copaltepe**	1.37	313	⇑P	Pn	21 18 02.6	+0.3
COPN	**Copaltepe**	1.37	313	*e*P	Pn	21 18 02.4	+0.1
JCR1	**Jicaral**	1.45	162	*e*P	Pn	21 18 03.6	+0.5
MOM2	**El Cardon**	1.49	323	⇑P	Pn	21 18 03.9	+0.6
MOM2				S	S	21 18 29.8	+0.8
VPL2	**V. Platanar**	1.49	128	*e*P	Pn	21 18 04.5	+0.9
MOMN	**Momotombo**	1.50	321	⇓P	Pn	21 18 03.9	+0.4
ARZA	**Esparza**	1.53	144	*e*P	Pn	21 18 04.6	+0.9
VPL1	**V. Platanar**	1.54	129	*e*P	Pn	21 18 04.7	+0.7
MOM3	**MOM3**	1.57	324	P	Pn	21 18 04.7	+0.6
MOM3				S	S	21 18 30.7	+0.4
ARTO	**Ro Cuarto**	1.60	124	*e*P	Pn	21 18 06.0	+1.6
CNGA	**Al SSO del Vol**	1.67	319	⇑P	Pn	21 18 05.6	+0.5
CNGA				S	S	21 18 33.3	+1.3
CNGN	**Cerro Negro**	1.67	319	⇑P	Pn	21 18 05.5	+0.4
CNGN	**Cerro Negro**	1.67	319	S	S	21 18 32.2	+0.1
CNGN	**Cerro Negro**	1.67	319	*e*P	Pn	21 18 05.5	+0.4
OROT	**Orotina**	1.67	142	*e*P	Pn	21 18 05.9	+0.8
ATEO	**Atenas**	1.71	137	*e*P	Pn	21 18 06.3	+0.7
MATN	**Matagalpa**	1.72	348	P	Pn	21 18 05.1	-0.5
ILCN	**San Idelfonso**	1.73	320	⇑P	Pn	21 18 06.0	+0.4
ILCN				S	S	21 18 33.4	+0.3
ALEN	**Leon**	1.76	314	S	S	21 18 33.2	-0.3
ALEN	**Leon**	1.76	314	P	Pn	21 18 06.4	+0.5
TEL3	**Telica 3**	1.82	317	P	Pn	21 18 06.2	-0.4
QUEN	**Al S del Volca**	1.84	317	⇑P	Pn	21 18 07.5	+0.8
POLN	**Al Sur del Vol**	1.85	319	P	Pn	21 18 07.6	+0.7
POLN				S	S	21 18 35.8	+0.5
LIMN	**Finca el Limon**	1.97	337	P	Pn	21 18 08.7	+0.5
LIMN				S	S	21 18 37.2	-0.5
PKGN	**Cerro Pekin**	1.98	316	P	Pn	21 18 09.5	+1.4
PKGN				S	S	21 18 39.4	+1.9
ACOS	**Acosta**	1.99	136	*e*P	Pn	21 18 09.3	+0.9
CRIN	**San Cristobal**	2.05	315	S	S	21 18 39.8	+0.8
CRIN	**San Cristobal**	2.05	315	P	Pn	21 18 09.4	+0.4
CRIN	**San Cristobal**	2.05	315	*e*P	Pn	21 18 08.9	0.0
PICV	**PH. Pirrs**	2.10	140	*e*P	Pn	21 18 10.2	+0.7
LCR2	**La Lucha 2**	2.14	134	S	S	21 18 40.4	-0.6
VTCV	**VTCV, Calle Va**	2.20	124	*e*P	Pn	21 18 12.1	+1.3
PIEC	**Cerro El Cedra**	2.26	135	*e*P	Pn	21 18 12.4	+0.9
QUEP	**Quepos**	2.27	142	S	S	21 18 43.1	0.0
RCON	**San Juan de Ri**	2.30	346	P	Pn	21 18 12.6	+0.8
RCVN	**Varillal2**	2.41	345	P	Pn	21 18 13.7	+0.7
BUS1	**Rivas**	2.46	133	*e*P	Pn	21 18 14.8	+1.0
POTN	**Potosi Cosigui**	2.58	313	P	Pn	21 18 15.2	+0.5
POTN				S	S	21 18 48.9	-0.4
SIUN	**Universidad Ur**	2.58	18	P	Pn	21 18 14.9	+0.2
CSGN	**Cosiguina Volc**	2.60	312	P	Pn	21 18 15.4	+0.4
CSGN				S	S	21 18 49.0	-0.9
CSGN	**Cosiguina Volc**	2.60	312	*e*P	Pn	21 18 15.2	+0.1
SAJE	**San Jernim**	2.77	133	*e*P	Pn	21 18 18.6	+1.5
OCHAL	**Ojochal**	2.85	138	S	S	21 18 55.3	+0.3
EDPE	**Pejibaye, P**	2.85	136	*e*P	Pn	21 18 19.9	+1.9
YUSH	**Yuscaran**	2.97	335	⇓P	Pn	21 18 20.6	+1.2
CNCH	**Conchagua**	3.00	313	*e*P	Pn	21 18 20.6	+0.9
CNCH				*e*S	S	21 18 54.2	-4.1
CNCH	**Conchagua**	3.00	313	P	Pn	21 18 19.9	+0.1
CNCH	**Conchagua**	3.00	313	S	S	21 18 58.4	+0.1
DRK0	**Durika**	3.02	130	P	Pn	21 18 21.5	+1.5
DRK0	**Durika**	3.02	130	S	S	21 18 58.4	-0.4
DRK0	**Durika**	3.02	130	*e*P	Pn	21 18 21.1	+1.0
FIMO	**Fila Mora**	3.12	135	*e*P	Pn	21 18 23.8	+2.5
TGUH	**Tegucigalpa,Un**	3.26	330	S	S	21 19 04.9	+0.9
VSM	**San Miguel**	3.42	310	*e*P	Pn	21 18 26.8	+1.8
LCY	**Lacayo**	3.43	310	*e*P	Pn	21 18 26.3	+1.3
RANC	**El Ranchito**	3.44	310	*e*P	Pn	21 18 25.8	+0.8
RANC				*e*S	S	21 19 04.3	-3.5
RANC				IAML		21 19 15.9	
	comp=Z,263nm,0.1s						
PACA	**Pacayal**	3.48	310	*e*P	Pn	21 18 26.5	+0.9
PACA	**Pacayal**	3.48	310	S	S	21 19 08.9	0.0
PACA	**Pacayal**	3.48	310	P	Pn	21 18 26.8	+1.2
PIRO	**Carate, Puerto**	3.58	142	S	S	21 19 11.0	+0.2
PIRO	**Carate, Puerto**	3.58	142	P	Pn	21 18 28.3	+1.6
PIRO	**Carate, Puerto**	3.58	142	*e*P	Pn	21 18 28.3	+1.6
TECA	**Tecapa**	3.64	308	*e*P	Pn	21 18 29.4	+1.9
TECA				*e*S	S	21 19 08.4	-4.0
BRU2	**Volcan**	3.74	130	S	S	21 19 12.2	-2.4
SCLA	**Alcaldia de Sa**	3.94	309	P	Pn	21 18 32.7	+1.5
SCLA	**Alcaldia de Sa**	3.94	309	S	S	21 19 20.5	+1.7
LOMA	**Loma Larga**	4.25	305	P	Pn	21 18 35.1	0.0
PMON	**Piamonte**	4.40	304	P	Pn	21 18 38.6	+1.5
JAYA	**Jayaque - finc**	4.48	303	P	Pn	21 18 39.2	+1.1
PRVC	**Isla de Provid**	4.63	62	P	Pn	21 18 40.1	+0.3
CEVE	**Cerro Verde**	4.72	303	S	S	21 19 37.6	+0.6
NUBE	**Las Nubes**	4.89	303	*e*P	Pn	21 18 44.9	+1.6
NUBE				*e*S	S	21 19 36.2	-4.5
NUBE	**Las Nubes**	4.89	303	P	Pn	21 18 45.1	+1.8
FAME	**Alcaldia de Sa**	5.05	301	P	Pn	21 18 46.6	+1.4
SDV	**Santo Domingo**	14.89	98	P	P	21 20 52.6	-0.3
	comp=Z,3.5nm,0.5s,baz=286,slow=7.2,SNR=6.8						
TXAR	**Lajitas Array**	24.68	319	P	P	21 22 37.5	+3.8
	comp=Z,0.8nm,0.6s,baz=134,slow=8.1,SNR=6.9						
	comp=Z,0.8nm,0.6s						
SCHQ	**Schefferville**	45.94	15	P	P	21 25 33.0	-0.7
	comp=Z,5.1nm,0.5s,baz=214,slow=9.5,SNR=13						
YKA	**Yellowknife Ar**	55.27	344	P	P	21 26 42.2	-1.0
	comp=Z,0.1nm,0.5s,baz=128,slow=8.7,SNR=6.8						
	comp=Z,0.1nm,0.5s						
ILAR	**Eielson Array**	67.86	336	P	P	21 28 06.6	-0.9
	comp=Z,0.2nm,0.6s,baz=107,slow=6.5,SNR=4.4						
	comp=Z,0.2nm,0.6s						
ASAR	**Alice Springs**	140.50	246	PKP	PKPdf	21 36 35.9	-1.5
	comp=Z,0.4nm,0.8s,baz=100,slow=2.7,SNR=3.2						
WRA	**Warramunga Arr**	140.68	252	PKP	PKPdf	21 36 38.1	+0.3
	comp=Z,0.5nm,0.8s,baz=93,slow=2.6,SNR=2.0						

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*ROM **11** 21:19:25.5±0.0, 44.°004N±0.°003×11.°303E±0.°004, h9km, ML2.4/55, Error ellipse: s-maj=0.3km s-min=0.1km az=11.0*

*GEN **11** 21:19:25.4, 43.°97N×11.°29E, h8km±2km, Ml2.0*

ISC 11 21:19:26.3±0.8**, 43.°99N**±0.°02×**11.°28E**±0.°02**, h7**km±6km**, n49, σ1.s42**/81**, 3C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCL	**Monte Cuccoli**	0.07	282	P	Pg	21 19 28.4	+0.2
MOCL				S	Sg	21 19 30.2	+0.7
MOCL				AML	AML		
	comp=E,3790µm,0.2s						
MOCL				AML	AML		
	comp=N,7170µm,0.4s						
MOCL				AML	AML		
	comp=E,3791µm,0.2s						
MOCL				AML	AML		
	comp=N,7166µm,0.4s						
SEI	**Scarperia**	0.09	40	P	Pg	21 19 27.8	-0.5
SEI				S	Sg	21 19 29.3	-0.4
SEI	**Scarperia**	0.09	40	P	Pg	21 19 27.8	-0.5
SEI				S	Sg	21 19 29.3	-0.5
SEI				AML	AML		
	comp=E,29250µm,0.3s						
SEI				AML	AML		
	comp=E,29214µm,0.3s						
SEI				AML	AML		
	comp=N,43039µm,0.3s						
SEI				AML	AML		
	comp=N,43050µm,0.3s						
MPPT	**Montemurlo**	0.14	257	⇑P	Pg	21 19 29.7	+0.5
MPPT				S	Sg	21 19 32.5	+1.2
MPPT				AML	AML		
	comp=N,2470µm,1.5s						
MPPT				AML	AML		
	comp=E,1798µm,0.2s						
MPPT				AML	AML		
	comp=N,2034µm,0.5s						
MPPT				AML	AML		
	comp=E,1925µm,1.2s						
MPPT				AML	AML		
	comp=N,2470µm,0.5s						
FIE	**Fiesole**	0.18	177	P	Pg	21 19 30.3	+0.3
FIE				S	Sg	21 19 33.8	+1.4
FNVD	**Fontana Vidola**	0.21	328	⇑P	Pg	21 19 30.4	-0.2
FNVD				S	Sg	21 19 33.7	+0.3
FNVD				AML	AML		
	comp=N,1800µm,0.8s						
FNVD				AML	AML		
	comp=E,1623µm,0.4s						
FNVD				AML	AML		
	comp=N,1646µm,0.3s						
FNVD				AML	AML		
	comp=E,1625µm,0.4s						
FNVD				AML	AML		
	comp=N,1800µm,1.2s						
FIR	**Firenze**	0.22	185	P	Pg	21 19 31.1	+0.6
FIR				S	Sg	21 19 35.2	+1.8
FIR				AML	AML		
	comp=E,3175µm,0.6s						
FIR				AML	AML		
	comp=N,3570µm,0.2s						
FIR				AML	AML		
	comp=E,3175µm,0.6s						
FIR				AML	AML		
	comp=N,3570µm,0.2s						
FIR				AML	AML		
	comp=E,3115µm,0.5s						
FIR				AML	AML		
	comp=E,2834µm,0.2s						
FIR				AML	AML		
	comp=N,3506µm,0.2s						
FIR				AML	AML		
	comp=E,2892µm,0.2s						
FIR				AML	AML		
	comp=N,3571µm,0.2s						
FIR				AML	AML		
	comp=N,3510µm,0.2s						
RUFI	**Rufina**	0.22	132	P	Pg	21 19 30.8	0.0
RUFI				S	Sg	21 19 34.3	+0.6
RUFI	**Rufina**	0.22	132	P	Pg	21 19 30.7	0.0
RUFI				S	Sg	21 19 34.2	+0.5
RUFI				AML	AML		
	comp=E,834µm,0.6s						
RUFI				AML	AML		
	comp=N,636µm,1.5s						
RUFI				AML	AML		
	comp=E,555µm,0.5s						
RUFI				AML	AML		
	comp=N,580µm,0.3s						
RUFI				AML	AML		
	comp=N,636µm,0.5s						
VISG	**Visignano**	0.23	29	⇑P	Pg	21 19 30.4	-0.4
VISG				S	Sg	21 19 34.1	+0.2
VISG				AML	AML		
	comp=E,1629µm,0.4s						
VISG				AML	AML		
	comp=N,2833µm,0.2s						
VISG				AML	AML		
	comp=N,2835µm,0.2s						
VISG				AML	AML		
	comp=E,1625µm,0.4s						
BRIS	**BRISIGHELLA**	0.23	46	P	Pg	21 19 33.9	+3.1
BRIS				S	Sg	21 19 40.6	+6.6
BRIS				AML	AML		
	comp=E,800µm,0.3s						
BRIS				AML	AML		
	comp=N,1240µm,0.3s						
BRIS				AML	AML		
	comp=E,801µm,0.3s						
BRIS				AML	AML		
	comp=N,1237µm,0.3s						
BRIS				AML	AML		
	comp=E,801µm,0.3s						
LMD	**Lutirano**	0.32	74	P	Pg	21 19 31.8	-0.8
LMD				S	Sg	21 19 36.9	+0.1
LMD	**Lutirano**	0.32	74	P	Pg	21 19 31.8	-0.8
LMD				S	Sg	21 19 37.0	+0.1
LMD				AML	AML		
	comp=N,1174µm,0.2s						
LMD				AML	AML		
	comp=E,784µm,0.3s						
LMD				AML	AML		
	comp=N,1175µm,0.2s						
LMD				AML	AML		
	comp=E,886µm,1.4s						
POPM	**Popiglio**	0.38	279	P	Pg	21 19 33.7	0.0
POPM				S	Sb	21 19 40.3	-1.3
POPM	**Popiglio**	0.38	279	P	Pg	21 19 33.6	-0.1
POPM				S	Sb	21 19 40.1	-1.5
POPM				AML	AML		
	comp=N,1023µm,0.3s						
POPM				AML	AML		
	comp=E,646µm,0.1s						
POPM				AML	AML		
	comp=N,1023µm,0.3s						
POPM				AML	AML		
	comp=E,708µm,1.2s						
MTRZ	**Monterenzio**	0.41	19	P	Pg	21 19 33.1	-1.1

MTRZ				S	Sg	21 19 39.6	0.0
MTRZ	Monterenzio	0.41	19	P	Pg	21 19 33.1	-1.2
MTRZ				AML	AML		
	comp=E,826µm,1.4s						
MTRZ				AML	AML		
	comp=N,887µm,0.5s						
MTRZ				AML	AML		
	comp=N,866µm,0.5s						
MTRZ				AML	AML		
	comp=E,792µm,0.5s						
MTRZ				AML	AML		
	comp=N,889µm,0.5s						
MTRZ				AML	AML		
	comp=E,844µm,0.4s						
MTRZ				AML	AML		
	comp=N,866µm,0.5s						
MTRZ				AML	AML		
	comp=E,826µm,0.6s						
MTRZ				AML	AML		
	comp=E,845µm,0.4s						
ASQU	Asqua	0.42	117	P	Pg	21 19 34.0	-0.4
ASQU				S	Sb	21 19 40.7	-1.9
ASQU	Asqua	0.42	117	P	Pg	21 19 33.9	-0.4
ASQU				S	Sb	21 19 40.6	-2.0
ASQU				AML	AML		
	comp=E,300µm,1.0s						
ASQU				AML	AML		
	comp=N,342µm,1.0s						
ASQU				AML	AML		
	comp=E,270µm,0.4s						
ASQU				AML	AML		
	comp=N,332µm,0.5s						
ASQU				AML	AML		
	comp=E,300µm,1.0s						
ASQU				AML	AML		
	comp=N,342µm,1.0s						
SFI	Santa Sofia	0.42	102	P	Pg	21 19 33.8	-0.6
SFI				S	Sg	21 19 40.2	+0.4
SFI				AML	AML		
	comp=E,424µm,0.8s						
SFI				AML	AML		
	comp=N,447µm,0.4s						
SFI				AML	AML		
	comp=E,338µm,0.2s						
SFI				AML	AML		
	comp=N,340µm,0.1s						
SFI				AML	AML		
	comp=E,331µm,0.1s						
SFI				AML	AML		
	comp=N,324µm,0.1s						
SFI				AML	AML		
	comp=N,471µm,0.4s						
SFI				AML	AML		
	comp=E,400µm,0.9s						
ZCCA	Zocca	0.42	329	P	Pb	21 19 35.3	-0.8
ZCCA	Zocca	0.42	329	P	Pg	21 19 34.8	+0.3
OSSC	Osservatorio P	0.47	183	P	Pb	21 19 35.4	-1.5
OSSC				S	Sb	21 19 43.3	-0.7
OSSC	Osservatorio P	0.47	183	P	Pg	21 19 35.3	0.0
OSSC				S	Sb	21 19 42.8	-1.2
OSSC				AML	AML		
	comp=E,610µm,0.2s						
OSSC				AML	AML		
	comp=N,818µm,0.2s						
OSSC				AML	AML		
	comp=E,790µm,0.2s						
OSSC				AML	AML		
	comp=E,789µm,0.2s						
OSSC				AML	AML		
	comp=N,630µm,0.2s						
OSSC				AML	AML		
	comp=E,610µm,0.2s						
OSSC				AML	AML		
	comp=N,818µm,0.2s						
OSSC				AML	AML		
	comp=N,818µm,1.8s						
OSSC				AML	AML		
	comp=E,790µm,1.8s						
OSSC				AML	AML		
	comp=N,630µm,0.2s						
IMOL	Imola, Italy	0.50	42	P	Pb	21 19 36.6	-0.8
IMOL				S	Sb	21 19 46.0	+1.2
IMOL	Imola, Italy	0.50	42	P	Pg	21 19 35.5	-0.3
IMOL				AML	AML		
	comp=E,629µm,0.6s						
IMOL				AML	AML		
	comp=N,581µm,0.3s						
BDI	Bagni Di Lucca	0.50	279	P	Pg	21 19 35.7	-0.2
BDI				S	Sb	21 19 43.6	-1.3
BDI	Bagni Di Lucca	0.50	279	P	Pg	21 19 35.6	-0.3
BDI				S	Sb	21 19 43.3	-1.7
BDI				AML	AML		
	comp=E,446µm,0.9s						
BDI				AML	AML		
	comp=N,616µm,0.5s						
BDI				AML	AML		
	comp=N,610µm,1.3s						
BDI				AML	AML		
	comp=E,467µm,0.5s						
BDI				AML	AML		
	comp=N,590µm,0.4s						
BDI				AML	AML		
	comp=E,431µm,0.7s						
BDI				AML	AML		
	comp=N,616µm,0.5s						
BDI				AML	AML		
	comp=N,610µm,0.7s						
BDI				AML	AML		
	comp=E,467µm,0.5s						
CSNT	Castellina Chi	0.52	179	P	Pg	21 19 36.1	-0.1
CSNT				S	Sb	21 19 44.5	-1.0
CSNT	Castellina Chi	0.52	179	P	Pg	21 19 36.2	-0.1
CSNT				S	Sb	21 19 43.7	-1.7
CSNT				AML	AML		
	comp=E,522µm,1.6s						
CSNT				AML	AML		
	comp=N,642µm,0.6s						
CSNT				AML	AML		
	comp=E,471µm,0.2s						
CSNT				AML	AML		
	comp=N,643µm,0.6s						
CSNT				AML	AML		
	comp=E,522µm,0.4s						
MAIM	Mastiano	0.57	263	P	Pb	21 19 37.4	-1.3
MAIM				S	Sb	21 19 45.7	-1.4
CARD	Cardoso	0.58	274	P	Pg	21 19 37.0	-0.4
CARD				S	Sb	21 19 46.0	-1.2
PII	Pisa	0.61	244	P	Pg	21 19 37.9	-0.1
PII				S	Sb	21 19 47.2	-0.8
PII	Pisa	0.61	244	P	Pg	21 19 37.8	-0.2
PII				AML	AML		
	comp=E,499µm,1.3s						
PII				AML	AML		
	comp=N,480µm,1.1s						
PII				AML	AML		
	comp=E,474µm,0.4s						
PII				AML	AML		
	comp=N,465µm,0.3s						
PII				AML	AML		
	comp=E,499µm,0.7s						
CRE	Caprese Michel	0.61	127	P	Pg	21 19 37.7	-0.3
CRE				AML	AML		
	comp=E,240µm,1.1s						
CRE				AML	AML		
	comp=E,219µm,0.2s						
CRE				AML	AML		
	comp=N,299µm,0.3s						
CRE				AML	AML		
	comp=N,298µm,0.3s						
CRE				AML	AML		
	comp=E,240µm,0.9s						
GSCL	Gusciola	0.61	306	P	Pg	21 19 38.2	+0.1
GSCL				S	Sb	21 19 48.0	-0.3
GSCL	Gusciola	0.61	306	P	Pg	21 19 38.1	-0.1
GSCL				AML	AML		
	comp=E,320µm,0.3s						
GSCL				AML	AML		
	comp=N,368µm,0.3s						
GSCL				AML	AML		
	comp=E,321µm,0.3s						
GSCL				AML	AML		
	comp=N,368µm,0.3s						
SARO	Sassorosso	0.66	287	P	Pg	21 19 38.9	-0.1
SARO				S	Sb	21 19 49.3	-0.5
VLC	Villacollemand	0.67	285	P	Pb	21 19 40.3	0.0
VLC				S	Sb	21 19 49.2	-0.5
SSP9	Sansepolcro	0.74	124	P	Pg	21 19 39.9	-0.7
SSP9				AML	AML		
	comp=E,122µm,2.1s						
SSP9				AML	AML		
	comp=N,137µm,0.7s						
ATMI	Monte Miggiano	0.97	132	AML	AML		
	comp=E,180µm,0.5s						
ATMI				AML	AML		
	comp=N,255µm,0.6s						
ATMI				AML	AML		
	comp=N,255µm,1.4s						
GRAM	Graiana	1.01	300	P	Pg	21 19 44.9	-0.7
GRAM				AML	AML		
	comp=E,338µm,0.3s						
GRAM				AML	AML		
	comp=E,338µm,0.3s						
GRAM				AML	AML		
	comp=N,171µm,0.4s						
GRAM				AML	AML		
	comp=E,338µm,1.7s						
GRAM				AML	AML		
	comp=N,172µm,0.4s						
ABTA	Abfaltersbach	2.89	17	*e*Pn	Pn	21 20 14.5	+1.6
	comp=N,1.3nm,0.4s						
ABTA				*e*Sn	Sn	21 20 49.2	+1.2
	comp=N,1.9nm,0.6s						
FETA	Feichten	3.06	353	*i* Pn	Pb	21 20 18.5	-2.6
	comp=N,0.9nm,0.4s						
SQTA	Sankt Quirin	3.23	359	*i* Pn	Pb	21 20 20.7	-3.4
	comp=N,3.9nm,0.2s						
WTTA	Wattenberg	3.28	4	*i* Pn	Pb	21 20 22.2	-2.8
	comp=N,1.2nm,0.2s						
WATA	Walderalm	3.35	3	*e*Pn	Pb	21 20 22.2	-4.0
	comp=N,2.7nm,0.3s						
KBA	Koelnbreinsper	3.41	24	*e*Pn	Pb	21 20 28.5	+1.3
	comp=N,0.8nm,0.3s						
LESA	Schwarzleotal	3.57	15	*e*Pn	Pn	21 20 24.6	+2.4
	comp=N,0.7nm,0.3s						

ROM 11 21:20:17.4±0.1, 44°.011N±0°.004×11°.302E±0°.004, h11^{km}, ML0.8/6, Error ellipse: s-maj=0.4km s-min=0.3km az=187.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEI	Scarperia	0.06	42	P	Pg	21 20 19.8	+0.2
SEI				S	Sg	21 20 21.4	+0.1
SEI				AML	AML		
	comp=E,136µm,0.5s						
SEI				AML	AML		
	comp=N,200µm,0.4s						
SEI				AML	AML		
	comp=E,136µm,1.6s						
MOCL	Monte Cuccoli	0.09	266	P	Pg	21 20 20.4	+0.4
MOCL				S	Sg	21 20 22.3	+0.5
MOCL				AML	AML		
	comp=N,68µm,0.1s						
MOCL				AML	AML		
	comp=E,46µm,0.1s						
MPPT	Montemurlo	0.16	251	P	Pg	21 20 21.6	+0.6
MPPT				S	Sg	21 20 24.6	+1.0
VISG	Visignano	0.20	28	P	Pb	21 20 22.5	-0.7
VISG				S	Sg	21 20 25.9	+1.3
VISG				AML	AML		
	comp=E,25µm,0.2s						
VISG				AML	AML		
	comp=N,41µm,0.2s						
FNVD	Fontana Vidola	0.20	321	P	Pg	21 20 22.4	+0.6
FNVD				S	Sg	21 20 25.8	+1.1
RUFI	Rufina	0.23	139	P	Pg	21 20 22.8	+0.6
RUFI				S	Sg	21 20 26.5	+1.2

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*IDC **11** 21:59:37.7±1.4, 6°.34S×130°.90E, h0^{km}, mb3.9/5, mbtmp3.9/7, ML4.4/3, Error ellipse: s-maj=54.5km s-min=24.2km az=77.0*

*DJA **11** 21:59:50.6±0.2, 7°S±2°×13°1E±°, h110^{km}±4^{km}, M4.6/21, mb4.3/21, mB5.3/5, MLv4.7/19, Mw(mB)4.7/5*

ISC 11 21:59:50.0±0.7, 6°.57S±0°.05×130°.50E±0°.07, h100^{km}, n31, σ1^{s}.75/32, mb3.9/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.61	151	P	Pn	22 00 19.4	+1.7
SAUI				S	Sn	22 00 39.3	+0.6
BNDI	Bandanaira	2.12	344	P	Pn	22 00 25.4	+1.2
BNDI				S	Sn	22 00 50.3	+0.1
MSAI	Masohi	3.56	334	P	Pn	22 00 46.5	+3.1
AAI	Ambon	3.67	321	P	Pn	22 00 45.7	+0.9
KRAI	Karang Ratu	3.85	327	P	Pn	22 00 49.2	+2.0
FAKI	Fak Fak	4.02	26	P	Pn	22 00 47.4	-2.2
KMPI	Kaimana, Papua	4.30	48	P	Pn	22 00 52.4	-0.9
NLAI	Namlea	4.74	314	P	Pn	22 01 01.3	+2.1
SWI	Sorong	5.72	8	P	Pn	22 01 10.2	-2.4
RKPI	Ransiki, Papua	6.22	36	P	Pn	22 01 18.3	-1.1
SANI	Sanana	6.36	315	P	Pn	22 01 23.8	+2.6
MWPI	Manokwari, Pap	6.62	32	P	Pn	22 01 24.4	-0.4
	0.8nm88nm,0.8s						
SOEI	Soe	6.93	242	P	Pn	22 01 31.5	+2.3
	0.5nm40nm,0.6s						
BATI	Baumata	7.67	241	Pn	Pn	22 01 40.5	+1.4
	9.8nm,0.3s,baz=143,slow=3.3,SNR=8.9						
BATI				Sn	Sn	22 03 00.8	-3.6
	5.4nm,0.3s,baz=119,slow=2.0,SNR=3.6						
BATI	Baumata	7.67	241	P	Pn	22 01 40.5	+1.4
	0.4nm24nm,0.4s						
BAKI	Biak	7.74	47	P	Pn	22 01 40.8	+0.8
EDFI	Ende, Flores	9.00	256	P	Pn	22 02 00.2	+3.0
WSI	Waingapu	10.56	252	P	Pn	22 02 19.6	+1.2
	31nm,0.8s						
WBSI	Waikabubak, Su	11.41	254	P	Pn	22 02 30.5	+0.5
	12nm,0.7s						
FITZ	Fitzroy Crossi	12.40	202	Pn	Pn	22 02 39.3	-3.7
	6.7nm,0.3s,baz=32,slow=11,SNR=50						
FITZ				Sn	Sn	22 04 45.4	-14
	3.4nm,0.3s,baz=149,slow=20,SNR=8.1						
WRA	Warramunga Arr	13.80	165	Pn	Pn	22 02 57.1	-4.4
	1.0nm,0.3s,baz=352,slow=14,SNR=36						
WRA				Sn	Sn	22 05 18.9	-15
	4.0nm,0.3s,baz=338,slow=22,SNR=15						
	3.0nm,0.5s						
KLNI	Mataram	14.40	262	P	Pn	22 03 11.6	+2.4
	11nm,1.1s						
ASAR	Alice Springs	17.31	169	P	P	22 03 44.2	-1.2
	0.7nm,0.3s,baz=344,slow=9.9,SNR=29						
ASAR				S	Sn	22 06 45.6	-13
	4.3nm,0.8s,baz=355,slow=27,SNR=8.2						
	1.3nm,0.4s						
KKM	Kota Kinabalu	18.98	311	P	P	22 04 04.5	+0.6
	25nm,1.2s						
BBJI	Bungbulang	22.70	266	P	P	22 04 43.5	-0.1
	14nm,1.0s						
CNJI	Cibinong	23.21	267	P	P	22 04 48.4	-0.1
	29nm,1.2s						
CMAR	Chiang Mai Arr	39.84	309	P	P	22 07 14.7	+0.6
	1.1nm,0.3s,baz=126,slow=8.9,SNR=7.6						
	1.1nm,0.3s						
SONM	Songino Array	58.20	341	P	P	22 09 34.4	+0.7
	0.3nm,0.5s,baz=145,slow=5.3,SNR=2.3						
	0.3nm,0.5s						
MKAR	Makanchi Array	68.14	326	P	P	22 10 39.9	+0.5
	0.8nm,0.5s,baz=116,slow=7.5,SNR=28						
	0.8nm,0.5s						
KURBB	Kurchatov Arra	72.41	328	P	P	22 11 05.2	-0.1
	0.4nm,0.4s,baz=126,slow=5.1,SNR=5.0						
	0.4nm,0.4s						
ILAR	Eielson Array	92.75	25	P	P	22 12 49.0	-1.8
	0.3nm,0.6s,baz=274,slow=4.2,SNR=4.6						
	0.3nm,0.6s						

GCG 11 22:16:28.6±1.0, 13°.66N×91°.01W, h34^{km}±31^{km}, MD3.8, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESSG	Sabana Grande	0.74	13	*e*P	Pb	22 16 43.0	-0.2
ESSG				*e*S	Sb	22 16 53.4	+0.2
FG16	Alotenango, Sa	0.78	38	*e*P	Pb	22 16 44.4	+0.4
STG2	El Palmar, Qui	0.85	335	*e*P	Pb	22 16 49.6	+4.4
STG8	El Palmar, Qui	0.85	337	*e*P	Pb	22 16 49.6	+4.3
NUBE	Las Nubes	1.22	78	*e*P	Pn	22 16 49.3	-0.1
APG	El Apazote	1.44	21	*e*P	Pn	22 16 53.7	+1.1

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*IDC **11** 22:16:58.8±1.8, 45°.72N×106°.64W, h0^{km}, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=70.9km s-min=9.8km az=134.0*

*NEIC **11** 22:16:58.6±2.3, 45°.83N±0°.04×106°.70W±0°.08, h0^{km}±1^{km}, ML2.7/26, Error ellipse: s-maj=10.1km s-min=6.2km az=293.0*

ISC 11 22:16:55.8±1.1, 45°.72N±0°.07×106°.56W±0°.05, h0^{km}, n20, σ2^{s}.06/20, Montana

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAO	LASA Array	0.99	14		Pn	22 17 16.9	-0.2
RLMT	Red Lodge	2.00	253	Pn	Pg	22 17 34.1	+0.1
RSSD	Black Hills	2.41	131		Pg	22 17 41.9	0.0
YMP	Mirror Lake Pl	2.72	250		Pb	22 17 43.4	-2.1
YNR	Norris Junctio	3.08	252	Pn	Pb	22 17 49.8	-1.8
YNR				IAML		22 18 53.1	
	comp=N,22nm,3.8s						
YNR				IAML		22 19 36.8	
	comp=E,19nm,4.3s						
YHH	Holmes Hill	3.17	254		Pb	22 17 50.7	-2.4
EGMT	Eagleton	3.17	318		Pn	22 17 48.5	+1.4
YMR	Madison River	3.29	253		Pn	22 17 51.3	+2.5
YHL	Hebgen Lake	3.38	257		Pn	22 17 52.2	+2.2
YHL				IAML		22 18 56.5	
	comp=E,21nm,1.2s						
YHL				IAML		22 19 14.7	
	comp=N,25nm,4.9s						
BOZ	Bozeman (W)	3.56	270		Pn	22 17 55.4	+3.0
BOZ				IAML		22 19 18.9	
	comp=N,13nm,4.9s						
LOHW	Long Hollow	3.57	235		Pb	22 17 57.5	-2.4
LOHW				IAML		22 18 33.0	
	comp=N,14nm,4.8s						
LOHW				IAML		22 19 00.6	
	comp=N,17nm,4.0s						
MOOW	Moose Ponds	3.58	238		Pb	22 17 56.8	-3.2
MOOW				IAML		22 18 36.5	
	comp=N,11nm,4.6s						
BW06	Boulder Array	3.66	217		Pb	22 17 59.4	-2.0
BW06				IAML		22 19 13.6	
	comp=N,13nm,4.8s						
BW06				IAML		22 19 20.0	
	comp=N,12nm,4.8s						
PD31	Pinedale Array	3.66	217		Pb	22 17 59.4	-2.0
PDAR	Pinedale Array	3.66	217	Pn	Pb	22 17 59.5	-1.9
	comp=N,0.3nm,0.3s,baz=27,slow=13,SNR=14						
PDAR				Pg	Pg	22 18 06.8	+1.0
	comp=N,1.1nm,0.3s,baz=35,slow=17,SNR=20						
PDAR				Lg	Lg	22 18 50.5	
	comp=N,1.1nm,0.3s,baz=38,slow=32,SNR=9.0						
	comp=N,0.3nm,0.3s						
PDAR	Pinedale Array	3.66	217		Pb	22 17 59.8	-1.6
FXWY	Fox Creek	3.81	238		Pb	22 18 02.6	-1.3
FXWY				IAML		22 18 42.5	
	comp=N,18nm,4.8s						
FXWY				IAML		22 20 10.6	
	comp=N,13nm,4.4s						
LRM	Limekiln Ridge	4.12	273	Pn	Pn	22 18 01.4	+1.2
I10CA	LAC DU BONNET	8.37	54	I	I	23 10 00.0	
	baz=239,slow=262,SNR=3.1						
ULM	Lac du Bonnet	8.48	54	Pn	Pn	22 19 01.1	+1.4
	comp=N,0.2nm,0.3s,baz=242,slow=15,SNR=1.2						
ULM				Lg	Lg	22 21 22.2	
	comp=N,0.1nm,0.3s,baz=148,slow=18,SNR=1.6						
	comp=N,1.2nm,0.4s						

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*IDC **11** 22:21:32.0±2.6, 8°.11S×111°.76E, h0^{km}, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=153.9km s-min=26.8km az=51.0*

*DJA **11** 22:21:45.7±0.3, 9°S±6°×11°2E±°, h65^{km}±8^{km}, M3.6/19, mb3.6/3, MLv3.6/19*

ISC 11 22:21:44.8±0.9, 8°.41S±0°.09×111°.87E±0°.06, h110^{km}, n28, σ1^{s}.41/31, mb3.3/4, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNJI	Sawahan-Nganju	0.64	350	P	Pn	22 22 02.1	-0.8
SNJI				S	Sn	22 22 15.0	-1.4
SJI	Sawahan	0.68	351	P	Pn	22 22 01.9	-1.2
SJI				S	Sn	22 22 15.3	-1.6
PCJI	Pacitan	0.72	287	P	Pn	22 22 02.0	-1.3
PCJI				S	Sn	22 22 14.6	-2.7
NGJI	Ngawi	1.11	339	P	Pn	22 22 08.6	+1.4
UGM	Wanagama	1.42	290	P	Pn	22 22 10.6	-0.1
GMJI	Gumukmas	1.56	85	P	Pn	22 22 11.5	-0.9
TBJI	Tambak Boyo	1.58	359	P	Pn	22 22 13.4	+0.7
GRJI	Gresik	1.60	22	P	Pn	22 22 13.1	+0.2
YOGI	Yogyakarta	1.67	291	P	Pn	22 22 13.4	-0.3
BLJI	Banyuglugur	1.83	69	P	Pn	22 22 15.3	-0.4
SMRI	Semarang	1.96	314	P	Pn	22 22 18.3	+1.0
JAGI	Jajag, Banyuwa	2.26	92	P	Pn	22 22 20.1	-1.0
ABJI	Asem Bagus	2.42	76	P	Pn	22 22 23.6	+0.4
KMMI	Kalianget	2.48	57	P	Pn	22 22 23.4	-0.6
CTJI	Waduk Cacaban	3.01	297	P	Pn	22 22 31.3	+0.4
RTBI	Rangdo, Negare	3.04	91	P	Pn	22 22 31.0	-0.4
KPJI	Karang Pucung	3.10	290	P	Pn	22 22 33.9	+1.7
KLNI	Mataram	4.18	90	P	Pn	22 22 47.0	+0.4
BBJI	Bungbulang	4.29	282	P	Pn	22 22 49.5	+1.4
CNJI	Cibinong	4.82	283	P	Pn	22 22 57.6	+2.3
TWSI	Taliwang, Sumb	4.97	94	P	Pn	22 22 56.4	-0.8
PLAI	Plampang	5.86	94	P	Pn	22 23 11.5	+2.3
	12nm,0.9s						
DBNI	Kabupaten Domp	6.37	91	P	Pn	22 23 17.4	+1.1
	4.4nm,1.1s						
EDFI	Ende, Flores	9.72	93	P	Pn	22 23 59.5	-2.3
WRA	Warramunga Arr	24.58	120	P	P	22 26 56.1	+1.3
	0.6nm,0.8s,baz=295,slow=11,SNR=7.8						
	0.6nm,0.8s						
ASAR	Alice Springs	25.99	128	P	P	22 27 10.0	+2.4
	0.7nm,0.5s,baz=304,slow=9.2,SNR=10						
	0.7nm,0.5s						
STKA	Stephens Creek	36.16	134	P	P	22 28 38.0	+1.2
	1.3nm,0.4s,baz=308,slow=9.8,SNR=4.5						
	1.3nm,0.4s						
MKAR	Makanchi Array	60.95	337	P	P	22 31 44.8	-1.5
	0.1nm,0.4s,baz=161,slow=7.8,SNR=4.1						
	0.1nm,0.4s						

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*IDC **11** 22:33:10.8±5.9, 37°.40N×71°.07E, h73^{km}±48^{km}, mb3.7/7, mbtmp4.0/12, ML3.6/5, Error ellipse: s-maj=44.7km s-min=28.7km az=173.0*

*NNC **11** 22:33:13.7±3.6, 37°.56N×71°.02E, h126^{km}±49^{km}, mb3.3, mpv4.1, Error ellipse: s-maj=31.2km s-min=22.4km az=8.0*

ISC 11 22:33:11.4±1.3, 37°.5N±0°.1×70°.82E±0°.10, h68^{km}, n27, σ1^{s}.95/31, mb3.9/6, 1C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UCH	Uchtor	5.49	30	P	Pn	22 34 32.0	+1.1
	SNR=21						
KK31	Karatay Array	5.58	358	⇓P	Pn	22 34 34.2	+2.4
	27nm,0.5s,baz=177,slow=12,SNR=482						
KK31				⇑S	Sn	22 35 36.8	+2.4
	6.7nm,0.5s,baz=176,slow=12,SNR=3.8						
EKS2	Erkin-Say	5.61	23	P	Pn	22 34 34.1	+1.8
	SNR=22						
AAK	Ala-Archa	5.83	28	P	Pn	22 34 37.0	+1.7
	SNR=28						
AAK	Ala-Archa	5.83	28	P	Pn	22 34 37.0	+1.7
	4.8nm,0.3s,baz=189,slow=5.8,SNR=66						
AAK				S	Sn	22 35 41.2	+0.4
	19nm,0.7s,baz=345,slow=20,SNR=15						
	12nm,0.4s						
AAK	Ala-Archa	5.83	28	⇓P	Pn	22 34 36.6	+1.2
	3.8nm,0.5s						
AAK				⇓S	Sn	22 35 42.1	+1.3
	16nm,0.6s						
KBK	Karagaybulak	6.02	30	P	Pn	22 34 40.1	+2.1
	SNR=15						
CHMS	Chumysh	6.24	28	P	Pn	22 34 42.2	+1.5
	SNR=6.1						
ULHL	Ulahol	6.29	40	P	Pn	22 34 43.0	+1.3
	SNR=8.6						
USP	Ospenovka	6.38	25	P	Pn	22 34 43.9	+1.1
	SNR=102						
TKM2	Tokmak 2	6.51	33	P	Pn	22 34 46.4	+1.7
	SNR=26						
MK31	Makanchi Array	12.56	39	P	Pn	22 36 05.2	-1.9
	3.6nm,0.7s,baz=215,slow=13,SNR=25						
MKAR	Makanchi Array	12.56	39	P	Pn	22 36 05.9	-1.2

	0.2nm,0.3s,baz=224,slow=14,SNR=34						
	3.0nm,0.7s						
AB31	**Akbulak array**	**14.12**	**330**	⇓P	**Pn**	**22 36 27.0**	**-1.0**
	1.0nm,0.5s,baz=138,slow=13,SNR=51						
KURBB	**Kurchatov Arra**	**14.20**	**20**	P	**Pn**	**22 36 26.2**	**-2.8**
	1.5nm,0.4s,baz=217,slow=17,SNR=1.4						
BVA0	**Borovoye Array**	**15.50**	**359**	P	**Pn**	**22 36 45.4**	**-0.3**
	0.2nm,0.8s,baz=175,slow=9.3,SNR=7.9						
BVAR	**Borovoye Array**	**15.50**	**359**	P	**Pn**	**22 36 45.3**	**-0.4**
	0.1nm,0.3s,baz=168,slow=10,SNR=10						
	2.1nm,0.6s						
AKTO	**Aktyubinsk**	**15.83**	**329**	P	**Pn**	**22 36 49.8**	**-0.1**
	1.1nm,0.3s,baz=140,slow=14,SNR=14						
AKTO				S	**Sn**	**22 39 37.7**	**-6.6**
	0.6nm,0.3s,baz=63,slow=4.5,SNR=1.3						
	1.3nm,0.3s						
AKTO	**Aktyubinsk**	**15.83**	**329**	⇓P	**P**	**22 36 52.7**	**+0.3**
	4.9nm,0.7s						
ZALV	**Zalesovo Beam**	**19.05**	**26**	P	**P**	**22 37 26.6**	**-1.3**
	0.4nm,0.3s,baz=214,slow=11,SNR=17						
	2.6nm,0.5s						
SONM	**Songino Array**	**27.88**	**57**	P	**P**	**22 38 53.0**	**-1.8**
	0.2nm,0.4s,baz=270,slow=9.7,SNR=2.6						
	0.2nm,0.4s						
FINES	**FINESS Array B**	**36.56**	**325**	P	**P**	**22 40 11.1**	**+0.9**
	7.0nm,1.1s,baz=124,slow=12,SNR=3.6						
	7.0nm,1.1s						
ARCES	**ARCESS Array B**	**40.14**	**337**	P	**P**	**22 40 40.4**	**+0.1**
	2.6nm,1.0s,baz=117,slow=8.7,SNR=1.0						
	2.6nm,1.0s						
HFS	**Hagfors**	**42.18**	**321**	P	**P**	**22 40 58.3**	**+1.3**
	1.3nm,0.4s,baz=104,slow=11,SNR=8.5						
	1.3nm,0.4s						
NOA	**NORSAR Array B**	**43.48**	**322**	P	**P**	**22 41 08.7**	**+1.1**
	0.3nm,0.5s,baz=96,slow=7.9,SNR=1.1						
	0.3nm,0.5s						
ESDC	**Sonseca Array**	**56.86**	**297**	P	**P**	**22 42 49.9**	**+0.9**
	0.9nm,1.1s,baz=71,slow=7.2,SNR=4.7						
	0.9nm,1.1s						
TORD	**Torodi Ar. Bea**	**65.61**	**268**	P	**P**	**22 43 47.7**	**-0.8**
	1.7nm,0.3s,baz=40,slow=8.9,SNR=2.9						
	1.7nm,0.3s						

NNC 11 23:18:59.8±5.5**,38°.65N**×**73°.30E,h0^{km},mb3.6,mpv3.2, 2C-3D,Error ellipse: s-maj=43.7km s-min=35.2km az=166.0,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**4.09**	**12**	⇓P	Pn	23 20 03.3	-0.4
	0.8nm,0.5s						
AAK				⇓S	Sn	23 20 53.4	+1.1
	7.9nm,1.1s						
KK31	**Karatay Array**	**4.93**	**336**	⇓P	Pn	23 20 16.6	+1.5
	3.3nm,0.2s,baz=37,slow=40,SNR=60						
KK31				⇑S	Sn	23 21 13.8	+1.0
	4.3nm,0.4s,baz=157,slow=24,SNR=6.3						
AB31	**Akbulak array**	**14.29**	**322**	⇑P	Pn	23 22 19.7	-3.6
	0.6nm,0.5s,baz=129,slow=13,SNR=18						

IDC ***11*** *23:38:33.9±0.5,30°.70N×142°.01E,h0^{km},mb4.4/22, mbtmp4.4/25,ML3.8/3,MS3.8/28,Error ellipse: s-maj=18.6km s-min=13.7km az=61.0*

NIED ***11*** *23:38:34.4,30°.78N×142°.10E,h19^{km},MW4.4,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.03; M$_{\theta\theta}$1.18; M$_{\phi\phi}$-3.22; M$_{r\theta}$2.97; M$_{\theta\phi}$-1.28; M$_{\phi r}$3.01; Fault plane solution: M$_{0}$5.21000×10^{15} NP1: ϕ_{s}161.00000°,δ27.00000°,λ32.00000°. NP2:ϕ_{s}42.00000°, δ76.00000°,λ113.00000°.*

JMA ***11*** *23:38:34.4±0.2,30°.8N±0°.8×14°2E±°,h19^{km},MV4.9/31, NEAR TORISHIMA IS*

MOS ***11*** *23:38:35.0±0.9,30°.68N×141°.93E,h12^{km},mb4.8/39,Error ellipse: s-maj=11.8km s-min=5.9km az=120.1*

NEIC ***11*** *23:38:36.0±1.1,30°.75N±0°.06×141°.9E±0°.1,h10^{km}±1^{km}, mb4.9/92,Error ellipse: s-maj=15.5km s-min=9.4km az=249.0*

ISC 11 23:38:37.4±0.3**,30°.77N**±0°.04×**142°.02E**±0°.05**,h24^{km},n436,** $\sigma 1^{s}$**49**/424**,mb4.7**/95**,MS3.9**/29**,10C-2D,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.00**	**322**	Pn	**Pn**	**23 39 21.8**	**-1.7**
JHJ	**Hachijo jima 2**	**3.02**	**322**	Pn	**Pn**	**23 39 21.6**	**-2.1**
	38nm,0.3s,baz=238,slow=24,SNR=5.8						
JHJ				Sn	**Sn**	**23 39 54.7**	**-4.5**
	109nm,0.3s,baz=71,slow=21,SNR=6.1						
JHJ				LR	LR	23 40 38.6	
	comp=Z,1µm,18.1s,baz=104,slow=41						
	124nm,0.4s						
CBIJ	**Chichi jima**	**3.66**	**178**	*e*P	**Pn**	**23 39 31.9**	**-0.6**
JCJ	**Chichijima**	**3.66**	**178**	Pn	Pn	23 39 21.0	-12
	34nm,0.3s,baz=286,slow=20,SNR=12						
JCJ				Sn	Sn	23 39 58.4	-17
	52nm,0.3s,baz=254,slow=21,SNR=4.9						
JCJ				LR	LR	23 40 56.1	
	comp=Z,953nm,19.4s,baz=25,slow=40						
JCJ	**Chichijima**	**3.66**	**178**		**Pn**	**23 39 31.7**	**-0.8**
BSO1	**Boso 1**	**3.98**	**347**	*e*P	**Pn**	**23 39 36.2**	**-0.2**
BSO1				*e*S	**Sn**	**23 40 23.1**	**+1.1**
BSO3	**Boso 3**	**4.22**	**343**	*e*P	**Pn**	**23 39 39.8**	**-0.2**
JOD2	**Odawara 2**	**5.12**	**332**	*e*P	**Pn**	**23 39 53.8**	**+1.2**
JIE	**Ise**	**5.76**	**310**	*e*P	**Pn**	**23 40 02.4**	**+1.0**
JRY	**Ryogami san**	**5.85**	**334**	*e*P	**Pn**	**23 40 03.4**	**+0.7**
JHO	**Hitachi**	**5.95**	**349**	*e*P	**Pn**	**23 40 02.9**	**-1.2**
JAG	**Ashikaga**	**6.04**	**340**	*e*P	**Pn**	**23 40 05.2**	**0.0**
INU	**Inuyama**	**6.21**	**319**	Pn	**Pn**	**23 40 08.4**	**+0.9**
JGF	**Kuroka**	**6.21**	**322**		**Pn**	**23 40 08.8**	**+1.3**
MJAR	**Matsushiro Arr**	**6.58**	**332**	Pn	**Pn**	**23 40 13.9**	**+1.2**
	1.9nm,0.3s,baz=154,slow=11,SNR=91						
MJAR				Sn	**Sn**	**23 41 26.8**	**-0.1**
	0.6nm,0.3s,baz=159,slow=19,SNR=6.5						
MJAR				LR	LR	23 42 52.0	
	comp=Z,632nm,19.3s,baz=148,slow=39						
	43nm,0.8s						
MJAR	**Matsushiro Arr**	**6.58**	**332**		**Pn**	**23 40 13.3**	**+0.7**
MAJO	**Matsushiro**	**6.58**	**332**		**Pn**	**23 40 13.6**	**+0.9**
MAJO	**Matsushiro**	**6.58**	**332**	⇑*i*P	**Pn**	**23 40 14.3**	**+1.6**
MJB9	**Matsu-Tunnel**	**6.58**	**332**		**Pn**	**23 40 14.2**	**+1.5**
JFK	**Kawauchi**	**6.65**	**352**	*e*P	**Pn**	**23 40 11.9**	**-1.8**
JFK				*e*S	**Sn**	**23 41 22.2**	**-6.5**
JMN	**Monobe**	**7.50**	**295**	Pn	**Pn**	**23 40 25.7**	**+0.4**
JMK	**Ichinoseki**	**8.19**	**356**	*e*P	**Pn**	**23 40 32.9**	**-1.8**
JMK				*e*S	**Sn**	**23 42 00.1**	**-6.5**
JNU	**Nakatsue**	**9.76**	**287**	LR	LR	23 44 31.4	
	comp=Z,710nm,18.9s,baz=106,slow=37						
ERM	**Erimo**	**11.26**	**4**	Pn	**Pn**	**23 41 13.7**	**-3.1**
ERM	**Erimo**	**11.26**	**4**	P	**Pn**	**23 41 13.7**	**-3.1**
JOW	**Kunigami**	**12.68**	**255**	LR	LR	23 46 30.8	
	comp=Z,623nm,18.4s,baz=116,slow=38						
ASAJ	**Asahikawa**	**13.34**	**2**	Pn	**Pn**	**23 41 41.9**	**-3.3**
	2.2nm,0.3s,baz=210,slow=16,SNR=2.8						
ASAJ				LR	LR	23 47 46.4	
	comp=Z,190nm,21.0s,baz=133,slow=41						
ASAJ	**Asahikawa**	**13.34**	**2**	P	**Pn**	**23 41 41.2**	**-3.9**
JKA	**Kamikawa-asahi**	**13.34**	**2**	Pn	**Pn**	**23 41 41.2**	**-3.9**
KSRS	**Korea Array**	**13.45**	**304**	Pn	**Pn**	**23 41 48.5**	**+1.8**
	0.3nm,0.3s,baz=112,slow=12,SNR=6.1						
	1.2nm,0.5s						
YSS	**Yuzhno-Sakhali**	**16.18**	**2**	Pn	**Pn**	**23 42 20.4**	**-2.6**
YSS				IAmb	IAmb	23 42 21.9	
	comp=Z,39nm,0.6s						
YSS	**Yuzhno-Sakhali**	**16.18**	**2**	*e*P	**Pn**	**23 42 20.5**	**-2.5**
YSS				pmax	pmax		
	comp=Z,40nm,0.7s						
YSS				MLR	MLR		
	comp=Z,500nm,11.0s						
MDJ	**Mudanjiang**	**16.94**	**328**		**Pn**	**23 42 32.4**	**-0.4**
MDJ	**Mudanjiang**	**16.94**	**328**	P	**P**	**23 42 37.3**	**+2.7**
MDJ				pmax	pmax		
	comp=Z,24nm,1.0s						
CN2	**Changchun**	**18.48**	**319**	P	**Pn**	**23 42 54.0**	**+2.2**
CN2				S	**Sn**	**23 46 16.2**	**-1.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CN2				LR	LR		
	comp=N,500nm,13.0s						
CN2				LR	LR		
	comp=E,500nm,13.0s						
CN2				LR	LR		
	comp=Z,600nm,12.0s						
BNX	**BinXian**	**18.80**	**327**	⇑P	**Pn**	**23 42 55.7**	**0.0**
BNX				pmax	pmax		
	comp=Z,9.0nm,0.7s						
YHNB	**Yeheng**	**19.25**	**257**	P	**P**	**23 42 57.3**	**-2.9**
YHNB				IAmb	IAmb	23 43 07.5	
	comp=Z,59nm,1.1s						
NJ2	**Nanjing**	**19.81**	**280**	*e*P	**Pn**	**23 43 08.1**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NJ2				LR	LR		
	comp=N,330nm,18.0s						
NJ2				LR	LR		
	comp=E,480nm,20.8s						
NJ2				LR	LR		
	comp=Z,760nm,18.0s						
SSLB	**Suanglung**	**19.96**	**255**		**P**	**23 43 07.4**	**-0.5**
SSLB				IAmb	IAmb	23 43 11.6	
	comp=Z,36nm,0.9s						
GRNR	**Gornyy**	**20.42**	**350**	*e*P	Pn	23 43 17.9	+3.0
TPUB	**Ta-pu**	**20.43**	**254**	P	**P**	**23 43 12.1**	**-1.1**
TPUB				IAmb	IAmb	23 43 21.5	
	comp=Z,64nm,1.3s						
HEH	**HeiHe**	**22.34**	**335**	*e*P	**P**	**23 43 32.7**	**-0.6**
HEH				pmax	pmax		
	comp=Z,29nm,0.8s						
BJI	**Beijing**	**22.95**	**301**	P	**P**	**23 43 40.4**	**+0.5**
BJI				pmax	pmax		
	comp=Z,4.0nm,1.5s						
BJI				LR	LR		
	comp=N,180nm,14.3s						
BJI				LR	LR		
	comp=E,310nm,16.9s						
BJI				LR	LR		
	comp=Z,300nm,16.8s						
BJT	**Baijiatuau**	**22.95**	**301**	P	**P**	**23 43 38.4**	**-1.5**
BJT	**Baijiatuau**	**22.95**	**301**	P	**P**	**23 43 38.4**	**-1.5**
BJT				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HNS	**HongShan**	**23.52**	**294**	⇓P	**P**	**23 43 46.6**	**+0.9**
HNS				S	**S**	**23 47 57.3**	**-0.9**
HNS				SS	**SnSn**	**23 48 47.5**	**+12**
HNS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HNS				LR	LR		
	comp=N,480nm,16.1s						
HNS				LR	LR		
	comp=E,390nm,18.2s						
HNS				LR	LR		
	comp=Z,690nm,16.1s						
HIA	**Hailar**	**25.00**	**324**	P	**P**	**23 43 58.1**	**-1.1**
HIA				IAmb	IAmb	23 44 06.1	
	comp=Z,13nm,0.8s						
HIA	**Hailar**	**25.00**	**324**	P	**P**	**23 43 58.1**	**-1.1**
HIA				pmax	pmax		
	comp=Z,13nm,0.8s						
PETK	**Petropavlovsk-**	**25.08**	**23**	LR	LR	23 56 28.2	
	comp=Z,70nm,18.9s,baz=216,slow=43						
HILR	**Hailar Array B**	**25.18**	**325**	P	**P**	**23 44 02.1**	**+1.3**
	comp=Z,4.5nm,0.5s,baz=127,slow=11,SNR=9.3						
	comp=Z,4.5nm,0.5s						
ZEA	**Zeya**	**25.32**	**339**	*e*P	**P**	**23 44 02.9**	**+0.8**
ZEA				pmax	pmax		
	comp=Z,30nm,0.7s						
ZEA				MLR	MLR		
	comp=N,100nm,10.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,11.0s						
H11S3	**WAKE ISLAND Hy**	**25.47**	**113**	T	T	00 10 52.5	
	baz=305,slow=73,SNR=7.1						
H11S1	**WAKE ISLAND Hy**	**25.47**	**113**	T	T	00 10 45.6	
	baz=305,slow=73,SNR=7.2						
H11S2	**WAKE ISLAND Hy**	**25.48**	**113**	T	T	00 10 50.4	
	baz=305,slow=73,SNR=8.6						
HHC	**Hu-ho-hao-te**	**26.55**	**301**	*e*P	**P**	**23 44 14.6**	**+1.0**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
XAN	**Xi'an**	**28.07**	**285**	*e*P	**P**	**23 44 27.2**	**0.0**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.4s						
MA2	**Magadan**	**29.41**	**9**	LR	LR	00 02 12.9	
	comp=Z,23nm,18.5s,baz=178,slow=48						
QIZ	**Qiongzhong**	**31.33**	**256**	P	**P**	**23 44 55.9**	**-0.2**
QIZ				S	**S**	**23 50 03.0**	**+1.1**
QIZ				LR	LR		
	comp=N,260nm,15.6s						
QIZ				LR	LR		
	comp=E,290nm,18.1s						
QIZ				LR	LR		
	comp=Z,300nm,17.9s						
ULN	**Ulaanbaatar**	**31.65**	**313**		**P**	**23 44 57.5**	**-1.3**
ULN	**Ulaanbaatar**	**31.65**	**313**	*i* P	**P**	**23 44 57.4**	**-1.4**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SHEM	**Shemya Is, Ala**	**32.05**	**37**	LR	LR	23 58 41.0	
	comp=Z,69nm,18.9s,baz=282,slow=38						
SONM	**Songino Array**	**32.06**	**312**	P	**P**	**23 45 03.6**	**+1.3**
	comp=Z,1.7nm,0.6s,baz=91,slow=7.9,SNR=11						
	comp=Z,1.7nm,0.6s						
SONM	**Songino Array**	**32.06**	**312**	P	**P**	**23 45 00.9**	**-1.4**
LZDM	**Lanzhou Array**	**32.28**	**290**	P	**P**	**23 45 01.7**	**-3.0**
	comp=Z,0.5nm,0.3s,baz=134,slow=11,SNR=3.6						
YAK	**Yakutsk**	**32.30**	**349**	P	**P**	**23 45 03.6**	**-0.5**
YAK				IAmb	IAmb	23 45 04.8	
	comp=Z,21nm,0.8s						
YAK	**Yakutsk**	**32.30**	**349**	*ce*P	**P**	**23 45 03.8**	**-0.3**
YAK				pmax	pmax		
	comp=Z,15nm,0.7s						
SEY	**Seymchan**	**32.86**	**9**	LR	LR	23 59 40.4	
	comp=Z,61nm,21.9s,baz=203,slow=38						
SEY	**Seymchan**	**32.86**	**9**	*e*P	**P**	**23 45 08.9**	**-0.2**
SEY				pmax	pmax		
	comp=Z,12nm,1.5s						
JAY	**Jayapura**	**33.12**	**182**	LR	LR	23 57 06.4	
	comp=Z,158nm,18.6s,baz=325,slow=34						
ZAK	**Zakamensk**	**34.83**	**315**	*e*P	**P**	**23 45 26.2**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,12nm,1.9s						
TLY	**Talaya**	**35.07**	**318**	P	**P**	**23 45 29.2**	**+0.7**
GTA	**Gaotai**	**35.34**	**296**	*e*P	**P**	**23 45 32.6**	**+1.6**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTA				LR	LR		
	comp=N,290nm,16.0s						
GTA				LR	LR		
	comp=E,480nm,15.6s						
GTA				LR	LR		
	comp=Z,580nm,16.7s						
PZH	**PanZhiHua**	**35.48**	**273**	P	**P**	**23 45 33.2**	**+0.9**
ADK	**Adak**	**36.84**	**43**	P	**P**	**23 45 43.3**	**-0.2**
ADK	**Adak**	**36.84**	**43**	P	**P**	**23 45 43.3**	**-0.2**
ADK				pmax	pmax		
	comp=Z,125nm,1.5s						
ATKA	**Atka Island**	**38.40**	**43**	P	**P**	**23 45 55.5**	**-1.2**
KNGR	**Kungurtug, Tuv**	**38.42**	**314**	*i* P	**P**	**23 45 59.3**	**+2.2**
KNGR				pmax	pmax		
	comp=Z,11nm,1.2s						
GOMU	**GeErMu**	**39.44**	**291**	P	**P**	**23 46 04.4**	**-1.7**
GOMU				S	**S**	**23 52 06.6**	**-0.3**
GOMU				pmax	pmax		
	comp=Z,14nm,0.8s						
GOMU				LR	LR		
	comp=N,230nm,13.0s						
GOMU				LR	LR		
	comp=E,310nm,14.6s						
GOMU				LR	LR		
	comp=Z,22µm,15.5s						
BILL	**Bilibino**	**39.93**	**14**	P	**P**	**23 46 09.6**	**+0.3**
BILL	**Bilibino**	**39.93**	**14**	*ce*P	**P**	**23 46 07.7**	**-1.6**
BILL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CHTO	**Chiang Mai**	**40.65**	**263**	P	**P**	**23 46 14.5**	**-1.4**
CHTO	**Chiang Mai**	**40.65**	**263**	P	**P**	**23 46 14.5**	**-1.4**
CHTO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**40.80**	**263**	LR	LR	00 03 57.0	
	comp=Z,149nm,19.2s,baz=70,slow=37						
KAPI	**Kappang**	**41.47**	**215**	LR	LR	00 02 45.9	
	comp=Z,52nm,19.8s,baz=99,slow=35						
KAPI	**Kappang**	**41.47**	**215**	P	**P**	**23 46 21.8**	**-0.7**
KAPI	**Kappang**	**41.47**	**215**	P	**P**	**23 46 21.8**	**-0.7**
KAPI				pmax	pmax		
	comp=Z,17nm,1.4s						
SOEI	**Soe**	**43.75**	**206**	P	**P**	**23 46 41.1**	**-0.1**
SOEI				IAmb	IAmb	23 47 13.5	
	comp=Z,18nm,1.0s						
GAMB	**Gambell**	**43.92**	**28**	P	**P**	**23 46 43.2**	**+1.3**
	baz=244						
WMQ	**Urumqi**	**44.40**	**303**	*e*P	**P**	**23 46 46.7**	**+0.6**
WMQ				ScP	**ScP**	**23 52 22.3**	**+2.0**
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
COEN	**Coen**	**44.48**	**178**	P	**P**	**23 46 46.6**	**-0.3**
COEN				IAmb	IAmb	23 47 12.4	
	comp=Z,11nm,1.1s						
MTN	**Manton Dam**	**44.60**	**195**		**P**	**23 46 46.6**	**-1.3**
MTN				IAmb	IAmb	23 46 59.4	
	comp=Z,13nm,0.9s						
DGZ	**Jazzator, Alta**	**44.69**	**311**	*i* P	**P**	**23 46 49.3**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TNA	**Tin City**	**46.15**	**26**	P	**P**	**23 47 01.0**	**+1.4**
	baz=246						
K13K	**Kusilvak Mount**	**46.24**	**32**	P	**P**	**23 47 00.6**	**+0.3**
	baz=253						
ZAA0	**Zalesovo Array**	**46.67**	**317**		**P**	**23 47 04.1**	**+0.2**
ZAA0				IAmb	IAmb	23 47 12.3	
	comp=Z,11nm,1.7s						
ZALV	**Zalesovo Beam**	**46.67**	**317**	P	**P**	**23 47 04.5**	**+0.6**
	comp=Z,2.6nm,0.7s,baz=100,slow=7.5,SNR=11						
ZALV				PcP	**PcP**	**23 48 37.1**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=97,slow=3.9,SNR=4.0						
ZALV				LR	LR	00 07 14.4	
	comp=Z,137nm,19.1s,baz=68,slow=37						
	comp=Z,2.6nm,0.7s						
ZALV	**Zalesovo Beam**	**46.67**	**317**		**P**	**23 47 04.2**	**+0.2**
F14K	**Arctic Creek**	**46.73**	**27**	P	**P**	**23 47 04.9**	**+0.8**
	baz=248						
ANM	**Nome**	**46.78**	**28**	P	**P**	**23 47 05.2**	**+0.6**
	baz=250						
J14K	**Nanvaranak Lak**	**46.97**	**31**	P	**P**	**23 47 07.7**	**+1.6**
	baz=253						
L14K	**Kuka Creek**	**46.98**	**33**	P	**P**	**23 47 07.4**	**+1.2**
	baz=256						
SDPT	**Sand Point**	**47.00**	**41**	P	**P**	**23 47 07.0**	**+0.6**
	baz=263						
N14K	**Kuskokwak Cree**	**47.13**	**35**	P	**P**	**23 47 08.9**	**+1.5**
	baz=258						
M14K	**Bethel**	**47.18**	**34**	P	**P**	**23 47 08.8**	**+1.0**
M14K	**Bethel**	**47.18**	**34**	P	**P**	**23 47 08.9**	**+1.1**
	baz=257						
G15K	**Niukluk**	**47.46**	**28**	P	**P**	**23 47 10.7**	**+0.8**
	baz=251						
F15K	**North Star Dit**	**47.46**	**27**	P	**P**	**23 47 11.1**	**+1.2**
	baz=250						
L15K	**Ungalak Mounta**	**47.62**	**33**	P	**P**	**23 47 12.5**	**+1.3**
	baz=256						
K15K	**Wolf Creek Mou**	**47.75**	**32**	P	**P**	**23 47 13.9**	**+1.7**
	baz=256						
M15K	**Kasigluk River**	**47.78**	**34**	P	**P**	**23 47 13.5**	**+1.1**
	baz=258						
EVN	**Everest**	**47.79**	**281**	P	**P**	**23 47 12.7**	**-1.1**
EVN				IAmb	IAmb	23 48 57.7	
	comp=Z,3.6nm,0.6s						
O15K	**Ungalikthiuk R**	**47.92**	**36**	P	**P**	**23 47 14.7**	**+1.2**
	baz=260						
N15K	**Kwethluk River**	**47.97**	**35**	P	**P**	**23 47 15.1**	**+1.2**
	baz=259						
H16K	**Elim**	**48.08**	**29**	P	**P**	**23 47 16.3**	**+1.6**
	baz=253						
MK31	**Makanchi Array**	**48.09**	**307**	P	**P**	**23 47 15.3**	**+0.1**
MK31	**Makanchi Array**	**48.09**	**307**	*i* P	**P**	**23 47 14.9**	**-0.2**
MKAR	**Makanchi Array**	**48.09**	**307**	P	**P**	**23 47 15.4**	**+0.3**
	comp=Z,2.3nm,0.5s,baz=86,slow=9.7,SNR=35						
MKAR				LR	LR	00 07 53.3	
	comp=Z,152nm,18.6s,baz=74,slow=37						
	comp=Z,2.3nm,0.5s						
MKAR	**Makanchi Array**	**48.09**	**307**		**P**	**23 47 14.7**	**-0.4**
MKAR	**Makanchi Array**	**48.09**	**307**	*i* P	**P**	**23 47 15.1**	**0.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
C16K	**Lisburne Hills**	**48.17**	**23**	P	**P**	**23 47 16.4**	**+1.1**
C16K				IAmb	IAmb	23 47 17.3	
	comp=Z,8.4nm,0.9s						
C16K	**Lisburne Hills**	**48.17**	**23**	P	**P**	**23 47 17.1**	**+1.7**
	baz=247						
MAKZ	**Makanchi**	**48.31**	**307**	P	**P**	**23 47 16.2**	**-0.6**
MAKZ				IAmb	IAmb	23 47 25.2	
	comp=Z,7.9nm,1.2s						
MAKZ	**Makanchi**	**48.31**	**307**	P	**P**	**23 47 16.2**	**-0.6**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.2s						
I17K	**Unalakleet**	**48.52**	**30**	P	**P**	**23 47 19.3**	**+1.2**
	baz=255						
N16K	**Nishlik Lake**	**48.67**	**35**	P	**P**	**23 47 20.4**	**+1.0**
	baz=260						
M16K	**Timber Creek**	**48.67**	**34**	P	**P**	**23 47 20.5**	**+1.2**
	baz=259						
D17K	**Noatak River**	**48.75**	**25**	P	**P**	**23 47 21.3**	**+1.5**
	baz=250,SNR=7.5						
P16K	**Nushagak River**	**48.83**	**37**	P	**P**	**23 47 21.1**	**+0.6**
	baz=262						
O16K	**Kokwok River B**	**48.86**	**36**	P	**P**	**23 47 21.1**	**+0.4**
	baz=261						
RDOG	**Red Dog Mine**	**48.93**	**24**	P	**P**	**23 47 22.4**	**+1.2**
	baz=250						
G17K	**Kiwalik Mounta**	**48.97**	**28**	P	**P**	**23 47 23.1**	**+1.5**
	baz=254						
C17K	**DeLong Mountai**	**48.99**	**24**	P	**P**	**23 47 23.2**	**+1.5**
	baz=249						
E17K	**Hotham Inlet**	**49.00**	**26**	P	**P**	**23 47 23.2**	**+1.5**
	baz=251						
F17K	**Baldwin Pennin**	**49.01**	**26**	P	**P**	**23 47 23.8**	**+1.9**
	baz=252						
J17K	**VABM Dome**	**49.11**	**31**	P	**P**	**23 47 24.1**	**+1.4**
	baz=257						
H17K	**Granite Mounta**	**49.12**	**29**	P	**P**	**23 47 24.1**	**+1.3**
	baz=255						
L17K	**Donlin**	**49.20**	**32**	P	**P**	**23 47 25.0**	**+1.6**
	baz=259						
NRIK	**Noril'sk**	**49.20**	**338**	P	**P**	**23 47 23.4**	**+0.2**
	comp=Z,2.4nm,0.7s,baz=102,slow=11,SNR=6.0						
	comp=Z,2.4nm,0.7s						
NRIK	**Noril'sk**	**49.20**	**338**		**P**	**23 47 22.7**	**-0.5**
NRIK				IAmb	IAmb	23 47 37.5	
	comp=Z,8.6nm,1.0s						
NRIK	**Noril'sk**	**49.20**	**338**	*i* P	**P**	**23 47 24.1**	**+0.8**
NRIK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PSI	**Prapat**	**49.27**	**244**	LR	LR	00 07 31.6	
	comp=Z,65nm,18.5s,baz=48,slow=35						
PBA	**Port Blair**	**49.29**	**258**	P	**P**	**23 47 23.3**	**-1.3**
K17K	**Iditarod**	**49.31**	**32**	P	**P**	**23 47 25.7**	**+1.5**
	baz=259						
O17K	**Koliganek Bris**	**49.39**	**36**	P	**P**	**23 47 26.5**	**+1.7**
	baz=262						
N17K	**Nushagak Hills**	**49.45**	**35**	P	**P**	**23 47 26.1**	**+0.8**
	baz=262						
M17K	**Holitna River**	**49.47**	**33**	P	**P**	**23 47 26.7**	**+1.3**
	baz=260						
Q16K	**King Salmon**	**49.47**	**37**	P	**P**	**23 47 26.6**	**+1.2**
	baz=264						
R17L	**Mt. Peulik Vol**	**49.52**	**38**	P	**P**	**23 47 26.8**	**+0.9**
	baz=265						
E18K	**Tukpahlearik C**	**49.55**	**25**	P	**P**	**23 47 26.9**	**+0.9**
	baz=252						
F18K	**Selawik**	**49.67**	**26**	P	**P**	**23 47 28.5**	**+1.6**
	baz=254						
C18K	**Utukok River**	**49.74**	**24**	P	**P**	**23 47 28.3**	**+0.8**
C18K				IAmb	IAmb	23 47 42.6	
	comp=Z,38nm,2.0s						
C18K	**Utukok River**	**49.74**	**24**	P	**P**	**23 47 28.2**	**+0.8**
	baz=251						
B18K	**Kokolik River**	**49.77**	**23**	P	**P**	**23 47 29.1**	**+1.4**
	baz=250						
CHIR	**Chirikof Islan**	**49.79**	**41**	P	**P**	**23 47 29.0**	**+1.1**
	baz=267						
H18K	**Honhosa River**	**49.81**	**28**	P	**P**	**23 47 29.1**	**+1.1**
	baz=256						
Q17K	**Contact Creek**	**49.83**	**38**	P	**P**	**23 47 29.2**	**+0.8**
	baz=265						
G18K	**Tagagawik**	**49.88**	**28**	P	**P**	**23 47 29.6**	**+1.1**
G18K				IAmb	IAmb	23 47 30.9	
	comp=Z,12nm,1.1s						
G18K	**Tagagawik**	**49.88**	**28**	P	**P**	**23 47 29.4**	**+0.9**
	baz=256,SNR=5.7						
L18K	**Granite Mounta**	**49.95**	**32**	P	**P**	**23 47 30.4**	**+1.3**
	baz=260						
M18K	**Stony River**	**50.25**	**33**	P	**P**	**23 47 31.7**	**+0.4**
	baz=262						
P18K	**Big Mountain,**	**50.28**	**36**	P	**P**	**23 47 32.1**	**+0.4**
	baz=264						
A19K	**Wainwright**	**50.31**	**22**	P	**P**	**23 47 32.7**	**+1.1**
	baz=250						
Q18K	**Katmai Hardscr**	**50.33**	**37**	P	**P**	**23 47 32.8**	**+0.7**
	baz=265						

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O18K  Koktuh Hills       50.34  36    P       P       23 47 33.0 +0.9
      baz=264
KURK  Kurchatov          50.36 312            P       23 47 32.3  0.0
KURK                                  IAmb    IAmb    23 47 48.0
      comp=Z,7.7nm,0.8s
KURK  Kurchatov          50.36 312ceP         P       23 47 32.8 +0.4
KURK                                  pmax    pmax
      comp=Z,9.0nm,0.8s
KURBB Kurchatov Arra     50.42 312    P       P       23 47 32.9 +0.1
      comp=Z,3.9nm,0.8s,baz=88,slow=7.4,SNR=17
      comp=Z,3.9nm,0.8s
C19K  Lookout Ridge      50.43  23    P       P       23 47 33.5 +0.8
      baz=252,SNR=6.5
F19K  Shaleruckik Mo     50.45  26    P       P       23 47 33.8 +1.0
      baz=256
G19K  Purcell Mounta     50.56  27    P       P       23 47 34.6 +1.0
      baz=257
SII   Sitkinak Islan     50.63  40    P       P       23 47 35.1 +0.8
      baz=268
H19K  Roundabout Mou     50.68  28    P       P       23 47 35.6 +1.1
      baz=258
J19K  Poorman            50.73  30    P       P       23 47 35.9 +0.9
      baz=260
D19K  Kuna River         50.77  24    P       P       23 47 36.4 +1.2
      baz=254
WB0   Warramunga Arr     50.77 189    P       P       23 47 34.7 -1.0
WB0                                   IAmb    IAmb    23 47 47.7
      comp=Z,20nm,0.8s
E19K  Redstone River     50.81  26    P       P       23 47 36.8 +1.2
      baz=256
O19K  Port Alsworth      50.82  35    P       P       23 47 36.9 +1.3
      baz=264
WR8   Warramunga Arr     50.95 189    P       P       23 47 36.5 -0.5
WR8                                   IAmb    IAmb    23 47 49.1
      comp=Z,17nm,0.8s
WRA   Warramunga Arr     50.95 189    P       P       23 47 36.3 -0.8
      comp=Z,3.2nm,0.4s,baz=6.1,slow=7.5,SNR=81
      comp=Z,3.2nm,0.4s
WRA   Warramunga Arr     50.95 189    P       P       23 47 35.7 -1.4
WRA   Warramunga Arr     50.95 189  i P       P       23 47 35.7 -1.4
WRA                                   pmax    pmax
      comp=Z,4.0nm,0.4s
FITZ  Fitzroy Crossi     51.07 200    P       P       23 47 37.1 -0.8
OHAK  Old Harbor         51.15  39    P       P       23 47 39.0 +0.9
      baz=268
F20K  Avaraart Lake      51.29  26    P       P       23 47 39.8 +0.7
      baz=258
H20K  Anotleneega Mo     51.31  28    P       P       23 47 40.5 +1.2
      baz=260
D20K  Etivluk River      51.36  24    P       P       23 47 40.5 +0.9
D20K                                  IAmb    IAmb    23 47 42.0
      comp=Z,11nm,1.0s
D20K  Etivluk River      51.36  24    P       P       23 47 40.8 +1.2
      baz=255
I20K  Naaghedeneel       51.36  29    P       P       23 47 40.6 +1.0
      baz=261
E20K  Nigu River         51.40  25    P       P       23 47 41.3 +1.4
      baz=256
J20K  Nowinta River      51.40  30    P       P       23 47 41.2 +1.2
      baz=261
B20K  Meade River        51.52  23    P       P       23 47 41.9 +1.2
      baz=254
KDAK  Kodiak Island      51.55  38    LR      LR      00 09 19.9
      comp=Z,71nm,20.7s,baz=224,slow=36
M20K  Styx River         51.57  33    P       P       23 47 42.4 +1.0
      baz=264
O20K  Slope Mountain     51.66  36    P       P       23 47 43.3 +1.2
      baz=266
Q20K  Shuyak Island      51.69  37    P       P       23 47 43.5 +1.3
      baz=267
IMAR  Indian Mountai     51.86  28    P       P       23 47 44.1 +0.7
SPCR  Spurr Chakacha     51.95  34    P       P       23 47 45.5 +1.3
      baz=266
G21K  Allakaket          52.05  27    P       P       23 47 46.2 +1.4
      baz=260
C21K  Knifeblade Rid     52.11  24    P       P       23 47 47.0 +1.8
      baz=257
PPLA  Purkeypile         52.11  32    P       P       23 47 46.5 +1.1
      baz=264
CHUM  Lake Minchumin     52.16  31    P       P       23 47 47.0 +1.4
      baz=263
F21K  Alatna River       52.18  26    P       P       23 47 47.2 +1.4
      baz=260
H21K  Melozitna Rive     52.19  28    P       P       23 47 47.0 +1.1
H21K                                  IAmb    IAmb    23 47 48.3
      comp=Z,7.9nm,0.9s
H21K  Melozitna Rive     52.19  28    P       P       23 47 47.3 +1.4
      baz=262,SNR=6.1
E21K  Killik River       52.24  25    P       P       23 47 47.4 +1.2
      baz=258
KDJ   Kajisay            52.24 302    P       P       23 47 46.4 -0.4
KDJ   Kajisay            52.24 302    P       P       23 47 46.4 -0.4
KDJ                                   pmax    pmax
      comp=Z,7.0nm,0.9s
B21K  Ikpikpuk River     52.27  23    P       P       23 47 48.1 +1.7
      baz=257
SKT   Skwentna           52.33  33    P       P       23 47 48.3 +1.3
      baz=266
A22K  Sinclair Lake      52.49  22    P       P       23 47 49.5 +1.5
      baz=255,SNR=6.3
SUA   Susitna One        52.67  34    P       P       23 47 50.8 +1.2
      baz=267
F22K  John River         52.73  26    P       P       23 47 51.4 +1.5
      baz=261
D22K  Ayikyak River      52.79  24    P       P       23 47 52.0 +1.8
      baz=259
H22K  Ishtalitna Cre     52.81  28    P       P       23 47 52.6 +2.2
      baz=263
B22K  Teshekpuk Lake     52.84  23    P       P       23 47 52.1 +1.6
      baz=257
G22K  Bettles            52.90  27    P       P       23 47 52.6 +1.5
      baz=262
E22K  Anaktuvuk Pass     52.97  25    P       P       23 47 53.0 +1.3
E22K  Anaktuvuk Pass     52.97  25    P       P       23 47 53.4 +1.7
      baz=261,SNR=6.0
MLY   Manley             52.97  29    P       P       23 47 52.9 +1.2
      baz=264
TRF   Thorofare Moun     53.02  31    P       P       23 47 53.4 +1.2
      baz=266
BOOM  Boomskoye usch     53.08 302    P       P       23 47 53.2 +0.1
BOOM  Boomskoye usch     53.08 302    P       P       23 47 53.2 +0.1
BOOM                                  pmax    pmax
      comp=Z,5.0nm,1.0s
RC01  Rabbit Creek A     53.14  34    P       P       23 47 53.2 +0.3
      baz=268
SEW   Seward             53.25  36    P       P       23 47 54.2 +0.5
      baz=269
G23K  Bananza Creek      53.45  27    P       P       23 47 56.8 +1.5
      baz=263
D23K  Nanushuk River     53.52  24    P       P       23 47 57.3 +1.7
      baz=261
H23K  Yukon River        53.55  28    P       P       23 47 57.4 +1.4
      baz=264
I23K  Minto, Yukon-K     53.56  29    P       P       23 47 57.6 +1.6
      baz=265
KSH   Kashi              53.64 299    P       P       23 48 01.2 +4.1
KSH                                   sP      pwP     23 48 12.7 +1.3
KSH                                   pmax    pmax
      comp=Z,3.0nm,0.8s
MCK   McKinley           53.64  31    P       P       23 47 58.1 +1.4
      baz=267
NEA2  Nenana             53.64  30    P       P       23 47 58.4 +1.8
      baz=266,SNR=7.3
C23K  Itkillik River     53.68  23            P       23 47 58.0 +1.2
C23K                                  IAmb    IAmb    23 47 58.9
      comp=Z,8.1nm,0.7s
C23K  Itkillik River     53.68  23    P       P       23 47 58.2 +1.4
      baz=260
KNK   Knik Glacier       53.76  34    P       P       23 47 59.3 +1.7
      baz=269
WAT1  Susitna Watana     53.77  32    P       P       23 47 58.3 +0.7
      baz=268
E23K  Chandalar          53.77  26    P       P       23 47 59.0 +1.4
      baz=263
PWL   Port Wells         53.81  35    P       P       23 47 58.5 +0.6
      baz=269
SML   Sawmill            53.84  33    P       P       23 47 58.9 +0.8
      baz=268
TOLK  Toolik Lake Re     53.87  25    P       P       23 47 59.7 +1.4
TOLK                                  IAmb    IAmb    23 48 02.0
      comp=Z,20nm,1.6s
TOLK  Toolik Lake Re     53.87  25    P       P       23 47 59.9 +1.6
      baz=262
AAK   Ala-Archa          54.10 303    LR      LR      00 11 57.3
      comp=Z,187nm,18.6s,baz=62,slow=37
AAK   Ala-Archa          54.10 303    P       P       23 48 00.5  0.0
AAK   Ala-Archa          54.10 303  i P       P       23 48 01.5 +1.0
AAK                                   pmax    pmax
      comp=Z,1.0nm,0.6s
M23K  Glacier View       54.12  33    P       P       23 48 00.9 +0.7
      baz=269
WAT6  Susitna Watana     54.13  33    P       P       23 48 01.3 +0.9
      baz=268
CCB   Clear Creek Bu     54.19  30    P       P       23 48 01.5 +1.0
CCB                                   IAmb    IAmb    23 48 57.4
      comp=Z,29nm,1.9s
E24K  Your Creek         54.20  26    P       P       23 48 02.3 +1.6
      baz=264
D24K  Happy Valley       54.20  24    P       P       23 48 02.5 +1.9
      baz=263
H24K  Noodor Dome        54.23  28    P       P       23 48 02.9 +2.0
      baz=266
SCM   Sheep Creek Mo     54.31  33    P       P       23 48 02.5 +0.9
SCM   Sheep Creek Mo     54.31  33    P       P       23 48 02.5 +0.9
SCM   Sheep Creek Mo     54.31  33    P       P       23 48 02.6 +0.9
      baz=269
C24K  Franklin Bluff     54.32  24    P       P       23 48 03.0 +1.6
      baz=262,SNR=5.2
F24K  Squaw Lake         54.37  26    P       P       23 48 03.6 +1.7
      baz=265
POKR  Poker Plat Res     54.37  29    P       P       23 48 03.7 +1.7
      baz=267
GLI   Glacier Island     54.42  35    P       P       23 48 03.8 +1.5
      baz=270
G24K  Hadweenzic Riv     54.46  27    P       P       23 48 04.0 +1.5
      baz=266
HDA   Harding Lake       54.55  30    P       P       23 48 03.5 +0.3
HDA   Harding Lake       54.55  30    P       P       23 48 03.7 +0.5
      baz=268
ILAR  Eielson Array      54.59  30    P       P       23 48 03.8 +0.3
      comp=Z,3.4nm,0.6s,baz=257,slow=6.3,SNR=40
      comp=Z,3.4nm,0.6s
ILAR  Eielson Array      54.59  30    P       P       23 48 03.7 +0.2
AS31  Alice Springs      54.68 189    P       P       23 48 04.3 -0.3
ASAR  Alice Springs      54.68 189    P       P       23 48 03.9 -0.7
      comp=Z,2.5nm,0.6s,baz=356,slow=5.4,SNR=22
ASAR                                  S       S       23 55 41.5 -2.0
      comp=Z,0.8nm,0.9s,baz=1.6,slow=6.9,SNR=6.0
      comp=Z,2.5nm,0.6s
ASAR  Alice Springs      54.68 189    P       P       23 48 04.2 -0.4
ASAR  Alice Springs      54.68 189    P       P       23 48 04.2 -0.4
KLU   Klutina            54.98  34    P       P       23 48 08.2 +1.7
      baz=271
G25K  Bearman Lake       55.01  27    P       P       23 48 08.0 +1.5
      baz=267
D25K  Kavik River        55.09  24    P       P       23 48 08.8 +1.7
      baz=265
PAX   Paxson             55.18  32    P       P       23 48 09.0 +1.1
      baz=270
F25K  Christian Rive     55.23  26    P       P       23 48 10.1 +2.0
      baz=267
J25K  Salcha River,      55.24  30    P       P       23 48 09.5 +1.2
      baz=269
BVAR  Borovoye Array     55.29 316    P       P       23 48 09.1 +0.4
      comp=Z,4.4nm,0.6s,baz=93,slow=7.3,SNR=35
      comp=Z,4.4nm,0.6s
E25K  Arctic Village     55.29  26    P       P       23 48 10.5 +1.9
E25K  Arctic Village     55.29  26    P       P       23 48 10.8 +2.2
      baz=267
BORK  Borovoye           55.33 316    P       P       23 48 09.1 +0.1
BORK  Borovoye           55.33 316ceP         P       23 48 10.9 +1.9
BORK                                  pmax    pmax
      comp=Z,3.0nm,0.9s
HARP  HAARP              55.33  33    P       P       23 48 10.5 +1.6
      baz=271
C26K  Camden Bay         55.65  24    P       P       23 48 11.5 +0.5
      baz=266
KAIM  Kayak Island       55.78  36    P       P       23 48 13.2 +1.1
      baz=273
F26K  Sheenjek River     55.81  26    P       P       23 48 14.2 +1.9
      baz=268
SCRK  Sand Creek         55.84  31    P       P       23 48 13.6 +0.9
      baz=271
MBWA  Marble Bar         55.89 205    P       P       23 48 12.5 -0.9
J26L  Joseph Creek       56.02  30    P       P       23 48 14.6 +0.7
      baz=271,SNR=6.4
C27K  Jago River         56.05  24    P       P       23 48 15.6 +1.7
      baz=267
L26K  Log Cabin Wild     56.15  32    P       P       23 48 16.4 +1.6
      baz=272
PSA00 Pilbara Seismi     56.23 205    P       P       23 48 14.7 -1.1
PSA00                                 IAmb    IAmb    23 48 24.4
      comp=Z,22nm,1.8s
M26K  Nabesna, AK        56.34  33    P       P       23 48 17.7 +1.5
      baz=273
K27K  Chicken            56.68  31    P       P       23 48 20.7 +2.2
      baz=272
E27K  Coleen River       56.78  26    P       P       23 48 21.1 +1.9
      baz=270
DRK   Karamyk            56.79 299    P       P       23 48 19.7 -0.4
DRK                                   IAmb    IAmb    23 48 33.4
      comp=Z,6.0nm,0.8s
DRK   Karamyk            56.79 299    P       P       23 48 19.7 -0.4
DRK                                   pmax    pmax
      comp=Z,6.0nm,0.8s
I27K  Kandik River       56.82  29    P       P       23 48 20.9 +1.3
      baz=272
H27K  Steamboat Moun     56.84  28    P       P       23 48 21.7 +2.1
      baz=272
L27K  Beaver Creek,      56.84  32    P       P       23 48 21.5 +1.8
      baz=273
M27K  Edge Creek, AK     56.86  33    P       P       23 48 21.1 +1.1
      baz=274
KK31  Karatay Array      56.87 304            P       23 48 20.2 -0.1
KK31  Karatay Array      56.87 304    P       P       23 48 20.2 -0.1
KK31                                  pmax    pmax
      comp=Z,5.0nm,0.7s
KKAR  Karatay Array      56.87 304            P       23 48 20.2 -0.1
KKAR  Karatay Array      56.87 304    P       P       23 48 20.2 -0.1
D27M  Malcolm River      57.01  24    P       P       23 48 22.8 +2.0
      baz=270
CTG   Chitna Glacier     57.22  34    P       P       23 48 24.0 +1.4
      baz=275
NIL   Nilore             57.27 292            P       23 48 22.2 -0.9
NIL                                   IAmb    IAmb    23 48 26.6
      comp=Z,14nm,0.7s
NIL   Nilore             57.27 292    P       P       23 48 22.3 -0.9
NIL                                   pmax    pmax
      comp=Z,14nm,0.7s
MANEM Manem              57.38 297            P       23 48 24.3  0.0
MANEM                                 IAmb    IAmb    23 48 38.8
      comp=Z,22nm,0.8s
F28M  Old Crow           57.44  26    P       P       23 48 25.9 +2.0
      baz=272
I28M  Miner Creek        57.52  29    P       P       23 48 26.5 +1.9
      baz=274
DZM   Mont Dzumac        57.53 153    P       P       23 48 25.9 +0.9
DZM                                   IAmb    IAmb    23 48 41.0
      comp=Z,16nm,1.0s
E28M  Babbage River      57.54  25    P       P       23 48 26.5 +2.0
      baz=272,SNR=5.9
YUK3  Moose Creek        57.57  33    P       P       23 48 26.2 +1.1
      baz=275
D28M  Stokes Point       57.80  24    P       P       23 48 27.8 +1.5
      baz=272
DAWY  Dawson             57.86  31            P       23 48 27.9 +1.0
DAWY                                  IAmb    IAmb    23 48 30.1
      comp=Z,14nm,1.2s
DAWY  Dawson             57.86  31    P       P       23 48 28.9 +2.0
      baz=275
GAR   Garm               58.02 299    P       P       23 48 28.3 -0.3
GAR                                   IAmb    IAmb    23 48 52.1
      comp=Z,12nm,0.7s
H29M  Whitestone         58.12  28    P       P       23 48 30.9 +2.3
      baz=274
E29M  Blow River         58.15  25    P       P       23 48 30.8 +2.0
      baz=274
G29M  Pine Creek         58.20  27    P       P       23 48 31.1 +1.9
      baz=274
I29M  Ogilvie Camp,      58.21  29    P       P       23 48 30.9 +1.6
      baz=275
J29N  Klondike Camp      58.33  30    P       P       23 48 32.2 +2.0
      baz=276
M29M  Somme Creek        58.44  32    P       P       23 48 33.1 +2.1
      baz=277
YUK4  Talbot Arm         58.48  34    P       P       23 48 33.5 +2.0
      baz=277
L29M  L29M               58.51  32    P       P       23 48 33.7 +2.2
      baz=277
O29M  Mount Kennedy      58.65  35    P       P       23 48 34.4 +1.8
      baz=278
K29M  Barlow Dome        58.70  31    P       P       23 48 34.9 +2.0
      baz=277
EPYK  Eagle Plains       58.77  28    P       P       23 48 34.9 +1.7
      baz=276,SNR=7.2
G30M  tAoh Zraii Nji     58.90  27    P       P       23 48 36.0 +1.9
      baz=276
CHGR  Chuyangaron        58.99 299            P       23 48 35.2 -0.1
CHGR  Chuyangaron        58.99 299    P       P       23 48 35.2 -0.1
CHGR                                  pmax    pmax
      comp=Z,45nm,0.6s
F30M  Barrier River      59.01  26    P       P       23 48 36.8 +2.0
      baz=276
I30M  Mount Dempster     59.03  29    P       P       23 48 36.7 +1.5
      baz=277
HYT   Haines Junctio     59.10  34    P       P       23 48 37.6 +1.9
      baz=278
J30M  Hart River         59.13  30    P       P       23 48 37.6 +1.7
      baz=277
P29M  Windy Craggy       59.17  36    P       P       23 48 38.4 +2.3
      baz=279
M30M  Minto, Yukon       59.19  32    P       P       23 48 38.3 +2.1
      baz=278
N30M  Aishikik Lake      59.21  34    P       P       23 48 37.7 +1.3
      baz=278
G31M  Satah River        59.67  27    P       P       23 48 40.7 +1.4
      baz=278
INK   Inuvik             59.77  25    P       P       23 48 41.3 +1.3
      baz=278
H31M  Peel River         59.80  28    P       P       23 48 41.5 +1.1
      baz=278
F31M  Tsiigehtchic       59.81  26    P       P       23 48 41.3 +1.0
      baz=278
SHAA  Shahritus          60.09 298            P       23 48 42.8 -0.1
SHAA                                  IAmb    IAmb    23 48 47.6
      comp=Z,113nm,1.8s
SVE   Sverdlovsk         60.26 321  eP        P       23 48 44.8 +1.2
SVE                                   pmax    pmax
      comp=Z,11nm,0.6s
KBL   Kabul              60.31 295            P       23 48 43.2 -1.4
KBL                                   IAmb    IAmb    23 49 13.6
      comp=Z,5.8nm,0.8s
KBL   Kabul              60.31 295    P       P       23 48 43.2 -1.4
KBL                                   pmax    pmax
      comp=Z,6.0nm,0.9s
M31M  Drury Creek, Y     60.35  32    P       P       23 48 45.6 +1.4
      baz=280
N32M  Quiet Lake         61.17  33    P       P       23 48 50.9 +1.1
      baz=282
P32M  Atlin              61.19  35    P       P       23 48 51.3 +1.4
      baz=282
ARTI  Arti               61.57 321            P       23 48 52.5 +0.1
ARTI  Arti               61.57 321c iP        P       23 48 53.0 +0.5
ARTI                                                  23 49 35.8
ARTI                                  S       S       23 57 16.8 +4.0
ARTI                                  SS      SS      00 01 11.8 -1.8
ARTI                                  pmax    pmax
      comp=Z,58nm,2.6s
A36M  Sachs Harbour      61.90  21            P       23 48 55.3 +0.9
A36M                                  IAmb    IAmb    23 48 57.0
      comp=Z,8.5nm,0.8s
A36M  Sachs Harbour      61.90  21    P       P       23 48 56.0 +1.6
      baz=283,SNR=6.3
STKA  Stephens Creek     62.30 180    P       P       23 48 58.5 +1.0
      comp=Z,1.9nm,0.7s,baz=9.2,slow=2.5,SNR=3.7
      comp=Z,1.9nm,0.7s
AB31  Akbulak array      62.47 313            P       23 48 58.5 -0.1
AB31                                  IAmb    IAmb    23 49 13.7
      comp=Z,22nm,1.6s
ABKAR Akbulak array      62.47 313            P       23 48 58.3 -0.3
FORT  Forrest            62.63 194    P       P       23 48 59.7 -0.1
FORT                                  IAmb    IAmb    23 49 46.6
      comp=Z,11nm,1.0s
C36M  Paulatuk           62.93  23            P       23 49 02.1 +0.8
C36M  Paulatuk           62.93  23    P       P       23 49 02.1 +0.8
      baz=285,SNR=8.0
AKTO  Aktyubinsk         63.33 315    LR      LR      00 17 32.5
      comp=Z,169nm,18.5s,baz=254,slow=37
MORW  Morawa             64.45 205    P       P       23 49 11.5 -0.4
LIRD  Liard River Hi     64.98  34    P       P       23 49 17.0 +2.0
      baz=288
TOAD  Toad River Com     65.58  35    P       P       23 49 20.3 +1.3
      baz=289
KIRV  Kirov              65.60 325    LR      LR      00 20 40.9
      comp=Z,107nm,18.1s,baz=37,slow=38
KIRV  Kirov              65.60 325ceP         P       23 49 20.5 +1.5
SPB2  Spitsbergen Ar     66.76 349    P       P       23 49 27.1 +0.9
SPITS Spitsbergen Ar     66.76 349    P       P       23 49 27.3 +1.1
RES   Resolute Bay       68.54  14            P       23 49 38.1 +0.6
RES                                   IAmb    IAmb    23 49 38.8
      comp=Z,4.8nm,0.9s
RES   Resolute Bay       68.54  14    P       P       23 49 38.1 +0.6
RES                                   pmax    pmax
      comp=Z,5.0nm,0.9s
YKA   Yellowknife Ar     69.00  29    P       P       23 49 41.0 +0.4
      comp=Z,2.1nm,0.9s,baz=293,slow=7.0,SNR=16
      comp=Z,2.1nm,0.9s
YKA   Yellowknife Ar     69.00  29    P       P       23 49 40.4 -0.1
YKA   Yellowknife Ar     69.00  29  i P       P       23 49 41.2 +0.7
YKA                                   pmax    pmax
      comp=Z,2.0nm,0.8s
KLMR  Klimovskoe         69.35 329  eP        P       23 49 41.7 -1.0
KLMR                                  pmax    pmax
      comp=Z,38nm,1.7s
ARCES ARCESS Array B     70.04 340    P       P       23 49 47.6 +0.7
      comp=Z,4.9nm,0.9s,baz=63,slow=6.1,SNR=4.5
ARCES                                 LR      LR      00 24 07.1
      comp=Z,144nm,18.7s,baz=282,slow=39
      comp=Z,4.9nm,0.9s
ARCES ARCESS Array B     70.04 340    P       P       23 49 47.2 +0.4
K02D  Willamette Mer     72.77  50    P       P       23 50 04.7 +0.8
POIN  Pond Inlet         73.24  12    P       P       23 50 06.8 +0.8
POIN                                  IAmb    IAmb    23 50 29.8
      comp=Z,18nm,1.6s
OBN   Obninsk            73.45 325⇓eP         P       23 50 08.3 +0.8
OBN                                 e*PP      pP      23 50 12.1 -1.1
OBN                                 e*SP      sP      23 50 14.9 -0.4
OBN                                 i                 23 50 22.1
OBN                                                   23 52 55.0
OBN                                 e                 00 00 09.5
OBN                                 eSS       SS      00 04 22.0 +4.9
OBN                                   pmax    pmax
      comp=Z,27nm,1.7s
OBN                                   MLR     MLR
      comp=Z,227nm,15.0s
LPSR  Galich'ya Gora     73.48 322  eP        P       23 50 14.0 +6.2
LPSR                                  pmax    pmax
      comp=Z,8.0nm,0.9s
YBH   Yreka Blue Hor     73.84  51    LR      LR      00 14 05.4
      comp=Z,6.4nm,21.8s,baz=308,slow=29
L04D  Klamath Falls      73.89  50    P       P       23 50 11.6 +1.0
VSR   Storozhevoye       74.02 320  eP        P       23 50 16.5 +5.5
VSR                                   pmax    pmax
      comp=Z,7.0nm,0.9s
NEW   Newport            74.31  43    P       P       23 50 13.0 +0.1
NEW                                   pmax    pmax
      comp=Z,7.0nm,1.0s
FIA1  FINESS Array S     74.61 333    P       P       23 50 14.1 -0.1
FINES FINESS Array B     74.61 333    P       P       23 50 14.7 +0.4
      comp=Z,2.8nm,0.4s,baz=71,slow=4.2,SNR=27
      comp=Z,2.8nm,0.4s
FINES FINESS Array B     74.61 333    P       P       23 50 14.3 +0.1
ILON  Igloolik, Nuna     75.17  15    P       P       23 50 16.9 -0.4
ILON                                  IAmb    IAmb    23 52 26.2
      comp=Z,27nm,1.7s
KBZ   Khabaz             75.42 312    P       P       23 50 20.5 +1.3
      comp=Z,3.2nm,0.8s,baz=67,slow=4.3,SNR=11
      comp=Z,3.2nm,0.8s
KBZ   Khabaz             75.42 312  i P       P       23 50 20.1 +0.9
KBZ                                   pmax    pmax
      comp=Z,8.0nm,0.9s
KIV   Kislovodsk         75.45 313    P       P       23 50 20.3 +0.7
KIV                                   IAmb    IAmb    23 50 37.0
      comp=Z,25nm,1.3s
KIV   Kislovodsk         75.45 313  eP        P       23 50 19.3 -0.3
KIV                                   pmax    pmax
      comp=Z,6.0nm,1.0s
JTMT  Jette              76.23  42            P       23 50 25.2 +1.2
SUMG  Summit             76.94   0    P       P       23 50 29.2 +1.3
SUMG  Summit             76.94   0    P       P       23 50 29.2 +1.3
SUMG                                  pmax    pmax
      comp=Z,59nm,2.0s
HLID  Hailey             78.30  46    P       P       23 50 36.2 +0.4
NVAR  Mina Array Bea     78.38  52    P       P       23 50 37.9 +1.6
      comp=Z,4.0nm,0.6s,baz=292,slow=5.5,SNR=23
NVAR                                  LR      LR      00 16 52.8
      comp=Z,52nm,20.7s,baz=298,slow=29
      comp=Z,4.0nm,0.6s
NVAR  Mina Array Bea     78.38  52    P       P       23 50 37.1 +0.8
FFC   Flin Flon          78.71  32            P       23 50 38.1 +0.6
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FFC				IAmb	IAmb	23 50 39.0	
	comp=Z,6.0nm,0.8s						
FFC	Flin Flon	78.71	32	P	P	23 50 38.1	+0.6
FFC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PABE	Paberze	79.15	329	P	P	23 50 40.1	+0.2
AKASG	Malin Array Be	79.59	323	P	P	23 50 42.5	+0.1
	comp=Z,0.6nm,0.3s,baz=51,slow=5.5,SNR=7.8						
AKASG				LR	LR	00 30 44.0	
	comp=Z,184nm,18.1s,baz=347,slow=39						
	comp=Z,0.6nm,0.3s						
AKASG	Malin Array Be	79.59	323	ceP	P	23 50 44.4	+2.0
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKBB	Malin Array Si	79.59	323	P	P	23 50 42.6	+0.2
AKBB				IAmb	IAmb	23 50 50.7	
	comp=Z,6.6nm,0.7s						
AKBB	Malin Array Si	79.59	323	P	P	23 50 42.6	+0.2
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GMN	Gold Mountain	79.66	53	P	P	23 50 43.5	+0.1
HFS	Hagfors	80.01	337	P	P	23 50 44.8	+0.3
	comp=Z,3.2nm,0.6s,baz=70,slow=4.9,SNR=10						
	comp=Z,3.2nm,0.6s						
NC204	NORSAR Array S	80.13	338	P	P	23 50 45.9	+0.7
NB2	NORSAR Subarra	80.16	338	P	P	23 50 45.8	+0.4
	comp=Z,1.4nm,0.6s,baz=41,slow=5.3						
NB2	NORSAR Subarra	80.16	338	P	P	23 50 45.8	+0.4
NOA	NORSAR Array B	80.16	338	P	P	23 50 45.8	+0.4
	comp=Z,1.7nm,0.6s,baz=41,slow=5.5,SNR=7.4						
	comp=Z,1.7nm,0.6s						
GWY	Greenwater Val	80.64	54		P	23 50 48.9	+0.3
DUG	Dugway, Tooele	81.10	48		P	23 50 52.2	+1.2
DUG				IAmb	IAmb	23 50 53.2	
	comp=Z,4.8nm,0.7s						
DUG	Dugway, Tooele	81.10	48	P	P	23 50 52.2	+1.2
DUG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PPT2	Papeete2	81.41	116	eLR	LR	00 16 13.4	
	comp=Z,47nm,26.2s						
BW06	Boulder Array	81.72	45		P	23 50 54.9	+0.6
BW06				IAmb	IAmb	23 52 40.7	
	comp=Z,11nm,1.6s						
PDAR	Pinedale Array	81.72	45	P	P	23 50 55.2	+0.9
	comp=Z,2.6nm,0.7s,baz=272,slow=2.1,SNR=30						
	comp=Z,2.6nm,0.7s						
PDAR	Pinedale Array	81.72	45	P	P	23 50 54.8	+0.5
PFO	Pinyon Flats O	82.12	56	LR	LR	00 28 23.1	
	comp=Z,74nm,18.5s,baz=286,slow=36						
RDMU	Red Mountain	82.95	47		P	23 51 01.8	+1.0
P18A	Preston Nutter	83.06	48	P	P	23 51 02.5	+1.1
P18A				IAmb	IAmb	23 51 04.2	
	comp=Z,6.3nm,0.7s						
SRU	San Rafael Swe	83.17	48	P	P	23 51 02.6	+0.7
SRU				IAmb	IAmb	23 51 03.8	
	comp=Z,7.0nm,0.7s						
SRU	San Rafael Swe	83.17	48	P	P	23 51 02.6	+0.7
SRU				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BRTR	Keskin Array B	83.42	313	P	P	23 51 03.7	+0.6
	comp=Z,1.7nm,0.8s,baz=114,slow=4.3,SNR=7.0						
	comp=Z,1.7nm,0.8s						
BRTR	Keskin Array B	83.42	313	P	P	23 51 03.0	-0.1
BRTR	Keskin Array B	83.42	313	ceP	P	23 51 04.0	+0.9
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BUR08	Bucovina Ar. S	83.55	323	P	P	23 51 03.9	+0.3
RAYN	Ar Rayn	83.55	293		P	23 51 04.1	+0.2
RAYN				IAmb	IAmb	23 51 07.1	
	comp=Z,7.5nm,0.7s						
RAYN	Ar Rayn	83.55	293	P	P	23 51 04.1	+0.2
RAYN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BURAR	Bucovina Array	83.56	323	P	P	23 51 03.4	-0.2
ULM	Lac du Bonnet	84.46	33	LR	LR	00 30 14.7	
	comp=Z,41nm,19.4s,baz=356,slow=37						
CLL	Collm	86.79	331	eP	P	23 51 20.0	+0.4
CLL	Collm	86.79	331	eP	P	23 51 20.0	+0.4
ANMO	Albuquerque	88.23	50	LR	LR	00 30 43.6	
	comp=Z,78nm,18.3s,baz=336,slow=35						
LPIG	La Paz	91.84	61	LR	LR	00 28 13.4	
	comp=Z,62nm,18.9s,baz=9.5,slow=32						
TXAR	Lajitas Array	93.52	53	P	P	23 51 53.3	+1.6
	comp=Z,3.4nm,0.8s,baz=308,slow=2.9,SNR=33						
	comp=Z,3.4nm,0.8s						
TXAR	Lajitas Array	93.52	53	P	P	23 51 52.6	+1.0
RKT	Rikitea	95.87	113	eLR	LR	00 23 02.8	
	comp=Z,5µm,39.2s						
QSPA	South Pole Qui	120.52	180	PKP	PKiKP	23 57 27.4	+1.2
	comp=Z,0.6nm,0.3s,baz=229,slow=2.5,SNR=1.5						
TORD	Torodi Ar. Bea	122.03	313	PKP	PKiKP	23 57 30.4	-0.3
	comp=Z,0.7nm,0.3s,baz=38,slow=4.4,SNR=0.9						
LPAZ	La Paz	148.94	69	PKPbc	PKPbc	23 58 23.2	-1.4
	comp=Z,3.1nm,0.7s,baz=343,slow=2.2,SNR=13						

DJA 11 23:58:24.7±0.3**, 7°S**±4°×**10°6E**±°**, h69**^{km}±9^{km}**, M3.8**/14**,**
mb4.0/3**, MLv3.8**/14**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	Sukabumi	0.85	83	P	Pn	23 58 42.1	+0.8
SKJI				S	Sn	23 58 55.1	+1.6
SBJI	Serang	1.07	23	P	Pn	23 58 43.2	-0.8
SBJI				S	Sn	23 58 58.7	+0.3
DBJI	Dramaga	1.17	62	P	Pn	23 58 45.6	+0.2
DBJI				S	Sn	23 59 01.5	+0.7
CNJI	Cibinong	1.42	98	P	Pn	23 58 48.3	-0.3
BBJI	Bungbulang	1.96	100	P	Pn	23 58 55.4	-0.4
KASI	Kota Agung	1.98	323	P	Pn	23 58 56.7	+0.6
KLSI		2.59	338	P	Pn	23 59 04.4	0.0
LWLI	Liwa	2.65	322	P	Pn	23 59 05.2	-0.1
MDSI	Maura Dua	3.02	330	P	Pn	23 59 08.8	-1.4
KPJI	Karang Pucung	3.20	94	P	Pn	23 59 13.7	+1.0
EGSI	Enggano, Bengk	3.83	297	P	Pn	23 59 22.4	+1.1
MNAI	Manna	3.87	315	P	Pn	23 59 22.0	+0.2
UGM	Wanagama	4.84	100	P	Pn	23 59 34.2	-0.9
PCJI	Pacitan	5.53	102	P	Pn	23 59 44.0	-0.4
	0.2nm34nm,1.3s						
SNJI	Sawahan-Nganju	6.04	97	P	Pn	23 59 53.0	+1.4
	0.2nm16nm,2.2s						
JAGI	Jajag, Banyuwa	8.47	100	P	Pn	00 00 23.8	-1.0

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*BER **12** 00:03:31.4±2.6, 80°.47N×2°.34W, h10^{km}, Mw3.5, ML3.7(NAO), Confirmed Earthquake*
*IDC **12** 00:03:31.3±1.0, 80°.47N×2°.82W, h0^{km}, mb3.5/8, mbtmp3.6/10, ML3.3/2, Error ellipse: s-maj=27.9km s-min=15.8km az=34.0*
*KOLA **12** 00:03:33.0, 80°.63N×0°.88W, h0^{km}, ML1.9, Greenland sea,Knipovich ridge, north*
*DNK **12** 00:03:33.3±2.2, 80°.50N×1°.84W, h36^{km}±15^{km}, ML2.5, Presumed earthquake*
*FCIAR **12** 00:03:35.0, 80°.38N×0°.34W, h10^{km}, station OMEGA has station magnitude of 3.60*
ISC 12 00:03:30.4±0.6**, 80°.42N**±0°.05×**2°.36W**±0°.04**, h10**^{km}**, n51,**
σ**3^{s}47**/77**, mb3.4**/6**, 1C, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOR	Nord	2.54	305	Pn	Pn	00 04 10.8	-0.7
NOR				Sn	Sn	00 04 38.2	-4.2
NOR	Nord	2.54	305	eP	Pn	00 04 11.0	-0.5
NOR				eS	Sn	00 04 38.4	-4.0
NOR	Nord	2.54	305	i P	Pn	00 04 11.1	-0.5
NOR				i S	Sn	00 04 39.0	-3.4
NOR				IAML		00 04 48.6	
	comp=Z,24nm,0.3s						
KBS	Kingsbay	2.98	113	Pn	Pn	00 04 16.9	-0.7
KBS				Sn	Sn	00 04 47.8	-5.4
KBS	Kingsbay	2.98	113	P	Pn	00 04 16.4	-1.1
KBS				S	Sn	00 04 47.8	-5.4
KBS	Kingsbay	2.98	113	eP	Pn	00 04 16.9	-0.7
KBS				eS	Sn	00 04 49.0	-4.2
KBS				IAML		00 04 56.6	
	comp=Z,19nm,0.4s						
KBS	Kingsbay	2.98	113	i P	Pn	00 04 16.8	-0.7
KBS				i S	Sn	00 04 47.5	-5.7
BRBB	Barentsburg B	3.87	119	Pn	Pn	00 04 31.1	+1.3
BRBB				Sn	Sn	00 05 12.3	-2.9
BRBB	Barentsburg B	3.87	119	P	Pn	00 04 30.1	+0.4
BRBB				S	Sn	00 05 13.1	-2.1
BRBB	Barentsburg B	3.87	119	Pn	Pn	00 04 31.1	+1.3
BRBB				Sn	Sn	00 05 12.3	-2.9
BRBA	Barentsburg A	3.90	119	Pn	Pn	00 04 31.4	+1.3
BRBA				Sn	Sn	00 05 12.5	-3.3
BRBA	Barentsburg A	3.90	119	Pn	Pn	00 04 31.4	+1.3
BRBA				Sn	Sn	00 05 12.5	-3.3
SPA0	Spitsbergen Ar	4.14	113	Pn	Pn	00 04 33.5	0.0
	baz=326,slow=8.6						
SPA0				Sn	Sn	00 05 17.7	-4.1
	baz=318,slow=14						
SPA0	Spitsbergen Ar	4.14	113⇑	iP	Pn	00 04 33.4	-0.1
SPA0				i S	Sn	00 05 17.4	-4.4
SPA0	Spitsbergen Ar	4.14	113	Pn	Pn	00 04 33.5	0.0
	baz=326,slow=8.6						
SPA0				Sn	Sn	00 05 17.7	-4.1
	baz=318,slow=14						
SPA0				IAML		00 05 21.3	
	comp=Z,12nm,0.8s						
SPITS	Spitsbergen Ar	4.14	113	Pn	Pn	00 04 33.6	0.0
	baz=329,slow=7.8						
SPITS				Sn	Sn	00 05 20.1	-1.7
	baz=320,slow=52						
SPITS	Spitsbergen Ar	4.14	113	P	Pn	00 04 33.1	-0.4
SPITS				S	Sn	00 05 18.4	-3.4
DAG	Danmarks Havn	4.87	230	eP	Pn	00 04 43.2	-0.2
DAG				e		00 04 50.7	
DAG				eS	Sn	00 05 34.3	-5.5
DAG	Danmarks Havn	4.87	230	i P	Pn	00 04 43.5	+0.1
DAG				i S	Sn	00 05 35.0	-4.7
DAG				IAML		00 05 42.1	
	comp=Z,31nm,0.3s						
HSPB	Hornsund (broa	4.89	125	Pn	Pn	00 04 44.0	+0.2
HSPB				Sn	Sn	00 05 36.3	-3.9
HSPB	Hornsund (broa	4.89	125	P	Pn	00 04 44.0	+0.2
HSPB				S	Sn	00 05 38.1	-2.1
HSPB	Hornsund (broa	4.89	125	eP	Pn	00 04 43.9	+0.2
HSPB				eS	Sn	00 05 35.5	-4.7
HSPB	Hornsund (broa	4.89	125	Pn	Pn	00 04 44.0	+0.2
HSPB				Sn	Sn	00 05 36.3	-3.9
HOPEN	Hopen	6.67	112	Pn	Pn	00 05 07.5	-0.7
HOPEN				Sn	Sn	00 06 17.4	-6.6
HOPEN	Hopen	6.67	112	eP	Pn	00 05 07.8	-0.4
HOPEN				eS	Sn	00 06 17.2	-6.8
DBG	Daneborg	7.23	222	Pn	Pn	00 05 16.1	+0.1
DBG				Sn	Sn	00 06 30.8	-7.1
DBG	Daneborg	7.23	222	eP	Pn	00 05 15.6	-0.3
DBG				eS	Sn	00 06 30.8	-7.1
DBG	Daneborg	7.23	222	eP	Pn	00 05 15.7	-0.3
DBG				eS	Sn	00 06 30.8	-7.1
DBG				IAML		00 06 47.1	
	comp=Z,14nm,0.6s						
ZFI2	Zemlya Franca-	7.96	63	eP	Pn	00 05 25.3	-0.6
ZFI2				eS	Sn	00 06 48.0	-7.9
OMEGA	Omega	7.99	63	eP	Pn	00 05 25.4	-0.8
OMEGA				eS	Sn	00 06 48.3	-8.1
	comp=Z,15nm,2.3s						
NEEM	North Greenlan	9.54	277	eP	Pn	00 05 43.8	-4.0
NEEM				i S	Sn	00 07 23.9	-11
NEEM	North Greenlan	9.54	277	eP	Pn	00 05 43.8	-4.0
NEEM				i S	Sn	00 07 23.9	-11
NEEM				IAML		00 07 31.1	
	comp=Z,11nm,0.2s						
SUMG	Summit	11.23	246	i P	Pn	00 06 09.7	-1.4
SUMG				eS	Sn	00 08 03.5	-13
KULLO	Kullorsuaq	12.65	273	i P	Pn	00 06 26.2	-3.8
KULLO				eS	Sn	00 08 32.8	-18
ARA0	ARCESS Array S	12.85	132	Pn	Pn	00 06 34.2	+1.5
	baz=346,slow=12						
ARA0	ARCESS Array S	12.85	132	Pn	Pn	00 06 34.2	+1.5
	baz=346,slow=12						
ARCES	ARCESS Array B	12.85	132	Pn	Pn	00 06 35.3	+2.5
	comp=Z,0.1nm,0.3s,baz=341,slow=11,SNR=6.2						
	comp=Z,8.1nm,1.0s						
TULEG	Thule	13.07	288	i P	Pn	00 06 31.5	-4.2
RES	Resolute Bay	18.48	303	P	P	00 07 45.1	-0.8
	comp=Z,0.2nm,0.3s,baz=37,slow=15,SNR=10						
RES				S	Sn	00 10 55.0	-17
	comp=Z,0.4nm,0.4s,baz=135,slow=17,SNR=1.2						
	comp=Z,0.7nm,0.4s						
FIA0	FINESS Array S	20.71	140	P	P	00 08 11.7	+1.3
	baz=350,slow=11						
FIA0	FINESS Array S	20.71	140	P	P	00 08 11.7	+1.3
	baz=350,slow=11						
FINES	FINESS Array B	20.71	140	P	Pn	00 08 13.8	+1.1
	comp=Z,4.2nm,0.9s,baz=334,slow=9.3,SNR=4.2						
	comp=Z,4.2nm,0.9s						
HFS	Hagfors	20.92	157	P	Pn	00 08 15.4	+0.3
	comp=Z,3.1nm,0.8s,baz=356,slow=10,SNR=4.7						
	comp=Z,3.1nm,0.8s						
HFS	Hagfors	20.92	157	P	Pn	00 08 14.4	-0.7
	baz=0.3,slow=10						
HFS	Hagfors	20.92	157	P	Pn	00 08 14.4	-0.7
	baz=0.3,slow=10						
NRIK	Noril'sk	22.81	66	P	P	00 08 35.3	+2.5
	comp=Z,0.6nm,0.3s,baz=351,slow=8.3,SNR=6.8						
	comp=Z,0.6nm,0.3s						
GERES	GERESS Array B	32.17	160	P	P	00 10 01.8	+3.9
	comp=Z,0.1nm,0.3s,baz=1.3,slow=8.8,SNR=1.4						
	comp=Z,0.1nm,0.3s						
ILAR	Eielson Array	33.67	333	P	P	00 10 13.0	+2.3
	comp=Z,0.3nm,0.7s,baz=7.0,slow=8.2,SNR=4.6						
	comp=Z,0.3nm,0.7s						
KURBB	Kurchatov Arra	39.02	87	P	P	00 10 59.9	+3.4
	comp=Z,0.3nm,0.3s,baz=346,slow=7.8,SNR=7.2						
	comp=Z,0.3nm,0.3s						
MKAR	Makanchi Array	43.36	85	P	P	00 11 35.5	+3.2
	comp=Z,0.3nm,0.7s,baz=335,slow=6.4,SNR=2.6						
	comp=Z,0.3nm,0.7s						
TXAR	Lajitas Array	63.14	286	P	P	00 13 59.7	+1.7
	comp=Z,0.4nm,0.6s,baz=16,slow=6.3,SNR=8.0						
	comp=Z,0.4nm,0.6s						

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*RSNC **12** 00:09:02.5±0.0, 3°N±1°×7°6W±°, h12^{km}±1^{km}, M3.8, mB4.6, mb4.5, ML3.5, Mw(mB)3.9*
*IDC **12** 00:09:25.4±2.2, 3°.14N×75°.26W, h95^{km}±25^{km}, mb3.2/6, mbtmp3.7/8, MS3.1/2, Error ellipse: s-maj=43.3km s-min=18.6km az=88.0*
ISC 12 00:09:15.4±1.6**, 3°.03N**±0°.03×**75°.89W**±0°.03**, h2**^{km}±11^{km}**,**
n55, σ**1^{s}79**/77**, mb3.6**/5**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BETC	Betania	0.56	127	P	Pg	00 09 26.7	+0.4
BETC				S	Sb	00 09 34.7	-2.0
JAMC	Jamundi, Valle	0.80	283	P	Pb	00 09 29.8	-2.5
JAMC				S	Sb	00 09 40.8	-2.9
POPC	Popayan, Colom	0.92	238	P	Pb	00 09 32.1	-2.2
POPC				S	Sb	00 09 44.5	-2.6
GARC	Garzon, Huila	0.92	154	P	Pb	00 09 33.4	-1.0
GARC				S	Sn	00 09 46.8	-2.9
YOTC	Yotoco, Valle	1.05	335	P	Pn	00 09 33.0	-4.4
YOTC				S	Sb	00 09 46.6	-4.2
ORTC	Ortega, Tolima	1.09	36	P	Pn	00 09 34.8	-3.0
ORTC				S	Sb	00 09 49.4	-2.3
PRAC	Prado	1.21	56	P	Pn	00 09 37.3	-2.2
PRAC				S	Sb	00 09 53.9	-1.5
FLOC	Florencia	1.45	171	P	Pn	00 09 42.2	-0.6
FLOC				S	Sg	00 10 02.9	+0.7
URMC	La Uribe, Meta	1.53	82	P	Pn	00 09 43.3	-0.5
URMC				S	Sn	00 10 03.5	-0.8
BBAC	Balboa, Cauca	1.68	234	P	Pn	00 09 45.7	-0.4
BBAC				S	Sn	00 10 07.9	-0.5
CRUC	La Cruz	1.79	216	P	Pb	00 09 49.5	+0.2
PLMC	San Jos del P	1.91	348	P	Pn	00 09 47.1	-2.0
NIZA	Niza - Manizal	2.06	12	P	Pn	00 09 50.8	-0.6
NIZA				S	Sn	00 10 17.3	-0.5
MACC	Macarena, Meta	2.22	113	P	Pn	00 09 54.7	+1.3
MACC				S	Sb	00 10 23.7	-0.7
GUY2C	Guyana, Caldas	2.25	14	P	Pn	00 09 53.9	-0.2
GUY2C				S	Sn	00 10 22.6	0.0
GR1C	Gorgona, Isla	2.27	269	P	Pn	00 09 53.1	-0.9
GR1C				S	Sn	00 10 22.8	+0.2
ROSC	El Rosal	2.39	41	P	Pn	00 09 57.5	+1.5
	270nm,0.5s,baz=325,slow=22,SNR=24						
ROSC				S	Sn	00 10 27.9	+1.9
	1µm,0.8s,baz=184,slow=24,SNR=29						
ROSC	El Rosal	2.39	41	P	Pn	00 09 56.3	+0.3
ROSC				S	Sb	00 10 29.8	+0.3
PIZC	Pizarro, Choco	2.42	323	P	Pn	00 09 57.9	+1.8
PIZC				S	Sn	00 10 29.7	+3.4
VILC	Villavicencio,	2.44	64	P	Pn	00 09 58.9	+2.4
VILC				S	Sb	00 10 29.9	-1.0
CHIC	Chingaza	2.68	53	P	Pn	00 10 00.6	+0.6
CHIC				S	Sn	00 10 36.2	+2.9
NORC	Norcasia	2.72	22	P	Pn	00 10 00.4	+0.2
NORC				S	Sn	00 10 35.6	+1.8
CBOC	Ciudad Bolivar	2.82	358	P	Pn	00 10 02.1	+0.3
CMBC	Cumbal	2.83	223	P	Pb	00 10 08.6	+1.5
TULM	Tulcn-Chalpat	2.98	220	P	Pb	00 10 08.1	-1.4
BONI	La Bonita	3.04	213	P	Pb	00 10 10.8	+0.4
BONI				S	Sb	00 10 50.3	+2.3
PTLC	Puerto Leguiza	3.04	159	P	Pb	00 10 10.7	+0.4
TUMC	Tumaco	3.07	247	P	Pn	00 10 06.7	+1.6
TUMC				S	Sn	00 10 45.2	+2.7
HELC	Santa Helena	3.16	7	P	Pn	00 10 08.5	+1.9
SPBC	San Pablo de B	3.18	35	P	Pn	00 10 06.9	+0.3
SPBC				S	Sn	00 10 47.0	+1.9
CUSE	Cuicocha Este	3.69	223	P	Pb	00 10 19.8	-1.8
OTAV	Otavalo	3.77	223	P	Pb	00 10 20.0	-3.1
PTBC	PUERTO BERRIO,	3.77	22	P	Pn	00 10 15.2	+0.5
PTBC				S	Sn	00 11 01.6	+1.9
DBBC	Dabeiba	3.98	355	P	Pn	00 10 20.5	+2.9
PAC1	Pacto, Paraso	3.99	227	P	Pn	00 10 21.7	+3.9
PAC1				S	Sn	00 11 07.8	+2.5
RUSC	La Rusia	3.99	44	P	Pn	00 10 18.9	+0.7
BRJC	Barrancabermej	4.47	29	P	Pn	00 10 27.1	+2.9
PTAC	Punta Ardita,	4.52	335	P	Pn	00 10 24.0	-0.9
APAC	Apartado, Choc	4.89	352	P	Pn	00 10 32.8	+2.7
PAMC	Pamplona, Colo	5.33	36	P	Pn	00 10 38.1	+1.5
	382nm38nm,0.7s						
BCIP	Isla Barro Col	7.25	327	P	Pn	00 11 04.4	+1.9
	70nm,1.8s						
SDV	Santo Domingo	7.82	42	P	Pn	00 11 10.1	-0.5
	5.6nm,0.3s,baz=150,slow=5.5,SNR=14						
SDV				S	Sn	00 12 40.5	+0.6
	40nm,0.8s,baz=50,slow=13,SNR=7.8						
SDV	Santo Domingo	7.82	42	P	Pn	00 11 12.1	+1.5
	20nm,0.8s						
URIC	Uribia, Colomb	9.45	24	P	Pn	00 11 31.9	-0.8
SGC2	Sao Gabriel da	9.45	109	P	Pn	00 11 33.4	+0.6
	463nm14nm,0.6s						
ATAH	Atahualpa	10.40	194	P	Pn	00 11 55.7	+10
	5.7nm,0.6s,baz=360,slow=7.7,SNR=4.1						
ATAH				LR	LR	00 16 43.4	
	comp=Z,94nm,18.5s,baz=358,slow=41						
SJG	San Juan	17.77	32	LR	LR	00 20 58.1	
	comp=Z,48nm,18.7s,baz=75,slow=40						
LPAZ	La Paz	20.67	158	P	P	00 13 56.7	-0.8
	0.7nm,0.7s,baz=5.7,slow=10,SNR=1.8						
	0.7nm,0.7s						
TXAR	Lajitas Array	37.15	318	P	P	00 16 30.2	+2.2
	0.4nm,0.8s,baz=129,slow=8.1,SNR=3.5						
	0.4nm,0.8s						
PDAR	Pinedale Array	49.65	328	P	P	00 18 09.4	+0.5
	0.5nm,0.7s,baz=141,slow=9.7,SNR=3.5						
	0.5nm,0.7s						
NVAR	Mina Array Bea	52.30	318	P	P	00 18 30.0	+1.1
	0.5nm,0.6s,baz=119,slow=7.1,SNR=1.6						
	0.5nm,0.6s						
YKA	Yellowknife Ar	65.91	341	P	P	00 20 01.6	-1.0
	0.6nm,0.7s,baz=143,slow=5.3,SNR=9.1						
	0.6nm,0.7s						
ILAR	Eielson Array	79.24	336	P	P	00 21 20.4	-1.6
	0.7nm,1.0s,baz=110,slow=9.0,SNR=3.3						
	0.7nm,1.0s						
ASAR	Alice Springs	144.64	232	PKPbc	PKPab	00 28 52.1	-1.2
	1.0nm,0.6s,baz=119,slow=3.9,SNR=15						
WRA	Warramunga Arr	146.05	238	PKPbc	PKPdf	00 28 56.9	-0.4
	1.0nm,0.8s,baz=115,slow=2.9,SNR=6.4						

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*JMA **12** 00:11:24.9±0.5, 44°N±2°×14°8E±°, h0^{km}, MV4.4/21, SE OFF ETOROFU*
*SKHL **12** 00:11:26.6±0.2, 44°.60N×148°.50E, h52^{km}±7^{km}, mb4.8/4*
ISC 12 00:11:23.4±3.6**, 44°.48N**±0°.09×**148°.7E**±0°.2**, h55**^{km}**, n14,**
σ**1^{s}73**/23**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.95	323	eP	Pn	00 11 40.9	+0.3
KUR				AMB	AMB	00 11 42.0	
	590nm,0.4s						
KUR				eS	Sn	00 11 51.5	-1.7
KUR				A	A	00 11 52.3	
	2µm,0.4s						
KUR				A	A	00 11 52.3	
	1µm,0.4s						
YUK	Yuzh-Kuril'sk	2.07	259	i P	Pn	00 11 56.4	+0.6
YUK				AMB	AMB	00 11 57.3	
	500nm,0.4s						
YUK				i S	Sn	00 12 18.1	-2.3
YUK				A	A	00 12 23.0	
	440nm,0.3s						
YUK				A	A	00 12 23.0	
	680nm,0.3s						
GLVR	Golovnino	2.39	253	eP	Pn	00 12 02.2	+2.1
GLVR				AMB	AMB	00 12 04.6	
	260nm,0.4s						
GLVR				eS	Sn	00 12 28.8	+0.5
GLVR				A	A	00 12 34.7	
	480nm,0.5s						
GLVR				A	A	00 12 34.7	
	880nm,0.5s						
NEM2	Nemuro 2	2.40	243	P	Pn	00 12 00.3	+0.1
NEM2				eS	Sn	00 12 26.0	-2.3
NMR	Nemuro--Hokkai	2.40	244	i P	Pn	00 12 00.3	0.0
NMR				i S	Sn	00 12 25.7	-2.8
JRA	Rausu	2.61	259	P	Pn	00 12 04.7	+1.5
JRA				eS	Sn	00 12 35.0	+1.3
JNSB	Nemuroshibetsu	2.74	256	P	Pn	00 12 06.6	+1.7
JKHN	Kushirohamanak	2.91	242	P	Pn	00 12 07.8	+0.7
JKHN				eS	Sn	00 12 39.0	-1.9
JNK	Nakash	2.99	254	P	Pn	00 12 09.7	+1.3
JNK				S	Sn	00 12 41.9	-1.1
AKK	Akkeshi	3.14	244	eP	Pn	00 12 11.2	+0.8
JAK	Akkeshi	3.24	244	P	Pn	00 12 12.5	+0.7
JAK				eS	Sn	00 12 46.8	-2.4
JAR	Ashorobuto	3.74	253	P	Pn	00 12 20.9	+2.3
JCH	Churui	4.29	246	P	Pn	00 12 28.1	+2.0
JNBK	Urakawa-nobuka	4.85	245	eP	Pn	00 12 35.5	+1.8

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*IDC **12** 00:12:28.7±0.8, 33°.14N×141°.64E, h0^{km}, mb3.7/9, mbtmp3.6/10, ML2.4/1, MS3.4/1, Error ellipse: s-maj=21.8km s-min=19.2km az=77.0*
ISC 12 00:12:34.6±0.8**, 33°.18N**±0°.10×**141°.49E**±0°.09**, h41**^{km}**, n13,**
σ**1^{s}01**/14**, mb3.7**/9**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	1.44	268	Pn	Pn	00 12 56.7	-1.4
	58nm,0.3s,baz=11,slow=22,SNR=7.7						
JHJ				Sn	Sn	00 13 16.1	+0.3
	123nm,0.3s,baz=77,slow=22,SNR=8.0						
MJAR	Matsushiro Arr	4.31	322	Pn	Pn	00 13 37.5	-0.1
	0.2nm,0.3s,baz=147,slow=12,SNR=4.4						
MJAR				Sn	Sn	00 14 25.2	-1.4
	0.1nm,0.3s,baz=45,slow=44,SNR=1.3						
	2.2nm,0.5s						
YAK	Yakutsk	29.85	349	LR	LR	00 32 22.4	
	comp=Z,66nm,18.6s,baz=275,slow=40						
SONM	Songino Array	30.14	310	P	P	00 18 42.8	+2.1
	1.4nm,1.0s,baz=116,slow=8.5,SNR=4.6						
	1.4nm,1.0s						
MKAR	Makanchi Array	46.31	305	P	P	00 20 57.3	+1.0
	0.3nm,0.6s,baz=88,slow=9.1,SNR=4.6						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	48.49	311	P	P	00 21 12.7	-0.5
	0.4nm,0.5s,baz=88,slow=7.7,SNR=5.6						
	0.4nm,0.5s						
ILAR	Eielson Array	52.74	31	P	P	00 21 44.0	-1.0
	0.5nm,0.8s,baz=286,slow=7.1,SNR=5.3						
	0.5nm,0.8s						
FITZ	Fitzroy Crossi	53.19	199	P	P	00 21 48.9	+0.2
	1.2nm,0.5s,baz=186,slow=20,SNR=1.5						
	1.2nm,0.5s						
WRA	Warramunga Arr	53.26	188	P	P	00 21 48.8	-0.5
	1.1nm,0.6s,baz=6.5,slow=7.6,SNR=20						
	1.1nm,0.6s						
ASAR	Alice Springs	56.99	188	P	P	00 22 16.3	+0.2
	0.2nm,0.3s,baz=19,slow=13,SNR=6.4						
	0.2nm,0.3s						
PDAR	Pinedale Array	80.33	45	P	P	00 24 41.6	-0.1
	0.2nm,0.6s,baz=316,slow=7.5,SNR=2.1						
	0.2nm,0.6s						
TXAR	Lajitas Array	92.42	52	P	P	00 25 41.5	+0.1
	0.1nm,0.3s,baz=320,slow=5.0,SNR=13						
	0.1nm,0.3s						
LPAZ	La Paz	148.43	65	PKPbc	PKPbc	00 32 18.3	+0.3
	0.5nm,0.3s,baz=326,slow=3.6,SNR=3.7						

PDG ***12*** *00:24:49.7±0.2, 41°.42N×19°.59E, h10^{km}, ML2.6/13, Error ellipse: s-maj=0.8km s-min=1.0km az=0.0*

ISC 12 00:24:47.4±1.9**, 41°.30N**±0°.08×**19°.57E**±0°.06**, h12**^{km}±11^{km}**, n14, σ0ˢ.71**/28**, 9C-4D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULC	**Ulcinj**	**0.71**	**340**	⇑*i*Pg	**Pg**	**00 25 00.7**	**-0.5**
ULC				*i* Sg	**Sg**	**00 25 10.2**	**-0.3**
DRME	**Dracevica, Mon**	**0.93**	**342**	⇑*i*Pg	**Pg**	**00 25 05.1**	**-0.4**
DRME				*e*Sg	**Sb**	**00 25 18.0**	**0.0**
OHR	**Ohrid**	**0.95**	**101**	*i* Pg	**Pb**	**00 25 05.8**	**0.0**
OHR				*i* Sg	**Sn**	**00 25 20.2**	**+0.1**
BUM	**Brajici-Budva**	**1.12**	**333**	⇓*i*Pg	**Pn**	**00 25 09.2**	**+0.1**
BUM				*i* Sg	**Sn**	**00 25 24.8**	**+0.3**
PDG	**Podgorica**	**1.16**	**348**	⇓*i*Pg	**Pb**	**00 25 08.5**	**-0.9**
PDG				*i* Sg	**Sg**	**00 25 25.0**	**+0.3**
PVY	**Plav**	**1.33**	**13**	⇑*i*Pg	**Pn**	**00 25 11.7**	**-0.3**
PVY				*i* Sg	**Sg**	**00 25 31.2**	**+0.9**
CEME	**Cevo**	**1.34**	**339**	⇑*i*Pg	**Pb**	**00 25 12.5**	**-0.1**
CEME				*e*Sg	**Sg**	**00 25 32.0**	**+1.4**
HCY	**Herceg Novi**	**1.40**	**325**	⇓*i*Pg	**Pb**	**00 25 13.3**	**-0.3**
HCY				*i* Sg	**Sg**	**00 25 34.4**	**+1.8**
NKME	**Niksic**	**1.54**	**343**	⇑*i*Pg	**Pb**	**00 25 15.6**	**-0.4**
NKME				*e*Sg	**Sg**	**00 25 37.9**	**+0.9**
KOME	**Kolasin**	**1.55**	**359**	⇑*i*Pg	**Pb**	**00 25 15.9**	**-0.3**
KOME				*e*Sg	**Sg**	**00 25 38.2**	**+0.8**
IVA	**Berane**	**1.59**	**9**	⇑*i*Pg	**Pb**	**00 25 16.8**	**-0.1**
IVA				*i* Sg	**Sg**	**00 25 39.1**	**+0.4**
BRY	**Bratogost**	**1.78**	**335**	⇑*i*Pn	**Pb**	**00 25 19.9**	**-0.2**
BRY				*i* Sn	**Sg**	**00 25 44.0**	**-0.6**
UPM	**Unac-Piva**	**1.97**	**346**	⇓*i*Pn	**Pb**	**00 25 22.6**	**-0.7**
UPM				*i* Sn	**Sb**	**00 25 48.6**	**+0.7**
PLE	**Pljevlja**	**2.04**	**356**	⇑*i*Pn	**Pb**	**00 25 23.5**	**-1.0**
PLE				*i* Sn	**Sb**	**00 25 50.0**	**+0.2**

HEL ***12*** *00:33:01.4±0.3, 67°.85N×19°.99E, h0^{km}, ML1.4, Suspected explosion*

UPP 12 00:33:02.3±0.0**, 67°.84N**×**20°.21E, h0**^{km}**, ML2.5, Suspected explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.12**	**23**	P	Pg	00 33 04.8	+0.2
KUA				S	Sg	00 33 06.5	+0.3
KUA	**Kurravaara**	**0.12**	**23**	P	Pg	00 33 06.5	+1.9
RATU	**Laukkuluspa**	**0.23**	**266**	P	Pg	00 33 06.9	+0.2
RATU				S	Sg	00 33 10.3	+0.5
KOVU	**Salmi**	**0.38**	**357**	P	Pg	00 33 09.6	0.0
KOVU				S	Sg	00 33 14.9	+0.3
KOVU	**Salmi**	**0.38**	**357**	P	Pb	00 33 12.7	+0.7
NIKU	**Nikkaluokta**	**0.45**	**274**	P	Pg	00 33 10.8	0.0
NIKU	**Nikkaluokta**	**0.45**	**274**	P	Pb	00 33 14.0	+0.9
LANU	**Lannavaara**	**0.70**	**72**	P	Pg	00 33 15.5	-0.2
LANU				S	Sg	00 33 25.0	+0.1
LANU	**Lannavaara**	**0.70**	**72**	P	Pn	00 33 19.1	-0.4
LANU	**Lannavaara**	**0.70**	**72**	PG	Pg	00 33 15.4	-0.3
LANU				SG	Sg	00 33 25.0	+0.1
DUNU	**Dundret**	**0.74**	**169**	P	Pg	00 33 16.0	-0.4
DUNU				S	Sg	00 33 26.2	+0.3
DUNU	**Dundret**	**0.74**	**169**	P	Pn	00 33 19.5	-0.4
MASU	**Masugnsbyn**	**0.79**	**119**	P	Pg	00 33 17.2	-0.2
MASU				S	Sg	00 33 27.8	+0.3
MASU	**Masugnsbyn**	**0.79**	**119**	P	Pn	00 33 20.5	-0.1
SALU	**Saltoluokta**	**0.80**	**235**	P	Pg	00 33 17.3	-0.3
SALU				S	Sg	00 33 28.4	+0.5
SALU	**Saltoluokta**	**0.80**	**235**	P	Pn	00 33 20.8	-0.1
SALU	**Saltoluokta**	**0.80**	**235**	*e*P	Pg	00 33 17.1	-0.5
KIF	**Kilpisjarvi**	**1.19**	**10**	PN	Pg	00 33 25.2	+0.2
KIF				MSG		00 33 38.7	
	comp=Z,4.5nm,0.2s						
KIF				SB	Sg	00 33 40.6	+0.3
PAJU	**Pajala**	**1.39**	**125**	P	Pg	00 33 27.7	-1.2
PAJU				S	Sg	00 33 46.4	-0.4
PAJU	**Pajala**	**1.39**	**125**	P	Pb	00 33 31.1	+2.0
PAJU	**Pajala**	**1.39**	**125**	PG	Pg	00 33 27.6	-1.3
	baz=303						
PAJU				SB	Sg	00 33 46.4	-0.5
HEF	**Hetta**	**1.41**	**65**	*e*P	Pn	00 33 28.1	-1.1
HEF	**Hetta**	**1.41**	**65**	PG	Pn	00 33 28.2	-1.0
	baz=246						
HEF				MSG		00 33 46.0	
	comp=Z,2.8nm,0.2s						
HEF				SN	Sn	00 33 49.5	+1.0
ERTU	**Ertsjaerv**	**1.51**	**148**	P	Pn	00 33 29.9	-0.6
ERTU	**Ertsjaerv**	**1.51**	**148**	P	Pg	00 33 33.6	+2.5
ERTU	**Ertsjaerv**	**1.51**	**148**	PG	Pn	00 33 29.6	-0.9
ERTU				SN	Sb	00 33 50.7	0.0
KLF	**Kolari**	**1.57**	**111**	PG	Pn	00 33 30.9	-0.4
	baz=294						
KLF				MSG		00 33 50.6	
	comp=Z,2.0nm,0.2s						
KLF				SG	Sn	00 33 52.2	-0.1
KTK1	**Kautokeino**	**1.62**	**42**	PN	Pn	00 33 32.0	-0.1
KTK1				SN	Sg	00 33 55.7	+1.3
HARU	**Harads**	**1.71**	**170**	P	Pn	00 33 33.4	+0.1
KALU	**Kalix**	**2.35**	**147**	PG	Pn	00 33 43.1	+1.0
KALU				SG	Sb	00 34 15.0	+0.1
TOF	**Tornio**	**2.40**	**136**	PB	Pn	00 33 44.2	+1.5
TOF				MSG		00 34 14.2	
	comp=Z,1.2nm,0.2s						
TOF				SG	Sb	00 34 16.6	+0.2
ARA0	**ARCESS Array S**	**2.58**	**46**	PB	Pn	00 33 46.7	+1.5
ARA0				SG	Sb	00 34 20.7	-0.7
RNF	**Rovaniemi**	**2.58**	**116**	PB	Pn	00 33 47.2	+2.0
RNF				SB	Sb	00 34 21.3	-0.1
RAJF	**Raja-Jooseppi**	**3.10**	**74**	SG	Sb	00 34 38.0	+1.6
KEV	**Kevo**	**3.13**	**49**	SB	Sn	00 34 33.6	+2.9
VRF	**Varrio**	**3.57**	**87**	SN	Sn	00 34 43.0	+1.3

IDC ***12*** *00:49:16.4±0.7, 36°.77N×78°.84E, h0^{km}, mb4.1/17, mbtmp4.1/21, ML3.2/5, MS3.4/4, Error ellipse: s-maj=18.3km s-min=12.0km az=49.0*

MOS ***12*** *00:49:16.8±0.9, 36°.75N×78°.80E, h14^{km}, mb4.5/13, Error ellipse: s-maj=9.6km s-min=4.3km az=104.0*

BJI ***12*** *00:49:18.5, 36°.88N×78°.75E, h10^{km}, mB4.4/1, mb4.4/12, ML4.4/8, Ms4.1/1, Ms7 3.8/1*

NEIC ***12*** *00:49:18.7±1.4, 36°.84N±0°.05×78°.86E±0°.07, h10^{km}±1^{km}, mb4.5/28, Error ellipse: s-maj=13.0km s-min=3.4km az=227.0*

NNC ***12*** *00:49:22.7±2.2, 37°.12N×78°.78E, h0^{km}, mb4.8, mpv4.5, Error ellipse: s-maj=17.4km s-min=14.9km az=116.0*

ISC 12 00:49:18.8±0.4**, 36°.79N**±0°.04×**78°.81E**±0°.05**, h17**^{km}**, n158, σ2ˢ.03**/152**, mb4.3**/35**, 11C-8D, Kashmir-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALCI	**Alchi Leh**	**2.89**	**208**	*e*P	**Pn**	**00 50 05.1**	**+0.7**
ALCI				*e*S	**Sn**	**00 50 38.7**	**-0.2**
ALCI				IAML		00 50 56.3	
	comp=E,1µm,0.1s						
ALCI				IAML		00 50 57.8	
	comp=N,1µm,0.1s						
KSH	**Kashi**	**3.52**	**322**	Pn	**Pn**	**00 50 15.8**	**+2.9**
KSH				Sn	**Sb**	**00 50 59.0**	**-4.3**
KSH				smax	smax		
	comp=N,610nm,0.7s						
KSH				smax	smax		
	comp=N,1µm,0.8s						
SRNI	**Srinagar**	**4.26**	**231**	*e*S	**Sn**	**00 51 10.8**	**+0.2**
SRNI				IAML		00 51 22.6	
	comp=N,982nm,0.5s						
SRNI				IAML		00 51 23.6	
	comp=E,966nm,0.1s						
WUS	**Wushi**	**4.42**	**4**		**Pn**	**00 50 26.4**	**+1.2**
TARG	**Taragay, Kyrgy**	**5.00**	**351**		**Pn**	**00 50 36.4**	**+3.0**
TARG	**Taragay, Kyrgy**	**5.00**	**351**	P	**Pn**	**00 50 36.4**	**+3.0**
JMU	**Jammu**	**5.17**	**220**	*e*P	**Pn**	**00 50 34.9**	**-0.6**
JMU				*e*S	**Sn**	**00 51 31.5**	**-3.3**
JMU				IAML		00 51 48.8	
	comp=E,663nm,1.2s						
JMU				IAML		00 51 49.8	
	comp=N,610nm,0.3s						
KDJ	**Kajisay**	**5.48**	**347**	Pn	**Pn**	**00 50 40.7**	**+0.9**
KDJ	**Kajisay**	**5.48**	**347**	P	**Pn**	**00 50 40.7**	**+0.9**
PRZ	**Przheval'sk**	**5.70**	**357**	Pn	**Pn**	**00 50 45.2**	**+2.4**
PRZ	**Przheval'sk**	**5.70**	**357**	P	**Pn**	**00 50 45.2**	**+2.4**
BHK	**Bhakra**	**5.74**	**201**	*e*P	**Pn**	**00 50 41.4**	**-1.4**
BHK				*e*S	**Sn**	**00 51 42.2**	**-5.8**
BHK				IAML		00 51 57.8	
	comp=E,505nm,0.3s						
BHK				IAML		00 51 58.8	
	comp=N,565nm,0.3s						
MANEM	**Manem**	**5.74**	**280**		**Pn**	**00 50 45.8**	**+2.3**
BOOM	**Boomskoye usch**	**6.11**	**340**		**Pn**	**00 50 50.3**	**+1.8**
BOOM	**Boomskoye usch**	**6.11**	**340**	P	**Pn**	**00 50 50.3**	**+1.8**
JOSI	**Joshimath**	**6.25**	**174**	*e*P	**Pn**	**00 50 49.4**	**-0.9**
JOSI				IAML		00 51 27.9	
	comp=E,446nm,0.4s						
JOSI				*e*S	**Sn**	**00 51 56.3**	**-5.1**
JOSI				IAML		00 52 19.1	
	comp=N,180nm,4.0s						
SATY	**Saty**	**6.27**	**357**	Pg	Pg	00 51 13.4	-5.4
	comp=N,42nm,0.5s						
SATY				Lg	Lg	00 52 34.7	
	comp=N,132nm,0.9s						
UZB	**Uzynbulak**	**6.36**	**1**	Pg	Pb	00 51 13.4	+4.4
	comp=N,28nm,0.5s						
UZB				Lg	Lg	00 52 34.8	
	comp=N,92nm,0.8s						
UZB	**Uzynbulak**	**6.36**	**1**	*e*P	**Pn**	**00 50 55.3**	**+3.5**
SHLS	**Shalkode**	**6.38**	**4**	Pg	Pg	00 51 14.8	-6.1
	comp=N,60nm,0.2s						
SHLS				Lg	Lg	00 52 37.1	
	comp=N,147nm,0.7s						
SHLS	**Shalkode**	**6.38**	**4**	*e*P	**Pn**	**00 50 55.1**	**+3.0**
TNSS	**Tian-Shan**	**6.41**	**348**	Pg	Pb	00 51 15.2	+5.2
	comp=N,12nm,0.6s						
TNSS				Lg	Lg	00 52 37.9	
	comp=N,17nm,0.6s						
ARSB	**Arslanbob**	**6.41**	**317**		**Pn**	**00 50 53.8**	**+1.3**
ARSB	**Arslanbob**	**6.41**	**317**	P	**Pn**	**00 50 53.8**	**+1.3**
IZV	**Izvestkoviy**	**6.47**	**346**	Pg	**Pb**	**00 51 15.1**	**+4.2**
	comp=N,51nm,0.4s						
IZV				Lg	Lg	00 52 37.4	
	comp=N,82nm,0.7s						
MDOK	**Medeo**	**6.51**	**349**	Pg	Pb	00 51 16.9	+5.3
	comp=N,27nm,0.4s						
MDOK				Lg	Lg	00 52 40.9	
	comp=N,70nm,0.7s						
PDGK	**Podgornoye**	**6.56**	**4**	⇑Pn	**Pn**	**00 50 56.3**	**+1.7**
	comp=N,13nm,0.5s						
PDGK				⇓Pg	**Pb**	**00 51 15.8**	**+3.4**
	comp=N,32nm,0.6s						
PDGK				⇑Sn	**Sn**	**00 52 07.8**	**-1.1**
	comp=N,91nm,0.6s						
PDGK				⇑Lg	Lg	00 52 39.0	
	comp=N,145nm,0.8s						
PDGK	**Podgornoye**	**6.56**	**4**	P	**Pn**	**00 50 56.2**	**+1.7**
PDGK						00 52 07.8	
KOTS	**Kotyrbulak**	**6.57**	**349**	Pg	Pg	00 51 18.4	-6.1
	comp=N,29nm,0.6s						
KOTS				Lg	Lg	00 52 43.5	
	comp=N,191nm,0.6s						
KNDC	**Almaty**	**6.58**	**348**	⇓Pg	Pg	00 51 18.5	-6.1
	comp=N,43nm,0.5s						
KNDC				⇓Lg	Lg	00 52 41.8	
	comp=N,286nm,0.7s						
MTBS	**Maitube**	**6.59**	**345**	Pg	Pb	00 51 18.4	+5.4
	comp=N,23nm,0.5s						
MTBS				Lg	Lg	00 52 43.4	
	comp=N,49nm,0.6s						
KPKS	**Kokpek**	**6.67**	**359**	Pg	**Pb**	**00 51 18.1**	**+3.8**
	comp=N,0.7nm,0.2s						
KPKS				Lg	Lg	00 52 42.7	
	comp=N,124nm,0.6s						
KURS	**Kuram**	**6.71**	**356**	Pg	Pg	00 51 21.5	-5.7
	comp=N,73nm,1.2s						
KURS				Lg	Lg	00 52 48.8	
	comp=N,73nm,1.4s						
AAK	**Ala-Archa**	**6.72**	**332**	Pn	**Pn**	**00 51 00.0**	**+3.2**
	comp=N,0.5nm,0.3s,baz=160,slow=6.8,SNR=8.7						
AAK				Pg	Pb	00 51 20.0	+4.8
	comp=N,1.7nm,0.3s,baz=186,slow=15,SNR=14						
AAK				Lg	Lg	00 52 49.0	
	comp=N,6.4nm,0.3s,baz=279,slow=20,SNR=5.6						
AAK				LR	LR	00 54 14.3	
	comp=N,162nm,18.0s,baz=110,slow=44						
	comp=N,1.3nm,0.4s						
AAK	**Ala-Archa**	**6.72**	**332**		**Pn**	**00 50 58.9**	**+2.1**
AAK	**Ala-Archa**	**6.72**	**332**	⇓Pn	**Pn**	**00 50 59.9**	**+3.0**
	comp=N,23nm,0.5s						
AAK				⇑Pg	**Pb**	**00 51 19.4**	**+4.1**
	comp=N,231nm,0.8s						
AAK				⇑Lg	Lg	00 52 47.0	
	comp=N,513nm,0.9s						
AAK	**Ala-Archa**	**6.72**	**332**	*i* P	**Pn**	**00 50 59.6**	**+2.8**
FRU1	**Bishkek**	**6.82**	**333**	Pn	**Pn**	**00 50 59.9**	**+1.8**
FRU1	**Bishkek**	**6.82**	**333**	P	**Pn**	**00 50 59.9**	**+1.8**
DGS	**Degeres**	**6.86**	**341**	Pg	Pb	00 51 23.0	+5.5
	comp=N,38nm,0.5s						
DGS				Lg	Lg	00 52 51.5	
	comp=N,54nm,0.6s						
GAR	**Garm**	**7.07**	**291**		**Pn**	**00 51 03.0**	**+1.5**
KTBS	**Karatobe**	**7.11**	**347**	Pg	Pg	00 51 28.4	-6.4
KTBS				Lg	Lg	00 53 00.7	
CHKK	**Chushkaly**	**7.20**	**349**	Pg	Pb	00 51 28.8	+5.6
	comp=N,32nm,0.5s						
CHKK				Lg	Lg	00 53 01.4	
	comp=N,48nm,0.5s						
KRBS	**Karabastau**	**7.30**	**342**	Pg	Pg	00 51 31.7	-6.8
	comp=N,21nm,0.5s						
KRBS				Lg	Lg	00 53 06.5	
	comp=N,31nm,0.9s						
BLB	**Baldybastay**	**7.31**	**358**	Pg	Pb	00 51 31.3	+6.1
	comp=N,25nm,0.5s						
BLB				Lg	Lg	00 53 05.0	
MRKS	**Merke**	**7.34**	**326**	Pg	Pb	00 51 31.4	+5.7
	comp=N,17nm,0.7s						
MRKS				Lg	Lg	00 53 05.7	
	comp=N,42nm,1.2s						
SGDS	**Sogindy**	**7.39**	**336**	Pg	Pg	00 51 33.8	-6.3
	comp=N,10.0nm,0.8s						
SGDS				Lg	Lg	00 53 09.6	
	comp=N,41nm,0.8s						
LGTI	**Lohaghat**	**7.45**	**171**	*e*P	**Pn**	**00 51 05.9**	**-0.3**
LGTI				*e*S	**Sn**	**00 52 25.4**	**-4.5**
LGTI				IAML		00 52 34.4	
	comp=N,477nm,0.1s						
LGTI				IAML		00 52 35.2	
	comp=E,489nm,0.4s						
ARXS	**Arharly**	**7.46**	**355**	Pg	Pb	00 51 34.1	+6.4
	comp=E,27nm,0.5s						
ARXS				Lg	Lg	00 53 10.2	
ARXS	**Arharly**	**7.46**	**355**	*e*P	**Pn**	**00 51 06.2**	**-0.6**
KNOS	**Konyrlen**	**7.57**	**2**	Pg	Pb	00 51 36.2	+6.6
	comp=E,24nm,0.4s						
KNOS				Lg	Lg	00 53 14.3	
	comp=E,31nm,0.9s						
CHGR	**Chuyangaron**	**7.87**	**287**		**Pn**	**00 51 13.2**	**+0.6**
CHGR	**Chuyangaron**	**7.87**	**287**	P	**Pn**	**00 51 13.2**	**+0.6**
KBL	**Kabul**	**8.26**	**257**		**Pn**	**00 51 19.5**	**+1.6**
KBL	**Kabul**	**8.26**	**257**	P	**Pn**	**00 51 19.5**	**+1.6**
SHAA	**Shahritus**	**8.56**	**278**		**Pn**	**00 51 23.4**	**+1.3**
KK31	**Karatay Array**	**8.96**	**317**		**Pn**	**00 51 28.2**	**+0.9**
KK31	**Karatay Array**	**8.96**	**317**	Pn	**Pn**	**00 51 28.3**	**+0.9**
	comp=E,1.0nm,0.3s,baz=132,slow=14,SNR=13						
KK31				⇓Sn	**Sn**	**00 53 03.0**	**-5.0**
	comp=E,5.6nm,0.6s						
KK31				⇓Lg	Lg	00 53 57.7	
	comp=E,6.0nm,0.6s						
KK31	**Karatay Array**	**8.96**	**317**	P	**Pn**	**00 51 28.3**	**+0.9**
KK31						00 53 02.9	
KKAR	**Karatay Array**	**8.96**	**317**	Pn	**Pn**	**00 51 28.0**	**+0.6**
KKAR	**Karatay Array**	**8.96**	**317**	P	**Pn**	**00 51 28.0**	**+0.6**
BTLS	**Baital**	**9.00**	**338**	Pg	Pn	00 52 00.7	+33
	comp=E,8.4nm,0.7s						
BTLS				Lg	Lg	00 53 56.5	
	comp=E,9.4nm,0.7s						
WMQ	**Urumqi**	**9.76**	**41**	P	**Pn**	**00 51 40.4**	**+2.0**
WMQ				S	**Sn**	**00 53 24.6**	**-3.1**
WMQ				smax	smax		
	comp=E,71nm,0.9s						
WMQ				smax	smax		
	comp=E,48nm,0.9s						
MAKZ	**Makanchi**	**10.29**	**12**		**Pn**	**00 51 46.0**	**+0.4**
MAKZ	**Makanchi**	**10.29**	**12**	⇑Pn	**Pn**	**00 51 45.7**	**+0.2**
	comp=E,16nm,0.8s						
MAKZ				⇑Sn	**Sn**	**00 53 34.3**	**-6.2**
	comp=E,12nm,0.6s						
MAKZ	**Makanchi**	**10.29**	**12**	P	**Pn**	**00 51 46.0**	**+0.4**
MK31	**Makanchi Array**	**10.33**	**13**	Pn	**Pn**	**00 51 46.2**	**+0.1**
	comp=E,5.8nm,0.6s,baz=196,slow=12,SNR=109						
MK31				⇓Sn	**Sn**	**00 53 35.5**	**-6.0**
	comp=E,10nm,0.5s,baz=201,slow=27,SNR=9.9						
MK31	**Makanchi Array**	**10.33**	**13**	*i* P	**Pn**	**00 51 46.6**	**+0.5**
MKAR	**Makanchi Array**	**10.33**	**13**	Pn	**Pn**	**00 51 46.3**	**+0.2**
	comp=E,1.1nm,0.3s,baz=204,slow=15,SNR=73						
MKAR				Sn	**Sn**	**00 53 36.7**	**-4.8**
	comp=E,5.9nm,0.3s,baz=196,slow=25,SNR=12						
	comp=E,1.3nm,0.3s						
MKAR	**Makanchi Array**	**10.33**	**13**	*i* P	**Pn**	**00 51 46.2**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
EVN	**Everest**	**11.10**	**140**		**Pn**	**00 51 57.8**	**+0.5**
KURBB	**Kurchatov Arra**	**13.83**	**359**	Pn	**Pn**	**00 52 35.0**	**+1.0**
	baz=188,slow=9.8,SNR=4.4						
KURBB				Lg	Lg	00 56 37.0	
	comp=Z,0.1nm,0.3s,baz=182,slow=32,SNR=6.3						
KURK	**Kurchatov**	**13.93**	**360**		**Pn**	**00 52 34.9**	**-0.2**
KURK	**Kurchatov**	**13.93**	**360**	⇑Pn	**P**	**00 52 40.9**	**-2.3**
	comp=Z,2.3nm,0.8s						
KURK				⇑Lg	Lg	00 56 38.1	
	comp=Z,5.6nm,1.1s						
KURK	**Kurchatov**	**13.93**	**360**	*i* P	**Pn**	**00 52 36.1**	**+0.9**
DGZ	**Jazzator, Alta**	**14.34**	**23**	*i* P	**Pn**	**00 52 40.8**	**-0.3**
GTA	**Gaotai**	**16.74**	**75**	P	**P**	**00 53 16.3**	**+1.6**
GTA				sP	sP	00 53 24.0	+0.8
GTA				pmax	pmax		
	comp=Z,18nm,0.8s						
BVA0	**Borovoye Array**	**17.28**	**343**	P	**P**	**00 53 20.8**	**+0.4**
BVAR	**Borovoye Array**	**17.28**	**343**	P	**P**	**00 53 20.1**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=146,slow=11,SNR=20						
BVAR				Lg	Lg	00 58 27.2	
	baz=235,slow=43						
	comp=Z,4.7nm,0.6s						
BORK	**Borovoye**	**17.31**	**343**		**Pn**	**00 53 19.3**	**-0.2**
BORK	**Borovoye**	**17.31**	**343**	*i* P	**P**	**00 53 20.3**	**-0.5**
ZAA0	**Zalesovo Array**	**17.66**	**12**	P	**Pn**	**00 53 23.7**	**-0.1**
ZALV	**Zalesovo Beam**	**17.66**	**12**	P	**Pn**	**00 53 22.0**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=204,slow=12,SNR=4.5						
ZALV				S	**Sn**	**00 56 32.2**	**-7.8**
	comp=Z,1.0nm,0.3s,baz=126,slow=19,SNR=5.4						
ZALV				LR	LR	01 00 53.3	
	comp=Z,81nm,20.5s,baz=230,slow=39						
	comp=Z,2.0nm,0.5s						
ZALV	**Zalesovo Beam**	**17.66**	**12**	P	**Pn**	**00 53 23.6**	**-0.2**
ZALV	**Zalesovo Beam**	**17.66**	**12**	*i* P	**Pn**	**00 53 20.7**	**-3.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AB31	**Akbulak array**	**18.53**	**318**	P	**P**	**00 53 34.2**	**0.0**
AB31	**Akbulak array**	**18.53**	**318**	⇓P	**Pn**	**00 53 34.7**	**+0.3**
	comp=Z,2.9nm,0.6s,baz=125,slow=8.9,SNR=48						
AB31	**Akbulak array**	**18.53**	**318**	P	**Pn**	**00 53 34.7**	**+0.3**
ABKAR	**Akbulak array**	**18.53**	**318**	P	**P**	**00 53 34.1**	**-0.1**
HYB	**Hyderabad**	**19.30**	**181**	*e*P	**P**	**00 53 44.4**	**+1.5**
LZDM	**Lanzhou Array**	**20.05**	**85**	P	Pn	00 53 52.8	-0.3
	comp=Z,1.7nm,0.5s,baz=227,slow=5.7,SNR=3.9						
	comp=Z,1.7nm,0.5s						
AKTO	**Aktyubinsk**	**20.23**	**319**	P	Pn	00 53 53.8	-1.0
	comp=Z,4.1nm,0.6s,baz=123,slow=10,SNR=13						
	comp=Z,4.1nm,0.6s						
PZH	**PanZhiHua**	**22.00**	**111**	P	**P**	**00 54 18.6**	**+6.3**
SONM	**Songino Array**	**23.07**	**53**	P	**P**	**00 54 24.8**	**+1.3**
	comp=Z,3.4nm,1.0s,baz=253,slow=10.0,SNR=14						
	comp=Z,3.4nm,1.0s						
SONM	**Songino Array**	**23.07**	**53**	P	**P**	**00 54 23.5**	**0.0**
ULN	**Ulaanbaatar**	**23.50**	**53**	P	**P**	**00 54 28.0**	**+0.1**
ULN				IAmb	IAmb	00 54 30.5	
	comp=Z,4.2nm,0.8s						
ULN	**Ulaanbaatar**	**23.50**	**53**	*i* P	**P**	**00 54 27.6**	**-0.3**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ARTI	**Arti**	**23.94**	**331**	P	**P**	**00 54 31.7**	**-0.1**
ARTI	**Arti**	**23.94**	**331**	*c i*P	**P**	**00 54 32.1**	**+0.3**
ARTI				S	**S**	**00 58 50.5**	**+3.0**
ARTI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CHTO	**Chiang Mai**	**25.16**	**130**	P	**P**	**00 54 43.4**	**+0.1**
CHTO				IAmb	IAmb	00 54 45.0	
	comp=Z,4.5nm,0.7s						
CHTO	**Chiang Mai**	**25.16**	**130**	P	**P**	**00 54 43.4**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**25.43**	**130**	P	**P**	**00 54 46.2**	**+0.5**
	comp=Z,2.8nm,0.3s,baz=312,slow=11,SNR=15						
CMAR				LR	LR	01 07 24.7	
	comp=Z,50nm,18.7s,baz=200,slow=43						
	comp=Z,2.8nm,0.3s						
HHC	**Hu-ho-hao-te**	**25.75**	**71**	*e*P	**P**	**00 54 48.1**	**-0.5**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KIV	**Kislovodsk**	**28.27**	**296**	*e*P	**P**	**00 55 10.1**	**-1.1**
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIRV	**Kirov**	**29.04**	**328**	*ce*P	**P**	**00 55 17.1**	**-0.6**
NRIK	**Noril'sk**	**32.96**	**6**	P	**P**	**00 55 52.4**	**+0.3**
NRIK				pmax	pmax		
	comp=Z,7.0nm,2.0s						
OBN	**Obninsk**	**33.95**	**316**	*e*P	**P**	**00 56 02.5**	**+1.6**
OBN				*e*		00 57 15.2	
OBN				*e*PPP	PPP	00 57 26.7	
OBN				*e*		00 58 37.7	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KLMR	**Klimovskoe**	**34.51**	**327**	*e*P	**P**	**00 56 04.5**	**-1.1**
KLMR				pmax	pmax		
	comp=Z,38nm,1.8s						
BR131	**Keskin Array S**	**35.31**	**289**	P	**P**	**00 56 13.6**	**+0.5**
BR131				IAmb	IAmb	00 56 17.5	
	comp=Z,4.9nm,1.1s						
BR131	**Keskin Array S**	**35.31**	**289**	*i* P	**P**	**00 56 13.4**	**+0.3**
BRTR	**Keskin Array B**	**35.31**	**289**	P	**P**	**00 56 14.0**	**+0.9**
	comp=Z,1.8nm,0.6s,baz=108,slow=7.9,SNR=14						
	comp=Z,1.8nm,0.6s						
BRTR	**Keskin Array B**	**35.31**	**289**	P	**P**	**00 56 13.1**	**+0.1**
BRTR	**Keskin Array B**	**35.31**	**289**	*i* P	**P**	**00 56 14.3**	**+1.2**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKBB	**Malin Array Si**	**37.71**	**308**	*i* P	**P**	**00 56 33.4**	**+0.2**
AKBB				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NACGM	**Naroch**	**39.46**	**314**	*e*P	**P**	**00 56 46.6**	**-1.3**
	comp=Z,9.0nm,0.7s,baz=95						
MLR	**Muntele Rosu**	**40.12**	**300**	P	**P**	**00 56 55.5**	**+1.9**
	comp=Z,2.4nm,0.4s,baz=346,slow=4.5,SNR=19						
	comp=Z,2.4nm,0.4s						
MLR	**Muntele Rosu**	**40.12**	**300**	P	**P**	**00 56 55.0**	**+1.4**
MLR				IAmb	IAmb	00 57 06.7	
	comp=Z,17nm,1.4s						
MLR	**Muntele Rosu**	**40.12**	**300**	P	**P**	**00 56 55.0**	**+1.4**
MLR				pmax	pmax		
	comp=Z,17nm,1.4s						
BURAR	**Bucovina Array**	**40.41**	**303**	P	**P**	**00 56 56.5**	**+0.5**
BURAR	**Bucovina Array**	**40.41**	**303**	P	**P**	**00 56 56.5**	**+0.5**
BURAR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BUR08	**Bucovina Ar. S**	**40.42**	**303**	P	**P**	**00 56 56.5**	**+0.5**
FIA1	**FINESS Array S**	**40.84**	**324**	P	**P**	**00 57 00.2**	**+1.0**
FINES	**FINESS Array B**	**40.84**	**324**	P	**P**	**00 56 59.7**	**+0.5**
	comp=Z,3.1nm,0.7s,baz=106,slow=9.2,SNR=21						
	comp=Z,3.1nm,0.7s						
FINES	**FINESS Array B**	**40.84**	**324**	P	**P**	**00 56 59.9**	**+0.7**
FINES	**FINESS Array B**	**40.84**	**324**	P	**P**	**00 56 59.9**	**+0.7**
TIXI	**Tiksi**	**43.21**	**21**	P	**P**	**00 57 18.4**	**0.0**
TIXI	**Tiksi**	**43.21**	**21**	P	**P**	**00 57 18.4**	**0.0**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ARCES	**ARCESS Array B**	**43.37**	**336**	P	**P**	**00 57 19.9**	**+0.1**
	comp=Z,5.8nm,0.8s,baz=99,slow=7.3,SNR=22						
	comp=Z,5.8nm,0.8s						
ARCES	**ARCESS Array B**	**43.37**	**336**	P	**P**	**00 57 20.0**	**+0.2**
ARCES				IAmb	IAmb	00 57 50.3	
	comp=Z,14nm,1.3s						
ARCES	**ARCESS Array B**	**43.37**	**336**	P	**P**	**00 57 20.0**	**+0.2**
ARCES				pmax	pmax		
	comp=Z,14nm,1.3s						
PDG	**Podgorica**	**45.41**	**296**	P	**P**	**00 57 36.7**	**+0.3**
HFS	**Hagfors**	**46.74**	**321**	P	**P**	**00 57 47.3**	**+0.6**
	comp=Z,1.5nm,0.5s,baz=98,slow=9.1,SNR=7.8						
	comp=Z,1.5nm,0.5s						
NC405	**NORSAR Array S**	**47.70**	**323**	P	**P**	**00 57 55.0**	**+0.8**
NORES	**NORESS Array B**	**47.80**	**322**	P	**P**	**00 57 55.6**	**+0.7**
NB2	**NORSAR Subarra**	**47.95**	**323**	P	**P**	**00 57 56.3**	**+0.2**
	comp=Z,3.1nm,0.8s,baz=90,slow=7.9						
NOA	**NORSAR Array B**	**47.95**	**323**	P	**P**	**00 57 56.4**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=90,slow=7.5,SNR=4.9						
	comp=Z,1.0nm,0.6s						
FDMO	**Fiordimonte**	**49.65**	**299**	P	**P**	**00 58 09.9**	**+0.4**

FDMO				IAmb	IAmb	00 58 18.2	
	comp=Z,9.7nm,1.1s						
FUORN	Ofenpass-Fuorn	50.63	304	P	P	00 58 17.3	+0.3
FUORN				IAmb	IAmb	00 58 53.4	
	comp=Z,18nm,1.5s						
DAVOX	Davos/Dischmat	50.84	304	P	P	00 58 18.7	+0.1
	comp=Z,0.9nm,0.4s,baz=43,slow=19,SNR=2.0						
	comp=Z,0.9nm,0.4s						
DAV	Davao City (W)	51.78	113	LR	LR	01 21 27.0	
	comp=Z,141nm,21.2s,baz=332,slow=37						
ESDC	Sonseca Array	62.80	301	P	P	00 59 43.2	-0.2
	comp=Z,0.5nm,0.5s,baz=55,slow=7.0,SNR=6.3						
	comp=Z,0.5nm,0.5s						
B20K	Meade River	66.09	18	P	P	01 00 05.0	+0.7
B20K				IAmb	IAmb	01 00 06.5	
	comp=Z,6.6nm,0.9s						
B21K	Ikpikpuk River	66.99	18	P	P	01 00 11.0	+0.9
B21K				IAmb	IAmb	01 00 11.9	
	comp=Z,5.2nm,0.7s						
E22K	Anaktuvuk Pass	68.77	18	P	P	01 00 21.9	+0.5
E22K				IAmb	IAmb	01 00 22.7	
	comp=Z,2.9nm,0.8s						
TOLK	Toolik Lake Re	68.93	17	P	P	01 00 23.2	+0.8
IMAR	Indian Mountai	69.86	20	P	P	01 00 28.4	+0.2
A36M	Sachs Harbour	70.21	8	P	P	01 00 30.5	+0.3
A36M				IAmb	IAmb	01 00 31.2	
	comp=Z,3.8nm,0.8s						
K17K	Iditarod	70.84	24	P	P	01 00 35.5	+1.4
ILAR	Eielson Array	72.64	19	P	P	01 00 44.9	-0.1
	comp=Z,1.6nm,0.7s,baz=328,slow=4.7,SNR=19						
	comp=Z,1.6nm,0.7s						
ILAR	Eielson Array	72.64	19	P	P	01 00 44.7	-0.3
WRA	Warramunga Arr	76.98	127	P	P	01 01 10.4	-0.2
	comp=Z,0.4nm,0.6s,baz=329,slow=5.4,SNR=4.7						
	comp=Z,0.4nm,0.6s						
LBTB	Lobatse	79.31	228	P	P	01 01 24.6	+1.0
LBTB				IAmb	IAmb	01 01 35.3	
	comp=Z,5.8nm,1.1s						
LBTB	Lobatse	79.31	228	P	P	01 01 24.6	+1.0
LBTB				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ASAR	Alice Springs	79.44	130	P	P	01 01 23.8	-0.5
	comp=Z,0.4nm,0.5s,baz=312,slow=5.8,SNR=5.5						
	comp=Z,0.4nm,0.5s						
YKA	Yellowknife Ar	80.47	6	P	P	01 01 29.3	+0.1
	comp=Z,2.0nm,0.9s,baz=340,slow=5.5,SNR=13						
	comp=Z,2.0nm,0.9s						
YKAW1	Yellowknife Wh	80.49	6	P	P	01 01 29.6	+0.2
YKAW1				IAmb	IAmb	01 01 30.2	
	comp=Z,5.5nm,0.9s						
BOSA	Boshof	82.23	226	P	P	01 01 39.4	+0.3
	comp=Z,1.7nm,0.6s,baz=30,slow=4.4,SNR=5.6						
	comp=Z,1.7nm,0.6s						
BOSA	Boshof	82.23	226	P	P	01 01 39.2	+0.1

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*IDC **12** 00:56:31.9±1.2, 35°.32N×27°.72E, h0km, mb3.5/3, mbtmp3.5/9, ML3.1/5, Error ellipse: s-maj=28.5km s-min=12.2km az=3.0*

*GII **12** 00:56:33.5±0.0, 35°.150N±0°.002×27°.694E±0°.001, h20km, Mws3.8, confirmed*

*AFAD **12** 00:56:34.7, 35°.36N×27°.69E, h8km±5km, ML3.5*

*ISK **12** 00:56:35.2, 35°.39N×27°.76E, h20km, ML3.5/16*

*THE **12** 00:56:37.6, 35°N±5°×2°8E±°, h13km±23km, M3.3/14, MLh3.3/14*

*ATH **12** 00:56:37.0, 35°.46N×27°.71E, h25km±3km, ML3.5/6, Manual Solution by A.Papageorgiou First location: 2019/12/12 00:58:13, This location: 2019/12/12 01:08:40 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

ISC 12 00:56:33.3±1.1, **35°.34N**±0°.03×**27°.81E**±0°.02, **h13**km±8km, **n136**, σ1§**14**/168, **mb3.2**/3, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSS1	Kassos Island	0.73	276	P	Pn	00 56 49.7	+0.4
KSS1				S	Sb	00 56 58.6	+0.8
ARG	Arkhangelos	0.91	16	P	Pn	00 56 52.9	+1.1
ARG				S	Sn	00 57 06.6	+1.9
ARG	Arkhangelos	0.91	16	Pg	Pn	00 56 52.6	+0.9
ARG				Sg	Sn	00 57 05.4	+0.7
ARG	Arkhangelos	0.91	16	P	Pn	00 56 52.7	+1.0
ARG				S	Sn	00 57 04.0	-0.7
RDI1	Rhodes Town Ha	1.16	17	P	Pg	00 56 56.8	+1.3
RDI1				S	Sg	00 57 11.1	+0.5
ZKR	Zakros	1.33	261	P	Pg	00 56 59.0	+0.2
ZKR	Zakros	1.33	261	Pn	Pb	00 56 58.3	+0.3
ZKR				Sn	Sg	00 57 16.1	+0.1
ZKR	Zakros	1.33	261	P	Pg	00 56 59.4	+0.6
ZKR				S	Sg	00 57 16.1	+0.1
YAZI	Mula-Dat§a-	1.37	348	P	Pg	00 56 59.1	-0.4
YAZI				S	Sn	00 57 14.8	-1.2
NISR	Nisiros	1.38	336	P	Pg	00 56 59.7	-0.1
NISR				S	Sg	00 57 16.8	-1.1
NISR	Nisiros	1.38	336	P	Pb	00 56 59.0	0.0
NISR				S	Sn	00 57 15.2	-1.1
DAT	Datca	1.40	352	Pn	Pg	00 56 59.5	-0.6
DAT				Sn	Sg	00 57 17.1	-1.2
SIT2	Siteia	1.40	265	P	Pb	00 56 59.7	+0.5
SIT2				S	Sb	00 57 17.3	+0.2
DATC	Datca-Mugla	1.42	355	Pn	Pg	00 57 00.2	-0.3
TURN	Turunc	1.47	14	P	Pg	00 57 02.0	+0.4
TURN				S	Sg	00 57 21.5	+0.9
TURN				i IAML		00 57 30.0	
	comp=E,890nm,0.7s						
TURN				i IAML		00 57 31.0	
	comp=N,702nm,0.7s						
IZZE	Mula-Seydike	1.58	46	P	Pg	00 57 03.1	-0.5
IZZE				i IAML		00 57 37.0	
	comp=N,619nm,0.5s						
DALY	Dalyan (Mula)	1.62	25	Pn	Pb	00 57 03.2	+0.2
FETY	Fethiye	1.65	38	P	Pn	00 56 55.3	-6.7
ASTA	Astypalaia	1.69	316	P	Pn	00 57 02.2	-0.2
ASTA				S	Sn	00 57 22.2	-1.7
AKAS	Kas	1.71	58	P	Pg	00 57 05.5	-0.5
AKAS				S	Sg	00 57 27.5	-0.7
AKAS				i IAML		00 57 31.0	
	comp=N,850nm,0.5s						
AKAS				i IAML		00 57 33.0	
	comp=E,602nm,0.4s						
BDRM	Kayabasi	1.75	350	P	Pn	00 57 03.7	+0.4
BDRM				S	Sb	00 57 25.5	-1.5
BDRM				i IAML		00 57 35.0	
	comp=E,474nm,0.5s						
KLNA	Kalymnos	1.75	337	P	Pn	00 57 03.6	+0.3
BODT	Bodrum	1.76	347	P	Pb	00 57 05.4	-0.1
BODT				S	Sb	00 57 27.1	-0.5
BODT	Bodrum	1.76	347	Pn	Pb	00 57 05.4	-0.1
NPS	Neapolis	1.80	268	P	Pb	00 57 06.6	+0.4
NPS				S	Sb	00 57 27.5	-1.1
NPS	Neapolis	1.80	268	P	Pb	00 57 06.5	+0.4
NPS				S	Sb	00 57 27.6	-1.1
YER	Yerkesik	1.83	12	P	Pb	00 57 06.3	-0.3
YER	Yerkesik	1.83	12	Pn	Pb	00 57 05.9	-0.7
YKAV	Yalikavak-Bodr	1.83	347	Pn	Pb	00 57 05.4	-1.2
MLSB	Milas	1.95	359	Pn	Pb	00 57 07.0	-1.6
MULA	Mugla, Merkez-	1.95	12	P	Pb	00 57 09.0	+0.3
KNIK	Mula-Seydike	2.07	43	P	Pb	00 57 10.7	0.0
CAEL	Denizli, Camel	2.15	34	P	Pb	00 57 11.8	-0.4
CAEL				i IAML		00 57 56.0	
	comp=E,571nm,0.8s						
CAEL				i IAML		00 58 15.0	
	comp=N,609nm,0.8s						
THERA	Ancient Thera,	2.16	299	P	Pn	00 57 09.6	+0.7
THERA				S	Sn	00 57 34.5	-1.0
THERA	Ancient Thera,	2.16	299	P	Pn	00 57 09.4	+0.5
THERA				S	Sn	00 57 34.3	-1.2
DNZT	Denizli-Tavas-	2.17	27	P	Pb	00 57 12.0	-0.4
DNZT				S	Sg	00 57 44.9	+2.0
THR8	Santorini-Mono	2.17	300	P	Pn	00 57 09.8	+0.7
THR8	Santorini-Mono	2.17	300	P	Pn	00 57 09.6	+0.5
THR6	Thira Island,	2.21	298	P	Pn	00 57 10.7	+1.1
THR6	Thira Island,	2.21	298	P	Pn	00 57 10.4	+0.8
THR2	Thira island,	2.22	300	P	Pn	00 57 10.8	+1.0
THR2	Thira island,	2.22	300	P	Pn	00 57 10.4	+0.6
THR3	Thira Island,	2.23	299	P	Pn	00 57 10.8	+1.0
THR3	Thira Island,	2.23	299	P	Pn	00 57 10.4	+0.5
SNT5	Nea Kammeni, S	2.23	299	P	Pn	00 57 10.8	+0.9
SNT5	Nea Kammeni, S	2.23	299	Pg_3		00 57 10.4	
THR9	Santorini-Faro	2.24	298	P	Pn	00 57 11.3	+1.3
SAP3	Santorini-Thir	2.28	299	P	Pn	00 57 11.8	+1.2
TAVA	DENIZLI_Tavas	2.30	22	P	Pb	00 57 13.0	-1.6
TAVA				i IAML		00 57 56.0	
	comp=N,265nm,0.5s						
GOLH	Golhisar	2.36	36	P	Pb	00 57 15.0	-0.7
GOLH				i IAML		00 58 10.0	
	comp=N,220nm,1.1s						
GOLH				i IAML		00 58 14.0	
	comp=E,282nm,0.9s						
IDI	Anoyia	2.39	270	Pn	Pn	00 57 12.7	+0.5
	15nm,0.4s,baz=43,slow=6.4,SNR=74						
IDI				Pg	Pg	00 57 18.8	-0.3
	15nm,0.3s,baz=98,slow=12,SNR=20						
IDI				Lg	Lg	00 57 46.3	
	19nm,0.3s,baz=348,slow=20,SNR=5.8						
IDI	Anoyia	2.39	270	P	Pn	00 57 14.1	+1.9
IDI				S	Sn	00 57 41.6	+0.2
IDI	Anoyia	2.39	270	Pn	Pn	00 57 13.9	+1.7
IDI	Anoyia	2.39	270	P	Pb	00 57 14.3	-1.9
GCAM	G?zelcaml?	2.40	349	P	Pn	00 57 13.5	+1.3
DNIZ	Denizli-Tavas-	2.48	23	P	Pb	00 57 16.4	-1.4
DNIZ				i IAML		00 58 08.0	
	comp=E,486nm,0.5s						
DNIZ				i IAML		00 58 09.0	
	comp=N,394nm,0.8s						
ESEN	Aydn-Nazilli	2.49	10	P	Pb	00 57 15.4	-2.4
ESEN				S	Sb	00 57 47.7	-0.6
SMG	Samos	2.49	342	P	Pn	00 57 14.4	+0.9
SMG				S	Sn	00 57 43.7	-0.1
SMG	Samos	2.49	342	P	Pn	00 57 14.2	+0.7
APE	Apeiranthos	2.52	314	P	Pn	00 57 14.4	+0.4
APE				S	Sn	00 57 44.3	-0.4
APE	Apeiranthos	2.52	314	Pn	Pn	00 57 14.5	+0.4
APE	Apeiranthos	2.52	314	P	Pn	00 57 14.4	+0.4
APE	Apeiranthos	2.52	314	S	Sn	00 57 45.1	+0.4
AYDB	Zeytinkoy-Aydi	2.60	1	Pn	Pn	00 57 16.4	+1.3
INCE	Denizli-Bozkur	2.75	30	P	Pn	00 57 19.3	+2.1
INCE				S	Sg	00 58 02.3	+0.5
IZMR	zmir-demi	2.79	2	P	Pn	00 57 18.7	+1.1
KIRA	zmir-Kiraz	2.89	9	P	Pn	00 57 20.5	+1.5
VAM	Vamos	2.95	272	P	Pn	00 57 22.4	+2.5
VAM				S	Sn	00 57 54.9	-0.3
GVD	Gavdhos	3.10	262	P	Pn	00 57 24.0	+2.2
GVD	Gavdhos	3.10	262	Pn	Pn	00 57 24.0	+2.2
BLCB	Balcova	3.10	349	Pn	Pn	00 57 22.9	+1.1
MANT	Manisa	3.20	11	P	Pn	00 57 24.0	+0.6
CHOS	Chios island	3.35	336	P	Pn	00 57 26.6	+1.2
CHOS	Chios island	3.35	336	Pn	Pn	00 57 26.8	+1.4
KARY	Karystos	3.82	316	P	Pn	00 57 33.0	+1.3
KTHA	Kythira Island	3.97	285	Pn	Pn	00 57 36.1	+2.3
DION	Dionisos Attik	4.14	312	P	Pn	00 57 37.9	+1.6
CSS	Mathiatis	4.54	93	P	Pn	00 57 42.7	+1.1
CSS	Mathiatis	4.54	93	S	Sn	00 58 35.9	+1.6
ITM	Ithomi	5.10	293	Pn	Pn	00 57 52.1	+2.8
BRTR	Keskin Array B	6.37	45	Pn	Pn	00 58 09.7	+2.8
	0.2nm,0.3s,baz=217,slow=14,SNR=6.0						
BRTR				Pg	Pb	00 58 21.3	-2.7
	0.5nm,0.3s,baz=235,slow=17,SNR=14						
BRTR				Sn	Sn	00 59 21.8	+2.2
	0.2nm,0.3s,baz=209,slow=23,SNR=5.7						
	0.6nm,0.4s						
OFRI	\`Ofer	6.55	112	P	Pn	00 58 09.1	-0.2
OFRI	\`Ofer	6.55	112	S	Sn	00 59 23.9	+0.1
BLGI	Bet Lehem HaGe	6.65	111	P	Pn	00 58 11.1	+0.4
BLGI	Bet Lehem HaGe	6.65	111	S	Sn	00 59 26.4	0.0
MMC7	Mount Meron ar	6.69	108	P	Pn	00 58 11.6	+0.3
MMA0B	Mount Meron ar	6.70	108	P	Pn	00 58 11.6	+0.1
MMA0B	Mount Meron ar	6.70	108	S	Sn	00 59 28.7	+0.9
MMAI	Mount Meron Ar	6.70	108	Pn	Pn	00 58 12.8	+1.4
	2.0nm,0.3s,baz=299,slow=13,SNR=13						
MMAI				Sn	Sn	00 59 29.5	+1.8
	6.6nm,0.3s,baz=212,slow=8.9,SNR=9.5						
	0.9nm,0.3s						
SLTI	Sal'it	6.76	115	P	Pn	00 58 12.4	+0.1
SLTI	Sal'it	6.76	115	S	Sn	00 59 29.2	0.0
GEM	Giv'at Ha'Em	6.84	106	P	Pn	00 58 13.7	+0.5
GEM	Giv'at Ha'Em	6.84	106	S	Sn	00 59 31.4	+0.5
NATI	Neve Ativ	6.88	105	P	Pn	00 58 14.4	+0.6
NATI	Neve Ativ	6.88	105	S	Sn	00 59 32.7	+0.8
MMLI	Mount Malkishu	6.96	112	P	Pn	00 58 15.1	+0.2
MMLI	Mount Malkishu	6.96	112	S	Sn	00 59 33.9	0.0
SALP	Salfit	6.96	116	P	Pn	00 58 15.4	+0.4
SALP	Salfit	6.96	116	S	Sn	00 59 34.4	+0.4
AMAZ	Amatzia	7.05	121	P	Pn	00 58 15.6	-0.5
AMAZ	Amatzia	7.05	121	S	Sn	00 59 35.4	-0.7
KZIT	Kziot	7.08	127	P	Pn	00 58 16.6	+0.1
KZIT	Kziot	7.08	127	S	Sn	00 59 35.2	-1.6
HMDT	Nahal Hemdat	7.12	113	P	Pn	00 58 17.1	0.0
HMDT	Nahal Hemdat	7.12	113	S	Sn	00 59 37.9	0.0
UJAP	Al Uja	7.22	116	P	Pn	00 58 18.4	-0.1
UJAP	Al Uja	7.22	116	S	Sn	00 59 40.2	-0.1
YTIR	Yattir	7.28	121	P	Pn	00 58 19.9	+0.4
YTIR	Yattir	7.28	121	S	Sn	00 59 41.7	-0.4
DSI	Dead Sea	7.36	119	P	Pn	00 58 21.0	+0.6
DSI	Dead Sea	7.36	119	S	Sn	00 59 43.4	-0.3
RMNI	Mount Ramon	7.51	127	P	Pn	00 58 22.4	-0.2
RMNI	Mount Ramon	7.51	127	S	Sn	00 59 46.4	-1.3
GHAJ	Ghor Haditha	7.64	120	P	Pn	00 58 24.1	-0.1
GHAJ	Ghor Haditha	7.64	120	S	Sn	00 59 50.2	-0.4
IDAN	Idan	7.71	124	P	Pn	00 58 24.4	-0.8
IDAN	Idan	7.71	124	S	Sn	00 59 51.2	-1.1
KRMI	Paran Flat	7.81	130	P	Pn	00 58 26.1	-0.6
KRMI	Paran Flat	7.81	130	S	Sn	00 59 51.7	-3.3
ZFRI	Zfri	7.82	126	P	Pn	00 58 26.4	-0.3
ZFRI	Zfri	7.82	126	S	Sn	00 59 53.7	-1.3
PRNI	Paran	7.83	127	P	Pn	00 58 26.4	-0.6
PRNI	Paran	7.83	127	S	Sn	00 59 53.4	-2.0
HRFI	Mount Harif	8.06	129	P	Pn	00 58 29.4	-0.7
HRFI	Mount Harif	8.06	129	S	Sn	00 59 59.7	-1.5
MBRI	Mt Berech	8.15	131	P	Pn	00 58 30.7	-0.6
MBRI	Mt Berech	8.15	131	S	Sn	01 00 02.4	-1.0
ASF	Jabal al Asfar	8.20	110	Pn	Pn	00 58 32.5	+0.5
ASF				Sn	Sn	01 00 05.5	+1.0
EIL	Elat	8.26	131	Pn	Pn	00 58 34.3	+1.5
	0.6nm,0.3s,baz=353,slow=13,SNR=16						
EIL				Sn	Sn	01 00 02.0	-4.1
	2.6nm,0.3s,baz=92,slow=11,SNR=13						
	2.7nm,0.4s						
EIL	Elat	8.26	131	P	Pn	00 58 32.6	-0.3
EIL	Elat	8.26	131	S	Sn	01 00 04.5	-1.6
KBZ	Khabaz	14.32	50	Pn	P	01 00 02.4	-0.4
	baz=220,slow=3.0,SNR=3.8						
	2.5nm,1.0s						
GERES	GERESS Array B	17.04	327	Pn	Pn	01 00 31.6	+0.4
	baz=144,slow=13,SNR=3.3						
	0.4nm,0.6s						
ESDC	Sonseca Array	25.50	289	P	P	01 02 00.1	-1.3
	2.1nm,0.6s,baz=80,slow=9.3,SNR=22						
	2.1nm,0.6s						
KURBB	Kurchatov Arra	39.32	51	P	P	01 04 02.8	+1.0
	0.2nm,0.6s,baz=277,slow=8.9,SNR=2.3						
	0.2nm,0.6s						
MKAR	Makanchi Array	41.86	57	P	P	01 04 25.1	+2.1
	0.3nm,0.6s,baz=259,slow=9.7,SNR=3.0						
	0.3nm,0.6s						

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*IDC **12** 01:31:04.5±3.5, 55°.66N×151°.70W, h0km, mb3.8/4, mbtmp3.8/5, ML3.3/1, Error ellipse: s-maj=72.3km s-min=37.4km az=153.0*

*NEIC **12** 01:31:11.7±1.6, 56°.52N±0°.07×151°.6W±0°.1, h10km±1km, ML2.8/36, ML3.0(AEIC), Error ellipse: s-maj=12.3km s-min=8.7km az=209.0*

*AEIC **12** 01:31:11.7±1.2, 56°.47N±0°.07×151°.41W±0°.09, h5km±6km, Error ellipse: s-maj=11.1km s-min=6.8km az=197.0*

ISC 12 01:31:12.3±1.3, **56°.55N**±0°.09×**151°.51W**±0°.05, **h21**km, **n72**, σ1§**28**/62, **mb3.8**/4, **Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHAK	Old Harbor	1.18	305		Pn	01 31 33.2	-0.4
OHAK					Sb	01 31 47.9	-0.9
OHAK	Old Harbor	1.18	305	IAML		01 32 15.4	
	comp=E,131nm,0.7s						
KDAK	Kodiak Island	1.36	335		Pn	01 31 35.9	-0.1
KDAK				IAML		01 32 21.8	
	comp=E,70nm,0.8s						
KDAK	Kodiak Island	1.36	335		Sb	01 31 57.8	+3.7
SYI	Shuyak Island	2.12	347		Pb	01 31 47.7	-2.2
SYI	Shuyak Island	2.12	347	IAML		01 32 31.2	
	comp=E,41nm,0.9s						
SYI				IAML		01 32 56.2	
	comp=N,36nm,0.8s						
MGLS	Mageik Landsli	2.53	310		Pn	01 31 53.1	+0.9
KAHG	Katmai Hook Gl	2.54	321		Pn	01 31 54.0	+1.7
KAHG					Sb	01 32 27.9	-0.1
KAWH	Katmai	2.55	317		Pn	01 31 54.0	+1.5
KAPH	Katmai Pasha	2.56	325		Pn	01 31 54.0	+1.4
KAPH					Pb	01 31 54.6	-2.8
KARR	Katmai Rainbow	2.60	320		Pb	01 31 55.6	-2.6
Q19K	Cape Douglas,	2.64	335		Pb	01 31 55.8	-3.1
ACHA	Angle Creek He	2.65	310		Pn	01 31 54.6	+0.7
KJL	Kejulik	2.67	306		Pn	01 31 54.6	+0.6
KABU	Katmai Buttres	2.67	312		Pn	01 31 55.6	+1.5
ANCK	Angle Creek	2.71	309		Pn	01 31 55.9	+1.2
PLK4	Peulik 4	2.86	294		Pn	01 31 57.0	+0.3
PLK4	Peulik 4	2.86	294	IAML		01 32 56.6	
	comp=E,56nm,1.2s						
PLK4				IAML		01 33 17.0	
	comp=N,66nm,1.2s						
PLK2	Peulik 2	2.89	297		Pn	01 31 57.9	+0.9
CNTC	Contact Creek	2.92	308		Pn	01 31 58.0	+0.4
CNPM	China Poot	2.98	3		Pn	01 31 59.2	+0.8
CNPM				IAML		01 32 34.7	
	comp=E,34nm,1.1s						
CNPM				IAML		01 32 38.8	
	comp=N,39nm,1.2s						
CNPM	China Poot	2.98	3		Sn	01 32 34.0	+0.5
BRSE	Bradley Lake S	3.22	7		Pn	01 32 01.8	+0.2
P18K	Big Mountain,	3.47	327		Pn	01 32 05.8	+0.7
IVE	Iliamna Volcan	3.56	348		Pn	01 32 07.5	+1.1
P17K	Kvichak River	3.73	317		Pn	01 32 10.0	+1.5
O18K	Koktuh Hills	3.84	331		Pn	01 32 11.3	+1.1
O18K				IAML		01 32 59.7	
	comp=E,12nm,1.0s						
O18K				IAML		01 33 13.8	
	comp=N,15nm,0.9s						
O19K	Port Alsworth	3.94	339		Pn	01 32 12.9	+1.5
NCT	North Crescent	4.09	350		Pn	01 32 14.4	+0.8
O17K	Koliganek Bris	4.38	320		Pn	01 32 18.3	+0.8
N19K	Bonanza Creek	4.54	341		Pn	01 32 20.7	+0.9
N19K	Bonanza Creek	4.54	341	IAML		01 33 26.8	
	comp=E,6.3nm,1.2s						
PWL	Port Wells	4.63	20		Pn	01 32 20.8	-0.1
PWL	Port Wells	4.63	20	IAML		01 33 25.3	
	comp=E,20nm,1.2s						
PWL				IAML		01 34 27.8	
	comp=N,11nm,1.0s						
O16K	Kokwok River B	4.64	314		Pn	01 32 21.8	+0.8
HIN	Hinchinbrook I	4.67	32		Pn	01 32 21.3	-0.1
SPWE	Spurr West	4.77	354		Pn	01 32 23.6	+0.7
SPNN	North Nagishla	4.87	353		Pn	01 32 25.4	+1.0
STLK	Strandline Lak	4.96	358		Pn	01 32 26.0	+0.5
STLK	Strandline Lak	4.96	358	IAML		01 35 30.6	
	comp=E,13nm,0.4s						
N17K	Nushagak Hills	4.97	326		Pn	01 32 26.2	+0.6
N17K	Nushagak Hills	4.97	326	IAML		01 33 42.4	
	comp=N,4.9nm,0.9s						
N17K				IAML		01 34 59.6	
	comp=E,2.6nm,1.0s						
EYAK	Cordova Ski Ar	5.02	35		Pn	01 32 26.8	+0.6
EYAK	Cordova Ski Ar	5.02	35	IAML		01 34 35.7	
	comp=N,17nm,1.2s						
EYAK				IAML		01 34 44.4	
	comp=E,13nm,1.1s						
GOAT	Goat Mountain	5.38	38		Pn	01 32 32.1	+0.9
M18K	Stony River	5.43	338		Pn	01 32 33.0	+1.1
N16K	Nishlik Lake	5.47	319		Pn	01 32 33.7	+1.2
BMRM	Bremner River	5.70	36		Pn	01 32 36.0	+0.4
KLU	Klutina	5.73	28		Pn	01 32 36.4	+0.3
M17K	Holitna River	5.75	330		Pn	01 32 37.8	+1.5
N15K	Kwethluk River	5.79	312		Pn	01 32 38.0	+1.2
L19K	White Mountain	5.90	345		Pn	01 32 39.0	+0.6
M16K	Timber Creek	5.92	322		Pn	01 32 40.2	+1.6
WAX	Waxell Ridge	5.99	46		Pn	01 32 40.1	+0.5
K17K	Iditarod	7.07	334		Pn	01 32 55.8	+1.4
J18K	Innoko River	7.41	342		Pn	01 33 00.0	+1.0
L14K	Kuka Creek	7.51	314		Pn	01 33 01.2	+0.9
ILAR	Eielson Array	8.55	13	Pn	Pn	01 33 16.4	+1.7
	comp=E,0.3nm,0.3s,baz=203,slow=14,SNR=35						
ILAR				Sn	Sn	01 34 48.0	-2.3
	comp=E,0.1nm,0.3s,baz=67,slow=6.9,SNR=1.1						
	comp=E,2.1nm,0.7s						
YKA	Yellowknife Ar	19.43	57	P	Pn	01 35 38.4	+0.3
	comp=E,0.2nm,0.8s,baz=264,slow=12,SNR=1.9						
H11N2	WAKE ISLAND Hy	47.97	237	T	T	02 31 23.5	
	baz=29						
H11N3	WAKE ISLAND Hy	47.97	237	T	T	02 31 22.2	
	baz=29						
H11N1	WAKE ISLAND Hy	47.98	237	T	T	02 31 21.5	
	baz=29						
H11S1	WAKE ISLAND Hy	49.12	237	T	T	02 32 46.0	
	baz=29,slow=74						
H11S2	WAKE ISLAND Hy	49.13	237	T	T	02 32 47.1	
	baz=29,slow=74						
H11S3	WAKE ISLAND Hy	49.13	237	T	T	02 32 47.8	
	baz=29						
ZALV	Zalesovo Beam	60.65	326	P	P	01 41 21.5	+0.4
	comp=E,0.4nm,0.5s,baz=15,slow=6.0,SNR=2.0						
	comp=E,0.4nm,0.5s						
ZALV	Zalesovo Beam	60.65	326	P	P	01 41 22.1	+0.9
FINES	FINESS Array B	62.33	1	P	P	01 41 33.4	+1.0
	comp=E,4.1nm,1.0s,baz=354,slow=4.3,SNR=3.4						
	comp=E,4.1nm,1.0s						
FINES	FINESS Array B	62.33	1	P	P	01 41 33.5	+1.1
BVAR	Borovoye Array	65.50	334	P	P	01 41 53.8	+0.3
	comp=E,0.4nm,0.5s,baz=20,slow=4.7,SNR=3.7						
	comp=E,0.4nm,0.5s						
MKAR	Makanchi Array	67.64	323	P	P	01 42 07.4	+0.1
	comp=E,0.3nm,0.5s,baz=35,slow=6.0,SNR=4.7						
	comp=E,0.3nm,0.5s						
MKAR	Makanchi Array	67.64	323	P	P	01 42 07.8	+0.5

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*SJA **12** 01:33:23.0±0.7, 20°.69S×68°.94W, h103km±4km, ML4.0, MW3.9*

*NEIC **12** 01:33:24.2±1.2, 20°.69S±0°.03×68°.95W±0°.07, h101km±7km, mb4.1/5, ML4.0(GUC), Error ellipse: s-maj=9.7km s-min=4.1km az=85.0*

*GUC **12** 01:33:24.6±0.6, 20°.68S×68°.94W, h100km±2km, ML4.0*

ISC 12 01:33:24.0±0.8, **20°.67S**±0°.03×**68°.89W**±0°.05, **h92**km±7km, **n76**, σ1§**67**/107, **9C-3D**, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	0.58	335	Pn	Pn	01 33 40.9	+0.8
PB08				Sn	Sn	01 33 53.4	+1.4
PB08	IPOC Station P	0.58	335	⇑iP	Pn	01 33 41.0	+0.9
PB08				i S	Sn	01 33 53.7	+1.7
PB08				IAML		01 33 54.7	
	comp=E,5µm,0.6s						
PB08	IPOC Station P	0.58	335	eP	Pn	01 33 41.0	+0.9
PB08				eS	Sn	01 33 54.1	+2.0
PB08				IAML		01 33 54.4	
	comp=Z,2µm,0.5s						
PB01	IPOC Station P	0.67	236		Pn	01 33 40.2	-0.3
PB01				Sn	Sn	01 33 53.4	+0.6
PB01	IPOC Station P	0.67	236	⇑iP	Pn	01 33 40.8	+0.2
PB01				i S	Sn	01 33 53.6	+0.9
PB01				IAML		01 33 54.9	
	comp=N,11µm,0.3s						
PB01	IPOC Station P	0.67	236	eP	Pn	01 33 40.7	+0.2
PB01				eS	Sn	01 33 53.1	+0.3
PB01				IAML		01 33 55.4	
	comp=Z,4µm,0.2s						
PX03	IPOC Station P	0.74	291	eP	Pn	01 33 40.7	-0.5
PX03				i S	Sn	01 33 54.8	+0.7
HMBC	Humberstone	1.01	293		Pn	01 33 44.0	-0.1
HMBC				Sn	Sn	01 33 59.6	+0.4
HMBC	Humberstone	1.01	293	⇑iP	Pn	01 33 44.1	-0.1
HMBC				i S	Sn	01 33 59.7	+0.5
HMBC				IAML		01 34 02.6	
	comp=N,7µm,0.9s						
HMBC	Humberstone	1.01	293	eP	Pn	01 33 44.0	-0.1
HMBC				eS	Sn	01 34 00.2	+1.0
HMBC				IAML		01 34 02.3	
	comp=Z,4µm,0.4s						
GO01	Chusmiza	1.04	344		Pn	01 33 45.4	+0.6
GO01				Sn	Sn	01 34 02.0	+1.7
GO01	Chusmiza	1.04	344	⇑iP	Pn	01 33 45.5	+0.6
GO01				i S	Sn	01 34 02.0	+1.7
GO01	Chusmiza	1.04	344	eP	Pn	01 33 45.8	+1.0
GO01				eS	Sn	01 34 02.6	+2.3
GO01				IAML		01 34 04.3	
	comp=Z,1µm,0.7s						
PB02	IPOC Station P	1.14	235		Pn	01 33 45.5	+0.1

PB02	IPOC Station P	1.14	235	⇑iP	Pn	01 33 45.6	+0.1
PB02				i S	Sn	01 34 02.0	+0.3
PB02				IAML		01 34 04.0	
	comp=E,8μm,0.3s						
PB02	IPOC Station P	1.14	235	eP	Pn	01 33 45.6	+0.1
PB02				eS	Sn	01 34 02.6	+0.9
PB02				IAML		01 34 08.9	
	comp=Z,5μm,0.4s						
PB11	IPOC Station P	1.16	322		Pn	01 33 45.8	0.0
PB11	IPOC Station P	1.16	322	⇑iP	Pn	01 33 46.0	+0.2
PB11				i S	Sn	01 34 02.9	+0.7
PB11				IAML		01 34 05.1	
	comp=E,2μm,0.3s						
PB11	IPOC Station P	1.16	322	eP	Pn	01 33 45.9	0.0
PB11				eS	Sn	01 34 03.4	+1.2
PB11				IAML		01 34 04.9	
	comp=Z,2μm,0.2s						
PB09	IPOC Station P	1.16	196		Pn	01 33 46.6	+0.7
PB09	IPOC Station P	1.16	196	⇓iP	Pn	01 33 46.6	+0.7
PB09				i S	Sn	01 34 04.0	+1.6
PB09				IAML		01 34 06.5	
	comp=E,3μm,0.6s						
PB09	IPOC Station P	1.16	196	eP	Pn	01 33 46.0	+0.1
PB09				IAML		01 34 06.5	
	comp=Z,2μm,0.5s						
PATCX	Punta Patache	1.19	263		Pn	01 33 46.1	0.0
PATCX	Punta Patache	1.19	263	eP	Pn	01 33 46.1	0.0
PATCX				eS	Sn	01 34 03.6	+0.8
PATCX				IAML		01 34 04.7	
	comp=Z,2μm,0.7s						
TA01	Diego Aracena	1.21	275		Pn	01 33 46.0	-0.2
TA01	Diego Aracena	1.21	275	⇑iP	Pn	01 33 46.1	-0.2
TA01				i S	Sn	01 34 03.1	+0.1
TA01				IAML		01 34 04.4	
	comp=E,4μm,0.3s						
TA01	Diego Aracena	1.21	275	eP	Pn	01 33 46.1	-0.2
TA01				eS	Sn	01 34 04.1	+1.0
TA01				IAML		01 34 05.0	
	comp=Z,997nm,0.4s						
TA02	Huaiquique	1.23	289	eP	Pn	01 33 46.5	+0.1
TA02				i S	Sn	01 34 04.3	+0.9
TA02				IAML		01 34 10.0	
TA02	Huaiquique	1.23	289	eP	Pn	01 33 46.7	+0.2
TA02				eS	Sn	01 34 05.5	+2.1
TA02				IAML		01 34 10.6	
	comp=Z,2μm,0.1s						
PB07	IPOC Station P	1.40	221		Pn	01 33 48.8	0.0
PB07	IPOC Station P	1.40	221	⇑eP	Pn	01 33 48.8	0.0
PB07				eS	Sn	01 34 07.6	+0.2
PB07				IAML		01 34 08.8	
	comp=N,5μm,0.4s						
PB07	IPOC Station P	1.40	221	eP	Pn	01 33 48.2	-0.5
PB07				IAML		01 34 08.5	
	comp=Z,2μm,0.4s						
PB03	IPOC Station P	1.59	210		Pn	01 33 51.2	+0.1
PB03	IPOC Station P	1.59	210	eP	Pn	01 33 51.2	+0.1
PB03				i S	Sn	01 34 11.9	+0.3
PB03				IAML		01 34 14.0	
	comp=E,2μm,0.4s						
PB03	IPOC Station P	1.59	210	eP	Pn	01 33 50.8	-0.3
PB03				IAML		01 34 14.5	
	comp=Z,2μm,0.3s						
PB06	IPOC Station P	2.12	197		Pn	01 33 58.6	+0.6
PB06	IPOC Station P	2.12	197	⇓eP	Pn	01 33 58.6	+0.6
PB06				i S	Sn	01 34 22.2	-1.7
PB06				IAML		01 34 31.4	
	comp=E,1μm,0.5s						
PB06	IPOC Station P	2.12	197	eP	Pn	01 33 58.5	+0.6
PB06				eS	Sn	01 34 25.7	+1.8
PB06				IAML		01 34 30.2	
	comp=Z,742nm,0.4s						
AF01	San Pedro de A	2.36	164		Pn	01 34 02.7	+1.3
AF01	San Pedro de A	2.36	164	eP	Pn	01 34 02.5	+1.1
AF01	San Pedro de A	2.36	164	eP	Pn	01 34 02.8	+1.5
AF01				eS	Sn	01 34 29.5	-0.4
AF01				IAML		01 35 16.9	
	comp=Z,429nm,0.5s						
PB16	IPOC Station P	2.40	346		Pn	01 34 03.4	+1.4
PB12	IPOC Station P	2.45	326		Pn	01 34 01.7	-0.6
PB12	IPOC Station P	2.45	326	⇓eP	Pn	01 34 01.7	-0.6
PB12	IPOC Station P	2.45	326	eP	Pn	01 34 01.8	-0.6
PB12				eS	Sn	01 34 32.0	+0.2
PB12				IAML		01 34 37.8	
	comp=Z,447nm,0.2s						
PB05	IPOC Station P	2.49	209		Pn	01 34 03.0	+0.2
PB05	IPOC Station P	2.49	209	eP	Pn	01 34 03.0	+0.2
PB05	IPOC Station P	2.49	209	eP	Pn	01 34 03.1	+0.3
PB05				eS	Sn	01 34 40.4	+7.8
PB05				IAML		01 34 40.4	
	comp=Z,394nm,0.4s						
AP01	Chacalluta	2.67	329		Pn	01 34 05.7	+0.6
AP01	Chacalluta	2.67	329	⇑eP	Pn	01 34 06.4	+1.3
AP01	Chacalluta	2.67	329	eP	Pn	01 34 06.0	+0.9
AP01				eS	Sn	01 34 44.2	+7.5
AP01				IAML		01 34 46.0	
	comp=Z,1μm,1.0s						
PB18	Visviri	3.12	350		Pn	01 34 13.2	+1.5
PB18	Visviri	3.12	350	eP	Pn	01 34 15.2	+3.6
PB10	IPOC Station P	3.22	208		Pn	01 34 13.7	+1.2
PB10	IPOC Station P	3.22	208	eP	Pn	01 34 13.7	+1.2
PB10	IPOC Station P	3.22	208	eP	Pn	01 34 12.6	+0.1
PB10				eS	Sn	01 35 00.3	+10
PB10				IAML		01 35 06.6	
	comp=Z,149nm,0.4s						
HJA	Humahuaca	4.10	129	eP	Pn	01 34 22.2	-2.5
PB14	IPOC Station P	4.17	199		Pn	01 34 26.4	+0.7
PB14	IPOC Station P	4.17	199	eP	Pn	01 34 29.7	+4.0
PB14	IPOC Station P	4.17	199	eP	Pn	01 34 26.1	+0.4
PB14				IAML		01 35 26.9	
	comp=Z,183nm,1.0s						
SALTA		4.25	147	eP	Pn	01 34 10.3	-17
LPAZ	La Paz	4.42	10		Pn	01 34 30.0	+0.7
LPAZ	La Paz	4.42	10	eP	Pn	01 34 32.2	+2.9
GO02	Mina Guanaco	4.51	188		Pn	01 34 30.8	+0.5
GO02	Mina Guanaco	4.51	188	eP	Pn	01 34 30.5	+0.2
GO02				eS	Sn	01 35 28.4	+6.6
GO02				IAML		01 35 43.3	
	comp=Z,121nm,0.3s						
AC01	Pan de Azucar	5.67	196		Pn	01 34 43.6	-2.2
AC02	Maricunga	6.14	182		Pn	01 34 52.1	-0.5
AC06	Mina Casimiro	6.79	191	Pn	Pn	01 35 01.8	+0.9
GO03	Copiapo	7.00	190	Pn	Pn	01 35 05.1	+1.2
AC05	El Transito	8.22	188	Pn	Pn	01 35 21.9	+1.2
VILB	Vilhena	11.32	49		Pn	01 36 02.7	0.0
ITAB	Concordia	16.65	116		Pn	01 37 11.6	-0.1
ITAB				IAmb	IAmb	01 37 34.0	
	comp=Z,15nm,1.2s						
TRQA	Tornquist	18.33	162	P	P	01 37 30.2	-0.8
PLCA	Paso Flores	20.05	184	P	P	01 37 48.5	-1.2
PLCA				IAmb	IAmb	01 38 11.1	
	comp=Z,16nm,1.5s						
TUMC	Tumaco	24.34	336	P	P	01 38 31.8	-1.6
RUSC	La Rusia	26.72	351	P	P	01 38 54.0	-1.5
RUSC				IAmb	IAmb	01 38 56.5	
	comp=Z,6.9nm,0.9s						

SKO ***12*** *01:35:00.1, 41°.18N×20°.38E, h20^{km}, ML2.3*

PDG ***12*** *01:35:00.9±0.2, 41°.22N×20°.30E, h3^{km}, ML2.7/10, Error ellipse: s-maj=1.4km s-min=2.0km az=0.0*

TIR ***12*** *01:35:00.2, 41°.24N×20°.39E, h8^{km}±2^{km}, Ml2.2/4*

ISC 12 01:35:00.8±1.0**, 41°.20N**±0°.02×**20°.39E**±0°.02**, h10**^{km}±9^{km}**, n25, σ1^{s}.02**/49**, 7C-4D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.32	106	i Pg	Pg	01 35 07.2	-0.1
OHR				i Sg	Sg	01 35 12.3	+0.7
OHR				eLg	Lg	01 35 12.4	
	comp=N,295nm,0.5s						
OHR				eLg	Lg	01 35 13.6	
	comp=E,303nm,0.6s						
TIR	Tirane	0.42	290	⇑Pg	Pg	01 35 08.9	-0.1
TIR				Sg	Sg	01 35 14.1	-0.5
TIR				AML	AML	01 35 15.7	
	comp=E,0.9nm,0.1s						
TIR				AML	AML	01 35 16.1	
	comp=E,0.8nm,0.2s						
TIR	Tirane	0.42	290	i Pg	Pg	01 35 08.9	-0.1
TIR				i Sg	Sb	01 35 16.5	-0.2
PHP	Peshkopia	0.48	5	Pg	Pg	01 35 08.8	-1.4
PHP				Sg	Sg	01 35 15.3	-1.3
PHP				AML	AML	01 35 18.8	
	comp=E,1.1nm,0.2s						
KBN	Korca	0.65	152	Pg	Pb	01 35 13.5	-0.8
KBN				Sg	Sb	01 35 23.1	-0.3
NEST	Nestorio	0.93	147	Pg	Pg	01 35 18.0	-0.8
NEST				Sg	Sn	01 35 32.6	-0.9
NEST				AML	AML	01 35 35.8	
	comp=E,0.4nm,0.4s						
VLO	Vlora	1.00	223	Pg	Pn	01 35 20.6	-0.2
VLO				Sg	Sn	01 35 34.3	-0.6
VLO				AML	AML	01 35 41.5	
	comp=E,1.2nm,0.4s						
SDA	Shkodra	1.08	322	Pg	Pb	01 35 20.6	-0.9
SDA				Sg	Sb	01 35 34.3	-1.3
SKO	Skopje	1.10	45	i Pg	Pb	01 35 21.9	0.0
SKO				i Sg	Sb	01 35 34.8	-1.5
ULC	Ulcinj	1.15	312	⇑iPg	Pb	01 35 21.3	-1.4
ULC				i Sg	Sn	01 35 39.1	+0.4
DRME	Dracevica, Mon	1.33	318	⇓iPg	Pn	01 35 24.0	-1.4
DRME				eSg	Sg	01 35 44.6	+0.9
PVY	Plav	1.43	347	⇓iPg	Pn	01 35 26.6	-0.2
PVY				i Sg	Sg	01 35 48.6	+1.9
PDG	Podgorica	1.49	326	Pg	Pb	01 35 28.5	0.0
PDG				Sg	Sb	01 35 48.5	+1.0
PDG	Podgorica	1.49	326	⇓iPg	Pn	01 35 27.7	+0.1
PDG				i Sg	Sg	01 35 50.9	+2.2
GRG	Griva	1.54	99	i Pn	Pn	01 35 28.6	+0.2
GRG				i Sn	Sb	01 35 49.2	+0.2
BUM	Brajici-Budva	1.57	315	⇑iPg	Pn	01 35 28.8	+0.1
BUM				i Sg	Sg	01 35 53.6	+2.5
VAY	Valandovo	1.65	85	i Pn	Pn	01 35 29.5	-0.2
VAY				i Sn	Sb	01 35 52.7	+0.6
VAY				eLg	Lg	01 35 57.2	
	comp=E,23nm,0.5s						
VAY				eLg	Lg	01 35 58.2	
	comp=N,22nm,0.7s						
IGT	Igoumenitsa	1.67	181	Pn	Pg	01 35 33.5	+0.7
IGT				Sn	Sg	01 35 56.5	+2.0
IVA	Berane	1.71	348	⇓iPn	Pb	01 35 32.0	-0.3
IVA				i Sn	Sg	01 35 56.8	+1.1
CEME	Cevo	1.73	321	⇑iPn	Pn	01 35 31.7	+0.7
CEME				eSn	Sg	01 35 57.6	+1.1
KOME	Kolasin	1.77	339	⇑iPn	Pb	01 35 33.6	+0.2
KOME				eSn	Sg	01 35 58.3	+0.6
HCY	Herceg Novi	1.88	312	⇑iPn	Pb	01 35 34.3	-0.9
HCY				i Sn	Sg	01 36 00.8	-0.5
KNT	Kendrikon	1.90	90	i Pn	Pb	01 35 34.8	-0.6
BARS	Barje	1.93	33	i Pn	Pb	01 35 36.7	+0.6
BARS				i Sn	Sb	01 36 01.8	+1.5
BRY	Bratogost	2.19	322	⇑iPn	Pn	01 35 37.9	+0.6
BRY				i Sn	Sb	01 36 08.8	+1.1

NEIC ***12*** *01:42:57.9±1.1, 4°.3S±0°.1×151°.94E±0°.07, h180^{km}±5^{km}, mb4.7/19, Error ellipse: s-maj=18.2km s-min=9.8km az=174.0*

IDC ***12*** *01:42:59.1±2.5, 4°.47S×151°.93E, h192^{km}±25^{km}, mb4.1/5, mbtmp4.6/6, Error ellipse: s-maj=20.8km s-min=18.5km az=147.0*

ISC 12 01:42:58.6±0.7**, 4°.3S**±0°.1×**151°.95E**±0°.09**, h200**^{km}**, n33, σ1^{s}.37**/36**, mb4.7**/17**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	0.23	66	Pn	Pn	01 43 21.8	-3.2
RABL				Sn	Sn	01 43 40.2	-5.2
PMG	Port Moresby	6.96	223		Pn	01 44 36.2	-2.1
JAY	Jayapura	11.36	279	P	Pn	01 45 34.5	-0.9
	12nm,0.7s,baz=349,slow=14,SNR=4.7						
JAY				S	Sn	01 47 25.6	-17
	5.4nm,0.5s,baz=163,slow=21,SNR=2.2						
COEN	Coen	12.93	221	Pn	Pn	01 45 55.9	+0.6
MTN	Manton Dam	22.25	246		P	01 47 40.1	+0.8
MTN				IAmb	IAmb	01 47 47.3	
	comp=Z,22nm,1.4s						
DZM	Mont Dzumac	22.58	143	P	P	01 47 42.5	+0.1
	comp=Z,9.5nm,0.4s,baz=267,slow=7.4,SNR=26						
	comp=Z,9.5nm,0.4s						
DZM	Mont Dzumac	22.58	143	P	P	01 47 42.5	+0.1
WB0	Warramunga Arr	23.01	227		P	01 47 47.1	+0.9
WB0				IAmb	IAmb	01 47 48.2	
	comp=Z,22nm,1.1s						
WR8	Warramunga Arr	23.06	226	P	P	01 47 47.1	+0.5
WR8				IAmb	IAmb	01 47 48.2	
	comp=Z,30nm,1.3s						
WRAB	Tennant Creek	23.15	226	P	P	01 47 47.9	+0.4
WRAB				IAmb	IAmb	01 47 49.0	
	comp=Z,15nm,0.6s						
WRA	Warramunga Arr	23.16	226	P	P	01 47 48.0	+0.5
	comp=Z,12nm,0.4s,baz=51,slow=9.9,SNR=239						
WRA				S	S	01 51 44.1	-0.1
	comp=Z,0.4nm,0.6s,baz=44,slow=17,SNR=1.7						
	comp=Z,12nm,0.4s						
WRA	Warramunga Arr	23.16	226		P	01 47 47.3	-0.2
KNRA	Kununurra	25.45	242		P	01 48 08.3	0.0
KNRA				IAmb	IAmb	01 48 23.1	
	comp=Z,25nm,1.4s						
AS31	Alice Springs	25.97	220	P	P	01 48 13.1	+0.1
ASAR	Alice Springs	25.97	220	P	P	01 48 13.1	+0.1
	comp=Z,0.6nm,0.3s,baz=53,slow=8.9,SNR=11						
ASAR				S	S	01 52 28.6	-0.1
	comp=Z,0.3nm,0.6s,baz=49,slow=13,SNR=1.6						
	comp=Z,0.6nm,0.3s						
ASAR	Alice Springs	25.97	220	P	P	01 48 13.0	0.0
FITZ	Fitzroy Crossi	29.17	240	P	P	01 48 41.1	-0.3
	comp=Z,7.9nm,0.3s,baz=62,slow=8.9,SNR=81						
	comp=Z,7.9nm,0.3s						
FITZ	Fitzroy Crossi	29.17	240	P	P	01 48 41.4	-0.1
BBOO	Buckleboo	32.03	206	P	P	01 49 06.6	+0.2
BBOO				IAmb	IAmb	01 49 37.4	
	comp=Z,24nm,1.4s						
FORT	Forrest	34.66	218	P	P	01 49 28.7	-0.4
FORT				IAmb	IAmb	01 49 30.3	
	comp=Z,7.2nm,0.9s						
MBWA	Marble Bar	35.50	239	P	P	01 49 36.5	0.0
PSA00	Pilbara Seismi	35.57	238	P	P	01 49 36.3	-0.8
PSA00	Pilbara Seismi	35.57	238	P	P	01 49 36.8	-0.3
PSA00				IAmb	IAmb	01 49 37.4	
	comp=Z,14nm,0.8s						
GIRL	Giralia	40.78	240	P	P	01 50 21.5	+1.0
QRZ	Quartz Range	40.81	156	P	P	01 50 21.9	+1.4
QRZ				IAmb	IAmb	01 50 34.8	
	comp=Z,39nm,1.5s						
RTZ	Ruatahuna	41.06	150	P	P	01 50 23.2	+0.5
RTZ				IAmb	IAmb	01 50 29.2	
	comp=Z,40nm,1.5s						
TKNZ	Takaka Hill	41.16	156	P	P	01 50 23.9	+0.4
THZ	Tophouse	41.76	156	P	P	01 50 28.1	-0.2
THZ				IAmb	IAmb	01 50 31.4	
	comp=Z,22nm,1.2s						
TCW	Tory Channel	41.86	155	P	P	01 50 30.0	+0.9
AIN	Ainahou	56.81	64	P	P	01 52 24.1	+1.4
CMAR	Chiang Mai Arr	56.89	295	P	P	01 52 26.1	+2.9
	comp=Z,1.5nm,0.3s,baz=112,slow=6.9,SNR=6.3						
	comp=Z,1.5nm,0.3s						
CMAR	Chiang Mai Arr	56.89	295	P	P	01 52 23.7	+0.6
ILAR	Eielson Array	82.01	22	P	P	01 54 57.1	+1.2
	comp=Z,0.2nm,0.6s,baz=252,slow=4.9,SNR=1.3						

SOME ***12*** *01:52:35.5, 41°.83N×72°.23E, h15^{km}*

KRNET ***12*** *01:52:35.2±0.1, 41°.85N×72°.21E, h19^{km}, mb2.3*

NNC ***12*** *01:52:38.5±1.4, 42°.12N×72°.14E, h0^{km}, mb2.7, mpv2.9, Error ellipse: s-maj=19.0km s-min=5.8km az=165.0*

ISC 12 01:52:35.4±0.9**, 41°.84N**±0°.03×**72°.20E**±0°.02**, h10**^{km}±9^{km}**, n22, σ1^{s}.27**/40**, 17C-7D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	Arkit	0.18	256	⇑iP	Pg	01 52 39.5	+0.1
ARK				⇑iS	Sg	01 52 42.7	+0.6
MNAS	Manas	0.68	19	⇑iP	Pg	01 52 48.3	-0.4
MNAS				⇑iS	Sg	01 52 57.6	-0.1
ARSB	Arslanbob	0.78	131	⇓eP	Pg	01 52 50.1	-0.4
ARSB				⇓eS	Sg	01 53 01.2	+0.5
TRKS	Terek-Say	0.85	249	⇑iP	Pg	01 52 51.4	-0.5
TRKS				⇑iS	Sg	01 53 03.5	+0.5
MRKS	Merke	1.18	40	P	Pn	01 52 57.4	-0.7
	2.7nm,0.2s						
MRKS				S	Sb	01 53 12.1	-1.2
	15nm,0.3s						
MRKS	Merke	1.18	40	eP	Pn	01 52 57.4	-0.7
	2.5nm,0.1s						
MRKS				eS	Sb	01 53 12.2	-1.2
	10nm,0.3s						
EKS2	Erkin-Say	1.43	54	⇓iP	Pn	01 53 01.1	-0.5
EKS2				⇓iS	Sb	01 53 20.1	-0.4
SALK	Salom-Alik	1.55	128	⇑iP	Pb	01 53 03.8	-0.5
SALK				⇑iS	Sb	01 53 24.4	+0.3
ARLS	Aral	1.59	89	⇑eP	Pb	01 53 04.2	-0.7
ARLS				⇑iS	Sb	01 53 25.3	+0.2
IUG	Iuzhnay	1.65	281	P	Pg	01 53 06.7	-0.3
	7.8nm,0.1s						
IUG				S	Sg	01 53 28.5	+0.1
	93nm,0.4s						
KK31	Karatay Array	1.77	316	⇑Pn	Pb	01 53 07.7	-0.4
	1.2nm,0.2s,baz=130,slow=15,SNR=5.8						
KK31				⇓Sn	Sb	01 53 30.6	+0.1
	1.5nm,0.2s,baz=129,slow=28,SNR=11						
AAK	Ala-Archa	1.88	64	⇑Pn	Pg	01 53 10.9	-0.6
	0.7nm,0.4s						
AAK				⇑Sn	Sg	01 53 39.7	+3.8
	1.0nm,0.5s						
SFK	Sufi-Kurgan	2.08	151	⇑eP	Pb	01 53 12.0	-1.3
SFK				⇑eS	Sb	01 53 38.5	-0.8
BRLS	Borolday	2.12	305	Pg	Pb	01 53 14.4	+0.5
	4.1nm,0.3s						
BRLS				Lg	Lg	01 53 41.8	
	15nm,0.4s						
BRLS	Borolday	2.12	305	eP	Pb	01 53 14.4	+0.5
	1.7nm,0.1s						
BRLS				eS	Sg	01 53 41.8	-1.6
	12nm,0.2s						
SGDS	Sogindy	2.41	47	Pg	Pb	01 53 18.7	-0.2
	1.9nm,0.2s						
SGDS				Lg	Lg	01 53 49.2	
	11nm,0.2s						
JNKS	Jany-Kuch	2.71	106	⇑eP	Pn	01 53 20.9	+1.6
JNKS				⇑eS	Sb	01 53 54.3	-3.3
BOOM	Boomskoye usch	2.85	76	⇓eP	Pn	01 53 22.7	+1.5
BOOM				⇓eS	Sn	01 53 57.5	+1.8
DGS	Degeres	2.99	61	Pg	Pb	01 53 30.1	+1.3
	2.3nm,0.3s						
DGS				Lg	Lg	01 54 08.7	
	4.6nm,0.5s						
DGS	Degeres	2.99	61	eP	Pb	01 53 30.1	+1.3
	1.8nm,0.2s						
DGS				eS	Sg	01 54 08.6	-2.8
	4.5nm,0.2s						
KRBS	Karabastau	3.16	53	Pg	Pb	01 53 31.4	-0.3
	1.3nm,0.3s						
KRBS				Lg	Lg	01 54 10.8	
	2.9nm,0.4s						
KRBS	Karabastau	3.16	53	eP	Pb	01 53 31.4	-0.3
	0.3nm,0.2s						
KRBS				eS	Sb	01 54 10.8	+0.5
	1.8nm,0.4s						

BUC 12 02:11:45.5±0.2**, 45°.55N**×**26°.39E, h119**^{km}±1^{km}**, ml3.5**/51**, 62C-33D, Error ellipse: s-maj=1.3km s-min=1.1km az=17.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEHR	Nehoiu	0.14	207	⇑P	Pn	02 12 02.6	+0.7
NEHR				⇓S	Sn	02 12 15.0	+0.9
BISRR	Bisoca	0.23	91	⇑P	Pn	02 12 02.8	+0.7
BISRR				⇓S	Sn	02 12 14.9	+0.3
MLR	Muntele Rosu	0.32	259	⇑P	Pn	02 12 03.0	+0.5
MLR				⇑S	Sn	02 12 16.2	+0.9
COVR	Voineasa-Covas	0.32	337	⇑P	Pn	02 12 02.6	+0.3
COVR				⇑S	Sn	02 12 15.5	+0.4
PLOR	Plostina	0.35	32	⇑P	Pn	02 12 02.9	+0.3
PLOR				⇑S	Sn	02 12 15.9	+0.5
VRI	Vrincioaia	0.40	37	⇑P	Pn	02 12 03.2	+0.5
VRI				⇑S	Sn	02 12 16.2	+0.6
ISR	Istrita	0.45	166	⇑P	Pn	02 12 03.8	+0.7
ISR				⇑S	Sn	02 12 16.1	-0.1
ODBI	Odobesti	0.52	66	⇑S	Sn	02 12 17.0	+0.2
TURR	Turia	0.56	333	⇑P	Pn	02 12 04.1	+0.4
TURR				⇓S	Sn	02 12 17.7	+0.2
PANC	Panciu	0.62	59	⇑P	Pn	02 12 04.7	+0.6
PANC				⇑S	Sn	02 12 19.1	+1.1
OZUR		0.69	323	⇑P	Pn	02 12 04.6	0.0
OZUR				⇑S	Sn	02 12 18.7	-0.4
COSR	Cosmesti PH	0.72	65	⇓P	Pn	02 12 05.4	+0.6
BOSR	Bodos	0.73	316	⇑P	Pn	02 12 05.0	+0.1
BOSR				⇑S	Sn	02 12 19.9	+0.2
ONER	Baraj Valea Uz	0.78	0	⇓P	Pn	02 12 05.8	+0.5
ONER				⇑S	Sn	02 12 20.9	+0.5
DOPR	Dopca	0.81	301	⇑P	Pn	02 12 05.8	+0.2
DOPR				⇓S	Sn	02 12 21.1	+0.2
SULR		0.88	186	⇑P	Pn	02 12 06.9	+0.8
SULR				⇑S	Sn	02 12 22.8	+1.0
TUDR		0.90	87	⇓P	Pn	02 12 06.3	0.0
TUDR				⇓S	Sn	02 12 22.2	+0.1
IZVR	Izvoarele	0.97	90	⇑P	Pn	02 12 06.8	-0.2
TESR	Tescani	0.98	11	⇑P	Pn	02 12 07.3	+0.1
TESR				⇓S	Sn	02 12 23.1	-0.4
MTUR	Matau	0.99	251	⇑P	Pn	02 12 07.8	+0.5
SCHL	Schela	1.02	92	⇓P	Pn	02 12 07.9	+0.5
SCHLR	Schela	1.02	94	⇓P	Pn	02 12 07.4	-0.1
SCHLR	Schela	1.02	94	⇓P	Pn	02 12 07.4	-0.1
NEGRR	Negrea	1.05	90	⇓P	Pn	02 12 08.0	+0.3
NEGRR				⇑S	Sn	02 12 24.4	-0.3
VARL	Varlezi	1.08	71	⇑P	Pn	02 12 08.5	+0.4
VARL				⇑S	Sn	02 12 25.2	-0.1
LEHL	Lehliu	1.12	164	⇓P	Pn	02 12 09.2	+0.6
LEHL				⇑S	Sn	02 12 27.1	+1.1
BIR	Birlad	1.12	50	⇓P	Pn	02 12 09.2	+0.7
BIR				⇑S	Sn	02 12 26.5	+0.4
INCR	INCERC-Sediu C	1.12	188	⇑S	Sn	02 12 26.5	+0.4
SCTR	Scanteiesti	1.14	83	⇑P	Pn	02 12 09.0	+0.3
SCTR				⇑S	Sn	02 12 26.5	+0.2
AMRR	Amara	1.16	144	⇑P	Pn	02 12 09.5	+0.5
AMRR				⇑S	Sn	02 12 27.5	+0.8
TATR	Tatarca	1.17	87	⇑P	Pn	02 12 09.5	+0.4
TATR				⇑S	Sn	02 12 27.4	+0.4
VLDR	Vladesti	1.22	76	⇑P	Pn	02 12 10.1	+0.5
VLDR				⇑S	Sn	02 12 28.2	+0.2
BUC1	Bucharest	1.23	192	⇑P	Pn	02 12 10.2	+0.5
BUC1				⇑S	Sn	02 12 28.6	+0.5
ARR	Arges	1.25	262	⇓P	Pn	02 12 10.3	+0.3
ARR				⇑S	Sn	02 12 28.4	-0.2
GIUM	Giurgiulesti	1.28	92	⇓P	Pn	02 12 11.0	+0.8
GIUM				⇑S	Sn	02 12 29.4	+0.3
SGRR	Singureni	1.36	193	⇓S	Sn	02 12 30.5	-0.2
CICN	Ciocanesti	1.43	161	⇑P	Pn	02 12 12.0	+0.1
CICN				⇑S	Sn	02 12 32.0	-0.1
VASR	Vaslui	1.46	41	⇓S	Sn	02 12 32.4	-0.4
MDB	Medias	1.52	294	⇑P	Pn	02 12 13.6	+0.6
MDB				⇓S	Sn	02 12 34.8	+0.8
TLBR	Topalu	1.55	130	⇓P	Pn	02 12 13.5	+0.1
TLBR				⇑S	Sn	02 12 34.1	-0.4
TPGR	Topolog	1.60	115	⇑P	Pn	02 12 13.7	-0.2
TLCR		1.75	101	⇑P	Pn	02 12 15.9	+0.2
TLCR				⇓S	Sn	02 12 38.2	-0.6
ICOR	Ion Corvin	1.75	144	⇑P	Pn	02 12 16.3	+0.6
ICOR				⇑S	Sn	02 12 39.0	+0.1
TIRR	Tirgusor	1.81	127	⇓P	Pn	02 12 16.5	+0.1
TIRR				⇓S	Sn	02 12 39.5	-0.5
PRAR	RASCA	1.81	357	⇑S	Sn	02 12 40.4	+0.2
LOT	Lotru	1.84	268	⇑P	Pn	02 12 16.9	-0.1
LOT				⇑S	Sn	02 12 40.4	-0.7
MFTR	Murfatlar	2.00	133	⇑P	Pn	02 12 18.8	+0.1
VLAD	Vladila	2.10	223	⇓P	Pn	02 12 19.6	-0.5
LOZB	Loznitsa	2.19	176	⇓P	Pn	02 12 21.0	-0.2
BURAR	Bucovina Array	2.21	339	⇑P	Pn	02 12 22.4	+0.8
BURAR				⇑S	Sn	02 12 50.4	+1.1
SRE	Strehaia	2.42	250	⇑P	Pn	02 12 23.9	-0.3
PLVB	Pleven	2.51	211	⇓P	Pn	02 12 25.0	-0.3
MARR	Marisel-Cluj	2.54	297	⇑P	Pn	02 12 25.7	0.0
GZR	Gura Zlata	2.54	268	⇓P	Pn	02 12 26.0	+0.2
GZR				⇓S	Sn	02 12 57.4	+0.6
PURM	Purcari	2.62	67	⇑P	Pn	02 12 26.2	-0.4
RMGR	Halanga-Turnu	2.76	253	⇓P	Pn	02 12 27.9	-0.6
HERR	Herculane	2.88	258	⇓P	Pn	02 12 29.7	-0.5
SORM	Soroca	2.92	27	⇓P	Pn	02 12 30.2	-0.3
BOVS	Bovan	3.85	242	⇓P	Pn	02 12 42.1	-0.9

GCG 12 02:11:52.9±1.0**, 14°.30N**×**90°.31W, h12**^{km}±8^{km}**, MD3.6, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESSG	**Sabana Grande**	**0.51**	**280**	*i* P	Pb	02 12 03.5	-0.3
ESSG				*i* S	Sb	02 12 10.6	-0.6
NUBE	**Las Nubes**	**0.65**	**127**	*i* P	Pg	02 12 05.9	+0.3
NUBE				*e*S	Sb	02 12 15.0	-0.3
APG	**El Apazote**	**0.72**	**348**	*e*P	Pg	02 12 07.1	+0.3

*IDC **12** 02:17:44.5±5.7, 30.°84N×142.°26E, h61^{km}±45^{km}, mb3.5/6, mbtmp3.7/7, ML2.7/1, Error ellipse: s-maj=110.2km s-min=23.0km az=74.0*

ISC 12 02:17:37.3±3.0**, 30.°4N**±0.°1×**142.°3E**±0.°7**, h24**^{km}**, n8,** σ**0^{s}60**/7**, mb3.7**/6**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.28**	**182**	P	**Pn**	**02 18 27.6**	**+0.4**
	37nm,0.8s,baz=304,slow=22,SNR=1.7						
JCJ				S	**Sn**	**02 19 04.7**	**-0.8**
	22nm,0.4s,baz=78,slow=23,SNR=2.2						
MJAR	**Matsushiro Arr**	**7.04**	**332**	P	**Pn**	**02 19 18.4**	**-0.5**
	0.2nm,0.3s,baz=157,slow=12,SNR=4.0 1.7nm,0.4s						
MKAR	**Makanchi Array**	**48.54**	**307**	P	**P**	**02 26 19.0**	**+0.5**
	0.4nm,0.6s,baz=92,slow=7.2,SNR=4.5 0.4nm,0.6s						
WRA	**Warramunga Arr**	**50.62**	**190**	P	P	02 26 40.5	+5.9
	1.0nm,0.6s,baz=7.4,slow=7.7,SNR=2.2 1.0nm,0.6s						
KURBB	**Kurchatov Arra**	**50.88**	**313**	P	**P**	**02 26 36.2**	**0.0**
	0.4nm,0.6s,baz=90,slow=7.8,SNR=4.5 0.4nm,0.6s						
ASAR	**Alice Springs**	**54.35**	**190**	P	P	02 27 08.2	+6.1
	0.2nm,0.3s,baz=5.9,slow=6.1,SNR=4.6 0.2nm,0.3s						
BVAR	**Borovoye Array**	**55.75**	**316**	P	**P**	**02 27 12.3**	**+0.3**
	0.4nm,0.5s,baz=90,slow=5.9,SNR=2.6 0.4nm,0.5s						
FINES	**FINESS Array B**	**75.07**	**334**	P	**P**	**02 29 16.6**	**-0.2**
	5.0nm,1.0s,baz=61,slow=5.5,SNR=4.9 5.0nm,1.0s						

*CNRM **12** 02:38:38.7, 35.°45N×3.°52W, h2^{km}*
*SFS **12** 02:38:41.8, 35.°77N×3.°10W, h3^{km}, ML2.0/4, MLv1.6/4*
*MDD **12** 02:38:42.0±0.9, 35.°74N×3.°20W, h0^{km}, mb_Lg2.5/3, Error ellipse: s-maj=25.6km s-min=3.3km az=73.0*

ISC 12 02:38:38.4±1.5**, 35.°63N**±0.°05×**3.°33W**±0.°06**, h19**^{km}±7^{km}**, n15,** σ**0^{s}77**/18**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMELI	**Melilla**	**0.44**	**135**	Pg	**Pn**	**02 38 50.3**	**+0.6**
WMELI				Sg	**Sn**	**02 38 56.5**	**-0.6**
EMEL	**Melilla**	**0.45**	**137**	Pg	**Pn**	**02 38 50.2**	**+0.4**
EMEL				Sg	**Sn**	**02 38 57.6**	**+0.3**
EMEL				*i* IVmb_Lg		02 38 58.9	
EMLI	**Melilla**	**0.45**	**137**	Sg	**Sn**	**02 38 57.5**	**+0.1**
EMLI				Pg	**Pn**	**02 38 50.2**	**+0.4**
PALE	**Palemas**	**0.65**	**230**	P	Pg	02 38 46.5	-4.7
PALE	**Palemas**	**0.65**	**230**	S	Sg	02 38 52.5	-7.4
TAF	**Taforalt**	**1.11**	**137**	P	**Pg**	**02 38 59.9**	**+0.1**
ELGU	**Los Guajares,**	**1.26**	**349**	Pg	**Pg**	**02 39 03.4**	**+0.7**
ELGU				Sg	**Sg**	**02 39 19.8**	**+0.7**
ELGU				*i* IVmb_Lg		02 39 26.0	
EGOR	**Sierra Gorda,**	**1.60**	**337**	Sn	**Sg**	**02 39 29.6**	**-0.6**
EQES	**Quesada**	**2.18**	**5**	Pg	**Pg**	**02 39 19.6**	**-0.6**
EQES				Sg	**Sg**	**02 39 47.7**	**-0.8**
EQES				*i* IVmb_Lg		02 40 53.1	
LCRM	**LCR**	**2.31**	**213**	P	**Pn**	**02 39 16.0**	**+0.4**
LCRM	**LCR**	**2.31**	**213**	S	**Sn**	**02 39 45.3**	**+1.6**
MD31	**MD31**	**3.00**	**204**	P	**Pn**	**02 39 24.7**	**-0.3**
MD31	**MD31**	**3.00**	**204**	S	**Sn**	**02 39 59.4**	**-1.1**
MDT	**Midelt**	**3.00**	**201**	P	**Pn**	**02 39 24.7**	**-0.3**
MDT	**Midelt**	**3.00**	**201**	S	**Sn**	**02 39 59.7**	**-0.9**

*IDC **12** 02:49:24.1±2.4, 34.°55N×24.°00E, h34^{km}±16^{km}, mb3.8/9, mbtmp3.8/14, ML3.5/5, Error ellipse: s-maj=23.8km s-min=19.2km az=132.0*
*GII **12** 02:49:26.6±0.0, 34.°272N±0.°002×24.°651E±0.°001, h20^{km}, Mws4.0, confirmed*
*ATH **12** 02:49:27.8±0.5, 34.°79N×24.°18E, h23^{km}±2^{km}, ML3.0/7, Manual Solution by N.Liadopoulou First location: 2019/12/12 02:50:57, This location: 2019/12/12 06:19:09 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 2 km*
*ISK **12** 02:49:27.5, 34.°66N×24.°40E, h62^{km}, ML2.9/16*
*THE **12** 02:49:28.7, 35°N±6°×2°4E±°, h21^{km}±7^{km}, M2.9/6, MLh2.9/6*

ISC 12 02:49:22.5±1.3**, 34.°41N**±0.°07×**24.°17E**±0.°04**, h30**^{km}±8^{km}**, n125,** σ**2^{s}24**/139**, mb3.9**/8**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.43**	**351**	P	**Pb**	**02 49 32.4**	**+0.6**
GVD				S	**Sb**	**02 49 36.5**	**-1.8**
GVD	**Gavdhos**	**0.43**	**351**	P	**Pb**	**02 49 32.3**	**+0.4**
GVD				S	**Sb**	**02 49 36.3**	**-2.0**
VAM	**Vamos**	**0.99**	**2**	P	**Pn**	**02 49 41.1**	**+0.8**
VAM				S	**Sn**	**02 49 51.8**	**-1.6**
VAM	**Vamos**	**0.99**	**2**	P	**Pn**	**02 49 40.7**	**+0.3**
VAM				S	**Sn**	**02 49 50.2**	**-3.1**
IDI	**Anoyia**	**1.06**	**34**	Pg	**Pn**	**02 49 43.7**	**+2.4**
	11nm,0.3s,baz=220,slow=11,SNR=126						
IDI				Lg	Lg	02 49 59.5	
	24nm,0.3s,baz=135,slow=22,SNR=7.9						
IDI	**Anoyia**	**1.06**	**34**	P	**Pn**	**02 49 43.4**	**+2.1**
IDI				S	**Sn**	**02 49 54.3**	**-0.8**
IDI	**Anoyia**	**1.06**	**34**	Pg	**Pn**	**02 49 42.7**	**+1.4**
IDI				Sg	**Sn**	**02 49 54.5**	**-0.5**
IDI	**Anoyia**	**1.06**	**34**	P	**Pn**	**02 49 43.5**	**+2.2**
IDI				S	**Sn**	**02 49 53.9**	**-1.1**
CHNB	**Souda**	**1.08**	**356**	P	**Pn**	**02 49 42.5**	**+1.0**
CHNB				S	**Sn**	**02 49 53.0**	**-2.4**
CH01	**Chania**	**1.11**	**354**	P	**Pn**	**02 49 43.4**	**+1.5**
CH01				S	**Sn**	**02 49 53.7**	**-2.5**
CHAN	**Chania**	**1.11**	**355**	P	**Pn**	**02 49 43.3**	**+1.4**
CHAN				S	**Sn**	**02 49 54.1**	**-2.0**
CHAN	**Chania**	**1.11**	**355**	P	**Pn**	**02 49 42.9**	**+0.9**
CHAN				S	**Sn**	**02 49 53.4**	**-2.8**
IACM	**Heraklion**	**1.16**	**40**	P	**Pb**	**02 49 46.2**	**+2.2**
IACM	**Heraklion**	**1.16**	**40**	P	**Pn**	**02 49 45.3**	**+2.6**
NPS	**Neapolis**	**1.46**	**54**	P	**Pb**	**02 49 50.6**	**+1.5**
NPS				S	**Sn**	**02 50 07.4**	**+2.5**
NPS	**Neapolis**	**1.46**	**54**	P	**Pb**	**02 49 50.5**	**+1.4**
ANKY	**Antikythira Is**	**1.62**	**334**	P	**Pn**	**02 49 51.2**	**+2.3**
STIA	**Sitia Lasithi**	**1.77**	**63**	P	**Pb**	**02 49 54.9**	**+0.6**
SIT2	**Siteia**	**1.78**	**63**	P	**Pb**	**02 49 55.3**	**+0.8**
ZKR	**Zakros**	**1.83**	**67**	P	**Pb**	**02 49 56.2**	**+1.0**
ZKR	**Zakros**	**1.83**	**67**	Pn	**Pn**	**02 49 54.2**	**+2.4**
ZKR	**Zakros**	**1.83**	**67**	P	**Pb**	**02 49 55.9**	**+0.6**
KTHA	**Kythira Island**	**2.05**	**334**	Pn	**Pb**	**02 49 59.3**	**+0.2**
SNT5	**Nea Kammeni, S**	**2.23**	**26**	P	**Pn**	**02 49 59.0**	**+1.7**
SNT5	**Nea Kammeni, S**	**2.23**	**26**	P	**Pn**	**02 49 59.0**	**+1.7**
SAP3	**Santorini-Thir**	**2.24**	**25**	P	**Pn**	**02 49 59.2**	**+1.8**
THRA	**Thira**	**2.25**	**27**	P	**Pn**	**02 49 59.7**	**+2.1**
MHLO	**Agia Marina, M**	**2.28**	**5**	P	**Pn**	**02 49 59.2**	**+1.1**
APE	**Apeiranthos**	**2.88**	**22**	Pn	**Pn**	**02 50 07.4**	**+1.1**
APE				Sn	**Sn**	**02 50 38.3**	**-1.5**
APE	**Apeiranthos**	**2.88**	**22**	P	**Pn**	**02 50 06.6**	**+0.4**
APE	**Apeiranthos**	**2.88**	**22**	P	**Pn**	**02 50 06.6**	**+0.4**
PYL	**PYLOS**	**3.17**	**322**	P	**Pn**	**02 50 13.2**	**+3.0**
MET1	**Methana Town,**	**3.22**	**349**	P	**Pn**	**02 50 11.2**	**+0.2**
MET2	**Kameni Chora,**	**3.27**	**348**	P	**Pn**	**02 50 12.1**	**+0.5**
MET5	**Makryloggos,Me**	**3.27**	**349**	P	**Pn**	**02 50 12.8**	**+1.1**
VLX	**Vlachokerasia**	**3.29**	**334**	P	**Pn**	**02 50 14.6**	**+2.5**
ITM	**Ithomi**	**3.31**	**327**	Pn	Pn	02 50 17.4	+5.2
ITM	**Ithomi**	**3.31**	**327**	P	**Pn**	**02 50 15.1**	**+2.9**
VLY	**Voula,Athens**	**3.45**	**355**	P	**Pn**	**02 50 14.5**	**+0.4**
DAT	**Datca**	**3.62**	**49**	Pn	**Pn**	**02 50 18.8**	**+2.3**
KARY	**Karystos**	**3.62**	**3**	P	**Pn**	**02 50 16.8**	**+0.4**
PTL	**Penteli**	**3.64**	**356**	P	**Pn**	**02 50 17.2**	**+0.5**
DION	**Dionisos Attik**	**3.66**	**357**	P	**Pn**	**02 50 17.3**	**+0.3**
ARG	**Arkhangelos**	**3.71**	**60**	P	**Pn**	**02 50 20.5**	**+2.9**
LTK	**Loutraki**	**3.73**	**345**	P	**Pn**	**02 50 18.5**	**+0.5**
STFN	**Stefani**	**3.79**	**353**	P	**Pn**	**02 50 19.4**	**+0.6**
GUR	**Goura**	**3.81**	**338**	P	**Pn**	**02 50 20.4**	**+1.2**
VIL2	**Platees**	**3.86**	**349**	P	**Pn**	**02 50 19.3**	**-0.5**
SMG	**Samos**	**3.94**	**33**	P	**Pn**	**02 50 22.6**	**+1.8**
KLV	**Kalavryta, Ach**	**3.97**	**336**	P	**Pn**	**02 50 22.7**	**+1.3**
DRO	**Drossia**	**4.05**	**331**	P	**Pn**	**02 50 25.0**	**+2.6**
TURN	**Turunc**	**4.08**	**53**	Pn	**Pn**	**02 50 25.2**	**+2.5**
KYMI	**Kymi, Euboea I**	**4.21**	**359**	P	**Pn**	**02 50 24.8**	**+0.2**
RLS	**Riolos of Patr**	**4.24**	**330**	P	**Pn**	**02 50 25.3**	**+0.3**
TRIZ	**Trizonia**	**4.29**	**337**	P	**Pn**	**02 50 26.5**	**+0.8**
YER	**Yerkesik**	**4.31**	**50**	Pn	**Pn**	**02 50 28.8**	**+2.8**
LKR	**Lokris**	**4.33**	**348**	P	**Pn**	**02 50 26.5**	**+0.3**
SERG	**Sergoula**	**4.34**	**338**	P	**Pn**	**02 50 27.2**	**+0.8**
ATAL	**Atalanti**	**4.37**	**348**	P	**Pn**	**02 50 26.6**	**-0.2**
DALY	**Dalyan (Mula)**	**4.37**	**55**	Pn	**Pn**	**02 50 29.7**	**+2.9**
MG00	**Magoula, Dorid**	**4.38**	**337**	P	**Pn**	**02 50 27.9**	**+1.1**
AXS	**Araxos**	**4.40**	**330**	P	**Pn**	**02 50 30.2**	**+3.1**
EFP	**Efpalio**	**4.40**	**336**	P	**Pn**	**02 50 29.4**	**+2.2**
ANX	**Ano Chora**	**4.55**	**337**	P	**Pn**	**02 50 30.9**	**+1.6**
AYDB	**Zeytinkoy-Aydi**	**4.64**	**39**	Pn	**Pn**	**02 50 33.3**	**+2.7**
PVO	**Paravola**	**4.70**	**334**	P	**Pn**	**02 50 34.0**	**+2.7**
VLS	**Valsamata**	**4.74**	**323**	P	**Pn**	**02 50 33.5**	**+1.7**
AKAS	**Kas**	**4.80**	**66**	Pn	**Pn**	**02 50 36.4**	**+3.5**
AGG	**Agios Georgios**	**4.83**	**343**	P	**Pn**	**02 50 34.2**	**+1.1**
NAZL	**Nazilli-Aydin**	**4.87**	**42**	Pn	**Pn**	**02 50 36.3**	**+2.7**
MAKR	**Makrakomi, Fth**	**4.87**	**341**	P	**Pn**	**02 50 35.2**	**+1.4**
EVR	**Evrytania**	**4.88**	**338**	P	**Pn**	**02 50 35.5**	**+1.7**
CAME	**Cameli-Denizli**	**4.88**	**57**	Pn	**Pn**	**02 50 37.0**	**+3.0**
ODEM	**Odemis-Izmir**	**4.98**	**38**	Pn	**Pn**	**02 50 38.3**	**+3.1**
APMY	**Acipayam-Deniz**	**5.17**	**52**	Pn	**Pn**	**02 50 40.2**	**+2.4**
ELL	**Elmali**	**5.23**	**62**	Pn	**Pn**	**02 50 41.7**	**+3.0**
TETR	**Tetrakomo, Epi**	**5.44**	**336**	P	**Pn**	**02 50 42.2**	**+0.6**
CSS	**Mathiatis**	**7.57**	**83**	P	**Pn**	**02 51 10.6**	**-0.1**
CSS	**Mathiatis**	**7.57**	**83**	S	**Sn**	**02 52 32.4**	**-3.1**
BRTR	**Keskin Array B**	**9.24**	**52**	Pn	**Pn**	**02 51 37.0**	**+3.2**
	0.1nm,0.3s,baz=222,slow=13,SNR=4.1 0.6nm,0.7s						
KZIT	**Kziot**	**9.31**	**109**	P	**Pn**	**02 51 34.4**	**-0.2**
KZIT	**Kziot**	**9.31**	**109**	S	**Sn**	**02 53 13.5**	**-4.7**
MMAI	**Mount Meron Ar**	**9.46**	**95**	Pn	**Pn**	**02 51 40.1**	**+3.3**
	0.9nm,0.3s,baz=290,slow=15,SNR=5.2						
MMAI				Sn	**Sn**	**02 53 21.8**	**-0.4**
	1.6nm,0.3s,baz=275,slow=20,SNR=5.8 0.4nm,0.3s						
AMAZ	**Amatzia**	**9.48**	**105**	P	**Pn**	**02 51 36.6**	**-0.3**
AMAZ	**Amatzia**	**9.48**	**105**	S	**Sn**	**02 53 18.5**	**-3.9**
SALP	**Salfit**	**9.53**	**101**	P	**Pn**	**02 51 37.4**	**-0.2**
SALP	**Salfit**	**9.53**	**101**	S	**Sn**	**02 53 19.2**	**-4.4**
MMLI	**Mount Malkishu**	**9.61**	**99**	P	**Pn**	**02 51 37.9**	**-0.9**
MMLI	**Mount Malkishu**	**9.61**	**99**	S	**Sn**	**02 53 21.5**	**-4.3**
GEM	**Giv'at Ha'Em**	**9.64**	**94**	P	**Pn**	**02 51 39.1**	**0.0**
GEM	**Giv'at Ha'Em**	**9.64**	**94**	S	**Sn**	**02 53 22.7**	**-3.7**
YTIR	**Yattir**	**9.70**	**105**	P	**Pn**	**02 51 39.9**	**-0.1**
YTIR	**Yattir**	**9.70**	**105**	S	**Sn**	**02 53 23.7**	**-4.2**
RMNI	**Mount Ramon**	**9.72**	**110**	P	**Pn**	**02 51 40.3**	**-0.1**
RMNI	**Mount Ramon**	**9.72**	**110**	S	**Sn**	**02 53 25.2**	**-3.3**
HMDT	**Nahal Hemdat**	**9.75**	**100**	P	**Pn**	**02 51 40.5**	**0.0**
HMDT	**Nahal Hemdat**	**9.75**	**100**	S	**Sn**	**02 53 25.2**	**-3.7**
UJAP	**Al Uja**	**9.78**	**101**	P	**Pn**	**02 51 40.1**	**-0.9**
UJAP	**Al Uja**	**9.78**	**101**	S	**Sn**	**02 53 25.0**	**-4.8**
DSI	**Dead Sea**	**9.84**	**104**	P	**Pn**	**02 51 41.9**	**+0.1**
DSI	**Dead Sea**	**9.84**	**104**	S	**Sn**	**02 53 27.2**	**-4.0**
KRMI	**Paran Flat**	**9.91**	**113**	P	**Pn**	**02 51 42.7**	**-0.2**
KRMI	**Paran Flat**	**9.91**	**113**	S	**Sn**	**02 53 29.0**	**-4.1**
PRNI	**Paran**	**10.02**	**111**	P	**Pn**	**02 51 44.4**	**+0.1**
PRNI	**Paran**	**10.02**	**111**	S	**Sn**	**02 53 31.2**	**-4.5**
GHAJ	**Ghor Haditha**	**10.08**	**105**	P	**Pn**	**02 51 44.6**	**-0.5**
GHAJ	**Ghor Haditha**	**10.08**	**105**	S	**Sn**	**02 53 33.2**	**-3.8**
HRFI	**Mount Harif**	**10.19**	**112**	P	**Pn**	**02 51 46.6**	**-0.1**
HRFI	**Mount Harif**	**10.19**	**112**	S	**Sn**	**02 53 35.7**	**-4.1**
MBRI	**Mt Berech**	**10.21**	**114**	P	**Pn**	**02 51 47.0**	**0.0**
MBRI	**Mt Berech**	**10.21**	**114**	S	**Sn**	**02 53 36.5**	**-4.0**
EIL	**Elat**	**10.30**	**114**	Pn	**Pn**	**02 51 50.9**	**+2.7**
	0.6nm,0.3s,baz=246,slow=2.9,SNR=14						
EIL				Sn	**Sn**	**02 53 36.9**	**-5.6**
	1.7nm,0.3s,baz=20,slow=14,SNR=7.5 2.1nm,0.4s						
EIL	**Elat**	**10.30**	**114**	P	**Pn**	**02 51 47.6**	**-0.5**
EIL	**Elat**	**10.30**	**114**	S	**Sn**	**02 53 37.0**	**-5.6**
AKASG	**Malin Array Be**	**16.69**	**11**	Pn	**Pn**	**02 53 14.8**	**+0.8**
	0.7nm,0.3s,baz=205,slow=10,SNR=4.3 0.2nm,0.2s						
KBZ	**Khabaz**	**17.23**	**52**	P	**P**	**02 53 23.9**	**+1.8**
	0.1nm,0.3s,baz=258,slow=13,SNR=5.1 2.7nm,0.9s						
HFS	**Hagfors**	**26.63**	**348**	P	**P**	**02 54 57.5**	**-0.6**
	1.2nm,0.5s,baz=155,slow=11,SNR=8.9 1.2nm,0.5s						
NOA	**NORSAR Array B**	**27.92**	**347**	P	**P**	**02 55 09.0**	**-0.7**
	0.7nm,0.8s,baz=155,slow=8.9,SNR=1.4 0.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**29.38**	**229**	P	**P**	**02 55 25.3**	**+2.3**
	3.6nm,0.3s,baz=33,slow=12,SNR=66 3.6nm,0.3s						
ARCES	**ARCESS Array B**	**35.18**	**1**	P	**P**	**02 56 12.3**	**-1.0**
	5.7nm,1.1s,baz=171,slow=7.2,SNR=3.9 5.7nm,1.1s						
BVAR	**Borovoye Array**	**37.45**	**46**	P	**P**	**02 56 34.8**	**+1.9**
	0.3nm,0.4s,baz=269,slow=5.8,SNR=2.1 0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**42.23**	**50**	P	**P**	**02 57 13.0**	**+0.4**
	0.4nm,0.5s,baz=273,slow=8.7,SNR=7.3 0.4nm,0.5s						
MKAR	**Makanchi Array**	**44.87**	**56**	P	**P**	**02 57 35.2**	**+1.3**
	0.9nm,0.5s,baz=273,slow=7.6,SNR=11 0.9nm,0.5s						
ZALV	**Zalesovo Beam**	**46.11**	**46**	P	**P**	**02 57 43.8**	**+0.1**
	1.0nm,0.4s,baz=267,slow=8.6,SNR=5.4 1.0nm,0.4s						
SONM	**Songino Array**	**60.59**	**50**	P	**P**	**02 59 31.6**	**+1.3**
	0.7nm,0.5s,baz=290,slow=5.5,SNR=5.4 0.7nm,0.5s						

IDC 12 02:58:13.7±1.9**, 3.°75N**×**129.°16E, h0**^{km}**, mb3.6**/5**, mbtmp3.7**/5**, Error ellipse: s-maj=155.2km s-min=19.7km az=69.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.09**	**168**	P	P	03 03 29.3	-1.9
	1.0nm,0.4s,baz=344,slow=9.1,SNR=8.8 1.0nm,0.4s						
ASAR	**Alice Springs**	**27.64**	**171**	P	P	03 04 01.7	-1.6
	0.2nm,0.4s,baz=346,slow=9.1,SNR=2.1 0.2nm,0.4s						
STKA	**Stephens Creek**	**37.36**	**162**	P	P	03 05 28.6	+0.5
	0.7nm,0.4s,baz=346,slow=8.3,SNR=3.3 0.7nm,0.4s						
MKAR	**Makanchi Array**	**58.94**	**324**	P	P	03 08 15.9	+1.0
	0.4nm,0.5s,baz=122,slow=8.2,SNR=5.2 0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**63.04**	**326**	P	P	03 08 43.6	+0.9
	0.3nm,0.5s,baz=130,slow=6.2,SNR=6.2 0.3nm,0.5s						

*AFAD **12** 03:05:34.4, 34.°66N×26.°08E, h7^{km}±3^{km}, MW4.9*
*BJI **12** 03:05:37.8, 34.°86N×25.°91E, h26^{km}, mB5.4/16, mb4.9/57, Ms5.3/12, Ms7 5.0/16*
*IDC **12** 03:05:37.9±0.5, 34.°92N×26.°33E, h0^{km}, mb4.8/33, mbtmp4.7/46, ML4.2/12, MS4.1/34, Error ellipse: s-maj=12.0km s-min=8.6km az=166.0*
*MCSM **12** 03:05:39.7±0.5, 35°N±3°×2°6E±°, h9^{km}±3^{km}, mb4.9, mB5.2, MLv5.0, Mw(mB)4.5*
*MOS **12** 03:05:39.4±1.2, 34.°76N×26.°32E, h23^{km}, mb5.2/38, Error ellipse: s-maj=4.3km s-min=2.4km az=94.5*
*NEIC **12** 03:05:40.9, 34.°90N×26.°29E, h24^{km}*
*NEIC **12** 03:05:40.9, 35.°10N×26.°41E, h24^{km}, Moment Tensor Solution. Duration: 1^{s}3 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.84; $M_{\theta\theta}$-0.24; $M_{\phi\phi}$1.08; $M_{r\theta}$0.20; $M_{\theta\phi}$0.32; $M_{\phi r}$-1.13; Fault plane solution: $M_0$1.55000×10^{16} NP1: ϕ_s217.51000°, δ25.48000°, λ-49.21000°. NP2: ϕ_s353.79000°, δ70.99000°, λ-107.30000°. Principal axes: T 1.6271, Plg24.0000°, Azm97.0000°; N -0.1774, Plg16.0000°, Azm360.0000°; P -1.4497, Plg60.0000°, Azm239.0000°;*
*NEIC **12** 03:05:41.7±1.4, 34.°93N±0.°06×26.°28E±0.°05, h21^{km}±2^{km}, mb5.0/228, Mww4.7/11 Error ellipse: s-maj=9.0km s-min=5.4km az=175.0*
*GII **12** 03:05:41.4±0.0, 34.°772N±0.°002×26.°578E±0.°001, h10^{km}, Mws5.0, confirmed*
*ISK **12** 03:05:41.1, 34.°93N×26.°31E, h15^{km}, ML4.8/36*
*HLW **12** 03:05:43.1, 34.°72N×26.°39E, h20^{km}±2^{km}, Ml5.0*
*ATH **12** 03:05:43.2, 35.°05N×26.°29E, h15^{km}, ML4.7/36, Manual Solution by A.Papageorgiou First location: 2019/12/12 03:06:54, This location: 2021/06/27 16:55:17 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*
*GCMT **12** 03:05:44.5±0.4, 34.°81N±0.°03×26.°26E±0.°02, h29^{km}±1^{km}, MW4.8/62, Moment Tensor Solution. s26,c29; s62,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.62±.18; $M_{\theta\theta}$-0.19±.10; $M_{\phi\phi}$1.81±.10; $M_{r\theta}$0.51±.15; $M_{\theta\phi}$0.70±.07; $M_{\phi r}$-1.39±.13; Best double couple: $M_0$2.37600×10^{16} NP1:ϕ_s221.00000°, δ33.00000°, λ-48.00000°. NP2: ϕ_s354.00000°, δ66.00000°, λ-114.00000°. Principal axes: T 2.3990, Plg17.0000°, Azm102.0000°; N -0.0450, Plg21.0000°, Azm5.0000°; P -2.3530, Plg62.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*THE **12** 03:05:44.6, 35°N±3°×2°6E±°, h3^{km}±3^{km}, M4.5/33, MLh4.5/33*
*MED_RC **12** 03:05:44.0±0.6, 34.°85N×26.°29E, h24^{km}, MW4.8/28, Moment Tensor Solution.Mantle waves: s28,c43; Duration: 1^{s}2 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.45±.23; $M_{\theta\theta}$-1.01±.14; $M_{\phi\phi}$1.46±.11; $M_{r\theta}$0.89±.16; $M_{\theta\phi}$-0.11±.11; $M_{\phi r}$-1.82±.10; Best double couple: $M_0$2.35000×10^{16} NP1:ϕ_s222.00000°, δ27.00000°, λ-18.00000°. NP2:ϕ_s328.00000°, δ82.00000°, λ-116.00000°. Principal axes: T 2.6500, Plg32.0000°, Azm79.0000°; N -0.5900, Plg25.0000°, Azm332.0000°; P -2.0600, Plg47.0000°, Azm212.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

ISC 12 03:05:41.1±0.4**, 34.°91N**±0.°02×**26.°34E**±0.°02**, h19**^{km}±1^{km}**, h18**^{km}**:pP-P, n1138,** σ**1^{s}59**/1157**, mb5.0**/202**, MS4.2**/35**, 76C-53D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.23**	**334**	P	**Pb**	**03 05 46.0**	**-0.5**
ZKR	**Zakros**	**0.23**	**334**	Pg	**Pb**	**03 05 46.0**	**-0.5**
ZKR				Sg	**Sb**	**03 05 50.0**	**0.0**
ZKR	**Zakros**	**0.23**	**334**	P	**Pb**	**03 05 46.1**	**-0.5**
ZKR				S	**Sb**	**03 05 49.1**	**-1.0**
SIT2	**Siteia**	**0.36**	**328**	P	**Pg**	**03 05 48.1**	**-0.6**
SIT2				S	**Sg**	**03 05 51.5**	**-2.4**
STIA	**Sitia Lasithi**	**0.36**	**325**	P	**Pg**	**03 05 48.1**	**-0.6**
STIA				S	**Sg**	**03 05 51.8**	**-2.1**
NPS	**Neapolis**	**0.70**	**301**	P	**Pb**	**03 05 54.0**	**-0.7**
NPS				S	**Sb**	**03 06 00.3**	**-3.6**
NPS	**Neapolis**	**0.70**	**301**	P	**Pb**	**03 05 54.3**	**-0.4**
NPS				S	**Sb**	**03 06 03.1**	**-0.8**
KSS1	**Kassos Island**	**0.70**	**43**	P	**Pn**	**03 05 55.6**	**-0.4**
KSS1				S	**Sg**	**03 06 04.7**	**+0.5**
IACM	**Heraklion**	**1.11**	**291**	P	**Pb**	**03 06 01.8**	**0.0**
IACM				S	**Sb**	**03 06 14.9**	**-1.1**
IACM	**Heraklion**	**1.11**	**291**	P	**Pb**	**03 06 02.1**	**+0.3**
IACM				S	**Sb**	**03 06 15.9**	**-0.1**
IDI	**Anoyia**	**1.25**	**288**	S	**Sg**	**03 06 22.5**	**+0.8**
IDI				P	**Pn**	**03 06 02.8**	**-0.9**
IDI	**Anoyia**	**1.25**	**288**	Pn	**Pn**	**03 06 02.7**	**-1.0**
	131nm,0.3s,baz=154,slow=7.2,SNR=892						
IDI				Sn	**Sg**	**03 06 21.4**	**-0.3**
	1µm,0.3s,baz=345,slow=21,SNR=10						
IDI				LR	LR	03 06 52.2	
	comp=Z,15µm,18.9s,baz=68,slow=60						
IDI	**Anoyia**	**1.25**	**288**	P	**Pn**	**03 06 02.8**	**-1.0**
IDI				S	**Sg**	**03 06 20.9**	**-0.8**
IDI	**Anoyia**	**1.25**	**288**		**Pn**	**03 06 03.0**	**-0.7**
IDI				Sn	**Sb**	**03 06 19.1**	**-0.8**
IDI	**Anoyia**	**1.25**	**288**	Pn	**Pn**	**03 06 03.6**	**-0.1**
IDI				Sn	**Sg**	**03 06 21.2**	**-0.5**
IDI	**Anoyia**	**1.25**	**288**	P	**Pb**	**03 06 04.3**	**+0.1**
IDI				S	**Sn**	**03 06 20.1**	**0.0**
THERA	**Ancient Thera,**	**1.62**	**334**	P	**Pn**	**03 06 08.9**	**+0.2**
THERA				S	**Sn**	**03 06 28.0**	**-1.2**
THERA	**Ancient Thera,**	**1.62**	**334**	P	**Pn**	**03 06 09.0**	**+0.2**
THERA				S	**Sn**	**03 06 28.3**	**-0.9**
ASTA	**Astypalaia**	**1.64**	**0**	P	**Pn**	**03 06 09.1**	**+0.2**
ASTA				S	**Sn**	**03 06 28.8**	**-0.7**
THR8	**Santorini-Mono**	**1.66**	**335**	P	**Pn**	**03 06 09.7**	**+0.5**
THR8	**Santorini-Mono**	**1.66**	**335**	P	**Pn**	**03 06 09.6**	**+0.5**
THR9	**Santorini-Faro**	**1.66**	**331**	P	**Pn**	**03 06 10.1**	**+0.9**
THR9	**Santorini-Faro**	**1.66**	**331**	P	**Pn**	**03 06 09.2**	**0.0**
THRA	**Thira**	**1.68**	**334**	P	**Pn**	**03 06 09.6**	**+0.1**
THRA				S	**Sn**	**03 06 30.3**	**-0.3**
SNT5	**Nea Kammeni, S**	**1.68**	**333**	P	**Pn**	**03 06 10.1**	**+0.5**
SNT5				S	**Sn**	**03 06 29.4**	**-1.2**
SNT5	**Nea Kammeni, S**	**1.68**	**333**	P	**Pn**	**03 06 09.8**	**+0.2**
SNT5				S	**Sn**	**03 06 30.2**	**-0.4**
THR3	**Thira Island,**	**1.69**	**333**	P	**Pn**	**03 06 10.1**	**+0.5**
THR3	**Thira Island,**	**1.69**	**333**	P	**Pn**	**03 06 09.9**	**+0.3**
THR2	**Thira island,**	**1.71**	**335**	P	**Pn**	**03 06 10.5**	**+0.5**
THR2	**Thira island,**	**1.71**	**335**	P	**Pn**	**03 06 09.9**	**-0.1**
RGE1	**Gennadi, Rhode**	**1.71**	**49**	P	**Pb**	**03 06 11.8**	**-0.3**
RGE1				S	**Sb**	**03 06 32.6**	**-0.6**
SAP3	**Santorini-Thir**	**1.73**	**332**	P	**Pn**	**03 06 10.7**	**+0.5**
SAP3				S	**Sn**	**03 06 30.8**	**-1.0**
SAP3	**Santorini-Thir**	**1.73**	**332**	P	**Pn**	**03 06 10.8**	**+0.6**
SAP3				S	**Sn**	**03 06 31.6**	**-0.2**
NISR	**Nisiros**	**1.82**	**20**	P	**Pn**	**03 06 12.5**	**+1.0**
NISR				S	**Sb**	**03 06 36.5**	**+0.2**
NISR	**Nisiros**	**1.82**	**20**	P	**Pn**	**03 06 12.2**	**+0.7**
NISR				S	**Sn**	**03 06 34.0**	**-0.1**
VAM	**Vamos**	**1.82**	**287**	P	**Pb**	**03 06 12.8**	**-1.1**
VAM				S	**Sn**	**03 06 34.6**	**+0.4**
VAM	**Vamos**	**1.82**	**287**	P	**Pb**	**03 06 12.8**	**-1.1**
VAM				S	**Sn**	**03 06 35.0**	**+0.8**
VAM	**Vamos**	**1.82**	**287**	P	**Pb**	**03 06 13.0**	**-0.9**
VAM				S	**Sb**	**03 06 35.2**	**-1.2**
GVD	**Gavdhos**	**1.85**	**269**	P	**Pb**	**03 06 14.8**	**+0.3**
GVD	**Gavdhos**	**1.85**	**269**	Pn	**Pb**	**03 06 13.5**	**-0.9**
GVD				Sn	**Sb**	**03 06 36.2**	**-1.1**
GVD	**Gavdhos**	**1.85**	**269**	P	**Pb**	**03 06 14.4**	**-0.1**
CHNB	**Souda**	**1.95**	**288**	P	**Pb**	**03 06 14.9**	**-1.2**
CHNB				S	**Sb**	**03 06 38.7**	**-1.4**
ARG	**Arkhangelos**	**1.96**	**48**	P	**Pb**	**03 06 16.0**	**-0.2**
ARG				S	**Sg**	**03 06 43.3**	**-0.9**
ARG	**Arkhangelos**	**1.96**	**48**		**Pb**	**03 06 15.3**	**-0.9**
ARG				Sn	**Sn**	**03 06 38.6**	**+1.1**
ARG	**Arkhangelos**	**1.96**	**48**	Pn	**Pb**	**03 06 15.3**	**-0.9**
ARG	**Arkhangelos**	**1.96**	**48**	P	**Pb**	**03 06 15.3**	**-0.9**
ARG						03 06 38.6	
ARG	**Arkhangelos**	**1.96**	**48**	⇑P	**Pb**	**03 06 16.1**	**-0.2**
ARG	**Arkhangelos**	**1.96**	**48**	P	**Pb**	**03 06 15.7**	**-0.5**
ARG				S	**Sb**	**03 06 39.1**	**-1.1**
CHAN	**Chania**	**1.98**	**289**	P	**Pb**	**03 06 15.8**	**-0.8**
CHAN				S	**Sb**	**03 06 40.5**	**-0.4**
CHAN	**Chania**	**1.98**	**289**	P	**Pn**	**03 06 14.9**	**+1.2**
CHAN				S	**Sn**	**03 06 37.9**	**0.0**
YAZI	**Mula-Dat§a-**	**1.99**	**27**	P	**Pn**	**03 06 15.3**	**+1.4**
CH01	**Chania**	**2.00**	**288**	P	**Pb**	**03 06 15.7**	**-1.2**
DAT	**Datca**	**2.08**	**29**	Pn	**Pn**	**03 06 16.4**	**+1.2**
KLNA	**Kalymnos**	**2.11**	**14**	P	**Pn**	**03 06 16.1**	**+0.6**
KLNA				S	**Sn**	**03 06 40.9**	**-0.3**
DATC	**Datca-Mugla**	**2.14**	**30**	Pn	**Pn**	**03 06 17.6**	**+1.7**
RODB	**Rodos**	**2.17**	**44**	P	**Pb**	**03 06 18.2**	**-1.6**
RDI1	**Rhodes Town Ha**	**2.17**	**44**	P	**Pb**	**03 06 18.7**	**-1.2**
APE	**Apeiranthos**	**2.26**	**343**	P	**Pn**	**03 06 18.1**	**+0.6**
APE				S	**Sn**	**03 06 45.6**	**+0.6**
APE	**Apeiranthos**	**2.26**	**343**	Pn	**Pn**	**03 06 18.9**	**+1.3**
APE	**Apeiranthos**	**2.26**	**343**	⇑P	**Pn**	**03 06 19.2**	**+1.6**
APE	**Apeiranthos**	**2.26**	**343**	*i* P	**Pn**	**03 06 17.5**	**-0.1**
APE	**Apeiranthos**	**2.26**	**343**	⇓P	**Pn**	**03 06 18.4**	**+0.8**
APE	**Apeiranthos**	**2.26**	**343**	P	**Pb**	**03 06 19.5**	**-1.9**
APE	**Apeiranthos**	**2.26**	**343**	P	**Pn**	**03 06 18.2**	**+0.6**
APE				S	**Sn**	**03 06 44.4**	**-0.6**
BODT	**Bodrum**	**2.29**	**20**	P	**Pb**	**03 06 20.3**	**-1.7**
BODT	**Bodrum**	**2.29**	**20**	Pn	**Pn**	**03 06 19.4**	**+1.4**
NAX1	**Naxos Island**	**2.33**	**341**	P	**Pn**	**03 06 19.0**	**+0.5**
NAX1				S	**Sn**	**03 06 46.6**	**+0.1**
BDRM	**Kayabasi**	**2.33**	**22**	P	**Pn**	**03 06 20.0**	**+1.4**
YKAV	**Yalikavak-Bodr**	**2.34**	**19**	Pn	**Pn**	**03 06 20.3**	**+1.6**
MHLO	**Agia Marina, M**	**2.38**	**319**	P	**Pn**	**03 06 20.8**	**+1.6**
MHLO				S	**Sn**	**03 06 48.8**	**+1.0**
MHLO	**Agia Marina, M**	**2.38**	**319**	P	**Pn**	**03 06 19.9**	**+0.7**
MHLO				S	**Sn**	**03 06 46.9**	**-0.9**
TURN	**Turunc**	**2.42**	**39**	P	**Pb**	**03 06 22.0**	**-2.1**

TURN				S	Sg	03 06 56.6	-2.6
MLSB	Milas	2.65	26	Pn	Pn	03 06 23.9	+0.9
ANKY	Antikythira Is	2.66	292	P	Pn	03 06 23.9	+0.8
ANKY				S	Sn	03 06 57.2	+2.4
ANKY	Antikythira Is	2.66	292	P	Pn	03 06 25.1	+2.1
DALY	Dalyan (Mula)	2.68	44	Pn	Pn	03 06 25.8	+2.5
YER	Yerkesik	2.73	35	P	Pn	03 06 26.2	+2.2
YER	Yerkesik	2.73	35	Pn	Pn	03 06 25.4	+1.4
YER	Yerkesik	2.73	35	P	Pn	03 06 25.3	+1.3
TNSA	Tinos	2.80	340	P	Pn	03 06 25.9	+1.0
IZZE	Mula-Seydike	2.80	56	P	Pn	03 06 26.5	+1.4
FETY	Fethiye	2.82	51	P	Pn	03 06 17.1	-8.1
SMG	Samos	2.83	8	P	Pn	03 06 26.2	+0.8
SMG				S	Sn	03 06 58.9	0.0
SMG	Samos	2.83	8	P	Pn	03 06 26.0	+0.7
SMG				S	Sn	03 06 58.6	-0.3
MULA	Mugla, Merkez-	2.84	34	P	Pn	03 06 27.6	+1.9
GCAM	G?zelcaml?	2.88	14	P	Pn	03 06 27.5	+1.4
KRL1	Karlovasi Samo	2.90	6	P	Pn	03 06 26.9	+0.6
AKAS	Kas	2.97	63	P	Pn	03 06 29.0	+1.5
AKAS	Kas	2.97	63		Pn	03 06 28.6	+1.1
KTHA	Kythira Island	2.99	298	P	Pn	03 06 28.9	+1.2
KTHA	Kythira Island	2.99	298	Pn	Pn	03 06 29.1	+1.5
KTHA	Kythira Island	2.99	298	P	Pn	03 06 28.8	+1.2
KUSD	Kusadasi-Aydin	3.05	14	Pn	Pn	03 06 30.6	+2.2
NPS1	Neapolis Lacon	3.11	302	P	Pn	03 06 30.4	+1.1
CAME	Cameli-Denizli	3.15	49	Pn	Pn	03 06 31.8	+1.9
DEMR	Demre-Antalya	3.19	64	Pn	Pn	03 06 32.6	+2.2
GMLD	Gumuldur	3.20	8	Pn	Pn	03 06 31.8	+1.4
DNZT	Denizli-Tavas-	3.21	42	P	Pn	03 06 32.8	+2.1
DNZT				P	Pb	03 06 32.9	-4.8
DNZT				S	Sb	03 07 17.5	+1.0
MNVA	Monemvasia	3.22	304	P	Pn	03 06 31.9	+1.2
KNIK	Mula-Seydike	3.26	53	P	Pn	03 06 33.6	+2.2
CAEL	Denizli, Camel	3.28	47	P	Pn	03 06 34.2	+2.5
AYDB	Zeytinkoy-Aydi	3.28	22	Pn	Pn	03 06 33.5	+1.8
TAVA	DENIZLI_Tavas	3.30	38	P	Pn	03 06 34.5	+2.6
TAVA				S	Sb	03 07 17.8	-1.1
ESEN	Aydn-Nazilli	3.31	29	P	Pn	03 06 34.4	+2.5
ESEN				S	Sn	03 07 13.0	+2.2
ZEYE	Izmir, Urla-Ze	3.33	2	P	Pn	03 06 32.7	+0.5
LVRA	Laurium	3.35	327	P	Pn	03 06 33.2	+0.6
CESE	eme	3.42	359	Pn	Pn	03 06 35.7	+2.2
ELL	Elmali	3.43	57		Pn	03 06 35.4	+1.6
ELL				Sn	Sn	03 07 15.3	+1.3
ELL	Elmali	3.43	57	Pn	Pn	03 06 35.2	+1.4
ELL	Elmali	3.43	57	P	Pn	03 06 35.4	+1.6
ELL						03 07 15.3	
NAZL	Nazilli-Aydin	3.44	27	Pn	Pn	03 06 35.5	+1.8
URLA	Izmir	3.46	3	P	Pn	03 06 35.4	+1.4
IZMR	zmir-demi	3.48	21	P	Pn	03 06 36.2	+2.0
KARY	Karystos	3.48	334	P	Pn	03 06 35.9	+1.6
KARY	Karystos	3.48	334	P	Pn	03 06 35.1	+0.8
DNIZ	Denizli-Tavas-	3.48	38	P	Pn	03 06 36.5	+2.1
DNIZ				S	Sb	03 07 23.4	-0.9
CHOS	Chios island	3.48	356	P	Pn	03 06 35.4	+1.0
CHOS	Chios island	3.48	356	Pn	Pn	03 06 35.7	+1.3
CHOS	Chios island	3.48	356	P	Pn	03 06 35.4	+1.0
GOLH	Golhisar	3.50	47	P	Pn	03 06 37.3	+2.7
GOLH				S	Sb	03 07 23.7	-1.0
APMY	Acipayam-Deniz	3.51	42	Pn	Pn	03 06 36.5	+1.7
BLCB	Balcova	3.52	9	P	Pn	03 06 36.6	+1.8
BLCB	Balcova	3.52	9	Pn	Pn	03 06 36.6	+1.8
AKUM	Antalya-Kumluc	3.55	65	P	Pn	03 06 36.4	+1.1
AKUM				S	Sn	03 07 16.9	0.0
MET1	Methana Town,	3.58	319	P	Pn	03 06 37.0	+1.3
VLY	Voula,Athens	3.59	326	P	Pn	03 06 37.6	+1.8
VLY	Voula,Athens	3.59	326	P	Pn	03 06 36.9	+1.1
MET4	Agioi Theodoro	3.61	320	P	Pn	03 06 36.8	+0.8
MET5	Makryloggos,Me	3.63	319	P	Pn	03 06 37.2	+0.8
MET2	Kameni Chora,	3.64	319	P	Pn	03 06 37.9	+1.4
EAG2	Marmaro, Chios	3.64	357	P	Pn	03 06 37.5	+1.0
ODEM	Odemis-Izmir	3.64	22	Pn	Pn	03 06 38.9	+2.3
KIRA	zmir-Kiraz	3.68	26	P	Pn	03 06 39.7	+2.6
ATH5	Athens Parliam	3.71	326	P	Pn	03 06 38.1	+0.6
DION	Dionisos Attik	3.71	329	P	Pn	03 06 39.3	+1.7
DION	Dionisos Attik	3.71	329	P	Pn	03 06 38.4	+0.9
PTL	Penteli	3.72	328	P	Pn	03 06 39.5	+1.9
PTL	Penteli	3.72	328	P	Pn	03 06 38.8	+1.1
ATHP	Athens-Neo Psi	3.72	327	P	Pn	03 06 38.7	+1.1
ATH	Athens Observa	3.72	326	P	Pn	03 06 40.4	+2.8
ATH	Athens Observa	3.72	326	P	Pn	03 06 38.5	+0.9
NOAC	Athens-Thissio	3.72	326	P	Pn	03 06 38.6	+1.0
INCE	Denizli-Bozkur	3.83	42	P	Pn	03 06 40.9	+1.7
ELFA	Athens-Elefsin	3.86	325	P	Pn	03 06 40.3	+0.7
KORT	Korkueli	3.87	56	P	Pn	03 06 42.5	+2.7
KORT				S	Sn	03 07 26.8	+2.1
MAGU	Magoula	3.90	325	P	Pn	03 06 41.1	+1.0
NPLA	Nafplio	3.90	314	P	Pn	03 06 41.2	+1.1
STFN	Stefani	3.97	326	P	Pn	03 06 42.1	+1.1
ARS1	Argos	3.99	314	P	Pn	03 06 42.9	+1.6
MANT	Manisa	4.00	26	P	Pn	03 06 43.7	+2.1
MANT	Manisa	4.00	26		Pn	03 06 43.2	+1.6
GOMA	Golmarmara-Man	4.00	18	Pn	Pn	03 06 43.4	+1.9
VLX	Vlachokerasia	4.04	309	P	Pn	03 06 43.6	+1.5
VLX	Vlachokerasia	4.04	309	P	Pn	03 06 43.3	+1.2
KULA	Kula-Manisa	4.06	27	Pn	Pn	03 06 44.4	+2.1
BRDR	BURDUR-Merkez	4.10	46	P	Pn	03 06 44.6	+1.8
VIL2	Platees	4.12	324	P	Pn	03 06 43.8	+0.6
LTK	Loutraki	4.13	320	P	Pn	03 06 45.4	+2.1
LTK	Loutraki	4.13	320	P	Pn	03 06 44.9	+1.5
KYMI	Kymi, Euboea I	4.13	335	P	Pn	03 06 45.0	+1.7
KYMI	Kymi, Euboea I	4.13	335	P	Pn	03 06 43.7	+0.4
AKS	Akhisar	4.14	16	Pn	Pn	03 06 45.3	+1.9
DKL	Dikili	4.18	6	Pn	Pn	03 06 45.9	+1.9
BUCA	Burdur, Bucak-	4.18	53	P	Pn	03 06 47.0	+2.9
SKY	Skiros Island	4.22	341	P	Pn	03 06 46.3	+1.9
SKY	Skiros Island	4.22	341	P	Pn	03 06 45.8	+1.3
PYL	PYLOS	4.23	299	P	Pn	03 06 44.8	+0.2
PYL	PYLOS	4.23	299	P	Pn	03 06 44.8	+0.2
ITM	Ithomi	4.24	304	P	Pn	03 06 46.3	+1.6
ITM	Ithomi	4.24	304		Pn	03 06 45.7	+0.9
ITM				Sn	Sn	03 07 34.7	+1.0
ITM	Ithomi	4.24	304	Pn	Pn	03 06 46.8	+2.1
ITM	Ithomi	4.24	304	⇑P	Pn	03 06 46.6	+1.9
ITM	Ithomi	4.24	304	P	Pn	03 06 46.1	+1.4
SKY1	Skyros Island	4.24	341	P	Pn	03 06 45.5	+0.8
GORD	Gordes-Manisa	4.26	20	Pn	Pn	03 06 47.4	+2.3
PASA	Karahalli, USA	4.27	35	P	Pn	03 06 46.7	+1.5
PYL1	Pylos	4.27	299	P	Pn	03 06 45.5	+0.3
BCK	Bucak	4.28	52	P	Pn	03 06 48.4	+3.0
SIGR	SIGRI	4.32	355	P	Pn	03 06 46.6	+0.9
SIGR	SIGRI	4.32	355	Pn	Pn	03 06 47.2	+1.4
SIGR	SIGRI	4.32	355	P	Pn	03 06 46.2	+0.4
PRK	Paraskevi	4.33	359	P	Pn	03 06 47.0	+0.9
PRK	Paraskevi	4.33	359	P	Pn	03 06 46.9	+0.9
SOMA	Soma-Manisa	4.35	12	Pn	Pn	03 06 48.2	+1.9
USAK	Uak-Merkez	4.37	29	P	Pn	03 06 48.7	+2.2
GUR	Goura	4.42	314	P	Pn	03 06 49.2	+1.8
GUR	Goura	4.42	314	P	Pn	03 06 48.4	+1.1
ISP	Isparta	4.46	48		Pn	03 06 48.7	+0.9
ISP	Isparta	4.46	48	P	Pn	03 06 48.7	+0.9
ISP	Isparta	4.46	48	⇑P	Pn	03 06 49.0	+1.1
ISP	Isparta	4.46	48	P	Pn	03 06 48.5	+0.7
ISP	Isparta	4.46	48	P	Pn	03 06 48.9	+1.1
DEMI	Demirci	4.55	24	P	Pn	03 06 51.0	+1.9
AMT	Artemida-Makis	4.57	306	P	Pn	03 06 50.2	+0.9
LKR	Lokris	4.60	325	P	Pn	03 06 52.0	+2.3
LKR	Lokris	4.60	325	P	Pn	03 06 51.2	+1.5
KLV	Kalavryta, Ach	4.61	314	P	Pn	03 06 51.3	+1.5
KLV	Kalavryta, Ach	4.61	314	P	Pn	03 06 50.6	+0.8
ATAL	Atalanti	4.62	326	P	Pn	03 06 50.9	+0.9
KLV1	Kalavrita	4.62	314	P	Pn	03 06 51.0	+0.9
AOS2	Alonissos-2	4.68	335	P	Pn	03 06 50.9	+0.1
BNAZ	Uak-Banaz	4.72	36	P	Pn	03 06 52.6	+1.1
DLFA	Delphi	4.72	320	P	Pn	03 06 52.0	+0.6
YAYO	Edremit-Balk	4.73	7	Pn	Pn	03 06 53.7	+2.2
AIDA	Aidipsos	4.74	327	P	Pn	03 06 52.1	+0.5
AGEO	AgiosGiorgios,	4.80	316	P	Pn	03 06 53.4	+0.9
DRO	Drossia	4.81	311	P	Pn	03 06 54.5	+1.8
KALE	Kalithea	4.85	317	P	Pn	03 06 54.0	+0.8
AXAR	Agios Charalam	4.86	324	P	Pn	03 06 54.9	+1.6
TRIZ	Trizonia	4.87	316	P	Pn	03 06 54.8	+1.4
BALB	Balikesir	4.88	14		Pn	03 06 55.6	+2.1
SERG	Sergoula	4.91	317	P	Pn	03 06 55.2	+1.2
EZN	Ezine	4.91	360	Pn	Pn	03 06 55.4	+1.4
EZN	Ezine	4.91	360	P	Pn	03 06 55.3	+1.3
MG00	Magoula, Dorid	4.97	316	P	Pn	03 06 56.1	+1.3
UPR	University Cam	4.98	314	P	Pn	03 06 55.6	+0.7
PATC	Patra C	4.99	314	P	Pn	03 06 55.7	+0.7
PATG	Patra B	4.99	313	P	Pn	03 06 56.0	+1.0
EFP	Efpalio	5.01	316	P	Pn	03 06 56.7	+1.5
RLS	Riolos of Patr	5.03	310	P	Pn	03 06 57.6	+2.0
NEO	Neokhori	5.05	331	P	Pn	03 06 57.6	+1.7
KRT2	Ano Kourtesi L	5.07	309	P	Pn	03 06 57.0	+0.9
LIA	Limnos Island	5.07	350	P	Pn	03 06 57.1	+1.0
AGRP	Agrapidokambos	5.09	315	P	Pn	03 06 58.4	+2.0
LCHA	Lechaina	5.09	308	P	Pn	03 06 56.6	+0.2
ANX	Ano Chora	5.11	317	P	Pn	03 06 58.3	+1.5
YRMI	Loutra Irminis	5.13	310	P	Pn	03 06 58.4	+1.4
CLEM	Kyllini,Ilia,G	5.15	307	P	Pn	03 06 59.2	+1.9
AXS	Araxos	5.17	311	P	Pn	03 06 59.7	+2.1
AGG	Agios Georgios	5.21	323	P	Pn	03 07 01.5	+3.3
AGG				pmax	pmax		
	comp=Z,437nm,0.8s						
AGG	Agios Georgios	5.21	323	⇑P	Pn	03 07 00.4	+2.2
AGG	Agios Georgios	5.21	323	P	Pn	03 07 00.3	+2.1
BAND	Balkesir-Ban	5.62	14	⇑P	Pn	03 07 06.1	+2.4
VLS	Valsamata	5.67	307	P	Pn	03 07 06.3	+1.9
SWA2		5.70	188	P	Pn	03 07 04.2	-0.6
CSS	Mathiatis	5.74	87		Pn	03 07 04.7	-0.7
CSS	Mathiatis	5.74	87	⇓P	Pn	03 07 04.8	-0.7
CSS	Mathiatis	5.74	87	Pn	Pn	03 07 04.9	-0.5
	comp=Z,1.8nmcomp=Z,3µmcomp=Z,295nm,0.8s						
CSS	Mathiatis	5.74	87	P	Pn	03 07 04.5	-1.0
CSS	Mathiatis	5.74	87	S	Sn	03 08 08.6	-2.2
CAVK	Edirne/Enez-Ca	5.78	359	⇓P	Pn	03 07 07.7	+1.8
PLG	Polygyros	5.92	338	P	Pn	03 07 10.7	+2.8
BORA	Eskisehir	5.95	32		Pn	03 07 09.0	+0.7
LIT	Litokhoron	6.02	331		Pn	03 07 09.8	+0.5
LIT	Litokhoron	6.02	331	P	Pn	03 07 09.8	+0.5
LIT	Litokhoron	6.02	331	⇑P	Pn	03 07 12.0	+2.7
RDO	Rodhopi	6.26	354		Pn	03 07 14.1	+1.6
RDO	Rodhopi	6.26	354	⇑P	Pn	03 07 13.4	+0.8
THE	Thessaloniki	6.31	336	P	Pn	03 07 17.0	+3.8
THE				pmax	pmax		
	comp=Z,230nm,0.9s						
JAN	Janina	6.45	319	P	Pn	03 07 17.5	+2.3
KZN	Kozani	6.50	327	P	Pn	03 07 20.0	+4.1
SRS	Serrai	6.57	342	P	Pn	03 07 20.0	+3.2
SRS				pmax	pmax		
	comp=Z,141nm,0.9s						
IGT	Igoumenitsa	6.66	316	P	Pn	03 07 18.4	+0.4
MDUB	Mudurnu	6.76	33		Pn	03 07 20.6	+1.1
KDZ	Kurdzhali	6.76	354	P	Pn	03 07 20.9	+1.5
KDZ	Kurdzhali	6.76	354	P	Pn	03 07 21.4	+2.0
KOT	Kottamia	6.79	135	P	Pn	03 07 19.9	0.0
KNT	Kendrikon	6.81	338	P	Pn	03 07 25.2	+5.1
KNT				pmax	pmax		
	comp=Z,212nm,0.8s						
RZN	Rozhen	6.89	350	P	Pn	03 07 25.6	+4.2
SAHE	Sakarya_HENDEK	6.93	30	⇓P	Pn	03 07 23.3	+1.7
MMB	Musomishta	6.94	344	P	Pn	03 07 25.8	+3.9
MMB	Musomishta	6.94	344	P	Pn	03 07 26.7	+4.8
VAY	Valandovo	7.06	336	*i* Pn	Pn	03 07 29.1	+5.6
KEK	Kerkira	7.08	315	⇑P	Pn	03 07 28.2	+4.4
ANTO	Ankara	7.14	44	P	Pn	03 07 26.0	+1.4
ANTO				S	Sn	03 08 47.6	+2.4
ANTO	Ankara	7.14	44		Pn	03 07 25.4	+0.8
ANTO	Ankara	7.14	44	⇑P	Pn	03 07 26.2	+1.6
ANTO	Ankara	7.14	44	P	Pn	03 07 26.1	+1.4
ANTO	Ankara	7.14	44	⇑P	Pn	03 07 26.0	+1.4
ANTO	Ankara	7.14	44	Pn	Pn	03 07 26.4	+1.8
	comp=Z,0.5nmcomp=Z,1µmcomp=Z,178nm,0.9s						
DIM	Dimitrovgrad	7.16	355	P	Pn	03 07 28.3	+3.5
PLD	Plovdiv	7.34	351	P	Pn	03 07 31.9	+4.7
PLD	Plovdiv	7.34	351	P	Pn	03 07 32.0	+4.7
PLD				pmax	pmax		
	comp=Z,508nm,1.3s						
KKB	Krupnik	7.37	341	P	Pn	03 07 33.2	+5.4
KKB	Krupnik	7.37	341	P	Pn	03 07 31.9	+4.1
KIRS	Kirsehir-Merke	7.38	53	⇑P	Pn	03 07 29.7	+1.6
SUZ	Suez	7.46	131	P	Pn	03 07 28.7	-0.3
BR105	Keskin Array S	7.53	48	Pn	Pn	03 07 31.7	+1.6
	comp=Z,0.3nmcomp=Z,663nmcomp=Z,87nm,0.8s						
BR104	Keskin Array S	7.54	48	Pn	Pn	03 07 31.7	+1.5
	comp=Z,0.2nmcomp=Z,449nmcomp=Z,65nm,1.0s						
BR106	Keskin Array S	7.54	48	Pn	Pn	03 07 31.7	+1.5
	comp=Z,0.2nmcomp=Z,463nmcomp=Z,57nm,0.7s						
BR131	Keskin Array S	7.55	48	P	Pn	03 07 31.2	+0.9
BR131				S	Sn	03 08 56.0	+0.6
BR131				S	Sn	03 08 56.0	+0.6
BR131	Keskin Array S	7.55	48		Pn	03 07 31.2	+0.9
BR131	Keskin Array S	7.55	48	P	Pn	03 07 31.2	+0.9
BRTR	Keskin Array B	7.55	48	Pn	Pn	03 07 31.1	+0.8
	comp=Z,1.6nm,0.3s,baz=215,slow=14,SNR=42						
BRTR				Sn	Sn	03 08 58.2	+2.8
	baz=234,slow=20						
BRTR				LR	LR	03 11 20.2	
	comp=Z,3µm,20.6s,baz=214,slow=45						
	comp=Z,13nm,0.6s						
BRTR	Keskin Array B	7.55	48		Pn	03 07 31.4	+1.1
BRTR	Keskin Array B	7.55	48	P	Pn	03 07 31.4	+1.1
NBNS	Bani Suef	7.55	145	P	Pn	03 07 30.2	-0.1
OFRI	`Ofer	7.55	105	P	Pn	03 07 28.8	-1.5
OFRI	`Ofer	7.55	105	S	Sn	03 08 52.1	-3.3
HNTI	Hanita	7.56	101	P	Pn	03 07 29.1	-1.3
HNTI	Hanita	7.56	101	S	Sn	03 08 52.6	-2.9
JMB	Yambol	7.58	1	P	Pn	03 07 33.9	+3.3
OHR	Ohrid	7.58	326	*i* Pn	Pn	03 07 33.2	+2.5
OHR				*i* Sn	Sn	03 09 06.3	+10
BLGI	Bet Lehem HaGe	7.68	104	P	Pn	03 07 30.8	-1.2
BLGI	Bet Lehem HaGe	7.68	104	S	Sn	03 08 55.4	-3.1
DQRL	Deir Qamar	7.73	96	*e*P	Pn	03 07 31.0	-1.8
SLTI	Sal'it	7.73	108	P	Pn	03 07 31.5	-1.3
SLTI	Sal'it	7.73	108	S	Sn	03 08 56.6	-3.1
MMA0B	Mount Meron ar	7.76	101	P	Pn	03 07 32.1	-1.1
MMA0B	Mount Meron ar	7.76	101	S	Sn	03 08 57.9	-2.8
MMAI	Mount Meron Ar	7.76	101	Pn	Pn	03 07 31.8	-1.5
	comp=Z,28nm,0.3s,baz=291,slow=12,SNR=62						
MMAI				Sn	Sn	03 08 57.6	-3.0
	comp=Z,26nm,0.3s,baz=297,slow=25,SNR=4.6						
	comp=Z,23nm,0.4s						
BHL	Bhannes	7.76	95	*e*P	Pn	03 07 31.6	-1.7
PGB	Panagyurishte	7.78	348	P	Pn	03 07 36.4	+2.9
QRWL	Qaraoun	7.85	97	*e*P	Pn	03 07 32.4	-2.1
PLNA	Plana	7.90	344	P	Pn	03 07 38.1	+3.0
SALP	Salfit	7.92	108	P	Pn	03 07 33.7	-1.6
SALP	Salfit	7.92	108	S	Sn	03 09 00.9	-3.5
GEM	Giv'at Ha'Em	7.92	100	⇓P	Pn	03 07 33.5	-1.8
GEM	Giv'at Ha'Em	7.92	100	P	Pn	03 07 33.6	-1.7
GEM	Giv'at Ha'Em	7.92	100	S	Sn	03 09 01.1	-3.3
AMAZ	Amatzia	7.93	113	P	Pn	03 07 34.3	-1.3
AMAZ	Amatzia	7.93	113	S	Sn	03 09 01.1	-3.6
HWQ	Hawqa	7.95	92	*e*P	Pn	03 07 35.1	-0.7
SHBL	Chebaa	7.95	99	*e*P	Pn	03 07 33.6	-2.2
MMLI	Mount Malkishu	7.96	105	P	Pn	03 07 34.4	-1.5
MMLI	Mount Malkishu	7.96	105	S	Sn	03 09 01.9	-3.6
ZAHL	Zahle	7.96	95	*e*P	Pn	03 07 33.8	-2.2
NATI	Neve Ativ	7.96	99	P	Pn	03 07 34.4	-1.5
NATI	Neve Ativ	7.96	99	S	Sn	03 09 02.9	-2.6
RCY	Rachaya	7.99	97	*e*P	Pn	03 07 34.5	-1.9
ELND	Elena	8.02	358	⇑P	Pn	03 07 39.0	+2.3
SKO	Skopje	8.03	333	*i* Pn	Pn	03 07 45.2	+8.3
VTS	Vitosha	8.07	343	P	Pn	03 07 40.8	+3.3
VTS	Vitosha	8.07	343	P	Pn	03 07 40.4	+2.9
KSHT	Keshet	8.10	101	P	Pn	03 07 36.6	-1.2
KSHT	Keshet	8.10	101	S	Sn	03 09 05.9	-3.0
HMDT	Nahal Hemdat	8.11	106	P	Pn	03 07 36.5	-1.4
HMDT	Nahal Hemdat	8.11	106	S	Sn	03 09 05.9	-3.1
BEIL	Beino	8.11	90	*e*P	Pn	03 07 36.6	-1.4
YTIR	Yattir	8.16	113	P	Pn	03 07 37.3	-1.4
YTIR	Yattir	8.16	113	S	Sn	03 09 06.9	-3.6
UJAP	Al Uja	8.17	109	P	Pn	03 07 37.3	-1.5
UJAP	Al Uja	8.17	109	S	Sn	03 09 07.2	-3.5
PHP	Peshkopia	8.20	327	P	Pn	03 07 44.7	+5.5
PHP				pmax	pmax		
	comp=Z,88nm,1.1s						
PVL	Pavlikeni	8.26	354	P	Pn	03 07 42.7	+2.8
DSI	Dead Sea	8.27	111	P	Pn	03 07 38.7	-1.4
DSI	Dead Sea	8.27	111	S	Sn	03 09 09.7	-3.4
PRD	Provadia	8.29	5	P	Pn	03 07 43.1	+2.8
PRD	Provadia	8.29	5	P	Pn	03 07 44.2	+3.9
BLSH	Balsha	8.29	344	P	Pn	03 07 43.6	+3.2
RMNI	Mount Ramon	8.29	119	P	Pn	03 07 38.9	-1.6
RMNI	Mount Ramon	8.29	119	S	Sn	03 09 10.4	-3.3
FKH	Fakeheh	8.33	92	*e*P	Pn	03 07 40.2	-0.9
SZH	Strazhitsa	8.35	358	P	Pn	03 07 46.4	+5.2
LOZB	Loznitsa	8.46	1	⇓P	Pn	03 07 45.7	+3.1
ILGA	Ilgaz	8.46	41		Pn	03 07 44.8	+1.9
GHAJ	Ghor Haditha	8.53	112		Pn	03 07 43.3	-0.3
KRMI	Paran Flat	8.54	122	P	Pn	03 07 42.2	-1.6
KRMI	Paran Flat	8.54	122	S	Sn	03 09 14.7	-5.0
IDAN	Idan	8.54	116	P	Pn	03 07 42.3	-1.5
IDAN	Idan	8.54	116	S	Sn	03 09 15.9	-3.8
HRDS	Abu Rudays	8.55	134	P	Pn	03 07 42.7	-1.3
PRNI	Paran	8.60	119	P	Pn	03 07 43.0	-1.7
PRNI	Paran	8.60	119	S	Sn	03 09 17.7	-3.6
ZFRI	Zfri	8.62	118	P	Pn	03 07 42.9	-1.9
ZFRI	Zfri	8.62	118	S	Sn	03 09 17.7	-3.8
MPEP	Malo Peshtene	8.68	347	P	Pn	03 07 51.7	+6.0
CIDE	Kastamonu/Cide	8.68	35	⇓P	Pn	03 07 48.8	+3.1
TIP	Timpagrande	8.77	302		Pn	03 07 46.5	-0.4
TIP	Timpagrande	8.77	302	⇓P	Pn	03 07 46.1	-0.9
TIP	Timpagrande	8.77	302	Pn	Pn	03 07 46.3	-0.7
	comp=Z,1µmcomp=Z,62nm,0.7s						
HRFI	Mount Harif	8.80	121	P	Pn	03 07 46.1	-1.4
HRFI	Mount Harif	8.80	121	S	Sn	03 09 22.4	-3.8
PSN	Preselentsi	8.83	9	P	Pn	03 07 50.5	+2.7
MBRI	Mt Berech	8.86	123	P	Pn	03 07 47.7	-0.6
MBRI	Mt Berech	8.86	123	S	Sn	03 09 24.7	-3.1
EIL	Elat	8.96	123	Pn	Pn	03 07 48.4	-1.3
	comp=Z,20nm,0.3s,baz=290,slow=2.7,SNR=188						
EIL				Sn	Sn	03 09 27.2	-2.9
	comp=Z,41nm,0.3s,baz=98,slow=9.0,SNR=8.7						
	comp=Z,102nm,0.4s						
EIL	Elat	8.96	123	P	Pn	03 07 48.1	-1.5
EIL	Elat	8.96	123	S	Sn	03 09 26.2	-3.9
CEL	Celeste	9.04	295		Pn	03 07 50.2	-0.6
CEL	Celeste	9.04	295	⇓P	Pn	03 07 51.0	+0.2
CEL	Celeste	9.04	295	Pn	Pn	03 07 51.0	+0.2
	comp=Z,150nm,0.9s						
GAZ	Gaziantep	9.09	72		Pn	03 07 51.4	-0.1
GAZ	Gaziantep	9.09	72	⇑P	Pn	03 07 51.5	+0.1
HBST	Basata	9.10	126	P	Pn	03 07 50.4	-1.1
ASF	Jabal al Asfar	9.22	104	Pn	Pn	03 07 52.7	-0.6
	baz=282,slow=13						
ASF				Sn	Sn	03 09 35.1	-1.5
BZK	Bozkurt	9.26	38		Pn	03 07 55.3	+1.6
BZK	Bozkurt	9.26	38	⇓P	Pn	03 07 55.2	+1.6
ICOR	Ion Corvin	9.27	7	⇑P	Pn	03 07 56.6	+2.9
PDG	Podgorica	9.33	326		Pn	03 07 55.2	+0.5
PDG	Podgorica	9.33	326	⇑P	Pn	03 07 55.4	+0.8
HDHB	Dhahab	9.36	129	P	Pn	03 07 54.0	-1.0
BOVS	Bovan	9.43	339	⇑P	Pn	03 07 59.1	+3.2
TIRR	Tirgusor	9.67	9		Pn	03 08 00.3	+1.0
TIRR	Tirgusor	9.67	9	P	Pn	03 08 00.3	+1.0
TIRR	Tirgusor	9.67	9	Pn	Pn	03 08 02.0	+2.7
	comp=Z,73nm,1.8s						
TOKA	Tokat	9.69	53	Pn	Pn	03 08 00.8	+1.2
WDD	Wied Dalam	9.70	279		Pn	03 07 59.3	-0.4
HDK1	Dakhla	9.70	163	P	Pn	03 07 60.0	+0.2
HHRG	Al Ghardaqah	9.85	139	P	Pn	03 08 02.3	+0.5
HHRG				S	Sn	03 09 47.1	-4.9
RAFF	Raffo Rosso	9.97	287		Pn	03 08 02.6	-0.8
VAE	Valguarnera	9.98	288	Pn	Pn	03 08 04.2	+0.6
	comp=Z,61nm,0.6s,baz=123,slow=2.9,SNR=21						
VAE				Sn	Sn	03 09 53.5	-1.5
	comp=Z,5.3nm,0.3s,baz=287,slow=7.2,SNR=3.7						
VAE				LR	LR	03 12 29.6	
	comp=Z,2µm,21.0s,baz=98,slow=41						
GTR	Jabal at Tayr	10.05	158	P	Pn	03 08 04.5	0.0
TPGR	Topolog	10.07	8	⇑P	Pn	03 08 07.4	+2.7
MRVN	Minervino Murg	10.09	311	⇓P	Pn	03 08 03.0	-2.1
ACER	Acerenza	10.10	309		Pn	03 08 03.3	-2.0
ISR	Istrita	10.20	1	Pn	Pn	03 08 08.9	+2.3
	comp=Z,99nm,1.0s						
CFR	Carcaliu	10.35	7	⇓P	Pn	03 08 10.6	+1.9
CFR	Carcaliu	10.35	7	P	Pn	03 08 10.5	+1.9
HERR	Herculane	10.41	344	⇑P	Pn	03 08 11.6	+2.2
TLCR		10.44	10	⇓P	Pn	03 08 12.6	+2.7
TLCR		10.44	10	P	Pn	03 08 12.5	+2.7
ARPR	Arapgir-MALATY	10.46	63		Pn	03 08 11.2	+0.9
MDVR	Moldovita	10.48	342	⇓P	Pn	03 08 13.9	+3.4
ARR	Arges	10.53	353	⇑P	Pn	03 08 13.9	+2.8
MLR	Muntele Rosu	10.58	358	Pn	Pn	03 08 12.8	+0.9
	comp=Z,0.3nm,0.3s,baz=174,slow=9.4,SNR=17						
MLR				LR	LR	03 12 39.9	
	comp=Z,808nm,20.9s,baz=185,slow=40						
	comp=Z,5.4nm,0.6s						
MLR	Muntele Rosu	10.58	358		Pn	03 08 13.2	+1.4
MLR	Muntele Rosu	10.58	358	⇑P	Pn	03 08 15.4	+3.5
MLR	Muntele Rosu	10.58	358	P	Pn	03 08 13.2	+1.4
MLR	Muntele Rosu	10.58	358	P	Pn	03 08 14.1	+2.3
	comp=Z,89nm,1.2s						
BISRR	Bisoca	10.63	1	P	Pn	03 08 14.9	+2.4
	comp=Z,233nm,0.9s						
LOT	Lotru	10.71	350	⇑P	Pn	03 08 16.7	+3.1
SGRT	San Giovanni R	10.77	313		Pn	03 08 11.9	-2.4
GZR	Gura Zlata	10.82	347	⇓P	Pn	03 08 18.3	+3.2
GZR	Gura Zlata	10.82	347	P	Pn	03 08 18.3	+3.2
COVR	Voineasa-Covas	10.93	359	⇓P	Pn	03 08 20.2	+3.6
VRI	Vrincioaia	10.95	1	⇑P	Pn	03 08 20.5	+3.6
VRI	Vrincioaia	10.95	1	P	Pn	03 08 20.4	+3.6
VRI	Vrincioaia	10.95	1	P	Pn	03 08 19.2	+2.4
	comp=Z,44nm,1.6s						
VLDR	Vladesti	11.01	6	⇑P	Pn	03 08 20.7	+3.1
DOPR	Dopca	11.07	357	⇑P	Pn	03 08 21.6	+3.1
PAOL	Paolisi	11.12	307		Pn	03 08 18.9	-0.3
TURR	Turia	11.14	359	⇓P	Pn	03 08 23.2	+3.7
OZUR		11.19	358	⇑P	Pn	03 08 23.2	+3.1
BZS	Buzias	11.29	343	⇑P	Pn	03 08 24.3	+2.8
BZS	Buzias	11.29	343	P	Pn	03 08 24.2	+2.8
BZS	Buzias	11.29	343	⇑P	Pn	03 08 24.7	+3.3
MDB	Medias	11.32	353	⇑P	Pn	03 08 24.0	+2.0
MDB	Medias	11.32	353	P	Pn	03 08 23.9	+2.0
ONER	Baraj Valea Uz	11.42	0	⇑P	Pn	03 08 26.9	+3.7
TESR	Tescani	11.60	1	⇑P	Pn	03 08 28.4	+2.7
TESR	Tescani	11.60	1	P	Pn	03 08 27.9	+2.2
	comp=Z,30nm,0.8s						
SIM	Simferopol'	11.67	28	*e*P	Pn	03 08 30.9	+4.3
SIM				S	Sn	03 10 39.3	+3.0
SIM				pmax	pmax		
	comp=Z,147nm,1.2s						
SIM				MLR	MLR		
	comp=Z,438nm,15.0s						
SIRR	Siria	11.89	344	⇑P	Pn	03 08 32.4	+2.7
MARD	Mardin	11.92	74		Pn	03 08 28.6	-1.7
MARR	Marisel-Cluj	12.01	349	⇓P	Pn	03 08 34.5	+3.1
BLY	Banja Luka	12.08	327	⇑P	Pn	03 08 35.2	+2.9
MILM	Milestii Mici	12.15	8	⇑P	Pn	03 08 35.0	+1.9
MILM	Milestii Mici	12.15	8	P	Pn	03 08 35.0	+1.9
DRGR		12.19	348	⇑P	Pn	03 08 37.1	+3.3
DRGR		12.19	348	P	Pn	03 08 37.0	+3.3
KOPT	Kop Dagi	12.35	61		Pn	03 08 38.6	+2.4
NGMR	NGMR	12.51	153	P	Pn	03 08 38.3	0.0
AQU	L'Aquila	12.55	310	P	Pn	03 08 37.8	-0.9
AQU	L'Aquila	12.55	310	P	Pn	03 08 42.7	+4.0
AQU				pmax	pmax		
	comp=Z,61nm,1.0s						
AQU	L'Aquila	12.55	310	⇑P	Pn	03 08 42.5	+3.8
AQU	L'Aquila	12.55	310	P	Pn	03 08 39.7	+1.0
	comp=Z,49nm,1.0s						
CAMP	Campotosto	12.64	311		Pn	03 08 40.9	+0.8
MORH	Mrgy, Hungar	12.71	335	⇑P	Pn	03 08 43.6	+2.7
MORH	Mrgy, Hungar	12.71	335	P	Pn	03 08 42.8	+1.9
	comp=Z,28nm,1.0s						
BURAR	Bucovina Array	12.73	357	⇓P	Pn	03 08 44.9	+3.7
BURAR	Bucovina Array	12.73	357	P	Pn	03 08 44.9	+3.7
BUR08	Bucovina Ar. S	12.76	357		Pn	03 08 45.2	+3.6
KOVH	Kovagotottos	12.80	333	⇓P	P	03 08 47.7	-5.3
BRNS	Bernies	12.92	146	P	Pn	03 08 44.3	+0.4
NRCA	Norcia	12.98	311		Pn	03 08 44.0	-0.7
ANN	Anapa	13.04	37	*e*P	Pn	03 08 42.0	-3.3
ANN				*e*S	Sn	03 11 08.1	-1.6
ANN				pmax	pmax		
	comp=Z,48nm,1.0s						
GURO	Guroymak-BITLI	13.10	69		Pn	03 08 46.8	+0.4
FDMO	Fiordimonte	13.11	312		Pn	03 08 48.6	+2.2
CESX	Cesi	13.20	310		Pn	03 08 46.2	-1.3
BAL3X	Bal3x, Balta	13.24	10	P	Pn	03 08 49.9	+1.8
SORM	Soroca	13.30	6	⇑P	Pn	03 08 50.9	+1.9
SORM	Soroca	13.30	6	P	Pn	03 08 50.8	+1.9
NSLU	Nyzhne Selyshc	13.36	355	P	Pn	03 08 53.4	+3.8
KSV	Kosov	13.43	356	P	Pn	03 08 53.0	+2.3
SOC	Sochi	13.50	46	*e*P	Pn	03 08 54.5	+2.9
SOC				*e*S	Sn	03 11 26.5	+5.5
SOC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SOC				MLR	MLR		
	comp=Z,965nm,16.0s						
AADN	Adndan	13.52	159	P	Pn	03 08 53.9	+1.8

MURB	Monte Urbino	13.58	312	Pn	Pn	03 08 53.5	+0.6
BERU	Beregovo	13.60	349	P	Pn	03 08 55.5	+2.6
BRIU	Brid	13.65	351	P	Pn	03 08 55.7	+2.1
KMPD	K-Podol'skiy	13.65	0	P	Pn	03 08 55.6	+2.0
MGAB	Montegabbione	13.65	310	⇑P	Pn	03 08 57.0	+3.3
MEZ	Mezhgor'ye	13.76	352	P	Pn	03 08 56.5	+1.3
MUKU	Mukachevo	13.81	350	P	Pn	03 08 57.9	+2.1
STNU	Starunia	13.86	355	P	Pn	03 08 58.7	+2.1
PSZ	Piszkesteto	13.87	342	Pn	Pn	03 08 57.6	+0.9
PSZ	Piszkesteto	13.87	342	⇑P	Pn	03 08 59.9	+3.3
PSZ	Piszkesteto	13.87	342	P	Pn	03 08 57.6	+0.9
PSZ	Piszkesteto	13.87	342	⇑P	P	03 09 01.2	-3.7
KEST	Kesra	13.90	278	Pn	Pn	03 08 57.3	0.0
	comp=Z,0.8nm,0.3s,baz=74,slow=22,SNR=11						
KEST				LR	LR	03 15 24.6	
	comp=Z,1µm,21.3s,baz=74,slow=42						
	comp=Z,17nm,1.1s						
KEST	Kesra	13.90	278	P	Pn	03 08 58.1	+0.8
KEST				P	Pn	03 08 58.1	+0.8
KEST	Kesra	13.90	278	Pn	Pn	03 08 57.6	+0.3
MPLH	Magyarpolny	13.93	334	P	Pn	03 08 59.2	+1.8
	comp=Z,4µmcomp=Z,119nm,0.9s						
SRO	Srobarova	14.22	337	*e*P	P	03 09 07.6	-1.2
SRO	Srobarova	14.22	337	*e*PN	P	03 09 07.6	-1.2
VSL	Villasalto	14.27	294	Pn	Pn	03 09 00.8	-1.4
CASP	Castiglione de	14.39	308	Pn	Pn	03 09 01.7	-2.1
OSSC	Osservatorio P	14.51	311	Pn	Pn	03 09 04.2	-1.2
SOKA	Soboth	14.53	327	*i* Pn	Pn	03 09 08.0	+2.3
	comp=Z,13nm,0.7s						
SOKA				*e*Sn	Sn	03 11 45.2	-1.1
	comp=Z,2.2nm,0.6s						
OBKA	Obir	14.62	326	*i* Pn	Pn	03 09 09.4	+2.3
	comp=Z,7.0nm,0.6s						
SABO	M.te Sabotino	14.69	323	Pn	Pn	03 09 06.8	-1.2
SOP	Sopron	14.71	333	P	P	03 09 13.3	-0.9
SOP				pmax	pmax		
	comp=Z,34nm,1.2s						
ARSA	Arzberg	14.77	330	Pn	Pn	03 09 07.3	-1.6
ARSA	Arzberg	14.77	330	*i* Pn	Pn	03 09 10.6	+1.7
	comp=Z,5.2nm,0.6s						
RONA	Rosalia, Austr	14.83	333	*e*Pn	Pn	03 09 09.9	+0.1
	comp=Z,8.2nm,0.6s						
KWP	Kalwaria Pacla	14.96	351	*e*P	P	03 09 15.5	-1.5
KWP	Kalwaria Pacla	14.96	351	P	P	03 09 22.2	+5.3
KWP	Kalwaria Pacla	14.96	351	P	Pn	03 09 13.7	+2.2
	comp=Z,61nm,1.0s						
STHS	Stebnicka Huta	14.98	347	*e*P	P	03 09 16.2	-1.0
STHS	Stebnicka Huta	14.98	347	*e*PN	P	03 09 16.2	-1.0
LUBAR	Lubar, Ukraine	15.04	4	P	Pn	03 09 14.8	+2.2
MODS	Modra-Piesok	15.05	336	*e*P	P	03 09 17.2	-0.8
MODS	Modra-Piesok	15.05	336	*e*PN	P	03 09 17.2	-0.8
LANS	Liptovska Anna	15.11	342	*e*P	P	03 09 18.6	-0.1
LANS	Liptovska Anna	15.11	342	*e*PN	P	03 09 18.6	-0.1
MYKA	Terra Mystica	15.13	325	*i* Pn	P	03 09 21.8	+2.8
	comp=Z,4.8nm,0.6s						
NIE	Niedzica	15.17	345	*e*P	P	03 09 20.6	+1.2
NIE	Niedzica	15.17	345	P	P	03 09 21.9	+2.6
NIE	Niedzica	15.17	345	P	Pn	03 09 16.2	+1.8
	comp=Z,14nm,1.5s						
CONA	Conrad Observa	15.18	332	*e*Pn	Pn	03 09 14.9	+0.3
	comp=Z,3.4nm,0.7s						
NEUR	Neytrino	15.18	52	*i* P	P	03 09 17.7	-2.0
TEOL	Teolo	15.30	317	Pn	Pn	03 09 13.8	-2.3
STAL	STALIGIAL	15.33	322	Pn	Pn	03 09 15.3	-1.2
JAVC	Velka Javorina	15.35	338	*e*P	P	03 09 24.6	+3.3
SHA1	Shidzhatmaz	15.38	50	*ce*P	P	03 09 21.9	0.0
CNGR	Negrine	15.50	274	P	P	03 09 24.7	+1.7
GNI	Garni	15.50	65	Pn	Pn	03 09 20.6	+1.7
	comp=Z,2.3nm,0.3s,baz=294,slow=3.6,SNR=13						
GNI				LR	LR	03 16 39.8	
	comp=Z,2µm,18.7s,baz=265,slow=43						
	comp=Z,27nm,0.9s						
GNI	Garni	15.50	65	P	Pn	03 09 17.7	-1.2
GNI	Garni	15.50	65	Pn	Pn	03 09 18.1	-0.8
GNI	Garni	15.50	65	P	P	03 09 22.2	-1.0
GNI	Garni	15.50	65	*i* P	Pn	03 09 17.7	-1.2
GNI	Garni	15.50	65	⇓P	P	03 09 21.8	-1.4
GNI	Garni	15.50	65	P	Pn	03 09 20.2	+1.3
	comp=Z,840nmcomp=Z,47nm,0.9s						
KIV	Kislovodsk	15.51	49	P	Pn	03 09 20.5	+1.6
KIV				S	Sn	03 12 11.1	+0.9
KIV	Kislovodsk	15.51	49	Pn	Pn	03 09 19.1	+0.2
KIV				IAmb	IAmb	03 09 30.2	
	comp=Z,88nm,0.8s						
KIV	Kislovodsk	15.51	49	*i* P	P	03 09 24.0	+0.8
	SNR=32						
KIV	Kislovodsk	15.51	49	*e*P	Pn	03 09 20.4	+1.6
KIV				*e*S	Sn	03 12 14.1	+3.9
KIV				pmax	pmax		
	comp=Z,90nm,1.1s						
KIV				MLR	MLR		
	comp=Z,372nm,14.0s						
KIV	Kislovodsk	15.51	49	⇓P	P	03 09 23.9	+0.8
KVAR	Kislovodsk Arr	15.51	49	Pn	Pn	03 09 21.0	+2.0
	baz=263,slow=23						
KVAR				LR	LR	03 17 20.6	
	comp=Z,351nm,18.4s,baz=128,slow=45						
	comp=Z,9.0nm,0.7s						
KBZ	Khabaz	15.53	50	Pn	P	03 09 21.3	-2.0
	comp=Z,0.7nm,0.3s,baz=245,slow=8.1,SNR=44						
KBZ				LR	LR	03 17 04.7	
	comp=Z,597nm,18.1s,baz=242,slow=44						
	comp=Z,24nm,0.8s						
KBZ	Khabaz	15.53	50	*i* P	Pn	03 09 20.8	+1.8
KBA	Koelnbreinsper	15.60	325	*i* Pn	Pn	03 09 20.3	+0.2
	comp=Z,16nm,0.6s						
CBBAR	Babar	15.69	276	P	P	03 09 27.4	+2.0
CTI	Castel Tesino	15.75	319	Pn	Pn	03 09 21.2	-0.8
CTI	Castel Tesino	15.75	319	P	Pn	03 09 21.2	-0.8
CTI				pmax	pmax		
	comp=Z,30nm,1.0s						
MAUC	Maruska	15.75	339	*e*P	Pn	03 09 22.2	+0.2
MOA	Molln	15.77	329	*i* Pn	P	03 09 25.1	-0.8
	comp=Z,9.3nm,0.9s						
ABTA	Abfaltersbach	15.77	323	*i* Pn	Pn	03 09 22.1	-0.1
	comp=Z,17nm,1.0s						
ABTA				*e*Sn	Sn	03 12 13.0	-3.4
	comp=Z,9.5nm,0.8s						
AK07	Malin Array Si	15.78	7	P	P	03 09 24.6	-1.4
AK06	Malin Array Si	15.81	7	P	P	03 09 24.8	-1.6
AK13	Malin Array Si	15.82	6	P	P	03 09 25.0	-1.5
AK10	Malin Array Si	15.83	7	P	P	03 09 25.0	-1.6
AK14	Malin Array Si	15.85	6	P	P	03 09 25.1	-1.7
NCK	Nalchik	15.87	52	*i* P	P	03 09 25.8	-1.3
AK11	Malin Array Si	15.90	7	P	P	03 09 25.9	-1.4
AK15	Malin Array Si	15.91	6	P	P	03 09 26.1	-1.4
BIOA	Bad Ischl, Aus	15.92	327	*i* Pn	P	03 09 27.6	0.0
	comp=Z,4.3nm,0.7s						
KIEV	Kiev	15.92	7	Pn	Pn	03 09 23.4	-0.6
KIEV	Kiev	15.92	7	⇑P	P	03 09 26.5	-1.0
KIEV	Kiev	15.92	7	*i* P	P	03 09 26.1	-1.5
	SNR=16						
KIEV	Kiev	15.92	7	P	P	03 09 26.3	-1.2
KIEV	Kiev	15.92	7	⇓P	P	03 09 26.3	-1.2
KIEV	Kiev	15.92	7	P	P	03 09 26.3	-1.2
	comp=Z,295nm,0.9s						
AKASG	Malin Array Be	15.93	7	Pn	Pn	03 09 23.9	-0.3
	comp=Z,4.9nm,0.3s,baz=194,slow=10,SNR=23						
AKASG				LR	LR	03 15 52.2	
	comp=Z,521nm,20.3s,baz=187,slow=39						
	comp=Z,2.5nm,0.5s						
AKASG	Malin Array Be	15.93	7	Pn	Pn	03 09 25.0	+0.9
AKASG				IAmb	IAmb	03 09 37.2	
	comp=Z,83nm,0.9s						
AKASG	Malin Array Be	15.93	7	*i* P	P	03 09 26.2	-1.4
AKASG				pmax	pmax		
	comp=Z,12nm,0.6s						
AKBB	Malin Array Si	15.93	7	Pn	Pn	03 09 23.8	-0.3
AKBB	Malin Array Si	15.93	7	*ce*P	Pn	03 09 25.7	+1.6
AKBB	Malin Array Si	15.93	7	P	P	03 09 26.3	-1.3
KRUC	Moravsky	15.94	336	*e*PN	Pn	03 09 26.0	+1.7
AK20	Malin Array Si	15.95	6	P	P	03 09 26.5	-1.4
CSGS	Sigus	16.03	280	P	P	03 09 31.0	+2.0
OJC	Ojcow	16.04	345	*e*P	P	03 09 28.1	-0.8
OJC	Ojcow	16.04	345	Pn	Pn	03 09 25.5	0.0
OJC	Ojcow	16.04	345	P	Pn	03 09 25.5	0.0
OJC	Ojcow	16.04	345	⇑P	P	03 09 28.3	-0.6
VRAC	Vranov	16.09	336	Pn	Pn	03 09 26.4	+0.2
	comp=Z,0.8nm,0.3s,baz=122,slow=9.6,SNR=11						
	comp=Z,9.1nm,0.7s						
VRAC	Vranov	16.09	336	⇑P	P	03 09 28.3	-1.2
VRAC	Vranov	16.09	336	*e*PN	P	03 09 28.0	-1.5
OKC	Ostrava-Krasne	16.09	341	P	P	03 09 30.0	+0.5
OKC				pmax	pmax		
	comp=Z,29nm,1.6s						
SALO	Salr	16.10	316	Pn	Pn	03 09 25.9	-0.6
SALO	Salr	16.10	316	⇓P	P	03 09 30.4	+0.7
LESA	Schwarzleotal	16.16	325	*i* Pn	P	03 09 30.4	0.0
	comp=Z,15nm,0.8s,SNR=9.6						
LESA				*e*Sn	Sn	03 12 29.8	+3.7
	comp=Z,6.9nm,0.7s						
CTGD	Timgad	16.20	278	P	P	03 09 30.7	-0.3
MORC	Moravsky Berou	16.20	339	Pn	Pn	03 09 26.2	-1.6
MORC	Moravsky Berou	16.20	339	*e*PN	Pn	03 09 28.9	+1.1
MORC	Moravsky Berou	16.20	339	P	Pn	03 09 26.2	-1.6
MORC				pmax	pmax		
	comp=Z,20nm,1.0s						
MORC	Moravsky Berou	16.20	339	⇓P	Pn	03 09 27.9	+0.1
CASM	Ain Smara	16.21	281	P	P	03 09 33.1	+2.1
BOB	Bobbio (Coli)	16.26	312	⇓P	P	03 09 31.4	-0.1
BOB	Bobbio (Coli)	16.26	312	⇓P	P	03 09 31.4	-0.1
CTEI	Djebel Teioual	16.28	280	P	P	03 09 33.4	+1.5
GOF	Gofitskoye	16.30	47	*ce*P	P	03 09 32.3	+0.4
RNPP5	Staryi Chortor	16.32	359	P	Pn	03 09 30.5	+1.3
COAT	Oued Athmania	16.38	280	P	P	03 09 35.4	+2.6
RNPP8	Varash	16.43	359	P	P	03 09 31.9	-1.3
TREC	Trest	16.45	334	*e*P	P	03 09 32.5	-1.1
TREC	Trest	16.45	334	*e*P	P	03 09 32.5	-1.1
CKRC	Cesky Krumlov	16.51	331	*e*P	Pn	03 09 32.2	+0.6
CKRC	Cesky Krumlov	16.51	331	*e*P	Pn	03 09 32.2	+0.6
WTTA	Wattenberg	16.56	323	*i* Pn	P	03 09 36.2	+1.3
	comp=Z,19nm,0.7s,SNR=6.1						
WATA	Walderalm	16.64	323	*i* Pn	P	03 09 36.7	+1.0
	comp=Z,9.9nm,0.6s,SNR=5.4						
CJSR	Ain Djasser	16.66	279	P	P	03 09 36.9	+0.9
KRLC	Kraliky	16.70	338	*e*P	Pn	03 09 33.8	-0.2
KRLC	Kraliky	16.70	338	*e*P	Pn	03 09 33.8	-0.2
SQTA	Sankt Quirin	16.74	322	*e*Pn	P	03 09 35.8	-1.1
	comp=Z,13nm,0.6s						
GEC2	GERESS Array S	16.78	330	P	P	03 09 37.3	+0.1
GEC2				pmax	pmax		
	comp=Z,25nm,0.8s						
GERES	GERESS Array B	16.78	330	Pn	Pn	03 09 35.2	+0.1
	baz=144,slow=9.4,SNR=27						
	comp=Z,3.6nm,0.7s						
FUORN	Ofenpass-Fuorn	16.85	319		Pn	03 09 35.8	-0.4
FETA	Feichten	16.86	321	*e*Pn	P	03 09 38.4	+0.2
	comp=Z,11nm,0.8s						
CKTS	El Kantara	16.91	277	P	P	03 09 39.3	+0.5
KHC	Kasperske Hory	17.05	330	*ce*P	Pn	03 09 38.6	+0.1
KHC				pmax	pmax		
	comp=Z,19nm,1.3s						
KHC	Kasperske Hory	17.05	330	*e*P	Pn	03 09 38.1	-0.4
KHC				*e*pP	pP	03 09 45.5	+0.2
KHC	Kasperske Hory	17.05	330	⇑P	Pn	03 09 38.4	-0.1
KHC	Kasperske Hory	17.05	330	P	P	03 09 39.8	-0.4
	comp=Z,16nm,0.8s						
ZVC	Zvikov	17.05	332	*e*P	Pn	03 09 37.9	-0.6
DPC	Dobruska-Polom	17.08	338	*e*P	Pn	03 09 39.2	+0.4
DPC	Dobruska-Polom	17.08	338	*e*P	Pn	03 09 39.2	+0.4
DPC	Dobruska-Polom	17.08	338	P	Pn	03 09 39.4	+0.6
	comp=Z,33nm,0.7s						
RETA	Reutte	17.15	322	*e*Pn	Pn	03 09 40.3	+0.6
	comp=Z,10.0nm,0.6s,SNR=4.6						
RETA				*e*Sn	Sn	03 12 49.6	-0.3
	comp=Z,5.9nm,0.7s						
RETA				*e*Sg	S	03 13 16.4	+17
	comp=Z,11nm,0.9s						
DAVOX	Davos/Dischmat	17.16	319	P	Pn	03 09 40.7	+0.7
	comp=Z,0.6nm,0.3s,baz=105,slow=6.4,SNR=8.9						
DAVOX				LR	LR	03 18 49.1	
	comp=Z,437nm,19.4s,baz=99,slow=46						
	comp=Z,3.6nm,0.6s						
TUE	Stuetta	17.27	317	⇑P	P	03 09 43.8	+1.0
TUE	Stuetta	17.27	317	P	P	03 09 42.5	-0.3
	comp=Z,186nm,0.9s						
CAZD	Ain Tagrout	17.29	280	P	P	03 09 45.2	+2.2
OSTC	Ostas	17.29	338	*e*P	Pn	03 09 41.5	0.0
OSTC	Ostas	17.29	338	*e*P	Pn	03 09 41.5	0.0
UPC	Upice	17.31	337	*e*P	Pn	03 09 41.7	0.0
UPC	Upice	17.31	337	*e*P	Pn	03 09 41.7	0.0
WET	Wettzell	17.35	329	P	P	03 09 43.5	0.0
WET				pmax	pmax		
	comp=Z,29nm,0.8s						
PRU	Pruhonice	17.37	334	*e*P	Pn	03 09 41.3	-1.1
PRU	Pruhonice	17.37	334	*e*P	Pn	03 09 41.3	-1.1
BEL	Belsk	17.39	348	*e*P	P	03 09 43.4	-0.4
BEL	Belsk	17.39	348	P	P	03 09 48.6	+4.8
DAVA	Damuels	17.48	320	*e*Pn	Pn	03 09 44.4	+0.5
	comp=Z,17nm,0.9s						
PRA	Prague	17.48	334	*e*P	P	03 09 44.8	-0.1
PRA	Prague	17.48	334	*e*P	P	03 09 44.8	-0.1
KSP	Ksiaz	17.52	338	*e*P	Pn	03 09 44.4	+0.1
KSP	Ksiaz	17.52	338	P	P	03 09 50.0	+4.7
CTCHA	Tamokra	17.69	281	P	P	03 09 48.8	+1.5
PVCC	Panska Ves	17.81	335	P	Pn	03 09 48.0	+0.1
PVCC				pmax	pmax		
	comp=Z,43nm,1.2s						
AKT	Akhty	18.03	62	*e*P	Pn	03 09 50.1	-0.6
AKT				*e*S	Sn	03 13 10.5	-0.9
AKT				pmax	pmax		
	comp=Z,25nm,1.4s						
AKT				MLR	MLR		
	comp=Z,1µm,18.0s						
ABSD	Ouled Sidi Bra	18.11	278	P	Pn	03 09 50.9	-0.8
ATKB	Taksebt	18.11	282	P	P	03 09 53.5	+1.6
BNI	Bardonecchia	18.12	310	P	P	03 09 54.0	+1.9
BNI	Bardonecchia	18.12	310	⇑P	P	03 09 54.7	+2.6
HSKC	Hora Svate Kat	18.29	333	*e*P	P	03 09 53.9	+0.1
MAK	Makhachkala	18.29	58	*c i*P	P	03 09 56.1	+2.2
MAK				*e*S	S	03 13 23.9	+1.6
MAK				pmax	pmax		
	comp=Z,231nm,0.8s						
BRG	Berggiesshubel	18.32	334	P	Pn	03 09 54.0	-0.1
BRG				pmax	pmax		
	comp=Z,27nm,1.1s						
LKRN	Lenkeran, Azer	18.36	71	P	Pn	03 09 57.0	+2.4
GRF	Grafenberg Arr	18.48	328	*e*P	P	03 09 53.2	-2.6
	comp=Z,31nm,1.1s,baz=137,slow=12						
GRF				*e*L	L	03 18 06.3	
	comp=Z,446nm,21.8s						
SLE	Schleitheim	18.51	319	P	P	03 09 56.2	-0.1
SLE				pmax	pmax		
	comp=Z,30nm,0.7s						
VORD	Divnogorie	18.60	26	*e*P	Pn	03 09 57.9	+0.4
VORD				pmax	pmax		
	comp=Z,20nm,0.8s						
ADJB	Djebel Djouab	18.68	280	P	Pn	03 09 58.6	-0.1
VSR	Storozhevoye	18.76	26	*e*P	Pn	03 10 02.7	+3.3
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ADCK	Dar Chioukh	18.77	277	P	P	03 09 59.5	+0.1
STU	Stuttgart	18.79	323	P	Pn	03 09 59.6	-0.2
STU				pmax	pmax		
	comp=Z,31nm,1.1s						
BFO	Black Forest	18.94	321		P	03 10 00.7	-0.4
BFO	Black Forest	18.94	321	P	P	03 10 00.7	-0.4
BFO				pmax	pmax		
	comp=Z,24nm,0.7s						
BFO	Black Forest	18.94	321	⇑P	Pn	03 10 01.8	0.0
ABRIN	Birine	18.97	279	P	P	03 10 01.3	-0.2
CLL	Collm	19.02	334		P	03 10 01.4	-0.3
CLL	Collm	19.02	334	*i* P	P	03 10 01.1	-0.7
CLL				*e*S	S	03 13 39.0	+2.2
CLL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CLL	Collm	19.02	334	*i* P	P	03 10 01.1	-0.7
	comp=Z,7.0nm,0.8s						
CLL				*i* x	x	03 10 04.2	
CLL				*i* pP	pP	03 10 06.0	-0.9
CLL				*i* sP	sP	03 10 09.1	+0.7
CLL				*i* (PP)	Pn	03 10 12.0	+9.4
	comp=Z,32nm,0.8s						
CLL				*e*PPP	PPP	03 10 24.0	
CLL				*e*S	S	03 13 39.0	+2.2
MOX	Moxa	19.03	330	P	Pn	03 10 03.2	+0.5
MOX				pmax	pmax		
	comp=Z,20nm,1.6s						
MOX	Moxa	19.03	330	*e*L	L	03 20 17.4	
	comp=Z,395nm,21.6s						
VORR	Voronezh	19.15	25	*e*P	Pn	03 10 05.1	+1.0
VORR				pmax	pmax		
	comp=Z,30nm,0.8s						
SUW	Suwalki	19.23	354	*e*P	Pn	03 10 04.7	-0.4
GKP	Gorka Klasztor	19.46	343	*e*P	Pn	03 10 07.2	-0.6
ECH	Echery	19.50	319	P	Pn	03 10 07.9	-0.5
ECH				pmax	pmax		
	comp=Z,26nm,1.1s						
ECH	Echery	19.50	319	⇑P	Pn	03 10 08.2	-0.2
SSB	Saint Sauveur	19.58	309	P	P	03 10 08.1	+0.1
SSB	Saint Sauveur	19.58	309	⇑P	P	03 10 08.2	+0.1
MNK	Minsk	19.62	3	*i* P	P	03 10 05.8	-2.6
	comp=E,12nm,0.9s						
MNK				*i* P	P	03 10 05.8	-2.6
	comp=N,14nm,1.2s						
MNK				*i* P	P	03 10 05.8	-2.6
	comp=Z,23nm,0.8s,baz=184						
MNK				*i* PP	PnPn	03 10 20.7	-2.7
MNK				*i* PPP	PPP	03 10 28.6	
MNK				*i* S	S	03 13 47.7	-1.3
MNK				*i* SS	SnSn	03 14 04.8	+0.9
MNK				*i* SSS	SSS	03 14 17.6	
MNK				*i* LQ	LQ	03 16 05.0	
MNK				*i* LR	LR	03 17 31.0	
MNK				*i* LRM	MLR	03 18 59.0	
	comp=N,240nm,14.2s						
MNK				*i* LRM	MLR	03 18 59.8	
	comp=E,156nm,12.1s						
MNK				*i* LRM	MLR	03 19 01.3	
	comp=Z,473nm,18.0s						
MNK	Minsk	19.62	3	*i* P	P	03 10 05.8	-2.6
MNK				*i* S	S	03 13 47.6	-1.3
MNK				pmax	pmax		
	comp=E,12nm,0.9s						
MNK				pmax	pmax		
	comp=N,14nm,1.2s						
MNK				pmax	pmax		
	comp=Z,23nm,0.8s						
MNK				MLR	MLR		
	comp=N,240nm,14.0s						
MNK				MLR	MLR		
	comp=E,156nm,12.0s						
MNK				MLR	MLR		
	comp=Z,473nm,18.0s						
EDDR	Deurdeur	19.68	280	P	Pn	03 10 11.7	+1.0
EZEK	Zmalet El Emir	19.71	277	P	Pn	03 10 10.8	-0.3
VRH	Novokhopyorsk	19.72	30	*e*P	P	03 10 08.9	-0.6
VRH				pmax	pmax		
	comp=Z,149nm,0.7s						
LPSR	Galich'ya Gora	19.84	23	*e*P	Pn	03 10 12.5	+0.2
LPSR				pmax	pmax		
	comp=Z,70nm,1.0s						
NACGM	Naroch	20.00	1	*e*P	Pn	03 10 15.6	+1.4
RAYN	Ar Rayn	20.17	119	P	Pn	03 10 16.4	-0.1
RAYN				S	S	03 14 00.1	-0.4
RAYN	Ar Rayn	20.17	119		P	03 10 15.1	+0.5
RAYN	Ar Rayn	20.17	119	*i* P	Pn	03 10 16.4	-0.1
	SNR=38						
RAYN	Ar Rayn	20.17	119	P	Pn	03 10 16.5	-0.1
RAYN	Ar Rayn	20.17	119	⇑P	Pn	03 10 16.7	+0.1
EADEB	Ain Deheb	20.32	277	P	P	03 10 16.1	-0.2
EASA	Ain Sidi Ali	20.43	275	P	P	03 10 18.2	+0.6
FLTG	Flechtingen	20.49	333	⇓P	P	03 10 16.1	-1.7
PABE	Paberze	20.67	356	P	P	03 10 19.1	-0.6
LOR	Lormes	20.88	313	P	P	03 10 21.9	-0.3
LOR				pmax	pmax		
	comp=Z,63nm,0.8s						
LOR	Lormes	20.88	313	⇑P	P	03 10 21.0	-1.1
WLF	Walferdange	20.89	321	P	P	03 10 21.3	-0.9
WLF	Walferdange	20.89	321		P	03 10 21.0	-1.2
WLF				IAmb	IAmb	03 10 31.9	
	comp=Z,61nm,1.1s						
WLF	Walferdange	20.89	321	P	P	03 10 21.0	-1.2
WLF				pmax	pmax		
	comp=Z,61nm,1.1s						
WLF	Walferdange	20.89	321	⇓P	P	03 10 22.2	0.0
WLF	Walferdange	20.89	321	*d*P	P	03 10 21.7	-0.5
	comp=Z,35nm,0.9s						
CEST	Esterri de Car	20.97	299		P	03 10 22.0	-1.3
CEST				IAmb	IAmb	03 10 41.6	
	comp=Z,62nm,1.0s						
BHOU	Houvegnez	21.39	322	*d*P	P	03 10 28.1	+0.4
	comp=Z,31nm,0.9s						
OBN	Obninsk	21.42	16	P	P	03 10 28.5	+0.7
	comp=Z,20nm,0.4s,baz=325,slow=13,SNR=5.9						
	comp=Z,20nm,0.4s						
OBN	Obninsk	21.42	16		P	03 10 26.4	-1.3
OBN	Obninsk	21.42	16	*e*P	P	03 10 29.3	+1.5
OBN				*e*PPP	PPP	03 10 55.1	
OBN				*e*		03 14 30.5	
OBN				pmax	pmax		
	comp=Z,72nm,1.3s						
OBN				MLR	MLR		
	comp=Z,354nm,18.0s						
OBN	Obninsk	21.42	16	P	P	03 10 29.5	+1.7
	comp=Z,90nm,0.9s						
BTNL	Ternell	21.48	323	*d*P	P	03 10 28.4	-0.1
	comp=Z,29nm,0.9s						
OFRG	Douar Fergoug	21.48	279	P	P	03 10 30.1	+1.4
BUG	Bochum--Univer	21.50	326	P	P	03 10 29.2	+0.5
BUG				pmax	pmax		
	comp=Z,37nm,1.0s						
MEM	Membach	21.55	323	*d*P	P	03 10 28.9	-0.4
	comp=Z,56nm,0.9s						
ODJA	Bouhanifia	21.66	279	P	P	03 10 31.8	+1.2
RCHB	Rochefort	21.67	321	*d*P	P	03 10 29.5	-1.1
BSTI	Sart Tilman	21.76	322	*d*P	P	03 10 31.5	+0.1
	comp=Z,11nm,1.0s						
BCLA	Clavier	21.79	322	*d*P	P	03 10 31.4	-0.5
	comp=Z,23nm,1.1s						
TAM	Tamanrasset	21.82	242		P	03 10 32.0	-0.5
TAM	Tamanrasset	21.82	242	P	P	03 10 32.0	-0.5
TAM				pmax	pmax		
	comp=Z,190nm,1.2s						
TAM	Tamanrasset	21.82	242	⇓P	P	03 10 33.9	+1.3
BGES	Gesves	21.88	321	*d*P	P	03 10 32.0	-0.8
	comp=Z,21nm,1.1s						
DOU	Dourbes	21.96	320	*d*P	P	03 10 32.0	-1.7
	comp=Z,34nm,0.8s						
BMRD	Maredsous	21.99	321	*d*P	P	03 10 32.8	-1.2
	comp=Z,16nm,0.9s						
BSEG	Bad Segeberg	22.11	334	P	P	03 10 37.6	+2.4
BSEG				pmax	pmax		
	comp=Z,17nm,0.8s						
CART	Cartagena	22.19	285	P	P	03 10 35.2	-1.0
CART	Cartagena	22.19	285	P	P	03 10 35.0	-1.2
CART				IAmb	IAmb	03 10 49.1	
	comp=Z,62nm,1.0s						
CLF	Chambon-Foret	22.19	314	IAmb	IAmb	03 11 01.3	
	comp=Z,81nm,1.0s						
CLF	Chambon-Foret	22.19	314	⇑P	P	03 10 37.0	+0.8
ECHE	Chera	22.20	290	P	P	03 10 36.8	+0.4
MOS	Moscow	22.24	17	*e*P	P	03 10 35.8	-0.8
MOS				*e*PPP	PPP	03 11 04.9	
MOS				*e*S	S	03 14 34.0	-6.4
MOS				*e*		03 14 41.2	
MOS				pmax	pmax		
	comp=Z,42nm,0.8s						
MOS				MLR	MLR		
	comp=Z,600nm,17.0s						
EMUR	La Murta	22.37	286	P	P	03 10 38.3	0.0
UCC	Uccle	22.50	322		P	03 10 38.4	-1.0
UCC				IAmb	IAmb	03 10 49.6	
	comp=Z,77nm,1.3s						
UCC	Uccle	22.50	322	P	P	03 10 38.4	-1.0
UCC				pmax	pmax		
	comp=Z,77nm,1.3s						
UCC	Uccle	22.50	322	*d*P	P	03 10 39.1	-0.3
	comp=Z,30nm,1.1s						
ETOB	Tobarra	22.61	288	P	P	03 10 39.9	-1.0
SHMA	Al-Shehemyia	23.03	106	P	P	03 10 44.8	-0.5
MFF	Saint Martin d	23.10	308	⇓P	P	03 10 47.4	+1.6
MFF	Saint Martin d	23.10	308	⇓P	P	03 10 47.4	+1.6
BELG	Belogornoye	23.15	34	*i* P	P	03 10 44.9	-1.3
BELG				pmax	pmax		
	comp=Z,24nm,1.0s						
ENIJ	Nijar	23.17	283	P	P	03 10 46.1	-0.6
TRNA	Turayna	23.78	108	P	P	03 10 52.7	0.0
	SNR=12						
TRNA				S	S	03 15 07.7	+0.3
UCM	Universidad Co	23.99	292	P	P	03 10 53.4	-1.2
EQTA	Presa de Quent	24.14	284	P	P	03 10 55.8	-0.3
ELGU	Los Guajares,	24.32	283	P	P	03 10 56.4	-1.2
ESDC	Sonseca Array	24.51	290	P	P	03 10 59.0	-0.5
	comp=Z,15nm,0.6s,baz=80,slow=9.4,SNR=181						
ESDC				LR	LR	03 21 04.9	
	comp=Z,288nm,19.4s,baz=102,slow=38						
	comp=Z,15nm,0.6s						
ESDC	Sonseca Array	24.51	290		P	03 10 58.4	-1.0
PAB	San Pablo	24.81	290		P	03 11 00.4	-1.7
PAB				IAmb	IAmb	03 11 19.8	
	comp=Z,63nm,1.2s						
PAB	San Pablo	24.81	290	P	P	03 11 00.4	-1.7

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PAB                                pmax   pmax
      comp=Z,63nm,1.3s
JRN   Qarnain Island   24.96 106   P      P      03 11 03.1  -0.4
JRN                                P      P      03 11 03.1  -0.4
GHWR  Ruwais           25.48 108   P      P      03 11 08.0  -0.3
GHWR                               P      P      03 11 08.0  -0.3
MDT   Midelt           25.74 274   LR     LR     03 24 05.6
      comp=Z,823nm,19.7s,baz=86,slow=43
MD01  Midelt array s   25.85 274          P      03 11 11.2  -0.5
MD31  MD31             25.85 274          P      03 11 11.0  -0.7
MD31                               IAmb   IAmb   03 11 21.3
      comp=Z,37nm,1.1s
IFR   Ifrane           26.01 276   P      P      03 11 13.1  -0.1
CNIL  Conil            26.31 283   P      P      03 11 14.3  -1.3
MZWR  Madinat Zayed    26.37 107   P      P      03 11 15.5  -0.8
MZWR                               P      P      03 11 15.5  -0.8
MZR   Muzera           26.46 109   P      P      03 11 16.0  -1.2
MZR   Muzera           26.46 109 i P      P      03 11 18.6  +1.5
      SNR=7.4
PBRG  Braganca         26.73 295 eP       P      03 11 19.1  -0.4
PBRG                             i IAmb   IAmb   03 11 21.7
      comp=Z,72nm,1.1s
AJN   Ajban            26.84 105   P      P      03 11 20.4  -0.1
MVO   Moncorvo         26.91 293 eP       P      03 11 20.8  -0.3
MVO                              i IAmb   IAmb   03 11 23.9
      comp=Z,100nm,2.0s
PBAR  Barrancos        26.93 287 eP       P      03 11 20.4  -0.9
PBAR                             i IAmb   IAmb   03 11 31.0
      comp=Z,53nm,2.1s
SHME  Shamm            27.08 101   P      P      03 11 20.7  -2.0
SHME                               P      P      03 11 20.7  -2.0
SHME  Shamm            27.08 101   P      P      03 11 23.6  +0.9
ASUD  Al Ashush, Dub   27.08 104   P      P      03 11 21.8  -1.0
PMRV  Marv??o          27.16 290 eP       P      03 11 22.3  -1.1
PMRV                             i IAmb   IAmb   03 11 33.9
      comp=Z,44nm,1.9s
NAZ   Nazwa, Dubai     27.18 103   P      P      03 11 22.7  -0.9
NAZ                                P      P      03 11 22.7  -0.9
NAZ   Nazwa, Dubai     27.18 103 i P      P      03 11 25.0  +1.4
      SNR=13
PCBR  Castelo Branco   27.22 290 eP       P      03 11 25.6  +1.8
FAQ   Al Faqa, Dubai   27.24 104   P      P      03 11 23.1  -1.0
FAQ                                P      P      03 11 23.1  -1.0
FAQ                                P      P      03 11 23.4  -0.7
FAQ                                P      P      03 11 23.4  -0.7
FAQ   Al Faqa, Dubai   27.24 104   P      P      03 11 25.3  +1.2
BANOM Banah            27.26 101   P      P      03 11 23.9  -0.5
BANOM                              P      P      03 11 23.9  -0.5
MTE   Manteigas        27.27 292   IAmb   IAmb   03 11 27.1
      comp=Z,32nm,0.9s
MTE   Manteigas        27.27 292 eP       P      03 11 22.6  -1.8
MTE                              i IAmb   IAmb   03 11 28.7
      comp=Z,60nm,1.7s
KLMR  Klimovskoe       27.32  14 eP       P      03 11 22.0  -2.5
KLMR                               pmax   pmax
      comp=Z,56nm,1.4s
KLMR                               MLR    MLR
      comp=Z,476nm,13.0s
PESTR Estremoz         27.33 288   IAmb   IAmb   03 11 27.8
      comp=Z,30nm,1.0s
PESTR Estremoz         27.33 288 eP       P      03 11 23.8  -1.1
PESTR                            i IAmb   IAmb   03 11 34.9
      comp=Z,41nm,1.2s
PESTR Estremoz         27.33 288 ⇑P       P      03 11 24.2  -0.7
MASF  Masafi           27.40 102   P      P      03 11 24.9  -0.7
MASF                               P      P      03 11 24.9  -0.7
MASF                               S      S      03 16 02.7  -2.3
MASF                               S      S      03 16 02.7  -2.3
MSFE  Esma-Masafi      27.40 102   P      P      03 11 26.5  +0.8
PVRL  Vila Real        27.43 294 eP       P      03 11 24.8  -0.9
PVRL                             i IAmb   IAmb   03 11 28.0
      comp=Z,76nm,1.7s
POLO  Lamas de Olo     27.49 294 eP       P      03 11 26.3  -0.1
POLO                             i IAmb   IAmb   03 11 31.0
      comp=Z,31nm,2.0s
PVAQ  Vaqueiros        27.53 285 eP       P      03 11 25.1  -1.6
PVAQ                             i IAmb   IAmb   03 11 26.9
      comp=Z,57nm,1.3s
PVAQ  Vaqueiros        27.53 285 ⇑P       P      03 11 25.9  -0.7
MDH   Madha            27.54 102   P      P      03 11 26.4  -0.4
MDH                                P      P      03 11 26.4  -0.4
PVIS  Viseu            27.55 292 eP       P      03 11 26.3  -0.6
PBEJ  Beja             27.60 287 eP       P      03 11 26.8  -0.5
PBEJ                             i IAmb   IAmb   03 11 55.7
      comp=Z,46nm,1.6s
HATD  Hatta, Dubai     27.63 103   P      P      03 11 26.7  -1.0
HATD                               P      P      03 11 26.7  -1.0
HATD  Hatta, Dubai     27.63 103 i P      P      03 11 28.8  +1.1
      SNR=9.7
UOSS  Minazif          27.63 103   P      P      03 11 27.4  -0.3
UOSS                               P      P      03 11 27.4  -0.3
UOSS  Minazif          27.63 103          P      03 11 27.7   0.0
UOSS                               IAmb   IAmb   03 11 39.1
      comp=Z,34nm,0.9s
UOSS  Minazif          27.63 103   P      P      03 11 28.3  +0.7
UOSS  Minazif          27.63 103 ⇓P       P      03 11 28.6  +0.9
ASHO  Ashiyiah         27.64 104   P      P      03 11 26.7  -1.0
ASHO                               P      P      03 11 26.7  -1.0
ASHO                               P      P      03 11 27.2  -0.6
ASHO                               P      P      03 11 27.2  -0.6
ASHO                               S      S      03 16 08.5  -0.3
ASHO                               S      S      03 16 08.5  -0.3
EVO   Evora            27.68 288   P      P      03 11 26.3  -1.6
EVO   Evora            27.68 288 eP       P      03 11 27.6  -0.4
EVO                              i IAmb   IAmb   03 12 08.5
      comp=Z,44nm,1.6s
PARRA Arraiolos        27.69 288 eP       P      03 11 27.2  -0.8
PARRA                            i IAmb   IAmb   03 11 31.5
      comp=Z,38nm,1.8s
ALNE  Al Ain           27.70 105   P      P      03 11 28.2  -0.1
ALNE                               P      P      03 11 28.2  -0.1
ALNE  Al Ain           27.70 105 i P      P      03 11 29.3  +1.0
      SNR=6.4
PBDV  Barranco-do-Ve   27.71 285 eP       P      03 11 27.6  -0.7
PBDV                             i IAmb   IAmb   03 11 31.5
      comp=Z,80nm,1.7s
AKTO  Aktyubinsk       27.72  46   LR     LR     03 25 53.4
      comp=Z,299nm,20.2s,baz=266,slow=44
PMTG  Montargil        27.82 289 eP       P      03 11 29.0  -0.2
PMTG                             i IAmb   IAmb   03 11 53.6
      comp=Z,49nm,1.5s
MESJ  Messejana        27.89 286   IAmb   IAmb   03 11 41.7
      comp=Z,23nm,0.9s
MESJ  Messejana        27.89 286 eP       P      03 11 28.3  -1.5
MESJ                             i IAmb   IAmb   03 11 36.0
      comp=Z,49nm,1.4s
KIRV  Kirov            28.20  26   P      P      03 11 31.1  -1.3
      comp=Z,9.7nm,0.4s,baz=190,slow=5.3,SNR=3.9
KIRV                               LR     LR     03 24 55.4
      comp=Z,273nm,18.6s,baz=243,slow=41
      comp=Z,9.7nm,0.4s
KIRV  Kirov            28.20  26ceP       P      03 11 31.4  -1.0
SOHO  SOHO             28.28 104   P      P      03 11 33.2  -0.2
SOHO                               P      P      03 11 33.2  -0.2
SOHO  SOHO             28.28 104 i P      P      03 11 34.4  +0.9
      SNR=16
TIO   Tiouine          28.41 272   P      P      03 11 32.0  -2.7
AB31  Akbulak array    28.50  49          P      03 11 35.0  -0.1
AB31                               IAmb   IAmb   03 11 60.0
      comp=Z,16nm,0.7s
ABKAR Akbulak array    28.50  49          P      03 11 34.9  -0.2
ARQ   Araqi            28.67 106   P      P      03 11 36.0  -1.0
      SNR=5.3
ARQ                                P      P      03 11 36.0  -1.0
      SNR=5.3
EKA   Eskdalemuir Ar   28.81 324   P      P      03 11 36.2  -1.7
      comp=Z,7.6nm,0.8s,baz=120,slow=9.2,SNR=10
EKA                                LR     LR     03 25 57.6
      comp=Z,347nm,19.9s,baz=134,slow=42
      comp=Z,7.6nm,0.8s
HOQ   Hoqain           29.17 104   P      P      03 11 41.3  -0.1
HOQ                                P      P      03 11 41.3  -0.1
HRA   Herat            29.45  81          P      03 11 43.8  -0.2
BSY   Bisya            29.50 106   P      P      03 11 44.0  -0.4
BSY                                P      P      03 11 44.0  -0.4
DOK   Doka             29.51 116   P      P      03 11 43.8  -0.6
DOK                                S      S      03 16 36.4  -1.8
WHFO  Wadi Hawf        29.69 118   P      P      03 11 47.1  +1.0
WHFO                               S      S      03 16 40.7  -0.4
ABTO  Aybut            29.71 119   P      P      03 11 47.3  +1.1
      SNR=5.9
BIDO  Bidbid           29.85 104   P      P      03 11 46.8  -0.7
SMDO  Samad            30.02 105   P      P      03 11 48.2  -0.8
SMDO                               P      P      03 11 48.2  -0.8
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RBK   Rabkut           30.27 118   P      P      03 11 51.6  +0.4
JMDO  Jabal Madar      30.41 106   P      P      03 11 51.3  -1.2
JMDO                               P      P      03 11 51.3  -1.2
ARTI  Arti             30.59  35          P      03 11 52.1  -1.5
ARTI                               IAmb   IAmb   03 11 59.4
      comp=Z,43nm,1.2s
ARTI  Arti             30.59  35c iP      P      03 11 52.7  -0.9
ARTI                               S      S      03 16 56.7  +2.2
ARTI                               SS     ScP    03 18 34.9  +1.6
ARTI                               pmax   pmax
      comp=Z,17nm,0.8s
ARTI  Arti             30.59  35 ⇓P       P      03 11 53.0  -0.6
DMTO  DMTO             30.68 117   P      P      03 11 54.8   0.0
WBK   Wadi Bani Khal   30.98 105   P      P      03 11 57.6  +0.2
WBK                                P      P      03 11 57.6  +0.2
SHAO  Shalim           30.98 115   P      P      03 11 57.7  +0.2
SHAO  Shalim           30.98 115   P      P      03 11 58.8  +1.3
MHTO  MHTO             31.04 108   P      P      03 11 58.3  +0.3
MHTO                               P      P      03 11 58.3  +0.3
TORD  Torodi Ar. Bea   31.08 232   P      P      03 11 58.0  -0.3
      comp=Z,20nm,0.5s,baz=37,slow=14,SNR=11
      comp=Z,20nm,0.5s
DQM   DQM              31.30 110   P      P      03 11 59.6  -0.6
JLN   Jalan Bani Buh   31.56 105   P      P      03 12 02.8  +0.3
JLN                                P      P      03 12 02.8  +0.3
SVE   Sverdlovsk       31.89  36 eP       P      03 12 05.3  +0.3
SVE                                pmax   pmax
      comp=Z,23nm,0.7s
LODK  Lodwar           32.43 163   P      P      03 12 12.6  +2.4
LODK  Lodwar           32.43 163          P      03 12 11.4  +1.2
APA   Apatity          32.96   5 eP       P      03 12 21.7  +7.4
APA                              e               03 13 22.1
APA                                MLR    MLR
      comp=Z,3µm,5.5s
SHAA  Shahritus        33.61  73   IAmb   IAmb   03 12 46.7
      comp=Z,41nm,1.1s
CHM   Chimkent         34.31  64 eP       P      03 12 26.4   0.0
CHM   Chimkent         34.31  64 eP       P      03 12 26.4   0.0
EDA   Edea             34.42 209          P      03 12 26.8  -0.7
EDA                                IAmb   IAmb   03 12 36.5
      comp=Z,46nm,1.5s
BRLS  Borolday         34.46  63 eP       P      03 12 26.5  -1.2
BRLS  Borolday         34.46  63 eP       P      03 12 26.5  -1.2
IUG   Iuzhnay          34.63  65 eP       P      03 12 29.5  +0.1
      comp=Z,15nm,0.9s
IUG   Iuzhnay          34.63  65 eP       P      03 12 29.4  +0.1
IUG                                pmax   pmax
      comp=Z,15nm,0.9s
ARCES ARCESS Array B   34.69 359   LR     LR     03 28 46.3
      comp=Z,210nm,18.3s,baz=182,slow=40
KBL   Kabul            34.91  78   P      P      03 12 31.4  -0.5
KBL   Kabul            34.91  78   P      P      03 12 31.4  -0.5
KBL                                pmax   pmax
      comp=Z,16nm,1.2s
KKAR  Karatay Array    34.95  63          P      03 12 32.1  +0.1
KKAR  Karatay Array    34.95  63   P      P      03 12 32.1  +0.1
MBAR  Mbarara          35.56 172   P      P      03 12 38.4  +0.9
DZA   Taraz            35.56  63 eP       P      03 12 37.5  +0.2
      comp=Z,7.7nm,0.5s
DZA   Taraz            35.56  63 eP       P      03 12 37.4  +0.2
DZA                                pmax   pmax
      comp=Z,8.0nm,0.5s
BORK  Borovoye         35.79  46          P      03 12 38.2  -0.7
BORK                               IAmb   IAmb   03 12 46.4
      comp=Z,31nm,1.1s
BORK  Borovoye         35.79  46ceP       P      03 12 38.9  -0.1
BORK                               pmax   pmax
      comp=Z,39nm,1.1s
BORK  Borovoye         35.79  46 ⇓P       P      03 12 39.8  +0.8
BVAR  Borovoye Array   35.83  46   P      P      03 12 40.0  +0.7
      comp=Z,16nm,0.8s,baz=256,slow=6.0,SNR=56
BVAR                               LR     LR     03 31 04.6
      comp=Z,346nm,20.9s,baz=266,slow=43
      comp=Z,16nm,0.8s
BVAR  Borovoye Array   35.83  46   P      P      03 12 40.0  +0.7
MANEM Manem            36.40  72   IAmb   IAmb   03 13 18.0
      comp=Z,46nm,0.9s
BTLS  Baital           37.45  60 eP       P      03 12 53.2  -0.1
      comp=Z,13nm,0.8s
BTLS  Baital           37.45  60 eP       P      03 12 53.2  -0.1
BTLS                               pmax   pmax
      comp=Z,13nm,0.8s
AAK   Ala-Archa        37.90  63   LR     LR     03 32 44.6
      comp=Z,181nm,19.2s,baz=290,slow=43
AAK   Ala-Archa        37.90  63   P      P      03 12 58.9  +1.6
AAK                                P      P      03 12 58.9  +1.6
AAK   Ala-Archa        37.90  63   P      P      03 12 58.7  +1.4
AAK   Ala-Archa        37.90  63ceP       P      03 12 58.9  +1.6
AAK                                pmax   pmax
      comp=Z,14nm,0.8s
AAK   Ala-Archa        37.90  63 ⇓P       P      03 12 58.9  +1.6
NIL   Nilore           38.51  78   P      P      03 13 04.0  +1.6
NIL                                P      P      03 13 04.0  +1.6
NIL   Nilore           38.51  78          P      03 13 03.0  +0.6
NIL                                IAmb   IAmb   03 13 09.0
      comp=Z,33nm,0.8s
NIL   Nilore           38.51  78   P      P      03 13 03.0  +0.6
NIL                                pmax   pmax
      comp=Z,33nm,0.8s
KIBK  Kibwezi          38.64 161   P      P      03 12 56.9  -6.8
KIBK  Kibwezi          38.64 161   P      P      03 13 06.7  +3.0
KSH   Kashi            39.40  68   P      P      03 13 09.1  -0.8
KSH                                sP     sP     03 13 19.7  +2.1
KSH                                ScP    ScP    03 19 05.6  +0.1
KSH                                pmax   pmax
      comp=Z,7.0nm,0.9s
MDOK  Medeo            39.73  62 eP       P      03 13 12.5  -0.1
MDOK  Medeo            39.73  62 eP       P      03 13 12.5  -0.1
KDJ   Kajisay          39.93  64   IAmb   IAmb   03 13 27.3
      comp=Z,24nm,0.9s
DBIC  Dimbokro         40.17 233   P      P      03 13 16.0  -0.4
      comp=Z,17nm,0.6s,baz=63,slow=8.5,SNR=36
DBIC                               LR     LR     03 33 42.9
      comp=Z,373nm,20.0s,baz=50,slow=42
      comp=Z,17nm,0.6s
DBIC  Dimbokro         40.17 233          P      03 13 15.1  -1.3
DBIC  Dimbokro         40.17 233 ⇓P       P      03 13 15.9  -0.4
KURBB Kurchatov Arra   40.53  51   P      P      03 13 19.5  +0.5
      comp=Z,35nm,0.9s,baz=277,slow=8.7,SNR=169
KURBB                              PP     PnPn   03 14 58.5  +2.3
      comp=Z,13nm,1.1s,baz=271,slow=11,SNR=6.1
KURBB                              S      S      03 19 27.4  +0.4
      comp=Z,2.3nm,1.0s,baz=274,slow=16,SNR=5.8
      comp=Z,35nm,0.9s
TDK   Taldyqorghan     40.54  59 eP       P      03 13 19.4  +0.2
      comp=Z,8.9nm,0.5s
TDK   Taldyqorghan     40.54  59 eP       P      03 13 19.3  +0.1
TDK                                pmax   pmax
      comp=Z,9.0nm,0.5s
KURK  Kurchatov        40.59  51   P      P      03 13 19.9  +0.5
KURK                               P      P      03 13 19.9  +0.5
KURK  Kurchatov        40.59  51          P      03 13 19.0  -0.5
KURK                               IAmb   IAmb   03 13 20.8
      comp=Z,40nm,1.0s
KURK  Kurchatov        40.59  51ceP       P      03 13 19.8  +0.4
KURK                               pmax   pmax
      comp=Z,48nm,1.0s
UZB   Uzynbulak        41.16  62 eP       P      03 13 24.5   0.0
UZB   Uzynbulak        41.16  62 eP       P      03 13 24.4   0.0
SHLS  Shalkode         41.48  62 eP       P      03 13 29.6  +2.5
SHLS  Shalkode         41.48  62 eP       P      03 13 29.5  +2.5
WUS   Wushi            41.58  65   IAmb   IAmb   03 13 39.6
      comp=Z,30nm,0.9s
MAKZ  Makanchi         42.89  56          P      03 13 38.1  -0.3
MAKZ  Makanchi         42.89  56   P      P      03 13 38.1  -0.3
MAKZ                               pmax   pmax
      comp=Z,11nm,0.7s
MAKZ  Makanchi         42.89  56 ⇑P       P      03 13 39.0  +0.6
MK31  Makanchi Array   43.11  56ceP       P      03 13 40.0  -0.1
MKAR  Makanchi Array   43.11  56   P      P      03 13 40.8  +0.6
      comp=Z,24nm,0.7s,baz=280,slow=6.4,SNR=134
      comp=Z,24nm,0.7s
MKAR  Makanchi Array   43.11  56          P      03 13 40.2  +0.1
MKAR  Makanchi Array   43.11  56   P      P      03 13 40.2  +0.1
SPITS Spitsbergen Ar   43.59 357   P      P      03 13 42.9  -0.7
      comp=Z,8.2nm,0.7s,baz=150,slow=9.3,SNR=7.9
      comp=Z,8.2nm,0.7s
ZAA0  Zalesovo Array   44.48  46          P      03 13 50.3  -0.7
ZALV  Zalesovo Beam    44.48  46   P      P      03 13 50.8  -0.3
      comp=Z,23nm,0.5s,baz=267,slow=9.0,SNR=90
ZALV                               LR     LR     03 38 03.6
      comp=Z,205nm,19.5s,baz=280,slow=44
      comp=Z,23nm,0.5s
ZALV  Zalesovo Beam    44.48  46          P      03 13 50.3  -0.7
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ZALV  Zalesovo Beam    44.48  46 i P      P      03 13 50.7  -0.3
ZALV                               pmax   pmax
      comp=Z,24nm,0.5s
KBS   Kingsbay         44.54 356 i P      P      03 13 51.5  +0.4
ZSN   Zaisan           44.80  55 eP       P      03 13 54.0  +0.2
ZSN   Zaisan           44.80  55 eP       P      03 13 53.9  +0.2
DGZ   Jazzator, Alta   46.27  52 i P      P      03 14 06.2  +0.7
DGZ                                pmax   pmax
      comp=Z,29nm,0.8s
DAG   Danmarks Havn    46.52 347 ⇓P       P      03 14 05.4  -1.4
DAG   Danmarks Havn    46.52 347 i P      P      03 14 04.2  -2.6
DAG                                IAmb   IAmb   03 14 07.1
      comp=Z,4.9nm,0.8s
WMQ   Urumqi           47.29  60 eP       P      03 14 14.7  +1.2
WMQ                                pmax   pmax
      comp=Z,30nm,1.3s
WMQ                                LR     LR
      comp=Z,250nm,19.1s
NRIK  Noril'sk         47.70  25   P      P      03 14 16.2  +0.1
      comp=Z,7.8nm,0.5s,baz=241,slow=5.7,SNR=17
      comp=Z,7.8nm,0.5s
NRIK  Noril'sk         47.70  25          P      03 14 16.1  -0.1
NRIK  Noril'sk         47.70  25 i P      P      03 14 16.3  +0.1
NRIK                               pmax   pmax
      comp=Z,23nm,0.7s
MSEY  Mahe Island      47.98 139   P      P      03 14 19.7  +0.7
NOR   Nord             49.32 352 ⇓P       P      03 14 27.0  -1.5
NOR   Nord             49.32 352 i P      P      03 14 26.7  -1.8
NOR                                IAmb   IAmb   03 14 33.2
      comp=Z,8.3nm,0.8s
HYB   Hyderabad        49.44  97 eP       P      03 14 31.0  +0.8
HYB                              esP      pwP    03 14 39.6  +1.1
SUMG  Summit           49.56 339   P      P      03 14 28.8  -2.1
SUMG  Summit           49.56 339 eP       P      03 14 30.2  -0.7
EVN   Everest          51.40  80          P      03 14 44.6  -1.1
EVN   Everest          51.40  80 ⇑P       P      03 14 46.0  +0.3
KNGR  Kungurtug, Tuv   52.56  49 i P      P      03 14 54.2  +0.8
SFJD  Kangerlussuaq    53.37 332   LR     LR     03 39 10.3
      comp=Z,156nm,18.3s,baz=98,slow=38
NEEM  North Greenlan   53.48 345 eP       P      03 14 58.1  -2.0
LSA   Lhasa            54.19  76   IAmb   IAmb   03 15 15.9
      comp=Z,13nm,0.8s
LSA   Lhasa            54.19  76   P      P      03 15 00.3  -5.8
TSUM  Tsumeb           54.45 190   LR     LR     03 40 57.1
      comp=Z,193nm,18.9s,baz=9.0,slow=39
TSUM  Tsumeb           54.45 190   P      P      03 15 06.8  -0.7
TSUM                               IAmb   IAmb   03 15 15.6
      comp=Z,12nm,0.8s
TSUM  Tsumeb           54.45 190 ⇑P       P      03 15 08.6  +1.1
MOY   Mondy            54.47  48 eP       P      03 15 08.5  +1.1
MOY                                pmax   pmax
      comp=Z,21nm,1.7s
GOMU  GeErMu           54.63  67   P      P      03 15 09.2  +0.1
GOMU                               pP     pP     03 15 14.3  -0.2
GOMU                               PcP    PcP    03 16 11.8  -0.2
GOMU                               S      S      03 22 47.3  -1.1
GOMU                               pmax   pmax
      comp=Z,9.0nm,1.0s
MATP  Matopo           55.06 178   LR     LR     03 42 13.5
      comp=Z,144nm,18.1s,baz=9.0,slow=40
BROLN Tlhalogang       55.70 179 i P      P      03 15 17.3  +0.8
TLY   Talaya           56.07  47   P      P      03 15 18.3  -0.5
TLY                                P      P      03 15 18.3  -0.5
TLY                                S      S      03 23 06.7  +0.2
TLY                                S      S      03 23 06.7  +0.2
GRTLG Ghanzi           56.17 186   IAmb   IAmb   03 15 30.5
      comp=Z,26nm,1.2s
GRTLG Ghanzi           56.17 186 i P      P      03 15 21.3  +1.4
ZAK   Zakamensk        56.19  49 eP       P      03 15 20.1  +0.3
ZAK                                pmax   pmax
      comp=Z,21nm,1.2s
SHL   Shillong         56.51  80   P      P      03 15 21.5  -1.1
SHL   Shillong         56.51  80          P      03 15 21.7  -0.8
SHL   Shillong         56.51  80   P      P      03 15 21.7  -0.8
SHL                                pmax   pmax
      comp=Z,22nm,0.6s
GTA   Gaotai           57.23  62   P      P      03 15 27.4   0.0
GTA                                pP     sP     03 15 34.6  -0.4
GTA                                pmax   pmax
      comp=Z,12nm,1.3s
TULEG Thule            57.56 344 i P      P      03 15 28.1  -0.9
KGCAE Kacgae           57.58 185 i P      P      03 15 31.4  +1.5
KOOLE Kule             57.87 187   IAmb   IAmb   03 15 40.4
      comp=Z,18nm,0.9s
KOOLE Kule             57.87 187 i P      P      03 15 33.4  +1.4
LPHEP Lephephe         57.95 181   IAmb   IAmb   03 15 34.9
      comp=Z,15nm,0.8s
LPHEP Lephephe         57.95 181 i P      P      03 15 34.2  +1.7
SONM  Songino Array    58.90  51   P      P      03 15 39.3  +0.3
      comp=Z,11nm,0.8s,baz=284,slow=8.9,SNR=31
      comp=Z,11nm,0.8s
SONM  Songino Array    58.90  51          P      03 15 38.7  -0.3
SONM                               IAmb   IAmb   03 15 40.5
      comp=Z,12nm,0.8s
SKOMA Sekoma           59.14 183 i P      P      03 15 42.0  +1.3
ULN   Ulaanbaatar      59.31  51   P      P      03 15 42.6  +0.8
ULN                                P      P      03 15 42.6  +0.8
ULN   Ulaanbaatar      59.31  51          P      03 15 41.9  +0.1
ULN   Ulaanbaatar      59.31  51   P      P      03 15 42.3  +0.4
      comp=Z,75nm,0.8s
ULN   Ulaanbaatar      59.31  51ceP       P      03 15 42.2  +0.4
ULN                                pmax   pmax
      comp=Z,16nm,0.9s
ULN   Ulaanbaatar      59.31  51 ⇓P       P      03 15 42.7  +0.8
LBTB  Lobatse          59.60 181   IAmb   IAmb   03 15 53.8
      comp=Z,10nm,0.9s
PHPEN Phepeng          60.14 184   IAmb   IAmb   03 16 08.7
      comp=Z,12nm,0.9s
MAKGR Makgori          60.40 182   IAmb   IAmb   03 16 22.6
      comp=Z,14nm,1.2s
MAKGR Makgori          60.40 182 i P      P      03 15 50.8  +1.4
TIXI  Tiksi            61.06  21   P      P      03 15 52.1  -1.2
      comp=Z,4.1nm,0.3s,baz=328,slow=4.6,SNR=21
TIXI                               LR     LR     03 45 49.8
      comp=Z,216nm,18.5s,baz=9.5,slow=40
      comp=Z,4.1nm,0.3s
TIXI  Tiksi            61.06  21          P      03 15 52.5  -0.7
TIXI                               IAmb   IAmb   03 16 00.6
      comp=Z,19nm,1.0s
TIXI  Tiksi            61.06  21ceP       P      03 15 52.3  -1.0
TIXI                               pmax   pmax
      comp=Z,14nm,0.8s
TIXI  Tiksi            61.06  21 ⇑P       P      03 15 52.6  -0.7
POIN  Pond Inlet       61.13 341   IAmb   IAmb   03 16 02.0
      comp=Z,8.0nm,0.9s
FRB   Frobisher Bay    61.38 330   LR     LR     03 44 40.2
      comp=Z,205nm,19.1s,baz=77,slow=38
LZDM  Lanzhou Array    61.38  64   P      P      03 15 56.2  -0.2
      comp=Z,2.4nm,0.4s,baz=290,slow=9.3,SNR=4.8
      comp=Z,2.4nm,0.4s
LZH   Lanzhou          61.44  64 eP       P      03 15 57.7  +1.1
LZH                                sP     sP     03 16 07.3  +3.0
LZH                                pmax   pmax
      comp=Z,26nm,1.1s
LZH                                pmax   pmax
      comp=Z,270nm,5.2s
LZH                                LR     LR
      comp=Z,350nm,13.7s
LZH                                LR     LR
      comp=Z,630nm,13.9s
LZH                                LR     LR
      comp=Z,740nm,16.0s
BOSA  Boshof           63.19 181   P      P      03 16 08.3  +0.2
      comp=Z,4.9nm,0.6s,baz=14,slow=7.0,SNR=21
BOSA                               LR     LR     03 47 17.5
      comp=Z,155nm,18.1s,baz=354,slow=40
      comp=Z,4.9nm,0.6s
BOSA  Boshof           63.19 181          P      03 16 08.2  +0.2
BOSA                               IAmb   IAmb   03 16 50.8
      comp=Z,26nm,1.5s
BOSA  Boshof           63.19 181 ⇑P       P      03 16 09.4  +1.3
CD2   Chengdu          63.57  70   P      P      03 16 11.5  +0.7
CD2                                pP     pP     03 16 16.0  -0.5
CD2                                sP     sP     03 16 18.6  +0.1
CD2                                S      S      03 24 41.9  -1.9
CD2                                pmax   pmax
      comp=Z,40nm,0.8s
CD2                                LR     LR
      comp=Z,1µm,18.4s
CD2                                LR     LR
      comp=Z,1µm,14.7s
ILON  Igloolik, Nuna   63.78 338   IAmb   IAmb   03 16 22.6
      comp=Z,11nm,0.9s
PZH   PanZhiHua        63.99  75   P      P      03 16 14.6  +0.8
SCHQ  Schefferville    64.01 320   P      P      03 16 12.4  -0.8
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	comp=Z,11nm,0.6s,baz=63,slow=6.8,SNR=18						
	comp=Z,11nm,0.6s						
BTO	**Baotou**	**64.01**	**57**	*e*P	**P**	**03 16 13.2**	**-0.4**
BTO				S	**S**	**03 24 45.5**	**-3.6**
BTO				pmax	pmax		
	comp=Z,31nm,0.7s						
BTO				pmax	pmax		
	comp=Z,350nm,4.8s						
BTO				LR	LR		
	comp=Z,500nm,6.7s						
BTO				LR	LR		
	comp=Z,620nm,15.5s						
BTO				LR	LR		
	comp=Z,340nm,6.7s						
RES	**Resolute Bay**	**64.16**	**345**	IAmb	IAmb	03 16 27.6	
	comp=Z,11nm,1.2s						
RES	**Resolute Bay**	**64.16**	**345**	⇓P	**P**	**03 16 17.2**	**+3.3**
RES	**Resolute Bay**	**64.16**	**345**	⇓P	**P**	**03 16 17.2**	**+3.3**
HHC	**Hu-ho-hao-te**	**64.97**	**57**	*e*P	**P**	**03 16 20.8**	**+0.9**
HHC				pP	pP	03 16 26.3	+0.8
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,150nm,5.0s						
HHC				LR	LR		
	comp=Z,440nm,13.3s						
HHC				LR	LR		
	comp=Z,1μm,15.9s						
KMI	**Kunming**	**65.44**	**76**	P	**P**	**03 16 27.9**	**+4.6**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KMI				LR	LR		
	comp=Z,270nm,20.9s						
CHTO	**Chiang Mai**	**65.46**	**84**	P	**P**	**03 16 23.0**	**-0.3**
CHTO	**Chiang Mai**	**65.46**	**84**		**P**	**03 16 22.8**	**-0.5**
CHTO				IAmb	IAmb	03 16 31.1	
	comp=Z,15nm,0.8s						
CHTO	**Chiang Mai**	**65.46**	**84**	P	**P**	**03 16 22.2**	**-1.0**
	comp=Z,22nm,1.0s						
CHTO	**Chiang Mai**	**65.46**	**84**	P	**P**	**03 16 22.8**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,15nm,0.9s						
YAK	**Yakutsk**	**65.61**	**30**	*e*P	**P**	**03 16 24.5**	**+1.0**
YAK				*e*		03 16 56.1	
YAK				*e*		03 18 47.3	
YAK				*e*S	**S**	**03 25 11.5**	**+3.7**
YAK				*e*		03 26 18.7	
YAK				*e*SS	**SS**	**03 29 26.6**	**+5.6**
YAK				pmax	pmax		
	comp=Z,23nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,317nm,4.7s						
YAK				smax	smax		
	comp=E,152nm,4.3s						
YAK				smax	smax		
	comp=N,133nm,4.2s						
CMAR	**Chiang Mai Arr**	**65.64**	**84**	P	**P**	**03 16 24.4**	**0.0**
	comp=N,6.7nm,0.7s,baz=297,slow=8.2,SNR=40						
	comp=N,6.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**65.64**	**84**		**P**	**03 16 23.8**	**-0.6**
XAN	**Xi'an**	**66.08**	**64**	P	**P**	**03 16 27.3**	**+0.2**
XAN				pmax	pmax		
	comp=N,21nm,0.6s						
HILR	**Hailar Array B**	**66.39**	**45**	P	**P**	**03 16 28.9**	**+0.1**
	comp=N,1.0nm,0.4s,baz=318,slow=2.0,SNR=3.6						
	comp=N,1.0nm,0.4s						
XLT	**XiLinHaoTe**	**66.65**	**52**	*e*P	**P**	**03 16 31.3**	**+0.6**
XLT				pmax	pmax		
	comp=N,12nm,1.0s						
SUR	**Sutherland**	**67.13**	**185**	P	**P**	**03 16 36.2**	**+2.5**
GYA	**Guiyang**	**67.90**	**73**	⇑P	**P**	**03 16 38.6**	**-0.3**
GYA				pmax	pmax		
	comp=N,30nm,0.5s						
LYN	**LuoYang**	**68.44**	**62**	P	P	03 16 48.2	+6.2
LYN				pmax	pmax		
	comp=Z,12nm,1.2s						
BJI	**Beijing**	**68.48**	**56**	P	**P**	**03 16 42.5**	**+0.4**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HNS	**HongShan**	**68.70**	**59**	⇑P	**P**	**03 16 43.9**	**+0.3**
HNS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
D62A	**Allapoint, All**	**68.71**	**313**		**P**	**03 16 42.7**	**-0.8**
HEH	**HeiHe**	**70.40**	**42**	*e*P	**P**	**03 16 53.9**	**+0.1**
HEH				pmax	pmax		
	comp=Z,12nm,0.8s						
HEH				LR	LR		
	comp=Z,750nm,14.8s						
HEH				LR	LR		
	comp=Z,630nm,15.7s						
BLKN	**Baker Lake**	**71.27**	**337**		**P**	**03 16 58.1**	**-0.7**
BLKN				IAmb	IAmb	03 17 13.9	
	comp=Z,9.3nm,0.8s						
WHN	**Wuhan**	**71.78**	**65**	P	**P**	**03 17 03.3**	**+0.8**
WHN				pP	**sP**	**03 17 09.6**	**-0.6**
NBPA	**Parau_RN**	**72.01**	**249**	*e*P	**P**	**03 17 05.7**	**+1.6**
TPTI		**72.45**	**98**	P	**P**	**03 17 07.3**	**+0.5**
	comp=Z,14nm,0.8s						
CN2	**Changchun**	**72.62**	**49**	P	**P**	**03 17 10.6**	**+3.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BNX	**BinXian**	**72.77**	**46**	⇑P	**P**	**03 17 08.6**	**+0.4**
BNX				pmax	pmax		
	comp=Z,14nm,1.0s						
NBMO	**Morrinhos-CE**	**72.78**	**253**	*e*P	**P**	**03 17 09.7**	**+1.0**
SEY	**Seymchan**	**73.42**	**23**	P	**P**	**03 17 11.8**	**+0.1**
	comp=Z,2.2nm,0.7s,baz=312,slow=12,SNR=2.7						
SEY				LR	LR	03 54 33.6	
	comp=Z,254nm,18.4s,baz=260,slow=40						
	comp=Z,2.2nm,0.7s						
SEY	**Seymchan**	**73.42**	**23**	*e*P	**P**	**03 17 10.9**	**-0.8**
SEY				pmax	pmax		
	comp=Z,11nm,1.3s						
C36M	**Paulatuk**	**73.80**	**349**	IAmb	IAmb	03 17 19.5	
	comp=Z,13nm,0.7s						
KULM	**Kulim**	**74.13**	**95**	P	**P**	**03 17 15.2**	**-1.5**
	comp=Z,26nm,1.2s						
PSI	**Prapat**	**74.14**	**98**	P	**P**	**03 17 17.6**	**+0.7**
	comp=Z,1μmcomp=Z,11nm,1.3s						
NJ2	**Nanjing**	**74.32**	**62**	*e*P	**P**	**03 17 15.9**	**-1.7**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
NBPS	**Pedro II - PI**	**74.55**	**253**	*e*P	**P**	**03 17 19.7**	**+0.5**
NBTA	**Tacaratu-PE**	**74.88**	**247**	*e*P	**P**	**03 17 21.5**	**+0.5**
B22K	**Teshekpuk Lake**	**75.06**	**360**	IAmb	IAmb	03 17 35.6	
	comp=Z,13nm,0.9s						
MA2	**Magadan**	**75.30**	**26**	LR	LR	03 54 02.0	
	comp=Z,205nm,18.1s,baz=227,slow=39						
B20K	**Meade River**	**75.36**	**1**	IAmb	IAmb	03 17 39.3	
	comp=Z,15nm,0.9s						
C23K	**Itkillik River**	**75.54**	**359**	IAmb	IAmb	03 17 26.4	
	comp=Z,10nm,0.8s						
B21K	**Ikpikpuk River**	**75.78**	**0**	IAmb	IAmb	03 17 40.8	
	comp=Z,14nm,0.8s						
SADO	**Sadowa**	**75.91**	**315**	P	**P**	**03 17 26.2**	**-0.3**
	comp=Z,7.4nm,0.7s,baz=73,slow=2.7,SNR=4.1						
	comp=Z,7.4nm,0.7s						
D24K	**Happy Valley**	**76.19**	**358**	IAmb	IAmb	03 18 04.0	
	comp=Z,13nm,1.1s						
USRK	**Ussuriysk Ar.**	**76.33**	**45**	P	**P**	**03 17 28.6**	**-0.3**
	comp=Z,11nm,0.8s,baz=319,slow=3.2,SNR=17						
	comp=Z,11nm,0.8s						
E29M	**Blow River**	**76.34**	**354**	IAmb	IAmb	03 17 34.5	
	comp=Z,19nm,0.9s						
D23K	**Nanushuk River**	**76.42**	**359**	IAmb	IAmb	03 17 35.6	
	comp=Z,12nm,0.9s						
D22K	**Ayikyak River**	**76.52**	**360**	IAmb	IAmb	03 17 36.0	
	comp=Z,14nm,1.1s						
C18K	**Utukok River**	**76.61**	**3**	IAmb	IAmb	03 17 36.7	
	comp=Z,15nm,1.0s						
D20K	**Etivluk River**	**76.67**	**1**	IAmb	IAmb	03 17 45.2	
	comp=Z,11nm,0.9s						
E27K	**Coleen River**	**76.82**	**355**	IAmb	IAmb	03 17 37.3	
	comp=Z,16nm,1.2s						
D19K	**Kuna River**	**76.86**	**2**	IAmb	IAmb	03 17 38.1	
	comp=Z,14nm,0.9s						
F30M	**Barrier River**	**76.91**	**353**	IAmb	IAmb	03 17 57.6	
	comp=Z,16nm,0.9s						
E21K	**Killik River**	**76.97**	**0**	IAmb	IAmb	03 17 46.9	
	comp=Z,10.0nm,0.8s						
E25K	**Arctic Village**	**77.11**	**357**	IAmb	IAmb	03 17 39.3	
	comp=Z,10nm,0.9s						
E22K	**Anaktuvuk Pass**	**77.27**	**359**	IAmb	IAmb	03 17 40.3	
	comp=Z,13nm,1.1s						
E23K	**Chandalar**	**77.31**	**358**	IAmb	IAmb	03 17 51.7	
	comp=Z,9.3nm,0.7s						
G31M	**Satah River**	**77.42**	**352**	IAmb	IAmb	03 17 39.8	
	comp=Z,8.1nm,0.7s						
PDSI	**Padang**	**77.53**	**100**	P	**P**	**03 17 38.5**	**+2.3**
KSAR	**Wonju Array Be**	**77.65**	**53**		**P**	**03 17 35.9**	**-0.5**
KSAR	**Wonju Array Be**	**77.65**	**53**	P	**P**	**03 17 35.9**	**-0.5**
KSRS	**Korea Array**	**77.67**	**53**	P	**P**	**03 17 36.5**	**0.0**
	comp=Z,5.3nm,0.7s,baz=313,slow=4.6,SNR=12						
	comp=Z,5.3nm,0.7s						
BMAR	**Burnt Mountain**	**77.75**	**356**	P	**P**	**03 17 36.8**	**+0.3**
F24K	**Squaw Lake**	**77.80**	**358**	IAmb	IAmb	03 17 43.5	
	comp=Z,18nm,1.1s						
G29M	**Pine Creek**	**77.80**	**354**	IAmb	IAmb	03 17 46.2	
	comp=Z,19nm,0.8s						
E18K	**Tukpahlearik C**	**77.86**	**3**	IAmb	IAmb	03 17 43.4	
	comp=Z,14nm,1.1s						
E19K	**Redstone River**	**77.92**	**1**	IAmb	IAmb	03 17 44.0	
	comp=Z,17nm,0.9s						
YKAW3	**Yellowknife Wh**	**77.93**	**343**	IAmb	IAmb	03 17 47.0	
	comp=Z,21nm,1.5s						
YKA	**Yellowknife Ar**	**77.98**	**343**	P	**P**	**03 17 37.1**	**-0.7**
	comp=Z,1.6nm,0.8s,baz=20,slow=5.5,SNR=16						
	comp=Z,1.6nm,0.8s						
YKA	**Yellowknife Ar**	**77.98**	**343**	P	**P**	**03 17 37.0**	**-0.9**
MDP	**Montagnes des**	**78.07**	**268**	LR	LR	03 50 26.9	
	comp=Z,89nm,21.6s,baz=17,slow=34						
G26K	**Porcupine Rive**	**78.18**	**356**	IAmb	IAmb	03 17 54.3	
	comp=Z,13nm,0.8s						
F21K	**Alatna River**	**78.19**	**360**	IAmb	IAmb	03 17 55.5	
	comp=Z,12nm,0.8s						
EPYK	**Eagle Plains**	**78.21**	**353**	IAmb	IAmb	03 17 48.1	
	comp=Z,14nm,0.8s						
H29M	**Whitestone**	**78.51**	**354**	IAmb	IAmb	03 17 50.1	
	comp=Z,12nm,0.8s						
F19K	**Shaleruckik Mo**	**78.53**	**2**	IAmb	IAmb	03 17 46.8	
	comp=Z,14nm,1.1s						
TMAB	**Tom-Au,PA,Br**	**78.64**	**259**	*e*P	**P**	**03 17 43.4**	**+1.1**
G23K	**Bananza Creek**	**78.67**	**359**	IAmb	IAmb	03 17 48.6	
	comp=Z,14nm,1.1s						
H27K	**Steamboat Moun**	**78.75**	**355**	IAmb	IAmb	03 17 52.0	
	comp=Z,9.2nm,0.8s						
F17K	**Baldwin Pennin**	**78.81**	**3**	IAmb	IAmb	03 17 48.4	
	comp=Z,14nm,1.1s						
G21K	**Allakaket**	**78.90**	**360**	IAmb	IAmb	03 17 49.1	
	comp=Z,14nm,0.9s						
G19K	**Purcell Mounta**	**79.24**	**1**	IAmb	IAmb	03 17 51.5	
	comp=Z,13nm,1.0s						
WRGLY	**Wrigley**	**79.27**	**347**	IAmb	IAmb	03 17 57.6	
	comp=Z,18nm,0.9s						
I30M	**Mount Dempster**	**79.29**	**353**	IAmb	IAmb	03 17 54.6	
	comp=Z,14nm,0.8s						
I27K	**Kandik River**	**79.38**	**355**	IAmb	IAmb	03 17 55.1	
	comp=Z,9.6nm,0.8s						
I28M	**Miner Creek**	**79.40**	**354**	IAmb	IAmb	03 17 49.1	
	comp=Z,20nm,1.5s						
IMAR	**Indian Mountai**	**79.44**	**0**	P	**P**	**03 17 45.5**	**-0.3**
H22K	**Ishtalitna Cre**	**79.51**	**359**	IAmb	IAmb	03 17 53.1	
	comp=Z,13nm,1.0s						
H23K	**Yukon River**	**79.54**	**358**	IAmb	IAmb	03 17 53.2	
	comp=Z,20nm,1.0s						
NBIT	**Itapeh - BA**	**79.62**	**244**	*e*P	**P**	**03 17 47.5**	**0.0**
H21K	**Melozitna Rive**	**79.76**	**360**	IAmb	IAmb	03 17 55.0	
	comp=Z,13nm,1.0s						
I26K	**Coal Creek Min**	**79.78**	**356**	IAmb	IAmb	03 17 57.6	
	comp=Z,13nm,1.0s						
H19K	**Roundabout Mou**	**79.87**	**1**	IAmb	IAmb	03 17 54.4	
	comp=Z,17nm,1.1s						
J30M	**Hart River**	**79.91**	**352**	IAmb	IAmb	03 18 00.4	
	comp=Z,16nm,0.7s						
CMC01	**Camacan, BA**	**79.96**	**243**	*e*P	**P**	**03 17 51.1**	**+1.8**
CMC01				*e*pP	**sP**	**03 17 57.1**	**0.0**
POKR	**Poker Plat Res**	**80.19**	**357**	IAmb	IAmb	03 17 60.0	
	comp=Z,14nm,0.8s						
H18K	**Honhosa River**	**80.20**	**2**	IAmb	IAmb	03 18 24.1	
	comp=Z,18nm,1.2s						
FFC	**Flin Flon**	**80.31**	**333**		**P**	**03 17 50.3**	**-0.4**
FFC				IAmb	IAmb	03 17 56.7	
	comp=Z,12nm,0.8s						
FFC	**Flin Flon**	**80.31**	**333**	P	**P**	**03 17 50.3**	**-0.4**
FFC				pmax	pmax		
	comp=Z,12nm,0.9s						
ANM	**Nome**	**80.43**	**5**		**P**	**03 17 51.0**	**-0.2**
ANM				IAmb	IAmb	03 17 57.0	
	comp=Z,13nm,1.0s						
ANM	**Nome**	**80.43**	**5**	P	**P**	**03 17 51.0**	**-0.2**
ANM				pmax	pmax		
	comp=Z,13nm,1.0s						
ILAR	**Eielson Array**	**80.51**	**357**	P	**P**	**03 17 51.5**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=336,slow=3.6,SNR=15						
	comp=Z,1.0nm,0.5s						
ILAR	**Eielson Array**	**80.51**	**357**	P	**P**	**03 17 51.3**	**-0.3**
DAWY	**Dawson**	**80.72**	**354**	IAmb	IAmb	03 18 04.4	
	comp=Z,11nm,0.7s						
WRH	**Wood River Hil**	**80.86**	**358**	IAmb	IAmb	03 18 02.9	
	comp=Z,15nm,0.7s						
HDA	**Harding Lake**	**80.88**	**357**	IAmb	IAmb	03 18 00.0	
	comp=Z,18nm,0.9s						
GUA01	**Guaratinga, BA**	**80.96**	**243**	*e*P	**P**	**03 17 55.9**	**+1.2**
GUA01				*e*pP	**sP**	**03 18 02.2**	**-0.3**
K27K	**Chicken**	**80.97**	**355**	IAmb	IAmb	03 18 00.6	
	comp=Z,23nm,1.1s						
ULM	**Lac du Bonnet**	**81.06**	**327**	P	**P**	**03 17 53.7**	**-1.1**
	comp=Z,4.1nm,0.6s,baz=37,slow=4.1,SNR=6.2						
	comp=Z,4.1nm,0.6s						
SCRK	**Sand Creek**	**81.15**	**356**	IAmb	IAmb	03 18 35.0	
	comp=Z,20nm,1.3s						
J20K	**Nowinta River**	**81.25**	**0**	IAmb	IAmb	03 18 02.4	
	comp=Z,26nm,1.2s						
K24K	**Donnelly Dome**	**81.42**	**356**	IAmb	IAmb	03 18 10.9	
	comp=Z,20nm,0.9s						
MCK	**McKinley**	**81.62**	**358**	IAmb	IAmb	03 18 06.4	
	comp=Z,19nm,1.0s						
SJG	**San Juan**	**81.83**	**286**	LR	LR	03 49 45.8	
	comp=Z,39nm,20.9s,baz=42,slow=32						
BCAR	**Beaver Creek A**	**81.90**	**355**	P	**P**	**03 17 59.5**	**+0.4**
J17K	**VABM Dome**	**81.94**	**2**	IAmb	IAmb	03 18 13.5	
	comp=Z,16nm,1.0s						
M31M	**Drury Creek, Y**	**81.98**	**351**	IAmb	IAmb	03 18 31.8	
	comp=Z,10nm,0.9s						
J16K	**Anvik River**	**81.99**	**3**	IAmb	IAmb	03 18 06.0	
	comp=Z,17nm,1.2s						
SMTB	**Santa Maria do**	**82.09**	**253**	*e*P	**P**	**03 18 01.5**	**+0.7**
SDBA	**SAO DESIDERIO**	**82.15**	**249**	*e*P	**P**	**03 18 01.9**	**+0.8**
DHY	**Denali Highway**	**82.23**	**357**	IAmb	IAmb	03 18 10.5	
	comp=Z,21nm,0.9s						
PRPB	**Parauapebas**	**82.26**	**257**	*e*P	**P**	**03 18 02.8**	**+1.0**
PPLA	**Purkeypile**	**82.53**	**359**	IAmb	IAmb	03 18 12.2	
	comp=Z,17nm,0.8s						
MDSI	**Maura Dua**	**82.62**	**101**	P	**P**	**03 18 06.1**	**+2.5**
K17K	**Iditarod**	**82.64**	**2**	IAmb	IAmb	03 18 14.5	
	comp=Z,21nm,1.0s						
PETK	**Petropavlovsk-**	**82.70**	**27**	P	**P**	**03 18 03.9**	**+0.5**
	comp=Z,4.5nm,0.8s,baz=344,slow=3.1,SNR=4.1						
	comp=Z,4.5nm,0.8s						
PETK	**Petropavlovsk-**	**82.70**	**27**	P	**P**	**03 18 03.3**	**-0.1**
PETK	**Petropavlovsk-**	**82.70**	**27**	P	**P**	**03 18 03.3**	**-0.1**
RIB01	**Linhares ES**	**83.15**	**241**	*e*P	**P**	**03 18 07.1**	**+1.0**
BSFB	**Barra de Sao F**	**83.16**	**242**	*e*P	**P**	**03 18 06.7**	**+0.5**
SJMB	**Sao Joao De Ma**	**83.33**	**242**	*e*P	**P**	**03 18 07.5**	**+0.4**
JANB	**Januaria**	**83.34**	**247**	*e*P	**P**	**03 18 08.2**	**+0.9**
R49A	**Shelbyville**	**83.43**	**313**	IAmb	IAmb	03 18 08.2	
	comp=Z,13nm,0.8s						
STLK	**Strandline Lak**	**83.93**	**359**	IAmb	IAmb	03 18 18.2	
	comp=Z,12nm,1.0s						
TKL	**Tuckaleechee C**	**84.24**	**310**	P	**P**	**03 18 11.1**	**-0.6**
	comp=Z,8.3nm,1.0s,baz=80,slow=2.5,SNR=3.6						
	comp=Z,8.3nm,1.0s						
MJAR	**Matsushiro Arr**	**84.77**	**49**	P	**P**	**03 18 14.2**	**-0.2**
	comp=Z,7.2nm,1.0s,baz=305,slow=5.7,SNR=7.3						
	comp=Z,7.2nm,1.0s						
MJAR	**Matsushiro Arr**	**84.77**	**49**		**P**	**03 18 14.8**	**+0.5**
MJAR				IAmb	IAmb	03 18 23.2	
	comp=Z,9.5nm,1.0s						
CPCT	**Cooper Cave**	**84.84**	**310**	IAmb	IAmb	03 18 28.8	
	comp=Z,10nm,0.8s						
DLBC	**Dease Lake**	**84.93**	**348**	P	**P**	**03 18 15.1**	**+0.3**
	comp=Z,3.6nm,1.0s,baz=12,slow=4.5,SNR=5.3						
	comp=Z,3.6nm,1.0s						
ITTB	**Itaituba**	**85.99**	**262**	*e*P	**P**	**03 18 22.0**	**+1.2**
BOAV	**Boa Vista**	**86.07**	**270**	*e*P	**P**	**03 18 22.5**	**+1.4**
ECSD	**EROS Data Cent**	**86.08**	**322**	IAmb	IAmb	03 18 32.2	
	comp=Z,12nm,1.1s						
BDFB	**Brasilia**	**86.51**	**248**	P	**P**	**03 18 23.8**	**+0.5**
	comp=Z,5.0nm,0.6s,baz=59,slow=6.0,SNR=12						
BDFB				LR	LR	03 59 53.0	
	comp=Z,134nm,18.2s,baz=36,slow=38						
	comp=Z,5.0nm,0.6s						
BDFB	**Brasilia**	**86.51**	**248**		**P**	**03 18 23.2**	**-0.1**
BDFB	**Brasilia**	**86.51**	**248**	P	**P**	**03 18 23.2**	**-0.1**
BDFB				pmax	pmax		
	comp=Z,26nm,1.4s						
FVM	**French Village**	**86.75**	**315**	IAmb	IAmb	03 18 25.0	
	comp=Z,9.3nm,0.8s						
CGM3	**Cape Girardeau**	**86.77**	**314**	IAmb	IAmb	03 18 42.1	
	comp=Z,6.7nm,0.8s						
SNDB	**Serra Nova Dou**	**86.86**	**253**	*e*P	**P**	**03 18 26.9**	**+1.9**
PMNB	**Patos De Minas**	**87.08**	**245**	*e*P	**P**	**03 18 27.2**	**+1.1**
CCM	**Cathedral Cave**	**87.18**	**316**		**P**	**03 18 26.1**	**-0.1**
CCM	**Cathedral Cave**	**87.18**	**316**	P	**P**	**03 18 26.1**	**-0.1**
CCM				pmax	pmax		
	comp=Z,12nm,0.6s						
NPGB	**Novo Progresso**	**87.23**	**260**	*e*P	**P**	**03 18 27.4**	**+0.7**
BSCB	**Bom Sucesso**	**87.38**	**242**	*e*P	**P**	**03 18 28.3**	**+0.9**
P38A	**Dawn**	**87.38**	**318**	IAmb	IAmb	03 18 45.9	
	comp=Z,18nm,1.3s						
RSSD	**Black Hills**	**89.33**	**327**		**P**	**03 18 36.6**	**0.0**
RSSD				IAmb	IAmb	03 18 47.5	
	comp=Z,6.0nm,0.7s						
RSSD	**Black Hills**	**89.33**	**327**	P	**P**	**03 18 36.6**	**0.0**
ARAG	**Araguaiana, MT**	**89.47**	**251**	*e*P	**P**	**03 18 39.4**	**+2.1**
JTMT	**Jette**	**90.48**	**335**	P	**P**	**03 18 41.3**	**-0.5**
JTMT					**PcP**	**03 18 42.1**	**-0.9**
SDV	**Santo Domingo**	**90.64**	**281**		**P**	**03 18 42.0**	**-1.2**
SDV				IAmb	IAmb	03 18 44.1	
	comp=Z,12nm,0.9s						
SDV	**Santo Domingo**	**90.64**	**281**	*e*P	**P**	**03 18 43.3**	**+0.1**
PDRB	**Porto dos Gac**	**90.96**	**257**	*e*P	**P**	**03 18 45.8**	**+1.5**
NEW	**Newport**	**91.00**	**337**	IAmb	IAmb	03 18 50.7	
	comp=Z,8.5nm,0.8s						
K22A	**Casper**	**91.60**	**327**	IAmb	IAmb	03 19 06.7	
	comp=Z,11nm,1.0s						
C09A	**Chrisman Ranch**	**91.78**	**337**	IAmb	IAmb	03 18 53.3	
	comp=Z,5.4nm,0.8s						
PDAR	**Pinedale Array**	**92.82**	**329**	P	**P**	**03 18 51.5**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=54,slow=5.0,SNR=7.2						
	comp=Z,0.7nm,0.7s						
PDAR	**Pinedale Array**	**92.82**	**329**	P	**P**	**03 18 51.9**	**-1.0**
HWUT	**Hardware Ranch**	**94.62**	**330**	IAmb	IAmb	03 19 12.1	
	comp=Z,4.6nm,0.8s						
MFID	**Camas Ranch**	**94.76**	**333**	IAmb	IAmb	03 19 14.9	
	comp=Z,7.0nm,1.2s						
PTGB	**Pitanga**	**94.97**	**243**	*e*P	**P**	**03 19 04.2**	**+1.5**
KAPI	**Kappang**	**95.63**	**92**	LR	LR	04 11 25.0	
	comp=Z,88nm,18.1s,baz=340,slow=41						
ROSC	**El Rosal**	**95.96**	**280**	LR	LR	04 01 35.4	
	comp=Z,55nm,18.6s,baz=146,slow=35						
SIV	**San Ignacio**	**96.91**	**255**	LR	LR	04 04 12.9	
	comp=Z,86nm,19.3s,baz=112,slow=36						
CPUP	**Villa Florida**	**99.79**	**245**	LR	LR	04 07 18.8	
	comp=Z,48nm,19.0s,baz=256,slow=37						
NVAR	**Mina Array Bea**	**100.01**	**333**	P	**Pdif**	**03 19 24.8**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=57,slow=2.9,SNR=3.7						
	comp=Z,0.4nm,0.7s						
NVAR	**Mina Array Bea**	**100.01**	**333**		**Pdif**	**03 19 25.0**	**-0.6**
WRA	**Warramunga Arr**	**115.60**	**97**	PKP	**PKPdf**	**03 24 21.9**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=323,slow=1.4,SNR=4.8						
WRA	**Warramunga Arr**	**115.60**	**97**		**PKPdf**	**03 24 21.4**	**-1.0**
WRA	**Warramunga Arr**	**115.60**	**97**	PKIKP	**PKPdf**	**03 24 21.5**	**-1.0**
ASAR	**Alice Springs**	**117.05**	**101**	PKP	**PKPdf**	**03 24 24.0**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=303,slow=1.5,SNR=8.8						
QSPA	**South Pole Qui**	**124.76**	**180**	PKP	**PKPdf**	**03 24 38.1**	**-0.6**
	comp=Z,1.4nm,0.2s,baz=288,slow=2.2,SNR=7.8						
QSPA	**South Pole Qui**	**124.76**	**180**		**PKiKP**	**03 24 39.1**	**0.0**
STKA	**Stephens Creek**	**126.70**	**106**	PKP	**PKiKP**	**03 24 44.1**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=276,slow=5.0,SNR=3.5						

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*NEIC **12** 03:05:56.7±0.5, 42.°71N±0.°04×99.°99W±0.°04, h5^{km}±1^{km}, mb_Lg2.9/26, Error ellipse: s-maj=7.4km s-min=3.0km az=323.0*

*IDC **12** 03:05:59.4±1.5, 43.°13N×100.°55W, h0^{km}, mbtmp3.3/3, ML3.1/3, Error ellipse: s-maj=23.5km s-min=11.8km az=136.0*

ISC 12 03:05:55.8±0.9**, 42.°76N**±0.°05×**100.°00W**±0.°06**, h10^{km}, n30, σ1.^{s}55**/27**, Nebraska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
K30B	**Basset**	**0.29**	**106**	Pg	**Pg**	**03 06 01.9**	**+0.2**
K30B				Sg	**Sg**	**03 06 06.3**	**+0.7**
SUSD	**Miller**	**1.85**	**24**	Pn	**Pn**	**03 06 29.4**	**+1.8**
SUSD					**Sn**	**03 06 53.1**	**+2.1**
BGNE	**Belgrade**	**1.92**	**134**	Pn	**Pb**	**03 06 30.2**	**-0.8**
BGNE					**Sn**	**03 06 54.0**	**+1.2**
OGNE	**Ogallala**	**2.36**	**221**	Pn	**Pn**	**03 06 34.6**	**-0.1**
OGNE				IAmb_Lg		03 07 15.7	
	comp=Z,55nm,0.7s						
ECSD	**EROS Data Cent**	**2.66**	**67**		**Pn**	**03 06 39.9**	**+1.2**
L34A	**Svendsen Farm,**	**2.80**	**105**	Pn	**Pn**	**03 06 40.6**	**0.0**
RSSD	**Black Hills**	**3.24**	**296**	Pn	**Pn**	**03 06 48.4**	**+1.5**
RSSD				IAmb_Lg		03 07 47.8	
	comp=Z,36nm,0.9s						
N35A	**Tabor**	**3.76**	**119**	IAmb_Lg		03 08 04.4	
	comp=Z,42nm,0.8s						
E28A	**Huff**	**3.85**	**353**	Pn	**Pn**	**03 06 56.4**	**+1.3**
CBKS	**Cedar Bluff**	**3.94**	**177**	Pn	**Pn**	**03 06 56.7**	**+0.4**
CBKS				IAmb_Lg		03 07 59.8	
	comp=Z,25nm,0.7s						
F33A	**5 Mile Ranch,**	**4.07**	**39**	Pn	**Pn**	**03 06 59.4**	**+1.3**
KSCO	**Kaye Shedlock'**	**4.24**	**209**	Pn	**Pn**	**03 07 00.9**	**+0.3**
KSCO				IAmb_Lg		03 08 13.0	
	comp=Z,34nm,0.7s						
R32A	**Long Quarter,**	**4.44**	**167**		**Pn**	**03 07 03.3**	**+0.2**
KSU1	**Kansas State U**	**4.46**	**144**	Pn	**Pn**	**03 07 03.5**	**+0.1**
K22A	**Casper**	**4.81**	**271**	Pn	**Pn**	**03 07 09.4**	**+1.0**
K22A				IAmb_Lg		03 08 32.7	
	comp=Z,19nm,0.7s						
ISCO	**Idaho Springs**	**5.16**	**237**	IAmb_Lg		03 08 36.6	
	comp=Z,17nm,0.9s						
Q24A	**Divide**	**5.44**	**228**	IAmb_Lg		03 08 51.2	
	comp=Z,19nm,0.9s						
HAYD	**Hayden**	**5.88**	**250**	IAmb_Lg		03 09 14.6	
	comp=Z,14nm,1.1s						
T35A	**Sooner Cattle**	**6.42**	**154**	Pn	**Pn**	**03 07 30.9**	**+0.6**
T25A	**Trinidad**	**6.55**	**213**	IAmb_Lg		03 09 32.8	
	comp=Z,15nm,0.8s						
RTBA	**Rita Blanca**	**6.65**	**199**	Pn	**Pn**	**03 07 33.0**	**-0.7**
RTBA				IAmb_Lg		03 09 37.1	
	comp=Z,14nm,0.9s						
PD31	**Pinedale Array**	**7.04**	**273**		**Pn**	**03 07 41.6**	**+2.6**
PDAR	**Pinedale Array**	**7.04**	**273**	Pn	**Pn**	**03 07 39.1**	**0.0**
	comp=Z,0.4nm,0.3s,baz=87,slow=13,SNR=14						
PDAR				Lg	Lg	03 09 26.6	
	comp=Z,0.4nm,0.3s,baz=87,slow=31,SNR=1.6						
	comp=Z,0.9nm,0.5s						
PDAR	**Pinedale Array**	**7.04**	**273**		**Pn**	**03 07 40.1**	**+1.0**
HHAR	**Hobbs**	**7.98**	**142**	IAmb_Lg		03 10 09.0	
	comp=Z,12nm,0.7s						
ULM	**Lac du Bonnet**	**8.02**	**19**	Pn	**Pn**	**03 07 51.5**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=199,slow=13,SNR=6.1						
ULM				Sn	**Sn**	**03 09 17.6**	**-5.3**
	comp=Z,0.7nm,0.3s,baz=135,slow=6.7,SNR=3.2						
	comp=Z,1.7nm,0.4s						
ULM	**Lac du Bonnet**	**8.02**	**19**		**Pn**	**03 07 52.4**	**+0.1**
ANMO	**Albuquerque**	**9.28**	**215**	Lg	Lg	03 10 42.5	
	comp=Z,0.1nm,0.3s,baz=124,slow=4.7,SNR=3.8						
TXAR	**Lajitas Array**	**13.72**	**194**	Pn	**P**	**03 09 17.8**	**-1.3**
	baz=9.9,slow=13,SNR=2.4						
TXAR				Lg	Lg	03 12 59.7	
	baz=359,slow=31,SNR=6.0						
	comp=Z,0.7nm,1.1s						
TXAR	**Lajitas Array**	**13.72**	**194**		**Pn**	**03 09 11.3**	**+0.9**

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*IDC **12** 03:07:37.9±0.8, 64.°26N×5.°97E, h0^{km}, mb3.9/5, mbtmp3.9/11, ML3.7/6, MS3.6/2, Error ellipse: s-maj=18.7km s-min=10.2km az=43.0*

*DNK **12** 03:07:38.8±2.3, 64.°20N×5.°74E, h12^{km}±12^{km}, ML3.7, Confirmed Earthquake*

*NEIC **12** 03:07:39.2±1.4, 64.°15N±0.°08×5.°8E±0.°2, h10^{km}±1^{km}, mb4.2/11, Error ellipse: s-maj=14.4km s-min=12.6km az=246.0*

*NAO **12** 03:07:40.9±0.5, 64.°20N×5.°81E, h24^{km}±6^{km}, ML4.3*

*UPP **12** 03:07:40.1±1.2, 64.°17N×6.°05E, h0^{km}, ML3.1, Confirmed Earthquake*

*BER **12** 03:07:41.0±2.9, 64.°23N×5.°70E, h16^{km}±8^{km}, ML3.3, ML4.3(NAO), Confirmed Earthquake*

ISC 12 03:07:38.9±2.6**, 64.°15N**±0.°04×**6.°04E**±0.°04**, h13^{km}**±17^{km}**,**

n213,$\sigma 2^{s}12$/347,mb4.0/10,2C-3D,Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOL	**Molde**	1.72	156	Pn	Pb	03 08 10.2	-0.1
MOL				Sn	Sn	03 08 30.1	-0.1
MOL	**Molde**	1.72	156	eP	Pb	03 08 10.3	-0.1
MOL				eS	Sn	03 08 30.3	0.0
MOL				IAML		03 08 42.5	
	comp=Z,474nm,0.4s						
AKN	**Aaknes**	2.02	167	Pn	Pb	03 08 14.2	-1.2
AKN				Sn	Sn	03 08 37.4	-0.4
AKN	**Aaknes**	2.02	167	eP	Pb	03 08 14.3	-1.2
AKN				eS	Sn	03 08 37.4	-0.4
AKN				IAML		03 08 44.1	
	comp=Z,592nm,0.3s						
DOMB	**Dombas**	2.52	146	Pn	Pb	03 08 21.9	-2.0
DOMB				Sn	Sn	03 08 51.5	+1.5
DOMB	**Dombas**	2.52	146	eP	Pb	03 08 21.9	-2.0
DOMB				eS	Sn	03 08 50.9	+0.9
DOMB				IAML		03 08 53.8	
	comp=Z,251nm,0.5s						
FOO	**Floro**	2.60	191	Pn	Pn	03 08 21.6	+1.1
FOO				Sn	Sn	03 08 52.5	+0.7
FOO	**Floro**	2.60	191	eP	Pn	03 08 21.6	+1.1
FOO				eS	Sn	03 08 50.0	-1.8
FOO				IAML		03 08 54.0	
	comp=Z,303nm,0.3s						
NSS	**Namsos**	2.61	79⇓	eP	Pn	03 08 22.0	+1.4
NSS				eS	Sn	03 08 53.3	+1.3
NSS				IAML		03 09 00.6	
	comp=Z,488nm,0.4s						
HYA	**Hoyanger**	3.00	179	Pn	Pn	03 08 27.3	+1.3
HYA				Sn	Sn	03 09 01.1	-0.4
HYA	**Hoyanger**	3.00	179	eP	Pn	03 08 27.2	+1.3
HYA				eS	Sn	03 09 01.8	+0.3
HYA				IAML		03 09 11.1	
	comp=Z,303nm,0.4s						
SUE	**Sulen**	3.16	191	Pn	Pn	03 08 29.4	+1.2
SUE				Sn	Sn	03 09 04.1	-1.5
SUE	**Sulen**	3.16	191	eP	Pn	03 08 30.3	+2.1
LEIR	**Leirfjorden**	3.58	53	eP	Pn	03 08 34.9	+1.0
LEIR				eS	Sn	03 09 14.1	-1.9
LEIR				IAML		03 09 19.0	
	comp=Z,384nm,0.3s						
NC204	**NORSAR Array S**	3.61	141		Pn	03 08 36.4	+1.9
NC2	**NORSAR Subarra**	3.63	140	Pn	Pn	03 08 37.1	+2.4
NC2				Sn	Sn	03 09 17.7	+0.4
NC2	**NORSAR Subarra**	3.63	140	Pn	Pn	03 08 37.1	+2.4
NC2				Sn	Sn	03 09 17.7	+0.4
SKAR	**Skarslia**	3.64	162	Pn	Pn	03 08 36.4	+1.6
SKAR				Sn	Sn	03 09 15.5	-2.0
SKAR	**Skarslia**	3.64	162⇓	eP	Pn	03 08 36.4	+1.6
SKAR				eS	Sn	03 09 15.7	-1.8
STOK	**Stokkvaagen**	3.66	50	eP	Pn	03 08 35.5	+0.4
STOK				eS	Sn	03 09 15.2	-2.9
STOK				IAML		03 09 18.9	
	comp=Z,266nm,0.5s						
ASK	**Askoy**	3.70	186	Pn	Pn	03 08 36.6	+1.0
ASK				Sn	Sn	03 09 19.1	+0.1
ASK	**Askoy**	3.70	186	eP	Pn	03 08 37.3	+1.7
ASK				eS	Sn	03 09 18.1	-0.8
ASK				IAML		03 09 21.3	
	comp=Z,104nm,0.2s						
BER	**Bergen**	3.79	185	Pn	Pn	03 08 38.5	+1.6
BER				Sn	Sn	03 09 20.1	-1.1
BER	**Bergen**	3.79	185	eP	Pn	03 08 38.8	+1.9
BER				eS	Sn	03 09 19.9	-1.4
BER				IAML		03 09 22.9	
	comp=Z,113nm,0.3s						
NC3	**NORSAR Subarra**	3.81	137	Pn	Pn	03 08 39.6	+2.5
NC3	**NORSAR Subarra**	3.81	137	Pn	Pn	03 08 39.6	+2.5
NBO	**NORSAR Subarra**	3.82	143	Pn	Pn	03 08 39.5	+2.3
NBO	**NORSAR Subarra**	3.82	143	Pn	Pn	03 08 39.5	+2.3
NBO00	**NORSAR Array S**	3.82	143		Pn	03 08 39.1	+1.8
NC303	**NORSAR Array S**	3.83	138		Pn	03 08 39.4	+2.0
NB2	**NORSAR Subarra**	3.93	140	Pn	Pn	03 08 40.9	+2.1
NB2				Pn	Pn	03 08 40.9	+2.1
	baz=323,slow=14						
NB2				Sn	Sn	03 09 25.4	+0.6
	baz=316,slow=22						
NB2	**NORSAR Subarra**	3.93	140	Pn	Pn	03 08 40.9	+2.1
NB2				Pn	Pn	03 08 40.9	+2.1
	baz=323,slow=14						
NB2				Sn	Sn	03 09 25.4	+0.6
	baz=316,slow=22						
NOA	**NORSAR Array B**	3.93	140	Pn	Pn	03 08 40.6	+1.8
	comp=Z,0.6nm,0.3s,baz=340,slow=16,SNR=54						
NOA				Sn	Sn	03 09 26.7	+1.9
	comp=Z,2.1nm,0.3s,baz=328,slow=22,SNR=4.7						
	comp=Z,4.3nm,0.4s						
NB201	**NORSAR Array S**	3.95	140		Pn	03 08 40.9	+1.9
NOD	**Norderasen**	3.98	96	P	Pn	03 08 41.8	+2.4
NOD				S	Sn	03 09 26.8	+1.0
NOD	**Norderasen**	3.98	96	P	Pn	03 08 41.8	+2.4
NOD				S	Sn	03 09 26.8	+1.0
VAGH	**Vaagaholmen**	3.98	46	eP	Pn	03 08 39.8	+0.4
VAGH				eS	Sn	03 09 21.9	-3.9
VAGH				IAML		03 09 26.4	
	comp=Z,426nm,0.3s						
NAO01	**NORSAR Array S**	4.01	144		Pn	03 08 41.6	+1.8
NAO	**NORSAR Subarra**	4.01	144	Pn	Pn	03 08 41.5	+1.7
NAO				Sn	Sn	03 09 25.1	-1.5
NAO	**NORSAR Subarra**	4.01	144	Pn	Pn	03 08 41.5	+1.7
NAO				Sn	Sn	03 09 25.1	-1.5
NC405	**NORSAR Array S**	4.02	137		Pn	03 08 41.9	+1.9
NC4	**NORSAR Subarra**	4.05	137	Pn	Pn	03 08 42.1	+1.7
NC4	**NORSAR Subarra**	4.05	137	Pn	Pn	03 08 42.1	+1.7
RAUS	**Rausandaksla**	4.07	52⇑	eP	Pn	03 08 41.4	+0.7
RAUS				eS	Sn	03 09 26.2	-1.9
RAUS				IAML		03 09 33.6	
	comp=Z,254nm,0.5s						
MOR8	**Moi Rana**	4.08	56	eP	Pn	03 08 44.3	+3.4
MOR8				eS	Sn	03 09 31.6	+3.2
MOR8				IAML		03 09 39.2	
	comp=Z,252nm,0.2s						
NC6	**NORSAR Subarra**	4.24	141	Pn	Pn	03 08 45.0	+2.0
NC6				Sn	Sn	03 09 32.3	0.0
NC6	**NORSAR Subarra**	4.24	141	Pn	Pn	03 08 45.0	+2.0
NC6				Sn	Sn	03 09 32.3	0.0
ODD1	**Odda**	4.26	176	Pn	Pn	03 08 44.3	+0.9
ODD1				Sn	Sn	03 09 30.2	-2.7
ODD1	**Odda**	4.26	176	eP	Pn	03 08 44.3	+0.9
ODD1				eS	Sn	03 09 29.8	-3.2
NC602	**NORSAR Array S**	4.27	141		Pn	03 08 44.9	+1.5
NRA0	**NORESS Array S**	4.27	141	Pn	Pn	03 08 44.9	+1.4
	baz=332,slow=14						
NRA0				Sn	Sn	03 09 32.8	-0.3
	baz=327,slow=22						
NRA0	**NORESS Array S**	4.27	141	Pn	Pn	03 08 44.9	+1.4
	baz=332,slow=14						
NRA0				Sn	Sn	03 09 32.8	-0.3
	baz=327,slow=22						
BLS5	**Blasjo**	4.75	177	eP	Pn	03 08 52.0	+2.0
BLS5				eS	Sn	03 09 42.0	-2.9
BLS5				IAML		03 09 50.8	
	comp=Z,46nm,0.5s						
OSL	**Oslo**	4.77	150	eP	Pn	03 08 52.2	+2.0
KONO	**Kongsberg**	4.82	158	Pn	Pn	03 08 53.1	+2.1
KONO	**Kongsberg**	4.82	158	eP	Pn	03 08 52.5	+1.5
KONO				eS	Sn	03 09 44.8	-1.7
KONO				IAML		03 09 52.3	
	comp=Z,35nm,0.4s						
KMY	**Karmoy**	4.97	185	eP	Pn	03 08 54.1	+1.1
KMY				eS	Sn	03 09 47.7	-2.6
KMY				IAML		03 10 00.9	
	comp=Z,41nm,0.4s						
FAUS	**Fauske**	5.00	45⇓	eP	Pn	03 08 54.4	+0.9
FAUS				eS	Sn	03 09 47.2	-3.8
FAUS				IAML		03 09 53.7	
	comp=Z,215nm,0.4s						
LOF	**Lofoten**	5.03	34⇑	eP	Pn	03 08 52.4	-1.4
LOF				eS	Sn	03 09 43.5	-8.1
LOF				IAML		03 09 51.8	
	comp=Z,155nm,0.7s						
SOLU	**Sollefteaa**	5.07	95	P	Pn	03 08 56.8	+2.3
SOLU				S	Sn	03 09 53.3	+0.5
SOLU	**Sollefteaa**	5.07	95	P	Pn	03 08 56.8	+2.3
SOLU				S	Sn	03 09 53.3	+0.5
SOLU	**Sollefteaa**	5.07	95	P	Pn	03 08 56.8	+2.3
SOLU				S	Sn	03 09 53.3	+0.5
HASU	**Hassela**	5.20	108	P	Pn	03 08 58.6	+2.5
HASU				S	Sn	03 09 57.0	+1.2
HASU	**Hassela**	5.20	108	P	Pn	03 08 58.6	+2.5
HASU				S	Sn	03 09 57.0	+1.2
HASU	**Hassela**	5.20	108	P	Pn	03 08 58.6	+2.5
HASU				S	Sn	03 09 57.0	+1.2
ROTU	**Roteberg**	5.25	117	P	Pn	03 08 59.5	+2.5
ROTU				S	Sn	03 09 58.2	+0.9
ROTU	**Roteberg**	5.25	117	P	Pn	03 08 59.5	+2.5
ROTU				S	Sn	03 09 58.2	+0.9
ROTU	**Roteberg**	5.25	117	P	Pn	03 08 59.5	+2.5
ROTU				S	Sn	03 09 58.2	+0.9
LRW	**Lerwick**	5.26	223	Pn	Pn	03 08 57.4	+0.4
LRW				Sn	Sn	03 09 51.1	-6.2
LRW	**Lerwick**	5.26	223	eP	Pn	03 08 57.4	+0.4
LRW				eS	Sn	03 09 51.3	-6.0
LRW				IAML		03 09 58.3	
	comp=Z,56nm,0.2s						
STEI	**Steigen**	5.33	41	eP	Pn	03 08 57.6	-0.4
STEI				eS	Sn	03 09 53.0	-6.1
STEI				IAML		03 10 03.2	
	comp=Z,72nm,0.3s						
HFS	**Hagfors**	5.39	135	Pn	Pn	03 09 01.3	+2.4
	comp=Z,2.5nm,0.3s,baz=321,slow=12,SNR=76						
HFS				Sn	Sn	03 10 03.8	+3.0
	comp=Z,7.1nm,0.3s,baz=325,slow=25,SNR=5.4						
	comp=Z,8.6nm,0.4s						
HFS	**Hagfors**	5.39	135	Pn	Pn	03 09 01.0	+2.1
	baz=327,slow=12						
HFS	**Hagfors**	5.39	135	Pn	Pn	03 09 01.0	+2.1
	baz=327,slow=12						
UDD	**Uddeholm**	5.40	135	P	Pn	03 09 00.9	+1.9
UDD	**Uddeholm**	5.40	135	P	Pn	03 09 00.9	+1.9
UDD	**Uddeholm**	5.40	135	P	Pn	03 09 00.9	+1.9
BREU	**Bredtraesk**	5.52	87	P	Pn	03 09 02.3	+1.7
BREU				S	Sn	03 10 03.1	-0.6
BREU	**Bredtraesk**	5.52	87	P	Pn	03 09 02.3	+1.7
BREU				S	Sn	03 10 03.1	-0.6
BREU	**Bredtraesk**	5.52	87	P	Pn	03 09 02.3	+1.7
BREU				S	Sn	03 10 03.1	-0.6
HEMU	**Hemsoen**	5.59	100	P	Pn	03 09 03.2	+1.7
HEMU				S	Sn	03 10 04.7	-0.8
HEMU	**Hemsoen**	5.59	100	P	Pn	03 09 03.2	+1.7
HEMU				S	Sn	03 10 04.7	-0.8
HEMU	**Hemsoen**	5.59	100	P	Pn	03 09 03.2	+1.7
HEMU				S	Sn	03 10 04.7	-0.8
FINU	**Finntorp**	5.66	144	P	Pn	03 09 03.7	+1.2
FINU				S	Sn	03 10 05.6	-1.5
FINU	**Finntorp**	5.66	144	P	Pn	03 09 03.7	+1.2
FINU				S	Sn	03 10 05.6	-1.5
FINU	**Finntorp**	5.66	144	P	Pn	03 09 03.7	+1.2
FINU				S	Sn	03 10 05.6	-1.5
STRU	**Stroemstad**	5.69	152	P	Pn	03 09 03.4	+0.5
STRU				S	Sn	03 10 05.8	-2.1
STRU	**Stroemstad**	5.69	152	P	Pn	03 09 03.4	+0.5
STRU				S	Sn	03 10 05.8	-2.1
STRU	**Stroemstad**	5.69	152	P	Pn	03 09 03.4	+0.5
STRU				iP	Pn	03 09 03.4	+0.5
STRU				S	Sn	03 10 05.8	-2.1
ARNU	**Arnoeviken**	5.74	110	P	Pn	03 09 05.9	+2.4
ARNU				S	Sn	03 10 09.9	+0.8
ARNU	**Arnoeviken**	5.74	110	P	Pn	03 09 05.9	+2.4
ARNU				S	Sn	03 10 09.9	+0.8
ARNU	**Arnoeviken**	5.74	110	P	Pn	03 09 05.9	+2.4
ARNU				S	Sn	03 10 09.9	+0.8
FALU	**Falun**	5.85	124	P	Pn	03 09 07.8	+2.7
FALU				S	Sn	03 10 12.0	0.0
FALU	**Falun**	5.85	124	P	Pn	03 09 07.8	+2.7
FALU				S	Sn	03 10 12.0	0.0
FALU	**Falun**	5.85	124	P	Pn	03 09 07.8	+2.7
FALU				S	Sn	03 10 12.0	0.0
SNART	**Snartemo**	5.86	174	eP	Pn	03 09 06.4	+1.2
SNART	**Snartemo**	5.86	174	iP	Pn	03 09 06.5	+1.2
HUSU	**Husum**	5.91	92	P	Pn	03 09 07.7	+1.8
HUSU				S	Sn	03 10 12.1	-1.2
HUSU	**Husum**	5.91	92	P	Pn	03 09 07.7	+1.8
HUSU				S	Sn	03 10 12.1	-1.2
HUSU	**Husum**	5.91	92	P	Pn	03 09 07.7	+1.8
HUSU				S	Sn	03 10 12.1	-1.2
HOMB	**Homborsund**	6.02	167	eP	Pn	03 09 08.4	+1.0
HOMB	**Homborsund**	6.02	167	iP	Pn	03 09 08.0	+0.6
HOMB				iS	Sn	03 10 11.2	-4.8
SALU	**Saltoluokta**	6.07	52	P	Pn	03 09 09.1	+1.0
SALU				S	Sn	03 10 15.5	-1.8
SALU	**Saltoluokta**	6.07	52	P	Pn	03 09 09.1	+1.0
SALU				S	Sn	03 10 15.5	-1.8
SALU	**Saltoluokta**	6.07	52	P	Pn	03 09 09.1	+1.0
SALU				S	Sn	03 10 15.5	-1.8
IGGU	**Iggoen**	6.17	117	P	Pn	03 09 11.6	+2.1
IGGU				S	Sn	03 10 19.1	-0.6
IGGU	**Iggoen**	6.17	117	P	Pn	03 09 11.6	+2.1
IGGU				S	Sn	03 10 19.1	-0.6
IGGU	**Iggoen**	6.17	117	P	Pn	03 09 11.6	+2.1
IGGU				S	Sn	03 10 19.1	-0.6
NASU	**Vaermlandsnaes**	6.25	144	P	Pn	03 09 11.8	+1.2
NASU				S	Sn	03 10 18.8	-3.0
NASU	**Vaermlandsnaes**	6.25	144	P	Pn	03 09 11.8	+1.2
NASU				S	Sn	03 10 18.8	-3.0
NASU	**Vaermlandsnaes**	6.25	144	P	Pn	03 09 11.8	+1.2
NASU				S	Sn	03 10 18.8	-3.0
NRAU	**Nora**	6.26	133	P	Pn	03 09 13.1	+2.4
NRAU				S	Sn	03 10 21.7	-0.3
NRAU	**Nora**	6.26	133	P	Pn	03 09 13.1	+2.4
NRAU				S	Sn	03 10 21.7	-0.3
NRAU	**Nora**	6.26	133	P	Pn	03 09 13.1	+2.4
NRAU				S	Sn	03 10 21.7	-0.3
VANU	**Vaenersborg**	6.37	150	P	Pn	03 09 13.2	+0.9
VANU				S	Sn	03 10 21.7	-3.1
VANU	**Vaenersborg**	6.37	150	P	Pn	03 09 13.2	+0.9
VANU				S	Sn	03 10 21.7	-3.1
VANU	**Vaenersborg**	6.37	150	P	Pn	03 09 13.2	+0.9
VANU				S	Sn	03 10 21.7	-3.1
ODEU	**Stanfors**	6.40	81	P	Pn	03 09 13.4	+0.8
ODEU				S	Sn	03 10 23.2	-2.1
ODEU	**Stanfors**	6.40	81	P	Pn	03 09 13.4	+0.8
ODEU				S	Sn	03 10 23.2	-2.1
ODEU	**Stanfors**	6.40	81	P	Pn	03 09 13.4	+0.8
ODEU				S	Sn	03 10 23.2	-2.1
UMAU	**Umeaa**	6.44	86	P	Pn	03 09 14.2	+1.0
UMAU				S	Sn	03 10 24.1	-2.3
UMAU	**Umeaa**	6.44	86	P	Pn	03 09 14.2	+1.0
UMAU				S	Sn	03 10 24.1	-2.3
UMAU	**Umeaa**	6.44	86	P	Pn	03 09 14.2	+1.0
UMAU				S	Sn	03 10 24.1	-2.3
NIKU	**Nikkaluokta**	6.48	49	P	Pn	03 09 14.7	+1.0
NIKU				S	Sn	03 10 25.5	-1.8
NIKU	**Nikkaluokta**	6.48	49	P	Pn	03 09 14.7	+1.0
NIKU				S	Sn	03 10 25.5	-1.8
NIKU	**Nikkaluokta**	6.48	49	P	Pn	03 09 14.7	+1.0
NIKU				S	Sn	03 10 25.5	-1.8
OSTU	**Oestervaala**	6.51	122	P	Pn	03 09 15.9	+1.8
OSTU				S	Sn	03 10 26.3	-1.8
OSTU	**Oestervaala**	6.51	122	P	Pn	03 09 15.9	+1.8
OSTU				S	Sn	03 10 26.3	-1.8
OSTU	**Oestervaala**	6.51	122	P	Pn	03 09 15.9	+1.8
OSTU				S	Sn	03 10 26.3	-1.8
HARU	**Harads**	6.61	66	P	Pn	03 09 15.1	-0.4
HARU				S	Sn	03 10 27.3	-3.2
HARU	**Harads**	6.61	66	P	Pn	03 09 15.1	-0.4
HARU				S	Sn	03 10 27.3	-3.2
HARU	**Harads**	6.61	66	P	Pn	03 09 15.1	-0.4
HARU				S	Sn	03 10 27.3	-3.2
DUNU	**Dundret**	6.71	57	P	Pn	03 09 17.1	+0.2
DUNU				S	Sn	03 10 30.2	-2.8
DUNU	**Dundret**	6.71	57	P	Pn	03 09 17.1	+0.2
DUNU				S	Sn	03 10 30.2	-2.8
DUNU	**Dundret**	6.71	57	P	Pn	03 09 17.1	+0.2
DUNU				S	Sn	03 10 30.2	-2.8
TJOU	**Tjoern**	6.71	154	P	Pn	03 09 17.3	+0.5
TJOU				S	Sn	03 10 29.2	-3.8
TJOU	**Tjoern**	6.71	154	P	Pn	03 09 17.3	+0.5
TJOU				S	Sn	03 10 29.2	-3.8
TJOU	**Tjoern**	6.71	154	P	Pn	03 09 17.3	+0.5
TJOU				iP	Pn	03 09 17.8	+0.9
TJOU				iS	Sn	03 10 28.9	-4.1
TJOU				S	Sn	03 10 29.2	-3.8
BACU	**Backbrunna**	6.76	125	P	Pn	03 09 19.2	+1.7
BACU				S	Sn	03 10 32.2	-2.0
BACU	**Backbrunna**	6.76	125	P	Pn	03 09 19.2	+1.7
BACU				S	Sn	03 10 32.2	-2.0
BACU	**Backbrunna**	6.76	125	P	Pn	03 09 19.2	+1.7
BACU				S	Sn	03 10 32.2	-2.0
BORU	**Boraas**	7.31	150	iP	Pn	03 09 26.1	+1.0
BORU	**Boraas**	7.31	150	iP	Pn	03 09 26.1	+1.0
ONAU	**Onsala**	7.36	154	iP	Pn	03 09 25.7	0.0
ONAU	**Onsala**	7.36	154	iP	Pn	03 09 25.7	0.0
BIGH	**Upper Bighouse**	7.42	225	eP	Pn	03 09 26.4	-0.2
BIGH				eS	Sn	03 10 41.0	-9.4
TRO	**Tromso**	7.47	37	eP	Pn	03 09 27.2	-0.1
KIF	**Kilpisjarvi**	7.62	44	eP	Pn	03 09 30.1	+0.7
JETT	**Jettan, Norway**	7.83	40	Pn	Pn	03 09 33.4	+1.2
JETT				Sn	Sn	03 10 55.4	-5.1
JETT	**Jettan, Norway**	7.83	40	Pn	Pn	03 09 33.4	+1.2
JETT				Sn	Sn	03 10 55.4	-5.1
HEF	**Hetta**	8.27	51	eP	Pn	03 09 38.7	+0.4
DRUM	**Mains of Drumt**	8.38	214	eP	Pn	03 09 38.5	-1.3
DRUM				eS	Sn	03 11 03.4	-11
KTK1	**Kautokeino**	8.39	47	eP	Pn	03 09 40.4	+0.6
KTK1				eS	Sn	03 11 08.9	-5.4
KTK1				IAML		03 11 12.4	
	comp=Z,22nm,0.3s						
DEL	**Delary**	8.62	150	iP	Pn	03 09 43.6	+0.5
DEL				iS	Sn	03 11 15.9	-4.1
DEL	**Delary**	8.62	150	iP	Pn	03 09 43.6	+0.5
DEL				iS	Sn	03 11 15.9	-4.1
BJUU	**Bjuv**	8.81	154	iP	Pn	03 09 45.3	-0.4
BJUU				iS	Sn	03 11 19.3	-5.5
BJUU	**Bjuv**	8.81	154	iP	Pn	03 09 45.3	-0.4
BJUU				iS	Sn	03 11 19.3	-5.5
LUNU	**Lund**	9.31	153	iP	Pn	03 09 52.9	+0.4
LUNU	**Lund**	9.31	153	iP	Pn	03 09 52.9	+0.4
ARA0	**ARCESS Array S**	9.35	46	Pn	Pn	03 09 52.4	-0.6
	baz=235,slow=14						
ARA0				Sn	Sn	03 11 30.9	-6.8
	baz=237,slow=28						
ARA0	**ARCESS Array S**	9.35	46	Pn	Pn	03 09 52.4	-0.6
	baz=235,slow=14						
ARA0				Sn	Sn	03 11 30.9	-6.8
	baz=237,slow=28						
ARA0				IAML		03 11 42.4	
	comp=Z,12nm,0.3s						
ARCES	**ARCESS Array B**	9.35	46	Pn	Pn	03 09 51.8	-1.2
	comp=Z,1.2nm,0.3s,baz=236,slow=14,SNR=59						
ARCES				Sn	Sn	03 11 30.8	-7.0
	comp=Z,4.4nm,0.3s,baz=235,slow=22,SNR=6.2						
	comp=Z,4.1nm,0.4s						
HAMF	**Hammerfest**	9.38	38	eP	Pn	03 09 53.5	+0.2
EDI	**Edinburgh**	9.44	213	eP	Pn	03 09 53.5	-0.8
EDI				eS	Sn	03 11 30.6	-10
FIA0	**FINESS Array S**	9.56	97	Pn	Pn	03 09 56.7	+0.8
	baz=303,slow=11						
FIA0				Sn	Sn	03 11 39.3	-3.7
	baz=300,slow=22						
FIA0	**FINESS Array S**	9.56	97	Pn	Pn	03 09 56.7	+0.8
	baz=303,slow=11						
FIA0				Sn	Sn	03 11 39.3	-3.7
	baz=300,slow=22						
FIA1	**FINESS Array S**	9.56	97	Pn	Pn	03 09 56.7	+0.8
FINES	**FINESS Array B**	9.56	97	Pn	Pn	03 09 56.6	+0.7
	comp=Z,2.8nm,0.3s,baz=304,slow=13,SNR=82						
FINES				Sn	Sn	03 11 38.6	-4.3
	comp=Z,5.7nm,0.3s,baz=301,slow=21,SNR=9.7						
	comp=Z,11nm,0.4s						
KEV	**Kevo**	9.91	46		Pn	03 10 00.3	-0.4
EKA	**Eskdalemuir Ar**	9.97	212	Pn	Pn	03 10 00.5	-1.2
	baz=26,slow=12						
EKA	**Eskdalemuir Ar**	9.97	212	P	Pn	03 10 00.2	-1.4
	baz=23,slow=14						
EKA	**Eskdalemuir Ar**	9.97	212	P	Pn	03 10 00.2	-1.4
	baz=23,slow=14						
EKB	**Eskdalemuir**	9.98	212	Pn	Pn	03 10 00.2	-1.5
ESK	**Eskdalemuir**	10.00	212	Pn	Pn	03 10 00.2	-1.8
BSD	**Bornholm Skovb**	10.10	150	iP	Pn	03 10 03.3	-0.1
BSD				IAML		03 11 48.0	
	comp=Z,22nm,0.9s						
BSD				iS	Sn	03 11 50.2	-6.2
BSD	**Bornholm Skovb**	10.10	150	iP	Pn	03 10 03.3	-0.1
BSD				IAML		03 11 48.0	
	comp=Z,22nm,0.9s						
BSD				iS	Sn	03 11 50.2	-6.2
EDMD	**Edmundbyers**	10.18	207	eP	Pn	03 10 02.8	-1.7
VADS	**Vadso**	10.81	46	eP	Pn	03 10 12.3	-0.6
APA0	**Apatity Array**	11.50	61	Pn	Pn	03 10 21.0	-1.5
	baz=268,slow=14						
APA0	**Apatity Array**	11.50	61	Pn	Pn	03 10 21.0	-1.5
	baz=268,slow=14						
BORG	**Borgarnes**	11.79	285	LR	LR	03 14 49.6	
	comp=Z,199nm,19.0s,baz=80,slow=37						
LVZ	**Lovozero**	12.16	59	Pn	Pn	03 10 28.9	-2.6
DSB	**Dublin**	12.66	216	Pn	Pn	03 10 36.8	-1.6
CLL	**Collm**	13.39	161	ePx	Px	03 10 49.0	
SPB2	**Spitsbergen Ar**	14.44	9	Pn	Pn	03 11 03.5	+0.9
SPITS	**Spitsbergen Ar**	14.44	9	Pn	Pn	03 11 00.5	-2.1
	baz=168,slow=15						
	comp=Z,1.0nm,0.4s						
KBS	**Kingsbay**	14.96	4	Pn	Pn	03 11 10.4	+0.9
AKASG	**Malin Array Be**	18.21	127	P	P	03 11 52.3	+1.1
	comp=Z,1.5nm,0.3s,baz=330,slow=12,SNR=4.3						
	comp=Z,1.6nm,0.4s						
AKASG	**Malin Array Be**	18.21	127	P	Pn	03 11 51.0	0.0
KIEV	**Kiev**	18.21	127		P	03 11 52.5	+1.3
KIEV				IAmb	IAmb	03 11 54.3	
	comp=Z,10.0nm,0.9s						
FDMO	**Fiordimonte**	21.54	166	P	P	03 12 28.7	+1.2
FDMO				IAmb	IAmb	03 12 30.1	
	comp=Z,17nm,1.1s						
ABKAR	**Akbulak array**	31.98	92	P	P	03 14 06.2	+2.0
A36M	**Sachs Harbour**	40.17	339	P	P	03 15 15.1	+1.2
A36M				IAmb	IAmb	03 15 16.7	
	comp=Z,2.7nm,0.8s						
INK	**Inuvik**	44.74	340	LR	LR	03 34 32.2	
	comp=Z,81nm,18.4s,baz=354,slow=36						
INK	**Inuvik**	44.74	340	P	P	03 15 53.6	+2.5
INK				IAmb	IAmb	03 15 55.4	
	comp=Z,10nm,1.1s						
E29M	**Blow River**	45.29	342	P	P	03 15 56.4	+1.0
E29M				IAmb	IAmb	03 15 57.2	
	comp=Z,4.4nm,0.7s						
YKA	**Yellowknife Ar**	46.19	326	P	P	03 16 02.4	-0.3
	comp=Z,1.1nm,0.9s,baz=47,slow=14,SNR=8.0						
	comp=Z,1.1nm,0.9s						
YKA	**Yellowknife Ar**	46.19	326	P	P	03 16 02.7	+0.1
I27K	**Kandik River**	48.41	343	P	P	03 16 21.6	+1.6
ILAR	**Eielson Array**	49.85	345	P	P	03 16 32.0	+1.0
	comp=Z,1.0nm,0.7s,baz=6.0,slow=7.3,SNR=9.9						
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	49.85	345	P	P	03 16 31.5	+0.6
TORD	**Torodi Ar. Bea**	51.02	185	P	P	03 16 41.0	+0.7
	comp=Z,4.4nm,0.5s,baz=5.9,slow=9.8,SNR=2.0						
	comp=Z,4.4nm,0.5s						
N19K	**Bonanza Creek**	54.49	348	P	P	03 17 06.8	+1.2
ECSD	**EROS Data Cent**	56.66	302	P	P	03 17 21.9	+0.5
PLID	**Pearl Lake**	61.99	317	P	P	03 17 58.4	0.0
PDAR	**Pinedale Array**	62.06	311	P	P	03 17 59.0	+0.1
	comp=Z,0.4nm,0.7s,baz=28,slow=6.7,SNR=4.3						
	comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	62.06	311	P	P	03 17 59.2	+0.3
PV10	**Paradox Valley**	65.82	309	P	P	03 18 25.1	+1.3
PV10				IAmb	IAmb	03 18 34.3	
	comp=Z,0.6nm,0.5s						
PV02	**Paradox Valley**	65.87	308	P	P	03 18 24.3	+0.3
PV01	**Paradox Valley**	65.88	308	P	P	03 18 25.0	+0.9
PV01				IAmb	IAmb	03 18 31.9	
	comp=Z,2.6nm,0.9s						
TXAR	**Lajitas Array**	72.00	300	P	P	03 19 02.5	+0.4
	comp=Z,0.3nm,0.5s,baz=24,slow=8.2,SNR=2.2						
	comp=Z,0.3nm,0.5s						
TXAR	**Lajitas Array**	72.00	300	P	P	03 19 02.8	+0.7
ASAR	**Alice Springs**	127.26	65	PKP	PKiKP	03 26 43.8	+0.7
	comp=Z,0.4nm,0.4s,baz=343,slow=2.2,SNR=4.5						

MOS ***12*** *03:18:22.3±1.1, 83°.23N×115°.06E, h10km, mb4.8/34, Error ellipse: s-maj=47.2km s-min=7.1km az=88.2*

IDC ***12*** *03:18:23.0±0.5, 83°.32N×115°.23E, h0km, mb4.2/30, mbtmp4.2/30, MS3.7/17, Error ellipse: s-maj=13.1km s-min=11.1km az=154.0*

NEIC ***12*** *03:18:24.3±1.1, 83°.41N±0°.07×114°.4E±0°.7, h10km±1km, mb4.7/165, Error ellipse: s-maj=15.0km s-min=10.3km az=58.0*

FCIAR ***12*** *03:18:33.0, 83°.13N×114°.88E, h10km, station SVZ has station magnitude of 3.80 station LSH has station magnitude of 5.14*

ISC 12 03:18:24.3±0.3**, 83°.37N**±0°.05×**114°.83E**±0°.04**, h10km, n247, $\sigma 1^{s}14$**/205**, mb4.6**/135**, MS3.6**/19**, 12C-1D, North of**

Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVZ	Severnaya Zeml	4.55	213	eP	Pn	03 19 37.9	+4.9
SVZ				eS	Sn	03 20 26.3	+0.5
	94nm,0.6s						
SVZ				i tx	tx	03 23 06.1	
ZFI2	Zemlya Franca-	9.05	290	eP	Pn	03 20 33.3	-1.3
ZFI2				eS	Sn	03 22 07.0	-9.4
OMEGA	Omega	9.06	289	eP	Pn	03 20 33.4	-1.4
OMEGA				S	Sn	03 22 07.1	-10
TIXI	Tiksi	12.09	158	Pn	Pn	03 21 13.9	-2.3
	0.3nm,0.3s,baz=42,slow=9.4,SNR=5.5						
TIXI				LR	LR	03 25 22.9	
	comp=Z,106nm,20.7s,baz=16,slow=35						
TIXI	Tiksi	12.09	158		Pn	03 21 16.2	0.0
TIXI	Tiksi	12.09	158	ceP	Pn	03 21 13.6	-2.6
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SPA0	Spitsbergen Ar	14.46	305	P	Pn	03 21 45.5	-3.0
SPITS	Spitsbergen Ar	14.46	305	Pn	Pn	03 21 45.2	-3.3
	baz=34,slow=14						
NRIK	Noril'sk	15.15	218	Pn	Pn	03 21 54.6	-3.3
	comp=Z,0.9nm,0.3s,baz=26,slow=11,SNR=8.8						
NRIK				LR	LR	03 28 11.3	
	comp=Z,301nm,20.0s,baz=355,slow=39						
NRIK	Noril'sk	15.15	218		Pn	03 21 55.6	-2.2
NRIK				IAmb	IAmb	03 22 10.8	
	comp=Z,47nm,1.1s						
NRIK	Noril'sk	15.15	218	i P	Pn	03 21 55.7	-2.2
BILL	Bilibino	18.64	113	P	Pn	03 22 42.3	+0.4
BILL	Bilibino	18.64	113	ceP	P	03 22 41.5	-0.1
BILL				pmax	pmax		
	comp=Z,18nm,1.3s						
B20K	Meade River	20.93	74	P	P	03 23 06.5	+0.1
B20K				IAmb	IAmb	03 23 08.6	
	comp=Z,52nm,1.4s						
B22K	Teshekpuk Lake	21.03	71		P	03 23 08.3	+0.8
RES	Resolute Bay	21.46	21	P	P	03 23 14.2	+2.0
	comp=Z,3.5nm,1.0s,baz=2.9,slow=8.8,SNR=1.9						
RES				LR	LR	03 31 23.1	
	comp=Z,150nm,18.4s,baz=3.5,slow=36						
	comp=Z,3.5nm,1.0s						
C19K	Lookout Ridge	21.52	77		P	03 23 13.0	+0.1
C19K				IAmb	IAmb	03 23 38.3	
	comp=Z,30nm,1.1s						
ARCES	ARCESS Array B	21.53	287	P	P	03 23 12.6	-0.4
	comp=Z,19nm,0.8s,baz=21,slow=10,SNR=13						
	comp=Z,19nm,0.8s						
ARCES	ARCESS Array B	21.53	287	P	P	03 23 11.8	-1.2
B21K	Ikpikpuk River	21.58	72		P	03 23 13.6	+0.1
B21K				IAmb	IAmb	03 23 23.0	
	comp=Z,22nm,0.9s						
C16K	Lisburne Hills	21.65	83	P	P	03 23 14.0	-0.2
C16K				IAmb	IAmb	03 23 16.2	
	comp=Z,31nm,1.2s						
YAK	Yakutsk	21.73	161	P	P	03 23 14.3	-0.8
	comp=Z,13nm,0.4s,baz=159,slow=20,SNR=6.5						
YAK				LR	LR	03 32 45.9	
	comp=Z,54nm,19.1s,baz=277,slow=40						
	comp=Z,13nm,0.4s						
YAK	Yakutsk	21.73	161	P	P	03 23 14.6	-0.5
YAK				IAmb	IAmb	03 23 15.4	
	comp=Z,26nm,0.7s						
YAK	Yakutsk	21.73	161	eP	P	03 23 15.1	-0.1
YAK				e		03 23 35.3	
YAK				e		03 27 14.4	
YAK				eS	S	03 27 16.0	+0.8
YAK				eSS	SnSn	03 27 43.3	+4.2
YAK				e		03 34 37.3	
YAK				pmax	pmax		
	comp=Z,32nm,1.5s						
YAK				pmax	pmax		
	comp=N,26nm,1.3s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,87nm,2.7s						
YAK				smax	smax		
	comp=E,77nm,2.7s						
YAK				smax	smax		
	comp=N,69nm,3.0s						
C18K	Utukok River	21.77	79		P	03 23 15.0	-0.6
C18K				IAmb	IAmb	03 23 37.5	
	comp=Z,37nm,1.4s						
C23K	Itkillik River	21.82	68	P	P	03 23 16.2	+0.2
LVZ	Lovozero	22.05	277	i P	P	03 23 17.4	-1.2
LVZ				pmax	pmax		
	comp=Z,199nm,3.4s						
C24K	Franklin Bluff	22.13	67	P	P	03 23 19.6	+0.2
C24K				IAmb	IAmb	03 23 37.3	
	comp=Z,41nm,1.1s						
A36M	Sachs Harbour	22.20	46		P	03 23 19.3	-0.8
A36M				IAmb	IAmb	03 23 32.7	
	comp=Z,23nm,0.9s						
SEY	Seymchan	22.27	133	P	P	03 23 20.9	-0.1
	comp=Z,12nm,1.1s,baz=347,slow=7.7,SNR=9.0						
	comp=Z,12nm,1.1s						
SEY	Seymchan	22.27	133	eP	P	03 23 19.6	-1.4
SEY				pmax	pmax		
	comp=Z,40nm,1.2s						
APA	Apatity	22.51	278	eP	P	03 23 11.3	-12
APA				MLR	MLR		
	comp=Z,2µm,6.1s						
C27K	Jago River	22.75	63	P	P	03 23 26.0	0.0
TOLK	Toolik Lake Re	23.07	68	P	P	03 23 29.6	+0.1
E22K	Anaktuvuk Pass	23.32	71		P	03 23 31.4	-0.4
E22K				IAmb	IAmb	03 23 48.0	
	comp=Z,19nm,1.1s						
E23K	Chandalar	23.63	69	P	P	03 23 34.8	-0.2
E23K				IAmb	IAmb	03 23 46.7	
	comp=Z,25nm,1.2s						
LSH	Leshukonskoye	23.67	263	eP	P	03 23 33.7	-1.5
	comp=Z,118nm,2.1s						
F17K	Baldwin Pennin	23.88	81		P	03 23 36.8	-0.5
F17K				IAmb	IAmb	03 23 53.3	
	comp=Z,21nm,0.8s						
F20K	Avaraart Lake	23.92	75	P	P	03 23 36.8	-1.0
E25K	Arctic Village	24.00	65		P	03 23 38.5	0.0
E28M	Babbage River	24.16	60		P	03 23 39.7	-0.3
F24K	Squaw Lake	24.33	68		P	03 23 40.8	-0.9
F24K				IAmb	IAmb	03 24 11.3	
	comp=Z,10nm,0.8s						
COLD	Coldfoot	24.36	70		P	03 23 41.7	-0.2
E29M	Blow River	24.53	58		P	03 23 43.2	-0.2
E29M				IAmb	IAmb	03 23 55.7	
	comp=Z,19nm,1.1s						
G16K	Koyuk River	24.76	83		P	03 23 43.9	-1.6
G16K				IAmb	IAmb	03 24 02.0	
	comp=Z,13nm,0.9s						
C36M	Paulatuk	24.87	46		P	03 23 46.6	+0.3
C36M				IAmb	IAmb	03 23 57.3	
	comp=Z,32nm,1.4s						
INK	Inuvik	25.03	55		P	03 23 48.0	+0.2
INK				IAmb	IAmb	03 24 05.4	
	comp=Z,19nm,1.3s						
INK	Inuvik	25.03	55	P	P	03 23 48.0	+0.2
INK				pmax	pmax		
	comp=Z,19nm,1.3s						
F28M	Old Crow	25.08	61	P	P	03 23 49.4	+1.1
ANM	Nome	25.21	86		P	03 23 49.3	-0.2
ANM	Nome	25.21	86	P	P	03 23 49.3	-0.2
ANM				pmax	pmax		
	comp=Z,35nm,1.2s						
H19K	Roundabout Mou	25.31	77	P	P	03 23 50.9	+0.5
H19K				IAmb	IAmb	03 24 06.6	
	comp=Z,24nm,1.3s						
G26K	Porcupine Rive	25.32	64		P	03 23 50.9	+0.5
MA2	Magadan	25.46	136	ceP	P	03 23 52.1	+0.3
MA2				pmax	pmax		
	comp=Z,22nm,1.7s						
H17K	Granite Mounta	25.48	81		P	03 23 52.9	+0.9
H17K				IAmb	IAmb	03 24 03.6	
	comp=Z,16nm,1.1s						
F30M	Barrier River	25.49	57		P	03 23 52.6	+0.6
H22K	Ishtalitna Cre	25.52	72	P	P	03 23 52.8	+0.4
H21K	Melozitna Rive	25.59	73	P	P	03 23 53.6	+0.6
H21K				IAmb	IAmb	03 24 08.6	
	comp=Z,17nm,1.2s						
G27K	Doyon Strip	25.68	63		P	03 23 54.5	+0.8
G27K				IAmb	IAmb	03 24 10.6	
	comp=Z,15nm,1.0s						
F31M	Tsiigehtchic	25.85	55		P	03 23 56.0	+0.8
H24K	Noodor Dome	25.96	69		P	03 23 56.9	+0.5
H24K				IAmb	IAmb	03 24 12.9	
	comp=Z,16nm,1.2s						
G30M	tAoh Zraii Nji	26.06	58		P	03 23 57.5	+0.3
I17K	Unalakleet	26.41	82		P	03 24 01.1	+0.7
I17K				IAmb	IAmb	03 24 17.8	
	comp=Z,24nm,1.2s						
I23K	Minto, Yukon-K	26.47	71	P	P	03 24 01.8	+1.0
I23K				IAmb	IAmb	03 24 16.5	
	comp=Z,23nm,1.3s						
EPYK	Eagle Plains	26.61	59		P	03 24 02.8	+0.6
I27K	Kandik River	26.85	63		P	03 24 05.0	+0.5
I27K				IAmb	IAmb	03 24 23.6	
	comp=Z,20nm,1.3s						
COLA	College	26.90	69	i P	P	03 24 04.0	-0.7
COLA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
J17K	VABM Dome	27.07	81	P	P	03 24 07.0	+0.6
J17K				IAmb	IAmb	03 24 09.3	
	comp=Z,30nm,1.4s						
IL31		27.10	69	P	P	03 24 07.6	+1.1
IL31				IAmb	IAmb	03 24 23.2	
	comp=Z,18nm,1.4s						
ILAR	Eielson Array	27.10	69	P	P	03 24 06.8	+0.1
	comp=Z,2.0nm,1.0s,baz=341,slow=7.8,SNR=11						
ILAR				LR	LR	03 34 32.6	
	comp=Z,111nm,21.2s,baz=329,slow=36						
	comp=Z,2.0nm,1.0s						
ILAR	Eielson Array	27.10	69	P	P	03 24 06.9	+0.3
ILAR	Eielson Array	27.10	69	P	P	03 24 06.9	+0.3
CCB	Clear Creek Bu	27.12	69	P	P	03 24 07.2	+0.5
I28M	Miner Creek	27.18	62	IAmb	IAmb	03 24 22.6	
	comp=Z,19nm,1.3s						
J18K	Innoko River	27.28	78	IAmb	IAmb	03 24 30.2	
	comp=Z,16nm,1.1s						
KLMR	Klimovskoe	28.30	267	eP	P	03 24 14.5	-2.8
KLMR				e		03 25 03.3	
KLMR				pmax	pmax		
	comp=Z,26nm,1.5s						
FINES	FINESS Array B	29.28	281	P	P	03 24 25.4	-0.6
	comp=Z,3.6nm,0.8s,baz=349,slow=7.8,SNR=5.3						
	comp=Z,3.6nm,0.8s						
FINES	FINESS Array B	29.28	281	P	P	03 24 25.7	-0.3
FINES	FINESS Array B	29.28	281	P	P	03 24 25.7	-0.3
KIRV	Kirov	29.38	256	LR	LR	03 36 54.7	
	comp=Z,154nm,18.6s,baz=274,slow=38						
KIRV	Kirov	29.38	256	ceP	P	03 24 27.5	+0.6
ZEA	Zeya	29.95	165	eP	P	03 24 33.5	+1.5
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ARTI	Arti	30.55	246	LR	LR	03 37 37.6	
	comp=Z,330nm,19.6s,baz=24,slow=38						
ARTI	Arti	30.55	246	c iP	P	03 24 37.0	-0.3
ARTI						03 25 32.6	
ARTI				S	S	03 29 40.1	+1.7
ARTI				SS	SnSn	03 31 13.4	-1.0
ZALV	Zalesovo Beam	30.61	215	P	P	03 24 37.1	-0.7
	comp=Z,1.1nm,0.6s,baz=355,slow=10,SNR=5.4						
	comp=Z,1.1nm,0.6s						
ZALV	Zalesovo Beam	30.61	215	P	P	03 24 37.8	-0.1
ZALV	Zalesovo Beam	30.61	215	i P	P	03 24 37.7	-0.1
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	NORSAR Array B	31.32	294	P	P	03 24 44.2	+0.1
	comp=Z,0.8nm,0.6s,baz=15,slow=7.4,SNR=3.5						
NOA				LR	LR	03 39 06.1	
	comp=Z,83nm,18.3s,baz=165,slow=40						
	comp=Z,0.8nm,0.6s						
HFS	Hagfors	31.94	292	P	P	03 24 49.3	-0.2
	comp=Z,3.3nm,0.8s,baz=28,slow=7.2,SNR=4.9						
	comp=Z,3.3nm,0.8s						
YKA	Yellowknife Ar	32.38	41	P	P	03 24 52.7	-0.6
	comp=Z,0.9nm,0.8s,baz=348,slow=9.2,SNR=7.2						
YKA				PcP	PcP	03 27 40.3	0.0
	comp=Z,0.4nm,0.7s,baz=328,slow=3.9,SNR=3.7						
YKA				LR	LR	03 37 39.6	
	comp=Z,203nm,20.6s,baz=3.5,slow=36						
	comp=Z,0.9nm,0.8s						
YKA	Yellowknife Ar	32.38	41	P	P	03 24 52.5	-0.8
BORK	Borovoye	32.66	232	ceP	P	03 24 56.1	+0.2
BORK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
BVAR	Borovoye Array	32.68	232	P	P	03 24 56.8	+0.7
	comp=Z,2.4nm,0.7s,baz=12,slow=7.6,SNR=8.0						
	comp=Z,2.4nm,0.7s						
KDAK	Kodiak Island	33.29	77	LR	LR	03 39 41.3	
	comp=Z,115nm,18.4s,baz=27,slow=38						
OBN	Obninsk	34.26	268	eP	P	03 25 11.3	+1.6
OBN				e		03 26 24.9	
OBN				ePPP	PPP	03 26 37.2	
OBN				e		03 27 48.0	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,208nm,18.0s						
KURK	Kurchatov	34.27	222		P	03 25 10.1	+0.1
KURK				IAmb	IAmb	03 25 11.7	
	comp=Z,4.6nm,0.6s						
KURK	Kurchatov	34.27	222	ceP	P	03 25 08.6	-1.3
KURK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KURBB	Kurchatov Arra	34.37	222	P	P	03 25 10.2	-0.6
	comp=Z,1.4nm,0.3s,baz=21,slow=7.4,SNR=16						
KURBB				PcP	PcP	03 27 45.8	-0.3
	comp=Z,0.8nm,0.2s,baz=3.4,slow=3.5,SNR=5.2						
	comp=Z,1.4nm,0.3s						
DGZ	Jazzator, Alta	34.67	212	i P	P	03 25 13.4	-0.2
DGZ				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BELG	Belogornoye	35.66	256	i P	P	03 25 20.8	-1.0
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ULN	Ulaanbaatar	35.72	189	i P	P	03 25 19.9	-2.7
ULN				pmax	pmax		
	comp=Z,9.0nm,1.6s						
SONM	Songino Array	35.76	190	P	P	03 25 23.3	+0.3
	comp=Z,1.2nm,0.9s,baz=358,slow=9.3,SNR=4.5						
	comp=Z,1.2nm,0.9s						
SONM	Songino Array	35.76	190	P	P	03 25 23.0	+0.1
MNK	Minsk	35.87	276	i P	P	03 25 21.8	-1.8
	comp=E,20nm,1.0s						
MNK				i P	P	03 25 21.8	-1.8
	comp=N,16nm,1.0s						
MNK				i P	P	03 25 21.8	-1.8
	comp=Z,18nm,1.1s,baz=12						
MNK				i PP	PnPn	03 26 42.2	-1.3
MNK				i PPP	PPP	03 26 55.5	
MNK				i S	S	03 31 01.8	+0.9
MNK				i SS	SnSn	03 33 26.2	+2.9
MNK				i SSS	SSS	03 33 43.1	
MNK				i LQ	LQ	03 37 27.1	
MNK				i LR	LR	03 40 05.5	
MNK				i LRM	MLR	03 41 58.0	
	comp=E,376nm,18.2s						
MNK				i LRM	MLR	03 41 59.9	
	comp=N,477nm,20.9s						
MNK				i LRM	MLR	03 42 30.3	
	comp=Z,130nm,9.6s						
MNK	Minsk	35.87	276	i P	P	03 25 21.8	-1.8
MNK				i		03 26 42.2	
MNK				i S	S	03 31 01.7	+0.9
MNK				i SS	SnSn	03 33 26.2	+2.9
MNK				pmax	pmax		
	comp=N,16nm,1.0s						
MNK				pmax	pmax		
	comp=E,20nm,1.0s						
MNK				pmax	pmax		
	comp=Z,18nm,1.1s						
MNK				MLR	MLR		
	comp=E,376nm,18.0s						
MNK				MLR	MLR		
	comp=N,477nm,21.0s						
MNK				MLR	MLR		
	comp=Z,130nm,10.0s						
AKTO	Aktyubinsk	36.46	244	LR	LR	03 41 40.1	
	comp=Z,244nm,18.1s,baz=26,slow=38						
AB31	Akbulak array	37.42	242		P	03 25 37.3	+0.4
ABKAR	Akbulak array	37.42	242	P	P	03 25 36.9	0.0
ABKAR				PcP	PcP	03 27 56.1	+0.9
MK31	Makanchi Array	37.91	217	ceP	P	03 25 39.3	-1.8
MKAR	Makanchi Array	37.91	217	P	P	03 25 40.7	-0.4
	comp=Z,5.7nm,0.8s,baz=1.2,slow=6.8,SNR=34						
	comp=Z,5.7nm,0.8s						
MKAR	Makanchi Array	37.91	217		P	03 25 40.9	-0.2
MKAR	Makanchi Array	37.91	217	P	P	03 25 40.9	-0.2
MAKZ	Makanchi	37.91	217		P	03 25 40.6	-0.5
MAKZ	Makanchi	37.91	217	P	P	03 25 40.6	-0.5
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BNX	BinXian	37.96	166	⇑P	P	03 25 41.8	+0.3
BNX				pmax	pmax		
	comp=Z,9.0nm,0.7s						
AKASG	Malin Array Be	39.45	274	P	P	03 25 53.5	-0.4
	comp=Z,1.6nm,0.6s,baz=14,slow=9.3,SNR=6.2						
AKASG				LR	LR	03 44 28.5	
	comp=Z,91nm,19.3s,baz=357,slow=40						
	comp=Z,1.6nm,0.6s						
AKASG	Malin Array Be	39.45	274	P	P	03 25 53.0	-0.9
AKBB	Malin Array Si	39.45	274	i P	P	03 25 52.3	-1.6
AKBB				pmax	pmax		
	comp=Z,5.0nm,1.1s						
USRK	Ussuriysk Ar.	39.65	161	P	P	03 25 55.7	0.0
	comp=Z,2.7nm,0.8s,baz=343,slow=7.5,SNR=3.6						
	comp=Z,2.7nm,0.8s						
CLL	Collm	40.69	290	eP	P	03 26 05.0	+0.8
CLL	Collm	40.69	290	eP	P	03 26 05.0	+0.8
STHS	Stebnicka Huta	41.63	281	eP	P	03 26 13.5	+1.5
STHS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
STHS	Stebnicka Huta	41.63	281	eP	P	03 26 13.5	+1.5
SCHQ	Schefferville	42.03	1	P	P	03 26 14.7	-0.5
	comp=Z,2.4nm,0.6s,baz=8.7,slow=13,SNR=1.3						
	comp=Z,2.4nm,0.6s						
SCHQ	Schefferville	42.03	1	P	P	03 26 15.1	-0.1
LANS	Liptovska Anna	42.10	283	eP	P	03 26 18.3	+2.4
LANS	Liptovska Anna	42.10	283	eP	P	03 26 18.2	+2.4
VRAC	Vranov	42.27	286	P	P	03 26 17.5	+0.3
	comp=Z,2.8nm,0.5s,baz=16,slow=9.0,SNR=5.4						
VRAC				LR	LR	03 45 21.9	
	comp=Z,69nm,19.0s,baz=350,slow=38						
	comp=Z,2.8nm,0.5s						
KK31	Karatay Array	42.51	229		P	03 26 19.1	-0.1
KK31	Karatay Array	42.51	229	P	P	03 26 19.1	-0.1
KK31				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KKAR	Karatay Array	42.51	229		P	03 26 18.5	-0.7
KKAR	Karatay Array	42.51	229	P	P	03 26 18.5	-0.7
AAK	Ala-Archa	42.63	225	P	P	03 26 20.4	0.0
AAK	Ala-Archa	42.63	225	ceP	P	03 26 19.6	-0.8
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HHC	Hu-ho-hao-te	42.67	184	eP	P	03 26 19.5	-1.2
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,120nm,4.6s						
HHC				LR	LR		
	comp=N,440nm,13.3s						
HHC				LR	LR		
	comp=E,1µm,16.3s						
HHC				LR	LR		
	comp=Z,1µm,15.3s						
GERES	GERESS Array B	43.05	288	P	P	03 26 25.0	+1.4
	comp=Z,1.7nm,0.8s,baz=15,slow=11,SNR=8.3						
	comp=Z,1.7nm,0.8s						
MODS	Modra-Piesok	43.11	285	eP	P	03 26 25.8	+1.7
MODS	Modra-Piesok	43.11	285	eP	P	03 26 25.8	+1.7
PSZ	Piszkesteto	43.27	282		P	03 26 25.3	-0.1
PSZ	Piszkesteto	43.27	282	P	P	03 26 25.3	-0.1
PSZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BJI	Beijing	43.47	178	P	P	03 26 27.6	+0.6
BJI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CONA	Conrad Observa	43.71	286	epP	pP	03 26 30.4	-0.5
	comp=Z,1.7nm,0.6s						
RONA	Rosalia, Austr	43.89	286	i pP	pP	03 26 32.5	+0.2
	comp=Z,1.0nm,0.4s						
GTA	Gaotai	44.35	197	eP	P	03 26 34.7	+0.4
GTA				sP	pwP	03 26 41.3	+0.7
GTA				PP	PcP	03 28 20.6	+2.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
KIV	Kislovodsk	44.54	259		P	03 26 36.4	+0.7
KIV				IAmb	IAmb	03 26 37.6	
	comp=Z,11nm,0.8s						
KIV	Kislovodsk	44.54	259	eP	P	03 26 34.3	-1.4
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KIV				MLR	MLR		
	comp=Z,120nm,16.0s						
LESA	Schwarzleotal	44.56	289	epP	pP	03 26 37.1	-0.6
	comp=Z,0.5nm,0.3s						
KBZ	Khabaz	44.74	258	P	P	03 26 39.0	+1.9
	comp=Z,4.7nm,0.9s,baz=338,slow=2.0,SNR=10						
	comp=Z,4.7nm,0.9s						
KBZ	Khabaz	44.74	258	ceP	P	03 26 37.1	0.0
KBZ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SHA1	Shidzhatmaz	44.76	259	ceP	P	03 26 35.8	-1.8
WTTA	Wattenberg	44.83	290	epP	pP	03 26 41.0	+1.0
	comp=Z,1.8nm,0.5s						
MLR	Muntele Rosu	44.96	276	P	P	03 26 41.0	+1.9
	comp=Z,6.2nm,1.0s,baz=106,slow=7.7,SNR=4.6						
	comp=Z,6.2nm,1.0s						
MLR	Muntele Rosu	44.96	276	IAmb	IAmb	03 26 41.9	
	comp=Z,14nm,1.3s						
MLR	Muntele Rosu	44.96	276	P	P	03 26 41.0	+1.9
SOKA	Soboth	45.04	286	epP	pP	03 26 40.9	-0.6
	comp=Z,1.6nm,0.7s						
ABTA	Abfaltersbach	45.25	289	epP	pP	03 26 43.0	-0.2
	comp=Z,2.7nm,0.8s						
OBKA	Obir	45.26	287	epP	pP	03 26 42.9	-0.3
	comp=Z,6.8nm,0.9s						
DAVOX	Davos/Dischmat	45.50	291	P	P	03 26 44.8	+1.3
	comp=Z,3.8nm,0.9s,baz=354,slow=9.6,SNR=4.2						
	comp=Z,3.8nm,0.9s						
KSH	Kashi	45.61	223	P	P	03 26 47.8	+3.5
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FUORN	Ofenpass-Fuorn	45.62	291		P	03 26 44.2	-0.2
FUORN				IAmb	IAmb	03 26 49.7	
	comp=Z,14nm,1.3s						
TUE	Stuetta	45.86	292		P	03 26 46.1	-0.2
HNS	HongShan	46.11	180	⇓P	P	03 26 48.4	+0.4
HNS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KSAR	Wonju Array Be	46.25	166		ScP	03 32 14.9	-2.2
NEW	Newport	46.29	47	LR	LR	03 48 04.9	
	comp=Z,99nm,18.7s,baz=329,slow=38						
AKT	Akhty	46.42	253	eP	P	03 26 51.5	+0.9
AKT				e		03 28 22.7	
AKT				pmax	pmax		
	comp=Z,16nm,0.7s						
CHGR	Chuyangaron	47.04	230	IAmb	IAmb	03 27 36.3	
	comp=Z,7.5nm,0.8s						
SHAA	Shahritus	48.22	231	IAmb	IAmb	03 27 06.5	
	comp=Z,22nm,1.3s						
G08A	Pilot Rock	49.08	49	IAmb	IAmb	03 27 19.0	
	comp=Z,7.3nm,1.2s						
XAN	Xi'an	49.50	186	eP	P	03 27 14.2	-0.2
BMO	Blue Mountains	49.66	47		P	03 27 16.4	+0.8
BMO	Blue Mountains	49.66	47	P	P	03 27 16.4	+0.8
BMO				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BR131	Keskin Array S	49.76	267		P	03 27 16.9	+0.4
BR131				IAmb	IAmb	03 27 18.6	
	comp=Z,6.2nm,0.9s						
BR131	Keskin Array S	49.76	267	P	P	03 27 16.9	+0.4
BR131				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRTR	Keskin Array B	49.76	267	P	P	03 27 18.0	+1.5
	comp=Z,2.6nm,0.8s,baz=16,slow=4.5,SNR=12						
BRTR				LR	LR	03 51 51.3	
	comp=Z,61nm,18.2s,baz=20,slow=40						
	comp=Z,2.6nm,0.8s						
BRTR	Keskin Array B	49.76	267	P	P	03 27 16.8	+0.3
ARPR	Arapgir-MALATY	49.84	262		P	03 27 17.4	+0.3
YNE	Yellowstone No	50.09	41	IAmb	IAmb	03 27 23.6	
	comp=Z,7.2nm,0.7s						
BCYI	Bear Canyon	50.52	44		P	03 27 22.5	+0.2
BCYI				IAmb	IAmb	03 27 34.7	
	comp=Z,7.3nm,1.1s						
J08A	Circle Bar Ran	51.04	49	IAmb	IAmb	03 27 29.7	
	comp=Z,9.2nm,1.0s						
KBL	Kabul	51.13	229	P	P	03 27 26.5	-0.5
KBL				IAmb	IAmb	03 27 29.1	
	comp=Z,7.5nm,1.0s						
KBL	Kabul	51.13	229	P	P	03 27 26.5	-0.5
KBL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MARD	Mardin	51.32	259	IAmb	IAmb	03 27 31.0	
	comp=Z,8.7nm,1.0s						
RSSD	Black Hills	51.40	35		P	03 27 28.9	0.0

RSSD	Black Hills	51.40	35	P	P	03 27 28.9	0.0
RSSD				pmax	pmax		
	comp=Z,23nm,1.5s						
NJ2	Nanjing	51.46	176	*e*P	P	03 27 29.0	-0.2
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
NIL	Nilore	51.66	225		P	03 27 30.9	+0.2
NIL	Nilore	51.66	225	P	P	03 27 30.9	+0.2
NIL				pmax	pmax		
	comp=Z,21nm,1.1s						
PDAR	Pinedale Array	52.36	41	P	P	03 27 36.5	+0.4
	comp=Z,0.4nm,0.6s,baz=20,slow=3.7,SNR=4.7						
	comp=Z,0.4nm,0.6s						
PDAR	Pinedale Array	52.36	41	P	P	03 27 35.9	-0.2
HWUT	Hardware Ranch	53.35	43	IAmb	IAmb	03 27 46.0	
	comp=Z,14nm,1.4s						
ESDC	Sonseca Array	53.96	303	P	P	03 27 48.8	+1.1
	comp=Z,1.7nm,0.9s,baz=6.5,slow=7.6,SNR=6.0						
	comp=Z,1.7nm,0.9s						
ESDC	Sonseca Array	53.96	303	P	P	03 27 47.8	+0.1
BEKR	Beckworth	54.34	51	IAmb	IAmb	03 27 52.9	
	comp=Z,13nm,1.4s						
RDMU	Red Mountain	54.54	41	IAmb	IAmb	03 27 53.4	
	comp=Z,7.1nm,1.2s						
DUG	Dugway, Tooele	54.66	44	IAmb	IAmb	03 27 55.0	
	comp=Z,7.4nm,1.3s						
SPR3	Spring Creek 3	55.72	46	IAmb	IAmb	03 28 04.1	
	comp=Z,10nm,1.3s						
RYN	Ryan	55.73	50	IAmb	IAmb	03 28 10.5	
	comp=Z,7.9nm,1.2s						
SRU	San Rafael Swe	55.91	42	IAmb	IAmb	03 28 04.9	
	comp=Z,6.7nm,1.2s						
NVAR	Mina Array Bea	55.95	49	P	P	03 28 03.7	+1.5
	comp=Z,0.9nm,0.8s,baz=5.6,slow=6.1,SNR=5.2						
	comp=Z,0.9nm,0.8s						
NVAR	Mina Array Bea	55.95	49	P	P	03 28 02.3	+0.1
Q16A	Castle Valley	56.06	43	IAmb	IAmb	03 28 06.3	
	comp=Z,12nm,1.1s						
MMAI	Mount Meron Ar	56.18	264	LR	LR	03 54 38.2	
	comp=Z,45nm,18.3s,baz=5.5,slow=39						
PSUT	Pine Spring	56.22	45	IAmb	IAmb	03 28 06.7	
	comp=Z,9.1nm,1.1s						
TCRU	Three Creeks R	56.26	44	IAmb	IAmb	03 28 22.5	
	comp=Z,10nm,1.1s						
KEST	Kesra	56.48	290	P	P	03 28 07.4	+1.4
	comp=Z,18nm,0.8s,baz=358,slow=3.0,SNR=12						
	comp=Z,18nm,0.8s						
PV04	Paradox Valley	56.75	41	IAmb	IAmb	03 28 11.2	
	comp=Z,8.8nm,1.4s						
PV15	Paradox Valley	56.84	40	IAmb	IAmb	03 28 10.2	
	comp=Z,9.7nm,1.0s						
MTPU	Mount Pierson	56.85	44	IAmb	IAmb	03 28 12.3	
	comp=Z,10.0nm,1.3s						
PV03	Paradox Valley	56.90	40	IAmb	IAmb	03 28 10.8	
	comp=Z,12nm,1.3s						
PZH	PanZhiHua	57.16	194	P	P	03 28 12.7	+1.8
SDCO	Great Sand Dun	57.65	37	IAmb	IAmb	03 28 16.2	
	comp=Z,7.1nm,1.1s						
MVCO	Mesa Verde	57.96	40	IAmb	IAmb	03 28 19.0	
	comp=Z,10nm,1.0s						
GWY	Greenwater Val	58.31	48	IAmb	IAmb	03 28 21.4	
	comp=Z,7.1nm,1.0s						
CLC	China Lake	58.60	49	IAmb	IAmb	03 28 22.9	
	comp=Z,5.1nm,1.0s						
WSHM	Spangler Hills	58.82	49	IAmb	IAmb	03 28 24.8	
	comp=Z,5.7nm,1.2s						
RTBA	Rita Blanca	59.13	35		P	03 28 24.5	-0.1
MWC	Mount Wilson	60.14	50	P	P	03 28 31.7	+0.1
MWC	Mount Wilson	60.14	50	P	P	03 28 31.7	+0.1
MWC				pmax	pmax		
	comp=Z,23nm,1.3s						
ANMO	Albuquerque	60.36	39	LR	LR	03 54 26.9	
	comp=Z,78nm,21.7s,baz=20,slow=36						
ANMO	Albuquerque	60.36	39		P	03 28 32.4	-0.8
ANMO				IAmb	IAmb	03 28 34.0	
	comp=Z,6.9nm,1.1s						
ANMO	Albuquerque	60.36	39	P	P	03 28 32.4	-0.8
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TASM	ASL Pad, Albuq	60.36	39	IAmb	IAmb	03 28 34.0	
	comp=Z,7.9nm,1.1s						
TASM	ASL Pad, Albuq	60.36	39	IAmb	IAmb	03 28 34.1	
	comp=Z,8.7nm,1.2s						
TASM	ASL Pad, Albuq	60.36	39	IAmb	IAmb	03 28 34.1	
	comp=Z,8.2nm,1.1s						
TASM	ASL Pad, Albuq	60.36	39	IAmb	IAmb	03 28 34.1	
	comp=Z,7.1nm,1.0s						
ABQ	Albuquerque	60.36	39	IAmb	IAmb	03 28 34.1	
	comp=Z,7.6nm,1.1s						
X16A	Lo Mia Camp, P	60.51	43		P	03 28 34.7	+0.6
X16A				IAmb	IAmb	03 28 36.3	
	comp=Z,6.6nm,1.3s						
X18A	Snowflake	60.51	42	IAmb	IAmb	03 28 36.0	
	comp=Z,9.3nm,1.1s						
Y14A	Wickenburg	60.85	45	IAmb	IAmb	03 28 38.0	
	comp=Z,5.4nm,1.0s						
WMOK	Wichita Mounta	61.08	31		P	03 28 37.8	0.0
WMOK	Wichita Mounta	61.08	31	P	P	03 28 37.8	0.0
WMOK				pmax	pmax		
	comp=Z,24nm,1.4s						
121A	Cookes Peak, D	62.66	40	IAmb	IAmb	03 28 49.9	
	comp=Z,6.8nm,0.9s						
MNTX	Cornudas Mount	63.66	38	IAmb	IAmb	03 28 55.6	
	comp=Z,5.0nm,1.0s						
MNHN	Monahans	64.20	35	IAmb	IAmb	03 28 59.0	
	comp=Z,10nm,1.3s						
RAYN	Ar Rayn	64.42	252		P	03 29 00.2	0.0
RAYN				IAmb	IAmb	03 29 01.7	
	comp=Z,4.4nm,0.8s						
RAYN	Ar Rayn	64.42	252	P	P	03 29 00.2	0.0
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMAR	Chiang Mai Arr	65.25	197	P	P	03 29 05.5	-0.2
	comp=Z,1.1nm,0.3s,baz=10,slow=8.4,SNR=5.3						
	comp=Z,1.1nm,0.3s						
CMAR	Chiang Mai Arr	65.25	197	P	P	03 29 05.2	-0.4
SAND	Sanderson	65.62	35	IAmb	IAmb	03 29 15.4	
	comp=Z,7.0nm,1.0s						
TXAR	Lajitas Array	66.13	36	P	P	03 29 10.8	-0.5
	comp=Z,2.7nm,0.6s,baz=357,slow=4.6,SNR=36						
	comp=Z,2.7nm,0.6s						
DBIC	Dimbokro	86.71	300	P	P	03 31 08.4	+0.5
	comp=Z,3.2nm,0.8s,baz=1.7,slow=2.2,SNR=4.3						
	comp=Z,3.2nm,0.8s						
DBIC	Dimbokro	86.71	300	P	P	03 31 07.9	-0.1
DBIC				IAmb	IAmb	03 31 16.5	
	comp=Z,7.4nm,1.1s						
KAPI	Kappang	88.33	175	P	P	03 31 16.5	+0.9
KAPI	Kappang	88.33	175	P	P	03 31 16.5	+0.9
KAPI				pmax	pmax		
	comp=Z,12nm,0.5s						
TAOE	Nuku Hiva Isla	100.47	76	*e*LR	LR	04 04 52.8	
	comp=Z,114nm,25.1s						
PPT2	Papeete2	108.01	87	*e*LR	LR	04 08 24.6	
	comp=Z,85nm,22.8s						
PPT2				*e*LR	LR	04 08 29.9	
	comp=Z,92nm,26.8s						
TBI	Tubuai	113.71	87	*e*LR	LR	04 10 56.3	
	comp=Z,468nm,25.0s						

ROM 12 03:24:26.0±0.1**,42°.607N**±0°.004×**13°.161E**±0°.004**,**
h13^{km},ML1.5/16**,Error ellipse: s-maj=0.4km**
s-min=0.3km az=14.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNSS	Leonessa	0.09	267	P	Pg	03 24 29.2	+0.2
LNSS				S	Sg	03 24 31.2	+0.2
LNSS				AML	AML		
	comp=E,488µm,0.2s						
LNSS				AML	AML		
	comp=N,380µm,0.4s						
LNSS				AML	AML		
	comp=E,488µm,0.1s						
LNSS				AML	AML		
	comp=N,380µm,0.4s						
LNSS				AML	AML		
	comp=E,470µm,0.1s						
LNSS				AML	AML		
	comp=N,428µm,1.3s						
LNSS				AML	AML		
	comp=N,428µm,0.7s						
RM33	Pellescritta (	0.11	158	P	Pg	03 24 29.5	+0.3
RM33				S	Sg	03 24 31.7	+0.4
RM33				AML	AML		
	comp=N,484µm,0.2s						
RM33				AML	AML		
	comp=E,356µm,1.5s						
RM33				AML	AML		
	comp=E,236µm,1.5s						
RM33				AML	AML		
	comp=N,484µm,0.2s						
RM33				AML	AML		
	comp=N,478µm,0.2s						
RM33				AML	AML		
	comp=E,236µm,0.5s						
RM33				AML	AML		
	comp=E,356µm,0.5s						
SMA1	SAN MARTINO	0.13	80	P	Pb	03 24 30.0	-0.5
SMA1				S	Sg	03 24 32.7	+0.7
SMA1				AML	AML		
	comp=N,241µm,0.3s						
SMA1				AML	AML		
	comp=E,772µm,0.3s						
CAMP	Campotosto	0.20	111	P	Pg	03 24 30.9	+0.4
CAMP				S	Sg	03 24 34.2	+0.7
MTRA	Matera	0.23	49	P	Pg	03 24 31.3	+0.3
MTRA				S	Sg	03 24 35.0	+0.6
MTRA				AML	AML		
	comp=E,121µm,0.3s						
MTRA				AML	AML		
	comp=N,156µm,1.1s						
NRCA	Norcia	0.23	351	P	Pg	03 24 31.2	+0.2
NRCA				S	Sg	03 24 35.0	+0.6
NRCA				AML	AML		
	comp=N,72µm,1.2s						
NRCA				AML	AML		
	comp=E,148µm,0.1s						
ARRO	Arrone	0.29	265	P	Pg	03 24 32.4	+0.3
ARRO				S	Sg	03 24 37.0	+0.9
MMO1	Montemonaco	0.32	23	P	Pg	03 24 32.9	+0.3
MMO1				S	Sb	03 24 38.0	-0.8
TERO	Teramo	0.33	87	P	Pg	03 24 33.0	+0.2
TERO				S	Sg	03 24 37.8	+0.6
TERO				AML	AML		
	comp=E,51µm,0.7s						
TERO				AML	AML		
	comp=N,66µm,1.5s						
FDMO	Fiordimonte	0.43	353	P	Pb	03 24 35.3	-0.3
FDMO				S	Sb	03 24 41.4	-0.7
MF5	Montefalcone A	0.44	30	P	Pb	03 24 35.5	-0.3
MNTT	Montottone	0.56	35	P	Pb	03 24 37.5	-0.2

AFAD ***12*** *03:26:01.3, 34°.82N×25°.70E, h7^{km}±5^{km}, ML3.2*
IDC ***12*** *03:26:04.1±1.4, 35°.11N×26°.47E, h0^{km}, mb4.0/5, mbtmp3.9/7, ML3.9/2, Error ellipse: s-maj=37.8km s-min=11.7km az=3.0*
ISK ***12*** *03:26:08.4, 35°.23N×26°.31E, h4^{km}, ML3.1/25*
THE ***12*** *03:26:09.7, 35°N±3°×2°6E±°, h3^{km}±3^{km}, M3.4/12, MLh3.4/12*
ATH ***12*** *03:26:09.5, 35°.17N×26°.29E, h12^{km}±1^{km}, ML3.5/6, Manual Solution by A.Papageorgiou First location: 2019/12/12 03:27:20, This location: 2019/12/12 04:10:44 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 0 km*
ISC 12 03:26:08.2±0.8**,35°.12N**±0°.04×**26°.33E**±0°.02**,h17**^{km}±4^{km}**,**
n87,σ1^{s}.**68**/121**,mb3.9**/5**,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.09	270	P	Pg	03 26 11.5	-0.2
ZKR	Zakros	0.09	270	Pg	Pg	03 26 11.5	-0.2
ZKR				Sg	Sg	03 26 15.1	+1.1
ZKR	Zakros	0.09	270	P	Pg	03 26 11.5	-0.2
ZKR				S	Sg	03 26 14.1	0.0
SIT2	Siteia	0.20	297	P	Pg	03 26 13.2	+0.1
SIT2				S	Sg	03 26 16.8	+0.5
KSS1	Kassos Island	0.57	58	P	Pg	03 26 20.8	+1.2
KSS1				S	Sg	03 26 29.0	+1.8
NPS	Neapolis	0.60	284	P	Pg	03 26 19.6	-0.6
NPS				S	Sg	03 26 27.9	-0.3
NPS	Neapolis	0.60	284	P	Pg	03 26 19.9	-0.3
NPS				S	Sg	03 26 28.2	0.0
IACM	Heraklion	1.05	281	P	Pb	03 26 28.9	+1.1
IACM				S	Sg	03 26 41.8	-0.4
IACM	Heraklion	1.05	281	P	Pb	03 26 28.4	+0.5
IACM				S	Sb	03 26 42.1	+0.9
IDI	Anoyia	1.19	279	Pg	Pb	03 26 29.2	-1.1
	11nm,0.3s,baz=152,slow=11,SNR=123						
IDI				Lg	Lg	03 26 47.1	
	122nm,0.3s,baz=343,slow=19,SNR=16						
IDI	Anoyia	1.19	279	P	Pb	03 26 29.2	-1.1
IDI				S	Sn	03 26 47.6	+1.7
IDI	Anoyia	1.19	279	Pn	Pb	03 26 30.1	-0.2
IDI				Sn	Sn	03 26 47.9	+2.0
IDI	Anoyia	1.19	279	P	Pb	03 26 30.9	+0.6
IDI				S	Sb	03 26 46.2	+0.7
ASTA	Astypalaia	1.43	1	P	Pn	03 26 34.5	+1.2
ASTA				S	Sn	03 26 52.7	+1.1
THERA	Ancient Thera,	1.43	331	P	Pn	03 26 34.4	+1.1
THERA				S	Sg	03 26 53.7	-0.6
THERA	Ancient Thera,	1.43	331	P	Pn	03 26 34.6	+1.2
THERA				S	Sb	03 26 52.4	+0.2
THR6	Thira Island,	1.45	329	P	Pb	03 26 35.5	+0.7
THR6	Thira Island,	1.45	329	P	Pb	03 26 35.4	+0.7
THR8	Santorini-Mono	1.46	332	P	Pn	03 26 35.1	+1.3
THR8	Santorini-Mono	1.46	332	P	Pn	03 26 34.7	+0.9
THRA	Thira	1.49	331	P	Pn	03 26 35.4	+1.3
SNT5	Nea Kammeni, S	1.49	330	P	Pb	03 26 35.8	+0.4
SNT5	Nea Kammeni, S	1.49	330	P	Pn	03 26 35.4	+1.3
THR3	Thira Island,	1.50	330	P	Pn	03 26 35.7	+1.5
THR3	Thira Island,	1.50	330	P	Pn	03 26 35.4	+1.2
THR2	Thira island,	1.51	332	P	Pn	03 26 36.1	+1.6
THR2	Thira island,	1.51	332	P	Pn	03 26 35.8	+1.3
SAP3	Santorini-Thir	1.54	329	P	Pn	03 26 36.2	+1.4
SAP3				S	Sb	03 26 55.7	+0.2
SAP3	Santorini-Thir	1.54	329	P	Pn	03 26 36.0	+1.1
SAP3				S	Sb	03 26 56.4	+0.9
NISR	Nisiros	1.63	23	P	Pn	03 26 38.1	+2.1
NISR				S	Sb	03 26 59.5	+1.5
NISR	Nisiros	1.63	23	P	Pn	03 26 37.7	+1.7
VAM	Vamos	1.77	280	P	Pn	03 26 39.6	+1.7
VAM				S	Sn	03 27 01.7	+1.7
VAM	Vamos	1.77	280	P	Pn	03 26 39.3	+1.3
VAM				S	Sn	03 27 01.9	+1.9
YAZI	Mula-Dat§a-	1.81	30	P	Pn	03 26 39.4	+0.8
ARG	Arkhangelos	1.83	53	P	Pn	03 26 41.4	+2.5
ARG				S	Sb	03 27 06.1	+2.3
ARG	Arkhangelos	1.83	53	Pn	Pn	03 26 40.9	+2.1
ARG				Sn	Sn	03 27 04.6	+3.0
ARG	Arkhangelos	1.83	53	P	Pn	03 26 40.8	+1.9
ARG				S	Sn	03 27 04.3	+2.7
GVD	Gavdhos	1.86	262	P	Pb	03 26 42.2	+0.4
GVD				S	Sb	03 27 06.1	+1.5
GVD	Gavdhos	1.86	262	Pn	Pb	03 26 42.1	+0.4
GVD	Gavdhos	1.86	262	P	Pn	03 26 41.3	+2.1
GVD				S	Sn	03 27 04.1	+1.7
DAT	Datca	1.90	32	Pn	Pn	03 26 41.5	+1.5
CHAN	Chania	1.91	283	P	Pn	03 26 42.5	+2.5
CHAN				S	Sn	03 27 05.6	+2.1
CHAN	Chania	1.91	283	P	Pn	03 26 41.7	+1.8
CHAN				S	Sn	03 27 05.4	+1.8
APE	Apeiranthos	2.05	342	P	Pn	03 26 43.5	+1.6
APE				S	Sb	03 27 10.6	+0.3
APE	Apeiranthos	2.05	342	Pn	Pn	03 26 43.1	+1.1
APE	Apeiranthos	2.05	342	P	Pn	03 26 43.4	+1.4
BODT	Bodrum	2.10	22	Pn	Pn	03 26 44.3	+1.7
BDRM	Kayabasi	2.15	25	P	Pn	03 26 45.4	+2.2
TURN	Turunc	2.27	43	P	Pn	03 26 47.0	+2.1
TURN				S	Sg	03 27 20.9	-0.4
TURN				*i* IAML		03 27 25.0	
	comp=N,120nm,0.4s						
TURN				*i* IAML		03 27 32.0	
	comp=E,105nm,0.3s						
MLSB	Milas	2.47	28	Pn	Pn	03 26 49.6	+1.9
DALY	Dalyan (Mula)	2.54	47	Pn	Pn	03 26 50.6	+2.1
YER	Yerkesik	2.56	38	Pn	Pn	03 26 51.0	+2.0
SMG	Samos	2.62	9	P	Pn	03 26 51.2	+1.5
GCAM	G?zelcaml?	2.68	16	P	Pb	03 26 55.2	-0.5
GCAM				S	Sn	03 27 24.3	+1.7
IZZE	Mula-Seydike	2.70	60	P	Pn	03 26 51.6	+0.8
IZZE				S	Sn	03 27 22.3	-0.7
IZZE				*i* IAML		03 27 35.0	
	comp=E,93nm,0.4s						
IZZE				*i* IAML		03 27 37.0	
	comp=N,130nm,0.4s						
CAME	Cameli-Denizli	3.02	52	Pn	Pn	03 26 57.1	+1.7
DNZT	Denizli-Tavas-	3.07	45	P	Pn	03 26 58.0	+2.0
DNZT				S	Sb	03 27 41.7	+2.1
DNZT				*i* IAML		03 27 55.0	
	comp=E,54nm,0.6s						
DNZT				*i* IAML		03 27 57.0	
	comp=N,56nm,0.7s						
AYDB	Zeytinkoy-Aydi	3.09	24	Pn	Pn	03 26 58.6	+2.3
ESEN	Aydn-Nazilli	3.13	31	P	Pn	03 26 59.6	+2.9
TAVA	DENIZLI_Tavas	3.14	41	P	Pn	03 26 58.8	+1.8
TAVA				S	Sb	03 27 42.8	+1.2
CAEL	Denizli, Camel	3.14	50	P	Pn	03 26 58.8	+1.8
CAEL				S	Sg	03 27 47.8	-1.4
KNIK	Mula-Seydike	3.15	56	P	Pn	03 26 58.1	+1.1
NAZL	Nazilli-Aydin	3.25	29	Pn	Pn	03 27 00.9	+2.5
CHOS	Chios island	3.27	356	Pn	Pn	03 27 00.6	+1.9
CHOS	Chios island	3.27	356	P	Pn	03 27 00.1	+1.4
IZMR	zmir-demi	3.29	23	P	Pn	03 27 00.5	+1.7
BLCB	Balcova	3.31	10	Pn	Pn	03 27 01.1	+1.9
DNIZ	Denizli-Tavas-	3.33	40	P	Pn	03 27 01.9	+2.4
DNIZ				S	Sb	03 27 45.9	-1.1
ELL	Elmali	3.33	60	Pn	Pn	03 27 01.2	+1.6
APMY	Acipayam-Deniz	3.36	45	Pn	Pn	03 27 01.7	+1.7
ODEM	Odemis-Izmir	3.45	23	Pn	Pn	03 27 03.3	+2.1
KIRA	zmir-Kiraz	3.50	28	P	Pn	03 27 04.6	+2.7
INCE	Denizli-Bozkur	3.68	44	P	Pn	03 27 05.7	+1.3
INCE				*i* IAML		03 28 12.0	
	comp=N,35nm,0.7s						
INCE				*i* IAML		03 28 13.0	
	comp=E,40nm,1.3s						
MANT	Manisa	3.81	27	P	Pn	03 27 09.0	+2.6
MANT				S	Sn	03 27 53.6	+2.7
KULA	Kula-Manisa	3.87	28	Pn	Pn	03 27 09.4	+2.4
GORD	Gordes-Manisa	4.07	21	Pn	Pn	03 27 11.9	+2.3
SIGR	SIGRI	4.11	355	Pn	Pn	03 27 12.3	+2.2
ITM	Ithomi	4.11	301	Pn	Pn	03 27 13.0	+2.7
YAYO	Edremit-Balk	4.53	7	Pn	Pn	03 27 18.4	+2.5
EZN	Ezine	4.70	360	Pn	Pn	03 27 20.9	+2.6
MMAI	Mount Meron Ar	7.82	103	Pn	Pn	03 27 58.1	-3.0
	2.5nm,0.3s,baz=272,slow=11,SNR=7.7						
MMAI				Sn	Sn	03 29 25.3	-4.0
	2.4nm,0.3s,baz=304,slow=29,SNR=5.5						
	1.1nm,0.3s						
EIL	Elat	9.09	124	Pn	Pn	03 28 14.5	-4.0
	1.0nm,0.3s,baz=311,slow=3.0,SNR=39						
	3.8nm,0.5s						
ESDC	Sonseca Array	24.43	290	P	P	03 31 24.3	-1.7
	0.8nm,0.5s,baz=83,slow=9.2,SNR=9.3						
	0.8nm,0.5s						
ARCES	ARCESS Array B	34.48	359	P	P	03 32 52.3	-2.4
	2.7nm,0.8s,baz=176,slow=8.5,SNR=5.0						
	2.7nm,0.8s						
KURBB	Kurchatov Arra	40.41	51	P	P	03 33 43.1	-2.0
	2.1nm,0.2s,baz=277,slow=8.8,SNR=5.0						
	2.1nm,0.2s						
MKAR	Makanchi Array	43.00	57	P	P	03 34 05.1	-1.4
	0.3nm,0.3s,baz=269,slow=8.4,SNR=5.5						
	0.3nm,0.3s						
ZALV	Zalesovo Beam	44.34	46	P	P	03 34 15.8	-1.4
	0.8nm,0.4s,baz=272,slow=6.9,SNR=3.9						
	0.8nm,0.4s						

SOME ***12*** *03:31:30.8, 41°.62N×72°.62E, h10^{km}*
KRNET ***12*** *03:31:30.4±0.1, 41°.61N×72°.65E, h18^{km}, mb3.3*
NNC ***12*** *03:31:32.5±1.2, 41°.69N×72°.64E, h0^{km}, mb3.7, mpv3.6, Error ellipse: s-maj=11.5km s-min=4.0km az=172.0*
KNET ***12*** *03:31:33.3±0.4, 41°.72N×72°.80E, h2^{km}±2^{km}, ml2.9, Error ellipse: s-maj=5.2km s-min=2.7km az=128.0*
ISC 12 03:31:30.8±1.1**,41°.61N**±0°.02×**72°.65E**±0°.02**,h3**^{km}±9^{km}**,**
n64,σ1^{s}.**41**/115**,40C-26D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.37	138	⇑*e*P	Pg	03 31 38.2	+0.2
ARSB				⇑*e*S	Sg	03 31 43.5	+0.6
ARK	Arkit	0.55	291	⇓*i*P	Pg	03 31 41.0	-0.4
ARK				⇓*i*S	Sg	03 31 48.7	+0.1
MNAS	Manas	0.89	353	⇑*i*P	Pg	03 31 47.4	-0.4
MNAS				⇑*i*S	Sb	03 31 59.3	-2.0
OHH	Osh	1.08	175	⇑*i*P	Pb	03 31 50.5	-1.7
OHH				⇑*i*S	Sb	03 32 05.2	-1.6
SALK	Salom-Alik	1.14	129	⇑*e*P	Pb	03 31 51.3	-1.9
SALK				⇑*e*S	Sb	03 32 07.2	-1.2
TRKS	Terek-Say	1.14	267	⇑*i*P	Pb	03 31 51.3	-1.9
TRKS				⇑*i*S	Sg	03 32 06.5	-0.8
MRKS	Merke	1.22	20	P	Pb	03 31 53.6	-0.9
	8.6nm,0.3s						
MRKS				S	Sn	03 32 09.9	-2.0
	64nm,0.2s						
MRKS	Merke	1.22	20	*e*P	Pb	03 31 53.6	-0.9
	4.0nm,0.1s						
MRKS				*e*S	Sn	03 32 09.9	-2.0
	44nm,0.1s						
ARLS	Aral	1.28	78	⇑*i*P	Pn	03 31 54.1	-1.6
ARLS				⇑*i*S	Sb	03 32 11.5	-0.9
EKS2	Erkin-Say	1.35	38	⇑P	Pn	03 31 55.9	-0.7
	8.8nm,0.1s,SNR=16						
EKS2				⇑S	Sn	03 32 14.6	-0.5
	29nm,0.2s						
EKS2	Erkin-Say	1.35	38	⇑*i*P	Pn	03 31 55.4	-1.2
EKS2				⇑*i*S	Sb	03 32 13.5	-0.9
UCH	Uchtor	1.52	65	⇑P	Pn	03 31 59.9	+0.6
	18nm,0.1s,SNR=27						
UCH				⇓S	Sg	03 32 20.6	+0.9
	67nm,0.2s						
UCH	Uchtor	1.52	65	⇑*i*P	Pn	03 31 58.6	-0.7
UCH				⇑*i*S	Sn	03 32 19.3	-0.5
DZA	Taraz	1.62	323	P	Pg	03 32 03.4	+1.6
	119nm,0.1s						
DZA				S	Sg	03 32 26.5	+3.7
	436nm,0.4s						
DZA	Taraz	1.62	323	*e*P	Pn	03 31 59.7	-0.5
	93nm,0.1s						
DZA				*e*S	Sn	03 32 20.2	-1.4
	99nm,0.1s						
AAK	Ala-Archa	1.71	52	⇑P	Pb	03 32 03.0	0.0
	18nm,0.2s,SNR=32						
AAK				⇑S	Sg	03 32 25.5	-0.4
	38nm,0.2s						
AAK	Ala-Archa	1.71	52	⇑*i*P	Pn	03 32 02.0	+0.3
AAK				⇑*i*S	Sb	03 32 24.8	-0.3
AAK	Ala-Archa	1.71	52	⇓P	Pb	03 32 03.8	+0.8
	4.1nm,0.4s						
AAK				⇑S	Sg	03 32 29.5	+3.6
	5.4nm,0.4s						
SFK	Sufi-Kurgan	1.72	158	⇓*i*P	Pn	03 32 01.9	+0.1
SFK				⇓*i*S	Sn	03 32 24.8	+0.5
FRU1	Bishkek	1.90	50	⇓*i*P	Pn	03 32 04.9	+0.7
FRU1				⇓*i*S	Sb	03 32 30.1	-0.2
KBK	Karagaybulak	2.00	58	⇓P	Pb	03 32 08.6	+0.6
	21nm,0.2s,SNR=26						
KBK				⇓S	Sg	03 32 35.6	+0.4
	83nm,0.2s						
KBK	Karagaybulak	2.00	58	⇓*i*P	Pn	03 32 06.3	+0.6
KBK				⇓*i*S	Sb	03 32 32.5	-0.9
IUG	Iuzhnay	2.03	286	Pg	Pb	03 32 09.1	+0.7
	78nm,0.2s						
IUG				Lg	Lg	03 32 36.3	
	370nm,0.4s						
CHMS	Chumysh	2.09	47	⇓P	Pb	03 32 09.8	+0.5
	9.9nm,0.2s,SNR=10						
CHMS				⇑S	Sg	03 32 37.5	-0.4
	146nm,0.6s						
CHMS	Chumysh	2.09	47	⇑*i*P	Pn	03 32 07.3	+0.6
CHMS				⇑*i*S	Sb	03 32 34.4	-1.3
USP	Ospenovka	2.15	39	⇓P	Pb	03 32 10.3	-0.1
	14nm,0.2s,SNR=53						
USP				⇓S	Sg	03 32 39.0	-0.9
	35nm,0.2s						
USP	Ospenovka	2.15	39	⇓*i*P	Pn	03 32 08.4	+0.8
USP				⇓*i*S	Sb	03 32 35.9	-1.6
KK31	Karatay Array	2.18	314	⇓P	Pb	03 32 10.2	-0.8
	4.1nm,0.2s,baz=128,slow=15,SNR=142						
KK31				⇑S	Sg	03 32 40.3	-0.6
	12nm,0.2s,baz=135,slow=28,SNR=12						
DRK	Karamyk	2.22	197	⇑*i*P	Pn	03 32 09.5	+0.8
DRK				⇑*i*S	Sn	03 32 37.9	+1.1
JNKS	Jany-Kuch	2.33	103	⇑*e*P	Pn	03 32 10.7	+0.5
JNKS				⇑*e*S	Sn	03 32 40.4	+1.0
SGDS	Sogindy	2.35	38	Pg	Pb	03 32 13.8	0.0
	17nm,0.3s						

SGDS				Lg	Lg	03 32 45.0	
	78nm,0.3s						
CHM	**Chimkent**	**2.38**	**288**	*e*P	**Pb**	**03 32 14.3**	**0.0**
	45nm,0.1s						
CHM				*e*S	**Sb**	**03 32 45.3**	**+1.1**
	91nm,0.4s						
BRLS	**Borolday**	**2.53**	**305**	Pg	**Pb**	**03 32 16.8**	**0.0**
	16nm,0.5s						
BRLS				Lg	Lg	03 32 49.8	
	92nm,0.5s						
BRLS	**Borolday**	**2.53**	**305**	*e*P	**Pb**	**03 32 16.8**	**0.0**
	7.6nm,0.2s						
BRLS				*e*S	**Sb**	**03 32 49.8**	**+1.5**
	68nm,0.1s						
TKM2	**Tokmak 2**	**2.55**	**58**	⇑P	**Pb**	**03 32 16.7**	**-0.6**
	21nm,0.2s,SNR=38						
TKM2				⇑S	**Sb**	**03 32 49.9**	**+0.8**
	67nm,0.3s						
TKM2	**Tokmak 2**	**2.55**	**58**	⇓*i*P	**Pn**	**03 32 14.1**	**+0.9**
TKM2				⇓*i*S	**Sn**	**03 32 45.8**	**+0.9**
BOOM	**Boomskoye usch**	**2.60**	**69**	⇓*i*P	**Pn**	**03 32 14.8**	**+0.9**
BOOM				⇓*i*S	**Sn**	**03 32 47.1**	**+1.0**
ULHL	**Ulahol**	**2.75**	**75**	⇑*i*P	**Pn**	**03 32 16.9**	**+0.9**
ULHL				⇑*i*S	**Sn**	**03 32 50.7**	**+0.8**
DGS	**Degeres**	**2.83**	**54**	Pg	**Pb**	**03 32 22.8**	**+0.8**
	12nm,0.6s						
DGS				Lg	Lg	03 33 00.1	
	74nm,0.9s						
DGS	**Degeres**	**2.83**	**54**	*e*P	**Pb**	**03 32 22.8**	**+0.8**
	12nm,0.6s						
DGS				*e*S	**Sg**	**03 33 00.1**	**-1.6**
	74nm,0.9s						
KRBS	**Karabastau**	**3.06**	**46**	Pg	**Pb**	**03 32 25.9**	**0.0**
	3.8nm,0.3s						
KRBS				Lg	Lg	03 33 05.1	
	18nm,0.5s						
KRBS	**Karabastau**	**3.06**	**46**	*e*P	**Pb**	**03 32 25.9**	**0.0**
	3.8nm,0.3s						
KRBS				*e*S	**Sb**	**03 33 05.1**	**+1.6**
	18nm,0.5s						
GAR	**Garm**	**3.16**	**215**	⇓*i*P	**Pn**	**03 32 22.4**	**+0.9**
GAR				⇓*i*S	**Sn**	**03 33 00.2**	**+0.5**
MTBS	**Maitube**	**3.19**	**60**	Pg	**Pb**	**03 32 29.5**	**+1.4**
	4.2nm,0.2s						
MTBS				Lg	Lg	03 33 11.6	
	21nm,0.5s						
MTBS	**Maitube**	**3.19**	**60**	*e*P	**Pb**	**03 32 29.5**	**+1.4**
	4.2nm,0.2s						
MTBS				*e*S	**Sg**	**03 33 11.6**	**-1.5**
	21nm,0.5s						
IZV	**Izvestkoviy**	**3.27**	**63**	Pg	**Pb**	**03 32 30.9**	**+1.4**
	6.6nm,0.3s						
IZV				Lg	Lg	03 33 13.7	
	20nm,0.5s						
IZV	**Izvestkoviy**	**3.27**	**63**	*e*P	**Pb**	**03 32 30.9**	**+1.4**
	6.6nm,0.3s						
IZV				*e*S	**Sg**	**03 33 13.7**	**-2.0**
	20nm,0.5s						
KDJ	**Kajisay**	**3.42**	**80**	⇑*e*P	**Pn**	**03 32 26.3**	**+1.1**
KDJ				⇑*i*S	**Sn**	**03 33 07.0**	**+0.7**
TNSS	**Tian-Shan**	**3.49**	**64**	Pg	**Pb**	**03 32 34.8**	**+1.4**
	0.8nm,0.2s						
TNSS				Lg	Lg	03 33 20.8	
	3.7nm,0.6s						
TNSS	**Tian-Shan**	**3.49**	**64**	*e*P	**Pb**	**03 32 34.8**	**+1.4**
	0.8nm,0.2s						
TNSS				*e*S	**Sg**	**03 33 20.8**	**-2.2**
	3.7nm,0.6s						
KUU	**Kurty**	**3.55**	**49**	*e*P	**Pb**	**03 32 35.1**	**+0.9**
	3.3nm,0.0s						
KUU				*e*S	**Sb**	**03 33 20.8**	**+3.1**
	6.9nm,0.0s						
BTLS	**Baital**	**3.58**	**16**	Pg	**Pb**	**03 32 35.9**	**+1.2**
	4.7nm,0.3s						
BTLS				Lg	Lg	03 33 22.7	
	9.8nm,0.4s						
BTLS	**Baital**	**3.58**	**16**	*e*P	**Pb**	**03 32 35.9**	**+1.2**
	4.7nm,0.3s						
BTLS				*e*S	**Sg**	**03 33 22.7**	**-3.1**
	9.8nm,0.4s						
KTBS	**Karatobe**	**3.64**	**53**	Pg	**Pb**	**03 32 37.2**	**+1.4**
	4.8nm,0.4s						
KTBS				Lg	Lg	03 33 24.5	
	0.2nm,0.3s						
KOTS	**Kotyrbulak**	**3.68**	**62**	Pg	**Pg**	**03 32 39.9**	**-1.4**
	8.4nm,0.4s						
KOTS				Lg	Lg	03 33 29.5	
	41nm,0.6s						
KOTS	**Kotyrbulak**	**3.68**	**62**	*e*P	**Pg**	**03 32 39.9**	**-1.4**
	8.4nm,0.2s						
KOTS				*e*S	**Sg**	**03 33 29.5**	**+0.4**
	35nm,0.3s						
TARG	**Taragay, Kyrgy**	**3.86**	**86**	⇑*i*P	**Pn**	**03 32 32.4**	**+1.0**
TARG				⇑*i*S	**Sn**	**03 33 17.5**	**0.0**
CHKK	**Chushkaly**	**3.91**	**53**	Pg	**Pb**	**03 32 42.2**	**+1.9**
	13nm,0.1s						
CHKK				Lg	Lg	03 33 33.5	
	14nm,0.3s						
CHKK	**Chushkaly**	**3.91**	**53**	*e*P	**Pb**	**03 32 42.1**	**+1.9**
	3.8nm,0.1s						
CHKK				*e*S	**Sg**	**03 33 33.5**	**-2.7**
	13nm,0.2s						
CHGR	**Chuyangaron**	**3.98**	**223**	⇓*i*P	**Pn**	**03 32 33.6**	**+0.8**
CHGR				⇓*i*S	**Sn**	**03 33 19.8**	**-0.2**
ARXS	**Arharly**	**4.61**	**54**	*e*P	**Pb**	**03 32 55.9**	**+3.6**
	5.0nm,0.3s						
ARXS				*e*S	**Sg**	**03 33 56.8**	**-2.0**
	16nm,0.4s						
KPKS	**Kokpek**	**4.83**	**65**	Pg	**Pb**	**03 32 59.9**	**+3.8**
	0.4nm,0.1s						
KPKS				Lg	Lg	03 34 03.3	
	16nm,0.6s						
KPKS	**Kokpek**	**4.83**	**65**	*e*P	**Pb**	**03 32 59.9**	**+3.8**
	0.1nm,0.1s						
KPKS				*e*S	**Sg**	**03 34 03.3**	**-2.6**
	15nm,0.3s						
AB31	**Akbulak array**	**11.75**	**315**	P	**Pn**	**03 34 19.2**	**+0.1**
	1.0nm,0.6s,baz=117,slow=15,SNR=13						
AB31				S	**Sn**	**03 36 29.9**	**-0.8**
	0.3nm,0.3s,baz=113,slow=24,SNR=2.6						

BJI ***12*** *03:33:16.4, 30°.59N×141°.90E, h16^{km}, mB5.0/17, mb4.8/63, Ms4.6/44, Ms7 4.4/44*

IDC ***12*** *03:33:17.4±0.5, 30°.72N×141°.84E, h0^{km}, mb4.6/29, mbtmp4.5/34, ML3.7/5, MS4.1/41, Error ellipse: s-maj=15.2km s-min=11.6km az=79.0*

NIED ***12*** *03:33:17.8, 30°.79N×142°.11E, h19^{km}, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.94; $M_{\theta\theta}$-0.04; $M_{\phi\phi}$-0.90; $M_{r\theta}$-0.52; $M_{\theta\phi}$0.30; $M_{\phi r}$1.95; Fault plane solution: $M_0$2.24000×10^{16} NP1: ϕ_s160.00000°, δ13.00000°, λ85.00000°. NP2: ϕ_s345.00000°, δ77.00000°, λ91.00000°.*

JMA ***12*** *03:33:17.8±0.2, 30°.8N±0°.9×14°2E±°, h19^{km}, MV4.8/19, NEAR TORISHIMA IS*

MOS ***12*** *03:33:19.0±1.1, 30°.71N×141°.77E, h11^{km}, mb5.2/43, MS4.4/6, Error ellipse: s-maj=11.8km s-min=4.7km az=124.0*

NEIC ***12*** *03:33:19.7±1.0, 30°.69N±0°.05×141°.81E±0°.09, h10^{km}±1^{km}, mb4.9/175, Error ellipse: s-maj=13.1km s-min=7.6km az=80.0*

GCMT ***12*** *03:33:23.7±0.4, 30°.72N±0°.05×141°.83E±0°.02, h21^{km}±1^{km}, MW4.8/61, Moment Tensor Solution. s19,c22; s61,c80; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.78±.17; $M_{\theta\theta}$-0.04±.10; $M_{\phi\phi}$-1.74±.10; $M_{r\theta}$0.11±.22; $M_{\theta\phi}$0.40±.07; $M_{\phi r}$0.22±.14; Best double couple: $M_0$1.82200×10^{16} NP1: ϕ_s162.00000°, δ42.00000°, λ82.00000°. NP2: ϕ_s352.00000°, δ48.00000°, λ97.00000°. Principal axes: T 1.8040, Plg84.0000°, Azm317.0000°; N 0.0320, Plg5.0000°, Azm168.0000°; P -1.8390, Plg3.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 03:33:19.0±0.8**, 30°.69N**±0°.04×**141°.91E**±0°.05**, h12**^{km}±4^{km}**, n397,** σ1^{s}.37/349**, mb4.9**/182**, MS4.2**/58**, 11C-5D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**2.98**	**323**	*e*P	**Pn**	**03 34 05.2**	**-0.8**
JHCJ				*e*S	**Sn**	**03 34 41.4**	**-0.3**
JHJ	**Hachijo jima 2**	**3.02**	**324**	Pn	**Pn**	**03 34 03.6**	**-3.0**
	34nm,0.3s,baz=42,slow=24,SNR=1.9						
JHJ				Sn	**Sn**	**03 34 41.5**	**-1.2**
	64nm,0.3s,baz=29,slow=20,SNR=4.4						
JHJ				LR	LR	03 35 21.5	
	comp=Z,3µm,18.1s,baz=140,slow=42						
	115nm,0.2s						
CBIJ	**Chichi jima**	**3.59**	**176**	*e*P	**Pn**	**03 34 15.0**	**+0.5**
CBIJ				*e*S	**Sn**	**03 34 58.2**	**+1.3**
JCJ	**Chichijima**	**3.59**	**176**	Pn	Pn	03 34 06.0	-8.5
	30nm,0.3s,baz=302,slow=21,SNR=12						
JCJ				Sn	Sn	03 34 41.7	-15
	46nm,0.3s,baz=112,slow=23,SNR=3.8						
JCJ	**Chichijima**	**3.59**	**176**	Pn	**Pn**	**03 34 15.4**	**+0.8**
JCJ				Sn	**Sn**	**03 34 55.7**	**-1.2**
JMYK	**Miyake Tsubota**	**3.91**	**330**	*e*P	**Pn**	**03 34 18.6**	**-0.2**
JMYK				*e*S	**Sn**	**03 35 04.2**	**-0.4**
BSO1	**Boso 1**	**4.03**	**349**	*e*P	**Pn**	**03 34 19.5**	**-0.5**
BSO1				*e*S	**Sn**	**03 35 05.8**	**-1.0**
JOD2	**Odawara 2**	**5.14**	**333**	*e*P	**Pn**	**03 34 37.8**	**+2.0**
JIE	**Ise**	**5.74**	**311**	*e*P	**Pn**	**03 34 46.0**	**+2.0**
JIE				*e*S	**Sn**	**03 35 52.0**	**+2.2**
JRY	**Ryogami san**	**5.88**	**335**	*e*P	**Pn**	**03 34 47.1**	**+1.2**
JRY				*e*S	**Sn**	**03 35 53.8**	**+0.6**
JTNC	**Tanabenakahech**	**6.18**	**302**	*e*P	**Pn**	**03 34 53.2**	**+3.1**
INU	**Inuyama**	**6.20**	**320**		**Pn**	**03 34 51.4**	**+1.0**
JGF	**Kuroka**	**6.21**	**323**		**Pn**	**03 34 50.7**	**+0.2**
MJAR	**Matsushiro Arr**	**6.60**	**333**	Pn	**Pn**	**03 34 57.2**	**+1.3**
	1.6nm,0.3s,baz=156,slow=11,SNR=134						
MJAR				Sn	**Sn**	**03 36 12.8**	**+1.7**
	0.4nm,0.3s,baz=231,slow=31,SNR=4.9						
MJAR				LR	LR	03 37 43.9	
	comp=Z,1µm,18.7s,baz=151,slow=41						
MJAR	**Matsushiro Arr**	**6.60**	**333**		**Pn**	**03 34 56.9**	**+1.0**
MJAR	**Matsushiro Arr**	**6.60**	**333**	P	**Pn**	**03 34 56.9**	**+1.0**
MAJO	**Matsushiro**	**6.60**	**333**		**Pn**	**03 34 56.4**	**+0.5**
MAJO	**Matsushiro**	**6.60**	**333**	*i* P	**Pn**	**03 34 57.7**	**+1.8**
MJB9	**Matsu-Tunnel**	**6.60**	**333**		**Pn**	**03 34 55.9**	**-0.1**
JMK	**Ichinoseki**	**8.26**	**356**	*e*P	**Pn**	**03 35 17.5**	**-1.1**
JNU	**Nakatsue**	**9.68**	**287**	Pn	**Pn**	**03 35 38.9**	**+0.7**
	0.2nm,0.3s,baz=56,slow=11,SNR=1.9						
JNU				LR	LR	03 39 23.2	
	comp=Z,2µm,18.2s,baz=113,slow=38						
	9.2nm,1.0s						
JNU	**Nakatsue**	**9.68**	**287**		**Pn**	**03 35 37.7**	**-0.5**
JOW	**Kunigami**	**12.56**	**256**	LR	LR	03 41 13.1	
	comp=Z,1µm,18.2s,baz=115,slow=38						
KSRS	**Korea Array**	**13.40**	**304**	Pn	**Pn**	**03 36 29.8**	**+0.8**
	0.2nm,0.3s,baz=119,slow=13,SNR=13						
	4.8nm,1.0s						
ASAJ	**Asahikawa**	**13.41**	**2**	Pn	**Pn**	**03 36 26.9**	**-2.1**
	1.8nm,0.3s,baz=220,slow=8.9,SNR=9.7						
ASAJ				Sn	Sn	03 38 48.9	-9.2
	0.5nm,0.3s,baz=58,slow=26,SNR=5.6						
ASAJ				LR	LR	03 42 20.2	
	comp=Z,652nm,20.8s,baz=130,slow=40						
	12nm,0.6s						
ASAJ	**Asahikawa**	**13.41**	**2**	P	**Pn**	**03 36 27.0**	**-2.1**
JKA	**Kamikawa-asahi**	**13.41**	**2**		**Pn**	**03 36 25.5**	**-3.6**
PSTR	**Posyet**	**14.88**	**326**	*i* P	**Pn**	**03 36 47.8**	**-1.3**
USRK	**Ussuriysk Ar.**	**15.60**	**333**	Pn	**Pn**	**03 36 56.8**	**-1.9**
	0.5nm,0.3s,baz=158,slow=11,SNR=5.9						
	7.7nm,0.9s						
MDJ	**Mudanjiang**	**16.95**	**328**		**Pn**	**03 37 14.0**	**-1.9**
MDJ	**Mudanjiang**	**16.95**	**328**	P	**Pn**	**03 37 14.9**	**-1.1**
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.5s						
SSE	**Sheshan**	**17.79**	**277**	P	**Pn**	**03 37 24.8**	**-1.7**
SSE				S	**Sn**	**03 40 43.2**	**-1.6**
SSE				pmax	pmax		
	comp=Z,15nm,1.0s						
SSE				pmax	pmax		
	comp=Z,160nm,4.5s						
SSE				LR	LR		
	comp=N,220nm,12.0s						
SSE				LR	LR		
	comp=E,510nm,13.2s						
CN2	**Changchun**	**18.47**	**320**	P	**P**	**03 37 34.2**	**-0.5**
CN2				sP	sP	03 37 41.2	+3.8
CN2				pmax	pmax		
	comp=Z,30nm,0.9s						
CN2				LR	LR		
	comp=N,800nm,13.0s						
CN2				LR	LR		
	comp=E,700nm,13.0s						
CN2				LR	LR		
	comp=Z,700nm,15.0s						
DL2	**Dalian**	**18.54**	**302**	P	**Pn**	**03 37 37.3**	**+1.7**
DL2				S	**S**	**03 41 07.3**	**+0.6**
DL2				pmax	pmax		
	comp=Z,43nm,1.1s						
DL2				pmax	pmax		
	comp=Z,330nm,4.0s						
DL2				LR	LR		
	comp=N,410nm,18.5s						
DL2				LR	LR		
	comp=E,1µm,17.4s						
DL2				LR	LR		
	comp=Z,1µm,17.6s						
BNX	**BinXian**	**18.81**	**327**	⇓P	**P**	**03 37 37.8**	**-0.6**
BNX				pmax	pmax		
	comp=Z,42nm,1.0s						
YHNB	**Yeheng**	**19.14**	**257**	P	**P**	**03 37 42.0**	**-0.2**
YHNB				IAmb	IAmb	03 37 43.8	
	comp=Z,72nm,0.9s						
NACB	**Ninganchiao**	**19.15**	**255**	P	**P**	**03 37 41.8**	**-0.5**
NACB				IAmb	IAmb	03 37 48.7	
	comp=Z,108nm,1.3s						
NJ2	**Nanjing**	**19.73**	**280**	*e*P	**P**	**03 37 46.5**	**-2.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				LR	LR		
	comp=Z,500nm,22.7s						
NJ2				LR	LR		
	comp=Z,1µm,22.7s						
NJ2				LR	LR		
	comp=Z,1µm,22.6s						
YULB	**Yu-li**	**19.73**	**253**	P	**P**	**03 37 48.8**	**+0.2**
YULB				IAmb	IAmb	03 37 57.6	
	comp=Z,47nm,0.8s						
TWG	**Pinlang**	**20.17**	**252**	P	**P**	**03 37 52.6**	**-0.9**
TWG				IAmb	IAmb	03 37 59.7	
	comp=Z,92nm,1.2s						
TPUB	**Ta-pu**	**20.32**	**254**	P	**P**	**03 37 56.1**	**+1.0**
GRNR	**Gornyy**	**20.47**	**350**	⇓*i*P	Pn	03 37 57.8	-0.8
GRNR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,310nm,16.0s						
TIA	**Tai'an**	**21.37**	**292**	P	**P**	**03 38 06.1**	**-0.3**
TIA				pmax	pmax		
	comp=E,12nm,1.1s						
TIA				LR	LR		
	comp=E,530nm,15.7s						
TIA				LR	LR		
	comp=E,1µm,16.1s						
TIA				LR	LR		
	comp=E,2µm,14.5s						
HEH	**HeiHe**	**22.36**	**335**	*e*P	**P**	**03 38 15.8**	**-1.0**
HEH				pmax	pmax		
	comp=E,49nm,0.9s						
HEH				LR	LR		
	comp=E,510nm,16.6s						
HEH				LR	LR		
	comp=E,430nm,13.4s						
HEH				LR	LR		
	comp=E,780nm,16.4s						
BJI	**Beijing**	**22.90**	**301**	P	**P**	**03 38 21.3**	**-1.3**
BJI				S	**S**	**03 42 31.8**	**-0.4**
BJI				pmax	pmax		
	comp=E,11nm,0.8s						
BJI				pmax	pmax		
	comp=E,110nm,4.2s						
BJI				LR	LR		
	comp=E,230nm,13.5s						
BJI				LR	LR		
	comp=E,560nm,17.7s						
BJI				LR	LR		
	comp=E,710nm,18.5s						
BJT	**Baijiatuau**	**22.90**	**301**		**P**	**03 38 21.8**	**-0.8**
BJT	**Baijiatuau**	**22.90**	**301**	P	**P**	**03 38 21.8**	**-0.8**
BJT				pmax	pmax		
	comp=Z,17nm,0.8s						
HNS	**HongShan**	**23.46**	**294**	⇓P	**P**	**03 38 26.8**	**-1.6**
HNS				S	**S**	**03 42 44.8**	**+3.1**
HNS				SS	**SnSn**	**03 43 28.3**	**+11**
HNS				pmax	pmax		
	comp=Z,14nm,0.8s						
HNS				LR	LR		
	comp=Z,830nm,16.3s						
HNS				LR	LR		
	comp=Z,1µm,16.3s						
HNS				LR	LR		
	comp=Z,1µm,17.3s						
WHN	**Wuhan**	**23.70**	**277**	P	**P**	**03 38 29.6**	**-1.2**
WHN				pP	**pP**	**03 38 32.5**	**0.0**
WHN				LR	LR		
	comp=Z,3µm,15.0s						
XLT	**XiLinHaoTe**	**24.30**	**310**	*e*P	**P**	**03 38 36.0**	**-0.4**
XLT				pmax	pmax		
	comp=Z,21nm,1.2s						
XLT				LR	LR		
	comp=Z,410nm,13.3s						
XLT				LR	LR		
	comp=Z,660nm,15.2s						
HIA	**Hailar**	**25.00**	**324**		**P**	**03 38 42.5**	**-0.1**
HIA	**Hailar**	**25.00**	**324**	P	**P**	**03 38 42.5**	**-0.1**
HIA				pmax	pmax		
	comp=Z,50nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**25.05**	**110**	T	T	04 05 08.0	
	baz=297						
H11N1	**WAKE ISLAND Hy**	**25.05**	**110**	T	T	04 05 11.0	
	baz=297,slow=74						
LYN	**LuoYang**	**25.05**	**287**	P	**P**	**03 38 42.5**	**-0.7**
LYN				sP	pwP	03 38 52.2	-0.6
LYN				S	**S**	**03 43 06.7**	**-0.6**
LYN				pmax	pmax		
	comp=Z,21nm,0.9s						
LYN				LR	LR		
	comp=Z,580nm,16.7s						
LYN				LR	LR		
	comp=Z,590nm,14.8s						
LYN				LR	LR		
	comp=Z,830nm,16.1s						
H11N3	**WAKE ISLAND Hy**	**25.07**	**110**	T	T	04 04 57.0	
	baz=297,slow=74						
HILR	**Hailar Array B**	**25.18**	**325**	P	**P**	**03 38 43.5**	**-0.8**
	comp=Z,27nm,0.9s,baz=129,slow=12,SNR=20						
	comp=Z,27nm,0.9s						
TIY	**Taiyuan**	**25.30**	**294**	*e*P	**P**	**03 38 45.0**	**-0.5**
TIY				pmax	pmax		
	comp=Z,33nm,0.5s						
ZEA	**Zeya**	**25.36**	**339**	*e*P	**P**	**03 38 46.3**	**+0.5**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=N,30nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,70nm,0.8s						
PET	**Petropavlovsk**	**25.44**	**24**	pP	pP	03 38 51.6	+3.5
	comp=Z,21nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**25.53**	**113**	T	T	04 05 43.7	
	baz=305,slow=73,SNR=11						
H11S1	**WAKE ISLAND Hy**	**25.53**	**113**	T	T	04 05 33.4	
	baz=305,slow=73,SNR=12						
H11S2	**WAKE ISLAND Hy**	**25.55**	**113**	T	T	04 05 45.8	
	baz=305,slow=73,SNR=12						
HHC	**Hu-ho-hao-te**	**26.51**	**301**	*e*P	**P**	**03 38 57.3**	**+0.8**
HHC				pmax	pmax		
	comp=Z,18nm,0.8s						
HHC				pmax	pmax		
	comp=Z,220nm,6.4s						
HHC				LR	LR		
	comp=Z,440nm,13.3s						
HHC				LR	LR		
	comp=Z,1µm,16.1s						
HHC				LR	LR		
	comp=Z,1µm,16.1s						
BTO	**Baotou**	**27.61**	**300**	*e*P	**P**	**03 39 07.0**	**+0.6**
BTO				sP	**pwP**	**03 39 14.7**	**-1.2**
BTO				PP	**PnPn**	**03 39 57.0**	**+5.5**
BTO				S	**S**	**03 43 49.5**	**+1.7**
BTO				pmax	pmax		
	comp=Z,54nm,0.8s						
BTO				pmax	pmax		
	comp=Z,470nm,4.8s						
BTO				LR	LR		
	comp=Z,2µm,15.0s						
BTO				LR	LR		
	comp=Z,3µm,14.5s						
BTO				LR	LR		
	comp=Z,4µm,15.1s						
XAN	**Xi'an**	**28.00**	**286**	P	**P**	**03 39 09.4**	**-0.4**
XAN				pmax	pmax		
	comp=Z,25nm,1.2s						
XAN				LR	LR		
	comp=Z,510nm,19.9s						
XAN				LR	LR		
	comp=Z,380nm,16.5s						
XAN				LR	LR		
	comp=Z,440nm,17.9s						
DAV	**Davao City (W)**	**28.05**	**216**	LR	LR	03 48 47.5	
	comp=Z,215nm,20.2s,baz=76,slow=33						
QIZ	**Qiongzhong**	**31.22**	**256**	P	**P**	**03 39 37.4**	**-1.1**
QIZ				S	**S**	**03 44 43.8**	**-0.9**
QIZ				LR	LR		
	comp=Z,230nm,13.8s						
QIZ				LR	LR		
	comp=Z,260nm,19.6s						
QIZ				LR	LR		
	comp=Z,470nm,20.6s						
ULN	**Ulaanbaatar**	**31.63**	**313**		**P**	**03 39 42.4**	**+0.4**
ULN				IAmb	IAmb	03 39 44.3	
	comp=Z,17nm,0.9s						
ULN	**Ulaanbaatar**	**31.63**	**313**	P	**P**	**03 39 43.1**	**+1.1**
ULN	**Ulaanbaatar**	**31.63**	**313**	*ce*P	**P**	**03 39 42.9**	**+0.9**
ULN				pmax	pmax		
	comp=Z,22nm,1.0s						
SONM	**Songino Array**	**32.03**	**312**	P	**P**	**03 39 45.8**	**+0.2**
	comp=Z,13nm,1.0s,baz=120,slow=7.9,SNR=24						
SONM				LR	LR	03 53 13.0	
	comp=Z,279nm,21.0s,baz=337,slow=37						
	comp=Z,13nm,1.0s						
SONM	**Songino Array**	**32.03**	**312**		**P**	**03 39 45.7**	**+0.1**
SONM				IAmb	IAmb	03 39 50.7	
	comp=Z,15nm,1.0s						
SHEM	**Shemya Is, Ala**	**32.16**	**37**	LR	LR	03 51 41.6	
	comp=Z,131nm,19.6s,baz=310,slow=34						
LZDM	**Lanzhou Array**	**32.22**	**290**	P	**P**	**03 39 46.0**	**-1.5**
	comp=Z,4.1nm,0.5s,baz=134,slow=6.4,SNR=6.6						
LZDM				LR	LR	03 54 05.2	
	comp=Z,367nm,18.1s,baz=195,slow=39						
	comp=Z,4.1nm,0.5s						
YAK	**Yakutsk**	**32.35**	**349**	*e*P	**P**	**03 39 48.1**	**+0.2**
YAK				*e*		03 40 55.6	
YAK				*e*		03 42 35.0	
YAK				*e*S	**S**	**03 45 03.2**	**+1.8**
YAK				*e*SS	**SnSn**	**03 46 59.2**	**+5.7**
YAK				*e*		03 50 13.7	
YAK				pmax	pmax		
	comp=Z,20nm,1.3s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.5s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,113nm,3.5s						
YAK				pmax	pmax		
	comp=N,79nm,3.8s						
YAK				pmax	pmax		
	comp=E,65nm,3.5s						
YAK				smax	smax		
	comp=E,78nm,3.2s						
YAK				smax	smax		
	comp=N,42nm,3.0s						
YAK				MLR	MLR		
	comp=Z,286nm,18.0s						
YAK				MLR	MLR		
	comp=N,184nm,19.0s						
YAK				MLR	MLR		
	comp=E,107nm,17.0s						
CD2	**Chengdu**	**32.66**	**280**	P	**P**	**03 39 50.5**	**-0.7**
CD2				pmax	pmax		
	comp=E,20nm,0.8s						
SEY	**Seymchan**	**32.95**	**9**	*e*P	**P**	**03 39 52.1**	**-1.1**
SEY				pmax	pmax		
	comp=Z,10.0nm,1.8s						
MYLDM	**Lahad Datu**	**33.60**	**226**	P	**P**	**03 39 59.1**	**-0.3**
ZAK	**Zakamensk**	**34.81**	**316**	*e*P	**P**	**03 40 09.5**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,34nm,1.7s						
GTOI	**Gorontalo**	**34.86**	**215**	P	**P**	**03 40 09.9**	**-0.4**
	comp=Z,17nm,1.1s						
IRK	**Irkutsk**	**34.92**	**319**	*e*P	**P**	**03 40 08.1**	**-2.4**

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IRK                                   pmax    pmax
       comp=Z,68nm,2.4s
TLY    Talaya            35.06 318            P       03 40 12.3 +0.6
TLY    Talaya            35.06 318ceP         P       03 40 13.7 +2.0
TLY                                   pmax    pmax
       comp=Z,58nm,1.3s
GTA    Gaotai            35.28 296    P       P       03 40 13.3  -0.6
GTA                                   sP      pwP     03 40 24.3 +0.9
GTA                                   pmax    pmax
       comp=Z,25nm,1.2s
GTA                                   LR      LR
       comp=Z,510nm,16.4s
GTA                                   LR      LR
       comp=Z,990nm,16.7s
GTA                                   LR      LR
       comp=Z,1µm,16.4s
MRSI   Marisa            35.53 216    P       P       03 40 16.3 +0.3
       comp=Z,39nm,1.2s
SANI   Sanana            35.92 208    P       P       03 40 18.2  -1.2
       comp=Z,28nm,0.9s
KRAI   Karang Ratu       36.20 203    P       P       03 40 22.1 +0.3
       comp=Z,3µmcomp=Z,14nm,0.5s
GOMU   GeErMu            39.38 291    P       P       03 40 46.2  -2.8
GOMU                                  S       S       03 46 48.8  -1.7
GOMU                                  pmax    pmax
       comp=Z,34nm,1.2s
GOMU                                  LR      LR
       comp=Z,300nm,13.8s
GOMU                                  LR      LR
       comp=Z,280nm,13.8s
MMSI   Mamuju            39.79 218    P       P       03 40 51.7  -0.4
       comp=Z,11nm,0.5s
CHTO   Chiang Mai        40.54 263    P       P       03 40 57.8  -0.6
CHTO                                  IAmb    IAmb    03 41 55.6
       comp=Z,24nm,0.7s
CHTO   Chiang Mai        40.54 263    P       P       03 40 57.8  -0.6
CHTO                                  pmax    pmax
       comp=Z,24nm,0.7s
BNSI   Bone              40.65 215    P       P       03 40 59.4 +0.2
       comp=Z,21nm,0.6s
CMAR   Chiang Mai Arr    40.70 263    P       P       03 40 58.0  -1.6
       comp=Z,1.9nm,0.3s,baz=66,slow=5.7,SNR=6.8
CMAR                                  PcP     PcP     03 43 02.4 +1.1
       comp=Z,1.6nm,0.3s,baz=94,slow=2.4,SNR=4.7
       comp=Z,1.9nm,0.3s
CMAR   Chiang Mai Arr    40.70 263    P       P       03 40 59.4  -0.3
CMAR                                          PcP     03 43 00.8  -0.5
KAPI   Kappang           41.35 215    P       P       03 41 04.3  -0.6
       comp=Z,3.8nm,0.3s,baz=28,slow=7.1,SNR=5.6
       comp=Z,3.8nm,0.3s
KAPI   Kappang           41.35 215            P       03 41 04.7  -0.3
KAPI   Kappang           41.35 215    P       P       03 41 04.7  -0.3
KAPI                                  pmax    pmax
       comp=Z,11nm,1.0s
TIXI   Tiksi             41.62 354    P       P       03 41 05.8  -0.8
       comp=Z,2.9nm,0.3s,baz=146,slow=6.3,SNR=5.6
       comp=Z,2.9nm,0.3s
TIXI   Tiksi             41.62 354    P       P       03 41 06.5   0.0
TIXI   Tiksi             41.62 354  i P       P       03 41 07.1 +0.5
TIXI                                  pmax    pmax
       comp=Z,2.0nm,0.9s
SOEI   Soe               43.64 206    P       P       03 41 22.9  -0.8
       comp=Z,23nm,0.8s
EDFI   Ende, Flores      43.76 210    P       P       03 41 22.6  -2.1
       comp=Z,19nm,0.9s
KDU    Kakadu            44.07 193    P       P       03 41 27.3 +0.3
       comp=Z,6.1nm,1.0s
WMQ    Urumqi            44.35 303   eP       P       03 41 29.9 +0.7
WMQ                                   pP      sP      03 41 34.8 +2.7
WMQ                                   PP      PP      03 43 15.0 +2.5
WMQ                                   pmax    pmax
       comp=Z,13nm,0.9s
WMQ                                   LR      LR
       comp=Z,160nm,17.7s
COEN   Coen              44.41 178    P       P       03 41 32.5 +2.8
       comp=Z,14nm,0.9s
COEN   Coen              44.41 178    P       P       03 41 29.7  -0.1
COEN                                  IAmb    IAmb    03 41 53.4
       comp=Z,14nm,0.9s
MTN    Manton Dam        44.51 195    P       P       03 41 30.3  -0.2
MTN                                   IAmb    IAmb    03 41 31.0
       comp=Z,12nm,0.6s
DGZ    Jazzator, Alta    44.66 311  i P       P       03 41 31.6  -0.1
DGZ                                   pmax    pmax
       comp=Z,40nm,1.0s
DBNI   Kabupaten Domp    45.07 214    P       P       03 41 35.2 +0.1
       comp=Z,18nm,1.1s
KLNI   Mataram           46.11 217    P       P       03 41 44.3 +1.0
ZSN    Zaisan            46.29 308   eP       P       03 41 44.5   0.0
       comp=Z,26nm,1.4s
ZSN    Zaisan            46.29 308   eP       P       03 41 44.4   0.0
ZSN                                   pmax    pmax
       comp=Z,26nm,1.4s
KHKI   Kahang-Kahang     46.31 217    P       P       03 41 45.3 +0.4
ZAA0   Zalesovo Array    46.66 317    P       P       03 41 47.5 +0.2
ZAA0                                  IAmb    IAmb    03 41 48.6
       comp=Z,7.2nm,0.9s
ZALV   Zalesovo Beam     46.66 317    P       P       03 41 47.6 +0.4
       comp=Z,4.2nm,0.7s,baz=100,slow=7.4,SNR=19
ZALV                                  PcP     PcP     03 43 20.9 +0.1
       comp=Z,2.3nm,0.7s,baz=94,slow=3.8,SNR=4.0
ZALV                                  LR      LR      04 02 18.0
       comp=Z,303nm,18.0s,baz=85,slow=37
       comp=Z,4.2nm,0.7s
ZALV   Zalesovo Beam     46.66 317    P       P       03 41 47.7 +0.5
ZALV                                          PcP     03 43 21.1 +0.3
EVN    Everest           47.71 281    P       P       03 41 55.2  -1.3
EVN                                   IAmb    IAmb    03 42 08.7
       comp=Z,4.7nm,0.7s
MK31   Makanchi Array    48.06 307ceP         P       03 41 58.1  -0.2
MKAR   Makanchi Array    48.06 307    P       P       03 41 58.9 +0.6
       comp=Z,6.1nm,0.7s,baz=91,slow=9.9,SNR=42
MKAR                                  LR      LR      04 02 38.2
       comp=Z,234nm,20.7s,baz=80,slow=37
       comp=Z,6.1nm,0.7s
MKAR   Makanchi Array    48.06 307    P       P       03 41 58.2  -0.1
MAKZ   Makanchi          48.27 307    P       P       03 42 00.5 +0.6
MAKZ   Makanchi          48.27 307    P       P       03 42 00.5 +0.6
MAKZ                                  pmax    pmax
       comp=Z,46nm,1.6s
PSI    Prapat            49.15 244    P       P       03 42 07.6 +0.4
J17K   VABM Dome         49.22  31    P       P       03 42 08.8 +1.8
J17K                                  IAmb    IAmb    03 42 48.6
       comp=Z,36nm,1.6s
NRIK   Noril'sk          49.23 338    P       P       03 42 06.8  -0.1
       comp=Z,4.5nm,0.7s,baz=115,slow=6.9,SNR=7.1
       comp=Z,4.5nm,0.7s
NRIK   Noril'sk          49.23 338            P       03 42 07.3 +0.4
NRIK                                  IAmb    IAmb    03 42 21.7
       comp=Z,13nm,1.0s
NRIK   Noril'sk          49.23 338  i P       P       03 42 07.1 +0.2
NRIK                                  pmax    pmax
       comp=Z,14nm,1.3s
KPJI   Karang Pucung     49.28 225    P       P       03 42 07.7  -0.2
       comp=Z,23nm,1.2s
G18K   Tagagawik         49.98  28            P       03 42 13.7 +1.0
G18K                                  IAmb    IAmb    03 42 32.1
       comp=Z,30nm,1.7s
KLSI                     50.00 232    P       P       03 42 12.7  -0.7
       comp=Z,28nm,1.5s
MDSI   Maura Dua         50.23 233    P       P       03 42 13.8  -1.4
       comp=Z,23nm,1.1s
MDSI                                  pP      pP      03 42 17.5 +0.3
       comp=Z,23nm,1.1s
KURK   Kurchatov         50.34 312            P       03 42 15.6   0.0
KURK   Kurchatov         50.34 312ceP         P       03 42 15.9 +0.3
KURK                                  pmax    pmax
       comp=Z,49nm,1.3s
SHLS   Shalkode          50.38 303   eP       P       03 42 13.6  -2.6
SHLS   Shalkode          50.38 303   eP       P       03 42 13.6  -2.6
KURBB  Kurchatov Arra    50.40 312    P       P       03 42 16.2 +0.1
       comp=Z,17nm,0.8s,baz=88,slow=7.5,SNR=62
KURBB                                 LR      LR      04 03 48.5
       comp=Z,190nm,18.7s,baz=162,slow=36
       comp=Z,17nm,0.8s
C19K   Lookout Ridge     50.54  23            P       03 42 18.1 +1.2
C19K                                  IAmb    IAmb    03 42 38.7
       comp=Z,16nm,1.2s
CTA    Charters Tower    50.66 175    LR      LR      04 04 25.4
       comp=Z,62nm,18.0s,baz=341,slow=37
WB0    Warramunga Arr    50.69 189            P       03 42 18.0  -0.5
UZB    Uzynbulak         50.70 303   eP       P       03 42 18.4  -0.2
UZB    Uzynbulak         50.70 303   eP       P       03 42 18.4  -0.2
WUS    Wushi             50.84 300    P       P       03 42 19.8   0.0
WUS                                   IAmb    IAmb    03 42 22.2
       comp=Z,43nm,1.7s

WR8    Warramunga Arr    50.86 189    P       P       03 42 19.5  -0.3
WR8                                   IAmb    IAmb    03 42 32.7
       comp=Z,18nm,0.7s
WRA    Warramunga Arr    50.87 189    P       P       03 42 19.8  -0.1
       comp=Z,11nm,0.7s,baz=9.9,slow=8.0,SNR=48
       comp=Z,11nm,0.7s
WRA    Warramunga Arr    50.87 189            P       03 42 19.7  -0.1
TDK    Taldyqorghan      50.91 305   eP       P       03 42 19.9  -0.2
TDK    Taldyqorghan      50.91 305   eP       P       03 42 19.8  -0.2
N19K   Bonanza Creek     50.92  34    P       P       03 42 18.3  -1.7
E19K   Redstone River    50.92  26    P       P       03 42 20.7 +0.9
E19K                                  IAmb    IAmb    03 42 38.8
       comp=Z,32nm,1.6s
FITZ   Fitzroy Crossi    50.97 200    P       P       03 42 21.5 +0.8
       comp=Z,2.3nm,1.0s
FITZ   Fitzroy Crossi    50.97 200    P       P       03 42 21.0 +0.3
       comp=Z,4.9nm,0.8s,baz=13,slow=8.1,SNR=8.4
       comp=Z,4.9nm,0.8s
FITZ   Fitzroy Crossi    50.97 200    P       P       03 42 20.4  -0.3
QIS    Mount Isa         51.00 183    P       P       03 42 22.1 +1.2
       comp=Z,12nm,1.3s
GSI    Gunungsitoli      51.14 244            P       03 42 21.3  -0.7
GSI    Gunungsitoli      51.14 244    P       P       03 42 21.9  -0.2
       comp=Z,30nm,0.9s
F20K   Avaraart Lake     51.40  26    P       P       03 42 24.4 +1.1
D20K   Etivluk River     51.46  24    P       P       03 42 24.7 +0.8
D20K                                  IAmb    IAmb    03 42 42.9
       comp=Z,14nm,1.1s
J20K   Nowinta River     51.52  30            P       03 42 25.9 +1.6
B20K   Meade River       51.62  23    P       P       03 42 25.7 +0.7
KDAK   Kodiak Island     51.67  38    LR      LR      04 03 11.5
       comp=Z,214nm,21.3s,baz=253,slow=35
TARG   Taragay, Kyrgy    51.80 301            P       03 42 26.4  -0.9
TARG   Taragay, Kyrgy    51.80 301    P       P       03 42 26.4  -0.9
TARG                                  pmax    pmax
       comp=Z,9.0nm,1.0s
MDOK   Medeo             52.12 303   eP       P       03 42 29.1  -0.3
MDOK   Medeo             52.12 303   eP       P       03 42 29.0  -0.3
G21K   Allakaket         52.16  27    P       P       03 42 30.1 +1.1
AAA    Alma-Ata          52.21 303   eP       P       03 42 29.6  -0.3
AAA    Alma-Ata          52.21 303   eP       P       03 42 29.6  -0.3
TNSS   Tian-Shan         52.22 303   eP       P       03 42 29.8  -0.6
TNSS   Tian-Shan         52.22 303   eP       P       03 42 29.7  -0.6
H21K   Melozitna Rive    52.30  28    P       P       03 42 31.4 +1.2
E21K   Killik River      52.34  25    P       P       03 42 31.2 +0.7
B21K   Ikpikpuk River    52.38  23            P       03 42 31.8 +1.2
B21K                                  IAmb    IAmb    03 42 49.7
       comp=Z,11nm,1.1s
I21K   Tanana            52.58  29    P       P       03 42 33.2 +1.1
I21K                                  IAmb    IAmb    03 42 34.8
       comp=Z,26nm,1.1s
D22K   Ayikyak River     52.89  24    P       P       03 42 35.8 +1.3
D22K                                  IAmb    IAmb    03 43 17.3
       comp=Z,15nm,1.3s
H22K   Ishtalitna Cre    52.92  28    P       P       03 42 36.1 +1.4
H22K                                  IAmb    IAmb    03 42 49.7
       comp=Z,36nm,2.0s
E22K   Anaktuvuk Pass    53.08  25            P       03 42 37.0 +1.1
KSH    Kashi             53.59 299    P       P       03 42 44.3 +4.1
KSH                                   sP      pwP     03 42 50.4 +0.7
KSH                                   pmax    pmax
       comp=Z,11nm,0.7s
NEA2   Nenana            53.75  30    P       P       03 42 41.6 +0.7
NEA2                                  IAmb    IAmb    03 42 59.7
       comp=Z,12nm,0.9s
C23K   Itkillik River    53.79  23            P       03 42 41.8 +0.9
C23K                                  IAmb    IAmb    03 43 00.0
       comp=Z,13nm,1.2s
SGDS   Sogindy           53.82 304   eP       P       03 42 41.7  -0.1
BTLS   Baital            53.96 306   eP       P       03 42 42.1  -0.6
       comp=Z,16nm,1.0s
BTLS   Baital            53.96 306   eP       P       03 42 42.1  -0.6
BTLS                                  pmax    pmax
       comp=Z,16nm,1.0s
TOLK   Toolik Lake Re    53.97  25    P       P       03 42 43.6 +1.2
TOLK                                  IAmb    IAmb    03 43 28.4
       comp=Z,9.9nm,1.2s
AAK    Ala-Archa         54.06 303    LR      LR      04 08 33.8
       comp=Z,168nm,18.1s,baz=82,slow=39
AAK    Ala-Archa         54.06 303ceP         P       03 42 44.5 +0.8
AAK                                   pmax    pmax
       comp=Z,14nm,2.0s
E24K   Your Creek        54.30  26    P       P       03 42 45.5 +0.6
E24K                                  IAmb    IAmb    03 43 03.8
       comp=Z,9.7nm,1.2s
D24K   Happy Valley      54.31  24    IAmb    IAmb    03 43 06.3
       comp=Z,14nm,0.9s
F24K   Squaw Lake        54.48  26            P       03 42 47.2 +1.1
AS31   Alice Springs     54.59 189            P       03 42 48.3 +0.9
ASAR   Alice Springs     54.59 189    P       P       03 42 47.3  -0.1
       comp=Z,3.7nm,0.8s,baz=1.7,slow=5.2,SNR=33
ASAR                                  LR      LR      04 06 33.1
       comp=Z,109nm,18.9s,baz=313,slow=36
       comp=Z,3.7nm,0.8s
ASAR   Alice Springs     54.59 189            P       03 42 47.5 +0.1
ASAR   Alice Springs     54.59 189    P       P       03 42 47.5 +0.1
IL31                     54.70  30            P       03 42 47.9 +0.2
IL31                                  IAmb    IAmb    03 43 05.8
       comp=Z,6.4nm,0.8s
ILAR   Eielson Array     54.70  30    P       P       03 42 47.7  -0.1
       comp=Z,3.4nm,0.7s,baz=258,slow=6.1,SNR=36
       comp=Z,3.4nm,0.7s
ILAR   Eielson Array     54.70  30    P       P       03 42 47.4  -0.4
D25K   Kavik River       55.20  24    P       P       03 42 53.0 +1.6
BVAR   Borovoye Array    55.27 316    P       P       03 42 52.3 +0.3
       comp=Z,8.0nm,0.7s,baz=95,slow=8.3,SNR=32
BVAR                                  LR      LR      04 06 44.1
       comp=Z,296nm,18.1s,baz=86,slow=36
       comp=Z,8.0nm,0.7s
BORK   Borovoye          55.31 316            P       03 42 52.6 +0.3
BORK                                  IAmb    IAmb    03 42 53.6
       comp=Z,7.6nm,0.7s
BORK   Borovoye          55.31 316ceP         P       03 42 52.2  -0.1
BORK                                  pmax    pmax
       comp=Z,6.0nm,0.6s
F25K   Christian Rive    55.34  26    P       P       03 42 54.1 +1.7
F25K                                  IAmb    IAmb    03 43 11.8
       comp=Z,12nm,1.2s
E25K   Arctic Village    55.40  26            P       03 42 54.2 +1.4
E25K                                  IAmb    IAmb    03 43 12.7
       comp=Z,17nm,1.3s
F26K   Sheenjek River    55.92  26            P       03 42 58.0 +1.5
F26K                                  IAmb    IAmb    03 43 16.4
       comp=Z,11nm,1.2s
PSAC1  Pilbara Seismi    56.10 205    P       P       03 42 56.8  -1.5
       comp=Z,20nm,0.9s
PSA00  Pilbara Seismi    56.12 205            P       03 42 58.5 +0.1
PSA00                                 IAmb    IAmb    03 42 59.2
       comp=Z,7.0nm,0.7s
J26L   Joseph Creek      56.13  30            P       03 42 59.0 +0.8
DZA    Taraz             56.29 304   eP       P       03 42 59.6  -0.1
DZA    Taraz             56.29 304   eP       P       03 42 59.5  -0.1
KKAR   Karatay Array     56.83 304            P       03 43 03.8 +0.4
KKAR   Karatay Array     56.83 304    P       P       03 43 03.8 +0.4
WRKA   Warakurna         56.93 195    P       P       03 43 04.5 +0.4
       comp=Z,4.4nm,0.9s
NIL    Nilore            57.20 292            P       03 43 04.7  -1.5
NIL                                   PcP     PcP     03 44 01.9 +1.1
NIL    Nilore            57.20 292    P       P       03 43 04.7  -1.5
NIL                                                   03 44 01.9
NIL                                   pmax    pmax
       comp=Z,35nm,0.9s
MANEM  Manem             57.33 297    IAmb    IAmb    03 43 09.5
       comp=Z,109nm,1.4s
BRLS   Borolday          57.33 304   eP       P       03 43 08.2 +1.2
       comp=Z,11nm,1.1s
BRLS   Borolday          57.33 304   eP       P       03 43 08.1 +1.2
BRLS                                  pmax    pmax
       comp=Z,11nm,1.1s
IUG    Iuzhnay           57.40 303   eP       P       03 43 07.6   0.0
       comp=Z,23nm,1.0s
IUG    Iuzhnay           57.40 303   eP       P       03 43 07.5   0.0
IUG                                   pmax    pmax
       comp=Z,23nm,1.0s
DZM    Mont Dzumac       57.51 153    LR      LR      04 07 25.4
       comp=Z,84nm,19.7s,baz=14,slow=36
DZM    Mont Dzumac       57.51 153            P       03 43 10.1 +1.7
DZM                                   IAmb    IAmb    03 43 16.6
       comp=Z,16nm,1.1s
F28M   Old Crow          57.55  26    IAmb    IAmb    03 43 35.2
       comp=Z,11nm,1.2s
I28M   Miner Creek       57.63  29    IAmb    IAmb    03 43 11.9
       comp=Z,32nm,1.8s
E28M   Babbage River     57.64  25    IAmb    IAmb    03 43 30.8
       comp=Z,11nm,1.1s

CHM    Chimkent          57.66 303   eP       P       03 43 09.2  -0.2
CHM    Chimkent          57.66 303   eP       P       03 43 09.1  -0.2
E29M   Blow River        58.26  25    IAmb    IAmb    03 43 46.1
       comp=Z,14nm,1.2s
M29M   Somme Creek       58.55  32    IAmb    IAmb    03 43 47.1
       comp=Z,11nm,1.1s
L29M   L29M              58.62  32    IAmb    IAmb    03 43 35.5
       comp=Z,16nm,0.8s
CHGR   Chuyangaron       58.94 299    P       P       03 43 18.7 +0.3
CHGR                                  pmax    pmax
       comp=Z,168nm,0.8s
I30M   Mount Dempster    59.14  29    IAmb    IAmb    03 44 04.5
       comp=Z,25nm,1.7s
G31M   Satah River       59.78  27    IAmb    IAmb    03 43 26.4
       comp=Z,6.8nm,0.8s
SHAA   Shahritus         60.03 298    IAmb    IAmb    03 43 28.7
       comp=Z,302nm,1.7s
KBL    Kabul             60.25 295            P       03 43 27.2  -0.4
KBL    Kabul             60.25 295    P       P       03 43 27.2  -0.4
KBL                                   pmax    pmax
       comp=Z,19nm,0.9s
SVE    Sverdlovsk        60.26 321deP         P       03 43 27.9 +0.9
SVE                                   pmax    pmax
       comp=Z,37nm,0.8s
ARTI   Arti              61.57 321            P       03 43 35.5  -0.5
ARTI   Arti              61.57 321c iP        P       03 43 36.3 +0.4
ARTI                                                  03 44 12.1
ARTI                                  S       S       03 51 59.4 +2.0
ARTI                                  SS      SS      03 55 53.4  -4.6
ARTI                                  pmax    pmax
       comp=Z,33nm,0.6s
A36M   Sachs Harbour     62.01  21    IAmb    IAmb    03 43 53.6
       comp=Z,8.1nm,0.8s
STKA   Stephens Creek    62.23 180    P       P       03 43 41.9 +1.4
       comp=Z,1.9nm,0.5s,baz=348,slow=9.3,SNR=5.2
STKA                                  LR      LR      04 10 09.5
       comp=Z,96nm,20.1s,baz=15,slow=36
       comp=Z,1.9nm,0.5s
STKA   Stephens Creek    62.23 180    P       P       03 43 41.8 +1.2
AB31   Akbulak array     62.45 313    IAmb    IAmb    03 43 45.7
       comp=Z,11nm,0.8s
ABKAR  Akbulak array     62.45 313            P       03 43 42.1 +0.2
FORT   Forrest           62.53 193    P       P       03 43 42.6   0.0
       comp=Z,16nm,1.1s
C36M   Paulatuk          63.04  23    IAmb    IAmb    03 43 47.9
       comp=Z,8.3nm,0.7s
DLBC   Dease Lake        63.43  36    LR      LR      04 11 09.1
       comp=Z,89nm,19.5s,baz=274,slow=36
KIRV   Kirov             65.61 325    LR      LR      04 14 59.7
       comp=Z,257nm,18.5s,baz=67,slow=38
KIRV   Kirov             65.61 325ceP         P       03 44 03.0 +0.5
KLBR   Kellerberrin      66.05 202    P       P       03 44 05.9 +0.3
       comp=Z,36nm,0.8s
BBB    Bella Bella       66.39  42    LR      LR      04 17 12.9
       comp=Z,112nm,18.0s,baz=18,slow=40
NWAO   Narrogin (SRO)    67.45 202    P       P       03 44 15.3 +0.7
       comp=Z,35nm,1.1s
NWAO   Narrogin (SRO)    67.45 202    P       P       03 44 15.3 +0.7
       comp=Z,23nm,1.1s
NWAO   Narrogin (SRO)    67.45 202    P       P       03 44 15.2 +0.7
APA    Apatity           68.65 337   eP       P       03 44 19.0  -2.7
APA                                  e                03 44 44.1
APA                                  eS       S       03 53 18.7  -5.3
APA                                   MLR     MLR
       comp=Z,2µm,15.7s
BELG   Belogornoye       68.78 319  i P       P       03 44 23.3 +0.5
BELG                                  pmax    pmax
       comp=Z,8.0nm,0.9s
YKA    Yellowknife Ar    69.11  29    P       P       03 44 24.4  -0.3
       comp=Z,1.5nm,0.9s,baz=294,slow=6.8,SNR=10
       comp=Z,1.5nm,0.9s
KLMR   Klimovskoe        69.37 329   eP       P       03 44 24.5  -1.8
KLMR                                  pmax    pmax
       comp=Z,25nm,1.4s
ARCES  ARCESS Array B    70.08 340    P       P       03 44 30.1  -0.5
       comp=Z,8.3nm,1.0s,baz=64,slow=5.7,SNR=5.4
ARCES                                 LR      LR      04 18 14.5
       comp=Z,155nm,19.7s,baz=23,slow=38
       comp=Z,8.3nm,1.0s
ARCES  ARCESS Array B    70.08 340    P       P       03 44 31.1 +0.5
ARCES  ARCESS Array B    70.08 340    P       P       03 44 31.1 +0.5
ARCES                                 pmax    pmax
       comp=Z,151nm,2.0s
DAG    Danmarks Havn     72.11 355    P       P       03 44 41.5  -1.3
DAG                                   pmax    pmax
       comp=Z,12nm,2.9s
VRH    Novokhopyorsk     72.61 320   eP       P       03 44 45.7  -0.4
VRH                                   pmax    pmax
       comp=Z,16nm,0.8s
MOS    Moscow            72.62 325   eP       P       03 44 44.3  -1.8
MOS                                  e                03 44 57.8
MOS                                   pmax    pmax
       comp=Z,33nm,0.7s
MAK    Makhachkala       72.76 310d iP        P       03 44 41.2  -6.0
MAK                                  ePPP     PPP     03 49 11.3
MAK                                  eS       S       03 54 01.9   -11
MAK                                  eSSS     SSS     04 02 04.0
MAK                                   pmax    pmax
       comp=Z,38nm,1.1s
MAK                                   MLR     MLR
       comp=Z,596nm,18.0s
AKT    Akhty             73.26 309   eP       P       03 44 50.9 +0.5
AKT                                  e                03 45 08.0
AKT                                  ePPP     PPP     03 49 14.0
AKT                                  eS       S       03 54 19.9 +1.1
AKT                                   pmax    pmax
       comp=Z,14nm,0.6s
OBN    Obninsk           73.45 325    LR      LR      04 19 37.1
       comp=Z,232nm,19.0s,baz=13,slow=38
OBN    Obninsk           73.45 325   eP       P       03 44 52.0 +0.9
OBN                                  e                03 45 07.4
OBN                                  e                03 47 35.3
OBN                                  ePPP     PPP     03 49 19.6
OBN                                   pmax    pmax
       comp=Z,33nm,1.3s
OBN    Obninsk           73.45 325    P       P       03 44 51.9 +0.9
       comp=Z,34nm,2.1s
LPSR   Galich'ya Gora    73.47 322   eP       P       03 44 51.5 +0.3
LPSR                                  pmax    pmax
       comp=Z,23nm,1.0s
SEKA   Sheki             73.74 308    P       P       03 44 54.5 +1.3
LKRN   Lenkeran, Azer    73.77 306    P       P       03 44 55.1 +1.9
VORR   Voronezh          73.77 321   eP       P       03 44 53.0   0.0
VORR                                  pmax    pmax
       comp=Z,65nm,0.4s
YBH    Yreka Blue Hor    73.96  51    LR      LR      04 09 41.9
       comp=Z,10nm,20.5s,baz=316,slow=30
MNGR   Mingechevir, A    74.01 308    P       P       03 44 56.5 +1.8
VSR    Storozhevoye      74.02 320   eP       P       03 44 52.3  -2.2
VSR                                   pmax    pmax
       comp=Z,10.0nm,1.1s
EDM    Edmonton          74.10  37    IAmb    IAmb    03 44 58.0
       comp=Z,10.0nm,0.8s
NEW    Newport           74.43  43    IAmb    IAmb    03 45 08.1
       comp=Z,11nm,1.2s
GANJ   Ganja             74.59 308    P       P       03 44 59.6 +1.5
FINES  FINESS Array B    74.63 333    P       P       03 44 57.7  -0.2
       comp=Z,8.8nm,0.8s,baz=65,slow=6.0,SNR=22
       comp=Z,8.8nm,0.8s
FINES  FINESS Array B    74.63 333    P       P       03 44 58.2 +0.4
FINES  FINESS Array B    74.63 333  i P       P       03 44 58.2 +0.4
FINES                                 pmax    pmax
       comp=Z,9.0nm,0.8s
GOF    Gofitskoye        74.68 313ceP         P       03 45 02.4 +3.9
BLKN   Baker Lake        75.06  22            P       03 45 00.3 +0.1
BLKN                                  IAmb    IAmb    03 45 02.6
       comp=Z,6.4nm,0.8s
KBZ    Khabaz            75.40 312    P       P       03 45 03.1 +0.5
       comp=Z,9.3nm,0.8s,baz=85,slow=3.0,SNR=28
KBZ                                   LR      LR      04 22 43.0
       comp=Z,99nm,19.1s,baz=32,slow=39
       comp=Z,9.3nm,0.8s
KBZ    Khabaz            75.40 312ceP         P       03 45 04.0 +1.4
KBZ                                   pmax    pmax
       comp=Z,22nm,1.5s
KIV    Kislovodsk        75.43 313    P       P       03 45 02.9   0.0
KIV    Kislovodsk        75.43 313   eP       P       03 45 03.0   0.0
KIV                                   pmax    pmax
       comp=Z,21nm,1.0s
KIV                                   MLR     MLR
       comp=Z,164nm,18.0s
SHA1   Shidzhatmaz       75.55 312  i P       P       03 45 02.9  -0.9
NAX    Nakhchivan        75.83 307    P       P       03 45 07.1 +1.8
GNI    Garni             75.89 308    LR      LR      04 21 17.6
       comp=Z,85nm,19.8s,baz=33,slow=38
J08A   Circle Bar Ran    75.97  48    IAmb    IAmb    03 45 13.6
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             comp=Z,13nm,1.5s
BMO   Blue Mountains   75.97  46  IAmb    IAmb    03 45 17.2
             comp=Z,8.3nm,1.1s
URZ   Urewera          76.06 152  LR      LR      04 15 01.5
             comp=Z,57nm,21.7s,baz=306,slow=33
RAR   Rarotonga        76.15 125  LR      LR      04 12 42.2
             comp=Z,91nm,20.5s,baz=306,slow=31
BEKR  Beckworth        76.40  52          P       03 45 08.9 +0.2
BEKR                              IAmb    IAmb    03 45 28.0
             comp=Z,6.6nm,0.9s
MNK   Minsk            78.00 327 i P      P       03 45 15.1 -2.0
MNK                              i                03 48 10.5
MNK                              i PPP    PPP     03 49 59.2
MNK                              i S      S       03 55 09.8 -0.6
MNK                              i SS     SS      04 00 07.7 -2.8
MNK                              i SSS    SSS     04 03 35.5
MNK                               pmax    pmax
             comp=E,23nm,1.3s
MNK                               pmax    pmax
             comp=Z,6.0nm,0.8s
MNK                               pmax    pmax
             comp=N,25nm,1.2s
MNK                               MLR     MLR
             comp=Z,338nm,20.0s
MNK                               MLR     MLR
             comp=N,589nm,22.0s
MNK                               MLR     MLR
             comp=E,591nm,20.0s
NVAR  Mina Array Bea   78.50  52  P       P       03 45 21.6 +1.1
             comp=E,3.2nm,0.8s,baz=294,slow=5.3,SNR=21
NVAR                              LR      LR      04 17 00.3
             comp=E,118nm,19.0s,baz=327,slow=33
             comp=E,3.2nm,0.8s
GURO  Guroymak-BITLI   78.50 308  IAmb    IAmb    03 45 35.2
             comp=Z,15nm,1.2s
DLMT  Dillon           78.58  44  IAmb    IAmb    03 45 56.2
             comp=Z,8.0nm,1.1s
FFC   Flin Flon        78.83  32          P       03 45 22.3 +0.6
FFC                               IAmb    IAmb    03 45 24.9
             comp=Z,9.6nm,1.1s
FFC   Flin Flon        78.83  32  P       P       03 45 22.3 +0.6
FFC                               pmax    pmax
             comp=Z,10.0nm,1.1s
BOZ   Bozeman (W)      79.03  43  IAmb    IAmb    03 45 28.6
             comp=Z,32nm,2.0s
BOZ   Bozeman (W)      79.03  43  P       P       03 45 24.9 +1.7
PABE  Paberze          79.16 329          P       03 45 23.7 +0.3
AK03  Malin Array Si   79.58 323  P       P       03 45 26.0 +0.2
AKASG Malin Array Be   79.59 323  P       P       03 45 26.0 +0.1
             comp=Z,1.9nm,0.6s,baz=48,slow=5.5,SNR=19
AKASG                             LR      LR      04 22 59.0
             comp=Z,308nm,18.1s,baz=38,slow=38
             comp=Z,1.9nm,0.6s
AKASG Malin Array Be   79.59 323  P       P       03 45 26.3 +0.4
AKASG Malin Array Be   79.59 323  P       P       03 45 26.3 +0.4
AKASG                             pmax    pmax
             comp=Z,8.0nm,1.1s
AKBB  Malin Array Si   79.59 323  IAmb    IAmb    03 45 27.8
             comp=Z,21nm,1.2s
AKBB  Malin Array Si   79.59 323ceP       P       03 45 27.0 +1.1
AKBB                              pmax    pmax
             comp=Z,14nm,1.1s
AKBB  Malin Array Si   79.59 323  P       P       03 45 26.2 +0.3
AK01  Malin Array Si   79.60 323  P       P       03 45 25.9 -0.1
KIEV  Kiev             79.60 323          P       03 45 25.7 -0.3
KIEV                              IAmb    IAmb    03 45 27.8
             comp=Z,20nm,1.2s
KIEV  Kiev             79.60 323  P       P       03 45 25.7 -0.3
KIEV                              pmax    pmax
             comp=Z,20nm,1.3s
KIEV  Kiev             79.60 323  P       P       03 45 26.2 +0.2
AK04  Malin Array Si   79.61 323  P       P       03 45 26.1 +0.1
AK08  Malin Array Si   79.61 323  P       P       03 45 26.1 +0.1
AK02  Malin Array Si   79.62 323  P       P       03 45 26.2 +0.1
AK11  Malin Array Si   79.63 323  P       P       03 45 26.1 -0.1
AK22  Malin Array Si   79.63 323  P       P       03 45 26.1 -0.1
AK21  Malin Array Si   79.64 324  P       P       03 45 26.4 +0.2
AK18  Malin Array Si   79.66 323  P       P       03 45 26.3  0.0
AK12  Malin Array Si   79.66 323  P       P       03 45 26.4 +0.1
AK17  Malin Array Si   79.68 323  P       P       03 45 26.6 +0.2
AK07  Malin Array Si   79.69 323  P       P       03 45 26.4 -0.1
YHL   Hebgen Lake      79.70  44  IAmb    IAmb    03 45 35.1
             comp=Z,10nm,1.2s
YHB   Horse Butte      79.75  44  IAmb    IAmb    03 45 31.3
             comp=Z,7.7nm,0.7s
MARD  Mardin           79.98 307  IAmb    IAmb    03 45 42.4
             comp=Z,26nm,1.2s
HFS   Hagfors          80.04 336  P       P       03 45 28.5 +0.3
             comp=Z,3.5nm,0.7s,baz=72,slow=4.8,SNR=9.4
             comp=Z,3.5nm,0.7s
NB2   NORSAR Subarra   80.19 338  P       P       03 45 28.6 -0.5
             comp=Z,1.6nm,0.6s,baz=41,slow=5.3
NOA   NORSAR Array B   80.19 338  P       P       03 45 29.3 +0.2
             comp=Z,2.0nm,0.6s,baz=42,slow=5.3,SNR=8.1
NOA                               LR      LR      04 24 12.4
             comp=Z,156nm,19.4s,baz=40,slow=38
             comp=Z,2.0nm,0.6s
YNE   Yellowstone No   80.31  43  IAmb    IAmb    03 45 33.4
             comp=Z,7.5nm,0.8s
SUW   Suwalki          80.47 328 eP       P       03 45 32.0 +1.4
TPNV  Topopah Spring   80.66  53  IAmb    IAmb    03 45 47.7
             comp=Z,8.3nm,1.1s
RLMT  Red Lodge        80.68  43  IAmb    IAmb    03 45 35.1
             comp=Z,32nm,1.9s
LOHW  Long Hollow      80.73  45  IAmb    IAmb    03 46 29.8
             comp=Z,21nm,1.9s
LUBAR Lubar, Ukraine   80.81 323  P       P       03 45 32.5  0.0
RNPP9 Sopachiv         80.83 325  P       P       03 45 32.8 +0.2
RNPP5 Staryi Chortor   80.95 325  P       P       03 45 34.0 +0.8
PPT   Papeete          81.45 116  LR      LR      04 17 29.6
             comp=Z,72nm,18.8s,baz=312,slow=32
SHPR  Sheep Range      81.63  53  P       P       03 45 38.8 +1.4
PDAR  Pinedale Array   81.84  45  P       P       03 45 39.2 +0.8
             comp=Z,2.4nm,0.7s,baz=264,slow=1.7,SNR=21
             comp=Z,2.4nm,0.7s
PDAR  Pinedale Array   81.84  45  P       P       03 45 38.9 +0.4
PFO   Pinyon Flats O   82.25  56  LR      LR      04 17 53.9
             comp=Z,163nm,19.9s,baz=311,slow=32
V12A  Nelson           82.26  53  IAmb    IAmb    03 45 42.7
             comp=Z,16nm,1.8s
DANC  Danby, Needles   82.47  54  IAmb    IAmb    03 46 19.4
             comp=Z,13nm,1.2s
KNB   Kanab            82.94  51  IAmb    IAmb    03 46 04.7
             comp=Z,16nm,1.4s
P17A  Butcher Ranch,   82.95  48  IAmb    IAmb    03 45 48.3
             comp=Z,6.3nm,0.8s
Q16A  Castle Valley    82.98  49  IAmb    IAmb    03 46 10.3
             comp=Z,11nm,1.4s
P18A  Preston Nutter   83.18  48  IAmb    IAmb    03 45 49.0
             comp=Z,5.1nm,0.7s
SRU   San Rafael Swe   83.29  48  IAmb    IAmb    03 46 01.4
             comp=Z,6.2nm,0.8s
BR131 Keskin Array S   83.39 313  IAmb    IAmb    03 45 59.6
             comp=Z,11nm,1.1s
BRTR  Keskin Array B   83.39 313  P       P       03 45 47.0 +0.5
             comp=Z,2.8nm,0.6s,baz=121,slow=4.6,SNR=18
             comp=Z,2.8nm,0.6s
BRTR  Keskin Array B   83.39 313  P       P       03 45 46.8 +0.3
RAYN  Ar Rayn          83.49 293          P       03 45 47.4 +0.2
RAYN  Ar Rayn          83.49 293  P       P       03 45 47.4 +0.2
RAYN                              pmax    pmax
             comp=Z,24nm,0.8s
KWP   Kalwaria Pacla   83.53 325 eP       P       03 45 47.1 +0.2
ANTO  Ankara           83.85 313  P       P       03 45 50.7 +2.0
O20A  White River Ci   84.15  46  IAmb    IAmb    03 45 53.8
             comp=Z,6.7nm,0.8s
STHS  Stebnicka Huta   84.39 326 eP       P       03 45 52.6 +1.3
STHS  Stebnicka Huta   84.39 326 eP       P       03 45 52.6 +1.3
HAYD  Hayden           84.54  46  IAmb    IAmb    03 45 59.2
             comp=Z,5.8nm,0.8s
OJC   Ojcow            84.54 327 eP       P       03 45 49.8 -2.2
ULM   Lac du Bonnet    84.57  33  LR      LR      04 24 55.6
             comp=Z,48nm,19.1s,baz=310,slow=37
PV21  Cone Mtn., Par   84.60  48  IAmb    IAmb    03 45 56.7
             comp=Z,7.9nm,0.8s
PV14  Lion Creek, Pa   84.68  48  IAmb    IAmb    03 46 08.6
             comp=Z,11nm,0.8s
PV04  Paradox Valley   84.74  48  IAmb    IAmb    03 46 12.6
             comp=Z,8.5nm,1.0s
WUAZ  Wupatki          84.74  52  IAmb    IAmb    03 46 22.3
             comp=Z,8.2nm,1.2s
PV17  East Wray Mesa   84.77  48  IAmb    IAmb    03 46 12.6
             comp=Z,13nm,1.0s
PV16  Nyswonger Mesa   84.78  48  IAmb    IAmb    03 45 57.5
             comp=Z,8.0nm,0.7s
PV05  Paradox Valley   84.80  49  IAmb    IAmb    03 46 09.2
             comp=Z,10nm,0.8s
PV03  Paradox Valley   84.86  48  IAmb    IAmb    03 45 57.9
             comp=Z,6.2nm,0.8s
PV13  Radium Mtn., P   84.93  48  IAmb    IAmb    03 45 57.0
             comp=Z,7.2nm,0.7s
PV02  Paradox Valley   84.95  48  IAmb    IAmb    03 45 57.5
             comp=Z,11nm,0.8s
PV01  Paradox Valley   85.10  48  IAmb    IAmb    03 46 10.6
             comp=Z,6.3nm,0.8s
ASF   Jabal al Asfar   85.42 305  LR      LR      04 29 35.4
             comp=Z,16µm,19.7s,baz=22,slow=40
LANS  Liptovska Anna   85.43 326 eP       P       03 45 58.1 +1.6
LANS  Liptovska Anna   85.43 326 eP       P       03 45 58.1 +1.6
MMAI  Mount Meron Ar   86.00 306  P       P       03 46 00.1 +0.4
             comp=Z,3.3nm,0.7s,baz=38,slow=4.6,SNR=5.2
MMAI                              LR      LR      04 28 57.6
             comp=Z,58nm,18.1s,baz=37,slow=39
             comp=Z,3.3nm,0.7s
CLL   Collm            86.80 331 eP       P       03 46 05.0 +1.8
CLL   Collm            86.80 331 eP       P       03 46 05.0 +1.8
CONA  Conrad Observa   88.00 327 ePcP     PcP     03 46 11.2 +0.2
             comp=Z,0.8nm,0.4s
GERES GERESS Array B   88.32 329  P       P       03 46 10.2 -0.5
             comp=Z,0.5nm,0.5s,baz=22,slow=3.8,SNR=3.8
GERES                             LR      LR      04 28 47.9
             comp=Z,155nm,19.2s,baz=359,slow=38
             comp=Z,0.5nm,0.5s
ANMO  Albuquerque      88.35  50  LR      LR      04 23 45.1
             comp=Z,167nm,20.4s,baz=329,slow=34
SOKA  Soboth           89.29 327 eP       P       03 46 15.6 +0.3
             comp=Z,1.7nm,0.6s
LESA  Schwarzleotal    89.83 328 i P      P       03 46 18.2 +0.4
             comp=Z,2.6nm,0.8s
MYKA  Terra Mystica    89.98 327 eP       P       03 46 17.6 -0.8
             comp=Z,1.6nm,0.5s
SCHQ  Schefferville    91.30  16  LR      LR      04 30 00.5
             comp=Z,37nm,20.4s,baz=90,slow=37
LPIG  La Paz           91.96  61  LR      LR      04 23 26.1
             comp=Z,125nm,18.7s,baz=325,slow=33
TX31  Lajitas Ar. Si   93.64  53  IAmb    IAmb    03 46 50.5
             comp=Z,5.8nm,1.1s
TXAR  Lajitas Array    93.64  53  P       P       03 46 37.3 +1.5
             comp=Z,2.3nm,0.8s,baz=314,slow=2.9,SNR=22
TXAR                              LR      LR      04 29 24.7
             comp=Z,131nm,18.2s,baz=270,slow=36
             comp=Z,2.3nm,0.8s
TXAR  Lajitas Array    93.64  53          P       03 46 36.8 +1.0
SADO  Sadowa           96.10  28  LR      LR      04 31 37.1
             comp=Z,32nm,20.6s,baz=334,slow=36
QSPA  South Pole Qui  120.45 180  PKP     PKiKP   03 52 10.1 +0.4
             comp=Z,0.8nm,0.3s,baz=262,slow=2.0,SNR=3.6
NVL   N'lazarevskaya  131.53 200 ePKIKP   PKiKP   03 52 30.6 -1.0
NVL                              e                03 54 50.2
NVL                              ePPP     PPP     03 57 41.8
NVL                              eSS      SS      04 12 27.7 +4.4
NVL                              eSSS     SSS     04 17 19.3
NVL                               pmax    pmax
             comp=Z,14nm,1.4s
LPAZ  La Paz          149.06  69  PKPbc   PKPbc   03 53 07.6 -0.9
             comp=Z,4.1nm,0.8s,baz=349,slow=3.6,SNR=4.6
LPAZ  La Paz          149.06  69  PKPdf   PKPdf   03 53 03.9 -0.5
LPAZ  La Paz          149.06  69  PKIKP   PKPdf   03 53 03.9 -0.5
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*IDC **12** 03:35:02.6±1.4, 1°.57N×126°.35E, h0^{km}, mb3.9/5, mbtmp3.8/6, ML3.7/1, Error ellipse: s-maj=116.5km s-min=18.8km az=69.0*

*NEIC **12** 03:35:04.9±1.4, 1°.5N±0°.1×126°.25E±0°.07, h11^{km}±5^{km}, mb4.5/18, Error ellipse: s-maj=15.1km s-min=9.8km az=193.0*

*DJA **12** 03:35:07.9±0.2, 2°N±2°×12°6E±°, h10^{km}, M4.0/12, mb4.2/2, MLv3.9/12*

ISC 12 03:35:08.2±0.6**, 1°.50N**±0°.05×**126°.41E**±0°.05**, h35**^{km}**, n39,** σ**2**^{s}**.06**/43**, mb4.2**/15**, Northern Molucca Sea**

```
Code  Station Name       Δ°  AZ°   Phase ID              Time     Res
                                   Op      ISC       h  m  s     ISC
TNTI  Ternate           1.20 127          Pn      03 35 29.5 +1.0
TNTI  Ternate           1.20 127  P       Pn      03 35 29.7 +1.1
TNTI                              S       Sn      03 35 45.1 +1.4
GAMI  Galela, Maluku    1.42  76  P       Pn      03 35 34.3 +2.7
MNI   Manado            1.56 268  P       Pn      03 35 37.2 +3.6
SGSI  Sangihe           2.34 338  P       Pn      03 35 46.6 +2.3
SGSI                              S       Sn      03 36 15.4 +3.6
GTOI  Gorontalo         3.50 256  P       Pn      03 36 04.9 +4.7
SANI  Sanana            3.55 187  P       Pn      03 36 04.2 +3.3
LUWI  Luwuk             4.42 235  Pn      Pn      03 36 10.2 -2.7
LUWI                              Sn      Sn      03 37 00.5 -2.7
LUWI  Luwuk             4.42 235  P       Pn      03 36 15.7 +2.8
NLAI  Namlea            4.76 172  P       Pn      03 36 21.3 +3.8
NLAI                              S       Sn      03 37 13.6 +2.1
APSI  Ampana            5.32 243  P       Pn      03 36 29.9 +4.6
FITZ  Fitzroy Crossi   19.49 182  P       P       03 39 31.8 -0.6
             0.2nm,0.3s,baz=16,slow=11,SNR=1.5
             0.6nm,0.4s
FITZ  Fitzroy Crossi   19.49 182  P       P       03 39 31.5 -0.8
WB0   Warramunga Arr   22.54 160  P       P       03 40 04.9 -0.5
COEN  Coen             22.63 133  P       P       03 40 07.4 +1.1
COEN                              IAmb    IAmb    03 40 21.1
             comp=Z,12nm,1.5s
WRAB  Tennant Creek    22.68 160  P       P       03 40 07.5 +0.6
WRAB                              IAmb    IAmb    03 40 27.0
             comp=Z,5.5nm,0.7s
WRA   Warramunga Arr   22.69 160  P       P       03 40 06.6 -0.3
             comp=Z,2.2nm,0.4s,baz=338,slow=11,SNR=19
             comp=Z,2.2nm,0.4s
WRA   Warramunga Arr   22.69 160  P       P       03 40 06.1 -0.8
WB2   Warramunga Arr   22.69 160  P       P       03 40 06.1 -0.9
WR8   Warramunga Arr   22.75 160  P       P       03 40 06.9 -0.7
WR8                               IAmb    IAmb    03 40 12.1
             comp=Z,9.2nm,1.2s
ASAR  Alice Springs    26.06 164  P       P       03 40 39.0 +0.5
             comp=Z,0.9nm,0.5s,baz=345,slow=7.9,SNR=18
             comp=Z,0.9nm,0.5s
ASAR  Alice Springs    26.06 164  P       P       03 40 38.7 +0.1
FORT  Forrest          32.14 177  P       P       03 41 32.5 -0.1
FORT                              IAmb    IAmb    03 41 35.2
             comp=Z,6.1nm,0.9s
BBOO  Buckleboo        35.32 166  P       P       03 42 00.4 +0.2
BBOO                              IAmb    IAmb    03 42 17.1
             comp=Z,9.3nm,1.2s
EVN   Everest          46.08 309  P       P       03 43 27.0 -2.8
EVN                               IAmb    IAmb    03 43 41.0
             comp=Z,3.5nm,0.6s
PEA0B Petropavlovsk-   57.61  22  P       P       03 44 55.0 +0.4
MKAR  Makanchi Array   59.20 326  P       P       03 45 05.7 -0.3
             comp=Z,0.5nm,0.4s,baz=125,slow=7.8,SNR=5.1
             comp=Z,0.5nm,0.4s
MKAR  Makanchi Array   59.20 326  P       P       03 45 05.5 -0.4
QRZ   Quartz Range     59.41 141  P       P       03 45 07.7 +0.3
TOZ   Tahuroa Road     59.79 136  P       P       03 45 11.1 +1.0
TOZ                               IAmb    IAmb    03 45 27.0
             comp=Z,16nm,1.1s
KHZ   Kahutara         60.91 142  P       P       03 45 18.9 +1.3
KHZ                               IAmb    IAmb    03 45 24.6
             comp=Z,12nm,1.0s
ZALV  Zalesovo Beam    62.42 334  P       P       03 45 25.9 -1.7
             comp=Z,0.6nm,0.5s,baz=122,slow=3.2,SNR=2.1
             comp=Z,0.6nm,0.5s
ZALV  Zalesovo Beam    62.42 334  P       P       03 45 26.6 -1.0
KURBB Kurchatov Arra   63.44 328  P       P       03 45 33.6 -0.8
             comp=Z,0.9nm,0.6s,baz=130,slow=6.3,SNR=3.1
             comp=Z,0.9nm,0.6s
KURK  Kurchatov        63.44 328  P       P       03 45 34.2 -0.3
KURK                              IAmb    IAmb    03 45 36.1
             comp=Z,3.8nm,1.1s
KKAR  Karatay Array    64.64 318  P       P       03 45 40.2 -2.4
CASY  Casey            68.58 187  P       P       03 46 06.8 -0.3
AB31  Akbulak array    73.67 321  P       P       03 46 36.6 -1.8
AB31                              IAmb    IAmb    03 46 38.5
             comp=Z,5.5nm,1.4s
ABKAR Akbulak array    73.67 321  P       P       03 46 37.8 -0.5
```

UCR 12 03:42:21.2±1.1**, 8°.62N**×**84°.60W, h11**^{km}±7^{km}**, MW3.5, 3C-2D, Off coast of Costa Rica**

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Code  Station Name       Δ°  AZ°   Phase ID              Time     Res
                                   Op      ISC       h  m  s     ISC
PICV  PH. Pirrs         1.07  22⇓iP       Pb      03 42 41.0 -0.9
PICV                             eS       Sg      03 42 52.8 -3.2
EDPE  Pejibaye, P       1.15  62 eP       Pb      03 42 41.7 -1.4
EDPE                             eS       Sb      03 42 56.4 -1.6
PIEC  Cerro El Cedra    1.18  32⇑eP       Pb      03 42 42.3 -1.5
BUS1  Rivas             1.25  42 eP       Pn      03 42 43.1 -2.0
PIRO  Carate, Puerto    1.27 100⇑eP       Pn      03 42 43.9 -1.0
PIRO                             eS       Sb      03 42 59.6 -1.8
FIMO  Fila Mora         1.28  73 eP       Pn      03 42 44.1 -1.2
FIMO                             eS       Sb      03 43 00.3 -1.8
SAJE  San Jernim        1.29  56⇑eP       Pn      03 42 44.2 -1.2
SAJE                             eS       Sb      03 43 00.4 -2.0
EDP2  Potrero Grande    1.46  74 eP       Pn      03 42 47.3 -0.2
EDP2                             eS       Sn      03 43 05.9 -0.8
DRK0  Durika            1.48  64 eP       Pn      03 42 46.8 -1.3
DRK0                             eS       Sn      03 43 05.4 -2.1
RAFA  San Farael, Vo    1.54  30 eP       Pn      03 42 47.8 -1.2
VTCV  VTCV, Calle Va    1.60  32 eP       Pn      03 42 48.7 -1.0
ABRB  Las Abras (San    1.63  32 eP       Pn      03 42 49.0 -1.0
JTS   Las Juntas de     1.69 348 eP       Pb      03 42 52.1 -0.3
BRU2  Volcan            1.89  85 eP       Pn      03 42 53.0 -0.6
BRU2                             eS       Sn      03 43 16.2 -1.4
JEFFS S de V. Baru      2.04  89 eP       Pn      03 42 55.1 -0.5
JEFFS                            eS       Sn      03 43 20.2 -1.0
PBNVO Pueblo Nuevo,     2.39  83⇓eP       Pn      03 42 59.9 -0.5
RBALA Bur               2.43  84 eP       Pn      03 43 00.2 -0.8
RBALA                            eS       Sn      03 43 29.1 -1.5
KKNTU Kakintº           2.77  85 eP       Pn      03 43 05.3 -0.2
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*SJA **12** 03:42:52.1±0.7, 32°.68S×71°.78W, h10^{km}±2^{km}, ML3.6, MW3.3*

*GUC **12** 03:42:56.0±0.6, 32°.63S×71°.62W, h37^{km}±2^{km}, ML3.7*

ISC 12 03:42:55.6±1.2**, 32°.67S**±0°.02×**71°.77W**±0°.04**, h19**^{km}±4^{km}**, n68,** σ**1**^{s}**.81**/117**, 3C-16D, Near coast of central Chile**

```
Code  Station Name       Δ°  AZ°   Phase ID              Time     Res
                                   Op      ISC       h  m  s     ISC
VA01  Torpederas        0.36 164⇑iP       Pn      03 43 04.8 -1.1
VA01                             i S      Sn      03 43 11.0 -1.5
VA01                              IAML            03 43 11.8
             comp=E,11µm,0.1s
VA06  Catapilco         0.41  75⇓iP       Pg      03 43 03.6 -0.6
VA06                             i S      Sg      03 43 08.7 -1.2
VA06                              IAML            03 43 09.8
             comp=E,49µm,0.5s
ROC1  El Roble          0.70 116 eP       Pb      03 43 02.6 -6.7
ROC1                             eS       Sb      03 43 17.3 -1.4
ROCH  El Roble          0.70 115⇓iP       Pb      03 43 08.2 -1.2
ROCH                             i S      Sb      03 43 17.0 -1.8
CO04  Los Peladeros     0.92  47⇓iP       Pb      03 43 10.9 -2.2
CO04                             i S      Sb      03 43 22.0 -3.1
CO04                              IAML            03 43 24.9
             comp=N,3µm,0.2s
VA05  Santo Domingo     0.99 172 eP       Pb      03 43 14.2 +0.1
VA05                             i S      Sn      03 43 28.3 +0.3
VA05                              IAML            03 43 31.3
             comp=E,3µm,0.2s
PEL   Peldehue          1.03 118 eP       Pb      03 43 12.7 -2.1
PEL                              i S      Sb      03 43 26.0 -1.9
PEL                               IAML            03 43 26.9
             comp=N,4µm,0.2s
PEL   Peldehue          1.03 118 eP       Pb      03 43 12.9 -1.8
PEL                              eS       Sb      03 43 25.8 -2.2
PEL                               IAML            03 43 26.6
             comp=Z,2µm,0.2s
VA03  San Esteban       1.03  95⇓iP       Pb      03 43 12.4 -2.5
VA03                             i S      Sb      03 43 23.8 -4.3
VA03                              IAML            03 43 25.2
             comp=N,3µm,0.1s
VA03  San Esteban       1.03  95 eP       Pb      03 43 12.1 -2.8
VA03                             eS       Sb      03 43 25.3 -2.8
VA03                              IAML            03 43 25.7
             comp=Z,1µm,0.2s
MT05  Renca             1.12 130⇓iP       Pn      03 43 15.2 -1.2
MT05                             i S      Sb      03 43 29.4 -1.4
MT05                              IAML            03 43 30.3
             comp=N,10µm,0.3s
MT05  Renca             1.12 130 eP       Pn      03 43 15.2 -1.2
MT05                             eS       Sb      03 43 29.8 -1.0
MT05                              IAML            03 43 30.3
             comp=Z,2µm,0.3s
MT10  Hacienda Santa    1.20 120⇓iP       Pn      03 43 16.0 -1.5
MT10                             i S      Sb      03 43 30.7 -2.2
MT10                              IAML            03 43 34.0
             comp=N,2µm,0.5s
MT14  Cerro Cal¡n       1.26 125⇓iP       Pn      03 43 17.0 -1.3
MT14                             i S      Sb      03 43 32.9 -1.9
MT14                              IAML            03 43 36.0
             comp=E,2µm,0.5s
MT01  Popeta            1.27 160 eP       Pn      03 43 18.3  0.0
MT01                             eS       Sn      03 43 35.0 +0.2
MT01                              IAML            03 43 36.2
             comp=E,2µm,0.2s
MT01  Popeta            1.27 160 eP       Pn      03 43 18.3  0.0
MT01                             eS       Sb      03 43 33.8 -1.0
MT01                              IAML            03 43 37.1
             comp=Z,868nm,0.4s
MT09  Talagante         1.28 149⇓eP       Pn      03 43 18.3 -0.3
MT09                             eS       Sb      03 43 34.6 -0.7
MT09                              IAML            03 43 37.8
             comp=N,2µm,0.5s
MT16  CCHEN             1.29 126⇓iP       Pn      03 43 17.5 -1.2
MT16                             i S      Sn      03 43 33.4 -2.1
MT03  Universidad Ad    1.34 128⇓eP       Pn      03 43 18.3 -1.1
MT03                             eS       Sn      03 43 35.0 -1.7
MT03                              IAML            03 43 36.0
             comp=E,4µm,0.2s
MT03  Universidad Ad    1.34 128 eP       Pn      03 43 18.2 -1.2
MT03                             eS       Sn      03 43 35.9 -0.8
MT03                              IAML            03 43 38.2
             comp=Z,1µm,0.1s
MT15  Las Vizcachas     1.41 131⇓eP       Pn      03 43 19.2 -1.0
MT15                             eS       Sn      03 43 37.1 -1.2
MT15                              IAML            03 43 43.9
             comp=N,3µm,0.2s
MT12  Pirque            1.47 136⇓iP       Pn      03 43 20.7 -0.5
MT12                             eS       Sn      03 43 39.1 -0.8
MT12                              IAML            03 43 43.0
             comp=N,3µm,0.3s
MT04  Ro Olivares       1.55 118⇓eP       Pn      03 43 21.2 -1.2
MT04                              IAML            03 43 41.9
             comp=N,824nm,0.2s
MT04  Ro Olivares       1.55 118 eP       Pn      03 43 21.2 -1.2
MT04                             eS       Sn      03 43 40.6 -1.6
MT04                              IAML            03 43 42.0
             comp=Z,443nm,0.1s
CO02  Combarbal         1.60  24⇑eP       Pn      03 43 22.0 -1.1
CO02                             eS       Sn      03 43 41.9 -1.4
CO02  Combarbal         1.60  24 eP       Pn      03 43 21.9 -1.2
CO02                             eS       Sn      03 43 42.4 -0.9
CO02                              IAML            03 43 44.8
             comp=Z,1µm,0.5s
BO04  La Punta          1.63 144⇓eP       Pn      03 43 23.6 +0.2
BO04                              IAML            03 43 46.8
             comp=N,1µm,0.5s
MT13  San Alfonso       1.64 131 eP       Pn      03 43 23.0 -0.5
MT13                             eS       Sn      03 43 43.8 -0.4
MT13                              IAML            03 43 48.8
             comp=Z,510nm,0.2s
MT08  Bocatoma Ro       1.66 118 eP       Pn      03 43 23.2 -0.7
MT08                             eS       Sb      03 43 46.5 +0.1
LMEL  Las Melosas       1.76 132⇓eP       Pn      03 43 24.8 -0.4
LMEL                             eS       Sn      03 43 47.0 -0.2
LMEL                              IAML            03 43 52.9
             comp=N,1µm,0.2s
LMEL  Las Melosas       1.76 132 eP       Pn      03 43 25.0 -0.2
LMEL                             eS       Sb      03 43 48.9 -0.2
LMEL                              IAML            03 43 50.0
             comp=Z,862nm,0.5s
BO01  Tunca             1.81 162 eP       Pn      03 43 25.8 +0.1
BO01                              IAML            03 43 53.6
             comp=N,393nm,0.3s
BO01  Tunca             1.81 162 eP       Pn      03 43 26.0 +0.2
BO01                             eS       Sb      03 43 49.8 -0.6
BO01                              IAML            03 43 53.6
             comp=Z,323nm,0.5s
BO03  Pichilemu         1.83 185 eP       Pn      03 43 25.6 -0.4
CO06  Fray Jorge        2.00   3⇑eP       Pn      03 43 26.6 -1.7
BO02  Sierra Bellavi    2.27 159 eP       Pn      03 43 32.5 +0.3
BO02  Sierra Bellavi    2.27 159 eP       Pn      03 43 32.6 +0.4
BO02                             eS       Sb      03 44 03.6 -0.1
BO02                              IAML            03 44 06.0
             comp=Z,574nm,0.4s
RTLS  Leoncito          2.27  68 eP       Pn      03 43 33.3 +1.0
RTLS                              IAML            03 44 14.4
             comp=Z,314nm,0.5s
GO05  Hualane           2.33 183⇓eP       Pn      03 43 32.5 -0.5
GO05  Hualane           2.33 183 eP       Pn      03 43 32.7 -0.3
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GO05				*e*S	**Sn**	**03 44 00.1**	**-1.1**
ARCO	**CERRO ARCO**	**2.40**	**95**	*e*P	**Pn**	**03 43 36.0**	**+2.0**
ARCO				*e*S	**Sb**	**03 44 07.8**	**+0.3**
ARCO				IAML		03 44 18.8	
	comp=Z,183nm,1.0s						
ASAL	**Salagasta**	**2.48**	**89**	*e*P	**Pn**	**03 43 37.3**	**+2.2**
ASAL				*e*S	**Sg**	**03 44 17.9**	**+2.6**
AAGR	**Agrelo**	**2.51**	**100**	*e*P	**Pb**	**03 43 38.2**	**-1.9**
GO04	**Tololo Observa**	**2.63**	**19**	*e*P	**Pn**	**03 43 37.5**	**+0.3**
GO04				*e*S	**Sb**	**03 44 12.9**	**-1.3**
GO04				IAML		03 44 18.2	
	comp=Z,720nm,0.4s						
CO05	**La Serena**	**2.78**	**10**	*e*P	**Pn**	**03 43 38.2**	**-0.9**
AVIZ	**Vizcacheras**	**2.85**	**107**	*e*P	**Pn**	**03 43 36.4**	**-3.7**
SJA	**San Juan**	**2.95**	**68**	*e*P	**Pn**	**03 43 39.1**	**-2.5**
CO01	**Juntas del Tor**	**3.05**	**29**	*e*P	**Pn**	**03 43 43.2**	**+0.2**
CO01				*e*S	**Sn**	**03 44 19.0**	**0.0**
CO01				IAML		03 44 29.5	
	comp=Z,191nm,0.9s						
ML02	**Panimavida**	**3.10**	**175**	*e*P	Pn	03 43 38.5	-4.9
ML02	**Panimavida**	**3.10**	**175**	*e*P	**Pn**	**03 43 39.3**	**-4.1**
ML02				*e*S	**Sn**	**03 44 21.7**	**+1.8**
ML02				IAML		03 44 40.9	
	comp=Z,109nm,0.5s						
RTLL	**Cerro Villicun**	**3.10**	**65**	*e*P	**Pn**	**03 43 45.0**	**+1.4**
RTLL				*e*S	**Sn**	**03 44 18.8**	**-1.4**
RTLL				*e*S	**Sb**	**03 44 21.8**	**-6.0**
RTLL				IAML		03 44 34.0	
	comp=Z,143nm,0.3s						
ACCO	**Cerro Coronel**	**3.10**	**49**	*e*P	**Pn**	**03 43 45.3**	**+1.4**
ACCO				*e*S	**Sb**	**03 44 25.5**	**-2.6**
AROD	**Rodeo**	**3.18**	**39**	*e*P	**Pn**	**03 43 46.1**	**+1.2**
AROD				*e*S	**Sn**	**03 44 24.1**	**+1.7**
CFA	**Coronel Fontan**	**3.18**	**71**	*e*P	**Pn**	**03 43 45.2**	**+0.5**
CFA				*e*S	**Sn**	**03 44 24.2**	**+2.1**
CFA				IAML		03 44 33.1	
	comp=Z,77nm,0.3s						
ACDV	**Cuesta del Vie**	**3.37**	**43**	*e*P	**Pn**	**03 43 50.0**	**+2.6**
ACDV				*e*S	**Sb**	**03 44 35.2**	**-0.3**
ACDV				IAML		03 44 40.3	
	comp=Z,60nm,0.6s						
RFA	**San Rafael**	**3.46**	**128**	*e*P	**Pn**	**03 43 49.7**	**+1.2**
RFA				*e*S	**Sg**	**03 44 46.2**	**-0.5**
EDS3	**Malargue**	**3.66**	**148**	*e*P	**Pb**	**03 43 57.2**	**-2.5**
EDS3				*e*S	Sn	03 44 17.2	-17
ACAN	**Cantantal**	**3.89**	**85**	*e*P	**Pn**	**03 43 54.1**	**-0.3**
ACAN				IAML		03 44 50.3	
	comp=Z,218nm,0.4s						
BI02	**San Fabin de**	**4.00**	**174**	*e*P	**Pn**	**03 43 56.2**	**+0.3**
BI02				IAML		03 45 02.3	
	comp=Z,38nm,0.7s						
AC05	**El Transito**	**4.04**	**19**	*e*P	**Pn**	**03 43 55.7**	**-0.8**
AVFE	**Valle Fertil**	**4.19**	**63**	*e*P	**Pn**	**03 43 59.2**	**+0.6**
AVFE				*e*S	**Sn**	**03 44 50.3**	**+3.2**
AVFE				IAML		03 44 59.4	
	comp=Z,60nm,0.7s						
BI05	**Punta Hualpn**	**4.23**	**196**	*e*P	**Pn**	**03 43 58.0**	**-1.0**
BI05				IAML		03 45 21.8	
	comp=Z,35nm,0.1s						
AGUA	**GUANDACOL**	**4.24**	**42**	*e*P	**Pn**	**03 44 01.8**	**+2.5**
AGUA				*e*S	**Sb**	**03 45 01.0**	**+0.5**
AGUA				IAML		03 45 05.2	
	comp=Z,117nm,0.5s						
ACHE	**Chepes**	**4.60**	**72**	*e*P	**Pn**	**03 44 06.3**	**+2.1**
ACHE				*e*S	**Sn**	**03 44 53.6**	**-3.6**
VCA	**Vinchina**	**4.98**	**39**	*e*P	**Pn**	**03 44 10.9**	**+1.3**
VCA				*e*S	**Sb**	**03 45 18.8**	**-3.0**
VCA				IAML		03 45 21.1	
	comp=Z,115nm,0.6s						
APLL	**PUNTA DE LOS L**	**5.02**	**64**	*e*P	**Pn**	**03 44 10.3**	**+0.4**
APLL				*e*S	**Sn**	**03 45 09.6**	**+2.2**
APLL				IAML		03 45 16.9	
	comp=Z,40nm,0.4s						
MRA	**San Martin**	**5.12**	**89**	*e*P	**Pn**	**03 44 11.2**	**-0.2**
MRA				*e*S	**Sn**	**03 45 10.1**	**+0.2**
MRA				IAML		03 45 17.5	
	comp=Z,56nm,0.9s						
ACLC	**CERRO LA CRUZ**	**5.25**	**53**	*e*P	**Pn**	**03 44 13.4**	**+0.2**
ACLC				*e*S	**Sn**	**03 45 20.3**	**+6.9**
ACLC				IAML		03 45 22.5	
	comp=Z,20nm,0.5s						

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*IDC **12** 03:57:28.7±2.9, 31°.00N×142°.95E, h0^{km}, mb3.9/9, mbtmp3.9/10, ML2.9/1, Error ellipse: s-maj=115.9km s-min=18.6km az=72.0*

*JMA **12** 03:57:30.2±0.4, 31°N±1°×14°3E±°, h50^{km}, MV4.0/12, FAR E OFF IZU ISLANDS*

*NEIC **12** 03:57:31.3±1.1, 31°.11N±0°.09×143°.01E±0°.05, h10^{km}±1^{km}, mb4.5/24, Error ellipse: s-maj=16.6km s-min=5.1km az=159.0*

ISC 12 03:57:33.3±0.6**, 31°.13N**±0°.05×**143°.0E**±0°.1**, h30^{km}, n49,** σ**1^{s}.63**/52**, mb4.3**/20**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**3.89**	**335**	*e*S	**Sn**	**03 59 13.1**	**-1.8**
CBIJ	**Chichi jima**	**4.08**	**190**	*e*S	**Sn**	**03 59 16.2**	**-4.1**
BSO3	**Boso 3**	**4.20**	**331**	*e*S	**Sn**	**03 59 21.1**	**-1.9**
JRY	**Ryogami san**	**5.94**	**326**	*e*P	**Pn**	**03 58 58.4**	**-0.8**
JRY				*e*S	**Sn**	**04 00 03.5**	**-2.7**
JAG	**Ashikaga**	**6.04**	**332**	*e*P	**Pn**	**03 58 59.0**	**-1.5**
JAG				*e*S	**Sn**	**04 00 04.3**	**-4.2**
JGF	**Kuroka**	**6.47**	**315**	Pn	**Pn**	**03 59 06.9**	**+0.4**
MJAR	**Matsushiro Arr**	**6.69**	**325**	Pn	**Pn**	**03 59 09.1**	**-0.4**
	0.2nm,0.3s,baz=155,slow=11,SNR=10						
	1.8nm,0.3s						
MAJO	**Matsushiro**	**6.69**	**325**	Pn	**Pn**	**03 59 08.9**	**-0.7**
MJB9	**Matsu-Tunnel**	**6.70**	**325**	Pn	**Pn**	**03 59 10.3**	**+0.7**
JMK	**Ichinoseki**	**7.93**	**350**	*e*P	**Pn**	**03 59 25.3**	**-1.3**
JMK				*e*S	**Sn**	**04 00 48.4**	**-6.9**
JKA	**Kamikawa-asahi**	**12.97**	**359**	Pn	**Pn**	**04 00 35.1**	**-0.3**
TWG	**Pinlang**	**21.16**	**252**	P	**P**	**04 02 16.9**	**+0.8**
TWG				IAmb	IAmb	04 02 49.8	
	comp=Z,24nm,0.8s						
HILR	**Hailar Array B**	**25.36**	**323**	P	**P**	**04 02 59.6**	**+2.0**
	comp=Z,2.5nm,0.6s,baz=130,slow=13,SNR=2.5						
	comp=Z,2.5nm,0.6s						
SONM	**Songino Array**	**32.42**	**312**	P	**P**	**04 04 01.6**	**+1.0**
	comp=Z,1.2nm,0.7s,baz=122,slow=8.4,SNR=8.3						
	comp=Z,1.2nm,0.7s						
SONM	**Songino Array**	**32.42**	**312**	P	**P**	**04 04 01.3**	**+0.7**
COEN	**Coen**	**44.83**	**180**	P	**P**	**04 05 45.4**	**+0.6**
COEN				IAmb	IAmb	04 06 13.8	
	comp=Z,12nm,1.5s						
MTN	**Manton Dam**	**45.17**	**196**	P	**P**	**04 05 46.5**	**-1.0**
MTN				IAmb	IAmb	04 06 02.6	
	comp=Z,9.6nm,1.2s						
SDPT	**Sand Point**	**46.20**	**41**	P	**P**	**04 05 55.6**	**+0.4**
ZAA0	**Zalesovo Array**	**46.96**	**317**	P	**P**	**04 06 02.5**	**+1.3**
ZALV	**Zalesovo Beam**	**46.96**	**317**	P	**P**	**04 06 01.0**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=99,slow=8.9,SNR=6.1						
	comp=Z,0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**46.96**	**317**	P	**P**	**04 06 02.3**	**+1.1**
KNRA	**Kununurra**	**48.50**	**198**	P	**P**	**04 06 13.7**	**+0.3**
KNRA				IAmb	IAmb	04 06 51.5	
	comp=Z,14nm,1.2s						
MKAR	**Makanchi Array**	**48.52**	**307**	P	**P**	**04 06 13.6**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=90,slow=10,SNR=9.8						
	comp=Z,1.2nm,0.7s						
MKAR	**Makanchi Array**	**48.52**	**307**	P	**P**	**04 06 14.3**	**+0.8**
MAKZ	**Makanchi**	**48.73**	**307**	P	**P**	**04 06 16.0**	**+0.9**
KURK	**Kurchatov**	**50.72**	**312**	P	**P**	**04 06 30.7**	**+0.7**
KURBB	**Kurchatov Arra**	**50.78**	**312**	P	**P**	**04 06 31.1**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=87,slow=6.9,SNR=5.7						
	comp=Z,0.6nm,0.4s						
WB0	**Warramunga Arr**	**51.27**	**190**	P	**P**	**04 06 33.3**	**-1.2**
WB0				IAmb	IAmb	04 06 34.4	
	comp=Z,5.3nm,0.9s						
WR8	**Warramunga Arr**	**51.44**	**190**	P	**P**	**04 06 34.9**	**-0.9**
WR8				IAmb	IAmb	04 06 35.6	
	comp=Z,3.5nm,0.9s						
WRA	**Warramunga Arr**	**51.45**	**190**	P	**P**	**04 06 35.0**	**-0.9**
	comp=Z,2.0nm,0.6s,baz=9.3,slow=7.7,SNR=11						
	comp=Z,2.0nm,0.6s						
WRA	**Warramunga Arr**	**51.45**	**190**	P	**P**	**04 06 34.5**	**-1.3**
FITZ	**Fitzroy Crossi**	**51.70**	**201**	P	**P**	**04 06 37.8**	**+0.1**
D22K	**Ayikyak River**	**52.12**	**24**	P	**P**	**04 06 41.8**	**+1.4**
D22K				IAmb	IAmb	04 07 20.3	
	comp=Z,8.0nm,1.5s						
C23K	**Itkillik River**	**53.03**	**23**	P	**P**	**04 06 47.5**	**+0.5**
C23K				IAmb	IAmb	04 07 25.1	
	comp=Z,7.3nm,1.4s						
M24K	**Tolsona, Glenn**	**54.11**	**33**	P	**P**	**04 06 54.6**	**-0.6**
ASAR	**Alice Springs**	**55.17**	**190**	P	**P**	**04 07 01.9**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=6.8,slow=6.2,SNR=9.9						
	comp=Z,0.7nm,0.5s						
ASAR	**Alice Springs**	**55.17**	**190**	P	**P**	**04 07 04.0**	**+0.8**
BVAR	**Borovoye Array**	**55.59**	**316**	P	**P**	**04 07 05.8**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=83,slow=12,SNR=2.9						
	comp=Z,0.5nm,0.5s						
E28M	**Babbage River**	**56.87**	**25**	P	**P**	**04 07 15.8**	**+1.0**
E28M				IAmb	IAmb	04 07 22.4	
	comp=Z,4.9nm,1.2s						
PSA00	**Pilbara Seismi**	**56.90**	**206**	P	**P**	**04 07 15.2**	**-0.4**
PSA00				IAmb	IAmb	04 07 19.9	
	comp=Z,6.5nm,1.4s						
KK31	**Karatay Array**	**57.34**	**304**	P	**P**	**04 07 19.9**	**+1.3**
KKAR	**Karatay Array**	**57.34**	**304**	P	**P**	**04 07 19.3**	**+0.7**
CHGR	**Chuyangaron**	**59.52**	**299**	P	**P**	**04 07 34.6**	**+0.7**
AB31	**Akbulak array**	**62.81**	**313**	P	**P**	**04 07 56.6**	**+0.6**
AB31				IAmb	IAmb	04 08 02.7	
	comp=Z,4.9nm,1.5s						
ABKAR	**Akbulak array**	**62.81**	**313**	P	**P**	**04 07 56.5**	**+0.5**
K02D	**Willamette Mer**	**71.92**	**51**	P	**P**	**04 08 54.3**	**+0.5**
H04A	**Detroit Lake**	**72.02**	**48**	P	**P**	**04 08 54.9**	**+0.6**
FINES	**FINESS Array B**	**74.64**	**334**	P	**P**	**04 09 10.2**	**+0.8**
	comp=Z,1.7nm,0.9s,baz=131,slow=3.8,SNR=3.6						
	comp=Z,1.7nm,0.9s						
FINES	**FINESS Array B**	**74.64**	**334**	P	**P**	**04 09 09.9**	**+0.5**

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*SOME **12** 04:26:31.3, 44°.12N×79°.78E, h20^{km}*

*NNC **12** 04:26:32.4±1.1, 44°.03N×79°.60E, h0^{km}, mb2.6, mpv2.7, Error ellipse: s-maj=9.0km s-min=5.4km az=78.0*

ISC 12 04:26:29.5±1.5**, 44°.11N**±0°.04×**79°.78E**±0°.04**, h3^{km}**±17^{km}**, n12,** σ**0^{s}.48**/24**, 2C-2D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNOS	**Konyrlen**	**0.50**	**300**	P	**Pb**	**04 26 41.4**	**+0.3**
	3.5nm,0.1s						
KNOS				S	**Sb**	**04 26 48.5**	**-0.3**
	9.5nm,0.1s						
KTMS	**Ketmen**	**0.78**	**148**	*e*P	**Pb**	**04 26 45.2**	**-0.8**
	0.7nm,0.1s						
KTMS				*e*S	**Sg**	**04 26 54.9**	**+0.3**
	3.6nm,0.1s						
PDGK	**Podgornoye**	**0.81**	**195**	⇑P	**Pg**	**04 26 45.2**	**+0.2**
	0.4nm,0.2s						
PDGK				⇓S	**Sg**	**04 26 55.9**	**+0.4**
	1.9nm,0.1s						
BLB	**Baldybastay**	**0.94**	**270**	P	**Pb**	**04 26 48.5**	**0.0**
	18nm,0.1s						
BLB				S	**Sb**	**04 27 01.1**	**-0.4**
	9.0nm,0.2s						
SHLS	**Shalkode**	**0.98**	**194**	*e*P	**Pg**	**04 26 48.5**	**+0.2**
	2.9nm,0.1s						
SHLS				*e*S	**Sg**	**04 27 00.6**	**-0.4**
	4.3nm,0.2s						
UZB	**Uzynbulak**	**1.11**	**210**	P	**Pb**	**04 26 51.2**	**-0.3**
	1.0nm,0.1s						
UZB				S	**Sg**	**04 27 05.3**	**+0.2**
	4.3nm,0.2s						
UZB	**Uzynbulak**	**1.11**	**210**	*e*P	**Pb**	**04 26 51.2**	**-0.3**
	0.6nm,0.1s						
UZB				*e*S	**Sg**	**04 27 05.3**	**+0.2**
	4.4nm,0.1s						
ARXS	**Arharly**	**1.41**	**275**	P	**Pn**	**04 26 56.2**	**0.0**
	3.0nm,0.2s						
ARXS				S	**Sg**	**04 27 13.9**	**-0.9**
	5.8nm,0.3s						
ARXS	**Arharly**	**1.41**	**275**	*e*P	**Pn**	**04 26 56.2**	**0.0**
	2.1nm,0.1s						
ARXS				*e*S	**Sg**	**04 27 14.0**	**-0.7**
	4.7nm,0.1s						
SATY	**Saty**	**1.45**	**224**	P	**Pb**	**04 26 57.3**	**+0.1**
SATY				S	**Sg**	**04 27 16.1**	**+0.1**
	27nm,0.2s						
CHKK	**Chushkaly**	**2.03**	**264**	*e*P	**Pb**	**04 27 07.5**	**+0.3**
	3.9nm,0.1s						
CHKK				*e*S	**Sb**	**04 27 33.1**	**+0.3**
	3.8nm,0.1s						
MK31	**Makanchi Array**	**3.21**	**32**	⇑Pn	**Pb**	**04 27 26.8**	**-0.5**
	0.1nm,0.2s						
MK31				⇓Sn	**Sb**	**04 28 08.0**	**+1.1**
	0.1nm,0.1s						

DJA 12 04:27:37.6±0.5**, 4°N**±5°×**12°6E**±°**, h111^{km}**±5^{km}**, M3.7**/8**, mb3.6**/2**, MLv3.7**/8**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.57**	**254**	P	Pn	04 27 56.1	+1.0
SGSI				S	Sn	04 28 10.3	+2.1
GAMI	**Galela, Maluku**	**2.63**	**139**	P	Pn	04 28 19.0	+0.2
DAV	**Davao City (W)**	**3.24**	**351**	P	Pn	04 28 26.6	-0.2
GTOI	**Gorontalo**	**4.43**	**224**	P	Pn	04 28 43.7	+1.0
SANI	**Sanana**	**5.86**	**181**	P	Pn	04 29 00.5	-1.6

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*IDC **12** 04:31:05.2±0.9, 83°.29N×114°.94E, h0^{km}, mb3.7/10, mbtmp3.8/12, ML3.9/2, MS3.2/3, Error ellipse: s-maj=26.1km s-min=17.7km az=136.0*

*NEIC **12** 04:31:06.4±1.7, 83°.3N±0°.1×114°.1E±0°.9, h10^{km}±1^{km}, mb4.3/21, Error ellipse: s-maj=19.8km s-min=16.3km az=147.0*

ISC 12 04:31:06.2±0.5**, 83°.34N**±0°.08×**113°.57E**±0°.06**, h10^{km}, n42,** σ**1^{s}.29**/42**, mb4.0**/18**, MS3.4**/3**, North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZFI2	**Zemlya Franca-**	**8.92**	**289**	*e*P	**Pn**	**04 33 15.3**	**+0.4**
ZFI2				S	**Sn**	**04 34 51.6**	**-3.6**
OMEGA	**Omega**	**8.93**	**289**	*e*P	**Pn**	**04 33 15.4**	**+0.4**
OMEGA				S	**Sn**	**04 34 51.9**	**-3.5**
TIXI	**Tiksi**	**12.12**	**157**	Pn	**Pn**	**04 33 58.1**	**-0.5**
	0.6nm,0.3s,baz=8.9,slow=10,SNR=1.7						
	2.2nm,0.3s						
TIXI	**Tiksi**	**12.12**	**157**		**Pn**	**04 33 57.5**	**-1.2**
NRIK	**Noril'sk**	**15.04**	**217**	Pn	**Pn**	**04 34 37.6**	**-0.8**
	0.5nm,0.3s,baz=34,slow=8.2,SNR=5.4						
NRIK				Sn	Sn	04 37 11.7	-13
	0.3nm,0.3s,baz=34,slow=23,SNR=1.3						
	1.1nm,0.4s						
NRIK	**Noril'sk**	**15.04**	**217**		**Pn**	**04 34 37.1**	**-1.3**
NRIK				IAmb	IAmb	04 34 53.2	
	comp=Z,8.0nm,1.1s						
BILL	**Bilibino**	**18.77**	**112**	P	**Pn**	**04 35 25.5**	**+0.1**
B20K	**Meade River**	**21.08**	**73**	P	**P**	**04 35 49.6**	**-0.5**
B22K	**Teshekpuk Lake**	**21.18**	**69**	P	**P**	**04 35 50.8**	**-0.3**
B22K				IAmb	IAmb	04 35 55.0	
	comp=Z,13nm,1.2s						
ARCES	**ARCESS Array B**	**21.39**	**286**	P	**P**	**04 35 54.3**	**+0.8**
	comp=Z,7.9nm,1.0s,baz=18,slow=12,SNR=3.9						
	comp=Z,7.9nm,1.0s						
ARCES	**ARCESS Array B**	**21.39**	**286**	P	**P**	**04 35 52.2**	**-1.2**
ARCES				IAmb	IAmb	04 36 15.4	
	comp=Z,20nm,1.5s						
C19K	**Lookout Ridge**	**21.67**	**76**	P	**P**	**04 35 56.8**	**+0.3**
B21K	**Ikpikpuk River**	**21.73**	**71**	P	**P**	**04 35 57.2**	**+0.1**
B21K				IAmb	IAmb	04 36 19.9	
	comp=Z,17nm,1.4s						
C16K	**Lisburne Hills**	**21.80**	**82**	P	**P**	**04 35 56.7**	**-1.1**
C16K				IAmb	IAmb	04 35 58.7	
	comp=Z,13nm,1.4s						
C18K	**Utukok River**	**21.92**	**78**	P	**P**	**04 35 58.5**	**-0.7**
C23K	**Itkillik River**	**21.96**	**67**	P	**P**	**04 35 59.5**	**0.0**
D22K	**Ayikyak River**	**22.65**	**70**	P	**P**	**04 36 07.1**	**+0.1**
D22K				IAmb	IAmb	04 36 17.7	
	comp=Z,8.6nm,1.1s						
ILAR	**Eielson Array**	**27.25**	**67**	P	**P**	**04 36 50.6**	**+0.7**
	comp=Z,1.0nm,1.1s,baz=346,slow=11,SNR=5.2						
ILAR				LR	LR	04 47 44.4	
	comp=Z,14nm,20.2s,baz=130,slow=37						
	comp=Z,1.0nm,1.1s						
ILAR	**Eielson Array**	**27.25**	**67**	P	**P**	**04 36 49.5**	**-0.4**
ZALV	**Zalesovo Beam**	**30.50**	**214**	P	**P**	**04 37 19.6**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=22,slow=8.2,SNR=1.7						
	comp=Z,0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**30.50**	**214**	P	**P**	**04 37 18.1**	**-0.8**
NOA	**NORSAR Array B**	**31.19**	**293**	P	**P**	**04 37 26.8**	**+1.9**
	comp=Z,0.7nm,0.6s,baz=9.9,slow=9.6,SNR=2.0						
	comp=Z,0.7nm,0.6s						
N32M	**Quiet Lake**	**32.21**	**57**	P	**P**	**04 37 33.3**	**-0.6**
BVAR	**Borovoye Array**	**32.55**	**230**	P	**P**	**04 37 39.3**	**+2.4**
	comp=Z,0.9nm,0.8s,baz=14,slow=7.6,SNR=2.3						
	comp=Z,0.9nm,0.8s						
KURK	**Kurchatov**	**34.16**	**220**	P	**P**	**04 37 52.3**	**+1.4**
KURK				IAmb	IAmb	04 37 56.5	
	comp=Z,1.6nm,0.6s						
KURBB	**Kurchatov Arra**	**34.26**	**221**	P	**P**	**04 37 53.7**	**+1.9**
	comp=Z,0.5nm,0.5s,baz=20,slow=8.8,SNR=4.6						
	comp=Z,0.5nm,0.5s						
SONM	**Songino Array**	**35.71**	**188**	P	**P**	**04 38 03.7**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=356,slow=10,SNR=2.1						
	comp=Z,0.3nm,0.5s						
SONM	**Songino Array**	**35.71**	**188**	IAmb	IAmb	04 38 04.3	
	comp=Z,4.2nm,1.5s						
AKTO	**Aktyubinsk**	**36.31**	**243**	LR	LR	04 54 48.5	
	comp=Z,68nm,18.8s,baz=12,slow=39						
MKAR	**Makanchi Array**	**37.80**	**216**	P	**P**	**04 38 22.8**	**+0.7**
	comp=Z,1.3nm,0.7s,baz=356,slow=6.6,SNR=10						
	comp=Z,1.3nm,0.7s						
MKAR	**Makanchi Array**	**37.80**	**216**	P	**P**	**04 38 22.6**	**+0.5**
BRTR	**Keskin Array B**	**49.61**	**266**	P	**P**	**04 40 00.0**	**+2.7**
	comp=Z,0.8nm,0.8s,baz=19,slow=9.7,SNR=2.9						
BRTR				LR	LR	05 02 49.2	
	comp=Z,33nm,19.0s,baz=312,slow=38						
	comp=Z,0.8nm,0.8s						
BRTR	**Keskin Array B**	**49.61**	**266**	P	**P**	**04 39 59.0**	**+1.6**
I03D	**Drain, OR**	**50.40**	**52**	P	**P**	**04 40 03.8**	**+0.8**
BCYI	**Bear Canyon**	**50.64**	**43**	P	**P**	**04 40 05.3**	**+0.1**
BCYI				IAmb	IAmb	04 40 43.5	
	comp=Z,3.8nm,1.4s						
PDAR	**Pinedale Array**	**52.47**	**39**	P	**P**	**04 40 18.0**	**-1.0**
L59A	**Walton**	**54.64**	**8**	P	**P**	**04 40 34.9**	**+0.3**
PNTR	**Pine Nut**	**55.31**	**49**	P	**P**	**04 40 39.8**	**+0.1**
PNTR				IAmb	IAmb	04 40 40.5	
	comp=Z,6.3nm,0.9s						
O48B	**Farmland**	**56.31**	**17**	P	**P**	**04 40 47.0**	**+0.4**
O48B				IAmb	IAmb	04 40 58.5	
	comp=Z,18nm,1.4s						
KEST	**Kesra**	**56.35**	**289**	P	**P**	**04 40 47.6**	**+0.6**
TXAR	**Lajitas Array**	**66.24**	**35**	P	**P**	**04 41 53.4**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=11,slow=5.2,SNR=12						
	comp=Z,0.6nm,0.6s						
TXAR	**Lajitas Array**	**66.24**	**35**	P	**P**	**04 41 53.3**	**-0.7**

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*IDC **12** 04:54:59.7±1.8, 33°.33N×139°.86E, h92^{km}±6^{km}, mb3.1/3, mbtmp3.5/4, Error ellipse: s-maj=70.7km s-min=11.0km az=76.0*

*JMA **12** 04:55:00.1±0.1, 33°.5N±0°.4×14°0E±°, h80^{km}±2^{km}, MV3.2/29, E OFF HACHIJOJIMA ISLAND*

ISC 12 04:54:59.0±1.1**, 33°.43N**±0°.05×**140°.18E**±0°.10**, h92^{km}**±8^{km}**, n24,** σ**1^{s}.03**/24**, mb3.5**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.44**	**224**	*i* P	**Pn**	**04 55 13.9**	**+0.4**
JHJ2				*e*S	**Sn**	**04 55 24.2**	**-0.1**
JHJ	**Hachijo jima 2**	**0.45**	**227**	P	**Pn**	**04 55 13.9**	**+0.3**
	623nm,0.3s,baz=135,slow=22,SNR=95						
JHJ				S	**Sn**	**04 55 24.5**	**0.0**
	2µm,0.2s,baz=100,slow=22,SNR=77						
JHCJ	**Hachijojimakas**	**0.48**	**222**	P	**Pn**	**04 55 14.1**	**+0.3**
JHCJ				S	**Sn**	**04 55 24.4**	**-0.4**
JMKN	**Mikurajimanish**	**0.68**	**313**	*e*P	**Pn**	**04 55 15.4**	**-0.1**
JMYK	**Miyake Tsubota**	**0.82**	**320**	P	**Pn**	**04 55 17.2**	**+0.3**
JMYK				S	**Sn**	**04 55 30.1**	**-0.2**
JAOM	**Aogashimamukai**	**1.02**	**200**	S	**Sn**	**04 55 36.6**	**+2.4**
BSO1	**Boso 1**	**1.39**	**28**	*e*P	**Pn**	**04 55 23.5**	**+0.6**
BSO3	**Boso 3**	**1.40**	**11**	*e*P	**Pn**	**04 55 24.1**	**+0.8**
JIM2	**Oshima 3**	**1.43**	**334**	*e*P	**Pn**	**04 55 24.4**	**+0.3**
BSO4	**Boso 4**	**1.56**	**5**	*e*P	**Pn**	**04 55 26.6**	**+1.1**
JIZS	**Izushimoda**	**1.68**	**320**	*e*P	**Pn**	**04 55 27.9**	**+0.8**
KTJ3	**Kamata3**	**1.76**	**329**	*e*P	**Pn**	**04 55 29.0**	**+0.8**
KTJ3				*e*S	**Sn**	**04 55 50.5**	**+0.2**
JOD2	**Odawara 2**	**2.04**	**334**	P	**Pn**	**04 55 32.7**	**+0.9**
SHZ3	**Shizuoka 3**	**2.31**	**316**	*e*P	**Pn**	**04 55 37.4**	**+2.0**
MJAR	**Matsushiro Arr**	**3.50**	**333**	P	**Pn**	**04 55 53.1**	**+1.7**
	10nm,0.4s,baz=145,slow=15,SNR=21						
MJAR				S	**Sn**	**04 56 31.7**	**-0.2**
	4.9nm,0.5s,baz=13,slow=23,SNR=8.3						
H11N2	**WAKE ISLAND Hy**	**27.42**	**113**	T	T	05 29 35.4	
	baz=305,slow=75,SNR=29						
H11N1	**WAKE ISLAND Hy**	**27.42**	**113**	T	T	05 29 39.1	
	baz=305,slow=75,SNR=27						
H11N3	**WAKE ISLAND Hy**	**27.43**	**113**	T	T	05 29 41.6	
	baz=305,slow=75,SNR=28						
H11S3	**WAKE ISLAND Hy**	**27.98**	**115**	T	T	05 30 12.8	
	baz=307						
H11S1	**WAKE ISLAND Hy**	**27.99**	**115**	T	T	05 30 08.0	
	baz=307						
H11S2	**WAKE ISLAND Hy**	**28.00**	**115**	T	T	05 30 20.0	
	baz=307						
ZALV	**Zalesovo Beam**	**43.68**	**315**	P	**P**	**05 02 53.1**	**-1.4**
	0.4nm,0.4s,baz=107,slow=7.7,SNR=1.6						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**45.27**	**305**	P	**P**	**05 03 06.1**	**-1.2**
	0.2nm,0.4s,baz=87,slow=10,SNR=2.2						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**53.36**	**187**	P	**P**	**05 04 09.1**	**0.0**
	0.5nm,0.9s,baz=6.3,slow=7.5,SNR=4.8						
	0.5nm,0.9s						

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*IDC **12** 05:14:05.3±14.0, 17°.07S×179°.08W, h513^{km}±115^{km}, mb3.6/3, mbtmp4.5/4, Error ellipse: s-maj=130.2km s-min=101.4km az=65.0*

*NEIC **12** 05:14:06.2±0.7, 17°.3S±0°.1×178°.8W±0°.2, h538^{km}±16^{km}, mb4.1/22, Error ellipse: s-maj=28.7km s-min=8.2km az=123.0*

ISC 12 05:14:06.1±0.9**, 17°.3S**±0°.2×**178°.9W**±0°.1**, h539^{km}, n30,** σ**0^{s}.68**/32**, mb4.2**/15**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.98**	**261**	P	**P**	**05 15 21.7**	**+1.5**
AFI	**Afiamalu**	**7.61**	**65**	P	**P**	**05 15 59.0**	**-0.8**
MARNC	**Mare, Loyalty**	**13.05**	**249**	P	**P**	**05 16 54.3**	**-1.2**
DZM	**Mont Dzumac**	**14.63**	**249**	P	**P**	**05 17 10.4**	**-1.6**
	4.7nm,0.7s,baz=73,slow=19,SNR=6.9						
DZM	**Mont Dzumac**	**14.63**	**249**	P	**P**	**05 17 11.3**	**-0.7**
EIDS	**Eidsvold**	**29.08**	**249**	P	**P**	**05 19 23.0**	**-0.3**
EIDS				IAmb	IAmb	05 19 23.7	
	comp=Z,4.6nm,0.6s						
ARMA	**Armidale**	**29.88**	**239**	P	**P**	**05 19 30.1**	**-0.2**
MLZ	**Mavora Lakes**	**30.04**	**199**	P	**P**	**05 19 31.0**	**-0.3**
CTAO	**Charters Tower**	**33.13**	**260**	P	**P**	**05 19 58.0**	**-0.1**
CTAO				IAmb	IAmb	05 20 00.9	
	comp=Z,4.6nm,1.1s						
CAN	**Canberra**	**33.74**	**232**	P	**P**	**05 20 02.8**	**-0.3**
CAN				IAmb	IAmb	05 20 10.2	
	comp=Z,9.8nm,1.0s						
COEN	**Coen**	**36.67**	**270**	P	**P**	**05 20 27.6**	**0.0**
COEN				IAmb	IAmb	05 20 31.1	
	comp=Z,4.0nm,1.1s						
TOO	**Toolangi**	**37.23**	**230**	P	**P**	**05 20 32.4**	**+0.4**
TOO				IAmb	IAmb	05 20 33.3	
	comp=Z,7.1nm,1.0s						
STKA	**Stephens Creek**	**38.55**	**240**	P	**P**	**05 20 43.1**	**+0.3**
	comp=Z,5.0nm,0.5s,baz=96,slow=11,SNR=17						
	comp=Z,5.0nm,0.5s						
STKA	**Stephens Creek**	**38.55**	**240**	P	**P**	**05 20 43.3**	**+0.5**
INKA	**Innaminka**	**38.58**	**247**	P	**P**	**05 20 42.8**	**-0.3**
BBOO	**Buckleboo**	**43.33**	**240**	P	**P**	**05 21 20.8**	**+0.1**
BBOO				IAmb	IAmb	05 21 21.7	
	comp=Z,9.4nm,1.1s						
WB0	**Warramunga Arr**	**44.29**	**259**	P	**P**	**05 21 27.7**	**-0.6**
WB2	**Warramunga Arr**	**44.31**	**259**	P	**P**	**05 21 28.0**	**-0.5**
WB2				IAmb	IAmb	05 21 32.2	
	comp=Z,4.7nm,1.0s						
WRAB	**Tennant Creek**	**44.31**	**259**	P	**P**	**05 21 28.1**	**-0.5**
WRA	**Warramunga Arr**	**44.32**	**259**	P	**P**	**05 21 28.1**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=92,slow=8.2,SNR=20						
WRA				PcP	**PcP**	**05 23 02.0**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=89,slow=3.1,SNR=2.2						
	comp=Z,0.8nm,0.3s						
WRA	**Warramunga Arr**	**44.32**	**259**	P	**P**	**05 21 28.0**	**-0.6**
AS31	**Alice Springs**	**44.55**	**254**	P	**P**	**05 21 30.5**	**+0.1**
AS31				IAmb	IAmb	05 21 30.9	
	comp=Z,4.8nm,0.6s						
ASAR	**Alice Springs**	**44.55**	**254**	P	**P**	**05 21 30.4**	**+0.1**
	comp=Z,15nm,0.7s,baz=88,slow=8.1,SNR=184						
ASAR				PcP	**PcP**	**05 23 03.0**	**+1.1**
	comp=Z,0.6nm,0.4s,baz=103,slow=4.3,SNR=5.3						
	comp=Z,15nm,0.7s						
FORT	**Forrest**	**49.88**	**244**	P	**P**	**05 22 10.2**	**-0.1**
FORT				IAmb	IAmb	05 22 16.8	
	comp=Z,5.2nm,0.8s						
KNRA	**Kununurra**	**50.12**	**264**	P	**P**	**05 22 12.4**	**+0.1**

KNRA				IAmb	IAmb	05 22 13.6	
	comp=Z,8.9nm,0.8s						
FITZ	Fitzroy Crossi	52.71	260	P	P	05 22 31.8	+0.9
PSA00	Pilbara Seismi	57.65	255	P	P	05 23 04.8	-0.5
PSA00				IAmb	IAmb	05 23 05.9	
	comp=Z,6.3nm,0.8s						
MBWA	Marble Bar	57.81	256	P	P	05 23 06.4	0.0
LUWI	Luwuk	59.58	279	P	P	05 23 18.2	-0.2
SNAA	Sanae	91.22	179	P	P	05 26 13.9	+0.5
SNAA				IAmb	IAmb	05 26 14.2	
	comp=Z,2.1nm,1.1s						

KRSC 12 05:14:33.6±1.3, 56°.17N×164°.27E, h47^{km}±18^{km}, Ml3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.81	273	eP	Pn	05 14 48.3	-0.4
KBG	Krutoberegovo	0.88	276	eP	Pn	05 14 49.2	-0.4
KBG				eS	Sn	05 15 02.0	+0.7
BKI	Bering	1.36	134	eP	Pn	05 14 58.0	+1.9
BKI				eS	Sn	05 15 16.0	+2.9
SRKR	Sorokina	1.79	287	eP	Pn	05 15 04.5	+2.4
KLY	Klyuchi	2.02	276	eP	Pn	05 15 06.5	+1.3
KLY				eS	Sn	05 15 30.2	+0.9
BZWR	Bezymyannyi-We	2.13	266	eP	Pn	05 15 09.8	+3.0
KIRR	Kirishev	2.21	266	eP	Pn	05 15 11.7	+3.7
KPT	Kopyto	2.28	267	eP	Pn	05 15 11.6	+2.8
KMNR	Kamenistaya	2.31	261	eP	Pn	05 15 12.7	+3.6
KOZ	Kozyrevsk	2.46	269	eP	Pn	05 15 15.6	+4.3
KZV	Kizimen	2.49	247	eP	Pn	05 15 14.4	+2.6
ESO	Esso	3.13	268	eP	Pn	05 15 25.1	+4.7
OSSR	Ossora	3.16	349	eP	Pn	05 15 23.0	+2.3
SPN	Mys Shipunski	3.94	220	eP	Pn	05 15 33.6	+2.1
SDLR	Sedlovina	4.26	229	eP	Pn	05 15 39.2	+3.2
KRER	Koryakskii	4.30	230	eP	Pn	05 15 41.0	+4.5
KRX	Arik	4.30	231	eP	Pn	05 15 41.0	+4.3
SMAR	Somma	4.30	230	eP	Pn	05 15 40.2	+3.5
AVH	Avacha	4.33	230	eP	Pn	05 15 41.1	+4.2
UGLR	Uglovaya	4.33	229	eP	Pn	05 15 40.6	+3.6
KOK	Koryaka	4.36	231	eP	Pn	05 15 41.3	+4.1
KRMR	Karymshinskiy	4.90	229	eP	Pn	05 15 48.8	+4.2
GRL	Gorelyy	5.12	228	eP	Pn	05 15 52.4	+4.6
MTVR	Mutnovka	5.13	226	eP	Pn	05 15 52.3	+4.4
ASAK	Asacha	5.32	227	eP	Pn	05 15 54.9	+4.4
KDTR	Khodutka, Kamc	5.69	222	eP	Pn	05 15 58.2	+2.6

IDC 12 05:49:12.1±1.8, 1°.92N×126°.86E, h0^{km}, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=170.8km s-min=20.7km az=67.0

NEIC 12 05:49:15.6±2.5, 1°.69N±0°.09×126°.65E±0°.04, h10^{km}±1^{km}, mb4.2/14, Error ellipse: s-maj=15.3km s-min=6.6km az=183.0

DJA 12 05:49:16.9±0.3, 2°N±3°×12°6E±°, h10^{km}, M4.0/10, mb4.4/1, MLv3.8/10

ISC 12 05:49:18.5±0.7, 1°.63N±0°.05×126°.47E±0°.06, h35^{km}, n31, σ1^{s}.34/32, mb4.1/11, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.23	134		Pn	05 49 36.8	-2.5
TNTI	Ternate	1.23	134	P	Pn	05 49 40.4	+1.1
GAMI	Galela, Maluku	1.33	81	P	Pn	05 49 43.5	+2.9
SGSI	Sangihe	2.25	335	P	Pn	05 49 53.9	+0.6
SGSI				S	Sn	05 50 20.4	+0.5
GTOI	Gorontalo	3.60	254	P	Pn	05 50 11.9	+0.1
SANI	Sanana	3.68	188	P	Pn	05 50 12.9	-0.1
LUWI	Luwuk	4.55	234	Pn	Pn	05 50 27.4	+2.5
NLAI	Namlea	4.87	173	P	Pn	05 50 30.7	+1.3
APSI	Ampana	5.44	242	P	Pn	05 50 37.3	+0.1
TOLI2	Tolitoli	5.71	265	Pn	Pn	05 50 41.5	+0.6
KNRA	Kununurra	17.34	173		Pn	05 53 19.1	+1.2
TPUB	Ta-pu	22.28	346	P	P	05 54 11.2	-1.6
WB0	Warramunga Arr	22.64	160	P	P	05 54 16.1	-0.6
WB0				IAmb	IAmb	05 54 20.7	
	comp=Z,4.5nm,0.4s						
WRA	Warramunga Arr	22.78	161	P	P	05 54 17.9	-0.4
	comp=Z,2.3nm,0.5s,baz=340,slow=11,SNR=16						
	comp=Z,2.3nm,0.5s						
WRA	Warramunga Arr	22.78	161	P	P	05 54 18.1	-0.1
WR8	Warramunga Arr	22.85	160	P	P	05 54 17.9	-1.0
WR8				IAmb	IAmb	05 54 23.0	
	comp=Z,2.6nm,0.5s						
IPM	Ipoh	25.57	277	P	P	05 54 45.6	+1.1
IPM				IAmb	IAmb	05 55 11.8	
	comp=Z,7.1nm,1.0s						
KULM	Kulim	26.03	279	P	P	05 54 50.7	+2.0
ASAR	Alice Springs	26.16	164	P	P	05 54 50.4	+0.6
	comp=Z,0.9nm,0.5s,baz=347,slow=7.4,SNR=12						
	comp=Z,0.9nm,0.5s						
ASAR	Alice Springs	26.16	164	P	P	05 54 49.9	+0.1
JCJ	Chichijima	29.47	29	P	P	05 55 16.9	-2.4
MKAR	Makanchi Array	59.13	326	P	P	05 59 14.2	-1.5
	comp=Z,0.3nm,0.3s,baz=126,slow=7.8,SNR=6.1						
	comp=Z,0.3nm,0.3s						
MKAR	Makanchi Array	59.13	326	P	P	05 59 14.6	-1.1
KURBB	Kurchatov Arra	63.37	328	P	P	05 59 43.1	-1.2
	comp=Z,0.7nm,0.6s,baz=128,slow=6.5,SNR=8.3						
	comp=Z,0.7nm,0.6s						
KURK	Kurchatov	63.37	328	P	P	05 59 43.2	-1.1
KURK				IAmb	IAmb	05 59 45.9	
	comp=Z,1.2nm,0.8s						
VNDA	Vanda	81.39	173	P	P	06 01 31.6	+0.4
VNDA				IAmb	IAmb	06 01 35.3	
	comp=Z,2.0nm,1.1s						
D19K	Kuna River	83.16	21	P	P	06 01 41.8	+1.1
H19K	Roundabout Mou	83.18	24	P	P	06 01 40.7	0.0
H19K				IAmb	IAmb	06 02 05.9	
	comp=Z,2.2nm,1.0s						
E19K	Redstone River	83.26	22	P	P	06 01 42.2	+1.0
E19K				IAmb	IAmb	06 01 59.4	
	comp=Z,1.7nm,1.1s						
D20K	Etivluk River	83.75	21	P	P	06 01 45.1	+1.4
B20K	Meade River	83.83	20	P	P	06 01 44.6	+0.6

IDC 12 06:06:31.8±0.6, 83°.36N×115°.16E, h0^{km}, mb4.0/26, mbtmp4.0/27, ML3.8/1, MS3.6/21, Error ellipse: s-maj=16.9km s-min=11.7km az=144.0

NEIC 12 06:06:33.4±1.1, 83°.35N±0°.10×114°.3E±0°.8, h10^{km}±1^{km}, mb4.5/66, Error ellipse: s-maj=16.7km s-min=15.7km az=1.0

ISC 12 06:06:33.2±0.4, 83°.40N±0°.07×113°.91E±0°.05, h10^{km}, n106, σ1^{s}.27/87, mb4.4/57, MS3.6/19, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZFI2	Zemlya Franca-	8.94	289	eP	Pn	06 08 42.1	0.0
ZFI2				eS	Sn	06 10 17.1	-5.5
OMEGA	Omega	8.95	289	eP	Pn	06 08 42.2	0.0
OMEGA				eS	Sn	06 10 17.1	-5.8
TIXI	Tiksi	12.16	157	Pn	Pn	06 09 23.8	-2.3
	0.4nm,0.3s,baz=16,slow=13,SNR=4.3						
TIXI				LR	LR	06 13 53.9	
	comp=Z,82nm,18.3s,baz=21,slow=37						
TIXI	Tiksi	12.16	157		Pn	06 09 26.0	-0.1
SPITS	Spitsbergen Ar	14.35	304	Pn	Pn	06 09 55.0	-1.0
	baz=50,slow=13						
NRIK	Noril'sk	15.11	217	Pn	Pn	06 10 05.8	-0.4
	0.4nm,0.3s,baz=26,slow=10,SNR=3.6						
NRIK				Sn	Sn	06 12 40.2	-13
	0.9nm,0.3s,baz=29,slow=23,SNR=6.5						
NRIK				LR	LR	06 16 30.6	
	comp=Z,187nm,19.1s,baz=348,slow=40						
	3.2nm,0.5s						
NRIK	Noril'sk	15.11	217		Pn	06 10 04.0	-2.3
NRIK				IAmb	IAmb	06 10 20.4	
	comp=Z,25nm,1.1s						
BILL	Bilibino	18.75	112	P	Pn	06 10 51.5	-0.7
B20K	Meade River	21.02	73		P	06 11 16.1	-0.3
B20K				IAmb	IAmb	06 11 24.7	
	comp=Z,13nm,0.8s						
KEV	Kevo	21.04	284	P	P	06 11 17.8	+1.2
KEV				IAmb	IAmb	06 11 32.5	
	comp=Z,27nm,1.2s						
B22K	Teshekpuk Lake	21.12	70		P	06 11 17.0	-0.5
ARCES	ARCESS Array B	21.42	286	P	P	06 11 21.8	+1.1
	comp=Z,12nm,1.0s,baz=28,slow=5.5,SNR=8.6						
	comp=Z,12nm,1.0s						
ARCES	ARCESS Array B	21.42	286	P	P	06 11 21.4	+0.7
RES	Resolute Bay	21.47	20	P	P	06 11 20.4	-0.8
	comp=Z,1.8nm,1.0s,baz=4.1,slow=12,SNR=1.8						
RES				LR	LR	06 19 44.1	
	comp=Z,115nm,19.6s,baz=358,slow=37						
	comp=Z,1.8nm,1.0s						
RES	Resolute Bay	21.47	20	P	P	06 11 21.3	0.0
C19K	Lookout Ridge	21.61	76		P	06 11 22.7	-0.1
C19K				IAmb	IAmb	06 11 37.5	
	comp=Z,29nm,1.5s						
B21K	Ikpikpuk River	21.68	71		P	06 11 23.2	-0.2
B21K				IAmb	IAmb	06 11 34.2	
	comp=Z,18nm,1.0s						
C16K	Lisburne Hills	21.75	83	P	P	06 11 24.1	-0.2
C16K				IAmb	IAmb	06 11 32.4	
	comp=Z,17nm,1.0s						
YAK	Yakutsk	21.80	160	P	P	06 11 23.6	-1.2
	comp=Z,13nm,0.4s,baz=296,slow=2.4,SNR=4.4						
YAK				LR	LR	06 19 40.8	
	comp=Z,72nm,18.4s,baz=296,slow=36						
	comp=Z,13nm,0.4s						
YAK	Yakutsk	21.80	160	P	P	06 11 23.9	-0.9
YAK				IAmb	IAmb	06 11 24.6	
	comp=Z,20nm,0.9s						
C18K	Utukok River	21.87	78		P	06 11 25.5	-0.1
C23K	Itkillik River	21.90	68		P	06 11 25.7	-0.2
C24K	Franklin Bluff	22.22	66	P	P	06 11 29.2	-0.1
RDOG	Red Dog Mine	22.24	80		P	06 11 29.8	+0.3
RDOG				IAmb	IAmb	06 11 39.8	
	comp=Z,24nm,1.3s						
A36M	Sachs Harbour	22.25	45		P	06 11 28.9	-0.7
A36M				IAmb	IAmb	06 11 43.4	
	comp=Z,23nm,1.2s						
D20K	Etivluk River	22.32	74	P	P	06 11 30.7	+0.3
D20K				IAmb	IAmb	06 11 38.9	
	comp=Z,20nm,1.2s						
D22K	Ayikyak River	22.59	70	P	P	06 11 32.3	-1.1
D22K				IAmb	IAmb	06 11 44.0	
	comp=Z,14nm,1.0s						
D23K	Nanushuk River	22.73	68		P	06 11 35.6	+0.9
D23K				IAmb	IAmb	06 11 45.5	
	comp=Z,26nm,1.1s						
D24K	Happy Valley	22.75	67	P	P	06 11 35.0	+0.1
D25K	Kavik River	22.84	64	IAmb	IAmb	06 11 46.4	
	comp=Z,16nm,0.9s						
E21K	Killik River	22.87	72	P	P	06 11 36.0	-0.3
E21K				IAmb	IAmb	06 11 46.3	
	comp=Z,13nm,1.1s						
E18K	Tukpahlearik C	23.11	79	IAmb	IAmb	06 11 47.6	
	comp=Z,16nm,1.3s						
TOLK	Toolik Lake Re	23.16	68	P	P	06 11 37.7	-1.6
E22K	Anaktuvuk Pass	23.41	70		P	06 11 40.9	-0.9
E19K	Redstone River	23.46	76	IAmb	IAmb	06 11 52.7	
	comp=Z,18nm,1.4s						
E23K	Chandalar	23.72	68	IAmb	IAmb	06 11 54.2	
	comp=Z,11nm,0.9s						
E24K	Your Creek	23.82	67	P	P	06 11 46.0	+0.2
F17K	Baldwin Pennin	23.98	80		P	06 11 46.2	-1.0
F19K	Shaleruckik Mo	24.00	77	IAmb	IAmb	06 11 57.0	
	comp=Z,22nm,1.5s						
F20K	Avaraart Lake	24.02	74	IAmb	IAmb	06 11 55.8	
	comp=Z,14nm,1.2s						
E25K	Arctic Village	24.09	65	P	P	06 11 48.2	-0.1
E28M	Babbage River	24.23	59	IAmb	IAmb	06 12 13.7	
	comp=Z,16nm,1.4s						
F15K	North Star Dit	24.30	84	P	P	06 11 50.7	+0.5
F15K				IAmb	IAmb	06 12 01.9	
	comp=Z,22nm,1.3s						
F24K	Squaw Lake	24.42	67	IAmb	IAmb	06 12 03.8	
	comp=Z,12nm,1.2s						
E29M	Blow River	24.60	58	IAmb	IAmb	06 12 04.6	
	comp=Z,10.0nm,1.1s						
BMAR	Burnt Mountain	24.86	64	P	P	06 11 55.8	+0.5
C36M	Paulatuk	24.92	46		P	06 11 55.2	-0.6
C36M				IAmb	IAmb	06 12 06.7	
	comp=Z,13nm,1.1s						
INK	Inuvik	25.10	54		P	06 11 57.0	-0.4
INK				IAmb	IAmb	06 12 07.0	
	comp=Z,11nm,1.2s						
F28M	Old Crow	25.16	60	P	P	06 11 58.3	+0.3
F28M				IAmb	IAmb	06 12 08.6	
	comp=Z,13nm,1.3s						
ANM	Nome	25.32	85	P	P	06 11 58.8	-0.6
F30M	Barrier River	25.56	56	IAmb	IAmb	06 12 29.6	
	comp=Z,16nm,1.1s						
H22K	Ishtalitna Cre	25.61	71	P	P	06 12 02.3	+0.2
H21K	Melozitna Rive	25.69	73	IAmb	IAmb	06 12 04.5	
	comp=Z,12nm,1.2s						
G27K	Doyon Strip	25.76	62	IAmb	IAmb	06 12 13.2	
	comp=Z,11nm,1.1s						
F31M	Tsiigehtchic	25.92	55		P	06 12 05.2	+0.4
G29M	Pine Creek	26.02	59	P	P	06 12 06.4	+0.6
G29M				IAmb	IAmb	06 12 17.6	
	comp=Z,12nm,1.1s						
G31M	Satah River	26.38	55	P	P	06 12 09.6	+0.6
G31M				IAmb	IAmb	06 12 29.1	
	comp=Z,12nm,1.2s						
EPYK	Eagle Plains	26.68	58		P	06 12 11.8	0.0
ILAR	Eielson Array	27.19	68	P	P	06 12 16.0	-0.4
	comp=Z,1.2nm,0.9s,baz=343,slow=10.0,SNR=11						
ILAR				PcP	PcP	06 15 35.0	-1.0
	comp=Z,0.6nm,1.0s,baz=249,slow=2.3,SNR=4.4						
ILAR				LR	LR	06 22 51.8	
	comp=Z,85nm,18.6s,baz=120,slow=36						
	comp=Z,1.2nm,0.9s						
I28M	Miner Creek	27.26	61		P	06 12 17.9	+0.8
H31M	Peel River	27.46	56	P	P	06 12 18.7	-0.1
H31M				IAmb	IAmb	06 12 47.3	
	comp=Z,15nm,1.4s						
I30M	Mount Dempster	27.83	58	P	P	06 12 21.9	-0.4
K17K	Iditarod	27.92	80	P	P	06 12 22.7	-0.2
FINES	FINESS Array B	29.17	280	P	P	06 12 36.1	+2.2
	comp=Z,1.6nm,0.7s,baz=7.8,slow=11,SNR=1.3						
	comp=Z,1.6nm,0.7s						
FINES	FINESS Array B	29.17	280	P	P	06 12 35.5	+1.5
BCAR	Beaver Creek A	29.39	64	P	P	06 12 36.6	+0.6
ARTI	Arti	30.46	245	LR	LR	06 26 11.9	
	comp=Z,210nm,18.2s,baz=9.5,slow=39						
ZALV	Zalesovo Beam	30.57	214	P	P	06 12 46.5	0.0
	comp=Z,0.8nm,0.5s,baz=359,slow=8.9,SNR=4.5						
ZALV				LR	LR	06 26 00.6	
	comp=Z,118nm,18.4s,baz=342,slow=38						
	comp=Z,0.8nm,0.5s						
ZALV	Zalesovo Beam	30.57	214	P	P	06 12 44.7	-1.8
NOA	NORSAR Array B	31.20	294	P	P	06 12 53.0	+0.9
	comp=Z,0.5nm,0.6s,baz=18,slow=8.9,SNR=1.9						
	comp=Z,0.5nm,0.6s						
HFS	Hagfors	31.83	291	P	P	06 12 58.2	+0.7
	comp=Z,2.0nm,0.7s,baz=22,slow=8.2,SNR=4.2						
	comp=Z,2.0nm,0.7s						
YKA	Yellowknife Ar	32.42	40	P	P	06 13 01.0	-1.6
	comp=Z,0.5nm,0.8s,baz=344,slow=8.7,SNR=4.9						
YKA				LR	LR	06 27 42.5	
	comp=Z,147nm,18.3s,baz=302,slow=39						
	comp=Z,0.5nm,0.8s						
BVAR	Borovoye Array	32.62	231	P	P	06 13 05.5	+1.1
	comp=Z,0.9nm,0.5s,baz=356,slow=6.1,SNR=4.3						
BVAR				LR	LR	06 27 42.3	
	comp=Z,123nm,18.6s,baz=0.2,slow=39						
	comp=Z,0.9nm,0.5s						
KURK	Kurchatov	34.23	221		P	06 13 18.7	+0.2
KURK				IAmb	IAmb	06 13 29.2	
	comp=Z,2.9nm,0.6s						
KURBB	Kurchatov Arra	34.33	221	P	P	06 13 20.1	+0.8
	comp=Z,1.0nm,0.6s,baz=21,slow=7.5,SNR=15						
	comp=Z,1.0nm,0.6s						
SHEM	Shemya Is, Ala	34.56	112	LR	LR	06 27 23.5	
	comp=Z,57nm,19.6s,baz=340,slow=36						
DLBC	Dease Lake	35.11	55	LR	LR	06 28 51.1	
	comp=Z,132nm,18.7s,baz=262,slow=38						
SONM	Songino Array	35.77	189	P	P	06 13 31.6	-0.4
	comp=Z,0.7nm,0.8s,baz=343,slow=9.5,SNR=2.6						
	comp=Z,0.7nm,0.8s						
GSTR	Great Sitkin T	36.28	102		P	06 13 35.9	-0.3
AKTO	Aktyubinsk	36.38	243	P	P	06 13 37.7	+0.7
	comp=Z,1.7nm,0.4s,baz=23,slow=7.6,SNR=7.6						
AKTO				LR	LR	06 29 25.1	
	comp=Z,114nm,18.3s,baz=234,slow=38						
	comp=Z,1.7nm,0.4s						
AB31	Akbulak array	37.34	241	P	P	06 13 44.7	-0.5
MKAR	Makanchi Array	37.87	216	P	P	06 13 49.9	+0.2
	comp=Z,2.6nm,0.8s,baz=359,slow=6.6,SNR=20						
MKAR				LR	LR	06 30 23.3	
	comp=Z,71nm,19.0s,baz=346,slow=38						
	comp=Z,2.6nm,0.8s						
MKAR	Makanchi Array	37.87	216		P	06 13 49.8	+0.1
AKASG	Malin Array Be	39.34	273	P	P	06 14 02.8	+0.9
	comp=Z,0.3nm,0.4s,baz=15,slow=8.8,SNR=2.0						
AKASG				LR	LR	06 33 26.8	
	comp=Z,94nm,18.2s,baz=350,slow=41						
	comp=Z,0.3nm,0.4s						
SCHQ	Schefferville	42.00	1	LR	LR	06 32 05.2	
	comp=Z,71nm,18.2s,baz=41,slow=36						
GERES	GERESS Array B	42.93	287	P	P	06 14 31.9	+0.2
	comp=Z,0.9nm,0.8s,baz=7.7,slow=8.1,SNR=4.4						
	comp=Z,0.9nm,0.8s						
KBZ	Khabaz	44.64	257	P	P	06 14 47.2	+1.9
	comp=Z,2.2nm,0.8s,baz=333,slow=5.2,SNR=5.7						
	comp=Z,2.2nm,0.8s						
ULM	Lac du Bonnet	45.81	26	LR	LR	06 34 02.0	
	comp=Z,92nm,18.4s,baz=327,slow=36						
NEW	Newport	46.34	46	LR	LR	06 34 22.2	
	comp=Z,78nm,18.5s,baz=303,slow=36						
GAR	Garm	46.54	228	P	P	06 15 01.1	+0.5
BRTR	Keskin Array B	49.66	266	P	P	06 15 26.8	+2.1
	comp=Z,1.7nm,0.8s,baz=11,slow=6.7,SNR=7.0						
	comp=Z,1.7nm,0.8s						
BRTR	Keskin Array B	49.66	266	P	P	06 15 25.3	+0.6
BCYI	Bear Canyon	50.57	43	P	P	06 15 32.2	+0.6
NIL	Nilore	51.60	224		P	06 15 39.7	+0.5
PDAR	Pinedale Array	52.40	40	P	P	06 15 45.5	+0.1
	comp=Z,0.4nm,0.7s,baz=339,slow=3.7,SNR=3.7						
PDAR				LR	LR	06 38 19.0	
	comp=Z,39nm,18.2s,baz=336,slow=36						
	comp=Z,0.4nm,0.7s						
ESDC	Sonseca Array	53.85	302	P	P	06 15 57.1	+1.2
	comp=Z,1.6nm,1.0s,baz=19,slow=8.2,SNR=4.5						
	comp=Z,1.6nm,1.0s						
NVAR	Mina Array Bea	56.01	48	P	P	06 16 12.2	+0.6
	comp=Z,0.2nm,0.5s,baz=341,slow=8.3,SNR=2.2						
	comp=Z,0.2nm,0.5s						
MMAI	Mount Meron Ar	56.08	263	P	P	06 16 14.1	+2.1
	comp=Z,0.6nm,0.4s,baz=17,slow=12,SNR=1.7						
	comp=Z,0.6nm,0.4s						
KEST	Kesra	56.37	289	P	P	06 16 16.4	+2.3
	comp=Z,9.0nm,0.8s,baz=11,slow=6.8,SNR=5.8						
	comp=Z,9.0nm,0.8s						
EIL	Elat	59.44	263	LR	LR	06 45 25.9	
	comp=Z,41nm,18.1s,baz=4.0,slow=39						
ANMO	Albuquerque	60.40	38	LR	LR	06 42 34.8	
	comp=Z,62nm,19.9s,baz=342,slow=36						
CMAR	Chiang Mai Arr	65.25	196	P	P	06 17 15.6	+1.0
	comp=Z,1.2nm,0.3s,baz=4.7,slow=8.3,SNR=1.2						
	comp=Z,1.2nm,0.3s						
TXAR	Lajitas Array	66.17	36	P	P	06 17 20.1	-0.4
	comp=Z,2.0nm,0.7s,baz=330,slow=5.1,SNR=30						
	comp=Z,2.0nm,0.7s						
LPIG	La Paz	70.88	42	LR	LR	06 50 45.2	
	comp=Z,34nm,18.1s,baz=346,slow=38						
TORD	Torodi Ar. Bea	79.52	293	P	P	06 18 40.5	+0.8
	comp=Z,1.4nm,0.3s,baz=8.8,slow=8.5,SNR=2.8						
	comp=Z,1.4nm,0.3s						
TORD	Torodi Ar. Bea	79.52	293	IAmb	IAmb	06 18 41.6	
	comp=Z,4.2nm,1.1s						

IDC 12 06:30:18.4±6.0, 21°.80N×146°.91E, h0^{km}, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=158.0km s-min=35.0km az=180.0

ISC 12 06:30:23.1±6.0, 22°N±1°×146°.9E±0°.3, h35^{km}, n10, σ0^{s}.53/7, mb3.9/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	18.88	96	T	T	06 53 20.3	
	baz=275,slow=75,SNR=15						
H11S1	WAKE ISLAND Hy	18.89	96	T	T	06 53 19.9	
	baz=275,slow=75,SNR=14						
H11S2	WAKE ISLAND Hy	18.90	96	T	T	06 53 20.2	
	baz=275,slow=75,SNR=13						
KSRS	Korea Array	22.70	318	P	P	06 35 21.3	-0.4
	0.5nm,0.3s,baz=130,slow=13,SNR=2.4						
	0.5nm,0.3s						
ZALV	Zalesovo Beam	56.35	321	P	P	06 40 01.0	+0.5
	0.5nm,0.4s,baz=101,slow=7.6,SNR=2.4						
	0.5nm,0.4s						
MKAR	Makanchi Array	57.23	312	P	P	06 40 07.0	+0.1
	0.8nm,0.6s,baz=81,slow=9.0,SNR=6.0						
	0.8nm,0.6s						
KURBB	Kurchatov Arra	59.87	317	P	P	06 40 25.1	-0.2
	1.7nm,0.9s,baz=95,slow=6.9,SNR=8.8						
	1.7nm,0.9s						
ILAR	Eielson Array	60.48	27	P	P	06 40 29.6	+0.4
	0.6nm,0.8s,baz=260,slow=7.2,SNR=5.2						
	0.6nm,0.8s						
BVAR	Borovoye Array	64.90	320	P	P	06 40 59.4	+0.6
	1.3nm,0.5s,baz=99,slow=9.2,SNR=6.4						
	1.3nm,0.5s						
YKA	Yellowknife Ar	74.84	28	P	P	06 41 59.2	-0.5
	0.4nm,0.7s,baz=291,slow=7.0,SNR=4.7						
	0.4nm,0.7s						

SJA 12 06:42:49.6±0.7, 32°.28S×69°.99W, h134^{km}±3^{km}, ML3.6, MW3.6

GUC 12 06:42:52.1±0.8, 32°.29S×70°.19W, h131^{km}±5^{km}, ML3.9

ISC 12 06:42:50.6±1.3, 32°.26S±0°.02×69°.97W±0°.03, h127^{km}±8^{km}, n65, σ1^{s}.39/113, 11C, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA03	San Esteban	0.70	224	eP	Pn	06 43 10.5	-0.4
VA03				eS	Sn	06 43 25.2	-1.0
VA03				IAML		06 43 26.7	
	comp=E,11μm,0.2s						
VA03	San Esteban	0.70	224	eP	Pn	06 43 10.4	-0.4
VA03				eS	Sn	06 43 26.0	-0.1
VA03				IAML		06 43 26.8	
	comp=Z,2μm,0.2s						
RTLS	Leoncito	0.74	51	eP	Pn	06 43 11.1	-0.3
RTLS				eS	Sn	06 43 25.8	-1.2
RTLS				IAML		06 43 26.1	
	comp=Z,2μm,0.2s						
CO04	Los Peladeros	0.88	284	⇑iP	Pn	06 43 11.7	-0.8
CO04				eS	Sn	06 43 27.4	-1.7
CO04				IAML		06 43 28.2	
	comp=E,7μm,0.2s						
ARCO	CERRO ARCO	1.05	124	eP	Pn	06 43 14.5	+0.5
ARCO				eS	Sn	06 43 32.5	+0.8
ARCO				IAML		06 43 34.2	
	comp=Z,1μm,0.5s						
PEL	Peldehue	1.07	214	eP	Pn	06 43 13.7	-0.3
PEL				eS	Sn	06 43 30.6	-1.1
PEL				IAML		06 43 31.9	
	comp=N,2μm,0.5s						
PEL	Peldehue	1.07	214	eP	Pn	06 43 13.8	-0.2
PEL				eS	Sn	06 43 31.0	-0.7
PEL				IAML		06 43 32.1	
	comp=Z,592nm,0.9s						
MT10	Hacienda Santa	1.12	205	⇑iP	Pn	06 43 14.9	+0.3
MT10				eS	Sn	06 43 32.8	0.0
ROCH	El Roble	1.13	231	⇑iP		06 43 14.4	
ROCH				⇑iP	Pn	06 43 14.4	-0.4
ROCH				eS	Sn	06 43 32.1	-1.0
ROCH				eS		06 43 32.1	
ROCH				IAML		06 43 32.9	
	comp=E,2μm,0.4s						
ROC1	El Roble	1.13	231	eP	Pn	06 43 14.5	-0.4
ROC1				eS	Sn	06 43 32.6	-0.7
MT04	Ro Olivares	1.15	187	eP	Pn	06 43 16.0	+1.0
MT04	Ro Olivares	1.15	187	eP	Pn	06 43 16.0	+1.0
MT04				eS	Sn	06 43 34.9	+1.3
MT04				IAML		06 43 42.7	
	comp=Z,318nm,0.1s						
VA06	Catapilco	1.16	255	⇑iP	Pn	06 43 14.1	-0.7
VA06				eS	Sn	06 43 31.3	-1.9
VA06				IAML		06 43 33.6	
	comp=E,3μm,0.5s						
MT08	Bocatoma Ro	1.18	182	⇑iP	Pn	06 43 16.2	+0.9
MT08				eS	Sn	06 43 34.5	+0.4
MT08	Bocatoma Ro	1.18	182	eP	Pn	06 43 16.3	+0.9
MT08				eS	Sn	06 43 35.0	+0.9
MT14	Cerro Cal¡n	1.23	203	eP	Pn	06 43 16.1	+0.4
MT14				eS	Sn	06 43 34.8	+0.1
MT14				IAML		06 43 37.6	
	comp=N,890nm,0.3s						
AAGR	Agrelo	1.27	131	eP	Pn	06 43 17.1	+1.0
AAGR				eS	Sn	06 43 37.7	+2.2
AAGR				IAML		06 43 38.4	
	comp=Z,856nm,0.5s						
MT05	Renca	1.30	210	eP	Pn	06 43 16.8	+0.4
MT05				eS	Sn	06 43 35.9	-0.1
MT05	Renca	1.30	210	eP	Pn	06 43 16.7	+0.4

MT05				*e*S	**Sn**	**06 43 37.4**	**+1.4**
MT05				IAML		06 43 37.7	
	comp=Z,755nm,0.1s						
MT03	**Universidad Ad**	**1.31**	**200**	⇑*e*P	**Pn**	**06 43 17.1**	**+0.5**
MT03	**Universidad Ad**	**1.31**	**200**	*e*P	**Pn**	**06 43 17.0**	**+0.5**
MT03				*e*S	**Sn**	**06 43 36.8**	**+0.5**
MT03				IAML		06 43 39.8	
	comp=Z,925nm,0.2s						
CO02	**Combarbal**	**1.37**	**320**	⇑*i*P	**Pn**	**06 43 17.5**	**+0.2**
CO02				*e*S	**Sn**	**06 43 37.3**	**-0.2**
CO02				IAML		06 43 38.6	
	comp=E,5μm,0.1s						
CO02	**Combarbal**	**1.37**	**320**	*e*P	**Pn**	**06 43 17.4**	**+0.2**
CO02				*e*S	**Sn**	**06 43 37.9**	**+0.5**
CO02				IAML		06 43 41.3	
	comp=Z,1μm,0.6s						
SJA	**San Juan**	**1.41**	**59**	*e*P	Pn	06 43 03.4	-14
SJA				IAML		06 43 22.3	
	comp=Z,353nm,0.6s						
SJA				*e*S	Sn	06 43 22.6	-15
MT15	**Las Vizcachas**	**1.41**	**198**	*e*P	**Pn**	**06 43 17.9**	**+0.4**
MT15				*e*S	**Sn**	**06 43 38.7**	**+0.6**
MT15				IAML		06 43 42.8	
	comp=N,1μm,0.2s						
MT13	**San Alfonso**	**1.50**	**190**	*i* P	**Pn**	**06 43 20.1**	**+1.4**
MT13	**San Alfonso**	**1.50**	**190**	*e*P	**Pn**	**06 43 15.2**	**-3.4**
MT13				*e*S	**Sn**	**06 43 41.5**	**+1.4**
MT13				IAML		06 43 47.1	
	comp=Z,231nm,0.1s						
CO03	**El Pedregal**	**1.54**	**336**	⇑*i*P	**Pn**	**06 43 19.8**	**+0.7**
CO03				*e*S	**Sn**	**06 43 41.1**	**+0.3**
CO03				IAML		06 43 41.9	
	comp=E,2μm,0.7s						
CO03	**El Pedregal**	**1.54**	**336**	*e*P	**Pn**	**06 43 19.8**	**+0.7**
CO03				*e*S	**Sn**	**06 43 41.6**	**+0.8**
CO03				IAML		06 43 44.5	
	comp=Z,703nm,0.5s						
MT12	**Pirque**	**1.55**	**198**	*e*P	**Pn**	**06 43 19.6**	**+0.5**
MT12				*e*S	**Sn**	**06 43 41.3**	**+0.5**
RTLL	**Cerro Villicun**	**1.58**	**54**	*e*P	**Pn**	**06 43 19.8**	**+0.3**
RTLL				*e*S	**Sn**	**06 43 41.1**	**-0.4**
RTLL				IAML		06 43 41.2	
	comp=Z,1μm,0.5s						
LMEL	**Las Melosas**	**1.59**	**187**	*e*P	**Pn**	**06 43 20.9**	**+1.1**
LMEL				*e*S	**Sn**	**06 43 46.7**	**+4.7**
LMEL				IAML		06 43 54.5	
	comp=Z,293nm,0.1s						
VA01	**Torpederas**	**1.60**	**241**	*e*P	**Pn**	**06 43 19.5**	**-0.1**
VA01	**Torpederas**	**1.60**	**241**	*e*P	**Pn**	**06 43 19.6**	**-0.1**
VA01				*e*S	**Sn**	**06 43 40.6**	**-1.2**
VA01				IAML		06 43 43.0	
	comp=Z,454nm,0.3s						
CFA	**Coronel Fontan**	**1.61**	**67**	*e*P	Pn	06 43 14.5	-5.4
CFA				*e*P		06 43 19.8	
CFA				*e*S	**Sn**	**06 43 41.6**	**-0.6**
CFA				IAML		06 43 42.2	
	comp=Z,306nm,0.5s						
AVIZ	**Vizcacheras**	**1.72**	**135**	*e*P	**Pn**	**06 43 22.2**	**+1.1**
AVIZ				*e*S	**Sn**	**06 43 42.0**	**-2.5**
MT09	**Talagante**	**1.74**	**209**	*e*P	**Pn**	**06 43 21.4**	**0.0**
MT09				*e*S	**Sn**	**06 43 44.2**	**-0.7**
ACCO	**Cerro Coronel**	**1.84**	**25**	*e*P	**Pn**	**06 43 23.7**	**+0.8**
ACCO				*e*S	**Sn**	**06 43 48.6**	**+1.2**
MT01	**Popeta**	**1.93**	**214**	*e*P	**Pn**	**06 43 23.1**	**-0.4**
MT01				*e*S	**Sn**	**06 43 48.5**	**-0.2**
MT01				IAML		06 43 49.3	
	comp=Z,275nm,0.3s						
VA05	**Santo Domingo**	**1.96**	**224**	*e*P	**Pn**	**06 43 23.9**	**0.0**
CO06	**Fray Jorge**	**2.13**	**318**	*i* P	**Pn**	**06 43 25.7**	**-0.3**
CO06				*e*S	**Sn**	**06 43 52.9**	**-0.2**
CO06				IAML		06 44 01.7	
	comp=E,785nm,0.3s						
AROD	**Rodeo**	**2.13**	**12**	*e*P	**Pn**	**06 43 28.1**	**+1.7**
AROD				*e*S	**Sn**	**06 43 55.9**	**+2.1**
GO04	**Tololo Observa**	**2.20**	**341**	⇑*i*P	**Pn**	**06 43 27.7**	**+0.6**
GO04				*e*S	**Sn**	**06 43 54.7**	**-0.4**
GO04				IAML		06 44 01.2	
	comp=E,956nm,0.4s						
GO04	**Tololo Observa**	**2.20**	**341**	*e*P	**Pn**	**06 43 27.9**	**+0.7**
GO04				*e*S	**Sn**	**06 43 55.8**	**+0.6**
GO04				IAML		06 44 05.6	
	comp=Z,424nm,0.3s						
ACDV	**Cuesta del Vie**	**2.21**	**20**	*e*P	**Pn**	**06 43 29.4**	**+2.2**
ACDV				*e*S	**Sn**	**06 43 48.8**	**-6.5**
ACDV				IAML		06 44 00.4	
	comp=Z,95nm,0.3s						
CO01	**Juntas del Tor**	**2.28**	**357**	⇑*i*P	**Pn**	**06 43 30.1**	**+1.9**
CO01				*e*S	**Sn**	**06 43 58.7**	**+1.8**
CO01	**Juntas del Tor**	**2.28**	**357**	*e*P	**Pn**	**06 43 24.6**	**-3.5**
CO01				*e*S	**Sn**	**06 43 58.9**	**+1.9**
BO01	**Tunca**	**2.32**	**203**	*e*P	**Pn**	**06 43 28.1**	**-0.3**
BO01				*e*S	**Sn**	**06 43 57.8**	**+0.3**
BO01				IAML		06 43 59.3	
	comp=Z,97nm,0.2s						
ACAN	**Cantantal**	**2.36**	**91**	*e*P	**Pn**	**06 43 28.4**	**-0.5**
CO05	**La Serena**	**2.57**	**335**	*e*P	**Pn**	**06 43 31.6**	**0.0**
CO05				*e*S	**Sn**	**06 44 02.0**	**-1.2**
CO05				IAML		06 44 05.2	
	comp=N,476nm,0.4s						
BO02	**Sierra Bellavi**	**2.61**	**195**	*e*P	**Pn**	**06 43 32.2**	**0.0**
BO02				*e*S	**Sn**	**06 44 06.0**	**+1.8**
BO02				IAML		06 44 07.9	
	comp=Z,277nm,0.2s						
AVFE	**Valle Fertil**	**2.68**	**54**	*e*P	**Pn**	**06 43 33.8**	**+0.7**
AVFE				IAML		06 44 09.1	
	comp=Z,110nm,0.4s						
RFA	**San Rafael**	**2.80**	**154**	*e*P	**Pn**	**06 43 35.0**	**+0.4**
RFA				*e*S	**Sn**	**06 44 07.8**	**-0.8**
RFA				IAML		06 44 08.3	
	comp=Z,90nm,0.7s						
AGUA	**GUANDACOL**	**3.04**	**25**	*e*S	Sn	06 44 02.0	-12
AGUA				IAML		06 44 20.4	
	comp=Z,93nm,0.6s						
GO05	**Hualane**	**3.19**	**210**	*e*P	**Pn**	**06 43 38.7**	**-1.0**
GO05				*e*S	**Sn**	**06 44 16.4**	**-1.1**
LCO	**Las Campanas**	**3.30**	**349**	*e*P	**Pn**	**06 43 41.6**	**+0.3**
LCO				*e*S	**Sn**	**06 44 20.6**	**+0.1**
LCO				IAML		06 44 21.6	
	comp=Z,252nm,0.6s						
AC05	**El Transito**	**3.42**	**356**	*e*P	**Pn**	**06 43 44.1**	**+1.3**
AC05				*e*S	Sn	06 44 12.7	-10
AC05				IAML		06 44 28.1	
	comp=Z,73nm,0.3s						
APLL	**PUNTA DE LOS L**	**3.48**	**59**	*e*P	**Pn**	**06 43 44.1**	**+0.6**
APLL				*e*S	Sn	06 44 13.2	-11
APLL				IAML		06 44 25.2	
	comp=Z,56nm,0.9s						
EDS3	**Malargue**	**3.53**	**172**	*e*P	**Pn**	**06 43 44.5**	**+0.2**
EDS3				*e*S	Sn	06 44 39.9	+14
MRA	**San Martin**	**3.61**	**94**	*e*P	**Pn**	**06 43 45.0**	**-0.1**
MRA				*e*S	Sn	06 44 13.7	-14
MRA				IAML		06 44 46.0	
	comp=Z,103nm,0.7s						
AC04	**Llanos de Chal**	**4.15**	**346**	*e*P	**Pn**	**06 43 52.7**	**+0.4**
AC04				*e*S	**Sn**	**06 44 44.0**	**+3.7**
AC04				IAML		06 44 52.9	
	comp=Z,51nm,1.1s						
BI02	**San Fabin de**	**4.52**	**193**	*e*P	**Pn**	**06 43 57.3**	**0.0**
BI02				IAML		06 44 59.8	
	comp=Z,16nm,0.8s						
GO03	**Copiapo**	**4.66**	**357**	*e*P	**Pn**	**06 44 00.5**	**+1.3**
GO03				*e*S	**Sn**	**06 44 52.5**	**+0.1**
GO03				IAML		06 45 19.6	
	comp=Z,33nm,1.1s						
TCA	**Tanti**	**4.67**	**80**	*e*P	**Pn**	**06 43 59.0**	**-0.3**
TCA				*e*S	**Sn**	**06 44 49.0**	**-3.7**
CYA	**Choya**	**5.24**	**45**	*e*P	**Pn**	**06 44 06.6**	**-0.4**
CYA				*e*S	**Sn**	**06 45 04.1**	**-2.3**
CYA				IAML		06 45 45.1	
	comp=Z,13nm,0.7s						

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*NNC **12** 06:52:55.3±3.4, 51°.67N×74°.12E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=106.8km s-min=19.6km az=27.0, Suspected Mining explosion.*

*IDC **12** 06:52:58.6±1.0, 52°.08N×74°.56E, h0^{km}, mbtmp3.0/4, ML2.5/4, Error ellipse: s-maj=29.9km s-min=8.3km az=28.0*

ISC 12 06:52:55.8±1.0, **52°.01N**±0°.09×**74°.38E**±0°.06, **h0**^{km}, **n9**, σ**1^{s}.95**/11, **4C-4D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BVA0	**Borovoye Array**	**2.64**	**294**	⇓Pg	**Pb**	**06 53 43.4**	**-0.5**
	5.4nm,0.6s,baz=122,slow=16,SNR=6.6						
BVA0				Lg	Lg	06 54 18.0	
	8.9nm,0.6s,baz=111,slow=25,SNR=16						
BVAR	**Borovoye Array**	**2.64**	**294**	Pn	**Pb**	**06 53 43.5**	**-0.4**
	0.3nm,0.3s,baz=108,slow=18,SNR=28						
BVAR				Sn	**Sb**	**06 54 16.1**	**-0.7**
	0.8nm,0.3s,baz=112,slow=27,SNR=6.6						
	5.3nm,0.5s						
KURBB	**Kurchatov Arra**	**2.96**	**116**	Pn	**Pn**	**06 53 45.3**	**+1.4**
	0.7nm,0.3s,baz=302,slow=14,SNR=4.8						
KURBB				Lg	Lg	06 54 27.6	
	0.8nm,0.3s,baz=299,slow=32,SNR=4.9						
	2.6nm,0.2s						
KURBB	**Kurchatov Arra**	**2.96**	**116**	⇑Pg	**Pb**	**06 53 48.3**	**-1.0**
	2.9nm,0.3s						
KURBB				⇑Lg	Lg	06 54 26.8	
	50nm,0.6s						
KURK	**Kurchatov**	**2.96**	**114**	⇓Pg	**Pg**	**06 53 53.2**	**+0.7**
	0.7nm,0.4s						
KURK				⇑Lg	Lg	06 54 28.3	
	17nm,0.7s						
I46RU	**ZALESOVO INFRA**	**6.60**	**69**	I	I	07 32 20.0	
	0.1nm,0.8s,baz=256,slow=305,SNR=2.4						
ZALV	**Zalesovo Beam**	**6.60**	**69**	Pn	**Pn**	**06 54 35.3**	**+1.3**
	0.3nm,0.3s,baz=259,slow=13,SNR=12						
ZALV				Sn	**Sn**	**06 55 48.5**	**-1.4**
	0.3nm,0.3s,baz=255,slow=26,SNR=5.4						
	2.4nm,0.6s						
MK31	**Makanchi Array**	**7.34**	**132**	⇑Pn	Pn	06 54 49.2	+5.0
	0.6nm,0.6s,baz=308,slow=12,SNR=4.9						
MK31				⇓Sn	**Sn**	**06 56 04.0**	**-4.2**
	0.7nm,0.5s						
MK31				⇓Lg	Lg	06 56 44.9	
	3.8nm,0.7s,baz=321,slow=31,SNR=4.9						
MKAR	**Makanchi Array**	**7.34**	**132**	Pn	**Pn**	**06 54 46.5**	**+2.2**
	0.2nm,0.3s,baz=0.7,slow=15,SNR=6.0						
MKAR				Sn	**Sn**	**06 56 08.3**	**0.0**
	0.3nm,0.3s,baz=321,slow=26,SNR=3.7						
MKAR				Lg	Lg	06 56 44.7	
	0.4nm,0.3s,baz=325,slow=30,SNR=7.5						
	0.2nm,0.4s						

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*IDC **12** 06:58:25.2±1.8, 30°.80S×177°.94W, h0^{km}, mb4.4/3, mbtmp4.3/4, ML3.8/1, MS3.4/4, Error ellipse: s-maj=47.5km s-min=21.1km az=116.0*

ISC 12 06:58:30.2±1.7, **30°.9S**±0°.1×**177°.9W**±0°.3, **h46**^{km}, **n18**, σ**1^{s}.82**/10, **mb4.3**/3, **MS3.5**/3, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.61**	**358**	Pn	**Pn**	**06 58 55.2**	**-1.0**
	184nm,0.3s,baz=88,slow=17,SNR=3.0						
RAO				Sn	**Sn**	**06 59 14.0**	**-1.7**
	321nm,0.3s,baz=66,slow=21,SNR=8.1						
URZ	**Urewera**	**8.46**	**208**	Pn	**Pn**	**07 00 28.1**	**-2.0**
	1.1nm,0.3s,baz=246,slow=5.2,SNR=7.4						
URZ				Sn	**Sn**	**07 02 03.3**	**-1.0**
	2.2nm,0.3s,baz=208,slow=22,SNR=12						
	2.0nm,0.4s						
DZM	**Mont Dzumac**	**16.54**	**298**	LR	LR	07 07 05.0	
	comp=Z,76nm,19.4s,baz=182,slow=32						
CTA	**Charters Tower**	**33.99**	**280**	LR	LR	07 18 16.8	
	comp=Z,42nm,18.5s,baz=48,slow=35						
STKA	**Stephens Creek**	**34.49**	**258**	P	**P**	**07 05 15.7**	**+1.8**
	8.1nm,0.6s,baz=92,slow=10,SNR=17						
	8.1nm,0.6s						
PMG	**Port Moresby**	**38.91**	**296**	LR	LR	07 19 04.0	
	comp=Z,74nm,19.5s,baz=150,slow=32						
ASAR	**Alice Springs**	**43.20**	**267**	P	**P**	**07 06 27.2**	**+0.3**
	1.3nm,0.5s,baz=103,slow=7.5,SNR=21						
	1.3nm,0.5s						
WRA	**Warramunga Arr**	**44.24**	**273**	P	**P**	**07 06 35.3**	**0.0**
	2.6nm,0.4s,baz=111,slow=8.0,SNR=37						
	2.6nm,0.4s						
JNU	**Nakatsue**	**79.98**	**318**	LR	LR	07 40 12.5	
	comp=Z,54nm,21.8s,baz=14,slow=31						
H03S2	**Juan Fernandez**	**80.11**	**123**	T	T	08 39 42.7	
	baz=238,slow=74,SNR=15						
H03S1	**Juan Fernandez**	**80.12**	**123**	T	T	08 39 41.2	
	baz=238,slow=74,SNR=14						
H03S3	**Juan Fernandez**	**80.13**	**123**	T	T	08 39 37.8	
	baz=238,slow=74,SNR=18						
H03N3	**Juan Fernandez**	**80.30**	**123**	T	T	08 39 56.7	
	baz=241,SNR=4.9						
H03N2	**Juan Fernandez**	**80.31**	**123**	T	T	08 39 55.4	
	baz=241,SNR=4.8						
H03N1	**Juan Fernandez**	**80.32**	**123**	T	T	08 39 55.4	
	baz=241,SNR=9.1						
KURBB	**Kurchatov Arra**	**121.49**	**313**	PKP	**PKiKP**	**07 17 21.6**	**+3.3**
	0.5nm,0.6s,baz=88,slow=2.0,SNR=6.5						
FINES	**FINESS Array B**	**145.62**	**340**	PKPbc	**PKPdf**	**07 18 02.8**	**+0.1**
	2.5nm,0.5s,baz=61,slow=3.5,SNR=15						
AKASG	**Malin Array Be**	**151.74**	**322**	PKPbc	**PKiKP**	**07 18 20.1**	**+0.4**
	1.3nm,0.6s,baz=54,slow=2.4,SNR=4.8						

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*GCG **12** 06:59:38.8±0.4, 13°.52N×90°.60W, h13^{km}±14^{km}, MD3.6, ML3.0*

*CATAC **12** 06:59:38.7±1.2, 13°N±13°×9°1W±°, h12^{km}±10^{km}, M2.6/7, MLv2.6/7, Error ellipse: s-maj=28.0km s-min=13.7km az=162.6, confirmed*

ISC 12 06:59:39.4±3.4, **13°.5N**±0°.2×**90°.6W**±0°.1, **h38**^{km}, **n13**, σ**0^{s}.77**/13, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**0.67**	**58**	P	**Pn**	**06 59 51.9**	**-0.6**
FAME	**Alcaldia de Sa**	**0.67**	**58**	S	**Sn**	**07 00 00.6**	**-1.1**
NUBE	**Las Nubes**	**0.90**	**62**	*e*P	**Pn**	**06 59 55.3**	**-0.3**
NUBE	**Las Nubes**	**0.90**	**62**	P	**Pn**	**06 59 55.3**	**-0.3**
NUBE	**Las Nubes**	**0.90**	**62**	S	**Sn**	**07 00 07.6**	**+0.1**
ESSG	**Sabana Grande**	**0.92**	**346**	*e*P	**Pn**	**06 59 55.1**	**-0.9**
CEVE	**Cerro Verde**	**1.00**	**70**	P	**Pn**	**06 59 57.2**	**0.0**
JAYA	**Jayaque - finc**	**1.13**	**81**	*i* P	**Pn**	**06 59 58.7**	**-0.2**
JAYA	**Jayaque - finc**	**1.13**	**81**	P	**Pn**	**06 59 58.7**	**-0.2**
UNIC	**Universidad Ca**	**1.13**	**64**	P	**Pn**	**06 59 59.0**	**+0.2**
PMON	**Piamonte**	**1.27**	**80**	P	**Pn**	**07 00 00.9**	**+0.2**
PMON	**Piamonte**	**1.27**	**80**	S	**Sn**	**07 00 17.6**	**+1.1**
APG	**El Apazote**	**1.51**	**5**	*e*P	**Pn**	**07 00 05.6**	**+1.4**

UCR 12 07:01:22.7±1.1, **8°.62N**×**84°.58W**, **h9**^{km}±14^{km}, **MW3.5, 1C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PICV	**PH. Pirrs**	**1.07**	**21**	*e*P	Pg	07 01 42.3	-1.0
PICV				*e*S	Sg	07 01 54.0	-3.2
EDPE	**Pejibaye, P**	**1.13**	**62**	*e*P	Pg	07 01 42.3	-2.2
PANP	**Palmar Norte**	**1.16**	**73**	*e*P	Pb	07 01 44.4	-0.6
PANP				*e*S	Sg	07 01 58.1	-2.0
RAZU	**San Marcos de**	**1.17**	**28**	*e*P	Pg	07 01 44.0	-1.2
PIEC	**Cerro El Cedra**	**1.17**	**32**	⇑*e*P	Pg	07 01 43.6	-1.6
PIEC				*e*S	Sg	07 01 59.9	-0.6
ACOS	**Acosta**	**1.24**	**19**	*e*P	Pn	07 01 44.4	-2.0
PIRO	**Carate, Puerto**	**1.25**	**100**	*e*P	Pn	07 01 45.6	-0.9
FIMO	**Fila Mora**	**1.27**	**73**	*e*P	Pn	07 01 45.3	-1.5
SAJE	**San Jernim**	**1.28**	**56**	*e*P	Pn	07 01 45.7	-1.3
SAJE				*e*S	Sb	07 02 02.1	-1.8
REPA	**Paraso**	**1.39**	**30**	*e*P	Pn	07 01 47.0	-1.5
EDAD	**Golfito**	**1.40**	**89**	*e*P	Pn	07 01 47.8	-0.8
EDP2	**Potrero Grande**	**1.44**	**74**	*e*P	Pn	07 01 48.7	-0.4
EDP2				*e*S	Sn	07 02 07.4	-0.8
DRK0	**Durika**	**1.47**	**64**	*e*P	Pn	07 01 48.4	-1.2
DRK0				*e*S	Sn	07 02 07.0	-2.0
NYURE	**Nandayure**	**1.52**	**334**	*e*P	Pg	07 01 53.6	+1.8
CVIMO	**Finca Echandi**	**1.53**	**24**	*e*P	Pn	07 01 49.6	-0.8
VTCV	**VTCV, Calle Va**	**1.59**	**32**	*e*P	Pn	07 01 51.7	+0.3
ABRB	**Las Abras (San**	**1.62**	**32**	*e*P	Pn	07 01 49.7	-2.0
RESJ	**San Isidro (Tu**	**1.68**	**33**	*e*P	Pn	07 01 52.0	-0.4
JTS	**Las Juntas de**	**1.70**	**348**	*e*P	Pg	07 01 58.8	+3.5
ALCO	**Alturas Coton,**	**1.76**	**79**	*e*P	Pn	07 01 52.0	-1.5
DMCAL	**E. de Neily**	**1.77**	**88**	*e*P	Pn	07 01 53.2	-0.4
DMCAL				*e*S	Sn	07 02 14.3	-2.0
JUD3	**Juan Diaz 3**	**1.80**	**328**	*e*P	Pg	07 01 56.8	-0.4
CEUA	**Cerro Uatsi, L**	**1.90**	**58**	*e*P	Pb	07 01 56.7	-1.0
CUI	**Cuipilapa**	**2.10**	**344**	*e*P	Pg	07 02 08.6	+5.5

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*IDC **12** 07:18:10.7±1.6, 24°.24S×67°.07W, h153^{km}±15^{km}, mb3.4/5, mbtmp4.0/11, Error ellipse: s-maj=20.8km s-min=12.4km az=93.0*

*SJA **12** 07:18:11.6±0.8, 24°.18S×67°.22W, h187^{km}±5^{km}, ML4.4, MW4.1*

*GUC **12** 07:18:12.0±0.6, 24°.23S×67°.24W, h174^{km}±6^{km}, ML4.7*

*NEIC **12** 07:18:13.1±2.1, 24°.15S±0°.07×67°.4W±0°.1, h197^{km}±7^{km}, mb4.8/8, ML4.7(GUC), Error ellipse: s-maj=18.3km s-min=9.4km az=96.0*

*VAO **12** 07:18:15.2±1.2, 23°.96S×66°.84W, h175^{km}±7^{km}, mb4.5, Presumed earthquake*

ISC 12 07:18:11.8±0.6, **24°.19S**±0°.04×**67°.22W**±0°.03, **h178**^{km}±6^{km}, **n124**, σ**1^{s}.25**/158, **mb3.2**/5, **8C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALTA		**0.81**	**92**	⇓*i*P	**Pn**	**07 18 39.3**	**+0.7**
SALTA		**0.81**	**92**	*e*P	**Pn**	**07 18 39.4**	**+0.7**
SALTA				*e*S	**Sn**	**07 19 00.2**	**+1.1**
AF01	**San Pedro de A**	**1.52**	**324**		**Pn**	**07 18 46.4**	**+2.4**
AF01	**San Pedro de A**	**1.52**	**324**	*e*P	**Pn**	**07 18 46.5**	**+2.4**
AF01	**San Pedro de A**	**1.52**	**324**	*e*P	**Pn**	**07 18 45.8**	**+1.7**
AF01				IAML		07 19 34.1	
	comp=Z,917nm,0.5s						
SLA	**San Lorenzo**	**1.65**	**109**	⇓*e*P	**Pn**	**07 18 46.3**	**+1.0**
SLA				*e*S	**Sn**	**07 19 11.8**	**+0.6**
SLA	**San Lorenzo**	**1.65**	**109**	*e*P	**Pn**	**07 18 46.5**	**+1.3**
SLA				*e*S	**Sn**	**07 19 12.3**	**+1.2**
HJA	**Humahuaca**	**1.93**	**60**	*e*P	**Pn**	**07 18 49.9**	**+1.5**
HJA				*e*S	**Sn**	**07 19 13.5**	**-3.2**
AZAP	**Zapla**	**1.97**	**91**	*e*P	**Pn**	**07 18 49.5**	**+0.9**
FSA	**Cafayete**	**2.22**	**150**	*e*P	**Pn**	**07 18 52.0**	**+0.7**
GO02	**Mina Guanaco**	**2.36**	**245**		**Pn**	**07 18 54.2**	**+1.2**
GO02				Sn	**Sn**	**07 19 25.9**	**+0.9**
GO02	**Mina Guanaco**	**2.36**	**245**	⇑*i*P	**Pn**	**07 18 54.3**	**+1.2**
GO02				*e*S	**Sn**	**07 19 26.2**	**+1.1**
GO02				IAML		07 19 26.8	
	comp=N,2μm,0.2s						
GO02	**Mina Guanaco**	**2.36**	**245**	*e*P	**Pn**	**07 18 54.2**	**+1.2**
GO02				*e*S	**Sn**	**07 19 26.2**	**+1.1**
GO02				IAML		07 19 27.9	
	comp=Z,887nm,0.1s						
YJA	**Yavi**	**2.55**	**38**	*e*P	**Pn**	**07 18 56.7**	**+1.3**
YJA	**Yavi**	**2.55**	**38**	*e*P	**Pn**	**07 18 57.6**	**+2.2**
YJA				*e*S	**Sn**	**07 19 30.6**	**+1.3**
PB06	**IPOC Station P**	**2.62**	**304**		**Pn**	**07 18 57.5**	**+1.6**
PB06				Sn	**Sn**	**07 19 30.0**	**-0.2**
PB06	**IPOC Station P**	**2.62**	**304**	⇑*i*P	**Pn**	**07 18 57.5**	**+1.6**
PB06				*e*S	**Sn**	**07 19 30.2**	**0.0**
PB06				IAML		07 19 32.3	
	comp=N,3μm,0.4s						
PB06	**IPOC Station P**	**2.62**	**304**	*e*P	**Pn**	**07 18 57.4**	**+1.4**
PB06				*e*S	**Sn**	**07 19 30.4**	**+0.2**
PB06				IAML		07 19 32.9	
	comp=Z,1μm,0.1s						
PB14	**IPOC Station P**	**2.93**	**261**		**Pn**	**07 19 00.4**	**+0.6**
PB14				Sn	**Sn**	**07 19 36.4**	**-0.7**
PB14	**IPOC Station P**	**2.93**	**261**	*e*P	**Pn**	**07 19 00.3**	**+0.6**
PB14				*e*S	**Sn**	**07 19 37.4**	**+0.2**
PB09	**IPOC Station P**	**3.02**	**322**		**Pn**	**07 19 02.9**	**+2.0**
PB09	**IPOC Station P**	**3.02**	**322**	*i* P	**Pn**	**07 19 02.7**	**+1.9**
PB09				*e*S	**Sn**	**07 19 40.1**	**+1.0**
PB09				IAML		07 19 41.4	
	comp=N,1μm,0.5s						
PB09	**IPOC Station P**	**3.02**	**322**	*e*P	**Pn**	**07 19 02.8**	**+2.0**
PB09				*e*S	**Sn**	**07 19 39.5**	**+0.5**
PB09				IAML		07 19 40.6	
	comp=Z,1μm,0.5s						
PB05	**IPOC Station P**	**3.04**	**295**		**Pn**	**07 19 01.8**	**+0.8**
PB05				Sn	**Sn**	**07 19 38.1**	**-1.1**
PB05	**IPOC Station P**	**3.04**	**295**	⇑*i*P	**Pn**	**07 19 01.9**	**+0.9**
PB05				*e*S	**Sn**	**07 19 37.9**	**-1.4**
PB05				IAML		07 19 40.5	
	comp=E,808nm,0.6s						
PB05	**IPOC Station P**	**3.04**	**295**	*e*P	**Pn**	**07 19 01.9**	**+0.9**
PB05				*e*S	**Sn**	**07 19 38.5**	**-0.8**
PB05				IAML		07 19 40.9	
	comp=Z,616nm,0.5s						
AHML	**Horco Molle**	**3.09**	**147**	*e*P	Pn	07 18 50.5	-11
AHML				*e*S	Sn	07 19 28.8	-12
PB10	**IPOC Station P**	**3.12**	**282**		**Pn**	**07 19 02.8**	**+1.0**
PB10	**IPOC Station P**	**3.12**	**282**	⇑*i*P	**Pn**	**07 19 03.0**	**+1.1**
PB10				*e*S	**Sn**	**07 19 39.6**	**-1.3**
PB10				IAML		07 19 45.3	
	comp=E,816nm,0.4s						
PB10	**IPOC Station P**	**3.12**	**282**	*e*P	**Pn**	**07 19 02.8**	**+1.0**
PB10				*e*S	**Sn**	**07 19 40.5**	**-0.3**
PB10				IAML		07 19 45.0	
	comp=Z,473nm,0.3s						
AC02	**Maricunga**	**3.14**	**213**		**Pn**	**07 19 03.5**	**+1.0**
AC02	**Maricunga**	**3.14**	**213**	⇑*i*P	**Pn**	**07 19 03.6**	**+1.0**
AC02	**Maricunga**	**3.14**	**213**	*e*P	**Pn**	**07 19 03.7**	**+1.1**
AC02				*e*S	**Sn**	**07 19 44.1**	**+1.9**
PB03	**IPOC Station P**	**3.16**	**312**		**Pn**	**07 19 03.8**	**+1.3**
PB03	**IPOC Station P**	**3.16**	**312**	⇑*i*P	**Pn**	**07 19 03.6**	**+1.1**
PB03				*e*S	**Sn**	**07 19 41.2**	**-0.8**
PB03				IAML		07 19 42.4	
	comp=E,2μm,0.3s						
PB03	**IPOC Station P**	**3.16**	**312**	*e*P	**Pn**	**07 19 03.5**	**+1.0**
PB03				*e*S	**Sn**	**07 19 40.5**	**-1.4**
PB03				IAML		07 19 45.1	
	comp=Z,1μm,0.3s						
PB07	**IPOC Station P**	**3.47**	**314**		**Pn**	**07 19 07.5**	**+1.2**
PB07	**IPOC Station P**	**3.47**	**314**	⇑*i*P	**Pn**	**07 19 07.4**	**+1.0**
PB07				*e*S	**Sn**	**07 19 47.4**	**-1.6**
PB07	**IPOC Station P**	**3.47**	**314**	*e*P	**Pn**	**07 19 07.2**	**+0.9**
PB07				*e*S	**Sn**	**07 19 48.0**	**-0.9**
PB07				IAML		07 19 49.3	
	comp=Z,2μm,0.4s						
AC01	**Pan de Azucar**	**3.62**	**237**		**Pn**	**07 19 07.7**	**-0.4**
AC01	**Pan de Azucar**	**3.62**	**237**	⇑*e*P	**Pn**	**07 19 07.7**	**-0.4**
AC01	**Pan de Azucar**	**3.62**	**237**	*e*P	**Pn**	**07 19 07.8**	**-0.3**
AC01				IAML		07 19 50.1	
	comp=Z,189nm,0.5s						
AC01				*e*S	**Sn**	**07 19 50.4**	**-1.7**
PB01	**IPOC Station P**	**3.77**	**326**		**Pn**	**07 19 10.6**	**+0.6**
PB01	**IPOC Station P**	**3.77**	**326**	*e*P	**Pn**	**07 19 10.6**	**+0.6**
PB01				*e*S	**Sn**	**07 19 54.5**	**-1.1**
PB01	**IPOC Station P**	**3.77**	**326**	*e*P	**Pn**	**07 19 10.6**	**+0.6**
PB01				*e*S	**Sn**	**07 19 54.5**	**-1.1**
PB01				IAML		07 19 56.7	
	comp=Z,478nm,0.5s						
PB02	**IPOC Station P**	**3.78**	**319**		**Pn**	**07 19 10.7**	**+0.6**
PB02	**IPOC Station P**	**3.78**	**319**	*e*P	**Pn**	**07 19 10.7**	**+0.6**
PB02				*e*S	**Sn**	**07 19 53.7**	**-2.0**
PB02	**IPOC Station P**	**3.78**	**319**	*e*P	**Pn**	**07 19 10.9**	**+0.7**
PB02				*e*S	**Sn**	**07 19 54.2**	**-1.5**
PB02				IAML		07 20 00.3	
	comp=Z,2μm,0.4s						
TINO	**Tinogasta**	**3.87**	**185**	*e*P	**Pn**	**07 19 12.7**	**+1.4**
AC06	**Mina Casimiro**	**4.23**	**221**		**Pn**	**07 19 15.1**	**-0.7**
AC06	**Mina Casimiro**	**4.23**	**221**	*e*P	**Pn**	**07 19 15.0**	**-0.7**
PATCX	**Punta Patache**	**4.31**	**321**		**Pn**	**07 19 17.1**	**+0.1**
PATCX	**Punta Patache**	**4.31**	**321**	*e*P	**Pn**	**07 19 17.5**	**+0.6**
PATCX	**Punta Patache**	**4.31**	**321**	*e*P	**Pn**	**07 19 17.2**	**+0.3**
PATCX				*e*S	Sn	07 19 57.2	-11
PATCX				IAML		07 20 09.3	
	comp=Z,319nm,0.8s						
GO03	**Copiapo**	**4.34**	**218**		**Pn**	**07 19 16.7**	**-0.5**
GO03	**Copiapo**	**4.34**	**218**	*e*P	**Pn**	**07 19 16.8**	**-0.5**
GO03				*e*S	**Sn**	**07 20 07.0**	**-1.5**
PB08	**IPOC Station P**	**4.41**	**336**	*i* P	**Pn**	**07 19 19.7**	**+1.2**
PB08				*e*S	**Sn**	**07 20 10.3**	**-0.4**
PB08	**IPOC Station P**	**4.41**	**336**	*e*P	**Pn**	**07 19 19.8**	**+1.2**
PB08				*e*S	**Sn**	**07 20 11.4**	**+0.7**
PB08				IAML		07 20 12.3	
	comp=Z,156nm,0.4s						
TA01	**Diego Aracena**	**4.53**	**322**		**Pn**	**07 19 19.7**	**+0.1**
TA01	**Diego Aracena**	**4.53**	**322**	*e*P	**Pn**	**07 19 19.3**	**-0.3**
HMBC	**Humberstone**	**4.61**	**327**		**Pn**	**07 19 20.3**	**-0.6**
HMBC	**Humberstone**	**4.61**	**327**	*e*P	**Pn**	**07 19 20.2**	**-0.6**
HMBC	**Humberstone**	**4.61**	**327**	*e*P	**Pn**	**07 19 20.2**	**-0.6**
HMBC				IAML		07 20 16.6	
	comp=Z,357nm,0.5s						
TA02	**Huaiquique**	**4.74**	**325**	*e*P	**Pn**	**07 19 21.8**	**-0.6**
PB11	**IPOC Station P**	**4.96**	**332**		**Pn**	**07 19 24.9**	**-0.4**
AC04	**Llanos de Chal**	**5.28**	**220**		**Pn**	**07 19 27.7**	**-1.6**
AC05	**El Transito**	**5.37**	**210**		**Pn**	**07 19 29.8**	**-0.8**
LCO	**Las Campanas**	**5.72**	**212**		**Pn**	**07 19 33.8**	**-1.5**
PB16	**IPOC Station P**	**6.21**	**340**		**Pn**	**07 19 42.1**	**0.0**
PB12	**IPOC Station P**	**6.26**	**332**		**Pn**	**07 19 41.7**	**-0.6**
CO01	**Juntas del Tor**	**6.30**	**203**	Pn	**Pn**	**07 19 43.4**	**+0.5**
GO04	**Tololo Observa**	**6.75**	**207**	Pn	**Pn**	**07 19 48.0**	**-0.9**

CO03	El Pedregal	7.30	204	Pn	Pn	07 19 54.7	-1.2
CFA	Coronel Fontan	7.44	187	P	Pn	07 19 56.7	-0.9
	comp=Z,2.2nm,0.3s,baz=28,slow=14,SNR=32						
CFA				S	Sn	07 21 17.5	-3.9
	comp=Z,2.1nm,0.3s,baz=46,slow=23,SNR=7.1						
CO06	Fray Jorge	7.55	210	Pn	Pn	07 19 56.3	-2.9
CO02	Combarbal	7.74	205	Pn	Pn	07 20 00.4	-1.3
LPAZ	La Paz	7.91	354	P	Pn	07 20 05.6	+1.0
	comp=Z,16nm,0.3s,baz=147,slow=3.9,SNR=246						
LPAZ				S	Sn	07 21 32.5	-1.2
	comp=Z,7.1nm,0.7s,baz=339,slow=17,SNR=4.9						
LPAZ	La Paz	7.91	354	eP	Pn	07 20 05.4	+0.9
VA03	San Esteban	9.03	198	Pn	Pn	07 20 18.1	-0.6
CPUP	Villa Florida	9.21	105	P	Pn	07 20 18.8	-2.2
	comp=Z,0.6nm,0.8s,baz=152,slow=13,SNR=5.3						
CPUP	Villa Florida	9.21	105	Pn	Pn	07 20 20.1	-0.8
CPUP	Villa Florida	9.21	105	eP	Pn	07 20 19.5	-1.4
SIV	San Ignacio	10.00	36	P	Pn	07 20 29.7	-1.8
	comp=Z,4.0nm,0.5s						
SIV				S	Sn	07 22 09.9	-13
BDQN	Bodoquena, MS	10.39	71	eP	Pn	07 20 34.4	-2.0
AQDB	Aquidauana	11.29	73		Pn	07 20 47.3	-0.9
AQDB	Aquidauana	11.29	73	eP	Pn	07 20 46.4	-1.7
AMBA	Amambai (Brazi	11.29	86	eP	Pn	07 20 46.0	-2.2
PTLB	Pontes e Lacer	11.55	43		Pn	07 20 50.3	-1.3
BI02	San Fabin de	12.91	195	Pn	Pn	07 21 07.0	-1.9
VILB	Vilhena	13.01	32		Pn	07 21 09.7	-0.5
CPSB	Cacapava Do Su	13.72	120	eP	P	07 21 21.1	-0.8
PTGB	Pitanga	13.82	95	eP	Pn	07 21 20.3	-0.1
PLTB	Pedras Altas	14.19	125	Pn	Pn	07 21 23.7	-1.2
PDRB	Porto dos Gac	16.00	40	eP	Pn	07 21 46.5	-0.7
PLCA	Paso Flores	16.73	189	P	Pn	07 21 56.5	+0.6
	comp=Z,2.5nm,0.8s,baz=6.4,slow=9.5,SNR=8.5						
ARAG	Araguaiana, MT	16.76	63	eP	P	07 21 55.0	-0.5
BB19B	Bebedouro	17.54	83	eP	P	07 22 03.9	-0.3
LL05	Los Muermos	17.94	195	P	P	07 22 07.1	-1.2
RCLB	Rio Claro- Sao	18.18	88	eP	P	07 22 10.9	-0.2
VAO	Valinhos	18.61	90	P	P	07 22 15.1	-0.7
VAO				IAmb	IAmb	07 22 17.1	
	comp=Z,36nm,0.9s						
VAO	Valinhos	18.61	90	eP	P	07 22 15.6	-0.2
IPMB	Ipameri, GO	18.78	74	eP	P	07 22 17.8	+0.1
LL02	Futaleuf	19.33	190	P	Pn	07 22 25.9	-0.6
LL02				IAmb	IAmb	07 22 28.8	
	comp=Z,33nm,0.9s						
SNDB	Serra Nova Dou	19.39	54	eP	P	07 22 23.7	-0.5
GO07	Milladeo Hill,	19.61	194	P	P	07 22 26.3	0.0
BDFB	Brasilia	19.95	68	P	P	07 22 30.3	0.0
	comp=Z,38nm,0.8s,baz=244,slow=10,SNR=61						
BDFB	Brasilia	19.95	68	P	P	07 22 29.8	-0.6
BDFB				IAmb	IAmb	07 22 31.7	
	comp=Z,40nm,0.8s						
PMNB	Patos De Minas	20.15	78	eP	P	07 22 32.4	-0.2
NPGB	Novo Progresso	20.50	36	eP	P	07 22 34.3	-1.9
TEFE	Tefe	20.71	7	eP	P	07 22 39.4	+1.0
MACA	Manacapuru-AM	21.84	18	P	P	07 22 47.9	-2.4
MACA				IAmb	IAmb	07 23 08.5	
	comp=Z,15nm,0.7s						
ITTB	Itaituba	22.61	31	eP	P	07 22 56.5	-1.1
SMTB	Santa Maria do	24.17	54	eP	P	07 23 10.6	-1.2
SDBA	SAO DESIDERIO	24.18	65	eP	P	07 23 11.6	-0.3
SNAA	Sanae	59.24	161	P	P	07 27 54.5	+0.5
TXAR	Lajitas Array	63.72	325	P	P	07 28 26.8	+2.3
	comp=Z,0.2nm,0.7s,baz=148,slow=4.5,SNR=2.4						
	comp=Z,0.2nm,0.7s						
QSPA	South Pole Qui	66.01	180	P	P	07 28 40.3	+1.4
	comp=Z,1.8nm,0.4s,baz=137,slow=2.1,SNR=5.2						
	comp=Z,1.8nm,0.4s						
QSPA	South Pole Qui	66.01	180	P	P	07 28 40.1	+1.1
TORD	Torodi Ar. Bea	76.83	69	P	P	07 29 44.3	-0.1
	comp=Z,1.6nm,0.3s,baz=253,slow=3.2,SNR=5.8						
	comp=Z,1.6nm,0.3s						
PDAR	Pinedale Array	77.21	329	P	P	07 29 47.8	+1.6
	comp=Z,0.2nm,0.5s,baz=130,slow=7.4,SNR=4.2						
	comp=Z,0.2nm,0.5s						
NVAR	Mina Array Bea	78.56	321	P	P	07 29 57.4	+3.6
	comp=Z,0.3nm,0.6s,baz=100,slow=1.8,SNR=2.3						
	comp=Z,0.3nm,0.6s						
ASAR	Alice Springs	128.19	205	PKP	PKiKP	07 36 59.0	+0.8
	comp=Z,0.7nm,0.8s,baz=124,slow=1.8,SNR=5.8						
WRA	Warramunga Arr	131.36	207	PKP	PKiKP	07 37 05.1	+0.5
	comp=Z,0.2nm,0.4s,baz=148,slow=1.8,SNR=2.5						
MKAR	Makanchi Array	146.80	40	PKPbc	PKPab	07 37 34.9	+0.4
	comp=Z,1.1nm,0.8s,baz=336,slow=2.7,SNR=8.4						

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*ASRS **12** 07:25:19.0±0.7, 54°.58N×86°.39E, h0^{km}, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 12 07:25:16.9±3.7**, 54°.68N×86°.67E, h0**^{km}**, mbtmp2.5**/2**, ML2.2**/2**, Error ellipse: s-maj=31.6km s-min=18.8km az=47.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.31	237	I	I	07 31 40.0	
	baz=55,slow=342,SNR=4.8						
ZALV	Zalesovo Beam	1.31	237	Pg	Pg	07 25 42.0	0.0
	0.9nm,0.3s,baz=55,slow=16,SNR=7.9						
ZALV				Lg	Lg	07 25 59.6	
	1.4nm,0.3s,baz=58,slow=28,SNR=8.7						
KURBB	Kurchatov Arra	6.41	234	Pn	Pn	07 26 51.5	-0.9
	baz=47,slow=14,SNR=1.6						
	0.1nm,0.3s						
MKAR	Makanchi Array	8.37	201	Pn	Pn	07 27 21.0	+1.6
	0.1nm,0.3s,baz=12,slow=12,SNR=1.5						
	0.1nm,0.4s						

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*IDC **12** 07:32:17.7±1.0, 37°.22N×135°.03E, h368^{km}±11^{km}, mb3.1/10, mbtmp3.9/15, Error ellipse: s-maj=15.0km s-min=13.4km az=141.0*

*JMA **12** 07:32:17.1±0.5, 37°N±2°×13°5E±°, h380^{km}±4^{km}, MV3.5/36, SEA OF JAPAN*

ISC 12 07:32:17.4±0.7**, 37°.21N**±0°.08×**135°.18E**±0°.08**, h372**^{km}**, n21,** σ**1^{s}.28**/24**, mb3.4**/10**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKG	Kaga	1.31	135	eP	Pn	07 33 07.3	+0.5
JKY	Yasaka	1.58	182	eP	Pn	07 33 08.6	+0.3
JWT	Wachi	1.93	175	eP	Pn	07 33 10.6	+0.2
JWT				eS	S	07 33 52.2	-0.8
JNG	Nsakai	2.48	108	eP	Pn	07 33 15.3	+1.1
MJAR	Matsushiro Arr	2.52	104	P	Pn	07 33 15.9	+1.4
	36nm,0.7s,baz=280,slow=9.5,SNR=60						
JMM	Marumori	4.51	80	eP	Pn	07 33 33.8	+1.0
JFK	Kawauchi	4.54	86	eP	Pn	07 33 33.3	+0.1
JFK				eS	S	07 34 32.6	-2.0
JNU	Nakatsue	5.39	222	P	Pn	07 33 41.7	-0.7
	14nm,0.7s,baz=127,slow=5.3,SNR=6.1						
KSRS	Korea Array	5.79	275	P	Pn	07 33 47.0	+0.5
	10.0nm,0.7s,baz=93,slow=12,SNR=24						
USRK	Ussuriysk Ar.	7.39	342	P	P	07 34 05.6	0.0
	2.2nm,0.8s,baz=134,slow=10,SNR=2.2						
ASAJ	Asahikawa	8.90	37	P	Pn	07 34 22.8	+0.6
	7.2nm,0.3s,baz=248,slow=14,SNR=15						
ASAJ				S	S	07 36 01.2	-3.5
	12nm,0.8s,baz=300,slow=30,SNR=6.6						
PETK	Petropavlovsk-	22.32	37	P	P	07 36 46.6	+2.0
	1.8nm,0.8s,baz=225,slow=8.0,SNR=5.0						
	1.8nm,0.8s						
SONM	Songino Array	23.59	306	P	P	07 36 55.8	-0.5
	0.3nm,0.4s,baz=90,slow=7.2,SNR=2.1						
	0.3nm,0.4s						
ZALV	Zalesovo Beam	38.12	312	P	P	07 39 00.3	-1.5
	0.6nm,0.3s,baz=110,slow=8.7,SNR=2.7						
	0.6nm,0.3s						
MKAR	Makanchi Array	39.78	301	P	P	07 39 14.4	-1.3
	0.6nm,0.7s,baz=92,slow=9.9,SNR=5.3						
	0.6nm,0.7s						
KURBB	Kurchatov Arra	41.95	307	P	P	07 39 33.6	+0.6
	0.7nm,0.2s,baz=89,slow=7.7,SNR=5.0						
	0.7nm,0.2s						
BVAR	Borovoye Array	46.74	311	P	P	07 40 10.4	-0.1
	0.7nm,0.4s,baz=101,slow=6.4,SNR=5.5						
	0.7nm,0.4s						
ILAR	Eielson Array	52.00	32	P	P	07 40 51.4	+1.8
	0.5nm,0.7s,baz=267,slow=6.0,SNR=13						
	0.5nm,0.7s						
ARTI	Arti	53.00	317	P	P	07 40 56.7	-0.3
	3.7nm,0.4s,baz=50,slow=3.8,SNR=6.3						
	3.7nm,0.4s						
WRA	Warramunga Arr	56.85	181	P	P	07 41 24.9	+0.3
	0.6nm,0.3s,baz=357,slow=7.4,SNR=10						
	0.6nm,0.3s						
FINES	FINESS Array B	66.26	330	P	P	07 42 26.4	+0.1
	1.8nm,0.7s,baz=62,slow=5.5,SNR=1.7						
	1.8nm,0.7s						

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*IDC **12** 07:34:42.0±1.1, 30°.65N×141°.89E, h0^{km}, mb4.0/10, mbtmp4.0/11, ML3.1/1, Error ellipse: s-maj=41.0km s-min=18.5km az=77.0*

ISC 12 07:34:45.6±1.2**, 30°.6N**±0°.1×**141°.9E**±0°.3**, h23**^{km}**, n14,** σ**0^{s}.45**/11**, mb4.1**/10**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	Matsushiro Arr	6.65	333	Pn	Pn	07 36 22.1	+0.2
	0.4nm,0.3s,baz=152,slow=11,SNR=10						
	6.6nm,0.8s						
H11S3	WAKE ISLAND Hy	25.51	113	T	T	08 06 49.7	
	baz=304,slow=75,SNR=3.2						
H11S1	WAKE ISLAND Hy	25.52	112	T	T	08 06 50.6	
	baz=304,slow=75,SNR=4.6						
H11S2	WAKE ISLAND Hy	25.53	113	T	T	08 06 48.7	
	baz=304,slow=75,SNR=5.5						
SONM	Songino Array	32.07	313	P	P	07 41 11.1	+0.3
	0.5nm,0.5s,baz=114,slow=43,SNR=2.2						
	0.5nm,0.5s						
MKAR	Makanchi Array	48.09	307	P	P	07 43 23.0	-0.4
	0.9nm,0.6s,baz=90,slow=8.5,SNR=8.0						
	0.9nm,0.6s						
KURBB	Kurchatov Arra	50.44	312	P	P	07 43 40.8	-0.5
	0.6nm,0.2s,baz=88,slow=7.1,SNR=8.0						
	0.6nm,0.2s						
WRA	Warramunga Arr	50.81	189	P	P	07 43 44.2	-0.1
	1.7nm,0.6s,baz=7.7,slow=7.7,SNR=16						
	1.7nm,0.6s						
ASAR	Alice Springs	54.53	189	P	P	07 44 12.2	+0.3
	0.6nm,0.6s,baz=4.0,slow=5.6,SNR=11						
	0.6nm,0.6s						
ILAR	Eielson Array	54.75	30	P	P	07 44 13.0	0.0
	0.3nm,0.6s,baz=254,slow=6.6,SNR=4.7						
	0.3nm,0.6s						
BVAR	Borovoye Array	55.31	316	P	P	07 44 17.3	+0.1
	0.7nm,0.6s,baz=93,slow=8.2,SNR=3.3						
	0.7nm,0.6s						
ARTI	Arti	61.61	321	P	P	07 45 00.2	-0.8
	3.7nm,0.5s,baz=148,slow=0.7,SNR=5.1						
	3.7nm,0.5s						
FINES	FINESS Array B	74.68	333	P	P	07 46 22.9	-0.1
	1.5nm,0.6s,baz=35,slow=7.0,SNR=9.2						
	1.5nm,0.6s						
KBZ	Khabaz	75.44	312	P	P	07 46 28.2	+0.6
	1.8nm,0.8s,baz=18,slow=9.6,SNR=4.2						
	1.8nm,0.8s						

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*UPP **12** 07:37:57.5±0.2, 67°.81N×20°.28E, h0^{km}, ML2.5, Confirmed Induced event*

*HEL **12** 07:37:58.4±0.3, 67°.91N×20°.17E, h0^{km}, ML1.3, Suspected explosion*

ISC 12 07:37:58.0±0.8**, 67°.82N**±0°.03×**20°.22E**±0°.03**, h0**^{km}**, n20,** σ**1^{s}.02**/33**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.15	18	S	Sg	07 38 03.3	+0.6
RATU	Laukkuluspa	0.24	272	P	Pg	07 38 02.8	+0.3
RATU				S	Sg	07 38 07.4	+1.8
KOVU	Salmi	0.41	357	P	Pg	07 38 05.6	-0.3
KOVU				S	Sg	07 38 11.3	+0.1
NIKU	Nikkaluokta	0.45	277	P	Pg	07 38 06.3	-0.4
LANU	Lannavaara	0.71	70	PB	Pg	07 38 11.8	+0.2
LANU				SG	Sg	07 38 20.6	-0.2
SALU	Saltoluokta	0.79	237	P	Pg	07 38 12.8	-0.3
SALU				S	Sb	07 38 24.2	-1.6
KIF	Kilpisjarvi	1.22	10	PN	Pn	07 38 22.0	-0.2
KIF				MSG		07 38 33.9	
	comp=Z,3.0nm,0.2s						
KIF				SN	Sg	07 38 37.1	+0.1
PAJU	Pajala	1.37	124	PG	Pg	07 38 23.7	-0.5
	baz=306						
PAJU				SG	Sb	07 38 42.4	-0.1
HEF	Hetta	1.42	64	PN	Pn	07 38 24.6	-0.5
HEF				MSG		07 38 40.6	
	comp=Z,1.3nm,0.2s						
HEF				SN	Sg	07 38 43.9	+0.3
ERTU	Ertsjaerv	1.48	148	PG	Pb	07 38 26.9	+0.6
	baz=332						
ERTU				SG	Sn	07 38 46.8	+0.9
KLF	Kolari	1.55	110	PN	Pg	07 38 27.9	+0.2
KLF				MSG		07 38 46.4	
	comp=Z,1.7nm,0.2s						
KLF				SG	Sg	07 38 48.8	+1.0
KALU	Kalix	2.32	146	PG	Pb	07 38 39.6	-1.1
	baz=329						
KALU				SG	Sg	07 39 11.2	-1.3
TOF	Tornio	2.38	135	PB	Pb	07 38 40.5	-1.1
TOF				MSG		07 39 11.0	
	comp=Z,1.1nm,0.2s						
TOF				SB	Sb	07 39 12.7	+1.3
RNF	Rovaniemi	2.56	116	PB	Pb	07 38 43.2	-1.5
RNF				SB	Sb	07 39 17.4	+0.7
ARA0	ARCESS Array S	2.59	46	PG	Pb	07 38 43.6	-1.7
ARA0				SG	Sb	07 39 17.9	+0.3
RAJF	Raja-Jooseppi	3.10	74	SG	Sb	07 39 32.8	+0.6
KEV	Kevo	3.15	49	SB	Sn	07 39 28.7	+1.8
RANF	Ranua	3.16	122	SG	Sg	07 39 38.8	-0.5
OLKF	Oulanka, Finla	3.89	108	SG	Sg	07 40 02.4	-0.5
OUF	Merijarvi	3.92	150	SN	Sn	07 39 48.3	+2.4

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*PDG **12** 07:39:28.9±0.2, 43°.78N×18°.56E, h13^{km}, ML2.7/12, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*

*RHSSO **12** 07:39:29.0±0.3, 43°.79N×18°.63E, h5^{km}±4^{km}, ML2.6/6*

*BEO **12** 07:39:29.5±0.3, 43°.81N×18°.55E, h11^{km}±2^{km}, ML2.4/17*

ISC 12 07:39:29.1±1.1**, 43°.79N**±0°.02×**18°.59E**±0°.02**, h8**^{km}±9^{km}**, n41,** σ**0^{s}.99**/75**, 6C-6D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUDO	Rudo	0.59	107	ePg	Pg	07 39 39.5	-1.0
RUDO				eSg	Sg	07 39 47.3	-1.0
BBLS	Lazi&#263i	0.60	82	ePg	Pg	07 39 40.9	+0.3
BBLS				eSg	Sg	07 39 49.3	+0.8
KLINJ	Klinje	0.62	180	ePg	Pg	07 39 40.7	-0.4
KLINJ				eSg	Sg	07 39 49.1	-0.1
UPM	Unac-Piva	0.63	158	⇓iPg	Pg	07 39 41.3	0.0
UPM				i Sg	Sg	07 39 50.6	+1.1
PLE	Pljevlja	0.74	128	⇓iPg	Pg	07 39 43.3	-0.1
PLE				i Sg	Sb	07 39 55.0	+0.4
BRY	Bratogost	0.89	182	⇑iPg	Pg	07 39 45.2	-1.0
BRY				i Sg	Sb	07 39 59.0	+0.2
TEKS	Tekeris	1.02	41	ePg	Pb	07 39 49.0	0.0
TEKS				eSg	Sb	07 40 02.7	+0.2
DIVS	Divibare	1.06	73	ePg	Pb	07 39 48.9	-0.8
DIVS				eSg	Sn	07 40 05.4	+0.1
TREB	Trebinje	1.09	189	ePg	Pb	07 39 48.6	-1.5
TREB				eSg	Sb	07 40 03.9	-0.5
STON	Ston	1.12	216	ePg	Pb	07 39 49.4	-1.3
STON				eSg	Sn	07 40 05.7	-0.9
SJES	Sjenica	1.14	117	ePg	Pb	07 39 50.3	-0.7
SJES				eSg	Sb	07 40 04.7	-1.3
IVAS	Ivanjica	1.16	100	ePg	Pb	07 39 49.8	-1.5
IVAS				eSg	Sn	07 40 07.3	-0.3
KOME	Kolasin	1.16	144	⇓iPg	Pb	07 39 50.0	-1.4
KOME				eSg	Sn	07 40 08.4	+0.7
CEME	Cevo	1.27	169	⇑iPg	Pn	07 39 52.1	-1.0
CEME				eSg	Sg	07 40 12.0	+2.2
IVA	Berane	1.32	133	⇓iPg	Pn	07 39 53.2	-0.7
IVA				i Sg	Sg	07 40 13.4	+1.8
HCY	Herceg Novi	1.34	183	⇑iPg	Pb	07 39 54.3	-0.2
HCY				i Sg	Sg	07 40 14.4	+2.2
TRUS	Trudelj	1.38	71	ePg	Pb	07 39 54.9	-0.3
TRUS				eSg	Sg	07 40 15.3	+1.8
BLY	Banja Luka	1.39	314	ePg	Pb	07 39 54.6	-0.7
BLY				eSg	Sg	07 40 14.0	+0.2
BLY	Banja Luka	1.39	314	ePg	Pb	07 39 54.7	-0.6
BLY				eSg	Sg	07 40 12.8	-1.0
PDG	Podgorica	1.44	160	ePg	Pn	07 39 55.0	-0.5
PDG				eSg	Sg	07 40 17.7	+2.2
PDG	Podgorica	1.44	160	⇑iPg	Pn	07 39 55.3	-0.2
PDG				i Sg	Sg	07 40 17.1	+1.6
BUM	Brajici-Budva	1.50	171	⇓iPg	Pn	07 39 56.3	-0.1
BUM				i Sg	Sg	07 40 18.5	+1.1
GRUS	Gruza	1.54	86	ePg	Pn	07 39 57.3	+0.5
GRUS				eSg	Sg	07 40 18.7	0.0
PVY	Plav	1.56	139	⇑iPg	Pn	07 39 57.1	-0.1
PVY				i Sg	Sg	07 40 19.3	+0.1
FRGS	Fruska Gora	1.62	32	ePn	Pn	07 39 57.3	-0.7
FRGS				eSn	Sb	07 40 19.3	-0.6
AVAS	Avala Beograd	1.66	56	ePn	Pn	07 39 57.3	-1.1
AVAS				eSn	Sn	07 40 19.1	-0.7
DRME	Dracevica, Mon	1.66	164	⇓iPn	Pb	07 39 59.8	-0.1
DRME				eSn	Sg	07 40 22.2	-0.2
GOCS	Kraljevo Serbi	1.67	97	ePn	Pb	07 40 00.2	0.0
GOCS				eSn	Sn	07 40 20.0	-0.4
ULC	Ulcinj	1.89	165	⇑iPn	Pn	07 40 02.1	+0.5
ULC				i Sn	Sb	07 40 27.8	+0.3
SELS	Selova	1.93	106	ePn	Pn	07 40 03.1	+0.9
SELS				eSn	Sb	07 40 27.8	-0.9
KNYS	Krupa na Uni	1.96	305	ePn	Pn	07 40 02.8	+0.2
KNYS				eSn	Sb	07 40 28.8	-0.9
MORH	Mrgy, Hungar	2.43	1	ePn	Pn	07 40 08.6	-0.4
MORH				eSn	Sn	07 40 39.4	+0.6
BARS	Barje	2.55	111	ePn	Pn	07 40 11.1	+0.4
BARS				eSn	Sn	07 40 42.9	+1.0
ZAGS	Zajecar	2.64	88	eSn	Sn	07 40 45.2	+1.1
BEHE	Becsehely	2.97	335	eSn	Sn	07 40 52.9	+0.6
ZAPS	Zavoj	2.99	99	ePn	Pn	07 40 17.9	+1.2
ZAPS				eSn	Sn	07 40 51.7	-1.0
SOKA	Soboth	3.83	320	ePn	Pn	07 40 28.9	+0.5
	1.5nm,0.2s						
OBKA	Obir	3.94	315	i Pn	Pn	07 40 31.9	+2.0
	2.1nm,0.2s						
ARSA	Arzberg	4.08	329	i Pn	Pn	07 40 32.1	+0.4
	5.5nm,0.6s						
BIOA	Bad Ischl, Aus	5.22	320	ePn	Pn	07 40 48.9	+1.6
	2.4nm,0.2s						
LESA	Schwarzleotal	5.51	313	i Pn	Pn	07 40 53.8	+2.3
	2.9nm,0.3s						

IDC 12 07:42:26.8±9.9**, 35°.79N×76°.39E, h0**^{km}**, mb4.1**/1**, mbtmp3.8**/5**, ML3.1**/4**, Error ellipse: s-maj=158.4km s-min=51.7km az=146.0, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	11.85	20	Pn	Pn	07 45 17.9	+0.8
	0.2nm,0.3s,baz=210,slow=17,SNR=3.9						
	0.6nm,0.8s						
KURBB	Kurchatov Arra	14.91	5	Pn	Pn	07 45 58.3	-0.5
	0.1nm,0.3s,baz=192,slow=11,SNR=8.2						
	1.0nm,0.2s						
BVAR	Borovoye Array	17.75	348	P	Pn	07 46 35.4	+0.1
	baz=148,slow=8.5,SNR=6.4						
	1.5nm,0.6s						
ZALV	Zalesovo Beam	19.09	15	P	Pn	07 46 51.4	-0.2
	0.3nm,0.3s,baz=218,slow=9.1,SNR=8.3						
	1.0nm,0.5s						
FINES	FINESS Array B	40.53	325	P	P	07 50 07.2	-0.2
	2.5nm,0.9s,baz=103,slow=8.4,SNR=4.7						
	2.5nm,0.9s						

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*PRU **12** 07:46:01.0, 45°.08N×15°.43E, h10^{km}*

*RHSSO **12** 07:46:01.2±0.8, 45°.06N×15°.47E, h5^{km}, ML2.5/5*

ISC 12 07:45:57.2±1.1**, 44°.95N**±0°.02×**15°.28E**±0°.02**, h5**^{km}±9^{km}**, n47,** σ**1^{s}.52**/93**, 2C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLIT	Plitvice	0.25	106	ePg	Pg	07 46 02.6	+0.5
PLIT				Sg	Sg	07 46 06.7	+1.2
RABC	Rab	0.41	241	ePg	Pb	07 46 06.3	-0.6
RABC				Sg	Sb	07 46 13.0	-0.5
NVLJ	Novalja	0.48	218	ePg	Pb	07 46 07.9	-0.4
NVLJ				Sg	Sb	07 46 15.8	+0.2
UDBI	Udbina	0.54	141	ePg	Pb	07 46 08.6	-0.7
UDBI				Sg	Sb	07 46 15.7	-1.7
BOJS	Bojanci	0.56	358	i Pg	Pg	07 46 07.3	-0.6
BOJS				eSg	Sg	07 46 15.1	-0.1
BOJS				IAML		07 46 17.4	
	comp=Z,244nm,0.2s						
GBRS	Gornja Briga	0.67	330	i Pg	Pg	07 46 10.2	0.0
GBRS				eSg	Sg	07 46 19.9	+0.9
GBRS				IAML		07 46 23.3	
	comp=Z,101nm,0.2s						
VIRC	Vir	0.68	194	ePg	Pb	07 46 11.3	-0.1
VIRC				Sg	Sb	07 46 20.8	-0.4
OZLJ	Ozalj	0.68	11	ePg	Pg	07 46 10.5	+0.2
OZLJ				Sg	Sg	07 46 19.0	-0.1
RIY	Rijeka	0.68	304	ePg	Pg	07 46 10.1	-0.2
RIY				Sg	Sg	07 46 20.3	+1.1
KNYS	Krupa na Uni	0.74	94	⇑iPg	Pg	07 46 11.8	+0.4
KNYS				eSg	Sg	07 46 21.8	+0.8
KNDS	Knezji Dol	0.86	313	i Pg	Pg	07 46 13.5	-0.3
KNDS				eSg	Sb	07 46 26.2	-0.5
KNDS				IAML		07 46 34.1	
	comp=Z,52nm,0.3s						
CRES	Cresnjevec Ost	0.89	8	i Pg	Pg	07 46 14.1	-0.2
CRES				eSg	Sg	07 46 26.6	+0.9
CRES				IAML		07 46 30.6	
	comp=Z,134nm,0.3s						
VISS	Visnje	0.91	340	i Pg	Pg	07 46 14.3	-0.4
VISS				eSg	Sg	07 46 26.2	-0.3
VISS				IAML		07 46 30.4	
	comp=Z,53nm,0.2s						
DUGI	Dugi Otok	0.97	190	ePg	Pb	07 46 16.6	+0.1
DUGI				Sg	Sn	07 46 30.4	-1.3
PTJ	Puntijarka	1.07	26	ePg	Pg	07 46 17.6	-0.2
PTJ				Sg	Sg	07 46 32.3	+0.5
SKDS	Skadanscina	1.08	304	i Pg	Pg	07 46 17.8	-0.1
SKDS				eSg	Sb	07 46 33.0	+0.2
SKDS				IAML		07 46 33.1	
	comp=Z,46nm,0.1s						
MORI	Morici	1.12	164	ePg	Pn	07 46 19.5	-0.2
MORI				Sg	Sn	07 46 36.2	+0.7
MOSL	Moslavina	1.23	57	ePg	Pg	07 46 21.0	+0.1
MOSL				Sg	Sg	07 46 37.2	+0.3
ZIRJ	Zirje	1.32	169	ePg	Pn	07 46 24.6	+2.3
ZIRJ				Sg	Sn	07 46 42.4	+2.1
LOBO	Lobor	1.33	24	ePg	Pg	07 46 22.6	0.0
LOBO				Sg	Sg	07 46 39.3	-0.6
BLY	Banja Luka	1.37	98	⇑iPg	Pb	07 46 23.9	+0.6
BLY				eSg	Sg	07 46 41.1	0.0
KALN	Kalnik	1.44	34	ePg	Pn	07 46 24.3	+0.2
KALN				Sg	Sg	07 46 43.1	-0.5
OBKA	Obir	1.64	342	ePn	Pb	07 46 28.3	+0.2
	comp=Z,14nm,0.2s,SNR=30						
OBKA				eSn	Sg	07 46 50.8	+0.8
	comp=Z,66nm,0.3s						
SOKA	Soboth	1.74	354	ePn	Pn	07 46 28.9	+0.7
	comp=Z,15nm,0.3s,SNR=15						
SOKA				eSn	Sn	07 46 52.2	+1.4
	comp=Z,29nm,0.5s						
BEHE	Becsehely	1.85	34	ePn	Pb	07 46 31.4	-0.1
BEHE				eSn	Sn	07 46 53.5	+0.1
HVAR	Hvar	1.96	154	ePn	Pg	07 46 33.6	-1.1
HVAR				Sn	Sg	07 47 00.5	+0.4
RICI	Ricice	1.97	137	ePn	Pg	07 46 35.0	0.0
RICI				Sn	Sg	07 47 00.6	+0.2
MYKA	Terra Mystica	2.04	326	ePn	Pb	07 46 35.5	+0.7
	comp=Z,5.5nm,0.2s						
MYKA				eSn	Sg	07 47 02.3	-0.4
	comp=Z,30nm,0.4s						
MAKA	Makarska	2.08	142	ePn	Pg	07 46 36.2	-0.8
MAKA				Sn	Sg	07 47 02.6	-1.4
ARSA	Arzberg	2.31	4	Pn	Pn	07 46 36.6	+0.6
	comp=Z,6.1nm,0.5s						
ARSA				Sn	Sn	07 47 03.7	-1.2
	comp=Z,3.3nm,0.3s						
LSTV	Lastovo	2.47	151	ePn	Pb	07 46 40.7	-1.4
LSTV				Sn	Sb	07 47 13.0	+0.2
KBA	Koelnbreinsper	2.52	328	Pn	Pn	07 46 40.6	+1.5
	comp=Z,3.7nm,0.3s						
KBA				eSn	Sn	07 47 12.5	+2.1
	comp=Z,11nm,0.5s						
ABTA	Abfaltersbach	2.64	314	Pn	Pb	07 46 44.2	-1.0
	comp=Z,3.9nm,0.2s						
MORH	Mrgy, Hungar	2.68	61	ePn	Pn	07 46 42.4	+1.4
MORH				eSn	Sn	07 47 13.7	-0.1
RONA	Rosalia, Austr	2.84	14	i Pn	Pn	07 46 44.8	+1.5
	comp=Z,7.5nm,0.2s,SNR=17						
RONA				eSn	Sg	07 47 31.3	+2.8
	comp=Z,13nm,0.5s						
KLINJ	Klinje	2.97	126	eSn	Sn	07 47 23.8	+2.6
BIOA	Bad Ischl, Aus	2.97	338	ePn	Pb	07 46 52.1	+1.4

	comp=Z,4.1nm,0.3s						
BIOA				*e*Sn	**Sb**	**07 47 25.6**	**-1.7**
	comp=Z,11nm,0.4s						
MOA	**Molln**	**2.99**	**347**	*e*Pn	**Pn**	**07 46 47.1**	**+1.7**
	comp=Z,3.5nm,0.3s						
MOA				*e*Sn	**Sn**	**07 47 23.4**	**+1.9**
	comp=Z,6.3nm,0.4s						
CONA	**Conrad Observa**	**3.01**	**7**	*e*Pn	**Pn**	**07 46 46.6**	**+1.0**
	comp=Z,3.3nm,0.2s						
LESA	**Schwarzleotal**	**3.07**	**325**	*e*Pn	**Pn**	**07 46 48.8**	**+2.3**
	comp=Z,4.4nm,0.4s						
LESA				Sn	**Sb**	**07 47 27.9**	**-2.3**
	comp=Z,14nm,0.6s						
TREB	**Trebinje**	**3.15**	**134**	*e*Pn	**Pb**	**07 46 51.5**	**-2.1**
TREB				*e*Sn	**Sb**	**07 47 28.9**	**-3.4**
WTTA	**Wattenberg**	**3.44**	**314**	*i* Pn	**Pn**	**07 46 55.1**	**+3.5**
	comp=Z,3.1nm,0.2s						
WTTA				*i* Sn	**Sb**	**07 47 37.7**	**-3.1**
	comp=Z,12nm,0.4s						
WATA	**Walderalm**	**3.51**	**314**	*i* Pn	**Pb**	**07 46 57.1**	**-2.9**
	comp=Z,3.9nm,0.2s						
WATA				*i* Sn	**Sb**	**07 47 40.5**	**-2.5**
	comp=Z,4.9nm,0.2s						
SQTA	**Sankt Quirin**	**3.63**	**310**	*e*Pn	**Pb**	**07 46 58.6**	**-3.4**
	comp=Z,1.4nm,0.1s						
SQTA				*e*Sn	**Sb**	**07 47 42.5**	**-3.9**
	comp=Z,7.2nm,0.3s						
MODS	**Modra-Piesok**	**3.69**	**21**	*e*PN	**Pn**	**07 46 56.4**	**+1.4**
MODS				*e*SG	**Sg**	**07 47 56.2**	**+0.4**
MODS				*e*		08 17 10.9	
FETA	**Feichten**	**3.79**	**305**	*e*Pn	**Pn**	**07 47 00.4**	**+3.9**
	comp=Z,1.4nm,0.5s						
FETA				Pg	**Pg**	**07 47 09.5**	**-0.4**
	comp=Z,2.2nm,0.4s						
FETA				*e*Sn	**Sb**	**07 47 46.8**	**-4.2**
	comp=Z,4.0nm,0.5s						
FETA				Sg	**Sg**	**07 48 00.4**	**+1.4**
	comp=Z,13nm,1.0s						
KHC	**Kasperske Hory**	**4.34**	**345**	*e*PN	**Pn**	**07 47 04.9**	**+0.9**
KHC				*e*SN	**Sn**	**07 47 53.7**	**-1.3**

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*ASRS **12** 07:54:37.0±1.1, 54°.31N×86°.14E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 12 07:54:39.1±2.7**, 54°.31N×86°.21E, h0**^{km}**, mbtmp3.4**/2**, ML2.9**/2**, Error ellipse: s-maj=20.9km s-min=12.5km az=50.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.89**	**246**	I	I	07 59 30.0	
	baz=64,slow=342,SNR=10						
ZALV	**Zalesovo Beam**	**0.90**	**246**	Pg	Pg	07 54 56.4	+0.1
	1.9nm,0.3s,baz=62,slow=16,SNR=16						
ZALV				Lg	Lg	07 55 08.6	
	6.9nm,0.3s,baz=66,slow=26,SNR=15						
KURBB	**Kurchatov Arra**	**5.97**	**235**	Pn	Pn	07 56 09.8	+1.2
	0.2nm,0.3s,baz=49,slow=14,SNR=1.6						
	1.9nm,0.2s						
MKAR	**Makanchi Array**	**7.93**	**200**	Pn	Pn	07 56 36.1	+0.5
	0.3nm,0.3s,baz=21,slow=12,SNR=12						
	0.5nm,0.4s						

TIR 12 07:56:43.2, 41°.42N×19°.50E, h15^{km}±1^{km}**, Md2.9**/5**, Ml2.6**/5**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.28**	**105**	Pg	Pb	07 56 50.3	+0.3
TIR				Sg	Sg	07 56 53.7	+0.5
SDA	**Shkodra**	**0.63**	**360**	Pg	Pg	07 56 55.5	0.0
SDA				Sg	Sb	07 57 04.5	-0.2
SDA				AMd		07 57 52.1	
PHP	**Peshkopia**	**0.75**	**69**	Pg	Pg	07 56 57.5	-0.4
PHP				Sg	Sg	07 57 07.0	-0.8
PHP				AML	AML	07 57 11.7	
	0.8nm,0.2s						
PHP				AMd		07 57 46.1	
PDG	**Podgorica**	**1.03**	**350**	Pg	Pn	07 57 03.2	+0.1
PDG				Sg	Sn	07 57 18.1	+0.8
PDG				AMd		07 57 59.9	
KBN	**Korca**	**1.26**	**129**	Sn	Sg	07 57 24.3	+0.5
KBN				AML	AML	07 57 30.5	
	0.4nm,0.7s						
NOCI	**Noci**	**1.95**	**252**	Pn	Pb	07 57 18.8	+0.4
NOCI				Sn	Sb	07 57 43.0	+0.5
NOCI				AML	AML	07 57 44.6	
	0.3nm,0.2s						
NOCI				AMd		07 58 32.3	
IGT	**Igoumenitsa**	**1.99**	**161**	Pg	Pb	07 57 19.7	+0.6
IGT				Sg	Sg	07 57 46.4	-0.8
IGT				AML	AML	07 57 53.5	
	0.1nm,0.3s						
IGT				AMd		07 58 45.5	

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*PDG **12** 07:56:46.3±0.3, 41°.54N×19°.64E, h12^{km}±1^{km}, ML2.7/11, Error ellipse: s-maj=1.1km s-min=1.6km az=0.0*

TIR 12 07:56:44.9, 41°.47N×19°.57E, h19^{km}±1^{km}**, Ml2.8**/5**, 4C-8D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.25**	**119**	⇓Pg	Pg	07 56 51.0	+0.3
TIR				Sg	Sb	07 56 54.4	0.0
TIR				AML	AML	07 56 54.9	
	8.6nm,0.2s						
TIR				AML	AML	07 56 55.0	
	8.6nm,0.4s						
ULC	**Ulcinj**	**0.55**	**334**	⇓*i*Pg	Pb	07 56 55.5	-0.4
ULC				*i* Sg	Sg	07 57 04.3	+0.9
SDA	**Shkodra**	**0.58**	**355**	Pg	Pg	07 56 56.5	0.0
SDA				Sg	Sg	07 57 05.5	+1.1
SDA				AML	AML	07 57 11.5	
	0.7nm,0.3s						
PHP	**Peshkopia**	**0.69**	**71**	Pg	Pb	07 56 58.0	-0.2
PHP				Sg	Sg	07 57 07.7	+0.1
PHP				AML	AML	07 57 13.4	
	0.5nm,0.6s						
DRME	**Dracevica, Mon**	**0.77**	**338**	⇑*i*Pg	Pg	07 57 00.0	0.0
DRME				*e*Sg	Sn	07 57 12.1	+0.2
BUM	**Brajici-Budva**	**0.97**	**329**	⇓*i*Pg	Pg	07 57 04.5	+0.7
BUM				*i* Sg	Sn	07 57 18.8	+1.9
PDG	**Podgorica**	**0.99**	**346**	Pg	Pg	07 57 05.3	+1.2
PDG				Sg	Sn	07 57 17.5	+0.3
PDG	**Podgorica**	**0.99**	**346**	⇑*i*Pg	Pn	07 57 03.8	+0.1
OHR	**Ohrid**	**0.99**	**111**	*i* Pg	Pg	07 57 04.0	-0.1
OHR				*i* Sg	Sn	07 57 19.8	+2.5
CEME	**Cevo**	**1.18**	**336**	⇓*i*Pg	Pg	07 57 07.9	+0.1
CEME				*e*Sg	Sg	07 57 25.2	+1.9
HCY	**Herceg Novi**	**1.27**	**321**	⇑*i*Pg	Pg	07 57 09.3	0.0
HCY				*i* Sg	Sg	07 57 28.7	+2.8
NKME	**Niksic**	**1.38**	**341**	⇓*i*Pg	Pb	07 57 10.0	0.0
NKME				*e*Sg	Sg	07 57 31.4	+2.0
KOME	**Kolasin**	**1.38**	**358**	⇑*i*Pg	Pb	07 57 09.8	-0.3
KOME				*e*Sg	Sg	07 57 31.4	+1.8
IVA	**Berane**	**1.42**	**10**	⇓*i*Pg	Pb	07 57 11.2	+0.4
IVA				*i* Sg	Sg	07 57 32.2	+1.3
NEST	**Nestorio**	**1.54**	**133**	Pn	Pg	07 57 14.9	+0.4
NEST				Sn	Sg	07 57 35.1	+0.5
NEST				AML	AML	07 57 44.5	
	0.2nm,0.6s						
BRY	**Bratogost**	**1.62**	**332**	⇓*i*Pn	Pb	07 57 14.8	+0.5
BRY				*i* Sn	Sg	07 57 38.2	+0.9
UPM	**Unac-Piva**	**1.80**	**344**	⇓*i*Pn	Pb	07 57 17.7	+0.3
UPM				*i* Sn	Sg	07 57 42.1	-0.9
NOCI	**Noci**	**2.01**	**251**	Pg	Pg	07 57 22.9	-0.7
NOCI				Sn	Sg	07 57 47.8	-1.9
NOCI				AML	AML	07 57 50.4	
	0.4nm,0.3s						
IGT	**Igoumenitsa**	**2.02**	**163**	Pn	Pb	07 57 21.4	+0.4
IGT				Sn	Sg	07 57 48.3	-1.6
SGRT	**San Giovanni R**	**2.88**	**277**	Pn	Pn	07 57 30.3	+0.4

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*ASRS **12** 08:10:33.0±0.7, 53°.81N×91°.12E, h0^{km}, M3.2, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*NNC **12** 08:10:35.3±4.7, 53°.65N×91°.05E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=34.0km s-min=28.5km az=60.0, Suspected Mining explosion.*

*IDC **12** 08:10:36.8±3.7, 53°.65N×90°.81E, h0^{km}, mbtmp3.3/3, ML2.8/3, Error ellipse: s-maj=35.6km s-min=24.5km az=26.0*

ISC 12 08:10:36.5±4.1**, 53°.8N**±0°.1×**90°.8E**±0°.2**, h0**^{km}**, n9, σ1**^{s}**.53**/11**, 6C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**3.56**	**275**	⇓Pg	**Pb**	**08 11 41.0**	**+0.7**
	0.9nm,0.6s						
ZAA0				⇑Lg	Lg	08 12 37.0	
	4.0nm,0.7s						
ZALV	**Zalesovo Beam**	**3.56**	**275**	Pn	**Pn**	**08 11 31.8**	**-1.2**
	1.1nm,0.3s,baz=97,slow=15,SNR=8.3						
ZALV				Lg	Lg	08 12 29.9	
	3.4nm,0.3s,baz=97,slow=25,SNR=8.4						
	1.6nm,0.4s						
KURK	**Kurchatov**	**8.11**	**252**	⇓Pn	**Pn**	**08 12 37.0**	**+1.7**
	0.6nm,0.6s						
KURK				⇓Sn	**Sn**	**08 14 09.8**	**+2.1**
	1.6nm,0.6s						
KURK				⇑Lg	Lg	08 14 54.7	
	7.0nm,1.0s						
KURBB	**Kurchatov Arra**	**8.20**	**252**	Pn	**Pn**	**08 12 36.2**	**-0.4**
	0.2nm,0.3s,baz=65,slow=15,SNR=4.4						
KURBB				Sn	**Sn**	**08 14 07.3**	**-2.6**
	baz=68,slow=26						
KURBB				Lg	Lg	08 14 55.4	
	0.2nm,0.3s,baz=63,slow=31,SNR=5.0						
	1.3nm,0.3s						
KURBB	**Kurchatov Arra**	**8.20**	**252**	⇑Pn	**Pn**	**08 12 36.2**	**-0.4**
	2.5nm,0.6s						
KURBB				⇓Sn	**Sn**	**08 14 10.0**	**0.0**
	23nm,0.8s						
KURBB				⇑Lg	Lg	08 14 59.0	
	18nm,0.8s						
MK31	**Makanchi Array**	**8.90**	**221**	⇓Pn	**Pn**	**08 12 47.0**	**+0.8**
	0.5nm,0.5s,baz=33,slow=14,SNR=5.0						
MK31				⇑Sn	**Sn**	**08 14 26.2**	**-1.0**
	2.6nm,0.8s						
MK31				⇑Lg	Lg	08 15 15.1	
	3.0nm,0.8s,baz=38,slow=31,SNR=3.7						
MKAR	**Makanchi Array**	**8.90**	**221**	Pn	**Pn**	**08 12 45.6**	**-0.7**
	0.2nm,0.3s,baz=36,slow=14,SNR=7.9						
MKAR				Lg	Lg	08 15 14.9	
	0.1nm,0.3s,baz=45,slow=29,SNR=5.0						
	0.7nm,0.6s						
SONM	**Songino Array**	**11.51**	**115**	Lg	Lg	08 16 33.4	
	0.1nm,0.3s,baz=305,slow=30,SNR=3.1						
I34MN	**SONGINO INFRAS**	**11.54**	**115**	I	I	09 15 30.0	
	baz=308,slow=324,SNR=1.8						

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*NIED **12** 08:43:58.7, 39°.97N×142°.40E, h37^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.94; $M_{\theta\theta}$-0.44; $M_{\phi\phi}$-4.51; $M_{r\theta}$1.89; $M_{\theta\phi}$-2.15; $M_{\phi r}$7.17; Fault plane solution: $M_0$9.05000×10^{14} NP1: ϕ_s212.00000°, δ18.00000°, λ105.00000°. NP2: ϕ_s16.00000°, δ73.00000°, λ85.00000°.*

*JMA **12** 08:43:58.7±0.1, 40°.0N±0°.3×142°.4E±0°.8, h37^{km}±1^{km}, MV3.7/34, E OFF IWATE PREF*

JMA Felt I J1 at E OFF IWATE PREF .

*NEIC **12** 08:44:01.1±2.1, 40°.2N±0°.1×142°.3E±0°.2, h50^{km}±10^{km}, mb4.1/11, Error ellipse: s-maj=25.2km s-min=9.1km az=120.0*

*IDC **12** 08:44:01.5±2.2, 39°.94N×142°.36E, h66^{km}±18^{km}, mb3.6/15, mbtmp3.8/19, Error ellipse: s-maj=20.9km s-min=13.1km az=113.0*

ISC 12 08:43:58.4±1.5**, 39°.98N**±0°.04×**142°.37E**±0°.06**, h32**^{km}±10^{km}**, n54, σ1**^{s}**.52**/56**, mb4.0**/21**, 12D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKEN	**Kujiedanarisaw**	**0.56**	**294**	⇓*i*P	**Pn**	**08 44 10.2**	**+0.1**
JKEN				⇓S	**Sn**	**08 44 18.4**	**+0.2**
MIYJ	**Miyakonagasawa**	**0.58**	**227**	⇓*i*P	**Pn**	**08 44 10.5**	**+0.1**
MIYJ				⇓S	**Sn**	**08 44 18.8**	**-0.1**
JANG	**Nango**	**0.77**	**301**	⇓*i*P	**Pn**	**08 44 13.1**	**+0.1**
JANG				⇓S	**Sn**	**08 44 23.2**	**-0.2**
JKZ	**Kuzumaki**	**0.80**	**271**	⇓*i*P	**Pn**	**08 44 14.4**	**+1.0**
JKZ				⇓*e*S	**Sn**	**08 44 24.9**	**+0.6**
JOM	**Ohasama**	**0.97**	**239**	⇓*i*P	**Pn**	**08 44 16.4**	**+0.6**
JOM				⇓S	**Sn**	**08 44 29.2**	**+0.6**
OFUJ	**Ofunato**	**1.05**	**211**	⇓*i*P	**Pb**	**08 44 17.0**	**-0.9**
OFUJ				⇓S	**Sn**	**08 44 31.0**	**+0.6**
JTM	**Tenmabayashi**	**1.28**	**309**	*i* P	**Pb**	**08 44 21.0**	**-0.8**
JTM				S	**Sb**	**08 44 37.6**	**-0.4**
ERM	**Erimo**	**2.12**	**16**	Pn	**Pn**	**08 44 30.9**	**-0.7**
ASAJ	**Asahikawa**	**4.14**	**2**	P	**Pn**	**08 45 01.2**	**+1.9**
	8.4nm,0.4s,baz=211,slow=18,SNR=13						
ASAJ				S	**Sn**	**08 45 51.5**	**+5.0**
	23nm,0.6s,baz=58,slow=30,SNR=5.5						
JKA	**Kamikawa-asahi**	**4.14**	**2**		**Pn**	**08 45 00.3**	**+1.0**
MJAR	**Matsushiro Arr**	**4.74**	**225**	P	**Pn**	**08 45 11.0**	**+3.3**
	10nm,0.7s,baz=32,slow=13,SNR=25						
MJAR	**Matsushiro Arr**	**4.74**	**225**		**Pn**	**08 45 10.5**	**+2.8**
MJB9	**Matsu-Tunnel**	**4.74**	**225**		**Pn**	**08 45 11.7**	**+4.0**
MAJO	**Matsushiro**	**4.74**	**225**		**Pn**	**08 45 10.9**	**+3.2**
JGF	**Kuroka**	**5.90**	**224**	Pn	**Pn**	**08 45 26.0**	**+2.3**
USRK	**Ussuriysk Ar.**	**8.79**	**302**	P	**Pn**	**08 46 04.7**	**+1.5**
	2.7nm,0.6s,baz=105,slow=14,SNR=5.1						
KSRS	**Korea Array**	**11.57**	**262**	P	**Pn**	**08 46 44.2**	**+3.0**
	0.5nm,0.5s,baz=70,slow=14,SNR=1.8						
PEA0B	**Petropavlovsk-**	**16.79**	**33**	Pn	**Pn**	**08 47 50.5**	**-0.5**
PETK	**Petropavlovsk-**	**16.79**	**33**	Pn	**Pn**	**08 47 51.0**	**+0.1**
PET	**Petropavlovsk**	**17.15**	**35**		**Pn**	**08 47 55.9**	**+0.6**
PET				IAmb	IAmb	08 48 07.5	
	comp=Z,30nm,1.1s						
SONM	**Songino Array**	**26.89**	**299**	P	**P**	**08 49 37.2**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=79,slow=7.6,SNR=3.0						
	comp=Z,0.6nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**29.16**	**127**	T	T	09 20 36.6	
	baz=319,slow=75,SNR=87						
H11N1	**WAKE ISLAND Hy**	**29.16**	**127**	T	T	09 20 37.8	
	baz=319,slow=75,SNR=94						
H11N3	**WAKE ISLAND Hy**	**29.17**	**127**	T	T	09 20 38.4	
	baz=319,slow=75,SNR=71						
H11S1	**WAKE ISLAND Hy**	**29.97**	**128**	T	T	09 21 52.9	
	baz=321,slow=76,SNR=18						
H11S3	**WAKE ISLAND Hy**	**29.97**	**129**	T	T	09 21 50.4	
	baz=321,slow=76,SNR=19						
H11S2	**WAKE ISLAND Hy**	**29.98**	**129**	T	T	09 21 52.6	
	baz=321,slow=76,SNR=17						
ZALV	**Zalesovo Beam**	**40.55**	**310**	P	**P**	**08 51 33.4**	**-0.9**
	comp=Z,0.9nm,0.5s,baz=92,slow=7.2,SNR=4.5						
	comp=Z,0.9nm,0.5s						
C18K	**Utukok River**	**41.31**	**28**	P	**P**	**08 51 39.8**	**-0.8**
C18K				IAmb	IAmb	08 51 43.3	
	comp=Z,4.6nm,1.3s						
H18K	**Honhosa River**	**41.76**	**33**	P	**P**	**08 51 44.8**	**+0.5**
D19K	**Kuna River**	**42.39**	**28**	P	**P**	**08 51 50.2**	**+0.9**
D19K				IAmb	IAmb	08 51 51.7	
	comp=Z,5.1nm,1.4s						
E19K	**Redstone River**	**42.54**	**30**	P	**P**	**08 51 51.3**	**+0.8**
E19K				IAmb	IAmb	08 51 59.0	
	comp=Z,4.4nm,1.1s						
B20K	**Meade River**	**43.01**	**26**	P	**P**	**08 51 54.9**	**+0.5**
B20K				IAmb	IAmb	08 52 24.7	
	comp=Z,8.9nm,1.5s						
CMAR	**Chiang Mai Arr**	**43.02**	**253**	P	**P**	**08 51 55.0**	**0.0**
	comp=Z,1.2nm,0.3s,baz=44,slow=7.9,SNR=1.4						
	comp=Z,1.2nm,0.3s						
MKAR	**Makanchi Array**	**43.25**	**300**	P	**P**	**08 51 56.1**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=88,slow=9.0,SNR=8.0						
	comp=Z,0.6nm,0.5s						
MKAR	**Makanchi Array**	**43.25**	**300**	P	**P**	**08 51 55.9**	**-0.8**
B21K	**Ikpikpuk River**	**43.82**	**27**	P	**P**	**08 52 01.6**	**+0.8**
E22K	**Anaktuvuk Pass**	**44.66**	**29**	P	**P**	**08 52 08.7**	**+1.0**
E22K				IAmb	IAmb	08 52 09.4	
	comp=Z,2.7nm,0.9s						
KURBB	**Kurchatov Arra**	**44.84**	**306**	P	**P**	**08 52 08.8**	**-0.4**
	comp=Z,1.8nm,0.5s,baz=80,slow=8.6,SNR=9.6						
	comp=Z,1.8nm,0.5s						
ILAR	**Eielson Array**	**46.62**	**34**	P	**P**	**08 52 23.1**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=264,slow=5.7,SNR=7.8						
	comp=Z,0.6nm,0.8s						
BVAR	**Borovoye Array**	**49.19**	**311**	P	**P**	**08 52 42.6**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=72,slow=11,SNR=5.7						
	comp=Z,1.1nm,0.5s						
AB31	**Akbulak array**	**56.65**	**309**	P	**P**	**08 53 37.4**	**-0.9**
ABKAR	**Akbulak array**	**56.65**	**309**	P	**P**	**08 53 37.6**	**-0.6**
WRA	**Warramunga Arr**	**60.08**	**189**	P	**P**	**08 54 00.6**	**-1.8**
	comp=Z,0.7nm,0.8s,baz=7.0,slow=7.2,SNR=4.7						
	comp=Z,0.7nm,0.8s						
WRA	**Warramunga Arr**	**60.08**	**189**	P	**P**	**08 54 02.5**	**+0.1**
YKA	**Yellowknife Ar**	**60.90**	**31**	P	**P**	**08 54 06.6**	**-0.9**
	comp=Z,0.3nm,0.8s,baz=297,slow=7.8,SNR=2.7						
	comp=Z,0.3nm,0.8s						
ARCES	**ARCESS Array B**	**61.51**	**339**	P	**P**	**08 54 09.5**	**-2.1**
	comp=Z,4.3nm,0.9s,baz=12,slow=4.6,SNR=2.1						
	comp=Z,4.3nm,0.9s						
AS31	**Alice Springs**	**63.80**	**189**	P	**P**	**08 54 29.1**	**+1.7**
AS31				IAmb	IAmb	08 54 33.2	
	comp=Z,1.2nm,1.3s						
ASAR	**Alice Springs**	**63.81**	**189**	P	**P**	**08 54 26.1**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=2.9,slow=4.6,SNR=2.4						
	comp=Z,0.2nm,0.4s						
ASAR	**Alice Springs**	**63.81**	**189**	P	**P**	**08 54 27.7**	**+0.3**
KBZ	**Khabaz**	**69.56**	**310**	P	**P**	**08 55 04.1**	**+0.1**
	comp=Z,3.0nm,0.9s,baz=66,slow=11,SNR=5.8						
	comp=Z,3.0nm,0.9s						
HFS	**Hagfors**	**71.72**	**336**	P	**P**	**08 55 16.5**	**-0.3**
	comp=Z,6.6nm,1.0s,baz=185,slow=7.2,SNR=2.1						
	comp=Z,6.6nm,1.0s						
AKASG	**Malin Array Be**	**72.43**	**322**	P	**P**	**08 55 20.3**	**-1.0**
	comp=Z,0.6nm,0.4s,baz=45,slow=6.0,SNR=4.6						
	comp=Z,0.6nm,0.4s						
TXAR	**Lajitas Array**	**87.74**	**53**	P	**P**	**08 56 45.2**	**+0.8**
	comp=Z,0.2nm,0.9s,baz=323,slow=5.3,SNR=1.8						
	comp=Z,0.2nm,0.9s						

ISC 12 08:48:38.2±1.2**, 49°.25N**±0°.10×**18°.85E**±0°.05**, h10**^{km}**, n6, σ0**^{s}**.43**/9**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANS	**Liptovska Anna**	**0.42**	**103**	*e*PG	**Pg**	**08 48 46.0**	**-0.5**
LANS				*e*SG	**Sg**	**08 48 52.4**	**+0.4**
JAVC	**Velka Javorina**	**0.87**	**244**	*e*PG	**Pb**	**08 48 55.5**	**+0.1**
MORC	**Moravsky Berou**	**1.00**	**302**	*e*PG	**Pb**	**08 48 58.0**	**+0.3**
KECS	**Kecovo**	**1.33**	**125**	*e*PG	**Pn**	**08 49 02.6**	**-0.2**
KECS				*e*SG	**Sg**	**08 49 21.6**	**+0.8**
MODS	**Modra-Piesok**	**1.36**	**230**	*e*PG	**Pn**	**08 49 03.3**	**+0.1**
MODS				*e*SG	**Sb**	**08 49 21.0**	**-0.1**
VRAC	**Vranov**	**1.48**	**273**	*e*PG	**Pb**	**08 49 05.6**	**-0.2**

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*SKHL **12** 09:02:31.1±0.3, 45°.90N×142°.00E, h14^{km}±1^{km}, mb3.9/2*

*JMA **12** 09:02:31.6±0.4, 46°N±1°×14°2E±°, h14^{km}±3^{km}, MV2.7/23, SOUTH SAKHALIN*

ISC 12 09:02:32.7±1.2**, 45°.82N**±0°.06×**141°.97E**±0°.08**, h21**^{km}**, n5, σ1**^{s}**.23**/9**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWK2	**Keihoku**	**0.50**	**185**	*e*P	**Pn**	**09 02 44.1**	**-0.5**
JWK2				*e*S	**Sn**	**09 02 52.5**	**-0.1**
JRBN	**Rebuntou**	**0.74**	**238**	*e*P	**Pn**	**09 02 47.1**	**-0.8**
JRBN				*e*S	**Sn**	**09 02 58.0**	**-0.6**
JRR	**Rishiri**	**0.82**	**214**	*e*S	**Sn**	**09 03 03.2**	**+2.8**
JSE	**Soyaes**	**0.96**	**153**	*e*P	**Pb**	**09 02 50.7**	**+0.1**
JSE				*e*S	**Sn**	**09 03 03.8**	**-0.1**
YSS	**Yuzhno-Sakhali**	**1.26**	**25**	*e*Pg	**Pn**	**09 02 54.9**	**-0.1**
YSS				AMB	AMB	09 02 55.5	
	60nm,0.8s						
YSS				*e*Sg	**Sb**	**09 03 11.5**	**0.0**
YSS				A	A	09 03 13.4	
	140nm,0.4s						
YSS				A	A	09 03 13.4	
	140nm,0.4s						

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*IDC **12** 09:02:37.6±0.8, 19°.43N×101°.39E, h0^{km}, mb4.0/14, mbtmp4.0/17, ML4.4/3, MS3.8/26, Error ellipse: s-maj=17.0km s-min=15.7km az=86.0*

*BKK **12** 09:02:38.1±0.8, 20°N±4°×10°1E±°, h4^{km}±4^{km}, M4.7/19, Mjma4.7/19, ML4.9/17, MLv4.7/18*

*NEIC **12** 09:02:39.5±2.0, 19°.36N±0°.07×101°.41E±0°.07, h13^{km}±5^{km}, mb4.3/10, Error ellipse: s-maj=11.2km s-min=8.5km az=144.0*

ISC 12 09:02:39.1±0.6**, 19°.49N**±0°.04×**101°.40E**±0°.06**, h10**^{km}**, n75, σ1**^{s}**.09**/51**, mb4.2**/21**, MS3.8**/23**, 1C, Laos**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UTTA	**Uttaradit**	**1.91**	**205**	P	**Pn**	**09 03 11.2**	**-0.6**
LAMP	**Lampang**	**1.93**	**240**	P	**Pn**	**09 03 11.1**	**-0.9**
CMAI	**Chiengmai2**	**2.26**	**282**	P	**Pn**	**09 03 15.0**	**-1.7**
CHTO	**Chiang Mai**	**2.41**	**254**		**Pn**	**09 03 17.3**	**-1.4**
CHTO	**Chiang Mai**	**2.41**	**254**	P	**Pn**	**09 03 17.3**	**-1.4**
PHIT	**Phitsanulok**	**2.47**	**202**	P	**Pn**	**09 03 19.3**	**-0.2**
CM09	**Chiang Mai Arr**	**2.50**	**246**	P	**Pn**	**09 03 18.8**	**-1.2**
CM04	**Chiang Mai Arr**	**2.53**	**245**	P	**Pn**	**09 03 19.9**	**-0.5**
CM31	**Chiang Mai Arr**	**2.54**	**246**		**Pn**	**09 03 19.8**	**-0.7**
CMAR	**Chiang Mai Arr**	**2.54**	**246**	Pn	**Pn**	**09 03 19.1**	**-1.4**
	26nm,0.3s,baz=67,slow=12,SNR=53						
CMAR				Lg	Lg	09 03 57.5	
	90nm,0.3s,baz=81,slow=34,SNR=4.9						
CMAR				LR	LR	09 04 22.5	
	comp=Z,2µm,21.0s,baz=70,slow=42						
	34nm,0.5s						
CMAR	**Chiang Mai Arr**	**2.54**	**246**		**Pn**	**09 03 19.2**	**-1.2**
CM01	**Chiang Mai Arr**	**2.54**	**246**	P	**Pn**	**09 03 19.4**	**-1.1**
CM02	**Chiang Mai Arr**	**2.55**	**246**	P	**Pn**	**09 03 19.3**	**-1.3**
SLVN	**Son La**	**2.98**	**52**		**Pn**	**09 03 25.4**	**-1.2**
KMI	**Kunming**	**5.74**	**12**	Sg	**Sg**	**09 05 42.8**	**-0.8**
KMI	**Kunming**	**5.74**	**12**	⇑Pg	**Pg**	**09 04 28.6**	**-0.6**
TNCH	**TengChong**	**6.12**	**335**	Sg	**Sg**	**09 05 52.6**	**-3.1**
TNCH	**TengChong**	**6.12**	**335**	Pg	**Pg**	**09 04 39.3**	**+2.9**
PZH	**PanZhiHua**	**6.99**	**3**	Sg	**Sg**	**09 06 23.5**	**0.0**
PZH	**PanZhiHua**	**6.99**	**3**	Pn	Pg	09 04 47.9	-5.1
PZH	**PanZhiHua**	**6.99**	**3**	Pg	Pg	09 05 02.7	+10
PZH	**PanZhiHua**	**6.99**	**3**	Sn	**Sn**	**09 05 40.2**	**-1.1**
BRDH	**Bariadhala**	**9.64**	**291**	LR	LR	09 09 34.8	
	comp=Z,679nm,19.8s,baz=139,slow=43						
EVN	**Everest**	**15.78**	**305**		**Pn**	**09 06 21.6**	**-0.5**
XAN	**Xi'an**	**15.96**	**23**	*e*P	**P**	**09 06 29.5**	**+2.0**
XAN				smax	smax		
	comp=N,23nm,1.6s						
XAN				smax	smax		
	comp=E,30nm,1.6s						
LZDM	**Lanzhou Array**	**16.53**	**7**	Pn	**Pn**	**09 06 31.9**	**+0.5**
	baz=196,slow=13						
LZDM				LR	LR	09 13 36.4	
	comp=E,352nm,19.7s,baz=20,slow=40						
	comp=E,0.8nm,0.3s						
PSI	**Prapat**	**16.76**	**189**	Pn	**P**	**09 06 35.8**	**-0.8**
	comp=E,0.7nm,0.3s,baz=333,slow=11,SNR=6.2						
PSI				LR	LR	09 14 08.6	
	comp=E,213nm,18.3s,baz=342,slow=41						
	comp=E,1.3nm,0.3s						
RPSI	**Rantau Prapat**	**16.87**	**189**	P	**Pn**	**09 06 35.8**	**+0.2**
GTA	**Gaotai**	**19.90**	**356**	*e*P	**Pn**	**09 07 13.3**	**+0.7**
GTA				pP	sP	09 07 16.6	+1.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BTO	**Baotou**	**22.30**	**18**	*e*P	**P**	**09 07 38.6**	**+1.7**
BTO				pmax	pmax		
	comp=Z,23nm,0.5s						
BTO				pmax	pmax		
	comp=Z,320nm,3.7s						
BTO				LR	LR		
	comp=N,1µm,11.8s						
BTO				LR	LR		
	comp=E,2µm,14.9s						
BTO				LR	LR		
	comp=Z,850nm,6.6s						
JOW	**Kunigami**	**25.73**	**68**	LR	LR	09 18 55.1	
	comp=Z,206nm,19.2s,baz=58,slow=38						
DAV	**Davao City (W)**	**26.53**	**114**	LR	LR	09 20 11.5	
	comp=Z,124nm,19.8s,baz=344,slow=40						
SONM	**Songino Array**	**28.56**	**7**	P	**P**	**09 08 36.1**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=186,slow=8.8,SNR=3.7						
SONM				LR	LR	09 21 10.8	
	comp=Z,228nm,18.2s,baz=154,slow=39						
	comp=Z,0.7nm,0.4s						
SONM	**Songino Array**	**28.56**	**7**	IAmb	IAmb	09 08 37.9	
	comp=Z,3.0nm,1.4s						
JNU	**Nakatsue**	**29.59**	**57**	LR	LR	09 21 54.0	
	comp=Z,203nm,19.5s,baz=258,slow=39						
KAPI	**Kappang**	**30.32**	**142**	LR	LR	09 24 24.9	
	comp=Z,87nm,18.1s,baz=318,slow=43						
MKAR	**Makanchi Array**	**31.41**	**334**	P	**P**	**09 09 00.8**	**+0.4**
	comp=Z,1.8nm,0.5s,baz=140,slow=9.2,SNR=15						
	comp=Z,1.8nm,0.5s						
BOOM	**Boomskoye usch**	**31.43**	**322**	P	**P**	**09 09 00.3**	**-0.5**
BOOM				IAmb	IAmb	09 09 02.7	
	comp=Z,4.2nm,1.2s						

AAK	Ala-Archa	32.36	321	LR	LR	09 22 54.5	
	comp=Z,98nm,18.6s,baz=108,slow=38						
KURBB	Kurchatov Arra	35.96	335	P	P	09 09 40.2	+0.3
	comp=Z,0.5nm,0.4s,baz=140,slow=9.6,SNR=6.3						
	comp=Z,0.5nm,0.4s						
KURK	Kurchatov	36.00	335	P	P	09 09 40.2	0.0
KURK	Kurchatov	36.00	335	IAmb	IAmb	09 09 52.7	
	comp=Z,1.4nm,0.7s						
MJAR	Matsushiro Arr	36.40	54	LR	LR	09 26 17.6	
	comp=Z,134nm,18.5s,baz=243,slow=39						
ZAA0	Zalesovo Array	36.68	344		P	09 09 46.0	0.0
ZAA0				IAmb	IAmb	09 09 52.1	
	comp=Z,4.5nm,0.7s						
ZALV	Zalesovo Beam	36.68	344	P	P	09 09 47.1	+1.1
	comp=Z,3.4nm,0.5s,baz=156,slow=9.3,SNR=11						
	comp=Z,3.4nm,0.5s						
ZALV	Zalesovo Beam	36.68	344		P	09 09 46.3	+0.3
BATI	Baumata	36.77	141	LR	LR	09 30 11.7	
	comp=Z,299nm,18.3s,baz=233,slow=45						
BVAR	Borovoye Array	41.17	332	P	P	09 10 24.4	+0.8
	comp=Z,0.7nm,0.5s,baz=134,slow=9.4,SNR=4.2						
	comp=Z,0.7nm,0.5s						
GUMO	Guam	42.00	91	LR	LR	09 27 13.0	
	comp=Z,52nm,18.4s,baz=63,slow=35						
AB31	Akbulak array	44.45	322		P	09 10 50.7	+0.3
AB31				IAmb	IAmb	09 10 53.0	
	comp=Z,1.9nm,0.6s						
ABKAR	Akbulak array	44.45	322	P	P	09 10 51.7	+1.4
ARTI	Arti	48.75	330	LR	LR	09 35 13.7	
	comp=Z,182nm,19.5s,baz=20,slow=40						
NRIK	Noril'sk	50.57	354	LR	LR	09 34 56.2	
	comp=Z,168nm,18.4s,baz=192,slow=38						
WB0	Warramunga Arr	50.68	138	P	P	09 11 38.4	-0.7
WB0				IAmb	IAmb	09 11 56.9	
	comp=Z,6.9nm,1.4s						
WRA	Warramunga Arr	50.78	139	P	P	09 11 39.2	-0.6
	comp=Z,0.5nm,0.7s,baz=328,slow=8.0,SNR=7.3						
	comp=Z,0.5nm,0.7s						
WR8	Warramunga Arr	50.89	139	P	P	09 11 40.2	-0.5
WR8				IAmb	IAmb	09 12 05.7	
	comp=Z,5.0nm,1.2s						
ASAR	Alice Springs	53.34	142	P	P	09 11 58.7	-0.2
	comp=Z,0.5nm,0.5s,baz=320,slow=7.5,SNR=12						
	comp=Z,0.5nm,0.5s						
KBZ	Khabaz	54.14	310	P	P	09 12 05.0	+0.5
	comp=Z,1.0nm,0.7s,baz=162,slow=13,SNR=2.4						
KBZ				LR	LR	09 40 20.8	
	comp=Z,80nm,19.2s,baz=172,slow=42						
	comp=Z,1.0nm,0.7s						
NWAO	Narrogin (SRO)	54.28	164	P	P	09 12 04.3	-1.3
TIXI	Tiksi	54.57	10	P	P	09 12 06.7	-0.4
	comp=Z,1.8nm,0.3s,baz=236,slow=3.8,SNR=4.2						
TIXI				LR	LR	09 37 19.8	
	comp=Z,197nm,18.5s,baz=192,slow=38						
	comp=Z,1.8nm,0.3s						
TIXI	Tiksi	54.57	10	IAmb	IAmb	09 12 15.9	
	comp=Z,8.8nm,1.4s						
EIL	Elat	60.56	294	LR	LR	09 45 54.0	
	comp=Z,66nm,19.3s,baz=198,slow=43						
BRTR	Keskin Array B	60.89	305	P	P	09 12 53.0	+0.6
	comp=Z,0.8nm,0.8s,baz=78,slow=7.5,SNR=2.5						
	comp=Z,0.8nm,0.8s						
SHEM	Shemya Is, Ala	64.29	40	LR	LR	09 42 29.3	
	comp=Z,26nm,18.0s,baz=286,slow=37						
FINES	FINESS Array B	66.06	329	P	P	09 13 25.6	-0.4
	comp=Z,5.1nm,1.0s,baz=150,slow=5.9,SNR=2.2						
	comp=Z,5.1nm,1.0s						
SPITS	Spitsbergen Ar	70.04	347	LR	LR	09 48 26.8	
	comp=Z,149nm,18.1s,baz=124,slow=39						
MBAR	Mbarara	72.00	263	LR	LR	09 45 47.7	
	comp=Z,21nm,18.9s,baz=80,slow=36						
HFS	Hagfors	72.18	328	P	P	09 14 04.8	+0.8
	comp=Z,2.3nm,0.6s,baz=92,slow=4.3,SNR=5.7						
	comp=Z,2.3nm,0.6s						
NOA	NORSAR Array B	73.24	329	P	P	09 14 10.5	+0.1
	comp=Z,1.7nm,1.0s,baz=82,slow=6.5,SNR=2.5						
NOA				LR	LR	09 48 17.4	
	comp=Z,89nm,20.7s,baz=355,slow=37						
	comp=Z,1.7nm,1.0s						
GERES	GERESS Array B	74.09	317	P	P	09 14 15.6	-0.1
	comp=Z,0.2nm,0.3s,baz=82,slow=8.0,SNR=1.4						
	comp=Z,0.2nm,0.3s						
LSZ	Lusaka	79.85	250	LR	LR	09 47 19.1	
	comp=Z,72nm,18.8s,baz=118,slow=34						
LBTB	Lobatse	85.96	242	LR	LR	09 52 59.3	
	comp=Z,48nm,19.0s,baz=39,slow=35						
BOSA	Boshof	87.67	239	LR	LR	09 51 38.3	
	comp=Z,32nm,18.2s,baz=1.5,slow=34						
YKA	Yellowknife Ar	93.47	16	LR	LR	10 04 16.4	
	comp=Z,62nm,18.2s,baz=351,slow=40						
TXAR	Lajitas Array	125.77	27	PKP	PKPdf	09 21 42.1	+0.2
	comp=Z,0.2nm,0.6s,baz=190,slow=0.8,SNR=4.3						

NOU 12 09:03:53.7, 19°.60S×170°.90E, h0^{km}, MLv4.3/12, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	2.96	307	P	Pn	09 04 42.8	+0.9
DVP	Devils Point	3.18	306	P	Pn	09 04 44.9	-0.1
MARNC	Mare, Loyalty	3.28	235	P	Pn	09 04 43.8	-2.5
PINNC	Pines Island,	4.40	226	P	Pn	09 05 02.9	+1.1
YATNC	Mamie plateau,	4.48	236	P	Pn	09 05 02.2	-0.7
OUENC	Ouen Island, N	4.72	233	P	Pn	09 05 06.5	+0.4
DZM	Mont Dzumac	4.84	239	P	Pn	09 05 07.5	-0.4
ONTNC	Ouen Toro	4.95	236	P	Pn	09 05 10.9	+1.5
SANVU	Saraoutou	5.43	319	P	Pn	09 05 15.4	-0.6

*NOU **12** 09:18:40.8, 40°.46S×174°.22E, h74^{km}, MLv3.5/14, Cook Strait, New Zealand*

*WEL **12** 09:18:42.4±0.5, 40°S±4°×17°4E±°, h44^{km}±11^{km}, M3.2/16, ML3.2/15, MLv3.2/16, Error ellipse: s-maj=5.3km s-min=4.8km az=126.7, confirmed*

ISC 12 09:18:40.6±1.5**, 40°.43S**±0°.03×**174°.24E**±0°.03**, h81^{km}**±11^{km}**, n95, σ0^{s}.68**/101**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUWZ	D'Urville Isla	0.44	213	P	Pn	09 18 53.8	-0.3
DUWZ				S	Sn	09 19 03.5	-0.4
KIW	Kapiti Island	0.67	130	P	Pn	09 18 55.9	-0.2
KIW				S	Sn	09 19 06.8	-0.8
FXBS	Foxton Beach S	0.76	93	P	Pn	09 18 57.9	+1.0
OTKS	Otaki School	0.77	115	P	Pn	09 18 57.8	+0.8
TCW	Tory Channel	0.78	178	P	Pn	09 18 57.4	+0.2
TCW				S	Sn	09 19 09.1	-0.4
WCDS	Wanganui Civil	0.80	52	P	Pn	09 18 58.0	+0.6
OGWZ	Otaki Gorge	0.81	119	P	Pn	09 18 57.4	-0.1
OGWZ				S	Sn	09 19 09.7	-0.5
HOCS	Levin Horowhen	0.82	104	P	Pn	09 18 57.8	+0.2
POKS	Katoa Kinderga	0.83	147	P	Pn	09 18 58.5	+0.8
PWES	Porirua West	0.83	147	P	Pn	09 18 58.7	+0.9
OHWZ	Ohakea	0.86	75	P	Pn	09 18 58.8	+0.7
MKBS	Makara Bunker	0.87	156	P	Pn	09 18 58.9	+0.7
MKBS				S	Sn	09 19 10.9	-0.4
WAZ	Wanganui	0.89	41	P	Pn	09 18 58.9	+0.5
HAVS	Havelock	0.91	202	P	Pn	09 18 58.7	+0.1
HAVS				S	Sn	09 19 11.8	-0.3
MKVS	Makara Village	0.91	157	P	Pn	09 18 59.9	+1.3
NEWS	Newlands	0.92	151	P	Pn	09 18 59.7	+1.0
BMTS	Belmont	0.92	146	P	Pn	09 18 59.7	+0.9
CAW	Cannon Point	0.93	137	P	Pn	09 18 59.2	+0.3
WEL	Wellington	0.94	155	P	Pn	09 19 00.5	+1.5
SNZO	South Karori	0.95	158	P	Pn	09 19 00.0	+0.9
SNZO	South Karori	0.95	158	S	Sn	09 19 12.4	-0.5
LREZ	Lake Rotokare	0.98	8	P	Pn	09 18 60.0	+0.5
NNZ	Nelson	1.02	219	P	Pn	09 19 00.2	+0.3
TUWZ	Tuamarina	1.02	192	P	Pn	09 19 00.5	+0.6
MRZ	Mangatainoka R	1.05	103	P	Pn	09 18 60.0	-0.3
NMEZ	Namu Road	1.05	345	P	Pn	09 19 00.6	+0.2
HOWZ	Holdsworth Sta	1.08	116	P	Pn	09 19 01.4	+0.7
PREZ	Palmer Road	1.09	357	P	Pn	09 19 01.2	+0.4
BHW	Baring Head	1.09	154	P	Pn	09 19 01.7	+0.9
TKNZ	Takaka Hill	1.14	238	P	Pn	09 19 01.5	+0.1
KHEZ	Kahui Hut	1.15	351	P	Pn	09 19 01.9	+0.3
KHEZ	Kahui Hut	1.15	351	S	Sn	09 19 17.5	+0.2
KHEZ	Kahui Hut	1.15	351	P	Pn	09 19 01.8	+0.2
POWZ	Post Office Ro	1.17	89	P	Pn	09 19 02.8	+1.0
NBEZ	Newall Road No	1.20	346	P	Pn	09 19 02.4	+0.3
MTW	Mount Morrison	1.21	127	P	Pn	09 19 02.5	+0.3
DREZ	Durham Road	1.24	359	P	Pn	09 19 03.0	+0.3
MSWZ	Moikau Station	1.25	142	P	Pn	09 19 03.1	+0.3
PKE	Pukeiti	1.25	351	P	Pn	09 19 03.0	+0.2
TIWZ	Tintock	1.30	106	P	Pn	09 19 03.8	+0.3
PAWZ	Paruwai Farm	1.31	137	P	Pn	09 19 03.7	+0.2
BSWZ	Blackbirch Sta	1.31	192	P	Pn	09 19 04.5	+1.0
CMWZ	Cape Campbell	1.32	181	P	Pn	09 19 05.5	+1.9
PRWZ	Pori Road	1.33	96	P	Pn	09 19 04.1	+0.4
MHEZ	Mangahewa	1.35	3	P	Pn	09 19 04.8	+0.7
QRZ	Quartz Range	1.36	253	P	Pn	09 19 03.8	-0.3
QRZ	Quartz Range	1.36	253	S	Sn	09 19 21.1	-0.7
QRZ	Quartz Range	1.36	253	P	Pn	09 19 03.7	-0.3
VRZ	Vera Road	1.36	17	P	Pn	09 19 04.6	+0.3
TSZ	Takapari Road	1.37	75	P	Pn	09 19 04.2	-0.1
MTVZ	Mangateitei	1.41	43	P	Pn	09 19 05.6	+0.7
PKVZ	Pokaka	1.43	37	P	Pn	09 19 05.6	+0.5
TMWZ	Te Maipa	1.43	119	P	Pn	09 19 05.2	+0.2
TRWZ	Traveller	1.47	132	P	Pn	09 19 06.0	+0.5
MRNZ	Matariki Terra	1.48	229	P	Pn	09 19 06.2	+0.5
DVHZ	Dannevirke	1.48	86	P	Pn	09 19 05.2	-0.6
TRVZ	Turoa	1.52	42	P	Pn	09 19 06.8	+0.4
WNVZ	Wahianoa	1.52	44	P	Pn	09 19 07.0	+0.6
MAVZ	Matarangi	1.55	42	P	Pn	09 19 07.7	+0.9
WHVZ	Whangaehu Hut	1.55	43	P	Pn	09 19 07.7	+0.9
FWVZ	Far West T-bar	1.55	41	P	Pn	09 19 07.4	+0.5
MOVZ	Moawhango	1.55	49	P	Pn	09 19 06.8	+0.1
BFZ	Birch Farm	1.55	100	P	Pn	09 19 06.5	-0.1
BFZ	Birch Farm	1.55	100	P	Pn	09 19 06.0	-0.7
COVZ	Chateau Observ	1.59	40	P	Pn	09 19 07.8	+0.5
PNHZ	Pukenui	1.59	72	P	Pn	09 19 06.7	-0.5
TUVZ	Tukino	1.59	44	P	Pn	09 19 08.1	+0.8
NGZ	Ngauruhoe	1.64	40	P	Pn	09 19 08.6	+0.7
TWVZ	Taurewa	1.64	35	P	Pn	09 19 08.2	+0.2
SNVZ	South Ngauruho	1.65	42	P	Pn	09 19 08.9	+0.9
THZ	Tophouse	1.67	217	P	Pn	09 19 09.2	+1.0
NNVZ	North Ngauruho	1.68	40	P	Pn	09 19 09.0	+0.6
OTVZ	Oturere	1.68	42	P	Pn	09 19 08.9	+0.4
WTVZ	West Tongariro	1.68	39	P	Pn	09 19 09.2	+0.8
ANWZ	Angora Road	1.71	92	P	Pn	09 19 08.4	-0.3
KRVZ	Karewarewa	1.72	40	P	Pn	09 19 09.7	+0.7
ETVZ	East Tongariro	1.72	42	P	Pn	09 19 09.8	+0.8
WPHZ	Waipukurau	1.73	78	P	Pn	09 19 08.5	-0.5
NTVZ	North Tongarir	1.73	40	P	Pn	09 19 10.1	+1.0
TMVZ	Te Maari	1.73	41	P	Pn	09 19 10.0	+0.9
KRHZ	Kereru	1.82	65	P	Pn	09 19 09.5	-0.7
KATZ	Kakaramea	1.84	38	P	Pn	09 19 11.2	+0.7
PRHZ	Porangahau	1.84	86	P	Pn	09 19 10.2	-0.2
KWHZ	Kaweka Forest	1.96	60	P	Pn	09 19 11.8	-0.2
HIZ	Hauiti	1.97	14	P	Pn	09 19 12.3	+0.1
KHZ	Kahutara	2.05	195	P	Pn	09 19 13.6	+0.4
KHZ	Kahutara	2.05	195	P	Pn	09 19 13.7	+0.5
KAHZ	Kahuranaki	2.12	73	P	Pn	09 19 13.3	-0.9
MCHZ	McNeill Hill	2.13	63	P	Pn	09 19 13.8	-0.5
BKZ	Black Stump Fm	2.15	55	P	Pn	09 19 14.2	-0.4
BKZ	Black Stump Fm	2.15	55	P	Pn	09 19 14.2	-0.4
URZ	Urewera	3.11	47	P	Pn	09 19 29.4	+2.0
ODZ	Otahua Downs	5.32	209	P	Pn	09 19 56.3	-1.1
JCZ	Jackson Bay	5.44	226	P	Pn	09 19 59.2	0.0
CTZ	Chatham Island	7.56	119	P	Pn	09 20 27.1	-0.9

*ASRS **12** 09:24:20.0±0.8, 53°.92N×86°.60E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*NNC **12** 09:24:21.9±2.1, 53°.91N×86°.59E, h0^{km}, mb2.5, mpv2.3, Error ellipse: s-maj=15.3km s-min=8.5km az=42.0, Suspected Mining explosion.*

*IDC **12** 09:24:22.4±2.4, 53°.92N×86°.56E, h0^{km}, mbtmp2.9/2, ML2.8/2, Error ellipse: s-maj=19.7km s-min=12.0km az=67.0*

ISC 12 09:24:22.3±4.1**, 54°.0N**±0°.2×**86°.5E**±0°.2**, h0^{km}, n8, σ1^{s}.07**/11**, 5C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.01	270	I	I	09 30 10.0	
	baz=89,slow=342,SNR=8.5						
ZAA0	Zalesovo Array	1.01	270	⇑P	Pg	09 24 41.3	-0.5
	0.2nm,0.4s						
ZAA0				⇑S	Sb	09 24 56.6	-0.1
	1.6nm,0.7s						
ZALV	Zalesovo Beam	1.01	270	Pg	Pg	09 24 40.6	-1.2
	1.1nm,0.3s,baz=89,slow=16,SNR=11						
ZALV				Lg	Lg	09 24 57.2	
	3.5nm,0.3s,baz=94,slow=30,SNR=24						
KURK	Kurchatov	5.84	239	⇑Pn	Pn	09 25 50.6	+0.5
	0.2nm,0.5s						
KURK				⇓Sn	Sn	09 26 59.0	+1.3
	0.3nm,0.6s						
KURK				⇑Lg	Lg	09 27 28.2	
	1.5nm,1.1s						
KURBB	Kurchatov Arra	5.94	239	Pn	Pn	09 25 52.5	+1.0
	0.2nm,0.3s,baz=55,slow=14,SNR=8.8						
KURBB				Lg	Lg	09 27 29.9	
	0.1nm,0.3s,baz=40,slow=28,SNR=6.8						
	0.7nm,0.3s						
KURBB	Kurchatov Arra	5.94	239	⇓Pn	Pn	09 25 51.8	+0.3
	0.8nm,0.3s						
KURBB				⇓Sn	Sn	09 27 00.7	+0.5
	2.3nm,0.7s						
KURBB				⇓Lg	Lg	09 27 29.6	
	3.4nm,0.7s						
MK31	Makanchi Array	7.67	202	Pn	Pn	09 26 16.3	+1.0
	baz=23,slow=9.9,SNR=8.2						
MK31				⇓Sn	Sn	09 27 41.1	-1.7
	0.2nm,0.4s						
MK31				⇑Lg	Lg	09 28 25.0	
	1.4nm,0.8s,baz=12,slow=30,SNR=5.8						
MKAR	Makanchi Array	7.67	202	Pn	Pn	09 26 15.9	+0.6
	0.2nm,0.3s,baz=22,slow=12,SNR=7.9						
MKAR				Lg	Lg	09 28 23.3	
	0.1nm,0.3s,baz=23,slow=26,SNR=3.2						
	0.2nm,0.3s						

*NEIC **12** 09:32:27.7±1.5, 10°.7N±0°.1×141°.3E±0°.1, h10^{km}±1^{km}, mb4.4/16, Error ellipse: s-maj=23.5km s-min=16.3km az=120.0*

*IDC **12** 09:32:33.5±3.0, 10°.63N×141°.47E, h68^{km}±31^{km}, mb3.7/12, mbtmp4.1/13, ML4.2/1, MS3.2/2, Error ellipse: s-maj=23.9km s-min=14.1km az=97.0*

ISC 12 09:32:30.7±0.7**, 10°.60N**±0°.09×**141°.3E**±0°.1**, h35^{km}, n36, σ0^{s}.92**/28**, mb4.1**/16**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.60	49	P	Pn	09 33 39.7	+1.9
	11nm,0.3s,baz=320,slow=5.9,SNR=12						
GUMO				S	Sn	09 34 28.5	-1.5
	38nm,0.3s,baz=351,slow=23,SNR=5.7						
	44nm,0.4s						
GUMO	Guam	4.60	49	Pn	Pn	09 33 38.3	+0.5
FAKI	Fak Fak	16.16	214		P	09 36 17.8	-0.4
JCJ	Chichijima	16.43	3		Pn	09 36 18.5	-0.1
JOW	Kunigami	20.28	325	P	Pn	09 37 06.2	+0.6
	8.8nm,0.3s,baz=127,slow=15,SNR=1.8						
	8.8nm,0.3s						
JOW	Kunigami	20.28	325	P	P	09 37 03.3	-0.2
PMG	Port Moresby	20.72	163	P	P	09 37 08.4	+0.2
	7.4nm,0.5s,baz=185,slow=14,SNR=2.7						
PMG				LR	LR	09 43 41.2	
	comp=Z,69nm,20.6s,baz=212,slow=32						
	7.4nm,0.5s						
PMG	Port Moresby	20.72	163	IAmb	IAmb	09 37 10.7	
	comp=Z,39nm,1.5s						
H11S3	WAKE ISLAND Hy	25.79	69	T	T	10 06 03.4	
	baz=252,slow=75,SNR=15						
H11S1	WAKE ISLAND Hy	25.81	69	T	T	10 05 44.8	
	baz=252,slow=75,SNR=8.4						
H11S2	WAKE ISLAND Hy	25.81	69	T	T	10 05 47.8	
	baz=252,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	26.30	67	T	T	10 07 15.8	
	baz=252						
H11N2	WAKE ISLAND Hy	26.31	67	T	T	10 07 16.9	
	baz=252						
H11N3	WAKE ISLAND Hy	26.32	67	T	T	10 06 27.7	
	baz=252						
WB0	Warramunga Arr	30.93	193	P	P	09 38 43.8	-0.7
WB0				IAmb	IAmb	09 39 19.2	
	comp=Z,5.6nm,1.5s						
WR8	Warramunga Arr	31.09	192	P	P	09 38 45.7	-0.2
WR8				IAmb	IAmb	09 39 27.5	
	comp=Z,3.2nm,1.1s						
WRAB	Tennant Creek	31.10	193	P	P	09 38 45.8	-0.2
WRAB				IAmb	IAmb	09 39 28.7	
	comp=Z,7.5nm,1.4s						
WRA	Warramunga Arr	31.11	193	P	P	09 38 45.6	-0.5
	comp=Z,0.7nm,0.7s,baz=15,slow=9.7,SNR=6.7						
	comp=Z,0.7nm,0.7s						
WRA	Warramunga Arr	31.11	193	P	P	09 38 44.0	-2.0
AS31	Alice Springs	34.81	192	P	P	09 39 19.2	+0.8
ASAR	Alice Springs	34.81	192	P	P	09 39 18.6	+0.2
	comp=Z,0.5nm,0.5s,baz=20,slow=12,SNR=17						
ASAR				LR	LR	09 55 37.2	
	comp=Z,42nm,18.1s,baz=338,slow=40						
	comp=Z,0.5nm,0.5s						
CMAR	Chiang Mai Arr	41.64	286	P	P	09 40 17.1	+1.1
	comp=Z,0.6nm,0.3s,baz=85,slow=6.6,SNR=5.6						
	comp=Z,0.6nm,0.3s						
SONM	Songino Array	47.28	328	P	P	09 41 00.8	0.0
	comp=Z,1.5nm,0.7s,baz=134,slow=7.5,SNR=5.6						
	comp=Z,1.5nm,0.7s						
SONM	Songino Array	47.28	328	IAmb	IAmb	09 41 03.5	
	comp=Z,2.2nm,1.3s						
MKAR	Makanchi Array	61.26	318	P	P	09 42 42.4	-0.1
	comp=Z,0.8nm,0.5s,baz=101,slow=8.3,SNR=11						
	comp=Z,0.8nm,0.5s						
ZALV	Zalesovo Beam	62.06	326	P	P	09 42 46.4	-1.3
	comp=Z,0.9nm,0.3s,baz=117,slow=7.7,SNR=4.3						
	comp=Z,0.9nm,0.3s						
KURK	Kurchatov	64.65	321	P	P	09 43 04.3	-0.6
KURK				IAmb	IAmb	09 43 05.0	
	comp=Z,2.8nm,0.8s						
KURBB	Kurchatov Arra	64.68	321	P	P	09 43 04.2	-0.9
	comp=Z,1.5nm,0.7s,baz=110,slow=6.2,SNR=10						
	comp=Z,1.5nm,0.7s						
BVAR	Borovoye Array	70.12	323	P	P	09 43 39.0	-0.5
	comp=Z,3.9nm,0.6s,baz=107,slow=8.0,SNR=26						
	comp=Z,3.9nm,0.6s						
BORK	Borovoye	70.16	323	P	P	09 43 38.8	-1.0
D20K	Etivluk River	70.24	20	P	P	09 43 40.5	+0.5
D20K				IAmb	IAmb	09 43 41.2	
	comp=Z,5.3nm,1.1s						
B20K	Meade River	70.57	19	P	P	09 43 42.5	+0.6
B21K	Ikpikpuk River	71.24	19	P	P	09 43 46.6	+0.7
B21K				IAmb	IAmb	09 44 14.9	
	comp=Z,4.3nm,1.3s						
ILAR	Eielson Array	72.75	25	P	P	09 43 53.6	-1.5
	comp=Z,0.7nm,0.8s,baz=253,slow=6.1,SNR=11						
	comp=Z,0.7nm,0.8s						
E24K	Your Creek	72.89	22	P	P	09 43 56.4	+0.4
YKA	Yellowknife Ar	87.10	27	P	P	09 45 13.0	+0.3
	comp=Z,0.3nm,0.6s,baz=291,slow=6.5,SNR=3.6						
	comp=Z,0.3nm,0.6s						

*AFAD **12** 09:52:51.1, 34°.66N×26°.09E, h4^{km}±5^{km}, ML3.5*

*MOS **12** 09:52:54.9±1.1, 34°.66N×26°.33E, h13^{km}, mb4.4/13, Error ellipse: s-maj=7.5km s-min=4.3km az=77.3*

*GII **12** 09:52:56.3±0.0, 34°.733N±0°.002×26°.436E±0°.001, h10^{km}, Mws4.2, confirmed*

*NEIC **12** 09:52:56.6±2.3, 34°.74N±0°.07×26°.26E±0°.05, h10^{km}±1^{km}, mb4.4/29, Error ellipse: s-maj=12.7km s-min=7.3km az=185.0*

*ISK **12** 09:52:59.8, 35°.25N×26°.27E, h4^{km}, ML3.8/17*

*HLW **12** 09:53:00.2, 34°.74N×26°.40E, h7^{km}±3^{km}, Md3.7, Ml3.7*

*ATH **12** 09:53:00.8, 35°.09N×26°.34E, h14^{km}, ML3.9/23, Manual Solution by N.Liadopoulou First location: 2019/12/12 09:54:15, This location: 2019/12/12 10:01:32 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

*THE **12** 09:53:01.4, 35°N±4°×2°6E±°, h6^{km}±3^{km}, M3.9/15, MLh3.9/15*

*IDC **12** 09:53:02.4±1.5, 34°.97N×26°.16E, h62^{km}±12^{km}, mb3.9/19, mbtmp4.1/25, MS3.6/15, Error ellipse: s-maj=19.5km s-min=11.1km az=157.0*

ISC 12 09:52:55.1±1.1**, 34°.74N**±0°.03×**26°.40E**±0°.02**, h5^{km}**±7^{km}**, n306, σ1^{s}.86**/327**, mb4.3**/40**, MS3.5**/10**, 11C-5D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.41	338	P	Pg	09 53 03.2	+0.2
ZKR	Zakros	0.41	338	Pg	Pg	09 53 03.1	+0.2
ZKR				Sg	Sg	09 53 06.5	-1.7
ZKR	Zakros	0.41	338	P	Pg	09 53 03.4	+0.5
ZKR				S	Sg	09 53 06.0	-2.2
SIT2	Siteia	0.53	333	P	Pg	09 53 05.3	+0.1
SIT2				S	Sg	09 53 09.1	-2.9
KSS1	Kassos Island	0.80	32	P	Pn	09 53 12.6	-0.4
KSS1				S	Sg	09 53 20.0	-0.9
NPS	Neapolis	0.83	309	P	Pb	09 53 11.3	-0.8
NPS				S	Sg	09 53 20.2	-1.7
NPS	Neapolis	0.83	309	P	Pb	09 53 11.2	-0.8
NPS				S	Sg	09 53 20.2	-1.7
NPS	Neapolis	0.83	309	P	Pb	09 53 11.3	-0.8
NPS				S	Sg	09 53 21.2	-0.7
IACM	Heraklion	1.23	298	P	Pg	09 53 20.4	+1.7
IACM				S	Sb	09 53 33.8	-1.2
IACM	Heraklion	1.23	298	P	Pg	09 53 20.6	+1.9
IACM				S	Sn	09 53 34.9	-1.1
IDI	Anoyia	1.36	294	P	Pn	09 53 19.9	-0.8
	538nm,0.5s,baz=124,slow=16,SNR=49						
IDI				S	Sb	09 53 36.6	-2.2
	1μm,0.3s,baz=3.9,slow=18,SNR=14						
IDI	Anoyia	1.36	294	P	Pg	09 53 21.0	-0.1
IDI				S	Sg	09 53 39.2	+0.5
IDI	Anoyia	1.36	294		Pg	09 53 20.9	-0.2
IDI	Anoyia	1.36	294	Pn	Pg	09 53 21.9	+0.8
IDI				Sn	Sg	09 53 38.3	-0.4
IDI	Anoyia	1.36	294	P	Pg	09 53 22.7	+1.5
IDI				S	Sg	09 53 38.9	+0.2
THERA	Ancient Thera,	1.79	335	P	Pn	09 53 25.9	-0.8
THERA				S	Sg	09 53 51.7	-1.0
THERA	Ancient Thera,	1.79	335	P	Pn	09 53 25.8	-0.9
ASTA	Astypalaia	1.80	359	P	Pn	09 53 26.3	-0.6
THR6	Thira Island,	1.81	333	P	Pn	09 53 26.6	-0.4
THR6	Thira Island,	1.81	333	P	Pn	09 53 27.1	+0.1
THR8	Santorini-Mono	1.83	336	P	Pn	09 53 26.5	-0.6
THR8	Santorini-Mono	1.83	336	P	Pn	09 53 26.6	-0.5
THR9	Santorini-Faro	1.83	332	P	Pn	09 53 26.5	-0.7
SNT5	Nea Kammeni, S	1.85	334	P	Pn	09 53 27.0	-0.5
THR3	Thira Island,	1.86	334	P	Pn	09 53 26.7	-0.9
THR3	Thira Island,	1.86	334	P	Pn	09 53 27.4	-0.2
THR2	Thira island,	1.88	335	P	Pn	09 53 28.1	+0.2
THR5	Thira Island,	1.88	333	P	Pn	09 53 27.6	-0.4
THR5	Thira Island,	1.88	333	P	Pn	09 53 27.8	-0.2
SAP3	Santorini-Thir	1.90	333	S	Sg	09 53 54.9	-1.2
SAP3	Santorini-Thir	1.90	333	P	Pn	09 53 28.3	+0.1
GVD	Gavdhos	1.91	274	P	Pg	09 53 32.1	+0.4
GVD				S	Sg	09 54 03.7	+7.3
GVD	Gavdhos	1.91	274	Pn	Pg	09 53 32.8	+1.1
GVD	Gavdhos	1.91	274	P	Pg	09 53 32.2	+0.6
VAM	Vamos	1.93	291	P	Pg	09 53 30.9	-1.1
VAM				S	Sb	09 53 53.9	-1.2
VAM	Vamos	1.93	291	P	Pb	09 53 30.0	-0.7
VAM				S	Sb	09 53 53.8	-1.2
VAM	Vamos	1.93	291	P	Pg	09 53 30.9	-1.1
NISR	Nisiros	1.96	17	P	Pn	09 53 29.5	+0.5
NISR				S	Sb	09 53 56.1	0.0
NISR	Nisiros	1.96	17	P	Pn	09 53 29.3	+0.3
ARG	Arkhangelos	2.04	43	P	Pg	09 53 33.4	-0.7
ARG				S	Sb	09 53 57.7	-0.6
ARG	Arkhangelos	2.04	43		Pb	09 53 32.8	+0.2
ARG	Arkhangelos	2.04	43	Pn	Pb	09 53 32.4	-0.2
ARG	Arkhangelos	2.04	43	P	Pb	09 53 32.8	+0.2
ARG	Arkhangelos	2.04	43	P	Pb	09 53 32.0	-0.6
CHNB	Souda	2.06	292	P	Pb	09 53 32.9	-0.1
CHAN	Chania	2.09	293	P	Pg	09 53 34.1	-0.9
CHAN				S	Sn	09 53 56.7	-0.4
CHAN	Chania	2.09	293	P	Pb	09 53 33.5	+0.1
CH01	Chania	2.10	292	P	Pb	09 53 33.7	+0.1
YAZI	Mula-Dat§a-	2.12	23	P	Pn	09 53 31.4	+0.2
YAZI				*i* IAML		09 54 08.0	
	comp=E,209nm,0.8s						
YAZI				*i* IAML		09 54 14.0	
	comp=N,310nm,0.8s						
DAT	Datca	2.20	25	S	Sg	09 54 07.2	+1.3
DAT	Datca	2.20	25	Pn	Pn	09 53 33.1	+0.6
DATC	Datca-Mugla	2.26	27	Pn	Pn	09 53 33.5	+0.4
APE	Apeiranthos	2.43	343	P	Pn	09 53 34.9	-0.7
APE				S	Sn	09 54 01.0	-4.7
APE	Apeiranthos	2.43	343	Pn	Pn	09 53 34.3	-1.2
APE	Apeiranthos	2.43	343	*c i*P	Pn	09 53 34.7	-0.8
APE	Apeiranthos	2.43	343	P	Pn	09 53 34.8	-0.7
APE	Apeiranthos	2.43	343	P	Pn	09 53 34.9	-0.7
BODT	Bodrum	2.43	17	Pn	Pn	09 53 35.4	-0.1

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BDRM  Kayabasi           2.47  20   P      Pn      09 53 37.1 +1.1
BDRM                              i IAML           09 54 20.0
      comp=E,183nm,1.1s
NAX1  Naxos Island       2.50 341   P      Pn      09 53 36.1 -0.3
TURN  Turunc             2.52  36   P      Pb      09 53 40.2 -0.7
TURN                                S      Sb      09 54 13.5 +1.2
TURN                              i IAML           09 54 26.0
      comp=N,301nm,0.8s
TURN                              i IAML           09 54 27.0
      comp=E,221nm,1.3s
MHLO  Agia Marina, M     2.54 321   P      Pn      09 53 37.9 +1.0
MHLO                                S      Sb      09 54 13.0 +0.3
MHLO  Agia Marina, M     2.54 321   P      Pn      09 53 38.1 +1.2
DALY  Dalyan (Mula)      2.77  41   Pn     Pb      09 53 42.1 -2.9
ANKY  Antikythira Is     2.77 295   P      Pb      09 53 43.0 -2.1
ANKY                                S      Sb      09 54 17.8 -1.7
ANKY  Antikythira Is     2.77 295   P      Pb      09 53 42.5 -2.6
MLSB  Milas              2.78  23   Pn     Pn      09 53 40.3 -0.1
YER   Yerkesik           2.84  32   P      Pn      09 53 43.0 +1.9
YER   Yerkesik           2.84  32   Pn     Pn      09 53 42.5 +1.4
YER   Yerkesik           2.84  32   P      Pn      09 53 43.0 +1.9
IZZE  Mula-Seydike       2.86  53   P      Pn      09 53 43.2 +1.9
IZZE                              i IAML           09 54 39.0
      comp=E,237nm,0.6s
IZZE                              i IAML           09 54 51.0
      comp=N,205nm,0.6s
SMG   Samos              2.98   7   P      Pn      09 53 42.8 -0.3
SMG   Samos              2.98   7   P      Pn      09 53 43.4 +0.2
AKAS  Kas                3.01  59   P      Pn      09 53 45.5 +2.0
AKAS                                S      Sb      09 54 26.8 +0.5
AKAS                              i IAML           09 54 35.0
      comp=E,187nm,0.8s
AKAS                              i IAML           09 54 54.0
      comp=N,262nm,1.2s
AKAS  Kas                3.01  59          Pb      09 53 46.0 -3.3
KTHA  Kythira Island     3.12 300   P      Pn      09 53 46.3 +1.3
KTHA  Kythira Island     3.12 300   Pn     Pn      09 53 46.7 +1.7
KTHA  Kythira Island     3.12 300   P      Pn      09 53 46.2 +1.3
CAME  Cameli-Denizli     3.22  46   Pn     Pn      09 53 49.1 +2.6
KNIK  Mula-Seydike       3.33  50   P      Pn      09 53 49.8 +1.9
KNIK                              i IAML           09 54 44.0
      comp=N,76nm,1.3s
KNIK                              i IAML           09 54 58.0
      comp=E,96nm,1.7s
CAEL  Denizli, Camel     3.36  44   P      Pb      09 53 52.7 -2.5
CAEL                              i IAML           09 55 04.0
      comp=N,614nm,0.9s
CAEL                              i IAML           09 55 23.0
      comp=E,708nm,1.0s
SLUM  Salum              3.39 197   P      Pb      09 53 53.6 -2.0
SLUM                                S      Sb      09 54 31.7 -5.5
TAVA  DENIZLI_Tavas      3.40  36   P      Pn      09 53 51.7 +2.8
TAVA                              i IAML           09 54 49.0
      comp=N,159nm,0.9s
TAVA                              i IAML           09 54 49.0
      comp=E,129nm,0.7s
AYDB  Zeytinkoy-Aydi     3.42  20   Pn     Pn      09 53 49.9 +0.7
ESEN  Aydn-Nazilli       3.43  27   P      Pn      09 53 50.9 +1.6
ESEN                                S      Sb      09 54 35.4 -3.1
ESEN                              i IAML           09 54 37.0
      comp=N,89nm,0.8s
ESEN                              i IAML           09 54 37.0
      comp=E,157nm,1.0s
ELL   Elmali             3.49  54          Pn      09 53 52.6 +2.5
ELL   Elmali             3.49  54   Pn     Pb      09 53 53.7 -3.7
ELL   Elmali             3.49  54   P      Pn      09 53 52.6 +2.5
NAZL  Nazilli-Aydin      3.56  25   Pn     Pn      09 53 51.9 +0.8
GOLH  Golhisar           3.57  45   P      Pn      09 53 53.2 +1.9
GOLH                              i IAML           09 55 05.0
      comp=N,310nm,0.9s
GOLH                              i IAML           09 55 13.0
      comp=E,289nm,0.9s
AKUM  Antalya-Kumluc     3.58  63   P      Pn      09 53 52.7 +1.4
AKUM                                S      Sb      09 54 38.3 -4.4
AKUM                              i IAML           09 55 25.0
      comp=E,136nm,2.0s
AKUM                              i IAML           09 55 30.0
      comp=N,122nm,2.8s
DNIZ  Denizli-Tavas-     3.58  36   P      Pb      09 53 54.9 -4.1
DNIZ                              i IAML           09 54 54.0
      comp=E,210nm,0.9s
DNIZ                              i IAML           09 55 03.0
      comp=N,204nm,1.0s
IZMR  zmir-demi          3.61  20   P      Pn      09 53 52.8 +1.1
IZMR                              i IAML           09 55 03.0
      comp=E,53nm,0.9s
IZMR                              i IAML           09 55 06.0
      comp=N,66nm,1.1s
KARY  Karystos           3.65 335   P      Pn      09 53 52.3 +0.1
KARY  Karystos           3.65 335   P      Pn      09 53 52.2 -0.1
CHOS  Chios island       3.65 356   P      Pn      09 53 52.1 -0.2
CHOS  Chios island       3.65 356   Pn     Pn      09 53 52.0 -0.4
CHOS  Chios island       3.65 356   P      Pn      09 53 52.3 -0.1
BLCB  Balcova            3.68   8   Pn     Pn      09 53 52.2 -0.4
MET1  Methana Town,      3.74 320   P      Pn      09 53 53.8 +0.4
VLY   Voula,Athens       3.75 327   P      Pn      09 53 54.1 +0.5
MET4  Agioi Theodoro     3.77 321   P      Pn      09 53 54.9 +1.0
ODEM  Odemis-Izmir       3.78  20   Pn     Pn      09 53 54.6 +0.5
MET5  Makryloggos,Me     3.79 320   P      Pn      09 53 55.4 +1.2
MET2  Kameni Chora,      3.80 320   P      Pn      09 53 55.5 +1.3
KIRA  zmir-Kiraz         3.81  24   P      Pn      09 53 56.1 +1.5
KIRA                                S      Sn      09 54 43.0 +3.2
KIRA                              i IAML           09 54 48.0
      comp=N,111nm,1.0s
KIRA                              i IAML           09 55 20.0
      comp=E,68nm,1.0s
DION  Dionisos Attik     3.88 330   P      Pn      09 53 56.4 +0.9
DION  Dionisos Attik     3.88 330   P      Pn      09 53 56.0 +0.6
PTL   Penteli            3.89 329   P      Pn      09 53 56.1 +0.6
INCE  Denizli-Bozkur     3.92  40   P      Pn      09 53 57.6 +1.5
INCE                              i IAML           09 55 12.0
      comp=N,102nm,1.7s
INCE                              i IAML           09 55 20.0
      comp=E,99nm,0.8s
KORT  Korkueli           3.92  54   P      Pn      09 53 59.0 +2.9
KORT                                S      Sb      09 54 50.8 -1.9
KORT                              i IAML           09 54 51.0
      comp=E,137nm,0.6s
KORT                              i IAML           09 55 04.0
      comp=N,121nm,0.9s
MANT  Manisa             4.13  24   P      Pn      09 53 59.4 +0.4
MANT                              i IAML           09 55 01.0
      comp=E,44nm,1.1s
MANT                              i IAML           09 55 29.0
      comp=N,38nm,1.3s
MANT  Manisa             4.13  24          Pn      09 54 00.3 +1.3
STFN  Stefani            4.13 327   P      Pn      09 53 59.5 +0.6
BRDR  BURDUR-Merkez      4.18  44   P      Pb      09 54 04.7 -4.5
BRDR                              i IAML           09 55 08.0
      comp=E,65nm,0.7s
BRDR                              i IAML           09 55 09.0
      comp=N,83nm,0.8s
BUCA  Burdur, Bucak-     4.25  51   S      Sb      09 54 56.2 -5.6
VIL2  Platees            4.29 325   P      Pn      09 54 00.6 -0.4
KYMI  Kymi, Euboea I     4.30 335   P      Pn      09 54 01.5 +0.2
PYL   PYLOS              4.36 301   P      Pn      09 54 03.5 +1.5
ITM   Ithomi             4.37 305          Pn      09 54 02.9 +0.7
ITM   Ithomi             4.37 305   P      Pn      09 54 04.1 +1.9
PASA  Karahalli, USA     4.38  34   P      Pn      09 54 03.9 +1.6
PASA                              i IAML           09 55 31.0
      comp=E,33nm,1.1s
PASA                              i IAML           09 55 33.0
      comp=N,33nm,1.0s
SKY   Skiros Island      4.39 341   P      Pn      09 54 02.4  0.0
SIGR  SIGRI              4.49 355   P      Pn      09 54 03.4 -0.3
USAK  Uak-Merkez         4.49  27   P      Pn      09 54 05.1 +1.3
USAK                              i IAML           09 55 31.0
      comp=N,30nm,1.6s
USAK                              i IAML           09 55 44.0
      comp=E,33nm,1.6s
PRK   Paraskevi          4.50 359   P      Pn      09 54 02.9 -1.1
GUR   Goura              4.57 315   P      Pn      09 54 06.5 +1.4
DEMI  Demirci            4.68  23   P      Pn      09 54 08.4 +1.9
DEMI                              i IAML           09 55 16.0
      comp=E,43nm,1.0s
DEMI                              i IAML           09 55 17.0
      comp=N,31nm,0.9s
AMT   Artemida-Makis     4.71 308   P      Pn      09 54 08.4 +1.5
KLV   Kalavryta, Ach     4.76 315   P      Pn      09 54 08.9 +1.3
BAGO  Egridir - ISPA     4.80  46   P      Pn      09 54 12.2 +4.1
BAGO                              i IAML           09 55 56.0
      comp=E,39nm,1.8s
BAGO                              i IAML           09 56 07.0
      comp=N,31nm,1.5s
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DRO   Drossia            4.96 312   P      Pn      09 54 12.1 +1.8
GDZ   Gediz              4.99  29   P      Pn      09 54 11.7 +0.8
GDZ                               i IAML           09 55 43.0
      comp=N,39nm,2.6s
GDZ                               i IAML           09 55 57.0
      comp=E,19nm,1.0s
BALB  Balikesir          5.03  13          Pn      09 54 13.4 +2.2
EZN   Ezine              5.08 359   P      Pn      09 54 12.1 +0.2
SEDI  Konya, Seydise     5.11  56   P      Pn      09 54 15.0 +2.5
SEDI                                S      Sn      09 55 14.9 +3.0
SEDI                              i IAML           09 55 21.0
      comp=N,60nm,0.8s
SEDI                              i IAML           09 55 25.0
      comp=E,50nm,0.6s
YVAC  Isparta, Yalva     5.25  46   P      Pb      09 54 20.7 -6.8
YVAC                              i IAML           09 56 01.0
      comp=N,20nm,2.2s
YVAC                              i IAML           09 56 07.0
      comp=E,25nm,2.4s
AGG   Agios Georgios     5.38 324   P      Pn      09 54 19.4 +3.4
AGG                                 pmax   pmax
      comp=Z,127nm,0.9s
SWA2                     5.54 189   P      Pn      09 54 23.0 +4.8
UCKU  Afyonkarahisar     5.60  45   P      Pn      09 54 22.3 +3.1
UCKU                              i IAML           09 56 31.0
      comp=Z,12nm,1.9s
UCKU                              i IAML           09 56 45.0
      comp=Z,17nm,1.8s
CSS   Mathiatis          5.70  86   Pn     Pn      09 54 23.3 +2.8
CSS   Mathiatis          5.70  86   P      Pn      09 54 21.3 +0.8
CSS   Mathiatis          5.70  86   S      Sn      09 55 26.4  0.0
KKBE  Karaman, Kazim     5.85  63   P      Pn      09 54 26.4 +3.8
KKBE                                S      Sn      09 55 32.8 +2.7
KKBE                              i IAML           09 55 47.0
      comp=Z,38nm,1.8s
KKBE                              i IAML           09 56 15.0
      comp=Z,25nm,1.1s
BORA  Eskisehir          6.06  31   Pn     Pn      09 54 28.5 +3.0
LIT   Litokhoron         6.19 331          Pn      09 54 27.8 +0.6
LIT   Litokhoron         6.19 331   P      Pn      09 54 27.8 +0.6
THE   Thessaloniki       6.48 336   P      Pn      09 54 34.8 +3.6
THE                                 pmax   pmax
      comp=Z,52nm,1.1s
RYAN  Fayoum             6.53 149   P      Pn      09 54 36.8 +5.0
RYAN                                S      Sn      09 55 47.4 +0.7
SRS   Serrai             6.74 342   P      Pn      09 54 38.9 +4.1
SRS                                 pmax   pmax
      comp=Z,28nm,1.3s
GRG   Griva              6.97 334   P      Pn      09 54 38.0 +0.1
GRG                                 pmax   pmax
      comp=Z,43nm,1.1s
KNT   Kendrikon          6.98 338   P      Pn      09 54 42.2 +4.1
KNT                                 pmax   pmax
      comp=Z,40nm,0.8s
ANTO  Ankara             7.22  43          Pn      09 54 43.1 +1.8
ANTO  Ankara             7.22  43   P      Pn      09 54 43.2 +1.8
VAY   Valandovo          7.23 336 i P      Pn      09 54 45.5 +4.1
KEK   Kerkira            7.24 315   Pn     Pn      09 54 41.3 -0.2
BR131 Keskin Array S     7.62  47          Pn      09 54 48.6 +1.7
BR131 Keskin Array S     7.62  47⇓iP      Pn      09 54 48.9 +2.0
BRTR  Keskin Array B     7.62  47   P      Pn      09 54 49.3 +2.4
      comp=Z,2.1nm,0.7s,baz=229,slow=13,SNR=8.0
BRTR                                LR     LR      09 58 31.2
      comp=Z,292nm,18.9s,baz=236,slow=43
BRTR  Keskin Array B     7.62  47   Pn     Pn      09 54 50.7 +3.8
BRTR  Keskin Array B     7.62  47   P      Pn      09 54 50.7 +3.8
MMC7  Mount Meron ar     7.67 100   P      Pn      09 54 48.6 +1.0
MMA0B Mount Meron ar     7.68 100   P      Pn      09 54 48.1 +0.4
MMA0B Mount Meron ar     7.68 100   S      Sn      09 56 14.9 -0.2
MMAI  Mount Meron Ar     7.68 100   P      Pn      09 54 50.1 +2.4
      comp=Z,1.0nm,0.2s,baz=285,slow=12,SNR=4.0
MMAI                                S      Sn      09 56 18.3 +3.2
      comp=Z,2.3nm,0.4s,baz=272,slow=17,SNR=2.2
KZIT  Kziot              7.74 117   P      Pn      09 54 48.8 +0.4
KZIT  Kziot              7.74 117   S      Sn      09 56 16.2 -0.3
OHR   Ohrid              7.75 327 i P      Pn      09 54 52.4 +3.8
GEM   Giv'at Ha'Em       7.84  99   P      Pn      09 54 50.3 +0.5
GEM   Giv'at Ha'Em       7.84  99   S      Sn      09 56 18.9 -0.1
MMLI  Mount Malkishu     7.87 104   P      Pn      09 54 51.1 +0.9
MMLI  Mount Malkishu     7.87 104   S      Sn      09 56 19.7  0.0
NATI  Neve Ativ          7.89  98   P      Pn      09 54 51.1 +0.6
NATI  Neve Ativ          7.89  98   S      Sn      09 56 20.7 +0.5
HMDT  Nahal Hemdat       8.01 105   P      Pn      09 54 52.6 +0.4
HMDT  Nahal Hemdat       8.01 105   S      Sn      09 56 23.2 -0.1
YTIR  Yattir             8.05 112   P      Pn      09 54 53.6 +0.8
YTIR  Yattir             8.05 112   S      Sn      09 56 24.4 +0.1
DSI   Dead Sea           8.16 110   P      Pn      09 54 55.0 +0.7
DSI   Dead Sea           8.16 110   S      Sn      09 56 26.7 -0.3
RMNI  Mount Ramon        8.17 118   P      Pn      09 54 55.6 +1.2
RMNI  Mount Ramon        8.17 118   S      Sn      09 56 27.4 +0.3
PHP   Peshkopia          8.37 328   P      Pn      09 55 01.6 +4.5
PHP                                 pmax   pmax
      comp=Z,18nm,1.1s
GHAJ  Ghor Haditha       8.42 111          Pn      09 55 01.4 +3.6
GHAJ  Ghor Haditha       8.42 111   P      Pn      09 54 58.3 +0.6
GHAJ  Ghor Haditha       8.42 111   S      Sn      09 56 33.2 -0.1
PRNI  Paran              8.47 119   P      Pn      09 54 58.8 +0.3
PRNI  Paran              8.47 119   S      Sn      09 56 34.2 -0.5
HRFI  Mount Harif        8.68 120   P      Pn      09 55 02.1 +0.8
HRFI  Mount Harif        8.68 120   S      Sn      09 56 39.7 +0.1
MBRI  Mt Berech          8.73 122   P      Pn      09 55 02.8 +0.7
MBRI  Mt Berech          8.73 122   S      Sn      09 56 41.2 +0.2
EIL   Elat               8.83 123   P      Pn      09 55 05.8 +2.4
      comp=Z,8.1nm,0.5s,baz=309,slow=14,SNR=5.3
EIL                                 S      Sn      09 56 41.9 -1.4
      comp=Z,15nm,0.6s,baz=86,slow=24,SNR=4.1
EIL   Elat               8.83 123   P      Pn      09 55 03.8 +0.4
EIL   Elat               8.83 123   S      Sn      09 56 42.7 -0.7
TIP   Timpagrande        8.90 303          Pn      09 55 03.8 -0.6
CEL   Celeste            9.16 296   Pn     Pn      09 55 09.1 +1.2
VAE   Valguarnera       10.08 289   P      Pn      09 55 21.5 +0.9
      comp=Z,9.2nm,0.4s,baz=242,slow=21,SNR=1.7
VAE                                 S      Sn      09 57 06.8 -7.2
      comp=Z,11nm,0.4s,baz=227,slow=22,SNR=2.3
MLR   Muntele Rosu      10.75 358   P      Pn      09 55 30.9 +1.1
      comp=Z,3.1nm,0.8s,baz=220,slow=9.1,SNR=3.4
MLR                                 LR     LR      09 59 51.1
      comp=Z,365nm,21.5s,baz=234,slow=39
SGRT  San Giovanni R    10.92 313   Pn     Pn      09 55 33.5 +1.4
ANN   Anapa             13.14  37  eP      Pn      09 56 02.0 -0.3
ANN                                eS      Sn      09 58 28.5 -0.3
ANN                                 pmax   pmax
      comp=Z,49nm,1.1s
SOC   Sochi             13.58  45  eP      Pn      09 56 10.2 +1.9
SOC                                eS      Sn      09 58 41.6 +2.1
SOC                                 pmax   pmax
      comp=Z,16nm,1.3s
KEST  Kesra             13.98 279   P      Pn      09 56 14.6 +0.7
      comp=Z,4.5nm,1.0s,baz=159,slow=12,SNR=1.5
KEST                                LR     LR      10 02 13.7
      comp=Z,183nm,20.9s,baz=39,slow=40
NEUR  Neytrino          15.25  51⇑iP      P       09 56 33.6 -2.7
NEUR                                pmax   pmax
      comp=Z,2.0nm,1.0s
GNI   Garni             15.53  64   LR     LR      10 03 52.1
      comp=Z,219nm,18.3s,baz=285,slow=42
KIV   Kislovodsk        15.58  49  eP      Pn      09 56 36.7 +1.2
KIV                                 pmax   pmax
      comp=Z,8.0nm,1.1s
KBZ   Khabaz            15.60  50   P      P       09 56 38.4 -1.5
      comp=Z,1.8nm,0.8s,baz=233,slow=10,SNR=4.2
KBZ   Khabaz            15.60  50⇓iP      P       09 56 39.0 -0.9
KBZ                                 pmax   pmax
      comp=Z,3.0nm,1.0s
KIEV  Kiev              16.08   6   Pn     P       09 56 42.8 -2.4
KIEV  Kiev              16.08   6   P      P       09 56 42.8 -2.4
KIEV                                pmax   pmax
      comp=Z,19nm,1.4s
AKASG Malin Array Be    16.09   6   P      Pn      09 56 42.6 +0.7
      comp=Z,1.8nm,0.6s,baz=197,slow=11,SNR=9.3
AKBB  Malin Array Si    16.09   6          P       09 56 42.8 -2.4
AKBB  Malin Array Si    16.09   6⇑iP      P       09 56 42.9 -2.4
AKBB                                pmax   pmax
      comp=Z,3.0nm,0.9s
GERES GERESS Array B    16.95 330   P      Pn      09 56 51.6 -1.4
      comp=Z,0.7nm,0.7s,baz=143,slow=9.9,SNR=4.4
GERES                               LR     LR      10 04 12.7
      comp=Z,200nm,18.5s,baz=98,slow=40
DVE   Vedeno            17.39  56⇑iP      P       09 57 03.3 +3.4
DVE                                 pmax   pmax
      comp=Z,3.0nm,0.9s
AKT   Akhty             18.06  62  eP      P       09 57 07.3 -0.1
AKT                                eS      Sn      10 00 29.5 +0.8
AKT                                 pmax   pmax
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      comp=Z,7.0nm,0.8s
SENIN Lac Senin/Sane    18.54 315   P      Pn      09 57 12.5 -0.3
VORD  Divnogorie        18.72  26  eP      Pn      09 57 17.2 +2.4
VORD                                pmax   pmax
      comp=Z,5.0nm,0.9s
VSR   Storozhevoye      18.89  25  eP      Pn      09 57 17.5 +0.8
VSR                                 pmax   pmax
      comp=Z,4.0nm,1.0s
CLL   Collm             19.19 334  eP      Pn      09 57 26.0 +5.6
CLL   Collm             19.19 334  ePPP    PPP     09 57 41.0
CLL   Collm             19.19 334  esP     Pn      09 57 26.0 +5.6
VRH   Novokhopyorsk     19.84  29  eP      Pn      09 57 26.8 -1.4
VRH                                 pmax   pmax
      comp=Z,6.0nm,1.0s
LOR   Lormes            21.03 313   P      P       09 57 40.8 +1.1
OBN   Obninsk           21.56  16   LR     LR      10 06 41.1
      comp=Z,152nm,20.9s,baz=58,slow=38
OBN   Obninsk           21.56  16⇓iP      P       09 57 46.5 +1.2
OBN                                ePPP    PPP     09 58 12.0
OBN                                e               10 01 46.4
OBN                                 pmax   pmax
      comp=Z,8.0nm,0.9s
OBN                                 MLR    MLR
      comp=Z,143nm,12.0s
TAM   Tamanrasset       21.78 242          P       09 57 46.8 -1.3
TAM   Tamanrasset       21.78 242   P      P       09 57 46.8 -1.3
TAM                                 pmax   pmax
      comp=Z,39nm,0.3s
ESBB  Sonseca Array     24.62 291   P      P       09 58 16.5  0.0
ESBB                                IAmb   IAmb    09 58 52.9
      comp=Z,19nm,1.5s
ESDC  Sonseca Array     24.62 291   P      P       09 58 14.9 -1.5
      comp=Z,3.0nm,0.8s,baz=90,slow=9.1,SNR=15
      comp=Z,3.0nm,0.8s
MDT   Midelt            25.80 275   LR     LR      10 10 35.6
      comp=Z,122nm,20.6s,baz=66,slow=41
FINES FINESS Array B    26.72 360   P      P       09 58 32.5 -2.7
      comp=Z,4.2nm,0.9s,baz=151,slow=12,SNR=4.8
      comp=Z,4.2nm,0.9s
FINES FINESS Array B    26.72 360 i P      P       09 58 39.0 +3.8
FINES                               pmax   pmax
      comp=Z,4.0nm,0.8s
NOA   NORSAR Array B    28.07 344   LR     LR      10 10 22.1
      comp=Z,96nm,18.2s,baz=5.0,slow=37
KIRV  Kirov             28.33  26⇑iP      P       09 58 52.2 +2.6
AB31  Akbulak array     28.57  49   P      P       09 58 53.6 +1.8
ABKAR Akbulak array     28.57  49   P      P       09 58 54.1 +2.3
EKA   Eskdalemuir Ar    28.97 324   P      P       09 58 52.3 -3.0
      comp=Z,1.2nm,0.6s,baz=123,slow=10.0,SNR=4.0
      comp=Z,1.2nm,0.6s
ARTI  Arti              30.69  35   LR     LR      10 13 07.7
      comp=Z,69nm,18.5s,baz=342,slow=39
ARTI  Arti              30.69  35c iP      P       09 59 15.8 +5.2
ARTI                                               10 00 17.7
ARTI                                S      S       10 04 21.6 +8.0
ARTI                                SS     SnSn    10 05 59.2 +8.5
ARTI                                pmax   pmax
      comp=Z,22nm,2.7s
TORD  Torodi Ar. Bea    31.02 232   P      P       09 59 14.6 +0.7
      comp=Z,3.7nm,0.8s,baz=39,slow=12,SNR=20
      comp=Z,3.7nm,0.8s
TORD  Torodi Ar. Bea    31.02 232   P      P       09 59 15.5 +1.7
ARCES ARCESS Array B    34.85 359   P      P       09 59 43.2 -3.7
      comp=Z,4.0nm,1.0s,baz=170,slow=7.4,SNR=9.1
      comp=Z,4.0nm,1.0s
MBAR  Mbarara           35.39 172   LR     LR      10 14 06.1
      comp=Z,48nm,19.6s,baz=294,slow=36
BORK  Borovoye          35.87  46⇑iP      P       09 59 56.3 +0.6
BORK                                pmax   pmax
      comp=Z,3.0nm,1.0s
BVAR  Borovoye Array    35.91  46   P      P       09 59 56.6 +0.5
      comp=Z,3.1nm,1.0s,baz=258,slow=6.8,SNR=10
BVAR                                LR     LR      10 18 06.2
      comp=Z,53nm,19.7s,baz=304,slow=42
      comp=Z,3.1nm,1.0s
ARSB  Arslanbob         36.92  66          P       10 00 06.8 +1.7
ARSB                                IAmb   IAmb    10 00 15.1
      comp=Z,3.9nm,0.8s
ARSB  Arslanbob         36.92  66   P      P       10 00 06.8 +1.7
ARSB                                pmax   pmax
      comp=Z,4.0nm,0.8s
AAK   Ala-Archa         37.93  63⇑iP      P       10 00 16.4 +2.7
AAK                                 pmax   pmax
      comp=Z,2.0nm,0.9s
DBIC  Dimbokro          40.12 233   P      P       10 00 30.1 -1.8
      comp=Z,2.3nm,0.5s,baz=66,slow=11,SNR=3.9
      comp=Z,2.3nm,0.5s
DBIC  Dimbokro          40.12 233   P      P       10 00 30.9 -1.1
DBIC                                IAmb   IAmb    10 00 38.5
      comp=Z,13nm,1.4s
DBIC  Dimbokro          40.12 233   P      P       10 00 30.9 -1.1
DBIC                                pmax   pmax
      comp=Z,13nm,1.4s
KURBB Kurchatov Arra    40.60  51   P      P       10 00 36.0 +0.5
      comp=Z,5.2nm,0.9s,baz=278,slow=8.8,SNR=32
KURBB                               PcP    PcP     10 02 38.3 +0.7
      comp=Z,0.9nm,0.8s,baz=272,slow=4.3,SNR=3.4
      comp=Z,5.2nm,0.9s
KURK  Kurchatov         40.66  50          P       10 00 36.8 +0.7
KURK                                IAmb   IAmb    10 00 44.8
      comp=Z,4.6nm,0.7s
KURK  Kurchatov         40.66  50          PcP     10 02 38.3 +0.5
KURK  Kurchatov         40.66  50⇑iP      P       10 00 36.8 +0.7
KURK                                pmax   pmax
      comp=Z,6.0nm,1.0s
MK31  Makanchi Array    43.16  56d iP      P       10 00 57.4 +0.7
MKAR  Makanchi Array    43.16  56   P      P       10 00 57.5 +0.8
      comp=Z,2.7nm,0.7s,baz=281,slow=6.5,SNR=20
MKAR                                PcP    PcP     10 02 46.2  0.0
      comp=Z,0.5nm,0.7s,baz=287,slow=3.9,SNR=1.3
      comp=Z,2.7nm,0.7s
MKAR  Makanchi Array    43.16  56          P       10 00 57.8 +1.2
MKAR  Makanchi Array    43.16  56   P      P       10 00 57.8 +1.2
MKAR                                               10 02 46.2
ZAA0  Zalesovo Array    44.56  46   P      P       10 01 07.9 +0.1
ZAA0                                IAmb   IAmb    10 01 08.3
      comp=Z,5.3nm,0.7s
ZALV  Zalesovo Beam     44.56  46   P      P       10 01 07.6 -0.2
      comp=Z,4.1nm,0.6s,baz=265,slow=8.9,SNR=14
      comp=Z,4.1nm,0.6s
ZALV  Zalesovo Beam     44.56  46   P      P       10 01 08.0 +0.2
ZALV  Zalesovo Beam     44.56  46 i P      P       10 01 07.8  0.0
ZALV                                pmax   pmax
      comp=Z,4.0nm,0.5s
KBS   Kingsbay          44.71 356   P      P       10 01 10.6 +2.0
KBS                                 pmax   pmax
      comp=Z,61nm,2.8s
DGZ   Jazzator, Alta    46.34  52⇑iP      P       10 01 23.2 +1.1
DGZ                                 pmax   pmax
      comp=Z,2.0nm,0.8s
NRIK  Noril'sk          47.83  25   P      P       10 01 32.5 -0.7
      comp=Z,2.7nm,0.5s,baz=250,slow=8.9,SNR=5.3
      comp=Z,2.7nm,0.5s
NRIK  Noril'sk          47.83  25          P       10 01 35.7 +2.4
NRIK                                IAmb   IAmb    10 01 48.4
      comp=Z,2.8nm,0.6s
NRIK  Noril'sk          47.83  25   P      P       10 01 35.7 +2.4
NRIK                                pmax   pmax
      comp=Z,3.0nm,0.6s
EVN   Everest           51.38  80   IAmb   IAmb    10 02 11.8
      comp=Z,4.3nm,0.6s
KNGR  Kungurtug, Tuv    52.62  49⇑iP      P       10 02 12.7 +2.6
KNGR                                pmax   pmax
      comp=Z,2.0nm,0.9s
TSUM  Tsumeb            54.29 190   LR     LR      10 26 34.0
      comp=Z,56nm,18.8s,baz=151,slow=37
SONM  Songino Array     58.96  51   P      P       10 02 56.2 +0.5
      comp=Z,2.2nm,0.7s,baz=286,slow=8.0,SNR=12
      comp=Z,2.2nm,0.7s
SONM  Songino Array     58.96  51   P      P       10 02 56.8 +1.2
SONM                                IAmb   IAmb    10 02 56.8
      comp=Z,2.3nm,1.0s
SONM  Songino Array     58.96  51   P      P       10 02 56.8 +1.2
SONM                                pmax   pmax
      comp=Z,2.0nm,1.0s
ULN   Ulaanbaatar       59.37  51⇓iP      P       10 02 59.8 +1.3
ULN                                 pmax   pmax
      comp=Z,4.0nm,1.1s
BOSA  Boshof            63.02 181   LR     LR      10 34 28.2
      comp=Z,47nm,19.8s,baz=8.5,slow=39
SCHQ  Schefferville     64.17 320   P      P       10 03 28.9 -1.6
      comp=Z,2.5nm,0.5s,baz=74,slow=4.5,SNR=7.1
      comp=Z,2.5nm,0.5s
SCHQ  Schefferville     64.17 320   P      P       10 03 31.2 +0.7
CMAR  Chiang Mai Arr    65.60  84   P      P       10 03 40.6 +0.2
      comp=Z,1.0nm,0.4s,baz=303,slow=8.7,SNR=9.6
      comp=Z,1.0nm,0.4s
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CMAR	Chiang Mai Arr	65.60	84	*i*P	P	10 03 41.2	+0.8
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
A36M	Sachs Harbour	71.72	351	P	P	10 04 19.2	+1.6
SEY	Seymchan	73.56	23	LR	LR	10 42 07.2	
	comp=Z,76nm,18.4s,baz=336,slow=40						
C23K	Itkillik River	75.71	359	P	P	10 04 41.0	-0.1
B21K	Ikpikpuk River	75.94	0	P	P	10 04 42.5	0.0
B21K				IAmb	IAmb	10 04 43.5	
	comp=Z,6.9nm,1.4s						
USRK	Ussuriysk Ar.	76.41	45	P	P	10 04 45.1	-0.5
	comp=Z,1.5nm,0.6s,baz=288,slow=6.9,SNR=4.0						
	comp=Z,1.5nm,0.6s						
E29M	Blow River	76.52	354	P	P	10 04 45.5	-0.3
D22K	Ayikyak River	76.69	360	P	P	10 04 46.8	0.0
D22K				IAmb	IAmb	10 05 15.0	
	comp=Z,8.7nm,1.5s						
D20K	Etivluk River	76.83	1	P	P	10 04 47.2	-0.4
D20K				IAmb	IAmb	10 04 51.9	
	comp=Z,5.1nm,1.2s						
E22K	Anaktuvuk Pass	77.43	359	P	P	10 04 50.9	-0.1
E22K				IAmb	IAmb	10 04 55.2	
	comp=Z,4.0nm,1.0s						
KSRS	Korea Array	77.72	53	P	P	10 04 53.1	0.0
	comp=Z,2.2nm,0.9s,baz=306,slow=4.5,SNR=3.2						
	comp=Z,2.2nm,0.9s						
G30M	tAoh Zraii Nji	77.73	353	P	P	10 04 52.3	-0.4
BMAR	Burnt Mountain	77.92	356	P	P	10 04 53.8	0.0
YKA	Yellowknife Ar	78.16	343	P	P	10 04 52.0	-3.0
	comp=Z,0.3nm,0.7s,baz=28,slow=5.4,SNR=3.5						
	comp=Z,0.3nm,0.7s						
YKA	Yellowknife Ar	78.16	343	P	P	10 04 52.0	-3.0
YKA	Yellowknife Ar	78.16	343	P	P	10 04 52.0	-3.0
H29M	Whitestone	78.68	354	P	P	10 04 56.9	-1.1
H29M				IAmb	IAmb	10 05 04.8	
	comp=Z,3.2nm,0.9s						
I30M	Mount Dempster	79.46	353	P	P	10 05 01.7	-0.6
I30M				IAmb	IAmb	10 05 02.1	
	comp=Z,3.2nm,0.8s						
I28M	Miner Creek	79.57	354	P	P	10 05 02.0	-0.9
I28M				IAmb	IAmb	10 05 09.7	
	comp=Z,3.3nm,1.1s						
ILAR	Eielson Array	80.68	357	P	P	10 05 07.3	-1.5
	comp=Z,0.7nm,0.8s,baz=348,slow=3.1,SNR=6.4						
	comp=Z,0.7nm,0.8s						
NEW	Newport	91.17	337	P	P	10 05 56.2	-4.9
	comp=Z,1.3nm,0.7s,baz=23,slow=13,SNR=1.7						
NEW	Newport	91.17	337	P	P	10 05 56.2	-4.9
NEW				pmax	pmax		
	comp=Z,6.0nm,1.4s						
PDAR	Pinedale Array	92.99	329	P	P	10 06 06.6	-3.3
	comp=Z,0.3nm,0.7s,baz=52,slow=6.9,SNR=2.2						
PDAR				LR	LR	10 53 01.3	
	comp=Z,61nm,19.1s,baz=330,slow=39						
	comp=Z,0.3nm,0.7s						
ASAR	Alice Springs	116.97	101	PKP	PKPdf	10 11 40.0	-1.4
	comp=Z,0.4nm,0.9s,baz=270,slow=0.6,SNR=5.1						
QSPA	South Pole Qui	124.59	180	PKP	PKiKP	10 11 54.7	-0.3
	comp=Z,0.8nm,0.3s,baz=246,slow=2.6,SNR=1.4						
STKA	Stephens Creek	126.61	106	PKP	PKPdf	10 11 58.2	-1.4
	comp=Z,1.0nm,0.8s,baz=309,slow=8.5,SNR=1.2						

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*SJA **12** 09:54:46.3±0.8, 36°.49S×71°.17W, h150^{km}±4^{km}, ML3.5, MW3.5*

*GUC **12** 09:54:48.2±0.7, 36°.47S×71°.06W, h138^{km}±4^{km}, ML3.8*

ISC 12 09:54:47.0±1.4**, 36°.46S**±0°.03×**71°.19W**±0°.06**, h145**^{km}±9^{km}**, n48,** $\sigma 1^{s}.$**39**/83**, 6C-1D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BI02	San Fabin de	0.21	199	⇓*i*P	Pn	09 55 06.8	-0.1
BI02	San Fabin de	0.21	199	*e*P	Pn	09 55 06.2	-0.7
ML02	Panimavida	0.72	345	⇑*i*P	Pn	09 55 10.0	+0.8
ML02				*i* S	Sn	09 55 26.0	0.0
ML02				IAML		09 55 27.3	
	comp=E,1μm,0.6s						
ML02	Panimavida	0.72	345	*e*P	Pn	09 55 10.1	+0.9
ML02				*e*S	Sn	09 55 26.7	+0.6
ML02				IAML		09 55 27.9	
	comp=Z,242nm,0.2s						
CANA	Caviahue	1.43	176	*e*P	Pn	09 55 16.7	+1.0
CANA				*e*S	Sn	09 55 33.4	-4.2
CANA				*e*S		09 55 37.2	
EDS3	Malargue	1.60	65	*e*P	Pn	09 55 17.8	+0.2
BI05	Punta Hualpn	1.64	259	*e*P	Pn	09 55 19.7	+2.0
BI05				*i* S	Sn	09 55 42.0	+0.8
BI05				IAML		09 55 43.3	
	comp=E,469nm,0.2s						
BI05	Punta Hualpn	1.64	259	*e*P	Pn	09 55 20.4	+2.7
BI05				IAML		09 55 47.2	
	comp=Z,140nm,0.2s						
BO02	Sierra Bellavi	1.70	11	⇑*i*P	Pn	09 55 19.3	+0.7
BO02				*i* S	Sn	09 55 42.5	0.0
BO02				IAML		09 55 47.3	
	comp=E,843nm,0.2s						
BO02	Sierra Bellavi	1.70	11	*e*P	Pn	09 55 19.2	+0.7
BO02				*e*S	Sn	09 55 44.0	+1.4
BO02				IAML		09 55 46.9	
	comp=Z,331nm,0.1s						
BO03	Pichilemu	2.06	342	⇑*i*P	Pn	09 55 23.7	+1.1
BO03				*i* S	Sn	09 55 50.2	+0.3
BO01	Tunca	2.07	2	⇑*i*P	Pn	09 55 23.1	+0.5
BO01				*i* S	Sn	09 55 48.7	-1.4
BO01				IAML		09 55 50.0	
	comp=N,328nm,0.3s						
BO01	Tunca	2.07	2	*e*P	Pn	09 55 23.2	+0.5
BO01				*e*S	Sn	09 55 49.7	-0.4
BO01				IAML		09 55 51.0	
	comp=Z,143nm,0.5s						
BO04	La Punta	2.51	11	*e*P	Pn	09 55 28.8	+0.6
BO04				*i* S	Sn	09 55 59.6	-0.2
BO04				IAML		09 56 02.7	
	comp=E,196nm,0.4s						
MT01	Popeta	2.59	359	⇑*i*P	Pn	09 55 29.3	+0.2
MT01				*i* S	Sn	09 55 59.8	-1.7
MT01				IAML		09 56 02.4	
	comp=E,596nm,0.1s						
MT01	Popeta	2.59	359	*e*P	Pn	09 55 29.3	+0.2
MT01				*e*S	Sn	09 56 00.3	-1.2
MT01				IAML		09 56 01.9	
	comp=Z,248nm,0.1s						
MT09	Talagante	2.68	4	⇑*i*P	Pn	09 55 30.6	+0.3
MT09				*i* S	Sn	09 56 02.4	-1.4
MT09				IAML		09 56 05.7	
	comp=N,680nm,0.2s						
LMEL	Las Melosas	2.73	17	*e*P	Pn	09 55 31.9	+0.9
LMEL				*i* S	Sn	09 56 04.8	0.0
LMEL				IAML		09 56 12.7	
	comp=E,291nm,0.7s						
LMEL	Las Melosas	2.73	17	*e*P	Pn	09 55 32.2	+1.2
LMEL				*e*S	Sn	09 56 07.0	+2.2
LMEL				IAML		09 56 11.9	
	comp=Z,129nm,0.3s						
RFA	San Rafael	2.79	54	*e*P	Pn	09 55 31.6	+0.1
MT13	San Alfonso	2.81	15	*e*P	Pn	09 55 33.0	+1.1
MT13				*i* S	Sn	09 56 06.8	+0.2
MT13				IAML		09 56 12.0	
	comp=E,215nm,0.6s						
MT13	San Alfonso	2.81	15	*e*P	Pn	09 55 33.4	+1.5
MT13				*e*S	Sn	09 56 07.2	+0.7
MT13				IAML		09 56 12.3	
	comp=Z,85nm,0.3s						
VA05	Santo Domingo	2.82	353	*e*P	Pn	09 55 32.1	+0.2
VA05				*i* S	Sn	09 56 02.5	-4.0
VA05				IAML		09 56 11.4	
	comp=E,410nm,0.2s						
MT03	Universidad Ad	3.01	11	*e*P	Pn	09 55 34.8	+0.3
MT03				*i* S	Sn	09 56 10.4	-0.8
MT03				IAML		09 56 15.8	
	comp=N,329nm,0.2s						
MT03	Universidad Ad	3.01	11	*e*P	Pn	09 55 35.1	+0.6
MT03				*e*S	Sn	09 56 11.6	+0.4
MT03				IAML		09 56 12.8	
	comp=Z,171nm,0.2s						
MT16	CCHEN	3.08	10	*e*P	Pn	09 55 35.7	+0.4
MT16				*i* S	Sn	09 56 11.9	-0.6
MT16				IAML		09 56 14.2	
	comp=N,73nm,0.4s						
MT05	Renca	3.08	7	*e*P	Pn	09 55 34.9	-0.5
MT05				*i* S	Sn	09 56 12.3	-0.4
MT05				IAML		09 56 14.4	
	comp=N,461nm,0.3s						
MT05	Renca	3.08	7	*e*P	Pn	09 55 36.0	+0.6
MT05				*e*S	Sn	09 56 12.8	+0.1
MT05				IAML		09 56 13.6	
	comp=Z,156nm,0.1s						
MT14	Cerro Cal¡n	3.10	10	*e*P	Pn	09 55 35.9	+0.2
GO06	Curarrehue	3.12	184	*e*P	Pn	09 55 37.1	+1.2
MT08	Bocatoma Ro	3.16	18	*e*P	Pn	09 55 37.3	+0.8
MT08				*i* S	Sn	09 56 14.8	+0.1
MT08				IAML		09 56 20.0	
	comp=N,66nm,0.4s						
MT08	Bocatoma Ro	3.16	18	*e*P	Pn	09 55 37.5	+1.0
MT08				*e*S	Sn	09 56 16.4	+1.7
MT08				IAML		09 56 20.2	
	comp=Z,55nm,0.3s						
MT04	Ro Olivares	3.17	16	*e*P	Pn	09 55 37.4	+0.7
MT04				*i* S	Sn	09 56 15.2	+0.3
MT04				IAML		09 56 18.9	
	comp=E,192nm,0.7s						
MT04	Ro Olivares	3.17	16	*e*P	Pn	09 55 37.6	+1.0
MT04				*e*S	Sn	09 56 14.5	-0.4
MT04				IAML		09 56 20.1	
	comp=Z,93nm,0.1s						
MT10	Hacienda Santa	3.23	10	*e*P	Pn	09 55 37.3	+0.1
MT10				*i* S	Sn	09 56 14.8	-1.2
LR03	Panguipulli	3.29	196	*e*P	Pn	09 55 25.6	-12
LR03				*e*S	Sn	09 56 18.3	+0.9
LR03				IAML		09 56 20.6	
	comp=Z,71nm,0.3s						
PEL	Peldehue	3.34	7	*e*P	Pn	09 55 38.8	+0.2
PEL				*i* S	Sn	09 56 17.8	-0.7
PEL				IAML		09 56 21.3	
	comp=N,278nm,0.3s						
PEL	Peldehue	3.34	7	*e*P	Pn	09 55 38.9	+0.2
PEL				*e*S	Sn	09 56 17.9	-0.7
PEL				IAML		09 56 19.4	
	comp=Z,103nm,0.8s						
VA01	Torpederas	3.45	354	*i* S	Sn	09 56 17.9	-3.2
VA01	Torpederas	3.45	354	*e*P	Pn	09 55 40.0	0.0
VA01				*e*S	Sn	09 56 15.9	-5.1
VA01				IAML		09 56 23.8	
	comp=Z,64nm,0.7s						
ROC1	El Roble	3.48	2	*e*P	Pn	09 55 40.8	+0.1
ROC1				*e*S	Sn	09 56 19.2	-3.0
VA03	San Esteban	3.73	8	*e*P	Pn	09 55 43.8	+0.1
VA03				*e*S	Sn	09 56 15.2	-12
VA03				IAML		09 56 32.1	
	comp=Z,84nm,0.5s						
LR04	Corral	3.84	207	*e*P	Pn	09 55 45.2	+0.2
LR04				*i* S	Sn	09 56 27.0	-3.1
LR04	Corral	3.84	207	*e*P	Pn	09 55 45.3	+0.3
LR04				IAML		09 56 50.3	
	comp=Z,26nm,1.1s						
PLCA	Paso Flores	4.29	174	*e*P	Pn	09 55 52.8	+1.8
RTLS	Leoncito	4.91	19	*e*P	Pn	09 56 00.7	+1.2
RTLS				*e*S	Sn	09 56 57.6	+1.8
RTLS				IAML		09 56 58.8	
	comp=Z,52nm,0.6s						
CO02	Combarbal	5.25	2	*e*P	Pn	09 56 03.7	-0.1
CO02				*e*S	Sn	09 57 02.2	-1.4
CO02				IAML		09 57 06.9	
	comp=Z,28nm,0.2s						
CFA	Coronel Fontan	5.43	28	*e*P	Pn	09 56 05.2	-0.9
CFA				*e*S	Sn	09 57 20.4	+13

STR 12 09:55:17.8±0.7**, 44°N**±5°×°±°**, h0**^{km}**, MLv1.7**/9**, LOCSAT earthModelID auvergne_taup-2.11 preliminary, Near south coast of France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FLAF	Flassans-sur-l	0.27	244	Pg	Pg	09 55 22.6	-0.3
FLAF				Sg	Sg	09 55 26.9	+0.5
TRIGF	Trigance	0.28	332	Pg	Pg	09 55 22.3	-0.9
CALF	Calern	0.35	44	Pg	Pg	09 55 24.3	-0.3
CALF				Sg	Sg	09 55 29.4	+0.3
SALSA	La sagne	0.39	11	Pg	Pg	09 55 24.6	-0.7
SALSA				Sg	Sg	09 55 30.1	-0.2
MVIF	Mont Vial	0.57	46	Pg	Pg	09 55 28.5	-0.3
MVIF				Sg	Sg	09 55 36.7	+0.6
TURF	col de Turini	0.75	51	Pg	Pg	09 55 31.8	-0.4
TURF				Sg	Sg	09 55 42.9	+0.9
MLYF	Mely	0.77	310	Pn	Pb	09 55 33.8	-0.3
MLYF				Sg	Sg	09 55 43.0	+0.5
SAOF	Saorge	0.85	55	Pg	Pg	09 55 33.5	-0.7
SAOF				Sg	Sg	09 55 45.9	+0.6
RUSF	Rustrel	0.91	299	Pg	Pg	09 55 35.5	+0.2
RUSF				Sg	Sg	09 55 47.8	+0.7
STV	Sant Anna di V	0.92	35	Pg	Pg	09 55 34.5	-0.9
STV				Sn	Sb	09 55 50.5	+1.0
JAUF	Jausiers	0.94	7	Pg	Pg	09 55 35.5	-0.2
JAUF				Sg	Sb	09 55 50.6	+0.5
ENR	Entracque	0.94	39	Pg	Pg	09 55 35.0	-0.9
OGAG	Argentiere	0.95	358	Pg	Pn	09 55 42.1	+3.5

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*KRNET **12** 09:56:43.4±0.1, 39°.95N×78°.74E, mb2.9*

*SOME **12** 09:56:48.0, 41°.00N×79°.93E, h15^{km}*

*NNC **12** 09:56:49.2±2.8, 40°.97N×79°.70E, h0^{km}, mb3.1, mpv2.9, Error ellipse: s-maj=32.1km s-min=18.1km az=74.0*

ISC 12 09:56:51.5±3.2**, 41°.2N**±0°.1×**79°.85E**±0°.08**, h17**^{km}±12^{km}**, n18,** $\sigma 1^{s}.$**66**/30**, 12C-2D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.64	291	⇑*e*P	Pn	09 57 19.0	-0.9
TARG				⇑*i*S	Sg	09 57 45.4	+0.9
PRZ	Przheval'sk	1.72	321	⇑*e*P	Pg	09 57 28.8	+4.3
PRZ				⇑*e*S	Sg	09 58 01.5	+15
SHLS	Shalkode	2.03	352	Pg	Pg	09 57 28.7	-1.7
	2.9nm,0.1s						
SHLS				Lg	Lg	09 57 57.7	
	13nm,0.4s						
SHLS	Shalkode	2.03	352	*e*P	Pg	09 57 28.7	-1.7
	2.9nm,0.1s						
SHLS				*e*S	Sg	09 57 57.7	+0.9
	14nm,0.3s						
UZB	Uzynbulak	2.09	343	Pg	Pg	09 57 30.0	-1.6
	2.8nm,0.1s						
UZB				Lg	Lg	09 57 59.7	
	5.6nm,0.3s						
UZB	Uzynbulak	2.09	343	*e*P	Pg	09 57 30.0	-1.6
	0.9nm,0.1s						
UZB				*e*S	Sg	09 57 59.7	+1.0
	3.0nm,0.2s						
SATY	Saty	2.19	331	Pg	Pb	09 57 31.2	+0.5
	2.4nm,0.2s						
SATY				Lg	Lg	09 58 02.0	
	14nm,0.4s						
PDGK	Podgornoye	2.19	353	⇑Pn	Pb	09 57 29.6	-1.2
	2.4nm,0.6s						
PDGK				⇓Sn	Sg	09 58 03.4	+1.2
	6.0nm,0.6s						
KDJ	Kajisay	2.23	297	⇑*e*P	Pn	09 57 27.0	-0.8
KDJ				⇑*i*S	Sb	09 57 59.0	+0.3
KPKS	Kokpek	2.47	340	Pg	Pb	09 57 36.3	+0.8
	0.2nm,0.1s						
KPKS				Lg	Lg	09 58 10.8	
	6.0nm,0.3s						
KPKS	Kokpek	2.47	340	*e*P	Pb	09 57 36.3	+0.8
	0.2nm,0.1s						
KPKS				*e*S	Sg	09 58 10.8	-0.1
	6.0nm,0.3s						
ULHL	Ulahol	2.92	293	⇑*i*P	Pn	09 57 34.8	-2.4
ULHL				⇑*i*S	Sn	09 58 12.4	+0.4
IZV	Izvestkoviy	3.06	309	*e*P	Pb	09 57 46.5	+0.9
	0.3nm,0.0s						
IZV				*e*S	Sg	09 58 28.1	-1.7
	1.5nm,0.1s						
BLB	Baldybastay	3.12	342	Pg	Pb	09 57 47.8	+1.4
	2.6nm,0.1s						
BLB				Lg	Lg	09 58 30.6	
	2.9nm,0.3s						
BOOM	Boomskoye usch	3.21	296	⇑*e*P	Pn	09 57 39.1	-2.2
BOOM				⇑*e*S	Sn	09 58 19.4	+0.1
ARXS	Arharly	3.41	335	*e*P	Pb	09 57 52.4	+1.0
	0.5nm,0.2s						
ARXS				*e*S	Sg	09 58 38.5	-2.4
	0.4nm,0.1s						
CHKK	Chushkaly	3.43	323	*e*P	Pb	09 57 53.3	+1.5
	1.2nm,0.1s						
CHKK				*e*S	Sg	09 58 39.8	-1.9
	0.7nm,0.1s						
MK31	Makanchi Array	5.91	17	⇑Pn	Pn	09 58 19.1	+0.9
	0.1nm,0.2s,baz=202,slow=13,SNR=15						
MK31				⇓Sn	Sn	09 59 27.3	+1.8
	0.3nm,0.6s,baz=198,slow=24,SNR=3.7						

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*HEL **12** 10:00:28.4±0.1, 64°.69N×30°.71E, h0^{km}, ML1.9, Suspected explosion*

*KOLA **12** 10:00:30.1, 64°.73N×30°.57E, h0^{km}, ML2.0, Error ellipse: s-maj=26.4km s-min=17.2km az=160.0, Kostomuksha, Karelia*

*IDC **12** 10:00:31.0±2.8, 64°.69N×30°.40E, h0^{km}, mbtmp3.2/4, ML1.9/4, Error ellipse: s-maj=42.4km s-min=8.9km az=101.0*

ISC 12 10:00:28.3±0.9**, 64°.74N**±0°.02×**30°.92E**±0°.05**, h0**^{km}**, n44,** $\sigma 1^{s}.$**52**/67**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RMF	Romuvaara	0.68	220	PG	Pg	10 00 39.2	-2.0
	baz=39						
RMF				MSG		10 00 47.1	
	comp=Z,20nm,0.2s						
KU1	Kurvinen	1.01	326	PG	Pg	10 00 46.6	-1.0
KU6	Riekki	1.36	342	PG	Pg	10 00 53.4	-0.9
	baz=165						
KU6				MSG		10 01 10.1	
	comp=Z,10.0nm,0.2s						
KU6				SG	Sg	10 01 11.6	-0.4
MSF	Maaselka	1.42	327	PG	Pn	10 00 53.6	-1.7
	baz=152						
MSF				SG	Sg	10 01 12.1	-1.6
KU2	Taivalkoski	1.49	312	PG	Pn	10 00 54.8	-1.6
OLKF	Oulanka, Finla	1.71	339	PG	Pn	10 00 59.4	0.0
OLKF				MSG		10 01 20.0	
	comp=Z,9.0nm,0.2s						
OLKF				SN	Sb	10 01 22.6	0.0
JOF	Joensuu	1.84	174	*e*P	Pn	10 01 00.8	-0.2
JOF	Joensuu	1.84	174	PG	Pn	10 01 00.3	-0.8
	baz=351						
JOF				SG	Sn	10 01 24.9	0.0
NIF	Nilsia	1.92	227	PG	Pn	10 01 01.3	-0.9
NIF				MSG		10 01 22.8	
	comp=Z,8.0nm,0.2s						
NIF				SG	Sn	10 01 25.8	-1.2
RANF	Ranua	2.15	308	PG	Pn	10 01 05.7	+0.3
	baz=127						
RANF				SG	Sn	10 01 33.2	+0.4
OUL	Oulu	2.17	282	PG	Pn	10 01 05.8	+0.2
	baz=97						
OUL				SG	Sn	10 01 32.2	-0.8
OBF4	Vikkela, Lumij	2.49	274	PB	Pn	10 01 09.9	-0.1
	baz=92						
OBF4				MSG		10 01 39.4	
	comp=Z,7.8nm,0.2s						
OBF4				SG	Sn	10 01 41.7	+0.7
OUF	Merijarvi	2.70	265	PB	Pn	10 01 13.7	+0.8
OUF				MSG		10 01 45.1	
	comp=Z,9.9nm,0.2s						
OUF				SG	Sn	10 01 47.3	+1.2
RNF	Rovaniemi	2.77	315	PB	Pn	10 01 15.1	+1.3
RNF				SB	Sn	10 01 50.3	+2.5
OBF0	Syolatti, Pyha	2.89	268	PB	Pn	10 01 17.0	+1.5
	baz=80						
OBF0				MSG		10 01 50.8	
	comp=Z,5.3nm,0.2s						
OBF0				SG	Sn	10 01 53.6	+2.7
SUF	Sumiainen	2.93	228	PB	Pn	10 01 16.8	+0.7
SUF				MSG		10 01 51.8	
	comp=Z,2.4nm,0.2s						
SUF				SG	Sn	10 01 55.5	+3.6
APA0	Apatity Array	3.00	15	P	Pn	10 01 19.2	+2.2
APA0				S	Sn	10 01 55.3	+1.6
TOF	Tornio	3.07	299	PN	Pn	10 01 18.0	0.0
TOF				MSG		10 01 56.8	
	comp=Z,2.4nm,0.2s						
TOF				SB	Sn	10 01 58.4	+3.1
VRF	Varrio	3.07	351	PB	Pn	10 01 19.8	+1.8
VRF				MSG		10 01 59.6	
	comp=Z,1.9nm,0.2s						
KALU	Kalix	3.37	293	PN	Pn	10 01 22.3	+0.2
	baz=111						
KALU				SB	Sn	10 02 03.3	+0.6
RUF	Ruokolahti	3.44	196	PN	Pn	10 01 23.2	+0.1
	baz=10.0						
LVZ	Lovozero	3.51	24	SN	Sn	10 02 07.6	+1.3
KEF	Keuruu	3.75	229	*e*P	Pn	10 01 28.1	+0.8
KEF	Keuruu	3.75	229	PB	Pn	10 01 28.4	+1.2
	baz=44						
KLF	Kolari	3.79	315	PG	Pb	10 01 35.8	-0.1
KLF				SG	Sb	10 02 24.1	+1.8
RAJF	Raja-Jooseppi	3.89	346	PN	Pn	10 01 29.9	+0.6
RAJF				SN	Sn	10 02 15.5	-0.2
PAJU	Pajala	3.94	309	PN	Pn	10 01 30.2	+0.3
PAJU				SG	Sb	10 02 28.3	+1.6
FIA0	FINESS Array S	3.97	216	PN	Pn	10 01 30.2	-0.2
	baz=33						
FIA0				SG	Sb	10 02 28.9	+1.3
FINES	FINESS Array B	3.97	216	Pn	Pn	10 01 30.0	-0.4
	comp=Z,0.1nm,0.3s,baz=36,slow=14,SNR=2.4						
FINES				Pg	Pb	10 01 38.5	-0.5
	comp=Z,0.2nm,0.3s,baz=31,slow=16,SNR=6.1						
FINES				Lg	Lg	10 02 27.8	
	comp=Z,0.9nm,0.3s,baz=42,slow=27,SNR=9.9						
	comp=Z,2.7nm,0.9s						
VAF	Ylistaro	4.02	249	*e*P	Pn	10 01 32.0	+0.9
VAF	Ylistaro	4.02	249	PG	Pb	10 01 40.1	+0.2
ERTU	Ertsjaerv	4.05	301	PN	Pn	10 01 31.6	+0.2
BURU	Burvik	4.10	272	PN	Pn	10 01 31.5	-0.7
VJF	Virojoki	4.49	202	SG	Sb	10 02 44.3	+1.8
UMAU	Umeaa	4.54	264	PN	Pn	10 01 36.9	-1.2
	baz=79						
UMAU				SG	Sb	10 02 45.8	+1.9
HEF	Hetta	4.69	325	SG	Sb	10 02 51.3	+3.2
TERR	Teriberka	4.78	18	S	Sn	10 02 37.9	+0.6
ARCES	ARCESS Array B	5.26	339	Pn	Pn	10 01 47.7	-0.3
	comp=Z,0.1nm,0.3s,baz=159,slow=16,SNR=11						
ARCES				Sn	Sn	10 02 46.1	-3.1
	comp=Z,0.2nm,0.3s,baz=157,slow=21,SNR=5.8						
ARCES				Lg	Lg	10 03 09.5	
	comp=Z,0.3nm,0.3s,baz=158,slow=27,SNR=5.3						
	comp=Z,2.4nm,0.9s						
ARCES	ARCESS Array B	5.26	339	P	Pn	10 01 47.9	-0.1
ARCES				S	Sn	10 02 46.7	-2.6
VADS	Vadso	5.44	354	S	Sn	10 02 51.6	-2.0
MEF	Metsahovi	5.45	217	*e*P	Pn	10 01 51.5	+0.9
RAF	Rauma	5.60	232	*e*P	Pn	10 01 52.7	0.0
HFS	Hagfors	9.21	248	Pn	Pn	10 02 39.7	-2.5
	comp=Z,0.1nm,0.3s,baz=50,slow=16,SNR=1.3						
	comp=Z,2.0nm,0.9s						
NOA	NORSAR Array B	9.71	257	Pn	Pn	10 02 45.2	-3.9
	baz=53,slow=13,SNR=3.5						
	comp=Z,0.9nm,0.8s						

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*NEIC **12** 10:18:16.8±2.0, 6°.65S±0°.09×129°.90E±0°.07, h176^{km}±11^{km}, mb4.2/4, Error ellipse: s-maj=14.0km s-min=8.7km az=153.0*

*IDC **12** 10:18:23.3±5.4, 6°.94S×129°.45E, h231^{km}±51^{km}, mb3.5/3, mbtmp4.1/6, MS3.7/1, Error ellipse: s-maj=55.0km s-min=15.9km az=59.0*

ISC 12 10:18:15.1±0.9**, 6°.69S**±0°.09×**129°.87E**±0°.08**, h150**^{km}**, n23,** $\sigma 1^{s}.$**97**/23**, mb4.0**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.92	132		Pn	10 18 52.8	+3.6
FAKI	Fak Fak	4.44	32	Pn	Pn	10 19 20.9	-0.2
MTN	Manton Dam	6.24	169		Pn	10 19 47.8	+2.8
SOEI	Soe	6.32	241	Pn	Pn	10 19 49.0	+2.8
BATI	Baumata	7.06	240	P	Pn	10 19 57.7	+1.7
	25nm,0.4s,baz=56,slow=3.6,SNR=2.5						
BATI				S	Sn	10 21 15.8	+0.6
	17nm,0.3s,baz=75,slow=23,SNR=2.2						
KNRA	Kununurra	8.99	187	Pn	Pn	10 20 23.0	+1.2
FITZ	Fitzroy Crossi	12.06	200	P	Pn	10 21 01.9	-0.3
	0.6nm,0.3s,baz=26,slow=12,SNR=1.7						
FITZ				S	Sn	10 23 08.0	-7.6
	2.1nm,0.4s,baz=68,slow=21,SNR=3.1						
FITZ	Fitzroy Crossi	12.06	200	P	Pn	10 21 02.7	+0.5
WB0	Warramunga Arr	13.72	162	Pn	Pn	10 21 23.0	-0.6
WRAB	Tennant Creek	13.86	162	Pn	Pn	10 21 25.2	-0.2
WRA	Warramunga Arr	13.87	162	P	Pn	10 21 24.1	-1.3
	2.2nm,0.3s,baz=337,slow=13,SNR=25						

WRA				S	Sn	10 23 51.0	-8.1
	1.8nm,0.5s,baz=336,slow=22,SNR=9.7						
WR8	Warramunga Arr	13.93	162	Pn	Pn	10 21 26.6	+0.3
COEN	Coen	14.95	120		Pn	10 21 40.1	+1.1
AS31	Alice Springs	17.32	167	P	P	10 22 07.3	+0.3
AS31				IAmb	IAmb	10 22 12.5	
	comp=Z,1.9nm,0.4s						
ASAR	Alice Springs	17.32	167	P	P	10 22 09.0	+2.0
	comp=Z,2.7nm,0.5s,baz=350,slow=11,SNR=51						
ASAR				S	S	10 25 14.4	-5.4
	comp=Z,0.7nm,0.6s,baz=352,slow=27,SNR=5.2						
ASAR	Alice Springs	17.32	167	P	P	10 22 08.1	+1.1
BBOO	Buckleboo	26.62	168	P	P	10 23 39.8	+0.1
BBOO				IAmb	IAmb	10 24 05.6	
	comp=Z,15nm,1.2s						
STKA	Stephens Creek	27.35	158	P	P	10 23 47.0	+0.8
	comp=Z,1.3nm,0.3s,baz=333,slow=11,SNR=8.6						
	comp=Z,1.3nm,0.3s						
STKA	Stephens Creek	27.35	158	P	P	10 23 45.2	-0.9
SONM	Songino Array	58.11	342	LR	LR	10 54 33.8	
	comp=Z,61nm,18.2s,baz=254,slow=37						
MKAR	Makanchi Array	67.90	327	P	P	10 28 56.8	-0.6
	comp=Z,1.0nm,0.4s,baz=126,slow=7.5,SNR=14						
	comp=Z,1.0nm,0.4s						
VNDA	Vanda	72.77	173	P	P	10 29 24.6	-2.0
	comp=Z,0.9nm,0.7s,baz=9.5,slow=6.1,SNR=3.1						
	comp=Z,0.9nm,0.7s						
VNDA	Vanda	72.77	173	IAmb	IAmb	10 29 50.6	
	comp=Z,7.9nm,1.4s						

HEL 12 10:35:35.2±0.2, 62°.41N×25°.75E, h0km, ML1.1, Suspected explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUF	Sumiainen	0.36	31	PG	Pg	10 35 41.7	-0.4
KEF	Keuruu	0.48	240	PG	Pg	10 35 43.5	-0.9
	baz=56						
KEF				SG	Sg	10 35 50.0	-0.6
FIA0	FINESS Array S	0.98	171	PB	Pg	10 35 53.5	-0.5
	baz=347						
FIA0				MSG		10 36 05.3	
	comp=Z,0.6nm,0.2s						
FIA0				SB	Sg	10 36 06.7	0.0
VAF	Ylistaro	1.55	295	MSG		10 36 21.9	
	comp=Z,0.5nm,0.2s						
VAF				SN	Sn	10 36 24.0	-0.9
KPF	Kankaanpaa	1.82	253	PG	Pn	10 36 08.6	+0.8
KPF				MSG		10 36 29.6	
	comp=Z,0.5nm,0.2s						
MEF	Metsahovi	2.30	197	PB	Pn	10 36 14.3	0.0
MEF				MSG		10 36 43.1	
	comp=Z,1.5nm,0.2s						
KU2	Taivalkoski	3.49	17	PG	Pb	10 36 38.6	+0.9
HEMU	Hemsoen	3.58	278	SG	Sb	10 37 22.7	-0.6
KU6	Riekki	4.05	25	PN	Pn	10 36 37.9	-0.5
OLKF	Oulanka, Finla	4.23	20	PB	Pb	10 36 47.3	-3.1

*HEL **12** 10:35:54.0±0.1, 64°.70N×30°.62E, h0km, ML2.0, Suspected explosion*

*IDC **12** 10:35:55.6±2.6, 64°.70N×30°.67E, h0km, mbtmp3.1/4, ML2.0/4, Error ellipse: s-maj=40.4km s-min=8.8km az=102.0*

*KOLA **12** 10:35:56.7, 64°.82N×30°.73E, h0km, ML2.2, Error ellipse: s-maj=30.6km s-min=24.7km az=150.0, Kostomuksha, Karelia*

ISC 12 10:35:54.0±0.9**, 64°.74N**±0°.02×**30°.54E**±0°.05**, h0km, n46, σ1ˢ.34**/68**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RMF	Romuvaara	0.59	207	PG	Pg	10 36 04.3	-0.9
	baz=28						
RMF				SG	Sg	10 36 12.1	-0.7
RMF				MSG		10 36 12.2	
	comp=Z,19nm,0.2s						
KU1	Kurvinen	0.93	334	PG	Pg	10 36 11.7	-0.1
KU1				SB	Sg	10 36 24.5	+0.7
KU6	Riekki	1.32	348	PG	Pg	10 36 18.5	-0.8
	baz=165						
KU6				MSG		10 36 35.2	
	comp=Z,11nm,0.2s						
KU6				SG	Sg	10 36 36.1	-0.3
MSF	Maaselka	1.34	333	PG	Pg	10 36 19.0	-0.5
	baz=150						
MSF				SB	Sg	10 36 37.0	+0.1
KU2	Taivalkoski	1.38	316	PG	Pg	10 36 19.9	-0.5
	baz=135						
OLKF	Oulanka, Finla	1.66	344	PG	Pn	10 36 24.6	+0.3
OLKF				MSG		10 36 44.8	
	comp=Z,11nm,0.2s						
NIF	Nilsia	1.81	223	PG	Pn	10 36 26.5	+0.2
	baz=43						
NIF				MSG		10 36 47.9	
	comp=Z,9.6nm,0.2s						
NIF				SG	Sn	10 36 50.2	+0.2
JOF	Joensuu	1.86	169	*e*P	Pn	10 36 26.0	-1.1
JOF	Joensuu	1.86	169	PB	Pn	10 36 25.4	-1.6
	baz=353						
JOF				SG	Sn	10 36 49.6	-1.5
OUL	Oulu	2.01	282	PG	Pb	10 36 30.6	-0.8
	baz=99						
OUL				SG	Sb	10 36 56.9	0.0
RANF	Ranua	2.03	311	PN	Pb	10 36 31.0	-0.7
RANF	Ranua	2.03	311	PG	Pb	10 36 30.7	-1.0
	baz=127						
RANF				SG	Sb	10 36 57.6	+0.2
OBF4	Vikkela, Lumij	2.33	274	PB	Pn	10 36 35.0	+1.5
OBF4				MSG		10 37 04.0	
	comp=Z,9.7nm,0.2s						
OBF4				SG	Sb	10 37 06.6	+0.5
OUF	Merijarvi	2.54	264	PB	Pn	10 36 37.6	+1.2
	baz=80						
OUF				MSG		10 37 09.7	
	comp=Z,13nm,0.2s						
OUF				SG	Sb	10 37 12.2	+0.2
RNF	Rovaniemi	2.66	317	PN	Pn	10 36 39.1	+1.2
RNF	Rovaniemi	2.66	317	PN	Pn	10 36 39.1	+1.2
RNF				SG	Sb	10 37 15.2	-0.2
OBF0	Syolatti, Pyha	2.73	268	PB	Pn	10 36 40.1	+1.1
OBF0				MSG		10 37 15.4	
	comp=Z,7.9nm,0.2s						
OBF0				SG	Sb	10 37 17.6	+0.1
SUF	Sumiainen	2.81	226	PB	Pn	10 36 41.8	+1.6
SUF				MSG		10 37 16.9	
	comp=Z,3.9nm,0.2s						
TOF	Tornio	2.93	300	PG	Pn	10 36 42.8	+1.1
TOF	Tornio	2.93	300	PN	Pn	10 36 42.8	+1.1
TOF				MSG		10 37 21.3	
	comp=Z,2.9nm,0.2s						
TOF				SB	Sb	10 37 22.5	-0.8
APA0	Apatity Array	3.05	18	P	Pn	10 36 43.8	+0.5
APA0				S	Sn	10 37 20.3	-0.2
VRF	Varrio	3.05	353	PN	Pn	10 36 44.0	+0.7
VRF				MSG		10 37 24.7	
	comp=Z,2.0nm,0.2s						
KALU	Kalix	3.22	294	PN	Pn	10 36 47.1	+1.4
KALU				SG	Sb	10 37 32.1	+0.4
RUF	Ruokolahti	3.40	193	PN	Pn	10 36 48.4	+0.2
LVZ	Lovozero	3.58	26	SN	Sn	10 37 34.5	+0.9
KEF	Keuruu	3.62	227	*e*P	Pn	10 36 52.6	+1.3
KEF	Keuruu	3.62	227	PN	Pn	10 36 52.8	+1.5
KLF	Kolari	3.68	316	PN	Pn	10 36 52.6	+0.6
KLF				SG	Sb	10 37 48.1	+3.3
PAJU	Pajala	3.82	310	PN	Pn	10 36 55.0	+1.1
RAJF	Raja-Jooseppi	3.86	348	PN	Pn	10 36 54.7	+0.2
RAJF				SN	Sn	10 37 40.9	+0.5
VAF	Ylistaro	3.87	248	*e*P	Pn	10 36 56.1	+1.4
VAF	Ylistaro	3.87	248	PB	Pn	10 36 57.8	+3.1
FIA0	FINESS Array S	3.88	214	PN	Pn	10 36 55.0	+0.2
	baz=30						
FIA0				SG	Sb	10 37 52.7	+2.1
FINES	FINESS Array B	3.88	214	Pn	Pn	10 36 55.1	+0.4
	comp=Z,0.1nm,0.3s,baz=33,slow=12,SNR=6.0						
FINES				Pg	Pb	10 37 04.2	+1.0
	comp=Z,0.3nm,0.3s,baz=32,slow=14,SNR=10						
FINES				Lg	Lg	10 37 54.9	
	comp=Z,1.0nm,0.3s,baz=41,slow=30,SNR=10						
	comp=Z,4.6nm,0.9s						
ERTU	Ertsjaerv	3.91	302	PN	Pn	10 36 56.7	+1.5
BURU	Burvik	3.94	272	PN	Pn	10 36 55.7	+0.1
UMAU	Umeaa	4.38	263	PN	Pn	10 37 01.4	-0.3
	baz=72						
VJF	Virojoki	4.43	199	SG	Sb	10 38 08.8	+2.2
HEF	Hetta	4.60	326	PN	Pn	10 37 05.2	+0.5
HEF				SG	Sb	10 38 15.4	+4.1
ARCES	ARCESS Array B	5.20	340	Pn	Pn	10 37 13.1	+0.1
	comp=Z,0.2nm,0.3s,baz=156,slow=14,SNR=38						
ARCES				Sn	Sn	10 38 10.6	-2.9
	comp=Z,0.2nm,0.3s,baz=156,slow=23,SNR=1.8						
ARCES				Lg	Lg	10 38 33.8	
	comp=Z,0.3nm,0.3s,baz=143,slow=34,SNR=2.6						
	comp=Z,0.7nm,0.3s						
ARCES	ARCESS Array B	5.20	340	P	Pn	10 37 13.1	+0.1
ARCES				S	Sn	10 38 11.0	-2.6
VADS	Vadso	5.43	356	S	Sn	10 38 15.8	-3.3
RAF	Rauma	5.48	231	*e*P	Pn	10 37 18.0	+1.3
FAUS	Fauske	6.75	300	S	Sn	10 38 50.6	-0.9
HFS	Hagfors	9.06	247	Pn	Pn	10 38 05.0	-0.8
	comp=Z,0.2nm,0.3s,baz=50,slow=12,SNR=1.0						
	comp=Z,0.6nm,0.4s						
NOA	NORSAR Array B	9.55	256	Pn	Pn	10 38 11.5	-1.1
	baz=60,slow=14,SNR=1.6						
	comp=Z,0.6nm,0.8s						

*UPP **12** 10:52:06.9±0.0, 67°.64N×21°.03E, h0km, ML2.6, Suspected explosion*

*HEL **12** 10:52:06.2±0.2, 67°.64N×20°.75E, h0km, ML1.5, Suspected explosion*

ISC 12 10:52:05.9±0.8**, 67°.61N**±0°.02×**21°.14E**±0°.02**, h0km, n31, σ0ˢ.87**/48**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASU	Masugnsbyn	0.36	114	P	Pb	10 52 14.9	-0.3
KUA	Kurravaara	0.47	319	P	Pg	10 52 14.9	+0.2
KUA				S	Sg	10 52 20.7	-0.1
DUNU	Dundret	0.54	205	P	Pb	10 52 17.3	-0.8
DUNU				S	Sb	10 52 25.5	-0.9
LANU	Lannavaara	0.55	36	P	Pb	10 52 17.4	-1.0
LANU	Lannavaara	0.55	36	PG	Pb	10 52 17.2	-1.1
LANU				SG	Sb	10 52 26.1	-0.7
RATU	Laukkuluspa	0.63	291	P	Pg	10 52 17.8	-0.1
KOVU	Salmi	0.72	329	P	Pg	10 52 19.7	0.0
	baz=177						
NIKU	Nikkaluokta	0.84	289	P	Pg	10 52 21.6	-0.4
NIKU				S	Sg	10 52 32.6	-0.4
PAJU	Pajala	0.96	127	P	Pb	10 52 25.4	+0.1
PAJU	Pajala	0.96	127	PG	Pb	10 52 25.5	+0.1
	baz=302						
PAJU				SG	Sn	10 52 40.3	-0.7
SALU	Saltoluokta	1.04	259	P	Pg	10 52 25.5	-0.2
SALU	Saltoluokta	1.04	259	*e*P	Pg	10 52 25.7	-0.1
ERTU	Ertsjaerv	1.13	158	P	Pn	10 52 28.6	-0.3
ERTU	Ertsjaerv	1.13	158	PG	Pn	10 52 28.7	-0.2
ERTU				SB	Sn	10 52 45.0	-0.2
KLF	Kolari	1.15	108	PG	Pn	10 52 29.3	+0.1
KLF				MSG		10 52 45.6	
	comp=Z,2.0nm,0.2s						
KLF				SB	Sn	10 52 46.4	+0.8
HEF	Hetta	1.24	48	*e*P	Pb	10 52 30.0	-0.2
HEF	Hetta	1.24	48	PG	Pb	10 52 29.9	-0.2
	baz=235						
HEF				MSG		10 52 46.6	
	comp=Z,2.3nm,0.2s						
HEF				SB	Sn	10 52 47.8	-0.1
KIF	Kilpisjarvi	1.41	355	PN	Pb	10 52 32.6	-0.4
KIF				MSG		10 52 48.5	
	comp=Z,8.7nm,0.2s						
KIF				SN	Sn	10 52 52.4	+0.4
HARU	Harads	1.45	183	P	Pb	10 52 34.0	+0.3
HARU				S	Sn	10 52 54.1	+1.2
KTK1	Kautokeino	1.61	28	PG	Pb	10 52 36.1	-0.3
KTK1				SN	Sg	10 52 59.5	+1.9
KALU	Kalix	1.96	152	PG	Pg	10 52 43.4	0.0
KALU				SG	Sg	10 53 10.4	+1.6
TOF	Tornio	1.98	139	PG	Pg	10 52 43.8	0.0
TOF				MSG		10 53 08.9	
	comp=Z,2.0nm,0.2s						
TOF				SG	Sg	10 53 10.4	+0.9
RNF	Rovaniemi	2.15	115	PG	Pg	10 52 46.3	-0.7
RNF				SG	Sg	10 53 15.5	+0.6
ARA0	ARCESS Array S	2.51	38	PB	Pb	10 52 50.1	-1.7
ARA0				SG	Sb	10 53 23.5	+0.2
RANF	Ranua	2.75	123	SG	Sg	10 53 33.2	-0.8
RAJF	Raja-Jooseppi	2.83	69	SG	Sg	10 53 35.3	-1.4
BURU	Burvik	3.04	178	SB	Sb	10 53 38.6	+0.3
KEV	Kevo	3.04	42	PB	Pn	10 52 57.6	+2.5
KEV				SB	Sb	10 53 36.8	-1.5
VRF	Varrio	3.23	84	PB	Pb	10 53 04.5	+0.4
VRF				SB	Sb	10 53 44.8	+0.8
KU2	Taivalkoski	3.40	121	PB	Pb	10 53 05.5	-1.4
KU6	Riekki	3.81	111	SG	Sg	10 54 06.8	-1.1

*NEIC **12** 11:05:29.8±1.1, 8°.5S±0°.1×158°.8E±0°.1, h188km±9km, mb4.4/25, Error ellipse: s-maj=17.9km s-min=16.0km az=77.0*

*IDC **12** 11:05:30.4±4.3, 8°.58S×158°.67E, h193km±39km, mb3.7/12, mbtmp4.3/16, Error ellipse: s-maj=24.0km s-min=14.1km az=93.0*

ISC 12 11:05:28.9±0.5**, 8°.54S**±0°.07×**158°.88E**±0°.07**, h188km, n64, σ1ˢ.23**/61**, mb4.2**/21**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TATA	Tatamba Isabel	0.93	81	P	Pn	11 05 54.2	-2.7
SAVO	Savo Central	1.10	123	P	Pn	11 05 54.8	-3.4
ALEG	Aligegeo Malai	1.81	97	P	Pn	11 06 02.5	-2.0
ALEG	Aligegeo Malai	1.81	97	S	Sn	11 06 28.3	-3.8
NGOA	Tingoa Renbel	3.22	159	P	Pn	11 06 18.5	-2.0
HURO	Huro Makira	3.54	123	P	Pn	11 06 22.5	-2.1
PMG	Port Moresby	11.61	265	P	Pn	11 08 08.9	-0.3
	10nm,0.9s,baz=90,slow=7.1,SNR=2.7						
DZM	Mont Dzumac	15.30	152	P	Pn	11 08 57.1	+1.7
	8.3nm,1.0s,baz=4.0,slow=17						
DZM	Mont Dzumac	15.30	152	P	Pn	11 08 56.2	+0.7
DZM				IAmb	IAmb	11 09 08.1	
	comp=Z,12nm,1.0s						
DZM	Mont Dzumac	15.30	152	P	Pn	11 08 56.3	+0.9
YATNC	Mamie plateau,	15.50	151	P	Pn	11 08 59.3	+1.5
TV1H	Townsville Har	15.84	226	P	P	11 09 03.0	+1.1
COEN	Coen	16.31	249	P	P	11 09 05.4	-1.8
COEN				IAmb	IAmb	11 09 11.7	
	comp=Z,9.1nm,0.8s						
CTA	Charters Tower	16.76	225	P	Pn	11 09 13.1	0.0
	comp=Z,11nm,0.7s,baz=48,slow=11,SNR=21						
CTA	Charters Tower	16.76	225	P	Pn	11 09 13.8	+0.7
CTAO	Charters Tower	16.76	225	P	P	11 09 12.5	+0.4
CTAO				IAmb	IAmb	11 09 17.2	
	comp=Z,13nm,0.9s						
CTAO	Charters Tower	16.76	225	P	Pn	11 09 13.9	+0.8
MTSU	Mount Surprise	17.07	235	P	Pn	11 09 17.4	+0.7
EIDS	Eidsvold	18.31	203	P	P	11 09 30.1	+1.1
EIDS	Eidsvold	18.31	203	P	P	11 09 30.6	+1.6
JAY	Jayapura	19.05	287	P	P	11 09 35.1	-2.0
	comp=Z,11nm,0.5s,baz=123,slow=6.8,SNR=5.0						
QIS	Mount Isa	22.12	235	P	P	11 10 09.2	-0.3
QLP	Quilpie	22.70	216	P	P	11 10 15.0	+0.4
ARMA	Armidale	22.80	196	P	P	11 10 16.5	+0.9
ARMA	Armidale	22.80	196	P	P	11 10 16.6	+0.9
INKA	Innaminka	25.66	220	P	P	11 10 40.4	-1.0
INKA				IAmb	IAmb	11 10 44.1	
	comp=Z,4.7nm,0.6s						
WR0	Warramunga Arr	26.14	242	P	P	11 10 45.2	-0.7
WR0				IAmb	IAmb	11 10 46.3	
	comp=Z,16nm,1.2s						
WR8	Warramunga Arr	26.17	242	P	P	11 10 45.6	-0.6
WR8				IAmb	IAmb	11 10 46.5	
	comp=Z,16nm,1.1s						
WB0	Warramunga Arr	26.20	242	P	P	11 10 45.8	-0.6
WRAB	Tennant Creek	26.30	242	P	P	11 10 46.7	-0.6
WRAB				IAmb	IAmb	11 10 47.5	
	comp=Z,14nm,1.2s						
WRAB	Tennant Creek	26.30	242	P	P	11 10 46.5	-0.8
WB2	Warramunga Arr	26.30	242	P	P	11 10 46.5	-0.8
WB2				IAmb	IAmb	11 10 47.6	
	comp=Z,20nm,1.3s						
WRA	Warramunga Arr	26.31	242	P	P	11 10 46.8	-0.7
	comp=Z,6.0nm,0.5s,baz=66,slow=9.2,SNR=61						
	comp=Z,6.0nm,0.5s						
STKA	Stephens Creek	28.24	212	P	P	11 11 04.1	-0.4
	comp=Z,4.8nm,0.4s,baz=43,slow=14,SNR=14						
	comp=Z,4.8nm,0.4s						
STKA	Stephens Creek	28.24	212	IAmb	IAmb	11 11 05.8	
	comp=Z,23nm,0.5s						
STKA	Stephens Creek	28.24	212	P	P	11 11 05.4	+0.9
AS31	Alice Springs	28.25	235	P	P	11 11 03.5	-1.1
AS31				IAmb	IAmb	11 11 04.0	
	comp=Z,2.8nm,0.5s						
ASAR	Alice Springs	28.25	235	P	P	11 11 03.5	-1.2
	comp=Z,5.9nm,0.6s,baz=62,slow=9.8,SNR=101						
ASAR				PcP	PcP	11 14 13.3	-0.1
	comp=Z,0.2nm,0.6s,baz=85,slow=1.7,SNR=1.7						
	comp=Z,5.9nm,0.6s						
KNRA	Kununurra	30.26	254	P	P	11 11 21.7	-0.8
BBOO	Buckleboo	32.09	218	P	P	11 11 37.7	-0.7
BBOO	Buckleboo	32.09	218	P	P	11 11 37.6	-0.7
FITZ	Fitzroy Crossi	33.66	250	P	P	11 11 51.0	-1.2
BKZ	Black Stump Fm	34.35	155	P	P	11 11 58.3	+0.4
BKZ				IAmb	IAmb	11 12 23.6	
	comp=Z,17nm,1.3s						
BKZ	Black Stump Fm	34.35	155	P	P	11 11 58.3	+0.4
MRNZ	Matariki Terra	34.96	162	P	P	11 12 03.7	+0.7
TUWZ	Tuamarina	35.37	160	P	P	11 12 07.6	+1.1
FORT	Forrest	36.28	228	P	P	11 12 13.8	-0.6
FORT				IAmb	IAmb	11 12 49.4	
	comp=Z,5.3nm,0.8s						
PSA00	Pilbara Seismi	39.73	246	P	P	11 12 42.8	-0.7
PSA00	Pilbara Seismi	39.73	246	P	P	11 12 42.8	-0.7
MBWA	Marble Bar	39.75	247	P	P	11 12 42.5	-1.0
MBWA				IAmb	IAmb	11 12 45.9	
	comp=Z,14nm,1.1s						
MBWA	Marble Bar	39.75	247	P	P	11 12 42.6	-1.0
PLAI	Plampang	40.62	266	P	P	11 12 49.6	-1.2
MORW	Morawa	45.08	237	P	P	11 13 26.1	-0.3
MJAR	Matsushiro Arr	48.87	338	P	P	11 13 55.5	-0.1
	comp=Z,1.3nm,0.8s,baz=140,slow=6.3,SNR=1.7						
	comp=Z,1.3nm,0.8s						
KSRS	Korea Array	54.15	330	P	P	11 14 35.2	+0.5
	comp=Z,0.9nm,0.6s,baz=151,slow=7.4,SNR=3.1						
	comp=Z,0.9nm,0.6s						
PETK	Petropavlovsk-	61.41	359	P	P	11 15 26.3	+1.3
	comp=Z,2.1nm,0.8s,baz=178,slow=5.4,SNR=7.1						
	comp=Z,2.1nm,0.8s						
VNDA	Vanda	68.97	179	P	P	11 16 15.0	+1.7
	comp=Z,1.2nm,0.7s,baz=356,slow=6.5,SNR=3.7						
	comp=Z,1.2nm,0.7s						
SONM	Songino Array	72.73	326	P	P	11 16 38.3	+1.7
	comp=Z,1.5nm,0.5s,baz=140,slow=6.1,SNR=8.3						
	comp=Z,1.5nm,0.5s						
SONM	Songino Array	72.73	326	IAmb	IAmb	11 16 38.7	
	comp=Z,1.5nm,0.8s						
QSPA	South Pole Qui	81.45	180	P	P	11 17 25.1	+0.2
	comp=Z,0.9nm,0.4s,baz=45,slow=2.9,SNR=1.3						
	comp=Z,0.9nm,0.4s						
QSPA	South Pole Qui	81.45	180	IAmb	IAmb	11 17 41.4	
	comp=Z,9.3nm,1.5s						
ILAR	Eielson Array	83.42	20	P	P	11 17 35.9	+1.0
	comp=Z,0.5nm,0.5s,baz=245,slow=4.9,SNR=17						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	87.11	318	P	P	11 17 53.5	0.0
	comp=Z,0.6nm,0.7s,baz=103,slow=6.8,SNR=7.3						
	comp=Z,0.6nm,0.7s						
PDAR	Pinedale Array	96.87	48	P	P	11 18 41.0	+1.9
	comp=Z,0.3nm,0.6s,baz=293,slow=8.4,SNR=2.0						
	comp=Z,0.3nm,0.6s						

*NEIC **12** 11:13:40.2±1.1, 35°.68N±0°.01×117°.52W±0°.02, h11km±2km, Error ellipse: s-maj=2.2km s-min=1.7km az=99.0*

PAS 12 11:13:40.8±1.4**, 35°.676N**±0°.010×**117°.52W**±0°.02**, h10km**±2km**, Mwr3.5**/4**, ML3.5**/163(NEIC)**, Error ellipse: s-maj=2.2km s-min=1.3km az=107.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSHM	Spangler Hills	0.08	162		Pg	11 13 43.1	-0.1
WSHM	Spangler Hills	0.08	162		Sg	11 13 45.0	+0.2
WSHM	Spangler Hills	0.08	162	IAML		11 13 45.7	
	29µm,0.1s						
WSHM				IAML		11 13 45.8	
	24µm,0.1s						
GPO	China Lake	0.12	257		Pg	11 13 43.7	+0.1
GPO					Sg	11 13 46.1	+0.5
CLC	China Lake	0.15	337	Pg	Pg	11 13 44.1	-0.1
CLC				IAML		11 13 47.0	
	comp=E,21µm,0.4s						
CLC				IAML		11 13 47.0	
	comp=N,8µm,0.3s						
SRTC	Snort	0.18	275		Pg	11 13 45.0	+0.3
SRTC					Sg	11 13 48.8	+1.4
CCCA	Chr Cany lake	0.20	139	Pg	Pg	11 13 45.3	+0.4
LRMC	Laurel Mtn Rad	0.23	213		Pg	11 13 45.5	-0.1
LRMC					Sg	11 13 49.0	0.0
LRMC	Laurel Mtn Rad	0.23	213	IAML		11 13 49.5	
	comp=N,21µm,0.1s						
LRMC				IAML		11 13 49.5	
	comp=E,16µm,0.3s						
TOW	Tower One	0.24	304		Pg	11 13 46.0	+0.3
TOW					Sg	11 13 50.5	+1.5
RCWM	Renegade Canyo	0.29	340		Pg	11 13 46.6	-0.1
RCWM					Sg	11 13 50.9	+0.2
WNMM	Nine Mile Cany	0.35	298		Pg	11 13 47.6	-0.1
WNMM					Sg	11 13 53.0	+0.6
WVPM	Volcano Peak E	0.36	319		Pg	11 13 47.8	-0.2
WVPM					Sg	11 13 52.9	0.0
JRC2	Joshua Ridge	0.38	323		Pg	11 13 48.3	-0.2
JRC2					Sg	11 13 53.8	+0.2
WCSM	Coso Springs S	0.40	331		Pg	11 13 48.5	-0.3
WCSM					Sg	11 13 54.1	+0.1
WRVM	Rose V. Centra	0.45	318		Pg	11 13 49.2	-0.3
WRVM					Sg	11 13 55.7	+0.2
DTP	Desert Tortois	0.48	213		Pg	11 13 49.8	-0.5
DTP					Sg	11 13 56.5	-0.1
MFS	McCloud Flat S	0.52	329		Pg	11 13 50.6	-0.3
MFS					Sg	11 13 58.0	+0.2
WBSM	Bird Springs	0.52	255		Sg	11 13 57.8	-0.1
WORM	Onyx Ranch	0.58	272		Pg	11 13 51.6	-0.5
WORM					Sg	11 13 59.3	-0.5
DAC	Darwin (Calif)	0.60	355		Pg	11 13 51.8	-0.8
DAC					Sg	11 13 59.8	-0.7
QSM	Queen of Sheba	0.61	61		Pg	11 13 52.1	-0.5
QSM					Sg	11 14 00.2	-0.3
QSM	Queen of Sheba	0.61	61	IAML		11 14 00.8	
	comp=N,3µm,0.5s						
QSM				IAML		11 14 04.2	
	comp=E,3µm,0.6s						
CCAC	Calif City Air	0.66	218		Pg	11 13 53.2	-0.4
WHFM	Hanning Flat	0.67	272		Pg	11 13 53.2	-0.6
GSC	Goldstone, Bar	0.69	122		Pg	11 13 53.8	-0.4
ISA	Isabella, Lake	0.77	269		Pg	11 13 55.1	-0.7
HYS	Haystack Butte	0.81	183		Pg	11 13 55.6	-0.8
HYS					Sg	11 14 06.4	-0.6
WASM	Alta Sierra Ca	0.84	275		Pg	11 13 56.4	-0.7
WASM					Pn	11 14 07.5	+8.5
GWY	Greenwater Val	0.86	53		Pg	11 13 56.7	-0.7
GWY				IAML		11 14 10.7	
	comp=E,2µm,0.5s						
GWY				IAML		11 14 11.0	
	comp=N,2µm,0.4s						
CWC	Cottonwood Cre	0.89	330		Pg	11 13 57.4	-0.5
CWC					Pn	11 14 09.4	+10
CWC	Cottonwood Cre	0.89	330	IAML		11 14 10.7	
	comp=N,918nm,0.2s						
CGO	Cerro Gordo	0.90	346		Pg	11 13 57.4	-0.9
CGO					Sb	11 14 10.6	-0.4
RRX	Edison Barstow	0.91	151		Pg	11 13 57.5	-0.7
RRX					Sb	11 14 10.9	0.0
FURC	Furnace Creek,	0.95	34		Pg	11 13 58.7	-0.5
TPO	Tropico Hills	0.98	216		Pg	11 13 59.1	-0.6
TPO				IAML		11 14 19.6	
	comp=N,2µm,0.6s						
SHOC	Shoshone, Teco	1.04	77		Pg	11 13 59.8	-1.0
SPG2	Springville 2	1.14	298		Pb	11 14 01.5	-1.1
VES	Vestal, Richgr	1.28	278	IAML		11 14 24.1	
	comp=N,1µm,0.8s						
VES				IAML		11 14 28.2	
	comp=E,936nm,0.5s						
GRAC	Grapevine Rang	1.32	5	IAML		11 14 27.0	
	comp=N,1µm,0.7s						
GRAC				IAML		11 14 27.1	
	comp=E,941nm,0.7s						
WCT	Wildcat Mounta	1.33	33		Pn	11 14 04.3	-1.3
WCT				IAML		11 14 24.8	
	comp=E,723nm,0.7s						
WCT				IAML		11 14 25.0	

	comp=N,561nm,0.7s						
OSI	**Osito Audit: C**	**1.45**	**223**		Pn	11 14 06.7	-0.4
OSI				IAML		11 14 29.2	
	comp=E,1µm,0.8s						
TIN	**Tinemaha, Big**	**1.49**	**338**	IAML		11 14 32.8	
	comp=E,650nm,0.5s						
TIN				IAML		11 14 40.8	
	comp=N,645nm,0.8s						
MWC	**Mount Wilson**	**1.51**	**197**		Pn	11 14 07.4	-0.8
PASC	**Pasadena Art C**	**1.60**	**200**		Pn	11 14 08.5	-0.7
PASC				IAML		11 14 33.3	
	comp=N,728nm,0.5s						
PASC				IAML		11 14 35.6	
	comp=E,583nm,0.3s						
MTPC	**Mountain Pass**	**1.62**	**96**		Pn	11 14 08.0	-1.6
MTPC				IAML		11 14 33.5	
	comp=N,679nm,0.2s						
MTPC				IAML		11 14 34.1	
	comp=E,555nm,0.2s						
GMN	**Gold Mountain**	**1.64**	**7**		Pn	11 14 09.4	-0.6
GMN				IAML		11 14 37.7	
	comp=N,361nm,0.5s						
TPNV	**Topopah Spring**	**1.64**	**39**		Pn	11 14 08.9	-0.9
TPNV				IAML		11 14 34.9	
	comp=N,457nm,0.4s						
TPNV				IAML		11 14 36.6	
	comp=N,549nm,0.5s						
DSP	**Deep Springs**	**1.73**	**348**		Pn	11 14 10.6	-0.4
ELS	**Elsinore Mount**	**2.02**	**178**		Pn	11 14 14.2	-0.9
ELS				IAML		11 14 47.8	
	comp=E,201nm,0.7s						
DANC	**Danby, Needles**	**2.04**	**120**		Pn	11 14 13.8	-1.4
RPV	**Rancho Palos V**	**2.06**	**201**		Pn	11 14 14.9	-0.6
SHPR	**Sheep Range**	**2.09**	**66**		Pn	11 14 15.2	-0.8
BELC	**Belle Mtn. Jos**	**2.09**	**143**		Pn	11 14 14.7	-1.4
BELC				IAML		11 14 50.2	
	comp=N,454nm,0.6s						
V12A	**Nelson**	**2.18**	**88**		Pn	11 14 15.8	-1.4
V12A				IAML		11 14 51.5	
	comp=N,186nm,0.5s						
V12A				IAML		11 14 56.4	
	comp=E,329nm,0.5s						
DNR	**Dunn Ranch,Anz**	**2.23**	**160**		Pn	11 14 17.2	-0.7
PMD	**Palm Desert**	**2.23**	**155**	IAML		11 14 53.7	
	comp=E,193nm,0.5s						
PFO	**Pinyon Flats O**	**2.24**	**157**		Pn	11 14 16.9	-1.2
S11A	**Rachel**	**2.43**	**35**		Pn	11 14 21.0	+0.3
S11A				IAML		11 15 05.2	
	comp=N,276nm,0.8s						
S11A				IAML		11 15 11.4	
	comp=E,284nm,1.2s						
PKD	**Bear Valley Ra**	**2.47**	**277**		Pn	11 14 21.5	+0.3
IRM	**Iron Mountain**	**2.47**	**127**		Pn	11 14 19.2	-2.0
IRM				IAML		11 14 59.2	
	comp=N,333nm,0.4s						
NEE2	**Needles Airpor**	**2.54**	**110**		Pn	11 14 21.2	-1.0
BORC	**Borrego Spring**	**2.57**	**159**	IAML		11 15 04.9	
	comp=N,128nm,0.8s						
BORC				IAML		11 15 07.3	
	comp=E,151nm,0.9s						
PRN	**Pahroc Range**	**2.64**	**48**		Pn	11 14 23.1	-0.5
PRN				IAML		11 15 13.7	
	comp=E,184nm,0.8s						
PRN				IAML		11 15 14.1	
	comp=N,184nm,0.7s						
BC3	**Big Chuckawall**	**2.64**	**139**		Pn	11 14 21.8	-1.8
BC3				IAML		11 15 10.4	
	comp=E,154nm,0.5s						
BC3				IAML		11 15 10.8	
	comp=N,226nm,0.5s						
LHV	**Little Huntoon**	**2.69**	**343**		Pn	11 14 26.0	+1.8
PMPB	**Monarch Peak**	**2.71**	**282**		Pn	11 14 25.5	+0.9
PMPB				IAML		11 15 18.1	
	comp=E,236nm,0.8s						
PMPB				IAML		11 15 21.0	
	comp=N,234nm,0.8s						
DPP	**Dos Picos Cty**	**2.71**	**170**	IAML		11 15 05.5	
	comp=E,132nm,0.3s						
NV11	**Mina Array Sit**	**2.80**	**350**		Pn	11 14 25.9	0.0
CPE	**Camp Elliot**	**2.80**	**173**	IAML		11 15 09.5	
	comp=E,142nm,0.3s						
CPE				IAML		11 15 16.1	
	comp=N,105nm,0.3s						
NVAR	**Mina Array Bea**	**2.82**	**347**		Pn	11 14 28.6	+2.4
BBGB	**Big Mountain B**	**2.98**	**289**		Pn	11 14 28.6	+0.2
W13A	**Hualapai Mount**	**3.03**	**100**	IAML		11 15 19.9	
	comp=E,117nm,0.7s						
W13A				IAML		11 15 20.5	
	comp=N,98nm,0.9s						
HULI	**Fort Hunter Li**	**3.04**	**278**		Pn	11 14 29.5	+0.5
HULI				IAML		11 15 33.4	
	comp=N,80nm,1.7s						
RYN	**Ryan**	**3.05**	**345**		Pn	11 14 29.8	+0.4
BAR	**Barrett**	**3.07**	**166**		Pn	11 14 28.7	-0.8
BAR				IAML		11 15 16.8	
	comp=E,183nm,0.4s						
BAR				IAML		11 15 16.8	
	comp=N,144nm,0.4s						
R11B	**Troy Canyon, C**	**3.09**	**30**		Pn	11 14 29.3	-0.5
BLYC	**Blythe**	**3.13**	**127**	IAML		11 15 20.2	
	comp=N,220nm,0.6s						
BLYC				IAML		11 15 20.9	
	comp=E,188nm,0.5s						
CMB	**Columbia Colle**	**3.29**	**317**		Pb	11 14 37.2	-2.1
CMB				IAML		11 15 29.5	
	comp=N,60nm,0.8s						
CMB				IAML		11 15 29.9	
	comp=E,81nm,0.8s						
GLA	**Glamis**	**3.44**	**139**	IAML		11 15 35.3	
	comp=N,164nm,0.6s						
MHC	**Mount Hamilton**	**3.71**	**298**		Pn	11 14 39.0	+0.6
MHC				IAML		11 15 43.4	
	comp=N,58nm,0.9s						
MHC				IAML		11 15 48.4	
	comp=E,54nm,0.9s						
ESJX	**Sierra Juarez**	**3.89**	**160**	IAML		11 15 44.1	
	comp=E,43nm,0.6s						
PSUT	**Pine Spring**	**4.09**	**45**		Pn	11 14 43.1	-0.6
PSUT				IAML		11 16 02.9	
	comp=N,36nm,1.7s						
Y14A	**Wickenburg**	**4.10**	**114**		Pn	11 14 42.6	-1.1
Y14A				IAML		11 15 54.0	
	comp=N,99nm,0.5s						
Y14A				IAML		11 15 57.9	
	comp=E,86nm,0.6s						
113A	**Mohawk Valley,**	**4.25**	**132**		Pn	11 14 43.2	-2.5
113A				IAML		11 16 03.0	
	comp=E,30nm,1.0s						
PKCU	**Pink Cliffs**	**4.55**	**66**	IAML		11 16 05.4	
	comp=E,51nm,0.4s						
PKCU				IAML		11 16 31.7	
	comp=N,45nm,3.8s						

*IDC **12** 11:14:23.0±0.9, 16°.61S×69°.44W, h191^{km}±7^{km}, mb3.3/8, mbtmp3.9/10, Error ellipse: s-maj=20.8km s-min=13.7km az=18.0*

ISC 12 11:14:22.7±0.8**, 16°.6S**±0°.1×**69°.45W**±0°.08**, h189**^{km}**, n11,** σ**1**^{s}**.42**/14**, mb3.6**/6**, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**1.30**	**78**	P	**Pn**	**11 14 55.6**	**+1.2**
	310nm,0.4s,baz=275,slow=6.7,SNR=1465						
LPAZ				S	**Sn**	**11 15 19.7**	**+0.9**
	54nm,0.5s,baz=163,slow=25,SNR=8.4						
SIV	**San Ignacio**	**8.07**	**87**	P	**Pn**	**11 16 15.5**	**-1.5**
	5.6nm,0.5s,baz=274,slow=9.4						
SIV				S	**Sn**	**11 17 45.9**	**-1.8**
	baz=274,slow=16						
NNA	**Nana**	**8.49**	**301**	P	**Pn**	**11 16 21.7**	**-0.8**
	6.9nm,0.4s,baz=126,slow=13,SNR=4.4						
NNA				S	**Sn**	**11 17 55.0**	**-2.7**
	4.3nm,0.3s,baz=200,slow=20,SNR=1.6						
BDFB	**Brasilia**	**20.62**	**90**	P	**P**	**11 18 47.5**	**-0.2**
	2.2nm,0.5s,baz=244,slow=12,SNR=3.2						
	2.2nm,0.5s						
PLCA	**Paso Flores**	**24.10**	**182**	P	**P**	**11 19 21.0**	**0.0**
	1.9nm,0.6s,baz=358,slow=10,SNR=7.8						
	1.9nm,0.6s						
TXAR	**Lajitas Array**	**56.34**	**324**	P	**P**	**11 23 45.2**	**+0.9**
	0.2nm,0.6s,baz=144,slow=7.3,SNR=2.2						
	0.2nm,0.6s						
DBIC	**Dimbokro**	**67.92**	**76**	P	**P**	**11 25 01.4**	**-0.1**
	1.3nm,0.4s,baz=254,slow=7.4,SNR=1.9						
	1.3nm,0.4s						
PDAR	**Pinedale Array**	**69.61**	**330**	P	**P**	**11 25 13.2**	**+1.5**
	0.2nm,0.4s,baz=126,slow=4.9,SNR=1.6						
	0.2nm,0.4s						
QSPA	**South Pole Qui**	**73.60**	**180**	P	**P**	**11 25 34.7**	**-0.4**
	0.8nm,0.3s,baz=161,slow=3.5,SNR=2.7						
	0.8nm,0.3s						
TORD	**Torodi Ar. Bea**	**76.24**	**72**	P	**P**	**11 25 50.1**	**-0.8**
	1.4nm,0.6s,baz=262,slow=4.0,SNR=5.4						
	1.4nm,0.6s						
ESDC	**Sonseca Array**	**82.71**	**45**	P	**P**	**11 26 27.1**	**+1.7**
	0.3nm,0.4s,baz=254,slow=5.3,SNR=1.2						
	0.3nm,0.4s						

*IDC **12** 11:27:45.2±1.9, 20°.94S×168°.75E, h0^{km}, mb3.9/7, mbtmp3.9/8, ML3.4/1, MS3.5/1, Error ellipse: s-maj=81.8km s-min=20.7km az=147.0*

*NOU **12** 11:27:46.3, 20°.90S×168°.69E, h4^{km}, MLv4.2/14, Loyalty Islands*

ISC 12 11:27:49.6±1.0**, 20°.96S**±0°.08×**168°.7E**±0°.1**, h30**^{km}**, n20,** σ**1**^{s}**.34**/21**, mb4.0**/7**, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**0.82**	**230**	P	**Pn**	**11 28 02.6**	**-2.6**
MARNC	**Mare, Loyalty**	**0.82**	**230**	S	**Sb**	**11 28 14.3**	**-1.9**
INH	**Isangel**	**1.50**	**21**	P	**Pn**	**11 28 12.8**	**-1.7**
YATNC	**Mamie plateau,**	**2.02**	**237**	P	**Pn**	**11 28 19.8**	**-1.9**
PINNC	**Pines Island,**	**2.02**	**215**	P	**Pn**	**11 28 21.1**	**-0.6**
OUENC	**Ouen Island, N**	**2.27**	**230**	P	**Pn**	**11 28 25.4**	**+0.3**
DZM	**Mont Dzumac**	**2.38**	**242**	Pn	**Pn**	**11 28 25.7**	**-1.0**
	8.1nm,0.3s,baz=98,slow=12,SNR=58						
DZM				Sn	**Sn**	**11 28 56.0**	**+0.9**
	14nm,0.3s,baz=65,slow=21,SNR=5.7						
	17nm,0.3s						
DZM	**Mont Dzumac**	**2.38**	**242**	P	**Pn**	**11 28 26.2**	**-0.6**
ONTNC	**Ouen Toro**	**2.49**	**237**	P	**Pn**	**11 28 29.0**	**+0.8**
RTV	**Rentapao**	**3.16**	**355**	P	**Pn**	**11 28 36.6**	**-0.7**
DVP	**Devils Point**	**3.25**	**351**	P	**Pn**	**11 28 37.9**	**-0.7**
KOUNC	**Koumac, New Ca**	**4.16**	**275**	P	**Pn**	**11 28 49.9**	**-1.2**
STKA	**Stephens Creek**	**26.54**	**240**	P	**P**	**11 33 26.7**	**+1.8**
	1.4nm,0.7s,baz=61,slow=10,SNR=3.0						
	1.4nm,0.7s						
WRA	**Warramunga Arr**	**32.19**	**266**	P	**P**	**11 34 14.5**	**-0.6**
	0.5nm,0.9s,baz=86,slow=8.6,SNR=2.9						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**32.27**	**259**	P	**P**	**11 34 15.4**	**-0.5**
	1.5nm,0.9s,baz=90,slow=8.3,SNR=13						
ASAR				LR	LR	11 47 00.3	
	comp=Z,69nm,18.1s,baz=291,slow=36						
	1.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**78.76**	**295**	P	**P**	**11 39 51.4**	**+1.6**
	0.6nm,0.3s,baz=113,slow=4.1,SNR=4.1						
	0.6nm,0.3s						
SONM	**Songino Array**	**88.29**	**323**	P	**P**	**11 40 39.5**	**+1.2**
	1.1nm,0.8s,baz=132,slow=4.2,SNR=4.8						
	1.1nm,0.8s						
NVAR	**Mina Array Bea**	**90.30**	**49**	P	**P**	**11 40 48.3**	**+0.2**
	0.8nm,0.8s,baz=237,slow=7.8,SNR=7.5						
	0.8nm,0.8s						
ILAR	**Eielson Array**	**92.01**	**17**	P	**P**	**11 40 53.6**	**-1.5**
	0.5nm,0.8s,baz=235,slow=5.4,SNR=6.6						
	0.5nm,0.8s						
GERES	**GERESS Array B**	**145.75**	**330**	PKPbc	**PKPbc**	**11 47 25.8**	**+0.1**
	0.3nm,0.4s,baz=27,slow=4.5,SNR=6.1						

IDC 12 11:59:06.5±13.0**, 50°.28S**×**108°.57E, h0**^{km}**, mb3.8**/2**, mbtmp3.8**/2**, MS3.2**/1**, Error ellipse: s-maj=703.1km s-min=44.9km az=115.0, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**15.90**	**17**	T	T	12 18 40.0	
	baz=201,slow=73,SNR=1216						
H01W1	**Cape Leeuwin H**	**15.90**	**17**	T	T	12 18 40.0	
	baz=201,slow=73,SNR=1156						
H01W3	**Cape Leeuwin H**	**15.91**	**17**	T	T	12 18 40.0	
	baz=201,slow=73,SNR=1062						
ASAR	**Alice Springs**	**33.08**	**46**	P	P	12 05 44.5	+0.6
	1.0nm,0.8s,baz=215,slow=8.9,SNR=8.6						
	1.0nm,0.8s						
VNDA	**Vanda**	**33.69**	**162**	LR	LR	12 18 31.0	
	comp=Z,35nm,18.5s,baz=316,slow=35						
WRA	**Warramunga Arr**	**36.52**	**43**	P	P	12 06 13.1	-0.5
	1.3nm,0.8s,baz=210,slow=8.3,SNR=7.4						
	1.3nm,0.8s						
NVAR	**Mina Array Bea**	**145.01**	**91**	PKPbc	PKPbc	12 18 43.6	-1.2
	1.0nm,0.8s,baz=223,slow=6.4,SNR=7.2						
TXAR	**Lajitas Array**	**147.97**	**119**	PKPbc	PKPbc	12 18 53.0	-0.6
	1.0nm,0.8s,baz=202,slow=6.1,SNR=10						

HEL 12 11:59:23.4±0.1**, 65°.09N**×**25°.66E, h0**^{km}**, ML1.3, Suspected explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUL	**Oulu**	**0.10**	**95**	PG	Pg	11 59 25.0	-0.3
OUL				SG	Sg	11 59 25.4	-1.2
OBF4	**Vikkela, Lumij**	**0.37**	**220**	PG	Pg	11 59 30.4	0.0
	baz=38						
OBF4				SG	Sg	11 59 33.9	-1.2
OUF	**Merijarvi**	**0.83**	**209**	PG	Pg	11 59 38.9	-0.4
	baz=30						
OUF				MSG		11 59 49.1	
	comp=Z,3.7nm,0.2s						
OUF				SB	Sg	11 59 49.7	-0.3
OBF0	**Syolatti, Pyha**	**0.85**	**226**	PG	Pg	11 59 39.5	-0.3
OBF0				MSG		11 59 49.9	
	comp=Z,2.3nm,0.2s						
OBF0				SB	Sg	11 59 51.4	+0.6
RANF	**Ranua**	**1.04**	**26**	PB	Pg	11 59 42.6	-0.7
RANF				SB	Sg	11 59 56.5	-0.2
TOF	**Tornio**	**1.14**	**331**	PG	Pg	11 59 43.6	-1.5
TOF				SG	Sg	11 59 57.6	-2.2
TOF				MSG		11 59 57.9	
	comp=Z,1.5nm,0.2s						
KALU	**Kalix**	**1.23**	**310**	PG	Pg	11 59 45.9	-1.1
	baz=127						
KALU				SG	Sg	12 00 01.4	-1.5
KU2	**Taivalkoski**	**1.24**	**59**	PG	Pg	11 59 46.4	-0.8
KU2				SN	Sb	12 00 03.7	-0.5
RNF	**Rovaniemi**	**1.53**	**5**	PG	Pn	11 59 51.1	-0.8
RNF				SN	Sg	12 00 11.2	-1.2
MSF	**Maaselka**	**1.63**	**58**	PG	Pn	11 59 53.5	+0.2
MSF				SN	Sg	12 00 15.6	-0.1
KU1	**Kurvinen**	**1.70**	**72**	PG	Pn	11 59 54.5	+0.2
KU1				SN	Sn	12 00 16.9	+0.1
BURU	**Burvik**	**1.90**	**256**	PG	Pn	11 59 57.7	+0.7
BURU				SG	Sb	12 00 22.8	-0.3
NIF	**Nilsia**	**1.95**	**150**	PG	Pn	11 59 58.7	+1.0
	baz=334						
NIF				MSG		12 00 21.4	
	comp=Z,1.6nm,0.2s						
NIF				SG	Sb	12 00 24.1	-0.5
OLKF	**Oulanka, Finla**	**1.98**	**50**	PG	Pb	11 59 59.4	-0.8
OLKF				MSG		12 00 22.2	
	comp=Z,1.5nm,0.2s						
OLKF				SG	Sb	12 00 24.6	-0.8
KU6	**Riekki**	**1.99**	**60**	PG	Pn	11 59 59.1	+0.8
KU6				MSG		12 00 22.5	
	comp=Z,1.6nm,0.2s						
KU6				SG	Sn	12 00 24.3	+0.4
RMF	**Romuvaara**	**2.04**	**114**	PG	Pn	11 59 59.1	+0.2
RMF				MSG		12 00 24.0	
	comp=Z,3.2nm,0.2s						
RMF				SG	Sb	12 00 26.7	-0.4
PAJU	**Pajala**	**2.20**	**333**	PG	Pn	12 00 02.2	+1.0
PAJU				SG	Sn	12 00 29.6	+0.6
KLF	**Kolari**	**2.26**	**343**	PB	Pn	12 00 02.1	+0.1
KLF				SN	Sn	12 00 30.1	-0.3
KLF				MSG		12 00 30.3	
	comp=Z,1.1nm,0.2s						
SUF	**Sumiainen**	**2.39**	**175**	PB	Pn	12 00 04.3	+0.5
SUF				MSG		12 00 34.1	
	comp=Z,0.5nm,0.2s						
VAF	**Ylistaro**	**2.44**	**214**	MSG		12 00 35.4	
	comp=Z,1.2nm,0.2s						
VAF				SG	Sb	12 00 39.6	+0.9
UMAU	**Umeaa**	**2.48**	**243**	PG	Pb	12 00 07.6	-1.1
	baz=62						
UMAU				SG	Sb	12 00 38.8	-0.8
KEF	**Keuruu**	**2.96**	**187**	PN	Pn	12 00 10.0	-1.5
KEF				MSG		12 00 50.5	
	comp=Z,1.8nm,0.2s						
HEMU	**Hemsoen**	**4.15**	**238**	SN	Sn	12 01 16.6	-0.5
ARA0	**ARCESS Array S**	**4.46**	**359**	PN	Pn	12 00 33.4	+1.2

*NOU **12** 12:11:05.6, 38°.75S×177°.78E, h20^{km}, MLv3.6/9, North Island, New Zealand*

*WEL **12** 12:11:08.2±0.4, 39°S±3°×17°8E±°, h34^{km}±4^{km}, M3.3/71, ML3.6/17, MLv3.3/71, Error ellipse: s-maj=3.6km s-min=3.0km az=172.1, confirmed*

ISC 12 12:11:08.9±1.2**, 38°.60S**±0°.02×**177°.59E**±0°.03**, h48**^{km}±6^{km}**, n122,** σ**1**^{s}**.04**/127**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIGZ	**Rimuhau**	**0.17**	**127**	P	**Pn**	**12 11 16.2**	**-0.7**
RIGZ				S	**Sn**	**12 11 22.7**	**+0.1**
RAGZ	**Rawiri**	**0.17**	**308**	P	**Pn**	**12 11 15.4**	**-1.6**
RAGZ				S	Sn	12 11 20.8	-1.8
GWTS	**Gisborne Waipa**	**0.26**	**95**	P	**Pn**	**12 11 17.3**	**-0.2**
GWTS				S	**Sn**	**12 11 25.9**	**+2.4**
TKGZ	**Te Karaka**	**0.26**	**51**	P	**Pn**	**12 11 16.4**	**-1.1**
TKGZ				S	**Sn**	**12 11 23.3**	**-0.3**
SNGZ	**Shannon Statio**	**0.26**	**228**	P	**Pn**	**12 11 17.1**	**-0.5**
SNGZ				S	**Sn**	**12 11 23.9**	**+0.1**
MWZ	**Matawai**	**0.27**	**350**	P	**Pn**	**12 11 15.9**	**-1.8**
MWZ				S	**Sn**	**12 11 21.6**	**-2.2**
GHHS	**Gisborne Hospi**	**0.34**	**97**	P	**Pn**	**12 11 18.0**	**-0.2**
GISS	**Gisborne 2ZG**	**0.34**	**101**	P	**Pn**	**12 11 17.9**	**-0.3**
GKBS	**Kaiti Beach**	**0.36**	**103**	P	**Pn**	**12 11 17.9**	**-0.5**
PRGZ	**Paritu Road**	**0.39**	**144**	P	**Pn**	**12 11 18.5**	**-0.4**
KNZ	**Kokohu**	**0.42**	**171**	P	**Pn**	**12 11 18.9**	**-0.3**
KNZ				S	**Sn**	**12 11 27.0**	**+0.6**
WFSS	**Wairoa Fire St**	**0.45**	**197**	P	**Pn**	**12 11 19.8**	**+0.4**
RTZ	**Ruatahuna**	**0.48**	**268**	P	**Pn**	**12 11 19.4**	**-0.5**
RTZ				S	**Sn**	**12 11 28.0**	**+0.4**
CNGZ	**Carnagh Statio**	**0.50**	**76**	P	**Pn**	**12 11 19.7**	**-0.3**
CNGZ				S	**Sn**	**12 11 29.6**	**+1.7**
RAHZ	**Arahi**	**0.50**	**231**	P	**Pn**	**12 11 20.1**	**0.0**
RAHZ				S	**Sn**	**12 11 29.2**	**+1.1**
URZ	**Urewera**	**0.51**	**312**	P	**Pn**	**12 11 19.2**	**-0.9**
URZ	**Urewera**	**0.51**	**312**	P	**Pn**	**12 11 19.0**	**-1.1**
URZ				S	**Sn**	**12 11 27.3**	**-0.8**
TWGZ	**Tauwhareparae**	**0.53**	**36**	P	**Pn**	**12 11 19.8**	**-0.6**
TWGZ				S	**Sn**	**12 11 29.2**	**+0.6**
WHHZ	**Waihua**	**0.55**	**210**	P	**Pn**	**12 11 20.9**	**+0.2**
MHGZ	**Mahia Peninsul**	**0.60**	**156**	P	**Pn**	**12 11 21.3**	**0.0**
TBAS	**Tolaga Bay Are**	**0.60**	**68**	P	**Pn**	**12 11 21.1**	**-0.2**
TBAS				S	**Sn**	**12 11 33.4**	**+3.2**
OPCS	**Opotiki Colleg**	**0.63**	**338**	P	**Pn**	**12 11 20.5**	**-1.2**
MTHZ	**Maungataniwha**	**0.64**	**247**	P	**Pn**	**12 11 21.8**	**0.0**
RUGZ	**Raukumara Rang**	**0.64**	**6**	P	**Pn**	**12 11 20.6**	**-1.3**
MUGZ	**Murupara**	**0.65**	**281**	P	**Pn**	**12 11 21.5**	**-0.5**
PUZ	**Puketiti**	**0.75**	**45**	P	**Pn**	**12 11 22.3**	**-0.9**
NMHZ	**Naumai**	**0.79**	**231**	P	**Pn**	**12 11 24.2**	**+0.4**
WKHS	**Whakatane High**	**0.80**	**323**	P	**Pn**	**12 11 22.9**	**-0.9**
ARHZ	**Aropaoanui**	**0.81**	**215**	P	**Pn**	**12 11 24.4**	**+0.4**
PKGZ	**Pakihiroa**	**0.83**	**28**	P	**Pn**	**12 11 23.5**	**-0.9**
EDRZ	**Edgecumbe**	**0.83**	**306**	P	**Pn**	**12 11 23.7**	**-0.7**
HAZ	**Te Kaha**	**0.86**	**10**	P	**Pn**	**12 11 23.9**	**-0.7**
KAFS	**Kawerau Fire S**	**0.86**	**307**	P	**Pn**	**12 11 24.1**	**-0.7**
RRRZ	**Republican Roa**	**0.88**	**287**	P	**Pn**	**12 11 24.5**	**-0.6**
WHRZ	**Whale Island**	**0.89**	**327**	P	**Pn**	**12 11 24.4**	**-0.7**
TARZ	**Mount Tarawera**	**0.93**	**293**	P	**Pn**	**12 11 25.3**	**-0.4**
PRRZ	**Plateau Road**	**0.94**	**276**	P	**Pn**	**12 11 25.3**	**-0.5**
MRHZ	**Matea Rd**	**0.94**	**256**	P	**Pn**	**12 11 25.9**	**0.0**
MARZ	**Manawahe**	**0.95**	**310**	P	**Pn**	**12 11 25.1**	**-0.8**
ALRZ	**Allen Road**	**0.98**	**272**	P	**Pn**	**12 11 26.0**	**-0.3**
MKRZ	**Makatiti**	**1.00**	**297**	P	**Pn**	**12 11 26.9**	**+0.3**
WMGZ	**Waiomatatini S**	**1.02**	**40**	P	**Pn**	**12 11 26.0**	**-0.8**
BKZ	**Black Stump Fm**	**1.02**	**236**	P	**Pn**	**12 11 27.5**	**+0.5**
BKZ	**Black Stump Fm**	**1.02**	**236**	P	**Pn**	**12 11 27.3**	**+0.3**
HLRZ	**Highlands Stat**	**1.03**	**289**	P	**Pn**	**12 11 26.9**	**-0.1**
HRRZ	**Handcock Road**	**1.05**	**281**	P	**Pn**	**12 11 26.6**	**-0.6**
OMRZ	**Omania**	**1.08**	**297**	P	**Pn**	**12 11 27.0**	**-0.7**
MCHZ	**McNeill Hill**	**1.09**	**219**	P	**Pn**	**12 11 28.1**	**+0.2**
HSRZ	**Hossack Road**	**1.09**	**285**	P	**Pn**	**12 11 27.5**	**-0.4**
OPRZ	**Ohinepanea**	**1.11**	**313**	P	**Pn**	**12 11 26.9**	**-1.2**
LIRZ	**Lichensteins R**	**1.12**	**302**	P	**Pn**	**12 11 27.5**	**-0.7**
WPRZ	**Whakapapatarin**	**1.12**	**274**	P	**Pn**	**12 11 28.0**	**-0.3**
CKHZ	**Cape Kidnapper**	**1.13**	**201**	P	**Pn**	**12 11 27.8**	**-0.5**
UTU	**Utuhina**	**1.18**	**291**	P	**Pn**	**12 11 30.4**	**+1.4**
MXZ	**Matakaoa Point**	**1.18**	**29**	P	**Pn**	**12 11 28.6**	**-0.5**
MXZ	**Matakaoa Point**	**1.18**	**29**	P	**Pn**	**12 11 28.5**	**-0.5**
KARZ	**Kaharoa**	**1.21**	**298**	P	**Pn**	**12 11 28.4**	**-1.0**
NGRZ	**Ngongotaha**	**1.21**	**294**	P	**Pn**	**12 11 29.2**	**-0.3**
KWHZ	**Kaweka Forest**	**1.22**	**228**	P	**Pn**	**12 11 29.6**	**-0.1**
KAHZ	**Kahuranaki**	**1.31**	**205**	P	**Pn**	**12 11 30.3**	**-0.6**
TGRZ	**Tauranga**	**1.36**	**309**	P	**Pn**	**12 11 30.1**	**-1.4**
KUTZ	**Kaahu Road**	**1.39**	**274**	P	**Pn**	**12 11 31.5**	**-0.4**
RITZ	**Rihia Road**	**1.40**	**254**	P	**Pn**	**12 11 32.2**	**+0.1**
KRHZ	**Kereru**	**1.41**	**222**	P	**Pn**	**12 11 31.5**	**-0.6**
RATZ	**Rangitukua**	**1.45**	**259**	P	**Pn**	**12 11 32.6**	**-0.1**
KMRZ	**Kaimai**	**1.50**	**300**	P	**Pn**	**12 11 32.3**	**-1.1**
KATZ	**Kakaramea**	**1.53**	**255**	P	**Pn**	**12 11 33.7**	**-0.2**
PXZ	**Pawanui**	**1.53**	**201**	P	**Pn**	**12 11 32.3**	**-1.5**
TMVZ	**Te Maari**	**1.56**	**250**	P	**Pn**	**12 11 34.0**	**-0.3**
ETVZ	**East Tongariro**	**1.56**	**249**	P	**Pn**	**12 11 34.0**	**-0.3**
NTVZ	**North Tongarir**	**1.57**	**251**	P	**Pn**	**12 11 34.3**	**-0.2**
KRVZ	**Karewarewa**	**1.60**	**252**	P	**Pn**	**12 11 34.5**	**-0.3**
OTVZ	**Oturere**	**1.60**	**249**	P	**Pn**	**12 11 34.7**	**-0.2**
SNVZ	**South Ngauruho**	**1.63**	**248**	P	**Pn**	**12 11 35.0**	**-0.3**
NNVZ	**North Ngauruho**	**1.63**	**250**	P	**Pn**	**12 11 35.4**	**+0.1**
TLZ	**Tolley Road**	**1.63**	**279**	P	**Pn**	**12 11 34.4**	**-0.8**
MOVZ	**Moawhango**	**1.64**	**240**	P	**Pn**	**12 11 35.0**	**-0.4**
WTVZ	**West Tongariro**	**1.64**	**251**	P	**Pn**	**12 11 35.4**	**-0.1**
TUVZ	**Tukino**	**1.65**	**246**	P	**Pn**	**12 11 35.3**	**-0.2**
NGZ	**Ngauruhoe**	**1.65**	**249**	P	**Pn**	**12 11 35.4**	**-0.3**
PNHZ	**Pukenui**	**1.70**	**219**	P	**Pn**	**12 11 35.0**	**-1.2**
MYRZ	**Mayor Island**	**1.70**	**321**	P	**Pn**	**12 11 34.8**	**-1.3**
WHVZ	**Whangaehu Hut**	**1.70**	**246**	P	**Pn**	**12 11 36.1**	**-0.2**
COVZ	**Chateau Observ**	**1.71**	**249**	P	**Pn**	**12 11 36.3**	**0.0**
WPHZ	**Waipukurau**	**1.71**	**211**	P	**Pn**	**12 11 35.1**	**-1.2**
WNVZ	**Wahianoa**	**1.71**	**244**	P	**Pn**	**12 11 36.1**	**-0.3**
MAVZ	**Matarangi**	**1.71**	**247**	P	**Pn**	**12 11 36.6**	**0.0**
FWVZ	**Far West T-bar**	**1.72**	**247**	P	**Pn**	**12 11 37.0**	**+0.4**
TRVZ	**Turoa**	**1.74**	**246**	P	**Pn**	**12 11 36.5**	**-0.3**
TWVZ	**Taurewa**	**1.74**	**254**	P	**Pn**	**12 11 36.6**	**-0.3**
PRHZ	**Porangahau**	**1.82**	**204**	P	**Pn**	**12 11 36.1**	**-1.7**
MTVZ	**Mangateitei**	**1.83**	**244**	P	**Pn**	**12 11 37.6**	**-0.4**
PKVZ	**Pokaka**	**1.88**	**248**	P	**Pn**	**12 11 39.3**	**+0.7**
TSZ	**Takapari Road**	**1.93**	**220**	P	**Pn**	**12 11 37.7**	**-1.5**
DVHZ	**Dannevirke**	**2.02**	**213**	P	**Pn**	**12 11 38.5**	**-2.0**
ANWZ	**Angora Road**	**2.04**	**205**	P	**Pn**	**12 11 39.0**	**-1.8**
HIZ	**Hauiti**	**2.15**	**272**	P	**Pn**	**12 11 42.7**	**+0.5**
HIZ	**Hauiti**	**2.15**	**272**	P	**Pn**	**12 11 42.5**	**+0.3**
VRZ	**Vera Road**	**2.27**	**256**	P	**Pn**	**12 11 44.2**	**+0.2**
POWZ	**Post Office Ro**	**2.27**	**218**	P	**Pn**	**12 11 42.2**	**-1.8**
PRWZ	**Pori Road**	**2.32**	**212**	P	**Pn**	**12 11 42.7**	**-1.9**
BFZ	**Birch Farm**	**2.32**	**206**	P	**Pn**	**12 11 42.2**	**-2.4**
BFZ	**Birch Farm**	**2.32**	**206**	P	**Pn**	**12 11 42.3**	**-2.3**
WAZ	**Wanganui**	**2.33**	**240**	P	**Pn**	**12 11 45.5**	**+0.8**
KUZ	**Kuaotunu**	**2.37**	**321**	P	Pn	12 11 42.2	-3.2
OHWZ	**Ohakea**	**2.38**	**227**	P	**Pn**	**12 11 45.1**	**-0.4**
MKAZ	**Moumakai**	**2.44**	**307**	P	**Pn**	**12 11 45.1**	**-1.1**
TIWZ	**Tintock**	**2.54**	**211**	P	**Pn**	**12 11 45.6**	**-2.1**
CPWZ	**Castlepoint**	**2.54**	**204**	P	**Pn**	**12 11 45.6**	**-2.0**
MRZ	**Mangatainoka R**	**2.58**	**216**	P	**Pn**	**12 11 45.6**	**-2.5**
WIAZ	**Waiheke Island**	**2.66**	**312**	P	**Pn**	**12 11 48.6**	**-0.6**
HOWZ	**Holdsworth Sta**	**2.79**	**214**	P	Pn	12 11 48.2	-2.9
MBAZ	**Motutapu North**	**2.81**	**310**	P	**Pn**	**12 11 50.9**	**-0.4**
TMWZ	**Te Maipa**	**2.82**	**207**	P	Pn	12 11 48.6	-2.9
KHEZ	**Kahui Hut**	**2.87**	**255**	P	**Pn**	**12 11 53.8**	**+1.5**
OGWZ	**Otaki Gorge**	**2.89**	**219**	P	**Pn**	**12 11 49.8**	**-2.6**
MTW	**Mount Morrison**	**3.02**	**212**	P	Pn	12 11 50.8	-3.3
KIW	**Kapiti Island**	**3.06**	**222**	P	**Pn**	**12 11 52.2**	**-2.5**
TRWZ	**Traveller**	**3.15**	**207**	P	Pn	12 11 52.6	-3.4
SNZO	**South Karori**	**3.50**	**218**	P	Pn	12 11 56.8	-3.9
QRZ	**Quartz Range**	**4.49**	**239**	P	Pn	12 12 11.5	-2.9
OUZ	**Omahuta**	**4.65**	**315**	P	**Pn**	**12 12 16.6**	**0.0**

*IDC **12** 12:22:16.0±0.9, 6°.82S×143°.45E, h0^{km}, mb3.8/7, mbtmp3.9/11, ML3.5/3, MS3.7/12, Error ellipse: s-maj=21.5km s-min=12.0km az=100.0*

ISC 12 12:22:21.4±0.7**, 6°.88S**±0°.07×**143°.51E**±0°.09**, h35**^{km}**, n20,** σ**2**^{s}**.03**/15**, mb3.7**/6**, MS3.6**/8**, New Guinea**

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

PMG	Port Moresby	4.40	125	Pn	Pn	12 23 25.8	0.0
	18nm,0.7s,baz=330,slow=5.7,SNR=12						
PMG				Sn	Sn	12 24 17.8	+2.0
	2.5nm,0.3s,baz=332,slow=4.8,SNR=3.2						
JAY	Jayapura	5.16	327	Pn	Pn	12 23 34.0	-2.1
	0.7nm,0.3s,baz=152,slow=15,SNR=1.9						
JAY				Sn	Sn	12 24 39.8	+5.3
	0.8nm,0.3s,baz=97,slow=23,SNR=3.6						
JAY				Lg	Lg	12 24 55.5	
	1.1nm,0.3s,baz=87,slow=19,SNR=4.4						
JAY				LR	LR	12 25 18.0	
	comp=Z,134nm,19.5s,baz=193,slow=36						
	3.1nm,0.3s						
CTA	Charters Tower	13.40	169	LR	LR	12 30 46.1	
	comp=Z,368nm,19.2s,baz=350,slow=38						
WRA	Warramunga Arr	15.74	214	Pn	Pn	12 25 58.1	-2.5
	0.2nm,0.3s,baz=36,slow=12,SNR=7.2						
WRA				Sn	Sn	12 28 55.9	+1.8
	0.1nm,0.3s,baz=27,slow=22,SNR=1.9						
WRA				Lg	Lg	12 30 37.5	
	0.1nm,0.3s,baz=27,slow=24,SNR=6.8						
	1.3nm,0.9s						
ASAR	Alice Springs	19.07	208	P	P	12 26 41.3	+0.3
	0.4nm,0.3s,baz=35,slow=10,SNR=24						
ASAR				S	S	12 30 16.5	+0.9
	0.5nm,0.8s,baz=24,slow=26,SNR=1.6						
ASAR				Lg	Lg	12 32 23.1	
	0.1nm,0.3s,baz=20,slow=29,SNR=4.9						
ASAR				LR	LR	12 35 05.4	
	comp=Z,104nm,21.0s,baz=56,slow=40						
	7.7nm,0.9s						
BATI	Baumata	19.90	259	LR	LR	12 36 34.3	
	comp=Z,383nm,18.3s,baz=106,slow=43						
GUMO	Guam	20.38	4	LR	LR	12 34 42.2	
	comp=Z,111nm,18.1s,baz=154,slow=37						
FITZ	Fitzroy Crossi	20.68	236	P	P	12 26 58.5	+0.1
	5.1nm,0.9s,baz=62,slow=9.9,SNR=7.8						
FITZ				S	Sn	12 30 57.5	+4.0
	4.6nm,1.0s,baz=67,slow=18,SNR=3.5						
FITZ				Lg	Lg	12 33 12.8	
	0.2nm,0.3s,baz=157,slow=15,SNR=6.0						
FITZ				LR	LR	12 35 40.3	
	comp=Z,348nm,19.1s,baz=54,slow=39						
	5.1nm,0.9s						
KAPI	Kappang	23.70	273	LR	LR	12 39 14.5	
	comp=Z,115nm,18.1s,baz=88,slow=43						
STKA	Stephens Creek	24.94	184	LR	LR	12 38 44.1	
	comp=Z,411nm,18.8s,baz=4.2,slow=40						
JCJ	Chichijima	33.80	358	LR	LR	12 42 50.7	
	comp=Z,53nm,19.2s,baz=82,slow=37						
NWAO	Narrogin (SRO)	35.59	220	LR	LR	12 45 44.3	
	comp=Z,64nm,20.4s,baz=130,slow=40						
KSRS	Korea Array	46.44	343	P	P	12 30 43.9	-0.9
	0.7nm,0.9s,baz=165,slow=9.7,SNR=2.0						
	0.7nm,0.9s						
SEY	Seymchan	69.94	4	LR	LR	13 02 32.2	
	comp=Z,142nm,20.4s,baz=74,slow=35						
MKAR	Makanchi Array	75.99	322	P	P	12 34 05.5	+0.5
	0.7nm,0.7s,baz=123,slow=8.8,SNR=6.2						
	0.7nm,0.7s						
ZALV	Zalesovo Beam	77.93	329	P	P	12 34 14.6	-1.1
	0.3nm,0.4s,baz=125,slow=7.6,SNR=1.8						
	0.3nm,0.4s						
QSPA	South Pole Qui	83.09	180	P	P	12 34 43.7	+0.3
	1.9nm,0.8s,baz=6.1,slow=2.2,SNR=6.6						
	1.9nm,0.8s						
BVAR	Borovoye Array	85.45	325	P	P	12 34 55.1	-0.3
	0.7nm,0.6s,baz=100,slow=7.5,SNR=5.7						
	0.7nm,0.6s						
ILAR	Eielson Array	87.66	24	P	P	12 35 05.8	-0.2
	0.3nm,0.7s,baz=270,slow=6.1,SNR=4.4						
	0.3nm,0.7s						
KIRV	Kirov	97.96	328	LR	LR	13 21 12.6	
	comp=Z,340nm,20.5s,baz=342,slow=36						

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*MEX **12** 12:25:33.3±0.5, 30°.67N×114°.06W, h8^{km}±11^{km}, MD4.5*

*GFZ **12** 12:25:34.6, 30°.48N×114°.09W, h10^{km}, MW5.0, Moment Tensor Solution. s15 Moment tensor: M_{rr}-0.29; $M_{\theta\theta}$-3.72; $M_{\phi\phi}$4.01; $M_{r\theta}$-0.06; $M_{\theta\phi}$-0.90; $M_{\phi r}$-0.54; Fault plane solution: NP1:ϕ_s128.00000°, δ84.00000°, λ177.00000°. NP2:ϕ_s219.00000°, δ87.00000°, λ6.00000°. Principal axes: T 4.1700, Plg7.0000°, Azm84.0000°; N -0.3500, Plg83.0000°, Azm247.0000°; P -3.8200, Plg2.0000°, Azm353.0000°;*

*NEIC **12** 12:25:34.1±2.5, 30°.72N±0°.03×114°.34W±0°.05, h10^{km}±1^{km}, mb4.6/24 Error ellipse: s-maj=8.1km s-min=5.2km az=124.0*

*ECX **12** 12:25:34.5±0.5, 30°.82N×114°.21W, h17^{km}±5^{km}, ML4.6, Fault plane solution: NP1:ϕ_s147.00000°, δ87.00000°, λ-168.00000°.*

*GCMT **12** 12:25:38.1±0.2, 30°.88N±0°.01×114°.15W±0°.01, h12^{km}, MW5.0/124, Moment Tensor Solution. s49,c59; s124,c209; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.04±.09; $M_{\theta\theta}$-4.07±.08; $M_{\phi\phi}$5.11±.07; $M_{r\theta}$0.69±.27; $M_{\theta\phi}$0.29±.08; $M_{\phi r}$-0.61±.23; Best double couple: $M_0$4.70800×10^{16} NP1:ϕ_s226.00000°, δ77.00000°, λ-5.00000°. NP2:ϕ_s318.00000°, δ85.00000°, λ-167.00000°. Principal axes: T 5.1760, Plg5.0000°, Azm91.0000°; N -0.9360, Plg76.0000°, Azm339.0000°; P -4.2410, Plg13.0000°, Azm183.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **12** 12:25:43.1±1.4, 31°.64N×113°.78W, h0^{km}, mb3.8/3, mbtmp3.7/9, ML3.7/6, MS4.4/58 Error ellipse: s-maj=18.2km s-min=12.1km az=21.0*

ISC 12 12:25:33.5±1.3, **30°.78N**±0°.03×**114°.21W**±0°.03, **h6**^{km}±8^{km}, **n161**, σ**1^{s}59**/112, **mb4.3**/5, **MS4.5**/53, **10C-9D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPXB	Puerto Peasco	0.74	42	⇓*i*P	Pg	12 25 47.2	-0.6
PPXB				*e*S	Sg	12 25 57.2	-0.2
PPXB				IAML		12 25 58.5	
	comp=N,23µm,0.5s						
PPXB				IAML		12 25 58.5	
	comp=E,35µm,0.4s						
SLGB	San Luis Gonza	0.96	190	⇓*i*P	Pb	12 25 51.6	-1.0
SLGB				*e*S	Sb	12 26 05.6	0.0
SLGB				IAML		12 26 18.1	
	comp=E,28µm,1.3s						
SLGB				IAML		12 26 27.6	
	comp=N,15µm,0.7s						
ECBX	El Chinero	1.00	314	⇑*i*P	Pb	12 25 51.1	-2.1
ECBX				*e*S	Sb	12 26 04.9	-1.8
ECBX				IAML		12 26 16.9	
	comp=E,20µm,0.7s						
ECBX				IAML		12 26 16.9	
	comp=N,15µm,1.0s						
PIX	Pinacate	1.01	39	Pg	Pb	12 25 51.8	-1.5
PIX	Pinacate	1.01	39	⇓*i*P	Pb	12 25 51.2	-2.1
PIX				*e*S	Sb	12 26 04.9	-2.0
PIX				IAML		12 26 10.7	
	comp=E,9µm,1.0s						
PIX				IAML		12 26 14.3	
	comp=N,6µm,0.8s						
SPIG	San Pedro Mart	1.11	284		Pb	12 25 53.8	-1.6
SPIG					Sb	12 26 09.8	-0.5
SPIG	San Pedro Mart	1.11	284	⇑*i*P	Pb	12 25 53.9	-1.6
SPIG				IAML		12 26 21.3	
	comp=N,13µm,0.6s						
SPIG				IAML		12 26 23.5	
	comp=E,10µm,0.8s						
SPIG	San Pedro Mart	1.11	284	*e*P	Pb	12 25 53.8	-1.6
SPIG				*e*S	Sb	12 26 09.8	-0.5
EDOMX	El Doctor, EDO	1.26	339	⇓*e*P	Pn	12 25 54.9	-2.8
SQX	San Quintin	1.45	262	⇑*e*P	Pn	12 25 59.4	-0.9
SQX				IAML		12 26 22.8	
	comp=E,12µm,0.3s						
SQX				IAML		12 26 25.1	
	comp=N,20µm,0.4s						
VTX	Valle De La Tr	1.48	295		Pn	12 25 59.0	-1.8
VTX	Valle De La Tr	1.48	295	⇑*i*P	Pn	12 25 58.9	-1.8
VTX				IAML		12 26 51.5	
	comp=N,7µm,1.3s						
RITX	Riito Sonora	1.52	335	⇓*e*P	Pn	12 25 59.4	-1.8
PLIB	Puerto Liberta	1.57	123	⇑*i*P	Pn	12 26 00.1	-1.8
PLIB				*e*S	Sb	12 26 22.6	-0.3
PLIB				IAML		12 26 42.1	
	comp=E,6µm,0.7s						
PLIB				IAML		12 26 47.8	
	comp=N,5µm,1.0s						
RHX	Rio Hardy	1.63	326	⇑*e*P	Pn	12 26 01.2	-1.6
AGSX	Ej. Aguas Cali	1.69	331	⇓*e*P	Pn	12 26 01.5	-2.1
GUVIX	Guadalupe Vict	1.69	334	⇓*e*P	Pn	12 26 01.9	-1.7
PESCX	Ej. Pescaderos	1.77	339	⇓*e*P	Pn	12 26 02.9	-1.8
ALAMX	Rancho Alamar	1.77	314	⇑*e*P	Pn	12 26 03.2	-1.5
ALAMX				IAML		12 26 38.7	
	comp=E,5µm,0.7s						
ALAMX				IAML		12 26 40.4	
	comp=N,4µm,0.6s						
SJX	San Joaquin	1.79	304	⇑*e*P	Pn	12 26 05.3	+0.3
SJX				IAML		12 26 49.7	
	comp=E,3µm,0.6s						
SJX				IAML		12 26 49.9	
	comp=N,2µm,1.0s						
MBIG	Mexicali	1.83	333	*e*P	Pg	12 26 09.4	+0.8
SV2X	San Vicente	1.83	288	⇑*e*P	Pn	12 26 04.4	-1.1
SV2X				IAML		12 26 43.1	
	comp=N,4µm,0.9s						
SV2X				IAML		12 27 00.3	
	comp=E,3µm,1.3s						
CPBX	Cerro Prieto	1.88	330		Pn	12 26 06.0	-0.2
CPBX	Cerro Prieto	1.88	330	⇓*e*P	Pn	12 26 04.4	-1.9
BAHB	Baha de los	1.92	163	*e*P	Pn	12 26 00.9	-5.7
ESJX	Sierra Juarez	1.93	310		Pn	12 26 05.4	-1.6
113A	Mohawk Valley,	2.02	11		Pn	12 26 06.1	-1.9
GLA	Glamis	2.32	347		Pn	12 26 11.0	-1.4
CCX	Cicese	2.37	298	*e*P	Pn	12 26 12.0	-0.9
YUH	Yuha Desert	2.37	322	Pn	Pn	12 26 12.6	-0.3
CBX	Cerro Bola	2.59	307		Pn	12 26 15.3	-0.9
CBX	Cerro Bola	2.59	307		Sb	12 26 54.8	+2.1
CBX	Cerro Bola	2.59	307	*e*P	Pn	12 26 15.5	-0.7
CBX	Cerro Bola	2.59	307	*e*P	Pn	12 26 15.6	-0.5
CBX				*e*S	Sb	12 26 54.8	+2.1
TJIG	Tijuana	2.67	309		Pn	12 26 16.1	-1.1
TJIG					Sn	12 26 49.8	-0.1
TJIG	Tijuana	2.67	309	*e*P	Pn	12 26 16.1	-1.1
TJIG				*e*S	Sn	12 26 49.8	-0.1
BAR	Barrett	2.83	313		Pn	12 26 18.4	-0.9
BLYC	Blythe	2.97	355		Pn	12 26 20.3	-0.9
BC3	Big Chuckawall	3.05	340		Pn	12 26 21.7	-0.8
BORC	Borrego Spring	3.11	323		Pn	12 26 23.6	+0.5
DPP	Dos Picos Cty	3.21	314		Pn	12 26 25.3	+0.8
CPE	Camp Elliot	3.24	311		Pn	12 26 24.6	-0.4
TUC	Tucson	3.29	62		Pn	12 26 25.0	-0.8
TUC	Tucson	3.29	62	*e*P	Pn	12 26 23.7	-2.1
Y14A	Wickenburg	3.31	18		Pn	12 26 25.4	-0.5
HSIG		3.33	121	⇑*e*P	Pn	12 26 25.5	-0.6
HSIG		3.33	121	*e*P	Pn	12 26 20.7	-5.4
PMD	Palm Desert	3.40	328		Pn	12 26 27.1	-0.1
PFO	Pinyon Flats O	3.41	327	Pn	Pn	12 26 31.0	+3.7
	comp=E,1.0nm,0.3s,baz=131,slow=15,SNR=8.1						
PFO				Pg	Pb	12 26 36.1	+1.7
	comp=E,2.5nm,0.3s,baz=136,slow=10.0,SNR=13						
PFO				Sn	Sn	12 27 06.3	-1.8
	comp=E,20nm,0.3s,baz=102,slow=10,SNR=4.9						
PFO				LR	LR	12 27 30.3	
	comp=E,2µm,18.5s,baz=136,slow=36						
	comp=E,3.0nm,0.3s						
PFO	Pinyon Flats O	3.41	327		Pn	12 26 28.9	+1.5
IRM	Iron Mountain	3.46	347		Pn	12 26 28.1	+0.1
BELC	Belle Mtn. Jos	3.55	335		Pn	12 26 30.9	+1.5
SRIG	Santa Rosalia	3.85	153	*e*P	Pn	12 26 27.3	-6.1
NZIG	Nacozari, Sono	4.03	95		Pn	12 26 34.5	-1.5
NZIG					Sn	12 27 24.0	+0.4
NZIG	Nacozari, Sono	4.03	95	*e*P	Pn	12 26 34.5	-1.5
NZIG				*e*P	Pb	12 26 34.7	-10
NZIG				*e*S	Sn	12 27 24.0	+0.4
GUYB	Guaymas	4.09	134	*e*P	Pn	12 26 31.0	-5.5
WUAZ	Wupatki	5.29	26	Pn	Pn	12 26 54.3	+1.1
121A	Cookes Peak, D	5.75	71	Pn	Pn	12 27 00.9	+1.4
KNB	Kanab	6.33	10		Pn	12 27 09.0	+1.5
Y22A	Socorro	6.89	61		Pn	12 27 15.3	+0.1
LPIG	La Paz	7.50	152	Pn	Pb	12 27 43.1	-0.9
	comp=E,2.4nm,0.3s,baz=147,slow=9.3,SNR=7.0						
LPIG				Sn	Sb	12 29 20.9	+7.1
	comp=E,10nm,0.3s,baz=175,slow=8.4,SNR=6.3						
LPIG				Lg	Lg	12 29 57.3	
	comp=E,1.8nm,0.3s,baz=228,slow=8.0,SNR=5.0						
LPIG				LR	LR	12 30 36.9	
	comp=E,4µm,19.5s,baz=342,slow=36						
	comp=E,63nm,0.9s						
MNTX	Cornudas Mount	7.61	81		Pn	12 27 25.1	+0.1
MNTX	Cornudas Mount	7.61	81	*e*P	Pn	12 27 23.6	-1.4
ANMO	Albuquerque	7.73	55	Pn	Pn	12 27 26.4	-0.4
	comp=E,0.5nm,0.3s,baz=220,slow=6.9,SNR=11						
ANMO				Lg	Lg	12 29 21.5	
	comp=E,0.4nm,0.3s,baz=248,slow=12,SNR=1.5						
ANMO				LR	LR	12 30 07.7	
	comp=E,2µm,19.8s,baz=240,slow=38						
	comp=E,0.7nm,0.3s						
ANMO	Albuquerque	7.73	55		Pn	12 27 28.8	+2.0
VHRN	Van Horn	7.93	88		Pn	12 27 30.5	+0.9
SLBS	Sierra La Lagu	8.02	151		Pn	12 27 31.8	+1.1
NVAR	Mina Array Bea	8.34	337	Pn	Pn	12 27 42.0	+6.8
	comp=E,0.1nm,0.3s,baz=156,slow=14,SNR=6.7						
NVAR				LR	LR	12 30 49.9	
	comp=E,4µm,20.7s,baz=152,slow=40						
PV20	West Nyswonger	8.69	28		Pn	12 27 43.5	+3.6
PECS	Pecos	8.89	84		Pn	12 27 44.0	+1.4
TXAR	Lajitas Array	9.25	96	Pn	Pn	12 27 48.2	+0.7
	comp=E,1.4nm,0.3s,baz=260,slow=14,SNR=63						
TXAR				Sn	Sn	12 29 31.1	-0.9
	comp=E,0.9nm,0.3s,baz=298,slow=30,SNR=1.3						
TXAR				Lg	Lg	12 30 26.6	
	comp=E,0.5nm,0.3s,baz=288,slow=31,SNR=2.2						
TXAR	Lajitas Array	9.25	96		Pn	12 27 48.0	+0.5
ELK	Elko	9.98	355	Pn	Pn	12 27 57.7	0.0
	comp=E,0.2nm,0.3s,baz=170,slow=6.1,SNR=9.2						
ELK				Lg	Lg	12 30 32.7	
	comp=E,0.1nm,0.3s,baz=152,slow=19,SNR=1.2						
	comp=E,0.8nm,0.5s						
ODSA	Odessa	10.05	79		Pn	12 28 01.8	+3.3
128A	Castleberry Fa	10.15	77		Pn	12 28 03.4	+3.5
T25A	Trinidad	10.31	49		Pn	12 28 04.8	+2.6
SAND	Sanderson	10.47	91		Pn	12 28 05.5	+1.3
O20A	White River Ci	10.52	26		Pn	12 28 08.2	+3.2
SGCY	Sterling City	11.24	81		Pn	12 28 17.2	+2.3
JCT	Junction City	12.41	88		Pn	12 28 28.0	-2.8
JCT	Junction City	12.41	88	*e*P	Pn	12 28 28.0	-2.8
PDAR	Pinedale Array	12.53	16	Pn	Pn	12 28 32.6	+0.1
	comp=E,0.2nm,0.3s,baz=199,slow=9.8,SNR=10.0						
PDAR				LR	LR	12 33 30.0	
	comp=E,3µm,20.2s,baz=194,slow=40						
	comp=E,0.1nm,0.4s						
YBH	Yreka Blue Hor	12.89	330	Pn		12 28 43.6	
	baz=146,slow=3.6,SNR=6.3						
YBH				LR	LR	12 33 52.8	
	comp=E,62nm,19.4s,baz=175,slow=40						
WMOK	Wichita Mounta	13.57	69		Pn	12 28 48.0	+1.4
YHH	Holmes Hill	14.23	10		P	12 29 00.9	-2.5
PLID	Pearl Lake	14.35	355		P	12 29 02.8	-1.9
Z35A	Perchaven, San	14.60	76	P	P	12 29 06.1	-1.2
DLMT	Dillon	14.61	5		P	12 29 08.7	+1.3
BOZ	Bozeman (W)	14.93	7	IAmb	IAmb	12 29 20.1	
	comp=Z,17nm,1.0s						
G08A	Pilot Rock	14.96	347		P	12 29 12.5	+1.3
G06A	Carlson Farm,	15.29	343	IAmb	IAmb	12 29 41.8	
	comp=Z,31nm,1.3s						
F10A	Beach Ranch, E	15.35	352	IAmb	IAmb	12 29 28.0	
	comp=Z,18nm,0.9s						
RSSD	Black Hills	15.55	28	Pn	Pn	12 29 14.7	+1.1
RSSD				IAmb	IAmb	12 29 26.1	
	comp=Z,47nm,1.2s						
HOOD	Mount Hood Mea	15.64	340	P	Pn	12 29 16.2	+1.6
HKT	Hockley	15.88	88		Pn	12 29 19.0	+1.3
HKT				IAmb	IAmb	12 29 24.1	
	comp=Z,77nm,1.5s						
MSO	Missoula	16.03	1	IAmb	IAmb	12 29 32.1	
	comp=Z,62nm,1.4s						
MOIG	Morelia	16.14	130	P	P	12 29 25.8	+1.2
E07A	Sunnyside	16.35	346		P	12 29 25.8	-0.8
E07A				IAmb	IAmb	12 29 34.8	
	comp=Z,72nm,1.2s						
MXC	Moxie City	16.46	345	P	P	12 29 27.6	-0.3
MXC				IAmb	IAmb	12 29 35.2	
	comp=Z,54nm,1.4s						
NATX	Nacogdoches	16.74	82	IAmb	IAmb	12 29 35.9	
	comp=Z,75nm,1.4s						
NEW	Newport	17.60	354	Pn	P	12 29 41.9	+1.4
	comp=Z,0.2nm,0.3s,baz=166,slow=9.5,SNR=16						
NEW				LR	LR	12 36 33.6	
	comp=Z,2µm,21.0s,baz=177,slow=39						
	comp=Z,11nm,0.9s						
R40A	Maddies Statio	19.54	62	IAmb	IAmb	12 30 16.7	
	comp=Z,36nm,1.3s						
AGMN	Agassiz Nation	22.40	33	P	P	12 30 34.9	+2.3
AGMN				IAmb	IAmb	12 30 44.8	
	comp=Z,25nm,0.9s						
BBB	Bella Bella	23.71	338	LR	LR	12 40 54.2	
	comp=Z,2µm,19.1s,baz=166,slow=40						
ULM	Lac du Bonnet	23.81	30	P	P	12 30 50.2	+3.2
	comp=Z,9.2nm,1.0s,baz=216,slow=8.7,SNR=6.0						
ULM				LR	LR	12 39 44.3	
	comp=Z,928nm,19.2s,baz=220,slow=37						
	comp=Z,9.2nm,1.0s						
TKL	Tuckaleechee C	25.86	71	LR	LR	12 41 43.9	
	comp=Z,2µm,21.2s,baz=266,slow=38						
APG	El Apazote	26.84	120	LR	LR	12 42 54.2	
	comp=Z,121nm,18.8s,baz=234,slow=38						
SADO	Sadowa	30.78	53	LR	LR	12 43 53.7	
	comp=Z,470nm,18.3s,baz=278,slow=36						
YKA	Yellowknife Ar	31.72	360	P	P	12 32 02.3	+4.5
	comp=Z,0.8nm,1.0s,baz=192,slow=8.1,SNR=7.4						
YKA				LR	LR	12 45 26.2	
	comp=Z,1µm,18.7s,baz=133,slow=38						
	comp=Z,0.8nm,1.0s						
JTS	Las Juntas de	33.97	121	LR	LR	12 45 56.9	
	comp=Z,2µm,21.9s,baz=306,slow=36						
ILAR	Eielson Array	39.60	339	P	P	12 33 09.5	+4.1
	comp=Z,0.8nm,0.7s,baz=153,slow=8.0,SNR=10						
ILAR				LR	LR	12 49 59.7	
	comp=Z,882nm,18.9s,baz=134,slow=37						
	comp=Z,0.8nm,0.7s						
SCHQ	Schefferville	41.19	40	LR	LR	12 51 08.2	
	comp=Z,901nm,20.1s,baz=261,slow=38						
FRB	Frobisher Bay	43.65	27	LR	LR	12 51 17.1	
	comp=Z,638nm,19.3s,baz=242,slow=36						
RES	Resolute Bay	45.03	7	LR	LR	12 51 04.1	
	comp=Z,733nm,20.8s,baz=214,slow=34						
SJG	San Juan	45.22	95	LR	LR	12 56 30.1	
	comp=Z,391nm,20.5s,baz=310,slow=41						
ROSC	El Rosal	45.51	116	LR	LR	12 54 35.9	
	comp=Z,578nm,20.4s,baz=326,slow=38						
SDV	Santo Domingo	46.03	109	LR	LR	12 56 22.0	
	comp=Z,498nm,18.3s,baz=308,slow=40						
TAOE	Nuku Hiva Isla	46.61	217	*e*S	S	12 40 50.8	-1.6
	comp=Z,66nm,24.6s						
TAOE				*e*LQ	LQ	12 45 14.7	
	comp=Z,438nm,23.5s						
TAOE				*e*LR	LR	12 47 06.2	
	comp=Z,364nm,21.6s						
ATAH	Atahualpa	50.97	132	LR	LR	12 55 25.1	
	comp=Z,357nm,18.9s,baz=326,slow=35						
SHEM	Shemya Is, Ala	55.34	315	LR	LR	12 56 45.6	
	comp=Z,186nm,20.2s,baz=122,slow=34						
NNA	Nana	55.65	134	LR	LR	12 56 21.3	
	comp=Z,399nm,18.8s,baz=332,slow=33						
RPN	Rapa Nui	57.77	175	LR	LR	12 54 18.2	
	comp=Z,243nm,21.7s,baz=332,slow=29						
PPT	Papeete	58.89	220	LR	LR	12 54 55.0	
	comp=Z,228nm,18.4s,baz=33,slow=29						
PPT2	Papeete2	58.91	220	*e*S	S	12 43 41.0	+0.8
	comp=Z,65nm,27.8s						
PPT2				*e*SS	SS	12 47 34.2	0.0
	comp=Z,29nm,21.8s						
PPT2				*e*LQ	LQ	12 50 19.0	
	comp=Z,276nm,25.2s						
PPT2				*e*LR	LR	12 52 45.5	
	comp=Z,341nm,24.8s						
PPT2				*e*LR	LR	12 52 45.7	
	comp=Z,336nm,23.2s						
MDP	Montagnes des	63.05	101	LR	LR	13 04 48.1	
	comp=Z,149nm,21.3s,baz=302,slow=37						
TBI	Tubuai	63.56	216	*e*SS	SS	12 48 43.8	-3.2
	comp=Z,966nm,28.5s						
TBI				*e*LQ	LQ	12 52 17.2	
	comp=Z,2µm,39.2s						
TBI				*e*LR	LR	12 55 02.4	
	comp=Z,1µm,27.2s						
LPAZ	La Paz	64.44	130	LR	LR	13 03 15.4	
	comp=Z,334nm,19.0s,baz=319,slow=35						
PETK	Petropavlovsk-	64.94	318	LR	LR	13 01 25.9	
	comp=Z,78nm,21.4s,baz=85,slow=33						
MA2	Magadan	66.42	326	LR	LR	13 04 13.2	
	comp=Z,178nm,20.2s,baz=60,slow=35						
SPITS	Spitsbergen Ar	67.49	10	LR	LR	13 06 34.4	
	comp=Z,638nm,19.6s,baz=313,slow=37						
RAR	Rarotonga	67.73	226	LR	LR	12 59 29.4	
	comp=Z,145nm,18.7s,baz=51,slow=30						
SIV	San Ignacio	69.07	125	LR	LR	13 05 48.2	
	comp=Z,227nm,19.6s,baz=334,slow=35						
ARCES	ARCESS Array B	75.77	14	LR	LR	13 12 04.7	
	comp=Z,484nm,18.2s,baz=330,slow=37						
EKA	Eskdalemuir Ar	76.04	33	LR	LR	13 10 03.3	
	comp=Z,491nm,18.8s,baz=296,slow=35						
ASAJ	Asahikawa	77.78	314	LR	LR	13 05 58.3	
	comp=Z,66nm,20.3s,baz=135,slow=31						
NOA	NORSAR Array B	78.34	24	LR	LR	13 10 59.5	
	comp=Z,196nm,19.7s,baz=320,slow=35						
BDFB	Brasilia	78.56	116	LR	LR	13 15 04.7	
	comp=Z,108nm,21.6s,baz=38,slow=38						
CPUP	Villa Florida	78.62	130	LR	LR	13 11 37.4	
	comp=Z,42nm,21.2s,baz=200,slow=35						
HFS	Hagfors	79.85	24	LR	LR	13 12 40.0	
	comp=Z,280nm,18.4s,baz=308,slow=36						
PLCA	Paso Flores	81.83	148	LR	LR	13 07 25.3	
	comp=Z,221nm,19.6s,baz=332,slow=30						
FINES	FINESS Array B	82.62	18	LR	LR	13 13 25.8	
	comp=Z,463nm,20.1s,baz=328,slow=35						
MJAR	Matsushiro Arr	84.69	310	LR	LR	13 09 15.5	
	comp=Z,240nm,19.1s,baz=51,slow=31						
RAO	Raoul Island	85.09	232	LR	LR	13 06 32.2	
	comp=Z,132nm,21.9s,baz=64,slow=28						
JHJ	Hachijo jima 2	85.54	306	LR	LR	13 13 01.2	
	comp=Z,139nm,18.7s,baz=88,slow=33						
GERES	GERESS Array B	88.11	31	LR	LR	13 16 50.2	
	comp=Z,341nm,19.3s,baz=308,slow=35						
MDT	Midelt	88.19	53	LR	LR	13 18 11.6	
	comp=Z,235nm,18.1s,baz=28,slow=36						
VRAC	Vranov	89.03	30	LR	LR	13 18 00.9	
	comp=Z,304nm,18.1s,baz=323,slow=36						
GUMO	Guam	92.28	287	LR	LR	13 11 30.7	
	comp=Z,347nm,21.8s,baz=70,slow=30						
DZM	Mont Dzumac	92.45	246	LR	LR	13 13 58.2	
	comp=Z,160nm,18.6s,baz=34,slow=31						
DZM	Mont Dzumac	92.45	246	*e*LR	LR	13 08 26.5	
	comp=Z,301nm,23.2s						
AKASG	Malin Array Be	92.67	22	LR	LR	13 19 19.2	
	comp=Z,249nm,21.5s,baz=320,slow=35						
ARTI	Arti	92.95	4	LR	LR	13 23 20.4	
	comp=Z,351nm,20.7s,baz=347,slow=38						
SONM	Songino Array	93.67	334	LR	LR	13 23 58.8	
	comp=Z,216nm,18.9s,baz=18,slow=38						
URZ	Urewera	93.88	227	LR	LR	13 12 10.9	
	comp=Z,123nm,21.6s,baz=44,slow=29						
ZALV	Zalesovo Beam	94.03	349	LR	LR	13 24 34.3	
	comp=Z,201nm,21.0s,baz=28,slow=38						
KEST	Kesra	95.22	43	LR	LR	13 20 45.1	
	comp=Z,139nm,20.9s,baz=6.2,slow=35						
BVAR	Borovoye Array	96.45	357	LR	LR	13 26 45.2	
	comp=Z,304nm,20.4s,baz=358,slow=38						
HHC	Hu-ho-hao-te	97.10	327	*e*P	P	12 39 05.4	-1.5
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,220nm,5.1s						
JOW	Kunigami	97.28	307	LR	LR	13 21 44.0	
	comp=Z,61nm,18.9s,baz=130,slow=35						
KURBB	Kurchatov Arra	98.17	352	LR	LR	13 27 12.6	
	comp=Z,295nm,20.7s,baz=183,slow=38						
WMQ	Urumqi	103.10	344	*e*P	Pdif	12 39 35.2	+1.7
WMQ				LR	LR		
	comp=Z,230nm,24.1s						

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*IDC **12** 12:30:48.0±1.5, 1°.44N×126°.88E, h0^{km}, mb4.1/5, mbtmp4.2/6, ML3.9/1, Error ellipse: s-maj=105.2km s-min=19.6km az=68.0*

*NEIC **12** 12:30:54.7±1.3, 1°.5N±0°.1×126°.88E±0°.10, h47^{km}±13^{km}, mb4.4/11, Error ellipse: s-maj=21.0km s-min=10.0km az=214.0*

*DJA **12** 12:30:56.4±0.4, 2°N±3°×12°7E±°, h65^{km}±13^{km}, M4.0/12, mB5.2/3, mb4.1/7, MLv3.9/12, Mw(mB)4.6/3*

ISC 12 12:30:53.2±1.2, **1°.6N**±0°.1×**126°.85E**±0°.10, **h35**^{km}, **n33**, σ**1^{s}89**/31, **mb4.4**/11, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.97	147		Pn	12 31 10.3	0.0
TNTI	Ternate	0.97	147	P	Pn	12 31 15.3	+5.0
TNTI				S	Sn	12 31 28.2	+5.3

SANI	Sanana	3.72	193	P	Pn	12 31 48.3	+0.1
GTOI	Gorontalo	3.95	256	P	Pn	12 31 53.9	+2.5
NLAI	Namlea	4.81	177	P	Pn	12 32 05.0	+1.8
LUWI	Luwuk	4.84	237	Pn	Pn	12 32 05.7	+2.1
LUWI	Luwuk	4.84	237	P	Pn	12 32 04.9	+1.3
MRSI	Marisa	5.03	257	P	Pn	12 32 07.7	+1.5
KRAI	Karang Ratu	5.12	162	P	Pn	12 32 11.4	+3.9
	0.1nm1µm6.4nm,0.4s						
MSAI	Masohi	5.33	157	P	Pn	12 32 11.8	+1.4
APSI	Ampana	5.76	244	P	Pn	12 32 17.3	+1.0
TOLI2	Tolitoli	6.08	266	Pn	Pn	12 32 21.8	+1.1
MPSI	Mapaga	7.06	260	P	Pn	12 32 35.0	+0.9
SPSI	Sidrap Palu	8.97	232	P	Pn	12 33 01.0	+0.6
	799nm19nm,0.9s						
BNSI	Bone	8.99	228	P	Pn	12 33 00.3	-0.3
	10nm,1.1s						
BKSI	Bulukumba	9.61	224	P	Pn	12 33 10.3	+1.2
MTN	Manton Dam	14.96	164	Pn	Pn	12 34 22.0	-0.2
KNRA	Kununurra	17.26	174		Pn	12 34 51.1	-0.6
KNRA				IAmb	IAmb	12 35 16.1	
	comp=Z,38nm,1.5s						
FITZ	Fitzroy Crossi	19.60	183	P	P	12 35 16.8	-1.8
	comp=Z,0.3nm,0.3s,baz=348,slow=8.1,SNR=7.0						
	comp=Z,15nm,1.1s						
FITZ	Fitzroy Crossi	19.60	183	IAmb	IAmb	12 35 25.0	
	comp=Z,8.0nm,1.4s						
COEN	Coen	22.37	134	P	P	12 35 47.6	-1.0
COEN				IAmb	IAmb	12 36 11.4	
	comp=Z,20nm,1.4s						
WB0	Warramunga Arr	22.48	161	P	P	12 35 48.2	-1.5
WB0				IAmb	IAmb	12 35 49.4	
	comp=Z,21nm,1.3s						
WRAB	Tennant Creek	22.62	161	P	P	12 35 49.8	-1.5
WRAB				IAmb	IAmb	12 35 50.6	
	comp=Z,28nm,1.5s						
WRA	Warramunga Arr	22.63	161	P	P	12 35 49.2	-2.1
	comp=Z,5.5nm,0.4s,baz=340,slow=11,SNR=76						
	comp=Z,5.5nm,0.4s						
WR8	Warramunga Arr	22.69	161	P	P	12 35 50.4	-1.6
WR8				IAmb	IAmb	12 35 52.4	
	comp=Z,28nm,1.4s						
AS31	Alice Springs	26.03	165	P	P	12 36 22.2	-1.2
AS31				IAmb	IAmb	12 36 25.1	
	comp=Z,3.7nm,0.4s						
ASAR	Alice Springs	26.03	165	P	P	12 36 21.7	-1.6
	comp=Z,2.8nm,0.4s,baz=341,slow=8.5,SNR=54						
	comp=Z,2.8nm,0.4s						
FORT	Forrest	32.21	178	P	P	12 37 16.3	-1.9
FORT				IAmb	IAmb	12 37 44.4	
	comp=Z,14nm,1.1s						
BBOO	Buckleboo	35.31	167	P	P	12 37 43.8	-1.3
STKA	Stephens Creek	36.11	158	P	P	12 37 50.0	-2.0
	comp=Z,0.6nm,0.3s,baz=357,slow=9.2,SNR=4.4						
	comp=Z,0.6nm,0.3s						
STKA	Stephens Creek	36.11	158	IAmb	IAmb	12 37 57.1	
	comp=Z,32nm,1.4s						
MKAR	Makanchi Array	59.37	326	P	P	12 40 52.9	+0.9
	comp=Z,0.2nm,0.4s,baz=124,slow=7.9,SNR=5.3						
	comp=Z,0.2nm,0.4s						
KURBB	Kurchatov Arra	63.59	328	P	P	12 41 21.8	+1.3
	comp=Z,1.0nm,0.2s,baz=108,slow=5.0,SNR=1.3						
	comp=Z,1.0nm,0.2s						

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*IDC **12** 12:31:48.2±1.4, 30°.51S×177°.54W, h0^{km}, mb4.5/4, mbtmp4.4/5, ML3.7/1, Error ellipse: s-maj=38.9km s-min=22.1km az=118.0*

*NEIC **12** 12:31:56.4±1.2, 30°.20S±0°.04×177°.8W±0°.2, h39^{km}±13^{km}, mb4.6/14, Error ellipse: s-maj=29.6km s-min=6.0km az=84.0*

ISC 12 12:31:54.1±1.0, **30°.39S**±0°.06×**177°.8W**±0°.2, **h35**^{km}, **n59**, σ**1^{s}93**/61, **mb4.6**/12, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.13	356	P	Pn	12 32 13.2	-0.1
GLKZ				S	Sn	12 32 25.5	-2.1
RAO	Raoul Island	1.14	357	Pn	Pn	12 32 13.4	-0.1
	144nm,0.3s,baz=46,slow=20,SNR=9.3						
RAO				Sn	Sn	12 32 26.2	-1.7
	1µm,0.3s,baz=310,slow=20,SNR=15						
RAO	Raoul Island	1.14	357	P	Pn	12 32 13.5	0.0
RAO				S	Sn	12 32 25.6	-2.3
RIZ	Raoul Island	1.15	356	P	Pn	12 32 12.3	-1.4
RIZ				S	Sn	12 32 25.1	-3.0
WMGZ	Waiomatatini S	8.03	202	P	Pn	12 33 47.3	-0.9
WMGZ				S	Sn	12 35 17.8	0.0
PKGZ	Pakihiroa	8.19	203	P	Pn	12 33 48.5	-1.8
HAZ	Te Kaha	8.19	205	P	Pn	12 33 49.8	-0.7
HAZ				S	Sn	12 35 22.8	+1.1
PUZ	Puketiti	8.31	202	P	Pn	12 33 50.3	-1.8
RUGZ	Raukumara Rang	8.42	205	P	Pn	12 33 53.0	-0.6
TWGZ	Tauwhareparae	8.50	203	P	Pn	12 33 53.6	-1.1
TWGZ				S	Sn	12 35 29.0	-0.4
WCZ	Waipu Caves	8.57	228	P	Pn	12 34 05.3	+10
OUZ	Omahuta	8.67	234	P	Pn	12 34 05.4	+8.4
MWZ	Matawai	8.80	205	P	Pn	12 33 57.3	-1.5
MWZ				S	Sn	12 35 34.6	-2.1
URZ	Urewera	8.89	207	Pn	Pn	12 33 57.7	-2.3
	0.8nm,0.3s,baz=4.6,slow=16,SNR=7.3						
URZ				Sn	Sn	12 35 38.4	-0.4
	4.2nm,0.3s,baz=260,slow=6.4,SNR=11						
	2.0nm,0.3s						
URZ	Urewera	8.89	207	P	Pn	12 33 58.1	-1.9
URZ				S	Sn	12 35 37.8	-1.0
RIGZ	Rimuhau	9.05	202	P	Pn	12 34 00.6	-1.6
RIGZ				S	Sn	12 35 39.3	-3.6
MUGZ	Murupara	9.21	207	P	Pn	12 34 01.7	-2.7
MUGZ				S	Sn	12 35 43.9	-2.9
RTZ	Ruatahuna	9.25	206	Pn	Pn	12 34 09.6	+4.6
MTHZ	Maungataniwha	9.51	206	P	Pn	12 34 06.9	-1.6
MTHZ				S	Sn	12 35 53.3	-0.9
BKZ	Black Stump Fm	9.91	206	P	Pn	12 34 11.8	-2.3
BKZ				S	Sn	12 35 59.4	-4.7
TSZ	Takapari Road	10.89	206	P	Pn	12 34 23.9	-3.6
BFZ	Birch Farm	11.34	203	P	Pn	12 34 28.7	-4.8
CTZ	Chatham Island	13.35	176	P	Pn	12 35 01.6	+0.5
LTZ	Lake Taylor	14.68	210	Pn	P	12 35 25.2	+0.3
CAN	Canberra	28.21	251	P	P	12 37 44.6	+1.0
CAN				IAmb	IAmb	12 38 07.6	
	comp=Z,31nm,1.3s						
CTAO	Charters Tower	33.93	279	P	P	12 38 37.1	+3.0
STKA	Stephens Creek	34.62	257	P	P	12 38 42.4	+2.5
	comp=Z,8.0nm,0.7s,baz=96,slow=9.1,SNR=15						
	comp=Z,8.0nm,0.7s						
STKA	Stephens Creek	34.62	257	P	P	12 38 43.0	+3.0
PMG	Port Moresby	38.73	295	P	P	12 39 15.8	+0.7
PMG				IAmb	IAmb	12 39 28.5	
	comp=Z,10.0nm,0.6s						
BBOO	Buckleboo	39.10	254	P	P	12 39 20.3	+2.2
BBOO				IAmb	IAmb	12 39 37.3	
	comp=Z,20nm,1.2s						
COEN	Coen	39.40	286	P	P	12 39 20.0	-0.8
AS31	Alice Springs	43.25	267	P	P	12 39 53.9	+1.6
ASAR	Alice Springs	43.25	267	P	P	12 39 52.9	+0.6
	comp=Z,2.3nm,0.5s,baz=105,slow=7.5,SNR=28						
	comp=Z,2.3nm,0.5s						
WR8	Warramunga Arr	44.09	272	P	P	12 40 00.5	+1.4
WR8				IAmb	IAmb	12 40 02.2	
	comp=Z,3.0nm,0.6s						
WRAB	Tennant Creek	44.23	272	P	P	12 40 01.6	+1.4
WRAB				IAmb	IAmb	12 40 02.1	
	comp=Z,4.7nm,0.7s						
WRA	Warramunga Arr	44.24	272	P	P	12 40 00.7	+0.4
	comp=Z,6.3nm,0.6s,baz=111,slow=8.1,SNR=35						
	comp=Z,6.3nm,0.6s						
WRA	Warramunga Arr	44.24	272	P	P	12 40 00.5	+0.2
WB0	Warramunga Arr	44.26	272	P	P	12 40 01.0	+0.6
WB0				IAmb	IAmb	12 40 02.3	
	comp=Z,7.6nm,0.7s						
FORT	Forrest	46.18	255	P	P	12 40 16.4	+0.9
FORT				IAmb	IAmb	12 40 45.2	
	comp=Z,7.8nm,1.0s						
KNRA	Kununurra	50.84	274	P	P	12 40 53.6	+2.0
KNRA				IAmb	IAmb	12 40 53.8	
	comp=Z,12nm,1.4s						
FITZ	Fitzroy Crossi	52.50	270	P	P	12 41 05.7	+1.8
	comp=Z,3.8nm,1.0s,baz=117,slow=4.5,SNR=2.8						
	comp=Z,3.8nm,1.0s						
FITZ	Fitzroy Crossi	52.50	270	IAmb	IAmb	12 41 07.1	
	comp=Z,2.4nm,1.3s						
H03S2	Juan Fernandez	80.35	123	T	T	14 13 12.9	
	baz=238,slow=74,SNR=26						
H03S1	Juan Fernandez	80.36	123	T	T	14 13 12.8	
	baz=238,slow=74,SNR=26						
H03S3	Juan Fernandez	80.37	123	T	T	14 13 10.8	
	baz=238,slow=74,SNR=26						
H03N3	Juan Fernandez	80.55	123	T	T	14 13 24.3	
	baz=242,slow=72,SNR=16						
H03N2	Juan Fernandez	80.55	123	T	T	14 13 25.7	
	baz=242,slow=72,SNR=14						
H03N1	Juan Fernandez	80.56	123	T	T	14 13 22.5	
	baz=242,slow=72,SNR=19						
KURK	Kurchatov	121.14	314		PKPdf	12 50 42.4	-0.4
KURBB	Kurchatov Arra	121.18	314	PKP	PKPdf	12 50 42.4	-0.4
	comp=Z,0.6nm,0.6s,baz=99,slow=1.9,SNR=6.7						
BVAR	Borovoye Array	126.50	316	PKP	PKPdf	12 50 53.1	+0.2
	comp=Z,0.7nm,0.5s,baz=90,slow=3.5,SNR=4.4						
H10N3	ASCENSION HYDR	138.76	154	T	T	15 27 09.9	
	baz=204,slow=75,SNR=19						
H10N1	ASCENSION HYDR	138.76	155	T	T	15 27 04.7	
	baz=204,slow=75,SNR=15						
H10N2	ASCENSION HYDR	138.77	154	T	T	15 27 04.5	
	baz=204,slow=75,SNR=27						
FINES	FINESS Array B	145.19	340	PKPbc	PKPbc	12 51 26.6	-0.3
	comp=Z,5.1nm,0.8s,baz=50,slow=4.1,SNR=14						
FINES	FINESS Array B	145.19	340	P	PKPbc	12 51 26.6	-0.3
HFS	Hagfors	149.26	349	PKPbc	PKPbc	12 51 38.7	+0.3
	comp=Z,2.7nm,0.8s,baz=27,slow=8.1,SNR=4.8						
HFS	Hagfors	149.26	349	P	PKPbc	12 51 38.7	+0.3
AKASG	Malin Array Be	151.38	323	PKPbc	PKPbc	12 51 43.5	-0.1
	comp=Z,1.7nm,0.6s,baz=53,slow=2.5,SNR=7.1						

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*JMA **12** 12:37:30.5±0.3, 25°N±2°×12°3E±°, h9^{km}, MV2.5/10, NW OFF ISHIGAKIJIMA IS*

*TAP **12** 12:37:30.6, 24°.89N×122°.66E, h13^{km}, ML3.1, D*

ISC 12 12:37:30.2±1.1, **24°.88N**±0°.04×**122°.63E**±0°.02, **h11**^{km}±10^{km}, **n50**, σ**0^{s}45**/75, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.51	146	P	Pg	12 37 40.2	0.0
JYNG				*e*S	Sg	12 37 46.9	0.0
YOJ	Yonaguni jima	0.54	140	*i* P	Pg	12 37 40.6	-0.1
YOJ				*i* S	Sg	12 37 48.5	+0.7
YOJ	Yonaguni jima	0.54	140	P	Pg	12 37 40.6	-0.1
YOJ				*e*S	Sg	12 37 46.7	-1.1
EOS2	EOS2	0.58	219	*i* P	Pb	12 37 42.3	0.0
EOS2				*e*S	Sb	12 37 51.5	+0.9
TWB1	Santiao Chiao	0.60	283	P	Pg	12 37 42.2	+0.4
EGS		0.64	267	*e*P	Pg	12 37 43.1	+0.6
EGS				*e*S	Sb	12 37 52.7	+0.5
EOS3	EOS3	0.65	206	P	Pb	12 37 43.5	0.0
EOS3				S	Sb	12 37 53.2	+0.7
SXI1	Grass Mountain	0.72	288	P	Pg	12 37 44.2	+0.1
TIPB	Shuangxi	0.74	278	*e*P	Pg	12 37 44.6	+0.2
TWC	Suao	0.76	250	P	Pg	12 37 44.4	-0.4
TWC				*e*S	Sb	12 37 55.5	-0.2
WFSB	Wu-fen Shan	0.80	284	*e*P	Pg	12 37 46.0	+0.4
EOS4	EOS4	0.80	201	*e*P	Pb	12 37 46.1	+0.2
EOS4				*e*S	Sb	12 37 56.6	-0.1
NDS	Dongshan	0.87	254	*e*P	Pg	12 37 47.1	+0.2
EWUT	Wuta	0.89	241	*e*P	Pg	12 37 46.6	-0.7
TWE	Neicheng	0.89	260	*e*P	Pg	12 37 47.6	+0.3
TWE				*e*S	Sb	12 37 59.5	0.0
PCYT	Pengchaiyu	0.91	326	*i* P	Pg	12 37 47.2	-0.4
PCYT				S	Sg	12 37 59.3	-0.1
ENA	Nanau	0.92	241	*e*P	Pg	12 37 47.6	-0.4
ENA				*e*S	Sg	12 38 00.2	+0.2
FUSB	Fushanzhiwuyua	0.95	263	*e*P	Pg	12 37 48.4	-0.1
FUSB				*e*S	Sb	12 38 01.9	+0.4
EAHA	Aohua	0.98	236	*e*P	Pg	12 37 49.0	0.0
EAHA				*e*S	Sb	12 38 02.0	0.0
YM08	YM08	0.99	288	*e*P	Pg	12 37 49.3	0.0
ENTT	Nioudou	1.00	257	*e*P	Pb	12 37 50.0	+0.5
ENTT				*e*S	Sb	12 38 02.7	+0.1
YM01	YM01	1.00	286	*e*P	Pg	12 37 49.2	-0.2
NWLT	Wulai	1.03	265	*e*P	Pg	12 37 48.8	-1.2
LATG	Datong	1.06	252	*e*P	Pg	12 37 50.0	-0.5
LATG				*e*S	Sb	12 38 04.6	+0.1
IRIF	Iriomote-Funau	1.14	118	*e*P	Pb	12 37 51.6	-0.3
IRIF				*e*S	Sg	12 38 07.1	+0.3
YHNB	Yeheng	1.16	260	*e*P	Pb	12 37 52.1	-0.2
YHNB				*e*S	Sg	12 38 07.8	+0.2
ETL	Fush Village	1.16	232	*e*P	Pb	12 37 52.4	+0.1
NACB	Ninganchiao	1.17	234	P	Pb	12 37 52.2	-0.3
NACB				*e*S	Sn	12 38 08.4	-0.2
NSK	Sanguang	1.17	260	*e*P	Pb	12 37 52.6	+0.1
NNSH	Datong	1.22	249	*e*P	Pn	12 37 52.6	-0.7
NNSB	Datong	1.22	249	*e*P	Pn	12 37 52.4	-0.9
NNS	Nan Shan	1.22	249	*e*P	Pn	12 37 53.1	-0.2
NNS				*e*S	Sb	12 38 08.6	-0.7
TWD	Chiawan	1.23	230	P	Pn	12 37 53.1	-0.3
ETLH	Xiulin Townshi	1.24	238	*e*P	Pn	12 37 53.2	-0.3
NFF	Wufeng Townshi	1.40	260	*e*P	Pn	12 37 55.4	-0.3
JKRS	Kuro-shima	1.41	117	*e*P	Pg	12 37 57.3	+0.1
FUSS	Fushou	1.41	244	P	Pb	12 37 56.7	0.0
WHF	Hehuan Shan	1.44	240	*e*P	Pn	12 37 57.0	+0.4
SHUL	Shoufeng	1.46	222	*e*P	Pn	12 37 56.2	-0.2
SHUL				*e*S	Sb	12 38 16.0	+0.1
TWT	Tachien	1.46	245	*e*P	Pb	12 37 57.6	+0.1
JIJ	Ishigaki jima	1.47	110	*e*P	Pg	12 37 58.4	+0.1
TDCB	Techi	1.48	245	*e*P	Pb	12 37 57.8	+0.1
ESL	Shilin	1.52	226	*e*P	Pn	12 37 56.9	-0.4
ESL				*e*S	Sn	12 38 16.7	-0.4
OWD	Renai	1.61	236	P	Pn	12 37 59.2	+0.5
WARBT	Fenglin Townsh	1.62	225	*e*P	Pn	12 37 58.0	-0.7
WUSB	Renai	1.64	238	*i* P	Pn	12 37 59.8	+0.8
WUSB				*e*S	Sb	12 38 21.7	+0.5
WHP	Taichung City	1.65	249	*e*P	Pb	12 38 01.1	+0.5
WHP				*e*S	Sg	12 38 22.6	-0.6
VWDT	VWDT	1.76	231	*e*P	Pn	12 38 01.1	+0.5
VWDT				*e*S	Sn	12 38 23.4	+0.4
SMLT	Sun Moon Lake	1.86	238	*e*P	Pb	12 38 04.3	0.0
SMLT				*e*S	Sb	12 38 27.5	-0.1
WHYT	Xinyi Township	2.00	234	*e*P	Pn	12 38 04.9	+0.9

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*IDC **12** 12:44:32.8±2.5, 49°.89N×27°.53E, h0^{km}, mbtmp3.8/3, ML2.8/3, Error ellipse: s-maj=26.3km s-min=15.1km az=22.0*

ISC 12 12:44:34.6±2.1, **50°.3N**±0°.2×**27°.36E**±0°.09, **h10**^{km}, **n6**, σ**1^{s}75**/5, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKASG	Malin Array Be	1.27	69	Pg	Pg	12 44 58.9	-0.1
	18nm,0.3s,baz=252,slow=13,SNR=38						
AKASG				Lg	Lg	12 45 16.2	
	15nm,0.3s,baz=234,slow=39,SNR=11						
STHS	Stebnicka Huta	4.05	260	*e*PN	Pg	12 45 52.6	+0.5
STHS				*e*SN	Sg	12 46 43.2	-1.3
I43RU	DUBNA INFRASON	8.74	38	I	I	13 38 00.0	
	baz=223,slow=319,SNR=3.6						
FINES	FINESS Array B	11.24	357	Pn	Pn	12 47 14.2	-0.9
	0.2nm,0.3s,baz=179,slow=12,SNR=4.5						
	2.5nm,0.8s						
HFS	Hagfors	12.58	327	Pn	Pn	12 47 31.1	-2.2
	0.1nm,0.3s,baz=143,slow=14,SNR=2.0						
	1.8nm,0.6s						
ARCES	ARCESS Array B	19.36	358	P	P	12 49 01.8	+1.8
	0.1nm,0.3s,baz=177,slow=11,SNR=6.0						
	2.3nm,0.9s						

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*IDC **12** 12:45:16.4±0.7, 83°.32N×115°.77E, h0^{km}, mb3.8/13, mbtmp3.9/15, ML3.4/2, MS3.6/4, Error ellipse: s-maj=25.4km s-min=14.7km az=136.0*

*MOS **12** 12:45:16.4±1.4, 83°.36N×114°.49E, h10^{km}, mb4.5/19, Error ellipse: s-maj=67.4km s-min=8.0km az=87.7*

*NEIC **12** 12:45:18.8±1.7, 83°.4N±0°.1×114°.3E±0°.9, h10^{km}±1^{km}, mb4.3/34, Error ellipse: s-maj=17.8km s-min=16.1km az=141.0*

ISC 12 12:45:18.3±0.5, **83°.43N**±0°.07×**113°.82E**±0°.05, **h10**^{km}, **n88**, σ**1^{s}66**/88, **mb4.3**/42, **MS3.9**/3, **7C-9D**, **North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZFI2	Zemlya Franca-	8.92	288	*e*P	Pn	12 47 26.6	-0.3
ZFI2				*e*S	Sn	12 49 00.9	-6.3
	16nm,2.8s						
OMEGA	Omega	8.93	288	*e*P	Pn	12 47 26.7	-0.3
OMEGA				*e*S	Sn	12 49 01.0	-6.5
TIXI	Tiksi	12.20	157	Pn	Pn	12 48 08.5	-3.2
	0.1nm,0.3s,baz=356,slow=3.2,SNR=1.2						
TIXI				LR	LR	12 52 47.6	
	comp=Z,46nm,18.1s,baz=11,slow=38						
	1.7nm,0.2s						
TIXI	Tiksi	12.20	157		Pn	12 48 12.1	+0.5
TIXI	Tiksi	12.20	157	⇓*i*P	Pn	12 48 10.8	-0.9
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SPITS	Spitsbergen Ar	14.32	304	Pn	Pn	12 48 40.0	-0.7
	baz=37,slow=17						
NRIK	Noril'sk	15.13	217	Pn	Pn	12 48 51.8	+0.2
	comp=Z,0.3nm,0.3s,baz=31,slow=9.6,SNR=8.6						
NRIK				LR	LR	12 54 44.6	
	comp=Z,267nm,19.6s,baz=356,slow=37						
	comp=Z,3.7nm,0.5s						
NRIK	Noril'sk	15.13	217		Pn	12 48 52.0	+0.4
NRIK				IAmb	IAmb	12 49 04.9	
	comp=Z,11nm,1.1s						
NRIK	Noril'sk	15.13	217	⇑*e*P	Pn	12 48 53.3	+1.7
NRIK				pmax	pmax		
	comp=Z,11nm,1.0s						
BILL	Bilibino	18.77	112	P	P	12 49 36.5	-0.5
BILL	Bilibino	18.77	112	⇓*e*P	P	12 49 36.5	-0.5
BILL				pmax	pmax		
	comp=Z,18nm,1.5s						
B20K	Meade River	21.03	73		P	12 49 59.9	-1.6
ARCES	ARCESS Array B	21.40	286	P	P	12 50 07.3	+1.7
	comp=Z,2.4nm,0.6s,baz=17,slow=8.9,SNR=6.6						
	comp=Z,2.4nm,0.6s						
ARCES	ARCESS Array B	21.40	286	IAmb	IAmb	12 50 27.5	
	comp=Z,15nm,1.4s						
ARCES	ARCESS Array B	21.40	286	*e*P	P	12 50 11.0	+5.4
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
C19K	Lookout Ridge	21.62	76		P	12 50 08.9	+0.9
C19K				IAmb	IAmb	12 50 22.1	
	comp=Z,18nm,1.5s						
B21K	Ikpikpuk River	21.67	71		P	12 50 09.2	+0.7
B21K				IAmb	IAmb	12 50 34.2	
	comp=Z,18nm,1.2s						
YAK	Yakutsk	21.83	160	*e*P	P	12 50 09.0	-1.2
YAK				*e*		12 50 29.6	
YAK				*e*S	S	12 54 08.4	-2.7
YAK				*e*		12 54 10.6	
YAK				*e*		13 01 30.0	
YAK				pmax	pmax		
	comp=Z,15nm,1.0s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,192nm,4.1s						
YAK				pmax	pmax		
	comp=E,133nm,4.4s						
YAK				smax	smax		
	comp=E,138nm,3.0s						
YAK				smax	smax		
	comp=N,103nm,3.6s						
C18K	Utukok River	21.87	78		P	12 50 10.7	0.0
C18K				IAmb	IAmb	12 50 31.6	
	comp=Z,31nm,1.5s						
C23K	Itkillik River	21.90	68		P	12 50 11.1	+0.2
C23K				IAmb	IAmb	12 50 21.9	
	comp=Z,16nm,1.1s						
A36M	Sachs Harbour	22.24	45		P	12 50 14.5	0.0
D20K	Etivluk River	22.32	74		P	12 50 15.6	+0.1
D20K				IAmb	IAmb	12 50 23.8	
	comp=Z,23nm,1.5s						
D19K	Kuna River	22.36	76	P	P	12 50 15.5	-0.5
D19K				IAmb	IAmb	12 50 24.7	
	comp=Z,16nm,1.1s						
APA	Apatity	22.39	276	*e*P	P	12 50 14.2	-1.9
APA				MLR	MLR		
	comp=Z,2µm,6.8s						
SEY	Seymchan	22.40	132	*e*P	P	12 50 14.4	-2.0
SEY				pmax	pmax		
	comp=Z,20nm,1.6s						
D22K	Ayikyak River	22.59	70	P	P	12 50 19.0	+0.6
D22K				IAmb	IAmb	12 50 29.0	
	comp=Z,15nm,1.1s						
D23K	Nanushuk River	22.73	68		P	12 50 20.5	+0.7
D23K				IAmb	IAmb	12 50 32.0	
	comp=Z,20nm,1.4s						
D25K	Kavik River	22.84	64	P	P	12 50 21.5	+0.4
D25K				IAmb	IAmb	12 50 30.0	
	comp=Z,20nm,1.4s						
E18K	Tukpahlearik C	23.11	79		P	12 50 23.6	-0.2
E18K				IAmb	IAmb	12 50 45.2	
	comp=Z,9.5nm,1.1s						
E22K	Anaktuvuk Pass	23.40	70	P	P	12 50 28.0	+1.2
E22K				IAmb	IAmb	12 50 44.9	
	comp=Z,10nm,1.3s						
E19K	Redstone River	23.46	76		P	12 50 26.3	-1.0
E19K				IAmb	IAmb	12 50 38.3	
	comp=Z,14nm,1.2s						
E23K	Chandalar	23.71	68	IAmb	IAmb	12 50 40.6	
	comp=Z,21nm,1.4s						
F17K	Baldwin Pennin	23.98	80	P	P	12 50 32.7	+0.4
F24K	Squaw Lake	24.42	67		P	12 50 37.9	+1.4
F24K				IAmb	IAmb	12 51 05.0	
	comp=Z,8.3nm,1.2s						
BMAR	Burnt Mountain	24.85	64	P	P	12 50 41.3	+0.9
F30M	Barrier River	25.55	56		P	12 50 47.9	+1.2
MA2	Magadan	25.59	135	⇑*i*P	P	12 50 46.1	-0.9
MA2				pmax	pmax		
	comp=Z,16nm,1.3s						
H29M	Whitestone	26.66	59	P	P	12 50 58.0	+1.3
COLA	College	26.99	69	⇓*e*P	P	12 50 59.0	-0.5
COLA				pmax	pmax		
	comp=Z,25nm,2.3s						
ILAR	Eielson Array	27.19	68	P	P	12 50 59.9	-1.5
	comp=Z,0.6nm,0.9s,baz=333,slow=6.9,SNR=6.2						
	comp=Z,0.6nm,0.9s						
ILAR	Eielson Array	27.19	68	*e*P	P	12 51 02.8	+1.4
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
KLMR	Klimovskoe	28.18	266	*e*P	P	12 51 08.9	-1.4
KLMR				pmax	pmax		
	comp=Z,15nm,1.4s						
BCAR	Beaver Creek A	29.39	64	P	P	12 51 22.3	+1.2
ARTI	Arti	30.47	245	*c i*P	P	12 51 30.6	0.0
ARTI						12 52 30.6	
ARTI				S	S	12 56 33.5	+2.3
ARTI				SS	SnSn	12 58 06.0	-0.5
ZALV	Zalesovo Beam	30.59	214	P	P	12 51 31.9	+0.2
	comp=Z,0.6nm,0.3s,baz=350,slow=7.9,SNR=1.5						
	comp=Z,0.6nm,0.3s						
YKA	Yellowknife Ar	32.41	40	P	P	12 51 46.5	-1.1
	comp=Z,0.4nm,0.8s,baz=344,slow=8.9,SNR=5.4						
YKA				LR	LR	13 05 48.0	
	comp=Z,164nm,18.1s,baz=316,slow=38						
	comp=Z,0.4nm,0.8s						
BORK	Borovoye	32.61	230	⇓*e*P	P	12 51 48.8	-0.7
BORK				pmax	pmax		
	comp=Z,14nm,2.8s						
BVAR	Borovoye Array	32.63	230	P	P	12 51 50.7	+1.1
	comp=Z,1.2nm,0.8s,baz=4.6,slow=7.4,SNR=5.2						
	comp=Z,1.2nm,0.8s						
KNGR	Kungurtug, Tuv	33.28	199	⇑*e*P	P	12 51 54.1	-1.4
KNGR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
OBN	Obninsk	34.14	267	*e*P	P	12 52 04.0	+1.3
OBN				*e*		12 53 18.3	
OBN				*e*PPP	PPP	12 53 32.9	
OBN				*e*		12 54 41.7	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,101nm,10.0s						
KURK	Kurchatov	34.24	221	P	P	12 52 05.0	+1.3
KURK	Kurchatov	34.24	221	IAmb	IAmb	12 52 08.2	
	comp=Z,1.2nm,0.6s						
KURK	Kurchatov	34.24	221	⇑*i*P	P	12 52 03.9	+0.2
KURK				pmax	pmax		
	comp=Z,13nm,3.8s						
KURBB	Kurchatov Arra	34.34	221	P	P	12 52 05.0	+0.4
	comp=Z,0.7nm,0.6s,baz=22,slow=7.4,SNR=8.3						
	comp=Z,0.7nm,0.6s						
DGZ	Jazzator, Alta	34.67	210	⇑*i*P	P	12 52 08.5	+0.9
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.8s						
BELG	Belogornoye	35.56	255	⇓*e*P	P	12 52 20.4	+5.4
BELG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	Songino Array	35.80	189	P	P	12 52 16.4	-1.0

	comp=Z,0.3nm,0.4s,baz=21,slow=8.5,SNR=1.7						
	comp=Z,0.3nm,0.4s						
AKTO	**Aktyubinsk**	**36.38**	**243**	P	**P**	**12 52 22.9**	**+0.8**
	comp=Z,1.3nm,0.5s,baz=352,slow=7.2,SNR=4.2						
	comp=Z,1.3nm,0.5s						
AB31	**Akbulak array**	**37.35**	**241**	P	**P**	**12 52 30.6**	**+0.2**
ABKAR	**Akbulak array**	**37.35**	**241**	P	**P**	**12 52 29.9**	**-0.4**
MK31	**Makanchi Array**	**37.89**	**216**	⇓*e*P	**P**	**12 52 32.5**	**-2.4**
MKAR	**Makanchi Array**	**37.89**	**216**	P	**P**	**12 52 34.8**	**-0.1**
	comp=Z,2.8nm,0.8s,baz=3.8,slow=7.3,SNR=16						
MKAR				PcP	**PcP**	**12 54 50.1**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=5.7,slow=1.4,SNR=2.2						
	comp=Z,2.8nm,0.8s						
MKAR	**Makanchi Array**	**37.89**	**216**	*e*P	**P**	**12 52 34.7**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MAKZ	**Makanchi**	**37.89**	**216**	P	**P**	**12 52 34.8**	**-0.2**
MAKZ				IAmb	IAmb	12 52 35.5	
	comp=Z,5.2nm,1.1s						
MAKZ	**Makanchi**	**37.89**	**216**	P	**P**	**12 52 34.8**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.2s						
AAK	**Ala-Archa**	**42.59**	**224**	⇓*e*P	**P**	**12 53 16.4**	**+2.3**
BOOM	**Boomskoye usch**	**42.63**	**222**		**P**	**12 53 16.6**	**+2.2**
BOOM				IAmb	IAmb	12 53 17.0	
	comp=Z,5.5nm,0.9s						
BOOM	**Boomskoye usch**	**42.63**	**222**	P	**P**	**12 53 16.6**	**+2.2**
BOOM				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TARG	**Taragay, Kyrgy**	**43.24**	**220**		**P**	**12 53 20.7**	**+1.0**
TARG	**Taragay, Kyrgy**	**43.24**	**220**	P	**P**	**12 53 20.7**	**+1.0**
TARG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KIV	**Kislovodsk**	**44.44**	**257**	*e*P	**P**	**12 53 30.0**	**+1.1**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SHA1	**Shidzhatmaz**	**44.66**	**257**	⇓*e*P	**P**	**12 53 33.4**	**+2.6**
BOZ	**Bozeman (W)**	**49.41**	**41**	P	**P**	**12 54 08.3**	**+0.6**
BOZ	**Bozeman (W)**	**49.41**	**41**	P	**P**	**12 54 08.4**	**+0.6**
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BR131	**Keskin Array S**	**49.65**	**266**	⇑*e*P	**P**	**12 54 11.0**	**+1.4**
BRTR	**Keskin Array B**	**49.65**	**266**	P	**P**	**12 54 11.2**	**+1.5**
	comp=Z,1.5nm,0.9s,baz=354,slow=11,SNR=4.0						
	comp=Z,1.5nm,0.9s						
BRTR	**Keskin Array B**	**49.65**	**266**	*e*P	**P**	**12 54 12.2**	**+2.5**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BCYI	**Bear Canyon**	**50.56**	**43**	P	**P**	**12 54 17.0**	**+0.4**
NIL	**Nilore**	**51.62**	**224**		**P**	**12 54 25.9**	**+1.5**
NIL	**Nilore**	**51.62**	**224**	P	**P**	**12 54 25.9**	**+1.5**
NIL				pmax	pmax		
	comp=Z,15nm,1.1s						
ANMO	**Albuquerque**	**60.38**	**38**	LR	LR	13 22 14.3	
	comp=Z,112nm,18.3s,baz=28,slow=37						
ANMO	**Albuquerque**	**60.38**	**38**	⇓*i*P	**P**	**12 55 27.5**	**+0.2**
ANMO				pmax	pmax		
	comp=Z,24nm,3.8s						
VHRN	**Van Horn**	**64.62**	**37**		**P**	**12 55 55.9**	**+0.3**
CMAR	**Chiang Mai Arr**	**65.27**	**196**	P	**P**	**12 55 59.5**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=2.2,slow=9.3,SNR=4.3						
	comp=Z,0.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**65.27**	**196**	*e*P	**P**	**12 56 00.7**	**+0.9**
TXAR	**Lajitas Array**	**66.15**	**36**	P	**P**	**12 56 05.0**	**-0.5**
	comp=Z,1.6nm,0.9s,baz=7.2,slow=6.7,SNR=13						
	comp=Z,1.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**79.50**	**293**	P	**P**	**12 57 25.6**	**+0.9**
	comp=Z,2.3nm,0.9s,baz=5.7,slow=2.9,SNR=5.1						
	comp=Z,2.3nm,0.9s						
TORD	**Torodi Ar. Bea**	**79.50**	**293**	IAmb	IAmb	12 57 26.3	
	comp=Z,2.6nm,1.1s						

DJA 12 12:47:27.4±0.4,**0°N**±5°×**10°0E**±°,**h168**^{km}±7^{km},**M3.9**/14, **mb4.6**/4,**MLv3.6**/14,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**0.62**	**181**	P	Pn	12 47 52.3	+0.9
MNSI	**Mandailing Nat**	**1.04**	**307**	P	Pn	12 47 54.6	+0.4
PDSI	**Padang**	**1.08**	**177**	P	Pn	12 47 55.3	+0.7
SISI	**Saibi**	**1.99**	**222**	P	Pn	12 48 03.4	-0.1
PBSI	**Pulau Batu**	**2.14**	**264**	P	Pn	12 48 05.7	+0.5
PPSI	**Pulau Pagai**	**2.94**	**188**	P	Pn	12 48 14.4	-0.4
GSI	**Gunungsitoli**	**3.05**	**292**	P	Pn	12 48 16.3	+0.2
KCSI	**Kotacane, Aceh**	**4.25**	**322**	P	Pn	12 48 31.4	0.0
TPTI		**4.45**	**314**	P	Pn	12 48 33.9	-0.1
SNSI	**Sinabang, Aceh**	**4.65**	**299**	P	Pn	12 48 37.2	+0.6
MNAI	**Manna**	**5.17**	**151**	P	Pn	12 48 43.8	+0.4
	199nm,1.1s						
PMBI	**Palembang**	**5.34**	**125**	P	Pn	12 48 44.1	-1.5
	246nm,0.4s						
MLSI	**Meulaboh, Aceh**	**5.71**	**316**	P	Pn	12 48 50.0	-0.5
	0.2nm57nm,1.0s						
TPI	**Tanjungpandan**	**7.80**	**112**	P	Pn	12 49 18.7	+0.5

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*RSNC **12** 12:55:37.6±0.0,3°N±1°×7°6W±°,h1^{km}±2^{km},M3.4,ML2.9*
*IDC **12** 12:55:47.5±1.5,3°.23N×76°.28W,h0^{km},mb3.0/1, mbtmp3.6/4,ML2.8/3,Error ellipse: s-maj=46.3km s-min=17.1km az=138.0*
ISC 12 12:55:45.4±1.2,**2°.95N**±0°.03×**76°.08W**±0°.02,**h5**^{km}±9^{km},**n32**, σ1^{s}**38**/55,**Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAMC	**Jamundi, Valle**	**0.65**	**294**	P	**Pn**	**12 56 00.1**	**-1.5**
JAMC				S	**Sn**	**12 56 09.9**	**-2.5**
BETC	**Betania**	**0.69**	**112**	P	**Pg**	**12 55 58.7**	**+0.1**
BETC				S	**Sg**	**12 56 07.9**	**+0.3**
POPC	**Popayan, Colom**	**0.72**	**236**	P	**Pb**	**12 56 00.2**	**-0.5**
POPC				S	**Sg**	**12 56 09.2**	**+0.5**
GARC	**Garzon, Huila**	**0.95**	**142**	P	**Pg**	**12 56 03.8**	**+0.1**
GARC				S	**Sg**	**12 56 15.4**	**-0.7**
YOTC	**Yotoco, Valle**	**1.06**	**345**	P	**Pb**	**12 56 06.1**	**-0.4**
YOTC				S	**Sn**	**12 56 20.8**	**-1.7**
ORTC	**Ortega, Tolima**	**1.27**	**41**	P	**Pb**	**12 56 09.8**	**0.0**
ORTC				S	**Sn**	**12 56 27.1**	**-0.2**
PRAC	**Prado**	**1.41**	**57**	P	**Pb**	**12 56 12.3**	**0.0**
PRAC				S	**Sb**	**12 56 30.8**	**+0.1**
FLOC	**Florencia**	**1.42**	**163**	P	**Pn**	**12 56 11.9**	**-0.1**
FLOC				S	**Sn**	**12 56 30.2**	**-0.9**
BBAC	**Balboa, Cauca**	**1.49**	**232**	P	**Pg**	**12 56 13.9**	**-0.1**
BBAC				S	**Sg**	**12 56 34.1**	**+0.8**
CRUC	**La Cruz**	**1.62**	**213**	P	**Pg**	**12 56 17.9**	**+1.3**
URMC	**La Uribe, Meta**	**1.72**	**80**	P	**Pb**	**12 56 17.4**	**-0.2**
URMC				S	**Sb**	**12 56 39.6**	**0.0**
PLMC	**San Jos del P**	**1.96**	**354**	P	**Pb**	**12 56 21.1**	**-0.6**
PLMC				S	**Sg**	**12 56 49.6**	**+1.2**
MACC	**Macarena, Meta**	**2.36**	**110**	P	**Pb**	**12 56 27.4**	**-1.2**
MACC				S	**Sb**	**12 56 57.7**	**-0.4**
GUY2C	**Guyana, Caldas**	**2.37**	**17**	P	**Pb**	**12 56 29.3**	**+0.3**
GUY2C				S	**Sb**	**12 56 58.9**	**+0.1**
ROSC	**El Rosal**	**2.57**	**43**	Pn	**Pb**	**12 56 30.3**	**-2.0**
	29nm,0.3s,baz=319,slow=2.5,SNR=16						
ROSC				Lg	Lg	12 57 07.3	
	24nm,0.3s,baz=332,slow=6.1,SNR=5.5						
	25nm,0.4s						
ROSC	**El Rosal**	**2.57**	**43**	P	**Pb**	**12 56 30.9**	**-1.4**
ROSC				S	**Sb**	**12 57 05.7**	**+1.3**
VILC	**Villavicencio,**	**2.65**	**64**	P	**Pb**	**12 56 33.7**	**+0.3**
VILC				S	**Sb**	**12 57 05.2**	**-1.1**
TULM	**Tulcn-Chalpat**	**2.80**	**218**	P	**Pg**	**12 56 38.9**	**-0.2**
NORC	**Norcasia**	**2.87**	**25**	P	**Pb**	**12 56 36.5**	**-0.6**
NORC				S	**Sb**	**12 57 13.1**	**+0.5**
BONI	**La Bonita**	**2.87**	**210**	P	**Pg**	**12 56 40.0**	**-0.5**
BONI				S	**Sg**	**12 57 19.6**	**+1.8**
CHIC	**Chingaza**	**2.88**	**54**	P	**Pb**	**12 56 35.8**	**-1.7**
CHIC				S	**Sb**	**12 57 12.7**	**-0.5**
CBOC	**Ciudad Bolivar**	**2.90**	**1**	P	**Pb**	**12 56 37.3**	**-0.5**
CBOC				S	**Sb**	**12 57 15.6**	**+1.9**
PTLC	**Puerto Leguiza**	**3.04**	**155**	P	**Pg**	**12 56 43.8**	**+0.1**
PTLC				S	**Sg**	**12 57 22.6**	**-0.5**
HELC	**Santa Helena**	**3.27**	**10**	P	**Pb**	**12 56 43.1**	**-1.1**
HELC				S	**Sb**	**12 57 25.2**	**+0.7**
OTAV	**Otavalo**	**3.59**	**221**	P	**Pb**	**12 56 50.1**	**+0.4**
PTBC	**PUERTO BERRIO,**	**3.92**	**24**	P	**Pb**	**12 56 51.9**	**-3.2**
PTBC				S	**Sb**	**12 57 43.6**	**+0.7**
PTGC	**Puerto Gaitan,**	**4.13**	**72**	P	**Pb**	**12 57 00.8**	**+2.2**
PTGC				S	**Sg**	**12 57 54.5**	**-3.6**
SDV	**Santo Domingo**	**8.01**	**42**	Pn	**Pn**	**12 57 45.1**	**+2.4**
	0.8nm,0.3s,baz=222,slow=16,SNR=3.1						
SDV				Sn	**Sn**	**12 59 18.4**	**+4.5**
	0.7nm,0.3s,baz=231,slow=23,SNR=2.2						
	2.3nm,0.3s						
ATAH	**Atahualpa**	**10.28**	**193**	Pn	Pn	12 58 19.7	+5.6
	0.3nm,0.3s,baz=13,slow=14,SNR=4.0						
	7.0nm,1.1s						
PDAR	**Pinedale Array**	**49.61**	**328**	P	**P**	**13 04 38.2**	**0.0**
	0.1nm,0.4s,baz=107,slow=4.2,SNR=1.5						
	0.1nm,0.4s						
ASAR	**Alice Springs**	**144.44**	**232**	PKP	**PKPdf**	**13 15 24.5**	**+0.6**
	0.8nm,0.9s,baz=121,slow=3.6,SNR=6.8						
WRA	**Warramunga Arr**	**145.85**	**238**	PKPbc	**PKiKP**	**13 15 29.6**	**-0.9**
	0.9nm,0.9s,baz=113,slow=3.7,SNR=5.3						

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*LVSN **12** 13:07:44.6±0.3,59°.41N×20°.86E,h0^{km},ML2.0*
*DNK **12** 13:07:46.6±0.9,57°.72N×18°.75E,h0^{km},ML1.7(UPP), Explosion*
UPP 12 13:07:46.9±0.3,**57°.74N×18°.65E,h0**^{km}**,ML1.7,1D, Suspected explosion,Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOTU	**Gotland**	**0.07**	**217**	P	Pg	13 07 48.4	+0.3
GOTU				S	Sg	13 07 49.5	+0.5
GOTU	**Gotland**	**0.07**	**217**	P	Pg	13 07 48.4	+0.3
GOTU				S	Sg	13 07 49.5	+0.5
VSTU	**Vaestervik**	**1.14**	**267**	P	Pg	13 08 08.0	-0.6
VSTU	**Vaestervik**	**1.14**	**267**	P	Pg	13 08 08.0	-0.6
VIKU	**Vikbolandet**	**1.29**	**307**	P	Pg	13 08 10.7	-0.8
VIKU				S	Sg	13 08 28.0	-0.1
VIKU	**Vikbolandet**	**1.29**	**307**	P	Pg	13 08 10.7	-0.8
VIKU				S	Sg	13 08 28.0	-0.1
NYNU	**Nynaeshamn**	**1.31**	**345**	P	Pg	13 08 10.9	-1.1
NYNU				S	Sg	13 08 28.9	-0.2
NYNU	**Nynaeshamn**	**1.31**	**345**	P	Pg	13 08 10.9	-1.1
NYNU				S	Sg	13 08 28.9	-0.2
OSKU	**Oskarshamn**	**1.48**	**249**	P	Pn	13 08 14.3	-0.5
OSKU	**Oskarshamn**	**1.48**	**249**	P	Pn	13 08 14.3	-0.5
LNKU	**Linkoeping**	**1.74**	**288**	P	Pn	13 08 18.7	+0.3
LNKU				S	Sg	13 08 42.5	-0.3
LNKU	**Linkoeping**	**1.74**	**288**	P	Pn	13 08 18.7	+0.3
LNKU				S	Sg	13 08 42.5	-0.3
EKSU	**Eksjoe**	**1.81**	**266**	P	Pn	13 08 19.7	+0.5
EKSU				S	Sg	13 08 44.5	-0.3
EKSU	**Eksjoe**	**1.81**	**266**	P	Pn	13 08 19.7	+0.5
EKSU				S	Sg	13 08 44.5	-0.3
ESKU	**Eskilstuna**	**1.91**	**323**	P	Pb	13 08 21.6	-0.9
ESKU				S	Sb	13 08 46.7	-0.1
ESKU	**Eskilstuna**	**1.91**	**323**	P	Pb	13 08 21.6	-0.9
ESKU				S	Sb	13 08 46.7	-0.1
SLIT	**Slitere, Latvi**	**1.96**	**92**	*e*P	Pn	13 08 20.5	-0.8
SLIT				⇓*i*		13 08 20.5	
	baz=338,slow=1.1						
SLIT				*e*S	Sn	13 08 46.7	+0.1
SLIT				AML	AML	13 08 48.9	
	comp=E,28nm,0.6s						
SLIT				AML	AML	13 08 49.1	
	comp=N,22nm,0.2s						
SLIT				AML	AML	13 08 49.3	
	comp=Z,18nm,0.1s						

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*IDC **12** 13:07:58.0±0.9,83°.45N×114°.78E,h0^{km},mb3.5/9, mbtmp3.6/10,ML3.6/1,MS3.6/1,Error ellipse: s-maj=40.2km s-min=16.7km az=138.0*
ISC 12 13:07:59.6±0.9,**83°.5N**±0°.1×**113°.35E**±0°.08,**h10**^{km}**,n12,** σ1^{s}**82**/14,**mb3.6**/9,**North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZFI2	**Zemlya Franca-**	**8.84**	**287**	*e*P	**Pn**	**13 10 09.1**	**+2.0**
ZFI2				*e*S	**Sn**	**13 11 43.7**	**-2.7**
OMEGA	**Omega**	**8.85**	**287**	*e*P	**Pn**	**13 10 09.1**	**+1.9**
OMEGA				*e*S	**Sn**	**13 11 43.6**	**-3.1**
	19nm,2.9s						
NRIK	**Noril'sk**	**15.18**	**216**	Pn	**Pn**	**13 11 31.7**	**-2.0**
	0.2nm,0.3s,baz=34,slow=10.0,SNR=4.2						
	1.8nm,0.6s						
ARCES	**ARCESS Array B**	**21.32**	**285**	P	**P**	**13 12 47.3**	**+1.3**
	4.9nm,1.0s,baz=17,slow=9.4,SNR=4.0						
	4.9nm,1.0s						
ILAR	**Eielson Array**	**27.20**	**68**	P	**P**	**13 13 40.9**	**-1.9**
	0.1nm,0.6s,baz=98,slow=11,SNR=1.7						
ILAR				LR	LR	13 24 26.9	
	comp=Z,110nm,18.3s,baz=136,slow=36						
	0.1nm,0.6s						
ZALV	**Zalesovo Beam**	**30.66**	**214**	P	**P**	**13 14 13.8**	**+0.2**
	0.3nm,0.3s,baz=357,slow=5.8,SNR=1.2						
	0.3nm,0.3s						
YKA	**Yellowknife Ar**	**32.36**	**40**	P	**P**	**13 14 28.2**	**-0.2**
	0.1nm,0.3s,baz=344,slow=9.0,SNR=2.8						
	0.1nm,0.3s						
BVAR	**Borovoye Array**	**32.66**	**230**	P	**P**	**13 14 32.4**	**+1.2**
	0.3nm,0.4s,baz=350,slow=6.5,SNR=4.2						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**34.39**	**220**	P	**P**	**13 14 46.9**	**+0.6**
	0.6nm,0.7s,baz=21,slow=7.3,SNR=8.3						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**37.94**	**215**	P	**P**	**13 15 16.7**	**0.0**
	1.4nm,0.8s,baz=15,slow=7.8,SNR=8.3						
	1.4nm,0.8s						
BRTR	**Keskin Array B**	**49.60**	**265**	P	**P**	**13 16 51.4**	**+0.8**
	0.4nm,0.5s,baz=21,slow=9.3,SNR=1.9						
	0.4nm,0.5s						
TXAR	**Lajitas Array**	**66.09**	**35**	P	**P**	**13 18 46.6**	**+0.2**
	0.4nm,0.6s,baz=358,slow=5.8,SNR=7.5						
	0.4nm,0.6s						

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*IDC **12** 13:26:28.9±0.9,27°.72N×85°.46E,h0^{km},mb4.0/14, mbtmp3.9/17,ML3.9/3,Error ellipse: s-maj=35.0km s-min=14.0km az=58.0*
*MOS **12** 13:26:30.4±1.9,27°.89N×85°.42E,h13^{km},mb4.6/10,Error ellipse: s-maj=11.1km s-min=5.4km az=118.3*
*NEIC **12** 13:26:31.8±2.4,27°.92N±0°.09×85°.72E±0°.08,h10^{km}±1^{km}, mb4.2/29,Error ellipse: s-maj=15.7km s-min=9.7km az=210.0*
*DMN **12** 13:26:31.3±0.0,27°.91N×85°.60E,h10^{km},Ml4.8/6,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*NDI **12** 13:26:33.4±1.6,28°.01N×85°.65E,h10^{km},ML4.1,MW4.0, mb4.2(NEIC)*
ISC 12 13:26:31.8±0.8,**27°.87N**±0°.03×**85°.60E**±0°.02,**h14**^{km}±5^{km}, **n128,**σ1^{s}**47**/158,**mb4.1**/29,**6C-6D,Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUN	**Gumba**	**0.25**	**81**	Pg	**Pg**	**13 26 37.3**	**-0.1**
	baz=90,slow=0.0						
GUN	**Gumba**	**0.25**	**81**	Pg	**Pb**	**13 26 37.4**	**-1.0**
	baz=90,slow=0.0						
GUN				Sg	**Sg**	**13 26 41.2**	**+0.1**
	41µm,0.2s,baz=90,slow=0.0						
GUN				Sg	**Sg**	**13 26 41.3**	**+0.1**
	baz=90,slow=0.0						
GUN				Sg	**Sg**	**13 26 41.3**	**+0.1**
	baz=90,slow=0.0						
GUN				Sg	**Sg**	**13 26 41.3**	**+0.1**
	baz=90,slow=0.0						
KKN	**Kakani**	**0.29**	**254**	Pg	**Pg**	**13 26 37.7**	**-0.3**
	baz=249,slow=0.0						
KKN	**Kakani**	**0.29**	**254**	Pg	**Pg**	**13 26 38.1**	**+0.1**
	baz=249,slow=0.0						
KKN				Sg	**Sg**	**13 26 41.2**	**-1.0**
	baz=249,slow=0.0						
KKN				Sg	**Sg**	**13 26 41.2**	**-1.0**
	baz=249,slow=0.0						
KKN				Sg	**Sg**	**13 26 41.2**	**-1.0**
	baz=249,slow=0.0						
KKN				Sg	**Sb**	**13 26 41.9**	**-1.9**
	19µm,0.2s,baz=249,slow=0.0						
PKI	**Pulchoki**	**0.34**	**209**	Pg	**Pg**	**13 26 39.2**	**+0.3**
	baz=206,slow=0.0						
PKI	**Pulchoki**	**0.34**	**209**	Pg	**Pg**	**13 26 39.3**	**+0.3**
	baz=206,slow=0.0						
PKI				Sg	**Sg**	**13 26 44.6**	**+0.8**
	27µm,0.4s,baz=206,slow=0.0						
PKI				Sg	**Sb**	**13 26 44.8**	**-0.6**
	baz=206,slow=0.0						
PKI				Sg	**Sb**	**13 26 44.8**	**-0.6**
	baz=206,slow=0.0						
PKI				Sg	**Sb**	**13 26 44.8**	**-0.6**
	baz=206,slow=0.0						
PKIN	**Phulchoki**	**0.34**	**211**	Pg	**Pg**	**13 26 38.9**	**0.0**
	baz=208,slow=0.0						
PKIN				Sg	**Sg**	**13 26 44.6**	**+0.8**
	baz=208,slow=0.0						
DMN	**Daman**	**0.51**	**239**	Pg	**Pg**	**13 26 41.8**	**-0.1**
	baz=235,slow=0.0						
DMN				Sg	**Sg**	**13 26 48.9**	**+0.2**
	6µm,0.3s,baz=235,slow=0.0						
JIRN	**Jiri**	**0.57**	**112**	Pg	**Pg**	**13 26 43.1**	**+0.1**
	baz=116,slow=0.0						
JIRN				Sg	**Sg**	**13 26 50.1**	**-0.5**
	9µm,0.3s,baz=116,slow=0.0						
EVN	**Everest**	**1.08**	**85**	Pn	**Pg**	**13 26 52.0**	**-0.8**
EVN				Sn	**Sg**	**13 27 05.2**	**-1.8**
RAMN	**Ramite**	**1.28**	**136**	Pg	**Pn**	**13 26 55.3**	**-0.3**
	baz=137,slow=0.0						
RAMN				Sg	**Sn**	**13 27 13.8**	**+1.1**
	4µm,0.4s,baz=137,slow=0.0						
DANN	**Dangsing**	**1.69**	**287**	Pg	**Pb**	**13 27 02.3**	**-0.6**
	baz=286,slow=0.0						
DANN				Sg	**Sg**	**13 27 25.1**	**-1.2**
	2µm,0.3s,baz=286,slow=0.0						
ODAN	**Odare**	**1.89**	**122**	Pg	**Pb**	**13 27 06.4**	**+0.2**
	baz=123,slow=0.0						
ODAN				Sg	**Sg**	**13 27 31.6**	**-1.0**
	2µm,0.4s,baz=123,slow=0.0						
TAPN	**Taplejung**	**1.95**	**105**	Pg	**Pb**	**13 27 07.4**	**+0.1**
	baz=106,slow=0.0						
TAPN				Sg	**Sg**	**13 27 33.3**	**-1.2**
	695nm,0.4s,baz=106,slow=0.0						
GTK	**Tadong**	**2.72**	**101**	*e*P	**Pn**	**13 27 17.1**	**+1.7**
GTK				*e*S	**Sn**	**13 27 49.1**	**+0.9**
GTK				IAML		13 27 58.9	
	comp=N,693nm,0.7s						
GTK				IAML		13 27 59.0	
	comp=E,676nm,0.3s						
GAYA	**Gaya**	**3.08**	**186**	*e*P	**Pb**	**13 27 24.1**	**-2.3**
GAYA				*e*S	**Sn**	**13 28 00.9**	**+4.3**
GAYA				IAML		13 28 09.0	
	comp=E,2µm,0.2s						
GAYA				IAML		13 28 09.1	
	comp=N,2µm,0.3s						
VAR	**Varanasi**	**3.49**	**223**	*e*S	**Sn**	**13 28 10.5**	**+4.6**
VAR				IAML		13 28 19.2	
	comp=N,1µm,0.6s						
VAR				IAML		13 28 19.7	
	comp=E,2µm,0.3s						
BRCI	**Bahraich**	**3.55**	**266**	*e*P	**Pn**	**13 27 29.7**	**+2.8**
BRCI				*e*S	**Sn**	**13 28 10.9**	**+2.0**
COBR	**COOCHBEHAR**	**3.79**	**114**	*e*P	**Pn**	**13 27 31.8**	**+2.0**
COBR				*e*S	**Sn**	**13 28 14.7**	**+0.5**
COBR				IAML		13 28 37.2	
	comp=N,988nm,0.7s						
COBR				IAML		13 28 46.1	
	comp=E,846nm,2.9s						
BOK	**Bokaro**	**4.07**	**176**	*e*P	**Pb**	**13 27 39.3**	**-4.0**
BOK				*e*S	**Sn**	**13 28 24.3**	**+3.1**
BOK				IAML		13 28 40.4	
	comp=E,437nm,0.6s						
BOK				IAML		13 28 43.2	
	comp=N,225nm,0.5s						
ALBI	**Allahabad**	**4.25**	**234**	*e*P	Pn	13 27 40.9	+4.8
DHUB	**DHUBRI**	**4.34**	**114**	*e*P	**Pn**	**13 27 40.7**	**+3.3**
DHUB				*e*S	**Sn**	**13 28 28.6**	**+0.8**
LGTI	**Lohaghat**	**5.08**	**289**	*e*S	**Sn**	**13 28 45.3**	**+2.3**
LSA	**Lhasa**	**5.20**	**68**	Pn	**Pn**	**13 27 50.4**	**+0.7**
LSA	**Lhasa**	**5.20**	**68**	Pn	**Pn**	**13 27 48.5**	**-1.2**
LSA				Sn	**Sn**	**13 28 47.4**	**-2.4**
LSA				smax	smax		
	comp=N,28nm,0.6s						
LSA				smax	smax		
	comp=E,18nm,0.6s						
LSA	**Lhasa**	**5.20**	**68**	P	**Pn**	**13 27 50.4**	**+0.7**
GUWA	**GUWAHATI**	**5.69**	**106**	*e*P	**Pn**	**13 27 57.5**	**+1.5**
GUWA				*e*S	**Sn**	**13 28 58.8**	**-2.3**
GUWA				IAML		13 29 05.2	
	comp=N,241nm,0.2s						
GUWA				IAML		13 29 07.4	
	comp=E,240nm,0.5s						
JOSI	**Joshimath**	**5.92**	**298**	*e*P	**Pn**	**13 28 01.2**	**+1.9**
JOSI				*e*S	**Sn**	**13 29 04.5**	**-2.6**
SHL	**Shillong**	**6.07**	**111**	Pn	**Pn**	**13 28 01.2**	**-0.2**
SHL	**Shillong**	**6.07**	**111**	P	**Pn**	**13 28 01.2**	**-0.2**
TEZP	**TEZPUR**	**6.53**	**99**	*e*P	**Pn**	**13 28 08.7**	**+1.1**
TEZP				*e*S	**Sn**	**13 29 18.7**	**-3.2**
TEZP				IAML		13 29 24.5	
	comp=N,242nm,0.3s						
TEZP				IAML		13 29 25.6	
	comp=E,247nm,0.2s						
BISR	**Bishrakh**	**7.23**	**277**	*e*P	**Pn**	**13 28 19.2**	**+2.1**
BISR				*e*S	**Sn**	**13 29 34.1**	**-4.9**
GUNA	**GUNA**	**8.08**	**248**	*e*P	**Pn**	**13 28 31.1**	**+2.2**
GUNA				*e*S	**Sn**	**13 29 57.9**	**-2.3**
MORE	**Moreh**	**8.62**	**113**		**Pn**	**13 28 37.0**	**+0.7**
NIL	**Nilore**	**12.07**	**302**	Pn	**Pn**	**13 29 20.6**	**-2.9**
NIL	**Nilore**	**12.07**	**302**	P	**Pn**	**13 29 20.6**	**-2.9**
KSH	**Kashi**	**14.10**	**328**	P	**Pn**	**13 29 53.9**	**+2.7**
KSH				S	Sn	13 32 17.0	-11
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WUS	**Wushi**	**14.29**	**340**	Pn	**Pn**	**13 29 54.2**	**+0.3**
MANEM	**Manem**	**15.16**	**313**	Pn	**Pn**	**13 30 06.4**	**+0.7**
MANEM				IAmb	IAmb	13 30 23.7	
	comp=Z,14nm,0.5s						
CHTO	**Chiang Mai**	**15.21**	**124**	P	**P**	**13 30 11.7**	**+0.4**
CHTO				IAmb	IAmb	13 30 12.4	
	comp=Z,4.4nm,0.8s						
CHTO	**Chiang Mai**	**15.21**	**124**	P	**P**	**13 30 11.7**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TARG	**Taragay, Kyrgy**	**15.22**	**337**	Pn	**Pn**	**13 30 05.9**	**-0.8**
TARG				IAmb	IAmb	13 30 25.8	
	comp=Z,4.7nm,0.7s						
TARG	**Taragay, Kyrgy**	**15.22**	**337**	P	**Pn**	**13 30 05.9**	**-0.8**
TARG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CM31	**Chiang Mai Arr**	**15.43**	**125**		**Pn**	**13 30 11.2**	**+2.0**
CMAR	**Chiang Mai Arr**	**15.43**	**125**	Pn	**Pn**	**13 30 07.7**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=308,slow=13,SNR=5.3						
	comp=Z,0.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**15.43**	**125**	P	**P**	**13 30 14.9**	**+1.1**
CMAR	**Chiang Mai Arr**	**15.43**	**125**	*ce*P	**P**	**13 30 14.8**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KBL	**Kabul**	**15.64**	**299**		**Pn**	**13 30 12.2**	**+0.2**
KBL				IAmb	IAmb	13 30 17.5	
	comp=Z,6.1nm,0.6s						
KBL	**Kabul**	**15.64**	**299**	P	**Pn**	**13 30 12.2**	**+0.2**
KBL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
WMQ	**Urumqi**	**16.00**	**6**	*e*P	**P**	**13 30 18.8**	**-1.2**
GTA	**Gaotai**	**16.48**	**42**	*e*P	**P**	**13 30 26.9**	**+1.4**
GTA				pP	sP	13 30 31.0	-0.6
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BOOM	**Boomskoye usch**	**16.56**	**334**	P	**P**	**13 30 26.5**	**+0.1**
BOOM	**Boomskoye usch**	**16.56**	**334**	P	**P**	**13 30 26.5**	**+0.1**
BOOM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARLS	**Aral**	**16.72**	**329**	P	**Pn**	**13 30 22.6**	**-3.2**
ARLS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GAR	**Garm**	**16.88**	**315**	Pn	**Pn**	**13 30 25.8**	**-2.0**
GAR				IAmb	IAmb	13 30 39.5	
	comp=Z,11nm,0.6s						
AAK	**Ala-Archa**	**17.27**	**331**	P	**Pn**	**13 30 33.0**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=130,slow=19,SNR=4.0						
	comp=Z,1.2nm,0.6s						
AAK	**Ala-Archa**	**17.27**	**331**	Pn	**Pn**	**13 30 32.1**	**-0.6**
AAK	**Ala-Archa**	**17.27**	**331**	⇓*e*P	**P**	**13 30 33.9**	**-0.3**
CHGR	**Chuyangaron**	**17.43**	**312**	Pn	**P**	**13 30 35.0**	**-0.9**
CHGR				IAmb	IAmb	13 30 46.9	
	comp=Z,18nm,0.5s						
CHGR	**Chuyangaron**	**17.43**	**312**	P	**P**	**13 30 35.0**	**-0.9**
CHGR				pmax	pmax		
	comp=Z,18nm,0.5s						
SHAA	**Shahritus**	**17.57**	**308**	Pn	**Pn**	**13 30 34.8**	**-1.6**
SHAA				IAmb	IAmb	13 30 46.7	
	comp=Z,30nm,0.7s						
TRKS	**Terek-Say**	**18.05**	**323**	P	**Pn**	**13 30 38.1**	**-4.2**
TRKS				pmax	pmax		
	comp=Z,19nm,0.6s						
MK31	**Makanchi Array**	**19.07**	**353**	P	**P**	**13 30 53.7**	**-0.1**
MK31	**Makanchi Array**	**19.07**	**353**	*c i*P	**Pn**	**13 30 54.2**	**-0.4**
MKAR	**Makanchi Array**	**19.07**	**353**	P	**Pn**	**13 30 54.0**	**-0.6**
	comp=Z,1.2nm,0.3s,baz=177,slow=11,SNR=38						
	comp=Z,2.8nm,0.5s						
MKAR	**Makanchi Array**	**19.07**	**353**	P	**P**	**13 30 53.1**	**-0.7**
MKAR	**Makanchi Array**	**19.07**	**353**	*i* P	**Pn**	**13 30 54.2**	**-0.4**

MKAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MAKZ	Makanchi	19.11	352	P	Pn	13 30 54.9	-0.3
MAKZ	Makanchi	19.11	352	P	Pn	13 30 54.9	-0.3
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KKAR	Karatay Array	19.49	325	P	P	13 30 58.1	-0.4
KKAR	Karatay Array	19.49	325	P	P	13 30 58.1	-0.4
ENH	Enshi	21.01	78	P	P	13 31 16.5	+1.4
ENH				IAmb	IAmb	13 31 21.7	
	comp=Z,8.8nm,0.5s						
DGZ	Jazzator, Alta	21.84	3	⇓eP	P	13 31 24.7	+0.7
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KURBB	Kurchatov Arra	23.35	349	P	P	13 31 39.8	+0.2
	comp=Z,2.6nm,0.6s,baz=168,slow=10,SNR=16						
	comp=Z,2.6nm,0.6s						
KURK	Kurchatov	23.42	349	P	P	13 31 41.6	+1.2
KURK				IAmb	IAmb	13 31 48.4	
	comp=Z,3.5nm,0.6s						
KURK	Kurchatov	23.42	349	⇓iP	P	13 31 41.4	+1.0
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BTO	Baotou	23.76	51	eP	P	13 31 42.5	-1.5
BTO				pmax	pmax		
	comp=Z,12nm,0.5s						
BTO				pmax	pmax		
	comp=Z,390nm,5.4s						
KNGR	Kungurtug, Tuv	24.44	19	⇑eP	P	13 31 50.0	-0.2
KNGR				pmax	pmax		
	comp=Z,4.0nm,1.3s						
HHC	Hu-ho-hao-te	24.93	52	eP	P	13 31 53.8	-1.0
HHC				pmax	pmax		
	comp=Z,15nm,0.6s						
HHC				pmax	pmax		
	comp=Z,85nm,5.5s						
SONM	Songino Array	25.68	34	P	P	13 32 02.8	+1.4
	comp=Z,2.3nm,0.5s,baz=225,slow=10.0,SNR=27						
	comp=Z,2.3nm,0.5s						
ULN	Ulaanbaatar	26.02	34	P	P	13 32 05.9	+1.2
ULN				IAmb	IAmb	13 32 23.0	
	comp=Z,3.2nm,0.7s						
ULN	Ulaanbaatar	26.02	34	⇓eP	P	13 32 05.8	+1.2
ULN				pmax	pmax		
	comp=Z,14nm,2.3s						
ZAA0	Zalesovo Array	26.06	359	P	P	13 32 05.6	+1.0
ZAA0				IAmb	IAmb	13 32 15.9	
	comp=Z,3.3nm,0.8s						
ZALV	Zalesovo Beam	26.06	359	P	P	13 32 05.6	+1.0
	comp=Z,2.3nm,0.3s,baz=184,slow=10.0,SNR=13						
	comp=Z,2.3nm,0.3s						
ZALV	Zalesovo Beam	26.06	359	P	P	13 32 05.1	+0.4
ZALV	Zalesovo Beam	26.06	359	i P	P	13 32 05.9	+1.3
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KULM	Kulim	26.63	145	P	P	13 32 11.2	+1.0
BVAR	Borovoye Array	27.54	340	P	P	13 32 18.0	-0.1
	comp=Z,0.3nm,0.4s,baz=223,slow=42,SNR=5.4						
	comp=Z,0.3nm,0.4s						
AB31	Akbulak array	29.05	324	P	P	13 32 31.9	+0.4
ABKAR	Akbulak array	29.05	324	P	P	13 32 31.8	+0.3
CN2	Changchun	35.62	53	P	P	13 33 28.0	-1.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KIRV	Kirov	39.61	331	⇑eP	P	13 34 02.6	0.0
VSLR	Vesyoloye	39.64	305	⇓eP	P	13 34 02.7	-0.5
VSLR				pmax	pmax		
	comp=Z,15nm,0.8s						
NRIK	Noril'sk	41.51	1	P	P	13 34 19.4	+1.0
	comp=Z,1.2nm,0.4s,baz=165,slow=11,SNR=4.3						
	comp=Z,1.2nm,0.4s						
NRIK	Noril'sk	41.51	1	P	P	13 34 19.3	+1.0
NRIK				IAmb	IAmb	13 34 26.1	
	comp=Z,4.5nm,1.1s						
NRIK	Noril'sk	41.51	1	⇓eP	P	13 34 19.7	+1.4
NRIK				pmax	pmax		
	comp=Z,9.0nm,1.5s						
OBN	Obninsk	44.43	322	eP	P	13 34 42.5	+0.5
OBN				e		13 36 28.4	
OBN				ePPP	PPP	13 37 00.6	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,52nm,8.0s						
TIXI	Tiksi	49.81	17	P	P	13 35 25.1	+1.2
TIXI				IAmb	IAmb	13 35 30.2	
	comp=Z,3.9nm,0.9s						
TIXI	Tiksi	49.81	17	P	P	13 35 25.1	+1.2
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
VSU	Vasula	50.49	324	⇑eP	P	13 35 31.4	+2.3
VSU				pmax	pmax		
	comp=Z,175nm,3.7s						
FIA1	FINESS Array S	51.42	328	P	P	13 35 36.2	+0.2
FINES	FINESS Array B	51.42	328	P	P	13 35 35.7	-0.4
	comp=Z,2.3nm,0.5s,baz=102,slow=9.1,SNR=18						
	comp=Z,2.3nm,0.5s						
FINES	FINESS Array B	51.42	328	P	P	13 35 35.6	-0.5
ARCES	ARCESS Array B	53.80	338	P	P	13 35 53.4	-0.3
	comp=Z,1.7nm,0.5s,baz=110,slow=6.1,SNR=14						
	comp=Z,1.7nm,0.5s						
ARCES	ARCESS Array B	53.80	338	P	P	13 35 54.1	+0.4
ARCES	ARCESS Array B	53.80	338	P	P	13 35 54.1	+0.4
ARCES				pmax	pmax		
	comp=Z,23nm,1.5s						
GERES	GERESS Array B	57.94	312	P	P	13 36 23.1	-0.7
	comp=Z,0.3nm,0.2s,baz=75,slow=11,SNR=1.5						
	comp=Z,0.3nm,0.2s						
NOA	NORSAR Array B	58.52	327	P	P	13 36 28.0	+0.4
	comp=Z,0.5nm,0.5s,baz=88,slow=6.9,SNR=2.0						
	comp=Z,0.5nm,0.5s						
NOA	NORSAR Array B	58.52	327	P	P	13 36 28.0	+0.4
WB0	Warramunga Arr	66.87	130	P	P	13 37 23.5	-0.2
EKA	Eskdalemuir Ar	66.88	322	P	P	13 37 23.0	-0.3
	comp=Z,0.7nm,0.5s,baz=74,slow=7.8,SNR=3.7						
	comp=Z,0.7nm,0.5s						
WRA	Warramunga Arr	66.95	130	P	P	13 37 23.8	-0.4
	comp=Z,0.8nm,0.5s,baz=323,slow=6.3,SNR=29						
	comp=Z,0.8nm,0.5s						
WRA	Warramunga Arr	66.95	130	P	P	13 37 23.7	-0.6
WRA	Warramunga Arr	66.95	130	ceP	P	13 37 29.7	+5.4
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NWAO	Narrogin (SRO)	67.52	151	P	P	13 37 26.1	-1.5
NWAO	Narrogin (SRO)	67.52	151	P	P	13 37 26.1	-1.5
NWAO				pmax	pmax		
	comp=Z,21nm,1.2s						
AS31	Alice Springs	69.25	133	P	P	13 37 38.2	-0.5
AS31				IAmb	IAmb	13 37 49.0	
	comp=Z,1.5nm,1.4s						
ASAR	Alice Springs	69.25	133	P	P	13 37 38.4	-0.3
	comp=Z,0.9nm,0.7s,baz=315,slow=6.3,SNR=19						
	comp=Z,0.9nm,0.7s						
ASAR	Alice Springs	69.25	133	P	P	13 37 37.7	-1.0
C19K	Lookout Ridge	72.49	20	P	P	13 37 58.7	+0.9
C19K				IAmb	IAmb	13 38 20.5	
	comp=Z,6.0nm,1.4s						
BMAR	Burnt Mountain	77.87	18	P	P	13 38 30.2	+1.4
ILAR	Eielson Array	79.10	20	P	P	13 38 34.6	-1.0
	comp=Z,0.2nm,0.5s,baz=325,slow=5.6,SNR=4.7						
	comp=Z,0.2nm,0.5s						
ILAR	Eielson Array	79.10	20	P	P	13 38 34.8	-0.7
ILAR	Eielson Array	79.10	20	P	P	13 38 34.8	-0.7
STKA	Stephens Creek	79.82	134	P	P	13 38 38.5	-1.4
	comp=Z,0.8nm,0.4s,baz=302,slow=6.8,SNR=3.7						
	comp=Z,0.8nm,0.4s						
STKA	Stephens Creek	79.82	134	P	P	13 38 38.3	-1.6
H31M	Peel River	81.72	16	P	P	13 38 48.6	-1.0
H31M				IAmb	IAmb	13 38 49.9	
	comp=Z,5.6nm,1.2s						
NVL	N'lazarevskaya	110.90	200	i PKIKP	PKiKP	13 45 02.8	-0.9
NVL				e		13 45 41.1	
NVL				ePPP	PPP	13 48 01.4	
NVL				eSS	SS	14 01 14.3	+2.1
NVL				eSSS	SSS	14 05 22.7	
NVL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NVL				MLR	MLR		
	comp=Z,630nm,21.0s						

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*ECX **12** 13:26:33.7±0.2, 30°.77N×114°.17W, h13km±4km, ML3.9*
*MEX **12** 13:26:39.9±0.3, 30°.36N×114°.50W, h10km, MD4.1*
ISC 12 13:26:33.9±1.2, **30°.93N**±0°.05×**114°.20W**±0°.03,
h16km±11km, **n16**, σ**0ˢ.81**/23, **1C-1D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIX	Pinacate	0.89	45	⇓iP	Pg	13 26 51.1	-0.1
PIX				eS	Sn	13 27 04.4	+0.1
ECBX	El Chinero	0.91	307	eP	Pb	13 26 51.6	+0.3
ECBX				eS	Sn	13 27 05.5	+0.7
ECBX				IAML		13 27 06.1	
	comp=E,3µm,0.3s						
ECBX				IAML		13 27 15.0	
	comp=N,2µm,0.9s						
SPIG	San Pedro Mart	1.10	276	eP	Pb	13 26 53.7	-1.0
SPIG				eS	Sb	13 27 09.5	+0.6
SPIG				IAML		13 27 19.6	
	comp=N,1µm,0.7s						
SPIG	San Pedro Mart	1.10	276	eP	Pn	13 26 54.9	0.0
SPIG				i S	Sg	13 27 10.1	+0.5
EDOMX	El Doctor, EDO	1.13	336	eP	Pn	13 26 55.6	+0.6
EDOMX				IAML		13 28 02.2	
	comp=N,2µm,0.8s						
EDOMX				IAML		13 28 06.9	
	comp=E,2µm,1.8s						
RITX	Riito Sonora	1.39	332	eP	Pb	13 26 60.0	+0.4
VTX	Valle De La Tr	1.44	289	eP	Pn	13 26 59.3	-0.1
SQX	San Quintin	1.49	257	⇑eP	Pn	13 26 58.8	-1.2
SQX				eS	Sn	13 27 18.7	-0.4
SQX				IAML		13 27 21.4	
	comp=E,2µm,0.2s						
SQX				IAML		13 27 22.1	
	comp=N,3µm,0.3s						
ALAMX	Rancho Alamar	1.68	310	eP	Pb	13 27 04.0	-0.4
MBIG	Mexicali	1.70	330	eP	Pg	13 27 08.0	+1.4
SJX	San Joaquin	1.72	299	eP	Pb	13 27 04.8	-0.3
SV2X	San Vicente	1.80	284	eP	Pn	13 27 04.8	+0.5
BAHB	Baha de los	2.06	164	eP	Pg	13 27 14.7	+1.3
CBX	Cerro Bola	2.52	304	eP	Pg	13 27 21.3	-0.8
TJIG	Tijuana	2.59	306	eP	Pg	13 27 23.4	-0.2
TJIG				i S	Sg	13 27 56.3	-0.9
TUC	Tucson	3.22	64	eP	Pn	13 27 23.8	-0.1
TUC				i S	Sg	13 28 15.7	-1.6

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*IDC **12** 13:59:03.9±1.0, 15°.96S×173°.00W, h0km, mb4.0/6, mbtmp4.1/7, ML3.7/1, MS3.1/1, Error ellipse: s-maj=33.0km s-min=23.8km az=134.0*
ISC 12 13:59:07.9±1.0, **16°.1S**±0°.2×**172°.9W**±0°.1, **h26**km, **n7**,
σ**1ˢ.03**/7, **mb4.0**/6, **Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAR	Rarotonga	13.45	114	Pn	Pn	14 02 16.3	-0.8
	4.0nm,0.3s,baz=294,slow=20,SNR=7.6						
RAR				Sn	Sn	14 04 36.2	-10
	0.6nm,0.3s,baz=275,slow=9.2,SNR=2.6						
RAR				LR	LR	14 06 01.0	
	comp=Z,79nm,20.9s,baz=310,slow=31						
	19nm,0.5s						
URZ	Urewera	23.81	200	P	P	14 04 19.5	+0.8
	3.5nm,0.3s,baz=19,slow=4.7,SNR=8.6						
	3.5nm,0.3s						
WRA	Warramunga Arr	50.18	257	P	P	14 08 00.7	-1.0
	0.5nm,0.6s,baz=91,slow=6.7,SNR=8.4						
	0.5nm,0.6s						
ASAR	Alice Springs	50.38	252	P	P	14 08 02.4	-0.9
	1.6nm,0.5s,baz=89,slow=8.1,SNR=29						
	1.6nm,0.5s						
QSPA	South Pole Qui	74.00	180	P	P	14 10 41.9	+0.9
	2.6nm,1.0s,baz=33,slow=4.7,SNR=6.0						
	2.6nm,1.0s						
PDAR	Pinedale Array	82.42	42	P	P	14 11 28.6	+0.5
	0.8nm,0.8s,baz=232,slow=4.1,SNR=6.7						
	0.8nm,0.8s						
ILAR	Eielson Array	82.98	11	P	P	14 11 30.5	+0.2
	0.3nm,0.6s,baz=206,slow=4.9,SNR=9.1						
	0.3nm,0.6s						

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*IDC **12** 14:25:01.3±1.1, 25°.97N×54°.75E, h0km, mb3.9/15, mbtmp3.9/15, MS3.8/1, Error ellipse: s-maj=26.1km s-min=19.0km az=22.0*
*TEH **12** 14:25:03.1, 26°.10N×54°.81E, h7km±34km*
*DSN **12** 14:25:04.6±0.9, 26°.22N×54°.77E, h15km, ML3.5/15, Error ellipse: s-maj=10.8km s-min=2.4km az=158.0*
*OMAN **12** 14:25:04.9±0.1, 26°.05N×54°.76E, h10km, mb4.7/8, ml3.6/24, Error ellipse: s-maj=1.2km s-min=0.6km az=4.0*
ISC 12 14:25:06.1±1.1, **26°.09N**±0°.03×**54°.79E**±0°.03, **h28**km±9km,
n99, σ**1ˢ.06**/126, **mb3.8**/13, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UMQ	Umm Al-Quwin	0.97	125	P	Pn	14 25 25.2	+1.3
	SNR=17						
UMQ				S	Sn	14 25 37.7	+1.0
	SNR=6.2						
UMQ	Umm Al-Quwin	0.97	125	eP	Pn	14 25 24.7	+0.8
	SNR=17						
SHME	Shamm	1.22	91	P	Pn	14 25 27.6	+0.3
	SNR=143						
SHME				S	Sn	14 25 44.8	+1.8
	SNR=9.5						
SHME	Shamm	1.22	91	eP	Pn	14 25 27.5	+0.1
	SNR=143						
SHME				S	Sn	14 25 44.7	+1.8
NAZ	Nazwa, Dubai	1.35	144	P	Pb	14 25 31.1	+0.3
	SNR=32						
NAZ				S	Sb	14 25 48.1	+0.5
	SNR=7.7						
NAZ	Nazwa, Dubai	1.35	144	eP	Pb	14 25 31.1	+0.3
	SNR=32						
BANOM	Banah	1.37	96	P	Pb	14 25 30.1	-1.1
BANOM				S	Sb	14 25 48.6	+0.3
BANOM	Banah	1.37	96	eP	Pb	14 25 30.1	-1.1
	SNR=162						
BANOM				S	Sb	14 25 48.3	0.0
MASF	Masafi	1.43	120	P	Pb	14 25 31.5	-0.6
	SNR=48						
MASF				S	Sb	14 25 50.5	+0.5
	SNR=9.1						
MSFE	Esma-Masafi	1.43	120	eP	Pb	14 25 31.5	-0.8
	SNR=48						
FAQ	Al Faqa, Dubai	1.52	151	P	Pb	14 25 33.1	-0.6
	SNR=13						
FAQ				S	Sb	14 25 53.3	+0.8
FAQ	Al Faqa, Dubai	1.52	151	eP	Pb	14 25 33.5	-0.2
	SNR=14						
AJN	Ajban	1.53	173	P	Pb	14 25 33.6	-0.2
	SNR=12						
AJN				S	Sb	14 25 52.1	-0.6
AJN	Ajban	1.53	173	eP	Pb	14 25 33.6	-0.2
	SNR=12						
ASUD	Al Ashush, Dub	1.53	161	P	Pb	14 25 33.3	-0.6
	SNR=15						
ASUD				S	Sb	14 25 52.6	-0.4
ASUD	Al Ashush, Dub	1.53	161	eP	Pb	14 25 33.8	-0.1
	SNR=16						
MDH	Madha	1.57	120	P	Pb	14 25 33.3	-1.2
	SNR=22						
MDH				S	Sb	14 25 54.3	+0.3
MDH	Madha	1.57	120	eP	Pn	14 25 33.2	+0.9
	SNR=22						
LAR1	LAR	1.62	347	Pg	Pb	14 25 34.1	-1.3
LAR1				Sg	Sb	14 25 56.5	+1.0
UOSS	Minazif	1.71	131	P	Pb	14 25 35.5	-1.4
UOSS				S	Sb	14 25 57.6	-0.5
UOSS	Minazif	1.71	131	eP	Pn	14 25 35.3	+1.1
	SNR=38						
HATD	Hatta, Dubai	1.75	136	P	Pb	14 25 36.3	-1.2
	SNR=8.9						
HATD				S	Sb	14 25 59.1	0.0
HATD	Hatta, Dubai	1.75	136	eP	Pb	14 25 36.1	-1.5
	SNR=9.0						
GENO	Geno	1.80	43	Pg	Pn	14 25 36.1	+0.6
ASHO	Ashiyiah	1.81	140	P	Pb	14 25 37.0	-1.7
	SNR=59						
ASHO				S	Sb	14 26 00.0	-0.9
ASHO	Ashiyiah	1.81	140	eP	Pb	14 25 37.0	-1.7
	SNR=59						
LMD1	Lamerd	1.91	311	Pn	Pb	14 25 39.8	-0.7
IBND	Bandar-abas	2.07	49	Pn	Pn	14 25 39.8	+0.7
ALNE	Al Ain	2.20	156	P	Pn	14 25 42.7	+1.8
	SNR=10						
ALNE				S	Sn	14 26 09.5	+2.3
ALNE	Al Ain	2.20	156	eP	Pn	14 25 42.6	+1.7
	SNR=10						
MZWR	Madinat Zayed	2.46	200	P	Pn	14 25 45.2	+0.8
SOHO	SOHO	2.51	140	P	Pn	14 25 46.1	+1.1
SOHO	SOHO	2.51	140	eP	Pn	14 25 46.0	+0.9
	SNR=32						
GHWR	Ruwais	2.73	220	P	Pn	14 25 48.2	+0.1
GHWR				S	Sn	14 26 21.3	+1.0
ARQ	Araqi	3.16	150	P	Pn	14 25 55.7	+1.6
ARQ				S	Sn	14 26 33.3	+2.4
KHNJ	Kahnooj	3.20	54	Pn	Pn	14 25 55.4	+0.8
UMZA	Um Al Zommool	3.37	174	P	Pn	14 25 58.5	+1.5
UMZA				S	Sn	14 26 36.5	+0.4
HOQ	Hoqain	3.39	137	P	Pn	14 25 58.0	+0.8
	SNR=19						
HOQ				S	Sn	14 26 38.4	+1.9
HOQ	Hoqain	3.39	137	Pn	Pn	14 25 58.4	+1.2
SHMA	Al-Shehemyia	3.45	267	P	Pn	14 25 59.0	+1.0
	SNR=6.7						
TRNA	Turayna	3.50	248	P	Pn	14 25 58.6	-0.2
TRNA				S	Sn	14 26 38.8	-0.5
DSBU	Dashti - Bushe	3.87	307	Pn	Pn	14 26 05.2	+1.2
NGRK	Negar Kerman	3.94	25	Pn	Pn	14 26 06.3	+1.1
BIDO	Bidbid	3.97	129	P	Pn	14 26 05.6	+0.4
BIDO				S	Sn	14 26 51.0	+0.3
BSY	Bisya	3.99	146	P	Pn	14 26 07.9	+2.4
BSY				S	Sn	14 26 50.5	-0.8
SMDO	Samad	4.23	135	P	Pn	14 26 10.6	+1.7
SMDO				S	Sn	14 26 58.9	+1.5
	SNR=6.8						
KBAM	BAM	4.45	46	Pn	Pn	14 26 13.7	+1.8
WSAR	Wadi Sarin	4.50	128	P	Pn	14 26 13.6	+1.1
WSAR				S	Sn	14 27 03.0	-1.0
KHGB	Koh Gabri	4.53	19	Pn	Pn	14 26 15.1	+2.0
JMDO	Jabal Madar	4.78	140	P	Pn	14 26 17.1	+0.8
JMDO				S	Sn	14 27 10.0	-0.8
WBK	Wadi Bani Khal	5.15	131	P	Pn	14 26 22.4	+0.9
	SNR=26						
WBK				S	Sn	14 27 20.1	+0.1
	SNR=6.4						
WBK	Wadi Bani Khal	5.15	131	Pn	Pn	14 26 22.2	+0.8
CHBR	Chabahar	5.16	94	Pn	Pn	14 26 22.4	+0.9
IMEH	Mehriz	5.29	358	Pn	Pn	14 26 25.2	+1.7
IBAF	Bafgh	5.53	7	Pn	Pn	14 26 28.2	+1.4
KLNJ	Kolanjah	5.65	331	Pn	Pn	14 26 29.6	+1.0
JLN	Jalan Bani Buh	5.76	132	P	Pn	14 26 30.6	+0.8
JLN				S	Sn	14 27 34.0	-1.1
NGCH	Negor - Chabah	5.77	96	P	Pn	14 26 31.2	+1.2
	SNR=15						
NGCH				S	Sn	14 27 35.1	-0.2
NGCH	Negor - Chabah	5.77	96	Pn	Pn	14 26 30.8	+0.9
MHTO	MHTO	5.86	149	P	Pn	14 26 32.0	+0.9
	SNR=32						
IRAM	Ramesheh	6.08	340	Pn	Pn	14 26 35.4	+1.0
ICHK	Chekchek	6.15	357	Pn	Pn	14 26 36.5	+1.2
IBRJ	Brojen	6.57	333	Pn	Pn	14 26 42.1	+0.9
DQM	DQM	6.63	157	P	Pn	14 26 41.9	+0.1
ZNGN	Zangian	6.92	331	Pn	Pn	14 26 46.6	+0.5
SRVN	Saravan	6.93	77	Pn	Pn	14 26 47.3	+1.3
BSRN	Basiran	6.98	32	Pn	Pn	14 26 48.1	+1.4
NHDN	Nehbandan	7.02	40	Pn	Pn	14 26 48.9	+1.7
JHBN	Jahan bin	7.10	330	Pn	Pn	14 26 49.0	+0.4
TPRV	Parvadeh(Tabas	7.11	13	Pn	Pn	14 26 50.0	+1.5
IKOO	Kooshah	7.31	29	Pn	Pn	14 26 52.2	+0.9
IPIR	Pirpir	7.40	334	Pn	Pn	14 26 53.5	+0.9
DOK	Doka	7.46	185	P	Pn	14 26 52.8	-0.3
	SNR=8.9						
IKLH	Kolahrood	7.73	340	Pn	Pn	14 26 57.9	+0.8
TKDS	Koohdasht(Taba	7.77	15	Pn	Pn	14 26 58.9	+1.4
TNSJ	Nastanj	8.01	11	Pn	Pn	14 27 01.8	+1.0
SHAO	Shalim	8.06	174	P	Pn	14 27 01.4	0.0
	SNR=8.9						
WHFO	Wadi Hawf	8.18	187	P	Pn	14 27 02.1	-1.0
	SNR=31						
DMTO	DMTO	8.33	179	P	Pn	14 27 04.9	-0.2
ISFB	Sefidab	8.53	346	Pn	Pn	14 27 08.5	+0.7
ABTO	Aybut	8.80	189	P	Pn	14 27 12.3	+0.7
BDRS	Dareh Seyedi	9.36	328	Pn	Pn	14 27 19.9	+0.4
IGHG	Ghaleghazi	10.86	321	Pn	Pn	14 27 40.6	+0.7
KBZ	Khabaz	20.08	334	P	Pn	14 29 38.3	-1.0
	2.8nm,0.9s,baz=162,slow=7.1,SNR=4.3						
	2.8nm,0.9s						
BRTR	Keskin Array B	22.30	313	P	P	14 30 01.7	+0.2
	1.1nm,0.6s,baz=135,slow=13,SNR=4.9						
	1.1nm,0.6s						
BVAR	Borovoye Array	29.34	19	P	P	14 31 06.8	+0.3
	1.8nm,0.5s,baz=206,slow=6.3,SNR=14						
	1.8nm,0.5s						
MKAR	Makanchi Array	30.02	39	P	P	14 31 13.2	+0.6
	1.1nm,0.5s,baz=224,slow=8.2,SNR=24						
	1.1nm,0.5s						
KURBB	Kurchatov Arra	30.52	30	P	P	14 31 17.7	+0.8
	0.7nm,0.3s,baz=229,slow=8.5,SNR=8.8						
	0.7nm,0.3s						
AKASG	Malin Array Be	31.41	328	P	P	14 31 23.6	-1.2
	0.4nm,0.3s,baz=116,slow=7.0,SNR=2.0						
	0.4nm,0.3s						
ZALV	Zalesovo Beam	35.61	31	P	P	14 32 01.2	-0.1
	2.3nm,0.4s,baz=239,slow=9.5,SNR=20						
	2.3nm,0.4s						
FINES	FINESS Array B	40.31	339	P	P	14 32 40.2	-0.6
	2.6nm,0.9s,baz=147,slow=13,SNR=6.7						
	2.6nm,0.9s						
CMAR	Chiang Mai Arr	41.41	91	P	P	14 32 50.7	+0.3
	0.3nm,0.3s,baz=281,slow=10,SNR=4.3						
	0.3nm,0.3s						
HFS	Hagfors	44.12	332	P	P	14 33 11.3	-0.6
	4.8nm,0.9s,baz=134,slow=8.3,SNR=2.3						
	4.8nm,0.9s						
SONM	Songino Array	45.62	48	P	P	14 33 24.9	+0.8
	0.7nm,0.8s,baz=262,slow=10.0,SNR=4.0						
	0.7nm,0.8s						
EKA	Eskdalemuir Ar	50.83	321	LR	LR	15 01 54.9	
	comp=Z,102nm,20.0s,baz=337,slow=44						
TORD	Torodi Ar. Bea	51.32	266	P	P	14 34 08.7	+0.3
	2.2nm,0.5s,baz=67,slow=8.3,SNR=3.6						
	2.2nm,0.5s						
ILAR	Eielson Array	87.88	9	P	P	14 37 51.7	-1.1
	0.2nm,0.6s,baz=316,slow=3.8,SNR=1.8						
	0.2nm,0.6s						
WRA	Warramunga Arr	89.71	112	P	P	14 38 01.0	-1.2
	0.2nm,0.5s,baz=309,slow=4.0,SNR=7.0						
	0.2nm,0.5s						
ASAR	Alice Springs	91.08	116	P	P	14 38 07.4	-1.1
	0.4nm,0.8s,baz=303,slow=4.9,SNR=5.4						
	0.4nm,0.8s						

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*CATAC **12** 14:41:23.4±0.4, 13°N±2°×9°0W±°, h27km±2km, M3.4/25, MLv3.4/25, Error ellipse: s-maj=5.1km s-min=2.8km az=27.4, confirmed*
*SNET **12** 14:41:24.5±1.1, 13°.09N×89°.55W, h40km, ML3.3*
*GCG **12** 14:41:27.1±2.2, 13°.22N×89°.46W, h41km±32km, MD3.8*
ISC 12 14:41:23.8±1.6, **13°.02N**±0°.06×**89°.56W**±0°.04, **h33**km±6km,
n85, σ**0ˢ.52**/101, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.52	27	eP	Pb	14 41 35.0	+0.3
LALI				eS	Sb	14 41 42.5	+0.3
LALI	Alcalda de L	0.52	27	eP	Pb	14 41 35.2	+0.5
LALI	Alcalda de L	0.52	27	P	Pb	14 41 35.0	+0.3
LALI	Alcalda de L	0.52	27	S	Sb	14 41 43.1	+0.9
JAYA	Jayaque - finc	0.64	10	eP	Pb	14 41 36.8	0.0
JAYA				eS	Sb	14 41 45.1	-0.5
JAYA	Jayaque - finc	0.64	10	eP	Pb	14 41 36.8	0.0
JAYA				eS	Sb	14 41 45.6	0.0
JAYA	Jayaque - finc	0.64	10	P	Pb	14 41 36.9	+0.2
PANCS	Alcalda de	0.69	32	eP	Pb	14 41 37.0	-0.7
PANCS				eS	Sb	14 41 46.0	-1.0
PANCS	Alcalda de	0.69	32	P	Pb	14 41 36.9	-0.7
LOMA	Loma Larga	0.72	31	eP	Pb	14 41 37.5	-0.7
LOMA				eS	Sb	14 41 47.1	-0.9
LOMA	Loma Larga	0.72	31	P	Pb	14 41 37.7	-0.5
LOMA	Loma Larga	0.72	31	S	Sb	14 41 48.2	+0.2
PMON	Piamonte	0.73	19	eP	Pn	14 41 37.7	-0.3
PMON	Piamonte	0.73	19	S	Sn	14 41 49.3	+1.3
PMON	Piamonte	0.73	19	P	Pn	14 41 37.9	0.0
UEES	Universidad Ev	0.76	24	P	Pn	14 41 37.9	-0.5
UEES	Universidad Ev	0.76	24	S	Sb	14 41 49.2	+0.4
BOQS	Boqueron	0.76	21	eP	Pn	14 41 38.5	0.0
BOQS				eS	Sb	14 41 48.9	-0.1
UTEC	Universidad Te	0.76	27	S	Sb	14 41 48.9	+0.1
UTEC	Universidad Te	0.76	27	P	Pn	14 41 37.8	-0.6
PIC2	El Picacho	0.78	22	eP	Pn	14 41 38.4	-0.3
IGN	Direccin Gen	0.78	29	eP	Pn	14 41 38.6	-0.1
IGN	Direccin Gen	0.78	29	P	Pn	14 41 38.4	-0.3
IGN	Direccin Gen	0.78	29	S	Sb	14 41 49.4	-0.2

CEDA	San Andres	0.79	12	P	Pn	14 41 38.2	-0.6
CEDA	San Andres	0.79	12	S	Sb	14 41 50.0	+0.3
UDBS	Universidad Do	0.79	30	S	Sb	14 41 49.6	-0.2
UDBS	Universidad Do	0.79	30	P	Pn	14 41 38.8	-0.1
CEVE	Cerro Verde	0.80	355	eP	Pn	14 41 39.3	+0.2
CEVE				eS	Sb	14 41 50.2	0.0
CEVE	Cerro Verde	0.80	355	S	Sb	14 41 51.4	+1.1
CEVE	Cerro Verde	0.80	355	P	Pn	14 41 39.4	+0.2
SBLS	San Blas	0.81	356	eP	Pn	14 41 39.5	+0.2
SBLS				eS	Sb	14 41 50.2	-0.4
LFU	La Fuente	0.84	31	eP	Pn	14 41 39.8	+0.2
SNJE	San Jose	0.84	357	eP	Pn	14 41 39.8	+0.2
SNJE				eS	Sb	14 41 51.3	0.0
RTR	El Retiro	0.87	354	eP	Pn	14 41 40.4	+0.3
RTR				eS	Sn	14 41 52.0	+0.3
NUBE	Las Nubes	0.90	346	eP	Pn	14 41 40.3	-0.1
NUBE				eS	Sn	14 41 52.0	-0.4
NUBE	Las Nubes	0.90	346	eP	Pn	14 41 40.5	+0.1
NUBE				eS	Sn	14 41 52.2	-0.2
NUBE	Las Nubes	0.90	346	P	Pn	14 41 40.4	+0.1
TECO	Alcaldia de Te	0.91	56	eP	Pn	14 41 39.8	-0.7
TECO	Alcaldia de Te	0.91	56	P	Pn	14 41 40.1	-0.4
TECO	Alcaldia de Te	0.91	56	S	Sn	14 41 52.2	-0.3
FAME	Alcaldia de Sa	0.93	332	S	Sn	14 41 52.2	-0.7
FAME	Alcaldia de Sa	0.93	332	P	Pn	14 41 40.6	-0.1
UNIC	Universidad Ca	0.95	1	S	Sn	14 41 54.1	+0.6
UNIC	Universidad Ca	0.95	1	P	Pn	14 41 41.3	+0.2
UESV	Universidad de	0.97	51	eP	Pn	14 41 40.8	-0.4
UESV	Universidad de	0.97	51	P	Pn	14 41 40.7	-0.5
UESV	Universidad de	0.97	51	S	Sn	14 41 53.8	0.0
SCLA	Alcaldia de Sa	1.05	50	eP	Pn	14 41 42.3	-0.1
SCLA	Alcaldia de Sa	1.05	50	P	Pn	14 41 42.5	+0.1
SCLA	Alcaldia de Sa	1.05	50	S	Sn	14 41 57.2	+1.3
RBDL	Robledal	1.09	353	eP	Pn	14 41 43.6	+0.5
TECA	Tecapa	1.13	65	eP	Pn	14 41 43.3	-0.3
LLGN	La Laguna	1.28	28	eP	Pn	14 41 45.7	+0.1
LLGN	La Laguna	1.28	28	P	Pn	14 41 45.6	+0.1
LLGN	La Laguna	1.28	28	S	Sn	14 42 03.0	+1.4
PACA	Pacayal	1.28	70	eP	Pn	14 41 46.4	+0.7
PACA	Pacayal	1.28	70	P	Pn	14 41 46.3	+0.7
PACA	Pacayal	1.28	70	S	Sn	14 42 02.6	+0.8
LCY	Lacayo	1.29	72	eP	Pn	14 41 46.0	+0.2
RANC	El Ranchito	1.30	72	eP	Pn	14 41 46.0	+0.1
VSM	San Miguel	1.31	72	eP	Pn	14 41 46.5	+0.4
BLLM	Bellamira	1.35	72	eP	Pn	14 41 46.9	+0.4
MTO3	Montecristo	1.38	8	eP	Pn	14 41 47.2	+0.2
MTO3	Montecristo	1.38	8	eP	Pn	14 41 47.5	+0.4
MTO3	Montecristo	1.38	8	S	Sn	14 42 04.3	0.0
MTO3	Montecristo	1.38	8	P	Pn	14 41 47.1	0.0
CNRM	Centro Naciona	1.42	71	S	Sn	14 42 05.8	+0.8
ESQI	Esquipulas	1.54	8	eP	Pn	14 41 49.5	+0.3
ESQI	Esquipulas	1.54	8	S	Sn	14 42 09.3	+1.1
ESQI	Esquipulas	1.54	8	P	Pn	14 41 48.7	-0.5
LCND	La Caada	1.65	80	eP	Pn	14 41 50.9	+0.3
LCND	La Caada	1.65	80	P	Pn	14 41 50.8	+0.3
CNCH	Conchagua	1.70	81	eP	Pn	14 41 51.5	+0.2
CNCH	Conchagua	1.70	81	P	Pn	14 41 51.7	+0.4
CNCH	Conchagua	1.70	81	S	Sn	14 42 12.8	+0.8
CSGN	Cosiguina Volc	1.95	91	P	Pn	14 41 54.9	+0.1
CSGN				S	Sn	14 42 18.9	+0.8
POTN	Potosi Cosigui	2.00	90	P	Pn	14 41 55.8	+0.4
POTN				S	Sn	14 42 19.6	+0.3
APG	El Apazote	2.16	336	eP	Pb	14 42 01.4	-1.0
PKGN	Cerro Pekin	2.54	98	P	Pn	14 42 03.9	+1.0
PKGN				S	Sn	14 42 32.3	-0.4
RTAL	Retalhuleu	2.56	306	P	Pn	14 42 03.8	+0.7
POLN	Al Sur del Vol	2.70	98	P	Pn	14 42 04.3	-0.8
YUSH	Yuscaran	2.80	70	P	Pn	14 42 06.3	-0.2
COPN	Copaltepe	3.02	106	P	Pn	14 42 09.4	0.0
LIMN	Finca el Limon	3.11	89	P	Pn	14 42 10.2	-0.6
LIMN				S	Sn	14 42 46.2	-0.7

DJA 12 14:51:19.7±0.4,**7°S**±4°×**10°6E**±°,**h76**^{km}±16^{km},**M3.9**/13, **mb4.4**/2,**MLv3.6**/13,**Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKJI	Sukabumi	0.92	80	P	Pn	14 51 37.5	-0.1
DBJI	Dramaga	1.26	61	P	Pn	14 51 41.6	-0.1
CNJI	Cibinong	1.48	96	P	Pn	14 51 44.8	+0.1
KASI	Kota Agung	1.98	325	P	Pn	14 51 51.3	0.0
LEM	Lembang	1.99	81	P	Pn	14 51 51.4	-0.1
BBJI	Bungbulang	2.02	99	P	Pn	14 51 52.5	+0.7
KLSI		2.62	340	P	Pn	14 52 00.1	+0.3
LWLI	Liwa	2.65	323	P	Pn	14 52 00.6	+0.3
MDSI	Maura Dua	3.03	331	P	Pn	14 52 06.0	+0.6
EGSI	Enggano, Bengk	3.79	298	P	Pn	14 52 17.0	+1.2
MNAI	Manna	3.86	316	P	Pn	14 52 16.3	-0.4
PMBI	Palembang	4.29	348	P	Pn	14 52 23.7	+1.1
TPI	Tanjungpandan	4.81	25	P	Pn	14 52 28.4	-1.3
PCJI	Pacitan	5.58	101	P	Pn	14 52 40.5	+0.3
	0.2nm38nm,1.3s						
PPSI	Pulau Pagai	7.11	308	P	Pn	14 52 59.8	-1.3

IDC 12 14:56:27.4±1.8,**10°.68S**×**124°.56E**,**h0**^{km},**mb3.4**/1, **mbtmp3.6**/4,**ML3.6**/3,**Error ellipse: s-maj=50.9km s-min=13.4km az=35.0**,**Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	0.99	298	Pg	Pg	14 56 47.0	+0.5
	152nm,0.3s,baz=154,slow=6.2,SNR=41						
BATI				Lg	Lg	14 57 00.1	
	112nm,0.3s,baz=273,slow=22,SNR=6.0						
FITZ	Fitzroy Crossi	7.45	172	Pn	Pn	14 58 16.9	-0.6
	0.6nm,0.3s,baz=98,slow=23,SNR=2.5						
FITZ				Sn	Sn	14 59 38.2	-4.6
	2.0nm,0.3s,baz=77,slow=23,SNR=5.2						
	1.3nm,0.3s						
WRA	Warramunga Arr	13.18	135	Pn	Pn	14 59 36.7	+0.6
	0.3nm,0.3s,baz=313,slow=13,SNR=10						
WRA				Sn	Sn	15 01 58.0	-5.6
	0.4nm,0.3s,baz=305,slow=24,SNR=7.6						
	0.4nm,0.4s						
ASAR	Alice Springs	15.70	147	Pn	Pn	15 00 10.7	+0.6
	0.5nm,0.3s,baz=319,slow=12,SNR=48						
ASAR				Sn	Sn	15 02 58.9	-6.0
	0.2nm,0.3s,baz=318,slow=23,SNR=9.3						
	1.3nm,0.4s						
MKAR	Makanchi Array	68.53	330	P	P	15 07 31.6	-0.3
	0.2nm,0.4s,baz=138,slow=5.4,SNR=5.2						
	0.2nm,0.4s						

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*PRE **12** 15:03:32.9±1.0,26°.06S×29°.13E,h0^{km},ML2.7,Suspected explosion*

*IDC **12** 15:03:47.6±3.4,26°.35S×28°.32E,h0^{km},mbtmp3.3/3, ML3.3/3,Error ellipse: s-maj=29.1km s-min=21.8km az=106.0*

*BGSI **12** 15:04:03.5±0.5,24°.48S×27°.06E,h15^{km},ML2.4*

ISC 12 15:03:33.4±0.9,**25°.99S**±0°.05×**29°.12E**±0°.04,**h0**^{km},**n16**, σ1^{s}**79**/20,**South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRLN	Carolina, Mapu	0.81	90	eP	Pg	15 03 47.9	-1.0
CRLN				eS	Sg	15 03 59.4	-0.1
CRLN				IAML		15 04 08.1	
	comp=Z,138nm,0.7s						
HRAO	HartRAO	1.29	274	eP	Pg	15 03 57.8	-0.4
HRAO				eS	Sb	15 04 16.0	0.0
HRAO				IAML		15 04 17.8	
	comp=Z,108nm,0.5s						
LEPH	Lephalale, Lim	2.44	330	eP	Pn	15 04 15.6	+1.0
LEPH				eS	Sn	15 04 46.2	+1.0
LEPH				IAML		15 05 03.5	
	comp=Z,33nm,0.5s						
MOPA	Mopani	3.22	41	eP	Pn	15 04 26.4	+1.2
MOPA				eS	Sn	15 05 05.0	+0.7
MOPA				IAML		15 05 23.5	
	comp=Z,83nm,0.4s						
LBTB	Lobatse	3.33	286	Pn	Pb	15 04 33.7	+0.3
	comp=Z,5.4nm,0.3s,baz=121,slow=18,SNR=79						
LBTB				Lg	Lg	15 05 15.7	
	comp=Z,7.3nm,0.3s,baz=186,slow=20,SNR=16						
	comp=Z,19nm,0.5s						
LBTB	Lobatse	3.33	286	eP	Pn	15 04 27.7	+0.9
LBTB				eS	Sn	15 05 08.3	+1.1
LBTB				IAML		15 05 21.9	
	comp=Z,60nm,0.6s						
MREMI	Moremi	3.73	336	*i* P	Pn	15 04 34.0	+1.6
MREMI				IAML		15 05 40.6	
	comp=E,109nm,0.3s						
MUSN	Musina, Limpop	3.75	11	eP	Pn	15 04 34.6	+2.1
MUSN				eS	Sn	15 05 18.4	+0.9
MUSN				IAML		15 05 41.8	
	comp=Z,24nm,0.5s						
MAKGR	Makgori	3.89	272	*i* P	Pb	15 04 41.3	-1.7
MAKGR				IAML		15 05 35.7	
	comp=E,132nm,0.4s						
LPHEP	Lephephe	3.96	311	*i* P	Pn	15 04 29.1	-6.3
LPHEP				IAML		15 05 44.4	
	comp=N,19nm,1.4s						
BOSA	Boshof	4.32	232	Pn	Pn	15 04 44.1	+3.7
	comp=N,1.8nm,0.3s,baz=56,slow=14,SNR=19						
BOSA				Lg	Lg	15 05 40.3	
	comp=N,2.5nm,0.3s,baz=140,slow=13,SNR=18						
	comp=N,2.1nm,0.3s						
BOSA	Boshof	4.32	232	eP	Pn	15 04 40.2	-0.2
BOSA				eS	Sn	15 05 30.0	-1.5
BOSA				IAML		15 05 43.0	
	comp=Z,18nm,0.5s						
I47ZA	BOSHOF INFRASO	4.33	232	I	I	15 27 10.0	
	baz=53,slow=303,SNR=1.7						
BROLN	Tlhalogang	5.14	341	*i* P	Pn	15 04 54.5	+2.8
BROLN				IAML		15 06 23.9	
	comp=N,12nm,1.6s						
MATP	Matopo	5.57	354	Pn	Pg	15 05 16.6	-3.5
	comp=N,0.6nm,0.3s,baz=177,slow=13,SNR=10.0						
	comp=N,1.4nm,0.3s						
I35NA	TSUMEB INFRASO	12.62	300	I	I	16 20 20.0	
	baz=128,slow=305,SNR=1.9						

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*NEIC **12** 15:17:57.7±1.7,63°.19N±0°.02×152°.78W±0°.05,h17^{km}±6^{km}, Error ellipse: s-maj=3.1km s-min=3.0km az=209.0*

AEIC 12 15:17:57.7±1.9,**63°.20N**±0°.02×**152°.77W**±0°.04,**h21**^{km}±7^{km}, **ML3.6**,**ML3.7**/232(NEIC),**Error ellipse: s-maj=2.9km s-min=2.3km az=166.0**,**Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPLA	Purkeypile	0.40	139		Pb	15 18 05.6	-0.5
PPLA				IAML		15 18 12.7	
	comp=N,7µm,0.6s						
PPLA				IAML		15 18 13.1	
	comp=E,6µm,0.7s						
PPLA	Purkeypile	0.40	139		Sb	15 18 11.4	-0.4
K20K	Telida	0.61	286		Pb	15 18 09.4	-0.4
K20K				IAML		15 18 18.3	
	comp=N,4µm,0.4s						
K20K				IAML		15 18 18.7	
	comp=E,6µm,0.5s						
K20K	Telida	0.61	286		Sb	15 18 18.0	0.0
CHUM	Lake Minchumin	0.71	16		Pb	15 18 11.8	+0.3
CHUM					Pn	15 18 12.0	-0.6
CHUM					Sb	15 18 21.8	+0.9
KTH	Kantishna Hill	0.90	66		Pb	15 18 14.4	-0.3
KTH				IAML		15 18 28.8	
	comp=N,2µm,0.8s						
KTH				IAML		15 18 30.1	
	comp=E,2µm,0.6s						
KTH	Kantishna Hill	0.90	66		Sb	15 18 26.6	+0.3
L22K	Petersville	1.14	126		Pb	15 18 19.2	+0.5
L22K				IAML		15 18 34.2	
	comp=N,2µm,0.4s						
L22K				IAML		15 18 35.8	
	comp=E,2µm,0.7s						
TRF	Thorofare Moun	1.15	76		Sn	15 18 34.0	+0.2
TRF	Thorofare Moun	1.15	76		Pn	15 18 17.9	-0.8
TRF				IAML		15 18 36.7	
	comp=N,1µm,0.9s						
TRF				IAML		15 18 37.4	
	comp=E,1µm,0.9s						
J20K	Nowinta River	1.16	329		Pn	15 18 18.8	+0.1
J20K				IAML		15 18 36.5	
	comp=E,2µm,0.6s						
BPAW	Bear Paw Mtn.	1.20	41		Pn	15 18 18.8	-0.6
BPAW	Bear Paw Mtn.	1.20	41		Sn	15 18 36.3	+1.3
M20K	Styx River	1.33	187		Pn	15 18 21.2	0.0
M20K	Styx River	1.33	187		Sn	15 18 38.5	+0.1
SKT	Skwentna	1.35	154		Pn	15 18 21.7	+0.4
SKT				IAML		15 18 41.7	
	comp=N,1µm,0.3s						
SKT	Skwentna	1.35	154		Sb	15 18 39.8	+0.7
CUT	Chulitna	1.40	124		Pb	15 18 22.6	-0.5
CUT	Chulitna	1.40	124		Sb	15 18 41.3	+0.9
L19K	White Mountain	1.40	224		Pn	15 18 21.3	-0.8
L19K					Sb	15 18 41.1	+0.5
L19K				IAML		15 18 42.6	
	comp=N,2µm,0.6s						
J19K	Poorman	1.50	303		Pn	15 18 23.5	0.0
J19K				IAML		15 18 46.4	
	comp=E,746nm,0.5s						
J19K				IAML		15 18 46.9	
	comp=N,854nm,0.4s						
STLK	Strandline Lak	1.76	165		Pn	15 18 27.6	+0.5
STLK					Sb	15 18 50.5	-0.5
STLK				IAML		15 18 53.6	
	comp=E,673nm,0.5s						
STLK				IAML		15 18 54.2	
	comp=N,598nm,0.5s						
BWN	Browne	1.77	55		Pn	15 18 27.0	0.0
BWN				IAML		15 19 02.5	
	comp=N,957nm,0.6s						
I20K	Naaghedeneel	1.77	336		Pn	15 18 27.6	+0.5
RND	Reindeer	1.78	82		Pn	15 18 27.4	+0.1
J18K	Innoko River	1.80	280		Pn	15 18 28.2	+0.7
J18K				IAML		15 18 56.8	
	comp=N,752nm,0.7s						
MCK	McKinley	1.80	71		Pn	15 18 27.1	-0.5
WAT7	Susitna Watana	1.82	100		Pn	15 18 28.3	+0.4
WAT7					Pb	15 18 28.5	-1.9
WAT7					Sb	15 18 52.6	-0.2
SPNN	North Nagishla	1.84	179		Pn	15 18 28.8	+0.6
M22K	Willow	1.90	139		Pn	15 18 29.6	+0.7
SPWE	Spurr West	1.94	177		Pn	15 18 30.3	+0.9
SPCG	Spurr Capps Gl	1.95	169		Pn	15 18 30.5	+0.8
SPBG	Spurr Blockage	1.96	174		Pn	15 18 30.8	+1.0
WAT1	Susitna Watana	1.96	99		Pn	15 18 30.1	+0.4
SUA	Susitna One	1.98	151		Pn	15 18 30.4	+0.3
SUA				IAML		15 19 09.3	
	comp=E,450nm,0.8s						
SPCN	Chakachatna No	2.00	172		Pn	15 18 31.8	+1.5
CKL	Chakachamna La	2.02	174		Pn	15 18 31.5	+0.8
CKL					Pb	15 18 31.8	-2.0
SPCR	Spurr Chakacha	2.02	172		Pn	15 18 31.7	+1.1
MLY	Manley	2.04	25		Pn	15 18 30.2	-0.7
MLY				IAML		15 19 03.0	
	comp=N,436nm,0.9s						
MLY				IAML		15 19 03.0	
	comp=E,410nm,0.7s						
MLY	Manley	2.04	25		Sb	15 18 57.6	-1.4
SPU	Mount Spurr	2.05	170		Pn	15 18 31.9	+0.9
L18K	Granite Mounta	2.06	243		Pn	15 18 30.9	-0.2
L18K				IAML		15 19 05.7	
	comp=N,769nm,0.3s						
L18K	Granite Mounta	2.06	243		Sb	15 19 00.1	+0.7
NEA2	Nenana	2.15	48		Pn	15 18 31.0	-1.4
M18K	Stony River	2.23	221		Pn	15 18 32.9	-0.5
GHO	Glory Hole Cre	2.29	127		Pn	15 18 34.7	+0.4
GHO				IAML		15 19 13.6	
	comp=E,366nm,0.8s						
GHO				IAML		15 19 15.4	
	comp=N,466nm,0.8s						
PMR	Palmer	2.34	132		Pn	15 18 35.3	+0.4
PMR				IAML		15 19 11.1	
	comp=N,336nm,0.5s						
WAT6	Susitna Watana	2.38	103		Pn	15 18 35.4	-0.3
WRH	Wood River Hil	2.43	56		Pn	15 18 34.9	-1.3
DHY	Denali Highway	2.45	91		Pn	15 18 36.7	+0.1
DHY				IAML		15 19 15.7	
	comp=N,365nm,0.7s						
DHY				IAML		15 19 16.8	
	comp=E,307nm,0.6s						
I23K	Minto, Yukon-K	2.46	36		Pn	15 18 35.6	-1.0
I23K				IAML		15 19 31.7	
	comp=N,265nm,0.7s						
H21K	Melozitna Rive	2.47	360		Pn	15 18 36.7	0.0
H21K				IAML		15 19 17.8	
	comp=N,529nm,0.8s						
SML	Sawmill	2.49	122		Pn	15 18 37.4	+0.3
SML				IAML		15 19 19.1	
	comp=E,499nm,0.7s						
SML				IAML		15 19 20.9	
	comp=N,530nm,0.8s						
N19K	Bonanza Creek	2.53	199		Pn	15 18 37.5	-0.1
RC01	Rabbit Creek A	2.55	145		Pn	15 18 38.3	+0.4
RC01				IAML		15 19 17.9	
	comp=E,322nm,0.4s						
RC01				IAML		15 19 24.5	
	comp=N,289nm,0.7s						
K17K	Iditarod	2.58	262		Pn	15 18 38.6	+0.5
K17K				IAML		15 19 20.3	
	comp=N,386nm,0.7s						
K17K				IAML		15 19 22.6	
	comp=E,420nm,0.8s						
RDJH	Redoubt Jeurge	2.62	180		Pn	15 18 39.5	+0.6
RDJH					Pb	15 18 39.7	-4.2
CCB	Clear Creek Bu	2.63	54		Pn	15 18 37.7	-1.2
CCB				IAML		15 19 19.9	
	comp=N,221nm,0.8s						
RDT	Redoubt	2.64	176		Pn	15 18 39.4	+0.2
RDT					Pb	15 18 39.8	-4.5
KNK	Knik Glacier	2.69	130		Pn	15 18 41.3	+1.5
KNK				IAML		15 19 22.4	
	comp=E,372nm,0.4s						
KNK				IAML		15 19 26.9	
	comp=N,235nm,0.5s						
RDWB	Redoubt West	2.72	181		Pn	15 18 41.0	+0.7
COLA	College	2.74	50		Pn	15 18 39.9	-0.5
L17K	Donlin	2.77	250		Pn	15 18 40.4	-0.4
H22K	Ishtalitna Cre	2.77	12		Pn	15 18 41.0	+0.2
IMAR	Indian Mountai	2.83	352		Pn	15 18 42.0	+0.3
M17K	Holitna River	2.83	232		Pn	15 18 40.7	-1.0
H19K	Roundabout Mou	2.83	327		Pn	15 18 43.1	+1.4
H19K				IAML		15 19 31.7	
	comp=E,259nm,0.9s						
H19K				IAML		15 19 31.9	
	comp=N,280nm,0.7s						
HDA	Harding Lake	2.85	62		Pn	15 18 40.8	-1.1
HDA				IAML		15 19 30.8	
	comp=E,185nm,0.5s						
J17K	VABM Dome	2.86	277		Pn	15 18 42.6	+0.6
J17K				IAML		15 19 29.1	
	comp=E,326nm,0.4s						
J17K				IAML		15 19 32.7	
	comp=N,401nm,0.9s						
SCM	Sheep Creek Mo	2.87	116		Pn	15 18 44.3	+2.0
SCM				IAML		15 19 31.7	
	comp=N,372nm,0.8s						
N18K	Kilae Creek	2.93	212		Pn	15 18 42.8	-0.3
SLKM	Skilak Lake	2.96	155		Pn	15 18 44.1	+0.6
SLKM				IAML		15 19 34.5	
	comp=E,234nm,0.6s						
POKR	Poker Plat Res	3.03	48		Pn	15 18 43.4	-0.9
IL01		3.03	56		Pn	15 18 43.5	-0.9
IL31		3.03	56		Pn	15 18 43.1	-1.3
ILAR	Eielson Array	3.03	56		Pn	15 18 43.8	-0.6
O22K	Cooper Landing	3.09	151		Pn	15 18 45.8	+0.6
O19K	Port Alsworth	3.10	194		Pn	15 18 45.6	+0.2
H18K	Honhosa River	3.14	311		Pn	15 18 47.5	+1.6
PWL	Port Wells	3.14	136		Pn	15 18 46.7	+0.7
PWL				IAML		15 19 42.3	
	comp=N,237nm,0.5s						
PWL				IAML		15 19 48.0	
	comp=E,269nm,0.8s						
K24K	Donnelly Dome	3.19	76		Pn	15 18 47.2	+0.6
IVE	Iliamna Volcan	3.20	182		Pn	15 18 46.7	-0.1
IVE					Pb	15 18 47.7	-6.1
ILSW	Iliamna Southw	3.23	183		Pn	15 18 48.1	+0.7
ILSW				IAML		15 19 43.1	
	comp=E,253nm,0.9s						
ILSW				IAML		15 19 50.2	
	comp=N,168nm,0.7s						
M24K	Tolsona, Glenn	3.23	107		Pn	15 18 48.0	+0.7
PAX	Paxson	3.33	91		Pn	15 18 49.4	+0.8
PAX				IAML		15 19 44.8	
	comp=N,169nm,1.0s						
G21K	Allakaket	3.34	355		Pn	15 18 49.0	+0.2
G21K				IAML		15 19 52.1	
	comp=N,198nm,0.8s						
G21K				IAML		15 19 54.5	
	comp=E,232nm,0.9s						
H24K	Noodor Dome	3.39	36		Pn	15 18 48.6	-0.8
N17K	Nushagak Hills	3.40	220		Pn	15 18 49.0	-0.5
N17K				IAML		15 19 52.7	
	comp=N,248nm,0.7s						
L16K	Owhat River	3.46	247		Pn	15 18 49.7	-0.6
L16K				IAML		15 19 53.7	
	comp=E,204nm,0.6s						
L16K				IAML		15 19 56.2	
	comp=N,216nm,0.9s						
SEW	Seward	3.48	152		Pn	15 18 52.0	+1.4
G19K	Purcell Mounta	3.49	330		Pn	15 18 51.2	+0.5
G19K				IAML		15 19 51.0	
	comp=E,122nm,1.1s						
GLI	Glacier Island	3.54	129		Pn	15 18 52.4	+0.9
GLI				IAML		15 19 49.8	
	comp=N,133nm,0.6s						
GLI				IAML		15 19 56.4	
	comp=E,171nm,0.5s						
J16K	Anvik River	3.54	275		Pn	15 18 51.7	+0.2
J16K				IAML		15 19 53.1	
	comp=E,172nm,0.7s						
O18K	Koktuh Hills	3.56	200		Pn	15 18 52.0	+0.4
J25K	Salcha River,	3.56	63		Pn	15 18 50.7	-1.1
J25K				IAML		15 19 59.5	
	comp=N,102nm,0.7s						
BRLK	Bradley Lake	3.56	165		Pn	15 18 52.9	+1.1
BRLK				IAML		15 19 49.1	
	comp=E,112nm,0.8s						
BRLK				IAML		15 19 58.2	
	comp=N,100nm,0.7s						
H17K	Granite Mounta	3.59	302		Pn	15 18 53.6	+1.5
H17K				IAML		15 19 37.8	
	comp=E,116nm,0.7s						
H17K				IAML		15 19 57.2	
	comp=N,106nm,0.6s						
BRSE	Bradley Lake S	3.60	163		Pn	15 18 53.2	+0.9
BRSE					Pb	15 18 53.8	-6.9
I17K	Unalakleet	3.62	285		Pn	15 18 51.9	-0.6
I17K				IAML		15 19 53.3	
	comp=N,97nm,0.9s						
KLU	Klutina	3.62	115		Pn	15 18 54.1	+1.5
KLU				IAML		15 19 53.5	
	comp=E,136nm,0.9s						
KLU				IAML		15 19 58.9	
	comp=N,98nm,1.1s						
M16K	Timber Creek	3.64	236		Pn	15 18 52.4	-0.4
M16K				IAML		15 19 58.0	
	comp=N,171nm,0.8s						
M16K				IAML		15 20 00.9	
	comp=E,187nm,0.6s						
G18K	Tagagawik	3.71	319		Pn	15 18 54.4	+0.6
G23K	Bananza Creek	3.71	17		Pn	15 18 54.2	+0.4
CNPM	China Poot	3.76	168		Pn	15 18 56.1	+1.7
CNPM				IAML		15 19 55.9	
	comp=E,131nm,0.9s						
FID	Port Fidalgo	3.85	127		Pn	15 18 56.4	+0.6
FID				IAML		15 20 05.6	
	comp=E,125nm,0.7s						
FID				IAML		15 20 08.6	
	comp=N,93nm,0.6s						
DIV	Divide	3.88	119		Pn	15 18 57.1	+0.9
DIV				IAML		15 20 03.9	
	comp=N,97nm,0.6s						
DOT	Dot Lake	3.94	80		Pn	15 18 56.4	-0.5
DOT				IAML		15 20 03.9	
	comp=N,156nm,1.0s						
DOT				IAML		15 20 08.3	
	comp=E,100nm,0.8s						
N16K	Nishlik Lake	3.95	229		Pn	15 18 56.3	-0.7
SCRK	Sand Creek	4.00	75		Pn	15 18 56.8	-1.1
SCRK				IAML		15 20 06.2	
	comp=N,87nm,0.8s						
P18K	Big Mountain,	4.00	198		Pn	15 18 58.3	+0.5
P18K				IAML		15 20 03.4	
	comp=N,156nm,0.5s						
O17K	Koliganek Bris	4.02	213		Pn	15 18 57.4	-0.5
F21K	Alatna River	4.05	356		Pn	15 18 59.2	+0.8
F21K	Alatna River	4.05	356	IAML		15 20 13.5	
	comp=E,73nm,0.8s						
F20K	Avaraart Lake	4.06	343		Pn	15 19 00.3	+1.8
WACK	Wrangell Chich	4.09	104		Pn	15 19 00.9	+1.7
WACK					Pb	15 19 01.7	-7.4
HIN	Hinchinbrook I	4.09	131		Pn	15 18 59.2	+0.2
HIN	Hinchinbrook I	4.09	131	IAML		15 20 17.6	
	comp=E,122nm,0.9s						

HIN				IAML		15 20 21.9	
	comp=N,137nm,1.2s						
N25K	**Chitina, Valde**	**4.12**	**109**		Pn	15 19 00.7	+1.2
N25K				IAML		15 20 10.2	
	comp=N,81nm,0.8s						
MENT	**Mentasta**	**4.12**	**90**		Pn	15 18 59.4	-0.1
K15K	**Wolf Creek Mou**	**4.13**	**261**		Pn	15 18 60.0	+0.4
K15K				IAML		15 20 06.5	
	comp=N,94nm,0.8s						
K15K				IAML		15 20 11.8	
	comp=E,74nm,0.6s						
G17K	**Kiwalik Mounta**	**4.13**	**307**		Pn	15 19 00.7	+1.1
G24K	**Hadweenzic Riv**	**4.17**	**30**		Pn	15 18 59.7	-0.4
G24K				IAML		15 20 10.3	
	comp=N,79nm,0.9s						
G24K				IAML		15 20 10.4	
	comp=E,72nm,0.8s						
WASW	**Wrangell South**	**4.18**	**104**		Pn	15 19 02.3	+2.0
COLD	**Coldfoot**	**4.19**	**14**		Pn	15 18 58.8	-1.5
COLD				IAML		15 20 14.6	
	comp=E,75nm,1.2s						
F19K	**Shaleruckik Mo**	**4.22**	**332**		Pn	15 19 02.0	+1.3
F19K	**Shaleruckik Mo**	**4.22**	**332**	IAML		15 20 18.6	
	comp=N,68nm,0.8s						
J26L	**Joseph Creek**	**4.28**	**68**		Pn	15 19 00.9	-0.7
J26L				IAML		15 20 17.4	
	comp=E,63nm,0.6s						
J26L				IAML		15 20 23.5	
	comp=N,73nm,0.7s						
H25L	**Birch Creek**	**4.28**	**41**		Pn	15 19 01.8	+0.3
L15K	**Ungalak Mounta**	**4.33**	**253**		Pn	15 19 02.2	0.0
H16K	**Elim**	**4.42**	**293**		Pn	15 19 04.8	+1.3
O16K	**Kokwok River B**	**4.43**	**218**		Pn	15 19 02.8	-0.9
BMRM	**Bremner River**	**4.44**	**117**		Pn	15 19 04.7	+0.8
F18K	**Selawik**	**4.50**	**322**		Pn	15 19 06.0	+1.4
M15K	**Kasigluk River**	**4.51**	**240**		Pn	15 19 04.3	-0.3
GLB	**Gilahina Butte**	**4.54**	**109**		Pn	15 19 06.0	+0.9
GLB				IAML		15 20 21.6	
	comp=N,49nm,1.1s						
M26K	**Nabesna, AK**	**4.56**	**96**		Pn	15 19 07.6	+2.2
M26K				IAML		15 20 18.8	
	comp=E,96nm,0.9s						
G25K	**Bearman Lake**	**4.56**	**35**		Pn	15 19 05.5	+0.1
SYI	**Shuyak Island**	**4.61**	**178**		Pn	15 19 07.6	+1.5
SYI	**Shuyak Island**	**4.61**	**178**	IAML		15 20 28.8	
	comp=E,51nm,1.1s						
N15K	**Kwethluk River**	**4.63**	**232**		Pn	15 19 05.4	-0.9
E19K	**Redstone River**	**4.67**	**338**		Pn	15 19 08.6	+1.7
I26K	**Coal Creek Min**	**4.70**	**59**		Pn	15 19 06.3	-0.9
G16K	**Koyuk River**	**4.72**	**302**		Pn	15 19 07.9	+0.3
G16K				IAML		15 20 33.1	
	comp=N,45nm,1.1s						
VRDI	**Verde Repeater**	**4.79**	**110**		Pn	15 19 08.9	+0.2
F24K	**Squaw Lake**	**4.79**	**23**		Pn	15 19 08.4	-0.3
KAHG	**Katmai Hook Gl**	**4.80**	**191**		Pn	15 19 10.1	+1.3
K27K	**Chicken**	**4.84**	**75**		Pn	15 19 08.8	-0.4
K27K				IAML		15 20 33.2	
	comp=N,45nm,0.8s						
F17K	**Baldwin Pennin**	**4.87**	**316**		Pn	15 19 10.6	+1.0
F17K				IAML		15 20 44.0	
	comp=E,39nm,1.0s						
F17K				IAML		15 20 47.0	
	comp=N,48nm,0.9s						
MCARA	**McCarthy VSAT**	**4.90**	**107**		Pn	15 19 10.6	+0.5
Q16K	**King Salmon**	**4.92**	**204**		Pn	15 19 10.8	+0.6
KAWH	**Katmai**	**4.93**	**193**		Pn	15 19 11.8	+1.2
J14K	**Nanvaranak Lak**	**4.94**	**270**		Pn	15 19 11.2	+0.6
J14K				IAML		15 20 45.1	
	comp=N,68nm,1.1s						
J14K				IAML		15 20 48.1	
	comp=E,41nm,1.0s						
BC01	**Beaver Creek A**	**4.97**	**87**		Pn	15 19 11.6	+0.6
L27K	**Beaver Creek,**	**4.97**	**87**		Pn	15 19 11.5	+0.5
E22K	**Anaktuvuk Pass**	**4.97**	**4**		Pn	15 19 11.7	+0.6
M14K	**Bethel**	**4.98**	**245**		Pn	15 19 11.7	+0.5
M14K				IAML		15 20 44.8	
	comp=N,50nm,1.0s						
M14K				IAML		15 20 59.3	
	comp=E,54nm,1.2s						
BCAR	**Beaver Creek A**	**4.99**	**87**		Pn	15 19 11.7	+0.4
L14K	**Kuka Creek**	**4.99**	**253**		Pn	15 19 12.2	+0.9
KAKN	**Katmai Knife C**	**5.05**	**194**		Pn	15 19 13.3	+1.1
E23K	**Chandalar**	**5.05**	**14**		Pn	15 19 12.6	+0.4
E23K				IAML		15 20 37.9	
	comp=E,52nm,1.1s						
E23K				IAML		15 20 41.0	
	comp=N,40nm,0.8s						
M27K	**Edge Creek, AK**	**5.07**	**95**	IAML		15 20 40.5	
	comp=N,60nm,1.1s						
M27K				IAML		15 20 51.8	
	comp=E,46nm,1.2s						
KABU	**Katmai Buttres**	**5.10**	**195**		Pn	15 19 14.6	+1.7
CRQM	**Cirque**	**5.16**	**114**		Pn	15 19 15.0	+1.2
CRQM	**Cirque**	**5.16**	**114**	IAML		15 20 37.1	
	comp=E,65nm,0.9s						
CRQM				IAML		15 20 52.5	
	comp=N,68nm,1.1s						
ACHA	**Angle Creek He**	**5.16**	**195**	IAML		15 20 44.7	
	comp=N,46nm,0.8s						
ACHA				IAML		15 20 44.9	
	comp=E,68nm,1.1s						
CNTC	**Contact Creek**	**5.18**	**199**		Pn	15 19 13.9	-0.1
E24K	**Your Creek**	**5.21**	**18**		Pn	15 19 14.8	+0.5
E24K	**Your Creek**	**5.21**	**18**	IAML		15 20 49.8	
	comp=E,45nm,0.9s						
E24K				IAML		15 20 50.1	
	comp=N,31nm,1.0s						
PTPK	**Patty Peak**	**5.23**	**108**		Pn	15 19 16.1	+1.3
E20K	**Nigu River**	**5.27**	**346**		Pn	15 19 17.5	+2.3
O15K	**Ungalikthiuk R**	**5.29**	**223**		Pn	15 19 14.9	-0.4
O15K	**Ungalikthiuk R**	**5.29**	**223**	IAML		15 20 51.4	
	comp=N,58nm,0.8s						
E21K	**Killik River**	**5.29**	**355**		Pn	15 19 17.0	+1.6
E21K	**Killik River**	**5.29**	**355**	IAML		15 20 59.7	
	comp=N,52nm,0.9s						
TGL	**Tana Glacier**	**5.29**	**113**		Pn	15 19 16.4	+0.9
TGL	**Tana Glacier**	**5.29**	**113**	IAML		15 20 47.4	
	comp=E,49nm,0.8s						
TGL				IAML		15 20 49.7	
	comp=N,60nm,1.1s						
F25K	**Christian Rive**	**5.32**	**31**		Pn	15 19 15.1	-0.8
E18K	**Tukpahlearik C**	**5.36**	**326**		Pn	15 19 17.5	+1.1
E18K				IAML		15 20 56.8	
	comp=N,28nm,1.0s						
KDAK	**Kodiak Island**	**5.44**	**179**		Pn	15 19 18.4	+0.9
BMAR	**Burnt Mountain**	**5.46**	**35**		Pn	15 19 16.8	-1.0
TOLK	**Toolik Lake Re**	**5.62**	**12**		Pn	15 19 21.3	+1.4
H27K	**Steamboat Moun**	**5.69**	**53**		Pn	15 19 20.1	-0.9
O14K	**Tigyukauivet M**	**5.70**	**230**		Pn	15 19 20.1	-0.9
D22K	**Ayikyak River**	**5.71**	**0**		Pn	15 19 22.7	+1.6
ANM	**Nome**	**5.74**	**289**		Pn	15 19 23.3	+1.8
M13K	**Dall Lake**	**5.74**	**246**		Pn	15 19 22.2	+0.6
D19K	**Kuna River**	**5.75**	**340**		Pn	15 19 23.4	+1.6
D20K	**Etivluk River**	**5.75**	**346**		Pn	15 19 23.2	+1.4
CTGM	**Chitina Glacie**	**5.82**	**108**		Pn	15 19 24.1	+1.3
D23K	**Nanushuk River**	**5.85**	**7**		Pn	15 19 24.2	+1.1
YUK3	**Moose Creek**	**5.88**	**99**		Pn	15 19 25.7	+1.9
OHAK	**Old Harbor**	**6.00**	**183**		Pn	15 19 26.4	+1.2
I28M	**Miner Creek**	**6.01**	**62**		Pn	15 19 25.4	0.0
DAWY	**Dawson**	**6.02**	**76**		Pn	15 19 25.5	0.0
C21K	**Knifeblade Rid**	**6.04**	**353**		Pn	15 19 27.4	+1.8
D24K	**Happy Valley**	**6.19**	**13**		Pn	15 19 28.2	+0.5
C19K	**Lookout Ridge**	**6.54**	**338**		Pn	15 19 32.9	+0.3
D25K	**Kavik River**	**6.66**	**20**		Pn	15 19 34.8	+0.5
C23K	**Itkillik River**	**6.72**	**6**		Pn	15 19 36.2	+1.2
B22K	**Teshekpuk Lake**	**7.18**	**358**		Pn	15 19 41.9	+0.6
C27K	**Jago River**	**7.39**	**25**		Pn	15 19 44.5	+0.2
E29M	**Blow River**	**8.01**	**43**		Pn	15 19 52.4	-0.3
A36M	**Sachs Harbour**	**13.54**	**38**		Pn	15 21 07.4	-0.8

NOU 12 15:22:15.8, 10°.38S×166°.68E, h285^{km}, mb5.0/7, Santa Cruz Islands, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUES	**Luesalemba Tem**	**0.80**	**250**	P	Pn	15 22 54.0	+0.3
SANVU	**Saraoutou**	**5.06**	**174**	P	Pn	15 23 33.4	-0.1
DVP	**Devils Point**	**7.45**	**169**	P	Pn	15 24 02.5	+0.1
YATNC	**Mamie plateau,**	**11.62**	**179**	P	P	15 24 55.1	-1.1

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*IDC **12** 15:27:12.6±2.0, 3°.30S×146°.05E, h0^{km}, mb3.7/6, mbtmp3.8/8, ML2.8/2, MS3.5/9, Error ellipse: s-maj=66.1km s-min=21.0km az=86.0*

ISC 12 15:27:16.6±1.5, 3°.4S±0°.1×145°.9E±0°.3, h25^{km}, n14, σ0^s.63/8, mb3.6/5, MS3.6/6, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.08**	**168**	Pn	**Pn**	**15 28 44.9**	**-0.1**
	3.1nm,0.3s,baz=355,slow=5.0,SNR=17						
PMG				LR	LR	15 30 52.3	
	comp=Z,120nm,18.8s,baz=354,slow=36						
	18nm,0.7s						
CTA	**Charters Tower**	**16.58**	**179**	Pn	**P**	**15 31 10.1**	**+0.2**
	0.1nm,0.3s,baz=360,slow=16,SNR=5.6						
CTA				LR	LR	15 37 37.9	
	comp=Z,90nm,19.6s,baz=6.0,slow=38						
	2.4nm,0.8s						
GUMO	**Guam**	**16.92**	**356**	LR	LR	15 37 42.1	
	comp=Z,55nm,18.0s,baz=146,slow=37						
WRA	**Warramunga Arr**	**19.95**	**214**	P	**Pn**	**15 31 48.1**	**-0.6**
	11nm,1.0s,baz=38,slow=12,SNR=30						
	11nm,1.0s						
ASAR	**Alice Springs**	**23.25**	**209**	P	**P**	**15 32 22.9**	**+0.6**
	3.5nm,0.8s,baz=44,slow=7.5,SNR=53						
ASAR				LR	LR	15 40 47.2	
	comp=Z,96nm,21.8s,baz=356,slow=35						
	3.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**24.66**	**232**	LR	LR	15 43 02.8	
	comp=Z,145nm,20.1s,baz=56,slow=38						
JOW	**Kunigami**	**34.57**	**331**	LR	LR	15 44 57.9	
	comp=Z,100nm,20.8s,baz=100,slow=31						
URZ	**Urewera**	**44.87**	**145**	LR	LR	15 51 26.8	
	comp=Z,76nm,18.4s,baz=305,slow=32						
CMAR	**Chiang Mai Arr**	**51.11**	**297**	P	**P**	**15 36 18.0**	**+0.3**
	0.2nm,0.3s,baz=113,slow=7.7,SNR=1.1						
	0.2nm,0.3s						
SONM	**Songino Array**	**61.63**	**331**	P	**P**	**15 37 32.1**	**-0.2**
	0.2nm,0.4s,baz=132,slow=6.0,SNR=1.9						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**78.53**	**323**	P	**P**	**15 39 15.0**	**-0.8**
	0.2nm,0.7s,baz=111,slow=5.1,SNR=1.9						
	0.2nm,0.7s						
BVAR	**Borovoye Array**	**84.06**	**324**	P	**P**	**15 39 45.8**	**+0.7**
	0.4nm,0.6s,baz=103,slow=6.5,SNR=5.1						
	0.4nm,0.6s						
KIRV	**Kirov**	**96.29**	**328**	LR	LR	16 25 45.5	
	comp=Z,59nm,19.4s,baz=119,slow=36						
NVAR	**Mina Array Bea**	**96.62**	**52**	LR	LR	16 20 06.7	
	comp=Z,54nm,18.3s,baz=298,slow=33						

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*BJI **12** 15:43:30.8, 19°.19S×64°.63E, h10^{km}, mB5.4/8, mb4.7/40, Ms4.9/6, Ms7 4.6/10*

*MOS **12** 15:43:34.7±1.7, 18°.61S×65°.43E, h10^{km}, mb5.0/46, Error ellipse: s-maj=10.5km s-min=6.1km az=94.2*

*IDC **12** 15:43:35.3±0.6, 18°.70S×65°.45E, h0^{km}, mb4.4/17, mbtmp4.4/18, ML3.7/1, MS4.2/49, Error ellipse: s-maj=22.6km s-min=16.5km az=65.0*

*NEIC **12** 15:43:36.3±1.2, 18°.5S±0°.1×65°.38E±0°.10, h10^{km}±1^{km}, mb4.9/66, Error ellipse: s-maj=17.1km s-min=15.7km az=192.0*

*GFZ **12** 15:43:38.4, 18°.73S×65°.52E, h10^{km}, MW4.9, Moment Tensor Solution. s29 Moment tensor: M_{rr}-3.13; $M_{\theta\theta}$1.30; $M_{\phi\phi}$1.82; $M_{r\theta}$0.79; $M_{\theta\phi}$-0.43; $M_{\phi r}$-0.20; Fault plane solution: NP1:ϕ_s155.00000°, δ39.00000°, λ-77.00000°. NP2:ϕ_s321.00000°, δ52.00000°, λ-98.00000°. Principal axes: T 2.1300, Plg7.0000°, Azm57.0000°; N 1.1400, Plg7.0000°, Azm326.0000°; P -3.2700, Plg80.0000°, Azm189.0000°;*

*GCMT **12** 15:43:38.3±0.2, 18°.66S±0°.02×65°.23E±0°.02, h12^{km}, MW5.0/106, Moment Tensor Solution. s33,c38; s106,c155; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.29±.07; $M_{\theta\theta}$1.05±.07; $M_{\phi\phi}$2.25±.07; $M_{r\theta}$-0.18±.30; $M_{\theta\phi}$-1.31±.06; $M_{\phi r}$2.32±.28; Best double couple: $M_0$3.93500×10^{16} NP1:ϕ_s315.00000°, δ30.00000°, λ-114.00000°. NP2:ϕ_s162.00000°, δ63.00000°, λ-77.00000°. Principal axes: T 3.7200, Plg17.0000°, Azm243.0000°; N 0.4390, Plg12.0000°, Azm336.0000°; P -4.1490, Plg69.0000°, Azm99.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 15:43:37.2±0.3, 18°.58S±0°.06×65°.34E±0°.06, h15^{km}, n294, σ1^s.72/250, mb4.8/96, MS4.2/52, 7C-15D, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**12.90**	**33**	T	T	15 59 49.9	
	baz=211,slow=75,SNR=216						
H08S2	**Diego Garcia H**	**12.91**	**34**	T	T	15 59 54.6	
	baz=211,slow=75,SNR=160						
H08S3	**Diego Garcia H**	**12.92**	**33**	T	T	15 59 51.4	
	baz=211,slow=75,SNR=88						
MSEY	**Mahe Island**	**16.85**	**324**	Pn	**Pn**	**15 47 32.0**	**-0.8**
MSEY	**Mahe Island**	**16.85**	**324**	P	**Pn**	**15 47 32.0**	**-0.8**
MSEY				pmax	pmax		
	comp=Z,13nm,1.4s						
ABPO	**Ambohimpanom**	**17.15**	**266**		**Pn**	**15 47 36.5**	**-0.2**
ABPO	**Ambohimpanom**	**17.15**	**266**	P	**Pn**	**15 47 36.5**	**-0.2**
ABPO				pmax	pmax		
	comp=Z,17nm,1.3s						
OPO	**Ambohidratompo**	**17.21**	**267**	P	**P**	**15 47 40.3**	**+1.4**
	baz=92,slow=13,SNR=4.3						
OPO				LR	LR	15 51 52.4	
	comp=Z,458nm,19.4s,baz=241,slow=29						
	comp=Z,3.9nm,0.8s						
HMDM	**Hanimaadhoo**	**26.36**	**18**	P	**P**	**15 49 12.0**	**-1.0**
H04N2	**CROZET ISLANDS**	**29.70**	**199**	T	T	16 20 51.4	
	baz=27,slow=75,SNR=466						
H04N1	**CROZET ISLANDS**	**29.70**	**199**	T	T	16 20 52.4	
	baz=27,slow=75,SNR=342						
H04N3	**CROZET ISLANDS**	**29.71**	**199**	T	T	16 20 51.2	
	baz=27,slow=75,SNR=295						
MATP	**Matopo**	**34.73**	**261**	LR	LR	16 03 31.9	
	comp=Z,550nm,18.2s,baz=106,slow=34						
LSZ	**Lusaka**	**35.65**	**270**	LR	LR	16 03 26.5	
	comp=Z,454nm,21.4s,baz=104,slow=33						
LSZ	**Lusaka**	**35.65**	**270**	P	**P**	**15 50 34.2**	**-0.9**
LSZ	**Lusaka**	**35.65**	**270**	P	**P**	**15 50 34.2**	**-0.9**
LSZ				pmax	pmax		
	comp=Z,12nm,1.3s						
LODK	**Lodwar**	**36.73**	**304**		**P**	**15 50 43.0**	**-1.3**
LODK				IAmb	IAmb	15 50 54.8	
	comp=Z,26nm,1.9s						
LBTB	**Lobatse**	**37.35**	**253**	LR	LR	16 04 06.7	
	comp=Z,878nm,18.7s,baz=80,slow=33						
LBTB	**Lobatse**	**37.35**	**253**	P	**P**	**15 50 48.9**	**-0.7**
LBTB	**Lobatse**	**37.35**	**253**	P	**P**	**15 50 48.9**	**-0.7**
LBTB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BOSA	**Boshof**	**37.91**	**247**	LR	LR	16 03 41.4	
	comp=Z,365nm,21.0s,baz=73,slow=32						
MBAR	**Mbarara**	**38.37**	**294**	LR	LR	16 04 16.9	
	comp=Z,262nm,21.9s,baz=104,slow=32						
PSI	**Prapat**	**39.30**	**61**	LR	LR	16 03 57.3	
	comp=Z,726nm,20.5s,baz=210,slow=31						
GRTLG	**Ghanzi**	**41.46**	**259**	P	**P**	**15 51 23.3**	**-0.6**
TSUM	**Tsumeb**	**45.07**	**261**	LR	LR	16 09 55.7	
	comp=Z,421nm,18.3s,baz=151,slow=35						
H01W2	**Cape Leeuwin H**	**46.06**	**121**	T	T	16 41 08.5	
	baz=279						
H01W3	**Cape Leeuwin H**	**46.06**	**121**	T	T	16 41 08.6	
	baz=279						
H01W1	**Cape Leeuwin H**	**46.07**	**121**	T	T	16 41 11.9	
	baz=279						
RAYN	**Ar Rayn**	**46.11**	**334**		**P**	**15 51 59.3**	**-1.8**
RAYN	**Ar Rayn**	**46.11**	**334**	P	**P**	**15 51 59.3**	**-1.8**
RAYN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRDH	**Bariadhala**	**48.40**	**33**	LR	LR	16 12 54.6	
	comp=Z,350nm,18.4s,baz=154,slow=36						
NWAO	**Narrogin (SRO)**	**48.42**	**118**	LR	LR	16 08 07.6	
	comp=Z,184nm,19.4s,baz=216,slow=30						
NWAO	**Narrogin (SRO)**	**48.42**	**118**	P	**P**	**15 52 17.8**	**-1.4**
NWAO	**Narrogin (SRO)**	**48.42**	**118**	P	**P**	**15 52 17.8**	**-1.4**
NWAO				pmax	pmax		
	comp=Z,70nm,2.0s						
CM31	**Chiang Mai Arr**	**49.45**	**44**	P	**P**	**15 52 25.0**	**-2.1**
CM31				IAmb	IAmb	15 52 35.3	
	comp=Z,14nm,1.1s						
CMAR	**Chiang Mai Arr**	**49.45**	**44**	P	**P**	**15 52 29.2**	**+2.1**
	comp=Z,5.2nm,1.0s,baz=237,slow=7.7,SNR=32						
CMAR				LR	LR	16 09 58.4	
	comp=Z,328nm,21.4s,baz=225,slow=32						
	comp=Z,5.2nm,1.0s						
CMAR	**Chiang Mai Arr**	**49.45**	**44**		**P**	**15 52 24.8**	**-2.3**
CHTO	**Chiang Mai**	**49.70**	**43**	P	**P**	**15 52 27.8**	**-1.2**
CHTO	**Chiang Mai**	**49.70**	**43**	P	**P**	**15 52 30.6**	**+1.6**
	comp=Z,6.6nm,1.3s						
CHTO	**Chiang Mai**	**49.70**	**43**	P	**P**	**15 52 27.8**	**-1.2**
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SBUM	**Sibu**	**50.64**	**71**		**P**	**15 52 34.5**	**-1.7**
EVN	**Everest**	**50.73**	**25**		**P**	**15 52 34.7**	**-2.7**
EVN				IAmb	IAmb	15 52 45.8	
	comp=Z,16nm,1.0s						
SHL	**Shillong**	**50.92**	**31**	P	**P**	**15 52 36.6**	**-1.7**
SHL				IAmb	IAmb	15 52 46.6	
	comp=Z,20nm,0.9s						
SHL	**Shillong**	**50.92**	**31**	P	**P**	**15 52 36.6**	**-1.7**
SHL				pmax	pmax		
	comp=Z,20nm,0.9s						
NIL	**Nilore**	**52.49**	**8**	P	**P**	**15 52 48.4**	**-1.3**
NIL				IAmb	IAmb	15 52 57.3	
	comp=Z,12nm,1.1s						
NIL	**Nilore**	**52.49**	**8**	P	**P**	**15 52 48.4**	**-1.3**
NIL				pmax	pmax		
	comp=Z,12nm,1.2s						
SYO	**Syowa Base**	**52.89**	**191**	⇑*e*P	**P**	**15 52 53.6**	**+1.4**
KBL	**Kabul**	**52.95**	**4**		**P**	**15 52 52.8**	**-0.5**
KBL				IAmb	IAmb	15 53 02.0	
	comp=Z,12nm,1.1s						
KBL	**Kabul**	**52.95**	**4**	P	**P**	**15 52 52.8**	**-0.5**
KBL				pmax	pmax		
	comp=Z,12nm,1.1s						
TNCH	**TengChong**	**54.06**	**38**	P	**P**	**15 53 03.9**	**+2.2**
TNCH				pmax	pmax		
	comp=Z,13nm,0.6s						
LSA	**Lhasa**	**54.07**	**28**		**P**	**15 53 01.1**	**-0.9**
LSA	**Lhasa**	**54.07**	**28**	P	**P**	**15 53 01.1**	**-0.9**
LSA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KAPI	**Kappang**	**54.74**	**83**	LR	LR	16 14 43.3	
	comp=Z,110nm,18.5s,baz=265,slow=34						
SLVN	**Son La**	**54.77**	**45**		**P**	**15 53 06.7**	**0.0**
SLVN				IAmb	IAmb	15 53 15.2	
	comp=Z,16nm,1.1s						
MMRI	**Maumere**	**55.98**	**88**	P	**P**	**15 53 15.5**	**-0.1**
MANEM	**Manem**	**56.14**	**6**		**P**	**15 53 16.0**	**-0.5**
MANEM				IAmb	IAmb	15 53 24.3	
	comp=Z,21nm,1.1s						
EIL	**Elat**	**56.21**	**328**	LR	LR	16 13 50.9	
	comp=Z,152nm,20.8s,baz=182,slow=32						
BATI	**Baumata**	**56.91**	**90**	LR	LR	16 13 40.8	
	comp=Z,222nm,21.4s,baz=251,slow=32						
FITZ	**Fitzroy Crossi**	**56.99**	**100**	LR	LR	16 16 29.7	
	comp=Z,253nm,18.4s,baz=260,slow=35						
CHGR	**Chuyangaron**	**57.05**	**4**	P	**P**	**15 53 21.6**	**-1.2**
CHGR				IAmb	IAmb	15 54 25.9	
	comp=Z,16nm,1.2s						
CHGR	**Chuyangaron**	**57.05**	**4**	P	**P**	**15 53 21.6**	**-1.2**
CHGR				pmax	pmax		
	comp=Z,16nm,1.2s						
PZH	**PanZhiHua**	**57.08**	**39**	P	**P**	**15 53 25.7**	**+2.4**
GHAJ	**Ghor Haditha**	**57.25**	**330**	P	**P**	**15 53 23.4**	**-0.7**
GAR	**Garm**	**57.47**	**5**	P	**P**	**15 53 24.1**	**-1.7**
GAR				IAmb	IAmb	15 53 32.9	
	comp=Z,10.0nm,1.0s						
QIZ	**Qiongzhong**	**57.50**	**52**	P	**P**	**15 53 28.9**	**+2.7**
QIZ				S	**S**	**16 01 26.5**	**+3.0**
QIZ				LR	LR		
	comp=Z,380nm,16.9s						
QIZ				LR	LR		
	comp=Z,260nm,15.3s						
QIZ				LR	LR		
	comp=Z,400nm,17.9s						
TOLI2	**Tolitoli**	**57.88**	**76**	P	**P**	**15 53 26.6**	**-2.4**
DRK	**Karamyk**	**58.07**	**6**	P	**P**	**15 53 27.8**	**-2.4**
DRK	**Karamyk**	**58.07**	**6**	P	**P**	**15 53 27.8**	**-2.4**
DRK				pmax	pmax		
	comp=Z,8.0nm,0.4s						
KSH	**Kashi**	**58.64**	**10**	P	**P**	**15 53 33.3**	**-0.7**
KSH				pP	pP	15 53 38.0	+0.2
KSH				pmax	pmax		
	comp=Z,12nm,0.9s						
EDA	**Edea**	**58.69**	**286**	P	**P**	**15 53 32.4**	**-2.3**
EDA				IAmb	IAmb	15 53 42.7	
	comp=Z,11nm,1.2s						
MMAI	**Mount Meron Ar**	**58.74**	**331**	LR	LR	16 17 55.5	
	comp=Z,26nm,18.1s,baz=140,slow=35						
ARSB	**Arslanbob**	**60.02**	**7**	P	**P**	**15 53 41.1**	**-2.4**
ARSB	**Arslanbob**	**60.02**	**7**	P	**P**	**15 53 41.1**	**-2.4**
ARSB				pmax	pmax		
	comp=Z,17nm,1.2s						
WUS	**Wushi**	**60.86**	**12**	P	**P**	**15 53 47.7**	**-1.5**
WUS				IAmb	IAmb	15 53 56.8	
	comp=Z,10nm,1.2s						
GURO	**Guroymak-BITLI**	**60.89**	**339**	P	**P**	**15 53 47.3**	**-2.2**
GURO				IAmb	IAmb	15 53 58.9	
	comp=Z,14nm,1.0s						
NVL	**N'lazarevskaya**	**60.93**	**198**	*e*P	**P**	**15 53 51.4**	**+2.2**
NVL				*e*		15 56 03.7	
NVL				*e*S	**S**	**16 02 10.9**	**+4.4**
NVL				*e*SS	**SS**	**16 06 11.8**	**+6.3**
NVL				pmax	pmax		
	comp=Z,13nm,1.1s						
NVL				MLR	MLR		
	comp=Z,747nm,21.0s						
GOMU	**GeErMu**	**61.21**	**27**	P	**P**	**15 53 52.8**	**+0.8**
GOMU				S	**S**	**16 02 15.9**	**+4.3**
GOMU				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KDJ	**Kajisay**	**61.39**	**10**	P	**P**	**15 53 51.2**	**-1.7**
KDJ				IAmb	IAmb	15 54 06.2	
	comp=Z,6.9nm,1.1s						
KDJ	**Kajisay**	**61.39**	**10**	P	**P**	**15 53 51.2**	**-1.7**
KDJ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GAZ	**Gaziantep**	**61.47**	**335**	P	**P**	**15 53 51.8**	**-1.6**
AAK	**Ala-Archa**	**61.50**	**8**	LR	LR	16 19 21.5	
	comp=Z,213nm,20.3s,baz=198,slow=35						
AAK	**Ala-Archa**	**61.50**	**8**	P	**P**	**15 53 51.8**	**-1.7**
AAK				IAmb	IAmb	15 54 02.2	
	comp=Z,8.5nm,1.1s						
AAK	**Ala-Archa**	**61.50**	**8**	*de*P	**P**	**15 53 56.2**	**+2.6**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GNI	**Garni**	**61.50**	**342**	LR	LR	16 18 11.7	
	comp=Z,84nm,21.3s,baz=138,slow=34						
GNI	**Garni**	**61.50**	**342**	P	**P**	**15 53 52.0**	**-1.6**
GNI	**Garni**	**61.50**	**342**	⇓*e*P	**P**	**15 53 57.9**	**+4.3**
GNI				pmax	pmax		
	comp=Z,33nm,1.0s						
GNI	**Garni**	**61.50**	**342**	P	**P**	**15 53 55.1**	**+1.5**
	comp=Z,30nm,0.9s						
CD2	**Chengdu**	**61.52**	**37**	P	**P**	**15 53 55.4**	**+1.5**
BOOM	**Boomskoye usch**	**61.55**	**9**	P	**P**	**15 53 52.7**	**-1.2**
BOOM	**Boomskoye usch**	**61.55**	**9**	P	**P**	**15 53 52.7**	**-1.2**
BOOM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KK31	**Karatay Array**	**61.56**	**4**	P	**P**	**15 53 52.9**	**-0.9**
KK31				IAmb	IAmb	15 54 01.9	
	comp=Z,8.9nm,1.4s						
KK31	**Karatay Array**	**61.56**	**4**	P	**P**	**15 53 52.9**	**-0.9**
KK31				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KKAR	**Karatay Array**	**61.56**	**4**	P	**P**	**15 53 53.0**	**-0.8**
KKAR	**Karatay Array**	**61.56**	**4**	P	**P**	**15 53 53.0**	**-0.8**
PRZ	**Przheval'sk**	**61.94**	**11**	P	**P**	**15 53 56.0**	**-0.6**
PRZ	**Przheval'sk**	**61.94**	**11**	P	**P**	**15 53 56.0**	**-0.6**
PRZ				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AKT	**Akhty**	**61.95**	**345**	*e*P	**P**	**15 53 55.2**	**-1.3**
AKT				*e*		15 54 37.4	
AKT				pmax	pmax		
	comp=Z,11nm,1.0s						
ASAR	**Alice Springs**	**63.63**	**108**	P	**P**	**15 54 07.4**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=257,slow=6.4,SNR=12						
ASAR				LR	LR	16 17 53.5	
	comp=Z,689nm,20.9s,baz=280,slow=32						
	comp=Z,1.2nm,0.7s						
ASAR	**Alice Springs**	**63.63**	**108**	P	**P**	**15 54 08.0**	**-0.2**
ASAR	**Alice Springs**	**63.63**	**108**	P	**P**	**15 54 08.0**	**-0.2**
AS31	**Alice Springs**	**63.63**	**108**	P	**P**	**15 54 07.5**	**-0.7**
TOKA	**Tokat**	**64.47**	**336**	P	**P**	**15 54 12.4**	**-0.8**
ENH	**Enshi**	**64.54**	**42**		**P**	**15 54 12.2**	**-1.7**
DAV	**Davao City (W)**	**64.63**	**72**	LR	LR	16 19 55.7	

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      comp=Z,214nm,21.5s,baz=245,slow=34
WRA   Warramunga Arr   64.72 104   P       P       15 54 14.4 -0.9
      comp=Z,3.1nm,1.1s,baz=261,slow=6.0,SNR=14
      comp=Z,3.1nm,1.1s
WRA   Warramunga Arr   64.72 104   P       P       15 54 14.8 -0.6
WRA   Warramunga Arr   64.72 104   P       P       15 54 14.8 -0.6
WRAB  Tennant Creek    64.73 104⇑ eP      P       15 54 13.5 -1.9
WRAB                               pmax    pmax
      comp=Z,18nm,1.0s
WB0   Warramunga Arr   64.80 104   P       P       15 54 15.0 -0.9
WB0                                IAmb    IAmb    15 54 21.7
      comp=Z,13nm,1.4s
WR8   Warramunga Arr   64.86 104   P       P       15 54 15.2 -1.1
WR8                                IAmb    IAmb    15 54 22.9
      comp=Z,8.3nm,1.1s
NEUR  Neytrino         64.96 342⇑ eP      P       15 54 19.4 +2.8
NEUR                               pmax    pmax
      comp=Z,9.0nm,1.6s
BR131 Keskin Array S   65.12 333   P       P       15 54 16.1 -1.6
BR131 Keskin Array S   65.12 333 i P       P       15 54 20.3 +2.7
BRTR  Keskin Array B   65.12 333   P       P       15 54 20.0 +2.4
      comp=Z,1.2nm,0.8s,baz=152,slow=5.6,SNR=5.6
BRTR                               LR      LR      16 21 37.9
      comp=Z,49nm,19.4s,baz=124,slow=35
      comp=Z,1.2nm,0.8s
BRTR  Keskin Array B   65.12 333 i P       P       15 54 20.8 +3.2
BRTR                               pmax    pmax
      comp=Z,3.0nm,1.0s
LZDM  Lanzhou Array    65.28  34   LR      LR      16 21 19.5
      comp=Z,100nm,21.8s,baz=125,slow=35
KBZ   Khabaz           65.33 342   P       P       15 54 21.1 +2.4
      comp=Z,3.5nm,0.9s,baz=180,slow=7.1,SNR=4.7
KBZ                                LR      LR      16 21 29.9
      comp=Z,53nm,18.6s,baz=150,slow=35
      comp=Z,3.5nm,0.9s
KBZ   Khabaz           65.33 342⇓ eP      P       15 54 22.0 +3.3
KBZ                                pmax    pmax
      comp=Z,8.0nm,1.2s
WMQ   Urumqi           65.39  18  eP      P       15 54 21.2 +2.0
WMQ                                pP      pwP     15 54 26.2 -1.1
WMQ                                PP      PP      15 56 45.3 +1.8
WMQ                                pmax    pmax
      comp=Z,12nm,0.9s
WMQ                                LR      LR
      comp=Z,190nm,23.5s
SHA1  Shidzhatmaz      65.41 342⇑ iP      P       15 54 21.9 +2.4
LZH   Lanzhou          65.45  34  eP      P       15 54 26.1 +6.2
LZH                                pP      pwP     15 54 34.2 +6.3
LZH                                pmax    pmax
      comp=Z,19nm,1.4s
KIV   Kislovodsk       65.60 342   P       P       15 54 20.0 -0.5
KIV   Kislovodsk       65.60 342  eP      P       15 54 23.9 +3.3
KIV                                pmax    pmax
      comp=Z,11nm,1.1s
KIV   Kislovodsk       65.60 342   P       P       15 54 20.9 +0.3
      comp=Z,12nm,1.2s
SNAA  Sanae            65.67 199   LR      LR      16 17 23.1
      comp=Z,270nm,19.0s,baz=20,slow=31
SNAA  Sanae            65.67 199   P       P       15 54 20.9 +0.2
SNAA                               IAmb    IAmb    15 54 23.9
      comp=Z,6.2nm,1.1s
SNAA  Sanae            65.67 199   P       P       15 54 20.9 +0.2
SNAA                               pmax    pmax
      comp=Z,6.0nm,1.1s
VSLR  Vesyoloye        65.97 340⇓ eP      P       15 54 25.0 +2.2
GTA   Gaotai           66.08  29   P       P       15 54 26.6 +2.8
GTA                                pP      pwP     15 54 31.0 -0.9
GTA                                pmax    pmax
      comp=Z,9.0nm,1.5s
BORA  Eskisehir        66.64 331   P       P       15 54 29.2 +1.8
BORA                               IAmb    IAmb    15 54 35.8
      comp=Z,10nm,1.0s
MAKZ  Makanchi         66.80  12   P       P       15 54 27.6 -0.5
MAKZ                               IAmb    IAmb    15 54 40.0
      comp=Z,11nm,1.3s
MAKZ  Makanchi         66.80  12   P       P       15 54 27.6 -0.5
MAKZ                               pmax    pmax
      comp=Z,11nm,1.3s
XAN   Xi'an            66.80  39   P       P       15 54 30.1 +1.7
XAN                                pmax    pmax
      comp=Z,16nm,1.2s
LABN  Labinsk          66.81 341  eP      P       15 54 29.1 +0.9
LABN                              e*PP    pP      15 54 32.2 -0.1
LABN                              eS      S       16 03 23.4 +3.4
LABN                               pmax    pmax
      comp=Z,12nm,0.6s
MK31  Makanchi Array   66.84  13   P       P       15 54 26.2 -2.3
MK31                               IAmb    IAmb    15 54 35.7
      comp=Z,10nm,1.1s
MK31  Makanchi Array   66.84  13d iP      P       15 54 30.2 +1.8
MKAR  Makanchi Array   66.84  13   P       P       15 54 29.6 +1.1
      comp=Z,4.6nm,0.9s,baz=215,slow=7.4,SNR=19
MKAR                               LR      LR      16 21 55.4
      comp=Z,136nm,20.9s,baz=181,slow=34
      comp=Z,4.6nm,0.9s
MKAR  Makanchi Array   66.84  13   P       P       15 54 24.9 -3.5
MKAR  Makanchi Array   66.84  13 i P       P       15 54 30.3 +1.9
MKAR                               pmax    pmax
      comp=Z,7.0nm,1.0s
SWI   Sorong           66.94  83   P       P       15 54 31.0 +1.2
      comp=Z,12nm,1.3s
KNMB  Chin-men Tao     67.10  52   P       P       15 54 29.3 -1.2
AB31  Akbulak array    67.70 356           P       15 54 32.9 -0.8
ABKAR Akbulak array    67.70 356   P       P       15 54 32.5 -1.2
ERBR  Yeremizino-Bor   67.85 341  eP      P       15 54 33.3 -1.5
ERBR                              e*PP    pP      15 54 37.1 -1.8
ERBR                              eS      S       16 03 32.4 -0.1
ERBR                               pmax    pmax
      comp=Z,11nm,0.8s
ANN   Anapa            68.02 339  eP      P       15 54 35.5 -0.3
ANN                               e*PP    pP      15 54 38.4 -1.5
ANN                               eS      S       16 03 35.9 +1.4
ANN                                pmax    pmax
      comp=Z,28nm,1.0s
INKA  Innaminka        69.00 113           P       15 54 41.5 -0.9
STKA  Stephens Creek   69.01 118   LR      LR      16 20 07.4
      comp=Z,160nm,21.5s,baz=218,slow=32
STKA  Stephens Creek   69.01 118⇑ eP      P       15 54 40.3 -2.3
KURBB Kurchatov Arra   69.88   9   P       P       15 54 47.7 +0.4
      comp=Z,4.6nm,0.9s,baz=206,slow=6.5,SNR=26
KURBB                              LR      LR      16 22 34.3
      comp=Z,170nm,20.7s,baz=177,slow=33
      comp=Z,4.6nm,0.9s
KURK  Kurchatov        69.98   9   P       P       15 54 46.1 -1.7
KURK                               IAmb    IAmb    15 54 55.3
      comp=Z,12nm,1.0s
KURK  Kurchatov        69.98   9⇓ iP      P       15 54 49.2 +1.3
KURK                               pmax    pmax
      comp=Z,17nm,1.1s
TORD  Torodi Ar. Bea   70.20 292   LR      LR      16 23 15.8
      comp=Z,148nm,21.5s,baz=116,slow=34
DGZ   Jazzator, Alta   70.75  15⇓ iP      P       15 54 55.0 +2.2
DGZ                                pmax    pmax
      comp=Z,10.0nm,1.1s
BVAR  Borovoye Array   71.44   3   P       P       15 54 57.0 +0.2
      comp=Z,6.8nm,0.8s,baz=165,slow=7.2,SNR=31
BVAR                               LR      LR      16 26 19.9
      comp=Z,123nm,18.7s,baz=193,slow=36
      comp=Z,6.8nm,0.8s
BVAR  Borovoye Array   71.44   3   P       P       15 54 57.0 +0.2
BORK  Borovoye         71.46   3   P       P       15 54 56.8  0.0
BORK                               IAmb    IAmb    15 54 60.0
      comp=Z,8.1nm,0.9s
BORK  Borovoye         71.46   3⇓ eP      P       15 54 58.3 +1.4
BORK                               pmax    pmax
      comp=Z,13nm,1.0s
QSPA  South Pole Qui   71.52 180   P       P       15 54 57.6 +0.2
      comp=Z,6.5nm,0.8s,baz=295,slow=1.3,SNR=25
QSPA                               LR      LR      16 21 56.6
      comp=Z,138nm,21.5s,baz=268,slow=32
      comp=Z,6.5nm,0.8s
QSPA  South Pole Qui   71.52 180           P       15 54 57.3 -0.1
NJ2   Nanjing          71.84  46  eP      P       15 54 59.9 +0.2
NJ2                                pmax    pmax
      comp=Z,7.0nm,0.5s
BTO   Baotou           72.06  34  eP      P       15 55 03.4 +2.5
BTO                                pmax    pmax
      comp=Z,18nm,0.5s
BTO                                pmax    pmax
      comp=Z,410nm,4.9s
BELG  Belogornoye      72.34 349⇓ iP      P       15 55 03.3 +1.2
BELG                               pmax    pmax
      comp=Z,4.0nm,1.1s
HNS   HongShan         72.53  39 ⇓P       P       15 55 06.2 +2.6
HNS                                pmax    pmax
      comp=Z,7.0nm,1.1s
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HHC   Hu-ho-hao-te     73.06  35  eP      P       15 55 08.4 +1.5
HHC                                pmax    pmax
      comp=Z,8.0nm,0.6s
HHC                                pmax    pmax
      comp=Z,220nm,5.0s
VRI   Vrincioaia       73.06 333   P       P       15 55 09.2 +2.5
VRI                                pmax    pmax
      comp=Z,38nm,1.1s
VRI   Vrincioaia       73.06 333   P       P       15 55 08.9 +2.2
      comp=Z,38nm,1.1s
MLR   Muntele Rosu     73.11 332   P       P       15 55 05.3 -1.8
MLR                                IAmb    IAmb    15 55 15.8
      comp=Z,18nm,1.1s
MLR   Muntele Rosu     73.11 332   P       P       15 55 05.3 -1.8
MLR                                pmax    pmax
      comp=Z,18nm,1.1s
MLR   Muntele Rosu     73.11 332   P       P       15 55 08.5 +1.4
      comp=Z,18nm,1.4s
VNDA  Vanda            73.40 167   P       P       15 55 07.1 -1.1
      comp=Z,2.2nm,1.0s,baz=270,slow=6.1,SNR=3.5
VNDA                               LR      LR      16 23 20.5
      comp=Z,145nm,20.4s,baz=252,slow=33
      comp=Z,2.2nm,1.0s
DBIC  Dimbokro         73.58 283   LR      LR      16 24 45.4
      comp=Z,197nm,21.9s,baz=145,slow=34
ZAA0  Zalesovo Array   74.15  12           P       15 55 11.8 -1.0
ZAA0                               IAmb    IAmb    15 55 19.9
      comp=Z,17nm,1.1s
ZALV  Zalesovo Beam    74.15  12   P       P       15 55 12.7 -0.1
      comp=Z,10.0nm,0.9s,baz=208,slow=6.1,SNR=27
ZALV                               LR      LR      16 26 37.7
      comp=Z,124nm,18.5s,baz=216,slow=35
      comp=Z,10.0nm,0.9s
ZALV  Zalesovo Beam    74.15  12   P       P       15 55 11.5 -1.4
ZALV  Zalesovo Beam    74.15  12 i P       P       15 55 13.1 +0.3
ZALV                               pmax    pmax
      comp=Z,10.0nm,0.9s
ARTI  Arti             74.91 356   P       P       15 55 16.3 -0.8
ARTI                               IAmb    IAmb    15 55 24.7
      comp=Z,17nm,1.0s
ARTI  Arti             74.91 356c iP      P       15 55 18.6 +1.4
ARTI                               S       S       16 04 55.2 +1.5
ARTI                               pmax    pmax
      comp=Z,12nm,1.0s
BURAR Bucovina Array   75.08 333   P       P       15 55 17.6 -0.9
BURAR Bucovina Array   75.08 333   P       P       15 55 19.2 +0.7
BUR08 Bucovina Ar. S   75.11 333           P       15 55 17.8 -0.9
BZS   Buzias           75.20 330   P       P       15 55 22.2 +3.1
SVE   Sverdlovsk       75.22 357  eP      P       15 55 22.0 +3.0
SVE                                pmax    pmax
      comp=Z,20nm,1.3s
KMPD  K-Podol'skiy     75.30 334   P       P       15 55 19.7 +0.1
KMPD                               P       P       15 55 19.7 +0.1
JAY   Jayapura         75.34  88   LR      LR      16 28 32.9
      comp=Z,66nm,18.5s,baz=279,slow=36
CTA   Charters Tower   75.59 107   LR      LR      16 25 22.7
      comp=Z,260nm,21.6s,baz=232,slow=33
SONM  Songino Array    75.65  27   P       P       15 55 22.6 +0.8
      comp=Z,2.5nm,0.9s,baz=219,slow=6.4,SNR=9.1
SONM                               LR      LR      16 27 38.5
      comp=Z,248nm,19.3s,baz=210,slow=35
      comp=Z,2.5nm,0.9s
SONM  Songino Array    75.65  27   P       P       15 55 21.3 -0.5
KEST  Kesra            75.67 316   LR      LR      16 30 04.2
      comp=Z,103nm,18.4s,baz=337,slow=37
KSV   Kosov            75.69 334   P       P       15 55 22.6 +0.7
AK07  Malin Array Si   75.83 337   P       P       15 55 22.5 -0.1
AK10  Malin Array Si   75.85 337   P       P       15 55 23.4 +0.7
AK09  Malin Array Si   75.85 337   P       P       15 55 23.3 +0.6
AK06  Malin Array Si   75.86 337   P       P       15 55 23.2 +0.4
LUBAR Lubar, Ukraine   75.86 336   P       P       15 55 22.8  0.0
AK08  Malin Array Si   75.88 337   P       P       15 55 23.2 +0.3
AK05  Malin Array Si   75.89 337   P       P       15 55 23.1 +0.2
JOW   Kunigami         75.92  55   LR      LR      16 25 00.5
      comp=Z,207nm,22.0s,baz=312,slow=33
AK02  Malin Array Si   75.92 337   P       P       15 55 24.2 +1.1
AK12  Malin Array Si   75.92 337   P       P       15 55 24.3 +1.2
AK14  Malin Array Si   75.93 337   P       P       15 55 24.2 +1.0
AK01  Malin Array Si   75.94 337   P       P       15 55 25.3 +2.1
AKASG Malin Array Be   75.95 337   P       P       15 55 24.2 +1.0
      comp=Z,3.9nm,0.8s,baz=144,slow=4.7,SNR=14
      comp=Z,3.9nm,0.8s
AKASG Malin Array Be   75.95 337   P       P       15 55 23.2 -0.1
AKASG Malin Array Be   75.95 337 i P       P       15 55 25.6 +2.3
AKASG                              pmax    pmax
      comp=Z,9.0nm,0.9s
AKBB  Malin Array Si   75.95 337           P       15 55 22.5 -0.8
AKBB                               IAmb    IAmb    15 55 31.3
      comp=Z,16nm,1.0s
AKBB  Malin Array Si   75.95 337   P       P       15 55 22.5 -0.8
AKBB                               pmax    pmax
      comp=Z,16nm,1.0s
AKBB  Malin Array Si   75.95 337   P       P       15 55 24.9 +1.6
KIEV  Kiev             75.95 337   P       P       15 55 22.2 -1.0
KIEV                               IAmb    IAmb    15 55 31.3
      comp=Z,14nm,1.0s
KIEV  Kiev             75.95 337   P       P       15 55 22.2 -1.0
KIEV                               pmax    pmax
      comp=Z,14nm,1.0s
KIEV  Kiev             75.95 337   P       P       15 55 24.9 +1.7
      comp=Z,69nm,1.0s
AK11  Malin Array Si   75.95 337   P       P       15 55 24.7 +1.4
ULN   Ulaanbaatar      75.96  28   P       P       15 55 21.9 -1.7
ULN   Ulaanbaatar      75.96  28   P       P       15 55 25.6 +1.9
ULN   Ulaanbaatar      75.96  28⇓ eP      P       15 55 25.9 +2.2
ULN                                pmax    pmax
      comp=Z,7.0nm,1.3s
AK16  Malin Array Si   75.96 337   P       P       15 55 24.1 +0.7
AK03  Malin Array Si   75.97 337   P       P       15 55 23.8 +0.4
AK04  Malin Array Si   75.98 337   P       P       15 55 24.1 +0.6
AK17  Malin Array Si   76.00 337   P       P       15 55 23.9 +0.4
AK18  Malin Array Si   76.02 337   P       P       15 55 24.7 +1.0
AK19  Malin Array Si   76.04 337   P       P       15 55 24.7 +0.9
AK22  Malin Array Si   76.05 337   P       P       15 55 24.8 +0.9
STNU  Starunia         76.23 334   P       P       15 55 26.9 +1.9
MI30  MI30,Zelenitsa   76.37 337   P       P       15 55 26.6 +0.9
      comp=Z,29nm,1.0s
BERU  Beregovo         76.67 332   P       P       15 55 29.7 +2.3
MI28  Mi28,Pidlybu     76.71 337   P       P       15 55 27.8 +0.2
MUKU  Mukachevo        76.82 332   P       P       15 55 28.3 +0.1
MORH  Mrgy, Hungar     77.07 329   P       P       15 55 31.2 +1.5
      comp=Z,11nm,1.4s
OBN   Obninsk          77.38 344  eP      P       15 55 34.7 +3.5
OBN                               e                15 55 43.9
OBN                               e                15 58 30.1
OBN                               ePPP    PPP     16 00 15.4
OBN                                pmax    pmax
      comp=Z,14nm,0.6s
OBN                                MLR     MLR
      comp=Z,46nm,9.0s
TLY   Talaya           77.55  23 i P       P       15 55 32.1 -0.3
TLY                                pmax    pmax
      comp=Z,4.0nm,0.6s
MOS   Moscow           77.66 344  eP      P       15 55 32.9 +0.1
MOS                               e                15 58 27.9
KWP   Kalwaria Pacla   77.69 333   P       P       15 55 35.6 +2.4
      comp=Z,34nm,2.2s
KECS  Kecovo           77.82 331  eP      P       15 55 39.2 +5.3
KECS  Kecovo           77.82 331  eP      P       15 55 39.2 +5.3
KIRV  Kirov            78.00 352⇓ eP      P       15 55 35.0 +0.4
MPLH  Magyarpolny      78.28 329   P       Pn      15 55 38.0 +0.3
      comp=Z,58nm,1.2s
LANS  Liptovska Anna   78.77 331  eP      P       15 55 42.7 +3.5
LANS  Liptovska Anna   78.77 331  eP      P       15 55 42.7 +3.5
SOKA  Soboth           79.20 327  epP     pP      15 55 44.7 -1.1
      comp=Z,7.9nm,1.4s
MODS  Modra-Piesok     79.24 330  eP      Pn      15 55 49.2 +1.7
MODS  Modra-Piesok     79.24 330  eP      P       15 55 49.2 +7.4
RONA  Rosalia, Austr   79.25 329  epP     pP      15 55 45.2 -0.9
      comp=Z,9.6nm,1.0s
ARSA  Arzberg          79.33 328  eP      P       15 55 44.4 +2.1
      comp=Z,10nm,1.2s
PMG   Port Moresby     79.37  96   LR      LR      16 31 38.8
      comp=Z,158nm,18.1s,baz=201,slow=36
OJC   Ojcow            79.39 332   P       P       15 55 42.4 -0.2
OJC   Ojcow            79.39 332   P       P       15 55 42.4 -0.2
OJC   Ojcow            79.39 332   P       P       15 55 44.8 +2.2
MNK   Minsk            79.52 339 i P       P       15 55 42.8 -0.3
MNK                              i PPP     PPP     16 00 34.8
MNK                              i S       S       16 05 44.4 +0.5
MNK                              i SS      SS      16 10 55.3 +2.9
MNK                                pmax    pmax
      comp=N,22nm,1.0s
MNK                                pmax    pmax
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      comp=E,18nm,0.8s
MNK                                pmax    pmax
      comp=Z,13nm,0.9s
MNK                                MLR     MLR
      comp=N,96nm,19.0s
MNK                                MLR     MLR
      comp=Z,140nm,17.0s
CONA  Conrad Observa   79.62 329  epP     pP      15 55 46.8 -1.3
      comp=Z,16nm,1.1s
ZCCA  Zocca            79.87 324   P       P       15 55 44.7 -0.7
TJN   Taejon           80.10  46⇓ iP      P       15 55 47.0 +0.3
MORC  Moravsky Berou   80.10 331   P       P       15 55 46.2 -0.2
MORC  Moravsky Berou   80.10 331   P       P       15 55 46.2 -0.2
MORC                               pmax    pmax
      comp=Z,11nm,1.2s
ABTA  Abfaltersbach    80.55 326  epP     pP      15 55 52.2 -1.0
      comp=Z,11nm,1.3s
LESA  Schwarzleotal    80.90 327  eP      P       15 55 51.4 +0.5
      comp=Z,13nm,1.3s
JNU   Nakatsue         80.95  51   LR      LR      16 31 52.5
      comp=Z,111nm,19.1s,baz=212,slow=36
KSRS  Korea Array      81.04  46   P       P       15 55 52.7 +1.0
      comp=Z,1.4nm,0.9s,baz=250,slow=5.9,SNR=7.5
      comp=Z,1.4nm,0.9s
WATA  Walderalm        81.42 326  ePcP    PcP     15 56 00.3 +0.6
      comp=Z,9.0nm,0.9s
KHC   Kasperske Hory   81.56 329⇑ eP      P       15 55 55.1 +0.8
KHC                                pmax    pmax
      comp=Z,10.0nm,1.4s
FETA  Feichten         81.67 326  ePcP    PcP     15 56 01.5 +0.7
      comp=Z,13nm,1.3s
KLMR  Klimovskoe       81.85 348  eP      P       15 55 55.2 -0.2
KLMR                              e                15 56 00.8
KLMR                               pmax    pmax
      comp=Z,30nm,1.3s
CLL   Collm            83.27 330  eP      P       15 55 55.0 -8.1
CLL   Collm            83.27 330  eP      P       15 56 03.0 -0.1
CLL                               ex      x       15 56 10.0
      comp=Z,16nm,1.4s
MDT   Midelt           84.08 307   LR      LR      16 33 47.7
      comp=Z,145nm,19.6s,baz=72,slow=36
FINES FINESS Array B   85.69 342   P       P       15 56 14.7 -0.4
      comp=Z,8.2nm,0.9s,baz=160,slow=7.7,SNR=6.0
      comp=Z,8.2nm,0.9s
FINES FINESS Array B   85.69 342 i P       P       15 56 17.8 +2.7
FINES                              pmax    pmax
      comp=Z,9.0nm,0.9s
ESDC  Sonseca Array    86.71 314   P       P       15 56 22.8 +2.0
      comp=Z,1.9nm,1.0s,baz=106,slow=5.7,SNR=5.9
ESDC                               LR      LR      16 37 03.4
      comp=Z,90nm,18.4s,baz=124,slow=37
      comp=Z,1.9nm,1.0s
JCJ   Chichijima       87.20  60   LR      LR      16 32 02.8
      comp=Z,67nm,18.9s,baz=114,slow=33
MJAR  Matsushiro Arr   87.87  50   P       P       15 56 28.1 +1.7
      comp=Z,3.9nm,1.0s,baz=226,slow=3.8,SNR=4.7
MJAR                               LR      LR      16 32 37.1
      comp=Z,79nm,22.0s,baz=220,slow=34
      comp=Z,3.9nm,1.0s
NRIK  Noril'sk         89.11   8   LR      LR      16 36 01.4
      comp=Z,56nm,19.1s,baz=180,slow=35
DZM   Mont Dzumac      92.93 114   LR      LR      16 34 48.6
      comp=Z,217nm,21.3s,baz=215,slow=33
DZM   Mont Dzumac      92.93 114  eLR     LR      16 26 41.9
      comp=Z,304nm,22.1s
ASAJ  Asahikawa        93.96  45   LR      LR      16 40 02.1
      comp=Z,53nm,18.6s,baz=151,slow=36
YAK   Yakutsk          94.92  25   LR      LR      16 39 25.3
      comp=Z,214nm,19.4s,baz=277,slow=35
TIXI  Tiksi            99.59  17   LR      LR      16 42 47.4
      comp=Z,224nm,19.5s,baz=199,slow=36
TIXI  Tiksi            99.59  17⇓ eP      Pdif    15 57 19.9 +0.5
TIXI                               pmax    pmax
      comp=Z,11nm,2.0s
COLA  College         128.71  17⇓ ePKIKP  PKiKP   16 02 43.4 -0.7
ILAR  Eielson Array   129.06  17   PKP     PKiKP   16 02 45.3 +0.5
      comp=Z,1.2nm,1.1s,baz=293,slow=3.2,SNR=5.5
PPT2  Papeete2        130.30 134  eLR     LR      16 44 02.5
      comp=Z,41nm,22.5s
YKA   Yellowknife Ar  136.13 360   PKP     PKPdf   16 02 57.5 +0.1
      comp=Z,1.8nm,1.1s,baz=340,slow=2.8,SNR=6.6
TAOE  Nuku Hiva Isla  142.91 135  eLR     LR      16 49 46.2
      comp=Z,86nm,25.4s
EPLO  Experimental L  144.72 336           PKPab   16 03 11.7 -0.5
ULM   Lac du Bonnet   145.02 339   PKPbc   PKPdf   16 03 13.8 -0.1
      comp=Z,12nm,0.9s,baz=56,slow=3.7,SNR=8.4
ULM   Lac du Bonnet   145.02 339           PKPbc   16 03 11.5 -1.7
Q52A  Bidwell         145.36 313           PKPdf   16 03 11.0 -3.8
EDM   Edmonton        145.41 359           PKPdf   16 03 10.9 -3.6
EDM   Edmonton        145.41 359   PKP2    PKPdf   16 03 10.9 -3.6
G40A  Rib Lake        146.51 328   PKPdf   PKPdf   16 03 13.8 -2.9
AGMN  Agassiz Nation  146.65 337   PKPdf   PKPdf   16 03 14.8 -2.0
MSO   Missoula        151.82 359   PKPdf   PKPdf   16 03 22.8 -2.4
RSSD  Black Hills     153.02 343           PKPdf   16 03 24.7 -2.5
RSSD  Black Hills     153.02 343   PKIKP   PKPdf   16 03 24.7 -2.5
PDAR  Pinedale Array  155.51 351   PKPbc   PKPdf   16 03 39.2 +8.4
      comp=Z,0.5nm,0.8s,baz=6.6,slow=3.3,SNR=2.8
NVAR  Mina Array Bea  159.97   8   PKPab   PKPab   16 04 17.6 +1.8
      comp=Z,1.0nm,0.9s,baz=353,slow=5.3,SNR=3.2
TXAR  Lajitas Array   165.33 319   PKPab   PKPab   16 04 39.7 +0.3
      comp=Z,1.8nm,0.9s,baz=39,slow=5.0,SNR=8.2
```

ROM 12 15:54:14.8±0.1,**42°.452N**±0°.005×**13°.370E**±0°.007,
h10^{km},**ML0.9**/10,**Error ellipse: s-maj=0.7km**
s-min=0.4km az=230.0,Central Italy

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Code  Station Name      Δ°  AZ°   Phase ID           Time       Res
                                  Op      ISC      h  m  s     ISC
CAMP  Campotosto       0.09  19   P       Pg      15 54 17.8 +0.4
CAMP                              S       Sg      15 54 20.1 +0.8
AQU   L'Aquila         0.10 166   P       Pg      15 54 17.8 +0.3
AQU                               S       Sg      15 54 19.5 +0.1
RM33  Pellescritta (   0.13 296   P       Pg      15 54 18.1 +0.2
RM33                              S       Sg      15 54 20.4 +0.3
RM33                              AML     AML
      comp=E,105µm,0.9s
RM33                              AML     AML
      comp=N,108µm,1.2s
RM33                              AML     AML
      comp=E,96µm,0.7s
RM33                              AML     AML
      comp=N,102µm,0.2s
RM33                              AML     AML
      comp=N,103µm,0.2s
RM33                              AML     AML
      comp=N,110µm,0.2s
RM33                              AML     AML
      comp=N,110µm,1.8s
RM33                              AML     AML
      comp=E,104µm,0.3s
RM33                              AML     AML
      comp=E,96µm,0.3s
GIGS  Gran Sasso       0.15  91   P       Pg      15 54 18.6 +0.4
GIGS                              S       Sg      15 54 21.5 +0.9
GIGS                              AML     AML
      comp=E,56µm,0.1s
GIGS                              AML     AML
      comp=N,45µm,0.1s
SMA1  SAN MARTINO      0.18 352   P       Pg      15 54 19.3 +0.5
SMA1                              S       Sg      15 54 22.8 +1.4
SMA1                              AML     AML
      comp=E,24µm,0.1s
SMA1                              AML     AML
      comp=N,18µm,0.2s
TERO  Teramo           0.24  45   P       Pg      15 54 20.2 +0.4
TERO                              S       Sg      15 54 24.2 +1.1
TERO                              AML     AML
      comp=E,39µm,0.1s
TERO                              AML     AML
      comp=N,60µm,0.9s
TERO                              AML     AML
      comp=N,52µm,0.1s
TERO                              AML     AML
      comp=E,39µm,0.1s
FAGN  Fagnano          0.24 139   P       Pg      15 54 21.1 +1.3
FAGN                              S       Sg      15 54 25.0 +1.8
LNSS  Leonessa         0.29 302   P       Pb      15 54 21.8 -0.3
LNSS                              S       Sb      15 54 25.9 -1.2
T0110 Collepietro      0.38 127   P       Pg      15 54 22.7 +0.4
T0110                             S       Sb      15 54 28.7 -0.9
```

NEIC ***12*** *16:07:36.0±1.0, 19°.2S±0°.2×65°.2E±0°.2, h10^{km}±1^{km}, mb4.4/12, Error ellipse: s-maj=30.5km s-min=23.8km az=315.0*

*IDC **12** 16:07:36.6±3.5, 18°.95S×65°.31E, h0^{km}, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=104.1km s-min=30.1km az=55.0*

ISC 12 16:07:35.4±0.8**, 19°.2S**±0°.2×**65°.2E**±0°.2**, h10**^{km}**, n28, σ0^{s}.93**/19**, mb4.0**/12**, Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**13.52**	**33**	T	T	16 23 57.7	
	baz=211,slow=75,SNR=42						
H08S2	**Diego Garcia H**	**13.53**	**33**	T	T	16 23 54.5	
	baz=211,slow=75,SNR=23						
H08S3	**Diego Garcia H**	**13.54**	**33**	T	T	16 23 53.9	
	baz=211,slow=75,SNR=58						
H04N2	**CROZET ISLANDS**	**29.04**	**199**	T	T	16 44 54.3	
	baz=27,slow=75,SNR=130						
H04N1	**CROZET ISLANDS**	**29.05**	**199**	T	T	16 44 50.9	
	baz=27,slow=75,SNR=119						
H04N3	**CROZET ISLANDS**	**29.06**	**199**	T	T	16 44 56.2	
	baz=27,slow=75,SNR=119						
BOSA	**Boshof**	**37.51**	**248**	P	**P**	**16 14 49.4**	**-0.5**
PHPEN	**Phepeng**	**39.49**	**253**	P	**P**	**16 15 06.6**	**0.0**
PHPEN				IAmb	IAmb	16 15 17.9	
	comp=Z,9.3nm,1.0s						
CMAR	**Chiang Mai Arr**	**50.02**	**44**	P	**P**	**16 16 30.8**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=231,slow=7.9,SNR=9.3						
	comp=Z,0.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**50.02**	**44**	P	**P**	**16 16 29.5**	**-0.9**
SHL	**Shillong**	**51.55**	**31**	P	**P**	**16 16 41.0**	**-1.0**
SHL				IAmb	IAmb	16 16 49.5	
	comp=Z,4.5nm,0.8s						
ASAR	**Alice Springs**	**63.59**	**107**	P	**P**	**16 18 08.7**	**+1.7**
	comp=Z,1.2nm,1.1s,baz=276,slow=6.1,SNR=5.9						
	comp=Z,1.2nm,1.1s						
ASAR	**Alice Springs**	**63.59**	**107**	P	**P**	**16 18 08.0**	**+1.1**
AS31	**Alice Springs**	**63.59**	**107**	P	**P**	**16 18 06.5**	**-0.4**
WRA	**Warramunga Arr**	**64.72**	**103**	P	P	16 18 17.6	+3.3
	comp=Z,1.1nm,1.0s,baz=258,slow=5.7,SNR=3.9						
	comp=Z,1.1nm,1.0s						
WRA	**Warramunga Arr**	**64.72**	**103**	P	**P**	**16 18 14.2**	**-0.2**
WR8	**Warramunga Arr**	**64.87**	**104**	P	**P**	**16 18 14.6**	**-0.7**
MKAR	**Makanchi Array**	**67.50**	**13**	P	**P**	**16 18 33.2**	**+1.6**
	comp=Z,1.0nm,1.1s,baz=194,slow=5.2,SNR=2.5						
	comp=Z,1.0nm,1.1s						
MKAR	**Makanchi Array**	**67.50**	**13**	P	**P**	**16 18 31.6**	**0.0**
KURBB	**Kurchatov Arra**	**70.53**	**9**	P	**P**	**16 18 51.6**	**+1.3**
	comp=Z,0.8nm,0.8s,baz=205,slow=6.5,SNR=4.0						
	comp=Z,0.8nm,0.8s						
KURK	**Kurchatov**	**70.64**	**9**	P	**P**	**16 18 51.6**	**+0.7**
KURK	**Kurchatov**	**70.64**	**9**	IAmb	IAmb	16 18 52.3	
	comp=Z,4.4nm,1.3s						
QSPA	**South Pole Qui**	**70.88**	**180**	P	P	16 18 59.4	+6.9
BVAR	**Borovoye Array**	**72.09**	**3**	P	**P**	**16 19 00.7**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=195,slow=9.2,SNR=6.9						
	comp=Z,0.8nm,0.7s						
VNDA	**Vanda**	**72.81**	**167**	P	**P**	**16 19 03.8**	**0.0**
VNDA				IAmb	IAmb	16 19 16.3	
	comp=Z,6.0nm,1.4s						
ZAA0	**Zalesovo Array**	**74.81**	**12**	P	**P**	**16 19 15.2**	**-0.4**
ZAA0				IAmb	IAmb	16 19 17.6	
	comp=Z,2.9nm,1.1s						
ZALV	**Zalesovo Beam**	**74.81**	**12**	P	**P**	**16 19 16.5**	**+0.9**
	comp=Z,1.0nm,0.6s,baz=212,slow=5.3,SNR=5.0						
	comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**74.81**	**12**	P	**P**	**16 19 15.6**	**0.0**

*KRNET **12** 16:15:48.6±0.1, 40°.41N×78°.36E, mb2.8*

*SOME **12** 16:15:52.3, 40°.58N×78°.22E, h15^{km}*

*NNC **12** 16:15:53.1±1.6, 40°.60N×78°.17E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=10.5km s-min=7.5km az=173.0*

ISC 12 16:15:53.1±1.8**, 40°.62N**±0°.08×**78°.19E**±0°.04**, h10**^{km}**, n45, σ1^{s}.57**/65**, 7C-9D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.15**	**345**	⇓*i*P	**Pb**	**16 16 14.1**	**-1.2**
TARG				⇓*i*S	**Sn**	**16 16 32.8**	**+1.2**
KDJ	**Kajisay**	**1.69**	**334**	⇑*i*P	**Pb**	**16 16 23.6**	**-0.8**
KDJ				⇑*i*S	**Sg**	**16 16 48.6**	**+1.1**
PRZ	**Przheval'sk**	**1.87**	**5**	⇑*e*P	**Pb**	**16 16 25.8**	**-1.7**
PRZ				⇑*e*S	**Sg**	**16 16 52.6**	**-0.7**
JNKS	**Jany-Kuch**	**1.97**	**284**	⇑*i*P	**Pn**	**16 16 26.4**	**-0.4**
JNKS				⇑*i*S	**Sb**	**16 16 54.4**	**+0.4**
ULHL	**Ulahol**	**2.19**	**319**	⇓*i*P	**Pn**	**16 16 30.5**	**+0.7**
ULHL				⇓*i*S	**Sb**	**16 17 01.0**	**+0.8**
SATY	**Saty**	**2.45**	**4**	Pg	**Pg**	**16 16 38.6**	**-1.4**
	16nm,0.6s						
SATY				Lg	Lg	16 17 12.2	
	11nm,0.2s						
BOOM	**Boomskoye usch**	**2.52**	**319**	⇓*e*P	**Pn**	**16 16 34.8**	**+0.5**
BOOM				⇓*e*S	**Sb**	**16 17 08.6**	**-1.1**
TNSS	**Tian-Shan**	**2.59**	**339**	Pg	**Pg**	**16 16 41.9**	**-0.9**
TNSS				Lg	Lg	16 17 17.6	
	3.8nm,0.5s						
TNSS	**Tian-Shan**	**2.59**	**339**	*e*P	**Pg**	**16 16 41.9**	**-0.9**
	1.0nm,0.1s						
TNSS				*e*S	**Sg**	**16 17 17.6**	**+1.3**
	4.2nm,0.4s						
UZB	**Uzynbulak**	**2.60**	**14**	Pg	**Pb**	**16 16 39.7**	**-0.3**
	3.5nm,0.2s						
UZB				Lg	Lg	16 17 13.8	
	9.9nm,0.5s						
UZB	**Uzynbulak**	**2.60**	**14**	*e*P	**Pb**	**16 16 39.7**	**-0.3**
	2.5nm,0.1s						
UZB				*e*S	**Sb**	**16 17 13.8**	**+1.8**
	9.9nm,0.5s						
MDOK	**Medeo**	**2.68**	**342**	Pg	**Pb**	**16 16 42.0**	**+0.7**
	6.2nm,0.6s						
MDOK				Lg	Lg	16 17 18.5	
	11nm,0.4s						
IZV	**Izvestkoviy**	**2.69**	**335**	Pg	**Pg**	**16 16 42.6**	**-2.0**
	6.6nm,0.2s						
IZV				Lg	Lg	16 17 19.4	
	24nm,0.4s						
IZV	**Izvestkoviy**	**2.69**	**335**	*e*P	**Pg**	**16 16 43.0**	**-1.6**
	6.6nm,0.2s						
IZV				*e*S	**Sg**	**16 17 19.6**	**+0.1**
	24nm,0.5s						
SHLS	**Shalkode**	**2.71**	**20**	Pg	**Pg**	**16 16 43.4**	**-1.6**
	2.4nm,0.2s						
SHLS				Lg	Lg	16 17 20.3	
	10nm,0.3s						
SHLS	**Shalkode**	**2.71**	**20**	*e*P	**Pg**	**16 16 43.5**	**-1.6**
	2.4nm,0.2s						
SHLS				*e*S	**Sg**	**16 17 20.3**	**+0.2**
	10nm,0.3s						
KOTS	**Kotyrbulak**	**2.74**	**343**	Pg	**Pb**	**16 16 43.0**	**+0.8**
	5.6nm,0.3s						
KOTS				Lg	Lg	16 17 20.1	
	29nm,0.3s						
KOTS	**Kotyrbulak**	**2.74**	**343**	*e*P	**Pg**	**16 16 44.5**	**-1.0**
	5.4nm,0.2s						
KOTS				*e*S	**Sg**	**16 17 22.0**	**+1.0**
	51nm,0.4s						
MTBS	**Maitube**	**2.83**	**333**	Pg	**Pb**	**16 16 44.7**	**+0.8**
	4.0nm,0.2s						
MTBS				Lg	Lg	16 17 22.6	
	8.2nm,0.2s						
MTBS	**Maitube**	**2.83**	**333**	*e*P	**Pb**	**16 16 44.7**	**+0.8**
	4.0nm,0.2s						
MTBS				*e*S	**Sg**	**16 17 22.6**	**-1.6**
	8.2nm,0.2s						
KURS	**Kuram**	**2.87**	**360**	Pg	**Pb**	**16 16 45.4**	**+1.0**
	8.8nm,0.5s						
KURS				Lg	Lg	16 17 23.4	
	4.1nm,0.4s						
KPKS	**Kokpek**	**2.87**	**7**	Pg	**Pg**	**16 16 45.9**	**-2.2**
	9.7nm,0.5s						
KPKS				Lg	Lg	16 17 24.7	
	10nm,0.3s						
KPKS	**Kokpek**	**2.87**	**7**	*e*P	**Pg**	**16 16 45.9**	**-2.2**
	9.7nm,0.5s						
KPKS				*e*S	**Sg**	**16 17 24.7**	**-0.6**
	10nm,0.3s						
PDGK	**Podgornoye**	**2.88**	**19**	⇑Pn	**Pn**	**16 16 40.7**	**+1.5**
	2.5nm,0.5s						
PDGK				⇓Sn	**Sb**	**16 17 21.3**	**+1.4**
	9.4nm,0.6s						
KST	**Kastek**	**2.94**	**326**	Pg	**Pg**	**16 16 47.2**	**-2.2**
	4.2nm,0.2s						
KST				Lg	Lg	16 17 26.9	
	9.3nm,0.3s						
KST	**Kastek**	**2.94**	**326**	*e*P	**Pg**	**16 16 47.2**	**-2.2**
	4.2nm,0.2s						
KST				*e*S	**Sg**	**16 17 26.9**	**-0.6**
	9.3nm,0.3s						
TKM2	**Tokmak 2**	**3.01**	**321**	P	**Pg**	**16 16 48.3**	**-2.4**
	SNR=6.1						
ARLS	**Aral**	**3.17**	**294**	⇓*e*P	**Pn**	**16 16 43.2**	**0.0**
ARLS				⇓*e*S	**Sn**	**16 17 23.5**	**+2.4**
KBK	**Karagaybulak**	**3.17**	**311**	P	**Pb**	**16 16 50.7**	**+1.0**
	SNR=6.9						
DGS	**Degeres**	**3.18**	**326**	Pg	**Pb**	**16 16 51.2**	**+1.4**
	3.0nm,0.3s						
DGS				Lg	Lg	16 17 33.7	
	6.4nm,0.3s						
KTMS	**Ketmen**	**3.25**	**29**	Pg	**Pb**	**16 16 52.3**	**+1.3**
	0.9nm,0.2s						
KTMS				Lg	Lg	16 17 35.5	
	4.5nm,0.1s						
KTMS	**Ketmen**	**3.25**	**29**	*e*P	**Pb**	**16 16 52.3**	**+1.3**
	0.9nm,0.2s						
KTMS				*e*S	**Sg**	**16 17 35.5**	**-2.0**
	4.5nm,0.1s						
KTBS	**Karatobe**	**3.29**	**341**	Pg	**Pg**	**16 16 53.6**	**-2.5**
	3.7nm,0.3s						
KTBS				Lg	Lg	16 17 38.2	
	3.5nm,0.3s						
CHKK	**Chushkaly**	**3.36**	**345**	Pg	**Pg**	**16 16 55.4**	**-1.9**
	7.2nm,0.2s						
CHKK				Lg	Lg	16 17 40.8	
	14nm,0.2s						
CHKK	**Chushkaly**	**3.36**	**345**	*e*P	**Pg**	**16 16 55.4**	**-1.9**
	7.2nm,0.2s						
CHKK				*e*S	**Sg**	**16 17 40.8**	**0.0**
	14nm,0.2s						
AAK	**Ala-Archa**	**3.43**	**307**	P	**Pb**	**16 16 54.6**	**+0.7**
	SNR=7.2						
BLB	**Baldybastay**	**3.48**	**3**	Pg	**Pg**	**16 16 57.6**	**-2.3**
	4.0nm,0.2s						
BLB				Lg	Lg	16 17 45.1	
	17nm,0.4s						
CHMS	**Chumysh**	**3.50**	**314**	P	**Pb**	**16 16 56.5**	**+1.3**
	SNR=6.3						
KRBS	**Karabastau**	**3.60**	**330**	Pg	**Pb**	**16 16 58.6**	**+1.7**
	2.6nm,0.2s						
KRBS				Lg	Lg	16 17 46.8	
	6.4nm,0.5s						
ARXS	**Arharly**	**3.60**	**356**	Pg	**Pg**	**16 16 59.9**	**-2.3**
	0.8nm,0.1s						
ARXS				Lg	Lg	16 17 48.3	
	6.1nm,0.3s						
ARXS	**Arharly**	**3.60**	**356**	*e*P	**Pg**	**16 16 59.9**	**-2.3**
	0.8nm,0.2s						
ARXS				*e*S	**Sg**	**16 17 48.3**	**-0.5**
	5.9nm,0.5s						
KNOS	**Konyrlen**	**3.81**	**11**	Pg	**Pg**	**16 17 03.2**	**-2.9**
	1.8nm,0.4s						
KNOS				Lg	Lg	16 17 54.4	
	3.2nm,0.3s						
USP	**Ospenovka**	**3.82**	**315**	P	**Pb**	**16 17 01.9**	**+1.3**
	SNR=7.7						
MRKS	**Merke**	**4.28**	**301**	Pg	**Pb**	**16 17 10.6**	**+2.1**
	1.6nm,0.3s						
MRKS				Lg	Lg	16 18 06.7	
	3.9nm,0.5s						
MRKS	**Merke**	**4.28**	**301**	*e*P	**Pb**	**16 17 10.6**	**+2.1**
	0.2nm,0.1s						
MRKS				*e*S	**Sg**	**16 18 06.7**	**-3.8**
	2.2nm,0.3s						

*MOS **12** 16:23:50.3±2.1, 18°.74S×65°.39E, h10^{km}, mb5.0/43, Error ellipse: s-maj=9.6km s-min=6.3km az=94.7*

*IDC **12** 16:23:50.5±0.6, 18°.62S×65°.38E, h0^{km}, mb4.3/17, mbtmp4.3/17, MS4.3/52, Error ellipse: s-maj=20.2km s-min=16.4km az=76.0*

*NEIC **12** 16:23:51.1±1.3, 18°.69S±0°.10×65°.29E±0°.10, h10^{km}±1^{km}, mb4.9/85, Error ellipse: s-maj=16.8km s-min=15.2km az=218.0*

*GCMT **12** 16:23:56.1±0.2, 18°.61S±0°.02×65°.28E±0°.01, h12^{km}, MW5.0/114, Moment Tensor Solution. s39,c47; s114,c183; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.52±.09; M$_{\theta\theta}$1.40±.09; M$_{\phi\phi}$3.11±.09; M$_{r\theta}$0.41±.39; M$_{\theta\phi}$-1.83±.07; M$_{\phi r}$1.03±.32; Best double couple: M$_0$4.52600×10^{16} NP1:φ$_s$318.00000°,δ42.00000°, λ-105.00000°. NP2:φ$_s$158.00000°,δ50.00000°, λ-77.00000°. Principal axes: T 4.3240, Plg4.0000°, Azm238.0000°; N 0.3950, Plg10.0000°, Azm329.0000°; P -4.7290, Plg79.0000°, Azm126.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 16:23:52.1±0.4**, 18°.73S**±0°.07×**65°.30E**±0°.06**, h15**^{km}**, n284, σ1^{s}.87**/227**, mb4.8**/97**, MS4.4**/56**, 7C-14D, Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**13.04**	**33**	T	T	16 40 06.1	
	baz=211,slow=75,SNR=238						
H08S2	**Diego Garcia H**	**13.05**	**33**	T	T	16 40 06.9	
	baz=211,slow=75,SNR=142						
H08S3	**Diego Garcia H**	**13.06**	**33**	T	T	16 40 08.1	
	baz=211,slow=75,SNR=466						
MSEY	**Mahe Island**	**16.95**	**324**	Pn	**Pn**	**16 27 46.8**	**-2.0**
MSEY	**Mahe Island**	**16.95**	**324**	P	**Pn**	**16 27 46.8**	**-2.0**
MSEY				pmax	pmax		
	comp=Z,41nm,1.8s						
ABPO	**Ambohimpanom**	**17.11**	**266**		**Pn**	**16 27 50.5**	**-0.5**
ABPO	**Ambohimpanom**	**17.11**	**266**	P	**Pn**	**16 27 50.5**	**-0.5**
ABPO				pmax	pmax		
	comp=Z,23nm,2.0s						
OPO	**Ambohidratompo**	**17.16**	**268**	LR	LR	16 31 59.0	
	comp=Z,695nm,19.5s,baz=239,slow=28						
H04N2	**CROZET ISLANDS**	**29.55**	**199**	T	T	17 01 04.7	
	baz=27,slow=75,SNR=952						
H04N1	**CROZET ISLANDS**	**29.55**	**199**	T	T	17 01 11.8	
	baz=27,slow=75,SNR=1069						
H04N3	**CROZET ISLANDS**	**29.56**	**199**	T	T	17 01 05.3	
	baz=27,slow=75,SNR=1029						
COCO	**West Island**	**31.05**	**83**	P	**P**	**16 30 08.8**	**-0.9**
COCO	**West Island**	**31.05**	**83**	P	**P**	**16 30 08.8**	**-0.9**
KIBK	**Kibwezi**	**31.27**	**298**	P	**P**	**16 30 10.5**	**-1.2**
MATP	**Matopo**	**34.67**	**261**	LR	LR	16 43 20.0	
	comp=Z,874nm,20.2s,baz=110,slow=34						
LSZ	**Lusaka**	**35.61**	**270**	LR	LR	16 43 42.8	
	comp=Z,681nm,21.3s,baz=104,slow=33						
LSZ	**Lusaka**	**35.61**	**270**	P	**P**	**16 30 49.0**	**-0.7**
LSZ	**Lusaka**	**35.61**	**270**	P	**P**	**16 30 49.0**	**-0.7**
LSZ				pmax	pmax		
	comp=Z,14nm,1.6s						
LODK	**Lodwar**	**36.79**	**304**	P	**P**	**16 30 59.5**	**-0.2**
LBTB	**Lobatse**	**37.27**	**253**	P	**P**	**16 31 06.0**	**+2.3**
	comp=Z,6.0nm,0.8s,baz=80,slow=8.6,SNR=7.2						
LBTB				LR	LR	16 44 13.8	
	comp=Z,1µm,19.2s,baz=80,slow=33						
	comp=Z,6.0nm,0.8s						
LBTB	**Lobatse**	**37.27**	**253**		**P**	**16 31 04.0**	**+0.2**
ATD	**Arta Tunnel**	**37.34**	**322**	P	**P**	**16 31 02.2**	**-2.1**
ATD				IAmb	IAmb	16 31 14.2	
	comp=Z,42nm,1.9s						
KHWEE	**KHWEE**	**37.43**	**258**	P	**P**	**16 31 04.0**	**-1.1**
GRHM	**Grahamstown, E**	**37.63**	**240**	P	**P**	**16 31 05.2**	**-1.4**
GRHM				IAmb	IAmb	16 32 23.8	
	comp=Z,31nm,1.1s						
BOSA	**Boshof**	**37.82**	**247**	LR	LR	16 43 57.8	
	comp=Z,523nm,21.5s,baz=74,slow=32						
MBAR	**Mbarara**	**38.40**	**294**	LR	LR	16 44 54.8	
	comp=Z,289nm,20.9s,baz=112,slow=33						
MBAR	**Mbarara**	**38.40**	**294**	⇓*i*P	**P**	**16 31 16.8**	**+3.4**
MBAR				pmax	pmax		
	comp=Z,11nm,2.3s						
PSI	**Prapat**	**39.40**	**61**	LR	LR	16 44 13.9	
	comp=Z,1µm,20.8s,baz=211,slow=31						
PHPEN	**Phepeng**	**39.76**	**252**	P	**P**	**16 31 23.7**	**-1.0**
KGCAE	**Kacgae**	**40.39**	**257**	P	**P**	**16 31 28.9**	**-1.0**
GRTLG	**Ghanzi**	**41.40**	**259**	P	**P**	**16 31 37.1**	**-1.2**
IPM	**Ipoh**	**42.08**	**60**	P	**P**	**16 31 41.7**	**-2.0**
KULM	**Kulim**	**42.23**	**59**	P	**P**	**16 31 43.1**	**-1.9**
KULM				IAmb	IAmb	16 31 58.9	
	comp=Z,44nm,1.6s						
KOOLE	**Kule**	**42.24**	**256**	P	**P**	**16 31 43.5**	**-1.7**
BBJI	**Bungbulang**	**42.63**	**81**	P	P	16 31 57.0	+8.6
MYKOM	**Kota Tinggi**	**43.04**	**66**	P	**P**	**16 31 49.7**	**-1.8**
TSUM	**Tsumeb**	**45.01**	**261**	LR	LR	16 50 11.9	
	comp=Z,580nm,18.1s,baz=142,slow=35						
WIN	**Windhoek**	**45.12**	**257**	P	**P**	**16 32 06.3**	**-2.0**
WIN				IAmb	IAmb	16 32 55.4	
	comp=Z,20nm,1.6s						
WIN	**Windhoek**	**45.12**	**257**	P	**P**	**16 32 06.4**	**-2.0**
WIN				pmax	pmax		
	comp=Z,20nm,1.6s						
H01W2	**Cape Leeuwin H**	**46.01**	**121**	T	T	17 21 24.3	
	baz=280,slow=74,SNR=4.3						
H01W3	**Cape Leeuwin H**	**46.01**	**121**	T	T	17 21 20.1	
	baz=280						
H01W1	**Cape Leeuwin H**	**46.03**	**121**	T	T	17 21 21.9	
	baz=280,slow=74,SNR=3.6						
RAYN	**Ar Rayn**	**46.23**	**335**		**P**	**16 32 15.3**	**-1.6**
RAYN	**Ar Rayn**	**46.23**	**335**	P	**P**	**16 32 15.3**	**-1.6**
RAYN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MORW	**Morawa**	**47.21**	**113**	P	**P**	**16 32 23.8**	**-0.8**
NWAO	**Narrogin (SRO)**	**48.39**	**118**	LR	LR	16 48 14.9	
	comp=Z,211nm,21.1s,baz=260,slow=30						
NWAO	**Narrogin (SRO)**	**48.39**	**118**	P	**P**	**16 32 32.3**	**-1.4**
NWAO	**Narrogin (SRO)**	**48.39**	**118**	P	**P**	**16 32 32.3**	**-1.4**
NWAO				pmax	pmax		
	comp=Z,25nm,1.4s						
JAGI	**Jajag, Banyuwa**	**48.43**	**85**	P	**P**	**16 32 32.6**	**-1.6**
BRDH	**Bariadhala**	**48.54**	**33**	LR	LR	16 53 10.6	
	comp=Z,458nm,18.2s,baz=186,slow=36						
CM31	**Chiang Mai Arr**	**49.58**	**44**	P	**P**	**16 32 41.3**	**-1.6**
CM31				IAmb	IAmb	16 32 51.6	
	comp=Z,12nm,1.1s						
CMAR	**Chiang Mai Arr**	**49.58**	**44**	P	**P**	**16 32 43.7**	**+0.8**
	comp=Z,4.4nm,1.1s,baz=235,slow=7.8,SNR=20						
CMAR				LR	LR	16 50 15.3	
	comp=Z,476nm,22.0s,baz=230,slow=32						
	comp=Z,4.4nm,1.1s						
CMAR	**Chiang Mai Arr**	**49.58**	**44**		**P**	**16 32 40.9**	**-2.0**
CMAR	**Chiang Mai Arr**	**49.58**	**44**	*i* P	**P**	**16 32 46.0**	**+3.1**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CHTO	**Chiang Mai**	**49.84**	**43**	P	**P**	**16 32 44.0**	**-0.8**
CHTO	**Chiang Mai**	**49.84**	**43**	P	**P**	**16 32 48.6**	**+3.8**
CHTO	**Chiang Mai**	**49.84**	**43**	P	**P**	**16 32 47.5**	**+2.7**
	comp=Z,6.6nm,1.1s						
CHTO	**Chiang Mai**	**49.84**	**43**	P	**P**	**16 32 44.0**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SBUM	**Sibu**	**50.72**	**71**	P	**P**	**16 32 51.4**	**-0.2**
SBUM	**Sibu**	**50.72**	**71**	P	P	16 32 59.6	+8.0
SBUM	**Sibu**	**50.72**	**71**	P	**P**	**16 32 53.2**	**+1.6**
	comp=Z,8.4nm,1.2s						
EVN	**Everest**	**50.87**	**25**		**P**	**16 32 52.2**	**-1.1**
EVN				IAmb	IAmb	16 33 01.6	
	comp=Z,13nm,1.0s						
SHL	**Shillong**	**51.06**	**31**		**P**	**16 32 53.3**	**-0.9**
SHL	**Shillong**	**51.06**	**31**	P	**P**	**16 32 53.3**	**-0.9**
SHL				pmax	pmax		
	comp=Z,28nm,1.1s						
PSA00	**Pilbara Seismi**	**51.07**	**103**	P	**P**	**16 32 54.2**	**-0.1**
UBPT	**Khong Chiam**	**52.03**	**52**	P	P	16 33 08.9	+7.5
SYO	**Syowa Base**	**52.74**	**191**	⇓*e*P	**P**	**16 33 05.4**	**-0.5**
SYO	**Syowa Base**	**52.74**	**191**	⇓*e*sP	sP	16 33 11.0	-0.3
KBL	**Kabul**	**53.09**	**4**	P	**P**	**16 33 09.7**	**+0.5**
KBL				IAmb	IAmb	16 33 18.4	
	comp=Z,14nm,1.2s						
KBL	**Kabul**	**53.09**	**4**	P	**P**	**16 33 09.7**	**+0.5**
KBL				pmax	pmax		
	comp=Z,14nm,1.3s						
LSA	**Lhasa**	**54.22**	**28**	P	**P**	**16 33 17.0**	**-0.9**
LSA				IAmb	IAmb	16 33 27.3	
	comp=Z,14nm,1.1s						
LSA	**Lhasa**	**54.22**	**28**	P	**P**	**16 33 17.0**	**-0.9**
LSA				pmax	pmax		
	comp=Z,14nm,1.1s						
KAPI	**Kappang**	**54.79**	**83**	LR	LR	16 54 40.2	
	comp=Z,112nm,19.9s,baz=266,slow=34						
KAPI	**Kappang**	**54.79**	**83**	⇓*e*P	**P**	**16 33 23.8**	**+2.0**
KAPI				pmax	pmax		
	comp=Z,15nm,1.3s						
SLVN	**Son La**	**54.90**	**45**	P	**P**	**16 33 21.1**	**-1.4**
SLVN				IAmb	IAmb	16 33 31.5	
	comp=Z,10nm,0.9s						
SLVN	**Son La**	**54.90**	**45**	P	**P**	**16 33 26.6**	**+4.1**
EDFI	**Ende, Flores**	**55.47**	**88**	P	**P**	**16 33 28.9**	**+2.0**
	comp=Z,21nm,1.4s						
MANEM	**Manem**	**56.29**	**6**		**P**	**16 33 31.6**	**-0.8**
MANEM				IAmb	IAmb	16 33 40.6	
	comp=Z,16nm,0.9s						
EIL	**Elat**	**56.32**	**328**	LR	LR	16 54 28.6	
	comp=Z,182nm,20.6s,baz=59,slow=33						
KKSI	**Kolaka, Sulawe**	**56.85**	**83**	P	**P**	**16 33 39.0**	**+2.4**
BATI	**Baumata**	**56.94**	**90**	LR	LR	16 55 35.4	
	comp=Z,257nm,19.2s,baz=254,slow=34						
FITZ	**Fitzroy Crossi**	**57.00**	**100**	LR	LR	16 56 36.9	
	comp=Z,288nm,18.5s,baz=266,slow=34						
FITZ	**Fitzroy Crossi**	**57.00**	**100**	P	**P**	**16 33 37.1**	**-0.5**
CHGR	**Chuyangaron**	**57.20**	**4**	P	**P**	**16 33 37.8**	**-0.8**
CHGR				IAmb	IAmb	16 34 42.9	
	comp=Z,22nm,1.3s						
CHGR	**Chuyangaron**	**57.20**	**4**	P	**P**	**16 33 37.8**	**-0.8**
CHGR				pmax	pmax		
	comp=Z,22nm,1.3s						
PZH	**PanZhiHua**	**57.22**	**39**	P	**P**	**16 33 41.8**	**+2.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.4s						
PZH				pmax	pmax		
	comp=Z,140nm,6.1s						
GHAJ	**Ghor Haditha**	**57.36**	**330**	P	**P**	**16 33 39.0**	**-0.7**
GAR	**Garm**	**57.62**	**5**	P	**P**	**16 33 41.2**	**-0.4**
GAR				IAmb	IAmb	16 33 51.5	
	comp=Z,12nm,1.0s						
QIZ	**Qiongzhong**	**57.62**	**52**	P	**P**	**16 33 45.1**	**+3.2**
QIZ				S	**S**	**16 41 34.7**	**-5.2**
QIZ				LR	LR		
	comp=Z,280nm,16.1s						
QIZ				LR	LR		
	comp=Z,370nm,12.6s						
QIZ				LR	LR		
	comp=Z,650nm,18.7s						
TOLI2	**Tolitoli**	**57.94**	**76**	P	**P**	**16 33 42.8**	**-1.5**
TOLI2				IAmb	IAmb	16 33 52.2	
	comp=Z,16nm,1.1s						
TOLI2	**Tolitoli**	**57.94**	**76**	P	P	16 33 51.8	+7.5
DRK	**Karamyk**	**58.22**	**6**	P	**P**	**16 33 44.8**	**-1.3**
DRK	**Karamyk**	**58.22**	**6**	P	**P**	**16 33 44.8**	**-1.3**
DRK				pmax	pmax		
	comp=Z,32nm,1.8s						
EDA	**Edea**	**58.70**	**287**	P	**P**	**16 33 48.0**	**-1.6**
EDA				IAmb	IAmb	16 33 53.5	
	comp=Z,20nm,1.6s						
KSH	**Kashi**	**58.80**	**10**	P	**P**	**16 33 49.6**	**-0.3**
KSH				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KSH				LR	LR		
	comp=Z,570nm,19.2s						
KSH				LR	LR		
	comp=Z,310nm,13.7s						
KSH				LR	LR		
	comp=Z,720nm,22.3s						
ARSB	**Arslanbob**	**60.17**	**7**		**P**	**16 33 58.5**	**-0.9**
ARSB				IAmb	IAmb	16 34 07.5	
	comp=Z,11nm,1.0s						
ARSB	**Arslanbob**	**60.17**	**7**	P	**P**	**16 33 58.5**	**-0.9**
ARSB				pmax	pmax		
	comp=Z,11nm,1.0s						
MARD	**Mardin**	**60.34**	**338**	P	**P**	**16 33 59.6**	**-1.0**
MARD				IAmb	IAmb	16 34 08.8	
	comp=Z,19nm,1.5s						
KNRA	**Kununurra**	**60.43**	**98**	P	**P**	**16 34 00.7**	**-0.8**
WUS	**Wushi**	**61.01**	**12**	P	**P**	**16 34 04.7**	**-0.3**
WUS				IAmb	IAmb	16 34 13.8	
	comp=Z,10nm,1.3s						
GURO	**Guroymak-BITLI**	**61.02**	**339**	P	**P**	**16 34 04.7**	**-0.5**
GURO				IAmb	IAmb	16 34 15.3	
	comp=Z,7.8nm,0.8s						
GOMU	**GeErMu**	**61.35**	**27**	P	**P**	**16 34 11.8**	**+4.0**
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CSS	**Mathiatis**	**61.43**	**330**	P	**P**	**16 34 06.3**	**-1.6**
KDJ	**Kajisay**	**61.54**	**10**	P	**P**	**16 34 07.0**	**-1.7**
KDJ				IAmb	IAmb	16 34 23.3	
	comp=Z,9.0nm,1.2s						
KDJ	**Kajisay**	**61.54**	**10**	P	**P**	**16 34 07.0**	**-1.7**
KDJ				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GNI	**Garni**	**61.63**	**342**	LR	LR	16 59 52.2	
	comp=Z,95nm,18.6s,baz=144,slow=35						
GNI	**Garni**	**61.63**	**342**	⇓*e*P	**P**	**16 34 12.5**	**+3.2**
GNI				pmax	pmax		
	comp=Z,28nm,1.0s						

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AAK   Ala-Archa          61.65   8   LR     LR       16 59 37.6
      comp=Z,279nm,20.2s,baz=202,slow=35
AAK   Ala-Archa          61.65   8          P        16 34 08.2 -1.1
AAK                                  IAmb   IAmb     16 34 14.1
      comp=Z,15nm,1.5s
AAK   Ala-Archa          61.65   8⇓iP      P        16 34 12.8 +3.4
AAK                                  pmax   pmax
      comp=Z,11nm,1.5s
BOOM  Boomskoye usch     61.70   9   P      P        16 34 08.6 -1.2
BOOM  Boomskoye usch     61.70   9   P      P        16 34 08.6 -1.2
BOOM                                 pmax   pmax
      comp=Z,4.0nm,0.8s
KK31  Karatay Array      61.71   4   P      P        16 34 08.2 -1.5
KK31                                 IAmb   IAmb     16 34 13.6
      comp=Z,19nm,1.8s
KK31  Karatay Array      61.71   4   P      P        16 34 08.2 -1.5
KK31                                 pmax   pmax
      comp=Z,19nm,1.8s
KKAR  Karatay Array      61.71   4          P        16 34 08.3 -1.3
KKAR  Karatay Array      61.71   4   P      P        16 34 08.3 -1.3
AKT   Akhty              62.08 345  eP      P        16 34 12.1 -0.2
AKT                                 e                16 34 54.2
AKT                                 e                16 36 30.6
AKT                                  pmax   pmax
      comp=Z,6.0nm,0.7s
PRZ   Przheval'sk        62.09  11   P      P        16 34 11.2 -1.2
PRZ   Przheval'sk        62.09  11   P      P        16 34 11.2 -1.2
PRZ                                  pmax   pmax
      comp=Z,17nm,1.3s
ARPR  Arapgir-MALATY     62.81 337   P      P        16 34 16.3 -1.0
KOPT  Kop Dagi           62.86 339   P      P        16 34 16.0 -1.7
KOPT                                 IAmb   IAmb     16 34 28.2
      comp=Z,12nm,1.3s
ASAR  Alice Springs      63.62 108   P      P        16 34 23.1 +0.1
      comp=Z,1.3nm,0.7s,baz=270,slow=5.6,SNR=23
ASAR                                 LR     LR       16 57 59.8
      comp=Z,956nm,21.4s,baz=278,slow=32
      comp=Z,1.3nm,0.7s
ASAR  Alice Springs      63.62 108          P        16 34 21.5 -1.4
AS31  Alice Springs      63.62 108   P      P        16 34 21.8 -1.1
ENH   Enshi              64.67  42   P      P        16 34 28.5 -1.1
ENH                                  IAmb   IAmb     16 34 37.5
      comp=Z,10.0nm,0.8s
DAV   Davao City (W)     64.70  72   LR     LR       17 00 23.1
      comp=Z,294nm,21.3s,baz=246,slow=34
WRA   Warramunga Arr     64.71 104   P      P        16 34 30.8 +0.6
      comp=Z,2.8nm,0.8s,baz=258,slow=5.2,SNR=14
WRA                                  LR     LR       17 00 03.9
      comp=Z,457nm,19.6s,baz=262,slow=34
      comp=Z,2.8nm,0.8s
WRA   Warramunga Arr     64.71 104          P        16 34 28.5 -1.6
WRAB  Tennant Creek      64.73 104   P      P        16 34 33.1 +2.9
WB0   Warramunga Arr     64.80 104   P      P        16 34 29.5 -1.2
WR8   Warramunga Arr     64.86 104   P      P        16 34 30.1 -1.0
NEUR  Neytrino           65.09 342⇑eP      P        16 34 37.4 +5.2
NEUR                                 pmax   pmax
      comp=Z,13nm,1.7s
BR104 Keskin Array S     65.22 334   P      P        16 34 31.4 -1.7
      comp=Z,3.6nm,1.0s
BR131 Keskin Array S     65.23 334⇓eP      P        16 34 36.9 +3.7
BRTR  Keskin Array B     65.23 334   P      P        16 34 34.4 +1.2
      comp=Z,1.6nm,0.9s,baz=156,slow=6.4,SNR=6.6
BRTR                                 LR     LR       17 01 13.0
      comp=Z,43nm,19.4s,baz=108,slow=34
      comp=Z,1.6nm,0.9s
BRTR  Keskin Array B     65.23 334   P      P        16 34 32.2 -1.0
BRTR  Keskin Array B     65.23 334 i P      P        16 34 36.7 +3.5
BRTR                                 pmax   pmax
      comp=Z,2.0nm,0.9s
BR105 Keskin Array S     65.24 334   P      P        16 34 32.6 -0.6
      comp=Z,4.2nm,0.9s
BR106 Keskin Array S     65.25 334   P      P        16 34 33.7 +0.4
      comp=Z,3.0nm,1.1s
LZDM  Lanzhou Array      65.42  34   LR     LR       17 01 15.0
      comp=Z,112nm,21.9s,baz=175,slow=34
KBZ   Khabaz             65.46 342   LR     LR       17 03 33.1
      comp=Z,85nm,18.4s,baz=142,slow=36
KBZ   Khabaz             65.46 342⇑iP      P        16 34 40.1 +5.8
SNAA  Sanae              65.52 199   LR     LR       16 57 19.9
      comp=Z,353nm,18.3s,baz=26,slow=31
SNAA  Sanae              65.52 199   P      P        16 34 34.4 -0.1
SNAA  Sanae              65.52 199   P      P        16 34 34.4 -0.1
SNAA                                 pmax   pmax
      comp=Z,22nm,1.7s
KIV   Kislovodsk         65.73 342   P      P        16 34 35.3 -0.9
KIV   Kislovodsk         65.73 342  eP      P        16 34 39.5 +3.3
KIV                                  pmax   pmax
      comp=Z,6.0nm,1.0s
VSLR  Vesyoloye          66.09 340⇓eP      P        16 34 41.6 +3.1
VSLR                                 pmax   pmax
      comp=Z,28nm,0.9s
GTA   Gaotai             66.23  29  eP      P        16 34 42.0 +2.4
GTA                                  pP     pwP      16 34 47.4 +0.4
GTA                                  pmax   pmax
      comp=Z,9.0nm,2.0s
GTA                                  LR     LR
      comp=Z,330nm,17.4s
GTA                                  LR     LR
      comp=Z,210nm,17.8s
GTA                                  LR     LR
      comp=Z,310nm,21.1s
BORA  Eskisehir          66.76 331   P      P        16 34 42.5 -0.4
XAN   Xi'an              66.93  39   P      P        16 34 46.8 +2.7
XAN                                  pmax   pmax
      comp=Z,14nm,1.6s
MAKZ  Makanchi           66.95  12          P        16 34 42.9 -1.0
MAKZ                                 IAmb   IAmb     16 34 47.2
      comp=Z,10nm,1.2s
MAKZ  Makanchi           66.95  12   P      P        16 34 42.9 -1.0
MAKZ                                 pmax   pmax
      comp=Z,10.0nm,1.3s
MK31  Makanchi Array     67.00  13⇓eP      P        16 34 46.4 +2.2
MKAR  Makanchi Array     67.00  13   P      P        16 34 43.9 -0.4
      comp=Z,3.5nm,1.0s,baz=186,slow=6.8,SNR=14
MKAR                                 LR     LR       17 02 20.6
      comp=Z,183nm,19.1s,baz=171,slow=34
      comp=Z,3.5nm,1.0s
MKAR  Makanchi Array     67.00  13          P        16 34 43.1 -1.1
MKAR  Makanchi Array     67.00  13 i P      P        16 34 47.0 +2.8
MKAR                                 pmax   pmax
      comp=Z,5.0nm,0.9s
AB31  Akbulak array      67.85 356   P      P        16 34 48.5 -0.9
AB31                                 IAmb   IAmb     16 34 57.8
      comp=Z,9.2nm,1.4s
ABKAR Akbulak array      67.85 356          P        16 34 48.6 -0.8
ANN   Anapa              68.14 339  eP      P        16 34 56.0 +4.6
ANN                                 e*PP    pwP      16 34 58.6 -0.2
ANN                                 e                16 37 25.7
ANN                                 eS      S        16 43 58.5 +7.7
ANN                                  pmax   pmax
      comp=Z,48nm,1.2s
INKA  Innaminka          68.97 113          P        16 34 54.8 -2.3
INKA                                 IAmb   IAmb     16 35 05.8
      comp=Z,6.2nm,1.0s
STKA  Stephens Creek     68.98 118   LR     LR       17 00 35.6
      comp=Z,200nm,21.3s,baz=226,slow=32
STKA  Stephens Creek     68.98 118⇓eP      P        16 34 59.6 +2.5
QIS   Mount Isa          69.41 105   P      P        16 35 02.8 +2.8
KURBB Kurchatov Arra     70.03   9   P      P        16 35 02.8 -0.2
      comp=Z,3.5nm,0.9s,baz=207,slow=6.6,SNR=12
KURBB                                LR     LR       17 02 50.2
      comp=Z,197nm,20.5s,baz=168,slow=34
      comp=Z,3.5nm,0.9s
KURK  Kurchatov          70.13   9   P      P        16 35 02.8 -0.8
KURK                                 IAmb   IAmb     16 35 12.2
      comp=Z,11nm,1.1s
KURK  Kurchatov          70.13   9⇑eP      P        16 35 06.0 +2.4
KURK                                 pmax   pmax
      comp=Z,14nm,1.1s
TORD  Torodi Ar. Bea     70.23 292   LR     LR       17 05 09.7
      comp=Z,196nm,18.3s,baz=113,slow=35
DGZ   Jazzator, Alta     70.90  15 i P      P        16 35 11.6 +3.0
DGZ                                  pmax   pmax
      comp=Z,9.0nm,1.3s
QSPA  South Pole Qui     71.37 180   P      P        16 35 12.8 +1.4
      comp=Z,7.0nm,0.7s,baz=279,slow=1.0,SNR=45
QSPA                                 LR     LR       17 01 51.2
      comp=Z,251nm,21.8s,baz=271,slow=32
      comp=Z,7.0nm,0.7s
QSPA  South Pole Qui     71.37 180          P        16 35 11.5 +0.2
BVAR  Borovoye Array     71.59   3   P      P        16 35 11.9 -0.6
      comp=Z,4.6nm,0.8s,baz=150,slow=6.7,SNR=10
BVAR                                 LR     LR       17 06 45.2
      comp=Z,125nm,18.1s,baz=181,slow=36
      comp=Z,4.6nm,0.8s
BORK  Borovoye           71.61   3   P      P        16 35 12.2 -0.4
BORK                                 IAmb   IAmb     16 35 20.5
      comp=Z,6.6nm,0.9s
BORK  Borovoye           71.61   3   P      P        16 35 12.2 -0.4
BORK                                 pmax   pmax
      comp=Z,7.0nm,0.9s
BTO   Baotou             72.20  34  eP      P        16 35 20.8 +4.2
BTO                                  pmax   pmax
      comp=Z,7.0nm,0.5s
BTO                                  pmax   pmax
      comp=Z,600nm,4.6s
QLP   Quilpie            72.25 113   P      P        16 35 19.9 +2.7
BELG  Belogornoye        72.47 349⇓eP      P        16 35 20.7 +3.0
BELG                                 pmax   pmax
      comp=Z,5.0nm,1.5s
VRH   Novokhopyorsk      72.64 345  eP      P        16 35 24.6 +5.8
VRH                                  pmax   pmax
      comp=Z,6.0nm,0.9s
PHP   Peshkopia          73.04 326   P      P        16 35 21.8 +0.3
PHP                                  pmax   pmax
      comp=Z,18nm,1.3s
VORD  Divnogorie         73.06 343  eP      P        16 35 21.7 +0.4
VORD                                 pmax   pmax
      comp=Z,5.0nm,1.0s
VRI   Vrincioaia         73.18 333   P      P        16 35 24.2 +2.0
VRI                                  pmax   pmax
      comp=Z,23nm,1.1s
VRI   Vrincioaia         73.18 333   P      P        16 35 23.2 +1.0
      comp=Z,23nm,1.1s
MLR   Muntele Rosu       73.23 332   LR     LR       17 06 33.7
      comp=Z,59nm,19.6s,baz=109,slow=35
MLR   Muntele Rosu       73.23 332   P      P        16 35 22.1 -0.5
MLR   Muntele Rosu       73.23 332   P      P        16 35 22.1 -0.5
MLR                                  pmax   pmax
      comp=Z,40nm,1.7s
VNDA  Vanda              73.26 167   P      P        16 35 23.6 +1.4
      comp=Z,2.3nm,1.0s,baz=261,slow=11,SNR=6.9
VNDA                                 LR     LR       17 03 48.3
      comp=Z,191nm,21.3s,baz=246,slow=33
      comp=Z,2.3nm,1.0s
VNDA  Vanda              73.26 167   P      P        16 35 22.7 +0.5
VNDA                                 IAmb   IAmb     16 35 31.1
      comp=Z,9.0nm,1.1s
VSR   Storozhevoye       73.32 343  eP      P        16 35 20.7 -2.1
VSR                                  pmax   pmax
      comp=Z,5.0nm,1.0s
DBIC  Dimbokro           73.58 283   LR     LR       17 05 23.9
      comp=Z,249nm,22.0s,baz=143,slow=34
BELA  Belgrano 2         73.89 193          P        16 35 26.3 +0.3
ZAA0  Zalesovo Array     74.30  12   P      P        16 35 26.9 -1.6
ZAA0                                 IAmb   IAmb     16 35 36.3
      comp=Z,13nm,1.1s
ZALV  Zalesovo Beam      74.30  12   P      P        16 35 28.1 -0.5
      comp=Z,4.6nm,0.6s,baz=201,slow=6.4,SNR=14
ZALV                                 LR     LR       17 06 34.2
      comp=Z,158nm,19.2s,baz=194,slow=35
      comp=Z,4.6nm,0.6s
ZALV  Zalesovo Beam      74.30  12          P        16 35 26.6 -1.9
LPSR  Galich'ya Gora     74.64 344  eP      P        16 35 34.8 +4.3
LPSR                                 pmax   pmax
      comp=Z,9.0nm,0.9s
ARTI  Arti               75.05 356          P        16 35 32.6 -0.2
ARTI                                 IAmb   IAmb     16 35 36.4
      comp=Z,11nm,1.1s
ARTI  Arti               75.05 356c iP      P        16 35 35.1 +2.3
ARTI                                 S      S        16 45 11.2 +1.1
ARTI                                 SS     SS       16 49 56.1 -3.6
ARTI                                 pmax   pmax
      comp=Z,11nm,1.1s
BURAR Bucovina Array     75.19 333   P      P        16 35 32.9 -1.1
BUR08 Bucovina Ar. S     75.22 333   P      P        16 35 33.2 -1.0
BUR08                                IAmb   IAmb     16 36 20.6
      comp=Z,12nm,1.4s
BZS   Buzias             75.31 330   P      P        16 35 38.5 +4.0
BZS                                  pmax   pmax
      comp=Z,7.0nm,1.1s
SVE   Sverdlovsk         75.37 357  eP      P        16 35 38.0 +3.4
SVE                                  pmax   pmax
      comp=Z,21nm,1.6s
KMPD  K-Podol'skiy       75.42 335   P      pP       16 35 36.1 -3.1
KMPD                                 P      P        16 35 34.9 -0.2
CTA   Charters Tower     75.58 107   LR     LR       17 06 32.0
      comp=Z,266nm,19.6s,baz=258,slow=34
SONM  Songino Array      75.80  27   P      P        16 35 37.8 +0.3
      comp=Z,1.3nm,0.8s,baz=224,slow=6.1,SNR=7.2
SONM                                 LR     LR       17 07 45.0
      comp=Z,377nm,19.8s,baz=198,slow=35
      comp=Z,1.3nm,0.8s
SONM  Songino Array      75.80  27   P      P        16 35 36.6 -0.9
SONM                                 IAmb   IAmb     16 35 56.1
      comp=Z,15nm,1.9s
AK07  Malin Array Si     75.95 337   P      P        16 35 38.7 +0.6
RAKU  Rahkiv             75.96 333   P      P        16 35 37.3 -1.0
AK10  Malin Array Si     75.97 337   P      P        16 35 38.4 +0.2
AK09  Malin Array Si     75.98 337   P      P        16 35 37.4 -0.8
AK06  Malin Array Si     75.98 337   P      P        16 35 38.3  0.0
LUBAR Lubar, Ukraine     75.98 336   P      P        16 35 39.7 +1.4
AK05  Malin Array Si     76.01 337   P      P        16 35 37.4 -1.0
JOW   Kunigami           76.03  55   LR     LR       17 05 28.4
      comp=Z,249nm,21.9s,baz=310,slow=33
AK02  Malin Array Si     76.04 337   P      P        16 35 37.3 -1.3
AK14  Malin Array Si     76.05 337   P      P        16 35 37.9 -0.8
AK01  Malin Array Si     76.06 337   P      P        16 35 38.1 -0.6
AKASG Malin Array Be     76.07 337   P      P        16 35 38.8  0.0
      comp=Z,2.9nm,0.8s,baz=142,slow=4.9,SNR=10
      comp=Z,2.9nm,0.8s
AKBB  Malin Array Si     76.07 337   P      P        16 35 37.9 -0.8
AKBB                                 IAmb   IAmb     16 35 47.3
      comp=Z,15nm,1.1s
AKBB  Malin Array Si     76.07 337ceP      P        16 35 42.7 +3.9
AKBB  Malin Array Si     76.07 337   P      P        16 35 38.4 -0.4
KIEV  Kiev               76.07 337          P        16 35 38.2 -0.6
KIEV                                 IAmb   IAmb     16 35 47.3
      comp=Z,12nm,1.0s
KIEV  Kiev               76.07 337   P      P        16 35 38.2 -0.6
KIEV                                 pmax   pmax
      comp=Z,12nm,1.0s
KIEV  Kiev               76.07 337   P      P        16 35 38.4 -0.4
      comp=Z,78nm,1.1s
AK11  Malin Array Si     76.07 337   P      P        16 35 37.5 -1.3
AK16  Malin Array Si     76.09 337   P      P        16 35 38.4 -0.5
AK03  Malin Array Si     76.09 337   P      P        16 35 38.0 -0.9
AK04  Malin Array Si     76.11 337   P      P        16 35 38.4 -0.6
ULN   Ulaanbaatar        76.11  28   P      P        16 35 37.7 -1.6
ULN                                  IAmb   IAmb     16 36 24.0
      comp=Z,18nm,1.9s
ULN   Ulaanbaatar        76.11  28⇓eP      P        16 35 41.8 +2.5
ULN                                  pmax   pmax
      comp=Z,4.0nm,1.1s
AK17  Malin Array Si     76.12 337   P      P        16 35 37.9 -1.1
AK18  Malin Array Si     76.14 337   P      P        16 35 38.3 -0.9
AK19  Malin Array Si     76.16 337   P      P        16 35 38.3 -1.0
AK22  Malin Array Si     76.17 337   P      P        16 35 38.4 -1.0
AK20  Malin Array Si     76.18 337   P      P        16 35 38.8 -0.6
AK21  Malin Array Si     76.20 337   P      P        16 35 38.9 -0.6
BRIU  Brid               76.70 333   P      P        16 35 42.7 +0.3
INTR  Introdacqua        76.83 323   P      P        16 35 42.4 -1.0
MORH  Mrgy, Hungar       77.17 329   P      P        16 35 45.2 +0.1
      comp=Z,6.3nm,1.8s
OBN   Obninsk            77.51 344  eP      P        16 35 51.2 +4.4
OBN                                 e                16 36 00.7
OBN                                 e                16 38 46.0
OBN                                 ePPP    PPP      16 40 32.4
OBN                                  pmax   pmax
      comp=Z,117nm,4.0s
OBN                                  MLR    MLR
      comp=Z,120nm,17.0s
MOS   Moscow             77.79 344  eP      P        16 35 51.1 +2.7
KIRV  Kirov              78.14 352⇓eP      P        16 35 55.0 +4.8
MPLH  Magyarpolny        78.39 329   P      P        16 35 52.8 +0.9
      comp=Z,34nm,1.4s
SOKA  Soboth             79.30 327  eP      P        16 36 01.4 +4.4
      comp=Z,9.5nm,1.2s
PMG   Port Moresby       79.38  96   LR     LR       17 12 03.8
      comp=Z,204nm,18.0s,baz=208,slow=36
ARSA  Arzberg            79.44 328   P      P        16 35 56.3 -1.4
ARSA                                 IAmb   IAmb     16 36 07.0
      comp=Z,20nm,1.5s
ARSA  Arzberg            79.44 328  eP      P        16 36 02.2 +4.4
      comp=Z,8.1nm,1.4s
MNK   Minsk              79.64 339 i P      P        16 36 00.2 +1.6
MNK                                i                 16 38 58.6
MNK                                i S      S        16 46 02.5 +2.4
MNK                                i SSS    SSS      16 54 37.4
MNK                                  pmax   pmax
      comp=Z,10.0nm,0.8s
MNK                                  pmax   pmax
      comp=E,20nm,0.9s
MNK                                  pmax   pmax
      comp=N,13nm,0.9s
MNK                                  MLR    MLR
      comp=Z,53nm,9.0s
MNK                                  MLR    MLR
      comp=E,843nm,21.0s
CONA  Conrad Observa     79.73 329  eP      P        16 36 03.7 +4.4
      comp=E,10.0nm,1.2s
VRAC  Vranov             80.33 330   LR     LR       17 13 51.1
      comp=E,34nm,18.1s,baz=354,slow=37
JNU   Nakatsue           81.07  51   LR     LR       17 12 08.5
      comp=E,152nm,19.3s,baz=206,slow=36
KSAR  Wonju Array Be     81.14  46   P      P        16 36 05.3 -1.7
KSAR  Wonju Array Be     81.14  46   P      P        16 36 05.3 -1.7
KSRS  Korea Array        81.17  46   P      P        16 36 08.8 +1.7
      comp=E,2.0nm,1.0s,baz=242,slow=5.4,SNR=4.8
      comp=E,2.0nm,1.0s
KHC   Kasperske Hory     81.67 329⇓eP      P        16 36 12.0 +2.4
KHC                                  pmax   pmax
      comp=Z,13nm,1.8s
KLMR  Klimovskoe         81.98 348  eP      P        16 36 12.7 +1.7
KLMR                                e                16 39 18.6
KLMR                                 pmax   pmax
      comp=Z,42nm,1.4s
CLL   Collm              83.38 330 i P      P        16 36 26.0 +7.6
CLL                                  pmax   pmax
      comp=Z,16nm,1.4s
CLL   Collm              83.38 330  ePx     Px       16 36 22.0
CLL                                 ex      x        16 36 26.0
      comp=Z,16nm,1.4s
MDT   Midelt             84.14 307   LR     LR       17 15 04.9
      comp=Z,154nm,18.6s,baz=92,slow=36
GUMO  Guam               84.70  74   LR     LR       17 10 37.7
      comp=Z,52nm,20.2s,baz=110,slow=33
BNX   BinXian            85.26  38 ⇑P      P        16 36 37.0 +8.9
BNX                                  pmax   pmax
      comp=Z,6.0nm,1.2s
FINES FINESS Array B     85.82 342   P      P        16 36 30.5  0.0
      comp=Z,1.8nm,0.7s,baz=106,slow=12,SNR=3.6
      comp=Z,1.8nm,0.7s
FINES FINESS Array B     85.82 342   P      P        16 36 29.4 -1.1
ESDC  Sonseca Array      86.79 314   P      P        16 36 36.9 +1.0
      comp=Z,1.3nm,0.8s,baz=115,slow=4.6,SNR=4.5
ESDC                                 LR     LR       17 17 18.6
      comp=Z,129nm,18.4s,baz=106,slow=37
      comp=Z,1.3nm,0.8s
ESDC  Sonseca Array      86.79 314   P      P        16 36 36.1 +0.1
ESDC                                 IAmb   IAmb     16 37 11.3
      comp=Z,13nm,1.6s
JCJ   Chichijima         87.30  60   LR     LR       17 11 16.0
      comp=Z,112nm,18.9s,baz=114,slow=33
JHJ   Hachijo jima 2     87.75  54   LR     LR       17 13 20.0
      comp=Z,92nm,20.6s,baz=120,slow=34
MAJO  Matsushiro         87.99  50⇑iP      P        16 36 45.1 +3.3
MAJO                                 pmax   pmax
      comp=Z,48nm,1.9s
MJAR  Matsushiro Arr     87.99  50   P      P        16 36 42.7 +0.9
      comp=Z,3.1nm,0.9s,baz=244,slow=7.4,SNR=5.6
MJAR                                 LR     LR       17 15 16.9
      comp=Z,94nm,20.6s,baz=226,slow=35
      comp=Z,3.1nm,0.9s
MJAR  Matsushiro Arr     87.99  50   P      P        16 36 41.7 -0.1
MJAR  Matsushiro Arr     87.99  50   P      P        16 36 41.7 -0.1
MJAR                                 pmax   pmax
      comp=Z,18nm,1.3s
PMSA  Palmer Station     88.23 199   LR     LR       17 09 24.0
      comp=Z,96nm,19.5s,baz=110,slow=31
NRIK  Noril'sk           89.26   8   LR     LR       17 15 25.6
      comp=Z,88nm,20.5s,baz=175,slow=35
DZM   Mont Dzumac        92.91 114  eLR     LR       17 07 32.5
      comp=Z,391nm,21.9s
ASAJ  Asahikawa          94.09  45   LR     LR       17 20 08.1
      comp=Z,58nm,18.3s,baz=140,slow=36
URZ   Urewera            94.61 133   LR     LR       17 12 38.0
      comp=Z,60nm,18.4s,baz=278,slow=31
YAK   Yakutsk            95.07  25   LR     LR       17 19 41.8
      comp=Z,314nm,19.4s,baz=276,slow=35
TIXI  Tiksi              99.74  17   LR     LR       17 22 53.5
      comp=Z,288nm,20.4s,baz=198,slow=36
TBI   Tubuai            126.14 140  eLR     LR       17 22 49.5
      comp=Z,2µm,42.0s
PPT2  Papeete2          130.22 134  eLR     LR       17 24 43.1
      comp=Z,71nm,22.8s
PPT2                                eLR     LR       17 24 54.4
      comp=Z,130nm,25.8s
YKA   Yellowknife Ar    136.28 360   PKP    PKPdf    16 43 12.4 -0.1
      comp=Z,0.4nm,0.7s,baz=353,slow=1.8,SNR=3.1
TAOE  Nuku Hiva Isla    142.83 135  eLR     LR       17 30 32.8
      comp=Z,141nm,26.9s
ULM   Lac du Bonnet     145.14 339   PKPbc  PKPbc    16 43 27.8 -0.6
      comp=Z,6.3nm,0.7s,baz=65,slow=4.9,SNR=6.3
ULM   Lac du Bonnet     145.14 339   PKIKP  PKPbc    16 43 27.9 -0.5
TXAR  Lajitas Array     165.41 318   PKPab  PKPab    16 44 55.6 +1.0
      comp=Z,0.3nm,0.4s,baz=38,slow=5.1,SNR=10.0
TXAR  Lajitas Array     165.41 318   PKPdf  PKPdf    16 43 55.4 -1.3
TXAR                                        PKPab    16 44 54.5 -0.1
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SKHL ***12*** *16:38:45.6±0.5, 44°.60N×149°.20E, h68^{km}±7^{km}, mb4.7/3*

JMA ***12*** *16:38:47.6±0.9, 45°N±4°×14°9E±°, h30^{km}, MV4.0/12, SE OFF ETOROFU*

ISC 12 16:38:46.1±4.1**, 44°.51N**±0°.09×**149°.1E**±0°.2**, h42**^{km}**, n14,** σ**1^{s}29**/21**, Kuril Islands**

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Code  Station Name        Δ°   AZ°    Phase ID        Time        Res
                                    Op      ISC       h  m  s     ISC
KUR   Kuril'sk           1.12 310  eP      Pn       16 39 04.6 -0.7
KUR                                 AMB    AMB      16 39 04.7
      500nm,0.4s
KUR                                eS      Sn       16 39 19.2 -0.3
KUR                                 A      A        16 39 19.7
      630nm,0.3s
KUR                                 A      A        16 39 19.7
      770nm,0.3s
YUK   Yuzh-Kuril'sk      2.36 259  eP      Pn       16 39 23.2 +1.0
YUK                                 AMB    AMB      16 39 24.3
      100nm,0.4s
YUK                                eS      Sn       16 39 50.5 +0.6
YUK                                 A      A        16 39 51.5
      420nm,0.5s
YUK                                 A      A        16 39 51.5
      560nm,0.5s
NEM2  Nemuro 2           2.67 246  eP      Pn       16 39 26.6 +0.1
NEM2                               eS      Sn       16 39 55.0 -2.5
GLVR  Golovnino          2.67 254  eS      Sn       16 39 58.1 +0.4
NMR   Nemuro--Hokkai     2.67 246  eP      Pn       16 39 26.6  0.0
NMR                                eS      Sn       16 39 56.1 -1.6
JRA   Rausu              2.90 260  eP      Pn       16 39 31.1 +1.5
JNK   Nakash             3.27 255  eP      Pn       16 39 36.0 +1.1
JNK                                eS      Sn       16 40 12.1 -0.5
AKK   Akkeshi            3.41 245  eP      Pn       16 39 37.5 +0.8
JAK   Akkeshi            3.52 246  eP      Pn       16 39 38.5 +0.3
JAK                                eS      Sn       16 40 16.2 -2.2
JTKR  Abashiri--Toko     3.75 263  eP      Pn       16 39 43.2 +1.8
JAR   Ashorobuto         4.02 254  eS      Sn       16 40 29.7 -1.2
JOB   Onbets             4.13 249  eP      Pn       16 39 48.0 +1.4
JOB                                eS      Sn       16 40 32.9 -0.6
JCH   Churui             4.56 247  eP      Pn       16 39 53.9 +1.3
JNBK  Urakawa-nobuka     5.12 246  eP      Pn       16 40 00.9 +0.8
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IDC ***12*** *17:03:32.7±1.0, 26°.51N×143°.94E, h0^{km}, mb3.9/10, mbtmp3.9/11, ML3.1/1, MS3.5/1, Error ellipse: s-maj=35.0km s-min=17.8km az=76.0*

NEIC ***12*** *17:03:34.7±2.0, 26°.6N±0°.1×143°.86E±0°.09, h10^{km}±1^{km}, mb4.4/11, Error ellipse: s-maj=19.3km s-min=12.6km az=200.0*

JMA ***12*** *17:03:34.6±0.7, 27°N±4°×14°4E±°, h19^{km}, NEAR CHICHIJIMA ISLAND*

ISC 12 17:03:34.3±0.8**, 26°.72N**±0°.09×**143°.91E**±0°.07**, h10**^{km}**, n34,** σ**1^{s}45**/35**, mb4.2**/15**, Bonin Islands region**

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Code  Station Name        Δ°   AZ°    Phase ID        Time        Res
                                    Op      ISC       h  m  s     ISC
JHH2  Haha-jima-NKT2     1.56 267  eP      Pg       17 04 04.2  0.0
JHH2                               eS      Sg       17 04 25.7 +1.4
JCJ   Chichijima         1.59 284   Pn     Pn       17 03 51.3  -11
      15nm,0.3s,baz=101,slow=23,SNR=21
JCJ                                 Sn     Sn       17 04 12.9  -10
      200nm,0.3s,baz=133,slow=22,SNR=23
JCJ   Chichijima         1.59 284   Pn     Pn       17 04 01.2 -1.2
JCJ                                 Sn     Sn       17 04 23.1 +0.1
CBIJ  Chichi jima        1.59 284  eP      Pn       17 04 02.2 -0.3
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CBIJ				*e*S	Sn	17 04 22.9	-0.1
JHO	Hitachi	10.26	345	*e*P	Pn	17 05 59.6	-2.0
JAG	Ashikaga	10.39	340	*e*S	Sn	17 07 55.9	-4.1
MJAR	Matsushiro Arr	10.93	335	Pn	Pn	17 06 11.3	+0.5
	0.1nm,0.3s,baz=161,slow=12,SNR=8.5						
	1.3nm,0.5s						
MJAR	Matsushiro Arr	10.93	335		Pn	17 06 11.0	+0.3
MAJO	Matsushiro	10.93	335	Pn	Pn	17 06 11.2	+0.4
MJB9	Matsu-Tunnel	10.93	335	Pn	Pn	17 06 12.0	+1.2
KSAR	Wonju Array Be	17.26	312	Pn	Pn	17 07 33.3	-2.1
KS19	Wonju Array Si	17.30	312	Pn	Pn	17 07 34.4	-1.5
KS19				IAmb	IAmb	17 07 42.6	
	comp=Z,14nm,1.1s						
SONM	Songino Array	36.05	316	P	P	17 10 38.7	+2.7
	comp=Z,2.2nm,0.8s,baz=106,slow=6.6,SNR=11						
	comp=Z,2.2nm,0.8s						
SONM	Songino Array	36.05	316	P	P	17 10 36.6	+0.6
SONM				IAmb	IAmb	17 10 39.2	
	comp=Z,2.5nm,1.0s						
YAK	Yakutsk	36.57	349	P	P	17 10 41.2	+1.2
	comp=Z,3.1nm,0.3s,baz=315,slow=1.4,SNR=2.1						
	comp=Z,3.1nm,0.3s						
CMAR	Chiang Mai Arr	42.15	268	P	P	17 11 26.7	-0.5
	comp=Z,0.5nm,0.4s,baz=68,slow=11,SNR=2.0						
	comp=Z,0.5nm,0.4s						
BILL	Bilibino	43.49	12	P	P	17 11 37.3	-0.1
BILL				IAmb	IAmb	17 11 50.4	
	comp=Z,4.1nm,1.2s						
WB0	Warramunga Arr	47.12	192	P	P	17 12 05.5	-1.3
WB0				IAmb	IAmb	17 12 06.2	
	comp=Z,4.2nm,1.1s						
WR8	Warramunga Arr	47.29	192	P	P	17 12 06.3	-1.8
WR8				IAmb	IAmb	17 12 39.2	
	comp=Z,6.8nm,1.4s						
WRA	Warramunga Arr	47.31	192	P	P	17 12 07.0	-1.2
	comp=Z,2.8nm,0.8s,baz=12,slow=8.2,SNR=15						
	comp=Z,2.8nm,0.8s						
WRA	Warramunga Arr	47.31	192	IAmb	IAmb	17 12 07.6	
	comp=Z,0.2nm,0.9s						
FITZ	Fitzroy Crossi	47.95	204	P	P	17 12 11.3	-1.9
ZALV	Zalesovo Beam	50.78	319	P	P	17 12 35.9	+1.5
	comp=Z,0.2nm,0.4s,baz=106,slow=11,SNR=2.2						
	comp=Z,0.2nm,0.4s						
ASAR	Alice Springs	51.02	192	P	P	17 12 34.0	-2.6
	comp=Z,0.4nm,0.7s,baz=21,slow=6.1,SNR=11						
ASAR				LR	LR	17 33 36.1	
	comp=Z,42nm,18.4s,baz=346,slow=36						
	comp=Z,0.4nm,0.7s						
MKAR	Makanchi Array	51.90	310	P	P	17 12 44.4	+1.3
	comp=Z,2.0nm,0.8s,baz=93,slow=8.6,SNR=11						
	comp=Z,2.0nm,0.8s						
KURK	Kurchatov	54.35	315	P	P	17 12 59.9	-1.1
KURK				IAmb	IAmb	17 13 03.7	
	comp=Z,9.1nm,1.3s						
KURBB	Kurchatov Arra	54.40	315	P	P	17 13 02.5	+1.1
	comp=Z,2.4nm,0.8s,baz=90,slow=7.6,SNR=14						
	comp=Z,2.4nm,0.8s						
BVAR	Borovoye Array	59.36	318	P	P	17 13 37.1	+0.6
	comp=Z,1.1nm,0.6s,baz=92,slow=8.9,SNR=6.8						
	comp=Z,1.1nm,0.6s						
KKAR	Karatay Array	60.55	306	P	P	17 13 45.6	+0.6
MANEM	Manem	60.77	300	P	P	17 13 47.5	+0.7
MANEM				IAmb	IAmb	17 13 49.4	
	comp=Z,6.1nm,0.8s						
CHGR	Chuyangaron	62.46	302	P	P	17 13 58.5	+0.5
YKA	Yellowknife Ar	71.73	29	P	P	17 14 56.9	+0.6
	comp=Z,0.3nm,0.8s,baz=290,slow=7.1,SNR=3.5						
	comp=Z,0.3nm,0.8s						
PLCA	Paso Flores	148.33	125	PKPbc	PKPbc	17 23 21.6	+0.5
	comp=Z,1.2nm,0.7s,baz=207,slow=2.3,SNR=3.8						
PLCA	Paso Flores	148.33	125		PKPbc	17 23 21.3	+0.3

IDC 12 17:13:05.4±1.5, 14°.03S×72°.60W, h78km±15km, mb3.5/2, mbtmp4.1/6, MS2.7/2, Error ellipse: s-maj=31.8km s-min=10.6km az=34.0

NEIC 12 17:13:06.6±1.6, 14°.1S±0°.1×72°.8W±0°.1, h78km±7km, mb4.4/11, Error ellipse: s-maj=22.7km s-min=9.5km az=47.0

ISC 12 17:13:04.2±0.6, 14°.10S±0°.08×72°.54W±0°.08, h83km, n53, σ1s.88/51, mb3.9/3, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB18	Visviri	4.55	140		Pn	17 14 16.4	+5.3
NNA	Nana	4.69	296	P	Pn	17 14 13.8	+1.1
	18nm,0.3s,baz=152,slow=8.7,SNR=8.1						
NNA				S	Sn	17 15 04.6	-1.4
	124nm,0.6s,baz=82,slow=4.6,SNR=12						
NNA	Nana	4.69	296		Pn	17 14 12.2	-0.5
AP01	Chacalluta	4.74	154	Pn	Pn	17 14 15.5	+2.2
LPAZ	La Paz	4.78	118	P	Pn	17 14 17.9	+3.6
	8.5nm,0.3s,baz=303,slow=8.3,SNR=37						
LPAZ				S	Sn	17 15 11.5	+2.7
	16nm,0.6s,baz=33,slow=22,SNR=4.2						
LPAZ				LR	LR	17 16 17.0	
	comp=Z,49nm,21.6s,baz=299,slow=39						
LPAZ	La Paz	4.78	118		Pn	17 14 18.1	+3.7
PB12	IPOC Station P	4.96	155		Pn	17 14 17.4	+1.0
PB16	IPOC Station P	5.12	146		Pn	17 14 21.6	+2.6
PB11	IPOC Station P	6.26	154		Pn	17 14 34.0	-0.2
GO01	Chusmiza	6.39	150		Pn	17 14 38.0	+1.8
HMBC	Humberstone	6.64	158		Pn	17 14 38.9	-0.5
HMBC				Sn	Sn	17 15 50.5	-3.2
TA01	Diego Aracena	6.81	161		Pn	17 14 41.2	-0.3
PB08	IPOC Station P	6.82	152		Pn	17 14 42.0	0.0
PATCX	Punta Patache	7.06	162		Pn	17 14 43.6	-1.4
PB01	IPOC Station P	7.49	158		Pn	17 14 47.0	-3.9
PB02	IPOC Station P	7.61	161		Pn	17 14 51.7	-0.8
PB07	IPOC Station P	7.99	162		Pn	17 14 57.1	-0.7
PB09	IPOC Station P	8.27	158		Pn	17 15 01.6	0.0
PB03	IPOC Station P	8.33	162		Pn	17 15 01.5	-1.0
PB05	IPOC Station P	8.98	166	Pn	Pn	17 15 09.8	-1.4
ATAH	Atahualpa	9.00	320	P	Pn	17 15 13.2	+1.3
	27nm,0.6s,baz=166,slow=8.5,SNR=18						
ATAH				LR	LR	17 18 56.6	
	comp=Z,112nm,20.9s,baz=115,slow=39						
PB06	IPOC Station P	9.01	162	Pn	Pn	17 15 09.5	-2.2
PB10	IPOC Station P	9.55	169	Pn	Pn	17 15 17.1	-1.8
PB14	IPOC Station P	10.66	169	Pn	Pn	17 15 32.5	-1.8
GO02	Mina Guanaco	11.35	166	Pn	Pn	17 15 40.6	-3.1
VILB	Vilhena	12.05	86		Pn	17 15 50.0	-3.0
AC01	Pan de Azucar	12.12	172	Pn	Pn	17 15 51.5	-2.5
PTLB	Pontes e Lacer	13.03	98	Pn	Pn	17 16 02.6	-3.5
AC05	El Transito	14.81	172		P	17 16 34.2	+0.9
LCO	Las Campanas	14.93	174		P	17 16 35.7	+0.9
CO01	Juntas del Tor	15.96	172	P	P	17 16 47.7	+1.6
CO01				IAmb	IAmb	17 16 52.0	
	comp=Z,24nm,0.8s						
CO03	El Pedregal	16.74	174	P	P	17 16 57.1	+2.5
CO03				IAmb	IAmb	17 16 59.2	
	comp=Z,21nm,0.9s						
CFA	Coronel Fontan	17.86	168	P	Pn	17 17 08.3	+1.0
	comp=Z,3.6nm,0.8s,baz=335,slow=10,SNR=7.7						
MT02	Curacav	19.11	176	P	Pn	17 17 22.6	+0.3
MT02				IAmb	IAmb	17 17 25.5	
	comp=Z,31nm,1.1s						
MT08	Bocatoma Ro	19.39	174		Pn	17 17 29.1	+3.3
MT08				IAmb	IAmb	17 17 29.7	
	comp=Z,20nm,0.9s						
MT13	San Alfonso	19.66	174	P	Pn	17 17 30.1	+1.3
MT13				IAmb	IAmb	17 17 32.5	
	comp=Z,19nm,0.6s						
LMEL	Las Melosas	19.77	174		Pn	17 17 32.6	+2.4
BO01	Tunca	20.24	177		Pn	17 17 35.6	+0.2
BO01				IAmb	IAmb	17 17 41.5	
	comp=Z,22nm,1.1s						
BO02	Sierra Bellavi	20.66	176	P	P	17 17 39.4	+2.0
ML02	Panimavida	21.59	178	P	P	17 17 50.1	+2.9
BI02	San Fabin de	22.50	177	P	P	17 17 59.7	+2.7
BI02				IAmb	IAmb	17 18 02.5	
	comp=Z,23nm,1.5s						
PLCA	Paso Flores	26.59	177	P	P	17 18 37.9	+3.2
	comp=Z,2.9nm,0.8s,baz=1.7,slow=10,SNR=6.5						
	comp=Z,2.9nm,0.8s						
PLCA	Paso Flores	26.59	177	IAmb	IAmb	17 18 42.2	
	comp=Z,12nm,1.2s						
TXAR	Lajitas Array	52.62	325	P	P	17 22 10.1	+0.2
	comp=Z,0.3nm,0.6s,baz=120,slow=4.7,SNR=2.6						
	comp=Z,0.3nm,0.6s						
ASAR	Alice Springs	134.42	215	PKP	PKPdf	17 32 13.7	0.0
	comp=Z,0.3nm,0.8s,baz=104,slow=1.9,SNR=5.8						
ZAA0	Zalesovo Array	136.44	19	PKPdf	PKiKP	17 32 17.9	-0.2
ZALV	Zalesovo Beam	136.44	19	PKP	PKiKP	17 32 17.9	-0.2
	comp=Z,2.8nm,0.8s,baz=320,slow=1.3,SNR=14						
ZALV	Zalesovo Beam	136.44	19		PKiKP	17 32 17.4	-0.6
KURK	Kurchatov	136.65	27		PKiKP	17 32 18.0	-0.6
KURBB	Kurchatov Arra	136.68	27	PKP	PKiKP	17 32 18.0	-0.7
	comp=Z,0.6nm,0.9s,baz=301,slow=2.8,SNR=5.4						
WRA	Warramunga Arr	137.06	219	PKP	PKiKP	17 32 20.0	-0.4
	comp=Z,0.6nm,0.6s,baz=137,slow=2.0,SNR=3.9						
SONM	Songino Array	146.36	1	PKPbc	PKPab	17 32 36.9	+0.2
	comp=Z,2.0nm,0.9s,baz=334,slow=3.3,SNR=10						
KSRS	Korea Array	150.46	326	PKPbc	PKiKP	17 32 48.1	+0.8
	comp=Z,1.7nm,0.8s,baz=6.0,slow=2.0,SNR=5.6						

UPP 12 17:17:38.5±0.1, 67°.89N×20°.13E, h0km, ML2.5, Confirmed Induced event, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.10	50	P	Pg	17 17 41.6	+1.1
KUA				S	Sg	17 17 43.2	+1.5
RATU	Laukkuluspa	0.21	253	P	Pg	17 17 43.6	+1.0
KOVU	Salmi	0.34	2	P	Pg	17 17 46.0	+1.1
KOVU				S	Sg	17 17 50.9	+1.7
NIKU	Nikkaluokta	0.42	268	P	Pg	17 17 47.4	+1.0
LANU	Lannavaara	0.72	76	P	Pg	17 17 52.0	-0.3
SALU	Saltoluokta	0.81	231	P	Pg	17 17 54.0	+0.1
SALU				S	Sb	17 18 06.0	-0.8
SALU	Saltoluokta	0.81	231	*e*P	Pg	17 17 53.4	-0.5
KIF	Kilpisjarvi	1.15	12	*e*P	Pn	17 18 02.0	+0.3
PAJU	Pajala	1.44	126	P	Pn	17 18 04.0	-1.8
PAJU				S	Sg	17 18 23.2	-1.5
ERTU	Ertsjaerv	1.56	148	P	Pn	17 18 06.5	-0.9
ERTU				S	Sn	17 18 27.5	-0.9

ISK 12 17:29:33.8, 36°.01N×33°.64E, h4km, ML3.0/25

AFAD 12 17:29:34.3, 36°.05N×33°.61E, h15km, ML2.4

NIC 12 17:29:35.3, 35°.77N×33°.62E, h68km±5km, Ml2.2/7

ISC 12 17:29:32.8±0.9, 35°.94N±0°.02×33°.64E±0°.03, h13km±6km, n45, σ0s.67/64, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKK2	Akkuyu-Mersin	0.21	340	Pg	Pg	17 29 37.9	+0.5
AKK1	Akkuyu-Mersin	0.22	339	Pg	Pg	17 29 37.8	+0.2
AKK1				Sg	Sg	17 29 40.9	+0.1
TISA	Tisan-Mersin	0.22	9	Pg	Pg	17 29 37.5	-0.2
TISA				Sg	Sg	17 29 40.6	-0.4
GULN	MERSIN_Gulnar	0.26	343	P	Pg	17 29 38.2	0.0
GULN				S	Sg	17 29 41.6	-0.3
GULN				*i* IAML		17 29 42.0	
	comp=N,962nm,0.3s						
GULN				*i* IAML		17 29 42.0	
	comp=E,804nm,0.5s						
YESI	Yesilovacik-Me	0.26	1	Pg	Pg	17 29 37.8	-0.4
YESI				Sg	Sg	17 29 41.2	-0.6
YORU	Yoruktepe-Mers	0.28	319	Pg	Pg	17 29 39.1	+0.4
YORU				Sg	Sg	17 29 43.3	+0.6
TEPK	Tepekoy-MERSIN	0.29	345	Pg	Pg	17 29 38.7	-0.2
TEPK				Sg	Sg	17 29 42.6	-0.4
IKL	Isikli	0.30	7	Pg	Pg	17 29 39.6	+0.6
OREN	Orenkoy-Mersin	0.30	332	Pg	Pg	17 29 39.2	+0.1
TEKE	Tekeli-Mersin	0.47	296	Pg	Pg	17 29 43.2	+1.1
SILI	Silifke-Mersin	0.48	28	Pg	Pg	17 29 42.6	+0.2
SILI				Sg	Sg	17 29 49.4	+0.5
KEBE	Keben-Mersin	0.51	7	Pg	Pg	17 29 43.1	+0.2
KEBE				Sg	Sb	17 29 49.9	-1.1
SLFK	Silifke-Mersin	0.52	29	Pg	Pg	17 29 43.5	+0.6
TEVE	Tevekalti-Mers	0.52	342	Pg	Pg	17 29 43.4	+0.4
BERE	Bereket-Mersin	0.53	321	Pg	Pg	17 29 43.9	+0.7
BOZY	Bozyazi-Mersin	0.56	287	Pg	Pb	17 29 45.1	+0.7
KIZK	Mersin	0.68	37	P	Pg	17 29 46.2	+0.2
KIZK				S	Sg	17 29 55.0	+0.1
KIZK	Mersin	0.68	37	Pg	Pg	17 29 46.4	+0.4
ATHAL	Athalassa	0.82	194	P	Pb	17 29 50.6	+1.7
ATHAL				S	Sb	17 30 00.9	+1.1
ATHAL				AML	AML	17 30 24.5	
	1.3nm,1.1s						
ATHAL				AML	AML	17 30 26.5	
	1.5nm,1.3s						
MVOU	Mavrovouni	0.92	180	P	Pb	17 29 50.9	+0.3
MVOU				S	Sb	17 30 02.9	+0.2
MVOU				AML	AML	17 30 03.2	
	0.1nm,0.5s						
MVOU				AML	AML	17 30 03.9	
	0.2nm,0.2s						
CSS	Mathiatis	1.01	195	P	Pb	17 29 52.1	0.0
CSS				S	Sb	17 30 04.7	-0.6
CSS				AML	AML	17 30 07.7	
	0.1nm,0.4s						
CSS				AML	AML	17 30 12.5	
	0.1nm,0.4s						
XYLS	Xyliatos	1.04	208	P	Pb	17 29 52.2	-0.4
XYLS				S	Sb	17 30 05.6	-0.6
XYLS				AML	AML	17 30 05.7	
	0.2nm,0.4s						
XYLS				AML	AML	17 30 07.4	
	0.2nm,0.1s						
GAZI	Gazipasa	1.11	286	P	Pb	17 29 54.1	+0.3
GAZI				S	Sb	17 30 07.5	-0.7
GAZI				*i* IAML		17 30 12.0	
	comp=E,98nm,0.4s						
GAZI	Gazipasa	1.11	286	Pn	Pg	17 29 55.5	+1.3
ALFC	Alefka	1.15	228	P	Pn	17 29 54.1	-0.6
ALFC				S	Sb	17 30 09.3	-0.1
ALFC				AML	AML	17 30 10.7	
	0.2nm,0.3s						
ALFC				AML	AML	17 30 12.1	
	0.2nm,0.4s						
MERS	Mersin	1.17	37	Pn	Pn	17 29 55.7	+0.8
TROD	Troodos	1.17	213	P	Pn	17 29 54.2	-0.9
TROD				AML	AML	17 30 08.3	
	0.1nm,1.6s						
TROD				S	Sb	17 30 09.1	-1.1
TROD				AML	AML	17 30 18.2	
	0.3nm,2.0s						
KRMN	Karaman	1.27	346	Pn	Pg	17 29 57.3	+0.1
HDMB	Hadim	1.38	318	Pn	Pg	17 29 59.8	+0.4
KKBE	Karaman, Kazim	1.40	336	P	Pb	17 29 58.9	+0.1
AKMS	Akamas	1.41	230	P	Pn	17 29 57.8	-0.3
AKMS				S	Sn	17 30 15.1	-1.3
AKMS				AML	AML	17 30 15.2	
	0.1nm,0.8s						
AKMS				AML	AML	17 30 16.9	
	0.3nm,2.1s						
KERG	Konya-Eregli	1.52	15	P	Pb	17 30 01.4	+0.4
KERG				S	Sb	17 30 20.2	0.0
KERG				*i* IAML		17 30 27.0	
	comp=E,42nm,0.4s						
GULE	Gulek	1.62	34	P	Pb	17 30 02.7	0.0
GULE				S	Sg	17 30 25.0	-0.1
GULE				*i* IAML		17 30 36.0	
	comp=E,68nm,0.9s						
KARA	Karaisali	1.74	40	Pn	Pb	17 30 04.9	+0.3
YESY	Yesilyurt	1.84	3	Pn	Pb	17 30 06.4	0.0
CMRD	Camardi-Nigde	2.03	32	Pn	Pb	17 30 08.9	-0.7
SEYD	Seydisehir-KON	2.06	316	Pn	Pb	17 30 09.4	-0.7
SEDI	Konya, Seydise	2.14	315	P	Pb	17 30 12.1	+0.7
KONT	Konya--Tatoy	2.25	333	P	Pb	17 30 13.3	0.0
KONT	Konya--Tatoy	2.25	333	Pn	Pb	17 30 11.9	-1.3
NIDE	Nigde/Merkez-G	2.25	24	P	Pb	17 30 13.8	+0.5
ALIN	Konya, Altinte	2.43	346	P	Pn	17 30 14.3	+2.0
ZIRJ	Zirje	15.81	305	Sn	Sn	17 36 09.6	-0.4
MORI	Morici	15.85	305	Sn	Sn	17 36 10.7	-0.4
DUGI	Dugi Otok	16.33	305	Sn	Sn	17 36 22.8	0.0

SJA 12 17:41:12.4±1.9, 30°.30S×72°.12W, h17km±7km, ML3.6, MW3.7

IDC 12 17:41:14.9±1.1, 30°.62S×71°.64W, h0km, mb3.5/2, mbtmp3.5/3, ML3.3/1, MS3.2/1, Error ellipse: s-maj=94.2km s-min=30.6km az=84.0

GUC 12 17:41:19.0±0.7, 30°.54S×71°.83W, h44km±2km, ML3.8

ISC 12 17:41:11.9±1.3, 30°.35S±0°.02×72°.13W±0°.03, h8km±8km, n67, σ2s.34/118, 2C-6D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.53	127	⇑*i*P	Pn	17 41 26.5	+0.6
CO06				*i* S	Sb	17 41 31.4	0.0
CO06				IAML		17 41 32.2	
	comp=E,20µm,0.2s						
GO04	Tololo Observa	1.16	81	*i* P	Pg	17 41 37.2	+2.9
GO04				*i* S	Sg	17 41 49.9	+0.5
GO04	Tololo Observa	1.16	81	*e*P	Pg	17 41 37.5	+3.1
GO04				*e*S	Sg	17 41 50.8	+1.4
GO04				IAML		17 41 51.9	
	comp=Z,5µm,0.3s						
CO02	Combarbal	1.29	131	⇓*i*P	Pb	17 41 37.0	+0.5
CO02				*i* S	Sn	17 41 49.9	-4.1
CO02				IAML		17 41 51.9	
	comp=N,5µm,0.2s						
CO02	Combarbal	1.29	131	*e*P	Pb	17 41 37.0	+0.5
CO02				*e*P	Pb	17 41 37.1	+0.5
CO02				*e*S	Sn	17 41 51.0	-3.0
CO02				IAML		17 41 52.4	
	comp=Z,2µm,0.3s						
CO03	El Pedregal	1.33	112	⇓*i*P	Pg	17 41 38.0	+0.5
CO03				*i* S	Sn	17 41 51.6	-3.4
CO03	El Pedregal	1.33	112	*e*P	Pg	17 41 38.1	+0.6
CO03				*e*S	Sn	17 41 52.2	-2.8
CO03				*e*S	Sn	17 41 52.2	-2.8
CO03				IAML		17 41 52.3	
	comp=Z,1µm,0.5s						
CO01	Juntas del Tor	1.80	78	*i* P	Pg	17 41 46.7	+0.2
CO01				*i* S	Sb	17 42 06.9	-1.3
CO01	Juntas del Tor	1.80	78	*e*P	Pg	17 41 47.2	+0.7
CO01				*e*P	Pb	17 41 47.4	+2.0
CO01				*e*S	Sb	17 42 07.9	-0.3
CO01				IAML		17 42 09.2	
	comp=Z,401nm,0.3s						
LCO	Las Campanas	1.83	43	*i* P	Pg	17 41 49.1	+2.1
LCO				*i* S	Sg	17 42 11.1	+0.4
LCO	Las Campanas	1.83	43	*e*P	Pg	17 41 48.5	+1.6
LCO				*e*S	Sg	17 42 12.6	+1.9
LCO				IAML		17 42 16.3	
	comp=Z,1µm,0.3s						
CO04	Los Peladeros	1.95	150	⇓*i*P	Pb	17 41 47.2	-0.8
CO04				*i* S	Sn	17 42 07.5	-3.1
CO04				IAML		17 42 09.1	
	comp=N,2µm,0.3s						
AC05	El Transito	2.21	47	*e*P	Pg	17 41 54.8	+0.4
AC05				*e*S	Sg	17 42 21.1	-2.0
AC05				IAML		17 42 26.1	
	comp=N,440nm,0.3s						
AC05	El Transito	2.21	47	*e*P	Pg	17 41 54.6	+0.2
AC05				*e*P	Pb	17 41 55.2	+2.9
AC05				*e*S	Sg	17 42 22.4	-0.6
AC05				IAML		17 42 23.3	
	comp=Z,173nm,0.2s						
AROD	Rodeo	2.31	86	*e*P	Pg	17 41 55.2	-0.9
AROD				*e*S	Sb	17 42 22.6	-0.2
VA06	Catapilco	2.31	162	⇓*e*P	Pn	17 41 51.8	+1.4
AC04	Llanos de Chal	2.33	24	*e*P	Pg	17 41 56.7	+0.1
AC04	Llanos de Chal	2.33	24	*e*P	Pg	17 41 56.3	-0.4
AC04				*e*S	Sg	17 42 26.4	-0.5
AC04				IAML		17 42 43.4	
	comp=Z,129nm,0.9s						
ACDV	Cuesta del Vie	2.61	87	*e*P	Pg	17 42 03.9	+1.9
ACDV				*e*S	Sb	17 42 31.7	+0.3
ACDV				IAML		17 42 43.6	
	comp=Z,224nm,0.6s						
ACCO	Cerro Coronel	2.66	96	*e*P	Pn	17 41 55.2	-0.2
ACCO				*e*P	Pb	17 41 59.7	-0.3
ACCO				*e*S	Sb	17 42 33.5	+0.7
VA01	Torpederas	2.69	171	*e*P	Pn	17 41 52.2	-3.4
VA01				IAML		17 42 45.3	
	comp=Z,97nm,0.6s						
VA03	San Esteban	2.75	151	*e*P	Pn	17 41 58.5	+1.9
VA03				*e*S	Sn	17 42 28.3	-1.8
VA03				IAML		17 42 40.0	
	comp=E,1µm,0.1s						
VA03	San Esteban	2.75	151	*e*P	Pn	17 41 58.9	+2.3
VA03				*e*S	Sn	17 42 31.0	+0.9
VA03				IAML		17 42 39.6	
	comp=Z,248nm,0.8s						
ROCH	El Roble	2.78	160	*i* P	Pn	17 41 58.6	+1.6
ROCH				⇓*e*P	Pn	17 41 58.6	+1.6
ROCH				IAML		17 42 49.9	
	comp=N,402nm,0.1s						
ROC1	El Roble	2.78	160	*e*P	Pn	17 41 58.7	+1.6
ROC1				*e*S	Sn	17 42 32.7	+1.7
RTLS	Leoncito	2.83	121	*e*P	Pb	17 42 01.9	-0.9
RTLS				*e*S	Sb	17 42 36.9	-0.8
RTLS				IAML		17 42 45.1	
	comp=Z,910nm,1.0s						
PEL	Peldehue	3.04	157	⇓*e*P	Pn	17 42 02.5	+2.0
PEL	Peldehue	3.04	157	*e*P	Pn	17 42 02.6	+2.1
PEL				*e*P	Pb	17 42 02.7	-3.7
PEL				*e*S	Sn	17 42 37.0	-0.1
PEL				IAML		17 42 54.9	
	comp=Z,119nm,0.8s						
MT10	Hacienda Santa	3.21	155	⇑*e*P	Pn	17 42 04.7	+1.8
GO03	Copiapo	3.21	32	*e*P	Pb	17 42 08.6	-0.7
GO03	Copiapo	3.21	32	*e*P	Pb	17 42 08.9	-0.4
GO03				*e*S	Sb	17 42 48.5	-0.1
GO03				IAML		17 43 05.1	
	comp=Z,93nm,0.3s						
MT05	Renca	3.25	159	*e*P	Pb	17 42 07.0	-3.0
MT05				*e*P	Pg	17 42 09.6	-4.7
MT05				*e*S	Sn	17 42 42.2	-0.1
MT05				*e*S	Sb	17 42 47.2	-2.6
MT05				IAML		17 42 53.8	
	comp=Z,127nm,0.2s						
AGUA	GUANDACOL	3.27	76	*e*P	Pn	17 41 58.1	-5.6
AGUA				IAML		17 43 12.5	
	comp=Z,167nm,1.0s						
RTLL	Cerro Villicun	3.29	108	*e*P	Pn	17 42 02.7	-1.2
RTLL				*e*P	Pb	17 42 07.6	-3.0
RTLL				*e*P	Pb	17 42 07.9	-2.7
RTLL				*e*P	Pb	17 42 09.7	-0.9
RTLL				*e*S	Sb	17 42 47.2	-3.7
RTLL				IAML		17 43 01.1	
	comp=Z,122nm,0.9s						
MT14	Cerro Cal¡n	3.32	156	*e*P	Pn	17 42 03.4	-1.0
AC06	Mina Casimiro	3.37	28	*i* P	Pb	17 42 10.7	-1.3
AC06				*e*S	Sb	17 42 49.7	-3.3
MT03	Universidad Ad	3.42	157	*e*P	Pn	17 42 08.9	+3.2
MT03				*e*S	Sn	17 42 46.0	-0.6
MT03				IAML		17 43 04.8	
	comp=Z,137nm,0.2s						
MT04	Ro Olivares	3.48	151	*e*P	Pn	17 42 09.6	+2.9
MT04				*e*S	Sn	17 42 49.9	+1.6
MT04				IAML		17 43 05.0	
	comp=Z,92nm,0.7s						
CFA	Coronel Fontan	3.57	111	*e*P	Pn	17 42 11.1	+3.4
CFA				*e*S	Sn	17 42 52.7	+2.6
CFA				*e*S	Sb	17 42 55.2	-3.7
CFA				IAML		17 43 01.1	
	comp=Z,214nm,0.8s						
MT08	Bocatoma Ro	3.57	150	*e*P	Pn	17 42 11.4	+3.5
MT08				*e*S	Sn	17 42 51.8	+1.4
MT08				*e*S	Sb	17 42 52.2	-6.8
MT08				IAML		17 43 09.1	
	comp=Z,77nm,0.5s						
MT01	Popeta	3.58	168	*e*P	Pn	17 42 09.6	+1.8
MT01				*e*P	Pb	17 42 09.7	-5.8
MT01				*e*S	Sn	17 42 54.0	+3.7
MT01				IAML		17 43 23.8	
	comp=Z,49nm,0.7s						
ASAL	Salagasta	3.59	129	*e*P	Pb	17 42 12.7	-3.1
ASAL				*e*S	Sn	17 42 54.1	+3.4
ASAL				*e*S	Sb	17 42 59.7	+0.1
ARCO	CERRO ARCO	3.69	133	*e*P	Pb	17 42 14.9	-2.6
ARCO				*e*S	Sb	17 43 02.6	+0.2
ARCO				IAML		17 43 18.9	
	comp=Z,84nm,0.6s						
MT13	San Alfonso	3.73	156	*e*P	Pn	17 42 11.8	+1.9
VCA	Vinchina	3.78	66	*e*P	Pn	17 42 12.7	+2.0
VCA				*e*P	Pb	17 42 17.7	-1.4
VCA				*e*S	Sb	17 43 01.7	-3.4
VCA				*e*S	Sn	17 43 02.7	+7.2
VCA				IAML		17 43 24.3	
	comp=Z,148nm,0.6s						
LMEL	Las Melosas	3.85	155	*e*P	Pn	17 42 14.9	+3.3
LMEL				*e*P	Pb	17 42 15.7	-4.5
LMEL				*e*S	Sn	17 42 57.4	+0.2
LMEL				IAML		17 43 04.8	
	comp=Z,63nm,0.7s						
AAGR	Agrelo	3.92	135	*e*P	Pn	17 42 15.7	+3.2
AAGR				*e*S	Sn	17 43 03.3	+4.5
AAGR				IAML		17 43 35.5	
	comp=Z,60nm,1.3s						
AVFE	Valle Fertil	4.04	96	*e*P	Pn	17 42 12.7	-1.6
AVFE				*e*P	Pb	17 42 18.3	-5.2

AVFE				*e*S	**Sn**	**17 43 05.2**	**+3.3**
AVFE				*e*S	**Sb**	**17 43 12.7**	**+0.1**
AVFE				IAML		17 43 20.7	
	comp=Z,88nm,1.0s						
BO01	**Tunca**	**4.12**	**168**	*e*P	**Pn**	**17 42 17.2**	**+1.9**
AC02	**Maricunga**	**4.39**	**38**	*e*P	**Pb**	**17 42 25.8**	**-3.8**
AC02				*e*S	**Sb**	**17 43 17.3**	**-5.6**
AC02				IAML		17 43 37.2	
	comp=Z,52nm,0.6s						
BO02	**Sierra Bellavi**	**4.57**	**166**	*e*P	**Pn**	**17 42 25.7**	**+4.2**
BO02				*e*S	**Sn**	**17 43 14.1**	**-0.7**
BO02				IAML		17 43 42.6	
	comp=Z,53nm,0.8s						
ACLC	**CERRO LA CRUZ**	**4.59**	**80**	*e*P	Pb	17 42 27.8	-5.1
ACLC				*e*S	**Sn**	**17 43 19.0**	**+3.5**
ACLC				IAML		17 43 42.0	
	comp=Z,45nm,0.4s						
APLL	**PUNTA DE LOS L**	**4.84**	**92**	*e*P	Pn	17 42 29.4	+4.2
APLL				*e*S	**Sn**	**17 43 22.4**	**+0.9**
RFA	**San Rafael**	**5.38**	**146**	*e*P	**Pn**	**17 42 31.7**	**-0.9**
RFA				*e*P	Pb	17 42 32.7	-14
RFA				*e*P	Pg	17 42 36.0	-19
H03N1	**Juan Fernandez**	**6.54**	**240**	Pn	Pn	17 42 53.5	+5.3
	baz=30,slow=78						
H03N1				Sn	**Sn**	**17 44 01.2**	**-1.7**
H03N1				T	T	17 49 52.9	
	baz=71,slow=72,SNR=1892						
H03N2	**Juan Fernandez**	**6.55**	**240**	Pn	Pn	17 42 53.8	+5.4
	baz=30,slow=78						
H03N2				Sn	**Sn**	**17 44 00.2**	**-3.0**
H03N2				T	T	17 49 51.9	
	baz=71,slow=72,SNR=1883						
H03N3	**Juan Fernandez**	**6.55**	**240**	Pn	Pn	17 42 53.7	+5.2
	baz=30,slow=78						
H03N3				Sn	**Sn**	**17 44 00.9**	**-2.4**
H03N3				T	T	17 49 51.1	
	baz=71,slow=72,SNR=1522						
H03S3	**Juan Fernandez**	**6.71**	**237**	Pn	Pn	17 42 55.0	+4.4
	baz=223,slow=74						
H03S1	**Juan Fernandez**	**6.72**	**237**	Pn	**Pn**	**17 42 54.7**	**+4.0**
H03S2	**Juan Fernandez**	**6.73**	**237**	Pn	Pn	17 42 55.4	+4.5
	baz=78,slow=74						
PLCA	**Paso Flores**	**10.44**	**173**	Pn	**Pn**	**17 43 40.5**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=4.1,slow=14,SNR=2.6						
	comp=Z,1.7nm,1.0s						
SIV	**San Ignacio**	**17.52**	**38**	LR	LR	17 52 14.8	
	comp=Z,88nm,21.5s,baz=326,slow=38						
QSPA	**South Pole Qui**	**59.87**	**180**	P	**P**	**17 51 21.1**	**+3.0**
	comp=Z,0.7nm,0.8s,baz=124,slow=11,SNR=2.1						
	comp=Z,0.7nm,0.8s						
TXAR	**Lajitas Array**	**66.53**	**330**	P	P	17 52 09.4	+6.9
	comp=Z,0.2nm,0.4s,baz=152,slow=7.3,SNR=1.8						
	comp=Z,0.2nm,0.4s						
BVAR	**Borovoye Array**	**144.59**	**39**	PKP	**PKiKP**	**18 00 52.0**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=317,slow=2.2,SNR=11						
KURBB	**Kurchatov Arra**	**150.18**	**39**	PKPbc	**PKPab**	**18 01 06.8**	**-2.3**
	comp=Z,0.4nm,0.3s,baz=298,slow=3.0,SNR=9.6						
ZALV	**Zalesovo Beam**	**151.13**	**29**	PKPbc	**PKPab**	**18 01 09.4**	**-3.6**
	comp=Z,2.9nm,0.6s,baz=310,slow=3.1,SNR=16						

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*NEIC **12** 17:52:00.2±1.6, 18°.48N±0°.08×145°.6E±0°.1, h189km±7km, mb4.5/42, Error ellipse: s-maj=19.5km s-min=11.6km az=93.0*

*IDC **12** 17:52:01.3±2.0, 18°.51N×145°.63E, h210km±18km, mb3.5/14, mbtmp4.0/16, Error ellipse: s-maj=19.2km s-min=10.7km az=90.0*

ISC 12 17:52:00.7±0.5**, 18°.45N**±0°.05×**145°.5E**±0°.1**, h200**km**, n70,** σ1s.**62**/63**, mb4.2**/32**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DPSS	**Saipan**	**3.21**	**174**		**Pn**	**17 52 51.6**	**-1.3**
DPSS				Sn	**Sn**	**17 53 29.9**	**-3.8**
GUMO	**Guam**	**4.87**	**187**	P	**Pn**	**17 53 14.0**	**+0.5**
	118nm,0.3s,baz=45,slow=4.0,SNR=29						
GUMO				S	**Sn**	**17 54 09.8**	**-1.1**
	104nm,0.3s,baz=0.0,slow=20,SNR=1.5						
JCJ	**Chichijima**	**9.12**	**341**	P	Pn	17 53 57.8	-11
	89nm,0.9s,baz=263,slow=14,SNR=5.7						
JCJ				S	Sn	17 55 35.6	-15
	35nm,0.5s,baz=286,slow=20,SNR=1.5						
JCJ	**Chichijima**	**9.12**	**341**		**Pn**	**17 54 05.9**	**-2.6**
PATS	**Pohnpei**	**17.03**	**131**	P	**Pn**	**17 55 53.3**	**+5.9**
JGF	**Kuroka**	**18.53**	**339**	P	**P**	**17 56 01.4**	**-0.8**
JGF				IAmb	IAmb	17 56 26.8	
	comp=Z,31nm,1.5s						
MJAR	**Matsushiro Arr**	**19.12**	**342**	P	**P**	**17 56 09.0**	**+0.4**
	comp=Z,1.3nm,0.9s,baz=153,slow=10.0,SNR=7.9						
MJAR	**Matsushiro Arr**	**19.12**	**342**	IAmb	IAmb	17 56 10.5	
	comp=Z,5.0nm,1.3s						
MAJO	**Matsushiro**	**19.12**	**342**	P	**P**	**17 56 09.0**	**+0.3**
MAJO				IAmb	IAmb	17 56 18.9	
	comp=Z,16nm,1.1s						
H11S3	**WAKE ISLAND Hy**	**20.13**	**87**	T	T	18 17 41.9	
	baz=275,slow=74,SNR=3.4						
H11S1	**WAKE ISLAND Hy**	**20.14**	**86**	T	T	18 17 39.7	
	baz=275,slow=74,SNR=3.1						
H11S2	**WAKE ISLAND Hy**	**20.15**	**87**	T	T	18 17 43.8	
	baz=275,slow=74,SNR=3.6						
H11N1	**WAKE ISLAND Hy**	**20.29**	**83**	T	T	18 18 02.2	
	baz=264,slow=74,SNR=7.2						
H11N2	**WAKE ISLAND Hy**	**20.29**	**83**	T	T	18 18 02.0	
	baz=264,slow=74,SNR=4.8						
H11N3	**WAKE ISLAND Hy**	**20.31**	**83**	T	T	18 17 54.0	
	baz=264,slow=74,SNR=5.1						
MANU	**Manus Island**	**20.45**	**175**		**P**	**17 56 22.5**	**-0.6**
MANU				IAmb	IAmb	17 56 26.4	
	comp=Z,17nm,0.8s						
JTM	**Tenmabayashi**	**22.58**	**351**	P	**P**	**17 56 50.8**	**+6.7**
JTM				IAmb	IAmb	17 57 25.6	
	comp=Z,14nm,0.7s						
FAKI	**Fak Fak**	**24.91**	**213**	P	**P**	**17 57 07.0**	**+1.5**
PMG	**Port Moresby**	**27.73**	**176**	P	**P**	**17 57 28.6**	**-2.1**
COEN	**Coen**	**32.28**	**184**	P	**P**	**17 58 10.5**	**-0.4**
COEN				IAmb	IAmb	17 58 12.7	
	comp=Z,8.7nm,0.7s						
MTN	**Manton Dam**	**34.16**	**205**		**P**	**17 58 27.6**	**+0.6**
KNRA	**Kununurra**	**37.69**	**207**	P	**P**	**17 58 57.9**	**+0.8**
WB0	**Warramunga Arr**	**39.51**	**197**	P	**P**	**17 59 12.8**	**+0.7**
WB0				IAmb	IAmb	17 59 17.8	
	comp=Z,6.3nm,0.7s						
WR8	**Warramunga Arr**	**39.66**	**196**	P	**P**	**17 59 14.2**	**+0.8**
WRA	**Warramunga Arr**	**39.69**	**197**	P	**P**	**17 59 14.0**	**+0.4**
	comp=Z,4.5nm,0.4s,baz=18,slow=8.7,SNR=36						
	comp=Z,4.5nm,0.4s						
WRA	**Warramunga Arr**	**39.69**	**197**		**P**	**17 59 12.5**	**-1.1**
SANVU	**Saraoutou**	**39.91**	**146**	P	**P**	**17 59 13.5**	**-2.0**
FITZ	**Fitzroy Crossi**	**41.22**	**209**	P	**P**	**17 59 27.2**	**+1.0**
SONM	**Songino Array**	**43.20**	**322**	P	**P**	**17 59 42.6**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=121,slow=5.3,SNR=2.8						
	comp=Z,0.3nm,0.5s						
AS31	**Alice Springs**	**43.36**	**196**	P	**P**	**17 59 45.1**	**+1.8**
ASAR	**Alice Springs**	**43.36**	**196**	P	**P**	**17 59 43.6**	**+0.3**
	comp=Z,1.3nm,0.4s,baz=11,slow=7.1,SNR=52						
ASAR				ScP	**ScP**	**18 04 58.3**	**-2.4**
	comp=Z,0.3nm,0.6s,baz=15,slow=3.4,SNR=4.5						
	comp=Z,1.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**44.03**	**278**	P	**P**	**17 59 51.5**	**+2.5**
	comp=Z,0.4nm,0.5s,baz=103,slow=4.6,SNR=1.8						
	comp=Z,0.4nm,0.5s						
INKA	**Innaminka**	**46.15**	**186**		**P**	**18 00 05.0**	**-0.2**
STKA	**Stephens Creek**	**50.18**	**184**	P	**P**	**18 00 36.7**	**+0.6**
	comp=Z,1.5nm,0.4s,baz=350,slow=10,SNR=4.2						
	comp=Z,1.5nm,0.4s						
STKA	**Stephens Creek**	**50.18**	**184**	IAmb	IAmb	18 00 52.0	
	comp=Z,15nm,1.1s						
MORW	**Morawa**	**55.13**	**212**	P	**P**	**18 01 13.0**	**+0.5**
MORW				IAmb	IAmb	18 01 13.9	
	comp=Z,5.5nm,0.8s						
O15K	**Ungalikthiuk R**	**56.49**	**30**	P	**P**	**18 01 22.0**	**+0.3**
N15K	**Kwethluk River**	**56.74**	**29**	P	**P**	**18 01 23.2**	**-0.2**
J16K	**Anvik River**	**57.78**	**26**	P	**P**	**18 01 31.5**	**+0.9**
J16K				IAmb	IAmb	18 01 38.7	
	comp=Z,15nm,1.5s						
MKAR	**Makanchi Array**	**58.47**	**314**	P	**P**	**18 01 36.5**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=88,slow=6.6,SNR=4.4						
	comp=Z,0.3nm,0.5s						
H18K	**Honhosa River**	**59.44**	**24**	P	**P**	**18 01 42.1**	**0.0**
N19K	**Bonanza Creek**	**59.57**	**30**	P	**P**	**18 01 43.9**	**+0.7**
N19K				IAmb	IAmb	18 02 25.5	
	comp=Z,16nm,1.5s						
G18K	**Tagagawik**	**59.63**	**23**	P	**P**	**18 01 43.3**	**-0.1**
G18K				IAmb	IAmb	18 02 10.9	
	comp=Z,6.0nm,1.4s						
C18K	**Utukok River**	**59.98**	**20**	P	**P**	**18 01 45.8**	**0.0**
C18K				IAmb	IAmb	18 02 16.2	
	comp=Z,9.7nm,1.5s						
C19K	**Lookout Ridge**	**60.71**	**20**	P	**P**	**18 01 51.5**	**+0.8**
C19K				IAmb	IAmb	18 01 52.4	
	comp=Z,4.1nm,0.9s						
J20K	**Nowinta River**	**60.77**	**26**	P	**P**	**18 01 50.8**	**-0.3**
J20K				IAmb	IAmb	18 01 53.4	
	comp=Z,5.2nm,1.1s						
E19K	**Redstone River**	**60.79**	**22**	P	**P**	**18 01 51.5**	**+0.3**
E19K				IAmb	IAmb	18 01 53.2	
	comp=Z,6.7nm,1.5s						
D19K	**Kuna River**	**60.92**	**21**	P	**P**	**18 01 51.1**	**-1.0**
D19K				IAmb	IAmb	18 01 52.0	
	comp=Z,12nm,1.4s						
PPLA	**Purkeypile**	**61.22**	**28**	P	**P**	**18 01 54.2**	**-0.1**
SKT	**Skwentna**	**61.26**	**29**	P	**P**	**18 01 53.7**	**-0.8**
SKT				IAmb	IAmb	18 02 11.4	
	comp=Z,15nm,1.4s						
KURK	**Kurchatov**	**61.31**	**318**	P	**P**	**18 01 55.1**	**+0.2**
KURK	**Kurchatov**	**61.31**	**318**	IAmb	IAmb	18 01 57.4	
	comp=Z,3.5nm,1.4s						
KURBB	**Kurchatov Arra**	**61.35**	**318**	P	**P**	**18 01 55.1**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=93,slow=7.5,SNR=8.6						
	comp=Z,0.4nm,0.4s						
D20K	**Etivluk River**	**61.51**	**21**	P	**P**	**18 01 56.3**	**+0.2**
D20K				IAmb	IAmb	18 01 57.1	
	comp=Z,3.9nm,0.7s						
L22K	**Petersville**	**61.75**	**28**	P	**P**	**18 01 57.1**	**-0.7**
L22K				IAmb	IAmb	18 02 11.7	
	comp=Z,16nm,1.5s						
TRF	**Thorofare Moun**	**62.20**	**27**	P	**P**	**18 01 60.0**	**-0.9**
TRF				IAmb	IAmb	18 02 00.6	
	comp=Z,17nm,1.4s						
TOLK	**Toolik Lake Re**	**63.90**	**22**	P	**P**	**18 02 11.4**	**-0.5**
TOLK				IAmb	IAmb	18 02 49.2	
	comp=Z,9.7nm,1.5s						
ILAR	**Eielson Array**	**63.96**	**26**	P	**P**	**18 02 10.6**	**-1.7**
	comp=Z,1.3nm,0.7s,baz=252,slow=5.3,SNR=17						
	comp=Z,1.3nm,0.7s						
E24K	**Your Creek**	**64.13**	**22**	P	**P**	**18 02 13.7**	**+0.3**
BMAR	**Burnt Mountain**	**65.43**	**24**	P	**P**	**18 02 22.6**	**+0.8**
BCAR	**Beaver Creek A**	**65.90**	**28**	P	**P**	**18 02 24.6**	**-0.2**
BVAR	**Borovoye Array**	**66.52**	**320**	P	**P**	**18 02 28.3**	**-0.6**
	comp=Z,1.3nm,0.4s,baz=96,slow=7.1,SNR=7.6						
	comp=Z,1.3nm,0.4s						
ABKAR	**Akbulak array**	**73.37**	**317**	P	**P**	**18 03 10.6**	**-0.1**
YKA	**Yellowknife Ar**	**78.31**	**28**	P	**P**	**18 03 37.5**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=292,slow=6.7,SNR=6.5						
	comp=Z,0.6nm,0.6s						
PINE	**Pine Mountain**	**79.99**	**47**	P	**P**	**18 03 48.8**	**+0.7**
PINE				IAmb	IAmb	18 03 49.3	
	comp=Z,9.9nm,0.9s						
ARCES	**ARCESS Array B**	**82.66**	**342**	P	**P**	**18 03 59.9**	**-1.5**
	comp=Z,3.9nm,1.0s,baz=87,slow=8.2,SNR=7.3						
	comp=Z,3.9nm,1.0s						
NVAR	**Mina Array Bea**	**83.46**	**52**	P	**P**	**18 04 06.5**	**+0.1**
	comp=Z,3.0nm,0.7s,baz=264,slow=6.3,SNR=14						
	comp=Z,3.0nm,0.7s						
FINES	**FINESS Array B**	**87.01**	**335**	P	**P**	**18 04 20.9**	**-2.3**
	comp=Z,0.8nm,0.4s,baz=66,slow=4.2,SNR=13						
	comp=Z,0.8nm,0.4s						
PDAR	**Pinedale Array**	**88.15**	**45**	P	**P**	**18 04 28.3**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=177,slow=0.7,SNR=13						
	comp=Z,0.4nm,0.4s						
LPAZ	**La Paz**	**147.89**	**91**	PKPbc	**PKPbc**	**18 11 23.5**	**-0.3**
	comp=Z,1.7nm,0.5s,baz=6.6,slow=4.9,SNR=2.8						

IDC 12 17:59:08.3±8.8**, 2°.00S**×**102°.51E, h0**km**, mb3.3**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=344.0km s-min=30.8km az=61.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**20.63**	**350**	P	P	18 03 49.5	-0.1
	0.4nm,0.3s,baz=180,slow=9.6,SNR=6.8						
	0.4nm,0.3s						
WRA	**Warramunga Arr**	**35.84**	**122**	P	P	18 06 11.7	+1.6
	0.2nm,0.5s,baz=294,slow=7.7,SNR=1.7						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**37.24**	**128**	P	P	18 06 20.6	-1.4
	0.5nm,0.9s,baz=300,slow=7.8,SNR=4.8						
	0.5nm,0.9s						

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*UPP **12** 18:08:00.4±0.0, 67°.86N×20°.09E, h0km, ML2.6, Confirmed Induced event*

*HEL **12** 18:08:00.5±0.3, 67°.88N×20°.15E, h0km, ML1.4, Suspected explosion*

ISC 12 18:08:00.6±0.8**, 67°.78N**±0°.02×**20°.30E**±0°.02**, h0**km**, n27,** σ1s.**06**/46**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.18**	**4**	P	**Pg**	**18 08 04.0**	**0.0**
KUA				S	**Sg**	**18 08 06.4**	**+0.1**
RATU	**Laukkuluspa**	**0.27**	**280**	P	**Pg**	**18 08 05.1**	**-0.8**
RATU				S	**Sg**	**18 08 08.5**	**-0.9**
KOVU	**Salmi**	**0.45**	**353**	P	**Pg**	**18 08 09.0**	**-0.2**
KOVU				S	**Sg**	**18 08 13.5**	**-1.5**
NIKU	**Nikkaluokta**	**0.49**	**281**	P	**Pg**	**18 08 09.0**	**-0.9**
NIKU				S	**Sg**	**18 08 15.8**	**-0.5**
DUNU	**Dundret**	**0.67**	**171**	P	**Pb**	**18 08 14.9**	**-0.3**
DUNU				S	**Sb**	**18 08 25.2**	**+0.2**
LANU	**Lannavaara**	**0.70**	**66**	PG	**Pg**	**18 08 13.4**	**-0.5**
LANU				SG	**Sg**	**18 08 22.1**	**-0.8**
MASU	**Masugnsbyn**	**0.73**	**116**	P	**Pb**	**18 08 16.6**	**+0.4**
SALU	**Saltoluokta**	**0.80**	**241**	*e*P	**Pg**	**18 08 15.6**	**-0.3**
KIF	**Kilpisjarvi**	**1.25**	**8**	*e*P	**Pg**	**18 08 23.9**	**-0.6**
KIF	**Kilpisjarvi**	**1.25**	**8**	PN	**Pg**	**18 08 23.8**	**-0.6**
	baz=191						
KIF				MSG		18 08 36.8	
	comp=Z,5.4nm,0.2s						
KIF				SN	**Sg**	**18 08 40.2**	**-0.4**
PAJU	**Pajala**	**1.32**	**124**	P	**Pg**	**18 08 25.6**	**-0.4**
PAJU				S	**Sn**	**18 08 45.2**	**+0.5**
PAJU	**Pajala**	**1.32**	**124**	PG	**Pg**	**18 08 25.4**	**-0.6**
	baz=304						
PAJU				SG	**Sn**	**18 08 45.8**	**+1.1**
HEF	**Hetta**	**1.41**	**62**	PN	**Pn**	**18 08 26.7**	**-0.8**
HEF				MSG		18 08 43.3	
	comp=Z,1.9nm,0.2s						
HEF				SN	**Sb**	**18 08 46.6**	**+0.3**
ERTU	**Ertsjaerv**	**1.44**	**148**	PG	**Pb**	**18 08 28.4**	**+0.2**
ERTU				SG	**Sn**	**18 08 49.9**	**+2.6**
KLF	**Kolari**	**1.51**	**110**	PG	**Pb**	**18 08 29.4**	**-0.1**
KLF				MSG		18 08 48.5	
	comp=Z,2.5nm,0.2s						
KLF				SN	**Sn**	**18 08 51.7**	**+2.4**
KTK1	**Kautokeino**	**1.65**	**40**	PN	**Pn**	**18 08 30.5**	**-0.3**
KALU	**Kalix**	**2.28**	**146**	PB	**Pb**	**18 08 41.4**	**-1.1**
KALU				SG	**Sg**	**18 09 13.4**	**-0.3**
TOF	**Tornio**	**2.33**	**135**	PB	**Pb**	**18 08 42.6**	**-0.8**
TOF				MSG		18 09 12.5	
	comp=Z,1.4nm,0.2s						
TOF				SG	**Sg**	**18 09 15.7**	**+0.3**
RNF	**Rovaniemi**	**2.52**	**115**	PB	**Pb**	**18 08 45.1**	**-1.5**
RNF				SB	**Sb**	**18 09 19.7**	**+1.6**
ARA0	**ARCESS Array S**	**2.60**	**45**	PB	**Pn**	**18 08 45.0**	**+1.2**
	baz=228						
ARA0				SG	**Sb**	**18 09 20.0**	**-0.4**
RAJF	**Raja-Jooseppi**	**3.08**	**73**	PB	**Pn**	**18 08 51.8**	**+1.3**
RAJF				SG	**Sb**	**18 09 34.0**	**-0.2**
RANF	**Ranua**	**3.11**	**122**	SG	**Sg**	**18 09 39.4**	**-1.0**
KEV	**Kevo**	**3.15**	**48**	SB	**Sn**	**18 09 31.6**	**+2.1**
KU2	**Taivalkoski**	**3.77**	**120**	PN	**Pn**	**18 09 01.1**	**+1.2**
KU2				SN	**Sn**	**18 09 44.7**	**-0.2**
OLKF	**Oulanka, Finla**	**3.85**	**108**	SG	**Sg**	**18 10 03.7**	**-0.5**
MSF	**Maaselka**	**3.93**	**114**	SG	**Sg**	**18 10 05.8**	**-0.8**
KU6	**Riekki**	**4.17**	**111**	PG	**Pg**	**18 09 17.8**	**-2.6**
	baz=298						
KU6				SG	**Sg**	**18 10 13.4**	**-1.0**

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*CATAC **12** 18:08:58.3±0.5, 13°N±4°×8°8W±°, h175km±3km, M3.1/15, MLv3.1/15, Error ellipse: s-maj=10.3km s-min=3.9km az=23.4, confirmed*

*SNET **12** 18:09:00.9±2.1, 13°.22N×87°.82W, h153km, ML3.5*

ISC 12 18:08:57.8±2.2**, 13°.2N**±0°.1×**87°.77W**±0°.05**, h183**km±13km**, n48,** σ0s.**58**/59**, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.14**	**334**	*e*P	**Pn**	**18 09 21.7**	**-0.4**
CNCH				*e*S	**Sn**	**18 09 39.9**	**-1.0**
CNCH	**Conchagua**	**0.14**	**334**	P	**Pn**	**18 09 21.8**	**-0.3**
CNCH	**Conchagua**	**0.14**	**334**	S	**Sn**	**18 09 41.6**	**+0.7**
LCND	**La Caada**	**0.20**	**324**	*e*P	**Pn**	**18 09 21.6**	**-0.4**
LCND	**La Caada**	**0.20**	**324**	P	**Pn**	**18 09 21.7**	**-0.4**
CSGN	**Cosiguina Volc**	**0.27**	**130**	P	**Pn**	**18 09 22.0**	**-0.3**
CSGN				S	**Sn**	**18 09 41.7**	**+0.6**
POTN	**Potosi Cosigui**	**0.30**	**120**	P	**Pn**	**18 09 22.1**	**-0.1**
POTN				S	**Sn**	**18 09 42.2**	**+1.3**
BLLM	**Bellamira**	**0.54**	**303**	*e*P	**Pn**	**18 09 23.3**	**+0.2**
VSM	**San Miguel**	**0.56**	**300**	*e*P	**Pn**	**18 09 23.5**	**0.0**
LCY	**Lacayo**	**0.58**	**298**	*e*P	**Pn**	**18 09 23.5**	**+0.1**
RANC	**El Ranchito**	**0.58**	**299**	*e*P	**Pn**	**18 09 23.4**	**0.0**
PACA	**Pacayal**	**0.63**	**301**	*e*P	**Pn**	**18 09 23.8**	**+0.2**
PACA				*e*S	**Sn**	**18 09 43.8**	**+0.3**
PACA	**Pacayal**	**0.63**	**301**	P	**Pn**	**18 09 24.1**	**+0.5**
TECA	**Tecapa**	**0.79**	**296**	*e*P	**Pn**	**18 09 24.8**	**+0.2**
CRIN	**San Cristobal**	**0.83**	**122**	P	**Pn**	**18 09 25.2**	**+0.5**
CRIN	**San Cristobal**	**0.83**	**122**	S	**Sn**	**18 09 45.9**	**+0.4**
PKGN	**Cerro Pekin**	**0.91**	**121**	P	**Pn**	**18 09 26.3**	**+1.1**
PKGN				S	**Sn**	**18 09 46.5**	**+0.3**
TGUH	**Tegucigalpa,Un**	**1.02**	**28**	P	**Pn**	**18 09 26.6**	**+0.5**
TGUH				S	**Sn**	**18 09 47.0**	**-1.1**
POLN	**Al Sur del Vol**	**1.06**	**118**	P	**Pn**	**18 09 26.5**	**+0.3**
POLN				S	**Sn**	**18 09 47.5**	**-0.6**
TECO	**Alcaldia de Te**	**1.06**	**292**	*e*P	**Pn**	**18 09 26.4**	**+0.2**
TECO	**Alcaldia de Te**	**1.06**	**292**	P	**Pn**	**18 09 26.3**	**+0.2**
TECO	**Alcaldia de Te**	**1.06**	**292**	S	**Sn**	**18 09 47.8**	**-0.4**
SCLA	**Alcaldia de Sa**	**1.08**	**301**	*e*P	**Pn**	**18 09 26.9**	**+0.5**
UESV	**Universidad de**	**1.10**	**296**	P	**Pn**	**18 09 26.8**	**+0.3**
ALEN	**Leon**	**1.11**	**128**	S	**Sn**	**18 09 48.1**	**-0.9**
ILCN	**San Idelfonso**	**1.19**	**118**	P	**Pn**	**18 09 26.6**	**-0.7**
ILCN				S	**Sn**	**18 09 49.9**	**0.0**
CNGN	**Cerro Negro**	**1.23**	**122**	S	**Sn**	**18 09 50.5**	**-0.1**
OCON	**Estacion meteo**	**1.35**	**69**	P	**Pn**	**18 09 28.9**	**+0.2**
LIMN	**Finca el Limon**	**1.37**	**93**	P	**Pn**	**18 09 29.5**	**+0.6**
LIMN				S	**Sn**	**18 09 52.6**	**-0.3**
MOM3	**MOM3**	**1.38**	**117**	P	**Pn**	**18 09 28.7**	**-0.1**
MOM3				S	**Sn**	**18 09 52.6**	**-0.2**
LFU	**La Fuente**	**1.44**	**295**	*e*P	**Pn**	**18 09 30.3**	**+0.8**
MOM2	**El Cardon**	**1.44**	**119**	S	**Sn**	**18 09 54.1**	**+0.2**
LOMA	**Loma Larga**	**1.45**	**290**	*e*P	**Pn**	**18 09 29.8**	**+0.2**
LOMA	**Loma Larga**	**1.45**	**290**	P	**Pn**	**18 09 30.1**	**+0.4**
LOMA	**Loma Larga**	**1.45**	**290**	S	**Sn**	**18 09 53.9**	**-0.4**
LALI	**Alcalda de L**	**1.55**	**283**	P	**Pn**	**18 09 30.4**	**+0.1**
LALI	**Alcalda de L**	**1.55**	**283**	S	**Sn**	**18 09 55.5**	**-0.2**
PIC2	**El Picacho**	**1.56**	**292**	*e*P	**Pn**	**18 09 31.5**	**+0.7**
BOQS	**Boqueron**	**1.58**	**292**	*e*P	**Pn**	**18 09 31.6**	**+0.7**
PMON	**Piamonte**	**1.60**	**291**	*e*P	**Pn**	**18 09 30.3**	**-0.8**
JAYA	**Jayaque - finc**	**1.71**	**287**	*e*P	**Pn**	**18 09 31.5**	**-0.6**
JAYA				*e*S	**Sn**	**18 09 57.3**	**-1.6**
MATN	**Matagalpa**	**1.81**	**97**	P	**Pn**	**18 09 32.9**	**-0.3**
MATN	**Matagalpa**	**1.81**	**97**	S	**Sn**	**18 10 00.1**	**-0.4**
SNJE	**San Jose**	**1.92**	**292**	*e*P	**Pn**	**18 09 35.1**	**+0.7**
CEVE	**Cerro Verde**	**1.93**	**291**	*e*P	**Pn**	**18 09 35.3**	**+0.8**
RTR	**El Retiro**	**1.97**	**292**	*e*P	**Pn**	**18 09 35.4**	**+0.5**
NUBE	**Las Nubes**	**2.09**	**291**	*e*P	**Pn**	**18 09 36.0**	**-0.2**
RBDL	**Robledal**	**2.10**	**297**	*e*P	**Pn**	**18 09 37.2**	**+1.0**

NOU 12 18:10:35.1, 21°.16S×**170°.61E, h13**km**, mb4.3**/13**, Southeast of Loyalty Islands, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INH	**Isangel**	**2.04**	**322**	P	Pg	18 11 13.5	-0.7
MARNC	**Mare, Loyalty**	**2.43**	**262**	P	Pn	18 11 16.1	+1.6
MARNC	**Mare, Loyalty**	**2.43**	**262**	P	Sn	18 11 46.6	+2.6
OUENC	**Ouen Island, N**	**3.72**	**250**	P	Pn	18 11 32.3	0.0
RTV	**Rentapao**	**3.93**	**328**	P	Pn	18 11 35.9	+0.7
DZM	**Mont Dzumac**	**3.98**	**256**	P	Pn	18 11 35.5	-0.5
ONTNC	**Ouen Toro**	**4.03**	**253**	P	Pn	18 11 36.3	-0.2
DVP	**Devils Point**	**4.11**	**326**	P	Pn	18 11 37.8	+0.2
SANVU	**Saraoutou**	**6.54**	**330**	P	Pn	18 12 09.5	-1.5

IDC 12 18:24:37.3±4.1**, 47°.40N**×**93°.28W, h0**km**, mbtmp2.8**/2**, ML0.9**/1**, Error ellipse: s-maj=47.7km s-min=17.2km az=87.0, Minnesota**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULM	**Lac du Bonnet**	**3.33**	**330**	Pn	Pn	18 25 29.0	-1.6
	0.2nm,0.3s,baz=146,slow=13,SNR=1.5						
ULM				Sn	Sn	18 26 08.2	-2.6
	0.5nm,0.3s,baz=135,slow=21,SNR=1.7						
ULM				Lg	Lg	18 26 20.3	
	3.8nm,0.3s,baz=148,slow=12,SNR=20						
	1.5nm,0.5s						
I10CA	**LAC DU BONNET**	**3.34**	**328**	I	I	18 49 20.0	
	baz=150,slow=330,SNR=4.8						
PDAR	**Pinedale Array**	**12.40**	**254**	Pn	Pn	18 27 33.3	-1.9
	0.2nm,0.5s,baz=64,slow=14,SNR=2.0						

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*BER **12** 18:41:28.4±1.9, 80°.17N×21°.19E, h12km±14km, ML2.8, Confirmed Earthquake*

*FCIAR **12** 18:41:35.0, 79°.71N×21°.54E, h10km, station ZFI2 has station magnitude of 3.10 station OMEGA has station magnitude of 3.00*

KOLA 12 18:41:29.8, 79°.82N×**20°.09E, h0**km**, ML2.8, 1D, Error ellipse: s-maj=20.4km s-min=16.0km az=70.0, Spitsbergen, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.76**	**243**	P	Pn	18 42 01.2	-0.2
KBS				S	Sg	18 42 25.9	-0.3
KBS	**Kingsbay**	**1.76**	**243**	*e*P	Pn	18 42 01.1	-0.4
KBS				*e*S	Sg	18 42 26.2	0.0
KBS				IAML		18 42 28.1	
	comp=Z,186nm,0.1s						
SPA0	**Spitsbergen Ar**	**1.80**	**205**	⇓*i*P	Pg	18 42 05.9	+1.7
SPA0				*e*S	Sg	18 42 28.9	+1.4
SPA0	**Spitsbergen Ar**	**1.80**	**205**	*e*P	Pn	18 42 02.8	+0.7
SPA0				*e*Pg	Pg	18 42 05.9	+1.7
SPA0				*e*S	Sg	18 42 30.2	+2.6
SPA0				IAML		18 42 33.5	
	comp=Z,114nm,0.6s						
SPITS	**Spitsbergen Ar**	**1.80**	**205**	P	Pn	18 42 02.8	+0.7
SPITS				S	Sb	18 42 27.0	+0.3
BRBB	**Barentsburg B**	**2.07**	**216**	P	Pn	18 42 06.8	+1.1
BRBB				S	Sn	18 42 31.1	-1.2
BRBB	**Barentsburg B**	**2.07**	**216**	*e*P	Pn	18 42 06.8	+1.0
BRBA	**Barentsburg A**	**2.10**	**216**	*e*P	Pn	18 42 06.8	+0.7
HSPB	**Hornsund (broa**	**2.98**	**200**	S	Sn	18 42 54.5	-0.1
HSPB	**Hornsund (broa**	**2.98**	**200**	*e*P	Pg	18 42 26.4	-0.5
HSPB				S	Sb	18 43 01.6	+1.1
HSPB	**Hornsund (broa**	**2.98**	**200**	*e*Pg	Pg	18 42 26.6	-0.3
HSPB				*e*Sg	Sg	18 43 07.3	+1.9
HSPB				IAML		18 43 14.4	
	comp=Z,62nm,0.4s						
ZFI2	**Zemlya Franca-**	**4.72**	**65**	*e*P	Pn	18 42 42.9	+0.7
ZFI2				*e*S	Sn	18 43 33.7	-3.8
	comp=Z,16nm,2.9s						
OMEGA	**Omega**	**4.74**	**65**	*e*P	Pn	18 42 43.0	+0.7
OMEGA				*e*S	Sn	18 43 33.7	-4.1
	comp=Z,12nm,2.6s						
VADS	**Vadso**	**10.02**	**162**	P	Pn	18 43 55.9	+1.2
VADS				S	Sn	18 45 40.7	-7.0
ARCES	**ARCESS Array B**	**10.43**	**169**	P	Pn	18 44 01.5	+1.1
ARCES				S	Sn	18 45 50.0	-7.8
TERR	**Teriberka**	**11.33**	**152**	S	Sn	18 46 11.7	-8.0
APA0	**Apatity Array**	**12.74**	**157**	S	Sn	18 46 45.3	-8.8
KVDA	**Kovda**	**13.63**	**158**	S	Sn	18 47 10.6	-5.4

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*IDC **12** 18:59:28.3±1.2, 15°.09S×173°.91W, h0km, mb4.2/7, mbtmp4.2/7, Error ellipse: s-maj=41.6km s-min=24.5km az=126.0*

*NEIC **12** 18:59:40.4±1.8, 15°.1S±0°.1×174°.1W±0°.1, h86km±7km, mb4.6/20, Error ellipse: s-maj=18.3km s-min=11.9km az=138.0*

ISC 12 18:59:38.6±0.6**, 15°.19S**±0°.08×**174°.09W**±0°.07**, h73**km**, n32,** σ1s.**65**/33**, mb4.6**/16**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.58**	**61**		**Pn**	**19 00 20.6**	**+2.4**
AFI				Sn	**Sn**	**19 00 47.0**	**-1.6**

NIUE	Niue	5.54	135		Pn	19 01 01.6	+3.0
NIUE				Sn	Sn	19 01 57.1	-3.9
MSVF	Nonsavu	7.96	250	Pn	Pn	19 01 33.1	+1.5
SANVU	Saraoutou	18.05	267	P	P	19 03 41.6	-2.6
SANVU				IAmb	IAmb	19 03 51.6	
	comp=Z,30nm,0.8s						
MARNC	Mare, Loyalty	18.08	247	P	P	19 03 41.2	-3.3
PINNC	Pines Island,	18.95	244	P	P	19 03 52.2	-1.8
PINNC				IAmb	IAmb	19 04 02.4	
	comp=Z,43nm,1.2s						
DZM	Mont Dzumac	19.67	247	P	P	19 03 59.0	-3.0
ONTNC	Ouen Toro	19.73	246	P	P	19 04 00.2	-2.3
ONTNC				IAmb	IAmb	19 04 11.7	
	comp=Z,20nm,0.9s						
LTZ	Lake Taylor	29.89	200	P	P	19 05 41.0	+1.6
LTZ				IAmb	IAmb	19 06 15.3	
	comp=Z,21nm,1.2s						
COEN	Coen	41.33	266	P	P	19 07 18.8	+1.2
COEN				IAmb	IAmb	19 07 36.7	
	comp=Z,30nm,1.4s						
TOO	Toolangi	42.09	230	P	P	19 07 23.5	-0.1
TOO				IAmb	IAmb	19 07 35.2	
	comp=Z,6.5nm,1.3s						
STKA	Stephens Creek	43.57	240	P	P	19 07 36.4	+0.8
	comp=Z,1.3nm,0.6s,baz=102,slow=15,SNR=4.1						
	comp=Z,1.3nm,0.6s						
BBOO	Buckleboo	48.34	239	P	P	19 08 12.9	-0.3
WR8	Warramunga Arr	49.09	257	P	P	19 08 18.8	-0.3
WR8				IAmb	IAmb	19 08 20.0	
	comp=Z,9.3nm,1.4s						
WB0	Warramunga Arr	49.20	257	P	P	19 08 18.6	-1.4
WB0				IAmb	IAmb	19 08 20.8	
	comp=Z,4.9nm,0.8s						
WRA	Warramunga Arr	49.24	257	P	P	19 08 19.9	-0.3
	comp=Z,4.4nm,0.7s,baz=92,slow=7.2,SNR=36						
	comp=Z,4.4nm,0.7s						
WRA	Warramunga Arr	49.24	257	IAmb	IAmb	19 08 21.0	
	comp=Z,0.5nm,0.9s						
AS31	Alice Springs	49.54	252	P	P	19 08 22.4	-0.1
ASAR	Alice Springs	49.54	252	P	P	19 08 22.4	-0.1
	comp=Z,40nm,0.6s,baz=87,slow=8.0,SNR=609						
ASAR	Alice Springs	49.54	252	P	P	19 08 22.2	-0.3
MTN	Manton Dam	53.09	265	P	P	19 08 48.4	-0.7
MTN				IAmb	IAmb	19 09 19.3	
	comp=Z,6.3nm,0.9s						
FORT	Forrest	54.92	243	P	P	19 09 01.8	-0.4
FORT				IAmb	IAmb	19 09 02.9	
	comp=Z,5.9nm,0.8s						
FITZ	Fitzroy Crossi	57.60	258	P	P	19 09 22.2	+0.8
	comp=Z,1.2nm,0.7s,baz=96,slow=9.2,SNR=6.1						
	comp=Z,1.2nm,0.7s						
SOEI	Soe	60.27	267	P	P	19 09 41.2	+1.0
PSA00	Pilbara Seismi	62.63	253	P	P	19 09 55.2	-0.7
PETK	Petropavlovsk-	72.23	343	P	P	19 10 55.5	-0.2
	comp=Z,4.7nm,0.8s,baz=153,slow=5.3,SNR=4.4						
	comp=Z,4.7nm,0.8s						
QSPA	South Pole Qui	74.85	180	P	P	19 11 11.4	+0.2
	comp=Z,1.1nm,0.3s,baz=57,slow=2.9,SNR=6.4						
	comp=Z,1.1nm,0.3s						
ILAR	Eielson Array	82.37	11	P	P	19 11 50.8	-1.4
	comp=Z,0.4nm,0.5s,baz=239,slow=5.8,SNR=9.1						
	comp=Z,0.4nm,0.5s						
C19K	Lookout Ridge	84.70	5	P	P	19 12 04.1	0.0
C19K				IAmb	IAmb	19 12 20.3	
	comp=Z,8.3nm,1.4s						
CMAR	Chiang Mai Arr	91.92	288	P	P	19 12 39.5	-0.1
	comp=Z,0.4nm,0.6s,baz=101,slow=4.1,SNR=2.3						
	comp=Z,0.4nm,0.6s						
BRTR	Keskin Array B	145.58	321	PKPbc	PKPab	19 19 09.2	-0.5
	comp=Z,0.7nm,0.8s,baz=116,slow=2.6,SNR=4.1						
GERES	GERESS Array B	145.83	351	PKPbc	PKPdf	19 19 08.2	-0.9
	comp=Z,0.2nm,0.3s,baz=29,slow=6.1,SNR=5.2						

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*NEIC **12** 19:06:05.2±1.4, 43.°77N±0.°02×105.°28W±0.°07, h0^{km}±1^{km}, ML3.4/68, Error ellipse: s-maj=9.5km s-min=2.8km az=287.0*

*IDC **12** 19:06:06.3±2.0, 43.°91N×105.°64W, h0^{km}, mb4.2/1, mbtmp4.0/3, ML3.6/2, Error ellipse: s-maj=64.3km s-min=8.5km az=149.0*

ISC 12 19:06:06.5±0.9, **43.°74N**±0.°06×**105.°37W**±0.°05, **h0^{km}, n41,** σ**1^{s}19**/37, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.03	68		Pg	19 06 26.5	+0.2
K22A	Casper	1.38	218		Pg	19 06 31.4	-1.4
K22A				IAML		19 06 54.9	
	423nm,0.3s						
K22A				IAML		19 06 56.5	
	544nm,0.3s						
LAO	LASA Array	3.01	349		Pn	19 06 55.5	0.0
LAO				IAML		19 07 52.1	
	169nm,0.7s						
RLMT	Red Lodge	3.12	298		Pn	19 06 57.5	+0.4
RLMT				IAML		19 07 54.2	
	88nm,0.7s						
RLMT				IAML		19 07 56.5	
	77nm,0.4s						
BW06	Boulder Array	3.21	254		Pn	19 06 59.0	+0.6
BW06				IAML		19 07 50.5	
	66nm,0.4s						
PD31	Pinedale Array	3.21	254	Pn	Pn	19 06 59.4	+1.0
PDAR	Pinedale Array	3.21	254	Pn	Pn	19 06 59.3	+0.9
	4.2nm,0.3s,baz=62,slow=14,SNR=58						
PDAR				Lg	Lg	19 07 42.8	
	14nm,0.3s,baz=67,slow=29,SNR=12						
	6.9nm,0.3s						
PDAR	Pinedale Array	3.21	254		Pn	19 06 58.9	+0.4
HAYD	Hayden	3.51	204		Pn	19 07 03.9	+1.4
HAYD				IAML		19 08 01.4	
	comp=N,57nm,0.7s						
YNE	Yellowstone No	3.56	292		Pn	19 07 04.8	+1.5
YNE				IAML		19 08 03.9	
	comp=N,72nm,0.5s						
YNE				IAML		19 08 10.8	
	comp=E,78nm,0.3s						
YMP	Mirror Lake Pl	3.58	288		Pn	19 07 05.1	+1.5
YMP				IAML		19 08 07.9	
	comp=E,115nm,0.4s						
OGNE	Ogallala	3.73	137		Pn	19 07 05.4	0.0
OGNE				IAML		19 08 08.8	
	comp=E,99nm,1.2s						
OGNE				IAML		19 08 19.1	
	comp=E,93nm,0.8s						
LOHW	Long Hollow	3.80	270		Pn	19 07 07.9	+1.4
H17A	Grant Village	3.81	282		Pn	19 07 08.1	+1.4
H17A				IAML		19 08 11.6	
	comp=E,42nm,2.1s						
MOOW	Moose Ponds	3.90	272		Pn	19 07 09.2	+1.3
SNOW	Snow King Moun	3.92	268		Pn	19 07 09.1	+0.9
SNOW				IAML		19 08 26.7	
	comp=E,54nm,2.4s						
SNOW				IAML		19 08 41.9	
	comp=E,50nm,1.1s						
ISCO	Idaho Springs	3.94	183		Pn	19 07 08.7	+0.2
YNR	Norris Junctio	3.94	286		Pn	19 07 09.4	+1.0
YPP	Pitchstone Pla	3.96	280		Pn	19 07 10.5	+1.8
YHH	Holmes Hill	4.08	287		Pn	19 07 12.3	+2.0
YMR	Madison River	4.13	285		Pn	19 07 13.2	+2.2
O20A	White River Ci	4.19	212		Pn	19 07 12.8	+1.0
O20A				IAML		19 08 32.9	
	comp=E,53nm,1.2s						
O20A				IAML		19 08 58.1	
	comp=E,58nm,2.6s						
YHL	Hebgen Lake	4.32	287	IAML		19 08 36.3	
	comp=E,48nm,1.3s						
YHL				IAML		19 08 47.4	
	comp=N,40nm,1.3s						
K30B	Basset	4.34	102		Pb	19 07 24.6	+1.0
E28A	Huff	4.36	48		Pn	19 07 13.4	-0.5
RDMU	Red Mountain	4.45	226		Pb	19 07 26.8	+1.3
RDMU				IAML		19 08 30.1	
	comp=N,38nm,1.3s						
RDMU				IAML		19 08 44.7	
	comp=E,25nm,1.3s						
DGMT	Dagmar	4.80	9		Pn	19 07 19.8	-0.2
BOZ	Bozeman (W)	4.84	295	IAML		19 08 42.3	
	comp=E,20nm,0.7s						
BOZ				IAML		19 09 03.4	
	comp=E,20nm,4.9s						
HWUT	Hardware Ranch	5.04	247		Pn	19 07 24.0	+0.5
HWUT				IAML		19 08 44.8	
	comp=E,30nm,1.1s						
HWUT				IAML		19 08 48.0	
	comp=E,29nm,0.8s						
BSUT	Blindstream Ca	5.13	233	IAML		19 08 56.3	
	comp=E,21nm,3.8s						
BSUT				IAML		19 08 59.3	
	comp=N,16nm,1.0s						
KSCO	Kaye Shedlock'	5.15	156		Pn	19 07 22.9	-2.0
EGMT	Eagleton	5.27	326		Pn	19 07 27.7	+1.1
MCMT	McKenzie Canyo	5.48	284		Pn	19 07 30.4	+0.8
MDND	Maddock	5.76	42		Pn	19 07 32.0	-1.1
BGNE	Belgrade	5.81	111		Pn	19 07 33.7	-0.2
PV16	Nyswonger Mesa	6.05	208		Pn	19 07 38.3	+0.9
ECSD	EROS Data Cent	6.34	87		Pn	19 07 41.0	-0.2
F33A	5 Mile Ranch,	6.79	69		Pn	19 07 47.1	-0.2
I10CA	LAC DU BONNET	9.08	41	I	I	19 59 19.3	
	baz=224,slow=309,SNR=0.6						
ULM	Lac du Bonnet	9.19	42	Pn	Pn	19 08 18.1	-2.0
	comp=N,1.9nm,0.3s,baz=236,slow=10,SNR=13						
ULM				Lg	Lg	19 10 49.0	
	comp=N,0.6nm,0.3s,baz=338,slow=19,SNR=1.8						
	comp=N,4.5nm,0.3s						
ARCES	ARCESS Array B	61.44	18	P	P	19 16 23.1	-1.0
	comp=N,2.3nm,0.9s,baz=334,slow=6.0,SNR=4.7						
	comp=N,2.3nm,0.9s						

DJA 12 19:06:21.5±0.6, **3°S**±3°×**13°8E**±°, **h13^{km}**±4^{km}, **M3.9**/8, **mb4.0**/2, **MLv3.9**/8, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.62	23	P	Pg	19 06 33.6	-0.1
GENI	Genyem	1.70	91	P	Pb	19 06 51.8	-0.8
GENI				S	Sn	19 07 12.8	+0.4
JAY	Jayapura	2.23	89	P	Pn	19 06 57.9	-0.4
JAY				S	Sn	19 07 26.3	+0.5
SRPI	Serui, Papua	2.33	287	P	Pn	19 06 59.0	-0.6
SRPI				S	Sn	19 07 28.4	+0.2
BAKI	Biak	2.73	300	P	Pn	19 07 06.2	+1.1
BAKI				S	Sn	19 07 38.1	+0.1
RKPI	Ransiki, Papua	4.42	284	P	Pn	19 07 28.1	-0.2
RKPI				S	Sn	19 08 19.9	+0.3
FAKI	Fak Fak	6.22	267	P	Pn	19 07 52.9	-0.2
	0.1nm19nm,1.1s						
SWI	Sorong	7.40	283	P	Pn	19 08 10.0	+0.7

DJA 12 19:12:13.3±1.0, **8°S**±4°×**10°6E**±°, **h21^{km}**±9^{km}, **M3.9**/18, **mb4.2**/6, **MLv3.8**/18, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKJI	Sukabumi	0.62	31	P	Pn	19 12 26.6	-0.3
CNJI	Cibinong	0.92	76	P	Pb	19 12 30.7	+0.1
DBJI	Dramaga	1.11	28	P	Pn	19 12 32.9	-0.7
BBJI	Bungbulang	1.41	87	P	Pn	19 12 37.5	-0.3
SBJI	Serang	1.41	356	P	Pn	19 12 37.3	-0.5
LEM	Lembang	1.55	63	P	Pn	19 12 39.9	+0.1
BLSI	Bandar Lampung	2.37	336	P	Pn	19 12 51.3	+0.3
KASI	Kota Agung	2.64	319	P	Pn	19 12 55.0	+0.3
KPJI	Karang Pucung	2.69	86	P	Pn	19 12 55.6	+0.3
CTJI	Waduk Cacaban	2.98	80	P	Pn	19 13 00.4	+1.1
KLSI		3.20	332	P	Pn	19 13 03.2	+0.8
LWLI	Liwa	3.31	319	P	Pn	19 13 04.9	+0.9
MDSI	Maura Dua	3.66	326	P	Pn	19 13 09.2	+0.5
UGM	Wanagama	4.27	95	P	Pn	19 13 14.7	-2.5
EGSI	Enggano, Bengk	4.49	299	P	Pn	19 13 20.9	+0.8
MNAI	Manna	4.54	314	P	Pn	19 13 21.1	+0.3
PCJI	Pacitan	4.94	98	P	Pn	19 13 26.8	+0.4
TPI	Tanjungpandan	4.96	17	P	Pn	19 13 26.3	-0.3
SNJI	Sawahan-Nganju	5.49	93	P	Pn	19 13 35.5	+1.5
GMJI	Gumukmas	7.18	96	P	Pn	19 13 58.8	+1.6
	0.1nm15nm,0.8s						
PPSI	Pulau Pagai	7.80	307	P	Pn	19 14 04.0	-1.7
JAGI	Jajag, Banyuwa	7.90	97	P	Pn	19 14 08.2	+1.2
	0.1nm24nm,1.5s						
KLNI	Mataram	9.81	96	P	Pn	19 14 32.7	-0.5
	15nm,1.0s						
TWSI	Taliwang, Sumb	10.61	97	P	Pn	19 14 43.2	-1.0
	14nm,1.3s						
PLAI	Plampang	11.50	97	P	Pn	19 14 56.1	-0.3
	16nm,1.1s						
DBNI	Kabupaten Domp	12.00	95	P	Pn	19 15 01.8	-1.5

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*NOU **12** 19:20:36.0, 41.°72S×177.°31E, h0^{km}, MLv3.8/11, Off E. Coast of N. Island, N.Z.*

*WEL **12** 19:20:43.7±0.8, 42°S±7°×17°7E±°, h33^{km}, M2.8/19, ML2.7/19, MLv2.8/19, Error ellipse: s-maj=9.5km s-min=5.7km az=158.8, confirmed*

ISC 12 19:20:39.8±1.4, **41.°71S**±0.°05×**177.°06E**±0.°05, **h35^{km}, n79,** σ**1^{s}61**/82, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPWZ	Castlepoint	1.03	321	P	Pn	19 20 59.9	+2.2
TMWZ	Te Maipa	1.06	304	P	Pn	19 20 59.0	+0.7
TRWZ	Traveller	1.07	286	P	Pn	19 20 58.5	+0.1
BFZ	Birch Farm	1.20	329	P	Pn	19 20 59.9	-0.2
BFZ	Birch Farm	1.20	329	P	Pn	19 20 59.9	-0.2
PAWZ	Paruwai Farm	1.27	285	P	Pn	19 21 01.2	+0.2
PAWZ				S	Sn	19 21 14.7	-2.1
MTW	Mount Morrison	1.29	295	P	Pn	19 21 01.7	+0.3
MTW				S	Sn	19 21 14.7	-2.8
ANWZ	Angora Road	1.32	340	P	Pn	19 21 01.9	0.0
MSWZ	Moikau Station	1.39	282	P	Pn	19 21 02.6	-0.1
MSWZ				S	Sn	19 21 17.4	-2.5
HOWZ	Holdsworth Sta	1.42	304	P	Pn	19 21 03.0	-0.2
PRHZ	Porangahau	1.48	347	P	Pn	19 21 04.0	+0.1
MRZ	Mangatainoka R	1.53	313	P	Pn	19 21 05.2	+0.5
DVHZ	Dannevirke	1.56	334	P	Pn	19 21 05.1	0.0
CAW	Cannon Point	1.61	291	P	Pn	19 21 06.2	+0.4
POWZ	Post Office Ro	1.64	323	P	Pn	19 21 07.8	+1.7
BHW	Baring Head	1.67	280	P	Pn	19 21 06.6	+0.1
OGWZ	Otaki Gorge	1.68	302	P	Pn	19 21 07.6	+0.8
PXZ	Pawanui	1.69	355	P	Pn	19 21 06.9	+0.1
WPHZ	Waipukurau	1.71	344	P	Pn	19 21 08.7	+1.5
SNZO	South Karori	1.81	282	P	Pn	19 21 11.6	+3.1
KIW	Kapiti Island	1.83	297	P	Pn	19 21 09.7	+0.9
TSZ	Takapari Road	1.85	333	P	Pn	19 21 09.8	+0.8
PNHZ	Pukenui	1.91	340	P	Pn	19 21 10.3	+0.3
KAHZ	Kahuranaki	1.92	356	P	Pn	19 21 10.3	+0.2
TCW	Tory Channel	2.15	283	P	Pn	19 21 13.7	+0.6
MCHZ	McNeill Hill	2.28	353	P	Pn	19 21 15.4	+0.5
KWHZ	Kaweka Forest	2.33	348	P	Pn	19 21 16.5	+0.7
MOVZ	Moawhango	2.51	336	P	Pn	19 21 20.5	+2.3
WAZ	Wanganui	2.51	320	P	Pn	19 21 21.2	+3.0
DUWZ	D'Urville Isla	2.53	290	P	Pn	19 21 20.4	+1.9
BKZ	Black Stump Fm	2.58	350	P	Pn	19 21 19.3	+0.2
BKZ	Black Stump Fm	2.58	350	P	Pn	19 21 19.6	+0.4
WNVZ	Wahianoa	2.63	334	P	Pn	19 21 21.8	+1.9
TUVZ	Tukino	2.67	336	P	Pn	19 21 22.4	+2.0
TRVZ	Turoa	2.67	334	P	Pn	19 21 23.0	+2.5
WHVZ	Whangaehu Hut	2.67	335	P	Pn	19 21 22.8	+2.2
FWVZ	Far West T-bar	2.71	334	P	Pn	19 21 23.2	+2.1
KHZ	Kahutara	2.71	254	P	Pn	19 21 21.4	+0.5
KHZ	Kahutara	2.71	254	P	Pn	19 21 21.2	+0.4
SNVZ	South Ngauruho	2.74	336	P	Pn	19 21 23.4	+1.9
NGZ	Ngauruhoe	2.77	336	P	Pn	19 21 23.7	+1.9
ETVZ	East Tongariro	2.77	338	P	Pn	19 21 23.8	+2.0
TMVZ	Te Maari	2.79	338	P	Pn	19 21 23.9	+1.8
NNVZ	North Ngauruho	2.80	336	P	Pn	19 21 24.1	+1.8
NTVZ	North Tongarir	2.81	338	P	Pn	19 21 24.4	+2.0
WTVZ	West Tongariro	2.83	336	P	Pn	19 21 24.4	+1.8
KRVZ	Karewarewa	2.83	337	P	Pn	19 21 24.8	+2.2
TWVZ	Taurewa	2.91	334	P	Pn	19 21 25.4	+1.6
KATZ	Kakaramea	2.92	339	P	Pn	19 21 26.1	+2.1
THZ	Tophouse	3.11	268	P	Pn	19 21 27.3	+0.9
VRZ	Vera Road	3.12	325	P	Pn	19 21 28.8	+2.2
TKNZ	Takaka Hill	3.16	281	P	Pn	19 21 28.3	+1.2
PREZ	Palmer Road	3.24	316	P	Pn	19 21 31.6	+3.4
MUGZ	Murupara	3.24	356	P	Pn	19 21 28.9	+0.8
MRNZ	Matariki Terra	3.24	274	P	Pn	19 21 29.0	+0.8
KHEZ	Kahui Hut	3.35	315	P	Pn	19 21 32.5	+2.8
KHEZ	Kahui Hut	3.35	315	P	Pn	19 21 33.4	+3.7
MWZ	Matawai	3.39	6	P	Pn	19 21 30.4	+0.1
URZ	Urewera	3.45	1	P	Pn	19 21 30.6	-0.4
URZ	Urewera	3.45	1	P	Pn	19 21 30.5	-0.4
TARZ	Mount Tarawera	3.50	353	P	Pn	19 21 32.2	+0.4
QRZ	Quartz Range	3.53	283	P	Pn	19 21 34.0	+1.9
QRZ	Quartz Range	3.53	283	P	Pn	19 21 33.6	+1.6
OKCZ	Okains Bay	3.57	234	P	Pn	19 21 33.9	+1.2
HIZ	Hauiti	3.61	331	P	Pn	19 21 35.0	+1.7
HIZ	Hauiti	3.61	331	P	Pn	19 21 35.2	+1.9
LTZ	Lake Taylor	3.71	252	P	Pn	19 21 35.1	+0.4
AKCZ	Akaroa Harbour	3.74	233	P	Pn	19 21 36.0	+1.0
RUGZ	Raukumara Rang	3.77	7	P	Pn	19 21 35.4	-0.2
MQZ	McQueen's Vall	3.81	237	P	Pn	19 21 36.4	+0.4
DSZ	Denniston Nort	3.93	268	P	Pn	19 21 38.6	+0.9
HAZ	Te Kaha	3.99	8	P	Pn	19 21 38.8	+0.3
CTZ	Chatham Island	5.08	116	P	Pn	19 22 01.9	+8.5
CTZ				S	Sn	19 22 50.1	-0.7
TMZ	Timaru	5.18	237	P	Pn	19 21 56.1	+1.3
ODZ	Otahua Downs	5.74	232	P	Pn	19 22 04.2	+1.7
ODZ	Otahua Downs	5.74	232	P	Pn	19 22 04.0	+1.5
JCZ	Jackson Bay	6.52	246	P	Pn	19 22 15.9	+2.6
TUZ	Tuapeka	6.84	229	P	Pn	19 22 19.9	+2.3
SYZ	Scrubby Hill	7.46	227	P	Pn	19 22 28.6	+2.5

DJA 12 19:31:46.4±0.8, **8°S**±5°×**10°7E**±°, **h20^{km}**±7^{km}, **M4.0**/13, **mb4.5**/3, **MLv3.7**/13, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBJI	Bungbulang	0.57	42	P	Pb	19 31 58.5	+0.8
CNJI	Cibinong	0.59	346	P	Pn	19 31 59.1	-0.6
LEM	Lembang	1.11	18	P	Pn	19 32 06.6	-0.4
SKJI	Sukabumi	1.13	321	P	Pn	19 32 06.6	-0.5
DBJI	Dramaga	1.42	339	P	Pn	19 32 10.8	-0.4
KPJI	Karang Pucung	1.74	72	P	Pn	19 32 15.0	-0.4
CTJI	Waduk Cacaban	2.09	65	P	Pn	19 32 20.1	-0.2
UGM	Wanagama	3.22	91	P	Pn	19 32 35.0	-0.9
KASI	Kota Agung	3.62	310	P	Pn	19 32 42.1	+0.7
PCJI	Pacitan	3.88	95	P	Pn	19 32 45.3	+0.3
SNJI	Sawahan-Nganju	4.45	89	P	Pn	19 32 54.2	+1.3
SJI	Sawahan	4.46	88	P	Pn	19 32 53.2	+0.2
TPI	Tanjungpandan	5.11	4	P	Pn	19 33 02.2	+0.3
	0.1nm23nm,1.3s						
MNAI	Manna	5.54	309	P	Pn	19 33 08.2	+0.4
	112nm,1.0s						
EGSI	Enggano, Bengk	5.56	297	P	Pn	19 33 07.8	-0.3

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*IDC **12** 19:33:10.6±1.1, 8.°52S×124.°77E, h0^{km}, mb3.8/5, mbtmp3.8/8, ML4.1/3, MS2.4/1, Error ellipse: s-maj=41.7km s-min=17.8km az=71.0*

*NEIC **12** 19:33:21.8±1.2, 9.°03S±0.°06×124.°21E±0.°09, h96^{km}±5^{km}, mb4.0/3, Error ellipse: s-maj=13.7km s-min=7.4km az=62.0*

*DJA **12** 19:33:22.3±0.2, 9°S±2°×12°4E±°, h84^{km}±4^{km}, M4.2/16, mb4.2/15, mB4.7/2, MLv4.2/16, Mw(mB)4.0/2, MwMwp5.2/1, Mwp5.5/1*

ISC 12 19:33:22.1±0.6, **9.°17S**±0.°05×**124.°27E**±0.°06, **h100^{km}, n78,** σ**1^{s}84**/81, **mb3.7**/6, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.58	180		Pn	19 33 39.0	+0.4
SOEI	Soe	0.58	180	P	Pn	19 33 39.2	+0.6
SOEI	Soe	0.58	180	S	Sn	19 33 52.7	+1.7
SOEI	Soe	0.58	180	P	Pn	19 33 39.1	+0.4
SOEI				S	Sn	19 33 52.3	+1.3
SOEI	Soe	0.58	180	P	Pn	19 33 39.1	+0.4
SOEI				Sg	Sn	19 33 52.3	+1.3
BATI	Baumata	1.19	210	Pn	Pn	19 33 45.8	+1.2
	50nm,0.3s,baz=99,slow=4.1,SNR=122						
BATI				Sn	Sn	19 34 02.7	+1.1
	184nm,0.3s,baz=210,slow=20,SNR=19						
BATI	Baumata	1.19	210		Pn	19 33 45.8	+1.2
BATI					Sn	19 34 02.7	+1.1
BATI	Baumata	1.19	210	P	Pn	19 33 45.7	+1.1
MMRI	Maumere	2.08	285		Pn	19 33 54.2	-1.5
MMRI	Maumere	2.08	285	P	Pn	19 33 54.5	-1.1
MMRI	Maumere	2.08	285	P	Pn	19 33 54.3	-1.3
EDFI	Ende, Flores	2.58	279	P	Pn	19 34 01.5	-0.8
EDFI	Ende, Flores	2.58	279	P	Pn	19 34 01.6	-0.8
BASI	Baing, Sumba	3.78	254	P	Pn	19 34 18.3	0.0
BASI	Baing, Sumba	3.78	254	P	Pn	19 34 17.9	-0.4
WSI	Waingapu	3.95	263	P	Pn	19 34 20.3	-0.3
WSI	Waingapu	3.95	263	P	Pn	19 34 20.1	-0.5
LBFI	Labuhan Bajo,	4.38	279	P	Pn	19 34 26.7	+0.3
WBSI	Waikabubak, Su	4.83	264	P	Pn	19 34 30.7	-1.9
WBSI	Waikabubak, Su	4.83	264	P	Pn	19 34 30.9	-1.7
KKSI	Kolaka, Sulawe	5.61	332	P	Pn	19 34 41.7	-1.4
	0.1nm19nm,1.1s						
BKSI	Bulukumba	5.62	313	P	Pn	19 34 42.4	-0.8
	11nm,0.6s						
DBNI	Kabupaten Domp	5.92	276	P	Pn	19 34 46.5	-0.8
	0.1nm14nm,0.5s						
DBNI	Kabupaten Domp	5.92	276	P	Pn	19 34 46.6	-0.8
	0.1nm14nm,0.5s						
KAPI	Kappang	6.09	312	LR	LR	19 36 50.9	
	comp=Z,39nm,20.6s,baz=130,slow=36						
BNSI	Bone	6.29	319	P	Pn	19 34 53.8	+1.5
	0.1nm25nm,0.9s						
PLAI	Plampang	6.42	273	P	Pn	19 34 54.1	0.0
PLAI	Plampang	6.42	273	P	Pn	19 34 53.6	-0.5
	0.3nm28nm,0.6s						
PLAI	Plampang	6.42	273	P	Pn	19 34 53.9	-0.2
	0.3nm28nm,0.6s						
SAUI	Saumlaki	7.06	81	P	Pn	19 35 03.3	+0.5
	41nm,0.4s						
SAUI	Saumlaki	7.06	81	P	Pn	19 35 04.3	+1.5
	41nm,0.4s						
DRS	Darwin Rock St	7.28	117	P	Pn	19 35 06.0	+0.2
SANI	Sanana	7.28	14	P	Pn	19 35 07.4	+1.5
SANI	Sanana	7.28	14	P	Pn	19 35 06.4	+0.5
	0.0nm12nm,0.7s						
SANI	Sanana	7.28	14	P	Pn	19 35 06.9	+1.0
	0.0nm12nm,1.1s						
TWSI	Taliwang, Sumb	7.31	273	P	Pn	19 35 05.1	-1.1
TWSI	Taliwang, Sumb	7.31	273	P	Pn	19 35 05.3	-0.9
MTN	Manton Dam	7.66	119		Pn	19 35 10.9	-0.1
KNRA	Kununurra	7.81	146		Pn	19 35 12.6	-0.5
MTNI	Mataram	8.02	273	P	Pn	19 35 11.3	-4.6
	520nm16nm,0.6s						
MTNI	Mataram	8.02	273	P	Pn	19 35 11.2	-4.6
	520nm16nm,0.6s						
KLNI	Mataram	8.11	275	P	Pn	19 35 14.5	-2.6
KLNI	Mataram	8.11	275	P	Pn	19 35 14.3	-2.8
FITZ	Fitzroy Crossi	8.97	172	Pn	Pn	19 35 27.6	-1.2
	2.1nm,0.3s,baz=359,slow=10.0,SNR=63						
FITZ				Sn	Sn	19 37 02.4	-5.7
	5.8nm,0.3s,baz=34,slow=2.6,SNR=13						
	4.5nm,0.3s						
FITZ	Fitzroy Crossi	8.97	172		Pn	19 35 27.6	-1.2
FITZ					Sn	19 37 02.4	-5.7
JAGI	Jajag, Banyuwa	10.02	273	P	Pn	19 35 43.9	+0.8
FAKI	Fak Fak	10.08	52	P	Pn	19 35 45.9	+2.0
FAKI	Fak Fak	10.08	52	P	Pn	19 35 42.8	-1.2
	17nm,1.4s						
FAKI	Fak Fak	10.08	52	P	Pn	19 35 42.7	-1.2
	17nm,1.4s						
TOLI2	Tolitoli	10.79	341	P	Pn	19 35 56.3	+2.7
SNJI	Sawahan-Nganju	12.45	275	P	Pn	19 36 15.1	-0.9
	15nm,0.6s						
PCJI	Pacitan	12.98	273	P	Pn	19 36 19.7	-3.1
	6µm55nm,1.5s						
UGM	Wanagama	13.65	274	P	Pn	19 36 32.5	+0.9
	72nm,1.8s						
WB0	Warramunga Arr	14.38	138	Pn	Pn	19 36 39.1	-1.9
WRA	Warramunga Arr	14.47	139	Pn	Pn	19 36 40.0	-2.2
	0.7nm,0.3s,baz=312,slow=14,SNR=12						
WRA				Sn	Sn	19 39 13.5	-8.2
	2.7nm,0.3s,baz=321,slow=24,SNR=14						
	1.2nm,0.5s						
WRA	Warramunga Arr	14.47	139		Pn	19 36 40.0	-2.2
WRAB	Tennant Creek	14.47	139	P	Pn	19 36 43.1	+0.9
WR8	Warramunga Arr	14.59	138	Pn	Pn	19 36 41.3	-2.3
BBJI	Bungbulang	16.53	275	P	Pn	19 37 07.4	-0.7
CNJI	Cibinong	17.06	275	P	Pn	19 37 13.4	-1.2
	12nm,1.2s						
AS31	Alice Springs	17.11	149		Pn	19 37 16.7	+1.6
AS31				IAmb	IAmb	19 37 20.8	
	comp=Z,1.4nm,0.8s						
ASAR	Alice Springs	17.11	149	P	P	19 37 15.5	+0.2
	comp=Z,0.6nm,0.3s,baz=319,slow=11,SNR=21						
ASAR				S	Sn	19 40 15.8	-10
	comp=Z,2.4nm,0.6s,baz=322,slow=25,SNR=9.2						
	comp=Z,1.3nm,0.4s						
ASAR	Alice Springs	17.11	149	P	P	19 37 15.5	+0.2
KKM	Kota Kinabalu	17.12	332	P	P	19 37 19.3	+3.8
MEEK	Meekatharra	18.18	196	P	P	19 37 28.0	+1.0
QIS	Mount Isa	18.63	129	P	Pn	19 37 35.4	+1.9
COEN	Coen	19.12	106	Pn	Pn	19 37 40.0	+0.8

COEN				IAmb	IAmb	19 37 41.3	
	comp=Z,12nm,1.1s						
COEN	Coen	19.12	106	P	Pn	19 37 40.1	+0.8
KASI	Kota Agung	19.94	279	P	P	19 37 44.6	-1.7
	comp=Z,12nm,1.2s						
UBSI	University, Be	22.50	282	P	P	19 38 15.7	+2.1
STKA	Stephens Creek	27.73	147	P	P	19 39 04.2	+3.0
	comp=Z,0.7nm,0.5s,baz=314,slow=6.3,SNR=4.5						
	comp=Z,0.7nm,0.5s						
CMAR	Chiang Mai Arr	37.13	318	P	P	19 40 23.4	+0.2
	comp=Z,0.2nm,0.3s,baz=144,slow=7.0,SNR=4.6						
	comp=Z,0.2nm,0.3s						
SONM	Songino Array	58.93	346	P	P	19 43 08.2	-2.7
	comp=Z,0.4nm,0.7s,baz=169,slow=8.7,SNR=2.8						
	comp=Z,0.4nm,0.7s						
MKAR	Makanchi Array	67.09	330	P	P	19 44 03.8	-1.1
	comp=Z,0.9nm,0.8s,baz=129,slow=9.6,SNR=6.6						
	comp=Z,0.9nm,0.8s						
MKAR	Makanchi Array	67.09	330	P	P	19 44 03.8	-1.1
KURBB	Kurchatov Arra	71.53	331	P	P	19 44 30.0	-2.0
	comp=Z,0.5nm,0.3s,baz=134,slow=5.3,SNR=1.4						
	comp=Z,0.5nm,0.3s						
KURK	Kurchatov	71.55	331	P	P	19 44 30.0	-2.2
KURK	Kurchatov	71.55	331	IAmb	IAmb	19 44 45.9	
	comp=Z,2.7nm,0.7s						

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*GII **12** 19:38:60.0±0.0, 33°.860N±0°.003×36°.075E±0°.001, h0^{km}, Mws2.0, confirmed*

JSO 12 19:39:00.8±0.0**, 34°N**±3°×**3°6E**±°**, h14**^{km}±2^{km}**, M3.5**/5**, Md3.7**/5**, MLv3.0**/5**, MLv3.0**/5**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NATI	Neve Ativ	0.69	212	P	Pg	19 39 13.6	-0.6
NATI				S	Sb	19 39 24.3	+0.4
NATI	Neve Ativ	0.69	212	P	Pg	19 39 13.8	-0.4
GEM	Giv'at Ha'Em	0.76	214	P	Pg	19 39 15.1	-0.5
GEM	Giv'at Ha'Em	0.76	214	P	Pg	19 39 15.1	-0.6
GEM	Giv'at Ha'Em	0.76	214	S	Sb	19 39 26.8	+0.7
KSHT	Keshet	0.91	200	P	Pb	19 39 18.0	-0.4
KSHT	Keshet	0.91	200	S	Sn	19 39 32.1	-0.2
MMA0B	Mount Meron ar	1.05	218	P	Pb	19 39 20.3	-0.5
MMA0B	Mount Meron ar	1.05	218	S	Sn	19 39 35.4	-0.3
MMC7	Mount Meron ar	1.05	219	P	Pb	19 39 20.1	-0.7
HNTI	Hanita	1.13	228	P	Pb	19 39 21.6	-0.6
HNTI	Hanita	1.13	228	S	Sn	19 39 37.5	-0.1
SHMJ	Saham	1.17	197	P	Pn	19 39 21.9	-0.8
HMDT	Nahal Hemdat	1.68	199	P	Pb	19 39 30.8	-0.7
HMDT	Nahal Hemdat	1.68	199	S	Sb	19 39 53.5	+1.0

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*IDC **12** 19:48:37.0±2.1, 5°.60S×130°.62E, h0^{km}, mb4.0/1, mbtmp3.8/4, ML3.9/3, Error ellipse: s-maj=87.8km s-min=26.9km az=77.0*

*DJA **12** 19:48:52.3±0.2, 6°S±3°×13°1E±°, h141^{km}±5^{km}, M4.0/13, mb3.8/13, mB4.7/3, MLv4.2/13, Mw(mB)3.9/3*

ISC 12 19:48:51.7±0.9**, 6°.00S**±0°.06×**130°.68E**±0°.09**, h124**^{km}**, n19, σ1^{s}43**/19**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.66	332	P	Pn	19 49 22.9	+1.6
BNDI				S	Sn	19 49 45.9	+2.1
SAUI	Saumlaki	2.06	163	P	Pn	19 49 28.5	+2.3
MSAI	Masohi	3.16	326	P	Pn	19 49 40.2	-0.1
FAKI	Fak Fak	3.44	27	P	Pn	19 49 43.8	-0.1
KMPI	Kaimana, Papua	3.81	53	P	Pn	19 49 49.2	+0.4
SWI	Sorong	5.14	7	P	Pn	19 50 05.9	-0.7
	0.3nm2µm8.9nm,0.9s						
RKPI	Ransiki, Papua	5.67	38	P	Pn	19 50 13.9	+0.2
MWPI	Manokwari, Pap	6.05	34	P	Pn	19 50 20.6	+1.7
	26nm,1.0s						
SANI	Sanana	6.11	310	P	Pn	19 50 19.6	-0.1
	0.0nm7.2nm,1.2s						
SOEI	Soe	7.36	239	P	Pn	19 50 37.7	+1.0
	0.1nm17nm,1.5s						
BATI	Baumata	8.10	239	P	Pn	19 50 46.8	+0.1
	11nm,1.2s						
EDFI	Ende, Flores	9.32	252	P	Pn	19 51 05.8	+2.6
	6.8nm,1.6s						
DBNI	Kabupaten Domp	12.52	258	P	Pn	19 51 47.5	+1.9
	8.2nm,1.6s						
FITZ	Fitzroy Crossi	12.99	202	Pn	Pn	19 51 47.9	-3.9
	0.2nm,0.3s,baz=31,slow=11,SNR=6.9						
FITZ				Sn	Sn	19 54 00.9	-14
	0.5nm,0.3s,baz=208,slow=17,SNR=7.8						
	0.8nm,0.3s						
TWSI	Taliwang, Sumb	13.95	258	P	Pn	19 52 04.2	+0.1
	14nm,1.4s						
WRA	Warramunga Arr	14.31	166	Pn	Pn	19 52 07.3	-1.4
	0.6nm,0.3s,baz=347,slow=10.0,SNR=11						
WRA				Sn	Sn	19 54 34.0	-13
	0.7nm,0.3s,baz=335,slow=24,SNR=8.9						
	0.5nm,0.3s						
GMJI	Gumukmas	17.25	261	P	P	19 52 43.9	-0.8
	19nm,1.1s						
ASAR	Alice Springs	17.84	170	P	P	19 52 51.1	-0.1
	0.5nm,0.3s,baz=348,slow=10,SNR=24						
ASAR				S	S	19 56 00.3	-10
	0.4nm,0.6s,baz=359,slow=29,SNR=4.9						
	1.5nm,0.6s						
MKAR	Makanchi Array	67.77	326	P	P	19 59 34.5	-1.7
	0.6nm,0.4s,baz=115,slow=6.5,SNR=21						
	0.6nm,0.4s						

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*SJA **12** 20:02:57.9±0.6, 21°.90S×70°.34W, h26^{km}±2^{km}, ML3.3, MW3.5*

*GUC **12** 20:03:00.4±0.8, 21°.91S×70°.27W, h15^{km}±5^{km}, ML3.4*

ISC 12 20:02:59.1±1.4**, 21°.90S**±0°.02×**70°.29W**±0°.05**, h20**^{km}±5^{km}**, n31, σ0^{s}93**/54**, 2C-8D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB07	IPOC Station P	0.41	65	⇑ *i*P	Pb	20 03 08.4	+0.5
PB07				*i* S	Sg	20 03 13.8	+0.1
PB07				IAML		20 03 14.4	
	comp=N,4µm,0.2s						
PB07	IPOC Station P	0.41	65	*e*P	Pb	20 03 08.2	+0.3
PB07				IAML		20 03 17.4	
	comp=Z,2µm,0.3s						
PB03	IPOC Station P	0.52	107	⇓ *i*P	Pg	20 03 09.8	0.0
PB03				*i* S	Sg	20 03 16.6	-0.3
PB03	IPOC Station P	0.52	107	*e*P	Pg	20 03 09.7	0.0
PB03				*e*S	Sg	20 03 16.7	-0.1
PB03				IAML		20 03 16.8	
	comp=Z,2µm,0.2s						
PB02	IPOC Station P	0.69	33	⇓ *i*P	Pb	20 03 12.6	+0.2
PB02				*i* S	Sb	20 03 21.3	-0.2
PB02				IAML		20 03 24.0	
	comp=E,3µm,0.2s						
PB02	IPOC Station P	0.69	33	*e*P	Pb	20 03 12.4	0.0
PB02				IAML		20 03 24.2	
	comp=Z,2µm,0.3s						
PB05	IPOC Station P	0.95	175	⇑ *i*P	Pb	20 03 16.6	-0.4
PB05				*i* S	Sb	20 03 29.0	-0.2
PB05				IAML		20 03 29.4	
	comp=E,2µm,0.3s						
PB05	IPOC Station P	0.95	175	*e*P	Pb	20 03 16.6	-0.4
PB05				*e*S	Sb	20 03 29.3	+0.1
PB05				IAML		20 03 29.6	
	comp=Z,952nm,0.2s						
PB09	IPOC Station P	0.98	84	⇓ *i*P	Pb	20 03 17.9	+0.3
PB09				*i* S	Sb	20 03 30.0	-0.1
PB09	IPOC Station P	0.98	84	*e*P	Pb	20 03 17.7	+0.2
PB09				*e*S	Sb	20 03 17.8	-12
PB09				IAML		20 03 30.9	
	comp=Z,856nm,0.3s						
PB06	IPOC Station P	1.04	140	⇓ *i*P	Pb	20 03 18.1	-0.5
PB06				*i* S	Sb	20 03 31.4	-0.5
PB06				IAML		20 03 31.9	
	comp=N,2µm,0.2s						
PB06	IPOC Station P	1.04	140	*e*P	Pb	20 03 18.0	-0.6
PB06				*e*S	Sb	20 03 31.5	-0.4
PB06				IAML		20 03 31.6	
	comp=Z,1µm,0.3s						
PB01	IPOC Station P	1.14	41	⇓ *i*P	Pn	20 03 19.8	-0.2
PB01				*i* S	Sb	20 03 34.0	-0.5
PB01	IPOC Station P	1.14	41	*e*P	Pn	20 03 19.8	-0.2
PB01				*e*S	Sb	20 03 34.7	+0.2
PB01				IAML		20 03 35.7	
	comp=Z,400nm,0.3s						
TA01	Diego Aracena	1.33	4	⇓ *i*P	Pn	20 03 22.5	0.0
TA01				*i* S	Sn	20 03 39.2	-0.6
TA01				IAML		20 03 42.1	
	comp=N,695nm,0.2s						
TA01	Diego Aracena	1.33	4	*e*P	Pn	20 03 22.6	0.0
TA01				IAML		20 03 42.6	
	comp=Z,266nm,0.4s						
PB10	IPOC Station P	1.62	189	*i* P	Pn	20 03 26.6	-0.1
PB10	IPOC Station P	1.62	189	*e*P	Pn	20 03 26.9	+0.2
PB10				*e*S	Sb	20 03 48.6	+0.1
PB10				IAML		20 03 51.7	
	comp=Z,133nm,0.6s						
HMBC	Humberstone	1.66	13	⇓ *i*P	Pn	20 03 27.5	+0.3
HMBC				*i* S	Sn	20 03 48.6	+0.6
HMBC				IAML		20 03 51.0	
	comp=N,705nm,0.2s						
HMBC	Humberstone	1.66	13	*e*P	Pn	20 03 27.7	+0.5
HMBC				*e*S	Sb	20 03 49.6	0.0
HMBC				IAML		20 03 49.9	
	comp=Z,444nm,0.4s						
PB11	IPOC Station P	2.21	16	*e*P	Pn	20 03 36.3	+1.5
PB11				*e*S	Sb	20 04 04.7	-0.8
PB11				IAML		20 04 10.8	
	comp=E,248nm,0.2s						
PB11	IPOC Station P	2.21	16	*e*P	Pn	20 03 36.3	+1.5
PB11				*e*S	Sn	20 04 00.7	-1.0
PB11				IAML		20 04 09.1	
	comp=Z,97nm,0.5s						
AF01	San Pedro de A	2.22	119	*e*P	Pg	20 03 47.7	+5.9
AF01				*e*S	Sb	20 04 04.5	-1.3
AF01				IAML		20 04 21.6	
	comp=Z,599nm,0.5s						
GO01	Chusmiza	2.45	25	⇓ *i*P	Pb	20 03 40.9	-1.9
GO01				*i* S	Sb	20 04 11.0	-1.6
GO01	Chusmiza	2.45	25	*e*P	Pb	20 03 41.4	-1.3
GO01				*e*S	Sb	20 04 12.7	+0.1
GO01				IAML		20 04 15.7	
	comp=Z,103nm,0.3s						
PB14	IPOC Station P	2.71	182	*e*P	Pn	20 03 42.0	0.0
PB14				*e*S	Sb	20 04 18.7	-1.5
PB14				IAML		20 04 24.1	
	comp=Z,69nm,0.4s						
PB12	IPOC Station P	3.27	359	*i* P	Pn	20 03 50.1	+0.8
PB12	IPOC Station P	3.27	359	*e*P	Pn	20 03 50.6	+1.2
PB12				*e*S	Sn	20 04 29.0	+1.2
PB12				IAML		20 04 40.9	
	comp=Z,48nm,0.5s						
GO02	Mina Guanaco	3.31	169	*i* P	Pn	20 03 51.6	+1.5
GO02	Mina Guanaco	3.31	169	*e*P	Pn	20 03 51.8	+1.7
GO02				*e*S	Sb	20 04 35.8	-1.5
GO02				IAML		20 04 50.9	
	comp=Z,126nm,0.7s						
AC01	Pan de Azucar	4.24	184	*e*P	Pn	20 04 01.6	-0.9
AC01				*e*S	Sb	20 05 07.0	+3.2
AC01				IAML		20 05 15.0	
	comp=Z,24nm,0.4s						

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*NOU **12** 20:21:22.6, 39°.39S×176°.23E, h90^{km}, MLv4.0/15, North Island, New Zealand*

*WEL **12** 20:21:25.2±0.3, 39°S±2°×17°6E±°, h42^{km}±4^{km}, M3.8/99, ML3.8/54, MLv3.8/99, Error ellipse: s-maj=2.9km s-min=2.7km az=10.7, confirmed*

ISC 12 20:21:23.6±1.3**, 39°.31S**±0°.03×**176°.12E**±0°.03**, h71**^{km}±6^{km}**, n158, σ0^{s}97**/175**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KWHZ	Kaweka Forest	0.26	116	P	Pn	20 21 35.2	+0.5
KWHZ				S	Sn	20 21 43.2	+0.4
KFHS	Kaweka Forest	0.30	115	P	Pn	20 21 35.4	+0.6
MOVZ	Moawhango	0.30	251	P	Pn	20 21 35.2	+0.2
MOVZ				S	Sn	20 21 42.5	-0.7
BKZ	Black Stump Fm	0.32	64	P	Pn	20 21 35.6	+0.5
BKZ	Black Stump Fm	0.32	64	P	Pn	20 21 35.2	+0.2
BKZ				S	Sn	20 21 42.9	-0.6
ETVZ	East Tongariro	0.36	299	P	Pn	20 21 35.8	+0.3
ETVZ				S	Sn	20 21 43.5	-0.6
TUVZ	Tukino	0.36	276	P	Pn	20 21 35.9	+0.5
TUVZ				S	Sn	20 21 43.8	-0.4
TMVZ	Te Maari	0.38	301	P	Pn	20 21 35.9	+0.3
TMVZ				S	Sn	20 21 43.7	-0.6
OTVZ	Oturere	0.38	292	P	Pn	20 21 36.0	+0.4
OTVZ				S	Sn	20 21 44.0	-0.4
KRHZ	Kereru	0.39	150	P	Pn	20 21 36.3	+0.7
RITZ	Rihia Road	0.39	329	P	Pn	20 21 36.0	+0.4
SNVZ	South Ngauruho	0.39	288	P	Pn	20 21 36.2	+0.4
SNVZ				S	Sn	20 21 44.1	-0.4
TTHS	Turangi Tongar	0.40	324	P	Pn	20 21 35.9	+0.3
NTVZ	North Tongarir	0.40	301	P	Pn	20 21 36.1	+0.3
WNVZ	Wahianoa	0.41	267	P	Pn	20 21 36.3	+0.4
WNVZ				S	Sn	20 21 44.4	-0.4
WHVZ	Whangaehu Hut	0.41	274	P	Pn	20 21 36.4	+0.4
WHVZ				S	Sn	20 21 44.2	-0.8
HATZ	Hinemaiaia	0.42	357	P	Pn	20 21 35.6	-0.2
NGZ	Ngauruhoe	0.42	288	P	Pn	20 21 36.4	+0.5
KRVZ	Karewarewa	0.43	300	P	Pn	20 21 36.4	+0.4
NNVZ	North Ngauruho	0.43	294	P	Pn	20 21 36.4	+0.4
NNVZ				S	Sn	20 21 44.8	-0.3
MAVZ	Matarangi	0.43	275	P	Pn	20 21 36.6	+0.3
MAVZ				S	Sn	20 21 44.7	-0.8
FWVZ	Far West T-bar	0.44	277	P	Pn	20 21 36.6	+0.4
FWVZ				S	Sn	20 21 44.8	-0.6
TRVZ	Turoa	0.44	271	P	Pn	20 21 36.7	+0.4
TRVZ				S	Sn	20 21 44.9	-0.6
WTVZ	West Tongariro	0.46	295	P	Pn	20 21 36.5	+0.3
COVZ	Chateau Observ	0.46	284	P	Pn	20 21 36.7	+0.5
COVZ				S	Sn	20 21 45.1	-0.4
MCHZ	McNeill Hill	0.47	107	P	Pn	20 21 37.5	+1.3
KATZ	Kakaramea	0.47	315	P	Pn	20 21 36.7	+0.4
WAKS	Wakarara Rangi	0.47	168	P	Pn	20 21 37.3	+1.0
MTVZ	Mangateitei	0.51	261	P	Pn	20 21 37.3	+0.7
MTVZ				S	Sn	20 21 46.3	+0.1
RATZ	Rangitukua	0.52	329	P	Pn	20 21 36.9	+0.2
MRHZ	Matea Rd	0.53	26	P	Pn	20 21 36.7	-0.1
ORCS	Ohakune Ruapeh	0.56	259	P	Pn	20 21 37.8	+0.7
NMHZ	Naumai	0.57	69	P	Pn	20 21 38.6	+1.3
TWVZ	Taurewa	0.58	294	P	Pn	20 21 37.4	0.0
PKVZ	Pokaka	0.60	272	P	Pn	20 21 38.2	+0.7
PNHZ	Pukenui	0.61	174	P	Pn	20 21 38.5	+0.9
NCDS	Napier Civil D	0.62	108	S	Sn	20 21 49.9	+2.0
NGHS	Napier Girls H	0.64	106	P	Pn	20 21 39.0	+1.1
NSPS	Napier St Paul	0.64	106	P	Pn	20 21 40.3	+2.4
WHTZ	Whakaora	0.66	349	P	Pn	20 21 39.0	+0.8
WATZ	Wairara	0.67	333	P	Pn	20 21 38.3	+0.1
ARHZ	Aropaoanui	0.68	86	P	Pn	20 21 39.5	+1.1
MTHZ	Maungataniwha	0.72	51	P	Pn	20 21 39.4	+0.5
TSZ	Takapari Road	0.76	189	P	Pn	20 21 40.5	+1.2
KAHZ	Kahuranaki	0.76	130	P	Pn	20 21 40.3	+1.0
ALRZ	Allen Road	0.77	13	P	Pn	20 21 39.4	0.0
WPRZ	Whakapapatarin	0.79	2	P	Pn	20 21 39.6	0.0
WPHZ	Waipukurau	0.79	162	P	Pn	20 21 40.8	+1.1
CKHZ	Cape Kidnapper	0.82	115	P	Pn	20 21 40.9	+1.0
PRRZ	Plateau Road	0.84	15	P	Pn	20 21 40.2	+0.1
PRRZ				S	Sn	20 21 52.0	-0.4
RAHZ	Arahi	0.85	63	P	Pn	20 21 41.2	+0.9
KUTZ	Kaahu Road	0.85	344	P	Pn	20 21 40.5	+0.2
DVHS	Dannevirke Hig	0.89	181	P	Pn	20 21 42.1	+1.3
WHHZ	Waihua	0.90	75	P	Pn	20 21 41.8	+0.9
PWZ	Pawanui	0.92	142	P	Pn	20 21 42.0	+0.9
PXZ	Pawanui	0.92	142	P	Pn	20 21 41.9	+0.7
HRRZ	Handcock Road	0.93	8	P	Pn	20 21 41.5	+0.2
RTZ	Ruatahuna	0.96	44	P	Pn	20 21 42.0	+0.2
MUGZ	Murupara	0.97	32	P	Pn	20 21 41.7	-0.1
WAZ	Wanganui	0.98	243	P	Pn	20 21 43.8	+1.9
DVHZ	Dannevirke	0.99	178	P	Pn	20 21 42.8	+0.8
FAHS	Feilding Agric	1.00	205	P	Pn	20 21 44.2	+2.1
HSRZ	Hossack Road	1.00	6	P	Pn	20 21 42.5	+0.3
RRRZ	Republican Roa	1.02	18	P	Pn	20 21 42.5	+0.1
PRHZ	Porangahau	1.03	158	P	Pn	20 21 43.5	+0.9
WCDS	Wanganui Civil	1.04	233	P	Pn	20 21 44.6	+2.1
PGFS	Porangahau Fir	1.06	159	P	Pn	20 21 43.7	+0.9
HLRZ	Highlands Stat	1.07	10	P	Pn	20 21 43.9	+0.8
VRZ	Vera Road	1.07	279	P	Pn	20 21 43.9	+0.9
TLZ	Tolley Road	1.08	335	P	Pn	20 21 43.3	+0.1
SNGZ	Shannon Statio	1.09	61	P	Pn	20 21 43.9	+0.7
OHWZ	Ohakea	1.09	214	P	Pn	20 21 45.4	+2.2
POWZ	Post Office Ro	1.11	194	P	Pn	20 21 44.6	+1.0
TARZ	Mount Tarawera	1.11	16	P	Pn	20 21 44.1	+0.4
UTU	Utuhina	1.13	3	P	Pn	20 21 44.1	+0.3
ANWZ	Angora Road	1.18	167	P	Pn	20 21 45.5	+1.1
MKRZ	Makatiti	1.20	13	P	Pn	20 21 45.6	+0.8
OMRZ	Omania	1.22	9	P	Pn	20 21 45.3	+0.3
KNZ	Kokohu	1.24	77	P	Pn	20 21 45.3	+0.1
PRWZ	Pori Road	1.25	185	P	Pn	20 21 46.3	+1.0
HIZ	Hauiti	1.27	309	P	Pn	20 21 46.4	+0.9
HIZ	Hauiti	1.27	309	P	Pn	20 21 46.3	+0.8
KARZ	Kaharoa	1.29	4	P	Pn	20 21 46.3	+0.4
EDRZ	Edgecumbe	1.30	22	P	Pn	20 21 46.2	+0.2
RAGZ	Rawiri	1.30	52	P	Pn	20 21 46.6	+0.6
URZ	Urewera	1.30	37	P	Pn	20 21 46.2	+0.2
URZ	Urewera	1.30	37	P	Pn	20 21 46.0	0.0
LREZ	Lake Rotokare	1.34	263	P	Pn	20 21 48.0	+1.6
BFZ	Birch Farm	1.37	176	P	Pn	20 21 47.2	+0.3
BFZ	Birch Farm	1.37	176	P	Sn	20 22 04.2	-0.3
BFZ	Birch Farm	1.37	176	P	Pn	20 21 47.3	+0.4
MARZ	Manawahe	1.39	18	P	Pn	20 21 47.4	+0.2
MHGZ	Mahia Peninsul	1.40	84	P	Pn	20 21 47.7	+0.5
MRZ	Mangatainoka R	1.41	197	P	Pn	20 21 48.0	+0.6
MHEZ	Mangahewa	1.42	279	P	Pn	20 21 49.3	+1.9
RIGZ	Rimuhau	1.42	65	P	Pn	20 21 47.8	+0.3
PRGZ	Paritu Road	1.43	75	P	Pn	20 21 48.1	+0.5
MWZ	Matawai	1.47	49	P	Pn	20 21 48.3	0.0
TIWZ	Tintock	1.48	187	P	Pn	20 21 48.8	+0.5
DREZ	Durham Road	1.49	274	P	Pn	20 21 50.4	+1.9
PREZ	Palmer Road	1.52	268	P	Pn	20 21 51.0	+2.1
NEZ	North Egmont	1.57	271	P	Pn	20 21 52.3	+2.8
TGRZ	Tauranga	1.58	4	P	Pn	20 21 50.3	+0.6
WHRZ	Whale Island	1.60	25	P	Pn	20 21 50.6	+0.7
CPWZ	Castlepoint	1.60	178	P	Pn	20 21 50.8	+0.9
TKGZ	Te Karaka	1.61	58	P	Pn	20 21 50.4	+0.5
KHEZ	Kahui Hut	1.63	270	P	Pn	20 21 52.9	+2.5
KHEZ	Kahui Hut	1.63	270	P	Pn	20 21 52.7	+2.3
TOZ	Tahuroa Road	1.65	343	P	Pn	20 21 51.1	+0.5
HOWZ	Holdsworth Sta	1.65	196	P	Pn	20 21 50.7	+0.1
PKE	Pukeiti	1.66	273	P	Pn	20 21 52.6	+1.9
OGWZ	Otaki Gorge	1.67	206	P	Pn	20 21 51.3	+0.4
NMEZ	Namu Road	1.74	266	P	Pn	20 21 54.0	+2.2
NBEZ	Newall Road No	1.75	271	P	Pn	20 21 54.1	+2.2
TMWZ	Te Maipa	1.80	185	P	Pn	20 21 52.6	0.0
KIW	Kapiti Island	1.81	211	P	Pn	20 21 53.0	+0.3
RUGZ	Raukumara Rang	1.81	43	P	Pn	20 21 52.7	-0.2
CNGZ	Carnagh Statio	1.83	64	P	Pn	20 21 53.6	+0.7
TWGZ	Tauwhareparae	1.84	53	P	Pn	20 21 53.9	+0.7
MTW	Mount Morrison	1.91	194	P	Pn	20 21 53.6	-0.4
CAW	Cannon Point	1.97	204	P	Pn	20 21 54.6	-0.2
HAZ	Te Kaha	2.03	41	P	Pn	20 21 54.9	-0.7
MYRZ	Mayor Island	2.03	3	P	Pn	20 21 57.0	+1.3
PUZ	Puketiti	2.08	54	P	Pn	20 21 56.3	0.0
PKGZ	Pakihiroa	2.11	47	P	Pn	20 21 56.7	0.0
TRWZ	Traveller	2.11	189	P	Pn	20 21 56.4	-0.4
PAWZ	Paruwai Farm	2.14	194	P	Pn	20 21 56.5	-0.7
MSWZ	Moikau Station	2.21	197	P	Pn	20 21 57.2	-0.9
WEL	Wellington	2.23	207	P	Pn	20 21 57.8	-0.5
DUWZ	D'Urville Isla	2.25	228	P	Pn	20 21 58.5	-0.2
SNZO	South Karori	2.27	208	P	Pn	20 21 58.5	-0.4
BHW	Baring Head	2.30	204	P	Pn	20 21 58.5	-0.9
MKAZ	Moumakai	2.33	341	P	Pn	20 22 00.5	+0.8
WMGZ	Waiomatatini S	2.33	51	P	Pn	20 21 59.7	-0.1
TCW	Tory Channel	2.37	216	P	Pn	20 21 59.6	-0.5
KBAZ	Karaka Road Bo	2.41	336	P	Pn	20 22 01.9	+1.1
MXZ	Matakaoa Point	2.45	45	P	Pn	20 22 01.4	+0.1
MXZ	Matakaoa Point	2.45	45	P	Pn	20 22 01.7	+0.5
AWAZ	Awhitu Peninsu	2.53	332	P	Pn	20 22 03.5	+1.1
ETAZ	East Tamaki Re	2.53	338	P	Pn	20 22 03.4	+1.0
KUZ	Kuaotunu	2.58	353	P	Pn	20 22 03.5	+0.4
WIAZ	Waiheke Island	2.63	342	P	Pn	20 22 04.7	+0.9
EPAZ	Eden Park BICE	2.66	336	P	Pn	20 22 05.4	+1.3
WTAZ	Waiatarua	2.67	332	P	Pn	20 22 05.7	+1.4
HBAZ	Herne Bay Bore	2.69	336	P	Pn	20 22 06.0	+1.5
TUWZ	Tuamarina	2.69	217	P	Pn	20 22 04.5	-0.1
MBAZ	Motutapu North	2.71	339	P	Pn	20 22 05.8	+0.9
RVAZ	Riverhead Bore	2.81	334	P	Pn	20 22 07.6	+1.4
NNZ	Nelson	2.83	227	P	Pn	20 22 05.7	-0.8
ABAZ	Army Bay	2.89	339	P	Pn	20 22 08.5	+1.2
BSWZ	Blackbirch Sta	2.95	215	P	Pn	20 22 07.2	-0.9
TKNZ	Takaka Hill	2.97	234	P	Pn	20 22 07.7	-0.7
QRZ	Quartz Range	3.14	240	P	Pn	20 22 09.6	-1.1
KHZ	Kahutara	3.67	211	P	Pn	20 22 16.0	-1.9
OUZ	Omahuta	4.55	333	P	Pn	20 22 31.2	+1.2
ODZ	Otahua Downs	7.02	214	P	Pn	20 23 00.7	-3.0
JCZ	Jackson Bay	7.26	227	P	Pn	20 23 06.7	-0.4
SYZ	Scrubby Hill	8.85	213	P	Pn	20 23 26.6	-2.0

RSNC 12 20:48:30.5±0.0**, 7°N**±1°×**7°3W**±°**, h151**^{km}±2^{km}**, M3.2, mB4.7, mb3.7, ML2.9, Mw(mB)3.9, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.23	198	P	Pn	20 48 50.9	-0.4
BARC				S	Sn	20 49 06.7	-0.4
BRJC	Barrancabermej	0.65	284	P	Pn	20 48 52.7	-0.1
BRJC				S	Sn	20 49 09.6	-0.1
PAMC	Pamplona, Colo	0.67	38	P	Pn	20 48 53.9	+0.4
PAMC				S	Sn	20 49 10.6	-0.4
RUSC	La Rusia	0.91	178	P	Pn	20 48 54.8	-0.5
RUSC				S	Sn	20 49 13.3	-0.8
PTBC	PUERTO BERRIO,	1.36	259	P	Pn	20 48 57.7	-1.1
PTBC				S	Sn	20 49 18.9	-1.5
OCAC	Ocana	1.44	352	P	Pn	20 48 59.0	-0.7
OCAC				S	Sn	20 49 22.2	+0.2
SPBC	San Pablo de B	1.50	220	P	Pn	20 49 00.0	-0.2
SPBC				S	Sn	20 49 22.2	-0.8
NORC	Norcasia	2.14	235	P	Pn	20 49 07.0	-0.4
NORC				S	Sn	20 49 34.7	-1.1
CHIC	Chingaza	2.25	196	P	Pn	20 49 09.0	-0.1
CHIC				S	Sn	20 49 38.5	-0.3
ROSC	El Rosal	2.30	212	P	Pn	20 49 10.5	+0.9
ROSC				S	Sn	20 49 38.6	-1.1
HELC	Santa Helena	2.48	256	P	Pn	20 49 11.8	0.0
HELC				S	Sn	20 49 42.3	-1.3
UREC	San Jos de Ur	2.58	291	P	Pn	20 49 10.5	-2.2
UREC				S	Sn	20 49 42.3	-2.9
GUY2C	Guyana, Caldas	2.74	235	P	Pn	20 49 15.5	+0.4
GUY2C				S	Sn	20 49 49.3	-0.2
VILC	Villavicencio,	2.74	192	P	Pn	20 49 14.6	-0.3
VILC				S	Sn	20 49 48.9	-0.2
PTGC	Puerto Gaitan,	2.77	159	P	Pn	20 49 14.1	-1.0
PTGC				S	Sn	20 49 47.5	-2.0
CBOC	Ciudad Bolivar	3.03	252	P	Pn	20 49 18.9	+0.4
CBOC				S	Sn	20 49 55.0	-0.6
DBBC	Dabeiba	3.08	274	P	Pn	20 49 18.5	-0.6
DBBC				S	Sn	20 49 54.8	-1.8
SDV	Santo Domingo	3.21	50	P	Pn	20 49 20.5	-0.2
SDV				S	Sn	20 49 57.5	-2.1
ARGC	Ariguani, Magd	3.23	340	P	Pn	20 49 20.3	-0.6
ARGC				S	Sn	20 49 59.6	-0.3
PRAC	Prado	3.55	210	P	Pn	20 49 25.1	+0.1
PRAC				S	Sn	20 50 07.3	0.0
ORTC	Ortega, Tolima	3.58	217	P	Pn	20 49 25.3	-0.1
ORTC				S	Sn	20 50 08.3	+0.3
APAC	Apartado, Choc	3.61	288	P	Pn	20 49 24.8	-0.9
APAC				S	Sn	20 50 07.7	-0.8
SJCC	San Jacinto, C	3.69	326	P	Pn	20 49 25.2	-1.6
SJCC				S	Sn	20 50 06.4	-4.1
URMC	La Uribe, Meta	3.76	200	P	Pn	20 49 28.0	+0.2
URMC				S	Sn	20 50 11.8	-0.4
YOTC	Yotoco, Valle	4.27	229	P	Pn	20 49 33.7	-0.8
YOTC				S	Sn	20 50 23.6	-0.7
URIC	Uribia, Colomb	4.98	13	P	Pn	20 49 41.5	-2.3
URIC				S	Sn	20 50 38.6	-2.3
JAMC	Jamundi, Valle	5.04	225	P	Pn	20 49 44.1	-0.6
	8.3nm,0.9s						
GARC	Garzon, Huila	5.17	207	P	Pn	20 49 45.2	-1.3
GARC				S	Sn	20 50 42.8	-2.9
POPC	Popayan, Colom	5.53	220	P	Pn	20 49 50.2	-1.1
	7.6nm,0.7s						
FLOC	Florencia	5.78	206	P	Pn	20 49 53.9	-0.5
	7.3nm,0.9s						
BBAC	Balboa, Cauca	6.29	221	P	Pn	20 50 01.9	+0.5

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*IDC **12** 20:50:08.4±7.8, 31°.86S×179°.82E, h442^{km}±97^{km}, mb2.9/2, mbtmp4.1/3, Error ellipse: s-maj=104.9km s-min=41.7km az=7.0*

*WEL **12** 20:50:12.9±1.1, 32°S±7°×18°0W±1°6, h371^{km}±16^{km}, mB4.6/10, ML4.2/7, MLv4.7/12, Mw(mB)3.8/10, Error ellipse: s-maj=22.0km s-min=6.7km az=107.9, confirmed*

ISC 12 20:50:10.5±1.2**, 31°.86S**±0°.10×**179°.9W**±0°.1**, h400**^{km}**, n67, σ1^{s}51**/70**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.11	34	P	Pn	20 51 13.6	-1.0
GLKZ				S	S	20 52 06.4	-0.1
MXZ	Matakaoa Point	5.87	194	P	Pn	20 51 44.4	+2.8
WMGZ	Waiomatatini S	6.10	193	P	Pn	20 51 46.5	+2.5
WMGZ				S	S	20 53 02.4	+2.0
HAZ	Te Kaha	6.18	197	P	Pn	20 51 45.8	+0.9
HAZ				S	S	20 53 01.8	-0.2
PKGZ	Pakihiroa	6.21	195	P	Pn	20 51 48.7	+3.4
WCZ	Waipu Caves	6.28	228	P	Pn	20 51 47.3	+1.3
OUZ	Omahuta	6.38	237	P	Pn	20 51 48.0	+0.9
RUGZ	Raukumara Rang	6.40	197	P	Pn	20 51 49.0	+1.4
RUGZ				S	S	20 53 05.2	-1.4
TWGZ	Tauwhareparae	6.53	195	P	Pn	20 51 51.8	+2.9
TWGZ				S	S	20 53 09.7	+0.5
OPRZ	Ohinepanea	6.64	205	P	P	20 51 52.9	+2.3
CNGZ	Carnagh Statio	6.78	193	P	Pn	20 51 53.2	+1.7
MWZ	Matawai	6.79	197	P	Pn	20 51 53.3	+1.6
URZ	Urewera	6.83	200	P	Pn	20 51 51.4	-0.8
	51nm,0.3s,baz=31,slow=2.4,SNR=102						
URZ				S	S	20 53 12.7	-2.5
	11nm,0.4s,baz=52,slow=22,SNR=12						
URZ	Urewera	6.83	200	P	Pn	20 51 51.5	-0.7
AWAZ	Awhitu Peninsu	6.87	219	P	P	20 51 54.5	+1.4
KARZ	Kaharoa	6.91	206	P	P	20 51 55.9	+2.3
RAGZ	Rawiri	6.97	198	P	Pn	20 51 53.7	-0.1
TARZ	Mount Tarawera	7.00	204	P	P	20 51 56.6	+1.9
MUGZ	Murupara	7.14	202	P	Pn	20 51 56.8	+1.2
RTZ	Ruatahuna	7.20	200	P	Pn	20 51 56.4	0.0
SNGZ	Shannon Statio	7.26	197	P	Pn	20 51 58.0	+1.1
KNZ	Kokohu	7.41	195	P	Pn	20 52 00.4	+1.8
RAHZ	Arahi	7.45	198	P	Pn	20 51 59.1	0.0
MTHZ	Maungataniwha	7.46	200	P	Pn	20 51 59.7	+0.4
MHGZ	Mahia Peninsul	7.49	193	P	P	20 52 01.6	+1.5
MRHZ	Matea Rd	7.58	202	P	Pn	20 52 01.2	+0.6
NMHZ	Naumai	7.70	199	P	Pn	20 52 02.3	+0.4
ARHZ	Aropaoanui	7.80	198	P	Pn	20 52 03.6	+0.5
RATZ	Rangitukua	7.83	206	P	Pn	20 52 04.5	+1.1
BKZ	Black Stump Fm	7.86	201	P	Pn	20 52 01.9	-1.8
HIZ	Hauiti	7.90	211	P	P	20 52 07.0	+2.4
KATZ	Kakaramea	7.95	206	P	Pn	20 52 05.7	+0.8
NTVZ	North Tongarir	8.07	205	P	Pn	20 52 06.9	+0.6
TMVZ	Te Maari	8.07	205	P	Pn	20 52 06.6	+0.3
KRVZ	Karewarewa	8.08	206	P	Pn	20 52 06.6	+0.2
ETVZ	East Tongariro	8.09	205	P	Pn	20 52 06.0	-0.5
KWHZ	Kaweka Forest	8.11	201	P	Pn	20 52 05.7	-1.0
WTVZ	West Tongariro	8.11	206	P	Pn	20 52 07.0	+0.2
NNVZ	North Ngauruho	8.12	206	P	Pn	20 52 07.2	+0.4
OTVZ	Oturere	8.13	205	P	Pn	20 52 05.9	-1.1
CKHZ	Cape Kidnapper	8.15	197	P	Pn	20 52 07.6	+0.6
SNVZ	South Ngauruho	8.16	205	P	Pn	20 52 06.9	-0.4
NGZ	Ngauruhoe	8.16	205	P	Pn	20 52 08.0	+0.6
FWVZ	Far West T-bar	8.25	205	P	Pn	20 52 07.8	-0.7
MAVZ	Matarangi	8.26	205	P	Pn	20 52 08.1	-0.5
WHVZ	Whangaehu Hut	8.26	205	P	Pn	20 52 08.6	0.0
TRVZ	Turoa	8.29	205	P	Pn	20 52 08.8	-0.1
WNVZ	Wahianoa	8.30	205	P	Pn	20 52 08.2	-0.7
MOVZ	Moawhango	8.31	204	P	Pn	20 52 07.5	-1.5
KRHZ	Kereru	8.33	200	P	Pn	20 52 08.4	-0.7
KAHZ	Kahuranaki	8.33	197	P	Pn	20 52 08.5	-0.7
PKVZ	Pokaka	8.36	206	P	Pn	20 52 09.7	+0.2
PXZ	Pawanui	8.56	197	P	Pn	20 52 10.7	-1.1
PNHZ	Pukenui	8.63	200	P	Pn	20 52 09.6	-3.0
PRHZ	Porangahau	8.84	198	P	Pn	20 52 14.9	0.0
BFZ	Birch Farm	9.33	198	P	P	20 52 19.3	-1.2
MRZ	Mangatainoka R	9.51	201	P	P	20 52 19.7	-2.7
HOWZ	Holdsworth Sta	9.74	201	P	P	20 52 23.1	-2.0
OGWZ	Otaki Gorge	9.78	203	P	P	20 52 22.7	-2.7
TMWZ	Te Maipa	9.82	199	P	P	20 52 26.4	+0.4
MTW	Mount Morrison	9.98	200	P	P	20 52 25.9	-1.9
MSWZ	Moikau Station	10.30	201	P	P	20 52 29.2	-2.0
BHW	Baring Head	10.41	202	P	P	20 52 31.6	-0.8
TCW	Tory Channel	10.43	205	P	P	20 52 29.7	-3.0
ASAR	Alice Springs	41.43	269	P	P	20 57 12.8	-7.4
	0.5nm,0.6s,baz=107,slow=7.2,SNR=8.0						
	0.5nm,0.6s						
WRA	Warramunga Arr	42.56	275	P	P	20 57 22.2	-7.0
	0.6nm,0.3s,baz=112,slow=7.8,SNR=7.6						
	0.6nm,0.3s						
FINES	FINESS Array B	145.92	338	PKPbc	PKPdf	21 08 55.4	-6.2
	2.9nm,0.8s,baz=49,slow=4.2,SNR=7.5						

GCG 12 20:55:17.5±0.3, 13°.96N×91°.64W, h10km±35km, MD3.5, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG8	El Palmar, Qui	0.56	30	*i* P	Pn	20 55 32.9	+1.2
FG16	Alotenango, Sa	1.14	74	*i* P	Pb	20 55 34.8	-4.6
PCG5	San Vicente Pa	1.25	78	*i* P	Pn	20 55 37.2	-3.9
APG	El Apazote	1.54	48	*i* P	Pn	20 55 45.2	0.0
APG				*i* S	Sg	20 56 07.0	-0.2

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*IDC **12** 21:40:08.2±0.8, 28°.25S×177°.28W, h0km, mb4.2/5, mbtmp4.2/5, MS3.2/3, Error ellipse: s-maj=29.4km s-min=20.9km az=107.0*

*NEIC **12** 21:40:17.6±1.4, 28°.6S±0°.1×177°.4W±0°.2, h60km±7km, mb4.6/17, Error ellipse: s-maj=26.3km s-min=9.6km az=131.0*

ISC 12 21:40:15.8±0.7, 28°.52S±0°.10×177°.3W±0°.1, h54km, n43, σ1s.18/39, mb4.5/13, 4D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.91	217	Pn	Pn	21 40 32.9	+0.4
	2µm,0.3s,baz=62,slow=8.0,SNR=25						
RAO				Sn	Sn	21 40 45.0	+0.3
	12µm,0.3s,baz=72,slow=19,SNR=41						
URZ	Urewera	10.78	204	Sn	Sn	21 44 34.7	-12
	2.0nm,0.3s,baz=50,slow=22,SNR=9.1						
THZ	Tophouse	15.44	209	P	Pn	21 43 49.6	-0.5
THZ				IAmb	IAmb	21 43 58.2	
	comp=Z,34nm,1.5s						
DZM	Mont Dzumac	16.04	290	LR	LR	21 48 25.3	
	comp=Z,138nm,20.4s,baz=32,slow=31						
LTZ	Lake Taylor	16.55	208		Pn	21 44 03.5	-0.6
LTZ				IAmb	IAmb	21 44 12.5	
	comp=Z,42nm,1.5s						
ARMA	Armidale	27.08	258	P	P	21 45 55.9	+2.3
ARMA				IAmb	IAmb	21 45 57.4	
	comp=Z,8.2nm,0.8s						
PPT	Papeete	27.67	73	LR	LR	21 55 49.0	
	comp=Z,18nm,19.6s,baz=217,slow=34						
CTA	Charters Tower	34.16	276	LR	LR	21 58 47.6	
	comp=Z,82nm,19.0s,baz=62,slow=33						
CTAO	Charters Tower	34.16	276	P	P	21 46 57.4	+1.4
CTAO				IAmb	IAmb	21 47 34.5	
	comp=Z,11nm,1.4s						
STKA	Stephens Creek	35.54	254	P	P	21 47 07.1	-0.7
	comp=Z,2.1nm,0.5s,baz=104,slow=12,SNR=6.3						
	comp=Z,2.1nm,0.5s						
STKA	Stephens Creek	35.54	254	P	P	21 47 07.2	-0.6
STKA				IAmb	IAmb	21 47 08.7	
	comp=Z,15nm,1.0s						
COEN	Coen	39.39	283		P	21 47 42.3	+1.8
COEN				IAmb	IAmb	21 48 06.7	
	comp=Z,20nm,1.4s						
BBOO	Buckleboo	40.10	252	P	P	21 47 44.8	-1.5
AS31	Alice Springs	43.86	265	P	P	21 48 17.1	0.0
ASAR	Alice Springs	43.86	265	P	P	21 48 16.4	-0.6
	comp=Z,2.5nm,0.5s,baz=97,slow=6.6,SNR=57						
	comp=Z,2.5nm,0.5s						
WR8	Warramunga Arr	44.53	270	P	P	21 48 22.3	-0.2
WRAB	Tennant Creek	44.67	270	P	P	21 48 20.9	-2.7
WRA	Warramunga Arr	44.68	270	P	P	21 48 23.1	-0.6
	comp=Z,3.5nm,0.7s,baz=108,slow=8.1,SNR=12						
	comp=Z,3.5nm,0.7s						
WRA	Warramunga Arr	44.68	270	P	P	21 48 23.3	-0.4
WB0	Warramunga Arr	44.69	270	P	P	21 48 23.1	-0.7
WB0				IAmb	IAmb	21 48 24.1	
	comp=Z,4.9nm,0.8s						
JOHN	Johnston Islan	45.61	10	P	P	21 48 31.8	+1.0
FORT	Forrest	47.15	253		P	21 48 40.7	-2.3
FORT				IAmb	IAmb	21 49 10.4	
	comp=Z,6.8nm,0.9s						
VNDA	Vanda	50.02	186	P	P	21 49 05.5	+1.1
	comp=Z,0.8nm,0.8s,baz=3.9,slow=5.3,SNR=2.1						
	comp=Z,0.8nm,0.8s						
VNDA	Vanda	50.02	186	P	P	21 49 05.6	+1.2
MTN	Manton Dam	50.33	277	P	P	21 49 07.3	-0.3
MTN				IAmb	IAmb	21 49 09.9	
	comp=Z,13nm,1.3s						
KNRA	Kununurra	51.21	272	P	P	21 49 13.6	-0.5
QSPA	South Pole Qui	61.59	180	P	P	21 50 28.7	+1.2
	comp=Z,2.1nm,0.5s,baz=57,slow=2.0,SNR=8.6						
	comp=Z,2.1nm,0.5s						
TROLL	Troll, Antarti	79.75	180	⇓P	P	21 52 18.2	+0.5
	comp=Z,87nm,0.5s						
SNAA	Sanae	80.01	178	⇓P	P	21 52 19.1	0.0
	comp=Z,37nm,0.8s						
VNA3	Neumayer Olymp	80.13	176	⇓P	P	21 52 18.6	-1.1
	comp=Z,3.6nm,0.5s						
VNA2	Neumayer--Watz	80.58	177	⇓P	P	21 52 18.6	-3.5
	comp=Z,6.0nm,0.3s,baz=202,slow=5.0						
MKAR	Makanchi Array	117.03	311	PKP	PKPdf	21 58 53.5	-0.9
	comp=Z,0.3nm,0.5s,baz=124,slow=0.7,SNR=6.9						
KURBB	Kurchatov Arra	120.22	314	PKP	PKPdf	21 58 59.4	-1.0
	comp=Z,0.8nm,0.8s,baz=105,slow=2.3,SNR=8.8						
BVAR	Borovoye Array	125.47	317	PKP	PKiKP	21 59 10.6	-0.3
	comp=Z,1.1nm,0.6s,baz=170,slow=0.4,SNR=8.0						
ARCES	ARCESS Array B	136.88	348	PKP	PKiKP	21 59 33.2	-0.1
	comp=Z,2.0nm,0.8s,baz=333,slow=0.5,SNR=5.3						
FINES	FINESS Array B	143.58	341	PKP	PKPbc	21 59 41.0	-0.3
	comp=Z,1.8nm,0.6s,baz=36,slow=3.7,SNR=15						
NB2	NORSAR Subarra	146.98	352	PKP	PKPbc	21 59 51.8	-0.1
	comp=Z,0.5nm,0.4s,baz=15,slow=4.6						
NOA	NORSAR Array B	146.98	352	PKPbc	PKPbc	21 59 51.6	-0.2
	comp=Z,0.4nm,0.4s,baz=49,slow=1.8,SNR=7.3						
HFS	Hagfors	147.52	350	PKPbc	PKPbc	21 59 52.6	-0.7
	comp=Z,4.6nm,0.8s,baz=57,slow=5.5,SNR=11						
AKASG	Malin Array Be	150.14	325	PKPbc	PKPbc	21 59 59.8	-0.4
	comp=Z,1.8nm,0.4s,baz=48,slow=3.1,SNR=11						
MMAI	Mount Meron Ar	151.61	287	PKPbc	PKiKP	22 00 05.3	+0.5
	comp=Z,2.2nm,0.5s,baz=70,slow=7.2,SNR=8.9						
BRTR	Keskin Array B	152.19	302	PKPbc	PKiKP	22 00 05.5	-0.4
	comp=Z,1.3nm,0.4s,baz=143,slow=5.1,SNR=9.5						
TORD	Torodi Ar. Bea	164.68	176	PKPab	PKPab	22 01 09.9	+0.2
	comp=Z,0.7nm,0.7s,baz=143,slow=1.7,SNR=3.0						

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*IDC **12** 21:55:37.9±5.1, 20°.72S×168°.26E, h0km, mb3.8/2, mbtmp3.7/3, ML2.7/1, Error ellipse: s-maj=168.7km s-min=29.6km az=131.0*

*NOU **12** 21:55:38.4, 20°.76S×168°.32E, h0km, MLv4.1/11, Loyalty Islands*

ISC 12 21:55:40.4±1.2, 20°.9S±0°.1×168°.5E±0°.2, h30km, n13, σ1s.06/14, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	0.73	214	P	Pb	21 55 53.0	-1.7
MARNC	Mare, Loyalty	0.73	214	S	Sb	21 56 03.8	-0.6
INH	Isangel	1.52	30	P	Pb	21 56 07.4	-0.4
YATNC	Mamie plateau,	1.89	231	P	Pn	21 56 09.7	-0.9
PINNC	Pines Island,	1.98	209	P	Pn	21 56 11.8	0.0
OUENC	Ouen Island, N	2.16	224	P	Pn	21 56 15.4	+1.1
DZM	Mont Dzumac	2.23	237	Pn	Pn	21 56 15.5	0.0
	2.5nm,0.3s,baz=102,slow=12,SNR=34						
DZM				Sn	Sn	21 56 41.7	-0.3
	48nm,0.3s,baz=128,slow=23,SNR=17						
	11nm,0.4s						
DZM	Mont Dzumac	2.23	237	P	Pn	21 56 15.6	+0.2
ONTNC	Ouen Toro	2.36	232	P	Pn	21 56 19.1	+2.0
RTV	Rentapao	3.06	359	P	Pn	21 56 25.6	-1.1
ASAR	Alice Springs	32.06	258	P	P	22 02 05.7	+0.8
	1.3nm,0.7s,baz=86,slow=9.1,SNR=15						
	1.3nm,0.7s						
SONM	Songino Array	88.09	323	P	P	22 08 28.7	+0.7
	0.5nm,0.8s,baz=116,slow=3.4,SNR=2.8						
	0.5nm,0.8s						
GERES	GERESS Array B	145.56	330	PKPbc	PKPab	22 15 16.7	+0.6
	0.1nm,0.4s,baz=32,slow=3.8,SNR=4.5						

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*ATH **12** 22:03:44.1, 40°.48N×20°.73E, h9km±1km, ML2.2/6, Manual Solution by M.Kolligri First location: 2019/12/12 22:04:59, This location: 2019/12/13 05:10:57 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*TIR **12** 22:03:45.5, 40°.50N×20°.85E, h16km, Ml2.5/6*

*SKO **12** 22:03:47.1, 40°.52N×20°.74E, h20km, ML2.3*

ISC 12 22:03:45.3±0.9, 40°.48N±0°.02×20°.81E±0°.02, h14km±7km, n28, σ1s.32/47, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.15	352	Pg	Pb	22 03 48.4	-1.6
KBN				Sg	Sb	22 03 50.9	-2.2
KBN				AML	AML	22 03 52.1	
	6.8nm,0.3s						
NEST	Nestorio	0.19	109	Pg	Pg	22 03 49.9	+0.1
NEST				Sg	Sg	22 03 53.1	+0.2
NEST				AML	AML	22 03 54.0	
	5.5nm,0.2s						
NEST				AML	AML	22 03 54.1	
	3.6nm,0.2s						
NEST	Nestorio	0.19	109	P	Pg	22 03 49.9	+0.1
NEST				S	Sg	22 03 53.2	+0.4
PENT	Pentalofos	0.38	138	P	Pg	22 03 52.6	-0.4
PENT				S	Sg	22 03 57.9	-0.3
LMS2	Laimos Florina	0.43	35	P	Pg	22 03 53.6	-0.4
OHR	Ohrid	0.63	359	*i* Pg	Pb	22 03 58.3	+0.1
OHR				*i* Sg	Sn	22 04 08.3	-1.7
OHR				*e*Lg	Lg	22 04 08.6	
	comp=N,114nm,0.4s						
OHR				*e*Lg	Lg	22 04 08.8	
	comp=E,328nm,0.5s						
KPRO	Kipourio	0.67	141	P	Pb	22 03 57.6	-1.3
KPRO				S	Sg	22 04 07.6	+0.2
KZN	Kozani	0.75	103	P	Pb	22 03 59.9	-0.3
KZN				S	Sn	22 04 11.5	-1.4
MSVA	Metsovo	0.76	158	P	Pb	22 03 59.4	-1.0
MSVA				S	Sg	22 04 10.8	+0.7
JAN	Janina	0.82	178	P	Pb	22 04 00.1	-1.3
JAN				S	Sb	22 04 11.3	-1.1
VLO	Vlora	1.00	270	Pg	Pg	22 04 04.6	-0.1
VLO				Sg	Sn	22 04 22.7	+3.7
VLO				AML	AML	22 04 25.2	
	comp=E,0.9nm,0.3s						
IGT	Igoumenitsa	1.01	201	Pg	Pb	22 04 04.1	-0.6
IGT				Sg	Sn	22 04 20.4	+1.1
IGT				AML	AML	22 04 28.3	
	comp=E,0.3nm,0.5s						
IGT	Igoumenitsa	1.01	201	*i* Pg	Pg	22 04 05.1	+0.2
IGT				*i* Sg	Sn	22 04 20.8	+1.5
IGT	Igoumenitsa	1.01	201	P	Pb	22 04 03.9	-0.9
TIR	Tirane	1.13	321	Pn	Pg	22 04 06.7	-0.4
TIR				Sn	Sg	22 04 23.5	+1.7
TIR				AML	AML	22 04 31.1	
	comp=E,0.1nm,0.4s						
TIR	Tirane	1.13	321	*i* Pn	Pb	22 04 06.4	-0.2
TETR	Tetrakomo, Epi	1.19	162	P	Pb	22 04 07.7	-0.1
PHP	Peshkopia	1.24	347	Pg	Pn	22 04 07.9	-0.4
PHP				Sg	Sg	22 04 25.5	+0.2
PHP				AML	AML	22 04 29.3	
	comp=E,0.3nm,0.4s						
PHP				AML	AML	22 04 30.9	
	comp=E,0.1nm,0.4s						
THL	Klokotos Trika	1.30	134	P	Pb	22 04 09.1	-0.5
GRG	Griva	1.30	68	*i* Pn	Pn	22 04 08.6	-0.6
GRG				*i* Sn	Sg	22 04 29.9	+2.7
TYRN	Tyrnavos	1.33	125	P	Pb	22 04 09.8	-0.3
LIT	Litokhoron	1.34	106	*i* Pn	Pg	22 04 11.8	+0.7
VAY	Valandovo	1.58	57	*i* Pn	Pb	22 04 14.6	+0.3
VAY				*i* Sn	Sg	22 04 39.2	+3.1
VAY				*e*Lg	Lg	22 04 39.5	
	comp=N,21nm,0.6s						
VAY				*e*Lg	Lg	22 04 41.9	
	comp=E,16nm,0.5s						
LKD2	Lefkada island	1.69	184	Pn	Pg	22 04 17.0	-0.8
LKD2				Sn	Sg	22 04 42.0	+2.3
KNT	Kendrikon	1.72	66	*i* Pn	Pb	22 04 16.3	-0.5
KNT				*i* Sn	Sg	22 04 43.6	+2.8
SDA	Shkodra	1.86	328	Pn	Pn	22 04 16.5	-0.2
SDA				Sn	Sg	22 04 45.3	+0.2
KKB	Krupnik	2.22	51	*i* Pn	Pb	22 04 24.1	-1.1
BARS	Barje	2.45	18	*i* Pn	Pn	22 04 26.0	+1.0

IDC 12 22:20:06.9±1.6, 1°.85N×127°.62E, h0km, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=147.0km s-min=18.7km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.64	163	P	P	22 25 10.8	+1.1
	1.4nm,0.5s,baz=342,slow=11,SNR=7.3						
	1.4nm,0.5s						
ASAR	Alice Springs	26.09	167	P	P	22 25 42.4	-0.2
	0.4nm,0.5s,baz=356,slow=8.1,SNR=12						
	0.4nm,0.5s						
STKA	Stephens Creek	36.07	160	P	P	22 27 09.5	-0.9
	2.3nm,0.4s,baz=339,slow=11,SNR=7.2						
	2.3nm,0.4s						
MKAR	Makanchi Array	59.60	325	P	P	22 30 13.2	+0.6
	0.5nm,0.5s,baz=117,slow=8.3,SNR=13						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	63.79	328	P	P	22 30 40.4	-0.5
	0.8nm,0.2s,baz=129,slow=5.5,SNR=7.0						
	0.8nm,0.2s						

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*CATAC **12** 22:23:21.5±0.5, 12°N±3°×8°8W±°, h34km±7km, M3.6/20, MLv3.6/20, Error ellipse: s-maj=5.9km s-min=2.5km az=23.5, confirmed*

*SNET **12** 22:23:24.4±1.0, 12°.50N×88°.22W, h22km±10km, ML3.1*

ISC 12 22:23:21.5±1.5, 12°.24N±0°.07×88°.09W±0°.04, h45km±51km, n48, σ0s.53/61, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	0.90	35	P	Pn	22 23 37.8	0.0
CSGN				S	Sn	22 23 50.2	+0.4
POTN	Potosi Cosigui	0.95	37	P	Pn	22 23 38.2	-0.2
POTN				S	Sn	22 23 51.1	+0.3
CNCH	Conchagua	1.06	14	*e*P	Pn	22 23 39.8	-0.3
CNCH				*e*S	Sn	22 23 53.2	-0.6
CNCH	Conchagua	1.06	14	P	Pn	22 23 39.8	-0.3
LCND	La Caada	1.08	10	*e*P	Pn	22 23 39.9	-0.3
LCND	La Caada	1.08	10	P	Pn	22 23 39.8	-0.5
CRIN	San Cristobal	1.12	66	S	Sn	22 23 56.0	+1.0
LCY	Lacayo	1.20	351	*e*P	Pn	22 23 41.6	-0.3
VSM	San Miguel	1.20	351	*e*P	Pn	22 23 42.1	+0.1
ALEN	Leon	1.21	80	P	Pn	22 23 41.5	-0.6
ALEN	Leon	1.21	80	S	Sn	22 23 57.1	-0.2
CNRM	Centro Naciona	1.23	356	S	Sn	22 23 58.4	+0.7
CNRM	Centro Naciona	1.23	356	P	Pn	22 23 42.0	-0.3
QUEN	Al S del Volca	1.26	74	P	Pn	22 23 42.8	+0.1
QUEN				S	Sn	22 23 58.9	+0.3
TECA	Tecapa	1.31	342	*e*P	Pn	22 23 43.6	+0.1
POLN	Al Sur del Vol	1.31	72	P	Pn	22 23 43.2	-0.3
POLN				S	Sn	22 23 59.9	+0.1
CNGA	Al SSO del Vol	1.38	79	P	Pn	22 23 44.3	-0.1
CNGN	Cerro Negro	1.39	79	P	Pn	22 23 44.3	-0.2
CNGN	Cerro Negro	1.39	79	S	Sn	22 24 01.7	+0.1
COPN	Copaltepe	1.47	92	P	Pn	22 23 45.5	0.0
UESV	Universidad de	1.55	334	P	Pn	22 23 46.5	-0.1
MOM3	MOM3	1.56	80	P	Pn	22 23 46.7	-0.1
MOM3				S	Sn	22 24 05.8	-0.1
SCLA	Alcaldia de Sa	1.58	337	*e*P	Pn	22 23 47.9	+0.8
SCLA				*e*S	Sn	22 24 06.0	-0.4
SCLA	Alcaldia de Sa	1.58	337	S	Sn	22 24 06.9	+0.5
MOM2	El Cardon	1.58	83	P	Pn	22 23 47.1	+0.1
MOM2				S	Sn	22 24 06.6	+0.2
PAVA	Las Pavas	1.68	331	S	Sn	22 24 09.4	+0.4
LOMA	Loma Larga	1.75	323	*e*P	Pn	22 23 49.6	+0.1
LOMA				*e*S	Sn	22 24 09.2	-1.4
LOMA	Loma Larga	1.75	323	P	Pn	22 23 49.4	-0.1
LOMA	Loma Larga	1.75	323	S	Sn	22 24 11.1	+0.4
LFU	La Fuente	1.80	327	*e*P	Pn	22 23 50.8	+0.6
UEES	Universidad Ev	1.85	323	S	Sn	22 24 13.6	+0.6
LIMN	Finca el Limon	1.87	64	P	Pn	22 23 51.4	+0.3
LIMN				S	Sn	22 24 13.1	-0.5
MAS3	Al N del Volca	1.89	96	P	Pn	22 23 51.1	-0.2
PMON	Piamonte	1.89	321	P	Pn	22 23 51.3	-0.1
PMON	Piamonte	1.89	321	S	Sn	22 24 15.0	+1.0
JAYA	Jayaque - finc	1.93	317	*e*P	Pn	22 23 52.1	+0.1
JAYA				*e*S	Sn	22 24 12.7	-2.5
JAYA				IAML		22 24 15.8	
	comp=Z,224nm,0.2s						
JAYA	Jayaque - finc	1.93	317	P	Pn	22 23 52.2	+0.1
JAYA	Jayaque - finc	1.93	317	S	Sn	22 24 15.9	+0.7
NANN	Nandasmo	1.95	99	S	Sn	22 24 15.8	+0.3
NANN	Nandasmo	1.95	99	P	Pn	22 23 52.0	-0.2
TGUH	Tegucigalpa,Un	1.98	24	P	Pn	22 23 52.3	-0.3
TGUH				S	Sn	22 24 16.4	+0.1
LLGN	La Laguna	2.08	337	S	Sn	22 24 19.1	+0.2
YUSH	Yuscaran	2.10	35	S	Sn	22 24 19.1	-0.1
YUSH	Yuscaran	2.10	35	P	Pn	22 23 54.1	-0.2
OCON	Estacion meteo	2.10	48	S	Sn	22 24 19.3	+0.2
MATN	Matagalpa	2.22	72	P	Pn	22 23 55.7	-0.3
RCFN	Al S de San Ju	2.24	55	P	Pn	22 23 56.4	+0.2
RCFN				S	Sn	22 24 22.6	-0.2
RCON	San Juan de Ri	2.26	57	P	Pn	22 23 56.8	+0.3

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*IDC **12** 22:26:45.9±1.5, 36°.47N×141°.87E, h49km±10km, mb3.5/4, mbtmp3.9/7, ML3.8/3, MS3.0/2, Error ellipse: s-maj=19.6km s-min=12.2km az=106.0*

*NIED **12** 22:26:46.5, 36°.64N×141°.65E, h63km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.76; $M_{\theta\theta}$-0.12; $M_{\phi\phi}$-2.63; $M_{r\theta}$-0.53; $M_{\theta\phi}$-3.43; $M_{\phi r}$2.92; Fault plane solution: $M_0$5.24000×10^{14} NP1: ϕ_s249.00000°, δ43.00000°, λ148.00000°. NP2: ϕ_s4.00000°, δ69.00000°, λ51.00000°.*

*JMA **12** 22:26:46.5±0.2, 36°.6N±0°.5×14°2E±°, h63km±2km, MV4.1/40, E OFF IBARAKI PREF*

JMA Felt I J1 at E OFF IBARAKI PREF .

ISC 12 22:26:46.3±1.3, 36°.59N±0°.05×141°.80E±0°.09, h47km±10km, n32, σ1s.21/39, mb3.6/4, 18D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.95	302	⇓*i*P	Pn	22 27 02.4	-1.0
ONAJ				⇓*e*S	Sn	22 27 14.2	-1.7
JHO	Hitachi	0.99	271	⇓*i*P	Pn	22 27 03.0	-0.9
JHO				⇓S	Sn	22 27 15.0	-1.8
JHO	Hitachi	0.99	271	A	A	22 27 03.0	
	comp=N,2.0nm,0.2s,comp=E,3.0nm,1.0s						
JHYU	Hitachinakayam	1.01	256	⇓*i*P	Pn	22 27 03.8	-0.4
JHYU				⇓S	Sn	22 27 16.1	-1.1
JFK	Kawauchi	1.07	316	⇓*i*P	Pn	22 27 04.0	-0.9
JFK				⇓S	Sn	22 27 17.0	-1.8
JFFD	Fukushimafurud	1.11	297	⇓*i*P	Pn	22 27 04.5	-1.0
JFFD				⇓*e*S	Sn	22 27 17.8	-1.9
JMM	Marumori	1.50	328	⇓*i*P	Pn	22 27 09.9	-0.9
JMM				⇓S	Sn	22 27 27.3	-2.0
JOTO	OTAMA OYAMA	1.52	310	*i* P	Pn	22 27 11.1	0.0
JOTO				S	Sn	22 27 29.5	-0.2
JOTO	OTAMA OYAMA	1.52	310	A	A	22 27 11.1	
	comp=N,11nm,0.3s,comp=E,5.0nm,0.4s						
JFY	Yanaizu	1.87	296	P	Pn	22 27 15.5	-0.3
JIO	Ouri	1.89	349	⇓*i*P	Pn	22 27 15.3	-0.8
JIO				⇓S	Sn	22 27 36.6	-2.2
JAG	Ashikaga	1.90	266	⇓*i*P	Pn	22 27 15.8	-0.5
JAG				⇓S	Sn	22 27 37.0	-2.0
JOU	Okura	1.99	333	*i* P	Pn	22 27 17.0	-0.5
JOU				S	Sn	22 27 40.9	-0.3
BSO1	Boso 1	2.05	199	P	Pn	22 27 18.5	+0.7
JKT	Katashina	2.06	276	*i* P	Pn	22 27 18.6	0.0
JKT				S	Sn	22 27 42.8	-0.3
JYS	Shirataka	2.13	320	⇓*i*P	Pn	22 27 19.4	0.0
JYS				⇓*e*S	Sn	22 27 44.6	-0.1
JNS	Sasagawa	2.33	302	P	Pn	22 27 21.6	-0.6
MJAR	Matsushiro Arr	2.90	270	P	Pn	22 27 29.5	-0.5
	comp=E,5.8nm,0.3s,baz=87,slow=15,SNR=151						
MJAR				S	Sn	22 28 04.3	+0.8
	comp=E,33nm,0.6s,baz=100,slow=15,SNR=4.9						
MJAR				LR	LR	22 28 28.5	
	comp=E,55nm,20.1s,baz=114,slow=35						
	comp=E,44nm,0.3s						
JHJ	Hachijo jima 2	3.84	206	P	Pn	22 27 42.4	-0.6
	comp=E,40nm,0.3s,baz=143,slow=23,SNR=22						
JHJ				S	Sn	22 28 24.3	-2.5
	comp=E,118nm,0.3s,baz=102,slow=22,SNR=10						
	comp=E,80nm,0.3s						
ASAJ	Asahikawa	7.54	4	P	Pn	22 28 33.3	-0.3
	comp=E,1.3nm,0.3s,baz=210,slow=14,SNR=8.3						
	comp=E,6.3nm,0.6s						
JCJ	Chichijima	9.48	178	P	Pn	22 28 47.4	-13
	comp=E,65nm,0.9s,baz=288,slow=20,SNR=1.8						
JCJ				S	Sn	22 30 23.8	-22
	comp=E,28nm,0.5s,baz=287,slow=20,SNR=1.2						

H11N2	WAKE ISLAND Hy	27.65	121	T	T	23 01 59.4	
	baz=313,slow=75,SNR=12						
H11N1	WAKE ISLAND Hy	27.66	121	T	T	23 01 54.6	
	baz=313,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	27.67	121	T	T	23 02 05.6	
	baz=313,slow=75,SNR=11						
SONM	Songino Array	28.29	305	P	P	22 32 35.9	+0.6
	comp=E,0.9nm,0.5s,baz=104,slow=8.8,SNR=8.9						
SONM				pP	pP	22 32 49.3	+2.0
	comp=E,0.7nm,0.6s,baz=110,slow=9.0,SNR=5.0						
	comp=E,0.9nm,0.5s						
H11S1	WAKE ISLAND Hy	28.36	123	T	T	23 02 50.4	
	baz=314,slow=76,SNR=8.4						
H11S3	WAKE ISLAND Hy	28.36	123	T	T	23 02 56.1	
	baz=314,slow=76,SNR=7.0						
H11S2	WAKE ISLAND Hy	28.37	123	T	T	23 02 52.1	
	baz=314,slow=76,SNR=6.7						
ZALV	Zalesovo Beam	42.44	313	P	P	22 34 37.9	+1.6
	comp=E,0.5nm,0.4s,baz=94,slow=6.2,SNR=3.7						
ZALV				pP	pP	22 34 50.2	+1.5
	comp=E,0.6nm,0.5s,baz=98,slow=7.7,SNR=3.2						
	comp=E,0.5nm,0.4s						
MKAR	Makanchi Array	44.62	303	P	P	22 34 53.7	-0.2
	comp=E,0.8nm,0.9s,baz=79,slow=7.5,SNR=3.9						
MKAR				pP	pP	22 35 06.4	0.0
	comp=E,0.6nm,0.6s,baz=90,slow=9.5,SNR=5.3						
	comp=E,0.8nm,0.9s						
KURBB	Kurchatov Arra	46.52	308	P	P	22 35 08.1	-0.8
	comp=E,1.0nm,0.6s,baz=84,slow=7.9,SNR=6.5						
	comp=E,1.0nm,0.6s						
SPITS	Spitsbergen Ar	61.01	349	LR	LR	23 06 59.0	
	comp=E,59nm,19.4s,baz=129,slow=40						

IDC ***12*** *22:27:43.2±1.0, 0°.70S×134°.19E, h0km, mb4.1/9, mbtmp4.1/11, ML4.3/2, MS3.8/2, Error ellipse: s-maj=42.8km s-min=17.4km az=80.0*
NEIC ***12*** *22:27:45.4±1.0, 0°.8S±0°.1×134°.1E±0°.1, h10km±2km, mb4.1/11, Error ellipse: s-maj=22.3km s-min=17.9km az=80.0*
DJA ***12*** *22:27:47.5±0.5, 1°S±3°×13°4E±°, h15km±2km, M4.5/9, mB5.2/1, mb4.9/3, MLv4.3/9, Mw(mB)4.6/1*
ISC 12 22:27:47.8±1.0**, 0°.72S**±0°.06×**134°.07E**±0°.06**, h30**km±7km**, n36, σ1s.17**/42**, mb4.2**/13**, MS4.2**/3**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MWPI	Manokwari, Pap	0.21	189	P	Pn	22 27 54.7	-0.2
MWPI				S	Sn	22 28 00.3	+1.9
RKPI	Ransiki, Papua	0.79	172	P	Pn	22 28 02.7	-0.3
RKPI				S	Sn	22 28 14.7	+0.9
BAKI	Biak	2.09	103	P	Pb	22 28 24.3	-0.7
BAKI				S	Sb	22 28 52.2	+1.6
SRPI	Serui, Papua	2.45	118	P	Pb	22 28 29.5	-1.7
SRPI				S	Sb	22 29 01.1	+0.1
SWI	Sorong	2.81	267	P	Pn	22 28 30.3	-0.5
FAKI	Fak Fak	2.84	220		Pn	22 28 30.9	-0.3
FAKI	Fak Fak	2.84	220	P	Pn	22 28 31.1	-0.1
FAKI				S	Sn	22 29 04.6	+0.1
KMPI	Kaimana, Papua	2.94	187	P	Pn	22 28 35.1	+2.5
KMPI				S	Sn	22 29 10.0	+3.1
BNDI	Bandanaira	5.62	228	P	Pn	22 29 09.8	+0.4
	165nm,0.7s						
BNDI				S	Sn	22 30 14.6	+1.6
	165nm,0.7s						
MTN	Manton Dam	12.39	193		Pn	22 30 41.0	-1.3
TOLI2	Tolitoli	13.41	278	Pn	Pn	22 30 56.1	-0.2
KNRA	Kununurra	15.76	199		Pn	22 31 25.9	-1.8
KNRA				IAmb	IAmb	22 31 32.7	
	comp=Z,47nm,1.2s						
COEN	Coen	15.94	146	Pn	Pn	22 31 28.9	-1.3
COEN				IAmb	IAmb	22 31 59.3	
	comp=Z,16nm,1.3s						
WB0	Warramunga Arr	18.93	179	P	P	22 32 05.8	-0.7
WB0				IAmb	IAmb	22 32 21.3	
	comp=Z,4.5nm,0.8s						
WRA	Warramunga Arr	19.11	179	P	P	22 32 07.8	-0.6
	comp=Z,0.8nm,0.3s,baz=359,slow=11,SNR=21						
	comp=Z,1.2nm,0.3s						
WRA	Warramunga Arr	19.11	179	P	P	22 32 07.4	-1.0
WR8	Warramunga Arr	19.12	179		P	22 32 07.7	-0.9
WR8				IAmb	IAmb	22 32 21.7	
	comp=Z,9.0nm,1.1s						
FITZ	Fitzroy Crossi	19.15	205	P	P	22 32 09.0	+0.1
	comp=Z,0.9nm,0.3s,baz=23,slow=12,SNR=7.4						
	comp=Z,5.4nm,0.6s						
FITZ	Fitzroy Crossi	19.15	205	P	P	22 32 08.3	-0.6
AS31	Alice Springs	22.81	180	P	P	22 32 46.5	-1.9
AS31				IAmb	IAmb	22 33 05.4	
	comp=Z,2.6nm,0.6s						
ASAR	Alice Springs	22.81	180	P	P	22 32 48.0	-0.3
	comp=Z,1.5nm,0.6s,baz=5.1,slow=11,SNR=13						
ASAR				LR	LR	22 43 07.7	
	comp=Z,113nm,19.3s,baz=300,slow=40						
	comp=Z,1.5nm,0.6s						
KSRS	Korea Array	38.41	352	LR	LR	22 49 29.0	
	comp=Z,8µm,20.7s,baz=20,slow=34						
CMAR	Chiang Mai Arr	39.44	301	P	P	22 35 15.8	+0.2
	comp=Z,1.4nm,0.4s,baz=121,slow=6.8,SNR=16						
	comp=Z,1.4nm,0.4s						
EVN	Everest	53.52	306	P	P	22 37 06.7	0.0
EVN				IAmb	IAmb	22 37 08.3	
	comp=Z,7.9nm,1.4s						
SONM	Songino Array	54.03	337	P	P	22 37 10.5	+1.0
	comp=Z,0.3nm,0.6s,baz=152,slow=8.2,SNR=2.4						
SONM				PcP	PcP	22 38 13.5	-0.8
	comp=Z,0.6nm,0.6s,baz=160,slow=4.0,SNR=4.4						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	65.42	324	P	P	22 38 28.9	+1.0
	comp=Z,2.9nm,0.6s,baz=110,slow=8.6,SNR=49						
	comp=Z,2.9nm,0.6s						
MAKZ	Makanchi	65.61	323	P	P	22 38 29.9	+0.8
KSH	Kashi	66.37	314	P	P	22 38 36.3	+2.1
KSH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ZALV	Zalesovo Beam	67.93	331	P	P	22 38 43.7	0.0
	comp=Z,0.8nm,0.5s,baz=111,slow=6.7,SNR=3.9						
	comp=Z,0.8nm,0.5s						
KURBB	Kurchatov Arra	69.47	326	P	P	22 38 53.7	+0.4
	comp=Z,2.9nm,0.8s,baz=119,slow=5.9,SNR=22						
	comp=Z,2.9nm,0.8s						
BVAR	Borovoye Array	75.06	326	P	P	22 39 26.9	+0.2
	comp=Z,1.4nm,0.7s,baz=111,slow=8.1,SNR=5.7						
	comp=Z,1.4nm,0.7s						
VNDA	Vanda	78.19	174	P	P	22 39 43.2	-0.8
VNDA				IAmb	IAmb	22 40 07.7	
	comp=Z,4.1nm,1.2s						
ILAR	Eielson Array	85.98	25	P	P	22 40 24.6	-0.4
	comp=Z,1.0nm,0.6s,baz=252,slow=5.0,SNR=12						
	comp=Z,1.0nm,0.6s						
QSPA	South Pole Qui	89.21	180	P	P	22 40 41.7	+1.1
	comp=Z,1.0nm,0.7s,baz=280,slow=3.1,SNR=2.5						
	comp=Z,1.0nm,0.7s						
QSPA	South Pole Qui	89.21	180	P	P	22 40 40.7	0.0
KVAR	Kislovodsk Arr	91.49	314	LR	LR	23 28 04.0	
	comp=Z,80nm,18.8s,baz=90,slow=40						

ATH ***12*** *22:40:41.0, 40°.50N×20°.73E, h9km±2km, ML2.4/11, Manual Solution by I.Dede First location: 2019/12/12 22:41:54, This location: 2019/12/12 23:41:49 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
TIR ***12*** *22:40:41.9, 40°.50N×20°.83E, h17km, Ml2.5/6*
SKO ***12*** *22:40:43.3, 40°.51N×20°.80E, h16km, ML2.4*
ISC 12 22:40:41.9±0.9**, 40°.45N**±0°.02×**20°.73E**±0°.03**, h9**km±7km**, n36, σ1s.31**/57**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.18	13	Pg	Pg	22 40 45.1	-0.7
KBN				Sg	Sg	22 40 47.4	-1.1
KBN				AML	AML	22 40 48.2	
	12nm,0.3s						
NEST	Nestorio	0.24	98	Pg	Pg	22 40 46.5	-0.4
NEST				Sg	Sg	22 40 50.1	-0.2
NEST				AML	AML	22 40 50.7	
	9.5nm,0.2s						
NEST				AML	AML	22 40 50.8	
	5.9nm,0.2s						
NEST	Nestorio	0.24	98	P	Pg	22 40 46.5	-0.4
NEST				S	Sb	22 40 52.1	+1.8
PENT	Pentalofos	0.40	129	P	Pg	22 40 49.6	-0.2
PENT				S	Sb	22 40 56.7	-0.8
OHR	Ohrid	0.66	4	*i* Pg	Pg	22 40 54.8	0.0
OHR				*i* Sg	Sg	22 41 04.3	+0.9
OHR				*e*Lg	Lg	22 41 05.0	
	comp=E,453nm,0.5s						
OHR				*e*Lg	Lg	22 41 05.6	
	comp=N,183nm,0.5s						
KPRO	Kipourio	0.69	135	P	Pg	22 40 54.6	-0.7
KPRO				S	Sb	22 41 05.6	-0.2
JAN	Janina	0.80	173	P	Pb	22 40 57.2	-0.8
JAN				S	Sb	22 41 09.0	+0.2
KZN	Kozani	0.81	100	P	Pg	22 40 56.8	-0.6
KZN				S	Sb	22 41 09.1	0.0
IGT	Igoumenitsa	0.97	199	Pg	Pn	22 41 01.2	-0.4
IGT				Sg	Sn	22 41 16.7	+1.3
IGT				AML	AML	22 41 18.2	
	comp=N,0.3nm,0.7s						
IGT	Igoumenitsa	0.97	199	*i* Pg	Pn	22 41 00.7	-0.9
IGT				*i* Sg	Sn	22 41 17.5	+2.1
IGT	Igoumenitsa	0.97	199	P	Pn	22 41 00.7	-0.9
IGT				S	Sn	22 41 14.3	-1.1
KEK	Kerkira	1.03	225	P	Pn	22 41 01.6	-0.9
TIR	Tirane	1.11	324	Pn	Pn	22 41 03.3	-0.3
TIR				Sn	Sn	22 41 22.3	+3.2
TIR				AML	AML	22 41 29.4	
	comp=N,0.2nm,0.4s						
TIR	Tirane	1.11	324	*i* Pg	Pn	22 41 03.5	-0.2
TETR	Tetrakomo, Epi	1.18	159	P	Pn	22 41 04.0	-0.6
TETR				S	Sn	22 41 20.5	-0.3
PHP	Peshkopia	1.25	350	Pg	Pg	22 41 04.4	-1.6
PHP				Sg	Sg	22 41 21.6	-0.7
PHP				AML	AML	22 41 26.0	
	comp=N,0.4nm,0.4s						
PHP				AML	AML	22 41 27.6	
	comp=N,0.2nm,0.4s						
THL	Klokotos Trika	1.32	132	Pn	Pn	22 41 04.6	-1.9
THL				Sn	Sn	22 41 24.7	+0.5
THL	Klokotos Trika	1.32	132	P	Pn	22 41 05.8	-0.7
THL				S	Sg	22 41 23.5	-1.0
GRG	Griva	1.37	68	*i* Pn	Pn	22 41 06.2	-0.9
TYRN	Tyrnavos	1.37	122	P	Pn	22 41 06.8	-0.4
TYRN				S	Sn	22 41 25.9	+0.6
LIT	Litokhoron	1.39	104	*i* Pn	Pb	22 41 07.8	-0.2
LIT				*i* Sn	Sn	22 41 27.7	+1.8
LIT	Litokhoron	1.39	104	P	Pn	22 41 07.4	-0.1
TSLK	Tsoukalades, L	1.62	182	P	Pg	22 41 11.4	-1.7
VAY	Valandovo	1.64	57	*i* Pn	Pn	22 41 10.9	0.0
VAY				*i* Sn	Sg	22 41 35.0	+0.2
VAY				*e*Lg	Lg	22 41 36.2	
	comp=N,25nm,0.7s						
VAY				*e*Lg	Lg	22 41 36.9	
	comp=E,19nm,0.8s						
LKD2	Lefkada island	1.66	182	Pn	Pg	22 41 14.1	+0.3
LKD2				Sn	Sg	22 41 41.7	+6.4
LKD2	Lefkada island	1.66	182	P	Pg	22 41 12.3	-1.5
THE	Thessaloniki	1.71	83	*i* Pn	Pb	22 41 13.8	+0.3
EVR	Evrytania	1.74	151	P	Pb	22 41 12.7	-1.4
KNT	Kendrikon	1.79	66	*i* Pn	Pn	22 41 12.8	-0.2
KNT	Kendrikon	1.79	66	P	Pn	22 41 12.9	-0.1
SDA	Shkodra	1.85	330	Pg	Pb	22 41 15.9	0.0
SDA				Sg	Sg	22 41 41.2	-0.2
SDA				AML	AML	22 41 46.4	
	comp=E,0.1nm,1.2s						
AGG	Agios Georgios	1.88	139	P	Pn	22 41 13.9	-0.4
PVO	Paravola	1.93	161	P	Pn	22 41 14.8	0.0
SRS	Serrai	2.27	72	*i* Pn	Pn	22 41 19.4	-0.2
KKB	Krupnik	2.28	52	*i* Pn	Pn	22 41 20.2	+0.5
BARS	Barje	2.50	19	*i* Pn	Pn	22 41 22.3	-0.4

GCG ***12*** *22:53:38.9±1.6, 13°.24N×89°.94W, h32km±15km, MD3.9*
CATAC ***12*** *22:53:38.3±0.6, 13°N±3°×9°0W±°, h17km±3km, M3.4/15, MLv3.4/15, Error ellipse: s-maj=5.9km s-min=5.0km az=35.3, confirmed*
SNET ***12*** *22:53:39.5±1.2, 13°.24N×89°.95W, h28km±3km, ML3.2*
ISC 12 22:53:38.8±2.2**, 13°.24N**±0°.07×**89°.94W**±0°.08**, h26**km±12km**, n54, σ0s.34**/69**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	Alcaldia de Sa	0.61	353	P	Pb	22 53 50.8	-0.1
JAYA	Jayaque - finc	0.64	49	*e*P	Pb	22 53 51.6	+0.1
JAYA				*e*S	Sb	22 54 00.6	+0.5
JAYA	Jayaque - finc	0.64	49	*i* P	Pb	22 53 51.7	+0.1
JAYA				*i* S	Sn	22 54 01.8	+0.1
JAYA	Jayaque - finc	0.64	49	P	Pb	22 53 51.6	+0.1
LALI	Alcalda de L	0.66	68	*e*P	Pb	22 53 51.5	-0.3
LALI				*e*S	Sb	22 54 00.2	-0.3
LALI	Alcalda de L	0.66	68	*i* P	Pb	22 53 51.5	-0.3
LALI				*i* S	Sb	22 54 00.2	-0.3
LALI	Alcalda de L	0.66	68	P	Pb	22 53 51.4	-0.3
SBLS	San Blas	0.68	27	*e*P	Pb	22 53 52.4	+0.2
SBLS				*e*S	Sn	22 54 02.4	-0.4
NUBE	Las Nubes	0.68	14	*e*P	Pb	22 53 52.3	0.0
NUBE				*e*S	Sn	22 54 02.2	-0.5
NUBE	Las Nubes	0.68	14	*i* P	Pb	22 53 52.3	0.0
NUBE				*i* S	Sn	22 54 02.7	-0.1
NUBE	Las Nubes	0.68	14	P	Pb	22 53 52.2	0.0
SNJE	San Jose	0.71	28	*e*P	Pb	22 53 52.8	0.0
SNJE				*e*S	Sb	22 54 02.6	+0.4
RTR	El Retiro	0.72	24	*e*P	Pb	22 53 53.0	+0.1
PMON	Piamonte	0.77	52	*e*P	Pn	22 53 53.9	-0.3
PMON				*e*S	Sn	22 54 05.2	+0.2
PMON	Piamonte	0.77	52	P	Pn	22 53 53.9	-0.3
CEDA	San Andres	0.78	43	S	Sn	22 54 05.3	+0.3
BOQS	Boqueron	0.81	52	*e*P	Pn	22 53 54.6	-0.2
BOQS				*e*S	Sn	22 54 06.3	+0.1
PANCS	Alcalda de	0.83	63	P	Pb	22 53 54.7	-0.1
PANCS	Alcalda de	0.83	63	S	Sb	22 54 05.6	0.0
UNIC	Universidad Ca	0.83	27	S	Sn	22 54 06.6	+0.1
UNIC	Universidad Ca	0.83	27	P	Pb	22 53 54.8	0.0
UEES	Universidad Ev	0.83	55	P	Pn	22 53 54.9	-0.1
UEES	Universidad Ev	0.83	55	S	Sn	22 54 06.6	+0.2
UTEC	Universidad Te	0.86	57	S	Sn	22 54 06.9	-0.1
IGN	Direccin Gen	0.89	58	P	Pn	22 53 55.5	-0.3
IGN	Direccin Gen	0.89	58	S	Sn	22 54 08.0	+0.2
UDBS	Universidad Do	0.90	58	S	Sn	22 54 08.0	-0.1
RBDL	Robledal	0.91	16	*e*P	Pn	22 53 55.9	-0.1
PAVA	Las Pavas	1.09	64	*e*P	Pn	22 53 58.6	+0.1
PAVA				*e*S	Sb	22 54 13.1	+0.1
PAVA	Las Pavas	1.09	64	P	Pb	22 53 59.0	-0.1
TECO	Alcaldia de Te	1.17	75	*e*P	Pn	22 53 58.9	-0.7
TECO	Alcaldia de Te	1.17	75	S	Sn	22 54 14.4	-0.3
TECO	Alcaldia de Te	1.17	75	P	Pn	22 53 59.7	+0.1
UESV	Universidad de	1.19	70	P	Pn	22 54 00.0	+0.1
UESV	Universidad de	1.19	70	S	Sb	22 54 15.7	-0.2
SCLA	Alcaldia de Sa	1.27	69	*e*P	Pn	22 54 00.7	-0.3
SCLA	Alcaldia de Sa	1.27	69	P	Pn	22 54 01.1	+0.2
SCLA	Alcaldia de Sa	1.27	69	S	Sb	22 54 18.6	+0.4
MTO3	Montecristo	1.29	26	*i* P	Pn	22 54 01.4	0.0
MTO3	Montecristo	1.29	26	P	Pn	22 54 01.3	0.0
MTO3	Montecristo	1.29	26	S	Sb	22 54 19.0	+0.2
LLGN	La Laguna	1.34	46	S	Sb	22 54 20.2	+0.1
LLGN	La Laguna	1.34	46	P	Pn	22 54 01.9	-0.1
TECA	Tecapa	1.43	79	*e*P	Pn	22 54 02.2	-1.0
TECA				*e*S	Sn	22 54 20.6	-0.7
ESQI	Esquipulas	1.44	24	S	Sb	22 54 23.1	+0.1
LCY	Lacayo	1.62	83	*e*P	Pn	22 54 05.5	-0.2
LCND	La Caada	2.00	88	*e*P	Pn	22 54 10.7	-0.2
LCND	La Caada	2.00	88	S	Sn	22 54 36.0	+0.8
LCND	La Caada	2.00	88	P	Pn	22 54 11.1	+0.2
CNCH	Conchagua	2.06	89	*e*P	Pn	22 54 11.6	-0.1
CNCH				*e*S	Sn	22 54 36.3	-0.4
CNCH	Conchagua	2.06	89	P	Pn	22 54 11.7	-0.1
CNCH	Conchagua	2.06	89	S	Sn	22 54 37.1	+0.5
CSGN	Cosiguina Volc	2.34	96	P	Pn	22 54 15.0	-0.7
CSGN				S	Sn	22 54 44.5	+0.9
PKGN	Cerro Pekin	2.95	101	P	Pn	22 54 24.4	+0.4
PKGN				S	Sn	22 54 59.3	+0.8

IDC ***12*** *23:03:19.9±1.8, 12°.40N×144°.77E, h61km±17km, mb3.7/6, mbtmp3.9/6, MS2.8/1, Error ellipse: s-maj=48.2km s-min=16.9km az=95.0*
ISC 12 23:03:16.8±1.2**, 12°.3N**±0°.1×**144°.6E**±0°.4**, h30km, n8, σ1s.06**/8**, mb3.9**/6**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.27	12	P	Pb	23 03 40.2	0.0
	144nm,0.3s,baz=20,slow=4.3,SNR=5.8						
GUMO				S	Sn	23 03 56.0	+1.4
	280nm,0.3s,baz=12,slow=21,SNR=5.9						
JHJ	Hachijo jima 2	21.15	349	LR	LR	23 14 16.6	
	comp=Z,31nm,21.5s,baz=54,slow=31						
WRA	Warramunga Arr	33.63	198	P	P	23 09 55.7	+0.8
	2.5nm,0.8s,baz=22,slow=9.7,SNR=15						
	2.5nm,0.8s						
ASAR	Alice Springs	37.28	196	P	P	23 10 27.1	+0.8
	0.7nm,0.8s,baz=13,slow=7.7,SNR=9.6						
	0.7nm,0.8s						
MKAR	Makanchi Array	62.21	317	P	P	23 13 35.4	-0.3
	0.2nm,0.5s,baz=91,slow=8.3,SNR=7.5						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	65.41	320	P	P	23 13 57.1	+0.5
	0.5nm,0.2s,baz=106,slow=6.5,SNR=4.7						
	0.5nm,0.2s						
ILAR	Eielson Array	69.81	25	P	P	23 14 23.1	-1.0
	0.3nm,0.6s,baz=261,slow=6.7,SNR=7.3						
	0.3nm,0.6s						
FINES	FINESS Array B	92.18	335	P	P	23 16 22.4	-1.0
	3.9nm,1.0s,baz=66,slow=4.9,SNR=4.5						
	3.9nm,1.0s						

IDC 12 23:10:05.1±57.0**, 16°.42S**×**177°.55W, h0**km**, mb4.2**/3**, mbtmp4.2**/3**, Error ellipse: s-maj=1048.0km s-min=173.6km az=77.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	40.07	240	P	P	23 17 42.5	+0.1
	2.9nm,0.7s,baz=88,slow=14,SNR=4.2						
	2.9nm,0.7s						
WRA	Warramunga Arr	45.72	258	P	P	23 18 28.1	-0.3
	0.6nm,0.5s,baz=93,slow=7.7,SNR=6.7						
	0.6nm,0.5s						
ASAR	Alice Springs	45.99	253	P	P	23 18 30.4	-0.2
	6.3nm,0.6s,baz=88,slow=8.3,SNR=95						
	6.3nm,0.6s						

DJA 12 23:23:04.6±0.9**, 6°N**±7°×**12°5E**±°**, h119**km±15km**, M4.1**/7**, mB5.5**/1**, mb4.2**/2**, MLv4.0**/7**, Mw(mB)5.0**/1**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	2.00	158	P	Pn	23 23 38.2	+0.2
SGSI				S	Sn	23 24 04.7	+1.2
GTOI	Gorontalo	5.19	200	P	Pn	23 24 19.8	-0.4
	0.1nm20nm,0.6s						
GTOI				S	Sn	23 25 17.0	-2.0
	0.1nm20nm,0.6s						
LUWI	Luwuk	6.85	197	P	Pn	23 24 42.4	-0.1
LUWI				S	Sn	23 26 00.5	+1.4

IDC 12 23:31:38.4±3.1**, 32°.70S**×**178°.08W, h0**km**, mb4.0**/2**, mbtmp3.9**/3**, ML3.3**/1**, Error ellipse: s-maj=72.8km s-min=37.1km az=119.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.79	214	Pn	Pn	23 33 19.5	+0.2
	0.6nm,0.3s,baz=255,slow=1.6,SNR=2.1						
URZ				Sn	Sn	23 34 37.2	-0.3
	3.6nm,0.3s,baz=12,slow=23,SNR=11						
	2.1nm,0.3s						
ASAR	Alice Springs	42.96	269	P	P	23 39 39.7	+0.2
	1.3nm,0.7s,baz=108,slow=7.8,SNR=13						
	1.3nm,0.7s						
WRA	Warramunga Arr	44.16	275	P	P	23 39 48.9	-0.2
	1.0nm,0.3s,baz=115,slow=8.0,SNR=11						
	1.0nm,0.3s						
FINES	FINESS Array B	147.26	339	PKPbc	PKPbc	23 51 22.0	-1.0
	1.9nm,0.9s,baz=41,slow=6.1,SNR=5.9						

IDC ***12*** *23:50:28.8±0.9, 48°.90S×105°.12E, h0km, mb4.0/8, mbtmp4.0/8, MS3.6/18, Error ellipse: s-maj=38.2km s-min=17.6km az=117.0*
ISC 12 23:50:30.1±1.0**, 48°.9S**±0°.2×**105°.2E**±0°.2**, h10**km**, n24, σ0s.34**/10**, mb4.0**/8**, MS3.6**/18**, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	Cape Leeuwin H	15.50	29	T	T	00 09 56.1	
	baz=202,slow=74,SNR=101						
H01W1	Cape Leeuwin H	15.51	29	T	T	00 09 56.6	
	baz=202,slow=74,SNR=147						
H01W3	Cape Leeuwin H	15.52	29	T	T	00 09 56.9	
	baz=202,slow=74,SNR=97						
MAW	Mawson	28.21	213	P	P	23 56 22.7	+0.2
	1.5nm,0.8s,baz=63,slow=16,SNR=3.6						
MAW				LR	LR	00 05 13.0	
	comp=Z,82nm,18.5s,baz=70,slow=31						
	1.5nm,0.8s						
STKA	Stephens Creek	32.16	72	P	P	23 56 58.0	+0.1
	1.5nm,0.9s,baz=208,slow=17,SNR=1.9						
STKA				LR	LR	00 07 21.5	
	comp=Z,174nm,21.5s,baz=207,slow=32						
	1.5nm,0.9s						
ASAR	Alice Springs	33.87	52	P	P	23 57 12.7	-0.1
	1.3nm,0.6s,baz=210,slow=8.2,SNR=16						
ASAR				LR	LR	00 09 14.5	
	comp=Z,105nm,19.9s,baz=250,slow=33						
	1.3nm,0.6s						
FITZ	Fitzroy Crossi	34.93	36	LR	LR	00 09 32.9	
	comp=Z,92nm,20.9s,baz=204,slow=33						
VNDA	Vanda	35.67	162	P	P	23 57 28.1	+0.3
	1.2nm,0.9s,baz=254,slow=2.5,SNR=3.6						
VNDA				LR	LR	00 10 56.0	
	comp=Z,110nm,19.4s,baz=288,slow=34						
	1.2nm,0.9s						
WRA	Warramunga Arr	37.19	49	P	P	23 57 41.4	0.0
	2.5nm,0.9s,baz=209,slow=9.0,SNR=8.3						
	2.5nm,0.9s						
QSPA	South Pole Qui	41.22	180	P	P	23 58 14.6	-0.2
	1.3nm,0.6s,baz=287,slow=3.8,SNR=4.8						
QSPA				LR	LR	00 14 17.9	
	comp=Z,66nm,19.9s,baz=329,slow=35						
	1.3nm,0.6s						
CTA	Charters Tower	43.62	64	LR	LR	00 16 07.0	
	comp=Z,108nm,18.9s,baz=222,slow=35						
SNAA	Sanae	49.57	203	P	P	23 59 20.4	-0.3
	2.8nm,0.8s,baz=168,slow=8.1,SNR=5.9						
SNAA				LR	LR	00 19 09.5	
	comp=Z,51nm,19.3s,baz=16,slow=35						
	2.8nm,0.8s						
PMG	Port Moresby	52.71	56	LR	LR	00 21 03.7	
	comp=Z,70nm,18.3s,baz=193,slow=35						
OPO	Ambohidratompo	55.27	282	LR	LR	00 17 36.7	
	comp=Z,26nm,21.5s,baz=354,slow=30						
BOSA	Boshof	62.63	257	LR	LR	00 21 54.8	
	comp=Z,48nm,19.1s,baz=202,slow=30						
LBTB	Lobatse	64.89	260	LR	LR	00 23 39.4	
	comp=Z,41nm,19.4s,baz=150,slow=31						
MATP	Matopo	66.21	266	LR	LR	00 24 11.6	
	comp=Z,54nm,19.6s,baz=124,slow=31						
CMAR	Chiang Mai Arr	67.30	354	P	P	00 01 24.9	+0.1
	1.2nm,0.5s,baz=188,slow=6.0,SNR=7.5						
CMAR				LR	LR	00 28 42.5	
	comp=Z,12nm,19.2s,baz=30,slow=34						
	1.2nm,0.5s						
BRDH	Bariadhala	72.29	347	LR	LR	00 32 39.0	
	comp=Z,41nm,18.1s,baz=243,slow=35						
TSUM	Tsumeb	74.22	259	LR	LR	00 29 57.9	
	comp=Z,41nm,18.7s,baz=151,slow=32						
MBAR	Mbarara	79.35	281	LR	LR	00 33 25.3	
	comp=Z,40nm,18.4s,baz=140,slow=32						
PLCA	Paso Flores	90.65	183	LR	LR	00 42 30.4	
	comp=Z,21nm,20.5s,baz=168,slow=34						
NVAR	Mina Array Bea	147.27	92	PKPbc	PKPab	00 10 14.7	-0.6
	2.7nm,0.9s,baz=219,slow=7.5,SNR=3.7						
TXAR	Lajitas Array	150.56	121	PKPbc	PKiKP	00 10 23.1	+0.4
	0.9nm,0.9s,baz=191,slow=4.0,SNR=7.9						

IDC ***12*** *23:54:38.4±1.6, 25°.12S×69°.31W, h0km, mbtmp3.4/1, ML3.6/1, Error ellipse: s-maj=238.9km s-min=48.1km az=102.0*
SJA ***12*** *23:54:49.8±0.6, 24°.48S×69°.43W, h72km±4km, ML3.6, MW3.7*
GUC ***12*** *23:54:50.7±0.9, 24°.55S×69°.43W, h85km±6km, ML3.8*
ISC 12 23:54:50.1±1.0**, 24°.51S**±0°.03×**69°.39W**±0°.05**, h86**km±9km**, n42, σ1s.94**/49**, 4C-2D, Northern Chile**

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

GO02	**Mina Guanaco**	**0.68**	**196**	⇓*i*P	**Pn**	**23 55 05.9**	**-0.5**
GO02				*i* S	**Sn**	**23 55 18.1**	**-0.4**
GO02				IAML		23 55 18.9	
	comp=N,13μm,0.1s						
GO02	**Mina Guanaco**	**0.68**	**196**	*e*P	**Pn**	**23 55 05.9**	**-0.5**
GO02				*e*S	**Sn**	**23 55 18.4**	**-0.1**
GO02				IAML		23 55 19.1	
	comp=Z,5μm,0.1s						
PB14	**IPOC Station P**	**0.94**	**263**	⇑*i*P	**Pn**	**23 55 09.2**	**+0.1**
PB14				*i* S	**Sn**	**23 55 23.4**	**+0.1**
PB14	**IPOC Station P**	**0.94**	**263**	*e*P	**Pn**	**23 55 08.5**	**-0.6**
PB14				IAML		23 55 28.6	
	comp=Z,1μm,0.2s						
PB10	**IPOC Station P**	**1.46**	**313**	⇓*i*P	**Pn**	**23 55 15.7**	**+0.6**
PB10				*i* S	**Sn**	**23 55 33.4**	**-0.6**
PB10	**IPOC Station P**	**1.46**	**313**	*e*P	**Pn**	**23 55 15.5**	**+0.3**
PB10				IAML		23 55 39.6	
	comp=Z,351nm,0.2s						
PB06	**IPOC Station P**	**1.80**	**355**	⇑*i*P	**Pn**	**23 55 20.8**	**+1.0**
PB06				*i* S	**Sn**	**23 55 44.0**	**+1.8**
PB06				IAML		23 55 47.6	
	comp=E,571nm,0.4s						
PB06	**IPOC Station P**	**1.80**	**355**	*e*P	**Pn**	**23 55 20.4**	**+0.6**
PB06				IAML		23 55 52.5	
	comp=Z,331nm,0.3s						
PB05	**IPOC Station P**	**1.81**	**335**	⇑*i*P	**Pn**	**23 55 20.4**	**+0.6**
PB05				*e*S	**Sn**	**23 55 44.2**	**+1.9**
PB05				IAML		23 55 49.4	
	comp=E,718nm,0.4s						
PB05	**IPOC Station P**	**1.81**	**335**	*e*P	**Pn**	**23 55 19.9**	**+0.1**
PB05				IAML		23 55 48.6	
	comp=Z,387nm,0.5s						
AF01	**San Pedro de A**	**1.90**	**36**	*i* P	**Pn**	**23 55 23.1**	**+1.9**
AF01	**San Pedro de A**	**1.90**	**36**	*e*P	Pn	23 55 11.3	-10
AF01				*e*S	**Sn**	**23 55 41.2**	**-3.6**
AF01				IAML		23 55 58.1	
	comp=Z,657nm,0.8s						
AC01	**Pan de Azucar**	**1.97**	**214**	IAML		23 55 49.5	
	comp=E,627nm,0.5s						
AC01	**Pan de Azucar**	**1.97**	**214**	*e*P	**Pn**	**23 55 20.8**	**-1.0**
AC01				*e*S	**Sn**	**23 55 48.5**	**+2.6**
AC01				IAML		23 55 50.4	
	comp=Z,364nm,0.8s						
AC02	**Maricunga**	**2.33**	**174**	⇑*i*P	**Pn**	**23 55 27.8**	**+0.8**
AC02				*i* S	**Sn**	**23 55 56.4**	**+1.2**
AC02				IAML		23 56 00.6	
	comp=E,663nm,0.3s						
AC02	**Maricunga**	**2.33**	**174**	*e*P	**Pn**	**23 55 28.1**	**+1.0**
AC02				*e*S	**Sn**	**23 55 57.7**	**+2.5**
AC02				IAML		23 56 06.4	
	comp=Z,194nm,0.8s						
PB03	**IPOC Station P**	**2.47**	**352**	*i* P	**Pn**	**23 55 28.8**	**+0.2**
PB03				IAML		23 56 07.5	
	comp=E,483nm,0.5s						
PB03	**IPOC Station P**	**2.47**	**352**	*e*P	**Pn**	**23 55 29.3**	**+0.7**
PB03				*e*S	**Sn**	**23 55 51.9**	**-6.2**
PB03				IAML		23 56 05.3	
	comp=Z,382nm,0.2s						
PB09	**IPOC Station P**	**2.70**	**3**	*e*P	**Pn**	**23 55 33.2**	**+1.5**
PB09				IAML		23 56 12.2	
	comp=N,217nm,0.5s						
PB09	**IPOC Station P**	**2.70**	**3**	*e*P	**Pn**	**23 55 33.2**	**+1.5**
PB09				*e*S	**Sn**	**23 56 04.4**	**+0.8**
PB09				IAML		23 56 14.5	
	comp=Z,247nm,1.0s						
SALTA		**2.79**	**85**	*e*P	**Pn**	**23 55 29.7**	**-3.5**
SALTA				*e*P		23 55 29.9	
SALTA				*e*P		23 55 35.5	
PB07	**IPOC Station P**	**2.81**	**350**	*i* P	**Pn**	**23 55 33.0**	**-0.1**
PB07	**IPOC Station P**	**2.81**	**350**	*e*P	**Pn**	**23 55 32.7**	**-0.4**
PB07				IAML		23 56 18.2	
	comp=Z,206nm,0.4s						
GO03	**Copiapo**	**3.17**	**194**	*e*P	**Pn**	**23 55 35.9**	**-2.0**
GO03	**Copiapo**	**3.17**	**194**	*e*P	**Pn**	**23 55 36.6**	**-1.2**
GO03				*e*S	**Sn**	**23 56 09.0**	**-5.7**
GO03				IAML		23 56 36.9	
	comp=Z,169nm,0.2s						
PB02	**IPOC Station P**	**3.21**	**351**	*e*P	**Pn**	**23 55 38.0**	**-0.5**
PB02				IAML		23 56 47.9	
	comp=Z,374nm,0.4s						
PB01	**IPOC Station P**	**3.45**	**358**	*e*P	**Pn**	**23 55 41.9**	**+0.2**
PB01				*e*S	Sn	23 56 06.0	-16
PB01				IAML		23 56 38.2	
	comp=Z,120nm,0.3s						
HJA	**Humahuaca**	**3.86**	**71**	*e*P	**Pn**	**23 55 45.7**	**-1.9**
TINO	**Tinogasta**	**3.90**	**156**	*e*P	**Pn**	**23 55 50.2**	**+2.3**
AZAP	**Zapla**	**3.95**	**87**	*e*P	**Pn**	**23 55 51.1**	**+2.5**
HMBC	**Humberstone**	**4.24**	**354**	*e*P	Pn	23 55 47.7	-4.8
HMBC				IAML		23 57 12.1	
	comp=Z,124nm,0.4s						
VCA	**Vinchina**	**4.34**	**166**	*e*P	**Pn**	**23 55 56.2**	**+2.3**
VCA				IAML		23 56 54.5	
	comp=Z,30nm,0.6s						
PB08	**IPOC Station P**	**4.35**	**3**	*e*P	**Pn**	**23 55 55.1**	**+0.9**
PB08				IAML		23 57 16.7	
	comp=Z,43nm,0.9s						
PB11	**IPOC Station P**	**4.73**	**357**	*e*P	**Pn**	**23 55 57.5**	**-1.7**
PB11				IAML		23 57 31.8	
	comp=Z,63nm,0.8s						
AGUA	**GUANDACOL**	**5.02**	**171**	*e*P	**Pn**	**23 56 05.3**	**+2.2**
AGUA				*e*S	Sn	23 57 09.9	+10
AGUA				IAML		23 57 16.7	
	comp=Z,32nm,0.5s						
LPAZ	**La Paz**	**8.26**	**8**	Pn	**Pn**	**23 56 48.4**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=180,slow=13,SNR=4.8						
	comp=Z,1.0nm,0.6s						
H03N1	**Juan Fernandez**	**12.19**	**221**	T	T	00 09 39.0	
	baz=44,slow=72,SNR=64						
H03N2	**Juan Fernandez**	**12.20**	**221**	T	T	00 09 45.6	
	baz=44,slow=72,SNR=49						
H03N3	**Juan Fernandez**	**12.21**	**221**	T	T	00 09 38.7	
	baz=44,slow=72,SNR=59						
ASAR	**Alice Springs**	**127.05**	**207**	PKP	**PKPdf**	**00 13 44.0**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=125,slow=1.9,SNR=3.6						
ZALV	**Zalesovo Beam**	**144.84**	**27**	PKPbc	**PKPab**	**00 14 16.7**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=297,slow=4.4,SNR=5.6						
MKAR	**Makanchi Array**	**148.29**	**38**	PKPbc	**PKPbc**	**00 14 27.3**	**+1.0**
	comp=Z,0.5nm,0.9s,baz=307,slow=1.4,SNR=3.2						

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*IDC **13** 00:09:39.4±2.9, 30°.64S×177°.83W, h0^{km}, mb3.8/3, mbtmp3.8/4, ML3.0/1, Error ellipse: s-maj=72.8km s-min=42.5km az=128.0*

ISC 13 00:09:42.7±2.9**, 30°.8S**±0°.1×**177°.8W**±0°.4**, h27**^{km}**, n6,** σ**1^{s}.01**/7**, mb3.7**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.54**	**354**	Sn	**Sn**	**00 10 26.8**	**-0.8**
	205nm,0.3s,baz=217,slow=20,SNR=3.2						
URZ	**Urewera**	**8.57**	**208**	Pn	**Pn**	**00 11 45.4**	**+0.4**
	0.2nm,0.3s,baz=90,slow=16,SNR=2.1						
URZ				Sn	**Sn**	**00 13 19.3**	**-1.5**
	1.5nm,0.3s,baz=52,slow=18,SNR=6.3						
	5.9nm,0.9s						
STKA	**Stephens Creek**	**34.60**	**257**	P	**P**	**00 16 30.6**	**+1.0**
	2.2nm,0.7s,baz=75,slow=8.5,SNR=5.8						
	2.2nm,0.7s						
ASAR	**Alice Springs**	**43.31**	**267**	P	**P**	**00 17 42.2**	**-0.3**
	0.3nm,0.3s,baz=114,slow=7.9,SNR=6.5						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**44.33**	**272**	P	**P**	**00 17 50.8**	**+0.1**
	0.7nm,0.7s,baz=111,slow=8.0,SNR=3.8						
	0.7nm,0.7s						
FINES	**FINESS Array B**	**145.59**	**340**	PKPbc	**PKPbc**	**00 29 17.8**	**-0.2**
	1.7nm,0.5s,baz=29,slow=3.5,SNR=19						

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*GCG **13** 00:36:54.5±1.0, 15°.56N×95°.13W, h36^{km}±999^{km}, MD4.0, ML3.7*

*MEX **13** 00:36:56.7±1.0, 15°.54N×95°.10W, h16^{km}±10^{km}, MD4.2*

ISC 13 00:36:54.6±1.9**, 15°.50N**±0°.05×**95°.10W**±0°.03**, h35**^{km}±5^{km}**, n27,** σ**1^{s}.83**/51**, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**1.01**	**285**	*e*P	**Pn**	**00 37 12.2**	**-0.2**
HUIG				*e*S	**Sn**	**00 37 24.4**	**-0.9**
HUIG	**Huatulco**	**1.01**	**285**	*e*P	**Pn**	**00 37 12.1**	**-0.2**
HUIG				*i* S	**Sn**	**00 37 24.2**	**-1.1**
HUIG				IAML		00 37 34.3	
	comp=N,685nm,0.4s						
CMIG	**Matias Romero**	**1.59**	**7**	*e*P	**Pn**	**00 37 19.1**	**-1.3**
CMIG				*e*S	**Sn**	**00 37 37.2**	**-2.6**
PCIG		**1.82**	**83**	*e*P	**Pn**	**00 37 23.4**	**-0.1**
PCIG				*e*S	**Sn**	**00 37 45.4**	**-0.1**
UXUV	**UXUV**	**2.02**	**27**	*e*P	**Pn**	**00 37 26.2**	**-0.1**
UXUV				*e*S	**Sn**	**00 37 49.5**	**-0.9**
PEIG	**Puerto Escondi**	**2.03**	**284**	*e*P	**Pn**	**00 37 26.8**	**+0.3**
PEIG				*e*S	**Sn**	**00 37 48.8**	**-1.9**
VHO	**Vista Hermosa**	**2.21**	**315**	*e*P	**Pb**	**00 37 33.2**	**-0.9**
VHO				*i* S	**Sn**	**00 37 56.4**	**+1.1**
TGIG		**2.29**	**56**	*e*P	**Pn**	**00 37 30.2**	**+0.3**
TGIG				*e*S	**Sn**	**00 37 57.1**	**+0.1**
TGIG		**2.29**	**56**	*e*P	**Pn**	**00 37 30.3**	**+0.3**
TGIG				*i* S	**Sn**	**00 37 57.6**	**+0.7**
TGIG				IAML		00 37 59.0	
	comp=N,1μm,0.5s						
NEUV	**Arroyo Zacate**	**2.30**	**343**	*e*P	**Pn**	**00 37 30.3**	**+0.2**
NEUV				*i* S	**Sn**	**00 37 57.7**	**+0.5**
TGBT	**Tuxtla Gutierr**	**2.31**	**56**	*e*P	Pn	00 37 19.2	-11
TGBT				*e*S	**Sn**	**00 37 56.9**	**-0.6**
YOIG	**Yosondua**	**2.71**	**300**	*e*P	**Pn**	**00 37 38.3**	**+2.3**
YOIG				*e*S	**Sn**	**00 38 06.3**	**-1.4**
PMUV	**Sontecomapan**	**3.02**	**360**	*e*P	**Pn**	**00 37 40.6**	**+0.4**
PMUV				*i* S	**Sn**	**00 38 13.5**	**-1.7**
PNIG	**Pinotepa**	**3.04**	**287**	*i* P	**Pn**	**00 37 41.1**	**+0.8**
PNIG				*i* S	**Sn**	**00 38 13.3**	**-2.4**
TXIG	**Tlaxiaco**	**3.10**	**305**	*e*P	**Pn**	**00 37 43.8**	**+2.4**
TXIG				*i* S	**Sn**	**00 38 16.4**	**-0.9**
TOIG	**Toxpalan**	**3.19**	**324**	*e*P	**Pn**	**00 37 46.0**	**+3.5**
TOIG				*i* S	**Sn**	**00 38 20.4**	**+1.0**
HLIG	**Huajuapan de L**	**3.47**	**312**	*e*P	**Pb**	**00 37 55.8**	**+0.2**
HLIG				*i* S	**Sn**	**00 38 26.8**	**+0.3**
HUEH	**Huehuetenango**	**3.48**	**93**	*e*P	**Pn**	**00 37 49.7**	**+3.2**
HUEH				*e*S	**Sn**	**00 38 30.7**	**+4.1**
TPIG	**Tehuac#an**	**3.62**	**324**	*e*P	**Pn**	**00 37 50.1**	**+1.7**
TPIG				*e*S	**Sn**	**00 38 30.3**	**+0.2**
FTIG	**Fresnillo de T**	**3.76**	**310**	*e*P	**Pn**	**00 37 53.2**	**+2.9**
FTIG				*e*S	**Sn**	**00 38 32.6**	**-0.9**
STG8	**El Palmar, Qui**	**3.77**	**106**	*i* P	**Pn**	**00 37 47.5**	**-3.1**
STG5	**El Palmar, Qui**	**3.79**	**106**	*i* P	**Pn**	**00 37 47.8**	**-2.8**
MGIG	**Malinaltepec**	**3.80**	**297**	*e*P	**Pn**	**00 37 53.7**	**+2.8**
MGIG				*i* S	**Sn**	**00 38 33.6**	**-1.0**
TLIG	**Tlapa**	**3.91**	**302**	*e*P	**Pn**	**00 37 55.2**	**+2.9**
TLIG				*i* S	**Sn**	**00 38 34.9**	**-2.1**
JAUV	**Jalcomulco**	**4.17**	**337**	*e*P	**Pn**	**00 37 54.4**	**-1.5**
JAUV				*e*S	**Sn**	**00 38 39.7**	**-3.9**
CXUV	**Coxquihui**	**5.21**	**333**	*e*P	**Pn**	**00 38 11.4**	**+1.1**
CXUV				*i* S	**Sn**	**00 39 11.4**	**+2.2**
PETF	**Flores**	**5.22**	**74**	*e*P	**Pn**	**00 38 10.6**	**+0.3**
PETF				*e*S	**Sn**	**00 39 10.2**	**+0.9**

DJA 13 00:41:45.0±0.4**, 10°S**±6°×**11°9E**±°**, h34**^{km}±6^{km}**, M3.0**/6**, mb4.0**/1**, MLv2.6**/6**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**0.07**	**269**	P	Pb	00 41 51.5	+0.7
WSI	**Waingapu**	**0.83**	**92**	P	Pn	00 42 00.1	-0.1
BASI	**Baing, Sumba**	**1.24**	**118**	P	Pn	00 42 06.0	0.0
DBNI	**Kabupaten Domp**	**1.60**	**315**	P	Pn	00 42 11.7	+0.8
PLAI	**Plampang**	**1.85**	**296**	P	Pn	00 42 13.4	-0.9
EDFI	**Ende, Flores**	**2.37**	**68**	P	Pn	00 42 21.4	-0.2
TWSI	**Taliwang, Sumb**	**2.70**	**289**	P	Pn	00 42 26.2	+0.2
SOEI	**Soe**	**4.74**	**92**	P	Pn	00 42 54.9	+0.7

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*IDC **13** 00:41:49.0±8.4, 7°.73S×128°.13E, h165^{km}±90^{km}, mb3.1/3, mbtmp4.0/7, Error ellipse: s-maj=87.6km s-min=23.5km az=38.0*

ISC 13 00:41:47.5±1.4**, 7°.86S**±0°.10×**128°.3E**±0°.1**, h150**^{km}**, n7,** σ**3^{s}.08**/10**, mb3.3**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.17**	**243**	P	**Pn**	**00 43 04.7**	**+1.5**
	18nm,0.2s,baz=80,slow=4.1,SNR=3.7						
BATI				S	**Sn**	**00 44 01.8**	**-0.5**
	39nm,0.4s,baz=86,slow=13,SNR=2.9						
FITZ	**Fitzroy Crossi**	**10.51**	**194**	P	**Pn**	**00 44 15.1**	**+0.9**
	3.7nm,0.3s,baz=12,slow=8.3,SNR=28						
FITZ				S	**Sn**	**00 46 08.8**	**-1.7**
	8.0nm,0.7s,baz=103,slow=20,SNR=7.1						
WRA	**Warramunga Arr**	**13.34**	**155**	P	**Pn**	**00 44 54.1**	**+2.9**
	1.6nm,0.4s,baz=333,slow=13,SNR=20						
WRA				S	Sn	00 47 16.4	-2.5
	4.3nm,0.6s,baz=318,slow=25,SNR=13						
ASAR	**Alice Springs**	**16.60**	**162**	P	**Pn**	**00 45 36.0**	**+4.4**
	5.4nm,0.5s,baz=340,slow=11,SNR=62						
ASAR				S	**S**	**00 48 31.4**	**-4.7**
	1.0nm,0.8s,baz=340,slow=19,SNR=4.1						
MKAR	**Makanchi Array**	**68.05**	**328**	P	**P**	**00 52 29.6**	**-1.2**
	0.2nm,0.5s,baz=119,slow=8.2,SNR=5.0						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**71.64**	**335**	P	**P**	**00 52 49.6**	**-2.9**
	0.3nm,0.4s,baz=114,slow=1.7,SNR=2.2						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**72.39**	**329**	P	**P**	**00 52 56.2**	**-0.9**
	0.3nm,0.4s,baz=130,slow=4.9,SNR=6.4						
	0.3nm,0.4s						

IDC 13 00:59:51.3±10.0**, 30°.92N**×**142°.46E, h0**^{km}**, mb3.3**/4**, mbtmp3.3**/4**, Error ellipse: s-maj=418.5km s-min=29.5km az=69.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**3.82**	**184**	Pn	Pn	01 00 43.2	-8.2
	3.7nm,0.3s,baz=340,slow=22,SNR=1.1						
JCJ				Sn	Sn	01 01 22.7	-14
	4.6nm,0.3s,baz=44,slow=24,SNR=2.4						
MKAR	**Makanchi Array**	**48.30**	**307**	P	P	01 08 34.7	+0.3
	0.2nm,0.7s,baz=72,slow=9.3,SNR=2.4						
	0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**50.60**	**312**	P	P	01 08 51.3	-0.5
	0.2nm,0.6s,baz=89,slow=8.1,SNR=1.8						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**51.17**	**190**	P	P	01 08 55.9	-0.5
	0.7nm,0.8s,baz=6.6,slow=7.3,SNR=5.6						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**54.89**	**190**	P	P	01 09 24.1	+0.3
	0.2nm,0.5s,baz=19,slow=9.0,SNR=1.8						
	0.2nm,0.5s						

IDC 13 01:00:33.1±7.8**, 31°.65S**×**179°.21E, h532**^{km}±106^{km}**, mb2.6**/2**, mbtmp3.6**/3**, Error ellipse: s-maj=133.8km s-min=43.0km az=6.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.81**	**194**	P	P	01 02 19.1	+0.7
	5.2nm,0.5s,baz=352,slow=19,SNR=11						
URZ				S	S	01 03 44.0	-0.8
	6.5nm,1.0s,baz=43,slow=19,SNR=1.6						
ASAR	**Alice Springs**	**40.68**	**270**	P	P	01 07 27.7	+0.2
	0.2nm,0.4s,baz=99,slow=7.6,SNR=1.6						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**41.78**	**275**	P	P	01 07 35.9	-0.4
	0.5nm,0.3s,baz=111,slow=8.1,SNR=7.0						
	0.5nm,0.3s						
FINES	**FINESS Array B**	**145.44**	**337**	PKPbc	PKPdf	01 19 10.1	+0.3
	2.8nm,0.9s,baz=52,slow=2.3,SNR=6.8						

MEX 13 01:06:24.6±0.5**, 16°.25N**×**98°.08W, h11**^{km}±3^{km}**, MD3.7, 1C, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.15**	**343**	*i* P	Pg	01 06 27.7	-0.5
PNIG				*e*S	Sg	01 06 30.2	-0.5
YOIG	**Yosondua**	**0.80**	**40**	*i* S	Sg	01 06 48.5	-2.1
TXIG	**Tlaxiaco**	**1.05**	**17**	*e*P	Pg	01 06 42.0	-2.9
TXIG				*i* S	Sg	01 06 54.8	-3.7
MGIG	**Malinaltepec**	**1.12**	**332**	*e*P	Pb	01 06 42.0	-4.0
MGIG				*e*S	Sb	01 06 56.4	-4.3
CRIG	**Cruz Grande**	**1.12**	**296**	*e*P	Pb	01 06 42.9	-3.1
CRIG				*e*S	Sb	01 06 56.9	-3.7
TLIG	**Tlapa**	**1.39**	**341**	⇑*e*P	Pn	01 06 47.4	-2.6
TLIG				*e*S	Sn	01 07 04.0	-4.4
HLIG	**Huajuapan de L**	**1.60**	**9**	*e*P	Pg	01 06 57.4	+2.0
HLIG				*i* S	Sn	01 07 10.9	-2.8
FTIG	**Fresnillo de T**	**1.65**	**358**	*e*P	Pn	01 06 51.8	-1.8
FTIG				*e*S	Sn	01 07 12.2	-2.8
DAIG	**Los Arroyos**	**1.69**	**297**	*e*P	Pn	01 06 54.6	+0.5
DAIG				*e*S	Sn	01 07 13.8	-1.9
TOIG	**Toxpalan**	**2.08**	**28**	*e*P	Pn	01 07 00.5	+1.0
TOIG				*i* S	Sn	01 07 26.2	+0.7
MEIG	**Mezcala**	**2.23**	**319**	*i* S	Sn	01 07 30.0	+0.9

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*MEX **13** 01:15:43.7±0.8, 16°.69N×94°.84W, h105^{km}±9^{km}, MD4.1*

*GCG **13** 01:15:44.6±2.6, 16°.24N×94°.67W, h70^{km}±83^{km}, ML3.6*

ISC 13 01:15:41.0±1.3**, 16°.70N**±0°.05×**94°.83W**±0°.03**, h115**^{km}±10^{km}**, n25,** σ**2^{s}.05**/47**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.39**	**353**	*i* P	**Pn**	**01 15 58.2**	**+0.3**
CMIG				*i* S	**Sn**	**01 16 09.3**	**-1.2**
UXUV	**UXUV**	**0.90**	**47**	*i* P	**Pn**	**01 16 02.4**	**+0.8**
UXUV				*i* S	**Sn**	**01 16 16.6**	**-0.7**
NEUV	**Arroyo Zacate**	**1.37**	**318**	*e*P	**Pn**	**01 16 06.8**	**+0.2**
NEUV				*e*S	**Sn**	**01 16 25.3**	**-0.7**
HUIG	**Huatulco**	**1.53**	**233**	*e*P	**Pn**	**01 16 08.0**	**-0.6**
HUIG				*i* S	**Sn**	**01 16 29.3**	**-0.2**
HUIG	**Huatulco**	**1.53**	**233**	*e*P	**Pn**	**01 16 07.5**	**-1.0**
HUIG				*i* S	**Sn**	**01 16 29.1**	**-0.3**
HUIG				IAML		01 16 30.0	
	comp=E,1μm,0.2s						
TGIG		**1.64**	**87**	*i* P	**Pn**	**01 16 10.9**	**+1.1**
TGIG				*i* S	**Sn**	**01 16 31.8**	**0.0**
TGIG		**1.64**	**87**	*i* P	**Pn**	**01 16 11.1**	**+1.2**
TGIG				*i* S	**Sn**	**01 16 31.4**	**-0.5**
TGIG				IAML		01 16 33.9	
	comp=N,334nm,0.4s						
PCIG		**1.84**	**122**	*e*P	**Pn**	**01 16 13.9**	**+1.7**
PCIG				*e*S	**Sn**	**01 16 37.2**	**+1.2**
OXBJ	**Oaxaca**	**1.85**	**282**	*e*P	Pn	01 16 18.2	+5.7
OXBJ				*e*S	**Sn**	**01 16 39.3**	**+2.8**
VHO	**Vista Hermosa**	**1.86**	**282**	*e*P	**Pn**	**01 16 14.7**	**+2.1**
VHO				*i* S	**Sn**	**01 16 37.7**	**+0.9**
PEIG	**Puerto Escondi**	**2.33**	**253**	*e*P	**Pn**	**01 16 17.8**	**-0.6**
PEIG				*i* S	**Sn**	**01 16 46.6**	**-0.5**
TOIG	**Toxpalan**	**2.54**	**303**	*e*P	**Pn**	**01 16 22.9**	**+1.6**
TOIG				*i* S	**Sn**	**01 16 53.0**	**+0.8**
YOIG	**Yosondua**	**2.60**	**274**	*e*P	**Pn**	**01 16 23.8**	**+1.6**
YOIG				*i* S	**Sn**	**01 16 50.4**	**-3.5**
CCIG	**Comitan**	**2.62**	**99**	*e*P	**Pn**	**01 16 24.0**	**+1.7**
CCIG				*e*S	**Sn**	**01 16 51.0**	**-3.1**
CCIG	**Comitan**	**2.62**	**99**	*i* P	**Pn**	**01 16 24.6**	**+2.2**
CCIG				*i* S	**Sn**	**01 16 52.3**	**-1.8**
CCIG				IAML		01 17 01.7	
	comp=N,292nm,0.5s						
TXIG	**Tlaxiaco**	**2.86**	**282**	*e*P	**Pn**	**01 16 27.8**	**+2.2**
TXIG				*i* S	**Sn**	**01 16 56.5**	**-3.4**
PATR	**El Naranjo**	**2.95**	**122**	*e*P	**Pn**	**01 16 28.7**	**+2.0**
TPIG	**Tehuac#an**	**2.96**	**306**	*e*P	**Pn**	**01 16 28.6**	**+1.9**
TPIG				*e*S	**Sn**	**01 17 01.3**	**-0.7**
PAVE	**Pavencul**	**2.96**	**120**	*e*P	**Pn**	**01 16 29.2**	**+2.4**
PAVE				*i* S	**Sn**	**01 16 57.1**	**-5.1**
HLIG	**Huajuapan de L**	**3.05**	**292**	*i* P	**Pn**	**01 16 30.5**	**+2.5**
HLIG				*i* S	**Sn**	**01 17 05.8**	**+1.5**
CHUJ	**Union Juarez**	**3.07**	**121**	*e*P	**Pn**	**01 16 30.6**	**+2.3**
CHUJ				*i* S	Sn	01 16 56.0	-8.7
PNIG	**Pinotepa**	**3.17**	**265**	*e*P	**Pn**	**01 16 29.5**	**+0.1**
PNIG				*e*S	**Sn**	**01 17 04.1**	**-2.7**
LVIG	**Laguna Verde**	**3.37**	**334**	*e*P	**Pn**	**01 16 31.4**	**-0.6**
LVIG				*i* S	**Sn**	**01 17 07.3**	**-4.0**
FTIG	**Fresnillo de T**	**3.37**	**291**	*e*P	**Pn**	**01 16 35.0**	**+2.8**
FTIG				*i* S	**Sn**	**01 17 08.9**	**-2.9**
PETF	**Flores**	**4.76**	**87**	*e*P	**Pn**	**01 16 52.0**	**+1.3**
PETF				*e*S	**Sn**	**01 17 42.6**	**-2.3**

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*TAP **13** 01:31:59.6, 24°.93N×122°.61E, h16^{km}, ML3.9, C*

*JMA **13** 01:31:59.4±0.3, 25°N±1°×12°3E±°, h19^{km}, MV3.0/11, NW OFF ISHIGAKIJIMA IS*

*NEIC **13** 01:32:00.2±1.1, 24°.84N±0°.05×122°.57E±0°.04, h10^{km}±1^{km}, mb4.5/6, Error ellipse: s-maj=10.6km s-min=3.9km az=29.0*

*IDC **13** 01:32:15.8±5.2, 24°.82N×122°.37E, h156^{km}±52^{km}, mb3.3/11, mbtmp3.8/13, MS3.4/16, Error ellipse: s-maj=25.4km s-min=15.8km az=69.0*

ISC 13 01:32:00.9±0.9**, 24°.90N**±0°.03×**122°.62E**±0°.02**, h19**^{km}±3^{km}**, n137,** σ**1^{s}.12**/166**, mb3.8**/14**, MS3.4**/14**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.53**	**146**	P	**Pb**	**01 32 09.8**	**-1.8**
JYNG				*e*S	**Sb**	**01 32 18.0**	**-0.9**
YOJ	**Yonaguni jima**	**0.56**	**140**		**Pb**	**01 32 10.6**	**-1.5**
YOJ	**Yonaguni jima**	**0.56**	**140**	P	**Pb**	**01 32 10.9**	**-1.2**
YOJ	**Yonaguni jima**	**0.56**	**140**	P	**Pb**	**01 32 10.6**	**-1.5**
YOJ	**Yonaguni jima**	**0.56**	**140**	*i* P	**Pb**	**01 32 10.9**	**-1.2**
YOJ				*i* S	**Sb**	**01 32 18.8**	**-0.8**
YOJ	**Yonaguni jima**	**0.56**	**140**	P	**Pb**	**01 32 10.5**	**-1.5**
YOJ				*e*S	**Sb**	**01 32 18.3**	**-1.3**
TWB1	**Santiao Chiao**	**0.58**	**281**	*i* P	**Pb**	**01 32 11.4**	**-1.1**
TWB1				*i* S	**Sg**	**01 32 19.5**	**-1.0**
EOS2	**EOS2**	**0.59**	**217**	P	**Pb**	**01 32 12.0**	**-0.5**
EOS2				S	**Sn**	**01 32 22.2**	**-0.9**
EGS		**0.62**	**266**	P	**Pb**	**01 32 12.2**	**-0.9**
EOS3	**EOS3**	**0.67**	**204**	P	**Pb**	**01 32 13.4**	**-0.4**
EOS3				S	**Sg**	**01 32 23.6**	**+0.7**
SXI1	**Grass Mountain**	**0.70**	**287**	*i* P	**Pb**	**01 32 13.7**	**-0.9**
TIPB	**Shuangxi**	**0.72**	**276**	P	**Pb**	**01 32 13.7**	**-1.2**
TIPB				*e*S	**Sb**	**01 32 23.5**	**-1.0**
TWC	**Suao**	**0.76**	**248**	P	**Pb**	**01 32 13.8**	**-1.6**
TWC				S	**Sb**	**01 32 24.2**	**-1.1**
ESAO	**Su ao**	**0.77**	**246**	P	**Pb**	**01 32 14.6**	**-1.2**
ESAO				*e*S	**Sb**	**01 32 24.9**	**-1.0**
NWF	**Wu-fen Shan**	**0.78**	**283**	P	**Pg**	**01 32 15.3**	**-1.0**
NWF				*e*S	**Sg**	**01 32 25.6**	**-1.1**
WFSB	**Wu-fen Shan**	**0.78**	**283**	*e*P	**Pg**	**01 32 15.4**	**-0.8**
WFSB				*e*S	**Sg**	**01 32 25.5**	**-1.2**
TNOU	**National Taiwa**	**0.81**	**288**	*e*P	**Pn**	**01 32 16.2**	**-1.0**
EOS4	**EOS4**	**0.82**	**200**	*e*P	**Pb**	**01 32 15.4**	**-0.9**
EOS4				*e*S	**Sb**	**01 32 26.7**	**-0.1**
NDS	**Dongshan**	**0.86**	**253**	*e*P	**Pb**	**01 32 16.1**	**-1.2**
TWE	**Neicheng**	**0.88**	**259**	*e*P	**Pb**	**01 32 16.2**	**-1.4**
PCYT	**Pengchaiyu**	**0.88**	**326**	*e*P	**Pn**	**01 32 17.5**	**-0.9**
ENA	**Nanau**	**0.92**	**240**	*e*P	**Pb**	**01 32 16.7**	**-1.6**
TWA	**Mucha**	**0.94**	**275**	P	**Pn**	**01 32 18.2**	**-1.0**
FUSB	**Fushanzhiwuyua**	**0.95**	**262**	P	**Pb**	**01 32 17.7**	**-1.0**
FUSB				*e*S	**Sb**	**01 32 30.0**	**-0.9**
YM08	**YM08**	**0.98**	**288**	*e*P	**Pb**	**01 32 18.5**	**-0.8**
YM08				*e*S	**Sg**	**01 32 31.8**	**-1.1**
EAHA	**Aohua**	**0.98**	**235**	*e*P	**Pb**	**01 32 18.2**	**-1.0**
EAHA				*i* S	**Sb**	**01 32 31.3**	**-0.5**
YM01	**YM01**	**0.98**	**285**	*e*P	**Pb**	**01 32 18.4**	**-0.9**
ENTT	**Nioudou**	**0.99**	**255**	*e*P	**Pb**	**01 32 18.2**	**-1.3**
ENTT				*e*S	**Sb**	**01 32 32.0**	**-0.2**
TWY	**Chenhua**	**1.00**	**293**	*e*P	**Pb**	**01 32 18.2**	**-1.4**
ZUZH	**Zhuzihu**	**1.01**	**285**	*e*P	**Pb**	**01 32 18.9**	**-1.0**
NWLT	**Wulai**	**1.02**	**264**	*e*P	**Pb**	**01 32 18.8**	**-1.2**
NWLT				*e*S	**Sb**	**01 32 32.7**	**-0.4**
TATO	**Taipei**	**1.03**	**275**		**Pb**	**01 32 19.0**	**-1.1**
TATO	**Taipei**	**1.03**	**275**	P	**Pg**	**01 32 20.3**	**-0.7**
TATO	**Taipei**	**1.03**	**275**	P	**Pg**	**01 32 19.9**	**-1.1**
TATO	**Taipei**	**1.03**	**275**	*e*P	**Pn**	**01 32 19.5**	**-0.9**
TATO				*e*S	**Sg**	**01 32 33.5**	**-1.0**
LATG	**Datong**	**1.06**	**250**	P	**Pb**	**01 32 19.5**	**-1.2**
LATG				*e*S	**Sn**	**01 32 34.1**	**-0.9**
YHNB	**Yeheng**	**1.15**	**259**		**Pn**	**01 32 21.4**	**-0.7**
YHNB	**Yeheng**	**1.15**	**259**	P	**Pn**	**01 32 21.4**	**-0.7**
YHNB	**Yeheng**	**1.15**	**259**	*e*P	**Pn**	**01 32 21.3**	**-0.8**
YHNB				*e*S	**Sn**	**01 32 36.7**	**-0.7**
ETL	**Fush Village**	**1.17**	**231**	*e*P	**Pn**	**01 32 21.4**	**-0.8**
NSK	**Sanguang**	**1.17**	**259**	P	**Pn**	**01 32 21.2**	**-1.1**
NACB	**Ninganchiao**	**1.18**	**233**		**Pn**	**01 32 21.0**	**-1.4**
NACB	**Ninganchiao**	**1.18**	**233**	P	**Pn**	**01 32 21.3**	**-1.1**
NACB	**Ninganchiao**	**1.18**	**233**	P	**Pn**	**01 32 20.7**	**-1.7**
NACB	**Ninganchiao**	**1.18**	**233**	*e*P	**Pn**	**01 32 21.1**	**-1.2**
NACB				*e*S	**Sb**	**01 32 37.2**	**-0.3**
NNSB	**Datong**	**1.22**	**248**	P	**Pn**	**01 32 22.2**	**-0.8**
NNSB				*e*S	**Sg**	**01 32 39.5**	**-1.1**
NNSH	**Datong**	**1.22**	**248**	P	**Pn**	**01 32 22.3**	**-0.8**
NNSH				*e*S	**Sn**	**01 32 39.1**	**+0.1**
NNS	**Nan Shan**	**1.22**	**248**	*e*P	**Pn**	**01 32 22.5**	**-0.6**
NNS				*e*S	**Sn**	**01 32 38.7**	**-0.5**
TWD	**Chiawan**	**1.24**	**229**	P	**Pn**	**01 32 22.6**	**-0.6**
TWD				*e*S	**Sn**	**01 32 39.5**	**+0.2**
ETLH	**Xiulin Townshi**	**1.24**	**237**	*e*P	**Pn**	**01 32 22.6**	**-0.8**
ETLH				*e*S	**Sn**	**01 32 39.5**	**-0.1**

HATJ	Hateruma jima	1.37	127	eP	Pn	01 32 22.9	-2.1
ETM	Tongmen	1.38	228	eP	Pb	01 32 25.6	-0.6
NFF	Wufeng Townshi	1.39	259	P	Pb	01 32 25.1	-1.2
LXIB	Xiulin Townshi	1.40	232	P	Pn	01 32 25.3	-0.3
LXIB				eS	Sb	01 32 43.9	-0.2
FUSS	Fushou	1.41	243	eP	Pb	01 32 25.9	-0.9
FUSS				eS	Sn	01 32 43.7	-0.3
JKRS	Kuro-shima	1.43	117	eP	Pn	01 32 24.1	-1.7
WHF	Hehuan Shan	1.44	239	eP	Pn	01 32 26.3	-0.1
WHF				eS	Sn	01 32 44.8	-0.2
TWT	Tachien	1.46	244	eP	Pb	01 32 27.1	-0.5
SHUL	Shoufeng	1.46	221	eP	Pn	01 32 25.9	-0.4
TDCB	Techi	1.48	245	eP	Pb	01 32 27.2	-0.6
TDCB				eS	Sb	01 32 46.3	0.0
LIOB	Emei	1.48	261	eP	Pg	01 32 28.6	-0.8
JIJ	Ishigaki jima	1.48	111	eP	Pn	01 32 25.8	-0.8
NSTT	Nanjuang	1.49	260	eP	Pg	01 32 28.6	-1.1
HSN	Hsinchu	1.50	267	eP	Pn	01 32 25.3	-1.5
HSN				eS	Sn	01 32 44.2	-1.6
ESL	Shilin	1.53	225	eP	Pn	01 32 26.7	-0.5
ESL				eS	Sb	01 32 47.6	0.0
JISG	Ishigakijimahi	1.57	101	eP	Pn	01 32 27.1	-0.7
OWD	Renai	1.61	235	eP	Pb	01 32 28.9	-1.3
WARBT	Fenglin Townsh	1.62	224	eP	Pn	01 32 27.9	-0.7
WUSB	Renai	1.64	237	eP	Pb	01 32 29.6	-1.1
WHP	Taichung City	1.64	248	eP	Pb	01 32 30.4	-0.3
WHP				eS	Sb	01 32 50.7	-0.3
WPL	Puli Township	1.75	240	eP	Pn	01 32 29.8	-0.5
VWDT	VWDT	1.76	230	eP	Pn	01 32 30.1	-0.3
VWDT				eS	Sn	01 32 52.9	+0.5
DPDB	Guoxing	1.77	241	eP	Pb	01 32 31.3	-1.4
TWQ1	Liyutan	1.77	252	eP	Pg	01 32 33.5	-1.4
HGSD	Ruisui	1.77	218	eP	Pn	01 32 29.6	-1.0
SMLT	Sun Moon Lake	1.86	238	eP	Pb	01 32 33.2	-1.2
TYC	Yuchr	1.89	239	eP	Pb	01 32 33.5	-1.2
YULB	Yu-li	1.92	219		Pn	01 32 31.7	-0.9
YULB	Yu-li	1.92	219	P	Pn	01 32 33.5	+0.8
YULB	Yu-li	1.92	219	P	Pn	01 32 32.0	-0.7
YULB	Yu-li	1.92	219	eP	Pn	01 32 31.8	-0.9
TWF1	Yuli	1.95	218	eP	Pn	01 32 33.0	-0.1
TWF1				eS	Sn	01 32 55.4	-1.7
WHYT	Xinyi Township	2.00	234	eP	Pb	01 32 35.2	-1.6
WJS	Zhushan	2.03	239	eP	Pb	01 32 36.2	-1.0
CHKH	Chenggong	2.03	214	eP	Pn	01 32 34.0	-0.1
YUS	Yu-Shan	2.07	228	eP	Pn	01 32 35.0	-0.1
FULB	Fuli	2.08	216	eP	Pn	01 32 35.4	+0.6
FULB				eS	Sn	01 33 00.3	+0.1
ALS	Alishan	2.15	231	eP	Pb	01 32 38.0	-1.6
ALS				eS	Sn	01 33 03.4	+0.9
EHD	Haiduan	2.17	217	eP	Pn	01 32 35.7	-0.3
CHN5	Tsauling	2.19	234	eP	Pb	01 32 38.5	-1.5
ELDTW	Lidau	2.24	221	eP	Pn	01 32 37.2	+0.1
WCKO	Fanlu	2.34	232	eP	Pn	01 32 39.9	+1.5
WCKO				eS	Sb	01 33 09.2	-1.9
CHN4	Tsaushan	2.41	231	eP	Pb	01 32 41.0	-2.6
STYH	Taoyuan	2.41	225	eP	Pn	01 32 39.7	+0.4
STYH				eS	Sn	01 33 09.5	+1.3
TPUB	Ta-pu	2.41	229		Pb	01 32 41.5	-2.3
TPUB	Ta-pu	2.41	229	P	Pb	01 32 41.1	-2.7
TPUB	Ta-pu	2.41	229	P	Pn	01 32 40.9	+1.5
TPUB	Ta-pu	2.41	229	eP	Pb	01 32 41.5	-2.3
STYT	Tauyuan	2.42	225	eP	Pn	01 32 41.0	+1.4
WTP	Ta-pu	2.46	229	eP	Pb	01 32 42.0	-2.6
TWGBT	Beinan	2.50	215	P	Pn	01 32 40.9	+0.3
TWG	Pinlang	2.50	215		Pn	01 32 40.4	-0.3
SNST	Tainan City	2.56	230	eP	Pn	01 32 42.3	+0.9
SNST				eS	Sn	01 33 13.7	+1.7
SGST	Jiashian	2.59	226	eP	Pn	01 32 42.9	+1.0
SSD	Sandimen	2.81	221	eP	Pn	01 32 47.0	+2.1
SSD				eS	Sn	01 33 20.1	+1.9
JNU	Nakatsue	10.93	40	LR	LR	01 40 32.8	
	comp=Z,82nm,18.7s,baz=224,slow=45						
KSRS	Korea Array	13.31	19	P	P	01 35 21.3	+2.9
	4.0nm,0.9s,baz=196,slow=12,SNR=11						
MJAR	Matsushiro Arr	17.70	45	LR	LR	01 42 46.1	
	comp=Z,60nm,20.3s,baz=290,slow=35						
LZDM	Lanzhou Array	19.66	309	P	Pn	01 36 30.7	+0.2
	0.8nm,0.3s,baz=90,slow=13,SNR=1.7						
USRK	Ussuriysk Ar.	20.72	19	P	Pn	01 36 45.2	+2.6
	3.9nm,1.0s,baz=196,slow=8.5,SNR=4.6						
	3.9nm,1.0s						
CMAR	Chiang Mai Arr	22.90	258	P	P	01 37 05.9	+2.2
	1.3nm,0.3s,baz=66,slow=9.7,SNR=1.5						
CMAR				LR	LR	01 47 41.8	
	comp=Z,63nm,18.1s,baz=55,slow=41						
	1.3nm,0.3s						
ASAJ	Asahikawa	25.16	35	LR	LR	01 46 51.7	
	comp=Z,99nm,19.2s,baz=29,slow=35						
SONM	Songino Array	26.25	335	P	P	01 37 35.8	+0.8
	2.7nm,1.1s,baz=148,slow=8.3,SNR=9.7						
SONM				LR	LR	01 47 58.8	
	comp=Z,76nm,20.1s,baz=162,slow=36						
	2.7nm,1.1s						
SONM	Songino Array	26.25	335	P	P	01 37 35.5	+0.5
KAPI	Kappang	29.86	186	LR	LR	01 50 21.0	
	comp=Z,28nm,18.7s,baz=14,slow=36						
PSI	Prapat	31.69	230	LR	LR	01 53 04.9	
	comp=Z,24nm,18.1s,baz=32,slow=40						
JAY	Jayapura	32.41	145	LR	LR	01 51 15.7	
	comp=Z,54nm,18.4s,baz=316,slow=35						
YAK	Yakutsk	37.43	5	LR	LR	01 58 28.6	
	comp=Z,64nm,18.1s,baz=108,slow=42						
MKAR	Makanchi Array	38.75	315	P	P	01 39 22.7	-1.4
	0.8nm,0.9s,baz=96,slow=8.8,SNR=5.0						
	0.8nm,0.9s						
MKAR	Makanchi Array	38.75	315	P	P	01 39 23.1	-1.0
MA2	Magadan	39.84	22	LR	LR	01 56 27.9	
	comp=Z,64nm,18.2s,baz=208,slow=36						
ZALV	Zalesovo Beam	40.37	326	P	P	01 39 36.6	-0.8
	0.9nm,0.8s,baz=104,slow=6.3,SNR=3.9						
ZALV				LR	LR	01 57 10.5	
	comp=Z,66nm,18.7s,baz=82,slow=37						
	0.9nm,0.8s						
KURK	Kurchatov	42.40	319	P	P	01 39 54.5	+0.4
KURK				IAmb	IAmb	01 39 58.8	
	comp=Z,8.2nm,1.4s						
KURBB	Kurchatov Arra	42.42	319	P	P	01 39 54.0	-0.2
	comp=Z,1.3nm,1.0s,baz=109,slow=7.6,SNR=6.0						
	comp=Z,1.3nm,1.0s						
AAK	Ala-Archa	43.12	307	LR	LR	02 00 16.7	
	comp=Z,68nm,18.7s,baz=90,slow=39						
WRA	Warramunga Arr	46.00	165	P	P	01 40 23.1	-0.1
	comp=Z,1.1nm,0.9s,baz=347,slow=8.2,SNR=4.7						
	comp=Z,1.1nm,0.9s						
WR8	Warramunga Arr	46.06	164	P	P	01 40 23.2	-0.5
WR8				IAmb	IAmb	01 40 34.0	
	comp=Z,5.6nm,1.1s						
TIXI	Tiksi	46.92	3	P	P	01 40 30.1	+0.3
TIXI				IAmb	IAmb	01 40 34.3	
	comp=Z,14nm,1.4s						
BVAR	Borovoye Array	47.96	320	P	P	01 40 38.4	+0.1
	comp=Z,0.6nm,0.7s,baz=106,slow=5.3,SNR=3.5						
	comp=Z,0.6nm,0.7s						
NRIK	Noril'sk	49.06	344	P	P	01 40 47.3	+0.8
	comp=Z,1.7nm,0.7s,baz=129,slow=8.5,SNR=3.8						
NRIK				LR	LR	02 02 15.7	
	comp=Z,73nm,19.3s,baz=152,slow=37						
	comp=Z,1.7nm,0.7s						
ASAR	Alice Springs	49.50	166	P	P	01 40 49.8	-0.5
	comp=Z,0.3nm,0.5s,baz=344,slow=7.3,SNR=4.7						
ASAR				LR	LR	02 05 31.2	
	comp=Z,48nm,18.1s,baz=28,slow=40						
	comp=Z,0.3nm,0.5s						
CTA	Charters Tower	50.28	151	LR	LR	02 02 58.3	
	comp=Z,23nm,18.9s,baz=44,slow=37						
AB31	Akbulak array	53.89	314	P	P	01 41 23.9	+1.1
AB31				IAmb	IAmb	01 41 27.7	
	comp=Z,4.9nm,1.4s						
ABKAR	Akbulak array	53.89	314	P	P	01 41 23.6	+0.8
AKTO	Aktyubinsk	55.18	315	LR	LR	02 08 21.4	
	comp=Z,81nm,18.8s,baz=168,slow=39						
SCM	Sheep Creek Mo	68.40	31	P	P	01 43 02.2	+1.0
YKA	Yellowknife Ar	81.81	23	P	P	01 44 18.6	+0.2
	comp=Z,0.4nm,0.9s,baz=306,slow=5.2,SNR=2.7						
	comp=Z,0.4nm,0.9s						

IDC 13 01:38:13.4±1.8, 13°.33N×124°.41E, h0^{km}, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=207.4km s-min=21.0km az=67.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	34.48	163	P	P	01 45 03.8	+0.5
	0.4nm,0.8s,baz=336,slow=9.6,SNR=1.6						
	0.4nm,0.8s						
SONM	Songino Array	37.54	340	P	P	01 45 28.8	-0.6
	0.4nm,0.6s,baz=134,slow=6.2,SNR=2.6						
	0.4nm,0.6s						
ASAR	Alice Springs	37.92	166	P	P	01 45 32.6	-0.1
	0.3nm,0.4s,baz=339,slow=6.9,SNR=5.0						
ASAR				PcP	PcP	01 47 47.5	-1.5
	0.1nm,0.4s,baz=343,slow=3.0,SNR=1.8						
	0.3nm,0.4s						
H11S3	WAKE ISLAND Hy	40.91	77	T	T	02 29 29.3	
	baz=269,slow=74,SNR=14						
H11S1	WAKE ISLAND Hy	40.92	77	T	T	02 29 20.5	
	baz=269,slow=74,SNR=8.4						
H11S2	WAKE ISLAND Hy	40.93	77	T	T	02 29 15.8	
	baz=269,slow=74,SNR=11						
H11N1	WAKE ISLAND Hy	41.13	75	T	T	02 29 39.4	
	baz=268,slow=74,SNR=15						
H11N2	WAKE ISLAND Hy	41.14	75	T	T	02 29 39.6	
	baz=268,slow=74,SNR=9.0						
H11N3	WAKE ISLAND Hy	41.15	75	T	T	02 29 40.8	
	baz=268,slow=74,SNR=14						
KURBB	Kurchatov Arra	52.54	325	P	P	01 47 28.8	+0.3
	0.9nm,0.7s,baz=122,slow=8.0,SNR=11						
	0.9nm,0.7s						
BVAR	Borovoye Array	58.13	325	P	P	01 48 09.0	+0.2
	0.6nm,0.5s,baz=139,slow=6.8,SNR=2.2						
	0.6nm,0.5s						

RSPR 13 01:39:14.5, 19°.05N×67°.15W, h7^{km}±10^{km}, MD2.7/3, 3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRPR	Cabo Rojo, PR	1.03	178	⇓eP	Pg	01 39 32.2	-2.2
CRPR	Cabo Rojo, PR	1.03	178	eS	Sg	01 39 46.1	-1.7
MLPR	Magueyes Islan	1.07	174	⇓eP	Pg	01 39 32.5	-2.7
MLPR	Magueyes Islan	1.07	174	eS	Sg	01 39 46.7	-2.4
OBIP	Obispado Ponce	1.12	152	⇓eP	Pg	01 39 33.5	-2.6
OBIP	Obispado Ponce	1.12	152	eS	Sg	01 39 48.1	-2.6

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*JMA **13** 02:03:27.9±0.2, 30°.7N±1°.0×14°2E±°, h23^{km}, MV3.9/13, NEAR TORISHIMA IS*

*IDC **13** 02:03:29.2±2.7, 30°.65N×141°.35E, h0^{km}, mb3.6/4, mbtmp3.7/6, ML2.5/2, MS3.7/2, Error ellipse: s-maj=113.3km s-min=23.5km az=74.0*

ISC 13 02:03:30.6±1.1, 30°.72N±0°.07×141°.8E±0°.2, h23^{km}, n16, σ1^{s}.93/14, mb3.6/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	2.93	325	eS	Sn	02 04 49.8	-0.3
JHJ	Hachijo jima 2	2.95	325	Pn	Pn	02 04 14.0	-2.0
	3.2nm,0.3s,baz=90,slow=20,SNR=2.0						
JHJ				Sn	Sn	02 04 48.9	-1.8
	8.8nm,0.3s,baz=72,slow=20,SNR=1.3						
	207nm,0.9s						
CBIJ	Chichi jima	3.63	175	eS	Sn	02 05 05.8	-1.6
JCJ	Chichijima	3.63	175	Pn	Pn	02 04 16.0	-9.3
	4.6nm,0.3s,baz=302,slow=23,SNR=6.1						
JCJ				Sn	Sn	02 04 55.2	-12
	9.6nm,0.3s,baz=349,slow=16,SNR=6.1						
BSO1	Boso 1	3.98	350	eS	Sn	02 05 16.1	+0.7
JRY	Ryogami san	5.82	336	eS	Sn	02 06 02.8	+1.3
JHO	Hitachi	5.96	350	eP	Pn	02 04 57.9	+0.4
JAG	Ashikaga	6.02	342	eS	Sn	02 06 04.4	-2.0
MJAR	Matsushiro Arr	6.54	334	Pn	Pn	02 05 05.9	+0.6
	0.1nm,0.3s,baz=161,slow=12,SNR=3.1						
	2.9nm,0.8s						
JFK	Kawauchi	6.67	354	eS	Sn	02 06 18.0	-4.6
MKAR	Makanchi Array	47.98	307	P	P	02 12 08.2	+0.7
	0.2nm,0.5s,baz=77,slow=9.3,SNR=2.5						
	0.2nm,0.5s						
PSI	Prapat	49.09	244	LR	LR	02 30 57.0	
	comp=Z,23nm,18.6s,baz=300,slow=34						
KURBB	Kurchatov Arra	50.32	312	P	P	02 12 25.5	+0.2
	0.3nm,0.5s,baz=94,slow=9.1,SNR=3.2						
	0.3nm,0.5s						
WRA	Warramunga Arr	50.88	189	P	P	02 12 30.7	+0.9
	0.7nm,0.7s,baz=6.4,slow=7.6,SNR=5.9						
	0.7nm,0.7s						
FINES	FINESS Array B	74.57	333	P	P	02 15 08.7	+1.5
	1.7nm,0.8s,baz=51,slow=6.4,SNR=4.4						
	1.7nm,0.8s						
ELK	Elko	79.40	49	LR	LR	02 43 24.0	
	comp=Z,115nm,20.2s,baz=74,slow=30						

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*TRN **13** 02:37:13.9, 11°.21N×61°.67W, h78^{km}, MD3.1, North-west of Trinidad.*

*FUNV **13** 02:37:13.4, 11°.20N×62°.01W, h20^{km}, MW3.5*

ISC 13 02:37:11.8±2.0, 11°.18N±0°.05×61°.9W±0°.1, h90^{km}±17^{km}, n11, σ1^{s}.11/20, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DMDM	Guralp CMG5TDE	0.57	147	eP	Pn	02 37 27.7	+0.6
DMDM				eS	Sn	02 37 37.5	-1.0
PSGH	Port of Spain	0.62	146	eP	Pn	02 37 28.2	+0.6
PSGH				eS	Sn	02 37 38.7	-0.6
TRN	Trinidad (W)	0.69	139	eP	Pn	02 37 29.2	+0.9
TRN				eS	Sn	02 37 39.6	-0.9
GRFF	Grenada Fort F	0.88	8	eP	Pn	02 37 30.7	+0.5
GRFF				eS	Sn	02 37 43.1	-0.8
GRGR	Grenville	0.97	12	eP	Pn	02 37 31.9	+0.7
GRGR				eS	Sn	02 37 45.6	-0.1
GRHS	Sauteurs	1.06	12	eP	Pn	02 37 33.2	+1.0
GRHS				eS	Sn	02 37 46.9	-0.6
GCMP	Grenada, Carri	1.37	18	eP	Pn	02 37 37.1	+1.2
GCMP				eS	Sn	02 37 53.9	-0.2
SVB	Belmont	2.17	16	eP	Pn	02 37 47.6	+1.4
SVB				eS	Sn	02 38 11.7	-0.8
MCLT	Moule a Chique	2.67	20	eS	Sn	02 38 23.0	-1.6
PCRV	Puerto La Cruz	2.90	250	eP	Pn	02 37 56.5	+0.5
SLBI	Saint Lucia, B	2.96	17	eP	Pn	02 37 57.6	+0.8
SLBI				eS	Sn	02 38 29.0	-2.4

AFAD 13 02:53:59.0, 39°.56N×26°.05E, h7^{km}±3^{km}, ML1.4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	Canakkale, Ayv	0.09	130	P	Pg	02 54 01.6	+0.5
BOZC	Bozcaada	0.28	0	P	Pg	02 54 04.2	-0.3
BOZC				P	Pb	02 54 04.7	-1.8
BOZC				S	Sg	02 54 09.7	+1.3
BOZC				*i* IAML		02 54 10.0	
	comp=N,35nm,0.2s						
BAYC	CANAKKALE_Bayr	0.42	64	P	Pb	02 54 09.9	+1.0
BAYC				S	Sg	02 54 13.4	+0.6
BAYC				*i* IAML		02 54 14.0	
	comp=N,34nm,0.2s						
BAYC				*i* IAML		02 54 14.0	
	comp=E,24nm,0.2s						
LAPS	Lapseki, ANA	0.92	41	P	Pn	02 54 25.1	+6.7
LAPS				S	Sb	02 54 29.9	+0.1
LAPS				*i* IAML		02 54 30.0	
	comp=N,19nm,0.4s						
LAPS				*i* IAML		02 54 30.0	
	comp=E,29nm,0.2s						

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*IDC **13** 02:55:20.9±1.7, 41°.41N×19°.39E, h0^{km}, mb3.7/6, mbtmp3.7/11, ML3.1/4, Error ellipse: s-maj=25.0km s-min=16.2km az=10.0*

*THE **13** 02:55:25.0, 42°N±10°×1°9E±1°5, h1^{km}±37^{km}, M3.2/31, MLh3.2/31*

*TIR **13** 02:55:24.1, 41°.61N×19°.28E, h36^{km}±3^{km}, Ml3.4/9*

*PDG **13** 02:55:24.8±0.5, 41°.57N×19°.29E, h21^{km}±1^{km}, MD3.3/5, ML3.3/13, Error ellipse: s-maj=0.5km s-min=1.4km az=0.0*

*PRU **13** 02:55:28.5, 41°.07N×18°.20E, h10^{km}*

ISC 13 02:55:24.2±1.1, 41°.55N±0°.02×19°.35E±0°.03, h12^{km}±8^{km}, n110, σ1^{s}.46/143, mb3.7/4, 12C-13D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULC	Ulcinj	0.42	349	ePg	Pg	02 55 32.9	+0.3
ULC				*i* Sg	Sb	02 55 39.3	-0.7
TIR	Tirane	0.43	117	Pg	Pg	02 55 32.5	-0.2
TIR				Sg	Sg	02 55 38.5	0.0
TIR				AML	AML	02 55 40.0	
	6.4nm,0.6s						
TIR				AML	AML	02 55 40.4	
	5.8nm,0.4s						
SDA	Shkodra	0.52	12	Pg	Pg	02 55 34.1	-0.2
SDA				Sg	Sb	02 55 42.4	-0.2
SDA				AML	AML	02 55 51.9	
	6.9nm,0.3s						
DRME	Dracevica, Mon	0.65	349	ePg	Pg	02 55 36.8	-0.1
DRME				eSg	Sb	02 55 46.9	+0.4
PHP	Peshkopia	0.83	80	Pg	Pg	02 55 38.8	-1.4
PHP				Sg	Sb	02 55 52.3	+0.7
PHP				AML	AML	02 55 59.2	
	4.3nm,0.4s						
PHP	Peshkopia	0.83	80	P	Pg	02 55 38.6	-1.6
PHP				S	Sg	02 55 50.5	-0.5
BUM	Brajici-Budva	0.83	336	ePg	Pg	02 55 39.9	-0.3
BUM				*i* Sg	Sb	02 55 52.5	+0.8
PDG	Podgorica	0.89	355	Pg	Pg	02 55 40.6	-0.7
PDG				Sg	Sb	02 55 54.1	+0.8
PDG	Podgorica	0.89	355	⇑S	Sb	02 55 52.9	-0.3
PDG	Podgorica	0.89	355	ePg	Pg	02 55 41.1	-0.2
PDG				*i* Sg	Sn	02 55 54.9	-0.3
PDG	Podgorica	0.89	355	⇑P	Pg	02 55 41.2	-0.2
CEME	Cevo	1.05	342	ePg	Pg	02 55 44.2	-0.2
CEME				eSg	Sn	02 56 00.4	+1.0
VLO	Vlora	1.08	174	Pg	Pn	02 55 46.5	+1.4
VLO				Sg	Sn	02 56 00.8	+0.9
VLO				AML	AML	02 56 08.2	
	5.6nm,0.4s						
VLO				AML	AML	02 56 22.1	
	6.0nm,0.6s						
VLO	Vlora	1.08	174	P	Pn	02 55 46.7	+1.6
VLO				S	Sn	02 56 03.7	+3.7
HCY	Herceg Novi	1.10	325	ePg	Pb	02 55 44.6	-0.6
HCY				*i* Sg	Sn	02 56 01.5	+0.9
PVY	Plav	1.14	23	ePg	Pb	02 55 45.3	-0.6
PVY				*i* Sg	Sn	02 56 04.0	+2.4
NKME	Niksic	1.25	346	ePg	Pb	02 55 47.7	-0.1
NKME				eSg	Sn	02 56 06.2	+1.8
KOME	Kolasin	1.31	5	ePg	Pb	02 55 48.8	+0.1
KOME				eSg	Sg	02 56 07.6	+1.2
IVA	Berane	1.38	17	⇑*i*Pg	Pb	02 55 49.9	-0.1
IVA				*i* Sg	Sg	02 56 09.7	+0.9
KBN	Korca	1.42	130	Pg	Pg	02 55 51.6	+0.1
KBN				AML	AML	02 56 15.1	
	2.6nm,0.6s						
KBN	Korca	1.42	130	P	Pg	02 55 51.6	+0.1
KBN				S	Sg	02 56 11.7	+1.7
BRY	Bratogost	1.48	336	ePg	Pn	02 55 50.9	+0.1
BRY				*i* Sg	Sg	02 56 11.3	-0.7
UPM	Unac-Piva	1.69	349	ePn	Pn	02 55 53.9	+0.3
UPM				*i* Sn	Sb	02 56 16.7	+0.2
NEST	Nestorio	1.71	131	Pn	Pb	02 55 55.9	+0.3
NEST				AML	AML	02 56 24.7	
	1.0nm,0.4s						
NEST				AML	AML	02 56 26.8	
	1.0nm,0.6s						
NEST	Nestorio	1.71	131	P	Pb	02 55 55.9	+0.3
NEST				S	Sg	02 56 19.8	+0.6
KLINJ	Klinje	1.72	341	ePn	Pg	02 55 56.4	-0.8
PLE	Pljevlja	1.78	1	ePn	Pn	02 55 55.3	+0.4
PLE				*i* Sn	Sb	02 56 19.0	-0.2
NOCI	Noci	1.89	247	Pn	Pn	02 55 56.1	-0.1
NOCI				AML	AML	02 56 32.8	
	1.6nm,0.4s						
PENT	Pentalofos	1.91	134	P	Pb	02 55 58.9	-0.1
RUDO	Rudo	2.07	0	ePn	Pn	02 56 00.1	+1.4
IGT	Igoumenitsa	2.15	159	Pn	Pn	02 56 00.9	+1.2
IGT				AML	AML	02 56 41.4	
	0.4nm,0.4s						
IGT	Igoumenitsa	2.15	159	P	Pn	02 56 00.6	+0.8
MATE	Matera	2.19	247	⇓P	Pn	02 56 00.2	-0.1
KPRO	Kipourio	2.20	136	P	Pb	02 56 02.8	-1.2
KZN	Kozani	2.21	123	P	Pn	02 56 02.5	+1.8
GRG	Griva	2.37	103	P	Pn	02 56 04.0	+1.1
PRMD	Pramanda	2.41	146	P	Pn	02 56 05.7	+2.2
MRVN	Minervino Murg	2.43	260	Pn	Pn	02 56 04.0	+0.3
TETR	Tetrakomo, Epi	2.64	146	P	Pn	02 56 08.6	+2.0
KNT	Kendrikon	2.69	97	P	Pn	02 56 08.4	+1.1
SGRT	San Giovanni R	2.71	276	Pn	Pn	02 56 07.6	0.0
BOVS	Bovan	2.71	39	⇓P	Pn	02 56 08.6	+1.0
THL	Klokotos Trika	2.83	133	P	Pn	02 56 10.7	+1.5
TYRN	Tyrnavos	2.86	129	P	Pn	02 56 10.9	+1.4
TSLK	Tsoukalades, L	2.90	159	P	Pn	02 56 10.6	+0.6
AMPL	Ampelaki	2.98	151	P	Pn	02 56 12.4	+1.2
AMPL				S	Sn	02 56 47.6	+0.7
DRAG	Dragano-Lefkad	3.01	161	P	Pn	02 56 11.3	-0.3
NYDR	Nydri-Lefkada	3.01	160	P	Pn	02 56 11.6	0.0
VTS	Vitosha	3.08	68	P	Pn	02 56 13.7	+1.0
VTS				S	Sn	02 56 50.9	+1.4
TIP	Timpagrande	3.09	221	⇑P	Pn	02 56 12.5	-0.2
EVGI	Lefkada island	3.09	161	P	Pn	02 56 12.4	-0.3
SOH	Sokhos	3.10	102	P	Pn	02 56 13.7	+0.8
SRS	Serrai	3.22	96	P	Pn	02 56 15.2	+0.7
EVR	Evrytania	3.23	144	P	Pn	02 56 16.6	+1.8
MAKR	Makrakomi, Fth	3.30	139	P	Pn	02 56 17.4	+1.7
MAKR				S	Sn	02 56 57.3	+2.4
PLG	Polygyros	3.31	109	P	Pn	02 56 16.5	+0.7
PVO	Paravola	3.37	150	P	Pn	02 56 17.8	+1.3
AGG	Agios Georgios	3.40	137	P	Pn	02 56 17.9	+0.9
AGG				S	Sn	02 56 58.3	+1.2
VLS	Valsamata	3.50	164	P	Pn	02 56 17.7	-0.6
ANX	Ano Chora	3.55	145	P	Pn	02 56 20.9	+1.9
BLY	Banja Luka	3.57	334	ePn	Pn	02 56 20.4	+1.1
RTZL	Ratzakli, Kefa	3.63	162	P	Pn	02 56 20.4	+0.2
MDVR	Moldovita	3.67	27	⇑P	Pn	02 56 20.5	-0.1
EFP	Efpalio	3.68	147	P	Pn	02 56 22.2	+1.4
HERR	Herculane	4.01	33	⇓P	Pn	02 56 26.7	+1.3
PLVB	Pleven	4.31	63	⇑P	Pn	02 56 32.3	+2.8
BZS	Buzias	4.39	21	⇓P	Pn	02 56 31.2	+0.7
AQU	L'Aquila	4.51	282	ePn	Pn	02 56 33.2	+0.9
GZR	Gura Zlata	4.58	32	⇓P	Pn	02 56 34.5	+1.2
MORH	Mrgy, Hungar	4.70	354	ePn	Pn	02 56 35.3	+0.6
MORH	Mrgy, Hungar	4.70	354	⇑P	Pn	02 56 35.4	+0.7
BOJS	Bojanci	4.95	324	*i* Pn	Pn	02 56 39.2	+0.9
ELND	Elena	5.03	72	⇓P	Pn	02 56 41.4	+2.0
LOT	Lotru	5.05	38	⇑P	Pn	02 56 40.9	+1.1
ARR	Arges	5.42	43	⇑P	Pn	02 56 46.4	+1.6
CEY	Cerknica	5.51	321	*i* Pn	Pn	02 56 46.8	+0.8
MARR	Marisel-Cluj	5.80	27	⇓P	Pn	02 56 50.2	+0.2
SOKA	Soboth	6.00	330	ePn	Pn	02 56 54.2	+1.4
	0.4nm,0.2s						
SOKA				eSn	Sn	02 57 59.1	-2.2
	4.6nm,0.8s						
OBKA	Obir	6.05	327	ePn	Pn	02 56 55.4	+2.0
	0.4nm,0.2s						
OBKA				eSn	Sn	02 58 04.9	+2.2
	4.8nm,0.6s						
MLR	Muntele Rosu	6.20	48	Pn	Pn	02 56 57.5	+1.9
	0.8nm,0.3s,baz=168,slow=11,SNR=11						
MLR				Sn	Sn	02 58 08.2	+1.8
	0.2nm,0.3s,baz=273,slow=19,SNR=1.4						
	3.5nm,0.6s						
MLR	Muntele Rosu	6.20	48	⇓P	Pn	02 56 57.1	+1.5
DOPR	Dopca	6.21	43	⇓P	Pn	02 56 57.3	+1.7
ARSA	Arzberg	6.33	336	ePn	Pn	02 56 58.3	+1.1
	0.7nm,0.4s						
PSZ	Piszkesteto	6.38	3	⇑P	Pn	02 56 58.7	+0.7
BOSR	Bodos	6.43	43	⇓P	Pn	02 57 00.5	+1.9
OZUR		6.50	43	⇓P	Pn	02 57 00.5	+0.9
RONA	Rosalia, Austr	6.53	342	ePn	Pn	02 57 03.8	+3.8
	0.9nm,0.4s						
COVR	Voineasa-Covas	6.56	47	⇑P	Pn	02 57 01.8	+1.3
ICOR	Ion Corvin	6.72	65	⇑P	Pn	02 57 04.6	+2.1
PLOR	Plostina	6.81	48	⇓P	Pn	02 57 05.2	+1.3
VRI	Vrincioaia	6.87	49	⇓P	Pn	02 57 06.0	+1.3
KBA	Koelnbreinsper	7.01	324	ePn	Pn	02 57 06.9	+0.2
	0.8nm,0.3s						
ABTA	Abfaltersbach	7.16	319	*i* Pn	Pn	02 57 09.8	+1.1
	0.5nm,0.3s						
ABTA				*i* Sn	Sn	02 58 31.5	+1.6
	3.6nm,0.5s						
MOA	Molln	7.27	332	*i* Pn	Pn	02 57 12.5	+2.3
	0.8nm,0.5s						
BIOA	Bad Ischl, Aus	7.37	328	*i* Pn	Pn	02 57 14.6	+3.0
	1.5nm,0.4s						
BIOA				eSn	Sn	02 58 34.5	-0.6
	2.1nm,0.5s						
LESA	Schwarzleotal	7.57	323	*i* Pn	Pn	02 57 14.5	+0.2
	0.6nm,0.4s						
IDI	Anoyia	7.61	143	Pn	Pn	02 57 12.6	-2.2
	11nm,1.1s,baz=24,slow=14,SNR=2.2						
IDI				Sn	Sn	02 58 33.8	-7.3
	0.3nm,0.3s,baz=9.0,slow=21,SNR=1.6						
WTTA	Wattenberg	7.95	319	ePn	Pn	02 57 21.8	+2.2

	0.9nm,0.2s						
WATA	**Walderalm**	**8.03**	**319**	*e*Pn	**Pn**	**02 57 22.9**	**+2.2**
	0.9nm,0.2s						
SQTA	**Sankt Quirin**	**8.13**	**317**	*e*Pn	**Pn**	**02 57 24.7**	**+2.7**
	1.1nm,0.2s						
GERES	**GERESS Array B**	**8.32**	**333**	Pn	**Pn**	**02 57 26.4**	**+1.8**
	baz=150,slow=13,SNR=2.5						
	0.3nm,0.6s						
DAVOX	**Davos/Dischmat**	**8.59**	**311**	Pn	**Pn**	**02 57 28.0**	**-0.3**
	0.7nm,0.3s,baz=72,slow=4.9,SNR=6.8						
DAVOX				Sn	**Sn**	**02 59 07.0**	**+1.9**
	0.2nm,0.3s,baz=114,slow=19,SNR=1.9						
	0.9nm,0.4s						
KHC	**Kasperske Hory**	**8.60**	**334**	*e*PN	Pn	02 57 34.0	+5.6
KHC				*e*SN	**Sn**	**02 59 06.2**	**+0.8**
HFS	**Hagfors**	**18.94**	**351**	P	**P**	**02 59 44.9**	**+0.2**
	0.1nm,0.3s,baz=166,slow=13,SNR=1.4						
	1.3nm,0.7s						
EKA	**Eskdalemuir Ar**	**20.21**	**321**	P	**P**	**02 59 58.8**	**+0.2**
	3.8nm,1.1s,baz=110,slow=9.0,SNR=3.8						
	3.8nm,1.1s						
FINES	**FINESS Array B**	**20.34**	**9**	P	**P**	**02 59 58.2**	**-1.8**
	5.1nm,1.0s,baz=182,slow=11,SNR=5.8						
	5.1nm,1.0s						
BVAR	**Borovoye Array**	**35.74**	**54**	P	**P**	**03 02 21.2**	**-1.3**
	0.7nm,0.7s,baz=266,slow=3.9,SNR=5.1						
	0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**41.03**	**56**	P	**P**	**03 03 04.3**	**-2.7**
	0.3nm,0.3s,baz=277,slow=11,SNR=1.5						
	0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**44.18**	**50**	P	**P**	**03 03 31.5**	**-1.0**
	0.7nm,0.4s,baz=285,slow=6.5,SNR=4.3						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**44.38**	**61**	P	**P**	**03 03 33.2**	**-1.1**
	0.8nm,0.7s,baz=285,slow=7.0,SNR=5.9						
	0.8nm,0.7s						

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*RSNC **13** 03:00:45.4±3.7, 1˚S±27˚×7˚8W±1˚2, h241^{km}±28^{km}, M3.1, mb3.6, ML2.8*

*IGQ **13** 03:00:47.8±1.4, 2˚S±4˚×7˚8W±1˚0, h209^{km}±11^{km}*

ISC 13 03:00:46.3±1.3**, 1°.51S**±0°.05×**77°.78W**±0°.07**, h200**^{km}**, n19, **σ**1^{s}27**/23**, 2C-1D, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSC	**San Juan Bosco**	**1.78**	**204**	⇑P	**Pn**	**03 01 23.7**	**+0.8**
BOSC				S	**Sn**	**03 01 51.8**	**+0.5**
CUSE	**Cuicocha Este**	**1.91**	**341**	P	**Pn**	**03 01 24.7**	**+0.3**
PAC1	**Pacto, Paraso**	**2.03**	**330**	P	**Pn**	**03 01 25.9**	**+0.5**
BV15	**Puerto Quito-O**	**2.20**	**319**	P	**Sn**	**03 02 01.5**	**+2.9**
FLF1	**Flavio Alfaro-**	**2.36**	**299**	P	**Pn**	**03 01 29.6**	**+0.9**
FLF1				S	**Sn**	**03 02 01.8**	**0.0**
JIPI	**JIPIJAPA**	**2.78**	**273**	P	**Sn**	**03 02 09.1**	**-1.2**
PPLP	**Puerto Lpez**	**3.00**	**269**	P	**Sn**	**03 02 14.1**	**-0.6**
ARNL	**Arenillas**	**3.05**	**228**	⇓P	**Pn**	**03 01 35.5**	**-1.2**
ARNL				S	**Sn**	**03 02 14.4**	**-1.6**
GONZ	**Gonzanam**	**3.15**	**211**	P	**Sn**	**03 02 20.7**	**+1.8**
CRUC	**La Cruz**	**3.17**	**15**	P	**Pn**	**03 01 39.0**	**+0.7**
BBAC	**Balboa, Cauca**	**3.55**	**9**	P	**Pn**	**03 01 43.3**	**+0.5**
ZUMB	**Zumba**	**3.60**	**202**	⇑P	**Pn**	**03 01 44.3**	**+0.9**
ZUMB				S	**Sn**	**03 02 27.8**	**-0.4**
FLOC	**Florencia**	**3.73**	**35**	P	**Pn**	**03 01 44.2**	**-0.7**
POPC	**Popayan, Colom**	**4.17**	**15**	P	**Pn**	**03 01 49.3**	**-1.2**
GARC	**Garzon, Huila**	**4.32**	**32**	P	**Pn**	**03 01 52.8**	**+0.3**
JAMC	**Jamundi, Valle**	**4.82**	**13**	P	**Pn**	**03 01 57.2**	**-1.5**
MACC	**Macarena, Meta**	**5.35**	**47**	P	**Pn**	**03 02 05.1**	**-0.2**
	21nm,0.7s						
YOTC	**Yotoco, Valle**	**5.64**	**15**	P	**Pn**	**03 02 06.5**	**-2.6**
	3.9nm,1.5s						
URMC	**La Uribe, Meta**	**5.82**	**36**	P	**Pn**	**03 02 11.4**	**0.0**

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*IDC **13** 03:13:32.1±0.8, 1°.42N×126°.59E, h0^{km}, mb3.8/9, mbtmp3.8/11, ML3.9/2, MS3.9/1, Error ellipse: s-maj=37.3km s-min=12.4km az=73.0*

*DJA **13** 03:13:36.6±0.2, 1˚N±2˚×12˚6E±˚, h10^{km}, M4.5/12, mB5.2/2, mb5.1/1, MLv4.1/12, Mw(mB)4.6/2*

*NEIC **13** 03:13:37.8±1.3, 1°.4N±0°.1×126°.51E±0°.07, h35^{km}±2^{km}, mb4.2/7, Error ellipse: s-maj=21.6km s-min=7.9km az=203.0*

ISC 13 03:13:37.8±0.7**, 1°.37N**±0°.05×**126°.50E**±0°.06**, h35**^{km}**, n35, **σ**1^{s}52**/39**, mb4.1**/14**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.05**	**124**		**Pn**	**03 13 56.9**	**+0.8**
TNTI	**Ternate**	**1.05**	**124**	P	**Pn**	**03 13 56.8**	**+0.7**
GAMI	**Galela, Maluku**	**1.37**	**70**	P	**Pn**	**03 14 02.5**	**+2.0**
SGSI	**Sangihe**	**2.49**	**337**	P	**Pn**	**03 14 17.3**	**+1.4**
SGSI				S	**Sn**	**03 14 48.4**	**+3.2**
KMSI	**Cibinong**	**2.64**	**253**	P	**Pn**	**03 14 17.7**	**-0.2**
SANI	**Sanana**	**3.44**	**189**	P	**Pn**	**03 14 28.7**	**-0.2**
GTOI	**Gorontalo**	**3.56**	**258**	P	**Pn**	**03 14 31.8**	**+1.2**
LUWI	**Luwuk**	**4.43**	**237**		**Pn**	**03 14 44.0**	**+1.5**
LUWI	**Luwuk**	**4.43**	**237**	P	**Pn**	**03 14 44.5**	**+1.9**
NLAI	**Namlea**	**4.62**	**172**	P	**Pn**	**03 14 46.5**	**+1.3**
KRAI	**Karang Ratu**	**5.03**	**158**	P	**Pn**	**03 14 53.0**	**+2.2**
APSI	**Ampana**	**5.35**	**245**	P	**Pn**	**03 14 55.8**	**+0.6**
TOLI2	**Tolitoli**	**5.72**	**267**		**Pn**	**03 14 59.1**	**-1.2**
KAPI	**Kappang**	**9.25**	**227**	Pn	**Pn**	**03 15 49.1**	**+0.3**
	1.0nm,0.3s,baz=67,slow=24,SNR=3.6						
KAPI				Sn	**Sn**	**03 17 35.0**	**+3.2**
	0.4nm,0.3s,baz=55,slow=1.8,SNR=1.8						
	2.7nm,0.6s						
KAPI	**Kappang**	**9.25**	**227**		**Pn**	**03 15 49.4**	**+0.6**
FITZ	**Fitzroy Crossi**	**19.37**	**182**	P	**P**	**03 18 00.3**	**-0.3**
	0.3nm,0.3s,baz=24,slow=12,SNR=7.6						
	1.3nm,0.4s						
FITZ	**Fitzroy Crossi**	**19.37**	**182**	P	**P**	**03 18 00.3**	**-0.3**
WB0	**Warramunga Arr**	**22.39**	**160**	P	**P**	**03 18 32.5**	**-0.9**
WB0				IAmb	IAmb	03 18 39.0	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	**22.54**	**160**	P	**P**	**03 18 34.4**	**-0.5**
	comp=Z,2.9nm,0.4s,baz=333,slow=11,SNR=36						
WRA				S	**S**	**03 22 37.3**	**-2.7**
	comp=Z,0.3nm,0.5s,baz=331,slow=20,SNR=2.4						
WRA				LR	LR	03 26 39.8	
	comp=Z,358nm,21.2s,baz=83,slow=35						
	comp=Z,2.9nm,0.4s						
WR8	**Warramunga Arr**	**22.60**	**160**	P	**P**	**03 18 34.9**	**-0.8**
WR8				IAmb	IAmb	03 18 40.4	
	comp=Z,5.0nm,0.7s						
AS31	**Alice Springs**	**25.91**	**164**	P	**P**	**03 19 05.1**	**-1.7**
AS31				IAmb	IAmb	03 19 26.4	
	comp=Z,1.5nm,0.4s						
ASAR	**Alice Springs**	**25.91**	**164**	P	**P**	**03 19 06.1**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=348,slow=16,SNR=12						
ASAR				S	**S**	**03 23 39.0**	**+4.2**
	comp=Z,0.5nm,0.9s,baz=348,slow=18,SNR=5.4						
	comp=Z,0.7nm,0.4s						
BBOO	**Buckleboo**	**35.18**	**166**	P	**P**	**03 20 27.8**	**-0.8**
STKA	**Stephens Creek**	**36.03**	**158**	P	**P**	**03 20 34.7**	**-1.2**
	comp=Z,1.1nm,0.5s,baz=337,slow=6.4,SNR=4.5						
	comp=Z,1.1nm,0.5s						
SONM	**Songino Array**	**49.45**	**342**	P	**P**	**03 22 23.5**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=90,slow=7.2,SNR=1.5						
	comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**59.36**	**326**	P	**P**	**03 23 35.5**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=120,slow=7.7,SNR=18						
	comp=Z,0.7nm,0.3s						
MKAR	**Makanchi Array**	**59.36**	**326**	P	**P**	**03 23 35.3**	**-1.3**
ZALV	**Zalesovo Beam**	**62.58**	**334**	P	**P**	**03 23 57.3**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=64,slow=11,SNR=2.7						
	comp=Z,0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**62.58**	**334**	P	**P**	**03 23 57.6**	**-0.6**
KURBB	**Kurchatov Arra**	**63.59**	**328**	P	**P**	**03 24 05.0**	**0.0**
	comp=Z,1.1nm,0.6s,baz=124,slow=6.7,SNR=10						
	comp=Z,1.1nm,0.6s						
KURK	**Kurchatov**	**63.60**	**328**	P	**P**	**03 24 05.3**	**+0.2**
KURK				IAmb	IAmb	03 24 07.3	
	comp=Z,2.6nm,0.8s						
BVAR	**Borovoye Array**	**69.16**	**328**	P	**P**	**03 24 41.5**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=147,slow=6.2,SNR=4.0						
	comp=Z,0.4nm,0.5s						
AB31	**Akbulak array**	**73.82**	**321**	P	**P**	**03 25 08.3**	**-0.6**
AB31				IAmb	IAmb	03 25 27.6	
	comp=Z,3.2nm,1.4s						
ABKAR	**Akbulak array**	**73.82**	**321**	P	**P**	**03 25 08.4**	**-0.4**
ILAR	**Eielson Array**	**87.32**	**25**	P	**P**	**03 26 20.9**	**0.0**
	comp=Z,0.2nm,1.0s,baz=243,slow=4.0,SNR=1.5						
	comp=Z,0.2nm,1.0s						

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*IDC **13** 03:16:01.0±2.1, 38°.10S×94°.36W, h0^{km}, mb4.0/5, mbtmp4.0/6, ML3.5/1, MS3.7/24, Error ellipse: s-maj=64.0km s-min=32.6km az=22.0*

*GCMT **13** 03:16:06.0±0.4, 37°.96S±0°.05×94°.06W±0°.03, h14^{km}±1^{km}, MW4.7/65, Moment Tensor Solution. s17,c21; s65,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.60±.15; M$_{\theta\theta}$0.22±.09; M$_{\phi\phi}$1.38±.10; M$_{r\theta}$-0.08±.27; M$_{\theta\phi}$-0.07±.06; M$_{\phi r}$-0.17±.18; Best double couple: M$_0$1.50400×10^{16} NP1:ϕ$_s$174.00000°, δ42.00000°, λ-94.00000°. NP2: ϕ$_s$359.00000°, δ48.00000°, λ-86.00000°. Principal axes: T 1.3940, Plg3.0000°, Azm87.0000°; N 0.2230, Plg3.0000°, Azm177.0000°; P -1.6140, Plg86.0000°, Azm309.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 13 03:16:02.0±1.8**, 38°.2S**±0°.4×**94°.4W**±0°.2**, h10**^{km}**, n40, **σ**1^{s}30**/9**, mb4.1**/5**, MS3.7**/22**, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**13.28**	**76**	T	T	03 32 27.4	
	baz=246,slow=74,SNR=449						
H03S1	**Juan Fernandez**	**13.29**	**76**	T	T	03 32 28.9	
	baz=246,slow=74,SNR=441						
H03S3	**Juan Fernandez**	**13.29**	**76**	T	T	03 32 30.0	
	baz=246,slow=74,SNR=496						
H03N2	**Juan Fernandez**	**13.43**	**74**	T	T	03 32 38.7	
	baz=251,slow=72,SNR=123						
H03N3	**Juan Fernandez**	**13.43**	**74**	T	T	03 32 39.4	
	baz=251,slow=72,SNR=156						
H03N1	**Juan Fernandez**	**13.45**	**74**	T	T	03 32 38.8	
	baz=251,slow=72,SNR=182						
RPN	**Rapa Nui**	**16.67**	**307**	LR	LR	03 24 38.6	
	comp=Z,441nm,19.3s,baz=126,slow=31						
PLCA	**Paso Flores**	**18.61**	**105**	P	**Pn**	**03 20 20.6**	**+0.9**
	baz=258,slow=12,SNR=4.5						
PLCA				LR	LR	03 25 37.4	
	comp=Z,411nm,19.8s,baz=266,slow=31						
	2.8nm,0.9s						
CFA	**Coronel Fontan**	**22.42**	**81**	LR	LR	03 28 08.4	
	comp=Z,136nm,21.0s,baz=52,slow=32						
NNA	**Nana**	**30.44**	**36**	LR	LR	03 31 03.8	
	comp=Z,211nm,21.8s,baz=194,slow=30						
LPAZ	**La Paz**	**31.77**	**54**	P	**P**	**03 22 27.0**	**-0.3**
	2.7nm,0.8s,baz=214,slow=3.6,SNR=7.5						
LPAZ				LR	LR	03 32 07.1	
	comp=Z,179nm,21.4s,baz=214,slow=30						
	2.7nm,0.8s						
PMSA	**Palmer Station**	**32.06**	**156**	LR	LR	03 31 43.8	
	comp=Z,141nm,22.0s,baz=314,slow=29						
CPUP	**Villa Florida**	**33.32**	**80**	LR	LR	03 34 37.6	
	comp=Z,64nm,18.0s,baz=92,slow=34						
ATAH	**Atahualpa**	**34.14**	**29**	LR	LR	03 33 37.4	
	comp=Z,120nm,19.6s,baz=239,slow=31						
SIV	**San Ignacio**	**36.71**	**62**	LR	LR	03 36 32.9	
	comp=Z,103nm,19.8s,baz=294,slow=34						
BDFB	**Brasilia**	**46.50**	**74**	LR	LR	03 42 39.4	
	comp=Z,198nm,20.9s,baz=218,slow=34						
TBI	**Tubuai**	**48.87**	**271**	*e*LR	LR	03 38 25.6	
	2µm,26.8s						
JTS	**Las Juntas de**	**49.02**	**12**	LR	LR	03 40 08.9	
	comp=Z,69nm,20.1s,baz=134,slow=30						
TAOE	**Nuku Hiva Isla**	**50.36**	**293**	*e*S	S	03 32 02.6	-10
	59nm,24.7s						
TAOE				*e*LR	LR	03 39 13.9	
	183nm,28.1s						
SDV	**Santo Domingo**	**51.82**	**30**	LR	LR	03 45 20.7	
	comp=Z,137nm,19.0s,baz=172,slow=34						
QSPA	**South Pole Qui**	**52.05**	**180**	LR	LR	03 44 21.8	
	comp=Z,40nm,21.0s,baz=100,slow=33						
PPT2	**Papeete2**	**52.08**	**277**	*e*S	S	03 32 24.3	-12
	74nm,25.2s						
PPT2				*e*LR	LR	03 39 51.3	
	133nm,29.2s						
PPT2				*e*LR	LR	03 40 04.1	
	221nm,25.8s						
PPT	**Papeete**	**52.09**	**277**	LR	LR	03 42 07.2	
	comp=Z,55nm,21.9s,baz=100,slow=30						
SNAA	**Sanae**	**54.77**	**157**	LR	LR	03 45 24.5	
	comp=Z,45nm,18.1s,baz=187,slow=32						
VNDA	**Vanda**	**55.94**	**195**	LR	LR	03 44 45.0	
	comp=Z,26nm,21.4s,baz=79,slow=31						
RAR	**Rarotonga**	**58.11**	**267**	LR	LR	03 44 38.5	
	comp=Z,68nm,20.3s,baz=104,slow=30						
URZ	**Urewera**	**66.66**	**239**	LR	LR	03 49 52.4	
	comp=Z,116nm,18.9s,baz=122,slow=30						
TXAR	**Lajitas Array**	**67.71**	**351**	P	**P**	**03 26 59.1**	**-0.4**
	0.9nm,0.7s,baz=171,slow=8.9,SNR=12						
	0.9nm,0.7s						
TKL	**Tuckaleechee C**	**74.12**	**9**	LR	LR	03 55 52.4	
	comp=Z,107nm,18.7s,baz=97,slow=32						
NVAR	**Mina Array Bea**	**79.33**	**341**	P	**P**	**03 28 09.5**	**+1.7**
	1.6nm,0.9s,baz=164,slow=7.0,SNR=7.3						
	1.6nm,0.9s						
ELK	**Elko**	**80.81**	**344**	P	**P**	**03 28 17.3**	**+1.5**
	0.3nm,0.4s,baz=256,slow=4.2,SNR=3.7						
	0.3nm,0.4s						
PDAR	**Pinedale Array**	**81.73**	**349**	P	**P**	**03 28 20.9**	**+0.3**
	1.4nm,0.8s,baz=158,slow=6.0,SNR=12						
	1.4nm,0.8s						
DZM	**Mont Dzumac**	**83.45**	**247**	*e*LR	LR	03 54 30.7	
	216nm,29.2s						
SADO	**Sadowa**	**83.71**	**11**	LR	LR	04 00 42.6	
	comp=Z,40nm,21.9s,baz=65,slow=32						
BOSA	**Boshof**	**92.87**	**130**	LR	LR	04 06 19.0	
	comp=Z,40nm,18.1s,baz=206,slow=32						
DBIC	**Dimbokro**	**93.74**	**85**	LR	LR	04 09 28.1	
	comp=Z,50nm,18.1s,baz=216,slow=34						
LBTB	**Lobatse**	**95.69**	**128**	LR	LR	04 06 32.7	
	comp=Z,50nm,18.5s,baz=254,slow=32						
CTA	**Charters Tower**	**98.78**	**236**	LR	LR	04 06 42.0	
	comp=Z,37nm,21.2s,baz=72,slow=31						
USRK	**Ussuriysk Ar.**	**144.92**	**295**	PKP	**PKPdf**	**03 35 39.0**	**+0.1**
	2.8nm,0.7s,baz=67,slow=4.0,SNR=6.1						
BVAR	**Borovoye Array**	**161.80**	**30**	PKP	**PKPdf**	**03 36 00.9**	**-1.8**
	0.6nm,0.5s,baz=279,slow=2.8,SNR=2.2						
BVAR				PKPab	**PKPab**	**03 36 47.2**	**-1.0**
	0.5nm,0.5s,baz=226,slow=5.8,SNR=2.7						

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*NIED **13** 03:26:12.4, 37°.11N×142°.30E, h25^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$1.65; M$_{\theta\theta}$0.12; M$_{\phi\phi}$-1.77; M$_{r\theta}$-0.10; M$_{\theta\phi}$0.62; M$_{\phi r}$1.05; Fault plane solution: M$_0$2.10000×10^{14} NP1: ϕ$_s$155.00000°, δ31.00000°, λ77.00000°. NP2: ϕ$_s$350.00000°, δ60.00000°, λ97.00000°.*

JMA 13 03:26:12.4±0.3**, 37°.1N**±0°.6×**142°.3E**±0°.9**, h25**^{km}±4^{km}**, MV3.7**/39**, E OFF FUKUSHIMA PREF, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.17**	**283**	*e*P	Pn	03 26 33.1	-0.1
JFK				*e*S	Sn	03 26 48.4	0.0
ONAJ	**Iwakimizuishiy**	**1.20**	**270**	*e*P	Pn	03 26 33.7	0.0
ONAJ				*e*S	Sb	03 26 49.5	-0.1
JMST	**Minamisoumatoc**	**1.28**	**299**	P	Pn	03 26 34.9	+0.1
JIKH	**Ishinomakikobu**	**1.37**	**331**	P	Pn	03 26 36.0	+0.1
JFFD	**Fukushimafurud**	**1.39**	**270**	P	Pn	03 26 36.5	+0.2
JFFD				*e*S	Sn	03 26 54.3	+0.4
JMM	**Marumori**	**1.42**	**303**	*e*P	Pn	03 26 36.7	+0.1
JIO	**Ouri**	**1.54**	**331**	*e*P	Pn	03 26 38.8	+0.5
JIO				*e*S	Sn	03 26 57.7	+0.2
JOTO	**OTAMA OYAMA**	**1.63**	**287**	*e*P	Pn	03 26 40.6	+1.0
JOTO				*e*S	Sb	03 27 01.3	-0.7
JOU	**Okura**	**1.80**	**314**	*e*P	Pn	03 26 43.2	+1.3
JMK	**Ichinoseki**	**2.03**	**335**	*e*P	Pb	03 26 47.1	-1.5
JMK				*e*S	Sb	03 27 11.5	-1.9
JYS	**Shirataka**	**2.09**	**303**	*e*P	Pn	03 26 47.1	+1.2
JYS				*e*S	Sn	03 27 12.7	+1.6
JFY	**Yanaizu**	**2.09**	**279**	*e*P	Pn	03 26 47.1	+1.2
JYK	**Kaneyama**	**2.37**	**320**	*e*P	Pn	03 26 51.6	+1.9
JYK				*e*S	Sn	03 27 20.5	+2.6
JAG	**Ashikaga**	**2.39**	**254**	*e*P	Pn	03 26 51.4	+1.4
JAG				*e*S	Sn	03 27 19.9	+1.5

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*GEN **13** 03:32:49.9, 44°.04N×11°.31E, h15^{km}, Ml1.7*

*ROM **13** 03:32:51.0±0.1, 44°.017N±0°.004×11°.284E±0°.005, h8^{km}, ML2.1/46, Error ellipse: s-maj=0.5km s-min=0.2km az=345.0*

ISC 13 03:32:50.8±0.9**, 44°.02N**±0°.02×**11°.28E**±0°.02**, h13**^{km}±5^{km}**, n38, **σ**1^{s}48**/63**, 4C, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEI	**Scarperia**	**0.06**	**54**	P	**Pg**	**03 32 53.1**	**-0.3**
SEI				S	**Sg**	**03 32 54.6**	**-0.8**
SEI	**Scarperia**	**0.06**	**54**	P	**Pg**	**03 32 53.1**	**-0.3**
SEI				S	**Sg**	**03 32 54.5**	**-0.8**
SEI				AML	AML		
	comp=N,25250µm,0.5s						
SEI				AML	AML		
	comp=E,18000µm,0.3s						
SEI				AML	AML		
	comp=N,23980µm,0.1s						
SEI				AML	AML		
	comp=E,11932µm,0.2s						
MOCL	**Monte Cuccoli**	**0.08**	**261**	P	**Pg**	**03 32 53.6**	**0.0**
MOCL				S	**Sg**	**03 32 55.2**	**-0.4**
MOCL				AML	AML		
	comp=E,6230µm,0.2s						
MOCL				AML	AML		
	comp=N,5630µm,1.0s						
MOCL				AML	AML		
	comp=E,6230µm,0.2s						
MOCL				AML	AML		
	comp=N,5046µm,0.2s						
MOCL				AML	AML		
	comp=E,6230µm,1.8s						
MPPT	**Montemurlo**	**0.15**	**247**	⇑P	**Pb**	**03 32 54.9**	**-0.6**
MPPT				S	**Sg**	**03 32 57.5**	**+0.3**
MPPT				AML	AML		
	comp=E,906µm,1.3s						
MPPT				AML	AML		
	comp=N,803µm,1.1s						
MPPT				AML	AML		
	comp=E,876µm,0.3s						
MPPT				AML	AML		
	comp=N,767µm,0.3s						
FNVD	**Fontana Vidola**	**0.19**	**322**	P	**Pb**	**03 32 55.3**	**-0.9**
FNVD				S	**Sg**	**03 32 58.2**	**+0.1**
VISG	**Visignano**	**0.20**	**32**	⇑P	**Pb**	**03 32 55.7**	**-0.8**
VISG				AML	AML		
	comp=E,1490µm,0.4s						
VISG				AML	AML		
	comp=N,2235µm,0.2s						
VISG				AML	AML		
	comp=N,2234µm,0.2s						
VISG				AML	AML		
	comp=N,2234µm,1.8s						
VISG				AML	AML		
	comp=E,1490µm,0.4s						
BRIS	**BRISIGHELLA**	**0.21**	**51**	P	**Pb**	**03 32 59.6**	**+3.1**
BRIS				S	**Sg**	**03 33 06.3**	**+7.7**
BRIS				AML	AML		
	comp=E,330µm,0.6s						
BRIS				AML	AML		
	comp=N,565µm,1.4s						
BRIS				AML	AML		
	comp=E,330µm,0.6s						
BRIS				AML	AML		
	comp=E,106µm,0.9s						
BRIS				AML	AML		
	comp=N,215µm,0.6s						
BRIS				AML	AML		
	comp=E,106µm,1.1s						
BRIS				AML	AML		
	comp=N,515µm,0.3s						
BRIS				AML	AML		
	comp=E,330µm,1.4s						
FIR	**Firenze**	**0.24**	**185**	P	**Pb**	**03 32 56.7**	**-0.4**
FIR				S	**Sb**	**03 33 01.3**	**0.0**
FIR				AML	AML		
	comp=E,1097µm,1.0s						
FIR				AML	AML		
	comp=N,1580µm,1.6s						
FIR				AML	AML		
	comp=E,1058µm,1.1s						
FIR				AML	AML		
	comp=N,1570µm,1.6s						
FIR				AML	AML		
	comp=E,1096µm,1.0s						
FIR				AML	AML		
	comp=E,951µm,0.4s						
FIR				AML	AML		
	comp=N,1539µm,0.3s						
FIR				AML	AML		
	comp=E,997µm,0.4s						
FIR				AML	AML		
	comp=N,1538µm,0.3s						
LMD	**Lutirano**	**0.31**	**79**	P	**Pb**	**03 32 57.4**	**-0.9**
LMD				S	**Sb**	**03 33 02.7**	**-0.6**
LMD	**Lutirano**	**0.31**	**79**	⇑P	**Pb**	**03 32 57.4**	**-0.9**
LMD				S	**Sb**	**03 33 02.6**	**-0.7**
LMD				AML	AML		
	comp=N,1155µm,0.5s						
LMD				AML	AML		
	comp=E,474µm,1.4s						
LMD				AML	AML		
	comp=N,957µm,0.1s						
LMD				AML	AML		
	comp=E,428µm,0.2s						
CRMI	**Carmignano**	**0.32**	**225**	P	**Pb**	**03 32 57.9**	**-0.5**
CRMI				S	**Sb**	**03 33 03.2**	**-0.4**
CRMI				AML	AML		
	comp=E,270µm,0.3s						
CRMI				AML	AML		
	comp=N,550µm,0.3s						
CRMI				AML	AML		
	comp=E,122µm,0.4s						
CRMI				AML	AML		
	comp=N,212µm,0.4s						
CRMI				AML	AML		
	comp=E,123µm,0.4s						
CRMI				AML	AML		
	comp=E,270µm,0.3s						
CRMI				AML	AML		
	comp=N,211µm,0.4s						
CRMI				AML	AML		
	comp=N,550µm,0.3s						
POPM	**Popiglio**	**0.38**	**274**	P	**Pg**	**03 32 58.8**	**+0.3**
POPM				S	**Sb**	**03 33 04.7**	**-0.6**
POPM	**Popiglio**	**0.38**	**274**	⇑P	**Pb**	**03 32 58.8**	**-0.6**
POPM				S	**Sb**	**03 33 04.9**	**-0.3**
POPM				AML	AML		
	comp=N,750µm,0.2s						
POPM				AML	AML		
	comp=E,774µm,0.2s						
POPM				AML	AML		
	comp=E,774µm,0.2s						
POPM				AML	AML		
	comp=N,750µm,0.2s						
POPM				AML	AML		
	comp=E,774µm,1.8s						
MTRZ	**Monterenzio**	**0.38**	**20**	P	**Pb**	**03 32 58.5**	**-1.0**
MTRZ	**Monterenzio**	**0.38**	**20**	P	**Pg**	**03 32 58.4**	**-0.1**
MTRZ				S	**Sb**	**03 33 04.8**	**-0.5**
ZCCA	**Zocca**	**0.40**	**327**	P	**Pb**	**03 33 00.7**	**+0.8**
ZCCA				S	**Sb**	**03 33 09.4**	**+3.5**
ZCCA	**Zocca**	**0.40**	**327**	P	**Pb**	**03 33 00.5**	**+0.6**
SFI	**Santa Sofia**	**0.42**	**105**	P	**Pb**	**03 32 59.7**	**-0.5**
SFI				S	**Sb**	**03 33 06.7**	**+0.3**
SFI				AML	AML		
	comp=E,182µm,0.3s						
SFI				AML	AML		
	comp=N,226µm,0.6s						
SFI				AML	AML		
	comp=N,207µm,0.1s						
SFI				AML	AML		
	comp=E,155µm,0.2s						
SFI				AML	AML		
	comp=N,216µm,0.1s						
SFI				AML	AML		
	comp=E,152µm,0.6s						
ASQU	**Asqua**	**0.43**	**121**	P	**Pb**	**03 32 59.7**	**-0.5**
ASQU				S	**Sb**	**03 33 06.6**	**0.0**
ASQU	**Asqua**	**0.43**	**121**	P	**Pb**	**03 32 59.8**	**-0.5**
ASQU				AML	AML		
	comp=E,134µm,0.3s						
ASQU				AML	AML		
	comp=N,116µm,1.4s						
ASQU				AML	AML		
	comp=N,109µm,0.3s						
ASQU				AML	AML		
	comp=E,135µm,0.3s						
OSSC	**Osservatorio P**	**0.49**	**183**	P	**Pb**	**03 33 01.0**	**-0.4**
OSSC				S	**Sb**	**03 33 09.2**	**+0.8**
OSSC	**Osservatorio P**	**0.49**	**183**	P	**Pb**	**03 33 01.1**	**-0.2**
OSSC				S	**Sb**	**03 33 09.1**	**+0.6**

OSSC				AML	AML		
	comp=E,258µm,1.0s						
OSSC				AML	AML		
	comp=N,218µm,0.3s						
OSSC				AML	AML		
	comp=E,236µm,0.2s						
OSSC				AML	AML		
	comp=E,241µm,0.2s						
OSSC				AML	AML		
	comp=N,217µm,0.3s						
OSSC				AML	AML		
	comp=N,291µm,0.8s						
CSNT	Castellina Chi	0.54	179	P	Pb	03 33 01.8	-0.4
CSNT				S	Sb	03 33 10.4	+0.4
CSNT	Castellina Chi	0.54	179	P	Pb	03 33 01.9	-0.3
CSNT				S	Sb	03 33 10.3	+0.4
CSNT				AML	AML		
	comp=E,250µm,0.2s						
CSNT				AML	AML		
	comp=N,256µm,1.0s						
CSNT				AML	AML		
	comp=N,244µm,0.2s						
CSNT				AML	AML		
	comp=E,250µm,0.2s						
CARD	Cardoso	0.58	271	P	Pg	03 33 02.1	0.0
CARD				S	Sb	03 33 10.7	-0.2
MAIM	Mastiano	0.58	260	P	Pb	03 33 02.4	-0.4
MAIM				S	Sg	03 33 10.5	+0.6
GSCL	Gusciola	0.60	304	P	Pb	03 33 03.2	-0.1
GSCL				S	Sb	03 33 12.6	+1.0
GSCL	Gusciola	0.60	304	P	Pb	03 33 03.1	-0.1
GSCL				S	Sb	03 33 12.9	+1.2
GSCL				AML	AML		
	comp=E,146µm,0.6s						
GSCL				AML	AML		
	comp=N,161µm,0.6s						
GSCL				AML	AML		
	comp=N,161µm,0.6s						
GSCL				AML	AML		
	comp=E,145µm,0.6s						
PII	Pisa	0.62	242	P	Pg	03 33 03.2	+0.2
PII	Pisa	0.62	242	P	Pg	03 33 03.1	+0.2
PII				AML	AML		
	comp=E,316µm,1.1s						
PII				AML	AML		
	comp=N,286µm,0.4s						
PII				AML	AML		
	comp=E,315µm,0.3s						
PII				AML	AML		
	comp=N,286µm,0.4s						
PII				AML	AML		
	comp=N,286µm,1.6s						
CRE	Caprese Michel	0.62	129	P	Pb	03 33 03.7	0.0
CRE				AML	AML		
	comp=E,97µm,0.4s						
CRE				AML	AML		
	comp=N,118µm,1.1s						
CRE				AML	AML		
	comp=E,97µm,0.4s						
CRE				AML	AML		
	comp=N,105µm,0.2s						
SARO	Sassorosso	0.66	285	P	Pb	03 33 04.0	-0.2
SARO				S	Sb	03 33 14.1	+0.7
VLC	Villacollemand	0.66	283	S	Sb	03 33 14.3	+0.9
MYKA	Terra Mystica	3.10	32	*e*Pn	Pb	03 33 42.3	-3.5
	comp=N,0.6nm,0.2s						
SQTA	Sankt Quirin	3.21	359	*e*Pn	Pb	03 33 45.6	-2.1
	comp=N,1.6nm,0.2s						
WTTA	Wattenberg	3.26	4	*i* Pn	Pb	03 33 47.6	-1.0
	comp=N,1.0nm,0.3s						
WATA	Walderalm	3.33	3	*e*Pn	Pb	03 33 47.6	-2.1
	comp=N,1.1nm,0.3s						
RETA	Reutte	3.49	354	*e*Pn	Pb	03 33 49.6	-2.9
	comp=N,0.7nm,0.2s						

ROM 13 03:33:43.0±0.1**, 44°.023N**±0°.007×**11°.284E**±0°.006**, h10**^{km}**, ML1.5**/10**, 2C-1D, Error ellipse: s-maj=0.8km s-min=0.1km az=167.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEI	Scarperia	0.06	59	P	Pg	03 33 45.3	+0.2
SEI				S	Sg	03 33 46.7	0.0
SEI				AML	AML		
	comp=E,1170µm,0.3s						
SEI				AML	AML		
	comp=N,1735µm,1.5s						
SEI				AML	AML		
	comp=E,757µm,0.2s						
SEI				AML	AML		
	comp=N,1672µm,0.3s						
MOCL	Monte Cuccoli	0.08	257	⇓P	Pg	03 33 45.8	+0.4
MOCL				S	Sg	03 33 47.3	+0.4
MOCL				AML	AML		
	comp=E,576µm,1.1s						
MOCL				AML	AML		
	comp=N,522µm,1.0s						
MOCL				AML	AML		
	comp=E,528µm,0.2s						
MOCL				AML	AML		
	comp=N,521µm,0.1s						
MPPT	Montemurlo	0.15	245	⇑P	Pg	03 33 47.1	+0.6
MPPT				AML	AML		
	comp=N,63µm,0.3s						
MPPT				AML	AML		
	comp=E,56µm,0.2s						
VISG	Visignano	0.20	33	⇑P	Pg	03 33 47.9	+0.7
VISG				AML	AML		
	comp=N,117µm,0.2s						
VISG				AML	AML		
	comp=E,87µm,0.2s						
FIE	Fiesole	0.22	178	P	Pg	03 33 48.0	+0.6
FIE				S	Sg	03 33 51.5	+1.0
LMD	Lutirano	0.31	80	P	Pg	03 33 49.6	+0.4
LMD				S	Sb	03 33 54.9	-1.0
POPM	Popiglio	0.38	274	P	Pg	03 33 50.9	+0.4
POPM				S	Sb	03 33 57.5	-0.5

ROM 13 03:34:32.4±0.1**, 44°.024N**±0°.003×**11°.281E**±0°.004**, h8**^{km}**, ML1.4**/14**, Error ellipse: s-maj=0.2km s-min=0.2km az=315.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEI	Scarperia	0.06	61	P	Pg	03 34 34.6	+0.2
SEI				S	Sg	03 34 36.0	+0.2
MOCL	Monte Cuccoli	0.08	255	P	Pg	03 34 35.0	+0.5
MOCL				S	Sg	03 34 36.6	+0.5
MPPT	Montemurlo	0.15	244	P	Pg	03 34 36.4	+0.7
MPPT				S	Sg	03 34 39.0	+1.0
FNVD	Fontana Vidola	0.18	322	P	Pg	03 34 36.8	+0.6
FNVD				S	Sg	03 34 39.8	+0.9
VISG	Visignano	0.20	34	P	Pg	03 34 37.1	+0.6
VISG				S	Sg	03 34 40.4	+1.1
BRIS	BRISIGHELLA	0.21	53	P	Pg	03 34 41.2	+4.6
BRIS				S	Sg	03 34 47.7	+8.2
BRIS				AML	AML		
	comp=E,103µm,1.6s						
BRIS				AML	AML		
	comp=N,170µm,0.3s						
BRIS				AML	AML		
	comp=N,190µm,0.8s						
BRIS				AML	AML		
	comp=N,170µm,0.3s						
FIE	Fiesole	0.22	177	P	Pg	03 34 37.4	+0.6
FIE				S	Sg	03 34 40.8	+1.0
FIR	Firenze	0.25	184	P	Pg	03 34 38.2	+0.8
FIR				S	Sb	03 34 42.6	-1.0
LMD	Lutirano	0.31	80	P	Pg	03 34 38.9	+0.3
LMD				S	Sg	03 34 44.1	+1.3
LMD				AML	AML		
	comp=E,153µm,1.3s						
LMD				AML	AML		
	comp=N,308µm,0.5s						
LMD				AML	AML		
	comp=E,128µm,0.1s						
LMD				AML	AML		
	comp=N,281µm,0.1s						
CRMI	Carmignano	0.33	224	P	Pg	03 34 39.3	+0.5
CRMI				S	Sb	03 34 44.6	-1.2
MTRZ	Monterenzio	0.38	21	P	Pg	03 34 39.5	-0.3
ZCCA	Zocca	0.39	326	P	Pb	03 34 41.1	-0.6
ZCCA				S	Sb	03 34 47.3	-0.5
SFI	Santa Sofia	0.43	106	P	Pg	03 34 41.2	+0.5
SFI				S	Sb	03 34 48.2	-0.5
SFI				AML	AML		
	comp=E,70µm,1.2s						
SFI				AML	AML		
	comp=N,74µm,0.2s						
SFI				AML	AML		
	comp=E,34µm,0.2s						
SFI				AML	AML		
	comp=N,70µm,0.1s						
ASQU	Asqua	0.43	122	P	Pb	03 34 41.6	-0.7
ASQU				S	Sb	03 34 48.1	-0.8
ASQU				AML	AML		
	comp=E,24µm,1.4s						
ASQU				AML	AML		
	comp=N,31µm,1.5s						
ASQU				AML	AML		
	comp=E,24µm,0.6s						
ASQU				AML	AML		
	comp=N,31µm,0.5s						
OSSC	Osservatorio P	0.50	183	P	Pg	03 34 42.6	+0.5
OSSC				S	Sb	03 34 50.5	-0.3
OSSC				AML	AML		
	comp=E,102µm,1.6s						
OSSC				AML	AML		
	comp=N,87µm,1.6s						
OSSC				AML	AML		
	comp=E,69µm,0.2s						
OSSC				AML	AML		
	comp=N,70µm,0.7s						
OSSC				AML	AML		
	comp=N,70µm,1.3s						
CSNT	Castellina Chi	0.55	179	P	Pg	03 34 43.3	+0.2
CSNT				S	Sb	03 34 51.8	-0.6
CSNT				AML	AML		
	comp=E,68µm,0.2s						
CSNT				AML	AML		
	comp=N,67µm,0.2s						
CRE	Caprese Michel	0.63	130	P	Pb	03 34 45.2	-0.5
CRE				S	Sb	03 34 54.3	-0.4

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*TAP **13** 03:48:34.5, 24°.88N×122°.59E, h25^{km}, ML3.3, C*
*JMA **13** 03:48:36.3±0.1, 25°N±1°×122°.6E±0°.7, h29^{km}±3^{km}, MV2.4/6, NW OFF ISHIGAKIJIMA IS*
ISC 13 03:48:33.7±1.3**, 24°.88N**±0°.05×**122°.65E**±0°.04**, h25**^{km}±14^{km}**, n18, σ0^s.51**/26**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.51	148	*e*P	Pn	03 48 44.9	-0.4
JYNG				*e*S	Sb	03 48 50.8	-0.1
YOJ	Yonaguni jima	0.53	142	*i* P	Pn	03 48 45.6	-0.1
YOJ				*i* S	Sn	03 48 53.2	-0.6
YOJ	Yonaguni jima	0.53	142	P	Pn	03 48 45.4	-0.3
EOS2	EOS2	0.59	220	P	Pn	03 48 46.4	0.0
EOS2				*e*S	Sn	03 48 56.0	+0.8
TWB1	Santiao Chiao	0.61	282	P	Pb	03 48 46.0	+0.3
TWB1				*e*S	Sb	03 48 54.4	+0.5
EGS		0.65	267	*e*P	Pn	03 48 46.9	-0.4
EOS3	EOS3	0.66	207	P	Pn	03 48 47.7	+0.4
EOS3				*e*S	Sn	03 48 56.9	0.0
SXI1	Grass Mountain	0.73	287	P	Pb	03 48 48.1	+0.3
TWC	Suao	0.78	250	P	Pb	03 48 48.0	-0.5
EOS4	EOS4	0.81	202	*e*P	Pn	03 48 50.3	+1.1
EOS4				*e*S	Sb	03 48 59.5	+0.2
NDS	Dongshan	0.88	254	P	Pb	03 48 50.2	-0.1
TWE	Neicheng	0.91	260	*e*P	Pn	03 48 50.6	-0.2
PCYT	Pengchaiyu	0.91	325	*e*P	Pb	03 48 51.4	+0.6
ENA	Nanau	0.94	242	P	Pb	03 48 51.2	-0.1
ENA				S	Sb	03 49 02.3	-1.1
FUSB	Fushanzhiwuyua	0.97	263	*e*P	Pn	03 48 51.7	-0.1
EAHA	Aohua	0.99	237	*e*P	Pb	03 48 52.5	+0.4
YM08	YM08	1.01	288	*e*P	Pb	03 48 52.5	+0.1
YM08				*e*S	Sb	03 49 04.5	-0.9
HATJ	Hateruma jima	1.34	128	*e*S	Sb	03 49 14.9	+0.2

TAP 13 03:48:38.9, 25°.27N×122°.14E, h51^{km}**, ML3.1, C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.30	208	P	Pn	03 48 48.8	+0.7
TWB1				S	Sn	03 48 55.0	+0.4
SXI1	Grass Mountain	0.30	233	*i* P	Pn	03 48 48.8	+0.6
SXI1				*i* S	Sn	03 48 55.9	+1.0
WFSB	Wu-fen Shan	0.38	238	P	Pn	03 48 49.3	+0.4
WFSB				*e*S	Sn	03 48 56.3	+0.2
TIPB	Shuangxi	0.41	224	P	Pn	03 48 49.0	-0.3
TIPB				S	Sn	03 48 57.2	+0.5
EGS		0.47	204	*e*P	Pn	03 48 50.3	+0.5
EGS				*e*S	Sn	03 48 58.4	+0.8
TWY	Chenhua	0.49	270	*e*P	Pn	03 48 50.3	+0.3
TWY				*e*S	Sn	03 48 58.9	+0.8
YM08	YM08	0.51	260	*e*P	Pn	03 48 49.8	-0.5
YM08				*e*S	Sn	03 48 58.9	+0.4
YM01	YM01	0.53	256	*e*P	Pn	03 48 50.9	+0.3
YM01				*e*S	Sn	03 48 58.7	-0.4
ANP	Anpu	0.57	261	*e*P	Pn	03 48 51.1	0.0
ANP				*e*S	Sn	03 48 59.5	-0.4
FUSB	Fushanzhiwuyua	0.72	225	*e*P	Pn	03 48 52.6	-0.3
NWLT	Wulai	0.76	230	*e*P	Pn	03 48 53.4	-0.1
ENTT	Nioudou	0.82	220	*e*P	Pn	03 48 53.5	-0.8
YHNB	Yeheng	0.92	229	*e*P	Pn	03 48 55.5	-0.2
LATG	Datong	0.92	217	*e*P	Pn	03 48 54.4	-1.3
LATG				*e*S	Sn	03 49 10.3	+2.3

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*CATAC **13** 04:01:58.5±0.7, 12°N±3°×8°8W±°, h21^{km}±5^{km}, M3.0/11, MLv3.0/11, Error ellipse: s-maj=7.7km s-min=4.9km az=40.0, confirmed*
*SNET **13** 04:01:59.9±1.1, 12°.27N×88°.05W, h26^{km}±116^{km}, ML2.4*
ISC 13 04:01:57.8±2.3**, 12°.16N**±0°.10×**88°.01W**±0°.05**, h24**^{km}±16^{km}**, n19, σ0^s.54**/26**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	0.92	28	P	Pb	04 02 14.9	-0.3
CSGN				S	Sn	04 02 27.3	-0.7
POTN	Potosi Cosigui	0.97	30	P	Pb	04 02 15.6	-0.4
POTN				S	Sn	04 02 28.6	-0.3
CRIN	San Cristobal	1.08	60	S	Sb	04 02 31.8	+0.2
CNCH	Conchagua	1.13	9	*e*P	Pn	04 02 18.2	0.0
CNCH				*e*S	Sn	04 02 33.7	+0.7
CNCH	Conchagua	1.13	9	P	Pn	04 02 18.1	-0.1
PKGN	Cerro Pekin	1.13	63	P	Pn	04 02 18.7	+0.6
PKGN				S	Sb	04 02 33.4	+0.6
LCND	La Caada	1.15	6	*e*P	Pn	04 02 18.6	+0.1
LCND				*e*S	Sn	04 02 33.6	+0.2
LCND				IAML		04 02 39.9	
	comp=Z,107nm,0.2s						
LCND	La Caada	1.15	6	P	Pn	04 02 18.5	+0.1
QUEN	Al S del Volca	1.21	69	P	Pn	04 02 20.2	+1.0
HOYN	Al Sur del Vol	1.23	69	S	Sn	04 02 35.7	+0.2
POLN	Al Sur del Vol	1.26	67	P	Pn	04 02 20.0	0.0
POLN				S	Sn	04 02 35.7	-0.6
PLRN	Geotermica Pol	1.28	70	P	Pn	04 02 20.3	+0.1
CNGA	Al SSO del Vol	1.32	75	S	Sn	04 02 38.1	+0.5
CNGN	Cerro Negro	1.32	75	P	Pn	04 02 20.9	+0.1
COPN	Copaltepe	1.38	89	P	Pn	04 02 21.6	0.0
MOM3	MOM3	1.50	76	P	Pn	04 02 22.6	-0.5
MOM3				S	Sn	04 02 41.6	-0.4
COEG	Centro de Oper	1.69	330	IAML		04 02 51.1	
	comp=Z,44nm,0.3s						
JAYA	Jayaque - finc	2.05	317	*e*S	Sn	04 02 54.8	-1.1
NUBE	Las Nubes	2.45	315	*e*P	Pn	04 02 37.4	+0.9
NUBE				*e*S	Sn	04 03 05.4	-0.3

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*TAP **13** 04:08:23.2, 24°.84N×122°.73E, h56^{km}, ML3.5, C*
*JMA **13** 04:08:24.7±0.4, 25°N±2°×12°3E±°, h30^{km}, MV2.2/6, NW OFF ISHIGAKIJIMA IS*
ISC 13 04:08:24.9±1.2**, 24°.83N**±0°.07×**122°.67E**±0°.04**, h31**^{km}±11^{km}**, n21, σ0^s.53**/31**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.45	146	P	Pb	04 08 34.5	-0.1
JYNG				*e*S	Sb	04 08 42.1	+1.0
YOJ	Yonaguni jima	0.47	140	*i* P	Pb	04 08 34.7	-0.3
YOJ				S	Sn	04 08 43.1	+0.2
YOJ	Yonaguni jima	0.47	140	*e*P	Pb	04 08 34.8	-0.2
YOJ				*e*S	Sb	04 08 41.2	-0.7
EOS2	EOS2	0.57	225	P	Pn	04 08 37.4	+0.6
EOS3	EOS3	0.63	211	*e*P	Pb	04 08 37.7	+0.3
TWB1	Santiao Chiao	0.65	287	*e*P	Pb	04 08 37.4	-0.5
EGS		0.67	272	*e*P	Pb	04 08 38.0	-0.3
SXI1	Grass Mountain	0.77	290	P	Pn	04 08 39.8	0.0
SXI1				*e*S	Sb	04 08 50.2	0.0
EOS4	EOS4	0.77	205	*e*P	Pn	04 08 38.4	-1.0
EOS4				*e*S	Sn	04 08 50.8	+1.0
TWC	Suao	0.78	254	*e*P	Pn	04 08 38.9	-0.9
TIPB	Shuangxi	0.78	281	*e*P	Pn	04 08 40.0	+0.1
TIPB				*e*S	Sb	04 08 50.6	+0.2
WFSB	Wu-fen Shan	0.84	287	*e*P	Pb	04 08 41.8	+0.6
NDS	Dongshan	0.89	258	*e*P	Pn	04 08 40.9	-0.4
TWE	Neicheng	0.92	264	P	Pn	04 08 41.2	-0.6
TWE				*e*S	Sn	04 08 54.0	0.0
ENA	Nanau	0.94	245	P	Pn	04 08 41.2	-0.8
ENA				S	Sn	04 08 53.7	-0.6
EAHA	Aohua	0.98	240	*e*P	Pn	04 08 42.8	+0.2
EAHA				*e*S	Sn	04 08 55.3	-0.1
FUSB	Fushanzhiwuyua	0.99	266	*e*P	Pn	04 08 42.6	-0.1
FUSB				*e*S	Sb	04 08 56.9	+0.6
ENTT	Nioudou	1.02	260	*e*P	Pn	04 08 43.1	-0.1
NWLT	Wulai	1.06	268	*e*P	Pn	04 08 43.8	0.0
IRIF	Iriomote-Funau	1.08	117	*e*P	Pn	04 08 44.1	+0.1
LATG	Datong	1.08	255	*e*P	Pn	04 08 43.6	-0.5

IDC 13 04:10:49.9±2.3**, 14°.88S×177°.59W, h0**^{km}**, mb3.6**/4**, mbtmp3.6**/4**, Error ellipse: s-maj=137.7km s-min=30.0km az=150.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.03	257	P	P	04 19 15.0	-0.7
	0.4nm,0.8s,baz=88,slow=7.6,SNR=1.2						
	0.4nm,0.8s						
ASAR	Alice Springs	46.43	251	P	P	04 19 19.1	+0.2
	1.2nm,0.6s,baz=90,slow=8.3,SNR=11						
	1.2nm,0.6s						
ILAR	Eielson Array	82.78	13	P	P	04 23 15.4	-0.1
	0.5nm,1.1s,baz=207,slow=4.8,SNR=4.3						
	0.5nm,1.1s						
TXAR	Lajitas Array	83.72	58	P	P	04 23 21.3	+0.1
	0.7nm,1.1s,baz=231,slow=5.8,SNR=3.5						
	0.7nm,1.1s						

IDC 13 04:15:11.3±3.2**, 49°.14S×105°.64E, h0**^{km}**, mb3.5**/4**, mbtmp3.5**/4**, MS3.3**/3**, Error ellipse: s-maj=159.7km s-min=24.8km az=122.0, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	15.55	27	T	T	04 34 37.8	
	baz=202,slow=73,SNR=52						
H01W1	Cape Leeuwin H	15.56	27	T	T	04 34 39.2	
	baz=202,slow=73,SNR=50						
H01W3	Cape Leeuwin H	15.56	27	T	T	04 34 39.1	
	baz=202,slow=73,SNR=46						
ASAR	Alice Springs	33.76	51	P	P	04 21 54.5	-0.2
	0.4nm,0.7s,baz=216,slow=7.7,SNR=4.9						
	0.4nm,0.7s						
VNDA	Vanda	35.37	162	LR	LR	04 35 38.0	
	comp=Z,50nm,18.6s,baz=308,slow=35						
WRA	Warramunga Arr	37.09	49	P	P	04 22 22.1	-1.2
	0.6nm,1.0s,baz=210,slow=9.2,SNR=2.1						
	0.6nm,1.0s						
QSPA	South Pole Qui	41.00	180	P	P	04 22 55.0	-0.7
	0.7nm,0.7s,baz=315,slow=4.9,SNR=4.7						
	0.7nm,0.7s						
CTA	Charters Tower	43.44	63	LR	LR	04 40 10.9	
	comp=Z,29nm,19.9s,baz=32,slow=34						
SNAA	Sanae	49.50	203	P	P	04 24 02.3	-0.7
	0.9nm,0.9s,baz=135,slow=16,SNR=3.9						
	0.9nm,0.9s						
BOSA	Boshof	62.89	257	LR	LR	04 46 39.5	
	comp=Z,35nm,21.0s,baz=184,slow=30						
TXAR	Lajitas Array	150.18	121	PKPbc	PKiKP	04 35 05.6	+0.7
	0.5nm,0.7s,baz=181,slow=3.3,SNR=6.4						

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*IDC **13** 04:39:13.0±0.5, 39°.32N×72°.76E, h0^{km}, mb4.3/28, mbtmp4.3/35, ML3.8/7, MS3.6/26, Error ellipse: s-maj=9.8km s-min=8.6km az=35.0*
*BJI **13** 04:39:14.6, 39°.53N×72°.67E, h12^{km}, mB4.8/5, mb4.6/44, ML4.5/5, Ms4.2/15, Ms7 4.0/14*
*KRNET **13** 04:39:14.4±0.1, 39°.55N×72°.67E, h14^{km}, mb4.9*
*MOS **13** 04:39:15.5±1.2, 39°.47N×72°.65E, h15^{km}, mb4.9/38, Error ellipse: s-maj=4.4km s-min=3.1km az=83.4*
*NEIC **13** 04:39:15.8±2.7, 39°.40N±0°.04×72°.64E±0°.03, h10^{km}±1^{km}, mb4.9/104, Error ellipse: s-maj=7.7km s-min=2.9km az=330.0*
*SOME **13** 04:39:16.4, 39°.58N×72°.67E, h10^{km}*
*NNC **13** 04:39:19.6±2.0, 39°.63N×72°.75E, h0^{km}, mb5.1, mpv4.9, Error ellipse: s-maj=15.8km s-min=8.8km az=179.0*
ISC 13 04:39:15.5±0.6**, 39°.48N**±0°.02×**72°.64E**±0°.02**, h8**^{km}±3^{km}**, n468, σ1^s.97**/496**, mb4.8**/134**, MS3.6**/26**, 66C-70D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.65	270		Pg	04 39 27.3	-0.8
DRK					Sb	04 39 37.0	-1.7
DRK	Karamyk	0.65	270	⇑*e*P	Pg	04 39 27.4	-0.8
DRK				⇑*e*S	Sg	04 39 36.7	0.0
DRK	Karamyk	0.65	270	PG	Pg	04 39 27.3	-0.8
DRK						04 39 37.0	
SFK	Sufi-Kurgan	0.85	51	⇓*e*P	Pg	04 39 29.6	-2.3
SFK				⇓*e*S	Sg	04 39 40.5	-2.5
SFK	Sufi-Kurgan	0.85	51	⇓*e*PG	Pg	04 39 29.6	-2.3
SFK				*e*S	Sg	04 39 40.5	-2.5
OHH	Osh	1.04	6	⇓*e*P	Pg	04 39 32.9	-2.7
OHH				⇓*e*S	Sg	04 39 46.4	-2.8
OHH	Osh	1.04	6	⇓*e*PG	Pg	04 39 32.9	-2.7
OHH				*e*S	Sg	04 39 46.4	-2.8
SALK	Salom-Alik	1.67	33	⇓*e*P	Pn	04 39 44.1	-1.1
SALK				⇓*e*S	Sn	04 40 05.9	-1.0
ARSB	Arslanbob	1.86	8		Pb	04 39 49.6	-0.2
ARSB	Arslanbob	1.86	8	⇓*e*P	Pn	04 39 47.5	-0.3
ARSB				⇓*e*S	Sn	04 40 11.7	+0.2
ARSB	Arslanbob	1.86	8	PN	Pb	04 39 49.6	-0.2
GAR	Garm	1.87	256		Pb	04 39 49.3	-0.7
GAR	Garm	1.87	256	⇑*e*P	Pb	04 39 49.5	-0.5
GAR				⇑*e*S	Sg	04 40 15.2	-0.4
GAR	Garm	1.87	256	*e*PN	Pb	04 39 49.5	-0.5
GAR				*e*S	Sg	04 40 15.2	-0.4
MANEM	Manem	2.08	202		Pn	04 39 51.2	+0.2
TRKS	Terek-Say	2.34	331	⇓*e*P	Pn	04 39 54.2	-0.3
TRKS				⇓*e*S	Sn	04 40 23.2	-0.3
TRKS	Terek-Say	2.34	331	⇓*e*PN	Pn	04 39 54.2	-0.3
TRKS				*e*S	Sn	04 40 23.2	-0.3
ARK	Arkit	2.37	348	⇓*e*P	Pn	04 39 55.2	+0.4
ARK				⇓*e*S	Sn	04 40 25.3	+1.2
KSH	Kashi	2.58	88	Pn	Pn	04 39 55.1	-2.6
KSH				Sn	Sn	04 40 26.4	-2.9
KSH				smax	smax		
	comp=N,2µm,0.7s						
KSH				smax	smax		
	comp=E,4µm,1.0s						
ARLS	Aral	2.70	28	⇓*e*P	Pn	04 39 59.8	+0.4
ARLS				⇓*e*S	Sn	04 40 32.7	+0.4
ARLS	Aral	2.70	28	⇓*e*PN	Pn	04 39 59.8	+0.4
ARLS				*e*S	Sn	04 40 32.7	+0.4
JNKS	Jany-Kuch	2.79	55	⇑*e*P	Pn	04 40 01.3	+0.6
JNKS				⇑*e*S	Sn	04 40 35.4	+0.7
CHGR	Chuyangaron	2.83	254		Pn	04 40 03.9	+2.7
CHGR	Chuyangaron	2.83	254	⇓*e*P	Pn	04 40 03.0	+1.8
CHGR				⇓*e*S	Sb	04 40 38.5	-2.8
CHGR	Chuyangaron	2.83	254	PN	Pn	04 40 03.9	+2.7
MNAS	Manas	3.00	358	⇑*e*P	Pn	04 40 04.1	+0.5
MNAS				⇑*e*S	Sn	04 40 40.3	+0.5
MNAS	Manas	3.00	358	*e*PN	Pn	04 40 04.1	+0.5
MNAS				*e*S	Sn	04 40 40.3	+0.5
UCH	Uchtor	3.09	27	P	Pn	04 40 08.0	+3.0
	SNR=138						
UCH	Uchtor	3.09	27	⇑*e*P	Pn	04 40 05.4	+0.4
UCH				⇑*e*S	Sn	04 40 42.6	+0.3
UCH	Uchtor	3.09	27	*e*PN	Pn	04 40 05.4	+0.4
UCH				*e*S	Sn	04 40 42.6	+0.3
MRKS	Merke	3.29	8	Pg	Pb	04 40 15.3	+1.1

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       486nm,0.5s
MRKS                                Lg      Lg      04 40 58.5
       1µm,0.5s
MRKS   Merke               3.29   8 eP      Pb      04 40 14.8 +0.7
       486nm,0.5s
MRKS                                eS      Sb      04 40 56.7 +2.3
       1µm,0.5s
EKS2   Erkin-Say           3.29  15  P      Pn      04 40 10.3 +2.8
       SNR=92
EKS2   Erkin-Say           3.29  15⇑eP      Pn      04 40 08.0 +0.5
EKS2                             ⇑eS      Sn      04 40 47.1 +0.3
EKS2   Erkin-Say           3.29  15 ePN     Pn      04 40 08.0 +0.5
EKS2                                eS      Sn      04 40 47.1 +0.3
IUG    Iuzhnay             3.32 324 ePn     Pn      04 40 10.5 +2.6
IUG                                 ePg     Pg      04 40 16.9 -2.2
IUG                                 eLg     Lg      04 41 03.3
IUG    Iuzhnay             3.32 324 ePN     Pn      04 40 10.4 +2.6
IUG                                 e               04 40 16.9
IUG                                 e               04 41 03.3
AAK    Ala-Archa           3.45  23  P      Pn      04 40 12.6 +2.9
       SNR=279
AAK    Ala-Archa           3.45  23  Pn     Pn      04 40 13.2 +3.5
       59nm,0.3s,baz=198,slow=7.9,SNR=503
AAK                                  Sn     Sb      04 40 57.1 -2.0
       80nm,0.3s,baz=121,slow=19,SNR=22
AAK                                  LR     LR      04 41 04.3
       comp=Z,126nm,21.5s,baz=236,slow=31
       228nm,0.4s
AAK    Ala-Archa           3.45  23         Pn      04 40 12.7 +2.9
AAK    Ala-Archa           3.45  23⇑eP      Pn      04 40 10.2 +0.5
AAK                              ⇑eS      Sn      04 40 51.0 +0.2
AAK    Ala-Archa           3.45  23 ⇑Pn     Pn      04 40 13.4 +3.7
       3µm,0.6s
AAK                                 ⇓Sn     Sb      04 40 57.0 -2.0
       9µm,0.7s
AAK    Ala-Archa           3.45  23d iPN    Pn      04 40 12.3 +2.6
AAK                                  pmax   pmax
       comp=Z,226nm,0.7s
DZA    Taraz               3.54 344  Pg     Pb      04 40 19.3 +0.8
       comp=Z,185nm,0.4s
DZA                                  Lg     Lg      04 41 04.8
       comp=Z,2µm,0.5s
DZA    Taraz               3.54 344 eP      Pb      04 40 19.3 +0.8
       comp=Z,185nm,0.4s
DZA                                 eS      Sb      04 41 04.8 +3.0
       comp=Z,2µm,0.5s
DZA    Taraz               3.54 344 ePn     Pn      04 40 13.7 +2.8
DZA                                 ePg     Pg      04 40 21.8 -1.7
DZA    Taraz               3.54 344 ePN     Pn      04 40 13.7 +2.8
DZA                                 e               04 40 21.7
KBK    Karagaybulak        3.62  28  P      Pn      04 40 15.2 +3.1
       SNR=72
KBK    Karagaybulak        3.62  28⇑eP      Pn      04 40 12.6 +0.6
KBK                              ⇑eS      Sn      04 40 55.1 +0.1
KBK    Karagaybulak        3.62  28 ePN     Pn      04 40 12.6 +0.6
KBK                                 eS      Sn      04 40 55.1 +0.1
FRU1   Bishkek             3.65  24         Pn      04 40 16.4 +4.0
FRU1   Bishkek             3.65  24⇓eP      Pn      04 40 13.2 +0.9
FRU1                             ⇓eS      Sn      04 40 55.9 +0.3
FRU1   Bishkek             3.65  24  PN     Pn      04 40 16.4 +4.0
CHM    Chimkent            3.65 322 eP      Pb      04 40 22.6 +2.3
       comp=Z,239nm,0.2s
CHM                                 eS      Sg      04 41 09.8 -2.9
       comp=Z,2µm,0.8s
CHM    Chimkent            3.65 322⇓ePN     Pn      04 40 15.8 +3.5
CHM                                 eS      Sb      04 41 00.5 -4.2
CHMS   Chumysh             3.86  24  P      Pn      04 40 18.4 +3.3
       SNR=19
CHMS   Chumysh             3.86  24⇓eP      Pn      04 40 15.8 +0.6
CHMS                             ⇓eS      Sn      04 41 00.5 -0.2
ULHL   Ulahol              3.88  44  P      Pn      04 40 18.6 +2.9
       SNR=36
ULHL   Ulahol              3.88  44⇑eP      Pn      04 40 16.4 +0.7
ULHL                             ⇑eS      Sn      04 41 01.6  0.0
ULHL   Ulahol              3.88  44 ePN     Pn      04 40 16.4 +0.7
ULHL                                eS      Sn      04 41 01.6  0.0
BOOM   Boomskoye usch      3.91  39         Pn      04 40 18.6 +2.6
BOOM   Boomskoye usch      3.91  39⇓eP      Pn      04 40 16.6 +0.6
BOOM                             ⇓eS      Sn      04 41 02.0 -0.1
BOOM   Boomskoye usch      3.91  39  PN     Pn      04 40 18.6 +2.6
KK31   Karatay Array       3.96 337         Pn      04 40 19.2 +2.7
KK31   Karatay Array       3.96 337  Pn     Pn      04 40 19.3 +2.7
       comp=Z,26nm,0.3s,baz=149,slow=13,SNR=1232
KK31                                ⇑Pg     Pg      04 40 30.3 -1.0
       comp=Z,240nm,0.8s,baz=141,slow=14,SNR=8.7
KK31                                ⇑Sn     Sb      04 41 08.3 -5.2
       comp=Z,425nm,0.5s,baz=149,slow=24,SNR=17
KK31   Karatay Array       3.96 337 ePN     Pn      04 40 19.2 +2.7
KK31                                i               04 40 30.5
KKAR   Karatay Array       3.96 337         Pn      04 40 19.1 +2.6
KKAR   Karatay Array       3.96 337  PN     Pn      04 40 19.1 +2.6
SHAA   Shahritus           4.03 243         Pn      04 40 19.1 +1.6
USP    Ospenovka           4.03  20  P      Pn      04 40 20.4 +2.9
       SNR=31
USP    Ospenovka           4.03  20⇓eP      Pn      04 40 18.1 +0.5
USP                              ⇓eS      Sn      04 41 04.8 -0.2
USP    Ospenovka           4.03  20⇓ePN     Pn      04 40 18.1 +0.5
USP                                 eS      Sn      04 41 04.8 -0.2
TKM2   Tokmak 2            4.09  32  P      Pn      04 40 21.9 +3.3
       SNR=28
TKM2   Tokmak 2            4.09  32⇑eP      Pn      04 40 19.3 +0.7
TKM2                             ⇑eS      Sn      04 41 06.6 -0.2
TKM2   Tokmak 2            4.09  32 ePN     Pn      04 40 19.3 +0.7
TKM2                                eS      Sn      04 41 06.6 -0.2
BRLS   Borolday            4.12 330  Pg     Pb      04 40 28.4 +0.1
       comp=Z,118nm,0.5s
BRLS                                 Lg     Lg      04 41 20.8
       comp=Z,309nm,0.8s
BRLS   Borolday            4.12 330 eP      Pb      04 40 28.4 +0.1
       comp=Z,118nm,0.5s
BRLS                                eS      Sb      04 41 20.8 +2.4
       comp=Z,309nm,0.8s
BRLS   Borolday            4.12 330 ePn     Pn      04 40 18.6 -0.3
BRLS                                ePg     Pb      04 40 29.2 +0.8
BRLS                                eLg     Lg      04 41 24.8
BRLS   Borolday            4.12 330 ePN     Pn      04 40 18.5 -0.3
BRLS                                e               04 40 29.2
BRLS                                e               04 41 24.8
SGDS   Sogindy             4.24  20  Pg     Pb      04 40 32.7 +2.3
       comp=Z,171nm,0.6s
SGDS                                 Lg     Lg      04 41 27.6
       comp=Z,358nm,0.7s
SGDS   Sogindy             4.24  20 ePn     Pn      04 40 22.8 +2.3
SGDS                                ePg     Pb      04 40 33.8 +3.5
KDJ    Kajisay             4.34  51         Pn      04 40 25.1 +3.1
KDJ    Kajisay             4.34  51⇑eP      Pn      04 40 22.8 +0.8
KDJ                              ⇑eS      Sn      04 41 12.9  0.0
KDJ    Kajisay             4.34  51  PN     Pn      04 40 25.1 +3.1
DGS    Degeres             4.43  31  Pg     Pb      04 40 36.0 +2.3
       comp=Z,118nm,0.6s
DGS                                  Lg     Lg      04 41 34.0
       comp=Z,659nm,0.7s
TARG   Taragay, Kyrgy      4.53  59         Pn      04 40 26.9 +2.2
TARG   Taragay, Kyrgy      4.53  59  PN     Pn      04 40 26.9 +2.2
MTBS   Maitube             4.63  37  Pg     Pb      04 40 39.5 +2.5
       comp=Z,82nm,0.5s
MTBS                                 Lg     Lg      04 41 39.1
       comp=Z,342nm,0.5s
MTBS   Maitube             4.63  37 eP      Pb      04 40 39.5 +2.5
       comp=Z,82nm,0.5s
MTBS                                eS      Sb      04 41 39.1 +6.2
       comp=Z,342nm,0.5s
KRBS   Karabastau          4.79  27  Pg     Pb      04 40 42.6 +2.9
       comp=Z,85nm,0.7s
KRBS                                 Lg     Lg      04 41 44.6
       comp=Z,354nm,0.6s
TNSS   Tian-Shan           4.81  41  Pg     Pb      04 40 43.9 +3.7
       comp=Z,38nm,0.6s
TNSS                                 Lg     Lg      04 41 46.4
       comp=Z,156nm,0.9s
TNSS   Tian-Shan           4.81  41 eP      Pb      04 40 43.9 +3.7
       comp=Z,38nm,0.6s
TNSS                                eS      Sg      04 41 46.4 -3.6
       comp=Z,156nm,0.9s
TNSS   Tian-Shan           4.81  41 ePn     Pn      04 40 31.1 +2.4
TNSS                                ePg     Pb      04 40 44.0 +3.7
TNSS   Tian-Shan           4.81  41 ePN     Pn      04 40 31.0 +2.4
TNSS                                e               04 40 44.0
AAA    Alma-Ata            4.92  39 ePn     Pn      04 40 32.5 +2.7
AAA                                 ePg     Pb      04 40 45.7 +3.8
AAA    Alma-Ata            4.92  39 ePN     Pn      04 40 32.5 +2.7
AAA                                 e               04 40 45.7
KNDC   Almaty              4.95  40 ⇓Pn     Pn      04 40 33.9 +3.7
       comp=Z,137nm,0.7s
KNDC                                ⇑Pg     Pg      04 40 48.5 -1.9
       comp=Z,725nm,1.0s
KNDC                                ⇑Lg     Lg      04 41 50.7
       comp=Z,1µm,1.1s
KNDC   Almaty              4.95  40  PN     Pn      04 40 33.9 +3.7
KNDC                                                04 40 48.4
MDOK   Medeo               4.95  41  Pg     Pb      04 40 46.0 +3.4
       comp=Z,60nm,0.6s
MDOK                                 Lg     Lg      04 41 50.3
       comp=Z,458nm,0.7s
MDOK   Medeo               4.95  41 ePn     Pn      04 40 32.1 +1.7
MDOK                                ePg     Pb      04 40 46.2 +3.6
MDOK   Medeo               4.95  41 ePN     Pn      04 40 32.9 +2.5
MDOK                                e               04 40 46.1
KOTS   Kotyrbulak          5.04  40  Pg     Pb      04 40 47.9 +3.9
       comp=Z,170nm,0.7s
KOTS                                 Lg     Lg      04 41 54.2
       comp=Z,2µm,0.7s
KOTS   Kotyrbulak          5.04  40 eP      Pb      04 40 47.9 +3.9
       comp=Z,170nm,0.7s
KOTS                                eS      Sg      04 41 54.2 -3.0
       comp=Z,2µm,0.7s
PRZ    Przheval'sk         5.29  54         Pn      04 40 38.3 +3.3
PRZ    Przheval'sk         5.29  54⇑eP      Pn      04 40 35.9 +0.9
PRZ                              ⇑eS      Sn      04 41 35.4 -0.9
PRZ    Przheval'sk         5.29  54  PN     Pn      04 40 38.3 +3.3
WUS    Wushi               5.31  69         Pn      04 40 37.4 +2.1
SATY   Saty                5.62  49 ePn     Pn      04 40 41.5 +1.9
SATY                                ePg     Pb      04 40 58.9 +4.9
SATY   Saty                5.62  49 ePN     Pn      04 40 41.4 +1.9
SATY                                e               04 40 58.9
BTLS   Baital              5.65  10 ePn     Pn      04 40 41.8 +1.9
BTLS                                ePg     Pg      04 41 00.5 -3.3
BTLS   Baital              5.65  10 ePN     Pn      04 40 41.7 +1.9
BTLS                                e               04 41 00.4
SRNI   Srinagar            5.69 162 eP      Pn      04 40 42.6 +2.7
SRNI                                eS      Sn      04 41 43.6 -1.4
SRNI                                 IAML           04 42 13.9
       comp=E,1µm,3.0s
SRNI                                 IAML           04 42 21.1
       comp=N,1µm,2.0s
KBL    Kabul               5.71 211         Pn      04 40 44.7 +3.9
KBL    Kabul               5.71 211  PN     Pn      04 40 44.7 +3.9
NIL    Nilore              5.84 175         Pn      04 40 46.7 +4.2
NIL    Nilore              5.84 175  PN     Pn      04 40 46.7 +4.2
UZB    Uzynbulak           6.04  51 ePn     Pn      04 40 48.7 +3.4
UZB                                 ePg     Pb      04 41 06.1 +5.0
UZB    Uzynbulak           6.04  51 ePN     Pn      04 40 48.6 +3.3
UZB                                 e               04 41 06.1
ARXS   Arharly             6.11  38 ePN     Pn      04 40 47.6 +1.4
SHLS   Shalkode            6.31  52 ePn     Pn      04 40 55.1 +6.1
SHLS                                ePg     Pg      04 41 15.7 -0.7
SHLS   Shalkode            6.31  52 ePN     Pn      04 40 55.1 +6.1
SHLS                                e               04 41 15.7
ALCI   Alchi Leh           6.40 144 eP      Pn      04 40 51.7 +1.3
ALCI                                eS      Sn      04 42 01.0 -2.8
ALCI                                 IAML           04 42 07.2
       comp=N,890nm,0.8s
ALCI                                 IAML           04 42 07.2
       comp=E,857nm,0.8s
PDGK   Podgornoye          6.42  51 ⇑Pn     Pn      04 40 53.6 +3.1
       comp=E,30nm,0.7s
PDGK                                ⇑Pg     Pb      04 41 13.7 +6.1
       comp=E,95nm,1.1s
PDGK                                ⇓Lg     Lg      04 42 38.8
       comp=E,324nm,0.8s
PDGK   Podgornoye          6.42  51  PN     Pn      04 40 53.6 +3.1
PDGK                                                04 41 13.7
JMU    Jammu               6.92 164 eP      Pn      04 40 58.6 +0.3
JMU                                 eS      Sn      04 42 12.7 -5.2
JMU                                  IAML           04 42 22.9
       comp=E,710nm,1.3s
JMU                                  IAML           04 42 24.5
       comp=N,723nm,0.8s
HNLY   HANLEY              8.43 141 eP      Pn      04 41 18.5 +0.1
HNLY                                eS      Sn      04 42 48.5 -5.5
HNLY                                 IAML           04 42 58.9
       comp=N,538nm,2.4s
HNLY                                 IAML           04 43 00.3
       comp=E,424nm,2.4s
BHK    Bhakra              8.63 158 eP      Pn      04 41 24.4 +3.8
BHK                                 eS      Sn      04 42 56.4 -1.5
BHK                                  IAML           04 43 01.2
       comp=E,356nm,2.3s
BHK                                  IAML           04 43 03.4
       comp=N,484nm,2.1s
SMLA   Simla               9.12 155 eP      Pn      04 41 27.8 +0.4
SMLA                                eS      Sn      04 43 03.9 -6.3
SMLA                                 IAML           04 43 13.1
       comp=E,489nm,1.1s
SMLA                                 IAML           04 43 13.2
       comp=N,444nm,0.4s
HRA    Herat               9.75 242         Pn      04 41 35.9 -0.4
MAKZ   Makanchi           10.00  40 ⇑Pn     Pn      04 41 44.2 +4.8
       comp=N,17nm,1.1s
MAKZ                                ⇓Lg     Lg      04 44 33.7
       comp=N,45nm,1.1s
MK31   Makanchi Array     10.15  41  Pn     Pn      04 41 43.5 +2.0
       comp=N,15nm,0.8s,baz=228,slow=12,SNR=65
MK31                                ⇓Lg     Lg      04 44 38.6
       comp=N,53nm,0.8s,baz=234,slow=24,SNR=2.9
MK31   Makanchi Array     10.15  41deP      Pn      04 41 43.6 +2.0
MKAR   Makanchi Array     10.15  41  Pn     Pn      04 41 42.9 +1.4
       comp=N,0.5nm,0.3s,baz=223,slow=15,SNR=24
MKAR                                 Lg     Lg      04 44 33.6
       comp=N,1.1nm,0.3s,baz=237,slow=26,SNR=4.2
       comp=N,2.0nm,0.8s
MKAR   Makanchi Array     10.15  41         Pn      04 41 43.9 +2.4
MKAR   Makanchi Array     10.15  41  P      Pn      04 41 43.9 +2.4
LGTI   Lohaghat           11.78 146 eP      Pn      04 42 05.7 +1.5
LGTI                                eS      Sn      04 44 06.9 -9.3
LGTI                                 IAML           04 44 14.9
       comp=N,373nm,0.7s
LGTI                                 IAML           04 44 22.3
       comp=E,360nm,1.2s
KURBB  Kurchatov Arra     11.89  19  Pn     Pn      04 42 04.3 -0.9
       comp=E,0.1nm,0.3s,baz=207,slow=12,SNR=13
KURBB                                Sn     Sn      04 44 18.3 +0.4
       baz=142,slow=25,SNR=2.2
KURBB                                Lg     Lg      04 45 31.6
       comp=E,0.4nm,0.3s,baz=204,slow=28,SNR=7.4
KURBB                                LR     LR      04 46 56.2
       comp=E,346nm,19.2s,baz=168,slow=39
       comp=E,1.7nm,0.6s
KURBB  Kurchatov Arra     11.89  19 ⇑Pn     Pn      04 42 06.7 +1.5
       comp=E,5.6nm,0.6s
KURBB                               ⇓Lg     Lg      04 45 31.3
       comp=E,271nm,1.1s
KURBB  Kurchatov Arra     11.89  19  P      Pn      04 42 06.7 +1.5
KURK   Kurchatov          11.99  19         Pn      04 42 06.9 +0.2
KURK   Kurchatov          11.99  19 ⇓Pn     Pn      04 42 10.1 +3.4
       comp=E,2.4nm,0.9s
KURK                                ⇓Lg     Lg      04 45 35.5
       comp=E,65nm,1.2s
KURK   Kurchatov          11.99  19⇑eP      Pn      04 42 07.0 +0.3
WMQ    Urumqi             12.06  64 eP      Pn      04 42 10.3 +2.5
WMQ                                  sP             04 42 16.4
WMQ                                  S      Sn      04 44 30.8 +8.3
WMQ                                  pmax   pmax
       comp=E,20nm,1.3s
WMQ                                  LR     LR
       comp=E,740nm,6.9s
AB31   Akbulak array      13.32 321 ⇓Pn     Pn      04 42 24.7 -0.1
       comp=E,3.7nm,0.4s,baz=125,slow=12,SNR=94
AB31                                ⇑Sn     Sn      04 44 55.6 +2.6
       comp=E,47nm,1.2s,baz=136,slow=26,SNR=5.7
AB31   Akbulak array      13.32 321 i P     Pn      04 42 23.0 -1.8
ABKAR  Akbulak array      13.32 321         Pn      04 42 23.3 -1.5
BVA0   Borovoye Array     13.63 354 ⇓Pn     Pn      04 42 30.5 +1.5
       comp=E,12nm,0.7s,baz=167,slow=13,SNR=36
BVA0                                ⇓Sn     Sn      04 45 02.6 +2.0
       comp=E,28nm,1.4s,baz=164,slow=24,SNR=3.9
BVA0                                ⇓Lg     Lg      04 46 30.0
       comp=E,46nm,1.3s,baz=158,slow=9.5,SNR=6.1
BVA0   Borovoye Array     13.63 354  P      Pn      04 42 30.5 +1.5
BVA0                                 S      Sn      04 45 02.6 +2.0
BVAR   Borovoye Array     13.63 354  Pn     Pn      04 42 27.9 -1.1
       comp=E,0.1nm,0.3s,baz=171,slow=14,SNR=27
BVAR                                 Sn     Sn      04 44 54.6 -6.0
       baz=162,slow=25,SNR=1.6
BVAR                                 Lg     Lg      04 46 26.4
       comp=E,0.1nm,0.3s,baz=156,slow=26,SNR=2.4
BVAR                                 LR     LR      04 48 02.4
       comp=E,350nm,21.1s,baz=179,slow=38
       comp=E,5.9nm,0.7s
BORK   Borovoye           13.66 354         Pn      04 42 28.6 -0.8
BORK   Borovoye           13.66 354d iP     Pn      04 42 28.0 -1.4
BORK                                 pmax   pmax
       comp=Z,22nm,1.7s
DGZ    Jazzator, Alta     14.65  41⇑iP      Pn      04 42 44.1 +1.0
UDPR   Udaipur            14.89 176 eP      Pn      04 42 46.8 +0.4
UDPR                                eS      Sn      04 45 19.2  -12
UDPR                                 IAML           04 45 33.5
       comp=N,17nm,0.5s
UDPR                                 IAML           04 45 33.6
       comp=E,43nm,0.9s
AKTO   Aktyubinsk         15.04 322  Pn     Pn      04 42 48.0 -0.2
       comp=E,0.6nm,0.3s,baz=132,slow=11,SNR=17
AKTO                                 Sn     Sn      04 45 31.1 -3.8
       comp=E,0.6nm,0.3s,baz=2.6,slow=17,SNR=6.6
AKTO                                 Lg     Lg      04 47 15.6
       baz=61,slow=20
AKTO                                 LR     LR      04 48 55.6
       comp=E,177nm,18.1s,baz=120,slow=38
       comp=E,6.4nm,0.6s
AKTO   Aktyubinsk         15.04 322 ⇑Pn     P       04 42 52.9 -0.7
       comp=E,36nm,0.7s
AKTO                                ⇑Sn     S       04 45 44.8 -7.8
       comp=E,14nm,0.8s
EVN    Everest            16.45 130         Pn      04 43 01.4 -5.9
ZAA0   Zalesovo Array     16.67  26         Pn      04 43 08.2 -1.1
ZALV   Zalesovo Beam      16.67  26  Pn     Pn      04 43 10.0 +0.7
       comp=E,1.0nm,0.3s,baz=224,slow=11,SNR=32
ZALV                                 Lg     Lg      04 48 05.6
       comp=E,0.1nm,0.3s,baz=197,slow=23,SNR=3.6
ZALV                                 LR     LR      04 50 21.0
       comp=E,134nm,19.5s,baz=222,slow=40
       comp=E,13nm,0.7s
ZALV   Zalesovo Beam      16.67  26         Pn      04 43 09.0 -0.3
ZALV   Zalesovo Beam      16.67  26 i P     Pn      04 43 10.0 +0.7
ZALV                                 pmax   pmax
       comp=Z,14nm,0.7s
GOMU   GeErMu             17.81  94  P      Pn      04 43 22.4 -1.7
GOMU                                 pmax   pmax
       comp=Z,14nm,0.8s
AKT    Akhty              19.04 284 eP      Pn      04 43 41.6 +2.8
AKT                                 eS      S       04 47 15.6 +1.3
AKT                                  pmax   pmax
       comp=Z,44nm,1.6s
SVE    Sverdlovsk         19.06 340 eP      Pn      04 43 39.9 +1.1
SVE                                  pmax   pmax
       comp=Z,28nm,1.3s
MAK    Makhachkala        19.20 289c iP     P       04 43 36.8 -2.9
MAK                                 eS      Sn      04 47 14.7 -1.1
MAK                                  pmax   pmax
       comp=Z,131nm,1.4s
MAK                                  MLR    MLR
       comp=Z,197nm,17.0s
ARTI   Arti               19.36 336  P      P       04 43 41.4 +0.1
       comp=Z,0.8nm,0.3s,baz=154,slow=3.9,SNR=15
ARTI                                 S      S       04 47 20.3  0.0
       comp=Z,2.6nm,0.5s,baz=135,slow=19,SNR=1.8
ARTI                                 Lg     Lg      04 49 32.1
       comp=Z,0.1nm,0.3s,baz=46,slow=18,SNR=1.6
ARTI                                 LR     LR      04 51 42.5
       comp=Z,272nm,20.5s,baz=155,slow=38
       comp=Z,12nm,0.8s
ARTI   Arti               19.36 336  P      P       04 43 41.6 +0.3
ARTI   Arti               19.36 336c iP     Pn      04 43 42.2 -0.2
ARTI                                 S      S       04 47 23.1 +2.8
ARTI                                 pmax   pmax
       comp=Z,20nm,1.1s
SEKA   Sheki              19.45 283  P      Pn      04 43 44.9 +1.2
KNGR   Kungurtug, Tuv     20.70  49 eP      P       04 43 56.5 +0.4
GTA    Gaotai             20.96  81  P      P       04 43 59.1  0.0
GTA                                  pmax   pmax
       comp=Z,35nm,1.1s
GTA                                  LR     LR
       comp=Z,380nm,13.8s
GTA                                  LR     LR
       comp=Z,310nm,12.4s
GTA                                  LR     LR
       comp=Z,340nm,13.1s
SHL    Shillong           21.29 125  P      P       04 43 59.9 -2.8
SHL    Shillong           21.29 125  P      P       04 43 59.9 -2.8
SHL                                  pmax   pmax
       comp=Z,18nm,0.9s
GNI    Garni              21.41 281  P      P       04 44 06.0 +2.1
GNI                                  IAmb   IAmb    04 44 14.4
       comp=Z,49nm,0.8s
GNI    Garni              21.41 281c iP     P       04 44 06.2 +2.3
GNI                                  pmax   pmax
       comp=Z,61nm,0.9s
GNI    Garni              21.41 281  P      P       04 44 06.3 +2.3
       comp=Z,63nm,1.4s
BELG   Belogornoye        21.53 315  P      P       04 44 05.2 +0.3
       comp=Z,84nm,0.9s,baz=139,slow=20,SNR=18
BELG                                 S      Sn      04 48 10.7 -1.0
       comp=Z,5.5nm,0.6s,baz=250,slow=21,SNR=1.2
       comp=Z,84nm,0.9s
BELG   Belogornoye        21.53 315c iP     P       04 44 04.9  0.0
BELG                                 pmax   pmax
       comp=Z,16nm,0.9s
NCK    Nalchik            22.07 290⇓iP      P       04 44 12.0 +1.2
NCK                                  pmax   pmax
       comp=Z,23nm,0.6s
GOF    Gofitskoye         22.52 294ceP      P       04 44 19.9 +4.2
KBZ    Khabaz             22.58 290  P      P       04 44 16.1 -0.1
       comp=Z,3.3nm,0.8s,baz=115,slow=7.0,SNR=5.1
KBZ                                  S      Sn      04 48 36.9 -0.1
       comp=Z,4.3nm,1.1s,baz=113,slow=14,SNR=1.4
KBZ                                  LR     LR      04 55 03.9
       comp=Z,104nm,18.7s,baz=120,slow=42
       comp=Z,3.3nm,0.8s
KBZ    Khabaz             22.58 290⇓eP      P       04 44 16.6 +0.4
KBZ                                  pmax   pmax
       comp=Z,19nm,1.4s
KARS   Kars               22.61 282  P      P       04 44 19.1 +2.3
KARS                                 IAmb   IAmb    04 44 21.4
       comp=Z,43nm,1.1s
KARS   Kars               22.61 282  P      P       04 44 19.1 +2.3
KARS                                 pmax   pmax
       comp=Z,43nm,1.1s
NEUR   Neytrino           22.72 289⇓eP      P       04 44 19.1 +1.1
NEUR                                 pmax   pmax
       comp=Z,11nm,1.2s
KIV    Kislovodsk         22.73 291 eP      P       04 44 17.6 -0.4
KIV                                 eS      S       04 48 27.9 +1.1
KIV                                  pmax   pmax
       comp=Z,17nm,1.1s
KIV                                  MLR    MLR
       comp=Z,57nm,14.0s
KIV    Kislovodsk         22.73 291  P      P       04 44 20.4 +2.4
       comp=Z,22nm,0.9s
KIV                                  pP     sP      04 44 30.1 +7.1
       comp=Z,22nm,0.9s
SHA1   Shidzhatmaz        22.75 291⇑eP      P       04 44 18.4 +0.1
LABN   Labinsk            24.16 293 eP      P       04 44 32.2 +0.2
LABN                                eS      S       04 48 51.9 +1.9
LABN                                 pmax   pmax
       comp=Z,68nm,1.0s
KIRV   Kirov              24.22 330  LR     LR      04 54 46.7
       comp=Z,211nm,20.6s,baz=135,slow=38
KIRV   Kirov              24.22 330ceP      P       04 44 33.0 +0.6
ERBR   Yeremizino-Bor     24.37 295 eP      P       04 44 35.4 +1.4
ERBR                                eS      S       04 48 59.9 +6.5
ERBR                                 pmax   pmax
       comp=Z,29nm,0.8s
VRH    Novokhopyorsk      24.50 309 eP      P       04 44 34.8 -0.3
VRH                                  pmax   pmax
       comp=Z,8.0nm,1.0s
TLY    Talaya             24.69  50⇓eP      P       04 44 38.8 +1.9
TLY                                  pmax   pmax
       comp=Z,9.0nm,1.0s
LZDM   Lanzhou Array      24.75  88  P      P       04 44 37.4 -0.6
       comp=Z,1.0nm,0.3s,baz=269,slow=10,SNR=3.7
       comp=Z,1.0nm,0.3s
LZH    Lanzhou            24.83  88 eP      P       04 44 42.4 +4.0
LZH                                  pmax   pmax
       comp=Z,24nm,1.0s
LZH                                  LR     LR
       comp=Z,290nm,14.3s
LZH                                  LR     LR
       comp=Z,250nm,13.4s
LZH                                  LR     LR
       comp=Z,260nm,14.1s
SONM   Songino Array      25.64  60  P      P       04 44 45.6 -0.1
       comp=Z,5.9nm,0.8s,baz=265,slow=9.3,SNR=3.9
       comp=Z,5.9nm,0.8s
SONM   Songino Array      25.64  60  IAmb   IAmb    04 44 49.2
       comp=Z,8.0nm,1.1s
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VORD  Divnogorie         25.92 307 eP      P       04 44 48.6 +0.7
VORD                                pmax    pmax
      comp=Z,10.0nm,1.0s
VSR   Storozhevoye       26.05 308 eP      P       04 44 48.9 -0.3
VSR                                 pmax    pmax
      comp=Z,10.0nm,1.0s
ULN   Ulaanbaatar        26.09  60⇓eP      P       04 44 51.0 +1.3
ULN                                 pmax    pmax
      comp=Z,23nm,1.2s
VORR  Voronezh           26.14 309 eP      P       04 44 50.3 +0.4
VORR                                pmax    pmax
      comp=Z,10.0nm,0.7s
ANN   Anapa              26.50 293 eP      P       04 44 54.2 +0.9
ANN                                eS      S       04 49 32.4 +5.0
ANN                                 pmax    pmax
      comp=Z,52nm,1.2s
LPSR  Galich'ya Gora     26.55 311 eP      P       04 44 54.3 +0.7
LPSR                                pmax    pmax
      comp=Z,24nm,1.0s
CD2   Chengdu            26.73  99  P      P       04 44 54.0 -1.5
PZH   PanZhiHua          27.50 109  P      P       04 45 03.3 +0.7
RAYN  Ar Rayn            27.93 243  P      P       04 45 07.0 +0.6
RAYN  Ar Rayn            27.93 243  P      P       04 45 07.0 +0.6
RAYN                                pmax    pmax
      comp=Z,7.0nm,1.1s
MOS   Moscow             28.27 317 eP      P       04 45 06.9 -2.1
BTO   Baotou             28.50  76 eP      P       04 45 10.3 -1.1
OBN   Obninsk            28.63 315⇑eP      P       04 45 12.4 +0.2
OBN                                e               04 46 02.4
OBN                                 pmax    pmax
      comp=Z,69nm,2.3s
OBN                                 MLR     MLR
      comp=Z,76nm,12.0s
XAN   Xi'an              29.44  89  P      P       04 45 19.3 -0.4
XAN                                 pmax    pmax
      comp=Z,9.0nm,0.9s
KLMR  Klimovskoe         29.60 327 eP      P       04 45 18.1 -2.6
KLMR                                pmax    pmax
      comp=Z,26nm,1.4s
HHC   Hu-ho-hao-te       29.61  75 eP      P       04 45 21.4 +0.1
HHC                                 pmax    pmax
      comp=Z,10.0nm,0.6s
HHC                                 LR      LR
      comp=Z,160nm,11.0s
HHC                                 LR      LR
      comp=Z,150nm,10.8s
HHC                                 LR      LR
      comp=Z,150nm,10.4s
KIRS  Kirsehir-Merke     29.81 282 ⇓P      P       04 45 25.4 +2.3
BR131 Keskin Array S     29.89 283  P      P       04 45 24.7 +1.0
BR131 Keskin Array S     29.89 283  P      P       04 45 24.7 +1.0
BR131                               pmax    pmax
      comp=Z,7.0nm,0.9s
BRTR  Keskin Array B     29.89 283  P      P       04 45 24.6 +0.8
      comp=Z,3.9nm,0.8s,baz=87,slow=7.2,SNR=14
      comp=Z,3.9nm,0.8s
BRTR  Keskin Array B     29.89 283  P      P       04 45 24.8 +1.0
BRTR  Keskin Array B     29.89 283  P      P       04 45 24.8 +1.0
BR104 Keskin Array S     29.89 283  P      P       04 45 24.9 +1.1
      comp=Z,6.7nm,0.8s
BR104                               pP     sP      04 45 34.3 +5.4
      comp=Z,6.7nm,0.8s
BR106 Keskin Array S     29.90 283  P      P       04 45 25.0 +1.1
      comp=Z,5.8nm,1.0s
BR105 Keskin Array S     29.91 283  P      P       04 45 23.5 -0.4
      comp=Z,6.1nm,0.8s
MMAI  Mount Meron Ar     30.56 270  P      P       04 45 28.8 -0.9
      comp=Z,1.7nm,0.7s,baz=277,slow=30,SNR=1.6
      comp=Z,1.7nm,0.7s
CMAR  Chiang Mai Arr     30.93 125  P      P       04 45 30.5 -2.4
      comp=Z,1.3nm,0.3s,baz=320,slow=8.6,SNR=11
      comp=Z,1.3nm,0.3s
CMAR  Chiang Mai Arr     30.93 125 i P     P       04 45 34.7 +1.8
CMAR                                pmax    pmax
      comp=Z,1.0nm,0.4s
NRIK  Noril'sk           30.96  10  P      P       04 45 31.2 -1.5
      comp=Z,1.3nm,0.5s,baz=174,slow=3.8,SNR=5.6
NRIK                                LR      LR     04 58 48.9
      comp=Z,88nm,19.1s,baz=268,slow=38
      comp=Z,1.3nm,0.5s
NRIK  Noril'sk           30.96  10  P      P       04 45 33.3 +0.6
NRIK  Noril'sk           30.96  10⇓iP      P       04 45 33.5 +0.8
NRIK                                pmax    pmax
      comp=Z,8.0nm,1.1s
AK09  Malin Array Si     32.15 305  P      P       04 45 42.8 -0.6
AK08  Malin Array Si     32.17 305  P      P       04 45 43.2 -0.4
AK10  Malin Array Si     32.17 305  P      P       04 45 43.1 -0.5
AKASG Malin Array Be     32.19 305  P      P       04 45 44.0 +0.2
      comp=Z,0.5nm,0.4s,baz=81,slow=7.1,SNR=7.7
AKASG                               LR      LR     05 00 56.7
      comp=Z,107nm,19.0s,baz=56,slow=40
      comp=Z,0.5nm,0.4s
AKASG Malin Array Be     32.19 305  IAmb    IAmb   04 45 47.3
      comp=Z,4.2nm,1.2s
AKASG Malin Array Be     32.19 305  P      P       04 45 44.0 +0.2
AKBB  Malin Array Si     32.19 305ceP      P       04 45 44.6 +0.8
AK03  Malin Array Si     32.20 305  P      P       04 45 43.4 -0.4
AK07  Malin Array Si     32.20 305  P      P       04 45 43.6 -0.2
AK01  Malin Array Si     32.20 305  P      P       04 45 43.5 -0.3
AK02  Malin Array Si     32.20 305  P      P       04 45 43.6 -0.2
AK05  Malin Array Si     32.20 305  P      P       04 45 43.6 -0.2
AK06  Malin Array Si     32.20 305  P      P       04 45 43.6 -0.3
KIEV  Kiev               32.20 305 ⇓P      P       04 45 43.9 +0.1
AK11  Malin Array Si     32.23 305  P      P       04 45 43.8 -0.3
AK04  Malin Array Si     32.23 305  P      P       04 45 43.1 -1.0
AK12  Malin Array Si     32.23 305  P      P       04 45 43.7 -0.4
BOD   Bodaibo            32.24  42 eP      P       04 45 43.0 -1.1
BOD                                 pmax    pmax
      comp=Z,16nm,1.1s
AK14  Malin Array Si     32.26 305  P      P       04 45 44.1 -0.3
AK16  Malin Array Si     32.27 305  P      P       04 45 43.2 -1.2
AK13  Malin Array Si     32.29 305  P      P       04 45 44.0 -0.6
AK18  Malin Array Si     32.30 305  P      P       04 45 44.4 -0.2
AK22  Malin Array Si     32.30 305  P      P       04 45 43.8 -0.8
AK17  Malin Array Si     32.30 305  P      P       04 45 44.5 -0.2
AK21  Malin Array Si     32.31 305  P      P       04 45 44.3 -0.5
AK19  Malin Array Si     32.33 305  P      P       04 45 44.5 -0.5
AK20  Malin Array Si     32.33 305  P      P       04 45 44.8 -0.2
XLT   XiLinHaoTe         32.46  68 eP      P       04 45 44.8 -1.5
XLT                                 pP      pP     04 45 49.5 -0.5
XLT                                 pmax    pmax
      comp=Z,10.0nm,0.8s
SORM  Soroca             32.72 300 ⇑P      P       04 45 47.6 -0.8
LUBAR Lubar, Ukraine     33.10 303  P      P       04 45 52.5 +0.7
MNK   Minsk              33.39 312 i P     P       04 45 52.8 -1.4
      comp=E,15nm,0.8s
MNK                                i P     P       04 45 52.8 -1.4
      comp=N,13nm,0.9s
MNK                                i P     P       04 45 52.8 -1.4
      comp=Z,9.0nm,0.5s,baz=98
MNK                                i PP    PnPn    04 47 04.1 -0.6
MNK                                i PPP   PPP     04 47 14.9
MNK                                i S     S       04 51 15.7 +0.5
MNK                                i SS    SnSn    04 53 19.4 +3.4
MNK                                i SSS   SSS     04 53 35.0
MNK                                i LQ    LQ      04 57 17.2
MNK                                i LR    LR      04 59 31.5
MNK                                i LRM   MLR     05 01 53.3
      comp=E,777nm,23.7s
MNK                                i LRM   MLR     05 02 09.1
      comp=N,575nm,21.0s
MNK                                i LRM   MLR     05 02 18.6
      comp=Z,159nm,17.2s
MNK   Minsk              33.39 312 i P     P       04 45 52.7 -1.4
MNK                                i               04 47 04.0
MNK                                i               04 48 33.1
MNK                                i S     S       04 51 15.6 +0.5
MNK                                i SS    SnSn    04 53 19.3 +3.4
MNK                                i               04 56 18.9
MNK                                 pmax    pmax
      comp=E,15nm,0.8s
MNK                                 pmax    pmax
      comp=N,13nm,0.9s
MNK                                 pmax    pmax
      comp=Z,9.0nm,0.5s
MNK                                 MLR     MLR
      comp=E,777nm,24.0s
MNK                                 MLR     MLR
      comp=N,575nm,21.0s
MNK                                 MLR     MLR
      comp=Z,159nm,17.0s
TESR  Tescani            33.97 297 ⇑P      P       04 46 00.5 +1.2
VRI   Vrincioaia         33.97 296 ⇑P      P       04 46 00.5 +1.1
VRI   Vrincioaia         33.97 296 ⇑P      P       04 46 00.5 +1.1
PLOR  Plostina           34.03 296 ⇓P      P       04 46 02.0 +2.1
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PLOR  Plostina           34.03 296 ⇓P      P       04 46 02.0 +2.1
NACGM Naroch             34.08 312 eP      P       04 46 01.5 +1.4
      comp=Z,22nm,0.8s,baz=98
ONER  Baraj Valea Uz     34.16 297 ⇑P      P       04 46 02.9 +1.9
ISR   Istrita            34.19 295 ⇑P      P       04 46 05.8 +4.5
ISR   Istrita            34.19 295 ⇑P      P       04 46 05.8 +4.5
RNPP5 Staryi Chortor     34.33 306  P      P       04 46 01.8 -0.6
COVR  Voineasa-Covas     34.34 296 ⇑P      P       04 46 03.5 +0.9
RNPP8 Varash             34.35 306  P      P       04 46 01.4 -1.1
TURR  Turia              34.45 297 ⇓P      P       04 46 05.7 +2.1
MLR   Muntele Rosu       34.56 296  LR      LR     05 03 45.1
      comp=Z,83nm,18.5s,baz=0.5,slow=42
MLR   Muntele Rosu       34.56 296 ⇓P      P       04 46 06.9 +2.3
MLR   Muntele Rosu       34.56 296 ⇓P      P       04 46 06.9 +2.3
DOPR  Dopca              34.89 296 ⇓P      P       04 46 08.2 +0.8
KSV   Kosov              34.91 301  P      P       04 46 08.0 +0.5
TIA   Tai'an             35.01  81  P      P       04 46 09.1 +0.6
TIA                                 pmax    pmax
      comp=Z,10.0nm,0.7s
WHN   Wuhan              35.05  92  P      P       04 46 06.8 -2.0
STNU  Starunia           35.26 301  P      P       04 46 10.4 -0.1
APA   Apatity            35.43 335 eP      P       04 46 17.1 +5.4
APA                                e               04 47 31.2
APA                                 MLR     MLR
      comp=Z,664nm,5.6s
ARR   Arges              35.49 296 ⇓P      P       04 46 14.3 +1.7
FINES FINESS Array B     35.80 323  P      P       04 46 15.7 +0.8
      comp=Z,4.7nm,0.6s,baz=106,slow=9.9,SNR=21
FINES                               LR      LR     05 01 50.2
      comp=Z,166nm,20.1s,baz=106,slow=38
      comp=Z,4.7nm,0.6s
SHIU  Shidnytsya         35.98 302  P      P       04 46 16.3 -0.4
LOT   Lotru              36.08 296 ⇓P      P       04 46 20.3 +2.5
MARR  Marisel-Cluj       36.37 298 ⇓P      P       04 46 21.5 +1.3
BERU  Beregovo           36.52 301  P      P       04 46 21.5 +0.2
DRGR                     36.63 298 ⇑P      P       04 46 22.7 +0.3
DRGR                     36.63 298 ⇑P      P       04 46 22.7 +0.3
GZR   Gura Zlata         36.78 296 ⇑P      P       04 46 24.8 +1.2
GZR   Gura Zlata         36.78 296 ⇑P      P       04 46 24.8 +1.2
HERR  Herculane          37.12 295 ⇑P      P       04 46 27.0 +0.6
STHS  Stebnicka Huta     37.35 303 eP      P       04 46 29.4 +1.0
STHS  Stebnicka Huta     37.35 303 eP      P       04 46 29.4 +1.0
BZS   Buzias             37.55 296  P      P       04 46 32.1 +2.0
BZS                                 pmax    pmax
      comp=Z,7.0nm,1.1s
MDVR  Moldovita          37.63 295 ⇓P      P       04 46 32.4 +1.6
BOVS  Bovan              37.85 293 ⇓P      P       04 46 33.8 +1.2
NJ2   Nanjing            37.89  87 eP      P       04 46 32.5 -0.6
NJ2                                 pmax    pmax
      comp=Z,10.0nm,0.6s
NIE   Niedzica           37.96 303  P      P       04 46 35.8 +2.2
NIE   Niedzica           37.96 303  P      P       04 46 33.8 +0.2
      comp=Z,7.2nm,1.1s
OJC   Ojcow              38.22 304  P      P       04 46 35.9 +0.2
OJC   Ojcow              38.22 304  P      P       04 46 35.9 +0.2
OJC   Ojcow              38.22 304  P      P       04 46 35.1 -0.6
      comp=Z,16nm,0.8s
ARCES ARCESS Array B     38.92 336  P      P       04 46 40.3 -1.1
      comp=Z,2.7nm,0.5s,baz=110,slow=8.8,SNR=27
ARCES                               LR      LR     05 03 23.2
      comp=Z,204nm,18.9s,baz=143,slow=37
      comp=Z,2.7nm,0.5s
ZEA   Zeya               39.13  50 eP      P       04 46 44.6 +1.3
ZEA                                 pmax    pmax
      comp=Z,10.0nm,1.1s
HEH   HeiHe              39.45  56 eP      P       04 46 45.8 -0.2
HEH                                 pmax    pmax
      comp=Z,35nm,0.7s
MORH  Mrgy, Hungar       39.50 298 ⇑P      P       04 46 44.8 -1.6
MORH  Mrgy, Hungar       39.50 298  P      P       04 46 46.7 +0.3
STEB  Steborice          39.55 304 eP      P       04 46 48.1 +1.3
MORC  Moravsky Berou     39.71 304  P      P       04 46 48.9 +0.6
MORC  Moravsky Berou     39.71 304 ⇓P      P       04 46 49.0 +0.8
MORC  Moravsky Berou     39.71 304 eP      P       04 46 48.8 +0.6
MORC  Moravsky Berou     39.71 304 ⇓P      P       04 46 49.0 +0.8
JAVC  Velka Javorina     39.74 302 eP      P       04 46 51.0 +2.5
MODS  Modra-Piesok       40.07 302 eP      P       04 46 55.8 +4.6
MODS  Modra-Piesok       40.07 302 eP      P       04 46 55.8 +4.6
BNX   BinXian            40.12  63 ⇓P      P       04 46 51.1 -0.5
BNX                                 pmax    pmax
      comp=Z,7.0nm,1.2s
VRAC  Vranov             40.38 303  LR      LR     05 06 32.9
      comp=Z,121nm,20.5s,baz=120,slow=40
VRAC  Vranov             40.38 303 ⇑P      P       04 46 51.8 -2.0
VRAC  Vranov             40.38 303 eP      P       04 46 50.9 -2.9
VRAC  Vranov             40.38 303 ⇑P      P       04 46 51.8 -2.0
DPC   Dobruska-Polom     40.43 305 eP      P       04 46 55.4 +1.2
DPC   Dobruska-Polom     40.43 305 eP      P       04 46 55.4 +1.2
DPC   Dobruska-Polom     40.43 305  P      P       04 46 54.1 -0.1
      comp=Z,12nm,2.3s
KRUC  Moravsky           40.55 303 eP      P       04 46 56.2 +1.1
KRUC  Moravsky           40.55 303  P      P       04 46 56.6 +1.5
KRUC                                pmax    pmax
      comp=Z,11nm,1.1s
UPC   Upice              40.60 305 eP      P       04 46 57.1 +1.5
UPC   Upice              40.60 305 eP      P       04 46 57.1 +1.5
YAK   Yakutsk            40.80  37  LR      LR     05 04 43.0
      comp=Z,96nm,20.3s,baz=294,slow=37
YAK   Yakutsk            40.80  37 eP      P       04 46 58.9 +1.9
YAK                                e               04 48 33.7
YAK                                e               04 48 59.2
YAK                                ePPP    PPP     04 49 01.0
YAK                                eS      S       04 53 06.3 -1.4
YAK                                eSS     SS      04 56 10.0 +1.7
YAK                                eSSS    SSS     04 56 36.8
YAK                                e               04 56 59.0
YAK                                 pmax    pmax
      comp=Z,25nm,1.1s
YAK                                 pmax    pmax
      comp=Z,153nm,4.1s
YAK                                 pmax    pmax
      comp=E,168nm,3.0s
YAK                                 pmax    pmax
      comp=N,100nm,2.7s
YAK                                 smax    smax
      comp=E,76nm,3.2s
YAK                                 smax    smax
      comp=N,76nm,3.0s
RONA  Rosalia, Austr     40.83 301  P      P       04 46 58.8 +1.3
RONA  Rosalia, Austr     40.83 301 epP     P       04 46 58.8 +1.3
      comp=N,7.5nm,1.2s
CONA  Conrad Observa     41.07 301 epP     P       04 47 00.7 +1.1
      comp=N,12nm,1.0s
HFS   Hagfors            41.57 320  P      P       04 47 03.3 -0.1
      comp=N,9.2nm,0.6s,baz=97,slow=11,SNR=34
HFS                                 LR      LR     05 04 12.6
      comp=N,146nm,19.9s,baz=84,slow=36
      comp=N,9.2nm,0.6s
PRU   Pruhonice          41.61 304 eP      P       04 47 05.0 +1.2
PRU   Pruhonice          41.61 304 eP      P       04 47 05.0 +1.2
SOKA  Soboth             41.86 299  P      P       04 47 07.1 +1.1
SOKA  Soboth             41.86 299 epP     P       04 47 07.1 +1.1
      comp=N,12nm,1.2s,SNR=5.3
ZVC   Zvikov             41.92 304 eP      P       04 47 07.7 +1.3
MOA   Molln              42.15 301  P      P       04 47 08.9 +0.7
MOA   Molln              42.15 301 eP      P       04 47 09.0 +0.7
      comp=N,5.2nm,0.9s
OBKA  Obir               42.22 299  P      P       04 47 10.0 +1.0
OBKA  Obir               42.22 299 epP     P       04 47 10.0 +1.0
      comp=N,5.8nm,1.1s
GERES GERESS Array B     42.33 303  P      P       04 47 11.6 +1.7
      comp=N,3.5nm,0.6s,baz=60,slow=8.0,SNR=24
GERES                               LR      LR     05 05 43.5
      comp=N,68nm,19.7s,baz=82,slow=37
      comp=N,3.5nm,0.6s
KHC   Kasperske Hory     42.36 303  P      P       04 47 11.0 +0.9
KHC   Kasperske Hory     42.36 303⇓iP      P       04 47 11.4 +1.3
KHC                                 pmax    pmax
      comp=Z,18nm,1.7s
KHC   Kasperske Hory     42.36 303 eP      P       04 47 11.1 +1.0
KHC   Kasperske Hory     42.36 303  P      P       04 47 09.9 -0.2
      comp=Z,15nm,1.9s
CLL   Collm              42.39 307  P      P       04 47 10.2  0.0
CLL                                 IAmb    IAmb   04 47 12.0
      comp=Z,41nm,1.6s
CLL   Collm              42.39 307 i P     P       04 47 10.9 +0.7
CLL                                 pmax    pmax
      comp=Z,9.0nm,0.8s
CLL   Collm              42.39 307  P      P       04 47 10.1 -0.1
      comp=Z,16nm,1.4s
CLL   Collm              42.39 307 i P     P       04 47 10.9 +0.7
      comp=Z,9.0nm,0.8s
TIXI  Tiksi              42.53  23  LR      LR     05 05 04.1
      comp=Z,78nm,19.1s,baz=202,slow=36
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TIXI  Tiksi              42.53  23⇑eP      P       04 47 09.0 -2.0
TIXI                                pmax    pmax
      comp=Z,17nm,0.9s
NORES NORESS Array B     42.66 321  P      P       04 47 13.0 +0.7
KSRS  Korea Array        42.76  74  P      P       04 47 11.7 -1.6
      comp=Z,1.2nm,0.6s,baz=269,slow=21,SNR=2.6
      comp=Z,1.2nm,0.6s
NC303 NORSAR Array S     42.76 321  P      P       04 47 13.5 +0.4
NB2   NORSAR Subarra     42.83 321  P      P       04 47 13.1 -0.6
      comp=Z,7.0nm,0.8s,baz=90,slow=7.9
NOA   NORSAR Array B     42.83 321  P      P       04 47 13.4 -0.3
      comp=Z,3.9nm,0.7s,baz=92,slow=8.0,SNR=14
NOA                                 LR      LR     05 05 55.8
      comp=Z,84nm,21.1s,baz=90,slow=37
      comp=Z,3.9nm,0.7s
KBA   Koelnbreinsper     42.91 300  P      P       04 47 15.5 +0.8
KBA   Koelnbreinsper     42.91 300 epP     P       04 47 15.5 +0.8
      comp=Z,3.3nm,0.7s
KBA   Koelnbreinsper     42.91 300  P      P       04 47 15.5 +0.8
LESA  Schwarzleotal      43.28 301  P      P       04 47 18.2 +0.6
LESA  Schwarzleotal      43.28 301 eP      P       04 47 18.2 +0.6
      comp=Z,8.8nm,0.8s
ABTA  Abfaltersbach      43.54 300  P      P       04 47 20.1 +0.4
ABTA  Abfaltersbach      43.54 300 eP      P       04 47 20.1 +0.4
      comp=Z,8.9nm,1.3s
USRK  Ussuriysk Ar.      43.63  64  P      P       04 47 19.1 -1.3
      comp=Z,1.6nm,0.5s,baz=263,slow=10.0,SNR=4.9
      comp=Z,1.6nm,0.5s
WTTA  Wattenberg         44.01 301  P      P       04 47 23.8 +0.3
WTTA  Wattenberg         44.01 301 eP      P       04 47 23.8 +0.3
      comp=Z,9.0nm,0.8s
WTTA  Wattenberg         44.01 301  P      P       04 47 23.8 +0.3
WATA  Walderalm          44.03 301  P      P       04 47 24.1 +0.3
WATA  Walderalm          44.03 301 eP      P       04 47 24.0 +0.3
      comp=Z,3.3nm,0.6s
WATA  Walderalm          44.03 301  P      P       04 47 24.1 +0.3
SQTA  Sankt Quirin       44.30 301  P      P       04 47 26.1 +0.2
SQTA  Sankt Quirin       44.30 301 i P     P       04 47 26.1 +0.2
      comp=Z,6.8nm,0.9s
SQTA  Sankt Quirin       44.30 301  P      P       04 47 26.1 +0.2
TEOL  Teolo              44.45 298  P      P       04 47 26.6 -0.3
TEOL                                IAmb    IAmb   04 47 30.7
      comp=Z,23nm,1.0s
RETA  Reutte             44.54 301  P      P       04 47 28.0 +0.3
RETA  Reutte             44.54 301 eP      P       04 47 28.0 +0.3
      comp=Z,7.6nm,1.3s
SPITS Spitsbergen Ar     44.90 346  P      P       04 47 31.4 +1.3
      comp=Z,7.2nm,0.9s,baz=129,slow=12,SNR=1.3
SPITS                               LR      LR     05 08 39.4
      comp=Z,108nm,18.4s,baz=99,slow=39
      comp=Z,7.2nm,0.9s
DAVA  Damuels            45.17 301  P      P       04 47 33.1 +0.3
DAVA  Damuels            45.17 301 eP      P       04 47 33.1 +0.3
      comp=Z,12nm,0.8s,SNR=6.1
JOW   Kunigami           47.57  88  LR      LR     05 11 14.6
      comp=Z,40nm,21.6s,baz=144,slow=40
KEST  Kesra              49.37 287  P      P       04 48 04.5 -1.1
      comp=Z,4.2nm,0.8s,baz=131,slow=11,SNR=2.0
      comp=Z,4.2nm,0.8s
YSS   Yuzhno-Sakhali     50.08  57 eP      P       04 48 10.6 -0.1
YSS                                 pmax    pmax
      comp=Z,20nm,0.9s
MJAR  Matsushiro Arr     50.71  71  P      P       04 48 13.2 -2.5
      comp=Z,3.0nm,0.7s,baz=292,slow=9.5,SNR=7.1
      comp=Z,3.0nm,0.7s
EKA   Eskdalemuir Ar     51.08 315  P      P       04 48 17.9 -0.2
      comp=Z,8.2nm,1.1s,baz=71,slow=8.9,SNR=3.9
      comp=Z,8.2nm,1.1s
EKA   Eskdalemuir Ar     51.08 315  P      P       04 48 18.0 -0.2
SEY   Seymchan           51.23  35  LR      LR     05 13 58.4
      comp=Z,60nm,18.3s,baz=299,slow=41
MBAR  Mbarara            55.29 234  LR      LR     05 15 00.4
      comp=Z,53nm,18.7s,baz=31,slow=39
BILL  Bilibino           55.36  27⇑eP      P       04 48 49.1 -0.4
BILL                                pmax    pmax
      comp=Z,10.0nm,0.9s
BORG  Borgarnes          56.69 329  LR      LR     05 12 48.5
      comp=Z,85nm,18.6s,baz=328,slow=35
ESDC  Sonseca Array      57.24 297  P      P       04 49 02.6 -0.9
      comp=Z,1.3nm,0.7s,baz=60,slow=6.6,SNR=4.8
      comp=Z,1.3nm,0.7s
SUMG  Summit             58.67 341  P      P       04 49 13.8 +0.5
SUMG  Summit             58.67 341  P      P       04 49 13.8 +0.5
SUMG                                pmax    pmax
      comp=Z,32nm,1.2s
B20K  Meade River        64.98  17  IAmb    IAmb   04 49 58.9
      comp=Z,9.3nm,0.8s
C18K  Utukok River       65.03  19  IAmb    IAmb   04 49 59.5
      comp=Z,9.7nm,0.9s
C19K  Lookout Ridge      65.10  18  IAmb    IAmb   04 49 59.8
      comp=Z,6.2nm,0.8s
B21K  Ikpikpuk River     65.85  16  IAmb    IAmb   04 50 04.5
      comp=Z,9.0nm,0.8s
E18K  Tukpahlearik C     66.09  20  IAmb    IAmb   04 50 05.7
      comp=Z,8.7nm,0.8s
D20K  Etivluk River      66.10  18  IAmb    IAmb   04 50 06.5
      comp=Z,9.8nm,1.0s
D22K  Ayikyak River      66.86  16  IAmb    IAmb   04 50 11.5
      comp=Z,14nm,1.1s
E19K  Redstone River     66.92  19  IAmb    IAmb   04 50 16.7
      comp=Z,5.0nm,0.8s
TORD  Torodi Ar. Bea     67.09 268  P      P       04 50 07.7 -2.0
      comp=Z,2.4nm,0.6s,baz=42,slow=7.9,SNR=4.6
      comp=Z,2.4nm,0.6s
G16K  Koyuk River        67.09  22  IAmb    IAmb   04 50 12.5
      comp=Z,8.6nm,0.9s
D23K  Nanushuk River     67.21  16  IAmb    IAmb   04 50 13.4
      comp=Z,13nm,1.2s
F20K  Avaraart Lake      67.61  18  IAmb    IAmb   04 50 37.0
      comp=Z,8.2nm,1.3s
E22K  Anaktuvuk Pass     67.65  16  IAmb    IAmb   04 50 15.6
      comp=Z,6.5nm,1.0s
D25K  Kavik River        67.76  14  IAmb    IAmb   04 50 17.4
      comp=Z,6.7nm,0.9s
G19K  Purcell Mounta     67.97  20  IAmb    IAmb   04 50 17.4
      comp=Z,7.9nm,0.8s
F21K  Alatna River       68.01  18  IAmb    IAmb   04 50 19.9
      comp=Z,6.4nm,0.9s
H17K  Granite Mounta     68.13  21  IAmb    IAmb   04 50 19.4
      comp=Z,12nm,1.1s
E23K  Chandalar          68.19  16  IAmb    IAmb   04 50 19.2
      comp=Z,7.0nm,0.9s
G21K  Allakaket          68.57  18  IAmb    IAmb   04 50 21.8
      comp=Z,5.5nm,0.8s
H19K  Roundabout Mou     68.62  20  IAmb    IAmb   04 51 07.3
      comp=Z,8.0nm,0.9s
COLD  Coldfoot           68.75  16  IAmb    IAmb   04 50 23.2
      comp=Z,10nm,0.9s
IMAR  Indian Mountai     68.94  19  P      P       04 50 19.7 -0.9
F25K  Christian Rive     69.39  15  IAmb    IAmb   04 50 27.8
      comp=Z,6.3nm,0.9s
H21K  Melozitna Rive     69.43  18  IAmb    IAmb   04 50 28.2
      comp=Z,17nm,1.6s
E29M  Blow River         70.04  12  IAmb    IAmb   04 50 31.3
      comp=Z,13nm,1.2s
H23K  Yukon River        70.06  17  IAmb    IAmb   04 50 31.4
      comp=Z,7.7nm,1.0s
J18K  Innoko River       70.16  21  IAmb    IAmb   04 50 31.9
      comp=Z,6.5nm,0.8s
J20K  Nowinta River      70.29  20  IAmb    IAmb   04 50 36.4
      comp=Z,7.2nm,0.8s
H24K  Noodor Dome        70.43  16  IAmb    IAmb   04 50 32.8
      comp=Z,13nm,1.4s
MLY   Manley             70.45  18  IAmb    IAmb   04 50 49.9
      comp=Z,19nm,1.6s
I23K  Minto, Yukon-K     70.67  17  IAmb    IAmb   04 50 35.2
      comp=Z,11nm,1.0s
INK   Inuvik             70.75  10  P      P       04 50 31.0 -0.7
      comp=Z,8.0nm,0.9s,baz=346,slow=6.7,SNR=13
      comp=Z,8.0nm,0.9s
INK   Inuvik             70.75  10  IAmb    IAmb   04 50 36.2
      comp=Z,12nm,1.1s
C36M  Paulatuk           70.78   6  IAmb    IAmb   04 50 35.1
      comp=Z,15nm,1.1s
G27K  Doyon Strip        70.83  14  IAmb    IAmb   04 50 33.6
      comp=Z,11nm,1.4s
F30M  Barrier River      71.08  11  IAmb    IAmb   04 50 37.2
      comp=Z,12nm,1.1s
POKR  Poker Plat Res     71.14  17  IAmb    IAmb   04 50 37.7
      comp=Z,8.4nm,0.8s
NEA2  Nenana             71.21  18  IAmb    IAmb   04 50 37.5
      comp=Z,15nm,1.2s
COLA  College            71.25  17  P      P       04 50 34.4 -0.4
COLA  College            71.25  17⇓iP      P       04 50 34.8  0.0
COLA                                pmax    pmax
      comp=Z,16nm,0.9s
F31M  Tsiigehtchic       71.53  10  IAmb    IAmb   04 50 44.6
      comp=Z,21nm,1.4s
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IL31		71.56	17	IAmb	IAmb	04 50 39.5	
	comp=Z,7.4nm,0.9s						
ILAR	Eielson Array	71.56	17	P	P	04 50 35.5	-1.1
	comp=Z,6.2nm,0.9s,baz=322,slow=4.9,SNR=29						
	comp=Z,6.2nm,0.9s						
ILAR	Eielson Array	71.56	17	P	P	04 50 35.9	-0.8
ILAR	Eielson Array	71.56	17	P	P	04 50 35.9	-0.8
G30M	tAoh Zraii Nji	71.59	12	IAmb	IAmb	04 50 45.3	
	comp=Z,17nm,1.4s						
J26L	Joseph Creek	72.51	16	IAmb	IAmb	04 53 20.7	
	comp=Z,28nm,1.9s						
L22K	Petersville	72.52	20	IAmb	IAmb	04 50 45.3	
	comp=Z,12nm,0.9s						
SKT	Skwentna	72.78	20	P	P	04 50 42.9	-1.2
PAX	Paxson	73.43	17		P	04 50 47.0	-1.0
PAX				IAmb	IAmb	04 50 51.1	
	comp=Z,14nm,1.1s						
PAX	Paxson	73.43	17	P	P	04 50 47.0	-1.0
PAX				pmax	pmax		
	comp=Z,14nm,1.1s						
SML	Sawmill	73.75	19		P	04 50 49.4	-0.5
SML	Sawmill	73.75	19	P	P	04 50 49.4	-0.5
SML				pmax	pmax		
	comp=Z,24nm,0.9s						
BLKN	Baker Lake	76.15	355		P	04 51 03.4	-0.1
BLKN				IAmb	IAmb	04 51 04.0	
	comp=Z,6.5nm,0.7s						
YKAW3	Yellowknife Wh	78.13	3	IAmb	IAmb	04 51 17.9	
	comp=Z,8.2nm,1.0s						
YKA	Yellowknife Ar	78.20	3	P	P	04 51 15.1	0.0
	comp=Z,2.9nm,0.7s,baz=346,slow=5.9,SNR=30						
	comp=Z,2.9nm,0.7s						
YKA	Yellowknife Ar	78.20	3	P	P	04 51 10.8	-4.3
YKAW1	Yellowknife Wh	78.22	3	IAmb	IAmb	04 51 22.8	
	comp=Z,12nm,1.0s						
BOSA	Boshof	80.85	221	P	P	04 51 28.5	-1.5
	comp=Z,3.3nm,0.9s,baz=14,slow=6.3,SNR=4.1						
BOSA				LR	LR	05 27 57.0	
	comp=Z,18nm,19.5s,baz=27,slow=36						
	comp=Z,3.3nm,0.9s						
BOSA	Boshof	80.85	221	IAmb	IAmb	04 51 36.8	
	comp=Z,13nm,1.2s						
FCC	Fort Churchill	81.49	353	P	P	04 51 33.2	+0.3
FCC				IAmb	IAmb	04 52 24.7	
	comp=Z,33nm,1.9s						
FCC	Fort Churchill	81.49	353	P	P	04 51 33.3	+0.3
FCC				pmax	pmax		
	comp=Z,33nm,1.9s						
WRA	Warramunga Arr	82.50	123	P	P	04 51 36.2	-2.7
	comp=Z,1.0nm,0.6s,baz=326,slow=4.9,SNR=11						
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	82.50	123	IAmb	IAmb	04 51 38.1	
	comp=Z,1.2nm,1.7s						
WRAB	Tennant Creek	82.51	123	⇓eP	P	04 51 37.0	-1.9
WRAB				pmax	pmax		
	comp=Z,10.0nm,1.8s						
PMG	Port Moresby	84.20	107	⇑eP	P	04 51 46.0	-1.7
PMG				pmax	pmax		
	comp=Z,12nm,0.8s						
ASAR	Alice Springs	84.93	126	P	P	04 51 49.4	-1.9
	comp=Z,1.0nm,0.9s,baz=307,slow=5.0,SNR=6.9						
	comp=Z,1.0nm,0.9s						
FFC	Flin Flon	86.05	357	P	P	04 51 56.3	-0.1
FFC	Flin Flon	86.05	357	P	P	04 51 56.3	-0.1
FFC				pmax	pmax		
	comp=Z,25nm,1.7s						
ULM	Lac du Bonnet	90.08	353	LR	LR	05 34 22.0	
	comp=Z,68nm,18.5s,baz=312,slow=37						
NVL	N'lazarevskaya	118.19	199	*i* PKIKP	PKiKP	04 58 03.6	+1.6
NVL				*e*		04 59 16.6	
NVL				*e*PPP	PPP	05 01 48.1	
NVL				*e*SS	SS	05 15 35.7	+2.4
NVL				*e*SSS	SSS	05 19 58.0	
NVL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
PLCA	Paso Flores	151.95	256	PKPbc	PKPbc	04 59 09.3	-1.6
	comp=Z,2.7nm,1.1s,baz=104,slow=2.3,SNR=6.9						

*KRNET **13** 04:42:22.8±0.1, 39°.58N×72°.68E, h14km, mb4.2*
*IDC **13** 04:42:28.1±4.8, 39°.19N×72°.66E, h46km±40km, mb3.7/10, mbtmp3.9/12, ML3.6/2, Error ellipse: s-maj=33.6km s-min=20.0km az=10.0*
*SOME **13** 04:42:33.4, 39°.90N×72°.45E, h5km*
ISC 13 04:42:23.8±1.1**, 39°.61N**±0°.04×**72°.62E**±0°.03**, h7**km±7km**, n44, σ2ˢ.33**/69**, mb3.8**/10**, 23C-27D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	0.65	259	⇑eP	Pg	04 42 36.1	-0.2
DRK				⇑eS	Sb	04 42 45.8	-1.1
SFK	Sufi-Kurgan	0.79	59	⇓eP	Pg	04 42 37.7	-1.4
SFK				⇓eS	Sb	04 42 48.7	-2.4
OHH	Osh	0.93	8	⇓eP	Pb	04 42 41.0	-1.2
OHH				⇓eS	Sg	04 42 54.4	+0.7
SALK	Salom-Alik	1.57	35	⇓eP	Pb	04 42 52.4	-0.9
SALK				⇓eS	Sg	04 43 14.0	-0.4
ARSB	Arslanbob	1.74	9	⇓eP	Pb	04 42 55.7	-0.4
ARSB				⇓iS	Sg	04 43 19.8	+0.1
GAR	Garm	1.89	252	⇑eP	Pb	04 42 58.4	-0.2
GAR				⇑eS	Sg	04 43 24.5	0.0
TRKS	Terek-Say	2.23	330	⇑eP	Pb	04 43 02.8	-1.7
TRKS				⇑eS	Sb	04 43 32.0	-0.3
ARK	Arkit	2.25	347	⇓eP	Pb	04 43 04.0	-0.8
ARK				⇓eS	Sb	04 43 33.7	+0.9
ARLS	Aral	2.60	29	⇑eP	Pb	04 43 08.2	-2.6
ARLS				⇑eS	Sb	04 43 41.4	-1.6
JNKS	Jany-Kuch	2.74	57	⇓eP	Pb	04 43 09.9	-3.3
JNKS				⇓eS	Sb	04 43 44.5	-2.5
CHGR	Chuyangaron	2.85	252	⇓eP	Pb	04 43 12.1	-3.0
CHGR				⇓eS	Sb	04 43 48.1	-2.1
MNAS	Manas	2.88	358	⇓eP	Pb	04 43 12.6	-3.0
MNAS				⇓eS	Sb	04 43 49.0	-2.0
UCH	Uchtor	2.99	28	⇑eP	Pb	04 43 13.9	-3.7
UCH				⇑eS	Sb	04 43 51.2	-3.2
MRKS	Merke	3.17	8	eP	Pg	04 43 27.7	+3.2
	72nm,0.5s						
MRKS				eS	Sg	04 44 06.9	+1.3
	264nm,0.4s						
EKS2	Erkin-Say	3.17	16	⇓eP	Pb	04 43 16.4	-4.2
EKS2				⇓eS	Sb	04 43 55.6	-3.9
AAK	Ala-Archa	3.34	24	P	Pb	04 43 22.9	-0.6
	10nm,0.3s,baz=189,slow=21,SNR=2.0						
AAK				S	Sb	04 44 06.5	+2.1
	100nm,0.4s,baz=327,slow=19,SNR=7.4						
	70nm,0.6s						
AAK	Ala-Archa	3.34	24	⇓eP	Pb	04 43 18.7	-4.8
AAK				⇓eS	Sb	04 43 59.5	-4.9
AAK	Ala-Archa	3.34	24	⇑Pg	Pb	04 43 22.5	-1.0
	32nm,0.6s						
AAK				⇓Lg	Lg	04 44 06.5	
	100nm,0.6s						
DZA	Taraz	3.42	344	eP	Pg	04 43 29.7	+0.3
	216nm,0.4s						
DZA				eS	Sg	04 44 10.2	-3.6
	378nm,0.4s						
KBK	Karagaybulak	3.52	29	⇑eP	Pn	04 43 21.1	+2.1
KBK				⇑eS	Sb	04 44 03.6	-5.9
FRU1	Bishkek	3.54	25	⇑eP	Pb	04 43 21.6	-5.2
FRU1				⇑eS	Sb	04 44 04.6	-5.4
CHM	Chimkent	3.54	321	eP	Pg	04 43 33.0	+1.3
	111nm,0.3s						
CHM				eS	Sg	04 44 15.9	-1.7
	423nm,0.4s						
CHMS	Chumysh	3.75	25	⇑eP	Pn	04 43 24.2	+2.1
CHMS				⇑eS	Sn	04 44 09.0	+2.5
ULHL	Ulahol	3.81	45	⇓eP	Pn	04 43 24.9	+1.9
ULHL				⇓eS	Sn	04 44 10.3	+2.2
BOOM	Boomskoye usch	3.82	40	⇓eP	Pn	04 43 25.2	+2.0
BOOM				⇓eS	Sn	04 44 10.7	+2.2
KK31	Karatay Array	3.84	336	⇑Pg	Pb	04 43 29.5	-2.4
	33nm,0.5s,baz=142,slow=11,SNR=7.2						
KK31				⇑Lg	Lg	04 44 17.4	
	102nm,0.4s,baz=142,slow=21,SNR=15						
USP	Ospenovka	3.92	21	⇑eP	Pn	04 43 26.7	+2.2
USP				⇑eS	Sn	04 44 13.3	+2.6
TKM2	Tokmak 2	4.00	33	⇓eP	Pn	04 43 27.7	+2.0
TKM2				⇓eS	Sn	04 44 15.1	+2.2
BRLS	Borolday	4.01	329	eP	Pg	04 43 38.9	-1.8
	34nm,0.5s						
BRLS				eS	Sb	04 44 25.8	+2.3
	50nm,0.3s						
KDJ	Kajisay	4.28	52	⇑eP	Pn	04 43 31.4	+1.9
KDJ				⇑eS	Sn	04 44 21.5	+1.7
MTBS	Maitube	4.54	38	eP	Pg	04 43 53.6	+2.8
	28nm,0.4s						
MTBS				eS	Sg	04 44 51.8	+2.2
	62nm,0.5s						
BVAR	Borovoye Array	13.51	354	P	P	04 45 45.4	+0.3
	5.7nm,0.6s,baz=158,slow=8.5,SNR=6.9						
ZALV	Zalesovo Beam	16.57	26	P	P	04 46 20.9	+2.0
	0.5nm,0.3s,baz=218,slow=12,SNR=5.7						
	3.8nm,0.6s						
SONM	Songino Array	25.60	60	P	P	04 47 54.9	+1.3
	1.0nm,0.5s,baz=277,slow=10,SNR=4.4						
	1.0nm,0.5s						
BRTR	Keskin Array B	29.85	283	P	P	04 48 34.1	+2.3
	1.1nm,0.8s,baz=67,slow=6.9,SNR=3.6						
	1.1nm,0.8s						
FINES	FINESS Array B	35.69	323	P	P	04 49 24.6	+2.2
	2.5nm,0.7s,baz=117,slow=6.6,SNR=3.7						
	2.5nm,0.7s						
ARCES	ARCESS Array B	38.80	336	P	P	04 49 50.9	+2.2
	0.9nm,0.5s,baz=113,slow=8.5,SNR=8.6						
	0.9nm,0.5s						
HFS	Hagfors	41.47	320	P	P	04 50 12.2	+1.3
	2.0nm,0.4s,baz=98,slow=11,SNR=10						
	2.0nm,0.4s						
GERES	GERESS Array B	42.25	303	P	P	04 50 18.8	+1.2
	0.6nm,0.6s,baz=62,slow=9.6,SNR=2.8						
	0.6nm,0.6s						
NB2	NORSAR Subarra	42.72	321	P	P	04 50 22.0	+0.8
	comp=Z,2.7nm,0.7s,baz=92,slow=8.6						
NOA	NORSAR Array B	42.72	321	P	P	04 50 21.5	+0.3
	comp=Z,0.7nm,0.6s,baz=100,slow=8.0,SNR=1.8						
	comp=Z,0.7nm,0.6s						
ILAR	Eielson Array	71.44	17	P	P	04 53 47.2	+2.8
	comp=Z,1.2nm,0.9s,baz=311,slow=4.8,SNR=5.8						
	comp=Z,1.2nm,0.9s						
YKA	Yellowknife Ar	78.08	3	P	P	04 54 23.6	+0.8
	comp=Z,0.6nm,0.5s,baz=350,slow=5.8,SNR=6.9						
	comp=Z,0.6nm,0.5s						
WRA	Warramunga Arr	82.59	123	P	P	04 54 44.6	-3.1
	comp=Z,0.6nm,0.7s,baz=330,slow=5.4,SNR=9.4						
	comp=Z,0.6nm,0.7s						

*IDC **13** 05:05:20.2±0.9, 2°.41N×128°.77E, h0km, mb3.8/10, mbtmp3.9/11, ML4.0/1, Error ellipse: s-maj=35.3km s-min=17.8km az=76.0*
*NEIC **13** 05:05:28.4±2.2, 2°.36N±0°.10×128°.53E±0°.08, h56km±9km, mb4.4/15, Error ellipse: s-maj=15.7km s-min=10.6km az=212.0*
*DJA **13** 05:05:32.1±0.5, 2°N±5°×12°8E±°, h62km±5km, M4.2/12, mB5.9/1, mb4.3/3, MLv4.1/12, Mw(mB)5.5/1*
ISC 13 05:05:25.4±0.7**, 2°.40N**±0°.08×**128°.78E**±0°.09**, h35**km**, n45, σ1ˢ.22**/41**, mb4.2**/18**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAMI	Galela, Maluku	1.14	241	P	Pn	05 05 47.2	+2.3
GAMI				S	Sn	05 05 59.4	+0.1
TNTI	Ternate	2.15	221		Pn	05 05 59.3	+0.5
TNTI	Ternate	2.15	221	P	Pn	05 06 00.3	+1.5
SGSI	Sangihe	3.49	292	P	Pn	05 06 20.9	+3.6
SWI	Sorong	4.08	143	P	Pn	05 06 32.4	+7.1
KMSI	Cibinong	5.13	249	P	Pn	05 06 40.5	+0.7
SANI	Sanana	5.23	212	P	Pn	05 06 42.0	+0.8
GTOI	Gorontalo	6.03	253	P	Pn	05 06 54.5	+2.3
FAKI	Fak Fak	6.32	147	Pn	Pn	05 07 01.4	+5.3
FAKI	Fak Fak	6.32	147	P	Pn	05 07 02.7	+6.5
	0.1nm25nm,0.7s						
TOLI2	Tolitoli	8.10	261		Pn	05 07 20.3	-0.3
MYLDM	Lahad Datu	10.62	285	Pn	Pn	05 07 54.4	-0.9
SPSI	Sidrap Palu	11.01	235	P	Pn	05 08 01.2	+0.7
KAPI	Kappang	11.65	231	Pn	Pn	05 08 08.3	-1.0
	1.0nm,0.3s,baz=37,slow=20,SNR=4.0						
	2.4nm,0.4s						
KAPI	Kappang	11.65	231		Pn	05 08 09.3	+0.1
YOJ	Yonaguni jima	22.63	346	P	P	05 10 22.4	-1.0
WB0	Warramunga Arr	22.71	166	P	P	05 10 25.0	+0.6
WB0				IAmb	IAmb	05 10 32.1	
	comp=Z,4.8nm,1.3s						
WRA	Warramunga Arr	22.86	166	P	P	05 10 26.3	+0.3
	comp=Z,1.1nm,0.8s,baz=336,slow=11,SNR=6.6						
	comp=Z,1.1nm,0.8s						
WRA	Warramunga Arr	22.86	166	P	P	05 10 23.7	-2.2
AS31	Alice Springs	26.38	169	P	P	05 10 58.3	-0.4
ASAR	Alice Springs	26.38	169	P	P	05 10 59.0	+0.2
	comp=Z,0.3nm,0.5s,baz=345,slow=7.4,SNR=5.3						
ASAR				PcP	PcP	05 14 22.6	-1.5
	comp=Z,0.3nm,0.6s,baz=350,slow=1.4,SNR=5.8						
	comp=Z,0.3nm,0.5s						
ASAR	Alice Springs	26.38	169	P	P	05 10 58.2	-0.5
KULM	Kulim	28.21	277	P	P	05 11 14.6	-0.6
CMAR	Chiang Mai Arr	33.31	301	P	P	05 12 01.1	+0.9
	comp=Z,1.0nm,0.3s,baz=110,slow=6.9,SNR=4.7						
	comp=Z,1.0nm,0.3s						
KS19	Wonju Array Si	34.94	359	P	P	05 12 13.5	-0.6
KS19				IAmb	IAmb	05 12 16.6	
	comp=Z,6.2nm,0.8s						
MJAR	Matsushiro Arr	35.07	13	P	P	05 12 16.0	+0.8
	comp=Z,1.2nm,0.4s,baz=182,slow=9.4,SNR=5.0						
	comp=Z,1.2nm,0.4s						
MJAR	Matsushiro Arr	35.07	13	P	P	05 12 15.3	+0.1
MJAR				IAmb	IAmb	05 12 40.0	
	comp=Z,5.3nm,1.3s						
JYT	Yasato	35.28	16	P	P	05 12 17.6	+0.7
BBOO	Buckleboo	35.69	169	P	P	05 12 19.9	-0.6
BBOO				IAmb	IAmb	05 12 46.8	
	comp=Z,5.6nm,1.1s						
H11N1	WAKE ISLAND Hy	41.01	62	T	T	05 57 10.7	
	baz=250,slow=75,SNR=4.9						
H11N2	WAKE ISLAND Hy	41.02	62	T	T	05 57 11.7	
	baz=250,slow=75,SNR=4.1						
H11N3	WAKE ISLAND Hy	41.03	62	T	T	05 57 16.9	
	baz=250,slow=75,SNR=5.7						
EVN	Everest	47.42	307	P	P	05 13 57.5	-0.1
EVN				IAmb	IAmb	05 13 59.6	
	comp=Z,11nm,1.2s						
ULN	Ulaanbaatar	49.03	341	P	P	05 14 08.8	-0.3
ULN				IAmb	IAmb	05 14 22.2	
	comp=Z,2.2nm,0.8s						
SONM	Songino Array	49.22	340	P	P	05 14 11.0	+0.5
	comp=Z,0.4nm,0.5s,baz=152,slow=9.4,SNR=2.1						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	59.81	325	P	P	05 15 27.1	-0.2
	comp=Z,0.9nm,0.4s,baz=117,slow=8.2,SNR=9.4						
	comp=Z,0.9nm,0.4s						
ZALV	Zalesovo Beam	62.70	332	P	P	05 15 46.1	-0.6
	comp=Z,0.3nm,0.3s,baz=82,slow=11,SNR=1.6						
	comp=Z,0.3nm,0.3s						
KURBB	Kurchatov Arra	63.96	327	P	P	05 15 54.7	-0.4
	comp=Z,0.9nm,0.5s,baz=127,slow=6.0,SNR=10						
	comp=Z,0.9nm,0.5s						
BVAR	Borovoye Array	69.55	327	P	P	05 16 30.5	-0.2
	comp=Z,0.9nm,0.5s,baz=116,slow=10,SNR=5.2						
	comp=Z,0.9nm,0.5s						
AB31	Akbulak array	74.47	321	P	P	05 16 58.5	-1.7
AB31				IAmb	IAmb	05 17 14.0	
	comp=Z,6.9nm,1.4s						
ABKAR	Akbulak array	74.47	321	P	P	05 16 58.5	-1.7
D19K	Kuna River	81.62	21	P	P	05 17 41.3	+1.7
D19K				IAmb	IAmb	05 18 04.0	
	comp=Z,7.4nm,1.4s						
E19K	Redstone River	81.68	22	P	P	05 17 41.3	+1.4
E19K				IAmb	IAmb	05 17 49.1	
	comp=Z,3.0nm,1.1s						
KDAK	Kodiak Island	81.92	32	P	P	05 17 43.0	+1.7
ILAR	Eielson Array	85.42	25	P	P	05 17 59.7	+0.6
	comp=Z,0.6nm,1.0s,baz=246,slow=6.4,SNR=4.5						
	comp=Z,0.6nm,1.0s						

*IDC **13** 05:38:44.1±4.5, 39°.62N×134°.37E, h110km±57km, mb3.2/5, mbtmp3.5/6, MS2.4/1, Error ellipse: s-maj=64.1km s-min=20.8km az=179.0*
*JMA **13** 05:38:53.3±0.1, 38°.2N±0°.3×142°.0E±0°.7, h48km, MV3.6/37, E OFF MIYAGI PREF*
ISC 13 05:38:54.0±1.0**, 38°.22N**±0°.05×**142°.00E**±0°.08**, h50**km**, n17, σ1ˢ.41**/28**, mb3.5**/3**, 17D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.43	282	⇓P	Pn	05 39 03.5	-1.0
JIKH				⇓S	Sn	05 39 10.6	-1.4
JIO	Ouri	0.57	295	⇓iP	Pn	05 39 05.2	-0.9
JIO				⇓S	Sn	05 39 13.5	-1.2
JKMT	Kesennumamotoy	0.72	325	⇓iP	Pn	05 39 07.4	-0.6
JKMT				⇓S	Sn	05 39 17.6	-0.6
OFUJ	Ofunato	0.90	343	⇓iP	Pn	05 39 09.9	-0.5
OFUJ				⇓S	Sn	05 39 21.8	-0.6
JMK	Ichinoseki	0.95	320	⇓iP	Pn	05 39 10.8	-0.3
JMK				⇓eS	Sn	05 39 23.6	-0.1
JMM	Marumori	1.02	250	⇓iP	Pn	05 39 10.5	-1.5
JOU	Okura	1.06	278	⇓iP	Pn	05 39 12.0	-0.6
JOU				⇓S	Sn	05 39 26.2	-0.2
JFK	Kawauchi	1.23	227	i P	Pn	05 39 13.3	-1.6
JFK				S	Sn	05 39 27.8	-2.7
JOM	Ohasama	1.37	336	⇓iP	Pn	05 39 16.8	+0.1
JOM				⇓S	Sn	05 39 35.2	+1.5
JYK	Kaneyama	1.47	299	i P	Pn	05 39 17.8	-0.2
JOTO	OTAMA OYAMA	1.48	244	P	Pn	05 39 18.3	+0.1
JOTO				S	Sn	05 39 36.0	-0.4
JYS	Shirataka	1.53	271	⇓iP	Pn	05 39 18.3	-0.6
JYS				⇓S	Sn	05 39 37.1	-0.5
JRG	Rokugo	1.59	318	P	Pn	05 39 20.1	+0.3
MJAR	Matsushiro Arr	3.46	242	P	Pn	05 39 48.5	+3.1
	1.8nm,0.4s,baz=131,slow=28,SNR=7.9						
MJAR				S	Sn	05 40 28.8	+3.8
	1.8nm,0.3s,baz=279,slow=5.9,SNR=4.3						
MJAR				LR	LR	05 41 38.3	
	comp=Z,42nm,20.8s,baz=34,slow=40						
ILAR	Eielson Array	48.24	33	P	P	05 47 28.4	-1.1
	0.4nm,0.8s,baz=258,slow=7.0,SNR=4.8						
	0.4nm,0.8s						
PDAR	Pinedale Array	76.50	46	P	P	05 50 39.1	+0.1
	0.4nm,0.6s,baz=300,slow=1.9,SNR=4.6						
	0.4nm,0.6s						
TXAR	Lajitas Array	89.03	53	P	P	05 51 45.1	+1.2
	0.1nm,0.5s,baz=248,slow=1.7,SNR=5.1						
	0.1nm,0.5s						

IDC 13 05:46:57.6±1.5**, 51°.54N×82°.46E, h0**km**, mbtmp2.6**/2**, ML2.2**/2**, Error ellipse: s-maj=16.8km s-min=12.6km az=131.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	Kurchatov Arra	2.64	251	Pg	Pb	05 47 44.4	-1.3
	0.1nm,0.3s,baz=55,slow=21,SNR=4.9						
KURBB				Lg	Lg	05 48 20.7	
	0.1nm,0.3s,baz=69,slow=29,SNR=4.5						
ZALV	Zalesovo Beam	2.81	30	Pn	Pn	05 47 42.6	-1.1
	0.9nm,0.3s,baz=216,slow=15,SNR=8.8						
ZALV				Sn	Sn	05 48 16.1	-2.1
	0.7nm,0.3s,baz=207,slow=25,SNR=6.1						
ZALV				Lg	Lg	05 48 26.8	
	0.5nm,0.3s,baz=213,slow=24,SNR=3.7						
	2.4nm,0.3s						
I46RU	ZALESOVO INFRA	2.81	30	I	I	06 04 00.0	
	baz=202,slow=308,SNR=2.4						
MKAR	Makanchi Array	4.75	181	Pn	Pn	05 48 12.3	+1.9
	0.2nm,0.3s,baz=9.0,slow=12,SNR=6.7						
MKAR				Lg	Lg	05 49 25.9	
	0.2nm,0.3s,baz=21,slow=26,SNR=5.2						
	0.3nm,0.4s						

*IDC **13** 06:04:45.9±1.2, 6°.32S×150°.61E, h0km, mb4.1/7, mbtmp4.1/8, ML2.0/1, MS3.2/4, Error ellipse: s-maj=46.7km s-min=18.4km az=124.0*
ISC 13 06:04:51.0±1.1**, 6°.3S**±0°.2×**150°.6E**±0°.2**, h33**km**, n10, σ0ˢ.92**/11**, mb4.0**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.56	228	Pn	Pn	06 05 58.9	+1.1
	5.4nm,0.3s,baz=347,slow=9.2,SNR=8.9						
PMG				Sn	Sn	06 06 49.8	+0.2
	10nm,0.3s,baz=91,slow=20,SNR=9.3						
PMG				LR	LR	06 07 10.6	
	comp=Z,88nm,18.2s,baz=217,slow=31						
	41nm,0.7s						
CTA	Charters Tower	14.31	197	LR	LR	06 12 38.1	
	comp=Z,77nm,19.5s,baz=44,slow=33						
WRA	Warramunga Arr	20.78	228	P	P	06 09 29.4	-0.1
	10nm,0.9s,baz=52,slow=11,SNR=27						
WRA				S	S	06 13 18.5	-1.4
	0.4nm,0.8s,baz=80,slow=20,SNR=1.5						
	10nm,0.9s						
ASAR	Alice Springs	23.54	221	P	P	06 09 58.5	-0.1
	2.4nm,0.7s,baz=56,slow=9.3,SNR=25						
ASAR				S	S	06 14 10.5	-0.2
	0.5nm,0.8s,baz=37,slow=22,SNR=4.8						
	2.4nm,0.7s						
STKA	Stephens Creek	26.77	197	P	P	06 10 27.4	-0.5
	4.0nm,0.8s,baz=25,slow=12,SNR=5.2						
STKA				LR	LR	06 21 38.0	
	comp=Z,68nm,19.6s,baz=26,slow=38						
	4.0nm,0.8s						
FITZ	Fitzroy Crossi	26.99	242	P	P	06 10 29.5	-0.6
	3.1nm,1.0s,baz=55,slow=10,SNR=6.9						
	3.1nm,1.0s						
KSRS	Korea Array	48.42	336	P	P	06 13 30.4	+0.3
	1.7nm,0.8s,baz=146,slow=7.8,SNR=5.0						
	1.7nm,0.8s						
ILAR	Eielson Array	84.40	22	P	P	06 17 18.6	-1.3
	0.9nm,0.8s,baz=245,slow=6.2,SNR=7.5						
	0.9nm,0.8s						
NVAR	Mina Array Bea	94.76	52	P	P	06 18 10.9	+1.1
	1.0nm,0.7s,baz=250,slow=6.7,SNR=8.6						
	1.0nm,0.7s						
AKTO	Aktyubinsk	96.46	320	LR	LR	07 00 40.5	
	comp=Z,33nm,21.4s,baz=204,slow=35						

*NOU **13** 06:13:07.6, 34°.34S×179°.88W, h304km, ML4.2/8, South of Kermadec Islands*
*WEL **13** 06:13:28.4±1.3, 35°S±15°×17°9E±1°4, h184km±27km, M4.1/13, MLv4.1/13, Error ellipse: s-maj=24.1km s-min=11.5km az=40.3, confirmed*
ISC 13 06:13:27.9±3.2**, 35°.3S**±0°.2×**178°.6E**±0°.2**, h200**km**, n31, σ0ˢ.96**/36**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	2.28	187	P	Pn	06 14 09.6	+0.2
MXZ	Matakaoa Point	2.28	187	P	Pn	06 14 09.6	+0.2
MXZ				S	Sn	06 14 41.1	-0.7
WMGZ	Waiomatatini S	2.53	184	P	Pn	06 14 13.0	+0.9
WMGZ				S	Sn	06 14 47.8	+1.1
HAZ	Te Kaha	2.55	195	P	Pn	06 14 12.7	+0.3
HAZ				S	Sn	06 14 47.4	+0.2
PKGZ	Pakihiroa	2.61	190	P	Pn	06 14 13.8	+0.8
KUZ	Kuaotunu	2.78	238	P	Pn	06 14 15.7	+0.8
KUZ	Kuaotunu	2.78	238	P	Pn	06 14 15.7	+0.8
RUGZ	Raukumara Rang	2.78	196	P	Pn	06 14 15.7	+0.7
PUZ	Puketiti	2.79	186	P	Pn	06 14 15.2	+0.1
PUZ				S	Sn	06 14 51.8	-0.3
TWGZ	Tauwhareparae	2.93	190	P	Pn	06 14 17.7	+1.0
MWZ	Matawai	3.16	196	P	Pn	06 14 20.1	+0.6
CNGZ	Carnagh Statio	3.20	186	P	Pn	06 14 20.2	+0.3
TKGZ	Te Karaka	3.20	191	P	Pn	06 14 20.4	+0.5
TKGZ				S	Sn	06 15 01.5	+0.8
URZ	Urewera	3.21	202	P	Pn	06 14 20.3	+0.4
URZ	Urewera	3.21	202	P	Pn	06 14 20.3	+0.4
URZ				S	Sn	06 15 02.1	+1.3
RAGZ	Rawiri	3.34	197	P	Pn	06 14 22.5	+0.8
MKAZ	Moumakai	3.35	236	P	Pn	06 14 22.9	+1.2
RIGZ	Rimuhau	3.48	191	P	Pn	06 14 23.3	0.0
MUGZ	Murupara	3.51	205	P	Pn	06 14 24.7	+1.0
WCZ	Waipu Caves	3.56	258	P	Pn	06 14 24.4	+0.1
SNGZ	Shannon Statio	3.63	196	P	Pn	06 14 25.4	+0.3
PRGZ	Paritu Road	3.67	189	P	Pn	06 14 25.9	+0.3
ALRZ	Allen Road	3.75	209	P	Pn	06 14 27.9	+1.4
KNZ	Kokohu	3.80	191	P	Pn	06 14 26.7	-0.4
RAHZ	Arahi	3.82	199	P	Pn	06 14 27.6	+0.1
OUZ	Omahuta	4.13	270	P	Pn	06 14 30.7	-0.6
OUZ	Omahuta	4.13	270	P	Pn	06 14 30.8	-0.6
BKZ	Black Stump Fm	4.23	203	P	Pn	06 14 32.4	-0.2
HIZ	Hauiti	4.42	222	P	Pn	06 14 38.4	+3.5
BFZ	Birch Farm	5.70	199	P	Pn	06 14 49.2	-2.1
KHZ	Kahutara	8.15	208	P	Pn	06 15 19.7	-3.3

IDC 13 06:16:41.3±1.5**, 6°.04S×150°.33E, h0**km**, mb3.6**/4**, mbtmp3.7**/5**, ML1.8**/1**, Error ellipse: s-maj=117.0km s-min=22.7km az=131.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.59	223	Pn	Pn	06 17 53.9	+1.9

	3.4nm,0.3s,baz=35,slow=6.8,SNR=4.3						
PMG				Sn	Sn	06 18 45.1	-0.9
	6.3nm,0.3s,baz=85,slow=20,SNR=6.3						
	7.8nm,0.3s						
WRA	Warramunga Arr	20.80	227	P	P	06 21 24.8	+0.4
	3.1nm,0.7s,baz=53,slow=11,SNR=12						
	3.1nm,0.7s						
ASAR	Alice Springs	23.60	220	P	P	06 21 53.0	-1.1
	0.8nm,0.9s,baz=57,slow=8.8,SNR=8.1						
	0.8nm,0.9s						
ILAR	Eielson Array	84.23	23	P	P	06 29 13.8	-0.7
	0.3nm,0.9s,baz=264,slow=3.6,SNR=1.9						
	0.3nm,0.9s						
NVAR	Mina Array Bea	94.78	52	P	P	06 30 06.4	+0.9
	0.4nm,0.8s,baz=280,slow=9.9,SNR=4.0						
	0.4nm,0.8s						

CATAC ***13*** *06:35:16.7±1.0, 13°N±6°×9°1W±°, h8^{km}±5^{km}, M3.3/6, MLv3.3/6, Error ellipse: s-maj=13.0km s-min=7.6km az=23.7, confirmed*

SNET ***13*** *06:35:17.8±0.8, 13°.10N×90°.97W, h35^{km}, ML3.5*

GCG ***13*** *06:35:22.1±0.3, 13°.16N×90°.55W, h22^{km}±6^{km}, MD4.1*

ISC 13 06:35:22.2±3.2**, 13°.1N**±0°.1×**90°.7W**±0°.1**, h24**^{km}**, n23, σ1^{s}.93**/24**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	1.00	43	P	Pn	06 35 38.4	-2.3
FAME	Alcaldia de Sa	1.00	43	S	Sn	06 35 54.4	+0.3
NUBE	Las Nubes	1.20	49	*i* P	Pn	06 35 41.5	-2.2
NUBE	Las Nubes	1.20	49	P	Pn	06 35 41.5	-2.2
SLOZ	Alcaldia de Sa	1.28	45	P	Pn	06 35 38.3	-6.4
SBLS	San Blas	1.29	56	*e*P	Pn	06 35 42.6	-2.3
SBLS				*e*S	Sb	06 36 02.3	+0.2
RTR	El Retiro	1.30	53	*e*P	Pn	06 35 43.2	-1.9
JAYA	Jayaque - finc	1.35	66	*e*P	Pn	06 35 43.0	-2.7
JAYA				*e*S	Sb	06 36 03.3	-0.5
JAYA	Jayaque - finc	1.35	66	*i* P	Pn	06 35 43.0	-2.7
JAYA	Jayaque - finc	1.35	66	P	Pn	06 35 43.0	-2.7
UNIC	Universidad Ca	1.43	53	P	Pn	06 35 44.7	-2.0
UNIC	Universidad Ca	1.43	53	S	Sn	06 36 04.9	+0.1
PMON	Piamonte	1.49	66	P	Pn	06 35 45.3	-2.3
PMON	Piamonte	1.49	66	S	Sb	06 36 08.8	+1.0
LOMA	Loma Larga	1.59	70	S	Sb	06 36 12.3	+1.4
PAVA	Las Pavas	1.83	71	P	Pn	06 35 51.3	-1.0
MTO3	Montecristo	1.84	46	*i* P	Pn	06 35 51.0	-1.5
MTO3	Montecristo	1.84	46	P	Pn	06 35 51.1	-1.3
APG	El Apazote	1.90	7	*i* P	Pn	06 35 53.0	-0.3
UESV	Universidad de	1.95	74	P	Pb	06 36 00.6	+3.5
UESV	Universidad de	1.95	74	S	Sn	06 36 17.5	-0.1
LLGN	La Laguna	2.02	59	P	Pb	06 35 58.2	0.0
SCLA	Alcaldia de Sa	2.02	73	P	Pn	06 35 53.4	-1.5

NEIC ***13*** *06:40:44.8±1.4, 12°.16N±0°.07×86°.48W±0°.04, h173^{km}±4^{km}, mb4.6/26, Error ellipse: s-maj=10.5km s-min=4.3km az=206.0*

CATAC ***13*** *06:40:44.8±0.4, 12°N±3°×8°7W±°, h169^{km}±3^{km}, M4.1/43, MLv4.1/43, Error ellipse: s-maj=9.0km s-min=3.8km az=40.8, confirmed*

IDC ***13*** *06:40:44.5±0.7, 12°.32N×86°.36W, h184^{km}±6^{km}, mb3.7/13, mbtmp4.3/17, MS2.3/1, Error ellipse: s-maj=17.7km s-min=8.9km az=58.0*

UCR ***13*** *06:40:44.0±1.2, 12°.24N×86°.46W, h176^{km}±10^{km}, MB4.6(NEIC)*

ISC 13 06:40:44.2±0.5**, 12°.20N**±0°.04×**86°.47W**±0°.04**, h180**^{km}±4^{km}**, n249, σ0^{s}.94**/262**, mb4.4**/20**, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMTN	Mateare	0.05	51	P	Pn	06 41 07.9	-0.1
COPN	Copaltepe	0.12	259	P	Pn	06 41 07.2	-0.8
COPN	Copaltepe	0.12	259	*e*P	Pn	06 41 07.1	-0.9
APQ3	Volcan Apoyequ	0.12	56	P	Pn	06 41 12.9	+4.9
APYN	Apoyeque	0.12	76	P	Pn	06 41 08.1	0.0
APQ2	Apoyeque	0.14	93	P	Pn	06 41 08.0	0.0
ALLN	Telcor Managua	0.20	104	S	Sn	06 41 27.0	+0.5
ALLN	Telcor Managua	0.20	104	P	Pn	06 41 08.1	0.0
USIM	UNAN	0.21	114		Pn	06 41 07.8	-0.4
MGAN	Managua	0.23	104		Pn	06 41 08.1	-0.1
MGAN				Sn	Sn	06 41 26.6	+0.1
MGAN	Managua	0.23	104	S	Sn	06 41 26.7	+0.2
MGAN	Managua	0.23	104	P	Pn	06 41 08.2	-0.1
MGAN	Managua	0.23	104	*e*P	Pn	06 41 08.1	-0.1
MGAN	Managua	0.23	104	P	Pn	06 41 08.0	-0.1
MOM2	El Cardon	0.23	357	P	Pn	06 41 08.3	0.0
AERN	Aeropuerto Man	0.30	101	P	Pn	06 41 08.0	-0.3
MOM3	MOM3	0.31	352	P	Pn	06 41 08.3	-0.1
MAS3	Al N del Volca	0.34	122	P	Pn	06 41 08.2	-0.4
CNGA	Al SSO del Vol	0.37	322	P	Pn	06 41 08.3	-0.4
CNGN	Cerro Negro	0.37	323		Pn	06 41 08.2	-0.5
CNGN				Sn	Sn	06 41 26.8	-0.7
CNGN	Cerro Negro	0.37	323	P	Pn	06 41 08.2	-0.5
CNGN	Cerro Negro	0.37	323	*e*P	Pn	06 41 08.1	-0.5
CNGN	Cerro Negro	0.37	323	P	Pn	06 41 08.1	-0.5
MASN	Masaya	0.38	124	P	Pn	06 41 08.9	+0.2
MASN	Masaya	0.38	124	*e*P	Pn	06 41 08.4	-0.3
SABN	Sabanita	0.39	129	P	Pn	06 41 07.5	-1.2
NANN	Nandasmo	0.43	128	S	Sn	06 41 28.8	+1.1
NANN	Nandasmo	0.43	128	P	Pn	06 41 09.7	+0.9
HERN	Volcan Telica	0.54	319		Pn	06 41 08.9	-0.4
POLN	Al Sur del Vol	0.55	323	P	Pn	06 41 09.5	+0.2
NADN	Granada	0.62	136	P	Pn	06 41 09.6	-0.1
NADN	Granada	0.62	136	*e*P	Pn	06 41 09.4	-0.2
PKGN	Cerro Pekin	0.68	313	P	Pn	06 41 10.7	+0.8
AESN	El Sauce Leon	0.68	354	P	Pn	06 41 10.1	+0.1
CRIN	San Cristobal	0.75	311		Pn	06 41 10.2	-0.2
CRIN				Sn	Sn	06 41 30.4	-0.1
CRIN	San Cristobal	0.75	311	P	Pn	06 41 10.2	-0.2
CRIN	San Cristobal	0.75	311	*e*P	Pn	06 41 10.1	-0.2
CRIN	San Cristobal	0.75	311	P	Pn	06 41 09.9	-0.5
BOAB	BOACO BROADBAN	0.82	73		Pn	06 41 11.0	+0.3
BOAB				Sn	Sn	06 41 31.1	-0.1
BOAB	BOACO BROADBAN	0.82	73	S	Sn	06 41 31.3	+0.2
BOAB	BOACO BROADBAN	0.82	73	P	Pn	06 41 11.1	+0.3
LIMN	Finca el Limon	0.86	7	P	Pn	06 41 11.6	+0.5
MATN	Matagalpa	0.90	36	S	Sn	06 41 31.8	-0.6
MATN	Matagalpa	0.90	36	P	Pn	06 41 10.8	-0.5
ARIN	Rivas	0.97	140	P	Pn	06 41 08.7	-3.1
MORN	Al O del Volca	1.04	129	P	Pn	06 41 12.5	+0.2
CONN	Concepcion	1.04	127	P	Pn	06 41 11.7	-0.6
POTN	Potosi Cosigui	1.28	308	P	Pn	06 41 14.2	0.0
POTN				S	Sn	06 41 38.1	+0.7
POTN	Potosi Cosigui	1.28	308	*e*P	Pn	06 41 14.1	-0.1
RCON	San Juan de Ri	1.31	14	P	Pn	06 41 15.8	+1.1
CSGN	Cosiguina Volc	1.31	306	P	Pn	06 41 14.3	-0.2
CSGN				S	Sn	06 41 40.1	+2.1
CSGN	Cosiguina Volc	1.31	306	*e*P	Pn	06 41 14.2	-0.4
RCPN	Sur Rio San Ju	1.36	16	P	Pn	06 41 16.0	+0.9
CARN	Rivas	1.37	137	P	Pn	06 41 15.2	+0.2
CARN				S	Sn	06 41 38.3	-0.6
CARN	Rivas	1.37	137	*e*P	Pn	06 41 14.9	-0.1
RCVN	Varillal2	1.40	11	P	Pn	06 41 16.4	+1.0
OCON	Estacion meteo	1.42	360	P	Pn	06 41 16.5	+1.0
CNCH	Conchagua	1.70	309	P	Pn	06 41 18.3	-0.1
PEJA	Penjamo Buenos	1.73	139	*e*P	Pn	06 41 18.9	+0.4
BUAI	Buenos Aires	1.73	140	*e*P	Pn	06 41 18.7	+0.2
VORI	VORI	1.76	141	*e*P	Pn	06 41 19.4	+0.3
LCND	La Caada	1.77	309	P	Pn	06 41 18.7	-0.1
VRLE	La Escondida,	1.78	142	*e*P	Pn	06 41 19.3	+0.2
YUSH	Yuscaran	1.78	348	P	Pn	06 41 20.1	+1.0
ELI1	Hacienda Flor	1.79	150	*e*P	Pn	06 41 19.6	+0.5
GPS1	Guardaparques	1.80	142	*e*P	Pn	06 41 19.8	+0.5
GPS3	Bodega del ICE	1.80	143	*e*P	Pn	06 41 19.7	+0.4
GPS2	Hotel Rincn d	1.81	143	*e*P	Pn	06 41 19.8	+0.4
ALIBA	Liberia Airpor	1.84	150	*e*P	Pn	06 41 20.0	+0.4
ERIA	Liberia	1.86	147	*e*P	Pn	06 41 20.3	+0.5
MESS	Mesas	1.92	139	*e*P	Pn	06 41 20.7	+0.1
VMAR	Armenia, Volca	1.92	136	*e*P	Pn	06 41 20.6	+0.1
UPAL	Upala	1.93	132	*e*P	Pn	06 41 20.8	+0.2
DELF	Filadelfia	1.96	153	*e*P	Pn	06 41 21.4	+0.5
CUI	Cuipilapa	2.00	140	*e*P	Pn	06 41 21.9	+0.5
TGUH	Tegucigalpa,Un	2.00	337		Pn	06 41 22.6	+1.1
TGUH	Tegucigalpa,Un	2.00	337	P	Pn	06 41 22.4	+0.9
MOTZ	Rio Naranjo	2.04	138	*e*P	Pn	06 41 22.1	+0.3
BAGA	Bagaces	2.04	144	*e*P	Pn	06 41 22.0	+0.2
ELVJ	El Viejo (Barb	2.07	147	*e*P	Pn	06 41 30.2	+8.1
TENO	El Achiote	2.09	135	*e*P	Pn	06 41 23.0	+0.6
SACU	Santa Cruz	2.12	156	*e*P	Pn	06 41 22.9	+0.3
PLVR	Palo Verde	2.15	149	*e*P	Pn	06 41 23.8	+0.7
TIMP	Tierras Morena	2.15	138	*e*P	Pn	06 41 23.2	+0.1
INVE	Universidad In	2.20	141	*e*P	Pn	06 41 23.8	+0.2
QUEB	Quebradon, Cot	2.20	135	*e*P	Pn	06 41 23.8	+0.2
JUD3	Juan Diaz 3	2.22	156		Pn	06 41 24.1	+0.2
JUD3	Juan Diaz 3	2.22	156	*e*P	Pn	06 41 24.1	+0.2
SIUN	Universidad Ur	2.24	48		Pn	06 41 24.6	+0.7
SIUN	Universidad Ur	2.24	48	P	Pn	06 41 24.6	+0.7
TILA	Tilaran	2.27	139	*e*P	Pn	06 41 24.6	+0.2
NICO	Nicoya	2.29	154	*e*P	Pn	06 41 24.8	+0.2
TABAC	Tabacon	2.38	135	*e*P	Pn	06 41 26.1	+0.4
CMARA	Lajas Hojancha	2.40	155	*e*P	Pn	06 41 26.1	+0.2
JTS	Las Juntas de	2.42	142	P	Pn	06 41 26.4	+0.4
	117nm,0.3s,baz=325,slow=14,SNR=130						
JTS				S	Sn	06 41 56.4	-2.1
	158nm,0.3s,baz=319,slow=19,SNR=10						
JTS				LR	LR	06 42 04.0	
	comp=Z,51nm,18.5s,baz=199,slow=32						
JTS	Las Juntas de	2.42	142	*e*P	Pn	06 41 26.2	+0.2
JTS	Las Juntas de	2.42	142	P	Pn	06 41 25.9	-0.1
JUNT	Juntas	2.42	142	*e*P	Pn	06 41 26.1	+0.1
CEDE	Laguna Cedeo	2.43	134	*e*P	Pn	06 41 26.2	0.0
ARE1	Arenal 1	2.44	135	*e*P	Pn	06 41 26.4	+0.1
VARE2	V. Arenal	2.44	135	*e*P	Pn	06 41 26.9	+0.5
CASO	Castillo	2.45	136	*e*P	Pn	06 41 26.1	-0.3
VACR	Volcan Arenal	2.46	134	*e*P	Pn	06 41 27.1	+0.5
FORC	Fortuna	2.47	134	*e*P	Pn	06 41 27.0	+0.4
COVE	Coope Vega, Sa	2.51	126	P	Pn	06 41 27.2	+0.2
SOCE	Pocosol	2.56	135	Pn	Pn	06 41 28.0	+0.2
SOCE	Pocosol	2.56	135	P	Pn	06 41 27.9	+0.1
TECO	Alcaldia de Te	2.61	301	P	Pn	06 41 28.1	-0.2
SCLA	Alcaldia de Sa	2.66	304	P	Pn	06 41 29.2	+0.4
UESV	Universidad de	2.67	302	P	Pn	06 41 29.2	+0.3
JCR1	Jicaral	2.69	150	*e*P	Pn	06 41 29.9	+0.6
ENAS	Puntarenas	2.73	144	*e*P	Pn	06 41 30.4	+0.7
QUEU	Ciudad Quesada	2.74	133	*e*P	Pn	06 41 30.1	+0.3
ITAL	Pital	2.77	129	*e*P	Pn	06 41 30.3	+0.2
VPL2	V. Platanar	2.79	132	*e*P	Pn	06 41 30.6	+0.1
ARZA	Esparza	2.82	141	*e*P	Pn	06 41 31.1	+0.3
PAVA	Las Pavas	2.83	302	P	Pn	06 41 31.3	+0.3
CAO2	Cobano, Puntar	2.84	152	*e*P	Pn	06 41 31.2	+0.2
ZARE	Zarcero	2.86	134	*e*P	Pn	06 41 33.1	+1.7
SRA1	San Ramn	2.87	137	*e*P	Pn	06 41 32.8	+1.3
ARTO	Ro Cuarto	2.88	130	*e*P	Pn	06 41 31.9	+0.4
PALD	Palmares	2.92	137	*e*P	Pn	06 41 33.7	+1.6
SARA	Sarapiqu	2.97	126	*e*P	Pn	06 41 32.8	+0.3
LOMA	Loma Larga	3.00	299	P	Pn	06 41 33.0	0.0
ATEO	Atenas	3.02	137	*e*P	Pn	06 41 33.9	+0.7
TCS1	Tacares	3.03	135	*e*P	Pn	06 41 34.5	+1.2
TRT2	Tortugero	3.14	121	*e*P	Pn	06 41 34.9	+0.3
BITO	Garabito Jaco	3.15	145	*e*P	Pn	06 41 35.8	+1.1
BELE	Belen	3.15	134	*e*P	Pn	06 41 35.3	+0.4
HEME	Heredia, Merce	3.17	134	*e*P	Pn	06 41 38.0	+2.9
SANTA	Santa Ana	3.18	135	*e*P	Pn	06 41 36.6	+1.4
HDC	Heredia	3.19	133	Pn	Pn	06 41 34.8	-0.5
CARI	Cariari	3.25	124	*e*P	Pn	06 41 36.8	+0.9
PILE	Guapiles	3.29	127	*e*P	Pn	06 41 38.5	+2.0
AMPA	Desamparados	3.29	134	*e*P	Pn	06 41 37.0	+0.4
ACOS	Acosta	3.29	136	*e*P	Pn	06 41 37.6	+0.9
TRIO	Tres Rios	3.34	133	*e*P	Pn	06 41 38.3	+1.1
PICV	PH. Pirrs	3.40	139	*e*P	Pn	06 41 38.2	+0.4
CVTR	Volcan Turrial	3.43	129	*e*P	Pn	06 41 37.0	-1.6
EGUB	Earth Gu¡pi	3.45	125	Pn	Pn	06 41 38.8	+0.4
CVTV	Tajo	3.45	129	*e*P	Pn	06 41 38.5	-0.3
PCAYA	Pacayas	3.46	131	*e*P	Pn	06 41 38.6	-0.2
ABRB	Las Abras (San	3.48	129	*e*P	Pn	06 41 39.7	+0.7
REPA	Paraso	3.48	132	*e*P	Pn	06 41 40.6	+1.6
VTCV	VTCV, Calle Va	3.48	129	*e*P	Pn	06 41 39.7	+0.6
RAZU	San Marcos de	3.49	136	*e*P	Pn	06 41 40.9	+1.8
RESJ	San Isidro (Tu	3.52	128	*e*P	Pn	06 41 40.6	+1.2
VINA	Juan Vinas	3.52	130	*e*P	Pn	06 41 41.9	+2.4
BILN	Bilwi Airport	3.53	58		Pn	06 41 40.2	+0.8
BILN	Bilwi Airport	3.53	58	*e*P	Pn	06 41 39.6	+0.2
VERB	Verbena	3.53	129	*e*P	Pn	06 41 41.0	+1.4
MTO3	Montecristo	3.56	308		Pn	06 41 40.9	+0.9
PIEC	Cerro El Cedra	3.56	136	*e*P	Pn	06 41 41.4	+1.3
ESQI	Esquipulas	3.65	310		Pn	06 41 41.9	+0.9
BUS1	Rivas	3.75	134	*e*P	Pn	06 41 44.0	+1.3
ZEDO	Perez Zeledon	3.94	136	*e*P	Pn	06 41 46.3	+1.6
SAJE	San Jernim	4.07	134	*e*P	Pn	06 41 47.4	+1.0
EDPE	Pejibaye, P	4.16	136	*e*P	Pn	06 41 49.2	+1.8
DRK0	Durika	4.31	132	*e*P	Pn	06 41 50.5	+0.9
FIMO	Fila Mora	4.43	136	*e*P	Pn	06 41 52.6	+1.6
EDP2	Potrero Grande	4.53	134	*e*P	Pn	06 41 53.8	+1.6
APG	El Apazote	4.78	306	P	Pn	06 41 56.4	+0.9
	2.7nm,0.6s,baz=135,slow=9.7,SNR=28						
ALCO	Alturas Coton,	4.82	132	*e*P	Pn	06 41 57.6	+1.5
PIRO	Carate, Puerto	4.88	140		Pn	06 41 57.8	+1.2
PIRO	Carate, Puerto	4.88	140	*e*P	Pn	06 41 57.7	+1.1
BRU2	Volcan	5.03	132		Pn	06 42 00.4	+1.6
PRVC	Isla de Provid	5.12	76		Pn	06 41 59.9	+0.2
PRVC	Isla de Provid	5.12	76	P	Pn	06 41 59.7	0.0
	165nm,1.3s						
BCIP	Isla Barro Col	7.18	114	P	Pn	06 42 29.3	+2.5
	23nm,0.7s						
TEIG	Tepich	8.16	348	P	Pn	06 42 38.9	-0.8
	1.5nm,0.6s,baz=130,slow=19,SNR=4.3						
CMIG	Matias Romero	9.48	302	P	Pn	06 42 56.5	-0.5
	3.2nm,0.3s,baz=148,slow=9.1,SNR=24						
CMIG				S	Sn	06 44 33.2	-9.5
	3.1nm,0.6s,baz=171,slow=18,SNR=1.9						
APAC	Apartado, Choc	10.64	113	P	P	06 43 22.7	+2.8
	21nm,1.0s						
SJCC	San Jacinto, C	11.32	101	P	P	06 43 28.2	+0.6
	33nm,1.5s						
UREC	San Jos de Ur	11.64	111	P	P	06 43 29.4	-1.8
	23nm,0.8s						
CBOC	Ciudad Bolivar	12.10	120	P	Pn	06 43 32.4	+1.3
	20nm,1.3s						
PLMC	San Jos del P	12.41	125	P	Pn	06 43 35.4	+0.4
	8.1nm,0.7s						
TLIG	Tlapa	12.85	296		Pn	06 43 42.4	+1.8
YOTC	Yotoco, Valle	12.93	128	P	Pn	06 43 41.0	-0.6
	9.1nm,1.6s						
GUY2C	Guyana, Caldas	12.98	121	P	P	06 43 45.9	-0.7
	54nm,0.8s						
PTBC	PUERTO BERRIO,	13.12	114	P	Pn	06 43 43.5	-0.5
	17nm,0.7s						
JAMC	Jamundi, Valle	13.19	132	P	Pn	06 43 47.6	+2.6
	18nm,0.9s						
OCAC	Ocana	13.53	106	P	Pn	06 43 49.6	+0.3
	33nm,0.7s						
BBAC	Balboa, Cauca	13.63	137	P	Pn	06 43 51.6	+0.9
	54nm,1.0s						
POPC	Popayan, Colom	13.65	134	P	Pn	06 43 51.1	+0.2
	42nm,1.0s						
ORTC	Ortega, Tolima	13.83	126	P	Pn	06 43 54.5	+1.6
	54nm,0.8s						
SPBC	San Pablo de B	13.87	117	P	Pn	06 43 54.5	+1.0
	47nm,0.9s						
ROSC	El Rosal	14.06	120	P	Pn	06 43 57.1	+1.0
	19nm,0.9s,baz=321,slow=5.0,SNR=9.9						
ROSC	El Rosal	14.06	120	P	P	06 43 58.6	+0.1
	41nm,1.4s						
CMBC	Cumbal	14.10	142	P	P	06 44 02.4	+3.4
FLF1	Flavio Alfaro-	14.11	152	P	P	06 43 59.2	+0.6
URIC	Uribia, Colomb	14.18	91	P	P	06 44 00.4	+1.1
	733nm82nm,1.0s						
PRAC	Prado	14.23	125	P	P	06 44 00.0	0.0
	25nm,0.7s						
BARC	Barichara	14.24	112	P	P	06 44 00.3	0.0
	26nm,1.0s						
OTAV	Otavalo	14.31	146	P	P	06 44 01.9	+0.6
	8.2nm,1.3s						
PAMC	Pamplona, Colo	14.40	108	P	Pn	06 43 59.4	-1.1
	351nm38nm,0.6s						
RUSC	La Rusia	14.63	114		Pn	06 44 04.2	+0.9
RUSC	La Rusia	14.63	114	P	Pn	06 44 01.9	-1.4
	28nm,1.2s						
CHIC	Chingaza	14.67	120	P	Pn	06 44 05.2	+1.4
	43nm,1.2s						
URMC	La Uribe, Meta	14.92	126	P	Pn	06 44 06.7	+0.2
	15nm,1.4s						
VILC	Villavicencio,	14.98	121	P	Pn	06 44 07.7	+0.4
	316nm34nm,0.7s						
FLOC	Florencia	15.05	134		Pn	06 44 08.6	+0.6
FLOC				IAmb	IAmb	06 44 11.0	
	comp=Z,15nm,0.8s						
FLOC	Florencia	15.05	134	P	Pn	06 44 08.8	+0.8
	comp=Z,23nm,0.8s						
SDV	Santo Domingo	15.91	100	P	Pn	06 44 19.2	+0.4
	comp=Z,32nm,0.9s,baz=276,slow=7.6,SNR=27						
SDV	Santo Domingo	15.91	100		Pn	06 44 18.4	-0.3
SDV				IAmb	IAmb	06 44 20.6	
	comp=Z,38nm,1.0s						
SDV	Santo Domingo	15.91	100	P	Pn	06 44 17.4	-1.4
	comp=Z,41nm,1.0s						
PTLC	Puerto Leguiza	16.65	135	P	Pn	06 44 28.7	+1.3
	comp=Z,18nm,1.1s						
MCRA	Macar, Loja	17.69	158	P	P	06 44 39.8	+1.6
DR12	Loma Pena Alta	17.72	66	P	Pn	06 44 40.1	0.0
CRPR	Cabo Rojo, PR	19.56	70	P	P	06 44 58.5	+0.2
833A	Chaparral WMA,	20.07	325	P	P	06 45 03.8	0.0
833A				IAmb	IAmb	06 45 07.6	
	comp=Z,8.5nm,0.7s						
SJG	San Juan	20.47	71	P	P	06 45 08.3	+0.3
	comp=Z,16nm,0.7s,baz=259,slow=5.6,SNR=4.3						
	comp=Z,16nm,0.7s						
LRAL	Lakeview Retre	20.74	359		P	06 45 12.2	+1.4
LRAL				IAmb	IAmb	06 45 14.6	
	comp=Z,15nm,1.0s						
ATAH	Atahualpa	20.82	157	P	P	06 45 13.6	+1.2
	comp=Z,9.2nm,0.7s,baz=326,slow=8.1,SNR=7.2						
	comp=Z,9.2nm,0.7s						
GOGA	Godfrey	21.29	7	P	P	06 45 18.0	+1.3
GOGA				IAmb	IAmb	06 45 19.3	
	comp=Z,26nm,1.1s						
Y49A	Blount Mountai	21.55	0		P	06 45 20.8	+1.3
Y49A				IAmb	IAmb	06 45 21.3	
	comp=Z,23nm,0.7s						
DRIO	Del Rio	21.61	325		P	06 45 20.8	+0.7
BRDY	Brady	22.23	331		P	06 45 26.0	-0.4
FPAL	Fort Paine	22.25	2		P	06 45 27.0	+0.6
TXAR	Lajitas Array	23.38	319	P	P	06 45 36.9	0.0
	comp=Z,3.2nm,0.7s,baz=141,slow=9.0,SNR=34						
TXAR				pP	pP	06 46 11.5	+0.8
	comp=Z,2.7nm,0.8s,baz=140,slow=10,SNR=6.6						
	comp=Z,3.2nm,0.7s						
TXAR	Lajitas Array	23.38	319	P	P	06 45 37.2	+0.4
TX31	Lajitas Ar. Si	23.38	319		P	06 45 37.3	+0.4
TKL	Tuckaleechee C	23.48	6		P	06 45 37.3	-0.3
TKL				IAmb	IAmb	06 45 41.1	
	comp=Z,17nm,0.9s						
W57A	Gilead	23.59	13		P	06 45 39.4	+0.8
SSPA	Standing Stone	29.31	13	P	P	06 46 30.6	+0.8
MACA	Manacapuru-AM	29.83	119		P	06 46 33.6	-1.1
MACA				IAmb	IAmb	06 46 34.1	
	comp=Z,14nm,1.0s						
LPAZ	La Paz	33.62	147	P	P	06 47 08.0	-0.5
	comp=Z,1.9nm,0.4s,baz=333,slow=7.1,SNR=12						
	comp=Z,1.9nm,0.4s						
GO01	Chusmiza	35.95	152	P	P	06 47 29.1	+0.8
GO01				IAmb	IAmb	06 47 30.5	
	comp=Z,7.6nm,0.8s						
VILB	Vilhena	36.11	133		P	06 47 27.7	-1.5
VILB				IAmb	IAmb	06 47 28.8	
	comp=Z,8.7nm,0.6s						
PDAR	Pinedale Array	36.45	331	P	P	06 47 31.8	-0.2
	comp=Z,0.7nm,0.7s,baz=126,slow=10.0,SNR=6.8						
PDAR				pP	pP	06 48 10.7	+0.5
	comp=Z,0.8nm,0.6s,baz=127,slow=8.3,SNR=2.7						
	comp=Z,0.7nm,0.7s						
PB09	IPOC Station P	37.78	153	P	P	06 47 44.9	+1.6
PB09				IAmb	IAmb	06 47 45.6	
	comp=Z,12nm,0.8s						
LMN	Caledonia Moun	38.25	25	P	P	06 47 47.6	+0.7
NVAR	Mina Array Bea	38.52	318	P	P	06 47 50.2	+0.7
	comp=Z,1.1nm,0.7s,baz=131,slow=7.4,SNR=6.9						
NVAR				pP	pP	06 48 29.4	+1.5
	comp=Z,0.3nm,0.6s,baz=78,slow=29,SNR=1.3						
NVAR				PcP	PcP	06 49 58.7	+0.2
	comp=Z,0.8nm,0.8s,baz=97,slow=2.7,SNR=4.1						
	comp=Z,1.1nm,0.7s						
ULM	Lac du Bonnet	38.72	350	P	P	06 47 48.9	-1.7
	comp=Z,6.1nm,0.9s,baz=176,slow=9.5,SNR=5.3						
	comp=Z,6.1nm,0.9s						
WVOR	Wild Horse Val	41.07	323	P	P	06 48 10.6	+0.3
AC02	Maricunga	42.30	157		P	06 48 22.3	+1.4
SCHQ	Schefferville	45.24	16	P	P	06 48 42.2	-1.2
	comp=Z,5.8nm,0.5s,baz=211,slow=6.8,SNR=21						
	comp=Z,5.8nm,0.5s						
PLTB	Pedras Altas	53.88	145	P	P	06 49 47.3	-1.7
YKA	Yellowknife Ar	54.10	344	P	P	06 49 48.7	-1.4
	comp=Z,0.7nm,0.9s,baz=146,slow=6.6,SNR=7.0						
YKA				pP	pP	06 50 30.8	-0.4
	comp=Z,2.5nm,1.1s,baz=142,slow=7.2,SNR=7.4						
	comp=Z,0.7nm,0.9s						
PLCA	Paso Flores	54.69	165	P	P	06 49 54.9	+0.2
	comp=Z,5.9nm,0.8s,baz=331,slow=8.0,SNR=27						
	comp=Z,5.9nm,0.8s						
PLCA	Paso Flores	54.69	165		P	06 49 55.1	+0.3
PLCA				IAmb	IAmb	06 49 56.4	
	comp=Z,14nm,1.2s						
COYC	Coyhaique	58.96	168	P	P	06 50 25.1	+0.6
F31M	Tsiigehtchic	63.27	341	P	P	06 50 55.2	+1.9
F31M				IAmb	IAmb	06 50 56.5	
	comp=Z,5.8nm,0.7s						
ILAR	Eielson Array	66.63	336	P	P	06 51 13.1	-2.0
	comp=Z,0.7nm,0.9s,baz=109,slow=6.1,SNR=5.4						
ILAR				pP	pP	06 51 58.0	+0.3
	comp=Z,0.6nm,0.8s,baz=149,slow=4.8,SNR=3.3						
	comp=Z,0.7nm,0.9s						
EKA	Eskdalemuir Ar	76.27	36	P	P	06 52 11.1	-1.8
	comp=Z,1.9nm,0.7s,baz=258,slow=5.9,SNR=2.5						
	comp=Z,1.9nm,0.7s						
ESDC	Sonseca Array	76.59	52	P	P	06 52 13.4	-1.7
	comp=Z,2.7nm,0.8s,baz=274,slow=5.6,SNR=8.7						
	comp=Z,2.7nm,0.8s						
BELA	Belgrano 2	94.45	170	P	P	06 53 42.8	-0.3
BELA				IAmb	IAmb	06 53 43.8	
	comp=Z,3.1nm,0.8s						
STKA	Stephens Creek	131.78	238	PKP	PKPdf	06 59 36.7	+0.3
	comp=Z,3.8nm,0.6s,baz=60,slow=5.2,SNR=5.0						
ASAR	Alice Springs	140.06	248	PKhKP	PKPpre	06 59 43.6	
	comp=Z,1.6nm,0.6s,baz=110,slow=3.3,SNR=17						
ASAR				PKP	PKPdf	06 59 52.0	-0.1
	comp=Z,3.7nm,0.8s,baz=99,slow=1.8,SNR=20						
ASAR				SKP	SKPdf	07 03 10.1	+0.1
	comp=Z,0.3nm,0.5s,baz=98,slow=2.9,SNR=4.4						
WRA	Warramunga Arr	140.12	254	PKhKP	PKPpre	06 59 43.7	
	comp=Z,0.7nm,0.5s,baz=99,slow=3.3,SNR=10						
WRA				PKP	PKPdf	06 59 52.5	+0.2
	comp=Z,5.4nm,0.6s,baz=91,slow=1.9,SNR=50						

TAP ***13*** *07:04:10.4, 24°.89N×122°.64E, h29^{km}±1^{km}, ML3.7, D*

JMA ***13*** *07:04:11.0±0.2, 25°N±2°×122°.6E±0°.7, h29^{km}±3^{km}, MV3.1/11, NW OFF ISHIGAKIJIMA IS*

ISC 13 07:04:09.9±1.4**, 24°.86N**±0°.03×**122°.67E**±0°.02**, h21**^{km}±4^{km}**, n108, σ0^{s}.88**/128**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.48	148	*e*P	Pn	07 04 20.8	-0.8
YOJ	Yonaguni jima	0.51	142	P	Pn	07 04 21.5	-0.4
YOJ	Yonaguni jima	0.51	142	P	Pn	07 04 21.7	-0.2
YOJ	Yonaguni jima	0.51	142	S	Sn	07 04 29.6	-0.4
YOJ	Yonaguni jima	0.51	142	*i* P	Pn	07 04 21.5	-0.4
YOJ				*i* S	Sn	07 04 28.9	-1.1
YOJ	Yonaguni jima	0.51	142	*e*P	Pn	07 04 21.5	-0.4
YOJ				*e*S	Sn	07 04 29.0	-1.0
EOS2	EOS2	0.59	222	P	Pb	07 04 22.1	+0.4
EOS2				*e*S	Sn	07 04 32.1	+0.2
TWB1	Santiao Chiao	0.64	283	P	Pb	07 04 21.8	-0.6
TWB1				S	Sb	07 04 30.0	-0.9
EOS3	EOS3	0.66	209	*e*P	Pn	07 04 23.4	-0.4
EOS3				*e*S	Sn	07 04 33.9	+0.4
EGS		0.67	269	*e*P	Pb	07 04 22.9	-0.1
SXI1	Grass Mountain	0.76	288	*e*P	Pb	07 04 24.7	+0.2
TIPB	Shuangxi	0.77	278	*e*P	Pb	07 04 24.7	0.0
TWC	Suao	0.79	252	P	Pb	07 04 24.4	-0.5
ESAO	Su ao	0.80	249	*e*P	Pb	07 04 25.4	+0.2
EOS4	EOS4	0.80	204	*e*P	Pn	07 04 26.3	+0.6
NWF	Wu-fen Shan	0.83	285	*e*P	Pn	07 04 26.2	-0.3
WFSB	Wu-fen Shan	0.83	285	*e*P	Pn	07 04 26.4	-0.1
WFSB				S	Sb	07 04 36.6	+0.1
TNOU	National Taiwa	0.86	290	*e*P	Pb	07 04 26.5	+0.2
NDS	Dongshan	0.90	256	*e*P	Pb	07 04 26.4	-0.4
EWUT	Wuta	0.91	243	P	Pb	07 04 26.6	-0.4
EWUT				S	Sn	07 04 39.4	-0.6
TWE	Neicheng	0.92	262	*e*P	Pb	07 04 27.0	-0.2
TWE				*e*S	Sb	07 04 38.7	-0.4
PCYT	Pengchaiyu	0.94	325	P	Pn	07 04 28.2	+0.3
PCYT				S	Sb	07 04 39.2	-0.3
ENA	Nanau	0.95	243	*e*P	Pb	07 04 27.5	-0.2
ENA				*e*S	Sn	07 04 40.7	-0.3
FUSB	Fushanzhiwuyua	0.99	264	*e*P	Pb	07 04 28.2	-0.2
TWA	Mucha	0.99	277	*e*P	Pb	07 04 28.3	-0.2

EAHA	Aohua	1.00	238	eP	Pn	07 04 28.7	0.0
EAHA				eS	Sb	07 04 41.5	+0.3
ENTT	Nioudou	1.03	258	eP	Pb	07 04 28.9	-0.1
ENTT				eS	Sn	07 04 43.5	+0.6
YM08	YM08	1.03	289	eP	Pn	07 04 30.0	+0.8
YM01	YM01	1.04	286	eP	Pn	07 04 29.3	0.0
TWY	Chenhua	1.05	293	eP	Pn	07 04 29.4	-0.2
NWLT	Wulai	1.06	266	eP	Pb	07 04 29.7	0.0
ZUZH	Zhuzihu	1.06	287	eP	Pb	07 04 30.7	+1.1
ZUZH				eS	Sb	07 04 42.1	-1.0
TATO	Taipei	1.08	276	P	Pb	07 04 30.7	+0.8
TATO	Taipei	1.08	276	P	Pn	07 04 29.3	-0.5
LATG	Datong	1.09	253	eP	Pb	07 04 30.2	0.0
ANP	Anpu	1.09	287	eP	Pb	07 04 30.8	+0.6
IRIF	Iriomote-Funau	1.10	118	eP	Pb	07 04 30.7	+0.4
NTST	Danshui	1.15	286	eP	Pn	07 04 30.5	-0.3
ETL	Fush Village	1.18	234	eP	Pb	07 04 32.6	+0.9
YHNB	Yeheng	1.19	261	P	Pb	07 04 31.9	+0.1
YHNB	Yeheng	1.19	261	P	Pb	07 04 32.0	+0.1
YHNB	Yeheng	1.19	261	eP	Pb	07 04 32.2	+0.3
NACB	Ninganchiao	1.20	235	P	Pn	07 04 31.5	0.0
NACB	Ninganchiao	1.20	235	P	Pn	07 04 31.2	-0.2
NACB	Ninganchiao	1.20	235	eP	Pn	07 04 31.4	0.0
NACB				S	Sb	07 04 46.3	-0.6
NSK	Sanguang	1.21	261	eP	Pb	07 04 32.2	+0.1
NNSB	Datong	1.25	250	eP	Pb	07 04 32.8	0.0
NNSB				eS	Sb	07 04 49.1	+0.6
TWD	Chiawan	1.25	232	eP	Pb	07 04 33.4	+0.5
NNS	Nan Shan	1.25	251	P	Pb	07 04 33.0	0.0
NNS				eS	Sn	07 04 47.6	-1.0
ETLH	Xiulin Townshi	1.26	239	eP	Pb	07 04 33.8	+0.7
ETLH				eS	Sb	07 04 49.6	+0.6
HATJ	Hateruma jima	1.31	128	eP	Pb	07 04 34.2	+0.4
HATJ				eS	Sb	07 04 50.9	+0.8
KSHI	Guanxi Townshi	1.36	267	eP	Pn	07 04 34.1	+0.4
JKRS	Kuro-shima	1.37	117	eP	Pb	07 04 35.1	+0.2
LXIB	Xiulin Townshi	1.42	234	eP	Pb	07 04 35.9	+0.1
NFF	Wufeng Townshi	1.43	261	eP	Pb	07 04 35.6	-0.4
JIJ	Ishigaki jima	1.43	110	eP	Pb	07 04 36.5	+0.6
FUSS	Fushou	1.44	245	eP	Pb	07 04 36.4	+0.3
WHF	Hehuan Shan	1.47	241	eP	Pb	07 04 36.8	0.0
SHUL	Shoufeng	1.47	224	eP	Pb	07 04 36.6	+0.1
TWT	Tachien	1.49	246	eP	Pb	07 04 37.5	+0.5
TDCB	Techi	1.50	247	eP	Pb	07 04 37.6	+0.4
LIOB	Emei	1.52	262	eP	Pb	07 04 38.6	+1.2
NSTT	Nanjuang	1.53	262	eP	Pb	07 04 38.4	+0.7
WARBT	Fenglin Townsh	1.63	226	eP	Pn	07 04 38.0	+0.5
OWD	Renai	1.63	237	eP	Pb	07 04 39.9	+0.5
WUSB	Renai	1.66	239	eP	Pb	07 04 40.2	+0.3
WHP	Taichung City	1.67	250	eP	Pb	07 04 41.2	+1.1
NMLH	Miaoli	1.74	260	eP	Pb	07 04 40.9	-0.3
HGSD	Ruisui	1.78	220	eP	Pn	07 04 39.4	0.0
VWDT	VWDT	1.78	232	eP	Pb	07 04 40.7	-1.1
WCS	Beigang Elemen	1.79	244	eP	Pb	07 04 41.9	-0.2
NSY	Sanyi	1.79	256	eP	Pb	07 04 41.9	-0.2
TWQ1	Liyutan	1.80	254	eP	Pb	07 04 43.0	+0.8
SMLT	Sun Moon Lake	1.89	239	eP	Pb	07 04 43.9	+0.2
TYC	Yuchr	1.91	240	eP	Pb	07 04 43.7	-0.4
YULB	Yu-li	1.93	221	P	Pb	07 04 43.2	-1.2
YULB	Yu-li	1.93	221	P	Pb	07 04 44.4	0.0
YULB	Yu-li	1.93	221	eP	Pn	07 04 41.5	-0.1
TWF1	Yuli	1.96	220	eP	Pn	07 04 42.2	+0.3
WHYT	Xinyi Township	2.02	235	eP	Pb	07 04 44.4	-1.6
WJS	Zhushan	2.05	240	eP	Pb	07 04 47.2	+0.8
WNT	Mingjian	2.06	242	eP	Pn	07 04 44.5	+1.2
FULB	Fuli	2.08	218	eP	Pn	07 04 44.7	+1.0
YUS	Yu-Shan	2.08	229	eP	Pn	07 04 45.1	+1.0
CHKT	Chengkung	2.12	214	eP	Pn	07 04 44.5	+0.4
EHD	Haiduan	2.17	218	eP	Pn	07 04 45.1	+0.2
EHD				eS	Sn	07 05 09.2	-1.9
ALS	Alishan	2.17	232	eP	Pb	07 04 47.4	-1.3
CHN5	Tsauling	2.21	236	eP	Pb	07 04 47.9	-1.4
ELDTW	Lidau	2.25	223	eP	Pn	07 04 47.9	+1.8
WDLH	Douliu	2.27	239	eP	Pn	07 04 47.7	+1.5
WCKO	Fanlu	2.36	234	eP	Pb	07 04 50.4	-1.3
WCKO				S	Sn	07 05 16.0	+0.2
STYH	Taoyuan	2.42	226	eP	Pb	07 04 51.4	-1.3
TPUB	Ta-pu	2.43	231	P	Pb	07 04 51.6	-1.3
TPUB	Ta-pu	2.43	231	P	Pb	07 04 51.0	-1.9
TPUB	Ta-pu	2.43	231	eP	Pn	07 04 50.5	+2.1
WTP	Ta-pu	2.47	230	eP	Pn	07 04 51.1	+2.0
TWGBT	Beinan	2.50	216	P	Pn	07 04 51.3	+1.9
TWGBT	Beinan	2.50	216	eP	Pn	07 04 48.4	-1.0
TWG	Pinlang	2.50	216	eP	Pn	07 04 48.4	-1.1
TWK	Hsinying	2.55	232	eP	Pn	07 04 52.3	+2.2
CHN1	Nanshi	2.57	230	eP	Pb	07 04 53.2	-2.2
SGST	Jiashian	2.60	228	eP	Pn	07 04 52.6	+1.7
ECL	Taimali	2.75	215	eP	Pn	07 04 53.4	+0.5
MATB	Ma-tsu	2.78	298	eP	Pn	07 04 52.6	-0.6
MASBT	Mashibuluo	2.92	220	eP	Pn	07 04 57.3	+2.2
EAST	Anshuo	2.98	214	eP	Pn	07 04 57.2	+1.1
TAWH	Dawu Township	3.00	213	eP	Pn	07 04 58.0	+1.7
SCZT	Fangliau	3.11	218	eP	Pn	07 04 59.9	+2.1

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*TAP **13** 07:28:49.0, 24°.89N×122°.55E, h14^{km}, ML3.4, D*

*JMA **13** 07:28:50.1±0.1, 25°N±1°×122°.5E±0°.5, h6^{km}, MV2.5/7, NW OFF ISHIGAKIJIMA IS*

ISC 13 07:28:49.4±1.1**, 24°.84N**±0°.03×**122°.55E**±0°.03**, h14**^{km}±9^{km}**, n65,** σ**0^{s}.52**/87**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS2	EOS2	0.51	215	eP	Pb	07 29 00.6	+0.5
EOS2				eS	Sn	07 29 10.0	-0.6
JYNG	Yonagunijimaku	0.53	137	eP	Pb	07 29 00.2	-0.3
JYNG				eS	Sb	07 29 07.3	-0.6
TWB1	Santiao Chiao	0.53	289	iP	Pg	07 28 59.9	-0.1
TWB1				iS	Sb	07 29 07.7	-0.5
EGS		0.56	271	iP	Pb	07 29 00.6	-0.4
EGS				S	Sb	07 29 08.5	-0.4
YOJ	Yonaguni jima	0.56	132	P	Pg	07 29 00.6	+0.1
YOJ	Yonaguni jima	0.56	132	eP	Pb	07 29 00.8	-0.3
YOJ				S	Sg	07 29 08.1	0.0
EOS3	EOS3	0.59	201	iP	Pb	07 29 01.9	+0.5
EOS3				S	Sn	07 29 12.8	+0.2
SXI1	Grass Mountain	0.66	293	P	Pg	07 29 02.2	-0.1
TIPB	Shuangxi	0.67	282	eP	Pb	07 29 02.7	-0.2
TWC	Suao	0.67	250	P	Pg	07 29 02.4	-0.2
ESAO	Su ao	0.69	248	eP	Pb	07 29 03.1	-0.1
NWF	Wu-fen Shan	0.73	289	P	Pb	07 29 04.2	+0.2
WFSB	Wu-fen Shan	0.73	289	P	Pb	07 29 03.9	-0.1
EOS4	EOS4	0.74	196	eP	Pn	07 29 04.8	-0.3
EOS4				eS	Sb	07 29 13.6	-0.3
TNOU	National Taiwa	0.77	294	P	Pg	07 29 04.0	-0.4
NDS	Dongshan	0.78	255	eP	Pb	07 29 04.7	-0.1
EWUT	Wuta	0.80	241	eP	Pb	07 29 05.0	-0.2
TWE	Neicheng	0.81	262	eP	Pb	07 29 05.0	-0.2
TWE				eS	Sn	07 29 17.8	-0.4
ENA	Nanau	0.84	241	eP	Pb	07 29 05.8	0.0
ENA				eS	Sb	07 29 17.8	+0.9
FUSB	Fushanzhiwuyua	0.88	265	eP	Pg	07 29 06.0	-0.5
EAHA	Aohua	0.89	236	eP	Pg	07 29 06.4	-0.3
EAHA				eS	Sb	07 29 18.7	+0.3
PCYT	Pengchaiyu	0.90	331	eP	Pg	07 29 06.7	-0.2
ENTT	Nioudou	0.91	258	eP	Pb	07 29 07.0	-0.1
YM08	YM08	0.94	292	eP	Pn	07 29 08.1	-0.1
YM01	YM01	0.94	289	eP	Pn	07 29 08.3	+0.1
NWLT	Wulai	0.95	267	eP	Pb	07 29 07.8	+0.1
NWLT				eS	Sb	07 29 20.9	+0.7
TWY	Chenhua	0.96	297	eP	Pg	07 29 07.6	-0.5
ZUZH	Zhuzihu	0.96	290	eP	Pg	07 29 07.7	-0.4
ZUZH				S	Sn	07 29 22.5	+0.4
LATG	Datong	0.98	252	eP	Pb	07 29 08.4	+0.2
LATG				eS	Sn	07 29 23.7	+1.2
ANP	Anpu	0.99	291	eP	Pb	07 29 08.6	+0.1
YHNB	Yeheng	1.08	261	eP	Pb	07 29 09.9	-0.1
ETL	Fush Village	1.08	231	eP	Pg	07 29 10.1	-0.2
NACB	Ninganchiao	1.09	233	eP	Pb	07 29 10.0	-0.1
NSK	Sanguang	1.09	262	eP	Pb	07 29 10.0	-0.1
NSK				eS	Sn	07 29 25.3	-0.1
NNSB	Datong	1.14	249	eP	Pg	07 29 11.0	-0.4
NNSB				eS	Sn	07 29 26.6	+0.2
NNS	Nan Shan	1.14	250	eP	Pb	07 29 10.9	0.0
NNS				eS	Sn	07 29 26.9	+0.3
TWD	Chiawan	1.15	229	eP	Pg	07 29 11.2	-0.4
ETLH	Xiulin Townshi	1.16	237	eP	Pb	07 29 10.9	-0.4
IRIF	Iriomote-Funau	1.19	115	eP	Pg	07 29 12.8	+0.4
LXIB	Xiulin Townshi	1.31	232	eP	Pg	07 29 14.7	-0.1
LXIB				eS	Sg	07 29 32.9	+0.9
NFF	Wufeng Townshi	1.32	261	eP	Pn	07 29 13.7	+0.2
FUSS	Fushou	1.32	244	eP	Pb	07 29 14.4	+0.2
FUSS				S	Sg	07 29 32.2	-0.1
WHF	Hehuan Shan	1.36	240	eP	Pg	07 29 15.1	-0.5
WHF				eS	Sg	07 29 32.8	-0.6
TWT	Tachien	1.38	245	eP	Pg	07 29 15.7	-0.3
SHUL	Shoufeng	1.38	221	eP	Pn	07 29 14.4	+0.1
SHUL				eS	Sg	07 29 35.6	+1.7
TDCB	Techi	1.39	246	eP	Pg	07 29 15.6	-0.7
LIOB	Emei	1.41	262	eP	Pg	07 29 17.1	+0.6
NSTT	Nanjuang	1.42	262	eP	Pg	07 29 16.3	-0.5
OWD	Renai	1.53	235	eP	Pb	07 29 17.4	-0.2
WARBT	Fenglin Townsh	1.54	224	eP	Pn	07 29 16.0	-0.5
WUSB	Renai	1.55	237	eP	Pb	07 29 17.8	-0.2
WHP	Taichung City	1.56	249	eP	Pb	07 29 18.5	+0.3
VWDT	VWDT	1.68	230	eP	Pb	07 29 19.5	-0.6
WCS	Beigang Elemen	1.68	243	eP	Pb	07 29 20.4	+0.2
HGSD	Ruisui	1.69	218	eP	Pb	07 29 19.9	-0.3
SMLT	Sun Moon Lake	1.78	238	eP	Pb	07 29 22.1	+0.2
TYC	Yuchr	1.80	239	eP	Pb	07 29 21.9	-0.3
YULB	Yu-li	1.84	219	eP	Pn	07 29 21.2	+0.6
TWF1	Yuli	1.87	218	eP	Pn	07 29 21.3	+0.3
WHYT	Xinyi Township	1.92	234	eP	Pb	07 29 23.7	-0.6
WHYT				eS	Sb	07 29 48.0	0.0
YUS	Yu-Shan	1.98	228	eP	Pn	07 29 24.1	+1.2
FULB	Fuli	1.99	215	eP	Pb	07 29 24.7	-0.8
FULB				eS	Sb	07 29 49.9	-0.3
ALS	Alishan	2.07	231	eP	Pb	07 29 25.8	-1.1
TWK	Hsinying	2.45	231	eP	Pb	07 29 31.2	-2.1
CHN1	Nanshi	2.47	229	eP	Pn	07 29 29.1	-0.2

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*MEX **13** 07:31:13.4±0.4, 14°.52N×92°.68W, h51^{km}±37^{km}, MD4.0*

*GCG **13** 07:31:13.7±0.3, 15°.04N×92°.39W, h84^{km}±4^{km}, MD3.6*

ISC 13 07:31:09.6±1.9**, 14°.58N**±0°.10×**92°.50W**±0°.08**, h95**^{km}±13^{km}**, n13,** σ**1^{s}.47**/25**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMCA	Catarina	0.49	56	iP	Pn	07 31 26.7	+1.9
SMCA				iS	Sn	07 31 37.2	+1.0
PATR	El Naranjo	0.59	26	eP	Pn	07 31 26.2	+0.3
PATR				eS	Sn	07 31 36.4	-1.6
CHUJ	Union Juarez	0.63	37	eP	Pn	07 31 27.1	+0.9
CHUJ				eS	Sn	07 31 37.9	-0.7
PAVE	Pavencul	0.68	27	eP	Pn	07 31 27.4	+0.7
PAVE				eS	Sn	07 31 38.6	-0.7
STG2	El Palmar, Qui	1.10	97	iP	Pn	07 31 31.4	+0.5
STG2				iS	Sn	07 31 45.1	-1.9
STG8	El Palmar, Qui	1.12	97	iP	Pn	07 31 31.9	+0.7
STG8				iS	Sn	07 31 46.1	-1.4
STG5	El Palmar, Qui	1.13	99	iP	Pn	07 31 31.9	+0.7
STG5				iS	Sn	07 31 45.9	-1.6
HUEH	Huehuetenango	1.21	53	eP	Pn	07 31 32.3	0.0
HUEH				eS	Sn	07 31 50.0	+0.6
PCIG		1.31	328	eP	Pn	07 31 33.7	+0.4
PCIG				eS	Sn	07 31 48.9	-2.3
CCIG	Comitan	1.73	12	eP	Pn	07 31 40.1	+1.5
CCIG				eS	Sn	07 32 00.7	0.0
TGIG		2.27	345	eS	Sn	07 32 09.4	-3.6
UXUV	UXUV	3.15	330	eP	Pn	07 31 58.8	+1.5
UXUV				eS	Sn	07 32 33.2	-0.8
CMIG	Matias Romero	3.39	318	eP	Pn	07 32 02.0	+1.5
CMIG				eS	Sn	07 32 39.1	-0.7

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*IDC **13** 07:45:31.5±1.1, 24°.63N×122°.23E, h0^{km}, mb3.7/8, mbtmp3.7/8, MS3.7/25, Error ellipse: s-maj=52.4km s-min=19.6km az=70.0*

*JMA **13** 07:45:32.4±0.3, 25°N±3°×12°3E±°, h29^{km}, MV3.4/13, NW OFF ISHIGAKIJIMA IS*

ISC 13 07:45:31.8±0.7**, 24°.76N**±0°.06×**122°.62E**±0°.03**, h10**^{km}**, n51,** σ**1^{s}.15**/29**, mb3.6**/7**, MS3.8**/21**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.42	136	P	Pn	07 45 42.4	-1.6
JYNG				eS	Sb	07 45 49.1	+1.2
YOJ	Yonaguni jima	0.46	129	P	Pn	07 45 43.2	-1.2
YOJ	Yonaguni jima	0.46	129	P	Pn	07 45 43.0	-1.4
YOJ				eS	Sb	07 45 50.3	+1.4
TATO	Taipei	1.05	282	P	Pg	07 45 50.8	-1.2
TATO	Taipei	1.05	282	P	Pg	07 45 51.1	-0.9
IRIF	Iriomote-Funau	1.10	112	P	Pb	07 45 52.3	-0.5
NACB	Ninganchiao	1.10	238	P	Pn	07 45 52.6	-0.6
NACB	Ninganchiao	1.10	238	P	Pn	07 45 52.7	-0.5
YHNB	Yeheng	1.13	266	P	Pb	07 45 52.7	-0.8
YHNB	Yeheng	1.13	266	P	Pb	07 45 52.6	-0.9
HATJ	Hateruma jima	1.29	123	P	Pg	07 45 56.0	-0.4
JKRS	Kuro-shima	1.37	112	eP	Pb	07 45 57.0	-0.5
JIJ	Ishigaki jima	1.44	105	eP	Pn	07 45 56.0	-1.9
JISG	Ishigakijimahi	1.55	96	eP	Pn	07 45 58.8	-0.6
YULB	Yu-li	1.82	222	P	Pg	07 46 05.5	-1.2
YULB	Yu-li	1.82	222	P	Pn	07 46 03.2	+0.1
JTJ	Tarama	1.90	93	eP	Pn	07 46 02.8	-1.4
TPUB	Ta-pu	2.33	232	P	Pb	07 46 12.5	-1.3
TPUB	Ta-pu	2.33	232	P	Pn	07 46 10.7	+0.6
TGY	Tagaytay City	10.72	189	LR	LR	07 52 30.9	
	comp=Z,205nm,19.4s,baz=35,slow=40						
JNU	Nakatsue	11.03	39	LR	LR	07 52 56.7	
	comp=Z,111nm,19.1s,baz=217,slow=39						
KSRS	Korea Array	13.44	18	Pn	P	07 48 52.2	+0.2
	0.4nm,0.3s,baz=198,slow=11,SNR=14						
JHJ	Hachijo jima 2	17.16	57	LR	LR	07 55 59.8	
	comp=Z,74nm,20.5s,baz=343,slow=36						
DAV	Davao City (W)	17.82	170	LR	LR	07 56 24.4	
	comp=Z,186nm,19.1s,baz=339,slow=37						
USRK	Ussuriysk Ar.	20.85	19	P	Pn	07 50 17.2	+1.1
	3.6nm,0.9s,baz=203,slow=11,SNR=4.5 3.6nm,0.9s						
CMAR	Chiang Mai Arr	22.87	259	LR	LR	08 01 07.8	
	comp=Z,117nm,18.7s,baz=75,slow=42						
ASAJ	Asahikawa	25.27	35	LR	LR	08 01 34.6	
	comp=Z,217nm,18.6s,baz=249,slow=38						
SONM	Songino Array	26.38	335	P	P	07 51 08.3	0.0
	1.1nm,0.8s,baz=147,slow=10.0,SNR=3.9						
SONM				LR	LR	08 01 14.7	
	comp=Z,123nm,19.7s,baz=110,slow=36 1.1nm,0.8s						
KAPI	Kappang	29.72	186	LR	LR	08 04 09.6	
	comp=Z,48nm,18.1s,baz=6.0,slow=38						
PSI	Prapat	31.60	230	LR	LR	08 04 31.4	
	comp=Z,70nm,18.0s,baz=37,slow=36						
BATI	Baumata	34.77	178	LR	LR	08 06 09.6	
	comp=Z,103nm,18.6s,baz=46,slow=36						
YAK	Yakutsk	37.57	5	LR	LR	08 10 25.4	
	comp=Z,107nm,18.7s,baz=162,slow=40						
PETK	Petropavlovsk-	38.66	34	LR	LR	08 09 50.4	
	comp=Z,128nm,18.1s,baz=212,slow=37						
MKAR	Makanchi Array	38.85	315	P	P	07 52 56.1	-1.0
	0.3nm,0.5s,baz=102,slow=10,SNR=4.3 0.3nm,0.5s						
MA2	Magadan	39.96	22	LR	LR	08 10 43.4	
	comp=Z,130nm,19.1s,baz=204,slow=38						
PMG	Port Moresby	41.55	142	LR	LR	08 10 33.1	
	comp=Z,53nm,19.3s,baz=338,slow=36						
KURBB	Kurchatov Arra	42.52	319	P	P	07 53 28.7	+1.3
	0.5nm,0.3s,baz=110,slow=8.0,SNR=1.9 0.5nm,0.3s						
SEY	Seymchan	43.00	19	LR	LR	08 13 06.4	
	comp=Z,81nm,18.1s,baz=292,slow=38						
WRA	Warramunga Arr	45.87	165	P	P	07 53 54.7	+0.3
	1.2nm,0.9s,baz=345,slow=8.4,SNR=5.3 1.2nm,0.9s						
BVAR	Borovoye Array	48.07	320	P	P	07 54 11.4	+0.1
	0.5nm,0.6s,baz=94,slow=12,SNR=2.3 0.5nm,0.6s						
NRIK	Noril'sk	49.20	344	P	P	07 54 22.0	+2.2
	1.3nm,0.3s,baz=118,slow=9.3,SNR=3.6						
NRIK				LR	LR	08 17 07.3	
	comp=Z,139nm,18.5s,baz=140,slow=38 1.3nm,0.3s						
ASAR	Alice Springs	49.37	166	P	P	07 54 23.1	+1.5
	0.2nm,0.4s,baz=348,slow=8.7,SNR=4.2 0.2nm,0.4s						
CTA	Charters Tower	50.16	151	LR	LR	08 16 37.8	
	comp=Z,22nm,19.1s,baz=23,slow=37						
ILAR	Eielson Array	68.10	28	LR	LR	08 30 42.4	
	comp=Z,125nm,19.4s,baz=160,slow=40						
SPITS	Spitsbergen Ar	69.20	348	LR	LR	08 30 39.4	
	comp=Z,71nm,18.5s,baz=50,slow=39						
FINES	FINESS Array B	71.61	330	LR	LR	08 31 27.3	
	comp=Z,148nm,21.2s,baz=40,slow=38						
HFS	Hagfors	77.70	331	LR	LR	08 35 16.3	
	comp=Z,222nm,18.2s,baz=60,slow=38						
NOA	NORSAR Array B	78.33	332	LR	LR	08 33 49.2	
	comp=Z,54nm,18.7s,baz=240,slow=37						
GERES	GERESS Array B	83.23	321	LR	LR	08 36 43.0	
	comp=Z,178nm,19.1s,baz=308,slow=37						
DAVOX	Davos/Dischmat	86.50	321	LR	LR	08 39 55.4	
	comp=Z,175nm,19.9s,baz=263,slow=38						
BORG	Borgarnes	86.51	345	LR	LR	08 39 19.6	
	comp=Z,42nm,18.8s,baz=343,slow=37						

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*MOS **13** 07:47:06.3±1.2, 38°.58N×29°.01W, h10^{km}, mb4.7/14, Error ellipse: s-maj=14.3km s-min=9.6km az=137.1*

*NEIC **13** 07:47:07.0±2.2, 38°.5N±0°.1×28°.91W±0°.08, h10^{km}±1^{km}, mb4.8/36, Error ellipse: s-maj=21.5km s-min=7.0km az=201.0*

*IDC **13** 07:47:06.5±1.1, 38°.72N×29°.30W, h0^{km}, mb4.0/11, mbtmp4.0/12, ML3.9/1, MS3.9/46, Error ellipse: s-maj=36.5km s-min=18.1km az=161.0*

*SVSA **13** 07:47:07.9±1.2, 38°.60N×29°.15W, h4^{km}±3^{km}, ML4.6(INMG), Error ellipse: s-maj=5.4km s-min=4.6km az=41.0, #DIST_RANGE: LOCAL #IPMA_REGION: W Faial #FELT: IV (MM56) at Faial: Capelo (Horta)*

ISC 13 07:47:09.0±0.4**, 38°.62N**±0°.05×**28°.90W**±0°.03**, h20**^{km}±1^{km}**, n168,** σ**1^{s}.88**/155**, mb4.6**/45**, MS3.9**/48**, 12C-14D, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCED	Cedros	0.16	87	eP	Pb	07 47 14.4	+0.7
PCED				eS	Sb	07 47 19.2	+2.3
PCED				i IAML		07 47 20.2	
PCED				i IAML		07 47 21.6	
PCED				i IAML		07 47 22.0	
CALA	Caldeira	0.16	104	⇓iP	Pb	07 47 14.4	+0.5
CALA				eS	Sb	07 47 19.1	+1.9
CALA				i IAML		07 47 20.2	
CALA				i IAML		07 47 20.3	
CALA				i IAML		07 47 20.4	
PFCBR	Castelo Branco	0.17	124	⇓eP	Pb	07 47 14.2	+0.2
PFCBR				eS	Sb	07 47 19.0	+1.7
PFCBR				i IAML		07 47 19.6	
PFCBR				i IAML		07 47 19.6	
PFCBR				i IAML		07 47 19.8	
HOR	Horta	0.23	113	⇓eP	Pb	07 47 15.2	+0.5
HOR				eS	Sb	07 47 20.5	+2.1
HOR				i IAML		07 47 21.9	
HOR				i IAML		07 47 22.1	
HOR				i IAML		07 47 22.5	
PCAN	Candelaria	0.36	115	eP	Pb	07 47 17.1	+0.3
PCAN				eS	Sn	07 47 24.2	-1.5
PCAN				i IAML		07 47 25.2	
PCAN				i IAML		07 47 25.9	
PCAN				i IAML		07 47 32.5	
PICO	Pico	0.39	107	⇓eP	Pb	07 47 18.0	+0.7
PICO				eS	Sn	07 47 25.8	-0.7
PICO				i IAML		07 47 27.0	
PICO				i IAML		07 47 27.2	
PICO				i IAML		07 47 27.3	
PPNO	Prainha do Nor	0.52	106	⇓eP	Pb	07 47 20.0	+0.4
PPNO				eS	Sn	07 47 28.9	-0.8
PPNO				i IAML		07 47 32.9	
PPNO				i IAML		07 47 48.7	
ROSA	Rosais	0.53	79	⇑eP	Pb	07 47 19.9	+0.3
ROSA				eS	Sn	07 47 28.8	-1.0
ROSA				i IAML		07 47 30.8	
ROSA				i IAML		07 47 35.1	
ROSA				i IAML		07 47 37.4	
PID	Ribeirinha	0.64	106	⇓eP	Pb	07 47 21.5	-0.1
PID				eS	Sn	07 47 31.6	-0.9
PID				i IAML		07 47 40.6	
PID				i IAML		07 47 40.9	
PID				i IAML		07 47 42.1	
SRBC	Serra Branca	0.79	58	eP	Pb	07 47 23.4	-0.7
SRBC				eS	Sb	07 47 34.7	+0.3
SRBC				i IAML		07 47 45.2	
SRBC				i IAML		07 47 45.8	
SRBC				i IAML		07 47 49.3	
ADH	Angra Heroismo	1.30	88	eP	Pn	07 47 30.8	-1.4
ADH				eS	Sn	07 47 47.7	-1.3
ADH				i IAML		07 47 49.3	
ADH				i IAML		07 47 49.9	
ADH				i IAML		07 47 50.8	
PAGU	Agualva, Azore	1.35	83	eP	Pn	07 47 31.5	-1.3
PAGU				i IAML		07 47 50.7	
PAGU				i IAML		07 47 51.2	
PAGU				i IAML		07 47 52.1	
PSCM	Serra do Cume	1.40	86	eP	Pn	07 47 31.9	-1.6
PSCM				eS	Sn	07 47 50.3	-1.0
PSCM				i IAML		07 47 51.1	
PSCM				i IAML		07 47 51.3	
PSCM				i IAML		07 47 52.0	
PSET	Sete Cidades	2.63	107	eP	Pn	07 47 49.5	-0.8
PSET				eS	Sn	07 48 20.1	-1.5
PSET				i IAML		07 48 21.9	
PSET				i IAML		07 48 27.4	
PSET				i IAML		07 48 31.4	
CMLA	Cha da Macela	2.79	107		Pn	07 47 52.1	-0.5
CMLA				Sn	Sn	07 48 24.6	-1.1
CMLA	Cha da Macela	2.79	107	P	Pn	07 47 52.1	-0.5
CMLA						07 48 24.6	
PCALD	Caldeiras da R	2.81	106	eP	Pn	07 47 52.5	-0.3
PCALD				eS	Sn	07 48 24.5	-1.6
PGRON	Lagoa das Cont	2.90	106	eP	Pn	07 47 53.8	-0.4
PGRON				eS	Sn	07 48 28.5	0.0
PGRON				i IAML		07 48 29.9	
PGRON				i IAML		07 48 31.0	
PGRON				i IAML		07 48 31.2	
BART	Pico Bartolome	3.06	105	eP	Pn	07 47 55.6	-0.7
BART				eS	Sn	07 48 31.0	-1.4
BART				i IAML		07 48 34.9	
BART				i IAML		07 48 35.5	
BART				i IAML		07 48 37.1	
PSMN	Pico do Norte,	3.44	117	⇓eP	Pn	07 47 59.8	-1.7
PSMN				eS	Sn	07 48 38.8	-2.8
PSMN				i IAML		07 48 42.0	
PSMN				i IAML		07 48 42.5	
PSMN				i IAML		07 48 44.9	
PMOZ	Porto Moniz, M	11.13	118	Pn	Pn	07 49 43.7	-3.4
PMOZ	Porto Moniz, M	11.13	118	eP	Pn	07 49 48.0	+0.9
PMAR	Madeira	11.38	117	eP	Pn	07 49 49.0	-1.6
FUL	Funchal	11.44	118	eP	Pn	07 49 51.7	+0.5
MACI	Morro de la Ar	14.61	131	Pn	Pn	07 50 31.6	-3.3
MESJ	Messejana	16.27	86	Pn	Pn	07 50 55.7	-0.6
MESJ	Messejana	16.27	86	P	Pn	07 50 55.7	-0.6
MESJ				pmax	pmax		
	comp=Z,46nm,1.5s						
ESDC	Sonseca Array	19.36	79	P	Pn	07 51 36.5	+2.0
	comp=Z,0.1nm,0.3s,baz=279,slow=11,SNR=4.8						
ESDC				LR	LR	07 57 49.0	
	comp=Z,445nm,19.4s,baz=278,slow=33 comp=Z,1.1nm,0.8s						
MD01	Midelt array s	20.39	99	P	P	07 51 43.7	-1.1
MD31	MD31	20.39	99	P	P	07 51 43.1	-1.6
MDT	Midelt	20.53	99	LR	LR	07 58 06.3	
	comp=Z,212nm,21.9s,baz=296,slow=32						
EKA	Eskdalemuir Ar	24.04	38	LR	LR	07 59 59.0	
	comp=Z,355nm,18.6s,baz=224,slow=32						
GBN	Guysborough	25.04	296	P	P	07 52 31.9	+0.2
HAL	Halifax	26.48	294	P	P	07 52 45.0	+0.2
HAL	Halifax	26.48	294	P	P	07 52 45.0	+0.2
HAL				pmax	pmax		
	comp=Z,26nm,0.8s						
BORG	Borgarnes	26.55	7	LR	LR	08 00 25.7	
	comp=Z,386nm,20.6s,baz=195,slow=30						
LMN	Caledonia Moun	27.37	297	P	P	07 52 53.9	+1.1
LMN				IAmb	IAmb	07 52 59.4	
	comp=Z,32nm,1.5s						
BATG	Bathurst New B	28.32	300	P	P	07 53 03.1	+1.9
DAVOX	Davos/Dischmat	29.40	61	LR	LR	08 02 56.3	
	comp=Z,203nm,20.7s,baz=260,slow=32						
F64A	Sherman	29.85	297	P	P	07 53 13.7	-1.1
F64A				IAmb	IAmb	07 53 15.0	
	comp=Z,12nm,1.1s						
SCHQ	Schefferville	30.18	315	LR	LR	08 02 43.1	
	comp=Z,151nm,19.1s,baz=83,slow=31						
SCHQ	Schefferville	30.18	315	P	P	07 53 16.5	-1.2
D62A	Allapoint, All	30.35	299	P	P	07 53 17.3	-1.9
D62A				IAmb	IAmb	07 53 32.1	

	comp=Z,15nm,1.2s						
SFJD	Kangerlussuaq	30.95	344	LR	LR	08 02 55.4	
	comp=Z,194nm,18.1s,baz=161,slow=31						
CLL	Collm	31.81	53	eS	S	07 58 48.0	+6.9
CLL				AMS	AMS	08 04 00.0	
	comp=Z,300nm,19.2s						
FDMO	Fiordimonte	31.83	68	P	P	07 53 34.1	+1.7
FDMO				IAmb	IAmb	07 53 35.5	
	comp=Z,12nm,0.9s						
KHC	Kasperske Hory	31.99	57	⇓iP	P	07 53 35.5	+1.8
KHC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KHC	Kasperske Hory	31.99	57	P	P	07 53 34.5	+0.8
GERES	GERESS Array B	32.05	57	LR	LR	08 05 11.5	
	comp=Z,102nm,19.0s,baz=260,slow=34						
NOA	NORSAR Array B	33.43	35	LR	LR	08 05 34.8	
	comp=Z,210nm,20.7s,baz=250,slow=33						
VAE	Valguarnera	33.90	78	LR	LR	08 07 04.5	
	comp=Z,776nm,18.3s,baz=338,slow=35						
VRAC	Vranov	33.97	57	LR	LR	08 07 02.3	
	comp=Z,124nm,18.1s,baz=264,slow=35						
HFS	Hagfors	34.23	37	LR	LR	08 06 11.2	
	comp=Z,204nm,20.0s,baz=256,slow=33						
FRB	Frobisher Bay	34.41	330	LR	LR	08 04 16.4	
	comp=Z,183nm,18.6s,baz=109,slow=30						
MORH	Mrgy, Hungar	35.47	62	P	P	07 54 04.6	+0.7
	comp=Z,6.8nm,1.2s						
OJC	Ojcow	36.05	55	P	P	07 54 09.7	+0.8
	comp=Z,17nm,2.4s						
SADO	Sadowa	37.52	296	LR	LR	08 08 18.9	
	comp=Z,73nm,18.7s,baz=98,slow=34						
SJG	San Juan	38.27	248	LR	LR	08 07 08.4	
	comp=Z,30nm,19.6s,baz=36,slow=32						
SHIU	Shidnytsya	38.40	57	P	P	07 54 29.5	+0.6
SHIU				pP	pP	07 54 32.0	-2.7
MDP	Montagnes des	39.72	219	LR	LR	08 07 38.8	
	comp=Z,147nm,19.0s,baz=25,slow=31						
O53A	New Philadelph	39.95	289	P	P	07 54 41.9	-0.1
FINES	FINESS Array B	40.44	37	LR	LR	08 10 31.6	
	comp=Z,275nm,18.2s,baz=234,slow=35						
FINES	FINESS Array B	40.44	37	P	P	07 54 47.2	+1.6
FINES	FINESS Array B	40.44	37	P	P	07 54 47.2	+1.6
FIA1	FINESS Array S	40.44	37	P	P	07 54 47.6	+2.0
KMPD	K-Podol'skiy	40.50	57	P	P	07 54 46.7	+0.3
MLR	Muntele Rosu	40.62	62	LR	LR	08 10 49.9	
	comp=Z,101nm,19.0s,baz=284,slow=35						
P52A	Corning	40.80	289	P	P	07 54 48.9	0.0
P52A				IAmb	IAmb	07 54 49.5	
	comp=Z,10nm,0.8s						
E46A	Sault Ste Mari	40.85	299	P	P	07 54 48.1	-1.2
MNK	Minsk	40.96	48	i P	P	07 54 43.1	-7.0
	comp=E,40nm,0.8s						
MNK				i P	P	07 54 43.1	-7.0
	comp=N,16nm,0.7s						
MNK				i P	P	07 54 43.1	-7.0
	comp=Z,17nm,0.7s,baz=271						
MNK				i PP	PP	07 56 17.6	-6.9
MNK				i PPP	PPP	07 56 43.8	
MNK				i S	S	08 00 55.7	-5.0
MNK				i SS	SS	08 03 58.7	-3.8
MNK				i SSS	SSS	08 04 23.8	
MNK				i LRM	MLR	08 13 36.1	
	comp=E,1µm,18.7s						
MNK				i LRM	MLR	08 13 37.5	
	comp=N,1µm,19.3s						
MNK	Minsk	40.96	48	i P	P	07 54 43.0	-7.1
MNK				i S	S	08 00 55.7	-5.0
MNK				i SS	SS	08 03 58.7	-3.8
MNK				i		08 04 48.1	
MNK				pmax	pmax		
	comp=Z,17nm,0.7s						
MNK				pmax	pmax		
	comp=N,16nm,0.7s						
MNK				pmax	pmax		
	comp=E,40nm,0.8s						
MNK				MLR	MLR		
	comp=Z,231nm,16.0s						
MNK				MLR	MLR		
	comp=E,1µm,19.0s						
MNK				MLR	MLR		
	comp=N,1µm,19.0s						
AK20	Malin Array Si	41.89	54	P	P	07 54 58.6	+0.8
AK21	Malin Array Si	41.91	54	P	P	07 54 58.7	+0.8
AK22	Malin Array Si	41.93	54	P	P	07 54 58.9	+0.8
AK18	Malin Array Si	41.93	54	P	P	07 54 58.9	+0.8
AK16	Malin Array Si	41.96	54	P	P	07 54 59.0	+0.7
KIEV	Kiev	42.02	54	P	P	07 54 59.8	+1.0
	comp=N,34nm,1.5s						
AKASG	Malin Array Be	42.03	54	P	P	07 54 59.8	+0.9
	comp=N,2.0nm,0.6s,baz=275,slow=8.4,SNR=4.6						
AKASG				LR	LR	08 12 23.9	
	comp=N,183nm,18.1s,baz=326,slow=36						
	comp=N,2.0nm,0.6s						
AKASG	Malin Array Be	42.03	54	eP	P	07 54 59.1	+0.2
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKBB	Malin Array Si	42.03	54	⇑iP	P	07 54 58.1	-0.8
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AKBB	Malin Array Si	42.03	54	P	P	07 54 59.6	+0.7
ARCES	ARCESS Array B	42.08	25	P	P	07 54 59.9	+0.8
	comp=Z,2.3nm,0.6s,baz=256,slow=6.6,SNR=10.0						
ARCES				LR	LR	08 09 28.9	
	comp=Z,129nm,20.0s,baz=254,slow=32						
	comp=Z,2.3nm,0.6s						
ARCES	ARCESS Array B	42.08	25	P	P	07 55 00.3	+1.2
ARCES	ARCESS Array B	42.08	25	P	P	07 55 00.3	+1.2
S51A	Beattyville	42.49	286	P	P	07 55 02.4	-0.4
TZTN	Tazewell	42.82	285	P	P	07 55 04.8	-0.8
TZTN				IAmb	IAmb	07 55 14.8	
	comp=Z,19nm,1.2s						
TKL	Tuckaleechee C	43.30	284	LR	LR	08 09 50.9	
	comp=Z,99nm,20.0s,baz=24,slow=32						
G40A	Rib Lake	45.11	299	P	P	07 55 23.2	-0.6
G40A				IAmb	IAmb	07 55 25.1	
	comp=Z,20nm,1.3s						
FCC	Fort Churchill	45.43	318	P	P	07 55 26.6	+0.5
FCC	Fort Churchill	45.43	318	P	P	07 55 26.6	+0.5
FCC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
OBN	Obninsk	45.92	47	LR	LR	08 14 02.1	
	comp=Z,173nm,20.4s,baz=176,slow=35						
OBN	Obninsk	45.92	47	⇑eP	P	07 55 32.2	+2.1
OBN				e		07 57 21.7	
OBN				eS	S	08 02 13.1	-0.2
OBN				pmax	pmax		
	comp=Z,12nm,1.1s						
OBN				MLR	MLR		
	comp=Z,228nm,21.0s						
BOAV	Boa Vista	46.19	227	P	P	07 55 31.2	-1.4
EPLO	Experimental L	46.45	306	P	P	07 55 32.7	-1.6
EPLO				IAmb	IAmb	07 55 34.2	
	comp=Z,6.2nm,1.0s						
Z47A	Carrollton	47.52	283	P	P	07 55 42.9	0.0
BR131	Keskin Array S	47.60	68	⇓iP	P	07 55 45.5	+1.9
BRTR	Keskin Array B	47.60	68	LR	LR	08 15 18.7	
	comp=Z,66nm,20.6s,baz=290,slow=35						
SDV	Santo Domingo	47.70	243	LR	LR	08 12 00.9	
	comp=Z,74nm,21.5s,baz=46,slow=32						
SDV	Santo Domingo	47.70	243	P	P	07 55 44.8	+0.2
PBMO	Poplar Bluff	47.90	288	P	P	07 55 43.6	-2.2
PBMO				IAmb	IAmb	07 55 45.0	
	comp=Z,8.3nm,1.1s						
OXF	Oxford	48.01	285		P	07 55 45.0	-1.7
OXF	Oxford	48.01	285	P	P	07 55 45.0	-1.7
OXF				pmax	pmax		
	comp=Z,42nm,1.0s						
P40A	Paris	48.11	292	P	P	07 55 46.0	-1.4
P40A				IAmb	IAmb	07 55 47.4	
	comp=Z,8.1nm,0.8s						
H10N2	ASCENSION HYDR	48.12	161	T	T	08 46 47.1	
	baz=345,slow=75						
H10N3	ASCENSION HYDR	48.12	161	T	T	08 46 51.7	
	baz=345,slow=75						
H10N1	ASCENSION HYDR	48.14	161	T	T	08 46 55.4	
	baz=345,slow=75						
R40A	Maddies Statio	48.71	291	P	P	07 55 50.5	-1.5
R40A				IAmb	IAmb	07 55 51.8	
	comp=Z,13nm,1.2s						
MGMO	Mountain Grove	49.13	289	P	P	07 55 53.9	-1.4
H10S3	ASCENSION HYDR	49.15	161	T	T	08 48 05.4	
	baz=235,slow=74						
P38A	Dawn	49.15	293	P	P	07 55 54.0	-1.4
P38A				IAmb	IAmb	07 55 55.4	
	comp=Z,13nm,1.3s						
H10S2	ASCENSION HYDR	49.16	161	T	T	08 48 06.4	
	baz=345,slow=74						
VBMS	Vicksburg	49.80	282	P	P	07 55 58.8	-1.7
L34A	Svendsen Farm,	50.37	297	P	P	07 56 02.6	-2.1
L34A				IAmb	IAmb	07 56 03.9	
	comp=Z,14nm,1.1s						
Z41A	Richland Creek	51.10	285	P	P	07 56 09.1	-1.2
KIRV	Kirov	52.22	40	LR	LR	08 16 53.8	
	comp=Z,166nm,21.1s,baz=291,slow=34						
KIRV	Kirov	52.22	40	⇓iP	P	07 56 18.4	+0.2
SHA1	Shidzhatmaz	52.57	60	⇓iP	P	07 56 22.1	+0.8
KBZ	Khabaz	52.73	60	P	P	07 56 25.9	+3.6
	comp=Z,3.5nm,0.9s,baz=288,slow=3.2,SNR=4.0						
KBZ				LR	LR	08 19 44.6	
	comp=Z,47nm,18.8s,baz=334,slow=37						
	comp=Z,3.5nm,0.9s						
KBZ	Khabaz	52.73	60	⇑iP	P	07 56 25.4	+3.2
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PYA1	Pyatigorsk	52.75	59	⇑iP	P	07 56 24.8	+2.3
BELG	Belogornoye	52.91	48	LR	LR	08 18 42.3	
	comp=Z,328nm,19.0s,baz=307,slow=36						
BELG	Belogornoye	52.91	48	⇓iP	P	07 56 25.0	+1.6
BELG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
WHTX	Lake Whitney,	55.17	286		P	07 56 39.1	-1.2
MAK	Makhachkala	56.13	59	eP	P	07 56 42.6	-4.4
MAK				eS	S	08 04 29.6	-5.3
MAK				eSS	SS	08 08 17.1	-3.9
MAK				MLR	MLR		
	comp=Z,182nm,17.0s						
BDFB	Brasilia	56.87	202	LR	LR	08 19 06.1	
	comp=Z,129nm,18.2s,baz=357,slow=34						
AKT	Akhty	56.89	61	eP	P	07 56 53.1	+0.5
JTS	Las Juntas de	57.26	256	LR	LR	08 17 51.7	
	comp=Z,107nm,20.3s,baz=66,slow=32						
ARTI	Arti	57.51	41	c iP	P	07 56 57.7	+1.2
ARTI						07 57 48.1	
ARTI						07 59 05.4	
ARTI				S	S	08 04 55.6	+2.9
ARTI				SS	SS	08 08 42.8	+0.8
PDAR	Pinedale Array	59.06	302	P	P	07 57 06.0	-2.0
	comp=Z,0.9nm,0.8s,baz=64,slow=6.8,SNR=7.1						
PDAR				LR	LR	08 21 19.7	
	comp=Z,107nm,19.6s,baz=313,slow=35						
	comp=Z,0.9nm,0.8s						
ANMO	Albuquerque	60.46	293	LR	LR	08 22 19.6	
	comp=Z,115nm,18.8s,baz=40,slow=35						
ANMO	Albuquerque	60.46	293	⇑iP	P	07 57 17.0	-0.6
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ALPN	Alpine	60.60	287		P	07 57 17.0	-1.6
ALPN				IAmb	IAmb	07 57 18.5	
	comp=Z,11nm,1.4s						
CMIG	Matias Romero	60.89	269	LR	LR	08 20 27.6	
	comp=Z,55nm,20.4s,baz=3.5,slow=33						
TXAR	Lajitas Array	61.14	286	P	P	07 57 21.4	-0.9
	comp=Z,3.3nm,0.9s,baz=82,slow=7.5,SNR=26						
TXAR				LR	LR	08 21 52.1	
	comp=Z,88nm,20.0s,baz=16,slow=34						
	comp=Z,3.3nm,0.9s						
TXAR	Lajitas Array	61.14	286		P	07 57 21.2	-1.0
NEW	Newport	61.40	310	LR	LR	08 21 53.7	
	comp=Z,114nm,18.5s,baz=310,slow=34						
SIV	San Ignacio	62.12	215	LR	LR	08 21 18.0	
	comp=Z,153nm,19.9s,baz=356,slow=33						
ATAH	Atahualpa	64.64	237	LR	LR	08 24 21.5	
	comp=Z,69nm,20.2s,baz=27,slow=35						
BVAR	Borovoye Array	65.23	41	P	P	07 57 52.0	+3.1
	comp=Z,1.6nm,0.8s,baz=297,slow=6.3,SNR=6.2						
BVAR				LR	LR	08 27 25.9	
	comp=Z,122nm,18.0s,baz=306,slow=37						
	comp=Z,1.6nm,0.8s						
BVAR	Borovoye Array	65.23	41	P	P	07 57 52.0	+3.1
PRN	Pahroc Range	65.30	299	P	P	07 57 49.1	-0.6
LPAZ	La Paz	65.83	222	P	P	07 57 53.4	-0.4
	comp=Z,2.0nm,0.9s,baz=40,slow=5.0,SNR=5.6						
LPAZ				LR	LR	08 24 22.0	
	comp=Z,119nm,19.5s,baz=40,slow=34						
	comp=Z,2.0nm,0.9s						
LPAZ	La Paz	65.83	222		P	07 57 52.9	-0.9
LPAZ				IAmb	IAmb	07 58 01.2	
	comp=Z,8.5nm,1.1s						
LPAZ	La Paz	65.83	222	eP	P	07 57 55.4	+1.6
LPAZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ILAR	Eielson Array	66.17	336	P	P	07 57 53.5	-1.2
	comp=Z,0.5nm,0.8s,baz=37,slow=6.6,SNR=6.5						
	comp=Z,0.5nm,0.8s						
ILAR	Eielson Array	66.17	336	eP	P	07 57 54.4	-0.3
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NVAR	Mina Array Bea	66.97	301	LR	LR	08 26 22.1	
	comp=Z,121nm,18.8s,baz=322,slow=35						
MBAR	Mbarara	67.08	110	LR	LR	08 27 02.5	
	comp=Z,88nm,18.1s,baz=300,slow=36						
PFO	Pinyon Flats O	68.26	296	LR	LR	08 28 14.2	
	comp=Z,99nm,18.5s,baz=322,slow=36						
TIXI	Tiksi	68.91	7	⇑iP	P	07 58 12.6	+0.7
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.0s						
CPUP	Villa Florida	69.88	207	LR	LR	08 26 56.9	
	comp=Z,13nm,19.1s,baz=250,slow=34						
KURK	Kurchatov	70.74	40	⇑iP	P	07 58 25.7	+2.2
KURK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KURBB	Kurchatov Arra	70.75	40	P	P	07 58 24.9	+1.3
	comp=Z,1.7nm,0.8s,baz=310,slow=6.3,SNR=8.4						
KURBB				LR	LR	08 30 23.8	
	comp=Z,94nm,18.4s,baz=174,slow=37						
	comp=Z,1.7nm,0.8s						
KMBO	Kilima Mbogo	72.27	106	i P	P	07 58 36.0	+2.4
BILL	Bilibino	73.05	354	⇓iP	P	07 58 38.3	+1.2
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
AAK	Ala-Archa	73.41	49	⇑iP	P	07 58 42.5	+2.6
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MK31	Makanchi Array	75.10	42	⇑iP	P	07 58 52.7	+3.2
MKAR	Makanchi Array	75.10	42	P	P	07 58 49.9	+0.4
	comp=Z,1.5nm,1.0s,baz=316,slow=6.7,SNR=4.5						
MKAR				LR	LR	08 32 25.8	
	comp=Z,204nm,18.1s,baz=316,slow=36						
	comp=Z,1.5nm,1.0s						
DGZ	Jazzator, Alta	75.69	37	⇓iP	P	07 58 53.9	+0.9
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.1s						
YAK	Yakutsk	78.21	10	⇑iP	P	07 59 08.7	+2.0
YAK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WMQ	Urumqi	79.92	41	eP	P	07 59 18.1	+1.6
WMQ				PP	PP	08 02 19.0	+1.4
WMQ				pmax	pmax		
	comp=Z,15nm,1.3s						
SONM	Songino Array	85.17	28	P	P	07 59 45.3	+1.4
	comp=Z,0.3nm,0.5s,baz=343,slow=4.5,SNR=4.4						
	comp=Z,0.3nm,0.5s						
PLCA	Paso Flores	87.66	210	LR	LR	08 37 35.9	
	comp=Z,57nm,20.1s,baz=28,slow=35						
HHC	Hu-ho-hao-te	93.06	29	eP	P	08 00 20.5	-0.9
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,220nm,6.1s						
LZH	Lanzhou	93.79	37	eP	P	08 00 25.5	+0.5
LZH				sP	sP	08 00 33.4	-0.3
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
RPN	Rapa Nui	99.55	243	LR	LR	08 41 21.8	
	comp=Z,22nm,18.7s,baz=52,slow=33						
PZH	PanZhiHua	100.45	44	P	Pdif	08 00 55.3	+0.1
NVL	N'lazarevskaya	112.94	166	i PKIKP	PKiKP	08 05 43.5	+0.2
NVL				e		08 06 30.1	
NVL				eSS	SS	08 22 15.8	+1.0
NVL				eSSS	SSS	08 26 27.6	
NVL				pmax	pmax		
	comp=Z,18nm,1.4s						

MDD 13 07:49:45.7±1.4**, 30°.47N**×**19°.30W, h30^{km}, mb_Lg3.5**/15**,**
Error ellipse: s-maj=37.8km s-min=11.4km az=37.0,
Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGOR	Puntagorda, La	2.04	146	P	Pn	07 50 15.9	-2.0
CGOR				i IVmb_Lg		07 50 19.2	
CROM	Garafia, La Pa	2.11	144	P	Pn	07 50 17.0	-2.1
CROM				i IVmb_Lg		07 50 26.2	
TBT	Taburiente	2.16	146	P	Pn	07 50 17.1	-2.5
TBT				i IVmb_Lg		07 50 18.5	
CMIR	El Paso, La Pa	2.17	144	P	Pn	07 50 17.0	-2.9
CMIR				i IVmb_Lg		07 50 27.2	
CJED	Jedey, El Paso	2.26	146	P	Pn	07 50 19.1	-2.0
CJED				i IVmb_Lg		07 50 28.9	
CVIE	Villa de Mazo,	2.27	145	P	Pn	07 50 19.7	-1.7
CDOS	Garachico, Isl	3.12	134	P	Pn	07 50 31.8	-1.1
CDOS				i IVmb_Lg		07 52 41.5	
CNOR	Icod de los Vi	3.15	132	P	Pn	07 50 31.5	-1.9
CNOR				S	Sn	07 51 04.9	-5.2
CPVI	La Orotava (Te	3.19	133	P	Pn	07 50 31.8	-2.3
CFOR	Fortaleza, Los	3.20	132	P	Pn	07 50 32.2	-1.9
CFOR				S	Sn	07 51 06.8	-4.5
CFOR				i IVmb_Lg		07 51 42.0	
CCHO	La Orotava (Te	3.21	134	P	Pn	07 50 31.9	-2.4
CCHO				i IVmb_Lg		07 50 43.9	
CCHO				S	Sn	07 51 06.9	-4.6
CADE	Adeje, Tenerif	3.21	135	P	Pn	07 50 32.0	-2.1
CADE				i IVmb_Lg		07 50 42.1	
CADE				S	Sn	07 51 06.9	-4.5
CRAJ	Montana Rajada	3.23	132	P	Pn	07 50 32.2	-2.3
CRAJ				i IVmb_Lg		07 50 45.9	
CRAJ				S	Sn	07 51 06.8	-5.3
CDIE	La Orotava (Te	3.24	132	P	Pn	07 50 32.3	-2.3
CCAN	Las Canadas	3.25	133	P	Pn	07 50 32.1	-2.7
CCAN				i IVmb_Lg		07 53 02.0	
CLAJ	Vilaflor (Tene	3.25	135	P	Pn	07 50 32.8	-2.1
CLAJ				i IVmb_Lg		07 51 55.1	
MACI	Morro de la Ar	3.29	132	P	Pn	07 50 33.5	-1.9
MACI				i IVmb_Lg		07 50 49.8	
CTFS	San Miguel de	3.33	135	P	Pn	07 50 32.7	-3.0
CTFS				i IVmb_Lg		07 51 19.4	
CGRA	Granadilla de	3.38	134	P	Pn	07 50 34.4	-2.0
CGRA				i IVmb_Lg		07 52 18.5	
CLUM	San Bartolome	4.15	129	P	Pn	07 50 44.6	-2.3

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*TAP **13** 07:55:48.6, 24°.87N×122°.45E, h13^{km}±1^{km}, ML2.7, D*
*JMA **13** 07:55:50.5±0.4, 25°N±4°×122°.4E±0°.8, h28^{km}, MV2.1/5,*
NW OFF ISHIGAKIJIMA IS
ISC 13 07:55:48.8±1.3**, 24°.83N**±0°.05×**122°.42E**±0°.04**, h24^{km}**±13^{km}**,**
n29, σ0^{s}.57/34**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.43	294	i P	Pb	07 55 57.0	-0.8
TWB1				eS	Sb	07 56 04.2	+0.3
EOS2	EOS2	0.45	203	i P	Pb	07 55 58.5	+0.5
EOS2				eS	Sn	07 56 06.2	-0.6
EOS3	EOS3	0.55	190	i P	Pb	07 55 59.6	-0.2
EOS3				eS	Sn	07 56 08.8	-0.6
TIPB	Shuangxi	0.56	284	P	Pb	07 55 59.9	-0.1
SXI1	Grass Mountain	0.56	298	P	Pb	07 55 59.7	-0.3
TWC	Suao	0.56	247	P	Pb	07 55 59.9	-0.2
TWC				S	Sb	07 56 08.2	+0.5
JYNG	Yonagunijimaku	0.61	128	eP	Pb	07 56 01.2	+0.4
JYNG				eS	Sb	07 56 08.1	-1.0
NWF	Wu-fen Shan	0.63	292	eP	Pb	07 56 01.5	+0.3
WFSB	Wu-fen Shan	0.63	292	eP	Pb	07 56 01.5	+0.4
YOJ	Yonaguni jima	0.65	124	eP	Pb	07 56 01.6	+0.1
TWE	Neicheng	0.69	261	eP	Pb	07 56 02.4	+0.2
EOS4	EOS4	0.71	187	eP	Pb	07 56 02.7	+0.3
FUSB	Fushanzhiwuyua	0.76	265	eP	Pb	07 56 02.9	-0.5
ENTT	Nioudou	0.80	256	eP	Pb	07 56 04.2	+0.2
YM01	YM01	0.83	292	eP	Pb	07 56 04.8	+0.2
LATG	Datong	0.86	250	eP	Pb	07 56 04.1	-1.1
YHNB	Yeheng	0.96	260	eP	Pb	07 56 06.9	0.0
NSK	Sanguang	0.98	261	eP	Pb	07 56 07.0	-0.1
NACB	Ninganchiao	1.00	229	eP	Pb	07 56 07.3	-0.1
NNSB	Datong	1.03	247	eP	Pn	07 56 07.7	-0.1
ETLH	Xiulin Townshi	1.06	234	eP	Pn	07 56 07.1	-1.1
WHF	Hehuan Shan	1.26	237	eP	Pn	07 56 11.9	+0.7
NSTT	Nanjuang	1.31	261	eP	Pb	07 56 12.9	+0.2
OWD	Renai	1.43	233	eP	Pn	07 56 13.8	+0.4
WUSB	Renai	1.45	235	eP	Pb	07 56 15.2	0.0
VWDT	VWDT	1.59	228	eP	Pn	07 56 16.2	+0.8
HGSD	Ruisui	1.62	214	eP	Pb	07 56 17.8	-0.2
SMLT	Sun Moon Lake	1.68	236	eP	Pb	07 56 18.8	-0.2
TYC	Yuchr	1.70	237	eP	Pn	07 56 18.4	+1.5

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*TAP **13** 08:02:08.7, 24°.92N×122°.60E, h14^{km}, ML3.9, D*
*IDC **13** 08:02:09.3±1.2, 24°.50N×121°.59E, h0^{km}, mb3.6/7,*
mbtmp3.7/8, ML3.4/1, MS3.3/10, Error ellipse:
s-maj=66.0km s-min=19.3km az=66.0
*JMA **13** 08:02:09.4±0.2, 25°N±2°×122°.6E±0°.8, h32^{km}±4^{km},*
MV2.5/9, NW OFF ISHIGAKIJIMA IS
ISC 13 08:02:09.2±1.1**, 24°.85N**±0°.03×**122°.59E**±0°.02**, h12^{km}**±8^{km}**,**
n119, σ0^{s}.85/139**, mb3.7**/7**, MS3.3**/9**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.51	141	P	Pg	08 02 19.5	+0.2
JYNG				eS	Sb	08 02 26.8	-0.8
EOS2	EOS2	0.54	217	eP	Pb	08 02 20.4	-0.3
EOS2				eS	Sn	08 02 31.0	-0.8
YOJ	Yonaguni jima	0.54	136	P	Pb	08 02 20.9	+0.2
YOJ	Yonaguni jima	0.54	136	P	Pb	08 02 20.6	-0.1
YOJ	Yonaguni jima	0.54	136	i P	Pg	08 02 20.1	+0.2
YOJ				eS	Sg	08 02 27.4	+0.3
YOJ	Yonaguni jima	0.54	136	P	Pg	08 02 20.1	+0.2
YOJ				eS	Sb	08 02 28.1	-0.4
TWB1	Santiao Chiao	0.57	286	i P	Pg	08 02 20.1	-0.3
TWB1				S	Sg	08 02 28.0	0.0
EGS		0.60	269	P	Pg	08 02 21.3	+0.3
EOS3	EOS3	0.62	204	eP	Pb	08 02 21.8	-0.1
EOS3				eS	Sn	08 02 32.7	-0.8
SXI1	Grass Mountain	0.69	290	eP	Pg	08 02 22.5	-0.2
TIPB	Shuangxi	0.71	280	P	Pg	08 02 22.7	-0.3
TIPB				eS	Sb	08 02 33.3	0.0
TWC	Suao	0.72	250	eP	Pg	08 02 22.6	-0.6
TWC				eS	Sb	08 02 33.7	+0.1
ESAO	Su ao	0.74	248	P	Pg	08 02 23.4	-0.2
NWF	Wu-fen Shan	0.77	287	P	Pg	08 02 24.5	+0.3
NWF				i S	Sb	08 02 34.9	-0.2
WFSB	Wu-fen Shan	0.77	287	P	Pg	08 02 24.4	+0.2
WFSB				i S	Sb	08 02 34.9	-0.2
EOS4	EOS4	0.77	199	eP	Pb	08 02 24.7	+0.3
TNOU	National Taiwa	0.80	292	P	Pg	08 02 24.8	+0.1
NDS	Dongshan	0.83	255	P	Pg	08 02 25.2	0.0
EWUT	Wuta	0.85	241	eP	Pg	08 02 25.1	-0.5
EWUT				eS	Sg	08 02 36.3	-0.4
TWE	Neicheng	0.85	261	P	Pg	08 02 25.2	-0.5
TWE				S	Sg	08 02 36.6	-0.2
ENA	Nanau	0.89	242	eP	Pg	08 02 26.0	-0.3
PCYT	Pengchaiyu	0.91	329	eP	Pb	08 02 26.8	-0.2
FUSB	Fushanzhiwuyua	0.92	264	eP	Pb	08 02 26.3	-0.9
TWA	Mucha	0.93	278	P	Pb	08 02 26.6	-0.7
TWA				eS	Sg	08 02 40.3	+1.1
EAHA	Aohua	0.94	236	P	Pb	08 02 26.8	-0.7
EAHA				S	Sb	08 02 39.2	-0.7
NHY	Taipei	0.95	281	eP	Pn	08 02 28.1	-0.4
ENTT	Nioudou	0.96	257	eP	Pb	08 02 27.1	-0.7
ENTT				S	Sn	08 02 41.4	-0.8
YM08	YM08	0.97	290	eP	Pg	08 02 28.1	+0.2
YM01	YM01	0.97	288	eP	Pg	08 02 28.4	+0.3
NWLT	Wulai	0.99	266	eP	Pb	08 02 27.7	-0.7
NWLT				eS	Sb	08 02 40.5	-1.1
TWY	Chenhua	0.99	295	P	Pn	08 02 29.0	0.0
ZUZH	Zhuzihu	1.00	288	eP	Pb	08 02 28.1	-0.5
TATO	Taipei	1.01	277	P	Pb	08 02 27.5	-1.2
TATO	Taipei	1.01	277	P	Pb	08 02 27.8	-0.9
LATG	Datong	1.02	252	eP	Pb	08 02 28.4	-0.6
LATG				eS	Sb	08 02 42.1	-0.3
ANP	Anpu	1.03	289	eP	Pg	08 02 29.2	+0.1
TWS1	Kuangyinshan	1.10	283	eP	Pg	08 02 30.5	+0.1
ETL	Fush Village	1.12	232	P	Pn	08 02 30.7	-0.1
YHNB	Yeheng	1.12	261	P	Pb	08 02 30.3	-0.4
YHNB	Yeheng	1.12	261	P	Pb	08 02 29.8	-0.9
YHNB	Yeheng	1.12	261	eP	Pb	08 02 29.8	-0.9
YHNB				S	Sn	08 02 46.3	0.0
NACB	Ninganchiao	1.13	234	P	Pb	08 02 30.1	-0.7
NACB	Ninganchiao	1.13	234	P	Pb	08 02 29.7	-1.1
NACB	Ninganchiao	1.13	234	P	Pb	08 02 30.1	-0.7
NACB				S	Sb	08 02 45.3	-0.2
NSK	Sanguang	1.14	261	eP	Pb	08 02 30.1	-0.8

IRIF	Iriomote-Funau	1.16	116	eP	Pb	08 02 29.1	-2.1
NNSB	Datong	1.18	249	P	Pn	08 02 31.3	-0.5
NNS	Nan Shan	1.19	250	eP	Pn	08 02 31.3	-0.5
NNS				eS	Sb	08 02 47.1	0.0
TWD	Chiawan	1.19	230	eP	Pb	08 02 31.9	+0.1
TWD				S	Sg	08 02 49.3	+1.6
NCUH	Zhongli	1.28	275	eP	Pn	08 02 32.2	-0.9
KSHI	Guanxi Townshi	1.29	267	eP	Pg	08 02 34.0	-0.1
ETM	Tongmen	1.34	229	i P	Pb	08 02 34.0	-0.3
ETM				eS	Sn	08 02 51.3	-0.2
LXIB	Xiulin Townshi	1.36	233	eP	Pb	08 02 34.4	-0.3
NFF	Wufeng Townshi	1.36	261	eP	Pn	08 02 33.7	-0.4
FUSS	Fushou	1.37	244	eP	Pb	08 02 35.3	+0.3
FUSS				eS	Sg	08 02 53.6	+0.2
WHF	Hehuan Shan	1.40	240	eP	Pb	08 02 35.5	-0.1
TDCB	Techi	1.44	246	eP	Pb	08 02 35.7	-0.4
LIOB	Emei	1.45	262	eP	Pb	08 02 36.2	0.0
NSTT	Nanjuang	1.47	262	eP	Pn	08 02 35.9	+0.4
ESL	Shilin	1.48	226	eP	Pb	08 02 36.3	-0.4
JIJ	Ishigaki jima	1.49	109	eP	Pn	08 02 34.9	-1.0
OWD	Renai	1.57	236	eP	Pb	08 02 38.0	-0.4
OWD				S	Sb	08 02 58.9	+0.6
WARBT	Fenglin Townsh	1.58	225	eP	Pn	08 02 36.8	-0.3
WUSB	Renai	1.60	238	eP	Pb	08 02 38.7	-0.1
WHP	Taichung City	1.61	249	eP	Pb	08 02 38.9	0.0
NMLH	Miaoli	1.67	260	eP	Pb	08 02 40.5	+0.5
VWDT	VWDT	1.72	231	P	Pb	08 02 40.1	-0.7
NSY	Sanyi	1.72	256	eP	Pg	08 02 41.7	-0.7
WCS	Beigang Elemen	1.73	243	eP	Pb	08 02 41.0	0.0
TWQ1	Liyutan	1.73	253	eP	Pg	08 02 42.5	0.0
EHYH	Wanrong	1.77	220	eP	Pn	08 02 38.7	-1.1
SMLT	Sun Moon Lake	1.82	238	eP	Pb	08 02 43.0	+0.4
TYC	Yuchr	1.84	240	eP	Pb	08 02 42.8	-0.1
TYC				eS	Sg	08 03 07.7	-0.9
YULB	Yu-li	1.88	219	P	Pb	08 02 42.5	-1.0
YULB	Yu-li	1.88	219	P	Pn	08 02 41.4	+0.2
YULB	Yu-li	1.88	219	eP	Pn	08 02 40.9	-0.4
TCU	Taichung	1.88	248	eP	Pb	08 02 43.3	-0.3
TWF1	Yuli	1.91	219	eP	Pn	08 02 40.8	-0.9
WHYT	Xinyi Township	1.96	234	eP	Pb	08 02 43.8	-1.1
WHYT				eS	Sb	08 03 10.4	+1.0
CHKH	Chenggong	1.98	214	eP	Pn	08 02 43.2	+0.6
WNT	Mingjian	1.99	241	eP	Pb	08 02 45.2	-0.3
WCH1	Changhua City	2.02	248	eP	Pn	08 02 44.0	+0.8
YUS	Yu-Shan	2.02	228	eP	Pn	08 02 44.0	+0.3
FULB	Fuli	2.03	216	eP	Pn	08 02 43.0	-0.3
ALS	Alishan	2.11	231	eP	Pb	08 02 47.1	-0.6
ELDTW	Lidau	2.20	221	eS	Sb	08 03 14.6	-1.6
STYH	Taoyuan	2.36	225	eP	Pn	08 02 49.5	+1.7
STYH				eS	Sb	08 03 19.4	-1.4
TPUB	Ta-pu	2.37	230	P	Pn	08 02 49.6	+1.6
TPUB	Ta-pu	2.37	230	P	Pn	08 02 49.4	+1.4
TPUB	Ta-pu	2.37	230	eP	Pb	08 02 50.4	-1.6
WTP	Ta-pu	2.42	229	eP	Pb	08 02 50.8	-1.9
TWGBT	Beinan	2.46	215	P	Pn	08 02 49.8	+0.6
TWGBT	Beinan	2.46	215	eP	Pn	08 02 49.4	+0.3
TWG	Pinlang	2.46	215	eP	Pn	08 02 49.5	+0.3
WSF	Szhu	2.48	241	eP	Pn	08 02 51.2	+1.7
TWK	Hsinying	2.49	231	eP	Pb	08 02 51.8	-2.2
CHN1	Nanshi	2.52	229	eP	Pb	08 02 52.8	-1.6
WSL	Shuilin Townsh	2.54	239	P	Pn	08 02 52.0	+1.8
SGST	Jiashian	2.55	227	eP	Pn	08 02 52.3	+1.8
SGST				eS	Sb	08 03 25.4	-0.9
MASBT	Mashibuluo	2.87	219	eP	Pn	08 02 57.2	+2.4
TAWH	Dawu Township	2.95	212	eP	Pn	08 02 56.3	+0.3
SCZT	Fangliau	3.06	217	eP	Pn	08 03 00.2	+2.7
AXDP	Jialang	4.20	272	P	Pn	08 03 12.4	-0.8
KSRS	Korea Array	13.36	19	Pn	P	08 05 29.9	+1.5
	0.2nm,0.3s,baz=199,slow=11,SNR=7.5						
	2.1nm,0.7s						
DAV	Davao City (W)	17.91	170	LR	LR	08 12 27.1	
	comp=Z,126nm,21.7s,baz=10,slow=35						
CMAR	Chiang Mai Arr	22.87	258	LR	LR	08 16 23.3	
	comp=Z,57nm,20.1s,baz=85,slow=39						
ASAJ	Asahikawa	25.20	35	LR	LR	08 17 45.4	
	comp=Z,127nm,19.3s,baz=166,slow=36						
SONM	Songino Array	26.28	335	P	P	08 07 45.4	+0.7
	1.0nm,0.9s,baz=156,slow=11,SNR=4.6						
SONM				LR	LR	08 18 04.4	
	comp=Z,89nm,18.4s,baz=166,slow=36						
	1.0nm,0.9s						
KAPI	Kappang	29.82	186	LR	LR	08 19 53.0	
	comp=Z,32nm,20.8s,baz=16,slow=36						
PSI	Prapat	31.64	230	LR	LR	08 20 26.9	
	comp=Z,39nm,19.9s,baz=338,slow=36						
JAY	Jayapura	32.39	145	LR	LR	08 20 43.4	
	comp=Z,30nm,20.9s,baz=331,slow=34						
MKAR	Makanchi Array	38.77	315	P	P	08 09 33.1	-0.5
	1.4nm,0.9s,baz=116,slow=9.8,SNR=6.2						
	1.4nm,0.9s						
ZALV	Zalesovo Beam	40.40	326	P	P	08 09 46.3	-0.8
	1.3nm,0.8s,baz=123,slow=10,SNR=2.6						
	1.3nm,0.8s						
KURBB	Kurchatov Arra	42.44	319	P	P	08 10 02.5	-1.3
	1.5nm,1.0s,baz=109,slow=6.8,SNR=6.2						
	1.5nm,1.0s						
WRA	Warramunga Arr	45.97	165	P	P	08 10 32.3	-0.2
	0.4nm,0.7s,baz=345,slow=8.1,SNR=2.8						
	0.4nm,0.7s						
BVAR	Borovoye Array	47.98	320	P	P	08 10 47.6	-0.2
	0.6nm,0.6s,baz=96,slow=10,SNR=2.4						
	0.6nm,0.6s						
NRIK	Noril'sk	49.10	344	LR	LR	08 33 01.8	
	comp=Z,72nm,20.6s,baz=161,slow=38						
ASAR	Alice Springs	49.46	166	P	P	08 11 01.5	+2.0
	0.2nm,0.7s,baz=349,slow=8.9,SNR=7.7						
ASAR				LR	LR	08 32 21.6	
	comp=Z,60nm,18.1s,baz=72,slow=37						
	0.2nm,0.7s						
CTA	Charters Tower	50.25	151	LR	LR	08 33 23.9	
	comp=Z,30nm,18.6s,baz=301,slow=37						

SJA ***13*** *08:11:28.6±0.7, 24°.02S×66°.65W, h172^{km}±6^{km}, ML3.9, MW3.8*

IDC ***13*** *08:11:29.3±1.8, 24°.02S×66°.78W, h182^{km}±17^{km}, mb3.1/4, mbtmp3.7/10, Error ellipse: s-maj=22.1km s-min=16.0km az=92.0*

GUC ***13*** *08:11:30.0±0.7, 24°.19S×66°.96W, h196^{km}±7^{km}, ML4.2*

VAO ***13*** *08:11:30.3±0.5, 23°.99S×66°.84W, h201^{km}, mb3.8, Presumed earthquake*

NEIC ***13*** *08:11:30.6±1.4, 24°.04S±0°.06×67°.0W±0°.1, h220^{km}±6^{km}, mb4.5/7, ML4.2(GUC), Error ellipse: s-maj=17.2km s-min=9.0km az=93.0*

ISC 13 08:11:29.0±0.6**, 24°.08S**±0°.04×**66°.79W**±0°.04**, h192**^{km}±6^{km}**, n117, σ1^{s}.50**/141**, mb3.6**/5**, 16C-1D, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALTA		0.43	109	⇓iP	Pn	08 11 58.4	+2.8
SALTA		0.43	109	eP	Pn	08 11 52.9	-2.7
SLA	San Lorenzo	1.33	119	eP	Pn	08 12 03.8	+3.1
SLA	San Lorenzo	1.33	119	eP	Pn	08 11 58.4	-2.3
SLA				eS	Sn	08 12 27.8	+2.5
HJA	Humahuaca	1.53	56	eP	Pn	08 12 00.1	-2.7
AF01	San Pedro de A	1.70	311		Pn	08 12 06.5	+2.2
AF01				Sn	Sn	08 12 35.0	+3.4
AF01	San Pedro de A	1.70	311	eP	Pn	08 12 06.9	+2.6
AF01				eS	Sn	08 12 34.4	+2.8
AF01	San Pedro de A	1.70	311	eP	Pn	08 12 04.0	-0.3
AF01				eS	Sn	08 12 42.5	+11
AF01				IAML		08 12 54.1	
	comp=Z,300nm,0.6s						
FSA	Cafayete	2.15	160	eP	Pn	08 12 10.9	+2.2
FSA				eS	Sn	08 12 39.6	-0.2
YJA	Yavi	2.23	32	⇑eP	Pn	08 12 12.6	+2.7
YJA	Yavi	2.23	32	eP	Pn	08 12 09.1	-0.8
GO02	Mina Guanaco	2.77	247		Pn	08 12 17.1	+1.2
GO02				Sn	Sn	08 12 51.6	-0.8
GO02	Mina Guanaco	2.77	247	⇑iP	Pn	08 12 17.1	+1.2
GO02				eS	Sn	08 12 52.2	-0.2
GO02	Mina Guanaco	2.77	247	eP	Pn	08 12 17.1	+1.2
GO02				eS	Sn	08 12 53.3	+0.9
GO02				IAML		08 12 56.7	
	comp=Z,538nm,0.3s						
PB06	IPOC Station P	2.90	298		Pn	08 12 18.6	+1.3
PB06				Sn	Sn	08 12 53.6	-1.3
PB06	IPOC Station P	2.90	298	⇑iP	Pn	08 12 18.6	+1.3
PB06				IAML		08 12 55.7	
	comp=N,482nm,0.5s						
PB06	IPOC Station P	2.90	298	eP	Pn	08 12 18.5	+1.2
PB06				eS	Sn	08 12 54.3	-0.6
PB06				IAML		08 12 59.5	
	comp=Z,245nm,0.2s						
AHML	Horco Molle	2.99	154	eP	Pn	08 12 08.3	-10
AHML				eS	Sn	08 12 46.8	-10
PB09	IPOC Station P	3.21	315		Pn	08 12 22.6	+1.7
PB09	IPOC Station P	3.21	315	⇑iP	Pn	08 12 22.7	+1.7
PB09				IAML		08 13 06.5	
	comp=E,240nm,0.5s						
PB09	IPOC Station P	3.21	315	eP	Pn	08 12 21.1	+0.1
PB09				eS	Sn	08 13 02.6	+1.0
PB09				IAML		08 13 05.7	
	comp=Z,184nm,0.6s						
PB14	IPOC Station P	3.34	260		Pn	08 12 23.1	+0.4
PB14				Sn	Sn	08 13 01.4	-3.3
PB14	IPOC Station P	3.34	260	⇑iP	Pn	08 12 23.2	+0.4
PB14				IAML		08 13 03.5	
	comp=E,266nm,0.2s						
PB14	IPOC Station P	3.34	260	eP	Pn	08 12 22.6	-0.1
PB14				eS	Sn	08 13 03.3	-1.3
PB14				IAML		08 13 05.6	
	comp=Z,246nm,0.5s						
PB05	IPOC Station P	3.37	291		Pn	08 12 23.4	+0.5
PB05	IPOC Station P	3.37	291	⇑iP	Pn	08 12 23.3	+0.5
PB05				IAML		08 13 04.6	
	comp=E,269nm,0.3s						
PB05	IPOC Station P	3.37	291	eP	Pn	08 12 23.4	+0.5
PB05				eS	Sn	08 13 04.0	-0.9
PB05				IAML		08 13 15.2	
	comp=Z,133nm,0.4s						
PB03	IPOC Station P	3.40	306		Pn	08 12 23.9	+0.6
PB03	IPOC Station P	3.40	306	⇑eP	Pn	08 12 24.1	+0.8
PB03	IPOC Station P	3.40	306	eP	Pn	08 12 24.0	+0.8
PB03				eS	Sn	08 13 04.2	-1.5
PB03				IAML		08 13 06.3	
	comp=Z,260nm,0.4s						
AC02	Maricunga	3.47	217		Pn	08 12 26.0	+1.6
AC02	Maricunga	3.47	217	⇑iP	Pn	08 12 25.9	+1.5
AC02	Maricunga	3.47	217	eP	Pn	08 12 25.9	+1.5
AC02				eS	Sn	08 13 07.5	-0.2
PB10	IPOC Station P	3.50	279		Pn	08 12 25.1	+0.8
PB10	IPOC Station P	3.50	279	⇑iP	Pn	08 12 25.1	+0.8
PB10	IPOC Station P	3.50	279	eP	Pn	08 12 25.2	+0.8
PB10				eS	Sn	08 13 07.6	0.0
PB10				IAML		08 13 09.4	
	comp=Z,145nm,0.5s						
PB07	IPOC Station P	3.70	309		Pn	08 12 27.1	+0.2
PB07	IPOC Station P	3.70	309	⇑eP	Pn	08 12 27.6	+0.7
PB07	IPOC Station P	3.70	309	eP	Pn	08 12 27.3	+0.4
PB07				eS	Sn	08 13 10.7	-1.6
PB07				IAML		08 13 12.1	
	comp=Z,222nm,0.4s						
PB01	IPOC Station P	3.92	320		Pn	08 12 29.8	+0.1
PB01	IPOC Station P	3.92	320	⇑eP	Pn	08 12 30.2	+0.5
PB01	IPOC Station P	3.92	320	eP	Pn	08 12 29.7	0.0
PB01				eS	Sn	08 13 17.4	+0.1
PB01				IAML		08 13 21.9	
	comp=Z,114nm,0.6s						
PB02	IPOC Station P	3.98	313		Pn	08 12 30.4	+0.1
PB02	IPOC Station P	3.98	313	⇑eP	Pn	08 12 30.6	+0.2
PB02	IPOC Station P	3.98	313	eP	Pn	08 12 30.7	+0.4
PB02				eS	Sn	08 13 16.7	-1.7
PB02				IAML		08 13 22.8	
	comp=Z,287nm,0.4s						
AC01	Pan de Azucar	4.02	238		Pn	08 12 30.4	-0.5
CYA	Choya	4.43	169	⇑eP	Pn	08 12 37.9	+2.0
PB08	IPOC Station P	4.49	330		Pn	08 12 38.0	+0.8
PB08	IPOC Station P	4.49	330	⇑eP	Pn	08 12 38.4	+1.2
PB08	IPOC Station P	4.49	330	eP	Pn	08 12 38.8	+1.6
PB08				eS	Sn	08 13 31.3	+0.6
PB08				IAML		08 13 36.9	
	comp=Z,103nm,0.5s						
PATCX	Punta Patache	4.50	316		Pn	08 12 36.8	-0.2
PATCX	Punta Patache	4.50	316	⇑eP	Pn	08 12 36.5	-0.5
PATCX	Punta Patache	4.50	316	eP	Pn	08 12 37.3	+0.3
PATCX				eS	Sn	08 13 30.2	-0.1
PATCX				IAML		08 13 39.1	
	comp=Z,118nm,0.6s						
AC06	Mina Casimiro	4.58	224		Pn	08 12 37.5	-0.4
GO03	Copiapo	4.68	221	eP	Pn	08 12 37.7	-1.5
TA01	Diego Aracena	4.70	317		Pn	08 12 39.0	-0.5
TA01	Diego Aracena	4.70	317	eP	Pn	08 12 39.7	+0.2
GO01	Chusmiza	4.93	333		Pn	08 12 43.2	+0.3
GO01	Chusmiza	4.93	333	eP	Pn	08 12 43.4	+0.5
PB11	IPOC Station P	5.06	328		Pn	08 12 43.7	-0.5
PB11	IPOC Station P	5.06	328	⇑eP	Pn	08 12 43.6	-0.6
AC04	Llanos de Chal	5.63	222		Pn	08 12 50.3	-1.1
AC05	El Transito	5.67	213	Pn	Pn	08 12 52.5	+0.4
LCO	Las Campanas	6.03	215	Pn	Pn	08 12 56.4	-0.5
PB16	IPOC Station P	6.26	336		Pn	08 12 59.6	-0.5
PB12	IPOC Station P	6.36	328		Pn	08 13 00.2	-0.9
CO01	Juntas del Tor	6.57	206	Pn	Pn	08 13 04.8	+1.0
CO03	El Pedregal	7.57	206	Pn	Pn	08 13 16.2	-0.6
CFA	Coronel Fontan	7.60	189	P	Pn	08 13 16.9	-0.2
	comp=Z,1.8nm,0.3s,baz=358,slow=7.2,SNR=59						
CFA				S	Sn	08 14 37.4	-5.6
	comp=Z,6.9nm,0.4s,baz=218,slow=15,SNR=18						
LPAZ	La Paz	7.86	350	P	Pn	08 13 21.2	+0.2
	comp=Z,5.1nm,0.4s,baz=177,slow=9.6,SNR=24						
LPAZ				S	Sn	08 14 48.3	-1.7
	comp=Z,5.2nm,0.6s,baz=356,slow=22,SNR=6.6						
LPAZ	La Paz	7.86	350		Pn	08 13 21.8	+0.7
LPAZ	La Paz	7.86	350	eP	Pn	08 13 21.4	+0.3
LPAZ				eS	Sn	08 14 47.9	-2.0
CO02	Combarbal	8.02	207	Pn	Pn	08 13 22.6	-0.1
MURT	Porto Murtinho	8.80	76	eP	Pn	08 13 34.4	+1.7
CPUP	Villa Florida	8.85	107	P	Pn	08 13 34.2	+0.8
	comp=Z,0.9nm,0.9s,baz=138,slow=11,SNR=4.7						
CPUP	Villa Florida	8.85	107	Pn	Pn	08 13 34.5	+1.0
CPUP	Villa Florida	8.85	107	eP	Pn	08 13 34.1	+0.7
SIV	San Ignacio	9.67	35	P	Pn	08 13 43.7	-0.6
	comp=Z,3.5nm,0.6s,baz=206,slow=13,SNR=16						
SIV				S	Sn	08 15 24.3	-8.1
	comp=Z,1.0nm,0.7s,baz=184,slow=16,SNR=3.2						
AMBA	Amambai (Brazi	10.88	86	eP	Pn	08 14 00.1	+0.3
PTLB	Pontes e Lacer	11.20	41	Pn	Pn	08 14 05.2	+1.2
BO02	Sierra Bellavi	11.23	197		Pn	08 14 03.8	-0.4
ML02	Panimavida	12.31	198	Pn	Pn	08 14 17.9	-0.1
TRCB	Terra Rica	13.05	87	P	P	08 14 31.8	+0.8
TRCB	Terra Rica	13.05	87	eP	P	08 14 30.6	-0.4
SALV	Santo Antonio	13.22	54	eP	P	08 14 32.2	-0.6
PTGB	Pitanga	13.43	96	eP	P	08 14 34.4	-0.7
CPSB	Cacapava Do Su	13.43	121	eP	P	08 14 35.3	+0.2
ITAB	Concordia	13.58	106	Pn	P	08 14 36.3	-0.4
PLTB	Pedras Altas	13.93	126	Pn	Pn	08 14 37.3	-1.1
TRQA	Tornquist	14.52	165	Pn	Pn	08 14 44.9	-0.7
FRTB	Fartura	15.79	91	eP	Pn	08 15 02.8	+1.5
ARAG	Araguaiana, MT	16.35	62	eP	Pn	08 15 07.9	-0.1
PLCA	Paso Flores	16.90	190	P	Pn	08 15 15.2	+0.6
	comp=Z,1.7nm,0.8s,baz=355,slow=14,SNR=7.0						
PLCA	Paso Flores	16.90	190	eP	Pn	08 15 14.5	-0.1
PET01	Itanhaem-SP	17.80	95	eP	Pn	08 15 24.1	-1.1
LL05	Los Muermos	18.16	196	P	P	08 15 26.1	-0.8
LL05				IAmb	IAmb	08 15 32.6	
	comp=Z,18nm,0.7s						
VAO	Valinhos	18.21	91	P	P	08 15 27.4	-0.4
VAO	Valinhos	18.21	91	eP	P	08 15 28.5	+0.7
LL01	San Ignacio de	18.84	193	P	P	08 15 33.1	-1.3
LL01				IAmb	IAmb	08 15 40.0	
	comp=Z,28nm,1.4s						
SNDB	Serra Nova Dou	19.00	53	eP	P	08 15 37.0	+0.6
PARB	Paraibuna	19.39	92	eP	P	08 15 42.0	+1.4
BDFB	Brasilia	19.53	68	P	P	08 15 43.0	+0.8
	comp=Z,9.9nm,0.8s,baz=243,slow=12,SNR=16						
BDFB	Brasilia	19.53	68	P	P	08 15 42.4	+0.1
BDFB				IAmb	IAmb	08 15 44.5	
	comp=Z,12nm,0.8s						
AY01	Puyuhuapi	20.85	192	P	P	08 15 56.2	+0.4
AY01				IAmb	IAmb	08 16 07.4	
	comp=Z,30nm,1.5s						
JANB	Januaria	22.97	71	eP	P	08 16 17.0	-0.1
SDBA	SAO DESIDERIO	23.76	65	eP	P	08 16 24.1	-0.2
SMTB	Santa Maria do	23.78	54	eP	P	08 16 25.1	+0.7
BELA	Belgrano 2	55.93	172	P	P	08 20 46.6	0.0
BELA				IAmb	IAmb	08 20 52.6	
	comp=Z,5.2nm,1.3s						
SNAA	Sanae	59.21	161	P	P	08 21 13.0	+3.3
	comp=Z,1.1nm,0.9s,baz=278,slow=14,SNR=2.1						
	comp=Z,1.1nm,0.9s						
BRDY	Brady	63.10	329	P	P	08 21 33.6	-2.6
TXAR	Lajitas Array	63.86	324	P	P	08 21 42.2	+0.9
	comp=Z,0.2nm,0.6s,baz=144,slow=3.9,SNR=2.1						
	comp=Z,0.2nm,0.6s						
TORD	Torodi Ar. Bea	76.41	69	P	P	08 22 58.0	+0.2
	comp=Z,0.5nm,0.5s,baz=267,slow=4.6,SNR=2.8						
PDAR	Pinedale Array	77.32	329	P	P	08 23 04.3	+1.7
	comp=Z,0.3nm,0.6s,baz=163,slow=1.3,SNR=2.1						
	comp=Z,0.3nm,0.6s						
YKA	Yellowknife Ar	94.27	340	P	P	08 24 26.7	+0.8
	comp=Z,0.3nm,0.6s,baz=140,slow=4.0,SNR=4.3						
	comp=Z,0.3nm,0.6s						
ASAR	Alice Springs	128.46	204	PKP	PKiKP	08 30 14.4	+0.1
	comp=Z,0.5nm,0.7s,baz=156,slow=2.3,SNR=9.7						
WRA	Warramunga Arr	131.64	207	PKP	PKiKP	08 30 20.6	-0.2
	comp=Z,0.5nm,0.5s,baz=163,slow=1.8,SNR=6.6						
MKAR	Makanchi Array	146.46	40	PKPbc	PKPbc	08 30 47.9	+0.4
	comp=Z,1.8nm,0.7s,baz=306,slow=3.2,SNR=9.4						

MDD ***13*** *08:12:18.6±0.2, 37°.86N×1°.91W, h1^{km}±1^{km}, mb_Lg3.6/43, Error ellipse: s-maj=1.5km s-min=1.4km az=161.0*

SFS ***13*** *08:12:19.0, 37°.87N×1°.90W, h0^{km}, ML3.9/13, ML3.7/18, MLv3.6/18*

INMG ***13*** *08:12:19.1±1.7, 37°.77N×1°.75W, h22^{km}±3^{km}, ML3.4, Error ellipse: s-maj=3.8km s-min=2.6km az=106.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NW Lorca (ESP)*

IGIL ***13*** *08:12:19.1, 37°.86N×1°.91W, h1^{km}*

CNRM ***13*** *08:12:19.3, 37°.87N×1°.87W, h44^{km}*

ISC 13 08:12:18.0±0.9**, 37°.88N**±0°.02×**1°.89W**±0°.02**, h14**^{km}±7^{km}**, n95, σ1^{s}.22**/189**, 3C, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EXBUL	Bullas, Murcia	0.24	47	⇑Pg	Pb	08 12 23.9	-0.3
EXBUL				Sg	Sg	08 12 28.6	+1.7
ELOR	Lorca, Murcia	0.27	155	⇑Pg	Pg	08 12 22.9	-0.8
ELOR				Sg	Sg	08 12 25.5	-1.9
ELOR				i IVmb_Lg		08 12 26.3	
TLOR	Lorca, Murcia	0.27	145	Pg	Pg	08 12 23.6	-0.2
TLOR				Sg	Sg	08 12 27.7	0.0
TLOR	Lorca, Murcia	0.27	145	Pg	Pg	08 12 23.6	-0.2
TLOR				Sg	Sg	08 12 26.9	-0.7
TLOR	Lorca, Murcia	0.27	145	Pg	Pg	08 12 23.4	-0.4
TLOR				Sg	Sg	08 12 26.3	-1.3
EXAHM	Alhama Murcia,	0.36	96	Pg	Pg	08 12 25.5	+0.2
EXAHM				Sg	Sg	08 12 30.6	+0.4
EMUR	La Murta	0.51	94	Pg	Pg	08 12 28.0	0.0
EMUR				Sg	Sg	08 12 35.3	+0.3
EMUR	La Murta	0.51	94	⇑Pg	Pg	08 12 28.1	0.0
EMUR				Sg	Sg	08 12 35.4	+0.5
EMUR				i IVmb_Lg		08 12 39.0	
EXMAZ	Mazarron	0.54	122	Pg	Pg	08 12 28.8	+0.2
EXMAZ				Sg	Sg	08 12 34.9	-1.0
CART	Cartagena	0.76	112	Pg	Pg	08 12 33.2	+0.5
CART				Sg	Sg	08 12 42.7	-0.1
CART	Cartagena	0.76	112	P	Pb	08 12 33.4	+0.3
CART	Cartagena	0.76	112	S	Sb	08 12 44.1	+0.9
ETOB	Tobarra	0.81	19	Pg	Pn	08 12 34.8	-0.3
ETOB				Sg	Sn	08 12 46.7	-0.3
ETOB	Tobarra	0.81	19	Pg	Pn	08 12 34.8	-0.3
ETOB				Sg	Sn	08 12 46.7	-0.3
ETOB				i IVmb_Lg		08 12 52.3	
EXPDH	Pilar de la Ho	0.88	91	Pg	Pg	08 12 34.8	-0.1
EXPDH				Sg	Sg	08 12 46.4	0.0
ETRV	Los Montesinos	0.90	81	Pg	Pg	08 12 35.3	-0.1
ETRV				Sg	Sb	08 12 47.8	+0.6
ETRV				i IVmb_Lg		08 12 53.8	
EQES	Quesada	0.94	266	Pg	Pb	08 12 36.4	+0.2
EQES				Sg	Sb	08 12 49.4	+0.8
EQES				i IVmb_Lg		08 12 56.0	
E0802	Ubeda,Jaen	1.19	277	Pg	Pg	08 12 41.2	+0.3
E0802				Sg	Sn	08 12 56.9	+0.6
EQUE	Quentar	1.41	242	Pg	Pn	08 12 43.1	-0.2
EQUE				Sg	Sn	08 13 02.3	+0.5
EQUE				i IVmb_Lg		08 13 07.2	
EQTA	Presa de Quent	1.41	242	Pn	Pn	08 12 43.0	-0.4
EQTA				Sn	Sg	08 13 04.5	+1.1
EVIV	Cofrentes, Val	1.51	23	Pg	Pg	08 12 46.0	-1.0
EVIV				Sg	Sg	08 13 06.1	-0.5
EVIV				i IVmb_Lg		08 13 13.1	
EBEN2	Beniarda presa	1.55	59	Pn	Pb	08 12 46.0	-0.6
EBEN2				Sn	Sg	08 13 07.4	-0.6
EBEN2				i IVmb_Lg		08 13 13.2	
ELGU	Los Guajares,	1.72	234	Sn	Sb	08 13 12.0	+1.1
ELGU				Pn	Pn	08 12 48.3	+0.7
ELGU	Los Guajares,	1.72	234	Pn	Pn	08 12 48.4	+0.9
ELGU				Pg	Pb	08 12 49.7	+0.3
ELGU				Sn	Sn	08 13 09.6	+0.2
ELGU				i IVmb_Lg		08 13 18.1	
PSIM	Granatula de C	1.74	303	Pn	Pb	08 12 48.9	-0.9
PSIM				Sn	Sn	08 13 09.6	-0.4
ECHE	Chera	1.85	23	Pn	Pb	08 12 51.0	-0.7
ECHE	Chera	1.85	23	Pn	Pn	08 12 49.8	+0.4
ECHE				Sn	Sb	08 13 13.9	-0.8
ECHE				i IVmb_Lg		08 13 23.5	
EGOR	Sierra Gorda,	1.93	247	Pn	Pb	08 12 53.0	-0.1
EGOR	Sierra Gorda,	1.93	247	Pg	Pb	08 12 53.5	+0.4
EGOR				Sn	Sn	08 13 14.4	-0.3
EGOR				i IVmb_Lg		08 13 27.6	
EADA	Adamuz	2.15	278	Pn	Pn	08 12 54.1	+0.7
EADA				Sn	Sn	08 13 21.1	+1.2
EADA	Adamuz	2.15	278	Pn	Pn	08 12 54.1	+0.7
EADA				Sn	Sn	08 13 20.7	+0.8
EADA				i IVmb_Lg		08 13 25.5	
PAB	San Pablo	2.54	312	Pn	Pn	08 13 00.1	+1.1
PAB				Sn	Sn	08 13 29.8	0.0
PAB				Sg	Sg	08 13 38.5	-1.3
PAB				i IVmb_Lg		08 13 42.6	
UCM	Universidad Co	2.64	337	Sg	Sg	08 13 43.0	0.0
EMIJ	Mijas	2.65	241	Pn	Pn	08 13 01.9	+1.5
E0901	Celadas (Terue	2.66	13	Pn	Pn	08 13 01.2	+0.6
E0901				Sn	Sn	08 13 33.9	+1.1
E0901				Sg	Sg	08 13 44.4	+0.9
E0901				i IVmb_Lg		08 13 50.1	
EMOS	Mosqueruela	2.71	23	Pn	Pn	08 13 03.3	+1.9
EMOS				Sn	Sn	08 13 34.5	+0.4
EMOS				i IVmb_Lg		08 13 49.1	
EIBI	Ibiza	2.78	65	Pn	Pn	08 13 04.2	+2.0
EIBI	Ibiza	2.78	65	Pn	Pn	08 13 03.0	+0.8
EIBI				Sn	Sn	08 13 34.9	-0.7
EIBI				i IVmb_Lg		08 13 42.4	
ECAB	El Cabril	2.80	275	Pn	Pn	08 13 03.0	+0.6
ECAB				Sn	Sn	08 13 36.8	+0.7
ECAB	El Cabril	2.80	275	Pn	Pn	08 13 03.0	+0.6
ECAB				Sn	Sn	08 13 36.5	+0.5
ECAB				i IVmb_Lg		08 13 45.4	
YEBES	Yebes (Guadala	2.80	341	Pn	Pn	08 13 03.9	+1.4
YEBES				Sg	Sg	08 13 48.3	+0.3
YEBES				i IVmb_Lg		08 13 52.3	
TAF	Taforalt	3.09	188	P	Pn	08 13 05.7	-0.8
TAF	Taforalt	3.09	188	S	Sn	08 13 42.4	-0.9
EJIF	Jimena Fronter	3.20	245	Pn	Pn	08 13 07.9	0.0
EJIF				Sn	Sn	08 13 44.6	-1.2
ESPR	Espera	3.32	253	Pn	Pn	08 13 11.4	+1.8
ESPR	Espera	3.32	253	Pn	Pn	08 13 10.6	+1.1
ESPR				Sn	Sn	08 13 49.5	+0.6
ESPR				i IVmb_Lg		08 14 04.7	
AKLM	AKL	3.73	206	P	Pn	08 13 13.7	-1.5
AKLM	AKL	3.73	206	S	Sn	08 13 56.6	-2.3
EMIN	Mina Concepcio	3.79	270	Pn	Pn	08 13 16.2	+0.1
EMIN				Sn	Sn	08 13 59.7	-0.8
EMIN	Mina Concepcio	3.79	270	Pn	Pn	08 13 16.1	+0.1
EMIN				Sn	Sn	08 13 58.4	-2.1
EMIN				i IVmb_Lg		08 14 02.7	
EPLA	Plasencia	3.93	305	Pn	Pn	08 13 19.0	+1.0
EPLA				Sn	Sn	08 14 03.5	-0.4
EPLA				Sg	Sb	08 14 18.1	+3.6
EPLA				i IVmb_Lg		08 14 24.4	
ESAC	San Caprasio	3.99	15	Pn	Pn	08 13 19.6	+0.8
ESAC				Sg	Sg	08 14 20.5	-5.5
ESAC				i IVmb_Lg		08 14 34.0	
PBAR	Barrancos	4.08	276	Pn	Pn	08 13 20.4	+0.4
PBAR				Sn	Sn	08 14 07.5	-0.1
PBAR	Barrancos	4.08	276	ePn	Pn	08 13 20.6	+0.6
PBAR				eSn	Sn	08 14 07.7	+0.1
PBAR				eSg	Sg	08 14 29.5	+0.5
PBAR				i IAML		08 14 30.9	
PBAR				i IAML		08 14 32.1	
PBAR				i IAML		08 14 33.9	
EBAD	Badajoz	4.13	284	Pn	Pn	08 13 21.7	+1.0
EBAD				Sn	Sn	08 14 08.8	+0.1
EBAD	Badajoz	4.13	284	Pn	Pn	08 13 21.0	+0.4

EBAD				Sn	Sn	08 14 08.3	-0.4
EBAD				Sg	Sg	08 14 26.8	-3.6
EBAD				*i* IVmb_Lg		08 14 36.1	
EPOB	Poblet	4.15	33	Pn	Pn	08 13 22.9	+1.8
EPOB				Sn	Sn	08 14 08.9	-0.6
EPOB				*i* IVmb_Lg		08 14 33.6	
EGRO	El Granado	4.45	267	Pn	Pn	08 13 25.3	+0.2
EGRO				Sn	Sn	08 14 15.5	-1.2
EGRO	El Granado	4.45	267	Pn	Pn	08 13 25.4	+0.3
EGRO				Sn	Sn	08 14 14.4	-2.4
EGRO				*i* IVmb_Lg		08 14 45.8	
PMRV	Marv??o	4.58	291	*e*Pn	Pn	08 13 28.8	+1.9
PMRV				*e*Sn	Sn	08 14 19.7	-0.2
PMRV				*e*Sg	Sg	08 14 43.6	-1.4
PMRV				*i* IAML		08 14 45.0	
PMRV				*i* IAML		08 14 46.7	
PMRV				*i* IAML		08 14 47.7	
PESTR	Estremoz	4.59	284	*e*Sn	Sn	08 14 20.1	-0.1
PESTR				*e*Sg	Sg	08 14 45.2	-0.1
PESTR				*i* IAML		08 14 49.3	
PESTR				*i* IAML		08 14 50.2	
PESTR				*i* IAML		08 14 55.0	
PVAQ	Vaqueiros	4.65	266	*e*Pn	Pn	08 13 28.1	+0.2
PVAQ				*e*Sn	Sn	08 14 21.2	-0.5
PVAQ				*i* IAML		08 14 22.5	
PVAQ				*i* IAML		08 14 22.8	
PVAQ				*i* IAML		08 14 24.4	
PVAQ	Vaqueiros	4.65	266	P	Pn	08 13 27.0	-0.9
PVAQ	Vaqueiros	4.65	266	S	Sn	08 14 20.4	-1.3
PBEJ	Beja	4.73	274	*e*Pn	Pn	08 13 30.7	+1.8
PBEJ				*e*Sn	Sn	08 14 22.8	-0.8
PBEJ				*e*Sg	Sg	08 14 47.8	-2.0
PBEJ				*i* IAML		08 14 55.8	
PBEJ				*i* IAML		08 14 55.9	
PBEJ				*i* IAML		08 14 59.2	
PCBR	Castelo Branco	4.78	296	*e*Pn	Pn	08 13 31.5	+1.8
PCBR				*e*Sn	Sn	08 14 24.7	-0.2
PCBR				*e*Sg	Sg	08 14 51.0	-0.5
PCBR				*i* IAML		08 14 57.1	
PCBR				*i* IAML		08 14 59.8	
PCBR				*i* IAML		08 15 03.2	
PBDV	Barranco-do-Ve	4.85	264	*e*Pn	Pn	08 13 31.1	+0.5
PBDV				*e*Sn	Sn	08 14 26.7	+0.2
PBDV				*e*Sg	Sg	08 14 55.1	+1.5
PBDV				*i* IAML		08 14 59.0	
PBDV				*i* IAML		08 14 59.1	
PBDV				*i* IAML		08 15 05.7	
EVO	Evora	4.87	280	*e*Pn	Pn	08 13 33.0	+2.1
EVO				*e*Sn	Sn	08 14 27.2	+0.2
EVO				*e*Sg	Sg	08 14 54.0	-0.3
EVO				*i* IAML		08 14 59.9	
EVO				*i* IAML		08 15 02.4	
EVO				*i* IAML		08 15 04.3	
PCVE	Castro Verde	4.88	269	*e*Pn	Pn	08 13 31.5	+0.4
PCVE				*e*Sn	Sn	08 14 27.1	-0.2
PCVE				*e*Sg	Sg	08 14 54.2	-0.5
PCVE				*i* IAML		08 15 01.9	
PCVE				*i* IAML		08 15 01.9	
PCVE				*i* IAML		08 15 05.4	
PARRA	Arraiolos	4.93	283	*e*Pn	Pn	08 13 32.3	+0.7
PARRA				*e*Sn	Sn	08 14 28.1	-0.4
PARRA				*e*Sg	Sg	08 14 54.2	-2.0
PARRA				*i* IAML		08 15 00.1	
PARRA				*i* IAML		08 15 07.4	
PARRA				*i* IAML		08 15 12.8	
MESJ	Messejana	5.01	271	*e*P	Pn	08 13 33.2	+0.4
MESJ	Messejana	5.01	271	*e*Pn	Pn	08 13 33.4	+0.6
MESJ				*e*Sn	Sn	08 14 30.2	-0.3
MESJ				*i* IAML		08 15 00.7	
MESJ				*i* IAML		08 15 05.8	
MESJ				*i* IAML		08 15 07.0	
MTE	Manteigas	5.07	302	*e*Sg	Sg	08 14 56.1	-4.6
MTE				*i* IAML		08 15 07.3	
MTE				*i* IAML		08 15 09.5	
MTE				*i* IAML		08 15 14.9	
PMTG	Montargil	5.11	285	*e*Pn	Pn	08 13 35.1	+0.9
PMTG				*e*Sn	Sn	08 14 32.4	-0.7
PMTG				*e*Sg	Sg	08 15 00.8	-1.3
PMTG				*i* IAML		08 15 03.8	
PMTG				*i* IAML		08 15 07.8	
PMTG				*i* IAML		08 15 09.8	
MOE	Montemor	5.13	279	*e*Pn	Pn	08 13 36.4	+1.9
MOE				*e*Sn	Sn	08 14 33.3	-0.2
MOE				*e*Sg	Sg	08 15 00.7	-2.0
MOE				*i* IAML		08 15 08.8	
MOE				*i* IAML		08 15 11.1	
MOE				*i* IAML		08 15 11.2	
MVO	Moncorvo	5.15	311	*e*Pn	Pn	08 13 36.0	+1.2
MVO				*e*Sn	Sn	08 14 33.3	-0.9
MVO				*e*Sg	Sg	08 15 01.9	-1.5
MVO				*i* IAML		08 15 14.7	
MVO				*i* IAML		08 15 19.2	
PSARD	Sardoal	5.20	291	*e*Pn	Pn	08 13 37.0	+1.6
PSARD				*e*Sn	Sn	08 14 34.7	-0.5
PSARD				*i* IAML		08 15 12.1	
PSARD				*i* IAML		08 15 16.8	
PSARD				*i* IAML		08 15 17.8	
MORF	Marmelete	5.41	266	*e*P	Pn	08 13 38.3	+0.1
MORF	Marmelete	5.41	266	*e*Pn	Pn	08 13 39.1	+0.8
MORF				*e*Sn	Sn	08 14 39.9	-0.4
MORF				*i* IAML		08 14 40.5	
MORF				*i* IAML		08 14 41.5	
MORF				*i* IAML		08 14 42.0	
PBRG	Braganca	5.41	318	*e*Pn	Pn	08 13 39.4	+1.0
PBRG				*e*Sn	Sn	08 14 37.8	-2.7
PBRG				*e*Sg	Sg	08 15 09.7	-2.1
PBRG				*i* IAML		08 15 13.8	
PBRG				*i* IAML		08 15 15.7	
PBRG				*i* IAML		08 15 19.9	
PTEO	Sao Teotonio	5.43	269	*e*Pn	Pn	08 13 39.7	+1.1
PTEO				*e*Sn	Sn	08 14 40.2	-0.7
PTEO				*e*Sg	Sg	08 15 14.4	+2.1
PTEO				*i* IAML		08 15 15.6	
PTEO				*i* IAML		08 15 22.4	
PTEO				*i* IAML		08 15 23.7	
PVIS	Viseu	5.45	303	*e*Pn	Pn	08 13 40.2	+1.3
PVIS				*e*Sn	Sn	08 14 41.7	+0.2
PVIS				*e*Sg	Sg	08 15 12.1	-0.9
ECAL	Calabor	5.51	319	Pn	Pn	08 13 40.3	+0.6
ECAL				Sn	Sn	08 14 42.4	-0.5
ECAL				*i* IVmb_Lg		08 15 22.8	
MDT	Midelt	5.52	205	P	Pn	08 13 39.7	-0.2
MDT	Midelt	5.52	205	S	Sn	08 14 41.8	-1.5
MD31	MD31	5.53	206	P	Pn	08 13 38.8	-1.2
PFVI	Vila Bisbo	5.57	264	*e*Pn	Pn	08 13 41.9	+1.4
PFVI				*e*Sn	Sn	08 14 43.0	-1.3
PFVI				*i* IAML		08 14 45.6	
PFVI				*i* IAML		08 15 32.0	
PFVI	Vila Bisbo	5.57	264	P	Pn	08 13 39.7	-0.8
PCAS	Casmilo, Conde	5.59	295	*e*Pn	Pn	08 13 43.0	+2.2
PCAS				*e*Sn	Sn	08 14 44.2	-0.7
PCAS				*i* IAML		08 15 25.1	
PCAS				*i* IAML		08 15 29.1	
PCAS				*i* IAML		08 15 33.0	
PVRL	Vila Real	5.64	309	*e*Sn	Sn	08 14 46.0	0.0
PVRL				*i* IAML		08 15 23.2	
PVRL				*i* IAML		08 15 23.6	
PSBE	So Bento	5.65	289	*e*Pn	Pn	08 13 43.7	+2.2
PSBE				*e*Sn	Sn	08 14 45.4	-0.8
POLO	Lamas de Olo	5.74	309	*e*Sn	Sn	08 14 48.6	-0.1
POLO				*e*Sg	Sg	08 15 19.3	-3.0
POLO				*i* IAML		08 15 35.1	
POLO				*i* IAML		08 15 36.8	
POLO				*i* IAML		08 15 38.6	
PMAFR	Mafra	5.91	283	*e*Pn	Pn	08 13 47.2	+2.1
PMAFR				*e*Sn	Sn	08 14 52.9	+0.3
PMAFR				*e*Sg	Sg	08 15 27.4	-0.1
PMAFR				*i* IAML		08 15 32.8	
PMAFR				*i* IAML		08 15 34.7	
PMAFR				*i* IAML		08 15 40.5	
PCAB	Cabril	6.08	311	*e*Pn	Pn	08 13 49.0	+1.4
PCAB				*e*Sn	Sn	08 14 56.5	-0.4
PCAB				*i* IAML		08 15 40.1	
PCAB				*i* IAML		08 15 40.3	
PCAB				*i* IAML		08 15 40.8	
PGAV	Gavieira, Arco	6.38	312	*e*Pn	Pn	08 13 53.9	+2.2
PGAV				*e*Sn	Sn	08 15 03.9	-0.5
PGAV				*e*Sg	Sg	08 15 40.9	-1.8

IDC ***13*** *08:31:56.6±1.8, 9°.59S×155°.18E, h0^{km}, mb3.9/6, mbtmp3.9/6, MS3.4/3, Error ellipse: s-maj=66.9km s-min=24.1km az=118.0*

ISC 13 08:32:01.7±1.8**, 9°.6S**±0°.3×**155°.1E**±0°.4**, h33^{km}, n9,** σ**1^{s}62**/6**,** **mb3.8**/6**, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.86	271	LR	LR	08 37 01.7	
	comp=Z,387nm,19.7s,baz=136,slow=38						
JAY	Jayapura	15.97	295	LR	LR	08 40 45.9	
	comp=Z,95nm,19.1s,baz=224,slow=33						
WRA	Warramunga Arr	22.54	241	P	P	08 36 57.4	-1.6
	2.2nm,0.8s,baz=66,slow=9.9,SNR=10.0						
	2.2nm,0.8s						
ASAR	Alice Springs	24.61	233	P	P	08 37 19.9	+0.7
	3.7nm,0.8s,baz=64,slow=9.6,SNR=44						
	3.7nm,0.8s						
STKA	Stephens Creek	25.45	208	P	P	08 37 27.4	+0.7
	3.4nm,0.7s,baz=40,slow=12,SNR=8.0						
	3.4nm,0.7s						
NWAO	Narrogin (SRO)	41.90	231	LR	LR	08 57 50.3	
	comp=Z,36nm,18.1s,baz=220,slow=37						
SONM	Songino Array	71.60	328	P	P	08 43 21.6	+1.7
	0.4nm,0.4s,baz=112,slow=6.4,SNR=3.7						
	0.4nm,0.4s						
ILAR	Eielson Array	85.75	21	P	P	08 44 36.4	-0.9
	0.5nm,0.8s,baz=245,slow=5.2,SNR=5.6						
	0.5nm,0.8s						
ZALV	Zalesovo Beam	86.41	326	P	P	08 44 39.8	-0.8
	0.3nm,0.4s,baz=134,slow=6.2,SNR=1.7						
	0.3nm,0.4s						

AFAD ***13*** *08:36:10.8, 37°.08N×44°.94E, h15^{km}±1^{km}, ML3.4*

TEH ***13*** *08:36:11.3, 37°.22N×45°.06E, h5^{km}*

ISN ***13*** *08:36:12.6±2.6, 37°.12N×45°.04E, h5^{km}, ML3.4*

ISC 13 08:36:12.2±1.4**, 37°.13N**±0°.03×**44°.96E**±0°.03**, h21**^{km}±5^{km}**, n19,** σ**2^{s}45**/29**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAHB	Mahabad	0.70	121	Pg	Pb	08 36 23.9	-1.9
MAHB				Sg	Sb	08 36 34.1	-1.0
IAZR	Azarshahr	0.98	56	Pg	Pb	08 36 28.2	-2.3
HAKT	HAKKARI	1.08	293	P	Pb	08 36 28.3	-4.0
HAKT				S	Sb	08 36 44.3	-1.9
CUKT	Cukurca	1.08	276	P	Pn	08 36 32.3	+0.1
CUKT				S	Sn	08 36 46.5	-0.1
CUKT				*i* IAML		08 36 52.0	
	comp=E,2μm,0.6s						
CUKT				*i* IAML		08 36 53.0	
	comp=N,956nm,0.7s						
ISHB	Shabestar	1.26	24	Sg	Sn	08 36 48.9	-2.3
IMRD	Marand	1.68	20	Pg	Pn	08 36 40.4	-0.1
OZAP	Van, Ozalp-Mer	1.71	334	P	Pb	08 36 44.6	+1.7
OZAP				S	Sb	08 37 05.7	+1.6
IKRK	Kirkuk	1.80	196	*e*Pg	Pb	08 36 43.0	-1.4
	baz=18						
IKRK				*e*Sg	Sb	08 37 10.0	+3.5
IKRK				AML	AML	08 37 12.4	
	comp=E,548nm,0.5s						
IKRK				AML	AML	08 37 13.2	
	comp=N,386nm,0.3s						
IHSH	Hashtrud	1.85	84	Pg	Pn	08 36 43.7	+0.9
TVAN	Van	1.86	319	P	Pb	08 36 45.3	-0.3
TVAN				S	Sb	08 37 11.4	+3.0
SIRN	Sırnak	2.06	281	P	Pb	08 36 47.0	-1.9
SIRN				S	Sb	08 37 15.1	+1.0
SIRN				*i* IAML		08 37 19.0	
	comp=N,231nm,0.5s						
SIRN				*i* IAML		08 37 23.0	
	comp=N,247nm,1.0s						
PERV	Siirt/Pervari-	2.09	294	P	Pb	08 36 46.8	-2.5
PERV				S	Sb	08 37 17.7	+2.8
PERV				*i* IAML		08 37 24.0	
	comp=N,285nm,0.6s						
PERV				*i* IAML		08 37 26.0	
	comp=N,309nm,0.9s						
SRTM	Siirt_Merkez	2.56	290	P	Pb	08 36 55.1	-2.3
SRTM				S	Sb	08 37 30.9	+2.4
SRTM				*i* IAML		08 37 38.0	
	comp=N,156nm,0.7s						
IDHR	Dehrash	2.69	154	Pn	Pb	08 36 58.1	-1.6
MIDY	Mardin/Midyat-	2.85	277	P	Pb	08 36 59.1	-3.3
MIDY				S	Sb	08 37 39.8	+2.9
IGHG	Ghaleghazi	3.09	154	Pn	Pb	08 37 03.7	-2.8
GLG1	Gilan-e-Gharb	3.11	165	Pn	Pb	08 37 04.0	-2.8
SNQR	Sonqor, Kerman	3.14	136	Pn	Pn	08 37 03.8	+3.3
QABG	Abgarm-Qazvin	3.99	109	Pn	Pn	08 37 15.0	+2.7

AUST ***13*** *08:36:20.5±0.2, 31°S±2°×11°8E±°, h10^{km}, mb4.1/2, ML2.7/12, Error ellipse: s-maj=3.7km s-min=3.4km az=64.7*

CUPWA ***13*** *08:36:22.0±1.1, 31°.11S×117°.59E, h-1^{km}±62^{km}, ML2.7, Region: WESTERN AUSTRALIA*

ISC 13 08:36:20.9±1.1**, 31°.09S**±0°.03×**117°.61E**±0°.03**, h15**^{km}±8^{km}**, n19,** σ**1^{s}06**/32**, 2C-1D, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLBR	Kellerberrin	0.51	166	P	Pg	08 36 31.0	-0.1
KLBR				S	Sg	08 36 37.4	-0.6
KLBR	Kellerberrin	0.51	166	⇑*i*P	Pg	08 36 31.0	-0.1
KLBR				S	Sg	08 36 37.4	-0.6
BR4	Bonnie Rock 4	0.76	54	⇓*i*P	Pg	08 36 36.1	+0.4
BR4				*i* S	Sb	08 36 46.6	+0.6
BLDU	Ballidu	0.91	301	P	Pg	08 36 38.5	-0.1
BLDU	Ballidu	0.91	301	⇑*i*P	Pg	08 36 38.4	-0.1
BLDU				*e*S	Sg	08 36 50.2	-0.3
MUN	Mundaring	1.49	233	P	Pn	08 36 47.9	+0.8
MUN	Mundaring	1.49	233	*e*P	Pn	08 36 48.0	+0.8
MUN				*e*S	Sn	08 37 06.6	+0.3
MTKN	Mount Kenneth	1.78	241	P	Pb	08 36 53.1	-0.2
MTKN				S	Sn	08 37 15.1	+1.6
NWAO	Narrogin (SRO)	1.86	190	P	Pn	08 36 53.1	+0.8
NWAO	Narrogin (SRO)	1.86	190	P	Pn	08 36 53.1	+0.8
NWAO				S	Sn	08 37 16.3	+0.9
NWAO	Narrogin (SRO)	1.86	190	*e*P	Pn	08 36 53.0	+0.8
NWAO				*e*S	Sn	08 37 16.1	+0.6
MORW	Morawa	2.43	326	P	Pn	08 37 01.1	+1.0
MORW	Morawa	2.43	326	*e*P	Pn	08 37 01.2	+1.0
MORW				*e*S	Sn	08 37 30.0	+0.3
RKGY	Rocky Gully	3.55	188	P	Pn	08 37 16.5	+1.1
RKGY				S	Sb	08 38 05.7	-0.5
KMBL	Kambalda	3.67	95	P	Pn	08 37 18.0	+0.8
KMBL				S	Sn	08 38 01.3	+1.1
MEEK	Meekatharra	4.53	11	P	Pn	08 37 30.2	+1.2
MEEK	Meekatharra	4.53	11	S	Sn	08 38 20.0	-1.4
DNDOZ	Balladonia	5.50	106	P	Pn	08 37 43.3	+1.0
	comp=Z,0.2nmcomp=Z,84nm,2.2s						
DNDOZ				S	Sn	08 38 45.5	+0.2
FORT	Forrest	8.98	91	P	Pn	08 38 30.4	+0.3
	comp=Z,0.0nmcomp=Z,4.9nm,1.0s						
FORT				S	Sn	08 40 07.4	-3.6

IDC ***13*** *08:46:08.6±1.5, 11°.23S×166°.03E, h0^{km}, mb3.9/5, mbtmp3.9/6, ML3.6/1, MS3.1/2, Error ellipse: s-maj=51.1km s-min=26.1km az=123.0*

NOU ***13*** *08:46:15.1, 11°.63S×165°.86E, h0^{km}, mb4.7/8, Santa Cruz Islands*

ISC 13 08:46:14.2±1.3**, 11°.4S**±0°.1×**166°.2E**±0°.2**, h37^{km}, n13,** σ**1^{s}84**/13**, mb3.8**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	4.14	167	P	Pn	08 47 18.0	+3.2
NGOA	Tingoa Renbel	6.03	268	P	Pn	08 47 40.3	-0.6
SAVO	Savo Central	6.69	289	P	Pn	08 47 51.8	+1.9
TATA	Tatamba Isabel	6.99	295	P	Pn	08 47 55.5	+1.5
DZM	Mont Dzumac	10.62	179	Pn	Pn	08 48 44.7	+0.9
	0.4nm,0.3s,baz=130,slow=19,SNR=19						
DZM				Sn	Sn	08 50 39.2	-2.3
	0.1nm,0.3s,baz=142,slow=19,SNR=1.4						
DZM				LR	LR	08 52 32.5	
	comp=Z,88nm,19.5s,baz=31,slow=36						
	1.6nm,0.5s						
DZM	Mont Dzumac	10.62	179	P	Pn	08 48 45.5	+1.7
YATNC	Mamie plateau,	10.62	177	P	Pn	08 48 45.9	+2.1
CTA	Charters Tower	21.05	243	LR	LR	08 57 50.8	
	comp=Z,63nm,18.1s,baz=51,slow=34						
STKA	Stephens Creek	30.51	224	P	P	08 52 23.9	0.0
	1.4nm,0.8s,baz=63,slow=11,SNR=3.6						
	1.4nm,0.8s						
WRA	Warramunga Arr	31.80	251	P	P	08 52 34.0	-1.5
	0.9nm,0.8s,baz=84,slow=9.2,SNR=8.4						
	0.9nm,0.8s						
ASAR	Alice Springs	33.05	244	P	P	08 52 45.1	-1.3
	1.5nm,0.7s,baz=69,slow=9.8,SNR=28						
	1.5nm,0.7s						
ILAR	Eielson Array	83.70	18	P	P	08 58 38.3	-0.5
	0.6nm,0.7s,baz=232,slow=5.3,SNR=13						
	0.6nm,0.7s						
MKAR	Makanchi Array	94.09	317	P	P	08 59 28.3	-0.6
	0.3nm,0.5s,baz=92,slow=7.2,SNR=1.5						
	0.3nm,0.5s						

SJA ***13*** *08:49:32.2±0.7, 20°.94S×68°.90W, h119^{km}±4^{km}, ML3.9, MW3.8*

NEIC ***13*** *08:49:34.6±1.1, 20°.94S±0°.05×68°.9W±0°.1, h98^{km}±10^{km}, mb4.0/5, ML3.9(GUC), Error ellipse: s-maj=13.9km s-min=6.7km az=90.0*

GUC ***13*** *08:49:34.5±0.8, 20°.95S×68°.89W, h105^{km}±4^{km}, ML3.9*

VAO ***13*** *08:49:37.6±1.4, 20°.71S×68°.41W, h112^{km}±8^{km}, mb4.2, Presumed earthquake*

IDC ***13*** *08:49:37.5±2.8, 20°.87S×68°.33W, h118^{km}±29^{km}, mb3.6/1, mbtmp3.9/4, Error ellipse: s-maj=56.4km s-min=27.0km az=110.0*

ISC 13 08:49:33.0±0.6**, 20°.94S**±0°.03×**68°.89W**±0°.05**, h109**^{km}±6^{km}**, n98,** σ**1^{s}77**/126**, 4C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.57	260		Pn	08 49 50.3	-0.1
PB01	IPOC Station P	0.57	260	⇑*i*P	Pn	08 49 50.4	0.0
PB01				*e*S	Sn	08 50 03.0	-0.4
PB01				IAML		08 50 05.1	
	comp=E,5μm,0.2s						
PB01	IPOC Station P	0.57	260	*e*P	Pn	08 49 50.4	0.0
PB01				*e*S	Sn	08 50 03.6	+0.2
PB01				IAML		08 50 04.3	
	comp=Z,4μm,0.2s						
PB08	IPOC Station P	0.83	342		Pn	08 49 53.4	+0.4
PB08	IPOC Station P	0.83	342	*i* P	Pn	08 49 53.9	+0.9
PB08				*e*S	Sn	08 50 08.7	+0.8
PB08	IPOC Station P	0.83	342	*e*P	Pn	08 49 53.9	+0.9
PB08				*e*S	Sn	08 50 09.2	+1.4
PB08				IAML		08 50 10.2	
	comp=Z,832nm,0.7s						
PX03	IPOC Station P	0.88	307	*e*P	Pn	08 49 52.9	-0.2
PB09	IPOC Station P	0.92	201		Pn	08 49 54.4	+0.8
PB09	IPOC Station P	0.92	201	⇑*i*P	Pn	08 49 54.3	+0.8
PB09				*e*S	Sn	08 50 10.2	+1.3
PB09	IPOC Station P	0.92	201	*e*P	Pn	08 49 53.7	+0.2
PB09				*e*S	Sn	08 50 11.0	+2.1
PB09				IAML		08 50 12.5	
	comp=Z,1μm,0.7s						
PB02	IPOC Station P	1.02	248		Pn	08 49 54.9	+0.5
PB02	IPOC Station P	1.02	248	⇑*i*P	Pn	08 49 55.1	+0.6
PB02				*e*S	Sn	08 50 10.8	+0.2
PB02	IPOC Station P	1.02	248	*e*P	Pn	08 49 54.4	-0.1
PB02				*e*S	Sn	08 50 11.9	+1.3
PB02				IAML		08 50 13.3	
	comp=Z,4μm,0.3s						
PATCX	Punta Patache	1.19	275		Pn	08 49 57.0	+0.6
PATCX	Punta Patache	1.19	275	⇑*i*P	Pn	08 49 56.9	+0.6
PATCX				*e*S	Sn	08 50 14.5	+0.6
PATCX				IAML		08 50 15.5	
	comp=E,4μm,0.3s						
PATCX	Punta Patache	1.19	275	*e*P	Pn	08 49 56.9	+0.6
PATCX				*e*S	Sn	08 50 15.3	+1.4
PATCX				IAML		08 50 15.6	
	comp=Z,2μm,0.4s						
PB07	IPOC Station P	1.22	230		Pn	08 49 57.2	+0.5
PB07	IPOC Station P	1.22	230	*e*P	Pn	08 49 57.2	+0.5
PB07				*e*S	Sn	08 50 15.0	+0.4
PB07				IAML		08 50 16.1	
	comp=N,3μm,0.2s						
PB07	IPOC Station P	1.22	230	*e*P	Pn	08 49 57.1	+0.4
PB07				*e*S	Sn	08 50 16.0	+1.4
PB07				IAML		08 50 17.0	
	comp=Z,2μm,0.3s						
TA01	Diego Aracena	1.27	287		Pn	08 49 57.4	+0.4
TA01	Diego Aracena	1.27	287	*e*P	Pn	08 49 57.4	+0.4
TA01				*e*S	Sn	08 50 15.2	-0.1
TA01				IAML		08 50 16.4	
	comp=N,2μm,0.3s						
TA01	Diego Aracena	1.27	287	*e*P	Pn	08 49 57.5	+0.4
TA01				*e*S	Sn	08 50 16.0	+0.7
GO01	Chusmiza	1.30	347		Pn	08 49 58.4	+0.4
GO01	Chusmiza	1.30	347	⇓*i*P	Pn	08 49 58.9	+1.0
GO01				*e*S	Sn	08 50 17.7	+1.0
GO01				IAML		08 50 20.7	
	comp=N,3μm,0.2s						
GO01	Chusmiza	1.30	347	*e*P	Pn	08 49 59.0	+1.0
GO01				*e*S	Sn	08 50 19.3	+2.6
TA02	Huaiquique	1.34	299	*e*P	Pn	08 49 58.4	+0.5
TA02				*e*S	Sn	08 50 17.5	+0.6
TA02	Huaiquique	1.34	299	*e*P	Pn	08 49 58.6	+0.7
TA02				IAML		08 50 24.8	
	comp=Z,1μm,0.1s						
PB03	IPOC Station P	1.37	216		Pn	08 49 59.0	+0.6
PB03	IPOC Station P	1.37	216	*i* P	Pn	08 49 59.0	+0.6
PB03				*e*S	Sn	08 50 17.9	+0.2
PB03				IAML		08 50 19.2	
	comp=N,2μm,0.3s						
PB03	IPOC Station P	1.37	216	*e*P	Pn	08 49 58.9	+0.6
PB03				*e*S	Sn	08 50 18.4	+0.8
PB03				IAML		08 50 21.4	
	comp=Z,2μm,0.2s						
PB11	IPOC Station P	1.38	328		Pn	08 49 59.3	+0.7
PB11	IPOC Station P	1.38	328	*e*P	Pn	08 49 59.3	+0.7
PB11				*e*S	Sn	08 50 18.6	+0.8
PB11				IAML		08 50 21.6	
	comp=E,3μm,0.1s						
PB11	IPOC Station P	1.38	328	*e*P	Pn	08 49 59.1	+0.6
PB11				*e*S	Sn	08 50 19.2	+1.4
PB11				IAML		08 50 20.3	
	comp=Z,832nm,0.6s						
PB06	IPOC Station P	1.87	200		Pn	08 50 05.4	+0.9
PB06	IPOC Station P	1.87	200	*e*P	Pn	08 50 05.1	+0.6
PB06				IAML		08 50 31.2	
	comp=E,960nm,0.4s						
PB06	IPOC Station P	1.87	200	*e*P	Pn	08 50 05.3	+0.9
PB06				*e*S	Sn	08 50 30.5	+2.0
PB06				IAML		08 50 34.4	
	comp=Z,1μm,0.3s						
AF01	San Pedro de A	2.11	162		Pn	08 50 10.0	+2.4
AF01	San Pedro de A	2.11	162	*e*P	Pn	08 50 10.2	+2.6
AF01				*e*S	Sn	08 50 33.4	-0.6
AF01				IAML		08 50 52.5	
	comp=Z,376nm,0.4s						
PB05	IPOC Station P	2.26	212		Pn	08 50 10.5	+1.0
PB05	IPOC Station P	2.26	212	*e*P	Pn	08 50 10.1	+0.6
PB05				IAML		08 50 45.4	
	comp=E,470nm,0.3s						
PB05	IPOC Station P	2.26	212	*e*P	Pn	08 50 09.8	+0.3
PB05				*e*S	Sn	08 50 39.0	+1.6
PB05				IAML		08 50 46.8	
	comp=Z,331nm,0.3s						
PB16	IPOC Station P	2.66	347		Pn	08 50 17.2	+2.2
PB16	IPOC Station P	2.66	347	*e*P	Pn	08 50 17.4	+2.3
PB16	IPOC Station P	2.66	347	*e*P	Pn	08 50 17.3	+2.2
PB16				*e*S	Sn	08 50 46.0	-1.2
PB12	IPOC Station P	2.68	329		Pn	08 50 15.0	+0.1
PB12	IPOC Station P	2.68	329	⇓*e*P	Pn	08 50 14.9	-0.1
PB12	IPOC Station P	2.68	329	*e*P	Pn	08 50 15.0	+0.1
PB12				*e*S	Sn	08 50 46.4	-0.7
PB12				IAML		08 50 58.4	
	comp=Z,168nm,0.3s						
AP01	Chacalluta	2.90	332	Pn	Pn	08 50 19.8	+2.1
AP01	Chacalluta	2.90	332	*e*P	Pn	08 50 19.9	+2.1
AP01				*e*S	Sn	08 50 52.2	+0.1
AP01				IAML		08 51 14.4	
	comp=Z,344nm,0.5s						
PB10	IPOC Station P	2.99	211		Pn	08 50 22.1	+3.1
PB10	IPOC Station P	2.99	211	*e*P	Pn	08 50 18.9	0.0
PB10	IPOC Station P	2.99	211	*e*P	Pn	08 50 19.1	+0.2
PB10				*e*S	Sn	08 51 04.5	+10
PB10				IAML		08 51 07.3	
	comp=Z,178nm,0.2s						

YJA	Yavi	3.37	112	eP	Pn	08 50 28.1	+3.8
PB18	Visviri	3.38	350		Pn	08 50 29.1	+4.5
PB18	Visviri	3.38	350	eP	Pn	08 50 29.4	+4.8
PB14	IPOC Station P	3.93	201		Pn	08 50 33.7	+2.0
PB14	IPOC Station P	3.93	201	eP	Pn	08 50 36.5	+4.8
PB14	IPOC Station P	3.93	201	eP	Pn	08 50 32.2	+0.5
PB14				eS	Sn	08 51 27.1	+10
PB14				IAML		08 51 32.5	
	comp=Z,192nm,0.3s						
HJA	Humahuaca	3.94	126	eP	Pn	08 50 35.8	+4.0
GO02	Mina Guanaco	4.25	189		Pn	08 50 37.1	+1.0
GO02	Mina Guanaco	4.25	189	eP	Pn	08 50 37.0	+1.0
GO02				eS	Sn	08 51 37.1	+12
GO02				IAML		08 51 49.4	
	comp=Z,144nm,0.2s						
LPAZ	La Paz	4.68	9	P	Pn	08 50 45.1	+3.0
	comp=Z,5.3nm,0.3s,baz=177,slow=7.2,SNR=34						
LPAZ	La Paz	4.68	9		Pn	08 50 44.2	+2.0
LPAZ	La Paz	4.68	9	eP	Pn	08 50 45.6	+3.4
LPAZ	La Paz	4.68	9	eP	Pn	08 50 43.5	+1.3
AC02	Maricunga	5.87	182		Pn	08 50 59.2	+1.1
GO03	Copiapo	6.74	190	Pn	Pn	08 51 07.8	-1.6
AC05	El Transito	7.96	189	Pn	Pn	08 51 26.8	+0.7
LCO	Las Campanas	8.20	191	Pn	Pn	08 51 26.7	-2.8
SIV	San Ignacio	8.90	58	P	Pn	08 51 36.8	-2.0
	comp=Z,6.8nm,0.5s,baz=234,slow=8.2,SNR=35						
CFA	Coronel Fontan	10.64	177	P	Pn	08 51 59.0	-3.3
	comp=Z,0.4nm,0.3s,baz=351,slow=13,SNR=1.9						
CFA				S	Sn	08 53 50.6	-8.8
	comp=Z,0.8nm,0.3s,baz=258,slow=19,SNR=3.0						
PTLB	Pontes e Lacer	10.75	61		Pn	08 52 02.5	-1.4
PTLB	Pontes e Lacer	10.75	61	eP	Pn	08 52 02.2	-1.7
BDQN	Bodoquena, MS	11.37	90	eP	Pn	08 52 09.5	-2.7
VILB	Vilhena	11.49	48		Pn	08 52 13.1	-0.8
VILB	Vilhena	11.49	48	eP	Pn	08 52 10.8	-3.1
PDRB	Porto dos Gac	14.90	53	eP	Pn	08 52 56.9	-1.2
ITAB	Concordia	16.52	116		P	08 53 19.9	+0.8
ITAB	Concordia	16.52	116	eP	P	08 53 20.0	+0.9
ARAG	Araguaiana, MT	17.02	75	eP	Pn	08 53 23.3	-1.2
FRTB	Fartura	18.06	101	eP	Pn	08 53 36.5	-0.6
TRQA	Tornquist	18.07	162	P	Pn	08 53 38.2	+1.1
TRQA				IAmb	IAmb	08 53 47.1	
	comp=Z,20nm,1.4s						
BB19B	Bebedouro	19.01	94	eP	P	08 53 46.8	+0.3
SNDB	Serra Nova Dou	19.07	65	eP	P	08 53 46.8	-0.2
IPMB	Ipameri, GO	19.71	85	eP	P	08 53 53.0	-1.1
PLCA	Paso Flores	19.78	184	P	Pn	08 53 59.6	+2.4
	comp=Z,3.1nm,0.9s,baz=359,slow=11,SNR=7.9						
PLCA	Paso Flores	19.78	184	P	Pn	08 53 59.1	+1.9
PLCA				IAmb	IAmb	08 54 16.3	
	comp=Z,11nm,1.5s						
PET01	Itanhaem-SP	20.22	104	eP	P	08 53 57.9	-1.6
ITTB	Itaituba	20.85	40	eP	P	08 54 05.2	-1.1
BSCB	Bom Sucesso	22.51	94	eP	P	08 54 23.8	-0.1
SMTB	Santa Maria do	23.79	63	eP	P	08 54 36.3	+0.4
JANB	Januaria	24.08	80	eP	P	08 54 38.5	-0.1
SDBA	SAO DESIDERIO	24.46	74	eP	P	08 54 41.5	-0.5
BOAV	Boa Vista	24.60	20	P	P	08 54 44.4	+1.3
BOAV				IAmb	IAmb	08 54 46.1	
	comp=Z,3.7nm,0.8s						
BOAV	Boa Vista	24.60	20	eP	P	08 54 43.6	+0.5
SNAA	Sanae	62.80	161	P	P	08 59 48.5	+1.8
TORD	Torodi Ar. Bea	77.15	70	P	P	09 01 15.8	+0.7
	comp=Z,0.7nm,0.5s,baz=259,slow=4.3,SNR=5.6						
	comp=Z,0.7nm,0.5s						
MKAR	Makanchi Array	145.17	35	PKP	PKiKP	09 08 59.9	-1.7
	comp=Z,0.2nm,0.6s,baz=313,slow=5.1,SNR=2.3						

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*TAP **13** 08:50:54.0, 24°.88N×122°.49E, h14^{km}, ML4.0, D*

*JMA **13** 08:50:53.8±0.1, 25°N±1°×122°.6E±0°.5, h36^{km}±2^{km}, MV2.9/10, NW OFF ISHIGAKIJIMA IS*

*IDC **13** 08:51:04.6±6.2, 24°.86N×122°.51E, h116^{km}±60^{km}, mb3.6/11, mbtmp4.0/12, MS3.5/13, Error ellipse: s-maj=32.2km s-min=14.6km az=67.0*

ISC 13 08:50:52.3±1.1**, 24°.88N**±0°.03×**122°.61E**±0°.02**, h8**^{km}±8^{km}**, n143, σ0^s.93**/170**, mb4.0**/10**, MS3.5**/11**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.53	144	P	Pb	08 51 04.6	+0.9
JYNG				eS	Sb	08 51 12.0	+0.5
YOJ	Yonaguni jima	0.56	139	P	Pb	08 51 04.9	+0.6
YOJ	Yonaguni jima	0.56	139	eP	Pb	08 51 05.1	+0.9
YOJ				eS	Sn	08 51 14.8	-1.1
YOJ	Yonaguni jima	0.56	139	P	Pb	08 51 05.1	+0.9
YOJ				eS	Sb	08 51 13.0	+0.7
EOS2	EOS2	0.57	217	eP	Pb	08 51 04.6	+0.2
EOS2				S	Sb	08 51 12.6	-0.1
TWB1	Santiao Chiao	0.58	283	i P	Pg	08 51 04.1	+0.6
EGS		0.61	267	P	Pg	08 51 04.8	+0.6
EGS				S	Sg	08 51 12.5	+0.3
EOS3	EOS3	0.65	204	eP	Pb	08 51 06.2	+0.5
EOS3				S	Sb	08 51 16.7	+1.9
SXI1	Grass Mountain	0.70	288	P	Pb	08 51 06.5	-0.3
TIPB	Shuangxi	0.71	277	P	Pg	08 51 06.7	+0.6
TWC	Suao	0.74	249	P	Pg	08 51 06.4	-0.2
TWC				eS	Sg	08 51 15.2	-1.1
ESAO	Su ao	0.76	247	eP	Pg	08 51 07.3	+0.4
ESAO				S	Sg	08 51 16.4	-0.4
NWF	Wu-fen Shan	0.77	284	eP	Pb	08 51 08.3	+0.2
NWF				S	Sg	08 51 17.6	+0.4
WFSB	Wu-fen Shan	0.77	284	P	Pb	08 51 08.3	+0.4
WFSB				S	Sg	08 51 17.6	+0.3
ILA	Ilan	0.79	262	eP	Pg	08 51 07.8	+0.3
EOS4	EOS4	0.80	199	eP	Pb	08 51 08.9	+0.7
EOS4				S	Sg	08 51 17.9	-0.1
TNOU	National Taiwa	0.80	290	eP	Pb	08 51 08.4	-0.1
TNOU				eS	Sg	08 51 18.6	+0.4
NDS	Dongshan	0.85	253	P	Pg	08 51 08.7	+0.1
NDS				S	Sg	08 51 19.1	-0.6
TWE	Neicheng	0.87	260	P	Pg	08 51 09.0	0.0
TWE				eS	Sg	08 51 18.2	-2.1
EWUT	Wuta	0.87	240	P	Pg	08 51 09.1	0.0
EWUT				eS	Sb	08 51 21.7	+0.3
PCYT	Pengchaiyu	0.89	327	P	Pb	08 51 09.9	-0.1
ENA	Nanau	0.91	240	eP	Pg	08 51 09.9	+0.1
ENA				S	Sg	08 51 21.2	-0.4
FUSB	Fushanzhiwuyua	0.93	263	eP	Pg	08 51 10.1	-0.1
TWA	Mucha	0.94	276	eP	Pb	08 51 10.7	0.0
EAHA	Aohua	0.96	235	eP	Pg	08 51 10.9	+0.1
YM08	YM08	0.97	289	eP	Pb	08 51 11.9	+0.6
ENTT	Nioudou	0.98	256	eP	Pg	08 51 10.9	-0.1
ENTT				eS	Sg	08 51 23.8	0.0
YM01	YM01	0.98	286	eP	Pb	08 51 11.6	+0.1
YM01				eS	Sg	08 51 23.6	-0.2
NHDH	Xindian Distri	0.99	275	eP	Pg	08 51 11.6	+0.4
TWY	Chenhua	0.99	293	P	Pn	08 51 12.9	+0.4
ZUZH	Zhuzihu	1.00	286	eP	Pb	08 51 12.6	+0.6
NWLT	Wulai	1.01	264	P	Pg	08 51 11.7	0.0
NWLT				S	Sg	08 51 24.7	-0.1
TATO	Taipei	1.02	276	P	Pg	08 51 11.7	-0.2
ANP	Anpu	1.03	287	eP	Pb	08 51 12.9	+0.5
LATG	Datong	1.04	251	eP	Pg	08 51 12.3	0.0
LATG				S	Sg	08 51 22.7	-3.2
NTST	Danshui	1.09	285	eP	Pn	08 51 14.2	+0.4
NTST				eS	Sg	08 51 26.9	-0.5
TWS1	Kuangyinshan	1.10	282	eP	Pn	08 51 14.8	+0.8
YHNB	Yeheng	1.14	260	P	Pg	08 51 14.1	-0.1
YHNB	Yeheng	1.14	260	eP	Pg	08 51 13.8	-0.4
YHNB				eS	Sg	08 51 27.6	-1.4
ETL	Fush Village	1.15	231	eP	Pg	08 51 14.0	-0.3
ETL				eS	Sg	08 51 29.3	0.0
NSK	Sanguang	1.15	260	eP	Pg	08 51 14.2	-0.3
IRIF	Iriomote-Funau	1.16	118	P	Pg	08 51 14.1	-0.4
NACB	Ninganchiao	1.16	233	P	Pg	08 51 14.8	+0.2
NACB	Ninganchiao	1.16	233	eP	Pg	08 51 13.8	-0.8
NACB				eS	Sg	08 51 29.3	-0.4
NNSB	Datong	1.20	248	eP	Pg	08 51 15.0	-0.4
NNS	Nan Shan	1.21	249	P	Pg	08 51 15.1	-0.3
NNS				S	Sg	08 51 30.6	-0.5
TWD	Chiawan	1.22	229	eP	Pg	08 51 15.8	+0.1
ETLH	Xiulin Townshi	1.23	237	eP	Pg	08 51 15.4	-0.5
ETLH				eS	Sg	08 51 30.8	-1.0
HWA	Hwalien	1.28	226	eP	Pg	08 51 19.3	+2.4
NCU	National Centr	1.29	274	eP	Pb	08 51 17.1	+0.3
NCUH	Zhongli	1.29	274	eP	Pg	08 51 19.3	+2.2
KSHI	Guanxi Townshi	1.30	266	eP	Pg	08 51 17.5	+0.1
ETM	Tongmen	1.36	228	eP	Pn	08 51 18.0	+0.4
TEYL	Yanliau Villag	1.36	223	eP	Pn	08 51 18.1	+0.5
NFF	Wufeng Townshi	1.38	260	eP	Pn	08 51 17.5	-0.3
LXIB	Xiulin Townshi	1.39	232	eP	Pn	08 51 18.1	+0.1
FUSS	Fushou	1.39	243	eP	Pn	08 51 18.6	+0.3
WHF	Hehuan Shan	1.43	239	eP	Pn	08 51 19.2	+0.3
JKRS	Kuro-shima	1.43	116	eP	Pn	08 51 18.7	+0.2
TWT	Tachien	1.45	245	eP	Pb	08 51 19.8	+0.3
SHUL	Shoufeng	1.45	221	eP	Pn	08 51 19.0	+0.3
TDCB	Techi	1.46	245	eP	Pn	08 51 19.6	+0.5
TDCB				S	Sn	08 51 38.5	+0.1
LIOB	Emei	1.47	261	eP	Pn	08 51 18.8	-0.3
SBCB	Hsinchu	1.48	267	eP	Pn	08 51 19.1	-0.1
NSTT	Nanjuang	1.48	261	eP	Pb	08 51 20.6	+0.6
NSTT				eS	Sn	08 51 39.1	+0.3
JIJ	Ishigaki jima	1.49	110	P	Pn	08 51 18.9	-0.4
ESL	Shilin	1.51	225	eP	Pn	08 51 19.7	+0.1
OWD	Renai	1.60	235	eP	Pn	08 51 21.7	+0.7
OWD				eS	Sn	08 51 41.2	-0.6
WARBT	Fenglin Townsh	1.61	224	eP	Pn	08 51 20.6	-0.4
EGFH	Guangfu	1.62	222	eP	Pb	08 51 22.5	+0.1
WUSB	Renai	1.62	237	P	Pb	08 51 22.3	-0.2
WUSB				eS	Sn	08 51 42.2	-0.2
WHP	Taichung City	1.63	249	eP	Pb	08 51 22.9	+0.3
WHP				eS	Sn	08 51 40.9	-1.6
NMLH	Miaoli	1.69	259	eP	Pb	08 51 24.0	+0.4
NSY	Sanyi	1.74	255	eP	Pg	08 51 25.8	+0.1
WCS	Beigang Elemen	1.75	242	eP	Pb	08 51 24.9	+0.3
TWQ1	Liyutan	1.75	253	eP	Pb	08 51 25.5	+0.8
TWQ1				eS	Sn	08 51 44.4	-1.1
HGSD	Ruisui	1.75	218	eP	Pn	08 51 23.5	+0.5
EHYH	Wanrong	1.80	220	eP	Pn	08 51 24.3	+0.7
EHY	Hungye	1.80	221	eP	Pn	08 51 24.5	+0.8
EHY				eS	Sn	08 51 48.1	+1.4
SMLT	Sun Moon Lake	1.85	238	eP	Pb	08 51 25.8	-0.5
TYC	Yuchr	1.87	239	eP	Pb	08 51 26.4	-0.2
ECBN	Changbin	1.88	214	eP	Pb	08 51 26.4	-0.5
YULB	Yu-li	1.91	219	P	Pn	08 51 24.5	-0.5
YULB	Yu-li	1.91	219	eP	Pn	08 51 24.6	-0.5
TWF1	Yuli	1.94	218	eP	Pn	08 51 25.2	-0.3
WHYT	Xinyi Township	1.99	234	eP	Pb	08 51 28.0	-0.7
WJS	Zhushan	2.01	239	eP	Pb	08 51 28.8	-0.4
CHKH	Chenggong	2.01	214	eP	Pn	08 51 27.4	+0.9
WNT	Mingjian	2.02	241	eP	Pb	08 51 29.1	-0.1
YUS	Yu-Shan	2.05	228	eP	Pn	08 51 28.7	+1.2
YUS				eS	Sn	08 51 54.7	+1.2
FULB	Fuli	2.06	216	eP	Pn	08 51 27.7	+0.5
FULB				eS	Sb	08 51 55.6	-0.2
ALS	Alishan	2.14	231	eP	Pn	08 51 30.0	+1.5
EHD	Haiduan	2.15	217	eP	Pn	08 51 26.9	-1.5
CHN5	Tsauling	2.18	234	eP	Pb	08 51 31.1	-0.8
ELDTW	Lidau	2.23	221	eP	Pn	08 51 30.0	+0.4
WDLH	Douliu	2.23	238	eP	Pb	08 51 31.7	-1.2
WCKO	Fanlu	2.33	232	eP	Pb	08 51 33.3	-1.2
WCKO				eS	Sn	08 52 01.6	+1.9
LONT	Longtian	2.39	215	P	Pn	08 51 28.6	-3.1
STYH	Taoyuan	2.39	225	eP	Pn	08 51 33.0	+1.3
TPUB	Ta-pu	2.40	229	eP	Pn	08 51 33.7	+1.8
WTP	Ta-pu	2.44	229	eP	Pn	08 51 34.3	+1.8
TWGBT	Beinan	2.48	215	P	Pn	08 51 32.4	-0.6
TTN	Taitung	2.50	213	eP	Pn	08 51 34.4	+1.1
WSF	Szhu	2.50	241	eS	Sb	08 52 07.1	-1.3
TWK	Hsinying	2.52	231	eP	Pn	08 51 35.5	+2.0
TWK				eS	Sb	08 52 08.8	-0.1
SNST	Tainan City	2.54	230	eP	Pn	08 51 35.4	+1.5
SNST				eS	Sb	08 52 09.9	+0.3
CHN1	Nanshi	2.54	229	eP	Pn	08 51 36.1	+2.2
WSL	Shuilin Townsh	2.56	239	eP	Pn	08 51 35.6	+1.6
ECL	Taimali	2.73	214	eP	Pn	08 51 35.6	-0.8
SCLT	Jiali	2.78	233	eS	Sn	08 52 12.0	+1.1
SSD	Sandimen	2.79	221	eP	Pn	08 51 40.1	+2.9
TSCK	Chigu Township	2.88	234	eP	Pn	08 51 40.5	+2.1
MASBT	Mashibuluo	2.89	219	eP	Pn	08 51 39.8	+1.1
EAST	Anshuo	2.96	213	eP	Pn	08 51 42.5	+2.8
TAWH	Dawu Township	2.98	212	eP	Pn	08 51 39.4	-0.5
LYUB	Lan-yu	3.02	198	eP	Pn	08 51 39.5	-0.9
PHUB	P'eng-hu	3.09	244	P	Pn	08 51 41.4	0.0
SCZT	Fangliau	3.09	217	eP	Pn	08 51 43.7	+2.4
VCHM	Qimei	3.35	241	eP	Pn	08 51 45.9	+0.9
TWKBT	Hengchun	3.36	210	eP	Pn	08 51 45.5	+0.5
AXDP	Jialang	4.21	271	eP	Pn	08 51 56.3	-0.5
JOW	Kunigami	5.46	68	LR	LR	08 54 28.4	
	comp=Z,197nm,18.2s,baz=286,slow=37						
KSRS	Korea Array	13.33	19	P	P	08 54 11.0	-0.5
	2.7nm,0.7s,baz=196,slow=12,SNR=12						
MJAR	Matsushiro Arr	17.72	45	LR	LR	09 01 52.7	
	comp=Z,76nm,18.5s,baz=251,slow=36						
USRK	Ussuriysk Ar.	20.74	19	P	Pn	08 55 35.1	-0.5
	1.9nm,0.6s,baz=194,slow=13,SNR=4.1						
	1.9nm,0.6s						
CMAR	Chiang Mai Arr	22.89	258	LR	LR	09 05 38.6	
	comp=Z,92nm,19.3s,baz=75,slow=38						
ASAJ	Asahikawa	25.17	35	LR	LR	09 06 18.7	
	comp=Z,94nm,18.9s,baz=8.0,slow=36						
SONM	Songino Array	26.26	335	P	P	08 56 29.3	+1.3
	2.0nm,0.9s,baz=154,slow=7.8,SNR=9.1						
SONM				LR	LR	09 07 14.4	
	comp=Z,56nm,19.3s,baz=94,slow=37						
	2.0nm,0.9s						
KAPI	Kappang	29.84	186	LR	LR	09 08 57.3	
	comp=Z,25nm,21.6s,baz=6.0,slow=36						
PSI	Prapat	31.67	230	LR	LR	09 08 55.4	
	comp=Z,33nm,18.7s,baz=38,slow=34						
PETK	Petropavlovsk-	38.57	34	LR	LR	09 15 41.7	
	comp=Z,71nm,18.5s,baz=217,slow=38						
MKAR	Makanchi Array	38.76	315	P	P	08 58 17.1	0.0
	2.6nm,0.8s,baz=104,slow=10,SNR=13						
	2.6nm,0.8s						
ZALV	Zalesovo Beam	40.38	326	P	P	08 58 30.0	-0.5
	2.8nm,0.8s,baz=117,slow=8.5,SNR=5.8						
	2.8nm,0.8s						
KURBB	Kurchatov Arra	42.42	319	P	P	08 58 47.1	-0.2
	2.7nm,1.0s,baz=108,slow=8.1,SNR=11						
	2.7nm,1.0s						
SEY	Seymchan	42.89	20	LR	LR	09 17 44.9	
	comp=Z,74nm,18.1s,baz=24,slow=37						
WRA	Warramunga Arr	45.99	165	P	P	08 59 15.9	-0.3
	0.9nm,0.6s,baz=346,slow=8.3,SNR=9.8						
	0.9nm,0.6s						
TIXI	Tiksi	46.93	3	P	P	08 59 23.0	0.0
	2.8nm,0.3s,baz=182,slow=5.0,SNR=4.1						
TIXI				LR	LR	09 21 01.0	
	comp=Z,104nm,18.1s,baz=196,slow=38						
	2.8nm,0.3s						
BVAR	Borovoye Array	47.97	320	P	P	08 59 30.8	-0.5
	1.3nm,0.6s,baz=106,slow=11,SNR=6.6						
	1.3nm,0.6s						
NRIK	Noril'sk	49.08	344	P	P	08 59 39.5	-0.1
	1.7nm,0.8s,baz=135,slow=8.6,SNR=2.8						
NRIK				LR	LR	09 22 09.1	
	comp=Z,61nm,18.9s,baz=117,slow=38						
	1.7nm,0.8s						
ASAR	Alice Springs	49.49	166	P	P	08 59 43.4	+0.1
	0.5nm,0.7s,baz=348,slow=10,SNR=9.7						
	0.5nm,0.7s						
KIRV	Kirov	60.40	325	LR	LR	09 27 22.1	
	comp=Z,84nm,18.2s,baz=24,slow=36						
FINES	FINESS Array B	71.50	330	LR	LR	09 37 38.3	
	comp=Z,109nm,18.1s,baz=23,slow=39						
YKA	Yellowknife Ar	81.82	23	P	P	09 03 11.2	-0.5
	0.4nm,0.7s,baz=309,slow=5.7,SNR=5.2						
	0.4nm,0.7s						

KRSC 13 08:53:26.6±1.6**, 54°.95N**×**164°.75E, h54**^{km}±24^{km}**, Ml3.6, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	0.75	70	eP	Pn	08 53 41.6	+0.5
BKI				eS	Sn	08 53 51.8	+0.2
KBTR	Krutoberegovo	1.67	320	eP	Pn	08 53 53.6	+0.2
KBTR				eS	Sn	08 54 14.3	+0.7
KBG	Krutoberegovo	1.74	319	eP	Pn	08 53 57.1	+2.7
KBG				eS	Sn	08 54 19.4	+3.9
MKZ	Mys Kozlova	1.79	258	eP	Pn	08 53 56.7	+1.6
BZGR	Bezymyannyi-Gr	2.51	295	eP	Pn	08 54 08.8	+3.8
KZV	Kizimen	2.57	275	eP	Pn	08 54 09.4	+3.6
BZWR	Bezymyannyi-We	2.62	294	eP	Pn	08 54 10.2	+3.6
SRKR	Sorokina	2.64	312	eP	Pn	08 54 11.2	+4.5
KLY	Klyuchi	2.69	302	eP	Pn	08 54 10.6	+3.2
KMNR	Kamenistaya	2.70	289	eP	Pn	08 54 11.8	+4.2
KIRR	Kirishev	2.70	294	eP	Pn	08 54 09.8	+2.1
KOZ	Kozyrevsk	2.98	294	eP	Pn	08 54 16.5	+5.1
KII	Karymskiy	3.22	256	eP	Pn	08 54 18.6	+3.9
SPN	Mys Shipunski	3.35	238	eS	Sn	08 54 55.1	+0.2
SDLR	Sedlovina	3.84	246	eP	Pn	08 54 26.6	+3.5
SDLR				eS	Sn	08 55 09.8	+2.7
SMAR	Somma	3.89	247	eP	Pn	08 54 27.8	+3.8
SMAR				eS	Sn	08 55 10.6	+2.1
KRER	Koryakskii	3.90	247	eP	Pn	08 54 28.5	+4.4
KRER				eS	Sn	08 55 11.9	+3.2
UGLR	Uglovaya	3.90	246	eP	Pn	08 54 28.6	+4.5
AVH	Avacha	3.92	247	eP	Pn	08 54 29.1	+4.8
AVH				eS	Sn	08 55 12.4	+3.3
KRX	Arik	3.92	248	eP	Pn	08 54 28.5	+4.1
KOK	Koryaka	3.96	248	eP	Pn	08 54 29.2	+4.3
DALK	Dalny	4.03	244	eS	Sn	08 55 13.3	+1.8
OSSR	Ossora	4.40	349	eP	Pn	08 54 34.5	+3.7
OSSR				eS	Sn	08 55 22.5	+1.8
KRMR	Karymshinskiy	4.46	244	eP	Pn	08 54 37.3	+5.8
MTVR	Mutnovka	4.62	240	eP	Pn	08 54 37.5	+3.6
MTVR				eS	Sn	08 55 26.0	-0.3
GRL	Gorelyy	4.63	241	eP	Pn	08 54 38.4	+4.3
ASAK	Asacha	4.82	240	eP	Pn	08 54 41.4	+4.8

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*IDC **13** 09:09:54.7±1.3, 3°.14S×149°.12E, h0^{km}, mb4.1/6, mbtmp4.2/6, MS3.6/20, Error ellipse: s-maj=73.0km s-min=20.5km az=112.0*

*NEIC **13** 09:09:55.9±1.3, 3°.4S±0°.1×149°.61E±0°.05, h10^{km}±2^{km}, mb4.4/16, Error ellipse: s-maj=18.7km s-min=6.2km az=16.0*

ISC 13 09:09:55.3±0.8**, 3°.31S**±0°.09×**149°.62E**±0°.08**, h10**^{km}**, n53, σ1^s.51**/34**, mb4.3**/12**, MS3.7**/16**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	Manus Island	2.58	299		Pn	09 10 37.6	+0.4
RABL	Rabaul	2.68	109	Pn	Pn	09 10 38.7	+0.1
PMG	Port Moresby	6.53	202	LR	LR	09 14 04.1	
	comp=Z,222nm,18.6s,baz=9.5,slow=38						
PMG	Port Moresby	6.53	202	Pn	Pn	09 11 30.8	-0.8
JAY	Jayapura	8.94	275	LR	LR	09 14 59.2	
	comp=Z,402nm,18.7s,baz=33,slow=36						
COEN	Coen	12.35	211	Pn	Pn	09 12 51.0	-0.3
CTA	Charters Tower	17.00	191	LR	LR	09 20 13.7	
	comp=Z,117nm,18.1s,baz=36,slow=36						
CTA	Charters Tower	17.00	191	P	P	09 13 59.0	+3.8
CTAO	Charters Tower	17.00	191	Pn	Pn	09 13 51.9	-1.5
FAKI	Fak Fak	17.35	271	Pn	Pn	09 13 57.5	-0.3
FAKI				IAmb	IAmb	09 14 02.6	
	comp=Z,33nm,1.4s						
GUMO	Guam	17.44	344	LR	LR	09 20 23.7	
	comp=Z,75nm,18.9s,baz=152,slow=37						
QIS	Mount Isa	19.73	209	P	P	09 14 27.2	+1.9
AUNRC	North Rockhamp	19.94	178	P	Pn	09 14 34.5	+5.3
MTN	Manton Dam	20.59	242	P	P	09 14 33.7	-1.1
MTN				IAmb	IAmb	09 14 37.1	
	comp=Z,12nm,0.9s						
SANVU	Saraoutou	21.10	126	P	P	09 14 39.1	-1.1
SANVU				IAmb	IAmb	09 15 02.5	
	comp=Z,28nm,0.9s						
WB0	Warramunga Arr	22.10	221	P	P	09 14 50.6	-0.4
WB0				IAmb	IAmb	09 14 57.5	
	comp=Z,13nm,1.0s						
WR8	Warramunga Arr	22.17	221	P	P	09 14 51.3	-0.4
WR8				IAmb	IAmb	09 14 55.3	
	comp=Z,8.1nm,0.8s						
WRAB	Tennant Creek	22.25	221	P	P	09 14 51.3	-1.3
WRAB				IAmb	IAmb	09 15 02.0	
	comp=Z,12nm,0.9s						
WRAB	Tennant Creek	22.25	221	P	P	09 14 55.0	+2.4
WRA	Warramunga Arr	22.26	221	P	P	09 14 51.2	-1.5
	comp=Z,11nm,1.0s,baz=43,slow=10,SNR=40						
	comp=Z,11nm,1.0s						
WRA	Warramunga Arr	22.26	221	P	P	09 14 52.2	-0.5
QLP	Quilpie	23.71	192	P	P	09 15 10.1	+2.6
AS31	Alice Springs	25.30	216	P	P	09 15 22.0	-0.3
ASAR	Alice Springs	25.30	216	P	P	09 15 21.7	-0.6
	comp=Z,5.2nm,0.9s,baz=51,slow=8.4,SNR=30						
ASAR				LR	LR	09 26 11.4	
	comp=Z,149nm,18.3s,baz=86,slow=39						
	comp=Z,5.2nm,0.9s						
ASAR	Alice Springs	25.30	216	P	P	09 15 21.9	-0.4
INKA	Innaminka	25.73	198	P	P	09 15 26.3	+0.2
SOEI	Soe	25.98	255	P	P	09 15 27.0	-1.6
AULRC	Lightning Ridg	26.02	183	P	P	09 15 30.4	+1.7
BATI	Baumata	26.66	254	LR	LR	09 28 39.8	
	comp=Z,215nm,18.6s,baz=90,slow=43						
ARMA	Armidale	27.03	176	P	P	09 15 37.0	-0.9
FITZ	Fitzroy Crossi	27.71	236	LR	LR	09 27 32.8	
	comp=Z,177nm,19.1s,baz=42,slow=39						
FITZ	Fitzroy Crossi	27.71	236	P	P	09 15 43.3	-0.8
FITZ	Fitzroy Crossi	27.71	236	P	P	09 15 47.7	+3.7
STKA	Stephens Creek	29.40	194	P	P	09 16 00.5	+1.5
	comp=Z,1.7nm,0.8s,baz=344,slow=15,SNR=3.2						
STKA				LR	LR	09 28 35.2	
	comp=Z,174nm,18.5s,baz=28,slow=38						
	comp=Z,1.7nm,0.8s						
STKA	Stephens Creek	29.40	194	P	P	09 15 58.2	-0.8
JCJ	Chichijima	31.07	347	LR	LR	09 27 14.7	
	comp=Z,158nm,20.1s,baz=82,slow=34						
CAN	Canberra	31.86	181	P	P	09 16 19.6	-1.0
PSA00	Pilbara Seismi	34.15	235	P	P	09 16 41.0	+0.2
PSA00				IAmb	IAmb	09 17 17.4	
	comp=Z,7.5nm,1.4s						
TOO	Toolangi	34.31	186	P	P	09 16 41.2	-0.8
TOO				IAmb	IAmb	09 17 21.1	
	comp=Z,6.3nm,1.2s						
JOW	Kunigami	36.38	327	LR	LR	09 28 30.7	
	comp=Z,85nm,20.4s,baz=198,slow=31						
JHJ	Hachijo jima 2	37.41	346	LR	LR	09 29 49.2	
	comp=Z,106nm,20.3s,baz=117,slow=32						
MJAR	Matsushiro Arr	41.05	346	LR	LR	09 31 41.0	
	comp=Z,77nm,20.1s,baz=158,slow=32						
NWAO	Narrogin (SRO)	42.26	222	LR	LR	09 36 19.2	
	comp=Z,100nm,19.7s,baz=314,slow=38						
URZ	Urewera	42.90	148	LR	LR	09 32 19.9	
	comp=Z,95nm,20.2s,baz=298,slow=31						
PETK	Petropavlovsk-	56.62	6	P	P	09 19 37.5	-0.8
	comp=Z,8.4nm,1.1s,baz=120,slow=5.8,SNR=4.6						
	comp=Z,8.4nm,1.1s						
MA2	Magadan	62.70	1	LR	LR	09 46 07.6	
	comp=Z,32nm,19.9s,baz=139,slow=35						
SONM	Songino Array	63.40	329	LR	LR	09 46 36.9	
	comp=Z,55nm,20.7s,baz=101,slow=35						
MKAR	Makanchi Array	77.13	319	LR	LR	09 53 53.2	
	comp=Z,35nm,20.2s,baz=337,slow=34						
ILAR	Eielson Array	82.00	23	P	P	09 22 17.1	+1.8
	comp=Z,0.7nm,0.8s,baz=256,slow=5.6,SNR=7.5						
	comp=Z,0.7nm,0.8s						
NRIK	Noril'sk	83.55	342	LR	LR	09 58 24.4	
	comp=Z,36nm,19.9s,baz=352,slow=35						
BVAR	Borovoye Array	86.16	324	P	P	09 22 36.4	-0.4
	comp=Z,0.7nm,0.6s,baz=86,slow=6.4,SNR=3.6						
	comp=Z,0.7nm,0.6s						
ARTI	Arti	93.42	326	LR	LR	10 05 23.6	
	comp=Z,38nm,20.3s,baz=66,slow=36						
AKTO	Aktyubinsk	93.55	320	LR	LR	10 06 22.6	
	comp=Z,37nm,19.2s,baz=39,slow=36						

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*IDC **13** 09:17:59.2±5.7, 6°.18S×150°.24E, h63^{km}±51^{km}, mb3.5/6, mbtmp3.8/8, ML2.5/2, Error ellipse: s-maj=52.9km s-min=33.2km az=120.0*

ISC 13 09:17:58.1±1.0**, 6°.1S**±0°.2×**150°.2E**±0°.2**, h52**^{km}**, n8, σ0^s.81**/9**, mb3.7**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.49	223	P	Pn	09 19 03.5	-0.1
	2.1nm,0.3s,baz=39,slow=6.0,SNR=5.5						
PMG				S	Sn	09 19 54.9	+0.4
	29nm,0.5s,baz=208,slow=18,SNR=10.0						
	9.0nm,0.4s						
CTA	Charters Tower	14.44	195	P	Pn	09 21 20.1	+0.4
	0.1nm,0.3s,baz=300,slow=20,SNR=1.9						
	1.2nm,0.7s						
WRA	Warramunga Arr	20.69	227	P	P	09 22 34.2	+0.1
	4.6nm,0.7s,baz=53,slow=11,SNR=15						
	4.6nm,0.7s						
ASAR	Alice Springs	23.50	220	P	P	09 23 03.9	+0.3
	0.9nm,0.9s,baz=56,slow=8.7,SNR=13						
	0.9nm,0.9s						
STKA	Stephens Creek	26.90	196	P	P	09 23 32.6	-1.7
	1.9nm,0.9s,baz=1.5,slow=17,SNR=2.9						
	1.9nm,0.9s						
ILAR	Eielson Array	84.31	23	P	P	09 30 24.1	-0.1
	0.4nm,0.8s,baz=259,slow=5.3,SNR=2.8						
	0.4nm,0.8s						

BVAR	**Borovoye Array**	**88.75**	**324**	P	**P**	**09 30 45.8**	**-0.2**
	0.4nm,0.5s,baz=108,slow=9.3,SNR=1.2						
	0.4nm,0.5s						
NVAR	**Mina Array Bea**	**94.89**	**52**	P	**P**	**09 31 15.9**	**+0.7**
	0.5nm,0.8s,baz=283,slow=6.5,SNR=3.9						
	0.5nm,0.8s						

IDC 13 09:19:13.2±1.8**,54°.65N**×**83°.75E,h0**^{km}**,mbtmp2.8**/3**,ML2.5**/2**,Error ellipse: s-maj=16.4km s-min=10.4km az=9.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.94**	**138**	I	I	09 24 22.9	
	0.1nm,2.0s,baz=319,slow=318,SNR=6.8						
ZALV	**Zalesovo Beam**	**0.94**	**138**	Pg	Pg	09 19 30.4	-0.8
	1.3nm,0.3s,baz=326,slow=14,SNR=8.4						
ZALV				Lg	Lg	09 19 45.2	
	7.5nm,0.3s,baz=316,slow=30,SNR=19						
KURBB	**Kurchatov Arra**	**5.13**	**220**	Pn	Pn	09 20 31.2	0.0
	0.4nm,0.5s,baz=39,slow=13,SNR=2.1						
KURBB				Lg	Lg	09 21 59.4	
	0.2nm,0.3s,baz=36,slow=33,SNR=5.9						
MKAR	**Makanchi Array**	**7.92**	**187**	Pn	Pn	09 21 09.2	-0.3
	0.1nm,0.3s,baz=12,slow=14,SNR=2.6						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**8.07**	**264**	Pn	Pn	09 21 10.9	-0.7
	baz=70,slow=14,SNR=2.8						
	0.5nm,0.4s						

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*ASRS **13** 09:21:20.0±1.1,54°.59N×83°.65E,h0^{km},M2.3,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 13 09:21:21.5±1.9**,54°.62N**×**83°.73E,h0**^{km}**,mbtmp2.8**/2**,ML2.5**/2**,Error ellipse: s-maj=16.0km s-min=11.2km az=8.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.92**	**136**	I	I	09 26 37.8	
	baz=316,slow=338						
ZALV	**Zalesovo Beam**	**0.92**	**136**	Pg	Pg	09 21 38.9	-0.3
	1.6nm,0.3s,baz=325,slow=18,SNR=5.0						
ZALV				Lg	Lg	09 21 52.5	
	7.9nm,0.3s,baz=318,slow=29,SNR=20						
KURBB	**Kurchatov Arra**	**5.10**	**221**	Lg	Lg	09 24 06.2	
	baz=41,slow=30,SNR=5.1						
MKAR	**Makanchi Array**	**7.88**	**187**	Pn	Pn	09 23 17.5	+0.1
	0.1nm,0.3s,baz=11,slow=16,SNR=1.7						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**8.06**	**264**	Pn	Pn	09 23 19.0	-0.7
	0.1nm,0.3s,baz=65,slow=15,SNR=2.3						
	0.4nm,0.3s						

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*NNC **13** 09:25:55.8±0.6,51°.63N×75°.28E,h0^{km},mb2.8,mpv2.4, Error ellipse: s-maj=44.9km s-min=3.9km az=25.0, Suspected Mining explosion.*

*IDC **13** 09:25:57.2±0.9,51°.63N×75°.45E,h0^{km},mbtmp2.6/3, ML2.2/3,Error ellipse: s-maj=36.3km s-min=7.1km az=28.0*

ISC 13 09:25:56.5±1.1**,51°.7N**±0°.1×**75°.44E**±0°.06**,h0**^{km}**,n9, σ1**^{s}**.19**/10**,5C-2D,Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.20**	**117**	Pg	**Pb**	**09 26 36.4**	**-0.8**
	0.3nm,0.3s,baz=301,slow=18,SNR=25						
KURBB				Lg	Lg	09 27 04.8	
	0.5nm,0.3s,baz=307,slow=32,SNR=10						
KURBB	**Kurchatov Arra**	**2.20**	**117**	⇑Pn	**Pn**	**09 26 34.8**	**+0.5**
	4.4nm,0.7s						
KURBB				⇑Sn	**Sb**	**09 27 04.5**	**-0.5**
	14nm,0.7s						
KURK	**Kurchatov**	**2.21**	**114**	⇑Pn	**Pn**	**09 26 35.0**	**+0.6**
	0.4nm,0.5s						
KURK				⇑Sn	**Sb**	**09 27 04.5**	**-0.7**
	3.2nm,0.6s						
BVA0	**Borovoye Array**	**3.39**	**296**	⇑Pg	**Pb**	**09 26 55.4**	**-2.0**
	1.1nm,0.6s,baz=116,slow=17,SNR=11						
BVA0				⇓Lg	Lg	09 27 43.1	
	4.0nm,0.5s,baz=118,slow=25,SNR=9.2						
BVAR	**Borovoye Array**	**3.39**	**296**	Pn	**Pn**	**09 26 51.6**	**+0.9**
	0.1nm,0.3s,baz=115,slow=17,SNR=13						
BVAR				Pg	**Pb**	**09 26 56.9**	**-0.6**
	0.1nm,0.3s,baz=115,slow=17,SNR=14						
BVAR				Lg	Lg	09 27 43.4	
	0.4nm,0.3s,baz=118,slow=26,SNR=6.1						
	0.9nm,0.5s						
ZALV	**Zalesovo Beam**	**6.13**	**64**	Pn	**Pn**	**09 27 29.6**	**+1.3**
	0.4nm,0.3s,baz=259,slow=14,SNR=6.1						
	1.0nm,0.4s						
I46RU	**ZALESOVO INFRA**	**6.13**	**64**	I	I	10 02 30.0	
	baz=249,slow=305,SNR=2.3						
MK31	**Makanchi Array**	**6.62**	**135**	⇓Lg	Lg	09 29 28.5	
	4.4nm,1.1s,baz=321,slow=26,SNR=4.0						
MKAR	**Makanchi Array**	**6.62**	**135**	Pn	**Pn**	**09 27 36.1**	**+1.1**
	0.1nm,0.3s,baz=315,slow=14,SNR=1.8						
MKAR				Lg	Lg	09 29 26.2	
	0.3nm,0.3s,baz=316,slow=26,SNR=5.7						
	0.2nm,0.5s						

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*MDD **13** 09:30:07.9±0.2,43°.06N×0°.53W,h1^{km},mb_Lg2.7/28, Error ellipse: s-maj=2.1km s-min=1.2km az=7.0*

*LDG **13** 09:30:07.5±0.1,43°.09N×0°.52W,h5^{km},Md3.1/2,Ml3.1/17, Error ellipse: s-maj=1.7km s-min=1.4km az=159.0*

*STR **13** 09:30:08.1±0.0,43°.07N±0°.08×0°.54W±0°.06,h2^{km}, MLv2.4/12,LOCSAT earthModelID pyrenees_taup-2.11 preliminary*

ISC 13 09:30:06.6±0.8**,43°.13N**±0°.02×**0°.53W**±0°.02**,h14**^{km}±6^{km}**, n42,σ1**^{s}**.42**/78**,Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATE	**Arette**	**0.13**	**252**	Pg	**Pg**	**09 30 10.4**	**+0.3**
ATE				Sg	**Sg**	**09 30 12.8**	**+0.2**
ETSF	**Etsaut**	**0.23**	**185**	*e*Pg	**Pg**	**09 30 11.5**	**-0.2**
ETSF				*e*Sg	**Sg**	**09 30 14.3**	**-0.8**
	124nm,0.2s						
ORDF	**Ordiarp**	**0.31**	**287**	Pg	**Pb**	**09 30 14.0**	**+0.1**
ORDF				Sg	**Sb**	**09 30 19.5**	**+0.8**
URDF	**Urds**	**0.32**	**352**	Pg	**Pb**	**09 30 13.8**	**-0.2**
URDF				Sg	**Sb**	**09 30 20.4**	**+1.5**
CANF	**Canfranc**	**0.36**	**178**	Pg	**Pb**	**09 30 14.0**	**-0.9**
CANF				Sg	**Sb**	**09 30 19.0**	**-1.4**
IRAF	**Chalets d'Irat**	**0.38**	**256**	Pg	**Pb**	**09 30 15.3**	**+0.1**
IRAF				Sg	**Sb**	**09 30 21.5**	**+0.5**
SJPF	**Ste Jean**	**0.51**	**269**	*e*Pg	**Pb**	**09 30 17.5**	**+0.2**
SJPF				*e*Sg	**Sb**	**09 30 25.5**	**+1.0**
	79nm,0.3s						
OSSF	**Osses**	**0.55**	**284**	Pg	**Pb**	**09 30 17.7**	**-0.2**
EORO	**Oroz-Betelu**	**0.62**	**248**	Pg	**Pb**	**09 30 18.5**	**-0.6**
EORO				Sg	**Sb**	**09 30 27.3**	**-0.4**
EORO				*i* IVmb_Lg		09 30 31.0	
EPF	**Esparros**	**0.65**	**98**	*e*Pg	**Pg**	**09 30 19.2**	**0.0**
EPF				*e*Sg	**Sg**	**09 30 26.7**	**-1.1**
	64nm,0.3s						
TERF	**Tercis-les-Bai**	**0.70**	**323**	Pg	**Pn**	**09 30 22.5**	**+0.5**
MLZA	**Monlezun-d-Arm**	**0.76**	**23**	Pg	**Pn**	**09 30 23.7**	**+0.8**
MLZA				Sg	**Sn**	**09 30 34.9**	**+0.8**
EARA	**Aranguren**	**0.85**	**246**	Pg	**Pg**	**09 30 22.4**	**-0.6**
EARA				Sg	**Sg**	**09 30 32.6**	**-1.5**
EARA				*i* IVmb_Lg		09 30 43.2	
VIES	**Vielha - Hospi**	**1.06**	**113**	Pg	**Pb**	**09 30 27.1**	**+0.3**
VIES				Sg	**Sb**	**09 30 41.4**	**+0.9**
CRAS	**Crastes**	**1.09**	**57**	Pg	**Pn**	**09 30 28.5**	**+1.1**
CRAS				Sg	**Sn**	**09 30 43.7**	**+1.4**
MLS	**Moulis**	**1.20**	**97**	Pg	**Pn**	**09 30 29.8**	**+0.8**
MLS				Sg	**Sn**	**09 30 47.1**	**+2.1**
SALF	**Salau**	**1.32**	**106**	Pg	**Pg**	**09 30 32.3**	**+0.4**
SALF				Sg	**Sn**	**09 30 49.6**	**+1.7**
ESAC	**San Caprasio**	**1.41**	**178**	Pg	**Pg**	**09 30 33.0**	**-0.6**
ESAC				Sg	**Sg**	**09 30 51.5**	**-0.4**
ESAC				*i* IVmb_Lg		09 30 57.7	
PAND	**Andorre**	**1.64**	**111**	Pn	**Pg**	**09 30 37.7**	**-0.5**
DUNF	**Dun**	**1.72**	**93**	Pg	**Pg**	**09 30 39.7**	**+0.2**
MONQ	**Montcuq**	**1.76**	**45**	Pn	**Pg**	**09 30 40.2**	**-0.2**
MONQ				Pg	**Pb**	**09 30 40.9**	**+2.2**
MONQ				Sn	**Sg**	**09 31 03.4**	**+0.1**
LRVF	**chteau la Riv**	**1.83**	**5**	Pg	**Pg**	**09 30 42.2**	**+0.5**
LRVF				Sg	**Sg**	**09 31 07.3**	**+2.0**
MTLF	**Montolieu**	**2.02**	**83**	*e*Pg	**Pg**	**09 30 44.8**	**-0.5**
MTLF				*e*Sg	**Sb**	**09 31 09.9**	**+1.9**
	24nm,0.2s						
LFF	**La Frestale**	**2.03**	**26**	*e*Pg	**Pg**	**09 30 45.7**	**+0.2**
LFF				*e*Sn	**Sn**	**09 31 06.3**	**+0.8**
LFF				*e*Sg	**Sg**	**09 31 12.9**	**+1.0**
	21nm,0.2s						
VALC	**Valcebollere**	**2.04**	**111**	Pn	**Pg**	**09 30 45.6**	**0.0**
VALC				Sn	**Sg**	**09 31 13.5**	**+1.4**
EPOB	**Poblet**	**2.14**	**145**	Pn	**Pn**	**09 30 42.6**	**+0.7**
EPOB				Pg	**Pb**	**09 30 45.6**	**+0.5**
EPOB				Sn	**Sn**	**09 31 08.9**	**+0.6**
EPOB				Sg	**Sg**	**09 31 13.9**	**-1.4**
EPOB				*i* IVmb_Lg		09 31 15.3	
CAF	**Calviac**	**2.60**	**45**	*e*Pn	**Pn**	**09 30 48.9**	**+0.8**
CAF	**Calviac**	**2.60**	**45**	*e*Pg	**Pg**	**09 30 55.8**	**-0.5**
CAF				*e*Sn	**Sn**	**09 31 19.1**	**-0.4**
CAF				*e*Sg	**Sg**	**09 31 29.2**	**-0.8**
	20nm,0.2s						
EJON	**La Jonquera**	**2.61**	**104**	Sg	**Sg**	**09 31 29.2**	**-1.2**
EJON				*i* IVmb_Lg		09 31 34.5	
RJF	**Les Rejaudoux**	**2.63**	**33**	*e*Sg	**Sg**	**09 31 29.6**	**-1.4**
	12nm,0.1s						
LASF	**Ste Croix**	**3.33**	**72**	*e*Pn	**Pn**	**09 30 58.2**	**0.0**
LASF	**Ste Croix**	**3.33**	**72**	*e*Pg	**Pg**	**09 31 08.6**	**-1.7**
LASF				*e*Sg	**Sg**	**09 31 50.9**	**-2.5**
	12nm,0.3s						
MFF	**Saint Martin d**	**3.49**	**4**	*e*Pg	**Pg**	**09 31 12.6**	**-0.7**
MFF	**Saint Martin d**	**3.49**	**4**	*e*Pg	**Pg**	**09 31 13.0**	**-0.3**
MFF				*e*Sg	**Sg**	**09 31 56.5**	**-2.0**
	7.5nm,0.2s						
MFF				*e*Sg	**Sg**	**09 31 56.5**	**-2.0**
	14nm,0.3s						
TCF	**Toulx Ste Croi**	**3.72**	**31**	*e*Pg	**Pg**	**09 31 17.1**	**-0.6**
TCF				*e*Sg	**Sg**	**09 32 03.2**	**-2.7**
	2.6nm,0.1s						
VIVF	**Saint-Julien-l**	**4.13**	**63**	*e*Pg	**Pg**	**09 31 23.0**	**-2.7**
VIVF				*e*Sg	**Sg**	**09 32 15.8**	**-3.5**
	4.3nm,0.2s						
BGF	**Bois d'Agland**	**4.19**	**34**	*e*Pg	**Pg**	**09 31 25.7**	**-1.1**
BGF				*e*Sg	**Sg**	**09 32 18.4**	**-2.6**
	12nm,0.2s						
AVF	**Avril sur Loir**	**4.58**	**36**	*e*Pg	**Pg**	**09 31 32.3**	**-2.0**
AVF				*e*Sg	**Sg**	**09 32 31.4**	**-2.3**
	6.4nm,0.4s						
SMF	**Signal de Mont**	**4.69**	**40**	*e*Sg	**Sg**	**09 32 35.8**	**-1.4**
	3.9nm,0.3s						
SSF	**Saint Saulge**	**4.86**	**35**	*e*Pg	**Pg**	**09 31 37.1**	**-2.6**
SSF				*e*Sg	**Sg**	**09 32 40.3**	**-2.3**
	12nm,0.4s						
LOR	**Lormes**	**5.17**	**35**	*e*Sg	**Sg**	**09 32 49.4**	**-3.2**
	5.5nm,0.3s						
CABF	**La Chapelle**	**5.85**	**51**	*e*Sg	**Sg**	**09 33 10.9**	**-3.5**
	0.2nm,0.1s						

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*IDC **13** 09:32:25.5±1.3,15°.08N×147°.08E,h0^{km},mb3.8/6, mbtmp3.8/7,ML3.9/1,MS3.2/2,Error ellipse: s-maj=38.6km s-min=19.5km az=103.0*

*NEIC **13** 09:32:28.2±2.1,14°.90N±0°.08×147°.03E±0°.08,h10^{km}±1^{km}, mb4.5/12,Error ellipse: s-maj=15.5km s-min=11.2km az=133.0*

ISC 13 09:32:30.2±0.9**,14°.95N**±0°.09×**147°.1E**±0°.1**,h32**^{km}**,n26, σ0**^{s}**.90**/25**,mb4.2**/12**,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DPSS	**Saipan**	**1.27**	**283**	Pn	**Pn**	**09 32 52.2**	**+0.5**
GUMO	**Guam**	**2.52**	**238**	Pn	**Pn**	**09 33 09.6**	**+0.6**
	21nm,0.3s,baz=36,slow=3.3,SNR=9.0						
GUMO				Sn	**Sn**	**09 33 40.3**	**+1.7**
	5.5nm,0.3s,baz=156,slow=20,SNR=1.4						
	45nm,0.3s						
GUMO	**Guam**	**2.52**	**238**	Pn	**Pn**	**09 33 09.1**	**+0.1**
JOW	**Kunigami**	**21.14**	**307**	LR	LR	09 43 09.2	
	comp=Z,45nm,20.9s,baz=184,slow=31						
FAKI	**Fak Fak**	**23.03**	**221**	P	**P**	**09 37 31.1**	**-1.8**
FAKI				IAmb	IAmb	09 37 32.7	
	comp=Z,14nm,1.2s						
JNU	**Nakatsue**	**23.31**	**324**	P	**P**	**09 37 35.6**	**+0.1**
JNU				IAmb	IAmb	09 37 42.0	
	comp=Z,9.9nm,1.2s						
PMG	**Port Moresby**	**24.20**	**180**	P	**P**	**09 37 43.3**	**-0.7**
PMG				IAmb	IAmb	09 38 00.2	
	comp=Z,16nm,1.1s						
NACB	**Ninganchiao**	**25.66**	**295**	P	**P**	**09 37 56.6**	**-0.7**
NACB				IAmb	IAmb	09 38 35.4	
	comp=Z,14nm,0.9s						
KSAR	**Wonju Array Be**	**28.14**	**326**	P	**P**	**09 38 19.4**	**0.0**
KS19	**Wonju Array Si**	**28.19**	**326**	P	**P**	**09 38 20.2**	**+0.2**
MYLDM	**Lahad Datu**	**29.72**	**254**	P	**P**	**09 38 32.6**	**-1.1**
MYLDM				IAmb	IAmb	09 38 37.2	
	comp=Z,11nm,1.0s						
WB0	**Warramunga Arr**	**36.68**	**200**	P	**P**	**09 39 34.7**	**+0.4**
WRA	**Warramunga Arr**	**36.86**	**200**	P	**P**	**09 39 36.7**	**+0.9**
	comp=Z,1.3nm,0.8s,baz=24,slow=9.5,SNR=8.3						
	comp=Z,1.3nm,0.8s						
WRA	**Warramunga Arr**	**36.86**	**200**	P	**P**	**09 39 35.4**	**-0.5**
AS31	**Alice Springs**	**40.48**	**199**	P	**P**	**09 40 07.0**	**+0.8**
ASAR	**Alice Springs**	**40.48**	**199**	P	**P**	**09 40 07.2**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=19,slow=11,SNR=9.9						
	comp=Z,0.5nm,0.6s						
ASAR	**Alice Springs**	**40.48**	**199**	P	**P**	**09 40 06.6**	**+0.4**
SHEM	**Shemya Is, Ala**	**43.36**	**24**	LR	LR	09 54 26.6	
	comp=Z,58nm,21.4s,baz=320,slow=31						
BBOO	**Buckleboo**	**48.64**	**192**	P	**P**	**09 41 11.6**	**+0.4**
L14K	**Kuka Creek**	**58.50**	**26**	P	**P**	**09 42 24.7**	**+1.7**
L14K				IAmb	IAmb	09 42 24.8	
	comp=Z,6.2nm,1.2s						
MKAR	**Makanchi Array**	**62.01**	**315**	P	**P**	**09 42 47.1**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=93,slow=8.0,SNR=9.7						
	comp=Z,0.7nm,0.5s						
MKAR	**Makanchi Array**	**62.01**	**315**	P	**P**	**09 42 46.6**	**-0.9**
BPAW	**Bear Paw Mtn.**	**64.54**	**25**	P	**P**	**09 43 05.3**	**+1.4**
KURBB	**Kurchatov Arra**	**64.98**	**319**	P	**P**	**09 43 06.5**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=97,slow=7.3,SNR=12						
	comp=Z,1.6nm,0.6s						
ILAR	**Eielson Array**	**66.44**	**25**	P	**P**	**09 43 15.5**	**-0.6**
	comp=Z,0.4nm,1.0s,baz=256,slow=5.7,SNR=1.7						
	comp=Z,0.4nm,1.0s						
BVAR	**Borovoye Array**	**70.20**	**321**	P	**P**	**09 43 39.8**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=91,slow=6.3,SNR=4.2						
	comp=Z,0.7nm,0.5s						

ASRS 13 09:35:40.0±1.2**,53°.68N**×**86°.88E,h0**^{km}**,M2.4,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.,Southwestern Siberia**

ASRS 13 09:36:32.0±1.7**,54°.20N**×**87°.22E,h0**^{km}**,M2.7,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.,Southwestern Siberia**

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*JMA **13** 09:42:52.6±0.4,22°N±2°×12°3E±°,h43^{km},FAR S OFF ISHIGAKIJIMA*

*TAP **13** 09:42:53.6,22°.38N×122°.82E,h68^{km}±1^{km},ML2.8,D*

ISC 13 09:42:49.1±1.8**,22°.38N**±0°.08×**122°.94E**±0°.05**,h9**^{km}±14^{km}**, n46,σ1**^{s}**.78**/77**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LYUB	**Lan-yu**	**1.31**	**253**	*i* P	**Pg**	**09 43 14.3**	**-0.1**
LYUB				*i* S	**Sg**	**09 43 29.8**	**-1.6**
FULB	**Fuli**	**1.72**	**298**	P	**Pn**	**09 43 20.1**	**+0.7**
FULB				*e*S	**Sn**	**09 43 39.6**	**-1.9**
ECS	**Chishang**	**1.74**	**294**	*e*S	**Sn**	**09 43 40.5**	**-1.4**
LONT	**Longtian**	**1.75**	**288**	*e*P	**Pn**	**09 43 20.6**	**+0.9**
LONT				*e*S	**Sn**	**09 43 40.6**	**-1.6**
EHD	**Haiduan**	**1.77**	**296**	*e*P	**Pn**	**09 43 21.2**	**+1.1**
EHD				*e*S	**Sn**	**09 43 41.7**	**-1.0**
TWGBT	**Beinan**	**1.77**	**284**	*e*P	**Pn**	**09 43 20.9**	**+0.9**
TWGBT				*e*S	**Sn**	**09 43 41.1**	**-1.6**
TWG	**Pinlang**	**1.78**	**285**	P	**Pn**	**09 43 20.9**	**+0.8**
TWG				S	**Sn**	**09 43 41.1**	**-1.8**
HGSD	**Ruisui**	**1.78**	**309**	*e*P	Pn	09 43 19.9	-0.2
HGSD				*e*S	**Sn**	**09 43 39.9**	**-3.0**
TWF1	**Yuli**	**1.80**	**303**	*e*P	**Pn**	**09 43 21.0**	**+0.7**
YULB	**Yu-li**	**1.82**	**304**	*e*P	Pn	09 43 21.1	+0.4
YULB				*e*S	**Sn**	**09 43 41.4**	**-2.5**
EOS4	**EOS4**	**1.82**	**342**	P	**Pn**	**09 43 22.2**	**+1.8**
EOS4				*e*S	**Sn**	**09 43 42.3**	**-1.1**
HATJ	**Hateruma jima**	**1.85**	**25**	*e*S	**Sn**	**09 43 43.1**	**-1.4**
EHY	**Hungye**	**1.86**	**307**	*e*P	**Pn**	**09 43 22.4**	**+1.1**
EHY				*e*S	**Sn**	**09 43 43.1**	**-1.9**
SHUL	**Shoufeng**	**1.89**	**318**	*e*S	**Sn**	**09 43 44.1**	**-1.5**
EAST	**Anshuo**	**1.94**	**270**	*e*P	**Pn**	**09 43 23.6**	**+1.3**
EAST				*e*S	**Sn**	**09 43 45.4**	**-1.4**
ELDTW	**Lidau**	**1.95**	**295**	*e*P	**Pn**	**09 43 23.1**	**+0.5**
ELDTW				*e*S	**Sn**	**09 43 45.1**	**-2.1**
WARBT	**Fenglin Townsh**	**1.95**	**313**	*e*P	**Pn**	**09 43 23.1**	**+0.6**
WARBT				*e*S	**Sn**	**09 43 44.4**	**-2.8**
EOS3	**EOS3**	**1.98**	**343**	*e*P	**Pn**	**09 43 24.9**	**+2.2**
EOS3				*e*S	**Sn**	**09 43 47.7**	**+0.1**
ESL	**Shilin**	**1.99**	**316**	*e*S	**Sn**	**09 43 45.3**	**-2.7**
SLIU	**Shizi**	**1.99**	**266**	*e*P	**Pn**	**09 43 24.0**	**+1.0**
SLIU				*e*S	**Sn**	**09 43 46.4**	**-1.7**
IRIF	**Iriomote-Funau**	**2.07**	**20**	*e*P	**Pn**	**09 43 25.4**	**+1.3**
IRIF				*e*S	**Sn**	**09 43 49.3**	**-0.8**
JKRS	**Kuro-shima**	**2.09**	**28**	*e*P	**Pn**	**09 43 25.7**	**+1.3**
JKRS				*e*S	**Sn**	**09 43 49.8**	**-0.8**
MASBT	**Mashibuluo**	**2.15**	**277**	*e*P	**Pn**	**09 43 27.2**	**+2.0**
STYH	**Taoyuan**	**2.15**	**292**	*e*P	**Pn**	**09 43 26.5**	**+1.4**
VWDT	**VWDT**	**2.15**	**310**	*e*P	**Pn**	**09 43 26.7**	**+1.6**
VWDT				*e*S	**Sn**	**09 43 50.6**	**-1.3**
SCZT	**Fangliau**	**2.15**	**270**	*e*P	**Pn**	**09 43 27.1**	**+2.0**
SCZT				*e*S	**Sn**	**09 43 50.9**	**-1.1**
LXIB	**Xiulin Townshi**	**2.15**	**320**	P	**Pn**	**09 43 26.8**	**+1.4**
LXIB				S	**Sn**	**09 43 50.6**	**-1.7**
SSD	**Sandimen**	**2.16**	**280**	*e*P	**Pn**	**09 43 26.7**	**+1.3**
SSD				*e*S	**Sn**	**09 43 49.8**	**-2.6**
NACB	**Ninganchiao**	**2.17**	**326**	P	Pn	09 43 25.5	0.0
NACB				*e*S	Sn	09 43 48.7	-3.9
OWD	**Renai**	**2.25**	**314**	*e*S	**Sn**	**09 43 52.4**	**-2.4**
ETLH	**Xiulin Townshi**	**2.26**	**324**	*e*S	**Sn**	**09 43 53.5**	**-1.3**
JIJ	**Ishigaki jima**	**2.26**	**29**	*e*P	**Pn**	**09 43 27.8**	**+1.1**
ALS	**Alishan**	**2.27**	**300**	*e*P	**Pn**	**09 43 29.8**	**+2.8**
ALS				*e*S	**Sn**	**09 43 55.4**	**+0.1**
WTP	**Ta-pu**	**2.31**	**292**	*e*P	**Pn**	**09 43 30.2**	**+2.8**
WTP				*e*S	**Sn**	**09 43 57.1**	**+1.1**
TPUB	**Ta-pu**	**2.32**	**294**	*e*P	**Pn**	**09 43 30.4**	**+2.8**
TPUB				*e*S	**Sn**	**09 43 57.9**	**+1.6**
WUSB	**Renai**	**2.32**	**314**	*e*P	**Pn**	**09 43 29.2**	**+1.6**
WUSB				*e*S	**Sn**	**09 43 55.2**	**-1.2**
WHF	**Hehuan Shan**	**2.33**	**319**	*e*S	**Sn**	**09 43 56.0**	**-1.2**
CHN1	**Nanshi**	**2.37**	**290**	*e*P	**Pn**	**09 43 31.3**	**+3.1**
CHN1				*e*S	**Sn**	**09 43 58.8**	**+1.4**
CHN4	**Tsaushan**	**2.37**	**294**	*e*P	**Pn**	**09 43 32.2**	**+4.0**
CHN4				*e*S	**Sn**	**09 43 59.6**	**+2.1**
WCKO	**Fanlu**	**2.40**	**296**	*e*P	**Pn**	**09 43 32.1**	**+3.5**
WCKO				*e*S	**Sn**	**09 43 59.2**	**+1.1**
NNSB	**Datong**	**2.49**	**325**	P	**Pn**	**09 43 31.4**	**+1.4**
NNSB				S	**Sn**	**09 43 59.6**	**-1.0**
NNSH	**Datong**	**2.49**	**325**	*e*P	**Pn**	**09 43 31.1**	**+1.2**
NNSH				*e*S	**Sn**	**09 43 59.2**	**-1.3**
LATG	**Datong**	**2.51**	**329**	*e*P	**Pn**	**09 43 31.5**	**+1.3**
LATG				*e*S	**Sn**	**09 43 59.7**	**-1.2**
JISG	**Ishigakijimahi**	**2.53**	**30**	*e*P	**Pn**	**09 43 31.1**	**+0.7**
JISG				*e*S	**Sn**	**09 43 59.5**	**-1.9**
FUSB	**Fushanzhiwuyua**	**2.67**	**333**	*e*P	**Pn**	**09 43 35.2**	**+2.8**
FUSB				*e*S	**Sn**	**09 44 04.8**	**-0.2**
YHNB	**Yeheng**	**2.69**	**328**	P	**Pn**	**09 43 34.5**	**+1.8**
YHNB				S	**Sn**	**09 44 04.1**	**-1.4**

HEL 13 10:00:13.0±0.1**,67°.71N**×**26°.93E,h0**^{km}**,ML1.5, Suspected explosion,Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAJF	**Raja-Jooseppi**	**0.93**	**34**	PG	Pg	10 00 29.9	-0.8
RAJF				SB	Sg	10 00 43.5	+0.8
VRF	**Varrio**	**1.02**	**87**	PG	Pg	10 00 31.1	-1.4
VRF				MSG		10 00 44.4	
	comp=Z,3.2nm,0.2s						
VRF				SB	Sg	10 00 45.8	0.0
RNF	**Rovaniemi**	**1.17**	**198**	PG	Pg	10 00 34.2	-1.0
	baz=20						
RNF				SG	Sg	10 00 50.7	+0.3
KLF	**Kolari**	**1.24**	**249**	PG	Pg	10 00 35.5	-1.2
KLF				MSG		10 00 50.6	
	comp=Z,2.5nm,0.2s						
KLF				SN	Sb	10 00 53.6	-0.1
HEF	**Hetta**	**1.41**	**301**	PN	Pn	10 00 39.0	-0.9
	baz=123						
HEF				MSG		10 00 55.5	
	comp=Z,2.7nm,0.2s						
HEF				SN	Sn	10 00 59.1	-0.2
PAJU	**Pajala**	**1.63**	**247**	PN	Pn	10 00 43.1	+0.2
	baz=60						
PAJU				SN	Sn	10 01 04.7	+0.1
OLKF	**Oulanka, Finla**	**1.70**	**144**	PG	Pn	10 00 43.6	-0.3
OLKF				MSG		10 01 03.8	
	comp=Z,6.7nm,0.2s						
RANF	**Ranua**	**1.71**	**182**	PG	Pn	10 00 43.4	-0.6
	baz=2.0						
KTK1	**Kautokeino**	**1.89**	**315**	PG	Pn	10 00 47.1	+0.6
KTK1				SG	Sb	10 01 12.3	-0.2
LANU	**Lannavaara**	**1.90**	**282**	PG	Pn	10 00 47.3	+0.7
ARA0	**ARCESS Array S**	**1.90**	**345**	PG	Pn	10 00 47.0	+0.3
ARA0				SN	Sb	10 01 12.7	-0.1
TOF	**Tornio**	**1.94**	**213**	PG	Pn	10 00 47.4	+0.3
TOF				MSG		10 01 10.5	
	comp=Z,2.0nm,0.2s						
TOF				SG	Sn	10 01 12.6	+0.5
KEV	**Kevo**	**2.05**	**1**	PG	Pb	10 00 49.9	-1.1
KEV				SG	Sb	10 01 16.6	-0.5
ERTU	**Ertsjaerv**	**2.19**	**240**	PG	Pb	10 00 52.0	-1.4
ERTU				SG	Sb	10 01 21.0	+0.1
KALU	**Kalix**	**2.34**	**219**	PG	Pb	10 00 55.0	-1.0
KALU				SG	Sb	10 01 25.6	+0.3
KIF	**Kilpisjarvi**	**2.62**	**303**	PB	Pn	10 00 58.5	+2.1
	baz=113						
KIF				MSG		10 01 30.5	
	comp=Z,1.3nm,0.2s						
KIF				SB	Sb	10 01 31.4	-1.8
OBF4	**Vikkela, Lumij**	**3.00**	**195**	PN	Pn	10 01 00.3	-1.5
OBF4				MSG		10 01 41.4	
	comp=Z,2.7nm,0.2s						

HEL 13 10:00:17.5±0.2**,64°.73N**×**30°.73E,h0**^{km}**,ML1.9, Suspected explosion,Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RMF	**Romuvaara**	**0.62**	**214**	PG	Pg	10 00 29.1	-0.3
RMF				MSG		10 00 37.2	
	comp=Z,15nm,0.2s						
RMF				SG	Sg	10 00 37.5	+0.1
KU1	**Kurvinen**	**0.97**	**330**	PG	Pg	10 00 35.1	-1.0
KU6	**Riekki**	**1.35**	**345**	PG	Pg	10 00 41.8	-1.5
KU6				MSG		10 00 58.2	
	comp=Z,9.0nm,0.2s						
KU6				SB	Sg	10 01 00.2	-0.5
MSF	**Maaselka**	**1.38**	**330**	PG	Pg	10 00 42.4	-1.6
	baz=148						
MSF				SG	Sg	10 01 00.3	-1.5
KU2	**Taivalkoski**	**1.44**	**314**	PG	Pn	10 00 43.5	-1.3
OLKF	**Oulanka, Finla**	**1.69**	**341**	PN	Pn	10 00 48.3	0.0
OLKF				MSG		10 01 08.0	
	comp=Z,6.7nm,0.2s						
OLKF				SN	Sb	10 01 11.0	-0.2
JOF	**Joensuu**	**1.84**	**172**	PG	Pn	10 00 50.1	-0.2
	baz=353						
JOF				SG	Sb	10 01 15.4	0.0
NIF	**Nilsia**	**1.86**	**225**	PG	Pn	10 00 51.0	+0.4
NIF				MSG		10 01 13.0	
	comp=Z,9.5nm,0.2s						
NIF				SG	Sb	10 01 15.4	-0.7
OUL	**Oulu**	**2.09**	**282**	PG	Pn	10 00 54.5	+0.8
	baz=97						
OUL				SG	Sn	10 01 21.2	+0.8
RANF	**Ranua**	**2.10**	**310**	PG	Pn	10 00 55.0	+1.2
	baz=130						
RANF				SG	Sn	10 01 21.3	+0.8
OBF4	**Vikkela, Lumij**	**2.41**	**275**	PB	Pn	10 00 59.0	+0.9
OBF4				MSG		10 01 28.8	
	comp=Z,6.4nm,0.2s						
OBF4				SG	Sb	10 01 32.3	+0.3
OUF	**Merijarvi**	**2.62**	**265**	PN	Pn	10 01 01.1	+0.2
OUF				MSG		10 01 34.7	
	comp=Z,7.8nm,0.2s						
OUF				SG	Sb	10 01 37.1	-0.7

RNF	Rovaniemi	2.71	316	SG	Sb	10 01 39.6	-1.1
OBF0	Syolatti, Pyha	2.81	268	PB	Pn	10 01 05.9	+2.3
OBF0				MSG		10 01 40.2	
	comp=Z,5.1nm,0.2s						
OBF0				SG	Sb	10 01 43.6	+0.3
SUF	Sumiainen	2.87	227	PB	Pn	10 01 06.4	+2.0
SUF				MSG		10 01 42.0	
	comp=Z,2.7nm,0.2s						
TOF	Tornio	3.00	300	MSG		10 01 45.6	
	comp=Z,2.0nm,0.2s						
TOF				SG	Sb	10 01 47.6	-1.3
KALU	Kalix	3.30	293	PG	Pb	10 01 16.9	+0.1
	baz=107						
KALU				SG	Sb	10 02 00.0	+2.6
LVZ	Lovozero	3.55	25	PB	Pn	10 01 16.4	+2.6
KEF	Keuruu	3.68	228	PG	Pb	10 01 23.0	-0.3
	baz=46						
KLF	Kolari	3.74	315	SG	Sb	10 02 12.4	+2.4
FIA0	FINESS Array S	3.92	215	PN	Pn	10 01 19.7	+0.9
VAF	Ylistaro	3.94	248	PN	Pn	10 01 20.7	+1.5
	baz=62						
BURU	Burvik	4.02	272	PN	Pn	10 01 20.3	+0.1
VJF	Virojoki	4.46	201	SG	Sg	10 02 36.3	-4.2
UMAU	Umeaa	4.46	264	SN	Sn	10 02 17.6	-1.2
HEF	Hetta	4.65	326	SG	Sb	10 02 41.2	+5.0

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*KRNET **13** 10:01:47.1±0.1, 40°.85N×69°.58E, mb2.7*

ISC 13 10:01:47.7±2.7**, 40°.85N**±0°.05×**69°.6E**±0°.1**, h15^{km}**±23^{km}**, n6, σ0^{s}.83**/11**, 10C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRKS	Terek-Say	1.32	58	⇑eP	Pb	10 02 12.8	+0.4
TRKS				⇑eS	Sg	10 02 31.3	+0.8
GAR	Garm	1.92	164	⇑eP	Pb	10 02 23.0	+0.6
GAR				⇑eS	Sg	10 02 49.0	-0.3
ARK	Arkit	1.99	61	⇑eP	Pb	10 02 24.7	+1.0
ARK				⇑eS	Sg	10 02 51.7	-0.1
DRK	Karamyk	2.15	129	⇑eP	Pb	10 02 26.5	+0.1
DRK				⇑eS	Sg	10 02 55.9	-0.8
KK31	Karatay Array	2.35	16	⇓Pg	Pb	10 02 29.7	-0.1
	0.2nm,0.1s,baz=202,slow=9.3,SNR=11						
KK31				⇓Lg	Lg	10 03 03.6	
	1.7nm,0.5s,baz=196,slow=29,SNR=7.4						
MNAS	Manas	2.70	52	⇑eP	Pb	10 02 34.5	-1.3
MNAS				⇑eS	Sb	10 03 08.8	-0.1

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*JMA **13** 10:02:32.1±0.3, 32°N±3°×13°8E±°, h437^{km}, MV3.2/38, FAR S OFF TOKAI DISTRICT*

*IDC **13** 10:02:40.7±2.0, 32°.59N×138°.09E, h403^{km}±43^{km}, mb2.7/2, mbtmp3.4/4, Error ellipse: s-maj=83.2km s-min=28.9km az=56.0*

ISC 13 10:02:39.9±1.3**, 32°.5N**±0°.2×**138°.0E**±0°.1**, h400^{km}, n15, σ1^{s}.53**/15**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTO2	TONANKAI O.B.S	1.46	327	P	Pn	10 03 31.6	-0.8
TTO1	TONANKAI O.B.S	1.50	318	eP	Pn	10 03 31.5	-1.0
TTO4	TONANKAI O.B.S	1.54	346	eP	Pn	10 03 32.1	-0.7
JIE	Ise	2.16	331	eP	Pn	10 03 35.5	-1.3
JTNC	Tanabenakahech	2.38	304	eP	Pn	10 03 36.1	-2.2
JWY	Kouya	2.63	311	eP	Pn	10 03 38.7	-1.4
JAI	Aioi	3.22	294	eP	Pn	10 03 42.8	-2.0
BSO1	Boso 1	3.30	49	P	Pn	10 03 43.0	-1.8
JWT	Wachi	3.50	323	P	Pn	10 03 46.0	-1.2
JMN	Monobe	3.65	291	P	Pn	10 03 47.0	-1.7
MJAR	Matsushiro Arr	4.03	3	P	Pn	10 03 52.0	-0.2
	2.5nm,0.6s,baz=185,slow=11,SNR=9.7						
JHS	Saijyo	4.75	303	eP	Pn	10 03 58.3	-1.0
KSRS	Korea Array	9.61	304	P	Pn	10 04 55.0	+1.8
	0.7nm,0.4s,baz=125,slow=10,SNR=5.6						
MKAR	Makanchi Array	44.29	306	P	P	10 10 12.3	+0.5
	0.3nm,0.4s,baz=96,slow=9.4,SNR=2.4 0.3nm,0.4s						
WRA	Warramunga Arr	52.27	184	P	P	10 11 13.4	+1.2
	0.2nm,0.3s,baz=360,slow=7.7,SNR=6.0 0.2nm,0.3s						

DJA 13 10:14:29.7±0.2**, 0°N**±2°×**12°5E**±°**, h10^{km}, M4.2**/12**, mB5.5**/1**, mb4.4**/2**, MLv4.1**/12**, Mw(mB)4.9**/1**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.93	79	P	Pn	10 15 03.2	+0.6
TNTI				S	Sn	10 15 27.2	+0.2
GTOI	Gorontalo	2.47	275	P	Pb	10 15 13.1	-1.1
SANI	Sanana	2.49	168	P	Pn	10 15 08.8	-1.5
LUWI	Luwuk	3.06	242	P	Pn	10 15 17.3	-0.8
SGSI	Sangihe	3.27	1	P	Pn	10 15 21.3	+0.3
MRSI	Marisa	3.53	271	P	Pn	10 15 25.7	+1.1
NLAI	Namlea	3.96	156	P	Pn	10 15 29.9	-0.7
APSI	Ampana	4.04	251	P	Pn	10 15 32.4	+0.8
KRAI	Karang Ratu	4.71	142	P	Pn	10 15 40.6	-0.3
MSAI	Masohi	5.08	137	P	Pn	10 15 45.4	-0.6
MYLDM	Lahad Datu	8.43	304	P	Pn	10 16 31.1	-0.8
	13nm,1.5s						
JAGI	Jajag, Banyuwa	14.31	232	P	Pn	10 17 52.8	+0.2

IDC 13 10:21:42.9±2.6**, 39°.29N**×**94°.57E, h0^{km}, mb3.6**/2**, mbtmp3.5**/3**, ML3.4**/1**, Error ellipse: s-maj=519.8km s-min=35.6km az=46.0, Gansu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	11.69	314	Pn	Pn	10 24 27.2	-3.7
	0.3nm,0.3s,baz=123,slow=10,SNR=6.1 0.6nm,0.5s						
WRA	Warramunga Arr	69.68	140	P	P	10 32 53.8	-0.6
	0.6nm,0.8s,baz=336,slow=7.4,SNR=4.7 0.6nm,0.8s						
ASAR	Alice Springs	72.63	142	P	P	10 33 12.9	+0.7
	0.5nm,0.9s,baz=327,slow=7.0,SNR=5.3 0.5nm,0.9s						

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*IDC **13** 10:25:11.0±3.1, 34°.85N×134°.99E, h97^{km}±33^{km}, mb3.5/8, mbtmp3.8/11, Error ellipse: s-maj=32.6km s-min=15.5km az=59.0*

*JMA **13** 10:25:21.1±0.1, 35°.9N±0°.5×137°.2E±0°.7, h261^{km}±1^{km}, MV3.0/48, NORTHERN GIFU PREF*

ISC 13 10:25:20.7±0.8**, 35°.89N**±0°.08×**137°.1E**±0°.1**, h261^{km}**±7^{km}**, n21, σ0^{s}.84**/27**, mb3.4**/8**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGF	Kuroka	0.36	142	P	Pn	10 25 54.5	-0.1
JGF				eS	S	10 26 20.5	-0.9
JYTA	Yamagatataniai	0.41	225	eP	Pn	10 25 55.2	+0.6
JYTA				S	S	10 26 21.3	-0.1
JKG	Kaga	0.73	303	eP	Pn	10 25 56.7	+1.1
JTT	Ttatey	0.75	15	eP	Pn	10 25 56.6	+1.0
JNY	Yasuok	0.82	130	P	Pn	10 25 56.0	-0.1
JNY				S	S	10 26 23.1	-1.1
JNG	Nsakai	0.97	57	i P	Pn	10 25 57.1	+0.3
JNG				S	S	10 26 25.4	+0.1
MAT	Matsushiro	1.12	54	i P	Pn	10 25 57.6	+0.1
MAT				S	S	10 26 26.4	-0.3
MJAR	Matsushiro Arr	1.12	54	P	Pn	10 25 57.8	+0.2
	38nm,0.4s,baz=230,slow=6.5,SNR=314						
MJAR				S	S	10 26 27.3	+0.6
	15nm,0.7s,baz=276,slow=11,SNR=12						
HMMJ	Hamamatsu 2	1.15	153	eP	Pn	10 25 58.0	+0.2
JYN	Shimob	1.25	108	eP	Pn	10 25 58.1	-0.3
JHJ	Hachijo jima 2	3.54	140	P	Pn	10 26 19.1	-0.8
	46nm,0.5s,baz=139,slow=23,SNR=7.8						
JHJ				S	S	10 27 09.3	+2.4
	53nm,0.5s,baz=89,slow=18,SNR=1.0						
USRK	Ussuriysk Ar.	9.18	336	P	Pn	10 27 28.1	-0.6
	1.8nm,0.6s,baz=145,slow=12,SNR=7.6						
HILR	Hailar Array B	18.62	323	P	P	10 29 17.8	-1.3
	1.2nm,0.4s,baz=126,slow=11,SNR=3.2						
SONM	Songino Array	25.61	307	P	P	10 30 26.4	-0.1
	0.5nm,0.5s,baz=118,slow=8.3,SNR=2.6 0.5nm,0.5s						
ZALV	Zalesovo Beam	40.14	314	P	P	10 32 31.2	-0.1
	0.6nm,0.5s,baz=89,slow=7.4,SNR=3.7 0.6nm,0.5s						
MKAR	Makanchi Array	41.78	303	P	P	10 32 45.0	+0.3
	1.0nm,0.6s,baz=91,slow=10,SNR=11 1.0nm,0.6s						
KURBB	Kurchatov Arra	43.97	308	P	P	10 33 02.2	+0.1
	1.3nm,0.2s,baz=86,slow=7.9,SNR=7.5 1.3nm,0.2s						
BVAR	Borovoye Array	48.77	312	P	P	10 33 40.5	+1.3
	0.8nm,0.5s,baz=92,slow=7.1,SNR=4.9 0.8nm,0.5s						
ILAR	Eielson Array	52.32	32	P	P	10 34 25.9	+20
	0.3nm,1.0s,baz=280,slow=5.3,SNR=4.1 0.3nm,1.0s						
WRA	Warramunga Arr	55.58	183	P	P	10 34 28.6	-0.8
	0.6nm,0.2s,baz=360,slow=7.6,SNR=17 0.6nm,0.2s						
ASAR	Alice Springs	59.30	183	P	P	10 34 55.0	-0.4
	0.5nm,0.6s,baz=356,slow=6.4,SNR=13 0.5nm,0.6s						

IDC 13 10:50:21.4±999.0**, 54°.17N**×**43°.75E, h0^{km}, Error ellipse: s-maj=756.9km s-min=190.9km az=99.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	9.53	108	I	I	11 47 16.7	
	0.1nm,0.6s,baz=299,slow=319,SNR=4.3						
I46RU	ZALESOVO INFRA	23.87	74	I	I	13 16 40.0	
	baz=287,slow=319,SNR=1.7						
I34MN	SONGINO INFRAS	38.78	73	I	I	14 47 10.0	
	baz=305,slow=332,SNR=0.6						

IDC 13 10:56:51.6±2.0**, 0°.20N**×**124°.56E, h0^{km}, mb3.1**/3**, mbtmp3.2**/3**, Error ellipse: s-maj=195.8km s-min=28.9km az=63.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.19	155	P	P	11 01 49.5	-0.1
	0.3nm,0.4s,baz=333,slow=10.0,SNR=5.0 0.3nm,0.4s						
ASAR	Alice Springs	25.40	160	P	P	11 02 21.0	+0.1
	0.3nm,0.7s,baz=350,slow=8.8,SNR=3.6 0.3nm,0.7s						
MKAR	Makanchi Array	59.28	327	P	P	11 06 55.2	0.0
	0.1nm,0.3s,baz=134,slow=6.1,SNR=1.9 0.1nm,0.3s						

STR 13 11:04:01.1±0.0**, 45°.78N**±0°.09×**1°.27E**±0°.08**, h0^{km}, MLv2.0**/3**, LOCSAT earthModelID haslach_taup-2.11 preliminary, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VERF	Verneugheol	0.85	91	Pg	Pg	11 04 17.1	-0.3
VERF				Pn	Pb	11 04 19.3	+0.5
FRNF	Fournols	0.99	113	Pg	Pg	11 04 19.6	-0.5
FRNF				Pn	Pb	11 04 21.1	0.0
CHIF	Chize	1.23	288	Pn	Pg	11 04 24.0	-0.6
CHIF				Sg	Sb	11 04 41.8	+0.3
MFF	Saint Martin d	1.28	310	Pg	Pg	11 04 25.4	-0.4
MFF				Sg	Sb	11 04 42.9	-0.4
LEUC	Leucamp	1.36	138	Pn	Pg	11 04 25.5	-1.7
LEUC				Pg	Pn	11 04 27.3	-0.1
MONQ	Montcuq	1.41	182	Pg	Pn	11 04 28.0	0.0
MONQ				Sn	Sb	11 04 46.6	-0.2

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*STR **13** 11:04:21.0±0.0, 45°.78N±0°.07×2°.84E±0°.07, h0^{km}, MLv1.8/10, LOCSAT earthModelID auvergne_taup-2.11 preliminary*

*LDG **13** 11:04:20.4±0.1, 45°.75N×2°.89E, h2^{km}, Md2.6/1, Ml2.6/9, Error ellipse: s-maj=2.0km s-min=1.1km az=137.0*

ISC 13 11:04:20.1±0.8**, 45°.81N**±0°.03×**2°.81E**±0°.02**, h0^{km}, n19, σ0^{s}.74**/35**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VERF	Verneugheol	0.24	256	Pg	Pg	11 04 25.5	+0.9
VERF				Sg	Sg	11 04 29.1	+1.4
AGO	Saint Agoulin	0.33	42	Pg	Pg	11 04 26.8	+0.3
AGO				Sg	Sg	11 04 32.3	+1.6
FRNF	Fournols	0.45	203	Pg	Pg	11 04 29.3	+0.5
FRNF				Sg	Sg	11 04 34.8	+0.2
PLDF	La Plantade	0.59	74	Pg	Pg	11 04 31.4	+0.1
PLDF				Sg	Sg	11 04 40.1	+1.1
TCF	Toulx Ste Croi	0.64	319	ePg	Pb	11 04 33.7	-0.5
TCF				eSg	Sb	11 04 42.9	-0.7
	13nm,0.2s						
LBL	Lubilhac	0.65	152	Pg	Pg	11 04 32.7	+0.2
LBL				Sg	Sg	11 04 41.4	+0.5
BGF	Bois d'Agland	0.75	2	ePg	Pb	11 04 35.7	-0.4
BGF				eSg	Sb	11 04 47.7	+0.8
	53nm,0.3s						
CAF	Calviac	1.03	211	ePg	Pg	11 04 39.4	-0.3
CAF				eSg	Sg	11 04 54.3	+1.3
	17nm,0.2s						
RJF	Les Rejaudoux	1.04	242	ePg	Pg	11 04 40.6	+0.6
RJF				eSg	Sg	11 04 54.3	+0.9
	22nm,0.3s						
AVF	Avril sur Loir	1.05	21	ePg	Pb	11 04 40.8	-0.4
AVF				eSg	Sb	11 04 54.9	-0.7
LEUC	Leucamp	1.06	190	Pg	Pg	11 04 40.5	+0.1
LEUC				Sg	Sg	11 04 54.1	0.0
SMF	Signal de Mont	1.10	40	ePg	Pb	11 04 41.7	-0.3
SMF				eSg	Sb	11 04 56.6	-0.4
SSF	Saint Saulge	1.34	21	ePg	Pn	11 04 46.2	+0.1
SSF				eSg	Sb	11 05 03.7	-0.2
	16nm,0.3s						
LOR	Lormes	1.63	26	ePg	Pb	11 04 51.1	0.0
	baz=204						
LOR				eSg	Sg	11 05 12.7	+0.2
	8.2nm,0.2s						
SLVF	La Salvetat-Pe	1.68	196	Sg	Sg	11 05 15.1	+1.1
LFF	La Frestale	1.70	240	eSg	Sg	11 05 14.9	+0.3
	18nm,0.3s						
MONQ	Montcuq	1.84	219	Sg	Sg	11 05 19.4	+0.3
MFF	Saint Martin d	2.20	292	ePg	Pg	11 05 02.7	+0.4
MFF				eSn	Sn	11 05 24.0	-1.8
MFF				eSg	Sg	11 05 31.2	+0.4
	2.8nm,0.2s						
CABF	La Chapelle	2.41	69	eSg	Sb	11 05 35.0	+0.2
	3.1nm,0.4s						

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*IDC **13** 11:21:06.5±5.4, 36°.09N×71°.04E, h84^{km}±46^{km}, mb3.7/9, mbtmp4.1/14, ML3.7/5, MS3.3/3, Error ellipse: s-maj=40.1km s-min=20.7km az=33.0*

*NNC **13** 11:21:15.9±6.8, 36°.77N×70°.75E, h166^{km}±87^{km}, mb3.3, mpv4.3, Error ellipse: s-maj=64.5km s-min=45.1km az=50.0*

ISC 13 11:21:08.2±1.0**, 36°.25N**±0°.09×**71°.23E**±0°.10**, h100^{km}, n30, σ1^{s}.90**/31**, mb4.0**/7**, 4C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	4.97	48	Pn	Pn	11 22 21.3	+0.7
KSH				Sn	Sn	11 23 11.8	-5.1
KSH				smax	smax		
	comp=N,220nm,0.5s						
KSH				smax	smax		
	comp=E,150nm,0.6s						
UCH	Uchtor	6.49	22	P	Pn	11 22 43.3	+1.8
	SNR=37						
EKS2	Erkin-Say	6.70	16	P	Pn	11 22 45.9	+1.8
	SNR=12						
AAK	Ala-Archa	6.86	21	P	Pn	11 22 48.5	+2.2
	SNR=20						
AAK	Ala-Archa	6.86	21	P	Pn	11 22 48.4	+2.2
	comp=E,8.9nm,0.3s,baz=185,slow=5.0,SNR=92						
AAK				S	Sn	11 24 01.5	-1.3
	comp=E,11nm,0.5s,baz=343,slow=22,SNR=9.5 comp=E,12nm,0.3s						
AAK	Ala-Archa	6.86	21	⇓P	Pn	11 22 48.2	+2.0
	comp=E,4.6nm,0.5s						
AAK				⇓S	Sn	11 24 04.3	+1.5
	comp=E,15nm,0.9s						
KK31	Karatay Array	6.87	356	⇓P	Pn	11 22 47.0	+0.7
	comp=E,27nm,0.4s,baz=185,slow=14,SNR=192						
KK31				⇓S	Sn	11 24 00.0	-2.8
	comp=E,4.0nm,0.3s,baz=190,slow=22,SNR=5.8						
KBK	Karagaybulak	7.01	23	P	Pn	11 22 51.9	+3.5
	SNR=12						
CHMS	Chumysh	7.26	21	P	Pn	11 22 54.9	+3.2
	SNR=12						
USP	Ospenovka	7.44	19	P	Pn	11 22 55.4	+1.3
	SNR=14						
TKM2	Tokmak 2	7.46	25	P	Pn	11 22 56.8	+2.3
	SNR=8.1						
MKAR	Makanchi Array	13.38	35	P	Pn	11 24 15.3	+1.3
	comp=E,0.2nm,0.3s,baz=223,slow=14,SNR=7.7 comp=E,0.8nm,0.5s						
KURBB	Kurchatov Arra	15.30	18	P	P	11 24 40.6	-0.4
	comp=E,0.2nm,0.3s,baz=209,slow=10,SNR=8.5 comp=E,1.0nm,0.2s						
AB31	Akbulak array	15.39	331	⇑P	Pn	11 24 38.0	-1.7
	comp=E,1.3nm,0.5s,baz=168,slow=11,SNR=45						
AB31				⇑S	Sn	11 27 16.8	-13
	comp=E,1.7nm,0.7s,baz=149,slow=23,SNR=6.2						
BVAR	Borovoye Array	16.78	358	P	Pn	11 24 56.3	-0.6
	comp=E,0.1nm,0.3s,baz=159,slow=12,SNR=14 comp=E,2.7nm,0.6s						
AKTO	Aktyubinsk	17.09	330	P	P	11 25 00.2	-0.7
	comp=E,0.6nm,0.3s,baz=132,slow=7.6,SNR=11 comp=E,3.8nm,0.5s						
AKTO	Aktyubinsk	17.09	330	⇑P	Pn	11 24 59.7	-1.0
	comp=E,2.5nm,0.7s						
AKTO				⇑S	Sn	11 27 58.6	-12
	comp=E,2.8nm,1.4s						
ZALV	Zalesovo Beam	20.06	24	P	P	11 25 34.3	+1.0
	comp=E,8.1nm,0.6s,baz=224,slow=11,SNR=40 comp=E,8.1nm,0.6s						
CMAR	Chiang Mai Arr	30.17	119	LR	LR	11 40 31.2	
	comp=E,14nm,20.0s,baz=310,slow=38						
FINES	FINESS Array B	37.80	326	P	P	11 28 15.0	+0.6
	comp=E,5.2nm,1.1s,baz=126,slow=9.7,SNR=6.5 comp=E,5.2nm,1.1s						
ARCES	ARCESS Array B	41.45	338	P	P	11 28 45.6	+1.0
	comp=E,1.5nm,0.5s,baz=113,slow=7.6,SNR=12 comp=E,1.5nm,0.5s						
HFS	Hagfors	43.38	322	P	P	11 29 00.5	+0.1
	comp=E,2.0nm,0.5s,baz=93,slow=9.1,SNR=7.6 comp=E,2.0nm,0.5s						
NB2	NORSAR Subarra	44.69	323	P	P	11 29 11.0	+0.1
	comp=Z,3.0nm,0.7s,baz=95,slow=8.6						
NOA	NORSAR Array B	44.69	323	P	P	11 29 11.0	+0.1
	comp=Z,0.9nm,0.5s,baz=96,slow=7.7,SNR=5.1 comp=Z,0.9nm,0.5s						
ASAJ	Asahikawa	53.53	58	LR	LR	11 54 54.0	
	comp=Z,54nm,20.1s,baz=149,slow=38						
TORD	Torodi Ar. Bea	65.90	269	P	P	11 31 42.0	-1.7
	comp=Z,2.7nm,0.4s,baz=44,slow=5.7,SNR=2.4 comp=Z,2.7nm,0.4s						
YKA	Yellowknife Ar	81.48	3	P	P	11 33 14.7	+0.7
	comp=Z,0.2nm,0.5s,baz=350,slow=5.4,SNR=4.2 comp=Z,0.2nm,0.5s						
WRA	Warramunga Arr	81.70	122	P	P	11 33 16.2	+0.4
	comp=Z,0.5nm,0.9s,baz=307,slow=6.2,SNR=2.3 comp=Z,0.5nm,0.9s						
ASAR	Alice Springs	83.96	125	P	P	11 33 27.9	+0.6
	comp=Z,0.4nm,0.6s,baz=304,slow=5.1,SNR=9.1 comp=Z,0.4nm,0.6s						
CTA	Charters Tower	90.27	115	LR	LR	12 20 59.5	
	comp=Z,38nm,18.1s,baz=46,slow=40						

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*IDC **13** 11:26:42.0±0.9, 30°.43N×79°.30E, h0^{km}, mb3.8/16, mbtmp3.9/18, ML3.7/2, MS3.3/3, Error ellipse: s-maj=26.0km s-min=15.0km az=50.0*

*NDI **13** 11:26:46.2±0.8, 30°.57N×79°.68E, h10^{km}±4^{km}, ML4.3, MW4.0*

*DMN **13** 11:26:49.7±0.0, 31°.01N×79°.74E, h10^{km}, Ml4.7/9, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 13 11:26:45.2±0.5**, 30°.58N**±0°.04×**79°.50E**±0°.04**, h17^{km}, n43, σ2^{s}.97**/64**, mb3.8**/14**, 1C-3D, Western Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDI	Dehra Dun	1.27	259	eP	Pg	11 27 13.1	+3.3
DDI				IAML		11 27 26.2	
	comp=N,10µm,0.5s						
DDI				IAML		11 27 26.4	
	comp=E,9µm,0.5s						
DDI				eS	Sg	11 27 32.2	+5.8
TKRD	Thakurdwara	1.53	201	eP	Pg	11 27 14.5	-0.3
TKRD				eS	Sg	11 27 34.5	-0.2
SMLA	Simla	2.08	286	eP	Pb	11 27 23.2	+0.8
SMLA				IAML		11 27 50.0	
	comp=E,6µm,0.5s						
SMLA				IAML		11 27 50.5	
	comp=N,6µm,0.5s						
SMLA				eS	Sg	11 27 50.6	-1.5
ASOR	Ausora	2.36	220	eS	Sb	11 27 55.8	-0.2
ASOR				IAML		11 27 57.9	
	comp=E,5µm,0.4s						
ASOR				IAML		11 27 59.1	
	comp=N,4µm,0.5s						
BHK	Bhakra	2.80	288	eP	Pn	11 27 26.8	-2.0
BHK				eS	Sn	11 27 56.9	-5.1
BHK				IAML		11 28 12.8	
	comp=E,2µm,0.5s						
BHK				IAML		11 28 15.1	
	comp=N,2µm,0.6s						
LDR	Lodi Road	2.81	225	eP	Pb	11 27 33.0	-2.0
LDR				eS	Sb	11 28 06.9	-2.2
LDR				IAML		11 28 13.7	
	comp=E,4µm,0.5s						
LDR				IAML		11 28 14.1	
	comp=N,3µm,0.7s						
ALCI	Alchi Leh	4.12	332	eP	Pn	11 27 50.6	+2.9
ALCI				eS	Sn	11 28 37.0	+1.4
DANN	Dangsing	4.33	120	Pn	Pn	11 27 54.8	+4.2
	baz=126,slow=0.0						
DANN				Sn	Sn	11 28 43.1	+2.2
	comp=N,408nm,0.5s,baz=126,slow=0.0						
JMU	Jammu	4.54	300	eP	Pn	11 27 57.2	+5.2
JMU				eS	Sn	11 28 48.6	+5.1
JMU				IAML		11 29 07.5	
	comp=E,519nm,0.5s						
JMU				IAML		11 29 17.4	
	comp=N,588nm,0.6s						
DMN	Daman	5.73	120	Pn	Pn	11 28 13.6	+3.8
	baz=124,slow=0.0						
DMN				Sn	Sn	11 29 15.6	+0.2
	comp=N,143nm,0.6s,baz=124,slow=0.0						
KKN	Kakani	5.77	117	Pn	Pn	11 28 14.4	+4.1
	baz=122,slow=0.0						
KKN				Sn	Sn	11 29 15.9	-0.3
	baz=122,slow=0.0						
AJM	Ajmer	5.96	227	eP	Pn	11 28 15.0	+3.0
AJM				eS	Sn	11 29 21.6	+2.2
AJM				IAML		11 29 54.3	
	comp=E,231nm,0.5s						
AJM				IAML		11 30 01.4	
	comp=N,105nm,1.0s						
PKIN	Phulchoki	5.97	119	Pn	Pn	11 28 16.8	+3.7
	baz=123,slow=0.0						
PKIN				Sn	Sn	11 29 22.3	+1.1
	comp=N,148nm,0.4s,baz=123,slow=0.0						
PKI	Pulchoki	5.98	119	Pn	Pn	11 28 16.8	+3.5
	baz=123,slow=0.0						
PKI				Sn	Sn	11 29 21.9	+0.3
	comp=N,178nm,0.5s,baz=123,slow=0.0						
GUN	Gumba	6.18	114	Pn	Pn	11 28 18.8	+2.8
	baz=118,slow=0.0						
GUN				Sn	Sn	11 29 25.4	-1.1
	comp=N,90nm,0.3s,baz=118,slow=0.0						
JIRN	Jiri	6.54	115	Pn	Pn	11 28 24.2	+3.2
	baz=119,slow=0.0						
JIRN				Sn	Sn	11 29 34.7	-0.7
	comp=N,172nm,0.4s,baz=119,slow=0.0						
RAMN	Ramite	7.21	118	Pn	Pn	11 28 33.4	+3.3
	baz=122,slow=0.0						
RAMN				Sn	Sn	11 29 50.1	-1.6
	comp=N,123nm,0.4s,baz=122,slow=0.0						
BHPL	Bhopal	7.54	195	eP	Pn	11 28 36.1	+1.6
BHPL				eS	Sn	11 29 56.1	-3.5
BHPL				IAML		11 29 57.2	
	comp=E,85nm,0.1s						
BHPL				IAML		11 30 02.7	
	comp=N,58nm,0.4s						
ODAN	Odare	7.86	116	Sn	Sn	11 30 05.4	-2.3
	comp=N,109nm,0.5s,baz=120,slow=0.0						
TAPN	Taplejung	7.88	112	Pn	Pn	11 28 42.9	+3.5
	baz=116,slow=0.0						
TAPN				Sn	Sn	11 30 06.4	-1.9
	comp=N,91nm,0.6s,baz=116,slow=0.0						
BOK	Bokaro	8.83	138	eP	Pn	11 28 51.6	-0.6

BOK				eS	Sn	11 30 23.6	-7.8
KSH	Kashi	9.37	343	Pn	Pn	11 29 00.0	+0.4
KSH				Sn	Sn	11 30 37.5	-7.1
KSH				smax	smax		
	comp=N,56nm,0.7s						
KSH				smax	smax		
	comp=E,63nm,0.6s						
AAK	Ala-Archa	12.68	343	Pn	Pn	11 29 45.4	+0.5
	comp=E,0.4nm,0.3s,baz=173,slow=14,SNR=8.6						
AAK				Sn	Sn	11 32 00.7	-5.1
	comp=E,0.4nm,0.3s,baz=7.0,slow=20,SNR=4.2						
AAK				LR	LR	11 35 41.1	
	comp=E,78nm,18.8s,baz=165,slow=42						
	comp=E,1.2nm,0.4s						
AAK	Ala-Archa	12.68	343	⇑P	Pn	11 29 46.0	+1.1
	comp=E,0.6nm,0.5s						
AAK				⇓S	Sn	11 31 59.6	-6.2
	comp=E,2.8nm,0.9s						
KK31	Karatay Array	14.41	333	⇓P	Pn	11 30 04.7	-3.7
	comp=E,1.8nm,0.5s,baz=142,slow=13,SNR=34						
KK31				⇓S	Sn	11 32 35.8	-12
	comp=E,6.2nm,0.6s,baz=148,slow=20,SNR=8.4						
MKAR	Makanchi Array	16.33	7	Pn	Pn	11 30 32.4	-1.3
	comp=E,0.3nm,0.3s,baz=188,slow=12,SNR=20						
MKAR				Sn	Sn	11 33 28.3	-6.2
	comp=E,0.2nm,0.3s,baz=193,slow=24,SNR=4.3						
MKAR				LR	LR	11 37 59.1	
	comp=E,66nm,20.0s,baz=211,slow=41						
	comp=E,0.5nm,0.8s						
KURBB	Kurchatov Arra	20.03	358	P	P	11 31 17.1	0.0
	comp=E,1.3nm,0.6s,baz=180,slow=9.8,SNR=5.9						
	comp=E,1.3nm,0.6s						
LZDM	Lanzhou Array	20.91	69	P	Pn	11 31 29.6	-0.2
	comp=E,1.5nm,0.3s,baz=238,slow=8.5,SNR=5.0						
	comp=E,1.5nm,0.3s						
CMAR	Chiang Mai Arr	21.38	120	P	P	11 31 33.4	+1.4
	comp=E,0.8nm,0.4s,baz=307,slow=9.9,SNR=9.0						
	comp=E,0.8nm,0.4s						
BVAR	Borovoye Array	23.39	346	P	P	11 31 53.4	+0.4
	comp=E,0.8nm,0.4s,baz=160,slow=13,SNR=5.6						
BVAR				LR	LR	11 41 41.4	
	comp=E,126nm,18.5s,baz=180,slow=38						
	comp=E,0.8nm,0.4s						
ZALV	Zalesovo Beam	23.67	8	P	P	11 31 56.1	+0.4
	comp=E,2.2nm,0.6s,baz=198,slow=9.3,SNR=12						
	comp=E,2.2nm,0.6s						
AKTO	Aktyubinsk	25.53	327	P	P	11 32 12.8	0.0
	comp=E,1.5nm,0.6s,baz=116,slow=9.5,SNR=4.7						
	comp=E,1.5nm,0.6s						
XLT	XiLinHaoTe	31.75	55	eP	P	11 33 10.5	+2.1
XLT				sP	sP	11 33 19.3	+2.2
XLT				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BRTR	Keskin Array B	38.24	297	P	P	11 34 03.7	-0.8
	comp=Z,0.4nm,0.5s,baz=124,slow=9.2,SNR=2.3						
	comp=Z,0.4nm,0.5s						
NRIK	Noril'sk	39.08	5	P	P	11 34 12.6	+1.6
	comp=Z,0.7nm,0.3s,baz=154,slow=10,SNR=2.2						
	comp=Z,0.7nm,0.3s						
FINES	FINESS Array B	46.30	328	P	P	11 35 09.4	-0.3
	comp=Z,1.4nm,0.4s,baz=120,slow=8.4,SNR=8.4						
	comp=Z,1.4nm,0.4s						
ARCES	ARCESS Array B	49.29	338	P	P	11 35 33.2	+0.4
	comp=Z,2.5nm,0.9s,baz=119,slow=8.1,SNR=7.3						
	comp=Z,2.5nm,0.9s						
HFS	Hagfors	52.03	325	P	P	11 35 51.7	-1.9
	comp=Z,5.2nm,0.9s,baz=93,slow=11,SNR=5.1						
	comp=Z,5.2nm,0.9s						
NOA	NORSAR Array B	53.31	326	P	P	11 36 03.9	+0.9
	comp=Z,0.8nm,0.8s,baz=115,slow=7.5,SNR=1.7						
	comp=Z,0.8nm,0.8s						
WRA	Warramunga Arr	72.81	126	P	P	11 38 12.8	-0.4
	comp=Z,0.8nm,0.7s,baz=320,slow=5.8,SNR=7.1						
	comp=Z,0.8nm,0.7s						
TORD	Torodi Ar. Bea	73.03	275	P	P	11 38 13.3	-1.3
	comp=Z,2.5nm,0.5s,baz=55,slow=5.4,SNR=2.7						
	comp=Z,2.5nm,0.5s						
ASAR	Alice Springs	75.04	129	P	P	11 38 25.6	-0.6
	comp=Z,0.4nm,0.5s,baz=318,slow=6.2,SNR=5.9						
	comp=Z,0.4nm,0.5s						
ILAR	Eielson Array	78.32	18	P	P	11 38 44.2	+0.1
	comp=Z,0.4nm,0.8s,baz=308,slow=5.0,SNR=4.7						
	comp=Z,0.4nm,0.8s						

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*JMA **13** 11:34:21.5±0.7, 31°N±3°×14°2E±°, h0^{km}, MV4.0/24, NEAR TORISHIMA IS*

*IDC **13** 11:34:25.6±1.3, 30°.54N×141°.24E, h0^{km}, mb3.5/6, mbtmp3.5/7, ML2.8/1, Error ellipse: s-maj=45.7km s-min=21.8km az=76.0*

ISC 13 11:34:26.6±1.4**, 31°.05N**±0°.09×**142°.5E**±0°.2**, h37^{km}, n16, σ1^{s}58**/16**, mb3.7**/6**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.05	313	eP	Pn	11 35 10.6	-1.7
BSO1	Boso 1	3.81	341	eP	Pn	11 35 23.3	+1.1
JOD2	Odawara 2	5.07	327	P	Pn	11 35 41.5	+1.5
JHO	Hitachi	5.77	345	eP	Pn	11 35 50.0	+0.4
JRY	Ryogami san	5.78	330	eP	Pn	11 35 51.4	+1.6
JIE	Ise	5.89	306	eP	Pn	11 35 50.9	-0.5
JAG	Ashikaga	5.92	336	eP	Pn	11 35 52.6	+0.9
JFK	Kawauchi	6.44	349	eS	Sn	11 37 08.6	-2.4
MJAR	Matsushiro Arr	6.53	328	Pn	Pn	11 36 01.1	+1.1
	0.2nm,0.3s,baz=159,slow=11,SNR=9.6						
MJAR				Sn	Sn	11 37 14.4	+1.1
	0.1nm,0.3s,baz=160,slow=24,SNR=1.7						
	1.6nm,0.4s						
JMK	Ichinoseki	7.95	353	eS	Sn	11 37 44.9	-3.2
SONM	Songino Array	32.16	312	P	P	11 40 52.3	+1.5
	0.6nm,0.6s,baz=108,slow=7.7,SNR=4.4						
	0.6nm,0.6s						
MKAR	Makanchi Array	48.23	307	P	P	11 43 04.3	+0.6
	0.6nm,0.7s,baz=90,slow=8.6,SNR=5.4						
	0.6nm,0.7s						
KURBB	Kurchatov Arra	50.52	312	P	P	11 43 20.7	-0.4
	0.5nm,0.6s,baz=86,slow=7.3,SNR=6.1						
	0.5nm,0.6s						
WRA	Warramunga Arr	51.30	190	P	P	11 43 26.1	-1.0
	0.3nm,0.3s,baz=6.6,slow=7.6,SNR=8.4						
	0.3nm,0.3s						
ILAR	Eielson Array	54.15	30	P	P	11 43 59.4	+12
	0.3nm,0.9s,baz=279,slow=8.5,SNR=1.6						
	0.3nm,0.9s						
ASAR	Alice Springs	55.03	190	P	P	11 43 54.3	-0.3
	0.1nm,0.4s,baz=3.6,slow=5.2,SNR=1.3						
	0.1nm,0.4s						

IDC 13 11:41:09.8±999.0**, 48°.32N**×**49°.23E, h0^{km}, Error ellipse: s-maj=599.8km s-min=141.5km az=68.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	6.12	67	I	I	12 09 01.4	
	0.2nm,0.5s,baz=254,slow=294,SNR=3.1						
I46RU	ZALESOVO INFRA	22.86	62	I	I	14 00 40.0	
	baz=270,slow=309,SNR=1.5						
I34MN	SONGINO INFRAS	37.45	69	I	I	15 30 10.0	
	baz=293,slow=328,SNR=0.7						

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*IDC **13** 11:43:07.5±3.7, 6°.20S×147°.89E, h55^{km}±30^{km}, mb3.9/4, mbtmp4.1/7, ML4.2/2, MS3.1/3, Error ellipse: s-maj=39.8km s-min=20.2km az=83.0*

ISC 13 11:43:12.4±1.0**, 6°.40S**±0°.08×**147°.43E**±0°.07**, h63^{km}, n19, σ1^{s}08**/19**, mb4.0**/4**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.00	185	P	Pn	11 43 56.8	-0.7
	88nm,0.5s,baz=4.9,slow=8.6,SNR=44						
PMG				S	Sn	11 44 34.3	+1.9
	122nm,0.3s,baz=282,slow=19,SNR=9.6						
PMG	Port Moresby	3.00	185	P	Pn	11 43 56.9	-0.7
JAY	Jayapura	7.74	300	P	Pn	11 45 03.2	+0.8
	3.1nm,0.3s,baz=146,slow=15,SNR=12						
	9.6nm,0.8s						
COEN	Coen	8.60	209	P	Pn	11 45 14.9	+0.6
COEN	Coen	8.60	209	S	Sn	11 46 49.8	-0.1
MTSU	Mount Surprise	12.06	194	P	Pn	11 46 01.7	+0.2
MTSU	Mount Surprise	12.06	194	S	Sn	11 48 13.8	-0.6
TATA	Tatamba Isabel	12.43	100	P	Pn	11 46 07.1	+0.5
TATA	Tatamba Isabel	12.43	100	S	Sn	11 48 23.7	+0.3
CTA	Charters Tower	13.66	185	LR	LR	11 51 30.3	
	comp=Z,62nm,18.4s,baz=32,slow=36						
QIS	Mount Isa	15.99	208	P	Pn	11 46 54.4	+0.9
WRAB	Tennant Creek	18.51	222	P	P	11 47 23.4	-0.3
WRA	Warramunga Arr	18.52	222	P	P	11 47 23.2	-0.7
	0.8nm,0.3s,baz=45,slow=11,SNR=28						
WRA				S	Sn	11 50 49.7	-1.5
	0.3nm,0.6s,baz=43,slow=23,SNR=1.6						
	2.2nm,0.5s						
ASAR	Alice Springs	21.54	216	P	P	11 47 56.7	+0.1
	4.2nm,0.5s,baz=52,slow=9.3,SNR=121						
ASAR				S	S	11 51 53.9	+1.7
	1.7nm,0.9s,baz=28,slow=24,SNR=8.0						
ASAR				LR	LR	11 56 28.6	
	comp=Z,45nm,21.5s,baz=20,slow=36						
	4.2nm,0.5s						
FITZ	Fitzroy Crossi	24.23	239	P	P	11 48 23.7	+0.2
	3.8nm,0.4s,baz=62,slow=8.3,SNR=24						
	3.8nm,0.4s						
STKA	Stephens Creek	25.93	191	P	P	11 48 38.9	+0.1
	3.4nm,0.7s,baz=25,slow=10,SNR=7.4						
	3.4nm,0.7s						
JOW	Kunigami	37.89	331	LR	LR	12 05 22.6	
	comp=Z,25nm,18.0s,baz=144,slow=35						
ILAR	Eielson Array	85.67	23	P	P	11 55 36.9	-7.2
	0.5nm,1.0s,baz=258,slow=5.3,SNR=2.5						
	0.5nm,1.0s						
TORD	Torodi Ar. Bea	145.60	284	PKPbc	PKPdf	12 02 42.3	-2.3
	1.7nm,0.3s,baz=80,slow=3.0,SNR=1.7						

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*SDD **13** 11:46:38.9±0.5, 18°.44N×67°.50W, h31^{km}±7^{km}, MD3.1, ML2.5, MW2.7, Presumed earthquake*

*NEIC **13** 11:46:38.1±1.4, 18°.41N±0°.08×67°.53W±0°.02, h28^{km}±10^{km}, ML2.9/24, Md2.4/13(RSPR), Error ellipse: s-maj=11.9km s-min=1.3km az=188.0*

*RSPR **13** 11:46:39.1, 18°.46N×67°.54W, h19^{km}, MD2.4/13*

ISC 13 11:46:37.4±1.0**, 18°.46N**±0°.05×**67°.54W**±0°.03**, h28^{km}**±6^{km}**, n63, σ0^{s}61**/69**, 9C-14D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.10	141		Pb	11 46 42.7	+0.2
IDE					Sb	11 46 45.6	-0.4
IDE	Isla Desecheo	0.10	141	⇑iP	Pb	11 46 42.7	+0.2
IDE	Isla Desecheo	0.10	141	eS	Sb	11 46 45.6	-0.4
AGPR	Aguadilla, PR	0.40	89		Pn	11 46 46.6	-0.7
AGPR				IAML		11 46 53.2	
	472nm,0.1s						
AGPR	Aguadilla, PR	0.40	89	⇓eP	Pn	11 46 46.8	-0.6
AGPR	Aguadilla, PR	0.40	89	eS	Sn	11 46 52.8	-1.2
AGPR	Aguadilla, PR	0.40	89	⇑ePg	Pn	11 46 46.7	-0.7
AGPR				⇑eSg	Sn	11 46 52.8	-1.2
AGPR				IAML		11 46 53.2	
	comp=N,494nm,0.1s						
PRSN	Puerto Rico Se	0.45	123		Sb	11 46 53.7	+0.3
PRSN	Puerto Rico Se	0.45	123		Pb	11 46 47.0	+0.1
PRSN				IAML		11 46 54.3	
	comp=N,3μm,0.2s						
PRSN				IAML		11 46 55.9	
	comp=N,4μm,0.2s						
PRSN	Puerto Rico Se	0.45	123	⇓iP	Pb	11 46 47.3	+0.4
PRSN	Puerto Rico Se	0.45	123	eS	Sb	11 46 53.7	+0.3
PRSN	Puerto Rico Se	0.45	123	⇑ePg	Pb	11 46 47.3	+0.4
PRSN				⇑eSg	Sb	11 46 53.9	+0.5
PRSN				IAML		11 46 55.9	
	comp=N,2μm,0.2s						
LSP	Las Mesas	0.51	123		Pb	11 46 48.6	+0.6
LSP					Sb	11 46 56.0	+0.8
LSP	Las Mesas	0.51	123	⇑iP	Pb	11 46 48.6	+0.6
LSP	Las Mesas	0.51	123	eS	Sb	11 46 56.0	+0.8
CRPR	Cabo Rojo, PR	0.61	138		Sb	11 46 57.6	-0.2
CRPR	Cabo Rojo, PR	0.61	138		Pb	11 46 49.5	-0.1
CRPR				IAML		11 46 59.7	
	comp=N,286nm,0.4s						
CRPR				IAML		11 47 00.9	
	comp=N,165nm,0.2s						
CRPR	Cabo Rojo, PR	0.61	138	⇓iP	Pb	11 46 49.7	+0.1
CRPR	Cabo Rojo, PR	0.61	138	eS	Sb	11 46 57.6	-0.2
CRPR	Cabo Rojo, PR	0.61	138	⇓ePg	Pb	11 46 49.7	+0.1
CRPR				⇓eSg	Sb	11 46 57.6	-0.2
CRPR				IAML		11 46 59.6	
	comp=N,280nm,0.5s						
MLPR	Magueyes Islan	0.68	136	⇓iP	Pn	11 46 50.7	-0.5
MLPR	Magueyes Islan	0.68	136	eS	Sb	11 46 59.5	-0.3
MLPR	Magueyes Islan	0.68	136	⇑ePg	Pn	11 46 50.6	-0.5
MLPR				⇓eSg	Sb	11 46 59.5	-0.3
MLPR				IAML		11 46 59.9	
	comp=N,60nm,0.1s						
AOPR	Arecibo Observ	0.75	99		Pb	11 46 52.0	0.0
AOPR					Sb	11 47 01.9	-0.1
AOPR	Arecibo Observ	0.75	99	IAML		11 47 06.8	
	comp=E,440nm,0.2s						
AOPR				IAML		11 47 07.4	
	comp=N,342nm,0.2s						
AOPR	Arecibo Observ	0.75	99	⇓iP	Pb	11 46 52.0	0.0
AOPR	Arecibo Observ	0.75	99	eS	Sb	11 47 01.9	-0.1
AOPR	Arecibo Observ	0.75	99	⇑ePg	Pb	11 46 51.9	0.0
AOPR				eSg	Sb	11 47 01.2	-0.7
AOPR				IAML		11 47 06.8	
	comp=N,328nm,0.1s						
GBPR	Guanica, Bosqu	0.79	128		Pn	11 46 52.9	+0.2
GBPR					Sb	11 47 04.0	+1.1
GBPR	Guanica, Bosqu	0.79	128	⇓eP	Pn	11 46 52.9	+0.2
GBPR	Guanica, Bosqu	0.79	128	eS	Sb	11 47 04.0	+1.1
UUPR	Utuado, UPR, P	0.80	105		Sb	11 47 03.4	0.0
UUPR	Utuado, UPR, P	0.80	105	Pn	Pn	11 46 52.5	-0.4
UUPR	Utuado, UPR, P	0.80	105	⇓eP	Pb	11 46 53.1	+0.2
UUPR	Utuado, UPR, P	0.80	105	eS	Sb	11 47 03.4	0.0
EMPR	Esperanza - Ma	0.96	89		Sb	11 47 09.4	+1.7
EMPR	Esperanza - Ma	0.96	89	Pn	Pb	11 46 55.3	-0.1
EMPR				IAML		11 47 11.5	
	comp=N,382nm,0.2s						
EMPR				IAML		11 47 11.7	
	comp=N,569nm,0.4s						
EMPR	Esperanza - Ma	0.96	89	⇓iP	Pb	11 46 55.9	+0.5
EMPR	Esperanza - Ma	0.96	89	eS	Sb	11 47 09.4	+1.7
OBIP	Obispado Ponce	0.98	115		Sb	11 47 09.1	+0.8
OBIP	Obispado Ponce	0.98	115		Pn	11 46 55.6	+0.3
OBIP	Obispado Ponce	0.98	115	IAML		11 47 09.1	
	comp=E,62nm,0.2s						
OBIP	Obispado Ponce	0.98	115	⇓iP	Pn	11 46 55.6	+0.3
OBIP	Obispado Ponce	0.98	115	eS	Sb	11 47 09.1	+0.8
ECPR	Experimental S	1.12	97	Pn	Pb	11 46 57.9	-0.4
ECPR	Experimental S	1.12	97	⇓eP	Pb	11 46 57.9	-0.4
ECPR	Experimental S	1.12	97	eS	Sb	11 47 13.5	+1.0
SJG	San Juan	1.36	105		Pb	11 47 02.0	-0.3
SJG				IAML		11 47 21.9	
	comp=E,227nm,0.5s						
SJG				IAML		11 47 22.0	
	comp=E,242nm,0.2s						
SJG	San Juan	1.36	105	⇑eP	Pb	11 47 03.2	+0.9
SJG	San Juan	1.36	105	eS	Sb	11 47 19.9	+0.5
GCPR	Guaynabo City	1.39	96		Pn	11 47 00.8	-0.1
GCPR				IAML		11 47 23.4	
	comp=E,95nm,0.2s						
GCPR	Guaynabo City	1.39	96	⇓eP	Pb	11 47 02.8	0.0
GCPR	Guaynabo City	1.39	96	eS	Sb	11 47 20.6	+0.5
MIDR	Miches	1.52	290	⇑eP	Pb	11 47 04.8	-0.3
MIDR	Miches	1.52	290	eS	Sb	11 47 24.7	+0.7
HUMP	Col San Antoni	1.63	101		Pn	11 47 04.9	+0.6
HUMP	Col San Antoni	1.63	101	IAML		11 47 30.3	
	comp=E,83nm,0.2s						
HUMP				IAML		11 47 30.4	
	comp=E,74nm,0.2s						
HUMP	Col San Antoni	1.63	101	⇑eP	Pb	11 47 06.4	-0.5
HUMP	Col San Antoni	1.63	101	eS	Sb	11 47 27.3	+0.2
DR12	Loma Pena Alta	1.78	281	Pn	Pn	11 47 07.2	+0.9
BANI	BANI	2.68	269	Pn	Pn	11 47 18.8	0.0
SDDR	Presa de Saban	3.59	279	Pn	Pn	11 47 31.1	-0.3
SDDR				IAML		11 48 25.4	
	comp=E,26nm,3.0s						
SDDR				IAML		11 48 35.2	
	comp=E,29nm,2.8s						
MTDJ	Mount Denham	9.50	270	Pn	Pn	11 48 53.2	+0.7

GCG 13 11:52:14.1±0.5**, 13°.29N**×**89°.75W, h43^{km}**±11^{km}**, MD3.7, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.46	65	i P	Pn	11 52 24.2	-0.4
LALI				i S	Sn	11 52 32.4	+0.5
JAYA	Jayaque - finc	0.47	39	i P	Pn	11 52 24.7	0.0
JAYA				i S	Sn	11 52 32.5	+0.2
NUBE	Las Nubes	0.61	357	i P	Pn	11 52 26.8	+0.2
NUBE				i S	Sn	11 52 36.8	+1.3
MTO3	Montecristo	1.17	19	i P	Pn	11 52 34.7	+0.5

IDC 13 11:58:09.3±1.4**, 29°.42N**×**142°.20E, h0^{km}, mb3.3**/3**, mbtmp3.2**/4**, ML2.2**/1**, Error ellipse: s-maj=76.9km s-min=26.9km az=96.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.32	180	Pn	Pn	11 58 43.0	-5.8
	11nm,0.3s,baz=90,slow=20,SNR=8.1						
JCJ				Sn	Sn	11 59 11.7	-6.3
	17nm,0.3s,baz=276,slow=23,SNR=4.6						
MJAR	Matsushiro Arr	7.85	336	Pn	Pn	12 00 04.2	-0.6
	baz=149,slow=14,SNR=2.0						
	0.5nm,0.4s						
WRA	Warramunga Arr	49.66	190	P	P	12 07 03.2	+0.2
	0.5nm,0.7s,baz=9.6,slow=7.6,SNR=6.2						
	0.5nm,0.7s						
ASAR	Alice Springs	53.38	189	P	P	12 07 30.2	-0.6
	0.1nm,0.4s,baz=3.4,slow=6.0,SNR=4.6						
	0.1nm,0.4s						
ILAR	Eielson Array	55.68	29	P	P	12 07 47.2	+0.1
	0.3nm,0.9s,baz=267,slow=7.6,SNR=2.2						
	0.3nm,0.9s						

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*IDC **13** 12:01:31.3±2.2, 27°.45N×142°.87E, h0^{km}, mb3.3/2, mbtmp3.3/3, ML2.6/1, Error ellipse: s-maj=36.6km s-min=25.7km az=160.0*

*JMA **13** 12:01:43.0±0.2, 28°N±1°×14°2E±°, h83^{km}, MV3.9/18, NEAR CHICHIJIMA ISLAND*

ISC 13 12:01:39.8±1.9**, 27°.88N**±0°.07×**142°.3E**±0°.6**, h100^{km}, n10, σ2^{s}62**/11**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	0.79	189	P	Pn	12 01 59.4	+1.3
CBIJ				eS	Sn	12 02 11.3	-0.5
JCJ	Chichijima	0.79	189	Pn	Pn	12 01 48.9	-9.2
	41nm,0.3s,baz=279,slow=13,SNR=18						
JCJ				Sn	Sn	12 02 00.3	-11
	200nm,0.3s,baz=107,slow=19,SNR=26						
JHH2	Haha-jima-NKT2	1.25	186	P	Pn	12 02 04.2	+1.1
JHH2				S	Sn	12 02 20.3	-0.3
BSO3	Boso 3	7.07	348	P	Pn	12 03 24.4	+4.0
JHO	Hitachi	8.83	351	eP	Pn	12 03 45.1	+0.5
JHO				S	Sn	12 05 19.1	-3.2
JAG	Ashikaga	8.86	345	eS	Sn	12 05 19.0	-4.0
MJAR	Matsushiro Arr	9.31	339	Pn	Pn	12 03 54.1	+3.0
	baz=156,slow=14,SNR=1.5						
	0.9nm,0.9s						
JFK	Kawauchi	9.54	353	eS	Sn	12 05 34.6	-4.9
WRA	Warramunga Arr	48.16	190	P	P	12 10 10.6	+0.5
	0.5nm,0.5s,baz=10,slow=8.1,SNR=8.0						
	0.5nm,0.5s						
ASAR	Alice Springs	51.88	190	P	P	12 10 38.9	+0.7
	0.1nm,0.5s,baz=8.7,slow=7.7,SNR=1.5						
	0.1nm,0.5s						

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*IDC **13** 12:03:17.4±2.1, 21°.11N×122°.54E, h0^{km}, mb3.2/4, mbtmp3.3/4, Error ellipse: s-maj=68.1km s-min=26.3km az=52.0*

*TAP **13** 12:03:37.1, 21°.11N×121°.88E, h172^{km}, ML4.4, D*

ISC 13 12:03:36.5±1.1**, 21°.08N**±0°.07×**121°.95E**±0°.07**, h165^{km}**±7^{km}**, n102, σ1^{s}23**/200**, mb3.0**/4**, 2C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LYUB	Lan-yu	0.98	339	i P	Pn	12 04 03.2	+0.6
LYUB				i S	Sn	12 04 22.7	+0.1
LAY	Lan-yu	1.02	339	i P	Pn	12 04 03.4	+0.5
LAY				eS	Sn	12 04 22.4	-1.0
TSEB	Hengchuen, Pin	1.27	310	i P	Pn	12 04 06.3	+1.3
TSEB				i S	Sn	12 04 28.0	+1.0
TWKBT	Hengchun	1.36	309	i P	Pn	12 04 06.9	+1.1
TWKBT				i S	Sn	12 04 28.6	+0.1
TWK1	Hengchun	1.37	309	i P	Pn	12 04 07.1	+1.2
TWK1				i S	Sn	12 04 28.6	0.0
SMST	Manzhou Townsh	1.40	312	i P	Pn	12 04 07.4	+1.3
SMST				i S	Sn	12 04 29.1	0.0
HEN	Hengchun	1.46	309	i P	Pn	12 04 07.7	+0.9
HEN				i S	Sn	12 04 29.8	-0.3
SLIU	Shizi	1.56	317	i P	Pn	12 04 08.6	+0.8
SLIU				i S	Sn	12 04 31.2	-0.8
TAWH	Dawu Township	1.59	322	i P	Pn	12 04 08.5	+0.3
TAWH				i S	Sn	12 04 30.4	-2.3
TAW	Tawu	1.60	322	i P	Pn	12 04 08.5	+0.3
TAW				i S	Sn	12 04 30.9	-1.9
EAST	Anshuo	1.65	322	i P	Pn	12 04 09.2	+0.3
EAST				S	Sn	12 04 32.3	-1.5
ECL	Taimali	1.77	329	i P	Pn	12 04 09.7	-0.3
ECL				i S	Sn	12 04 32.6	-3.3
SCZT	Fangliau	1.78	316	⇑iP	Pn	12 04 10.8	+0.6
SCZT				S	Sn	12 04 35.3	-0.9
TTN	Taitung	1.82	336	eP	Pn	12 04 11.1	+0.5
TTN				S	Sn	12 04 37.4	+0.4
TWGBT	Beinan	1.91	335	i P	Pn	12 04 11.1	-0.4
TWGBT				i S	Sn	12 04 36.2	-2.5
TWG	Pinlang	1.91	335	i P	Pn	12 04 11.4	-0.2
TWG				i S	Sn	12 04 36.1	-2.7
MASBT	Mashibuluo	1.95	321	⇑iP	Pn	12 04 12.7	+0.7
MASBT				S	Sn	12 04 38.1	-1.5
LONT	Longtian	1.97	337	i P	Pn	12 04 12.4	+0.2
LONT				i S	Sn	12 04 37.7	-2.2
SSD	Sandimen	2.06	324	i P	Pn	12 04 13.9	+0.6
SSD				S	Sn	12 04 40.0	-1.7
CHKT	Chengkung	2.08	345	P	Pn	12 04 13.8	+0.4
CHKT				i S	Sn	12 04 41.8	-0.3
ECS	Chishang	2.12	341	P	Pn	12 04 13.9	0.0
ECS				i S	Sn	12 04 42.7	-0.2
SGLT	Jiouru	2.12	321	eP	Pn	12 04 16.2	+2.2
SGLT				S	Sn	12 04 44.9	+2.0
CHKH	Chenggong	2.16	346	i P	Pn	12 04 14.2	-0.1
CHKH				i S	Sn	12 04 43.7	-0.1
EHD	Haiduan	2.17	342	i P	Pn	12 04 13.0	-1.5
EHD				S	Sn	12 04 42.0	-2.0
FULB	Fuli	2.19	344	i P	Pn	12 04 15.9	+1.1
FULB				i S	Sn	12 04 44.8	+0.3
WSSB	Gushan	2.21	315	i P	Pn	12 04 16.5	+1.5
WSSB				i S	Sn	12 04 42.7	-2.0
TWM1	Shoushan	2.24	321	i P	Pn	12 04 17.9	+2.6
TWM1				eS	Sn	12 04 46.1	+0.7
ELDTW	Lidau	2.27	338	i P	Pn	12 04 15.9	+0.2
ELDTW				i S	Sn	12 04 46.2	0.0
TWF1	Yuli	2.34	345	i P	Pn	12 04 17.4	+0.9
TWF1				i S	Sn	12 04 46.2	-1.3
STYH	Taoyuan	2.35	332	i P	Pn	12 04 17.2	+0.7
STYH				i S	Sn	12 04 46.7	-0.9
STYT	Tauyuan	2.35	332	i P	Pn	12 04 17.4	+0.7
STYT				i S	Sn	12 04 47.0	-0.8
SGST	Jiashian	2.36	328	i P	Pn	12 04 16.8	0.0
SGST				i S	Sn	12 04 46.1	-1.9
YULB	Yu-li	2.38	345	i P	Pn	12 04 16.8	-0.1
YULB				i S	Sn	12 04 46.2	-2.2
SHHT	Tainan City	2.44	323	i P	Pn	12 04 19.3	+1.7
SHHT				S	Sn	12 04 48.4	-1.1
HGSD	Ruisui	2.45	349	i P	Pn	12 04 19.3	+1.6
HGSD				i S	Sn	12 04 50.8	+1.0
EHYH	Wanrong	2.46	347	i P	Pn	12 04 18.8	+0.8
EHYH				i S	Sn	12 04 48.3	-1.9
CHN3	Shinhua	2.47	324	P	Pn	12 04 19.8	+1.8
CHN3				i S	Sn	12 04 51.0	+0.8
CHN1	Nanshi	2.47	328	i P	Pn	12 04 18.9	+0.8
CHN1				i S	Sn	12 04 49.0	-1.4
EHY	Hungye	2.48	347	i P	Pn	12 04 17.4	-0.8
EHY				i S	Sn	12 04 49.6	-0.9
WTP	Ta-pu	2.48	330	i P	Pn	12 04 18.8	+0.6
WTP				i S	Sn	12 04 49.8	-0.9
SNST	Tainan City	2.52	328	i P	Pn	12 04 19.5	+0.9
SNST				i S	Sn	12 04 49.6	-1.6
TAI1	Yung-k'ang	2.52	321	eP	Pn	12 04 18.1	-0.5
TAI1				eS	Sn	12 04 50.8	-0.4
TPUB	Ta-pu	2.52	331	i P	Pn	12 04 19.1	+0.4
TPUB				i S	Sn	12 04 49.8	-1.7
SSHA	Shanhua	2.56	323	eP	Pn	12 04 19.6	+0.5
SSHA				i S	Sn	12 04 53.1	+0.9
TWK	Hsinying	2.56	328	i P	Pn	12 04 19.8	+0.6
TWK				i S	Sn	12 04 50.8	-1.5
YUS	Yu-Shan	2.57	339	i P	Pn	12 04 20.9	+1.2

YUS				*i* S	Sn	12 04 52.7	-0.5
CHN4	**Tsaushan**	2.58	331	*i* P	Pn	12 04 20.0	+0.6
CHN4				*i* S	Sn	12 04 51.3	-1.4
EGFH	**Guangfu**	2.62	349	*e*P	Pn	12 04 19.8	0.0
EGFH				*i* S	Sn	12 04 52.9	-0.6
ALS	**Alishan**	2.64	336	*i* P	Pn	12 04 20.6	+0.2
ALS				*i* S	Sn	12 04 53.4	-1.0
SCLT	**Jiali**	2.64	322	*i* P	Pn	12 04 21.0	+0.9
SCLT				*i* S	Sn	12 04 53.9	0.0
WCKO	**Fanlu**	2.66	332	*i* P	Pn	12 04 20.4	+0.2
WCKO				*i* S	Sn	12 04 52.5	-1.8
WARBT	**Fenglin Townsh**	2.67	349	*i* P	Pn	12 04 20.8	+0.3
WARBT				*i* S	Sn	12 04 53.1	-1.6
TSCK	**Chigu Township**	2.69	320	*i* P	Pn	12 04 21.3	+0.7
TSCK				*i* S	Sn	12 04 53.8	-1.1
SHUL	**Shoufeng**	2.71	352	*i* P	Pn	12 04 21.8	+0.8
SHUL				*i* S	Sn	12 04 55.8	+0.3
ESL	**Shilin**	2.76	350	*i* P	Pn	12 04 22.4	+0.9
ESL				*i* S	Sn	12 04 55.2	-1.3
VWDT	**VWDT**	2.76	344	*i* P	Pn	12 04 22.2	+0.7
VWDT				*i* S	Sn	12 04 56.9	+0.3
CHN8	**Yiju**	2.77	325	*i* P	Pn	12 04 22.0	+0.3
CHN8				*i* S	Sn	12 04 56.4	-0.3
CHY	**Chiayi**	2.79	330	*e*P	Pn	12 04 22.1	+0.2
CHY				*i* S	Sn	12 04 55.6	-1.6
WHYT	**Xinyi Township**	2.79	339	*i* P	Pn	12 04 22.2	+0.2
WHYT				*i* S	Sn	12 04 56.2	-1.1
WGK	**Gukeng**	2.89	334	*e*P	Pn	12 04 24.4	+1.2
WGK				*i* S	Sn	12 04 58.2	-1.2
ETM	**Tongmen**	2.90	352	*e*P	Pn	12 04 23.5	+0.3
ETM				*i* S	Sn	12 04 58.8	-0.8
WDLH	**Douliu**	2.91	333	*i* P	Pn	12 04 23.6	+0.3
WDLH				*i* S	Sn	12 04 57.9	-1.8
WSL	**Shuilin Townsh**	2.91	327	*i* P	Pn	12 04 23.6	+0.3
WSL				*i* S	Sn	12 04 58.4	-1.3
OWD	**Renai**	2.95	346	*i* P	Pn	12 04 25.3	+1.4
OWD				*i* S	Sn	12 04 59.4	-1.5
SMLT	**Sun Moon Lake**	2.95	341	*i* P	Pn	12 04 25.5	+1.5
SMLT				*i* S	Sn	12 05 00.4	-0.5
LXIB	**Xiulin Townshi**	2.97	350	*i* P	Pn	12 04 25.1	+0.9
LXIB				*i* S	Sn	12 04 59.2	-2.1
TYC	**Yuchr**	2.98	340	*i* P	Pn	12 04 24.7	+0.4
TYC				*i* S	Sn	12 04 58.9	-2.6
WUSB	**Renai**	3.00	345	*i* P	Pn	12 04 25.5	+0.9
WUSB				*i* S	Sn	12 05 00.9	-1.0
WSF	**Szhu**	3.00	328	*e*P	Pn	12 04 24.5	0.0
WSF				*i* S	Sn	12 04 59.9	-2.0
WNT	**Mingjian**	3.02	337	P	Pn	12 04 24.4	-0.3
WNT				*i* S	Sn	12 05 00.9	-1.3
WDGT	**Dungji**	3.03	316	*i* P	Pn	12 04 25.0	+0.2
WDGT				*i* S	Sn	12 05 00.8	-1.8
DPDB	**Guoxing**	3.08	342	*e*P	Pn	12 04 27.6	+2.0
DPDB				*i* S	Sn	12 05 03.1	-0.7
NACB	**Ninganchiao**	3.09	354	*e*P	Pn	12 04 26.3	+0.7
NACB				*i* S	Sn	12 05 03.9	0.0
WCS	**Beigang Elemen**	3.11	342	*i* P	Pn	12 04 26.9	+1.1
WCS				*i* S	Sn	12 05 03.8	-0.5
WHF	**Hehuan Shan**	3.11	348	*i* P	Pn	12 04 27.5	+1.2
WHF				*i* S	Sn	12 05 04.4	-0.6
ETLH	**Xiulin Townshi**	3.14	352	*i* P	Pn	12 04 26.8	+0.5
ETLH				*i* S	Sn	12 05 03.8	-1.3
VCHM	**Qimei**	3.15	313	*i* P	Pn	12 04 26.1	-0.2
VCHM				*i* S	Sn	12 05 03.8	-1.4
FUSS	**Fushou**	3.22	348	*i* P	Pn	12 04 28.9	+1.4
FUSS				*i* S	Sn	12 05 07.0	0.0
TWT	**Tachien**	3.24	347	P	Pn	12 04 29.5	+1.9
TWT				S	Sn	12 05 07.3	-0.1
WCH1	**Changhua City**	3.25	337	*e*P	Pn	12 04 29.2	+1.7
WCH1				*i* S	Sn	12 05 07.4	+0.1
WCHH	**Zhanghua**	3.25	337	*e*P	Pn	12 04 28.6	+1.1
WCHH				*i* S	Sn	12 05 06.8	-0.6
TCU	**Taichung**	3.27	339	*e*P	Pn	12 04 28.6	+0.8
TCU				*i* S	Sn	12 05 06.5	-1.4
WHP	**Taichung City**	3.31	344	*i* P	Pn	12 04 28.9	+0.5
WHP				*i* S	Sn	12 05 08.8	-0.1
PNG	**Penghu**	3.32	319	*i* P	Pn	12 04 28.3	-0.2
PNG				*i* S	Sn	12 05 06.8	-2.2
NNSB	**Datong**	3.37	351	*i* P	Pn	12 04 30.5	+1.2
NNSB				*i* S	Sn	12 05 10.0	-0.3
NNSH	**Datong**	3.37	351	*i* P	Pn	12 04 29.2	0.0
NNSH				S	Sn	12 05 09.3	-1.0
NNS	**Nan Shan**	3.38	351	*i* P	Pn	12 04 31.1	+1.7
NNS				S	Sn	12 05 11.1	+0.5
TWQ1	**Liyutan**	3.43	342	*e*P	Pn	12 04 31.7	+1.9
TWQ1				*i* S	Sn	12 05 09.9	-1.5
LATG	**Datong**	3.46	354	*i* P	Pn	12 04 30.6	+0.3
LATG				*e*S	Sn	12 05 11.4	-0.9
ENTT	**Nioudou**	3.56	354	P	Pn	12 04 33.2	+1.7
ENTT				*i* S	Sn	12 05 14.8	+0.3
YHNB	**Yeheng**	3.61	352	*i* P	Pn	12 04 33.7	+1.5
YHNB				*e*S	Sn	12 05 14.3	-1.3
NFF	**Wufeng Townshi**	3.62	348	*i* P	Pn	12 04 34.3	+2.0
NFF				*i* S	Sn	12 05 14.5	-1.3
NSK	**Sanguang**	3.62	351	*i* P	Pn	12 04 33.8	+1.5
NSK				*e*S	Sn	12 05 14.9	-0.9
NSTT	**Nanjuang**	3.64	346	*e*P	Pn	12 04 33.7	+1.2
NSTT				*i* S	Sn	12 05 13.7	-2.5
LIOB	**Emei**	3.65	346	*i* P	Pn	12 04 32.8	+0.2
LIOB				*e*S	Sn	12 05 13.6	-2.9
FUSB	**Fushanzhiwuyua**	3.67	355	P	Pn	12 04 34.0	+0.9
FUSB				*e*S	Sn	12 05 16.4	-0.7
NWLT	**Wulai**	3.70	354	*e*P	Pn	12 04 34.3	+1.0
NWLT				*e*S	Sn	12 05 16.4	-1.3
TIPB	**Shuangxi**	3.87	358	P	Pn	12 04 38.4	+2.8
TIPB				*e*S	Sn	12 05 20.6	-1.0
CMAR	**Chiang Mai Arr**	21.81	267	P	P	12 08 17.4	+1.7
	0.3nm,0.3s,baz=79,slow=10,SNR=5.6						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	41.08	318	P	P	12 11 05.6	+1.6
	0.7nm,0.5s,baz=112,slow=8.8,SNR=6.9						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	42.54	163	P	P	12 11 14.1	-1.8
	0.1nm,0.4s,baz=342,slow=8.1,SNR=1.6						
	0.1nm,0.4s						
ASAR	**Alice Springs**	45.98	165	P	P	12 11 41.1	-2.1
	0.1nm,0.3s,baz=348,slow=9.0,SNR=1.6						
	0.1nm,0.3s						

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*IDC **13** 12:09:04.5±1.3, 55°.40N×35°.17W, h0^{km}, mb3.7/8, mbtmp3.8/9, ML2.7/1, Error ellipse: s-maj=41.2km s-min=20.9km az=13.0*

ISC 13 12:09:06.5±1.0**, 55°.4N**±0°.2×**35°.2W**±0°.1**, h14**^{km}**, n10, σ0^{s}.74**/10**, mb3.8**/7**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	18.02	281	P	P	12 13 16.8	+0.2
	0.2nm,0.3s,baz=94,slow=15,SNR=1.4						
	4.0nm,0.9s						
YKA	**Yellowknife Ar**	39.10	314	P	P	12 16 33.1	+0.3
	0.6nm,0.8s,baz=57,slow=8.9,SNR=5.5						
	0.6nm,0.8s						
BRTR	**Keskin Array B**	47.05	79	P	P	12 17 38.8	+1.3
	0.8nm,0.7s,baz=305,slow=7.7,SNR=4.2						
	0.8nm,0.7s						
PDAR	**Pinedale Array**	48.01	287	P	P	12 17 44.8	-0.3
	0.2nm,0.5s,baz=63,slow=7.5,SNR=2.5						
	0.2nm,0.5s						
ILAR	**Eielson Array**	49.34	328	P	P	12 17 55.1	+0.4
	0.7nm,0.9s,baz=51,slow=5.4,SNR=7.0						
	0.7nm,0.9s						
TORD	**Torodi Ar. Bea**	50.94	131	P	P	12 18 07.1	-0.2
	2.6nm,0.3s,baz=351,slow=8.1,SNR=2.4						
	2.6nm,0.3s						
BVAR	**Borovoye Array**	55.84	45	P	P	12 18 42.6	-0.3
	0.7nm,0.6s,baz=324,slow=7.1,SNR=4.4						
	0.7nm,0.6s						
KURBB	**Kurchatov Arra**	60.89	42	P	P	12 19 17.6	-0.6
	0.6nm,0.7s,baz=319,slow=7.3,SNR=5.2						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	65.46	42	P	P	12 19 47.9	-0.7
	0.9nm,1.0s,baz=313,slow=7.4,SNR=2.7						
	0.9nm,1.0s						
ASAR	**Alice Springs**	147.32	19	PKPbc	PKPbc	12 28 48.5	-0.8
	1.9nm,1.1s,baz=336,slow=3.3,SNR=8.6						

IDC 13 12:11:11.6±2.2**, 55°.47N**×**35°.04W, h0**^{km}**, mb3.8**/3**, mbtmp3.8**/3**, Error ellipse: s-maj=87.9km s-min=34.7km az=41.0, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRTR	**Keskin Array B**	46.92	80	P	P	12 19 43.7	-0.1
	0.8nm,0.7s,baz=301,slow=7.8,SNR=4.0						
	0.8nm,0.7s						
ILAR	**Eielson Array**	49.31	328	P	P	12 20 01.8	0.0
	0.7nm,1.1s,baz=53,slow=6.4,SNR=2.2						
	0.7nm,1.1s						
TORD	**Torodi Ar. Bea**	50.92	131	P	P	12 20 14.6	0.0
	1.4nm,0.3s,baz=338,slow=7.0,SNR=1.6						
	1.4nm,0.3s						
ASAR	**Alice Springs**	147.19	19	PKPbc	PKPbc	12 30 55.5	-1.1
	0.3nm,0.8s,baz=7.6,slow=2.8,SNR=1.7						

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*IDC **13** 12:13:17.0±0.7, 55°.52N×35°.10W, h0^{km}, mb3.8/15, mbtmp3.8/16, ML2.8/1, MS3.7/23, Error ellipse: s-maj=24.6km s-min=14.0km az=10.0*

*NEIC **13** 12:13:22.0±2.2, 55°.8N±0°.1×34°.9W±0°.2, h10^{km}±2^{km}, mb4.4/24, Error ellipse: s-maj=20.5km s-min=15.1km az=169.0*

ISC 13 12:13:19.9±0.6**, 55°.6N**±0°.1×**34°.89W**±0°.07**, h14**^{km}**, n62, σ1^{s}.65**/49**, mb4.2**/25**, MS3.7**/21**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRS	**Narsarsuaq**	7.87	320	Pn	Pn	12 15 14.5	+0.6
IVI	**Ivigtut**	8.97	314	Pn	Pn	12 15 29.4	+0.5
ANGG	**Ammassalik, Gr**	10.17	354	Pn	Pn	12 15 44.0	-1.3
BORG	**Borgarnes**	11.39	31	Pn	Pn	12 16 00.7	-1.3
SCHQ	**Schefferville**	18.17	281	P	Pn	12 17 29.4	-2.1
	0.3nm,0.3s,baz=55,slow=12,SNR=5.3						
SCHQ				LR	LR	12 23 11.9	
	comp=Z,208nm,19.4s,baz=82,slow=33						
	6.8nm,0.9s						
SCHQ	**Schefferville**	18.17	281	Pn	Pn	12 17 30.2	-1.3
FRB	**Frobisher Bay**	18.66	310	LR	LR	12 23 35.4	
	comp=Z,281nm,18.8s,baz=88,slow=33						
GBN	**Guysborough**	19.63	250	P	Pn	12 17 50.8	+1.6
GBN				IAmb	IAmb	12 18 02.9	
	comp=Z,29nm,1.2s						
NAO01	**NORSAR Array S**	24.28	59	P	P	12 18 37.9	+1.5
NAO01				IAmb	IAmb	12 19 21.3	
	comp=Z,9.7nm,1.1s						
NOA	**NORSAR Array B**	24.41	58	P	P	12 18 38.3	+0.7
	comp=Z,1.5nm,0.9s,baz=281,slow=9.5,SNR=2.7						
NOA				LR	LR	12 26 11.3	
	comp=Z,72nm,19.7s,baz=275,slow=32						
	comp=Z,1.5nm,0.9s						
ILON	**Igloolik, Nuna**	24.90	322	P	P	12 18 41.6	-0.3
HFS	**Hagfors**	25.77	60	LR	LR	12 27 04.0	
	comp=Z,171nm,18.1s,baz=286,slow=32						
ESDC	**Sonseca Array**	25.92	115	P	P	12 18 52.7	+1.2
	comp=Z,1.3nm,0.9s,baz=301,slow=10,SNR=2.5						
ESDC				LR	LR	12 26 31.0	
	comp=Z,209nm,21.1s,baz=330,slow=30						
	comp=Z,1.3nm,0.9s						
DAVOX	**Davos/Dischmat**	28.95	89	LR	LR	12 29 50.3	
	comp=Z,290nm,18.6s,baz=266,slow=34						
RES	**Resolute Bay**	29.67	332	LR	LR	12 29 56.5	
	comp=Z,102nm,18.7s,baz=17,slow=34						
GERES	**GERESS Array B**	30.00	82	LR	LR	12 30 45.6	
	comp=Z,152nm,18.1s,baz=288,slow=35						
MDT	**Midelt**	31.02	125	LR	LR	12 31 12.6	
	comp=Z,92nm,18.7s,baz=41,slow=35						
VRAC	**Vranov**	31.38	80	LR	LR	12 30 48.6	
	comp=Z,110nm,19.6s,baz=270,slow=33						
ULM	**Lac du Bonnet**	36.11	288	P	P	12 20 19.4	-1.7
	comp=Z,1.4nm,0.4s,baz=21,slow=8.6,SNR=3.5						
ULM				LR	LR	12 33 45.8	
	comp=Z,188nm,19.5s,baz=12,slow=34						
	comp=Z,1.4nm,0.4s						
AKASG	**Malin Array Be**	37.55	70	P	P	12 20 33.0	-0.2
	comp=Z,0.8nm,0.5s,baz=305,slow=8.6,SNR=4.8						
AKASG				LR	LR	12 36 31.4	
	comp=Z,41nm,21.0s,baz=46,slow=37						
	comp=Z,0.8nm,0.5s						
TKL	**Tuckaleechee C**	38.57	260	LR	LR	12 35 49.4	
	comp=Z,111nm,20.3s,baz=15,slow=35						
MLR	**Muntele Rosu**	38.77	79	LR	LR	12 35 26.5	
	comp=Z,90nm,21.9s,baz=306,slow=34						
YKA	**Yellowknife Ar**	39.10	314	P	P	12 20 43.6	-2.6
	comp=Z,0.9nm,0.9s,baz=60,slow=8.8,SNR=7.7						
	comp=Z,0.9nm,0.9s						
LAO	**LASA Array**	43.77	289	P	P	12 21 26.6	+1.8
F30M	**Barrier River**	44.02	327	P	P	12 21 25.5	-1.0
EGMT	**Eagleton**	44.80	293		P	12 21 32.7	-0.3
EGMT				IAmb	IAmb	12 21 38.3	
	comp=Z,8.9nm,1.1s						
C24K	**Franklin Bluff**	46.26	334	P	P	12 21 45.7	+1.6
C24K				IAmb	IAmb	12 21 49.7	
	comp=Z,11nm,1.1s						
RLMT	**Red Lodge**	46.41	290	P	P	12 21 48.0	+2.0
D24K	**Happy Valley**	46.69	333	P	P	12 21 49.4	+1.9
BRTR	**Keskin Array B**	46.82	80	P	P	12 21 48.7	-0.5
	comp=Z,1.6nm,0.7s,baz=316,slow=6.3,SNR=7.3						
BRTR				LR	LR	12 42 41.1	
	comp=Z,49nm,18.2s,baz=306,slow=38						
	comp=Z,1.6nm,0.7s						
D23K	**Nanushuk River**	47.29	334	P	P	12 21 52.3	+0.1
D23K				IAmb	IAmb	12 21 59.0	
	comp=Z,6.5nm,1.1s						
BOZ	**Bozeman (W)**	47.35	292	P	P	12 21 55.3	+2.1
BOZ				IAmb	IAmb	12 21 59.0	
	comp=Z,5.7nm,1.0s						
DLBC	**Dease Lake**	47.69	315	LR	LR	12 39 51.5	
	comp=Z,67nm,19.5s,baz=126,slow=34						
PDAR	**Pinedale Array**	48.13	288	P	P	12 21 57.7	-1.7
	comp=Z,0.2nm,0.6s,baz=57,slow=9.0,SNR=3.7						
	comp=Z,0.2nm,0.6s						
ARTI	**Arti**	48.25	48	P	P	12 22 00.5	+0.7
AMTX	**Amarillo**	49.26	274	P	P	12 22 09.4	+1.3
IL31		49.28	328		P	12 22 08.2	+0.6
ILAR	**Eielson Array**	49.28	328	P	P	12 22 06.4	-1.2
	comp=Z,0.9nm,0.8s,baz=37,slow=5.8,SNR=10						
ILAR				PcP	PcP	12 23 29.7	-0.5
	comp=Z,0.3nm,0.8s,baz=22,slow=3.2,SNR=2.0						
ILAR				LR	LR	12 41 41.2	
	comp=Z,145nm,19.2s,baz=94,slow=35						
	comp=Z,0.9nm,0.8s						
ILAR	**Eielson Array**	49.28	328		P	12 22 08.5	+0.8
PLID	**Pearl Lake**	49.98	294		P	12 22 16.5	+3.0
PLID				IAmb	IAmb	12 22 20.9	
	comp=Z,3.3nm,1.0s						
F20K	**Avaraart Lake**	49.99	334	P	P	12 22 14.7	+1.7
BMO	**Blue Mountains**	50.82	295		P	12 22 21.2	+1.5
TORD	**Torodi Ar. Bea**	50.92	132	P	P	12 22 19.4	-1.2
	comp=Z,4.5nm,0.5s,baz=332,slow=5.8,SNR=2.9						
	comp=Z,4.5nm,0.5s						
ANMO	**Albuquerque**	51.91	278	LR	LR	12 42 26.3	
	comp=Z,94nm,19.7s,baz=25,slow=34						
ELK	**Elko**	52.59	289	LR	LR	12 43 48.5	
	comp=Z,197nm,21.8s,baz=130,slow=35						
SAND	**Sanderson**	53.16	270	P	P	12 22 40.1	+2.9
SAND				IAmb	IAmb	12 22 41.6	
	comp=Z,3.9nm,1.0s						
DBIC	**Dimbokro**	54.31	142	P	P	12 22 45.4	-0.3
	comp=Z,2.7nm,0.9s,baz=41,slow=4.8,SNR=3.7						
DBIC				LR	LR	12 43 16.5	
	comp=Z,96nm,18.7s,baz=9.0,slow=33						
	comp=Z,2.7nm,0.9s						
TXAR	**Lajitas Array**	54.50	271	P	P	12 22 47.4	+0.3
	comp=Z,0.4nm,0.8s,baz=32,slow=5.9,SNR=4.1						
	comp=Z,0.4nm,0.8s						
PAHR	**Pah Rah Range**	55.55	291		P	12 22 57.9	+3.2
PAHR				IAmb	IAmb	12 23 01.2	
	comp=Z,4.6nm,1.1s						
BVAR	**Borovoye Array**	55.56	45	P	P	12 22 55.5	+1.1
	comp=Z,1.9nm,0.8s,baz=319,slow=8.4,SNR=7.6						
	comp=Z,1.9nm,0.8s						
NVAR	**Mina Array Bea**	55.90	290	P	P	12 22 55.9	-1.4
	comp=Z,0.3nm,0.6s,baz=49,slow=8.3,SNR=2.4						
	comp=Z,0.3nm,0.6s						
GMN	**Gold Mountain**	56.17	288	P	P	12 23 02.0	+2.8
GMN				IAmb	IAmb	12 23 04.7	
	comp=Z,3.2nm,1.1s						
KDAK	**Kodiak Island**	56.39	325	LR	LR	12 45 40.3	
	comp=Z,119nm,18.4s,baz=61,slow=34						
KURBB	**Kurchatov Arra**	60.62	42	P	P	12 23 30.4	+0.7
	comp=Z,1.0nm,0.7s,baz=321,slow=7.1,SNR=7.7						
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	65.18	42	P	P	12 24 00.1	-0.2
	comp=Z,0.6nm,0.7s,baz=323,slow=5.2,SNR=4.4						
	comp=Z,0.6nm,0.7s						
ARSB	**Arslanbob**	65.79	52	P	P	12 24 05.8	+1.3
ARSB				IAmb	IAmb	12 24 08.6	
	comp=Z,3.9nm,1.2s						
BOOM	**Boomskoye usch**	66.14	49	P	P	12 24 08.9	+2.2
BOOM				IAmb	IAmb	12 24 22.4	
	comp=Z,2.5nm,1.0s						
GAR	**Garm**	66.44	55	P	P	12 24 10.0	+1.4
TSUM	**Tsumeb**	86.68	131	LR	LR	13 05 06.9	
	comp=Z,41nm,18.0s,baz=282,slow=36						
BOSA	**Boshof**	98.25	130	LR	LR	13 08 57.9	
	comp=Z,29nm,19.2s,baz=19,slow=34						
QSPA	**South Pole Qui**	145.46	180	PKPbc	PKPdf	12 32 53.7	-2.2
	comp=Z,0.6nm,0.3s,baz=108,slow=3.2,SNR=2.0						
ASAR	**Alice Springs**	147.08	19	PKP	PKPdf	12 32 56.6	-3.4
	comp=Z,0.4nm,0.5s,baz=340,slow=3.1,SNR=7.1						
ASAR				PKPbc	PKPbc	12 33 01.5	-0.6
	comp=Z,1.6nm,0.9s,baz=341,slow=3.3,SNR=11						

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*KOLA **13** 12:30:14.5, 68°.10N×32°.98E, h0^{km}, ML2.1, Error ellipse: s-maj=2.1km s-min=1.3km az=90.0, Olenegorsk City, Mines*

HEL 13 12:30:14.2±0.1**, 68°.11N**×**32°.98E, h0**^{km}**, ML1.7, Suspected explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA0	**Apatity Array**	0.51	180	P	Pg	12 30 23.1	-0.7
APA0				S	Sg	12 30 30.6	+0.2
APA	**Apatity**	0.57	163	P	Pg	12 30 24.7	-0.3
APA				S	Sg	12 30 31.4	-0.9
LVZ	**Lovozero**	0.66	108	P	Pg	12 30 26.4	-0.5
LVZ				S	Sg	12 30 34.8	-0.6
LVZ	**Lovozero**	0.66	108	PB	Pg	12 30 26.9	0.0
LVZ				SG	Sg	12 30 35.0	-0.5
VRF	**Varrio**	1.32	256	PG	Pg	12 30 38.2	-1.4
	baz=74						
VRF				MSG		12 30 54.1	
	comp=Z,13nm,0.2s						
VRF				SB	Sg	12 30 55.2	-1.5
TERR	**Teriberka**	1.34	34	P	Pg	12 30 38.6	-1.3
TERR				S	Sg	12 30 56.5	-0.9
KVDA	**Kovda**	1.43	182	P	Pn	12 30 39.6	-1.6
KVDA				S	Sg	12 30 58.0	-1.9
RAJF	**Raja-Jooseppi**	1.78	284	PG	Pn	12 30 46.0	-0.1
RAJF				SG	Sn	12 31 07.8	-1.5
OLKF	**Oulanka, Finla**	2.27	219	PG	Pn	12 30 53.6	+0.6
OLKF				MSG		12 31 21.6	
	comp=Z,2.6nm,0.2s						
OLKF				SG	Sn	12 31 22.8	+1.1
VADS	**Vadso**	2.40	329	P	Pn	12 30 54.5	-0.2
VADS				S	Sn	12 31 24.6	-0.2
KU6	**Riekki**	2.42	211	PG	Pn	12 30 56.6	+1.7
KU6				MSG		12 31 25.7	
	comp=Z,1.9nm,0.2s						
KU6				SG	Sb	12 31 27.4	-1.4
MSF	**Maaselka**	2.70	217	PB	Pn	12 31 00.6	+1.8
MSF				SG	Sb	12 31 36.2	-0.6
KEV	**Kevo**	2.72	310	PN	Pn	12 30 59.5	+0.4
KEV				SN	Sn	12 31 29.7	-2.9
ARCES	**ARCESS Array B**	3.07	301	P	Pn	12 31 03.9	+0.1
ARCES				S	Sn	12 31 40.5	-0.7
RNF	**Rovaniemi**	3.09	244	PN	Pn	12 31 04.4	+0.3
RNF				SN	Sn	12 31 40.4	-1.3
RANF	**Ranua**	3.21	232	PN	Pn	12 31 05.5	-0.3
HEF	**Hetta**	3.48	279	PN	Pn	12 31 09.3	-0.3
	baz=89						
HEF				SG	Sb	12 32 01.5	+2.1
TOF	**Tornio**	3.95	243	PN	Pn	12 31 15.5	-0.5
RMF	**Romuvaara**	4.10	199	PN	Pn	12 31 17.5	-0.5
KALU	**Kalix**	4.40	244	PN	Pn	12 31 21.6	-0.6
	baz=58						
ERTU	**Ertsjaerv**	4.46	255	PN	Pn	12 31 22.6	-0.3
FAUS	**Fauske**	6.76	272	P	Pn	12 31 53.8	-0.6
FAUS				S	Sn	12 33 06.0	-6.0

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*HEL **13** 12:30:21.8±0.3, 67°.81N×20°.21E, h0^{km}, ML1.2, Suspected explosion*

UPP 13 12:30:22.0±0.4**, 67°.85N**×**20°.21E, h1**^{km}±2^{km}**, ML2.4, Confirmed Induced event, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	0.12	24	P	Pg	12 30 24.3	+0.1
KUA				S	Sg	12 30 26.0	+0.3
RATU	**Laukkuluspa**	0.24	264	P	Pg	12 30 26.5	0.0
RATU				S	Sg	12 30 29.8	+0.2
KOVU	**Salmi**	0.38	357	P	Pg	12 30 29.1	-0.1
	baz=179						
NIKU	**Nikkaluokta**	0.45	273	P	Pg	12 30 30.4	-0.1
LANU	**Lannavaara**	0.70	73	P	Pg	12 30 35.1	-0.3
LANU	**Lannavaara**	0.70	73	PB	Pg	12 30 35.1	-0.3
LANU				SG	Sg	12 30 44.4	-0.1
DUNU	**Dundret**	0.74	169	P	Pg	12 30 35.9	-0.4
SALU	**Saltoluokta**	0.81	235	P	Pg	12 30 36.9	-0.5
SALU	**Saltoluokta**	0.81	235	*e*P	Pg	12 30 37.0	-0.4
KIF	**Kilpisjarvi**	1.18	10	*e*P	Pg	12 30 44.7	+0.1
KIF	**Kilpisjarvi**	1.18	10	PG	Pg	12 30 44.5	0.0
	baz=188						
KIF				MSG		12 30 59.9	
	comp=Z,2.6nm,0.2s						
KIF				SB	Sg	12 31 00.4	+0.5
PAJU	**Pajala**	1.39	125	PN	Pn	12 30 47.2	-1.4
PAJU				SN	Sg	12 31 06.2	-0.4
HEF	**Hetta**	1.41	65	PN	Pn	12 30 48.0	-0.8
HEF				MSG		12 31 04.6	
	comp=Z,1.2nm,0.2s						
HEF				SB	Sg	12 31 05.8	-1.4
ERTU	**Ertsjaerv**	1.51	148	PN	Pn	12 30 49.4	-0.7
ERTU				SN	Sb	12 31 10.4	-0.1
KLF	**Kolari**	1.57	111	PN	Pn	12 30 50.8	-0.1
KLF				MSG		12 31 08.2	
	comp=Z,1.3nm,0.2s						
KLF				SN	Sn	12 31 10.2	-1.6
KTK1	**Kautokeino**	1.62	42	PN	Pn	12 30 51.9	+0.3
KTK1				SN	Sg	12 31 15.1	+1.3
TRO	**Tromso**	1.85	346	SG	Sg	12 31 21.5	+0.1
KALU	**Kalix**	2.35	147	PG	Pn	12 31 02.8	+1.1
KALU				SG	Sb	12 31 34.2	-0.4
TOF	**Tornio**	2.40	136	PG	Pn	12 31 03.9	+1.5
TOF				MSG		12 31 32.0	
	comp=Z,1.0nm,0.2s						
TOF				SG	Sb	12 31 36.6	+0.5
ARA0	**ARCESS Array S**	2.57	46	PN	Pn	12 31 04.0	-0.7
ARA0				SN	Sb	12 31 41.0	+0.1
ARA0	**ARCESS Array S**	2.57	46	PN	Pn	12 31 04.0	-0.7
ARA0				SG	Sb	12 31 41.0	+0.1
RNF	**Rovaniemi**	2.58	116	SN	Sn	12 31 33.2	-3.5
RAJF	**Raja-Jooseppi**	3.09	75	PB	Pn	12 31 14.2	+2.4
VRF	**Varrio**	3.57	87	PG	Pb	12 31 25.6	-0.2

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*NEIC **13** 12:43:17.0±1.6, 7°.13S±0°.06×129°.09E±0°.07, h164^{km}±7^{km}, mb4.9/42, Error ellipse: s-maj=9.6km s-min=8.9km az=101.0*

*DJA **13** 12:43:16.7±0.1, 7°S±2°×12°9E±°, h168^{km}±2^{km}, M4.9/86, mb5.1/86, mB5.4/55, MLv5.5/23, Mw(mB)4.8/55, MwMwp4.7/7, Mwp5.0/7*

*IDC **13** 12:43:17.2±1.4, 7°.17S×129°.06E, h172^{km}±12^{km}, mb4.1/18, mbtmp4.6/20, MS3.4/10, Error ellipse: s-maj=16.4km s-min=8.9km az=68.0*

*GCMT **13** 12:43:19.0±0.3, 7°.27S±0°.02×129°.11E±0°.02, h183^{km}±4^{km}, MW4.9/79, Moment Tensor Solution. s19,c20; s79,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.67±.14; $M_{\theta\theta}$-1.29±.15; $M_{\phi\phi}$2.96±.14; $M_{r\theta}$1.59±.10; $M_{\theta\phi}$-0.57±.13; $M_{\phi r}$1.14±.13; Best double couple: $M_0$3.27900×10^{16} NP1:ϕ_s319.00000°, δ47.00000°, λ-149.00000°. NP2: ϕ_s207.00000°, δ68.00000°, λ-47.00000°. Principal axes: T 3.2350, Plg12.0000°, Azm267.0000°; N 0.0890, Plg39.0000°, Azm7.0000°; P -3.3230, Plg48.0000°, Azm163.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 12:43:16.9±0.4**, 7°.20S**±0°.04×**129°.08E**±0°.03**, h170**^{km}±3^{km}**, n394, σ1^{s}.48**/401**, mb4.8**/68**, 5D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	2.34	110		Pn	12 43 56.9	-0.2
SAUI	**Saumlaki**	2.34	110	P	Pn	12 43 57.0	-0.1
SAUI	**Saumlaki**	2.34	110	S	Sn	12 44 29.1	+0.9

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SAUI  Saumlaki          2.34 110  P     Pn    12 43 57.0  -0.1
SAUI                              S     Sn    12 44 26.8  -1.4
BNDI  Bandanaira        2.78  17  P     Pn    12 44 03.1  +0.7
BNDI  Bandanaira        2.78  17  P     Pn    12 44 03.6  +1.2
AAI   Ambon             3.59 346  P     Pn    12 44 14.0  +1.5
MSAI  Masohi            3.83 358  P     Pn    12 44 17.2  +1.7
KRAI  Karang Ratu       3.91 350  P     Pn    12 44 18.7  +2.1
NLAI  Namlea            4.40 333  P     Pn    12 44 25.4  +2.6
FAKI  Fak Fak           5.29  37        Pn    12 44 31.9  -2.6
FAKI                              Sn    Sn    12 45 27.0  -8.4
FAKI  Fak Fak           5.29  37  P     Pn    12 44 34.4  -0.1
FAKI  Fak Fak           5.29  37  P     Pn    12 44 31.5  -3.0
      4.3nm2µm15µm284nm,0.5s
SOEI  Soe               5.40 242        Pn    12 44 36.3  +0.3
SOEI  Soe               5.40 242  P     Pn    12 44 36.4  +0.4
SOEI  Soe               5.40 242  S     Sn    12 45 36.8  -1.2
SOEI  Soe               5.40 242  P     Pn    12 44 36.2  +0.3
DRS   Darwin Rock St    5.50 161  P     Pn    12 44 36.8  -0.4
DRS   Darwin Rock St    5.50 161  S     Sn    12 45 35.9  -4.5
KMPI  Kaimana, Papua    5.79  53  P     Pn    12 44 39.4  -1.6
      20µm490nm,0.4s
MTN   Manton Dam        5.97 160  P     Pn    12 44 42.4  -0.9
      comp=Z,1µm,0.5s,comp=Z,0.0nm
MTN   Manton Dam        5.97 160        Pn    12 44 42.2  -1.1
SANI  Sanana            5.97 329  P     Pn    12 44 45.9  +2.5
SANI  Sanana            5.97 329  P     Pn    12 44 45.4  +2.0
      comp=Z,100nm,0.9s
BATI  Baumata           6.13 240  P     Pn    12 44 45.7  +0.1
      comp=Z,2µm,0.5s,baz=136,slow=2.2,SNR=310
BATI                              S     Sn    12 45 51.6  -3.7
      comp=Z,1µm,0.4s,baz=104,slow=22,SNR=24
BATI  Baumata           6.13 240  P     Pn    12 44 45.6   0.0
KDU   Kakadu            6.40 149  P     Pn    12 44 47.8  -1.3
SWI   Sorong            6.66  19  P     Pn    12 44 50.8  -1.7
MMRI  Maumere           6.93 258        Pn    12 44 56.2  +0.1
MMRI  Maumere           6.93 258  P     Pn    12 44 57.7  +1.7
MMRI  Maumere           6.93 258  S     Sn    12 46 13.9  -0.3
MMRI  Maumere           6.93 258  P     Pn    12 44 56.1  +0.1
      comp=Z,1.9nmcomp=Z,7µmcomp=Z,579nm,1.2s
KDI   Kendari           7.19 296  P     Pn    12 45 00.4  +0.9
EDFI  Ende, Flores      7.48 258  P     Pn    12 45 03.3  -0.2
      comp=Z,1.0nmcomp=Z,3µmcomp=Z,194nm,0.8s
RKPI  Ransiki, Papua    7.60  42  P     Pn    12 45 03.6  -1.3
MWPI  Manokwari, Pap    7.95  39  P     Pn    12 45 09.2  -0.4
      comp=Z,4µmcomp=Z,275nm,1.3s
KKSI  Kolaka, Sulawe    7.98 292  P     Pn    12 45 10.9  +0.9
TNTI  Ternate           8.10 348        Pn    12 45 10.5  -1.0
TNTI  Ternate           8.10 348  P     Pn    12 45 12.7  +1.2
      comp=Z,76nm,0.7s
KNRA  Kununurra         8.44 182  P     Pn    12 45 14.4  -1.6
      comp=Z,521nm,0.7s,comp=Z,0.0nm
KNRA  Kununurra         8.44 182        Pn    12 45 13.9  -2.0
LUWI  Luwuk             8.77 314  Pn    Pn    12 45 23.1  +2.7
LUWI  Luwuk             8.77 314  P     Pn    12 45 23.4  +3.0
      comp=Z,1µmcomp=Z,83nm,1.0s
SRPI  Serui, Papua      8.88  54  P     Pn    12 45 21.8  -0.1
      comp=Z,84nm,0.5s
BASI  Baing, Sumba      8.93 250  P     Pn    12 45 22.3  -0.2
WSI   Waingapu          9.03 254  P     Pn    12 45 22.2  -1.6
BKSI  Bulukumba         9.10 281  P     Pn    12 45 25.8  +1.1
      comp=Z,2µmcomp=Z,199nm,1.1s
LBFI  Labuhan Bajo,     9.19 261  P     Pn    12 45 25.1  -0.9
      comp=Z,3µmcomp=Z,318nm,0.6s
BAKI  Biak              9.20  50  P     Pn    12 45 26.9  +0.8
      comp=Z,7µmcomp=Z,703nm,1.1s
BNSI  Bone              9.35 287  P     Pn    12 45 29.5  +1.4
      comp=Z,2µmcomp=Z,138nm,1.1s
KAPI  Kappang           9.53 283  P     Pn    12 45 30.5  +0.2
      comp=Z,62nm,0.8s,baz=113,slow=8.0,SNR=20
KAPI                              LR    LR    12 49 12.5
      comp=Z,210nm,18.4s,baz=109,slow=37
KAPI  Kappang           9.53 283  P     Pn    12 45 30.4   0.0
KAPI  Kappang           9.53 283        Pn    12 45 26.4  -4.0
KAPI  Kappang           9.53 283  P     Pn    12 45 31.8  +1.4
APSI  Ampana            9.69 310  P     Pn    12 45 35.6  +3.1
      comp=Z,944nmcomp=Z,51nm,0.9s
SPSI  Sidrap Palu       9.81 289  P     Pn    12 45 35.5  +1.4
      comp=Z,1µmcomp=Z,101nm,1.0s
GTOI  Gorontalo         9.86 322  P     Pn    12 45 39.4  +4.6
      comp=Z,68nm,1.1s
WBSI  Waikabubak, Su    9.89 255  P     Pn    12 45 33.4  -1.8
TTSI  Tana Toraja      10.10 294  P     Pn    12 45 40.4  +2.4
      comp=Z,1µmcomp=Z,81nm,1.5s
WAMI  Wamena           10.13  72  P     Pn    12 45 41.3  +2.9
MRSI  Marisa           10.43 317  P     Pn    12 45 45.3  +3.0
      comp=Z,2µmcomp=Z,244nm,1.2s
DBNI  Kabupaten Domp   10.75 262  P     Pn    12 45 44.0  -2.4
      comp=Z,2µmcomp=Z,121nm,0.6s
PMSI  Majene           10.76 289  P     Pn    12 45 47.4  +0.7
      comp=Z,2µmcomp=Z,100nm,1.1s
SMPI  Sarmi            10.90  62  P     Pn    12 45 47.7  -0.7
      comp=Z,57nm,1.0s
MMSI  Mamuju           11.07 293  P     Pn    12 45 52.0  +1.3
      comp=Z,3µmcomp=Z,244nm,1.0s
MMPI  Merauke          11.27  97  P     Pn    12 45 52.3  -0.9
PLAI  Plampang         11.31 261  P     Pn    12 45 51.0  -2.7
PLAI  Plampang         11.31 261  P     Pn    12 45 51.0  -2.7
FITZ  Fitzroy Crossi   11.34 197  P     Pn    12 45 51.1  -3.1
      comp=Z,82nm,0.6s,baz=29,slow=10,SNR=307
FITZ                              S     Sn    12 47 47.2   -13
      comp=Z,87nm,0.3s,baz=233,slow=24,SNR=7.4
FITZ                              LR    LR    12 50 53.9
      comp=Z,190nm,20.3s,baz=11,slow=40
FITZ  Fitzroy Crossi   11.34 197  Pn    Pn    12 45 51.7  -2.4
TOLI2 Tolitoli         11.69 315  Pn    Pn    12 45 56.1  -2.5
TOLI2 Tolitoli         11.69 315  P     Pn    12 46 00.1  +1.4
MPSI  Mapaga           11.83 309  P     Pn    12 46 03.3  +2.9
GENI  Genyem           11.95  68  S     Sn    12 48 17.1  +2.3
TWSI  Taliwang, Sumb   12.18 262  P     Pn    12 46 02.1  -2.8
      comp=Z,2µmcomp=Z,140nm,0.7s
JAY   Jayapura         12.48  69  S     Sn    12 48 20.5  -6.9
      comp=Z,6.5nm,0.3s,baz=143,slow=18,SNR=3.6
JAY                               LR    LR    12 52 19.8
      comp=Z,142nm,20.7s,baz=312,slow=43
KLNI  Mataram          12.92 264  P     Pn    12 46 12.7  -1.8
      comp=Z,2µmcomp=Z,124nm,0.5s
KHKI  Kahang-Kahang    13.40 264  P     Pn    12 46 18.6  -1.9
      comp=Z,47nm,0.7s
WB0   Warramunga Arr   13.52 158  Pn    Pn    12 46 18.4  -3.6
WRAB  Tennant Creek    13.66 159  Pn    Pn    12 46 20.1  -3.6
WRAB  Tennant Creek    13.66 159  P     Pn    12 46 20.1  -3.6
WRA   Warramunga Arr   13.66 159  P     Pn    12 46 19.4  -4.4
      comp=Z,45nm,0.8s,baz=342,slow=13,SNR=84
WRA                               S     Sn    12 48 40.0   -16
      comp=Z,104nm,0.6s,baz=331,slow=23,SNR=16
WRA   Warramunga Arr   13.66 159        Pn    12 46 19.5  -4.3
WR8   Warramunga Arr   13.73 158  Pn    Pn    12 46 21.1  -3.6
IGBI  Denpasar         13.89 262  P     Pn    12 46 26.8  +0.1
      comp=Z,5µmcomp=Z,252nm,0.6s
RTBI  Rangdo, Negare   14.06 264  P     Pn    12 46 30.5  +1.6
      comp=Z,80nm,1.1s
BBKI  Banjar Baru      14.65 284  P     P     12 46 39.4  +1.4
      comp=Z,9µmcomp=Z,956nm,1.1s
ABJI  Asem Bagus       14.73 267  P     Pn    12 46 36.0  -1.2
      comp=Z,104nm,0.6s
JAGI  Jajag, Banyuwa   14.84 264        Pn    12 46 36.8  -1.8
JAGI  Jajag, Banyuwa   14.84 264  P     Pn    12 46 37.1  -1.5
JAGI  Jajag, Banyuwa   14.84 264  P     Pn    12 46 36.7  -1.8
      comp=Z,2µmcomp=Z,84nm,0.5s
KMMI  Kalianget        15.00 270  P     Pn    12 46 41.3  +0.8
      comp=Z,2µmcomp=Z,272nm,0.9s
BLJI  Banyuglugur      15.36 267  P     Pn    12 46 44.9  -0.1
      comp=Z,2µmcomp=Z,237nm,0.8s
COEN  Coen             15.39 117  P     Pn    12 46 45.2  -0.1
      comp=Z,80nm,1.1s
COEN  Coen             15.39 117        Pn    12 46 44.1  -1.2
COEN  Coen             15.39 117  P     Pn    12 46 44.8  -0.5
MTKI  Muara Teweh, K   15.45 293  P     Pn    12 46 46.4  +0.4
      comp=Z,351nm,0.7s
GMJI  Gumukmas         15.53 265  P     Pn    12 46 45.4  -1.6
      comp=Z,44nm,0.7s
GRJI  Gresik           16.48 270  P     Pn    12 46 58.8  +0.3
      comp=Z,342nm,1.0s
MBWA  Marble Bar       16.57 212  P     P     12 46 58.6  -0.5
      comp=Z,29nm,0.9s
MBWA  Marble Bar       16.57 212  P     P     12 46 58.5  -0.6
MBWA  Marble Bar       16.57 212  P     P     12 46 58.8  -0.3
QIS   Mount Isa        16.75 144  P     P     12 47 00.7  -0.4
      comp=Z,256nm,0.7s
QIS   Mount Isa        16.75 144  P     P     12 47 01.2  +0.1
PSAC2 Pilbara Seismi   16.81 211  P     P     12 47 01.4  -0.4
      comp=Z,55nm,0.6s
PSAC1 Pilbara Seismi   16.84 211  P     P     12 47 02.5  +0.5
      comp=Z,46nm,0.8s
PSA00 Pilbara Seismi   16.85 211  P     P     12 47 02.8  +0.6
      comp=Z,62nm,0.5s
PSA00 Pilbara Seismi   16.85 211        P     12 47 01.4  -0.8
PSA00 Pilbara Seismi   16.85 211        P     12 47 01.5  -0.7
PSA00 Pilbara Seismi   16.85 211  P     Pn    12 47 03.2  +0.3
AS31  Alice Springs    17.02 165  P     P     12 47 04.8  +0.7
ASAR  Alice Springs    17.02 165  P     P     12 47 04.2  +0.1
      comp=Z,378nm,0.6s,baz=341,slow=9.6,SNR=2465
ASAR                              S     S     12 49 58.6   -14
      comp=Z,12nm,0.7s,baz=340,slow=18,SNR=4.6
ASAR                              ScP   ScP   12 54 57.2  -2.3
      comp=Z,3.7nm,0.6s,baz=1.3,slow=2.2,SNR=2.6
ASAR  Alice Springs    17.02 165  P     P     12 47 04.4  +0.3
SJI   Sawahan          17.18 267  P     P     12 47 05.6  -0.3
      comp=Z,3µmcomp=Z,193nm,0.6s
SNJI  Sawahan-Nganju   17.18 267  P     P     12 47 05.9  -0.2
      comp=Z,3µmcomp=Z,210nm,0.5s
WRKA  Warakurna        17.76 182  P     P     12 47 12.6  +0.4
      comp=Z,119nm,0.9s
PCJI  Pacitan          17.77 266  P     P     12 47 10.3  -2.0
      comp=Z,2µmcomp=Z,184nm,0.9s
PMG   Port Moresby     18.02  98  P     Pn    12 47 16.5  -0.5
      comp=Z,42nm,0.8s,baz=292,slow=9.8,SNR=14
PMG                               S     S     12 50 24.9  -8.3
      comp=Z,4.3nm,0.5s,baz=0.0,slow=20,SNR=1.1
PMG   Port Moresby     18.02  98  P     Pn    12 47 16.3  -0.7
PMG   Port Moresby     18.02  98  P     Pn    12 47 17.1  +0.1
PMG   Port Moresby     18.02  98  P     Pn    12 47 17.3  +0.3
PMG   Port Moresby     18.02  98  P     Pn    12 47 16.3  -0.7
      comp=Z,959nmcomp=Z,101nm,0.9s
KKM   Kota Kinabalu    18.38 315  P     P     12 47 17.6  -1.5
KKM   Kota Kinabalu    18.38 315  P     Pn    12 47 20.3  -0.9
KKM   Kota Kinabalu    18.38 315  P     Pn    12 47 20.5  -0.7
      comp=Z,2µmcomp=Z,145nm,0.9s
MTSU  Mount Surprise   18.40 128  P     P     12 47 20.1  +0.8
      comp=Z,73nm,0.7s
MTSU  Mount Surprise   18.40 128  P     P     12 47 20.0  +0.8
UGM   Wanagama         18.41 267  P     P     12 47 20.0  +0.7
UGM   Wanagama         18.41 267  P     P     12 47 20.5  +1.1
UGM   Wanagama         18.41 267  P     P     12 47 20.4  +1.1
      comp=Z,108nm,1.1s
SMRI  Semarang         18.50 269  P     P     12 47 17.5  -2.8
SMRI  Semarang         18.50 269  P     P     12 47 17.7  -2.6
      comp=Z,117nm,0.7s
MANU  Manus Island     18.93  75  P     P     12 47 24.4  -0.5
SBUM  Sibu             19.36 299  P     P     12 47 31.2  +1.5
SBUM  Sibu             19.36 299  P     Pn    12 47 32.0  -0.7
SBUM  Sibu             19.36 299  P     Pn    12 47 31.4  -1.3
      comp=Z,860nmcomp=Z,85nm,1.0s
CTJI  Waduk Cacaban    19.75 269  P     P     12 47 33.2  -0.6
      comp=Z,62nm,0.8s
KPJI  Karang Pucung    19.99 268  P     P     12 47 35.0  -1.4
      comp=Z,84nm,0.7s
TV1H  Townsville Har   20.98 127  P     P     12 47 48.6  +1.7
GIRL  Giralia          20.98 221  P     P     12 47 47.2  +0.3
CTA   Charters Tower   21.01 129  P     P     12 47 48.4  +1.0
      comp=Z,16nm,1.2s
CTA   Charters Tower   21.01 129  P     P     12 47 48.1  +0.8
      comp=Z,14nm,0.6s,baz=306,slow=11,SNR=17
CTA                               S     S     12 51 31.1  -0.7
      comp=Z,10nm,1.0s,baz=232,slow=19,SNR=3.2
CTA                               LR    LR    12 56 59.4
      comp=Z,276nm,18.1s,baz=297,slow=39
      comp=Z,14nm,0.6s
CTA   Charters Tower   21.01 129  P     P     12 47 48.3  +1.0
CTAO  Charters Tower   21.01 129  P     P     12 47 47.6  +0.3
BBJI  Bungbulang       21.26 268  P     P     12 47 48.0  -2.0
BBJI  Bungbulang       21.26 268  P     P     12 47 46.2  -3.8
      comp=Z,81nm,0.7s
MEEK  Meekatharra      21.75 206  P     P     12 47 54.8  -0.2
      comp=Z,25nm,0.9s
MEEK  Meekatharra      21.75 206  P     P     12 47 54.8  -0.2
CNJI  Cibinong         21.77 268  P     P     12 47 53.9  -1.5
      comp=Z,88nm,1.0s
TPI   Tanjungpandan    21.79 281  P     P     12 47 56.2  +0.6
      comp=Z,1µmcomp=Z,119nm,1.1s
INKA  Innaminka        23.23 153  P     P     12 48 09.6  +0.6
PPBI  Pangkal Pinang   23.40 281  P     P     12 48 12.2  +1.5
FORT  Forrest          23.48 182  P     P     12 48 11.7  +0.4
      comp=Z,115nm,1.1s
FORT  Forrest          23.48 182  P     P     12 48 11.6  +0.3
QLP   Quilpie          24.07 145  P     P     12 48 17.2  +0.5
      comp=Z,428nm,1.3s
QLP   Quilpie          24.07 145  P     P     12 48 16.8  +0.1
KASI  Kota Agung       24.49 272  P     P     12 48 18.7  -1.9
      comp=Z,30nm,1.1s
KMBL  Kambalda         24.97 195  P     P     12 48 25.1  +0.3
      comp=Z,14nm,1.0s
MORW  Morawa           24.99 208  P     P     12 48 25.2  +0.2
      comp=Z,34nm,1.9s
MORW  Morawa           24.99 208  P     P     12 48 25.3  +0.3
MORW                              IAmb  IAmb  12 48 28.2
      comp=Z,24nm,0.7s
MORW  Morawa           24.99 208  P     P     12 48 25.1  +0.2
DSRI  Dabo             25.33 284  P     P     12 48 29.6  +1.4
      comp=Z,1µmcomp=Z,49nm,1.1s
BLDU  Ballidu          26.03 205  P     P     12 48 33.9  -0.4
      comp=Z,17nm,0.7s,comp=Z,0.0nm
BLDU  Ballidu          26.03 205  P     P     12 48 34.1  -0.2
BBOO  Buckleboo        26.30 167  P     P     12 48 36.8  +0.1
      comp=Z,123nm,0.8s
BBOO  Buckleboo        26.30 167  P     P     12 48 36.6  -0.1
BBOO  Buckleboo        26.30 167  P     P     12 48 36.4  -0.3
KLBR  Kellerberrin     26.48 202  P     P     12 48 38.7  +0.4
      comp=Z,75nm,0.9s
KLBR  Kellerberrin     26.48 202  P     P     12 48 38.7  +0.4
MYKOM Kota Tinggi      26.71 289  P     P     12 48 41.2  +0.6
      comp=Z,36nm,1.1s
RMQ   Roma             26.81 138  P     P     12 48 42.0  +0.6
      comp=Z,130nm,1.2s
RMQ   Roma             26.81 138  P     P     12 48 42.6  +1.2
WHYH  Whyalla          26.89 164  P     P     12 48 42.1  +0.1
STKA  Stephens Creek   27.19 156  P     P     12 48 44.5  -0.2
      comp=Z,260nm,1.0s
STKA  Stephens Creek   27.19 156  P     P     12 48 44.8  +0.1
      comp=Z,25nm,0.5s,baz=334,slow=8.7,SNR=63
STKA                              LR    LR    13 01 19.4
      comp=Z,170nm,18.2s,baz=346,slow=40
      comp=Z,25nm,0.5s
STKA  Stephens Creek   27.19 156  P     P     12 48 44.6  -0.1
STKA  Stephens Creek   27.19 156  P     P     12 48 44.0  -0.7
MUN   Mundaring        27.42 204  P     P     12 48 47.0  +0.2
      comp=Z,15nm,0.8s
MUN   Mundaring        27.42 204  P     P     12 48 46.5  -0.3
HTT   Hallett          27.65 162  P     P     12 48 49.7  +0.9
      comp=Z,12nm,0.9s
HTT   Hallett          27.65 162  P     P     12 48 49.2  +0.3
NWAO  Narrogin (SRO)   27.87 202  P     P     12 48 51.4  +0.7
      comp=Z,27nm,1.0s
NWAO  Narrogin (SRO)   27.87 202  P     P     12 48 51.4  +0.7
      comp=Z,46nm,1.0s
NWAO  Narrogin (SRO)   27.87 202  P     P     12 48 50.9  +0.1
      comp=Z,20nm,0.9s,baz=26,slow=9.1,SNR=9.7
      comp=Z,20nm,0.9s
NWAO  Narrogin (SRO)   27.87 202  P     P     12 48 51.2  +0.5
NWAO                              IAmb  IAmb  12 48 52.1
      comp=Z,23nm,0.9s
NWAO  Narrogin (SRO)   27.87 202  P     P     12 48 51.1  +0.3
NWAO  Narrogin (SRO)   27.87 202  P     P     12 48 51.0  +0.3
CMSA  Cobar Meteorol   28.76 150  P     P     12 48 59.2  +0.5
      comp=Z,57nm,0.7s
CMSA  Cobar Meteorol   28.76 150  P     P     12 48 58.9  +0.2
PPI   Padang Panjang   29.37 282  P     P     12 49 03.8  -0.5
RKGY  Rocky Gully      29.48 201  P     P     12 49 01.5  -3.4
IPM   Ipoh             30.30 292  P     P     12 49 12.7  +0.2
IPM                               IAmb  IAmb  12 49 14.7
      comp=Z,18nm,0.7s
TATA  Tatamba Isabel   30.46  94  P     P     12 49 15.1  +1.2
MNSI  Mandailing Nat   30.48 284  P     P     12 49 13.6  -0.5
      comp=Z,51nm,0.8s
NGOA  Tingoa Renbel    30.86 100  P     P     12 49 17.9  +0.5
KULM  Kulim            30.96 293  P     P     12 49 18.4  +0.1
KULM                              IAmb  IAmb  12 49 20.8
      comp=Z,22nm,1.0s
KULM  Kulim            30.96 293  P     P     12 49 20.0  +1.7
KULM  Kulim            30.96 293  P     P     12 49 19.6  +1.3
      comp=Z,23nm,0.8s
ARMA  Armidale         31.32 140  P     P     12 49 21.9  +0.5
      comp=Z,30nm,0.9s
ARMA  Armidale         31.32 140  P     P     12 49 21.9  +0.5
ARMA                              IAmb  IAmb  12 49 24.2
      comp=Z,17nm,0.7s
ARMA  Armidale         31.32 140  P     P     12 49 22.8  +1.4
ARPS  Mount Arapiles   31.66 160  P     P     12 49 25.1  +1.0
      comp=Z,126nm,0.7s
PSI   Prapat           31.69 287  P     P     12 49 24.2  -0.6
      comp=Z,43nm,0.9s
MGBR  Mount Gambier    32.13 163  P     P     12 49 29.4  +1.2
YNG   Young            32.33 149  P     P     12 49 31.7  +1.6
      comp=Z,41nm,1.1s
GSI   Gunungsitoli     32.55 284  P     P     12 49 31.5  -0.7
GSI                               IAmb  IAmb  12 49 33.8
      comp=Z,25nm,0.8s
GSI   Gunungsitoli     32.55 284  P     P     12 49 31.7  -0.5
      comp=Z,39nm,1.1s
KCSI  Kotacane, Aceh   33.01 288  P     P     12 49 35.7  -0.5
CAN   Canberra         33.44 150  P     P     12 49 41.4  +1.7
CAN                               pP    pP    12 50 17.7  +2.6
TPTI                   33.49 287  P     P     12 49 40.0  -0.3
      comp=Z,18nm,1.2s
CNB   Canberra Magne   33.62 149  P     P     12 49 42.7  +1.4
      comp=Z,16nm,1.3s
CNB   Canberra Magne   33.62 149  P     P     12 49 42.1  +0.8
TOO   Toolangi         33.71 156  P     P     12 49 43.9  +1.8
      comp=Z,23nm,0.7s
TOO   Toolangi         33.71 156  P     P     12 49 43.9  +1.8
TOO                               IAmb  IAmb  12 49 45.0
      comp=Z,12nm,0.6s
JOW   Kunigami         33.83 359  LR    LR    13 04 10.2
      comp=Z,46nm,18.6s,baz=117,slow=37
MLSI  Meulaboh, Aceh   34.54 288  P     P     12 49 48.4  -1.0
      comp=Z,104nm,0.7s
LHI   Lord Howe Isla   36.99 135  P     P     12 50 10.1   0.0
LHI                               IAmb  IAmb  12 50 10.5
      comp=Z,34nm,1.1s
SLVN  Son La           37.61 319  P     P     12 50 15.5   0.0
SANVU Saraoutou        38.22 106  P     P     12 50 21.2  +0.7
SANVU Saraoutou        38.22 106  P     P     12 50 20.7  +0.1
SANVU Saraoutou        38.22 106  P     P     12 50 20.6   0.0
SANVU                             pP    pP    12 50 55.7  -0.8
SANVU                             sP    sP    12 51 15.2  -0.4
NOUC  Port Laguerre    38.81 116  P     P     12 50 25.8  +0.3
NOUC                              pP    pP    12 51 01.9  +0.2
DZM   Mont Dzumac      38.92 116  LR    LR    13 07 04.3
      comp=Z,41nm,18.8s,baz=183,slow=37
DZM   Mont Dzumac      38.92 116  P     P     12 50 27.1  +0.6
DZM                               IAmb  IAmb  12 50 28.3
      comp=Z,74nm,2.0s
DZM   Mont Dzumac      38.92 116  P     P     12 50 26.9  +0.4
ONTNC Ouen Toro        39.00 117  P     P     12 50 27.4  +0.4
ONTNC                             IAmb  IAmb  12 50 44.5
      comp=Z,19nm,0.8s
CM31  Chiang Mai Arr   39.16 311  P     P     12 50 28.7  +0.3
CM31                              IAmb  IAmb  12 50 30.1
      comp=Z,14nm,0.9s
CMAR  Chiang Mai Arr   39.16 311  P     P     12 50 28.9  +0.5
      comp=Z,8.1nm,0.8s,baz=142,slow=7.3,SNR=56
CMAR                              PcP   PcP   12 52 35.6  +1.1
      comp=Z,1.6nm,0.7s,baz=134,slow=3.7,SNR=5.3
CMAR                              ScP   ScP   12 56 07.8  +0.7
      comp=Z,2.0nm,0.8s,baz=158,slow=3.0,SNR=14
      comp=Z,8.1nm,0.8s
CMAR  Chiang Mai Arr   39.16 311  P     P     12 50 28.4   0.0
YATNC Mamie plateau,   39.32 116  P     P     12 50 30.5  +0.8
OUENC Ouen Island, N   39.37 117  P     P     12 50 30.9  +0.8
CHTO  Chiang Mai       39.38 311  P     P     12 50 30.9  +0.7
CHTO                              IAmb  IAmb  12 50 32.2
      comp=Z,19nm,0.8s
CHTO  Chiang Mai       39.38 311  P     P     12 50 30.8  +0.7
      comp=Z,30nm,0.9s
CHTO  Chiang Mai       39.38 311  P     P     12 50 30.4  +0.2
CHTO                              pP    pP    12 51 06.7  +1.4
CHTO                              sP    sP    12 51 24.3  +0.3
WHN   Wuhan            40.09 340  P     P     12 50 36.3  +0.4
NJ2   Nanjing          40.23 347 eP     P     12 50 38.4  +1.5
NJ2                               pmax  pmax
      comp=Z,9.0nm,0.5s
KMI   Kunming          41.10 322  P     P     12 50 45.5  +1.0
KMI                               pmax  pmax
      comp=Z,14nm,0.7s
PZH   PanZhiHua        42.73 323  P     P     12 50 59.8  +2.3
MJAR  Matsushiro Arr   44.34  11  P     P     12 51 08.5  -1.6
      comp=Z,0.8nm,0.6s,baz=186,slow=10.0,SNR=2.4
MJAR                              ScP   ScP   12 56 26.6  -0.8
      comp=Z,1.2nm,0.6s,baz=192,slow=5.9,SNR=4.3
MJAR                              LR    LR    13 07 40.3
      comp=Z,37nm,20.7s,baz=196,slow=33
      comp=Z,0.8nm,0.6s
KSRS  Korea Array      44.43 359  P     P     12 51 10.6  -0.2
      comp=Z,0.9nm,0.6s,baz=171,slow=7.4,SNR=4.3
      comp=Z,0.9nm,0.6s
XAN   Xi'an            45.24 336  P     P     12 51 16.0  -1.4
XAN                               pP    pP    12 51 51.4  -1.9
XAN                               ScP   ScP   12 56 32.3  +1.1
XAN                               pmax  pmax
      comp=Z,7.0nm,1.1s
HNS   HongShan         46.35 344 ⇓P     P     12 51 30.9  +5.0
HNS                               pmax  pmax
      comp=Z,7.0nm,1.4s
SHL   Shillong         48.66 313  P     P     12 51 43.6  -0.6
SHL                               IAmb  IAmb  12 51 45.1
      comp=Z,28nm,1.0s
MSVF  Nonsavu          48.82 107  P     P     12 51 47.4  +2.0
LZDM  Lanzhou Array    49.11 333  P     P     12 51 47.5  -0.2
      comp=Z,1.7nm,0.4s,baz=169,slow=11,SNR=1.7
      comp=Z,1.7nm,0.4s
LZH   Lanzhou          49.15 333 eP     P     12 51 48.0  +0.3
LZH                               pP    pwP   12 52 32.3  +1.5
LZH                               pmax  pmax
      comp=Z,12nm,1.1s
OUZ   Omahuta          49.40 131  P     P     12 51 51.5  +2.0
OUZ   Omahuta          49.40 131  P     P     12 51 51.8  +2.3
WCZ   Waipu Caves      50.25 131  P     P     12 51 57.8  +2.0
MSZ   Milford Sound    50.32 144  P     P     12 51 58.5  +2.3
HHC   Hu-ho-hao-te     50.45 343 eP     P     12 52 00.3  +2.9
HHC                               pmax  pmax
      comp=Z,6.0nm,0.5s
HHC                               pmax  pmax
      comp=Z,170nm,6.5s
JCZ   Jackson Bay      50.47 143  P     P     12 51 59.2  +1.7
JCZ   Jackson Bay      50.47 143  P     P     12 51 59.3  +1.8
FOZ   Fox Glacier      50.79 142  P     P     12 52 00.7  +0.9
MLZ   Mavora Lakes     50.84 145  P     P     12 52 01.4  +1.2
MLZ   Mavora Lakes     50.84 145  P     P     12 52 01.3  +1.1
WKZ   Wanaka           51.04 144  P     P     12 52 03.0  +1.4
WKZ   Wanaka           51.04 144  P     P     12 52 03.3  +1.7
WHZ   Wether Hill Ro   51.05 146  P     P     12 52 02.3  +0.6
WHZ   Wether Hill Ro   51.05 146  P     P     12 52 02.2  +0.5
DSZ   Denniston Nort   51.10 139  P     P     12 52 03.6  +1.4
WVZ   Waitaha Valley   51.11 141  P     P     12 52 03.5  +1.4
QRZ   Quartz Range     51.12 138  P     P     12 52 04.2  +1.9
QRZ   Quartz Range     51.12 138  P     P     12 52 04.4  +2.1
INZ   Inchbonnie       51.37 141  P     P     12 52 04.5  +0.4
LBZ   Lake Benmore     51.48 143  P     P     12 52 05.8  +0.8
LBZ                               IAmb  IAmb  12 52 06.6
      comp=Z,37nm,0.8s
LBZ   Lake Benmore     51.48 143  P     P     12 52 05.2  +0.3
RPZ   Rata Peaks       51.64 142  P     P     12 52 07.2  +1.0
RPZ   Rata Peaks       51.64 142  P     P     12 52 07.3  +1.1
TOZ   Tahuroa Road     51.82 133  P     P     12 52 10.3  +2.8
THZ   Tophouse         51.82 139  P     P     12 52 08.3  +0.7
NNZ   Nelson           51.87 138  P     P     12 52 09.5  +1.6
LTZ   Lake Taylor      51.92 140  P     P     12 52 09.2  +1.0
TMZ   Timaru           51.97 143  P     P     12 52 09.3  +0.8
OXZ   Oxford           52.05 141  P     P     12 52 10.0  +0.8
TLZ   Tolley Road      52.09 134  P     P     12 52 11.6  +2.0
ODZ   Otahua Downs     52.12 143  P     P     12 52 11.0  +1.4
WAZ   Wanganui         52.30 136  P     P     12 52 13.6  +2.4
WTVZ  West Tongariro   52.45 135  P     P     12 52 14.7  +2.3
GVZ   Greta Valley S   52.50 140  P     P     12 52 14.3  +1.9
KHZ   Kahutara         52.55 139  P     P     12 52 14.2  +1.4
KHZ   Kahutara         52.55 139  P     P     12 52 13.9  +1.1
KIW   Kapiti Island    52.74 137  P     P     12 52 15.1  +0.8
SNZO  South Karori     52.80 137  P     P     12 52 14.9  +0.2
OGWZ  Otaki Gorge      52.89 137  P     P     12 52 15.7  +0.2
MRHZ  Matea Rd         52.92 134  P     P     12 52 16.4  +0.6
TSZ   Takapari Road    53.11 136  P     P     12 52 18.0  +1.0
BKZ   Black Stump Fm   53.11 134  P     P     12 52 17.5  +0.4
HOWZ  Holdsworth Sta   53.16 137  P     P     12 52 17.3  -0.1
KWHZ  Kaweka Forest    53.17 135  P     P     12 52 18.2  +0.6
URZ   Urewera          53.20 133  P     P     12 52 18.0  +0.3
URZ   Urewera          53.20 133  P     P     12 52 17.8  +0.2
KRHZ  Kereru           53.22 135  P     P     12 52 17.7  -0.1
MTHZ  Maungataniwha    53.23 134  P     P     12 52 18.2  +0.1
MCHZ  McNeill Hill     53.37 135  P     P     12 52 20.0  +1.1
RAHZ  Arahi            53.44 134  P     P     12 52 20.2  +0.8
SNGZ  Shannon Statio   53.56 134  P     P     12 52 20.9  +0.5
BFZ   Birch Farm       53.57 136  P     P     12 52 20.7  +0.3
BFZ   Birch Farm       53.57 136  P     P     12 52 21.0  +0.6
WHHZ  Waihua           53.60 134  P     P     12 52 21.6  +1.0
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Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
KAHZ	Kahuranaki	53.64	135	P	P	12 52 21.6	+0.7
GTA	Gaotai	53.71	332	P	P	12 52 22.3	+0.8
GTA				sP	pwP	12 53 07.4	+2.3
GTA				ScP	ScP	12 57 09.3	+2.0
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
EVN	Everest	53.73	312	P	P	12 52 22.8	+0.3
EVN				IAmb	IAmb	12 52 23.9	
	comp=Z,22nm,0.5s						
MXZ	Matakaoa Point	53.81	132	P	P	12 52 23.0	+0.9
HEH	HeiHe	57.23	359	*e*P	P	12 52 46.9	+0.7
HEH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SONM	Songino Array	58.34	342	P	P	12 52 54.9	+0.7
	comp=Z,1.3nm,0.7s,baz=167,slow=6.4,SNR=6.3						
SONM				ScP	ScP	12 57 26.1	-1.5
	comp=Z,1.0nm,0.7s,baz=146,slow=3.1,SNR=4.5						
	comp=Z,1.3nm,0.7s						
DRV	Dumont d'Urvil	59.85	175	P	P	12 53 04.9	+0.8
WMQ	Urumqi	63.06	328	*e*P	P	12 53 28.4	+2.3
PETK	Petropavlovsk-	64.80	19	P	P	12 53 37.5	+0.3
	comp=Z,5.6nm,0.8s,baz=184,slow=3.6,SNR=8.8						
PETK				LR	LR	13 21 31.8	
	comp=Z,29nm,20.2s,baz=182,slow=35						
	comp=Z,5.6nm,0.8s						
KSH	Kashi	67.55	318	P	P	12 53 56.3	+1.1
KSH				pmax	pmax		
	comp=Z,14nm,0.7s						
MK31	Makanchi Array	67.89	327	P	P	12 53 57.6	+0.6
MKAR	Makanchi Array	67.89	327	P	P	12 53 57.2	+0.2
	comp=Z,3.9nm,0.6s,baz=118,slow=7.7,SNR=37						
	comp=Z,3.9nm,0.6s						
MKAR	Makanchi Array	67.89	327	P	P	12 53 57.4	+0.4
CCD	Concordia, Ant	67.94	182	P	P	12 53 58.4	+1.1
CCD				PcP	PcP	12 54 23.4	+1.0
CCD				pP	pP	12 54 38.5	+1.4
MAKZ	Makanchi	68.07	327	P	P	12 53 58.2	+0.1
MAKZ	Makanchi	68.07	327	P	P	12 53 58.2	+0.1
MAKZ				PcP	PcP	12 54 20.9	-2.1
MAKZ				pP	pP	12 54 38.3	+1.2
YAK	Yakutsk	69.02	0	LR	LR	13 28 14.5	
	comp=Z,24nm,18.0s,baz=84,slow=39						
YAK	Yakutsk	69.02	0	P	P	12 54 03.6	0.0
YAK				IAmb	IAmb	12 54 06.3	
	comp=Z,16nm,0.7s						
MANEM	Manem	69.55	314	P	P	12 54 08.6	+0.8
MANEM				IAmb	IAmb	12 54 10.5	
	comp=Z,12nm,1.0s						
AAK	Ala-Archa	70.10	320	P	P	12 54 11.0	+0.1
AAK	Ala-Archa	70.10	320	P	P	12 54 11.4	+0.4
AAK				PcP	PcP	12 54 30.8	-1.1
KBL	Kabul	70.19	311	P	P	12 54 11.8	+0.1
ZAA0	Zalesovo Array	71.36	334	P	P	12 54 17.1	-0.9
ZALV	Zalesovo Beam	71.36	334	P	P	12 54 16.8	-1.2
	comp=Z,3.3nm,0.5s,baz=136,slow=5.9,SNR=18						
	comp=Z,3.3nm,0.5s						
ZALV	Zalesovo Beam	71.36	334	P	P	12 54 17.1	-0.9
KURBB	Kurchatov Arra	72.20	329	P	P	12 54 23.1	0.0
	comp=Z,1.5nm,0.5s,baz=133,slow=4.9,SNR=20						
	comp=Z,1.5nm,0.5s						
KURK	Kurchatov	72.21	329	P	P	12 54 23.3	+0.1
KURK	Kurchatov	72.21	329	P	P	12 54 23.1	0.0
KURK				pP	pP	12 55 03.9	+1.3
VNDA	Vanda	72.37	173	P	P	12 54 24.1	+0.4
	comp=Z,5.7nm,0.5s,baz=320,slow=6.7,SNR=44						
	comp=Z,5.7nm,0.5s						
VNDA	Vanda	72.37	173	P	P	12 54 24.1	+0.4
VNDA				PcP	PcP	12 54 41.9	+1.3
KK31	Karatay Array	72.89	319	P	P	12 54 27.7	+0.3
KKAR	Karatay Array	72.89	319	P	P	12 54 27.4	0.0
SBA	Scott Base	73.27	172	P	P	12 54 30.4	+1.4
JLN	Jalan Bani Buh	74.16	295	P	P	12 54 35.5	+0.3
WBK	Wadi Bani Khal	74.67	296	P	P	12 54 38.1	-0.1
MHTO	MHTO	75.18	294	P	P	12 54 40.5	-0.6
DQM	DQM	75.32	293	P	P	12 54 39.5	-2.4
JMDO	Jabal Madar	75.39	295	P	P	12 54 42.0	-0.3
SMDO	Samad	75.60	296	P	P	12 54 43.5	-0.2
BIDO	Bidbid	75.65	296	P	P	12 54 44.4	+0.7
	SNR=7.0						
BSY	Bisya	76.29	295	P	P	12 54 47.4	0.0
HOQ	Hoqain	76.39	296	P	P	12 54 48.6	+0.6
SHAO	Shalim	76.67	290	P	P	12 54 49.9	+0.3
ARQ	Araqi	77.03	296	P	P	12 54 51.5	-0.1
SOHO	SOHO	77.21	297	P	P	12 54 52.0	-0.5
DMTO	DMTO	77.23	290	P	P	12 54 52.6	-0.2
UOSS	Minazif	77.70	297	P	P	12 54 55.7	+0.4
HATD	Hatta, Dubai	77.73	297	P	P	12 54 55.7	+0.2
BVAR	Borovoye Array	77.74	328	P	P	12 54 53.7	-1.1
	comp=Z,1.6nm,0.5s,baz=116,slow=8.5,SNR=10.0						
	comp=Z,1.6nm,0.5s						
ASHO	Ashiyiah	77.77	297	P	P	12 54 56.2	+0.5
MASF	Masafi	77.84	298	P	P	12 54 56.9	+0.8
BANOM	Banah	77.85	298	P	P	12 54 56.8	+0.6
SHME	Shamm	78.02	298	P	P	12 54 57.7	+0.7
UMZA	Um Al Zommool	78.11	295	P	P	12 54 57.5	-0.1
DOK	Doka	78.18	291	P	P	12 54 57.6	-0.4
	SNR=9.3						
WHFO	Wadi Hawf	78.37	290	P	P	12 54 58.4	-0.8
	SNR=11						
ASUD	Al Ashush, Dub	78.40	297	P	P	12 54 59.6	+0.5
ABTO	Aybut	78.71	289	P	P	12 55 01.0	0.0
	SNR=10						
NRIK	Noril'sk	81.53	346	P	P	12 55 15.2	+0.2
	comp=Z,2.2nm,0.4s,baz=130,slow=6.6,SNR=5.3						
	comp=Z,2.2nm,0.4s						
AB31	Akbulak array	82.09	322	P	P	12 55 18.0	-0.3
ABKAR	Akbulak array	82.09	322	P	P	12 55 17.8	-0.5
QSPA	South Pole Qui	82.78	180	P	P	12 55 21.4	-0.4
	comp=Z,17nm,0.6s,baz=311,slow=1.0,SNR=56						
	comp=Z,17nm,0.6s						
QSPA	South Pole Qui	82.78	180	P	P	12 55 21.8	0.0
QSPA				IAmb	IAmb	12 55 22.7	
	comp=Z,19nm,0.8s						
QSPA	South Pole Qui	82.78	180	P	P	12 55 21.4	-0.4
SYO	Syowa Base	83.15	201	⇓*e*PcP	PcP	12 55 27.6	0.0
RAYN	Ar Rayn	86.99	294	P	P	12 55 43.8	+0.2
RAYN	Ar Rayn	86.99	294	P	P	12 55 43.4	-0.2
ELIB	Princess Elisa	88.03	197	*d*P	P	12 55 48.9	+1.3
	comp=Z,7.5nm,0.9s						
TROLL	Troll, Antarti	93.75	194	⇓P	P	12 56 14.8	+0.6
	comp=Z,271nm,0.6s						
ILAR	Eielson Array	93.91	25	P	P	12 56 13.4	-1.4
	comp=Z,0.4nm,0.6s,baz=253,slow=4.3,SNR=8.7						
	comp=Z,0.4nm,0.6s						
BELA	Belgrano 2	94.57	183		P	12 56 17.6	-0.1
SNAA	Sanae	95.26	194	⇓P	P	12 56 21.3	+0.3
	comp=Z,57nm,0.5s						
SNAA	Sanae	95.26	194	P	P	12 56 21.3	+0.3
	comp=Z,2.5nm,0.5s,baz=195,slow=6.2,SNR=23						
	comp=Z,2.5nm,0.5s						
SNAA	Sanae	95.26	194	P	P	12 56 21.6	+0.6
SNAA				IAmb	IAmb	12 56 23.4	
	comp=Z,4.7nm,0.9s						
PDAR	Pinedale Array	117.67	45	PKP	PKiKP	13 01 43.6	+0.2
	comp=Z,0.5nm,0.7s,baz=349,slow=1.5,SNR=4.0						
TXAR	Lajitas Array	125.81	59	PKP	PKiKP	13 01 59.5	-0.1
	comp=Z,0.3nm,0.6s,baz=221,slow=1.8,SNR=5.5						
TORD	Torodi Ar. Bea	127.95	281	PKP	PKPdf	13 02 03.5	0.0
	comp=Z,1.3nm,0.4s,baz=96,slow=1.7,SNR=1.4						
PCBR	Castelo Branco	129.35	317	*e*tx	tx	13 05 11.4	
PMRV	Marv??o	129.49	316	*e*tx	tx	13 05 12.1	
PBAR	Barrancos	129.81	315	*e*tx	tx	13 05 13.1	
PESTR	Estremoz	129.88	316	*e*tx	tx	13 05 13.6	
PSARD	Sardoal	129.93	317	*e*tx	tx	13 05 14.2	
PARRA	Arraiolos	130.22	316	*e*tx	tx	13 05 15.8	
PMTG	Montargil	130.22	316	*e*tx	tx	13 05 15.0	
EVO	Evora	130.33	316	*e*tx	tx	13 05 15.1	
PBEJ	Beja	130.46	315	*e*tx	tx	13 05 16.3	
PVAQ	Vaqueiros	130.63	314	*e*tx	tx	13 05 17.1	
PCVE	Castro Verde	130.76	314	*e*tx	tx	13 05 17.8	
MESJ	Messejana	130.79	315	*e*tx	tx	13 05 18.0	
SCHQ	Schefferville	130.81	12	SKPbc	SKPbc	13 05 15.2	-1.0
	comp=Z,4.9nm,0.9s,baz=45,slow=2.9,SNR=3.8						
PBDV	Barranco-do-Ve	130.86	314	*e*tx	tx	13 05 18.5	
DBIC	Dimbokro	134.28	272	SKPbc	SKPbc	13 05 27.8	-1.6
	comp=Z,8.9nm,0.7s,baz=134,slow=3.1,SNR=18						
CPUP	Villa Florida	146.10	170	PKPbc	PKPdf	13 02 36.7	+0.2
	comp=Z,2.9nm,0.7s,baz=51,slow=2.4,SNR=14						
LPAZ	La Paz	151.11	144	PKPbc	PKiKP	13 02 52.4	+0.2
	comp=Z,6.0nm,0.9s,baz=141,slow=0.9,SNR=10						
LPAZ				PKPab	PKPab	13 03 00.2	+0.5
	comp=Z,6.2nm,0.5s,baz=226,slow=3.4,SNR=11						

BER ***13*** *12:50:38.0±2.3,78°.74N×5°.09E,h28^{km}±27^{km},Mw3.7, ML2.9(NAO),Confirmed Earthquake*

NAO ***13*** *12:50:38.0±2.3,78°.68N×5°.84E,h15^{km},ML2.9*

FCIAR ***13*** *12:50:40.0,78°.68N×7°.00E,h10^{km},station ZFI2 has station magnitude of 3.60 station OMEGA has station magnitude of 3.80*

KOLA ***13*** *12:50:41.2,78°.52N×7°.57E,h0^{km},ML2.4,Error ellipse: s-maj=16.6km s-min=11.0km az=100.0,Greenland sea,Knipovich ridge, middle*

ISC 13 12:50:38.4±4.2,**78°.81N**±0°.06×**6°.1E**±0°.2,**h29**^{km}±19^{km},**n20,** σ**1^{s}.46**/37,**1C,Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.14	81	Pb	Pn	12 50 59.4	+1.0
KBS				Sb	Sb	12 51 14.1	+0.3
KBS	Kingsbay	1.14	81	P	Pn	12 50 59.4	+1.0
KBS				S	Sn	12 51 12.3	-0.7
KBS	Kingsbay	1.14	81	*e*P	Pn	12 50 59.2	+0.9
KBS				*e*S	Sb	12 51 14.1	+0.3
KBS				IAML		12 51 15.5	
	comp=Z,102nm,0.2s						
BRBB	Barentsburg B	1.78	110	Pn	Pn	12 51 07.7	+0.5
BRBB				Sn	Sn	12 51 29.7	+0.9
BRBB	Barentsburg B	1.78	110	P	Pn	12 51 07.7	+0.5
BRBB				S	Sn	12 51 26.2	-2.6
BRBB	Barentsburg B	1.78	110	Pn	Pn	12 51 07.7	+0.5
BRBB				Sn	Sn	12 51 29.7	+0.9
BRBA	Barentsburg A	1.80	111	Pn	Pn	12 51 08.0	+0.6
BRBA				Sn	Sn	12 51 30.0	+0.7
BRBA	Barentsburg A	1.80	111	Pn	Pn	12 51 08.0	+0.6
BRBA				Sn	Sn	12 51 30.0	+0.7
SPA0	Spitsbergen Ar	2.15	102	Pn	Pn	12 51 14.1	+1.8
	baz=290,slow=11						
SPA0				Sn	Sn	12 51 40.2	+2.2
	baz=276,slow=16						
SPA0	Spitsbergen Ar	2.15	102	⇑*i*P	Pn	12 51 14.1	+1.8
SPA0				*i* S	Sn	12 51 38.8	+0.8
SPA0	Spitsbergen Ar	2.15	102	Pn	Pn	12 51 14.1	+1.8
	baz=290,slow=11						
SPA0				Sn	Sn	12 51 40.2	+2.2
	baz=276,slow=16						
SPITS	Spitsbergen Ar	2.15	102	P	Pn	12 51 13.7	+1.4
SPITS				S	Sb	12 51 40.3	-2.6
HSPB	Hornsund (broa	2.69	128	S	Sn	12 51 48.9	-2.3
HSPB	Hornsund (broa	2.69	128	P	Pn	12 51 20.8	+1.2
HSPB				*e*S	Sn	12 51 50.7	-0.4
HSPB	Hornsund (broa	2.69	128	*e*P	Pn	12 51 19.5	-0.1
HSPB				*e*S	Sn	12 51 50.4	-0.7
HSPB				IAML		12 51 57.1	
	comp=Z,9.1nm,0.4s						
HOPEN	Hopen	4.65	110	Pn	Pn	12 51 47.0	+0.5
HOPEN				Sn	Sn	12 52 38.2	-1.1
HOPEN	Hopen	4.65	110	*e*P	Pn	12 51 47.1	+0.6
HOPEN				*e*S	Sn	12 52 38.2	-1.1
HOPEN				IAML		12 52 39.9	
	comp=Z,26nm,0.9s						
ZFI2	Zemlya Franca-	7.48	55	*e*P	Pn	12 52 26.5	+1.2
ZFI2				*e*S	Sn	12 53 46.5	-2.6
	comp=Z,17nm,3.2s						
OMEGA	Omega	7.50	55	*e*P	Pn	12 52 26.6	+1.1
OMEGA				*e*S	Sn	12 53 46.8	-2.6
	comp=Z,25nm,2.9s						
DBG	Daneborg	7.54	247	*e*P	Pn	12 52 19.9	-6.2
DBG				*e*S	Sn	12 53 35.9	-14

DJA 13 13:05:26.0±0.2,**9°S**±6°×**11°8E**±°,**h174**^{km}±3^{km},**M3.7**/18, **mB4.7**/1,**mb3.7**/10,**MLv3.7**/18,**Mw(mB)3.9**/1, **MwMwp4.9**/1,**Mwp5.2**/1,**Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.16	135	P	Pn	13 05 50.2	+1.1
PLAI				S	Sn	13 06 07.8	+0.9
DBNI	Kabupaten Domp	0.68	72	P	Pn	13 05 51.7	+0.7
DBNI				S	Sn	13 06 10.5	+0.4
TWSI	Taliwang, Sumb	0.77	268	P	Pn	13 05 52.9	+1.4
KLNI	Mataram	1.57	280	P	Pn	13 05 58.8	+0.6
KLNI				S	Sn	13 06 24.2	+1.2
WBSI	Waikabubak, Su	1.94	119	P	Pn	13 06 02.6	+0.5
WBSI				S	Sn	13 06 29.5	-0.5
KHKI	Kahang-Kahang	2.06	279	P	Pn	13 06 04.5	+1.2
LBFI	Labuhan Bajo,	2.22	84	P	Pn	13 06 04.5	-0.6
DNP	Denpasar	2.42	271	P	Pn	13 06 08.1	+0.7
IGBI	Denpasar	2.49	267	P	Pn	13 06 08.5	+0.3
RTBI	Rangdo, Negare	2.70	275	P	Pn	13 06 11.4	+0.6
WSI	Waingapu	2.77	110	P	Pn	13 06 12.1	+0.5
BASI	Baing, Sumba	3.25	118	P	Pn	13 06 18.6	+1.2
JAGI	Jajag, Banyuwa	3.48	274	P	Pn	13 06 19.3	-1.0
EDFI	Ende, Flores	3.98	91	P	Pn	13 06 25.8	-1.1
BKSI	Bulukumba	4.16	36	P	Pn	13 06 29.8	+0.8
GMJI	Gumukmas	4.19	276	P	Pn	13 06 28.3	-1.1
SNJI	Sawahan-Nganju	5.91	279	P	Pn	13 06 53.1	+1.1
	0.1nm13nm,1.8s						
BATI	Baumata	6.11	105	P	Pn	13 06 54.0	-0.4
	0.1nm20nm,0.9s						
PCJI	Pacitan	6.43	274	P	Pn	13 06 58.4	-0.3
	30nm,1.6s						
SOEI	Soe	6.61	100	P	Pn	13 07 00.6	-0.5
	0.1nm16nm,0.8s						
UGM	Wanagama	7.11	276	P	Pn	13 07 07.1	-0.5
	57nm,2.0s						
KPJI	Karang Pucung	8.75	278	P	Pn	13 07 29.0	-0.3
	4μm9.9nm,1.6s						
BBJI	Bungbulang	9.99	276	P	Pn	13 07 43.6	-2.0

IDC ***13*** *13:17:04.5±2.5,12°.88N×90°.37W,h0^{km},mb3.4/4, mbtmp3.4/6,ML3.0/2,Error ellipse: s-maj=60.0km s-min=38.5km az=84.0*

GCG ***13*** *13:17:04.5±1.1,12°.83N×90°.83W,h4^{km}±15^{km},MD4.3, ML4.0,MW3.4*

SNET ***13*** *13:17:05.8±1.4,12°.86N×90°.81W,h8^{km},ML3.5*

CATAC ***13*** *13:17:07.0±0.5,13°N±3°×9°1W±°,h9^{km}±3^{km},M3.8/18, MLv3.8/18,Error ellipse: s-maj=6.0km s-min=3.3km az=24.5,confirmed*

ISC 13 13:17:08.7±1.1,**12°.98N**±0°.06×**90°.74W**±0°.04,**h10**^{km},**n57,** σ**1^{s}.27**/60,**mb3.6**/3,**Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	1.11	39	P	Pg	13 17 28.1	-2.0
FAME	Alcaldia de Sa	1.11	39	S	Sg	13 17 43.7	-0.7
NUBE	Las Nubes	1.31	45	*i* P	Pn	13 17 31.4	-1.8
NUBE	Las Nubes	1.31	45	P	Pn	13 17 31.1	-2.1
NUBE	Las Nubes	1.31	45	S	Sb	13 17 50.1	-0.2
CEVE	Cerro Verde	1.37	52	*e*P	Pn	13 17 32.4	-1.7
CEVE				*e*S	Sg	13 17 55.8	+2.8
CEVE	Cerro Verde	1.37	52	P	Pn	13 17 32.6	-1.5
CEVE	Cerro Verde	1.37	52	S	Sb	13 17 51.9	-0.4
SLOZ	Alcaldia de Sa	1.39	42	S	Sb	13 17 52.3	-0.4
JAYA	Jayaque - finc	1.42	62	*e*P	Pn	13 17 32.7	-2.0
JAYA	Jayaque - finc	1.42	62	*i* P	Pn	13 17 32.7	-2.0
JAYA	Jayaque - finc	1.42	62	P	Pn	13 17 32.9	-1.9
JAYA	Jayaque - finc	1.42	62	S	Sb	13 17 52.4	-1.2
LALI	Alcalda de L	1.47	70	P	Pn	13 17 35.0	-0.3
LALI	Alcalda de L	1.47	70	S	Sn	13 17 54.6	0.0
UNIC	Universidad Ca	1.53	49	P	Pn	13 17 34.4	-1.7
UNIC	Universidad Ca	1.53	49	S	Sn	13 17 56.1	0.0
STG5	El Palmar, Qui	1.53	337	*i* P	Pg	13 17 39.5	+1.4
CEDA	San Andres	1.54	58	S	Sn	13 17 56.3	-0.1
PMON	Piamonte	1.56	62	P	Pn	13 17 35.2	-1.5
PMON	Piamonte	1.56	62	S	Sn	13 17 58.1	+1.1
STG8	El Palmar, Qui	1.58	338	*i* P	Pb	13 17 39.5	+1.4
BOQS	Boqueron	1.60	62	*e*P	Pn	13 17 36.3	-1.0
PANCS	Alcalda de	1.64	67	P	Pn	13 17 37.8	+0.1
PANCS	Alcalda de	1.64	67	S	Sn	13 17 58.6	-0.3
LOMA	Loma Larga	1.66	66	S	Sn	13 18 00.6	+1.1
LOMA	Loma Larga	1.66	66	P	Pn	13 17 37.6	-0.4
IGN	Direccin Gen	1.69	64	S	Sn	13 18 00.6	+0.5
UDBS	Universidad Do	1.71	64	S	Sn	13 18 01.2	+0.8
RTAL	Retalhuleu	1.79	329	S	Sn	13 18 00.1	-2.5
PAVA	Las Pavas	1.90	67	P	Pn	13 17 40.6	-0.7
SOKI	Kika Raxquin	1.94	341	*i* P	Pn	13 17 40.6	-1.5
SOKI				IAML		13 18 14.3	
	comp=N,1μm,1.0s						
MTO3	Montecristo	1.94	43	*i* P	Pn	13 17 40.8	-1.1
MTO3	Montecristo	1.94	43	S	Sn	13 18 06.4	-0.2
MTO3	Montecristo	1.94	43	P	Pn	13 17 41.0	-1.0
APG	El Apazote	2.03	8	Pn	Pn	13 17 42.8	-0.4
	comp=N,2.9nm,0.3s,baz=172,slow=12,SNR=96						
APG				Sn	Sn	13 18 09.7	+1.0
	comp=N,1.3nm,0.3s,baz=94,slow=14,SNR=15						
	comp=N,11nm,0.5s						
APG	El Apazote	2.03	8	*i* P	Pn	13 17 42.7	-0.4
APG				*i* S	Sb	13 18 11.6	+0.4
ESQI	Esquipulas	2.08	41	P	Pn	13 17 43.0	-0.7
ESQI	Esquipulas	2.08	41	S	Sn	13 18 09.9	+0.3
SCLA	Alcaldia de Sa	2.08	70	S	Sn	13 18 10.7	+0.9
SCLA	Alcaldia de Sa	2.08	70	P	Pn	13 17 43.3	-0.5
LLGN	La Laguna	2.10	56	P	Pn	13 17 43.6	-0.5
LLGN	La Laguna	2.10	56	S	Sn	13 18 11.1	+0.7
PACA	Pacayal	2.40	78	P	Pn	13 17 47.6	-0.6
PACA	Pacayal	2.40	78	S	Sn	13 18 18.2	+0.4
LCND	La Caada	2.79	83	P	Pn	13 17 52.8	-0.7
CNCH	Conchagua	2.84	84	P	Pn	13 17 53.1	-1.2
CNCH	Conchagua	2.84	84	S	Sn	13 18 29.4	+0.7
PKGN	Cerro Pekin	3.68	94	P	Pn	13 18 05.0	-0.7
POLN	Al Sur del Vol	3.84	94	P	Pn	13 18 06.1	-1.8
YUSH	Yuscaran	3.91	75	P	Pn	13 18 08.1	-0.8
CMIG	Matias Romero	5.72	316	Pn	Pn	13 18 33.8	0.0
	comp=N,0.5nm,0.3s,baz=141,slow=9.4,SNR=4.4						
CMIG				Sn	Sn	13 19 36.8	-2.8
	comp=N,0.5nm,0.3s,baz=82,slow=18,SNR=1.4						
	comp=N,1.2nm,0.3s						
TXAR	Lajitas Array	20.22	326	P	P	13 21 45.0	+0.9
	comp=N,1.0nm,0.4s,baz=143,slow=11,SNR=11						
	comp=N,1.0nm,0.4s						
NVAR	Mina Array Bea	35.23	321	P	P	13 24 05.1	+1.5
	comp=N,0.7nm,0.7s,baz=132,slow=8.8,SNR=4.9						
	comp=N,0.7nm,0.7s						
YKA	Yellowknife Ar	52.30	346	P	P	13 26 17.3	-2.9
	comp=N,0.2nm,0.6s,baz=154,slow=7.7,SNR=4.6						
	comp=N,0.2nm,0.6s						
ILAR	Eielson Array	64.25	337	P	P	13 27 41.5	-2.2
	comp=N,0.6nm,1.0s,baz=111,slow=6.8,SNR=6.2						
	comp=N,0.6nm,1.0s						
CMAR	Chiang Mai Arr	147.33	343	PKPbc	PKPdf	13 36 52.0	+0.7
	comp=N,0.8nm,0.3s,baz=353,slow=4.1,SNR=7.1						

TIR ***13*** *13:20:10.4,41°.54N×19°.60E,h22^{km},Ml2.6/3*

SKO ***13*** *13:20:10.3,41°.61N×19°.41E,h8^{km},ML2.8*

PDG ***13*** *13:20:12.9±0.1,41°.66N×19°.54E,h11^{km},ML3.0/13,Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*

ISC 13 13:20:10.9±1.1,**41°.55N**±0°.03×**19°.54E**±0°.03,**h6**^{km}±9^{km}, **n35,**σ**0^{s}.80**/57,**7C-9D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.32	130	P	Pg	13 20 17.0	-0.1
TIR				Sg	Sg	13 20 21.3	0.0
TIR				AML	AML	13 20 22.0	
	3.4nm,0.4s						
ULC	Ulcinj	0.47	332	*e*Pg	Pg	13 20 20.2	+0.3
ULC				*i* Sg	Sg	13 20 26.4	+0.4
SDA	Shkodra	0.50	356	Pg	Pg	13 20 20.3	-0.2
SDA				Sg	Sb	13 20 28.6	-1.0
SDA				AML	AML	13 20 31.2	
	1.8nm,0.3s						
DRME	Dracevica, Mon	0.69	337	*e*Pg	Pg	13 20 24.1	0.0
DRME				*e*Sg	Sg	13 20 33.6	+0.6
PHP	Peshkopia	0.69	79	Pg	Pg	13 20 22.9	-1.3
PHP				Sg	Sg	13 20 32.2	-0.8
PHP				AML	AML	13 20 35.7	
	0.7nm,0.2s						
BUM	Brajici-Budva	0.89	327	*e*Pg	Pg	13 20 27.9	-0.1
BUM				*i* Sg	Sb	13 20 40.8	-0.2
PDG	Podgorica	0.90	346	Pg	Pg	13 20 28.1	-0.1
PDG				Sg	Sb	13 20 41.3	+0.1
PDG	Podgorica	0.90	346	⇑P	Pg	13 20 28.1	-0.1
PDG				⇑S	Sn	13 20 42.7	-0.7
PDG	Podgorica	0.90	346	⇑*i*Pg	Pg	13 20 27.8	-0.4
PDG				*i* Sg	Sb	13 20 40.6	-0.6
OHR	Ohrid	1.05	115	*i* Pg	Pb	13 20 30.8	-0.6
OHR				*i* Sg	Sb	13 20 47.4	+1.9
OHR				*e*Lg	Lg	13 20 48.0	
	comp=N,94nm,0.4s						
OHR				*e*Lg	Lg	13 20 48.6	
	comp=E,136nm,0.6s						
PVY	Plav	1.09	17	*e*Pg	Pg	13 20 31.2	-0.5
PVY				*i* Sg	Sb	13 20 46.9	+0.2
CEME	Cevo	1.09	335	*e*Pg	Pg	13 20 31.6	-0.3
CEME				*e*Sg	Sn	13 20 47.4	-1.0
HCY	Herceg Novi	1.19	319	*e*Pg	Pb	13 20 33.5	-0.3
HCY				*i* Sg	Sn	13 20 51.0	+0.5
NKME	Niksic	1.29	340	*e*Pg	Pn	13 20 35.1	-0.4
NKME				*e*Sg	Sn	13 20 53.9	+0.8
KOME	Kolasin	1.30	359	*e*Pg	Pn	13 20 35.0	-0.7
KOME				*e*Sg	Sn	13 20 53.8	+0.4
IVA	Berane	1.34	11	*e*Pg	Pn	13 20 35.9	-0.4
IVA				*i* Sg	Sg	13 20 55.5	+1.4
SKO	Skopje	1.48	73	*i* Pg	Pn	13 20 38.9	+0.8
SKO				*i* Sg	Sg	13 20 59.7	+1.2
BRY	Bratogost	1.54	331	*e*Pg	Pn	13 20 39.6	+0.6
BRY				*i* Sg	Sg	13 21 01.7	+1.3
UPM	Unac-Piva	1.71	344	*e*Pn	Pb	13 20 42.5	-0.4
UPM				*i* Sn	Sg	13 21 05.8	-0.2
PLE	Pljevlja	1.78	356	*e*Pn	Pn	13 20 43.3	+1.0
PLE				*i* Sn	Sb	13 21 07.1	+0.5
NOCI	Noci	2.02	249	P	Pn	13 20 43.5	-2.0
BARS	Barje	2.11	53	*i* Pn	Pn	13 20 46.6	-0.1
VAY	Valandovo	2.29	95	*i* Pn	Pn	13 20 49.2	0.0
VAY				*i* Sn	Sn	13 21 20.0	+2.3
VAY				*e*Lg	Lg	13 21 23.6	
	comp=E,23nm,0.5s						
VAY				*e*Lg	Lg	13 21 24.1	
	comp=N,83nm,1.1s						
MATE	Matera	2.33	248	⇓P	Pb	13 20 53.8	+0.6
BOVS	Bovan	2.62	37	⇓P	Pn	13 20 53.5	-0.3
BOVS				⇓S	Sn	13 21 25.3	-0.7
BLKB	Belogradchik	3.10	47	⇑S	Sn	13 21 36.4	-1.5
MDVR	Moldovita	3.60	25	⇑P	Pn	13 21 06.9	-0.4
HERR	Herculane	3.93	31	⇓P	Pn	13 21 11.8	0.0
BZS	Buzias	4.33	20	⇑P	Pn	13 21 17.4	+0.1
GZR	Gura Zlata	4.50	30	⇓P	Pn	13 21 19.9	+0.2
MORH	Mrgy, Hungar	4.71	352	⇓P	Pn	13 21 23.5	+1.1
SIRR	Siria	4.96	17	⇓P	Pn	13 21 25.8	-0.1
ARR	Arges	5.32	42	⇓P	Pn	13 21 30.6	-0.3
DRGR		5.71	22	⇑P	Pn	13 21 36.2	-0.1
MARR	Marisel-Cluj	5.73	25	⇓P	Pn	13 21 36.9	+0.3

NEIC ***13*** *13:34:10.9±1.3,9°.38N±0°.06×124°.2E±0°.2,h508^{km}±6^{km}, mb4.2/21,Error ellipse: s-maj=21.6km s-min=8.5km az=85.0*

IDC ***13*** *13:34:12.1±1.6,9°.32N×124°.24E,h534^{km}±21^{km},mb3.1/15, mbtmp4.1/16,Error ellipse: s-maj=25.5km s-min=9.0km az=78.0*

ISC 13 13:34:09.9±0.5,**9°.37N**±0°.06×**124°.3E**±0°.1,**h500**^{km},**n49,** σ**1^{s}.32**/51,**mb3.9**/25,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	2.62	151	P	P	13 35 18.2	-0.3
KKM	Kota Kinabalu	8.66	248		P	13 36 13.8	+0.4
TOLI2	Tolitoli	8.92	203		P	13 36 18.5	+2.5
SBUM	Sibu	13.84	241		P	13 37 09.8	+1.8
TPUB	Ta-pu	14.29	346		P	13 37 12.9	+0.3
FAKI	Fak Fak	14.56	147	P	P	13 37 17.6	+2.0
SOEI	Soe	19.00	180		P	13 38 00.1	+0.4
BATI	Baumata	19.46	182	P	P	13 38 03.3	-0.5
	42nm,0.7s,baz=270,slow=10,SNR=7.2						
MTN	Manton Dam	23.09	163	P	P	13 38 36.3	-0.3
KNRA	Kununurra	25.28	170		P	13 38 55.7	-0.3
KNRA				IAmb	IAmb	13 39 33.1	
	comp=Z,12nm,1.2s						
FITZ	Fitzroy Crossi	27.33	177	P	P	13 39 13.6	-0.4
KSRS	Korea Array	28.15	6	P	P	13 39 21.9	+1.0
	comp=Z,1.8nm,0.7s,baz=187,slow=9.8,SNR=5.6						
	comp=Z,1.8nm,0.7s						
COEN	Coen	29.80	141		P	13 39 35.8	0.0
COEN				IAmb	IAmb	13 39 47.3	
	comp=Z,7.8nm,1.2s						
MJAR	Matsushiro Arr	29.85	23	P	P	13 39 35.1	-0.7
	comp=Z,1.0nm,0.5s,baz=190,slow=10,SNR=2.8						
	comp=Z,1.0nm,0.5s						
WB0	Warramunga Arr	30.62	161	P	P	13 39 42.0	-0.7
WB0				IAmb	IAmb	13 39 42.7	
	comp=Z,6.8nm,0.7s						
MBWA	Marble Bar	30.67	188	P	P	13 39 42.5	-0.6
WRA	Warramunga Arr	30.77	161	P	P	13 39 43.1	-0.9
	comp=Z,4.5nm,0.6s,baz=342,slow=9.1,SNR=62						

WRA				ScP	ScP	13 45 17.2	-4.4
	comp=Z,0.5nm,0.7s,baz=349,slow=3.3,SNR=3.3						
	comp=Z,4.5nm,0.6s						
WRA	Warramunga Arr	30.77	161	P	P	13 39 43.7	-0.3
WR8	Warramunga Arr	30.83	161	P	P	13 39 44.1	-0.4
WR8				IAmb	IAmb	13 39 44.3	
	comp=Z,4.6nm,0.5s						
AS31	Alice Springs	34.16	164		P	13 40 12.9	0.0
ASAR	Alice Springs	34.16	164	P	P	13 40 12.8	0.0
	comp=Z,5.9nm,0.4s,baz=340,slow=7.0,SNR=401						
ASAR				PcP	PcP	13 42 34.3	-1.6
	comp=Z,0.2nm,0.4s,baz=343,slow=3.1,SNR=1.9						
ASAR				ScP	ScP	13 45 28.1	-5.2
	comp=Z,0.3nm,0.6s,baz=336,slow=2.5,SNR=3.3						
	comp=Z,5.9nm,0.4s						
USRK	Ussuriysk Ar.	35.33	10	P	P	13 40 23.3	+0.9
	comp=Z,2.1nm,0.6s,baz=206,slow=6.9,SNR=3.0						
	comp=Z,2.1nm,0.6s						
MORW	Morawa	39.04	192	P	P	13 40 52.3	-0.8
MORW				IAmb	IAmb	13 41 32.3	
	comp=Z,14nm,1.4s						
INKA	Innaminka	40.19	157		P	13 41 03.5	+1.1
INKA				IAmb	IAmb	13 41 04.0	
	comp=Z,5.3nm,0.7s						
SONM	Songino Array	41.21	342	P	P	13 41 10.8	+0.3
	comp=Z,0.5nm,0.4s,baz=139,slow=9.0,SNR=2.2						
	comp=Z,0.5nm,0.4s						
SONM	Songino Array	41.21	342	P	P	13 41 08.1	-2.4
NWAO	Narrogin (SRO)	42.60	189	P	P	13 41 20.9	-0.6
NWAO				IAmb	IAmb	13 41 21.3	
	comp=Z,8.9nm,0.8s						
STKA	Stephens Creek	44.23	159	P	P	13 41 34.2	0.0
	comp=Z,4.2nm,0.5s,baz=332,slow=11,SNR=7.8						
	comp=Z,4.2nm,0.5s						
STKA	Stephens Creek	44.23	159	P	P	13 41 34.5	+0.3
PETK	Petropavlovsk-	51.26	25	P	P	13 42 27.1	+0.5
	comp=Z,0.9nm,0.5s,baz=214,slow=6.8,SNR=6.5						
	comp=Z,0.9nm,0.5s						
PETK	Petropavlovsk-	51.26	25	P	P	13 42 27.5	+0.8
MKAR	Makanchi Array	51.58	324	P	P	13 42 29.4	+0.2
	comp=Z,0.3nm,0.4s,baz=116,slow=6.8,SNR=3.0						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	51.58	324	P	P	13 42 29.0	-0.2
ZALV	Zalesovo Beam	54.49	333	P	P	13 42 48.4	-1.4
	comp=Z,0.6nm,0.4s,baz=136,slow=5.6,SNR=2.8						
	comp=Z,0.6nm,0.4s						
ZALV	Zalesovo Beam	54.49	333	P	P	13 42 49.2	-0.5
KURK	Kurchatov	55.72	327	P	P	13 42 58.3	-0.1
KURBB	Kurchatov Arra	55.72	326	P	P	13 42 58.4	-0.1
	comp=Z,1.2nm,0.8s,baz=124,slow=6.1,SNR=12						
	comp=Z,1.2nm,0.8s						
BVAR	Borovoye Array	61.31	326	P	P	13 43 35.6	-0.5
	comp=Z,1.1nm,0.7s,baz=126,slow=7.5,SNR=6.2						
	comp=Z,1.1nm,0.7s						
NRIK	Noril'sk	64.41	346	P	P	13 43 55.5	-0.3
	comp=Z,1.7nm,0.6s,baz=138,slow=6.4,SNR=4.1						
	comp=Z,1.7nm,0.6s						
NRIK	Noril'sk	64.41	346	P	P	13 43 55.8	-0.1
NRIK				IAmb	IAmb	13 43 55.9	
	comp=Z,1.8nm,0.6s						
AB31	Akbulak array	66.29	320	P	P	13 44 08.0	-0.1
ABKAR	Akbulak array	66.29	320	P	P	13 44 07.9	-0.2
BKZ	Black Stump Fm	68.38	139	P	P	13 44 21.6	+0.4
BKZ				IAmb	IAmb	13 44 30.2	
	comp=Z,17nm,1.4s						
C18K	Utukok River	75.69	21	P	P	13 45 03.6	+0.4
C18K				IAmb	IAmb	13 45 41.5	
	comp=Z,5.3nm,1.5s						
C19K	Lookout Ridge	76.35	21	P	P	13 45 08.1	+1.3
C19K				IAmb	IAmb	13 45 08.5	
	comp=Z,3.2nm,0.9s						
ILAR	Eielson Array	81.09	26	P	P	13 45 31.5	-0.6
	comp=Z,0.3nm,0.6s,baz=250,slow=5.4,SNR=6.2						
	comp=Z,0.3nm,0.6s						
BMAR	Burnt Mountain	81.85	23	P	P	13 45 37.5	+1.5
FINES	FINESS Array B	85.75	332	P	P	13 45 53.6	-1.8
	comp=Z,1.7nm,0.8s,baz=66,slow=3.5,SNR=7.2						
	comp=Z,1.7nm,0.8s						
FINES	FINESS Array B	85.75	332	P	P	13 45 54.0	-1.4

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*IDC **13** 13:40:02.3±4.0, 13°.23N×89°.49W, h0^{km}, mb3.7/4, mbtmp3.8/4, Error ellipse: s-maj=91.0km s-min=53.4km az=13.0*

*GCG **13** 13:40:04.8±1.2, 12°.96N×90°.37W, h4^{km}±13^{km}, MD4.1, ML4.0, MW3.4*

*SNET **13** 13:40:05.2±0.6, 12°.89N×90°.27W, h7^{km}, ML3.6*

*CATAC **13** 13:40:06.7±0.6, 13°N±2°×9°0W±°, h25^{km}±6^{km}, M3.9/18, MLv3.9/18, Error ellipse: s-maj=6.8km s-min=4.2km az=59.5, confirmed*

ISC 13 13:40:05.3±1.8**, 12°.90N**±0°.06×**90°.19W**±0°.05**, h13**^{km}±10^{km}**, n56,** σ**0^{s}.89**/62**, mb3.8**/3**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	0.95	10	P	Pb	13 40 23.4	-0.4
FAME	Alcaldia de Sa	0.95	10	S	Sb	13 40 36.6	+0.3
LALI	Alcalda de L	1.03	55	S	Sn	13 40 40.8	+0.9
LALI	Alcalda de L	1.03	55	P	Pn	13 40 26.3	+0.8
JAYA	Jayaque - finc	1.04	44	*e*P	Pn	13 40 25.8	0.0
JAYA	Jayaque - finc	1.04	44	*i* P	Pn	13 40 25.8	0.0
JAYA				*i* S	Sn	13 40 42.7	+2.3
JAYA	Jayaque - finc	1.04	44	P	Pn	13 40 25.9	0.0
JAYA	Jayaque - finc	1.04	44	S	Sn	13 40 41.3	+0.9
NUBE	Las Nubes	1.07	22	*e*P	Pb	13 40 25.5	-0.4
NUBE				*i* S	Sn	13 40 41.6	+0.4
NUBE	Las Nubes	1.07	22	P	Pb	13 40 25.7	-0.2
NUBE	Las Nubes	1.07	22	S	Sb	13 40 39.8	-0.2
CEVE	Cerro Verde	1.08	31	*e*P	Pn	13 40 26.4	+0.1
CEVE				*e*S	Sn	13 40 42.8	+1.5
CEVE	Cerro Verde	1.08	31	P	Pn	13 40 26.5	+0.1
CEVE	Cerro Verde	1.08	31	S	Sn	13 40 40.8	-0.5
PMON	Piamonte	1.18	47	P	Pn	13 40 28.0	+0.3
PMON	Piamonte	1.18	47	S	Sn	13 40 45.1	+1.4
PANCS	Alcalda de	1.21	54	S	Sb	13 40 44.5	+0.5
PANCS	Alcalda de	1.21	54	P	Pg	13 40 28.1	-0.6
BOQS	Boqueron	1.22	47	*e*P	Pn	13 40 28.8	+0.5
LOMA	Loma Larga	1.24	53	P	Pg	13 40 28.4	-0.9
LOMA	Loma Larga	1.24	53	S	Sn	13 40 45.7	+0.4
UNIC	Universidad Ca	1.25	30	P	Pn	13 40 28.7	+0.2
UNIC	Universidad Ca	1.25	30	S	Sb	13 40 44.7	-0.1
FG16	Alotenango, Sa	1.40	347	*i* P	Pg	13 40 34.0	+1.7
FG16				IAML		13 40 57.6	
	comp=E,4µm,0.2s						
PAVA	Las Pavas	1.47	56	P	Pb	13 40 32.7	+0.1
PAVA	Las Pavas	1.47	56	S	Sn	13 40 50.1	-0.6
JUAM	Asuncion Mita	1.50	18	*i* P	Pn	13 40 32.3	+0.2
JUAM				*i* S	Sg	13 40 53.7	-0.1
JUAM				IAML		13 40 54.0	
	comp=N,3µm,0.2s						
TECO	Alcaldia de Te	1.52	65	S	Sn	13 40 52.0	+0.1
TECO	Alcaldia de Te	1.52	65	P	Pn	13 40 32.6	+0.4
UESV	Universidad de	1.55	62	P	Pb	13 40 34.3	+0.2
UESV	Universidad de	1.55	62	S	Sb	13 40 54.3	+0.7
SCLA	Alcaldia de Sa	1.63	61	P	Pn	13 40 34.7	+0.8
SCLA	Alcaldia de Sa	1.63	61	S	Sn	13 40 55.7	+0.8
MTO3	Montecristo	1.69	28	*i* P	Pn	13 40 35.4	+0.5
MTO3				*i* S	Sg	13 40 60.0	0.0
MTO3	Montecristo	1.69	28	P	Pn	13 40 35.4	+0.5
MTO3	Montecristo	1.69	28	S	Sn	13 40 56.8	+0.2
LLGN	La Laguna	1.75	44	S	Sn	13 40 58.1	+0.4
LLGN	La Laguna	1.75	44	P	Pn	13 40 36.3	+0.8
ESQI	Esquipulas	1.85	27	*e*P	Pn	13 40 37.8	+0.9
ESQI	Esquipulas	1.85	27	P	Pb	13 40 38.1	-1.0
ESQI	Esquipulas	1.85	27	S	Sb	13 41 01.3	-0.8
PACA	Pacayal	1.91	73	P	Pn	13 40 39.1	+1.4
PACA	Pacayal	1.91	73	S	Sn	13 41 03.7	+2.0
APG	El Apazote	2.11	353	*i* P	Pn	13 40 40.9	+0.3
CSGN	Cosiguina Volc	2.57	88	P	Pn	13 40 47.6	+0.7
PKGN	Cerro Pekin	3.15	94	P	Pn	13 40 55.2	+0.5
PKGN				S	Sn	13 41 32.4	+0.3
POLN	Al Sur del Vol	3.31	94	P	Pn	13 40 56.3	-0.6
YUSH	Yuscaran	3.42	72	P	Pn	13 40 59.6	+1.0
CNGN	Cerro Negro	3.43	96	S	Sn	13 41 39.1	-0.2
CNGN	Cerro Negro	3.43	96	P	Pn	13 40 59.6	+0.9
LIMN	Finca el Limon	3.73	87	P	Pn	13 41 03.0	+0.2
LIMN				S	Sn	13 41 48.0	+1.2
TXAR	Lajitas Array	20.59	325	P	P	13 44 44.7	+0.3
	comp=N,0.4nm,0.5s,baz=132,slow=11,SNR=8.1						
	comp=N,0.4nm,0.5s						
NVAR	Mina Array Bea	35.63	321	P	P	13 47 04.4	+1.1
	comp=N,1.0nm,0.7s,baz=130,slow=7.7,SNR=9.4						
	comp=N,1.0nm,0.7s						
SCHQ	Schefferville	45.67	19	P	P	13 48 21.1	-4.6
	comp=N,11nm,1.1s,baz=225,slow=10.0,SNR=2.5						
	comp=N,11nm,1.1s						
YKA	Yellowknife Ar	52.50	346	P	P	13 49 14.7	-3.3
	comp=N,0.5nm,0.7s,baz=153,slow=7.2,SNR=6.5						
	comp=N,0.5nm,0.7s						
CMAR	Chiang Mai Arr	147.56	344	PKPbc	PKPdf	13 59 48.2	+0.5
	comp=N,0.5nm,0.4s,baz=358,slow=2.7,SNR=4.6						

AUST 13 14:16:05.3±0.3**, 31°S**±2°×**11°8E**±°**, h10**^{km}**, mb4.2**/2**, ML2.7**/10**, Error ellipse: s-maj=4.5km s-min=4.1km az=59.0, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLBR	Kellerberrin	0.49	167	P	Pb	14 16 15.5	-0.5
KLBR				S	Sg	14 16 22.0	+0.7
BLDU	Ballidu	0.93	302	P	Pg	14 16 23.1	-0.2
BLDU	Ballidu	0.93	302	S	Sg	14 16 34.8	-0.6
MUN	Mundaring	1.49	234	P	Pn	14 16 32.4	+0.3
MUN	Mundaring	1.49	234	S	Sn	14 16 51.3	-0.3
NWAO	Narrogin (SRO)	1.84	190	S	Sn	14 17 00.7	+0.4
NWAO	Narrogin (SRO)	1.84	190	P	Pn	14 16 37.6	+0.7
MORW	Morawa	2.46	326	P	Pn	14 16 46.4	+1.0
RKGY	Rocky Gully	3.53	189	P	Pn	14 17 01.2	+1.0
KMBL	Kambalda	3.65	95	P	Pn	14 17 02.2	+0.3
KMBL				S	Sn	14 17 44.8	-0.3
MEEK	Meekatharra	4.54	11	P	Pn	14 17 14.7	+0.6
MEEK				S	Sn	14 18 04.0	-3.1
DNDOZ	Balladonia	5.48	106	P	Pn	14 17 27.6	+0.6
	comp=Z,0.2nmcomp=Z,65nm,1.6s						
GIRL	Giralia	8.96	339	P	Pn	14 18 14.7	-0.1
FORT	Forrest	8.96	91	P	Pn	14 18 14.2	-0.7
	comp=Z,0.0nmcomp=Z,6.0nm,0.8s						

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*CATAC **13** 14:23:34.9±0.3, 10°N±2°×8°6W±°, h10^{km}±2^{km}, M4.9/31, MLv4.9/31, Error ellipse: s-maj=4.2km s-min=2.1km az=48.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}5.73; $M_{\theta\theta}$-7.16; $M_{\phi\phi}$1.43; $M_{r\theta}$4.62; $M_{\theta\phi}$1.82; $M_{\phi r}$-0.04; Fault plane solution: $M_0$8.22669×10^{15} NP1: ϕ_s93.42127°, δ62.71550°, λ81.08735°. NP2: ϕ_s292.30712°, δ28.59673°, λ106.71858°. Principal axes: T 7.2569, Plg70.9074°, Azm343.8536°; N 1.6801, Plg7.9143°, Azm97.5331°; P -8.9371, Plg17.2597°, Azm190.0086°; confirmed*

*UCR **13** 14:23:36.0±1.0, 10°.39N×86°.20W, h25^{km}±4^{km}, MW5.1*

*GFZ **13** 14:23:37.0, 10°.47N×86°.18W, h29^{km}, MW4.8, Moment Tensor Solution. s17 Moment tensor: M_{rr}1.38; $M_{\theta\theta}$-0.86; $M_{\phi\phi}$-0.52; $M_{r\theta}$1.09; $M_{\theta\phi}$0.59; $M_{\phi r}$-0.83; Fault plane solution: NP1: ϕ_s127.00000°, δ68.00000°, λ90.00000°. NP2: ϕ_s307.00000°, δ22.00000°, λ90.00000°. Principal axes: T 1.9500, Plg67.0000°, Azm38.0000°; N -0.0700, Plg0.0000°, Azm307.0000°; P -1.8800, Plg23.0000°, Azm217.0000°;*

*NEIC **13** 14:23:38.2±2.8, 10°.38N±0°.08×86°.08W±0°.05, h36^{km}±12^{km}, mb4.6/155 Error ellipse: s-maj=12.7km s-min=4.4km az=210.0*

*GCMT **13** 14:23:39.2±0.5, 10°.30N±0°.03×86°.36W±0°.03, h29^{km}±1^{km}, MW4.9/65, Moment Tensor Solution. s24,c27; s65,c80; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.77±.17; $M_{\theta\theta}$-1.24±.11; $M_{\phi\phi}$-0.53±.10; $M_{r\theta}$1.31±.12; $M_{\theta\phi}$0.88±.06; $M_{\phi r}$-0.98±.13; Best double couple: $M_0$2.43300×10^{16} NP1: ϕ_s302.00000°, δ24.00000°, λ86.00000°. NP2: ϕ_s126.00000°, δ66.00000°, λ92.00000°. Principal axes: T 2.4040, Plg69.0000°, Azm39.0000°; N 0.0540, Plg1.0000°, Azm305.0000°; P -2.4630, Plg21.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **13** 14:23:39.1±1.7, 11°.12N×85°.52W, h31^{km}±15^{km}, mb4.0/8, mbtmp4.2/9, ML3.3/2, MS4.1/43 Error ellipse: s-maj=40.1km s-min=14.9km az=56.0*

ISC 13 14:23:36.5±1.2**, 10°.40N**±0°.04×**86°.18W**±0°.04**, h29**^{km}±8^{km}**, n257,** σ**1^{s}.43**/172**, mb4.6**/82**, MS4.2**/41**, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SACU	Santa Cruz	0.60	103	*e*P	Pb	14 23 48.5	-0.1
SACU				*e*S	Sn	14 23 58.2	+0.2
DELF	Filadelfia	0.62	86	*e*P	Pb	14 23 48.7	-0.2
DELF				*e*S	Sb	14 23 57.8	+0.5
ALIBA	Liberia Airpor	0.65	73	*e*P	Pn	14 23 49.8	0.0
ALIBA				*e*S	Sn	14 24 00.3	+1.2
ELI1	Hacienda Flor	0.66	69	P	Pn	14 23 50.3	+0.4
ELI1	Hacienda Flor	0.66	69	*e*P	Pn	14 23 50.1	+0.1
JUD3	Juan Diaz 3	0.67	110		Pb	14 23 49.7	-0.2
JUD3					Sb	14 23 58.4	-0.5
JUD3	Juan Diaz 3	0.67	110	*e*P	Pb	14 23 49.5	-0.3
NICO	Nicoya	0.77	110	*e*P	Pb	14 23 50.8	-0.6
LAPC	Finca la Perla	0.82	64	*e*P	Pb	14 23 51.7	-0.6
CMARA	Lajas Hojancha	0.84	117	P	Pn	14 23 52.8	+0.4
CMARA	Lajas Hojancha	0.84	117	S	Sn	14 24 03.9	+0.1
CMARA	Lajas Hojancha	0.84	117	*e*P	Pb	14 23 51.8	-0.8
GPS2	Hotel Rincn d	0.89	67	*e*P	Pb	14 23 53.0	-0.4
BAGA	Bagaces	0.91	82	*e*P	Pn	14 23 53.4	0.0
BUAI	Buenos Aires	0.96	60	*e*P	Pn	14 23 54.2	+0.1
CARN	Rivas	1.01	40	P	Pb	14 23 55.5	0.0
CARN				S	Sn	14 24 10.5	+2.4
CARN	Rivas	1.01	40	*e*P	Pb	14 23 55.1	-0.4
CARN				*e*S	Sn	14 24 09.5	+1.4
CUI	Cuipilapa	1.03	76	*e*P	Pn	14 23 55.2	+0.1
CNAS	Canas	1.07	88	*e*P	Pb	14 23 56.5	0.0
ARIN	Rivas	1.10	18	P	Pn	14 23 53.8	-2.2
VMAR	Armenia, Volca	1.13	69	*e*P	Pn	14 23 56.8	+0.4
JCR1	Jicaral	1.19	117	*e*P	Pn	14 23 57.0	-0.3
TILA	Tilaran	1.19	87	*e*P	Pn	14 23 57.5	+0.2
JTS	Las Juntas de	1.21	95	Pg	Pn	14 23 57.5	0.0
	148nm,0.3s,baz=300,slow=14,SNR=180						
JTS				Lg	Lg	14 24 11.8	
	293nm,0.3s,baz=294,slow=20,SNR=9.7						
JTS				LR	LR	14 24 33.2	
	comp=Z,4µm,20.8s,baz=33,slow=55						
JTS	Las Juntas de	1.21	95		Pn	14 23 57.3	-0.3
JTS					Sn	14 24 12.4	-0.7
JTS	Las Juntas de	1.21	95	P	Pn	14 23 57.8	+0.2
JTS				S	Sb	14 24 15.3	+1.0
JTS	Las Juntas de	1.21	95	*e*P	Pn	14 23 57.0	-0.6
JAPN	Al SSO del Vol	1.22	24	P	Pn	14 23 57.2	-0.5
UPAL	Upala	1.25	67	P	Pb	14 23 58.9	-0.6
UPAL	Upala	1.25	67	S	Sb	14 24 17.1	+1.9
UPAL	Upala	1.25	67	*e*P	Pn	14 23 58.5	+0.5
MORN	Al O del Volca	1.25	25	P	Pb	14 23 58.9	-0.7
MORN				S	Sb	14 24 17.6	+2.3
NADN	Granada	1.35	6	P	Pb	14 24 00.5	-0.6
NADN				S	Sb	14 24 20.0	+2.0
ARE1	Arenal 1	1.44	88	*e*P	Pb	14 24 02.0	-0.7
VARE2	V. Arenal	1.44	88	*e*P	Pb	14 24 01.7	-1.0
NANN	Nandasmo	1.53	2	P	Pb	14 24 03.7	-0.5
NANN	Nandasmo	1.53	2	S	Sb	14 24 24.7	+1.4
SOCE	Pocosol	1.54	91	Pn	Pn	14 24 03.0	+0.9
SOCE	Pocosol	1.54	91	P	Pb	14 24 03.4	-1.0
SOCE	Pocosol	1.54	91	S	Sb	14 24 23.7	+0.2
SABN	Sabanita	1.55	1	P	Pn	14 24 02.0	-0.2
MASN	Masaya	1.58	1	S	Sb	14 24 25.4	+0.7
MAS3	Al N del Volca	1.61	0	P	Pn	14 24 03.7	+0.6
MAS3				S	Sb	14 24 26.7	+1.0
UNAN	Cigeo UNAN	1.70	357	P	Pn	14 23 57.0	-7.2
USIM	UNAN	1.71	357	Pn	Pn	14 24 05.3	+0.9
AERN	Aeropuerto Man	1.73	0	P	Pn	14 24 05.4	+0.7
MGAN	Managua	1.74	358	Pn	Pn	14 24 04.8	+0.1
COVE	Coope Vega, Sa	1.78	80	P	Pn	14 24 05.8	+0.5
COVE	Coope Vega, Sa	1.78	80	S	Sb	14 24 29.7	-0.7
COPN	Copaltepe	1.81	347	P	Pn	14 24 06.1	+0.3
COPN	Copaltepe	1.81	347	*e*P	Pn	14 24 05.7	-0.1
APYN	Apoyeque	1.83	355	P	Pn	14 24 07.2	+1.2
APYN				S	Sb	14 24 32.3	+0.4
AMTN	Mateare	1.84	352	S	Sb	14 24 32.7	+0.5
AMTN	Mateare	1.84	352	P	Pn	14 24 07.4	+1.2
MOM2	El Cardon	2.04	352	P	Pn	14 24 09.5	+0.5
MOM2				S	Sb	14 24 38.3	+0.3
HDC	Heredia	2.07	101	Pn	Pn	14 24 10.4	+0.9
BOAB	BOACO BROADBAN	2.10	14	Pn	Pn	14 24 10.1	+0.4
BOAB	BOACO BROADBAN	2.10	14	P	Pn	14 24 10.3	+0.6
BOAB	BOACO BROADBAN	2.10	14	S	Sb	14 24 39.0	-0.5
MOM3	MOM3	2.12	351	P	Pn	14 24 10.5	+0.5
MOM3				S	Sb	14 24 40.7	+0.4
CNGA	Al SSO del Vol	2.14	346	P	Pn	14 24 11.3	+0.9
CNGN	Cerro Negro	2.15	346	Pn	Pn	14 24 10.2	-0.3
CNGN	Cerro Negro	2.15	346	P	Pn	14 24 10.9	+0.4
CNGN	Cerro Negro	2.15	346	S	Sb	14 24 40.0	-1.0
QUEN	Al S del Volca	2.27	343	P	Pn	14 24 13.6	+1.4
QUEN				S	Sb	14 24 43.5	-1.2
POLN	Al Sur del Vol	2.32	345	P	Pn	14 24 13.8	+1.1
POLN				S	Sb	14 24 44.4	-1.5
RAFA	San Farael, Vo	2.37	100	Pn	Pn	14 24 15.4	+1.6
PKGN	Cerro Pekin	2.38	341	P	Pn	14 24 14.4	+0.7
TRT2	Tortugero	2.41	86	P	Pn	14 24 14.9	+0.9
CRIN	San Cristobal	2.44	340	Pn	Pn	14 24 14.3	-0.2
CRIN	San Cristobal	2.44	340	S	Sb	14 24 47.0	-2.4
CRIN	San Cristobal	2.44	340	P	Pn	14 24 15.9	+1.5
MATN	Matagalpa	2.52	6	S	Sb	14 24 49.6	-2.4
MATN	Matagalpa	2.52	6	P	Pn	14 24 15.6	-0.1
EGUB	Earth Gu¡pi	2.56	94	Pn	Pb	14 24 19.0	-2.8
LIMN	Finca el Limon	2.65	356	P	Pn	14 24 18.0	+0.6
LIMN				S	Sb	14 24 52.7	-2.8
CSGN	Cosiguina Volc	2.89	332	P	Pn	14 24 22.3	+1.6
RCON	San Juan de Ri	3.06	0	P	Pn	14 24 24.6	+1.5
DRK0	Durika	3.11	111	S	Sn	14 25 01.1	+1.1
DRK0	Durika	3.11	111	P	Pn	14 24 25.4	+1.6
RCVN	Varillal2	3.16	360	P	Pn	14 24 25.7	+1.2
RCVN	Varillal2	3.16	360	S	Sn	14 25 05.4	+4.1
OCON	Estacion meteo	3.22	355	P	Pn	14 24 26.5	+1.2
CNCH	Conchagua	3.28	331	P	Pn	14 24 26.8	+0.7
LCND	La Caada	3.34	330	P	Pn	14 24 28.0	+1.2
PTJ1	Puerto Jimnez	3.39	123	S	Sn	14 25 08.0	+1.2
PIRO	Carate, Puerto	3.44	125	Pn	Pn	14 24 29.9	+1.8
PIRO	Carate, Puerto	3.44	125	S	Sn	14 25 10.4	+2.5
PIRO	Carate, Puerto	3.44	125	P	Pn	14 24 30.6	+2.5
SIUN	Universidad Ur	3.57	23	Pn	Pn	14 24 30.4	+0.4
SIUN	Universidad Ur	3.57	23	P	Pn	14 24 31.5	+1.5
YUSH	Yuscaran	3.59	350	P	Pn	14 24 32.1	+1.8
PACA	Pacayal	3.70	326	P	Pn	14 24 33.7	+1.8
CDITO	Canoas	3.73	119	S	Sn	14 25 17.6	+2.3
TGUH	Tegucigalpa,Un	3.79	344	Pn	Pn	14 24 33.5	+0.4
TGUH	Tegucigalpa,Un	3.79	344	P	Pn	14 24 34.6	+1.6
BRU2	Volcan	3.79	115	Pn	Pn	14 24 33.5	+0.3
MTO3	Montecristo	5.04	322	Pn	Pn	14 24 51.4	+0.9
ESQI	Esquipulas	5.16	324	Pn	Pn	14 24 54.6	+2.7
APG	El Apazote	6.20	318	Pn	Pn	14 25 09.2	+3.0
	0.1nm,0.3s,baz=148,slow=7.8,SNR=6.8						
CCIG	Comitan	8.23	316	Pn	Pn	14 25 37.3	+3.1
CMIG	Matias Romero	10.75	309	Pn	Pn	14 26 10.9	+2.2
	1.1nm,0.3s,baz=123,slow=12,SNR=8.4						
CMIG				Sn	Sn	14 28 06.2	-1.9
	0.4nm,0.3s,baz=105,slow=20,SNR=1.2						
	6.2nm,0.5s						
TLIG	Tlapa	13.96	302	Pn	P	14 26 56.3	-4.0
SDV	Santo Domingo	15.40	94	LR	LR	14 35 02.0	
	comp=Z,346nm,18.4s,baz=270,slow=46						
MOIG	Morelia	17.17	304		P	14 27 37.2	+1.2
MOIG				IAmb	IAmb	14 27 58.1	
	comp=Z,88nm,1.4s						
ATAH	Atahualpa	19.07	156	LR	LR	14 34 24.5	
	comp=Z,928nm,19.6s,baz=333,slow=33						
ZAIG	Zacatecas	19.92	310	P	Pn	14 28 09.6	+1.4
HBVL	Hebbronville	20.33	326	P	Pn	14 28 12.2	-0.5
HBVL				IAmb	IAmb	14 28 20.1	
	comp=Z,30nm,1.1s						
SJG	San Juan	20.86	66	LR	LR	14 37 00.6	
	comp=Z,215nm,18.0s,baz=165,slow=40						
441A	DeRidder	21.27	343	P	P	14 28 22.1	+1.5
HKT	Hockley	21.43	337	P	P	14 28 23.1	+0.8
833A	Chaparral WMA,	21.72	327	IAmb	IAmb	14 28 29.8	
	comp=Z,26nm,0.7s						
LRAL	Lakeview Retre	22.54	358	IAmb	IAmb	14 28 36.9	
	comp=Z,24nm,0.8s						
DRIO	Del Rio	23.24	327	IAmb	IAmb	14 28 51.5	
	comp=Z,14nm,0.7s						
Y49A	Blount Mountai	23.35	360	IAmb	IAmb	14 28 44.8	
	comp=Z,21nm,0.6s						
Y52A	Lilburn	23.43	4	IAmb	IAmb	14 28 44.8	
	comp=Z,37nm,1.2s						
JCT	Junction City	23.66	330	IAmb	IAmb	14 28 54.8	
	comp=Z,33nm,1.4s						
WHTX	Lake Whitney,	23.88	336	IAmb	IAmb	14 28 56.6	
	comp=Z,17nm,0.8s						
BRDY	Brady	23.94	332	P	P	14 28 47.0	-1.3
BRDY				IAmb	IAmb	14 28 49.3	
	comp=Z,15nm,0.8s						
HODGE	Hodges	23.99	8	IAmb	IAmb	14 29 08.0	
	comp=Z,17nm,1.0s						
FPAL	Fort Paine	24.03	1	IAmb	IAmb	14 28 58.5	
	comp=Z,22nm,1.5s						
X51A	Calhoun	24.08	3	IAmb	IAmb	14 29 08.8	
	comp=Z,38nm,1.2s						
FW13	Cleburne	24.19	336	P	P	14 28 51.1	+0.6
FW13				IAmb	IAmb	14 29 17.5	
	comp=Z,34nm,1.1s						
PAULI	Pauline	24.63	9	IAmb	IAmb	14 28 55.9	
	comp=Z,22nm,0.9s						
BG3	Lake Jocassee	24.66	6	IAmb	IAmb	14 28 58.9	
	comp=Z,24nm,1.0s						
W52A	Murphy	24.66	4	IAmb	IAmb	14 28 56.0	
	comp=Z,12nm,0.7s						
OZNA	Ozona	24.69	328	IAmb	IAmb	14 28 56.7	
	comp=Z,8.5nm,0.7s						
W50A	Signal Mountai	24.70	2	IAmb	IAmb	14 28 57.4	
	comp=Z,32nm,1.2s						
TXAR	Lajitas Array	24.94	322	P	P	14 28 58.9	+1.3
	comp=Z,6.2nm,0.6s,baz=141,slow=9.1,SNR=73						
TXAR				PcP	PcP	14 32 34.8	+2.1
	comp=Z,0.7nm,0.7s,baz=138,slow=2.0,SNR=3.9						
	comp=Z,6.2nm,0.6s						
TXAR	Lajitas Array	24.94	322	P	P	14 28 58.0	+0.5
TX31	Lajitas Ar. Si	24.94	322	IAmb	IAmb	14 29 17.2	
	comp=Z,12nm,0.9s						
CPCT	Cooper Cave	24.98	3	IAmb	IAmb	14 29 14.9	
	comp=Z,13nm,1.0s						
V48A	Smith Brothers	25.23	359	IAmb	IAmb	14 29 00.4	
	comp=Z,13nm,0.9s						
TKL	Tuckaleechee C	25.24	5	LR	LR	14 39 04.8	
	comp=Z,334nm,19.2s,baz=212,slow=38						
V53A	Saluda	25.34	6	P	P	14 29 01.3	+0.3
V53A				IAmb	IAmb	14 29 14.2	
	comp=Z,33nm,1.3s						
ABTX	Abilene, Hawle	25.36	333	IAmb	IAmb	14 29 03.7	
	comp=Z,21nm,0.8s						
MNHN	Monahans	25.89	326	IAmb	IAmb	14 29 25.0	
	comp=Z,26nm,0.9s						
FCAR	Ozark Folk Cen	25.94	349	IAmb	IAmb	14 29 07.7	
	comp=Z,12nm,0.7s						
U49A	Red Boiling Sp	26.00	1	IAmb	IAmb	14 29 07.4	
	comp=Z,37nm,1.5s						
APMT	Aspermont	26.17	333	IAmb	IAmb	14 29 11.6	
	comp=Z,13nm,0.7s						
ODSA	Odessa	26.38	327	IAmb	IAmb	14 29 29.2	
	comp=Z,17nm,0.8s						
T47A	Sharon Grove	26.48	358	IAmb	IAmb	14 29 11.3	
	comp=Z,13nm,0.7s						
LPIG	La Paz	26.71	304	LR	LR	14 40 40.7	
	comp=Z,229nm,18.8s,baz=110,slow=38						
HHAR	Hobbs	26.71	346	IAmb	IAmb	14 29 22.3	
	comp=Z,21nm,1.3s						
CGM3	Cape Girardeau	26.96	354	IAmb	IAmb	14 29 23.5	
	comp=Z,18nm,1.3s						
U38A	Gravette	26.97	345	IAmb	IAmb	14 29 24.6	
	comp=Z,15nm,1.2s						
S44A	Carbondale	27.32	355	IAmb	IAmb	14 29 18.8	
	comp=Z,21nm,1.0s						
SIUC	Southern Illin	27.33	355	IAmb	IAmb	14 29 18.9	
	comp=Z,17nm,0.8s						
QUOK	Quay	27.37	341	IAmb	IAmb	14 29 19.3	
	comp=Z,13nm,0.7s						
CCM	Cathedral Cave	27.91	351	P	P	14 29 21.6	-2.5
CCM				IAmb	IAmb	14 29 30.3	
	comp=Z,11nm,0.9s						
MSTX	Muleshoe	27.96	330	IAmb	IAmb	14 29 26.9	
	comp=Z,11nm,0.7s						
Q51A	Peebles	28.62	5	P	P	14 29 29.2	-1.2
P38A	Dawn	29.83	349	IAmb	IAmb	14 29 47.2	
	comp=Z,22nm,1.3s						
O53A	New Philadelph	30.05	8	P	P	14 29 42.3	-0.8
Y22A	Socorro	30.19	324	IAmb	IAmb	14 30 03.4	
	comp=Z,7.6nm,0.9s						
TASM	ASL Pad, Albuq	30.64	326	IAmb	IAmb	14 29 51.9	
	comp=Z,3.8nm,0.8s						
TASM	ASL Pad, Albuq	30.64	326	IAmb	IAmb	14 29 51.9	
	comp=Z,4.4nm,0.9s						
LPAZ	La Paz	31.97	146	LR	LR	14 43 43.5	

	comp=Z,318nm,20.1s,baz=316,slow=37						
SDCO	Great Sand Dun	32.30	331	IAmb	IAmb	14 30 05.7	
	comp=Z,4.7nm,0.8s						
S22A	4UR Ranch, Cre	32.95	329	IAmb	IAmb	14 30 18.1	
	comp=Z,8.6nm,1.4s						
MDP	Montagnes des	33.63	96	LR	LR	14 45 04.2	
	comp=Z,412nm,18.4s,baz=297,slow=39						
PV02	Paradox Valley	34.29	328	IAmb	IAmb	14 30 42.1	
	comp=Z,18nm,1.5s						
PV13	Radium Mtn., P	34.30	327	IAmb	IAmb	14 30 23.1	
	comp=Z,4.5nm,0.9s						
PV03	Paradox Valley	34.38	328	IAmb	IAmb	14 30 40.0	
	comp=Z,16nm,1.5s						
PV16	Nyswonger Mesa	34.46	327	IAmb	IAmb	14 30 24.2	
	comp=Z,4.4nm,0.6s						
PV20	West Nyswonger	34.51	327	IAmb	IAmb	14 30 31.0	
	comp=Z,9.1nm,0.7s						
SADO	Sadowa	34.78	9	LR	LR	14 44 51.1	
	comp=Z,389nm,18.7s,baz=238,slow=37						
BC3	Big Chuckawall	35.44	315	IAmb	IAmb	14 30 44.0	
	comp=Z,8.8nm,1.2s						
SRU	San Rafael Swe	35.90	327	IAmb	IAmb	14 30 43.6	
	comp=Z,9.6nm,1.1s						
BELC	Belle Mtn. Jos	36.01	315	IAmb	IAmb	14 30 39.7	
	comp=Z,13nm,1.4s						
P18A	Preston Nutter	36.13	328	IAmb	IAmb	14 30 45.7	
	comp=Z,12nm,1.3s						
V12A	Nelson	36.23	319	IAmb	IAmb	14 30 40.8	
	comp=Z,7.7nm,1.2s						
P17A	Butcher Ranch,	36.28	327	IAmb	IAmb	14 30 40.0	
	comp=Z,5.5nm,0.8s						
TCRU	Three Creeks R	36.62	324	IAmb	IAmb	14 30 43.7	
	comp=Z,6.2nm,1.1s						
GWY	Greenwater Val	37.70	318	IAmb	IAmb	14 31 02.9	
	comp=Z,9.5nm,1.4s						
QSM	Queen of Sheba	37.70	317	P	P	14 30 51.2	+1.6
QSM				IAmb	IAmb	14 30 54.3	
	comp=Z,7.0nm,1.1s						
TPNV	Topopah Spring	37.87	319	P	P	14 30 53.8	+2.6
TPNV				IAmb	IAmb	14 30 55.8	
	comp=Z,10nm,1.1s						
WSHM	Spangler Hills	37.92	316	P	P	14 30 53.8	+2.3
WSHM				IAmb	IAmb	14 30 56.5	
	comp=Z,8.8nm,1.4s						
CLC	China Lake	38.11	317	IAmb	IAmb	14 30 57.0	
	comp=Z,13nm,1.4s						
PDAR	Pinedale Array	38.16	332	P	P	14 30 53.0	-0.6
	comp=Z,1.6nm,0.6s,baz=125,slow=10.0,SNR=14						
PDAR				PcP	PcP	14 33 09.3	+1.3
	comp=Z,0.6nm,0.5s,baz=143,slow=5.0,SNR=7.5						
PDAR				LR	LR	14 49 53.0	
	comp=Z,195nm,19.4s,baz=120,slow=42						
	comp=Z,1.6nm,0.6s						
PDAR	Pinedale Array	38.16	332	P	P	14 30 53.6	0.0
HWUT	Hardware Ranch	38.26	329	IAmb	IAmb	14 30 56.3	
	comp=Z,6.7nm,0.8s						
AGMN	Agassiz Nation	38.64	350	IAmb	IAmb	14 31 03.3	
	comp=Z,22nm,1.4s						
LOHW	Long Hollow	39.29	332	IAmb	IAmb	14 31 10.9	
	comp=Z,9.9nm,1.4s						
NV11	Mina Array Sit	39.96	320	IAmb	IAmb	14 31 13.2	
	comp=Z,17nm,1.3s						
NVAR	Mina Array Bea	40.06	320	P	P	14 31 11.9	+2.4
	comp=Z,4.4nm,0.7s,baz=128,slow=7.5,SNR=44						
NVAR				PcP	PcP	14 33 15.7	+1.5
	comp=Z,1.6nm,0.7s,baz=93,slow=2.9,SNR=9.3						
NVAR				LR	LR	14 49 19.8	
	comp=Z,299nm,18.6s,baz=144,slow=39						
	comp=Z,4.4nm,0.7s						
NVAR	Mina Array Bea	40.06	320	P	P	14 31 11.4	+1.8
LHV	Little Huntoon	40.08	319	P	P	14 31 12.6	+3.2
LHV				IAmb	IAmb	14 31 14.3	
	comp=Z,12nm,1.0s						
MDPB	Devils Postpil	40.11	318	IAmb	IAmb	14 31 14.2	
	comp=Z,12nm,1.0s						
RYN	Ryan	40.31	320	IAmb	IAmb	14 31 15.6	
	comp=Z,10nm,1.3s						
ULM	Lac du Bonnet	40.53	350	P	P	14 31 09.9	-3.0
	comp=Z,3.1nm,0.5s,baz=154,slow=6.5,SNR=4.5						
ULM				LR	LR	14 49 31.3	
	comp=Z,170nm,18.6s,baz=170,slow=39						
	comp=Z,3.1nm,0.5s						
ULM	Lac du Bonnet	40.53	350	P	P	14 31 10.8	-2.2
WAKR	Walker	40.83	319	IAmb	IAmb	14 31 20.4	
	comp=Z,16nm,1.1s						
HLID	Hailey	41.13	328	P	P	14 31 18.2	-0.1
CMB	Columbia Colle	41.19	318	P	P	14 31 20.9	+2.2
BEKR	Beckworth	42.19	320	P	P	14 31 29.1	+2.1
WVOR	Wild Horse Val	42.68	324	IAmb	IAmb	14 31 33.3	
	comp=Z,8.2nm,0.8s						
ORV	Oroville	42.75	319	IAmb	IAmb	14 31 35.5	
	comp=Z,10nm,1.1s						
SUTB	Sutter Butte	42.76	318	IAmb	IAmb	14 31 35.0	
	comp=Z,15nm,0.9s						
PLID	Pearl Lake	43.01	329	P	P	14 31 34.0	+0.3
RPN	Rapa Nui	43.55	211	LR	LR	14 45 06.3	
	comp=Z,172nm,20.9s,baz=58,slow=29						
H03N2	Juan Fernandez	44.14	171	T	T	15 18 55.0	
	baz=350,slow=76,SNR=11						
H03N1	Juan Fernandez	44.14	171	T	T	15 18 54.2	
	baz=350,slow=76,SNR=8.5						
H03N3	Juan Fernandez	44.16	171	T	T	15 18 50.1	
	baz=350,slow=76,SNR=9.6						
NEW	Newport	45.79	331	LR	LR	14 54 25.1	
	comp=Z,133nm,18.3s,baz=158,slow=41						
BDFB	Brasilia	45.80	124	LR	LR	14 53 33.3	
	comp=Z,317nm,18.3s,baz=316,slow=39						
E07A	Sunnyside	45.99	328		P	14 31 57.4	+0.1
SCHQ	Schefferville	46.89	15	P	P	14 32 01.1	-3.0
	comp=Z,2.5nm,0.7s,baz=221,slow=8.3,SNR=5.6						
SCHQ				LR	LR	14 52 03.7	
	comp=Z,250nm,18.9s,baz=218,slow=37						
	comp=Z,2.5nm,0.7s						
PLCA	Paso Flores	52.89	165	P	P	14 32 57.4	+7.5
	comp=Z,2.3nm,1.0s,baz=2.2,slow=7.2,SNR=3.6						
PLCA				LR	LR	14 51 05.2	
	comp=Z,64nm,18.1s,baz=5.0,slow=31						
	comp=Z,2.3nm,1.0s						
FRB	Frobisher Bay	54.72	10	LR	LR	14 56 53.7	
	comp=Z,407nm,19.2s,baz=188,slow=37						
YKA	Yellowknife Ar	55.91	345	P	P	14 33 09.5	-2.0
	comp=Z,1.4nm,0.9s,baz=142,slow=7.0,SNR=9.6						
YKA				PcP	PcP	14 34 10.3	+0.4
	comp=Z,0.1nm,0.4s,baz=148,slow=3.3,SNR=4.1						
YKA				LR	LR	14 58 13.4	
	comp=Z,110nm,19.0s,baz=91,slow=38						
	comp=Z,1.4nm,0.9s						
TAOE	Nuku Hiva Isla	57.01	252	*e*S	S	14 41 12.7	-0.7
	comp=Z,80nm,25.0s						
TAOE				*e*LR	LR	14 50 03.8	
	comp=Z,124nm,22.7s						
DLBC	Dease Lake	58.28	335	LR	LR	15 02 38.8	
	comp=Z,264nm,18.4s,baz=108,slow=40						
SFJD	Kangerlussuaq	61.35	15	LR	LR	15 00 13.6	
	comp=Z,298nm,19.6s,baz=202,slow=36						
H27K	Steamboat Moun	67.00	339	P	P	14 34 26.1	-0.3
H27K				IAmb	IAmb	14 34 27.7	
	comp=Z,6.7nm,1.1s						
IL31		68.39	336		P	14 34 34.8	-0.3
IL31				IAmb	IAmb	14 34 35.1	
	comp=Z,3.7nm,1.0s						
ILAR	Eielson Array	68.39	336	P	P	14 34 34.5	-0.7
	comp=Z,1.6nm,1.0s,baz=136,slow=4.8,SNR=18						
ILAR				LR	LR	15 11 16.3	
	comp=Z,123nm,18.8s,baz=106,slow=42						
	comp=Z,1.6nm,1.0s						
ILAR	Eielson Array	68.39	336	P	P	14 34 34.7	-0.5
PPT	Papeete	68.50	246	LR	LR	14 56 20.1	
	comp=Z,130nm,18.0s,baz=64,slow=28						
PPT2	Papeete2	68.51	246	*e*S	S	14 43 35.8	-1.7
	comp=Z,48nm,23.0s						
PPT2	Papeete2	68.51	246	*e*LR	LR	14 55 18.3	
	comp=Z,156nm,25.2s						
PPT2				*e*LR	LR	14 55 22.3	
	comp=Z,106nm,26.8s						
KDAK	Kodiak Island	68.75	328	LR	LR	15 06 19.5	
	comp=Z,170nm,18.3s,baz=105,slow=37						
BORG	Borgarnes	70.04	24	LR	LR	15 03 30.6	
	comp=Z,174nm,19.0s,baz=251,slow=35						
TBI	Tubuai	70.38	241	*e*S	S	14 44 04.5	+5.3
	comp=Z,830nm,47.0s						
TBI	Tubuai	70.38	241	*e*LR	LR	14 56 16.1	
	comp=Z,689nm,29.8s						
G21K	Allakaket	71.56	337	IAmb	IAmb	14 34 55.2	
	comp=Z,4.9nm,0.8s						
F21K	Alatna River	71.76	338	P	P	14 34 55.9	0.0
F21K				IAmb	IAmb	14 34 56.8	
	comp=Z,4.8nm,0.9s						
L18K	Granite Mounta	71.80	332	P	P	14 34 56.0	-0.2
L18K				IAmb	IAmb	14 35 32.1	
	comp=Z,7.5nm,1.3s						
D20K	Etivluk River	73.30	339	IAmb	IAmb	14 35 05.9	
	comp=Z,6.4nm,1.1s						
JMIC	Jan Mayen	76.21	19	LR	LR	15 10 42.6	
	comp=Z,55nm,18.0s,baz=236,slow=38						
PMSA	Palmer Station	76.79	170	LR	LR	15 05 00.8	
	comp=Z,70nm,18.3s,baz=280,slow=32						
MDT	Midelt	77.40	59	LR	LR	15 06 38.4	
	comp=Z,204nm,18.8s,baz=243,slow=34						
ESDC	Sonseca Array	77.47	52	LR	LR	15 04 53.6	
	comp=Z,164nm,20.4s,baz=280,slow=32						
EKA	Eskdalemuir Ar	77.56	36	LR	LR	15 05 59.7	
	comp=Z,101nm,19.1s,baz=276,slow=33						
RAR	Rarotonga	78.77	246	LR	LR	15 02 41.5	
	comp=Z,37nm,21.6s,baz=118,slow=29						
NOA	NORSAR Array B	84.55	29	LR	LR	15 11 23.7	
	comp=Z,54nm,19.5s,baz=280,slow=34						
HFS	Hagfors	85.94	30	LR	LR	15 14 43.0	
	comp=Z,59nm,18.0s,baz=268,slow=36						
ARCES	ARCESS Array B	87.70	19	LR	LR	15 15 18.4	
	comp=Z,39nm,19.0s,baz=283,slow=36						
KEST	Kesra	88.44	54	LR	LR	15 10 25.3	
	comp=Z,82nm,21.1s,baz=288,slow=32						
GERES	GERESS Array B	88.67	41	LR	LR	15 09 05.0	
	comp=Z,105nm,20.3s,baz=271,slow=31						
VRAC	Vranov	90.39	40	LR	LR	15 13 26.1	
	comp=Z,108nm,20.0s,baz=283,slow=33						
FINES	FINESS Array B	91.25	26	LR	LR	15 15 44.0	
	comp=Z,123nm,19.0s,baz=268,slow=35						
SEY	Seymchan	94.31	337	LR	LR	15 25 53.0	
	comp=Z,70nm,18.6s,baz=54,slow=40						
TIXI	Tiksi	94.87	349	LR	LR	15 21 39.1	
	comp=Z,57nm,21.8s,baz=18,slow=37						
MA2	Magadan	96.81	335	LR	LR	15 26 06.9	
	comp=Z,72nm,18.3s,baz=67,slow=39						
AKASG	Malin Array Be	97.47	35	LR	LR	15 15 37.1	
	comp=Z,108nm,20.0s,baz=242,slow=32						
MLR	Muntele Rosu	97.65	41	LR	LR	15 16 46.5	
	comp=Z,92nm,21.8s,baz=298,slow=33						
NRIK	Noril'sk	100.33	2	LR	LR	15 23 29.4	
	comp=Z,109nm,21.0s,baz=346,slow=36						
ZALV	Zalesovo Beam	115.45	6	PKP	PKiKP	14 42 15.5	0.0
	comp=Z,0.5nm,0.5s,baz=32,slow=3.1,SNR=2.2						
KURBB	Kurchatov Arra	117.79	11	PKP	PKPdf	14 42 20.1	-0.1
	comp=Z,0.4nm,0.6s,baz=347,slow=2.3,SNR=2.4						
SONM	Songino Array	120.95	350	PKP	PKPdf	14 42 26.6	0.0
	comp=Z,0.3nm,0.4s,baz=330,slow=1.2,SNR=2.2						
MKAR	Makanchi Array	122.14	9	PKP	PKPdf	14 42 28.0	-0.7
	comp=Z,0.2nm,0.5s,baz=337,slow=2.1,SNR=4.2						
KSRS	Korea Array	122.66	328	PKP	PKiKP	14 42 31.1	+1.1
	comp=Z,1.3nm,0.6s,baz=11,slow=2.1,SNR=7.0						
ASAR	Alice Springs	139.62	246	PKhKP	PKPpre	14 42 56.9	
	comp=Z,0.4nm,0.7s,baz=101,slow=3.3,SNR=6.8						
ASAR				PKP	PKiKP	14 43 03.9	-0.8
	comp=Z,0.3nm,0.7s,baz=98,slow=1.9,SNR=5.0						
WRA	Warramunga Arr	139.85	251	PKP	PKiKP	14 43 04.5	-0.7
	comp=Z,0.6nm,0.6s,baz=99,slow=2.1,SNR=8.7						
CMAR	Chiang Mai Arr	150.88	350	PKP	PKPdf	14 43 22.8	+1.1
	comp=Z,0.3nm,0.3s,baz=336,slow=1.9,SNR=7.2						
CMAR				PKPbc	PKiKP	14 43 28.0	+0.1
	comp=Z,2.0nm,0.6s,baz=325,slow=3.2,SNR=14						
CMAR	Chiang Mai Arr	150.88	350		PKPdf	14 43 22.6	+0.9

IDC 13 14:29:24.4±2.5, 21°.32S×177°.60W, h0^{km}, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=62.1km s-min=43.8km az=51.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	44.70	257	P	P	14 37 39.0	-0.5
	0.6nm,0.6s,baz=99,slow=7.8,SNR=16						
	0.6nm,0.6s						
WRA	Warramunga Arr	44.86	263	P	P	14 37 41.1	+0.2
	1.0nm,0.6s,baz=97,slow=8.1,SNR=25						
	1.0nm,0.6s						
QSPA	South Pole Qui	68.75	180	P	P	14 40 30.0	0.0
	1.5nm,1.1s,baz=135,slow=5.7,SNR=2.8						
	1.5nm,1.1s						
KSRS	Korea Array	77.74	318	P	P	14 41 23.5	+0.2
	1.0nm,0.7s,baz=130,slow=6.8,SNR=2.6						
	1.0nm,0.7s						

MEX ***13*** *14:40:37.6±0.5, 13°.73N×92°.41W, h10^{km}, MD4.1*

GCG ***13*** *14:40:37.0±1.4, 13°.76N×92°.12W, h0^{km}±15^{km}, MD4.3, ML3.4*

ISC 13 14:40:34.8±2.1, 13°.92N±0°.08×92°.57W±0°.04, h9^{km}±12^{km}, n20, σ1^{s}.69/33, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	Retalhuleu	1.04	54	*e*P	Pb	14 40 55.2	+0.2
RTAL				*i* S	Sb	14 41 09.1	+0.3
PATR	El Naranjo	1.24	15	*e*P	Pn	14 40 59.6	+1.0
PATR				*e*S	Sn	14 41 16.6	+1.1
CHUJ	Union Juarez	1.25	21	*e*P	Pg	14 40 59.3	+0.4
CHUJ				*i* S	Sb	14 41 15.8	+0.7
STG5	El Palmar, Qui	1.28	68	*i* P	Pn	14 40 57.4	-1.6
STG8	El Palmar, Qui	1.30	66	*i* P	Pn	14 40 58.4	-0.9
STG8				*i* S	Sb	14 41 16.3	-0.1
STG8				IAML		14 41 17.7	
	comp=E,815nm,0.2s						
PAVE	Pavencul	1.33	17	*e*P	Pg	14 41 00.7	+0.4
PAVE				*e*S	Sn	14 41 19.7	+2.0
SOKI	Kika Raxquin	1.45	51	*i* P	Pn	14 41 01.3	-0.3
PCIG		1.89	341	*e*P	Pb	14 41 09.5	0.0
PCIG				*i* S	Sb	14 41 34.3	+1.1
APG	El Apazote	2.31	62	*i* P	Pn	14 41 14.0	+0.7
CCIG	Comitan	2.39	10	*e*P	Pb	14 41 18.1	0.0
CCIG				*e*S	Sn	14 41 44.0	+0.1
CCIG	Comitan	2.39	10	*i* P	Pg	14 41 19.6	-1.1
CCIG				*i* S	Sg	14 41 53.2	+1.5
TGIG		2.90	349	*e*P	Pb	14 41 25.0	-1.7
TGIG				*i* S	Sn	14 41 53.4	-2.8
UXUV	UXUV	3.71	336	*e*P	Pb	14 41 36.9	-3.6
UXUV				*e*S	Sb	14 42 21.6	-4.0
CMIG	Matias Romero	3.87	325	*e*P	Pn	14 41 35.2	+0.7
CMIG				*e*S	Sn	14 42 21.8	+1.7
HUIG	Huatulco	3.89	299	*e*P	Pn	14 41 35.2	+0.5
HUIG				*e*S	Sn	14 42 20.1	-0.5
PEIG	Puerto Escondi	4.88	296	*e*P	Pn	14 41 49.2	+0.7
NEUV	Arroyo Zacate	4.89	321	*e*P	Pn	14 41 51.2	+2.6
NEUV				*e*S	Sn	14 42 45.2	-0.2
YOIG	Yosondua	5.62	302	*e*P	Pn	14 42 04.6	+5.7
PNIG	Pinotepa	5.90	295	*e*P	Pn	14 42 06.5	+4.0
TOIG	Toxpalan	6.00	314	*e*P	Pn	14 42 03.7	-0.1
TOIG				*e*S	Sn	14 43 13.1	+0.3

IDC 13 14:54:32.8±8.6, 30°.88S×179°.26W, h0^{km}, mb3.2/2, mbtmp3.2/2, Error ellipse: s-maj=360.3km s-min=64.6km az=156.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	42.00	268	P	P	15 02 25.4	-0.7
	0.2nm,0.5s,baz=112,slow=8.2,SNR=4.6						
	0.2nm,0.5s						
WRA	Warramunga Arr	43.03	273	P	P	15 02 34.9	+0.5
	0.2nm,0.4s,baz=114,slow=8.0,SNR=2.2						
	0.2nm,0.4s						
FINES	FINESS Array B	145.21	339	PKPbc	PKPbc	15 14 10.3	-0.9
	5.5nm,1.1s,baz=50,slow=2.7,SNR=3.4						

JMA 13 15:01:33.0±0.2, 37°.6N±0°.8×14°4E±°, h40^{km}, MV3.5/30, FAR E OFF NORTH HONSHU, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	1.99	291	P	Pn	15 02 05.3	+1.2
JIKH				*e*S	Sn	15 02 29.2	+1.4
JIO	Ouri	2.12	294	P	Pn	15 02 07.3	+1.4
JIO				S	Sn	15 02 32.8	+1.7
JKMT	Kesennumamotoy	2.20	303	P	Pn	15 02 08.3	+1.3
JKMT				S	Sn	15 02 34.0	+1.1
OFUJ	Ofunato	2.23	311	P	Pn	15 02 08.6	+1.2
OFUJ				S	Sn	15 02 35.2	+1.5
JMK	Ichinoseki	2.44	304	P	Pn	15 02 11.7	+1.4
JMK				S	Sn	15 02 41.1	+2.2
JOU	Okura	2.61	287	P	Pn	15 02 14.6	+2.1
JOU				S	Sn	15 02 45.6	+2.5
JOM	Ohasama	2.71	314	P	Pn	15 02 15.8	+1.7
JOM				S	Sn	15 02 47.7	+2.1
JOTO	OTAMA OYAMA	2.78	270	P	Pn	15 02 16.5	+1.6
JOTO				*e*S	Sn	15 02 49.0	+1.8
JYK	Kaneyama	3.02	296	P	Pn	15 02 20.5	+2.2
JRG	Rokugo	3.06	306	P	Pn	15 02 21.8	+2.9
JANG	Nango	3.28	327	S	Sn	15 03 00.1	+0.5
JTM	Tenmabayashi	3.81	327	S	Sn	15 03 13.7	+1.0
JRY	Ryogami san	4.27	249	P	Pn	15 02 36.0	+0.6
JRY				S	Sn	15 03 22.4	-1.6
JCH	Churui	4.99	356	P	Pn	15 02 45.6	+0.3
JCH				*e*S	Sn	15 03 39.9	-1.9

IDC ***13*** *15:17:15.7±1.9, 30°.65N×141°.89E, h0^{km}, mb3.8/7, mbtmp3.9/10, ML3.1/3, MS3.0/1, Error ellipse: s-maj=75.8km s-min=16.8km az=75.0*

JMA ***13*** *15:17:18.3±0.3, 31°N±1°×14°2E±°, h51^{km}, MV3.9/28, NEAR TORISHIMA IS*

ISC 13 15:17:18.1±0.9, 30°.61N±0°.06×142°.2E±0°.1, h35^{km}, n21, σ2^{s}.56/26, mb3.8/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	3.22	321	*e*P	Pn	15 18 05.6	-0.6
JHJ2				S	Sn	15 18 39.9	-3.4
JHJ	Hachijo jima 2	3.24	321	Pn	Pn	15 18 05.5	-1.0
	7.3nm,0.3s,baz=80,slow=22,SNR=1.6						
JHJ				Sn	Sn	15 18 39.6	-4.3
	14nm,0.3s,baz=59,slow=20,SNR=2.1						
	108nm,0.9s						
JCJ	Chichijima	3.50	180	Pn	Pn	15 18 08.8	-1.3
	2.8nm,0.3s,baz=288,slow=20,SNR=1.3						
JCJ				Sn	Sn	15 18 44.3	-6.0
	9.6nm,0.3s,baz=286,slow=20,SNR=1.5						
BSO1	Boso 1	4.16	346	*e*P	Pn	15 18 19.5	+0.9
BSO3	Boso 3	4.42	341	*e*P	Pn	15 18 23.8	+1.4
JOD2	Odawara 2	5.33	331	*e*P	Pn	15 18 37.4	+2.2
JYT	Yasato	5.85	344	*e*P	Pn	15 18 43.2	+0.9
JRY	Ryogami san	6.06	334	*e*P	Pn	15 18 46.3	+1.0
JHO	Hitachi	6.14	348	*e*P	Pn	15 18 46.4	+0.1
JHO				*e*S	Sn	15 19 51.2	-4.1
MJAR	Matsushiro Arr	6.79	332	Pn	Pn	15 18 55.9	+0.6
	0.2nm,0.3s,baz=157,slow=10,SNR=11						
MJAR				Sn	Sn	15 20 09.2	-2.2
	baz=153,slow=30,SNR=1.2						
	3.4nm,0.8s						
JFK	Kawauchi	6.83	351	*e*P	Pn	15 18 55.2	-0.5
JMK	Ichinoseki	8.36	355	*e*P	Pn	15 19 17.3	+0.5
JMK				*e*S	Sn	15 20 44.7	-5.2
JNU	Nakatsue	9.96	287	LR	LR	15 22 47.7	
	comp=Z,79nm,19.4s,baz=46,slow=34						
ASAJ	Asahikawa	13.48	1	Pn	Pn	15 20 26.6	-0.3
	0.2nm,0.3s,baz=180,slow=20,SNR=2.2						
	10nm,1.0s						
HILR	Hailar Array B	25.40	325	P	P	15 22 43.4	+1.2
	1.7nm,0.6s,baz=126,slow=9.1,SNR=2.4						
	1.7nm,0.6s						
SONM	Songino Array	32.28	312	P	P	15 23 44.3	+0.7
	0.4nm,0.4s,baz=114,slow=9.6,SNR=2.4						
	0.4nm,0.4s						
MKAR	Makanchi Array	48.32	307	P	P	15 25 56.3	+0.2
	0.5nm,0.6s,baz=86,slow=8.4,SNR=6.5						
	0.5nm,0.6s						
KURBB	Kurchatov Arra	50.65	312	P	P	15 26 14.0	+0.3
	0.6nm,0.2s,baz=83,slow=7.3,SNR=5.0						
	0.6nm,0.2s						
WRA	Warramunga Arr	50.83	190	P	P	15 26 17.9	+2.6
	1.1nm,0.7s,baz=6.9,slow=7.5,SNR=14						
	1.1nm,0.7s						
ASAR	Alice Springs	54.55	189	P	P	15 26 45.8	+2.9
	0.3nm,0.5s,baz=5.0,slow=6.1,SNR=18						
	0.3nm,0.5s						
FINES	FINESS Array B	74.82	333	P	P	15 28 56.8	+2.2
	0.9nm,0.5s,baz=73,slow=6.4,SNR=8.0						
	0.9nm,0.5s						

PRE 13 15:22:51.7±1.1, 27°.88S×22°.99E, h0^{km}, ML1.8, Suspected explosion, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UPI	Upington	1.61	252	*e*P	Pn	15 23 21.9	+0.4
UPI				*e*S	Sg	15 23 44.1	+0.6
UPI				IAML		15 23 52.3	
	comp=Z,18nm,0.3s						
BOSA	Boshof	2.13	111	*e*P	Pb	15 23 30.1	-1.1
BOSA				*e*S	Sn	15 23 55.9	+0.1
BOSA				IAML		15 24 02.3	
	comp=Z,6.9nm,0.2s						
ALKP	Alkanpan, Nort	2.15	197	*e*P	Pn	15 23 30.1	+1.1
ALKP				*e*S	Sn	15 23 57.3	+0.8
ALKP				IAML		15 24 08.3	
	comp=Z,10nm,0.3s						
BRAK	Brakfontein	3.89	181	*e*P	Pn	15 23 54.9	+2.1
BRAK				*e*S	Sn	15 24 32.6	-6.6
BRAK				IAML		15 25 06.2	
	comp=Z,4.1nm,0.5s						
FRAZ	Fraserburg	4.26	198	*e*P	Pn	15 23 59.0	+1.0
FRAZ				*e*S	Sn	15 24 46.9	-1.6
FRAZ				IAML		15 25 11.6	
	comp=Z,3.4nm,0.5s						
GRAN	Grantham	4.46	189	*e*P	Pn	15 24 02.3	+1.5
GRAN				*e*S	Sn	15 24 46.1	-7.3
GRAN				IAML		15 25 19.1	
	comp=Z,4.5nm,0.5s						
GRAF	Camdeboo Natio	4.57	164	*e*P	Pb	15 24 15.1	+2.3
GRAF				*e*S	Sb	15 25 08.5	0.0
GRAF				IAML		15 25 22.1	
	comp=Z,3.8nm,0.5s						
SUR	Sutherland	4.87	202	*e*P	Pn	15 24 07.8	+1.4
SUR				*e*S	Sn	15 24 59.6	-3.9
SUR				IAML		15 25 40.4	
	comp=Z,3.4nm,0.4s						

KOLA ***13*** *15:47:02.0, 67°.70N×34°.28E, h0^{km}, ML2.8, Error ellipse: s-maj=3.9km s-min=1.6km az=120.0, Khibiny Massif*

IDC ***13*** *15:47:03.6±1.6, 67°.77N×33°.96E, h0^{km}, mbtmp3.7/5, ML2.8/5, Error ellipse: s-maj=16.8km s-min=8.7km az=88.0*

HEL ***13*** *15:47:10.0±0.5, 67°.73N×33°.58E, h0^{km}, ML2.4, Explosion*

ISC 13 15:46:59.8±1.0, 67°.65N±0°.03×34°.44E±0°.05, h0^{km}, n35, σ1^{s}.64/56, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVZ	Lovozero	0.26	18	S	Sg	15 47 09.2	+1.0
APA	Apatity	0.40	259	P	Pb	15 47 09.0	-0.8
APA				S	Sg	15 47 13.6	+0.8
APA0	Apatity Array	0.56	266	S	Sg	15 47 17.5	-0.1
KVDA	Kovda	1.14	213	P	Pb	15 47 22.4	+0.1
KVDA				S	Sg	15 47 37.5	+1.1
TERR	Teriberka	1.58	9	P	Pb	15 47 29.9	+0.1
TERR				S	Sn	15 47 49.4	-0.7
VRF	Varrio	1.84	275	PG	Pg	15 47 37.6	+2.5
	baz=84						
VRF				MSG		15 47 55.4	
	comp=Z,55nm,0.2s						
VRF				SG	Sn	15 47 57.0	+0.3
OLKF	Oulanka, Finla	2.39	238	MSG		15 48 14.3	
	comp=Z,22nm,0.2s						
OLKF				SN	Sb	15 48 14.5	+1.0
KU6	Riekki	2.43	230	SN	Sb	15 48 15.7	+1.0
KU6				MSG		15 48 16.6	
	comp=Z,22nm,0.2s						
RAJF	Raja-Jooseppi	2.45	293	PG	Pg	15 47 48.0	+1.4
RAJF				SB	Sn	15 48 12.3	+0.8
MSF	Maaselka	2.76	233	SN	Sb	15 48 25.2	+0.9
KU1	Kurvinen	2.86	225	PN	Pg	15 47 53.5	-1.0
VADS	Vadso	3.09	326	P	Pn	15 47 51.0	+1.2
VADS				S	Sn	15 48 27.1	-0.2
KU2	Taivalkoski	3.15	235	PN	Pb	15 47 57.9	+1.4
KEV	Kevo	3.44	311	PN	Pb	15 48 00.1	-1.4
KEV				SN	Sn	15 48 36.8	+0.9
RANF	Ranua	3.44	245	PN	Pb	15 48 01.1	-0.4
	baz=57						
RANF				SB	Sb	15 48 44.1	+0.3
RNF	Rovaniemi	3.45	256	SN	Sn	15 48 37.4	+1.2
ARA0	ARCESS Array S	3.78	304	*e*P	Pn	15 47 59.0	-0.2
ARA0	ARCESS Array S	3.78	304	PN	Pb	15 48 03.9	-3.4
ARA0				SN	Sn	15 48 45.9	+1.5
ARCES	ARCESS Array B	3.78	304	Pn	Pn	15 47 58.6	-0.6
	comp=Z,2.1nm,0.3s,baz=119,slow=16,SNR=110						

ARCES				Sn	Sn	15 48 43.5	-0.9
	comp=Z,2.6nm,0.3s,baz=116,slow=24,SNR=19						
ARCES				Lg	Lg	15 48 54.9	
	comp=Z,9.0nm,0.3s,baz=119,slow=32,SNR=12						
	comp=Z,6.5nm,0.2s						
ARCES	ARCESS Array B	3.78	304	P	Pn	15 47 58.8	-0.5
ARCES				S	Sn	15 48 41.5	-2.9
KLF	Kolari	4.06	269	PN	Pb	15 48 10.0	-2.1
	baz=77						
KLF				SG	Sb	15 49 05.1	+3.6
HEF	Hetta	4.12	286	*e*P	Pn	15 48 03.6	-0.3
HEF	Hetta	4.12	286	PB	Pb	15 48 15.0	+1.8
	baz=97						
HEF				SN	Sn	15 48 52.9	+0.2
TOF	Tornio	4.29	253	PB	Pb	15 48 16.5	+0.5
TOF				SN	Sn	15 48 56.5	-0.3
OUL	Oulu	4.29	237	PB	Pg	15 48 19.8	-2.2
	baz=50						
OUL				SG	Sg	15 49 14.4	-3.2
KTK1	Kautokeino	4.37	293	PB	Pb	15 48 18.3	+0.9
KTK1				SN	Sn	15 49 00.3	+1.4
PAJU	Pajala	4.43	267	PB	Pb	15 48 19.0	+0.6
	baz=76						
PAJU				SN	Sn	15 49 00.1	-0.2
LANU	Lannavaara	4.73	281	PG	Pg	15 48 28.3	-2.0
LANU				SN	Sn	15 49 06.6	-1.1
KALU	Kalix	4.74	253	PB	Pb	15 48 26.6	+2.9
KALU				SN	Sn	15 49 09.2	+1.1
ERTU	Ertsjaerv	4.91	263	SN	Sn	15 49 11.5	-0.7
FINES	FINESS Array B	7.19	214	Pn	Pn	15 48 47.1	+1.1
	comp=Z,0.3nm,0.3s,baz=32,slow=12,SNR=14						
FINES				Sn	Sn	15 50 07.9	-0.3
	comp=Z,0.5nm,0.3s,baz=32,slow=22,SNR=6.1						
FINES				Lg	Lg	15 50 42.6	
	comp=Z,0.9nm,0.3s,baz=27,slow=26,SNR=6.0						
	comp=Z,1.1nm,0.5s						
FAUS	Fauske	7.34	277	P	Pn	15 48 48.6	+0.5
FAUS				S	Sn	15 50 06.0	-6.0
SPITS	Spitsbergen Ar	11.74	342	Pn	Pn	15 49 47.1	-1.0
	baz=140,slow=17						
SPITS				Sn	Sn	15 51 49.8	-10
	baz=140,slow=23						
	comp=Z,17nm,1.1s						
HFS	Hagfors	11.78	240	Pn	Pn	15 49 48.6	-0.3
	comp=Z,0.1nm,0.3s,baz=46,slow=12,SNR=5.2						
HFS				Sn	Sn	15 51 51.7	-9.2
	comp=Z,0.1nm,0.3s,baz=47,slow=24,SNR=2.1						
HFS				Lg	Lg	15 53 09.8	
	comp=Z,0.2nm,0.3s,baz=42,slow=25,SNR=3.7						
	comp=Z,3.9nm,0.9s						
NOA	NORSAR Array B	11.98	248	Pn	Pn	15 49 50.6	-1.0
	baz=45,slow=11,SNR=3.9						
NOA				Lg	Lg	15 53 15.9	
	baz=40,slow=25,SNR=1.4						
	comp=Z,0.5nm,0.8s						

IDC 13 15:55:33.4±2.4**, 14°.71N**×**149°.09E, h0**^{km}**, mb3.3**/3**,**
mbtmp3.5/4**, ML3.5**/1**, Error ellipse: s-maj=48.7km**
s-min=35.7km az=79.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	4.24	255	Pn	Pn	15 56 39.1	-0.2
	2.6nm,0.3s,baz=335,slow=20,SNR=1.3						
GUMO				Sn	Sn	15 57 30.6	+1.0
	7.8nm,0.3s,baz=23,slow=18,SNR=1.3						
	53nm,0.8s						
WRA	Warramunga Arr	37.37	203	P	P	16 02 48.1	+0.1
	0.6nm,0.7s,baz=28,slow=9.6,SNR=5.2						
	0.6nm,0.7s						
ASAR	Alice Springs	40.93	202	P	P	16 03 17.5	-0.3
	0.2nm,0.6s,baz=23,slow=7.0,SNR=5.1						
	0.2nm,0.6s						
MKAR	Makanchi Array	63.56	315	P	P	16 06 05.8	0.0
	0.3nm,0.7s,baz=82,slow=7.6,SNR=2.1						
	0.3nm,0.7s						

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*JMA **13** 16:47:42.2±0.2, 25°N±2°×123°.2E±0°.5, h110^{km}±1^{km},*
MV3.7/17, NW OFF ISHIGAKIJIMA IS
*IDC **13** 16:47:42.7±3.1, 24°.99N×123°.27E, h130^{km}±32^{km},*
mb3.5/11, mbtmp3.9/13, Error ellipse: s-maj=27.0km
s-min=13.2km az=64.0
ISC 13 16:47:41.2±0.7**, 24°.82N**±0°.07×**123°.14E**±0°.04**, h117**^{km}±6^{km}**,**
n43, σ0^{s}.**93**/58**, mb3.8**/11**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.38	199	S	Sn	16 48 10.4	-0.4
YOJ	Yonaguni jima	0.38	199	P	Pn	16 47 58.2	+0.1
YOJ	Yonaguni jima	0.38	199	S	Sn	16 48 10.5	-0.4
YOJ	Yonaguni jima	0.38	199	P	Pn	16 47 58.4	+0.2
YOJ				S	Sn	16 48 10.3	-0.4
JYNG	Yonagunijimaku	0.41	206	*i* P	Pn	16 47 58.6	+0.3
JYNG				S	Sn	16 48 10.8	-0.3
IRIF	Iriomote-Funau	0.72	132	P	Pn	16 48 00.6	+0.2
IRIF				*e*S	Sn	16 48 14.5	-0.4
HATJ	Hateruma jima	0.97	141	P	Pn	16 48 03.3	+0.7
HATJ				*e*S	Sn	16 48 18.6	-0.2
JKRS	Kuro-shima	0.98	126	P	Pn	16 48 03.5	+0.8
JKRS				S	Sn	16 48 18.9	-0.1
JIJ	Ishigaki jima	1.02	116	P	Pn	16 48 03.3	+0.2
JIJ				*e*S	Sn	16 48 19.0	-0.7
JISG	Ishigakijimahi	1.09	102	P	Pn	16 48 04.2	+0.4
JISG				S	Sn	16 48 20.4	-0.6
JTJ	Tarama	1.43	97	P	Pn	16 48 08.3	+0.7
JTJ				*e*S	Sn	16 48 27.4	-0.2
TATO	Taipei	1.51	276	P	Pn	16 48 09.7	+1.2
NACB	Ninganchiao	1.55	246	P	Pn	16 48 09.0	-0.1
NACB	Ninganchiao	1.55	246	P	Pn	16 48 08.9	-0.1
YHNB	Yeheng	1.61	265	P	Pn	16 48 11.0	+1.2
YHNB	Yeheng	1.61	265	P	Pn	16 48 11.1	+1.2
JIRB	Irabujima	1.84	89	*e*P	Pn	16 48 13.4	+0.9
JIRB				*e*S	Sn	16 48 35.9	-0.6
JIKM	Ikemajima	1.92	86	*e*P	Pn	16 48 14.4	+1.0
JIKM				*e*S	Sn	16 48 38.3	+0.3
JMJ2	Miyako jima3	1.99	92	*e*P	Pn	16 48 15.6	+1.3
JMJ2				*e*S	Sn	16 48 40.5	+0.8
YULB	Yu-li	2.20	230	S	Sn	16 48 44.9	+0.3
YULB	Yu-li	2.20	230	P	Pn	16 48 16.8	-0.3
YULB	Yu-li	2.20	230	S	Sn	16 48 42.7	-1.9
TWGBT	Beinan	2.75	224	P	Pn	16 48 23.8	-0.3
TWGBT	Beinan	2.75	224	P	Pn	16 48 23.5	-0.6
TWGBT	Beinan	2.75	224	S	Sn	16 48 55.3	-1.8
TPUB	Ta-pu	2.75	237	S	Sn	16 48 59.4	+2.2
TPUB	Ta-pu	2.75	237	P	Pn	16 48 26.0	+1.8
TPUB	Ta-pu	2.75	237	S	Sn	16 48 56.0	-1.2
JOW	Kunigami	5.04	65	P	Pn	16 48 53.8	-0.9
	128nm,0.3s,baz=156,slow=7.5,SNR=750						
JOW				S	Sn	16 49 49.4	-2.5
	11nm,0.2s,baz=102,slow=23,SNR=0.8						
JOW	Kunigami	5.04	65	P	Pn	16 48 54.0	-0.7
JNU	Nakatsue	10.69	38	P	Pn	16 50 11.5	+0.5
	4.2nm,0.9s,baz=209,slow=19,SNR=1.7						
KSRS	Korea Array	13.24	17	P	P	16 50 50.6	+0.5
	2.0nm,0.5s,baz=196,slow=12,SNR=12						
CMAR	Chiang Mai Arr	23.35	259	P	P	16 52 40.9	+1.5
	0.5nm,0.6s,baz=56,slow=8.4,SNR=6.6						
	0.5nm,0.6s						
SONM	Songino Array	26.53	334	P	P	16 53 08.5	+0.5
	0.3nm,0.3s,baz=147,slow=11,SNR=5.6						
	0.3nm,0.3s						
MKAR	Makanchi Array	39.15	315	P	P	16 54 57.1	-0.3
	1.8nm,0.5s,baz=99,slow=9.4,SNR=43						
MKAR				PcP	PcP	16 57 04.5	-0.1
	0.5nm,0.7s,baz=354,slow=1.2,SNR=3.6						
	1.8nm,0.5s						
ZALV	Zalesovo Beam	40.70	326	P	P	16 55 09.2	-1.0
	2.0nm,0.5s,baz=117,slow=8.2,SNR=13						
ZALV				PcP	PcP	16 57 08.3	-1.1
	0.3nm,0.5s,baz=141,slow=5.5,SNR=1.8						
	2.0nm,0.5s						
KURBB	Kurchatov Arra	42.79	319	P	P	16 55 26.4	-0.8
	1.2nm,0.5s,baz=113,slow=8.8,SNR=7.6						
	1.2nm,0.5s						
WRA	Warramunga Arr	45.81	165	P	P	16 55 52.1	+0.6
	1.0nm,0.4s,baz=347,slow=8.7,SNR=16						
	1.0nm,0.4s						
BVAR	Borovoye Array	48.33	320	P	P	16 56 10.2	-0.5
	0.9nm,0.4s,baz=100,slow=8.4,SNR=8.8						
BVAR				PcP	PcP	16 57 35.2	-0.4
	0.7nm,0.4s,baz=97,slow=3.8,SNR=4.3						
	0.9nm,0.4s						
ASAR	Alice Springs	49.31	167	P	P	16 56 20.2	+1.6
	0.7nm,0.6s,baz=353,slow=7.4,SNR=30						
	0.7nm,0.6s						
FINES	FINESS Array B	71.80	330	P	P	16 58 50.3	-0.5
	0.6nm,0.5s,baz=46,slow=6.0,SNR=6.3						
	0.6nm,0.5s						
BRTR	Keskin Array B	74.23	307	P	P	16 59 05.6	-0.1
	0.5nm,0.7s,baz=27,slow=6.3,SNR=2.9						
	0.5nm,0.7s						
NOA	NORSAR Array B	78.49	333	P	P	16 59 28.6	-0.7
	0.5nm,0.6s,baz=58,slow=5.5,SNR=1.8						
	0.5nm,0.6s						

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*NEIC **13** 16:48:00.6±1.4, 52°.3S±0°.1×28°.7E±0°.3, h10^{km}±2^{km},*
mb4.4/8, Error ellipse: s-maj=36.7km s-min=15.6km
az=282.0
*IDC **13** 16:48:01.1±1.1, 52°.39S×29°.31E, h0^{km}, mb3.8/6,*
mbtmp3.8/6, MS2.9/2, Error ellipse: s-maj=45.5km
s-min=23.0km az=85.0
ISC 13 16:48:01.3±0.8**, 52°.3S**±0°.1×**28°.9E**±0°.2**, h10**^{km}**, n21,**
σ**1^{s}.85**/14**, mb3.6**/6**, South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H04S2	CROZET ISLANDS	15.87	79	T	T	17 09 02.2	
	baz=242,slow=75,SNR=10						
H04S3	CROZET ISLANDS	15.88	79	T	T	17 08 52.5	
	baz=242,slow=75,SNR=9.2						
H04S1	CROZET ISLANDS	15.89	79	T	T	17 08 59.3	
	baz=242,slow=75,SNR=12						
CRZF	Crozet Islands	16.06	78	Pn	Pn	16 51 47.0	-0.1
CRZF				IAmb	IAmb	16 51 52.6	
	comp=Z,63nm,1.0s						
H04N3	CROZET ISLANDS	16.14	77	T	T	17 09 05.8	
	baz=232,slow=74,SNR=12						
H04N1	CROZET ISLANDS	16.14	77	T	T	17 09 07.8	
	baz=232,slow=74,SNR=8.8						
H04N2	CROZET ISLANDS	16.16	77	T	T	17 09 10.9	
	baz=232,slow=74,SNR=7.6						
SUR	Sutherland	20.74	340	P	P	16 52 41.4	-0.8
SUR				IAmb	IAmb	16 52 46.2	
	comp=Z,12nm,0.8s						
BOSA	Boshof	23.80	352	P	P	16 53 16.9	+2.6
	comp=Z,5.9nm,1.0s,baz=182,slow=11,SNR=5.2						
BOSA				LR	LR	17 01 17.4	
	comp=Z,31nm,19.7s,baz=190,slow=33						
	comp=Z,5.9nm,1.0s						
BOSA	Boshof	23.80	352	P	P	16 53 12.8	-1.5
BOSA				IAmb	IAmb	16 53 17.9	
	comp=Z,8.8nm,1.1s						
SNAA	Sanae	23.95	204	P	P	16 53 16.4	+1.1
	comp=Z,1.2nm,0.7s,baz=76,slow=6.7,SNR=5.3						
	comp=Z,1.2nm,0.7s						
SNAA	Sanae	23.95	204	P	P	16 53 13.6	-1.7
LBTB	Lobatse	27.35	354	LR	LR	17 02 48.7	
	comp=Z,27nm,19.5s,baz=172,slow=32						
KGCAE	Kacgae	29.83	348	P	P	16 54 08.3	-0.4
KOOLE	Kule	30.00	344	P	P	16 54 07.0	-3.2
TSUM	Tsumeb	34.18	341	P	P	16 54 45.6	-1.2
TSUM				IAmb	IAmb	16 54 50.3	
	comp=Z,3.2nm,0.9s						
QSPA	South Pole Qui	37.93	180	P	P	16 55 19.1	+0.5
	comp=Z,0.6nm,0.4s,baz=123,slow=1.5,SNR=13						
	comp=Z,0.6nm,0.4s						
QSPA	South Pole Qui	37.93	180	P	P	16 55 17.9	-0.7
TORD	Torodi Ar. Bea	69.27	332	P	P	16 59 11.5	+3.0
	comp=Z,0.9nm,0.3s,baz=163,slow=5.6,SNR=1.9						
	comp=Z,0.9nm,0.3s						
ASAR	Alice Springs	80.28	116	P	P	17 00 13.4	+0.9
	comp=Z,0.3nm,0.9s,baz=216,slow=6.2,SNR=2.5						
	comp=Z,0.3nm,0.9s						
WRA	Warramunga Arr	83.49	114	P	P	17 00 28.1	-1.3
	comp=Z,0.3nm,0.8s,baz=224,slow=3.5,SNR=2.3						
	comp=Z,0.3nm,0.8s						

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*MOS **13** 17:04:50.8±1.0, 0°.91S×127°.91E, h17^{km}, mb5.4/62,*
MS4.6/4, Error ellipse: s-maj=8.6km s-min=4.4km
az=110.6
*GFZ **13** 17:04:50.9, 0°.88S×127°.93E, h16^{km}, MW5.1, Moment*
Tensor Solution. s72 Moment tensor: M_{rr}-4.78;
$M_{\theta\theta}$1.35; $M_{\phi\phi}$3.43; $M_{r\theta}$1.02; $M_{\theta\phi}$1.73; $M_{\phi r}$0.64; Fault plane
solution: NP1:ϕ_s216.00000°,δ52.00000°,λ-81.00000°.
NP2:ϕ_s24.00000°,δ39.00000°,λ-99.00000°. Principal
axes: T 4.5300, Plg7.0000°, Azm300.0000°; N 0.4300,
Plg6.0000°, Azm31.0000°; P -4.9600, Plg81.0000°,
Azm163.0000°;
*NEIC **13** 17:04:50.5±1.6, 0°.88S±0°.05×127°.93E±0°.05, h19^{km}±3^{km},*
mb5.5/323, Mww5.3/16 Error ellipse: s-maj=8.2km
s-min=6.3km az=65.0
*GCMT **13** 17:04:51.5±0.1, 0°.87S±0°.01×127°.85E±0°.01, h17^{km},*
MW5.2/123, Moment Tensor Solution. s85,c134;
s123,c211; Duration: 1^{s}0 Moment tensor: Scale 10^{17}
Nm; M_{rr}-0.71±.02; $M_{\theta\theta}$0.25±.01; $M_{\phi\phi}$0.46±.01;
$M_{r\theta}$0.27±.03; $M_{\theta\phi}$0.34±.01; $M_{\phi r}$0.23±.03; Best double
couple: $M_0$0.79800×10^{17} NP1:ϕ_s30.00000°,δ33.00000°,
λ-100.00000°. NP2:ϕ_s222.00000°,δ58.00000°,
λ-83.00000°. Principal axes: T 0.7950, Plg13.0000°,
Azm308.0000°; N 0.0080, Plg6.0000°, Azm39.0000°; P
-0.8020, Plg76.0000°, Azm152.0000°; nsta1 refers to
body waves, cutoff=40s. nsta2 refers to surface waves,
cutoff=50s. Triangular moment-rate function
*DJA **13** 17:04:52.8±0.4, 1°S±1°×12°8E±°, h23^{km}±3^{km}, M5.2/119,*
mb5.5/119, mB5.7/91, MLv5.7/24, Mw(mB)5.3/91,
MwMwp5.0/33, Mwp5.2/33
*IDC **13** 17:04:52.0±3.6, 0°.92S×127°.86E, h27^{km}±23^{km}, mb4.9/22,*
mbtmp5.1/26, ML4.6/3, MS4.3/45, Error ellipse:
s-maj=20.8km s-min=9.1km az=72.0
*NEIC **13** 17:04:53.5, 0°.80S×127°.95E, h30^{km}, Moment Tensor*
Solution. Duration: 2^{s}3 Moment tensor: Scale 10^{17}Nm;
M_{rr}-1.03; $M_{\theta\theta}$0.07; $M_{\phi\phi}$0.96; $M_{r\theta}$-0.13; $M_{\theta\phi}$0.32; $M_{\phi r}$-0.03;
Fault plane solution: $M_0$1.06000×10^{17} NP1:
ϕ_s191.22000°,δ43.61000°,λ-99.68000°. NP2:ϕ_s24.48000°,
δ47.16000°,λ-80.90000°. Principal axes: T 1.0659,
Plg2.0000°, Azm108.0000°; N -0.0183, Plg7.0000°,
Azm198.0000°; P -1.0476, Plg83.0000°, Azm3.0000°;
*NEIC **13** 17:04:53.5, 0°.80S×127°.95E, h29^{km}*
ISC 13 17:04:49.7±0.2**, 0°.91S**±0°.03×**127°.94E**±0°.03**, h10**^{km}**, n1102,**
σ**1^{s}.67**/833**, mb5.5**/298**, MS4.4**/72**, 13C-17D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.77	341		Pn	17 05 20.4	+0.1
TNTI				Sn	Sn	17 05 41.1	-1.7
TNTI	Ternate	1.77	341	P	Pn	17 05 20.8	+0.5
TNTI	Ternate	1.77	341	S	Sn	17 05 45.2	+2.3
TNTI	Ternate	1.77	341	P	Pn	17 05 21.5	+1.2
SANI	Sanana	2.25	240	P	Pn	17 05 27.5	+0.4
SANI	Sanana	2.25	240	S	Sn	17 05 55.3	+0.4
SANI	Sanana	2.25	240	P	Pn	17 05 27.4	+0.4
KRAI	Karang Ratu	2.43	169	P	Pn	17 05 33.3	+3.8
NLAI	Namlea	2.46	200	P	Pn	17 05 31.8	+2.0
MSAI	Masohi	2.61	158	P	Pn	17 05 36.1	+4.1
AAI	Ambon	2.77	175	P	Pn	17 05 37.8	+3.7
SWI	Sorong	3.32	89	P	Pn	17 05 43.7	+2.0
BNDI	Bandanaira	4.09	151	P	Pn	17 05 55.4	+3.1
BNDI	Bandanaira	4.09	151	S	Sn	17 06 42.2	+1.9
BNDI	Bandanaira	4.09	151	P	Pn	17 05 55.0	+2.7
FAKI	Fak Fak	4.75	115		Pn	17 06 02.2	+0.9
FAKI				Sn	Sn	17 06 55.1	-1.5
FAKI	Fak Fak	4.75	115	P	Pn	17 06 02.7	+1.3
FAKI	Fak Fak	4.75	115	S	Sn	17 06 56.8	+0.3
FAKI	Fak Fak	4.75	115	P	Pn	17 06 02.3	+0.9
GTOI	Gorontalo	5.16	287	P	Pn	17 06 10.9	+3.9
SGSI	Sangihe	5.16	332	P	Pn	17 06 08.3	+1.2
LUWI	Luwuk	5.17	269		Pn	17 06 07.3	+0.3
LUWI				Sn	Sn	17 07 03.8	-3.0
LUWI	Luwuk	5.17	269	P	Pn	17 06 07.8	+0.7
LUWI	Luwuk	5.17	269	P	Pn	17 06 07.4	+0.3
	10nm10μm18μm1μm,0.8s						
MWPI	Manokwari, Pap	6.10	90	P	Pn	17 06 23.8	+3.8
	6.7nm10μm12μm816nm,1.2s						
KDI	Kendari	6.11	240	P	Pn	17 06 22.7	+2.6
MRSI	Marisa	6.15	283	P	Pn	17 06 22.3	+1.6
	1.8nm7μm3μm391nm,1.0s						
RKPI	Ransiki, Papua	6.27	96	P	Pn	17 06 24.7	+2.4
	6.7nm6μm519nm,0.9s						
APSI	Ampana	6.29	270	P	Pn	17 06 23.8	+1.3
KMPI	Kaimana, Papua	6.38	115	P	Pn	17 06 25.5	+1.7
KKSI	Kolaka, Sulawe	7.07	243	P	Pn	17 06 35.0	+1.8
TOLI2	Tolitoli	7.43	286		Pn	17 06 38.3	0.0
TOLI2				Sn	Sn	17 08 00.7	-2.0
TOLI2	Tolitoli	7.43	286	P	Pn	17 06 39.7	+1.4
TOLI2	Tolitoli	7.43	286	S	Sn	17 08 03.3	+0.6
SAUI	Saumlaki	7.78	155		Pn	17 06 43.5	+0.5
SAUI				Sn	Sn	17 08 11.2	-0.1
SAUI	Saumlaki	7.78	155	P	Pn	17 06 45.9	+2.8
SAUI	Saumlaki	7.78	155	S	Sn	17 08 12.7	+1.4
SAUI	Saumlaki	7.78	155	P	Pn	17 06 45.9	+2.8
	7μm6μm496nm,0.7s						
PCI	Palu	8.10	270	P	Pn	17 06 48.2	+0.8
	5μm374nm,0.5s						
MPSI	Mapaga	8.13	279	P	Pn	17 06 50.4	+2.5
	6μm3μm254nm,1.2s						
BAKI	Biak	8.17	92	P	Pn	17 06 52.1	+3.6
	6μm209nm,0.7s						
DAV	Davao City (W)	8.27	344	Pn	Pn	17 06 50.3	+0.5
	86nm,0.3s,baz=36,slow=3.7,SNR=3.8						
DAV				Sn	Sn	17 08 23.6	+0.2
	34nm,0.3s,baz=36,slow=22,SNR=1.1						
DAV	Davao City (W)	8.27	344	Pn	Pn	17 06 48.4	-1.3
DAV	Davao City (W)	8.27	344	P	Pn	17 06 54.3	+4.5
SRPI	Serui, Papua	8.36	97	P	Pn	17 06 52.9	+2.0
	3μm88nm,0.6s						
TTSI	Tana Toraja	8.38	255	P	Pn	17 06 53.4	+2.1
	3μm4μm383nm,0.7s						
BNSI	Bone	8.55	246	P	Pn	17 06 56.0	+2.3
	3μm2μm284nm,1.0s						
SPSI	Sidrap Palu	8.71	249	P	Pn	17 06 58.3	+2.6
BKSI	Bulukumba	8.95	241	P	Pn	17 07 03.0	+3.9
	3μm296nm,0.7s						
KAPI	Kappang	9.13	243	Pn	Pn	17 07 04.9	+3.2
	15nm,0.3s,baz=55,slow=7.4,SNR=52						
KAPI				Sn	Sn	17 08 44.3	-0.3
	1.9nm,0.3s,baz=68,slow=20,SNR=0.9						
KAPI				LR	LR	17 10 29.0	
	comp=Z,1μm,21.7s,baz=72,slow=37						
KAPI	Kappang	9.13	243	P	Pn	17 07 04.9	+3.2
KAPI				S	Sn	17 08 42.9	-1.7
KAPI	Kappang	9.13	243		Pn	17 07 02.0	+0.4
KAPI	Kappang	9.13	243	P	Pn	17 07 05.0	+3.4
KAPI	Kappang	9.13	243	S	Sn	17 08 44.6	0.0
KAPI	Kappang	9.13	243	P	Pn	17 07 04.8	+3.2
	97nm,0.7s						
MMSI	Mamuju	9.19	259	P	Pn	17 07 05.3	+2.8
	3μm331nm,1.2s						
PMSI	Majene	9.37	254	P	Pn	17 07 08.5	+3.5
	5μm560nm,0.9s						
SOEI	Soe	9.51	202		Pn	17 07 06.7	-0.3
SOEI	Soe	9.51	202	P	Pn	17 07 08.4	+1.4
SOEI	Soe	9.51	202	P	Pn	17 07 11.8	+4.8
	4μm4μm242nm,1.0s						
MMRI	Maumere	9.54	216		Pn	17 07 06.6	-0.7
MMRI	Maumere	9.54	216	P	Pn	17 07 09.5	+2.2
MMRI	Maumere	9.54	216	P	Pn	17 07 11.6	+4.3
	2μm2μm152nm,1.2s						
EDFI	Ende, Flores	9.97	218	P	Pn	17 07 17.2	+4.1
	2μm120nm,0.9s						
BATI	Baumata	10.16	205	Pn	Pn	17 07 20.9	+5.1
	6.1nm,0.3s,baz=61,slow=1.1,SNR=25						
BATI				LR	LR	17 11 42.2	
	comp=Z,1μm,19.1s,baz=16,slow=40						
BATI	Baumata	10.16	205	P	Pn	17 07 20.3	+4.5
	2μm2μm213nm,0.9s						
I39PW	PALAU INFRASON	10.67	38	I	I	18 08 30.0	
	baz=222,slow=318,SNR=1.3						
SMPI	Sarmi	10.82	96	P	Pn	17 07 28.1	+3.3
LBFI	Labuhan Bajo,	10.99	227	P	Pn	17 07 30.3	+3.2
	3μm173nm,0.8s						
BKB	Balikpapan	11.04	268		Pn	17 07 27.5	-0.3
BKB	Balikpapan	11.04	268	P	Pn	17 07 30.1	+2.3
BKB	Balikpapan	11.04	268	P	Pn	17 07 29.0	+1.2
	3μm2μm167nm,0.6s						
TARAI	Tarakan	11.19	292	P	Pn	17 07 30.1	+0.3
	4μm222nm,0.8s						
WSI	Waingapu	11.55	221	P	Pn	17 07 40.0	+5.2
	565nm,1.5s						
BASI	Baing, Sumba	11.79	218	P	Pn	17 07 41.9	+3.8
	2μm4μm250nm,0.9s						
DRS	Darwin Rock St	11.82	166	P	Pn	17 07 39.2	+0.8
WBSI	Waikabubak, Su	12.14	224	P	Pn	17 07 46.7	+3.8
	3μm210nm,1.1s						
DBNI	Kabupaten Domp	12.20	232	P	Pn	17 07 47.2	+3.6
	2μm154nm,1.4s						
MTN	Manton Dam	12.27	165	P	Pn	17 07 44.5	-0.1
	comp=Z,151nm,0.6s,comp=Z,0.0nm						
MTN	Manton Dam	12.27	165		Pn	17 07 43.9	-0.7
GENI	Genyem	12.34	98	P	Pn	17 07 49.0	+3.5
GENI	Genyem	12.34	98	P	Pn	17 07 48.4	+2.9
	comp=Z,4μmcomp=Z,3μmcomp=Z,275nm,1.2s						
KDU	Kakadu	12.53	159	P	Pn	17 07 46.6	-1.6
PLAI	Plampang	12.81	232	P	Pn	17 07 54.7	+2.7
PLAI	Plampang	12.81	232	P	Pn	17 07 57.1	+5.1
	comp=Z,3μmcomp=Z,286nm,1.0s						
JAY	Jayapura	12.86	97	Pn	Pn	17 07 54.2	+1.5
	comp=Z,0.6nm,0.3s,baz=246,slow=4.4,SNR=6.3						
JAY				LR	LR	17 14 02.4	
	comp=Z,2μm,20.8s,baz=294,slow=42						
	comp=Z,30nm,0.9s						
JAY	Jayapura	12.86	97	P	Pn	17 07 54.1	+1.4
MTKI	Muara Teweh, K	13.04	270	P	Pn	17 07 56.9	+1.8
	comp=Z,94nm,1.2s						
BBKI	Banjar Baru	13.33	259	P	Pn	17 08 03.5	+4.4
	comp=Z,3μmcomp=Z,3μmcomp=Z,238nm,1.4s						
TWSI	Taliwang, Sumb	13.48	234	P	Pn	17 08 04.3	+3.2
	comp=Z,1μmcomp=Z,134nm,1.0s						
KKM	Kota Kinabalu	13.59	301		Pn	17 08 01.2	-1.6
KKM	Kota Kinabalu	13.59	301	P	Pn	17 08 06.3	+3.5
KKM	Kota Kinabalu	13.59	301	P	Pn	17 08 05.4	+2.6
KLNI	Mataram	13.96	237	P	Pn	17 08 10.9	+3.2
	comp=Z,1μmcomp=Z,106nm,0.8s						
KHKI	Kahang-Kahang	14.34	239	P	Pn	17 08 16.6	+3.7
	comp=Z,157nm,0.9s						
MMPI	Merauke	14.49	122	P	Pn	17 08 15.8	+0.8
	comp=Z,6μmcomp=Z,315nm,1.1s						
KNRA	Kununurra	14.69	177	P	Pn	17 08 16.8	-1.0
	comp=Z,121nm,0.9s						
KNRA	Kununurra	14.69	177		Pn	17 08 16.5	-1.3
RTBI	Rangdo, Negare	14.96	240	P	Pn	17 08 24.4	+3.0
	comp=Z,2μmcomp=Z,144nm,1.0s						
KMMI	Kalianget	15.21	246	P	Pn	17 08 26.9	+2.2
	comp=Z,85nm,1.0s						
ABJI	Asem Bagus	15.27	243	P	Pn	17 08 26.0	+0.5
	comp=Z,3μmcomp=Z,179nm,1.1s						
JAGI	Jajag, Banyuwa	15.65	241		Pn	17 08 28.6	-1.9
JAGI	Jajag, Banyuwa	15.65	241	P	Pn	17 08 32.2	+1.7
JAGI	Jajag, Banyuwa	15.65	241	P	Pn	17 08 32.8	+2.3
	comp=Z,2μmcomp=Z,2μmcomp=Z,171nm,1.1s						
BLJI	Banyuglugur	15.82	244	P	Pn	17 08 36.5	+3.8
	comp=Z,2μmcomp=Z,170nm,0.8s						
SBUM	Sibu	16.06	282		Pn	17 08 34.2	-1.6
SBUM	Sibu	16.06	282	P	Pn	17 08 37.7	+1.9
SBUM	Sibu	16.06	282	P	Pn	17 08 34.9	-0.9
GMJI	Gumukmas	16.18	243	P	Pn	17 08 39.9	+2.5
	comp=Z,3μmcomp=Z,211nm,1.1s						
TGY	Tagaytay City	16.45	335	Pn	Pn	17 08 40.9	+0.1
	comp=Z,125nm,0.3s,baz=194,slow=12,SNR=5.2						
TGY				LR	LR	17 16 17.6	
	comp=Z,553nm,18.2s,baz=114,slow=42						
GRJI	Gresik	16.53	248	P	Pn	17 08 45.1	+3.3
	comp=Z,2μmcomp=Z,122nm,1.3s						
FITZ	Fitzroy Crossi	17.23	187	P	Pn	17 08 48.9	-1.7
FITZ	Fitzroy Crossi	17.23	187	P	Pn	17 08 50.3	-0.3
	comp=Z,2.1nm,0.3s,baz=20,slow=11,SNR=85						
FITZ				LR	LR	17 16 54.6	
	comp=Z,677nm,20.1s,baz=23,slow=42						
	comp=Z,28nm,0.7s						
FITZ	Fitzroy Crossi	17.23	187		Pn	17 08 48.5	-2.0
FITZ	Fitzroy Crossi	17.23	187	P	Pn	17 08 49.3	-1.3
SJI	Sawahan	17.48	247	P	Pn	17 08 57.1	+3.2
SNJI	Sawahan-Nganju	17.51	247	P	Pn	17 08 57.7	+3.4
NGJI	Ngawi	17.63	248	P	P	17 09 00.3	+3.7
	comp=Z,138nm,0.9s						
PCJI	Pacitan	18.20	246	P	Pn	17 09 05.1	+2.5
	comp=Z,3μmcomp=Z,237nm,1.2s						
SMRI	Semarang	18.48	250	P	P	17 09 04.0	-2.0
SMRI	Semarang	18.48	250	P	P	17 09 07.7	+1.7
SMRI	Semarang	18.48	250	P	P	17 09 08.2	+2.2
	comp=Z,192nm,1.3s						
UGM	Wanagama	18.69	248		P	17 09 06.6	-1.8
UGM	Wanagama	18.69	248	P	P	17 09 09.2	+0.8
YOGI	Yogyakarta	18.87	248	P	P	17 09 12.3	+2.0
	comp=Z,288nm,1.1s						
MANU	Manus Island	19.45	94	P	P	17 09 14.2	-2.5
CTJI	Waduk Cacaban	19.66	252	P	P	17 09 20.8	+1.9

	comp=Z,3µmcomp=Z,161nm,1.1s						
WB0	Warramunga Arr	19.78	162	P	P	17 09 18.1	-2.1
COEN	Coen	19.88	131	P	P	17 09 22.1	+0.7
	comp=Z,203nm,1.4s,comp=Z,0.0nm						
COEN	Coen	19.88	131	P	P	17 09 21.6	+0.2
COEN				IAmb	IAmb	17 09 24.1	
	comp=Z,310nm,1.2s						
COEN	Coen	19.88	131	P	P	17 09 22.2	+0.8
WRAB	Tennant Creek	19.92	162		P	17 09 20.0	-1.8
WRAB	Tennant Creek	19.92	162	P	P	17 09 20.2	-1.5
WRAB	Tennant Creek	19.92	162	*ce*P	P	17 09 20.5	-1.2
WRAB				pmax	pmax		
	comp=Z,190nm,1.7s						
WRA	Warramunga Arr	19.93	162	P	P	17 09 20.8	-1.0
	comp=Z,3.7nm,0.3s,baz=341,slow=11,SNR=48						
WRA				S	S	17 12 50.8	-15
	comp=Z,10nm,0.8s,baz=318,slow=6.2,SNR=5.1						
WRA				LR	LR	17 17 27.0	
	comp=Z,2µm,20.8s,baz=345,slow=38						
	comp=Z,22nm,0.6s						
WRA	Warramunga Arr	19.93	162	P	P	17 09 18.5	-3.3
WB2	Warramunga Arr	19.93	162	P	P	17 09 20.5	-1.3
WR8	Warramunga Arr	19.99	162	P	P	17 09 20.2	-2.3
KPJI	Karang Pucung	19.99	251	P	P	17 09 24.6	+2.0
	comp=Z,2µmcomp=Z,208nm,1.0s						
WR0	Warramunga Arr	20.00	162	P	P	17 09 19.1	-3.6
TPI	Tanjungpandan	20.36	265	P	P	17 09 27.7	+1.2
PMG	Port Moresby	20.91	114	P	P	17 09 32.8	+0.3
	comp=Z,58nm,1.0s,baz=293,slow=11,SNR=17						
PMG				LR	LR	17 20 57.1	
	comp=Z,1µm,19.4s,baz=318,slow=46						
	comp=Z,58nm,1.0s						
PMG	Port Moresby	20.91	114	P	P	17 09 31.9	-0.6
PMG				IAmb	IAmb	17 09 39.4	
	comp=Z,371nm,1.6s						
PMG	Port Moresby	20.91	114	P	P	17 09 33.4	+0.9
PMG	Port Moresby	20.91	114	P	P	17 09 33.1	+0.6
	comp=Z,3µmcomp=Z,2µmcomp=Z,145nm,1.0s						
BBJI	Bungbulang	21.24	252	P	P	17 09 36.8	+0.6
BBJI	Bungbulang	21.24	252	P	P	17 09 36.2	0.0
	comp=Z,119nm,0.8s						
MBWA	Marble Bar	21.66	201	P	P	17 09 40.0	-0.5
	comp=Z,145nm,1.1s						
MBWA	Marble Bar	21.66	201	P	P	17 09 40.0	-0.5
MBWA				S	S	17 13 34.9	-5.6
MBWA	Marble Bar	21.66	201	P	P	17 09 38.5	-2.0
MBWA				IAmb	IAmb	17 09 42.1	
	comp=Z,276nm,1.4s						
MBWA	Marble Bar	21.66	201	P	P	17 09 40.6	+0.1
CNJI	Cibinong	21.70	252	P	P	17 09 41.1	+0.1
	comp=Z,106nm,1.0s						
PPBI	Pangkal Pinang	21.83	266	P	P	17 09 42.1	-0.3
DBJI	Dramaga	21.86	255	P	P	17 09 45.0	+2.2
	comp=Z,130nm,1.0s						
TNG	Tangerang	21.88	256	P	pP	17 09 44.7	-0.8
TNG				P	P	17 09 44.3	+1.4
PSAC2	Pilbara Seismi	21.97	200	P	P	17 09 43.2	-0.6
	comp=Z,149nm,1.1s						
PSAC1	Pilbara Seismi	21.98	201	P	P	17 09 43.6	-0.3
	comp=Z,108nm,1.1s						
PSA00	Pilbara Seismi	22.00	200	P	P	17 09 44.5	+0.3
	comp=Z,125nm,1.0s						
PSA00	Pilbara Seismi	22.00	200	P	P	17 09 42.9	-1.3
PSA00				IAmb	IAmb	17 09 45.8	
	comp=Z,199nm,1.3s						
PSA00	Pilbara Seismi	22.00	200	P	P	17 09 42.9	-1.3
PSA00				IAmb	IAmb	17 09 45.8	
	comp=Z,190nm,1.3s						
PSA00	Pilbara Seismi	22.00	200	P	P	17 09 44.3	+0.1
GUMO	Guam	22.12	49	LR	LR	17 17 30.9	
	comp=Z,568nm,19.6s,baz=227,slow=34						
SKJI	Sukabumi	22.16	254	P	P	17 09 45.3	-0.7
	comp=Z,3µmcomp=Z,120nm,0.9s						
SBJI	Serang	22.36	256	P	P	17 09 48.8	+0.6
	comp=Z,5µmcomp=Z,282nm,1.5s						
QIS	Mount Isa	22.61	150	P	P	17 09 50.7	-0.1
	comp=Z,255nm,1.3s,comp=Z,0.0nm						
QIS	Mount Isa	22.61	150	P	P	17 09 50.2	-0.6
BLSI	Bandar Lampung	23.08	258	P	P	17 09 57.1	+1.3
	comp=Z,2µmcomp=Z,146nm,0.5s						
DLV	Lat	23.16	304	P	P	17 09 55.0	-1.8
DLV	Lat	23.16	304	P	P	17 09 57.6	+0.9
PMBI	Palembang	23.24	265	P	P	17 10 01.0	+3.6
PMBI	Palembang	23.24	265	P	P	17 09 59.7	+2.3
	comp=Z,2µmcomp=Z,321nm,0.7s						
AS31	Alice Springs	23.35	166	P	P	17 09 57.5	-1.0
ASAR	Alice Springs	23.35	166	P	P	17 09 57.8	-0.7
	comp=Z,52nm,0.6s,baz=344,slow=11,SNR=837						
ASAR				S	S	17 14 10.6	-0.8
	comp=Z,19nm,0.9s,baz=346,slow=20,SNR=7.8						
ASAR				LR	LR	17 19 30.6	
	comp=Z,1µm,18.7s,baz=346,slow=38						
	comp=Z,52nm,0.6s						
ASAR	Alice Springs	23.35	166	P	P	17 09 57.3	-1.1
ASAR					S	17 14 06.9	-4.5
DSRI	Dabo	23.36	271	P	P	17 09 59.8	+1.2
	comp=Z,2µmcomp=Z,1µmcomp=Z,115nm,1.2s						
KLI	Kotabumi	23.38	260	P	P	17 10 00.5	+1.7
	comp=Z,2µmcomp=Z,5µmcomp=Z,423nm,1.6s						
KLSI		23.48	260	P	P	17 10 01.5	+1.7
	comp=Z,5µmcomp=Z,367nm,1.9s						
TPRI	Tanjung Pinang	23.48	274	P	P	17 10 01.4	+1.6
	comp=Z,84nm,1.1s						
MTSU	Mount Surprise	23.49	138	P	P	17 10 00.3	+0.5
	comp=Z,66nm,1.0s						
MTSU	Mount Surprise	23.49	138	P	P	17 10 00.4	+0.5
KASI	Kota Agung	23.84	258	P	P	17 10 04.3	+1.0
	comp=Z,2µmcomp=Z,173nm,1.2s						
WRKA	Warakurna	23.99	179	P	P	17 10 04.7	0.0
	comp=Z,109nm,1.2s						
MDSI	Maura Dua	23.99	261	P	P	17 10 06.1	+1.3
	comp=Z,4µmcomp=Z,374nm,1.2s						
XMI	Christmas Isla	24.06	246	P	P	17 10 06.1	+0.7
LWLI	Liwa	24.19	260	P	P	17 10 07.9	+1.2
	comp=Z,5µmcomp=Z,412nm,0.8s						
MYKOM	Kota Tinggi	24.23	276	P	P	17 10 05.3	-1.7
MYKOM	Kota Tinggi	24.23	276	P	P	17 10 08.7	+1.7
MYKOM	Kota Tinggi	24.23	276	P	P	17 10 07.9	+0.9
	comp=Z,107nm,1.0s						
JMBI	JAMBI	24.30	268	P	P	17 10 10.8	+3.2
	comp=Z,456nm,1.5s						
TWGBT	Beinan	24.51	345	P	P	17 10 08.3	-1.1
TWG	Pinlang	24.52	345	P	P	17 10 06.8	-2.6
TWG				IAmb	IAmb	17 10 12.0	
	comp=Z,113nm,0.7s						
YULB	Yu-li	25.01	345	P	P	17 10 11.9	-2.0
YULB	Yu-li	25.01	345	P	P	17 10 13.9	0.0
TPUB	Ta-pu	25.09	344	P	P	17 10 13.3	-1.4
TPUB	Ta-pu	25.09	344	P	P	17 10 16.7	+2.0
MNAI	Manna	25.18	262	P	P	17 10 13.8	-1.9
MNAI	Manna	25.18	262	P	P	17 10 17.5	+1.8
MNAI	Manna	25.18	262	P	P	17 10 17.0	+1.3
	comp=Z,528nm,1.4s						
GIRL	Giralia	25.38	211	P	P	17 10 17.5	+0.2
	comp=Z,171nm,1.2s						
GIRL	Giralia	25.38	211	P	P	17 10 16.5	-0.8
GIRL				IAmb	IAmb	17 10 20.5	
	comp=Z,141nm,1.0s						
KSI	Kapahiang	25.47	263	P	P	17 10 19.9	+1.6
	comp=Z,255nm,0.9s						
YOJ	Yonaguni jima	25.67	350	P	P	17 10 18.4	-1.5
YOJ				IAmb	IAmb	17 10 52.4	
	comp=Z,184nm,1.0s						
YOJ	Yonaguni jima	25.67	350	P	P	17 10 23.0	+3.1
YOJ	Yonaguni jima	25.67	350	P	P	17 10 18.4	-1.5
YOJ				pmax	pmax		
	comp=Z,184nm,1.0s						
NACB	Ninganchiao	25.68	347	P	P	17 10 18.0	-2.1
NACB	Ninganchiao	25.68	347	P	P	17 10 22.6	+2.6
MASI	Maura Aman, Be	25.77	265	P	P	17 10 22.7	+1.6
UBSI	University, Be	25.80	263	P	P	17 10 22.2	+1.0
TV1H	Townsville Har	25.96	136	P	P	17 10 25.1	+2.5
EGSI	Enggano, Bengk	25.99	260	P	P	17 10 24.0	+1.0
	comp=Z,152nm,0.8s						
CTA	Charters Tower	26.16	138	P	P	17 10 26.6	+2.2
CTA	Charters Tower	26.16	138	LR	LR	17 22 25.6	
	comp=Z,1µm,20.1s,baz=329,slow=40						
CTA	Charters Tower	26.16	138	P	P	17 10 26.8	+2.4
CTA	Charters Tower	26.16	138	P	P	17 10 27.2	+2.8
CTAO	Charters Tower	26.16	138	P	P	17 10 22.8	-1.6
CTAO				IAmb	IAmb	17 10 28.5	
	comp=Z,108nm,1.1s						
CTAO	Charters Tower	26.16	138	P	P	17 10 26.8	+2.4
CTAO	Charters Tower	26.16	138	P	P	17 10 22.8	-1.6
CTAO				pmax	pmax		
	comp=Z,108nm,1.1s						
YHNB	Yeheng	26.21	346	P	P	17 10 23.2	-1.7
YHNB	Yeheng	26.21	346	P	P	17 10 27.5	+2.6
TATO	Taipei	26.48	347	P	P	17 10 26.1	-1.1
TATO				IAmb	IAmb	17 10 32.8	
	comp=Z,136nm,0.9s						
TATO	Taipei	26.48	347	P	P	17 10 29.7	+2.5
KRJI	Kerinci	26.49	267	P	P	17 10 29.7	+2.1
QIZ	Qiongzhong	26.62	319	P	P	17 10 26.8	-1.8
QIZ	Qiongzhong	26.62	319	P	P	17 10 29.0	+0.4
QIZ				S	S	17 15 02.0	-1.7
QIZ				pmax	pmax		
	comp=Z,45nm,1.7s						
QIZ				pmax	pmax		
	comp=Z,510nm,5.5s						
QIZ				LR	LR		
	comp=Z,530nm,14.4s						
QIZ				LR	LR		
	comp=Z,470nm,15.2s						
QIZ				LR	LR		
	comp=Z,850nm,22.3s						
QIZ	Qiongzhong	26.62	319	P	P	17 10 32.0	+3.4
KNMB	Chin-men Tao	26.87	340	P	P	17 10 28.8	-1.9
KNMB				IAmb	IAmb	17 10 37.5	
	comp=Z,151nm,0.9s						
BKNI	Bangkinang	26.92	272	P	P	17 10 29.3	-2.1
BKNI	Bangkinang	26.92	272	P	P	17 10 33.5	+2.1
BKNI	Bangkinang	26.92	272	P	P	17 10 32.2	+0.8
	comp=Z,230nm,1.2s						
MEEK	Meekatharra	27.11	199	P	P	17 10 31.9	-1.1
	comp=Z,63nm,1.1s						
MEEK	Meekatharra	27.11	199	P	P	17 10 31.8	-1.1
QZH	Quanzhou	27.25	341	P	P	17 10 36.8	+2.6
QZH				S	S	17 15 11.8	-1.6
QZH				pmax	pmax		
	comp=Z,160nm,1.1s						
QZH				LR	LR		
	comp=Z,690nm,13.7s						
QZH				LR	LR		
	comp=Z,620nm,15.5s						
IPM	Ipoh	27.42	281	P	P	17 10 33.7	-2.2
IPM	Ipoh	27.42	281	P	P	17 10 37.1	+1.2
IPM	Ipoh	27.42	281	P	P	17 10 36.8	+0.9
	comp=Z,61nm,1.0s						
PDSI	Padang	27.47	270	P	P	17 10 37.0	+0.6
	comp=Z,77nm,1.1s						
PPI	Padang Panjang	27.54	271	P	P	17 10 37.8	+0.8
	comp=Z,2µmcomp=Z,149nm,1.0s						
JOW	Kunigami	27.59	1	P	P	17 10 37.9	+0.7
	comp=Z,73nm,0.9s,baz=180,slow=6.5,SNR=11						
JOW				LR	LR	17 20 51.0	
	comp=Z,1µm,21.2s,baz=184,slow=35						
	comp=Z,73nm,0.9s						
JOW	Kunigami	27.59	1	P	P	17 10 36.0	-1.2
JOW				IAmb	IAmb	17 10 42.8	
	comp=Z,108nm,1.0s						
GZH	Guangzhou	27.76	330	P	P	17 10 44.0	+5.2
GZH				PcP	PcP	17 13 54.5	-1.0
GZH				S	S	17 15 29.9	+8.3
GZH				pmax	pmax		
	comp=Z,150nm,1.1s						
KULM	Kulim	27.94	283	P	P	17 10 39.1	-1.5
KULM				IAmb	IAmb	17 10 44.1	
	comp=Z,112nm,1.7s						
KULM	Kulim	27.94	283	P	P	17 10 40.2	-0.3
KULM	Kulim	27.94	283	P	P	17 10 41.7	+1.2
PPSI	Pulau Pagai	27.97	266	P	P	17 10 40.9	+0.1
	comp=Z,3µmcomp=Z,264nm,1.4s						
MNSI	Mandailing Nat	28.41	273	P	P	17 10 45.3	+0.6
	comp=Z,63nm,1.1s						
SISI	Saibi	28.84	269	P	P	17 10 48.7	+0.1
	comp=Z,2µmcomp=Z,135nm,1.1s						
PSI	Prapat	29.24	277	P	P	17 10 52.2	0.0
	comp=Z,860nmcomp=Z,89nm,0.9s						
INKA	Innaminka	29.37	156	P	P	17 10 51.0	-2.0
PBSI	Pulau Batu	29.67	271	P	P	17 10 55.2	-0.7
	comp=Z,101nm,1.2s						
TSI	Tuntungan	29.68	279	P	P	17 10 56.9	+0.9
	comp=Z,150nm,0.9s						
FORT	Forrest	29.70	180	P	P	17 10 55.6	-0.4
	comp=Z,73nm,1.1s						
FORT	Forrest	29.70	180	P	P	17 10 54.1	-1.9
FORT				IAmb	IAmb	17 10 57.4	
	comp=Z,118nm,1.4s						
QLP	Quilpie	29.95	150	P	P	17 10 59.4	+1.1
	comp=Z,89nm,0.8s						
QLP	Quilpie	29.95	150	P	P	17 10 59.6	+1.3
MORW	Morawa	30.21	201	P	P	17 10 59.2	-1.4
	comp=Z,15nm,1.1s						
MORW	Morawa	30.21	201	P	P	17 10 59.1	-1.4
MORW	Morawa	30.21	201	P	P	17 11 00.6	0.0
GSI	Gunungsitoli	30.44	274	P	P	17 11 00.9	-1.8
GSI	Gunungsitoli	30.44	274	P	P	17 11 02.0	-0.8
GSI	Gunungsitoli	30.44	274	P	P	17 11 02.4	-0.4
	comp=Z,2µmcomp=Z,156nm,1.0s						
KCSI	Kotacane, Aceh	30.47	278	P	P	17 11 02.4	-0.6
	comp=Z,699nmcomp=Z,71nm,1.0s						
KMBL	Kambalda	30.83	190	P	P	17 11 05.3	-0.6
	comp=Z,32nm,1.0s						
TPTI		31.02	278	P	P	17 11 07.8	-0.1
	comp=Z,878nmcomp=Z,62nm,0.9s						
JCJ	Chichijima	31.04	25	LR	LR	17 23 39.7	
	comp=Z,455nm,18.9s,baz=197,slow=36						
JCJ	Chichijima	31.04	25	P	P	17 11 05.2	-2.7
GULI	GuiLin	31.11	328	P	P	17 11 14.0	+5.5
GULI				pmax	pmax		
	comp=Z,35nm,1.1s						
GULI				LR	LR		
	comp=Z,540nm,13.9s						
GULI				LR	LR		
	comp=Z,400nm,14.6s						
GULI				LR	LR		
	comp=Z,640nm,16.3s						
AUNRC	North Rockhamp	31.28	137	P	P	17 11 12.0	+2.0
BLDU	Ballidu	31.41	199	P	P	17 11 09.9	-1.2
	comp=Z,49nm,1.1s						
BLDU	Ballidu	31.41	199	P	P	17 11 10.8	-0.2
SNSI	Sinabang, Aceh	31.77	276	P	P	17 11 15.0	+0.5
	comp=Z,205nm,1.2s						
MLSI	Meulaboh, Aceh	31.93	280	P	P	17 11 15.3	-0.6
KLBR	Kellerberrin	32.00	197	P	P	17 11 15.6	-0.7
	comp=Z,118nm,0.8s						
KLBR	Kellerberrin	32.00	197	P	P	17 11 15.8	-0.5
SLVN	Son La	32.26	315	P	P	17 11 16.9	-1.8
SLVN				IAmb	IAmb	17 11 24.8	
	comp=Z,66nm,1.4s						
SLVN	Son La	32.26	315	P	P	17 11 20.7	+2.0
SSE	Sheshan	32.47	349	P	P	17 11 20.8	+0.4
SSE				S	S	17 16 34.9	-0.4
SSE				pmax	pmax		
	comp=Z,23nm,0.7s						
SSE				pmax	pmax		
	comp=Z,81nm,3.5s						
SSE				LR	LR		
	comp=Z,180nm,16.5s						
SSE				LR	LR		
	comp=Z,300nm,16.5s						
TATA	Tatamba Isabel	32.60	104	P	P	17 11 23.4	+1.7
BBOO	Buckleboo	32.64	167	P	P	17 11 22.0	+0.2
	comp=Z,125nm,1.2s						
BBOO	Buckleboo	32.64	167	P	P	17 11 21.0	-0.9
BBOO	Buckleboo	32.64	167	P	P	17 11 22.2	+0.3
SAVO	Savo Central	32.76	106	P	P	17 11 24.9	+1.7
MUN	Mundaring	32.83	199	P	P	17 11 22.1	-1.4
	comp=Z,30nm,1.3s						
MUN	Mundaring	32.83	199	P	P	17 11 23.3	-0.2
EIDS	Eidsvold	33.02	139	P	P	17 11 25.8	+0.5
	comp=Z,28nm,1.6s						
EIDS	Eidsvold	33.02	139	P	P	17 11 23.3	-2.0
EIDS	Eidsvold	33.02	139	P	P	17 11 27.0	+1.7
WHYH	Whyalla	33.21	165	P	P	17 11 27.9	+1.1
STKA	Stephens Creek	33.39	159	P	P	17 11 28.4	0.0
	comp=Z,376nm,1.2s						
STKA	Stephens Creek	33.39	159	P	P	17 11 29.2	+0.7
	comp=Z,58nm,1.0s,baz=329,slow=9.6,SNR=50						
STKA				LR	LR	17 26 01.8	
	comp=Z,982nm,19.7s,baz=328,slow=38						
	comp=Z,58nm,1.0s						
STKA	Stephens Creek	33.39	159	P	P	17 11 28.1	-0.4
STKA	Stephens Creek	33.39	159	P	P	17 11 29.6	+1.1
STKA	Stephens Creek	33.39	159	*d i*P	P	17 11 29.3	+0.8
NWAO	Narrogin (SRO)	33.40	196	P	P	17 11 27.6	-1.0
	comp=Z,53nm,1.3s						
NWAO	Narrogin (SRO)	33.40	196	P	P	17 11 27.4	-1.1
	comp=Z,85nm,0.9s						
NWAO	Narrogin (SRO)	33.40	196	P	P	17 11 28.2	-0.4
NWAO	Narrogin (SRO)	33.40	196	P	P	17 11 27.5	-1.0
NWAO				IAmb	IAmb	17 11 29.5	
	comp=Z,37nm,0.8s						
NWAO	Narrogin (SRO)	33.40	196	P	P	17 11 29.0	+0.4
NWAO	Narrogin (SRO)	33.40	196	P	P	17 11 28.9	+0.4
NWAO	Narrogin (SRO)	33.40	196	P	P	17 11 27.5	-1.0
NWAO				pmax	pmax		
	comp=Z,37nm,0.8s						
AUJCS	Jamestown Cent	33.65	164	P	P	17 11 31.9	+1.2
WHN	Wuhan	33.85	339	⇓P	P	17 11 33.8	+1.4
WHN				LR	LR		
	comp=Z,2µm,16.7s						
NJ2	Nanjing	33.89	346	⇑P	P	17 11 33.9	+1.1
NJ2				pmax	pmax		
	comp=Z,13nm,0.9s						
NJ2				LR	LR		
	comp=Z,930nm,19.0s						
NJ2				LR	LR		
	comp=Z,650nm,15.2s						
NJ2				LR	LR		
	comp=Z,420nm,9.3s						
HTT	Hallett	33.95	163	P	P	17 11 33.6	+0.2
	comp=Z,31nm,1.5s						
HTT	Hallett	33.95	163	P	P	17 11 34.7	+1.3
HTT	Hallett	33.95	163	P	P	17 11 34.7	+1.3
JNU	Nakatsue	33.97	4	P	P	17 11 33.1	-0.3
	comp=Z,37nm,1.1s,baz=178,slow=7.7,SNR=6.3						
JNU				LR	LR	17 24 41.3	
	comp=Z,1µm,20.0s,baz=184,slow=35						
	comp=Z,37nm,1.1s						
JNU	Nakatsue	33.97	4	P	P	17 11 32.4	-1.1
JNU				IAmb	IAmb	17 11 38.2	
	comp=Z,100nm,1.3s						
JNU	Nakatsue	33.97	4	P	P	17 11 34.4	+0.9
AUCAS	Cummins Area S	33.97	168	P	P	17 11 34.9	+1.5
GYA	Guiyang	34.08	325	⇑P	P	17 11 36.3	+1.6
GYA				S	S	17 17 00.4	-0.3
GYA				sS	sS	17 17 15.6	+10
GYA				pmax	pmax		
	comp=Z,72nm,1.4s						
AULRC	Lightning Ridg	34.19	148	P	P	17 11 35.8	+0.3
CM31	Chiang Mai Arr	34.40	305	P	P	17 11 40.0	+2.7
	SNR=16						
CM31	Chiang Mai Arr	34.40	305	P	P	17 11 36.6	-0.7
CMAR	Chiang Mai Arr	34.40	305	P	P	17 11 38.4	+1.0
	comp=Z,12nm,1.0s,baz=139,slow=8.3,SNR=34						
CMAR				PcP	PcP	17 14 13.9	+0.7
	comp=Z,2.8nm,0.9s,baz=151,slow=1.8,SNR=5.4						
	comp=Z,12nm,1.0s						
CMAR	Chiang Mai Arr	34.40	305	P	P	17 11 36.2	-1.1
CMAR					PcP	17 14 12.3	-0.9
CMAR	Chiang Mai Arr	34.40	305	*i* P	P	17 11 38.5	+1.1
CMAR				pmax	pmax		
	comp=Z,11nm,1.0s						
CHTO	Chiang Mai	34.58	306	P	P	17 11 40.3	+1.4
CHTO				S	S	17 17 05.1	-3.3
CHTO	Chiang Mai	34.58	306	P	P	17 11 37.3	-1.7
CHTO	Chiang Mai	34.58	306	P	P	17 11 39.8	+0.8
CHTO	Chiang Mai	34.58	306	P	P	17 11 39.3	+0.3
CHTO	Chiang Mai	34.58	306	P	P	17 11 37.3	-1.7
CHTO				pmax	pmax		
	comp=Z,40nm,1.1s						
CMSA	Cobar Meteorol	34.78	153	P	P	17 11 41.1	+0.5
	comp=Z,38nm,1.3s						
CMSA	Cobar Meteorol	34.78	153	P	P	17 11 41.6	+1.0
JMN	Monobe	34.91	9	P	P	17 11 40.2	-1.4
RKGY	Rocky Gully	35.05	196	P	P	17 11 43.6	+0.8
	comp=Z,106nm,1.0s						
TW1H	Toowoomba 1 Ha	35.10	141	P	P	17 11 45.1	+1.6
AUMAR	Marden Senior	35.25	165	P	P	17 11 46.0	+1.5
GHSS	Government Hou	35.27	165	P	P	17 11 47.3	+2.7
KMI	Kunming	35.56	318	P	P	17 11 49.9	+2.3
KMI				S	S	17 17 23.5	-0.3
KMI				pmax	pmax		
	comp=Z,93nm,1.2s						
KMI				LR	LR		
	comp=Z,280nm,15.2s						
KMI				LR	LR		
	comp=Z,350nm,16.0s						
KMI				LR	LR		
	comp=Z,470nm,17.1s						
JHJ	Hachijo jima 2	35.65	17	LR	LR	17 26 40.4	
	comp=Z,424nm,18.6s,baz=162,slow=37						
ENH	Enshi	35.65	332	P	P	17 11 47.1	-0.9
ENH	Enshi	35.65	332	P	P	17 11 48.1	0.0
AUMBR	Murray Bridge	35.65	164	P	P	17 11 49.3	+1.3
AUWSH	Wavell State H	35.69	140	P	P	17 11 49.6	+1.2
JSG	Sagara	36.68	14	P	P	17 11 55.7	-1.0
AUDCS	Dubbo College	36.76	150	P	P	17 11 58.3	+0.8
ARMA	Armidale	36.98	145	P	P	17 12 00.9	+1.3
	comp=Z,126nm,1.3s						
ARMA	Armidale	36.98	145	P	P	17 11 58.8	-0.8
ARMA				IAmb	IAmb	17 12 02.7	
	comp=Z,103nm,0.9s						
ARMA	Armidale	36.98	145	P	P	17 12 01.2	+1.7
INU	Inuyama	37.06	12	P	P	17 11 59.7	-0.2
INU				IAmb	IAmb	17 12 05.3	
	comp=Z,128nm,1.2s						
INU	Inuyama	37.06	12	P	P	17 12 00.2	+0.2
AUPHS	Peel High Scho	37.07	146	P	P	17 12 01.6	+1.4
TJN	Taejon	37.10	359	P	P	17 11 59.8	-0.5
TJN	Taejon	37.10	359	P	P	17 11 59.8	-0.5
TJN				pmax	pmax		
	comp=Z,634nm,1.7s						
PZH	PanZhiHua	37.16	319	P	P	17 12 07.0	+5.9
PZH				PcP	PcP	17 14 26.1	+4.7
PZH				S	S	17 17 45.3	-2.7
PZH				pmax	pmax		
	comp=Z,80nm,1.3s						
PZH				pmax	pmax		
	comp=Z,130nm,4.9s						
PZH				LR	LR		
	comp=Z,290nm,20.4s						
PZH				LR	LR		
	comp=Z,350nm,17.9s						
PZH				LR	LR		
	comp=Z,450nm,18.0s						
JGF	Kuroka	37.37	13	P	P	17 12 01.7	-1.0
JGF				IAmb	IAmb	17 12 07.8	
	comp=Z,89nm,1.2s						
JGF	Kuroka	37.37	13	P	P	17 12 03.4	+0.7
ARPS	Mount Arapiles	37.93	162	P	P	17 12 08.3	+0.9
	comp=Z,88nm,1.0s						
LYN	LuoYang	38.14	339	P	P	17 12 09.5	+0.3
LYN				sP	sP	17 12 28.1	+15
LYN				S	S	17 18 00.9	-1.5
LYN				pmax	pmax		
	comp=Z,55nm,0.8s						
LYN				LR	LR		
	comp=Z,400nm,13.4s						
LYN				LR	LR		
	comp=Z,440nm,14.1s						
LYN				LR	LR		
	comp=Z,1µm,18.9s						
KSAR	Wonju Array Be	38.16	360	P	P	17 12 07.5	-1.8
KSAR	Wonju Array Be	38.16	360	P	P	17 12 07.5	-1.8
KSRS	Korea Array	38.17	360	P	P	17 12 09.1	-0.3
	comp=Z,6.5nm,0.9s,baz=179,slow=9.5,SNR=11						
KSRS				PcP	PcP	17 14 24.8	+0.7
	comp=Z,5.4nm,0.9s,baz=174,slow=2.9,SNR=6.7						
	comp=Z,6.5nm,0.9s						
KS19	Wonju Array Si	38.22	360	P	P	17 12 07.9	-1.9
KS19				IAmb	IAmb	17 12 50.1	
	comp=Z,144nm,1.9s						
TIA	Tai'an	38.28	346	P	P	17 12 09.8	-0.5
TIA				pmax	pmax		
	comp=Z,15nm,0.8s						
AUMAG	Moama Anglican	38.33	158	P	P	17 12 13.0	+2.2
YNG	Young	38.33	152	P	P	17 12 11.8	+1.0
	comp=Z,68nm,1.3s						
TNCH	TengChong	38.42	314	P	P	17 12 15.9	+4.0
TNCH				pP	sP	17 12 23.1	+7.0
TNCH				sP	pP	17 12 26.0	+11
TNCH				PP	PP	17 13 40.3	+0.4
TNCH				S	S	17 18 04.8	-2.5
TNCH				pmax	pmax		
	comp=Z,98nm,1.7s						
TNCH				LR	LR		
	comp=Z,170nm,7.5s						
TNCH				LR	LR		
	comp=Z,240nm,7.5s						
TNCH				LR	LR		
	comp=Z,510nm,19.6s						
MGBR	Mount Gambier	38.44	164	P	P	17 12 10.7	-1.0
MAJO	Matsushiro	38.47	13	P	P	17 12 10.1	-1.8

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MAJO                                IAmb   IAmb    17 12 17.2
       comp=Z,183nm,1.4s
MAJO   Matsushiro         38.47  13   P     P       17 12 11.3 -0.6
MAJO   Matsushiro         38.47  13 i P     P       17 12 11.4 -0.5
MAJO                                  pmax  pmax
       comp=Z,79nm,1.1s
MJAR   Matsushiro Arr     38.47  13   P     P       17 12 11.0 -1.0
       comp=Z,44nm,0.9s,baz=184,slow=9.4,SNR=80
MJAR                                  PcP   PcP     17 14 25.2 +0.2
       comp=Z,8.6nm,1.0s,baz=172,slow=2.4,SNR=5.0
MJAR                                  LR    LR      17 25 46.1
       comp=Z,733nm,20.8s,baz=188,slow=33
       comp=Z,44nm,0.9s
MJAR   Matsushiro Arr     38.47  13   P     P       17 12 10.2 -1.7
MJAR                                  IAmb  IAmb    17 12 17.3
       comp=Z,106nm,1.2s
MJAR                                        PcP     17 14 23.9 -1.2
MJAR   Matsushiro Arr     38.47  13   P     P       17 12 11.0 -0.9
MJB9   Matsu-Tunnel       38.47  13   P     P       17 12 10.2 -1.7
MJB9                                  IAmb  IAmb    17 12 18.2
       comp=Z,180nm,1.4s
JYT    Yasato             38.67  16   P     P       17 12 11.5 -2.1
XAN    Xi'an              39.09 335   P     P       17 12 17.0 -0.2
XAN                                   S     S       17 18 13.6 -3.3
XAN                                   pmax  pmax
       comp=Z,120nm,1.4s
XAN                                   LR    LR
       comp=Z,560nm,18.0s
XAN                                   LR    LR
       comp=Z,450nm,21.6s
XAN                                   LR    LR
       comp=Z,510nm,21.3s
CD2    Chengdu            39.11 326   P     P       17 12 17.5  0.0
CD2                                   pP    sP      17 12 25.3 +3.6
CD2                                   PP    PP      17 13 48.8 +1.6
CD2                                   S     S       17 18 12.1 -5.2
CD2                                   pmax  pmax
       comp=Z,170nm,1.2s
CD2                                   pmax  pmax
       comp=Z,270nm,3.8s
CD2                                   LR    LR
       comp=Z,930nm,14.7s
CD2                                   LR    LR
       comp=Z,790nm,15.3s
CD2                                   LR    LR
       comp=Z,830nm,14.3s
BRAT   Ballarat           39.33 160   P     P       17 12 21.6 +2.5
AUMTC  Mt Clear Colle     39.37 160   P     P       17 12 21.5 +2.1
AUDAR  Daramalan Coll     39.46 152   P     P       17 12 22.5 +2.2
AUMHS  Melrose High S     39.53 152   P     P       17 12 22.7 +1.8
CNB    Canberra Magne     39.62 152   P     P       17 12 22.9 +1.2
       comp=Z,33nm,1.2s
CNB    Canberra Magne     39.62 152   P     P       17 12 24.2 +2.5
WOLH   Wollongong Har     39.63 150   P     P       17 12 24.8 +3.2
TOO    Toolangi           39.91 158   P     P       17 12 25.7 +1.6
       comp=Z,28nm,1.4s
TOO    Toolangi           39.91 158   P     P       17 12 23.1 -0.9
TOO    Toolangi           39.91 158   P     P       17 12 23.1 -0.9
TOO                                   pmax  pmax
       comp=Z,24nm,1.1s
JSD    Sado               39.91  13   P     P       17 12 21.8 -2.1
HNS    HongShan           40.04 344 ⇓P     P       17 12 24.6 -0.4
HNS                                   S     S       17 18 34.0 +3.1
HNS                                   sS    sS      17 18 46.3  +10
HNS                                   pmax  pmax
       comp=Z,22nm,0.8s
HNS                                   LR    LR
       comp=Z,350nm,17.2s
HNS                                   LR    LR
       comp=Z,350nm,16.7s
DL2    Dalian             40.05 352   P     P       17 12 25.1 +0.1
DL2                                   S     S       17 18 28.1 -2.8
DL2                                   pmax  pmax
       comp=Z,49nm,1.0s
DL2                                   pmax  pmax
       comp=Z,340nm,8.6s
DL2                                   LR    LR
       comp=Z,1µm,15.0s
DL2                                   LR    LR
       comp=Z,680nm,17.9s
DL2                                   LR    LR
       comp=Z,920nm,17.6s
AUSMG  Snowy Mountain     40.19 154   P     P       17 12 28.8 +2.4
MILA   Mila               40.96 154   P     P       17 12 33.7 +0.9
       comp=Z,11nm,0.8s
TIY    Taiyuan            41.02 341 eP     P       17 12 33.1 -0.1
TIY                                   PP    PP      17 14 11.6 +3.7
TIY                                   S     S       17 18 41.6 -4.1
TIY                                   pmax  pmax
       comp=Z,41nm,0.7s
TIY                                   pmax  pmax
       comp=Z,220nm,4.7s
TIY                                   LR    LR
       comp=Z,150nm,13.7s
TIY                                   LR    LR
       comp=Z,360nm,19.2s
TIY                                   LR    LR
       comp=Z,440nm,22.0s
SANVU  Saraoutou          41.35 113   P     P       17 12 34.1 -2.1
SANVU  Saraoutou          41.35 113   P     P       17 12 39.0 +2.8
BJT    Baijiatuau         42.13 346   P     P       17 12 40.8 -1.4
BJT    Baijiatuau         42.13 346   P     P       17 12 42.0 -0.2
BJT    Baijiatuau         42.13 346   P     P       17 12 40.8 -1.4
BJT                                   pmax  pmax
       comp=Z,45nm,1.1s
BJI    Beijing            42.15 347   P     P       17 12 42.0 -0.3
BJI                                   S     S       17 19 01.1 -1.1
BJI                                   pmax  pmax
       comp=Z,20nm,1.0s
BJI                                   pmax  pmax
       comp=Z,97nm,4.4s
BJI                                   LR    LR
       comp=Z,150nm,15.9s
BJI                                   LR    LR
       comp=Z,120nm,13.5s
BJI                                   LR    LR
       comp=Z,130nm,17.6s
SNY    Shenyang           42.73 355 ⇓P     P       17 12 45.6 -1.4
SNY                                   S     S       17 19 03.1 -7.5
SNY                                   pmax  pmax
       comp=Z,22nm,1.7s
SNY                                   pmax  pmax
       comp=Z,260nm,3.6s
SNY                                   LR    LR
       comp=Z,360nm,11.7s
SNY                                   LR    LR
       comp=Z,300nm,12.2s
SNY                                   LR    LR
       comp=Z,240nm,12.2s
DVP    Devils Point       42.93 115   P     P       17 12 52.6 +3.5
DZM    Mont Dzumac        42.97 122   LR    LR      17 31 27.5
       comp=Z,350nm,20.6s,baz=282,slow=37
DZM    Mont Dzumac        42.97 122 eP     P       17 12 50.1 +0.6
       comp=Z,188nm,1.2s
DZM                                 eS     S       17 19 13.0 -2.1
       comp=Z,215nm,30.2s
DZM                                 eSS    SS      17 22 23.3 -3.8
       comp=Z,217nm,23.6s
DZM                                 eLR    LR      17 24 47.0
       comp=Z,592nm,22.8s
DZM    Mont Dzumac        42.97 122   P     P       17 12 49.2 -0.2
DZM                                   IAmb  IAmb    17 12 53.1
       comp=Z,100nm,1.2s
DZM    Mont Dzumac        42.97 122   P     P       17 12 51.8 +2.3
LZDM   Lanzhou Array      43.08 331   P     P       17 12 50.7 +0.3
       comp=Z,25nm,0.7s,baz=156,slow=11,SNR=12
       comp=Z,25nm,0.7s
ONTNC  Ouen Toro          43.08 122   P     P       17 12 49.6 -0.6
ONTNC                                 IAmb  IAmb    17 12 53.5
       comp=Z,97nm,1.3s
ONTNC  Ouen Toro          43.08 122   P     P       17 12 52.7 +2.5
LZH    Lanzhou            43.11 331 ⇓P     P       17 12 51.4 +1.0
LZH                                   PP    PP      17 14 36.0 +5.4
LZH                                   S     S       17 19 15.9 -0.9
LZH                                   sS    sS      17 19 29.4 +7.4
LZH                                   pmax  pmax
       comp=Z,200nm,1.2s
LZH                                   pmax  pmax
       comp=Z,640nm,4.0s
LZH                                   LR    LR
       comp=Z,170nm,17.2s
LZH                                   LR    LR
       comp=Z,540nm,17.9s
LZH                                   LR    LR
       comp=Z,660nm,17.0s
YATNC  Mamie plateau,     43.35 122   P     P       17 12 55.1 +2.7
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PSTR   Posyet             43.44   3 i P     P       17 12 53.0 +0.2
SHL    Shillong           43.67 310   P     P       17 12 55.5 +0.3
       SNR=36
SHL    Shillong           43.67 310   P     P       17 12 54.5 -0.7
SHL                                   IAmb  IAmb    17 12 59.9
       comp=Z,100nm,0.8s
SHL    Shillong           43.67 310   P     P       17 12 54.5 -0.7
SHL                                   pmax  pmax
       comp=Z,100nm,0.8s
VLA    Vladivostok        43.98   4 i P     P       17 12 57.3 +0.2
VLA                                   pmax  pmax
       comp=Z,25nm,1.0s
MARNC  Mare, Loyalty      44.10 120   P     P       17 12 57.5 -1.0
MARNC  Mare, Loyalty      44.10 120   P     P       17 13 00.9 +2.5
HHC    Hu-ho-hao-te       44.16 342 eP     P       17 12 59.1 +0.4
HHC                                   sP    sP      17 13 12.4 +9.5
HHC                                   S     S       17 19 29.9 -2.0
HHC                                   sS    sS      17 19 43.6 +6.5
HHC                                   SS    SS      17 22 40.0  -10
HHC                                   pmax  pmax
       comp=Z,17nm,0.6s
HHC                                   pmax  pmax
       comp=Z,190nm,4.5s
HHC                                   LR    LR
       comp=Z,290nm,15.7s
HHC                                   LR    LR
       comp=Z,240nm,15.3s
HHC                                   LR    LR
       comp=Z,330nm,15.7s
BTO    Baotou             44.43 340 eP     P       17 13 05.8 +4.9
BTO                                   pP    sP      17 13 18.3  +13
BTO                                   sP    pP      17 13 23.6  +20
BTO                                   S     S       17 19 38.0 +2.1
BTO                                   pmax  pmax
       comp=Z,28nm,0.9s
BTO                                   pmax  pmax
       comp=Z,450nm,7.5s
CN2    Changchun          44.57 357   P     P       17 13 02.3 +0.5
CN2                                   S     S       17 19 36.1 -1.5
CN2                                   SS    SS      17 22 48.3 -9.3
CN2                                   pmax  pmax
       comp=Z,10.0nm,0.8s
CN2                                   LR    LR
       comp=Z,400nm,15.0s
CN2                                   LR    LR
       comp=Z,400nm,15.0s
CN2                                   LR    LR
       comp=Z,600nm,16.0s
ERM    Erimo              44.89  16   P     P       17 13 03.0 -1.5
ERM                                   IAmb  IAmb    17 13 21.9
       comp=Z,136nm,1.5s
ERM    Erimo              44.89  16   P     P       17 13 03.0 -1.4
ERM                                   pmax  pmax
       comp=Z,136nm,1.5s
USRK   Ussuriysk Ar.      45.06   4   P     P       17 13 05.7  0.0
       comp=Z,36nm,1.0s,baz=193,slow=7.1,SNR=24
       comp=Z,36nm,1.0s
MDJ    Mudanjiang         45.35   2   P     P       17 13 06.8 -1.2
MDJ    Mudanjiang         45.35   2   P     P       17 13 08.8 +0.7
MDJ                                   S     S       17 19 54.0 +5.1
MDJ                                   pmax  pmax
       comp=Z,51nm,1.1s
MDJ                                   pmax  pmax
       comp=Z,600nm,4.6s
MDJ                                   LR    LR
       comp=Z,780nm,16.1s
MDJ                                   LR    LR
       comp=Z,910nm,22.1s
MDJ    Mudanjiang         45.35   2   P     P       17 13 08.9 +0.8
XLT    XiLinHaoTe         45.86 348 eP     P       17 13 11.8 -0.4
XLT                                   pP    sP      17 13 25.1 +8.7
XLT                                   sP    pP      17 13 29.5  +14
XLT                                   PP    PP      17 15 00.0 +0.2
XLT                                   S     S       17 19 50.5 -5.9
XLT                                   sS    sS      17 20 09.9 +8.2
XLT                                   pmax  pmax
       comp=Z,24nm,0.9s
XLT                                   pmax  pmax
       comp=Z,220nm,3.3s
XLT                                   LR    LR
       comp=Z,440nm,14.0s
XLT                                   LR    LR
       comp=Z,320nm,12.3s
TEY    Ternei             46.39   8⇑eP     P       17 13 17.3 +1.1
TEY                                   pmax  pmax
       comp=N,40nm,1.0s
TEY                                   pmax  pmax
       comp=Z,70nm,0.9s
BNX    BinXian            46.45 359 ⇓P     P       17 13 14.8 -1.9
BNX                                   pmax  pmax
       comp=Z,25nm,1.3s
LSA    Lhasa              46.45 314   P     P       17 13 19.1 +1.5
LSA    Lhasa              46.45 314   IAmb  IAmb    17 13 23.9
       comp=Z,67nm,0.9s
LSA    Lhasa              46.45 314   P     P       17 13 14.3 -3.3
LSA                                   pmax  pmax
       comp=Z,57nm,0.8s
ASAJ   Asahikawa          46.70  15   LR    LR      17 32 36.1
       comp=Z,658nm,19.6s,baz=212,slow=36
ASAJ   Asahikawa          46.70  15   P     P       17 13 18.1 -0.6
ASAJ                                  pmax  pmax
       comp=Z,156nm,1.2s
JKA    Kamikawa-asahi     46.70  15   P     P       17 13 18.1 -0.7
GTA    Gaotai             47.69 330   P     P       17 13 27.3 +0.6
GTA                                   S     S       17 20 21.0 -1.9
GTA                                   pmax  pmax
       comp=Z,43nm,1.2s
GTA                                   pmax  pmax
       comp=Z,390nm,5.8s
GTA                                   LR    LR
       comp=Z,350nm,15.6s
GTA                                   LR    LR
       comp=Z,260nm,15.3s
GTA                                   LR    LR
       comp=Z,390nm,18.2s
GOMU   GeErMu             48.08 324   P     P       17 13 29.3 -0.8
GOMU                                  S     S       17 20 26.8 -2.3
GOMU                                  pmax  pmax
       comp=Z,28nm,1.4s
GOMU                                  LR    LR
       comp=Z,270nm,17.3s
GOMU                                  LR    LR
       comp=Z,320nm,17.7s
GOMU                                  LR    LR
       comp=Z,510nm,18.3s
EVN    Everest            48.78 309   P     P       17 13 34.8 -1.1
YSS    Yuzhno-Sakhali     49.41  13   P     P       17 13 38.7 -0.9
YSS                                   IAmb  IAmb    17 13 45.1
       comp=Z,70nm,1.1s
YSS    Yuzhno-Sakhali     49.41  13   P     P       17 13 40.8 +1.2
YSS    Yuzhno-Sakhali     49.41  13 eP     P       17 13 40.1 +0.5
YSS                                 e               17 15 31.9
YSS                                 eS     S       17 20 43.6 -3.0
YSS                                 e               17 23 27.3
YSS                                 eSS    SS      17 24 08.9  -10
YSS                                   pmax  pmax
       comp=Z,50nm,1.2s
YSS                                   pmax  pmax
       comp=Z,200nm,4.4s
HIA    Hailar             50.48 353   P     P       17 13 45.7 -2.0
HIA    Hailar             50.48 353   P     P       17 13 50.3 +2.5
HIA    Hailar             50.48 353   P     P       17 13 45.7 -2.1
HIA                                   pmax  pmax
       comp=Z,24nm,1.1s
HILR   Hailar Array B     50.76 353   P     P       17 13 49.7 -0.3
       comp=Z,3.3nm,0.6s,baz=161,slow=9.4,SNR=6.5
HILR                                  LR    LR      17 35 57.4
       comp=Z,338nm,20.2s,baz=130,slow=37
       comp=Z,3.3nm,0.6s
HEH    HeiHe              50.97 360 eP     P       17 13 50.8 -0.6
HEH                                   pmax  pmax
       comp=Z,45nm,1.8s
HEH                                   LR    LR
       comp=Z,960nm,17.8s
HEH                                   LR    LR
       comp=Z,420nm,16.2s
HEH                                   LR    LR
       comp=Z,1µm,20.6s
FUNA   Funafuti           51.59 100   P     P       17 13 54.1 -2.7
FUNA                                  IAmb  IAmb    17 13 59.4
       comp=Z,87nm,1.0s
ULN    Ulaanbaatar        51.88 342   P     P       17 13 58.2 -0.2
ULN    Ulaanbaatar        51.88 342   P     P       17 13 57.4 -1.1
ULN                                   IAmb  IAmb    17 14 03.3
       comp=Z,69nm,1.2s
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ULN    Ulaanbaatar        51.88 342   P     P       17 13 58.0 -0.5
ULN    Ulaanbaatar        51.88 342ceP     P       17 13 57.9 -0.5
ULN                                   pmax  pmax
       comp=Z,95nm,1.7s
HYB    Hyderabad          51.92 293 eP     P       17 13 58.4 -0.8
HYB                                 ePP    PP      17 15 56.0 -1.3
HYB                                 eS     S       17 21 19.9 -2.6
MSVF   Nonsavu            51.98 112   P     P       17 13 57.9 -1.8
MSVF                                  IAmb  IAmb    17 14 04.0
       comp=Z,74nm,1.1s
MSVF   Nonsavu            51.98 112   P     P       17 14 02.6 +2.9
MSVF   Nonsavu            51.98 112   P     P       17 13 57.9 -1.8
MSVF                                  pmax  pmax
       comp=Z,74nm,1.1s
GRNR   Gornyy             51.99   7⇓iP     P       17 14 00.0 +0.9
GRNR                                  pmax  pmax
       comp=N,20nm,1.2s
GRNR                                  pmax  pmax
       comp=Z,30nm,1.1s
SONM   Songino Array      52.05 342   P     P       17 13 59.4 -0.4
       comp=Z,24nm,1.1s,baz=160,slow=8.4,SNR=46
SONM                                  LR    LR      17 38 35.5
       comp=Z,198nm,18.7s,baz=164,slow=39
       comp=Z,24nm,1.1s
SONM   Songino Array      52.05 342   P     P       17 13 58.3 -1.5
TYV    Tymovskoe          53.09  12 eP     P       17 14 08.3 +1.2
TYV                                   pmax  pmax
       comp=Z,29nm,1.0s
TYV                                   pmax  pmax
       comp=Z,100nm,2.3s
CIT    Chita              54.12 349 eP     P       17 14 14.8  0.0
CIT                                 e               17 14 24.8
CIT                                 e               17 14 28.8
CIT                                 e               17 15 13.0
CIT                                 e               17 16 16.6
CIT                                 e               17 21 44.0
CIT                                   pmax  pmax
       comp=Z,123nm,2.0s
ZEA    Zeya               54.46 359 eP     P       17 14 16.7 -0.5
ZEA                                 e               17 21 49.4
ZEA                                   pmax  pmax
       comp=N,10.0nm,1.1s
ZEA                                   pmax  pmax
       comp=Z,20nm,1.4s
ZEA                                   pmax  pmax
       comp=Z,200nm,6.7s
HMDM   Hanimaadhoo        55.17 279   P     P       17 14 22.2 -0.8
ZAK    Zakamensk          55.28 341 eP     P       17 14 21.3 -2.0
ZAK                                   pmax  pmax
       comp=Z,23nm,1.9s
DCZ    Deep Cove          56.19 148   IAmb  IAmb    17 14 32.5
       comp=Z,48nm,1.0s
JCZ    Jackson Bay        56.21 145   P     P       17 14 32.2 +2.0
TLY    Talaya             56.29 342   P     P       17 14 29.4 -1.0
TLY    Talaya             56.29 342 i P     P       17 14 29.7 -0.7
TLY                                   pmax  pmax
       comp=Z,13nm,1.0s
IRK    Irkutsk            56.59 343 eP     P       17 14 30.6 -2.0
IRK                                   pmax  pmax
       comp=Z,60nm,2.2s
KUZ    Kuaotunu           56.70 135   P     P       17 14 36.6 +3.0
WKZ    Wanaka             56.81 146   P     P       17 14 33.4 -0.9
WHZ    Wether Hill Ro     56.90 148   P     P       17 14 34.8  0.0
WHZ                                   IAmb  IAmb    17 14 36.8
       comp=Z,76nm,1.0s
TOZ    Tahuroa Road       57.01 136   P     P       17 14 36.3 +0.5
TOZ                                   IAmb  IAmb    17 14 39.6
       comp=Z,68nm,1.2s
MRNZ   Matariki Terra     57.05 141   P     P       17 14 33.8 -2.2
MOY    Mondy              57.13 340 eP     P       17 14 36.1 -0.4
MOY                                   pmax  pmax
       comp=Z,62nm,2.2s
LBZ    Lake Benmore       57.20 145   P     P       17 14 37.5 +0.4
LBZ                                   IAmb  IAmb    17 14 39.0
       comp=Z,65nm,0.8s
WMQ    Urumqi             57.21 326 eP     P       17 14 37.5 +0.3
WMQ                                   PcP   PcP     17 15 32.3 +0.6
WMQ                                   pmax  pmax
       comp=Z,33nm,1.1s
WMQ                                   LR    LR
       comp=Z,200nm,23.9s
THZ    Tophouse           57.34 141   P     P       17 14 36.0 -2.1
THZ                                   IAmb  IAmb    17 14 52.4
       comp=Z,39nm,1.2s
KNGR   Kungurtug, Tuv     57.50 338 i P     P       17 14 39.0 -0.2
KNGR                                  pmax  pmax
       comp=Z,9.0nm,1.0s
LTZ    Lake Taylor        57.51 142   P     P       17 14 37.9 -1.4
OXZ    Oxford             57.67 143   P     P       17 14 40.6 +0.3
OXZ                                   IAmb  IAmb    17 14 47.7
       comp=Z,109nm,1.6s
TUWZ   Tuamarina          57.81 140   P     P       17 14 39.8 -1.6
TCW    Tory Channel       57.91 140   P     P       17 14 40.9 -1.2
SNZO   South Karori       58.24 140   P     P       17 14 42.7 -1.7
BKZ    Black Stump Fm     58.37 137   P     P       17 14 44.5 -0.9
BKZ                                   IAmb  IAmb    17 14 47.7
       comp=Z,42nm,1.1s
BKZ    Black Stump Fm     58.37 137   P     P       17 14 46.4 +0.9
URZ    Urewera            58.38 136   LR    LR      17 42 05.6
       comp=Z,291nm,18.3s,baz=308,slow=38
BHW    Baring Head        58.40 140   P     P       17 14 43.5 -2.1
BHW                                   IAmb  IAmb    17 14 47.9
       comp=Z,85nm,1.4s
RTZ    Ruatahuna          58.45 136   P     P       17 14 45.7 -0.4
MRZ    Mangatainoka R     58.48 139   P     P       17 14 44.3 -1.9
MRZ                                   IAmb  IAmb    17 14 47.5
       comp=Z,68nm,1.3s
BFZ    Birch Farm         58.94 138   P     P       17 14 47.5 -1.8
PEA0B  Petropavlovsk-     59.29  20   P     P       17 14 51.8 +0.2
PEA0B                                 IAmb  IAmb    17 14 57.9
       comp=Z,96nm,1.4s
PEA0B  Petropavlovsk-     59.29  20 i P     P       17 14 51.7 +0.2
PETK   Petropavlovsk-     59.29  20   P     P       17 14 52.3 +0.8
       comp=Z,24nm,0.9s,baz=215,slow=2.9,SNR=18
PETK                                  LR    LR      17 39 51.1
       comp=Z,167nm,20.1s,baz=217,slow=35
       comp=Z,24nm,0.9s
PETK   Petropavlovsk-     59.29  20   P     P       17 14 50.2 -1.3
PET    Petropavlovsk      59.56  21   P     P       17 14 52.0 -1.3
PET    Petropavlovsk      59.56  21 i P     P       17 14 53.8 +0.5
PET                                   pmax  pmax
       comp=Z,67nm,1.4s
BOD    Bodaibo            59.60 351 eP     P       17 14 52.8 -0.7
BOD                                   pmax  pmax
       comp=Z,46nm,1.8s
AFI    Afiamalu           60.98 105   P     P       17 15 01.9 -2.0
AFI                                   IAmb  IAmb    17 15 07.2
       comp=Z,65nm,1.1s
AFI    Afiamalu           60.98 105   P     P       17 15 06.4 +2.5
AFI    Afiamalu           60.98 105   P     P       17 15 01.9 -2.0
AFI                                   pmax  pmax
       comp=Z,65nm,1.1s
ZSN    Zaisan             61.05 328 eP     P       17 15 02.9 -0.8
ZSN    Zaisan             61.05 328 eP     P       17 15 02.9 -0.8
DGZ    Jazzator, Alta     61.21 331 eP     P       17 15 03.6 -1.3
DGZ                                   pmax  pmax
       comp=Z,19nm,1.1s
SHLS   Shalkode           61.69 322⇓iP     P       17 15 06.0 -2.2
       comp=Z,10nm,0.9s
SHLS   Shalkode           61.69 322d iP    P       17 15 05.9 -2.3
SHLS                                  pmax  pmax
       comp=Z,10.0nm,0.9s
NIL    Nilore             61.74 309   P     P       17 15 07.5 -1.2
NIL                                   IAmb  IAmb    17 15 14.6
       comp=Z,61nm,1.4s
NIL    Nilore             61.74 309   P     P       17 15 07.5 -1.2
NIL                                   pmax  pmax
       comp=Z,61nm,1.4s
UZB    Uzynbulak          61.96 321 eP     P       17 15 09.6 -0.6
       comp=Z,8.5nm,0.7s
UZB    Uzynbulak          61.96 321 eP     P       17 15 09.5 -0.6
UZB                                   pmax  pmax
       comp=Z,9.0nm,0.7s
PRZ    Przheval'sk        62.01 320   IAmb  IAmb    17 15 27.7
       comp=Z,47nm,1.0s
TARG   Taragay, Kyrgy     62.01 319   P     P       17 15 08.9 -1.9
TARG                                  IAmb  IAmb    17 15 31.0
       comp=Z,28nm,1.0s
TARG   Taragay, Kyrgy     62.01 319   P     P       17 15 08.9 -1.9
TARG                                  pmax  pmax
       comp=Z,29nm,1.0s
MK31   Makanchi Array     62.05 326ceP     P       17 15 09.7 -0.8
MKAR   Makanchi Array     62.05 326   P     P       17 15 09.7 -0.8
       comp=Z,18nm,0.9s,baz=125,slow=8.0,SNR=108
MKAR                                  PP    PP      17 17 26.9 -0.2
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      comp=Z,6.3nm,1.1s,baz=122,slow=11,SNR=2.5
      comp=Z,18nm,0.9s
MKAR  Makanchi Array     62.05 326   P       P       17 15 09.2  -1.3
KSH   Kashi              62.19 316   P       P       17 15 11.8  +0.1
KSH                                  pmax    pmax
      comp=Z,14nm,0.9s
MAKZ  Makanchi           62.23 326   P       P       17 15 10.2  -1.5
MAKZ                                 IAmb    IAmb    17 15 16.0
      comp=Z,48nm,1.1s
MAKZ  Makanchi           62.23 326   P       P       17 15 10.2  -1.5
MAKZ                                 pmax    pmax
      comp=Z,48nm,1.2s
SATY  Saty               62.30 321⇓iP        P       17 15 11.8  -0.5
      comp=Z,14nm,0.8s
SATY  Saty               62.30 321d iP       P       17 15 11.8  -0.5
SATY                                 pmax    pmax
      comp=Z,15nm,0.8s
KDJ   Kajisay            62.62 320   IAmb    IAmb    17 15 19.6
      comp=Z,31nm,1.0s
YAK   Yakutsk            62.79   1   LR      LR      17 40 13.9
      comp=Z,296nm,22.0s,baz=157,slow=34
YAK   Yakutsk            62.79   1   P       P       17 15 14.6  -0.5
YAK   Yakutsk            62.79   1  eP       P       17 15 15.1  +0.1
YAK                                 e*PP     sP      17 15 26.9  +7.6
YAK                                 e                17 15 53.3
YAK                                 e                17 17 33.4
YAK                                 ePPP     PPP     17 19 01.3
YAK                                 eS       S       17 23 41.4  -2.6
YAK                                 e*SS     sS      17 24 01.7   +12
YAK                                 e                17 25 04.0
YAK                                 eSS      SS      17 27 47.7  -1.3
YAK                                  pmax    pmax
      comp=Z,60nm,1.0s
YAK                                  pmax    pmax
      comp=N,22nm,0.8s
YAK                                  pmax    pmax
      comp=E,17nm,0.9s
YAK                                  pmax    pmax
      comp=Z,214nm,4.6s
YAK                                  pmax    pmax
      comp=N,208nm,4.6s
YAK                                  pmax    pmax
      comp=E,195nm,4.8s
YAK                                  smax    smax
      comp=N,87nm,2.2s
YAK                                  smax    smax
      comp=E,67nm,3.1s
MA2   Magadan            62.91  13   LR      LR      17 39 37.9
      comp=E,204nm,21.8s,baz=212,slow=33
MA2   Magadan            62.91  13   P       P       17 15 16.1  +0.2
MA2   Magadan            62.91  13   P       P       17 15 17.0  +1.1
MA2   Magadan            62.91  13ceP        P       17 15 17.2  +1.3
MA2                                  pmax    pmax
      comp=Z,103nm,0.8s
MA2   Magadan            62.91  13   P       P       17 15 17.0  +1.1
      comp=Z,1µmcomp=Z,127nm,0.9s
MDOK  Medeo              63.21 321  eP       P       17 15 18.0  -0.5
MDOK  Medeo              63.21 321  eP       P       17 15 17.9  -0.5
TNSS  Tian-Shan          63.21 320  eP       P       17 15 17.9  -0.9
TNSS  Tian-Shan          63.21 320  eP       P       17 15 17.9  -0.9
TDK   Taldyqorghan       63.30 323  eP       P       17 15 18.4  -0.5
      comp=Z,17nm,1.3s
TDK   Taldyqorghan       63.30 323  eP       P       17 15 18.4  -0.5
TDK                                  pmax    pmax
      comp=Z,17nm,1.3s
AAA   Alma-Ata           63.32 320  eP       P       17 15 18.6  -0.4
      comp=Z,6.7nm,0.5s
AAA   Alma-Ata           63.32 320  eP       P       17 15 18.6  -0.4
AAA                                  pmax    pmax
      comp=Z,7.0nm,0.5s
TKM2  Tokmak 2           64.02 320   P       P       17 15 23.4  -0.5
      SNR=17
KBK   Karagaybulak       64.32 319   P       P       17 15 25.5  -0.3
      SNR=6.7
UCH   Uchtor             64.41 319   P       P       17 15 26.8   0.0
      SNR=22
MANEM Manem              64.41 313   P       P       17 15 25.9  -0.8
MANEM                                IAmb    IAmb    17 15 45.3
      comp=Z,51nm,1.0s
AAK   Ala-Archa          64.61 319   P       P       17 15 27.5  -0.2
      SNR=7.5
AAK   Ala-Archa          64.61 319   P       P       17 15 27.6  -0.1
AAK   Ala-Archa          64.61 319   P       P       17 15 26.6  -1.2
AAK   Ala-Archa          64.61 319ceP        P       17 15 27.0  -0.7
AAK                                  pmax    pmax
      comp=Z,28nm,1.3s
USP   Ospenovka          64.89 320   P       P       17 15 28.9  -0.5
      SNR=24
ARSB  Arslanbob          65.04 317   IAmb    IAmb    17 15 35.3
      comp=Z,47nm,1.2s
DRK   Karamyk            65.09 315   IAmb    IAmb    17 15 40.8
      comp=Z,32nm,0.8s
EKS2  Erkin-Say          65.09 319   P       P       17 15 30.8   0.0
      SNR=17
ZALV  Zalesovo Beam      65.25 334   P       P       17 15 29.5  -1.9
      comp=Z,14nm,1.0s,baz=111,slow=6.5,SNR=40
ZALV                                 PKP2bc  P'P'bc  17 44 16.4  -1.7
      comp=Z,1.0nm,0.8s,baz=250,slow=7.4,SNR=5.0
ZALV                                 LR      LR      17 46 52.9
      comp=Z,157nm,18.8s,baz=133,slow=39
      comp=Z,14nm,1.0s
ZALV  Zalesovo Beam      65.25 334   P       P       17 15 28.9  -2.6
KBL   Kabul              65.32 309   P       P       17 15 31.8  -0.8
      SNR=20
KBL   Kabul              65.32 309   P       P       17 15 30.1  -2.5
KBL                                  IAmb    IAmb    17 15 54.0
      comp=Z,18nm,0.7s
KBL   Kabul              65.32 309   P       P       17 15 30.1  -2.5
KBL                                  pmax    pmax
      comp=Z,18nm,0.7s
GAR   Garm               65.96 314           P       17 15 34.9  -1.6
GAR                                  IAmb    IAmb    17 16 09.3
      comp=Z,56nm,1.0s
BTLS  Baital             66.01 321  eP       P       17 15 34.6  -1.9
BTLS  Baital             66.01 321  eP       P       17 15 34.6  -1.9
DRV   Dumont d'Urvil     66.17 175   P       P       17 15 37.5  +0.4
SEY   Seymchan           66.28  12   LR      LR      17 43 24.9
      comp=Z,231nm,20.1s,baz=196,slow=35
SEY   Seymchan           66.28  12  eP       P       17 15 36.9  -0.9
SEY                                  pmax    pmax
      comp=Z,86nm,1.5s
KURBB Kurchatov Arra     66.28 328   P       P       17 15 36.9  -1.2
      comp=Z,23nm,0.9s,baz=126,slow=5.9,SNR=100
KURBB                                PP      PP      17 18 03.4  -0.7
      comp=Z,9.0nm,1.1s,baz=131,slow=8.9,SNR=7.3
      comp=Z,23nm,0.9s
KURK  Kurchatov          66.29 328   P       P       17 15 36.7  -1.5
KURK  Kurchatov          66.29 328   P       P       17 15 36.4  -1.8
KURK                                 IAmb    IAmb    17 15 42.1
      comp=Z,46nm,1.0s
KURK  Kurchatov          66.29 328   P       P       17 15 36.9  -1.3
CASY  Casey              66.39 188   P       P       17 15 37.3  -1.3
CHGR  Chuyangaron        66.67 313   IAmb    IAmb    17 15 45.3
      comp=Z,65nm,1.3s
SHAA  Shahritus          67.05 312   P       P       17 15 41.2  -2.2
SHAA                                 IAmb    IAmb    17 16 42.0
      comp=Z,20nm,0.8s
IUG   Iuzhnay            67.39 317⇓iP        P       17 15 44.9  -0.7
      comp=Z,15nm,0.9s
IUG   Iuzhnay            67.39 317d iP       P       17 15 44.8  -0.7
IUG                                  pmax    pmax
      comp=Z,15nm,0.9s
KK31  Karatay Array      67.45 318   P       P       17 15 43.9  -1.9
KK31  Karatay Array      67.45 318   P       P       17 15 43.9  -1.9
KK31                                 pmax    pmax
      comp=Z,17nm,0.9s
KKAR  Karatay Array      67.45 318   P       P       17 15 44.2  -1.6
KKAR  Karatay Array      67.45 318   P       P       17 15 44.2  -1.6
BRLS  Borolday           67.87 318  eP       P       17 15 47.6  -0.9
BRLS  Borolday           67.87 318  eP       P       17 15 47.5  -1.0
BRZS  Berezniki          69.16 325  eP       P       17 15 56.1  -0.2
BRZS  Berezniki          69.16 325  eP       P       17 15 56.1  -0.2
JLN   Jalan Bani Buh     70.52 294   P       P       17 16 04.5  -0.8
HRA   Herat              70.64 307   P       P       17 16 04.6  -1.4
WBK   Wadi Bani Khal     71.00 294   P       P       17 16 07.2  -1.1
WSAR  Wadi Sarin         71.41 295   P       P       17 16 09.6  -1.1
MHTO  MHTO               71.67 292   P       P       17 16 11.2  -1.1
      SNR=11
JMDO  Jabal Madar        71.75 294   P       P       17 16 11.7  -1.1
BVAR  Borovoye Array     71.85 328   P       P       17 16 11.1  -1.7
      comp=Z,12nm,0.9s,baz=132,slow=6.6,SNR=46
      comp=Z,12nm,0.9s
BORK  Borovoye           71.90 328   P       P       17 16 11.3  -1.7
BORK  Borovoye           71.90 328ceP        P       17 16 11.0  -2.0
BORK                                 pmax    pmax
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      comp=Z,27nm,1.3s
SMDO  Samad              71.91 295   P       P       17 16 12.5  -1.3
BIDO  Bidbid             71.91 295   P       P       17 16 12.9  -0.8
DQM   DQM                71.92 291   P       P       17 16 12.8  -1.0
TIXI  Tiksi              72.44   0   LR      LR      17 49 18.1
      comp=Z,164nm,20.2s,baz=198,slow=37
TIXI  Tiksi              72.44   0   P       P       17 16 14.1  -1.8
TIXI                                 IAmb    IAmb    17 16 21.0
      comp=Z,33nm,0.8s
TIXI  Tiksi              72.44   0ceP        P       17 16 14.5  -1.4
TIXI                                 pmax    pmax
      comp=Z,65nm,1.7s
BSY   Bisya              72.64 294   P       P       17 16 17.2  -0.9
      SNR=7.3
HOQ   Hoqain             72.66 295   P       P       17 16 17.6  -0.6
RAR   Rarotonga          73.17 112   LR      LR      17 49 56.5
      comp=Z,41nm,18.3s,baz=274,slow=37
ARQ   Araqi              73.34 295   P       P       17 16 22.0  -0.2
      SNR=6.1
SOHO  SOHO               73.45 295   P       P       17 16 21.2  -1.6
SHAO  Shalim             73.49 289   P       P       17 16 22.3  -0.9
BILL  Bilibino           73.72  14   P       P       17 16 22.3  -1.2
BILL  Bilibino           73.72  14ceP        P       17 16 23.5   0.0
BILL                                 pmax    pmax
      comp=Z,44nm,2.5s
BILL                                 MLR     MLR
      comp=Z,325nm,21.0s
UOSS  Minazif            73.87 296   P       P       17 16 24.1  -1.2
UOSS  Minazif            73.87 296   P       P       17 16 22.9  -2.4
HATD  Hatta, Dubai       73.91 296   P       P       17 16 24.2  -1.4
BANOM Banah              73.93 297   P       P       17 16 23.9  -1.8
ASHO  Ashiyiah           73.96 296   P       P       17 16 26.0  +0.1
MASF  Masafi             73.97 297   P       P       17 16 24.8  -1.1
DMTO  DMTO               74.10 289   P       P       17 16 24.4  -2.3
ALNE  Al Ain             74.14 295   P       P       17 16 26.4  -0.6
      SNR=14
CLES  Cleveland East     74.29  34   P       P       17 16 26.0  -1.1
RBK   Rabkut             74.78 288   P       P       17 16 29.7  -1.0
NIKH  Nikolski High      74.93  34   P       P       17 16 30.4  -0.4
      baz=248
DOK   Doka               74.97 289   P       P       17 16 30.1  -1.6
      SNR=8.9
NRIK  Noril'sk           75.19 346   P       P       17 16 31.7  -0.4
      comp=Z,23nm,0.9s,baz=125,slow=5.9,SNR=58
NRIK                                 LR      LR      17 50 54.0
      comp=Z,254nm,20.8s,baz=140,slow=37
      comp=Z,23nm,0.9s
NRIK  Noril'sk           75.19 346   P       P       17 16 30.9  -1.1
NRIK                                 IAmb    IAmb    17 16 36.8
      comp=Z,67nm,1.2s
NRIK  Noril'sk           75.19 346 i P       P       17 16 31.3  -0.8
NRIK                                 pmax    pmax
      comp=Z,31nm,1.0s
WHFO  Wadi Hawf          75.23 289   P       P       17 16 31.4  -2.0
ABTO  Aybut              75.63 288   P       P       17 16 35.0  -0.7
      SNR=8.7
SPIA  Saint Paul Isl     75.88  30   P       P       17 16 36.8  +0.6
      baz=245
P08K  Saint George I     75.99  30   P       P       17 16 37.2  +0.3
      baz=246
MZR   Muzera             76.07 294   P       P       17 16 37.1  -1.0
ABKAR Akbulak array      76.49 321   P       P       17 16 37.9  -2.0
UNV   Unalaska Valle     76.56  34   P       P       17 16 39.0  -1.1
UNV   Unalaska Valle     76.56  34   P       P       17 16 42.7  +2.6
UNV   Unalaska Valle     76.56  34   P       P       17 16 40.6  +0.5
      baz=249
AKUT  Akutan             77.07  34   P       P       17 16 43.8  +0.8
AKTO  Aktyubinsk         78.03 322   LR      LR      17 53 55.5
      comp=Z,156nm,21.4s,baz=66,slow=38
GAMB  Gambell            78.14  23   P       P       17 16 49.7  +0.9
      baz=243
SVE   Sverdlovsk         78.53 329  eP       P       17 16 49.8  -1.3
SVE                                  pmax    pmax
      comp=Z,22nm,1.2s
FALS  False Pass         78.60  33   P       P       17 16 52.0  +0.5
      baz=252
VNDA  Vanda              78.70 173   P       P       17 16 51.9  +0.2
      comp=Z,28nm,0.8s,baz=318,slow=6.5,SNR=124
VNDA                                 LR      LR      17 50 18.5
      comp=Z,182nm,19.4s,baz=350,slow=35
      comp=Z,28nm,0.8s
VNDA  Vanda              78.70 173   P       P       17 16 50.4  -1.3
VNDA                                 IAmb    IAmb    17 16 53.2
      comp=Z,58nm,1.2s
VNDA  Vanda              78.70 173   P       P       17 16 50.4  -1.3
VNDA                                 pmax    pmax
      comp=Z,58nm,1.3s
M11K  Mekoryuk           79.08  27   P       P       17 16 54.4  +0.4
      baz=248
ARTI  Arti               79.56 328   LR      LR      17 55 24.1
      comp=Z,67nm,18.2s,baz=116,slow=38
ARTI  Arti               79.56 328   P       P       17 16 54.2  -2.6
ARTI  Arti               79.56 328d iP       P       17 16 54.7  -2.1
ARTI                                 S       S       17 26 55.5  -3.1
ARTI                                 SS      SS      17 31 58.5  -8.1
ARTI                                 pmax    pmax
      comp=Z,16nm,1.4s
S12K  Black Hills        79.60  33   P       P       17 16 57.2  +0.1
      baz=253
SBA   Scott Base         79.60 172   P       P       17 16 56.5  -0.1
SBA                                  IAmb    IAmb    17 16 58.8
      comp=Z,33nm,0.9s
SBA   Scott Base         79.60 172   P       P       17 16 56.6  -0.1
SBA                                  pmax    pmax
      comp=Z,33nm,0.9s
K13K  Kusilvak Mount     80.34  26   IAmb    IAmb    17 17 03.9
      comp=Z,77nm,1.1s
K13K  Kusilvak Mount     80.34  26   P       P       17 17 02.1  +1.3
      baz=249
SDPT  Sand Point         80.36  33   P       P       17 17 02.3  +1.2
SDPT  Sand Point         80.36  33   P       P       17 17 01.5  +0.4
      baz=254
TNA   Tin City           80.38  22   P       P       17 17 02.1  +1.0
      baz=246
M13K  Dall Lake          80.42  28   P       P       17 17 02.9  +1.6
      baz=251,SNR=5.8
CHNA  Chernabura Isl     80.72  34   P       P       17 17 03.8  +0.8
      baz=255
F14K  Arctic Creek       80.96  23   P       P       17 17 05.8  +1.7
      baz=247
ANM   Nome               80.99  24   P       P       17 17 05.7  +1.4
      baz=248
L14K  Kuka Creek         81.03  27   P       P       17 17 06.1  +1.5
      baz=251,SNR=27
N14K  Kuskokwak Cree     81.06  29   IAmb    IAmb    17 17 07.3
      comp=Z,84nm,1.0s
N14K  Kuskokwak Cree     81.06  29   P       P       17 17 06.2  +1.4
      baz=252
O14K  Tigyukauivet M     81.06  29   IAmb    IAmb    17 17 07.3
      comp=Z,91nm,1.1s
O14K  Tigyukauivet M     81.06  29   P       P       17 17 05.3  +0.6
      baz=253
J14K  Nanvaranak Lak     81.11  26   P       P       17 17 06.7  +1.8
      baz=250
S14K  Fog Glacier        81.11  33   P       P       17 17 06.4  +1.1
      baz=255
M14K  Bethel             81.18  28   P       P       17 17 07.0  +1.6
      baz=252,SNR=19
G15K  Niukluk            81.68  23   P       P       17 17 09.2  +1.2
      baz=250
L15K  Ungalak Mounta     81.68  27   P       P       17 17 09.1  +1.1
      baz=252,SNR=16
F15K  North Star Dit     81.69  23   IAmb    IAmb    17 17 11.1
      comp=Z,108nm,1.6s
F15K  North Star Dit     81.69  23   P       P       17 17 09.6  +1.6
      baz=249
O15K  Ungalikthiuk R     81.75  30   IAmb    IAmb    17 17 11.0
      comp=Z,63nm,1.1s
O15K  Ungalikthiuk R     81.75  30   P       P       17 17 09.5  +1.0
      baz=254
M15K  Kasigluk River     81.76  28   P       P       17 17 08.8  +0.3
      baz=253
K15K  Wolf Creek Mou     81.85  26   IAmb    IAmb    17 17 12.1
      comp=Z,70nm,1.0s
K15K  Wolf Creek Mou     81.85  26   P       P       17 17 10.6  +1.7
      baz=252
N15K  Kwethluk River     81.89  29   IAmb    IAmb    17 17 12.0
      comp=Z,85nm,1.1s
N15K  Kwethluk River     81.89  29   P       P       17 17 10.7  +1.5
      baz=254
H16K  Elim               82.28  24   P       P       17 17 12.5  +1.4
      baz=251,SNR=49
C16K  Lisburne Hills     82.39  20   P       P       17 17 13.0  +1.4
      baz=248
G16K  Koyuk River        82.48  23   P       P       17 17 13.8  +1.7
      baz=251
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J16K  Anvik River        82.55  26   P       P       17 17 14.5  +1.9
      baz=253,SNR=67
PPT   Papeete            82.56 107   LR      LR      17 52 57.9
      comp=Z,73nm,19.1s,baz=285,slow=35
PPT2  Papeete2           82.56 108  ePKP2    P       17 17 10.7  -3.0
      comp=Z,69nm,24.0s
PPT2  Papeete2           82.56 108  ePP      PP      17 20 20.0  -3.2
      comp=Z,57nm,28.0s
PPT2                                eS       S       17 27 20.3   -11
      comp=Z,86nm,25.0s
PPT2                                eSS      SS      17 32 48.3  -4.8
      comp=Z,278nm,40.5s
PPT2  Papeete2           82.56 108  eLR      LR      17 42 58.2
      comp=Z,227nm,34.5s
PPT2                                eLR      LR      17 43 05.4
      comp=Z,336nm,31.5s
L16K  Owhat River        82.61  27   P       P       17 17 12.3  -0.6
L16K  Owhat River        82.61  27   P       P       17 17 14.4  +1.5
      baz=254,SNR=22
N16K  Nishlik Lake       82.61  29   P       P       17 17 14.9  +1.9
      baz=255
P16K  Nushagak River     82.62  30   P       P       17 17 14.1  +1.0
      baz=256,SNR=15
M16K  Timber Creek       82.66  28   IAmb    IAmb    17 17 16.1
      comp=Z,94nm,1.3s
M16K  Timber Creek       82.66  28   P       P       17 17 15.0  +1.8
      baz=255
I17K  Unalakleet         82.69  25   P       P       17 17 15.4  +2.1
      baz=253
O16K  Kokwok River B     82.71  30   IAmb    IAmb    17 17 16.1
      comp=Z,56nm,1.0s
O16K  Kokwok River B     82.71  30   P       P       17 17 14.6  +1.2
      baz=256,SNR=12
TBI   Tubuai             82.84 113  eS       S       17 27 24.8  -9.1
      comp=Z,535nm,27.0s
TBI                                 eSS      SS      17 32 52.0  -5.0
      comp=Z,552nm,30.2s
TBI   Tubuai             82.84 113  eLR      LR      17 43 04.0
      comp=Z,1µm,32.2s
TBI                                 eLR      LR      17 43 09.7
      comp=Z,964nm,29.2s
D17K  Noatak River       82.98  21   P       P       17 17 16.6  +1.9
      baz=250
R17L  Mt. Peulik Vol     83.14  32   P       P       17 17 16.3  +0.5
      baz=257,SNR=5.9
CHIR  Chirikof Islan     83.15  34   P       P       17 17 16.7  +0.8
      baz=258
RDOG  Red Dog Mine       83.16  21   P       P       17 17 17.0  +1.3
      baz=250
G17K  Kiwalik Mounta     83.19  23   P       P       17 17 17.4  +1.5
      baz=253
C17K  DeLong Mountai     83.21  20   P       P       17 17 17.5  +1.6
      baz=250
Q16K  King Salmon        83.22  31   P       P       17 17 16.0  -0.1
      baz=257
E17K  Hotham Inlet       83.23  22   P       P       17 17 17.8  +1.8
      baz=251
J17K  VABM Dome          83.25  26   P       P       17 17 18.0  +1.9
      baz=254
F17K  Baldwin Pennin     83.25  22   P       P       17 17 17.4  +1.4
      baz=252
O17K  Koliganek Bris     83.25  29   P       P       17 17 17.7  +1.4
      baz=256
L17K  Donlin             83.26  27   P       P       17 17 18.2  +2.0
      baz=255,SNR=27
AKT   Akhty              83.26 312  eP       P       17 17 15.9  -1.0
AKT                                  pmax    pmax
      comp=Z,40nm,2.2s
H17K  Granite Mounta     83.32  24   P       P       17 17 18.4  +1.8
      baz=253
N17K  Nushagak Hills     83.38  29   P       P       17 17 18.9  +2.0
      baz=256
K17K  Iditarod           83.41  26   P       P       17 17 18.5  +1.4
      baz=255
RAYN  Ar Rayn            83.42 294   P       P       17 17 16.3  -1.8
RAYN  Ar Rayn            83.42 294   P       P       17 17 16.3  -1.7
RAYN                                 pmax    pmax
      comp=Z,13nm,1.0s
P17K  Kvichak River      83.44  30   P       P       17 17 19.6  +2.4
      baz=257
M17K  Holitna River      83.47  28   P       P       17 17 19.4  +2.0
      baz=256,SNR=19
MAK   Makhachkala        83.61 313  eP       P       17 17 14.3  -4.2
MAK                                 e                17 20 27.3
MAK                                 eS       S       17 27 32.4  -8.5
MAK                                 eSS      SS      17 33 04.8  -2.6
MAK                                 eSSS     SSS     17 36 32.3
E18K  Tukpahlearik C     83.79  22   P       P       17 17 20.4  +1.5
      baz=252
F18K  Selawik            83.90  23   P       P       17 17 20.5  +1.1
      baz=253,SNR=12
C18K  Utukok River       83.95  20   IAmb    IAmb    17 17 22.3
      comp=Z,48nm,1.1s
C18K  Utukok River       83.95  20   P       P       17 17 20.3  +0.5
      baz=252
B18K  Kokolik River      83.98  20   P       P       17 17 21.6  +1.7
      baz=251
L18K  Granite Mounta     84.01  27   P       P       17 17 21.9  +1.7
      baz=257,SNR=52
H18K  Honhosa River      84.02  24   P       P       17 17 20.3  +0.2
      baz=255
N18K  Kilae Creek        84.04  29   P       P       17 17 21.6  +1.3
      baz=257
Q18K  Katmai Hardscr     84.05  31   P       P       17 17 20.6   0.0
      baz=258,SNR=7.8
SII   Sitkinak Islan     84.08  33   P       P       17 17 22.7  +2.0
SII   Sitkinak Islan     84.08  33   P       P       17 17 22.2  +1.5
      baz=259
P18K  Big Mountain,      84.09  30   IAmb    IAmb    17 17 22.2
      comp=Z,46nm,1.1s
P18K  Big Mountain,      84.09  30   P       P       17 17 21.1  +0.4
      baz=258,SNR=7.1
G18K  Tagagawik          84.10  23   IAmb    IAmb    17 17 26.8
      comp=Z,56nm,1.4s
G18K  Tagagawik          84.10  23   P       P       17 17 21.4  +0.9
      baz=254
O18K  Koktuh Hills       84.20  30   P       P       17 17 22.2  +1.0
      baz=258,SNR=6.5
M18K  Stony River        84.25  28   P       P       17 17 22.9  +1.6
      baz=257
J18K  Innoko River       84.29  26   P       P       17 17 22.6  +1.1
      baz=256,SNR=29
A19K  Wainwright         84.49  19   P       P       17 17 23.7  +1.4
      baz=252
GCSA  Galena City Sc     84.53  25   P       P       17 17 23.7  +1.0
      baz=256
C19K  Lookout Ridge      84.65  20   IAmb    IAmb    17 17 26.5
      comp=Z,57nm,1.1s
C19K  Lookout Ridge      84.65  20   P       P       17 17 24.7  +1.4
      baz=253
OHAK  Old Harbor         84.69  32   P       P       17 17 24.9  +1.3
OHAK  Old Harbor         84.69  32   P       P       17 17 24.4  +0.8
      baz=260,SNR=7.2
F19K  Shaleruckik Mo     84.69  22   IAmb    IAmb    17 17 29.6
      comp=Z,42nm,1.5s
F19K  Shaleruckik Mo     84.69  22   P       P       17 17 24.1  +0.7
      baz=255
O19K  Port Alsworth      84.70  29   P       P       17 17 22.7  -1.0
O19K  Port Alsworth      84.70  29   P       P       17 17 24.2  +0.5
      baz=259
N19K  Bonanza Creek      84.74  29   P       P       17 17 25.5  +1.5
      baz=259
G19K  Purcell Mounta     84.78  23   P       P       17 17 25.2  +1.2
      baz=256
KIRV  Kirov              84.79 329   LR      LR      17 57 19.0
      comp=Z,112nm,21.8s,baz=87,slow=37
KIRV  Kirov              84.79 329ceP        P       17 17 22.8  -1.3
BELG  Belogornoye        84.80 323 i P       P       17 17 22.6  -1.7
BELG                                 pmax    pmax
      comp=Z,8.0nm,1.0s
Q19K  Cape Douglas,      84.80  31   P       P       17 17 24.0  -0.3
      baz=260
L19K  White Mountain     84.84  27   P       P       17 17 25.5  +1.1
      baz=258
J19K  Poorman            84.89  25   P       P       17 17 25.5  +1.0
      baz=257
H19K  Roundabout Mou     84.89  24   IAmb    IAmb    17 17 30.4
      comp=Z,41nm,1.1s
H19K  Roundabout Mou     84.89  24   P       P       17 17 25.7  +1.2
      baz=256
D19K  Kuna River         84.99  21   IAmb    IAmb    17 17 27.7
      comp=Z,32nm,0.9s
D19K  Kuna River         84.99  21   P       P       17 17 25.9  +0.8
      baz=255
E19K  Redstone River     85.05  22   IAmb    IAmb    17 17 27.0
      comp=Z,22nm,0.9s
E19K  Redstone River     85.05  22   P       P       17 17 26.3  +1.0
      baz=256
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P19K	**Oil Pt**	85.14	30	P	**P**	**17 17 26.1**	**+0.1**
	baz=260						
KDAK	**Kodiak Island**	85.16	32	LR	LR	17 50 43.5	
	comp=Z,271nm,19.9s,baz=239,slow=32						
KDAK	**Kodiak Island**	85.16	32	P	**P**	**17 17 25.9**	**-0.1**
KDAK	**Kodiak Island**	85.16	32	P	**P**	**17 17 25.9**	**-0.1**
KDAK				pmax	pmax		
	comp=Z,140nm,1.3s						
KDAK	**Kodiak Island**	85.16	32	P	**P**	**17 17 26.9**	**+1.0**
	baz=261						
ILSW	**Iliamna Southw**	85.24	30	IAmb	IAmb	17 17 31.0	
	comp=Z,68nm,1.2s						
Q20K	**Shuyak Island**	85.39	31	P	**P**	**17 17 27.9**	**+0.8**
	baz=261						
K20K	**Telida**	85.43	26	IAmb	IAmb	17 17 35.2	
	comp=Z,42nm,1.5s						
K20K	**Telida**	85.43	26	P	**P**	**17 17 28.4**	**+1.1**
	baz=259						
O20K	**Slope Mountain**	85.52	30	P	**P**	**17 17 28.6**	**+0.7**
	baz=260						
H20K	**Anotleneega Mo**	85.52	24	P	**P**	**17 17 28.1**	**+0.4**
	baz=258						
F20K	**Avaraart Lake**	85.52	22	P	**P**	**17 17 28.1**	**+0.5**
	baz=257						
I20K	**Naaghedeneel**	85.54	25	P	**P**	**17 17 28.8**	**+1.0**
	baz=258						
J20K	**Nowinta River**	85.56	25	IAmb	IAmb	17 17 35.7	
	comp=Z,42nm,1.5s						
J20K	**Nowinta River**	85.56	25	P	**P**	**17 17 28.9**	**+1.0**
	baz=259,SNR=8.9						
M20K	**Styx River**	85.58	28	P	**P**	**17 17 28.8**	**+0.6**
	baz=260						
D20K	**Etivluk River**	85.58	21	IAmb	IAmb	17 17 31.3	
	comp=Z,32nm,0.9s						
D20K	**Etivluk River**	85.58	21	P	**P**	**17 17 28.7**	**+0.8**
	baz=256						
E20K	**Nigu River**	85.63	21	P	**P**	**17 17 29.2**	**+0.9**
	baz=256						
B20K	**Meade River**	85.72	19	P	**P**	**17 17 28.9**	**+0.4**
	baz=256						
SPCR	**Spurr Chakacha**	85.90	29	P	**P**	**17 17 30.0**	**+0.2**
	baz=261						
HOM	**Homer**	85.94	30	P	**P**	**17 17 30.9**	**+1.0**
	baz=261						
SPU	**Mount Spurr**	85.97	29	IAmb	IAmb	17 17 31.2	
	comp=Z,53nm,1.6s						
IMAR	**Indian Mountai**	86.07	24	P	**P**	**17 17 30.2**	**-0.3**
PPLA	**Purkeypile**	86.19	27	P	**P**	**17 17 31.5**	**+0.3**
	baz=261						
A21K	**Barrow**	86.22	18	P	**P**	**17 17 31.5**	**+0.6**
	baz=256						
G21K	**Allakaket**	86.27	23	P	**P**	**17 17 32.0**	**+0.6**
	baz=259						
CHUM	**Lake Minchumin**	86.30	26	P	**P**	**17 17 31.5**	**-0.1**
	baz=260,SNR=8.9						
C21K	**Knifeblade Rid**	86.33	20	P	**P**	**17 17 32.1**	**+0.5**
	baz=258						
SKT	**Skwentna**	86.34	28	P	P	17 17 30.3	-1.6
SKT				IAmb	IAmb	17 17 33.5	
	comp=Z,30nm,1.0s						
SKT	**Skwentna**	86.34	28	P	**P**	**17 17 31.5**	**-0.4**
	baz=261,SNR=7.2						
H21K	**Melozitna Rive**	86.40	24	P	**P**	**17 17 32.7**	**+0.6**
	baz=260,SNR=7.3						
BRSE	**Bradley Lake S**	86.40	30	P	**P**	**17 17 32.5**	**+0.3**
	baz=262						
F21K	**Alatna River**	86.42	22	P	**P**	**17 17 31.6**	**-0.6**
	baz=259						
E21K	**Killik River**	86.47	21	IAmb	IAmb	17 17 34.0	
	comp=Z,23nm,1.1s						
E21K	**Killik River**	86.47	21	P	**P**	**17 17 32.4**	**0.0**
	baz=259						
B21K	**Ikpikpuk River**	86.48	20	P	**P**	**17 17 32.7**	**+0.4**
	baz=258						
SUA	**Susitna One**	86.64	28	IAmb	IAmb	17 17 39.5	
	comp=Z,52nm,1.0s						
SUA	**Susitna One**	86.64	28	P	**P**	**17 17 33.3**	**-0.2**
	baz=262,SNR=6.0						
I21K	**Tanana**	86.65	25	P	**P**	**17 17 33.7**	**+0.5**
	baz=261						
A22K	**Sinclair Lake**	86.66	19	P	**P**	**17 17 33.7**	**+0.5**
	baz=258						
L22K	**Petersville**	86.78	27	IAmb	IAmb	17 17 35.4	
	comp=Z,26nm,0.8s						
KTH	**Kantishna Hill**	86.86	26	P	**P**	**17 17 33.7**	**-0.7**
BPAW	**Bear Paw Mtn.**	86.91	26	P	**P**	**17 17 34.3**	**-0.3**
	baz=262						
F22K	**John River**	86.96	22	P	**P**	**17 17 35.3**	**+0.5**
	baz=260						
M22K	**Willow**	86.97	28	P	**P**	**17 17 34.3**	**-0.6**
	baz=262,SNR=6.4						
CUT	**Chulitna**	86.99	27	P	**P**	**17 17 35.5**	**+0.5**
	baz=262						
D22K	**Ayikyak River**	87.02	21	IAmb	IAmb	17 17 41.1	
	comp=Z,51nm,1.9s						
D22K	**Ayikyak River**	87.02	21	P	**P**	**17 17 35.8**	**+0.7**
	baz=260						
H22K	**Ishtalitna Cre**	87.02	24	P	**P**	**17 17 35.6**	**+0.5**
	baz=261						
KBZ	**Khabaz**	87.03	314	LR	LR	18 03 20.2	
	comp=Z,51nm,18.6s,baz=56,slow=40						
KBZ	**Khabaz**	87.03	314	*e*P	P	17 17 34.7	-0.9
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
B22K	**Teshekpuk Lake**	87.03	19	P	**P**	**17 17 34.8**	**-0.2**
	baz=259						
RC01	**Rabbit Creek A**	87.07	29	P	**P**	**17 17 35.1**	**-0.3**
	baz=263						
SEW	**Seward**	87.09	30	P	**P**	**17 17 35.7**	**+0.2**
	baz=263						
TRF	**Thorofare Moun**	87.12	26	P	P	17 17 35.0	-0.8
	baz=262						
G22K	**Bettles**	87.12	23	P	**P**	**17 17 35.4**	**-0.2**
	baz=261						
MLY	**Manley**	87.15	25	P	**P**	**17 17 35.3**	**-0.5**
	baz=262,SNR=11						
KIV	**Kislovodsk**	87.20	314	*e*P	P	17 17 35.2	-1.4
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,56nm,20.0s						
E22K	**Anaktuvuk Pass**	87.20	22	IAmb	IAmb	17 17 38.4	
	comp=Z,40nm,1.1s						
E22K	**Anaktuvuk Pass**	87.20	22	P	**P**	**17 17 36.7**	**+0.7**
	baz=261,SNR=32						
SHA1	**Shidzhatmaz**	87.21	314	*i* P	**P**	**17 17 36.7**	**-0.1**
GURO	**Guroymak-BITLI**	87.35	308	P	P	17 17 36.3	-1.2
GURO				IAmb	IAmb	17 17 51.5	
	comp=Z,43nm,1.5s						
PMR	**Palmer**	87.42	28	IAmb	IAmb	17 17 38.7	
	comp=Z,26nm,1.0s						
PMR	**Palmer**	87.42	28	P	**P**	**17 17 37.4**	**+0.3**
PMR	**Palmer**	87.42	28	P	**P**	**17 17 36.9**	**-0.1**
	baz=263						
BWN	**Browne**	87.58	26	IAmb	IAmb	17 19 32.2	
	comp=Z,39nm,0.9s						
G23K	**Bananza Creek**	87.67	23	IAmb	IAmb	17 17 40.2	
	comp=Z,38nm,1.1s						
G23K	**Bananza Creek**	87.67	23	P	**P**	**17 17 39.1**	**+0.8**
	baz=262						
COLD	**Coldfoot**	87.68	23	IAmb	IAmb	17 17 40.5	
	comp=Z,26nm,0.9s						
COLD	**Coldfoot**	87.68	23	P	**P**	**17 17 38.9**	**+0.7**
	baz=262,SNR=24						
KNK	**Knik Glacier**	87.72	29	P	**P**	**17 17 38.8**	**+0.2**
	baz=264,SNR=5.2						
PWL	**Port Wells**	87.73	29	P	**P**	**17 17 38.8**	**+0.2**
	baz=264						
D23K	**Nanushuk River**	87.75	21	IAmb	IAmb	17 17 40.7	
	comp=Z,42nm,1.1s						
D23K	**Nanushuk River**	87.75	21	P	**P**	**17 17 39.0**	**+0.5**
	baz=262						
I23K	**Minto, Yukon-K**	87.75	25	IAmb	IAmb	17 17 40.1	
	comp=Z,51nm,1.1s						
I23K	**Minto, Yukon-K**	87.75	25	P	**P**	**17 17 38.7**	**+0.2**
	baz=263						
H23K	**Yukon River**	87.75	24	IAmb	IAmb	17 17 40.3	
	comp=Z,29nm,1.0s						
H23K	**Yukon River**	87.75	24	P	**P**	**17 17 38.8**	**+0.1**
	baz=263,SNR=20						
MCK	**McKinley**	87.76	26	IAmb	IAmb	17 17 39.3	
	comp=Z,29nm,1.0s						
MCK	**McKinley**	87.76	26	P	P	17 17 37.3	-1.4
	baz=263,SNR=8.6						
RND	**Reindeer**	87.76	27	P	P	17 17 37.4	-1.4
RND				IAmb	IAmb	17 17 39.6	
	comp=Z,32nm,1.0s						
RND	**Reindeer**	87.76	27	P	P	17 17 37.4	-1.4
RND				pmax	pmax		
	comp=Z,32nm,1.0s						
SML	**Sawmill**	87.83	28	IAmb	IAmb	17 17 41.2	
	comp=Z,41nm,1.0s						
SML	**Sawmill**	87.83	28	P	**P**	**17 17 39.1**	**0.0**
	baz=264,SNR=6.1						
WAT1	**Susitna Watana**	87.83	27	P	**P**	**17 17 38.7**	**-0.4**
	baz=264						
C23K	**Itkillik River**	87.90	20	IAmb	IAmb	17 17 40.7	
	comp=Z,30nm,1.0s						
C23K	**Itkillik River**	87.90	20	P	**P**	**17 17 39.1**	**-0.1**
	baz=262						
E23K	**Chandalar**	88.01	22	IAmb	IAmb	17 17 41.8	
	comp=Z,36nm,1.0s						
E23K	**Chandalar**	88.01	22	P	**P**	**17 17 40.5**	**+0.6**
	baz=263						
TOLK	**Toolik Lake Re**	88.10	21	IAmb	IAmb	17 17 42.0	
	comp=Z,22nm,1.0s						
TOLK	**Toolik Lake Re**	88.10	21	P	**P**	**17 17 40.6**	**+0.3**
	baz=263,SNR=11						
M23K	**Glacier View**	88.11	28	P	**P**	**17 17 40.3**	**-0.1**
	baz=265,SNR=5.1						
WAT6	**Susitna Watana**	88.18	27	P	**P**	**17 17 40.8**	**-0.1**
	baz=264,SNR=11						
WRH	**Wood River Hil**	88.21	26	P	P	17 17 39.8	-1.0
WRH				IAmb	IAmb	17 17 41.2	
	comp=Z,31nm,1.1s						
SCM	**Sheep Creek Mo**	88.30	28	P	**P**	**17 17 41.4**	**0.0**
	baz=265,SNR=5.6						
VRH	**Novokhopyorsk**	88.32	321	*e*P	P	17 17 37.2	-4.4
VRH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GLI	**Glacier Island**	88.33	29	P	**P**	**17 17 41.3**	**-0.2**
	baz=265						
CCB	**Clear Creek Bu**	88.35	25	IAmb	IAmb	17 17 41.6	
	comp=Z,34nm,1.1s						
COLA	**College**	88.35	25	P	**P**	**17 17 41.2**	**-0.2**
DHY	**Denali Highway**	88.39	27	IAmb	IAmb	17 17 44.9	
	comp=Z,18nm,1.0s						
DHY	**Denali Highway**	88.39	27	P	**P**	**17 17 41.7**	**-0.2**
	baz=265						
D24K	**Happy Valley**	88.43	21	IAmb	IAmb	17 17 47.6	
	comp=Z,25nm,1.0s						
D24K	**Happy Valley**	88.43	21	P	**P**	**17 17 41.8**	**0.0**
	baz=263						
E24K	**Your Creek**	88.43	22	P	**P**	**17 17 41.8**	**-0.1**
	baz=264						
H24K	**Noodor Dome**	88.44	24	IAmb	IAmb	17 17 43.6	
	comp=Z,32nm,1.0s						
H24K	**Noodor Dome**	88.44	24	P	**P**	**17 17 42.1**	**+0.2**
	baz=264,SNR=24						
C24K	**Franklin Bluff**	88.54	20	IAmb	IAmb	17 17 43.6	
	comp=Z,33nm,1.2s						
C24K	**Franklin Bluff**	88.54	20	P	**P**	**17 17 42.5**	**+0.2**
	baz=263,SNR=11						
POKR	**Poker Plat Res**	88.55	25	P	**P**	**17 17 42.5**	**+0.1**
	baz=265						
SYO	**Syowa Base**	88.56	201⇓	*i*P	**P**	**17 17 42.4**	**+0.1**
SYO	**Syowa Base**	88.56	201⇑	*e*pP	pP	17 17 49.2	+3.8
Q23K	**Middleton Isla**	88.59	31	P	**P**	**17 17 42.7**	**0.0**
	baz=266						
F24K	**Squaw Lake**	88.60	23	IAmb	IAmb	17 17 44.6	
	comp=Z,24nm,1.1s						
F24K	**Squaw Lake**	88.60	23	P	**P**	**17 17 43.3**	**+0.7**
	baz=264						
G24K	**Hadweenzic Riv**	88.68	23	IAmb	IAmb	17 17 44.8	
	comp=Z,28nm,1.1s						
G24K	**Hadweenzic Riv**	88.68	23	P	**P**	**17 17 43.3**	**+0.2**
	baz=265						
HDA	**Harding Lake**	88.70	26	IAmb	IAmb	17 17 43.4	
	comp=Z,23nm,0.9s						
HDA	**Harding Lake**	88.70	26	P	P	17 17 42.1	-1.0
	baz=265,SNR=10						
ILAR	**Eielson Array**	88.75	25	P	P	17 17 41.9	-1.5
	comp=Z,8.6nm,0.9s,baz=271,slow=3.9,SNR=50						
ILAR				PP	**PP**	**17 21 08.8**	**-3.4**
	comp=Z,3.0nm,1.1s,baz=261,slow=6.3,SNR=5.0						
	comp=Z,8.6nm,0.9s						
ILAR	**Eielson Array**	88.75	25	P	P	17 17 41.4	-2.0
ILAR					PP	17 21 06.5	-5.7
M24K	**Tolsona, Glenn**	88.87	28	IAmb	IAmb	17 17 54.6	
	comp=Z,47nm,1.1s						
M24K	**Tolsona, Glenn**	88.87	28	P	**P**	**17 17 43.8**	**-0.3**
	baz=266						
KLU	**Klutina**	88.94	29	P	**P**	**17 17 43.8**	**-0.6**
	baz=266						
EYAK	**Cordova Ski Ar**	88.97	30	P	**P**	**17 17 44.5**	**+0.1**
	baz=266						
DIV	**Divide**	88.99	29	IAmb	IAmb	17 17 47.5	
	comp=Z,38nm,1.0s						
QSPA	**South Pole Qui**	89.03	180	P	**P**	**17 17 44.1**	**-0.7**
	comp=Z,80nm,0.9s,baz=314,slow=1.2,SNR=378						
	comp=Z,80nm,0.9s						
QSPA	**South Pole Qui**	89.03	180	P	P	17 17 43.8	-1.0
K24K	**Donnelly Dome**	89.16	26	P	P	17 17 44.5	-0.9
K24K	**Donnelly Dome**	89.16	26	P	**P**	**17 17 44.9**	**-0.5**
	baz=266						
G25K	**Bearman Lake**	89.23	23	P	**P**	**17 17 45.8**	**+0.3**
	baz=266						
PAX	**Paxson**	89.25	27	IAmb	IAmb	17 17 47.3	
	comp=Z,29nm,1.1s						
PAX	**Paxson**	89.25	27	P	**P**	**17 17 45.6**	**-0.2**
	baz=267,SNR=8.4						
D25K	**Kavik River**	89.32	21	P	**P**	**17 17 45.5**	**-0.5**
	baz=266						
HARP	**HAARP**	89.36	28	P	**P**	**17 17 46.1**	**-0.2**
	baz=267						
J25K	**Salcha River,**	89.39	25	P	P	17 17 45.6	-0.8
	baz=267,SNR=6.1						
F25K	**Christian Rive**	89.47	22	P	**P**	**17 17 47.2**	**+0.5**
	baz=266						
E25K	**Arctic Village**	89.53	22	P	**P**	**17 17 47.8**	**+0.8**
	baz=266,SNR=17						
BMRM	**Bremner River**	89.55	29	P	**P**	**17 17 47.3**	**0.0**
	baz=267						
RIDG	**Independent Ri**	89.57	26	P	**P**	**17 17 47.1**	**-0.2**
	baz=267						
N25K	**Chitina, Valde**	89.58	29	IAmb	IAmb	17 18 03.8	
	comp=Z,35nm,1.4s						
N25K	**Chitina, Valde**	89.58	29	P	**P**	**17 17 47.3**	**-0.2**
	baz=267						
KAIM	**Kayak Island**	89.60	30	P	**P**	**17 17 47.1**	**-0.4**
	baz=268						
VORD	**Divnogorie**	89.84	321	*e*P	**P**	**17 17 49.9**	**+1.1**
VORD				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KIBK	**Kibwezi**	89.85	268	P	P	17 17 47.3	-2.5
BMAR	**Burnt Mountain**	89.86	23	P	P	17 17 47.6	-1.0
C26K	**Camden Bay**	89.87	20	P	**P**	**17 17 48.8**	**+0.3**
	baz=267						
DOT	**Dot Lake**	89.92	26	IAmb	IAmb	17 17 49.9	
	comp=Z,22nm,1.0s						
VSR	**Storozhevoye**	89.93	321	*e*P	P	17 17 45.1	-4.1
VSR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GLB	**Gilahina Butte**	89.95	29	IAmb	IAmb	17 17 52.0	
	comp=Z,34nm,1.2s						
SCRK	**Sand Creek**	89.97	26	P	**P**	**17 17 49.2**	**0.0**
	baz=268,SNR=6.9						
KLMR	**Klimovskoe**	90.02	331	*e*P	P	17 17 46.6	-2.7
KLMR				*e*		17 21 18.8	
KLMR				pmax	pmax		
	comp=Z,24nm,1.7s						
F26K	**Sheenjek River**	90.04	22	P	**P**	**17 17 49.1**	**-0.4**
	baz=268						
MENT	**Mentasta**	90.05	27	IAmb	IAmb	17 17 55.2	
	comp=Z,21nm,0.9s						
MENT	**Mentasta**	90.05	27	P	**P**	**17 17 49.3**	**-0.2**
VRDI	**Verde Repeater**	90.12	29	IAmb	IAmb	17 17 59.7	
	comp=Z,73nm,1.7s						
G26K	**Porcupine Rive**	90.15	23	IAmb	IAmb	17 17 52.0	
	comp=Z,26nm,1.2s						
G26K	**Porcupine Rive**	90.15	23	P	**P**	**17 17 50.5**	**+0.6**
	baz=268						
J26L	**Joseph Creek**	90.17	26	IAmb	IAmb	17 17 51.1	
	comp=Z,26nm,0.8s						
J26L	**Joseph Creek**	90.17	26	P	**P**	**17 17 50.0**	**-0.1**
	baz=268,SNR=24						
L26K	**Log Cabin Wild**	90.22	27	IAmb	IAmb	17 17 55.9	
	comp=Z,56nm,1.8s						
L26K	**Log Cabin Wild**	90.22	27	P	**P**	**17 17 51.1**	**+0.7**
	baz=268,SNR=5.4						
C27K	**Jago River**	90.27	20	IAmb	IAmb	17 17 52.3	
	comp=Z,27nm,1.2s						
C27K	**Jago River**	90.27	20	P	**P**	**17 17 50.4**	**0.0**
	baz=268						
CRQE	**Cirque**	90.28	29	P	**P**	**17 17 51.2**	**+0.4**
	baz=269						
MCARA	**McCarthy VSAT**	90.33	29	P	**P**	**17 17 50.2**	**-0.6**
MCARA				IAmb	IAmb	17 17 54.8	
	comp=Z,23nm,1.0s						
MCARA	**McCarthy VSAT**	90.33	29	P	**P**	**17 17 51.7**	**+0.8**
	baz=269						
I26K	**Coal Creek Min**	90.36	25	P	**P**	**17 17 50.2**	**-0.7**
	baz=269						
M26K	**Nabesna, AK**	90.37	28	IAmb	IAmb	17 17 52.8	
	comp=Z,54nm,1.8s						
M26K	**Nabesna, AK**	90.37	28	P	**P**	**17 17 51.0**	**0.0**
	baz=269						
K27K	**Chicken**	90.81	26	P	**P**	**17 17 54.2**	**+1.2**
	baz=270,SNR=32						
M27K	**Edge Creek, AK**	90.89	28	P	**P**	**17 17 54.1**	**+0.5**
	baz=270						
L27K	**Beaver Creek,**	90.91	27	IAmb	IAmb	17 17 55.5	
	comp=Z,19nm,0.9s						
L27K	**Beaver Creek,**	90.91	27	P	**P**	**17 17 54.5**	**+0.9**
	baz=270,SNR=11						
BCAR	**Beaver Creek A**	90.93	27	P	P	17 17 52.7	-1.0
BARN	**Barnard Glacie**	90.99	29	IAmb	IAmb	17 17 56.4	
	comp=Z,39nm,1.0s						
G27K	**Doyon Strip**	90.99	23	P	**P**	**17 17 54.4**	**+0.6**
	baz=270						
I27K	**Kandik River**	91.01	25	P	**P**	**17 17 54.9**	**+0.9**
	baz=270,SNR=24						
E27K	**Coleen River**	91.02	22	IAmb	IAmb	17 17 55.6	
	comp=Z,21nm,1.2s						
E27K	**Coleen River**	91.02	22	P	**P**	**17 17 54.3**	**+0.4**
	baz=270						
H27K	**Steamboat Moun**	91.05	24	IAmb	IAmb	17 17 56.3	
	comp=Z,38nm,1.4s						
H27K	**Steamboat Moun**	91.05	24	P	**P**	**17 17 54.8**	**+0.7**
	baz=270						
CTG	**Chitna Glacier**	91.14	29	P	**P**	**17 17 55.8**	**+1.0**
	baz=270						
D27M	**Malcolm River**	91.24	21	P	**P**	**17 17 54.8**	**-0.2**
	baz=271						
LOGN	**Logan Glacier**	91.31	29	IAmb	IAmb	17 18 09.2	
	comp=Z,40nm,1.2s						
ASF	**Jabal al Asfar**	91.36	302	LR	LR	18 06 14.2	
	comp=Z,16µm,19.0s,baz=55,slow=40						
BVCY	**Beaver Creek**	91.36	28	P	**P**	**17 17 56.6**	**+0.9**
	baz=271,SNR=5.5						
OBN	**Obninsk**	91.53	325⇓	*e*P	P	17 17 53.3	-3.2
OBN				*e*		17 18 00.4	
OBN				*e*		17 21 33.5	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,135nm,17.0s						
YUK3	**Moose Creek**	91.56	28	P	**P**	**17 17 57.1**	**+0.3**
	baz=271						
F28M	**Old Crow**	91.68	23	IAmb	IAmb	17 17 58.4	
	comp=Z,19nm,1.1s						
F28M	**Old Crow**	91.68	23	P	**P**	**17 17 57.4**	**+0.4**
	baz=272,SNR=10						
PINM	**Pinnacle**	91.69	30	P	**P**	**17 17 57.4**	**+0.1**
	baz=271						
O28M	**Mount Upton**	91.71	29	IAmb	IAmb	17 18 03.9	
	comp=Z,35nm,1.1s						
O28M	**Mount Upton**	91.71	29	P	**P**	**17 17 57.9**	**+0.3**
	baz=271						
I28M	**Miner Creek**	91.71	25	P	**P**	**17 17 58.1**	**+0.8**
	baz=272						
TAOE	**Nuku Hiva Isla**	91.75	99	*e*PKP2	P	17 17 55.8	-2.8
	comp=Z,32nm,24.4s						
TAOE	**Nuku Hiva Isla**	91.75	99	*e*S	S	17 28 52.7	-7.6
	comp=Z,75nm,29.7s						
TAOE				*e*SS	SS	17 34 59.2	-8.7
	comp=Z,87nm,28.4s						
TAOE	**Nuku Hiva Isla**	91.75	99	*e*LR	LR	17 47 23.7	
	comp=Z,166nm,26.9s						
E28M	**Babbage River**	91.77	22	IAmb	IAmb	17 17 59.0	
	comp=Z,22nm,1.1s						
E28M	**Babbage River**	91.77	22	P	**P**	**17 17 57.7**	**+0.3**
	baz=272						
YUK8	**Steele Glacier**	91.90	29	P	**P**	**17 17 59.5**	**+1.0**
	baz=272						
DAWY	**Dawson**	91.99	26	P	**P**	**17 17 59.0**	**+0.5**
	baz=272,SNR=25						
D28M	**Stokes Point**	92.03	21	P	**P**	**17 17 58.8**	**+0.2**
	baz=273						
H29M	**Whitestone**	92.33	24	IAmb	IAmb	17 18 01.4	
	comp=Z,33nm,1.2s						
H29M	**Whitestone**	92.33	24	P	**P**	**17 17 59.9**	**-0.1**
	baz=273						
E29M	**Blow River**	92.38	22	IAmb	IAmb	17 18 08.8	
	comp=Z,19nm,1.4s						
E29M	**Blow River**	92.38	22	P	**P**	**17 18 00.1**	**-0.1**
	baz=274,SNR=6.4						
I29M	**Ogilvie Camp,**	92.40	25	P	**P**	**17 18 00.5**	**+0.1**
	baz=273,SNR=34						
G29M	**Pine Creek**	92.42	23	P	**P**	**17 18 00.4**	**-0.1**
	baz=273						
YUK4	**Talbot Arm**	92.44	29	P	**P**	**17 18 02.0**	**+1.1**
	baz=273						
M29M	**Somme Creek**	92.48	28	IAmb	IAmb	17 18 03.2	
	comp=Z,24nm,1.1s						
M29M	**Somme Creek**	92.48	28	P	**P**	**17 18 02.2**	**+1.3**
	baz=273						
J29N	**Klondike Camp**	92.48	26	P	**P**	**17 18 02.0**	**+1.1**
	baz=273,SNR=9.4						
O29M	**Mount Kennedy**	92.52	30	IAmb	IAmb	17 18 07.5	
	comp=Z,31nm,1.1s						
O29M	**Mount Kennedy**	92.52	30	P	**P**	**17 18 01.6**	**+0.4**
	baz=273						
L29M	**L29M**	92.59	27	P	**P**	**17 18 02.5**	**+1.1**
	baz=273						
YUK6	**Outpost Mounta**	92.60	29	P	**P**	**17 18 01.2**	**-0.5**
	baz=273						
MMAI	**Mount Meron Ar**	92.62	303	LR	LR	18 07 10.3	
	comp=Z,67nm,19.3s,baz=76,slow=40						
K29M	**Barlow Dome**	92.82	26	P	**P**	**17 18 03.2**	**+0.7**
	baz=274						
PLTM	**Poltava**	92.89	319	P	**P**	**17 18 03.0**	**0.0**
P29M	**Windy Craggy**	92.98	30	P	**P**	**17 18 03.9**	**+0.7**
	baz=273						
EPYK	**Eagle Plains**	92.98	24	P	**P**	**17 18 03.0**	**0.0**
	baz=274,SNR=9.6						
HYT	**Haines Junctio**	93.02	29	IAmb	IAmb	17 18 05.5	
	comp=Z,21nm,1.0s						
HYT	**Haines Junctio**	93.02	29	P	**P**	**17 18 04.2**	**+0.8**
	baz=274,SNR=6.5						
G30M	**tAoh Zraii Nji**	93.13	23	IAmb	IAmb	17 18 04.4	
	comp=Z,39nm,1.2s						
G30M	**tAoh Zraii Nji**	93.13	23	P	**P**	**17 18 03.1**	**-0.6**
	baz=275						
N30M	**Aishikik Lake**	93.18	29	IAmb	IAmb	17 18 06.4	
	comp=Z,33nm,1.1s						
N30M	**Aishikik Lake**	93.18	29	P	**P**	**17 18 04.4**	**+0.3**
	baz=274						
I30M	**Mount Dempster**	93.22	25	IAmb	IAmb	17 18 05.6	
	comp=Z,21nm,1.1s						
I30M	**Mount Dempster**	93.22	25	P	**P**	**17 18 04.3**	**0.0**
	baz=275						
F30M	**Barrier River**	93.24	22	IAmb	IAmb	17 18 05.3	
	comp=Z,32nm,1.1s						
F30M	**Barrier River**	93.24	22	P	**P**	**17 18 03.9**	**-0.3**
	baz=276,SNR=9.5						
M30M	**Minto, Yukon**	93.24	28	IAmb	IAmb	17 18 06.5	
	comp=Z,25nm,1.1s						
M30M	**Minto, Yukon**	93.24	28	P	**P**	**17 18 04.8**	**+0.4**
	baz=274,SNR=10						
J30M	**Hart River**	93.29	25	IAmb	IAmb	17 18 06.5	
	comp=Z,34nm,1.1s						
J30M	**Hart River**	93.29	25	P	**P**	**17 18 05.4**	**+0.7**
	baz=275						
P30M	**Million Dollar**	93.34	30	P	**P**	**17 18 05.6**	**+0.7**
	baz=274						
MAYO	**Mayo, Yukon**	93.57	26	P	**P**	**17 18 06.4**	**+0.6**
	baz=275						
ELIB	**Princess Elisa**	93.64	198	*d*P	P	17 18 04.0	-2.1
	comp=Z,13nm,1.1s						
PLBC	**Pleasant Camp**	93.69	31	P	**P**	**17 18 06.2**	**-0.2**
	baz=274						
O30N	**Mendenhall**	93.72	29	IAmb	IAmb	17 18 13.1	
	comp=Z,23nm,1.2s						
O30N	**Mendenhall**	93.72	29	P	**P**	**17 18 07.2**	**+0.6**
	baz=275						
N31M	**Braeburn, Yuko**	93.81	29	P	**P**	**17 18 07.8**	**+0.8**
	baz=275,SNR=7.8						
BRTR	**Keskin Array B**	93.89	310	P	P	17 18 06.2	-1.8
	comp=Z,1.0nm,1.0s,baz=90,slow=9.9,SNR=4.7						
BRTR				PP	**PP**	**17 21 57.7**	**+4.0**
	comp=Z,2.5nm,1.0s,baz=116,slow=5.6,SNR=6.2						
BRTR				LR	LR	18 07 39.6	
	comp=Z,24nm,19.4s,baz=82,slow=40						

G31M	**Satah River**	**93.90**	**23**	IAmb	IAmb	17 18 07.9	
	comp=Z,34nm,1.1s						
G31M	**Satah River**	**93.90**	**23**	P	**P**	**17 18 06.8**	**-0.4**
	baz=277,SNR=18						
BR105	**Keskin Array S**	**93.91**	**310**	P	P	17 18 06.8	-1.3
H31M	**Peel River**	**94.00**	**24**	IAmb	IAmb	17 18 08.9	
	comp=Z,23nm,1.1s						
H31M	**Peel River**	**94.00**	**24**	P	**P**	**17 18 07.2**	**-0.5**
	baz=277						
INK	**Inuvik**	**94.01**	**22**	P	P	17 18 05.7	-2.0
INK				IAmb	IAmb	17 18 08.4	
	comp=Z,27nm,1.1s						
INK	**Inuvik**	**94.01**	**22**	P	P	17 18 05.7	-1.9
INK	**Inuvik**	**94.01**	**22**	P	**P**	**17 18 07.3**	**-0.4**
	baz=278,SNR=16						
F31M	**Tsiigehtchic**	**94.04**	**23**	P	**P**	**17 18 07.3**	**-0.5**
	baz=277,SNR=15						
R31K	**City Hall, Gus**	**94.09**	**32**	P	**P**	**17 18 08.3**	**0.0**
	baz=275						
SKAG	**Skagway**	**94.21**	**31**	IAmb	IAmb	17 18 10.9	
	comp=Z,37nm,1.2s						
SKAG	**Skagway**	**94.21**	**31**	P	**P**	**17 18 10.3**	**+1.5**
SKAG	**Skagway**	**94.21**	**31**	P	**P**	**17 18 09.0**	**+0.3**
	baz=275						
WHY	**Whitehorse**	**94.32**	**29**	P	P	17 18 07.0	-2.5
WHY	**Whitehorse**	**94.32**	**29**	P	**P**	**17 18 09.6**	**+0.2**
	baz=276,SNR=8.7						
M31M	**Drury Creek, Y**	**94.39**	**28**	IAmb	IAmb	17 18 11.4	
	comp=Z,32nm,1.5s						
M31M	**Drury Creek, Y**	**94.39**	**28**	P	**P**	**17 18 09.9**	**+0.3**
	baz=276						
SIT	**Sitka**	**94.44**	**33**	P	**P**	**17 18 10.8**	**+1.0**
	baz=275						
S32K	**Killisnoo**	**94.80**	**33**	P	**P**	**17 18 12.4**	**+0.8**
	baz=276						
P32M	**Atlin**	**95.02**	**30**	P	**P**	**17 18 13.2**	**+0.6**
	baz=277						
N32M	**Quiet Lake**	**95.14**	**29**	P	**P**	**17 18 13.2**	**+0.1**
	baz=277						
ARCES	**ARCESS Array B**	**95.19**	**340**	P	P	17 18 11.7	-1.5
	comp=Z,2.2nm,0.8s,baz=77,slow=5.3,SNR=4.5						
ARCES				LR	LR	18 07 47.7	
	comp=Z,152nm,18.7s,baz=77,slow=40						
	comp=Z,2.2nm,0.8s						
SPITS	**Spitsbergen Ar**	**95.23**	**349**	LR	LR	18 08 42.8	
	comp=Z,164nm,18.1s,baz=40,slow=40						
P33M	**Teslin, Yukon**	**95.39**	**30**	P	P	17 18 11.8	-2.5
P33M				IAmb	IAmb	17 18 20.4	
	comp=Z,22nm,1.3s						
P33M	**Teslin, Yukon**	**95.39**	**30**	P	**P**	**17 18 14.4**	**+0.1**
	baz=278						
U33K	**Whale Pass**	**95.75**	**34**	P	**P**	**17 18 15.2**	**-0.7**
	baz=277						
CRAG	**Craig**	**95.82**	**34**	P	**P**	**17 18 16.2**	**-0.1**
	baz=277						
Q32M	**Nakina River**	**95.83**	**31**	P	**P**	**17 18 16.6**	**0.0**
	baz=278						
A36M	**Sachs Harbour**	**96.03**	**17**	P	P	17 18 14.8	-2.0
A36M	**Sachs Harbour**	**96.03**	**17**	P	**P**	**17 18 16.6**	**-0.2**
	baz=286,SNR=7.0						
WRAK	**Wrangell Islan**	**96.14**	**33**	P	**P**	**17 18 17.6**	**0.0**
	baz=278						
AKBB	**Malin Array Si**	**96.23**	**321**	*i* P	**P**	**17 18 19.0**	**+0.8**
AKBB				pmax	pmax		
	comp=Z,3.0nm,1.1s						
AK01	**Malin Array Si**	**96.24**	**321**	P	P	17 18 17.1	-1.2
R33M	**Jennings River**	**96.43**	**30**	P	**P**	**17 18 18.8**	**-0.4**
	baz=279						
FINES	**FINESS Array B**	**96.47**	**332**	LR	LR	18 07 41.8	
	comp=Z,150nm,18.2s,baz=72,slow=39						
S34M	**Telegraph Cree**	**96.58**	**32**	P	**P**	**17 18 19.1**	**-0.6**
	baz=279						
MNK	**Minsk**	**96.58**	**325**	*i* P	P	17 18 17.4	-2.3
MNK				*i*		17 22 11.7	
MNK				*i* PPP	PPP	17 24 15.0	
MNK				*i* S	**SKSac**	**17 28 54.1**	**-2.6**
MNK				*i* SS	**SS**	**17 36 14.2**	**-0.3**
MNK				*i* SSS	SSS	17 39 59.0	
MNK				pmax	pmax		
	comp=N,12nm,0.7s						
MNK				pmax	pmax		
	comp=Z,16nm,0.6s						
MNK				pmax	pmax		
	comp=E,13nm,0.7s						
MNK				MLR	MLR		
	comp=E,1µm,19.0s						
MNK				MLR	MLR		
	comp=N,741nm,18.0s						
DLBC	**Dease Lake**	**97.07**	**31**	LR	LR	18 00 10.4	
	comp=N,86nm,19.3s,baz=245,slow=34						
DLBC	**Dease Lake**	**97.07**	**31**	P	**P**	**17 18 21.9**	**-0.1**
	baz=280						
C36M	**Paulatuk**	**97.14**	**20**	P	**P**	**17 18 21.6**	**-0.3**
	baz=287						
MBAR	**Mbarara**	**97.19**	**269**	LR	LR	17 59 11.6	
	comp=N,67nm,20.4s,baz=86,slow=34						
WTLY	**Watson Lake, Y**	**97.39**	**29**	IAmb	IAmb	17 18 25.4	
	comp=Z,25nm,1.1s						
NVL	**N'lazarevskaya**	**97.52**	**197**	*e*P	P	17 18 21.6	-2.0
NVL				*e*		17 22 19.4	
NVL				*e*PPP	PPP	17 24 24.0	
NVL				*e*S	**SKSac**	**17 28 55.0**	**-5.9**
NVL				*e*SS	**SS**	**17 36 24.6**	**-2.2**
NVL				*e*SSS	SSS	17 40 11.1	
NVL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NVL				MLR	MLR		
	comp=Z,694nm,22.0s						
RNPP9	**Sopachiv**	**98.22**	**322**	P	P	17 18 26.0	-1.2
RNPP2	**Kostyukhnivka**	**98.24**	**322**	P	P	17 18 26.3	-1.0
MATP	**Matopo**	**98.53**	**249**	LR	LR	17 57 03.7	
	comp=Z,76nm,21.5s,baz=84,slow=32						
LIRD	**Liard River Hi**	**98.87**	**30**	P	**P**	**17 18 30.0**	**0.0**
	baz=283						
MLR	**Muntele Rosu**	**99.05**	**316**	LR	LR	18 10 14.8	
	comp=Z,88nm,19.9s,baz=63,slow=40						
TOAD	**Toad River Com**	**99.44**	**30**	P	**Pdif**	**17 18 32.6**	**+0.1**
	baz=284						
KOTAN	**Kotaneelee Air**	**99.70**	**29**	P	**Pdif**	**17 18 34.2**	**+0.5**
	baz=285						
BELA	**Belgrano 2**	**100.73**	**184**		**Pdif**	**17 18 35.8**	**-2.2**
SNAA	**Sanae**	**101.05**	**194**	*i* P	**Pdif**	**17 18 40.0**	**+0.5**
SNAA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
YKA	**Yellowknife Ar**	**103.18**	**25**	Pdiff	**Pdif**	**17 18 48.8**	**-0.2**
	comp=Z,1.4nm,0.9s,baz=295,slow=5.7,SNR=10.0						
YKA				PP	**PP**	**17 23 03.0**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=99,slow=26,SNR=6.6						
YKA				PKKPbc	**PKKPbc**	**17 34 44.0**	**-3.0**
	comp=Z,0.3nm,0.7s,baz=107,slow=2.4,SNR=4.3						
CLL	**Collm**	**106.08**	**324**	*e*PP	**PP**	**17 23 29.0**	**+3.5**
CLL				AMS	AMS	18 12 00.0	
	comp=Z,300nm,18.0s						
NVAR	**Mina Array Bea**	**109.04**	**50**	PP	**PP**	**17 23 47.1**	**-0.9**
	comp=Z,1.6nm,1.0s,baz=267,slow=8.0,SNR=4.5						
PDAR	**Pinedale Array**	**113.98**	**43**	PKP	**PKiKP**	**17 23 29.5**	**-0.2**
	comp=Z,3.1nm,1.1s,baz=187,slow=2.4,SNR=9.4						
PDAR				PKKPbc	**PKKPbc**	**17 34 10.6**	**-1.9**
	comp=Z,0.9nm,0.6s,baz=121,slow=5.2,SNR=9.8						
PDAR	**Pinedale Array**	**113.98**	**43**		**PKiKP**	**17 23 27.9**	**-1.8**
K22A	**Casper**	**116.07**	**42**		**PKiKP**	**17 23 29.8**	**-3.8**
RSSD	**Black Hills**	**117.04**	**40**		**PKPdf**	**17 23 32.4**	**-3.1**
RSSD	**Black Hills**	**117.04**	**40**	PKIKP	**PKPdf**	**17 23 32.4**	**-3.1**
BNM	**Barren Site**	**119.31**	**51**		**PKPdf**	**17 23 38.0**	**-2.2**
K30B	**Basset**	**120.56**	**39**	PKPdf	**PKPdf**	**17 23 41.1**	**-1.0**
GDL2	**Guadalupe Moun**	**121.79**	**52**	PKPdf	**PKPdf**	**17 23 42.6**	**-2.2**
VHRN	**Van Horn**	**121.79**	**54**		**PKPdf**	**17 23 42.2**	**-2.8**
TXAR	**Lajitas Array**	**123.36**	**55**	PKP	**PKPdf**	**17 23 47.8**	**-0.1**
	comp=Z,3.2nm,0.8s,baz=222,slow=1.2,SNR=31						
TXAR	**Lajitas Array**	**123.36**	**55**		**PKPdf**	**17 23 46.2**	**-1.7**
TXAR	**Lajitas Array**	**123.36**	**55**	PKIKP	**PKPdf**	**17 23 46.2**	**-1.7**
KSU1	**Kansas State U**	**124.36**	**41**		**PKPdf**	**17 23 48.2**	**-1.3**
SCHQ	**Schefferville**	**124.91**	**10**	PKP	**PKPdf**	**17 23 49.8**	**-0.3**
	comp=Z,3.5nm,0.7s,baz=314,slow=1.5,SNR=6.0						
TORD	**Torodi Ar. Bea**	**125.41**	**285**	PKP	**PKPdf**	**17 23 51.1**	**-1.0**
	comp=Z,4.0nm,0.9s,baz=59,slow=3.7,SNR=6.0						
TORD	**Torodi Ar. Bea**	**125.41**	**285**		**PKPdf**	**17 23 49.4**	**-2.7**
P38A	**Dawn**	**126.06**	**39**		**PKPdf**	**17 23 50.2**	**-2.5**
P40A	**Paris**	**127.05**	**39**		**PKPdf**	**17 23 50.9**	**-3.7**
R40A	**Maddies Statio**	**127.64**	**40**		**PKPdf**	**17 23 54.2**	**-1.5**
DBIC	**Dimbokro**	**132.57**	**278**	PKP	**PKPdf**	**17 24 05.2**	**-0.5**
	comp=Z,4.8nm,1.1s,baz=81,slow=2.0,SNR=3.5						
SWET	**Sewanee**	**133.54**	**39**	PKPdf	**PKPdf**	**17 24 04.4**	**-2.7**
W50A	**Signal Mountai**	**133.94**	**39**		**PKPdf**	**17 24 05.9**	**-2.0**
PLCA	**Paso Flores**	**135.26**	**160**	PKP	**PKPdf**	**17 24 11.6**	**+1.3**
	comp=Z,3.3nm,0.9s,baz=214,slow=9.0,SNR=5.8						
152A	**Waverly Hall**	**135.93**	**41**		**PKPdf**	**17 24 10.4**	**-1.1**
MT08	**Bocatoma Ro**	**141.87**	**155**		PKPdf	17 24 17.4	-5.4
CO05	**La Serena**	**144.30**	**151**		**PKPab**	**17 24 23.0**	**-1.7**
MRA	**San Martin**	**144.42**	**160**	*e*P	**PKPab**	**17 24 25.5**	**+0.3**
ACCO	**Cerro Coronel**	**144.74**	**154**	*e*P	**PKPab**	**17 24 27.4**	**+0.7**
BOAB	**BOACO BROADBAN**	**144.77**	**70**		**PKPab**	**17 24 25.5**	**-1.3**
CO01	**Juntas del Tor**	**144.80**	**152**		**PKPab**	**17 24 24.8**	**-2.0**
AROD	**Rodeo**	**144.92**	**153**	*e*P	**PKPab**	**17 24 28.6**	**+1.2**
ACHE	**Chepes**	**145.22**	**158**	*e*P	**PKPbc**	**17 24 28.1**	**0.0**
SIUN	**Universidad Ur**	**145.22**	**67**		**PKPbc**	**17 24 28.3**	**-0.1**
AVFE	**Valle Fertil**	**145.35**	**156**	*e*P	**PKPbc**	**17 24 28.6**	**+0.2**
CAIB	**Caibarien**	**145.78**	**49**		**PKPdf**	**17 24 27.9**	**-1.6**
TCA	**Tanti**	**145.79**	**161**	*e*P	**PKPdf**	**17 24 30.3**	**+0.8**
AGUA	**GUANDACOL**	**145.94**	**154**	*e*P	**PKPdf**	**17 24 30.8**	**+1.0**
APLL	**PUNTA DE LOS L**	**145.95**	**157**	*e*P	**PKPdf**	**17 24 30.4**	**+0.7**
JTS	**Las Juntas de**	**146.00**	**73**		PKPdf	17 24 25.4	-4.8
JTS	**Las Juntas de**	**146.00**	**73**	PKIKP	PKPdf	17 24 25.4	-4.8
ACLC	**CERRO LA CRUZ**	**146.65**	**156**	*e*P	**PKPdf**	**17 24 31.8**	**+0.7**
GO03	**Copiapo**	**146.71**	**150**	*e*P	**PKPdf**	**17 24 31.9**	**+0.8**
VCA	**Vinchina**	**146.71**	**154**	*e*P	**PKPdf**	**17 24 32.8**	**+1.6**
TINO	**Tinogasta**	**147.57**	**154**	*e*P	**PKPdf**	**17 24 33.1**	**+0.5**
AC01	**Pan de Azucar**	**147.69**	**148**		**PKPdf**	**17 24 28.9**	**-3.8**
PIRO	**Carate, Puerto**	**147.98**	**76**	PKPdf	**PKPdf**	**17 24 29.8**	**-3.6**
CYA	**Choya**	**147.98**	**157**	*e*P	**PKPdf**	**17 24 35.9**	**+2.8**
PRVC	**Isla de Provid**	**148.46**	**66**	PKPdf	**PKPdf**	**17 24 31.0**	**-3.2**
BRU2	**Volcan**	**148.52**	**75**		**PKPdf**	**17 24 31.0**	**-3.5**
BRU2				PKPbc	**pPKPdf**	**17 24 34.2**	**-3.7**
CHIV	**Chivirico**	**149.56**	**50**		**PKPdf**	**17 24 33.3**	**-2.5**
FSA	**Cafayete**	**149.96**	**154**	*e*P	**PKPdf**	**17 24 37.4**	**+0.8**
NNA	**Nana**	**152.25**	**118**	PKPdf	**PKPdf**	**17 24 37.0**	**-3.2**
NNA	**Nana**	**152.25**	**118**	PKIKP	**PKPdf**	**17 24 37.0**	**-3.2**
HMBC	**Humberstone**	**152.64**	**141**	PKPdf	**PKPdf**	**17 24 37.1**	**-3.6**
PB11	**IPOC Station P**	**153.17**	**141**		**PKPdf**	**17 24 37.9**	**-3.7**
GO01	**Chusmiza**	**153.53**	**141**	PKPdf	PKPdf	17 24 38.5	-4.0
OTAV	**Otavalo**	**153.60**	**91**		PKPdf	17 24 38.5	-4.3
OTAV	**Otavalo**	**153.60**	**91**	PKIKP	PKPdf	17 24 38.5	-4.3
PB16	**IPOC Station P**	**154.31**	**139**		PKPdf	17 24 38.7	-5.1
ROSC	**El Rosal**	**157.44**	**80**	PKPab	**PKPab**	**17 25 20.4**	**+1.1**
	comp=Z,6.6nm,0.4s,baz=153,slow=5.5,SNR=5.6						
BDFB	**Brasilia**	**163.07**	**194**	PKPab	**PKPab**	**17 25 43.0**	**-0.1**
	comp=Z,8.3nm,1.0s,baz=201,slow=3.0,SNR=5.6						
BDFB	**Brasilia**	**163.07**	**194**	PKPdf	PKPdf	17 24 49.7	-4.0
BDFB					**PKPab**	**17 25 44.0**	**+0.9**
BDFB	**Brasilia**	**163.07**	**194**	PKIKP	PKPdf	17 24 49.7	-3.9

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*NEIC **13** 17:08:54.1±1.4, 4.°41S±0.°10×152.°4E±0.°1, h112^{km}±6^{km}, mb4.8/21, Error ellipse: s-maj=18.7km s-min=13.7km az=105.0*

*IDC **13** 17:08:56.7±5.5, 4.°33S×152.°22E, h131^{km}±45^{km}, mb3.9/8, mbtmp4.3/9, Error ellipse: s-maj=43.5km s-min=26.1km az=96.0*

ISC 13 17:08:52.5±0.6**, 4.°43S**±0.°08×**152.°51E**±0.°10**, h100**^{km}**, n39, σ1^{s}47**/40**, mb4.6**/14**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**0.42**	**305**		**Pn**	**17 09 09.9**	**+2.0**
PMG	**Port Moresby**	**7.26**	**227**	P	**Pn**	**17 10 39.1**	**+3.2**
	20nm,0.8s,baz=85,slow=15,SNR=0.8						
PMG				S	**Sn**	**17 11 58.7**	**+1.9**
	13nm,0.5s,baz=162,slow=20,SNR=1.9						
PMG	**Port Moresby**	**7.26**	**227**		**Pn**	**17 10 34.3**	**-1.6**
PMG					**Sn**	**17 11 57.1**	**+0.3**
COEN	**Coen**	**13.20**	**224**	Pn	**Pn**	**17 11 55.6**	**-0.6**
SANVU	**Saraoutou**	**18.12**	**128**	P	**P**	**17 12 53.3**	**-3.6**
DZM	**Mont Dzumac**	**22.13**	**144**	P	**P**	**17 13 41.1**	**+0.9**
ONTNC	**Ouen Toro**	**22.32**	**144**	P	**P**	**17 13 43.1**	**+1.0**
MARNC	**Mare, Loyalty**	**22.67**	**140**	P	**P**	**17 13 47.0**	**+1.3**
WRA	**Warramunga Arr**	**23.48**	**227**	P	**P**	**17 13 53.5**	**+0.1**
	6.7nm,0.5s,baz=46,slow=9.5,SNR=5.7						
	6.7nm,0.5s						
WRA	**Warramunga Arr**	**23.48**	**227**	P	**P**	**17 13 50.1**	**-3.4**
ARMA	**Armidale**	**25.86**	**182**	P	**P**	**17 14 14.0**	**-1.0**
ASAR	**Alice Springs**	**26.23**	**221**	P	**P**	**17 14 18.7**	**+0.3**
	2.5nm,0.5s,baz=45,slow=9.8,SNR=4.4						
	2.5nm,0.5s						
STKA	**Stephens Creek**	**29.16**	**199**	P	**P**	**17 14 44.7**	**+0.3**
FITZ	**Fitzroy Crossi**	**29.58**	**241**	P	**P**	**17 14 46.9**	**-1.4**
	8.6nm,0.8s,baz=52,slow=12,SNR=1.3						
	8.6nm,0.8s						
BBOO	**Buckleboo**	**32.15**	**207**	P	**P**	**17 15 10.0**	**-0.7**
BBOO				IAmb	IAmb	17 15 34.4	
	comp=Z,15nm,1.1s						
FORT	**Forrest**	**34.89**	**219**	P	**P**	**17 15 33.4**	**-1.1**
FORT				IAmb	IAmb	17 15 41.4	
	comp=Z,11nm,1.0s						
MBWA	**Marble Bar**	**35.91**	**240**	P	**P**	**17 15 42.2**	**-1.2**
PSA00	**Pilbara Seismi**	**35.97**	**239**	P	**P**	**17 15 42.7**	**-1.2**
PSA00				IAmb	IAmb	17 15 57.3	
	comp=Z,11nm,1.0s						
TAU	**Tasmania Unive**	**38.59**	**186**	P	**P**	**17 16 06.7**	**+0.9**
RTZ	**Ruatahuna**	**40.65**	**150**	P	**P**	**17 16 22.4**	**-0.6**
RTZ				IAmb	IAmb	17 16 23.2	
	comp=Z,41nm,1.4s						
BKZ	**Black Stump Fm**	**40.84**	**151**	P	**P**	**17 16 24.0**	**-0.6**
BKZ				IAmb	IAmb	17 16 52.8	
	comp=Z,24nm,1.2s						
NNZ	**Nelson**	**41.13**	**156**	P	**P**	**17 16 27.6**	**+0.8**
GIRL	**Giralia**	**41.20**	**240**	P	**P**	**17 16 27.1**	**-0.6**
THZ	**Tophouse**	**41.40**	**157**	P	**P**	**17 16 29.8**	**+0.7**
MRZ	**Mangatainoka R**	**41.61**	**153**	P	**P**	**17 16 31.7**	**+1.0**
KHZ	**Kahutara**	**42.20**	**157**	P	**P**	**17 16 35.6**	**+0.1**
JNU	**Nakatsue**	**42.61**	**333**	P	**P**	**17 16 38.3**	**-0.8**
MLZ	**Mavora Lakes**	**42.99**	**164**	P	**P**	**17 16 42.5**	**+0.6**
K15K	**Wolf Creek Mou**	**75.16**	**20**	P	**P**	**17 20 26.3**	**+2.6**
MKAR	**Makanchi Array**	**79.86**	**319**	P	**P**	**17 20 50.5**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=91,slow=7.7,SNR=4.2						
	comp=Z,0.4nm,0.5s						
H21K	**Melozitna Rive**	**80.27**	**20**	P	**P**	**17 20 50.9**	**-1.1**
H21K				IAmb	IAmb	17 20 57.2	
	comp=Z,29nm,1.5s						
D19K	**Kuna River**	**80.33**	**16**	P	**P**	**17 20 52.6**	**+0.3**
ZALV	**Zalesovo Beam**	**80.69**	**326**	P	**P**	**17 20 54.2**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=104,slow=5.1,SNR=2.4						
	comp=Z,0.9nm,0.6s						
ZALV	**Zalesovo Beam**	**80.69**	**326**	P	**P**	**17 20 53.7**	**-0.8**
ILAR	**Eielson Array**	**81.93**	**22**	P	**P**	**17 21 00.1**	**-0.8**
	comp=Z,0.6nm,0.9s,baz=262,slow=5.9,SNR=2.1						
	comp=Z,0.6nm,0.9s						
QSPA	**South Pole Qui**	**85.52**	**180**	P	**P**	**17 21 19.5**	**+0.2**
	comp=Z,5.4nm,0.9s,baz=325,slow=4.7,SNR=5.9						
	comp=Z,5.4nm,0.9s						
QSPA	**South Pole Qui**	**85.52**	**180**	IAmb	IAmb	17 21 19.6	
	comp=Z,27nm,1.7s						
BVAR	**Borovoye Array**	**88.78**	**323**	P	**P**	**17 21 34.2**	**-0.9**
	comp=Z,1.7nm,0.5s,baz=110,slow=6.2,SNR=11						
	comp=Z,1.7nm,0.5s						
BDFB	**Brasilia**	**151.52**	**135**	PKPbc	**PKiKP**	**17 28 39.4**	**+2.7**
	comp=Z,2.2nm,0.4s,baz=198,slow=3.2,SNR=3.3						

JMA 13 17:10:56.9±0.2**, 35.°9N**±0.°3×**141.°0E**±0.°7**, h17**^{km}±1^{km}**, MV1.0**/19**, NEAR CHOSHI CITY, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.54**	**325**	*e*P	Pg	17 11 07.5	-0.1
JYT	**Yasato**	**0.71**	**298**	*e*P	Pg	17 11 10.2	-0.5
JHO	**Hitachi**	**0.78**	**336**	*e*S	Sb	17 11 21.7	-0.7

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*KOLA **13** 17:22:40.4, 79.°83N×19.°52E, h0^{km}, ML2.7, Error ellipse: s-maj=17.0km s-min=14.5km az=50.0, Spitsbergen*

*BER **13** 17:22:43.3±1.6, 80.°00N×19.°55E, h23^{km}±17^{km}, ML2.9, Confirmed Earthquake*

*IDC **13** 17:22:44.5±2.2, 79.°68N×21.°53E, h0^{km}, mb3.5/1, mbtmp3.6/4, ML2.9/3, Error ellipse: s-maj=24.1km s-min=18.0km az=162.0*

*FCIAR **13** 17:22:45.0, 79.°52N×21.°82E, h10^{km}, station OMEGA has station magnitude of 3.20*

ISC 13 17:22:42.9±1.1**, 79.°66N**±0.°07×**20.°89E**±0.°05**, h10**^{km}**, n24, σ2^{s}70**/42**, 1D, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPA0	**Spitsbergen Ar**	**1.73**	**213**	⇓*i*P	**Pn**	**17 23 12.7**	**-0.2**
SPA0				S	**Sn**	**17 23 34.7**	**-0.4**
SPA0	**Spitsbergen Ar**	**1.73**	**213**	*e*P	**Pn**	**17 23 12.8**	**-0.2**
SPA0				*e*Pg	**Pb**	**17 23 15.9**	**+1.2**
SPA0				*e*Sg	**Sg**	**17 23 40.3**	**+1.9**
SPA0				IAML		17 23 44.8	
	comp=Z,179nm,0.8s						
SPITS	**Spitsbergen Ar**	**1.73**	**213**	Pn	**Pb**	**17 23 15.8**	**+1.1**
	baz=27,slow=18						
SPITS				Sn	**Sg**	**17 23 39.4**	**+1.0**
	baz=31,slow=26						
SPITS	**Spitsbergen Ar**	**1.73**	**213**	P	**Pn**	**17 23 12.8**	**-0.2**
SPITS				S	**Sb**	**17 23 37.3**	**+0.8**
KBS	**Kingsbay**	**1.83**	**251**	P	**Pn**	**17 23 11.3**	**-3.0**
KBS				S	**Sn**	**17 23 33.2**	**-4.3**
KBS	**Kingsbay**	**1.83**	**251**	*e*P	**Pn**	**17 23 11.3**	**-3.0**
KBS				*e*Sg	**Sn**	**17 23 36.1**	**-1.3**
KBS				IAML		17 23 37.1	
	comp=Z,192nm,0.1s						
BRBB	**Barentsburg B**	**2.04**	**223**	P	**Pn**	**17 23 16.3**	**-0.9**
BRBB				S	**Sn**	**17 23 41.2**	**-1.5**
BRBB	**Barentsburg B**	**2.04**	**223**	*e*P	**Pn**	**17 23 16.5**	**-0.7**
BRBA	**Barentsburg A**	**2.07**	**222**	*e*P	**Pn**	**17 23 17.0**	**-0.6**
HSPB	**Hornsund (broa**	**2.89**	**205**	S	**Sn**	**17 24 03.0**	**-0.6**
HSPB	**Hornsund (broa**	**2.89**	**205**	P	**Pn**	**17 23 32.0**	**+3.2**
HSPB				S	**Sn**	**17 24 05.4**	**+1.9**
HSPB	**Hornsund (broa**	**2.89**	**205**	*e*P	**Pn**	**17 23 31.1**	**+2.3**
HSPB				*e*Pg	**Pg**	**17 23 37.5**	**-0.6**
HSPB				*e*Sg	**Sg**	**17 24 16.5**	**+1.0**
HSPB				IAML		17 24 20.5	
	comp=Z,70nm,0.6s						
HOPEN	**Hopen**	**3.28**	**163**	*e*P	**Pn**	**17 23 36.7**	**+2.4**
ZFI2	**Zemlya Franca-**	**4.67**	**63**	*e*P	**Pn**	**17 23 53.0**	**-0.2**
ZFI2				*e*S	**Sn**	**17 24 44.3**	**-3.0**
OMEGA	**Omega**	**4.68**	**63**	*e*P	**Pn**	**17 23 53.1**	**-0.3**
OMEGA				*e*S	**Sn**	**17 24 44.5**	**-3.1**
	comp=Z,18nm,3.0s						
VADS	**Vadso**	**9.83**	**163**	P	**Pn**	**17 25 06.5**	**+2.6**
VADS				S	**Sn**	**17 26 51.5**	**-2.5**
ARCES	**ARCESS Array B**	**10.25**	**171**	Pn	**Pn**	**17 25 10.6**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=358,slow=11,SNR=22						
ARCES				Sn	**Sn**	**17 27 00.2**	**-4.3**
	comp=Z,0.6nm,0.3s,baz=1.6,slow=19,SNR=7.6						
	comp=Z,0.6nm,0.3s						
ARCES	**ARCESS Array B**	**10.25**	**171**	P	**Pn**	**17 25 12.3**	**+2.5**
ARCES				S	**Sn**	**17 26 58.9**	**-5.7**
TERR	**Teriberka**	**11.12**	**153**	P	**Pn**	**17 25 22.8**	**+1.1**
TERR				S	**Sn**	**17 27 21.8**	**-4.1**
FAUS	**Fauske**	**12.44**	**190**	P	**Pn**	**17 25 43.8**	**+4.2**
APA0	**Apatity Array**	**12.54**	**158**	P	**Pn**	**17 25 42.9**	**+1.9**
APA0				S	**Sn**	**17 27 52.5**	**-7.9**
FINES	**FINESS Array B**	**18.38**	**172**	P	**P**	**17 27 01.1**	**+3.7**
	comp=Z,0.1nm,0.3s,baz=356,slow=11,SNR=1.9						
	comp=Z,3.7nm,1.0s						
HFS	**Hagfors**	**19.75**	**191**	P	**Pn**	**17 27 14.0**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=0.0,slow=9.1,SNR=0.8						
	comp=Z,1.2nm,0.7s						
MKAR	**Makanchi Array**	**39.28**	**108**	P	**P**	**17 30 13.3**	**+2.0**
	comp=Z,0.5nm,0.6s,baz=352,slow=7.2,SNR=4.4						
	comp=Z,0.5nm,0.6s						

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*IDC **13** 17:41:17.4±2.2, 23.°59S×179.°82W, h511^{km}±21^{km}, mb3.5/8, mbtmp4.3/10, Error ellipse: s-maj=21.4km s-min=19.3km az=4.0*

*NOU **13** 17:41:17.2, 23.°56S×179.°39W, h556^{km}, mb4.3/23, South of Fiji Islands*

*NEIC **13** 17:41:18.3±1.6, 23.°6S±0.°1×179.°8W±0.°1, h525^{km}±7^{km}, mb4.5/46, Error ellipse: s-maj=16.5km s-min=14.6km az=126.0*

ISC 13 17:41:18.5±0.4**, 23.°66S**±0.°06×**179.°83W**±0.°07**, h532**^{km}**, n124, σ1^{s}25**/133**, mb4.4**/26**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**5.84**	**163**	P	**P**	**17 42 52.6**	**-2.0**
MSVF	**Nonsavu**	**6.22**	**341**	P	**P**	**17 42 57.7**	**-0.8**
MSVF	**Nonsavu**	**6.22**	**341**	P	**P**	**17 42 58.6**	**+0.1**
NIUE	**Niue**	**10.29**	**66**	P	**P**	**17 43 39.7**	**+0.5**
MARNC	**Mare, Loyalty**	**11.43**	**279**	P	**P**	**17 43 51.5**	**+0.4**
MARNC	**Mare, Loyalty**	**11.43**	**279**	P	**P**	**17 43 52.6**	**+1.6**
PINNC	**Pines Island,**	**11.76**	**273**	P	**P**	**17 43 56.0**	**+1.5**
PINNC	**Pines Island,**	**11.76**	**273**	P	**P**	**17 43 57.2**	**+2.7**
YATNC	**Mamie plateau,**	**12.35**	**275**	P	**P**	**17 44 03.7**	**+3.0**
DVP	**Devils Point**	**12.67**	**296**	P	**P**	**17 44 06.3**	**+2.3**
DZM	**Mont Dzumac**	**12.76**	**274**	P	**P**	**17 44 06.0**	**+1.0**
	3.4nm,0.7s,baz=74,slow=19,SNR=7.9						
DZM	**Mont Dzumac**	**12.76**	**274**	P	**P**	**17 44 04.8**	**-0.2**
WMGZ	**Waiomatatini S**	**14.20**	**186**	P	**P**	**17 44 21.7**	**+2.0**
PKGZ	**Pakihiroa**	**14.28**	**187**	P	**P**	**17 44 23.1**	**+2.5**
RUGZ	**Raukumara Rang**	**14.42**	**188**	P	**P**	**17 44 23.4**	**+1.2**
TOZ	**Tahuroa Road**	**14.59**	**195**	P	**P**	**17 44 24.1**	**+0.4**
TOZ	**Tahuroa Road**	**14.59**	**195**	P	**P**	**17 44 26.9**	**+3.1**
TWGZ	**Tauwhareparae**	**14.60**	**187**	P	**P**	**17 44 26.0**	**+2.1**
SANVU	**Saraoutou**	**14.69**	**301**	P	**P**	**17 44 24.3**	**-0.8**
SANVU	**Saraoutou**	**14.69**	**301**	P	**P**	**17 44 28.5**	**+3.4**
URZ	**Urewera**	**14.79**	**189**	P	**P**	**17 44 25.7**	**-0.1**
	6.5nm,0.3s,baz=310,slow=2.8,SNR=17						
URZ				S	**S**	**17 46 59.0**	**-1.3**
	9.8nm,0.7s,baz=358,slow=18,SNR=6.6						
URZ	**Urewera**	**14.79**	**189**	P	**P**	**17 44 26.7**	**+0.9**
URZ	**Urewera**	**14.79**	**189**	P	**P**	**17 44 26.4**	**+0.5**
URZ				S	**S**	**17 46 59.8**	**-0.6**
MWZ	**Matawai**	**14.81**	**188**	P	**P**	**17 44 25.8**	**-0.2**
MWZ				S	**S**	**17 47 02.5**	**+1.7**
MUGZ	**Murupara**	**15.06**	**190**	P	**P**	**17 44 29.0**	**+0.3**
RIGZ	**Rimuhau**	**15.14**	**187**	P	**P**	**17 44 29.6**	**0.0**
RTZ	**Ruatahuna**	**15.16**	**190**	P	**P**	**17 44 29.2**	**-0.6**
RTZ				IAmb	IAmb	17 44 56.4	
	comp=Z,24nm,1.3s						
BKZ	**Black Stump Fm**	**15.78**	**191**	P	**P**	**17 44 34.4**	**-1.7**
BKZ				IAmb	IAmb	17 44 40.1	
	comp=Z,22nm,1.3s						
BKZ	**Black Stump Fm**	**15.78**	**191**	P	**P**	**17 44 34.6**	**-1.5**
BKZ	**Black Stump Fm**	**15.78**	**191**	P	**P**	**17 44 34.8**	**-1.3**
BKZ				S	**S**	**17 47 15.9**	**-2.4**
TMVZ	**Te Maari**	**15.87**	**193**	P	**P**	**17 44 36.6**	**-0.6**
TWVZ	**Taurewa**	**15.89**	**194**	P	**P**	**17 44 38.3**	**+1.0**
ETVZ	**East Tongariro**	**15.89**	**193**	P	**P**	**17 44 38.8**	**+1.4**
VRZ	**Vera Road**	**16.09**	**195**	P	**P**	**17 44 41.1**	**+1.9**
TSZ	**Takapari Road**	**16.74**	**191**	P	**P**	**17 44 46.0**	**+0.5**
BFZ	**Birch Farm**	**17.30**	**190**	P	**P**	**17 44 49.0**	**-1.6**
BFZ	**Birch Farm**	**17.30**	**190**	P	**P**	**17 44 49.2**	**-1.4**
BFZ	**Birch Farm**	**17.30**	**190**	P	**P**	**17 44 49.1**	**-1.4**
BFZ				S	**S**	**17 47 42.3**	**-1.3**
MRZ	**Mangatainoka R**	**17.39**	**192**	P	**P**	**17 44 50.2**	**-1.2**
OGWZ	**Otaki Gorge**	**17.62**	**193**	P	**P**	**17 44 52.7**	**-0.9**
DUWZ	**D’Urville Isla**	**17.89**	**196**	P	**P**	**17 44 56.2**	**+0.2**
TCW	**Tory Channel**	**18.19**	**194**	P	**P**	**17 44 57.9**	**-0.8**
TCW	**Tory Channel**	**18.19**	**194**	P	**P**	**17 44 58.2**	**-0.6**
TCW				S	**S**	**17 48 00.8**	**+2.7**
SNZO	**South Karori**	**18.19**	**193**	P	**P**	**17 44 57.9**	**-0.8**
BHW	**Baring Head**	**18.25**	**193**	P	**P**	**17 44 58.0**	**-1.3**
QRZ	**Quartz Range**	**18.29**	**199**	P	**P**	**17 44 59.9**	**+0.3**
QRZ	**Quartz Range**	**18.29**	**199**	P	**P**	**17 45 00.7**	**+1.1**
QRZ	**Quartz Range**	**18.29**	**199**	P	**P**	**17 45 01.0**	**+1.4**
TKNZ	**Takaka Hill**	**18.36**	**198**	P	**P**	**17 44 59.8**	**-0.5**
NNZ	**Nelson**	**18.41**	**196**	P	**P**	**17 45 01.1**	**+0.3**
TUWZ	**Tuamarina**	**18.48**	**195**	P	**P**	**17 45 00.1**	**-1.3**
TUWZ	**Tuamarina**	**18.48**	**195**	P	**P**	**17 45 02.4**	**+1.1**
MRNZ	**Matariki Terra**	**18.75**	**198**	P	**P**	**17 45 03.1**	**-0.8**
BSWZ	**Blackbirch Sta**	**18.76**	**195**	P	**P**	**17 45 03.4**	**-0.6**
THZ	**Tophouse**	**19.05**	**197**	P	**P**	**17 45 06.1**	**-0.5**
THZ				IAmb	IAmb	17 45 09.8	
	comp=Z,19nm,1.1s						
KHZ	**Kahutara**	**19.51**	**195**	P	**P**	**17 45 10.5**	**-0.2**
OXZ	**Oxford**	**20.74**	**197**	P	**P**	**17 45 21.2**	**-0.7**
OXZ				IAmb	IAmb	17 45 24.0	
	comp=Z,22nm,1.2s						
JCZ	**Jackson Bay**	**22.41**	**202**	P	**P**	**17 45 36.5**	**-0.6**
NGOA	**Tingoa Renbel**	**22.60**	**299**	P	**P**	**17 45 39.4**	**+0.4**
TATA	**Tatamba Isabel**	**24.72**	**305**	P	**P**	**17 45 56.5**	**-1.4**
PYZ	**Puysegur Point**	**24.96**	**203**	P	**P**	**17 45 56.7**	**-2.9**
ARMA	**Armidale**	**26.26**	**249**	P	**P**	**17 46 12.5**	**+1.1**
ARMA				IAmb	IAmb	17 46 12.8	
	comp=Z,19nm,1.4s						
EIDS	**Eidsvold**	**26.50**	**260**	P	**P**	**17 46 13.4**	**-0.1**
EIDS				IAmb	IAmb	17 46 15.3	
	comp=Z,26nm,1.3s						
EIDS	**Eidsvold**	**26.50**	**260**	P	**P**	**17 46 14.5**	**+1.0**
TV1H	**Townsville Har**	**31.33**	**272**	P	**P**	**17 46 56.3**	**+0.8**
CMSA	**Cobar Meteorol**	**31.45**	**248**	P	**P**	**17 46 57.4**	**+1.0**
CTA	**Charters Tower**	**31.63**	**270**	P	**P**	**17 46 59.0**	**+0.9**
CTAO	**Charters Tower**	**31.63**	**270**	P	**P**	**17 46 59.0**	**+0.9**
CTAO	**Charters Tower**	**31.63**	**270**	P	**P**	**17 46 59.0**	**+0.9**
TOO	**Toolangi**	**32.71**	**237**	P	**P**	**17 47 07.8**	**+0.7**

PMG	**Port Moresby**	**34.56**	**289**		**P**	**17 47 22.9**	**0.0**
STKA	**Stephens Creek**	**34.96**	**248**	P	**P**	**17 47 26.8**	**+0.7**
	comp=Z,3.2nm,0.6s,baz=97,slow=10,SNR=9.2						
	comp=Z,3.2nm,0.6s						
STKA	**Stephens Creek**	**34.96**	**248**	P	**P**	**17 47 26.5**	**+0.4**
INKA	**Innaminka**	**35.66**	**255**	P	**P**	**17 47 33.3**	**+1.4**
COEN	**Coen**	**36.23**	**279**	P	**P**	**17 47 36.8**	**-0.1**
COEN				IAmb	IAmb	17 47 38.9	
	comp=Z,8.0nm,1.2s						
BBOO	**Buckleboo**	**39.69**	**247**	P	**P**	**17 48 04.5**	**-0.3**
BBOO				IAmb	IAmb	17 48 31.8	
	comp=Z,17nm,1.4s						
AS31	**Alice Springs**	**42.23**	**260**		**P**	**17 48 25.1**	**0.0**
AS31				IAmb	IAmb	17 48 26.5	
	comp=Z,3.0nm,0.5s						
ASAR	**Alice Springs**	**42.23**	**260**	P	**P**	**17 48 25.4**	**+0.3**
	comp=Z,7.4nm,0.5s,baz=94,slow=7.4,SNR=201						
ASAR				ScP	**ScP**	**17 53 09.3**	**+2.4**
	comp=Z,1.4nm,0.8s,baz=106,slow=4.3,SNR=10.0						
ASAR				S	**S**	**17 54 04.8**	**-2.4**
	comp=Z,0.4nm,0.8s,baz=91,slow=15,SNR=4.8						
	comp=Z,7.4nm,0.5s						
ASAR	**Alice Springs**	**42.23**	**260**		**P**	**17 48 25.3**	**+0.1**
ASAR					**ScP**	**17 53 08.7**	**+1.8**
WR8	**Warramunga Arr**	**42.43**	**266**	P	**P**	**17 48 26.4**	**-0.3**
WR8				IAmb	IAmb	17 48 27.1	
	comp=Z,12nm,0.9s						
WB0	**Warramunga Arr**	**42.57**	**266**		**P**	**17 48 27.4**	**-0.5**
WRA	**Warramunga Arr**	**42.58**	**266**	P	**P**	**17 48 27.4**	**-0.5**
	comp=Z,14nm,0.6s,baz=102,slow=8.0,SNR=239						
WRA				ScP	**ScP**	**17 53 10.5**	**+2.1**
	comp=Z,0.7nm,0.9s,baz=99,slow=4.0,SNR=5.4						
WRA				S	**S**	**17 54 09.3**	**-3.0**
	comp=Z,0.2nm,0.7s,baz=102,slow=18,SNR=1.7						
	comp=Z,14nm,0.6s						
WRA	**Warramunga Arr**	**42.58**	**266**		**P**	**17 48 26.8**	**-1.2**
FORT	**Forrest**	**46.54**	**249**	P	**P**	**17 48 58.1**	**-0.1**
FORT				IAmb	IAmb	17 48 58.8	
	comp=Z,8.8nm,0.6s						
MTN	**Manton Dam**	**47.59**	**274**	P	**P**	**17 49 05.6**	**-0.8**
MTN				IAmb	IAmb	17 49 06.3	
	comp=Z,33nm,1.5s						
WOH	**Wood Valley**	**48.80**	**31**	P	**P**	**17 49 15.5**	**+0.1**
KNRA	**Kununurra**	**48.85**	**270**	P	**P**	**17 49 15.8**	**+0.1**
KNRA				IAmb	IAmb	17 49 29.2	
	comp=Z,36nm,1.5s						
FAKI	**Fak Fak**	**50.66**	**287**	P	**P**	**17 49 28.1**	**-1.0**
FAKI				IAmb	IAmb	17 50 10.6	
	comp=Z,19nm,1.1s						
FITZ	**Fitzroy Crossi**	**51.00**	**265**	P	**P**	**17 49 31.1**	**-0.4**
VNDA	**Vanda**	**54.63**	**185**	P	**P**	**17 49 58.2**	**+1.7**
SOEI	**Soe**	**54.98**	**275**	P	**P**	**17 50 01.1**	**+1.1**
SOEI				IAmb	IAmb	17 50 11.3	
	comp=Z,19nm,0.9s						
PSA00	**Pilbara Seismi**	**55.36**	**259**	P	**P**	**17 50 00.9**	**-1.6**
PSA00	**Pilbara Seismi**	**55.36**	**259**	P	**P**	**17 50 01.9**	**-0.7**
PSA00				IAmb	IAmb	17 50 03.7	
	comp=Z,25nm,1.5s						
NWAO	**Narrogin (SRO)**	**55.48**	**245**	P	**P**	**17 50 03.0**	**-0.2**
MBWA	**Marble Bar**	**55.57**	**260**	P	**P**	**17 50 03.7**	**-0.3**
MBWA				IAmb	IAmb	17 50 17.0	
	comp=Z,30nm,1.4s						
MORW	**Morawa**	**57.11**	**250**	P	**P**	**17 50 14.4**	**-0.1**
MORW				IAmb	IAmb	17 50 14.9	
	comp=Z,5.8nm,0.5s						
MMRI	**Maumere**	**57.26**	**275**	P	**P**	**17 50 15.6**	**-0.1**
MMRI				IAmb	IAmb	17 50 50.2	
	comp=Z,19nm,0.9s						
GIRL	**Giralia**	**60.12**	**257**	P	**P**	**17 50 35.8**	**+1.0**
TOLI2	**Tolitoli**	**62.67**	**284**	P	**P**	**17 50 52.2**	**+0.5**
TOLI2				IAmb	IAmb	17 50 53.4	
	comp=Z,10nm,0.6s						
JAGI	**Jajag, Banyuwa**	**64.72**	**272**	P	**P**	**17 51 03.3**	**-1.4**
JAGI				IAmb	IAmb	17 51 24.1	
	comp=Z,20nm,1.2s						
QSPA	**South Pole Qui**	**66.43**	**180**	P	**P**	**17 51 15.7**	**+1.1**
	comp=Z,3.4nm,0.7s,baz=24,slow=6.1,SNR=29						
	comp=Z,3.4nm,0.7s						
QSPA	**South Pole Qui**	**66.43**	**180**	P	**P**	**17 51 15.8**	**+1.1**
UGM	**Wanagama**	**68.26**	**271**	P	**P**	**17 51 26.1**	**-0.6**
KKM	**Kota Kinabalu**	**68.98**	**287**	P	**P**	**17 51 30.4**	**-0.7**
MJAR	**Matsushiro Arr**	**71.78**	**325**	P	**P**	**17 51 46.5**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=156,slow=5.6,SNR=4.2						
	comp=Z,1.1nm,0.8s						
MJAR	**Matsushiro Arr**	**71.78**	**325**	P	**P**	**17 51 46.9**	**-0.2**
BELA	**Belgrano 2**	**76.66**	**173**	P	**P**	**17 52 13.9**	**-0.1**
UNV	**Unalaska Valle**	**78.03**	**8**	P	**P**	**17 52 22.1**	**+0.4**
UNV				IAmb	IAmb	17 52 47.5	
	comp=Z,29nm,1.2s						
PETK	**Petropavlovsk-**	**78.90**	**346**	P	**P**	**17 52 26.6**	**+0.3**
HOPS	**Hopland Field**	**81.85**	**41**	P	**P**	**17 52 40.4**	**-1.6**
CMAR	**Chiang Mai Arr**	**89.59**	**290**	P	**P**	**17 53 21.6**	**+1.8**
	comp=Z,0.8nm,0.8s,baz=118,slow=3.8,SNR=4.6						
	comp=Z,0.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**89.59**	**290**	P	**P**	**17 53 19.6**	**-0.3**
TXAR	**Lajitas Array**	**90.17**	**58**	P	**P**	**17 53 23.3**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=215,slow=7.0,SNR=8.5						
	comp=Z,0.9nm,0.7s						
TXAR	**Lajitas Array**	**90.17**	**58**	P	**P**	**17 53 22.6**	**+0.2**
PDAR	**Pinedale Array**	**92.41**	**44**	P	**P**	**17 53 32.4**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=178,slow=4.5,SNR=3.5						
	comp=Z,0.2nm,0.4s						
F31M	**Tsiigehtchic**	**97.05**	**16**	P	**P**	**17 53 52.8**	**+0.2**
BVAR	**Borovoye Array**	**120.36**	**319**	PKP	**PKPdf**	**17 59 08.2**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=117,slow=2.8,SNR=3.2						
FINES	**FINESS Array B**	**138.26**	**342**	PKP	**PKPdf**	**17 59 42.4**	**-0.2**
	comp=Z,1.5nm,1.0s,baz=45,slow=2.2,SNR=3.7						
HFS	**Hagfors**	**142.34**	**349**	PKhKP	PKPpre	17 59 45.7	
	comp=Z,1.0nm,0.3s,baz=67,slow=3.6,SNR=15						
ARPR	**Arapgir-MALATY**	**144.25**	**305**		PKPbc	17 59 53.0	-0.9
AKASG	**Malin Array Be**	**144.85**	**328**	PKP	PKPbc	17 59 54.5	-0.6
	comp=Z,1.3nm,0.4s,baz=46,slow=4.3,SNR=5.8						
BRTR	**Keskin Array B**	**147.56**	**308**	PKPbc	**PKiKP**	**18 00 05.5**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=98,slow=4.1,SNR=8.1						
BRTR	**Keskin Array B**	**147.56**	**308**	PKPdf	**PKPdf**	**17 59 58.3**	**-1.4**
BRTR					**PKiKP**	**18 00 05.4**	**+0.6**
MMAI	**Mount Meron Ar**	**147.74**	**295**	PKPbc	**PKiKP**	**18 00 04.7**	**-0.6**
	comp=Z,1.8nm,0.5s,baz=74,slow=6.2,SNR=8.3						

DJA 13 17:53:06.5±0.7**,6°S**±3°×**10°2E**±°**,h17**^{km}±7^{km}**,M3.8**/13**, mB5.5**/1**,mb4.0**/7**,MLv3.6**/13**,Mw(mB)4.9**/1**,MwMwp5.4**/1**, Mwp5.6**/1**,Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGSI	**Enggano, Bengk**	**0.71**	**348**	P	Pb	17 53 20.3	-0.1
EGSI				S	Sb	17 53 30.6	+0.8
MNAI	**Manna**	**1.76**	**18**	P	Pn	17 53 37.1	+0.8
LWLI	**Liwa**	**1.93**	**58**	P	Pb	17 53 40.4	-0.9
KASI	**Kota Agung**	**2.13**	**76**	P	Pn	17 53 41.9	+0.6
KASI				S	Sn	17 54 07.0	-0.4
MDSI	**Maura Dua**	**2.34**	**49**	P	Pn	17 53 44.7	+0.5
MDSI				S	Sn	17 54 12.8	+0.2
KSI	**Kapahiang**	**2.39**	**4**	P	Pn	17 53 44.5	-0.5
KLSI		**2.67**	**60**	P	Pn	17 53 48.9	+0.2
MASI	**Maura Aman, Be**	**2.90**	**356**	P	Pn	17 53 52.8	+0.9
KRJI	**Kerinci**	**4.05**	**346**	P	Pn	17 54 08.0	+0.2
CNJI	**Cibinong**	**4.84**	**105**	P	Pn	17 54 18.0	-0.6
BBJI	**Bungbulang**	**5.38**	**105**	P	Pn	17 54 26.0	-0.1
SISI	**Saibi**	**5.75**	**325**	P	Pn	17 54 30.7	-0.4
	0.1nm19nm,0.8s						
TPI	**Tanjungpandan**	**6.16**	**58**	P	Pn	17 54 36.8	0.0
	0.1nm14nm,1.5s						
GSI	**Gunungsitoli**	**8.76**	**326**	P	Pn	17 55 12.4	-0.1
	9.3nm,0.9s						
SPSI	**Sidrap Palu**	**17.41**	**84**	P	Pn	17 57 08.7	-0.1

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*IDC **13** 17:54:54.9±2.1, 3°.57S×140°.91E, h34^{km}±24^{km}, mb3.4/3, mbtmp3.8/5, ML4.2/1, MS3.4/1, Error ellipse: s-maj=34.2km s-min=21.1km az=92.0*

ISC 13 17:54:55.4±1.0**,3°.61S**±0°.10×**140°.9E**±0°.1**,h35**^{km}**,n7, σ0.s80**/7**,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.10**	**352**	Pg	**Pn**	**17 55 14.9**	**+0.6**
	19nm,0.3s,baz=146,slow=12,SNR=59						
JAY				Lg	Lg	17 55 30.4	
	54nm,0.3s,baz=61,slow=21,SNR=10						
PMG	**Port Moresby**	**8.50**	**133**	Pn	**Pn**	**17 56 56.5**	**+0.4**
	6.0nm,0.7s,baz=315,slow=10.0,SNR=3.6						
PMG				Sn	**Sn**	**17 58 31.0**	**+0.1**
	0.2nm,0.3s,baz=258,slow=12,SNR=1.8						
WRA	**Warramunga Arr**	**17.44**	**201**	P	**Pn**	**17 58 55.3**	**-0.8**
	0.9nm,0.3s,baz=22,slow=13,SNR=21						
	2.4nm,0.5s						
FITZ	**Fitzroy Crossi**	**20.73**	**225**	P	**P**	**17 59 33.8**	**+0.7**
	2.0nm,0.6s,baz=35,slow=9.8,SNR=9.4						
	2.0nm,0.6s						
ASAR	**Alice Springs**	**21.05**	**198**	P	**P**	**17 59 36.7**	**+0.2**
	1.5nm,0.6s,baz=27,slow=11,SNR=40						
	1.5nm,0.6s						
JCJ	**Chichijima**	**30.55**	**2**	LR	LR	18 12 49.9	
	comp=Z,58nm,18.6s,baz=126,slow=35						
ILAR	**Eielson Array**	**85.76**	**24**	P	**P**	**18 07 29.8**	**-1.0**
	0.3nm,0.7s,baz=256,slow=5.2,SNR=2.8						
	0.3nm,0.7s						

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*IDC **13** 18:02:05.6±0.8, 67°.05N×21°.29E, h0^{km}, mbtmp3.5/5, ML2.0/4, Error ellipse: s-maj=14.0km s-min=7.4km az=108.0*
*HEL **13** 18:02:05.8±0.2, 67°.06N×20°.91E, h0^{km}, ML2.2, Suspected explosion*
*UPP **13** 18:02:05.6±0.1, 67°.06N×20°.96E, h0^{km}, ML2.6, Suspected explosion*

ISC 13 18:02:05.2±0.7**,67°.06N**±0°.02×**20°.92E**±0°.02**,h0**^{km}**,n53, σ1.s20**/77**,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.15**	**293**	P	**Pg**	**18 02 09.1**	**+1.0**
DUNU				S	**Sg**	**18 02 11.6**	**+1.6**
MASU	**Masugnsbyn**	**0.57**	**46**	P	**Pg**	**18 02 16.5**	**+0.3**
ERTU	**Ertsjaerv**	**0.72**	**135**	P	**Pg**	**18 02 18.9**	**-0.1**
ERTU				S	**Sg**	**18 02 28.2**	**0.0**
ERTU	**Ertsjaerv**	**0.72**	**135**	PG	**Pg**	**18 02 18.5**	**-0.4**
ERTU				SG	**Sg**	**18 02 29.7**	**+1.5**
PAJU	**Pajala**	**0.86**	**92**	P	**Pg**	**18 02 21.4**	**-0.3**
PAJU	**Pajala**	**0.86**	**92**	PG	**Pg**	**18 02 20.6**	**-1.1**
PAJU				SG	**Sg**	**18 02 32.1**	**-0.7**
HARU	**Harads**	**0.91**	**179**	P	**Pg**	**18 02 22.5**	**0.0**
HARU				S	**Sg**	**18 02 34.9**	**+0.6**
RATU	**Laukkuluspa**	**0.92**	**327**	P	**Pg**	**18 02 22.8**	**0.0**
RATU				S	**Sb**	**18 02 35.8**	**-1.0**
KUA	**Kurravaara**	**0.92**	**346**	P	**Pg**	**18 02 22.7**	**-0.2**
	baz=184						
SALU	**Saltoluokta**	**0.99**	**290**	P	**Pb**	**18 02 24.4**	**-0.9**
SALU	**Saltoluokta**	**0.99**	**290**	*e*P	**Pb**	**18 02 25.0**	**-0.3**
LANU	**Lannavaara**	**1.07**	**22**	P	**Pg**	**18 02 25.2**	**-0.5**
LANU	**Lannavaara**	**1.07**	**22**	PG	**Pg**	**18 02 25.2**	**-0.5**
LANU				SN	**Sn**	**18 02 43.9**	**+0.9**
NIKU	**Nikkaluokta**	**1.09**	**319**	P	**Pg**	**18 02 26.0**	**0.0**
KOVU	**Salmi**	**1.20**	**346**	P	**Pg**	**18 02 27.9**	**-0.3**
KLF	**Kolari**	**1.20**	**80**	PG	**Pg**	**18 02 27.6**	**-0.6**
	baz=265						
KLF				MSG		18 02 42.4	
	comp=Z,23nm,0.2s						
KLF				SG	**Sg**	**18 02 44.6**	**+0.9**
KALU	**Kalix**	**1.56**	**140**	P	**Pn**	**18 02 33.8**	**-0.3**
KALU	**Kalix**	**1.56**	**140**	PG	**Pn**	**18 02 33.8**	**-0.3**
SJUU	**Sjulsmark**	**1.59**	**170**	P	**Pn**	**18 02 34.7**	**+0.2**
TOF	**Tornio**	**1.68**	**124**	PG	**Pn**	**18 02 35.9**	**+0.1**
TOF				MSG		18 02 56.3	
	comp=Z,17nm,0.2s						
TOF				SN	**Sb**	**18 02 60.0**	**+1.3**
HEF	**Hetta**	**1.71**	**36**	*e*P	**Pn**	**18 02 36.6**	**+0.4**
HEF	**Hetta**	**1.71**	**36**	PG	**Pn**	**18 02 36.2**	**0.0**
	baz=221						
HEF				MSG		18 02 56.9	
	comp=Z,23nm,0.2s						
HEF				SN	**Sg**	**18 03 00.9**	**+0.9**
KIF	**Kilpisjarvi**	**1.95**	**359**	PG	**Pb**	**18 02 41.3**	**-0.3**
KIF				MSG		18 03 04.9	
	comp=Z,68nm,0.2s						
KIF				SG	**Sg**	**18 03 08.4**	**+0.7**
RNF	**Rovaniemi**	**2.06**	**100**	PG	**Pn**	**18 02 42.1**	**+1.0**
RNF				SG	**Sb**	**18 03 11.0**	**+1.3**
KTK1	**Kautokeino**	**2.14**	**23**	PG	**Pn**	**18 02 43.7**	**+1.5**
KTK1				SG	**Sb**	**18 03 12.0**	**0.0**
BURU	**Burvik**	**2.50**	**175**	PB	**Pn**	**18 02 48.4**	**+1.4**
RANF	**Ranua**	**2.57**	**111**	PN	**Pn**	**18 02 48.7**	**+0.6**
	baz=299						
RANF				SG	**Sb**	**18 03 25.2**	**+0.9**
TRO	**Tromso**	**2.68**	**345**	PG	**Pb**	**18 02 54.2**	**+0.2**
TRO				SB	**Sb**	**18 03 25.3**	**-2.2**
OBF4	**Vikkela, Lumij**	**2.84**	**141**	PN	**Pn**	**18 02 52.7**	**+1.0**
	baz=325						
OBF4				MSG		18 03 29.2	
	comp=Z,6.0nm,0.2s						
OUL	**Oulu**	**2.84**	**132**	PB	**Pn**	**18 02 53.8**	**+2.1**
OUL				SG	**Sg**	**18 03 35.5**	**-0.8**
OBF0	**Syolatti, Pyha**	**2.92**	**151**	PB	**Pn**	**18 02 55.1**	**+2.3**
OBF0				MSG		18 03 31.6	
	comp=Z,6.8nm,0.2s						
OBF8	**Ulkokalla**	**2.94**	**158**	PG	**Pb**	**18 02 57.9**	**-0.4**
OBF8				MSG		18 03 32.1	
	comp=Z,6.7nm,0.2s						
ARA0	**ARCESS Array S**	**3.01**	**32**	PN	**Pn**	**18 02 54.9**	**+0.7**
ARA0				SB	**Sn**	**18 03 33.4**	**+2.5**
ARCES	**ARCESS Array B**	**3.01**	**32**	Pn	**Pn**	**18 02 54.2**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=212,slow=13,SNR=49						
ARCES				Sn	**Sn**	**18 03 30.2**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=209,slow=16,SNR=6.9						
	comp=Z,1.7nm,0.2s						
OUF	**Merijarvi**	**3.13**	**148**	PB	**Pn**	**18 02 57.6**	**+1.9**
OUF				MSG		18 03 37.8	
	comp=Z,3.5nm,0.2s						
RAJF	**Raja-Jooseppi**	**3.15**	**60**	PB	**Pn**	**18 02 58.4**	**+2.5**
RAJF				SG	**Sb**	**18 03 43.9**	**+3.1**
UMAU	**Umeaa**	**3.20**	**182**	PB	**Pn**	**18 02 58.0**	**+1.4**
KU2	**Taivalkoski**	**3.24**	**111**	PN	**Pn**	**18 02 58.1**	**+0.9**
VRF	**Varrio**	**3.42**	**74**	PN	**Pn**	**18 03 01.9**	**+2.1**
OLKF	**Oulanka, Finla**	**3.45**	**99**	PN	**Pn**	**18 03 01.3**	**+1.1**
MSF	**Maaselka**	**3.45**	**106**	PN	**Pn**	**18 03 01.3**	**+1.1**
MSF				SG	**Sg**	**18 03 54.4**	**-1.6**
KEV	**Kevo**	**3.52**	**37**	PN	**Pn**	**18 03 01.7**	**+0.7**
KEV				SN	**Sn**	**18 03 43.3**	**+0.1**
KU6	**Riekki**	**3.73**	**102**	PN	**Pn**	**18 03 05.1**	**+1.0**
	baz=288						
KU1	**Kurvinen**	**3.80**	**109**	PN	**Pn**	**18 03 06.1**	**+1.2**
HUSU	**Husum**	**3.81**	**192**	PN	**Pn**	**18 03 06.3**	**+1.3**
	baz=7.0						
HUSU				SN	**Sn**	**18 03 51.4**	**+1.0**
VAF	**Ylistaro**	**4.11**	**169**	PN	**Pn**	**18 03 10.7**	**+1.6**
HEMU	**Hemsoen**	**4.58**	**197**	PN	**Pn**	**18 03 16.4**	**+0.8**
	baz=13						
NIF	**Nilsia**	**4.69**	**139**	PN	**Pn**	**18 03 18.7**	**+1.5**
	baz=325						
RMF	**Romuvaara**	**4.70**	**123**	PN	**Pn**	**18 03 19.4**	**+2.1**
	baz=316						
FINES	**FINESS Array B**	**6.07**	**156**	Pn	**Pn**	**18 03 35.3**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=346,slow=13,SNR=13						
FINES				Sn	**Sn**	**18 04 44.5**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=337,slow=25,SNR=8.1						
FINES				Lg	Lg	18 05 15.7	
	comp=Z,0.3nm,0.3s,baz=342,slow=31,SNR=1.9						
	comp=Z,1.1nm,0.7s						
NOA	**NORSAR Array B**	**7.39**	**220**	Pn	**Pn**	**18 03 54.2**	**0.0**
	baz=39,slow=17,SNR=6.1						
NOA				Sn	**Sn**	**18 05 17.0**	**-1.6**
	baz=27,slow=20,SNR=4.2						
NOA				Lg	Lg	18 06 00.6	
	baz=27,slow=20,SNR=2.0						
	comp=Z,0.6nm,0.8s						
HFS	**Hagfors**	**7.66**	**208**	Pn	**Pn**	**18 03 57.4**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=24,slow=11,SNR=10						
	comp=Z,6.4nm,1.0s						
SPITS	**Spitsbergen Ar**	**11.25**	**355**	Pn	**Pn**	**18 04 44.7**	**-2.3**
	comp=Z,16nm,1.1s,baz=168,slow=14,SNR=1.6						

JMA 13 18:10:09.3±0.1**,34°.9N**±0°.2×**137°.5E**±0°.2**,h16**^{km}**,MV0.1**/18**, NE AICHI PREF,Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSSY	**Shinshiroyabe**	**0.01**	**137**	*e*P	Pg	18 10 12.1	0.0
JSSY				*e*S	Sg	18 10 14.0	0.0
HMMJ	**Hamamatsu 2**	**0.19**	**110**	*i* P	Pg	18 10 13.9	-0.1
HMMJ				*e*S	Sg	18 10 16.8	-0.3
JHMK	**Hamakita**	**0.24**	**116**	*e*P	Pg	18 10 14.5	-0.1
JAA	**Atsumi**	**0.41**	**226**	*e*S	Sg	18 10 23.0	-0.3

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*MDD **13** 18:14:49.1±0.8, 36°.43N×5°.57W, h8^{km}±4^{km}, mb_Lg2.5/9, Error ellipse: s-maj=6.1km s-min=3.6km az=6.0*
*SFS **13** 18:14:49.2, 36°.42N×5°.57W, h0^{km}, ML2.8/8, ML2.6/12, MLv2.6/12*
*INMG **13** 18:14:49.2±1.9, 36°.40N×5°.51W, h11^{km}±4^{km}, ML2.2, Error ellipse: s-maj=5.5km s-min=4.1km az=15.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NW Gibraltar*
*CNRM **13** 18:14:51.0, 36°.46N×5°.45W, h13^{km}, ML1.9*

ISC 13 18:14:49.2±0.9**,36°.53N**±0°.02×**5°.53W**±0°.02**,h7**^{km}±7^{km}**,n43, σ1.s22**/75**,Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EJIF	**Jimena Fronter**	**0.09**	**148**	Pg	**Pg**	**18 14 51.0**	**-0.3**
EJIF				Sg	**Sg**	**18 14 53.0**	**+0.2**
ESPR	**Espera**	**0.43**	**322**	Pg	**Pg**	**18 14 58.2**	**+0.6**
ESPR				Sg	**Sg**	**18 15 04.7**	**+1.5**
ESPR	**Espera**	**0.43**	**322**	Pg	**Pg**	**18 14 58.7**	**+1.1**
ESPR				Sg	**Sb**	**18 15 06.5**	**+0.6**
ESPR				*i* IVmb_Lg		18 15 10.9	
CNIL	**Conil**	**0.45**	**250**	Pg	**Pg**	**18 14 56.5**	**-1.4**
EMIJ	**Mijas**	**0.61**	**86**	Pg	**Pg**	**18 15 00.4**	**-0.5**
EMIJ				Sg	**Sb**	**18 15 10.3**	**-0.7**
EMIJ	**Mijas**	**0.61**	**86**	Pg	**Pg**	**18 15 00.5**	**-0.5**
EMIJ				Sg	**Sg**	**18 15 07.1**	**-1.9**
EMIJ				*i* IVmb_Lg		18 15 13.8	
SMIR	**Smir Dam**	**0.85**	**172**	P	**Pg**	**18 15 06.5**	**+0.9**
SMIR	**Smir Dam**	**0.85**	**172**	S	**Sg**	**18 15 17.5**	**+0.9**
EGOR	**Sierra Gorda,**	**1.28**	**63**	Pg	**Pg**	**18 15 14.4**	**+0.7**
EGOR				Sg	**Sn**	**18 15 32.3**	**+1.2**
EGOR	**Sierra Gorda,**	**1.28**	**63**	Pg	**Pg**	**18 15 15.3**	**+1.6**
EGOR				*i* IVmb_Lg		18 15 40.3	
EMIN	**Mina Concepcio**	**1.54**	**324**	Pn	**Pn**	**18 15 16.9**	**-0.2**
EMIN				Sn	**Sb**	**18 15 37.7**	**-0.1**
EMIN	**Mina Concepcio**	**1.54**	**324**	Pn	**Pn**	**18 15 17.1**	**-0.1**
EMIN				Sg	**Sg**	**18 15 39.2**	**+0.5**
EMIN				*i* IVmb_Lg		18 15 39.9	
ECAB	**El Cabril**	**1.55**	**3**	Pn	**Pb**	**18 15 17.6**	**-0.6**
ECAB				Sn	**Sg**	**18 15 38.6**	**-0.3**
ECAB	**El Cabril**	**1.55**	**3**	Pn	**Pb**	**18 15 17.6**	**-0.6**
ECAB				Sn	**Sg**	**18 15 38.1**	**-0.8**
ECAB				*i* IVmb_Lg		18 15 44.0	
ELGU	**Los Guajares,**	**1.57**	**77**	Pn	**Pg**	**18 15 19.0**	**-0.2**
EADA	**Adamuz**	**1.80**	**25**	Pn	**Pn**	**18 15 20.0**	**-0.8**
EADA				Sn	**Sg**	**18 15 47.6**	**+0.4**
EADA	**Adamuz**	**1.80**	**25**	Pn	**Pn**	**18 15 20.5**	**-0.3**
EADA				Pg	**Pg**	**18 15 23.6**	**-0.2**
EADA				Sg	**Sg**	**18 15 50.4**	**+3.2**
EADA				*i* IVmb_Lg		18 15 52.5	
EGRO	**El Granado**	**1.86**	**303**	Sn	**Sb**	**18 15 47.3**	**+0.3**
EGRO				Pn	**Pn**	**18 15 19.7**	**-1.8**
EGRO	**El Granado**	**1.86**	**303**	Pn	**Pn**	**18 15 19.8**	**-1.7**
EGRO				Sn	**Sn**	**18 15 43.6**	**-1.6**
PVAQ	**Vaqueiros**	**1.96**	**297**	*e*Pn	**Pn**	**18 15 20.9**	**-2.0**
PVAQ				*e*Sn	**Sn**	**18 15 47.0**	**-0.7**
PVAQ				*e*Sg	**Sb**	**18 15 52.0**	**+2.1**
PVAQ				*i* IAML		18 15 55.9	
PVAQ				*i* IAML		18 15 56.3	
PVAQ				*i* IAML		18 15 56.4	
PVAQ	**Vaqueiros**	**1.96**	**297**	P	**Pb**	**18 15 25.3**	**0.0**
PVAQ	**Vaqueiros**	**1.96**	**297**	S	**Sb**	**18 15 51.3**	**+1.4**
PBAR	**Barrancos**	**2.04**	**324**	Pn	**Pn**	**18 15 24.5**	**+0.5**
PBAR				Sn	**Sb**	**18 15 52.2**	**0.0**
PBAR	**Barrancos**	**2.04**	**324**	*e*Pn	**Pn**	**18 15 23.3**	**-0.7**
PBAR				*e*Pg	**Pb**	**18 15 27.0**	**+0.4**
PBAR				*e*Sg	**Sb**	**18 15 52.7**	**+0.5**
PBAR				*i* IAML		18 15 56.2	
PBAR				*i* IAML		18 15 58.2	
PBAR				*i* IAML		18 15 58.7	
PBDV	**Barranco-do-Ve**	**2.05**	**291**	*e*Pn	**Pn**	**18 15 22.8**	**-1.5**
PBDV				*e*Sn	**Sn**	**18 15 49.9**	**-0.3**
PBDV				*i* IAML		18 16 04.3	
PBDV				*i* IAML		18 16 06.7	
PBDV				*i* IAML		18 16 16.3	
PCVE	**Castro Verde**	**2.29**	**300**	*e*Pn	**Pn**	**18 15 26.1**	**-1.3**
PCVE				*e*Sg	**Sb**	**18 16 01.7**	**+2.3**
PCVE				*i* IAML		18 16 07.0	
PCVE				*i* IAML		18 16 09.8	
PCVE				*i* IAML		18 16 17.3	
PBEJ	**Beja**	**2.39**	**309**	*e*Sg	**Sg**	**18 16 06.1**	**+0.1**
PBEJ				*i* IAML		18 16 08.5	
PBEJ				*i* IAML		18 16 11.9	
PBEJ				*i* IAML		18 16 15.3	
EBAD	**Badajoz**	**2.52**	**333**	*i* IVmb_Lg		18 16 09.1	
EBAD				Sg	**Sg**	**18 16 11.2**	**+1.1**
MESJ	**Messejana**	**2.52**	**302**	*e*Pn	**Pn**	**18 15 30.7**	**+0.2**
MESJ				*e*Sn	**Sn**	**18 16 01.0**	**-0.5**
MESJ				*e*Sg	**Sg**	**18 16 10.5**	**+0.4**
MESJ				*i* IAML		18 16 11.0	
MESJ				*i* IAML		18 16 12.9	
MESJ				*i* IAML		18 16 22.2	
MORF	**Marmelete**	**2.62**	**288**	*e*Pn	**Pn**	**18 15 32.6**	**+0.6**
MORF				*e*Sn	**Sn**	**18 16 02.7**	**-1.4**
MORF				*e*Sg	**Sg**	**18 16 17.2**	**+3.8**
MORF				*i* IAML		18 16 17.9	
MORF				*i* IAML		18 16 23.4	
MORF				*i* IAML		18 16 28.8	
EVO	**Evora**	**2.81**	**316**	*e*Sg	**Sg**	**18 16 18.5**	**-1.0**
EVO				*i* IAML		18 16 22.1	
EVO				*i* IAML		18 16 25.2	
EVO				*i* IAML		18 16 26.2	
PESTR	**Estremoz**	**2.85**	**326**	*e*Pn	**Pn**	**18 15 35.3**	**+0.1**
PESTR				*e*Sg	**Sb**	**18 16 16.4**	**+0.9**
PESTR				*i* IAML		18 16 26.0	
PESTR				*i* IAML		18 16 31.9	
MOE	**Montemor**	**3.00**	**312**	*e*Sg	**Sg**	**18 16 25.8**	**+0.2**
MOE				*i* IAML		18 16 26.7	
MOE				*i* IAML		18 16 29.3	
MOE				*i* IAML		18 16 33.0	
PARRA	**Arraiolos**	**3.03**	**320**	*e*Pn	**Pn**	**18 15 36.2**	**-1.4**
PARRA				*e*Sn	**Sn**	**18 16 13.1**	**-1.1**
PARRA				*e*Sg	**Sg**	**18 16 27.0**	**+0.4**
PARRA				*i* IAML		18 16 27.7	
PARRA				*i* IAML		18 16 33.4	
PARRA				*i* IAML		18 16 38.5	
PMRV	**Marv??o**	**3.25**	**334**	*e*Pn	**Pn**	**18 15 41.2**	**+0.6**
PMRV				*e*Sn	**Sn**	**18 16 19.3**	**-0.3**
PMRV				*e*Sg	**Sg**	**18 16 32.6**	**-0.9**
PMRV				*i* IAML		18 16 36.2	
PMRV				*i* IAML		18 16 36.6	
PMRV				*i* IAML		18 16 41.0	
PMTG	**Montargil**	**3.32**	**321**	*e*Sn	**Sn**	**18 16 20.9**	**-0.3**
PMTG				*e*Sg	**Sg**	**18 16 34.2**	**-1.5**
PMTG				*i* IAML		18 16 38.3	
PMTG				*i* IAML		18 16 40.0	
PMTG				*i* IAML		18 16 42.7	
PCBR	**Castelo Branco**	**3.65**	**336**	*e*Sg	**Sg**	**18 16 44.6**	**-1.7**
PSARD	**Sardoal**	**3.71**	**327**	*e*Sg	**Sg**	**18 16 44.5**	**-3.7**
PSARD				*i* IAML		18 16 53.3	
PSARD				*i* IAML		18 17 00.8	
PSARD				*i* IAML		18 17 04.3	
MD31	**MD31**	**3.71**	**170**	P	**Pn**	**18 15 47.1**	**+0.1**
MD31	**MD31**	**3.71**	**170**	S	**Sn**	**18 16 31.0**	**0.0**
MDT	**Midelt**	**3.78**	**168**	P	**Pn**	**18 15 47.9**	**-0.1**
MDT	**Midelt**	**3.78**	**168**	S	**Sn**	**18 16 32.6**	**-0.3**
ECHE	**Chera**	**4.72**	**48**	Pn	**Pn**	**18 16 01.9**	**+0.9**

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*MOS **13** 18:24:01.6±1.1, 34°.98N×139°.65E, h36^{km}, mb4.6/13, Error ellipse: s-maj=12.2km s-min=6.4km az=102.6*
*NIED **13** 18:24:03.8, 35°.03N×139°.45E, h33^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.21; $M_{\theta\theta}$-0.23; $M_{\phi\phi}$-0.98; $M_{r\theta}$0.54; $M_{\theta\phi}$-2.39; $M_{\phi r}$-0.18; Fault plane solution: $M_0$2.58000×10^{15} NP1: ϕ_s179.00000°, δ67.00000°, λ20.00000°. NP2: ϕ_s81.00000°, δ71.00000°, λ156.00000°.*
*JMA **13** 18:24:03.8±0.1, 35°.0N±0°.2×139°.5E±0°.2, h33^{km}, MD4.3/40, MW4.3/40, SAGAMINADA*
JMA Felt III J1 at SAGAMINADA .
*IDC **13** 18:24:04.5±2.3, 35°.00N×139°.54E, h37^{km}±20^{km}, mb3.7/18, mbtmp3.9/20, ML3.4/2, MS3.4/9, Error ellipse: s-maj=17.6km s-min=12.0km az=78.0*
*NEIC **13** 18:24:04.7±1.9, 35°.01N±0°.04×139°.56E±0°.02, h35^{km}±4^{km}, mb4.6/64, Error ellipse: s-maj=5.3km s-min=2.4km az=182.0*

ISC 13 18:24:03.1±0.7**,35°.01N**±0°.02×**139°.55E**±0°.03**,h29**^{km}±5^{km}**, n202,**σ**1.s24**/170**,mb4.5**/60**,MS3.3**/8**,6D,Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYO	**Yokosk**	0.23	25	iP	Pn	18 24 11.1	+0.5
JYO				eS	Sn	18 24 16.9	+3.0
JYO	**Yokosk**	0.23	25	A	A	18 24 11.1	
	comp=N,155nm,0.7s,comp=E,234nm,0.9s						
TATJ	**Tateyama 2**	0.28	86	A	A	18 24 12.1	
	comp=N,165nm,0.9s,comp=E,110nm,0.7s						
JIM2	**Oshima 3**	0.31	198	iP	Pn	18 24 11.5	-0.2
JIM2				S	Sn	18 24 16.9	-0.4
JIM2	**Oshima 3**	0.31	198	A	A	18 24 11.5	
	comp=N,95nm,0.5s,comp=E,156nm,0.7s						
KTJ3	**Kamata3**	0.40	259	iP	Pb	18 24 11.7	-0.1
KTJ3				S	Sb	18 24 17.4	-0.5
JHTM	**Izuhatsuma**	0.45	263	A	A	18 24 12.2	
	comp=N,404nm,0.3s,comp=E,345nm,0.6s						
JOD2	**Odawara 2**	0.45	304	⇓iP	Pb	18 24 12.3	-0.4
JOD2				⇓S	Sb	18 24 18.4	-0.8
JOD2	**Odawara 2**	0.45	304	A	A	18 24 12.3	
	comp=N,45nm,0.4s,comp=E,28nm,0.4s						
JTHY	**Toshimahigashi**	0.53	204	iP	Pn	18 24 15.0	+0.3
JTHY				S	Sn	18 24 23.5	+0.8
JTHY	**Toshimahigashi**	0.53	204	A	A	18 24 15.0	
	comp=N,70nm,1.1s,comp=E,65nm,1.2s						
JKUC	**kamogawauchiur**	0.55	75	A	A	18 24 16.0	
	comp=N,39nm,2.0s,comp=E,40nm,1.6s						
JIZS	**Izushimoda**	0.62	242	iP	Pb	18 24 15.4	-0.1
JIZS				S	Sb	18 24 23.9	0.0
JIZS	**Izushimoda**	0.62	242	A	A	18 24 15.4	
	comp=N,23nm,1.2s,comp=E,24nm,1.0s						
JSGW	**Sagamiharawaka**	0.65	335	A	A	18 24 15.6	
	comp=N,38nm,1.6s,comp=E,30nm,1.9s						
JCCN	**Chibachonan**	0.67	56	A	A	18 24 17.6	
	comp=N,31nm,2.6s,comp=E,32nm,1.0s						
TOK	**Tokyo**	0.69	14	A	A	18 24 17.1	
	comp=N,43nm,0.8s,comp=E,56nm,0.9s						
JFNN	**Fujinakano**	0.73	285	A	A	18 24 16.3	
	comp=N,23nm,0.6s,comp=E,17nm,3.1s						
JSKK	**Shikinejimakit**	0.73	202	A	A	18 24 17.4	
	comp=N,14nm,1.7s,comp=E,35nm,1.3s						
BSO3	**Boso 3**	0.82	105	iP	Pb	18 24 20.0	+1.4
BSO3				eX		18 24 32.5	
JMYK	**Miyake Tsubota**	0.95	180	P	Pb	18 24 21.3	+0.4
JMYK				S	Sb	18 24 34.4	+1.2
JMYK	**Miyake Tsubota**	0.95	180	A	A	18 24 21.3	
	comp=N,10.0nm,3.1s,comp=E,14nm,3.5s						
JYN	**Shimob**	0.95	301	⇓iP	Pn	18 24 20.0	-0.6
JYN				⇓eS	Sn	18 24 32.3	-0.9
JSMT	**Sammumatsuo**	0.97	49	A	A	18 24 22.0	
	comp=N,21nm,4.5s,comp=E,21nm,1.7s						
SHZ3	**Shizuoka 3**	1.10	273	iP	Pn	18 24 22.9	+0.4
SHZ3				S	Sb	18 24 37.3	-0.1
SHZ3	**Shizuoka 3**	1.10	273	A	A	18 24 22.9	
	comp=N,21nm,1.1s,comp=E,10.0nm,1.0s						
JMKN	**Mikurajimanish**	1.12	178	P	Pb	18 24 23.7	0.0
JMKN	**Mikurajimanish**	1.12	178	A	A	18 24 23.7	
	comp=N,7.0nm,3.3s,comp=E,7.0nm,3.7s						
JRY	**Ryogami san**	1.13	332	⇓iP	Pn	18 24 23.1	+0.1
JRY				⇓S	Sn	18 24 37.6	0.0
JSG	**Sagara**	1.17	254		Pb	18 24 25.0	+0.3
JSG				Sn	Sb	18 24 40.3	+0.9
JSG	**Sagara**	1.17	254	A	A	18 24 23.3	
	comp=N,33nm,1.1s,comp=E,21nm,0.7s						
JIHU	**Itakohorinouch**	1.24	40	A	A	18 24 26.0	
	comp=N,18nm,1.5s,comp=E,18nm,1.1s						
JCAJ	**Choshiashikaji**	1.28	56	A	A	18 24 26.9	
	comp=N,4.0nm,1.8s,comp=E,5.0nm,3.1s						
JKKS	**Kakegawashinom**	1.31	259	A	A	18 24 25.3	
	comp=N,24nm,1.9s,comp=E,16nm,2.0s						
JYT	**Yasato**	1.32	23	A	A	18 24 26.9	
	comp=N,9.0nm,0.6s,comp=E,9.0nm,0.4s						
JAG	**Ashikaga**	1.41	357	A	A	18 24 27.7	
	comp=N,3.0nm,0.6s,comp=E,5.0nm,1.0s						
JNY	**Yasuok**	1.42	284	A	A	18 24 26.9	
	comp=N,10.0nm,1.3s,comp=E,6.0nm,1.3s						
JNT	**Takato**	1.44	307	A	A	18 24 27.3	
	comp=N,6.0nm,0.7s,comp=E,6.0nm,0.9s						
HMMJ	**Hamamatsu 2**	1.51	265	A	A	18 24 28.2	
	comp=N,10.0nm,1.7s,comp=E,4.0nm,3.0s						
TTO5	**TONANKAI O.B.S**	1.69	244	A	A	18 24 31.1	
	comp=N,13nm,2.0s,comp=E,17nm,5.6s						
JGK	**Kuni**	1.71	335	A	A	18 24 31.7	
	comp=N,4.0nm,1.6s,comp=E,7.0nm,5.1s						
JKT	**Katashina**	1.77	352	A	A	18 24 32.8	
	comp=N,6.0nm,0.5s,comp=E,7.0nm,0.6s						
MJAR	**Matsushiro Arr**	1.87	325	Pn	Pn	18 24 33.9	+0.7
	comp=E,9.6nm,0.3s,baz=177,slow=14,SNR=366						
MJAR				Sn	Sn	18 24 58.1	+2.2
	comp=E,26nm,0.3s,baz=205,slow=39,SNR=6.6						
MJAR	**Matsushiro Arr**	1.87	325		Pn	18 24 34.4	+1.3
MAJO	**Matsushiro**	1.88	325		Pn	18 24 34.5	+1.4
MAJO				Sn	Sb	18 24 58.5	-1.2
MAJO	**Matsushiro**	1.88	325	P	Pn	18 24 34.6	+1.4
MAJO						18 24 58.5	
MJB9	**Matsu-Tunnel**	1.88	325		Pb	18 24 35.6	-1.1
MJB9				Sn	Sb	18 24 58.8	-1.1
JGF	**Kuroka**	1.89	289		Pn	18 24 34.6	+1.2
JGF				Sn	Sb	18 24 59.4	-0.6
JGF	**Kuroka**	1.89	289	A	A	18 24 33.7	
	comp=N,7.0nm,2.5s,comp=E,5.0nm,2.7s						
JHJ	**Hachijo jima 2**	1.90	174	Pn	Pb	18 24 35.1	-1.9
	comp=E,290nm,0.3s,baz=338,slow=16,SNR=88						
JHJ				Sn	Sb	18 24 59.2	-1.2
	comp=E,473nm,0.3s,baz=190,slow=24,SNR=19						
JHJ				LR	LR	18 25 33.4	
	comp=E,558nm,18.1s,baz=109,slow=47						
JHJ2	**Mitsune**	1.91	173		Pb	18 24 35.4	-1.8
JHJ2				Sn	Sb	18 24 59.1	-1.6
JSB	**Shiboa**	1.97	9	A	A	18 24 36.1	
	comp=N,8.0nm,4.9s,comp=E,7.0nm,1.8s						
INU	**Inuyama**	2.10	280		Pn	18 24 37.3	+1.1
JICN	**Ichinomiyachia**	2.23	278	A	A	18 24 38.7	
	comp=N,7.0nm,3.0s,comp=E,5.0nm,4.9s						
JJN	**Nakama**	2.37	332	A	A	18 24 41.1	
	comp=N,5.0nm,2.1s,comp=E,6.0nm,3.2s						
JSD	**Sado**	3.19	341		Pn	18 24 52.4	+1.1
JMN	**Monobe**	4.86	256		Pn	18 25 15.5	+1.3
JNU	**Nakatsue**	7.44	258	LR	LR	18 28 48.6	
	comp=E,224nm,20.6s,baz=76,slow=38						
JNU	**Nakatsue**	7.44	258	Pn	Pn	18 25 49.9	+0.3
ERM	**Erimo**	7.54	21	Pn	Pn	18 25 50.1	-0.9
ERM	**Erimo**	7.54	21	P	Pn	18 25 50.1	-0.9
JCJ	**Chichijima**	8.21	163	Pn	Pn	18 25 50.0	-10
	comp=E,8.7nm,0.3s,baz=302,slow=22,SNR=11						
JCJ				Sn	Sn	18 27 17.9	-14
	comp=E,2.4nm,0.3s,baz=287,slow=23,SNR=1.4						
JCJ	**Chichijima**	8.21	163	Pn	Pn	18 26 00.7	+0.4
ASAJ	**Asahikawa**	9.39	14	Pn	Pn	18 26 16.3	0.0
	comp=E,0.7nm,0.3s,baz=213,slow=13,SNR=11						
	comp=E,7.7nm,1.0s						
JKA	**Kamikawa-asahi**	9.39	14	Pn	Pn	18 26 15.9	-0.5
KSRS	**Korea Array**	9.70	288	Pn	Pn	18 26 25.9	+5.3
	comp=E,0.1nm,0.3s,baz=106,slow=14,SNR=3.0						
USRK	**Ussuriysk Ar.**	10.86	330	Pn	Pn	18 26 37.9	+1.4
	comp=E,0.1nm,0.3s,baz=159,slow=13,SNR=4.1						
	comp=E,1.3nm,0.8s						
YSS	**Yuzhno-Sakhali**	12.17	10	eP	Pn	18 26 53.8	-0.6
YSS				eS	Sn	18 29 03.0	-6.0
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YSS				MLR	MLR		
	comp=Z,600nm,16.0s						
NJ2	**Nanjing**	17.50	266	eP	P	18 28 06.8	+0.9
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
YULB	**Yu-li**	19.66	239	P	P	18 28 29.9	+0.3
YULB				IAmb	IAmb	18 29 12.8	
	comp=Z,35nm,1.4s						
XLT	**XiLinHaoTe**	20.12	303	eP	Pn	18 28 38.0	+1.3
XLT				pP	sP	18 28 51.3	+5.5
XLT				pmax	pmax		
	comp=Z,9.0nm,0.4s						
TWG	**Pinlang**	20.19	238	P	P	18 28 35.5	+0.1
TWG				IAmb	IAmb	18 29 12.4	
	comp=Z,38nm,1.3s						
TPUB	**Ta-pu**	20.19	240	P	P	18 28 34.5	-0.9
TPUB				IAmb	IAmb	18 29 03.0	
	comp=Z,73nm,1.5s						
ZEA	**Zeya**	20.63	339	eP	P	18 28 40.5	+0.6
ZEA				e		18 28 49.9	
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GUMO	**Guam**	21.87	166	LR	LR	18 36 23.3	
	comp=Z,72nm,18.5s,baz=50,slow=34						
PETK	**Petropavlovsk-**	22.19	30	P	P	18 28 56.0	-0.8
	comp=Z,4.9nm,0.9s,baz=206,slow=9.6,SNR=3.9						
PETK				LR	LR	18 37 27.1	
	comp=Z,55nm,18.4s,baz=179,slow=36						
	comp=Z,4.9nm,0.9s						
PETK	**Petropavlovsk-**	22.19	30	P	P	18 28 56.0	-0.8
PET	**Petropavlovsk**	22.52	31	P	P	18 29 01.1	+0.8
PET	**Petropavlovsk**	22.52	31	P	P	18 29 01.1	+0.8
PET				pmax	pmax		
	comp=Z,65nm,1.4s						
HHC	**Hu-ho-hao-te**	22.77	293	eP	P	18 29 04.1	+0.8
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,5.4s						
MA2	**Magadan**	25.65	13		P	18 29 30.2	+0.2
MA2				IAmb	IAmb	18 29 32.2	
	comp=Z,18nm,0.8s						
MA2	**Magadan**	25.65	13	P	P	18 29 30.2	+0.2
MA2				pmax	pmax		
	comp=Z,18nm,0.8s						
SONM	**Songino Array**	27.74	308	P	P	18 29 50.4	+1.3
	comp=Z,0.4nm,0.6s,baz=115,slow=10,SNR=2.1						
	comp=Z,0.4nm,0.6s						
YAK	**Yakutsk**	27.75	350	LR	LR	18 40 37.7	
	comp=Z,102nm,19.1s,baz=110,slow=36						
YAK	**Yakutsk**	27.75	350	P	P	18 29 47.9	-1.0
YAK				IAmb	IAmb	18 30 19.6	
	comp=Z,20nm,1.5s						
YAK	**Yakutsk**	27.75	350	eP	P	18 29 47.9	-1.0
YAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.3s						
H11N2	**WAKE ISLAND Hy**	28.54	115	T	T	18 59 41.0	
	baz=308,slow=75,SNR=498						
H11N1	**WAKE ISLAND Hy**	28.55	115	T	T	18 59 33.4	
	baz=308,slow=75,SNR=437						
H11N3	**WAKE ISLAND Hy**	28.56	115	T	T	18 59 42.3	
	baz=308,slow=75,SNR=503						
SEY	**Seymchan**	29.07	12	LR	LR	18 43 52.8	
	comp=E,64nm,19.1s,baz=232,slow=41						
SEY	**Seymchan**	29.07	12	eP	P	18 30 00.5	-0.1
SEY				pmax	pmax		
	comp=Z,9.0nm,1.6s						
H11S3	**WAKE ISLAND Hy**	29.16	117	T	T	19 00 46.8	
	baz=310,slow=76,SNR=57						
H11S1	**WAKE ISLAND Hy**	29.16	117	T	T	19 00 39.7	
	baz=310,slow=76,SNR=73						
H11S2	**WAKE ISLAND Hy**	29.17	117	T	T	19 00 42.8	
	baz=310,slow=76,SNR=64						
GTA	**Gaotai**	31.77	290	eP	P	18 30 23.8	-1.1
GTA				pmax	pmax		
	comp=Z,1.0nm,1.5s						
TIXI	**Tiksi**	37.13	354	LR	LR	18 47 35.9	
	comp=Z,67nm,18.5s,baz=199,slow=38						
TIXI	**Tiksi**	37.13	354	P	P	18 31 10.1	-0.6
TIXI	**Tiksi**	37.13	354	P	P	18 31 10.1	-0.6
TIXI				pmax	pmax		
	comp=Z,20nm,0.4s						
MANU	**Manus Island**	37.59	167	P	P	18 31 15.8	+0.7
MANU				IAmb	IAmb	18 31 45.4	
	comp=Z,11nm,0.9s						
CMAR	**Chiang Mai Arr**	39.53	256	P	P	18 31 31.8	+0.2
	comp=Z,0.1nm,0.3s,baz=75,slow=7.4,SNR=2.0						
CMAR				LR	LR	18 48 33.8	
	comp=Z,28nm,18.2s,baz=25,slow=37						
	comp=Z,0.1nm,0.3s						
WMQ	**Urumqi**	40.44	299	eP	P	18 31 41.1	+2.2
WMQ				S	S	18 37 48.8	+3.2
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
ZALV	**Zalesovo Beam**	42.19	314	P	P	18 31 53.1	0.0
	comp=Z,0.4nm,0.4s,baz=110,slow=6.5,SNR=3.8						
ZALV				PcP	PcP	18 33 46.9	+0.1
	comp=Z,0.6nm,0.6s,baz=72,slow=4.7,SNR=2.3						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	43.94	304	P	P	18 32 07.7	+0.4
	comp=Z,2.0nm,0.9s,baz=90,slow=9.1,SNR=12						
	comp=Z,2.0nm,0.9s						
MAKZ	**Makanchi**	44.16	304	P	P	18 32 08.8	-0.2
MAKZ	**Makanchi**	44.16	304	P	P	18 32 08.8	-0.2
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
C16K	**Lisburne Hills**	45.18	26	P	P	18 32 18.0	+1.2
KURK	**Kurchatov**	46.02	309		P	18 32 23.9	+0.2
KURK				IAmb	IAmb	18 32 35.5	
	comp=Z,7.7nm,0.8s						
KURK				PcP	PcP	18 33 57.8	-2.1
KURK	**Kurchatov**	46.02	309	P	P	18 32 24.5	+0.8
KURBB	**Kurchatov Arra**	46.08	309	P	P	18 32 24.5	+0.3
	comp=Z,3.7nm,0.7s,baz=86,slow=8.0,SNR=43						
	comp=Z,3.7nm,0.7s						
C18K	**Utukok River**	46.75	26		P	18 32 31.5	+2.2
C18K				IAmb	IAmb	18 32 34.5	
	comp=Z,8.2nm,1.1s						
C19K	**Lookout Ridge**	47.43	25		P	18 32 35.9	+1.3
C19K				IAmb	IAmb	18 32 38.1	
	comp=Z,4.7nm,0.8s						
C19K				PcP	PcP	18 34 06.9	+2.2
D19K	**Kuna River**	47.82	26	P	P	18 32 38.3	+0.7
D19K				IAmb	IAmb	18 32 40.9	
	comp=Z,5.5nm,1.0s						
D19K				PcP	PcP	18 34 06.6	+0.6
TARG	**Taragay, Kyrgy**	47.96	297		P	18 32 40.2	+0.6
TARG	**Taragay, Kyrgy**	47.96	297	P	P	18 32 40.2	+0.6
TARG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
E19K	**Redstone River**	47.96	28		P	18 32 40.0	+1.3
E19K				IAmb	IAmb	18 32 44.0	
	comp=Z,4.6nm,0.8s						
H19K	**Roundabout Mou**	48.00	30	IAmb	IAmb	18 32 42.5	
	comp=Z,9.1nm,1.2s						
J19K	**Poorman**	48.20	32	P	P	18 32 42.4	+1.8
J19K				IAmb	IAmb	18 32 44.5	
	comp=Z,7.4nm,1.2s						
MTN	**Manton Dam**	48.26	191	P	P	18 32 40.6	-0.9
D20K	**Etivluk River**	48.40	26	IAmb	IAmb	18 32 45.4	
	comp=Z,5.5nm,1.0s						
COEN	**Coen**	48.82	175	P	P	18 32 46.0	+0.2
COEN				IAmb	IAmb	18 33 02.1	
	comp=Z,7.5nm,1.1s						
BOOM	**Boomskoye usch**	49.13	299	P	P	18 32 46.0	-2.3
BOOM				IAmb	IAmb	18 32 48.2	
	comp=Z,5.7nm,1.1s						
BOOM	**Boomskoye usch**	49.13	299	P	P	18 32 46.0	-2.3
BOOM				pmax	pmax		
	comp=Z,6.0nm,1.1s						
G21K	**Allakaket**	49.30	29	P	P	18 32 49.2	+0.2
G21K				IAmb	IAmb	18 32 54.4	
	comp=Z,4.5nm,1.1s						
KDAK	**Kodiak Island**	49.61	41	P	P	18 32 51.7	+0.2
KDAK	**Kodiak Island**	49.61	41	P	P	18 32 51.7	+0.2
KDAK				pmax	pmax		
	comp=Z,60nm,1.4s						
D22K	**Ayikyak River**	49.84	26		P	18 32 55.5	+2.4
D22K				IAmb	IAmb	18 32 58.5	
	comp=Z,4.7nm,0.8s						
E22K	**Anaktuvuk Pass**	50.09	27		P	18 32 56.9	+1.9
E22K				IAmb	IAmb	18 33 00.1	
	comp=Z,6.4nm,1.1s						
L22K	**Petersville**	50.34	34	P	P	18 32 58.5	+1.5
L22K				IAmb	IAmb	18 33 35.0	
	comp=Z,15nm,1.4s						
MLY	**Manley**	50.36	31		P	18 32 58.5	+1.4
MLY				IAmb	IAmb	18 33 00.7	
	comp=Z,7.8nm,1.1s						
SUA	**Susitna One**	50.38	36	P	P	18 32 58.7	+1.3
D23K	**Nanushuk River**	50.57	26	P	P	18 33 00.9	+2.3
C23K	**Itkillik River**	50.67	25		P	18 33 00.4	+1.1
C23K				IAmb	IAmb	18 33 04.5	
	comp=Z,7.6nm,1.1s						
BVAR	**Borovoye Array**	50.83	313	P	P	18 33 01.2	+0.4
	comp=Z,0.9nm,0.6s,baz=84,slow=13,SNR=3.7						
	comp=Z,0.9nm,0.6s						
BORK	**Borovoye**	50.87	313	P	P	18 33 00.6	-0.5
BORK	**Borovoye**	50.87	313	P	P	18 33 00.6	-0.5
BORK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
E23K	**Chandalar**	50.91	27	P	P	18 33 02.5	+1.2
KNRA	**Kununurra**	51.44	193	P	P	18 33 05.0	-0.6
GSI	**Gunungsitoli**	51.46	239	P	P	18 33 05.0	-1.0
ARSB	**Arslanbob**	51.57	298		P	18 33 08.5	+1.8
ARSB				IAmb	IAmb	18 33 10.2	
	comp=Z,10.0nm,1.5s						
ARSB	**Arslanbob**	51.57	298	P	P	18 33 08.5	+1.8
ARSB				pmax	pmax		
	comp=Z,10.0nm,1.5s						
POKR	**Poker Plat Res**	51.76	31	P	P	18 33 09.5	+2.0
POKR				IAmb	IAmb	18 33 11.2	
	comp=Z,8.4nm,0.9s						
IL31		52.01	31		P	18 33 10.5	+1.2
ILAR	**Eielson Array**	52.01	31	P	P	18 33 10.2	+0.8
	comp=Z,2.0nm,0.9s,baz=280,slow=7.6,SNR=14						
	comp=Z,2.0nm,0.9s						
ILAR	**Eielson Array**	52.01	31	P	P	18 33 10.1	+0.6
BMAR	**Burnt Mountain**	52.83	28	P	P	18 33 16.2	+0.7
KK31	**Karatay Array**	52.84	301	P	P	18 33 15.8	-0.2
KK31	**Karatay Array**	52.84	301	P	P	18 33 15.8	-0.2
KK31				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KKAR	**Karatay Array**	52.84	301	P	P	18 33 16.1	+0.1
KKAR	**Karatay Array**	52.84	301	P	P	18 33 16.1	+0.1
F26K	**Sheenjek River**	52.98	28	IAmb	IAmb	18 33 22.1	
	comp=Z,7.7nm,1.1s						
H27K	**Steamboat Moun**	54.12	29	P	P	18 33 26.9	+1.8
BCAR	**Beaver Creek A**	54.41	33	P	P	18 33 28.9	+1.7
FITZ	**Fitzroy Crossi**	54.45	196	P	P	18 33 27.4	-0.3
WB0	**Warramunga Arr**	54.70	186	P	P	18 33 29.3	-0.4
WB0				IAmb	IAmb	18 33 30.4	
	comp=Z,4.1nm,0.7s						
WR8	**Warramunga Arr**	54.88	186	P	P	18 33 30.8	-0.1
WR8				IAmb	IAmb	18 33 31.4	
	comp=Z,3.7nm,0.6s						
WRA	**Warramunga Arr**	54.88	186	P	P	18 33 30.1	-0.8
	comp=Z,2.5nm,0.6s,baz=4.4,slow=7.6,SNR=32						
	comp=Z,2.5nm,0.6s						
WRA	**Warramunga Arr**	54.88	186		P	18 33 30.1	-0.8
CHGR	**Chuyangaron**	55.18	296		P	18 33 33.5	+0.3
CHGR	**Chuyangaron**	55.18	296	P	P	18 33 33.5	+0.3
CHGR				pmax	pmax		
	comp=Z,12nm,1.0s						
G30M	**tAoh Zraii Nji**	56.11	28	P	P	18 33 40.4	+1.0
G30M				IAmb	IAmb	18 33 43.2	
	comp=Z,11nm,1.3s						
I30M	**Mount Dempster**	56.38	30	IAmb	IAmb	18 33 45.6	
	comp=Z,9.5nm,1.2s						
ARTI	**Arti**	56.99	319	LR	LR	18 58 51.0	
	comp=Z,54nm,18.5s,baz=356,slow=37						
AB31	**Akbulak array**	58.09	311	P	P	18 33 53.6	0.0
AB31				IAmb	IAmb	18 34 07.2	
	comp=Z,6.7nm,1.5s						
ABKAR	**Akbulak array**	58.09	311	P	P	18 33 53.3	-0.3
AS31	**Alice Springs**	58.60	186	P	P	18 33 57.8	+0.5
ASAR	**Alice Springs**	58.60	186	P	P	18 33 57.3	-0.1
	comp=Z,0.5nm,0.7s,baz=14,slow=13,SNR=22						
	comp=Z,0.5nm,0.7s						
ASAR	**Alice Springs**	58.60	186	P	P	18 33 57.4	+0.1
ASAR	**Alice Springs**	58.60	186	P	P	18 33 57.4	+0.1
A36M	**Sachs Harbour**	58.69	21		P	18 33 57.5	+0.1
DAH	**Dandelion**	58.78	87	P	P	18 33 58.2	-1.0
MBWA	**Marble Bar**	58.95	202	P	P	18 33 58.8	-0.9
EIDS	**Eidsvold**	61.04	168	P	P	18 34 13.1	-0.9
GIRL	**Giralia**	62.17	207	P	P	18 34 23.6	+1.9
SPITS	**Spitsbergen Ar**	62.21	349	LR	LR	19 03 17.4	
	comp=Z,64nm,18.1s,baz=308,slow=38						
RES	**Resolute Bay**	64.92	14	P	P	18 34 40.1	+0.9
RES				IAmb	IAmb	18 34 43.2	
	comp=Z,6.3nm,0.9s						
RES	**Resolute Bay**	64.92	14	P	P	18 34 40.2	+0.9
RES				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YKA	**Yellowknife Ar**	66.31	29	P	P	18 34 49.0	+0.6
	comp=Z,0.8nm,0.8s,baz=298,slow=6.9,SNR=5.7						
	comp=Z,0.8nm,0.8s						
FINES	**FINESS Array B**	69.89	332	P	P	18 35 11.3	+0.4
	comp=Z,1.7nm,0.9s,baz=71,slow=6.7,SNR=4.3						
	comp=Z,1.7nm,0.9s						
FINES	**FINESS Array B**	69.89	332	P	P	18 35 11.1	+0.2
BLKN	**Baker Lake**	71.83	22	P	P	18 35 23.5	+0.9
NIUE	**Niue**	72.06	130	P	P	18 35 24.6	-0.1
AKASG	**Malin Array Be**	74.96	322	P	P	18 35 41.7	+0.4
	comp=Z,0.3nm,0.3s,baz=45,slow=6.8,SNR=4.1						
	comp=Z,0.3nm,0.3s						
HFS	**Hagfors**	75.29	335	P	P	18 35 44.2	+1.1
	comp=Z,2.4nm,0.9s,baz=54,slow=8.0,SNR=1.5						
	comp=Z,2.4nm,0.9s						
NC204	**NORSAR Array S**	75.42	337	P	P	18 35 44.7	+0.8
NC204				IAmb	IAmb	18 36 27.8	
	comp=Z,15nm,1.4s						
NB2	**NORSAR Subarra**	75.45	337	P	P	18 35 44.6	+0.6
	comp=Z,7.6nm,1.1s,baz=40,slow=6.2						
NOA	**NORSAR Array B**	75.45	337	P	P	18 35 44.6	+0.6
	comp=Z,1.9nm,0.9s,baz=41,slow=6.0,SNR=3.8						
	comp=Z,1.9nm,0.9s						
NVAR	**Mina Array Bea**	77.42	52	P	P	18 35 54.9	-0.9
	comp=Z,1.5nm,0.7s,baz=308,slow=3.6,SNR=6.8						
	comp=Z,1.5nm,0.7s						
NVAR	**Mina Array Bea**	77.42	52	P	P	18 35 54.2	-1.6
BURAR	**Bucovina Array**	78.94	321	P	P	18 36 04.5	+0.5
BURAR	**Bucovina Array**	78.94	321	P	P	18 36 04.5	+0.5
BURAR				pmax	pmax		
	comp=Z,3.0nm,1.4s						
BRTR	**Keskin Array B**	79.04	311	P	P	18 36 03.5	-1.2
	comp=Z,1.9nm,1.2s,baz=48,slow=4.3,SNR=3.8						
	comp=Z,1.9nm,1.2s						
PDAR	**Pinedale Array**	80.16	44	P	P	18 36 11.9	+1.1
PV23	**Carpenter Ridg**	83.22	47	P	P	18 36 26.4	-0.7
PV10	**Paradox Valley**	83.25	47	P	P	18 36 28.3	+1.0
TXAR	**Lajitas Array**	92.56	51	P	P	18 37 14.0	+1.9
	comp=Z,0.4nm,0.6s,baz=324,slow=4.0,SNR=3.5						
	comp=Z,0.4nm,0.6s						
TXAR	**Lajitas Array**	92.56	51	P	P	18 37 14.0	+1.9
NVL	**N'lazarevskaya**	134.85	202	ePKIKP	PKPdf	18 43 14.1	-3.9
NVL				e		18 45 48.7	
NVL				eSS	SS	19 03 41.7	-1.7
NVL				eSSS	SSS	19 08 41.8	
NVL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
H03N2	**Juan Fernandez**	148.27	98	T	T	21 29 45.1	
	baz=286,slow=76,SNR=16						
H03N3	**Juan Fernandez**	148.28	98	T	T	21 29 46.2	
	baz=286,slow=76,SNR=18						
H03N1	**Juan Fernandez**	148.29	98	T	T	21 29 46.3	
	baz=286,slow=76,SNR=21						
LPAZ	**La Paz**	149.01	60	PKPbc	PKiKP	18 43 51.4	+0.5
	comp=Z,2.6nm,0.9s,baz=3.7,slow=6.0,SNR=7.7						
LPAZ	**La Paz**	149.01	60	PKPdf	PKPdf	18 43 41.7	-3.8
LPAZ					PKiKP	18 43 51.4	+0.5

IDC ***13*** *18:28:17.3±1.4, 34.°63N×138.°50E, h0km, mb3.3/3, mbtmp3.3/4, ML2.9/1, Error ellipse: s-maj=37.3km s-min=17.4km az=65.0*

JMA ***13*** *18:28:19.6±0.1, 35.°0N±0.°2×139.°5E±0.°2, h33km, MV3.0/36, SAGAMINADA*

ISC 13 18:28:19.3±0.9**, 34.°96N**±0.°04×**139.°46E**±0.°04**, h32**km±7km**, n16,** σ1.s02/23**, mb3.4**/3**, 8D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIM2	**Oshima 3**	0.24	186	iP	Pn	18 28 27.3	+0.6
JIM2				S	Sb	18 28 32.5	+1.5
JYO	**Yokosk**	0.31	32	P	Pb	18 28 26.8	-0.3
JYO				S	Sb	18 28 32.5	0.0
AJI	**Ajiro2**	0.31	286	⇓iP	Pn	18 28 27.2	-0.5
KTJ3	**Kamata3**	0.32	265	⇓iP	Pn	18 28 27.6	-0.2
KTJ3				⇓S	Sn	18 28 33.1	-0.2
JOD2	**Odawara 2**	0.43	315	⇓iP	Pb	18 28 28.2	-0.6
JOD2				⇓S	Sb	18 28 34.1	-1.2
JIZS	**Izushimoda**	0.54	243	⇓iP	Pn	18 28 31.3	+0.6
JIZS				⇓S	Sn	18 28 39.7	+1.0
BSO3	**Boso 3**	0.88	100	P	Pn	18 28 35.7	+0.5
JYN	**Shimob**	0.92	306	iP	Pn	18 28 35.8	-0.3
SHZ3	**Shizuoka 3**	1.03	276	iP	Pb	18 28 38.8	+0.1
SHZ3				S	Sn	18 28 53.2	+2.2
JRY	**Ryogami san**	1.15	337	⇓P	Pn	18 28 39.0	-0.2
JHJ	**Hachijo jima 2**	1.86	172	Pn	Pb	18 28 50.3	-2.2
	12nm,0.3s,baz=64,slow=19,SNR=1.3						
JHJ				Sn	Sb	18 29 15.1	-0.3
	23nm,0.3s,baz=106,slow=22,SNR=5.6						
MJAR	**Matsushiro Arr**	1.88	328	Pn	Pn	18 28 50.6	+1.4
	0.8nm,0.3s,baz=202,slow=11,SNR=9.2						
MJAR				Sn	Sb	18 29 15.0	-1.0
	0.5nm,0.3s,baz=80,slow=23,SNR=4.0						
JNU	**Nakatsue**	7.36	258	Pn	Pn	18 29 52.3	-12
	0.3nm,0.3s,baz=71,slow=18,SNR=1.3						
	2.5nm,0.5s						
SONM	**Songino Array**	27.71	308	P	P	18 34 04.6	-0.2

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      0.1nm,0.4s,baz=106,slow=11,SNR=1.5
      0.1nm,0.4s
KURBB Kurchatov Arra   46.06 309 P     P     18 36 40.1 +0.3
      0.3nm,0.7s,baz=81,slow=6.7,SNR=2.9
      0.3nm,0.7s
WRA   Warramunga Arr   54.82 186 P     P     18 37 46.2 -0.1
      0.3nm,0.7s,baz=1.8,slow=12,SNR=2.0
      0.3nm,0.7s
```

*IDC **13** 18:39:56.5±0.7, 30.°68N×141.°73E, h0^{km}, mb4.0/20, mbtmp4.0/22, ML3.6/2, MS3.1/8, Error ellipse: s-maj=19.8km s-min=15.8km az=68.0*

*NIED **13** 18:39:57.7, 30.°73N×141.°71E, h19^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.10; $M_{\theta\theta}$0.06; $M_{\phi\phi}$-0.16; $M_{r\theta}$-1.89; $M_{\theta\phi}$0.57; $M_{\phi r}$1.08; Fault plane solution: $M_0$2.23000×10^{15} NP1: ϕ_s189.00000°, δ11.00000°, λ161.00000°. NP2: ϕ_s298.00000°, δ86.00000°, λ80.00000°.*

*JMA **13** 18:39:57.7±0.3, 31.°N±1.°×14.°2E±.°, h19^{km}, MV4.3/24, NEAR TORISHIMA IS*

*MOS **13** 18:39:58.3±0.9, 30.°73N×141.°73E, h23^{km}, mb4.6/17, Error ellipse: s-maj=15.3km s-min=7.1km az=115.5*

*NEIC **13** 18:39:58.7±1.4, 30.°71N±0.°06×141.°8E±0.°1, h10^{km}±1^{km}, mb4.5/43, Error ellipse: s-maj=17.3km s-min=8.0km az=70.0*

ISC 13 18:40:00.2±0.4**, 30.°75N**±0.°04×**141.°78E**±0.°07**, h24^{km}, n149, σ1.^{s}17**/152**, mb4.4**/58**, MS3.1**/5**, 8C-2D, Southeast of Honshu**

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Code  Station Name       Δ°   AZ°  Phase ID          Time      Res
                                 Op    ISC     h  m  s    ISC
JHCJ  Hachijojimakas    2.87 324 eP    Pn    18 40 44.4  0.0
JHJ2  Mitsune           2.89 325 Pn    Pn    18 40 44.0 -0.6
JHJ2                             Sn    Sn    18 41 15.2 -3.4
JHJ2  Mitsune           2.89 325 eP    Pn    18 40 44.1 -0.6
JHJ2                             eS    Sn    18 41 18.1 -0.6
JHJ   Hachijo jima 2    2.91 325 Pn    Pn    18 40 44.9 -0.1
      33nm,0.3s,baz=74,slow=23,SNR=11
JHJ                              Sn    Sn    18 41 20.2 +1.0
      53nm,0.3s,baz=76,slow=22,SNR=5.8
      77nm,0.3s
JMKN  Mikurajimanish    3.64 330 eP    Pn    18 40 54.5 -0.6
JMKN                             eS    Sn    18 41 36.8 -0.4
CBIJ  Chichi jima       3.66 174 eP    Pn    18 40 54.9 -0.4
JCJ   Chichijima        3.66 174 Pn    Pn    18 40 44.5  -11
      19nm,0.3s,baz=45,slow=20,SNR=11
JCJ                              Sn    Sn    18 41 23.4  -14
      35nm,0.3s,baz=77,slow=23,SNR=6.8
JCJ                              LR    LR    18 42 20.9
      comp=Z,284nm,18.8s,baz=225,slow=40
JCJ   Chichijima        3.66 174 Pn    Pn    18 40 53.4 -1.9
JCJ                              Sn    Sn    18 41 34.3 -3.4
JMYK  Miyake Tsubota    3.81 331 eP    Pn    18 40 57.1 -0.2
JMYK                             eS    Sn    18 41 41.1 -0.2
BSO1  Boso 1            3.95 350 eP    Pn    18 40 58.8  0.0
JHH2  Haha-jima-NKT2    4.12 175 eS    Sn    18 41 49.3 +0.4
BSO3  Boso 3            4.18 345 eP    Pn    18 41 02.2  0.0
JKUC  kamogawauchiur    4.59 344 eP    Pn    18 41 08.4 +0.2
JSG   Sagara            4.95 323 Pn    Pn    18 41 12.2 -0.8
JOD2  Odawara 2         5.04 334 eP    Pn    18 41 14.1 -0.2
INU   Inuyama           6.09 320 Pn    Pn    18 41 28.1 -0.6
JGF   Kuroka            6.10 324       Pn    18 41 28.8  0.0
MJAR  Matsushiro Arr    6.50 334 Pn    Pn    18 41 35.2 +0.9
      1.0nm,0.3s,baz=158,slow=11,SNR=74
MJAR                             LR    LR    18 44 07.3
      comp=Z,161nm,18.8s,baz=129,slow=38
      14nm,0.6s
MJAR  Matsushiro Arr    6.50 334       Pn    18 41 33.6 -0.8
MAJO  Matsushiro        6.50 334       Pn    18 41 34.1 -0.3
MAJO  Matsushiro        6.50 334 i P   Pn    18 41 34.5 +0.1
MJB9  Matsu-Tunnel      6.51 334       Pn    18 41 34.0 -0.5
JMN   Monobe            7.33 296 Pn    Pn    18 41 45.9 +0.2
JSD   Sado              7.83 339 Pn    Pn    18 41 51.4 -1.1
JEW   Eniwo            12.07 359 Pn    Pn    18 42 48.1 -2.6
JOW   Kunigami         12.47 255 LR    LR    18 47 01.6
      comp=Z,104nm,20.7s,baz=211,slow=34
ASAJ  Asahikawa        13.36   3 P     Pn    18 43 04.8 -3.4
JKA   Kamikawa-asahi   13.36   3 Pn    Pn    18 43 04.8 -3.4
YSS   Yuzhno-Sakhali   16.20   2 eP    Pn    18 43 42.7 -3.4
YSS                              pmax  pmax
      comp=Z,20nm,0.9s
CN2   Changchun        18.36 320 P     P     18 44 12.8 -0.2
CN2                              pmax  pmax
      comp=Z,10.0nm,0.5s
BNX   BinXian          18.70 327 ⇓P    P     18 44 16.4 -0.4
BNX                              pmax  pmax
      comp=Z,4.0nm,0.9s
NJ2   Nanjing          19.61 280 eP    P     18 44 27.1 +0.3
NJ2                              pmax  pmax
      comp=Z,5.0nm,0.6s
HEH   HeiHe            22.27 335 eP    P     18 44 54.6 -0.7
HEH                              pmax  pmax
      comp=Z,11nm,0.8s
HIA   Hailar           24.89 324       P     18 45 19.0 -2.1
HIA                              IAmb  IAmb  18 45 25.8
      comp=Z,11nm,0.8s
HIA   Hailar           24.89 324 P     P     18 45 19.0 -2.1
HIA                              pmax  pmax
      comp=Z,11nm,0.8s
HILR  Hailar Array B   25.07 325 P     P     18 45 23.3 +0.6
      comp=Z,2.8nm,0.6s,baz=145,slow=5.4,SNR=3.8
      comp=Z,2.8nm,0.6s
ZEA   Zeya             25.27 340 eP    P     18 45 25.6 +1.2
ZEA                              e           18 45 38.1
ZEA                              pmax  pmax
      comp=N,10.0nm,1.3s
ZEA                              pmax  pmax
      comp=Z,20nm,0.8s
H11S3 WAKE ISLAND Hy   25.65 113 T     T     19 12 16.6
      baz=305
H11S1 WAKE ISLAND Hy   25.65 113 T     T     19 12 23.8
      baz=305
H11S2 WAKE ISLAND Hy   25.67 113 T     T     19 12 16.8
      baz=305
HHC   Hu-ho-hao-te     26.39 301 eP    P     18 45 34.0 -0.8
HHC                              pmax  pmax
      comp=Z,7.0nm,0.6s
HHC                              pmax  pmax
      comp=Z,74nm,4.6s
MA2   Magadan          29.46   9 LR    LR    19 03 02.4
      comp=Z,24nm,18.0s,baz=272,slow=47
SONM  Songino Array    31.92 312 P     P     18 46 23.8 -0.1
      comp=Z,0.8nm,0.8s,baz=110,slow=9.1,SNR=4.5
SONM                             LR    LR    18 58 51.0
      comp=Z,41nm,19.4s,baz=262,slow=36
      comp=Z,0.8nm,0.8s
YAK   Yakutsk          32.27 349 LR    LR    18 59 19.1
      comp=Z,57nm,19.3s,baz=104,slow=36
YAK   Yakutsk          32.27 349 ceP   P     18 46 26.2 -0.4
YAK                              pmax  pmax
      comp=Z,18nm,2.5s
GTA   Gaotai           35.16 296 eP    P     18 46 51.8 -0.4
GTA                              pmax  pmax
      comp=Z,3.0nm,1.2s
PZH   PanZhiHua        35.27 273 P     P     18 46 54.8 +1.5
BILL  Bilibino         40.00  14 i P   P     18 47 32.8 +0.2
BILL                             pmax  pmax
      comp=Z,1.0nm,0.9s
CMAR  Chiang Mai Arr   40.60 263 P     P     18 47 36.7 -1.5
      comp=Z,0.1nm,0.4s,baz=76,slow=8.3,SNR=1.7
CMAR                             LR    LR    19 04 05.9
      comp=Z,15nm,20.4s,baz=315,slow=36
      comp=Z,0.1nm,0.4s
TIXI  Tiksi            41.55 354 i P   P     18 47 45.2 -0.2
TIXI                             pmax  pmax
      comp=Z,2.0nm,1.1s
WMQ   Urumqi           44.23 303 eP    P     18 48 10.1 +2.5
WMQ                              pP    pP    18 48 14.4 +0.9
WMQ                              pmax  pmax
      comp=Z,10.0nm,0.7s
COEN  Coen             44.47 178 P     P     18 48 08.7 -0.9
COEN                             IAmb  IAmb  18 48 12.2
      comp=Z,7.5nm,1.2s
MTN   Manton Dam       44.54 195 P     P     18 48 09.2 -0.9
DGZ   Jazzator, Alta   44.55 311 i P   P     18 48 09.8 -0.3
DGZ                              pmax  pmax
      comp=Z,1.0nm,0.9s
ZALV  Zalesovo Beam    46.55 317 P     P     18 48 25.5 -0.1
      comp=Z,0.5nm,0.5s,baz=96,slow=7.8,SNR=2.3
ZALV                             PcP   PcP   18 49 59.6 -0.1
      comp=Z,1.1nm,0.6s,baz=102,slow=3.3,SNR=4.6
      comp=Z,0.5nm,0.5s
ANM   Nome             46.89  28 P     P     18 48 28.4 +0.3
ANM                              IAmb  IAmb  18 48 32.5
      comp=Z,7.5nm,1.2s
ANM   Nome             46.89  28 P     P     18 48 28.5 +0.3
ANM                              pmax  pmax
      comp=Z,7.0nm,1.2s
M14K  Bethel           47.31  34 P     P     18 48 31.4 -0.1
EVN   Everest          47.59 281 P     P     18 48 34.8 -0.2
EVN                              IAmb  IAmb  18 49 19.0
      comp=Z,6.3nm,1.5s
KNRA  Kununurra        47.83 197 P     P     18 48 37.3 +1.3
MK31  Makanchi Array   47.94 307 ceP   P     18 48 37.7 +1.0
MKAR  Makanchi Array   47.94 307 P     P     18 48 36.8 +0.1
      comp=Z,1.0nm,0.6s,baz=93,slow=9.3,SNR=8.3
      comp=Z,1.0nm,0.6s
MKAR  Makanchi Array   47.94 307 P     P     18 48 37.0 +0.3
MKAR                             PcP   PcP   18 50 05.6 +0.8
MKAR  Makanchi Array   47.94 307 ceP   P     18 48 37.0 +0.3
MKAR                             pmax  pmax
      comp=Z,1.0nm,0.6s
MAKZ  Makanchi         48.15 307 P     P     18 48 38.7 +0.4
MAKZ                             IAmb  IAmb  18 48 58.7
      comp=Z,5.2nm,1.4s
MAKZ  Makanchi         48.15 307 P     P     18 48 38.7 +0.4
MAKZ                             pmax  pmax
      comp=Z,5.0nm,1.4s
NRIK  Noril'sk         49.14 338 i P   P     18 48 46.3 +0.8
NRIK                             pmax  pmax
      comp=Z,2.0nm,0.9s
L18K  Granite Mounta   50.08  32 P     P     18 48 54.2 +1.4
L18K                             IAmb  IAmb  18 49 15.0
      comp=Z,12nm,1.4s
KURK  Kurchatov        50.22 312       P     18 48 53.9 -0.1
KURK  Kurchatov        50.22 312 ceP   P     18 48 54.5 +0.4
KURK                             pmax  pmax
      comp=Z,4.0nm,1.0s
KURBB Kurchatov Arra   50.28 312 P     P     18 48 54.1 -0.4
      comp=Z,2.3nm,0.9s,baz=88,slow=7.3,SNR=17
      comp=Z,2.3nm,0.9s
CTA   Charters Tower   50.73 175 LR    LR    19 08 58.5
      comp=Z,27nm,19.4s,baz=40,slow=34
WRAB  Tennant Creek    50.90 189 ceP   P     18 49 07.0 +7.6
WRAB                             pmax  pmax
      comp=Z,5.0nm,1.0s
WR8   Warramunga Arr   50.90 189 P     P     18 48 59.2 -0.2
WR8                              IAmb  IAmb  18 49 00.8
      comp=Z,5.5nm,0.6s
WRA   Warramunga Arr   50.91 189 P     P     18 48 59.1 -0.4
      comp=Z,4.6nm,0.6s,baz=6.1,slow=7.5,SNR=50
      comp=Z,4.6nm,0.6s
WRA   Warramunga Arr   50.91 189 P     P     18 48 58.9 -0.6
FITZ  Fitzroy Crossi   50.99 200 P     P     18 49 00.8 +0.7
KDAK  Kodiak Island    51.69  38 P     P     18 49 05.2 +0.2
KDAK  Kodiak Island    51.69  38 P     P     18 49 05.2 +0.2
KDAK                             pmax  pmax
      comp=Z,49nm,1.4s
IMAR  Indian Mountai   51.97  28 P     P     18 49 06.9 -0.1
SKT   Skwentna         52.46  33 P     P     18 49 10.9 +0.2
SKT                              IAmb  IAmb  18 49 52.7
      comp=Z,8.3nm,1.2s
FUNA  Funafuti         53.03 131 P     P     18 49 15.2 -0.2
C23K  Itkillik River   53.78  23       P     18 49 20.6 +0.4
C23K                             IAmb  IAmb  18 49 22.4
      comp=Z,4.9nm,0.8s
H24K  Noodor Dome      54.35  28 P     P     18 49 25.4 +0.8
AS31  Alice Springs    54.63 189       P     18 49 27.8 +0.8
AS31                             IAmb  IAmb  18 49 29.1
      comp=Z,1.7nm,0.4s
ASAR  Alice Springs    54.63 189 P     P     18 49 26.6 -0.5
      comp=Z,1.1nm,0.4s,baz=1.9,slow=5.7,SNR=39
      comp=Z,1.1nm,0.4s
ASAR  Alice Springs    54.63 189 P     P     18 49 27.5 +0.5
ASAR  Alice Springs    54.63 189 P     P     18 49 27.5 +0.5
ILAR  Eielson Array    54.71  30 P     P     18 49 27.4 +0.3
      comp=Z,1.5nm,0.7s,baz=262,slow=6.5,SNR=23
      comp=Z,1.5nm,0.7s
ILAR  Eielson Array    54.71  30 P     P     18 49 27.1  0.0
BVAR  Borovoye Array   55.16 316 P     P     18 49 30.6 +0.1
      comp=Z,0.8nm,0.5s,baz=92,slow=8.6,SNR=5.3
      comp=Z,0.8nm,0.5s
ARSB  Arslanbob        55.31 301 P     P     18 49 33.2 +1.1
ARSB                             IAmb  IAmb  18 50 08.7
      comp=Z,5.9nm,1.5s
ARSB  Arslanbob        55.31 301 P     P     18 49 33.2 +1.1
ARSB                             pmax  pmax
      comp=Z,6.0nm,1.5s
BMAR  Burnt Mountain   55.74  27 P     P     18 49 36.0 +1.4
DOT   Dot Lake         55.93  31 P     P     18 49 37.0 +1.0
DOT                              IAmb  IAmb  18 50 05.2
      comp=Z,6.5nm,1.3s
SCRK  Sand Creek       55.96  31 P     P     18 49 36.8 +0.5
SCRK                             IAmb  IAmb  18 49 41.0
      comp=Z,8.0nm,1.4s
KK31  Karatay Array    56.71 304 P     P     18 49 42.6 +0.7
KK31  Karatay Array    56.71 304 P     P     18 49 42.6 +0.7
KK31                             pmax  pmax
      comp=Z,1.0nm,0.7s
KKAR  Karatay Array    56.71 304 P     P     18 49 42.6 +0.7
KKAR  Karatay Array    56.71 304 P     P     18 49 42.6 +0.7
BCAR  Beaver Creek A   56.98  32 P     P     18 49 44.9 +1.4
NIL   Nilore           57.08 292       P     18 49 44.7  0.0
NIL                              IAmb  IAmb  18 49 46.5
      comp=Z,6.6nm,0.8s
NIL   Nilore           57.08 292 P     P     18 49 44.7  0.0
NIL                              pmax  pmax
      comp=Z,7.0nm,0.8s
MANEM Manem            57.21 297 P     P     18 49 46.1 +0.3
MANEM                            IAmb  IAmb  18 49 54.6
      comp=Z,7.2nm,0.8s
GAR   Garm             57.85 299 P     P     18 49 50.1  0.0
GAR                              IAmb  IAmb  18 49 52.0
      comp=Z,12nm,1.4s
INKA  Innaminka        58.17 181 P     P     18 49 52.5 +0.4
CHGR  Chuyangaron      58.82 299       P     18 49 57.0 +0.2
CHGR  Chuyangaron      58.82 299 P     P     18 49 57.0 +0.2
CHGR                             pmax  pmax
      comp=Z,19nm,0.5s
G31M  Satah River      59.78  27 P     P     18 50 03.7 +0.9
ARTI  Arti             61.45 321       P     18 50 14.6 +0.1
ARTI  Arti             61.45 321 d iP  P     18 50 15.0 +0.5
ARTI                             S     S     18 58 34.2 +0.1
ARTI                             SS    SS    19 02 31.1 -3.4
ARTI                             pmax  pmax
      comp=Z,23nm,2.6s
STKA  Stephens Creek   62.28 180 P     P     18 50 20.7 +0.5
STKA  Stephens Creek   62.28 180 P     P     18 50 20.7 +0.5
STKA                             pmax  pmax
      comp=Z,36nm,1.5s
AB31  Akbulak array    62.33 313       P     18 50 20.9 +0.4
AB31                             IAmb  IAmb  18 50 21.9
      comp=Z,2.1nm,0.9s
ABKAR Akbulak array    62.33 313 P     P     18 50 20.9 +0.4
FORT  Forrest          62.56 193 P     P     18 50 22.7 +0.6
BBOO  Buckleboo        63.45 185 P     P     18 50 29.5 +1.5
YKA   Yellowknife Ar   69.11  29 P     P     18 51 04.0  0.0
      comp=Z,0.8nm,0.9s,baz=290,slow=7.4,SNR=6.0
      comp=Z,0.8nm,0.9s
YKA   Yellowknife Ar   69.11  29 ceP   P     18 51 04.5 +0.5
YKA                              pmax  pmax
      comp=Z,1.0nm,1.0s
KLMR  Klimovskoe       69.26 329 eP    P     18 51 02.0 -2.9
KLMR                             e*PP  pwP   18 51 15.3 -1.7
KLMR                             pmax  pmax
      comp=Z,6.0nm,1.1s
OBN   Obninsk          73.35 325 ⇑eP   P     18 51 29.4 -0.3
OBN                              e           18 51 46.1
OBN                              e           18 54 12.4
OBN                              eS    ScS   19 01 41.0 +4.3
OBN                              pmax  pmax
      comp=Z,4.0nm,0.8s
OBN                              MLR   MLR
      comp=Z,50nm,7.0s
FIA1  FINESS Array S   74.53 333 P     P     18 51 37.2 +0.7
FINES FINESS Array B   74.53 333 P     P     18 51 37.0 +0.5
      comp=Z,1.6nm,0.4s,baz=60,slow=5.4,SNR=32
      comp=Z,1.6nm,0.4s
FINES FINESS Array B   74.53 333 P     P     18 51 36.8 +0.3
FINES FINESS Array B   74.53 333 ceP   P     18 51 37.2 +0.7
FINES                            pmax  pmax
      comp=Z,2.0nm,0.4s
KIV   Kislovodsk       75.31 313 eP    P     18 51 43.0 +1.5
KIV                              pmax  pmax
      comp=Z,5.0nm,1.0s
JTMT  Jette            76.38  42 P     P     18 51 48.6 +1.0
BEKR  Beckworth        76.45  52 P     P     18 51 48.7 +0.5
BEKR                             IAmb  IAmb  18 51 50.4
      comp=Z,2.1nm,0.8s
NVAR  Mina Array Bea   78.55  52 P     P     18 52 01.0 +1.0
      comp=Z,0.9nm,0.4s,baz=310,slow=5.7,SNR=6.6
      comp=Z,0.9nm,0.4s
AKASG Malin Array Be   79.48 323 P     P     18 52 04.5 -0.1
      comp=Z,0.6nm,0.5s,baz=54,slow=5.8,SNR=2.5
      comp=Z,0.6nm,0.5s
HFS   Hagfors          79.94 336 P     P     18 52 07.2 +0.3
      comp=Z,2.0nm,0.7s,baz=79,slow=7.7,SNR=7.8
      comp=Z,2.0nm,0.7s
NB201 NORSAR Array S   80.07 338 P     P     18 52 08.5 +0.8
NC204 NORSAR Array S   80.07 338 P     P     18 52 08.1 +0.4
NB2   NORSAR Subarra   80.10 338 P     P     18 52 08.3 +0.5
      comp=Z,0.8nm,0.6s,baz=41,slow=5.6
NOA   NORSAR Array B   80.10 338 P     P     18 52 08.0 +0.2
      comp=Z,1.1nm,0.7s,baz=42,slow=5.3,SNR=5.0
      comp=Z,1.1nm,0.7s
PDAR  Pinedale Array   81.87  45 P     P     18 52 18.5 +0.6
      comp=Z,0.4nm,0.7s,baz=27,slow=0.3,SNR=4.8
      comp=Z,0.4nm,0.7s
PDAR  Pinedale Array   81.87  45 P     P     18 52 18.8 +0.9
BRTR  Keskin Array B   83.28 312 P     P     18 52 26.1 +1.0
      comp=Z,1.1nm,0.9s,baz=95,slow=3.7,SNR=5.1
      comp=Z,1.1nm,0.9s
RAYN  Ar Rayn          83.37 293 P     P     18 52 26.1 +0.3
RAYN                             IAmb  IAmb  18 52 27.4
      comp=Z,2.3nm,0.7s
RAYN  Ar Rayn          83.37 293 P     P     18 52 26.1 +0.3
RAYN                             pmax  pmax
      comp=Z,2.0nm,0.7s
BURAR Bucovina Array   83.45 322 P     P     18 52 26.6 +0.8
BURAR Bucovina Array   83.45 322 P     P     18 52 26.6 +0.8
BURAR                            pmax  pmax
      comp=Z,1.0nm,1.1s
STHS  Stebnicka Huta   84.28 326 eP    P     18 52 28.6 -1.4
STHS  Stebnicka Huta   84.28 326 eP    P     18 52 28.6 -1.4
PV14  Lion Creek, Pa   84.72  48 P     P     18 52 33.2 +0.6
MMAI  Mount Meron Ar   85.88 306 P     P     18 52 39.3 +0.9
      comp=Z,4.9nm,0.9s,baz=55,slow=7.9,SNR=1.7
      comp=Z,4.9nm,0.9s
MODS  Modra-Piesok     86.91 327 eP    P     18 52 39.9 -3.1
MODS  Modra-Piesok     86.91 327 eP    P     18 52 39.9 -3.1
TXAR  Lajitas Array    93.69  53 P     P     18 53 16.5 +1.3
      comp=Z,1.4nm,1.0s,baz=312,slow=2.8,SNR=6.8
      comp=Z,1.4nm,1.0s
```

*MOS **13** 19:03:07.9±1.1, 51.°23N×178.°51E, h45^{km}, mb4.4/20, Error ellipse: s-maj=11.6km s-min=8.3km az=102.3*

*IDC **13** 19:03:07.4±0.9, 51.°25N×178.°60E, h0^{km}, mb4.0/19, mbtmp4.0/21, ML3.6/2, MS3.4/8, Error ellipse: s-maj=24.6km s-min=15.8km az=169.0*

*AEIC **13** 19:03:13.3±3.9, 51.°30N±0.°05×178.°65E±0.°06, h15^{km}±4^{km}, Error ellipse: s-maj=8.2km s-min=5.2km az=158.0*

*NEIC **13** 19:03:14.4±1.6, 51.°35N±0.°04×178.°56E±0.°06, h43^{km}±6^{km}, mb4.1/96, ML4.1/14, ML3.8(AEIC), Error ellipse: s-maj=6.2km s-min=5.1km az=122.0*

ISC 13 19:03:07.8±1.5**, 51.°09N**±0.°06×**178.°49E**±0.°03**, h5^{km}**±9^{km}**, n433, σ1.^{s}29**/421**, mb4.2**/66**, MS3.8**/5**, 11C-1D, Rat Islands**

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Code  Station Name       Δ°   AZ°  Phase ID          Time      Res
                                 Op    ISC     h  m  s    ISC
AMKA  Amchitka          0.59  60       Pg    19 03 21.6 +2.5
AMKA                                   Sb    19 03 28.4 -0.8
AMKA                             IAML        19 03 29.0
      comp=E,20μm,0.4s
LSSE  Little Sitkin     0.85   3       Pb    19 03 26.0 +0.9
LSPA  Little Sitkin     0.87   3       Pb    19 03 26.3 +0.8
LSPA                                   Sb    19 03 36.8 -0.7
LSNW  Little Sitkin     0.89   1       Pb    19 03 26.2 +0.5
LSNW                                   Sb    19 03 37.1 -0.8
CESW  Semis' Southwe    1.05  39       Pb    19 03 29.2 +0.6
CESW                                   Sb    19 03 40.9 -1.8
CERB  Semis' Cerberu    1.10  40       Pb    19 03 30.2 +0.8
CERB                                   Sb    19 03 43.6 -0.5
CEPE  Semis' Perret     1.14  39       Pn    19 03 30.5  0.0
GAKI  Gareloi-Kavalg    1.75  73       Pb    19 03 40.6 +0.1
GAKI                                   Sn    19 04 01.1 -0.4
GASW  Gareloi Southw    1.80  66       Pb    19 03 41.1 -0.2
GASW                                   Sn    19 04 02.5 -0.3
GALAA Gareloi Lava P    1.84  67       Pb    19 03 42.1 +0.2
GANO  Gareloi North     1.84  65       Pb    19 03 42.3 +0.3
GANO                                   Sn    19 04 02.8 -1.1
GANE  Gareloi Northe    1.86  66       Pb    19 03 42.1 -0.2
GAEA  Gareloi East      1.86  67       Pb    19 03 42.2 -0.1
TANO  Tanaga North      2.27  67       Pb    19 03 48.2 -1.1
TANO                                   Sb    19 04 16.6 -1.1
TASE  Tanaga Southea    2.30  70       Pb    19 03 48.8 -1.0
TASE                                   Sb    19 04 17.6 -0.9
TASE                                   LR    19 04 17.8
TAFP  Tanaga Falls P    2.35  68       Pb    19 03 49.4 -1.2
TAFL  Tanaga Flats      2.36  72       Pb    19 03 49.7 -1.1
KIMD  Kanaga Island     2.76  74       Pn    19 03 55.1 +2.5
KIMD                                   Sn    19 04 27.9 +1.5
KIKV  Kanaga Island     2.83  72       Pn    19 03 56.3 +2.7
KIKV                                   Sn    19 04 29.4 +1.3
KIWB  Kanaga Island     2.83  73       Pn    19 03 55.5 +1.9
KIWB                             Sn    Sn    19 04 29.1 +0.9
KIWB                             IAML        19 04 41.9
      comp=E,701nm,0.7s
KIRH  Kanaga Island     2.88  72       Pn    19 03 56.9 +2.6
ADK   Adak              3.12  73       Pn    19 03 59.3 +1.7
ADK                              IAML        19 04 42.1
      comp=E,524nm,0.5s
ADK   Adak              3.12  73       Sn    19 04 33.8 -1.4
ADK   Adak              3.12  73 P     Pn    19 04 00.1 +2.5
ADK   Adak              3.12  73 P     Pn    19 03 59.3 +1.7
SHEM  Shemya Is, Ala    3.18 303 Pn    Pn    19 04 00.8 +2.4
      comp=E,98nm,0.3s,baz=79,slow=2.1,SNR=35
SHEM                             Sn    Sb    19 04 40.6 -3.2
      comp=E,63nm,0.3s,baz=264,slow=21,SNR=10.0
SHEM                             LR    LR    19 05 15.7
      comp=E,439nm,20.2s,baz=118,slow=41
SHEM  Shemya Is, Ala    3.18 303 Pn    Pn    19 04 00.3 +1.9
SHEM                             IAML        19 04 50.3
      comp=E,458nm,0.7s
SMY   Shemya            3.18 303       Pn    19 04 00.6 +2.1
SMY                                    Sn    19 04 37.3 +0.6
SMY                              IAML        19 04 48.7
      comp=N,780nm,0.6s
SMY   Shemya            3.18 303 P     Pn    19 04 02.5 +4.0
SMY   Shemya            3.18 303 P     Pn    19 04 00.6 +2.1
SMY                                          19 04 37.3
ADAG  Mount Adagdak     3.19  72       Pn    19 04 01.1 +2.4
ETKA  Kagalaska Isla    3.28  74       Pn    19 04 02.3 +2.4
ETKA                                   Sn    19 04 41.3 +2.0
GSSP  Great Sitkin S    3.47  71       Pn    19 04 04.9 +2.4
GSTD  Great Sitkin T    3.48  72       Pn    19 04 04.5 +1.8
GSMY  Great Sitkin M    3.53  72       Pn    19 04 05.1 +1.8
GSTR  Great Sitkin T    3.54  71 Pn    Pn    19 04 06.0 +2.5
GSTR                             IAML        19 05 08.7
      comp=E,484nm,1.1s
GSIG  Igitkin Island    3.60  73       Pn    19 04 06.4 +2.2
ATKA  Atka Island       4.69  73 Pn    Pn    19 04 21.1 +1.9
ATKA                             IAML        19 05 25.3
      comp=N,179nm,0.8s
ATKA                             IAML        19 05 30.3
      comp=E,157nm,0.7s
ATKA  Atka Island       4.69  73 P     Pn    19 04 22.2 +3.0
KOWE  Korovin West      4.69  71       Pn    19 04 21.4 +2.2
KOKL  Mount Kliuchef    4.71  72       Pn    19 04 22.4 +2.8
KOSE  Korovin Southe    4.80  72       Pn    19 04 23.1 +2.3
CLCO  Concord Point,    7.48  72       Pn    19 05 00.6 +3.0
NIKH  Nikolski High     8.03  71 P     Pn    19 05 07.0 +2.0
      baz=262
P08K  Saint George I    8.96  47 Pn    Pn    19 05 20.5 +2.7
P08K  Saint George I    8.96  47 P     Pn    19 05 19.0 +1.2
      baz=237
SPIA  Saint Paul Isl    8.99  43 Pn    Pn    19 05 22.0 +3.8
SPIA  Saint Paul Isl    8.99  43 P     Pn    19 05 19.4 +1.3
      baz=232
UNV   Unalaska Valle    9.56  67 Pn    Pn    19 05 28.7 +2.7
UNV   Unalaska Valle    9.56  67 P     Pn    19 05 29.2 +3.2
UNV   Unalaska Valle    9.56  67 P     Pn    19 05 28.0 +2.0
      baz=260
LVA   Lava Point        9.90  66 Pn    Pn    19 05 33.7 +3.1
ZRO   Akutan Zero       9.92  66       Pn    19 05 34.1 +3.2
AKUT  Akutan           10.04  66 Pn    Pn    19 05 36.4 +3.8
FALS  False Pass       11.54  64 Pn    Pn    19 05 56.6 +3.6
FALS  False Pass       11.54  64 P     Pn    19 05 54.4 +1.4
      baz=259
S12K  Black Hills      12.48  61 P     Pn    19 06 07.9 +2.0
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	baz=257						
M11K	Mekoryuk	12.66	37	Pn	Pn	19 06 11.4	+3.1
M11K	Mekoryuk	12.66	37	P	Pn	19 06 09.9	+1.6
	baz=230						
PETK	Petropavlovsk-	12.94	287	Pn	Pn	19 06 14.5	+2.3
	comp=E,0.3nm,0.3s,baz=94,slow=14,SNR=5.9						
PETK				LR	LR	19 12 30.0	
	comp=E,68nm,18.1s,baz=94,slow=43						
	comp=E,3.0nm,0.9s						
PETK	Petropavlovsk-	12.94	287	Pn	Pn	19 06 07.1	-5.2
SDPT	Sand Point	13.29	63	Pn	Pn	19 06 17.0	+0.1
SDPT	Sand Point	13.29	63	P	Pn	19 06 19.2	+2.3
SDPT	Sand Point	13.29	63	P	Pn	19 06 19.0	+2.1
	baz=260						
CNBA	Chernabura Isl	13.71	66	Pn	Pn	19 06 22.3	-0.5
CHNA	Chernabura Isl	13.72	66	P	Pn	19 06 24.3	+1.6
	baz=264						
GAMB	Gambell	13.75	19	Pn	Pn	19 06 25.6	+2.5
GAMB	Gambell	13.75	19	P	Pn	19 06 24.4	+1.2
	baz=207						
M13K	Dall Lake	13.80	40	P	Pn	19 06 24.6	+0.8
	baz=236						
S14K	Fog Glacier	13.98	60	P	Pn	19 06 27.7	+1.2
	baz=258						
O14K	Tigyukauivet M	14.12	47	Pn	Pn	19 06 30.5	+2.3
O14K	Tigyukauivet M	14.12	47	P	Pn	19 06 29.1	+0.9
	baz=244						
SKR	Severo-Kuril's	14.13	277	eP	Pn	19 06 25.6	-2.8
SKR				pmax	pmax		
	comp=Z,59nm,1.3s						
SKR				MLR	MLR		
	comp=Z,2µm,11.0s						
N14K	Kuskokwak Cree	14.24	44	Pn	Pn	19 06 32.0	+2.1
N14K	Kuskokwak Cree	14.24	44	P	Pn	19 06 31.0	+1.1
	baz=241						
K13K	Kusilvak Mount	14.25	34	P	Pn	19 06 31.2	+1.2
	baz=228						
M14K	Bethel	14.56	41	P	Pn	19 06 35.6	+1.3
	baz=237						
L14K	Kuka Creek	14.61	38	Pn	Pn	19 06 36.1	+1.2
L14K	Kuka Creek	14.61	38	P	Pn	19 06 36.0	+1.2
	baz=234						
O15K	Ungalikthiuk R	14.76	48	Pn	Pn	19 06 37.7	+0.7
O15K	Ungalikthiuk R	14.76	48	P	Pn	19 06 38.2	+1.3
	baz=246						
M15K	Kasigluk River	15.06	42	P	Pn	19 06 42.3	+1.2
	baz=240						
N15K	Kwethluk River	15.06	45	Pn	Pn	19 06 42.2	+1.0
N15K	Kwethluk River	15.06	45	P	Pn	19 06 41.9	+0.7
	baz=243						
J14K	Nanvaranak Lak	15.18	33	P	Pn	19 06 43.3	+0.7
	baz=228						
L15K	Ungalak Mounta	15.27	38	P	Pn	19 06 44.6	+0.7
	baz=235						
P16K	Nushagak River	15.58	50	P	Pn	19 06 49.1	+1.3
	baz=250						
K15K	Wolf Creek Mou	15.62	36	Pn	Pn	19 06 48.2	-0.2
K15K				IAmb	IAmb	19 06 54.8	
	comp=Z,11nm,1.0s						
K15K	Wolf Creek Mou	15.62	36	P	Pn	19 06 48.9	+0.5
	baz=233						
O16K	Kokwok River B	15.73	48	P	Pn	19 06 50.8	+0.9
	baz=248						
N16K	Nishlik Lake	15.79	45	P	Pn	19 06 51.3	+0.6
	baz=244						
ANM	Nome	15.94	26	Pn	Pn	19 06 52.3	-0.2
ANM				IAmb	IAmb	19 07 18.9	
	comp=Z,17nm,1.4s						
ANM	Nome	15.94	26	P	Pn	19 06 52.3	-0.2
ANM				pmax	pmax		
	comp=Z,17nm,1.4s						
ANM	Nome	15.94	26	P	Pn	19 06 53.3	+0.8
	baz=220						
M16K	Timber Creek	15.96	43	Pn	Pn	19 06 51.7	-1.2
R17L	Mt. Peulik Vol	15.99	56	P	Pn	19 06 54.5	+1.2
	baz=257						
CHIR	Chirikof Islan	16.08	63	P	P	19 06 56.3	-1.5
	baz=264						
L16K	Owhat River	16.09	40	Pn	Pn	19 06 53.3	-1.2
L16K	Owhat River	16.09	40	P	Pn	19 06 55.6	+1.1
	baz=239						
TNA	Tin City	16.11	21	P	Pn	19 06 56.2	+1.5
	baz=212						
O17K	Koliganek Bris	16.27	48	P	Pn	19 06 58.2	+1.3
	baz=249						
P17K	Kvichak River	16.39	51	Pn	Pn	19 06 58.0	-0.3
P17K				IAmb	IAmb	19 07 28.8	
	comp=Z,20nm,0.9s						
F14K	Arctic Creek	16.41	23	P	Pn	19 06 59.8	+1.2
	baz=216						
N17K	Nushagak Hills	16.52	46	P	P	19 07 01.5	-1.2
	baz=246						
J16K	Anvik River	16.56	34	Pn	Pn	19 07 00.7	+0.2
J16K	Anvik River	16.56	34	P	Pn	19 07 01.4	+0.9
	baz=232						
G15K	Niukluk	16.64	26	P	P	19 07 03.2	-0.8
	baz=222						
L17K	Donlin	16.79	40	P	P	19 07 05.1	-0.6
	baz=240						
M17K	Holitna River	16.79	43	Pn	Pn	19 07 03.6	+0.2
M17K				IAmb	IAmb	19 07 23.3	
	comp=Z,13nm,1.1s						
M17K	Holitna River	16.79	43	P	Pn	19 07 04.4	+0.9
	baz=243						
I17K	Unalakleet	16.90	33	P	Pn	19 07 05.6	+0.7
	baz=231						
H16K	Elim	16.91	29	P	Pn	19 07 05.3	+0.5
	baz=226						
Q18K	Katmai Hardscr	16.94	53	P	Pn	19 07 06.1	+0.7
	baz=255						
F15K	North Star Dit	17.02	24	P	Pn	19 07 06.8	+0.5
	baz=219						
P18K	Big Mountain,	17.04	51	P	P	19 07 07.4	-1.1
	baz=253						
K17K	Iditarod	17.09	38	P	P	19 07 08.3	-0.7
	baz=238						
N18K	Kilae Creek	17.17	46		P	19 07 09.1	-0.9
N18K	Kilae Creek	17.17	46	P	P	19 07 09.4	-0.6
	baz=248						
J17K	VABM Dome	17.18	36	P	Pn	19 07 09.0	+0.7
	baz=235						
O18K	Koktuh Hills	17.19	49	P	P	19 07 09.6	-0.6
	baz=251						
G16K	Koyuk River	17.41	27	P	P	19 07 11.9	-0.6
	baz=224						
L18K	Granite Mounta	17.49	41		Pn	19 07 12.0	-0.1
L18K	Granite Mounta	17.49	41	P	P	19 07 12.7	-0.6
	baz=242						
M18K	Stony River	17.53	44	P	P	19 07 13.1	-0.7
	baz=245						
OHAK	Old Harbor	17.55	59	P	Pn	19 07 12.4	-0.5
OHAK	Old Harbor	17.55	59	P	P	19 07 13.5	-0.6
	baz=262						
MA2	Magadan	17.80	309	LR	LR	19 13 40.8	
	comp=Z,63nm,19.3s,baz=114,slow=36						
MA2	Magadan	17.80	309	iP	Pn	19 07 12.0	-4.0
N19K	Bonanza Creek	17.86	47	P	Pn	19 07 16.8	-0.1
N19K	Bonanza Creek	17.86	47	P	P	19 07 17.3	-0.4
	baz=249						
G17K	Kiwalik Mounta	17.99	29	P	Pn	19 07 18.6	+0.2
	baz=227						
KDAK	Kodiak Island	18.01	57	P	Pn	19 07 16.4	-2.3
	comp=Z,1.3nm,0.3s,baz=245,slow=3.6,SNR=10.0						
	comp=Z,7.0nm,0.8s						
KDAK	Kodiak Island	18.01	57	P	Pn	19 07 16.6	-2.1
KDAK	Kodiak Island	18.01	57	iP	Pn	19 07 16.7	-1.9
KDAK	Kodiak Island	18.01	57	P	P	19 07 19.3	+0.2
	baz=261						
BILL	Bilibino	18.03	345	ceP	P	19 07 19.7	+0.4
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
P19K	Oil Pt	18.09	51	P	P	19 07 20.3	+0.2
	baz=254						
J18K	Innoko River	18.10	37	P	P	19 07 21.4	+1.3
J18K	Innoko River	18.10	37	P	P	19 07 20.2	0.0
	baz=238						
L19K	White Mountain	18.24	42	P	P	19 07 21.7	0.0
	baz=245						
Q20K	Shuyak Island	18.26	54	P	P	19 07 22.3	+0.4
	baz=259						
SEY	Seymchan	18.35	320	LR	LR	19 13 30.4	
	comp=Z,116nm,19.5s,baz=121,slow=34						
F17K	Baldwin Pennin	18.49	26	P	Pn	19 07 24.6	+0.2
	baz=224						
H18K	Honhosa River	18.49	32	P	P	19 07 24.1	-0.3
H18K	Honhosa River	18.49	32	P	Pn	19 07 24.5	0.0
	baz=232						
O20K	Slope Mountain	18.50	50	P	Pn	19 07 25.3	+0.5
	baz=254						
J19K	Poorman	18.79	37	P	Pn	19 07 28.1	-0.1
J19K	Poorman	18.79	37	P	Pn	19 07 28.2	0.0
	baz=239						
E17K	Hotham Inlet	18.81	24	P	Pn	19 07 28.5	+0.2
	baz=221						
G18K	Tagagawik	18.87	30	P	Pn	19 07 29.2	+0.1
G18K	Tagagawik	18.87	30	P	Pn	19 07 29.0	-0.1
	baz=229						
C16K	Lisburne Hills	18.96	19	P	P	19 07 29.3	-0.2
C16K				IAmb	IAmb	19 07 36.2	
	comp=Z,6.7nm,0.6s						
C16K	Lisburne Hills	18.96	19	P	Pn	19 07 29.9	-0.1
	baz=213						
D17K	Noatak River	18.98	22	P	Pn	19 07 30.5	+0.2
	baz=218						
SPCR	Spurr Chakacha	19.04	47	P	Pn	19 07 31.3	+0.1
	baz=251						
F18K	Selawik	19.05	27	P	Pn	19 07 31.1	-0.1
	baz=226						
K20K	Telida	19.08	39	P	Pn	19 07 31.7	0.0
	baz=243						
RDOG	Red Dog Mine	19.30	21		P	19 07 33.6	+0.3
RDOG				IAmb	IAmb	19 07 40.4	
	comp=Z,7.5nm,0.6s						
RDOG	Red Dog Mine	19.30	21	P	Pn	19 07 33.8	-0.5
	baz=218						
STLK	Strandline Lak	19.30	46	P	P	19 07 32.5	-0.9
BRSE	Bradley Lake S	19.33	51	P	Pn	19 07 34.5	-0.3
	baz=257						
H19K	Roundabout Mou	19.35	32	P	P	19 07 34.3	+0.4
	baz=234						
E18K	Tukpahlearik C	19.38	25		P	19 07 32.4	-1.7
E18K	Tukpahlearik C	19.38	25	P	Pn	19 07 34.8	-0.4
	baz=223						
CAPN	Captain Cook N	19.39	48	P	Pn	19 07 35.0	-0.4
	baz=254						
J20K	Nowinta River	19.44	37	P	P	19 07 33.3	-1.6
J20K				IAmb	IAmb	19 07 51.9	
	comp=Z,16nm,1.4s						
J20K	Nowinta River	19.44	37	P	Pn	19 07 35.9	-0.1
	baz=241						
G19K	Purcell Mounta	19.52	30	P	P	19 07 36.0	+0.3
G19K				IAmb	IAmb	19 07 41.8	
	comp=Z,12nm,0.8s						
G19K	Purcell Mounta	19.52	30	P	Pn	19 07 37.0	0.0
	baz=231,SNR=11						
C17K	DeLong Mountai	19.58	20	P	Pn	19 07 37.7	+0.1
	baz=216						
SKT	Skwentna	19.60	45	P	P	19 07 37.1	+0.4
	baz=250						
PPLA	Purkeypile	19.66	42	P	P	19 07 37.5	+0.1
	baz=247						
F19K	Shaleruckik Mo	19.76	28		P	19 07 37.9	-0.4
F19K				IAmb	IAmb	19 07 40.4	
	comp=Z,7.7nm,0.7s						
F19K	Shaleruckik Mo	19.76	28	P	P	19 07 38.3	0.0
	baz=229						
SUA	Susitna One	19.79	47	P	P	19 07 38.4	-0.4
	baz=252						
H20K	Anotleneega Mo	19.87	33	P	P	19 07 39.1	-0.5
	baz=236						
O22K	Cooper Landing	20.00	50	P	P	19 07 40.9	-0.1
	baz=256						
CHUM	Lake Minchumin	20.02	39	P	P	19 07 41.2	+0.1
	baz=244						
L22K	Petersville	20.13	44	P	P	19 07 42.8	+0.4
L22K				IAmb	IAmb	19 07 44.5	
	comp=Z,20nm,1.5s						
RC01	Rabbit Creek A	20.15	48	P	P	19 07 43.2	+0.6
	baz=255						
M22K	Willow	20.16	46	P	P	19 07 42.9	+0.2
	baz=253						
C18K	Utukok River	20.16	22		P	19 07 42.9	+0.1
C18K				IAmb	IAmb	19 07 48.3	
	comp=Z,15nm,1.1s						
C18K	Utukok River	20.16	22	P	P	19 07 42.0	-0.7
	baz=220,SNR=6.9						
E19K	Redstone River	20.33	27		P	19 07 45.2	+0.6
E19K	Redstone River	20.33	27	P	Pn	19 07 45.7	-0.9
	baz=228,SNR=5.7						
KTH	Kantishna Hill	20.45	41		P	19 07 46.1	+0.3
F20K	Avaraart Lake	20.52	29	IAmb	IAmb	19 07 50.9	
	comp=Z,4.6nm,0.7s						
F20K	Avaraart Lake	20.52	29	P	P	19 07 47.0	+0.6
	baz=232						
PMR	Palmer	20.57	47	P	Pn	19 07 48.3	-1.0
	baz=254						
B18K	Kokolik River	20.59	20	P	P	19 07 48.0	+0.7
	baz=217						
BPAW	Bear Paw Mtn.	20.64	39		P	19 07 47.9	-0.1
BPAW	Bear Paw Mtn.	20.64	39	P	P	19 07 48.4	+0.4
	baz=246						
TRF	Thorofare Moun	20.67	41	P	P	19 07 48.8	+0.4
	baz=248						
H21K	Melozitna Rive	20.69	34	P	P	19 07 49.0	+0.6
	baz=239						
I21K	Tanana	20.75	36	P	P	19 07 49.8	+0.8
	baz=242						
PWL	Port Wells	20.75	49	P	P	19 07 49.6	+0.4
	baz=257						
D19K	Kuna River	20.81	24	IAmb	IAmb	19 07 53.6	
	comp=Z,9.3nm,0.7s						
D19K	Kuna River	20.81	24	P	P	19 07 50.5	+0.8
	baz=225						
KNK	Knik Glacier	20.83	48	P	P	19 07 50.3	+0.3
	baz=256						
C19K	Lookout Ridge	20.89	22		P	19 07 50.9	+0.3
C19K				IAmb	IAmb	19 07 54.9	
	comp=Z,9.4nm,0.7s						
C19K	Lookout Ridge	20.89	22	P	P	19 07 51.2	+0.6
	baz=221,SNR=11						
G21K	Allakaket	20.91	32	P	P	19 07 51.2	+0.4
	baz=236						
SML	Sawmill	20.99	47	P	P	19 07 51.8	0.0
	baz=255						
P23K	Montague Islan	21.04	52	P	P	19 07 52.3	+0.1
	baz=260						
MLY	Manley	21.14	37	P	P	19 07 52.8	-0.6
	baz=244						
E20K	Nigu River	21.16	26	P	P	19 07 53.5	-0.1
	baz=228,SNR=6.4						
WAT1	Susitna Watana	21.19	44	P	P	19 07 53.8	-0.2
	baz=252						
M23K	Glacier View	21.27	47	P	P	19 07 55.1	+0.5
	baz=255						
H22K	Ishtalitna Cre	21.32	35	P	P	19 07 55.0	-0.2
	baz=241						
F21K	Alatna River	21.32	30	P	P	19 07 55.2	0.0
F21K				IAmb	IAmb	19 07 58.7	
	comp=Z,6.1nm,0.8s						
F21K	Alatna River	21.32	30	P	P	19 07 54.8	-0.5
	baz=235						
MCK	McKinley	21.34	41	P	P	19 07 55.4	-0.1
	baz=249						
GLI	Glacier Island	21.35	49	P	P	19 07 55.9	+0.3
	baz=258						
D20K	Etivluk River	21.36	25	P	P	19 07 56.3	+0.7
	baz=227						
A19K	Wainwright	21.42	19	P	P	19 07 56.3	+0.1
	baz=217						
SCM	Sheep Creek Mo	21.46	47	P	P	19 07 56.9	0.0
	baz=256						
WAT6	Susitna Watana	21.47	45	P	P	19 07 56.8	-0.3
	baz=253						
Q23K	Middleton Isla	21.48	53	P	P	19 07 57.3	+0.4
	baz=263						
NEA2	Nenana	21.61	39	P	P	19 07 58.5	+0.2
	baz=247						
I23K	Minto, Yukon-K	21.72	37	P	P	19 07 59.7	+0.2
	baz=245						
DHY	Denali Highway	21.78	44	P	P	19 08 00.4	0.0
	baz=253						
F22K	John River	21.90	30	P	P	19 08 01.6	+0.2
	baz=236						
E21K	Killik River	21.91	27	P	P	19 08 02.2	+0.6
	baz=232						
EYAK	Cordova Ski Ar	21.94	51	P	P	19 08 02.0	+0.1
	baz=261						
H23K	Yukon River	21.95	36	P	P	19 08 02.9	+0.9
	baz=243						
KLU	Klutina	22.03	48	P	P	19 08 02.9	-0.1
	baz=258						
M24K	Tolsona, Glenn	22.05	46	P	P	19 08 03.5	+0.3
	baz=256						
B20K	Meade River	22.13	22	IAmb	IAmb	19 08 09.4	
	comp=Z,9.7nm,1.1s						
C21K	Knifeblade Rid	22.14	25	P	P	19 08 04.1	0.0
	baz=229,SNR=7.6						
G23K	Bananza Creek	22.20	33	P	P	19 08 04.1	-0.6
G23K				IAmb	IAmb	19 08 06.8	
	comp=Z,5.9nm,0.9s						
G23K	Bananza Creek	22.20	33	P	P	19 08 04.0	-0.6
	baz=241						
COLA	College	22.20	39	P	P	19 08 04.8	+0.2
	baz=248						
E22K	Anaktuvuk Pass	22.37	29		P	19 08 06.5	0.0
E22K	Anaktuvuk Pass	22.37	29	P	P	19 08 06.4	0.0
	baz=235,SNR=6.4						
HDA	Harding Lake	22.39	40	P	P	19 08 06.8	0.0
	baz=250						
COLD	Coldfoot	22.39	32	P	P	19 08 06.7	-0.1
	baz=240						
RAGM	Ragged Mountai	22.44	51	P	P	19 08 06.6	-0.8
POKR	Poker Plat Res	22.45	38	P	P	19 08 07.4	0.0
	baz=248						
B21K	Ikpikpuk River	22.50	24	IAmb	IAmb	19 08 09.0	
	comp=Z,14nm,1.2s						
B21K	Ikpikpuk River	22.50	24	P	P	19 08 07.6	-0.2
	baz=228						
KAIM	Kayak Island	22.51	52	P	P	19 08 07.8	-0.2
	baz=264						
IL31		22.54	39	P	P	19 08 07.3	-1.0
IL31				IAmb	IAmb	19 08 08.4	
	comp=Z,3.1nm,0.6s						
ILAR	Eielson Array	22.54	39	P	P	19 08 05.9	-2.5
	comp=Z,1.3nm,0.5s,baz=240,slow=8.7,SNR=46						
	comp=Z,1.3nm,0.5s						
D22K	Ayikyak River	22.55	27	P	P	19 08 08.8	+0.4
	baz=233						
BMRM	Bremner River	22.56	50	P	P	19 08 08.5	-0.1
	baz=261						
H24K	Noodor Dome	22.57	36	P	P	19 08 08.5	-0.2
	baz=246						
HARP	HAARP	22.59	46	P	P	19 08 08.4	-0.5
	baz=257						
PAX	Paxson	22.59	44	P	P	19 08 08.3	-0.6
	baz=255						
N25K	Chitina, Valde	22.68	48	P	P	19 08 09.2	-0.7
	baz=259						
K24K	Donnelly Dome	22.68	42	P	P	19 08 09.2	-0.6
	baz=253						
E23K	Chandalar	23.02	31	IAmb	IAmb	19 08 19.1	
	comp=Z,10.0nm,1.4s						
E23K	Chandalar	23.02	31	P	P	19 08 12.6	-0.8
	baz=239,SNR=7.1						
RIDG	Independent Ri	23.06	43	P	P	19 08 12.9	-1.0
	baz=254						
G24K	Hadweenzic Riv	23.09	35	P	P	19 08 13.1	-1.0
	baz=244,SNR=9.4						
J25K	Salcha River,	23.10	40	P	P	19 08 12.0	-2.3
J25K				IAmb	IAmb	19 08 13.3	
	comp=Z,4.0nm,0.6s						
J25K	Salcha River,	23.10	40	P	P	19 08 12.6	-1.8
	baz=252						
D23K	Nanushuk River	23.19	28	P	P	19 08 14.6	-0.5
	baz=235,SNR=15						
A21K	Barrow	23.22	20	P	P	19 08 14.4	-1.0
	baz=222						
CRQE	Cirque	23.27	51	P	P	19 08 14.9	-1.2
	baz=263						
B22K	Teshekpuk Lake	23.29	24	P	P	19 08 15.0	-1.0
	baz=229						
F24K	Squaw Lake	23.32	33	IAmb	IAmb	19 08 17.5	
	comp=Z,4.9nm,0.7s						
F24K	Squaw Lake	23.32	33	P	P	19 08 16.1	-0.4
	baz=242						
TOLK	Toolik Lake Re	23.34	29		P	19 08 16.3	-0.4
TOLK	Toolik Lake Re	23.34	29	P	P	19 08 16.0	-0.7
	baz=238,SNR=14						
A22K	Sinclair Lake	23.36	22	P	P	19 08 16.3	-0.4
	baz=225						
MCARA	McCarthy VSAT	23.39	49	P	P	19 08 15.8	-1.3
	baz=262						
E24K	Your Creek	23.39	31	IAmb	IAmb	19 08 18.6	
	comp=Z,7.5nm,1.4s						
E24K	Your Creek	23.39	31	P	P	19 08 16.8	-0.4
	baz=240						
SCRK	Sand Creek	23.49	42		P	19 08 15.9	-2.4
SCRK				IAmb	IAmb	19 08 17.3	
	comp=Z,4.9nm,0.6s						
SCRK	Sand Creek	23.49	42	P	P	19 08 16.6	-1.7
	baz=255,SNR=6.6						
L26K	Log Cabin Wild	23.54	45	P	P	19 08 18.2	-0.4
	baz=258						
M26K	Nabesna, AK	23.57	46	P	P	19 08 18.3	-0.7
	baz=259						
G25K	Bearman Lake	23.61	35	P	P	19 08 18.2	-1.1
	baz=246						
C23K	Itkillik River	23.72	26	IAmb	IAmb	19 08 20.7	
	comp=Z,8.1nm,0.8s						
C23K	Itkillik River	23.72	26	P	P	19 08 19.5	-0.7
	baz=234						
J26L	Joseph Creek	23.82	41	P	P	19 08 20.0	-1.4
	baz=254						
D24K	Happy Valley	23.85	29	P	P	19 08 21.6	0.0
	baz=238						
M27K	Edge Creek, AK	24.07	47	P	P	19 08 23.5	-0.5
	baz=261						
F25K	Christian Rive	24.12	33	P	P	19 08 23.7	-0.5
F25K				IAmb	IAmb	19 08 25.8	
	comp=Z,5.1nm,0.8s						
F25K	Christian Rive	24.12	33	P	P	19 08 23.5	-0.7
	baz=245,SNR=5.2						
CTG	Chitna Glacier	24.14	50	P	P	19 08 23.3	-1.3
	baz=264						
C24K	Franklin Bluff	24.20	27	P	P	19 08 24.7	-0.1
	baz=237						
I26K	Coal Creek Min	24.22	39	P	P	19 08 24.5	-0.5
	baz=253						
L27K	Beaver Creek,	24.23	45	IAmb	IAmb	19 08 27.0	
	comp=Z,7.1nm,0.8s						
L27K	Beaver Creek,	24.23	45	P	P	19 08 24.7	-0.5
	baz=259						
K27K	Chicken	24.32	43	P	P	19 08 25.3	-0.7
K27K				IAmb	IAmb	19 08 27.4	
	comp=Z,5.9nm,1.0s						
K27K	Chicken	24.32	43	P	P	19 08 25.8	-0.3
	baz=257						
E25K	Arctic Village	24.38	32	IAmb	IAmb	19 08 28.0	
	comp=Z,4.5nm,0.8s						
E25K	Arctic Village	24.38	32	P	P	19 08 25.8	-0.8
	baz=244,SNR=5.2						
G26K	Porcupine Rive	24.53	35	P	P	19 08 27.6	-0.3
	baz=248						
BVCY	Beaver Creek	24.55	47	P	P	19 08 27.5	-0.7
	baz=262						
YUK3	Moose Creek	24.65	48	P	P	19 08 27.9	-1.5
	baz=263						
D25K	Kavik River	24.68	29	IAmb	IAmb	19 08 30.0	
	comp=Z,6.2nm,0.6s						
D25K	Kavik River	24.68	29	P	P	19 08 28.1	-1.2
	baz=240						
O28M	Mount Upton	24.68	51	P	P	19 08 28.3	-1.4
F26K	Sheenjek River	24.68	34	IAmb	IAmb	19 08 30.9	
	comp=Z,4.4nm,0.7s						
F26K	Sheenjek River	24.68	34	P	P	19 08 28.6	-0.7
	baz=247						
I27K	Kandik River	24.92	39	P	P	19 08 30.9	-0.6
	baz=254						
YUK8	Steele Glacier	24.93	50	P	P	19 08 30.8	-1.1
	baz=265						
H27K	Steamboat Moun	25.14	38	P	P	19 08 31.9	-1.6
	baz=253						
G27K	Doyon Strip	25.27	36	P	P	19 08 33.6	-1.0
	baz=251						
C26K	Camden Bay	25.42	29	P	P	19 08 35.9	-0.1
	baz=241,SNR=9.3						
YUK4	Talbot Arm	25.48	50	P	P	19 08 36.5	-0.2
	baz=266						
DAWY	Dawson	25.48	43		P	19 08 36.2	-0.4
DAWY	Dawson	25.48	43	P	P	19 08 36.2	-0.4
	baz=260,SNR=16						
I28M	Miner Creek	25.55	40		P	19 08 35.9	-1.4
I28M				IAmb	IAmb	19 08 38.9	
	comp=Z,7.2nm,1.0s						
I28M	Miner Creek	25.55	40	P	P	19 08 36.5	-0.8
	baz=256						
YUK6	Outpost Mounta	25.59	51	P	P	19 08 37.1	-0.7
	baz=267						
C27K	Jago River	25.66	30	P	P	19 08 37.4	-0.7
	baz=243						
M29M	Somme Creek	25.66	47	P	P	19 08 36.9	-1.5
	baz=264						
E27K	Coleen River	25.76	33	P	P	19 08 37.8	-1.3

	baz=249						
HYT	Haines Junctio	26.00	51	P	P	19 08 40.1	-1.4
	baz=268						
F28M	Old Crow	26.18	35	IAmb	IAmb	19 08 43.2	
	comp=Z,8.7nm,1.4s						
F28M	Old Crow	26.18	35	P	P	19 08 42.1	-0.8
	baz=252						
N30M	Aishikik Lake	26.23	50	P	P	19 08 42.0	-1.4
	baz=267						
P30M	Million Dollar	26.26	53	P	P	19 08 43.1	-0.6
	baz=270						
K29M	Barlow Dome	26.26	44	P	P	19 08 42.3	-1.5
	baz=262						
H29M	Whitestone	26.36	39	P	P	19 08 43.2	-1.4
H29M	Whitestone	26.36	39	P	P	19 08 43.1	-1.4
	baz=256						
D27M	Malcolm River	26.38	31	P	P	19 08 44.2	-0.5
	baz=248						
E28M	Babbage River	26.63	33	P	P	19 08 46.6	-0.3
	baz=250						
G29M	Pine Creek	26.67	37	P	P	19 08 46.1	-1.2
	baz=255						
O30N	Mendenhall	26.69	51	P	P	19 08 46.2	-1.4
	baz=270						
S31K	Pelican	26.73	57	P	P	19 08 46.5	-1.3
	baz=275						
N31M	Braeburn, Yuko	26.86	50	P	P	19 08 47.8	-1.3
	baz=268						
I30M	Mount Dempster	26.97	41	P	P	19 08 48.6	-1.6
	baz=260						
EPYK	Eagle Plains	27.05	39	P	P	19 08 49.8	-0.9
	baz=258						
E29M	Blow River	27.13	34	P	P	19 08 50.2	-1.2
	baz=253						
G30M	tAoh Zraii Nji	27.38	37	P	P	19 08 52.1	-1.6
	baz=257						
F30M	Barrier River	27.69	36	P	P	19 08 55.3	-1.1
	baz=256						
H31M	Peel River	27.90	40	P	P	19 08 57.2	-1.2
	baz=261						
P32M	Atlin	27.91	54	P	P	19 08 57.5	-1.1
	baz=274						
G31M	Satah River	28.12	38	P	P	19 08 58.4	-1.8
	baz=259						
YAK	Yakutsk	28.34	312	*ce*P	P	19 09 01.8	-0.4
YAK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
F31M	Tsiigehtchic	28.42	37	P	P	19 09 01.3	-1.6
	baz=259						
INK	Inuvik	28.68	35	P	P	19 09 03.7	-1.5
	baz=258						
R33M	Jennings River	29.33	54	P	P	19 09 10.3	-0.9
	baz=276						
S34M	Telegraph Cree	29.43	57	P	P	19 09 11.0	-1.0
	baz=279						
V35K	Ketchikan	29.65	62	P	P	19 09 12.8	-1.2
	baz=283						
TIXI	Tiksi	30.06	331	LR	LR	19 21 39.7	
	comp=Z,49nm,18.3s,baz=203,slow=37						
ZEA	Zeya	30.82	295	*e*P	P	19 09 24.4	+0.1
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
A36M	Sachs Harbour	32.17	29	P	P	19 09 34.0	-1.9
	baz=260						
C36M	Paulatuk	32.22	34	P	P	19 09 34.8	-1.6
	baz=266						
H11N2	WAKE ISLAND Hy	32.60	201	T	T	19 44 48.3	
	baz=20,slow=75,SNR=14						
H11N3	WAKE ISLAND Hy	32.61	201	T	T	19 44 47.2	
	baz=20,slow=75,SNR=15						
H11N1	WAKE ISLAND Hy	32.62	201	T	T	19 44 49.3	
	baz=20,slow=75,SNR=15						
H11S1	WAKE ISLAND Hy	33.83	200	T	T	19 46 17.9	
	baz=18,slow=76,SNR=9.3						
H11S2	WAKE ISLAND Hy	33.84	200	T	T	19 46 18.6	
	baz=18,slow=76,SNR=7.0						
H11S3	WAKE ISLAND Hy	33.84	200	T	T	19 46 23.2	
	baz=18,slow=76,SNR=7.3						
YKA	Yellowknife Ar	36.66	46	P	P	19 10 14.1	-0.9
	comp=Z,0.5nm,0.6s,baz=287,slow=8.9,SNR=6.6						
	comp=Z,0.5nm,0.6s						
YKA	Yellowknife Ar	36.66	46	*ce*P	P	19 10 14.3	-0.6
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KSRS	Korea Array	37.94	269	LR	LR	19 26 53.9	
	comp=Z,5µm,19.3s,baz=15,slow=38						
D05A	Enumclaw	38.21	72	P	P	19 10 29.8	+1.5
INCN	Inchon	38.73	270	P	P	19 10 34.1	+1.3
INCN	Inchon	38.73	270	P	P	19 10 34.1	+1.3
INCN				pmax	pmax		
	comp=Z,58nm,1.3s						
RES	Resolute Bay	40.71	24	P	P	19 10 47.8	-1.0
RES				IAmb	IAmb	19 11 07.0	
	comp=Z,6.8nm,1.4s						
RES	Resolute Bay	40.71	24	P	P	19 10 47.8	-1.0
RES				pmax	pmax		
	comp=Z,7.0nm,1.4s						
LNOR	Lincton Mounta	41.09	72	P	P	19 10 52.8	+0.5
LNOR				IAmb	IAmb	19 11 18.8	
	comp=Z,9.0nm,1.4s						
K05A	Summer Lake	41.18	77	P	P	19 10 54.5	+1.3
BPMT	Black Pine Rid	43.66	68	P	P	19 11 12.9	-0.6
NRIK	Noril'sk	43.79	329	*i* P	P	19 11 11.6	-2.4
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.5s						
MHC	Mount Hamilton	43.86	84	P	P	19 11 15.6	+0.6
MHC	Mount Hamilton	43.86	84	P	P	19 11 15.6	+0.6
MHC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ULN	Ulaanbaatar	44.85	295	*ce*P	P	19 11 21.8	-1.1
ULN				pmax	pmax		
	comp=Z,5.0nm,1.7s						
MCMT	McKenzie Canyo	44.88	70	P	P	19 11 22.9	-0.4
BOZ	Bozeman (W)	45.17	68	P	P	19 11 25.4	-0.1
BOZ				IAmb	IAmb	19 11 28.5	
	comp=Z,1.4nm,0.7s						
BOZ	Bozeman (W)	45.17	68	P	P	19 11 25.4	-0.1
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM	Songino Array	45.25	295	P	P	19 11 26.9	+0.9
	comp=Z,1.8nm,0.5s,baz=65,slow=8.0,SNR=14						
SONM				PcP	PcP	19 13 06.2	+0.3
	comp=Z,0.4nm,0.4s,baz=62,slow=3.4,SNR=2.6						
SONM				LR	LR	19 30 50.1	
	comp=Z,31nm,20.1s,baz=44,slow=37						
	comp=Z,1.8nm,0.5s						
SONM	Songino Array	45.25	295	P	P	19 11 25.5	-0.5
SONM				IAmb	IAmb	19 11 27.5	
	comp=Z,1.9nm,0.7s						
NVAR	Mina Array Bea	45.28	81	P	P	19 11 26.7	+0.2
	comp=Z,0.6nm,0.5s,baz=301,slow=5.7,SNR=4.4						
	comp=Z,0.6nm,0.5s						
ELK	Elko	45.78	76	P	P	19 11 30.3	-0.2
ELK				IAmb	IAmb	19 11 38.6	
	comp=Z,1.9nm,1.0s						
ELK	Elko	45.78	76	P	P	19 11 30.3	-0.2
ELK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
POIN	Pond Inlet	45.87	24	P	P	19 11 29.4	-1.1
HHC	Hu-ho-hao-te	46.12	284	*e*P	P	19 11 33.3	+0.3
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,68nm,5.1s						
YNE	Yellowstone No	46.45	68	P	P	19 11 35.1	-0.7
LKWY	Lake	46.47	69	P	P	19 11 34.4	-1.5
LKWY	Lake	46.47	69	P	P	19 11 34.4	-1.5
LKWY				pmax	pmax		
	comp=Z,19nm,0.7s						
ILON	Igloolik, Nuna	46.52	29	P	P	19 11 34.8	-0.9
R11B	Troy Canyon, C	47.01	79	P	P	19 11 40.7	+0.5
R11B				IAmb	IAmb	19 12 01.1	
	comp=Z,3.1nm,1.3s						
SPR3	Spring Creek 3	47.39	77	P	P	19 11 42.8	-0.5
SPR3				IAmb	IAmb	19 12 13.4	
	comp=Z,2.8nm,1.2s						
TPNV	Topopah Spring	47.47	81	P	P	19 11 44.4	+0.7
TPNV	Topopah Spring	47.47	81	P	P	19 11 44.4	+0.7
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DUG	Dugway, Tooele	47.59	75	P	P	19 11 45.1	+0.6
DUG				IAmb	IAmb	19 11 47.3	
	comp=Z,3.2nm,1.0s						
DUG	Dugway, Tooele	47.59	75	P	P	19 11 45.1	+0.6
DUG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PSUT	Pine Spring	47.97	78	P	P	19 11 47.1	-0.4
PSUT				IAmb	IAmb	19 12 02.7	
	comp=Z,2.7nm,1.1s						
PFO	Pinyon Flats O	49.49	84	LR	LR	19 30 04.2	
	comp=Z,110nm,18.2s,baz=263,slow=33						
SPITS	Spitsbergen Ar	50.54	355	P	P	19 12 04.3	-2.1
	comp=Z,8.3nm,0.9s,baz=20,slow=5.4,SNR=5.2						
	comp=Z,8.3nm,0.9s						
PV13	Radium Mtn., P	51.29	75	P	P	19 12 12.7	-0.2
ZALV	Zalesovo Beam	52.98	312	P	P	19 12 24.2	-0.8
	comp=Z,1.1nm,0.5s,baz=48,slow=8.0,SNR=5.0						
	comp=Z,1.1nm,0.5s						
ZALV	Zalesovo Beam	52.98	312	*i* P	P	19 12 24.5	-0.5
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
LZH	Lanzhou	53.82	285	*e*P	P	19 12 42.0	+10
LZH				pP	pwP	19 12 51.8	+16
LZH				pmax	pmax		
	comp=Z,22nm,1.4s						
GTA	Gaotai	54.08	290	P	P	19 12 34.3	+0.8
GTA				pP	pwP	19 12 46.1	+8.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
DGZ	Jazzator, Alta	54.37	307	*i* P	P	19 12 34.6	-0.8
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KURK	Kurchatov	57.98	312		P	19 13 00.3	-0.6
KURK	Kurchatov	57.98	312	*ce*P	P	19 13 01.1	+0.1
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
WMQ	Urumqi	58.06	301	*e*P	P	19 13 02.6	+0.9
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
ARCES	ARCESS Array B	58.08	349	P	P	19 13 01.0	-0.4
	comp=Z,2.9nm,0.8s,baz=35,slow=7.3,SNR=5.9						
	comp=Z,2.9nm,0.8s						
ARCES	ARCESS Array B	58.08	349	P	P	19 13 01.2	-0.2
ARCES	ARCESS Array B	58.08	349	P	P	19 13 01.2	-0.2
KURBB	Kurchatov Arra	58.08	312	P	P	19 13 01.6	-0.1
	comp=Z,3.0nm,0.7s,baz=41,slow=6.6,SNR=29						
	comp=Z,3.0nm,0.7s						
MK31	Makanchi Array	58.87	307	P	P	19 13 06.7	-0.6
MK31				IAmb	IAmb	19 13 07.1	
	comp=Z,1.2nm,0.6s						
MK31	Makanchi Array	58.87	307	P	P	19 13 06.7	-0.6
MK31				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	58.87	307	P	P	19 13 06.7	-0.6
	comp=Z,1.0nm,0.4s,baz=53,slow=6.0,SNR=36						
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	58.87	307		P	19 13 06.5	-0.8
MKAR	Makanchi Array	58.87	307	*ce*P	P	19 13 06.6	-0.7
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MAKZ	Makanchi	59.02	307	P	P	19 13 07.2	-1.1
MAKZ	Makanchi	59.02	307	P	P	19 13 07.2	-1.1
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.5s						
L42A	Oliver, Polo	59.85	59	P	P	19 13 15.4	+1.3
BVAR	Borovoye Array	60.00	318	P	P	19 13 15.0	0.0
	comp=Z,6.6nm,0.5s,baz=48,slow=6.5,SNR=59						
BVAR				LR	LR	19 39 58.9	
	comp=Z,70nm,18.2s,baz=11,slow=37						
	comp=Z,6.6nm,0.5s						
BORK	Borovoye	60.01	319		P	19 13 14.9	-0.1
BORK	Borovoye	60.01	319	*ce*P	P	19 13 15.5	+0.4
BORK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
P40A	Paris	60.23	63	P	P	19 13 16.4	-0.3
TXAR	Lajitas Array	60.38	79	P	P	19 13 18.3	+0.2
	comp=Z,0.5nm,0.6s,baz=315,slow=6.1,SNR=3.8						
	comp=Z,0.5nm,0.6s						
ARTI	Arti	62.03	327	*d i*P	P	19 13 29.1	+0.4
ARTI				S	S	19 21 55.4	+1.9
ARTI				SS	SS	19 25 54.7	-0.2
ARTI				pmax	pmax		
	comp=Z,41nm,3.2s						
FINES	FINESS Array B	65.67	346	P	P	19 13 51.7	-0.9
	comp=Z,1.1nm,0.6s,baz=20,slow=6.1,SNR=11						
	comp=Z,1.1nm,0.6s						
FINES	FINESS Array B	65.67	346	*ce*P	P	19 13 50.2	-2.4
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KSH	Kashi	67.29	305	P	P	19 14 07.4	+3.9
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NOA	NORSAR Array B	67.76	353	P	P	19 14 06.2	+0.2
	comp=Z,0.4nm,0.6s,baz=10,slow=6.3,SNR=1.9						
	comp=Z,0.4nm,0.6s						
HFS	Hagfors	68.46	352	P	P	19 14 09.9	-0.4
	comp=Z,2.4nm,0.8s,baz=19,slow=6.2,SNR=6.4						
	comp=Z,2.4nm,0.8s						
BELG	Belogornoye	68.88	330	*i* P	P	19 14 11.8	-1.2
BELG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CMAR	Chiang Mai Arr	69.34	274	P	P	19 14 17.1	+0.6
	comp=Z,0.9nm,0.6s,baz=31,slow=7.6,SNR=8.4						
	comp=Z,0.9nm,0.6s						
CMAR	Chiang Mai Arr	69.34	274	*ce*P	P	19 14 16.2	-0.3
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
OBN	Obninsk	69.52	338	⇑*e*P	P	19 14 16.5	-0.5
OBN				*e*		19 14 37.8	
OBN				*e*		19 16 50.2	
OBN				*e*PPP	PPP	19 18 32.3	
OBN				*e*S	SKiKP	19 24 13.8	+8.0
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,59nm,9.0s						
AKASG	Malin Array Be	75.28	340	P	P	19 14 50.4	-1.0
	comp=Z,1.4nm,0.4s,baz=24,slow=6.5,SNR=4.7						
	comp=Z,1.4nm,0.4s						
AKASG	Malin Array Be	75.28	340	IAmb	IAmb	19 15 14.6	
	comp=Z,4.4nm,1.3s						
AKASG	Malin Array Be	75.28	340	*ce*P	P	19 14 52.0	+0.6
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WRA	Warramunga Arr	80.64	222	P	P	19 15 21.6	+0.1
	comp=Z,0.5nm,0.7s,baz=27,slow=5.4,SNR=3.3						
	comp=Z,0.5nm,0.7s						
ASAR	Alice Springs	84.14	220	P	P	19 15 41.0	+1.2
	comp=Z,0.3nm,0.6s,baz=20,slow=5.8,SNR=2.7						
	comp=Z,0.3nm,0.6s						
BRTR	Keskin Array B	84.48	334	P	P	19 15 41.3	-0.3
	comp=Z,0.8nm,0.7s,baz=44,slow=3.5,SNR=4.7						
	comp=Z,0.8nm,0.7s						
BRTR	Keskin Array B	84.48	334	*i* P	P	19 15 42.0	+0.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
H03N2	Juan Fernandez	122.71	104	T	T	21 36 42.7	
	baz=317,slow=78,SNR=13						
H03N1	Juan Fernandez	122.73	104	T	T	21 36 44.0	
	baz=317,slow=78,SNR=13						
H03N3	Juan Fernandez	122.73	104	T	T	21 36 43.8	
	baz=317,slow=78,SNR=10						

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*BER **13** 19:05:44.6±2.9, 81°.16N×4°.18W, h10^{km}, Mw3.3, ML1.9(DNK), Confirmed Earthquake*

*DNK **13** 19:05:46.1±2.7, 81°.21N×3°.83W, h36^{km}±46^{km}, ML1.9, Presumed earthquake*

ISC 13 19:05:40.1±1.0, 81°.4N±0°.1×3°.69W±0°.06, h10^{km}, n10, σ2^{s}.03/14, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOR	Nord	1.95	283	*e*P	Pg	19 06 17.6	+0.3
NOR				*i* S	Sn	19 06 36.9	-0.6
NOR				IAML		19 06 49.6	
	comp=Z,9.3nm,0.8s						
NOR	Nord	1.95	283	*e*P	Pg	19 06 17.6	+0.3
NOR				*i* S	Sn	19 06 36.9	-0.6
NOR				IAML		19 06 49.6	
	comp=Z,9.3nm,0.8s						
KBS	Kingsbay	3.62	124	*i* P	Pn	19 06 36.8	+0.7
KBS	Kingsbay	3.62	124	*i* P	Pn	19 06 36.8	+0.7
SPA0	Spitsbergen Ar	4.77	122	*e*P	Pn	19 06 54.3	+2.4
HSPB	Hornsund (broa	5.64	131	*e*P	Pn	19 07 05.4	+1.6
ZFI2	Zemlya Franca-	7.76	68	*e*P	Pn	19 07 35.9	+3.0
ZFI2				*e*S	Sn	19 08 57.8	-2.9
OMEGA	Omega	7.79	68	*e*P	Pn	19 07 35.9	+2.7
OMEGA				*e*S	Sn	19 08 58.0	-3.2
	comp=Z,11nm,1.8s						
DBG	Daneborg	7.85	215	*i* P	Pn	19 07 34.0	0.0
DBG				*i* S	Sn	19 08 51.5	-11
DBG				IAML		19 09 15.5	
	comp=Z,5.2nm,1.0s						
DBG	Daneborg	7.85	215	*i* P	Pn	19 07 34.0	0.0
DBG				*i* S	Sn	19 08 51.5	-11
DBG				IAML		19 09 15.5	
	comp=Z,5.2nm,1.0s						

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*VIE **13** 19:18:24.7±0.8, 45°.01N×15°.14E, h13^{km}±2^{km}, ml2.3/9, Error ellipse: s-maj=5.3km s-min=4.3km az=16.0 62 km SSW of Karlovac*

*PRU **13** 19:18:25.9, 45°.08N×15°.39E, h1^{km}, Karlovac*

*RHSSO **13** 19:18:25.9±1.4, 44°.95N×15°.37E, h7^{km}, ML2.5/4*

ISC 13 19:18:23.8±0.9, 44°.99N±0°.02×15°.29E±0°.02, h13^{km}±8^{km}, n29, σ0^{s}.88/55, 4C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLIT	Plitvice	0.26	115	*e*Pg	Pg	19 18 28.9	-0.4
PLIT				Sg	Sg	19 18 32.9	-0.1
RABC	Rab	0.43	237	*e*Pg	Pg	19 18 32.6	+0.2
RABC				Sg	Sg	19 18 38.8	+0.5
NVLJ	Novalja	0.52	215	*e*Pg	Pg	19 18 34.1	+0.1
NVLJ				Sg	Sb	19 18 41.8	-0.6
UDBI	Udbina	0.57	144	*e*Pg	Pg	19 18 34.6	-0.4
UDBI				Sg	Sg	19 18 42.2	-0.4
OZLJ	Ozalj	0.64	11	*e*Pg	Pb	19 18 36.6	-0.2
OZLJ				Sg	Sb	19 18 45.2	-0.4
RIY	Rijeka	0.66	301	*e*Pg	Pn	19 18 38.2	-0.8
RIY				Sg	Sg	19 18 45.6	+0.2
VIRC	Vir	0.72	194	*e*Pg	Pg	19 18 37.6	-0.2
VIRC				Sg	Sg	19 18 47.3	+0.1
KNYS	Krupa na Uni	0.74	97	⇑*i*Pg	Pg	19 18 37.3	-0.8
KNYS				*e*Sg	Sg	19 18 47.7	-0.1
ZAG	Zagreb	0.97	30	*e*Pg	Pn	19 18 43.5	+0.4
ZAG				Sg	Sg	19 18 55.8	+0.6
DUGI	Dugi Otok	1.01	190	Sg	Sn	19 18 57.3	-0.6
PTJ	Puntijarka	1.03	27	*e*Pg	Pn	19 18 44.2	+0.1
PTJ				Sg	Sg	19 18 57.3	0.0
MORI	Morici	1.16	165	*e*Pg	Pb	19 18 45.7	-0.1
MORI				Sg	Sg	19 19 02.6	+1.2
MOSL	Moslavina	1.21	58	*e*Pg	Pg	19 18 47.5	+0.4
MOSL				Sg	Sg	19 19 02.8	+0.1
KIJV	Kijevo	1.27	141	*e*Pg	Pg	19 18 48.4	+0.2
KIJV				Sg	Sg	19 19 05.3	+0.7
BLY	Banja Luka	1.37	100	⇑*i*Pg	Pg	19 18 50.0	-0.1
BLY				*e*Sg	Sg	19 19 07.6	-0.3
KALN	Kalnik	1.40	35	*e*Pg	Pg	19 18 50.9	+0.1
KALN				Sg	Sg	19 19 09.1	+0.1
OBKA	Obir	1.60	341	*e*Pg	Pg	19 18 54.6	0.0
	3.1nm,0.2s						
OBKA				*e*Sn	Sb	19 19 13.8	+0.2
	10nm,0.3s						
SOKA	Soboth	1.70	354	*e*Pn	Pb	19 18 54.7	-0.3
	0.4nm,0.2s						
SOKA				*e*Sn	Sb	19 19 16.5	+0.2
	0.1nm,0.1s						
BEHE	Becsehely	1.81	35	⇑*i*Pn	Pg	19 18 57.8	-0.7
BEHE				*e*Sn	Sg	19 19 21.0	-1.0
RICI	Ricice	2.00	138	*e*Pn	Pb	19 19 00.4	+0.3
RICI				Sn	Sb	19 19 25.7	+0.9
MYKA	Terra Mystica	2.00	325	*e*Pn	Pn	19 18 57.3	-0.2
	0.4nm,0.2s						
MYKA				*e*Sn	Sn	19 19 21.5	-1.0
	7.6nm,0.4s						
ARSA	Arzberg	2.27	4	*e*Pn	Pn	19 19 02.2	+1.2
	0.8nm,0.4s						
ARSA				Sg	Sg	19 19 39.1	+2.5
	3.2nm,0.4s						
ABTA	Abfaltersbach	2.62	313	*e*Pn	Pn	19 19 05.5	-0.4
	0.1nm,0.1s						
ABTA				*e*Sn	Sn	19 19 36.0	-1.6
	0.1nm,0.1s						
MORH	Mrgy, Hungar	2.65	61	⇑*i*Pn	Pn	19 19 08.2	+1.9
MORH				*e*Sn	Sb	19 19 40.6	-3.1
RONA	Rosalia, Austr	2.80	14	*e*Pn	Pn	19 19 09.7	+1.3
	2.0nm,0.2s						
BIOA	Bad Ischl, Aus	2.93	338	Pn	Pn	19 19 10.1	-0.1
	0.5nm,0.2s						
BIOA				*e*Sn	Sn	19 19 45.5	+0.2
	0.3nm,0.2s						
CONA	Conrad Observa	2.96	7	*e*Pn	Pn	19 19 12.1	+1.4
	0.3nm,0.1s						
LESA	Schwarzleotal	3.04	324	*e*Pn	Pn	19 19 11.3	-0.4
	4.4nm,1.5s						
LESA				*e*Sn	Sn	19 19 48.3	+0.4
	0.7nm,0.2s						
KHC	Kasperske Hory	4.30	345	*e*PN	Pn	19 19 30.8	+1.7
KHC				*e*SN	Sn	19 20 19.5	+0.4

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*IDC **13** 19:22:34.1±1.6, 1°.15N×126°.76E, h0^{km}, mb3.8/4, mbtmp3.8/5, ML3.3/1, Error ellipse: s-maj=117.7km s-min=20.2km az=69.0*

*DJA **13** 19:22:38.5±0.6, 1°N±3°×12°7E±°, h13^{km}±5^{km}, M3.9/13, mB4.8/1, mb4.2/4, MLv3.7/13, Mw(mB)4.1/1*

ISC 13 19:22:40.4±1.1, 0°.99N±0°.09×126°.57E±0°.07, h39^{km}, n16, σ0^{s}.80/18, mb3.7/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.82	105	P	Pn	19 22 55.6	+0.1
TNTI				S	Sn	19 23 07.9	+1.4
SANI	Sanana	3.07	191	P	Pn	19 23 26.0	-0.5
SANI				S	Sn	19 24 02.8	+0.8
GTOI	Gorontalo	3.58	264	P	Pn	19 23 34.4	+0.9
NLAI	Namlea	4.23	173	P	Pn	19 23 42.6	+0.2
LUWI	Luwuk	4.30	242	P	Pn	19 23 43.6	+0.2
MRSI	Marisa	4.66	264	P	Pn	19 23 48.4	+0.1
APSI	Ampana	5.27	249	P	Pn	19 23 56.5	-0.2
	30nm,1.0s						
KKSI	Kolaka, Sulawe	7.10	224	P	Pn	19 24 20.2	-1.7
BNSI	Bone	8.39	230	P	Pn	19 24 40.3	+0.7
	10nm,1.1s						
SPSI	Sidrap Palu	8.39	234	P	Pn	19 24 39.7	+0.1
	12nm,0.7s						
BKSI	Bulukumba	8.99	226	P	Pn	19 24 48.4	+0.6
FITZ	Fitzroy Crossi	18.99	183	P	P	19 26 59.0	+0.2
	0.1nm,0.3s,baz=357,slow=12,SNR=2.0						
	0.8nm,0.4s						
WRA	Warramunga Arr	22.15	160	P	P	19 27 32.6	-0.5
	2.0nm,0.6s,baz=340,slow=11,SNR=14						
	2.0nm,0.6s						
ASAR	Alice Springs	25.52	164	P	P	19 28 05.8	+0.3
	1.0nm,0.8s,baz=342,slow=10,SNR=14						
	1.0nm,0.8s						
MKAR	Makanchi Array	59.72	326	P	P	19 32 40.8	-0.5
	0.2nm,0.3s,baz=122,slow=8.4,SNR=8.5						
	0.2nm,0.3s						
KURBB	Kurchatov Arra	63.96	328	P	P	19 33 08.5	-1.2
	0.8nm,0.3s,baz=129,slow=6.2,SNR=3.4						
	0.8nm,0.3s						

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*DNK **13** 19:25:15.0±4.6, 57°.76N×8°.50E, h0^{km}, ML1.7, ML1.1(BER), Suspected explosion*

BER 13 19:25:17.6±3.3, 57°.83N×8°.38E, h0^{km}, ML1.1, Suspected explosion, Denmark

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOMB	Homborsund	0.45	9	*i* P	Pb	19 25 27.8	-0.5
HOMB				*i* S	Sg	19 25 31.9	0.0
HOMB				IAML		19 25 32.1	
	comp=Z,10nm,0.1s						
HOMB	Homborsund	0.45	9	*i* S	Sg	19 25 31.9	0.0
HOMB	Homborsund	0.45	9	*i* P	Pb	19 25 27.8	-0.5
HOMB				*i* S	Sg	19 25 31.9	0.0
HOMB				IAML		19 25 32.1	
	comp=Z,10nm,0.1s						
HOMB	Homborsund	0.45	9	*i* P	Pb	19 25 27.8	-0.5
SNART	Snartemo	0.80	310	*i* P	Pg	19 25 33.0	0.0
SNART				*i* S	Sg	19 25 40.8	-2.5
SNART				IAML		19 25 42.1	
	comp=Z,14nm,0.2s						
SNART	Snartemo	0.80	310	*i* S	Sg	19 25 40.8	-2.5
SNART	Snartemo	0.80	310	*i* P	Pg	19 25 33.0	0.0
SNART				*i* S	Sg	19 25 40.8	-2.5
SNART				IAML		19 25 42.1	
	comp=Z,14nm,0.2s						
SNART	Snartemo	0.80	310	*i* P	Pg	19 25 33.0	0.0
STRU	Stroemstad	1.91	50	*i* S	Sn	19 26 10.8	-5.2
STRU	Stroemstad	1.91	50	*i* S	Sn	19 26 10.8	-5.2
STRU	Stroemstad	1.91	50	*i* S	Sn	19 26 10.8	-5.2

*IDC **13** 19:52:46.7±6.4, 12.°96N×143.°07E, h0^{km}, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=273.8km s-min=24.7km az=81.0*

ISC 13 19:52:52.1±10.0, 12.°9N±0.°5×14.°3E±°, h35^{km}, n6, σ0.^{s}17/6, mb3.8/6, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	33.75	195	P	P	19 59 30.6	0.0
	0.4nm,0.8s,baz=17,slow=8.9,SNR=1.8						
	0.4nm,0.8s						
ASAR	Alice Springs	37.44	194	P	P	20 00 02.3	0.0
	0.1nm,0.4s,baz=17,slow=8.7,SNR=1.2						
	0.1nm,0.4s						
MKAR	Makanchi Array	60.73	317	P	P	20 03 00.5	+0.2
	0.6nm,1.0s,baz=90,slow=8.6,SNR=5.2						
	0.6nm,1.0s						
ZALV	Zalesovo Beam	61.13	325	P	P	20 03 02.9	+0.1
	0.3nm,0.3s,baz=102,slow=6.6,SNR=1.9						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	63.98	320	P	P	20 03 21.7	-0.2
	0.8nm,0.2s,baz=100,slow=6.9,SNR=4.3						
	0.8nm,0.2s						
BVAR	Borovoye Array	69.34	322	P	P	20 03 56.0	-0.1
	0.5nm,0.5s,baz=106,slow=7.7,SNR=5.2						
	0.5nm,0.5s						

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*IDC **13** 19:55:05.0±3.1, 43.°00N×105.°11W, h0^{km}, mbtmp3.3/2, ML3.1/2, Error ellipse: s-maj=60.6km s-min=10.7km az=157.0*

*NEIC **13** 19:55:06.0±0.9, 43.°62N±0.°05×105.°32W±0.°06, h0^{km}±1^{km}, ML3.2/56, Error ellipse: s-maj=9.8km s-min=6.9km az=326.0*

ISC 13 19:55:05.9±1.0, 43.°59N±0.°05×105.°38W±0.°04, h0^{km}, n48, σ1.^{s}75/47, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.11	61		Pg	19 55 26.6	-0.6
K22A	Casper	1.26	222		Pn	19 55 32.7	+1.7
LAO	LASA Array	3.16	349		Pn	19 55 57.6	+0.7
BW06	Boulder Array	3.17	256	Pn	Pn	19 55 60.0	+2.7
PD31	Pinedale Array	3.17	256	Pn	Pn	19 55 59.8	+2.6
PDAR	Pinedale Array	3.17	256	Pn	Pb	19 56 01.1	-2.1
	1.2nm,0.3s,baz=63,slow=18,SNR=27						
PDAR				Pg	Pg	19 56 07.1	+0.5
	3.8nm,0.3s,baz=64,slow=17,SNR=24						
PDAR				Lg	Lg	19 56 47.7	
	2.2nm,0.3s,baz=65,slow=33,SNR=4.2						
	1.1nm,0.3s						
PDAR	Pinedale Array	3.17	256		Pn	19 55 59.9	+2.6
RLMT	Red Lodge	3.18	300		Pn	19 55 59.8	+2.4
RLMT				IAML		19 57 02.7	
	41nm,1.8s						
HAYD	Hayden	3.37	205	Pn	Pn	19 56 02.7	+2.6
HAYD				IAML		19 57 05.3	
	comp=N,57nm,1.9s						
HAYD				IAML		19 57 55.5	
	comp=E,46nm,1.8s						
YNE	Yellowstone No	3.61	295		Pn	19 56 05.0	+1.6
YNE				IAML		19 57 08.3	
	comp=N,52nm,0.7s						
YNE				IAML		19 57 14.2	
	comp=E,44nm,0.8s						
YMP	Mirror Lake Pl	3.62	290		Pn	19 56 05.3	+1.7
YMP				IAML		19 57 12.5	
	comp=E,62nm,0.7s						
OGNE	Ogallala	3.63	136	Pn	Pn	19 56 05.2	+1.8
ISCO	Idaho Springs	3.79	183		Pn	19 56 08.3	+2.4
ISCO				IAML		19 58 15.3	
	comp=E,24nm,4.0s						
LOHW	Long Hollow	3.80	272		Pn	19 56 08.2	+2.3
LOHW				IAML		19 57 37.3	
	comp=E,24nm,1.5s						
LOHW				IAML		19 57 41.6	
	comp=E,24nm,3.6s						
H17A	Grant Village	3.84	284		Pn	19 56 08.2	+1.7
H17A				IAML		19 57 16.7	
	comp=E,33nm,2.0s						
H17A				IAML		19 57 17.4	
	comp=N,33nm,2.0s						
MOOW	Moose Ponds	3.90	274		Pn	19 56 09.3	+2.0
SNOW	Snow King Moun	3.91	270		Pn	19 56 08.1	+0.5
SNOW				IAML		19 57 35.4	
	comp=N,45nm,1.7s						
YPP	Pitchstone Pla	3.98	282		Pn	19 56 09.5	+1.0
YPP				IAML		19 57 27.5	
	comp=E,27nm,2.4s						
YPP				IAML		19 57 29.0	
	comp=N,24nm,2.0s						
O20A	White River Ci	4.06	213	Pn	Pn	19 56 10.1	+0.5
O20A				IAML		19 57 27.3	
	comp=N,44nm,0.9s						
YHH	Holmes Hill	4.11	289		Pn	19 56 10.7	+0.3
AHID	Auburn Hatcher	4.27	261	Pn	Pn	19 56 13.5	+1.1
AHID				IAML		19 57 32.5	
	comp=N,34nm,0.9s						
AHID				IAML		19 57 40.7	
	comp=N,27nm,1.9s						
RDMU	Red Mountain	4.34	227	Pn	Pn	19 56 12.8	-0.6
RDMU				IAML		19 57 38.3	
	comp=E,36nm,1.2s						
RDMU				IAML		19 57 41.5	
	comp=N,24nm,1.3s						
YHB	Horse Butte	4.34	288	Pn	Pn	19 56 14.1	+0.6
YHL	Hebgen Lake	4.36	289		Pn	19 56 13.7	0.0
YHL				IAML		19 57 41.0	
	comp=N,25nm,1.8s						
YHL				IAML		19 57 56.5	
	comp=E,24nm,2.8s						
BOZ	Bozeman (W)	4.89	296		Pn	19 56 20.1	-0.8
BOZ				IAML		19 57 45.5	
	comp=E,16nm,2.5s						
BOZ				IAML		19 57 51.1	
	comp=E,12nm,2.8s						
DGMT	Dagmar	4.95	9		Pn	19 56 19.9	-1.7
DGMT	Dagmar	4.95	9	Pn	Pn	19 56 19.5	-2.0
DGMT				IAML		19 57 52.8	
	comp=E,106nm,4.7s						
DGMT				IAML		19 57 53.8	
	comp=E,80nm,3.3s						
HWUT	Hardware Ranch	4.98	249		Pn	19 56 27.5	+5.4
BSUT	Blindstream Ca	5.04	235	Pn	Pn	19 56 22.9	-0.1
BSUT				IAML		19 58 19.4	
	comp=N,16nm,1.6s						
BSUT				IAML		19 58 43.6	
	comp=E,16nm,3.1s						
TCUT	Toone Canyon	5.11	243		Pn	19 56 23.5	-0.4
P18A	Preston Nutter	5.38	224		Pn	19 56 31.2	+3.4
DLMT	Dillon	5.46	291		Pn	19 56 30.7	+2.0
MCMT	McKenzie Canyo	5.51	286		Pn	19 56 31.2	+1.7
PV22	Blue Mesa, Par	5.67	208		Pn	19 56 30.6	-1.0
PV15	Paradox Valley	5.75	205		Pn	19 56 31.6	-1.1
P17A	Butcher Ranch,	5.75	226		Pn	19 56 35.5	+2.8
PV23	Carpenter Ridg	5.82	209		Pn	19 56 32.7	-1.1
SDCO	Great Sand Dun	5.84	181		Pn	19 56 36.5	+2.5
MDND	Maddock	5.87	41		Pn	19 56 37.3	+3.2
PV16	Nyswonger Mesa	5.91	208		Pn	19 56 34.5	-0.5
SRU	San Rafael Swe	5.92	223		Pn	19 56 34.7	-0.3
PV19	Morning Glory	5.94	209		Pn	19 56 36.9	+1.5
PV03	Paradox Valley	5.94	207		Pn	19 56 36.7	+1.3
PV02	Paradox Valley	5.95	206		Pn	19 56 36.4	+0.9
PV01	Paradox Valley	5.96	205		Pn	19 56 34.8	-0.9
PV13	Radium Mtn., P	6.02	207		Pn	19 56 36.0	-0.4
I10CA	LAC DU BONNET	9.20	41	I	I	20 51 50.0	
	comp=E,0.1nm,1.3s,baz=220,slow=282,SNR=1.4						
ULM	Lac du Bonnet	9.30	41	Pn	Pn	19 57 22.9	+1.7
	comp=E,0.5nm,0.3s,baz=225,slow=11,SNR=2.3						
ULM				Lg	Lg	19 59 59.2	
	comp=E,0.4nm,0.3s,baz=135,slow=23,SNR=3.0						
	comp=E,1.0nm,0.3s						

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*NEIC **13** 20:08:21.8±1.5, 41.°88N±0.°07×127.°0W±0.°1, h10^{km}±2^{km}, ML3.2/71, Error ellipse: s-maj=17.9km s-min=11.6km az=263.0*

*IDC **13** 20:08:23.9±2.1, 42.°01N×126.°81W, h0^{km}, mb3.4/5, mbtmp3.4/7, ML2.3/3, MS3.1/2, Error ellipse: s-maj=46.2km s-min=15.6km az=37.0*

ISC 13 20:08:23.1±1.2, 41.°89N±0.°06×127.°0W±0.°1, h10^{km}, n64, σ1.^{s}46/56, mb3.4/5, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBO	Bosley Butte	2.05	80	Pn	Pn	20 08 57.3	-0.5
KBO				IAML		20 09 16.4	
	comp=E,183nm,2.9s						
KBO				IAML		20 09 43.9	
	comp=N,181nm,2.3s						
KEBM	Edson Butte	2.17	62	Pn	Pn	20 08 58.9	-0.5
KEBM				IAML		20 09 42.9	
	comp=N,121nm,4.8s						
KEBM				IAML		20 10 06.6	
	comp=E,109nm,3.4s						
KSXB	Camp Six Broad	2.30	90	Pn	Pn	20 09 00.6	-0.5
KRPM	Rodgers	2.32	107	Pn	Pn	20 09 00.8	-0.5
KRPM				IAML		20 09 49.2	
	comp=E,161nm,1.9s						
KRPM				IAML		20 10 10.1	
	comp=N,184nm,3.4s						
JCC	Jacoby Creek,	2.45	115	Pn	Pn	20 09 02.5	-0.5
JCC				IAML		20 09 49.9	
	comp=N,91nm,2.3s						
JCC				IAML		20 10 13.0	
	comp=E,85nm,2.4s						
L02F	Cave Junction	2.53	84	Pn	Pn	20 09 03.7	-0.5
K02D	Willamette Mer	2.57	71	Pn	Pn	20 09 04.2	-0.6
KMPM	Mount Pierce	2.59	124	Pn	Pn	20 09 04.7	-0.5
KMPM				IAML		20 09 32.8	
	comp=N,97nm,3.7s						
KMPM				IAML		20 09 41.7	
	comp=E,119nm,4.5s						
KHMM	Horse Mountain	2.63	112	Pn	Pn	20 09 05.2	-0.5
KHMM				IAML		20 09 56.9	
	comp=E,77nm,2.0s						
KHMM				IAML		20 10 26.3	
	comp=N,67nm,2.3s						
KMRM	Mail Ridge	2.96	123	Pn	Pn	20 09 09.2	-1.0
KMRM				IAML		20 09 35.1	
	comp=E,56nm,4.5s						
M02C	Callahan	3.11	98	Pn	Pn	20 09 11.0	-1.3
YBH	Yreka Blue Hor	3.17	91	Pn	Pn	20 09 14.4	+1.3
	comp=E,0.1nm,0.3s,baz=331,slow=5.5,SNR=11						
YBH				LR	LR	20 10 18.3	
	comp=E,17nm,19.1s,baz=267,slow=37						
YBH	Yreka Blue Hor	3.17	91		Pn	20 09 12.0	-1.2
I02E	Swisshome, OR	3.18	45	Pn	Pn	20 09 12.8	-0.3
I02E				IAML		20 10 05.1	
	comp=N,90nm,1.9s						
I03D	Drain, OR	3.21	55	Pn	Pn	20 09 13.6	+0.1
I03D				IAML		20 10 02.1	
	comp=N,54nm,4.5s						
I03D				IAML		20 10 48.0	
	comp=E,41nm,4.9s						
BBOR	Butler Butte	3.32	71		Pn	20 09 14.8	-0.3
N02D	Trinity Center	3.32	105	Pn	Pn	20 09 14.8	-0.3
N02D				IAML		20 09 59.0	
	comp=N,34nm,4.3s						
L04D	Klamath Falls	3.47	83	Pn	Pn	20 09 15.8	-1.5
L04D				IAML		20 09 57.3	
	comp=E,46nm,3.1s						
L04D				IAML		20 10 21.8	
	comp=N,57nm,4.9s						
O02D	Mt. Diablo Mer	3.58	117	Pn	Pn	20 09 17.7	-1.1
O02D				IAML		20 09 48.3	
	comp=N,28nm,4.9s						
DCMP	DeCamp, Califo	3.66	130	Pn	Pn	20 09 18.2	-1.6
M03C	McCloud	3.67	98		Pn	20 09 18.5	-1.5
M03C				IAML		20 09 59.4	
	comp=N,37nm,2.2s						
M03C				IAML		20 11 14.0	
	comp=E,58nm,3.8s						
BUCK	Buck Mountain	3.71	50	Pn	Pn	20 09 20.0	-0.5
J04A	Umpqua Nationa	3.82	68		Pn	20 09 22.1	-0.1
I04A	Tendick Farm,	3.84	59	Pn	Pn	20 09 21.1	-1.2
I04A				IAML		20 10 22.9	
	comp=N,29nm,2.7s						
I04A				IAML		20 10 25.8	
	comp=E,39nm,3.2s						
H04D	Lebanon	4.05	48		Pn	20 09 23.6	-1.5
HOPS	Hopland Field	4.14	133	Pn	Pn	20 09 25.3	-1.0
HOPS				IAML		20 10 47.8	
	comp=N,36nm,4.0s						
HOPS				IAML		20 11 14.0	
	comp=E,44nm,4.4s						
O03E	Paynes Creek	4.20	111	Pn	Pn	20 09 27.4	+0.1
O03E				IAML		20 11 04.3	
	comp=E,27nm,4.8s						
O03E				IAML		20 12 03.0	
	comp=N,24nm,4.5s						
HATC	Hat Creek Radi	4.27	103	Pn	Pn	20 09 26.8	-1.4
WIFE	Three Sisters-	4.34	58	Pn	Pn	20 09 27.4	-1.9
J05D	Fort Rock, OR	4.44	70	Pn	Pn	20 09 29.4	-1.3
J05D				IAML		20 11 43.5	
	comp=N,31nm,4.4s						
K05A	Summer Lake	4.57	77	Pn	Pn	20 09 31.0	-1.4
K05A				IAML		20 10 08.2	
	comp=E,31nm,5.0s						
K05A				IAML		20 10 16.0	
	comp=N,26nm,4.9s						
G04A	Mulino	4.64	43		Pn	20 09 32.6	-0.6
PINE	Pine Mountain	4.81	65		Pn	20 09 34.6	-1.2
PINE				IAML		20 10 16.7	
	comp=E,27nm,3.3s						
G05A	Wamic	5.29	49	Pn	Pn	20 09 40.2	-1.9
BEKR	Beckworth	5.39	110	Pn	Pn	20 09 40.9	-2.7
I07A	Izee	5.88	66	Pn	Pn	20 09 49.5	-0.9
LON	Longmire	6.10	35		Pn	20 09 52.2	-1.1
PAHR	Pah Rah Range	6.14	108	Pn	Pn	20 09 53.5	-0.5
PMPB	Monarch Peak	7.41	138	Pn	Pn	20 10 09.0	-2.4
LNOR	Lincton Mounta	7.42	55	Pn	Pn	20 10 10.1	-1.3
NVAR	Mina Array Bea	7.47	115	Pn	Pn	20 10 14.6	+2.3
	comp=E,0.1nm,0.3s,baz=299,slow=14,SNR=4.0						
	comp=E,0.2nm,0.5s						
NVAR	Mina Array Bea	7.47	115	Pn	Pn	20 10 10.7	-1.5
EPH	Ephrata	7.57	41	Pn	Pn	20 10 11.3	-2.1
BMO	Blue Mountains	7.62	64		Pn	20 10 12.4	-1.9
D08A	Wollman Farm,	7.72	45	Pn	Pn	20 10 13.9	-1.6
PLID	Pearl Lake	8.58	64	Pn	Pn	20 10 25.3	-2.1
ELK	Elko	8.89	94	Pn	Pn	20 10 34.0	+2.2
	comp=E,0.1nm,0.3s,baz=282,slow=14,SNR=4.0						
	comp=E,0.7nm,0.6s						
PDAR	Pinedale Array	12.90	80	LR	LR	20 15 29.7	
	comp=E,96nm,20.8s,baz=287,slow=33						
ANMO	Albuquerque	17.47	107	LR	LR	20 18 59.9	
	comp=E,69nm,20.5s,baz=302,slow=36						
YKA	Yellowknife Ar	21.90	15	P	P	20 13 17.4	+1.4
	comp=E,1.4nm,1.0s,baz=211,slow=11,SNR=9.2						
	comp=E,1.4nm,1.0s						
YKA	Yellowknife Ar	21.90	15	P	P	20 13 15.3	-0.7
TXAR	Lajitas Array	22.62	116	P	P	20 13 27.6	+3.5
	comp=E,0.4nm,0.7s,baz=308,slow=9.7,SNR=3.7						
	comp=E,0.4nm,0.7s						
TXAR	Lajitas Array	22.62	116	P	P	20 13 21.3	-2.8
ULM	Lac du Bonnet	22.99	58	P	P	20 13 28.8	+1.0
	comp=E,1.4nm,0.6s,baz=284,slow=8.3,SNR=1.8						
	comp=E,1.4nm,0.6s						
ILAR	Eielson Array	25.60	340	P	P	20 13 53.8	+1.7
	comp=E,0.8nm,0.9s,baz=137,slow=9.2,SNR=7.0						
	comp=E,0.8nm,0.9s						
ILAR	Eielson Array	25.60	340	P	P	20 13 50.9	-1.3
H11N3	WAKE ISLAND Hy	59.49	270	T	T	21 22 44.5	
	baz=52,slow=75,SNR=37						
H11N2	WAKE ISLAND Hy	59.50	270	T	T	21 22 43.6	
	baz=52,slow=75,SNR=36						
H11N1	WAKE ISLAND Hy	59.51	270	T	T	21 22 45.9	
	baz=52,slow=75,SNR=42						
H11S1	WAKE ISLAND Hy	60.39	269	T	T	21 23 53.1	
	baz=52,slow=75,SNR=36						
H11S2	WAKE ISLAND Hy	60.40	269	T	T	21 23 51.4	
	baz=52,slow=75,SNR=29						
H11S3	WAKE ISLAND Hy	60.41	269	T	T	21 23 50.6	
	baz=52,slow=75,SNR=21						
KURK	Kurchatov	85.11	344	P	P	20 20 57.4	-1.5
KURBB	Kurchatov Arra	85.21	344	P	P	20 21 00.9	+1.4
	comp=E,1.1nm,1.1s,baz=21,slow=3.1,SNR=6.0						
	comp=E,1.1nm,1.1s						

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*JMA **13** 20:16:02.6±0.2, 25°N±2°×122.°5E±0.°9, h32^{km}, MV2.9/9, NW OFF ISHIGAKIJIMA IS*

*TAP **13** 20:16:03.0, 24.°87N×122.°46E, h8^{km}±1^{km}, ML3.9, C*

*IDC **13** 20:16:27.4±9.6, 25.°22N×122.°05E, h217^{km}±106^{km}, mb3.2/8, mbtmp3.8/9, MS3.3/13, Error ellipse: s-maj=73.8km s-min=13.8km az=63.0*

ISC 13 20:16:02.4±1.2, 24.°90N±0.°03×122.°52E±0.°03, h14^{km}±9^{km}, n105, σ0.^{s}55/111, mb3.7/8, MS3.3/12, 3C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.49	283	*i* P	Pb	20 16 12.6	-0.2
TWB1				*i* S	Sb	20 16 19.6	-0.3
EGS		0.53	264	⇑*i*P	Pb	20 16 13.5	-0.1
EGS				S	Sb	20 16 20.8	-0.3
EOS2	EOS2	0.54	209	*i* P	Pb	20 16 14.1	+0.5
EOS2				*i* S	Sb	20 16 21.2	0.0
JYNG	Yonagunijimaku	0.59	139	P	Pg	20 16 14.1	+0.1
JYNG				S	Sg	20 16 22.5	+0.6
SXI1	Grass Mountain	0.61	289	⇓*i*P	Pb	20 16 15.3	+0.3
SXI1				*e*S	Sb	20 16 23.2	-0.3
YOJ	Yonaguni jima	0.62	134	⇑*i*P	Pg	20 16 14.8	+0.2
YOJ	Yonaguni jima	0.62	134	P	Pg	20 16 14.9	+0.3
TIPB	Shuangxi	0.63	277	*e*P	Pb	20 16 15.6	+0.3
TIPB				*e*S	Sb	20 16 24.2	+0.2
EOS3	EOS3	0.64	197	P	Pb	20 16 16.0	+0.8
TWC	Suao	0.67	245	*i* P	Pg	20 16 15.3	-0.2
TWC				S	Sb	20 16 25.3	+0.2
NWF	Wu-fen Shan	0.69	285	*e*P	Pb	20 16 16.5	+0.2
NWF				S	Sb	20 16 26.1	+0.4
WFSB	Wu-fen Shan	0.69	285	*e*P	Pn	20 16 17.2	-0.6
WFSB				*e*S	Sn	20 16 26.7	-1.6
ESAO	Su ao	0.69	242	P	Pb	20 16 16.2	0.0
ESAO				S	Sb	20 16 25.5	-0.2
ILA	Ilan	0.71	259	*e*P	Pn	20 16 17.2	-0.8
TNOU	National Taiwa	0.72	291	P	Pb	20 16 17.0	+0.2
TNOU				*e*S	Sb	20 16 27.4	+0.9
NDS	Dongshan	0.77	250	P	Pb	20 16 17.5	-0.2
NDS				S	Sb	20 16 28.6	+0.5
TWE	Neicheng	0.79	257	⇑*i*P	Pb	20 16 18.1	+0.2
TWE				*i* S	Sb	20 16 29.0	+0.4
EOS4	EOS4	0.80	193	P	Pn	20 16 19.0	+0.1
EWUT	Wuta	0.81	236	*e*P	Pg	20 16 17.9	-0.3
EWUT				*e*S	Sb	20 16 30.2	+1.2
PCYT	Pengchaiyu	0.83	331	P	Pn	20 16 19.7	0.0
ENA	Nanau	0.85	237	*i* P	Pg	20 16 18.6	-0.2
ENA				*i* S	Sn	20 16 31.7	-0.4
TWA	Mucha	0.85	276	P	Pn	20 16 19.8	-0.2
FUSB	Fushanzhiwuyua	0.86	261	P	Pb	20 16 19.1	0.0
NHY	Taipei	0.87	279	*e*P	Pn	20 16 20.1	-0.2
YM08	YM08	0.89	289	P	Pn	20 16 20.5	0.0
YM08				*e*S	Sn	20 16 32.8	-0.5
YM01	YM01	0.89	286	P	Pn	20 16 20.2	-0.4
ENTT	Nioudou	0.90	254	*i* P	Pb	20 16 20.0	+0.2
ENTT				*i* S	Sb	20 16 32.0	+0.3
NHDH	Xindian Distri	0.90	274	*e*P	Pb	20 16 19.9	+0.1
EAHA	Aohua	0.91	232	P	Pg	20 16 19.7	-0.2
TWY	Chenhua	0.91	295	*i* P	Pn	20 16 21.2	+0.4
TWY				*i* S	Sn	20 16 34.5	+0.7
ZUZH	Zhuzihu	0.92	287	*e*P	Pn	20 16 21.3	+0.3
NWLT	Wulai	0.93	263	*e*P	Pg	20 16 19.9	-0.5
TATO	Taipei	0.94	275	P	Pb	20 16 20.3	-0.1
ANP	Anpu	0.95	288	*e*P	Pn	20 16 21.1	-0.3
LATG	Datong	0.97	248	*e*P	Pg	20 16 20.6	-0.6
NTST	Danshui	1.00	286	*e*P	Pn	20 16 22.4	+0.3
TWS1	Kuangyinshan	1.02	282	*i* P	Pb	20 16 21.6	-0.2
YHNB	Yeheng	1.06	258	P	Pg	20 16 22.5	-0.4
YHNB	Yeheng	1.06	258	*e*P	Pn	20 16 22.8	-0.2
NSK	Sanguang	1.08	258	*i* P	Pn	20 16 23.2	+0.1
ETL	Fush Village	1.10	228	P	Pb	20 16 23.1	-0.1
ETL				S	Sn	20 16 38.5	+0.1
NACB	Ninganchiao	1.11	230	P	Pb	20 16 22.5	-0.8
NACB	Ninganchiao	1.11	230	P	Pb	20 16 23.4	+0.1
NACB				*e*S	Sg	20 16 38.3	+0.1
NNSB	Datong	1.13	246	P	Pn	20 16 24.1	+0.1
NNSB				*e*S	Sn	20 16 40.2	+0.8
NNS	Nan Shan	1.14	247	P	Pg	20 16 24.2	-0.2
ETLH	Xiulin Townshi	1.17	234	*e*P	Pg	20 16 24.7	-0.3
TWD	Chiawan	1.17	226	*e*P	Pn	20 16 24.5	+0.2
NCU	National Centr	1.21	274	*e*P	Pn	20 16 24.1	-0.8
NCUH	Zhongli	1.21	274	*e*P	Pn	20 16 24.7	-0.3
KSHI	Guanxi Townshi	1.22	265	*e*P	Pg	20 16 25.7	-0.3
HWA	Hwalien	1.24	222	*e*P	Pn	20 16 24.2	-1.0
IRIF	Iriomote-Funau	1.24	117	*e*P	Pn	20 16 23.8	-1.5
NFF	Wufeng Townshi	1.30	259	*e*P	Pn	20 16 25.8	-0.4
ETM	Tongmen	1.32	225	*e*P	Pn	20 16 26.1	-0.3
TEYL	Yanliau Villag	1.32	219	*e*P	Pn	20 16 25.3	-1.2
FUSS	Fushou	1.33	241	*e*P	Pg	20 16 27.7	-0.3
LXIB	Xiulin Townshi	1.33	229	*e*P	Pb	20 16 27.1	-0.1
WHF	Hehuan Shan	1.36	237	*e*P	Pg	20 16 28.3	-0.4
TWT	Tachien	1.38	243	*e*P	Pg	20 16 29.4	+0.4
LIOB	Emei	1.39	260	*e*P	Pb	20 16 27.8	-0.3
TDCB	Techi	1.39	243	*e*P	Pg	20 16 28.9	-0.3
SBCB	Hsinchu	1.40	266	*e*P	Pb	20 16 28.3	+0.1
NSTT	Nanjuang	1.40	259	*e*P	Pg	20 16 29.3	-0.1
SHUL	Shoufeng	1.41	218	*e*P	Pg	20 16 29.9	+0.5
HSN	Hsinchu	1.41	266	*e*P	Pg	20 16 29.0	-0.5
ESL	Shilin	1.46	223	*e*P	Pg	20 16 30.0	-0.5
JKRS	Kuro-shima	1.51	116	*e*P	Pn	20 16 27.9	-1.1
OWD	Renai	1.54	233	*e*P	Pb	20 16 30.4	-0.5
WHP	Taichung City	1.56	247	*e*P	Pg	20 16 32.4	0.0
WUSB	Renai	1.56	235	*e*P	Pb	20 16 30.9	-0.3
WARBT	Fenglin Townsh	1.56	222	*e*P	Pn	20 16 29.8	0.0
EGFH	Guangfu	1.58	219	*e*P	Pn	20 16 30.5	+0.5
NMLH	Miaoli	1.61	257	*e*P	Pb	20 16 31.9	0.0
TWQ1	Liyutan	1.68	251	*e*P	Pb	20 16 32.3	-0.8
WCS	Beigang Elemen	1.69	241	*e*P	Pg	20 16 34.0	-0.8
VWDT	VWDT	1.69	228	*e*P	Pn	20 16 32.5	+0.9
HGSD	Ruisui	1.72	216	*e*P	Pb	20 16 33.5	-0.3
EHYH	Wanrong	1.76	218	*e*P	Pb	20 16 34.5	+0.1
EHY	Hungye	1.76	218	*e*P	Pn	20 16 32.8	+0.3
TYC	Yuchr	1.81	237	*e*P	Pb	20 16 35.3	0.0
TCU	Taichung	1.84	246	*e*P	Pn	20 16 34.0	+0.4
YULB	Yu-li	1.87	217	P	Pb	20 16 35.3	-1.0
TPUB	Ta-pu	2.35	228	P	Pb	20 16 43.2	-1.3
TWGBT	Beinan	2.45	213	P	Pb	20 16 45.0	-1.3
KSRS	Korea Array	13.34	19	P	P	20 19 26.1	+5.2
	3.2nm,0.9s,baz=186,slow=12,SNR=10						
MJAR	Matsushiro Arr	17.77	46	LR	LR	20 27 22.4	
	comp=Z,76nm,19.3s,baz=230,slow=37						
CMAR	Chiang Mai Arr	22.81	258	LR	LR	20 30 06.9	
	comp=Z,37nm,20.1s,baz=80,slow=36						
ASAJ	Asahikawa	25.21	35	LR	LR	20 32 02.9	
	comp=Z,78nm,19.1s,baz=184,slow=37						
SONM	Songino Array	26.21	335	P	P	20 21 38.3	+1.5
	1.7nm,0.9s,baz=156,slow=10,SNR=8.7						
SONM				LR	LR	20 32 23.4	
	comp=Z,100nm,18.1s,baz=168,slow=37						
	1.7nm,0.9s						
KAPI	Kappang	29.85	186	LR	LR	20 35 25.5	
	comp=Z,18nm,19.5s,baz=353,slow=38						
PSI	Prapat	31.62	230	LR	LR	20 34 16.3	
	comp=Z,38nm,19.7s,baz=4.5,slow=34						
YAK	Yakutsk	37.44	6	LR	LR	20 40 59.6	
	comp=Z,50nm,18.6s,baz=118,slow=40						
PETK	Petropavlovsk-	38.60	34	LR	LR	20 39 16.5	
	comp=Z,45nm,21.8s,baz=272,slow=36						
MKAR	Makanchi Array	38.69	315	P	P	20 23 25.8	0.0
	1.2nm,0.9s,baz=104,slow=10,SNR=7.7						
	1.2nm,0.9s						
MA2	Magadan	39.87	22	LR	LR	20 40 52.1	
	comp=Z,56nm,18.1s,baz=170,slow=37						
ZALV	Zalesovo Beam	40.32	326	P	P	20 23 39.1	-0.1
	0.8nm,0.8s,baz=101,slow=6.2,SNR=5.5						
	0.8nm,0.8s						
KURBB	Kurchatov Arra	42.36	319	P	P	20 23 55.1	-0.9
	1.3nm,1.0s,baz=114,slow=7.8,SNR=7.8						
	1.3nm,1.0s						
WRA	Warramunga Arr	46.03	164	P	P	20 24 31.6	+5.9
	1.4nm,0.7s,baz=346,slow=8.6,SNR=5.8						
	1.4nm,0.7s						
TIXI	Tiksi	46.92	3	LR	LR	20 46 02.3	
	comp=Z,75nm,18.1s,baz=194,slow=38						
BVAR	Borovoye Array	47.90	320	P	P	20 24 39.9	-0.1
	0.9nm,0.7s,baz=104,slow=9.6,SNR=4.7						
	0.9nm,0.7s						
NRIK	Noril'sk	49.04	344	P	P	20 24 48.4	-0.1
	0.7nm,0.3s,baz=121,slow=6.4,SNR=4.0						
	0.7nm,0.3s						
ASAR	Alice Springs	49.52	166	P	P	20 25 00.1	+7.3
	0.6nm,0.8s,baz=345,slow=8.0,SNR=7.1						
	0.6nm,0.8s						
CTA	Charters Tower	50.33	151	LR	LR	20 45 04.2	
	comp=Z,24nm,21.2s,baz=37,slow=34						
AKTO	Aktyubinsk	55.12	315	LR	LR	20 49 19.0	
	comp=Z,72nm,19.6s,baz=214,slow=36						
ARTI	Arti	55.37	323	LR	LR	20 52 52.9	
	comp=Z,71nm,20.2s,baz=234,slow=40						

*NOU **13** 20:17:53.1, 39°.34S×174°.36E, h230km, MLv3.9/7, North Island, New Zealand*
*WEL **13** 20:17:58.7±0.9, 40°S±5°×17°4E±°, h183km±7km, M2.6/13, ML2.4/7, MLv2.6/13, Error ellipse: s-maj=8.8km s-min=5.2km az=123.1, confirmed*
ISC 13 20:17:52.1±1.8, **39°.40S**±0°.07×**174°.34E**±0°.07, **h225**km±11km, **n80**, σ**1s.75**/101, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WNVZ	Wahianoa	0.98	86	P	Pn	20 18 26.6	+2.0
WNVZ				S	S	20 18 48.6	-1.3
WTVZ	West Tongariro	1.01	74	P	Pn	20 18 26.7	+1.9
WTVZ				S	S	20 18 47.7	-2.5
MOVZ	Moawhango	1.10	91	P	Pn	20 18 26.8	+1.5
MOVZ				S	S	20 18 48.6	-2.4
TMVZ	Te Maari	1.10	76	P	Pn	20 18 27.6	+2.3
TMVZ				S	S	20 18 50.0	-1.1
TSZ	Takapari Road	1.42	118	P	Pn	20 18 29.4	+2.0
TSZ				S	S	20 18 53.8	-1.2
DUWZ	D'Urville Isla	1.44	193	P	Pn	20 18 29.7	+2.1
DUWZ				S	S	20 18 54.0	-1.4
KIW	Kapiti Island	1.53	164	P	Pn	20 18 30.1	+1.8
KIW				S	S	20 18 54.5	-2.1
PNHZ	Pukenui	1.53	110	P	Pn	20 18 30.4	+2.0
PNHZ				S	S	20 18 55.3	-1.3
OGWZ	Otaki Gorge	1.55	156	P	Pn	20 18 30.5	+2.0
OGWZ				S	S	20 18 55.4	-1.6
MRZ	Mangatainoka R	1.58	143	P	Pn	20 18 30.4	+1.7
MRZ				S	S	20 18 55.6	-1.8
KRHZ	Kereru	1.59	100	P	Pn	20 18 30.5	+1.6
KRHZ				S	S	20 18 56.4	-1.1
KWHZ	Kaweka Forest	1.61	92	P	Pn	20 18 31.4	+2.2
DVHZ	Dannevirke	1.67	123	P	Pn	20 18 31.3	+1.7
DVHZ				S	S	20 18 55.9	-2.8
BKZ	Black Stump Fm	1.69	83	P	Pn	20 18 31.3	+1.5
BKZ				S	S	20 18 56.8	-2.2
PRWZ	Pori Road	1.71	133	P	Pn	20 18 31.8	+2.0
PRWZ				S	S	20 18 56.5	-2.8
HOWZ	Holdsworth Sta	1.75	149	P	Pn	20 18 31.7	+1.5
HOWZ				S	S	20 18 58.0	-2.0
WPHZ	Waipukurau	1.75	113	P	Pn	20 18 32.3	+2.0
WPHZ				S	S	20 18 58.6	-1.4
CAW	Cannon Point	1.80	162	P	Pn	20 18 32.5	+1.9
CAW				S	S	20 18 59.4	-1.4
TCW	Tory Channel	1.81	181	P	Pn	20 18 32.9	+2.2
TCW				S	S	20 18 59.3	-1.7
TIWZ	Tintock	1.82	140	P	Pn	20 18 32.6	+1.7
MCHZ	McNeill Hill	1.83	92	P	Pn	20 18 33.6	+2.6
TKNZ	Takaka Hill	1.94	212	P	Pn	20 18 33.6	+1.6
BFZ	Birch Farm	1.95	132	P	Pn	20 18 33.7	+1.7
BFZ	Birch Farm	1.95	132	P	Pn	20 18 33.7	+1.7
BFZ				S	S	20 19 01.1	-2.1
ANWZ	Angora Road	1.96	124	P	Pn	20 18 34.3	+2.2
ANWZ				S	S	20 19 01.7	-1.6
NNZ	Nelson	1.96	202	P	Pn	20 18 34.1	+1.9
PRHZ	Porangahau	1.97	117	P	Pn	20 18 34.4	+2.1
MTW	Mount Morrison	1.97	154	P	Pn	20 18 33.7	+1.4
MTW				S	S	20 19 02.8	-0.8
QRZ	Quartz Range	1.99	224	P	Pn	20 18 34.2	+1.8
QRZ	Quartz Range	1.99	224	P	Pn	20 18 33.9	+1.5
KAHZ	Kahuranaki	2.00	102	P	Pn	20 18 35.0	+2.4
PXZ	Pawanui	2.05	109	P	Pn	20 18 35.1	+2.1
TUWZ	Tuamarina	2.05	188	P	Pn	20 18 35.8	+2.8
ARHZ	Aropaoanui	2.06	87	P	Pn	20 18 35.6	+2.4
CPWZ	Castlepoint	2.08	137	P	Pn	20 18 35.5	+2.2
TMWZ	Te Maipa	2.08	146	P	Pn	20 18 34.9	+1.6
MUGZ	Murupara	2.11	65	P	Pn	20 18 34.7	+1.0
MSWZ	Moikau Station	2.13	161	P	Pn	20 18 35.2	+1.3
PAWZ	Paruwai Farm	2.15	158	P	Pn	20 18 35.5	+1.4
TRWZ	Traveller	2.25	153	P	Pn	20 18 36.5	+1.5
MRNZ	Matariki Terra	2.33	211	P	Pn	20 18 37.6	+1.7
BSWZ	Blackbirch Sta	2.34	189	P	Pn	20 18 38.1	+2.2
URZ	Urewera	2.44	63	P	Pn	20 18 38.0	+0.9
URZ	Urewera	2.44	63	P	Pn	20 18 37.8	+0.8
THZ	Tophouse	2.60	204	P	Pn	20 18 40.7	+1.9
KNZ	Kokohu	2.62	83	P	Pn	20 18 40.8	+1.9
MWZ	Matawai	2.71	68	P	Pn	20 18 41.0	+1.1
RIGZ	Rimuhau	2.75	77	P	Pn	20 18 42.2	+1.7
MHGZ	Mahia Peninsul	2.78	86	P	Pn	20 18 42.8	+2.1
PRGZ	Paritu Road	2.80	81	P	Pn	20 18 42.7	+1.8
TKGZ	Te Karaka	2.90	72	P	Pn	20 18 43.9	+1.9
RUGZ	Raukumara Rang	2.98	62	P	Pn	20 18 43.4	+0.4
DSZ	Denniston Nort	3.04	219	P	Pn	20 18 45.0	+1.4
KHZ	Kahutara	3.08	191	P	Pn	20 18 46.1	+2.2
KHZ	Kahutara	3.08	191	P	Pn	20 18 45.8	+1.9
TWGZ	Tauwhareparae	3.10	68	P	Pn	20 18 46.4	+2.1
CNGZ	Carnagh Statio	3.15	74	P	Pn	20 18 47.0	+2.1
HAZ	Te Kaha	3.16	60	P	Pn	20 18 45.3	+0.4
PKGZ	Pakihiroa	3.31	64	P	Pn	20 18 47.6	+0.9
PUZ	Puketiti	3.34	68	P	Pn	20 18 47.9	+0.9
WMGZ	Waiomatatini S	3.56	65	P	Pn	20 18 50.3	+0.7
GVZ	Greta Valley S	3.70	195	P	Pn	20 18 52.3	+1.1
LTZ	Lake Taylor	3.72	204	P	Pn	20 18 53.0	+1.5
INZ	Inchbonnie	3.98	212	P	Pn	20 18 55.9	+1.4
AMCZ	Amberley	3.98	198	P	Pn	20 18 55.7	+1.2
OXZ	Oxford	4.29	203	P	Pn	20 18 59.2	+0.9
OKCZ	Okains Bay	4.43	192	P	Pn	20 19 01.2	+1.1
MQZ	McQueen's Vall	4.49	196	P	Pn	20 19 00.8	+0.1
WVZ	Waitaha Valley	4.57	215	P	Pn	20 19 03.3	+1.6
AKCZ	Akaroa Harbour	4.60	193	P	Pn	20 19 02.8	+0.8
MHCZ	Mount Hutt	4.62	206	P	Pn	20 19 03.2	+0.7
RPZ	Rata Peaks	4.97	209	P	Pn	20 19 08.0	+1.3
RPZ	Rata Peaks	4.97	209	P	Pn	20 19 07.5	+0.8
ARCZ	Arundel	5.12	206	P	Pn	20 19 09.3	+0.6
FOZ	Fox Glacier	5.35	218	P	Pn	20 19 12.6	+1.2
TMZ	Timaru	5.57	205	P	Pn	20 19 15.4	+1.1
JCZ	Jackson Bay	6.25	220	P	Pn	20 19 25.1	+2.1
JCZ	Jackson Bay	6.25	220	P	Pn	20 19 24.2	+1.2
ODZ	Otahua Downs	6.27	205	P	Pn	20 19 24.6	+1.5
ODZ	Otahua Downs	6.27	205	P	Pn	20 19 24.6	+1.5

BER 13 20:23:01.1±1.3, **73°.43N**×**7°.68E**, **h10**km, **Mw3.8**, **Confirmed Earthquake**, **Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BEA1	Bear Island, N	3.32	66	*e*P	Pn	20 23 50.8	-2.2
BJO1	Bjornoya	3.32	66	*e*P	Pn	20 23 50.9	-2.1
TRO	Tromso	5.22	131	*e*P	Pn	20 24 16.8	-2.2
TRO				IAML		20 24 16.9	
	comp=Z,2.5nm,0.3s						
SPA0	Spitsbergen Ar	5.22	20	*e*P	Pn	20 24 17.6	-1.5
JETT	Jettan, Norway	5.61	128	*e*P	Pn	20 24 21.8	-2.6
JETT				IAML		20 24 23.4	
	comp=Z,1.2nm,0.3s						
HAMF	Hammerfest	5.67	112	*e*P	Pn	20 24 23.0	-2.3
STEI	Steigen	6.06	152	*e*P	Pn	20 24 27.9	-2.7
STEI				IAML		20 24 28.4	
	comp=Z,2.2nm,0.6s						
KIF	Kilpisjarvi	6.12	130	*e*P	Pn	20 24 29.4	-2.1
ARA0	ARCESS Array S	6.87	116	*e*P	Pn	20 24 39.6	-2.1
ARA0				IAML		20 24 42.9	
	comp=Z,1.3nm,0.7s						
VAGH	Vaagaholmen	6.99	161	*e*P	Pn	20 24 40.0	-3.3
SALU	Saltoluokta	7.07	144	*e*P	Pn	20 24 43.2	-1.3
KEV	Kevo	7.12	112	*e*P	Pn	20 24 43.1	-2.0
RAUS	Rausandaksla	7.35	160	*e*P	Pn	20 24 45.8	-2.5
RAUS				IAML		20 24 51.6	
	comp=Z,2.2nm,0.6s						
STOK	Stokkvaagen	7.36	163	*e*P	Pn	20 24 45.4	-3.0
STOK				IAML		20 24 51.8	
	comp=Z,3.9nm,0.7s						
LEIR	Leirfjorden	7.58	163	*e*P	Pn	20 24 48.6	-2.8
LEIR				IAML		20 24 50.3	
	comp=Z,2.7nm,0.6s						

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*NEIC **13** 20:40:32.5±2.0, 18°.81N±0°.06×145°.7E±0°.1, h208km±7km, mb4.4/52, Error ellipse: s-maj=17.8km s-min=9.1km az=83.0*
*IDC **13** 20:40:35.0±1.9, 18°.77N×145°.69E, h235km±18km, mb3.3/16, mbtmp4.0/19, Error ellipse: s-maj=20.7km s-min=10.0km az=83.0*
ISC 13 20:40:32.6±0.5, **18°.79N**±0°.05×**145°.64E**±0°.09, **h214**km, **n80**, σ**1s.12**/85, **mb4.2**/36, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DPSS	Saipan	3.53	178		Pn	20 41 28.7	-0.5
DPSS				Sn	S	20 42 10.8	-2.7
GUMO	Guam	5.22	188	P	Pn	20 41 54.2	+3.9
	66nm,0.8s,baz=67,slow=15,SNR=1.8						
GUMO				S	S	20 42 52.7	+1.3
	46nm,0.3s,baz=214,slow=20,SNR=4.2						
GUMO	Guam	5.22	188	Pn	Pn	20 41 50.3	+0.1
GUMO				Sn	S	20 42 48.9	-2.6
JCJ	Chichijima	8.86	340	Pn	Pn	20 42 34.6	-2.3
JCJ				Sn	S	20 44 13.4	-3.3
JHJ2	Mitsune	15.19	341	P	Pn	20 43 54.3	-2.2
JOW	Kunigami	17.89	300	P	Pn	20 44 29.2	+0.6
	25nm,0.4s,baz=124,slow=14,SNR=10.0						
JOW	Kunigami	17.89	300	P	Pn	20 44 28.9	+0.2
JMN	Monobe	18.22	327	P	P	20 44 31.1	+1.2
JMN				IAmb	IAmb	20 45 06.7	
	comp=Z,22nm,1.2s						
JGF	Kuroka	18.28	338	P	Pn	20 44 33.6	+0.3
JGF				IAmb	IAmb	20 44 47.8	
	comp=Z,12nm,1.2s						
MJAR	Matsushiro Arr	18.86	341	P	Pn	20 44 39.5	-0.5
	comp=Z,1.6nm,0.7s,baz=168,slow=10,SNR=6.3						
MJAR	Matsushiro Arr	18.86	341	P	P	20 44 38.6	+1.8
MAJO	Matsushiro	18.86	341	P	Pn	20 44 39.5	-0.5
MAJO				IAmb	IAmb	20 45 15.5	
	comp=Z,13nm,1.2s						
YULB	Yu-li	23.16	286	P	P	20 45 20.2	-0.1
YULB				IAmb	IAmb	20 45 27.4	
	comp=Z,16nm,1.1s						
YHNB	Yeheng	23.28	289		P	20 45 21.5	0.0
TWG	Pinlang	23.31	284	P	P	20 45 21.6	-0.1
TPUB	Ta-pu	23.76	285	P	P	20 45 25.9	+0.1
KSRS	Korea Array	24.22	324	P	P	20 45 31.0	+1.3
	comp=Z,0.9nm,0.6s,baz=147,slow=10,SNR=2.3						
	comp=Z,0.9nm,0.6s						
FAKI	Fak Fak	25.28	213	P	P	20 45 38.9	-0.7
JKA	Kamikawa-asahi	25.38	355	P	P	20 45 40.6	+0.4
KKM	Kota Kinabalu	31.34	250	P	P	20 46 33.7	+0.2
COEN	Coen	32.63	184	P	P	20 46 44.5	0.0
COEN				IAmb	IAmb	20 47 09.6	
	comp=Z,10nm,1.4s						
MTN	Manton Dam	34.53	206	P	P	20 47 01.2	+0.3
MTN				IAmb	IAmb	20 47 15.9	
	comp=Z,20nm,1.3s						
SOEI	Soe	35.34	218	P	P	20 47 06.3	-1.7
SOEI				IAmb	IAmb	20 47 13.9	
	comp=Z,12nm,0.9s						
SBUM	Sibu	36.53	248	P	P	20 47 18.6	+0.6
KNRA	Kununurra	38.07	207	P	P	20 47 31.1	+0.3
WB0	Warramunga Arr	39.87	197	P	P	20 47 46.4	+0.6
WRAB	Tennant Creek	40.04	197	P	P	20 47 47.6	+0.4
WRA	Warramunga Arr	40.05	197	P	P	20 47 48.1	+0.8
	comp=Z,12nm,0.6s,baz=22,slow=9.1,SNR=52						
WRA	Warramunga Arr	40.05	197	P	P	20 47 46.6	-0.6
JAGI	Jajag, Banyuwa	41.21	232	P	P	20 47 55.6	-1.2
JAGI				IAmb	IAmb	20 48 21.9	
	comp=Z,17nm,1.2s						
FITZ	Fitzroy Crossi	41.59	209	P	P	20 48 00.3	+0.5
	comp=Z,2.5nm,0.2s,baz=28,slow=5.9,SNR=23						
	comp=Z,2.5nm,0.2s						
FITZ	Fitzroy Crossi	41.59	209	P	P	20 48 00.2	+0.4
SONM	Songino Array	43.04	321	P	P	20 48 13.6	+2.2
	comp=Z,0.2nm,0.4s,baz=107,slow=6.6,SNR=2.7						
	comp=Z,0.2nm,0.4s						
AS31	Alice Springs	43.72	196	P	P	20 48 16.1	-0.8
ASAR	Alice Springs	43.72	196	P	P	20 48 17.6	+0.7
	comp=Z,1.3nm,0.5s,baz=19,slow=8.1,SNR=21						
	comp=Z,1.3nm,0.5s						
ASAR	Alice Springs	43.72	196	P	P	20 48 16.6	-0.4
CMAR	Chiang Mai Arr	44.16	277	P	P	20 48 22.1	+1.6
	comp=Z,0.9nm,0.7s,baz=63,slow=7.6,SNR=9.0						
	comp=Z,0.9nm,0.7s						
CMAR	Chiang Mai Arr	44.16	277	P	P	20 48 21.0	+0.5
EIDS	Eidsvold	44.21	173	P	P	20 48 20.2	-0.5
EIDS				IAmb	IAmb	20 48 51.8	
	comp=Z,20nm,1.4s						
DZM	Mont Dzumac	45.42	152	P	P	20 48 29.3	-1.1
DZM				IAmb	IAmb	20 49 04.9	
	comp=Z,13nm,1.3s						
KULM	Kulim	45.86	259	P	P	20 48 35.0	+1.0
KULM				IAmb	IAmb	20 49 10.3	
	comp=Z,35nm,1.5s						
MBWA	Marble Bar	47.12	214	P	P	20 48 43.5	-0.1
MBWA				IAmb	IAmb	20 48 54.6	
	comp=Z,16nm,1.3s						
PSA00	Pilbara Seismi	47.40	213	P	P	20 48 45.4	-0.3
PSA00				IAmb	IAmb	20 49 01.2	
	comp=Z,13nm,1.4s						
PSA00	Pilbara Seismi	47.40	213	P	P	20 48 45.6	-0.1
PSA00				IAmb	IAmb	20 48 47.3	
	comp=Z,2.9nm,0.9s						
SHL	Shillong	49.97	288	P	P	20 49 05.6	+0.1
GSI	Gunungsitoli	50.20	255	P	P	20 49 07.6	+0.4
STKA	Stephens Creek	50.52	184	P	P	20 49 09.7	+0.4
	comp=Z,0.9nm,0.5s,baz=354,slow=10,SNR=2.1						
	comp=Z,0.9nm,0.5s						
STKA	Stephens Creek	50.52	184	P	P	20 49 08.5	-0.7
STKA				IAmb	IAmb	20 49 34.6	
	comp=Z,30nm,1.4s						
PBA	Port Blair	51.39	270	P	P	20 49 15.7	-0.3
FORT	Forrest	52.10	199	P	P	20 49 20.8	-0.1
FORT				IAmb	IAmb	20 49 36.9	
	comp=Z,5.3nm,0.9s						
BBOO	Buckleboo	52.12	190	P	P	20 49 20.2	-0.9
BBOO				IAmb	IAmb	20 49 36.7	
	comp=Z,21nm,1.4s						
MORW	Morawa	55.50	212	P	P	20 49 45.6	0.0
MORW				IAmb	IAmb	20 50 06.8	
	comp=Z,11nm,1.4s						
ZALV	Zalesovo Beam	57.91	322	P	P	20 50 01.4	-0.8
	comp=Z,0.4nm,0.5s,baz=99,slow=8.9,SNR=2.0						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	58.37	314	P	P	20 50 05.8	+0.3
	comp=Z,0.8nm,0.5s,baz=89,slow=7.9,SNR=15						
MKAR				PcP	PcP	20 50 53.8	-0.2
	comp=Z,0.3nm,0.5s,baz=69,slow=4.9,SNR=7.1						
	comp=Z,0.8nm,0.5s						
MAKZ	Makanchi	58.58	314	P	P	20 50 06.6	-0.4
KURK	Kurchatov	61.17	318	P	P	20 50 24.4	-0.1
KURBB	Kurchatov Arra	61.22	318	P	P	20 50 24.7	-0.2
	comp=Z,1.0nm,0.6s,baz=92,slow=7.4,SNR=27						
	comp=Z,1.0nm,0.6s						
NRIK	Noril'sk	61.51	340	P	P	20 50 26.6	+0.1
	comp=Z,1.4nm,0.4s,baz=108,slow=6.4,SNR=4.6						
	comp=Z,1.4nm,0.4s						
NRIK	Noril'sk	61.51	340	IAmb	IAmb	20 50 27.3	
	comp=Z,2.2nm,0.6s						
BPAW	Bear Paw Mtn.	61.70	26	P	P	20 50 27.6	-0.3
BPAW				IAmb	IAmb	20 50 55.5	
	comp=Z,8.0nm,1.5s						
TOLK	Toolik Lake Re	63.53	22	P	P	20 50 39.3	-0.7
TOLK				IAmb	IAmb	20 50 40.1	
	comp=Z,2.2nm,0.6s						
TOLK				PcP	PcP	20 51 15.6	+1.1
ILAR	Eielson Array	63.59	26	P	P	20 50 41.0	+0.7
	comp=Z,0.3nm,0.8s,baz=271,slow=5.0,SNR=4.5						
	comp=Z,0.3nm,0.8s						
AAK	Ala-Archa	63.77	309	P	P	20 50 42.5	+0.3
KHZ	Kahutara	66.11	158	P	P	20 50 57.4	+0.6
BVAR	Borovoye Array	66.38	320	P	P	20 50 58.4	-0.1
	comp=Z,1.8nm,0.4s,baz=95,slow=7.5,SNR=28						
	comp=Z,1.8nm,0.4s						
BORK	Borovoye	66.42	320	P	P	20 50 59.0	+0.3
GVZ	Greta Valley S	66.42	158	P	P	20 50 59.9	+1.2
KKAR	Karatay Array	66.67	310	P	P	20 51 00.6	0.0
N31M	Braeburn, Yuko	68.23	30	P	P	20 51 10.2	+0.2
N31M				IAmb	IAmb	20 51 11.1	
	comp=Z,15nm,1.1s						
F30M	Barrier River	68.43	24	P	P	20 51 13.5	+2.4
F30M				IAmb	IAmb	20 51 43.4	
	comp=Z,7.4nm,1.5s						
G31M	Satah River	68.99	25	P	P	20 51 16.5	+2.0
G31M				IAmb	IAmb	20 51 19.5	
	comp=Z,7.3nm,1.4s						
ARTI	Arti	73.07	325	P	P	20 51 38.5	-0.7
ARTI				IAmb	IAmb	20 52 06.6	
	comp=Z,12nm,1.4s						
AB31	Akbulak array	73.24	317	P	P	20 51 39.4	-0.9
ABKAR	Akbulak array	73.24	317	P	P	20 51 39.8	-0.6
YKA	Yellowknife Ar	77.94	28	P	P	20 52 07.8	+1.1
	comp=Z,0.3nm,0.6s,baz=291,slow=6.5,SNR=4.0						
	comp=Z,0.3nm,0.6s						
YKA	Yellowknife Ar	77.94	28	P	P	20 52 07.3	+0.7
ARCES	ARCESS Array B	82.39	342	P	P	20 52 30.8	+0.4
	comp=Z,1.1nm,0.7s,baz=58,slow=5.6,SNR=5.2						
	comp=Z,1.1nm,0.7s						
ARCES	ARCESS Array B	82.39	342	P	P	20 52 30.2	-0.2
ARCES				IAmb	IAmb	20 52 50.5	
	comp=Z,10nm,1.4s						
NVAR	Mina Array Bea	83.13	52	P	P	20 52 35.0	-0.1
	comp=Z,0.3nm,0.5s,baz=289,slow=5.3,SNR=2.0						
	comp=Z,0.3nm,0.5s						
FINES	FINESS Array B	86.78	335	P	P	20 52 50.8	-1.6
	comp=Z,1.2nm,0.4s,baz=66,slow=4.9,SNR=16						
	comp=Z,1.2nm,0.4s						

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*SKO **13** 20:44:27.3, 41°.60N×19°.34E, h14km*
*TIR **13** 20:44:27.9, 41°.60N×19°.52E, h2km±2km, ML2.8/2*
*BEO **13** 20:44:28.2±0.6, 41°.55N×19°.58E, h4km±3km, ML2.8/14*
*PDG **13** 20:44:28.6±0.2, 41°.64N×19°.62E, h10km, MD3.0/1, ML2.9/12, Error ellipse: s-maj=0.9km s-min=1.1km az=0.0*
ISC 13 20:44:28.5±1.1, **41°.61N**±0°.02×**19°.56E**±0°.02, **h8**km±9km, **n55**, σ**1s.25**/92, **13C-17D**, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.35	139	Pg	Pg	20 44 35.0	-0.4
TIR				Sg	Sb	20 44 40.8	-1.9
TIR				AML	AML	20 44 40.9	
	3.4nm,0.2s						
ULC	Ulcinj	0.42	326	⇑*i*Pg	Pg	20 44 36.4	-0.4
ULC				*i* Sg	Sg	20 44 43.7	+1.3
SDA	Shkodra	0.44	354	P	Pg	20 44 36.9	-0.3
SDA				Sg	Sg	20 44 44.0	+1.0
DRME	Dracevica, Mon	0.64	334	⇑*i*Pg	Pg	20 44 40.3	-0.6
DRME				*e*Sg	Sb	20 44 51.3	+0.3
PHP	Peshkopia	0.67	83	Pg	Pg	20 44 40.7	-0.7
PHP				Sg	Sb	20 44 51.8	0.0
PHP				AML	AML	20 44 55.2	
	3.6nm,0.4s						
BUM	Brajici-Budva	0.85	325	⇓*i*Pg	Pg	20 44 44.8	-0.1
BUM				*i* Sg	Sb	20 44 57.7	+0.6
PDG	Podgorica	0.85	345	P	Pg	20 44 44.0	-0.9
PDG				Sg	Sb	20 44 57.6	+0.6
PDG	Podgorica	0.85	345	⇑P	Pg	20 44 45.0	+0.1
PDG				⇑S	Sn	20 44 59.0	-0.3
PDG	Podgorica	0.85	345	*e*Pg	Pg	20 44 43.8	-1.1
PDG				*e*Sg	Sn	20 44 58.6	-0.8
PDG	Podgorica	0.85	345	⇓*i*Pg	Pg	20 44 43.8	-1.1
PDG				*i* Sg	Sb	20 44 57.5	+0.5
PVY	Plav	1.03	17	⇓*i*Pg	Pg	20 44 47.0	-1.3
PVY				*i* Sg	Sb	20 45 02.6	+0.3
CEME	Cevo	1.05	333	⇓*i*Pg	Pg	20 44 48.6	-0.1
CEME				*e*Sg	Sn	20 45 04.8	+0.4
OHR	Ohrid	1.06	118	*i* Pg	Pg	20 44 48.2	-0.6
OHR				*i* Sg	Sn	20 45 06.3	+1.7
VLO	Vlora	1.14	182	Pg	Pb	20 44 49.5	-1.0
VLO				Sg	Sn	20 45 05.5	-1.1
HCY	Herceg Novi	1.15	317	⇓*i*Pg	Pb	20 44 50.2	-0.5
HCY				*i* Sg	Sn	20 45 07.9	+1.0
KOME	Kolasin	1.24	359	⇑*i*Pg	Pn	20 44 50.2	-2.0
KOME				*e*Sg	Sn	20 45 10.4	+1.2
NKME	Niksic	1.24	339	⇑*i*Pg	Pn	20 44 51.8	-0.4
NKME				*e*Sg	Sn	20 45 10.5	+1.4
IVA	Berane	1.28	11	⇑*i*Pg	Pn	20 44 51.9	-0.9
IVA				*i* Sg	Sn	20 45 11.0	+0.7
KBN	Korca	1.36	136	P	Pg	20 44 54.8	+0.2
KBN				S	Sg	20 45 14.4	+2.2
SKO	Skopje	1.45	75	*i* Pg	Pg	20 44 56.1	-0.3
SKO				*i* Sg	Sg	20 45 18.4	+3.2
UPM	Unac-Piva	1.66	343	⇑*i*Pn	Pn	20 44 57.9	-0.2
UPM				*i* Sn	Sg	20 45 22.7	+0.7
SJES	Sjenica	1.68	10	*e*Pg	Pb	20 44 59.9	+0.2
SJES				*e*Sg	Sg	20 45 22.7	+0.2
PLE	Pljevlja	1.72	356	⇑*i*Pn	Pb	20 44 59.4	-1.1
PLE				*i* Sn	Sg	20 45 23.4	-0.5
SELS	Selova	1.98	35	*e*Pn	Pn	20 45 02.9	+0.5
SELS				*e*Sn	Sb	20 45 28.8	-0.8
IVAS	Ivanjica	2.01	12	*e*Pn	Pn	20 45 03.0	+0.2
IVAS				*e*Sn	Sb	20 45 30.2	-0.4
NOCI	Noci	2.05	247	Pn	Pb	20 45 06.2	+0.2
BARS	Barje	2.06	54	*i* Pn	Pb	20 45 04.3	-1.9
BARS	Barje	2.06	54	*e*Pn	Pb	20 45 04.3	-1.9
BARS				*e*Sn	Sb	20 45 30.3	-1.8
GOCS	Kraljevo Serbi	2.18	26	*e*Pn	Pn	20 45 05.6	+0.5
GOCS				*e*Sn	Sb	20 45 34.0	-1.4
BBLS	Lazi&#263i	2.26	357	*e*Pn	Pn	20 45 07.2	+1.0
BBLS				*e*Sn	Sb	20 45 36.8	-0.8
VAY	Valandovo	2.28	96	*i* Pn	Pn	20 45 07.3	+0.9
VAY				*i* Sn	Sb	20 45 35.9	-2.4
BOSS	Bosilegrad	2.35	67	*e*Pn	Pn	20 45 08.5	+1.1
BOSS				*e*Sn	Sn	20 45 36.3	-0.1
MATE	Matera	2.36	247	⇓P	Pn	20 45 06.2	-1.3
GRUS	Gruza	2.43	20	*e*Pn	Pn	20 45 09.1	+0.6
GRUS				*e*Sn	Sb	20 45 41.5	-1.1
DIVS	Divibare	2.51	7	*e*Pn	Pn	20 45 10.1	+0.5
DIVS				*e*Sn	Sn	20 45 41.1	+0.7
BOVS	Bovan	2.57	37	⇑P	Pn	20 45 11.6	+1.2
BOVS				⇓S	Sn	20 45 43.1	+1.2
BOVS	Bovan	2.57	37	*e*Pn	Pn	20 45 11.1	+0.7
BOVS				*e*Sn	Sn	20 45 42.6	+0.8
TRUS	Trudelj	2.68	13	*e*Pn	Pb	20 45 14.7	-2.1
ZAPS	Zavoj	2.82	53	*e*Pn	Pn	20 45 14.7	+0.8
ZAPS				*e*Sn	Sn	20 45 50.0	+2.0
TEKS	Tekeris	2.94	360	*e*Pn	Pn	20 45 16.1	+0.6
ZAGS	Zajecar	2.95	41	*e*Pn	Pn	20 45 16.8	+1.1
ZAGS				*e*Sn	Sn	20 45 52.9	+1.6
BLKB	Belogradchik	3.06	48	⇑S	Sb	20 45 56.6	-4.0
BORS2	Bor- Borsko je	3.07	35	*e*Pn	Pn	20 45 16.7	-0.6
BORS2				*e*Sn	Sn	20 45 53.2	-0.9
MDVR	Moldovita	3.54	26	⇓P	Pn	20 45 24.8	+1.0
HERR	Herculane	3.88	32	⇓P	Pn	20 45 29.4	+1.0
BZS	Buzias	4.27	20	⇓P	Pn	20 45 35.3	+1.4
GZR	Gura Zlata	4.45	31	⇓P	Pn	20 45 37.8	+1.5
MORH	Mrgy, Hungar	4.65	352	⇓P	Pn	20 45 40.3	+1.3
SIRR	Siria	4.90	17	⇓P	Pn	20 45 43.7	+1.3
LOT	Lotru	4.91	37	⇓P	Pn	20 45 44.0	+1.4
ARR	Arges	5.26	43	⇑P	Pn	20 45 49.2	+1.7
DRGR		5.65	23	⇓P	Pn	20 45 54.4	+1.5
MLR	Muntele Rosu	6.05	48	⇓P	Pn	20 46 00.1	+1.8
PLOR	Plostina	6.66	48	⇑P	Pn	20 46 08.7	+2.0
VRI	Vrincioaia	6.71	48	⇓P	Pn	20 46 09.2	+1.8

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*IDC **13** 20:45:55.9±1.1, 30°.75N×141°.95E, h0km, mb3.6/6, mbtmp3.6/7, ML2.9/1, Error ellipse: s-maj=46.3km s-min=20.6km az=82.0*
ISC 13 20:45:59.4±1.2, **30°.7N**±0°.1×**142°.0E**±0°.3, **h23**km, **n7**, σ**0s.85**/7, **mb3.6**/6, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	6.58	333	Pn	Pn	20 47 35.4	+0.6
	0.3nm,0.3s,baz=159,slow=12,SNR=14						
	3.4nm,0.7s						
MKAR	Makanchi Array	48.07	307	P	P	20 54 36.9	-0.2
	0.3nm,0.6s,baz=88,slow=8.1,SNR=2.6						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	50.41	312	P	P	20 54 53.5	-1.3
	0.5nm,0.9s,baz=79,slow=6.7,SNR=3.2						
	0.5nm,0.9s						
WRA	Warramunga Arr	50.92	189	P	P	20 54 58.5	-0.4
	0.9nm,0.6s,baz=6.5,slow=7.6,SNR=11						
	0.9nm,0.6s						
ASAR	Alice Springs	54.64	189	P	P	20 55 27.2	+0.8
	0.3nm,0.4s,baz=4.3,slow=6.1,SNR=9.9						
	0.3nm,0.4s						
ILAR	Eielson Array	54.64	30	P	P	20 55 25.8	-0.2
	0.2nm,0.6s,baz=269,slow=7.5,SNR=4.4						
	0.2nm,0.6s						
FINES	FINESS Array B	74.61	333	P	P	20 57 36.6	+0.3
	0.7nm,0.5s,baz=63,slow=6.3,SNR=8.0						
	0.7nm,0.5s						

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*VAO **13** 20:50:17.9±1.2, 24°.25S×67°.17W, h166km±6km, mb4.9, Presumed earthquake*
*NEIC **13** 20:50:18.3, 24°.30S×67°.06W, h160km*
*SJA **13** 20:50:18.0±0.8, 24°.29S×67°.21W, h193km±4km, ML4.7, MW4.6*
*NEIC **13** 20:50:18.3, 24°.50S×67°.17W, h160km, Moment Tensor Solution. Duration: 1s.2 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.85; $M_{\theta\theta}$-0.75; $M_{\phi\phi}$1.60; $M_{r\theta}$0.71; $M_{\theta\phi}$0.52; $M_{\phi r}$-0.82;*

Fault plane solution: $M_0 1.83000\times10^{16}$ NP1: ϕ_s227.68000°,δ46.18000°,λ-27.17000°. NP2: ϕ_s337.25000°,δ70.76000°,λ-132.83000°. Principal axes: T 1.8829, Plg15.0000°, Azm97.0000°; N -0.1045, Plg40.0000°, Azm354.0000°; P -1.7784, Plg46.0000°, Azm203.0000°;

*NEIC **13** 20:50:18.2±1.6,24.°30S±0.°03×67.°06W±0.°08,h162km±5km, mb4.7/190,Mww4.8/17,Mwr4.8(GUC) Error ellipse: s-maj=11.1km s-min=3.0km az=101.0*

*IDC **13** 20:50:18.9±1.3,24.°28S×67.°03W,h164km±11km,mb4.2/12, mbtmp4.7/17,MS3.2/1,Error ellipse: s-maj=15.7km s-min=9.9km az=87.0*

*GUC **13** 20:50:19.1±0.8,24.°32S×67.°25W,h177km±5km,ML5.1*

ISC 13 20:50:18.2±0.5,**24.°27S**±0.°03×**67.°26W**±0.°03,**h168**km±4km, **n351,**σ**1**^{s}**83**/331,**mb4.7**/95,**12C-9D,Chile-Argentina border region**

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Code  Station Name       Δ°    AZ°  Phase ID            Time      Res
                                    Op    ISC       h  m  s       ISC
SALTA                     0.84  87⇓eP    Pn     20 50 46.5 +2.4
SALTA                             eS    Sn     20 51 07.6 +3.6
SALTA                     0.84  87 eP    Pn     20 50 46.5 +2.4
SALTA                             IAML         20 51 06.0
      comp=Z,605nm,0.7s
SALTA                             eS    Sn     20 51 07.5 +3.6
AF01  San Pedro de A     1.56 327       Pn     20 50 53.0 +2.9
AF01                              Sn    Sn     20 51 19.2 +4.5
AF01  San Pedro de A     1.56 327 eP    Pn     20 50 53.4 +3.3
AF01                              i S   Sn     20 51 19.4 +4.7
AF01                              IAML         20 51 22.0
      comp=E,12µm,0.6s
AF01  San Pedro de A     1.56 327 eP    Pn     20 50 53.4 +3.3
AF01                              eS    Sn     20 51 18.8 +4.2
AF01                              IAML         20 51 38.7
      comp=Z,5µm,0.5s
SLA   San Lorenzo        1.66 106⇓eP    Pn     20 50 53.4 +2.5
SLA                               eS    Sn     20 51 19.2 +3.0
SLA   San Lorenzo        1.66 106 eP    Pn     20 50 53.5 +2.5
SLA                               eS    Sn     20 51 19.1 +2.8
SLA                               IAML         20 51 22.0
      comp=Z,419nm,0.8s
FSA   Cafayete           2.17 148 eP    Pn     20 50 58.8 +2.2
FSA                               eS    Sn     20 51 27.6 +1.2
GO02  Mina Guanaco       2.30 247       Pn     20 51 00.7 +2.5
GO02                              Sn    Sn     20 51 31.6 +2.5
GO02  Mina Guanaco       2.30 247⇑eP    Pn     20 51 00.6 +2.4
GO02                              i S   Sn     20 51 32.1 +3.0
GO02  Mina Guanaco       2.30 247 eP    Pn     20 51 00.7 +2.5
GO02                              eS    Sn     20 51 32.5 +3.3
GO02                              IAML         20 51 33.8
      comp=Z,9µm,0.5s
YJA   Yavi               2.63  38⇑eP    Pn     20 51 04.7 +2.5
YJA   Yavi               2.63  38 eP    Pn     20 51 04.7 +2.5
YJA                               eS    Sn     20 51 39.0 +2.7
YJA                               IAML         20 51 40.4
      comp=Z,39nm,0.7s
PB06  IPOC Station P     2.63 306       Pn     20 51 04.0 +2.1
PB06                              Sn    Sn     20 51 37.5 +1.6
PB06  IPOC Station P     2.63 306⇑iP    Pn     20 51 04.5 +2.5
PB06  IPOC Station P     2.63 306 eP    Pn     20 51 04.5 +2.5
PB06                              eS    Sn     20 51 38.6 +2.7
PB06                              IAML         20 51 41.0
      comp=Z,5µm,0.3s
PB14  IPOC Station P     2.89 262       Pn     20 51 06.8 +1.6
PB14                              Sn    Sn     20 51 42.2 +0.5
PB14  IPOC Station P     2.89 262⇑eP    Pn     20 51 07.0 +1.8
PB14                              IAML         20 51 49.4
      comp=E,2µm,0.5s
PB14  IPOC Station P     2.89 262 eP    Pn     20 51 07.2 +1.9
PB14                              eS    Sn     20 51 44.0 +2.2
PB14                              IAML         20 51 53.4
      comp=Z,2µm,0.7s
PB05  IPOC Station P     3.05 297       Pn     20 51 08.9 +1.9
PB05                              Sn    Sn     20 51 45.0 +0.1
PB05  IPOC Station P     3.05 297⇑eP    Pn     20 51 08.9 +1.9
PB05                              IAML         20 51 50.0
      comp=N,4µm,0.2s
PB05  IPOC Station P     3.05 297 eP    Pn     20 51 09.0 +1.9
PB05                              eS    Sn     20 51 43.5 -1.4
PB05                              IAML         20 51 57.4
      comp=Z,2µm,0.6s
AHML  Horco Molle        3.05 146⇑iP    Pn     20 50 56.7  -10
AHML                              i S   Sn     20 51 31.8  -13
AHML  Horco Molle        3.05 146 eP    Pn     20 50 56.8  -10
AHML                              eS    Sn     20 51 34.3  -11
AHML                              IAML         20 51 35.2
      comp=Z,172nm,0.6s
PB09  IPOC Station P     3.06 323       Pn     20 51 10.1 +2.8
PB09                              Sn    Sn     20 51 47.5 +2.1
PB09  IPOC Station P     3.06 323⇓eP    Pn     20 51 10.2 +2.9
PB09                              IAML         20 51 49.1
      comp=N,4µm,0.2s
PB09  IPOC Station P     3.06 323 eP    Pn     20 51 09.6 +2.4
PB09                              eS    Sn     20 51 43.0 -2.4
PB09                              IAML         20 51 49.2
      comp=Z,5µm,0.8s
AC02  Maricunga          3.07 213       Pn     20 51 09.7 +2.2
AC02  Maricunga          3.07 213⇑eP    Pn     20 51 09.9 +2.3
AC02                              IAML         20 51 55.2
      comp=N,1µm,0.2s
AC02  Maricunga          3.07 213 eP    Pn     20 51 09.6 +2.0
AC02                              eS    Sn     20 51 49.0 +3.0
AC02                              IAML         20 51 56.8
      comp=Z,469nm,0.6s
PB10  IPOC Station P     3.11 283       Pn     20 51 09.5 +1.9
PB10                              Sn    Sn     20 51 46.4 +0.3
PB10  IPOC Station P     3.11 283⇑eP    Pn     20 51 09.8 +2.2
PB10                              IAML         20 51 54.9
      comp=E,3µm,0.4s
PB10  IPOC Station P     3.11 283 eP    Pn     20 51 09.9 +2.3
PB10                              eS    Sn     20 51 48.7 +2.6
PB10                              IAML         20 51 54.5
      comp=Z,3µm,0.5s
PB03  IPOC Station P     3.19 313       Pn     20 51 10.8 +2.0
PB03  IPOC Station P     3.19 313⇓eP    Pn     20 51 11.0 +2.2
PB03  IPOC Station P     3.19 313 eP    Pn     20 51 10.8 +2.0
PB03                              eS    Sn     20 51 50.1 +2.0
PB03                              IAML         20 51 53.2
      comp=Z,3µm,0.4s
PB07  IPOC Station P     3.50 316       Pn     20 51 14.5 +1.7
PB07  IPOC Station P     3.50 316⇑eP    Pn     20 51 14.6 +1.9
PB07  IPOC Station P     3.50 316 eP    Pn     20 51 14.5 +1.7
PB07                              eS    Sn     20 51 55.9 +0.7
PB07                              IAML         20 51 57.7
      comp=Z,5µm,0.7s
AC01  Pan de Azucar      3.56 238       Pn     20 51 14.0 +0.7
AC01  Pan de Azucar      3.56 238 eP    Pn     20 51 14.0 +0.7
AC01                              i S   Sn     20 51 55.7 -0.6
AC01  Pan de Azucar      3.56 238 eP    Pn     20 51 13.3  0.0
AC01                              eS    Sn     20 51 57.0 +0.7
AC01                              IAML         20 52 00.5
      comp=Z,1µm,0.5s
TINO  Tinogasta          3.79 184 eP    Pn     20 51 19.1 +2.7
PB02  IPOC Station P     3.81 320       Pn     20 51 17.9 +1.2
PB02  IPOC Station P     3.81 320⇑eP    Pn     20 51 18.5 +1.8
PB02                              i S   Sn     20 52 01.6 -0.7
PB02  IPOC Station P     3.81 320 eP    Pn     20 51 18.0 +1.4
PB02                              eS    Sn     20 52 03.6 +1.4
PB02                              IAML         20 52 05.8
      comp=Z,4µm,0.3s
PB01  IPOC Station P     3.81 327       Pn     20 51 17.9 +1.2
PB01  IPOC Station P     3.81 327 eP    Pn     20 51 18.1 +1.5
PB01                              i S   Sn     20 52 02.5 +0.2
PB01  IPOC Station P     3.81 327 eP    Pn     20 51 18.1 +1.5
PB01                              eS    Sn     20 52 03.8 +1.5
PB01                              IAML         20 52 05.6
      comp=Z,2µm,0.4s
AC06  Mina Casimiro      4.16 222       Pn     20 51 21.0 +0.1
AC06  Mina Casimiro      4.16 222⇑iP    Pn     20 51 21.2 +0.3
AC06                              i S   Sn     20 52 09.0 -1.0
GO03  Copiapo            4.26 218       Pn     20 51 22.4 +0.1
GO03  Copiapo            4.26 218 eP    Pn     20 51 22.5 +0.1
GO03                              i S   Sn     20 52 11.6 -0.9
GO03  Copiapo            4.26 218 eP    Pn     20 51 22.8 +0.5
GO03                              eS    Sn     20 52 12.2 -0.3
GO03                              IAML         20 52 16.0
      comp=Z,2µm,0.6s
PATCX Punta Patache      4.35 321       Pn     20 51 24.1 +0.6
PB08  IPOC Station P     4.46 336       Pn     20 51 26.9 +1.5
PB08  IPOC Station P     4.46 336 eP    Pn     20 51 27.4 +2.0
PB08                              eS    Sn     20 52 19.1 +1.3
PB08                              IAML         20 52 21.5
      comp=Z,404nm,0.3s
VCA   Vinchina           4.53 191 eP    Pn     20 51 28.6 +2.7
VCA                               eS    Sn     20 52 16.7 -2.3
VCA                               IAML         20 52 27.6
      comp=Z,102nm,0.3s
TA01  Diego Aracena      4.57 323       Pn     20 51 26.6 +0.3
TA01  Diego Aracena      4.57 323 eP    Pn     20 51 26.8 +0.5
TA01                              IAML         20 52 28.7
      comp=Z,1µm,0.8s
HMBC  Humberstone        4.66 328       Pn     20 51 27.7 +0.1
HMBC  Humberstone        4.66 328 eP    Pn     20 51 28.0 +0.4
HMBC                              IAML         20 52 34.0
      comp=Z,1µm,0.3s
GO01  Chusmiza           4.92 338       Pn     20 51 32.2 +0.8
GO01  Chusmiza           4.92 338 eP    Pn     20 51 32.8 +1.4
GO01                              IAML         20 52 36.7
      comp=Z,243nm,0.3s
PB11  IPOC Station P     5.00 333       Pn     20 51 32.3 +0.1
ACLC  CERRO LA CRUZ      5.15 177 eP    Pn     20 51 35.0 +1.0
AC04  Llanos de Chal     5.21 220       Pn     20 51 34.2 -0.5
AC04  Llanos de Chal     5.21 220⇑eP    Pn     20 51 34.0 -0.6
AC04                              i S   Sn     20 52 32.2 -2.4
AC04  Llanos de Chal     5.21 220 IAML         20 52 36.5
      comp=Z,876nm,0.7s
AC05  El Transito        5.29 210       Pn     20 51 35.8 -0.1
LCO   Las Campanas       5.64 212       Pn     20 51 39.9 -0.7
CO01  Juntas del Tor     6.22 203       Pn     20 51 48.9 +0.7
PB16  IPOC Station P     6.26 340       Pn     20 51 49.6 +0.5
PB12  IPOC Station P     6.31 332       Pn     20 51 48.7 -0.6
AP01  Chacalluta         6.53 333 Pn    Pn     20 51 52.5 +0.3
CO05  La Serena          6.65 211       Pn     20 51 53.2 -0.5
GO04  Tololo Observa     6.67 207       Pn     20 51 53.1 -1.1
PB18  Visviri            6.96 342       Pn     20 51 58.8 +0.4
CO03  El Pedregal        7.22 204       Pn     20 52 00.0 -1.2
CFA   Coronel Fontan     7.36 187 P     Pn     20 52 02.8 -0.3
      comp=Z,5.6nm,0.3s,baz=8.2,slow=12,SNR=27
CFA                               S     Sn     20 53 22.8 -3.0
      comp=Z,21nm,0.4s,baz=281,slow=18,SNR=9.7
CO06  Fray Jorge         7.47 210       Pn     20 52 02.5 -2.0
CO02  Combarbal          7.66 205       Pn     20 52 05.0 -2.2
LPAZ  La Paz             7.98 354 P     Pn     20 52 13.2 +1.2
      comp=Z,23nm,0.3s,baz=171,slow=9.4,SNR=157
LPAZ                              S     Sn     20 53 35.3 -6.3
      comp=Z,12nm,0.7s,baz=105,slow=8.0,SNR=3.6
LPAZ                              LR    LR     20 55 51.4
      comp=Z,151nm,18.7s,baz=216,slow=42
LPAZ  La Paz             7.98 354       Pn     20 52 11.0 -0.9
VA03  San Esteban        8.95 198       Pn     20 52 22.4 -1.7
VA06  Catapilco          8.99 202 Pn    Pn     20 52 22.3 -2.3
PEL   Peldehue           9.34 198 Pn    Pn     20 52 27.5 -1.7
MT08  Bocatoma Ro        9.46 194       Pn     20 52 29.0 -2.0
MT02  Curacav            9.58 200       Pn     20 52 29.6 -2.8
MT03  Universidad Ad     9.62 196       Pn     20 52 31.0 -2.0
MT13  San Alfonso        9.81 195       Pn     20 52 32.9 -2.6
LMEL  Las Melosas        9.89 194       Pn     20 52 33.6 -2.9
MT09  Talagante         10.02 198       Pn     20 52 35.8 -2.5
SIV   San Ignacio       10.07  36 P     Pn     20 52 37.0 -2.0
      comp=Z,11nm,0.4s,baz=215,slow=15,SNR=60
SIV                               S     Sn     20 54 17.9  -13
      comp=Z,12nm,0.9s,baz=213,slow=19,SNR=6.8
BO04  La Punta          10.12 196       Pn     20 52 35.2 -4.3
MT01  Popeta            10.18 199 Pn    Pn     20 52 35.4 -4.9
BDQN  Bodoquena, MS     10.44  71 eP    Pn     20 52 41.7 -2.1
BO01  Tunca             10.63 197       Pn     20 52 41.7 -4.3
PSAL  Palomas, Salto    10.92 131 eP    Pn     20 52 49.7 -0.2
AMBA  Amambai (Brazi    11.33  86 eP    Pn     20 52 53.2 -2.1
AQDB  Aquidauana        11.34  73       Pn     20 52 54.3 -1.2
AQDB  Aquidauana        11.34  73 eP    Pn     20 52 53.4 -2.0
PTLB  Pontes e Lacer    11.63  43       Pn     20 52 58.1 -1.1
PTLB  Pontes e Lacer    11.63  43 eP    Pn     20 52 57.6 -1.6
ML02  Panimavida        12.01 196       Pn     20 53 03.2 -0.8
BI02  San Fabin de      12.83 195       Pn     20 53 13.4 -1.2
VILB  Vilhena           13.09  32       Pn     20 53 16.1 -1.9
VILB  Vilhena           13.09  32 eP    Pn     20 53 19.0 +1.0
PP1B  Ponte de Pedra    13.33  62 eP    Pn     20 53 18.7 -2.3
BI05  Punta Hualpn      13.45 201       Pn     20 53 20.3 -2.0
TRCB  Terra Rica        13.49  87 Pn    Pn     20 53 20.6 -2.5
TRCB  Terra Rica        13.49  87 eP    Pn     20 53 22.8 -0.4
SALV  Santo Antonio     13.68  55 eP    Pn     20 53 23.7 -1.8
H03N1 Juan Fernandez    13.70 226 P     Pn     20 53 27.0 +1.8
      baz=111,slow=15,SNR=72
H03N2 Juan Fernandez    13.71 226 P     Pn     20 53 27.0 +1.6
      baz=111,slow=15,SNR=42
H03N3 Juan Fernandez    13.71 225 P     Pn     20 53 27.2 +1.7
      baz=111,slow=15,SNR=104
CPSB  Cacapava Do Su    13.71 120 eP    Pn     20 53 23.9 -1.8
PTGB  Pitanga           13.84  95 eP    Pn     20 53 27.6 +0.1
H03S3 Juan Fernandez    13.94 224 P     Pn     20 53 29.5 +1.3
      baz=141,slow=75,SNR=53
H03S1 Juan Fernandez    13.95 224 P     Pn     20 53 29.4 +1.1
      baz=141,slow=75,SNR=42
ITAB  Concordia         13.95 105 P     Pn     20 53 27.8 -1.0
ITAB  Concordia         13.95 105 eP    Pn     20 53 27.7 -1.0
H03S2 Juan Fernandez    13.96 224 P     Pn     20 53 29.7 +1.2
      baz=141,slow=75,SNR=50
PLTB  Pedras Altas      14.18 125       Pn     20 53 29.4 -2.2
PLTB  Pedras Altas      14.18 125 eP    Pn     20 53 30.1 -1.5
TRQA  Tornquist         14.47 163       Pn     20 53 33.2 -1.9
C2SB  Chapadao do Su    14.49  71 eP    Pn     20 53 35.9 +0.4
LDASE Londrina, Braz    14.80  90 eP    Pn     20 53 38.2 -1.2
CNLB  Canela            15.48 112 eP    Pn     20 53 46.0 -1.8
PDRB  Porto dos Gac     16.07  40 eP    Pn     20 53 53.9 -1.1
FRTB  Fartura           16.22  90 eP    Pn     20 53 55.4 -1.4
ITRB  Iturama           16.32  77 eP    P      20 53 56.8 -1.0
LR04  Corral            16.41 197 P     P      20 53 54.0 -4.6
PLCA  Paso Flores       16.65 189 P     Pn     20 54 02.8 +0.9
      comp=Z,20nm,0.9s,baz=10.0,slow=12,SNR=23
PLCA                              PcP   PcP    20 58 42.0 +0.9
      comp=Z,3.9nm,0.7s,baz=73,slow=3.6,SNR=5.3
PLCA  Paso Flores       16.65 189 P     P      20 53 57.6 -3.8
ARAG  Araguaiana, MT    16.82  62 eP    P      20 54 02.9 -0.5
CLDB  Colider           17.21  41 eP    P      20 54 07.0 -0.7
BB19B Bebedouro         17.58  83 eP    P      20 54 10.9 -0.7
LL05  Los Muermos       17.86 195 P     P      20 54 11.0 -3.6
SPB   Sao Paulo         18.14  92 P     P      20 54 16.0 -1.7
SPB   Sao Paulo         18.14  92 eP    P      20 54 17.1 -0.6
RCLB  Rio Claro- Sao    18.21  88 eP    P      20 54 17.6 -0.9
PET01 Itanhaem-SP       18.22  94 eP    P      20 54 18.1 -0.6
LL01  San Ignacio de    18.56 192 P     P      20 54 22.1  0.0
VAO   Valinhos          18.64  90 P     P      20 54 21.8 -1.5
VAO   Valinhos          18.64  90 eP    P      20 54 22.4 -0.8
IPMB  Ipameri, GO       18.83  74 eP    P      20 54 24.8 -0.5
LL07  Hotel Espejo d    19.22 194 P     P      20 54 26.1 -3.2
LL02  Futaleuf          19.25 190       P      20 54 28.6 -1.0
SNDB  Serra Nova Dou    19.46  54 eP    P      20 54 31.2 -1.0
GO07  Milladeo Hill,    19.53 194 P     P      20 54 31.8 -0.8
PARB  Paraibuna         19.82  92 eP    P      20 54 34.8 -1.2
BDFB  Brasilia          20.00  68 P     P      20 54 37.3 -0.8
      comp=Z,150nm,0.9s,baz=243,slow=11,SNR=115
BDFB  Brasilia          20.00  68 P     P      20 54 35.9 -2.2
PMNB  Patos De Minas    20.20  78 eP    P      20 54 38.8 -1.3
NPGB  Novo Progresso    20.58  36 eP    P      20 54 41.4 -2.7
AY01  Puyuhuapi         20.58 191       P      20 54 41.0 -2.8
TEFE  Tefe              20.79   7 eP    P      20 54 45.9 -0.5
BSCB  Bom Sucesso       21.00  86 eP    P      20 54 47.3 -1.4
COYC  Coyhaique         21.61 189       P      20 54 54.6 -0.2
MACA  Manacapuru-AM     21.92  18 P     P      20 54 55.9 -2.4
VAS01 Vassouras-RJ      21.96  90 eP    P      20 54 57.9 -0.8
ITTB  Itaituba          22.69  31 eP    P      20 55 04.0 -1.6
DIAM  Diamantina, MG    22.75  79 eP    P      20 55 05.0 -1.3
DUB01 Friburgo-RJ       22.97  90 eP    P      20 55 07.2 -1.1
AY03  Cochrane          23.33 189 P     P      20 55 12.5 +1.3
AY03                              IAmb  IAmb   20 55 13.9
      comp=Z,35nm,0.8s
JANB  Januaria          23.44  71 eP    P      20 55 11.2 -1.4
CAM01 Campos-RJ         23.67  89 eP    P      20 55 13.2 -1.4
SDBA  SAO DESIDERIO     24.23  65 eP    P      20 55 18.4 -1.4
SMTB  Santa Maria do    24.24  54 eP    P      20 55 19.2 -0.6
COHC  Cochancay         24.58 330 P     P      20 55 18.4 -4.4
PRPB  Parauapebas       24.58  46 eP    P      20 55 21.4 -1.5
SJMB  Sao Joao De Ma    24.86  82 eP    P      20 55 23.4 -2.0
BSFB  Barra de Sao F    25.13  83 eP    P      20 55 26.3 -1.5
RIB01 Linhares ES       25.41  84 eP    P      20 55 28.6 -1.7
MAL2  Monte Alegre,     25.48  32 P     P      20 55 26.7 -4.2
MAL2                              IAmb  IAmb   20 55 34.0
      comp=Z,25nm,0.8s
GUA01 Guaratinga, BA    26.80  79 eP    P      20 55 41.3 -1.6
FLOC  Florencia         26.96 341 P     P      20 55 44.3 +0.1
FLOC                              IAmb  IAmb   20 55 47.3
      comp=Z,12nm,0.8s
GO09  Cerro Castillo    27.24 187 P     P      20 55 47.1 +0.7
GO09                              IAmb  IAmb   20 55 48.7
      comp=Z,18nm,0.7s
CMC01 Camacan, BA       27.52  76 eP    P      20 55 47.6 -1.6
MG05  Puerto Natales    27.66 187 P     P      20 55 51.0 +0.9
NBIT  Itapeh - BA       27.76  76 eP    P      20 55 50.3 -1.1
RUSC  La Rusia          30.51 349       P      20 56 14.5 -1.7
RUSC                              IAmb  IAmb   20 56 19.9
      comp=Z,14nm,0.9s
NBTA  Tacaratu-PE       31.66  67 eP    P      20 56 24.4 -1.5
NBPS  Pedro II - PI     31.75  56 eP    P      20 56 25.9 -0.8
NBPA  Parau_RN          34.31  62 eP    P      20 56 48.0 -0.9
RCBR  Riachuelo         35.25  64 P     P      20 56 54.5 -2.5
RCBR  Riachuelo         35.25  64 P     P      20 56 57.2 +0.2
RCBR                              pP    pP     20 57 33.2 -0.5
RCBR                              sP    sP     20 57 51.6 -1.6
NBPV  Pedro Velho       35.43  65 eP    P      20 56 57.9 -0.5
PMSA  Palmer Station    40.56 178 P     P      20 57 40.8 +0.1
PMSA                              IAmb  IAmb   20 57 50.9
      comp=Z,18nm,0.8s
PMSA  Palmer Station    40.56 178 P     P      20 57 42.6 +1.9
OBIP  Obispado Ponce    42.06   1 P     P      20 57 51.6 -1.8
AOPR  Arecibo Observ    42.36   1 P     P      20 57 53.2 -2.7
MTO3  Montecristo       44.08 328 P     P      20 58 11.5 +1.5
MTO3                              IAmb  IAmb   20 58 13.2
      comp=Z,13nm,0.8s
TEIG  Tepich            48.73 333 P     P      20 58 46.6 +0.7
SOR   Soroa             49.22 341 P     P      20 58 50.6 +1.0
SOR                               IAmb  IAmb   20 58 51.9
      comp=Z,20nm,0.9s
BELA  Belgrano 2        55.81 172 P     P      20 59 38.2 +0.8
BELA                              IAmb  IAmb   20 59 39.7
      comp=Z,13nm,0.7s
VNA3  Neumayer Olymp    56.98 161⇓P     P      20 59 46.6 +0.9
      comp=Z,16nm,0.7s
VNA1  Neumayer--Stat    57.18 160⇓P     P      20 59 47.5 +0.4
      comp=Z,12nm,0.6s
VNA2  Neumayer--Watz    57.55 160⇓P     P      20 59 50.7 +1.1
      comp=Z,15nm,0.6s,baz=281,slow=7.5
ZAIG  Zacatecas         57.98 321 IAmb  IAmb   20 59 57.9
      comp=Z,14nm,1.2s
RGRS  Roger Stewart     58.18 347 P     P      20 59 55.1 +0.6
RGRS                              IAmb  IAmb   21 01 19.8
      comp=Z,1µm,1.8s
Y58A  Scranton          59.04 348 P     P      21 00 01.2 +0.8
SNAA  Sanae             59.18 161⇓P     P      21 00 01.8 +0.8
      comp=Z,229nm,0.7s
SNAA  Sanae             59.18 161 P     P      21 00 01.9 +0.8
      comp=Z,7.8nm,0.6s,baz=286,slow=7.0,SNR=54
      comp=Z,7.8nm,0.6s
SNAA  Sanae             59.18 161       P      21 00 01.6 +0.6
GOGA  Godfrey           59.40 344 P     P      21 00 02.9  0.0
JSC   Jenkinsville      59.73 347 P     P      21 00 05.8 +0.7
833A  Chaparral WMA,    60.76 327 P     P      21 00 12.2 -0.1
TROLL Troll, Antarti    60.89 161⇓P     P      21 00 13.8 +1.0
      comp=Z,632nm,0.5s
V55A  Taylorsville      61.23 347 P     P      21 00 16.3 +1.0
X48A  Hartselle         61.34 341 IAmb  IAmb   21 00 17.9
      comp=Z,16nm,1.1s
CPCT  Cooper Cave       61.60 344 P     P      21 00 18.0 +0.2
TKL   Tuckaleechee C    61.62 345 P     P      21 00 18.3 +0.4
U54A  Nelsons Funny     62.00 347 P     P      21 00 21.2 +0.7
DRIO  Del Rio           62.27 327 IAmb  IAmb   21 00 24.8
      comp=Z,9.7nm,1.2s
BLA   Blacksburg        62.39 348 P     P      21 00 24.4 +1.3
JCT   Junction City     62.75 329 IAmb  IAmb   21 00 28.0
      comp=Z,12nm,0.7s
WHTX  Lake Whitney,     62.95 331 P     P      21 00 27.6 +0.8
WHTX                              IAmb  IAmb   21 00 29.2
      comp=Z,15nm,1.0s
BRDY  Brady             63.04 330 P     P      21 00 27.8 +0.3
BRDY                              IAmb  IAmb   21 00 29.7
      comp=Z,6.5nm,0.8s
S54A  Dingess, Beckl    63.13 348 P     P      21 00 28.1 +0.1
WVT   Waverly           63.14 341 P     P      21 00 28.4 +0.5
WVT   Waverly           63.14 341 P     P      21 00 28.5 +0.5
WVT                               pP    PcP    21 01 06.4 +2.4
T50A  Nancy             63.17 344 P     P      21 00 28.9 +0.7
SAND  Sanderson         63.46 326 IAmb  IAmb   21 00 33.4
      comp=Z,9.3nm,0.9s
MIAR  Mount Ida         63.60 336       P      21 00 31.2 +0.2
MIAR                              IAmb  IAmb   21 00 32.8
      comp=Z,8.8nm,0.8s
TXAR  Lajitas Array     63.76 325 P     P      21 00 34.4 +2.1
      comp=Z,1.0nm,0.5s,baz=160,slow=7.7,SNR=12
      comp=Z,1.0nm,0.5s
MNHN  Monahans          64.90 327 IAmb  IAmb   21 00 42.5
      comp=Z,11nm,0.7s
APMT  Aspermont         65.27 330 IAmb  IAmb   21 00 44.4
      comp=Z,13nm,0.7s
HHAR  Hobbs             65.28 336 IAmb  IAmb   21 00 44.0
      comp=Z,8.4nm,0.9s
MGMO  Mountain Grove    65.48 338 IAmb  IAmb   21 00 45.1
      comp=Z,12nm,1.1s
RLO   Rose Lookout      65.58 336 IAmb  IAmb   21 00 46.1
      comp=Z,9.8nm,0.9s
VHRN  Van Horn          65.60 325 IAmb  IAmb   21 00 47.1
      comp=Z,10nm,0.9s
DEOK  Depew             65.87 334 P     P      21 00 46.4 +0.6
DKNS  Dickens           65.92 330 IAmb  IAmb   21 00 48.3
      comp=Z,7.0nm,0.6s
QSPA  South Pole Qui    65.94 180 P     P      21 00 47.7 +1.7
      comp=Z,21nm,0.6s,baz=157,slow=2.1,SNR=68
      comp=Z,21nm,0.6s
QSPA  South Pole Qui    65.94 180 P     P      21 00 47.5 +1.5
QSPA  South Pole Qui    65.94 180 P     P      21 00 47.5 +1.5
CCM   Cathedral Cave    65.96 339       P      21 00 47.0 +0.8
CCM                               IAmb  IAmb   21 00 47.9
      comp=Z,24nm,1.3s
R40A  Maddies Statio    66.51 339       P      21 00 50.5 +0.8
MNTX  Cornudas Mount    66.53 325 IAmb  IAmb   21 00 52.7
      comp=Z,21nm,1.6s
T35A  Sooner Cattle     66.81 335 IAmb  IAmb   21 00 54.1
      comp=Z,33nm,1.4s
MSTX  Muleshoe          67.04 328       P      21 00 53.6 +0.2
MSTX                              IAmb  IAmb   21 00 56.3
      comp=Z,19nm,0.8s
P40A  Paris             67.56 339 IAmb  IAmb   21 00 58.1
      comp=Z,9.0nm,0.7s
DBIC  Dimbokro          68.11  72 P     P      21 00 59.8 -0.5
      comp=Z,6.0nm,0.8s,baz=257,slow=6.2,SNR=6.7
      comp=Z,6.0nm,0.8s
DBIC  Dimbokro          68.11  72 IAmb  IAmb   21 01 00.5
      comp=Z,6.0nm,0.8s
DBIC  Dimbokro          68.11  72 P     P      21 00 59.1 -1.2
DBIC                              PcP   PcP    21 01 23.9 -1.3
DBIC                              pP    pP     21 01 37.0 -4.8
121A  Cookes Peak, D    68.45 324 IAmb  IAmb   21 01 06.4
      comp=Z,15nm,1.1s
R32A  Long Quarter,     68.98 334 IAmb  IAmb   21 01 07.9
      comp=Z,13nm,0.7s
RTBA  Rita Blanca       69.05 330 IAmb  IAmb   21 01 10.1
      comp=Z,11nm,0.9s
ABQ   Albuquerque       69.63 326 IAmb  IAmb   21 01 13.2
      comp=Z,9.3nm,1.0s
ANMO  Albuquerque       69.64 326       P      21 01 11.1 +1.6
ANMO                              IAmb  IAmb   21 01 13.1
      comp=Z,8.8nm,0.9s
ANMO  Albuquerque       69.64 326 P     P      21 01 12.0 +2.5
TASM  ASL Pad, Albuq    69.64 326 IAmb  IAmb   21 01 13.2
      comp=Z,8.8nm,0.9s
TASM  ASL Pad, Albuq    69.64 326 IAmb  IAmb   21 01 13.2
      comp=Z,9.5nm,1.0s
TASM  ASL Pad, Albuq    69.64 326 IAmb  IAmb   21 01 13.2
      comp=Z,9.1nm,1.0s
TASM  ASL Pad, Albuq    69.64 326 IAmb  IAmb   21 01 13.2
      comp=Z,9.4nm,0.9s
TUC   Tucson            69.94 322       P      21 01 13.2 +1.8
T25A  Trinidad          70.39 329 IAmb  IAmb   21 01 17.6
      comp=Z,8.2nm,0.9s
214A  Organ Pipe Nat    70.85 320 IAmb  IAmb   21 01 21.0
      comp=Z,18nm,1.4s
X16A  Lo Mia Camp, P    71.87 323 IAmb  IAmb   21 01 27.1
      comp=Z,13nm,1.2s
WUAZ  Wupatki           72.65 323 IAmb  IAmb   21 01 31.8
      comp=Z,13nm,0.9s
ECSD  EROS Data Cent    72.84 338 IAmb  IAmb   21 01 30.2
      comp=Z,16nm,1.2s
PV15  Paradox Valley    73.30 327 IAmb  IAmb   21 01 35.6
      comp=Z,11nm,0.9s
PV02  Paradox Valley    73.33 327 IAmb  IAmb   21 01 35.4
      comp=Z,16nm,1.3s
PV12  Saucer Basin,     73.44 327 IAmb  IAmb   21 01 35.9
      comp=Z,11nm,0.9s
PV22  Blue Mesa, Par    73.60 327 IAmb  IAmb   21 01 36.9
      comp=Z,12nm,1.1s
PV10  Paradox Valley    73.61 327 IAmb  IAmb   21 01 36.3
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	comp=Z,15nm,1.0s						
BC3	Big Chuckawall	73.62	320		P	21 01 35.7	+2.3
U15A	North Rim	73.83	324	IAmb	IAmb	21 01 38.9	
	comp=Z,9.0nm,0.9s						
PFO	Pinyon Flats O	74.19	319		P	21 01 38.5	+1.8
DANC	Danby, Needles	74.27	320	IAmb	IAmb	21 01 41.1	
	comp=Z,18nm,0.8s						
VNDA	Vanda	74.40	190	P	P	21 01 39.2	+2.1
	comp=Z,8.2nm,0.9s,baz=125,slow=4.0,SNR=21						
	comp=Z,8.2nm,0.9s						
VNDA	Vanda	74.40	190		P	21 01 39.1	+2.0
VNDA				IAmb	IAmb	21 01 40.9	
	comp=Z,13nm,1.1s						
VNDA	Vanda	74.40	190	P	P	21 01 39.6	+2.5
VNDA				pP	pP	21 02 18.8	-0.2
KNB	Kanab	74.55	324	IAmb	IAmb	21 01 43.1	
	comp=Z,24nm,1.0s						
O20A	White River Ci	74.58	329	IAmb	IAmb	21 01 42.5	
	comp=Z,14nm,0.9s						
V12A	Nelson	74.74	321	IAmb	IAmb	21 01 43.4	
	comp=Z,9.5nm,1.0s						
SRU	San Rafael Swe	74.91	326	IAmb	IAmb	21 01 44.1	
	comp=Z,12nm,0.8s						
Q16A	Castle Valley	75.10	326	IAmb	IAmb	21 01 45.8	
	comp=Z,28nm,1.7s						
P18A	Preston Nutter	75.17	327	IAmb	IAmb	21 01 46.1	
	comp=Z,9.2nm,0.8s						
CCUT	Cedar City	75.23	324	IAmb	IAmb	21 01 47.2	
	comp=Z,15nm,0.9s						
P17A	Butcher Ranch,	75.30	327	IAmb	IAmb	21 01 46.5	
	comp=Z,9.2nm,0.8s						
RDMU	Red Mountain	75.56	328	IAmb	IAmb	21 01 47.8	
	comp=Z,8.0nm,0.8s						
RSSD	Black Hills	75.94	334		P	21 01 48.1	+1.5
RSSD				IAmb	IAmb	21 04 29.3	
	comp=Z,19nm,1.1s						
CCCA	Chr Cany lake	76.05	320	IAmb	IAmb	21 01 51.2	
	comp=Z,18nm,1.2s						
PRN	Pahroc Range	76.05	323	IAmb	IAmb	21 01 51.5	
	comp=Z,11nm,1.1s						
QSM	Queen of Sheba	76.07	320	IAmb	IAmb	21 01 50.2	
	comp=Z,27nm,1.7s						
GWY	Greenwater Val	76.11	321	IAmb	IAmb	21 01 51.2	
	comp=Z,10nm,1.0s						
BSUT	Blindstream Ca	76.12	327	IAmb	IAmb	21 01 51.6	
	comp=Z,8.5nm,0.8s						
PSUT	Pine Spring	76.22	324	IAmb	IAmb	21 01 52.1	
	comp=Z,8.9nm,0.8s						
TPNV	Topopah Spring	76.40	322		P	21 01 52.9	+3.6
TPNV				IAmb	IAmb	21 01 53.5	
	comp=Z,12nm,1.1s						
FURC	Furnace Creek,	76.41	321	IAmb	IAmb	21 01 53.3	
	comp=Z,9.8nm,0.9s						
WCT	Wildcat Mounta	76.50	321	P	P	21 01 52.0	+2.3
WCT				IAmb	IAmb	21 01 54.0	
	comp=Z,9.6nm,1.0s						
AGMN	Agassiz Nation	76.65	341	IAmb	IAmb	21 01 52.7	
	comp=Z,12nm,1.0s						
TORD	Torodi Ar. Bea	76.88	69	P	P	21 01 51.8	-0.4
	comp=Z,12nm,1.1s,baz=321,slow=6.2,SNR=6.0						
	comp=Z,12nm,1.1s						
TORD	Torodi Ar. Bea	76.88	69	P	P	21 01 51.1	-1.1
CWC	Cottonwood Cre	77.10	320		P	21 01 54.3	+1.1
PDAR	Pinedale Array	77.26	329	P	P	21 01 55.2	+1.2
	comp=Z,1.3nm,0.7s,baz=136,slow=7.8,SNR=12						
	comp=Z,1.3nm,0.7s						
BGU	Big Grassy Mou	77.54	326		P	21 01 56.4	+0.8
ULM	Lac du Bonnet	78.41	342	P	P	21 02 01.1	+1.2
	comp=Z,5.6nm,0.7s,baz=151,slow=8.9,SNR=7.1						
	comp=Z,5.6nm,0.7s						
ULM	Lac du Bonnet	78.41	342	IAmb	IAmb	21 04 48.0	
	comp=Z,7.9nm,0.7s						
NVAR	Mina Array Bea	78.60	321	P	P	21 02 03.5	+2.0
	comp=Z,2.2nm,0.8s,baz=141,slow=5.1,SNR=9.8						
	comp=Z,2.2nm,0.8s						
LAO	LASA Array	78.93	334	IAmb	IAmb	21 02 05.8	
	comp=Z,14nm,0.9s						
RLMT	Red Lodge	78.96	331	IAmb	IAmb	21 02 06.6	
	comp=Z,32nm,1.9s						
YNE	Yellowstone No	79.20	331	IAmb	IAmb	21 02 08.0	
	comp=Z,11nm,0.9s						
YMR	Madison River	79.37	330	IAmb	IAmb	21 02 09.6	
	comp=Z,13nm,0.9s						
YHH	Holmes Hill	79.41	330		P	21 02 07.2	+1.3
YHB	Horse Butte	79.54	330	IAmb	IAmb	21 02 10.3	
	comp=Z,9.3nm,0.9s						
PNTR	Pine Nut	79.79	321	IAmb	IAmb	21 02 11.8	
	comp=Z,18nm,0.9s						
HLID	Hailey	80.18	327		P	21 02 11.6	+1.7
HLID				IAmb	IAmb	21 02 13.8	
	comp=Z,15nm,0.9s						
CCD	Concordia, Ant	80.64	183	P	P	21 02 13.6	+1.4
DLMT	Dillon	80.65	329	IAmb	IAmb	21 02 15.9	
	comp=Z,17nm,1.2s						
BOSA	Boshof	80.82	117	P	P	21 02 13.9	+0.2
	comp=Z,5.9nm,0.8s,baz=258,slow=3.5,SNR=20						
	comp=Z,5.9nm,0.8s						
EGMT	Eagleton	81.44	333	IAmb	IAmb	21 02 18.8	
	comp=Z,9.8nm,0.9s						
PLID	Pearl Lake	82.07	327	IAmb	IAmb	21 02 23.1	
	comp=Z,11nm,0.8s						
LBTB	Lobatse	82.50	114	P	P	21 02 21.5	-1.0
LBTB				PcP	PcP	21 02 26.0	-1.3
K05A	Summer Lake	82.97	323	P	P	21 02 25.9	+1.3
K05A				IAmb	IAmb	21 02 27.8	
	comp=Z,14nm,1.0s						
F10A	Beach Ranch, E	83.31	327	IAmb	IAmb	21 02 33.2	
	comp=Z,6.1nm,0.7s						
PINE	Pine Mountain	83.71	324	IAmb	IAmb	21 02 31.9	
	comp=Z,10nm,0.8s						
TAM	Tamanrasset	84.73	62		P	21 02 33.1	-0.7
TAM	Tamanrasset	84.73	62	P	P	21 02 35.2	+1.3
C09A	Chrisman Ranch	85.11	328	IAmb	IAmb	21 02 37.9	
	comp=Z,16nm,0.8s						
FCC	Fort Churchill	85.66	346		P	21 02 38.9	+1.5
ESDC	Sonseca Array	86.75	44	P	P	21 02 44.7	+1.3
	comp=Z,1.3nm,0.9s,baz=244,slow=5.1,SNR=5.1						
	comp=Z,1.3nm,0.9s						
EDM	Edmonton	86.90	334		P	21 02 43.6	-0.1
YKA	Yellowknife Ar	94.29	340	P	P	21 03 19.2	+1.4
	comp=Z,3.2nm,0.9s,baz=137,slow=4.0,SNR=35						
	comp=Z,3.2nm,0.9s						
MODS	Modra-Piesok	104.28	43	*e*PDIFF	Pdif	21 04 06.4	+3.4
CTA	Charters Tower	125.15	219	PKP	PKiKP	21 09 00.7	+0.9
	comp=Z,6.8nm,1.0s,baz=124,slow=3.4,SNR=4.2						
ASAR	Alice Springs	128.12	205	PKP	PKiKP	21 09 05.9	+0.2
	comp=Z,5.0nm,0.7s,baz=147,slow=2.2,SNR=47						
ASAR	Alice Springs	128.12	205		PKPdf	21 09 05.5	+0.4
WRA	Warramunga Arr	131.28	207	PKP	PKiKP	21 09 12.3	+0.3
	comp=Z,3.6nm,0.6s,baz=152,slow=2.1,SNR=34						
WRA				SKPbc	SKPbc	21 12 19.5	-1.0
	comp=Z,0.9nm,0.8s,baz=151,slow=3.6,SNR=5.6						
BVAR	Borovoye Array	137.15	37	PKP	PKiKP	21 09 22.6	-0.3
	comp=Z,1.5nm,0.6s,baz=271,slow=2.4,SNR=7.9						
KURK	Kurchatov	142.73	36		PKPdf	21 09 28.4	-2.7
KURBB	Kurchatov Arra	142.73	36	PKhKP	PKPpre	21 09 28.4	
	comp=Z,1.3nm,0.6s,baz=301,slow=2.7,SNR=9.0						
KURBB				SKPbc	SKPbc	21 12 51.7	-1.7
	comp=Z,0.2nm,0.6s,baz=311,slow=2.0,SNR=4.2						
ZALV	Zalesovo Beam	143.74	28	PKP	PKPbc	21 09 32.0	+1.1
	comp=Z,5.8nm,0.5s,baz=304,slow=4.2,SNR=37						
ZALV				SKPbc	SKPbc	21 12 55.2	-0.5
	comp=Z,1.8nm,0.8s,baz=297,slow=4.5,SNR=5.8						
ZALV	Zalesovo Beam	143.74	28		PKPbc	21 09 31.6	+0.7
KSH	Kashi	145.54	55	PKPbc	PKPbc	21 09 37.4	+0.3
MKAR	Makanchi Array	146.88	40	PKPbc	PKPbc	21 09 40.0	-0.6
	comp=Z,12nm,0.6s,baz=276,slow=1.5,SNR=103						
HEH	HeiHe	151.66	340	*e*P	PKiKP	21 09 53.3	+0.6
HEH				pmax	pmax		
	comp=Z,14nm,0.8s						
WMQ	Urumqi	151.70	40	*e*PKPbc	PKPdf	21 09 46.1	-0.2
WMQ				LR	LR		
	comp=Z,190nm,23.1s						
HILR	Hailar Array B	154.17	349	PKPbc	PKiKP	21 09 59.0	+1.0
	comp=Z,3.1nm,0.7s,baz=86,slow=4.6,SNR=4.6						
HILR				PKPab	PKPab	21 10 14.3	+2.0
	comp=Z,5.1nm,0.6s,baz=64,slow=3.5,SNR=7.6						
MJAR	Matsushiro Arr	154.94	305	PKPab	PKPab	21 10 17.7	+1.6
	comp=Z,6.1nm,0.9s,baz=87,slow=2.4,SNR=12						
MJAR	Matsushiro Arr	154.94	305		PKPab	21 10 18.2	+2.1
SONM	Songino Array	155.94	11	PKP	PKPdf	21 09 54.1	+1.8
	comp=Z,0.9nm,0.8s,baz=6.0,slow=1.7,SNR=5.4						
SONM				PKPab	PKPab	21 10 21.8	+1.7
	comp=Z,1.3nm,0.7s,baz=317,slow=3.6,SNR=6.7						
GTA	Gaotai	161.36	33	*e*PKP	PKPdf	21 10 00.3	+1.3
GTA				pPKP	pPKPdf	21 10 44.5	-0.3
HHC	Hu-ho-hao-te	163.43	3	*e*P	PKPdf	21 10 00.9	-0.1
CMAR	Chiang Mai Arr	165.91	112	PKP	PKPdf	21 10 04.2	+0.5
	comp=Z,0.4nm,0.4s,baz=68,slow=3.2,SNR=4.1						
CMAR				PKPab	PKPab	21 11 04.8	+0.3
	comp=Z,0.3nm,0.3s,baz=255,slow=4.7,SNR=4.5						
LZH	Lanzhou	165.94	31	*e*PKP	PKPdf	21 09 58.9	-4.5
LZH				pPKP	pPKPdf	21 10 43.4	-5.9
LZH				sPKP	sPKPdf	21 10 59.0	-7.8
PZH	PanZhiHua	169.81	75	PKP	PKPdf	21 10 04.8	-1.5
NJ2	Nanjing	170.56	327	*e*P	PKPdf	21 10 06.8	+0.5
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						

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*MEX **13** 21:15:44.8±0.4, 15°.01N×92°.16W, h115^{km}±3^{km}, MD3.7*
*GCG **13** 21:15:44.6±0.6, 14°.85N×92°.13W, h102^{km}±12^{km}, MD3.5*
ISC 13 21:15:41.3±2.1**, 14°.7N**±0°.1×**92°.20W**±0°.09**, h119**^{km}±11^{km}**, n12,** σ**1^{s}.72**/24**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMCA	Catarina	0.22	33	*i* P	Pn	21 15 58.8	+1.0
SMCA				*i* S	Sn	21 16 09.2	-1.1
THIG		0.24	345	*e*P	Pn	21 15 59.4	+1.6
THIG				*e*S	Sn	21 16 10.8	+0.5
CHUJ	Union Juarez	0.43	12	*e*P	Pn	21 15 59.5	+0.5
CHUJ				*e*S	Sn	21 16 10.9	-1.4
PATR	El Naranjo	0.45	356	*e*P	Pn	21 15 59.2	+0.2
PATR				*e*S	Sn	21 16 10.9	-1.5
RTAL	Retalhuleu	0.51	106	*e*P	Pn	21 16 02.0	+2.9
RTAL				*e*S	Sn	21 16 15.4	+2.9
PAVE	Pavencul	0.52	2	*e*P	Pn	21 16 00.0	+0.5
PAVE				*e*S	Sn	21 16 11.6	-1.6
STG2	El Palmar, Qui	0.83	106	*i* P	Pn	21 16 01.1	-0.6
STG2				*i* S	Sn	21 16 14.2	-2.9
STG8	El Palmar, Qui	0.85	105	*i* P	Pn	21 16 01.5	-0.5
STG8				*i* S	Sn	21 16 16.9	-0.7
STG5	El Palmar, Qui	0.87	108	*i* P	Pn	21 16 01.4	-0.6
STG5				*i* S	Sn	21 16 14.5	-3.2
PCIG		1.42	316	*e*P	Pn	21 16 08.1	+0.4
PCIG				*e*S	Sn	21 16 28.4	+0.6
APG	El Apazote	1.71	79	*i* P	Pn	21 16 13.6	+2.2
APG				*i* S	Sn	21 16 34.1	-0.1
CMIG	Matias Romero	3.53	313	*e*P	Pn	21 16 35.2	+0.7
CMIG				*e*S	Sn	21 17 13.9	-1.9

DJA 13 21:32:08.2±0.3**, 8°S**±3°×**12°0E**±°**, h156**^{km}±4^{km}**, M3.6**/16**, mB4.7**/1**, mb3.9**/4**, MLv3.5**/16**, Mw(mB)4.0**/1**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBFI	Labuhan Bajo,	0.11	190	P	Pn	21 32 30.0	+0.9
LBFI				S	Sn	21 32 45.7	+0.6
WSI	Waingapu	1.35	164	P	Pn	21 32 37.2	+0.5
WSI				S	Sn	21 32 58.7	+0.1
WBSI	Waikabubak, Su	1.36	202	P	Pn	21 32 37.4	+0.5
WBSI				S	Sn	21 32 58.9	-0.1
DBNI	Kabupaten Domp	1.59	265	P	Pn	21 32 39.6	+0.5
DBNI				S	Sn	21 33 03.2	+0.3
EDFI	Ende, Flores	1.80	102	P	Pn	21 32 41.6	0.0
BASI	Baing, Sumba	1.95	160	P	Pn	21 32 43.6	+0.4
BASI				S	Sn	21 33 10.3	+0.2
PLAI	Plampang	2.16	258	P	Pn	21 32 46.2	+0.7
MMRI	Maumere	2.32	97	P	Pn	21 32 48.6	+1.2
BKSI	Bulukumba	3.04	4	P	Pn	21 32 56.7	+0.4
KAPI	Kappang	3.34	357	P	Pn	21 33 00.8	+0.7
KLNI	Mataram	3.77	269	P	Pn	21 33 05.5	-0.2
SOEI	Soe	4.52	108	P	Pn	21 33 15.9	+0.4
DNP	Denpasar	4.66	266	P	Pn	21 33 17.8	+0.6
IGBI	Denpasar	4.73	264	P	Pn	21 33 18.0	-0.2
JAGI	Jajag, Banyuwa	5.70	269	P	Pn	21 33 30.3	-0.7
	0.1nm7.3nm,0.8s						
MMSI	Mamuju	5.73	350	P	Pn	21 33 30.8	-0.7
	0.1nm23nm,0.5s						
LUWI	Luwuk	7.82	22	P	Pn	21 33 58.2	-1.0
	819nm19nm,0.8s						

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*IDC **13** 21:35:33.5±1.9, 24°.54S×67°.52W, h106^{km}±21^{km}, mb3.8/1, mbtmp4.0/4, Error ellipse: s-maj=41.2km s-min=14.9km az=97.0*
*SJA **13** 21:35:34.5±0.6, 24°.54S×67°.89W, h127^{km}±6^{km}, ML3.5, MW3.7*
*GUC **13** 21:35:35.6±0.7, 24°.44S×67°.98W, h149^{km}±7^{km}, ML3.7*
ISC 13 21:35:33.9±0.9**, 24°.50S**±0°.03×**67°.88W**±0°.04**, h148**^{km}±10^{km}**, n49,** σ**1^{s}.33**/72**, 2C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALTA		1.43	79	*e*P	Pn	21 36 03.1	-0.1
SALTA		1.43	79	*e*P	Pn	21 36 03.0	-0.1
SALTA				IAML		21 36 03.4	
	comp=Z,598nm,0.8s						
AF01	San Pedro de A	1.57	350	*e*P	Pn	21 36 04.9	+0.5
AF01	San Pedro de A	1.57	350	*e*P	Pn	21 36 04.9	+0.5
AF01				*e*S	Sn	21 36 27.4	-0.4
AF01				IAML		21 36 40.9	
	comp=Z,171nm,0.6s						
GO02	Mina Guanaco	1.69	247	⇑*i*P	Pn	21 36 07.0	+1.2
GO02				*i* S	Sn	21 36 30.6	+0.5
GO02				IAML		21 36 32.8	
	comp=N,1μm,0.1s						
GO02	Mina Guanaco	1.69	247	*e*P	Pn	21 36 07.0	+1.2
GO02				IAML		21 36 33.5	
	comp=Z,782nm,0.2s						
SLA	San Lorenzo	2.17	96	*e*P	Pn	21 36 11.7	+0.6
SLA				*e*S	Sn	21 36 39.5	-0.2
PB14	IPOC Station P	2.30	266	⇑*e*P	Pn	21 36 13.4	+0.5
PB14				*e*S	Sn	21 36 42.6	-0.2
PB14				IAML		21 36 44.4	
	comp=N,215nm,0.2s						
PB14	IPOC Station P	2.30	266	*e*P	Pn	21 36 13.4	+0.5
PB14				*e*S	Sn	21 36 42.1	-0.7
PB14				IAML		21 36 43.9	
	comp=Z,244nm,0.3s						
PB06	IPOC Station P	2.37	319	*i* S	Sn	21 36 43.2	-0.8
PB06				IAML		21 36 46.2	
	comp=N,240nm,0.3s						
PB06	IPOC Station P	2.37	319	*e*P	Pn	21 36 14.4	+0.8
PB06				*e*S	Sn	21 36 44.0	0.0
PB06				IAML		21 36 45.9	
	comp=Z,171nm,0.3s						
AC02	Maricunga	2.58	206	*e*P	Pn	21 36 18.8	+2.4
AC02	Maricunga	2.58	206	*e*P	Pn	21 36 18.9	+2.4
AC02				*e*S	Sn	21 37 06.6	+17
PB10	IPOC Station P	2.64	291	*e*P	Pn	21 36 17.5	+0.9
PB10				*e*S	Sn	21 36 48.9	-0.7
PB10				IAML		21 36 51.9	
	comp=N,235nm,0.2s						
PB10	IPOC Station P	2.64	291	*e*P	Pn	21 36 17.8	+1.1
PB10				*e*S	Sn	21 36 48.7	-0.9
PB10				IAML		21 36 54.0	
	comp=Z,141nm,0.6s						
PB05	IPOC Station P	2.69	307	*e*P	Pn	21 36 18.0	+0.6
PB05				*e*S	Sn	21 36 49.8	-1.2
PB05				IAML		21 36 53.1	
	comp=E,303nm,0.3s						
PB05	IPOC Station P	2.69	307	*e*P	Pn	21 36 18.1	+0.7
PB05				*e*S	Sn	21 36 49.9	-1.1
PB05				IAML		21 36 56.4	
	comp=Z,124nm,0.4s						
AC01	Pan de Azucar	2.96	236	*e*P	Pn	21 36 21.0	+0.3
AC01	Pan de Azucar	2.96	236	*e*P	Pn	21 36 21.1	+0.4
AC01				*e*S	Sn	21 36 55.5	-1.3
AC01				IAML		21 36 59.7	
	comp=Z,120nm,0.4s						
PB09	IPOC Station P	2.97	335	*e*P	Pn	21 36 22.4	+1.3
PB09				*e*S	Sn	21 36 56.9	-0.5
PB09	IPOC Station P	2.97	335	*e*P	Pn	21 36 22.4	+1.3
PB09				*e*S	Sn	21 36 58.1	+0.6
PB09				IAML		21 36 59.6	
	comp=Z,81nm,0.5s						
PB03	IPOC Station P	2.99	324	*e*P	Pn	21 36 21.8	+0.6
PB03				*e*S	Sn	21 36 57.2	-0.6
PB03				IAML		21 36 57.9	
	comp=N,172nm,0.3s						
PB03	IPOC Station P	2.99	324	*e*P	Pn	21 36 21.9	+0.6
PB03				*e*S	Sn	21 36 56.5	-1.4
PB03				IAML		21 36 57.4	
	comp=Z,114nm,0.4s						
YJA	Yavi	3.18	44	*e*P	Pn	21 36 26.0	+2.1
YJA	Yavi	3.18	44	*e*P	Pn	21 36 26.0	+2.1
YJA				*e*S	Sn	21 37 00.0	-2.5
AHML	Horco Molle	3.23	135	*e*P	Pn	21 36 14.7	-10
PB07	IPOC Station P	3.32	326	*e*P	Pn	21 36 25.9	+0.3
PB07				IAML		21 37 12.3	
	comp=E,66nm,0.3s						
PB07	IPOC Station P	3.32	326	*e*P	Pn	21 36 25.9	+0.3
PB07				*e*S	Sn	21 37 07.5	+2.0
PB07				IAML		21 37 14.3	
	comp=Z,97nm,0.5s						
TINO	Tinogasta	3.56	176	*e*P	Pn	21 36 18.5	-10
PB02	IPOC Station P	3.67	329	*e*P	Pn	21 36 30.1	+0.1
PB02				IAML		21 37 15.4	
	comp=N,116nm,0.2s						
PB02	IPOC Station P	3.67	329	*e*P	Pn	21 36 30.1	+0.1
PB02				*e*S	Sn	21 37 13.8	+0.3
PB02				IAML		21 37 14.9	
	comp=Z,150nm,0.3s						
GO03	Copiapo	3.74	214	*e*P	Pn	21 36 31.4	+0.7
GO03	Copiapo	3.74	214	*e*P	Pn	21 36 31.7	+0.9
GO03				*e*S	Sn	21 37 15.2	+0.3
GO03				IAML		21 37 16.6	
	comp=Z,156nm,0.5s						
PB01	IPOC Station P	3.75	336	*e*P	Pn	21 36 31.2	+0.2
PB01	IPOC Station P	3.75	336	*e*P	Pn	21 36 31.2	+0.2
PB01				*e*S	Sn	21 37 14.7	-0.5
PB01				IAML		21 37 22.1	
	comp=Z,44nm,0.2s						
VCA	Vinchina	4.23	184	*e*P	Pn	21 36 40.1	+2.9
VCA				*e*S	Sn	21 37 16.1	-10
TA01	Diego Aracena	4.46	331	*e*P	Pn	21 36 39.7	-0.5
TA01				IAML		21 38 00.5	
	comp=Z,21nm,0.5s						
PB08	IPOC Station P	4.50	345	*e*P	Pn	21 36 41.9	+0.8
PB08				*e*S	Sn	21 37 35.6	+2.3
HMBC	Humberstone	4.60	336	*e*P	Pn	21 36 44.5	+2.3
HMBC				IAML		21 37 55.3	
	comp=Z,37nm,0.4s						
AC04	Llanos de Chal	4.67	217	*e*S	Sn	21 37 32.1	-4.6
AC04				IAML		21 37 41.5	
	comp=Z,75nm,0.3s						
AC05	El Transito	4.82	206	*e*S	Sn	21 37 40.2	-0.3
AC05				IAML		21 37 45.0	
	comp=Z,44nm,0.5s						
ACLC	CERRO LA CRUZ	4.97	171	*e*P	Pn	21 36 49.4	+2.2
LCO	Las Campanas	5.15	209	*e*P	Pn	21 36 49.4	-0.2
LCO				*e*S	Sn	21 37 47.7	-0.8
LCO				*e*S	Sn	21 37 47.7	-0.8
CFA	Coronel Fontan	7.08	182	P	Pn	21 37 16.1	+1.0
	comp=Z,1.0nm,0.3s,baz=11,slow=16,SNR=15						
CFA				S	Sn	21 38 31.6	-2.9
	comp=Z,1.6nm,0.3s,baz=249,slow=18,SNR=7.2						
LPAZ	La Paz	8.18	358	P	Pn	21 37 31.9	+1.5
	comp=Z,2.5nm,0.3s,baz=161,slow=5.6,SNR=15						
LPAZ				S	Sn	21 39 00.8	-0.9
	comp=Z,0.9nm,0.7s,baz=85,slow=8.5,SNR=1.3						
SIV	San Ignacio	10.60	38	P	Pn	21 38 00.1	-2.0
	comp=Z,5.9nm,0.5s,baz=221,slow=17,SNR=22						
BDFB	Brasilia	20.62	68	P	P	21 40 01.4	-0.5
	comp=Z,6.3nm,0.6s,baz=243,slow=12,SNR=10						
	comp=Z,6.3nm,0.6s						
ZALV	Zalesovo Beam	144.21	28	PKP	PKiKP	21 54 54.8	-0.6
	comp=Z,1.5nm,0.6s,baz=297,slow=2.8,SNR=7.6						
MKAR	Makanchi Array	147.42	39	PKPbc	PKPab	21 55 04.0	+1.4
	comp=Z,1.1nm,0.6s,baz=310,slow=3.1,SNR=14						

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*IDC **13** 21:41:28.9±0.9, 14°.93S×173°.68W, h0^{km}, mb4.0/7, mbtmp4.0/7, MS3.5/8, Error ellipse: s-maj=36.1km s-min=24.1km az=131.0*
ISC 13 21:41:33.5±0.9**, 14°.9S**±0°.2×**173°.7W**±0°.2**, h30**^{km}**, n20,** σ**1^{s}.03**/8**, mb4.0**/7**, MS3.5**/8**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	20.09	246	LR	LR	21 52 01.3	
	comp=Z,60nm,18.2s,baz=80,slow=31						
URZ	Urewera	24.64	197	LR	LR	21 55 01.4	
	comp=Z,105nm,19.7s,baz=49,slow=33						
H11S2	WAKE ISLAND Hy	38.36	329	T	T	22 29 43.5	
	baz=146,slow=75,SNR=63						
H11S3	WAKE ISLAND Hy	38.37	329	T	T	22 29 44.6	
	baz=146,slow=75,SNR=9.7						
H11S1	WAKE ISLAND Hy	38.37	329	T	T	22 29 44.8	
	baz=146,slow=75,SNR=31						
CTA	Charters Tower	38.44	256	LR	LR	22 01 43.0	
	comp=Z,36nm,21.6s,baz=50,slow=32						
H11N3	WAKE ISLAND Hy	39.30	330	T	T	22 30 49.1	
	baz=147,slow=76,SNR=7.1						
H11N1	WAKE ISLAND Hy	39.31	330	T	T	22 30 35.8	
	baz=147,slow=76,SNR=5.8						
H11N2	WAKE ISLAND Hy	39.32	330	T	T	22 30 50.7	
	baz=147,slow=76,SNR=11						
STKA	Stephens Creek	44.01	239	P	P	21 49 38.6	+0.1
	1.3nm,0.6s,baz=45,slow=10.0,SNR=3.1						
	1.3nm,0.6s						
WRA	Warramunga Arr	49.64	256	P	P	21 50 22.9	+0.1
	1.2nm,0.8s,baz=90,slow=6.9,SNR=9.7						
	1.2nm,0.8s						
ASAR	Alice Springs	49.95	251	P	P	21 50 25.1	0.0
	4.4nm,0.7s,baz=84,slow=8.5,SNR=49						
ASAR				LR	LR	22 10 18.9	
	comp=Z,71nm,18.1s,baz=110,slow=35						
	4.4nm,0.7s						
VNDA	Vanda	63.85	186	P	P	21 52 03.0	+0.3
	1.1nm,0.8s,baz=18,slow=8.9,SNR=3.9						
	1.1nm,0.8s						
MJAR	Matsushiro Arr	68.34	320	LR	LR	22 15 58.3	
	comp=Z,25nm,21.1s,baz=128,slow=30						
NVAR	Mina Array Bea	74.17	42	P	P	21 53 08.8	+1.1
	0.9nm,0.8s,baz=232,slow=9.2,SNR=4.4						
NVAR				LR	LR	22 20 01.7	
	comp=Z,52nm,21.2s,baz=260,slow=31						
	0.9nm,0.8s						
QSPA	South Pole Qui	75.15	180	P	P	21 53 12.2	-0.6
	3.8nm,0.8s,baz=39,slow=4.3,SNR=11						
	3.8nm,0.8s						
ILAR	Eielson Array	82.01	11	P	P	21 53 48.7	-1.6
	0.4nm,0.9s,baz=224,slow=3.8,SNR=5.1						
	0.4nm,0.9s						
YAK	Yakutsk	88.52	337	LR	LR	22 37 32.1	
	comp=Z,16nm,18.5s,baz=136,slow=38						
ULM	Lac du Bonnet	93.75	39	LR	LR	22 30 41.6	
	comp=Z,56nm,18.2s,baz=0.5,slow=32						
BRTR	Keskin Array B	145.55	321	PKPbc	PKPab	22 01 10.8	+1.0
	1.1nm,0.8s,baz=62,slow=1.7,SNR=8.1						

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*TEH **13** 21:41:40.8, 38°.64N×45°.75E, h10^{km}±203^{km}*
*AZER **13** 21:41:42.5, 38°.74N×45°.80E, h11^{km}, ml2.8*
*AFAD **13** 21:41:47.0, 38°.68N×45°.68E, h40^{km}, ML2.0*
ISC 13 21:41:42.2±1.1**, 38°.68N**±0°.02×**45°.77E**±0°.02**, h5**^{km}±10^{km}**, n41,** σ**1^{s}.13**/73**, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ORD	Ordubad	0.30	35	P	Pg	21 41 48.4	+0.2
ORD				S	Sg	21 41 53.3	+1.1
NAX	Nakhchivan	0.54	337	P	Pg	21 41 53.3	+0.7
NAX				S	Sb	21 42 02.2	-0.2
SBZ	Shahbuz	0.74	347	P	Pg	21 41 56.5	+0.1
SBZ				S	Sb	21 42 07.9	-0.2
IAZR	Azarshahr	1.01	171	Pg	Pg	21 42 00.5	-1.1
IAZR				Sg	Sg	21 42 13.8	-1.0
MAKU	Maku	1.08	309	Pg	Pg	21 42 02.4	-0.6
MAKU				Sg	Sb	21 42 17.8	-0.4
HYR	Heyderabad	1.26	326	P	Pn	21 42 05.9	-0.8
HYR				S	Sn	21 42 24.3	+0.3
OZAP	Van, Ozalp-Mer	1.39	270	P	Pg	21 42 08.9	-0.1
OZAP				*i* IAML		21 42 25.0	
	comp=E,21nm,1.3s						
OZAP				S	Sg	21 42 27.1	+0.1
OZAP				*i* IAML		21 42 39.0	
	comp=N,31nm,1.8s						
QRD	Qoradiz	1.44	57	Pn	Pn	21 42 08.3	-0.7
QRD				Sn	Sg	21 42 29.2	+0.8
YOVA	Hakkari_Yksek	1.60	227	P	Pb	21 42 12.0	-0.3
YOVA				S	Sn	21 42 31.6	-0.9
GRMI	Germi	1.66	85	Pg	Pn	21 42 11.5	-0.7
ISRB	Sarab	1.72	119	Pg	Pn	21 42 12.8	-0.2
BLQ	Beylaqan	1.74	53	Pn	Pn	21 42 13.6	+0.6
BLQ				Sn	Sb	21 42 37.2	+0.4
VMUR	Van-Muradiye	1.75	281	P	Pg	21 42 15.5	-0.2
VMUR				S	Sn	21 42 35.4	-0.7

VMUR				i IAML		21 42 53.0	
	comp=N,18nm,1.1s						
AGDM	**Agdam**	**1.77**	**36**	Pn	**Pb**	**21 42 14.4**	**-0.7**
AGDM				Sn	**Sg**	**21 42 39.4**	**+0.5**
IGDI	**IGDIR**	**1.77**	**313**	P	**Pb**	**21 42 14.2**	**-1.0**
IGDI				S	**Sn**	**21 42 35.9**	**-0.8**
IGDI				i IAML		21 42 42.0	
	comp=E,13nm,0.3s						
IGDI				i IAML		21 42 47.0	
	comp=N,17nm,1.1s						
IGDI	**IGDIR**	**1.77**	**313**	Pn	**Pb**	**21 42 14.7**	**-0.6**
IGDI				Sn	**Sg**	**21 42 40.3**	**+1.1**
IHSH	**Hashtrud**	**1.81**	**139**	Pg	**Pn**	**21 42 13.9**	**-0.5**
TVAN	**Van**	**1.86**	**266**	P	**Pg**	**21 42 18.0**	**+0.2**
BRDA	**Brd**	**1.92**	**34**	Pn	**Pn**	**21 42 16.4**	**+0.8**
BRDA				Sn	**Sg**	**21 42 46.5**	**+2.6**
YRD	**Yardimli**	**1.94**	**82**	Pn	**Pn**	**21 42 17.0**	**+0.8**
YRD				Sn	**Sb**	**21 42 43.6**	**+0.7**
HAKT	**HAKKARI**	**1.98**	**236**	P	**Pb**	**21 42 19.1**	**+0.3**
HAKT	**HAKKARI**	**1.98**	**236**	Pn	**Pg**	**21 42 21.1**	**+1.0**
HAKT				Sn	**Sg**	**21 42 48.4**	**+2.7**
GANJ	**Ganja**	**2.01**	**12**	Pn	**Pb**	**21 42 18.9**	**-0.4**
GANJ				Sn	**Sg**	**21 42 45.8**	**-1.0**
LRK	**Lerik**	**2.01**	**90**	Pn	**Pn**	**21 42 17.8**	**+0.8**
LRK				Sn	**Sb**	**21 42 45.6**	**+0.8**
GDB	**GEDABAY**	**2.04**	**360**	Pn	**Pb**	**21 42 19.4**	**-0.5**
GDB				Sn	**Sg**	**21 42 46.7**	**-1.1**
GLBA	**Clilabad**	**2.12**	**74**	Pn	**Pb**	**21 42 19.9**	**-1.2**
GLBA				Sn	**Sb**	**21 42 48.5**	**+0.7**
ZRD	**Zardab**	**2.18**	**42**	Pn	**Pb**	**21 42 22.3**	**+0.2**
ZRD				Sn	**Sg**	**21 42 53.4**	**+1.2**
KOTA	**Agri, Merkez-K**	**2.29**	**300**	P	**Pb**	**21 42 23.9**	**-0.2**
MNGR	**Mingechevir, A**	**2.33**	**25**	Pn	**Pb**	**21 42 23.9**	**-0.7**
MNGR				Sn	**Sg**	**21 42 56.7**	**-0.2**
LKRN	**Lenkeran, Azer**	**2.35**	**88**	Pn	**Pb**	**21 42 24.1**	**-1.0**
LKRN				Sn	**Sb**	**21 42 56.1**	**+1.7**
ASTR	**Astara**	**2.37**	**92**	Pn	**Pb**	**21 42 24.1**	**-1.3**
ASTR				Sn	**Sb**	**21 42 56.3**	**+1.4**
SAAT	**Saatly**	**2.37**	**59**	Sn	**Sb**	**21 42 54.8**	**-0.2**
QZX	**Qazax, Azerbai**	**2.40**	**353**	Pn	**Pb**	**21 42 26.3**	**+0.4**
QZX				Sn	**Sg**	**21 42 58.8**	**-0.4**
GAS1	**Astara - Iran**	**2.42**	**96**	Pn	**Pb**	**21 42 24.5**	**-1.8**
KDMR	**Kurdemir**	**2.52**	**47**	Pn	**Pb**	**21 42 28.5**	**+0.5**
KDMR				Sn	**Sb**	**21 43 01.2**	**+1.9**
SEKA	**Sheki**	**2.76**	**23**	Pn	**Pb**	**21 42 30.0**	**-2.0**
SEKA				Sn	**Sb**	**21 43 07.1**	**+0.9**
QBL	**Gabala**	**2.77**	**34**	Pn	**Pb**	**21 42 31.4**	**-0.9**
QBL				Sn	**Sg**	**21 43 09.6**	**-1.5**
IML	**Ismayilli**	**2.81**	**41**	Pn	**Pb**	**21 42 30.5**	**-2.5**
IML				Sn	**Sg**	**21 43 10.7**	**-1.9**
ZKTA	**Zakatala**	**3.03**	**12**	Pg	**Pb**	**21 42 35.1**	**-1.6**
ZKTA				Sg	**Sg**	**21 43 17.9**	**-1.6**
PQL	**Pirkuli**	**3.03**	**45**	Pn	**Pn**	**21 42 31.8**	**+0.8**
PQL				Sn	**Sn**	**21 43 10.3**	**+2.6**
GBS	**Qobustan**	**3.07**	**52**	Pn	**Pb**	**21 42 35.3**	**-2.1**

DJA 13 21:42:36.2±0.8**, 1˚N**±3˚×**9˚7E**±˚**, h20**km±4km**, M4.0**/15**,**
mb4.3/7**, MLv3.8**/15**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.62**	**22**	P	Pn	21 42 50.7	+0.9
GSI				S	Sb	21 42 56.0	-0.6
PBSI	**Pulau Batu**	**1.22**	**130**	P	Pb	21 42 58.6	0.0
PBSI				S	Sb	21 43 13.1	-0.9
SNSI	**Sinabang, Aceh**	**1.95**	**329**	P	Pn	21 43 08.3	+0.1
MNSI	**Mandailing Nat**	**2.24**	**88**	P	Pn	21 43 13.2	+1.0
TPTI		**2.52**	**356**	P	Pn	21 43 15.9	-0.1
PSI	**Prapat**	**2.60**	**38**	P	Pn	21 43 16.6	-0.6
SISI	**Saibi**	**2.69**	**139**	P	Pn	21 43 18.8	+0.4
KCSI	**Kotacane, Aceh**	**2.81**	**9**	P	Pn	21 43 20.3	+0.3
KRJI	**Kerinci**	**4.98**	**124**	P	Pn	21 43 51.3	+1.3
IPM	**Ipoh**	**5.24**	**45**	P	Pn	21 43 54.5	+1.1
	0.1nm17nm,1.2s						
KULM	**Kulim**	**5.61**	**36**	P	Pn	21 43 57.4	-1.1
MYKOM	**Kota Tinggi**	**6.59**	**81**	P	Pn	21 44 13.3	+1.2
	0.2nm46nm,1.5s						
UBSI	**University, Be**	**6.65**	**132**	P	Pn	21 44 12.3	-0.5
MNAI	**Manna**	**7.55**	**132**	P	Pn	21 44 25.0	-0.3
	99nm,1.5s						
EGSI	**Enggano, Bengk**	**7.80**	**141**	P	Pn	21 44 27.0	-1.6
	0.2nm65nm,1.4s						
MDSI	**Maura Dua**	**8.57**	**127**	P	Pn	21 44 39.1	-0.2
	4.4nm,0.5s						
KASI	**Kota Agung**	**9.47**	**131**	P	Pn	21 44 50.9	-0.7
	11nm,1.4s						
TPI	**Tanjungpandan**	**10.88**	**109**	P	Pn	21 45 10.4	-0.5

DJA 13 21:45:12.0±0.4**, 1˚N**±3˚×**12˚1E**±˚**, h10**km**, M4.1**/14**, mb4.1**/7**,**
MLv4.0/14**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MRSI	**Marisa**	**1.20**	**137**	P	Pb	21 45 33.5	-1.4
MRSI				S	Sb	21 45 49.7	-0.8
MPSI	**Mapaga**	**1.59**	**230**	P	Pn	21 45 38.8	-1.4
MPSI				S	Sn	21 46 00.7	-0.1
GTOI	**Gorontalo**	**2.02**	**111**	P	Pn	21 45 44.8	-1.4
GTOI				S	Sn	21 46 08.1	-3.4
APSI	**Ampana**	**2.32**	**167**	P	Pn	21 45 49.6	-0.6
PCI	**Palu**	**2.59**	**210**	P	Pn	21 45 55.3	+1.3
PCI				S	Sn	21 46 26.9	+1.3
LUWI	**Luwuk**	**2.90**	**145**	P	Pn	21 45 58.6	+0.3
LUWI				S	Sb	21 46 39.0	-0.5
TTSI	**Tana Toraja**	**4.56**	**197**	P	Pn	21 46 21.4	+0.2
MMSI	**Mamuju**	**4.59**	**209**	P	Pn	21 46 21.3	-0.2
SPSI	**Sidrap Palu**	**5.46**	**194**	P	Pn	21 46 35.2	+1.7
	0.1nm22nm,0.7s						
SANI	**Sanana**	**5.93**	**125**	P	Pn	21 46 39.5	-0.5
	0.1nm21nm,1.0s						
SANI				S	Sn	21 47 48.7	+0.7
	0.1nm21nm,1.0s						
KAPI	**Kappang**	**6.48**	**192**	P	Pn	21 46 47.3	-0.2
	6.3nm,0.9s						
BKSI	**Bulukumba**	**6.71**	**189**	P	Pn	21 46 52.5	+1.8
	0.0nm13nm,0.9s						
KKM	**Kota Kinabalu**	**6.75**	**314**	P	Pn	21 46 51.6	+0.2
	0.1nm14nm,1.0s						

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*IDC **13** 22:22:43.6±1.2, 34˚72N×23˚74E, h0km, mb3.9/10,*
mbtmp3.8/13, ML3.4/3, Error ellipse: s-maj=24.8km
s-min=13.2km az=161.0
*HLW **13** 22:22:48.2, 34˚61N×24˚23E, h11km±10km, Ml3.3*
*ISK **13** 22:22:49.1, 34˚78N×24˚21E, h20km, ML3.2/16*
*THE **13** 22:22:51.6, 35˚N±2˚×2˚4E±˚, h7km±2km, M3.1/7, MLh3.1/7*
*NAO **13** 22:22:51.7, 35˚08N×24˚47E, h33km, MB3.4*
*ATH **13** 22:22:51.1±0.2, 34˚91N×24˚11E, h10km±1km, ML3.2/8,*
Manual Solution by G.Panopoulou First location:
2019/12/13 22:24:03, This location: 2019/12/14 02:09:20
ML Amplitudes are expressed in micrometers, All
distances are expressed in degrees Latitude uncertainty: 2
km; Longitude uncertainty: 2 km
*AFAD **13** 22:22:59.1, 35˚16N×24˚86E, h6km±3km, ML3.0*
ISC 13 22:22:49.0±0.9**, 34˚80N**±0˚06×**24˚14E**±0˚04**, h23**km±5km**,**
n108, σ2^{s}27/119**, mb3.9**/9**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.06**	**307**	P	**Pb**	**22 22 53.5**	**+0.4**
GVD				S	**Sb**	**22 22 55.4**	**-0.5**
GVD	**Gavdhos**	**0.06**	**307**	Pg	**Pb**	**22 22 53.4**	**+0.3**
GVD	**Gavdhos**	**0.06**	**307**	P	**Pb**	**22 22 53.4**	**+0.3**
GVD				S	**Sb**	**22 22 56.6**	**+0.6**
VAM	**Vamos**	**0.60**	**4**	P	**Pb**	**22 23 02.0**	**+1.1**
VAM	**Vamos**	**0.60**	**4**	P	**Pb**	**22 23 02.0**	**+1.1**
VAM				S	**Sb**	**22 23 08.8**	**-0.2**
IMMV	**Iera Moni Meta**	**0.67**	**349**	P	**Pb**	**22 23 02.7**	**+0.7**
IMMV				S	**Sb**	**22 23 11.5**	**+0.6**
IMMV	**Iera Moni Meta**	**0.67**	**349**	Pg	**Pb**	**22 23 02.9**	**+0.9**
IMMV				Sg	**Sn**	**22 23 13.9**	**+1.1**
CHNB	**Souda**	**0.68**	**355**	P	**Pb**	**22 23 03.1**	**+0.9**
CH01	**Chania**	**0.72**	**352**	P	**Pb**	**22 23 03.5**	**+0.6**
CHAN	**Chania**	**0.72**	**353**	P	**Pb**	**22 23 03.7**	**+0.9**
CHAN				S	**Sb**	**22 23 13.4**	**+1.1**
CHAN	**Chania**	**0.72**	**353**	P	**Pb**	**22 23 03.3**	**+0.5**
IDI	**Anoyia**	**0.78**	**52**	Pg	**Pn**	**22 23 05.4**	**+0.8**
	56nm,0.3s,baz=234,slow=12,SNR=171						
IDI				Lg	Lg	22 23 21.2	
	73nm,0.3s,baz=320,slow=19,SNR=6.2						
IDI	**Anoyia**	**0.78**	**52**	P	**Pn**	**22 23 05.4**	**+0.8**
IDI				S	**Sb**	**22 23 15.5**	**+1.3**
IDI	**Anoyia**	**0.78**	**52**	Pg	**Pb**	**22 23 04.7**	**+0.8**
IDI				Sg	**Sb**	**22 23 15.4**	**+1.3**
IDI	**Anoyia**	**0.78**	**52**	P	**Pn**	**22 23 05.5**	**+0.8**
IDI				S	**Sn**	**22 23 16.4**	**+0.8**
IACM	**Heraklion**	**0.91**	**56**	P	**Pb**	**22 23 09.1**	**+3.0**
ANKY	**Antikythira Is**	**1.26**	**327**	P	**Pb**	**22 23 13.8**	**+1.7**
ANKY	**Antikythira Is**	**1.26**	**327**	P	**Pb**	**22 23 13.5**	**+1.3**
NPS	**Neapolis**	**1.29**	**69**	P	**Pb**	**22 23 14.8**	**+2.2**
NPS	**Neapolis**	**1.29**	**69**	P	**Pb**	**22 23 15.3**	**+2.8**
STIA	**Sitia Lasithi**	**1.65**	**76**	P	**Pb**	**22 23 19.6**	**+0.9**
KTHA	**Kythira Island**	**1.70**	**329**	P	**Pb**	**22 23 20.0**	**+0.5**
KTHA	**Kythira Island**	**1.70**	**329**	Pn	**Pb**	**22 23 19.0**	**-0.5**
ZKR	**Zakros**	**1.73**	**79**	Pn	**Pn**	**22 23 18.0**	**+0.4**
ZKR				Sn	**Sn**	**22 23 38.8**	**-0.2**
ZKR	**Zakros**	**1.73**	**79**	P	**Pb**	**22 23 21.7**	**+1.6**
MHLO	**Agia Marina, M**	**1.89**	**6**	P	**Pb**	**22 23 23.0**	**+0.1**
SNT5	**Nea Kammeni, S**	**1.89**	**32**	P	**Pb**	**22 23 22.9**	**0.0**
SAP3	**Santorini-Thir**	**1.90**	**31**	P	**Pn**	**22 23 21.8**	**+1.9**
APE	**Apeiranthos**	**2.52**	**26**	Pn	**Pn**	**22 23 30.1**	**+1.5**
APE	**Apeiranthos**	**2.52**	**26**	P	**Pn**	**22 23 30.7**	**+2.1**
MET1	**Methana Town,**	**2.84**	**348**	P	**Pn**	**22 23 35.0**	**+2.3**
PYL	**PYLOS**	**2.86**	**318**	P	**Pn**	**22 23 35.1**	**+2.0**
MET4	**Agioi Theodoro**	**2.88**	**348**	P	**Pn**	**22 23 35.7**	**+2.4**
MET2	**Kameni Chora,**	**2.88**	**347**	P	**Pn**	**22 23 35.0**	**+1.6**
MET5	**Makryloggos,Me**	**2.88**	**348**	P	**Pn**	**22 23 35.9**	**+2.4**
ITM	**Ithomi**	**2.98**	**323**	P	**Pn**	**22 23 37.2**	**+2.4**
VLY	**Voula,Athens**	**3.06**	**355**	P	**Pn**	**22 23 37.7**	**+1.8**
ATHU	**Athens Univers**	**3.17**	**355**	P	**Pn**	**22 23 39.5**	**+2.1**
ATH	**Athens Observa**	**3.18**	**354**	P	**Pn**	**22 23 39.5**	**+2.0**
KARY	**Karystos**	**3.23**	**4**	P	**Pn**	**22 23 40.5**	**+2.3**
PTL	**Penteli**	**3.25**	**356**	P	**Pn**	**22 23 40.4**	**+2.0**
DION	**Dionisos Attik**	**3.27**	**357**	P	**Pn**	**22 23 40.9**	**+2.1**
YAZI	**Mula-Dat§a-**	**3.28**	**54**	P	**Pn**	**22 23 41.4**	**+2.5**
YAZI				S	**Sn**	**22 24 14.3**	**-2.9**
MAGU	**Magoula**	**3.31**	**351**	P	**Pn**	**22 23 41.4**	**+2.1**
LTK	**Loutraki**	**3.35**	**344**	P	**Pn**	**22 23 42.0**	**+2.1**
BODT	**Bodrum**	**3.42**	**48**	Pn	**Pn**	**22 23 42.5**	**+1.7**
SLUM	**Salum**	**3.42**	**165**	P	Pn	22 23 39.8	-1.0
SLUM				S	Sn	22 24 17.4	-3.3
GUR	**Goura**	**3.45**	**336**	P	**Pn**	**22 23 43.8**	**+2.5**
VIL2	**Platees**	**3.47**	**349**	P	**Pn**	**22 23 42.6**	**+1.0**
BDRM	**Kayabasi**	**3.50**	**49**	P	**Pn**	**22 23 45.1**	**+3.1**
BDRM				S	Sn	22 24 09.8	-13
ARG	**Arkhangelos**	**3.54**	**65**	Pn	**Pn**	**22 23 44.9**	**+2.4**
ARG	**Arkhangelos**	**3.54**	**65**	P	**Pn**	**22 23 45.6**	**+3.1**
KLV	**Kalavryta, Ach**	**3.61**	**334**	P	**Pn**	**22 23 46.2**	**+2.6**
KYMI	**Kymi, Euboea I**	**3.82**	**359**	P	**Pn**	**22 23 48.2**	**+1.8**
TURN	**Turunc**	**3.87**	**58**	P	**Pn**	**22 23 50.0**	**+3.0**
TURN				S	**Sn**	**22 24 26.6**	**-5.1**
TURN				i IAML		22 25 30.0	
	comp=E,32nm,1.4s						
TURN	**Turunc**	**3.87**	**58**	Pn	**Pn**	**22 23 49.6**	**+2.6**
TRIZ	**Trizonia**	**3.92**	**335**	P	**Pn**	**22 23 49.9**	**+2.1**
KALE	**Kalithea**	**3.93**	**336**	P	**Pn**	**22 23 50.0**	**+2.2**
LKR	**Lokris**	**3.95**	**347**	P	**Pn**	**22 23 49.6**	**+1.5**
ATAL	**Atalanti**	**3.98**	**347**	P	**Pn**	**22 23 50.6**	**+2.0**
MG00	**Magoula, Dorid**	**4.01**	**335**	P	**Pn**	**22 23 50.7**	**+1.7**
EFP	**Efpalio**	**4.04**	**334**	P	**Pn**	**22 23 52.4**	**+3.1**
URLA	**Izmir**	**4.06**	**28**	P	**Pn**	**22 23 51.2**	**+1.5**
YER	**Yerkesik**	**4.08**	**54**	Pn	**Pn**	**22 23 52.4**	**+2.4**
MULA	**Mugla, Merkez-**	**4.18**	**53**	P	**Pn**	**22 23 52.3**	**+0.9**
DALY	**Dalyan (Mula)**	**4.18**	**60**	Pn	**Pn**	**22 23 53.7**	**+2.4**
ANX	**Ano Chora**	**4.18**	**335**	P	**Pn**	**22 23 53.5**	**+2.1**
PVO	**Paravola**	**4.35**	**332**	P	**Pn**	**22 23 56.7**	**+3.1**
AYDB	**Zeytinkoy-Aydi**	**4.36**	**43**	Pn	**Pn**	**22 23 56.2**	**+2.4**
IZZE	**Mula-Seydike**	**4.45**	**67**	P	**Pn**	**22 23 57.1**	**+2.1**
IZZE				S	**Sn**	**22 24 41.6**	**-4.5**
IZZE				i IAML		22 24 50.0	
	comp=N,46nm,0.3s						
IZZE				i IAML		22 24 51.0	
	comp=E,40nm,0.4s						
AGG	**Agios Georgios**	**4.45**	**341**	P	**Pn**	**22 23 56.7**	**+1.6**
MAKR	**Makrakomi, Fth**	**4.50**	**340**	P	**Pn**	**22 23 57.8**	**+2.0**
EVR	**Evrytania**	**4.51**	**336**	P	**Pn**	**22 23 58.7**	**+2.7**
ESEN	**Aydn-Nazilli**	**4.52**	**47**	P	**Pn**	**22 23 59.8**	**+3.8**
ESEN				S	**Sn**	**22 24 43.0**	**-4.8**
IZMR	**zmir-demi**	**4.53**	**42**	P	**Pn**	**22 23 59.3**	**+3.3**
IZMR				S	Sn	22 24 36.8	-11
NEO	**Neokhori**	**4.55**	**351**	P	**Pn**	**22 23 58.1**	**+1.7**
NAZL	**Nazilli-Aydin**	**4.60**	**46**	Pn	**Pn**	**22 23 59.5**	**+2.4**
DNZT	**Denizli-Tavas-**	**4.66**	**57**	P	**Pn**	**22 24 01.2**	**+3.2**
DNZT				S	**Sn**	**22 24 47.3**	**-4.1**
DNZT				i IAML		22 25 52.0	
	comp=E,17nm,2.6s						
AKAS	**Kas**	**4.68**	**71**	P	**Pn**	**22 23 59.9**	**+1.7**
AKAS				S	Sn	22 24 44.6	-7.2
TAVA	**DENIZLI_Tavas**	**4.69**	**54**	P	**Pn**	**22 24 01.5**	**+3.2**
TAVA				S	**Sn**	**22 24 47.2**	**-4.8**
TAVA				i IAML		22 26 12.0	
	comp=E,21nm,2.2s						
CAME	**Cameli-Denizli**	**4.70**	**62**	Pn	**Pn**	**22 24 01.1**	**+2.5**
CAEL	**Denizli, Camel**	**4.79**	**60**	P	**Pn**	**22 24 01.9**	**+2.0**
KIRA	**zmir-Kiraz**	**4.82**	**44**	P	**Pn**	**22 24 02.5**	**+2.3**
KIRA				S	**Sn**	**22 24 48.8**	**-6.5**
DNIZ	**Denizli-Tavas-**	**4.86**	**53**	P	**Pn**	**22 24 02.3**	**+1.6**
DNIZ				i IAML		22 25 36.0	
	comp=E,28nm,0.9s						
KNIK	**Mula-Seydike**	**4.86**	**64**	P	**Pn**	**22 24 03.8**	**+3.0**
KNIK				S	**Sn**	**22 24 51.6**	**-4.7**
KNIK				i IAML		22 25 35.0	
	comp=E,33nm,2.6s						
KNIK				i IAML		22 26 09.0	
	comp=N,28nm,3.6s						
APMY	**Acipayam-Deniz**	**4.95**	**56**	Pn	**Pn**	**22 24 04.4**	**+2.4**
GOLH	**Golhisar**	**5.02**	**60**	P	**Pn**	**22 24 05.4**	**+2.5**
GOLH				S	**Sn**	**22 24 55.8**	**-4.4**
ELL	**Elmali**	**5.07**	**66**	Pn	**Pn**	**22 24 06.2**	**+2.5**
INCE	**Denizli-Bozkur**	**5.26**	**55**	P	**Pn**	**22 24 08.9**	**+2.6**
INCE				i IAML		22 25 20.0	
	comp=E,15nm,1.1s						
INCE				i IAML		22 26 21.0	
	comp=N,21nm,2.5s						
SWA2		**5.66**	**168**	P	Pn	22 24 09.6	-1.9
SWA2				S	Sn	22 25 08.6	-7.1
RYAN	**Fayoum**	**7.73**	**136**	P	Pn	22 24 38.7	-1.3
HFRF	**Wahat Farafira**	**8.43**	**154**	P	Pn	22 24 47.4	-2.2
NBNS	**Bani Suef**	**8.66**	**133**	P	Pn	22 24 51.5	-1.4
BRTR	**Keskin Array B**	**9.02**	**54**	Pn	**Pn**	**22 24 59.6**	**+1.7**
	0.1nm,0.3s,baz=246,slow=9.3,SNR=5.4 0.5nm,0.8s						
MMAI	**Mount Meron Ar**	**9.53**	**98**	Pn	**Pn**	**22 25 06.0**	**+1.3**
	1.1nm,0.3s,baz=284,slow=13,SNR=8.1						
MMAI				Sn	Sn	22 26 45.5	-5.6
	1.0nm,0.3s,baz=288,slow=16,SNR=2.0 0.8nm,0.4s						
HDK1	**Dakhla**	**10.29**	**152**	P	Pn	22 25 13.2	-2.0
EIL	**Elat**	**10.48**	**116**	Pn	**Pn**	**22 25 17.6**	**-0.3**
	0.4nm,0.3s,baz=344,slow=18,SNR=9.1						
EIL				Sn	Sn	22 27 06.7	-7.8
	0.5nm,0.3s,baz=20,slow=23,SNR=2.0 1.1nm,0.3s						
HFS	**Hagfors**	**26.24**	**348**	P	**P**	**22 28 21.0**	**-1.0**
	1.5nm,0.4s,baz=160,slow=11,SNR=11 1.5nm,0.4s						
FINES	**FINESS Array B**	**26.69**	**2**	P	**P**	**22 28 24.6**	**-1.3**
	2.4nm,0.9s,baz=186,slow=10,SNR=3.6 2.4nm,0.9s						
NB2	**NORSAR Subarra**	**27.54**	**346**	P	**P**	**22 28 33.0**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=156,slow=9.3						
NOA	**NORSAR Array B**	**27.54**	**346**	P	**P**	**22 28 31.9**	**-1.8**
	comp=Z,0.4nm,0.7s,baz=156,slow=8.7,SNR=4.6 comp=Z,0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**29.62**	**229**	P	P	22 28 49.9	-2.7
	comp=Z,2.2nm,0.5s,baz=38,slow=12,SNR=1.7 comp=Z,2.2nm,0.5s						
ARCES	**ARCESS Array B**	**34.79**	**1**	P	P	22 29 35.6	-1.8
	comp=Z,2.4nm,1.0s,baz=191,slow=5.8,SNR=5.9 comp=Z,2.4nm,1.0s						
BVAR	**Borovoye Array**	**37.20**	**46**	P	**P**	**22 29 59.0**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=282,slow=7.2,SNR=2.4 comp=Z,0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**41.99**	**51**	P	**P**	**22 30 38.6**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=270,slow=8.2,SNR=15 comp=Z,0.7nm,0.3s						
MKAR	**Makanchi Array**	**44.67**	**56**	P	**P**	**22 31 00.3**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=263,slow=8.4,SNR=15 comp=Z,0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**45.85**	**46**	P	**P**	**22 31 08.7**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=267,slow=7.7,SNR=7.7 comp=Z,0.9nm,0.3s						
SONM	**Songino Array**	**60.36**	**50**	P	**P**	**22 32 56.0**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=277,slow=7.2,SNR=3.3 comp=Z,0.5nm,0.5s						

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*IDC **13** 22:24:40.8±1.2, 53˚10N×35˚42W, h0km, mb3.7/10,*
mbtmp3.7/11, ML3.9/1, MS3.5/9, Error ellipse:
s-maj=41.6km s-min=18.0km az=5.0
*NEIC **13** 22:24:42.8±1.3, 53˚4N±0˚1×35˚5W±0˚2, h10km±1km,*
mb4.6/13, Error ellipse: s-maj=22.9km s-min=17.7km
az=194.0
ISC 13 22:24:42.5±0.8**, 53˚4N**±0˚1×**35˚46W**±0˚09**, h10**km**, n41,**
σ0^{s}96/35**, mb3.9**/15**, MS3.4**/8**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NRS	**Narsarsuaq**	**9.50**	**329**	Pn	**Pn**	**22 26 58.7**	**-0.4**
IVI	**Ivigtut**	**10.44**	**324**	Pn	**Pn**	**22 27 11.7**	**-0.3**
BORG	**Borgarnes**	**13.50**	**27**	Pn	**Pn**	**22 27 52.6**	**-1.2**
SFJD	**Kangerlussuaq**	**15.55**	**337**	Pn	**Pn**	**22 28 19.8**	**-1.8**
SFJD				IAmb	IAmb	22 28 59.2	
	comp=Z,27nm,1.2s						
SCHQ	**Schefferville**	**18.38**	**287**	LR	LR	22 34 34.1	
	comp=Z,236nm,21.4s,baz=102,slow=32						
EKA	**Eskdalemuir Ar**	**18.85**	**71**	P	**P**	**22 29 02.1**	**-0.3**
	baz=142,slow=12 comp=Z,2.1nm,0.9s						
ESDC	**Sonseca Array**	**25.39**	**110**	P	**P**	**22 30 08.4**	**-1.5**
	comp=Z,1.4nm,0.9s,baz=318,slow=8.9,SNR=4.1						
ESDC				LR	LR	22 38 00.3	
	comp=Z,112nm,18.5s,baz=306,slow=32 comp=Z,1.4nm,0.9s						
MDT	**Midelt**	**30.11**	**121**	LR	LR	22 40 18.7	
	comp=Z,58nm,19.7s,baz=334,slow=31						
VRAC	**Vranov**	**32.18**	**76**	LR	LR	22 43 27.5	
	comp=Z,58nm,19.1s,baz=280,slow=35						
TKL	**Tuckaleechee C**	**37.89**	**262**	LR	LR	22 47 11.3	
	comp=Z,86nm,18.1s,baz=30,slow=36						
YKA	**Yellowknife Ar**	**40.42**	**315**	P	**P**	**22 32 20.4**	**0.0**
	comp=Z,0.9nm,1.1s,baz=63,slow=7.6,SNR=4.9						
YKA				PcP	**PcP**	**22 34 22.8**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=51,slow=3.1,SNR=5.3 comp=Z,0.9nm,1.1s						
BRTR	**Keskin Array B**	**47.59**	**77**	P	**P**	**22 33 18.6**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=301,slow=5.9,SNR=12						
BRTR				LR	LR	22 52 48.0	
	comp=Z,22nm,18.3s,baz=310,slow=35 comp=Z,1.8nm,0.7s						
BRTR	**Keskin Array B**	**47.59**	**77**	P	**P**	**22 33 18.2**	**-0.3**
PDAR	**Pinedale Array**	**48.51**	**289**	P	**P**	**22 33 26.4**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=75,slow=6.3,SNR=6.8 comp=Z,1.0nm,0.8s						
PDAR	**Pinedale Array**	**48.51**	**289**	P	**P**	**22 33 23.5**	**-2.1**
PLPT	**Palo Pinto**	**48.55**	**271**	P	**P**	**22 33 24.9**	**-0.8**
PLPT				IAmb	IAmb	22 34 04.3	
	comp=Z,3.6nm,0.8s						
AMTX	**Amarillo**	**49.12**	**276**	P	**P**	**22 33 30.2**	**0.0**
E24K	**Your Creek**	**49.18**	**333**	P	**P**	**22 33 30.2**	**0.0**
HWUT	**Hardware Ranch**	**50.40**	**289**	P	**P**	**22 33 40.0**	**0.0**
HWUT				IAmb	IAmb	22 33 43.1	
	comp=Z,4.2nm,0.8s						
PV12	**Saucer Basin,**	**50.99**	**284**	P	**P**	**22 33 44.2**	**-0.3**
ILAR	**Eielson Array**	**51.00**	**329**	P	**P**	**22 33 46.2**	**+2.3**
	comp=Z,1.2nm,1.1s,baz=41,slow=5.3,SNR=5.6 comp=Z,1.2nm,1.1s						
ILAR	**Eielson Array**	**51.00**	**329**	P	**P**	**22 33 45.7**	**+1.8**
PV10	**Paradox Valley**	**51.09**	**284**	P	**P**	**22 33 45.3**	**0.0**
PV10				IAmb	IAmb	22 33 49.8	
	comp=Z,11nm,1.0s						
PV18	**Skein Mesa, Pa**	**51.10**	**284**	P	**P**	**22 33 45.5**	**+0.1**
PV18				IAmb	IAmb	22 33 49.3	
	comp=Z,9.2nm,1.0s						
PV19	**Morning Glory**	**51.10**	**284**	P	**P**	**22 33 44.7**	**-0.7**
PV19				IAmb	IAmb	22 33 49.3	
	comp=Z,13nm,1.3s						
E19K	**Redstone River**	**51.92**	**335**	P	**P**	**22 33 52.1**	**+1.3**
ANMO	**Albuquerque**	**51.92**	**279**	LR	LR	22 53 27.2	
	comp=Z,72nm,18.6s,baz=26,slow=33						
AKTO	**Aktyubinsk**	**53.70**	**52**	LR	LR	22 57 24.8	
	comp=Z,46nm,18.3s,baz=218,slow=36						
TXAR	**Lajitas Array**	**54.23**	**272**	P	**P**	**22 34 08.8**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=36,slow=8.6,SNR=3.7 comp=Z,0.3nm,0.7s						
TXAR	**Lajitas Array**	**54.23**	**272**	P	**P**	**22 34 07.8**	**-0.7**
BVAR	**Borovoye Array**	**57.39**	**44**	P	**P**	**22 34 32.0**	**+1.3**
	comp=Z,0.9nm,0.7s,baz=283,slow=7.4,SNR=4.3 comp=Z,0.9nm,0.7s						
JTS	**Las Juntas de**	**58.31**	**242**	LR	LR	22 59 01.9	
	comp=Z,26nm,18.1s,baz=12,slow=35						
KURBB	**Kurchatov Arra**	**62.50**	**41**	P	**P**	**22 35 06.7**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=323,slow=7.0,SNR=5.8 comp=Z,0.8nm,0.7s						
MKAR	**Makanchi Array**	**67.06**	**41**	P	**P**	**22 35 36.4**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=336,slow=5.3,SNR=3.6 comp=Z,0.5nm,0.8s						
GAR	**Garm**	**68.00**	**54**	P	**P**	**22 35 42.5**	**+0.7**
SONM	**Songino Array**	**74.11**	**26**	P	**P**	**22 36 19.7**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=1.4,slow=5.8,SNR=2.1 comp=Z,0.3nm,0.6s						
SONM	**Songino Array**	**74.11**	**26**	P	**P**	**22 36 19.0**	**+0.3**
WRA	**Warramunga Arr**	**145.74**	**17**	PKPbc	**PKPbc**	**22 44 21.8**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=339,slow=3.3,SNR=8.1						
WRA	**Warramunga Arr**	**145.74**	**17**		**PKPdf**	**22 44 20.6**	**-0.6**
ASAR	**Alice Springs**	**149.28**	**19**	PKPbc	**PKPbc**	**22 44 31.1**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=354,slow=2.4,SNR=16						
ASAR	**Alice Springs**	**149.28**	**19**		**PKPbc**	**22 44 31.0**	**-0.3**

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*TEH **13** 22:26:27.6, 28˚98N×57˚71E, h10km*
*OMAN **13** 22:26:33.3±1.6, 28˚79N×57˚30E, h10km, mb4.1/5,*
ml3.4/12, Error ellipse: s-maj=13.4km s-min=9.9km
az=145.0
*DSN **13** 22:26:35.7±1.1, 28˚54N×57˚80E, h15km, ML3.0/13, Error*
ellipse: s-maj=31.0km s-min=8.0km az=129.0
ISC 13 22:26:31.6±0.9**, 28˚96N**±0˚04×**57˚17E**±0˚05**, h10**km**, n54,**
σ1^{s}69/65**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NGRK	**Negar Kerman**	**0.78**	**331**	Pg	**Pg**	**22 26 48.7**	**+2.0**
CHMN	**Cheshme madani**	**0.95**	**20**	Pg	**Pg**	**22 26 49.7**	**-0.3**
KRBR	**Kerman**	**1.07**	**341**	Pg	**Pg**	**22 26 52.6**	**+0.3**
KHNJ	**Kahnooj**	**1.12**	**155**	Pg	**Pn**	**22 26 57.8**	**+4.5**
KBAM	**BAM**	**1.14**	**81**	Pg	**Pb**	**22 26 54.1**	**+0.6**
KHGB	**Koh Gabri**	**1.53**	**337**	Pg	Pn	22 26 55.5	-3.8
KRM1	**Kerman Provinc**	**1.54**	**3**	Pg	Pn	22 26 55.5	-3.8
IBND	**Bandar-abas**	**1.61**	**200**	Pn	**Pg**	**22 27 02.7**	**+0.3**
BNDS	**Bandar-Abbas**	**1.79**	**210**	Pn	**Pb**	**22 27 04.7**	**+0.1**
LAR1	**LAR**	**2.78**	**243**	Pn	**Pn**	**22 27 16.0**	**-0.2**
IBAF	**Bafgh**	**2.96**	**333**	Pn	Pn	22 27 14.3	-4.5
SHME	**Shamm**	**3.04**	**198**	P	**Pn**	**22 27 21.2**	**+1.4**
SHME				S	**Sn**	**22 27 56.6**	**+0.4**
SHME	**Shamm**	**3.04**	**198**	P	**Pn**	**22 27 21.2**	**+1.4**
SHME				S	**Sn**	**22 27 56.7**	**+0.4**
BANOM	**Banah**	**3.12**	**194**	P	**Pn**	**22 27 22.7**	**+1.7**
BANOM				S	**Sn**	**22 27 59.0**	**+0.6**
BANOM	**Banah**	**3.12**	**194**	eP	**Pn**	**22 27 22.4**	**+1.4**
	SNR=5.5						
BSRN	**Basiran**	**3.44**	**29**	Pn	Pn	22 27 20.7	-4.7
KHL1	**Khalili_Fars**	**3.65**	**250**	Pn	**Pn**	**22 27 27.3**	**-0.9**
MASF	**Masafi**	**3.69**	**194**	P	**Pn**	**22 27 30.7**	**+2.0**
	SNR=13						
MASF				S	**Sn**	**22 28 13.3**	**+0.9**
MSFE	**Esma-Masafi**	**3.70**	**194**	i P	**Pn**	**22 27 29.9**	**+1.1**
	SNR=13						
MDH	**Madha**	**3.73**	**192**	P	**Pn**	**22 27 30.5**	**+1.2**
MDH	**Madha**	**3.73**	**192**	P	**Pn**	**22 27 29.5**	**+0.2**
IKOO	**Kooshah**	**3.80**	**24**	Pn	Pn	22 27 25.4	-5.0
UOSS	**Minazif**	**4.09**	**192**	P	**Pn**	**22 27 35.7**	**+1.4**
UOSS				S	**Sn**	**22 28 23.1**	**+0.9**
UOSS	**Minazif**	**4.09**	**192**	i P	**Pn**	**22 27 34.7**	**+0.4**
	SNR=6.6						
NAZ	**Nazwa, Dubai**	**4.18**	**199**	P	**Pn**	**22 27 37.3**	**+1.9**
	SNR=7.7						
NAZ				S	**Sn**	**22 28 24.6**	**+0.2**
NAZ	**Nazwa, Dubai**	**4.18**	**199**	i P	**Pn**	**22 27 36.8**	**+1.3**
	SNR=7.7						
HATD	**Hatta, Dubai**	**4.22**	**193**	P	**Pn**	**22 27 38.2**	**+2.1**
	SNR=9.0						
HATD				S	**Sn**	**22 28 26.8**	**+1.3**
HATD	**Hatta, Dubai**	**4.22**	**193**	i P	**Pn**	**22 27 37.0**	**+0.9**
	SNR=9.0						
ASHO	**Ashiyiah**	**4.38**	**193**	P	**Pn**	**22 27 39.7**	**+1.5**
	SNR=23						
ASHO				S	**Sn**	**22 28 30.1**	**+0.9**

ASHO	Ashiyiah	4.38	193	*i* P	Pn	22 27 39.5	+1.3
	SNR=23						
IDAH	Dahanechah	4.42	31	Pn	Pn	22 27 33.8	-5.3
FAQ	Al Faqa, Dubai	4.43	199	P	Pn	22 27 40.1	+1.2
	SNR=8.1						
FAQ				S	Sn	22 28 30.6	+0.1
FAQ	Al Faqa, Dubai	4.43	199	*i* P	Pn	22 27 40.1	+1.2
	SNR=8.1						
CHBR	Chabahar	4.47	138	Pn	Pn	22 27 38.4	-1.0
ASUD	Al Ashush, Dub	4.62	201	P	Pn	22 27 43.1	+1.6
	SNR=13						
ASUD				S	Sn	22 28 33.5	-1.8
ASUD	Al Ashush, Dub	4.62	201	*i* P	Pn	22 27 43.1	+1.6
	SNR=13						
SOHO	SOHO	4.84	187	P	Pn	22 27 43.8	-0.8
SOHO	SOHO	4.84	187	*i* P	Pn	22 27 43.7	-0.8
	SNR=12						
NGCH	Negor - Chabah	5.04	134	P	Pn	22 27 46.2	-1.1
	SNR=9.4						
NGCH				S	Sn	22 28 44.0	-1.6
ALNE	Al Ain	5.05	195	P	Pn	22 27 48.4	+1.0
ALNE				S	Sn	22 28 45.2	-0.7
ALNE	Al Ain	5.05	195	P	Pn	22 27 48.4	+1.0
HOQ	Hoqain	5.36	179	P	Pn	22 27 51.0	-0.7
	SNR=11						
ARQ	Araqi	5.63	186	P	Pn	22 27 57.5	+2.0
	SNR=18						
ARQ				S	Sn	22 29 01.2	+0.9
WSAR	Wadi Sarin	5.85	167	P	Pn	22 27 58.7	+0.2
	SNR=14						
WSAR				S	Sn	22 29 02.1	-3.5
BSY	Bisya	6.19	180	P	Pn	22 28 05.5	+2.4
BSY				S	Sn	22 29 14.5	+0.5
SHMA	Al-Shehemyia	6.32	242	P	Pn	22 28 02.4	-2.4
	SNR=26						
UMZA	Um Al Zommool	6.48	197	P	Pn	22 28 06.6	-0.4
UMZA				S	Sn	22 29 16.7	-4.4
WBK	Wadi Bani Khal	6.53	165	P	Pn	22 28 07.3	-0.5
WBK				S	Sn	22 29 17.9	-4.6
JLN	Jalan Bani Buh	7.08	163	P	Pn	22 28 14.5	-0.8
MHTO	MHTO	7.98	175	P	Pn	22 28 28.7	+1.1
DOK	Doka	10.67	196	P	Pn	22 29 03.1	-1.4
SHAO	Shalim	10.98	188	P	Pn	22 29 06.8	-2.0
WHFO	Wadi Hawf	11.43	197	P	Pn	22 29 12.2	-2.8
ABTO	Aybut	12.09	198	P	Pn	22 29 21.1	-3.0
	SNR=10						

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*IDC **13** 23:25:40.6±1.1,26°.57N×143°.92E,h0^{km},mb3.5/6, mbtmp3.5/7,ML3.0/1,Error ellipse: s-maj=38.5km s-min=22.3km az=77.0*

ISC 13 23:25:46.5±1.1,26°.6N±0°.1×143°.5E±0°.1,h38^{km},n9, σ1^{s}.99/9,mb3.6/6,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.27	293	Pn	Pn	23 26 01.2	-6.4
	19nm,0.3s,baz=95,slow=23,SNR=10.0						
JCJ				Sn	Sn	23 26 21.1	-2.3
	66nm,0.3s,baz=92,slow=23,SNR=14						
MJAR	Matsushiro Arr	10.87	337	Pn	Pn	23 28 19.2	-0.3
	0.1nm,0.3s,baz=160,slow=12,SNR=4.4						
	0.6nm,0.3s						
SONM	Songino Array	35.87	316	P	P	23 32 43.5	+0.7
	0.7nm,0.7s,baz=122,slow=8.0,SNR=5.1						
	0.7nm,0.7s						
WRA	Warramunga Arr	47.12	192	P	P	23 34 15.0	0.0
	0.6nm,0.5s,baz=14,slow=8.4,SNR=5.6						
	0.6nm,0.5s						
ASAR	Alice Springs	50.84	191	P	P	23 34 42.6	-0.9
	0.2nm,0.7s,baz=9.5,slow=7.1,SNR=2.2						
	0.2nm,0.7s						
MKAR	Makanchi Array	51.68	310	P	P	23 34 52.5	+2.9
	0.4nm,0.6s,baz=97,slow=7.4,SNR=5.7						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	54.21	315	P	P	23 35 10.6	+2.4
	0.5nm,0.6s,baz=89,slow=8.1,SNR=7.8						
	0.5nm,0.6s						
ILAR	Eielson Array	57.57	28	P	P	23 35 30.4	-1.6
	0.4nm,0.8s,baz=261,slow=5.1,SNR=4.5						
	0.4nm,0.8s						
LPAZ	La Paz	148.90	77	PKPbc	PKPbc	23 45 30.9	-0.8
	1.9nm,0.5s,baz=290,slow=5.3,SNR=4.3						

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*GCG **13** 23:51:42.9±1.2, 13°.91N×89°.38W, h3^{km}±11^{km}, MD3.6, ML3.4*

*SNET **13** 23:51:42.7±0.9, 13°.89N×89°.38W, h11^{km}, ML3.1*

*CATAC **13** 23:51:44.1±0.2, 14°N±1°×89°.4W±0°.9, h2^{km}, M3.2/19, MLv3.2/19, Error ellipse: s-maj=2.7km s-min=1.7km az=27.7, confirmed*

ISC 13 23:51:44.2±0.8,13°.88N±0°.02×89°.38W±0°.02,h9^{km}±5^{km}, n59,σ1^{s}.44/75,1C-1D,El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEDA	San Andres	0.08	188	⇑*e*P	Pg	23 51 45.8	-0.7
CEDA				*e*S	Sg	23 51 47.4	-0.7
CEDA	San Andres	0.08	188	P	Pg	23 51 45.7	-0.7
BOQS	Boqueron	0.18	145	*e*P	Pg	23 51 47.8	-0.3
PMON	Piamonte	0.18	158	⇓*e*P	Pg	23 51 47.9	-0.1
PMON				*e*S	Sg	23 51 50.8	+0.1
PMON	Piamonte	0.18	158	S	Sg	23 51 51.4	+0.8
PMON	Piamonte	0.18	158	P	Pg	23 51 48.0	-0.1
PIC2	El Picacho	0.18	138	*e*P	Pg	23 51 47.9	-0.3
PIC2				*e*S	Sg	23 51 51.5	+0.6
UNIC	Universidad Ca	0.19	302	*e*P	Pg	23 51 47.5	-0.6
UNIC				*e*S	Sg	23 51 50.6	-0.3
UNIC	Universidad Ca	0.19	302	P	Pg	23 51 47.6	-0.6
UEES	Universidad Ev	0.21	139	*e*P	Pg	23 51 48.3	-0.3
UEES				*e*S	Sg	23 51 51.9	+0.2
UEES	Universidad Ev	0.21	139	P	Pg	23 51 48.4	-0.3
JAYA	Jayaque - finc	0.23	196	*e*P	Pg	23 51 48.4	-0.6
JAYA				*e*S	Sg	23 51 52.0	-0.3
JAYA	Jayaque - finc	0.23	196	*i* P	Pg	23 51 48.7	-0.3
JAYA	Jayaque - finc	0.23	196	P	Pb	23 51 49.0	0.0
CEVE	Cerro Verde	0.24	257	*e*P	Pg	23 51 49.1	0.0
CEVE				*e*S	Sg	23 51 53.6	+1.1
CEVE	Cerro Verde	0.24	257	P	Pg	23 51 49.2	0.0
UESS	Universidad de	0.24	132	*e*P	Pg	23 51 48.8	-0.3
UTEC	Universidad Te	0.25	135	P	Pg	23 51 49.1	-0.2
UTEC	Universidad Te	0.25	135	S	Sg	23 51 53.3	+0.6
RTR	El Retiro	0.26	274	*e*P	Pb	23 51 49.3	-1.8
IGN	Direccin Gen	0.27	129	*e*P	Pg	23 51 49.2	-0.4
IGN				*e*S	Sg	23 51 53.7	+0.5
IGN	Direccin Gen	0.27	129	P	Pg	23 51 49.2	-0.4
UDBS	Universidad Do	0.28	126	*e*P	Pg	23 51 49.2	-0.6
UDBS	Universidad Do	0.28	126	S	Sg	23 51 53.7	+0.2
UDBS	Universidad Do	0.28	126	P	Pg	23 51 49.4	-0.3
LOMA	Loma Larga	0.31	139	*e*P	Pg	23 51 49.9	-0.6
LOMA	Loma Larga	0.31	139	P	Pg	23 51 50.0	-0.5
LOMA	Loma Larga	0.31	139	S	Sg	23 51 54.9	+0.2
PANCS	Alcalda de	0.33	143	S	Sg	23 51 55.4	+0.1
PANCS	Alcalda de	0.33	143	P	Pb	23 51 51.0	-1.4
NUBE	Las Nubes	0.39	273	*i* P	Pb	23 51 51.5	-1.8
NUBE				*i* S	Sb	23 51 57.3	-2.1
NUBE	Las Nubes	0.39	273	P	Pb	23 51 51.5	-1.8
LALI	Alcalda de L	0.39	171	*e*P	Pg	23 51 51.4	-0.6
LALI				*e*S	Sg	23 51 57.2	0.0
LALI	Alcalda de L	0.39	171	*i* P	Pb	23 51 52.0	-1.3
LALI				*i* S	Sb	23 51 58.4	-1.1
LALI				IAML		23 51 58.8	
	comp=E,3μm,0.3s						
LALI	Alcalda de L	0.39	171	P	Pb	23 51 52.1	-1.3
PAVA	Las Pavas	0.47	111	*e*P	Pg	23 51 52.9	-0.4
PAVA				*e*S	Sb	23 51 59.9	-1.8
PAVA	Las Pavas	0.47	111	P	Pb	23 51 53.0	-1.6
LLGN	La Laguna	0.51	57	S	Sb	23 52 00.8	-2.2
LLGN	La Laguna	0.51	57	P	Pg	23 51 53.4	-0.8
MTO3	Montecristo	0.52	2	*i* P	Pg	23 51 53.3	-1.0
MTO3	Montecristo	0.52	2	S	Sg	23 52 00.6	-0.5
MTO3	Montecristo	0.52	2	P	Pg	23 51 53.3	-1.0
FAME	Alcaldia de Sa	0.61	267	P	Pb	23 51 55.8	-1.3
FAME	Alcaldia de Sa	0.61	267	S	Sb	23 52 04.3	-1.6
UESV	Universidad de	0.63	113	S	Sb	23 52 04.8	-1.5
UESV	Universidad de	0.63	113	P	Pg	23 51 55.9	-0.5
SCLA	Alcaldia de Sa	0.66	106	P	Pb	23 51 56.5	-1.4
SCLA	Alcaldia de Sa	0.66	106	S	Sb	23 52 06.0	-1.3
ESQI	Esquipulas	0.68	3	P	Pb	23 51 56.5	-1.7
ESQI	Esquipulas	0.68	3	S	Sb	23 52 05.8	-2.0
TECO	Alcaldia de Te	0.68	120	P	Pg	23 51 56.7	-0.7
TECO	Alcaldia de Te	0.68	120	S	Sb	23 52 06.8	-0.9
ZAFR2	Estanzuela, Za	0.69	3	*i* P	Pn	23 52 03.9	+3.7
ZAFR2				*i* S	Sn	23 52 19.0	+7.9
PACA	Pacayal	1.11	112	P	Pn	23 52 05.3	-0.8
PACA	Pacayal	1.11	112	S	Sb	23 52 20.1	-0.1
APG	El Apazote	1.53	317	*i* P	Pn	23 52 11.3	-0.6
CSGN	Cosiguina Volc	1.99	117	P	Pb	23 52 19.4	-1.2
CSGN				S	Sg	23 52 46.5	-1.7
TGUH	Tegucigalpa,Un	2.06	85	P	Pb	23 52 20.3	-1.5
TGUH				S	Sb	23 52 47.5	0.0
YUSH	Yuscaran	2.47	88	P	Pn	23 52 25.5	+0.8
YUSH				S	Sb	23 52 58.2	-1.1

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*IDC **13** 23:52:38.0±1.8, 19°.96N×72°.91E, h0^{km}, mb3.7/10, mbtmp3.7/10, MS3.4/4, Error ellipse: s-maj=52.7km s-min=20.6km az=64.0*

*NEIC **13** 23:52:40.2±2.5, 20°.1N±0°.1×73°.17E±0°.06, h10^{km}±1^{km}, mb4.3/15, Error ellipse: s-maj=17.8km s-min=9.9km az=174.0*

*NDI **13** 23:52:49.1±0.5, 20°.06N×72°.87E, h9^{km}±3^{km}, ML4.0, MW4.0, mb4.3(NEIC)*

ISC 13 23:52:39.5±0.6,19°.92N±0°.04×72°.97E±0°.05,h10^{km},n45, σ2^{s}.15/49,mb4.0/19,MS3.6/4,Southern India

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOM	Bombay	1.02	188	*e*P	Pn	23 53 11.1	+11
BOM				*e*S	Sn	23 53 27.8	+13
BHV	Bhavnagar	1.98	337	*e*P	Pg	23 53 20.8	+3.2
BHV				IAML		23 53 36.5	
	comp=N,550nm,0.6s						
BHV				IAML		23 53 38.1	
	comp=E,540nm,0.9s						
BHV				*e*S	Sg	23 53 44.2	+0.9
KAD	Karad	2.84	156	*e*P	Pg	23 53 37.5	+3.5
KAD				IAML		23 54 09.0	
	comp=N,531nm,0.3s						
KAD				IAML		23 54 09.2	
	comp=E,532nm,0.2s						
KAD				*e*S	Sg	23 54 12.0	+1.3
LATR	Latur	3.69	113	*e*P	Pg	23 53 48.6	-1.6
LATR				*e*S	Sb	23 54 32.0	+2.4
LATR				IAML		23 54 35.5	
	comp=E,488nm,0.4s						
LATR				IAML		23 54 35.6	
	comp=N,573nm,0.4s						
BHUJ	Bhuj	4.53	318	*e*P	Pb	23 53 55.9	-3.4
BHUJ				*e*S	Sn	23 54 44.1	+3.1
NRDN	NARMADA NAGAR	4.81	54	*e*P	Pb	23 54 01.5	-2.4
NRDN				IAML		23 54 51.7	
	comp=N,394nm,0.7s						
NRDN				IAML		23 54 51.9	
	comp=E,374nm,0.7s						
NRDN				*e*S	Sn	23 54 54.3	+6.5
HYB	Hyderabad	5.85	114	*e*Pn	Pn	23 54 05.7	-0.7
HYB				*e*Pg	Pg	23 54 30.3	-1.3
HYB				*e*Sn	Sn	23 55 09.2	-4.4
HYB				*e*Sb	Sb	23 55 33.3	+1.5
HYB				IAML		23 55 42.7	
	comp=Z,461nm,0.5s						
HYB				*e*Sg	Sg	23 55 50.1	+2.7
GUNA	GUNA	6.21	40	*e*P	Pn	23 54 20.0	+8.7
GUNA				*e*S	Sn	23 55 26.5	+4.1
GUNA				IAML		23 55 49.5	
	comp=N,384nm,0.4s						
GUNA				IAML		23 55 50.1	
	comp=E,390nm,0.9s						
RAGD	RAYAGADA	9.91	92	*e*P	Pn	23 55 12.4	+10
RAGD				*e*S	Sn	23 56 57.1	+3.6
RAGD				IAML		23 57 47.2	
	comp=N,198nm,0.2s						
RAGD				IAML		23 57 58.8	
	comp=E,195nm,0.8s						
HMDM	Hanimaadhoo	13.07	179	Pn	Pn	23 55 46.4	+1.1
NIL	Nilore	13.68	1	Pn	Pn	23 55 49.9	-3.8
EVN	Everest	14.97	55	Pn	Pn	23 56 06.2	-5.6
KBL	Kabul	14.98	347	Pn	Pn	23 56 09.7	-1.9
MANEM	Manem	17.60	357	Pn	Pn	23 56 41.6	-3.6
MANEM				IAmb	IAmb	23 57 22.9	
	comp=Z,9.1nm,1.2s						
CHGR	Chuyangaron	18.97	351		P	23 57 00.5	-0.6
CHGR				IAmb	IAmb	23 57 08.9	
	comp=Z,6.4nm,0.9s						
GAR	Garm	19.16	354	P	P	23 57 03.7	+0.5
KK31	Karatay Array	23.21	355	P	P	23 57 45.0	-1.7
KK31				IAmb	IAmb	23 57 53.6	
	comp=Z,4.2nm,0.8s						
KKAR	Karatay Array	23.21	355	P	P	23 57 45.3	-1.4
CMAR	Chiang Mai Arr	24.57	89	P	P	23 57 59.8	-0.1
	comp=Z,1.4nm,0.3s,baz=278,slow=9.3,SNR=13						
CMAR				LR	LR	00 08 04.3	
	comp=Z,12nm,21.7s,baz=285,slow=38						
	comp=Z,1.4nm,0.3s						
GOMU	GeErMu	25.11	45	P	P	23 58 05.3	+0.3
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.9s						
RAYN	Ar Rayn	25.75	283	P	P	23 58 12.0	+1.4
RAYN				IAmb	IAmb	23 58 14.5	
	comp=Z,2.6nm,0.9s						
MKAR	Makanchi Array	27.87	14	P	P	23 58 28.3	-1.2
	comp=Z,0.6nm,1.0s,baz=191,slow=7.9,SNR=2.4						
	comp=Z,0.6nm,1.0s						
KURBB	Kurchatov Arra	30.96	7	P	P	23 58 56.4	-0.3
	comp=Z,0.6nm,0.8s,baz=202,slow=8.8,SNR=5.1						
	comp=Z,0.6nm,0.8s						
AB31	Akbulak array	31.08	343	P	P	23 58 58.0	+0.2
AB31				IAmb	IAmb	23 58 59.8	
	comp=Z,13nm,1.5s						
ABKAR	Akbulak array	31.08	343	P	P	23 58 58.4	+0.5
BVAR	Borovoye Array	33.11	357	P	P	23 59 15.9	+0.4
	comp=Z,0.5nm,0.7s,baz=161,slow=9.2,SNR=2.1						
	comp=Z,0.5nm,0.7s						
ZALV	Zalesovo Beam	35.17	12	P	P	23 59 33.3	-0.1
	comp=Z,0.6nm,0.5s,baz=199,slow=7.6,SNR=4.6						
	comp=Z,0.6nm,0.5s						
SONM	Songino Array	38.80	36	P	P	00 00 05.0	+0.4
	comp=Z,1.5nm,0.8s,baz=229,slow=8.4,SNR=11						
	comp=Z,1.5nm,0.8s						
SONM	Songino Array	38.80	36	P	P	00 00 05.4	+0.8
AKASG	Malin Array Be	46.09	322	LR	LR	00 26 28.3	
	comp=Z,112nm,20.1s,baz=248,slow=44						
BURAR	Bucovina Array	47.36	317	P	P	00 01 13.3	-0.5
BURAR				IAmb	IAmb	00 01 16.2	
	comp=Z,1.1nm,0.9s						
BUR08	Bucovina Ar. S	47.38	317	P	P	00 01 14.2	+0.1
BUR08				IAmb	IAmb	00 01 16.7	
	comp=Z,5.2nm,1.2s						
ARCES	ARCESS Array B	57.27	342	P	P	00 02 26.2	-0.8
	comp=Z,1.8nm,0.8s,baz=139,slow=4.4,SNR=3.9						
	comp=Z,1.8nm,0.8s						
BOSA	Boshof	66.72	225	LR	LR	00 28 42.3	
	comp=Z,26nm,19.2s,baz=13,slow=32						
MA2	Magadan	66.88	33	LR	LR	00 36 47.4	
	comp=Z,56nm,19.4s,baz=122,slow=40						
WB0	Warramunga Arr	71.94	120	P	P	00 04 03.7	+0.1
WB0				IAmb	IAmb	00 04 44.3	
	comp=Z,5.8nm,1.4s						
WRA	Warramunga Arr	71.98	120	P	P	00 04 04.9	+1.0
	comp=Z,0.8nm,0.7s,baz=310,slow=5.3,SNR=6.4						
	comp=Z,0.8nm,0.7s						
ASAR	Alice Springs	73.50	123	P	P	00 04 13.3	+0.4
	comp=Z,0.8nm,0.6s,baz=306,slow=5.9,SNR=10						
	comp=Z,0.8nm,0.6s						
C18K	Utukok River	83.49	17	P	P	00 05 06.7	-0.6
C18K				IAmb	IAmb	00 05 08.5	
	comp=Z,5.5nm,1.4s						
D19K	Kuna River	84.44	17	P	P	00 05 11.2	-0.9
D19K				IAmb	IAmb	00 05 15.5	
	comp=Z,5.9nm,1.4s						
IMAR	Indian Mountai	87.42	17	P	P	00 05 26.1	-0.8
H21K	Melozitna Rive	87.93	17	P	P	00 05 30.4	+1.0
L18K	Granite Mounta	89.21	21	P	P	00 05 35.9	+0.5
K20K	Telida	89.25	19	P	P	00 05 34.4	-1.2
ILAR	Eielson Array	90.21	16	P	P	00 05 39.4	-0.6
	comp=Z,0.2nm,0.6s,baz=319,slow=5.9,SNR=1.6						
	comp=Z,0.2nm,0.6s						

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*IDC **14** 00:23:16.8±0.8, 32°.65S×177°.72W, h0^{km}, mb4.3/5, mbtmp4.3/8, ML3.5/2, MS3.2/4, Error ellipse: s-maj=28.2km s-min=20.7km az=122.0*

*NEIC **14** 00:23:19.6±0.8, 32°.53S±0°.08×177°.8W±0°.2, h12^{km}±6^{km}, mb4.8/15, Error ellipse: s-maj=19.1km s-min=10.7km az=109.0*

ISC 14 00:23:18.1±0.8,32°.59S±0°.07×177°.7W±0°.1,h10^{km},n47, σ1^{s}.18/43,mb4.7/16,5C,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.34	356	Pn	Pn	00 24 10.6	+0.2
	537nm,0.3s,baz=88,slow=23,SNR=3.6						
RAO				Sn	Sn	00 24 54.1	+4.0
	99nm,0.3s,baz=109,slow=24,SNR=1.5						
MXZ	Matakaoa Point	5.95	212	Pn	Pn	00 24 48.0	+1.7
URZ	Urewera	7.07	215	Pn	Pn	00 25 00.9	-0.7
	1.8nm,0.3s,baz=360,slow=2.2,SNR=11						
URZ				Sn	Sn	00 26 21.4	-0.7
	12nm,0.3s,baz=209,slow=10,SNR=11						
	6.6nm,0.5s						
RTZ	Ruatahuna	7.41	214		Pn	00 25 07.7	+1.2
DZM	Mont Dzumac	17.55	303	P	P	00 27 24.1	-0.1
	0.1nm,0.3s,baz=130,slow=21,SNR=1.5						
DZM				LR	LR	00 33 30.3	
	comp=Z,143nm,18.1s,baz=144,slow=35						
	1.8nm,0.6s						
DZM	Mont Dzumac	17.55	303	P	P	00 27 24.0	-0.1
RAR	Rarotonga	19.56	59	LR	LR	00 35 51.0	
	comp=Z,50nm,18.4s,baz=258,slow=38						
PPT	Papeete	29.41	66	LR	LR	00 41 32.5	
	comp=Z,42nm,18.5s,baz=261,slow=37						
MGBR	Mount Gambier	34.30	250	P	P	00 30 04.9	+0.2
STKA	Stephens Creek	34.30	260	P	P	00 30 04.4	-0.4
	2.7nm,0.7s,baz=83,slow=9.2,SNR=6.2						
	2.7nm,0.7s						
STKA	Stephens Creek	34.30	260	P	P	00 30 04.5	-0.4
CTA	Charters Tower	34.47	282	LR	LR	00 43 19.8	
	comp=Z,33nm,18.4s,baz=207,slow=35						
CTAO	Charters Tower	34.47	282	P	P	00 30 07.3	+0.9
CTAO				IAmb	IAmb	00 30 10.6	
	comp=Z,34nm,1.9s						
BBOO	Buckleboo	38.68	257	P	P	00 30 42.2	0.0
BBOO				IAmb	IAmb	00 31 04.0	
	comp=Z,21nm,1.4s						
COEN	Coen	40.17	288	P	P	00 30 55.3	+0.5
COEN				IAmb	IAmb	00 31 11.0	
	comp=Z,5.8nm,1.1s						
AS31	Alice Springs	43.30	269	P	P	00 31 20.4	0.0
ASAR	Alice Springs	43.30	269	P	P	00 31 20.0	-0.4
	comp=Z,3.1nm,0.6s,baz=105,slow=7.8,SNR=49						
ASAR				PcP	PcP	00 33 07.9	-1.4
	comp=Z,0.4nm,0.6s,baz=139,slow=4.6,SNR=2.2						
	comp=Z,3.1nm,0.6s						
ASAR	Alice Springs	43.30	269	P	P	00 31 19.7	-0.7
WR8	Warramunga Arr	44.35	274	P	P	00 31 28.0	-0.8
WR8				IAmb	IAmb	00 31 30.0	
	comp=Z,5.7nm,0.7s						
WRA	Warramunga Arr	44.49	274	P	P	00 31 29.3	-0.6
	comp=Z,6.0nm,0.6s,baz=115,slow=7.8,SNR=50						
	comp=Z,6.0nm,0.6s						
WRA	Warramunga Arr	44.49	274	P	P	00 31 29.2	-0.7
WB0	Warramunga Arr	44.52	274	P	P	00 31 29.6	-0.6
WB0				IAmb	IAmb	00 31 30.2	
	comp=Z,7.2nm,0.7s						
FORT	Forrest	45.78	257	P	P	00 31 40.0	0.0
FORT				IAmb	IAmb	00 31 40.8	
	comp=Z,11nm,0.7s						
MTN	Manton Dam	50.62	281	P	P	00 32 16.7	-0.9
MTN				IAmb	IAmb	00 33 57.3	
	comp=Z,28nm,1.3s						
KNRA	Kununurra	51.17	276		P	00 32 21.6	-0.1
KNRA				IAmb	IAmb	00 34 17.2	
	comp=Z,49nm,1.6s						
CASY	Casey	53.34	209	P	P	00 32 37.1	0.0
TROLL	Troll, Antarti	75.69	180	⇑P	P	00 35 07.4	+4.0
	comp=Z,106nm,0.8s						
SNAA	Sanae	75.96	178	⇑P	P	00 35 08.0	+3.1
	comp=Z,44nm,1.0s						
SNAA	Sanae	75.96	178	P	P	00 35 04.9	0.0
	comp=Z,2.5nm,1.1s,baz=244,slow=5.5,SNR=4.3						
	comp=Z,2.5nm,1.1s						
SNAA	Sanae	75.96	178	P	P	00 35 06.5	+1.6
SNAA				IAmb	IAmb	00 35 26.1	
	comp=Z,24nm,2.0s						
VNA3	Neumayer Olymp	76.11	176	⇑P	P	00 35 09.2	+3.5
	comp=Z,8.2nm,0.6s						
VNA2	Neumayer--Watz	76.54	177	⇑P	P	00 35 12.0	+3.9
	comp=Z,6.0nm,0.7s,baz=170,slow=4.5						
VNA1	Neumayer--Stat	76.77	176	⇑P	P	00 35 13.2	+3.8
	comp=Z,5.7nm,1.0s						
NVAR	Mina Array Bea	89.67	43	P	P	00 36 15.6	-0.9
	comp=Z,0.6nm,0.7s,baz=235,slow=4.5,SNR=3.6						
	comp=Z,0.6nm,0.7s						
MKAR	Makanchi Array	119.37	309	PKP	PKiKP	00 42 07.7	+0.1
	comp=Z,0.2nm,0.6s,baz=115,slow=2.4,SNR=3.7						
ZALV	Zalesovo Beam	119.84	317	PKP	PKiKP	00 42 09.8	+1.6
	comp=Z,0.2nm,0.4s,baz=168,slow=1.3,SNR=1.6						
KURK	Kurchatov	122.74	313		PKiKP	00 42 14.6	+0.6
KURBB	Kurchatov Arra	122.78	313	PKP	PKiKP	00 42 14.0	-0.1
	comp=Z,0.7nm,0.2s,baz=109,slow=1.6,SNR=4.3						
BVAR	Borovoye Array	128.15	315	PKP	PKiKP	00 42 24.8	+0.1
	comp=Z,0.5nm,0.5s,baz=93,slow=2.9,SNR=6.4						
KBZ	Khabaz	146.52	301	PKPbc	PKPab	00 42 58.7	-1.8
	comp=Z,5.8nm,1.1s,baz=150,slow=4.5,SNR=3.7						
FINES	FINESS Array B	147.29	339	PKPbc	PKPab	00 43 01.2	-1.7
	comp=Z,5.3nm,0.7s,baz=64,slow=3.2,SNR=18						
FINES	FINESS Array B	147.29	339		PKPab	00 43 01.6	-1.3
NOA	NORSAR Array B	150.95	351	PKPbc	PKiKP	00 43 10.1	-1.0
	comp=Z,1.8nm,0.9s,baz=14,slow=2.4,SNR=3.9						
EIL	Elat	151.97	273	PKPbc	PKiKP	00 43 14.8	+0.7
	comp=Z,9.8nm,0.9s,baz=354,slow=10,SNR=7.3						
MMAI	Mount Meron Ar	152.25	280	PKPbc	PKiKP	00 43 16.2	+1.5
	comp=Z,6.3nm,0.8s,baz=101,slow=4.3,SNR=5.0						
AKASG	Malin Array Be	153.18	320	PKPbc	PKiKP	00 43 15.1	-0.8
	comp=Z,0.9nm,0.6s,baz=74,slow=1.8,SNR=2.0						
BRTR	Keskin Array B	153.82	295	PKPbc	PKiKP	00 43 18.2	+0.4
	comp=Z,1.1nm,0.8s,baz=99,slow=4.5,SNR=4.5						

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*NNC **14** 00:23:43.7±0.9, 43°.75N×75°.32E, h0^{km}, mb2.4, mpv2.8, Error ellipse: s-maj=8.7km s-min=4.7km az=39.0*

*SOME **14** 00:23:44.9, 43°.72N×75°.32E, h20^{km}*

*KRNET **14** 00:23:44.5±0.1, 43°.74N×75°.33E, h20^{km}, mb2.5*

ISC 14 00:23:44.8±0.9,43°.72N±0°.03×75°.34E±0°.02,h17^{km}±7^{km}, n31,σ0^{s}.46/61,10C-10D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBS	Karabastau	0.24	95	*e*P	Pg	00 23 50.3	0.0
KRBS				*e*S	Sg	00 23 54.1	0.0
KRBS	Karabastau	0.24	95	P	Pg	00 23 50.3	0.0
	4.0nm,0.0s						
KRBS				S	Sg	00 23 54.1	0.0
	9.0nm,0.1s						
KRBS	Karabastau	0.24	95	*e*P	Pg	00 23 50.3	0.0
	4.0nm,0.0s						
KRBS				*e*S	Sg	00 23 54.1	0.0
	9.0nm,0.1s						
DGS	Degeres	0.57	146	*e*P	Pg	00 23 56.2	+0.1
DGS				*e*S	Sb	00 24 04.4	+0.1
DGS	Degeres	0.57	146	P	Pg	00 23 56.2	+0.1
	6.0nm,0.1s						
DGS				S	Sb	00 24 04.4	+0.1
	22nm,0.1s						
DGS	Degeres	0.57	146	*e*P	Pg	00 23 56.2	+0.1
	6.0nm,0.1s						
DGS				*e*S	Sb	00 24 04.4	+0.1
	22nm,0.1s						
USP	Ospenovka	0.76	234	⇓*e*P	Pg	00 23 59.1	-0.5
USP				⇓*e*S	Sg	00 24 09.2	-0.5
TKM2	Tokmak 2	0.82	167	⇓*e*P	Pb	00 24 00.5	-0.2
TKM2				⇓*e*S	Sg	00 24 11.7	+0.1
CHMS	Chumysh	0.84	211	⇑*e*P	Pb	00 24 00.5	-0.4
CHMS				⇑*e*S	Sb	00 24 11.7	-0.2
KTBS	Karatobe	0.97	90	*e*P	Pb	00 24 02.9	-0.3
KTBS				*e*S	Sb	00 24 15.7	-0.1
KTBS	Karatobe	0.97	90	P	Pb	00 24 02.9	-0.3
KTBS				S	Sb	00 24 15.7	-0.1
MTBS	Maitube	0.99	126	*e*P	Pb	00 24 03.6	+0.1
MTBS				*e*S	Sg	00 24 16.8	-0.1
MTBS	Maitube	0.99	126	P	Pb	00 24 03.6	+0.1
	9.4nm,4.7s						
MTBS				S	Sg	00 24 16.8	-0.1
	12nm,0.2s						
MTBS	Maitube	0.99	126	*e*P	Pb	00 24 03.6	+0.1
	9.4nm,4.7s						
MTBS				*e*S	Sg	00 24 16.8	-0.1
	12nm,0.2s						
KBK	Karagaybulak	1.10	195	⇓*e*P	Pb	00 24 05.3	-0.1
KBK				⇓*e*S	Sb	00 24 20.0	+0.4
IZV	Izvestkoviy	1.15	126	P	Pn	00 24 05.6	-0.7
	0.9nm,0.1s						

IZV				S	Sb	00 24 20.0	-1.0
	6.2nm,0.2s						
IZV	Izvestkoviy	1.15	126	*e*P	Pn	00 24 05.6	-0.7
	0.9nm,0.1s						
IZV				*e*S	Sb	00 24 20.0	-1.0
	6.2nm,0.2s						
CHKK	Chushkaly	1.20	83	*e*P	Pb	00 24 07.1	0.0
CHKK				*e*S	Sn	00 24 22.9	+0.1
CHKK	Chushkaly	1.20	83	P	Pb	00 24 07.1	0.0
CHKK				S	Sn	00 24 22.9	+0.1
	7.2nm,0.3s						
CHKK	Chushkaly	1.20	83	*e*P	Pb	00 24 07.1	0.0
	1.2nm,0.1s						
CHKK				*e*S	Sn	00 24 22.9	+0.1
	7.2nm,0.3s						
KNDC	Almaty	1.28	112	⇓P	Pb	00 24 08.4	-0.1
	10nm,0.5s						
KNDC				⇑S	Sg	00 24 26.5	+0.2
	14nm,0.6s						
BOOM	Boomskoye usch	1.30	160	⇓*e*P	Pb	00 24 09.2	+0.3
BOOM				⇓*e*S	Sg	00 24 26.7	-0.2
KOTS	Kotyrbulak	1.38	110	*e*P	Pb	00 24 10.3	+0.1
KOTS				*e*S	Sb	00 24 28.4	+0.9
KOTS	Kotyrbulak	1.38	110	P	Pb	00 24 10.3	+0.1
KOTS				S	Sb	00 24 28.4	+0.9
	2.9nm,0.4s						
KOTS	Kotyrbulak	1.38	110	*e*P	Pb	00 24 10.3	+0.1
	1.5nm,0.2s						
KOTS				*e*S	Sb	00 24 28.4	+0.9
	6.3nm,0.2s						
EKS2	Erkin-Say	1.56	228	⇑*e*P	Pb	00 24 13.1	-0.1
EKS2				⇑*e*S	Sb	00 24 33.5	+0.8
UCH	Uchtor	1.61	202	⇑*e*P	Pb	00 24 14.3	0.0
UCH				⇑*e*S	Sb	00 24 35.6	+1.1
ULHL	Ulahol	1.61	156	⇑*e*P	Pb	00 24 14.6	+0.4
ULHL				⇑*e*S	Sb	00 24 35.9	+1.5
BTLS	Baital	1.62	325	P	Pn	00 24 13.0	+0.5
	2.5nm,0.2s						
BTLS				S	Sn	00 24 33.2	+0.2
	2.2nm,0.2s						
BTLS	Baital	1.62	325	*e*P	Pb	00 24 14.0	-0.2
	1.3nm,0.2s						
BTLS				*e*S	Sb	00 24 34.6	+0.3
	2.9nm,0.2s						
PDGK	Podgornoye	3.04	96	⇑Pg	Pb	00 24 38.0	-0.6
	2.0nm,1.1s						
PDGK				⇓Lg	Lg	00 25 21.1	
	3.2nm,1.2s						

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*IDC **14** 00:25:18.4±0.8, 29°.64N×42°.77W, h0^{km}, mb3.9/16, mbtmp3.9/16, MS3.6/38, Error ellipse: s-maj=24.5km s-min=17.5km az=166.0*

ISC 14 00:25:19.9±0.7**, 29°.6N**±0°.2×**42°.8W**±0°.1**, h10^{km}, n52,** σ**1^s.05**/16**, mb3.9**/15**, MS3.7**/38**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	San Juan	24.23	247	LR	LR	00 37 52.0	
	comp=Z,97nm,21.9s,baz=128,slow=31						
MDP	Montagnes des	26.14	203	LR	LR	00 39 00.3	
	comp=Z,57nm,18.7s,baz=356,slow=32						
SADO	Sadowa	32.38	308	LR	LR	00 42 14.5	
	comp=Z,110nm,21.9s,baz=114,slow=31						
MDT	Midelt	32.65	75	LR	LR	00 42 41.8	
	comp=Z,119nm,19.7s,baz=298,slow=32						
ESDC	Sonseca Array	33.21	62	P	P	00 31 56.4	-0.6
	1.0nm,0.8s,baz=274,slow=8.4,SNR=2.8						
	1.0nm,0.8s						
SDV	Santo Domingo	33.29	237	LR	LR	00 43 26.2	
	comp=Z,84nm,22.0s,baz=58,slow=33						
TKL	Tuckaleechee C	34.88	291	LR	LR	00 42 04.0	
	comp=Z,85nm,21.8s,baz=81,slow=29						
ROSC	El Rosal	38.71	237	LR	LR	00 48 58.0	
	comp=Z,95nm,18.9s,baz=54,slow=37						
DBIC	Dimbokro	42.34	115	LR	LR	00 48 19.9	
	comp=Z,117nm,19.3s,baz=318,slow=33						
JTS	Las Juntas de	43.78	253	LR	LR	00 49 56.8	
	comp=Z,82nm,20.2s,baz=51,slow=34						
DAVOX	Davos/Dischmat	43.90	52	LR	LR	00 48 26.8	
	comp=Z,76nm,19.6s,baz=262,slow=32						
TORD	Torodi Ar. Bea	44.22	102	P	P	00 33 29.1	-0.4
	1.4nm,0.3s,baz=318,slow=9.3,SNR=3.4						
	1.4nm,0.3s						
ULM	Lac du Bonnet	44.55	313	LR	LR	00 49 23.9	
	comp=Z,35nm,20.3s,baz=5.0,slow=32						
BDFB	Brasilia	45.30	187	LR	LR	00 49 37.5	
	comp=Z,45nm,19.0s,baz=33,slow=32						
H10N2	ASCENSION HYDR	46.12	139	T	T	01 22 55.9	
	baz=325,slow=75,SNR=1028						
H10N3	ASCENSION HYDR	46.12	139	T	T	01 22 56.0	
	baz=325,slow=75,SNR=826						
H10N1	ASCENSION HYDR	46.14	139	T	T	01 22 57.3	
	baz=325,slow=75,SNR=1088						
GERES	GERESS Array B	46.59	49	LR	LR	00 49 57.9	
	comp=Z,112nm,18.3s,baz=287,slow=32						
H10S3	ASCENSION HYDR	46.94	140	T	T	01 23 50.4	
	baz=324,slow=74,SNR=244						
H10S2	ASCENSION HYDR	46.96	140	T	T	01 23 53.9	
	baz=256,slow=74,SNR=182						
VRAC	Vranov	48.50	49	LR	LR	00 52 42.4	
	comp=Z,68nm,18.1s,baz=301,slow=34						
SIV	San Ignacio	48.69	204	LR	LR	00 52 52.5	
	comp=Z,45nm,18.7s,baz=302,slow=34						
CMIG	Matias Romero	49.10	267	LR	LR	00 52 30.3	
	comp=Z,57nm,21.1s,baz=83,slow=33						
ATAH	Atahualpa	50.11	229	LR	LR	00 56 42.4	
	comp=Z,70nm,18.2s,baz=11,slow=38						
LPAZ	La Paz	51.81	212	P	P	00 34 28.7	-0.2
	1.6nm,0.7s,baz=17,slow=7.1,SNR=4.8						
LPAZ				LR	LR	00 55 26.0	
	comp=Z,64nm,18.6s,baz=23,slow=35						
	1.6nm,0.7s						
TXAR	Lajitas Array	52.46	286	P	P	00 34 31.9	-1.3
	0.7nm,0.8s,baz=89,slow=7.9,SNR=5.8						
	0.7nm,0.8s						
ANMO	Albuquerque	53.32	293	LR	LR	00 54 39.6	
	comp=Z,84nm,21.4s,baz=60,slow=33						
PDAR	Pinedale Array	54.17	303	P	P	00 34 45.3	-0.4
	2.1nm,0.8s,baz=80,slow=5.8,SNR=16						
PDAR				LR	LR	00 56 24.8	
	comp=Z,87nm,19.5s,baz=60,slow=34						
	2.1nm,0.8s						
FINES	FINESS Array B	54.36	33	P	P	00 34 46.9	+0.4
	2.2nm,0.7s,baz=262,slow=5.1,SNR=4.0						
	2.2nm,0.7s						
MLR	Muntele Rosu	55.09	53	LR	LR	00 56 12.1	
	comp=Z,60nm,18.7s,baz=250,slow=34						
YKA	Yellowknife Ar	55.83	328	P	P	00 34 56.5	-0.5
	0.7nm,1.1s,baz=90,slow=5.9,SNR=4.9						
	0.7nm,1.1s						
AKASG	Malin Array Be	56.56	46	P	P	00 35 01.0	-1.4
	1.5nm,0.7s,baz=286,slow=6.0,SNR=5.0						
AKASG				LR	LR	00 57 40.9	
	comp=Z,88nm,18.4s,baz=249,slow=34						
	1.5nm,0.7s						
NEW	Newport	58.48	311	LR	LR	00 59 12.6	
	comp=Z,94nm,18.2s,baz=35,slow=35						
ELK	Elko	58.74	302	LR	LR	01 00 08.1	
	comp=Z,113nm,18.2s,baz=6.0,slow=36						
LPIG	La Paz	59.77	282	LR	LR	00 59 49.8	
	comp=Z,28nm,20.1s,baz=19,slow=35						
NVAR	Mina Array Bea	61.63	300	P	P	00 35 38.0	-0.2
	1.1nm,0.7s,baz=75,slow=4.5,SNR=5.7						
NVAR				LR	LR	01 00 38.9	
	comp=Z,94nm,19.6s,baz=48,slow=34						
	1.1nm,0.7s						
PFO	Pinyon Flats O	61.65	294	LR	LR	01 00 06.8	
	comp=Z,57nm,18.9s,baz=74,slow=34						
BRTR	Keskin Array B	61.88	58	P	P	00 35 40.1	+0.4
	1.4nm,0.9s,baz=267,slow=6.9,SNR=6.5						
BRTR				LR	LR	01 00 58.1	
	comp=Z,38nm,19.0s,baz=280,slow=35						
	1.4nm,0.9s						
YBH	Yreka Blue Hor	63.91	305	LR	LR	01 04 10.9	
	comp=Z,6.9nm,18.1s,baz=14,slow=36						
BBB	Bella Bella	64.47	317	LR	LR	01 02 44.8	
	comp=Z,109nm,19.5s,baz=256,slow=35						
EIL	Elat	66.19	68	LR	LR	01 04 27.5	
	comp=Z,31nm,21.8s,baz=0.0,slow=36						
ILAR	Eielson Array	69.30	334	P	P	00 36 28.8	+1.7
	0.4nm,0.9s,baz=65,slow=5.2,SNR=4.9						
	0.4nm,0.9s						
ARTI	Arti	71.61	35	LR	LR	01 04 25.3	
	comp=Z,41nm,19.4s,baz=338,slow=33						
AKTO	Aktyubinsk	74.08	41	LR	LR	01 08 16.5	
	comp=Z,72nm,18.2s,baz=350,slow=35						
PLCA	Paso Flores	74.61	202	P	P	00 37 00.1	+0.9
	2.4nm,1.0s,baz=25,slow=7.8,SNR=4.1						
PLCA				LR	LR	01 08 24.7	
	comp=Z,23nm,21.8s,baz=38,slow=35						
	2.4nm,1.0s						
MBAR	Mbarara	75.98	99	LR	LR	01 08 43.0	
	comp=Z,36nm,20.6s,baz=308,slow=34						
BVAR	Borovoye Array	79.31	34	P	P	00 37 26.8	+1.3
	0.6nm,0.7s,baz=277,slow=3.8,SNR=4.1						
	0.6nm,0.7s						
KURBB	Kurchatov Arra	84.75	33	P	P	00 37 53.9	-0.3
	0.3nm,0.7s,baz=310,slow=5.9,SNR=6.8						
	0.3nm,0.7s						
LBTB	Lobatse	85.15	122	LR	LR	01 13 30.3	
	comp=Z,28nm,18.1s,baz=289,slow=34						
ZALV	Zalesovo Beam	85.23	28	P	P	00 37 58.3	+1.8
	0.3nm,0.4s,baz=331,slow=7.4,SNR=3.6						
	0.3nm,0.4s						
AAK	Ala-Archa	87.82	41	LR	LR	01 16 47.5	
	comp=Z,48nm,18.8s,baz=329,slow=35						
MKAR	Makanchi Array	89.19	34	P	P	00 38 16.5	+0.6
	0.4nm,0.9s,baz=298,slow=3.1,SNR=2.4						
MKAR				LR	LR	01 16 04.3	
	comp=Z,55nm,19.8s,baz=307,slow=34						
	0.4nm,0.9s						

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*IDC **14** 00:27:31.9±1.1, 6°.88N×125°.24E, h0^{km}, mb3.5/5, mbtmp3.5/5, MS3.0/2, Error ellipse: s-maj=22.1km s-min=8.6km az=152.0*

ISC 14 00:27:33.3±1.1**, 7°.0N**±0°.1×**125°.5E**±0°.2**, h10^{km}, n9,** σ**2^s.33**/7**, mb3.5**/5**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.16	41	Pg	Pg	00 27 39.3	+2.5
	4µm,0.3s,baz=289,slow=2.5,SNR=169						
DAV				Lg	Lg	00 27 44.8	
	3µm,0.3s,baz=313,slow=23,SNR=12						
DAV	Davao City (W)	0.16	41	P	Pg	00 27 34.0	-2.8
KAPI	Kappang	13.18	206	LR	LR	00 36 07.5	
	comp=Z,55nm,19.1s,baz=58,slow=40						
BATI	Baumata	17.14	186	LR	LR	00 39 26.4	
	comp=Z,56nm,20.1s,baz=62,slow=42						
WRA	Warramunga Arr	28.11	162	P	P	00 33 24.8	-0.7
	0.3nm,0.4s,baz=343,slow=9.2,SNR=2.3						
	0.3nm,0.4s						
ASAR	Alice Springs	31.52	165	P	P	00 33 56.6	+0.9
	0.4nm,0.4s,baz=342,slow=7.0,SNR=7.6						
	0.4nm,0.4s						
SONM	Songino Array	43.87	341	P	P	00 35 41.7	+1.7
	0.3nm,0.6s,baz=153,slow=9.7,SNR=2.0						
	0.3nm,0.6s						
MKAR	Makanchi Array	54.22	325	P	P	00 36 57.7	-1.6
	0.4nm,0.8s,baz=125,slow=8.9,SNR=2.3						
	0.4nm,0.8s						
KURBB	Kurchatov Arra	58.38	327	P	P	00 37 27.9	-0.8
	0.3nm,0.6s,baz=115,slow=7.1,SNR=1.7						
	0.3nm,0.6s						

NOU 14 00:31:02.5, 15°.76S×168°.04E, h3^{km}, MLv4.0/9**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.86	291	P	Pg	00 31 19.3	+0.2
DVP	Devils Point	1.96	176	P	Pn	00 31 37.3	+0.7
YATNC	Mamie plateau,	6.36	190	P	Pn	00 32 36.6	-0.6
DZM	Mont Dzumac	6.46	193	P	Pn	00 32 38.3	-0.3

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*IGQ **14** 00:43:25.8±0.4, 0°N±2°×8°0W±°, h9^{km}±1^{km}, MLv3.7/35*

ISC 14 00:43:26.1±0.9**, 0°.40N**±0°.02×**79°.95W**±0°.04**, h10^{km}, n92,** σ**1^s.46**/113**, 5C-22D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AV21	Acelerografo,	0.48	57	S	Sb	00 43 43.4	-0.4
AV21				⇑P	Pg	00 43 35.9	+0.4
AV18	Acelerografo,	0.48	100	⇓P	Pb	00 43 36.9	+0.3
AMA1	Acelerografo,	0.58	23	P	Pb	00 43 37.4	-0.9
AMA1				S	Sb	00 43 47.0	+0.5
AES2	Ecuador-Puerto	0.66	28	S	Sb	00 43 48.8	-0.1
AES2				P	Pg	00 43 37.9	-1.0
FLF1	Flavio Alfaro-	0.76	172	S	Sn	00 43 54.6	+0.1
FLF1				P	Pb	00 43 41.6	+0.1
BV15	Puerto Quito-O	0.77	108	⇓P	Pg	00 43 40.4	-0.5
RVRD	Rio Verde	0.87	41	P	Pg	00 43 42.1	-0.8
RVRD				S	Sb	00 43 55.2	+0.2
CAB1	Cabo Pasado-Ma	0.92	211	P	Pg	00 43 42.8	-0.9
APR2	Miler	1.03	108	P	Pg	00 43 44.9	-1.1
ASDO	Santo Domingo	1.06	129	P	Pg	00 43 44.6	-1.8
PAC1	Pacto, Paraso	1.17	97	⇓P	Pb	00 43 46.6	-1.9
PAC1	Pacto, Paraso	1.17	97	P	Pb	00 43 46.5	-1.9
PAC1				S	Sb	00 44 03.6	-0.1
PECV	Mancha de Ca P	1.17	185	P	Pg	00 43 49.2	+0.5
SNLR	San Lorenzo-Es	1.42	51	⇑P	Pn	00 43 51.7	-0.2
PINO	Pino	1.45	112	⇓P	Pn	00 43 51.2	-1.8
TERV	Terraza Guagua	1.46	113	⇓P	Pn	00 43 51.3	-1.7
GGPT	Toaza - Volcan	1.47	115	⇓P	Pn	00 43 51.3	-1.7
GGPC	Guagua Pichinc	1.47	113	⇓P	Pn	00 43 51.6	-1.6
YANA	Yana	1.47	110	P	Pn	00 43 51.7	-1.5
JUA2	San Juan 2	1.48	114	⇓P	Pn	00 43 51.7	-1.5
OTAV	Otavalo	1.51	96	P	Pn	00 43 52.3	-1.3
OTAV				S	Sn	00 44 13.6	0.0
CUSE	Cuicocha Este	1.56	93	P	Pn	00 43 53.5	-0.7
CUSE	Cuicocha Este	1.56	93	P	Pn	00 43 53.0	-1.2
CUSE				S	Sn	00 44 15.1	+0.4
CUIC	Cuicocha-Domo	1.59	93	⇓P	Pn	00 43 53.8	-0.9
COTA	Cotacachi	1.61	92	⇓P	Pn	00 43 54.4	-0.7
LITE1	Lita	1.64	76	P	Pn	00 43 53.2	-1.9
ILLI	Illinizas Sur	1.65	132	⇓P	Pn	00 43 54.1	-1.5
PUEM	Granja Avicola	1.67	109	P	Pn	00 43 56.0	+0.3
URCU	Urcuqui	1.70	89	P	Pn	00 43 55.3	-0.9
IMBA	Imbabura, San	1.76	94	⇓P	Pn	00 43 57.7	+0.7
TOMA	Boca Toma-Volc	1.76	120	P	Pn	00 43 56.8	-0.2
SUCR	Mariscal Sucre	1.79	125	⇓P	Pn	00 43 57.1	-0.3
PITA	Cotopaxi Volc	1.79	122	⇓P	Pn	00 43 57.3	-0.2
CAMI	Rancho Maria	1.80	126	P	Pn	00 43 57.5	-0.1
SLOR	San Lorenzo -	1.84	128	⇓P	Pn	00 43 58.2	0.0
BREF	Cotopaxi Volca	1.85	125	⇓P	Pn	00 43 58.4	0.0
JIPI	JIPIJAPA	1.85	199	P	Pb	00 44 00.5	+0.4
VC1	Cotopaxi 1	1.86	124	P	Pn	00 43 58.7	+0.2
BVC2	Cotopaxi Volca	1.86	124	⇓P	Pn	00 43 58.6	0.0
TUMC	Tumaco	1.87	41	P	Pn	00 43 56.4	-1.8
TUMC				S	Sb	00 44 24.4	+0.6
YAHU	Yahuarcocha	1.88	91	P	Pn	00 43 59.5	+0.8
BTAM	Cotopaxi Volca	1.89	124	⇓P	Pn	00 43 59.0	+0.1
ANTG	Antisana-Guama	1.92	118	⇓P	Pn	00 43 59.1	-0.2
TAMB	Tambo	1.92	124	⇓P	Pn	00 43 59.7	+0.3
CHMA	Chilma	1.94	76	P	Pn	00 43 57.1	-2.3
VCES	Cotopaxi	1.96	127	⇓P	Pn	00 43 59.3	-0.6
ANTM	Antisana-La Mi	1.96	118	P	Pn	00 43 60.0	0.0
ANGU	Angureal	1.98	100	P	Pn	00 44 00.9	+0.7
LNGL	El Angel-Carch	1.98	80	⇑P	Pn	00 43 59.6	-0.6
ANTI	Antisana	1.98	115	P	Pn	00 44 00.3	+0.1
CAYR	Refugio Cayamb	1.98	101	P	Pn	00 44 00.8	+0.5
ANTS	Antisana-Sarah	1.99	117	⇓P	Pn	00 44 00.3	-0.1
ECEN	Cerro Negro	2.02	78	P	Pn	00 43 59.9	-0.8
CHL1	Volc¡n Chiles	2.04	79	⇑P	Pn	00 44 00.4	-0.7
CHL2	Volc¡n Chiles	2.07	79	⇑P	Pn	00 44 00.8	-0.6
PPLP	Puerto Lpez	2.10	203	P	Pn	00 44 02.1	+0.7
PPLP				S	Sb	00 44 31.1	+0.6
PIS1	Pisayambo	2.13	133	P	Pn	00 44 02.7	+0.4
CHSH	Refugio Sur-Vo	2.17	150	P	Pn	00 44 02.9	0.0
TULM	Tulcn-Chalpat	2.19	82	P	Pn	00 44 03.9	+0.9
TULM	Tulcn-Chalpat	2.19	82	P	Pn	00 44 02.9	-0.1
TULM				S	Sn	00 44 31.9	+1.5
CMBC	Cumbal	2.19	76	P	Pn	00 44 03.2	+0.2
CMBC	Cumbal	2.19	76	P	Pn	00 44 02.1	-0.9
TAMH	Tambohuasha Ch	2.26	149	P	Pn	00 44 03.9	-0.1
IGUA	Igualata	2.29	145	P	Pn	00 44 05.1	+0.6
BMAS	Trigal station	2.40	142	P	Pn	00 44 04.7	-1.0
BONI	La Bonita	2.42	89	P	Pn	00 44 07.9	+1.9
BONI	La Bonita	2.42	89	P	Pn	00 44 07.2	+1.2
BONI				S	Sn	00 44 37.3	+1.4
BPAT	Tungurahua Vol	2.42	141	P	Pn	00 44 07.3	+1.1
COHC	Cochancay	2.93	166	P	Pn	00 44 11.6	-1.2
COHC	Cochancay	2.93	166	P	Pn	00 44 11.9	-0.9
COHC				S	Sn	00 44 47.5	-0.6
GR1C	Gorgona, Isla	3.14	35	P	Pb	00 44 20.9	-1.1
GR1C				S	Sg	00 45 04.4	-2.7
BBAC	Balboa, Cauca	3.15	59	P	Pn	00 44 15.0	-0.9
BBAC	Balboa, Cauca	3.15	59	P	Pn	00 44 14.8	-1.1
BBAC				S	Sn	00 44 53.7	0.0
CRUC	La Cruz	3.22	69	P	Pn	00 44 19.0	+2.0
POPC	Popayan, Colom	3.90	57	P	Pn	00 44 26.0	-0.4
POPC				S	Sn	00 45 13.1	+0.7
JAMC	Jamundi, Valle	4.31	49	P	Pn	00 44 30.3	-1.6
JAMC				S	Sn	00 45 23.3	+0.9
FLOC	Florencia	4.46	75	P	Pn	00 44 35.3	+1.5
MCRA	Macar, Loja	4.74	180	P	Pn	00 44 38.9	+1.2
MCRA				S	Sn	00 45 33.2	+0.4
GARC	Garzon, Huila	4.80	68	P	Pn	00 44 39.7	+1.0
GARC				S	Sn	00 45 38.2	+3.7
BETC	Betania	5.04	63	P	Pn	00 44 46.1	+4.2
YOTC	Yotoco, Valle	5.07	45	P	Pn	00 44 42.2	0.0
	14nm,0.7s						
PTLC	Puerto Leguiza	5.16	93	P	Pn	00 44 44.8	+1.3
	494nm73nm,0.6s						
PLMC	San Jos del P	5.78	39	P	Pn	00 44 51.8	-0.3
	11nm,0.4s						
ORTC	Ortega, Tolima	5.85	53	P	Pn	00 44 54.8	+1.8
	15nm,1.2s						
ORTC				S	Sn	00 46 01.5	+1.2
	15nm,1.2s						
PRAC	Prado	6.04	57	P	Pn	00 44 57.7	+2.1
	25nm,0.6s						
PRAC				S	Sn	00 46 09.1	+4.3
	25nm,0.6s						
URMC	La Uribe, Meta	6.25	63	P	Pn	00 45 00.0	+1.5
	26nm,0.6s						
MACC	Macarena, Meta	6.34	74	P	Pn	00 45 02.9	+3.2
	2µm639nm55nm,0.6s						
GUY2C	Guyana, Caldas	6.63	44	P	Pn	00 45 06.1	+2.0
	6.9nm,0.6s						
CBOC	Ciudad Bolivar	6.70	36	P	Pn	00 45 06.6	+1.8
	12nm,0.9s						
NORC	Norcasia	7.21	45	P	Pn	00 45 16.1	+4.4
	4.8nm,0.7s						
VILC	Villavicencio,	7.26	59	P	Pn	00 45 16.9	+4.5
PTBC	PUERTO BERRIO,	8.20	42	P	Pn	00 45 29.2	+3.9

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*IDC **14** 00:55:50.3±1.0, 30°.98N×142°.84E, h0^{km}, mb3.8/10, mbtmp3.8/13, ML3.2/3, Error ellipse: s-maj=31.5km s-min=17.6km az=71.0*

*JMA **14** 00:55:52.4±0.3, 31°N±1°×14°3E±°, h47^{km}, MV4.0/23, FAR E OFF IZU ISLANDS*

ISC 14 00:55:55.8±0.9**, 31°.10N**±0°.07×**142°.7E**±0°.1**, h37^{km}, n21,** σ**1^s.89**/26**, mb3.8**/10**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.18	310	*e*P	Pn	00 56 42.4	-0.9
JHJ2				*e*S	Sn	00 57 19.1	-0.9
JHJ	Hachijo jima 2	3.21	310	Pn	Pn	00 56 42.2	-1.5
	10.0nm,0.3s,baz=237,slow=23,SNR=5.5						
JHJ				Sn	Sn	00 57 17.3	-3.3
	38nm,0.3s,baz=84,slow=23,SNR=7.4						
	98nm,0.8s						
BSO1	Boso 1	3.84	338	*e*P	Pn	00 56 51.0	-0.8
BSO1				*e*S	Sn	00 57 34.4	-0.9
CBIJ	Chichi jima	4.02	187	*e*S	Sn	00 57 38.8	-1.9
JCJ	Chichijima	4.02	187	Pn	Pn	00 56 40.2	-15
	7.4nm,0.3s,baz=275,slow=24,SNR=7.3						
JCJ				Sn	Sn	00 57 24.8	-16
	10nm,0.3s,baz=279,slow=23,SNR=2.1						
BSO3	Boso 3	4.13	334	*e*P	Pn	00 56 55.3	-0.8
JRY	Ryogami san	5.85	328	*e*P	Pn	00 57 20.0	0.0
JRY				*e*S	Sn	00 58 25.4	-0.4
JAG	Ashikaga	5.97	334	*e*P	Pn	00 57 21.2	-0.3
JAG				*e*S	Sn	00 58 25.6	-3.1
JFK	Kawauchi	6.43	347	*e*S	Sn	00 58 34.2	-5.9
MJAR	Matsushiro Arr	6.60	326	Pn	Pn	00 57 30.3	0.0
	0.2nm,0.3s,baz=153,slow=11,SNR=9.7						
MJAR				Sn	Sn	00 58 43.9	-0.4
	0.2nm,0.3s,baz=268,slow=22,SNR=5.6						
	3.2nm,0.8s						
KSRS	Korea Array	13.78	301	Pn	Pn	00 59 08.5	0.0
	0.2nm,0.3s,baz=103,slow=13,SNR=1.8						
	0.7nm,0.5s						
HILR	Hailar Array B	25.26	323	P	P	01 01 21.2	+2.8
	0.6nm,0.3s,baz=119,slow=12,SNR=2.4						
	0.6nm,0.3s						
SONM	Songino Array	32.28	312	P	P	01 02 23.1	+1.9
	1.0nm,0.5s,baz=116,slow=8.1,SNR=5.3						
	1.0nm,0.5s						
ZALV	Zalesovo Beam	46.85	317	P	P	01 04 22.6	+0.7
	0.5nm,0.4s,baz=110,slow=8.7,SNR=5.4						
	0.5nm,0.4s						
MKAR	Makanchi Array	48.38	307	P	P	01 04 35.4	+1.4
	0.9nm,0.6s,baz=93,slow=8.8,SNR=8.8						
	0.9nm,0.6s						
KURBB	Kurchatov Arra	50.65	312	P	P	01 04 51.9	+0.7
	0.7nm,0.3s,baz=90,slow=6.7,SNR=6.7						
	0.7nm,0.3s						
WRA	Warramunga Arr	51.39	190	P	P	01 04 56.1	-0.9
	1.4nm,0.4s,baz=8.0,slow=7.6,SNR=12						
	1.4nm,0.4s						
ILAR	Eielson Array	53.99	30	P	P	01 05 16.3	+0.5
	0.4nm,1.0s,baz=272,slow=7.4,SNR=2.8						
	0.4nm,1.0s						
ASAR	Alice Springs	55.11	190	P	P	01 05 23.6	-0.8
	0.6nm,0.5s,baz=4.1,slow=6.2,SNR=14						
	0.6nm,0.5s						
BVAR	Borovoye Array	55.47	316	P	P	01 05 27.0	+0.3
	0.6nm,0.6s,baz=104,slow=6.3,SNR=4.5						
	0.6nm,0.6s						
YKA	Yellowknife Ar	68.41	29	P	P	01 06 53.6	+0.2
	0.1nm,0.3s,baz=293,slow=7.4,SNR=3.0						
	0.1nm,0.3s						

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*TAP **14** 01:07:30.0, 24°.07N×122°.67E, h30^{km}, ML2.6, D*

*JMA **14** 01:07:29.8±0.1, 24°N±1°×122°.6E±0°.4, h31^{km}±3^{km}, MV2.1/11, NW OFF ISHIGAKIJIMA IS*

ISC 14 01:07:29.7±1.1**, 23°.99N**±0°.04×**122°.66E**±0°.02**, h30^{km}**±10^{km}**, n41,** σ**0^s.83**/67**, 1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	EOS4	0.34	292	*i* P	Pb	01 07 37.7	+0.4
EOS4				*i* S	Sn	01 07 43.5	-0.3
EOS3	EOS3	0.43	313	⇓*i*P	Pn	01 07 39.3	-0.3
EOS3				S	Sn	01 07 46.3	0.0
JYNG	Yonagunijimaku	0.53	30	*e*P	Pb	01 07 40.1	-0.4
JYNG				*e*S	Sb	01 07 47.3	-0.7
YOJ	Yonaguni jima	0.57	35	*e*P	Pb	01 07 40.3	-0.9
YOJ				*e*S	Sb	01 07 48.3	-0.8
YOJ	Yonaguni jima	0.57	35	*e*P	Pb	01 07 40.8	-0.4
YOJ				*e*S	Sn	01 07 48.6	-1.4
EOS2	EOS2	0.57	318	P	Pn	01 07 42.1	+0.4
EOS2				S	Sn	01 07 51.3	+1.3
EWUT	Wuta	0.92	300	P	Pb	01 07 46.9	-0.2
EWUT				*e*S	Sb	01 07 60.0	+1.0
ENA	Nanau	0.94	298	*e*P	Pb	01 07 47.3	-0.1
ENA				*e*S	Sb	01 08 00.4	+0.8
TWC	Suao	0.96	310	*i* P	Pb	01 07 47.3	-0.4
TWC				S	Sb	01 07 59.7	-0.4
NACB	Ninganchiao	0.99	281	P	Pn	01 07 46.9	-0.5
NACB				*e*S	Sn	01 08 00.4	0.0
SHUL	Shoufeng	1.02	259	*e*P	Pn	01 07 46.2	-1.7
IRIF	Iriomote-Funau	1.04	71	*e*P	Pb	01 07 48.9	-0.2
IRIF				*e*S	Sb	01 08 02.5	+0.2
HATJ	Hateruma jima	1.05	86	*e*P	Pn	01 07 49.0	+0.7
NDS	Dongshan	1.07	307	*e*P	Pb	01 07 50.0	+0.4
EGS		1.07	322	*e*P	Pb	01 07 49.7	0.0
EGS				*e*S	Sb	01 08 04.4	+1.0
ETLH	Xiulin Townshi	1.09	281	*i* P	Pn	01 07 48.9	-0.1
ETLH				*e*S	Sn	01 08 03.4	+0.2
LXIB	Xiulin Townshi	1.14	272	*e*P	Pn	01 07 49.1	-0.5
LXIB				*e*S	Sn	01 08 03.3	-1.0
TWE	Neicheng	1.16	309	*e*P	Pb	01 07 51.9	+0.8
LATG	Datong	1.16	298	*e*P	Pb	01 07 51.3	0.0
ENTT	Nioudou	1.19	303	P	Pb	01 07 51.8	+0.3
WARBT	Fenglin Townsh	1.20	257	*e*P	Pn	01 07 48.9	-1.4
WARBT				*e*S	Sn	01 08 04.2	-1.4
TIPB	Shuangxi	1.23	322	*e*P	Pb	01 07 51.8	-0.6
FUSB	Fushanzhiwuyua	1.24	308	*e*P	Pb	01 07 52.8	+0.3
FUSB				*e*S	Sb	01 08 09.9	+1.8
NNSB	Datong	1.24	291	*e*P	Pn	01 07 51.4	+0.3
NNSB				*e*S	Sb	01 08 08.5	+0.2
JKRS	Kuro-shima	1.26	79	*e*S	Sb	01 08 09.1	+0.5
WHF	Hehuan Shan	1.28	277	*e*P	Pn	01 07 51.7	-0.2
SXI1	Grass Mountain	1.31	327	P	Pb	01 07 52.4	-1.2
SXI1				*e*S	Sb	01 08 08.8	-1.3

NWLT	Wulai	1.31	307	eP	Pb	01 07 54.0	+0.3
NWLT				eS	Sb	01 08 09.8	-0.4
WFSB	Wu-fen Shan	1.34	324	eP	Pb	01 07 53.4	-0.7
YHNB	Yeheng	1.35	300	eP	Pb	01 07 53.3	-1.1
NSK	Sanguang	1.37	300	P	Pn	01 07 53.4	+0.7
NSK				eS	Sb	01 08 11.1	-0.7
TWT	Tachien	1.38	281	eP	Pn	01 07 53.9	+0.9
TWT				eS	Sb	01 08 11.9	-0.3
YULB	Yu-li	1.38	245	eP	Pn	01 07 52.8	-0.1
YULB				eS	Sn	01 08 10.2	0.0
TDCB	Techi	1.39	281	eP	Pn	01 07 53.9	+0.7
TWF1	Yuli	1.40	243	eP	Pn	01 07 52.9	-0.3
TWF1				eS	Sn	01 08 10.4	-0.3
JIJ	Ishigaki jima	1.41	74	eP	Pn	01 07 53.6	+0.4
JIJ				eS	Sn	01 08 11.5	+0.8
VWDT	VWDT	1.41	261	eP	Pn	01 07 53.4	+0.2
VWDT				eS	Sn	01 08 11.1	+0.3
NFF	Wufeng Townshi	1.54	295	eP	Pb	01 07 57.1	-0.5
JISG	Ishigakijimahi	1.62	68	eS	Sn	01 08 16.5	+0.5
TPUB	Ta-pu	1.98	250	eP	Pn	01 08 03.5	+2.3
TPUB				eS	Sn	01 08 27.1	+2.1
CHN1	Nanshi	2.11	248	eP	Pb	01 08 06.0	-1.3

IDC 14 01:10:25.9±2.1**, 6°.75S×128°.55E, h0^{km}, mb3.5**/1**, mbtmp3.3**/3**, ML3.3**/2**, Error ellipse: s-maj=138.7km s-min=31.6km az=66.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.27	157	Pn	Pn	01 13 48.6	-0.9
	0.1nm,0.3s,baz=336,slow=14,SNR=5.2						
WRA				Sn	Sn	01 16 15.6	-13
	0.1nm,0.3s,baz=327,slow=21,SNR=4.9						
	0.2nm,0.6s						
ASAR	Alice Springs	17.59	164	P	P	01 14 33.3	-0.5
	0.1nm,0.3s,baz=340,slow=9.9,SNR=8.6						
ASAR				S	Sn	01 17 35.8	-14
	0.4nm,0.9s,baz=343,slow=24,SNR=2.4						
	0.4nm,0.5s						
MKAR	Makanchi Array	67.23	327	P	P	01 21 22.2	0.0
	0.2nm,0.3s,baz=125,slow=7.5,SNR=6.2						
	0.2nm,0.3s						

SJA ***14*** *01:12:11.8±0.8, 21°.25S×70°.00W, h84^{km}±6^{km}, ML3.7, MW3.7*

GUC ***14*** *01:12:38.0±0.7, 23°.20S×68°.90W, h98^{km}±3^{km}, ML3.3*

ISC 14 01:12:38.4±1.5**, 23°.16S**±0°.04×**68°.87W**±0°.04**, h93**^{km}±13^{km}**, n20, σ2^{s}03**/34**, 2C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AF01	San Pedro de A	0.67	72 ⇓	iP	Pn	01 12 55.1	-0.1
AF01				eS	Sn	01 13 08.2	+0.3
AF01				IAML		01 13 08.9	
	comp=E,2µm,0.5s						
AF01	San Pedro de A	0.67	72	eP	Pn	01 12 50.9	-4.4
AF01				eS	Sn	01 13 08.7	+0.8
AF01				IAML		01 13 25.4	
	comp=Z,960nm,0.4s						
PB06	IPOC Station P	0.79	305 ⇑	iP	Pn	01 12 55.9	-0.3
PB06				eS	Sn	01 13 09.4	-0.2
PB06				IAML		01 13 10.3	
	comp=E,1µm,0.2s						
PB06	IPOC Station P	0.79	305	eS	Sn	01 13 09.4	-0.2
PB06				IAML		01 13 11.4	
	comp=Z,653nm,0.1s						
PB05	IPOC Station P	1.26	284	eP	Pn	01 13 00.8	-0.7
PB05				eS	Sn	01 13 18.1	-0.8
PB05				IAML		01 13 21.6	
	comp=N,548nm,0.2s						
PB05	IPOC Station P	1.26	284	eP	Pn	01 12 59.8	-1.7
PB05				eS	Sn	01 13 20.3	+1.4
PB05				IAML		01 13 22.8	
	comp=Z,272nm,0.4s						
PB03	IPOC Station P	1.38	324	eP	Pn	01 13 03.1	+0.2
PB03				eS	Sn	01 13 22.4	+0.9
PB03				IAML		01 13 25.5	
	comp=E,589nm,0.2s						
PB09	IPOC Station P	1.40	346	eP	Pn	01 13 04.1	+0.9
PB09				eS	Sn	01 13 23.2	+1.1
PB10	IPOC Station P	1.58	257	eP	Pn	01 13 05.2	-0.1
PB10				IAML		01 13 31.0	
	comp=E,332nm,0.4s						
PB10	IPOC Station P	1.58	257	eP	Pn	01 13 05.0	-0.3
PB10				eS	Sn	01 13 19.4	-6.3
PB10				IAML		01 13 29.4	
	comp=Z,167nm,0.4s						
PB07	IPOC Station P	1.71	327	eP	Pn	01 13 07.2	+0.1
PB07				eS	Sn	01 13 29.8	+0.8
PB07				IAML		01 13 32.5	
	comp=E,480nm,0.2s						
PB14	IPOC Station P	2.02	224	eP	Pn	01 13 10.8	-0.5
PB14				eS	Sn	01 13 35.9	-0.4
PB14	IPOC Station P	2.02	224	eP	Pn	01 13 10.7	-0.5
PB14				eS	Sn	01 13 42.5	+6.2
PB14				IAML		01 13 43.7	
	comp=Z,188nm,0.3s						
PB02	IPOC Station P	2.06	333	eP	Pn	01 13 11.7	0.0
PB02				eS	Sn	01 13 37.7	+0.7
PB02				IAML		01 13 46.2	
	comp=E,353nm,0.2s						
GO02	Mina Guanaco	2.10	198 ⇑	iP	Pn	01 13 11.8	-0.5
GO02				eS	Sn	01 13 38.2	+0.2
GO02				IAML		01 13 45.0	
	comp=E,316nm,0.1s						
GO02	Mina Guanaco	2.10	198	eP	Pn	01 13 12.0	-0.3
GO02				eS	Sn	01 13 42.2	+4.2
GO02				IAML		01 13 50.5	
	comp=Z,226nm,0.1s						
PB01	IPOC Station P	2.19	345	eP	Pn	01 13 13.4	+0.2
PB01				eS	Sn	01 13 40.9	+1.0
PB01				IAML		01 13 49.0	
	comp=E,234nm,0.2s						
HJA	Humahuaca	3.19	91	eP	Pn	01 13 23.8	-3.0
AC01	Pan de Azucar	3.36	207	eP	Pn	01 13 26.7	-2.1
AC01				eS	Sn	01 14 15.8	+8.0
AC01				IAML		01 14 18.1	
	comp=Z,96nm,0.2s						
AC02	Maricunga	3.66	184	eP	Pn	01 13 34.2	+0.9
AC02				eS	Sn	01 14 26.2	+10
AC02				IAML		01 14 29.9	
	comp=Z,27nm,0.2s						

AZER ***14*** *01:25:08.2, 38°.42N×44°.61E, h10^{km}, ml2.6*

AFAD ***14*** *01:25:08.3, 38°.43N×44°.48E, h15^{km}±1^{km}, ML2.6*

ISK ***14*** *01:25:10.3, 38°.54N×44°.44E, h2^{km}, ML2.5/9*

TEH ***14*** *01:25:13.2, 38°.74N×44°.74E, h10^{km}±60^{km}*

ISC 14 01:25:08.1±1.1**, 38°.49N**±0°.02×**44°.57E**±0°.02**, h4**^{km}±10^{km}**, n55, σ2^{s}04**/87**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.48	291	P	Pg	01 25 17.5	0.0
OZAP				S	Sg	01 25 24.2	+0.4
OZAP				i IAML		01 25 30.0	
	comp=E,593nm,0.5s						
OZAP				i IAML		01 25 33.0	
	comp=N,354nm,0.6s						
MAKU	Maku	0.87	6	Pg	Pb	01 25 25.4	-0.6
TVAN	Van	0.91	273	P	Pg	01 25 24.6	-1.0
TVAN				S	Sg	01 25 36.9	-0.6
TVAN				i IAML		01 25 50.0	
	comp=N,197nm,0.5s						
TVAN				i IAML		01 25 53.0	
	comp=E,234nm,0.8s						
IMRD	Marand	0.92	75	Pg	Pn	01 25 28.2	+0.2
YOVA	Hakkari_Yksek	0.92	194	P	Pb	01 25 26.8	-0.1
YOVA				S	Sg	01 25 37.2	-0.6
VMUR	Van-Muradiye	0.93	303	P	Pg	01 25 25.8	-0.2
VMUR				S	Sg	01 25 38.6	+0.6
VMUR				i IAML		01 25 46.0	
	comp=N,141nm,0.3s						
VANB	Van	0.93	277	Pg	Pb	01 25 26.9	-0.1
VANB				Sg	Sg	01 25 38.9	+0.8
NAX	Nakhchivan	1.00	46	P	Pn	01 25 29.5	+0.4
NAX				S	Sn	01 25 45.5	+1.8
ERCV	ERCIS-VAN	1.10	299	Pg	Pb	01 25 29.8	-0.1
HAKT	HAKKARI	1.15	217	P	Pg	01 25 29.2	-1.0
HAKT				S	Sg	01 25 44.3	-0.7
HAKT				i IAML		01 25 52.0	
	comp=E,129nm,0.5s						
HAKT	HAKKARI	1.15	217	P	Pg	01 25 29.6	-0.5
HAKT				S	Sn	01 25 48.0	+0.4
SBZ	Shahbuz	1.19	40	P	Pn	01 25 32.9	+1.1
SBZ				S	Sn	01 25 53.5	+5.1
ORD	Ordubad	1.20	68	P	Pn	01 25 33.0	+1.2
ORD				S	Sn	01 25 51.0	+2.4
HYR	Heyderabad	1.25	10	P	Pn	01 25 33.4	+0.9
HYR				S	Sn	01 25 54.8	+4.9
DYDN	Diyadin	1.26	327	P	Pn	01 25 32.9	+0.1
DYDN				S	Sg	01 25 47.5	-1.2
DYDN				i IAML		01 25 55.0	
	comp=N,84nm,0.5s						
IAZR	Azarshahr	1.37	125	Pg	Pb	01 25 38.5	+4.0
IGDI	IGDIR	1.43	345	P	Pg	01 25 35.9	+0.3
IGDI				S	Sb	01 25 52.9	-1.3
IGDI				i IAML		01 26 00.0	
	comp=E,69nm,1.0s						
IGDI	IGDIR	1.43	345	P	Pg	01 25 36.8	+1.2
IGDI				S	Sn	01 25 59.7	+5.3
CUKT	Cukurca	1.45	212	P	Pg	01 25 38.3	+2.4
CUKT				S	Sg	01 25 58.7	+4.0
CUKT	Cukurca	1.45	212	Pn	Pg	01 25 38.3	+2.4
CUKT				Sn	Sg	01 25 58.6	+3.9
ADCV	BITLIS_Adilcev	1.48	283	P	Pn	01 25 35.5	-0.3
ADCV				S	Sg	01 25 56.5	+0.8
TASB	TASBURUN-IGDIR	1.52	350	Pn	Pg	01 25 38.9	+1.7
AGRB	Hanur-Agry	1.64	312	Pn	Pg	01 25 39.6	0.0
DORK	Agr/Tutak/Do	1.66	303	P	Pb	01 25 38.9	-0.5
DORK				S	Sn	01 25 56.2	-4.0
PERV	Siirt/Pervari-	1.69	252	P	Pn	01 25 38.3	-0.2
PERV				S	Sn	01 26 00.9	+0.2
PERV				i IAML		01 26 07.0	
	comp=N,119nm,0.4s						
PERV				i IAML		01 26 12.0	
	comp=E,137nm,0.5s						
KOTA	Agri, Merkez-K	1.69	322	P	Pg	01 25 40.0	-0.5
KOTA				S	Sn	01 25 58.7	-2.1
MLAZ	Malazgirt-MUS	1.71	293	Pn	Pg	01 25 40.6	-0.3
BLIS	Bitlis-Merkez	1.93	269	P	Pb	01 25 43.2	-0.8
MAHB	Mahabad	1.94	152	Pn	Pg	01 25 50.9	+5.7
SIRN	Sırnak	1.97	241	P	Pn	01 25 42.8	+0.4
SIRN				i IAML		01 26 19.0	
	comp=E,71nm,0.7s						
SIRN				i IAML		01 26 21.0	
	comp=N,53nm,1.0s						
GURO	Guroymak-BITLI	1.99	273	Pn	Pb	01 25 44.5	-0.5
DIGO	Kars	2.14	335	P	Pg	01 25 49.9	+0.8
DIGO				i IAML		01 26 42.0	
	comp=E,34nm,0.8s						
SRTM	Siirt_Merkez	2.14	258	P	Pb	01 25 46.9	-0.7
SRTM				S	Sn	01 26 12.8	+0.9
SRTM				i IAML		01 26 30.0	
	comp=N,103nm,0.8s						
SRTM				i IAML		01 26 31.0	
	comp=E,63nm,0.7s						
EAK	Akyaka	2.32	342	P	Pg	01 25 53.6	+1.0
EAK				S	Sg	01 26 22.8	+0.2
QRD	Qoradiz	2.35	65	P	Pg	01 25 51.7	-1.5
QRD				S	Sg	01 26 22.6	-1.2
MUSM	Mu-Merkez	2.41	277	P	Pb	01 25 51.5	-0.7
MUSM				S	Sn	01 26 18.8	+0.3
GDB	GEDABAY	2.41	22	P	Pb	01 25 51.6	-0.6
GDB				S	Sg	01 26 24.2	-1.5
IHSH	Hashtrud	2.44	118	Pn	Pg	01 25 55.7	+0.9
ISRB	Sarab	2.53	104	Pn	Pg	01 25 55.2	-1.4
GANJ	Ganja	2.55	32	P	Pb	01 25 53.7	-0.7
GANJ				S	Sg	01 26 33.8	+3.9
AGDM	Agdam	2.55	50	P	Pg	01 25 54.8	-2.2
GRMI	Germi	2.62	82	Pn	Pb	01 25 55.8	+0.1
BLQ	Beylaqan	2.63	61	P	Pg	01 25 57.3	-1.2
QZX	Qazax, Azerbai	2.64	13	P	Pg	01 25 57.7	-1.1
SVAN	Silvan-Diyarba	2.67	264	P	Pb	01 25 55.7	-0.8
SVAN				S	Sn	01 26 25.8	+0.9
SVAN	Silvan-Diyarba	2.67	264	Pn	Pn	01 25 54.3	+2.3
MIDY	Mardin/Midyat-	2.73	248	P	Pn	01 25 52.9	0.0
MIDY				S	Sn	01 26 23.8	-2.5
YRD	Yardimli	2.90	80	P	Pb	01 25 59.8	-0.9
YRD				S	Sb	01 26 32.9	-3.7
LRK	Lerik	2.96	86	P	Pb	01 25 59.6	-2.0
LRK				S	Sb	01 26 34.1	-4.1
DGRG	David-gareji	3.03	12	P	Pg	01 26 07.8	+1.7
GLBA	Clilabad	3.08	75	P	Pb	01 26 01.8	-1.6
GLBA				S	Sg	01 26 43.8	-3.2
VSHL	Vashlovani	3.08	27	P	Pb	01 26 03.5	0.0
VSHL				S	Sg	01 26 54.1	+7.0
BNGB	Bingl	3.08	281	Pn	Pn	01 25 59.3	+1.5
ASTR	Astara	3.31	87	P	Pb	01 26 04.7	-2.7
ASTR				S	Sg	01 26 54.5	+0.1
SEKA	Sheki	3.39	36	P	Pg	01 26 11.8	-1.2

SFS ***14*** *01:40:17.5, 36°.73N×9°.67W, h22^{km}, ML3.1/10, ML2.6/13, MLv2.4/13*

MDD ***14*** *01:40:18.2±1.0, 36°.73N×9°.65W, h35^{km}, mb_Lg3.0/9, Error ellipse: s-maj=7.7km s-min=5.6km az=39.0*

INMG ***14*** *01:40:18.3±1.3, 36°.73N×9°.63W, h19^{km}±5^{km}, ML2.0, Error ellipse: s-maj=5.1km s-min=4.3km az=41.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Cabo S.Vicente*

CNRM ***14*** *01:40:18.0, 36°.40N×9°.15W, h8^{km}, ML2.2*

IGIL ***14*** *01:40:18.2, 36°.73N×9°.64W, h19^{km}, ML1.8*

ISC 14 01:40:14.4±1.6**, 36°.60N**±0°.05×**9°.71W**±0°.07**, h76**^{km}±12^{km}**, n61, σ1^{s}62**/106**, 1C-1D, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	0.88	53	Pn	Pn	01 40 32.3	+0.5
PFVI				Sn	Sn	01 40 42.7	-2.1
PFVI	Vila Bisbo	0.88	53 ⇑	eP	Pn	01 40 32.3	+0.5
PFVI				eS	Sn	01 40 42.6	-2.2
PFVI				i IAML		01 40 43.5	
PFVI				i IAML		01 40 43.7	
PFVI				i IAML		01 40 44.0	
PFVI	Vila Bisbo	0.88	53	P	Pn	01 40 32.9	+1.1
PFVI	Vila Bisbo	0.88	53	S	Sn	01 40 44.1	-0.7
MORF	Marmelete	1.10	50	eP	Pn	01 40 35.3	+0.8
MORF				eS	Sn	01 40 47.8	-1.7
MORF				IAML		01 40 49.1	
	comp=E,41nm,0.1s						
MORF	Marmelete	1.10	50	eP	Pn	01 40 35.4	+0.8
MORF				eS	Sn	01 40 48.4	-1.1
MORF				i IAML		01 40 49.0	
MORF				i IAML		01 40 49.5	
MORF				i IAML		01 40 51.3	
PTEO	Sao Teotonio	1.23	39	eP	Pn	01 40 37.5	+1.4
PTEO				eS	Sn	01 40 51.4	-1.0
PTEO				i IAML		01 40 51.6	
PTEO				i IAML		01 40 51.9	
PTEO				i IAML		01 40 53.0	
PBDV	Barranco-do-Ve	1.56	65	Pn	Pn	01 40 42.0	+1.6
PBDV				Sn	Sn	01 40 59.7	-0.3
PBDV	Barranco-do-Ve	1.56	65 ⇓	eP	Pn	01 40 42.0	+1.6
PBDV				eS	Sn	01 40 59.9	-0.1
PBDV				i IAML		01 41 01.2	
PBDV				i IAML		01 41 01.2	
PBDV				i IAML		01 41 02.5	
PCVE	Castro Verde	1.69	52	Pn	Pn	01 40 43.6	+1.6
PCVE				Sn	Sn	01 41 02.6	-0.4
PCVE	Castro Verde	1.69	52	eP	Pn	01 40 43.7	+1.7
PCVE				eS	Sn	01 41 03.4	+0.5
PCVE				i IAML		01 41 04.1	
PCVE				i IAML		01 41 04.2	
PCVE				i IAML		01 41 04.8	
MESJ	Messejana	1.72	43	eP	Pn	01 40 43.6	+1.2
MESJ				eS	Sn	01 41 02.5	-1.1
MESJ				IAML		01 41 04.3	
	comp=E,5.4nm,0.1s						
MESJ	Messejana	1.72	43	eP	Pn	01 40 43.6	+1.2
MESJ				eS	Sn	01 41 03.1	-0.5
MESJ				i IAML		01 41 05.3	
MESJ				i IAML		01 41 05.8	
MESJ				i IAML		01 41 07.1	
PVAQ	Vaqueiros	1.78	63	eP	Pn	01 40 45.0	+1.7
PVAQ				eS	Sn	01 41 05.0	-0.3
PVAQ				i IAML		01 41 06.5	
PVAQ				i IAML		01 41 07.2	
PVAQ				i IAML		01 41 07.7	
EGRO	El Granado	2.01	62	Pn	Pn	01 40 48.2	+2.0
EGRO				Sn	Sn	01 41 11.2	+0.6
EGRO	El Granado	2.01	62	Pg	Pn	01 40 48.3	+2.0
EGRO				Sg	Sn	01 41 10.6	0.0
EGRO				i IVmb_Lg		01 41 12.2	
PBEJ	Beja	2.05	45	eS	Sn	01 41 11.0	-0.5
PBEJ				i IAML		01 41 11.9	
PBEJ				i IAML		01 41 12.0	
PBEJ				i IAML		01 41 12.7	
MOE	Montemor	2.20	29	eP	Pn	01 40 50.2	+1.3
MOE				eS	Sn	01 41 14.4	-0.9
MOE				i IAML		01 41 16.1	
MOE				i IAML		01 41 16.3	
MOE				i IAML		01 41 17.0	
EVO	Evora	2.35	34	Pn	Pn	01 40 51.9	+1.0
EVO				Sn	Sn	01 41 17.4	-1.5
EVO	Evora	2.35	34	eP	Pn	01 40 51.9	+1.0
EVO				eS	Sn	01 41 17.6	-1.3
EVO				i IAML		01 41 18.2	
EVO				i IAML		01 41 18.3	
EVO				i IAML		01 41 19.3	
PMAFR	Mafra	2.38	8	Pn	Pn	01 40 52.1	+0.9
PMAFR				Sn	Sn	01 41 18.6	-0.9
PMAFR	Mafra	2.38	8	eP	Pn	01 40 52.4	+1.2
PMAFR				eS	Sn	01 41 18.6	-0.9
PMAFR				i IAML		01 41 19.7	
PMAFR				i IAML		01 41 20.0	
PMAFR				i IAML		01 41 20.5	
PARRA	Arraiolos	2.58	30	eP	Pn	01 40 55.0	+1.0
PARRA				eS	Sn	01 41 23.2	-1.1
PARRA				i IAML		01 41 24.6	
PARRA				i IAML		01 41 24.6	
PARRA				i IAML		01 41 25.3	
PBAR	Barrancos	2.64	53	Pn	Pn	01 40 56.6	+1.7
PBAR				Sn	Sn	01 41 25.6	-0.3
PBAR	Barrancos	2.64	53	eP	Pn	01 40 57.1	+2.3
PBAR				eS	Sn	01 41 25.9	0.0
PBAR				i IAML		01 41 27.3	
PBAR				i IAML		01 41 28.1	
PBAR				i IAML		01 41 28.1	
EMIN	Mina Concepcio	2.69	63	Pn	Pn	01 40 57.4	+2.0
EMIN				Sn	Sn	01 41 26.6	-0.4
EMIN	Mina Concepcio	2.69	63	Pn	Pn	01 40 57.3	+1.8
EMIN				Sn	Sn	01 41 26.6	-0.4
PMTG	Montargil	2.73	25	eP	Pn	01 40 57.5	+1.5
PMTG				eS	Sn	01 41 26.7	-1.3
PMTG				i IAML		01 41 28.3	
PMTG				i IAML		01 41 28.5	
PMTG				i IAML		01 41 29.2	
PESTR	Estremoz	2.82	36	Sn	Sn	01 41 28.5	-1.7
PESTR	Estremoz	2.82	36	eP	Pn	01 40 58.1	+0.9
PESTR				eS	Sn	01 41 28.9	-1.3
PESTR				i IAML		01 41 30.9	
PSBE	So Bento	3.00	14	eP	Pn	01 41 01.2	+1.6
PSBE				eS	Sn	01 41 34.8	+0.2
PSBE				i IAML		01 41 35.9	
PSBE				i IAML		01 41 36.1	
EBAD	Badajoz	3.03	44	Pn	Pn	01 41 00.9	+0.8
EBAD				Sn	Sn	01 41 34.6	-0.8
EBAD	Badajoz	3.03	44	Pn	Pn	01 41 00.9	+0.8
EBAD				Sn	Sn	01 41 32.4	-3.0
EBAD				i IVmb_Lg		01 41 35.5	
ESPR	Espera	3.10	84	Pn	Pn	01 41 03.3	+2.2
ESPR				Sn	Sn	01 41 37.7	+0.7
ESPR	Espera	3.10	84	Pn	Pn	01 41 03.3	+2.2
ESPR				Sn	Sn	01 41 36.3	-0.8
ESPR				i IVmb_Lg		01 41 39.5	
PSARD	Sardoal	3.24	22	eP	Pn	01 41 04.3	+1.4
PSARD				eS	Sn	01 41 39.4	-1.0
PSARD				i IAML		01 41 40.6	
PSARD				i IAML		01 41 40.6	
PSARD				i IAML		01 41 40.8	
PMRV	Marv??o	3.37	32	eP	Pn	01 41 05.8	+1.2
PMRV				eS	Sn	01 41 41.7	-1.8
PMRV				i IAML		01 41 43.5	
PMRV				i IAML		01 41 43.8	
PCAS	Casmilo, Conde	3.58	15	eP	Pn	01 41 09.5	+2.0
PCAS				eS	Sn	01 41 48.2	-0.5
PCBR	Castelo Branco	3.68	28	eP	Pn	01 41 10.6	+1.7
PCBR				eS	Sn	01 41 50.0	-1.2
ECAB	El Cabril	3.72	65	Pn	Pn	01 41 11.3	+1.8
ECAB				Sn	Sn	01 41 51.4	-0.7
ECAB	El Cabril	3.72	65	Pn	Pn	01 41 11.3	+1.8
ECAB				Sn	Sn	01 41 49.7	-2.5
ECAB				i IVmb_Lg		01 42 06.6	
PVIS	Viseu	4.35	18	eP	Pn	01 41 19.9	+1.8
PVIS				eS	Sn	01 42 06.2	-1.4
EADA	Adamuz	4.37	67	Pn	Pn	01 41 20.6	+2.2
EADA	Adamuz	4.37	67	Pn	Pn	01 41 20.6	+2.2
EADA				Sn	Sn	01 42 06.2	-1.9
EADA				i IVmb_Lg		01 44 22.8	
EPLA	Plasencia	4.48	38	Pn	Pn	01 41 21.2	+1.3
EPLA				i IVmb_Lg		01 41 53.4	
EPLA				Sn	Sn	01 42 07.8	-3.0
LCRM	LCR	4.92	125	P	Pn	01 41 26.2	+0.2
LCRM	LCR	4.92	125	S	Sn	01 42 19.3	-2.4
POLO	Lamas de Olo	5.00	17	eP	Pn	01 41 28.7	+1.7
POLO				eS	Sn	01 42 22.2	-1.2
MVO	Moncorvo	5.02	24	eP	Pn	01 41 28.6	+1.4
PAB	San Pablo	5.15	54	Pn	Pn	01 41 30.3	+1.3
PAB				Sn	Sn	01 42 23.1	-4.1
PAB				i IVmb_Lg		01 43 33.1	
PSIM	Granatula de C	5.21	63	Pn	Pn	01 41 31.6	+1.8
PSIM				Sn	Sn	01 42 25.1	-3.6
ELOB	Lobios	5.42	13	Pn	Pn	01 41 33.7	+1.0
ELOB				Sn	Sn	01 42 30.3	-3.3
EQES	Quesada	5.43	75	Pn	Pn	01 41 34.7	+1.8
EQES				Sn	Sn	01 42 30.7	-3.4
EQES				i IVmb_Lg		01 44 36.2	
MD31	MD31	5.52	131	P	Pn	01 41 34.2	+0.1
MD31	MD31	5.52	131	S	Sn	01 42 33.9	-2.3
MDT	Midelt	5.64	130	P	Pn	01 41 35.9	0.0
MDT	Midelt	5.64	130	S	Sn	01 42 36.9	-2.4
PBRG	Braganca	5.69	23	eP	Pn	01 41 38.0	+1.7
TIO	Tiouine	6.01	160	P	Pn	01 41 42.9	+2.0
TIO	Tiouine	6.01	160	S	Sn	01 42 49.4	+1.1
OUZM	OUZ	6.18	156	P	Pn	01 41 45.6	+2.4

IDC 14 02:00:45.8±1.8**, 1°.05S×123°.88E, h0^{km}, mb3.2**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=183.5km s-min=28.4km az=62.0, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.38	152	P	P	02 05 36.0	+0.8
	0.3nm,0.4s,baz=330,slow=11,SNR=11						
	0.3nm,0.4s						
ASAR	Alice Springs	24.49	157	P	P	02 06 06.3	-0.7
	0.3nm,0.4s,baz=344,slow=10,SNR=7.6						
	0.3nm,0.4s						
MKAR	Makanchi Array	59.97	328	P	P	02 10 54.1	0.0
	0.1nm,0.3s,baz=126,slow=7.1,SNR=1.8						
	0.1nm,0.3s						

IDC ***14*** *02:19:04.7±0.9, 5°.02S×133°.96E, h0^{km}, mb3.9/8, mbtmp4.1/12, ML4.3/4, MS3.5/6, Error ellipse: s-maj=41.0km s-min=15.0km az=75.0*

NEIC ***14*** *02:19:05.5±2.6, 4°.86S±0°.08×133°.96E±0°.09, h10^{km}±1^{km}, mb4.5/7, Error ellipse: s-maj=18.8km s-min=8.3km az=45.0*

DJA ***14*** *02:19:07.3±1.2, 5°S±3°×13°4E±°, h12^{km}±10^{km}, M4.7/11, mB5.0/4, mb5.0/7, MLv4.6/11, Mw(mB)4.4/4*

ISC 14 02:19:07.6±0.6**, 4°.94S**±0°.05×**133°.95E**±0°.07**, h28**^{km}**, n60, σ1^{s}92**/55**, mb4.2**/13**, MS3.6**/3**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMPI	Kaimana, Papua	1.29	349	P	Pn	02 19 27.2	-2.6
KMPI				S	Sn	02 19 42.5	-3.7
FAKI	Fak Fak	2.63	320		Pn	02 19 45.6	-2.7
FAKI	Fak Fak	2.63	320	P	Pn	02 19 45.7	-2.5
FAKI	Fak Fak	2.63	320	P	Pn	02 19 45.2	-3.0
MWPI	Manokwari, Pap	3.98	1	P	Pn	02 20 05.9	-1.0
SAUI	Saumlaki	4.01	221		Pn	02 20 10.1	+2.8
SAUI	Saumlaki	4.01	221	P	Pn	02 20 10.1	+2.8
BNDI	Bandanaira	4.05	276	P	Pn	02 20 08.3	+0.5
BNDI	Bandanaira	4.05	276	S	Sn	02 20 56.4	+2.0
BNDI	Bandanaira	4.05	276	P	Pn	02 20 07.9	+0.1
SWI	Sorong	4.86	326	P	Pn	02 20 18.4	-0.5
MSAI	Masohi	5.25	287	P	Pn	02 20 23.9	-0.4

	0.6nm94nm,0.8s						
AAI	Ambon	5.87	282	P	Pn	02 20 32.0	-0.9
GENI	Genyem	6.63	70	P	Pn	02 20 35.5	-7.7
NLAI	Namlea	7.04	284	P	Pn	02 20 49.2	+0.3
	2µm103nm,0.8s						
DRS	Darwin Rock St	8.03	202	P	Pn	02 21 04.4	+1.9
MTN	Manton Dam	8.33	199		Pn	02 21 07.2	+0.5
SANI	Sanana	8.45	290	P	Pn	02 21 05.9	-2.4
SANI	Sanana	8.45	290	P	Pn	02 21 05.2	-3.1
SOEI	Soe	10.73	243		Pn	02 21 38.6	-1.0
SOEI	Soe	10.73	243	P	Pn	02 21 40.4	+0.8
SOEI	Soe	10.73	243	P	Pn	02 21 39.2	-0.4
BATI	Baumata	11.46	242	Pn	Pn	02 21 50.9	+1.3
	9.3nm,0.3s,baz=166,slow=6.1,SNR=2.6						
BATI				Sn	Sn	02 23 52.7	-4.0
	6.7nm,0.3s,baz=80,slow=20,SNR=4.3						
	28nm,0.5s						
KNRA	Kununurra	11.83	205		Pn	02 21 54.0	-0.5
COEN	Coen	12.77	135		Pn	02 22 05.2	-2.2
KAPI	Kappang	14.15	269	LR	LR	02 28 15.6	
	comp=Z,103nm,21.1s,baz=90,slow=39						
WRAB	Tennant Creek	14.91	179	P	Pn	02 22 37.9	+1.3
WRA	Warramunga Arr	14.92	179	Pn	Pn	02 22 34.5	-2.3
	0.7nm,0.3s,baz=358,slow=13,SNR=23						
WRA				Sn	Sn	02 25 11.6	-10
	0.8nm,0.3s,baz=360,slow=23,SNR=4.9						
WRA				Lg	Lg	02 26 54.1	
	0.3nm,0.3s,baz=1.2,slow=22,SNR=4.9						
	1.3nm,0.4s						
WRA	Warramunga Arr	14.92	179		Pn	02 22 35.5	-1.3
QIS	Mount Isa	16.47	161	P	P	02 22 59.5	+0.2
MTSU	Mount Surprise	16.57	143	P	P	02 22 59.7	-0.8
ASAR	Alice Springs	18.62	180	P	P	02 23 22.4	-0.7
	1.2nm,0.3s,baz=4.0,slow=11,SNR=88						
ASAR				S	Sn	02 26 41.2	-10
	1.9nm,0.7s,baz=2.1,slow=28,SNR=4.6						
ASAR				Lg	Lg	02 28 54.7	
	baz=2.9,slow=32						
ASAR				LR	LR	02 31 32.9	
	comp=Z,178nm,19.3s,baz=344,slow=40						
	14nm,0.7s						
ASAR	Alice Springs	18.62	180	P	P	02 23 22.6	-0.4
CTA	Charters Tower	19.24	143	P	P	02 23 30.2	+0.3
	0.3nm,0.3s,baz=326,slow=9.9,SNR=6.1						
CTA				Lg	Lg	02 29 14.0	
	0.3nm,0.3s,baz=22,slow=16,SNR=6.8						
CTA				LR	LR	02 31 35.1	
	comp=Z,128nm,22.0s,baz=0.5,slow=39						
	2.3nm,0.5s						
CTAO	Charters Tower	19.24	143	P	Pn	02 23 31.8	+0.8
MBWA	Marble Bar	21.22	219	P	P	02 23 52.4	+0.9
MBWA				IAmb	IAmb	02 23 53.6	
	comp=Z,9.2nm,0.8s						
MBWA	Marble Bar	21.22	219	P	P	02 23 52.9	+1.5
GUMO	Guam	21.36	30	LR	LR	02 33 06.2	
	comp=Z,46nm,19.6s,baz=72,slow=39						
PSA00	Pilbara Seismi	21.46	218		P	02 23 53.6	-0.3
PSA00				IAmb	IAmb	02 23 58.6	
	comp=Z,13nm,0.8s						
PSA00	Pilbara Seismi	21.46	218	P	P	02 23 54.9	+0.9
PSA00				IAmb	IAmb	02 24 07.7	
	comp=Z,5.2nm,0.8s						
PSA00	Pilbara Seismi	21.46	218	P	P	02 23 54.0	+0.1
QLP	Quilpie	23.66	157	P	P	02 24 18.6	+1.7
STKA	Stephens Creek	27.74	166	P	P	02 24 55.1	+1.2
	comp=Z,0.5nm,0.3s,baz=345,slow=4.2,SNR=3.6						
	comp=Z,0.5nm,0.3s						
STKA	Stephens Creek	27.74	166	IAmb	IAmb	02 25 29.9	
	comp=Z,19nm,1.1s						
BBOO	Buckleboo	27.80	176	P	P	02 24 53.5	-0.9
BBOO				IAmb	IAmb	02 25 10.7	
	comp=Z,11nm,1.2s						
MGBR	Mount Gambier	33.19	170	P	P	02 25 39.5	-2.5
PZH	PanZhiHua	44.15	317	P	P	02 27 14.8	+0.5
USRK	Ussuriysk Ar.	48.95	358	P	P	02 27 52.9	+1.5
	comp=Z,1.0nm,0.6s,baz=158,slow=4.9,SNR=2.9						
	comp=Z,1.0nm,0.6s						
HHC	Hu-ho-hao-te	49.97	338	*e*P	P	02 27 58.4	-1.0
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,100nm,4.5s						
URZ	Urewera	51.33	136	LR	LR	02 50 54.6	
	comp=Z,61nm,19.1s,baz=304,slow=37						
HILR	Hailar Array B	55.66	349	P	P	02 28 43.4	+2.2
	comp=Z,0.9nm,0.4s,baz=216,slow=7.1,SNR=2.1						
	comp=Z,0.9nm,0.4s						
SONM	Songino Array	57.86	338	P	P	02 28 59.4	+2.4
	comp=Z,0.7nm,0.9s,baz=146,slow=6.9,SNR=2.3						
	comp=Z,0.7nm,0.9s						
MKAR	Makanchi Array	68.75	325	P	P	02 30 09.4	+0.4
	comp=Z,2.1nm,0.8s,baz=117,slow=7.2,SNR=8.6						
	comp=Z,2.1nm,0.8s						
ZALV	Zalesovo Beam	71.56	332	P	P	02 30 29.6	+3.6
	comp=Z,0.6nm,0.5s,baz=114,slow=7.1,SNR=3.6						
	comp=Z,0.6nm,0.5s						
ZALV	Zalesovo Beam	71.56	332	P	P	02 30 29.3	+3.3
KURK	Kurchatov	72.89	327		P	02 30 37.8	+3.8
KURK				IAmb	IAmb	02 30 43.5	
	comp=Z,3.6nm,0.8s						
KURBB	Kurchatov Arra	72.89	327	P	P	02 30 37.3	+3.2
	comp=Z,2.1nm,0.8s,baz=129,slow=5.2,SNR=13						
	comp=Z,2.1nm,0.8s						
KKAR	Karatay Array	74.45	317	P	P	02 30 40.8	-2.6
BVAR	Borovoye Array	78.47	326	P	P	02 31 06.6	+0.6
	comp=Z,0.8nm,0.8s,baz=120,slow=7.5,SNR=11						
	comp=Z,0.8nm,0.8s						
SNAA	Sanae	98.55	193	LR	LR	03 16 44.9	
	comp=Z,47nm,19.2s,baz=130,slow=35						

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*IDC **14** 02:20:34.6±4.0, 23°.51N×122°.70E, h0^{km}, mb3.7/7, mbtmp3.7/8, ML3.9/1, MS3.8/23, Error ellipse: s-maj=78.9km s-min=38.8km az=170.0*

*TAP **14** 02:20:45.1, 24°.88N×122°.61E, h14^{km}, ML3.9, D*

*JMA **14** 02:20:45.0±0.2, 25°N±1°×122°.7E±0°.6, h28^{km}±2^{km}, MV3.2/10, NW OFF ISHIGAKIJIMA IS*

*NEIC **14** 02:20:45.0±2.1, 24°.90N±0°.05×122°.59E±0°.07, h10^{km}±1^{km}, mb4.4/7, Error ellipse: s-maj=13.6km s-min=3.2km az=50.0*

ISC 14 02:20:44.5±1.1, **24°.88N**±0°.03×**122°.67E**±0°.02, **h11**^{km}±8^{km}, **n120**, σ**0^{s}.92**/120, **mb3.9**/10, **MS3.8**/22, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.49	150	P	Pb	02 20 55.4	+0.2
JYNG				*e*S	Sb	02 21 03.3	+0.9
YOJ	Yonaguni jima	0.52	143		Pb	02 20 56.1	+0.4
YOJ	Yonaguni jima	0.52	143	P	Pg	02 20 55.6	+1.0
YOJ	Yonaguni jima	0.52	143	*i* P	Pb	02 20 55.9	+0.2
YOJ				*i* S	Sb	02 21 03.9	+0.7
YOJ	Yonaguni jima	0.52	143	P	Pb	02 20 55.8	+0.2
EOS2	EOS2	0.61	221	P	Pg	02 20 57.2	+0.9
EOS2				S	Sb	02 21 06.3	+0.8
TWB1	Santiao Chiao	0.63	282	*i* P	Pg	02 20 57.1	+0.3
TWB1				*i* S	Sg	02 21 05.3	+0.2
EOS3	EOS3	0.67	209	P	Pg	02 20 58.0	+0.5
EOS3				S	Sb	02 21 08.3	+0.9
EGS		0.67	267	*i* P	Pg	02 20 58.2	+0.7
EGS				S	Sg	02 21 06.4	+0.1
SXI1	Grass Mountain	0.75	287	P	Pg	02 20 59.7	+0.6
SXI1				*e*S	Sg	02 21 08.0	-1.0
NTC	Toucheng	0.76	268	P	Pg	02 20 59.6	+0.3
NTC				*i* S	Sg	02 21 09.1	-0.2
TIPB	Shuangxi	0.77	277	*e*P	Pg	02 20 59.9	+0.4
TIPB				*e*S	Sg	02 21 09.1	-0.6
TWC	Suao	0.79	250	*e*P	Pg	02 20 59.4	-0.4
TWC				*e*S	Sg	02 21 08.6	-1.6
ESAO	Su ao	0.81	248	*e*P	Pg	02 21 00.1	0.0
EOS4	EOS4	0.82	203	*e*P	Pb	02 21 01.2	+0.6
NWF	Wu-fen Shan	0.83	284	*e*P	Pn	02 21 02.1	-0.2
WFSB	Wu-fen Shan	0.83	284	*e*P	Pn	02 21 02.0	-0.1
TNOU	National Taiwa	0.86	289	*e*P	Pg	02 21 01.6	+0.5
NDS	Dongshan	0.90	255	*e*P	Pb	02 21 01.9	-0.3
NDS				S	Sg	02 21 12.9	-0.7
EWUT	Wuta	0.92	242	*e*P	Pb	02 21 02.1	-0.4
PCYT	Pengchaiyu	0.92	324	*i* P	Pb	02 21 02.8	+0.2
PCYT				*e*S	Sg	02 21 14.9	+0.5
TWE	Neicheng	0.93	260	P	Pb	02 21 01.8	-0.8
ENA	Nanau	0.96	242	*e*P	Pb	02 21 02.8	-0.3
FUSB	Fushanzhiwuyua	0.99	263	*e*P	Pb	02 21 03.6	-0.2
FUSB				*e*S	Sb	02 21 16.2	-0.7
TWA	Mucha	0.99	276	*e*P	Pb	02 21 02.7	-1.0
EAHA	Aohua	1.01	237	*e*P	Pb	02 21 03.6	-0.5
EAHA				*e*S	Sb	02 21 17.4	+0.1
ENTT	Nioudou	1.03	257	*e*P	Pb	02 21 04.0	-0.4
YM01	YM01	1.03	285	*e*P	Pb	02 21 04.3	-0.2
NHDH	Xindian Distri	1.04	275	*e*P	Pb	02 21 04.9	+0.3
TWY	Chenhua	1.05	292	P	Pb	02 21 05.0	+0.3
ZUZH	Zhuzihu	1.06	286	P	Pb	02 21 05.3	+0.3
ZUZH				S	Sb	02 21 18.8	0.0
NWLT	Wulai	1.07	265	*e*P	Pb	02 21 04.9	-0.1
TATO	Taipei	1.08	275		Pb	02 21 05.0	-0.2
TATO	Taipei	1.08	275	P	Pb	02 21 04.8	-0.4
ANP	Anpu	1.09	287	*e*P	Pg	02 21 06.7	+1.2
LATG	Datong	1.09	252	*e*P	Pb	02 21 05.2	-0.3
LATG				*e*S	Sb	02 21 17.8	-2.1
IRIF	Iriomote-Funau	1.11	119	*e*P	Pb	02 21 04.7	-0.9
TWS1	Kuangyinshan	1.16	281	*e*P	Pn	02 21 06.7	0.0
YHNB	Yeheng	1.20	260		Pn	02 21 07.3	0.0
YHNB	Yeheng	1.20	260	P	Pn	02 21 06.7	-0.6
YHNB	Yeheng	1.20	260	*e*P	Pn	02 21 07.1	-0.1
NACB	Ninganchiao	1.21	235		Pn	02 21 06.5	-0.8
NACB	Ninganchiao	1.21	235	P	Pn	02 21 06.6	-0.8
NACB	Ninganchiao	1.21	235	*e*P	Pn	02 21 06.7	-0.6
NACB				*e*S	Sb	02 21 22.8	-0.2
NSK	Sanguang	1.21	261	*e*P	Pn	02 21 07.5	0.0
NNSB	Datong	1.25	249	*e*P	Pn	02 21 08.1	0.0
NNS	Nan Shan	1.26	250	P	Pn	02 21 08.2	0.0
TWD	Chiawan	1.26	231	*e*P	Pn	02 21 08.6	+0.5
TWD				*e*S	Sb	02 21 23.6	-1.0
ETLH	Xiulin Townshi	1.27	239	*e*P	Pn	02 21 07.9	-0.4
HATJ	Hateruma jima	1.32	128	*e*P	Pn	02 21 08.4	-0.5
HATJ				*e*S	Sb	02 21 24.6	-1.6
KSHI	Guanxi Townshi	1.36	266	*e*P	Pn	02 21 10.2	+0.7
JKRS	Kuro-shima	1.38	117	P	Pn	02 21 09.1	-0.5
ETM	Tongmen	1.41	230	*e*P	Pn	02 21 10.9	+0.8
LXIB	Xiulin Townshi	1.43	234	*e*P	Pb	02 21 11.6	+0.3
NFF	Wufeng Townshi	1.43	260	*e*P	Pn	02 21 10.6	+0.1
JIJ	Ishigaki jima	1.43	111	P	Pn	02 21 09.8	-0.7
FUSS	Fushou	1.44	244	*e*P	Pb	02 21 12.0	+0.4
WHF	Hehuan Shan	1.47	241	*e*P	Pb	02 21 12.4	+0.2
SHUL	Shoufeng	1.48	223	*e*P	Pn	02 21 11.5	+0.4
TWT	Tachien	1.50	246	*e*P	Pb	02 21 13.1	+0.6
TDCB	Techi	1.51	246	*e*P	Pb	02 21 12.9	+0.2
LIOB	Emei	1.52	262	*e*P	Pn	02 21 12.6	+0.8
NSTT	Nanjuang	1.54	261	*e*P	Pb	02 21 13.1	0.0
OWD	Renai	1.64	236	*e*P	Pn	02 21 14.5	+1.0
WARBT	Fenglin Townsh	1.65	226	*e*P	Pn	02 21 13.6	+0.1
WUSB	Renai	1.67	238	*e*P	Pb	02 21 15.8	+0.4
WHP	Taichung City	1.68	250	*e*P	Pb	02 21 16.6	+1.0
VWDT	VWDT	1.79	232	*e*P	Pb	02 21 17.1	-0.2
VWDT				*e*S	Sn	02 21 36.9	-1.2
WCS	Beigang Elemen	1.80	243	*e*P	Pb	02 21 17.4	-0.1
SMLT	Sun Moon Lake	1.90	239	*e*P	Pb	02 21 19.6	+0.4
YULB	Yu-li	1.94	221	Pn	Pn	02 21 14.9	-2.5
YULB	Yu-li	1.94	221	P	Pn	02 21 19.2	+1.7
WHYT	Xinyi Township	2.03	235	*e*P	Pb	02 21 21.3	-0.2
STYH	Taoyuan	2.43	226	*e*P	Pn	02 21 25.8	+1.7
TPUB	Ta-pu	2.44	230		Pn	02 21 26.6	+2.4
TPUB	Ta-pu	2.44	230	P	Pn	02 21 26.7	+2.4
TPUB	Ta-pu	2.44	230	*e*P	Pn	02 21 26.8	+2.4
WTP	Ta-pu	2.48	230	*e*P	Pn	02 21 27.5	+2.5
TWGBT	Beinan	2.52	216	P	Pb	02 21 28.3	-1.4
TWG	Pinlang	2.52	216	Pn	Pn	02 21 25.2	-0.2
TWK	Hsinying	2.56	232	P	Pb	02 21 29.0	-1.6
KNMB	Chin-men Tao	3.92	265	Pn	Pn	02 21 43.6	-1.1
JNU	Nakatsue	10.91	39	LR	LR	02 28 09.9	
	comp=Z,75nm,18.3s,baz=224,slow=38						
KSRS	Korea Array	13.31	18	Pn	P	02 24 02.7	-0.5
	0.6nm,0.3s,baz=197,slow=11,SNR=14						
	0.9nm,0.6s						
INU	Inuyama	16.20	47	Pn	Pn	02 24 30.3	-1.8
INU				IAmb	IAmb	02 24 52.4	
	comp=Z,22nm,1.3s						
JMM	Marumori	20.13	46	P	P	02 25 18.4	-0.1
USRK	Ussuriysk Ar.	20.72	19	P	Pn	02 25 31.3	+4.0
	comp=Z,2.8nm,0.9s,baz=196,slow=10,SNR=2.3						
	comp=Z,2.8nm,0.9s						
CMAR	Chiang Mai Arr	22.94	258	LR	LR	02 34 37.6	
	comp=Z,36nm,21.5s,baz=80,slow=37						
TOLI2	Tolitoli	23.70	185	P	P	02 25 55.9	-0.6
TOLI2				IAmb	IAmb	02 26 06.4	
	comp=Z,10nm,1.1s						
ASAJ	Asahikawa	25.14	35	LR	LR	02 36 09.1	
	comp=Z,151nm,18.0s,baz=238,slow=36						
SONM	Songino Array	26.29	335	P	P	02 26 21.7	+1.6
	comp=Z,1.6nm,1.0s,baz=140,slow=8.8,SNR=6.2						
SONM				LR	LR	02 38 07.4	
	comp=Z,235nm,18.2s,baz=172,slow=38						
	comp=Z,1.6nm,1.0s						
SONM	Songino Array	26.29	335	P	P	02 26 20.6	+0.5
PSI	Prapat	31.71	230	LR	LR	02 39 58.8	
	comp=Z,60nm,19.0s,baz=68,slow=38						
YAK	Yakutsk	37.44	5	LR	LR	02 46 57.8	
	comp=Z,54nm,18.6s,baz=92,slow=41						
MKAR	Makanchi Array	38.80	315	P	P	02 28 10.1	+0.8
	comp=Z,0.7nm,0.8s,baz=101,slow=9.8,SNR=6.0						
MKAR				LR	LR	02 44 38.8	
	comp=Z,80nm,18.4s,baz=100,slow=36						
	comp=Z,0.7nm,0.8s						
MKAR	Makanchi Array	38.80	315	P	P	02 28 09.6	+0.3
MA2	Magadan	39.83	22	LR	LR	02 45 56.4	
	comp=Z,88nm,18.6s,baz=201,slow=37						
ZALV	Zalesovo Beam	40.41	326	P	P	02 28 23.4	+0.8
	comp=Z,0.9nm,0.5s,baz=117,slow=9.3,SNR=5.1						
ZALV				LR	LR	02 45 48.3	
	comp=Z,76nm,20.8s,baz=105,slow=36						
	comp=Z,0.9nm,0.5s						
ZALV	Zalesovo Beam	40.41	326	P	P	02 28 22.3	-0.3
KURBB	Kurchatov Arra	42.46	319	P	P	02 28 38.6	-0.9
	comp=Z,0.5nm,0.8s,baz=115,slow=8.5,SNR=8.7						
	comp=Z,0.5nm,0.8s						
SEY	Seymchan	42.87	19	LR	LR	02 47 03.6	
	comp=Z,57nm,18.1s,baz=294,slow=36						
TIXI	Tiksi	46.93	3	LR	LR	02 50 21.1	
	comp=Z,118nm,18.4s,baz=199,slow=37						
TIXI	Tiksi	46.93	3	P	P	02 29 15.1	+0.3
TIXI				IAmb	IAmb	02 29 24.6	
	comp=Z,5.0nm,1.0s						
BVAR	Borovoye Array	48.01	320	P	P	02 29 24.7	+1.3
	comp=Z,1.0nm,0.6s,baz=122,slow=11,SNR=8.7						
BVAR				LR	LR	02 51 33.2	
	comp=Z,92nm,18.4s,baz=53,slow=38						
	comp=Z,1.0nm,0.6s						
NRIK	Noril'sk	49.09	344	LR	LR	02 52 00.4	
	comp=Z,108nm,19.3s,baz=139,slow=37						
AB31	Akbulak array	53.93	314	P	P	02 30 09.7	+1.6
AB31				IAmb	IAmb	02 30 13.5	
	comp=Z,2.0nm,0.7s						
ABKAR	Akbulak array	53.93	314	P	P	02 30 08.2	+0.1
KIRV	Kirov	60.43	325	LR	LR	02 58 40.3	
	comp=Z,179nm,18.0s,baz=93,slow=37						
DZM	Mont Dzumac	63.12	134	LR	LR	02 52 26.6	
	comp=Z,54nm,21.9s,baz=160,slow=31						
D22K	Ayikyak River	65.12	23	P	P	02 31 26.4	+1.4
D22K				IAmb	IAmb	02 31 40.5	
	comp=Z,6.9nm,1.4s						
BMAR	Burnt Mountain	68.34	25	P	P	02 31 47.4	+1.7
SPITS	Spitsbergen Ar	69.09	348	LR	LR	03 05 54.2	
	comp=Z,70nm,18.3s,baz=328,slow=39						
FINES	FINESS Array B	71.53	330	LR	LR	03 06 47.6	
	comp=Z,138nm,19.4s,baz=32,slow=38						
HFS	Hagfors	77.62	331	LR	LR	03 10 42.0	
	comp=Z,252nm,19.8s,baz=73,slow=38						
RES	Resolute Bay	77.76	10	LR	LR	03 10 21.7	
	comp=Z,39nm,20.2s,baz=14,slow=38						
NOA	NORSAR Array B	78.24	332	LR	LR	03 12 00.4	
	comp=Z,68nm,19.1s,baz=265,slow=39						
YKA	Yellowknife Ar	81.80	23	P	P	02 33 01.4	-1.9
	comp=Z,0.4nm,0.8s,baz=306,slow=6.2,SNR=8.0						
	comp=Z,0.4nm,0.8s						
BORG	Borgarnes	86.40	345	LR	LR	03 15 20.0	
	comp=Z,51nm,19.8s,baz=6.1,slow=38						
EKA	Eskdalemuir Ar	87.73	332	LR	LR	03 16 14.8	
	comp=Z,211nm,21.7s,baz=2.5,slow=38						
FRB	Frobisher Bay	91.23	5	LR	LR	03 17 44.1	
	comp=Z,63nm,18.8s,baz=98,slow=37						

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*AZER **14** 02:26:26.6, 40°.50N×50°.88E, h62^{km}, ml2.7*

ISC 14 02:26:28.2±3.2, **40°.49N**±0°.06×**50°.8E**±0°.2, **h88**^{km}±12^{km}, **n31**, σ**1^{s}.11**/58, **Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GALA	Gala	0.52	261	P	Pn	02 26 42.8	-0.1
GALA				S	Sn	02 26 50.0	-3.7
NDR	Nardaran	0.65	278	P	Pn	02 26 43.7	-0.3
NDR				S	Sn	02 26 58.2	+2.5
GOBA	Gobu	0.84	264	P	Pn	02 26 46.3	+0.4
GOBA				S	Sn	02 26 59.4	+0.1
GBS	Qobustan	1.44	272	Pn	Pn	02 26 53.7	+0.6
GBS				Sn	Sn	02 27 12.3	+0.3
ATGJ	Altiaghaj	1.49	285	Pn	Pn	02 26 53.2	-0.5
ATGJ				Sn	Sn	02 27 13.2	+0.1
SIZA	Siyzn	1.58	292	Pn	Pn	02 26 55.1	+0.2
SIZA				Sn	Sn	02 27 17.2	+2.1
PQL	Pirkuli	1.73	281	Pn	Pn	02 26 56.6	-0.3
PQL				Sn	Sn	02 27 19.5	+0.8
QUBA	Quba, Azerbaij	1.97	297	Pn	Pn	02 26 59.8	-0.1
QUBA				Sn	Sn	02 27 26.4	+2.2
IML	Ismayilli	2.04	279	Pn	Pn	02 27 00.4	-0.4
IML				Sn	Sn	02 27 26.9	+1.2
XNQ	Khinaliq	2.15	289	Pn	Pn	02 27 01.2	-1.2
XNQ				Sn	Sn	02 27 28.1	-0.6
QSAR	Qusar	2.20	299	Pn	Pn	02 27 02.1	-0.8
QSAR				Sn	Sn	02 27 29.4	-0.1
GLBA	Clilabad	2.25	237	Pn	Pn	02 27 03.4	-0.2
GLBA				Sn	Sn	02 27 31.8	+1.1
QBL	Gabala	2.32	282	Pn	Pn	02 27 03.5	-1.0
QBL				Sn	Sn	02 27 32.1	-0.3
LKRN	Lenkeran, Azer	2.38	222	Pn	Pn	02 27 05.8	+0.4
LKRN				Sn	Sn	02 27 35.1	+1.3
ZRD	Zardab	2.41	266	Pn	Pn	02 27 05.7	0.0
ZRD				Sn	Sn	02 27 36.7	+2.2
ASTR	Astara	2.49	220	Pn	Pn	02 27 07.1	+0.3
ASTR				Sn	Sn	02 27 36.5	+0.1
YRD	Yardimli	2.54	233	Pn	Pn	02 27 07.0	-0.6
YRD				Sn	Sn	02 27 37.3	-0.7
BLQ	Beylaqan	2.62	254	Sn	Sn	02 27 39.6	0.0
LRK	Lerik	2.67	227	Pn	Pn	02 27 09.3	0.0
LRK				Sn	Sn	02 27 40.8	-0.1
BRDA	Brd	2.80	267	Sn	Sn	02 27 45.2	+1.4
SEKA	Sheki	2.85	286	Pn	Pn	02 27 10.9	-0.7
SEKA				Sn	Sn	02 27 44.5	-0.6
MNGR	Mingechevir, A	2.86	277	Pn	Pn	02 27 12.1	+0.3
AGDM	Agdam	2.87	264	Pn	Pn	02 27 10.6	-1.4
AGDM				Sn	Sn	02 27 45.9	+0.3
ZKTA	Zakatala	3.38	291	Pn	Pn	02 27 20.0	+1.2
ZKTA				Sn	Sn	02 27 59.5	+1.5
GANJ	Ganja	3.44	274	Pn	Pn	02 27 18.0	-1.5
GANJ				Sn	Sn	02 27 57.9	-1.4
VSHL	Vashlovani	3.44	284	P	Pn	02 27 19.6	0.0
VSHL				S	Sn	02 28 00.6	+1.3
GDB	GEDABAY	3.87	275	Pn	Pn	02 27 24.3	-1.3
GDB				Sn	Sn	02 28 08.6	-1.4
ORD	Ordubad	4.04	249	Pn	Pn	02 27 28.0	+0.2
ORD				Sn	Sn	02 28 14.4	+0.4
QZX	Qazax, Azerbai	4.18	280	Pn	Pn	02 27 28.3	-1.4
QZX				Sn	Sn	02 28 16.6	-0.8
SBZ	Shahbuz	4.20	257	Sn	Sn	02 28 18.3	+0.4
DGRG	David-gareji	4.24	285	P	Pn	02 27 30.0	-0.4
DGRG				S	Sn	02 28 18.9	+0.1

GCG 14 02:32:39.4±0.9, **16°.35N**×**90°.83W**, **h35**^{km}±999^{km}, **MD3.5**, **Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETF	Flores	1.08	58	*i* P	Pn	02 32 57.7	-0.3
PETF				*i* S	Sn	02 33 12.6	+0.7
CCIG	Comitan	1.26	267	*i* P	Pn	02 33 01.3	+0.6
CCIG				*i* S	Sn	02 33 17.6	+1.2
APG	El Apazote	1.38	165	*i* P	Pn	02 33 03.5	+1.1
APG				*i* S	Sn	02 33 20.5	+0.9
STG8	El Palmar, Qui	1.95	195	*i* P	Pn	02 33 08.1	-2.2
STG8				*i* S	Sn	02 33 30.9	-2.9

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*BUT **14** 02:34:48.9±1.6, 44°.77N±0°.02×114°.47W±0°.03, h8^{km}±8^{km}, Error ellipse: s-maj=3.6km s-min=3.3km az=161.0*

NEIC 14 02:34:48.3±1.7, **44°.75N**±0°.03×**114°.476W**±0°.005, **h10**^{km}±2^{km}, **ML3.2**/90, **ML3.5**/22(BUT), **Error ellipse: s-maj=4.3km s-min=3.1km az=358.0**, **Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLID	Pearl Lake	1.13	288		Pn	02 35 10.4	-0.1
PLID					Sb	02 35 25.6	+0.6
PLID				IAML		02 35 33.8	
	346nm,0.5s						
MCMT	McKenzie Canyo	1.16	86		Pb	02 35 10.4	-0.2
HLID	Hailey	1.19	178		Pb	02 35 11.0	-0.1
HLID					Sg	02 35 27.0	+0.3
DLMT	Dillon	1.47	65		Pb	02 35 15.6	-0.1
DLMT				IAML		02 35 37.3	
	392nm,0.4s						
DLMT				IAML		02 35 37.9	
	357nm,0.6s						
DLMT	Dillon	1.47	65		Sg	02 35 35.3	-0.1
MOMT	Monida	1.49	95		Pb	02 35 16.2	-0.1
MFID	Camas Ranch	1.66	217		Pb	02 35 18.6	-0.4
MFID	Camas Ranch	1.66	217		Sg	02 35 40.9	-0.6
HBMT	Mount Humbug	1.68	51		Pn	02 35 18.6	+0.6
VCMT	Victor	1.70	7		Pn	02 35 18.8	+0.7
LRM	Limekiln Ridge	1.78	53		Pn	02 35 20.0	+0.6
BGMT	Barton Gulch	1.79	74		Pn	02 35 20.1	+0.5
BPMT	Black Pine Rid	1.83	23		Pn	02 35 20.8	+0.7
BUT	Butte	1.84	46		Pn	02 35 20.7	+0.5
BUT					Sb	02 35 44.6	-0.9
TPMT	Tepee Creek	2.00	90		Pb	02 35 24.4	-0.5
BMO	Blue Mountains	2.02	274		Pn	02 35 23.2	+0.7
BMO				IAML		02 35 55.6	
	107nm,0.3s						
CMI	Centennial Mou	2.05	95		Pn	02 35 24.0	+0.9
MSO	Missoula	2.11	10		Pn	02 35 24.5	+0.7
MSO				IAML		02 35 57.1	
	172nm,0.3s						
MSO				IAML		02 36 02.1	
	123nm,0.8s						
QLMT	Earthquake Lak	2.17	87		Pn	02 35 25.5	+0.8
BOZ	Bozeman (W)	2.18	66		Pn	02 35 25.4	+0.6
ALMT	Alberton, Mont	2.28	1		Pn	02 35 27.6	+1.4
F10A	Beach Ranch, E	2.29	303		Pb	02 35 28.3	-1.5
YPDC	Denny Creek	2.31	90		Pn	02 35 28.3	+1.7
CHMT	Chamberlain Mo	2.32	21		Pn	02 35 27.3	+0.5
YHB	Horse Butte	2.34	89		Pn	02 35 28.4	+1.4
YHB				IAML		02 36 04.6	
	comp=E,93nm,0.6s						
YHB				IAML		02 36 06.5	
	comp=N,93nm,0.7s						
YHL	Hebgen Lake	2.35	86		Pn	02 35 28.6	+1.4
YHL				IAML		02 36 06.0	
	comp=E,104nm,0.8s						
YHL				IAML		02 36 06.2	
	comp=N,99nm,0.4s						
GCR	Grayling Creek	2.40	88		Pb	02 35 30.1	-1.6
YPWB	West Boundary	2.41	92		Pn	02 35 29.9	+1.8
MCID	Moose Creek	2.42	102		Pn	02 35 29.7	+1.5
YMC	Maple Creek	2.47	89		Pn	02 35 30.3	+1.5
PCMT	Pistol Creek	2.48	7		Pn	02 35 29.7	+0.8
BEMT	Mount Belmont	2.50	36		Pn	02 35 29.7	+0.5
YMR	Madison River	2.50	91		Pn	02 35 31.2	+1.9
YMR				IAML		02 36 11.5	
	comp=E,176nm,0.8s						
NDMT	Ninemile Divid	2.52	355		Pn	02 35 30.7	+1.1
YPM	Purple Mountai	2.57	91		Pn	02 35 32.1	+1.8
SLMT	Seeley Lake	2.58	15		Pg	02 35 37.2	-0.6
YHH	Holmes Hill	2.58	88		Pn	02 35 32.2	+1.7
YFT	Old Faithful	2.62	95		Pg	02 35 38.1	-0.4
YFT	Old Faithful	2.62	95	IAML		02 36 17.9	
	comp=E,56nm,0.7s						
SXM	Sixmile	2.69	58		Pn	02 35 32.6	+0.7
LYMT	Lyon Mountain	2.69	34		Pn	02 35 32.4	+0.5
YMV	Mammoth Vault	2.70	84		Pn	02 35 34.3	+2.3
YNR	Norris Junctio	2.71	89		Pb	02 35 38.5	+1.5
BZMT	Bozeman Pass	2.75	70		Pn	02 35 33.7	+1.0
MOOW	Moose Ponds	2.86	109		Pn	02 35 35.9	+1.7
LNOR	Lincton Mounta	2.91	294	IAML		02 36 27.8	
	comp=E,46nm,0.8s						
SNOW	Snow King Moun	2.98	114		Pb	02 35 39.5	-2.0
SNOW	Snow King Moun	2.98	114	IAML		02 36 24.3	
	comp=E,46nm,1.0s						
SNOW				IAML		02 36 32.8	
	comp=E,46nm,1.3s						
JTMT	Jette	3.00	3		Pn	02 35 37.1	+1.2
MSMT	Mission Creek	3.04	72		Pn	02 35 38.8	+2.1
YMP	Mirror Lake Pl	3.08	89	IAML		02 36 47.2	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=N,42nm,2.0s						
YPSB	Soda Butte	3.08	86		Pn	02 35 39.1	+1.9
BSMT	Bassoo Peak	3.10	356		Pn	02 35 39.0	+1.5
E09A	Wood Farm, Sta	3.12	306	IAML		02 36 31.5	
	comp=E,64nm,0.6s						
E09A				IAML		02 36 33.7	
	comp=N,74nm,0.7s						
YBMT	Yellow Bay	3.13	6		Pn	02 35 38.5	+0.8
YNE	Yellowstone No	3.19	84		Pn	02 35 40.4	+1.7
YNE	Yellowstone No	3.19	84	IAML		02 36 32.1	
	comp=N,78nm,0.4s						
YNE				IAML		02 36 39.7	
	comp=E,38nm,0.4s						
J08A	Circle Bar Ran	3.20	246		Pn	02 35 40.2	+1.5
J08A				IAML		02 36 36.2	
	comp=E,73nm,0.6s						
J08A				IAML		02 36 39.8	
	comp=N,64nm,0.7s						
HVU	Hansel Valley	3.22	157		Pb	02 35 43.8	-1.9
G08A	Pilot Rock	3.22	281		Pn	02 35 40.6	+1.6
YPK	Parker Peak, Y	3.25	89		Pn	02 35 41.8	+2.2
I07A	Izee	3.67	261		Pn	02 35 47.2	+2.1
I07A				IAML		02 36 49.4	
	comp=N,34nm,3.6s						
RLMT	Red Lodge	3.72	82		Pn	02 35 48.2	+2.2
RLMT				IAML		02 36 48.2	
	comp=N,56nm,0.4s						
RLMT				IAML		02 36 50.5	
	comp=N,58nm,0.5s						
LDM	Libby Dam	3.75	351		Pn	02 35 47.9	+1.7
HWUT	Hardware Ranch	3.80	145		Pb	02 35 53.6	-2.0
HWUT	Hardware Ranch	3.80	145	IAML		02 36 53.2	
	comp=N,22nm,0.8s						
HWUT				IAML		02 36 54.0	
	comp=N,23nm,1.0s						
WVOR	Wild Horse Val	3.81	234		Pn	02 35 49.7	+2.5
D08A	Wollman Farm,	3.86	308	IAML		02 36 54.4	
	comp=E,38nm,0.9s						
D08A				IAML		02 36 54.5	
	comp=N,50nm,0.8s						
HAWA	Hanford	3.91	297		Pn	02 35 50.0	+1.6
HAWA				IAML		02 37 00.1	
	comp=N,35nm,0.7s						
HAWA				IAML		02 37 00.5	
	comp=N,21nm,0.7s						
NEW	Newport	3.96	333		Pn	02 35 50.2	+1.1
NEW				IAML		02 36 56.7	
	comp=N,45nm,0.9s						
BGU	Big Grassy Mou	3.97	164		Pn	02 35 52.1	+2.7
BGU				IAML		02 36 56.2	
	comp=N,22nm,0.9s						
BGU				IAML		02 37 06.8	
	comp=E,27nm,1.1s						
PDAR	Pinedale Array	4.08	117		Pb	02 35 55.8	-4.5
TCUT	Toone Canyon	4.28	147		Pb	02 36 06.6	+2.9
TCUT				IAML		02 37 21.2	
	comp=E,44nm,1.0s						
G06A	Carlson Farm,	4.39	278	Pn	Pn	02 35 55.5	+0.3
G06A				IAML		02 37 14.3	
	comp=N,18nm,3.1s						
G06A				IAML		02 38 50.5	
	comp=E,16nm,4.8s						
EPH	Ephrata	4.41	308	IAML		02 37 10.6	
	comp=E,30nm,3.9s						
EPH				IAML		02 37 17.8	
	comp=N,40nm,1.7s						
EGMT	Eagleton	4.62	43		Pn	02 35 59.0	+0.7
DUG	Dugway, Tooele	4.72	164		Pn	02 36 01.6	+1.9
DUG				IAML		02 37 18.0	
	comp=N,13nm,3.2s						
DUG				IAML		02 37 33.9	
	comp=N,19nm,1.1s						
PINE	Pine Mountain	4.74	261	IAML		02 37 30.6	
	comp=N,22nm,4.3s						
PINE				IAML		02 38 13.6	
	comp=E,24nm,4.6s						
BSUT	Blindstream Ca	5.03	146	Pn	Pn	02 36 09.0	+4.9
BSUT				IAML		02 37 31.8	
	comp=N,13nm,3.3s						
BSUT				IAML		02 37 38.3	
	comp=E,12nm,4.6s						
O20A	White River Ci	6.52	133	Pn	Pn	02 36 29.4	+4.8

IDC 14 02:35:31.9±7.7, 6°.24S×128°.46E, h282km±85km, mb2.7/1, mbtmp3.7/3, Error ellipse: s-maj=85.2km s-min=24.7km az=46.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.17	230	P	Pn	02 37 04.6	+1.8
	60nm,0.3s,baz=85,slow=4.8,SNR=5.1						
BATI				S	S	02 38 14.4	-1.7
	24nm,0.4s,baz=53,slow=21,SNR=1.8						
WRA	Warramunga Arr	14.77	158	P	P	02 38 47.1	-0.4
	1.2nm,0.5s,baz=340,slow=11,SNR=13						
ASAR	Alice Springs	18.10	164	P	P	02 39 23.9	+0.2
	2.4nm,0.6s,baz=347,slow=12,SNR=40						
MKAR	Makanchi Array	66.76	327	P	P	02 45 53.1	-0.1
	0.1nm,0.4s,baz=118,slow=7.8,SNR=4.1						
	0.1nm,0.4s						

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*IDC **14** 02:46:22.6±3.5, 25°.04N×123°.04E, h0km, mb3.4/6, mbtmp3.4/6, Error ellipse: s-maj=263.6km s-min=22.1km az=62.0*

*JMA **14** 02:46:26.7±0.2, 25°N±1°×122°.7E±0°.6, h20km±2km, MV2.5/11, NW OFF ISHIGAKIJIMA IS*

ISC 14 02:46:25.7±1.1, 24°.8N±0°.1×122°.6E±0°.1, h16km, n12, σ0ˢ41/13, mb3.4/6, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.49	140	P	Pb	02 46 36.0	0.0
JYNG				*e*S	Sb	02 46 42.8	0.0
YOJ	Yonaguni jima	0.52	134	P	Pb	02 46 36.5	0.0
IRIF	Iriomote-Funau	1.14	115	*e*P	Pb	02 46 46.9	-0.1
JKRS	Kuro-shima	1.41	114	*e*P	Pn	02 46 50.7	0.0
JIJ	Ishigaki jima	1.48	108	*e*P	Pn	02 46 51.5	-0.2
JISG	Ishigakijimahi	1.57	98	*e*P	Pn	02 46 53.3	+0.3
MKAR	Makanchi Array	38.79	315	P	P	02 53 50.0	+0.4
	0.7nm,0.8s,baz=105,slow=7.6,SNR=5.6						
	0.7nm,0.8s						
ZALV	Zalesovo Beam	40.42	326	P	P	02 54 02.4	-0.7
	0.4nm,0.5s,baz=126,slow=7.4,SNR=2.5						
	0.4nm,0.5s						
KURBB	Kurchatov Arra	42.46	319	P	P	02 54 19.4	-0.4
	0.9nm,1.0s,baz=108,slow=7.9,SNR=4.3						
	0.9nm,1.0s						
WRA	Warramunga Arr	45.94	165	P	P	02 54 47.8	-0.2
	0.5nm,0.8s,baz=347,slow=8.1,SNR=3.0						
	0.5nm,0.8s						
BVAR	Borovoye Array	48.00	320	P	P	02 55 04.6	+0.8
	0.4nm,0.6s,baz=99,slow=9.1,SNR=2.3						
	0.4nm,0.6s						
ASAR	Alice Springs	49.44	166	P	P	02 55 15.5	+0.3
	0.1nm,0.4s,baz=346,slow=9.1,SNR=1.4						
	0.1nm,0.4s						

NOU 14 02:57:52.8, 16°.37S×167°.81E, h171km, MLv3.9/13, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.09	327	P	Pn	02 58 20.7	+0.4
SANVU	Saraoutou	1.09	327	S	Sn	02 58 42.6	+1.1
DVP	Devils Point	1.40	165	P	Pn	02 58 24.2	+1.2
DVP	Devils Point	1.40	165	S	Sn	02 58 46.8	+0.4
RTV	Rentapao	1.53	158	P	Pn	02 58 25.4	+1.1
MARNC	Mare, Loyalty	5.09	178	P	Pn	02 59 08.3	+0.6

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*JMA **14** 03:04:31.0±0.2, 30°.8N±0°.9×14°2E±°, h56km, MV4.1/19, NEAR TORISHIMA IS*

*IDC **14** 03:04:31.0±1.3, 30°.37N×140°.82E, h0km, mb3.7/5, mbtmp3.7/7, ML2.8/2, Error ellipse: s-maj=53.5km s-min=20.9km az=77.0*

ISC 14 03:04:32.3±1.1, 30°.69N±0°.07×141°.9E±0°.2, h35km, n18, σ1ˢ32/19, mb3.8/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	3.01	324	Pn	Pn	03 05 16.6	-0.9
	3.9nm,0.3s,baz=66,slow=15,SNR=1.2						
JHJ				Sn	Sn	03 05 50.1	-2.3
	21nm,0.3s,baz=85,slow=21,SNR=4.6						
	20nm,0.4s						
CBIJ	Chichi jima	3.59	176	*e*P	Pn	03 05 26.4	+0.9
CBIJ				*e*S	Sn	03 06 05.7	-1.0
JCJ	Chichijima	3.59	176	Pn	Pn	03 05 15.6	-10
	4.8nm,0.3s,baz=293,slow=23,SNR=1.7						
JCJ				Sn	Sn	03 05 55.0	-12
	16nm,0.3s,baz=34,slow=21,SNR=5.4						
BSO1	Boso 1	4.03	349	*e*P	Pn	03 05 31.3	+0.3
BSO1				*e*S	Sn	03 06 17.1	+0.5
BSO3	Boso 3	4.26	345	*e*P	Pn	03 05 34.9	+0.4
BSO4	Boso 4	4.48	344	*e*S	Sn	03 06 28.8	+0.3
JRY	Ryogami san	5.87	336	*e*P	Pn	03 05 58.1	+1.3
JRY				*e*S	Sn	03 07 04.4	+1.4
JHO	Hitachi	6.01	350	*e*P	Pn	03 05 58.3	-0.4
JHO				*e*S	Sn	03 07 02.9	-3.4
JAG	Ashikaga	6.07	341	*e*P	Pn	03 05 59.7	+0.1
JAG				*e*S	Sn	03 07 06.6	-1.2
MJAR	Matsushiro Arr	6.59	333	Pn	Pn	03 06 08.1	+1.3
	0.2nm,0.3s,baz=156,slow=12,SNR=11						
	1.8nm,0.4s						
H11S3	WAKE ISLAND Hy	25.55	113	T	T	03 36 41.0	
	baz=304						
H11S1	WAKE ISLAND Hy	25.55	113	T	T	03 37 00.9	
	baz=304						
H11S2	WAKE ISLAND Hy	25.57	113	T	T	03 37 00.1	
	baz=304						
MKAR	Makanchi Array	48.04	307	P	P	03 13 08.6	+0.5
	0.3nm,0.4s,baz=90,slow=9.6,SNR=1.9						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	50.39	312	P	P	03 13 26.2	+0.3
	0.4nm,0.5s,baz=89,slow=6.8,SNR=4.5						
	0.4nm,0.5s						
WRA	Warramunga Arr	50.86	189	P	P	03 13 30.1	+0.3
	1.3nm,0.7s,baz=6.3,slow=7.5,SNR=8.9						
	1.3nm,0.7s						
ASAR	Alice Springs	54.58	189	P	P	03 13 57.6	+0.3
	0.6nm,0.6s,baz=349,slow=7.5,SNR=5.0						
	0.6nm,0.6s						
TXAR	Lajitas Array	93.66	53	P	P	03 17 54.4	+8.8
	0.3nm,0.8s,baz=286,slow=5.0,SNR=3.6						
	0.3nm,0.8s						

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*TAP **14** 03:04:54.0, 24°.91N×122°.63E, h33km, ML3.6, D*

*JMA **14** 03:04:54.0±0.1, 25°N±1°×122°.7E±0°.5, h34km±2km, MV3.1/12, NW OFF ISHIGAKIJIMA IS*

*IDC **14** 03:05:14.4±5.4, 24°.79N×122°.30E, h215km±55km, mb3.1/8, mbtmp3.7/9, MS3.4/4, Error ellipse: s-maj=38.9km s-min=15.1km az=66.0*

ISC 14 03:04:54.5±1.0, 24°.87N±0°.03×122°.64E±0°.03, h32km±7km, n105, σ1ˢ30/137, mb3.5/8, MS3.4/4, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.50	146	*e*P	Pb	03 05 04.2	-0.9
JYNG				*e*S	Sb	03 05 11.2	-1.1
YOJ	Yonaguni jima	0.53	140	P	Pn	03 05 04.9	-0.8
YOJ	Yonaguni jima	0.53	140	P	Pn	03 05 05.0	-0.8
YOJ				S	Sn	03 05 13.2	-0.4
YOJ	Yonaguni jima	0.53	140	*e*P	Pn	03 05 04.4	-1.4
YOJ				*e*S	Sb	03 05 12.1	-0.9
EOS2	EOS2	0.58	219	*e*P	Pb	03 05 06.1	-0.2
EOS2				*e*S	Sb	03 05 16.0	+1.6
TWB1	Santiao Chiao	0.61	283	P	Pn	03 05 05.6	-1.2
TWB1				*e*S	Sn	03 05 13.7	-1.8
EGS		0.64	268	*e*P	Pb	03 05 07.1	-0.2
EGS				*e*S	Sb	03 05 15.8	-0.3
EOS3	EOS3	0.65	207	P	Pb	03 05 07.3	-0.1
EOS3				*e*S	Sb	03 05 18.2	+2.0
SXI1	Grass Mountain	0.73	288	P	Pn	03 05 07.4	-1.2
SXI1				*e*S	Sb	03 05 18.4	-0.1
NTC	Toucheng	0.74	269	*e*P	Pb	03 05 08.2	-0.7
NTC				*e*S	Sn	03 05 17.4	-1.3
TIPB	Shuangxi	0.75	278	*e*P	Pb	03 05 08.4	-0.6
TWC	Suao	0.77	250	*e*P	Pn	03 05 08.0	-1.0
TWC				*e*S	Sn	03 05 17.9	-1.6
ESAO	Su ao	0.78	248	*e*P	Pb	03 05 09.2	-0.4
ESAO				*e*S	Sn	03 05 18.9	-0.9
EOS4	EOS4	0.80	201	*e*P	Pb	03 05 09.8	0.0
NWF	Wu-fen Shan	0.80	284	*e*P	Pb	03 05 09.7	-0.4
NWF				*e*S	Sn	03 05 18.9	-1.6
WFSB	Wu-fen Shan	0.80	284	*e*P	Pb	03 05 10.0	0.0
ILA	Ilan	0.82	263	*e*P	Pn	03 05 09.3	-0.4
TNOU	National Taiwa	0.83	290	P	Pb	03 05 10.5	0.0
TNOU				*e*S	Sn	03 05 18.6	-2.5
NDS	Dongshan	0.87	254	*e*P	Pn	03 05 09.9	-0.6
EWUT	Wuta	0.89	242	*e*P	Pn	03 05 10.3	-0.4
TWE	Neicheng	0.90	261	*e*P	Pn	03 05 10.3	-0.5
TWE				*e*S	Sn	03 05 20.4	-2.2
PCYT	Pengchaiyu	0.91	326	*e*P	Pn	03 05 10.8	-0.2
ENA	Nanau	0.93	242	*e*P	Pn	03 05 11.0	-0.3
ENA				*e*S	Sn	03 05 22.5	-1.0
FUSB	Fushanzhiwuyua	0.96	264	*e*P	Pb	03 05 12.3	-0.4
FUSB				*e*S	Sn	03 05 23.5	-0.9
TWA	Mucha	0.96	277	*e*S	Sn	03 05 23.6	-0.7
EAHA	Aohua	0.98	237	*e*P	Pb	03 05 12.2	-0.8
EAHA				*e*S	Sb	03 05 25.1	-0.5
ENTT	Nioudou	1.00	257	*e*P	Pb	03 05 13.1	-0.3
YM08	YM08	1.00	288	*e*P	Pb	03 05 13.4	0.0
YM08				*e*S	Sn	03 05 24.2	-1.1
YM01	YM01	1.01	286	*e*P	Pb	03 05 12.7	-0.7
ZUZH	Zhuzihu	1.03	286	*e*P	Pb	03 05 14.0	+0.1
NWLT	Wulai	1.04	265	*e*P	Pb	03 05 13.7	-0.3
TATO	Taipei	1.05	276	P	Pb	03 05 14.4	+0.3
LATG	Datong	1.07	252	*e*P	Pb	03 05 13.4	-1.0
IRIF	Iriomote-Funau	1.13	118	*e*P	Pn	03 05 13.3	-0.7
YHNB	Yeheng	1.17	260	P	Pb	03 05 15.6	-0.5
YHNB	Yeheng	1.17	260	*e*P	Pb	03 05 14.9	-1.2
YHNB				*e*S	Sn	03 05 28.8	-0.6
ETL	Fush Village	1.17	233	*e*P	Pb	03 05 15.5	-0.6
ETL				*e*S	Sb	03 05 30.9	0.0
NACB	Ninganchiao	1.18	234	P	Pb	03 05 15.1	-1.2
NACB	Ninganchiao	1.18	234	*e*P	Pb	03 05 14.9	-1.3
NSK	Sanguang	1.18	261	*e*P	Pb	03 05 15.8	-0.6
NNSB	Datong	1.23	249	*e*P	Pb	03 05 16.5	-0.7
NNSB				*e*S	Sn	03 05 29.9	-1.0
NNS	Nan Shan	1.23	250	*e*P	Pb	03 05 17.0	-0.3
TWD	Chiawan	1.24	231	*e*P	Pb	03 05 17.0	-0.2
ETLH	Xiulin Townshi	1.25	238	*e*P	Pb	03 05 16.7	-0.7
NCUH	Zhongli	1.32	274	*e*P	Pb	03 05 17.7	-1.0
KSHI	Guanxi Townshi	1.33	266	*e*P	Pb	03 05 17.7	-1.2
KSHI				*e*S	Sb	03 05 34.2	-1.4
HATJ	Hateruma jima	1.34	127	*e*P	Pn	03 05 17.1	+0.2
ETM	Tongmen	1.38	229	*e*P	Pb	03 05 18.9	-0.8
JKRS	Kuro-shima	1.40	117	*e*P	Pn	03 05 17.5	-0.2
LXIB	Xiulin Townshi	1.40	233	*e*P	Pb	03 05 19.2	-0.9
LXIB				*e*S	Sb	03 05 37.2	-0.6
NFF	Wufeng Townshi	1.40	260	*e*P	Pb	03 05 19.3	-0.8
NFF				*e*S	Sn	03 05 35.2	-0.1
FUSS	Fushou	1.42	244	*e*P	Pb	03 05 21.0	+0.6
WHF	Hehuan Shan	1.45	240	*e*P	Pb	03 05 20.5	-0.6
WHF				*e*S	Sb	03 05 37.7	-1.6
JIJ	Ishigaki jima	1.46	110	*e*P	Pn	03 05 18.4	-0.2
SHUL	Shoufeng	1.46	222	*e*P	Pb	03 05 20.0	-1.0
TWT	Tachien	1.47	245	*e*P	Pb	03 05 21.4	+0.2
TDCB	Techi	1.48	246	*e*P	Pb	03 05 21.1	-0.5
LIOB	Emei	1.49	262	*e*P	Pb	03 05 20.5	-1.1
LIOB				*e*S	Sn	03 05 37.0	-0.5
NSTT	Nanjuang	1.51	261	*e*P	Pb	03 05 20.5	-1.4
HSN	Hsinchu	1.52	268	*e*P	Pn	03 05 19.7	+0.3
ESL	Shilin	1.52	226	*e*P	Pb	03 05 20.6	-1.5
TEGC	Jichi Village	1.53	221	*e*P	Pb	03 05 20.8	-1.5
OWD	Renai	1.62	236	*e*P	Pb	03 05 22.6	-1.2
WARBT	Fenglin Townsh	1.62	225	*e*P	Pn	03 05 21.6	+0.8
WUSB	Renai	1.64	238	*e*P	Pb	03 05 23.3	-0.9
WUSB				*e*S	Sb	03 05 42.3	-2.2
WHP	Taichung City	1.65	249	*e*P	Pb	03 05 24.7	+0.3
VWDT	VWDT	1.76	231	*e*P	Pb	03 05 24.6	-1.6
VWDT				S	Sn	03 05 44.3	+0.3
HGSD	Ruisui	1.77	219	*e*P	Pn	03 05 23.3	+0.5
HGSD				*e*S	Sn	03 05 44.6	+0.4
WCS	Beigang Elemen	1.77	243	*e*P	Pb	03 05 25.8	-0.5
SMLT	Sun Moon Lake	1.87	239	*e*P	Pb	03 05 26.3	-1.7
TYC	Yuchr	1.89	240	*e*P	Pb	03 05 27.3	-1.0
YULB	Yu-li	1.92	220	P	Pn	03 05 25.2	+0.3
YULB	Yu-li	1.92	220	*e*P	Pn	03 05 25.2	+0.3
WHYT	Xinyi Township	2.01	235	*e*P	Pb	03 05 28.9	-1.5
WCH1	Changhua City	2.07	248	*e*P	Pn	03 05 28.2	+1.3
YUS	Yu-Shan	2.07	229	*e*S	Sn	03 05 51.8	-0.5
FULB	Fuli	2.07	217	*e*P	Pn	03 05 28.0	+1.0
FULB				*e*S	Sn	03 05 52.5	+0.7
ALS	Alishan	2.15	231	*e*P	Pb	03 05 31.2	-1.8
EHD	Haiduan	2.16	218	*e*P	Pn	03 05 28.5	+0.3
EHD				*e*S	Sn	03 05 53.6	-0.3
CHN5	Tsauling	2.19	235	*e*P	Pb	03 05 30.8	-2.7
CHN5				*e*S	Sn	03 05 56.2	+1.3
ECS	Chishang	2.19	217	*e*P	Pb	03 05 30.8	-2.7
ELDTW	Lidau	2.24	222	*e*S	Sn	03 05 54.6	-1.4
WDLH	Douliu	2.25	239	*e*P	Pb	03 05 32.3	-2.2
STYH	Taoyuan	2.40	226	*e*P	Pb	03 05 33.9	-3.2
STYH				*e*S	Sn	03 06 01.6	+1.8
TPUB	Ta-pu	2.41	230	P	Pb	03 05 34.9	-2.3
TPUB	Ta-pu	2.41	230	*e*P	Pn	03 05 33.5	+1.8
TPUB				*e*S	Sn	03 06 01.1	+0.9
WTP	Ta-pu	2.46	229	*e*P	Pb	03 05 35.2	-2.8
WTP				*e*S	Sn	03 06 03.8	+2.4
TWGBT	Beinan	2.50	215	P	Pn	03 05 34.5	+1.7
TWGBT	Beinan	2.50	215	*e*P	Pn	03 05 32.7	-0.1
TWGBT				*e*S	Sn	03 06 00.3	-1.9
TWK	Hsinying	2.53	231	*e*P	Pb	03 05 36.6	-2.7
WSL	Shuilin Townsh	2.58	239	*e*P	Pb	03 05 36.9	-3.1
MASBT	Mashibuluo	2.91	220	*e*P	Pb	03 05 41.6	-4.0
XPSS	Dashiqiu	3.01	313	*e*P	Pn	03 05 40.2	+0.3
KSRS	Korea Array	13.33	19	P	P	03 08 16.2	+5.6
	3.4nm,0.6s,baz=198,slow=11,SNR=11						
ASAJ	Asahikawa	25.16	35	LR	LR	03 21 10.4	
	comp=Z,42nm,18.6s,baz=189,slow=38						
SONM	Songino Array	26.28	335	P	P	03 10 29.7	+2.7
	0.7nm,0.7s,baz=151,slow=10,SNR=5.2						
	0.7nm,0.7s						
MKAR	Makanchi Array	38.78	315	P	P	03 12 17.4	+1.4
	0.3nm,0.3s,baz=107,slow=7.7,SNR=5.8						
	0.3nm,0.3s						
MA2	Magadan	39.85	22	LR	LR	03 31 37.2	
	comp=Z,64nm,18.4s,baz=148,slow=40						
ZALV	Zalesovo Beam	40.40	326	P	P	03 12 31.1	+1.7
	0.4nm,0.3s,baz=123,slow=8.2,SNR=3.8						
ZALV				LR	LR	03 31 39.1	
	comp=Z,47nm,19.1s,baz=90,slow=39						
	0.4nm,0.3s						
KURBB	Kurchatov Arra	42.45	319	P	P	03 12 46.8	+0.6
	0.3nm,0.3s,baz=109,slow=7.8,SNR=4.5						
	0.3nm,0.3s						
WRA	Warramunga Arr	45.98	165	P	P	03 13 16.4	+1.6
	0.9nm,0.8s,baz=346,slow=7.7,SNR=5.8						
	0.9nm,0.8s						
TIXI	Tiksi	46.94	3	LR	LR	03 37 23.5	
	comp=Z,67nm,18.5s,baz=194,slow=41						
ASAR	Alice Springs	49.47	166	P	P	03 13 42.6	+0.8
	0.3nm,0.8s,baz=348,slow=8.5,SNR=4.1						
	0.3nm,0.8s						
FINES	FINESS Array B	71.52	330	P	P	03 16 09.2	-2.6
	3.7nm,1.1s,baz=76,slow=4.7,SNR=5.9						
	3.7nm,1.1s						
YKA	Yellowknife Ar	81.82	23	P	P	03 17 11.0	+1.0
	0.4nm,0.7s,baz=310,slow=5.8,SNR=6.8						
	0.4nm,0.7s						

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*TAP **14** 03:06:22.6, 24°.88N×122°.66E, h35km, ML3.5, D*

*JMA **14** 03:06:22.7±0.4, 25°N±2°×12°3E±°, h1km±4km, MV3.1/9, NW OFF ISHIGAKIJIMA IS*

ISC 14 03:06:23.5±1.0, 24°.85N±0°.03×122°.58E±0°.03, h20km±12km, n80, σ0ˢ78/102, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.51	140	*e*P	Pb	03 06 33.2	-0.6
JYNG				*e*S	Sb	03 06 40.5	-0.3
EOS2	EOS2	0.53	217	P	Pb	03 06 34.8	+0.8
EOS2				S	Sn	03 06 43.8	-0.2
YOJ	Yonaguni jima	0.55	134	P	Pb	03 06 33.4	-0.9
YOJ				S	Sb	03 06 41.1	-0.6
YOJ	Yonaguni jima	0.55	134	P	Pb	03 06 33.7	-0.7
YOJ				*e*S	Sb	03 06 41.0	-0.8
TWB1	Santiao Chiao	0.56	287	*e*P	Pb	03 06 34.4	-0.3
TWB1				*e*S	Sn	03 06 45.2	+0.1
EGS		0.59	270	P	Pb	03 06 35.4	+0.3
EOS3	EOS3	0.61	203	P	Pn	03 06 36.1	-0.7
NTC	Toucheng	0.68	271	P	Pb	03 06 37.2	+0.6
NTC				*e*S	Sn	03 06 47.5	-0.5
SXI1	Grass Mountain	0.69	291	*e*P	Pb	03 06 36.9	+0.1
TIPB	Shuangxi	0.70	281	*e*P	Pb	03 06 37.2	+0.3
TWC	Suao	0.71	251	*e*P	Pb	03 06 37.1	0.0
ESAO	Su ao	0.72	248	*e*P	Pn	03 06 38.4	-0.1
EOS4	EOS4	0.76	198	*e*P	Pn	03 06 38.5	-0.2
NWF	Wu-fen Shan	0.76	287	*e*P	Pn	03 06 38.8	-0.3
WFSB	Wu-fen Shan	0.76	287	*e*P	Pn	03 06 39.9	+0.8
ILA	Ilan	0.76	264	*e*P	Pn	03 06 38.8	-0.3
ILA				*e*S	Sn	03 06 49.4	-0.5
TNOU	National Taiwa	0.79	293	*e*P	Pn	03 06 39.1	-0.4
NDS	Dongshan	0.81	255	*e*P	Pn	03 06 39.4	-0.4
EWUT	Wuta	0.83	242	*e*P	Pb	03 06 39.1	-0.1
EWUT				*e*S	Sn	03 06 51.4	-0.3
TWE	Neicheng	0.84	262	*e*P	Pn	03 06 39.8	-0.4
ENA	Nanau	0.87	242	P	Pb	03 06 39.8	-0.1
FUSB	Fushanzhiwuyua	0.91	265	*e*P	Pn	03 06 41.3	+0.1
PCYT	Pengchaiyu	0.91	330	*e*P	Pb	03 06 39.7	-0.8
TWA	Mucha	0.92	279	P	Pb	03 06 40.6	0.0
TWA				*e*S	Sn	03 06 53.2	-0.6
EAHA	Aohua	0.92	236	*e*P	Pb	03 06 40.7	-0.1
ENTT	Nioudou	0.94	258	*e*P	Pn	03 06 41.8	+0.2
YM08	YM08	0.96	291	*e*P	Pn	03 06 42.3	+0.4
YM01	YM01	0.96	288	*e*P	Pn	03 06 43.0	+1.1
NHDH	Xindian Distri	0.97	277	P	Pb	03 06 41.1	-0.4
NWLT	Wulai	0.98	266	*e*P	Pn	03 06 42.8	+0.7
NWLT				S	Sn	03 06 56.3	+0.8
TWY	Chenhua	0.99	296	*e*P	Pb	03 06 41.3	-0.6
TWY				*e*S	Sb	03 06 54.9	+0.5
ZUZH	Zhuzihu	0.99	289	*e*S	Sb	03 06 54.6	0.0
TATO	Taipei	1.00	278	P	Pb	03 06 40.7	-1.4
LATG	Datong	1.01	252	*e*P	Pn	03 06 42.8	+0.3
ANP	Anpu	1.02	290	*e*P	Pb	03 06 41.9	-0.6
NTST	Danshui	1.07	287	*e*P	Pn	03 06 42.6	-0.8
NTST				*e*S	Sb	03 06 57.1	+0.1
ETL	Fush Village	1.11	232	*e*P	Pb	03 06 44.8	+0.9
YHNB	Yeheng	1.11	261	*e*P	Pb	03 06 44.6	+0.6
YHNB				*e*S	Sb	03 06 57.4	-0.7
NACB	Ninganchiao	1.12	234	*e*P	Pn	03 06 43.9	-0.1
NSK	Sanguang	1.12	262	*e*P	Pb	03 06 44.8	+0.5
IRIF	Iriomote-Funau	1.16	116	*e*P	Pb	03 06 45.5	+0.7
NNSB	Datong	1.17	249	*e*P	Pb	03 06 45.4	+0.4
NNS	Nan Shan	1.17	250	*e*P	Pb	03 06 46.1	+1.0
TWD	Chiawan	1.18	230	*e*P	Pb	03 06 46.1	+1.0
TWD				*e*S	Sn	03 07 00.8	+0.6
ETLH	Xiulin Townshi	1.19	238	*e*P	Pb	03 06 45.5	+0.2
HWA	Hwalien	1.24	226	*e*P	Pn	03 06 44.8	-0.8
HWA				S	Sn	03 07 01.8	0.0
NCU	National Centr	1.27	276	*e*P	Pn	03 06 44.5	-1.6
NCUH	Zhongli	1.27	276	P	Pn	03 06 45.2	-0.9
NCUH				S	Sn	03 07 02.2	-0.5
KSHI	Guanxi Townshi	1.28	267	*e*P	Pb	03 06 48.3	+1.4
ETM	Tongmen	1.32	229	*e*P	Pb	03 06 47.9	+0.3
LXIB	Xiulin Townshi	1.34	233	*e*P	Pb	03 06 49.4	+1.3
NFF	Wufeng Townshi	1.35	261	*e*P	Pb	03 06 49.7	+1.6
NFF				*e*S	Sb	03 07 05.3	+0.4
FUSS	Fushou	1.35	244	*e*P	Pb	03 06 49.4	+1.1
HATJ	Hateruma jima	1.36	125	*e*P	Pb	03 06 49.3	+1.0
WHF	Hehuan Shan	1.39	240	*e*P	Pb	03 06 49.7	+0.8
SHUL	Shoufeng	1.40	222	*e*P	Pb	03 06 49.3	+0.3
TDCB	Techi	1.42	246	*e*P	Pb	03 06 49.1	-0.3
TDCB				*e*S	Sb	03 07 07.7	+0.5
JKRS	Kuro-shima	1.43	115	*e*P	Pb	03 06 51.8	+2.3
LIOB	Emei	1.44	262	*e*P	Pb	03 06 49.5	-0.1
SBCB	Hsinchu	1.45	268	*e*S	Sb	03 07 08.0	+0.1
NSTT	Nanjuang	1.45	262	*e*P	Pb	03 06 49.6	-0.2
OWD	Renai	1.56	236	*e*P	Pb	03 06 51.4	-0.3
WARBT	Fenglin Townsh	1.56	224	*e*P	Pn	03 06 49.8	-0.3
WUSB	Renai	1.58	238	*e*P	Pb	03 06 52.3	+0.2
WHP	Taichung City	1.59	250	*e*P	Pb	03 06 53.2	+0.9
WHP				*e*S	Sn	03 07 10.2	-0.5
VWDT	VWDT	1.71	231	*e*P	Pb	03 06 53.4	-0.7
VWDT				*e*S	Sn	03 07 13.5	+0.2
HGSD	Ruisui	1.71	218	*e*P	Pn	03 06 51.5	-0.6
HGSD				*e*S	Sn	03 07 13.5	0.0
WCS	Beigang Elemen	1.71	243	*e*P	Pb	03 06 55.1	+0.9
WCS				*e*S	Sn	03 07 13.1	-0.4
SMLT	Sun Moon Lake	1.81	238	*e*P	Pb	03 06 55.7	-0.2
TYC	Yuchr	1.83	240	*e*P	Pb	03 06 56.5	+0.2
TWF1	Yuli	1.89	219	*e*P	Pn	03 06 55.5	+0.8
WHYT	Xinyi Township	1.95	234	*e*P	Pn	03 06 56.7	+1.2
YUS	Yu-Shan	2.01	228	*e*P	Pn	03 06 58.1	+1.4

ALS	**Alishan**	**2.10**	**231**	*e*P	**Pn**	**03 06 58.6**	**+0.8**
EHD	**Haiduan**	**2.10**	**217**	*e*P	**Pn**	**03 06 57.9**	**+0.3**
CHN5	**Tsauling**	**2.14**	**235**	*e*P	**Pn**	**03 06 59.8**	**+1.7**
STYH	**Taoyuan**	**2.35**	**225**	*e*P	**Pn**	**03 07 01.6**	**+0.8**
TPUB	**Ta-pu**	**2.35**	**230**	*e*P	**Pb**	**03 07 03.4**	**-1.8**
MASBT	**Mashibuluo**	**2.85**	**219**	P	**Pb**	**03 07 11.1**	**-2.6**
XPSS	**Dashiqiu**	**2.99**	**314**	*e*S	**Sn**	**03 07 45.7**	**+0.7**

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*TAP **14** 03:07:13.2, 24°.99N×122°.72E, h40^{km}±1^{km}, ML3.5, D*
*JMA **14** 03:07:15.7±0.4, 25°N±3°×12°3E±°, h13^{km}, MV3.1/8, NW OFF ISHIGAKIJIMA IS*
ISC 14 03:07:13.4±1.2, **24°.89N**±0°.04×**122°.66E**±0°.03, **h12**^{km}±10^{km}, **n42,** σ**0^{s}.69**/58, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.51**	**149**	P	**Pb**	**03 07 24.7**	**+0.4**
JYNG				*e*S	**Sb**	**03 07 30.6**	**-1.0**
YOJ	**Yonaguni jima**	**0.54**	**143**	*i* P	**Pn**	**03 07 25.3**	**-1.5**
YOJ	**Yonaguni jima**	**0.54**	**143**	P	**Pn**	**03 07 25.3**	**-1.5**
YOJ				*e*S	**Sb**	**03 07 31.1**	**-1.2**
EOS2	**EOS2**	**0.61**	**220**	*e*P	**Pb**	**03 07 26.1**	**+0.2**
TWB1	**Santiao Chiao**	**0.62**	**281**	*e*P	**Pb**	**03 07 25.8**	**-0.4**
EGS		**0.66**	**266**	*i* P	**Pb**	**03 07 27.1**	**+0.1**
EGS				*e*S	**Sb**	**03 07 37.2**	**+1.2**
EOS3	**EOS3**	**0.68**	**207**	P	**Pb**	**03 07 27.4**	**+0.3**
SXI1	**Grass Mountain**	**0.74**	**286**	*e*P	**Pb**	**03 07 28.4**	**+0.1**
TIPB	**Shuangxi**	**0.76**	**276**	P	**Pn**	**03 07 29.2**	**-0.8**
TIPB				S	**Sb**	**03 07 39.5**	**+0.6**
TWC	**Suao**	**0.79**	**249**	*e*P	**Pg**	**03 07 28.6**	**-0.1**
EOS4	**EOS4**	**0.83**	**202**	P	**Pn**	**03 07 30.5**	**-0.1**
TNOU	**National Taiwa**	**0.84**	**288**	*e*P	**Pn**	**03 07 31.5**	**+0.4**
NDS	**Dongshan**	**0.90**	**253**	*e*P	**Pn**	**03 07 31.9**	**+0.1**
PCYT	**Pengchaiyu**	**0.91**	**324**	S	**Sb**	**03 07 42.2**	**-0.9**
EWUT	**Wuta**	**0.92**	**241**	*e*P	**Pg**	**03 07 30.3**	**-0.8**
TWE	**Neicheng**	**0.92**	**259**	*e*P	**Pg**	**03 07 31.0**	**-0.2**
TWE				*e*S	**Sg**	**03 07 43.0**	**-0.2**
ENA	**Nanau**	**0.96**	**241**	*e*P	**Pg**	**03 07 31.6**	**-0.3**
FUSB	**Fushanzhiwuyua**	**0.98**	**262**	*e*P	**Pn**	**03 07 32.8**	**-0.3**
YM08	**YM08**	**1.01**	**287**	*e*P	**Pn**	**03 07 33.5**	**+0.1**
YM08				S	**Sg**	**03 07 45.9**	**-0.4**
YM01	**YM01**	**1.02**	**285**	*e*P	**Pb**	**03 07 32.7**	**-0.3**
YM01				*e*S	**Sb**	**03 07 47.2**	**+0.8**
NWLT	**Wulai**	**1.06**	**264**	*e*P	**Pn**	**03 07 33.9**	**-0.2**
LATG	**Datong**	**1.09**	**251**	*e*P	**Pn**	**03 07 34.6**	**0.0**
LATG				*e*S	**Sg**	**03 07 48.7**	**0.0**
IRIF	**Iriomote-Funau**	**1.12**	**119**	*e*S	**Sn**	**03 07 51.0**	**+0.8**
YHNB	**Yeheng**	**1.19**	**259**	*e*P	**Pg**	**03 07 36.0**	**-0.3**
ETL	**Fush Village**	**1.19**	**232**	*e*P	**Pn**	**03 07 35.2**	**-0.8**
NSK	**Sanguang**	**1.20**	**260**	*e*P	**Pn**	**03 07 35.8**	**-0.3**
NSK				*e*S	**Sg**	**03 07 52.4**	**+0.1**
NACB	**Ninganchiao**	**1.21**	**234**	*e*P	**Pn**	**03 07 36.0**	**0.0**
NACB				*e*S	**Sb**	**03 07 52.4**	**+0.7**
ETLH	**Xiulin Townshi**	**1.27**	**238**	*e*P	**Pg**	**03 07 37.6**	**-0.3**
ETLH				*e*S	**Sg**	**03 07 54.8**	**+0.3**
NFF	**Wufeng Townshi**	**1.43**	**260**	*e*S	**Sb**	**03 07 59.0**	**+0.9**
FUSS	**Fushou**	**1.44**	**244**	*e*P	**Pb**	**03 07 40.5**	**+0.2**
FUSS				*e*S	**Sn**	**03 07 57.9**	**-0.6**
JIJ	**Ishigaki jima**	**1.45**	**111**	*e*P	**Pg**	**03 07 43.0**	**+1.8**
WHF	**Hehuan Shan**	**1.47**	**240**	*e*P	**Pg**	**03 07 41.7**	**-0.1**
WHF				*e*S	**Sn**	**03 07 59.0**	**-0.5**
TWT	**Tachien**	**1.49**	**245**	*e*P	**Pg**	**03 07 42.6**	**+0.5**
TDCB	**Techi**	**1.51**	**245**	*e*P	**Pb**	**03 07 41.5**	**+0.1**
OWD	**Renai**	**1.64**	**236**	*e*P	**Pn**	**03 07 42.9**	**+0.7**
OWD				*e*S	**Sb**	**03 08 05.1**	**+0.7**
WUSB	**Renai**	**1.67**	**238**	*e*P	**Pb**	**03 07 43.6**	**-0.5**
WUSB				*e*S	**Sn**	**03 08 03.2**	**-0.8**
WHP	**Taichung City**	**1.68**	**249**	*e*P	**Pg**	**03 07 45.0**	**-0.7**
VWDT	**VWDT**	**1.79**	**231**	*e*P	**Pn**	**03 07 44.8**	**+0.7**
TWQ1	**Liyutan**	**1.80**	**253**	*e*P	**Pb**	**03 07 45.8**	**-0.6**
SMLT	**Sun Moon Lake**	**1.89**	**238**	*e*P	**Pn**	**03 07 46.4**	**+0.8**
SMLT				*i* S	**Sn**	**03 08 09.8**	**+0.3**
TYC	**Yuchr**	**1.92**	**239**	*e*P	**Pn**	**03 07 46.9**	**+1.0**
WHYT	**Xinyi Township**	**2.03**	**235**	*e*P	**Pn**	**03 07 48.7**	**+1.2**

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*AEIC **14** 03:47:41.4±1.1, 51°.9N±0°.1×172°.44W±0°.07, h17^{km}±7^{km}, Error ellipse: s-maj=14.8km s-min=5.8km az=177.0*
NEIC 14 03:47:42.2±1.1, **52°.1N**±0°.1×**172°.45W**±0°.06, **h35**^{km}±2^{km}, **ML3.5**(AEIC), **Error ellipse: s-maj=18.0km s-min=6.1km az=0.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOSE	**Korovin Southe**	**1.02**	**286**		Pn	03 47 59.8	-0.2
KOSE					Sn	03 48 12.7	-0.5
KOFP	**Korovin Flat P**	**1.03**	**282**		Pn	03 48 00.3	+0.1
KOFP					Sn	03 48 14.3	+0.9
KONE	**Korovin Northe**	**1.08**	**288**		Pn	03 48 00.3	-0.5
KONE					Sn	03 48 14.9	+0.5
ATKA	**Atka Island**	**1.08**	**277**		Pn	03 48 00.5	-0.3
ATKA	**Atka Island**	**1.08**	**277**		Sn	03 48 14.4	-0.2
KOKV	**Korovin Volcan**	**1.09**	**286**		Pn	03 48 00.7	-0.3
KOKV					Sn	03 48 15.3	+0.4
KOKL	**Mount Kliuchef**	**1.11**	**284**		Pn	03 48 01.0	-0.2
KOKL					Sn	03 48 15.2	0.0
KONW	**Korovin Northw**	**1.13**	**287**		Pn	03 48 01.0	-0.5
KONW					Sn	03 48 17.1	+1.3
KOWE	**Korovin West**	**1.15**	**285**		Pn	03 48 01.3	-0.4
CLES	**Cleveland East**	**1.73**	**63**		Pn	03 48 09.8	+0.1
CLES	**Cleveland East**	**1.73**	**63**		Sn	03 48 33.6	+3.0
CLCO	**Concord Point,**	**1.81**	**66**		Pn	03 48 11.0	+0.2
CLCO					Sn	03 48 35.3	+2.7
GSIG	**Igitkin Island**	**2.15**	**269**		Pn	03 48 14.6	-0.9
GSMY	**Great Sitkin M**	**2.23**	**271**		Pn	03 48 15.7	-0.8
GSMY					Sn	03 48 43.2	+0.4
GSTR	**Great Sitkin T**	**2.23**	**272**		Pn	03 48 16.2	-0.4
GSTR	**Great Sitkin T**	**2.23**	**272**		Sn	03 48 44.6	+1.8
GSTD	**Great Sitkin T**	**2.28**	**271**		Sn	03 48 45.2	+0.9
NIKH	**Nikolski High**	**2.37**	**66**		Pn	03 48 18.8	+0.3
NIKH	**Nikolski High**	**2.37**	**66**		Sn	03 48 48.2	+1.9
ETKA	**Kagalaska Isla**	**2.46**	**267**		Sn	03 48 49.3	+0.8
ADAG	**Mount Adagdak**	**2.57**	**270**		Pn	03 48 21.4	+0.2
ADAG					Sn	03 48 53.4	+2.2
ADK	**Adak**	**2.63**	**267**		Pn	03 48 21.9	-0.1
ADK	**Adak**	**2.63**	**267**		Sn	03 48 53.1	+0.5
OKSP	**Okmok Steeple**	**2.79**	**63**		Sn	03 49 00.0	+3.2
KIWB	**Kanaga Island**	**2.92**	**267**		Pn	03 48 26.0	-0.1
KIWB	**Kanaga Island**	**2.92**	**267**		Sn	03 49 00.3	+0.5
KIKV	**Kanaga Island**	**2.93**	**268**		Pn	03 48 26.1	-0.1
KIKV					Sn	03 49 01.6	+1.5
OKCE	**Okmok Cone E**	**2.94**	**61**		Pn	03 48 26.5	+0.2
OKCE					Sn	03 49 04.9	+4.7
KIMD	**Kanaga Island**	**2.98**	**266**		Sn	03 49 03.6	+2.2
OKTU	**Okmok Mt. Tuli**	**2.98**	**62**		Pn	03 48 27.4	+0.5
OKTU					Sn	03 49 05.0	+3.5
TAPA	**Tanaga Point A**	**3.33**	**268**		Pn	03 48 31.6	-0.1
MREP	**Makushin Rep't**	**3.86**	**61**		Pn	03 48 39.2	+0.1
GANE	**Gareloi Northe**	**3.92**	**269**		Pn	03 48 39.2	-0.7
MNAT	**Makushin Natee**	**3.93**	**60**		Pn	03 48 40.1	+0.2
UNV	**Unalaska Valle**	**4.01**	**61**		Pn	03 48 40.9	-0.1
LVA	**Lava Point**	**4.39**	**59**	Pn	Pn	03 48 46.5	+0.2
AMKA	**Amchitka**	**5.17**	**266**	Pn	Pn	03 48 57.5	+0.5
SPIA	**Saint Paul Isl**	**5.27**	**13**	Pn	Pn	03 48 56.4	-1.9
SDPT	**Sand Point**	**7.82**	**61**	Pn	Pn	03 49 31.6	-1.7

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*TIR **14** 03:55:51.5, 41°.63N×19°.48E, h12^{km}, Ml2.7/3*
*SKO **14** 03:55:53.8, 41°.57N×19°.48E, h15^{km}*
*PDG **14** 03:55:54.6±0.3, 41°.76N×19°.55E, h0^{km}±11^{km}, MD2.8/1, ML2.7/11, Error ellipse: s-maj=1.2km s-min=1.1km az=90.0*
ISC 14 03:55:52.1±1.1, **41°.58N**±0°.03×**19°.38E**±0°.03, **h19**^{km}±3^{km}, **n35,** σ**1^{s}.45**/57, **12C-13D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULC	**Ulcinj**	**0.40**	**345**	⇓*i*Pg	**Pg**	**03 56 00.1**	**-0.3**
ULC				*i* Sg	**Sg**	**03 56 05.5**	**-0.6**
TIR	**Tirane**	**0.43**	**122**	Pg	**Pg**	**03 55 60.0**	**-0.9**
TIR				S	**Sg**	**03 56 05.5**	**-1.3**
TIR				AML	AML	03 56 07.0	
	1.7nm,0.3s						
TIR	**Tirane**	**0.43**	**122**	*i* Pg	**Pg**	**03 55 60.0**	**-0.9**
TIR				*i* Sg	**Sb**	**03 56 07.2**	**0.0**
SDA	**Shkodra**	**0.48**	**10**	Pg	**Pg**	**03 56 00.8**	**-1.1**
SDA				Sg	**Sg**	**03 56 06.4**	**-2.1**
DRME	**Dracevica, Mon**	**0.63**	**347**	⇑*i*Pg	**Pb**	**03 56 04.1**	**-0.3**
DRME				*e*Sg	**Sb**	**03 56 11.9**	**-0.8**
PHP	**Peshkopia**	**0.80**	**82**	Pg	**Pb**	**03 56 05.6**	**-1.9**
PHP				Sg	**Sb**	**03 56 15.7**	**-2.3**
PHP				AML	AML	03 56 18.8	
	1.7nm,0.2s						
BUM	**Brajici-Budva**	**0.81**	**333**	⇑*i*Pg	**Pn**	**03 56 08.4**	**-0.2**
BUM				*i* Sg	**Sg**	**03 56 19.3**	**+0.6**
PDG	**Podgorica**	**0.86**	**354**	Pg	**Pb**	**03 56 07.6**	**-0.8**
PDG				Sg	**Sg**	**03 56 20.4**	**+0.2**
PDG	**Podgorica**	**0.86**	**354**	⇓P	**Pb**	**03 56 07.7**	**-0.7**
PDG				⇓S	**Sb**	**03 56 19.3**	**-0.2**
PDG	**Podgorica**	**0.86**	**354**	⇓*i*Pg	**Pb**	**03 56 07.5**	**-0.8**
PDG				*i* Sg	**Sb**	**03 56 18.9**	**-0.6**
HCY	**Herceg Novi**	**1.09**	**323**	⇑*i*Pg	**Pg**	**03 56 13.5**	**+0.2**
HCY				*i* Sg	**Sg**	**03 56 30.4**	**+2.8**
PVY	**Plav**	**1.10**	**23**	⇑*i*Pg	**Pn**	**03 56 11.0**	**-1.7**
PVY				*i* Sg	**Sb**	**03 56 24.9**	**-1.8**
OHR	**Ohrid**	**1.16**	**113**	*i* Pg	**Pb**	**03 56 13.8**	**+0.2**
OHR				*i* Sg	**Sg**	**03 56 30.8**	**+0.9**
NKME	**Niksic**	**1.23**	**345**	⇓*i*Pg	**Pg**	**03 56 15.6**	**-0.3**
NKME				*e*Sg	**Sg**	**03 56 32.6**	**+0.5**
KOME	**Kolasin**	**1.28**	**4**	⇓*i*Pg	**Pn**	**03 56 14.7**	**-0.3**
KOME				*e*Sg	**Sn**	**03 56 31.8**	**+0.1**
IVA	**Berane**	**1.35**	**16**	⇑*i*Pg	**Pn**	**03 56 16.0**	**0.0**
IVA				*i* Sg	**Sn**	**03 56 33.4**	**0.0**
KBN	**Korca**	**1.43**	**131**	Pn	**Pb**	**03 56 18.4**	**+0.3**
KBN				Sn	**Sg**	**03 56 37.3**	**-0.9**
KBN				AML	AML	03 56 45.0	
	0.4nm,0.5s						
BRY	**Bratogost**	**1.47**	**335**	⇓*i*Pg	**Pg**	**03 56 19.9**	**-0.4**
BRY				*i* Sg	**Sg**	**03 56 40.1**	**+0.6**
SKO	**Skopje**	**1.59**	**75**	*i* Pg	**Pb**	**03 56 21.6**	**+0.8**
SKO				*i* Sg	**Sb**	**03 56 42.2**	**+1.7**
PLE	**Pljevlja**	**1.75**	**0**	⇓*i*Pn	**Pb**	**03 56 24.2**	**+0.5**
PLE				*i* Sn	**Sb**	**03 56 45.9**	**+0.5**
NOCI	**Noci**	**1.92**	**247**	P	**Pg**	**03 56 28.3**	**-0.6**
NOCI				Sn	**Sg**	**03 56 55.8**	**+2.0**
BARS	**Barje**	**2.19**	**55**	*i* Pn	**Pn**	**03 56 29.1**	**+1.6**
MATE	**Matera**	**2.22**	**246**	⇑P	**Pn**	**03 56 23.9**	**-3.9**
VAY	**Valandovo**	**2.41**	**95**	*i* Pn	**Pn**	**03 56 32.3**	**+1.8**
VAY				*i* Sn	**Sn**	**03 56 58.2**	**-1.3**
BOVS	**Bovan**	**2.68**	**39**	⇑P	**Pn**	**03 56 36.0**	**+1.8**
HERR	**Herculane**	**3.98**	**33**	⇑P	**Pn**	**03 56 53.4**	**+1.4**
BZS	**Buzias**	**4.35**	**21**	⇑P	**Pn**	**03 56 58.4**	**+1.2**
GZR	**Gura Zlata**	**4.54**	**32**	⇑P	**Pn**	**03 57 01.2**	**+1.3**
SIRR	**Siria**	**4.97**	**19**	⇑P	**Pn**	**03 57 05.9**	**+0.2**
ELND	**Elena**	**5.01**	**72**	⇑P	**Pn**	**03 57 08.5**	**+2.4**
LOT	**Lotru**	**5.02**	**38**	⇓P	**Pn**	**03 57 08.1**	**+1.7**
ARR	**Arges**	**5.38**	**43**	⇓P	**Pn**	**03 57 13.7**	**+2.3**
DRGR		**5.74**	**24**	⇓P	**Pn**	**03 57 17.7**	**+1.4**
MLR	**Muntele Rosu**	**6.17**	**48**	⇓P	**Pn**	**03 57 24.7**	**+2.4**
TLCR		**7.76**	**59**	⇓P	**Pn**	**03 57 47.3**	**+3.4**

GCG 14 03:56:21.8±1.3, **14°.00N**×**91°.61W, h26**^{km}±12^{km}, **MD3.6, ML3.0, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG5	**El Palmar, Qui**	**0.47**	**33**	*i* P	Pn	03 56 35.1	+2.1
STG2	**El Palmar, Qui**	**0.49**	**28**	*e*P	Pn	03 56 35.8	+2.5
STG8	**El Palmar, Qui**	**0.51**	**30**	*e*P	Pn	03 56 36.2	+2.5
STG8				*e*S	Sn	03 56 47.2	+5.4
STG8				IAML		03 56 50.4	
	comp=E,543nm,0.1s						
ESSG	**Sabana Grande**	**0.85**	**63**	*e*P	Pb	03 56 37.6	-0.4
ESSG				*e*S	Sb	03 56 49.3	+0.2
FG16	**Alotenango, Sa**	**1.10**	**76**	*e*P	Pn	03 56 38.3	-3.4
FG16				IAML		03 56 52.6	
	comp=N,2μm,0.1s						
APG	**El Apazote**	**1.49**	**48**	*e*P	Pb	03 56 48.5	-0.6
NUBE	**Las Nubes**	**1.78**	**93**	*e*P	Pn	03 56 50.4	-0.6

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*TAP **14** 04:12:43.2, 24°.84N×122°.57E, h11^{km}, ML3.7, C*
*JMA **14** 04:12:43.4±0.2, 25°N±2°×122°.6E±0°.9, h26^{km}±3^{km}, MV3.0/11, NW OFF ISHIGAKIJIMA IS*
*IDC **14** 04:12:56.0±7.3, 24°.53N×122°.43E, h139^{km}±73^{km}, mb3.1/7, mbtmp3.5/8, MS3.4/12, Error ellipse: s-maj=47.9km s-min=19.1km az=64.0*
ISC 14 04:12:42.0±1.2, **24°.86N**±0°.03×**122°.64E**±0°.02, **h5**^{km}±8^{km}, **n119,** σ**0^{s}.86**/146, **mb3.4**/7, **MS3.4**/10, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.49**	**146**	P	**Pb**	**04 12 52.6**	**-0.5**
JYNG				*e*S	**Sg**	**04 12 58.9**	**+0.9**
YOJ	**Yonaguni jima**	**0.52**	**140**	P	**Pb**	**04 12 53.6**	**0.0**
YOJ	**Yonaguni jima**	**0.52**	**140**	*i* P	**Pb**	**04 12 53.8**	**+0.2**
YOJ				*i* S	**Sb**	**04 13 02.2**	**+0.8**
YOJ	**Yonaguni jima**	**0.52**	**140**	*e*P	**Pb**	**04 12 53.1**	**-0.4**
YOJ				*e*S	**Sb**	**04 13 00.9**	**-0.6**
EOS2	**EOS2**	**0.58**	**220**	*i* P	**Pb**	**04 12 54.8**	**+0.3**
EOS2				*i* S	**Sb**	**04 13 03.6**	**+0.6**
TWB1	**Santiao Chiao**	**0.61**	**284**	*i* P	**Pb**	**04 12 55.1**	**0.0**
EGS		**0.65**	**268**	*i* P	**Pb**	**04 12 55.3**	**-0.4**
EGS				*i* S	**Sb**	**04 13 04.1**	**-0.8**
EOS3	**EOS3**	**0.65**	**207**	*i* P	**Pb**	**04 12 55.8**	**+0.2**
EOS3				*i* S	**Sb**	**04 13 05.0**	**+0.1**
SXI1	**Grass Mountain**	**0.73**	**288**	P	**Pn**	**04 12 57.3**	**-1.8**
SXI1				S	**Sb**	**04 13 07.8**	**+0.2**
TIPB	**Shuangxi**	**0.75**	**278**	P	**Pb**	**04 12 57.0**	**-0.5**
TIPB				*e*S	**Sb**	**04 13 07.2**	**-0.8**
TWC	**Suao**	**0.77**	**251**	P	**Pg**	**04 12 56.7**	**0.0**
ESAO	**Su ao**	**0.78**	**249**	P	**Pb**	**04 12 57.3**	**-0.7**
ESAO				*e*S	**Sg**	**04 13 07.7**	**+0.6**
EOS4	**EOS4**	**0.80**	**202**	*e*P	**Pb**	**04 12 58.2**	**+0.2**
NWF	**Wu-fen Shan**	**0.81**	**285**	P	**Pn**	**04 12 59.1**	**-0.9**
NWF				S	**Sb**	**04 13 09.8**	**0.0**
WFSB	**Wu-fen Shan**	**0.81**	**285**	P	**Pn**	**04 12 58.9**	**-1.1**
WFSB				*e*S	**Sb**	**04 13 09.6**	**-0.1**
TNOU	**National Taiwa**	**0.84**	**290**	*e*P	**Pn**	**04 12 59.3**	**-1.1**
TNOU				*e*S	**Sb**	**04 13 10.4**	**-0.2**
NDS	**Dongshan**	**0.87**	**255**	*e*P	**Pb**	**04 12 59.2**	**-0.4**
TWE	**Neicheng**	**0.90**	**261**	*e*P	**Pb**	**04 12 59.5**	**-0.5**
TWE				*e*S	**Sb**	**04 13 11.5**	**-0.8**
PCYT	**Pengchaiyu**	**0.92**	**326**	*e*P	**Pn**	**04 13 00.5**	**-1.0**
ENA	**Nanau**	**0.93**	**242**	*e*P	**Pb**	**04 12 59.8**	**-0.7**
ENA				*e*S	**Sg**	**04 13 11.5**	**-0.3**
FUSB	**Fushanzhiwuyua**	**0.96**	**264**	*e*P	**Pb**	**04 13 00.9**	**-0.3**
FUSB				*e*S	**Sb**	**04 13 14.7**	**+0.5**
TWA	**Mucha**	**0.97**	**277**	*e*P	**Pn**	**04 13 01.5**	**-0.7**
EAHA	**Aohua**	**0.98**	**237**	*e*P	**Pb**	**04 13 01.0**	**-0.4**
EAHA				*e*S	**Sg**	**04 13 13.5**	**+0.1**
ENTT	**Nioudou**	**1.00**	**257**	*e*P	**Pb**	**04 13 01.4**	**-0.4**
ENTT				*e*S	**Sb**	**04 13 15.5**	**+0.2**
YM08	**YM08**	**1.01**	**289**	*e*P	**Pn**	**04 13 01.9**	**-0.9**
YM08				*e*S	**Sn**	**04 13 15.9**	**-1.4**
YM01	**YM01**	**1.01**	**286**	*e*P	**Pn**	**04 13 02.5**	**-0.4**
YM01				*e*S	**Sn**	**04 13 16.1**	**-1.4**
TWY	**Chenhua**	**1.03**	**294**	*e*P	**Pn**	**04 13 03.6**	**+0.6**
ZUZH	**Zhuzihu**	**1.04**	**287**	*e*P	**Pn**	**04 13 03.2**	**0.0**
ZUZH				*e*S	**Sn**	**04 13 16.8**	**-1.3**
NWLT	**Wulai**	**1.04**	**265**	*e*P	**Pb**	**04 13 02.1**	**-0.3**
NWLT				*e*S	**Sb**	**04 13 16.3**	**-0.1**
TATO	**Taipei**	**1.05**	**276**	P	**Pb**	**04 13 02.1**	**-0.6**
TATO	**Taipei**	**1.05**	**276**	*e*P	**Pn**	**04 13 02.5**	**-0.8**
TATO				*e*S	**Sb**	**04 13 16.5**	**-0.3**
LATG	**Datong**	**1.07**	**252**	P	**Pb**	**04 13 02.4**	**-0.5**
LATG				*e*S	**Sg**	**04 13 16.2**	**-0.1**
ANP	**Anpu**	**1.07**	**288**	*e*P	**Pn**	**04 13 03.7**	**+0.1**
IRIF	**Iriomote-Funau**	**1.12**	**118**	*e*P	**Pg**	**04 13 02.8**	**-0.6**
IRIF				*e*S	**Sg**	**04 13 17.2**	**-0.8**
TWS1	**Kuangyinshan**	**1.14**	**282**	*e*P	**Pn**	**04 13 06.0**	**+1.5**
ETL	**Fush Village**	**1.16**	**233**	*e*P	**Pn**	**04 13 04.6**	**-0.3**
ETL				*e*S	**Sg**	**04 13 19.3**	**-0.1**
YHNB	**Yeheng**	**1.17**	**261**	P	**Pn**	**04 13 05.0**	**0.0**
YHNB	**Yeheng**	**1.17**	**261**	*e*P	**Pb**	**04 13 04.2**	**-0.4**
YHNB				*e*S	**Sb**	**04 13 19.7**	**-0.4**
NACB	**Ninganchiao**	**1.18**	**234**	P	**Pg**	**04 13 04.3**	**-0.3**
NACB	**Ninganchiao**	**1.18**	**234**	P	**Pg**	**04 13 04.2**	**-0.3**
NACB				*e*S	**Sg**	**04 13 19.7**	**-0.1**
NSK	**Sanguang**	**1.18**	**261**	*e*P	**Pn**	**04 13 04.6**	**-0.6**
NSK				*e*S	**Sg**	**04 13 19.8**	**-0.3**
NNSB	**Datong**	**1.23**	**250**	*e*P	**Pn**	**04 13 05.4**	**-0.4**
NNSB				*e*S	**Sg**	**04 13 20.4**	**-1.0**
NNSH	**Datong**	**1.23**	**250**	*e*P	**Pn**	**04 13 05.5**	**-0.4**
NNS	**Nan Shan**	**1.23**	**250**	*e*P	**Pn**	**04 13 05.4**	**-0.5**
NNS				*e*S	**Sg**	**04 13 20.9**	**-0.6**
TWD	**Chiawan**	**1.23**	**231**	*e*P	**Pb**	**04 13 05.6**	**-0.1**
ETLH	**Xiulin Townshi**	**1.24**	**238**	*e*P	**Pn**	**04 13 06.1**	**0.0**
ETLH				*e*S	**Sn**	**04 13 22.9**	**-0.3**
HWA	**Hwalien**	**1.29**	**227**	*e*P	**Pg**	**04 13 07.8**	**+1.0**
NCUH	**Zhongli**	**1.33**	**275**	*e*P	**Pg**	**04 13 08.2**	**+0.8**
HATJ	**Hateruma jima**	**1.33**	**127**	*e*P	**Pn**	**04 13 06.5**	**-0.7**
KSHI	**Guanxi Townshi**	**1.34**	**267**	*e*P	**Pg**	**04 13 08.8**	**+1.2**
ETM	**Tongmen**	**1.38**	**230**	*e*P	**Pg**	**04 13 08.6**	**+0.2**
JKRS	**Kuro-shima**	**1.39**	**116**	*e*P	**Pb**	**04 13 07.9**	**-0.6**
LXIB	**Xiulin Townshi**	**1.40**	**233**	*e*P	**Pg**	**04 13 09.1**	**+0.3**
LXIB				*e*S	**Sg**	**04 13 27.5**	**+0.6**
NFF	**Wufeng Townshi**	**1.41**	**261**	*e*P	**Pg**	**04 13 08.8**	**-0.1**
FUSS	**Fushou**	**1.41**	**245**	*e*P	**Pg**	**04 13 09.1**	**0.0**
WHF	**Hehuan Shan**	**1.45**	**241**	*e*P	**Pg**	**04 13 09.6**	**-0.1**
JIJ	**Ishigaki jima**	**1.45**	**110**	*e*P	**Pn**	**04 13 08.3**	**-0.5**
SHUL	**Shoufeng**	**1.46**	**223**	*e*P	**Pg**	**04 13 09.6**	**-0.3**
TWT	**Tachien**	**1.47**	**246**	*e*P	**Pg**	**04 13 10.2**	**+0.1**
TDCB	**Techi**	**1.48**	**246**	*e*P	**Pg**	**04 13 10.4**	**0.0**
TDCB				*e*S	**Sn**	**04 13 28.8**	**-0.4**
LIOB	**Emei**	**1.50**	**262**	*e*P	**Pg**	**04 13 10.7**	**+0.1**
NSTT	**Nanjuang**	**1.51**	**262**	*e*P	**Pg**	**04 13 11.4**	**+0.4**
ESL	**Shilin**	**1.52**	**227**	*e*P	**Pn**	**04 13 09.7**	**-0.1**
JISG	**Ishigakijimahi**	**1.54**	**100**	*e*P	**Pb**	**04 13 09.9**	**-1.1**
OWD	**Renai**	**1.61**	**236**	*e*P	**Pb**	**04 13 12.2**	**-0.1**
WARBT	**Fenglin Townsh**	**1.62**	**225**	*e*P	**Pb**	**04 13 11.9**	**-0.4**
WARBT				*e*S	**Sn**	**04 13 32.2**	**-0.2**
WUSB	**Renai**	**1.64**	**238**	*e*P	**Pg**	**04 13 12.7**	**-0.7**
WUSB				*e*S	**Sb**	**04 13 33.4**	**-0.3**
WHP	**Taichung City**	**1.65**	**250**	*e*P	**Pg**	**04 13 14.1**	**+0.5**
WHP				*e*S	**Sg**	**04 13 35.4**	**+0.3**
NMLH	**Miaoli**	**1.71**	**259**	*e*P	**Pg**	**04 13 14.9**	**+0.1**
VWDT	**VWDT**	**1.76**	**231**	*e*P	**Pb**	**04 13 14.2**	**-0.5**
HGSD	**Ruisui**	**1.76**	**219**	*e*P	**Pn**	**04 13 13.0**	**-0.1**
HGSD				*e*S	**Sn**	**04 13 34.7**	**-1.2**
DPDB	**Guoxing**	**1.77**	**242**	*e*P	**Pb**	**04 13 15.0**	**+0.1**
TWQ1	**Liyutan**	**1.78**	**254**	*e*P	**Pg**	**04 13 16.4**	**+0.3**
EHY	**Hungye**	**1.81**	**222**	*e*P	**Pn**	**04 13 14.2**	**+0.5**
SMLT	**Sun Moon Lake**	**1.86**	**239**	*e*P	**Pg**	**04 13 17.0**	**-0.7**
TYC	**Yuchr**	**1.89**	**240**	*e*P	**Pb**	**04 13 16.7**	**-0.1**
YULB	**Yu-li**	**1.91**	**220**	P	**Pg**	**04 13 19.2**	**+0.6**
YULB	**Yu-li**	**1.91**	**220**	*e*P	**Pn**	**04 13 14.6**	**-0.6**
YULB				*e*S	**Sn**	**04 13 36.9**	**-2.7**
TWF1	**Yuli**	**1.94**	**220**	*e*P	**Pn**	**04 13 15.4**	**-0.2**
WHYT	**Xinyi Township**	**2.00**	**235**	*e*P	**Pb**	**04 13 18.0**	**-0.9**
CHKH	**Chenggong**	**2.02**	**215**	*e*P	**Pn**	**04 13 16.1**	**-0.5**
WJS	**Zhushan**	**2.03**	**240**	*e*P	**Pg**	**04 13 19.9**	**-1.0**
YUS	**Yu-Shan**	**2.06**	**229**	*e*P	**Pb**	**04 13 19.0**	**-1.2**
FULB	**Fuli**	**2.07**	**217**	*e*P	**Pn**	**04 13 18.1**	**+0.7**
ALS	**Alishan**	**2.15**	**232**	*e*P	**Pb**	**04 13 21.3**	**-0.2**
EHD	**Haiduan**	**2.15**	**218**	*e*P	**Pn**	**04 13 18.3**	**-0.2**
CHN5	**Tsauling**	**2.19**	**235**	*e*P	**Pb**	**04 13 21.2**	**-1.0**
WDLH	**Douliu**	**2.25**	**239**	*e*P	**Pb**	**04 13 21.8**	**-1.3**
WCKO	**Fanlu**	**2.34**	**233**	*e*P	**Pb**	**04 13 23.5**	**-1.1**
STYH	**Taoyuan**	**2.40**	**226**	*e*P	**Pn**	**04 13 22.8**	**+1.0**
CHN4	**Tsaushan**	**2.40**	**232**	*e*P	**Pn**	**04 13 23.1**	**+1.2**
TPUB	**Ta-pu**	**2.41**	**230**	P	**Pb**	**04 13 24.9**	**-0.9**
TPUB	**Ta-pu**	**2.41**	**230**	*e*P	**Pb**	**04 13 23.9**	**-1.9**
STYT	**Tauyuan**	**2.42**	**226**	*e*P	**Pb**	**04 13 24.1**	**-1.8**
CHY	**Chiayi**	**2.44**	**237**	*e*P	**Pb**	**04 13 24.5**	**-1.8**
WTP	**Ta-pu**	**2.46**	**229**	*e*P	**Pb**	**04 13 24.9**	**-1.7**
TWGBT	**Beinan**	**2.49**	**215**	P	**Pb**	**04 13 25.9**	**-1.3**
TWK	**Hsinying**	**2.53**	**232**	*e*P	**Pb**	**04 13 25.9**	**-2.0**
SNST	**Tainan City**	**2.56**	**231**	*e*P	**Pb**	**04 13 26.6**	**-1.7**
CHN1	**Nanshi**	**2.56**	**230**	*e*P	**Pn**	**04 13 25.6**	**+1.6**
WSL	**Shuilin Townsh**	**2.58**	**239**	*e*P	**Pb**	**04 13 26.5**	**-2.2**
KSRS	**Korea Array**	**13.34**	**19**	P	**P**	**04 16 04.6**	**+3.0**
	2.5nm,0.7s,baz=196,slow=11,SNR=5.5						
MJAR	**Matsushiro Arr**	**17.71**	**45**	LR	LR	04 25 44.0	
	comp=Z,50nm,19.4s,baz=229,slow=42						
DAV	**Davao City (W)**	**17.92**	**170**	LR	LR	04 24 22.4	
	comp=Z,90nm,18.3s,baz=348,slow=39						
CMAR	**Chiang Mai Arr**	**22.91**	**259**	LR	LR	04 26 58.2	
	comp=Z,37nm,18.1s,baz=275,slow=37						
ASAJ	**Asahikawa**	**25.17**	**35**	LR	LR	04 28 35.6	
	comp=Z,124nm,18.0s,baz=296,slow=37						
SONM	**Songino Array**	**26.29**	**335**	P	**P**	**04 18 20.9**	**+2.5**
	1.1nm,1.0s,baz=160,slow=8.8,SNR=3.6						
SONM				LR	LR	04 29 13.7	
	comp=Z,149nm,18.8s,baz=166,slow=37						
	1.1nm,1.0s						
KAPI	**Kappang**	**29.83**	**186**	LR	LR	04 31 06.3	
	comp=Z,26nm,21.8s,baz=19,slow=37						
PSI	**Prapat**	**31.68**	**230**	LR	LR	04 31 31.5	
	comp=Z,71nm,18.9s,baz=73,slow=36						
YAK	**Yakutsk**	**37.46**	**5**	LR	LR	04 35 56.2	
	comp=Z,62nm,19.6s,baz=178,slow=36						
MKAR	**Makanchi Array**	**38.79**	**315**	P	**P**	**04 20 08.6**	**+1.1**
	0.8nm,0.9s,baz=124,slow=8.9,SNR=4.9						
	0.8nm,0.9s						
MA2	**Magadan**	**39.86**	**22**	LR	LR	04 37 12.5	
	comp=Z,74nm,19.3s,baz=230,slow=36						
ZALV	**Zalesovo Beam**	**40.41**	**326**	P	**P**	**04 20 20.4**	**-0.5**
	0.8nm,0.7s,baz=126,slow=9.3,SNR=3.9						
ZALV				LR	LR	04 37 46.6	
	comp=Z,79nm,18.0s,baz=100,slow=37						
	0.8nm,0.7s						
KURBB	**Kurchatov Arra**	**42.46**	**319**	P	**P**	**04 20 37.8**	**0.0**
	0.2nm,0.3s,baz=108,slow=6.5,SNR=4.8						
	0.2nm,0.3s						
SEY	**Seymchan**	**42.89**	**19**	LR	LR	04 40 08.7	
	comp=Z,38nm,21.0s,baz=319,slow=38						
AAK	**Ala-Archa**	**43.16**	**307**	LR	LR	04 38 31.9	
	comp=Z,72nm,18.5s,baz=90,slow=36						
WRA	**Warramunga Arr**	**45.97**	**165**	P	**P**	**04 21 05.0**	**-1.1**
	0.4nm,0.5s,baz=347,slow=8.7,SNR=1.3						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**49.46**	**166**	P	P	04 21 28.1	-5.2
	0.2nm,0.5s,baz=346,slow=9.1,SNR=1.9						
	0.2nm,0.5s						
YKA	**Yellowknife Ar**	**81.83**	**23**	P	**P**	**04 25 01.2**	**-0.6**
	0.2nm,0.6s,baz=306,slow=6.0,SNR=2.9						
	0.2nm,0.6s						

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*IDC **14** 04:15:37.6±1.1, 52°.70S×19°.79E, h0^{km}, mb4.2/5, mbtmp4.2/5, MS3.6/6, Error ellipse: s-maj=57.8km s-min=21.6km az=81.0*
ISC 14 04:15:39.1±1.0, **52°.7S**±0°.1×**19°.6E**±0°.3, **h10**^{km}, **n22,** σ**1^{s}.16**/12, **mb4.1**/7, **MS3.5**/6, **5C, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TROLL	**Troll, Antarti**	**20.75**	**195**	⇑P	**P**	**04 20 20.7**	**+0.9**
	comp=Z,407nm,0.9s						
SNAA	**Sanae**	**21.44**	**199**	⇑P	**P**	**04 20 27.5**	**+0.5**
	comp=Z,167nm,0.8s						
SNAA	**Sanae**	**21.44**	**199**	P	**P**	**04 20 27.5**	**+0.5**
	comp=Z,8.5nm,0.9s,baz=46,slow=9.3,SNR=25						
SNAA				LR	LR	04 26 32.6	
	comp=Z,122nm,21.9s,baz=46,slow=30						
	comp=Z,8.5nm,0.9s						
H04S2	**CROZET ISLANDS**	**21.52**	**87**	T	T	04 42 58.4	
	baz=242,slow=75,SNR=22						
H04S3	**CROZET ISLANDS**	**21.52**	**87**	T	T	04 42 58.3	
	baz=242,slow=75,SNR=21						
H04S1	**CROZET ISLANDS**	**21.53**	**87**	T	T	04 42 53.1	
	baz=242,slow=75,SNR=28						
VNA2	**Neumayer--Watz**	**21.91**	**204**	⇑P	**P**	**04 20 32.0**	**-0.1**
	comp=Z,13nm,0.7s,baz=36,slow=10						
VNA1	**Neumayer--Stat**	**21.94**	**205**	⇑P	**P**	**04 20 32.7**	**+0.4**
	comp=Z,12nm,1.0s						
VNA3	**Neumayer Olymp**	**22.68**	**204**	⇑P	**P**	**04 20 38.5**	**-1.8**
	comp=Z,5.7nm,0.9s						
BOSA	**Boshof**	**24.45**	**12**	LR	LR	04 28 56.4	
	comp=Z,117nm,20.1s,baz=192,slow=33						
LBTB	**Lobatse**	**28.04**	**12**	LR	LR	04 30 54.3	
	comp=Z,113nm,21.1s,baz=186,slow=33						
MATP	**Matopo**	**32.96**	**15**	LR	LR	04 34 11.5	
	comp=Z,124nm,20.0s,baz=218,slow=34						
QSPA	**South Pole Qui**	**37.50**	**180**	P	**P**	**04 22 53.5**	**+0.7**
	comp=Z,1.8nm,0.6s,baz=266,slow=2.8,SNR=14						
	comp=Z,1.8nm,0.6s						
MBAR	**Mbarara**	**52.77**	**14**	LR	LR	04 45 37.1	
	comp=Z,142nm,21.8s,baz=176,slow=34						
DBIC	**Dimbokro**	**62.73**	**332**	P	**P**	**04 26 05.3**	**+1.1**
	comp=Z,4.7nm,1.0s,baz=161,slow=7.6,SNR=4.7						
DBIC				LR	LR	04 51 20.3	
	comp=Z,36nm,18.0s,baz=196,slow=34						
	comp=Z,4.7nm,1.0s						
H01W2	**Cape Leeuwin H**	**65.61**	**116**	T	T	05 38 18.8	
	baz=221						
H01W3	**Cape Leeuwin H**	**65.63**	**116**	T	T	05 38 15.0	
	baz=221						
H01W1	**Cape Leeuwin H**	**65.63**	**116**	T	T	05 38 20.3	
	baz=221						
TORD	**Torodi Ar. Bea**	**67.40**	**341**	P	**P**	**04 26 35.1**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=170,slow=6.8,SNR=7.6						

	comp=Z,1.1nm,0.3s						
ASAR	Alice Springs	84.97	123	P	P	04 28 14.0	-0.7
	comp=Z,0.7nm,0.9s,baz=212,slow=4.3,SNR=3.3						
	comp=Z,0.7nm,0.9s						
PDAR	Pinedale Array	145.09	274	PKPbc	PKPbc	04 35 15.2	-0.5
	comp=Z,1.3nm,0.7s,baz=133,slow=4.8,SNR=13						
YKA	Yellowknife Ar	154.16	310	PKPab	PKPab	04 35 49.5	-2.2
	comp=Z,0.2nm,0.5s,baz=98,slow=3.2,SNR=5.0						

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*NEIC **14** 04:17:41.0±1.6, 28.°2S±0.°1×176.°4W±0.°1, h10^{km}±1^{km}, mb4.7/11, Error ellipse: s-maj=22.8km s-min=12.8km az=134.0*

*IDC **14** 04:17:45.0±0.7, 28.°11S×176.°44W, h41^{km}±5^{km}, mb4.2/14, mbtmp4.4/16, ML3.7/2, MS4.2/6, Error ellipse: s-maj=18.0km s-min=15.5km az=140.0*

ISC 14 04:17:45.2±0.5**, 28.°27S**±0.°07×**176.°28W**±0.°06**, h44^{km}**±4^{km}**, h43^{km}:pP-P, n72, σ1^{s}55**/82**, mb4.7**/26**, MS4.3**/4**, 5C-1D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.74	236	P	Pn	04 18 12.7	-0.2
	694nm,0.3s,baz=128,slow=12,SNR=6.9						
RAO				S	Sn	04 18 39.5	+5.6
	2µm,0.5s,baz=75,slow=23,SNR=20						
RAO	Raoul Island	1.74	236		Pn	04 18 11.2	-1.7
NIUE	Niue	10.84	34	Pn	Pn	04 20 16.6	-1.3
URZ	Urewera	11.39	207	P	Pn	04 20 27.1	+1.9
	0.7nm,0.3s,baz=3.1,slow=11,SNR=2.1						
URZ				S	Sn	04 22 26.1	-5.0
	15nm,0.5s,baz=8.3,slow=22,SNR=12						
	5.4nm,0.5s						
BKZ	Black Stump Fm	12.41	207	Pn	Pn	04 20 35.3	-4.0
BFZ	Birch Farm	13.82	204	Pn	Pn	04 20 56.2	-2.2
RAR	Rarotonga	16.55	69	P	Pn	04 21 35.0	+0.9
	1.9nm,0.3s,baz=108,slow=3.5,SNR=4.1						
RAR				S	Sn	04 24 14.3	-23
	15nm,0.8s,baz=355,slow=23,SNR=1.4						
RAR				LR	LR	04 26 50.7	
	comp=Z,799nm,21.5s,baz=256,slow=33						
	38nm,0.9s						
DZM	Mont Dzumac	16.81	288	P	P	04 21 41.5	+2.4
DZM				LR	LR	04 27 07.9	
	comp=Z,511nm,18.5s,baz=130,slow=34						
DZM	Mont Dzumac	16.81	288	*e*P	P	04 21 39.1	-0.1
	136nm,1.4s						
DZM				*e*LR	LR	04 25 28.5	
	852nm,27.8s						
DZM	Mont Dzumac	16.81	288		P	04 21 39.5	+0.3
DZM				IAmb	IAmb	04 22 05.3	
	comp=Z,77nm,1.4s						
TBI	Tubuai	24.61	85	*e*P	P	04 23 02.6	+1.2
	comp=Z,483nm,31.2s						
TBI				*e*S	S	04 27 18.3	-1.4
	comp=Z,2µm,28.0s						
TBI				*e*LR	LR	04 28 55.6	
	comp=Z,700nm,26.5s						
TBI				*e*LR	LR	04 29 04.6	
	comp=Z,2µm,21.5s						
PPT2	Papeete2	26.73	72	*e*P	P	04 23 20.3	-0.5
	comp=Z,36nm,24.8s						
PPT2				*e*S	S	04 27 51.1	-2.5
	comp=Z,396nm,24.5s						
PPT2				*e*LR	LR	04 30 03.3	
	comp=Z,412nm,21.0s						
PPT2				*e*LR	LR	04 30 08.4	
	comp=Z,398nm,21.2s						
PPT	Papeete	26.74	72	LR	LR	04 31 42.5	
	comp=Z,513nm,18.7s,baz=240,slow=31						
CTA	Charters Tower	35.03	275	LR	LR	04 38 39.4	
	comp=Z,672nm,18.3s,baz=69,slow=36						
CTAO	Charters Tower	35.03	275	P	P	04 24 32.6	-1.3
CTAO				IAmb	IAmb	04 24 47.1	
	comp=Z,13nm,1.4s						
STKA	Stephens Creek	36.47	254	P	P	04 24 45.1	-1.0
	comp=Z,3.0nm,0.8s,baz=66,slow=7.5,SNR=8.2						
STKA				LR	LR	04 39 38.6	
	comp=Z,311nm,18.3s,baz=67,slow=36						
	comp=Z,3.0nm,0.8s						
RKT	Rikitea	37.44	92	*e*LR	LR	04 34 57.3	
	comp=Z,14µm,43.5s						
TAOE	Nuku Hiva Isla	39.10	68	*e*S	S	04 31 08.3	+3.0
	comp=Z,59nm,23.0s						
TAOE				*e*LR	LR	04 35 49.9	
	comp=Z,370nm,20.9s						
COEN	Coen	40.22	282		P	04 25 16.1	-1.6
COEN				IAmb	IAmb	04 25 19.7	
	comp=Z,7.1nm,0.9s						
AS31	Alice Springs	44.78	264		P	04 25 53.2	-1.6
ASAR	Alice Springs	44.78	264	P	P	04 25 53.2	-1.6
	comp=Z,1.9nm,0.7s,baz=102,slow=7.6,SNR=32						
ASAR				pP	pP	04 26 06.2	+0.4
	comp=Z,2.9nm,0.7s,baz=95,slow=8.6,SNR=8.1						
ASAR				LR	LR	04 45 05.7	
	comp=Z,435nm,18.4s,baz=102,slow=37						
	comp=Z,1.9nm,0.7s						
WR8	Warramunga Arr	45.43	269	P	P	04 25 58.2	-1.8
WR8				IAmb	IAmb	04 26 00.8	
	comp=Z,14nm,1.5s						
WRA	Warramunga Arr	45.58	269	P	P	04 25 59.2	-1.9
	comp=Z,2.9nm,0.7s,baz=109,slow=7.8,SNR=11						
WRA				pP	pP	04 26 11.3	-0.8
	comp=Z,1.8nm,0.7s,baz=110,slow=8.0,SNR=3.0						
	comp=Z,2.9nm,0.7s						
WRA	Warramunga Arr	45.58	269		P	04 25 59.4	-1.8
QSPA	South Pole Qui	61.83	180	P	P	04 28 01.5	+2.0
	comp=Z,15nm,1.0s,baz=34,slow=3.1,SNR=28						
	comp=Z,15nm,1.0s						
QSPA	South Pole Qui	61.83	180	P	P	04 28 01.2	+1.7
MJAR	Matsushiro Arr	77.39	324	P	P	04 29 34.0	-1.5
	comp=Z,3.3nm,0.8s,baz=173,slow=5.3,SNR=6.7						
	comp=Z,3.3nm,0.8s						
TROLL	Troll, Antarti	79.99	180	⇑P	P	04 29 50.7	+1.1
	comp=Z,378nm,0.8s						
SNAA	Sanae	80.23	178	⇑P	P	04 29 51.8	+1.0
	comp=Z,133nm,1.0s						
SNAA	Sanae	80.23	178	P	P	04 29 51.4	+0.6
	comp=Z,8.5nm,1.1s,baz=214,slow=3.6,SNR=11						
SNAA				pP	pP	04 30 04.4	+2.2
	comp=Z,2.3nm,0.8s,baz=214,slow=3.4,SNR=3.4						
	comp=Z,8.5nm,1.1s						
SNAA	Sanae	80.23	178		P	04 29 51.3	+0.5
SNAA				IAmb	IAmb	04 29 54.1	
	comp=Z,13nm,1.1s						
VNA3	Neumayer Olymp	80.31	176	⇑P	P	04 29 52.1	+1.0
	comp=Z,9.0nm,0.7s						
VNA2	Neumayer--Watz	80.77	176	⇑P	P	04 29 54.9	+1.4
	comp=Z,10nm,0.8s,baz=164,slow=3.4						
VNA1	Neumayer--Stat	80.99	176	⇑P	P	04 29 55.9	+1.2
	comp=Z,15nm,1.0s						
PLCA	Paso Flores	82.84	133	P	P	04 30 05.7	+0.5
	comp=Z,4.7nm,1.1s,baz=223,slow=6.4,SNR=5.2						
	comp=Z,4.7nm,1.1s						
PLCA	Paso Flores	82.84	133		P	04 30 05.9	+0.8
PLCA				IAmb	IAmb	04 30 08.0	
	comp=Z,11nm,1.2s						
KSRS	Korea Array	83.73	319	P	P	04 30 08.8	-0.6
	comp=Z,3.5nm,0.9s,baz=142,slow=5.7,SNR=5.6						
	comp=Z,3.5nm,0.9s						
NVAR	Mina Array Bea	85.66	42	P	P	04 30 19.8	+0.4
	comp=Z,2.0nm,0.8s,baz=227,slow=7.1,SNR=10						
	comp=Z,2.0nm,0.8s						
NVAR	Mina Array Bea	85.66	42	P	P	04 30 19.2	-0.2
NJ2	Nanjing	86.03	310	*e*P	P	04 30 23.4	+2.3
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
USRK	Ussuriysk Ar.	86.24	326	P	P	04 30 21.9	0.0
	comp=Z,5.0nm,0.7s,baz=88,slow=8.4,SNR=5.5						
	comp=Z,5.0nm,0.7s						
TUC	Tucson	86.61	51		P	04 30 25.2	+1.1
TUC				IAmb	IAmb	04 30 26.7	
	comp=Z,7.0nm,1.1s						
CN2	Changchun	89.38	322	*e*P	P	04 30 35.9	-1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TIA	Tai'an	89.65	312	P	P	04 30 39.5	+1.1
TIA				pP	pP	04 30 49.9	-0.2
TIA				sP	sP	04 30 54.5	0.0
TIA				PP	PP	04 34 14.0	+2.9
TIA	Tai'an	89.65	312	S	S	04 41 29.5	+3.1
TIA	Tai'an	89.65	312	SS	SS	04 47 27.8	+3.6
TIA				pmax	pmax		
	comp=Z,18nm,1.3s						
TXAR	Lajitas Array	89.97	56	P	P	04 30 40.1	0.0
	comp=Z,1.3nm,1.1s,baz=210,slow=7.2,SNR=8.3						
	comp=Z,1.3nm,1.1s						
TXAR	Lajitas Array	89.97	56	P	P	04 30 40.4	+0.2
ENH	Enshi	91.67	304		P	04 30 48.7	+0.8
HNS	HongShan	91.92	312	⇓P	P	04 30 50.3	+1.4
HNS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PDAR	Pinedale Array	93.56	43	P	P	04 30 56.1	-0.5
	comp=Z,0.7nm,0.9s,baz=197,slow=2.5,SNR=4.7						
	comp=Z,0.7nm,0.9s						
SEY	Seymchan	94.27	346	P	P	04 30 58.7	-0.4
	comp=Z,2.4nm,0.9s,baz=345,slow=3.3,SNR=3.9						
	comp=Z,2.4nm,0.9s						
ILAR	Eielson Array	95.53	12	P	P	04 31 04.3	-0.5
	comp=Z,0.3nm,0.8s,baz=217,slow=5.8,SNR=5.8						
	comp=Z,0.3nm,0.8s						
PZH	PanZhiHua	95.67	297	P	P	04 31 07.3	+0.7
HHC	Hu-ho-hao-te	95.86	313	*e*P	P	04 31 08.9	+1.8
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,80nm,4.0s						
ZALV	Zalesovo Beam	117.44	319	PKP	PKPdf	04 36 24.1	-1.5
	comp=Z,0.3nm,0.4s,baz=236,slow=1.6,SNR=3.9						
MKAR	Makanchi Array	117.55	311	PKP	PKPdf	04 36 24.8	-1.2
	comp=Z,1.2nm,0.9s,baz=64,slow=3.8,SNR=7.5						
MKAR				pPKP	pPKPdf	04 36 36.9	-1.1
	comp=Z,0.7nm,0.7s,baz=64,slow=2.8,SNR=4.0						
MKAR	Makanchi Array	117.55	311		PKPdf	04 36 24.2	-1.8
KURBB	Kurchatov Arra	120.70	314	PKP	PKPdf	04 36 31.1	-0.9
	comp=Z,1.8nm,0.2s,baz=115,slow=2.0,SNR=7.6						
KURBB				pPKP	pPKPdf	04 36 44.0	+0.2
	comp=Z,1.0nm,0.2s,baz=100,slow=2.0,SNR=2.1						
BVAR	Borovoye Array	125.91	317	PKP	PKiKP	04 36 41.8	-0.5
	comp=Z,3.2nm,0.9s,baz=48,slow=4.4,SNR=7.2						
ARCES	ARCESS Array B	136.82	349	PKP	PKPdf	04 37 02.0	0.0
	comp=Z,3.5nm,0.9s,baz=88,slow=3.8,SNR=6.6						
FINES	FINESS Array B	143.63	342	PKP	PKPdf	04 37 15.0	+0.5
	comp=Z,2.9nm,0.9s,baz=356,slow=7.6,SNR=3.9						
FINES				pPKP	pPKPdf	04 37 27.0	+0.5
	comp=Z,4.1nm,0.9s,baz=339,slow=3.6,SNR=2.5						
KBZ	Khabaz	145.11	307	PKP	PKPdf	04 37 17.2	-0.5
	comp=Z,4.4nm,0.9s,baz=75,slow=3.0,SNR=4.3						
NC303	NORSAR Array S	146.65	353		PKPbc	04 37 20.6	-0.8
NB2	NORSAR Subarra	146.85	353	PKP	PKPbc	04 37 21.1	-1.0
	comp=Z,2.2nm,0.7s,baz=6.9,slow=2.9						
NOA	NORSAR Array B	146.85	353	PKPbc	PKPdf	04 37 20.4	+0.2
	comp=Z,4.8nm,0.8s,baz=13,slow=4.4,SNR=9.8						
HFS	Hagfors	147.43	351	PKPbc	PKPbc	04 37 23.3	-0.4
	comp=Z,9.4nm,0.8s,baz=48,slow=2.2,SNR=12						
AKASG	Malin Array Be	150.45	326	PKPbc	PKiKP	04 37 31.5	-0.8
	comp=Z,15nm,1.0s,baz=47,slow=2.8,SNR=23						
AKASG				PKPab	PKPab	04 37 36.9	-1.3
	comp=Z,5.4nm,0.9s,baz=45,slow=2.9,SNR=6.9						
AKASG	Malin Array Be	150.45	326		PKPbc	04 37 31.2	-0.3
AKBB	Malin Array Si	150.45	326		PKPbc	04 37 31.2	-0.3
BRTR	Keskin Array B	152.82	303	PKPbc	PKPbc	04 37 37.2	-0.3
	comp=Z,2.4nm,1.0s,baz=140,slow=2.2,SNR=8.5						
BRTR				PKPab	PKPab	04 37 48.3	-0.4
	comp=Z,3.1nm,1.0s,baz=133,slow=3.7,SNR=7.9						
BRTR	Keskin Array B	152.82	303		PKPbc	04 37 37.0	-0.6

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*IDC **14** 04:32:14.0±6.0, 22.°97S×175.°58W, h0^{km}, mb3.8/2, mbtmp3.8/2, Error ellipse: s-maj=294.0km s-min=51.3km az=150.0*

ISC 14 04:32:14.6±1.7**, 23.°7S**±0.°4×**174.°9W**±0.°3**, h29^{km}, n6, σ0^{s}18**/6**, mb4.1**/4**, 2C, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	46.63	259	P	P	04 40 40.9	+0.2
	1.9nm,0.9s,baz=97,slow=7.9,SNR=18						
	1.9nm,0.9s						
WRA	Warramunga Arr	47.04	264	P	P	04 40 43.6	-0.2
	0.7nm,0.6s,baz=102,slow=8.2,SNR=6.9						
	0.7nm,0.6s						
VNA3	Neumayer Olymp	84.79	175	⇑P	P	04 44 45.8	-0.1
	comp=Z,0.3nm,0.2s						
VNA2	Neumayer--Watz	85.26	176	⇑P	P	04 44 48.2	0.0
	comp=Z,0.4nm,0.2s,baz=328,slow=15						
AKASG	Malin Array Be	147.14	331	PKPbc	PKPab	04 51 56.2	0.0
	comp=Z,0.7nm,0.6s,baz=40,slow=3.4,SNR=4.2						
BRTR	Keskin Array B	151.05	310	PKPbc	PKiKP	04 52 05.8	+0.1
	comp=Z,0.2nm,0.3s,baz=92,slow=4.0,SNR=1.7						

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*MDD **14** 04:52:17.1±0.7, 36.°37N×11.°42W, h30^{km}, Mb4.4/12, M_mb3.8/12, Error ellipse: s-maj=5.9km s-min=3.8km az=84.0*

*IGIL **14** 04:52:18.5, 36.°34N×11.°46W, h31^{km}, ML2.7*

*INMG **14** 04:52:18.3±1.4, 36.°35N×11.°45W, h40^{km}, ML2.7, Error ellipse: s-maj=5.7km s-min=3.8km az=93.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*

*CNRM **14** 04:52:19.4, 36.°17N×11.°16W, h54^{km}, ML3.5*

ISC 14 04:52:17.1±1.4**, 36.°34N**±0.°04×**11.°26W**±0.°07**, h35^{km}, n92, σ1^{s}71**/147**, 11C, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.11	67	Pn	Pn	04 52 51.6	+1.7
PFVI				Sn	Sn	04 53 16.0	+1.1
PFVI	Vila Bisbo	2.11	67	⇑*e*P	Pn	04 52 51.5	+1.7
PFVI				*e*S	Sn	04 53 16.1	+1.2
PFVI				*i* IAML		04 53 16.9	
PFVI				*i* IAML		04 53 17.4	
PFVI				*i* IAML		04 53 17.9	
PFVI	Vila Bisbo	2.11	67	P	Pn	04 52 51.5	+1.7
PFVI	Vila Bisbo	2.11	67	S	Sn	04 53 17.0	+2.2
MORF	Marmelete	2.31	64	*e*P	Pn	04 52 54.3	+1.7
MORF				*e*S	Sn	04 53 20.6	+0.9
MORF				IAML		04 53 22.9	
	comp=N,79nm,0.2s						
MORF	Marmelete	2.31	64	*e*P	Pn	04 52 54.3	+1.7
MORF				*e*S	Sn	04 53 21.4	+1.6
MORF				*i* IAML		04 53 22.7	
MORF				*i* IAML		04 53 22.9	
MORF				*i* IAML		04 53 24.1	
PTEO	Sao Teotonio	2.36	59	*e*P	Pn	04 52 55.2	+1.9
PTEO				*e*S	Sn	04 53 22.4	+1.3
PTEO				*i* IAML		04 53 23.1	
PTEO				*i* IAML		04 53 23.6	
PTEO				*i* IAML		04 53 28.0	
PBDV	Barranco-do-Ve	2.82	70	Pn	Pn	04 53 01.8	+2.1
PBDV				Sn	Sn	04 53 32.3	-0.1
PBDV	Barranco-do-Ve	2.82	70	*e*P	Pn	04 53 02.1	+2.4
PBDV				*e*S	Sn	04 53 33.1	+0.6
PBDV				*i* IAML		04 53 37.5	
PBDV				*i* IAML		04 53 37.9	
PBDV				*i* IAML		04 53 38.4	
MESJ	Messejana	2.86	57	*e*P	Pn	04 53 01.9	+1.8
MESJ				*e*S	Sn	04 53 33.6	+0.3
MESJ				IAML		04 53 37.0	
	comp=N,14nm,0.1s						
MESJ	Messejana	2.86	57	*e*P	Pn	04 53 01.9	+1.8
MESJ				*e*S	Sn	04 53 34.0	+0.7
MESJ				*i* IAML		04 53 37.1	
MESJ				*i* IAML		04 53 38.9	
MESJ				*i* IAML		04 53 40.2	
PCVE	Castro Verde	2.88	62	Pn	Pn	04 53 02.5	+2.0
PCVE				Sn	Sn	04 53 34.5	+0.5
PCVE	Castro Verde	2.88	62	*e*P	Pn	04 53 02.5	+2.0
PCVE				*e*S	Sn	04 53 35.5	+1.5
PCVE				*i* IAML		04 53 37.1	
PCVE				*i* IAML		04 53 39.9	
PCVE				*i* IAML		04 53 41.4	
PVAQ	Vaqueiros	3.03	68	*e*P	Pn	04 53 04.7	+2.2
PVAQ				*e*S	Sn	04 53 38.6	+1.0
PVAQ				*i* IAML		04 53 41.3	
PVAQ				*i* IAML		04 53 43.6	
PVAQ				*i* IAML		04 53 44.9	
PVAQ	Vaqueiros	3.03	68	P	Pn	04 53 04.3	+1.7
PVAQ	Vaqueiros	3.03	68	S	Sn	04 53 40.2	+2.5
PMAFR	Mafra	3.05	30	Pn	Pn	04 53 03.0	+0.3
PMAFR	Mafra	3.05	30	*e*P	Pn	04 53 03.1	+0.4
PMAFR				*e*S	Sn	04 53 38.7	+0.6
PMAFR				*i* IAML		04 53 41.6	
PMAFR				*i* IAML		04 53 41.7	
PMAFR				*i* IAML		04 53 43.3	
MOE	Montemor	3.18	46	*e*P	Pn	04 53 05.7	+1.1
MOE				*e*S	Sn	04 53 41.4	0.0
MOE				*i* IAML		04 53 43.9	
MOE				*i* IAML		04 53 45.0	
MOE				*i* IAML		04 53 45.1	
PBEJ	Beja	3.19	57	*e*P	Pn	04 53 06.1	+1.4
PBEJ				*e*S	Sn	04 53 42.0	+0.4
PBEJ				*i* IAML		04 53 44.1	
PBEJ				*i* IAML		04 53 44.3	
PBEJ				*i* IAML		04 53 45.7	
EGRO	El Granado	3.25	67	Pn	Pn	04 53 08.1	+2.5
EGRO				Sn	Sn	04 53 43.8	+0.7
EGRO	El Granado	3.25	67	Pn	Pn	04 53 08.0	+2.4
EGRO				⇑*i*IVmb_VC		04 53 10.5	
	comp=N,286nm,SNR=2.4						
EGRO				Sn	Sn	04 53 43.9	+0.8
EVO	Evora	3.39	49	Pn	Pn	04 53 08.8	+1.4
EVO				Sn	Sn	04 53 46.0	-0.4
EVO	Evora	3.39	49	*e*P	Pn	04 53 08.8	+1.4
EVO				*e*S	Sn	04 53 47.2	+0.8
EVO				*i* IAML		04 53 48.4	
EVO				*i* IAML		04 53 49.1	
EVO				*i* IAML		04 53 49.2	
PARRA	Arraiolos	3.56	45	*e*P	Pn	04 53 10.6	+0.8
PARRA				*e*S	Sn	04 53 50.4	-0.2
PARRA				*i* IAML		04 53 52.5	
PARRA				*i* IAML		04 53 53.0	
PARRA				*i* IAML		04 53 54.0	
PMTG	Montargil	3.64	41	*e*P	Pn	04 53 11.4	+0.5
PMTG				*e*S	Sn	04 53 52.8	+0.3
PMTG				*i* IAML		04 53 55.9	
PMTG				*i* IAML		04 53 56.4	
PMTG				*i* IAML		04 53 56.7	
PSBE	So Bento	3.72	31	*e*P	Pn	04 53 12.8	+0.7
PSBE				*e*S	Sn	04 53 55.6	+0.9
PSBE				*i* IAML		04 53 57.5	
PSBE				*i* IAML		04 53 57.6	
PSBE				*i* IAML		04 53 59.1	
PBAR	Barrancos	3.83	60	Pn	Pn	04 53 15.2	+1.6
PBAR				Sn	Sn	04 53 57.6	+0.1
PBAR	Barrancos	3.83	60	*e*P	Pn	04 53 15.8	+2.2
PBAR				*e*S	Sn	04 53 57.9	+0.4
PBAR				*i* IAML		04 53 59.2	
PBAR				*i* IAML		04 53 59.8	
PBAR				*i* IAML		04 54 00.1	
PESTR	Estremoz	3.86	48	*e*P	Pn	04 53 15.2	+1.3
PESTR				*e*S	Sn	04 53 57.9	0.0
PESTR				*i* IAML		04 53 59.1	
PESTR				*i* IAML		04 53 59.9	
PESTR				*i* IAML		04 54 00.7	
EMIN	Mina Concepcio	3.94	67	Pn	Pn	04 53 16.8	+1.9
EMIN				Sn	Sn	04 53 59.9	0.0
EMIN	Mina Concepcio	3.94	67	Pn	Pn	04 53 16.9	+1.9
EMIN				Sn	Sn	04 53 58.1	-1.9
PSARD	Sardoal	4.08	36	*e*P	Pn	04 53 18.0	+1.1
PSARD				*e*S	Sn	04 54 03.1	-0.3
PSARD				*i* IAML		04 54 05.0	
PSARD				*i* IAML		04 54 05.3	
PSARD				*i* IAML		04 54 05.3	
EBAD	Badajoz	4.15	53	Pn	Pn	04 53 18.8	+0.9
EBAD				Sn	Sn	04 54 04.8	-0.4
EBAD	Badajoz	4.15	53	Pn	Pn	04 53 19.0	+1.1
EBAD				⇑*i*IVmb_VC		04 53 19.7	
	comp=N,250nm,SNR=1.9						
EBAD				Sn	Sn	04 54 04.8	-0.4
PCAS	Casmilo, Conde	4.30	30	*e*P	Pn	04 53 20.4	+0.5
PCAS				*e*S	Sn	04 54 08.8	-0.1
PCAS				*i* IAML		04 54 10.8	
PCAS				*i* IAML		04 54 11.3	
PCAS				*i* IAML		04 54 11.8	
PMRV	Marv??o	4.35	44	*e*P	Pn	04 53 21.1	+0.5
PMRV				*e*S	Sn	04 54 08.6	-1.4
PMRV				*i* IAML		04 54 10.2	
PMRV				*i* IAML		04 54 10.4	
PMRV				*i* IAML		04 54 11.0	
ESPR	Espera	4.38	81	Pn	Pn	04 53 23.2	+2.2
ESPR				Sn	Sn	04 54 11.2	+0.3
ESPR	Espera	4.38	81	Pn	Pn	04 53 23.3	+2.2
ESPR				⇑*i*IVmb_VC		04 53 24.3	
	comp=N,756nm,SNR=5.8						
ESPR				Sn	Sn	04 54 11.8	+0.9
AVE	Averroes	4.38	133	Pn	Pn	04 53 21.9	+0.7
AVE				Sn	Sn	04 54 09.9	-1.0
AVE	Averroes	4.38	133	P	Pn	04 53 22.1	+0.9
AVE	Averroes	4.38	133	S	Sn	04 54 10.6	-0.4
PCBR	Castelo Branco	4.60	39	*e*P	Pn	04 53 24.9	+0.9
PCBR				*e*S	Sn	04 54 15.1	-1.1
PCBR				*i* IAML		04 54 17.1	
PCBR				*i* IAML		04 54 17.5	
RSA	Sarsar	4.66	107	P	Pn	04 53 26.0	+1.0
RSA	Sarsar	4.66	107	S	Sn	04 54 18.1	+0.2
EJIF	Jimena Fronter	4.67	87	Pn	Pn	04 53 27.6	+2.5
EJIF				Sn	Sn	04 54 17.0	-1.1
SRHM	Skhour des Reh	4.75	143	P	Pn	04 53 28.1	+1.8
SRHM	Skhour des Reh	4.75	143	S	Sn	04 54 21.6	+1.4
SMIR	Smir Dam	4.81	96	P	Pn	04 53 27.3	+0.3
SMIR	Smir Dam	4.81	96	S	Sn	04 54 21.5	+0.1
ECAB	El Cabril	4.98	68	Pn	Pn	04 53 31.3	+2.0
ECAB				Sn	Sn	04 54 24.5	-1.1
ECAB	El Cabril	4.98	68	Pn	Pn	04 53 30.9	+1.6
ECAB				⇑*i*IVmb_VC		04 53 31.8	
	comp=N,142nm,SNR=1.3						
ECAB				Sn	Sn	04 54 23.5	-2.1
MTE	Manteigas	5.00	35	*e*P	Pn	04 53 30.1	+0.5
MTE				*e*S	Sn	04 54 25.4	-0.7
MTE				*i* IAML		04 54 28.1	
MTE				*i* IAML		04 54 30.3	
PVIS	Viseu	5.11	30	*e*P	Pn	04 53 31.3	+0.2
PVIS				*e*S	Sn	04 54 27.9	-0.9
EMIJ	Mijas	5.24	86	Pn	Pn	04 53 34.2	+1.3
EMIJ				⇑*i*IVmb_VC		04 53 38.8	
	comp=N,161nm,SNR=1.4						
EMIJ				Sn	Sn	04 54 29.8	-2.2
EPLA	Plasencia	5.52	46	Pn	Pn	04 53 37.7	+1.0
EPLA				⇑*i*IVmb_VC		04 53 41.3	
	comp=N,248nm,SNR=1.4						
EPLA				Sn	Sn	04 54 37.5	-1.6
EADA	Adamuz	5.64	69	Pn	Pn	04 53 39.7	+1.3
EADA				Sn	Sn	04 54 41.5	-0.3
EADA	Adamuz	5.64	69	Pn	Pn	04 53 39.9	+1.6
EADA				⇑*i*IVmb_VC		04 53 47.3	
	comp=N,160nm,SNR=1.0						
EADA				Sn	Sn	04 54 39.5	-2.4
POLO	Lamas de Olo	5.71	27	*e*P	Pn	04 53 39.4	0.0
POLO				*e*S	Sn	04 54 41.5	-2.2
IFR	Ifrane	5.77	117	Pn	Pn	04 53 40.4	+0.1
IFR				Sn	Sn	04 54 40.3	-5.1
EGOR	Sierra Gorda,	5.80	80	Pn	Pn	04 53 43.9	+3.2
EGOR				Sn	Sn	04 54 44.0	-2.0
MVO	Moncorvo	5.84	33	*e*P	Pn	04 53 41.6	+0.4
MVO				*e*S	Sn	04 54 44.7	-2.3
MVO				*i* IAML		04 54 47.8	
MVO				*i* IAML		04 54 48.5	
OUK	Oukaimeden	5.85	150	P	Pn	04 53 41.2	-0.3
OUK	Oukaimeden	5.85	150	S	Sn	04 54 46.3	-1.2
LCRM	LCR	5.88	115	P	Pn	04 53 42.2	+0.3
LCRM	LCR	5.88	115	S	Sn	04 54 47.8	-0.4
PMAR	Madeira	5.89	234	P	Pn	04 53 43.7	+1.6
PMAR	Madeira	5.89	234	S	Sn	04 54 50.6	+2.1
ELOB	Lobios	6.06	23	⇑*i*IVmb_VC		04 53 42.8	
	comp=N,330nm,SNR=1.0						
ELOB				Pn	Pn	04 53 43.5	-0.6
ELOB				Sn	Sn	04 54 47.5	-4.8
PALE	Palemas	6.06	98	P	Pn	04 53 44.7	+0.6
PALE	Palemas	6.06	98	S	Sn	04 54 52.3	+0.1
PGAV	Gavieira, Arco	6.08	22	*e*P	Pn	04 53 45.1	+0.6
TISM	Timmit	6.10	138	S	Sn	04 54 50.7	-2.6
AKLM	AKL	6.31	105	P	Pn	04 53 46.2	-1.4
AKLM	AKL	6.31	105	S	Sn	04 54 55.6	-3.0
PAB	San Pablo	6.33	58	Pn	Pn	04 53 49.2	+1.3
PAB				⇑*i*IVmb_VC		04 53 52.0	
	comp=N,138nm,SNR=1.2						
PAB				Sn	Sn	04 54 54.5	-4.6
TIO	Tiouine	6.34	147	Pn	Pn	04 53 48.4	+0.2
TIO				Sn	Sn	04 54 54.4	-5.1
TIO	Tiouine	6.34	147	P	Pn	04 53 48.7	+0.5
TIO	Tiouine	6.34	147	S	Sn	04 54 58.6	-0.9
MD31	MD31	6.38	121	P	Pn	04 53 48.9	+0.2
MD31	MD31	6.38	121	S	Sn	04 54 59.8	-0.5
PSIM	Granatula de C	6.45	65	Pn	Pn	04 53 51.2	+1.6
PSIM				Sn	Sn	04 54 58.0	-4.1
PBRG	Braganca	6.49	31	*e*P	Pn	04 53 50.2	+0.1
PBRG				*e*S	Sn	04 55 00.4	-2.5
MDT	Midelt	6.52	121	P	Pn	04 53 50.6	+0.1
MDT	Midelt	6.52	121	S	Sn	04 55 01.6	-2.1
OUZM	OUZ	6.59	144	P	Pn	04 53 52.0	+0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
OUZM				P		04 53 52.1	
OUZM	OUZ	6.59	144	S	Sn	04 55 02.9	-2.6
ECAL	Calabor	6.61	31	Pn	Pn	04 53 51.5	-0.2
ECAL				⇑*i*IVmb_VC		04 53 56.5	
	comp=N,306nm,SNR=1.3						
ECAL				Sn	Sn	04 55 01.0	-4.9
EQES	Quesada	6.71	75	Sn	Sn	04 55 05.5	-3.0
EAGO	Agolada(Pontev	6.91	20	Pn	Pn	04 53 54.5	-1.2
EAGO				Sn	Sn	04 55 07.3	-5.7
TZRR	Tazzarine	7.29	138	P	Pn	04 54 01.2	-0.1
TZRR	Tazzarine	7.29	138	S	Sn	04 55 20.7	-2.2

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*IDC **14** 04:57:32.5±0.4, 14°.39S×167°.76E, h0^{km}, mb5.3/23, mbtmp5.2/24, ML5.1/1, MS5.5/49, Error ellipse: s-maj=17.5km s-min=12.7km az=101.0*

*MOS **14** 04:57:34.3±1.2, 14°.25S×167°.61E, h14^{km}, mb6.0/59, MS5.6/19, Error ellipse: s-maj=7.4km s-min=6.3km az=112.9*

*NEIC **14** 04:57:34.9±2.8, 14°.36S±0°.07×167°.71E±0°.07, h8^{km}±3^{km}, mb5.9/568, Ms_20 5.8/681, Mww6.0/29, Error ellipse: s-maj=10.3km s-min=9.0km az=205.0*

*NEIC **14** 04:57:34.2, 14°.39S×167°.67E, h12^{km}*

*NEIC **14** 04:57:34.2, 14°.29S×167°.67E, h12^{km}, Moment Tensor Solution. Duration: 4^{s}6 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.61; M$_{\theta\theta}$0.08; M$_{\phi\phi}$-0.69; M$_{r\theta}$0.61; M$_{\theta\phi}$0.40; M$_{\phi r}$0.41; Fault plane solution: M$_0$1.06000×10^{18} NP1: ϕ_s127.30000°, δ49.52000°, λ37.95000°. NP2: ϕ_s10.44000°, δ62.11000°, λ132.74000°. Principal axes: T 1.1786, Plg52.0000°, Azm332.0000°; N -0.2981, Plg37.0000°, Azm167.0000°; P -0.8805, Plg7.0000°, Azm72.0000°;*

*BJI **14** 04:57:34.7, 14°.20S×167°.65E, h10^{km}, mB6.3/75, mb5.5/83, Ms5.8/96, Ms7 5.5/89*

*NOU **14** 04:57:34.3, 14°.33S×167°.74E, h0^{km}, ML6.2/153, Vanuatu Islands*

*GFZ **14** 04:57:35.8, 14°.29S×167°.65E, h14^{km}, MW5.9, Moment Tensor Solution. s96 Moment tensor: M$_{rr}$6.45; M$_{\theta\theta}$1.24; M$_{\phi\phi}$-7.69; M$_{r\theta}$-0.10; M$_{\theta\phi}$4.00; M$_{\phi r}$-2.05; Fault plane solution: NP1: ϕ_s170.00000°, δ53.00000°, λ104.00000°. NP2: ϕ_s327.00000°, δ39.00000°, λ72.00000°. Principal axes: T 6.8400, Plg77.0000°, Azm129.0000°; N 2.6000, Plg11.0000°, Azm341.0000°; P -9.4400, Plg7.0000°, Azm250.0000°;*

*GCMT **14** 04:57:36.9±0.1, 14°.34S×167°.73E, h12^{km}, MW5.9/160, Moment Tensor Solution. s141,c286; s160,c502; Duration: 2^{s}2 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.61±.01; M$_{\theta\theta}$0.23±.01; M$_{\phi\phi}$-0.83±.01; M$_{r\theta}$0.17±.01; M$_{\theta\phi}$0.46±.00; M$_{\phi r}$0.15±.01; Best double couple: M$_0$0.87500×10^{18} NP1: ϕ_s132.00000°, δ50.00000°, λ48.00000°. NP2: ϕ_s6.00000°, δ55.00000°, λ129.00000°. Principal axes: T 0.7390, Plg59.0000°, Azm335.0000°; N 0.2710, Plg31.0000°, Azm162.0000°; P -1.0100, Plg3.0000°, Azm70.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*IPGP **14** 04:57:37.0, 14°.42S×167°.69E, h12^{km}, Mw5.9, Fault plane solution: NP1: ϕ_s134.00000°, δ58.00000°, λ49.00000°. NP2: ϕ_s13.00000°, δ51.00000°, λ136.00000°.*

ISC 14 04:57:36.1±0.3**, 14°.32S**±0°.03×**167°.86E**±0°.03**, h22**^{km}±3^{km}**, h22**^{km}**:pP-P, n1742, σ1^{s}81**/1391**, mb5.8**/447**, MS5.8**/430**, 86C-37D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.29	209		Pn	04 57 53.5	-5.4
SANVU	Saraoutou	1.29	209	P	Pn	04 57 57.8	-1.0
SANVU	Saraoutou	1.29	209	⇑P	Pn	04 57 53.4	-5.4
DVP	Devils Point	3.40	175	P	Pn	04 58 26.3	-1.6
DVP	Devils Point	3.40	175	S	Sn	04 59 10.3	+2.7
RTV	Rentapao	3.50	171	P	Pn	04 58 27.6	-1.6
INH	Isangel	5.37	166	P	Pn	04 58 55.7	+0.6
HURO	Huro Makira	6.96	303	P	Pn	04 59 15.7	-1.2
KOUNC	Koumac, New Ca	7.07	208	P	Pn	04 59 18.0	-0.4
KOUNC	Koumac, New Ca	7.07	208	S	Sn	05 00 39.3	+1.2
MARNC	Mare, Loyalty	7.12	179		Pn	04 59 17.1	-2.0
MARNC	Mare, Loyalty	7.12	179	P	Pn	04 59 18.6	-0.5
YATNC	Mamie plateau,	7.75	187	P	Pn	04 59 26.7	-1.1
DZM	Mont Dzumac	7.83	190	Pn	Pn	04 59 26.6	-2.2
	30nm,0.3s,baz=60,slow=20,SNR=168						
DZM				Sn	Sn	05 00 57.2	+0.3
	24nm,0.3s,baz=166,slow=23,SNR=3.9						
DZM				LR	LR	05 02 03.1	
	comp=Z,30µm,20.2s,baz=256,slow=35						
	235nm,0.6s						
DZM	Mont Dzumac	7.83	190	*e*Pn	Pn	04 59 26.8	-2.1
	857nm,0.9s						
DZM				*e*LR	LR	05 01 12.9	
	33µm,25.5s						
DZM	Mont Dzumac	7.83	190		Pn	04 59 26.8	-2.1
DZM	Mont Dzumac	7.83	190	P	Pn	04 59 28.6	-0.2
DZM	Mont Dzumac	7.83	190	⇑P	Pn	04 59 27.3	-1.5
ONTNC	Ouen Toro	8.05	189		Pn	04 59 30.8	-1.1
ONTNC	Ouen Toro	8.05	189	P	Pn	04 59 31.6	-0.3
ONTNC	Ouen Toro	8.05	189	⇓P	Pn	04 59 31.0	-0.9
NGOA	Tingoa Renbel	8.08	289	P	Pn	04 59 30.6	-1.6
OUENC	Ouen Island, N	8.11	187	P	Pn	04 59 33.4	+0.7
PINNC	Pines Island,	8.26	183		Pn	04 59 33.6	-1.1
PINNC	Pines Island,	8.26	183	P	Pn	04 59 35.0	+0.3
SAVO	Savo Central	9.40	302	P	Pn	04 59 50.6	+0.2
TATA	Tatamba Isabel	9.85	306	P	Pn	04 59 55.8	-0.8
MSVF	Nonsavu	10.37	110		Pn	05 00 09.0	+5.2
MSVF	Nonsavu	10.37	110	P	Pn	05 00 07.2	+3.4
MSVF	Nonsavu	10.37	110	P	Pn	05 00 09.0	+5.2
MSVF	Nonsavu	10.37	110	⇓P	Pn	05 00 08.1	+4.3
FUNA	Funafuti	12.52	64		Pn	05 00 32.1	-1.0
FUNA	Funafuti	12.52	64	P	Pn	05 00 34.8	+1.7
FUNA	Funafuti	12.52	64	⇑P	Pn	05 00 33.9	+0.8
NFK	Norfolk Island	14.65	180	P	Pn	05 01 03.3	+1.1
	comp=Z,238nm,1.6s,comp=Z,0.0nm						
NFK	Norfolk Island	14.65	180	P	Pn	05 01 04.4	+2.2
TARA	Tarawa	16.36	18	P	Pn	05 01 25.9	+1.2
GD1S	Gladstone Soft	18.38	236	P	Pn	05 01 51.3	+1.6
AUNRC	North Rockhamp	18.68	239	P	Pn	05 01 54.5	+1.1
LHI	Lord Howe Isla	18.92	204	P	P	05 01 55.7	+0.1
LHI	Lord Howe Isla	18.92	204		P	05 01 54.6	-0.9
LHI				IAmb	IAmb	05 02 05.4	
	comp=Z,889nm,1.6s						
LHI	Lord Howe Isla	18.92	204	⇓P	P	05 01 55.3	-0.3
AUWSH	Wavell State H	18.98	224	P	Pn	05 01 56.7	-0.2
GC1S	Gold Coast 1 S	19.17	222	P	P	05 01 58.4	+0.1
EIDS	Eidsvold	19.21	233	P	P	05 01 58.9	+0.2
EIDS	Eidsvold	19.21	233		P	05 01 58.6	-0.1
EIDS	Eidsvold	19.21	233	P	P	05 01 59.1	+0.3
EIDS	Eidsvold	19.21	233	⇓P	P	05 01 59.0	+0.2
AFI	Afiamalu	19.76	91		Pn	05 02 06.1	-0.4
AFI	Afiamalu	19.76	91	P	Pn	05 02 08.9	+2.4
AFI	Afiamalu	19.76	91	P	Pn	05 02 06.1	-0.4
AFI				pmax	pmax		
	comp=Z,112nm,1.1s						
TW1H	Toowoomba 1 Ha	19.80	226	P	Pn	05 02 06.4	-0.5
RAO	Raoul Island	19.85	141	P	Pn	05 02 09.7	+2.3
	comp=Z,247nm,0.3s,baz=216,slow=8.9,SNR=14						
RAO				LR	LR	05 08 05.3	
	comp=Z,11µm,18.4s,baz=317,slow=32						
RAO	Raoul Island	19.85	141	P	Pn	05 02 09.7	+2.3
RAO	Raoul Island	19.85	141	P	Pn	05 02 07.5	+0.1
RAO	Raoul Island	19.85	141	P	Pn	05 02 09.7	+2.3
RAO				pmax	pmax		
	comp=Z,1µm,1.1s						
GLKZ	Green Lake	19.86	141	P	Pn	05 02 11.1	+3.6
TV1H	Townsville Har	20.75	253	P	Pn	05 02 17.1	-0.9
PMG	Port Moresby	20.83	281	P	Pn	05 02 18.4	-0.6
	comp=Z,338nm,1.1s,baz=94,slow=6.9,SNR=38						
PMG				LR	LR	05 09 27.7	
	comp=Z,50µm,19.0s,baz=74,slow=34						
PMG	Port Moresby	20.83	281		Pn	05 02 17.9	-1.1
PMG				IAmb	IAmb	05 02 25.2	
	comp=Z,533nm,1.1s						
PMG	Port Moresby	20.83	281	IAMs_20	IAMs_20	05 09 16.3	
	comp=Z,45µm,19.0s						
PMG	Port Moresby	20.83	281	P	P	05 02 17.6	+1.1
PMG	Port Moresby	20.83	281	P	Pn	05 02 18.4	-0.6
PMG	Port Moresby	20.83	281	P	Pn	05 02 18.3	-0.7
	comp=Z,10µmcomp=Z,468nm,1.3s						
PMG	Port Moresby	20.83	281	*ce*P	P	05 02 15.9	-0.6
PMG				pmax	pmax		
	comp=Z,401nm,1.3s						
PMG	Port Moresby	20.83	281	⇑P	P	05 02 16.6	+0.1
CTA	Charters Tower	21.41	251	P	P	05 02 22.6	-0.1
	comp=Z,74nm,0.9s,baz=72,slow=11,SNR=63						
CTA				LR	LR	05 09 58.7	
	comp=Z,49µm,18.4s,baz=61,slow=35						
	comp=Z,74nm,0.9s						
CTAO	Charters Tower	21.41	251	P	P	05 02 22.9	+0.1
CTAO				IAmb	IAmb	05 02 28.9	
	comp=Z,427nm,1.2s						
CTAO	Charters Tower	21.41	251	IAMs_20	IAMs_20	05 09 38.1	
	comp=Z,49µm,19.0s						
CTAO	Charters Tower	21.41	251	P	P	05 02 22.7	-0.1
CTAO	Charters Tower	21.41	251	P	P	05 02 22.9	+0.1
CTAO				pmax	pmax		
	comp=Z,427nm,1.2s						
CTAO				MLR	MLR		
	comp=Z,49µm,19.0s						
CTAO	Charters Tower	21.41	251	⇓P	P	05 02 22.3	-0.5
OUZ	Omahuta	21.44	167	P	P	05 02 23.9	+0.9
OUZ	Omahuta	21.44	167	⇓P	P	05 02 24.4	+1.5
RMQ	Roma	21.57	233	P	P	05 02 25.5	+1.1
ARMA	Armidale	21.91	220	P	P	05 02 28.0	-0.1
	comp=Z,460nm,1.9s,comp=Z,0.0nm						
ARMA	Armidale	21.91	220		P	05 02 28.6	+0.5
ARMA	Armidale	21.91	220	P	P	05 02 28.9	+0.8
ARMA	Armidale	21.91	220	⇑P	P	05 02 27.3	-0.8
AUPHS	Peel High Scho	22.84	220	P	P	05 02 39.1	+1.2
MTSU	Mount Surprise	22.91	257	P	P	05 02 38.4	-0.4
	comp=Z,272nm,0.9s						
MTSU	Mount Surprise	22.91	257	P	P	05 02 38.2	-0.6
PATS	Pohnpei	23.05	335	P	P	05 02 41.1	+0.8
	comp=Z,662nm,1.1s,comp=Z,0.0nm						
PATS	Pohnpei	23.05	335	P	P	05 02 40.8	+0.6
PATS	Pohnpei	23.05	335	P	P	05 02 41.3	+1.1
KUZ	Kuaotunu	23.41	164	P	P	05 02 46.9	+3.2
KUZ	Kuaotunu	23.41	164	P	P	05 02 45.7	+2.0
MANU	Manus Island	23.63	299		P	05 02 44.8	-1.2
MANU				IAmb	IAmb	05 02 50.6	
	comp=Z,529nm,1.0s						
MANU	Manus Island	23.63	299	⇑P	P	05 02 44.4	-1.6
AULRC	Lightning Ridg	23.74	227	P	P	05 02 46.8	-0.2
COEN	Coen	23.93	268	P	P	05 02 48.5	-0.4
	comp=Z,225nm,2.2s,comp=Z,0.0nm						
COEN	Coen	23.93	268		P	05 02 49.0	+0.1
COEN				IAmb	IAmb	05 02 54.7	
	comp=Z,794nm,1.9s						
COEN	Coen	23.93	268	P	P	05 02 48.8	-0.2
COEN	Coen	23.93	268	⇑P	P	05 02 48.5	-0.4
MGCD	Mangrove Creek	24.20	216	P	P	05 02 51.5	+0.3
	comp=Z,208nm,1.4s						
MGCD	Mangrove Creek	24.20	216	P	P	05 02 52.4	+1.2
AUKHS	Kincumber High	24.23	215	P	P	05 02 52.2	+0.7
TOZ	Tahuroa Road	24.29	165		P	05 02 53.1	+1.1
TOZ				IAmb	IAmb	05 02 59.1	
	comp=Z,468nm,1.5s						
TOZ				IAMs_20	IAMs_20	05 10 23.5	
	comp=Z,20µm,18.0s						
TOZ	Tahuroa Road	24.29	165	P	P	05 02 51.4	-0.6
WIZ	White Island	24.56	162	P	P	05 02 56.7	+2.2
RIV	Riverview	24.62	215	P	P	05 02 55.2	+0.1
	comp=Z,531nm,2.2s						
RIV	Riverview	24.62	215	P	P	05 02 56.5	+1.4
RIV	Riverview	24.62	215	P	P	05 02 57.2	+2.1
RIV				pmax	pmax		
	comp=Z,532nm,2.2s						
RIV	Riverview	24.62	215	⇑P	P	05 02 56.1	+1.1
SYDH	Sydney Hard Ro	24.81	216	P	P	05 02 57.1	+0.4
TLZ	Tolley Road	24.86	166	P	P	05 02 59.0	+1.7
HIZ	Hauiti	24.88	167	IAmb	IAmb	05 03 14.2	
	comp=Z,348nm,1.2s						
HIZ				IAMs_20	IAMs_20	05 11 18.6	
	comp=Z,25µm,20.0s						
HIZ	Hauiti	24.88	167	P	P	05 02 59.4	+2.0
MXZ	Matakaoa Point	24.95	160	P	P	05 02 58.6	+0.7
MXZ	Matakaoa Point	24.95	160	P	P	05 03 00.3	+2.3
MXZ	Matakaoa Point	24.95	160	P	P	05 03 00.3	+2.3
HAZ	Te Kaha	24.95	161	P	P	05 02 59.4	+1.4
AUDCS	Dubbo College	25.02	221	P	P	05 02 59.0	+0.3
RUGZ	Raukumara Rang	25.11	161	P	P	05 03 01.7	+2.1
PKGZ	Pakihiroa	25.15	161	P	P	05 03 00.8	+1.0
WOLH	Wollongong Har	25.21	215	P	P	05 03 01.8	+1.4
WMGZ	Waiomatatini S	25.21	160	P	P	05 03 01.0	+0.6
URZ	Urewera	25.22	163	LR	LR	05 10 50.1	
	comp=Z,20µm,21.6s,baz=342,slow=32						
URZ	Urewera	25.22	163	P	P	05 03 00.6	+0.2
URZ	Urewera	25.22	163	⇓P	P	05 03 01.1	+0.8
QLP	Quilpie	25.22	237	P	P	05 02 59.9	-0.7
	comp=Z,818nm,2.0s,comp=Z,0.0nm						
QLP	Quilpie	25.22	237	P	P	05 02 59.7	-0.8
QLP	Quilpie	25.22	237	⇓P	P	05 02 59.8	-0.8
PUZ	Puketiti	25.39	161	P	P	05 03 03.5	+1.5
TWGZ	Tauwhareparae	25.40	161	P	P	05 03 03.0	+0.9
MWZ	Matawai	25.41	162	P	P	05 03 02.2	0.0
VRZ	Vera Road	25.45	167	P	P	05 03 06.2	+3.7
RTZ	Ruatahuna	25.51	163	P	P	05 03 03.8	+0.6
RTZ	Ruatahuna	25.51	163	P	P	05 03 04.3	+1.1
NGZ	Ngauruhoe	25.68	166	P	P	05 03 06.2	+1.4
RIGZ	Rimuhau	25.82	162	P	P	05 03 05.5	-0.5
BKZ	Black Stump Fm	25.89	164		P	05 03 06.6	-0.1
BKZ	Black Stump Fm	25.89	164	P	P	05 03 09.6	+3.0
BKZ	Black Stump Fm	25.89	164	P	P	05 03 05.8	-0.8
NMHZ	Naumai	25.91	164	P	P	05 03 07.6	+0.8
KNZ	Kokohu	26.09	162	P	P	05 03 05.7	-2.6
WAZ	Wanganui	26.10	167	P	P	05 03 11.5	+3.1
AUUHS	Ulladulla High	26.14	214	P	P	05 03 10.9	+2.1
YNG	Young	26.55	218	P	P	05 03 13.0	+0.4
	comp=Z,122nm,2.3s,comp=Z,0.0nm						
CMSA	Cobar Meteorol	26.56	226	P	P	05 03 12.0	-0.7
	comp=Z,186nm,1.1s,comp=Z,0.0nm						
CMSA	Cobar Meteorol	26.56	226	P	P	05 03 12.0	-0.7
CNB	Canberra Magne	26.72	215	P	P	05 03 14.8	+0.6
	comp=Z,122nm,1.2s,comp=Z,0.0nm						
CNB	Canberra Magne	26.72	215	P	P	05 03 15.8	+1.7
QRZ	Quartz Range	26.72	172	IAmb	IAmb	05 03 18.5	
	comp=Z,450nm,1.9s						
PXZ	Pawanui	26.80	165	P	P	05 03 10.2	-4.5
AUMHS	Melrose High S	26.90	216	P	P	05 03 18.1	+2.3
CAN	Canberra	26.93	216	IAmb	IAmb	05 03 22.3	
	comp=Z,454nm,1.9s						
MRZ	Mangatainoka R	27.10	167	IAMs_20	IAMs_20	05 12 30.2	
	comp=Z,28µm,21.0s						
MRZ	Mangatainoka R	27.10	167	P	P	05 03 16.9	-0.5
NNZ	Nelson	27.23	171	P	P	05 03 21.0	+2.5
BFZ	Birch Farm	27.27	166	IAmb	IAmb	05 03 22.5	
	comp=Z,447nm,1.8s						
BFZ				IAMs_20	IAMs_20	05 12 23.7	
	comp=Z,20µm,20.0s						
BFZ	Birch Farm	27.27	166	P	P	05 03 21.8	+2.9
BFZ	Birch Farm	27.27	166	P	P	05 03 17.6	-1.3
DSZ	Denniston Nort	27.54	174	IAmb	IAmb	05 03 30.9	
	comp=Z,155nm,1.3s						
DSZ	Denniston Nort	27.54	174	P	P	05 03 22.6	+1.1
SNZO	South Karori	27.55	169	IAMs_20	IAMs_20	05 13 13.8	
	comp=Z,28µm,19.0s						
QIS	Mount Isa	27.63	253	P	P	05 03 22.0	-0.4
	comp=Z,99nm,0.8s,comp=Z,0.0nm						
QIS	Mount Isa	27.63	253	P	P	05 03 21.0	-1.5
BHW	Baring Head	27.67	169	IAMs_20	IAMs_20	05 13 19.2	
	comp=Z,19µm,20.0s						
THZ	Tophouse	27.69	172	IAmb	IAmb	05 03 37.0	
	comp=Z,262nm,1.9s						
THZ	Tophouse	27.69	172	P	P	05 03 20.5	-2.3
AUSMG	Snowy Mountain	27.94	215	P	P	05 03 26.1	+1.0
MILA	Mila	28.12	213	P	P	05 03 28.3	+1.7
	comp=Z,20nm,1.4s,comp=Z,0.0nm						
INZ	Inchbonnie	28.47	174	IAmb	IAmb	05 03 35.8	
	comp=Z,157nm,1.3s						
INZ	Inchbonnie	28.47	174	P	P	05 03 28.7	-1.0
LTZ	Lake Taylor	28.62	173	P	P	05 03 30.6	-0.5
WVZ	Waitaha Valley	28.76	176	P	P	05 03 36.3	+4.1
GVZ	Greta Valley S	28.89	172	P	P	05 03 34.4	+0.9
OXZ	Oxford	29.13	174	IAmb	IAmb	05 03 42.1	
	comp=Z,373nm,1.9s						
OXZ	Oxford	29.13	174	P	P	05 03 36.3	+0.8
FOZ	Fox Glacier	29.16	177	P	P	05 03 37.8	+2.0
JAY	Jayapura	29.26	291	P	P	05 03 36.8	-0.2
	comp=Z,58nm,1.0s						
JCZ	Jackson Bay	29.66	179	P	P	05 03 43.1	+2.7
JCZ	Jackson Bay	29.66	179	P	P	05 03 40.8	+0.5
STKA	Stephens Creek	29.69	229	P	P	05 03 40.1	-0.5
	comp=Z,88nm,0.5s,baz=45,slow=8.8,SNR=67						
STKA				S	S	05 08 31.7	-3.8
	comp=Z,5.1nm,0.9s,baz=322,slow=18,SNR=1.6						
STKA				LR	LR	05 15 16.6	
	comp=Z,30µm,20.1s,baz=54,slow=36						
	comp=Z,88nm,0.5s						
STKA	Stephens Creek	29.69	229	P	P	05 03 39.9	-0.8
GENI	Genyem	29.71	291	P	P	05 03 40.5	-0.5
GENI	Genyem	29.71	291	P	P	05 03 40.9	-0.1
	comp=Z,10µmcomp=Z,5µmcomp=Z,126nm,1.1s						
LBZ	Lake Benmore	30.03	177	P	P	05 03 43.9	+0.4
WKZ	Wanaka	30.42	178	P	P	05 03 50.0	+3.0
TOO	Toolangi	30.52	217	P	P	05 03 48.5	+0.6
	comp=Z,41nm,1.3s,comp=Z,0.0nm						
TOO	Toolangi	30.52	217	P	P	05 03 46.9	-1.0
TOO	Toolangi	30.52	217	P	P	05 03 46.9	-1.0
TOO				pmax	pmax		
	comp=Z,81nm,1.4s						
TOO	Toolangi	30.52	217	⇑P	P	05 03 49.0	+1.1
DCZ	Deep Cove	31.05	181	IAmb	IAmb	05 04 09.3	
	comp=Z,122nm,1.1s						
SMPI	Sarmi	31.29	290	P	P	05 03 54.6	-0.3
BRAT	Ballarat	31.42	218	P	P	05 03 57.7	+1.9
AUMTC	Mt Clear Colle	31.49	218	P	P	05 03 57.9	+1.5
RAR	Rarotonga	31.54	107	LR	LR	05 14 21.6	
	comp=Z,6µm,20.4s,baz=282,slow=32						
RAR	Rarotonga	31.54	107	P	P	05 03 58.8	+1.8
RAR	Rarotonga	31.54	107	P	P	05 04 00.8	+3.7
RAR	Rarotonga	31.54	107	P	P	05 03 58.8	+1.8
RAR				pmax	pmax		
	comp=Z,781nm,2.0s						
GLAD	Gladstone	31.70	209	P	P	05 04 00.2	+2.0
ARPS	Mount Arapiles	32.23	221	P	P	05 04 02.2	-0.7
	comp=Z,56nm,1.6s						
HTT	Hallett	32.41	229	P	P	05 04 04.1	-0.6
	comp=Z,97nm,2.8s						
HTT	Hallett	32.41	229	P	P	05 04 03.7	-1.0
HTT	Hallett	32.41	229	P	P	05 04 04.5	-0.2
HTT	Hallett	32.41	229	⇓P	P	05 04 04.0	-0.8
WRAB	Tennant Creek	32.47	255	P	P	05 04 03.2	-2.0
WRAB	Tennant Creek	32.47	255	P	P	05 04 03.4	-1.9
WRAB	Tennant Creek	32.47	255	*ce*P	P	05 04 03.7	-1.6
WRAB				pmax	pmax		
	comp=Z,124nm,1.7s						
WRA	Warramunga Arr	32.48	255	P	P	05 04 02.5	-2.8
	comp=Z,34nm,0.8s,baz=86,slow=8.5,SNR=48						
WRA				PcP	PcP	05 06 53.3	+1.0
	comp=Z,3.5nm,1.0s,baz=173,slow=36,SNR=1.9						
WRA				S	S	05 09 16.8	-2.6
	comp=Z,1.5nm,0.9s,baz=42,slow=8.0,SNR=1.3						
WRA				LR	LR	05 16 53.6	
	comp=Z,34µm,18.0s,baz=85,slow=36						
	comp=Z,34nm,0.8s						
WRA	Warramunga Arr	32.48	255		P	05 04 02.9	-2.5
AUJCS	Jamestown Cent	32.53	230	P	P	05 04 05.0	-0.7
H11S2	WAKE ISLAND Hy	32.62	358	T	T	05 38 38.8	
	baz=171,slow=76						
H11S3	WAKE ISLAND Hy	32.63	358	T	T	05 38 40.0	
	baz=171,slow=76						
H11S1	WAKE ISLAND Hy	32.64	358	T	T	05 38 38.8	
	baz=171,slow=76						
AUBRN	Burnie High Sc	32.79	212	P	P	05 04 09.7	+1.9
AUMBR	Murray Bridge	33.01	226	P	P	05 04 09.5	-0.3
MOO	Moorlands	33.22	208	P	P	05 04 12.6	+1.0
	comp=Z,151nm,1.1s,comp=Z,0.0nm						
MOO	Moorlands	33.22	208	P	P	05 04 13.4	+1.8
WHYH	Whyalla	33.23	231	P	P	05 04 11.1	-0.6
AUMAR	Marden Senior	33.34	227	P	P	05 04 12.4	-0.3
ASAR	Alice Springs	33.35	249	P	P	05 04 10.3	-2.7
	comp=Z,29nm,0.7s,baz=75,slow=9.0,SNR=95						
ASAR				PcP	PcP	05 06 55.1	+0.4
	comp=Z,8.5nm,1.0s,baz=98,slow=3.0,SNR=1.9						
ASAR				S	S	05 09 29.6	-3.3
	comp=Z,1.6nm,1.0s,baz=251,slow=28,SNR=2.3						
ASAR				LR	LR	05 17 15.7	
	comp=Z,36µm,18.5s,baz=76,slow=36						
	comp=Z,29nm,0.7s						
ASAR	Alice Springs	33.35	249		P	05 04 10.6	-2.4
ASAR	Alice Springs	33.35	249	P	P	05 04 10.6	-2.4
GHSS	Government Hou	33.38	227	P	P	05 04 14.5	+1.4
TAU	Tasmania Unive	33.52	208	P	P	05 04 15.9	+1.8
TAU				IAmb	IAmb	05 04 19.8	
	comp=Z,233nm,1.5s						
TAU	Tasmania Unive	33.52	208	P	P	05 04 16.3	+2.1
TAU	Tasmania Unive	33.52	208	P	P	05 04 16.0	+1.8
TAU				pmax	pmax		
	comp=Z,233nm,1.5s						
H11N1	WAKE ISLAND Hy	33.83	358	T	T	05 40 09.8	
	baz=172,slow=76						
H11N3	WAKE ISLAND Hy	33.84	358	T	T	05 40 09.5	
	baz=172,slow=76						
H11N2	WAKE ISLAND Hy	33.85	358	T	T	05 40 06.7	
	baz=172,slow=76						
BAKI	Biak	33.98	290	P	P	05 04 20.6	+2.0
	comp=Z,8µmcomp=Z,6µmcomp=Z,255nm,1.2s						
BBOO	Buckleboo	34.28	232	P	P	05 04 19.9	-1.1
	comp=Z,316nm,2.6s,comp=Z,0.0nm						
BBOO	Buckleboo	34.28	232	P	P	05 04 20.3	-0.6
KDU	Kakadu	34.42	268	P	P	05 04 21.1	-1.3
	comp=Z,42nm,1.5s,comp=Z,0.0nm						
AUCAS	Cummins Area S	35.16	230	P	P	05 04 29.6	+1.1
RKPI	Ransiki, Papua	35.63	288	P	P	05 04 34.4	+1.6
MTN	Manton Dam	35.70	268	P	P	05 04 33.2	-0.2
	comp=Z,69nm,0.9s,comp=Z,0.0nm						
GUMO	Guam	35.87	320	LR	LR	05 17 33.0	
	comp=Z,5µm,21.9s,baz=146,slow=34						
GUMO	Guam	35.87	320	IAMs_20	IAMs_20	05 21 29.0	
	comp=Z,11µm,18.0s						
DRS	Darwin Rock St	35.98	268	P	P	05 04 37.5	+1.7
SAUI	Saumlaki	36.38	276	IAMs_20	IAMs_20	05 18 08.9	
	comp=Z,19µm,20.0s						
FAKI	Fak Fak	36.91	285	P	P	05 04 43.7	-0.2
FAKI				IAmb	IAmb	05 04 44.9	
	comp=Z,163nm,1.0s						
FAKI				IAMs_20	IAMs_20	05 19 28.5	
	comp=Z,24µm,22.0s						
FAKI	Fak Fak	36.91	285	P	P	05 04 44.0	+0.2
FAKI	Fak Fak	36.91	285	P	P	05 04 43.6	-0.2
	comp=Z,8µmcomp=Z,5µmcomp=Z,175nm,1.2s						
FAKI	Fak Fak	36.91	285	⇑P	P	05 04 41.6	-2.2
KNRA	Kununurra	37.75	263	P	P	05 04 49.1	-1.8
	comp=Z,205nm,1.3s,comp=Z,0.0nm						
KNRA	Kununurra	37.75	263	IAmb	IAmb	05 04 55.4	
	comp=Z,180nm,0.9s						
XMAS	Kiritimati	38.03	67	IAMs_20	IAMs_20	05 16 23.1	
	comp=Z,17µm,21.0s						
JOHN	Johnston Islan	38.09	37	IAMs_20	IAMs_20	05 16 14.7	
	comp=Z,20µm,22.0s						
SWI	Sorong	38.57	287	P	P	05 04 57.2	-0.6
	comp=Z,8µmcomp=Z,5µmcomp=Z,366nm,1.2s						
WRKA	Warakurna	38.62	248	P	P	05 04 55.7	-2.4
	comp=Z,85nm,0.8s,comp=Z,0.0nm						
BNDI	Bandanaira	38.62	281	P	P	05 04 58.8	+0.6
BNDI	Bandanaira	38.62	281	P	P	05 04 59.2	+1.0
FORT	Forrest	39.99	239	P	P	05 05 07.5	-2.0
	comp=Z,88nm,1.3s,comp=Z,0.0nm						
KRAI	Karang Ratu	40.42	282	P	P	05 05 13.5	+0.2
	comp=Z,7µmcomp=Z,5µmcomp=Z,145nm,2.0s						
AAI	Ambon	40.50	281	P	P	05 05 14.5	+0.6
	comp=Z,6µmcomp=Z,94nm,1.0s						
PAE	Paea	40.99	101	*e*S	S	05 11 26.7	-2.5
	comp=Z,656nm,23.4s						
PAE				*e*SS	SS	05 14 25.9	-5.7
	comp=Z,134nm,21.7s						
PAE				*e*LR	LR	05 16 38.3	
	comp=Z,3µm,23.6s						
PPT2	Papeete2	41.00	100	*e*P	P	05 05 08.8	-9.2
	comp=Z,227nm,21.5s						
PPT2	Papeete2	41.00	100	*e*PP	PP	05 06 48.3	-4.5
	comp=Z,237nm,21.2s						
PPT2				*e*S	S	05 11 24.7	-4.8
	comp=Z,5µm,25.5s						
PPT2				*e*LQ	LQ	05 14 58.2	
	comp=Z,22µm,30.8s						
PPT2				*e*LR	LR	05 16 40.2	
	comp=Z,19µm,30.2s						
PPT2				*e*LR	LR	05 16 41.9	
	comp=Z,29µm,27.8s						
PPT	Papeete	41.00	100	P	P	05 05 25.7	+7.7
	comp=Z,64nm,0.7s,baz=211,slow=7.1,SNR=6.5						
PPT				LR	LR	05 18 10.3	
	comp=Z,5µm,20.8s,baz=265,slow=30						
PPT				PKPPKP	P'P'df	05 37 31.9	-4.3
	comp=Z,29nm,0.8s,baz=45,slow=17,SNR=1.6						
TIAR	Tiarei	41.22	100	*e*S	S	05 11 30.1	-2.5
	comp=Z,4µm,28.2s						
TIAR				*e*LR	LR	05 16 47.9	
	comp=Z,17µm,25.2s						
TBI	Tubuai	41.26	109	*e*P	P	05 05 14.6	-5.4
	comp=Z,2µm,38.8s						

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TBI    Tubuai            41.26 109  ePP      PP       05 06 54.4 -1.0
              comp=Z,985nm,20.8s
TBI                                 eS       S        05 11 32.6 -0.5
              comp=Z,14µm,25.5s
TBI                                 eSS      SS       05 14 35.9 -0.8
              comp=Z,15µm,39.2s
TBI                                 eLQ      LQ       05 15 00.5
              comp=Z,110µm,31.2s
TBI                                 eLR      LR       05 16 41.6
              comp=Z,19µm,25.2s
TBI                                 eLR      LR       05 16 50.1
              comp=Z,81µm,26.0s
TVO    Taravao           41.30 101  ePP      PP       05 06 59.5 +3.4
              comp=Z,824nm,26.6s
TVO                                 eS       S        05 11 30.9 -3.1
              comp=Z,860nm,22.8s
TVO                                 eSS      SS       05 14 31.7 -6.2
              comp=Z,1µm,29.7s
TVO                                 eLR      LR       05 16 47.9
              comp=Z,4µm,25.8s
NLAI   Namlea            41.68 281  P        P        05 05 24.0 +0.4
              comp=Z,8µmcomp=Z,10µmcomp=Z,310nm,1.6s
PMOR   Pomariorio Ree    42.76  97  eP       P        05 05 34.7 +2.3
              comp=Z,762nm,1.4s
PMOR                                eS       S        05 11 54.3 -1.1
              comp=Z,4µm,24.3s
PMOR                                eLR      LR       05 17 25.4
              comp=Z,26µm,25.4s
SOEI   Soe               42.82 271           P        05 05 33.2 +0.1
SOEI                                 IAmb    IAmb     05 05 48.7
              comp=Z,242nm,0.9s
SOEI                                 IAMs_20 IAMs_20  05 25 31.4
              comp=Z,11µm,18.0s
SOEI   Soe               42.82 271  P        P        05 05 33.5 +0.4
SOEI   Soe               42.82 271  P        P        05 05 33.5 +0.4
              comp=Z,8µmcomp=Z,6µmcomp=Z,281nm,1.4s
SOEI   Soe               42.82 271 ⇑P        P        05 05 33.2 +0.1
VAH    Vaihoa            43.00  97  eP       P        05 05 33.9 -0.4
              comp=Z,3.5nm,1.4s
SANI   Sanana            43.10 283  P        P        05 05 34.9 -0.3
SANI   Sanana            43.10 283  P        P        05 05 34.7 -0.5
              comp=Z,8µmcomp=Z,137nm,1.2s
SANI   Sanana            43.10 283 ⇑P        P        05 05 33.8 -1.4
BATI   Baumata           43.33 270  LR       LR       05 22 58.3
              comp=Z,10µm,20.8s,baz=116,slow=35
BATI   Baumata           43.33 270  P        P        05 05 38.5 +1.4
MMRI   Maumere           45.00 272  P        P        05 05 50.6 +0.1
MMRI   Maumere           45.00 272  P        P        05 05 51.2 +0.7
              comp=Z,8µmcomp=Z,218nm,1.1s
KMBL   Kambalda          45.29 240  P        P        05 05 50.5 -2.0
              comp=Z,64nm,2.6s,comp=Z,0.0nm
EDFI   Ende, Flores      45.51 272  P        P        05 05 53.7 -0.9
              comp=Z,6µmcomp=Z,5µmcomp=Z,211nm,2.0s
SGSI   Sangihe           45.61 290  P        P        05 05 56.1 +0.8
PSA00  Pilbara Seismi    46.10 254  P        P        05 05 57.8 -1.3
PSA00                               IAmb     IAmb     05 06 03.8
              comp=Z,184nm,1.0s
PSA00  Pilbara Seismi    46.10 254  P        P        05 05 57.7 -1.3
PSA00                               IAmb     IAmb     05 06 03.8
              comp=Z,191nm,1.0s
PSA00  Pilbara Seismi    46.10 254  P        P        05 05 58.0 -1.0
MBWA   Marble Bar        46.20 254  P        P        05 06 00.2 +0.4
MBWA                                P        P        05 06 00.2 +0.4
MBWA                                S        S        05 12 45.0 -0.3
MBWA                                S        S        05 12 45.0 -0.3
MBWA   Marble Bar        46.20 254  P        P        05 05 58.8 -1.1
MBWA                                IAmb     IAmb     05 06 04.6
              comp=Z,184nm,0.9s
MBWA   Marble Bar        46.20 254  P        P        05 05 58.4 -1.4
MBWA   Marble Bar        46.20 254 ⇓P        P        05 05 58.5 -1.4
BASI   Baing, Sumba      46.32 269  P        P        05 06 07.3 +6.5
LUWI   Luwuk             46.47 282  P        P        05 06 02.5 +0.5
LUWI   Luwuk             46.47 282  P        P        05 06 03.1 +1.1
LUWI   Luwuk             46.47 282  P        P        05 06 00.7 -1.3
              comp=Z,9µmcomp=Z,8µmcomp=Z,265nm,1.1s
KKSI   Kolaka, Sulawe    46.62 278  P        P        05 06 02.0 -1.2
              comp=Z,6µmcomp=Z,5µmcomp=Z,114nm,2.1s
WSI    Waingapu          46.69 270  P        P        05 06 05.2 +1.5
              comp=Z,7µmcomp=Z,473nm,1.9s
DAV    Davao City (W)    47.02 294  P        P        05 06 05.2 -1.1
DAV    Davao City (W)    47.02 294  P        P        05 06 04.0 -2.3
LBFI   Labuhan Bajo,     47.31 272  P        P        05 06 08.0 -0.6
MEEK   Meekatharra       47.47 247  P        P        05 06 08.5 -1.2
WBSI   Waikabubak, Su    47.57 270  P        P        05 06 10.5 -0.2
              comp=Z,7µmcomp=Z,5µmcomp=Z,285nm,1.0s
APSI   Ampana            47.57 282  P        P        05 06 11.8 +1.1
              comp=Z,4µmcomp=Z,124nm,1.2s
MRSI   Marisa            47.75 284  P        P        05 06 10.6 -1.5
              comp=Z,81nm,1.2s
BKSI   Bulukumba         47.79 276  P        P        05 06 12.2 -0.2
              comp=Z,6µmcomp=Z,4µmcomp=Z,83nm,0.9s
BNSI   Bone              48.04 277  P        P        05 06 12.4 -1.9
              comp=Z,8µmcomp=Z,7µmcomp=Z,163nm,1.1s
JCJ    Chichijima        48.13 329  LR       LR       05 23 46.0
              comp=Z,4µm,21.5s,baz=150,slow=33
JCJ    Chichijima        48.13 329  P        P        05 06 14.6 -0.1
KAPI   Kappang           48.23 276  LR       LR       05 26 45.0
              comp=Z,3µm,20.8s,baz=95,slow=36
KAPI   Kappang           48.23 276  P        P        05 06 15.5 -0.2
KAPI                                P        P        05 06 15.5 -0.2
KAPI                                S        S        05 13 16.6 +2.1
KAPI                                S        S        05 13 16.6 +2.1
KAPI   Kappang           48.23 276  P        P        05 06 15.0 -0.8
KAPI   Kappang           48.23 276  P        P        05 06 16.5 +0.8
KAPI   Kappang           48.23 276  P        P        05 06 13.3 -2.4
              comp=Z,3µmcomp=Z,77nm,1.2s
KAPI   Kappang           48.23 276 i P       P        05 06 15.2 -0.5
KAPI                                pmax     pmax
              comp=Z,207nm,1.3s
KAPI   Kappang           48.23 276 ⇑P        P        05 06 14.8 -1.0
SPSI   Sidrap Palu       48.48 277  P        P        05 06 15.1 -2.6
              comp=Z,5µmcomp=Z,5µmcomp=Z,86nm,1.1s
TTSI   Tana Toraja       48.68 279  P        P        05 06 18.7 -0.6
              comp=Z,3µmcomp=Z,95nm,1.5s
KIP    Kipapa            48.83  44ceP        P        05 06 20.8 +0.6
KIP                                 pmax     pmax
              comp=Z,158nm,1.4s
DBNI   Kabupaten Domp    48.83 271  P        P        05 06 17.8 -2.6
              comp=Z,5µmcomp=Z,6µmcomp=Z,279nm,1.6s
TOLI2  Tolitoli          49.06 284  P        P        05 06 19.9 -2.2
TOLI2  Tolitoli          49.06 284  P        P        05 06 21.5 -0.6
DAH    Dandelion         49.09  48  P        P        05 06 24.1 +1.4
AUALB  St Joseph's Co    49.28 236  P        P        05 06 25.1 +1.5
PLAI   Plampang          49.29 271  P        P        05 06 23.6 -0.3
PLAI   Plampang          49.29 271  P        P        05 06 22.3 -1.6
              comp=Z,8µmcomp=Z,9µmcomp=Z,293nm,2.8s
PCI    Palu              49.30 281  P        P        05 06 24.1 +0.1
              comp=Z,172nm,0.6s
HMH    Humu‘ula Sheep    49.38  48  P        P        05 06 27.1 +2.4
PUH    Pauahi            49.42  48  P        P        05 06 27.0 +2.1
PMSI   Majene            49.43 278  P        P        05 06 25.0  0.0
              comp=Z,8µmcomp=Z,7µmcomp=Z,125nm,1.2s
POHA   Pohakuloa         49.44  48  IAMs_20  IAMs_20  05 21 16.0
              comp=Z,12µm,22.0s
NWAO   Narrogin (SRO)    49.45 239  P        P        05 06 25.2 +0.3
NWAO                                P        P        05 06 25.2 +0.3
NWAO                                S        S        05 13 37.0 +5.8
NWAO                                S        S        05 13 37.0 +5.8
NWAO   Narrogin (SRO)    49.45 239  P        P        05 06 24.4 -0.5
NWAO                                IAmb     IAmb     05 06 29.7
              comp=Z,265nm,1.4s
NWAO   Narrogin (SRO)    49.45 239  P        P        05 06 24.6 -0.3
NWAO   Narrogin (SRO)    49.45 239  P        P        05 06 24.4 -0.5
NWAO                                pmax     pmax
              comp=Z,265nm,1.5s
NWAO                                MLR      MLR
              comp=Z,31µm,19.0s
BLDU   Ballidu           49.55 242  P        P        05 06 25.6 -0.1
MPSI   Mapaga            49.63 283  P        P        05 06 24.2 -2.3
              comp=Z,4µmcomp=Z,103nm,1.2s
MMSI   Mamuju            49.65 279  P        P        05 06 26.4 -0.3
MORW   Morawa            49.95 244  IAmb     IAmb     05 06 32.9
              comp=Z,95nm,1.1s
MORW   Morawa            49.95 244  P        P        05 06 28.0 -0.8
MORW   Morawa            49.95 244 ⇑P        P        05 06 27.1 -1.7
MUN    Mundaring         50.16 240  P        P        05 06 28.7 -1.6
              comp=Z,105nm,1.7s,comp=Z,0.0nm
MUN    Mundaring         50.16 240  P        P        05 06 30.3  0.0
MUN    Mundaring         50.16 240  P        P        05 06 27.8 -2.5
KLNI   Mataram           51.00 271  P        P        05 06 35.4 -1.5
              comp=Z,7µmcomp=Z,7µmcomp=Z,161nm,1.0s
TAOE   Nuku Hiva Isla    51.14  90  eP       P        05 06 39.6 +1.5
              comp=Z,439nm,1.4s
TAOE   Nuku Hiva Isla    51.14  90  ePP      PP       05 08 28.8 -6.2
              comp=Z,176nm,21.9s
TAOE                                eS       S        05 13 54.3 -1.1
              comp=Z,6µm,25.8s
TAOE                                eSS      SS       05 17 34.8 +3.8
              comp=Z,2µm,24.8s
TAOE                                eLQ      LQ       05 19 10.4
              comp=Z,3µm,27.7s
TAOE                                eLR      LR       05 21 23.1
              comp=Z,28µm,28.2s
TAOE   Nuku Hiva Isla    51.14  90  P        P        05 06 41.1 +3.0
TAOE                                IAmb     IAmb     05 06 43.8
              comp=Z,328nm,1.5s
TAOE   Nuku Hiva Isla    51.14  90  P        P        05 06 41.3 +3.2
GIRL   Giralia           51.30 252  P        P        05 06 38.4 -0.6
              comp=Z,103nm,1.5s
KHKI   Kahang-Kahang     51.48 271  P        P        05 06 38.1 -2.4
              comp=Z,5µmcomp=Z,163nm,1.3s
DNP    Denpasar          51.80 270  P        P        05 06 41.3 -1.6
IGBI   Denpasar          51.84 270  P        P        05 06 40.4 -2.8
BKB    Balikpapan        51.99 280  IAmb     IAmb     05 06 48.0
              comp=Z,229nm,1.2s
BKB    Balikpapan        51.99 280  P        P        05 06 45.0 +0.7
BKB    Balikpapan        51.99 280  P        P        05 06 43.6 -0.7
              comp=Z,7µmcomp=Z,153nm,1.1s
RTBI   Rangdo, Negare    52.11 270  P        P        05 06 44.9 -0.3
              comp=Z,8µmcomp=Z,8µmcomp=Z,259nm,1.8s
MYLDM  Lahad Datu        52.64 288  P        P        05 06 49.9 +0.8
MYLDM                               IAmb     IAmb     05 07 03.2
              comp=Z,239nm,1.2s
MYLDM  Lahad Datu        52.64 288  P        P        05 06 50.0 +0.9
MYLDM  Lahad Datu        52.64 288  P        P        05 06 49.0 -0.1
              comp=Z,8µmcomp=Z,7µmcomp=Z,180nm,1.3s
MYLDM  Lahad Datu        52.64 288 ⇑P        P        05 06 49.5 +0.4
JAGI   Jajag, Banyuwa    52.87 270  IAmb     IAmb     05 07 09.9
              comp=Z,201nm,1.1s
JAGI   Jajag, Banyuwa    52.87 270  P        P        05 06 49.9 -1.0
JAGI   Jajag, Banyuwa    52.87 270  P        P        05 06 49.4 -1.5
              comp=Z,6µmcomp=Z,6µmcomp=Z,194nm,2.9s
JAGI   Jajag, Banyuwa    52.87 270 ⇑P        P        05 06 49.1 -1.8
ABJI   Asem Bagus        52.93 271  P        P        05 06 49.4 -1.9
              comp=Z,8µmcomp=Z,9µmcomp=Z,328nm,2.2s
KMMI   Kalianget         53.35 272  P        P        05 06 53.5 -0.8
              comp=Z,7µmcomp=Z,6µmcomp=Z,95nm,1.4s
BBKI   Banjar Baru       53.35 276  P        P        05 06 54.9 +0.5
              comp=Z,262nm,1.8s
BLJI   Banyuglugur       53.56 271  P        P        05 06 55.3 -0.6
              comp=Z,7µmcomp=Z,6µmcomp=Z,195nm,1.4s
GMJI   Gumukmas          53.60 270  P        P        05 06 56.2  0.0
              comp=Z,4µmcomp=Z,102nm,1.0s
MTKI   Muara Teweh, K    54.00 279  P        P        05 07 00.4 +1.3
JHJ    Hachijo jima 2    54.26 331  LR       LR       05 28 01.7
              comp=Z,2µm,20.1s,baz=126,slow=34
TGY    Tagaytay City     54.35 299  LR       LR       05 29 49.5
              comp=Z,2µm,19.9s,baz=123,slow=36
RKT    Rikitea           54.57 108  eS       S        05 14 37.4 -4.4
              comp=Z,8µm,26.8s
RKT                                 eSS      SS       05 18 21.7 -2.9
              comp=Z,7µm,26.0s
RKT                                 eLQ      LQ       05 20 38.1
              comp=Z,33µm,31.2s
RKT                                 eLR      LR       05 22 51.0
              comp=Z,30µm,29.5s
KKM    Kota Kinabalu     55.07 288  P        P        05 07 07.9 +0.9
KKM    Kota Kinabalu     55.07 288  P        P        05 07 05.2 -1.8
              comp=Z,5µmcomp=Z,219nm,1.2s
KKM    Kota Kinabalu     55.07 288 ⇑P        P        05 07 05.7 -1.3
SNJI   Sawahan-Nganju    55.33 270  P        P        05 07 09.8 +0.8
              comp=Z,7µmcomp=Z,273nm,1.5s
SJI    Sawahan           55.33 270  P        P        05 07 07.0 -1.9
              comp=Z,8µmcomp=Z,218nm,2.6s
TBJI   Tambak Boyo       55.45 272  P        P        05 07 09.6 -0.1
              comp=Z,6µmcomp=Z,8µmcomp=Z,154nm,1.1s
NGJI   Ngawi             55.71 271  P        P        05 07 11.6 +0.1
              comp=Z,8µmcomp=Z,268nm,1.3s
PCJI   Pacitan           55.81 270  P        P        05 07 10.2 -2.1
JOW    Kunigami          56.14 317  IAmb     IAmb     05 07 16.6
              comp=Z,238nm,1.5s
JOW    Kunigami          56.14 317  P        P        05 07 15.9 +1.6
JOW    Kunigami          56.14 317 ⇑P        P        05 07 13.6 -0.8
UGM    Wanagama          56.50 270  P        P        05 07 17.2 -0.1
UGM    Wanagama          56.50 270  P        P        05 07 15.6 -1.7
              comp=Z,5µmcomp=Z,238nm,1.1s
YOGI   Yogyakarta        56.74 270  P        P        05 07 17.0 -1.9
SMRI   Semarang          56.76 271  P        P        05 07 19.6 +0.5
SMRI   Semarang          56.76 271  P        P        05 07 19.2 +0.1
              comp=Z,197nm,1.0s
INU    Inuyama           57.40 330  P        P        05 07 23.8 +0.7
INU                                 IAmb     IAmb     05 07 24.2
              comp=Z,204nm,1.7s
INU    Inuyama           57.40 330  P        P        05 07 24.0 +0.9
JGF    Kuroka            57.44 331  P        P        05 07 23.5  0.0
JGF    Kuroka            57.44 331 ⇑P        P        05 07 22.9 -0.5
SBUM   Sibu              57.57 282  P        P        05 07 26.0 +1.2
SBUM   Sibu              57.57 282 ⇑P        P        05 07 24.4 -0.4
JMN    Monobe            57.72 327  IAmb     IAmb     05 07 32.7
              comp=Z,185nm,1.0s
JMN    Monobe            57.72 327  P        P        05 07 26.8 +1.3
JMN    Monobe            57.72 327 ⇑P        P        05 07 25.4 -0.1
MJAR   Matsushiro Arr    57.81 332  P        P        05 07 24.1 -1.9
              comp=Z,68nm,1.1s,baz=163,slow=7.2,SNR=45
MJAR                                PcP      PcP      05 08 19.6 +1.1
              comp=Z,15nm,0.9s,baz=163,slow=4.7,SNR=4.2
MJAR                                LR       LR       05 30 04.2
              comp=Z,1µm,20.7s,baz=146,slow=34
              comp=Z,68nm,1.1s
MJAR   Matsushiro Arr    57.81 332  P        P        05 07 24.4 -1.5
MJAR                                IAmb     IAmb     05 07 27.3
              comp=Z,99nm,1.2s
MJAR   Matsushiro Arr    57.81 332  P        P        05 07 24.5 -1.5
MJAR                                pmax     pmax
              comp=Z,99nm,1.3s
MAJO   Matsushiro        57.81 332  P        P        05 07 25.8 -0.2
MAJO                                IAmb     IAmb     05 07 27.3
              comp=Z,133nm,1.2s
MAJO   Matsushiro        57.81 332  P        P        05 07 26.1 +0.1
MAJO   Matsushiro        57.81 332 i P       P        05 07 25.4 -0.6
MAJO                                pmax     pmax
              comp=Z,49nm,0.9s
MAJO   Matsushiro        57.81 332 ⇑P        P        05 07 26.0 -0.1
MJB9   Matsu-Tunnel      57.81 332  IAmb     IAmb     05 07 28.3
              comp=Z,129nm,1.2s
CTJI   Waduk Cacaban     57.99 271  P        P        05 07 26.5 -1.2
              comp=Z,8µmcomp=Z,199nm,1.1s
KPJI   Karang Pucung     58.17 270  P        P        05 07 27.8 -1.2
TWGBT  Beinan            58.82 308  P        P        05 07 34.8 +1.5
JNU    Nakatsue          58.92 324  LR       LR       05 29 44.5
              comp=Z,2µm,21.5s,baz=134,slow=33
JNU    Nakatsue          58.92 324  IAmb     IAmb     05 07 43.0
              comp=Z,97nm,1.0s
JNU    Nakatsue          58.92 324  P        P        05 07 34.5 +0.6
JNU    Nakatsue          58.92 324 ⇑P        P        05 07 33.3 -0.6
YULB   Yu-li             58.98 309  IAmb     IAmb     05 07 36.7
              comp=Z,90nm,1.2s
YULB   Yu-li             58.98 309  P        P        05 07 34.9 +0.5
JSD    Sado              59.02 333  IAmb     IAmb     05 07 41.5
              comp=Z,136nm,1.1s
JSD    Sado              59.02 333  P        P        05 07 36.5 +2.1
NACB   Ninganchiao       59.20 310  IAmb     IAmb     05 07 40.3
              comp=Z,115nm,1.0s
NACB   Ninganchiao       59.20 310  P        P        05 07 36.3 +0.3
BBJI   Bungbulang        59.38 270  P        P        05 07 36.2 -1.3
BBJI   Bungbulang        59.38 270  P        P        05 07 35.5 -2.0
              comp=Z,3µmcomp=Z,127nm,1.6s
TPUB   Ta-pu             59.43 308  IAmb     IAmb     05 07 38.7
              comp=Z,155nm,1.1s
TPUB   Ta-pu             59.43 308  P        P        05 07 37.4 -0.2
YHNB   Yeheng            59.65 310  P        P        05 07 39.7 +0.6
TATO   Taipei            59.74 310  P        P        05 07 39.7  0.0
TATO                                P        P        05 07 39.7  0.0
TATO                                S        S        05 15 50.3 +0.5
TATO                                S        S        05 15 50.3 +0.5
TATO   Taipei            59.74 310  IAMs_20  IAMs_20  05 34 04.3
              comp=Z,6µm,19.0s
TATO   Taipei            59.74 310  P        P        05 07 40.4 +0.7
CNJI   Cibinong          59.92 270  P        P        05 07 39.6 -1.5
              comp=Z,3µmcomp=Z,128nm,1.6s
DBJI   Dramaga           60.45 271  P        P        05 07 45.3 +0.5
TPI    Tanjungpandan     60.47 275  P        P        05 07 45.0 +0.1
              comp=Z,5µmcomp=Z,4µmcomp=Z,81nm,1.2s
ERM    Erimo             60.50 339  IAMs_20  IAMs_20  05 29 16.0
              comp=Z,6µm,19.0s
SKJI   Sukabumi          60.54 270  P        P        05 07 45.4  0.0
XMI    Christmas Isla    60.69 266  P        P        05 07 47.3 +0.8
XMI    Christmas Isla    60.69 266 ⇑P        P        05 07 46.5 +0.1
SBJI   Serang            61.14 271  P        P        05 07 47.7 -1.8
YUK    Yuzh-Kuril'sk     61.45 342c iP       P        05 07 51.0 +0.1
YUK                                 i                 05 08 29.8
YUK                                 e                 05 10 07.2
YUK                                 eS       S        05 16 07.1 -3.7
YUK                                 eSS      SS       05 20 06.9 -5.4
YUK                                 pmax     pmax
              comp=Z,665nm,2.8s
YUK                                 pmax     pmax
              comp=Z,282nm,0.8s
YUK                                 pmax     pmax
              comp=N,231nm,0.6s
QZH    Quanzhou          61.89 309  P        P        05 07 53.1 -1.2
QZH                                 S        S        05 16 18.1 +0.9
QZH                                 pmax     pmax
              comp=N,3µm,6.8s
QZH                                 LR       LR
              comp=N,2µm,17.2s
QZH                                 LR       LR
              comp=N,2µm,15.8s
QZH                                 LR       LR
              comp=N,2µm,18.5s
JKA    Kamikawa-asahi    62.55 340  P        P        05 07 58.2 -0.1
ASAJ   Asahikawa         62.55 340  LR       LR       05 30 30.5
              comp=N,5µm,21.8s,baz=185,slow=32
ASAJ   Asahikawa         62.55 340  P        P        05 07 58.2 -0.1
ASAJ                                pmax     pmax
              comp=Z,181nm,1.2s
KLSI                     62.83 272  P        P        05 07 58.5 -2.3
KASI   Kota Agung        62.86 271  P        P        05 07 57.6 -3.4
              comp=Z,3µmcomp=Z,216nm,1.1s
PMBI   Palembang         63.21 274  IAMs_20  IAMs_20  05 35 43.7
              comp=Z,5µm,22.0s
TJN    Taejon            63.27 324  P        P        05 08 04.6 +1.3
VNDA   Vanda             63.28 181  P        P        05 08 02.3 -0.5
              comp=Z,4.8nm,0.9s,baz=0.8,slow=7.0,SNR=20
VNDA                                LR       LR       05 33 09.6
              comp=Z,2µm,19.0s,baz=4.0,slow=34
              comp=Z,4.8nm,0.9s
VNDA   Vanda             63.28 181  IAmb     IAmb     05 08 07.6
              comp=Z,188nm,1.9s
LWLI   Liwa              63.40 272  P        P        05 08 03.0 -1.8
MDSI   Maura Dua         63.41 272  P        P        05 08 03.0 -1.7
              comp=Z,4µmcomp=Z,143nm,1.9s
SBA    Scott Base        63.55 180  P        P        05 08 04.8 +0.3
SBA    Scott Base        63.55 180  P        P        05 08 04.8 +0.3
SBA                                 pmax     pmax
              comp=Z,606nm,2.0s
SSE    Sheshan           63.62 316  P        P        05 08 06.0 +0.3
SSE                                 S        S        05 16 40.5 +1.8
SSE                                 pmax     pmax
              comp=Z,22nm,0.9s
SSE                                 pmax     pmax
              comp=Z,1µm,5.8s
SSE                                 LR       LR
              comp=Z,1µm,18.9s
SSE                                 LR       LR
              comp=Z,1µm,18.6s
KSRS   Korea Array       63.73 325  P        P        05 08 07.3 +1.1
              comp=Z,17nm,1.0s,baz=143,slow=6.5,SNR=21
KSRS                                LR       LR       05 34 50.1
              comp=Z,1451µm,18.6s,baz=145,slow=35
              comp=Z,17nm,1.0s
KSAR   Wonju Array Be    63.74 325  P        P        05 08 05.8 -0.5
KSAR   Wonju Array Be    63.74 325  P        P        05 08 05.8 -0.5
HKPS   Hong Kong Po S    63.98 304  P        P        05 08 08.2 -0.1
HKPS   Hong Kong Po S    63.98 304  P        P        05 08 09.8 +1.6
DSRI   Dabo              64.03 277  P        P        05 08 06.9 -1.9
              comp=Z,5µmcomp=Z,4µmcomp=Z,82nm,1.1s
CASY   Casey             64.12 202  P        P        05 08 08.6 +0.1
CASY   Casey             64.12 202 ⇑P        P        05 08 10.0 +1.5
INCN   Inchon            64.47 324  P        P        05 08 12.9 +1.7
INCN                                P        P        05 08 12.9 +1.7
INCN                                S        S        05 16 50.4 +1.3
INCN                                S        S        05 16 50.4 +1.3
INCN   Inchon            64.47 324  P        P        05 08 12.0 +0.8
INCN                                IAmb     IAmb     05 08 18.2
              comp=Z,130nm,1.1s
INCN   Inchon            64.47 324  P        P        05 08 12.8 +1.7
INCN   Inchon            64.47 324  P        P        05 08 12.0 +0.8
INCN                                pmax     pmax
              comp=Z,130nm,1.2s
INCN                                MLR      MLR
              comp=Z,3µm,18.0s
MNAI   Manna             64.62 272  P        P        05 08 11.9 -0.8
MNAI   Manna             64.62 272  P        P        05 08 12.9 +0.2
GZH    Guangzhou         65.02 304  P        P        05 08 15.5 +0.5
GZH                                 S        S        05 16 59.6 +3.4
GZH                                 pmax     pmax
              comp=Z,58nm,1.3s
GZH                                 LR       LR
              comp=Z,3µm,13.4s
GZH                                 LR       LR
              comp=Z,1µm,13.3s
YSS    Yuzhno-Sakhali    65.02 341  P        P        05 08 15.0 +0.4
YSS                                 IAMs_20  IAMs_20  05 30 22.9
              comp=Z,5µm,21.0s
YSS    Yuzhno-Sakhali    65.02 341  P        P        05 08 15.8 +1.3
YSS    Yuzhno-Sakhali    65.02 341c iP       P        05 08 14.7 +0.2
YSS                                e*PP      sP       05 08 25.5 +1.9
YSS                                e                  05 08 45.0
YSS                                e                  05 10 36.9
YSS                                eS        S        05 16 52.9 -2.5
YSS                                e                  05 18 06.2
YSS                                eSS       SS       05 21 15.0 +6.9
YSS                                 pmax     pmax
              comp=Z,140nm,1.3s
YSS                                 pmax     pmax
              comp=E,70nm,0.9s
YSS                                 pmax     pmax
              comp=Z,2µm,5.4s
YSS                                 pmax     pmax
              comp=E,700nm,4.2s
YSS                                 smax     smax
              comp=N,900nm,9.0s
YSS                                 smax     smax
              comp=E,1µm,9.2s
EGSI   Enggano, Bengk    65.05 271  P        P        05 08 13.0 -2.5
              comp=E,5µmcomp=E,5µmcomp=E,162nm,1.1s
KSI    Kapahiang         65.14 273  P        P        05 08 14.3 -1.9
BTDF   Bukit Timah Da    65.31 278  P        P        05 08 17.7 +0.6
MYKOM  Kota Tinggi       65.35 279  P        P        05 08 17.9 +0.5
MYKOM                               IAmb     IAmb     05 09 15.9
              comp=Z,97nm,1.4s
MYKOM  Kota Tinggi       65.35 279  P        P        05 08 16.1 -1.3
TEY    Ternei            65.53 336⇓eP        P        05 08 17.7 -0.2
TEY                                 pmax     pmax
              comp=N,10.0nm,1.5s
TEY                                 pmax     pmax
              comp=Z,40nm,1.7s
TEY                                 pmax     pmax
              comp=N,100nm,9.1s
TEY                                 pmax     pmax
              comp=Z,200nm,8.8s
SKR    Severo-Kuril's    65.54 352  eP       P        05 08 18.4 +0.6
SKR                                 pmax     pmax
              comp=Z,2µm,7.9s
SKR                                 MLR      MLR
              comp=Z,2µm,20.0s
MASI   Maura Aman, Be    65.61 273  P        P        05 08 17.9 -1.2
              comp=Z,5µmcomp=Z,307nm,1.4s
NJ2    Nanjing           65.78 315 ⇑P        P        05 08 20.5 +0.7
NJ2                                 pP       pP       05 08 25.8 -0.5
NJ2                                 sP       sP       05 08 31.9 +3.1
NJ2                                 S        S        05 17 07.8 +2.5
NJ2                                 pmax     pmax
              comp=Z,65nm,1.3s
NJ2                                 pmax     pmax
              comp=Z,2µm,6.6s
NJ2                                 LR       LR
              comp=Z,2µm,18.0s
NJ2                                 LR       LR
              comp=Z,2µm,18.5s
NJ2                                 LR       LR
              comp=Z,3µm,17.2s
VLA    Vladivostok       65.98 332 i P       P        05 08 22.1 +1.3
VLA                                 pmax     pmax
              comp=Z,84nm,0.9s
QIZ    Qiongzhong        66.04 299  P        P        05 08 22.9 +1.2
QIZ                                 S        S        05 17 10.1 +1.1
QIZ                                 pmax     pmax
              comp=Z,57nm,1.8s
QIZ                                 pmax     pmax
              comp=Z,2µm,6.6s
QIZ                                 LR       LR
              comp=Z,850nm,17.4s
QIZ                                 LR       LR
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	comp=Z,1µm,19.9s						
QIZ				LR	LR		
	comp=Z,3µm,28.2s						
PSTR	**Posyet**	**66.12**	**331**	*i* P	**P**	**05 08 22.9**	**+1.2**
USRK	**Ussuriysk Ar.**	**66.78**	**333**	P	**P**	**05 08 26.1**	**+0.2**
	comp=Z,99nm,1.0s,baz=136,slow=6.8,SNR=61						
USRK				PKP2ab	**P'P'ab**	**05 37 01.7**	**+3.9**
	comp=Z,1.2nm,0.5s,baz=211,slow=3.3,SNR=5.3						
	comp=Z,99nm,1.0s						
SHEM	**Shemya Is, Ala**	**66.99**	**4**	LR	LR	05 32 36.6	
	comp=Z,1000nm,21.4s,baz=188,slow=31						
UGL	**Uglegorsk**	**67.12**	**342**	*e*P	**P**	**05 08 30.1**	**+2.1**
UGL				*e*S	**S**	**05 17 27.3**	**+6.4**
UGL				*e*SS	**SS**	**05 21 35.0**	**-5.7**
UGL				pmax	pmax		
	comp=Z,200nm,0.9s						
UGL				pmax	pmax		
	comp=Z,5µm,8.7s						
UGL				smax	smax		
	comp=E,2µm,6.0s						
UGL				smax	smax		
	comp=N,2µm,9.0s						
ADK	**Adak**	**67.28**	**10**	P	**P**	**05 08 29.2**	**+0.3**
ADK	**Adak**	**67.28**	**10**	P	**P**	**05 08 30.2**	**+1.3**
ADK	**Adak**	**67.28**	**10**	P	**P**	**05 08 29.3**	**+0.3**
ADK				pmax	pmax		
	comp=Z,369nm,1.4s						
PET	**Petropavlovsk**	**67.53**	**354**	*e*P	**P**	**05 08 31.7**	**+1.2**
PET				*e*S	**S**	**05 17 28.3**	**+2.6**
PET				pmax	pmax		
	comp=Z,119nm,1.3s						
PET				pmax	pmax		
	comp=Z,2µm,15.9s						
PET	**Petropavlovsk**	**67.53**	**354**	P	**P**	**05 08 31.9**	**+1.4**
	comp=Z,105nm,2.3s						
PEA0B	**Petropavlovsk-**	**67.72**	**353**	*i* P	**P**	**05 08 32.5**	**+0.8**
PETK	**Petropavlovsk-**	**67.72**	**353**	P	**P**	**05 08 32.2**	**+0.5**
	comp=Z,82nm,1.0s,baz=116,slow=6.8,SNR=38						
PETK				LR	LR	05 35 00.3	
	comp=Z,1µm,18.9s,baz=163,slow=33						
	comp=Z,82nm,1.0s						
PETK	**Petropavlovsk-**	**67.72**	**353**	P	**P**	**05 08 31.8**	**+0.1**
PPSI	**Pulau Pagai**	**67.86**	**273**	P	**P**	**05 08 31.9**	**-1.6**
	comp=Z,9µmcomp=Z,284nm,1.3s						
PDSI	**Padang**	**67.89**	**275**	P	**P**	**05 08 30.1**	**-3.6**
CNSH	**ChangSha**	**67.90**	**309**	P	**P**	**05 08 33.0**	**-0.4**
CNSH				S	**S**	**05 17 30.9**	**-0.2**
CNSH				pmax	pmax		
	comp=Z,2µm,6.8s						
CNSH				LR	LR		
	comp=Z,2µm,18.8s						
CNSH				LR	LR		
	comp=Z,2µm,21.4s						
CNSH				LR	LR		
	comp=Z,3µm,21.4s						
ATKA	**Atka Island**	**68.05**	**12**	P	**P**	**05 08 34.4**	**+0.7**
PPI	**Padang Panjang**	**68.07**	**275**	P	**P**	**05 08 33.3**	**-1.5**
	comp=Z,4µmcomp=Z,4µmcomp=Z,78nm,1.4s						
WHN	**Wuhan**	**68.09**	**312**	⇑P	**P**	**05 08 34.8**	**+0.3**
WHN				sP	**pP**	**05 08 39.8**	**-1.3**
WHN				S	**S**	**05 17 34.8**	**+1.5**
WHN				pmax	pmax		
	comp=Z,5µm,5.0s						
WHN				LR	LR		
	comp=Z,9µm,17.3s						
WHN				LR	LR		
	comp=Z,8µm,22.4s						
WHN				LR	LR		
	comp=Z,11µm,20.5s						
MDJ	**Mudanjiang**	**68.19**	**332**	P	**P**	**05 08 36.3**	**+1.4**
MDJ				S	**S**	**05 17 37.9**	**+4.0**
MDJ				pmax	pmax		
	comp=Z,170nm,1.1s						
MDJ				LR	LR		
	comp=Z,5µm,16.5s						
MDJ				LR	LR		
	comp=Z,4µm,16.1s						
MDJ				LR	LR		
	comp=Z,4µm,22.3s						
MDJ	**Mudanjiang**	**68.19**	**332**	P	**P**	**05 08 35.4**	**+0.5**
DL2	**Dalian**	**68.32**	**323**	P	**P**	**05 08 35.6**	**-0.2**
DL2				S	**S**	**05 17 39.3**	**+3.7**
DL2				pmax	pmax		
	comp=Z,120nm,1.6s						
DL2				pmax	pmax		
	comp=Z,3µm,6.7s						
DL2				LR	LR		
	comp=Z,2µm,17.3s						
DL2				LR	LR		
	comp=Z,3µm,17.3s						
DL2				LR	LR		
	comp=Z,3µm,19.7s						
UBPT	**Khong Chiam**	**68.33**	**293**	P	**P**	**05 08 37.4**	**+1.1**
GULI	**GuiLin**	**68.46**	**305**	P	**P**	**05 08 38.5**	**+1.5**
GULI				S	**S**	**05 17 41.0**	**+3.1**
GULI				SS	**SS**	**05 22 01.5**	**-0.7**
GULI				pmax	pmax		
	comp=Z,83nm,1.2s						
GULI				LR	LR		
	comp=Z,2µm,16.9s						
GULI				LR	LR		
	comp=Z,2µm,18.8s						
GULI				LR	LR		
	comp=Z,2µm,20.3s						
TYV	**Tymovskoe**	**68.55**	**343**	*e*P	**P**	**05 08 38.5**	**+1.6**
TYV				*e*S	**S**	**05 17 38.5**	**+0.6**
TYV				pmax	pmax		
	comp=Z,71nm,0.9s						
TYV				pmax	pmax		
	comp=Z,700nm,3.0s						
TYV				smax	smax		
	comp=N,500nm,4.6s						
TYV				smax	smax		
	comp=E,400nm,4.6s						
IPM	**Ipoh**	**68.83**	**281**	IAmb	IAmb	05 08 41.1	
	comp=Z,108nm,1.2s						
IPM	**Ipoh**	**68.83**	**281**	P	**P**	**05 08 40.2**	**+0.7**
IPM	**Ipoh**	**68.83**	**281**	P	**P**	**05 08 38.7**	**-0.8**
	comp=Z,4µmcomp=Z,82nm,1.2s						
IPM	**Ipoh**	**68.83**	**281**	⇑P	**P**	**05 08 39.8**	**+0.2**
COCO	**West Island**	**68.91**	**262**	P	**P**	**05 08 41.0**	**+1.0**
COCO				P	**P**	**05 08 41.0**	**+1.0**
COCO				S	**S**	**05 17 49.0**	**+5.3**
COCO				S	**S**	**05 17 49.0**	**+5.3**
COCO	**West Island**	**68.91**	**262**	IAMs_20	IAMs_20	05 40 28.5	
	comp=Z,5µm,19.0s						
COCO	**West Island**	**68.91**	**262**	P	**P**	**05 08 39.2**	**-0.8**
	comp=Z,3µmcomp=Z,4µmcomp=Z,96nm,1.2s						
SISI	**Saibi**	**69.11**	**274**	P	**P**	**05 08 41.9**	**+0.6**
	comp=Z,6µmcomp=Z,118nm,2.9s						
SNY	**Shenyang**	**69.18**	**326**	⇓P	**P**	**05 08 41.9**	**+0.8**
SNY				S	**S**	**05 17 48.0**	**+2.2**
SNY				pmax	pmax		
	comp=Z,39nm,1.5s						
SNY				pmax	pmax		
	comp=Z,2µm,6.1s						
SNY				LR	LR		
	comp=Z,2µm,21.0s						
SNY				LR	LR		
	comp=Z,1µm,24.3s						
SNY				LR	LR		
	comp=Z,2µm,20.2s						
MNSI	**Mandailing Nat**	**69.18**	**276**	P	**P**	**05 08 40.1**	**-1.6**
	comp=Z,127nm,1.5s						
TIA	**Tai'an**	**69.41**	**318**	P	**P**	**05 08 42.0**	**-0.7**
TIA				PP	**PP**	**05 11 13.1**	**-3.4**
TIA				S	**S**	**05 17 47.9**	**-0.9**
TIA				SKS	**SKiKP**	**05 18 36.0**	**+5.0**
TIA				pmax	pmax		
	comp=Z,66nm,1.3s						
TIA				pmax	pmax		
	comp=Z,2µm,6.7s						
TIA				LR	LR		
	comp=Z,1µm,13.3s						
TIA				LR	LR		
	comp=Z,3µm,18.3s						
TIA				LR	LR		
	comp=Z,5µm,21.1s						
KULM	**Kulim**	**69.42**	**281**	IAmb	IAmb	05 08 58.1	
	comp=Z,89nm,1.3s						
KULM	**Kulim**	**69.42**	**281**	P	**P**	**05 08 43.7**	**+0.5**
KULM	**Kulim**	**69.42**	**281**	P	**P**	**05 08 42.3**	**-0.9**
CN2	**Changchun**	**69.59**	**329**	*e*P	**P**	**05 08 42.8**	**-0.8**
CN2				*e*S	**S**	**05 17 52.1**	**+1.5**
CN2				SS	**SS**	**05 22 23.6**	**+4.5**
CN2				pmax	pmax		
	comp=Z,2µm,5.0s						
CN2				LR	LR		
	comp=Z,2µm,19.0s						
CN2				LR	LR		
	comp=Z,2µm,19.0s						
CN2				LR	LR		
	comp=Z,3µm,19.9s						
NIKH	**Nikolski High**	**69.96**	**15**	P	**P**	**05 08 45.5**	**-0.1**
NIKH	**Nikolski High**	**69.96**	**15**	P	**P**	**05 08 46.8**	**+1.2**
NIKH	**Nikolski High**	**69.96**	**15**	P	**P**	**05 08 44.7**	**-0.9**
	baz=204,SNR=9.0						
BNX	**BinXian**	**70.05**	**331**	⇑P	**P**	**05 08 47.0**	**+0.6**
BNX				pP	**pP**	**05 08 50.3**	**-2.7**
BNX				S	**S**	**05 17 58.3**	**+2.4**
BNX				pmax	pmax		
	comp=Z,100nm,1.1s						
BNX				pmax	pmax		
	comp=Z,3µm,6.5s						
BNX				LR	LR		
	comp=Z,3µm,16.8s						
BNX				LR	LR		
	comp=Z,1µm,16.8s						
BNX				LR	LR		
	comp=Z,2µm,19.5s						
PBSI	**Pulau Batu**	**70.21**	**275**	P	**P**	**05 08 45.9**	**-2.2**
	comp=Z,7µmcomp=Z,8µmcomp=Z,154nm,1.4s						
GRNR	**Gornyy**	**70.41**	**339**	⇑*i*P	**P**	**05 08 48.8**	**+0.3**
GRNR				pmax	pmax		
	comp=Z,100nm,1.1s						
GSI	**Gunungsitoli**	**71.25**	**276**	P	**P**	**05 08 53.1**	**-1.3**
GSI	**Gunungsitoli**	**71.25**	**276**	P	**P**	**05 08 54.7**	**+0.3**
GSI	**Gunungsitoli**	**71.25**	**276**	P	**P**	**05 08 54.5**	**+0.1**
	comp=Z,6µmcomp=Z,6µmcomp=Z,103nm,1.1s						
GSI	**Gunungsitoli**	**71.25**	**276**	⇓P	**P**	**05 08 54.3**	**-0.1**
UNV	**Unalaska Valle**	**71.35**	**16**	P	**P**	**05 08 53.7**	**-0.4**
	baz=206						
ENH	**Enshi**	**71.55**	**309**	P	**P**	**05 08 55.4**	**-0.5**
LYN	**LuoYang**	**71.60**	**314**	P	**P**	**05 08 55.4**	**-0.6**
LYN				sP	sP	05 09 07.0	+1.9
LYN				PcP	**PcP**	**05 09 13.1**	**-2.2**
LYN				S	**S**	**05 18 15.3**	**+1.0**
LYN				pmax	pmax		
	comp=Z,170nm,1.2s						
LYN				pmax	pmax		
	comp=Z,4µm,6.4s						
LYN				LR	LR		
	comp=Z,5µm,18.2s						
LYN				LR	LR		
	comp=Z,3µm,16.5s						
LYN				LR	LR		
	comp=Z,6µm,24.0s						
KCSI	**Kotacane, Aceh**	**71.66**	**279**	P	**P**	**05 08 56.8**	**-0.1**
HNS	**HongShan**	**71.68**	**318**	⇑P	**P**	**05 08 55.8**	**-0.7**
HNS				S	**S**	**05 18 16.8**	**+1.7**
HNS				pmax	pmax		
	comp=Z,92nm,1.3s						
HNS				pmax	pmax		
	comp=Z,3µm,7.3s						
HNS				LR	LR		
	comp=Z,2µm,21.2s						
HNS				LR	LR		
	comp=Z,3µm,21.4s						
HNS				LR	LR		
	comp=Z,4µm,20.6s						
GYA	**Guiyang**	**71.95**	**304**	⇑P	**P**	**05 08 59.0**	**+0.5**
GYA				S	**S**	**05 18 19.1**	**+0.1**
GYA				pmax	pmax		
	comp=Z,51nm,1.2s						
GYA				LR	LR		
	comp=Z,2µm,17.3s						
GYA				LR	LR		
	comp=Z,2µm,19.1s						
GYA				LR	LR		
	comp=Z,4µm,19.8s						
SLVN	**Son La**	**72.06**	**298**	IAmb	IAmb	05 09 12.8	
	comp=Z,89nm,1.6s						
SLVN	**Son La**	**72.06**	**298**	P	**P**	**05 09 00.7**	**+1.5**
TPTI		**72.16**	**278**	P	**P**	**05 08 57.7**	**-2.2**
BJT	**Baijiatuau**	**72.30**	**321**	P	**P**	**05 09 01.4**	**+1.3**
BJI	**Beijing**	**72.31**	**321**	P	**P**	**05 09 00.9**	**+0.7**
BJI				pP	**pP**	**05 09 05.8**	**-0.9**
BJI				PP	**PP**	**05 11 43.8**	**+2.5**
BJI				S	**S**	**05 18 23.1**	**+0.9**
BJI				pmax	pmax		
	comp=Z,37nm,2.2s						
BJI				pmax	pmax		
	comp=Z,1µm,6.2s						
BJI				LR	LR		
	comp=Z,1µm,20.3s						
BJI				LR	LR		
	comp=Z,1µm,18.5s						
BJI				LR	LR		
	comp=Z,2µm,21.9s						
SNSI	**Sinabang, Aceh**	**72.75**	**277**	P	**P**	**05 09 01.8**	**-1.6**
	comp=Z,4µmcomp=Z,5µmcomp=Z,143nm,2.8s						
FALS	**False Pass**	**73.08**	**17**	IAMs_20	IAMs_20	05 36 39.8	
	comp=Z,4µm,20.0s						
FALS	**False Pass**	**73.08**	**17**	P	**P**	**05 09 04.3**	**-0.1**
	baz=209						
P08K	**Saint George I**	**73.13**	**13**	P	**P**	**05 09 05.6**	**+1.0**
	baz=203						
MLSI	**Meulaboh, Aceh**	**73.18**	**279**	P	**P**	**05 09 05.5**	**-0.5**
	comp=Z,6µmcomp=Z,189nm,1.2s						
TIY	**Taiyuan**	**73.35**	**317**	*e*P	**P**	**05 09 07.8**	**+1.3**
TIY				S	**S**	**05 18 31.8**	**-2.6**
TIY				pmax	pmax		
	comp=Z,120nm,1.0s						
TIY				pmax	pmax		
	comp=Z,2µm,5.1s						
TIY				LR	LR		
	comp=Z,2µm,18.5s						
TIY				LR	LR		
	comp=Z,2µm,19.2s						
TIY				LR	LR		
	comp=Z,2µm,19.2s						
HEH	**HeiHe**	**73.44**	**334**	*e*P	**P**	**05 09 06.3**	**-0.3**
HEH				S	**SKiKP**	**05 18 37.3**	**+0.8**
HEH				pmax	pmax		
	comp=Z,92nm,1.1s						
HEH				pmax	pmax		
	comp=Z,4µm,6.1s						
HEH				LR	LR		
	comp=Z,3µm,19.9s						
HEH				LR	LR		
	comp=Z,3µm,16.7s						
HEH				LR	LR		
	comp=Z,5µm,18.0s						
SPIA	**Saint Paul Isl**	**73.52**	**12**	P	**P**	**05 09 06.4**	**-0.5**
	baz=202						
XAN	**Xi'an**	**73.83**	**312**	⇑P	**P**	**05 09 08.6**	**-0.8**
XAN				pP	pP	05 09 17.1	+1.0
XAN				S	**S**	**05 18 39.9**	**-0.1**
XAN				pmax	pmax		
	comp=Z,85nm,1.9s						
XAN				pmax	pmax		
	comp=Z,2µm,4.7s						
XAN				LR	LR		
	comp=Z,3µm,20.6s						
XAN				LR	LR		
	comp=Z,1µm,16.5s						
XAN				LR	LR		
	comp=Z,2µm,19.9s						
CNBA	**Chernabura Isl**	**74.19**	**19**	IAmb	IAmb	05 09 12.5	
	comp=Z,160nm,1.2s						
CNBA				IAMs_20	IAMs_20	05 36 29.5	
	comp=Z,8µm,19.0s						
CHNA	**Chernabura Isl**	**74.20**	**19**	P	**P**	**05 09 08.8**	**-2.2**
	baz=213						
S12K	**Black Hills**	**74.21**	**17**	IAmb	IAmb	05 09 12.4	
	comp=Z,180nm,1.1s						
S12K	**Black Hills**	**74.21**	**17**	P	**P**	**05 09 10.3**	**-0.7**
	baz=210,SNR=6.5						
SDPT	**Sand Point**	**74.37**	**18**	P	**P**	**05 09 10.7**	**-1.3**
	baz=212						
KMI	**Kunming**	**74.58**	**301**	⇑P	**P**	**05 09 13.0**	**-1.2**
KMI				S	**S**	**05 18 48.8**	**-0.3**
KMI				pmax	pmax		
	comp=Z,63nm,1.2s						
KMI				pmax	pmax		
	comp=Z,2µm,6.5s						
KMI				LR	LR		
	comp=Z,1µm,17.1s						
KMI				LR	LR		
	comp=Z,2µm,19.2s						
KMI				LR	LR		
	comp=Z,2µm,26.6s						
XLT	**XiLinHaoTe**	**74.71**	**324**	⇑*i*P	**P**	**05 09 15.5**	**+1.1**
XLT				sP	pP	05 09 22.6	+1.6
XLT				S	**S**	**05 18 52.9**	**+3.4**
XLT				pmax	pmax		
	comp=Z,120nm,1.2s						
XLT				pmax	pmax		
	comp=Z,3µm,6.3s						
XLT				LR	LR		
	comp=Z,160nm,18.9s						
XLT				LR	LR		
	comp=Z,1µm,17.2s						
XLT				LR	LR		
	comp=Z,2µm,17.6s						
MA2	**Magadan**	**74.93**	**351**	LR	LR	05 41 35.4	
	comp=Z,866nm,18.2s,baz=174,slow=35						
MA2	**Magadan**	**74.93**	**351**	P	**P**	**05 09 15.2**	**0.0**
MA2				IAmb	IAmb	05 09 17.0	
	comp=Z,107nm,1.3s						
MA2				IAMs_20	IAMs_20	05 34 48.8	
	comp=Z,4µm,22.0s						
MA2	**Magadan**	**74.93**	**351**	P	**P**	**05 09 16.0**	**+0.8**
MA2	**Magadan**	**74.93**	**351**	*ce*P	**P**	**05 09 14.8**	**-0.4**
MA2				pmax	pmax		
	comp=Z,24nm,0.9s						
MA2	**Magadan**	**74.93**	**351**	P	**P**	**05 09 15.3**	**+0.1**
	comp=Z,4µmcomp=Z,91nm,2.0s						
CM31	**Chiang Mai Arr**	**75.30**	**294**	P	**P**	**05 09 19.3**	**+1.0**
	SNR=20						
CM31				P	**P**	**05 09 19.3**	**+1.0**
	SNR=20						
CMAR	**Chiang Mai Arr**	**75.30**	**294**	P	**P**	**05 09 17.7**	**-0.5**
	comp=Z,27nm,1.0s,baz=126,slow=4.1,SNR=67						
	comp=Z,27nm,1.0s						
CMAR	**Chiang Mai Arr**	**75.30**	**294**	P	**P**	**05 09 18.0**	**-0.2**
CMAR	**Chiang Mai Arr**	**75.30**	**294**	P	**P**	**05 09 18.0**	**-0.2**
CHTO	**Chiang Mai**	**75.43**	**294**	P	**P**	**05 09 19.1**	**+0.1**
CHTO	**Chiang Mai**	**75.43**	**294**	P	**P**	**05 09 18.4**	**-0.6**
CHTO				IAmb	IAmb	05 09 25.8	
	comp=Z,142nm,1.6s						
CHTO	**Chiang Mai**	**75.43**	**294**	P	**P**	**05 09 19.4**	**+0.5**
CHTO	**Chiang Mai**	**75.43**	**294**	P	**P**	**05 09 18.8**	**-0.1**
CHTO	**Chiang Mai**	**75.43**	**294**	P	**P**	**05 09 18.4**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,142nm,1.6s						
CHTO	**Chiang Mai**	**75.43**	**294**	⇑P	**P**	**05 09 18.1**	**-0.8**
S14K	**Fog Glacier**	**75.44**	**18**	P	**P**	**05 09 17.7**	**-0.6**
	baz=213,SNR=6.5						
HHC	**Hu-ho-hao-te**	**75.64**	**319**	*e*P	**P**	**05 09 21.3**	**+1.4**
HHC				sP	sP	05 09 30.8	+1.9
HHC				PP	**PP**	**05 12 15.4**	**+5.6**
HHC				S	**S**	**05 19 02.3**	**+2.2**
HHC				ScS	**ScS**	**05 19 31.3**	**-1.3**
HHC				pmax	pmax		
	comp=Z,54nm,0.9s						
HHC				pmax	pmax		
	comp=Z,2µm,4.6s						
HHC				LR	LR		
	comp=Z,2µm,20.1s						
HHC				LR	LR		
	comp=Z,1µm,19.6s						
HHC				LR	LR		
	comp=Z,3µm,21.0s						
QSPA	**South Pole Qui**	**75.70**	**180**	P	**P**	**05 09 18.9**	**-0.9**
	comp=Z,10nm,1.0s,baz=343,slow=0.9,SNR=20						
QSPA				LR	LR	05 39 08.3	
	comp=Z,2µm,19.6s,baz=28,slow=33						
	comp=Z,10nm,1.0s						
QSPA	**South Pole Qui**	**75.70**	**180**	P	**P**	**05 09 18.5**	**-1.4**
PZH	**PanZhiHua**	**75.96**	**302**	P	**P**	**05 09 20.5**	**-1.5**
PZH				S	**S**	**05 19 03.0**	**-1.2**
PZH				pmax	pmax		
	comp=Z,20nm,1.0s						
PZH				pmax	pmax		
	comp=Z,2µm,6.8s						
PZH				LR	LR		
	comp=Z,1µm,22.4s						
PZH				LR	LR		
	comp=Z,810nm,20.3s						
PZH				LR	LR		
	comp=Z,1µm,22.8s						
ZEA	**Zeya**	**76.14**	**337**	*e*P	**P**	**05 09 22.7**	**+0.5**
ZEA				*e*S	**S**	**05 19 06.7**	**+1.9**
ZEA				pmax	pmax		
	comp=E,300nm,4.6s						
ZEA				pmax	pmax		
	comp=N,600nm,6.3s						
ZEA				pmax	pmax		
	comp=Z,2µm,6.3s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=N,50nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,110nm,1.1s						
ZEA				smax	smax		
	comp=N,700nm,7.3s						
ZEA				smax	smax		
	comp=E,900nm,9.8s						
ZEA				MLR	MLR		
	comp=N,700nm,16.0s						
CD2	**Chengdu**	**76.21**	**307**	P	**P**	**05 09 22.3**	**-0.9**
CD2				pP	pP	05 09 31.5	+1.6
CD2				sP	PcP	05 09 35.3	+0.1
CD2				PP	**PP**	**05 12 14.4**	**-0.3**
CD2				S	**S**	**05 19 06.6**	**-0.1**
CD2				sS	sS	05 19 18.8	+0.9
CD2				SKS	**SKSac**	**05 19 31.4**	**-2.1**
CD2				pmax	pmax		
	comp=N,80nm,1.1s						
CD2				pmax	pmax		
	comp=N,3µm,7.1s						
CD2				LR	LR		
	comp=N,3µm,15.1s						
CD2				LR	LR		
	comp=N,3µm,15.6s						
CD2				LR	LR		
	comp=N,3µm,18.0s						
HIA	**Hailar**	**76.22**	**330**	IAmb	IAmb	05 09 24.9	
	comp=Z,109nm,1.1s						
HIA	**Hailar**	**76.22**	**330**	P	**P**	**05 09 24.0**	**+1.2**
CHIR	**Chirikof Islan**	**76.31**	**20**	IAMs_20	IAMs_20	05 37 15.3	
	comp=Z,7µm,20.0s						
CHIR	**Chirikof Islan**	**76.31**	**20**	P	**P**	**05 09 23.1**	**0.0**
	baz=216						
CMBY	**CAMPBELL BAY**	**76.32**	**281**	*e*P	**P**	**05 09 20.4**	**-3.7**
CMBY				IAmb	IAmb	05 09 34.4	
	comp=Z,136nm,0.8s						
HILR	**Hailar Array B**	**76.41**	**330**	P	**P**	**05 09 22.4**	**-1.5**
	comp=Z,26nm,0.8s,baz=140,slow=9.4,SNR=4.6						
HILR				LR	LR	05 41 32.3	
	comp=Z,830nm,19.9s,baz=90,slow=34						
	comp=Z,26nm,0.8s						
BTO	**Baotou**	**76.49**	**318**	*e*P	**P**	**05 09 26.8**	**+2.1**
BTO				pP	**pP**	**05 09 31.6**	**+0.3**
BTO				sP	**sP**	**05 09 33.5**	**-0.3**
BTO				sS	**sS**	**05 19 25.0**	**+4.0**
BTO				SS	**SS**	**05 24 09.0**	**+4.1**
BTO				pmax	pmax		
	comp=Z,120nm,1.7s						
BTO				pmax	pmax		
	comp=Z,6µm,6.7s						
BTO				LR	LR		
	comp=Z,7µm,17.8s						
BTO				LR	LR		
	comp=Z,4µm,19.3s						
BTO				LR	LR		
	comp=Z,7µm,18.5s						
R16K	**Pilot Point**	**77.11**	**18**	IAMs_20	IAMs_20	05 35 58.4	
	comp=Z,6µm,22.0s						
R16K	**Pilot Point**	**77.11**	**18**	P	**P**	**05 09 26.5**	**-1.1**
	baz=214						
M11K	**Mekoryuk**	**77.31**	**13**	IAmb	IAmb	05 09 31.8	
	comp=Z,148nm,1.1s						
M11K	**Mekoryuk**	**77.31**	**13**	P	**P**	**05 09 28.0**	**-0.6**
	baz=206,SNR=6.8						
RPN	**Rapa Nui**	**77.32**	**115**	LR	LR	05 36 37.4	
	comp=Z,2µm,21.4s,baz=278,slow=30						
SII	**Sitkinak Islan**	**77.38**	**20**	IAMs_20	IAMs_20	05 37 37.7	
	comp=Z,6µm,19.0s						
SII	**Sitkinak Islan**	**77.38**	**20**	P	**P**	**05 09 30.2**	**+1.0**
SII	**Sitkinak Islan**	**77.38**	**20**	P	**P**	**05 09 28.5**	**-0.7**
	baz=218						
O14K	**Tigyukauivet M**	**77.49**	**16**	IAmb	IAmb	05 09 36.8	
	comp=Z,91nm,1.4s						
O14K	**Tigyukauivet M**	**77.49**	**16**	P	**P**	**05 09 28.7**	**-1.0**
	baz=211						

R17L	**Mt. Peulik Vol**	**77.54**	**19**	P	**P**	**05 09 28.9**	**-1.1**
	baz=216						
PLK4	**Peulik 4**	**77.54**	**19**	IAmb	IAmb	05 09 36.9	
	comp=Z,153nm,1.1s						
PLK4				IAMs_20	IAMs_20	05 37 44.2	
	comp=Z,7µm,20.0s						
O15K	**Ungalikthiuk R**	**77.81**	**16**	IAmb	IAmb	05 09 43.8	
	comp=Z,77nm,1.4s						
O15K				IAMs_20	IAMs_20	05 35 50.5	
	comp=Z,4µm,22.0s						
O15K	**Ungalikthiuk R**	**77.81**	**16**	P	**P**	**05 09 30.5**	**-1.1**
	baz=212						
SEY	**Seymchan**	**77.95**	**353**	LR	LR	05 38 11.1	
	comp=Z,2µm,20.5s,baz=160,slow=31						
SEY	**Seymchan**	**77.95**	**353**	eP	**P**	**05 09 30.0**	**-2.2**
SEY				e		05 12 24.8	
SEY				eS	**S**	**05 19 18.6**	**-5.5**
SEY				pmax	pmax		
	comp=Z,134nm,1.4s						
N14K	**Kuskokwak Cree**	**77.97**	**15**	P	**P**	**05 09 32.0**	**-0.3**
	baz=210,SNR=9.6						
M13K	**Dall Lake**	**77.98**	**14**	IAMs_20	IAMs_20	05 37 11.9	
	comp=Z,4µm,21.0s						
M13K	**Dall Lake**	**77.98**	**14**	P	**P**	**05 09 32.2**	**-0.2**
	baz=209						
TNCH	**TengChong**	**78.06**	**300**	⇑iP	**P**	**05 09 33.3**	**-0.6**
TNCH				pP	pP	05 09 38.3	-2.3
TNCH				sP	PcP	05 09 40.1	-3.4
TNCH				S	**S**	**05 19 22.6**	**-4.6**
TNCH				SS	**SS**	**05 24 31.8**	**+2.5**
TNCH				pmax	pmax		
	comp=Z,86nm,1.8s						
TNCH				pmax	pmax		
	comp=Z,1µm,4.4s						
TNCH				LR	LR		
	comp=Z,1µm,12.8s						
TNCH				LR	LR		
	comp=Z,870nm,10.8s						
TNCH				LR	LR		
	comp=Z,2µm,22.4s						
R18K	**Karluk**	**78.09**	**20**	IAmb	IAmb	05 09 35.2	
	comp=Z,210nm,1.4s						
R18K				IAMs_20	IAMs_20	05 37 57.9	
	comp=Z,5µm,20.0s						
R18K	**Karluk**	**78.09**	**20**	P	**P**	**05 09 30.9**	**-2.2**
	baz=217						
Q17K	**Contact Creek**	**78.20**	**19**	P	**P**	**05 09 32.3**	**-1.6**
	baz=216						
P16K	**Nushagak River**	**78.20**	**17**	IAMs_20	IAMs_20	05 36 46.2	
	comp=Z,5µm,22.0s						
P16K	**Nushagak River**	**78.20**	**17**	P	**P**	**05 09 33.8**	**+0.1**
	baz=214						
OHAK	**Old Harbor**	**78.21**	**20**	P	**P**	**05 09 35.2**	**+1.5**
OHAK	**Old Harbor**	**78.21**	**20**	P	**P**	**05 09 33.6**	**-0.2**
	baz=218,SNR=8.7						
Q16K	**King Salmon**	**78.30**	**18**	P	**P**	**05 09 33.1**	**-1.2**
	baz=215,SNR=16						
ACHA	**Angle Creek He**	**78.33**	**19**	IAmb	IAmb	05 09 37.8	
	comp=Z,117nm,1.2s						
LZH	**Lanzhou**	**78.47**	**312**	⇑P	**P**	**05 09 34.4**	**-1.5**
LZH				sP	sP	05 09 47.8	+2.8
LZH				S	**S**	**05 19 33.4**	**+2.2**
LZH				pmax	pmax		
	comp=Z,130nm,1.8s						
LZH				pmax	pmax		
	comp=Z,3µm,5.0s						
LZH				LR	LR		
	comp=Z,2µm,20.6s						
LZH				LR	LR		
	comp=Z,2µm,19.7s						
LZH				LR	LR		
	comp=Z,3µm,18.1s						
LZDM	**Lanzhou Array**	**78.52**	**312**	P	**P**	**05 09 37.7**	**+1.3**
	comp=Z,88nm,1.1s,baz=99,slow=9.2,SNR=27						
LZDM				LR	LR	05 43 12.6	
	comp=Z,1µm,20.1s,baz=105,slow=35						
	comp=Z,88nm,1.1s						
N15K	**Kwethluk River**	**78.59**	**16**	P	**P**	**05 09 35.7**	**-0.1**
	baz=212,SNR=24						
M14K	**Bethel**	**78.62**	**15**	IAmb	IAmb	05 09 43.2	
	comp=Z,154nm,1.1s						
M14K	**Bethel**	**78.62**	**15**	P	**P**	**05 09 35.8**	**-0.1**
	baz=210,SNR=19						
O16K	**Kokwok River B**	**78.64**	**17**	IAMs_20	IAMs_20	05 37 00.5	
	comp=Z,5µm,22.0s						
O16K	**Kokwok River B**	**78.64**	**17**	P	**P**	**05 09 35.5**	**-0.6**
	baz=214,SNR=11						
Q18K	**Katmai Hardscr**	**78.78**	**19**	P	**P**	**05 09 35.9**	**-1.2**
	baz=217,SNR=25						
P17K	**Kvichak River**	**78.79**	**18**	IAmb	IAmb	05 09 43.0	
	comp=Z,271nm,1.5s						
P17K				IAMs_20	IAMs_20	05 39 37.8	
	comp=Z,5µm,20.0s						
P17K	**Kvichak River**	**78.79**	**18**	P	**P**	**05 09 35.8**	**-1.1**
	baz=215,SNR=7.5						
M15K	**Kasigluk River**	**78.88**	**15**	P	**P**	**05 09 37.6**	**+0.2**
	baz=211						
KDAK	**Kodiak Island**	**78.89**	**20**	LR	LR	05 38 35.6	
	comp=Z,6µm,20.4s,baz=210,slow=31						
KDAK	**Kodiak Island**	**78.89**	**20**	P	**P**	**05 09 38.1**	**+0.6**
KDAK				IAmb	IAmb	05 09 40.0	
	comp=Z,103nm,1.2s						
KDAK	**Kodiak Island**	**78.89**	**20**	IAMs_20	IAMs_20	05 38 34.5	
	comp=Z,6µm,19.0s						
KDAK	**Kodiak Island**	**78.89**	**20**	P	**P**	**05 09 38.1**	**+0.6**
KDAK				pmax	pmax		
	comp=Z,103nm,1.2s						
KDAK	**Kodiak Island**	**78.89**	**20**	⇓P	**P**	**05 09 38.7**	**+1.3**
KDAK	**Kodiak Island**	**78.89**	**20**	P	**P**	**05 09 37.5**	**0.0**
	baz=219						
L14K	**Kuka Creek**	**78.96**	**14**	IAmb	IAmb	05 09 40.6	
	comp=Z,190nm,1.4s						
L14K				IAMs_20	IAMs_20	05 38 01.6	
	comp=Z,3µm,20.0s						
L14K	**Kuka Creek**	**78.96**	**14**	P	**P**	**05 09 37.0**	**-0.8**
	baz=209						
K13K	**Kusilvak Mount**	**79.04**	**13**	IAmb	IAmb	05 09 45.7	
	comp=Z,81nm,1.1s						
K13K	**Kusilvak Mount**	**79.04**	**13**	P	**P**	**05 09 38.5**	**+0.3**
	baz=207						
DGPR	**DIGLIPUR**	**79.05**	**287**	eP	**P**	**05 09 35.2**	**-4.1**
DGPR				IAmb	IAmb	05 09 46.9	
	comp=Z,204nm,1.8s						
O17K	**Koliganek Bris**	**79.08**	**17**	P	**P**	**05 09 37.2**	**-1.3**
	baz=215,SNR=9.3						
N16K	**Nishlik Lake**	**79.20**	**16**	P	**P**	**05 09 39.8**	**+0.7**
	baz=213						
P18K	**Big Mountain,**	**79.32**	**18**	IAmb	IAmb	05 09 46.1	
	comp=Z,253nm,1.4s						
P18K				IAMs_20	IAMs_20	05 37 26.7	
	comp=Z,4µm,21.0s						
P18K	**Big Mountain,**	**79.32**	**18**	P	**P**	**05 09 38.7**	**-1.2**
	baz=216,SNR=8.5						
GAMB	**Gambell**	**79.44**	**9**	P	**P**	**05 09 40.5**	**+0.2**
	baz=200,SNR=5.3						
Q19K	**Cape Douglas,**	**79.44**	**19**	IAMs_20	IAMs_20	05 39 13.0	
	comp=Z,7µm,20.0s						
Q19K	**Cape Douglas,**	**79.44**	**19**	P	**P**	**05 09 39.7**	**-0.9**
	baz=218						
L15K	**Ungalak Mounta**	**79.53**	**14**	P	**P**	**05 09 40.5**	**-0.4**
	baz=210,SNR=17						
Q20K	**Shuyak Island**	**79.59**	**20**	P	**P**	**05 09 40.6**	**-0.7**
	baz=219						
SYI	**Shuyak Island**	**79.59**	**20**	IAMs_20	IAMs_20	05 39 03.1	
	comp=Z,4µm,20.0s						
M16K	**Timber Creek**	**79.61**	**16**	IAmb	IAmb	05 09 44.7	
	comp=Z,324nm,1.8s						
M16K	**Timber Creek**	**79.61**	**16**	P	**P**	**05 09 41.8**	**+0.5**
	baz=213,SNR=14						
N17K	**Nushagak Hills**	**79.67**	**17**	IAmb	IAmb	05 09 44.6	
	comp=Z,183nm,1.9s						
N17K				IAMs_20	IAMs_20	05 37 09.8	
	comp=Z,6µm,22.0s						
N17K	**Nushagak Hills**	**79.67**	**17**	P	**P**	**05 09 41.5**	**-0.2**
	baz=214,SNR=5.9						
O18K	**Koktuh Hills**	**79.70**	**18**	IAmb	IAmb	05 09 44.9	
	comp=Z,226nm,1.8s						
O18K				IAMs_20	IAMs_20	05 37 39.7	
	comp=Z,5µm,22.0s						
O18K	**Koktuh Hills**	**79.70**	**18**	P	**P**	**05 09 41.1**	**-0.8**
	baz=216,SNR=8.2						
J14K	**Nanvaranak Lak**	**80.00**	**13**	IAmb	IAmb	05 09 46.5	
	comp=Z,190nm,1.4s						
J14K	**Nanvaranak Lak**	**80.00**	**13**	P	**P**	**05 09 43.4**	**-0.1**
	baz=208,SNR=20						
L16K	**Owhat River**	**80.06**	**15**	IAmb	IAmb	05 09 46.6	
	comp=Z,202nm,1.9s						
L16K	**Owhat River**	**80.06**	**15**	P	**P**	**05 09 43.6**	**-0.2**
	baz=212,SNR=7.9						
K15K	**Wolf Creek Mou**	**80.06**	**14**	IAmb	IAmb	05 09 46.9	
	comp=Z,251nm,1.4s						
K15K				IAMs_20	IAMs_20	05 37 52.7	
	comp=Z,4µm,21.0s						
K15K	**Wolf Creek Mou**	**80.06**	**14**	P	**P**	**05 09 44.1**	**+0.3**
	baz=210,SNR=27						
P19K	**Oil Pt**	**80.14**	**19**	IAMs_20	IAMs_20	05 39 45.5	
	comp=Z,6µm,20.0s						
P19K	**Oil Pt**	**80.14**	**19**	P	**P**	**05 09 44.4**	**0.0**
	baz=218						
N18K	**Kilae Creek**	**80.17**	**17**	IAMs_20	IAMs_20	05 37 56.8	
	comp=Z,5µm,21.0s						
N18K	**Kilae Creek**	**80.17**	**17**	P	**P**	**05 09 43.9**	**-0.5**
	baz=216						
O19K	**Port Alsworth**	**80.24**	**18**	IAMs_20	IAMs_20	05 40 13.0	
	comp=Z,4µm,20.0s						
O19K	**Port Alsworth**	**80.24**	**18**	P	**P**	**05 09 43.3**	**-1.5**
	baz=217,SNR=9.7						
M17K	**Holitna River**	**80.33**	**16**	IAmb	IAmb	05 10 13.0	
	comp=Z,157nm,1.9s						
M17K				IAMs_20	IAMs_20	05 37 19.1	
	comp=Z,4µm,22.0s						
M17K	**Holitna River**	**80.33**	**16**	P	**P**	**05 09 45.5**	**+0.2**
	baz=214,SNR=10						
ILSW	**Iliamna Southw**	**80.43**	**19**	IAmb	IAmb	05 09 52.1	
	comp=Z,235nm,1.6s						
HOM	**Homer**	**80.65**	**20**	IAMs_20	IAMs_20	05 39 39.0	
	comp=Z,5µm,20.0s						
HOM	**Homer**	**80.65**	**20**	P	**P**	**05 09 46.4**	**-0.6**
	baz=220						
O20K	**Slope Mountain**	**80.67**	**19**	P	**P**	**05 09 45.7**	**-1.5**
	baz=219						
CNPM	**China Poot**	**80.68**	**20**	IAmb	IAmb	05 09 55.4	
	comp=Z,247nm,1.4s						
CNPM				IAMs_20	IAMs_20	05 46 30.9	
	comp=Z,5µm,18.0s						
N19K	**Bonanza Creek**	**80.68**	**18**	IAMs_20	IAMs_20	05 38 20.5	
	comp=Z,5µm,21.0s						
N19K	**Bonanza Creek**	**80.68**	**18**	P	**P**	**05 09 46.3**	**-1.0**
	baz=217						
L17K	**Donlin**	**80.72**	**15**	P	**P**	**05 09 47.5**	**+0.2**
	baz=213						
M18K	**Stony River**	**80.85**	**17**	P	**P**	**05 09 48.8**	**+0.8**
	baz=216,SNR=22						
RED	**Redoubt Volcan**	**80.89**	**19**	IAmb	IAmb	05 09 49.9	
	comp=Z,140nm,1.3s						
BRLK	**Bradley Lake**	**80.98**	**20**	IAmb	IAmb	05 09 55.8	
	comp=Z,100nm,1.1s						
BRLK				IAMs_20	IAMs_20	05 46 31.4	
	comp=Z,5µm,18.0s						
BRSE	**Bradley Lake S**	**81.01**	**20**	P	**P**	**05 09 47.5**	**-1.5**
	baz=220						
CIT	**Chita**	**81.01**	**329**	eP	**P**	**05 09 50.4**	**+1.2**
CIT				pmax	pmax		
	comp=Z,707nm,2.6s						
J16K	**Anvik River**	**81.13**	**14**	IAmb	IAmb	05 09 57.4	
	comp=Z,92nm,1.2s						
J16K				IAMs_20	IAMs_20	05 39 19.1	
	comp=Z,4µm,21.0s						
J16K	**Anvik River**	**81.13**	**14**	P	**P**	**05 09 49.7**	**+0.2**
	baz=211,SNR=18						
K17K	**Iditarod**	**81.21**	**15**	IAmb	IAmb	05 09 53.1	
	comp=Z,108nm,1.4s						
K17K	**Iditarod**	**81.21**	**15**	P	**P**	**05 09 50.4**	**+0.5**
	baz=213						
L18K	**Granite Mounta**	**81.21**	**16**	IAmb	IAmb	05 09 53.3	
	comp=Z,158nm,1.8s						
L18K				IAMs_20	IAMs_20	05 38 22.6	
	comp=Z,4µm,22.0s						
L18K	**Granite Mounta**	**81.21**	**16**	P	**P**	**05 09 50.2**	**+0.3**
	baz=215,SNR=8.9						
ANM	**Nome**	**81.25**	**11**	IAmb	IAmb	05 09 57.8	
	comp=Z,235nm,1.7s						
ANM	**Nome**	**81.25**	**11**	P	**P**	**05 09 50.7**	**+0.5**
	baz=206,SNR=13						
J17K	**VABM Dome**	**81.59**	**14**	IAmb	IAmb	05 09 55.2	
	comp=Z,94nm,1.4s						
J17K	**VABM Dome**	**81.59**	**14**	P	**P**	**05 09 52.4**	**+0.5**
	baz=212,SNR=11						
AIS	**Amsterdam Isla**	**81.59**	**233**	IAMs_20	IAMs_20	05 41 26.6	
	comp=Z,6µm,21.0s						
I17K	**Unalakleet**	**81.63**	**13**	IAMs_20	IAMs_20	05 39 15.5	
	comp=Z,4µm,21.0s						
I17K	**Unalakleet**	**81.63**	**13**	P	**P**	**05 09 52.3**	**+0.2**
	baz=211						
CAPN	**Captain Cook N**	**81.66**	**19**	P	**P**	**05 09 52.1**	**-0.3**
	baz=220						
N20K	**Mount Spurr**	**81.67**	**18**	P	**P**	**05 09 52.0**	**-0.6**
	baz=219						
SPCR	**Spurr Chakacha**	**81.67**	**18**	P	**P**	**05 09 52.1**	**-0.4**
	baz=219						
L19K	**White Mountain**	**81.68**	**17**	IAmb	IAmb	05 10 00.4	
	comp=Z,173nm,1.5s						
L19K				IAMs_20	IAMs_20	05 38 21.0	
	comp=Z,5µm,22.0s						
L19K	**White Mountain**	**81.68**	**17**	P	**P**	**05 09 51.8**	**-0.7**
	baz=216						
SPU	**Mount Spurr**	**81.70**	**18**	IAmb	IAmb	05 09 54.1	
	comp=Z,122nm,2.0s						
TNA	**Tin City**	**81.70**	**10**	IAmb	IAmb	05 09 59.9	
	comp=Z,192nm,1.6s						
TNA	**Tin City**	**81.70**	**10**	P	**P**	**05 09 52.1**	**-0.4**
	baz=204,SNR=6.9						
SEW	**Seward**	**81.71**	**20**	IAmb	IAmb	05 10 03.3	
	comp=Z,144nm,1.3s						
SEW	**Seward**	**81.71**	**20**	P	**P**	**05 09 53.4**	**+0.8**
	baz=222						
SLKM	**Skilak Lake**	**81.76**	**20**	IAMs_20	IAMs_20	05 40 45.5	
	comp=Z,4µm,19.0s						
YAK	**Yakutsk**	**81.81**	**343**	LR	LR	05 41 15.1	
	comp=Z,2µm,21.7s,baz=136,slow=32						
YAK	**Yakutsk**	**81.81**	**343**	P	**P**	**05 09 52.3**	**-0.8**
YAK	**Yakutsk**	**81.81**	**343**	eP	**P**	**05 09 51.8**	**-1.3**
YAK				e*PP	**PcP**	**05 09 57.4**	**-1.3**
YAK				e		05 10 00.4	
YAK				e		05 12 56.5	
YAK				eS	**S**	**05 20 04.9**	**+0.1**
YAK				e*SS	**SKSac**	**05 20 12.0**	**+0.5**
YAK				eSSS	SSS	05 28 53.6	
YAK				pmax	pmax		
	comp=Z,332nm,1.0s						
YAK				pmax	pmax		
	comp=E,45nm,1.1s						
YAK				pmax	pmax		
	comp=N,99nm,1.3s						
YAK				pmax	pmax		
	comp=Z,329nm,3.8s						
YAK				pmax	pmax		
	comp=E,196nm,3.7s						
YAK				pmax	pmax		
	comp=N,248nm,3.5s						
YAK				smax	smax		
	comp=E,80nm,3.3s						
YAK				smax	smax		
	comp=N,165nm,4.6s						
YAK				MLR	MLR		
	comp=N,2µm,19.0s						
YAK	**Yakutsk**	**81.81**	**343**	⇑P	**P**	**05 09 52.0**	**-1.1**
PASG	**PASIGHAT**	**81.83**	**302**	eP	**P**	**05 09 50.5**	**-3.5**
PASG				IAmb	IAmb	05 09 59.7	
	comp=Z,66nm,1.1s						
MOKO	**MOKOCHONG**	**81.89**	**300**	eP	**P**	**05 09 52.7**	**-1.9**
MOKO				IAmb	IAmb	05 09 58.9	
	comp=Z,286nm,2.0s						
G15K	**Niukluk**	**81.90**	**12**	P	**P**	**05 09 53.4**	**-0.2**
	baz=208						
F14K	**Arctic Creek**	**81.90**	**11**	P	**P**	**05 09 53.5**	**-0.1**
	baz=205						
O22K	**Cooper Landing**	**81.90**	**20**	IAMs_20	IAMs_20	05 47 09.2	
	comp=Z,4µm,18.0s						
O22K	**Cooper Landing**	**81.90**	**20**	P	**P**	**05 09 52.4**	**-1.2**
	baz=221						
SAIH	**SAIHA**	**81.92**	**296**	eP	**P**	**05 09 50.3**	**-4.4**
SAIH				IAmb	IAmb	05 10 02.0	
	comp=Z,140nm,1.7s						
M20K	**Styx River**	**81.93**	**18**	IAmb	IAmb	05 10 00.8	
	comp=Z,159nm,1.9s						
M20K				IAMs_20	IAMs_20	05 39 00.8	
	comp=Z,5µm,21.0s						
M20K	**Styx River**	**81.93**	**18**	P	**P**	**05 09 53.2**	**-0.7**
	baz=218						
H16K	**Elim**	**81.95**	**13**	P	**P**	**05 09 53.9**	**+0.1**
	baz=209,SNR=14						
KOHI	**KOHIMA**	**82.03**	**299**	eP	**P**	**05 09 51.7**	**-3.6**
KOHI				IAmb	IAmb	05 10 05.8	
	comp=Z,169nm,1.5s						
BILL	**Bilibino**	**82.14**	**359**	P	**P**	**05 09 53.8**	**-1.0**
BILL				IAmb	IAmb	05 10 01.5	
	comp=Z,172nm,1.3s						
BILL	**Bilibino**	**82.14**	**359**	ceP	**P**	**05 09 55.2**	**+0.4**
BILL				pmax	pmax		
	comp=Z,118nm,1.3s						
ULN	**Ulaanbaatar**	**82.14**	**324**	P	**P**	**05 09 55.4**	**0.0**
ULN				P	**P**	**05 09 55.4**	**0.0**
ULN	**Ulaanbaatar**	**82.14**	**324**	P	**P**	**05 09 54.2**	**-1.2**
ULN				IAmb	IAmb	05 10 02.5	
	comp=Z,193nm,1.4s						
ULN	**Ulaanbaatar**	**82.14**	**324**	P	**P**	**05 09 54.0**	**-1.4**
	comp=Z,374nm,1.5s						
ULN	**Ulaanbaatar**	**82.14**	**324**	ceP	**P**	**05 09 54.8**	**-0.6**
ULN				pmax	pmax		
	comp=Z,260nm,2.5s						
ULN	**Ulaanbaatar**	**82.14**	**324**	⇑P	**P**	**05 09 54.7**	**-0.8**
J18K	**Innoko River**	**82.23**	**15**	P	**P**	**05 09 55.5**	**+0.1**
	baz=215,SNR=14						
Q23K	**Middleton Isla**	**82.29**	**22**	P	**P**	**05 09 55.3**	**-0.3**
	baz=225						
SUA	**Susitna One**	**82.32**	**19**	IAMs_20	IAMs_20	05 40 58.3	
	comp=Z,4µm,20.0s						
SUA	**Susitna One**	**82.32**	**19**	P	**P**	**05 09 55.3**	**-0.7**
	baz=220,SNR=9.6						
P23K	**Montague Islan**	**82.33**	**21**	P	**P**	**05 09 56.1**	**+0.2**
	baz=224						
RC01	**Rabbit Creek A**	**82.36**	**19**	IAMs_20	IAMs_20	05 40 44.2	
	comp=Z,4µm,20.0s						
RC01	**Rabbit Creek A**	**82.36**	**19**	P	**P**	**05 09 55.7**	**-0.4**
	baz=221						
F15K	**North Star Dit**	**82.42**	**11**	IAmb	IAmb	05 10 03.8	
	comp=Z,186nm,1.8s						
F15K	**North Star Dit**	**82.42**	**11**	P	**P**	**05 09 56.3**	**0.0**
	baz=207						
SKT	**Skwentna**	**82.48**	**18**	IAMs_20	IAMs_20	05 41 53.4	
	comp=Z,5µm,20.0s						
SKT	**Skwentna**	**82.48**	**18**	P	**P**	**05 09 55.4**	**-1.3**
	baz=220						
SONM	**Songino Array**	**82.51**	**323**	P	**P**	**05 09 56.8**	**-0.5**
	comp=Z,30nm,1.1s,baz=144,slow=4.3,SNR=88						
SONM				PKKPbc	**PKKPbc**	**05 28 23.1**	**-2.4**
	comp=Z,1.6nm,1.1s,baz=219,slow=1.8,SNR=2.3						
SONM				PKPPKP	**P'P'df**	**05 36 30.4**	**+4.3**
	comp=Z,0.3nm,0.4s,baz=180,slow=1.5,SNR=3.9						
SONM				LR	LR	05 45 26.6	
	comp=Z,1µm,19.9s,baz=128,slow=35						
	comp=Z,30nm,1.1s						
SONM	**Songino Array**	**82.51**	**323**	P	**P**	**05 09 56.2**	**-1.1**
G16K	**Koyuk River**	**82.59**	**12**	IAmb	IAmb	05 10 04.8	
	comp=Z,116nm,1.4s						
G16K	**Koyuk River**	**82.59**	**12**	P	**P**	**05 09 57.4**	**+0.3**
	baz=209,SNR=17						
PWL	**Port Wells**	**82.64**	**20**	P	**P**	**05 09 56.6**	**-1.0**
	baz=223,SNR=17						
H17K	**Granite Mounta**	**82.71**	**13**	IAMs_20	IAMs_20	05 39 47.7	
	comp=Z,4µm,21.0s						
H17K	**Granite Mounta**	**82.71**	**13**	P	**P**	**05 09 58.0**	**+0.2**
	baz=212,SNR=9.0						
M22K	**Willow**	**82.74**	**19**	IAMs_20	IAMs_20	05 41 21.2	
	comp=Z,6µm,20.0s						
M22K	**Willow**	**82.74**	**19**	P	**P**	**05 09 57.4**	**-0.6**
	baz=221,SNR=11						
GTA	**Gaotai**	**82.80**	**314**	P	**P**	**05 09 58.8**	**-0.2**
GTA				PP	**PP**	**05 13 09.4**	**-0.1**
GTA				S	**S**	**05 20 16.4**	**+0.1**
GTA				pmax	pmax		
	comp=Z,61nm,1.6s						
GTA				pmax	pmax		
	comp=Z,3µm,7.4s						
GTA				LR	LR		
	comp=Z,2µm,19.3s						
GTA				LR	LR		
	comp=Z,2µm,18.2s						
GTA				LR	LR		
	comp=Z,3µm,21.4s						
K20K	**Telida**	**82.84**	**16**	P	**P**	**05 09 58.8**	**+0.3**
	baz=217						
ZIRO	**ZIRO**	**82.86**	**301**	eP	**P**	**05 09 56.5**	**-3.1**
ZIRO				IAmb	IAmb	05 10 06.4	
	comp=Z,50nm,0.4s						
HIN	**Hinchinbrook I**	**82.93**	**21**	IAMs_20	IAMs_20	05 38 37.4	
	comp=Z,4µm,19.0s						
PMR	**Palmer**	**82.93**	**19**	P	**P**	**05 09 59.4**	**+0.4**
PMR	**Palmer**	**82.93**	**19**	P	**P**	**05 09 58.6**	**-0.4**
	baz=222,SNR=20						
J19K	**Poorman**	**82.95**	**15**	P	**P**	**05 09 59.4**	**+0.3**
	baz=216,SNR=15						
PPLA	**Purkeypile**	**83.00**	**17**	IAMs_20	IAMs_20	05 39 13.0	
	comp=Z,5µm,21.0s						
PPLA	**Purkeypile**	**83.00**	**17**	P	**P**	**05 09 58.4**	**-1.1**
	baz=219						
KNK	**Knik Glacier**	**83.01**	**20**	IAMs_20	IAMs_20	05 50 18.5	
	comp=Z,3µm,19.0s						
KNK	**Knik Glacier**	**83.01**	**20**	P	**P**	**05 09 59.5**	**0.0**
	baz=222,SNR=9.0						
G17K	**Kiwalik Mounta**	**83.03**	**13**	P	**P**	**05 09 59.7**	**+0.2**
	baz=211						
GLI	**Glacier Island**	**83.07**	**20**	IAMs_20	IAMs_20	05 41 03.2	
	comp=Z,3µm,19.0s						
GLI	**Glacier Island**	**83.07**	**20**	P	**P**	**05 09 58.8**	**-1.0**
	baz=224,SNR=6.1						
GHO	**Glory Hole Cre**	**83.13**	**19**	IAMs_20	IAMs_20	05 41 31.6	
	comp=Z,5µm,20.0s						
L22K	**Petersville**	**83.13**	**18**	IAmb	IAmb	05 10 06.0	
	comp=Z,178nm,1.6s						
L22K				IAMs_20	IAMs_20	05 42 23.5	
	comp=Z,4µm,19.0s						
BRDH	**Bariadhala**	**83.16**	**295**	LR	LR	05 46 21.8	
	comp=Z,936nm,21.0s,baz=144,slow=35						
CUT	**Chulitna**	**83.19**	**18**	IAMs_20	IAMs_20	05 41 57.2	
	comp=Z,4µm,20.0s						
CUT	**Chulitna**	**83.19**	**18**	P	**P**	**05 09 59.5**	**-0.8**
	baz=221,SNR=12						
FID	**Port Fidalgo**	**83.19**	**21**	IAMs_20	IAMs_20	05 40 11.8	
	comp=Z,4µm,20.0s						
H18K	**Honhosa River**	**83.24**	**14**	IAMs_20	IAMs_20	05 39 52.6	
	comp=Z,3µm,20.0s						
H18K	**Honhosa River**	**83.24**	**14**	P	**P**	**05 10 00.3**	**-0.3**
	baz=213						
GCSA	**Galena City Sc**	**83.25**	**14**	P	**P**	**05 10 01.1**	**+0.6**
	baz=214						
EYAK	**Cordova Ski Ar**	**83.30**	**21**	IAMs_20	IAMs_20	05 38 46.2	
	comp=Z,4µm,20.0s						
EYAK	**Cordova Ski Ar**	**83.30**	**21**	P	**P**	**05 10 00.8**	**-0.1**
	baz=225						
KAIM	**Kayak Island**	**83.34**	**22**	P	**P**	**05 10 02.4**	**+1.3**
	baz=226						
SML	**Sawmill**	**83.34**	**19**	IAMs_20	IAMs_20	05 41 07.3	
	comp=Z,3µm,20.0s						
SML	**Sawmill**	**83.34**	**19**	P	**P**	**05 10 00.3**	**-1.0**
	baz=223,SNR=14						
TEZP	**TEZPUR**	**83.44**	**299**	eP	**P**	**05 09 58.6**	**-3.9**
TEZP				IAmb	IAmb	05 10 09.2	
	comp=Z,53nm,1.0s						
J20K	**Nowinta River**	**83.48**	**16**	IAmb	IAmb	05 10 09.3	
	comp=Z,90nm,1.3s						
J20K				IAMs_20	IAMs_20	05 39 44.5	
	comp=Z,3µm,22.0s						
J20K	**Nowinta River**	**83.48**	**16**	P	**P**	**05 10 01.4**	**-0.4**
	baz=217,SNR=22						
HULI	**Fort Hunter Li**	**83.51**	**50**	IAMs_20	IAMs_20	05 38 36.3	
	comp=Z,5µm,20.0s						
BELO	**BELONIA**	**83.51**	**296**	eP	**P**	**05 09 59.5**	**-3.4**
M23K	**Glacier View**	**83.53**	**20**	P	**P**	**05 10 02.0**	**-0.1**
	baz=223,SNR=5.4						
SAO	**San Andreas Ge**	**83.64**	**50**	IAmb	IAmb	05 10 11.0	
	comp=Z,160nm,1.9s						
SAO				IAMs_20	IAMs_20	05 38 29.7	
	comp=Z,6µm,20.0s						
SAO	**San Andreas Ge**	**83.64**	**50**	⇑P	**P**	**05 10 05.7**	**+2.4**
KHMM	**Horse Mountain**	**83.67**	**45**	IAMs_20	IAMs_20	05 39 12.3	
	comp=Z,6µm,20.0s						
SCM	**Sheep Creek Mo**	**83.69**	**20**	P	**P**	**05 10 03.0**	**0.0**
	baz=224,SNR=9.6						
DIV	**Divide**	**83.70**	**21**	IAMs_20	IAMs_20	05 40 29.9	
	comp=Z,4µm,19.0s						
MHC	**Mount Hamilton**	**83.72**	**49**	IAmb	IAmb	05 10 15.4	
	comp=Z,186nm,1.8s						
F17K	**Baldwin Pennin**	**83.73**	**12**	IAmb	IAmb	05 10 09.7	
	comp=Z,147nm,1.6s						
F17K	**Baldwin Pennin**	**83.73**	**12**	P	**P**	**05 10 02.9**	**-0.1**
	baz=210						
CHUM	**Lake Minchumin**	**83.74**	**17**	P	**P**	**05 10 02.9**	**-0.2**
	baz=219,SNR=11						
MNRC	**McLaughlin Min**	**83.75**	**47**	IAmb	IAmb	05 10 28.2	
	comp=Z,198nm,1.7s						
G18K	**Tagagawik**	**83.81**	**13**	IAmb	IAmb	05 10 06.0	
	comp=Z,126nm,1.8s						

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G18K                                 IAMs_20 IAMs_20 05 40 32.9
      comp=Z,4µm,21.0s
G18K  Tagagawik           83.81  13  P       P       05 10 03.4 -0.1
      baz=213
SHL   Shillong            83.87 298  P       P       05 10 03.9 -1.0
      SNR=67
SHL   Shillong            83.87 298 eP       P       05 10 00.9 -4.0
SHL                                  IAmb    IAmb    05 10 11.6
      comp=Z,108nm,1.5s
SHL   Shillong            83.87 298 ⇑P       P       05 10 04.4 -0.5
KTH   Kantishna Hill      83.88  17  IAmb    IAmb    05 10 09.7
      comp=Z,107nm,1.2s
KTH                                  IAMs_20 IAMs_20 05 42 30.1
      comp=Z,5µm,19.0s
AGT   Agartala            83.88 296 eP       P       05 10 01.0 -3.7
AGT                                  IAmb    IAmb    05 10 16.0
      comp=Z,39nm,0.6s
I20K  Naaghedeneel        83.89  15  P       P       05 10 04.0 +0.2
      baz=217,SNR=9.1
PMPB  Monarch Peak        83.91  50  IAmb    IAmb    05 10 19.5
      comp=Z,133nm,1.4s
KLU   Klutina             83.91  20  IAmb    IAmb    05 10 11.2
      comp=Z,158nm,1.7s
KLU                                  IAMs_20 IAMs_20 05 41 00.3
      comp=Z,4µm,20.0s
KLU   Klutina             83.91  20  P       P       05 10 03.8 -0.3
      baz=225
BERG  Berg Lake           83.92  22  IAMs_20 IAMs_20 05 40 22.1
      comp=Z,4µm,19.0s
KSXB  Camp Six Broad      83.98  44  IAmb    IAmb    05 10 09.9
      comp=Z,139nm,1.5s
KSXB                                 IAMs_20 IAMs_20 05 38 05.9
      comp=Z,6µm,21.0s
TRF   Thorofare Moun      83.98  18  IAmb    IAmb    05 10 11.9
      comp=Z,134nm,1.3s
TRF                                  IAMs_20 IAMs_20 05 40 15.9
      comp=Z,6µm,21.0s
TRF   Thorofare Moun      83.98  18  P       P       05 10 03.5 -1.1
      baz=221,SNR=16
BMRM  Bremner River       83.99  21  IAMs_20 IAMs_20 05 44 34.6
      comp=Z,3µm,20.0s
BMRM  Bremner River       83.99  21  P       P       05 10 03.7 -0.9
      baz=226
PKD   Bear Valley Ra      84.00  51  IAmb    IAmb    05 10 08.5
      comp=Z,132nm,1.7s
PKD                                  IAMs_20 IAMs_20 05 39 55.3
      comp=Z,5µm,19.0s
H19K  Roundabout Mou      84.00  14  P       P       05 10 04.1 -0.3
      baz=215
WAT1  Susitna Watana      84.03  19  P       P       05 10 04.0 -0.7
      baz=222
O02D  Mt. Diablo Mer      84.04  46  IAmb    IAmb    05 10 13.6
      comp=Z,89nm,1.1s
WAT6  Susitna Watana      84.10  19  P       P       05 10 04.9 -0.3
      baz=223,SNR=22
PAF   Port-aux-Franc      84.17 221  IAMs_20 IAMs_20 05 49 51.3
      comp=Z,4µm,18.0s
E17K  Hotham Inlet        84.17  11  P       P       05 10 05.3 +0.1
      baz=210,SNR=47
F18K  Selawik             84.19  12  P       P       05 10 04.6 -0.7
      baz=212,SNR=24
GUWA  GUWAHATI            84.24 299 eP       P       05 10 03.1 -3.4
GUWA                                 IAmb    IAmb    05 10 12.2
      comp=Z,44nm,0.2s
M24K  Tolsona, Glenn      84.27  20  P       P       05 10 06.4 +0.5
      baz=224,SNR=7.2
BPAW  Bear Paw Mtn.       84.28  17  IAmb    IAmb    05 10 11.8
      comp=Z,105nm,1.5s
BPAW                                 IAMs_20 IAMs_20 05 40 13.7
      comp=Z,4µm,22.0s
BPAW  Bear Paw Mtn.       84.28  17  P       P       05 10 04.9 -1.1
      baz=220,SNR=12
H20K  Anotleneega Mo      84.35  15  P       P       05 10 06.0 -0.2
      baz=216
BOD   Bodaibo             84.35 334 eP       P       05 10 04.9 -1.5
BOD                                  pmax    pmax
      comp=Z,319nm,1.8s
SUTB  Sutter Butte        84.36  47  IAmb    IAmb    05 10 15.5
      comp=Z,134nm,1.6s
SUTB                                 IAMs_20 IAMs_20 05 37 56.7
      comp=Z,7µm,22.0s
G19K  Purcell Mounta      84.36  14  IAMs_20 IAMs_20 05 40 59.8
      comp=Z,4µm,21.0s
G19K  Purcell Mounta      84.36  14  P       P       05 10 06.0 -0.3
      baz=214
CRQM  Cirque              84.37  22  IAMs_20 IAMs_20 05 40 59.0
      comp=Z,3µm,20.0s
RND   Reindeer            84.37  18  IAMs_20 IAMs_20 05 43 24.3
      comp=Z,4µm,20.0s
CRQE  Cirque              84.38  22  P       P       05 10 05.9 -0.8
      baz=227
N02D  Trinity Center      84.42  45  IAmb    IAmb    05 10 15.4
      comp=Z,121nm,1.4s
N25K  Chitina, Valde      84.44  21  P       P       05 10 06.7 -0.2
      baz=226,SNR=9.3
D17K  Noatak River        84.48  11  P       P       05 10 07.3 +0.5
      baz=208,SNR=30
TGL   Tana Glacier        84.48  22  IAMs_20 IAMs_20 05 41 00.6
      comp=Z,3µm,19.0s
K02D  Willamette Mer      84.49  44  IAmb    IAmb    05 10 15.4
      comp=Z,67nm,1.2s
M02C  Callahan            84.49  45  IAmb    IAmb    05 10 15.8
      comp=Z,86nm,1.2s
M02C                                 IAMs_20 IAMs_20 05 38 47.0
      comp=Z,6µm,20.0s
TAWA  Tawang              84.55 300 eP       P       05 10 04.2 -4.3
TAWA                                 IAmb    IAmb    05 10 16.3
      comp=Z,101nm,1.4s
VRDI  Verde Repeater      84.58  21  IAMs_20 IAMs_20 05 40 58.1
      comp=Z,3µm,20.0s
DHY   Denali Highway      84.58  19  IAMs_20 IAMs_20 05 42 26.9
      comp=Z,5µm,20.0s
DHY   Denali Highway      84.58  19  P       P       05 10 07.5 -0.1
      baz=223,SNR=15
MCK   McKinley            84.59  18  IAMs_20 IAMs_20 05 43 42.1
      comp=Z,4µm,20.0s
MCK   McKinley            84.59  18  P       P       05 10 06.1 -1.4
      baz=222,SNR=23
GLB   Gilahina Butte      84.60  21  IAmb    IAmb    05 10 10.8
      comp=Z,140nm,1.6s
C16K  Lisburne Hills      84.61  10  IAmb    IAmb    05 10 11.4
      comp=Z,195nm,1.9s
C16K  Lisburne Hills      84.61  10  P       P       05 10 06.9 -0.5
      baz=206
YAH   Yahtse              84.62  23  IAMs_20 IAMs_20 05 43 19.1
      comp=Z,4µm,20.0s
ORV   Oroville            84.69  47  IAmb    IAmb    05 10 15.9
      comp=Z,84nm,1.5s
ORV                                  IAMs_20 IAMs_20 05 39 34.5
      comp=Z,6µm,20.0s
E18K  Tukpahlearik C      84.70  12  IAmb    IAmb    05 10 12.3
      comp=Z,71nm,1.4s
E18K  Tukpahlearik C      84.70  12  P       P       05 10 07.9 -0.1
      baz=211
YBH   Yreka Blue Hor      84.73  45  LR      LR      05 39 15.9
      comp=Z,379nm,22.0s,baz=258,slow=30
YBH   Yreka Blue Hor      84.73  45  IAmb    IAmb    05 10 16.7
      comp=Z,48nm,1.1s
O03E  Paynes Creek        84.78  46  P       P       05 10 09.9 +0.8
O03E                                 IAmb    IAmb    05 10 16.4
      comp=Z,109nm,1.2s
O03E                                 IAMs_20 IAMs_20 05 38 53.6
      comp=Z,6µm,22.0s
F19K  Shaleruckik Mo      84.79  13  IAMs_20 IAMs_20 05 41 54.9
      comp=Z,3µm,19.0s
F19K  Shaleruckik Mo      84.79  13  P       P       05 10 08.3 -0.1
      baz=213
HARP  HAARP               84.81  20  P       P       05 10 08.9 +0.3
      baz=225
RDOG  Red Dog Mine        84.83  11  P       P       05 10 08.6  0.0
      baz=208,SNR=16
MCARA McCarthy VSAT       84.84  21  IAmb    IAmb    05 10 23.2
      comp=Z,89nm,1.2s
MCARA                                IAMs_20 IAMs_20 05 41 15.9
      comp=Z,3µm,21.0s
MCARA McCarthy VSAT       84.84  21  P       P       05 10 07.4 -1.3
      baz=227
I21K  Tanana              84.84  16  IAMs_20 IAMs_20 05 41 07.6
      comp=Z,4µm,20.0s
I21K  Tanana              84.84  16  P       P       05 10 09.0 +0.4
      baz=219,SNR=21
GRNC  Granite Creek       84.86  22  IAmb    IAmb    05 10 12.5
      comp=Z,180nm,1.6s
GRNC                                 IAMs_20 IAMs_20 05 42 10.6
      comp=Z,3µm,20.0s
OSI   Osito Audit: C      84.89  53  IAMs_20 IAMs_20 05 46 53.9
      comp=Z,6µm,18.0s
CMB   Columbia Colle      84.91  49  IAmb    IAmb    05 10 19.6
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      comp=Z,100nm,1.6s
CMB   Columbia Colle      84.91  49 ⇑P       P       05 10 10.2 +0.5
M03C  McCloud             84.95  45  IAmb    IAmb    05 10 19.6
      comp=Z,83nm,0.9s
H21K  Melozitna Rive      85.00  15  IAmb    IAmb    05 10 14.7
      comp=Z,114nm,1.6s
H21K                                 IAMs_20 IAMs_20 05 41 16.8
      comp=Z,3µm,21.0s
H21K  Melozitna Rive      85.00  15  P       P       05 10 09.7 +0.2
      baz=218
PCA   Pinnacle            85.00  23  IAMs_20 IAMs_20 05 41 29.6
      comp=Z,5µm,19.0s
PINM  Pinnacle            85.01  23  P       P       05 10 09.1 -0.7
      baz=230
IMAR  Indian Mountai      85.03  15  P       P       05 10 09.2 -0.4
MLY   Manley              85.06  16  IAmb    IAmb    05 10 16.5
      comp=Z,183nm,1.6s
MLY   Manley              85.06  16  P       P       05 10 09.0 -0.9
      baz=220,SNR=22
BARN  Barnard Glacie      85.11  22  IAMs_20 IAMs_20 05 41 09.2
      comp=Z,3µm,20.0s
PAX   Paxson              85.11  19  P       P       05 10 10.3  0.0
      baz=225,SNR=6.4
I03D  Drain, OR           85.12  43  IAmb    IAmb    05 10 17.6
      comp=Z,51nm,1.0s
C17K  DeLong Mountai      85.15  10  P       P       05 10 10.1 -0.1
      baz=208
BCPM  Bancas Point        85.15  24  IAMs_20 IAMs_20 05 41 05.5
      comp=Z,4µm,19.0s
CTG   Chitna Glacier      85.17  22  P       P       05 10 10.0 -0.6
      baz=229,SNR=6.9
CTGM  Chitina Glacie      85.17  22  IAmb    IAmb    05 10 21.9
      comp=Z,75nm,1.1s
CTGM                                 IAMs_20 IAMs_20 05 40 49.7
      comp=Z,3µm,19.0s
GOMU  GeErMu              85.17 309  P       P       05 10 12.6 +1.1
GOMU                                 pP      sP      05 10 20.5 -0.1
GOMU                                 S       S       05 20 40.9 +0.1
GOMU                                 SS      SS      05 26 16.9 +1.6
GOMU                                 pmax    pmax
      comp=Z,28nm,1.7s
GOMU                                 LR      LR
      comp=Z,560nm,16.8s
GOMU                                 LR      LR
      comp=Z,980nm,19.1s
GOMU                                 LR      LR
      comp=Z,2µm,21.8s
SIT   Sitka               85.18  27  P       P       05 10 09.6 -0.9
      baz=235
LOGN  Logan Glacier       85.20  23  IAmb    IAmb    05 10 25.4
      comp=Z,77nm,1.2s
LOGN                                 IAMs_20 IAMs_20 05 49 29.5
      comp=Z,3µm,18.0s
NEA2  Nenana              85.20  17  IAMs_20 IAMs_20 05 41 04.1
      comp=Z,4µm,22.0s
NEA2  Nenana              85.20  17  P       P       05 10 09.1 -1.4
      baz=222,SNR=19
L04D  Klamath Falls       85.20  44  IAmb    IAmb    05 10 18.7
      comp=Z,101nm,1.0s
HATC  Hat Creek Radi      85.22  46  IAMs_20 IAMs_20 05 40 55.4
      comp=Z,5µm,20.0s
CRAG  Craig               85.29  29  P       P       05 10 10.3 -0.9
      baz=236
S31K  Pelican             85.32  26  IAmb    IAmb    05 10 16.5
      comp=Z,98nm,1.2s
S31K                                 IAMs_20 IAMs_20 05 37 43.1
      comp=Z,3µm,19.0s
S31K  Pelican             85.32  26  P       P       05 10 10.9 -0.3
      baz=234
WRH   Wood River Hil      85.39  18  IAmb    IAmb    05 10 13.2
      comp=Z,107nm,1.4s
WRH                                  IAMs_20 IAMs_20 05 43 37.2
      comp=Z,4µm,20.0s
F20K  Avaraart Lake       85.42  14  IAmb    IAmb    05 10 19.2
      comp=Z,128nm,1.4s
F20K                                 IAMs_20 IAMs_20 05 41 42.7
      comp=Z,4µm,21.0s
F20K  Avaraart Lake       85.42  14  P       P       05 10 11.3 -0.2
      baz=215,SNR=40
E19K  Redstone River      85.43  13  IAmb    IAmb    05 10 18.6
      comp=Z,61nm,1.1s
E19K  Redstone River      85.43  13  P       P       05 10 12.1 +0.5
      baz=214
ISA   Isabella, Lake      85.45  52  IAmb    IAmb    05 10 23.9
      comp=Z,159nm,1.5s
ISA                                  IAMs_20 IAMs_20 05 44 37.8
      comp=Z,3µm,18.0s
O28M  Mount Upton         85.47  23  IAMs_20 IAMs_20 05 43 18.4
      comp=Z,3µm,20.0s
O28M  Mount Upton         85.47  23  P       P       05 10 12.0 -0.3
      baz=230
G21K  Allakaket           85.51  15  IAmb    IAmb    05 10 19.4
      comp=Z,149nm,1.4s
G21K                                 IAMs_20 IAMs_20 05 41 12.6
      comp=Z,3µm,21.0s
G21K  Allakaket           85.51  15  P       P       05 10 11.8 -0.3
      baz=218
COR   Corvallis           85.52  42  IAMs_20 IAMs_20 05 39 30.0
      comp=Z,6µm,22.0s
I23K  Minto, Yukon-K      85.53  17  IAmb    IAmb    05 10 15.3
      comp=Z,124nm,1.8s
I23K                                 IAMs_20 IAMs_20 05 42 40.9
      comp=Z,3µm,20.0s
I23K  Minto, Yukon-K      85.53  17  P       P       05 10 11.4 -0.7
      baz=221,SNR=8.8
M26K  Nabesna, AK         85.54  21  IAmb    IAmb    05 10 20.2
      comp=Z,68nm,1.2s
M26K                                 IAMs_20 IAMs_20 05 41 18.1
      comp=Z,3µm,20.0s
M26K  Nabesna, AK         85.54  21  P       P       05 10 11.9 -0.4
      baz=227,SNR=9.3
CPE   Camp Elliot         85.54  55  IAmb    IAmb    05 10 24.1
      comp=Z,164nm,1.6s
ZAK   Zakamensk           85.55 325 eP       P       05 10 10.8 -1.9
ZAK                                  pmax    pmax
      comp=Z,154nm,2.2s
ELS   Elsinore Mount      85.55  54  IAmb    IAmb    05 10 24.2
      comp=Z,162nm,1.6s
H22K  Ishtalitna Cre      85.56  16  IAMs_20 IAMs_20 05 41 09.2
      comp=Z,3µm,21.0s
H22K  Ishtalitna Cre      85.56  16  P       P       05 10 12.7 +0.4
      baz=220,SNR=34
BUCK  Buck Mountain       85.57  42  IAmb    IAmb    05 10 20.7
      comp=Z,72nm,1.0s
BFSC  Mount Baldy Ra      85.58  53  IAmb    IAmb    05 10 24.0
      comp=Z,116nm,1.3s
CCB   Clear Creek Bu      85.60  18  IAmb    IAmb    05 10 14.1
      comp=Z,76nm,1.4s
CCB                                  IAMs_20 IAMs_20 05 42 43.8
      comp=Z,4µm,20.0s
K24K  Donnelly Dome       85.61  19  IAMs_20 IAMs_20 05 42 38.0
      comp=Z,6µm,20.0s
K24K  Donnelly Dome       85.61  19  P       P       05 10 12.7 +0.1
      baz=225
DHUB  DHUBRI              85.63 298 eP       P       05 10 09.4 -4.2
DHUB                                 IAmb    IAmb    05 10 21.3
      comp=Z,62nm,1.3s
U33K  Whale Pass          85.65  29  P       P       05 10 12.6 -0.3
      baz=236
C18K  Utukok River        85.66  11  IAmb    IAmb    05 10 20.0
      comp=Z,169nm,1.5s
C18K  Utukok River        85.66  11  P       P       05 10 12.8  0.0
      baz=210,SNR=26
MENT  Mentasta            85.66  20  P       P       05 10 14.9 +2.0
HDA   Harding Lake        85.68  18  IAMs_20 IAMs_20 05 43 05.0
      comp=Z,5µm,20.0s
HDA   Harding Lake        85.68  18  P       P       05 10 12.1 -0.9
      baz=224,SNR=31
CBX   Cerro Bola          85.70  55  IAmb    IAmb    05 10 20.5
      comp=Z,91nm,1.3s
P29M  Windy Craggy        85.70  24  IAMs_20 IAMs_20 05 48 46.8
      comp=Z,5µm,18.0s
P29M  Windy Craggy        85.70  24  P       P       05 10 10.9 -2.2
      baz=232
DPP   Dos Picos Cty       85.71  55  IAmb    IAmb    05 10 20.3
      comp=Z,72nm,1.2s
K04D  Chiloquin, OR       85.74  44  IAmb    IAmb    05 10 34.3
      comp=Z,53nm,0.8s
J04A  Umpqua Nationa      85.75  44  IAmb    IAmb    05 10 21.1
      comp=Z,63nm,0.7s
S32K  Killisnoo           85.75  27  P       P       05 10 12.3 -1.1
      baz=235
COLA  College             85.76  17  P       P       05 10 12.0 -1.2
COLA                                 IAmb    IAmb    05 10 19.5
      comp=Z,137nm,1.4s
COLA  College             85.76  17  IAMs_20 IAMs_20 05 44 55.8
      comp=Z,3µm,20.0s
COLA  College             85.76  17  P       P       05 10 14.6 +1.4
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COLA  College             85.76  17  P       P       05 10 14.6 +1.4
COLA  College             85.76  17 ⇑P       P       05 10 12.3 -1.0
COLA  College             85.76  17  P       P       05 10 11.6 -1.6
      baz=223
O29M  Mount Kennedy       85.79  24  IAMs_20 IAMs_20 05 41 47.2
      comp=Z,4µm,20.0s
O29M  Mount Kennedy       85.79  24  P       P       05 10 11.6 -2.1
      baz=232
R31K  City Hall, Gus      85.80  26  P       P       05 10 13.7 +0.1
      baz=234
LSA   Lhasa               85.83 302  IAmb    IAmb    05 10 21.1
      comp=Z,144nm,1.9s
LSA   Lhasa               85.83 302  P       P       05 10 11.5 -3.5
LSA                                  LR      LR
      comp=Z,1µm,10.4s
LSA                                  LR      LR
      comp=Z,830nm,10.8s
L26K  Log Cabin Wild      85.85  20  IAmb    IAmb    05 10 20.8
      comp=Z,126nm,1.9s
L26K                                 IAMs_20 IAMs_20 05 42 21.5
      comp=Z,4µm,20.0s
L26K  Log Cabin Wild      85.85  20  P       P       05 10 13.1 -0.7
      baz=227,SNR=5.7
RIDG  Independent Ri      85.85  19  IAmb    IAmb    05 10 29.2
      comp=Z,160nm,1.6s
RIDG                                 IAMs_20 IAMs_20 05 42 23.6
      comp=Z,4µm,21.0s
RIDG  Independent Ri      85.85  19  P       P       05 10 12.8 -1.1
      baz=226
H04D  Lebanon             85.86  42  IAmb    IAmb    05 10 52.0
      comp=Z,138nm,1.6s
PNTR  Pine Nut            85.88  48  IAmb    IAmb    05 10 26.0
      comp=Z,221nm,1.8s
M27K  Edge Creek, AK      85.90  21  IAmb    IAmb    05 10 21.5
      comp=Z,163nm,1.9s
M27K  Edge Creek, AK      85.90  21  P       P       05 10 13.5 -0.8
      baz=228
IRK   Irkutsk             85.91 326 eP       P       05 10 12.6 -1.7
IRK                                  pmax    pmax
      comp=Z,257nm,2.8s
V35K  Ketchikan           85.94  30  IAMs_20 IAMs_20 05 47 35.9
      comp=Z,6µm,19.0s
V35K  Ketchikan           85.94  30  P       P       05 10 13.9 -0.4
      baz=238
YUK8  Steele Glacier      85.95  23  P       P       05 10 13.4 -1.3
      baz=230,SNR=5.9
IL31                      85.97  18  IAmb    IAmb    05 10 20.6
      comp=Z,158nm,1.5s
ILAR  Eielson Array       85.97  18  P       P       05 10 14.0 -0.3
      comp=Z,10nm,0.7s,baz=236,slow=5.3,SNR=42
ILAR                                 LR      LR      05 43 45.8
      comp=Z,5µm,19.7s,baz=226,slow=32
      comp=Z,10nm,0.7s
ILAR  Eielson Array       85.97  18  P       P       05 10 12.9 -1.4
TLY   Talaya              85.97 326  P       P       05 10 14.2 -0.5
TLY                                  P       P       05 10 14.2 -0.5
TLY   Talaya              85.97 326  P       P       05 10 13.5 -1.2
TLY                                  IAmb    IAmb    05 10 16.2
      comp=Z,106nm,1.4s
TLY   Talaya              85.97 326ceP       P       05 10 13.9 -0.8
TLY                                  pmax    pmax
      comp=Z,77nm,1.3s
TLY                                  MLR     MLR
      comp=Z,2µm,18.0s
LRMC  Laurel Mtn Rad      85.99  52  IAMs_20 IAMs_20 05 44 27.1
      comp=Z,5µm,18.0s
H23K  Yukon River         85.99  16  IAMs_20 IAMs_20 05 40 57.4
      comp=Z,3µm,21.0s
H23K  Yukon River         85.99  16  P       P       05 10 13.7 -0.8
      baz=221
YUK3  Moose Creek         86.02  22  P       P       05 10 12.9 -2.0
      baz=230,SNR=9.1
CAL   Calcutta            86.03 294 eP       P       05 10 11.5 -4.1
CWC   Cottonwood Cre      86.03  51  IAmb    IAmb    05 10 25.5
      comp=Z,156nm,1.9s
CWC                                  IAMs_20 IAMs_20 05 40 28.2
      comp=Z,4µm,21.0s
POKR  Poker Plat Res      86.06  17  IAmb    IAmb    05 10 21.0
      comp=Z,127nm,1.7s
POKR                                 IAMs_20 IAMs_20 05 44 35.8
      comp=Z,3µm,20.0s
POKR  Poker Plat Res      86.06  17  P       P       05 10 12.5 -2.3
      baz=223,SNR=8.1
F21K  Alatna River        86.08  14  IAmb    IAmb    05 10 22.1
      comp=Z,177nm,1.6s
F21K                                 IAMs_20 IAMs_20 05 41 43.2
      comp=Z,3µm,21.0s
F21K  Alatna River        86.08  14  P       P       05 10 14.8 -0.1
      baz=218
VTX   Valle De La Tr      86.10  56  IAmb    IAmb    05 10 22.8
      comp=Z,92nm,1.3s
D19K  Kuna River          86.12  12  P       P       05 10 14.6 -0.4
      baz=213
T33K  Petersburg          86.12  28  P       P       05 10 14.1 -1.1
      baz=237
BBB   Bella Bella         86.12  34  LR      LR      05 40 48.0
      comp=Z,5µm,20.4s,baz=253,slow=30
TIN   Tinemaha, Big       86.14  50  IAmb    IAmb    05 10 26.3
      comp=Z,50nm,0.9s
TIN                                  IAMs_20 IAMs_20 05 40 30.0
      comp=Z,5µm,21.0s
DNR   Dunn Ranch,Anz      86.15  54  IAmb    IAmb    05 10 25.4
      comp=Z,214nm,1.9s
PLBC  Pleasant Camp       86.15  25  P       P       05 10 14.7 -0.6
      baz=234
ESJX  Sierra Juarez       86.17  56  IAmb    IAmb    05 10 20.0
      comp=Z,163nm,1.9s
COBR  COOCHBEHAR          86.17 298 eP       P       05 10 12.7 -3.5
B18K  Kokolik River       86.17  10  P       P       05 10 15.4 +0.2
      baz=210
CLC   China Lake          86.17  52  IAmb    IAmb    05 10 23.9
      comp=Z,128nm,1.3s
WSHM  Spangler Hills      86.18  52  IAmb    IAmb    05 10 27.5
      comp=Z,169nm,1.6s
WSHM                                 IAMs_20 IAMs_20 05 45 10.0
      comp=Z,5µm,18.0s
WRAK  Wrangell Islan      86.18  29  IAmb    IAmb    05 10 19.1
      comp=Z,133nm,1.7s
WRAK  Wrangell Islan      86.18  29  IAMs_20 IAMs_20 05 38 46.1
      comp=Z,6µm,19.0s
WRAK  Wrangell Islan      86.18  29  P       P       05 10 15.8 +0.3
      baz=237
BORC  Borrego Spring      86.22  54  IAmb    IAmb    05 10 22.9
      comp=Z,48nm,1.0s
CCCA  Chr Cany lake       86.25  52  IAmb    IAmb    05 10 26.6
      comp=Z,82nm,0.9s
PAHR  Pah Rah Range       86.26  48  IAmb    IAmb    05 10 27.7
      comp=Z,97nm,1.4s
YUK6  Outpost Mounta      86.27  23  P       P       05 10 15.2 -1.0
      baz=232
BESE  Bessie Mountai      86.27  26  IAmb    IAmb    05 10 24.1
      comp=Z,90nm,1.3s
BVCY  Beaver Creek        86.29  21  P       P       05 10 15.5 -0.5
      baz=229
SCRK  Sand Creek          86.29  19  IAmb    IAmb    05 10 23.0
      comp=Z,154nm,2.0s
SCRK  Sand Creek          86.29  19  P       P       05 10 15.3 -0.9
      baz=226
PFO   Pinyon Flats O      86.30  54  LR      LR      05 40 16.4
      comp=Z,11µm,21.3s,baz=278,slow=30
PFO   Pinyon Flats O      86.30  54  P       P       05 10 16.9  0.0
PFO                                  IAmb    IAmb    05 10 20.0
      comp=Z,154nm,1.9s
PFO   Pinyon Flats O      86.30  54  P       P       05 10 16.9  0.0
PFO                                  pmax    pmax
      comp=Z,154nm,1.9s
J25K  Salcha River,       86.31  18  IAMs_20 IAMs_20 05 42 44.2
      comp=Z,5µm,20.0s
J25K  Salcha River,       86.31  18  P       P       05 10 15.9 -0.2
      baz=225,SNR=11
P30M  Million Dollar      86.31  24  P       P       05 10 16.3 +0.1
      baz=233
G04A  Mulino              86.31  42  IAmb    IAmb    05 10 26.1
      comp=Z,90nm,1.0s
E20K  Nigu River          86.31  13  P       P       05 10 16.8 +0.8
      baz=215
G22K  Bettles             86.32  15  P       P       05 10 16.2 +0.2
      baz=219
C19K  Lookout Ridge       86.35  11  IAMs_20 IAMs_20 05 41 60.0
      comp=Z,3µm,21.0s
C19K  Lookout Ridge       86.35  11  P       P       05 10 16.6 +0.4
      baz=212
J05D  Fort Rock, OR       86.35  44  IAmb    IAmb    05 10 26.3
      comp=Z,63nm,1.0s
NLWA  Neilton Lookou      86.36  39  IAMs_20 IAMs_20 05 39 60.0
      comp=Z,5µm,20.0s
LHV   Little Huntoon      86.36  49  IAmb    IAmb    05 10 28.4
      comp=Z,102nm,1.3s
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PMD  Palm Desert      86.37  54  IAmb     IAmb     05 10 30.2
     comp=Z,79nm,1.6s
L27K Beaver Creek,    86.38  21  IAmb     IAmb     05 10 23.7
     comp=Z,88nm,1.9s
L27K                             IAMs_20  IAMs_20  05 42 05.7
     comp=Z,3µm,19.0s
L27K Beaver Creek,    86.38  21  P        P        05 10 16.4 -0.1
     baz=228
YUH  Yuha Desert      86.40  55  IAmb     IAmb     05 10 25.0
     comp=Z,225nm,1.9s
BCAR Beaver Creek A   86.40  21  P        P        05 10 15.9 -0.7
YUK4 Talbot Arm       86.41  23  P        P        05 10 17.2 +0.4
     baz=232
DSP  Deep Springs     86.44  50  IAmb     IAmb     05 10 29.0
     comp=Z,135nm,1.6s
H24K Noodor Dome      86.46  17  IAMs_20  IAMs_20  05 42 06.2
     comp=Z,3µm,22.0s
H24K Noodor Dome      86.46  17  P        P        05 10 16.2 -0.6
     baz=223
RYN  Ryan             86.49  49  IAmb     IAmb     05 10 27.7
     comp=Z,120nm,1.8s
HYT  Haines Junctio   86.53  24  P        P        05 10 16.5 -0.8
     baz=232
G23K Bananza Creek    86.54  15  IAmb     IAmb     05 10 30.9
     comp=Z,134nm,1.6s
G23K                             IAMs_20  IAMs_20  05 41 50.4
     comp=Z,4µm,21.0s
G23K Bananza Creek    86.54  15  P        P        05 10 16.5 -0.7
     baz=221
NVAR Mina Array Bea   86.58  49  P        P        05 10 19.3 +1.1
     comp=Z,5.8nm,0.7s,baz=232,slow=8.4,SNR=27
NVAR                             PKPPKP   P'P'df   05 36 24.9 +4.9
     comp=Z,0.3nm,0.5s,baz=104,slow=3.1,SNR=5.7
NVAR                             LR       LR       05 41 11.2
     comp=Z,9µm,21.0s,baz=272,slow=30
     comp=Z,5.8nm,0.7s
NVAR Mina Array Bea   86.58  49  P        P        05 10 18.4 +0.2
SKAG Skagway          86.58  25  P        P        05 10 20.3 +2.9
SKAG Skagway          86.58  25  P        P        05 10 17.2 -0.3
     baz=234
D20K Etivluk River    86.60  12  P        P        05 10 17.4  0.0
     baz=214
F22K John River       86.62  14  P        P        05 10 17.1 -0.5
     baz=219
CBB  Campbell River   86.64  36  IAmb     IAmb     05 10 27.3
     comp=Z,132nm,1.6s
NV11 Mina Array Sit   86.69  49  IAmb     IAmb     05 10 29.9
     comp=Z,190nm,1.6s
I05D Terrebonne, OR   86.70  43  IAmb     IAmb     05 10 38.0
     comp=Z,131nm,1.8s
QSM  Queen of Sheba   86.78  52  IAmb     IAmb     05 10 26.6
     comp=Z,70nm,1.3s
J26L Joseph Creek     86.79  19  IAMs_20  IAMs_20  05 43 35.3
     comp=Z,3µm,21.0s
J26L Joseph Creek     86.79  19  P        P        05 10 17.8 -0.7
     baz=227
B04A Port Angeles     86.87  39  IAmb     IAmb     05 10 28.8
     comp=Z,78nm,1.2s
JPG  JALPAIGURI       86.88 298 eP        P        05 10 14.5 -5.2
COLD Coldfoot         86.89  15  IAMs_20  IAMs_20  05 42 25.6
     comp=Z,3µm,20.0s
COLD Coldfoot         86.89  15  P        P        05 10 19.5 +0.7
     baz=221,SNR=20
HOOD Mount Hood Mea   86.89  42  IAmb     IAmb     05 10 28.3
     comp=Z,63nm,1.0s
E21K Killik River     86.95  13  IAmb     IAmb     05 10 26.5
     comp=Z,101nm,1.2s
E21K                             IAMs_20  IAMs_20  05 42 42.0
     comp=Z,3µm,20.0s
E21K Killik River     86.95  13  P        P        05 10 19.0 -0.1
     baz=217
K27K Chicken          86.95  20  IAMs_20  IAMs_20  05 42 46.0
     comp=Z,3µm,20.0s
K27K Chicken          86.95  20  P        P        05 10 19.0 -0.2
     baz=228
FURC Furnace Creek,   86.96  51  IAmb     IAmb     05 10 27.6
     comp=Z,87nm,1.2s
FURC                             IAMs_20  IAMs_20  05 42 19.6
     comp=Z,4µm,20.0s
GWY  Greenwater Val   87.01  52  IAmb     IAmb     05 10 27.8
     comp=Z,111nm,1.5s
U35K Hyder            87.02  30  IAMs_20  IAMs_20  05 40 01.3
     comp=Z,6µm,21.0s
U35K Hyder            87.02  30  P        P        05 10 18.7 -0.9
     baz=239
A19K Wainwright       87.03  10  P        P        05 10 19.7 +0.3
     baz=210
O30N Mendenhall       87.05  24  IAmb     IAmb     05 10 27.6
     comp=Z,65nm,1.6s
O30N                             IAMs_20  IAMs_20  05 49 13.6
     comp=Z,4µm,18.0s
O30N Mendenhall       87.05  24  P        P        05 10 19.7 -0.1
     baz=234
N30M Aishikik Lake    87.07  23  IAMs_20  IAMs_20  05 49 12.2
     comp=Z,4µm,19.0s
N30M Aishikik Lake    87.07  23  P        P        05 10 19.1 -0.9
     baz=233
GNW  Green Mountain   87.08  39  IAmb     IAmb     05 10 24.8
     comp=Z,152nm,2.0s
G05A Wamic            87.08  42  IAmb     IAmb     05 10 59.5
     comp=Z,93nm,1.2s
BC3  Big Chuckawall   87.10  54  IAmb     IAmb     05 10 28.8
     comp=Z,124nm,1.5s
PGC  Sidney           87.16  38  IAmb     IAmb     05 10 29.6
     comp=Z,75nm,1.3s
M29M Somme Creek      87.17  22  IAmb     IAmb     05 10 31.1
     comp=Z,100nm,2.0s
M29M                             IAMs_20  IAMs_20  05 51 03.6
     comp=Z,3µm,19.0s
M29M Somme Creek      87.17  22  P        P        05 10 18.9 -1.5
     baz=232
E22K Anaktuvuk Pass   87.20  14  IAMs_20  IAMs_20  05 42 18.6
     comp=Z,3µm,22.0s
E22K Anaktuvuk Pass   87.20  14  P        P        05 10 19.8 -0.5
     baz=219
G24K Hadweenzic Riv   87.21  16  IAmb     IAmb     05 10 27.4
     comp=Z,106nm,1.7s
G24K                             IAMs_20  IAMs_20  05 42 07.1
     comp=Z,3µm,22.0s
G24K Hadweenzic Riv   87.21  16  P        P        05 10 19.9 -0.5
     baz=223
SHOC Shoshone, Teco   87.21  52  IAMs_20  IAMs_20  05 44 02.4
     comp=Z,5µm,18.0s
GTK  Tadong           87.21 299 eP        P        05 10 17.3 -4.2
GTK                              IAmb     IAmb     05 10 26.6
     comp=Z,224nm,1.9s
WCT  Wildcat Mounta   87.25  51  IAmb     IAmb     05 10 29.1
     comp=Z,100nm,1.5s
P32M Atlin            87.33  26  P        P        05 10 19.6 -1.6
     baz=236
C21K Knifeblade Rid   87.35  13  P        P        05 10 21.5 +0.4
     baz=216
LON  Longmire         87.37  40  IAmb     IAmb     05 10 26.1
     comp=Z,89nm,2.0s
MOY  Mondy            87.42 325 eP        P        05 10 22.3 +0.4
MOY                              pmax     pmax
     comp=Z,269nm,3.2s
T35M Bob Quinn        87.46  29  IAMs_20  IAMs_20  05 39 41.0
     comp=Z,7µm,22.0s
T35M Bob Quinn        87.46  29  P        P        05 10 21.5 -0.4
     baz=239
WHY  Whitehorse       87.46  24  IAmb     IAmb     05 10 28.1
     comp=Z,97nm,1.6s
WHY  Whitehorse       87.46  24  P        P        05 10 20.7 -1.2
     baz=235
I26K Coal Creek Min   87.47  18  IAmb     IAmb     05 10 29.0
     comp=Z,118nm,1.8s
I26K                             IAMs_20  IAMs_20  05 42 47.2
     comp=Z,4µm,20.0s
I26K Coal Creek Min   87.47  18  P        P        05 10 21.4 -0.3
     baz=227
G06A Carlson Farm,    87.52  42  IAmb     IAmb     05 10 36.8
     comp=Z,57nm,1.6s
S34M Telegraph Cree   87.54  28  IAmb     IAmb     05 10 34.0
     comp=Z,53nm,1.4s
S34M                             IAMs_20  IAMs_20  05 41 40.1
     comp=Z,5µm,21.0s
S34M Telegraph Cree   87.54  28  P        P        05 10 22.0 -0.2
     baz=238
B20K Meade River      87.57  11  P        P        05 10 21.8 -0.2
     baz=214
D22K Ayikyak River    87.58  13  IAmb     IAmb     05 10 30.2
     comp=Z,108nm,1.2s
D22K                             IAMs_20  IAMs_20  05 44 45.5
     comp=Z,4µm,19.0s
D22K Ayikyak River    87.58  13  P        P        05 10 22.2 +0.1
     baz=218
TPNV Topopah Spring   87.58  51  IAMs_20  IAMs_20  05 42 40.4
     comp=Z,3µm,20.0s
TPNV Topopah Spring   87.58  51 ⇑P        P        05 10 23.8 +0.7
TPNV                            ⇓P        PcP      05 10 25.4 +0.3
N31M Braeburn, Yuko   87.59  24  IAMs_20  IAMs_20  05 43 26.0
     comp=Z,4µm,20.0s
N31M Braeburn, Yuko   87.59  24  P        P        05 10 22.5 +0.1
     baz=234
Q32M Nakina River     87.60  27  IAMs_20  IAMs_20  05 40 19.5
     comp=Z,3µm,22.0s
Q32M Nakina River     87.60  27  P        P        05 10 21.6 -1.1
     baz=237
MTPC Mountain Pass    87.63  53  IAmb     IAmb     05 10 31.1
     comp=Z,165nm,1.7s
G25K Bearman Lake     87.63  17  P        P        05 10 22.2 -0.1
     baz=224
BWNR Bhubaneshwar     87.64 291 eP        P        05 10 19.4 -4.1
E23K Chandalar        87.67  15  IAmb     IAmb     05 10 30.4
     comp=Z,110nm,1.6s
E23K Chandalar        87.67  15  P        P        05 10 22.9 +0.2
     baz=221,SNR=17
F24K Squaw Lake       87.70  16  IAMs_20  IAMs_20  05 42 02.8
     comp=Z,3µm,22.0s
F24K Squaw Lake       87.70  16  P        P        05 10 23.2 +0.5
     baz=223
L29M L29M             87.70  22  P        P        05 10 22.3 -0.6
     baz=232
B21K Ikpikpuk River   87.76  12  IAMs_20  IAMs_20  05 43 56.4
     comp=Z,3µm,18.0s
B21K Ikpikpuk River   87.76  12  P        P        05 10 22.8 -0.1
     baz=216
WVOR Wild Horse Val   87.79  45  IAMs_20  IAMs_20  05 40 20.4
     comp=Z,5µm,22.0s
WVOR Wild Horse Val   87.79  45 ⇑P        P        05 10 25.1 +1.2
I07A Izee             87.82  44  IAmb     IAmb     05 10 31.6
     comp=Z,50nm,1.0s
M30M Minto, Yukon     87.86  22  IAmb     IAmb     05 10 31.9
     comp=Z,115nm,2.0s
M30M                             IAMs_20  IAMs_20  05 42 37.0
     comp=Z,3µm,20.0s
M30M Minto, Yukon     87.86  22  P        P        05 10 22.7 -1.0
     baz=233
DAWY Dawson           87.87  21  P        P        05 10 23.4 -0.3
     baz=231
E24K Your Creek       87.96  15  IAmb     IAmb     05 10 45.9
     comp=Z,66nm,1.9s
E24K Your Creek       87.96  15  P        P        05 10 24.0  0.0
     baz=222
P33M Teslin, Yukon    88.05  25  P        P        05 10 24.9 +0.3
     baz=237
D23K Nanushuk River   88.11  14  IAmb     IAmb     05 10 32.8
     comp=Z,96nm,1.4s
D23K                             IAMs_20  IAMs_20  05 43 21.7
     comp=Z,3µm,20.0s
D23K Nanushuk River   88.11  14  P        P        05 10 25.5 +0.8
     baz=220,SNR=20
TOLK Toolik Lake Re   88.12  14  IAmb     IAmb     05 11 04.3
     comp=Z,59nm,1.6s
TOLK                             IAMs_20  IAMs_20  05 42 58.1
     comp=Z,4µm,22.0s
TOLK Toolik Lake Re   88.12  14  P        P        05 10 24.4 -0.4
     baz=221
I27K Kandik River     88.15  19  IAMs_20  IAMs_20  05 43 19.1
     comp=Z,3µm,20.0s
I27K Kandik River     88.15  19  P        P        05 10 24.8 -0.2
     baz=229
J08A Circle Bar Ran   88.24  44  IAmb     IAmb     05 10 33.6
     comp=Z,46nm,1.1s
V12A Nelson           88.25  53  IAmb     IAmb     05 10 37.6
     comp=Z,145nm,1.6s
MXC  Moxie City       88.26  41  IAmb     IAmb     05 11 13.0
     comp=Z,77nm,1.8s
SHPR Sheep Range      88.26  52  IAmb     IAmb     05 10 34.4
     comp=Z,88nm,1.5s
DLBC Dease Lake       88.31  28  LR       LR       05 42 38.1
     comp=Z,3µm,20.6s,baz=225,slow=31
DLBC Dease Lake       88.31  28  P        P        05 10 25.9  0.0
     baz=239
F25K Christian Rive   88.35  16  IAMs_20  IAMs_20  05 43 05.3
     comp=Z,4µm,22.0s
F25K Christian Rive   88.35  16  P        P        05 10 26.5 +0.6
     baz=225
K29M Barlow Dome      88.37  21  P        P        05 10 25.5 -0.6
     baz=232
R33M Jennings River   88.40  27  P        P        05 10 26.3 -0.1
     baz=238
G26K Porcupine Rive   88.41  17  IAMs_20  IAMs_20  05 44 44.1
     comp=Z,4µm,21.0s
G26K Porcupine Rive   88.41  17  P        P        05 10 26.0 -0.1
     baz=226
N32M Quiet Lake       88.47  25  IAmb     IAmb     05 10 34.8
     comp=Z,92nm,1.8s
N32M                             IAMs_20  IAMs_20  05 42 26.7
     comp=Z,4µm,19.0s
N32M Quiet Lake       88.47  25  P        P        05 10 25.7 -0.8
     baz=236
J29N Klondike Camp    88.51  21  P        P        05 10 26.2 -0.6
     baz=232
LPIG La Paz           88.51  65  LR       LR       05 41 25.9
     comp=Z,3µm,21.4s,baz=249,slow=30
BMAR Burnt Mountain   88.52  17  P        P        05 10 25.2 -1.6
E07A Sunnyside        88.53  41  IAmb     IAmb     05 10 34.7
     comp=Z,54nm,0.9s
BOK  Bokaro           88.54 295 eP        P        05 10 23.7 -4.0
BOK                              IAmb     IAmb     05 10 32.6
     comp=Z,114nm,1.9s
M31M Drury Creek, Y   88.55  23  IAMs_20  IAMs_20  05 42 45.2
     comp=Z,5µm,20.0s
M31M Drury Creek, Y   88.55  23  P        P        05 10 26.2 -0.7
     baz=235
R11B Troy Canyon, C   88.55  50  IAmb     IAmb     05 10 35.2
     comp=Z,67nm,1.5s
JMUI Jamui            88.56 296 eP        P        05 10 24.8 -3.0
I28M Miner Creek      88.57  19  IAMs_20  IAMs_20  05 42 21.2
     comp=Z,3µm,20.0s
I28M Miner Creek      88.57  19  P        P        05 10 26.0 -1.1
     baz=230
B22K Teshekpuk Lake   88.59  12  IAmb     IAmb     05 10 34.5
     comp=Z,107nm,1.3s
B22K Teshekpuk Lake   88.59  12  P        P        05 10 26.5 -0.4
     baz=218
H27K Steamboat Moun   88.59  18  IAMs_20  IAMs_20  05 44 03.9
     comp=Z,5µm,20.0s
H27K Steamboat Moun   88.59  18  P        P        05 10 27.3 +0.3
     baz=229
G08A Pilot Rock       88.63  43  IAmb     IAmb     05 10 36.7
     comp=Z,67nm,1.2s
PRN  Pahroc Range     88.64  51  IAmb     IAmb     05 10 36.1
     comp=Z,119nm,1.4s
HAWA Hanford          88.68  41  IAmb     IAmb     05 10 35.5
     comp=Z,58nm,1.0s
D24K Happy Valley     88.69  14  IAmb     IAmb     05 10 35.3
     comp=Z,165nm,1.9s
D24K                             IAMs_20  IAMs_20  05 43 28.0
     comp=Z,5µm,21.0s
D24K Happy Valley     88.69  14  P        P        05 10 28.0 +0.6
     baz=222
SLBS Sierra La Lagu   88.72  65  P        P        05 10 31.4 +2.8
SLBS Sierra La Lagu   88.72  65  IAMs_20  IAMs_20  05 41 16.8
     comp=Z,4µm,20.0s
E25K Arctic Village   88.75  16  IAMs_20  IAMs_20  05 43 06.8
     comp=Z,4µm,22.0s
E25K Arctic Village   88.75  16  P        P        05 10 27.8 +0.1
     baz=225
A21K Barrow           88.77  11  P        P        05 10 27.8 +0.1
     baz=214
C23K Itkillik River   88.79  13  IAmb     IAmb     05 10 36.0
     comp=Z,116nm,1.2s
C23K                             IAMs_20  IAMs_20  05 47 04.4
     comp=Z,3µm,20.0s
C23K Itkillik River   88.79  13  P        P        05 10 28.5 +0.6
     baz=220
WAH2 Wahluke Slope    88.79  41  IAmb     IAmb     05 10 35.8
     comp=Z,45nm,1.1s
MAYO Mayo, Yukon      88.80  22  P        P        05 10 27.4 -0.6
     baz=234
A22K Sinclair Lake    88.81  11  P        P        05 10 27.4 -0.5
     baz=216
F26K Sheenjek River   88.83  16  IAMs_20  IAMs_20  05 42 56.0
     comp=Z,3µm,22.0s
F26K Sheenjek River   88.83  16  P        P        05 10 28.4 +0.3
     baz=226
EVN  Everest          88.91 299  IAmb     IAmb     05 10 44.9
     comp=Z,54nm,0.9s
G27K Doyon Strip      88.94  18  IAMs_20  IAMs_20  05 44 37.0
     comp=Z,5µm,20.0s
G27K Doyon Strip      88.94  18  P        P        05 10 28.7 +0.1
     baz=228
KNGR Kungurtug, Tuv   88.94 323 i P       P        05 10 30.0 +0.8
KNGR                             pmax     pmax
     comp=Z,20nm,0.9s
EPH  Ephrata          89.00  40  IAmb     IAmb     05 10 36.7
     comp=Z,80nm,1.3s
I29M Ogilvie Camp,    89.05  20  IAMs_20  IAMs_20  05 44 00.1
     comp=Z,3µm,19.0s
I29M Ogilvie Camp,    89.05  20  P        P        05 10 29.0 -0.2
     baz=232
Y14A Wickenburg       89.13  55  IAmb     IAmb     05 10 38.2
     comp=Z,53nm,1.3s
C24K Franklin Bluff   89.14  14  IAmb     IAmb     05 10 37.5
     comp=Z,118nm,1.4s
C24K                             IAMs_20  IAMs_20  05 44 06.4
     comp=Z,4µm,21.0s
C24K Franklin Bluff   89.14  14  P        P        05 10 30.0 +0.5
     baz=222
VIS  Vishakhapatnam   89.21 288 eP        P        05 10 26.8 -4.1
VIS                              IAmb     IAmb     05 10 40.5
     comp=Z,91nm,1.7s
J30M Hart River       89.23  21  P        P        05 10 30.4 +0.2
     baz=233
SYO  Syowa Base       89.26 196⇓iP        P        05 10 30.2  0.0
SYO  Syowa Base       89.26 196⇑iPcP      PcP      05 10 32.3 +0.7
SYO  Syowa Base       89.26 196⇑isP       P        05 10 34.5 +4.3
LNOR Lincton Mounta   89.29  42  IAmb     IAmb     05 10 37.0
     comp=Z,93nm,2.0s
HSIG                  89.35  60  IAmb     IAmb     05 10 42.5
     comp=Z,105nm,1.6s
GAYA Gaya             89.39 296 eP        P        05 10 27.6 -4.1
D25K Kavik River      89.40  15  IAMs_20  IAMs_20  05 43 48.0
     comp=Z,3µm,22.0s
D25K Kavik River      89.40  15  P        P        05 10 30.4 -0.4
     baz=224,SNR=7.0
RAGD RAYAGADA         89.49 290 eP        P        05 10 28.5 -3.8
B08A Colville Reser   89.55  40  IAmb     IAmb     05 10 49.4
     comp=Z,70nm,1.5s
H29M Whitestone       89.56  19  P        P        05 10 31.4 -0.2
     baz=232
BMO  Blue Mountains   89.57  43  IAmb     IAmb     05 10 38.5
     comp=Z,175nm,1.9s
BMO                              IAMs_20  IAMs_20  05 42 05.1
     comp=Z,3µm,20.0s
BMO  Blue Mountains   89.57  43 ⇑P        P        05 10 32.9 +0.7
ELK  Elko             89.60  48  LR       LR       05 43 32.2
     comp=Z,5µm,20.2s,baz=252,slow=31
ELK  Elko             89.60  48  IAMs_20  IAMs_20  05 43 50.6
     comp=Z,5µm,20.0s
I30M Mount Dempster   89.60  20  IAMs_20  IAMs_20  05 44 44.9
     comp=Z,3µm,19.0s
I30M Mount Dempster   89.60  20  P        P        05 10 30.8 -1.1
     baz=233
E09A Wood Farm, Sta   89.61  42  IAmb     IAmb     05 10 39.5
     comp=Z,47nm,1.1s
TIXI Tiksi            89.68 349  LR       LR       05 46 03.2
     comp=Z,2µm,21.6s,baz=170,slow=32
TIXI Tiksi            89.68 349  P        P        05 10 30.3 -1.7
TIXI                             IAmb     IAmb     05 10 38.1
     comp=Z,132nm,1.6s
TIXI Tiksi            89.68 349 i P       P        05 10 33.1 +1.1
TIXI                             pmax     pmax
     comp=Z,29nm,1.0s
TIXI                             MLR      MLR
     comp=Z,1µm,18.0s
SPR3 Spring Creek 3   89.69  50  IAmb     IAmb     05 10 40.6
     comp=Z,56nm,1.1s
JHSG JHARSUGUGA       89.87 292 eP        P        05 10 30.3 -3.7
E27K Coleen River     89.87  17  IAMs_20  IAMs_20  05 52 07.6
     comp=Z,2µm,18.0s
E27K Coleen River     89.87  17  P        P        05 10 32.9 -0.1
     baz=229
LCMT Little Creek M   89.88  52  IAmb     IAmb     05 10 41.8
     comp=Z,136nm,1.5s
PSUT Pine Spring      89.90  50  IAmb     IAmb     05 10 41.7
     comp=Z,55nm,1.3s
CCUT Cedar City       89.96  51  IAmb     IAmb     05 10 42.6
     comp=Z,101nm,1.4s
F28M Old Crow         89.99  18  IAMs_20  IAMs_20  05 45 29.8
     comp=Z,6µm,20.0s
F28M Old Crow         89.99  18  P        P        05 10 33.5 -0.1
     baz=230
C09A Chrisman Ranch   90.00  40  IAmb     IAmb     05 10 40.1
     comp=Z,79nm,1.9s
F10A Beach Ranch, E   90.01  42  IAmb     IAmb     05 10 41.3
     comp=Z,71nm,0.9s
MFID Camas Ranch      90.07  45  IAmb     IAmb     05 10 42.1
     comp=Z,44nm,1.1s
MFID                             IAMs_20  IAMs_20  05 42 50.6
     comp=Z,4µm,21.0s
G29M Pine Creek       90.10  19  IAMs_20  IAMs_20  05 43 58.9
     comp=Z,3µm,21.0s
G29M Pine Creek       90.10  19  P        P        05 10 33.2 -0.9
     baz=232
SZCU Shurtz Canyon    90.18  51  IAmb     IAmb     05 10 43.4
     comp=Z,141nm,1.5s
EPYK Eagle Plains     90.18  19  IAmb     IAmb     05 10 41.5
     comp=Z,84nm,1.8s
EPYK                             IAMs_20  IAMs_20  05 44 26.1
     comp=Z,4µm,21.0s
EPYK Eagle Plains     90.18  19  P        P        05 10 33.8 -0.7
     baz=233
C26K Camden Bay       90.19  15  P        P        05 10 34.6 +0.2
     baz=226,SNR=8.1
C27K Jago River       90.29  15  IAmb     IAmb     05 10 45.8
     comp=Z,85nm,1.9s
C27K                             IAMs_20  IAMs_20  05 44 45.4
     comp=Z,3µm,21.0s
C27K Jago River       90.29  15  P        P        05 10 34.4 -0.5
     baz=227,SNR=6.0
TUC  Tucson           90.43  57  P        P        05 10 37.3 +0.8
TUC                              IAmb     IAmb     05 10 44.7
     comp=Z,145nm,1.6s
TUC  Tucson           90.43  57  IAMs_20  IAMs_20  05 41 54.9
     comp=Z,5µm,21.0s
TUC  Tucson           90.43  57  P        P        05 10 37.3 +0.8
TUC                              pmax     pmax
     comp=Z,145nm,1.7s
PLID Pearl Lake       90.52  43  IAMs_20  IAMs_20  05 45 52.3
     comp=Z,4µm,20.0s
LIRD Liard River Hi   90.57  28  P        P        05 10 35.6 -0.8
     baz=242
H31M Peel River       90.63  20  IAMs_20  IAMs_20  05 45 18.1
     comp=Z,3µm,20.0s
H31M Peel River       90.63  20  P        P        05 10 35.6 -1.0
     baz=235
TOAD Toad River Com   90.71  29  P        P        05 10 35.7 -1.4
     baz=243
G30M tAoh Zraii Nji   90.71  19  IAmb     IAmb     05 10 41.9
     comp=Z,71nm,1.8s
G30M                             IAMs_20  IAMs_20  05 44 29.9
     comp=Z,3µm,20.0s
G30M tAoh Zraii Nji   90.71  19  P        P        05 10 36.5 -0.5
     baz=234
ELIB Princess Elisa   90.72 190 dP        P        05 10 35.8 -1.4
E28M Babbage River    90.72  17  IAMs_20  IAMs_20  05 46 24.1
     comp=Z,3µm,19.0s
E28M Babbage River    90.72  17  P        P        05 10 36.3 -0.6
     baz=230
D27M Malcolm River    90.75  16  IAMs_20  IAMs_20  05 44 17.6
     comp=Z,3µm,22.0s
D27M Malcolm River    90.75  16  P        P        05 10 35.9 -1.2
     baz=229
NEW  Newport          90.89  40  LR       LR       05 46 14.1
     comp=Z,3µm,19.1s,baz=248,slow=32
NEW  Newport          90.89  40  IAMs_20  IAMs_20  05 45 52.7
     comp=Z,4µm,19.0s
NEW  Newport          90.89  40  P        P        05 10 38.8 +0.6
NEW  Newport          90.89  40 ⇓P        P        05 10 38.6 +0.4
TCRU Three Creeks R   90.97  50  IAmb     IAmb     05 10 48.8
     comp=Z,53nm,1.3s
MTPU Mount Pierson    91.00  51  IAmb     IAmb     05 10 47.9
     comp=Z,54nm,1.3s
E29M Blow River       91.06  17  IAMs_20  IAMs_20  05 46 13.8
     comp=Z,6µm,20.0s
E29M Blow River       91.06  17  P        P        05 10 37.8 -0.6
     baz=232
HLID Hailey           91.09  45  IAmb     IAmb     05 10 46.2
     comp=Z,75nm,1.7s
HLID                             IAMs_20  IAMs_20  05 43 22.7
     comp=Z,6µm,20.0s
DUG  Dugway, Tooele   91.18  49 ⇓P        P        05 10 41.8 +1.9
DUG                              PCP      PcP      05 10 41.9 +1.0
F30M Barrier River    91.22  19  IAMs_20  IAMs_20  05 44 34.1
     comp=Z,4µm,21.0s
F30M Barrier River    91.22  19  P        P        05 10 38.5 -0.8
     baz=234
BGU  Big Grassy Mou   91.24  48  IAmb     IAmb     05 10 46.7
     comp=Z,74nm,1.8s
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G31M	Satah River	91.30	20	IAMs_20	IAMs_20	05 45 09.6	
	comp=Z,4µm,19.0s						
G31M	Satah River	91.30	20	P	P	05 10 38.3	-1.3
	baz=235						
VJD	Vijayawada	91.38	287	*e*P	P	05 10 37.0	-4.1
D28M	Stokes Point	91.41	17	P	P	05 10 39.9	-0.1
	baz=231						
BLSP	Bilaspur	91.43	292	*e*P	P	05 10 37.2	-4.1
VAR	Varanasi	91.46	296	*e*P	P	05 10 36.6	-4.7
HVU	Hansel Valley	91.69	47	IAmb	IAmb	05 10 49.8	
	comp=Z,74nm,1.5s						
X18A	Snowflake	91.72	55	IAmb	IAmb	05 10 50.5	
	comp=Z,115nm,1.6s						
F31M	Tsiigehtchic	91.77	19	IAmb	IAmb	05 10 47.4	
	comp=Z,76nm,2.0s						
F31M				IAMs_20	IAMs_20	05 45 43.8	
	comp=Z,3µm,21.0s						
F31M	Tsiigehtchic	91.77	19	P	P	05 10 41.2	-0.5
	baz=236						
KOTAN	Kotaneelee Air	91.82	28	P	P	05 10 42.2	0.0
	baz=244						
PMSA	Palmer Station	91.96	160	LR	LR	05 44 51.7	
	comp=Z,1µm,21.4s,baz=234,slow=31						
PMSA	Palmer Station	91.96	160	*e*P	P	05 10 45.9	+3.0
Q16A	Castle Valley	92.01	50	IAmb	IAmb	05 10 55.7	
	comp=Z,86nm,1.6s						
W18A	Petrified Fore	92.05	54	IAmb	IAmb	05 10 51.9	
	comp=Z,132nm,1.8s						
INK	Inuvik	92.32	19	LR	LR	05 49 31.0	
	comp=Z,2µm,18.6s,baz=235,slow=34						
INK	Inuvik	92.32	19	P	P	05 10 43.0	-1.3
	baz=236						
MSO	Missoula	92.44	42	IAMs_20	IAMs_20	05 50 15.2	
	comp=Z,4µm,18.0s						
TCUT	Toone Canyon	92.47	48	IAmb	IAmb	05 10 53.4	
	comp=Z,30nm,1.0s						
HWUT	Hardware Ranch	92.50	48	IAMs_20	IAMs_20	05 43 09.2	
	comp=Z,4µm,20.0s						
SALM	Salem	92.50	281	*e*P	P	05 10 42.6	-3.7
ALBI	Allahabad	92.52	295	*e*P	P	05 10 42.5	-3.8
WMQ	Urumqi	92.85	314	*e*P	P	05 10 48.3	+0.9
WMQ				pP	sP	05 10 57.0	+0.4
WMQ				PP	PP	05 14 30.4	+0.3
WMQ				SKS	SKSac	05 21 17.5	-2.7
WMQ				SS	SS	05 28 09.8	+3.9
WMQ				pmax	pmax		
	comp=Z,30nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,1µm,4.7s						
WMQ				LR	LR		
	comp=Z,1µm,22.9s						
WMQ				LR	LR		
	comp=Z,2µm,19.5s						
WMQ				LR	LR		
	comp=Z,1µm,19.5s						
KOD	Kodaikanal	92.86	280	*e*P	P	05 10 44.1	-4.3
DLMT	Dillon	92.89	44	IAmb	IAmb	05 10 55.0	
	comp=Z,31nm,1.1s						
DLMT				IAMs_20	IAMs_20	05 44 16.0	
	comp=Z,4µm,21.0s						
121A	Cookes Peak, D	92.93	57	IAmb	IAmb	05 10 56.1	
	comp=Z,138nm,1.9s						
TRD	Trivandrum	92.93	278	*e*P	P	05 10 44.1	-4.3
HPIG		93.30	63	IAmb	IAmb	05 10 60.0	
	comp=Z,60nm,1.9s						
TROLL	Troll, Antarti	93.31	185	⇑P	P	05 10 46.7	-2.5
	comp=Z,687nm,0.7s						
TROLL				⇑SKSac	SKSac	05 21 07.8	-14
DGAR	Diego Garcia	93.38	262	IAMs_20	IAMs_20	05 50 30.0	
	comp=Z,3µm,20.0s						
WRGLY	Wrigley	93.42	25	P	P	05 10 48.7	-0.8
	baz=245						
PV10	Paradox Valley	93.47	51	IAmb	IAmb	05 10 59.3	
	comp=Z,91nm,1.6s						
PV19	Morning Glory	93.49	51	IAmb	IAmb	05 11 08.4	
	comp=Z,103nm,1.9s						
PV23	Carpenter Ridg	93.51	51	IAmb	IAmb	05 10 58.2	
	comp=Z,42nm,0.9s						
NVL	N'lazarevskaya	93.53	188	*e*P	P	05 10 51.6	+1.6
NVL				*e*		05 14 36.0	
NVL				*e*PPP	PPP	05 16 36.3	
NVL				*e*S	SKSac	05 21 25.8	+2.8
NVL				*e*SS	SS	05 28 18.9	+5.9
NVL				*e*SSS	SSS	05 31 59.5	
NVL				pmax	pmax		
	comp=Z,52nm,1.8s						
NVL				MLR	MLR		
	comp=Z,1µm,16.0s						
PV18	Skein Mesa, Pa	93.53	52	IAmb	IAmb	05 11 52.3	
	comp=Z,58nm,1.6s						
HYB	Hyderabad	93.55	287	*e*P	P	05 10 50.9	-0.3
HYB				*e*pP	PcP	05 10 53.5	+1.8
HYB				*e*PP	PP	05 14 37.2	+1.1
HYB				*e*SKSac	SKSac	05 21 26.2	+1.2
HYB				*e*SKKSac	SKKSac	05 21 44.0	-0.7
BOZ	Bozeman (W)	93.60	44	IAMs_20	IAMs_20	05 45 00.0	
	comp=Z,3µm,20.0s						
PV12	Saucer Basin,	93.63	52	IAmb	IAmb	05 10 58.7	
	comp=Z,30nm,0.9s						
YHB	Horse Butte	93.66	45	IAmb	IAmb	05 11 45.9	
	comp=Z,63nm,2.0s						
EPT	El Paso	93.78	58	IAmb	IAmb	05 10 59.4	
	comp=Z,77nm,1.7s						
EPT				IAMs_20	IAMs_20	05 43 48.9	
	comp=Z,4µm,21.0s						
NGP	Nagpur	93.97	291	*e*P	P	05 10 49.5	-3.5
SNAA	Sanae	93.98	183	⇑P	P	05 10 49.8	-2.5
	comp=Z,198nm,0.9s						
SNAA				⇑SKSac	SKSac	05 21 11.9	-14
SNAA	Sanae	93.98	183	P	P	05 10 50.3	-1.9
	comp=Z,5.4nm,0.9s,baz=177,slow=5.9,SNR=17						
SNAA				LR	LR	05 52 58.0	
	comp=Z,3µm,18.2s,baz=160,slow=35						
	comp=Z,5.4nm,0.9s						
SNAA	Sanae	93.98	183	P	P	05 10 49.7	-2.5
SNAA				IAMs_20	IAMs_20	05 53 30.2	
	comp=Z,3µm,18.0s						
SNAA	Sanae	93.98	183	*ce*P	P	05 10 51.0	-1.2
SNAA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BW06	Boulder Array	94.25	47	IAMs_20	IAMs_20	05 45 40.5	
	comp=Z,4µm,20.0s						
PDAR	Pinedale Array	94.25	47	P	P	05 10 55.4	+1.2
	comp=Z,0.7nm,0.6s,baz=213,slow=3.5,SNR=9.3						
PDAR				PP	PP	05 14 42.6	+1.2
	comp=Z,1.1nm,1.0s,baz=232,slow=1.7,SNR=6.0						
PDAR				PKKP	PKKPdf	05 27 53.1	-2.8
	comp=Z,0.4nm,0.8s,baz=86,slow=4.6,SNR=3.7						
	comp=Z,0.7nm,0.6s						
PDAR	Pinedale Array	94.25	47	P	P	05 10 54.3	+0.2
TASM	ASL Pad, Albuq	94.60	55	IAmb	IAmb	05 11 03.0	
	comp=Z,31nm,1.6s						
TASM	ASL Pad, Albuq	94.60	55	IAmb	IAmb	05 11 03.0	
	comp=Z,34nm,1.7s						
TASM	ASL Pad, Albuq	94.60	55	IAmb	IAmb	05 11 05.4	
	comp=Z,52nm,2.0s						
ANMO	Albuquerque	94.60	55	LR	LR	05 45 16.3	
	comp=Z,5µm,21.0s,baz=258,slow=30						
ANMO	Albuquerque	94.60	55	P	P	05 10 54.2	-1.7
ANMO	Albuquerque	94.60	55	IAMs_20	IAMs_20	05 44 55.4	
	comp=Z,5µm,21.0s						
ANMO	Albuquerque	94.60	55	*ce*P	P	05 10 57.2	+1.3
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.2s						
VNA3	Neumayer Olymp	94.63	181	⇑P	P	05 10 52.5	-2.7
	comp=Z,13nm,0.7s						
MNTX	Cornudas Mount	94.69	59	IAMs_20	IAMs_20	05 44 28.1	
	comp=Z,3µm,21.0s						
DGZ	Jazzator, Alta	94.72	320	*i* P	P	05 10 55.4	-0.6
DGZ				pmax	pmax		
	comp=Z,32nm,1.0s						
VHRN	Van Horn	94.81	60	IAmb	IAmb	05 11 04.3	
	comp=Z,98nm,2.0s						
KAAM	Kaadhehdhoo	94.83	269	IAMs_20	IAMs_20	05 54 49.7	
	comp=Z,3µm,20.0s						
VNA2	Neumayer--Watz	94.90	182	⇑P	P	05 10 54.0	-2.3
	comp=Z,11nm,0.6s,baz=168,slow=4.7						
PTH	Pithoragarh	94.92	299	*e*P	P	05 10 53.4	-4.0
LGTI	Lohaghat	95.00	299	*e*P	P	05 10 53.8	-3.1
ZAIG	Zacatecas	95.05	68	IAmb	IAmb	05 11 09.3	
	comp=Z,42nm,1.7s						
HAYD	Hayden	95.35	50	IAMs_20	IAMs_20	05 47 13.6	
	comp=Z,5µm,20.0s						
JHNI	Jhansi	95.36	295	*e*P	P	05 10 55.5	-4.2
EGMT	Eagleton	95.51	42	IAmb	IAmb	05 11 06.7	
	comp=Z,103nm,1.9s						
EGMT				IAMs_20	IAMs_20	05 49 37.2	
	comp=Z,3µm,19.0s						
TX31	Lajitas Ar. Si	95.58	61	IAmb	IAmb	05 11 08.0	
	comp=Z,100nm,1.9s						
TXAR	Lajitas Array	95.58	61	P	P	05 11 01.1	+0.7
	comp=Z,1.3nm,0.7s,baz=226,slow=4.8,SNR=16						
TXAR				LR	LR	05 45 07.6	
	comp=Z,2µm,22.0s,baz=258,slow=30						
	comp=Z,1.3nm,0.7s						
TXAR	Lajitas Array	95.58	61	P	P	05 11 00.9	+0.5
AKL	Akola	95.72	290	*e*P	P	05 10 57.1	-3.9
C36M	Paulatuk	95.82	19	IAmb	IAmb	05 11 10.3	
	comp=Z,68nm,1.9s						
C36M				IAMs_20	IAMs_20	05 47 56.0	
	comp=Z,3µm,20.0s						
C36M	Paulatuk	95.82	19	P	P	05 10 59.1	-1.3
	baz=245						
BHPL	Bhopal	95.92	292	*e*P	P	05 10 57.8	-4.2
BHPL				IAmb	IAmb	05 11 07.5	
	comp=Z,37nm,1.4s						
TKRD	Thakurdwara	95.99	298	*e*P	P	05 10 58.5	-3.5
NRDN	NARMADA NAGAR	96.03	292	*e*P	P	05 10 58.3	-4.1
GUNA	GUNA	96.31	294	*e*P	P	05 10 59.5	-4.2
K22A	Casper	96.39	48	IAMs_20	IAMs_20	05 45 23.2	
	comp=Z,3µm,22.0s						
ISCO	Idaho Springs	96.40	51	IAMs_20	IAMs_20	05 46 27.8	
	comp=Z,3µm,22.0s						
ISCO	Idaho Springs	96.40	51	P	P	05 11 05.9	+1.8
UGON	Onchagaon	96.61	297	*e*P	P	05 11 00.5	-4.4
A36M	Sachs Harbour	96.62	17	P	P	05 11 02.7	-1.2
	baz=244						
HNLY	HANLEY	96.69	302	*e*P	P	05 11 00.9	-5.0
MERT	Meerut	96.91	298	*e*P	P	05 11 03.4	-2.8
DDI	Dehra Dun	96.92	299	*e*P	P	05 11 02.3	-4.0
DDI				IAmb	IAmb	05 11 05.9	
	comp=Z,11nm,0.3s						
YKA	Yellowknife Ar	96.92	27	P	P	05 11 04.7	-0.8
	comp=Z,1.7nm,0.8s,baz=262,slow=5.3,SNR=18						
YKA				PKKP	PKKPdf	05 27 50.8	-0.6
	comp=Z,0.3nm,0.8s,baz=59,slow=1.9,SNR=4.4						
	comp=Z,1.7nm,0.8s						
YKA	Yellowknife Ar	96.92	27	P	P	05 11 04.2	-1.4
YKAW3	Yellowknife Wh	96.94	27	IAmb	IAmb	05 11 11.5	
	comp=Z,78nm,1.8s						
YKAW1	Yellowknife Wh	96.98	27	IAmb	IAmb	05 11 11.7	
	comp=Z,68nm,1.8s						
MK31	Makanchi Array	97.30	316	*ce*P	P	05 11 07.0	-0.7
MKAR	Makanchi Array	97.30	316	P	P	05 11 06.5	-1.1
	comp=Z,15nm,0.7s,baz=97,slow=5.5,SNR=87						
MKAR				PP	PP	05 15 02.6	-2.0
	comp=Z,3.0nm,1.0s,baz=109,slow=8.4,SNR=3.9						
MKAR				PKiKP	PKiKP	05 15 43.3	+0.4
	comp=Z,1.2nm,0.8s,baz=72,slow=1.3,SNR=4.7						
MKAR				PKKP	PKKPbc	05 27 48.8	+0.9
	comp=Z,1.6nm,0.9s,baz=327,slow=2.0,SNR=8.5						
	comp=Z,15nm,0.7s						
MKAR	Makanchi Array	97.30	316	P	P	05 11 05.8	-1.9
SONA	Sohna	97.31	297	*e*P	P	05 10 59.9	-8.1
NPLP	NPLP New Delhi	97.32	298	*e*P	P	05 11 03.9	-4.2
AYAN	Aya Nagar	97.32	297	*e*P	P	05 11 04.2	-4.0
MSTX	Muleshoe	97.35	57	IAmb	IAmb	05 11 17.2	
	comp=Z,44nm,1.6s						
MSTX				IAMs_20	IAMs_20	05 45 44.1	
	comp=Z,4µm,22.0s						
ZAA0	Zalesovo Array	97.40	324	IAmb	IAmb	05 11 08.4	
	comp=Z,48nm,1.2s						
ZALV	Zalesovo Beam	97.40	324	P	P	05 11 06.4	-1.5
	comp=Z,21nm,1.0s,baz=110,slow=4.7,SNR=51						
ZALV				LR	LR	05 52 38.2	
	comp=Z,1µm,21.7s,baz=100,slow=34						
	comp=Z,21nm,1.0s						
ZALV	Zalesovo Beam	97.40	324	P	P	05 11 05.7	-2.1
ZALV	Zalesovo Beam	97.40	324	*i* P	P	05 11 05.5	-2.4
ZALV				pmax	pmax		
	comp=Z,21nm,1.0s						
MAKZ	Makanchi	97.51	316	P	Pdif	05 11 08.6	0.0
MAKZ	Makanchi	97.51	316	P	Pdif	05 11 08.6	-0.1
MAKZ				pmax	pmax		
	comp=Z,93nm,1.5s						
LAO	LASA Array	97.52	44	IAMs_20	IAMs_20	05 49 08.5	
	comp=Z,4µm,20.0s						
GOA	Goa	97.52	284	*e*P	P	05 11 04.8	-4.5
GOA				IAmb	IAmb	05 11 14.4	
	comp=Z,25nm,0.4s						
KAD	Karad	97.58	286	*e*P	P	05 11 04.8	-4.8
JHJR	Jhajjar	97.76	297	*e*P	P	05 11 06.2	-3.9
KUDL	Kundal	97.80	297	*e*P	P	05 11 06.2	-4.1
RTBA	Rita Blanca	97.89	54	IAmb	IAmb	05 11 16.6	
	comp=Z,34nm,1.7s						
KKR	Kurukshetra	97.89	299	*e*P	P	05 11 09.8	-0.9
POO	Poona	98.16	287	*e*P	P	05 11 07.7	-4.4
POO				IAmb	IAmb	05 11 16.1	
	comp=Z,126nm,2.2s						
AMTX	Amarillo	98.42	56	IAMs_20	IAMs_20	05 47 25.4	
	comp=Z,4µm,20.0s						
ALCI	Alchi Leh	98.45	303	*e*P	P	05 11 09.4	-4.2
JCT	Junction City	99.11	61	IAMs_20	IAMs_20	05 46 46.7	
	comp=Z,3µm,21.0s						
DGMT	Dagmar	99.23	42	IAMs_20	IAMs_20	05 48 03.6	
	comp=Z,3µm,20.0s						
APMT	Aspermont	99.38	58	IAmb	IAmb	05 11 22.8	
	comp=Z,31nm,1.6s						
UDPR	Udaipur	99.52	293	*e*P	Pdif	05 11 13.8	-4.4
ABTX	Abilene, Hawle	99.65	59	IAMs_20	IAMs_20	05 47 56.7	
	comp=Z,3µm,20.0s						
NRIK	Noril'sk	99.89	339	P	Pdif	05 11 18.6	0.0
	comp=Z,20nm,1.0s,baz=115,slow=4.9,SNR=23						
NRIK				LR	LR	05 57 08.7	
	comp=Z,1µm,18.7s,baz=104,slow=36						
	comp=Z,20nm,1.0s						
NRIK	Noril'sk	99.89	339	*i* P	Pdif	05 11 18.1	-0.6
NRIK				pmax	pmax		
	comp=Z,33nm,1.2s						
NRIK				MLR	MLR		
	comp=Z,2µm,19.0s						
SRNI	Srinagar	100.36	303	*e*P	Pdif	05 11 17.3	-4.1
KSH	Kashi	100.39	308	P	Pdif	05 11 28.5	+6.7
KSH				PP	PP	05 15 27.3	-1.3
KSH				S	Sdif	05 23 00.8	+3.7
KSH				pmax	pmax		
	comp=Z,8.0nm,3.2s						
KSH				LR	LR		
	comp=Z,1µm,18.9s						
KSH				LR	LR		
	comp=Z,940nm,18.9s						
KSH				LR	LR		
	comp=Z,1µm,22.7s						
KURK	Kurchatov	100.46	320	P	Pdif	05 11 20.9	-0.7
KURK	Kurchatov	100.46	320	*i* P	Pdif	05 11 20.7	-0.9
KURK				pmax	pmax		
	comp=Z,11nm,1.3s						
H03S2	Juan Fernandez	100.48	129	T	T	07 03 31.2	
	baz=242,slow=74,SNR=15						
H03S1	Juan Fernandez	100.49	129	T	T	07 03 32.4	
	baz=242,slow=74,SNR=14						
H03S3	Juan Fernandez	100.50	129	T	T	07 03 20.4	
	baz=242,slow=74,SNR=15						
KURBB	Kurchatov Arra	100.50	320	P	Pdif	05 11 20.5	-1.3
	comp=Z,3.7nm,1.0s,baz=100,slow=3.3,SNR=13						
KURBB				PKiKP	PKiKP	05 15 46.2	-2.2
	comp=Z,1.3nm,0.2s,baz=101,slow=2.9,SNR=4.8						
735A	Kenedy	100.50	63	IAMs_20	IAMs_20	05 51 36.6	
	comp=Z,4µm,19.0s						
BKNR	BIKANER	100.56	296	*e*P	Pdif	05 11 17.1	-5.6
WMOK	Wichita Mounta	100.73	57	IAMs_20	IAMs_20	05 48 14.3	
	comp=Z,4µm,22.0s						
OK038	West end E0370	101.06	55	IAMs_20	IAMs_20	05 50 39.9	
	comp=Z,4µm,20.0s						
E28A	Huff	101.24	45	IAMs_20	IAMs_20	05 48 18.6	
	comp=Z,4µm,22.0s						
PAYG	Puerto Ayora	101.32	94	IAMs_20	IAMs_20	05 46 13.9	
	comp=Z,3µm,22.0s						
WHTX	Lake Whitney,	101.36	60	IAMs_20	IAMs_20	05 49 31.0	
	comp=Z,3µm,20.0s						
K30B	Basset	101.39	49	IAMs_20	IAMs_20	05 49 46.2	
	comp=Z,3µm,20.0s						
Z35A	Perchaven, San	101.75	58	IAMs_20	IAMs_20	05 49 34.3	
	comp=Z,3µm,20.0s						
AAK	Ala-Archa	101.99	311	*i* P	Pdif	05 11 29.0	+0.1
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SUSD	Miller	102.13	47	IAMs_20	IAMs_20	05 49 01.5	
	comp=Z,4µm,22.0s						
MDND	Maddock	102.16	44	IAMs_20	IAMs_20	05 49 28.9	
	comp=Z,4µm,22.0s						
HKT	Hockley	102.39	62	IAMs_20	IAMs_20	05 56 59.5	
	comp=Z,3µm,18.0s						
OK048	Pawnee Station	102.48	55	IAMs_20	IAMs_20	05 52 12.5	
	comp=Z,4µm,20.0s						
OK052	Battle Ridge R	102.53	56	IAMs_20	IAMs_20	05 50 35.9	
	comp=Z,5µm,21.0s						
OK051	E0350 and S346	102.58	55	IAMs_20	IAMs_20	05 52 25.1	
	comp=Z,4µm,21.0s						
T35A	Sooner Cattle	102.90	55	IAMs_20	IAMs_20	05 49 40.5	
	comp=Z,4µm,22.0s						
Z38A	Mt. Pleasant	103.61	59	IAMs_20	IAMs_20	05 51 04.7	
	comp=Z,3µm,21.0s						
NATX	Nacogdoches	103.67	60	IAMs_20	IAMs_20	05 50 31.2	
	comp=Z,3µm,21.0s						
ECSD	EROS Data Cent	103.71	48	IAMs_20	IAMs_20	05 52 41.4	
	comp=Z,3µm,20.0s						
U38A	Gravette	104.53	56	IAMs_20	IAMs_20	05 51 37.7	
	comp=Z,5µm,20.0s						
AGMN	Agassiz Nation	104.70	43	IAMs_20	IAMs_20	05 53 30.2	
	comp=Z,4µm,19.0s						
441A	DeRidder	104.77	62	IAMs_20	IAMs_20	05 56 03.5	
	comp=Z,3µm,19.0s						
MIAR	Mount Ida	104.95	58	IAMs_20	IAMs_20	05 52 37.0	
	comp=Z,3µm,20.0s						
BVAR	Borovoye Array	105.78	322	Pdiff	Pdif	05 11 44.4	-0.9
	comp=Z,5.3nm,1.0s,baz=90,slow=3.1,SNR=13						
BVAR				PKiKP	PKiKP	05 15 58.3	+0.4
	comp=Z,3.2nm,0.6s,baz=137,slow=1.4,SNR=6.5						
BORK	Borovoye	105.82	322	IAMs_20	IAMs_20	05 57 22.6	
	comp=Z,3µm,22.0s						
I37A	Lemond, Waseca	106.05	48	IAMs_20	IAMs_20	05 58 08.3	
	comp=Z,3µm,19.0s						
143A	Socs Landing,	106.53	60	IAMs_20	IAMs_20	05 53 03.9	
	comp=Z,3µm,20.0s						
VBMS	Vicksburg	107.22	60	IAMs_20	IAMs_20	05 54 30.2	
	comp=Z,3µm,20.0s						
MT08	Bocatoma Ro	107.23	132	IAMs_20	IAMs_20	05 51 41.8	
	comp=Z,2µm,21.0s						
TGUH	Tegucigalpa,Un	107.50	80	IAMs_20	IAMs_20	05 49 02.3	
	comp=Z,3µm,22.0s						
EYMN	Ely	107.60	44	IAMs_20	IAMs_20	05 54 24.9	
	comp=Z,4µm,20.0s						
TEIG	Tepich	107.62	73	IAMs_20	IAMs_20	05 53 24.4	
	comp=Z,3µm,20.0s						
346A	Big Creek Wild	108.02	61	IAMs_20	IAMs_20	06 05 48.5	
	comp=Z,2µm,18.0s						
I40A	Norwalk	108.05	48	IAMs_20	IAMs_20	05 54 32.2	
	comp=Z,2µm,21.0s						
OXF	Oxford	108.37	58	IAMs_20	IAMs_20	05 52 33.5	
	comp=Z,2µm,22.0s						
G40A	Rib Lake	108.40	47	IAMs_20	IAMs_20	05 55 09.4	
	comp=Z,4µm,20.0s						
146A	Union	108.49	60	IAMs_20	IAMs_20	05 53 43.9	
	comp=Z,2µm,21.0s						
BOAB	BOACO BROADBAND	108.74	82	IAMs_20	IAMs_20	05 54 15.0	
	comp=Z,3µm,19.0s						
Q44A	Meyer Farm, Va	109.00	53	IAMs_20	IAMs_20	05 55 30.8	
	comp=Z,3µm,20.0s						
T45A	Paducah	109.17	55	IAMs_20	IAMs_20	05 55 49.7	
	comp=Z,4µm,20.0s						
I42A	Draeger Farm,	109.28	48	IAMs_20	IAMs_20	05 56 55.8	
	comp=Z,3µm,19.0s						
Z47A	Carrollton	109.37	60	IAMs_20	IAMs_20	05 53 42.1	
	comp=Z,4µm,21.0s						
PLAL	Pickwick Lake	109.50	58	IAMs_20	IAMs_20	05 54 21.4	
	comp=Z,3µm,22.0s						
HDC	Heredia	109.75	84	IAMs_20	IAMs_20	05 50 49.4	
	comp=Z,4µm,21.0s						
BRAL	Brewton	110.06	62	IAMs_20	IAMs_20	05 57 59.5	
	comp=Z,2µm,20.0s						
H43A	Windswept, Lux	110.11	48	IAMs_20	IAMs_20	05 55 51.8	
	comp=Z,3µm,20.0s						
LRAL	Lakeview Retre	110.25	60	IAMs_20	IAMs_20	05 53 59.5	
	comp=Z,3µm,22.0s						
X48A	Hartselle	110.31	58	IAMs_20	IAMs_20	05 57 59.9	
	comp=Z,3µm,20.0s						
V48A	Smith Brothers	110.57	57	IAMs_20	IAMs_20	05 57 56.7	
	comp=Z,3µm,20.0s						
NNA	Nana	110.77	109	IAMs_20	IAMs_20	05 53 35.7	
	comp=Z,2µm,20.0s						
NNA	Nana	110.77	109	P	PP	05 16 47.5	+2.0
	comp=Z,15nm,2.6s						
I45A	Fountain	111.22	48	IAMs_20	IAMs_20	05 58 24.0	
	comp=Z,4µm,20.0s						
SVE	Sverdlovsk	111.29	326	*e*PKIKP	PKiKP	05 16 08.3	+0.2
W50A	Signal Mountai	111.77	58	IAMs_20	IAMs_20	05 55 09.6	
	comp=Z,3µm,22.0s						
JLN	Jalan Bani Buh	112.11	288	P	Pdif	05 12 18.7	+4.6
X51A	Calhoun	112.12	58	IAMs_20	IAMs_20	05 55 50.8	
	comp=Z,3µm,21.0s						
152A	Waverly Hall	112.14	60	IAMs_20	IAMs_20	05 55 29.6	
	comp=Z,2µm,20.0s						
E46A	Sault Ste Mari	112.52	46	IAMs_20	IAMs_20	05 57 02.1	
	comp=Z,3µm,21.0s						
WBK	Wadi Bani Khal	112.57	289	P	Pdif	05 12 18.3	+2.1
ARTI	Arti	112.58	325	*i* PKIKP	PKiKP	05 16 11.1	+0.5
ARTI						05 17 02.7	
ARTI						05 23 20.5	
ARTI				SS	SS	05 32 45.0	+7.6
PAC1	Pacto, Paraso	112.67	96	P	PP	05 17 03.8	+4.3
Y52A	Lilburn	112.75	59	IAMs_20	IAMs_20	05 57 47.5	
	comp=Z,3µm,19.0s						
W52A	Murphy	112.90	58	IAMs_20	IAMs_20	05 55 43.5	
	comp=Z,4µm,22.0s						
PB03	IPOC Station P	112.96	122	IAMs_20	IAMs_20	05 55 38.2	
	comp=Z,2µm,20.0s						
TIGA	Tifton	113.03	62	IAMs_20	IAMs_20	05 59 44.2	
	comp=Z,2µm,20.0s						
CUSE	Cuicocha Este	113.06	96	P	PP	05 17 07.0	+4.4
	comp=Z,190µmcomp=Z,13nm,1.4s						
GOGA	Godfrey	113.23	60	IAMs_20	IAMs_20	05 58 13.3	
	comp=Z,3µm,20.0s						
MHTO	MHTO	113.31	287	P	Pdif	05 12 22.2	+2.7
JMDO	Jabal Madar	113.34	288	P	Pdif	05 12 17.7	-1.9
SMDO	Samad	113.47	289	P	Pdif	05 12 19.3	-1.0
154A	Montrose	113.50	60	IAMs_20	IAMs_20	05 59 26.5	
	comp=Z,2µm,20.0s						
DQM	DQM	113.57	286	P	Pdif	05 12 18.6	-2.0
BCIP	Isla Barro Col	113.72	86	IAMs_20	IAMs_20	05 51 56.8	
	comp=Z,2µm,22.0s						
TULM	Tulcn-Chalpat	113.75	96	P	PP	05 17 12.5	+4.9
CMBC	Cumbal	113.78	95	P	PP	05 17 13.1	+5.4
V53A	Saluda	113.83	57	IAMs_20	IAMs_20	05 57 16.0	
	comp=Z,4µm,20.0s						
BONI	La Bonita	113.93	96	P	PP	05 17 13.4	+4.8
	comp=Z,6.4nm,0.7s						
PB11	IPOC Station P	114.06	120	IAMs_20	IAMs_20	05 53 52.9	
	comp=Z,2µm,22.0s						
Q52A	Bidwell	114.26	54	IAMs_20	IAMs_20	05 59 40.1	
	comp=Z,4µm,19.0s						
GO01	Chusmiza	114.50	120	IAMs_20	IAMs_20	05 54 18.6	
	comp=Z,2µm,22.0s						
U54A	Nelsons Funny	114.64	56	IAMs_20	IAMs_20	05 59 19.3	
	comp=Z,3µm,20.0s						
M52A	Chesterland	114.87	51	IAMs_20	IAMs_20	06 00 18.1	
	comp=Z,4µm,20.0s						
061Z	Ochoppi	115.02	68	IAMs_20	IAMs_20	05 57 28.4	
	comp=Z,2µm,20.0s						
V55A	Taylorsville	115.13	57	IAMs_20	IAMs_20	05 57 36.4	
	comp=Z,4µm,22.0s						
PIZC	Pizarro, Choco	115.21	91	P	PP	05 17 21.5	+4.1
	comp=Z,209nm,0.9s						
257A	Skidaway Islan	115.24	61	IAMs_20	IAMs_20	06 02 21.6	
	comp=Z,2µm,19.0s						
MASF	Masafi	115.40	291	P	Pdif	05 12 30.5	+1.7
060A	Indiantown	115.59	67	IAMs_20	IAMs_20	06 02 06.4	
	comp=Z,2µm,19.0s						
U56A	King	115.80	56	IAMs_20	IAMs_20	05 58 35.0	
	comp=Z,4µm,21.0s						
Y57A	Sumter	115.80	59	IAMs_20	IAMs_20	06 01 41.4	
	comp=Z,2µm,19.0s						
R55A	Marlinton	115.96	54	IAMs_20	IAMs_20	06 00 26.0	
	comp=Z,4µm,20.0s						
YOTC	Yotoco, Valle	115.97	93	P	PP	05 17 22.4	-0.4
NHSC	New Hope	115.97	60	IAMs_20	IAMs_20	05 59 47.0	
	comp=Z,3µm,20.0s						
GARC	Garzon, Huila	116.35	95	P	PP	05 17 23.0	-2.7
Y58A	Scranton	116.40	59	IAMs_20	IAMs_20	05 59 11.4	
	comp=Z,3µm,21.0s						
KIRV	Kirov	116.82	329*c*	*i*PKIKP	PKiKP	05 16 19.1	+0.5
LPAZ	La Paz	116.89	117	PKP	PKiKP	05 16 21.4	+0.5
	comp=Z,1.0nm,0.8s,baz=263,slow=5.2,SNR=4.0						
LPAZ	La Paz	116.89	117		PKiKP	05 16 21.9	+1.0
MTDJ	Mount Denham	117.39	77	IAMs_20	IAMs_20	05 55 26.4	
	comp=Z,2µm,22.0s						
Y60A	Bolivia	117.61	59	IAMs_20	IAMs_20	06 00 37.3	
	comp=Z,3µm,21.0s						
L56A	Greenwood	117.66	50	IAMs_20	IAMs_20	06 01 21.8	
	comp=Z,4µm,21.0s						

M57A	**Sunshine Farm,**	118.06	51	IAMs_20	IAMs_20	06 01 48.4	
	comp=Z,3µm,20.0s						
BINY	**Binghamton**	118.82	50	IAMs_20	IAMs_20	06 01 22.3	
	comp=Z,4µm,20.0s						
APA	**Apatity**	119.17	342	i PKIKP	PKPdf	05 16 18.9	-4.1
APA				e		05 17 42.8	
BELG	**Belogornoye**	119.56	323	PKP	PKPdf	05 16 23.6	-0.5
	comp=Z,66nm,1.0s,baz=35,slow=0.7,SNR=26						
BELG	**Belogornoye**	119.56	323	i PKIKP	PKiKP	05 16 25.0	+0.8
GTBY	**Guantanamo Bay**	119.85	75	IAMs_20	IAMs_20	06 00 51.6	
	comp=Z,2µm,18.0s						
ARCES	**ARCESS Array B**	120.00	346	PKP	PKPdf	05 16 24.0	-0.6
	comp=Z,2.8nm,0.6s,baz=96,slow=2.3,SNR=19						
ARCES	**ARCESS Array B**	120.00	346	PKIKP	PKPdf	05 16 24.0	-0.6
CPUP	**Villa Florida**	120.31	132	PKP	PKPdf	05 16 25.2	-1.2
	comp=Z,1.0nm,1.0s,baz=192,slow=2.3,SNR=6.5						
CPUP				PKKPab	PKKPab	05 26 35.8	-0.1
	comp=Z,0.8nm,1.1s,baz=169,slow=1.0,SNR=3.2						
PAL	**Palisades**	120.51	51	IAMs_20	IAMs_20	06 03 16.3	
	comp=Z,3µm,20.0s						
KLMR	**Klimovskoe**	120.57	334	ePKIKP	PKPdf	05 16 23.8	-2.0
KLMR				e		05 17 51.7	
KLMR				PPP	PPP	05 20 24.5	
KLMR				pmax	pmax		
	comp=Z,74nm,1.7s						
KLMR				MLR	MLR		
	comp=Z,2µm,17.0s						
J61A	**Chester**	121.15	48	IAMs_20	IAMs_20	06 08 04.9	
	comp=Z,3µm,19.0s						
MAK	**Makhachkala**	121.77	312	d iP	Pdif	05 12 50.7	-5.9
MAK				i		05 16 25.8	
MAK				e		05 17 58.3	
M63A	**Gales Ferry**	121.84	50	IAMs_20	IAMs_20	06 01 11.5	
	comp=Z,3µm,21.0s						
AKT	**Akhty**	121.85	310	i PKIKP	PKiKP	05 16 30.2	+1.0
AKT				e		05 18 01.9	
AKT				pmax	pmax		
	comp=Z,51nm,1.2s						
AKT				MLR	MLR		
	comp=Z,1µm,19.0s						
E62A	**Clayton Lake**	122.56	44	IAMs_20	IAMs_20	06 14 09.2	
	comp=Z,3µm,18.0s						
SDV	**Santo Domingo**	122.57	89	IAMs_20	IAMs_20	05 59 08.9	
	comp=Z,3µm,21.0s						
SDV	**Santo Domingo**	122.57	89	eP	PKPdf	05 16 30.0	-1.3
SDDR	**Presa de Saban**	123.36	77	IAMs_20	IAMs_20	05 59 53.0	
	comp=Z,3µm,21.0s						
VRH	**Novokhopyorsk**	123.41	323	ePKIKP	PKPdf	05 16 31.0	-0.6
VRH				pmax	pmax		
	comp=Z,42nm,1.0s						
GRTK	**Grand Turk**	123.69	74	IAMs_20	IAMs_20	06 02 08.6	
	comp=Z,3µm,20.0s						
MOS	**Moscow**	123.83	329	i PKIKP	PKPdf	05 16 31.0	-1.2
MOS				pmax	pmax		
	comp=Z,58nm,1.0s						
MOS				MLR	MLR		
	comp=Z,1µm,20.0s						
BOSA	**Boshof**	124.05	220	PKP	PKPdf	05 16 33.0	-0.8
	comp=Z,4.3nm,0.9s,baz=302,slow=3.6,SNR=3.5						
BOSA	**Boshof**	124.05	220	PKIKP	PKPdf	05 16 33.0	-0.8
GOF	**Gofitskoye**	124.44	315	c ePKIKP	PKiKP	05 16 34.6	+0.5
LPSR	**Galich'ya Gora**	124.49	325	ePKIKP	PKPdf	05 16 31.9	-1.7
LPSR				pmax	pmax		
	comp=Z,50nm,1.0s						
OBN	**Obninsk**	124.66	328	⇓iPKIKP	PKiKP	05 16 34.4	+0.3
OBN				e		05 18 18.7	
OBN				e		05 23 43.4	
OBN				ePS	PS	05 28 15.1	-5.6
OBN				eSS	SS	05 35 17.0	+3.8
OBN				pmax	pmax		
	comp=Z,105nm,1.7s						
VORR	**Voronezh**	124.70	324	ePKIKP	PKiKP	05 16 34.5	+0.2
VORR				pmax	pmax		
	comp=Z,98nm,1.2s						
KBZ	**Khabaz**	124.88	314	PKP	PKPdf	05 16 34.5	-0.1
	comp=Z,9.1nm,0.9s,baz=163,slow=2.8,SNR=8.8						
KBZ	**Khabaz**	124.88	314	c iPKIKP	PKiKP	05 16 35.4	+0.5
VSR	**Storozhevoye**	124.90	323	ePKIKP	PKPdf	05 16 32.8	-1.6
VSR				pmax	pmax		
	comp=Z,20nm,0.9s						
PTLB	**Pontes e Lacer**	124.93	121	eP	PKPdf	05 16 33.7	-1.9
KIV	**Kislovodsk**	124.97	314	⇑P	PKiKP	05 16 35.4	+0.1
KIV	**Kislovodsk**	124.97	314	i PKIKP	PKPdf	05 16 34.0	-1.0
KIV				e		05 18 22.3	
KIV				ePS	PS	05 28 21.2	-3.2
KIV				eSS	SS	05 35 15.8	-2.7
KIV				pmax	pmax		
	comp=Z,26nm,1.1s						
RAYN	**Ar Rayn**	125.00	289	IAMs_20	IAMs_20	06 14 11.9	
	comp=Z,2µm,20.0s						
RAYN	**Ar Rayn**	125.00	289	PKIKP	PKPdf	05 16 34.9	-0.7
PTGB	**Pitanga**	125.02	135	eP	PKPdf	05 16 34.6	-1.0
SHA1	**Shidzhatmaz**	125.05	314	i PKIKP	PKiKP	05 16 35.4	-0.2
NEUR	**Neytrino**	125.14	313	i PKIKP	PKiKP	05 16 35.6	-0.2
VILB	**Vilhena**	125.23	117	eP	PKPdf	05 16 35.4	-0.8
FINES	**FINESS Array B**	125.55	339	PKP	PKiKP	05 16 35.5	-0.3
	comp=Z,19nm,1.1s,baz=116,slow=4.4,SNR=12						
ERBR	**Yeremizino-Bor**	125.99	317	i PKIKP	PKiKP	05 16 36.9	-0.2
ERBR				pmax	pmax		
	comp=Z,82nm,1.2s						
LABN	**Labinsk**	126.14	315	i PKIKP	PKiKP	05 16 37.7	+0.2
LABN				pmax	pmax		
	comp=Z,33nm,1.1s						
ATD	**Arta Tunnel**	126.43	274	IAMs_20	IAMs_20	06 15 01.2	
	comp=Z,2µm,18.0s						
SOC	**Sochi**	127.15	314	i PKIKP	PKPdf	05 16 36.9	-2.1
SOC				e		05 18 35.9	
SOC				eSSS	SSS	05 40 32.8	
SOC				MLR	MLR		
	comp=Z,1µm,19.0s						
PP1B	**Ponte de Pedra**	127.24	126	eP	PKPdf	05 16 39.6	-0.4
SALV	**Santo Antonio**	127.52	123	eP	PKPdf	05 16 39.8	-0.7
SJG	**San Juan**	128.15	78	IAMs_20	IAMs_20	06 01 09.0	
	comp=Z,2µm,22.0s						
ANN	**Anapa**	128.32	316	i PKIKP	PKPdf	05 16 41.3	+0.1
ANN				pmax	pmax		
	comp=Z,103nm,1.7s						
PDRB	**Porto dos Gac**	128.85	118	eP	PKPdf	05 16 41.7	-1.4
MACA	**Manacapuru-AM**	128.86	106	eP	PKPdf	05 16 43.1	-0.1
BBSR	**BB Station**	129.03	60	IAMs_20	IAMs_20	06 03 36.9	
	comp=Z,2µm,22.0s						
MNK	**Minsk**	129.24	331	i PKP	PKiKP	05 16 43.2	-0.1
	comp=E,18nm,0.8s						
MNK				i PKP	PKiKP	05 16 43.2	-0.1
	comp=N,25nm,0.8s						
MNK				i PKP	PKiKP	05 16 43.2	-0.1
	comp=Z,17nm,0.9s,baz=54						
MNK				i PKiKP	pPKPdf	05 16 47.0	-2.4
	comp=Z,17nm,0.7s						
MNK				i PP	PP	05 18 57.6	+6.6
MNK				i SKP		05 19 38.0	
MNK				i PKS	PKSdf	05 20 09.6	-9.3
MNK				i PPP	PPP	05 21 37.7	
MNK				i SKS	SKSdf	05 23 55.9	+2.9
MNK				i SP	SKKPbc	05 29 35.6	-17
MNK				i SS	SS	05 36 14.3	+4.1
MNK				i LQ	LQ	06 06 10.9	
MNK				i LRM	MLR	06 11 40.0	
	comp=Z,2µm,18.3s						
MNK				i LRM	MLR	06 12 52.2	
	comp=E,988nm,15.1s						
MNK				i LRM	MLR	06 12 54.1	
	comp=N,1µm,17.8s						
MNK	**Minsk**	129.24	331	i PKIKP	PKiKP	05 16 43.2	-0.1
MNK				i		05 16 46.9	
MNK				i		05 18 57.6	
MNK				i PPP	PPP	05 21 37.6	
MNK				i		05 23 55.8	
MNK				i SS	SS	05 36 14.3	+4.1
MNK				pmax	pmax		
	comp=E,18nm,0.8s						
MNK				pmax	pmax		
	comp=N,25nm,0.8s						
MNK				pmax	pmax		
	comp=Z,17nm,0.9s						
MNK				pmax	pmax		
	comp=Z,17nm,0.7s						
MNK				MLR	MLR		
	comp=Z,2µm,18.0s						
MNK				MLR	MLR		
	comp=E,988nm,15.0s						
MNK				MLR	MLR		
	comp=N,1µm,18.0s						
ITRB	**Iturama**	129.43	131	eP	PKPdf	05 16 43.9	-0.3
BB19B	**Bebedouro**	129.87	134	eP	PKPdf	05 16 44.9	0.0
CLDB	**Colider**	130.01	118	eP	PKPdf	05 16 44.8	-0.6
NB2	**NORSAR Subarra**	130.38	345	PKPdf	PKPdf	05 16 44.9	+0.2
	comp=Z,11nm,1.7s,baz=31,slow=1.9						
NB2	**NORSAR Subarra**	130.38	345	PKPdf	PKPdf	05 16 44.9	+0.2
	baz=31,slow=1.9						
NOA	**NORSAR Array B**	130.38	345	PKP	PKiKP	05 16 45.7	+0.2
	comp=Z,2.1nm,0.8s,baz=34,slow=2.0,SNR=6.1						
NOA				SKP	SKPdf	05 20 18.7	-0.2
	comp=Z,0.9nm,0.9s,baz=278,slow=18,SNR=1.8						
SIM	**Simferopol'**	130.46	318	ePKIKP	PKiKP	05 16 47.0	+0.9
SIM				pmax	pmax		
	comp=Z,21nm,0.9s						
HFS	**Hagfors**	130.50	343	PKP	PKiKP	05 16 45.4	-0.4
	comp=Z,3.0nm,0.8s,baz=98,slow=6.6,SNR=4.7						
HFS				SKPbc	SKPbc	05 20 07.6	+0.4
	comp=Z,1.5nm,0.7s,baz=222,slow=26,SNR=1.8						
AK03	**Malin Array Si**	130.70	326	PKP	PKPdf	05 16 45.6	+0.1
AKASG	**Malin Array Be**	130.71	326	PKP	PKiKP	05 16 46.7	+0.3
	comp=Z,10nm,1.0s,baz=54,slow=1.8,SNR=27						
AKASG				SKPab	SKPab	05 20 11.7	+3.3
	comp=Z,4.0nm,1.0s,baz=48,slow=4.2,SNR=7.2						
AKBB	**Malin Array Si**	130.71	326	c iPKIKP	PKPdf	05 16 45.0	-0.5
AKBB	**Malin Array Si**	130.71	326	PKP	PKPdf	05 16 45.7	+0.2
KIEV	**Kiev**	130.72	326	⇑P	PKPdf	05 16 45.2	-0.3
KIEV	**Kiev**	130.72	326	PKIKP	PKPdf	05 16 45.2	-0.3
KIEV	**Kiev**	130.72	326	PKP	PKPdf	05 16 45.3	-0.3
ARAG	**Araguaiana, MT**	130.73	126	eP	PKPdf	05 16 45.8	-0.8
AK02	**Malin Array Si**	130.75	326	PKP	PKiKP	05 16 46.0	-0.5
AK10	**Malin Array Si**	130.75	326	PKP	PKiKP	05 16 46.5	0.0
BOAV	**Boa Vista**	130.81	99	eP	PKPdf	05 16 47.1	+0.3
SABA	**Saba**	130.88	79	IAMs_20	IAMs_20	06 05 24.2	
	comp=Z,3µm,20.0s						
SEUS	**St. Eustatius**	131.12	79	IAMs_20	IAMs_20	06 05 30.6	
	comp=Z,3µm,20.0s						
MI28	**Mi28,Pidlybu**	131.41	327	PKP	PKPdf	05 16 46.7	-0.2
SUW	**Suwalki**	131.69	333	ePKP	PKPdf	05 16 40.7	-6.6
LUBAR	**Lubar, Ukraine**	131.93	326	PKP	PKPdf	05 16 47.6	-0.3
RNPP9	**Sopachiv**	132.05	329	PKP	PKiKP	05 16 48.9	-0.2
IPMB	**Ipameri, GO**	132.09	131	eP	PKPdf	05 16 49.2	0.0
RNPP8	**Varash**	132.11	329	PKP	PKiKP	05 16 49.4	+0.2
RNPP5	**Staryi Chortor**	132.16	328	PKP	PKiKP	05 16 49.4	+0.1
NPGB	**Novo Progresso**	132.16	114	eP	PKPdf	05 16 49.2	-0.3
ANWB	**Willy Bob**	132.27	79	IAMs_20	IAMs_20	06 06 35.1	
	comp=Z,2µm,20.0s						
ABD	**La Joyeuse, An**	132.47	81	IAMs_20	IAMs_20	06 06 26.4	
	comp=Z,2µm,20.0s						
BSCB	**Bom Sucesso**	132.47	137	eP	PKPdf	05 16 49.1	-0.8
SORM	**Soroca**	132.55	324	⇓P	PKPdf	05 16 49.2	+0.1
SORM	**Soroca**	132.55	324	PKIKP	PKPdf	05 16 49.2	+0.1
SVN	**Savane Anatole**	132.63	83	IAMs_20	IAMs_20	06 04 13.7	
	comp=Z,2µm,21.0s						
KIRS	**Kirsehir-Merke**	132.66	310	⇓P	PKPdf	05 16 50.1	+0.4
BRTR	**Keskin Array B**	132.67	311	PKP	PKPdf	05 16 49.1	-0.7
	comp=Z,6.7nm,1.0s,baz=129,slow=2.4,SNR=16						
BRTR				SKPab	SKPab	05 20 20.0	+2.7
	comp=Z,0.6nm,0.8s,baz=314,slow=38,SNR=3.7						
BRTR	**Keskin Array B**	132.67	311		PKPdf	05 16 49.4	-0.4
BRTR	**Keskin Array B**	132.67	311	PKIKP	PKPdf	05 16 49.4	-0.4
BR104	**Keskin Array S**	132.68	311	PKP	PKPdf	05 16 49.5	-0.3
BR106	**Keskin Array S**	132.68	311	PKP	PKPdf	05 16 49.5	-0.3
BR105	**Keskin Array S**	132.69	311	PKP	PKPdf	05 16 49.5	-0.4
BIM	**Bigot**	132.69	83	IAMs_20	IAMs_20	06 04 16.3	
	comp=Z,3µm,22.0s						
MPOM	**Morne Pois Mar**	132.89	83	IAMs_20	IAMs_20	06 06 48.4	
	comp=Z,2µm,20.0s						
ITTB	**Itaituba**	132.96	110	eP	PKPdf	05 16 50.5	-0.4
PMNB	**Patos De Minas**	133.01	133	eP	PKPdf	05 16 51.3	+0.3
MMAI	**Mount Meron Ar**	133.08	302	PKP	PKiKP	05 16 52.4	+0.5
	comp=Z,12nm,0.9s,baz=291,slow=24,SNR=4.2						
SNDB	**Serra Nova Dou**	133.23	122	eP	PKPdf	05 16 50.5	-0.8
ANTO	**Ankara**	133.24	312	PKP	PKPdf	05 16 50.2	-0.6
GHAJ	**Ghor Haditha**	133.26	300	IAMs_20	IAMs_20	06 22 33.6	
	comp=Z,2µm,19.0s						
KMPD	**K-Podol'skiy**	133.39	325	PKP	PKPdf	05 16 50.4	-0.2
BDFB	**Brasilia**	133.70	129	PKP	PKPdf	05 16 51.9	-0.5
	comp=Z,2.3nm,0.4s,baz=56,slow=2.6,SNR=5.3						
R9F13	**Warsaw-Wawer**	133.81	332	ePKPdf	PKiKP	05 16 58.0	+5.4
CFR	**Carcaliu**	134.17	320	⇑P	PKPdf	05 16 52.3	+0.1
CFR	**Carcaliu**	134.17	320	PKIKP	PKPdf	05 16 52.3	+0.1
BEL	**Belsk**	134.23	332	ePKP	PKPdf	05 16 48.1	-4.0
SAHE	**Sakarya_HENDEK**	134.26	314	⇑P	PKPdf	05 16 52.7	+0.1
CSS	**Mathiatis**	134.30	305	IAMs_20	IAMs_20	06 23 31.1	
	comp=Z,2µm,20.0s						
TIRR	**Tirgusor**	134.34	319	IAMs_20	IAMs_20	06 20 49.8	
	comp=Z,2µm,22.0s						
BURAR	**Bucovina Array**	134.61	325	⇓P	PKPdf	05 16 53.3	+0.2
BURAR	**Bucovina Array**	134.61	325	PKIKP	PKPdf	05 16 53.3	+0.2
ONER	**Baraj Valea Uz**	134.63	323	⇓P	PKPdf	05 16 53.3	+0.2
VRI	**Vrincioaia**	134.68	322	⇑P	PKiKP	05 16 54.0	-0.6
VRI	**Vrincioaia**	134.68	322	PKIKP	PKiKP	05 16 54.0	-0.6
VRI	**Vrincioaia**	134.68	322	PKP	PKPdf	05 16 52.8	-0.4
GKP	**Gorka Klasztor**	134.74	335	ePKP	PKPdf	05 16 53.5	+0.5
KWP	**Kalwaria Pacla**	134.75	328	ePKP	PKPdf	05 16 53.5	+0.2
KWP	**Kalwaria Pacla**	134.75	328	PKP	PKPdf	05 16 52.9	-0.3
TURR	**Turia**	135.00	323	⇓P	PKPdf	05 16 53.4	-0.4
DIAM	**Diamantina, MG**	135.10	135	eP	PKPdf	05 16 48.8	-6.3
ISR	**Istrita**	135.18	321	⇑P	PKiKP	05 16 55.4	-0.4
ISR	**Istrita**	135.18	321	PKIKP	PKiKP	05 16 55.3	-0.4
MLR	**Muntele Rosu**	135.34	322	PKP	PKPdf	05 16 55.2	+0.6
	comp=Z,24nm,1.1s,baz=42,slow=4.2,SNR=8.7						
MLR	**Muntele Rosu**	135.34	322	⇑P	PKiKP	05 16 55.6	-0.5
MLR	**Muntele Rosu**	135.34	322	PKIKP	PKiKP	05 16 55.6	-0.5
MLR	**Muntele Rosu**	135.34	322	PKP	PKPdf	05 16 54.1	-0.5
BMR	**Baia Mare**	135.52	326	⇓P	PKPdf	05 16 55.0	+0.2
BMR	**Baia Mare**	135.52	326	PKIKP	PKPdf	05 16 54.9	+0.2
STHS	**Stebnicka Huta**	135.62	329	ePKIKP	PKiKP	05 16 57.2	+0.8
STHS	**Stebnicka Huta**	135.62	329	ePKP	PKiKP	05 16 57.2	+0.8
MDB	**Medias**	135.91	324	⇓P	PKiKP	05 16 56.5	-0.6
MDB	**Medias**	135.91	324	PKIKP	PKiKP	05 16 56.5	-0.6
CJR	**Cluj-Napoca**	136.03	325	⇑P	PKPdf	05 16 56.2	+0.4
CJR	**Cluj-Napoca**	136.03	325	PKIKP	PKPdf	05 16 56.2	+0.4
NIE	**Niedzica**	136.08	330	ePKP	PKiKP	05 16 57.1	-0.3
ARR	**Arges**	136.19	322	⇓P	PKiKP	05 16 57.2	-0.6
MARR	**Marisel-Cluj**	136.32	325	⇓P	PKiKP	05 16 57.1	-0.9
SJMB	**Sao Joao De Ma**	136.46	138	eP	PKPdf	05 16 52.3	-5.1
DRGR		136.48	325	⇑P	PKiKP	05 16 57.5	-0.8
DRGR		136.48	325	PKIKP	PKiKP	05 16 57.5	-0.8
RIB01	**Linhares ES**	136.52	139	eP	PKPdf	05 16 55.7	-1.7
KECS	**Kecovo**	136.60	329	ePKIKP	PKiKP	05 16 57.8	-0.7
KECS	**Kecovo**	136.60	329	ePKP	PKiKP	05 16 57.8	-0.7
LOT	**Lotru**	136.65	323	⇑P	PKiKP	05 16 57.9	-0.9
ELND	**Elena**	136.69	319	⇓P	PKPdf	05 16 57.8	+0.7
OKC	**Ostrava-Krasne**	136.82	331	AMS	AMS	06 15 40.0	
	comp=Z,2µm,17.9s						
DEV	**Deva**	136.90	324	⇓P	PKPdf	05 16 58.0	+0.7
DEV	**Deva**	136.90	324	PKIKP	PKPdf	05 16 58.0	+0.7
KSP	**Ksiaz**	136.93	334	ePKP	PKiKP	05 16 58.2	-0.8
MORC	**Moravsky Berou**	137.14	332	ePKP	PKPdf	05 16 58.4	+0.7
MORC				e		05 19 41.6	
OSTC	**Ostas**	137.17	334	ePKIKP	PKPdf	05 16 56.7	-1.0
OSTC	**Ostas**	137.17	334	ePKP	PKPdf	05 16 56.7	-1.0
PLVB	**Pleven**	137.25	320	⇓P	PKPdf	05 16 58.8	+0.8
GZR	**Gura Zlata**	137.26	324	⇑P	PKiKP	05 16 59.1	-0.9
GZR	**Gura Zlata**	137.26	324	PKIKP	PKiKP	05 16 59.0	-0.9
PSZ	**Piszkesteto**	137.27	328	⇓P	PKPdf	05 16 57.8	-0.3
PSZ	**Piszkesteto**	137.27	328	PKIKP	PKPdf	05 16 57.7	-0.3
KRLC	**Kraliky**	137.27	333	AMS	AMS	06 17 00.0	
	comp=Z,2µm,25.4s						
DPC	**Dobruska-Polom**	137.28	333	AMS	AMS	06 18 10.0	
	comp=Z,2µm,19.4s						
UPC	**Upice**	137.29	334	AMS	AMS	06 12 00.0	
	comp=Z,2µm,21.2s						
MAUC	**Maruska**	137.30	331	ePKP	PKPdf	05 16 56.9	-1.1
SIRR	**Siria**	137.37	325	⇓P	PKPdf	05 16 59.0	+0.8
JAVC	**Velka Javorina**	137.73	331	ePKP	PKiKP	05 17 00.5	-0.3
JAVC				e		05 20 36.7	
HERR	**Herculane**	137.76	323	⇓P	PKPdf	05 16 59.2	+0.2
BZS	**Buzias**	137.79	325	⇑P	PKPdf	05 16 59.4	+0.4
BZS	**Buzias**	137.79	325	PKIKP	PKPdf	05 16 59.4	+0.4
CLL	**Collm**	137.91	337	i PKIKP	PKPdf	05 16 59.4	+0.4
CLL				i		05 17 05.7	
CLL				pmax	pmax		
	comp=Z,19nm,1.2s						
CLL				MLR	MLR		
	comp=Z,2µm,20.2s						
VRAC	**Vranov**	137.91	332	ePKP	PKPdf	05 16 59.6	+0.5
VRAC				e		05 20 36.3	
SMTB	**Santa Maria do**	137.97	121	eP	PKPdf	05 16 55.0	-5.3
SDBA	**SAO DESIDERIO**	138.06	128	eP	PKPdf	05 16 55.0	-5.5
SMOL	**Smolenice**	138.09	331	ePKIKP	PKiKP	05 17 00.4	-1.1
KRUC	**Moravsky**	138.18	332	ePKP	PKPdf	05 17 00.0	+0.4
KRUC				e		05 20 37.0	
MODS	**Modra-Piesok**	138.25	331	PKIKP	PKPdf	05 16 54.1	-5.7
MODS				e		05 17 00.8	
MODS				e		05 19 48.4	
MODS	**Modra-Piesok**	138.25	331	ePKP	PKiKP	05 17 00.8	-1.1
MODS				ePP	PP	05 19 48.4	-0.1
HSKC	**Hora Svate Kat**	138.29	336	AMS	AMS	06 21 10.0	
	comp=Z,2µm,19.9s						
PRA	**Prague**	138.29	334	AMS	AMS	06 15 40.0	
	comp=Z,2µm,23.5s						
PRU	**Pruhonice**	138.31	334	ePKIKP	PKiKP	05 17 02.3	+0.4
PRU				MLR	MLR		
	comp=Z,2µm,21.0s						
PRU	**Pruhonice**	138.31	334	ePKP	PKiKP	05 17 02.3	+0.4
PRU				AMS	AMS	06 15 30.0	
	comp=Z,2µm,21.0s						
EKA	**Eskdalemuir Ar**	138.48	352	PKP	PKPdf	05 17 00.5	+0.6
	comp=Z,5.5nm,1.0s,baz=28,slow=3.8,SNR=3.4						
ZVC	**Zvikov**	138.87	334	ePKP	PKPdf	05 16 53.0	-7.9
ZVC				AMS	AMS	06 20 20.0	
	comp=Z,2µm,21.4s						
BOVS	**Bovan**	138.89	322	⇑P	PKPdf	05 17 01.1	0.0
MORH	**Mrgy, Hungar**	139.03	327	⇑P	PKPdf	05 17 01.7	+0.5
MORH	**Mrgy, Hungar**	139.03	327	PKP	PKPdf	05 17 01.1	-0.1
RONA	**Rosalia, Austr**	139.20	331		PKPdf	05 16 58.7	-2.9
RONA					PKiKP	05 17 03.0	-0.8
RONA					PP	05 19 53.9	-0.5
RONA	**Rosalia, Austr**	139.20	331	ePKP	PKPdf	05 16 58.7	-2.9
	comp=Z,10nm,1.5s						
RONA				i PKiKP	PKiKP	05 17 03.0	-0.8
	comp=Z,37nm,1.2s						
RONA				ePP	PP	05 19 53.9	-0.5
	comp=Z,31nm,1.7s						
CONA	**Conrad Observa**	139.24	331	ePKiKP	PKiKP	05 17 03.2	-0.8
	comp=Z,72nm,2.0s						
CONA				ePP	PP	05 19 53.4	-1.3
	comp=Z,25nm,1.5s						
CKRC	**Cesky Krumlov**	139.29	333	ePKHKP	PKPpre	05 16 54.6	
CKRC				MLR	MLR		
	comp=Z,2µm,20.5s						
CKRC	**Cesky Krumlov**	139.29	333	ePKP	PKPdf	05 16 54.6	-7.1
CKRC				AMS	AMS	06 16 20.0	
	comp=Z,2µm,20.5s						
KHC	**Kasperske Hory**	139.37	334	ePKIKP	PKPdf	05 16 57.3	-4.5
KHC				e		05 19 54.5	
KHC				MLR	MLR		
	comp=Z,2µm,19.2s						
KHC	**Kasperske Hory**	139.37	334	ePKP	PKPdf	05 16 57.3	-4.5
KHC				ePP	PP	05 19 54.5	-0.8
KHC				AMS	AMS	06 20 40.0	
	comp=Z,2µm,19.2s						
GERES	**GERESS Array B**	139.53	334	PKhKP	PKPpre	05 16 57.5	
	comp=Z,2.2nm,0.8s,baz=29,slow=3.0,SNR=6.9						
GERES				PKP	PKiKP	05 17 03.8	-0.8
	comp=Z,3.2nm,0.7s,baz=47,slow=1.9,SNR=7.4						
GERES				SKPbc	SKiKP	05 20 39.6	0.0
	comp=Z,2.2nm,0.8s,baz=351,slow=1.8,SNR=5.4						
GERES				SKPab	SKPab	05 20 50.6	+3.6
	comp=Z,0.6nm,0.5s,baz=293,slow=27,SNR=1.4						
ARSA	**Arzberg**	139.89	331		PKPdf	05 16 59.8	-3.0
ARSA					PKiKP	05 17 04.0	-1.3
ARSA					PP	05 19 54.0	-4.6
ARSA	**Arzberg**	139.89	331	ePKP	PKPdf	05 16 59.8	-3.0
	comp=Z,10nm,1.6s						
ARSA				ePKP	PKiKP	05 17 04.0	-1.3
	comp=Z,24nm,2.0s						
ARSA				ePP	PP	05 19 54.0	-4.6
	comp=Z,22nm,2.1s						
MOA	**Molln**	140.03	332		PKPdf	05 17 01.0	-2.1
MOA					PKiKP	05 17 05.2	-0.3
MOA					PP	05 19 58.7	-0.7
MOA	**Molln**	140.03	332	ePKP	PKPdf	05 17 01.0	-2.1
	comp=Z,9.7nm,1.1s						
MOA				ePKiKP	PKiKP	05 17 05.2	-0.3
	comp=Z,5.2nm,0.8s						
MOA				ePKiKP	pPKPdf	05 17 06.2	-3.6
	comp=Z,16nm,1.2s						
MOA				ePP	PP	05 19 58.7	-0.7
	comp=Z,18nm,2.1s						
BIOA	**Bad Ischl, Aus**	140.43	333		PKiKP	05 17 06.9	+0.5
BIOA					PP	05 20 02.9	+1.0
BIOA	**Bad Ischl, Aus**	140.43	333	i PKiKP	PKiKP	05 17 06.9	+0.5
	comp=Z,34nm,1.4s						
BIOA				ePP	PP	05 20 02.9	+1.0
	comp=Z,9.9nm,1.3s						
SOKA	**Soboth**	140.53	330		PKPdf	05 17 01.2	-2.9
SOKA					PKiKP	05 17 06.8	+0.1
SOKA					PP	05 20 01.6	-1.0
SOKA	**Soboth**	140.53	330	ePKP	PKPdf	05 17 01.2	-2.9
	comp=Z,7.3nm,1.2s						
SOKA				ePKiKP	PKiKP	05 17 06.8	+0.1
	comp=Z,46nm,2.0s						
SOKA				ePP	PP	05 20 01.6	-1.0
	comp=Z,27nm,1.5s						
TMAB	**Tom-Au,PA,Br**	140.71	112	eP	PKPdf	05 17 05.6	+0.3
OBKA	**Obir**	140.88	331		PKPdf	05 17 03.6	-1.1
OBKA					PP	05 20 01.1	-3.7
OBKA	**Obir**	140.88	331	ePKP	PKPdf	05 17 03.6	-1.1
	comp=Z,19nm,1.3s						
OBKA				ePP	PP	05 20 01.1	-3.7
	comp=Z,20nm,1.5s						
KBA	**Koelnbreinsper**	141.03	332		PKPdf	05 17 02.9	-2.2
KBA					PKiKP	05 17 07.7	-0.1
KBA					PP	05 20 03.2	-2.4
KBA	**Koelnbreinsper**	141.03	332	ePKP	PKPdf	05 17 02.9	-2.2
	comp=Z,8.7nm,0.8s						
KBA				ePKiKP	PKiKP	05 17 07.7	-0.1
	comp=Z,36nm,1.8s						
KBA				ePP	PP	05 20 03.2	-2.4
	comp=Z,17nm,1.2s						
LESA	**Schwarzleotal**	141.06	333		PKPdf	05 17 02.3	-2.7
LESA					PKiKP	05 17 07.9	+0.2
LESA	**Schwarzleotal**	141.06	333	ePKP	PKPdf	05 17 02.3	-2.7
	comp=Z,7.9nm,1.0s						
LESA				i PKiKP	PKiKP	05 17 07.9	+0.2
	comp=Z,30nm,1.3s						
MYKA	**Terra Mystica**	141.22	331		PKPpre	05 17 02.1	
MYKA					PKiKP	05 17 08.0	-0.1
MYKA					PP	05 20 05.1	-1.6
MYKA	**Terra Mystica**	141.22	331	ePKP	PKPdf	05 17 02.1	-3.2
	comp=Z,11nm,1.5s						
MYKA				ePKiKP	PKiKP	05 17 08.0	-0.1
	comp=Z,32nm,1.8s						
MYKA				ePP	PP	05 20 05.1	-1.6
	comp=Z,17nm,1.7s						
WATA	**Walderalm**	141.61	334		PKPpre	05 17 01.9	
WATA					PKPdf	05 17 07.0	+0.9
WATA					PP	05 20 09.3	+0.2
WATA	**Walderalm**	141.61	334	ePKP	PKPdf	05 17 01.9	-4.2
	comp=Z,17nm,1.4s						
WATA				ePKP	PKPdf	05 17 07.0	+0.9
	comp=Z,53nm,1.8s						
WATA				i PP	PP	05 20 09.3	+0.2
	comp=Z,20nm,1.4s						
WATA	**Walderalm**	141.61	334	PKIKP	PKPdf	05 17 01.9	-4.2
WATA						05 17 07.0	
WATA						05 20 09.3	
WTTA	**Wattenberg**	141.64	334		PKPpre	05 17 02.2	
WTTA					PKPdf	05 17 07.5	+1.3
WTTA					PP	05 20 08.4	-0.9
WTTA	**Wattenberg**	141.64	334	ePKP	PKPdf	05 17 02.2	-4.0
	comp=Z,12nm,1.2s						
WTTA				ePKP	PKPdf	05 17 07.5	+1.3
	comp=Z,43nm,1.2s						
WTTA				ePP	PP	05 20 08.4	-0.9
	comp=Z,28nm,1.6s						
WTTA	**Wattenberg**	141.64	334	PKIKP	PKPdf	05 17 02.2	-4.0
WTTA						05 17 07.5	
WTTA						05 20 08.4	
ABTA	**Abfaltersbach**	141.65	332		PKPpre	05 17 02.2	
ABTA					PKPdf	05 17 06.9	+0.8
ABTA	**Abfaltersbach**	141.65	332	ePKP	PKPdf	05 17 02.2	-3.9
	comp=Z,13nm,1.1s						
ABTA				i PKP	PKPdf	05 17 06.9	+0.8
	comp=Z,48nm,1.3s						
WLF	**Walferdange**	141.71	341	dPKP	PKiKP	05 17 09.7	+0.9
RETA	**Reutte**	141.83	335		PKPpre	05 17 02.7	
RETA					PKiKP	05 17 08.3	-0.9
RETA					PP	05 20 11.2	+0.8
RETA	**Reutte**	141.83	335	ePKP	PKPdf	05 17 02.7	-3.7
	comp=Z,20nm,1.4s						
RETA				ePKiKP	PKiKP	05 17 08.3	-0.9
	comp=Z,28nm,1.5s						
RETA				ePP	PP	05 20 11.2	+0.8
	comp=Z,23nm,1.4s						
SQTA	**Sankt Quirin**	141.85	334		PKPpre	05 17 02.9	

SQTA					PKiKP	05 17 10.0	+0.6
SQTA					PP	05 20 08.2	-2.3
SQTA	Sankt Quirin	141.85	334	*e*PKP	PKPdf	05 17 02.9	-3.6
	comp=Z,18nm,1.5s						
SQTA				*i* PKiKP	PKiKP	05 17 10.0	+0.6
	comp=Z,53nm,1.8s						
SQTA				*e*PP	PP	05 20 08.2	-2.3
	comp=Z,29nm,1.4s						
SQTA	Sankt Quirin	141.85	334	PKIKP	PKPdf	05 17 02.9	-3.6
SQTA						05 17 10.0	
SQTA						05 20 08.2	
FETA	Feichten	142.21	334		PKPpre	05 17 04.1	
FETA					PKiKP	05 17 11.0	+0.8
FETA	Feichten	142.21	334	*e*PKP	PKPdf	05 17 04.1	-3.1
	comp=Z,23nm,1.1s						
FETA				*e*PKiKP	PKiKP	05 17 11.0	+0.8
	comp=Z,49nm,1.1s						
DAVA	Damuels	142.35	335		PKPpre	05 17 04.7	
DAVA					PKiKP	05 17 10.2	-0.2
DAVA					PP	05 20 07.9	-5.7
DAVA	Damuels	142.35	335	*e*PKP	PKPdf	05 17 04.7	-2.8
	comp=Z,17nm,1.2s						
DAVA				*e*PKiKP	PKiKP	05 17 10.2	-0.2
	comp=Z,39nm,1.1s						
DAVA				*i* PP	PP	05 20 07.9	-5.7
	comp=Z,21nm,1.4s						
TUE	Stuetta	143.22	335	IAMs_20	IAMs_20	06 12 38.7	
	comp=Z,2μm,18.0s						
TIP	Timpagrande	144.51	320		PKPdf	05 17 10.8	-0.5
TIP	Timpagrande	144.51	320	⇑P	PKPdf	05 17 11.2	-0.2
NBTA	Tacaratu-PE	145.31	131	*e*P	PKPbc	05 17 11.0	-2.1
NBPS	Pedro II - PI	145.50	121	*e*P	PKPdf	05 17 12.4	-1.4
NBMO	Morrinhos-CE	147.26	120	*e*P	PKPbc	05 17 19.3	+0.3
NBPA	Parau_RN	148.20	127	*e*P	PKPbc	05 17 20.1	-1.5
RCBR	Riachuelo	149.08	129		PKPbc	05 17 22.6	-1.2
RCBR	Riachuelo	149.08	129	IAMs_20	IAMs_20	06 22 47.6	
	comp=Z,1μm,20.0s						
RCBR	Riachuelo	149.08	129	PKIKP	PKPbc	05 17 22.6	-1.2
RCBR				MLR	MLR		
	comp=Z,1μm,20.0s						
RCBR	Riachuelo	149.08	129	*e*P	PKPbc	05 17 22.6	-1.2
NBPV	Pedro Velho	149.15	130	*e*P	PKPdf	05 17 20.7	+0.9
CBOGS	Bougous	151.12	324	P	PKiKP	05 17 29.0	+0.4
KEST	Kesra	151.25	322	PKPbc	PKiKP	05 17 28.9	-0.1
	comp=Z,118nm,1.0s,baz=356,slow=1.9,SNR=31						
CMAH	Djebel Manchou	151.73	325	P	PKiKP	05 17 29.9	-0.1
CAEH	'Ain El Ouahch	151.93	326	P	PKiKP	05 17 30.3	0.0
ABSA	Djebel Ababsia	151.96	325	P	PKPab	05 17 37.2	-2.1
CBST	Bordj Sabath	152.07	325	P	PKiKP	05 17 32.7	+2.0
PBRG	Braganca	152.22	351	*e*PKPbc	PKPbc	05 17 30.3	-0.2
PGAV	Gavieira, Arco	152.25	354	*e*PKPbc	PKiKP	05 17 31.4	+0.4
PGAV				*i* IAMs_20	IAMs_20	06 27 32.2	
	comp=Z,2μm,20.0s						
CKFL	Kef-Lekhel	152.28	326	P	PKiKP	05 17 31.3	+0.1
CBHR	Beni Haroun da	152.40	327	P	PKiKP	05 17 31.1	-0.2
CSGS	Sigus	152.48	326	P	PKiKP	05 17 32.7	+1.1
CASM	Ain Smara	152.51	326	P	PKPdf	05 17 25.9	+1.5
CTEI	Djebel Teioual	152.70	326	P	PKPdf	05 17 25.7	+0.9
POLO	Lamas de Olo	152.78	353	*e*PKPbc	PKPbc	05 17 30.9	-0.9
PVRL	Vila Real	152.87	353	*e*PKPbc	PKiKP	05 17 33.0	+0.8
MVO	Moncorvo	152.88	352	*e*PKPbc	PKPbc	05 17 31.9	-0.1
MVO				*i* IAMs_20	IAMs_20	06 28 08.8	
	comp=Z,2μm,20.0s						
CBBAR	Babar	152.93	323	P	PKPdf	05 17 26.1	+0.9
CTGD	Timgad	153.02	325	P	PKiKP	05 17 34.2	+1.5
CJSR	Ain Djasser	153.10	326	P	PKiKP	05 17 33.0	+0.1
CNGR	Negrine	153.21	322	P	PKiKP	05 17 33.4	+0.4
CAZD	Ain Tagrout	153.28	328	P	PKiKP	05 17 34.6	+1.4
PVIS	Viseu	153.44	353	*e*PKPbc	PKiKP	05 17 33.6	+0.2
MTE	Manteigas	153.71	352	*e*PKPbc	PKiKP	05 17 34.5	+0.5
MTE				*i* IAMs_20	IAMs_20	06 28 44.1	
	comp=Z,2μm,20.0s						
CKTS	El Kantara	153.71	326	P	PKiKP	05 17 34.5	+0.4
ESDC	Sonseca Array	153.74	346	PKP	PKPdf	05 17 24.0	-2.1
	comp=Z,0.5nm,0.4s,baz=289,slow=12,SNR=3.7						
ESDC				PKPbc	pPKPdf	05 17 33.5	+0.5
	comp=Z,0.7nm,0.9s,baz=292,slow=24,SNR=6.7						
ESDC				PKPab	PKPab	05 17 47.9	+1.3
	comp=Z,26nm,1.0s,baz=20,slow=3.8,SNR=23						
ADJB	Djebel Djouab	154.16	330	P	PKiKP	05 17 35.1	0.0
ABSD	Ouled Sidi Bra	154.35	328	P	PKPbc	05 17 31.6	-3.7
PSARD	Sardoal	154.57	353	*e*PKPbc	PKiKP	05 17 37.3	+1.6
PMRV	Marv??o	154.64	351	*e*PKPbc	PKiKP	05 17 36.5	+0.7
PMRV				*e*PKPab	PKPab	05 17 52.0	+1.6
PMRV				*i* IAMs_20	IAMs_20	06 35 29.6	
	comp=Z,2μm,20.0s						
PMTG	Montargil	155.11	353	*e*PKPab	PKPab	05 17 53.0	+0.6
PESTR	Estremoz	155.22	351	*e*PKPab	PKPab	05 17 53.9	+1.1
PARRA	Arraiolos	155.33	352	*e*PKPab	PKPab	05 17 54.4	+1.0
EVO	Evora	155.61	352	*e*PKPab	PKPab	05 17 55.9	+1.4
MOE	Montemor	155.66	353	*e*PKPab	PKPab	05 17 56.6	+1.9
PBAR	Barrancos	155.81	350	*e*PKPab	PKPab	05 17 54.8	-0.6
PBEJ	Beja	156.09	352	*e*PKPab	PKPab	05 17 58.0	+1.4
MESJ	Messejana	156.32	352	*e*PKPdf	PKPdf	05 17 29.6	0.0
MESJ				*e*PKPab	PKPab	05 17 58.7	+1.1
MESJ				IAMs_20	IAMs_20	06 26 43.8	
	comp=Z,2μm,20.7s						
MESJ	Messejana	156.32	352	*e*PKP2	PKPab	05 17 58.7	+1.1
PCVE	Castro Verde	156.50	352	*e*PKPab	PKPab	05 17 58.3	-0.1
PTEO	Sao Teotonio	156.67	353	*e*PKPab	PKPab	05 18 00.2	+1.2
PVAQ	Vaqueiros	156.67	351	*e*PKPab	PKPab	05 18 00.1	+1.0
PVAQ				*i* IAMs_20	IAMs_20	06 30 50.4	
	comp=Z,2μm,18.0s						
PBDV	Barranco-do-Ve	156.86	351	*e*PKPab	PKPab	05 18 01.2	+1.3
MORF	Marmelete	156.90	353	*e*PKPdf	PKPdf	05 17 30.3	-0.1
MORF				*e*PKPab	PKPab	05 18 01.4	+1.3
MORF				IAMs_20	IAMs_20	06 23 52.5	
	comp=Z,3μm,31.7s						
MORF	Marmelete	156.90	353	*e*PKIKP	PKPdf	05 17 30.3	-0.1
MD01	Midelt array s	160.35	341		PKPab	05 18 15.4	0.0
PMOZ	Porto Moniz, M	161.01	13	*i* IAMs_20	IAMs_20	06 44 34.3	
	comp=Z,2μm,20.0s						
TORD	Torodi Ar. Bea	166.50	267	PKP	PKPdf	05 17 41.0	+0.1
	comp=Z,2.3nm,0.3s,baz=31,slow=3.5,SNR=9.0						
TORD				PKPab	PKPab	05 18 43.3	+0.4
	comp=Z,9.5nm,1.0s,baz=72,slow=4.6,SNR=4.8						
TORD	Torodi Ar. Bea	166.50	267		PKPdf	05 17 40.3	-0.6
DBIC	Dimbokro	169.56	224	PKP	PKPdf	05 17 42.5	-0.5
	comp=Z,5.9nm,0.9s,baz=202,slow=1.1,SNR=8.6						
DBIC				PKPab	PKPab	05 18 56.7	+0.5
	comp=Z,3.2nm,0.7s,baz=151,slow=6.7,SNR=4.8						
DBIC	Dimbokro	169.56	224	PKIKP	PKPdf	05 17 43.9	+0.9

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*IDC **14** 05:03:20.5±1.9, 14°.21S×167°.74E, h0^{km}, mb4.2/6, mbtmp4.2/7, ML3.8/1, Error ellipse: s-maj=55.3km s-min=28.5km az=126.0*

*NEIC **14** 05:03:21.1±1.8, 14°.5S±0°.1×168°.0E±0°.2, h10^{km}±1^{km}, mb4.6/13, Error ellipse: s-maj=28.0km s-min=13.7km az=115.0*

ISC 14 05:03:23.9±0.9, **14°.40S**±0°.08×**167°.8E**±0°.2, **h30**^{km}, **n24**, σ1^s**30**/24, **mb4.3**/9, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.21	211	Pn	Pn	05 03 42.6	-2.3
DZM	Mont Dzumac	7.75	190	Pn	Pn	05 05 16.9	+2.1
	1.4nm,0.3s,baz=22,slow=18,SNR=3.4						
DZM				Sn	Sn	05 06 43.2	+1.6
	baz=270,slow=20						
	12nm,0.7s						
DZM	Mont Dzumac	7.75	190		Pn	05 05 13.5	-1.3
ONTNC	Ouen Toro	7.98	189	Pn	Pn	05 05 15.2	-2.6
TARA	Tarawa	16.44	18	Pn	Pn	05 07 11.2	-1.3
EIDS	Eidsvold	19.15	233	P	P	05 07 45.1	+0.2
EIDS				IAmb	IAmb	05 07 53.6	
	comp=Z,29nm,1.4s						
CTA	Charters Tower	21.37	252	P	P	05 08 10.7	+1.5
	comp=Z,5.3nm,0.8s,baz=63,slow=14,SNR=2.9						
	comp=Z,5.3nm,0.8s						
CTAO	Charters Tower	21.37	252	P	P	05 08 09.3	+0.2
CTAO				IAmb	IAmb	05 08 50.6	
	comp=Z,30nm,1.5s						
STKA	Stephens Creek	29.63	230	P	P	05 09 28.5	+1.7
	comp=Z,4.9nm,0.8s,baz=54,slow=10,SNR=5.1						
	comp=Z,4.9nm,0.8s						
WB0	Warramunga Arr	32.38	256	P	P	05 09 50.4	-0.8
WRA	Warramunga Arr	32.45	255	P	P	05 09 51.6	-0.2
	comp=Z,1.6nm,0.8s,baz=85,slow=9.2,SNR=2.0						
	comp=Z,1.6nm,0.8s						
WRA	Warramunga Arr	32.45	255	P	P	05 09 50.4	-1.4
AS31	Alice Springs	33.31	249	P	P	05 09 58.7	-0.6
ASAR	Alice Springs	33.31	249	P	P	05 09 59.1	-0.2
	comp=Z,1.0nm,0.6s,baz=79,slow=8.7,SNR=4.1						
	comp=Z,1.0nm,0.6s						
BBOO	Buckleboo	34.22	232	P	P	05 10 07.3	+0.2
MTN	Manton Dam	35.69	268	P	P	05 10 20.4	+0.5
JKA	Kamikawa-asahi	62.62	340	P	P	05 13 45.9	+0.5
VNDA	Vanda	63.20	181	P	P	05 13 47.8	-1.1
VNDA				IAmb	IAmb	05 14 30.6	
	comp=Z,3.7nm,1.2s						
M16K	Timber Creek	79.69	16	P	P	05 15 28.7	+0.4
M16K				IAmb	IAmb	05 15 44.6	
	comp=Z,17nm,1.4s						
K15K	Wolf Creek Mou	80.14	14	P	P	05 15 31.8	+1.0
K15K				IAmb	IAmb	05 15 50.0	
	comp=Z,15nm,1.3s						
J18K	Innoko River	82.31	15	P	P	05 15 43.5	+1.2
J18K				IAmb	IAmb	05 15 43.9	
	comp=Z,6.8nm,1.4s						
ILAR	Eielson Array	86.04	18	P	P	05 16 01.7	+0.5
	comp=Z,1.2nm,1.0s,baz=233,slow=5.8,SNR=4.2						
	comp=Z,1.2nm,1.0s						
MKAR	Makanchi Array	97.35	316	P	Pdif	05 16 55.5	+1.0
	comp=Z,1.0nm,0.7s,baz=92,slow=5.9,SNR=4.1						
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	97.35	316	P	P	05 16 54.6	+0.2

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*IDC **14** 05:21:56.6±3.8, 12°.75N×89°.86W, h0^{km}, mb3.7/3, mbtmp3.6/5, ML3.0/2, MS3.7/2, Error ellipse: s-maj=58.1km s-min=48.5km az=30.0*

*CATAC **14** 05:21:59.1±0.8, 13°N±4°×9°0W±°, h2^{km}±4^{km}, M3.7/22, MLv3.7/22, Error ellipse: s-maj=8.4km s-min=3.3km az=20.4, confirmed*

*GCG **14** 05:22:01.5±1.5, 12°.89N×90°.46W, h17^{km}±19^{km}, MD4.2, ML3.5*

*SNET **14** 05:22:04.7±2.2, 13°.01N×90°.27W, h20^{km}, ML3.5*

ISC 14 05:22:01.9±1.8, **12°.88N**±0°.06×**90°.34W**±0°.03, **h4**^{km}±10^{km}, **n78**, σ1^s**16**/83, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	1.00	18	S	Sg	05 22 34.8	+0.5
FAME	Alcaldia de Sa	1.00	18	P	Pg	05 22 20.1	-1.2
NUBE	Las Nubes	1.15	28	*e*P	Pg	05 22 22.9	-1.1
NUBE				*e*S	Sg	05 22 38.9	-0.1
NUBE	Las Nubes	1.15	28	*e*P	Pg	05 22 22.9	-1.1
NUBE				*i* S	Sb	05 22 41.1	+1.3
NUBE	Las Nubes	1.15	28	S	Sg	05 22 39.4	+0.4
NUBE	Las Nubes	1.15	28	P	Pg	05 22 22.8	-1.2
JAYA	Jayaque - finc	1.16	49	*e*P	Pg	05 22 23.3	-0.9
JAYA	Jayaque - finc	1.16	49	*e*P	Pg	05 22 23.5	-0.7
JAYA	Jayaque - finc	1.16	49	P	Pg	05 22 23.4	-0.7
LALI	Alcalda de L	1.16	59	*e*P	Pg	05 22 23.3	-0.9
LALI				*e*S	Sg	05 22 39.4	0.0
LALI	Alcalda de L	1.16	59	*e*P	Pg	05 22 23.4	-0.9
LALI	Alcalda de L	1.16	59	S	Sg	05 22 40.9	+1.6
LALI	Alcalda de L	1.16	59	P	Pg	05 22 23.3	-0.9
CEVE	Cerro Verde	1.17	37	*e*P	Pg	05 22 23.5	-0.9
CEVE	Cerro Verde	1.17	37	S	Sg	05 22 40.5	+0.9
CEVE	Cerro Verde	1.17	37	P	Pg	05 22 23.7	-0.7
SBLS	San Blas	1.18	36	*e*P	Pg	05 22 23.7	-0.9
SNJE	San Jose	1.21	36	*e*P	Pg	05 22 24.3	-1.0
RTR	El Retiro	1.21	34	*e*P	Pg	05 22 24.4	-0.8
PMON	Piamonte	1.29	50	*e*P	Pn	05 22 25.4	-1.4
PMON	Piamonte	1.29	50	S	Sn	05 22 46.1	+1.4
PMON	Piamonte	1.29	50	P	Pn	05 22 25.5	-1.4
CEDA	San Andres	1.30	45	*e*P	Pn	05 22 25.2	-1.6
CEDA	San Andres	1.30	45	P	Pn	05 22 25.3	-1.5
BOQS	Boqueron	1.33	51	*e*P	Pn	05 22 26.6	-0.9
UNIC	Universidad Ca	1.34	35	*e*P	Pn	05 22 25.7	-1.7
UNIC	Universidad Ca	1.34	35	S	Sg	05 22 45.3	+0.4
UNIC	Universidad Ca	1.34	35	P	Pn	05 22 25.8	-1.6
UEES	Universidad Ev	1.35	52	S	Sn	05 22 47.5	+1.3
UEES	Universidad Ev	1.35	52	P	Pn	05 22 26.5	-1.2
PIC2	El Picacho	1.36	51	*e*P	Pn	05 22 26.6	-1.3
LOMA	Loma Larga	1.37	56	*e*P	Pn	05 22 25.9	-2.0
LOMA	Loma Larga	1.37	56	P	Pn	05 22 26.1	-1.8
RBDL	Robledal	1.38	27	*e*P	Pn	05 22 26.8	-1.3
FG16	Alotenango, Sa	1.39	353	*e*P	Pb	05 22 29.4	+0.8
ESSG	Sabana Grande	1.56	342	*e*P	Pn	05 22 28.4	-2.2
ESSG				IAML		05 22 58.2	
	comp=N,420nm,0.4s						
PAVA	Las Pavas	1.60	59	*e*P	Pn	05 22 30.1	-1.0
PAVA	Las Pavas	1.60	59	P	Pn	05 22 30.4	-0.6
TECO	Alcaldia de Te	1.65	67	*e*P	Pn	05 22 30.2	-1.5
TECO	Alcaldia de Te	1.65	67	S	Sb	05 22 55.6	+1.4
TECO	Alcaldia de Te	1.65	67	P	Pn	05 22 30.3	-1.5
UESV	Universidad de	1.69	64	P	Pn	05 22 31.1	-1.1
SCLA	Alcaldia de Sa	1.77	62	*e*P	Pn	05 22 32.5	-0.8
SCLA	Alcaldia de Sa	1.77	62	S	Sb	05 22 59.0	+1.5
SCLA	Alcaldia de Sa	1.77	62	P	Pn	05 22 32.5	-0.8
MTO3	Montecristo	1.78	32	*e*P	Pn	05 22 32.6	-1.1
MTO3	Montecristo	1.78	32	S	Sn	05 22 57.6	+0.7
MTO3	Montecristo	1.78	32	P	Pn	05 22 32.7	-1.1
STG5	El Palmar, Qui	1.80	327	*e*P	Pg	05 22 36.6	+0.1
STG8	El Palmar, Qui	1.84	328	*e*P	Pg	05 22 36.5	-0.7
STG8				*e*S	Sg	05 23 04.1	+2.9
STG2	El Palmar, Qui	1.84	327	*e*P	Pg	05 22 37.8	+0.5
LLGN	La Laguna	1.86	47	P	Pn	05 22 34.9	+0.2
LLGN	La Laguna	1.86	47	S	Sn	05 22 59.6	+1.0
TECA	Tecapa	1.89	71	*e*P	Pn	05 22 33.7	-1.5
ESQI	Esquipulas	1.93	30	P	Pn	05 22 35.7	+0.1
ESQI	Esquipulas	1.93	30	S	Sb	05 23 02.7	+0.5
ZAFR2	Estanzuela, Za	1.94	30	*e*P	Pg	05 22 38.3	-0.8
PACA	Pacayal	2.05	73	P	Pn	05 22 36.7	-0.6
RANC	El Ranchito	2.07	74	*e*P	Pn	05 22 36.6	-1.1
VSM	San Miguel	2.08	75	*e*P	Pn	05 22 37.3	-0.6
APG	El Apazote	2.11	357	Pn	Pn	05 22 37.2	-1.1
	comp=N,3.8nm,0.3s,baz=124,slow=12,SNR=142						
APG				Sn	Sb	05 23 05.9	-1.7
	comp=N,1.0nm,0.3s,baz=69,slow=21,SNR=11						
	comp=N,8.7nm,0.4s						
APG	El Apazote	2.11	357	*i* P	Pn	05 22 37.3	-1.0
LCND	La Caada	2.42	80	P	Pn	05 22 41.4	-0.9
CNCH	Conchagua	2.47	81	*e*P	Pn	05 22 42.0	-1.1
CNCH	Conchagua	2.47	81	P	Pn	05 22 42.1	-1.1
CNCH	Conchagua	2.47	81	S	Sn	05 23 15.3	+1.4
CSGN	Cosiguina Volc	2.71	88	P	Pn	05 22 45.3	-1.1
POTN	Potosi Cosigui	2.77	87	P	Pn	05 22 46.3	-0.7
POTN				S	Sn	05 23 22.1	+1.2
TGUH	Tegucigalpa,Un	3.20	68	P	Pn	05 22 52.0	-1.2
TGUH				S	Sn	05 23 31.0	-0.9
YUSH	Yuscaran	3.57	72	P	Pn	05 22 57.1	-1.0
CCIG	Comitan	3.80	333	P	Pn	05 23 01.4	-0.1
LIMN	Finca el Limon	3.88	87	P	Pn	05 23 01.7	-0.8
LIMN				S	Sn	05 23 49.5	+1.0
CMIG	Matias Romero	6.06	314	Pn	Pn	05 23 32.0	-0.4
	comp=N,0.3nm,0.3s,baz=150,slow=14,SNR=3.1						
CMIG				Sn	Sn	05 24 40.7	-1.6
	comp=N,0.4nm,0.3s,baz=39,slow=13,SNR=2.2						
	comp=N,1.5nm,0.5s						
TXAR	Lajitas Array	20.52	325	P	Pn	05 26 40.6	-2.9
	comp=N,1.3nm,1.0s,baz=154,slow=13,SNR=9.2						
	comp=N,1.3nm,1.0s						
ATAH	Atahualpa	23.16	149	LR	LR	05 34 32.9	
	comp=N,570nm,18.4s,baz=82,slow=33						
PCRV	Puerto La Cruz	25.32	93	LR	LR	05 38 04.1	
	comp=N,54nm,21.0s,slow=39						
NVAR	Mina Array Bea	35.55	321	P	P	05 29 00.1	-0.5
	comp=N,0.7nm,0.7s,baz=124,slow=8.8,SNR=4.8						
	comp=N,0.7nm,0.7s						
SCHQ	Schefferville	45.73	19	P	P	05 30 18.5	-5.6
	comp=N,1.4nm,0.5s,baz=225,slow=10.0,SNR=1.2						
	comp=N,1.4nm,0.5s						

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*IDC **14** 05:23:44.6±7.9, 6°.68S×129°.60E, h116^{km}±80^{km}, mb3.9/7, mbtmp4.4/10, ML4.3/2, Error ellipse: s-maj=65.3km s-min=26.0km az=49.0*

*NEIC **14** 05:23:49.1±1.2, 6°.73S±0°.07×129°.79E±0°.08, h162^{km}±9^{km}, mb4.1/14, Error ellipse: s-maj=13.1km s-min=7.6km az=50.0*

*DJA **14** 05:23:49.7±0.2, 7°S±2°×13°0E±°, h176^{km}±4^{km}, M4.6/18, mb4.2/18, mB6.1/1, MLv4.8/13, Mw(mB)5.7/1*

ISC 14 05:23:48.0±0.5, **6°.85S**±0°.05×**129°.62E**±0°.06, **h150**^{km}, **n64**, σ1^s**84**/64, **mb4.1**/13, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.01	124		Pn	05 24 25.7	+2.4
SAUI				Sn	Sn	05 24 51.7	+1.3
SAUI	Saumlaki	2.01	124	P	Pn	05 24 25.8	+2.5
SAUI	Saumlaki	2.01	124	P	Pn	05 24 25.9	+2.6
SAUI				S	Sn	05 24 53.7	+3.3
BNDI	Bandanaira	2.33	7	P	Pn	05 24 28.9	+1.8
BNDI	Bandanaira	2.33	7	P	Pn	05 24 28.8	+1.7
MSAI	Masohi	3.55	349	P	Pn	05 24 44.9	+2.4
KRAI	Karang Ratu	3.71	341	P	Pn	05 24 47.9	+3.3
FAKI	Fak Fak	4.71	34		Pn	05 24 54.9	-2.7
FAKI	Fak Fak	4.71	34	P	Pn	05 24 54.6	-3.0
KMPI	Kaimana, Papua	5.16	52	P	Pn	05 25 02.5	-1.1
DRS	Darwin Rock St	5.69	167	P	Pn	05 25 12.9	+2.3
SOEI	Soe	6.03	241	Pn	Pn	05 25 19.2	+4.0
SOEI	Soe	6.03	241	P	Pn	05 25 20.4	+5.2
	0.5nm33nm,0.6s						
MTN	Manton Dam	6.14	166		Pn	05 25 17.9	+1.3
SWI	Sorong	6.17	15	P	Pn	05 25 14.9	-2.1
	0.4nm26nm,0.7s						
BATI	Baumata	6.76	240	P	Pn	05 25 30.0	+5.0
	0.4nm65nm,1.1s						
RKPI	Ransiki, Papua	6.99	41	P	Pn	05 25 26.6	-1.4
MWPI	Manokwari, Pap	7.35	37	P	Pn	05 25 31.9	-0.9
EDFI	Ende, Flores	8.07	256	P	Pn	05 25 47.6	+5.0
BAKI	Biak	8.57	49	P	Pn	05 25 49.5	+0.4
KNRA	Kununurra	8.81	185		Pn	05 25 53.1	+0.9
KAPI	Kappang	9.98	280	P	Pn	05 26 09.9	+2.1
MRSI	Marisa	10.57	313	P	Pn	05 26 19.2	+3.6
	24nm,1.1s						
FITZ	Fitzroy Crossi	11.83	199	P	Pn	05 26 32.4	+0.3
	6.2nm,0.3s,baz=27,slow=12						
FITZ				S	Sn	05 28 36.7	-6.2
	baz=341,slow=18						
PLAI	Plampang	11.89	260	P	Pn	05 26 33.8	+0.8
PLAI	Plampang	11.89	260	P	Pn	05 26 32.7	-0.3
	26nm,1.0s						
TWSI	Taliwang, Sumb	12.75	261	P	P	05 26 47.8	-1.6
	5.7nm,0.4s						
WB0	Warramunga Arr	13.65	161		Pn	05 26 53.0	-2.5
WRA	Warramunga Arr	13.80	161	P	Pn	05 26 55.7	-1.8
	1.0nm,0.3s,baz=336,slow=13,SNR=31						
WRA				S	Sn	05 29 17.5	-13
	7.3nm,0.6s,baz=332,slow=25,SNR=12						
	4.5nm,0.7s						
WRA	Warramunga Arr	13.80	161		Pn	05 26 54.4	-3.0
COEN	Coen	15.08	119	Pn	Pn	05 27 12.4	-1.2
COEN	Coen	15.08	119	P	P	05 27 15.4	+0.1
QIS	Mount Isa	16.71	146	P	Pn	05 27 34.1	+0.6
MBWA	Marble Bar	17.14	213		Pn	05 27 38.9	+0.2
MBWA				IAmb	IAmb	05 27 58.7	
	comp=Z,18nm,1.5s						
AS31	Alice Springs	17.22	167		Pn	05 27 39.5	-0.1
AS31				IAmb	IAmb	05 27 42.5	
	comp=Z,4.7nm,0.6s						
ASAR	Alice Springs	17.22	167	P	Pn	05 27 40.4	+0.8
	comp=Z,2.5nm,0.3s,baz=347,slow=9.5,SNR=170						
ASAR				S	S	05 30 37.2	-14
	comp=Z,1.0nm,0.5s,baz=332,slow=17,SNR=4.4						
	comp=Z,10nm,0.6s						
ASAR	Alice Springs	17.22	167		Pn	05 27 40.1	+0.4
PSA00	Pilbara Seismi	17.42	212	P	Pn	05 27 42.0	0.0
PSA00				IAmb	IAmb	05 28 01.8	
	comp=Z,6.7nm,0.6s						
PSA00	Pilbara Seismi	17.42	212	P	Pn	05 27 42.4	+0.4
SNJI	Sawahan-Nganju	17.73	266	P	Pn	05 27 46.8	+0.8
	comp=Z,16nm,0.7s						
PCJI	Pacitan	18.33	265	P	P	05 27 50.7	-0.3
	comp=Z,21nm,1.6s						
CTA	Charters Tower	20.82	131	P	P	05 28 19.2	+1.3
	comp=Z,2.3nm,0.7s,baz=321,slow=13,SNR=3.8						
	comp=Z,2.3nm,0.7s						
BBJI	Bungbulang	21.80	267	P	P	05 28 28.6	+0.1
	comp=Z,7.4nm,0.9s						
FORT	Forrest	23.85	183	P	P	05 28 47.9	+0.4
FORT				IAmb	IAmb	05 28 50.9	
	comp=Z,4.0nm,0.7s						
BBOO	Buckleboo	26.52	168	P	P	05 29 11.9	+0.3
BBOO				IAmb	IAmb	05 29 16.2	
	comp=Z,3.8nm,0.6s						
STKA	Stephens Creek	27.29	157	P	P	05 29 19.5	+0.9
	comp=Z,1.5nm,0.3s,baz=326,slow=12,SNR=5.0						
	comp=Z,1.5nm,0.3s						
PZH	PanZhiHua	42.78	322	P	P	05 31 33.5	+2.4
HHC	Hu-ho-hao-te	50.29	342	*e*P	P	05 32 31.4	+2.1
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,220nm,4.8s						
EVN	Everest	53.90	312	P	P	05 32 56.3	-0.6
EVN				IAmb	IAmb	05 32 57.1	
	comp=Z,2.1nm,0.6s						
SONM	Songino Array	58.18	342	P	P	05 33 25.5	-0.9
	comp=Z,0.4nm,0.5s,baz=170,slow=7.8,SNR=3.8						
	comp=Z,0.4nm,0.5s						
SONM	Songino Array	58.18	342	P	P	05 33 26.1	-0.2
MKAR	Makanchi Array	67.89	327	P	P	05 34 30.4	+0.1
	comp=Z,5.3nm,0.4s,baz=116,slow=8.1,SNR=55						
	comp=Z,5.3nm,0.4s						
MKAR	Makanchi Array	67.89	327		P	05 34 30.0	-0.3
MAKZ	Makanchi	68.07	327	P	P	05 34 31.3	-0.2
BOOM	Boomskoye usch	69.19	320	P	P	05 34 38.4	-0.3
ZAA0	Zalesovo Array	71.28	334	P	P	05 34 49.7	-1.2
ZAA0				IAmb	IAmb	05 34 50.4	
	comp=Z,1.7nm,0.8s						
ZALV	Zalesovo Beam	71.28	334	P	P	05 34 49.5	-1.4
	comp=Z,2.0nm,0.7s,baz=135,slow=6.4,SNR=7.9						
	comp=Z,2.0nm,0.7s						
KURBB	Kurchatov Arra	72.19	329	P	P	05 34 56.1	-0.2
	comp=Z,2.5nm,0.3s,baz=129,slow=4.9,SNR=13						
	comp=Z,2.5nm,0.3s						
KURK	Kurchatov	72.19	329	P	P	05 34 56.0	-0.5
VNDA	Vanda	72.64	173	P	P	05 34 58.7	0.0
VNDA				IAmb	IAmb	05 35 17.9	
	comp=Z,8.1nm,1.5s						
KK31	Karatay Array	72.98	319	P	P	05 35 00.4	-0.9
BVAR	Borovoye Array	77.74	328	P	P	05 35 27.4	-0.8
	comp=Z,1.6nm,0.7s,baz=124,slow=8.0,SNR=7.9						
	comp=Z,1.6nm,0.7s						
AB31	Akbulak array	82.16	322	P	P	05 35 51.1	-1.0
ABKAR	Akbulak array	82.16	322	P	P	05 35 51.1	-1.0

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*IDC **14** 05:25:42.6±1.6, 3°.84S×12°.06W, h0^{km}, mb4.2/7, mbtmp4.2/7, MS5.0/4, Error ellipse: s-maj=113.6km s-min=20.2km az=106.0*

*NEIC **14** 05:25:44.7±2.9, 3°.64S±0°.09×12°.05W±0°.09, h10^{km}±1^{km}, mb4.6/8, Error ellipse: s-maj=15.7km s-min=15.3km az=294.0*

ISC 14 05:25:44.4±0.6, **3°.67S**±0°.09×**12°.1W**±0°.1, **h12**^{km}, **n37**, σ1^s**22**/28, **mb4.6**/13, **MS5.2**/4, **5C**, **North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	4.79	210	T	T	05 31 28.2	
	baz=30,slow=74,SNR=1112						
H10N1	ASCENSION HYDR	4.80	210	T	T	05 31 29.1	
	baz=30,slow=74,SNR=1134						
H10N3	ASCENSION HYDR	4.81	210	T	T	05 31 29.7	
	baz=30,slow=74,SNR=869						
ASCN	Ascension	4.82	208	Pn	Pn	05 26 59.4	+2.5
H10S2	ASCENSION HYDR	5.86	206	T	T	05 32 49.0	
	baz=194,slow=74,SNR=598						
H10S3	ASCENSION HYDR	5.86	206	T	T	05 32 51.3	
	baz=26,slow=74,SNR=566						
DBIC	Dimbokro	12.53	35	Pn	Pn	05 28 43.6	+0.9
ACRG	Accra	15.01	52	Pn	Pn	05 29 15.8	-0.8
TORD	Torodi Ar. Bea	21.57	39	P	P	05 30 35.0	+0.9
	8.1nm,0.8s,baz=230,slow=7.5,SNR=7.4						
	8.1nm,0.8s						
SACV	Santiago Islan	21.77	329	P	P	05 30 35.7	-0.6
SACV				IAmb	IAmb	05 30 37.8	
	comp=Z,58nm,1.1s						
EDA	Edea	23.39	72	P	P	05 30 53.1	-0.2
MACI	Morro de la Ar	32.02	353	P	P	05 32 08.7	-2.4
GRTLG	Ghanzi	36.79	121	P	P	05 32 51.1	-1.4
GRTLG				IAmb	IAmb	05 33 09.1	
	comp=Z,6.3nm,0.9s						
MBAR	Mbarara	42.86	87	P	P	05 33 42.8	-0.4
MBAR				IAmb	IAmb	05 34 02.5	
	comp=Z,4.5nm,0.8s						
EBR	Ebro Roquetas	45.74	13	P	P	05 34 05.8	+0.3
BOAV	Boa Vista	48.82	276	P	P	05 34 29.0	-1.1
BOAV				IAmb	IAmb	05 34 39.0	
	comp=Z,7.1nm,1.0s						
GERES	GERESS Array B	56.90	20	P	P	05 35 31.1	+1.7
	comp=Z,1.8nm,0.9s,baz=214,slow=12,SNR=5.5						
	comp=Z,1.8nm,0.9s						

SDV	**Santo Domingo**	**59.72**	**282**	LR	LR	05 59 20.1	
	comp=Z,3μm,20.3s,baz=254,slow=34						
BRTR	**Keskin Array B**	**60.18**	**39**	P	**P**	**05 35 55.0**	**+2.6**
	comp=Z,1.0nm,0.9s,baz=224,slow=3.2,SNR=4.7						
	comp=Z,1.0nm,0.9s						
AKASG	**Malin Array Be**	**64.66**	**28**	P	**P**	**05 36 21.6**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=234,slow=7.5,SNR=2.1						
	comp=Z,0.2nm,0.3s						
VNA1	**Neumayer--Stat**	**66.93**	**179**	⇑P	**P**	**05 36 36.5**	**+0.2**
	comp=Z,7.1nm,1.0s						
VNA2	**Neumayer--Watz**	**67.23**	**178**	⇑P	**P**	**05 36 37.9**	**-0.4**
	comp=Z,8.7nm,0.7s,baz=353,slow=7.1						
VNA3	**Neumayer Olymp**	**67.50**	**179**	⇑P	**P**	**05 36 39.2**	**-0.7**
	comp=Z,5.2nm,0.8s						
SNAA	**Sanae**	**68.16**	**177**	⇑P	**P**	**05 36 43.7**	**-0.5**
	comp=Z,119nm,0.9s						
SNAA	**Sanae**	**68.16**	**177**	P	**P**	**05 36 42.6**	**-1.6**
	comp=Z,5.6nm,0.9s,baz=334,slow=8.2,SNR=12						
	comp=Z,5.6nm,0.9s						
SNAA	**Sanae**	**68.16**	**177**	P	**P**	**05 36 44.0**	**-0.2**
SNAA				IAmb	IAmb	05 36 44.7	
	comp=Z,7.8nm,1.0s						
TROLL	**Troll, Antarti**	**68.87**	**175**	⇑P	**P**	**05 36 48.1**	**-0.6**
	comp=Z,202nm,0.7s						
OBN	**Obninsk**	**70.91**	**27**	LR	LR	06 11 46.9	
	comp=Z,842nm,19.6s,baz=16,slow=39						
FINES	**FINESS Array B**	**71.25**	**18**	P	**P**	**05 37 04.2**	**+0.9**
	comp=Z,2.9nm,1.0s,baz=219,slow=3.6,SNR=3.9						
FINES				LR	LR	06 09 29.3	
	comp=Z,2μm,21.5s,baz=52,slow=37						
	comp=Z,2.9nm,1.0s						
JMIC	**Jan Mayen**	**74.55**	**1**	LR	LR	06 07 24.5	
	comp=Z,467nm,21.7s,baz=329,slow=34						
QSPA	**South Pole Qui**	**86.42**	**180**	P	**P**	**05 38 27.2**	**+0.5**
	comp=Z,11nm,0.9s,baz=224,slow=4.2,SNR=28						
	comp=Z,11nm,0.9s						
QSPA	**South Pole Qui**	**86.42**	**180**	P	**P**	**05 38 26.5**	**-0.3**
ASAR	**Alice Springs**	**137.12**	**131**	PKhKP	PKPpre	05 44 56.9	
	comp=Z,0.3nm,0.6s,baz=216,slow=3.4,SNR=4.4						
ASAR				PKP	**PKPdf**	**05 45 08.0**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=223,slow=3.1,SNR=4.7						
WRA	**Warramunga Arr**	**139.49**	**127**	PKhKP	PKPpre	05 45 04.6	
	comp=Z,0.7nm,0.9s,baz=236,slow=3.0,SNR=2.4						
EIDS	**Eidsvold**	**146.81**	**151**	PKPdf	**PKPdf**	**05 45 24.3**	**-1.3**
CTA	**Charters Tower**	**148.19**	**139**	PKPbc	**PKPbc**	**05 45 30.2**	**-1.1**
	comp=Z,2.5nm,0.8s,baz=180,slow=1.0,SNR=5.6						
CTAO	**Charters Tower**	**148.19**	**139**	PKPbc	**PKPbc**	**05 45 30.4**	**-0.9**

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*IDC **14** 05:45:28.7±1.5, 52°.64S×10°.72E, h0^{km}, mb4.0/4, mbtmp4.1/4, Error ellipse: s-maj=51.3km s-min=34.2km az=63.0*

ISC 14 05:45:30.1±1.6, **52°.6S**±0°.2×**10°.7E**±0°.3, **h10**^{km}**, n15,** σ**0^{s}.68**/9, **mb4.0**/3, **4D, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TROLL	**Troll, Antarti**	**19.80**	**188**	⇓P	**P**	**05 50 00.6**	**+0.2**
	comp=Z,481nm,0.8s						
SNAA	**Sanae**	**20.05**	**192**	⇓P	**P**	**05 50 04.0**	**+0.9**
	comp=Z,271nm,0.8s						
SNAA	**Sanae**	**20.05**	**192**	P	**P**	**05 50 02.5**	**-0.5**
	comp=Z,11nm,0.8s,baz=18,slow=9.7,SNR=30						
	comp=Z,11nm,0.8s						
VNA2	**Neumayer--Watz**	**20.11**	**197**	⇓P	**P**	**05 50 03.8**	**+0.1**
	comp=Z,4.3nm,0.7s,baz=25,slow=14						
VNA3	**Neumayer Olymp**	**20.80**	**199**	⇓P	**P**	**05 50 10.0**	**-1.1**
	comp=Z,9.5nm,0.8s						
H04S2	**CROZET ISLANDS**	**26.95**	**94**	T	T	06 19 28.2	
	baz=243,slow=75,SNR=44						
H04S3	**CROZET ISLANDS**	**26.95**	**94**	T	T	06 19 29.6	
	baz=243,slow=75,SNR=34						
H04S1	**CROZET ISLANDS**	**26.96**	**94**	T	T	06 19 24.9	
	baz=243,slow=75,SNR=42						
QSPA	**South Pole Qui**	**37.63**	**180**	P	**P**	**05 52 45.1**	**+0.3**
	comp=Z,1.1nm,0.9s,baz=177,slow=0.7,SNR=3.1						
	comp=Z,1.1nm,0.9s						
H01W2	**Cape Leeuwin H**	**70.42**	**122**	T	T	07 14 15.3	
	baz=219,slow=75,SNR=6.3						
H01W3	**Cape Leeuwin H**	**70.44**	**122**	T	T	07 14 21.0	
	baz=219,slow=75,SNR=6.3						
H01W1	**Cape Leeuwin H**	**70.44**	**122**	T	T	07 14 14.4	
	baz=219,slow=75,SNR=7.6						
LPAZ	**La Paz**	**70.48**	**269**	P	**P**	**05 56 45.6**	**0.0**
	comp=Z,1.8nm,0.8s,baz=117,slow=4.2,SNR=7.9						
	comp=Z,1.8nm,0.8s						
ASAR	**Alice Springs**	**89.41**	**130**	P	**P**	**05 58 26.8**	**-0.3**
	comp=Z,1.1nm,1.0s,baz=197,slow=4.6,SNR=6.1						
	comp=Z,1.1nm,1.0s						
YKA	**Yellowknife Ar**	**149.96**	**311**	PKPbc	**PKPbc**	**06 05 19.6**	**+0.3**
	comp=Z,0.9nm,0.9s,baz=95,slow=1.8,SNR=9.7						

NOU 14 05:51:50.1, 14°.39S×167°.85E, h0^{km}**, mb4.3**/10**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**1.22**	**211**	P	Pg	05 52 12.2	-1.4
DVP	**Devils Point**	**3.33**	**174**	P	Pn	05 52 43.7	+0.2
RTV	**Rentapao**	**3.43**	**171**	P	Pn	05 52 44.6	-0.2
YATNC	**Mamie plateau,**	**7.68**	**187**	P	Pn	05 53 43.8	+0.5
DZM	**Mont Dzumac**	**7.75**	**190**	P	Pn	05 53 45.3	+0.9

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*IDC **14** 05:53:47.0±1.3, 14°.27S×167°.62E, h0^{km}, mb3.9/7, mbtmp3.9/8, ML3.8/1, Error ellipse: s-maj=47.2km s-min=23.6km az=130.0*

ISC 14 05:54:03.8±1.1, **14°.9S**±0°.1×**167°.8E**±0°.2, **h150**^{km}**, n8,** σ**1^{s}.61**/8, **mb3.6**/7, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.27**	**190**	Pn	Pn	05 55 42.7	-4.8
	1.4nm,0.3s,baz=290,slow=16,SNR=7.4						
DZM				Sn	**Sn**	**05 57 08.0**	**-0.9**
	0.4nm,0.3s,baz=114,slow=20,SNR=1.3						
	3.5nm,0.3s						
STKA	**Stephens Creek**	**29.28**	**230**	P	**P**	**05 59 54.3**	**+2.2**
	1.9nm,0.6s,baz=73,slow=14,SNR=5.1						
	1.9nm,0.6s						
WRA	**Warramunga Arr**	**32.28**	**256**	P	**P**	**06 00 17.5**	**-1.1**
	0.4nm,0.4s,baz=86,slow=9.6,SNR=5.4						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**33.09**	**249**	P	**P**	**06 00 24.4**	**-1.2**
	0.7nm,0.6s,baz=71,slow=9.6,SNR=11						
	0.7nm,0.6s						
SONM	**Songino Array**	**82.92**	**323**	P	**P**	**06 06 12.1**	**+0.2**
	0.4nm,0.7s,baz=108,slow=4.7,SNR=2.3						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**86.51**	**18**	P	**P**	**06 06 27.6**	**-1.8**
	0.4nm,0.7s,baz=238,slow=4.5,SNR=5.9						
	0.4nm,0.7s						
NVAR	**Mina Array Bea**	**86.99**	**49**	P	**P**	**06 06 33.7**	**+1.1**
	0.7nm,0.8s,baz=232,slow=7.0,SNR=3.8						
	0.7nm,0.8s						
MKAR	**Makanchi Array**	**97.66**	**316**	P	**P**	**06 07 21.6**	**+0.2**
	0.4nm,0.6s,baz=84,slow=6.1,SNR=4.5						
	0.4nm,0.6s						

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*TIF **14** 05:55:06.6, 42°.08N×48°.50E, h50^{km}±2^{km}*
*MOS **14** 05:55:07.5, 42°.15N×48°.13E, h33^{km}, MPVA3.8*
*NORS **14** 05:55:08.1, 42°.41N×48°.25E, h5^{km}, MPVA4.2*
*DRS **14** 05:55:08.8, 42°.15N×48°.10E, h24^{km}*

ISC 14 05:55:10.0±1.0, **42°.16N**±0°.03×**48°.15E**±0°.05, **h30**^{km}±7^{km}, **n46,** σ**0^{s}.98**/85, **1D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRN	**Derbent**	**0.19**	**134**	*i* Pg	**Pb**	**05 55 15.7**	**-0.3**
DRN				*e*Sg	**Sb**	**05 55 20.7**	**+0.5**
DRN	**Derbent**	**0.19**	**134**	*i* PG	**Pb**	**05 55 15.7**	**-0.3**
DRN				*e*S	**Sb**	**05 55 20.7**	**+0.5**
URKR	**Urkarakh**	**0.39**	**271**	*e*Pg	**Pb**	**05 55 17.7**	**-1.1**
URKR				*e*Sg	**Sb**	**05 55 24.8**	**0.0**
URKR	**Urkarakh**	**0.39**	**271**	*e*PG	**Pb**	**05 55 17.6**	**-1.1**
URKR				*e*S	**Sb**	**05 55 24.7**	**0.0**
URKR				pmax	pmax		
	comp=Z,155nm,0.1s						
SGKR	**Sergokala**	**0.47**	**309**	*e*Pg	**Pb**	**05 55 18.9**	**-1.1**
SGKR				*e*Sg	**Sb**	**05 55 26.9**	**0.0**
SGKR	**Sergokala**	**0.47**	**309**	*e*PG	**Pb**	**05 55 18.9**	**-1.1**
SGKR				*e*S	**Sb**	**05 55 26.9**	**0.0**
KSMR	**Kasumkent**	**0.56**	**182**	*e*Pg	**Pb**	**05 55 20.1**	**-1.3**
KSMR				*e*Sg	**Sb**	**05 55 29.1**	**-0.1**
KSMR	**Kasumkent**	**0.56**	**182**	*e*PG	**Pb**	**05 55 20.1**	**-1.3**
KSMR				*e*S	**Sb**	**05 55 29.0**	**-0.1**
KSMR				pmax	pmax		
	comp=Z,132nm,0.2s						
AKT	**Akhty**	**0.75**	**205**	*e*PG	**Pn**	**05 55 23.0**	**-1.6**
AKT				*e*S	**Sb**	**05 55 33.8**	**-0.7**
AKT				pmax	pmax		
	comp=Z,85nm,0.2s						
KMKR	**Kumukh**	**0.78**	**268**	*e*Pg	**Pn**	**05 55 24.0**	**-1.1**
KMKR				*e*Sg	**Sb**	**05 55 35.6**	**0.0**
KMKR	**Kumukh**	**0.78**	**268**	*e*PG	**Pn**	**05 55 24.0**	**-1.1**
KMKR				*e*S	**Sb**	**05 55 35.6**	**0.0**
MAK	**Makhachkala**	**0.93**	**329**	*e*Pg	**Pn**	**05 55 25.9**	**-1.1**
MAK				*e*Sg	**Sb**	**05 55 39.5**	**-0.1**
MAK	**Makhachkala**	**0.93**	**329**	⇓*i*PG	**Pb**	**05 55 27.5**	**-0.1**
MAK				*e*S	**Sb**	**05 55 39.7**	**+0.1**
MAK				pmax	pmax		
	comp=Z,201nm,1.4s						
MAK				smax	smax		
	comp=E,451nm,0.3s						
MAK				smax	smax		
	comp=E,342nm,0.3s						
ARKR	**Arakani**	**0.96**	**298**	*e*PG	**Pn**	**05 55 26.6**	**-0.9**
ARKR				*e*S	**Sn**	**05 55 40.3**	**+0.1**
ARKR				pmax	pmax		
	comp=Z,11nm,0.3s						
BUJR	**Buynaksk**	**1.02**	**311**	*e*Pg	**Pn**	**05 55 27.6**	**-0.6**
BUJR				*e*Sg	**Sb**	**05 55 41.9**	**-0.3**
BUJR	**Buynaksk**	**1.02**	**311**	PG	**Pn**	**05 55 27.6**	**-0.6**
BUJR				S	**Sb**	**05 55 41.8**	**-0.3**
HNZR	**Khunzah**	**1.14**	**291**	PG	**Pn**	**05 55 29.0**	**-0.9**
HNZR				S	**Sn**	**05 55 45.2**	**+0.6**
KRNR	**Karanay**	**1.14**	**306**	*e*Pg	**Pn**	**05 55 29.2**	**-0.7**
KRNR				*e*Sg	**Sb**	**05 55 45.4**	**-0.2**
KRNR	**Karanay**	**1.14**	**306**	*e*PG	**Pn**	**05 55 29.2**	**-0.7**
KRNR				*e*S	**Sb**	**05 55 45.4**	**-0.2**
XNZR	**Khunzakh**	**1.14**	**290**	*e*Pg	**Pn**	**05 55 29.0**	**-1.0**
XNZR				*e*Sg	**Sn**	**05 55 45.2**	**+0.6**
UNCR	**Uncukul**	**1.15**	**299**	*e*Pg	**Pn**	**05 55 29.4**	**-0.6**
UNCR				*e*Sg	**Sb**	**05 55 45.4**	**-0.4**
UNCR	**Uncukul**	**1.15**	**299**	*e*PG	**Pn**	**05 55 29.4**	**-0.6**
UNCR				*e*S	**Sb**	**05 55 45.4**	**-0.4**
TLTR	**Tlyarata**	**1.34**	**268**	*e*Pg	**Pn**	**05 55 32.2**	**-0.5**
TLTR				*e*Sg	**Sn**	**05 55 50.9**	**+1.3**
TLTR	**Tlyarata**	**1.34**	**268**	*e*PG	**Pn**	**05 55 32.2**	**-0.5**
TLTR				*e*S	**Sn**	**05 55 50.8**	**+1.3**
TLTR				pmax	pmax		
	comp=Z,21nm,0.2s						
DLMR	**Dylym**	**1.45**	**310**	*e*Pg	**Pn**	**05 55 34.8**	**+0.7**
DLMR				*e*Sg	**Sb**	**05 55 54.5**	**+0.2**
DLMR	**Dylym**	**1.45**	**310**	*e*PG	**Pn**	**05 55 34.8**	**+0.7**
DLMR				*e*S	**Sb**	**05 55 54.5**	**+0.2**
BTLR	**Botlikh**	**1.51**	**290**	*e*Pg	**Pn**	**05 55 36.0**	**+1.0**
BTLR				*e*Sg	**Sb**	**05 55 57.3**	**+1.0**
BTLR	**Botlikh**	**1.51**	**290**	*e*PG	**Pb**	**05 55 37.5**	**0.0**
BTLR				pmax	pmax		
	comp=Z,39nm,0.0s						
VSHL	**Vashlovani**	**1.61**	**235**	P	**Pb**	**05 55 38.0**	**-1.0**
DVE	**Vedeno**	**1.69**	**299**	*e*Pg	**Pn**	**05 55 38.2**	**+0.7**
DVE				*e*Sg	**Sb**	**05 56 00.9**	**-0.5**
DVE	**Vedeno**	**1.69**	**299**	*i* PN	**Pb**	**05 55 39.0**	**-1.5**
DVE				pmax	pmax		
	comp=Z,39nm,0.3s						
GROC	**Groznyy**	**2.02**	**302**	*e*Pg	**Pb**	**05 55 44.6**	**-1.5**
GROC				*i* Sg	**Sb**	**05 56 10.6**	**-0.3**
GROC	**Groznyy**	**2.02**	**302**	*e*PN	**Pb**	**05 55 44.6**	**-1.5**
DGRG	**David-gareji**	**2.19**	**252**	P	**Pn**	**05 55 45.8**	**+1.4**
DGRG				S	**Sn**	**05 56 13.3**	**+2.7**
DGRG	**David-gareji**	**2.19**	**252**	PN	**Pn**	**05 55 45.8**	**+1.4**
DGRG				S	**Sn**	**05 56 13.3**	**+2.7**
LACR	**Lac**	**2.93**	**284**	*e*PN	**Pn**	**05 55 55.9**	**+1.4**
LACR				*e*S	**Sn**	**05 56 30.2**	**+1.5**
TRLG	**Trialeti**	**3.09**	**260**	P	**Pn**	**05 55 56.9**	**+0.1**
TRLG				S	**Sn**	**05 56 33.4**	**+0.7**
TRLG	**Trialeti**	**3.09**	**260**	PN	**Pn**	**05 55 56.9**	**+0.1**
TRLG						05 56 33.4	
DIGR	**Digorskoe uzhe**	**3.46**	**284**	*e*Pn	**Pn**	**05 56 02.4**	**+0.5**
DIGR				*e*Sn	**Sn**	**05 56 43.9**	**+2.0**
DIGR	**Digorskoe uzhe**	**3.46**	**284**	*e*PN	**Pn**	**05 56 02.4**	**+0.5**
DIGR				*e*S	**Sn**	**05 56 43.9**	**+2.0**
KBZ	**Khabaz**	**4.16**	**294**	*e*Pn	**Pn**	**05 56 11.4**	**0.0**
KBZ				*e*Sn	**Sn**	**05 56 59.6**	**+0.7**
KBZ	**Khabaz**	**4.16**	**294**	*e*PN	**Pn**	**05 56 11.4**	**0.0**
KBZ				*e*S	**Sn**	**05 56 59.6**	**+0.7**
SHA1	**Shidzhatmaz**	**4.33**	**293**	*e*Pn	**Pn**	**05 56 13.7**	**-0.2**
SHA1				*e*Sn	**Sn**	**05 57 02.2**	**-1.3**
SHA1	**Shidzhatmaz**	**4.33**	**293**	*e*PN	**Pn**	**05 56 13.7**	**-0.2**
KIV	**Kislovodsk**	**4.39**	**296**	*e*Pn	**Pn**	**05 56 14.5**	**-0.1**
KIV				*e*Sn	**Sn**	**05 57 05.0**	**+0.3**
KIV	**Kislovodsk**	**4.39**	**296**	*e*PN	**Pn**	**05 56 16.9**	**+2.3**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						

IDC 14 05:57:29.5±1.9, **14°.57S**×**166°.92E, h0**^{km}**, mb3.8**/4, **mbtmp3.7**/5, **ML3.6**/1, **Error ellipse: s-maj=42.2km s-min=33.8km az=129.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.48**	**183**	Pn	Pn	05 59 18.7	-1.3
	1.0nm,0.3s,baz=128,slow=22,SNR=6.8						
DZM				Sn	Sn	06 00 46.0	+0.4
	0.3nm,0.3s,baz=330,slow=20,SNR=2.3						
	2.2nm,0.4s						
STKA	**Stephens Creek**	**28.84**	**229**	P	P	06 03 30.8	+1.1
	1.1nm,0.4s,baz=45,slow=14,SNR=4.5						
	1.1nm,0.4s						
WRA	**Warramunga Arr**	**31.54**	**256**	P	P	06 03 53.4	-0.4
	0.3nm,0.5s,baz=84,slow=8.9,SNR=2.1						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**32.41**	**249**	P	P	06 04 01.1	-0.4
	0.5nm,0.7s,baz=73,slow=9.2,SNR=5.8						
	0.5nm,0.7s						
TXAR	**Lajitas Array**	**96.50**	**61**	P	P	06 11 01.4	-0.1
	0.3nm,0.7s,baz=277,slow=4.1,SNR=3.5						
	0.3nm,0.7s						

KRSC 14 05:59:58.0±1.0, **54°.60N**×**162°.46E, h39**^{km}±13^{km}**, Ml3.9, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.43**	**265**	*e*P	Pn	06 00 08.9	+1.4
MKZ				*e*S	Sn	06 00 15.5	+1.1
KZV	**Kizimen**	**1.36**	**293**	*e*P	Pn	06 00 21.4	+0.9
KZV				*e*S	Sn	06 00 38.0	+0.7
TUMR	**Tumrok**	**1.50**	**298**	*e*P	Pn	06 00 24.3	+1.8
KBTR	**Krutoberegovo**	**1.63**	**7**	*e*P	Pn	06 00 26.2	+2.1
KBTR				*e*S	Sn	06 00 46.8	+3.0
KBG	**Krutoberegovo**	**1.67**	**5**	*e*P	Pn	06 00 26.0	+1.4
BZGR	**Bezymyannyi-Gr**	**1.68**	**324**	*e*P	Pn	06 00 26.6	+1.7
BZGR				*e*S	Sn	06 00 48.5	+3.2
ZLN	**Zelenaya**	**1.71**	**327**	*e*P	Pn	06 00 27.7	+2.4
ZLN				*e*S	Sn	06 00 49.2	+3.2
KMNR	**Kamenistaya**	**1.73**	**313**	*e*P	Pn	06 00 27.2	+1.7
KMNR				*e*S	Sn	06 00 49.2	+2.8
BZWR	**Bezymyannyi-We**	**1.77**	**321**	*e*P	Pn	06 00 28.4	+2.1
CIRR	**Tsirk**	**1.81**	**328**	*e*P	Pn	06 00 29.1	+2.4
KIRR	**Kirishev**	**1.82**	**319**	*e*P	Pn	06 00 29.0	+2.1
KII	**Karymskiy**	**1.85**	**254**	*e*P	Pn	06 00 29.5	+2.3
KLY	**Klyuchi**	**2.01**	**330**	*e*P	Pn	06 00 30.9	+1.7
KLY				*e*S	Sn	06 00 54.5	+1.5
KOZ	**Kozyrevsk**	**2.08**	**316**	*e*P	Pn	06 00 32.9	+2.6
KOZ				*e*S	Sn	06 00 59.0	+4.0
SPN	**Mys Shipunski**	**2.08**	**225**	*e*P	Pn	06 00 32.0	+1.7
SPN				*e*S	Sn	06 00 55.3	+0.3
BKI	**Bering**	**2.12**	**72**	*e*S	Sn	06 00 58.0	+2.1
SRKR	**Sorokina**	**2.19**	**341**	*e*P	Pn	06 00 34.2	+2.4
NLC	**Nalytchevo**	**2.33**	**234**	*e*P	Pn	06 00 37.9	+4.2
SDLR	**Sedlovina**	**2.49**	**239**	*e*P	Pn	06 00 39.2	+3.1
SDLR				*e*S	Sn	06 01 08.5	+3.2
ESO	**Esso**	**2.53**	**303**	*e*P	Pn	06 00 38.2	+1.7
ESO				*e*S	Sn	06 01 07.2	+1.1
SMAR	**Somma**	**2.54**	**240**	*e*P	Pn	06 00 40.0	+3.2
SMAR				*e*S	Sn	06 01 09.3	+2.7
KRER	**Koryakskii**	**2.55**	**241**	*e*P	Pn	06 00 40.4	+3.5
KRER				*e*S	Sn	06 01 10.2	+3.5
UGLR	**Uglovaya**	**2.56**	**239**	*e*P	Pn	06 00 40.2	+3.2
UGLR				*e*S	Sn	06 01 09.3	+2.4
KRX	**Arik**	**2.57**	**243**	*e*P	Pn	06 00 40.1	+3.0
KRX				*e*S	Sn	06 01 09.6	+2.4
AVH	**Avacha**	**2.57**	**240**	*e*P	Pn	06 00 40.7	+3.6
AVH				*e*S	Sn	06 01 11.0	+3.9
KOK	**Koryaka**	**2.61**	**242**	*e*P	Pn	06 00 41.1	+3.4
KOK				*e*S	Sn	06 01 11.7	+3.6
DALK	**Dalny**	**2.70**	**236**	*e*P	Pn	06 00 41.9	+3.2
DALK				*e*S	Sn	06 01 13.2	+3.1
KRMR	**Karymshinskiy**	**3.12**	**237**	*e*P	Pn	06 00 48.1	+3.5
KRMR				*e*S	Sn	06 01 24.4	+3.8
MTVR	**Mutnovka**	**3.31**	**232**	*e*P	Pn	06 00 50.6	+3.3
MTVR				*e*S	Sn	06 01 28.1	+2.5
GRL	**Gorelyy**	**3.32**	**234**	*e*P	Pn	06 00 52.8	+5.4
ASAK	**Asacha**	**3.51**	**233**	*e*P	Pn	06 00 54.6	+4.6
APC	**Apacha**	**3.56**	**244**	*e*S	Sn	06 01 38.7	+7.2

IDC 14 06:00:24.0±1.9, **14°.16S**×**167°.78E, h0**^{km}**, mb3.9**/4, **mbtmp3.9**/5, **ML3.7**/1, **MS4.3**/1, **Error ellipse: s-maj=59.1km s-min=29.5km az=125.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.97**	**189**	Pn	Pn	06 02 20.5	-0.8
	1.1nm,0.3s,baz=66,slow=20,SNR=11						
DZM				Sn	Sn	06 03 46.9	-5.4
	0.1nm,0.3s,baz=150,slow=20,SNR=1.7						
	2.9nm,0.3s						
STKA	**Stephens Creek**	**29.73**	**229**	P	P	06 06 32.5	+0.3
	3.0nm,0.6s,baz=46,slow=11,SNR=6.6						
	3.0nm,0.6s						
WRA	**Warramunga Arr**	**32.44**	**255**	P	P	06 06 56.8	+0.6
	0.6nm,0.5s,baz=84,slow=9.2,SNR=2.2						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**33.34**	**248**	P	P	06 07 03.5	-0.5
	1.0nm,0.6s,baz=72,slow=9.7,SNR=9.5						
	1.0nm,0.6s						
BATI	**Baumata**	**43.25**	**270**	LR	LR	06 25 44.3	
	comp=Z,312nm,18.6s,baz=264,slow=35						
ILAR	**Eielson Array**	**85.84**	**18**	P	P	06 13 05.2	0.0
	0.4nm,0.7s,baz=232,slow=6.2,SNR=7.0						
	0.4nm,0.7s						

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*IDC **14** 06:10:49.1±1.6, 38°.15N×70°.28E, h0^{km}, mb3.9/8, mbtmp3.9/14, ML3.6/6, MS4.5/2, Error ellipse: s-maj=23.8km s-min=15.2km az=161.0*

ISC 14 06:10:57.2±1.4, **38°.7N**±0°.1×**69°.93E**±0°.10, **h27**^{km}**, n25,** σ**2^{s}.08**/27, **mb3.8**/7, **Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EKS2	**Erkin-Say**	**4.90**	**35**	P	**Pn**	**06 12 11.4**	**+2.1**
	SNR=18						
UCH	**Uchtor**	**4.94**	**44**	P	**Pn**	**06 12 09.6**	**-0.5**
	SNR=46						
AAK	**Ala-Archa**	**5.22**	**40**	P	**Pn**	**06 12 15.5**	**+1.9**
	SNR=54						
AAK	**Ala-Archa**	**5.22**	**40**	Pn	**Pn**	**06 12 15.6**	**+1.9**
	15nm,0.3s,baz=210,slow=7.0,SNR=110						
AAK				Sn	**Sn**	**06 13 15.8**	**+2.6**
	4.9nm,0.3s,baz=223,slow=19,SNR=1.5						
AAK				Lg	Lg	06 13 36.1	
	7.0nm,0.3s,baz=345,slow=21,SNR=5.7						
	34nm,0.4s						
KBK	**Karagaybulak**	**5.47**	**43**	P	**Pn**	**06 12 17.4**	**+0.2**
	SNR=16						
CHMS	**Chumysh**	**5.62**	**39**	P	**Pn**	**06 12 20.8**	**+1.8**
	SNR=8.4						
USP	**Ospenovka**	**5.70**	**36**	P	**Pn**	**06 12 21.4**	**+1.2**
	SNR=36						
TKM2	**Tokmak 2**	**6.00**	**44**	P	**Pn**	**06 12 23.7**	**-0.7**
	SNR=7.9						
MKAR	**Makanchi Array**	**12.13**	**44**	Pn	**Pn**	**06 13 46.7**	**-1.6**
	0.1nm,0.3s,baz=231,slow=12,SNR=7.6						
MKAR				Lg	Lg	06 17 12.5	
	0.1nm,0.3s,baz=250,slow=26,SNR=2.9						
	1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**13.36**	**24**	Pn	**Pn**	**06 14 01.6**	**-3.3**
	0.1nm,0.3s,baz=215,slow=12,SNR=13						
KURBB				Sn	**Sn**	**06 16 35.1**	**+2.6**
	baz=221,slow=25,SNR=1.6						
KURBB				Lg	Lg	06 17 56.0	
	0.1nm,0.3s,baz=214,slow=28,SNR=6.6						
	1.0nm,0.8s						
BVAR	**Borovoye Array**	**14.31**	**1**	Pn	**Pn**	**06 14 18.0**	**+0.1**
	0.1nm,0.3s,baz=168,slow=10,SNR=12						
BVAR				Sn	**Sn**	**06 16 55.6**	**+0.1**
	0.1nm,0.3s,baz=162,slow=24,SNR=5.1						
	4.2nm,0.7s						
AKTO	**Aktyubinsk**	**14.44**	**328**	Pn	**Pn**	**06 14 20.8**	**+1.1**
	0.6nm,0.3s,baz=131,slow=9.1,SNR=8.0						
AKTO				Sn	**Sn**	**06 16 58.6**	**-0.2**
	0.9nm,0.3s,baz=150,slow=20,SNR=6.0						
AKTO				Lg	Lg	06 18 49.9	
	0.2nm,0.3s,baz=225,slow=13,SNR=2.5						
	3.0nm,0.6s						
ZALV	**Zalesovo Beam**	**18.31**	**29**	P	**P**	**06 15 05.7**	**-3.3**
	1.8nm,0.6s,baz=221,slow=11,SNR=8.3						
ARTI	**Arti**	**19.27**	**340**	P	**Pn**	**06 15 20.6**	**0.0**
	0.2nm,0.3s,baz=189,slow=13,SNR=1.9						
ARTI				S	**Sn**	**06 18 49.3**	**-6.3**
	1.4nm,0.4s,baz=168,slow=14,SNR=2.3						
	2.0nm,0.5s						
BELG	**Belogornoye**	**20.64**	**319**	P	Pn	06 15 36.7	-0.2
	7.0nm,0.6s,baz=81,slow=1.2,SNR=6.0						
	7.0nm,0.6s						
FINES	**FINESS Array B**	**35.17**	**325**	P	**P**	**06 17 49.5**	**+1.1**
	5.1nm,1.1s,baz=108,slow=11,SNR=5.3						
	5.1nm,1.1s						
ARCES	**ARCESS Array B**	**38.77**	**337**	P	**P**	**06 18 20.1**	**+1.1**
	1.5nm,0.8s,baz=106,slow=6.9,SNR=5.0						
	1.5nm,0.8s						
HFS	**Hagfors**	**40.80**	**320**	P	**P**	**06 18 37.3**	**+1.3**
	2.3nm,0.6s,baz=98,slow=9.1,SNR=8.7						
	2.3nm,0.6s						
NB2	**NORSAR Subarra**	**42.10**	**322**	P	**P**	**06 18 47.0**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=93,slow=8.6						
NOA	**NORSAR Array B**	**42.10**	**322**	P	**P**	**06 18 47.3**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=92,slow=8.0,SNR=4.4						
	comp=Z,1.4nm,0.8s						
EKA	**Eskdalemuir Ar**	**50.11**	**315**	P	**P**	**06 19 49.5**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=72,slow=6.7,SNR=4.4						
	comp=Z,0.4nm,0.4s						
TGY	**Tagaytay City**	**51.07**	**104**	LR	LR	06 44 07.1	
	comp=Z,206nm,19.7s,baz=195,slow=39						
ESDC	**Sonseca Array**	**55.69**	**296**	P	**P**	**06 20 31.8**	**+0.5**
	comp=Z,1.3nm,0.9s,baz=64,slow=6.5,SNR=6.6						
	comp=Z,1.3nm,0.9s						
BOSA	**Boshof**	**78.92**	**219**	LR	LR	07 00 39.4	
	comp=Z,646nm,20.3s,baz=326,slow=38						
YKA	**Yellowknife Ar**	**79.06**	**2**	P	**P**	**06 22 57.0**	**-1.5**
	comp=Z,0.1nm,0.6s,baz=349,slow=6.0,SNR=5.7						
	comp=Z,0.1nm,0.6s						

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*TIR **14** 06:11:35.5, 41°.60N×19°.46E, h7^{km}±3^{km}, Ml2.5/2*
*PDG **14** 06:11:37.0±0.3, 41°.67N×19°.50E, h12^{km}±1^{km}, ML2.6/10, Error ellipse: s-maj=1.4km s-min=1.4km az=90.0*

ISC 14 06:11:35.4±1.3, **41°.58N**±0°.05×**19°.46E**±0°.05, **h20**^{km}±4^{km}, **n13,** σ**0^{s}.97**/26, **9C-1D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.39**	**127**	Pg	**Pg**	**06 11 43.1**	**-0.4**
TIR				Sg	**Sg**	**06 11 49.3**	**+0.2**
TIR				AML	AML	06 11 51.1	
	1.6nm,0.2s						
ULC	**Ulcinj**	**0.41**	**338**	⇑*i*Pg	**Pb**	**06 11 43.4**	**-0.7**
ULC				*i* Sg	**Sb**	**06 11 50.0**	**0.0**
SDA	**Shkodra**	**0.47**	**4**	P	**Pb**	**06 11 44.5**	**-0.5**
SDA				S	**Sb**	**06 11 51.3**	**-0.3**
DRME	**Dracevica, Mon**	**0.64**	**342**	⇑*i*Pg	**Pb**	**06 11 47.7**	**-0.1**
DRME				*e*Sg	**Sn**	**06 11 57.8**	**-1.1**
PHP	**Peshkopia**	**0.74**	**82**	Pg	**Pg**	**06 11 49.5**	**-0.5**
PHP				Sg	**Sb**	**06 12 00.3**	**+0.8**
PHP				AML	AML	06 12 03.1	
	1.1nm,0.3s						
BUM	**Brajici-Budva**	**0.83**	**330**	⇑*i*Pg	**Pn**	**06 11 52.2**	**+0.1**
BUM				*i* Sg	**Sn**	**06 12 03.4**	**-0.4**
PDG	**Podgorica**	**0.86**	**350**	⇑*i*Pg	**Pn**	**06 11 52.1**	**-0.3**
PDG				*i* Sg	**Sn**	**06 12 04.2**	**-0.2**
PVY	**Plav**	**1.08**	**20**	⇓*i*Pg	**Pb**	**06 11 54.9**	**-0.6**
PVY				*i* Sg	**Sn**	**06 12 10.8**	**+0.8**
HCY	**Herceg Novi**	**1.12**	**321**	⇑*i*Pg	**Pg**	**06 11 56.3**	**-0.9**
HCY				*i* Sg	**Sn**	**06 12 13.8**	**+2.9**
NKME	**Niksic**	**1.24**	**343**	⇑*i*Pg	**Pg**	**06 11 59.2**	**-0.3**
NKME				*e*Sg	**Sg**	**06 12 17.1**	**+1.4**
KOME	**Kolasin**	**1.27**	**2**	⇑*i*Pg	**Pg**	**06 11 59.0**	**-1.0**

KOME				eSg	Sg	06 12 17.5	+0.9
IVA	Berane	1.33	14	⇑iPg	Pb	06 11 59.7	0.0
IVA				i Sg	Sg	06 12 19.0	+0.5
BRY	Bratogost	1.48	333	⇑iPg	Pg	06 12 03.0	-1.1
BRY				i Sg	Sg	06 12 24.9	+1.5

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*NEIC **14** 06:12:35.5±1.6,39.°33S±0.°04×176.°11E±0.°04,h61^{km}±6^{km}, mb5.0/27,Mwr5.0/30,Mww5.0/10,Error ellipse: s-maj=6.8km s-min=4.0km az=151.0,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.77; $M_{\theta\theta}$2.25; $M_{\phi\phi}$-3.02; $M_{r\theta}$1.48; $M_{\theta\phi}$0.34; $M_{\phi r}$-1.84; Fault plane solution: $M_0$3.61000×10^{16} NP1:ϕ_s40.31000°, δ46.25000°,λ170.31000°. NP2:ϕ_s137.04000°,δ83.02000°, λ44.16000°. Principal axes: T 3.2487, Plg35.0000°, Azm9.0000°; N 0.6434, Plg45.0000°, Azm144.0000°; P -3.8921, Plg24.0000°, Azm261.0000°;*

*NOU **14** 06:12:35.0,39.°39S×176.°17E,h63^{km},mb5.1/37,North Island, New Zealand*

*NEIC **14** 06:12:35.5,39.°32S×176.°11E,h60^{km}*

*NEIC **14** 06:12:35.7,39.°32S×176.°12E,h60^{km}*

*NEIC **14** 06:12:35.7,38.°52S×175.°73E,h60^{km},Moment Tensor Solution. Duration: 1^{s}5 Moment tensor: Scale 10^{16}Nm; M_{rr}1.47; $M_{\theta\theta}$-4.89; $M_{\phi\phi}$3.41; $M_{r\theta}$-0.35; $M_{\theta\phi}$0.25; $M_{\phi r}$1.45; Fault plane solution: $M_0$4.60000×10^{16} NP1:ϕ_s50.00000°, δ67.80000°,λ18.09000°. NP2:ϕ_s312.96000°,δ73.30000°, λ156.76000°. Principal axes: T 4.1888, Plg28.0000°, Azm270.0000°; N 0.7304, Plg62.0000°, Azm99.0000°; P -4.9192, Plg4.0000°, Azm2.0000°;*

*WEL **14** 06:12:36.9±0.3,39°S±2°×17°6E±°,h45^{km}±3^{km},M4.9/114, ML4.8/61,MLv4.9/114 Error ellipse: s-maj=2.7km s-min=2.5km az=14.9,confirmed*

*WEL **14** 06:12:36.9,39.°26S×176.°14E,h66^{km},ML4.9,Mw5.0, Moment Tensor Solution. s13 Moment tensor: Scale 10^{16}Nm; M_{rr}0.17; $M_{\theta\theta}$2.59; $M_{\phi\phi}$-2.77; $M_{r\theta}$1.56; $M_{\theta\phi}$0.16; $M_{\phi r}$-1.30; Fault plane solution: $M_0$3.37000×10^{16} NP1: ϕ_s134.00000°,δ87.00000°,λ37.00000°. NP2:ϕ_s42.00000°, δ53.00000°,λ177.00000°. Principal axes: T 3.3870, Plg27.0000°, Azm5.0000°; N -0.0399, Plg53.0000°, Azm137.0000°; P -3.3471, Plg23.0000°, Azm262.0000°; Stations used: TSZ RTZ PXZ WAZ VRZ KNZ HIZ BFZ MWZ MRZ TOZ KHEZ MKAZ OBLIQUE FAULTING*

*IDC **14** 06:12:37.9±1.0,39.°00S×176.°10E,h87^{km}±9^{km},mb4.3/10, mbtmp4.6/10,MS3.6/2 Error ellipse: s-maj=14.9km s-min=13.0km az=33.0*

ISC 14 06:12:35.7±0.5**,39.°30S**±0.°03×**176.°12E**±0.°03**,h69**^{km}±3^{km}**, n326,**σ1^{s}**16**/351**,mb5.1**/38**,5C,North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KWHZ	Kaweka Forest	0.26	118	P	Pn	06 12 47.2	+0.6
KWHZ				S	Sn	06 12 55.6	+1.1
KFHS	Kaweka Forest	0.30	116	P	Pn	06 12 47.4	+0.7
MOVZ	Moawhango	0.30	250	P	Pn	06 12 47.2	+0.4
MOVZ				S	Sn	06 12 55.1	+0.1
BKZ	Black Stump Fm	0.32	65		Pn	06 12 46.7	-0.2
BKZ					Sn	06 12 55.3	+0.1
BKZ	Black Stump Fm	0.32	65	P	Pn	06 12 47.3	+0.4
BKZ	Black Stump Fm	0.32	65	P	Pn	06 12 47.1	+0.1
BKZ				S	Sn	06 12 54.9	-0.3
ETVZ	East Tongariro	0.36	297	P	Pn	06 12 47.8	+0.5
ETVZ				S	Sn	06 12 56.0	+0.2
TUVZ	Tukino	0.36	275	P	Pn	06 12 48.0	+0.6
TUVZ				S	Sn	06 12 56.3	+0.4
TMVZ	Te Maari	0.38	300	P	Pn	06 12 47.9	+0.5
TMVZ				S	Sn	06 12 56.1	+0.1
OTVZ	Oturere	0.38	291	P	Pn	06 12 48.1	+0.5
OTVZ				S	Sn	06 12 56.5	+0.4
RITZ	Rihia Road	0.38	328	P	Pn	06 12 47.9	+0.5
KRHZ	Kereru	0.39	151	P	Pn	06 12 48.2	+0.7
KRHZ				S	Sn	06 12 56.9	+0.8
SNVZ	South Ngauruho	0.39	287	P	Pn	06 12 48.2	+0.6
TTHS	Turangi Tongar	0.40	323	P	Pn	06 12 48.0	+0.5
NTVZ	North Tongarir	0.40	300	P	Pn	06 12 48.1	+0.5
WNVZ	Wahianoa	0.41	266	P	Pn	06 12 48.3	+0.6
WNVZ				S	Sn	06 12 56.9	+0.4
HATZ	Hinemaiaia	0.41	357	P	Pn	06 12 47.6	-0.1
HATZ				S	Sn	06 12 55.2	-1.1
WHVZ	Whangaehu Hut	0.41	273	P	Pn	06 12 48.4	+0.5
WHVZ				S	Sn	06 12 56.7	-0.1
NGZ	Ngauruhoe	0.42	287	P	Pn	06 12 48.5	+0.6
NGZ				S	Sn	06 12 57.3	+0.5
KRVZ	Karewarewa	0.43	299	P	Pn	06 12 48.4	+0.5
NNVZ	North Ngauruho	0.43	293	P	Pn	06 12 48.5	+0.5
MAVZ	Matarangi	0.44	274	P	Pn	06 12 48.6	+0.5
MAVZ				S	Sn	06 12 57.1	-0.2
FWVZ	Far West T-bar	0.45	276	P	Pn	06 12 48.7	+0.5
FWVZ				S	Sn	06 12 57.2	-0.1
TRVZ	Turoa	0.45	270	P	Pn	06 12 48.7	+0.6
TRVZ				S	Sn	06 12 57.3	0.0
THHS	Taihape Hospit	0.45	214	P	Pn	06 12 48.8	+0.7
THHS				S	Sn	06 12 58.1	+1.1
WTVZ	West Tongariro	0.45	294	P	Pn	06 12 48.6	+0.5
WTVZ				S	Sn	06 12 57.5	+0.3
COVZ	Chateau Observ	0.46	283	P	Pn	06 12 48.7	+0.6
COVZ				S	Sn	06 12 57.5	+0.2
KATZ	Kakaramea	0.47	314	P	Pn	06 12 49.0	+0.8
MCHZ	McNeill Hill	0.47	108	P	Pn	06 12 49.3	+1.2
WAKS	Wakarara Rangi	0.48	168	P	Pn	06 12 49.3	+1.0
MTVZ	Mangateitei	0.51	261	P	Pn	06 12 49.3	+0.7
MTVZ				S	Sn	06 12 58.7	+0.7
RATZ	Rangitukua	0.51	328	P	Pn	06 12 48.7	+0.1
MRHZ	Matea Rd	0.52	26	P	Pn	06 12 48.5	-0.2
MRHZ				S	Sn	06 12 57.4	-0.8
ORCS	Ohakune Ruapeh	0.56	258	P	Pn	06 12 49.9	+0.9
MNGS	Mangaweka Scho	0.57	207	P	Pn	06 12 50.3	+1.2
NMHZ	Naumai	0.57	69	P	Pn	06 12 50.2	+1.0
TWVZ	Taurewa	0.58	293	P	Pn	06 12 49.5	+0.1
PKVZ	Pokaka	0.60	271	P	Pn	06 12 50.3	+0.8
NAAS	Napier Airport	0.60	106	P	Pn	06 12 50.4	+1.0
PNHZ	Pukenui	0.61	174	P	Pn	06 12 50.4	+0.8
NCDS	Napier Civil D	0.62	109	P	Pn	06 12 50.5	+1.0
TPPS	Taupo Police S	0.62	356	P	Pn	06 12 49.7	+0.1
NCHS	Napier Colenso	0.63	109	P	Pn	06 12 50.7	+0.9
NGHS	Napier Girls H	0.64	107	P	Pn	06 12 50.8	+1.0
NSPS	Napier St Paul	0.64	107	P	Pn	06 12 50.8	+1.0
WHTZ	Whakaora	0.65	348	P	Pn	06 12 50.2	+0.2
HCDS	Hastings Civil	0.65	122	P	Pn	06 12 50.9	+0.9
WATZ	Wairara	0.67	333	P	Pn	06 12 50.1	0.0
HUTZ	Huka	0.67	358	P	Pn	06 12 50.4	+0.2
ARHZ	Aropaoanui	0.68	87	P	Pn	06 12 51.0	+0.7
MTHZ	Maungataniwha	0.72	51	P	Pn	06 12 51.0	+0.3
WPWS	Waipawa Distri	0.73	151	P	Pn	06 12 51.8	+0.9
ALRZ	Allen Road	0.76	13	P	Pn	06 12 51.0	-0.2
KAHZ	Kahuranaki	0.76	130	P	Pn	06 12 52.3	+1.0
TSZ	Takapari Road	0.77	189	P	Pn	06 12 52.3	+1.0
WPRZ	Whakapapatarin	0.78	2	P	Pn	06 12 51.4	-0.1
WPHZ	Waipukurau	0.80	162	P	Pn	06 12 52.6	+0.9
TUHS	Taumarunui Hig	0.81	302	P	Pn	06 12 52.2	+0.5
CKHZ	Cape Kidnapper	0.82	116	P	Pn	06 12 52.8	+0.9
PRRZ	Plateau Road	0.83	15	P	Pn	06 12 51.8	-0.2
RAHZ	Arahi	0.84	63	P	Pn	06 12 52.8	+0.5
KUTZ	Kaahu Road	0.84	344	P	Pn	06 12 52.2	0.0
TIRS	Atiamuri Tiroh	0.85	349	P	Pn	06 12 52.2	-0.1
WHHZ	Waihua	0.89	76	P	Pn	06 12 53.4	+0.6
HRRZ	Handcock Road	0.92	8	P	Pn	06 12 53.1	-0.1
PXZ	Pawanui	0.93	142	P	Pn	06 12 53.9	+0.7
RTZ	Ruatahuna	0.96	45		Pn	06 12 53.6	0.0
RTZ					Sn	06 13 06.9	-0.1
RTZ	Ruatahuna	0.96	45	P	Pn	06 12 53.7	0.0
MUGZ	Murupara	0.97	32	P	Pn	06 12 53.3	-0.4
WAZ	Wanganui	0.99	242	P	Pn	06 12 55.9	+1.9
HSRZ	Hossack Road	0.99	6	P	Pn	06 12 54.1	0.0
DVHZ	Dannevirke	1.00	178	P	Pn	06 12 54.6	+0.5
RRRZ	Republican Roa	1.01	18	P	Pn	06 12 54.1	-0.2
PRHZ	Porangahau	1.04	158	P	Pn	06 12 55.4	+0.8
HLRZ	Highlands Stat	1.06	10	P	Pn	06 12 55.4	+0.5
TLZ	Tolley Road	1.07	335	P	Pn	06 12 55.1	0.0
VRZ	Vera Road	1.07	279	P	Pn	06 12 55.9	+0.9
SNGZ	Shannon Statio	1.08	62	P	Pn	06 12 55.5	+0.3
OHWZ	Ohakea	1.10	214	P	Pn	06 12 57.2	+1.8
TARZ	Mount Tarawera	1.11	16	P	Pn	06 12 55.7	+0.1
POWZ	Post Office Ro	1.12	194	P	Pn	06 12 56.3	+0.6
UTU	Utuhina	1.12	3	P	Pn	06 12 55.9	+0.2
ANWZ	Angora Road	1.19	167	P	Pn	06 12 57.2	+0.7
MKRZ	Makatiti	1.19	13	P	Pn	06 12 57.1	+0.4
NGRZ	Ngongotaha	1.20	2	P	Pn	06 12 56.9	+0.2
OMRZ	Omania	1.21	9	P	Pn	06 12 56.7	-0.1
KNZ	Kokohu	1.24	77	P	Pn	06 12 56.9	-0.3
PRWZ	Pori Road	1.26	185	P	Pn	06 12 58.1	+0.6
HIZ	Hauiti	1.26	308		Pn	06 12 58.1	+0.6
HIZ					Sn	06 13 14.2	+0.3
HIZ	Hauiti	1.26	308	P	Pn	06 12 58.2	+0.7
HIZ	Hauiti	1.26	308	S	Sn	06 13 14.5	+0.7
HIZ	Hauiti	1.26	308	P	Pn	06 12 58.1	+0.6
KARZ	Kaharoa	1.28	4	P	Pn	06 12 57.8	0.0
EDRZ	Edgecumbe	1.29	22	P	Pn	06 12 57.7	-0.2
RAGZ	Rawiri	1.29	52	P	Pn	06 12 58.0	+0.1
URZ	Urewera	1.30	37	P	Pn	06 12 58.0	0.0
	6μm,0.4s,baz=226,slow=7.7,SNR=8144						
URZ				S	Sn	06 13 13.8	-0.8
	9μm,0.3s,baz=109,slow=21,SNR=71						
URZ				LR	LR	06 13 31.4	
	comp=Z,5μm,19.3s,baz=280,slow=49						
URZ	Urewera	1.30	37	P	Pn	06 12 57.9	0.0
URZ	Urewera	1.30	37	P	Pn	06 13 14.1	+16
URZ	Urewera	1.30	37	P	Pn	06 12 57.5	-0.4
LIRZ	Lichensteins R	1.31	9	P	Pn	06 12 58.5	+0.3
LREZ	Lake Rotokare	1.34	263	P	Pn	06 13 00.1	+1.6
BFZ	Birch Farm	1.38	176		Pn	06 12 59.3	+0.2
BFZ	Birch Farm	1.38	176	P	Pn	06 12 58.6	-0.5
BFZ	Birch Farm	1.38	176	P	Pn	06 12 59.2	+0.2
MARZ	Manawahe	1.38	18	P	Pn	06 12 59.0	-0.2
MHGZ	Mahia Peninsul	1.39	84	P	Pn	06 12 59.2	0.0
RIGZ	Rimuhau	1.41	66	P	Pn	06 12 59.3	-0.2
MHEZ	Mangahewa	1.42	279	P	Pn	06 13 01.3	+1.8
MRZ	Mangatainoka R	1.42	197		Pn	06 12 59.4	-0.1
MRZ	Mangatainoka R	1.42	197	P	Pn	06 12 59.7	+0.1
PRGZ	Paritu Road	1.42	75	P	Pn	06 12 59.4	-0.2
KMRZ	Kaimai	1.46	354	P	Pn	06 13 00.3	+0.2
MWZ	Matawai	1.46	49	P	Pn	06 12 59.8	-0.3
TIWZ	Tintock	1.48	187	P	Pn	06 13 00.7	+0.2
OPRZ	Ohinepanea	1.49	13	P	Pn	06 13 00.3	-0.2
DREZ	Durham Road	1.50	274	P	Pn	06 13 02.2	+1.7
PREZ	Palmer Road	1.52	268	P	Pn	06 13 03.0	+2.0
NEZ	North Egmont	1.57	271	P	Pn	06 13 03.9	+2.2
TGRZ	Tauranga	1.57	4	P	Pn	06 13 01.8	+0.2
WHRZ	Whale Island	1.59	25	P	Pn	06 13 01.8	0.0
TKGZ	Te Karaka	1.60	58	P	Pn	06 13 02.2	+0.3
CPWZ	Castlepoint	1.61	178	P	Pn	06 13 02.6	+0.6
KHEZ	Kahui Hut	1.64	270	P	Pn	06 13 04.4	+1.9
KHEZ	Kahui Hut	1.64	270	P	Pn	06 13 04.2	+1.7
TOZ	Tahuroa Road	1.64	343		Pn	06 13 02.4	-0.1
TOZ	Tahuroa Road	1.64	343	P	Pn	06 13 02.8	+0.3
HOWZ	Holdsworth Sta	1.66	196	P	Pn	06 13 02.5	-0.3
PKE	Pukeiti	1.66	273	P	Pn	06 13 04.5	+1.7
OGWZ	Otaki Gorge	1.68	205	P	Pn	06 13 03.1	0.0
NMEZ	Namu Road	1.74	266	P	Pn	06 13 05.6	+1.8
NBEZ	Newall Road No	1.75	270	P	Pn	06 13 05.5	+1.5
RUGZ	Raukumara Rang	1.81	43	P	Pn	06 13 04.1	-0.7
TMWZ	Te Maipa	1.81	186	P	Pn	06 13 04.4	-0.4
KIW	Kapiti Island	1.81	210	P	Pn	06 13 04.8	-0.1
CNGZ	Carnagh Statio	1.82	64	P	Pn	06 13 05.1	+0.2
TWGZ	Tauwhareparae	1.84	53	P	Pn	06 13 05.4	+0.2
MTW	Mount Morrison	1.91	194	P	Pn	06 13 05.3	-0.8
WIZ	White Island	1.96	26	P	Pn	06 13 06.2	-0.5
WSRZ	White Island S	1.96	25	P	Pn	06 13 07.6	+0.7
CAW	Cannon Point	1.98	204	P	Pn	06 13 06.4	-0.6
HAZ	Te Kaha	2.02	41	P	Pn	06 13 06.4	-1.2
MYRZ	Mayor Island	2.02	3	P	Pn	06 13 08.3	+0.7
PUZ	Puketiti	2.07	54	P	Pn	06 13 07.5	-0.8
PKGZ	Pakihiroa	2.10	48	P	Pn	06 13 08.2	-0.5
TRWZ	Traveller	2.12	189	P	Pn	06 13 08.1	-0.9
PAWZ	Paruwai Farm	2.14	194	P	Pn	06 13 08.1	-1.2
MSWZ	Moikau Station	2.21	197		Pn	06 13 08.8	-1.4
MSWZ	Moikau Station	2.21	197	P	Pn	06 13 09.0	-1.3
WEL	Wellington	2.23	207	P	Pn	06 13 09.6	-0.8
DUWZ	D'Urville Isla	2.26	228	P	Pn	06 13 10.4	-0.4
SNZO	South Karori	2.28	208		Pn	06 13 10.0	-1.1
SNZO	South Karori	2.28	208	P	Pn	06 13 10.4	-0.7
BHW	Baring Head	2.31	204		Pn	06 13 09.9	-1.6
BHW	Baring Head	2.31	204	P	Pn	06 13 10.2	-1.3
MKAZ	Moumakai	2.32	341	P	Pn	06 13 12.0	+0.3
WMGZ	Waiomatatini S	2.33	51	P	Pn	06 13 11.2	-0.5
TCW	Tory Channel	2.37	216		Pn	06 13 11.2	-1.1
TCW	Tory Channel	2.37	216	P	Pn	06 13 11.5	-0.9
KBAZ	Karaka Road Bo	2.41	336	P	Pn	06 13 13.7	+0.9
MXZ	Matakaoa Point	2.44	45	Pn	Pn	06 13 13.2	-0.1
MXZ	Matakaoa Point	2.44	45	P	Pn	06 13 13.1	-0.1
MXZ	Matakaoa Point	2.44	45	P	Pn	06 13 13.2	-0.1
AWAZ	Awhitu Peninsu	2.52	332	P	Pn	06 13 15.1	+0.7
ETAZ	East Tamaki Re	2.53	338	P	Pn	06 13 15.0	+0.6
KUZ	Kuaotunu	2.57	353	P	Pn	06 13 15.1	0.0
KUZ	Kuaotunu	2.57	353	P	Pn	06 13 15.3	+0.3
WIAZ	Waiheke Island	2.62	342	P	Pn	06 13 15.6	-0.1
EPAZ	Eden Park BICE	2.66	335	P	Pn	06 13 16.9	+0.7
WTAZ	Waiatarua	2.66	332	P	Pn	06 13 17.3	+0.9
HBAZ	Herne Bay Bore	2.68	335	P	Pn	06 13 17.2	+0.7
TUWZ	Tuamarina	2.70	217	Pn	Pn	06 13 16.2	-0.6
TUWZ	Tuamarina	2.70	217	P	Pn	06 13 16.6	-0.2
MBAZ	Motutapu North	2.71	339	P	Pn	06 13 17.5	+0.6
RVAZ	Riverhead Bore	2.81	334	P	Pn	06 13 18.9	+0.7
NNZ	Nelson	2.84	227	Pn	Pn	06 13 17.9	-0.7
NNZ	Nelson	2.84	227	P	Pn	06 13 17.5	-1.1
CMWZ	Cape Campbell	2.84	210	Pn	Pn	06 13 18.1	-0.7
CMWZ	Cape Campbell	2.84	210	P	Pn	06 13 17.9	-0.9
ABAZ	Army Bay	2.88	339	P	Pn	06 13 20.0	+0.8
BSWZ	Blackbirch Sta	2.96	215	Pn	Pn	06 13 19.2	-1.0
BSWZ	Blackbirch Sta	2.96	215	P	Pn	06 13 18.8	-1.5
TKNZ	Takaka Hill	2.98	233	Pn	Pn	06 13 19.6	-1.0
TKNZ	Takaka Hill	2.98	233	P	Pn	06 13 19.5	-1.0
GRZ	Great Barrier	3.09	350	P	Pn	06 13 22.5	+0.4
QRZ	Quartz Range	3.15	240	Pn	Pn	06 13 21.8	-1.1
QRZ	Quartz Range	3.15	240	P	Pn	06 13 21.6	-1.3
QRZ	Quartz Range	3.15	240	P	Pn	06 13 21.7	-1.3
MRNZ	Matariki Terra	3.32	230		Pn	06 13 23.8	-1.4
MRNZ	Matariki Terra	3.32	230	P	Pn	06 13 24.2	-1.0
THZ	Tophouse	3.47	224		Pn	06 13 26.1	-1.3
THZ	Tophouse	3.47	224	P	Pn	06 13 25.9	-1.5
WCZ	Waipu Caves	3.64	337	P	Pn	06 13 30.5	+0.8
KHZ	Kahutara	3.68	211		Pn	06 13 27.7	-2.3
KHZ	Kahutara	3.68	211	P	Pn	06 13 28.0	-2.1
KHZ	Kahutara	3.68	211	P	Pn	06 13 28.0	-2.1
DSZ	Denniston Nort	4.10	232		Pn	06 13 34.0	-1.8
DSZ	Denniston Nort	4.10	232	P	Pn	06 13 33.7	-2.2
GVZ	Greta Valley S	4.34	211		Pn	06 13 37.6	-1.5
LTZ	Lake Taylor	4.54	219		Pn	06 13 39.8	-2.1
LTZ	Lake Taylor	4.54	219	P	Pn	06 13 39.3	-2.6
OUZ	Omahuta	4.55	333	P	Pn	06 13 42.9	+0.9
OUZ	Omahuta	4.55	333	P	Pn	06 13 43.0	+1.1
INZ	Inchbonnie	4.92	224		Pn	06 13 45.3	-1.7
RPZ	Rata Peaks	5.82	219		Pn	06 13 57.5	-1.9
RPZ	Rata Peaks	5.82	219	P	Pn	06 13 57.3	-2.1
RPZ	Rata Peaks	5.82	219	P	Pn	06 13 57.1	-2.3
LBZ	Lake Benmore	6.74	219		Pn	06 14 10.1	-1.9
CTZ	Chatham Island	7.02	131	Pn	Pn	06 14 15.3	-0.4
CTZ	Chatham Island	7.02	131	P	Pn	06 14 15.3	-0.4
CTZ	Chatham Island	7.02	131	P	Pn	06 14 15.1	-0.6
ODZ	Otahua Downs	7.03	214	P	Pn	06 14 12.2	-3.7
JCZ	Jackson Bay	7.27	227	P	Pn	06 14 16.4	-2.9
MSZ	Milford Sound	8.13	226	P	Pn	06 14 32.8	+2.0
MLZ	Mavora Lakes	8.47	222	P	Pn	06 14 33.6	-2.1
SYZ	Scrubby Hill	8.86	213	P	Pn	06 14 38.3	-2.5
WHZ	Wether Hill Ro	8.93	220	Pn	Pn	06 14 40.8	-1.0
WHZ	Wether Hill Ro	8.93	220	P	Pn	06 14 39.9	-1.9
DCZ	Deep Cove	9.05	224	Pn	Pn	06 14 42.5	-1.0
PYZ	Puysegur Point	9.76	222	Pn	Pn	06 14 52.8	-0.3
PYZ	Puysegur Point	9.76	222	P	Pn	06 14 52.8	-0.3
PYZ	Puysegur Point	9.76	222	P	Pn	06 14 58.2	+5.1
DZM	Mont Dzumac	19.06	331	P	Pn	06 16 54.7	+0.7
	15nm,1.0s,baz=164,slow=11,SNR=7.1						
DZM	Mont Dzumac	19.06	331	eP	P	06 16 53.3	+0.7
	44nm,1.2s						
DZM				eS	S	06 20 14.8	-11
	330nm,22.9s						
DZM				eLR	LR	06 21 21.6	
	444nm,26.8s						
DZM	Mont Dzumac	19.06	331	P	P	06 16 52.2	-0.4
DZM	Mont Dzumac	19.06	331	P	Pn	06 16 55.2	+1.1
MSVF	Nonsavu	21.56	5		P	06 17 18.1	-1.4
MSVF				IAmb	IAmb	06 17 25.2	
	comp=Z,32nm,1.0s						
MSVF	Nonsavu	21.56	5	P	P	06 17 19.0	-0.6
ARMA	Armidale	21.91	286		P	06 17 25.7	+2.3
ARMA				IAmb	IAmb	06 17 28.9	
	comp=Z,44nm,0.9s						
MOO	Moorlands	22.06	252	P	P	06 17 25.6	+0.9
TOO	Toolangi	24.00	264	P	P	06 17 45.1	+1.0
EIDS	Eidsvold	25.21	296	P	P	06 17 55.8	+0.8
EIDS				IAmb	IAmb	06 18 00.7	
	comp=Z,22nm,0.9s						
CMSA	Cobar Meteorol	25.89	278	P	P	06 18 02.4	+1.2
RAR	Rarotonga	27.41	56	LR	LR	06 27 57.2	
	comp=Z,94nm,19.0s,baz=268,slow=34						
STKA	Stephens Creek	28.91	274	P	P	06 18 29.6	+1.4
	comp=Z,12nm,0.8s,baz=105,slow=10,SNR=35						
	comp=Z,12nm,0.8s						
STKA	Stephens Creek	28.91	274	P	P	06 18 28.8	+0.6
HTT	Hallett	30.37	269	P	P	06 18 42.2	+1.0
CTAO	Charters Tower	32.03	298	P	P	06 18 56.6	+0.9
CTAO	Charters Tower	32.03	298	P	P	06 18 57.6	+1.8
BBOO	Buckleboo	32.83	269	P	P	06 19 02.4	-0.4
BBOO				IAmb	IAmb	06 19 04.0	
	comp=Z,69nm,1.6s						
BBOO	Buckleboo	32.83	269	P	P	06 19 02.8	+0.1
TBI	Tubuai	33.19	72	eLR	LR	06 27 59.4	
	comp=Z,2μm,28.2s						
DRV	Dumont d'Urvil	34.07	205	P	P	06 19 11.9	-1.2
DRV				pP	pP	06 19 26.8	-2.9
DRV				sP	sP	06 19 34.4	-3.5
QIS	Mount Isa	36.43	290	P	P	06 19 35.3	+1.4
PPT2	Papeete2	36.79	64	eLR	LR	06 29 26.9	
	comp=Z,191nm,31.8s						
PPT2				eLR	LR	06 29 34.3	
	comp=Z,496nm,34.5s						
PPT	Papeete	36.80	64	LR	LR	06 33 03.4	
	comp=Z,126nm,18.8s,baz=244,slow=33						
COEN	Coen	38.43	302		P	06 19 51.2	+0.4
COEN				IAmb	IAmb	06 19 53.4	
	comp=Z,33nm,0.9s						
COEN	Coen	38.43	302	P	P	06 19 51.8	+1.0
VNDA	Vanda	38.80	185	P	P	06 19 55.6	+2.4
	comp=Z,1.3nm,0.7s,baz=324,slow=4.5,SNR=4.7						
	comp=Z,1.3nm,0.7s						
VNDA	Vanda	38.80	185	P	P	06 19 54.7	+1.5
AS31	Alice Springs	38.86	281		P	06 19 54.1	-0.3
AS31				IAmb	IAmb	06 19 56.7	
	comp=Z,24nm,1.4s						
ASAR	Alice Springs	38.86	281	P	P	06 19 54.3	-0.1
	comp=Z,32nm,0.9s,baz=123,slow=7.4,SNR=194						
ASAR				S	S	06 25 44.0	-3.5
	comp=Z,2.6nm,0.9s,baz=124,slow=15,SNR=12						
	comp=Z,32nm,0.9s						
ASAR	Alice Springs	38.86	281		P	06 19 54.5	+0.1
FORT	Forrest	39.87	267		P	06 20 02.1	-0.6
FORT				IAmb	IAmb	06 20 03.7	
	comp=Z,25nm,0.9s						
WRAB	Tennant Creek	40.69	286		P	06 20 09.9	+0.3
WRAB				IAmb	IAmb	06 20 10.8	
	comp=Z,44nm,0.9s						
WRAB	Tennant Creek	40.69	286	P	P	06 20 09.6	0.0
WRAB	Tennant Creek	40.69	286	P	P	06 20 09.8	+0.2
WRAB				pP	pP	06 20 24.5	-2.5
WRA	Warramunga Arr	40.70	286	P	P	06 20 09.8	+0.2
	comp=Z,30nm,0.8s,baz=124,slow=8.1,SNR=137						
WRA				ScP	ScP	06 25 47.3	-6.2
	comp=Z,1.4nm,0.8s,baz=124,slow=4.3,SNR=6.3						
WRA				S	S	06 26 11.4	-3.6
	comp=Z,0.8nm,1.0s,baz=113,slow=13,SNR=3.2						
	comp=Z,30nm,0.8s						
WRA	Warramunga Arr	40.70	286		P	06 20 09.0	-0.6
WB0	Warramunga Arr	40.76	286		P	06 20 10.3	+0.1
CASY	Casey	45.04	211		P	06 20 44.8	+0.7
NWAO	Narrogin (SRO)	47.28	259	P	P	06 21 01.8	-0.4
NWAO	Narrogin (SRO)	47.28	259	P	P	06 21 01.0	-1.2
NWAO	Narrogin (SRO)	47.28	259	P	P	06 21 01.3	-0.9
KLBR	Kellerberrin	47.46	260	P	P	06 21 02.7	-0.9
KNRA	Kununurra	47.49	286		P	06 21 04.4	+0.4
KNRA				IAmb	IAmb	06 21 05.5	
	comp=Z,44nm,1.3s						
MUN	Mundaring	48.47	259	P	P	06 21 10.8	-0.6
BLDU	Ballidu	48.70	261	P	P	06 21 12.4	-0.8
MEEK	Meekatharra	49.13	267	P	P	06 21 15.7	-0.9
TAOE	Nuku Hiva Isla	49.42	64	eLR	LR	06 35 13.3	
	comp=Z,435nm,30.6s						
MORW	Morawa	49.93	263		P	06 21 21.8	-0.8
MORW	Morawa	49.93	263	P	P	06 21 21.9	-0.8
QSPA	South Pole Qui	50.82	180	P	P	06 21 31.8	+2.8
	comp=Z,16nm,0.9s,baz=16,slow=1.5,SNR=62						
	comp=Z,16nm,0.9s						
QSPA	South Pole Qui	50.82	180	P	P	06 21 31.2	+2.2
QSPA				IAmb	IAmb	06 21 43.0	
	comp=Z,22nm,1.0s						
QSPA	South Pole Qui	50.82	180	P	P	06 21 31.5	+2.5
PSA00	Pilbara Seismi	50.84	273	P	P	06 21 29.0	-0.4
PSA00				IAmb	IAmb	06 21 29.6	
	comp=Z,21nm,1.0s						
PSA00	Pilbara Seismi	50.84	273	P	P	06 21 29.1	-0.4
MBWA	Marble Bar	51.15	273	P	P	06 21 30.9	-0.9
MBWA				IAmb	IAmb	06 21 32.0	
	comp=Z,16nm,0.9s						
MBWA	Marble Bar	51.15	273	P	P	06 21 31.4	-0.5
SOEI	Soe	54.65	288	P	P	06 21 57.8	-0.1
EDFI	Ende, Flores	57.22	287	P	P	06 22 15.8	-0.4
	comp=Z,21nm,1.1s						
BKSI	Bulukumba	60.65	289	P	P	06 22 39.5	-0.3
	comp=Z,23nm,1.1s						
KAPI	Kappang	61.13	289	P	P	06 22 43.1	+0.1
KAPI				IAmb	IAmb	06 22 44.8	
	comp=Z,20nm,0.9s						
KAPI	Kappang	61.13	289	P	P	06 22 43.5	+0.4
	comp=Z,13nm,1.1s						
BNSI	Bone	61.28	289	P	P	06 22 44.2	+0.1
	comp=Z,32nm,1.0s						
BELA	Belgrano 2	61.60	173	P	P	06 22 46.1	+0.7
SPSI	Sidrap Palu	61.82	290	P	P	06 22 47.4	-0.3
	comp=Z,4μmcomp=Z,26nm,0.9s						
TTSI	Tana Toraja	62.41	290	P	P	06 22 51.6	-0.1
	comp=Z,31nm,0.8s						
GMJI	Gumukmas	63.73	281	P	P	06 23 00.1	-0.3
	comp=Z,45nm,1.0s						
TOLI2	Tolitoli	64.59	294	P	P	06 23 05.5	-0.6
TOLI2				IAmb	IAmb	06 23 07.7	
	comp=Z,14nm,1.1s						
MPSI	Mapaga	64.68	293	P	P	06 23 06.1	-0.5
SNJI	Sawahan-Nganju	65.32	281	P	P	06 23 12.2	+1.2
	comp=Z,41nm,0.9s						
SJI	Sawahan	65.35	281	P	P	06 23 11.1	0.0
	comp=Z,16nm,0.9s						
BBKI	Banjar Baru	65.80	286	P	P	06 23 13.8	-0.1
KPJI	Karang Pucung	67.77	279	P	P	06 23 26.3	-0.1
	comp=Z,53nm,0.9s						
TROLL	Troll, Antarti	68.90	182	⇑P	P	06 23 33.6	+0.8
	comp=Z,635nm,0.9s						
CNJI	Cibinong	69.17	278	P	P	06 23 34.6	-0.5
SNAA	Sanae	69.33	180	⇑P	P	06 23 36.3	+0.9
	comp=Z,138nm,0.9s						
SNAA	Sanae	69.33	180	P	P	06 23 36.8	+1.4
	comp=Z,6.4nm,0.9s,baz=204,slow=6.2,SNR=15						
	comp=Z,6.4nm,0.9s						
SNAA	Sanae	69.33	180		P	06 23 36.9	+1.5
SNAA				IAmb	IAmb	06 23 55.8	
	comp=Z,14nm,1.2s						
VNA3	Neumayer Olymp	69.68	178	⇑P	P	06 23 38.7	+1.2
	comp=Z,21nm,0.8s						
VNA2	Neumayer--Watz	70.05	179	⇑P	P	06 23 41.0	+1.3
	comp=Z,17nm,0.7s,baz=170,slow=6.4						
VNA1	Neumayer--Stat	70.31	178	⇑P	P	06 23 43.1	+1.8
	comp=Z,19nm,1.0s						
SBUM	Sibu	71.69	289	P	P	06 23 50.3	-0.2
PLCA	Paso Flores	79.83	135	P	P	06 24 38.4	+1.6
	comp=Z,1.9nm,1.2s,baz=244,slow=7.6,SNR=3.6						
	comp=Z,1.9nm,1.2s						
MJAR	Matsushiro Arr	83.17	330	P	P	06 24 53.4	-0.7
	comp=Z,2.3nm,0.7s,baz=156,slow=6.0,SNR=6.1						
	comp=Z,2.3nm,0.7s						
KSRS	Korea Array	88.31	324	P	P	06 25 20.1	+0.8
	comp=Z,4.4nm,0.8s,baz=138,slow=5.1,SNR=9.9						
	comp=Z,4.4nm,0.8s						
NJ2	Nanjing	88.68	314	eP	P	06 25 24.1	+2.8
NJ2				pmax	pmax		
	comp=Z,11nm,0.9s						
WHN	Wuhan	90.14	311	P	P	06 25 26.9	-1.2
CMAR	Chiang Mai Arr	92.01	292	P	P	06 25 38.8	+1.6
	comp=Z,0.7nm,0.3s,baz=116,slow=4.5,SNR=7.5						
CMAR	Chiang Mai Arr	92.01	292	P	P	06 25 36.7	-0.5
PZH	PanZhiHua	95.33	300	P	P	06 25 53.4	+1.0
NVAR	Mina Array Bea	97.96	46	P	P	06 26 04.2	+0.1
	comp=Z,0.2nm,0.5s,baz=216,slow=7.3,SNR=3.7						
	comp=Z,0.2nm,0.5s						
HHC	Hu-ho-hao-te	99.10	316	eP	Pdif	06 26 12.0	+2.9

HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,97nm,4.9s						
PDAR	Pinedale Array	105.81	47	PP	PP	06 31 01.8	-1.3
	comp=Z,0.7nm,1.0s,baz=250,slow=9.0,SNR=3.9						
WMQ	Urumqi	114.83	307	*e*PKP	PKPdf	06 31 09.0	+0.9
YKA	Yellowknife Ar	115.55	29	PKP	PKPdf	06 31 07.2	-1.6
	comp=Z,0.3nm,0.7s,baz=259,slow=1.8,SNR=6.6						
YKA				SKP	SKPdf	06 34 35.2	-2.9
	comp=Z,0.8nm,0.9s,baz=247,slow=2.4,SNR=7.0						
YKA				PKKPbc	PKKPbc	06 41 41.5	-1.7
	comp=Z,0.5nm,0.9s,baz=43,slow=3.4,SNR=8.7						
ULM	Lac du Bonnet	117.80	46	PKP	PKPdf	06 31 11.8	-1.7
	comp=Z,0.9nm,0.4s,baz=156,slow=4.0,SNR=3.1						
MKAR	Makanchi Array	119.61	308	PKP	PKPdf	06 31 16.1	-1.1
	comp=Z,0.5nm,0.8s,baz=243,slow=0.6,SNR=3.1						
KURBB	Kurchatov Arra	123.48	311	PKP	PKPdf	06 31 23.1	-1.2
	comp=Z,0.3nm,0.3s,baz=129,slow=2.1,SNR=5.7						
KBZ	Khabaz	145.06	293	PKP	PKPbc	06 32 05.7	+1.4
	comp=Z,3.7nm,0.8s,baz=122,slow=3.2,SNR=3.9						
ARCES	ARCESS Array B	145.93	342	PKPbc	PKPdf	06 32 05.1	-0.3
	comp=Z,8.4nm,0.7s,baz=37,slow=3.2,SNR=30						
DBIC	Dimbokro	147.50	178	PKPbc	PKPdf	06 32 12.4	+2.6
	comp=Z,2.6nm,0.3s,baz=162,slow=4.3,SNR=9.4						
MMAI	Mount Meron Ar	147.86	271	PKPbc	PKPbc	06 32 14.4	+1.5
	comp=Z,2.5nm,0.6s,baz=91,slow=7.2,SNR=1.8						
BRTR	Keskin Array B	151.19	283	PKPbc	PKPbc	06 32 20.1	-0.9
	comp=Z,1.9nm,0.8s,baz=136,slow=4.3,SNR=4.5						
BRTR				PKPab	PKPab	06 32 27.6	-1.6
	comp=Z,2.0nm,0.7s,baz=118,slow=4.5,SNR=7.4						
FINES	FINESS Array B	151.20	330	PKPbc	PKPdf	06 32 18.7	+4.5
	comp=Z,2.8nm,0.8s,baz=44,slow=2.1,SNR=11						
TORD	Torodi Ar. Bea	153.49	192	PKPbc	PKPbc	06 32 26.7	-0.1
	comp=Z,1.2nm,0.4s,baz=79,slow=2.7,SNR=2.1						
TORD				PKPab	pPKPdf	06 32 39.6	+0.5
	comp=Z,7.5nm,1.0s,baz=153,slow=1.7,SNR=3.3						

KRSC 14 06:23:03.4±0.9, 53°.00N×160°.21E, h44^{km}±6^{km}, Ml3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	0.15	313	*e*P	Pn	06 23 11.8	+1.1
SPN				*e*S	Sn	06 23 17.0	+1.1
NLC	Nalytchevo	0.55	289	*e*P	Pn	06 23 15.6	+0.8
NLC				*e*S	Sn	06 23 24.0	+1.0
SDLR	Sedlovina	0.84	290	*e*P	Pn	06 23 20.0	+1.0
SDLR				*e*S	Sn	06 23 31.5	+1.2
UGLR	Uglovaya	0.86	285	*e*P	Pn	06 23 20.3	+1.1
DALK	Dalny	0.88	273	*e*P	Pn	06 23 19.9	+0.6
DALK				*e*S	Sn	06 23 31.2	+0.4
SMAR	Somma	0.89	288	*e*P	Pn	06 23 20.5	+0.9
AVH	Avacha	0.92	287	*e*P	Pn	06 23 21.4	+1.4
KRER	Koryakskii	0.93	290	*e*P	Pn	06 23 21.5	+1.3
KRER				*e*S	Sn	06 23 34.4	+1.9
PET	Petropavlovsk	0.94	272	*e*P	Pn	06 23 20.8	+0.8
PET				*e*S	Sn	06 23 32.9	+0.6
INSR	Institute	0.97	275	*e*P	Pn	06 23 21.7	+1.1
KOK	Koryaka	0.99	288	*e*P	Pn	06 23 22.1	+1.2
KRX	Arik	1.00	292	*e*P	Pn	06 23 22.0	+0.9
KII	Karymskiy	1.14	337	*e*P	Pn	06 23 24.0	+1.1
KII				*e*S	Sn	06 23 38.2	+0.9
RUS	Russkaya	1.17	242	*e*P	Pn	06 23 24.4	+1.0
KRMR	Karymshinskiy	1.27	263	*e*P	Pn	06 23 25.5	+0.9
KRMR				*e*S	Sn	06 23 41.4	+1.0
MTVR	Mutnovka	1.33	248	*e*P	Pn	06 23 27.0	+1.4
MTVR				*e*S	Sn	06 23 43.9	+1.7
GRL	Gorelyy	1.37	252	*e*P	Pn	06 23 27.9	+1.8
GNL	Ganaly	1.53	298	*e*P	Pn	06 23 30.7	+2.4
ASAK	Asacha	1.53	247	*e*P	Pn	06 23 30.5	+2.2
ASAK				*e*S	Sn	06 23 50.3	+3.2
KDTR	Khodutka, Kamc	1.77	228	*e*P	Pn	06 23 33.1	+1.7
MKZ	Mys Kozlova	1.81	29	*e*P	Pn	06 23 32.5	+0.5
APC	Apacha	1.84	269	*e*P	Pn	06 23 34.8	+2.3
APC				*e*S	Sn	06 23 58.6	+4.0
KZV	Kizimen	2.12	1	*e*P	Pn	06 23 38.7	+2.2
MIPR	Malaya Ipel'ka	2.22	252	*e*P	Pn	06 23 40.8	+3.1
KMNR	Kamenistaya	2.77	0	*e*P	Pn	06 23 49.5	+4.2
ESO	Esso	3.06	344	*e*P	Pn	06 23 51.4	+2.1
SKR	Severo-Kuril's	3.44	229	*e*P	Pn	06 23 56.6	+2.3
KBTR	Krutoberegovo	3.56	24	*e*P	Pn	06 23 59.0	+3.0
SRKR	Sorokina	3.71	8	*e*P	Pn	06 24 02.9	+4.8

IDC 14 06:35:10.1±2.2, 3°.16N×126°.92E, h0^{km}, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=180.7km s-min=27.1km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	24.09	163	P	P	06 40 28.7	+1.1
	0.7nm,0.6s,baz=341,slow=11,SNR=6.3						
	0.7nm,0.6s						
ASAR	Alice Springs	27.52	166	P	P	06 40 59.8	+1.2
	0.2nm,0.5s,baz=346,slow=9.4,SNR=3.2						
	0.2nm,0.5s						
STKA	Stephens Creek	37.53	159	P	P	06 42 24.1	-2.0
	1.0nm,0.3s,baz=318,slow=15,SNR=4.6						
	1.0nm,0.3s						
MKAR	Makanchi Array	58.13	325	P	P	06 45 05.3	-0.4
	0.1nm,0.4s,baz=131,slow=6.5,SNR=1.6						
	0.1nm,0.4s						

IDC ***14*** *06:39:44.5±1.1, 6°.60N×126°.56E, h84^{km}±9^{km}, mb4.3/20, mbtmp4.6/22, MS3.4/4, Error ellipse: s-maj=24.0km s-min=9.0km az=62.0*

NEIC ***14*** *06:39:45.9±1.4, 6°.47N±0°.04×126°.29E±0°.08, h87^{km}±6^{km}, mb4.8/43, Error ellipse: s-maj=11.3km s-min=6.5km az=94.0*

DJA ***14*** *06:39:45.7±0.4, 7°N±3°×12°6E±°, h104^{km}±3^{km}, M5.0/54, mb5.0/54, mB5.4/25, MLv5.5/7, Mw(mB)4.9/25*

ISC 14 06:39:45.5±0.5, 6°.43N±0°.04×126°.33E±0°.07, h89^{km}±4^{km}, n199, σ1^{s}28/216, mb4.8/84, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.98	311	P	Pn	06 40 04.3	-0.7
	9µm,0.6s,baz=147,slow=1.0,SNR=201						
DAV				S	Sn	06 40 20.5	+1.0
	4µm,0.4s,baz=323,slow=22,SNR=9.9						
DAV				LR	LR	06 40 45.0	
	comp=Z,3µm,21.4s,baz=163,slow=56						
DAV	Davao City (W)	0.98	311		Pn	06 40 04.5	-0.5
DAV	Davao City (W)	0.98	311	P	Pn	06 40 04.5	-0.5
DAV	Davao City (W)	0.98	311	P	Pn	06 39 58.0	-7.0
SGSI	Sangihe	2.84	196	P	Pn	06 40 30.8	+1.9
SGSI				S	Sn	06 41 04.9	+2.6
TNTI	Ternate	5.71	170		Pn	06 41 08.6	+0.7
TNTI	Ternate	5.71	170	P	Pn	06 41 09.0	+1.1
	1.9nm6µm411nm,0.9s						
GTOI	Gorontalo	6.64	210	P	Pn	06 41 20.2	-0.3
MRSI	Marisa	7.36	217	P	Pn	06 41 30.8	+0.5
TOLI2	Tolitoli	7.65	227		Pn	06 41 32.3	-2.1
MYLDM	Lahad Datu	7.89	261		Pn	06 41 38.5	+0.9
LUWI	Luwuk	8.23	206		Pn	06 41 44.4	+2.2
LUWI	Luwuk	8.23	206	P	Pn	06 41 46.3	+4.1
SANI	Sanana	8.43	182	P	Pn	06 41 42.7	-2.3
	4µm108nm,0.6s						
APSI	Ampana	8.66	213	P	Pn	06 41 52.5	+4.4
SWI	Sorong	8.76	146	P	Pn	06 41 52.7	+3.3
	68nm,0.5s						
MPSI	Mapaga	8.82	227	P	Pn	06 41 49.9	-0.4
	57nm,0.6s						
NLAI	Namlea	9.63	175	P	Pn	06 42 00.4	-1.0
KRAI	Karang Ratu	9.90	168	P	Pn	06 42 05.3	+0.3
	75nm,0.6s						
MSAI	Masohi	10.05	165	P	Pn	06 42 07.7	+0.6
	6µm131nm,1.0s						
AAI	Ambon	10.22	169	P	Pn	06 42 09.3	-0.1
	102nm,0.5s						
FAKI	Fak Fak	11.01	147		Pn	06 42 21.1	+1.0
FAKI	Fak Fak	11.01	147	P	Pn	06 42 21.0	+0.9
	663nm56nm,1.7s						
TTSI	Tana Toraja	11.44	215	P	Pn	06 42 27.3	+1.4
	2µm176nm,1.0s						
MMSI	Mamuju	11.70	219	P	Pn	06 42 30.4	+0.9
	35nm,0.9s						
SPSI	Sidrap Palu	12.23	213	P	Pn	06 42 36.5	-0.1
	60nm,0.8s						
BNSI	Bone	12.42	210	P	Pn	06 42 40.8	+1.6
	1µm126nm,1.3s						
KAPI	Kappang	13.13	210	P	Pn	06 42 49.5	+0.9
	68nm,0.8s,baz=55,slow=3.0,SNR=39						
KAPI				LR	LR	06 48 07.1	
	comp=Z,86nm,19.0s,baz=48,slow=38						
KAPI	Kappang	13.13	210		Pn	06 42 48.5	-0.1
KAPI	Kappang	13.13	210	P	Pn	06 42 48.7	+0.1
	670nm67nm,1.0s						
BKSI	Bulukumba	13.22	208	P	Pn	06 42 49.4	-0.3
	799nm43nm,1.5s						
SBUM	Sibu	14.61	255		Pn	06 43 08.9	+1.0
SBUM	Sibu	14.61	255	P	Pn	06 43 08.6	+0.7
	79nm,0.7s						
SMPI	Sarmi	14.92	124	P	Pn	06 43 11.3	-0.6
	88nm,1.2s						
BBKI	Banjar Baru	15.10	230	P	P	06 43 17.3	0.0
	99nm,0.8s						
SAUI	Saumlaki	15.15	161	Pn	Pn	06 43 13.9	-0.8
EDFI	Ende, Flores	15.77	197	P	Pn	06 43 21.3	-1.4
SOEI	Soe	16.21	187		Pn	06 43 28.9	+0.7
SOEI	Soe	16.21	187	P	P	06 43 29.8	+0.1
	2µm85nm,0.9s						
BATI	Baumata	16.74	189	P	P	06 43 35.5	+0.1
	72nm,0.5s,baz=333,slow=7.7,SNR=2.5						
BATI	Baumata	16.74	189	P	Pn	06 43 34.5	-0.1
DBNI	Kabupaten Domp	16.85	208	P	Pn	06 43 34.6	-1.4
	23nm,0.7s						
PLAI	Plampang	17.39	209	P	Pn	06 43 38.9	-3.7
	839nm81nm,0.9s						
KLNI	Mataram	17.94	215	P	P	06 43 48.7	0.0
	5µm56nm,1.3s						
KMMI	Kalianget	18.20	223	P	P	06 43 51.2	-0.4
	66nm,1.0s						
JAGI	Jajag, Banyuwa	19.14	220		P	06 44 01.8	-0.1
JAGI	Jajag, Banyuwa	19.14	220	P	P	06 44 01.6	-0.3
GUMO	Guam	19.58	67	LR	LR	06 51 26.0	
	comp=Z,83nm,20.5s,baz=170,slow=36						
MTN	Manton Dam	19.73	166	P	P	06 44 09.1	+0.9
	comp=Z,64nm,0.9s						
MTN	Manton Dam	19.73	166		P	06 44 08.4	+0.1
KDU	Kakadu	19.95	162	P	P	06 44 10.9	+0.3
	comp=Z,68nm,1.0s,comp=Z,0.0nm						
NGJI	Ngawi	20.20	227	P	P	06 44 12.9	-0.4
	comp=Z,54nm,0.9s						
SJI	Sawahan	20.22	226	P	P	06 44 13.2	-0.5
	comp=Z,2µmcomp=Z,42nm,1.1s						
SNJI	Sawahan-Nganju	20.26	226	P	P	06 44 13.2	-1.0
	comp=Z,65nm,1.0s						
SMRI	Semarang	20.75	230	P	P	06 44 20.1	+0.8
SMRI	Semarang	20.75	230	P	P	06 44 19.4	+0.1
	comp=Z,135nm,1.0s						
KPJI	Karang Pucung	22.09	232	P	P	06 44 32.3	-1.3
	comp=Z,37nm,0.9s						
KNRA	Kununurra	22.10	174	P	P	06 44 33.6	0.0
	comp=Z,84nm,0.8s						
KNRA	Kununurra	22.10	174		P	06 44 33.8	+0.2
BBJI	Bungbulang	23.19	234	P	P	06 44 41.3	-3.6
CNJI	Cibinong	23.52	235	P	P	06 44 46.1	-1.8
	comp=Z,1µmcomp=Z,31nm,0.9s						
KLSI		24.23	243	P	P	06 44 54.0	-0.2
	comp=Z,44nm,1.1s						
MDSI	Maura Dua	24.63	244	P	P	06 44 56.8	-1.1
KASI	Kota Agung	24.82	242	P	P	06 44 57.3	-2.3
	comp=Z,33nm,0.9s						
LWLI	Liwa	24.97	243	P	P	06 45 00.9	-0.3
KULM	Kulim	25.57	269	P	P	06 45 06.9	+0.4
KULM				IAmb	IAmb	06 45 15.9	
	comp=Z,38nm,1.1s						
KULM	Kulim	25.57	269	P	P	06 45 04.1	-2.4
	comp=Z,40nm,1.1s						
PMG	Port Moresby	26.04	127	P	P	06 45 09.3	-1.4
	comp=Z,15nm,0.9s,baz=318,slow=12,SNR=3.9						
	comp=Z,15nm,0.9s						
COEN	Coen	26.26	141	P	P	06 45 12.6	-0.1
	comp=Z,32nm,1.2s						
COEN	Coen	26.26	141		P	06 45 12.9	+0.2
COEN				IAmb	IAmb	06 45 15.6	
	comp=Z,39nm,1.1s						
NJ2	Nanjing	26.43	346	*e*P	P	06 45 14.8	+0.8
NJ2				pmax	pmax		
	comp=Z,13nm,0.7s						
PPI	Padang Panjang	26.77	256	P	P	06 45 15.7	-1.6
	comp=Z,37nm,0.9s						
WB0	Warramunga Arr	27.21	163		P	06 45 20.4	-0.8
WB0				IAmb	IAmb	06 45 28.7	
	comp=Z,28nm,0.6s						
WRAB	Tennant Creek	27.36	163		P	06 45 22.5	+0.1
WRAB				IAmb	IAmb	06 45 30.6	
	comp=Z,16nm,0.7s						
WRA	Warramunga Arr	27.37	163	P	P	06 45 22.1	-0.4
	comp=Z,8.7nm,0.7s,baz=342,slow=10,SNR=30						
WRA				PcP	PcP	06 48 39.9	+0.1
	comp=Z,2.9nm,0.6s,baz=343,slow=2.8,SNR=6.2						
WRA				ScP	ScP	06 52 13.1	+0.7
	comp=Z,3.1nm,0.8s,baz=339,slow=3.0,SNR=5.7						
	comp=Z,8.7nm,0.7s						
WRA	Warramunga Arr	27.37	163		P	06 45 20.8	-1.7
WR8	Warramunga Arr	27.42	163	P	P	06 45 22.2	-0.9
WR8				IAmb	IAmb	06 45 31.1	
	comp=Z,22nm,0.8s						
PSI	Prapat	27.55	264	LR	LR	06 59 10.5	
	comp=Z,190nm,18.4s,baz=112,slow=42						
PSI	Prapat	27.55	264	P	P	06 45 23.1	-1.3
MBWA	Marble Bar	28.17	193	P	P	06 45 28.6	-1.0
	comp=Z,17nm,0.9s						
MBWA	Marble Bar	28.17	193	P	P	06 45 28.8	-0.9
MBWA				IAmb	IAmb	06 45 38.1	
	comp=Z,38nm,1.4s						
SISI	Saibi	28.26	255	P	P	06 45 28.5	-2.1
PSAD1	Pilbara Seismi	28.43	193	P	P	06 45 31.2	-0.9
	comp=Z,11nm,0.5s						
PSAC1	Pilbara Seismi	28.52	193	P	P	06 45 32.0	-0.7
	comp=Z,20nm,0.5s						
PSAC2	Pilbara Seismi	28.52	193	P	P	06 45 32.1	-0.8
	comp=Z,21nm,0.4s						
PSA00	Pilbara Seismi	28.55	193	P	P	06 45 32.3	-0.7
	comp=Z,23nm,0.4s						
PSA00	Pilbara Seismi	28.55	193		P	06 45 32.2	-0.7
PSA00				IAmb	IAmb	06 45 37.3	
	comp=Z,16nm,0.5s						
PSAB3	Pilbara Seismi	28.56	193	P	P	06 45 32.4	-0.8
	comp=Z,23nm,0.5s						
GSI	Gunungsitoli	29.13	261		P	06 45 37.0	-1.3
GSI				IAmb	IAmb	06 45 38.8	
	comp=Z,20nm,0.7s						
GSI	Gunungsitoli	29.13	261	P	P	06 45 36.5	-1.8
	comp=Z,32nm,0.7s						
CMAR	Chiang Mai Arr	29.24	297	P	P	06 45 44.2	+4.9
	comp=Z,1.3nm,0.3s,baz=114,slow=6.9,SNR=7.7						
CMAR				PcP	PcP	06 48 44.8	+0.3
	comp=Z,1.0nm,0.3s,baz=48,slow=1.0,SNR=6.8						
CMAR				ScP	ScP	06 52 18.8	+0.4
	comp=Z,0.9nm,0.3s,baz=90,slow=2.5,SNR=6.9						
CMAR				LR	LR	06 57 14.5	
	comp=Z,54nm,20.5s,baz=100,slow=36						
QIS	Mount Isa	29.82	154	P	P	06 45 44.1	-0.3
	comp=Z,46nm,0.7s						
MTSU	Mount Surprise	30.18	144	P	P	06 45 48.1	+0.5
	comp=Z,8.8nm,0.5s						
PZH	PanZhiHua	30.78	313	P	P	06 45 54.0	+1.1
AS31	Alice Springs	30.81	166		P	06 45 52.3	-0.8
ASAR	Alice Springs	30.81	166	P	P	06 45 52.1	-1.0
	comp=Z,3.0nm,0.4s,baz=342,slow=6.7,SNR=78						
ASAR				PP	PnPn	06 46 51.0	-6.1
	comp=Z,3.3nm,0.7s,baz=353,slow=9.7,SNR=4.7						
ASAR				PcP	PcP	06 48 48.4	-0.1
	comp=Z,4.3nm,0.6s,baz=356,slow=2.2,SNR=12						
ASAR				ScP	ScP	06 52 23.9	+0.5
	comp=Z,2.6nm,0.9s,baz=333,slow=2.8,SNR=5.2						
	comp=Z,3.0nm,0.4s						
ASAR	Alice Springs	30.81	166		P	06 45 52.5	-0.6
GIRL	Giralia	31.23	202	P	P	06 45 56.0	-0.7
WRKA	Warakurna	31.34	177	P	P	06 45 57.7	0.0
	comp=Z,3.7nm,0.4s						
XAN	Xi'an	31.85	332	P	P	06 46 03.8	+1.6
XAN				pP	pP	06 46 23.3	+0.6
XAN				pmax	pmax		
	comp=Z,25nm,0.8s						
HNS	HongShan	32.60	343	⇑P	P	06 46 10.3	+1.8
HNS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CTA	Charters Tower	32.84	144	P	P	06 46 11.7	+0.8
	comp=Z,26nm,1.2s,baz=314,slow=8.5,SNR=14						
	comp=Z,26nm,1.2s						
CTAO	Charters Tower	32.84	144		P	06 46 12.1	+1.2
CTAO	Charters Tower	32.84	144	P	P	06 46 12.4	+1.4
MEEK	Meekatharra	33.71	193	P	P	06 46 17.5	-0.9
	comp=Z,28nm,0.9s						
BJI	Beijing	34.69	346	P	P	06 46 27.4	+0.8
BJI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LZDM	Lanzhou Array	35.98	328	P	P	06 46 41.1	+2.9
	comp=Z,1.0nm,0.3s,baz=152,slow=9.9,SNR=4.2						
LZDM				ScP	ScP	06 52 42.0	+0.5
	comp=Z,0.9nm,0.3s,baz=168,slow=2.9,SNR=4.5						
LZH	Lanzhou	36.00	328	*e*P	P	06 46 41.8	+3.6
LZH				pP	pP	06 47 00.8	+1.9
LZH				pmax	pmax		
	comp=Z,29nm,1.6s						
MORW	Morawa	36.66	195	P	P	06 46 43.0	-0.7
	comp=Z,16nm,0.6s						
MORW	Morawa	36.66	195		P	06 46 42.9	-0.8
MORW				IAmb	IAmb	06 46 53.7	
	comp=Z,21nm,1.2s						
INKA	Innaminka	36.72	158	P	P	06 46 44.8	+0.7
INKA				IAmb	IAmb	06 46 46.7	
	comp=Z,13nm,1.3s						
HHC	Hu-ho-hao-te	36.73	341	*e*P	P	06 46 47.8	+3.5
HHC				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,4.8s						
FORT	Forrest	37.03	178	P	P	06 46 46.6	-0.2
	comp=Z,27nm,0.5s						
FORT	Forrest	37.03	178		P	06 46 46.9	+0.1
QLP	Quilpie	37.12	153	P	P	06 46 47.2	-0.4
	comp=Z,38nm,1.2s						
KMBL	Kambalda	37.82	186	P	P	06 46 53.1	-0.4
	comp=Z,15nm,0.9s						
BLDU	Ballidu	37.97	194	P	P	06 46 53.9	-0.8
	comp=Z,16nm,0.5s						
SHL	Shillong	38.01	304	P	P	06 46 54.4	-1.0
SHL				IAmb	IAmb	06 47 53.3	
	comp=Z,9.1nm,0.7s						
KLBR	Kellerberrin	38.68	192	P	P	06 47 00.2	-0.6
MUN	Mundaring	39.40	194	P	P	06 47 06.1	-0.6
	comp=Z,22nm,0.5s						
EIDS	Eidsvold	39.73	144	P	P	06 47 08.9	-0.6
	comp=Z,36nm,1.5s						
NWAO	Narrogin (SRO)	40.08	192	P	P	06 47 12.2	-0.2
	comp=Z,36nm,1.0s						
NWAO	Narrogin (SRO)	40.08	192		P	06 47 12.1	-0.2
NWAO	Narrogin (SRO)	40.08	192	P	P	06 47 12.3	0.0
BBOO	Buckleboo	40.10	167	P	P	06 47 12.4	-0.1
	comp=Z,25nm,0.7s						
BBOO	Buckleboo	40.10	167		P	06 47 12.6	0.0
GTA	Gaotai	40.60	328	P	P	06 47 19.8	+3.0
GTA				sP	sP	06 47 49.0	+1.0
GTA				PcP	PcP	06 49 18.6	+1.3
GTA				ScP	ScP	06 53 00.4	+1.5
GTA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
STKA	Stephens Creek	40.78	160	P	P	06 47 18.5	+0.4
	comp=Z,19nm,0.6s,baz=331,slow=8.8,SNR=47						
STKA				PP	PP	06 48 51.6	-2.3
	comp=Z,6.0nm,0.8s,baz=326,slow=11,SNR=2.9						
	comp=Z,19nm,0.6s						
HTT	Hallett	41.40	164	P	P	06 47 23.6	+0.3
	comp=Z,8.6nm,1.5s						
RKGY	Rocky Gully	41.76	192	P	P	06 47 26.2	+0.1
	comp=Z,42nm,0.7s						
CMSA	Cobar Meteorol	42.04	155	P	P	06 47 28.4	0.0
	comp=Z,22nm,0.9s						
EVN	Everest	43.11	305	P	P	06 47 37.7	-0.2
EVN				IAmb	IAmb	06 48 29.1	
	comp=Z,15nm,1.3s						
HEH	HeiHe	43.69	1	*e*P	P	06 47 49.3	+7.8
ARMA	Armidale	43.94	148	P	P	06 47 43.9	0.0
	comp=Z,37nm,1.4s						
ARMA	Armidale	43.94	148		P	06 47 44.2	+0.3
ULN	Ulaanbaatar	44.45	341	P	P	06 47 47.2	-0.6
ULN	Ulaanbaatar	44.45	341	P	P	06 47 47.2	-0.6
	comp=Z,36nm,1.2s						
SONM	Songino Array	44.63	341	P	P	06 47 48.6	-0.6
	comp=Z,2.0nm,1.1s,baz=163,slow=7.9,SNR=8.4						
SONM				PcP	PcP	06 49 29.1	-1.5
	comp=Z,1.4nm,0.8s,baz=156,slow=3.8,SNR=3.8						
	comp=Z,2.0nm,1.1s						
SONM	Songino Array	44.63	341	P	P	06 47 49.4	+0.2
ARPS	Mount Arapiles	45.36	162	P	P	06 47 55.4	+0.5
	comp=Z,23nm,1.1s						
YNG	Young	45.57	154	P	P	06 47 56.7	0.0
	comp=Z,15nm,1.6s						
CAN	Canberra	46.70	154	P	P	06 48 05.7	+0.1
CAN				IAmb	IAmb	06 48 09.1	
	comp=Z,18nm,0.7s						
CAN	Canberra	46.70	154	P	P	06 48 07.1	+1.6
CNB	Canberra Magne	46.85	154	P	P	06 48 07.6	+0.9
	comp=Z,32nm,1.7s						
TOO	Toolangi	47.28	159	P	P	06 48 10.8	+0.7
	comp=Z,8.9nm,1.8s						
TOO	Toolangi	47.28	159	P	P	06 48 11.5	+1.4
DZM	Mont Dzumac	48.44	127	P	P	06 48 20.1	+0.8
DZM	Mont Dzumac	48.44	127	P	P	06 48 20.4	+1.0
DZM				pP	pP	06 48 42.0	+2.1
WMQ	Urumqi	50.31	324	*e*P	P	06 48 36.1	+2.9
WMQ				pP	pP	06 48 55.5	+0.6
WMQ				S	S	06 55 40.8	+1.4
WMQ				pmax	pmax		
	comp=Z,22nm,0.9s						
WMQ				LR	LR		
	comp=Z,240nm,19.7s						
MKAR	Makanchi Array	55.13	324	P	P	06 49 07.8	-0.9
	comp=Z,3.7nm,0.6s,baz=122,slow=7.9,SNR=31						
MKAR				ScP	ScP	06 53 59.1	-0.6
	comp=Z,3.1nm,0.9s,baz=108,slow=4.0,SNR=10						
	comp=Z,3.7nm,0.6s						
MKAR	Makanchi Array	55.13	324		P	06 49 07.6	-1.1
MAKZ	Makanchi	55.32	324	P	P	06 49 10.0	0.0
MAKZ				IAmb	IAmb	06 49 12.8	
	comp=Z,7.4nm,1.1s						
MAKZ	Makanchi	55.32	324	P	P	06 49 09.1	-1.0
MAKZ				pP	pP	06 49 31.6	-0.4
ZAA0	Zalesovo Array	58.02	332	P	P	06 49 28.9	0.0
ZAA0				IAmb	IAmb	06 49 30.5	
	comp=Z,5.8nm,0.9s						
ZALV	Zalesovo Beam	58.02	332	P	P	06 49 27.5	-1.5
	comp=Z,4.7nm,0.9s,baz=116,slow=6.8,SNR=18						
	comp=Z,4.7nm,0.9s						
ZALV	Zalesovo Beam	58.02	332	P	P	06 49 29.1	+0.1
KURK	Kurchatov	59.27	327		P	06 49 36.5	-1.2
KURK				IAmb	IAmb	06 49 40.1	
	comp=Z,11nm,0.8s						
KURK	Kurchatov	59.27	327	P	P	06 49 37.9	+0.2
KURK				pP	pP	06 49 59.0	-1.2
KURBB	Kurchatov Arra	59.27	327	P	P	06 49 36.8	-1.0
	comp=Z,8.1nm,0.8s,baz=126,slow=6.0,SNR=56						
KURBB				PKPPKP	P'P'df	07 19 00.3	-9.0
	comp=Z,0.6nm,0.9s,baz=266,slow=3.3,SNR=4.8						
	comp=Z,8.1nm,0.8s						
KK31	Karatay Array	61.01	316	P	P	06 49 49.5	-0.3
KKAR	Karatay Array	61.01	316	P	P	06 49 49.8	0.0
BKZ	Black Stump Fm	64.85	139		P	06 50 16.0	+0.7
BVAR	Borovoye Array	64.86	326	P	P	06 50 14.0	-1.1
	comp=Z,12nm,1.0s,baz=119,slow=8.8,SNR=22						
	comp=Z,12nm,1.0s						
BORK	Borovoye	64.91	326	P	P	06 50 16.1	+0.7
BORK				IAmb	IAmb	06 50 17.6	
	comp=Z,10nm,0.8s						
BORK	Borovoye	64.91	326	P	P	06 50 16.8	+1.4
BORK				pP	pP	06 50 39.9	+1.7
NRIK	Noril'sk	67.73	346	P	P	06 50 30.7	-2.4
	comp=Z,3.8nm,0.6s,baz=104,slow=5.4,SNR=8.2						
	comp=Z,3.8nm,0.6s						
ABKAR	Akbulak array	69.83	320	P	P	06 50 47.1	+0.6
ARTI	Arti	72.54	327	P	P	06 51 02.4	-0.4
ARTI				IAmb	IAmb	06 51 24.5	
	comp=Z,43nm,1.9s						
CASY	Casey	73.43	187	P	P	06 51 07.5	-0.2
CASY				IAmb	IAmb	06 51 31.7	
	comp=Z,26nm,1.2s						
DRV	Dumont d'Urvil	73.58	174	P	P	06 51 07.8	-0.8
DRV				pP	pP	06 51 30.5	-1.1
IMAR	Indian Mountai	80.06	24	P	P	06 51 44.7	-0.5
D24K	Happy Valley	82.19	21	P	P	06 51 56.5	+0.1
D24K				IAmb	IAmb	06 52 26.9	
	comp=Z,7.4nm,0.9s						
H24K	Noodor Dome	82.45	24		P	06 51 58.2	+0.4
ILAR	Eielson Array	82.85	26	P	P	06 51 59.0	-0.9
	comp=Z,1.0nm,0.8s,baz=245,slow=4.8,SNR=18						
	comp=Z,1.0nm,0.8s						
D25K	Kavik River	83.07	21	P	P	06 52 00.7	-0.4
D25K				IAmb	IAmb	06 54 27.6	
	comp=Z,24nm,2.0s						

BMAR	Burnt Mountain	83.76	23	P	P	06 52 05.6	+1.0
C27K	Jago River	84.00	21	P	P	06 52 04.9	-0.8
I26K	Coal Creek Min	84.42	25	P	P	06 52 07.9	0.0
I26K				IAmb	IAmb	06 52 22.5	
	comp=Z,9.9nm,1.2s						
D27M	Malcolm River	85.00	21	P	P	06 52 11.8	+1.0
D27M				IAmb	IAmb	06 52 16.7	
	comp=Z,11nm,1.3s						
H27K	Steamboat Moun	85.03	24		P	06 52 11.4	+0.4
F28M	Old Crow	85.55	23	P	P	06 52 14.2	+0.6
VNDA	Vanda	86.14	173	P	P	06 52 16.1	0.0
	comp=Z,2.1nm,0.4s,baz=318,slow=6.7,SNR=15						
	comp=Z,2.1nm,0.4s						
VNDA	Vanda	86.14	173	P	P	06 52 16.4	+0.3
VNDA				PcP	PcP	06 52 19.2	+0.5
VNDA				pP	pP	06 52 40.1	+0.4
SPITS	Spitsbergen Ar	87.77	349	P	P	06 52 23.4	-0.8
	comp=Z,7.0nm,0.8s,baz=342,slow=0.5,SNR=2.6						
	comp=Z,7.0nm,0.8s						
ARCES	ARCESS Array B	87.79	340	P	P	06 52 23.8	-0.6
	comp=Z,8.4nm,1.0s,baz=78,slow=5.7,SNR=12						
	comp=Z,8.4nm,1.0s						
BRTR	Keskin Array B	88.00	310	P	P	06 52 27.2	+1.0
	comp=Z,0.5nm,0.6s,baz=64,slow=3.4,SNR=2.2						
	comp=Z,0.5nm,0.6s						
FIA1	FINESS Array S	89.28	332	P	P	06 52 31.4	-0.1
FINES	FINESS Array B	89.28	332	P	P	06 52 31.2	-0.3
	comp=Z,1.3nm,0.5s,baz=79,slow=2.9,SNR=10.0						
	comp=Z,1.3nm,0.5s						
FINES	FINESS Array B	89.28	332	P	P	06 52 31.4	-0.1
STHS	Stebnicka Huta	94.86	321	*e*P	P	06 52 57.5	-0.2
NOA	NORSAR Array B	96.21	334	P	P	06 53 02.9	-0.7
	comp=Z,0.9nm,0.8s,baz=61,slow=9.6,SNR=2.2						
	comp=Z,0.9nm,0.8s						
QSPA	South Pole Qui	96.32	180	P	P	06 53 04.2	+0.3
	comp=Z,1.2nm,0.7s,baz=335,slow=2.6,SNR=3.7						
	comp=Z,1.2nm,0.7s						
QSPA	South Pole Qui	96.32	180	P	P	06 53 05.2	+1.3
YKA	Yellowknife Ar	97.22	24	P	P	06 53 05.5	-2.5
	comp=Z,0.9nm,0.9s,baz=303,slow=5.6,SNR=9.9						
	comp=Z,0.9nm,0.9s						
PDAR	Pinedale Array	109.58	40	PKKPab	PKKPab	07 09 20.2	-4.0
	comp=Z,0.3nm,0.6s,baz=98,slow=2.2,SNR=4.6						
TXAR	Lajitas Array	120.24	51	PKP	PKPdf	06 58 26.9	-0.2
	comp=Z,0.4nm,0.7s,baz=201,slow=1.1,SNR=5.5						
DBIC	Dimbokro	129.59	284	PKP	PKiKP	06 58 46.7	+0.7
	comp=Z,3.2nm,0.7s,baz=168,slow=1.9,SNR=4.7						
PLCA	Paso Flores	142.65	159	PKhKP	PKPpre	06 59 04.6	
	comp=Z,2.2nm,0.7s,baz=238,slow=3.4,SNR=9.6						
LPAZ	La Paz	162.78	126	PKP	PKPdf	06 59 39.6	+0.6
	comp=Z,1.3nm,0.5s,baz=180,slow=2.8,SNR=5.9						
LPAZ				PKPab	PKPab	07 00 30.5	+2.3
	comp=Z,3.9nm,0.9s,baz=214,slow=3.0,SNR=8.1						

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*SNET **14** 06:41:51.6±6.8, 13°.62N×91°.56W, h119^{km}, ML3.2*
*GCG **14** 06:41:53.0±0.9, 13°.47N×91°.69W, h13^{km}±17^{km}, MD4.0*
*CATAC **14** 06:41:54.0±0.5, 14°N±3°×9°2W±°, h1^{km}, M3.5/17, MLv3.5/17, Error ellipse: s-maj=7.4km s-min=3.1km az=30.4, confirmed*
ISC 14 06:41:54.2±2.2**, 13°.5N**±0°.1×**91°.55W**±0°.08**, h28**^{km}**, n35, σ1^s.98**/38**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG5	El Palmar, Qui	0.96	11	*e*P	Pb	06 42 14.7	+2.3
STG8	El Palmar, Qui	1.01	11	*e*P	Pb	06 42 15.5	+2.2
ESSG	Sabana Grande	1.16	37	*e*P	Pb	06 42 15.3	-0.4
FG16	Alotenango, Sa	1.29	51	*e*P	Pn	06 42 16.1	-0.6
FAME	Alcaldia de Sa	1.54	75	S	Sb	06 42 43.2	+2.1
FAME	Alcaldia de Sa	1.54	75	P	Pn	06 42 21.3	+1.5
THIG		1.61	334	*e*P	Pn	06 42 19.7	-1.0
NUBE	Las Nubes	1.77	75	*e*P	Pn	06 42 24.9	+1.8
NUBE	Las Nubes	1.77	75	S	Sb	06 42 49.4	+1.4
NUBE	Las Nubes	1.77	75	P	Pn	06 42 25.1	+1.9
HUEH	Huehuetenango	1.86	1	P	Pb	06 42 25.6	-2.0
APG	El Apazote	1.86	34	*e*P	Pb	06 42 26.5	-1.3
RTR	El Retiro	1.90	76	*e*P	Pn	06 42 27.1	+2.2
CEVE	Cerro Verde	1.90	78	*e*P	Pn	06 42 26.4	+1.4
CEVE	Cerro Verde	1.90	78	S	Sb	06 42 53.6	+1.7
CEVE	Cerro Verde	1.90	78	P	Pb	06 42 27.8	-0.7
SBLS	San Blas	1.91	78	*e*P	Pn	06 42 26.7	+1.6
RBDL	Robledal	1.92	70	*e*P	Pb	06 42 27.5	-1.2
RBDL				*e*S	Sn	06 42 47.1	-1.5
SNJE	San Jose	1.93	77	*e*P	Pn	06 42 26.8	+1.4
SNJE				*e*S	Sn	06 42 46.7	-2.1
UNIC	Universidad Ca	2.01	75	P	Pb	06 42 29.0	-1.1
JAYA	Jayaque - finc	2.05	84	*e*P	Pn	06 42 26.8	-0.2
JAYA				*e*S	Sn	06 42 46.6	-5.1
JAYA	Jayaque - finc	2.05	84	P	Pn	06 42 28.9	+2.0
JAYA	Jayaque - finc	2.05	84	S	Sb	06 42 56.8	+0.9
LALI	Alcalda de L	2.16	89	P	Pb	06 42 32.2	-0.5
PMON	Piamonte	2.18	83	P	Pn	06 42 31.5	+2.7
PMON	Piamonte	2.18	83	S	Sb	06 42 59.8	0.0
MTO3	Montecristo	2.32	66	*e*P	Pn	06 42 32.8	+2.0
MTO3	Montecristo	2.32	66	P	Pn	06 42 32.4	+1.6
ESQI	Esquipulas	2.41	62	P	Pn	06 42 34.1	+2.3
ESQI	Esquipulas	2.41	62	S	Sb	06 43 06.0	-0.2
SCLA	Alcaldia de Sa	2.75	84	S	Sb	06 43 14.5	-1.6
SCLA	Alcaldia de Sa	2.75	84	P	Pn	06 42 39.8	+3.3
CCIG	Comitan	2.87	349	P	Pn	06 42 40.3	+2.0
PACA	Pacayal	3.13	89	P	Pn	06 42 44.9	+3.0
PETF	Flores	3.81	25	P	Pn	06 42 53.0	+2.0

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*BJI **14** 06:44:57.7, 5°.91S×150°.62E, h129^{km}, mB5.3/13, mb5.0/44*
*IDC **14** 06:45:01.8±1.6, 5°.65S×150°.07E, h121^{km}±12^{km}, mb4.2/20, mbtmp4.6/22, MS3.8/2, Error ellipse: s-maj=18.5km s-min=8.0km az=105.0*
*NEIC **14** 06:45:02.8±1.5, 5°.62S±0°.07×150°.25E±0°.08, h127^{km}±7^{km}, mb4.9/33, Error ellipse: s-maj=11.6km s-min=9.4km az=113.0*
ISC 14 06:45:03.1±0.3**, 5°.66S**±0°.05×**150°.18E**±0°.06**, h135**^{km}**, n118, σ1^s.31**/123**, mb4.8**/49**, 1C-1D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	2.45	54		Pn	06 45 40.6	-2.4
MANU	Manus Island	4.56	322		Pn	06 46 09.9	-0.5
PMG	Port Moresby	4.78	219	P	Pn	06 46 11.9	-1.5
	108nm,0.3s,baz=360,slow=3.5,SNR=54						
PMG				S	Sn	06 47 03.8	-4.2
	584nm,0.4s,baz=210,slow=21,SNR=20						
PMG	Port Moresby	4.78	219		Pn	06 46 13.2	-0.2
PMG	Port Moresby	4.78	219	P	Pn	06 46 13.4	0.0
TATA	Tatamba Isabel	9.93	106	P	Pn	06 47 22.3	-0.2
COEN	Coen	10.75	219	Pn	Pn	06 47 32.0	-1.5
MTSU	Mount Surprise	13.66	204	P	P	06 48 14.4	-1.2
TV1H	Townsville Har	13.92	193	P	P	06 48 20.7	+2.3
CTA	Charters Tower	14.84	195	P	Pn	06 48 26.4	+0.1
	20nm,0.8s,baz=13,slow=11,SNR=17						
CTAO	Charters Tower	14.84	195	Pn	Pn	06 48 26.5	+0.1
CTAO	Charters Tower	14.84	195	P	P	06 48 30.9	+2.2
QIS	Mount Isa	18.02	214	P	P	06 48 58.8	-5.0
SANVU	Saraoutou	19.34	122		P	06 49 17.8	-0.4
SANVU	Saraoutou	19.34	122	P	Pn	06 49 19.9	-0.7
EIDS	Eidsvold	19.62	178		P	06 49 22.4	+1.3
WR8	Warramunga Arr	20.85	226	P	P	06 49 34.1	-0.3
WRA	Warramunga Arr	20.95	226	P	P	06 49 34.8	-0.7
	5.7nm,0.5s,baz=51,slow=11,SNR=19						
WRA				S	S	06 53 21.8	+0.1
	4.9nm,1.1s,baz=52,slow=20,SNR=5.3						
WRA				PcP	PcP	06 53 38.0	+0.1
	2.9nm,0.7s,baz=55,slow=2.2,SNR=5.2						
WRA				ScP	ScP	06 57 04.0	+1.7
	5.4nm,0.9s,baz=55,slow=2.9,SNR=16						
	5.7nm,0.5s						
WRA	Warramunga Arr	20.95	226	P	P	06 49 32.9	-2.7
QLP	Quilpie	21.57	195	P	P	06 49 43.4	+1.3
AUWSH	Wavell State H	21.79	173	P	P	06 49 45.2	+0.8
TW1H	Toowoomba 1 Ha	21.83	176	P	P	06 49 45.1	+0.2
DZM	Mont Dzumac	22.66	138	LR	LR	06 57 25.8	
	comp=Z,174nm,19.5s,baz=206,slow=33						
DZM	Mont Dzumac	22.66	138		P	06 49 53.3	0.0
ONTNC	Ouen Toro	22.83	138		P	06 49 54.3	-0.4
YATNC	Mamie plateau,	22.96	137	P	P	06 49 57.1	+1.1
KNRA	Kununurra	23.26	243		P	06 49 58.2	-0.6
KNRA				IAmb	IAmb	06 50 00.1	
	comp=Z,24nm,0.7s						
INKA	Innaminka	23.73	201		P	06 50 03.3	+0.4
AS31	Alice Springs	23.80	220	P	P	06 50 04.2	+0.5
ASAR	Alice Springs	23.80	220	P	P	06 50 04.2	+0.5
	comp=Z,3.2nm,0.5s,baz=58,slow=8.7,SNR=20						
ASAR				S	S	06 54 10.2	+0.6
	comp=Z,2.4nm,0.9s,baz=56,slow=13,SNR=7.0						
ASAR				ScP	ScP	06 57 11.4	+1.8
	comp=Z,1.7nm,0.8s,baz=44,slow=3.3,SNR=8.3						
	comp=Z,3.2nm,0.5s						
ASAR	Alice Springs	23.80	220	P	P	06 50 03.6	-0.1
ARMA	Armidale	24.67	177		P	06 50 12.9	+1.4
ARMA				IAmb	IAmb	06 50 14.8	
	comp=Z,28nm,0.7s						
ARMA	Armidale	24.67	177	P	P	06 50 13.0	+1.4
AUPHS	Peel High Scho	25.32	179	P	P	06 50 18.7	+1.3
CMSA	Cobar Meteorol	26.09	189	P	P	06 50 24.8	+0.5
STKA	Stephens Creek	27.30	196	P	P	06 50 34.7	-0.4
	comp=Z,6.7nm,0.5s,baz=36,slow=14,SNR=6.8						
	comp=Z,6.7nm,0.5s						
STKA	Stephens Creek	27.30	196		P	06 50 35.1	0.0
STKA				IAmb	IAmb	06 50 37.2	
	comp=Z,32nm,0.6s						
BBOO	Buckleboo	30.05	204	P	P	06 50 59.0	-0.6
BBOO				IAmb	IAmb	06 51 39.7	
	comp=Z,23nm,1.6s						
TOO	Toolangi	32.05	187	P	P	06 51 17.7	+0.6
MBWA	Marble Bar	33.29	240	P	P	06 51 27.5	-0.6
MBWA				IAmb	IAmb	06 51 28.1	
	comp=Z,22nm,0.8s						
PSA00	Pilbara Seismi	33.36	239		P	06 51 27.7	-0.9
TAU	Tasmania Unive	37.18	183	P	P	06 52 01.4	+0.3
GIRL	Giralia	38.58	240	P	P	06 52 13.4	+0.3
JOW	Kunigami	38.64	328	P	P	06 52 13.8	+0.2
	comp=Z,32nm,0.8s,baz=179,slow=6.7,SNR=5.7						
	comp=Z,32nm,0.8s						
JOW	Kunigami	38.64	328	P	P	06 52 15.0	+1.4
MORW	Morawa	39.79	230	P	P	06 52 22.4	-0.7
MORW				IAmb	IAmb	06 52 55.0	
	comp=Z,22nm,1.6s						
YULB	Yu-li	40.37	317	P	P	06 52 27.7	-0.2
NACB	Ninganchiao	40.69	318	P	P	06 52 30.3	-0.2
NACB				IAmb	IAmb	06 52 33.5	
	comp=Z,21nm,0.8s						
TKNZ	Takaka Hill	40.69	153	P	P	06 52 31.6	+1.2
RTZ	Ruatahuna	40.82	147	P	P	06 52 32.4	+0.8
BFZ	Birch Farm	41.97	150	P	P	06 52 40.6	-0.2
JNU	Nakatsue	42.70	336	LR	LR	07 08 20.8	
	comp=Z,136nm,18.4s,baz=358,slow=33						
MJAR	Matsushiro Arr	43.45	346	P	P	06 52 52.1	-0.7
	comp=Z,8.4nm,0.8s,baz=167,slow=8.4,SNR=14						
	comp=Z,8.4nm,0.8s						
MJAR	Matsushiro Arr	43.45	346		P	06 52 52.5	-0.3
MAJO	Matsushiro	43.45	346	P	P	06 52 52.0	-0.8
MAJO				IAmb	IAmb	06 54 24.6	
	comp=Z,68nm,1.8s						
MJB9	Matsu-Tunnel	43.46	346	P	P	06 52 51.7	-1.1
MJB9				IAmb	IAmb	06 54 25.6	
	comp=Z,68nm,1.8s						
KSRS	Korea Array	47.65	336	P	P	06 53 26.9	+1.1
	comp=Z,7.3nm,0.7s,baz=154,slow=8.2,SNR=19						
	comp=Z,7.3nm,0.7s						
KSAR	Wonju Array Be	47.66	336	P	P	06 53 26.1	+0.2
KS19	Wonju Array Si	47.71	336	P	P	06 53 25.7	-0.6
NJ2	Nanjing	47.92	323	*e*P	P	06 53 29.8	+1.8
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
WHN	Wuhan	49.72	319	P	P	06 53 43.4	+1.7
DL2	Dalian	51.63	332	P	P	06 53 57.4	+1.5
DL2				pmax	pmax		
	comp=Z,52nm,0.8s						
TIA	Tai'an	51.91	326	P	P	06 53 58.3	+0.3
TIA				pmax	pmax		
	comp=Z,20nm,0.9s						
USRK	Ussuriysk Ar.	52.27	344	P	P	06 54 01.7	+1.2
	comp=Z,10nm,0.8s,baz=174,slow=7.2,SNR=9.6						
	comp=Z,10nm,0.8s						
MDJ	Mudanjiang	53.36	342	P	P	06 54 09.7	+1.1
MDJ				IAmb	IAmb	06 54 11.2	
	comp=Z,28nm,1.0s						
MDJ	Mudanjiang	53.36	342	P	P	06 54 10.1	+1.6
MDJ				pmax	pmax		
	comp=Z,35nm,0.9s						
CN2	Changchun	54.06	338	*e*P	P	06 54 14.3	+0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
HNS	HongShan	54.11	325	⇓P	P	06 54 14.5	+0.4
HNS				pmax	pmax		
	comp=Z,22nm,0.7s						
BNX	BinXian	55.06	341	⇑P	P	06 54 21.8	+0.9
BNX				pmax	pmax		
	comp=Z,43nm,1.0s						
BJT	Baijiatuau	55.20	328	P	P	06 54 22.0	0.0
BJT				IAmb	IAmb	06 54 24.1	
	comp=Z,8.9nm,0.7s						
XAN	Xi'an	55.48	318	P	P	06 54 24.5	+0.3
XAN				pP	pP	06 55 01.5	+5.8
XAN				pmax	pmax		
	comp=Z,26nm,0.7s						
CMAR	Chiang Mai Arr	55.90	297	P	P	06 54 27.2	-0.2
	comp=Z,0.7nm,0.3s,baz=109,slow=6.6,SNR=6.4						
	comp=Z,0.7nm,0.3s						
PZH	PanZhiHua	56.76	307	P	P	06 54 36.0	+2.5
CD2	Chengdu	57.35	312	P	P	06 54 38.3	+0.8
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
XLT	XiLinHaoTe	58.13	331	*e*P	P	06 54 44.3	+1.6
XLT				pmax	pmax		
	comp=Z,16nm,0.7s						
XLT				pmax	pmax		
	comp=Z,220nm,5.4s						
HHC	Hu-ho-hao-te	58.26	326	*e*P	P	06 54 46.8	+3.1
HHC				pmax	pmax		
	comp=Z,12nm,0.5s						
HHC				pmax	pmax		
	comp=Z,80nm,6.3s						
PEA0B	Petropavlovsk-	58.89	5	P	P	06 54 47.6	-0.1
PETK	Petropavlovsk-	58.89	5	P	P	06 54 47.8	+0.1
	comp=Z,4.5nm,0.5s,baz=168,slow=6.5,SNR=12						
	comp=Z,4.5nm,0.5s						
BTO	Baotou	58.97	325	*e*P	P	06 54 48.8	+0.2
BTO				pmax	pmax		
	comp=Z,11nm,0.6s						
BTO				pmax	pmax		
	comp=Z,470nm,5.5s						
HEH	HeiHe	59.07	343	*e*P	P	06 54 49.8	+0.8
HEH				pmax	pmax		
	comp=Z,27nm,0.8s						
LZDM	Lanzhou Array	60.09	317	P	P	06 54 57.7	+1.0
	comp=Z,1.9nm,0.3s,baz=134,slow=4.3,SNR=5.2						
	comp=Z,1.9nm,0.3s						
HIA	Hailar	60.79	338	P	P	06 55 01.8	+1.1
HILR	Hailar Array B	61.02	338	P	P	06 55 03.5	+1.1
	comp=Z,8.8nm,0.5s,baz=139,slow=7.3,SNR=4.3						
	comp=Z,8.8nm,0.5s						
DRV	Dumont d'Urvil	61.31	185	P	P	06 55 05.1	+1.1
GTA	Gaotai	64.54	319	*e*P	P	06 55 27.8	+1.8
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ULN	Ulaanbaatar	65.38	330	P	P	06 55 31.7	+0.4
ULN				IAmb	IAmb	06 55 33.3	
	comp=Z,7.4nm,0.7s						
ULN	Ulaanbaatar	65.38	330	P	P	06 55 32.6	+1.3
SONM	Songino Array	65.69	329	P	P	06 55 34.1	+0.9
	comp=Z,8.5nm,0.5s,baz=144,slow=5.1,SNR=57						
	comp=Z,8.5nm,0.5s						
SONM	Songino Array	65.69	329	P	P	06 55 33.9	+0.6
SONM				IAmb	IAmb	06 55 36.1	
	comp=Z,10.0nm,0.6s						
VNDA	Vanda	72.08	177	P	P	06 56 13.2	+1.0
	comp=Z,2.3nm,0.7s,baz=332,slow=5.8,SNR=6.9						
	comp=Z,2.3nm,0.7s						
VNDA	Vanda	72.08	177	P	P	06 56 13.0	+0.9
WMQ	Urumqi	74.62	318	*e*P	P	06 56 27.8	+0.1
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
TIXI	Tiksi	78.42	353	P	P	06 56 44.4	-4.0
MKAR	Makanchi Array	79.27	320	P	P	06 56 51.8	-1.8
	comp=Z,1.0nm,0.4s,baz=98,slow=7.9,SNR=12						
MKAR				PP	PP	06 59 52.0	-3.3
	comp=Z,0.2nm,0.5s,baz=98,slow=8.7,SNR=3.8						
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	79.27	320	P	P	06 56 52.8	-0.8
ZALV	Zalesovo Beam	80.43	327	P	P	06 56 57.9	-1.8
	comp=Z,2.2nm,0.4s,baz=112,slow=5.9,SNR=12						
	comp=Z,2.2nm,0.4s						
IMAR	Indian Mountai	82.07	20	P	P	06 57 08.2	+0.2
BOOM	Boomskoye usch	82.30	314	P	P	06 57 09.6	-0.5
BOOM				IAmb	IAmb	06 59 11.7	
	comp=Z,18nm,1.2s						
NIL	Nilore	82.32	305	P	P	06 57 10.0	-0.1
NIL				IAmb	IAmb	06 57 11.8	
	comp=Z,5.9nm,0.6s						
KURK	Kurchatov	82.85	323	P	P	06 57 11.9	-0.5
KURBB	Kurchatov Arra	82.87	322	P	P	06 57 11.0	-1.6
	comp=Z,1.5nm,0.6s,baz=116,slow=4.3,SNR=11						
	comp=Z,1.5nm,0.6s						
IL31		83.94	23	P	P	06 57 16.9	-0.7
IL31				IAmb	IAmb	06 58 13.4	
	comp=Z,22nm,1.8s						
ILAR	Eielson Array	83.94	23	P	P	06 57 15.7	-2.1
	comp=Z,1.3nm,0.7s,baz=250,slow=4.8,SNR=15						
ILAR	Eielson Array	83.94	23	P	P	06 57 16.8	-0.9
QSPA	South Pole Qui	84.31	180	P	P	06 57 20.7	+1.0
	comp=Z,4.7nm,0.6s,baz=323,slow=0.7,SNR=26						
	comp=Z,4.7nm,0.6s						
QSPA	South Pole Qui	84.31	180	P	P	06 57 20.8	+1.0
QSPA	South Pole Qui	84.31	180	P	P	06 57 20.8	+1.0
NRIK	Noril'sk	85.94	342	P	P	06 57 26.4	-1.2
	comp=Z,4.1nm,0.6s,baz=132,slow=4.8,SNR=8.7						
	comp=Z,4.1nm,0.6s						
BMAR	Burnt Mountain	85.95	21	P	P	06 57 28.5	+0.7
KK31	Karatay Array	86.33	314	P	P	06 57 29.5	-0.7
KKAR	Karatay Array	86.33	314	P	P	06 57 29.8	-0.4
BVAR	Borovoye Array	88.37	324	P	P	06 57 38.0	-1.7
	comp=Z,1.4nm,0.6s,baz=93,slow=6.1,SNR=5.4						
	comp=Z,1.4nm,0.6s						
AB31	Akbulak array	94.40	319	P	P	06 58 07.6	-0.1
AB31				IAmb	IAmb	06 58 21.9	
	comp=Z,8.0nm,1.6s						
ABKAR	Akbulak array	94.40	319	P	P	06 58 07.6	-0.1
NVAR	Mina Array Bea	94.66	52	P	P	06 58 09.0	-0.4
	comp=Z,0.2nm,0.5s,baz=283,slow=6.4,SNR=2.1						
	comp=Z,0.2nm,0.5s						
PLCA	Paso Flores	120.62	145	PKP	PKiKP	07 03 40.1	+0.6
	comp=Z,0.6nm,0.7s,baz=290,slow=3.1,SNR=4.9						
TORD	Torodi Ar. Bea	148.06	286	PKPbc	PKPbc	07 04 32.6	-1.3
	comp=Z,5.0nm,0.5s,baz=48,slow=5.7,SNR=3.0						
BDFB	Brasilia	152.20	140	PKPbc	PKiKP	07 04 44.5	+0.1
	comp=Z,3.6nm,0.4s,baz=252,slow=1.1,SNR=16						

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*IDC **14** 06:52:49.7±1.1, 1°.54N×126°.38E, h0^{km}, mb4.0/6, mbtmp4.0/6, Error ellipse: s-maj=129.0km s-min=17.7km az=67.0*
*NEIC **14** 06:52:52.0±1.3, 1°.44N±0°.10×126°.30E±0°.03, h10^{km}±1^{km}, mb4.6/12, Error ellipse: s-maj=16.9km s-min=3.9km az=192.0*
*DJA **14** 06:52:52.3±0.3, 1°N±4°×12°6E±°, h10^{km}, M3.8/8, MLv3.8/8*
ISC 14 06:52:54.6±0.6**, 1°.40N**±0°.08×**126°.38E**±0°.07**, h35**^{km}**, n33, σ1^s.20**/33**, mb4.3**/12**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.17	122		Pn	06 53 14.8	+0.3
TNTI	Ternate	1.17	122	P	Pn	06 53 14.4	-0.1
SANI	Sanana	3.45	186	P	Pn	06 53 47.0	+1.1
GTOI	Gorontalo	3.45	257	P	Pn	06 53 49.2	+3.3
LUWI	Luwuk	4.35	236	Pn	Pn	06 53 55.4	-2.8
LUWI	Luwuk	4.35	236	P	Pn	06 53 59.0	+0.8
MRSI	Marisa	4.53	258	P	Pn	06 54 02.1	+1.4
TOLI2	Tolitoli	5.60	267	Pn	Pn	06 54 13.8	-1.7
MYLDM	Lahad Datu	8.71	296	Pn	Pn	06 54 58.3	0.0
SBUM	Sibu	14.19	274	Pn	Pn	06 56 12.4	-0.8
MTN	Manton Dam	14.92	162	Pn	Pn	06 56 22.8	-0.2
WB0	Warramunga Arr	22.46	160	P	P	06 57 51.4	+0.5
WB0				IAmb	IAmb	06 57 58.4	
	comp=Z,8.6nm,0.7s						
WRA	Warramunga Arr	22.60	160	P	P	06 57 53.1	+0.7
	comp=Z,5.3nm,0.7s,baz=340,slow=11,SNR=16						
	comp=Z,5.3nm,0.7s						
WRA	Warramunga Arr	22.60	160	P	P	06 57 51.5	-0.9
MNAI	Manna	24.09	256	P	P	06 58 06.3	-0.9
KNMB	Chin-men Tao	24.20	342	P	P	06 58 07.4	-0.5
AS31	Alice Springs	25.97	164	P	P	06 58 25.1	+0.9
ASAR	Alice Springs	25.97	164	P	P	06 58 25.8	+1.6
	comp=Z,1.3nm,0.6s,baz=345,slow=8.2,SNR=13						
	comp=Z,1.3nm,0.6s						
ASAR	Alice Springs	25.97	164	P	P	06 58 25.2	+1.1
CMAR	Chiang Mai Arr	31.80	304	P	P	06 59 15.2	-1.0
STKA	Stephens Creek	36.11	158	P	P	06 59 54.4	+1.0
	comp=Z,1.0nm,0.5s,baz=335,slow=12,SNR=3.9						
	comp=Z,1.0nm,0.5s						
JEW	Eniwo	43.41	16	P	P	07 00 54.0	+0.1
PEA0B	Petropavlovsk-	57.71	22	P	P	07 02 41.1	-0.6
PETK	Petropavlovsk-	57.71	22	P	P	07 02 40.9	-0.8
MKAR	Makanchi Array	59.27	326	P	P	07 02 52.5	-0.3
	comp=Z,0.6nm,0.5s,baz=128,slow=8.0,SNR=7.8						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	59.27	326	P	P	07 02 51.9	-0.9
MAKZ	Makanchi	59.45	326	P	P	07 02 53.7	-0.3
MAKZ				IAmb	IAmb	07 03 01.3	
	comp=Z,4.2nm,1.4s						
KURBB	Kurchatov Arra	63.51	328	P	P	07 03 20.6	-0.7
	comp=Z,1.1nm,0.6s,baz=127,slow=6.1,SNR=10						
	comp=Z,1.1nm,0.6s						
KURK	Kurchatov	63.51	328	P	P	07 03 20.9	-0.4
KURK				IAmb	IAmb	07 03 33.6	
	comp=Z,2.3nm,0.7s						
NRIK	Noril'sk	72.59	347	P	P	07 04 18.4	+0.4
	comp=Z,2.5nm,0.8s,baz=122,slow=7.9,SNR=3.7						
	comp=Z,2.5nm,0.8s						
C19K	Lookout Ridge	83.03	20	P	P	07 05 17.5	+1.4
C19K				IAmb	IAmb	07 05 19.2	
	comp=Z,15nm,1.4s						
H19K	Roundabout Mou	83.42	24	P	P	07 05 19.7	+1.6
H19K				IAmb	IAmb	07 05 21.4	
	comp=Z,5.5nm,1.0s						
E19K	Redstone River	83.51	22	P	P	07 05 19.7	+1.1
E19K				IAmb	IAmb	07 05 21.7	
	comp=Z,5.5nm,1.0s						

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*IDC **14** 07:00:30.7±2.5, 14°.00N×145°.78E, h0^{km}, mb3.8/5, mbtmp3.8/5, MS3.4/1, Error ellipse: s-maj=69.0km s-min=18.4km az=144.0*
ISC 14 07:00:35.5±2.9**, 13°.9N**±0°.5×**145°.8E**±0°.3**, h35**^{km}**, n7, σ0^s.56**/7**, mb3.9**/5**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.97	253	Pn	Pn	07 00 52.1	-0.5
	61nm,0.3s,baz=110,slow=5.2,SNR=14						
GUMO				Sn	Sn	07 01 05.9	+0.6
	142nm,0.3s,baz=18,slow=23,SNR=20						
CMAR	Chiang Mai Arr	45.16	282	LR	LR	07 26 26.6	
	comp=Z,50nm,21.6s,baz=255,slow=34						
MKAR	Makanchi Array	61.93	316	P	P	07 10 51.9	+0.1
	0.9nm,0.5s,baz=90,slow=8.3,SNR=11						
	0.9nm,0.5s						
KURBB	Kurchatov Arra	65.01	320	P	P	07 11 11.7	-0.3
	1.4nm,0.7s,baz=101,slow=6.9,SNR=15						
	1.4nm,0.7s						
ILAR	Eielson Array	67.91	25	P	P	07 11 30.0	-0.3
	0.6nm,1.0s,baz=260,slow=5.1,SNR=4.3						
	0.6nm,1.0s						
BVAR	Borovoye Array	70.28	322	P	P	07 11 45.1	-0.1
	0.7nm,0.6s,baz=90,slow=5.8,SNR=4.0						
	0.7nm,0.6s						
YKA	Yellowknife Ar	82.17	28	P	P	07 12 53.2	+0.6
	0.2nm,0.7s,baz=276,slow=7.5,SNR=4.2						
	0.2nm,0.7s						

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*SNET **14** 07:08:44.2±2.9, 14°.84N×92°.66W, h31^{km}, ML4.4*
*GCG **14** 07:08:45.5±1.2, 14°.73N×92°.61W, h63^{km}±11^{km}, MD4.0, ML4.3*
*MEX **14** 07:08:46.5±1.0, 14°.67N×92°.61W, h68^{km}±14^{km}, MD4.4*
*CATAC **14** 07:08:46.0±0.5, 15°N±3°×9°3W±°, h32^{km}±4^{km}, M4.2/18, MLv4.2/18, Error ellipse: s-maj=7.7km s-min=4.0km az=37.3, confirmed*
ISC 14 07:08:44.2±1.2**, 14°.66N**±0°.04×**92°.61W**±0°.03**, h76**^{km}±8^{km}**, n80, σ2^s.72**/124**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.42	54	*e*P	Pn	07 08 56.9	0.0
THIG				*e*S	Sn	07 09 06.0	-0.2
THIG		0.42	54	*i* P	Pn	07 08 56.7	-0.2
SMCA	Catarina	0.56	70	*i* P	Pn	07 08 58.3	+0.2
SMCA				IAML		07 09 08.8	
	comp=N,39µm,0.1s						
PATR	El Naranjo	0.58	39	*e*P	Pn	07 08 58.0	-0.7
PATR				*e*S	Sn	07 09 07.4	-1.9
CHUJ	Union Juarez	0.65	49	*e*P	Pn	07 08 58.8	-0.5

CHUJ				*e*S	Sn	07 09 09.3	-1.2
PAVE	Pavencul	0.68	39	*e*P	Pn	07 08 59.2	-0.4
PAVE				*e*S	Sn	07 09 09.6	-1.3
RTAL	Retalhuleu	0.90	99	*e*P	Pn	07 09 02.7	+0.9
RTAL				*e*S	Sn	07 09 15.6	+0.6
RTAL	Retalhuleu	0.90	99	*e*P	Pn	07 09 02.8	+0.9
RTAL				*e*S	Sn	07 09 14.7	-0.3
RTAL	Retalhuleu	0.90	99	P	Pn	07 09 02.9	+1.0
RTAL	Retalhuleu	0.90	99	S	Sn	07 09 16.0	+1.1
QUEO	Labor Ovalle	1.08	79	*i* P	Pn	07 09 05.7	+1.3
QUEO				*i* S	Sn	07 09 21.0	+1.7
QUEO				IAML		07 09 21.4	
	comp=N,19µm,0.4s						
SOKI	Kika Raxquin	1.18	82	*i* P	Pn	07 09 07.3	+1.6
SOKI				IAML		07 09 31.5	
	comp=N,2µm,0.4s						
PCIG		1.19	331	*e*P	Pn	07 09 05.9	+0.5
PCIG				*e*S	Sn	07 09 20.8	-0.5
STG2	El Palmar, Qui	1.22	100	*i* P	Pn	07 09 03.0	-2.9
STG2				*i* S	Sn	07 09 16.9	-5.3
STG8	El Palmar, Qui	1.24	100	*i* P	Pn	07 09 03.5	-2.7
STG8				*i* S	Sn	07 09 17.6	-5.2
STG5	El Palmar, Qui	1.25	102	*i* P	Pn	07 09 03.6	-2.7
STG5				*i* S	Sn	07 09 18.4	-4.4
HUEH	Huehuetenango	1.26	59	*e*P	Pn	07 09 07.7	+1.2
HUEH				*e*S	Sn	07 09 24.8	+1.7
HUEH	Huehuetenango	1.26	59	*e*P	Pn	07 09 07.8	+1.4
HUEH				*e*S	Sn	07 09 24.0	+0.8
HUEH	Huehuetenango	1.26	59	*i* P	Pn	07 09 07.9	+1.4
HUEH				*i* S	Sn	07 09 25.1	+1.9
HUEH				IAML		07 09 33.5	
	comp=E,9µm,0.6s						
HUEH	Huehuetenango	1.26	59	P	Pn	07 09 08.1	+1.6
QUIS	Sacapulas	1.60	67	*i* P	Pn	07 09 12.5	+1.7
QUIS				*i* S	Sn	07 09 33.5	+2.6
QUIS				IAML		07 09 36.7	
	comp=E,3µm,0.4s						
CCIG	Comitan	1.68	16	*e*P	Pn	07 09 13.4	+1.4
CCIG				*e*S	Sn	07 09 32.1	-0.7
CCIG	Comitan	1.68	16	*i* P	Pn	07 09 13.3	+1.4
CCIG				*i* S	Sn	07 09 34.4	+1.6
CCIG				IAML		07 09 37.3	
	comp=N,1µm,0.4s						
CCIG	Comitan	1.68	16	P	Pn	07 09 13.6	+1.7
ESSG	Sabana Grande	1.75	99	*i* P	Pn	07 09 14.4	+1.6
ESSG				*i* S	Sn	07 09 35.3	+0.9
FG16	Alotenango, Sa	2.07	100	*i* P	Pn	07 09 14.1	-3.1
FG16				*i* S	Sn	07 09 36.6	-5.7
FG16				IAML		07 09 42.6	
	comp=E,8µm,0.2s						
APG	El Apazote	2.10	80	*i* P	Pn	07 09 19.1	+1.4
TGBT	Tuxtla Gutierr	2.15	348	*e*P	Pn	07 09 19.2	+1.1
TGBT				*e*S	Sn	07 09 46.4	+2.5
TGIG		2.16	347	*e*P	Pn	07 09 18.1	-0.2
TGIG				*e*S	Sn	07 09 42.8	-1.4
TGIG		2.16	347	*i* P	Pn	07 09 18.1	-0.2
TGIG				IAML		07 09 55.8	
	comp=E,552nm,0.4s						
PCG5	San Vicente Pa	2.21	101	*i* S	Sn	07 09 41.4	-4.2
FAME	Alcaldia de Sa	2.65	108	P	Pn	07 09 26.3	+1.5
SLOZ	Alcaldia de Sa	2.81	103	S	Sn	07 10 02.7	+2.7
NUBE	Las Nubes	2.85	105	*e*P	Pn	07 09 29.8	+2.2
NUBE				*e*S	Sn	07 10 02.0	+1.0
NUBE	Las Nubes	2.85	105	*i* P	Pn	07 09 30.2	+2.6
NUBE	Las Nubes	2.85	105	P	Pn	07 09 29.7	+2.0
SBLS	San Blas	3.01	105	*e*P	Pn	07 09 32.7	+2.7
SBLS				*e*S	Sn	07 10 08.4	+3.3
CEVE	Cerro Verde	3.01	106	*e*P	Pn	07 09 32.7	+2.7
CEVE	Cerro Verde	3.01	106	P	Pn	07 09 32.9	+2.9
UXUV	UXUV	3.02	331	*e*P	Pn	07 09 31.4	+1.6
UXUV				*e*S	Sn	07 10 06.7	+1.6
UNIC	Universidad Ca	3.05	102	P	Pn	07 09 33.3	+3.0
MTO3	Montecristo	3.16	94	P	Pn	07 09 35.0	+3.0
JAYA	Jayaque - finc	3.23	108	*e*P	Pn	07 09 35.0	+2.2
JAYA				*e*S	Sn	07 10 11.8	+1.5
JAYA	Jayaque - finc	3.23	108	P	Pn	07 09 35.0	+2.2
JAYA	Jayaque - finc	3.23	108	S	Sn	07 10 13.6	+3.3
CMIG	Matias Romero	3.26	318	*e*P	Pn	07 09 34.1	+1.0
CMIG				*e*S	Sn	07 10 11.2	+0.5
PMON	Piamonte	3.34	106	P	Pn	07 09 37.7	+3.5
LALI	Alcalda de L	3.40	110	P	Pn	07 09 37.9	+2.9
PETF	Flores	3.47	49	*e*P	Pn	07 09 36.6	+0.7
PETF				*e*S	Sn	07 10 12.6	-3.2
PETF	Flores	3.47	49	*i* P	Pn	07 09 37.3	+1.4
PETF				*i* S	Sn	07 10 14.3	-1.5
PETF				IAML		07 10 18.1	
	comp=E,506nm,0.4s						
PETF	Flores	3.47	49	P	Pn	07 09 38.0	+2.1
LOMA	Loma Larga	3.49	106	P	Pn	07 09 38.6	+2.3
HUIG	Huatulco	3.55	289	*e*P	Pn	07 09 37.1	+0.1
HUIG				*e*S	Sn	07 10 14.2	-3.6
HUIG	Huatulco	3.55	289	*i* P	Pn	07 09 38.0	+1.0
PAVA	Las Pavas	3.69	104	P	Pn	07 09 42.2	+3.2
TUIG	Tuzandepetl	3.78	333	*e*S	Sn	07 10 19.8	-3.6
SCLA	Alcaldia de Sa	3.89	104	P	Pn	07 09 44.0	+2.4
NEUV	Arroyo Zacate	4.31	315	*e*P	Pn	07 09 49.7	+2.3
NEUV				*e*S	Sn	07 10 38.0	+1.6
SCIG	Sabancuy	4.49	18	*e*P	Pn	07 09 50.4	+0.5
SCIG				*e*S	Sn	07 10 35.9	-5.0
SCIG	Sabancuy	4.49	18	*i* P	Pn	07 09 51.1	+1.2
PMUV	Sontecomapan	4.55	328	*e*P	Pn	07 09 51.2	+0.5
PMUV				*e*S	Sn	07 10 36.4	-6.1
PEIG	Puerto Escondi	4.57	287	*e*P	Pn	07 09 52.2	+1.2
PEIG				*e*S	Sn	07 10 38.8	-4.1
VHO	Vista Hermosa	4.63	302	*e*P	Pn	07 09 54.2	+2.2
VHO				*e*S	Sn	07 10 44.0	-0.7
YOIG	Yosondua	5.23	295	*e*P	Pn	07 10 03.4	+3.2
YOIG				*e*S	Sn	07 11 01.9	+2.6
TOIG	Toxpalan	5.47	309	*e*P	Pn	07 10 06.3	+3.0
TOIG				*e*S	Sn	07 11 04.5	-0.5
PNIG	Pinotepa	5.59	289	*e*P	Pn	07 10 07.1	+2.3
PNIG				*e*S	Sn	07 11 02.4	-5.4
TXIG	Tlaxiaco	5.59	298	*e*P	Pn	07 10 09.0	+3.9
TXIG				*e*S	Sn	07 11 08.9	+0.8
TPIG	Tehuac#an	5.89	310	*e*P	Pn	07 10 19.4	+10
TPIG				*e*S	Sn	07 11 16.1	+0.7
HLIG	Huajuapan de L	5.90	303	*e*P	Pn	07 10 17.5	+8.2
HLIG				*e*S	Sn	07 11 20.3	+4.7
JAUV	Jalcomulco	6.16	320	*e*P	Pn	07 10 10.3	-2.4
JAUV				*e*S	Sn	07 11 15.4	-6.4
FTIG	Fresnillo de T	6.21	302	*e*P	Pn	07 10 18.9	+5.4
FTIG				*e*S	Sn	07 11 21.2	-1.8
LVIG	Laguna Verde	6.21	325	*e*S	Sn	07 11 16.0	-6.9
MGIG	Malinaltepec	6.33	295	*e*P	Pn	07 10 17.7	+2.6
MGIG				*e*S	Sn	07 11 27.5	+1.3
TLIG	Tlapa	6.41	298	*e*P	Pn	07 10 19.7	+3.5
TLIG				*e*S	Sn	07 11 25.0	-3.0
CRIG	Cruz Grande	6.61	289	*e*P	Pn	07 10 21.5	+2.7
CRIG				*e*S	Sn	07 11 30.1	-2.6
MYIG	Merida	6.83	23	*e*P	Pn	07 10 31.7	+10
MYIG				*e*S	Sn	07 11 34.2	-4.0
TEIG	Tepich	6.91	36	*e*P	Pn	07 10 21.6	-1.3
TEIG				*e*S	Sn	07 11 33.1	-7.0
DAIG	Los Arroyos	7.17	290	*e*P	Pn	07 10 29.6	+3.1
DAIG				*e*S	Sn	07 11 38.6	-7.8
PPM	Popocatepetl	7.23	308	*e*P	Pn	07 10 31.4	+3.6
PPM				*e*S	Sn	07 11 53.1	+4.4
CXUV	Coxquihui	7.25	320	*e*P	Pn	07 10 27.1	-0.6
CXUV				*e*S	Sn	07 11 42.9	-5.7

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*SDD **14** 07:13:36.3±1.9, 19°.08N×69°.61W, h94^{km}±13^{km}, MD2.9, ML3.0, MW2.8, Presumed earthquake*
*OSPL **14** 07:13:36.7±6.6, 19°.15N×69°.52W, h62^{km}±61^{km}, ML2.7, Presumed earthquake*
*SSNC **14** 07:13:39.5±3.5, 20°.90N×70°.18W, h78^{km}±172^{km}, MD4.2, ML2.9, MW2.9*
ISC 14 07:13:28.3±2.2**, 19°.25N**±0°.07×**69°.52W**±0°.08**, h137**^{km}±12^{km}**, n23, σ2^{s}.72**/40**, 8C-6D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMDR	Samana, DR	0.32	83	⇓*e*Pg	Pn	07 13 49.7	+2.4
SMDR				⇑*e*Sg	Sn	07 14 01.1	-0.5
SMDR				IAML		07 14 01.4	
	comp=N,326nm,0.2s						
HATOM	Hato Mayor del	0.48	164	⇓*e*Pg	Pn	07 13 49.7	+1.6
HATOM				⇑*e*Sg	Sn	07 13 59.9	-3.2
HATOM				IAML		07 13 59.9	
	comp=N,193nm,0.7s						
MIDR	Miches	0.52	121	⇓*e*Pg	Pn	07 13 50.9	+2.7
MIDR				⇑*e*Sg	Sn	07 14 02.5	-0.9
MIDR				IAML		07 14 03.2	
	comp=N,296nm,0.1s						
DR08	Loma La Naviza	0.55	239	⇑*e*Pg	Pn	07 13 49.1	+0.6
DR08				⇑*e*Sg	Sn	07 13 59.0	-4.8
DR08				IAML		07 13 59.8	
	comp=N,13µm,0.1s						
SDD	Santo Domingo	0.87	205	⇑*e*Pg	Pn	07 13 51.9	+1.1
SDD				⇑*e*Sg	Sn	07 14 03.9	-3.9
SDD				IAML		07 14 04.7	
	comp=N,47nm,0.1s						
SDD	Santo Domingo	0.87	205	*i* P	Pn	07 13 52.0	+1.2
SDD				*e*S	Sn	07 14 03.5	-4.2
SC01	Santiago de lo	1.15	279	⇓*e*Pg	Pn	07 13 56.3	+3.0
SC01				⇓*e*Sg	Sn	07 14 12.7	+0.4
SC01				IAML		07 14 13.7	
	comp=N,185nm,0.2s						
SC01	Santiago de lo	1.15	279	*i* P	Pn	07 13 56.2	+3.0
SC01				*e*S	Sn	07 14 11.4	-0.8
SC01				IAML		07 14 15.0	
	comp=Z,97nm,0.2s						
BANI	BANI	1.16	223	⇓*e*Pg	Pn	07 13 55.6	+2.1
BANI				⇑*e*Sg	Sn	07 14 10.3	-2.4
BANI				IAML		07 14 12.1	
	comp=N,316nm,0.3s						
SDDR	Presa de Saban	1.69	261	*i* P	Pn	07 14 02.8	+3.7
SDDR				*e*S	Sn	07 14 23.2	+0.6
SDDR				IAML		07 14 25.6	
	comp=Z,43nm,0.5s						
LOPP1	Punta Rusia, P	1.69	291	*i* P	Pn	07 14 02.3	+3.3
LOPP1				*e*S	Sn	07 14 22.1	-0.5
LOPP1				IAML		07 14 26.2	
	comp=Z,63nm,0.5s						
LODU1	El Espartillar	2.05	245	*i* P	Pn	07 14 07.0	+3.7
LODA1	ITESIL, Dajabo	2.08	278	*i* P	Pn	07 14 14.6	+11
LODA1				*e*S	Sn	07 14 29.3	-1.4
LOVI	El Cajuil, Ovi	2.27	231	*i* P	Pn	07 14 09.0	+3.0
LOVI				*e*S	Sn	07 14 33.8	-1.1
LOVI				IAML		07 14 37.6	
	comp=Z,72nm,1.5s						
LOBH	Bahia de las A	2.44	236	*i* P	Pn	07 14 12.2	+4.2
LOBH				*e*S	Sn	07 14 38.8	+0.3
LOBH				IAML		07 14 39.7	
	comp=Z,42nm,1.6s						
MASC	Masc	4.53	283	*e*P	Pn	07 14 36.7	+1.4
MASC				*e*S	Sn	07 15 26.1	-1.2
MASC				IAML		07 15 27.5	
	comp=N,5.0nm,0.1s						
QMBU	Quimbuelo	5.07	282	*e*P	Pn	07 14 43.4	+0.9
QMBU				*e*S	Sn	07 15 28.8	-12
QMBU				IAML		07 15 39.9	
	comp=E,13nm,0.7s						
QMBU				IAML		07 15 40.6	
	comp=N,7.0nm,0.3s						
MOAC	Moa	5.30	286	*e*P	Pn	07 14 46.4	+0.8
MOAC				*e*S	Sn	07 15 37.1	-8.7
MOAC				IAML		07 15 45.3	
	comp=N,6.4nm,0.1s						
MOAC				IAML		07 15 46.4	
	comp=E,3.0nm,0.0s						
GTBY	Guantanamo Bay	5.31	278	*e*P	Pn	07 14 49.0	+3.3
GTBY				*e*S	Sn	07 15 38.0	-8.0
GTBY				IAML		07 15 43.3	
	comp=E,11nm,1.4s						
GTBY				IAML		07 15 57.2	
	comp=E,24nm,1.9s						
RCC	Rio Carpintero	5.87	278	*e*P	Pn	07 14 54.6	+1.5
RCC				*e*S	Sn	07 15 55.5	-3.8
RCC				IAML		07 16 00.8	
	comp=E,14nm,1.7s						
RCC				IAML		07 16 00.8	
	comp=N,13nm,1.7s						
PINC	Pinares de May	6.03	283	*e*P	Pn	07 14 56.5	+1.2
PINC				*e*S	Sn	07 15 52.4	-11
PINC				IAML		07 16 01.3	
	comp=E,3.7nm,0.1s						
PINC				IAML		07 16 03.4	
	comp=N,4.0nm,0.1s						
MARVS	Santiago de Cu	6.06	278	*e*P	Pn	07 14 56.3	+0.6
MARVS				*e*S	Sn	07 16 00.7	-3.2
MARVS				IAML		07 16 09.6	
	comp=E,7.4nm,1.2s						
MARVS				IAML		07 16 10.0	
	comp=N,11nm,2.2s						
HLGC	Holguin	6.36	286	*e*P	Pn	07 14 59.5	-0.2
HLGC				*e*S	Sn	07 16 05.0	-6.3
HLGC				IAML		07 16 28.0	
	comp=E,14nm,1.6s						
HLGC				IAML		07 16 30.6	
	comp=N,17nm,2.6s						

IDC 14 07:14:44.6±2.6**, 4°.09N**×**123°.86E, h0**^{km}**, mb3.5**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=357.2km s-min=26.5km az=63.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.01	157	P	P	07 20 19.7	+0.2
	0.3nm,0.3s,baz=337,slow=9.1,SNR=5.1 0.3nm,0.3s						
ASAR	Alice Springs	29.28	161	P	P	07 20 48.6	-0.2
	0.1nm,0.3s,baz=337,slow=8.2,SNR=4.5 0.1nm,0.3s						
MKAR	Makanchi Array	55.65	326	P	P	07 24 22.6	0.0
	0.4nm,0.4s,baz=121,slow=8.2,SNR=6.8 0.4nm,0.4s						

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*CATAC **14** 07:27:00.4±0.5, 13°N±2°×9°0W±°, h11^{km}±4^{km}, M4.6/45, mb4.6/2, mB4.6/2, MLv4.6/45, Mw(mB)3.8/2, Error ellipse: s-maj=4.2km s-min=3.6km az=73.7, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$3.63; M$_{θθ}$-3.80; M$_{φφ}$0.17; M$_{rθ}$3.60; M$_{θφ}$2.67; M$_{φr}$-0.73; Fault plane solution: M$_{0}$5.87291×10^{15} NP1:φ$_{s}$103.81736°, δ65.79607°, λ76.12516°. NP2:φ$_{s}$314.88557°, δ27.68949°, λ118.07926°. Principal axes: T 5.1137, Plg66.3527°, Azm348.8094°; N 1.3005, Plg12.6339°, Azm109.6000°; P -6.4141, Plg19.6470°, Azm204.1899°; confirmed*
*NEIC **14** 07:27:01.4±2.7, 12°.92N±0°.06×90°.43W±0°.05, h10^{km}±1^{km}, mb4.5/27 Error ellipse: s-maj=11.1km s-min=7.9km az=203.0*
*SNET **14** 07:27:02.9±1.6, 12°.96N×90°.33W, h14^{km}, ML4.4*
*GCG **14** 07:27:03.8±2.2, 13°.10N×90°.42W, h6^{km}±18^{km}, MD4.8, ML4.2*
*UCR **14** 07:27:09.1±1.7, 12°.69N×89°.90W, h10^{km}, MW4.1*
*IDC **14** 07:27:12.5±2.2, 13°.73N×89°.72W, h85^{km}±16^{km}, mb4.0/14, mbtmp4.4/16, MS3.9/12, Error ellipse: s-maj=34.4km s-min=14.8km az=39.0*
ISC 14 07:27:00.0±0.5**, 12°.89N**±0°.04×**90°.41W**±0°.03**, h10**^{km}**, n227, σ1^{s}.48**/229**, mb4.5**/25**, MS4.0**/11**, 5C, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESSJ	San Jos, E	0.68	352	*e*P	Pn	07 27 23.3	+7.6
FAME	Alcaldia de Sa	1.02	22	P	Pg	07 27 20.6	+0.8
FAME	Alcaldia de Sa	1.02	22	S	Sn	07 27 36.0	+1.0
NUBE	Las Nubes	1.18	31	*e*P	Pb	07 27 23.1	+0.4
NUBE				*e*S	Sb	07 27 38.0	0.0
NUBE	Las Nubes	1.18	31	⇑*e*P	Pb	07 27 23.0	+0.4
NUBE				*e*S	Sb	07 27 35.6	-2.5
NUBE	Las Nubes	1.18	31	P	Pb	07 27 23.0	+0.4
NUBE	Las Nubes	1.18	31	S	Sn	07 27 40.9	+1.9
JAYA	Jayaque - finc	1.21	51	*e*P	Pb	07 27 23.6	+0.5
JAYA				*e*S	Sb	07 27 37.1	-1.7
JAYA	Jayaque - finc	1.21	51	⇑*e*P	Pb	07 27 23.6	+0.5
JAYA				*e*S	Sb	07 27 39.8	+1.0
JAYA	Jayaque - finc	1.21	51	P	Pb	07 27 23.9	+0.8
JAYA	Jayaque - finc	1.21	51	S	Sn	07 27 41.8	+2.1
CEVE	Cerro Verde	1.21	39	*e*P	Pb	07 27 23.9	+0.8
CEVE	Cerro Verde	1.21	39	P	Pb	07 27 23.9	+0.8
CEVE	Cerro Verde	1.21	39	S	Sn	07 27 41.9	+2.1
LALI	Alcalda de L	1.22	60	*e*P	Pn	07 27 23.4	+0.3
LALI	Alcalda de L	1.22	60	⇑*e*P	Pn	07 27 23.4	+0.3
LALI				IAML		07 27 47.8	
	comp=N,709nm,0.4s						
LALI	Alcalda de L	1.22	60	P	Pn	07 27 23.5	+0.4
LALI	Alcalda de L	1.22	60	S	Sn	07 27 41.6	+1.9
SBLS	San Blas	1.22	39	*e*P	Pb	07 27 23.9	+0.5
SBLS				*e*S	Sb	07 27 37.3	-1.9
RTR	El Retiro	1.25	36	*e*P	Pn	07 27 24.5	+0.8
SNJE	San Jose	1.25	39	*e*P	Pn	07 27 24.4	+0.6
PCG5	San Vicente Pa	1.32	1	*e*P	Pg	07 27 26.6	+1.2
CEDA	San Andres	1.34	47	*e*P	Pn	07 27 25.4	+0.5
CEDA	San Andres	1.34	47	P	Pn	07 27 25.8	+0.9
CEDA	San Andres	1.34	47	S	Sg	07 27 44.7	+1.4
PMON	Piamonte	1.34	52	*e*P	Pn	07 27 25.6	+0.6
PMON	Piamonte	1.34	52	P	Pn	07 27 26.0	+1.0
PMON	Piamonte	1.34	52	S	Sn	07 27 44.4	+1.4
UNIC	Universidad Ca	1.37	37	*e*P	Pn	07 27 25.9	+0.6
UNIC	Universidad Ca	1.37	37	P	Pn	07 27 26.0	+0.7
BOQS	Boqueron	1.39	52	*e*P	Pn	07 27 26.2	+0.5
PANCS	Alcalda de	1.40	59	*e*P	Pn	07 27 25.5	-0.1
PANCS	Alcalda de	1.40	59	P	Pn	07 27 26.0	+0.3
PANCS	Alcalda de	1.40	59	S	Sn	07 27 45.3	+1.1
UEES	Universidad Ev	1.41	54	*e*P	Pn	07 27 26.4	+0.5
UEES				*e*S	Sn	07 27 45.5	+1.0
UEES	Universidad Ev	1.41	54	P	Pn	07 27 26.5	+0.7
UEES	Universidad Ev	1.41	54	S	Sg	07 27 46.4	+1.1
RBDL	Robledal	1.41	30	*e*P	Pn	07 27 26.7	+0.8
PIC2	El Picacho	1.41	53	*e*P	Pn	07 27 26.3	+0.3
LOMA	Loma Larga	1.42	58	*e*P	Pn	07 27 26.2	+0.2
LOMA	Loma Larga	1.42	58	P	Pn	07 27 26.3	+0.2
LOMA	Loma Larga	1.42	58	S	Sg	07 27 47.0	+1.2
UTEC	Universidad Te	1.43	55	*e*P	Pn	07 27 26.4	+0.3
UTEC	Universidad Te	1.43	55	P	Pn	07 27 26.8	+0.8
UTEC	Universidad Te	1.43	55	S	Sb	07 27 47.0	+1.9
UESS	Universidad de	1.44	55	*e*P	Pn	07 27 26.8	+0.5
IGN	Direccin Gen	1.46	56	*e*P	Pn	07 27 27.2	+0.7
IGN	Direccin Gen	1.46	56	P	Pn	07 27 27.5	+1.0
IGN	Direccin Gen	1.46	56	S	Sb	07 27 47.8	+1.8
UDBS	Universidad Do	1.47	56	*e*P	Pn	07 27 27.4	+0.7
UDBS	Universidad Do	1.47	56	P	Pn	07 27 27.6	+0.9
UDBS	Universidad Do	1.47	56	S	Sg	07 27 48.8	+1.3
LFRS	El Faro	1.50	61	*e*P	Pn	07 27 27.6	+0.4
LFU	La Fuente	1.52	56	*e*P	Pn	07 27 28.3	+0.9
ESSG	Sabana Grande	1.54	345	*e*P	Pn	07 27 27.4	-0.3
ESSG				IAML		07 27 56.3	
	comp=N,3µm,0.1s						
LBRS	Las Brisas	1.57	57	*e*P	Pn	07 27 28.9	+0.8
PAVA	Las Pavas	1.65	60	*e*P	Pn	07 27 30.2	+1.0
PAVA				*e*S	Sn	07 27 51.6	+1.1
PAVA	Las Pavas	1.65	60	P	Pn	07 27 31.0	+1.8
PAVA	Las Pavas	1.65	60	S	Sn	07 27 52.3	+1.8
TECO	Alcaldia de Te	1.71	68	*e*P	Pn	07 27 30.2	+0.3
TECO	Alcaldia de Te	1.71	68	P	Pn	07 27 30.5	+0.5
UESV	Universidad de	1.75	65	*e*P	Pn	07 27 30.9	+0.5
UESV	Universidad de	1.75	65	P	Pn	07 27 31.2	+0.8
UESV	Universidad de	1.75	65	S	Sn	07 27 54.3	+1.6
STG5	El Palmar, Qui	1.76	329	*i* P	Pg	07 27 35.6	+1.7
STG2	El Palmar, Qui	1.81	329	*e*P	Pg	07 27 36.7	+2.0
STG8	El Palmar, Qui	1.81	330	*e*P	Pg	07 27 36.7	+2.0
MTO3	Montecristo	1.82	34		Pn	07 27 32.8	+1.2
MTO3				Sn	Sn	07 27 54.8	0.0
MTO3	Montecristo	1.82	34	*e*P	Pn	07 27 32.7	+1.2
MTO3	Montecristo	1.82	34	P	Pn	07 27 32.9	+1.3
MTO3	Montecristo	1.82	34	S	Sb	07 27 57.5	+1.0
SCLA	Alcaldia de Sa	1.82	63	*e*P	Pn	07 27 32.7	+1.1
SCLA	Alcaldia de Sa	1.82	63	P	Pn	07 27 32.9	+1.3
SCLA	Alcaldia de Sa	1.82	63	S	Sn	07 27 57.0	+2.2
LLGN	La Laguna	1.91	48	*e*P	Pn	07 27 33.8	+1.0
LLGN	La Laguna	1.91	48	P	Pn	07 27 33.7	+1.0
LLGN	La Laguna	1.91	48	S	Sn	07 27 59.2	+2.4
TECA	Tecapa	1.95	72	*e*P	Pn	07 27 33.6	+0.1
ESQI	Esquipulas	1.96	32	Pn	Pn	07 27 34.8	+1.4
ESQI	Esquipulas	1.96	32	P	Pn	07 27 34.9	+1.4
ZAFR2	Estanzuela, Za	1.97	31	⇑*i*P	Pg	07 27 38.5	+0.6
RTAL	Retalhuleu	2.05	323		Pn	07 27 35.2	+0.6
RTAL				Sn	Sn	07 27 59.4	-0.9
APG	El Apazote	2.11	359	P	Pn	07 27 37.5	+1.9
	comp=N,53nm,0.3s,baz=149,slow=9.9,SNR=836						
APG				S	Sb	07 28 05.9	+1.1
	comp=N,71nm,0.8s,baz=94,slow=14,SNR=10.0						
APG	El Apazote	2.11	359	⇑*i*P	Pn	07 27 37.4	+1.9
PACA	Pacayal	2.11	74	P	Pn	07 27 37.0	+1.4
LCY	Lacayo	2.13	75	*e*P	Pn	07 27 36.6	+0.8
RANC	El Ranchito	2.13	75	*e*P	Pn	07 27 36.6	+0.7
VSM	San Miguel	2.15	75	*e*P	Pn	07 27 37.0	+0.8
QUEO	Labor Ovalle	2.25	332	*e*P	Pn	07 27 39.9	+2.4
CNRM	Centro Naciona	2.26	75	P	Pn	07 27 39.2	+1.8
QUIS	Sacapulas	2.48	345	*e*P	Pn	07 27 43.4	+2.7
QUIS				IAML		07 28 20.9	
	comp=E,2µm,0.5s						
LCND	La Caada	2.49	80	*e*P	Pn	07 27 41.1	+0.5
LCND	La Caada	2.49	80	P	Pn	07 27 41.7	+1.1
CNCH	Conchagua	2.54	81	*e*P	Pn	07 27 41.8	+0.4
CNCH	Conchagua	2.54	81	P	Pn	07 27 42.4	+1.0
HUEH	Huehuetenango	2.64	336		Pn	07 27 44.4	+1.4
HUEH	Huehuetenango	2.64	336	*e*P	Pn	07 27 45.2	+2.3
HUEH				IAML		07 28 25.0	
	comp=N,4µm,1.0s						
THIG		2.70	318	*e*P	Pn	07 27 45.3	+1.8
THIG				*e*S	Sn	07 28 17.1	+0.9
THIG				IAML		07 28 24.2	
	comp=E,2µm,0.8s						
CSGN	Cosiguina Volc	2.78	88	P	Pn	07 27 45.4	+0.7
POTN	Potosi Cosigui	2.83	87	P	Pn	07 27 45.6	+0.3
TGUH	Tegucigalpa,Un	3.26	69		Pn	07 27 52.2	+0.7
TGUH	Tegucigalpa,Un	3.26	69	P	Pn	07 27 52.5	+1.0
CRIN	San Cristobal	3.28	93		Pn	07 27 52.7	+1.1
CRIN	San Cristobal	3.28	93	P	Pn	07 27 52.6	+1.1
PKGN	Cerro Pekin	3.35	93	P	Pn	07 27 52.9	+0.4
QUEN	Al S del Volca	3.48	94	P	Pn	07 27 55.0	+0.6
HERN	Volcan Telica	3.50	94		Pn	07 27 54.7	+0.1
POLN	Al Sur del Vol	3.52	93	P	Pn	07 27 54.9	+0.2
CNGA	Al SSO del Vol	3.64	96	P	Pn	07 27 57.0	+0.5
CNGN	Cerro Negro	3.64	96		Pn	07 27 56.6	+0.1
CNGN	Cerro Negro	3.64	96	P	Pn	07 27 56.9	+0.3
CCIG	Comitan	3.77	334		Pn	07 27 57.8	-0.6
COPN	Copaltepe	3.79	100	P	Pn	07 27 58.9	+0.4
COPN	Copaltepe	3.79	100	*e*P	Pn	07 27 58.0	-0.6
MOMN	Momotombo	3.81	97	P	Pn	07 27 59.5	+0.7
MOM2	El Cardon	3.85	96	P	Pn	07 28 00.1	+0.7
OCON	Estacion meteo	3.90	79	P	Pn	07 28 00.9	+0.9
LIMN	Finca el Limon	3.94	87	P	Pn	07 28 01.1	+0.4
PETF	Flores	4.04	7		Pn	07 28 02.8	+0.8
PETF	Flores	4.04	7	P	Pn	07 28 02.6	+0.6
MGAN	Managua	4.13	100	P	Pn	07 28 01.5	-1.7
RCFN	Al S de San Ju	4.14	81	P	Pn	07 28 04.2	+0.8
RCVN	Varillal2	4.16	80	P	Pn	07 28 04.8	+1.0
RCON	San Juan de Ri	4.18	81	P	Pn	07 28 05.0	+0.9
MAS3	Al N del Volca	4.22	101	P	Pn	07 28 05.5	+1.0
RCPN	Sur Rio San Ju	4.25	81	P	Pn	07 28 05.6	+0.6
NANN	Nandasmo	4.29	102	P	Pn	07 28 07.1	+1.6
MATN	Matagalpa	4.37	89	P	Pn	07 28 06.0	-0.7
NADN	Granada	4.42	104	P	Pn	07 28 08.6	+1.3
BOAB	BOACO BROADBAN	4.65	95		Pn	07 28 10.4	0.0
BOAB	BOACO BROADBAN	4.65	95	P	Pn	07 28 10.3	0.0
ELI1	Hacienda Flor	5.25	115	*e*P	Pn	07 28 21.3	+2.7
ALIBA	Liberia Airpor	5.28	115	*e*P	Pn	07 28 21.6	+2.6
LAPC	Finca la Perla	5.31	113	*e*P	Pn	07 28 21.6	+2.2
DELF	Filadelfia	5.34	116	*e*P	Pn	07 28 22.3	+2.5
SAJU	San Juanillo,	5.39	121	*e*P	Pn	07 28 22.3	+1.7
JUD3	Juan Diaz 3	5.48	119		Pn	07 28 23.4	+1.5
JUD3	Juan Diaz 3	5.48	119	*e*P	Pn	07 28 23.8	+1.8
MESS	Mesas	5.53	112	*e*P	Pn	07 28 24.2	+1.6
SIUN	Universidad Ur	5.55	81		Pn	07 28 23.5	+0.8
VMAR	Armenia, Volca	5.58	111	*e*P	Pn	07 28 24.3	+1.1
NICO	Nicoya	5.58	119	*e*P	Pn	07 28 24.9	+1.8
CUI	Cuipilapa	5.59	113	*e*P	Pn	07 28 25.7	+2.3
CMARA	Lajas Hojancha	5.66	120	*e*P	Pn	07 28 25.7	+1.4
TIMP	Tierras Morena	5.75	113	*e*P	Pn	07 28 28.2	+2.6
QUEB	Quebradon, Cot	5.85	112	*e*P	Pn	07 28 29.6	+2.7
JTS	Las Juntas de	5.94	115	P	Pn	07 28 30.7	+2.6
	comp=E,15nm,0.3s,baz=104,slow=22,SNR=35						
JTS				S	Sn	07 29 32.7	-3.5
	comp=E,11nm,0.3s,baz=304,slow=18,SNR=1.4						
JTS	Las Juntas de	5.94	115		Pn	07 28 30.9	+2.9
JTS	Las Juntas de	5.94	115	*e*P	Pn	07 28 30.3	+2.3
JCR1	Jicaral	6.01	120	*e*P	Pn	07 28 31.5	+2.4
CMIG	Matias Romero	6.01	315	P	Pn	07 28 31.0	+1.9
	comp=E,9.9nm,0.7s,baz=155,slow=12,SNR=21						
CMIG				S	Sn	07 29 36.3	-1.8
	comp=E,21nm,0.8s,baz=229,slow=9.3,SNR=1.3						
ARE1	Arenal 1	6.07	113	*e*P	Pn	07 28 32.3	+2.4
SOCE	Pocosol	6.19	113		Pn	07 28 33.4	+1.7
HDC	Heredia	6.80	114	*e*P	Pb	07 28 55.2	-3.3
TEIG	Tepich	7.58	15		Pn	07 28 53.2	+2.6

ROSC	El Rosal	17.78	115	P	P	07 31 12.9	+3.8
	comp=E,4.5nm,0.4s,baz=302,slow=12,SNR=4.7						
ROSC	El Rosal	17.78	115	P	Pn	07 31 10.2	+1.9
DRIO	Del Rio	18.99	332		Pn	07 31 23.4	+0.9
NATX	Nacogdoches	19.19	349	P	P	07 31 25.1	+1.1
NATX				IAmb	IAmb	07 31 26.7	
	comp=Z,26nm,0.9s						
SDV	Santo Domingo	19.82	100	P	P	07 31 30.6	-0.6
	comp=Z,6.3nm,0.6s,baz=290,slow=6.5,SNR=8.5						
SDV				LR	LR	07 40 50.0	
	comp=Z,133nm,18.1s,baz=282,slow=42						
SDV	Santo Domingo	19.82	100		P	07 31 31.2	0.0
SDV	Santo Domingo	19.82	100	eP	P	07 31 28.9	-2.3
BRDY	Brady	19.95	338	P	P	07 31 33.8	+1.4
SAND	Sanderson	20.16	329		Pn	07 31 36.7	+0.2
LRAL	Lakeview Retre	20.30	8	P	P	07 31 37.5	+1.5
LRAL				IAmb	IAmb	07 31 48.5	
	comp=Z,14nm,1.1s						
Z47A	Carrollton	20.33	6	P	P	07 31 37.9	+1.5
Z47A				IAmb	IAmb	07 31 42.2	
	comp=Z,22nm,0.9s						
TXAR	Lajitas Array	20.48	325	P	P	07 31 40.2	+1.9
	comp=Z,7.3nm,0.9s,baz=153,slow=12,SNR=60						
	comp=Z,7.3nm,0.9s						
TXAR	Lajitas Array	20.48	325		P	07 31 39.1	+0.9
OZNA	Ozona	20.50	333		P	07 31 40.4	+2.1
MNHN	Monahans	21.61	330		P	07 31 52.1	+1.8
MNHN				IAmb	IAmb	07 31 53.5	
	comp=Z,18nm,0.7s						
X48A	Hartselle	21.69	8	P	P	07 31 51.8	+0.8
X48A				IAmb	IAmb	07 31 53.5	
	comp=Z,11nm,0.8s						
WVT	Waverly	23.26	5	P	P	07 32 07.4	-0.3
WVT				IAmb	IAmb	07 32 07.9	
	comp=Z,19nm,1.1s						
TKL	Tuckaleechee C	23.45	14	P	P	07 32 08.2	-1.5
	comp=Z,6.5nm,0.7s,baz=167,slow=11,SNR=5.6						
TKL				LR	LR	07 41 45.8	
	comp=Z,502nm,18.6s,baz=198,slow=39						
CCM	Cathedral Cave	25.08	358		P	07 32 24.2	-0.5
CCM				IAmb	IAmb	07 32 25.6	
	comp=Z,8.6nm,0.7s						
WCI	Wyandotte Cave	25.50	8		P	07 32 27.8	-0.8
ANMO	Albuquerque	26.34	329	LR	LR	07 43 42.4	
	comp=Z,164nm,19.5s,baz=136,slow=38						
I45A	Fountain	31.25	6	P	P	07 33 17.9	-1.9
BOAV	Boa Vista	31.36	107	P	P	07 33 21.2	0.0
BOAV	Boa Vista	31.36	107	eP	P	07 33 18.5	-2.7
BOAV				epP	pwP	07 33 45.4	+19
V12A	Nelson	31.66	320	P	P	07 33 24.8	+1.0
V12A				IAmb	IAmb	07 33 28.4	
	comp=Z,9.1nm,1.2s						
SADO	Sadowa	33.20	15	LR	LR	07 47 38.2	
	comp=Z,340nm,18.2s,baz=204,slow=38						
MACA	Manacapuru-AM	33.55	116	P	P	07 33 41.0	+0.6
MACA	Manacapuru-AM	33.55	116	eP	P	07 33 41.0	+0.6
PDAR	Pinedale Array	34.08	334	P	P	07 33 44.8	-0.2
	comp=Z,0.7nm,0.9s,baz=137,slow=12,SNR=5.4						
PDAR				PcP	PcP	07 36 21.6	-1.0
	comp=Z,0.2nm,0.5s,baz=106,slow=6.0,SNR=4.9						
	comp=Z,0.7nm,0.9s						
NVAR	Mina Array Bea	35.51	321	P	P	07 34 00.2	+2.9
	comp=Z,4.9nm,0.8s,baz=134,slow=8.5,SNR=31						
NVAR				PcP	PcP	07 36 28.1	+1.4
	comp=Z,1.3nm,0.9s,baz=160,slow=3.0,SNR=4.6						
	comp=Z,4.9nm,0.8s						
NVAR	Mina Array Bea	35.51	321	P	P	07 33 58.9	+1.6
ULM	Lac du Bonnet	37.53	354	P	P	07 34 11.8	-2.4
	comp=Z,6.5nm,0.7s,baz=173,slow=8.6,SNR=9.7						
	comp=Z,6.5nm,0.7s						
ITTB	Itaituba	38.47	114	eP	P	07 34 21.9	-0.7
VILB	Vilhena	39.45	129	P	P	07 34 31.7	+1.0
VILB				IAmb	IAmb	07 34 37.2	
	comp=Z,11nm,0.7s						
VILB	Vilhena	39.45	129	eP	P	07 34 35.4	+4.6
NPGB	Novo Progresso	40.06	118	eP	P	07 34 35.0	-0.9
PDRB	Porto dos Gac	41.34	125	eP	P	07 34 49.1	+2.6
CLDB	Colider	41.69	123	eP	P	07 34 51.6	+2.4
E07A	Sunnyside	41.73	329		P	07 34 50.1	+0.9
E07A				IAmb	IAmb	07 34 50.9	
	comp=Z,9.5nm,1.0s						
HOOD	Mount Hood Mea	41.82	327		P	07 34 50.7	+0.5
PTLB	Pontes e Lacer	41.83	131	eP	P	07 34 56.3	+5.9
FFC	Flin Flon	42.72	350		P	07 34 56.3	-0.8
FFC				IAmb	IAmb	07 34 57.1	
	comp=Z,3.9nm,0.7s						
RPN	Rapa Nui	43.81	205	LR	LR	07 49 04.0	
	comp=Z,58nm,18.1s,baz=54,slow=29						
SCHQ	Schefferville	45.75	19	P	P	07 35 17.6	-3.9
	comp=Z,7.7nm,0.5s,baz=214,slow=6.4,SNR=30						
SCHQ				LR	LR	07 55 48.5	
	comp=Z,105nm,18.1s,baz=216,slow=38						
	comp=Z,7.7nm,0.5s						
SNDB	Serra Nova Dou	46.00	121	eP	P	07 35 23.8	-0.2
ARAG	Araguaiana, MT	47.59	126	eP	P	07 35 40.1	+3.7
BDFB	Brasilia	50.62	123	P	P	07 36 02.6	+2.8
	comp=Z,1.4nm,0.4s,baz=267,slow=6.8,SNR=3.8						
	comp=Z,1.4nm,0.4s						
YKA	Yellowknife Ar	52.47	346	P	P	07 36 11.3	-1.5
	comp=Z,2.5nm,0.8s,baz=154,slow=7.3,SNR=29						
	comp=Z,2.5nm,0.8s						
YKA	Yellowknife Ar	52.47	346	P	P	07 36 11.4	-1.3
FRB	Frobisher Bay	53.06	12	LR	LR	07 59 09.2	
	comp=Z,190nm,18.8s,baz=198,slow=37						
CMC01	Camacan, BA	57.65	118	eP	P	07 36 50.5	-0.5
RIB01	Linhares ES	58.74	122	eP	P	07 36 58.3	-0.2
SFJD	Kangerlussuaq	60.11	17	LR	LR	08 03 26.3	
	comp=Z,159nm,18.5s,baz=194,slow=37						
BCAR	Beaver Creek A	61.67	336	P	P	07 37 18.4	+0.3
RES	Resolute Bay	61.84	359	LR	LR	08 05 35.5	
	comp=Z,113nm,18.0s,baz=193,slow=38						
INK	Inuvik	61.94	343	P	P	07 37 19.1	-0.6
INK				IAmb	IAmb	07 37 19.6	
	comp=Z,4.6nm,1.0s						
A36M	Sachs Harbour	62.64	348	P	P	07 37 22.7	-1.6
A36M				IAmb	IAmb	07 37 23.4	
	comp=Z,4.7nm,0.9s						
IL31		64.47	337	P	P	07 37 36.3	-0.2
IL31				IAmb	IAmb	07 37 41.2	
	comp=Z,5.5nm,1.2s						
ILAR	Eielson Array	64.47	337	P	P	07 37 36.2	-0.3
	comp=Z,2.5nm,1.0s,baz=148,slow=4.3,SNR=14						
	comp=Z,2.5nm,1.0s						
ILAR	Eielson Array	64.47	337	P	P	07 37 36.4	-0.1
BMAR	Burnt Mountain	64.86	340	P	P	07 37 39.1	0.0
SUMG	Summit	66.90	15	P	P	07 37 51.0	-1.6
EKA	Eskdalemuir Ar	77.96	36	P	P	07 38 55.0	-3.3
	comp=Z,1.1nm,0.5s,baz=277,slow=5.6,SNR=4.6						
	comp=Z,1.1nm,0.5s						
ESDC	Sonseca Array	79.19	52	P	P	07 39 02.8	-2.8
	comp=Z,0.8nm,0.7s,baz=266,slow=5.4,SNR=5.5						
	comp=Z,0.8nm,0.7s						
SPITS	Spitsbergen Ar	80.86	12	P	P	07 39 12.2	-1.7
	comp=Z,18nm,1.1s,baz=150,slow=1.8,SNR=4.6						
	comp=Z,18nm,1.1s						
DBIC	Dimbokro	84.22	84	P	P	07 39 31.6	-0.9
	comp=Z,3.4nm,0.7s,baz=306,slow=5.1,SNR=5.6						
	comp=Z,3.4nm,0.7s						
HFS	Hagfors	85.82	29	P	P	07 39 37.4	-2.2
	comp=Z,2.4nm,0.7s,baz=260,slow=8.2,SNR=4.3						
HFS				LR	LR	08 20 26.1	
	comp=Z,60nm,18.3s,baz=280,slow=38						
	comp=Z,2.4nm,0.7s						
ARCES	ARCESS Array B	86.70	18	P	P	07 39 40.8	-3.1
	comp=Z,2.9nm,0.8s,baz=294,slow=6.7,SNR=3.5						
ARCES				LR	LR	08 18 42.1	
	comp=Z,53nm,19.5s,baz=312,slow=36						
	comp=Z,2.9nm,0.8s						
NRIK	Noril'sk	97.97	1	LR	LR	08 27 20.5	
	comp=Z,86nm,20.1s,baz=2.5,slow=37						
WRA	Warramunga Arr	136.61	255	PKP	PKiKP	07 46 28.0	+2.8
	comp=Z,0.4nm,0.7s,baz=88,slow=2.3,SNR=6.2						
ASAR	Alice Springs	136.74	249	PKhKP	PKPpre	07 46 21.2	
	baz=91,slow=2.7,SNR=4.0						
ASAR				PKP	pPKPdf	07 46 27.5	+1.1
	comp=Z,0.4nm,0.8s,baz=98,slow=1.9,SNR=4.0						
CMAR	Chiang Mai Arr	147.52	343	PKPbc	PKPbc	07 46 45.9	+0.5
	comp=Z,3.4nm,0.5s,baz=343,slow=3.9,SNR=18						

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*BEO **14** 07:53:20.3±0.2, 43°.27N×18°.02E, h11^{km}±2^{km}, ML2.7/16*
*RHSSO **14** 07:53:21.8±0.3, 43°.21N×18°.13E, h9^{km}, ML3.0/6*
*PDG **14** 07:53:21.3±0.2, 43°.19N×18°.07E, h0^{km}±11^{km}, MD3.1/2, ML3.0/11, Error ellipse: s-maj=0.8km s-min=0.6km az=90.0*
*VIE **14** 07:53:24.1±0.8, 43°.58N×18°.33E, h8^{km}, mb2.9/4, ml2.5/7, ms4.0/2, Error ellipse: s-maj=13.3km s-min=6.8km az=55.0 29 km SSW of Sarajevo*
ISC 14 07:53:21.2±1.1**, 43°.18N**±0°.02×**18°.04E**±0°.02**, h19**^{km}±3^{km}**, n68, σ1^{s}27**/123**, 7C-5D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	Ston	0.40	219	ePg	Pb	07 53 29.0	-0.6
STON				Sg	Sn	07 53 36.4	-2.3
STON	Ston	0.40	219	ePg	Pb	07 53 28.9	-0.6
STON				eSg	Sn	07 53 36.5	-2.2
KLINJ	Klinje	0.40	91	ePg	Pg	07 53 28.6	-0.9
KLINJ				eSg	Sg	07 53 34.3	-0.9
BRY	Bratogost	0.46	127	⇑iPg	Pg	07 53 29.9	-0.7
BRY				i Sg	Sb	07 53 37.8	+0.6
TREB	Trebinje	0.51	154	⇓iPg	Pb	07 53 30.9	-0.6
TREB				eSg	Sn	07 53 40.0	-1.7
TREB	Trebinje	0.51	154	ePg	Pb	07 53 31.0	-0.6
TREB				eSg	Sn	07 53 39.9	-1.7
DBRK	Dubrovnik	0.52	171	ePg	Pb	07 53 31.5	-0.1
DBRK				Sg	Sn	07 53 39.5	-2.2
RICI	Ricice	0.73	296	ePg	Pb	07 53 34.0	-1.3
RICI				Sg	Sb	07 53 44.4	-0.6
MAKA	Makarska	0.75	279	ePg	Pb	07 53 34.4	-1.2
MAKA				Sg	Sg	07 53 46.0	0.0
NKME	Niksic	0.79	121	⇑iPg	Pb	07 53 35.7	-0.5
NKME				eSg	Sn	07 53 48.3	-0.1
HCY	Herceg Novi	0.80	155	⇑iPg	Pg	07 53 36.2	-0.7
HCY				i Sg	Sn	07 53 50.1	+1.3
LSTV	Lastovo	0.94	244	ePg	Pb	07 53 38.0	-0.7
LSTV				Sg	Sn	07 53 52.3	+0.2
PLE	Pljevlja	1.00	81	⇓iPg	Pb	07 53 39.4	-0.4
PLE				i Sg	Sg	07 53 54.1	+0.4
RUDO	Rudo	1.06	65	ePg	Pb	07 53 39.2	-1.7
RUDO				eSg	Sb	07 53 52.9	-1.5
RUDO	Rudo	1.06	65	ePg	Pb	07 53 39.2	-1.7
RUDO				eSg	Sb	07 53 53.8	-0.6
BUM	Brajici-Budva	1.08	144	⇓iPg	Pn	07 53 41.0	-0.3
BUM				i Sg	Sg	07 53 57.8	+1.5
KOME	Kolasin	1.13	106	⇓iPg	Pb	07 53 42.0	-0.1
KOME				eSg	Sg	07 53 59.5	+1.6
HVAR	Hvar	1.17	270	ePg	Pn	07 53 41.6	-0.8
HVAR				Sg	Sg	07 53 59.0	0.0
PDG	Podgorica	1.17	130	ePg	Pb	07 53 42.2	-0.4
PDG				eSg	Sg	07 54 00.4	+1.4
PDG	Podgorica	1.17	130	⇑iPg	Pg	07 53 42.9	-0.8
PDG				i Sg	Sg	07 54 01.2	+2.2
BBLS	Lazi&#263i	1.21	55	ePg	Pn	07 53 42.2	-0.8
BBLS				eSg	Sb	07 53 58.2	-0.4
DRME	Dracevica, Mon	1.30	139	⇓iPg	Pg	07 53 45.6	-0.7
DRME				eSg	Sg	07 54 05.0	+1.7
IVA	Berane	1.39	102	⇑iPg	Pb	07 53 46.6	0.0
IVA				i Sg	Sg	07 54 07.2	+0.9
SJES	Sjenica	1.42	86	ePg	Pb	07 53 46.9	-0.1
SJES				eSg	Sb	07 54 05.2	+0.6
KIJV	Kijevo	1.45	305	ePg	Pb	07 53 47.1	-0.4
KIJV				Sg	Sb	07 54 06.4	+1.0
ULC	Ulcinj	1.50	143	⇑iPg	Pb	07 53 48.4	0.0
ULC				i Sg	Sg	07 54 11.1	+1.3
PVY	Plav	1.53	112	⇑iPg	Pb	07 53 49.0	+0.1
PVY				i Sg	Sg	07 54 10.7	+0.2
IVAS	Ivanjica	1.59	75	ePg	Pn	07 53 48.2	-0.1
IVAS				eSg	Sn	07 54 09.5	+1.2
BLY	Banja Luka	1.69	339	ePn	Pb	07 53 51.2	-0.3
BLY				eSn	Sb	07 54 12.7	+0.3
BLY	Banja Luka	1.69	339	ePg	Pn	07 53 49.6	0.0
BLY				eSg	Sb	07 54 12.7	+0.3
DIVS	Divibare	1.69	56	ePg	Pn	07 53 49.0	-0.7
DIVS				eSg	Sn	07 54 11.5	+0.7
TEKS	Tekeris	1.74	38	ePn	Pn	07 53 48.7	-1.6
TEKS				eSn	Sn	07 54 12.4	+0.4
ZIRJ	Zirje	1.81	286	ePn	Pb	07 53 52.7	-0.9
ZIRJ				Sn	Sb	07 54 17.0	+1.1
MORI	Morici	1.83	293	ePn	Pb	07 53 53.3	-0.7
MORI				Sn	Sb	07 54 17.5	+1.0
TRUS	Trudelj	2.01	58	ePn	Pn	07 53 53.4	-0.6
TRUS				eSn	Sn	07 54 18.6	+0.1
GRUS	Gruza	2.07	69	ePn	Pn	07 53 54.7	-0.1
GOCS	Kraljevo Serbi	2.10	79	ePn	Pn	07 53 55.9	+0.6
GOCS				eSn	Sn	07 54 22.3	+1.3
KNYS	Krupa na Uni	2.11	325	ePn	Pb	07 53 57.4	-1.4
KNYS				eSn	Sb	07 54 24.4	-0.2
UDBI	Udbina	2.13	310	ePn	Pn	07 53 57.2	+1.5
UDBI				Sn	Sb	07 54 24.1	-1.0
SELS	Selova	2.25	88	ePn	Pn	07 53 58.0	+0.7
SELS				eSn	Sn	07 54 25.6	+1.0
DUGI	Dugi Otok	2.31	292	ePn	Pb	07 54 00.3	-2.0
DUGI				Sn	Sb	07 54 30.2	-0.2
AVAS	Avala Beograd	2.34	49	ePn	Pn	07 53 58.5	-0.1
FRGS	Fruska Gora	2.35	32	ePn	Pn	07 53 57.1	-1.6
FRGS				eSn	Sn	07 54 25.2	-1.9
VIRC	Vir	2.43	298	ePn	Pn	07 54 01.7	+1.9
VIRC				Sn	Sb	07 54 32.8	-1.0
NVLJ	Novalja	2.68	302	ePn	Pb	07 54 05.6	-2.8
NVLJ				Sn	Sb	07 54 38.7	-2.1
BOVS	Bovan	2.71	79	ePn	Pn	07 54 03.9	+0.3
BOVS				eSn	Sn	07 54 36.6	+0.8
BARS	Barje	2.79	96	ePn	Pn	07 54 05.6	+0.8
KUBS	Kucevo	2.91	64	ePn	Pn	07 54 05.5	-0.8
MORH	Mrgy, Hungar	3.07	8	ePn	Pn	07 54 09.5	+1.0
MORH				eSn	Sn	07 54 46.7	+2.1
BOJS	Bojanci	3.07	320	ePn	Pn	07 54 08.2	-0.3
MDVR	Moldovita	3.10	58	ePn	Pn	07 54 08.8	-0.2
ZAGS	Zajecar	3.12	77	ePn	Pn	07 54 09.9	+0.7
ZAGS				eSn	Sn	07 54 45.5	-0.3
CRES	Cresnjevec Ost	3.23	326	ePn	Pn	07 54 11.7	+0.9
ZAPS	Zavoj	3.36	87	ePn	Pn	07 54 12.1	-0.5
ZAPS				eSn	Sn	07 54 51.4	-0.5
BEHE	Becsehely	3.41	345	ePn	Pn	07 54 15.2	+1.9
BEHE				eSn	Sn	07 54 55.0	+1.9
BZS	Buzias	3.54	45	ePn	Pn	07 54 14.4	-0.6
CEY	Cerknica	3.64	316	ePn	Pn	07 54 15.5	-0.9
GROS	Grobnik	3.75	332	i Pn	Pn	07 54 18.1	+0.2
SOKA	Soboth	4.10	330	i Pn	Pn	07 54 23.0	+0.2
	3.1nm,0.5s						
SOKA				i Sn	Sn	07 55 09.9	-0.3
	2.8nm,0.5s						
OBKA	Obir	4.15	324	i Pn	Pn	07 54 25.9	+2.3
	0.9nm,0.3s						
OBKA				i Sn	Sn	07 55 11.8	+0.2
	7.5nm,0.7s						
ARSA	Arzberg	4.44	337	i Pn	Pn	07 54 27.4	0.0
	2.0nm,0.3s						
RONA	Rosalia, Austr	4.69	345	i Pn	Pn	07 54 30.5	-0.3
	1.8nm,0.3s						
CONA	Conrad Observa	4.99	343	i Pn	Pn	07 54 36.1	+1.0
	1.1nm,0.3s						
CONA				i Sn	Sn	07 55 29.9	-2.3
	2.9nm,0.5s						
ABTA	Abfaltersbach	5.30	314	i Pn	Pn	07 54 41.7	+2.4
	1.5nm,0.6s						
ABTA				eSn	Sn	07 55 42.3	+2.5
	9.1nm,0.9s						
MOA	Molln	5.37	332	i Pn	Pn	07 54 42.3	+2.1
	1.1nm,0.3s						
MOA				i Sn	Sn	07 55 42.1	+0.6
	2.4nm,0.4s						
LESA	Schwarzleotal	5.69	320	i Pn	Pn	07 54 47.5	+3.0
	1.4nm,0.3s						
LESA				i Sn	Sn	07 55 52.4	+3.1
	1.8nm,0.4s						
WTTA	Wattenberg	6.09	314	i Pn	Pn	07 54 53.0	+2.7
	1.3nm,0.3s						
WTTA				eSn	Sn	07 56 02.3	+2.8
	6.7nm,0.8s						
WATA	Walderalm	6.17	315	i Pn	Pn	07 54 53.5	+2.2
	1.0nm,0.2s						

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*IDC **14** 08:06:02.7±1.1, 52°.40N×160°.77E, h0^{km}, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=32.7km s-min=22.0km az=8.0*
*MOS **14** 08:06:03.5±0.9, 52°.38N×160°.80E, h9^{km}, mb3.9/2, Error ellipse: s-maj=9.2km s-min=5.0km az=118.4*
*KRSC **14** 08:06:04.3±1.8, 52°.51N×160°.77E, h7^{km}±15^{km}, Ml4.1*
ISC 14 08:06:03.8±1.8**, 52°.42N**±0°.05×**160°.72E**±0°.06**, h4**^{km}±10^{km}**, n68, σ1^{s}16**/79**, mb3.7**/7**, 5C-1D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.80	328	PN	Pg	08 06 19.0	-0.1
SPN	Mys Shipunski	0.80	328	eP	Pg	08 06 19.1	-0.1
SPN				eS	Sg	08 06 27.2	-2.3
NLC	Nalytchevo	1.12	312	PN	Pg	08 06 24.8	-0.5
NLC	Nalytchevo	1.12	312	eP	Pg	08 06 24.8	-0.5
DALK	Dalny	1.34	298	PN	Pn	08 06 28.6	-0.7
DALK				S	Sb	08 06 46.1	-1.0
DALK	Dalny	1.34	298	eP	Pn	08 06 28.7	-0.7
DALK				eS	Sb	08 06 46.1	-1.0
RUS	Russkaya	1.35	271	PN	Pb	08 06 29.8	+0.2
RUS				S	Sg	08 06 48.2	+1.0
RUS	Russkaya	1.35	271	eP	Pb	08 06 29.9	+0.2
RUS				eS	Sg	08 06 48.3	+1.0
PET	Petropavlovsk	1.40	296	ePN	Pn	08 06 29.9	-0.2
PET				eS	Sb	08 06 48.5	-0.1
PET				pmax	pmax		
	comp=Z,320nm,0.6s						
PET				smax	smax		
	comp=N,1μm,0.9s						
PET				smax	smax		
	comp=E,2μm,0.9s						
PET	Petropavlovsk	1.40	296	eP	Pn	08 06 29.9	-0.2
PET				eS	Sn	08 06 49.1	+0.2
UGLR	Uglovaya	1.40	305	PN	Pn	08 06 30.1	-0.1
UGLR	Uglovaya	1.40	305	eP	Pn	08 06 30.2	-0.1
SDLR	Sedlovina	1.41	308	PN	Pn	08 06 29.6	-0.7
SDLR	Sedlovina	1.41	308	eP	Pn	08 06 29.6	-0.7
SMAR	Somma	1.44	307	PN	Pn	08 06 30.4	-0.4
SMAR	Somma	1.44	307	eP	Pn	08 06 30.5	-0.4
INSR	Institute	1.44	297	PN	Pn	08 06 30.5	-0.1
INSR	Institute	1.44	297	eP	Pn	08 06 30.6	-0.1
AVH	Avacha	1.47	306	PN	Pb	08 06 32.0	+0.3
AVH	Avacha	1.47	306	eP	Pb	08 06 32.1	+0.3
KRER	Koryakskii	1.49	307	PN	Pn	08 06 31.4	-0.1
KRER	Koryakskii	1.49	307	eP	Pn	08 06 31.4	-0.1
KOK	Koryaka	1.54	305	PN	Pb	08 06 32.7	-0.2
KOK	Koryaka	1.54	305	eP	Pb	08 06 32.7	-0.2
MTVR	Mutnovka	1.56	273	PN	Pb	08 06 32.9	-0.3
MTVR	Mutnovka	1.56	273	eP	Pb	08 06 33.0	-0.3
KRX	Arik	1.57	308	PN	Pn	08 06 32.1	-0.5
KRX	Arik	1.57	308	eP	Pn	08 06 32.2	-0.5
GRL	Gorelyy	1.63	276	PN	Pg	08 06 35.1	+0.2
GRL	Gorelyy	1.63	276	eP	Pg	08 06 35.1	+0.2
KRMR	Karymshinskiy	1.63	286	PN	Pn	08 06 33.7	+0.4
KRMR	Karymshinskiy	1.63	286	eP	Pn	08 06 33.7	+0.4
ASAK	Asacha	1.73	270	PN	Pb	08 06 35.9	-0.2
ASAK				S	Sg	08 07 00.2	+0.9
ASAK	Asacha	1.73	270	eP	Pb	08 06 36.0	-0.2
ASAK				eS	Sg	08 07 00.3	+0.9
KDTR	Khodutka, Kamc	1.74	250	PN	Pn	08 06 35.0	+0.2
KDTR	Khodutka, Kamc	1.74	250	eP	Pn	08 06 35.0	+0.2
PEA0B	Petropavlovsk-	1.96	292	d iPN	Pn	08 06 38.5	+0.6
PETK	Petropavlovsk-	1.96	292	Pn	Pn	08 06 38.1	+0.2
	comp=E,21nm,0.3s,baz=114,slow=19,SNR=181						
PETK				Sn	Sn	08 07 03.8	+0.8
	comp=E,35nm,0.3s,baz=112,slow=19,SNR=4.5						
APC	Apacha	2.23	285	PN	Pb	08 06 43.5	-1.1
APC				S	Sb	08 07 13.6	+1.1
APC	Apacha	2.23	285	eP	Pb	08 06 43.5	-1.1
APC				eS	Sb	08 07 13.6	+1.1
KZV	Kizimen	2.71	355	PN	Pn	08 06 48.3	+0.1
KZV	Kizimen	2.71	355	eP	Pn	08 06 48.4	+0.1
KMNR	Kamenistaya	3.35	355	PN	Pn	08 06 58.6	+1.5
KMNR	Kamenistaya	3.35	355	eP	Pn	08 06 58.6	+1.5
SKR	Severo-Kuril's	3.36	241	ePN	Pb	08 07 01.5	-2.4
SKR				pmax	pmax		
	comp=Z,66nm,0.5s						
BZGR	Bezymyannyi-Gr	3.53	360	PN	Pn	08 07 01.9	+2.5
BZGR	Bezymyannyi-Gr	3.53	360	eP	Pn	08 07 02.0	+2.5
KIRR	Kirishev	3.55	357	PN	Pn	08 07 02.1	+2.4
KIRR	Kirishev	3.55	357	eP	Pn	08 07 02.1	+2.4
BZWR	Bezymyannyi-We	3.55	358	PN	Pn	08 07 01.3	+1.4
BZWR	Bezymyannyi-We	3.55	358	eP	Pn	08 07 01.3	+1.4
KOZ	Kozyrevsk	3.68	353	PN	Pn	08 07 04.1	+2.7
KOZ	Kozyrevsk	3.68	353	eP	Pn	08 07 04.1	+2.7
ESO	Esso	3.71	342	PN	Pn	08 07 02.7	+0.9
ESO	Esso	3.71	342	eP	Pn	08 07 02.7	+0.9
SRKR	Sorokina	4.25	3	PN	Pn	08 07 13.7	+4.4
SRKR	Sorokina	4.25	3	eP	Pn	08 07 13.7	+4.4
SEY	Seymchan	11.43	340	⇑ePN	Pn	08 08 47.6	-0.1
SEY				pmax	pmax		
	comp=Z,3.0nm,1.4s						
YUK	Yuzh-Kuril'sk	12.96	236	⇑ePN	Pn	08 09 09.3	+0.7
YAK	Yakutsk	19.17	312	⇑eP	P	08 10 26.5	-1.5
YAK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TIXI	Tiksi	23.85	336	⇑eP	P	08 11 19.1	+1.4
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TLY	Talaya	34.33	292	⇑eP	P	08 12 51.4	+0.2
TLY				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	Kurchatov	48.42	303	P	P	08 14 46.7	0.0
KURBB	Kurchatov Arra	48.52	303	P	P	08 14 46.7	-0.8
	comp=Z,0.2nm,0.3s,baz=56,slow=7.3,SNR=2.5						
	comp=Z,0.2nm,0.3s						
PDAR	Pinedale Array	57.52	61	P	P	08 15 53.9	-0.4
	comp=Z,0.3nm,0.6s,baz=324,slow=7.1,SNR=3.6						
	comp=Z,0.3nm,0.6s						
FINES	FINESS Array B	60.89	337	P	P	08 16 16.9	-0.1
	comp=Z,0.5nm,0.5s,baz=28,slow=6.9,SNR=0.8						
	comp=Z,0.5nm,0.5s						
TXAR	Lajitas Array	70.55	67	P	P	08 17 18.9	-1.1
	comp=Z,0.3nm,0.6s,baz=302,slow=4.5,SNR=4.8						
	comp=Z,0.3nm,0.6s						
ASAR	Alice Springs	79.31	205	P	P	08 18 10.2	-0.1
	comp=Z,0.3nm,0.5s,baz=15,slow=6.0,SNR=6.4						
	comp=Z,0.3nm,0.5s						

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*IDC **14** 08:13:18.3±1.7, 14°.26S×167°.78E, h0^{km}, mb4.1/7, mbtmp4.1/8, ML4.0/1, MS3.8/4, Error ellipse: s-maj=50.9km s-min=23.8km az=124.0*
*NEIC **14** 08:13:19.8±1.5, 14°.5S±0°.1×167°.9E±0°.2, h10^{km}±1^{km}, mb4.5/18, Error ellipse: s-maj=27.1km s-min=15.5km az=116.0*
*NOU **14** 08:13:20.1, 14°.49S×167°.81E, h4^{km}, MLv4.8/19, Vanuatu Islands*
ISC 14 08:13:22.0±0.7**, 14°.47S**±0°.07×**167°.88E**±0°.09**, h30**^{km}**, n47, σ1^{s}14**/45**, mb4.2**/13**, MS3.7**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.17	214		Pn	08 13 40.4	-1.9
SANVU	Saraoutou	1.17	214	P	Pn	08 13 40.4	-1.9
SANVU	Saraoutou	1.17	214	S	Sn	08 13 56.3	-1.0
DVP	Devils Point	3.25	175	P	Pn	08 14 11.2	+0.3
RTV	Rentapao	3.34	171	P	Pn	08 14 12.9	+0.7
KOUNC	Koumac, New Ca	6.95	209	P	Pn	08 15 03.0	+1.2
HURO	Huro Makira	7.06	304	P	Pn	08 15 03.4	0.0
YATNC	Mamie plateau,	7.61	187	P	Pn	08 15 11.4	+0.6
DZM	Mont Dzumac	7.68	190	Pn	Pn	08 15 13.8	+1.8
	2.3nm,0.3s,baz=167,slow=21,SNR=29						
DZM				Sn	Sn	08 16 38.2	+0.2
	baz=323,slow=20						
	8.1nm,0.3s						
DZM	Mont Dzumac	7.68	190		Pn	08 15 11.6	-0.3
DZM	Mont Dzumac	7.68	190	P	Pn	08 15 14.0	+2.0
ONTNC	Ouen Toro	7.91	190	Pn	Pn	08 15 14.8	-0.3
ONTNC	Ouen Toro	7.91	190	P	Pn	08 15 15.5	+0.5
OUENC	Ouen Island, N	7.97	187	P	Pn	08 15 16.9	+1.1
PINNC	Pines Island,	8.11	183	Pn	Pn	08 15 18.3	+0.6
NGOA	Tingoa Renbel	8.15	290	P	Pn	08 15 18.2	-0.1
SAVO	Savo Central	9.50	303	P	Pn	08 15 37.9	+1.0
TATA	Tatamba Isabel	9.96	307	P	Pn	08 15 43.4	+0.3
RABL	Rabaul	18.55	302	P	P	08 17 34.1	-2.4
EIDS	Eidsvold	19.13	233	P	P	08 17 43.0	+0.2
AFI	Afiamalu	19.73	91	P	P	08 17 47.0	-2.5
AFI				IAmb	IAmb	08 17 58.2	
	comp=Z,29nm,1.1s						
CTA	Charters Tower	21.38	252	P	P	08 18 08.4	+1.1
	comp=Z,2.1nm,0.5s,baz=51,slow=12,SNR=6.0						
CTA				LR	LR	08 25 49.2	
	comp=Z,186nm,19.2s,baz=50,slow=35						
	comp=Z,2.1nm,0.5s						
CTAO	Charters Tower	21.38	252	P	P	08 18 05.5	-1.8
CTAO				IAmb	IAmb	08 18 38.4	
	comp=Z,14nm,1.4s						
COEN	Coen	23.95	268	P	P	08 18 33.3	-0.6
INKA	Innaminka	28.47	238	P	P	08 19 15.4	+0.8

INKA				IAmb	IAmb	08 19 26.5	
	comp=Z,8.6nm,0.6s						
STKA	**Stephens Creek**	**29.61**	**230**	P	**P**	**08 19 27.1**	**+2.4**
	comp=Z,6.3nm,0.7s,baz=37,slow=7.8,SNR=13						
	comp=Z,6.3nm,0.7s						
WR8	**Warramunga Arr**	**32.31**	**256**	P	**P**	**08 19 48.4**	**-0.2**
WR8				IAmb	IAmb	08 20 04.2	
	comp=Z,3.0nm,1.1s						
WRA	**Warramunga Arr**	**32.46**	**256**	P	**P**	**08 19 49.1**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=86,slow=9.2,SNR=11						
	comp=Z,0.7nm,0.6s						
WRA	**Warramunga Arr**	**32.46**	**256**	P	**P**	**08 19 48.4**	**-1.6**
AS31	**Alice Springs**	**33.31**	**249**	P	**P**	**08 19 57.1**	**-0.3**
ASAR	**Alice Springs**	**33.32**	**249**	P	**P**	**08 19 57.3**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=76,slow=9.3,SNR=29						
ASAR				LR	LR	08 32 35.0	
	comp=Z,128nm,18.3s,baz=80,slow=35						
	comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**33.32**	**249**	P	**P**	**08 19 57.0**	**-0.4**
BBOO	**Buckleboo**	**34.20**	**232**	P	**P**	**08 20 05.6**	**+0.6**
BBOO				IAmb	IAmb	08 20 10.4	
	comp=Z,5.0nm,0.7s						
KNRA	**Kununurra**	**37.75**	**263**	P	**P**	**08 20 34.2**	**-1.4**
KNRA				IAmb	IAmb	08 20 41.6	
	comp=Z,14nm,1.1s						
PPT	**Papeete**	**40.95**	**100**	LR	LR	08 34 14.6	
	comp=Z,117nm,18.6s,baz=254,slow=31						
BATI	**Baumata**	**43.35**	**270**	LR	LR	08 39 26.4	
	comp=Z,113nm,18.1s,baz=124,slow=36						
JKA	**Kamikawa-asahi**	**62.70**	**340**	P	**P**	**08 23 45.3**	**+1.3**
KIWB	**Kanaga Island**	**67.32**	**10**	P	**P**	**08 24 14.7**	**+0.9**
QSPA	**South Pole Qui**	**75.56**	**180**	P	**P**	**08 25 03.6**	**0.0**
QSPA				IAmb	IAmb	08 25 45.9	
	comp=Z,2.6nm,1.1s						
K15K	**Wolf Creek Mou**	**80.20**	**14**	P	**P**	**08 25 30.1**	**+0.9**
K15K				IAmb	IAmb	08 26 10.8	
	comp=Z,19nm,1.4s						
SONM	**Songino Array**	**82.64**	**323**	P	**P**	**08 25 42.9**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=139,slow=2.9,SNR=4.2						
	comp=Z,0.4nm,0.5s						
SONM	**Songino Array**	**82.64**	**323**	P	**P**	**08 25 43.0**	**+0.3**
SONM				IAmb	IAmb	08 25 44.6	
	comp=Z,2.3nm,1.3s						
H19K	**Roundabout Mou**	**84.14**	**14**	P	**P**	**08 25 49.2**	**-0.5**
H19K				IAmb	IAmb	08 25 57.8	
	comp=Z,3.9nm,0.9s						
M24K	**Tolsona, Glenn**	**84.40**	**20**	P	**P**	**08 25 50.5**	**-0.7**
ILAR	**Eielson Array**	**86.10**	**18**	P	**P**	**08 25 59.4**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=240,slow=5.4,SNR=8.2						
	comp=Z,0.6nm,0.7s						
MKAR	**Makanchi Array**	**97.42**	**316**	P	Pdif	08 26 53.6	+0.8
	comp=Z,1.2nm,0.7s,baz=96,slow=6.3,SNR=12						
	comp=Z,1.2nm,0.7s						
MKAR	**Makanchi Array**	**97.42**	**316**	P	**P**	**08 26 52.6**	**-0.2**

IDC 14 09:08:55.5±1.6**,3°.84S**×**137°.22E,h0^{km},mb3.3**/1**, mbtmp3.5**/4**,ML3.4**/3**,MS3.2**/2**,Error ellipse: s-maj=38.6km s-min=25.5km az=128.0,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	**3.72**	**69**	Pn	Pn	09 09 53.8	-0.5
	1.1nm,0.3s,baz=126,slow=19,SNR=1.0						
JAY				Sn	Sn	09 10 39.6	+0.7
	1.2nm,0.3s,baz=110,slow=12,SNR=2.6						
	3.8nm,0.4s						
WRA	**Warramunga Arr**	**16.25**	**190**	Pn	Pn	09 12 43.7	-1.7
	0.1nm,0.3s,baz=13,slow=13,SNR=4.7						
WRA				Sn	Sn	09 15 41.7	-4.8
	0.2nm,0.3s,baz=12,slow=22,SNR=4.2						
	0.6nm,0.6s						
FITZ	**Fitzroy Crossi**	**18.15**	**218**	P	Pn	09 13 07.1	-2.0
	baz=36,slow=12						
ASAR	**Alice Springs**	**19.97**	**189**	P	Pn	09 13 31.4	+0.1
	0.7nm,0.3s,baz=13,slow=11,SNR=39						
ASAR				S	S	09 17 12.9	-2.3
	0.3nm,0.7s,baz=4.1,slow=27,SNR=3.3						
ASAR				LR	LR	09 22 04.7	
	comp=Z,65nm,21.4s,baz=359,slow=40						
	3.2nm,0.6s						
JCJ	**Chichijima**	**31.12**	**9**	LR	LR	09 25 33.5	
	comp=Z,58nm,21.5s,baz=118,slow=32						
MKAR	**Makanchi Array**	**69.78**	**323**	P	P	09 20 07.9	+0.2
	0.2nm,0.6s,baz=116,slow=6.6,SNR=2.1						
	0.2nm,0.6s						

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*SJA **14** 09:13:01.2±0.6,21°.36S×68°.67W,h140^{km},ML3.3,MW3.5*
*GUC **14** 09:13:03.2±0.4,21°.38S×68°.61W,h126^{km}±2^{km},ML3.4*
ISC 14 09:13:01.6±1.5**,21°.39S**±0°.03×**68°.69W**±0°.05**, h141^{km}**±11^{km}**,n32,**σ**1^{s}.22**/57**,7C,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.66**	**232**	⇑*i*P	**Pn**	**09 13 23.4**	**+0.3**
PB09				*e*S	**Sn**	**09 13 38.9**	**-0.5**
PB09				IAML		09 13 41.4	
	comp=E,810nm,0.5s						
PB09	**IPOC Station P**	**0.66**	**232**	*e*P	**Pn**	**09 13 23.4**	**+0.3**
PB09				*e*S	**Sn**	**09 13 39.4**	**0.0**
PB09				IAML		09 13 40.0	
	comp=Z,1µm,0.4s						
PB01	**IPOC Station P**	**0.82**	**294**	⇑*i*P	**Pn**	**09 13 24.1**	**0.0**
PB01				*e*S	**Sn**	**09 13 40.4**	**-0.8**
PB01				IAML		09 13 42.1	
	comp=N,1µm,0.4s						
PB01	**IPOC Station P**	**0.82**	**294**	*e*P	**Pn**	**09 13 23.5**	**-0.6**
PB01				IAML		09 13 42.1	
	comp=Z,779nm,0.4s						
PB02	**IPOC Station P**	**1.13**	**273**	⇑*i*P	**Pn**	**09 13 27.3**	**+0.5**
PB02				*e*S	**Sn**	**09 13 45.8**	**-0.2**
PB02	**IPOC Station P**	**1.13**	**273**	*e*P	**Pn**	**09 13 27.2**	**+0.4**
PB02				*e*S	**Sn**	**09 13 46.8**	**+0.8**
PB07	**IPOC Station P**	**1.17**	**253**	⇑*i*P	**Pn**	**09 13 27.9**	**+0.6**
PB07				*e*S	**Sn**	**09 13 46.5**	**-0.2**
PB07				IAML		09 13 49.2	
	comp=N,1µm,0.3s						
PB07	**IPOC Station P**	**1.17**	**253**	*e*P	**Pn**	**09 13 27.8**	**+0.6**
PB07				*e*S	**Sn**	**09 13 47.4**	**+0.6**
PB07				IAML		09 13 50.9	
	comp=Z,530nm,0.5s						
PB03	**IPOC Station P**	**1.19**	**236**	⇑*i*P	**Pn**	**09 13 28.0**	**+0.5**
PB03				*e*S	**Sn**	**09 13 47.2**	**+0.1**
PB03				IAML		09 13 48.7	
	comp=N,709nm,0.4s						
PB03	**IPOC Station P**	**1.19**	**236**	*e*P	**Pn**	**09 13 28.0**	**+0.5**
PB03				*e*S	**Sn**	**09 13 47.3**	**+0.1**
PB03				IAML		09 13 48.7	
	comp=Z,620nm,0.5s						
PB08	**IPOC Station P**	**1.31**	**340**	⇑*i*P	**Pn**	**09 13 29.4**	**+0.4**
PB08				*e*S	**Sn**	**09 13 49.2**	**-0.6**
PB08	**IPOC Station P**	**1.31**	**340**	*e*P	**Pn**	**09 13 29.3**	**+0.4**
PB08				*e*S	**Sn**	**09 13 49.8**	**0.0**
PB08				IAML		09 13 52.7	
	comp=Z,128nm,0.4s						
PATCX	**Punta Patache**	**1.48**	**292**	*e*P	**Pn**	**09 13 31.1**	**+0.7**
PATCX				*e*S	**Sn**	**09 13 52.4**	**+0.1**
PATCX				IAML		09 13 55.0	
	comp=N,656nm,0.3s						
PATCX	**Punta Patache**	**1.48**	**292**	*e*P	**Pn**	**09 13 31.5**	**+1.1**
PATCX				IAML		09 13 57.6	
	comp=Z,177nm,0.4s						
PB06	**IPOC Station P**	**1.55**	**212**	⇑*i*P	**Pn**	**09 13 31.9**	**+0.7**
PB06				*e*S	**Sn**	**09 13 54.0**	**+0.1**
PB06				IAML		09 13 56.1	
	comp=E,536nm,0.3s						
PB06	**IPOC Station P**	**1.55**	**212**	*e*P	**Pn**	**09 13 31.9**	**+0.7**
PB06				*e*S	**Sn**	**09 13 54.5**	**+0.7**
PB06				IAML		09 13 55.5	
	comp=Z,336nm,0.2s						
TA01	**Diego Aracena**	**1.62**	**300**	*e*P	**Pn**	**09 13 32.0**	**+0.3**
TA01				*e*S	**Sn**	**09 13 54.4**	**-0.4**
TA01				IAML		09 13 55.8	
	comp=N,454nm,0.5s						
TA01	**Diego Aracena**	**1.62**	**300**	*e*P	**Pn**	**09 13 32.2**	**+0.4**
TA01				*e*S	**Sn**	**09 13 54.9**	**+0.1**
TA01				IAML		09 13 55.7	
	comp=Z,172nm,0.5s						
AF01	**San Pedro de A**	**1.63**	**163**	*e*P	Pn	09 13 47.8	+16
AF01				*e*S	**Sn**	**09 13 53.9**	**-1.7**
AF01				IAML		09 14 06.1	
	comp=Z,253nm,0.2s						
TA02	**Huaiquique**	**1.75**	**309**	*e*P	**Pn**	**09 13 33.5**	**+0.2**
TA02				*e*S	**Sn**	**09 13 52.4**	**-5.1**
TA02				IAML		09 13 59.9	
	comp=Z,132nm,0.1s						
GO01	**Chusmiza**	**1.77**	**344**	*e*P	**Pn**	**09 13 34.5**	**+0.4**
GO01				*e*S	**Sn**	**09 13 58.6**	**-0.3**
GO01				IAML		09 14 01.5	
	comp=E,190nm,0.1s						
GO01	**Chusmiza**	**1.77**	**344**	*e*P	**Pn**	**09 13 34.0**	**-0.1**
GO01				*e*S	**Sn**	**09 14 00.1**	**+1.3**
GO01				IAML		09 14 01.5	
	comp=Z,65nm,0.2s						
PB11	**IPOC Station P**	**1.85**	**330**	*e*P	**Pn**	**09 13 34.7**	**0.0**
PB11				*e*S	**Sn**	**09 13 59.5**	**-0.5**
PB11				IAML		09 14 00.5	
	comp=E,369nm,0.3s						
PB11	**IPOC Station P**	**1.85**	**330**	*e*P	**Pn**	**09 13 34.6**	**0.0**
PB11				*e*S	**Sn**	**09 13 58.6**	**-1.4**
PB11				IAML		09 14 04.3	
	comp=Z,119nm,0.3s						
PB05	**IPOC Station P**	**2.03**	**224**	*e*P	**Pn**	**09 13 37.3**	**+0.7**
PB05				*e*S	**Sn**	**09 14 03.4**	**-0.1**
PB05				IAML		09 14 04.0	
	comp=Z,112nm,0.9s						
PB10	**IPOC Station P**	**2.73**	**219**	*e*P	**Pn**	**09 13 45.9**	**+0.7**
PB10				*e*S	**Sn**	**09 14 15.1**	**-3.8**
PB10				IAML		09 14 20.6	
	comp=Z,47nm,0.3s						
YJA	**Yavi**	**3.05**	**106**	*e*P	**Pn**	**09 13 50.8**	**+1.2**
YJA				*e*S	**Sn**	**09 14 23.6**	**-3.1**
PB16	**IPOC Station P**	**3.13**	**346**	*e*P	**Pn**	**09 13 52.3**	**+1.4**
PB16				*e*S	**Sn**	**09 14 30.9**	**+2.0**
PB12	**IPOC Station P**	**3.16**	**330**	*e*P	**Pn**	**09 13 50.1**	**-0.7**
PB12				*e*S	**Sn**	**09 14 27.8**	**-1.0**
PB12				IAML		09 14 57.9	
	comp=Z,26nm,0.5s						
HJA	**Humahuaca**	**3.53**	**121**	*e*P	**Pn**	**09 13 57.3**	**+1.4**
PB14	**IPOC Station P**	**3.59**	**206**	*e*P	Pn	09 13 49.4	-7.2
PB14				*e*S	Sn	09 14 26.1	-13
PB14				IAML		09 14 47.7	
	comp=Z,38nm,1.0s						
GO02	**Mina Guanaco**	**3.85**	**192**	*e*P	**Pn**	**09 14 00.6**	**+0.7**
GO02				IAML		09 14 49.3	
	comp=Z,41nm,0.1s						

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*KOLA **14** 09:17:13.0,79°.87N×19°.77E,h0^{km},ML2.2,Error ellipse: s-maj=19.2km s-min=16.7km az=60.0,Spitsbergen*
*NAO **14** 09:17:15.9±1.0,79°.88N×19°.31E,h10^{km},ML2.7*
*BER **14** 09:17:17.1±3.0,79°.95N×19°.78E,h22^{km}±12^{km},ML2.3, ML2.7(NAO),Confirmed Earthquake*
*FCIAR **14** 09:17:17.0,79°.85N×20°.50E,h10^{km},station ZFI2 has station magnitude of 3.20 station OMEGA has station magnitude of 2.90*
ISC 14 09:17:17.3±1.6**,79°.93N**±0°.06×**19°.59E**±0°.04**,h33^{km}**±6^{km}**, n21,**σ**1^{s}.32**/46**,1D,Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.73**	**238**	Pb	**Pn**	**09 17 44.2**	**-0.8**
KBS				Sg	**Sn**	**09 18 08.3**	**+2.4**
KBS	**Kingsbay**	**1.73**	**238**	P	**Pn**	**09 17 44.2**	**-0.8**
KBS				S	**Sn**	**09 18 08.0**	**+2.1**
KBS	**Kingsbay**	**1.73**	**238**	*e*P	**Pn**	**09 17 44.3**	**-0.8**
KBS				*e*Pg	**Pb**	**09 17 47.3**	**-1.2**
KBS				*e*S	**Sn**	**09 18 07.9**	**+2.0**
KBS				IAML		09 18 10.1	
	comp=Z,57nm,0.3s						
SPA0	**Spitsbergen Ar**	**1.87**	**201**	Pn	**Pn**	**09 17 45.9**	**-1.0**
	baz=22,slow=18						
SPA0				Pg	**Pb**	**09 17 49.0**	**-1.7**
	baz=22,slow=18						
SPA0				Sg	**Sb**	**09 18 12.8**	**-0.7**
	baz=30,slow=37						
SPA0	**Spitsbergen Ar**	**1.87**	**201**	⇓*i*P	**Pn**	**09 17 45.7**	**-1.1**
SPA0				*i* S	**Sn**	**09 18 09.5**	**+0.2**
SPA0	**Spitsbergen Ar**	**1.87**	**201**	Pn	**Pn**	**09 17 45.9**	**-1.0**
	baz=22,slow=18						
SPA0				Pg	**Pb**	**09 17 49.0**	**-1.7**
	baz=22,slow=18						
SPA0				Sg	**Sb**	**09 18 12.8**	**-0.7**
	baz=30,slow=37						
SPA0				IAML		09 18 17.2	
	comp=Z,40nm,0.6s						
SPITS	**Spitsbergen Ar**	**1.87**	**201**	P	**Pn**	**09 17 46.1**	**-0.8**
SPITS				S	**Sn**	**09 18 10.2**	**+0.9**
BRBB	**Barentsburg B**	**2.12**	**212**	Pn	**Pn**	**09 17 49.5**	**-0.8**
BRBB				Sn	**Sn**	**09 18 13.8**	**-1.5**
BRBB	**Barentsburg B**	**2.12**	**212**	P	**Pn**	**09 17 49.2**	**-1.0**
BRBB				S	**Sn**	**09 18 13.8**	**-1.5**
BRBB	**Barentsburg B**	**2.12**	**212**	Pn	**Pn**	**09 17 49.5**	**-0.8**
BRBB				Sn	**Sn**	**09 18 13.8**	**-1.5**
BRBA	**Barentsburg A**	**2.15**	**211**	*e*P	**Pn**	**09 17 50.1**	**-0.6**
HSPB	**Hornsund (broa**	**3.06**	**197**	Pn	**Pn**	**09 18 03.8**	**+0.6**
HSPB				Sg	**Sb**	**09 18 49.0**	**+1.4**
HSPB	**Hornsund (broa**	**3.06**	**197**	P	**Pn**	**09 18 04.1**	**+1.0**
HSPB				S	**Sn**	**09 18 38.5**	**+0.1**
HSPB	**Hornsund (broa**	**3.06**	**197**	P	**Pn**	**09 18 04.5**	**+1.4**
HSPB				S	**Sn**	**09 18 39.5**	**+1.0**
HSPB	**Hornsund (broa**	**3.06**	**197**	*e*P	**Pn**	**09 18 03.8**	**+0.6**
HSPB				*e*Pg	**Pb**	**09 18 10.3**	**-0.5**
HSPB				Sg	**Sb**	**09 18 49.0**	**+1.4**
HOPEN	**Hopen**	**3.61**	**159**	Pn	**Pn**	**09 18 11.3**	**+0.6**
HOPEN				Sn	**Sn**	**09 18 50.2**	**-1.9**
HOPEN				Sg	**Sb**	**09 19 06.0**	**+2.5**
HOPEN	**Hopen**	**3.61**	**159**	*e*P	**Pn**	**09 18 11.5**	**+0.7**
HOPEN				*e*Pg	**Pb**	**09 18 21.0**	**+0.7**
HOPEN				Sn	**Sn**	**09 18 50.2**	**-1.9**
HOPEN				Sg	**Sb**	**09 19 06.0**	**+2.5**
ZFI2	**Zemlya Franca-**	**4.76**	**66**	*e*P	**Pn**	**09 18 27.0**	**+0.5**
ZFI2				*e*S	**Sn**	**09 19 18.8**	**-1.5**
	comp=Z,17nm,3.2s						
OMEGA	**Omega**	**4.77**	**66**	*e*P	**Pn**	**09 18 27.1**	**+0.4**
OMEGA				*e*S	**Sn**	**09 19 18.9**	**-1.8**
	comp=Z,9.2nm,2.5s						
ARA0	**ARCESS Array S**	**10.56**	**169**	Pn	**Pn**	**09 19 45.6**	**-0.4**
	baz=0.4,slow=11						
ARA0				Sn	Sn	09 21 33.5	-9.3
	baz=360,slow=22						
ARA0	**ARCESS Array S**	**10.56**	**169**	Pn	**Pn**	**09 19 45.6**	**-0.4**
	baz=0.4,slow=11						
ARA0				Sn	Sn	09 21 33.5	-9.3
	baz=360,slow=22						

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*IDC **14** 09:28:15.8±0.5,22°.85S×69°.31E,h0^{km},mb4.4/18, mbtmp4.4/18,MS4.1/45,Error ellipse: s-maj=17.1km s-min=15.9km az=65.0*
*BJI **14** 09:28:16.0,22°.90S×69°.30E,h5^{km},mB5.0/7,mb4.7/28, Ms4.8/3,Ms7 4.5/5*
*NEIC **14** 09:28:18.1±0.9,22°.80S±0°.04×69°.3E±0°.1,h10^{km}±1^{km}, mb4.8/57,Error ellipse: s-maj=16.7km s-min=6.7km az=273.0*
*GCMT **14** 09:28:21.1±0.3,22°.75S±0°.02×69°.27E±0°.02,h25^{km}±1^{km}, MW5.0/104,Moment Tensor Solution. s24,c28; s104,c146; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.05±.22; $M_{\theta\theta}$-3.63±.14; $M_{\phi\phi}$4.68±.18; $M_{r\theta}$-0.09±.35; $M_{\theta\phi}$1.65±.15; $M_{\phi r}$-1.84±.38; Best double couple: $M_0$4.73800×10^{16} NP1:ϕ_s237.00000°,δ75.00000°, λ7.00000°. NP2:ϕ_s145.00000°,δ83.00000°,λ165.00000°. Principal axes: T 5.5040, Plg16.0000°, Azm100.0000°; N -1.5320, Plg73.0000°, Azm302.0000°; P -3.9720, Plg6.0000°, Azm192.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 14 09:28:17.7±0.4**,22°.88S**±0°.08×**69°.30E**±0°.07**,h10^{km},n151, **σ**1^{s}.20**/103**,mb4.8**/48**,MS4.1**/48**,2C,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**15.45**	**12**	T	T	09 47 37.2	
	baz=193,slow=76,SNR=277						
H08S2	**Diego Garcia H**	**15.46**	**12**	T	T	09 47 37.5	
	baz=193,slow=76,SNR=334						
H08S3	**Diego Garcia H**	**15.47**	**12**	T	T	09 47 31.8	
	baz=193,slow=76,SNR=3895						
VOI	**Vohitsoka**	**20.83**	**268**		**P**	**09 32 59.1**	**-0.6**
ABPO	**Ambohimpanom**	**20.96**	**276**		**P**	**09 33 01.0**	**-0.2**
ABPO				IAmb	IAmb	09 33 07.1	
	comp=Z,59nm,1.4s						
OPO	**Ambohidratompo**	**21.11**	**278**	P	**P**	**09 33 03.2**	**+0.3**
	comp=Z,12nm,1.0s,baz=92,slow=16,SNR=8.3						
	comp=Z,12nm,1.0s						
MSEY	**Mahe Island**	**22.50**	**322**	P	**P**	**09 33 15.7**	**-2.0**
H04N2	**CROZET ISLANDS**	**27.22**	**207**	T	T	10 02 29.3	
	baz=38,slow=75						
H04N1	**CROZET ISLANDS**	**27.23**	**207**	T	T	10 02 28.9	
	baz=38,slow=75						
H04N3	**CROZET ISLANDS**	**27.24**	**207**	T	T	10 02 28.9	
	baz=38,slow=75						
KIBK	**Kibwezi**	**36.54**	**299**		**P**	**09 35 23.6**	**-0.3**
GSI	**Gunungsitoli**	**36.56**	**53**	P	**P**	**09 35 23.8**	**-0.2**
GSI				IAmb	IAmb	09 36 40.7	
	comp=Z,15nm,1.0s						
MATP	**Matopo**	**37.92**	**266**	LR	LR	09 48 54.6	
	comp=Z,420nm,19.7s,baz=102,slow=33						
MDSI	**Maura Dua**	**38.34**	**67**	P	**P**	**09 35 37.8**	**-1.3**
	comp=Z,9.5nm,0.4s						
GRHM	**Grahamstown, E**	**39.02**	**245**	P	**P**	**09 35 45.4**	**+0.6**
LSZ	**Lusaka**	**39.48**	**274**	LR	LR	09 49 58.1	
	comp=Z,356nm,20.8s,baz=129,slow=33						
LSZ	**Lusaka**	**39.48**	**274**		**P**	**09 35 48.0**	**-0.8**
LSZ				IAmb	IAmb	09 35 55.9	
	comp=Z,62nm,1.9s						
LPHEP	**Lephephe**	**39.84**	**261**	P	**P**	**09 35 51.1**	**-0.7**
LPHEP				IAmb	IAmb	09 35 54.9	
	comp=Z,21nm,1.2s						
LBTB	**Lobatse**	**39.87**	**258**	LR	LR	09 48 45.3	
	comp=Z,311nm,20.3s,baz=102,slow=31						
BOSA	**Boshof**	**39.91**	**252**	P	**P**	**09 35 52.0**	**-0.2**
	comp=Z,11nm,0.8s,baz=92,slow=8.7,SNR=15						
BOSA				LR	LR	09 48 39.6	
	comp=Z,438nm,20.6s,baz=92,slow=31						
	comp=Z,11nm,0.8s						
BOSA	**Boshof**	**39.91**	**252**		**P**	**09 35 52.1**	**-0.2**
BOSA				IAmb	IAmb	09 35 54.9	
	comp=Z,18nm,0.9s						
KHWEE	**KHWEE**	**40.44**	**263**	P	**P**	**09 35 56.5**	**-0.2**
H01W2	**Cape Leeuwin H**	**40.73**	**117**	T	T	10 19 27.1	
	baz=275,slow=75,SNR=296						
H01W3	**Cape Leeuwin H**	**40.74**	**117**	T	T	10 19 27.1	
	baz=275,slow=75,SNR=275						
H01W1	**Cape Leeuwin H**	**40.75**	**117**	T	T	10 19 28.3	
	baz=275,slow=75,SNR=326						
KSANE	**Kasane**	**41.58**	**269**	P	**P**	**09 36 06.4**	**+0.2**
KSANE				IAmb	IAmb	09 36 08.9	
	comp=Z,14nm,0.8s						
LODK	**Lodwar**	**42.19**	**304**		**P**	**09 36 11.1**	**0.0**
MORW	**Morawa**	**42.26**	**109**	P	**P**	**09 36 11.3**	**-0.2**
MORW				IAmb	IAmb	09 36 20.6	
	comp=Z,40nm,1.9s						
ATD	**Arta Tunnel**	**42.90**	**320**	LR	LR	09 50 46.4	
	comp=Z,9.8nm,21.9s,baz=154,slow=32						
NWAO	**Narrogin (SRO)**	**43.22**	**114**	LR	LR	09 50 15.9	
	comp=Z,476nm,20.9s,baz=277,slow=30						
KGCAE	**Kacgae**	**43.24**	**260**		**P**	**09 36 19.7**	**0.0**
MBAR	**Mbarara**	**43.52**	**295**	LR	LR	09 51 37.1	
	comp=Z,173nm,19.0s,baz=104,slow=32						
MBAR	**Mbarara**	**43.52**	**295**	P	**P**	**09 36 22.2**	**+0.2**
GMARE	**Gumare**	**43.96**	**265**	P	**P**	**09 36 25.3**	**-0.2**
GRTLG	**Ghanzi**	**44.41**	**262**	P	**P**	**09 36 28.8**	**-0.4**
GRTLG				IAmb	IAmb	09 36 31.7	
	comp=Z,7.2nm,0.8s						
XAUDM	**Khaudum**	**44.92**	**266**	P	**P**	**09 36 33.1**	**-0.1**
XAUDM				IAmb	IAmb	09 37 26.7	
	comp=Z,14nm,1.0s						
KOOLE	**Kule**	**45.05**	**260**	P	**P**	**09 36 33.8**	**-0.3**
PSA00	**Pilbara Seismi**	**46.62**	**99**	P	**P**	**09 36 46.6**	**+0.1**
TSUM	**Tsumeb**	**48.21**	**264**	LR	LR	09 54 47.0	
	comp=Z,475nm,19.9s,baz=149,slow=33						
TSUM	**Tsumeb**	**48.21**	**264**	P	**P**	**09 36 58.5**	**-0.6**
TSUM				IAmb	IAmb	09 37 02.0	
	comp=Z,14nm,1.3s						
UOSS	**Minazif**	**49.21**	**344**	P	**P**	**09 37 04.7**	**-1.7**
UOSS				IAmb	IAmb	09 37 14.7	
	comp=Z,8.5nm,1.1s						
MTKI	**Muara Teweh, K**	**49.34**	**70**	P	**P**	**09 37 07.7**	**+0.1**
BRDH	**Bariadhala**	**50.23**	**27**	LR	LR	09 57 29.5	
	comp=Z,172nm,19.8s,baz=216,slow=35						
CMAR	**Chiang Mai Arr**	**50.27**	**38**	P	**P**	**09 37 14.8**	**+0.3**
	comp=Z,1.1nm,0.3s,baz=232,slow=7.5,SNR=9.8						
CMAR				LR	LR	09 56 37.0	
	comp=Z,61nm,18.5s,baz=220,slow=34						
	comp=Z,1.1nm,0.3s						
CMAR	**Chiang Mai Arr**	**50.27**	**38**	P	**P**	**09 37 13.3**	**-1.3**
CHTO	**Chiang Mai**	**50.56**	**37**	P	**P**	**09 37 15.7**	**-0.9**
RAYN	**Ar Rayn**	**51.60**	**332**		**P**	**09 37 24.7**	**+0.2**
KAPI	**Kappang**	**51.79**	**78**	P	**P**	**09 37 25.3**	**-0.8**
EDFI	**Ende, Flores**	**52.06**	**83**	P	P	09 37 38.0	+10
SHL	**Shillong**	**52.90**	**26**	P	**P**	**09 37 33.0**	**-1.2**
SHL				IAmb	IAmb	09 37 37.7	
	comp=Z,15nm,0.8s						
EVN	**Everest**	**53.29**	**19**	P	**P**	**09 37 36.2**	**-1.5**
EVN				IAmb	IAmb	09 37 40.6	
	comp=Z,10.0nm,1.2s						
BATI	**Baumata**	**53.35**	**86**	LR	LR	09 56 02.9	
	comp=Z,184nm,21.9s,baz=242,slow=31						
SOEI	**Soe**	**54.06**	**86**	P	**P**	**09 37 40.9**	**-2.1**
SLVN	**Son La**	**55.40**	**40**	P	**P**	**09 37 52.2**	**-0.3**
SLVN				IAmb	IAmb	09 37 52.6	
	comp=Z,29nm,1.7s						
TOLI2	**Tolitoli**	**55.47**	**72**	P	**P**	**09 37 51.9**	**-1.2**
TOLI2				IAmb	IAmb	09 37 53.3	
	comp=Z,14nm,0.9s						
KBL	**Kabul**	**57.10**	**360**	P	**P**	**09 38 04.0**	**-0.6**
KBL				IAmb	IAmb	09 38 16.5	
	comp=Z,5.8nm,0.8s						
QIZ	**Qiongzhong**	**57.47**	**47**	P	**P**	**09 38 08.6**	**+1.4**
QIZ				S	**S**	**09 46 06.6**	**+1.8**
QIZ				LR	LR		
	comp=Z,300nm,18.9s						
QIZ				LR	LR		
	comp=Z,280nm,16.1s						
PZH	**PanZhiHua**	**58.27**	**34**	P	**P**	**09 38 16.3**	**+3.4**
ASAR	**Alice Springs**	**58.87**	**105**	P	**P**	**09 38 16.2**	**-0.9**
	comp=Z,5.9nm,0.9s,baz=257,slow=6.1,SNR=57						
ASAR				LR	LR	10 00 13.3	
	comp=Z,515nm,20.6s,baz=274,slow=33						
	comp=Z,5.9nm,0.9s						
ASAR	**Alice Springs**	**58.87**	**105**	P	**P**	**09 38 16.5**	**-0.7**
AS31	**Alice Springs**	**58.88**	**105**	P	**P**	**09 38 16.4**	**-0.9**
BBOO	**Buckleboo**	**59.01**	**115**	P	**P**	**09 38 17.0**	**-1.0**
MTN	**Manton Dam**	**59.34**	**92**	P	**P**	**09 38 19.4**	**-1.1**
MANEM	**Manem**	**60.14**	**2**	P	**P**	**09 38 24.3**	**-1.4**
MANEM				IAmb	IAmb	09 38 37.2	
	comp=Z,12nm,1.0s						
WRA	**Warramunga Arr**	**60.19**	**101**	P	**P**	**09 38 25.4**	**-0.9**
	comp=Z,9.6nm,0.9s,baz=254,slow=6.6,SNR=59						
	comp=Z,9.6nm,0.9s						
WRA	**Warramunga Arr**	**60.19**	**101**	P	**P**	**09 38 25.9**	**-0.3**
WRAB	**Tennant Creek**	**60.20**	**101**	P	**P**	**09 38 25.6**	**-0.8**
WB0	**Warramunga Arr**	**60.28**	**100**	P	**P**	**09 38 26.2**	**-0.7**
WB0				IAmb	IAmb	09 38 27.2	
	comp=Z,14nm,1.1s						
WR8	**Warramunga Arr**	**60.33**	**101**	P	**P**	**09 38 26.5**	**-0.7**
TROLL	**Troll, Antarti**	**61.28**	**199**	⇑P	**P**	**09 38 33.2**	**+0.1**
	comp=Z,82nm,0.8s						
EIL	**Elat**	**61.81**	**326**	LR	LR	10 01 18.7	
	comp=Z,118nm,20.1s,baz=180,slow=32						
KSH	**Kashi**	**62.38**	**6**	P	**P**	**09 38 36.4**	**-4.3**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SNAA	**Sanae**	**62.86**	**200**	LR	LR	09 59 14.7	
	comp=Z,78nm,21.1s,baz=100,slow=30						
CD2	**Chengdu**	**62.87**	**33**	P	**P**	**09 38 45.6**	**+1.5**
EDA	**Edea**	**63.47**	**287**	P	**P**	**09 38 48.5**	**+0.1**
EDA				IAmb	IAmb	09 38 57.9	
	comp=Z,10nm,1.1s						
STKA	**Stephens Creek**	**63.78**	**115**	P	**P**	**09 38 49.2**	**-1.1**
	comp=Z,1.3nm,0.8s,baz=268,slow=6.9,SNR=4.0						
STKA				LR	LR	10 03 06.6	
	comp=Z,327nm,20.2s,baz=213,slow=33						
	comp=Z,1.3nm,0.8s						
STKA	**Stephens Creek**	**63.78**	**115**	P	**P**	**09 38 49.9**	**-0.4**
INKA	**Innaminka**	**63.95**	**111**	P	**P**	**09 38 51.1**	**-0.3**
INKA				IAmb	IAmb	09 38 52.5	
	comp=Z,9.6nm,1.4s						
MMAI	**Mount Meron Ar**	**64.31**	**329**	LR	LR	10 03 32.4	
	comp=Z,99nm,20.5s,baz=145,slow=33						
AAK	**Ala-Archa**	**65.36**	**4**	LR	LR	10 04 53.5	
	comp=Z,200nm,19.7s,baz=194,slow=34						
KK31	**Karatay Array**	**65.66**	**1**	P	**P**	**09 39 01.6**	**-0.5**
KK31				IAmb	IAmb	09 39 09.7	
	comp=Z,9.4nm,1.2s						
KKAR	**Karatay Array**	**65.66**	**1**	P	**P**	**09 39 01.3**	**-0.8**
GURO	**Guroymak-BITLI**	**66.24**	**337**	P	**P**	**09 39 06.8**	**+0.7**
GURO				IAmb	IAmb	09 39 14.2	
	comp=Z,13nm,1.1s						

LZDM	Lanzhou Array	66.96	30	P	P	09 39 12.2	+1.2
	comp=Z,1.4nm,0.2s,baz=201,slow=7.9,SNR=4.0						
	comp=Z,1.4nm,0.2s						
QSPA	South Pole Qui	67.24	180	P	P	09 39 12.0	-0.2
	comp=Z,5.5nm,0.8s,baz=280,slow=1.8,SNR=18						
QSPA				LR	LR	10 04 18.5	
	comp=Z,106nm,21.9s,baz=294,slow=32						
	comp=Z,5.5nm,0.8s						
QSPA	South Pole Qui	67.24	180	P	P	09 39 12.4	+0.2
QSPA				IAmb	IAmb	09 39 13.2	
	comp=Z,7.5nm,0.9s						
XAN	Xi'an	68.01	35	P	P	09 39 18.3	+1.0
XAN				pmax	pmax		
	comp=Z,14nm,0.7s						
GTA	Gaotai	68.22	25	*e*P	P	09 39 20.1	+1.5
GTA				pP	pwP	09 39 24.4	-0.3
GTA				pmax	pmax		
	comp=Z,11nm,1.4s						
VNDA	Vanda	68.39	166	P	P	09 39 19.5	+0.5
	comp=Z,4.4nm,1.0s,baz=277,slow=8.4,SNR=8.3						
VNDA				LR	LR	10 05 41.0	
	comp=Z,95nm,18.3s,baz=270,slow=33						
	comp=Z,4.4nm,1.0s						
VNDA	Vanda	68.39	166	P	P	09 39 19.8	+0.7
VNDA				IAmb	IAmb	09 39 24.3	
	comp=Z,7.1nm,1.1s						
WMQ	Urumqi	68.49	14	*e*P	P	09 39 22.6	+2.5
WMQ				LR	LR		
	comp=Z,150nm,21.1s						
MAKZ	Makanchi	70.30	9	P	P	09 39 30.1	-1.1
MK31	Makanchi Array	70.33	9	P	P	09 39 29.6	-1.8
MKAR	Makanchi Array	70.33	9	P	P	09 39 29.7	-1.7
	comp=Z,4.1nm,0.8s,baz=193,slow=4.9,SNR=18						
MKAR				LR	LR	10 08 54.9	
	comp=Z,90nm,20.2s,baz=198,slow=35						
	comp=Z,4.1nm,0.8s						
MKAR	Makanchi Array	70.33	9	P	P	09 39 29.3	-2.1
KBZ	Khabaz	70.58	340	LR	LR	10 09 28.1	
	comp=Z,145nm,19.1s,baz=170,slow=35						
BR131	Keskin Array S	70.62	332	P	P	09 39 33.2	-0.3
BR131				IAmb	IAmb	09 39 40.3	
	comp=Z,9.3nm,1.2s						
BRTR	Keskin Array B	70.62	332	P	P	09 39 32.5	-1.0
	comp=Z,2.1nm,1.0s,baz=150,slow=5.1,SNR=6.0						
BRTR				LR	LR	10 09 54.7	
	comp=Z,55nm,18.1s,baz=148,slow=35						
	comp=Z,2.1nm,1.0s						
BRTR	Keskin Array B	70.62	332	P	P	09 39 32.9	-0.6
BELA	Belgrano 2	70.68	193	P	P	09 39 33.7	+0.4
CTA	Charters Tower	70.88	104	LR	LR	10 07 13.5	
	comp=Z,277nm,21.7s,baz=224,slow=33						
JAY	Jayapura	71.90	85	LR	LR	10 08 45.8	
	comp=Z,82nm,21.9s,baz=208,slow=34						
AB31	Akbulak array	72.29	354	P	P	09 39 43.4	+0.3
AB31				IAmb	IAmb	09 39 49.7	
	comp=Z,9.3nm,0.9s						
ABKAR	Akbulak array	72.29	354	P	P	09 39 43.6	+0.4
NJ2	Nanjing	72.31	43	*e*P	P	09 39 45.3	+1.6
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HNS	HongShan	73.63	36	⇑P	P	09 39 53.5	+2.1
HNS				pmax	pmax		
	comp=Z,14nm,0.7s						
KURBB	Kurchatov Arra	73.63	6	P	P	09 39 49.8	-1.2
	comp=Z,1.2nm,0.3s,baz=204,slow=6.4,SNR=7.5						
KURBB				LR	LR	10 09 17.5	
	comp=Z,109nm,19.3s,baz=177,slow=33						
	comp=Z,1.2nm,0.3s						
BTO	Baotou	73.65	31	*e*P	P	09 39 54.4	+2.8
BTO				pmax	pmax		
	comp=Z,19nm,0.8s						
BTO				pmax	pmax		
	comp=Z,370nm,6.9s						
AKTO	Aktyubinsk	73.67	353	LR	LR	10 09 45.5	
	comp=Z,80nm,19.2s,baz=278,slow=34						
KURK	Kurchatov	73.73	6	P	P	09 39 51.0	-0.7
HHC	Hu-ho-hao-te	74.58	32	*e*P	P	09 39 59.3	+2.3
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,4.4s						
TORD	Torodi Ar. Bea	75.23	291	P	P	09 40 00.5	-0.7
	comp=Z,10nm,0.6s,baz=109,slow=5.5,SNR=3.6						
TORD				LR	LR	10 12 27.4	
	comp=Z,177nm,18.0s,baz=110,slow=35						
	comp=Z,10nm,0.6s						
PMG	Port Moresby	75.28	94	LR	LR	10 12 34.9	
	comp=Z,56nm,18.4s,baz=245,slow=35						
BVAR	Borovoye Array	75.59	1	P	P	09 40 02.0	-0.4
	comp=Z,1.4nm,0.7s,baz=172,slow=5.5,SNR=4.3						
BVAR				LR	LR	10 11 21.9	
	comp=Z,91nm,21.6s,baz=195,slow=34						
	comp=Z,1.4nm,0.7s						
ZAA0	Zalesovo Array	77.67	9	P	P	09 40 13.0	-1.2
ZAA0				IAmb	IAmb	09 40 21.1	
	comp=Z,7.3nm,0.9s						
ZALV	Zalesovo Beam	77.67	9	P	P	09 40 13.1	-1.1
	comp=Z,5.2nm,0.9s,baz=224,slow=4.1,SNR=14						
ZALV				LR	LR	10 13 00.6	
	comp=Z,85nm,19.7s,baz=218,slow=35						
	comp=Z,5.2nm,0.9s						
ZALV	Zalesovo Beam	77.67	9	P	P	09 40 12.6	-1.5
SONM	Songino Array	77.88	25	P	P	09 40 15.7	0.0
	comp=Z,4.8nm,1.0s,baz=226,slow=3.8,SNR=14						
SONM				LR	LR	10 13 17.6	
	comp=Z,70nm,21.4s,baz=184,slow=35						
	comp=Z,4.8nm,1.0s						
SONM	Songino Array	77.88	25	P	P	09 40 15.4	-0.3
SONM				IAmb	IAmb	09 40 24.2	
	comp=Z,7.0nm,1.1s						
DBIC	Dimbokro	78.14	282	LR	LR	10 12 29.2	
	comp=Z,285nm,20.4s,baz=168,slow=34						
ULN	Ulaanbaatar	78.16	25	P	P	09 40 17.0	-0.2
ULN				IAmb	IAmb	09 40 25.4	
	comp=Z,10nm,1.1s						
ULN	Ulaanbaatar	78.16	25	P	P	09 40 18.9	+1.7
MLR	Muntele Rosu	78.64	330	LR	LR	10 14 08.3	
	comp=Z,82nm,18.4s,baz=179,slow=35						
VAE	Valguarnera	79.17	319	LR	LR	10 13 38.8	
	comp=Z,105nm,18.3s,baz=318,slow=34						
ARTI	Arti	79.49	354	LR	LR	10 15 27.6	
	comp=Z,80nm,18.1s,baz=185,slow=36						
LUBAR	Lubar, Ukraine	81.30	334	P	P	09 40 35.0	+1.0
KEST	Kesra	81.32	315	LR	LR	10 16 34.6	
	comp=Z,104nm,18.6s,baz=36,slow=36						
AK02	Malin Array Si	81.32	336	P	P	09 40 35.9	+1.8
AKASG	Malin Array Be	81.35	336	P	P	09 40 33.7	-0.6
	comp=Z,0.5nm,0.3s,baz=136,slow=4.2,SNR=8.1						
	comp=Z,0.5nm,0.3s						
KSRS	Korea Array	81.49	43	P	P	09 40 36.4	+1.1
	comp=Z,1.5nm,0.7s,baz=234,slow=4.6,SNR=5.4						
	comp=Z,1.5nm,0.7s						
KIRV	Kirov	82.82	350	LR	LR	10 16 45.2	
	comp=Z,86nm,18.8s,baz=168,slow=35						
MODS	Modra-Piesok	84.82	328	*e*P	P	09 41 01.0	+8.7
PMSA	Palmer Station	85.53	198	LR	LR	10 10 33.3	
	comp=Z,76nm,21.3s,baz=122,slow=30						
VRAC	Vranov	85.79	329	LR	LR	10 18 42.9	
	comp=Z,45nm,18.9s,baz=190,slow=35						
DZM	Mont Dzumac	87.82	113	*e*SS	SS	09 57 32.4	-5.4
	comp=Z,101nm,25.2s						
DZM	Mont Dzumac	87.82	113	*e*LR	LR	10 08 57.7	
	comp=Z,386nm,22.1s						
CLL	Collm	88.84	329	*e*P	P	09 41 14.0	+2.2
URZ	Urewera	89.07	131	LR	LR	10 14 21.3	
	comp=Z,62nm,18.7s,baz=280,slow=31						
MDT	Midelt	89.61	306	LR	LR	10 21 11.6	
	comp=Z,190nm,19.5s,baz=100,slow=35						
FINES	FINESS Array B	90.92	341	LR	LR	10 22 33.3	
	comp=Z,79nm,19.6s,baz=200,slow=36						
ESDC	Sonseca Array	92.34	312	LR	LR	10 24 27.4	
	comp=Z,116nm,18.4s,baz=105,slow=36						
NRIK	Noril'sk	92.90	6	LR	LR	10 22 18.7	
	comp=Z,63nm,18.0s,baz=226,slow=35						
YAK	Yakutsk	97.24	24	LR	LR	10 25 27.8	
	comp=Z,55nm,20.7s,baz=252,slow=35						
ARCES	ARCESS Array B	97.34	346	LR	LR	10 24 34.2	
	comp=Z,98nm,20.9s,baz=172,slow=35						
PPT2	Papeete2	124.66	133	*e*LR	LR	10 25 58.7	
	comp=Z,55nm,23.0s						
PPT2				*e*LR	LR	10 26 01.3	
	comp=Z,57µm,35.5s						
RKT	Rikitea	128.54	151	*e*LR	LR	10 27 45.5	
	comp=Z,3µm,38.8s						
TAOE	Nuku Hiva Isla	137.27	134	*e*LR	LR	10 31 56.3	
	comp=Z,68nm,22.5s						
YKA	Yellowknife Ar	140.32	3	PKP	PKPdf	09 47 47.7	+1.3
	comp=Z,0.6nm,0.8s,baz=349,slow=2.5,SNR=7.6						
ULM	Lac du Bonnet	150.31	341	PKPbc	PKiKP	09 48 09.8	0.0
	comp=Z,6.8nm,0.8s,baz=120,slow=2.1,SNR=4.1						
NVAR	Mina Array Bea	163.19	21	PKPab	PKPab	09 49 11.4	+0.3
	comp=Z,1.2nm,0.9s,baz=327,slow=5.0,SNR=3.9						
TXAR	Lajitas Array	170.99	317	PKPab	PKPab	09 49 45.3	-0.4
	comp=Z,0.4nm,0.8s,baz=24,slow=5.6,SNR=3.6						

SDD ***14*** *09:43:06.9±2.6, 18°.50N×69°.23W, h108^{km}±20^{km}, MD3.1, ML3.0, MW3.2, Presumed earthquake*

NEIC ***14*** *09:43:09.0±1.0, 18°.5N±0°.1×69°.18W±0°.04, h74^{km}±9^{km}, ML2.9/24, Md3.0/11(RSPR), Error ellipse: s-maj=21.7km s-min=4.2km az=187.0*

RSPR ***14*** *09:43:08.6, 19°.31N×68°.88W, h117^{km}±3^{km}, MD3.0/11*

OSPL ***14*** *09:43:09.0±2.0, 18°.55N×69°.21W, h95^{km}±16^{km}, ML2.9, Presumed earthquake*

ISC 14 09:43:07.5±1.3**, 18°.58N**±0°.05×**69°.25W**±0°.03**, h97**^{km}±8^{km}**, n57, σ1^{s}25**/68**, 19C-4D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DR12	Loma Pena Alta	0.24	328		Pn	09 43 20.8	-0.8
HATOM	Hato Mayor del	0.24	328	⇑*e*Pg	Pn	09 43 20.5	-1.1
HATOM				⇑*e*Sg	Sn	09 43 31.3	-0.8
HATOM				IAML		09 43 31.4	
	comp=N,419nm,0.2s						
MIDR	Miches	0.44	25	⇓*e*Pg	Pn	09 43 21.9	-0.6
MIDR				⇑*e*Sg	Sn	09 43 33.5	-0.3
MIDR				IAML		09 43 34.0	
	comp=N,213nm,0.7s						
SDD	Santo Domingo	0.65	259	Pn	Pn	09 43 24.1	0.0
SDD	Santo Domingo	0.65	259	⇑*e*Pg	Pn	09 43 23.9	-0.2
SDD				⇑*e*Sg	Sn	09 43 37.0	+0.4
SDD				IAML		09 43 37.5	
	comp=N,32nm,1.0s						
SDD	Santo Domingo	0.65	259	*i* P	Pn	09 43 23.9	-0.2
SDD				*e*S	Sn	09 43 36.8	+0.2
SMDR	Samana, DR	0.71	4	⇑*e*P	Pn	09 43 24.7	0.0
SMDR	Samana, DR	0.71	4	*e*S	Sn	09 43 40.2	+2.5
SMDR	Samana, DR	0.71	4	⇑*e*Pg	Pn	09 43 24.8	0.0
SMDR				⇑*e*Sg	Sn	09 43 40.2	+2.5
SMDR				IAML		09 43 40.8	
	comp=N,363nm,0.5s						
PCDR	Punta Cana, DR	0.82	94	⇑*e*Pg	Pn	09 43 24.6	-1.2
PCDR				⇑*e*Sg	Sn	09 43 39.5	0.0
PCDR				IAML		09 43 41.4	
	comp=N,161nm,1.2s						
DR08	Loma La Naviza	0.83	298	⇑*e*Pg	Pn	09 43 25.0	-0.9
DR08				⇑*e*Sg	Sn	09 43 39.9	+0.1
DR08				IAML		09 43 44.0	
	comp=N,6µm,0.2s						
BANI	BANI	1.07	260	Pn	Pn	09 43 29.4	+0.8
BANI	BANI	1.07	260	*e*Pg	Pn	09 43 28.9	+0.3
BANI				IAML		09 43 51.5	
	comp=N,162nm,0.3s						
SC01	Santiago de lo	1.64	301	Pn	Pn	09 43 36.6	+1.3
SC01				IAML		09 44 05.3	
	comp=N,130nm,0.3s						
SC01				IAML		09 44 05.6	
	comp=E,121nm,0.3s						
SC01	Santiago de lo	1.64	301	*i* P	Pn	09 43 36.9	+1.6
IDE	Isla Desecheo	1.69	96		Pn	09 43 36.7	+0.7
IDE					Sn	09 43 58.5	+0.8
IDE	Isla Desecheo	1.69	96	⇑*e*P	Pn	09 43 36.7	+0.7
IDE	Isla Desecheo	1.69	96	*e*S	Sn	09 43 58.5	+0.8
SDDR	Presa de Saban	1.98	282	Pn	Pn	09 43 41.9	+2.2
SDDR	Presa de Saban	1.98	282	*i* P	Pn	09 43 41.9	+2.2
SDDR				IAML		09 44 16.3	
	comp=Z,17nm,0.6s						
PRSN	Puerto Rico Se	2.03	100	Pn	Pn	09 43 39.9	-0.4
PRSN				IAML		09 44 10.7	
	comp=Z,164nm,0.2s						
PRSN				IAML		09 44 15.0	
	comp=Z,231nm,0.3s						
PRSN	Puerto Rico Se	2.03	100	⇓*e*P	Pn	09 43 40.8	+0.5
PRSN	Puerto Rico Se	2.03	100	*e*S	Sn	09 44 08.1	+2.7
AGPR	Aguadilla, PR	2.03	93	Pn	Pn	09 43 39.5	-0.8
AGPR				IAML		09 44 05.6	
	comp=Z,99nm,2.4s						
AGPR				IAML		09 44 50.5	
	comp=Z,111nm,2.6s						
AGPR	Aguadilla, PR	2.03	93	⇓*e*P	Pn	09 43 40.4	+0.1
AGPR	Aguadilla, PR	2.03	93	*e*S	Sn	09 44 06.2	+0.8
AGPR	Aguadilla, PR	2.03	93	*i* P	Pn	09 43 40.1	-0.2
AGPR				IAML		09 44 07.3	
	comp=Z,69nm,2.0s						
LSP	Las Mesas	2.09	101		Pn	09 43 41.6	+0.5
LSP					Sn	09 44 08.4	+1.5
LSP	Las Mesas	2.09	101	⇑*e*P	Pn	09 43 41.6	+0.5
LSP	Las Mesas	2.09	101	*e*S	Sn	09 44 08.4	+1.5
CRPR	Cabo Rojo, PR	2.11	105	Pn	Pn	09 43 40.3	-1.0
CRPR	Cabo Rojo, PR	2.11	105	IAML		09 44 10.6	
	comp=Z,53nm,2.4s						
CRPR				IAML		09 44 21.5	
	comp=Z,51nm,2.8s						
CRPR	Cabo Rojo, PR	2.11	105	*e*S	Sn	09 44 09.9	+2.7
CRPR	Cabo Rojo, PR	2.11	105	*i* P	Pn	09 43 41.2	-0.1
CRPR				IAML		09 44 14.0	
	comp=Z,20nm,0.9s						
LOVI	El Cajuil, Ovi	2.16	249	*i* P	Pn	09 43 41.6	-0.4
LOVI				*e*S	Sn	09 44 06.5	-2.0
LOVI				IAML		09 44 07.3	
	comp=Z,76nm,1.0s						
MLPR	Magueyes Islan	2.18	106	⇑*e*P	Pn	09 43 44.1	+1.9
MLPR	Magueyes Islan	2.18	106	*e*S	Sn	09 44 10.5	+1.6
AOPR	Arecibo Observ	2.38	95		Pn	09 43 44.6	-0.3
AOPR	Arecibo Observ	2.38	95	⇑*e*P	Pn	09 43 44.6	-0.3
AOPR	Arecibo Observ	2.38	95	*e*S	Sn	09 44 12.9	-0.7
LOBH	Bahia de las A	2.38	253	*i* P	Pn	09 43 45.2	+0.3
LOBH				*e*S	Sn	09 44 12.8	-0.9
LOBH				IAML		09 44 19.3	
	comp=Z,54nm,3.2s						
UUPR	Utuado, UPR, P	2.42	97	Pn	Pn	09 43 45.6	+0.1
UUPR	Utuado, UPR, P	2.42	97		Sn	09 44 14.2	-0.4
UUPR	Utuado, UPR, P	2.42	97	⇑*e*P	Pn	09 43 45.6	+0.1
UUPR	Utuado, UPR, P	2.42	97	*e*S	Sn	09 44 14.2	-0.4
OBIP	Obispado Ponce	2.56	102		Pn	09 43 46.8	-0.5
OBIP	Obispado Ponce	2.56	102	⇓*i*P	Pn	09 43 47.8	+0.5
OBIP	Obispado Ponce	2.56	102	*e*S	Sn	09 44 19.2	+1.3
ECPR	Experimental S	2.75	95	⇑*e*P	Pn	09 43 49.7	-0.1
ECPR	Experimental S	2.75	95	*e*S	Sn	09 44 19.6	-2.8
SJG	San Juan	2.98	98	Pn	Pn	09 43 53.0	+0.2
SJG				IAML		09 44 50.3	
	comp=Z,38nm,0.3s						
SJG				IAML		09 45 19.3	
	comp=Z,34nm,0.2s						
GCPR	Guaynabo City	3.01	95	Pn	Pn	09 43 53.5	+0.1
GCPR				IAML		09 44 38.5	
	comp=N,27nm,2.7s						
GCPR				IAML		09 45 43.9	
	comp=E,27nm,2.9s						
HUMP	Col San Antoni	3.25	97	Pn	Pn	09 43 55.7	-0.9
HUMP					Sn	09 44 32.1	-2.4
HUMP	Col San Antoni	3.25	97	IAML		09 44 44.6	
	comp=E,25nm,2.4s						
HUMP				IAML		09 44 59.3	
	comp=E,24nm,2.3s						
HUMP	Col San Antoni	3.25	97	⇑*e*P	Pn	09 43 55.9	-0.6
HUMP	Col San Antoni	3.25	97	*e*S	Sn	09 44 32.1	-2.4
GRTK	Grand Turk	3.42	329	*i* P	Pn	09 43 57.8	-0.9
GRTK				*e*S	Sn	09 44 35.9	-2.4
GRTK				IAML		09 44 39.1	
	comp=Z,73nm,1.3s						

IDC ***14*** *09:43:32.6±1.8, 14°.22S×167°.68E, h0^{km}, mb3.8/5, mbtmp3.8/6, ML3.9/1, Error ellipse: s-maj=52.8km s-min=28.7km az=127.0*

NOU ***14*** *09:43:34.1, 14°.48S×167°.82E, h0^{km}, MLv4.5/13, Vanuatu Islands*

ISC 14 09:43:34.3±1.4**, 14°.46S**±0°.10×**167°.8E**±0°.2**, h10**^{km}**, n15, σ1^{s}48**/15**, mb3.7**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.15	211	P	Pb	09 43 54.6	-1.7
DVP	Devils Point	3.27	174	P	Pn	09 44 27.3	+1.7
RTV	Rentapao	3.36	170	P	Pn	09 44 27.0	+0.1
YATNC	Mamie plateau,	7.61	187	P	Pn	09 45 26.1	+0.8
DZM	Mont Dzumac	7.68	190	Pn	Pn	09 45 28.1	+1.7
	1.8nm,0.3s,baz=90,slow=22,SNR=25						
	5.6nm,0.4s						
DZM	Mont Dzumac	7.68	190	P	Pn	09 45 28.2	+1.8
NGOA	Tingoa Renbel	8.09	290	P	Pn	09 45 32.5	+0.5
PINNC	Pines Island,	8.12	182	P	Pn	09 45 34.3	+2.0
SAVO	Savo Central	9.45	303	P	Pn	09 45 52.5	+1.9
TATA	Tatamba Isabel	9.91	307	P	Pn	09 45 57.4	+0.5
STKA	Stephens Creek	29.57	230	P	P	09 49 40.3	+0.8
	2.7nm,0.5s,baz=61,slow=7.7,SNR=10						
	2.7nm,0.5s						
WRA	Warramunga Arr	32.41	256	P	P	09 50 03.0	-1.7
	0.3nm,0.6s,baz=83,slow=9.0,SNR=5.8						
	0.3nm,0.6s						
ASAR	Alice Springs	33.27	249	P	P	09 50 11.3	-0.9
	0.5nm,0.5s,baz=79,slow=9.1,SNR=11						
	0.5nm,0.5s						
FITZ	Fitzroy Crossi	40.59	259	P	P	09 51 14.6	+0.1
	1.7nm,0.9s,baz=49,slow=9.3,SNR=1.5						
	1.7nm,0.9s						
ILAR	Eielson Array	86.11	18	P	P	09 56 14.1	-1.0
	0.3nm,0.7s,baz=238,slow=4.8,SNR=4.0						
	0.3nm,0.7s						

NNC ***14*** *09:52:04.0±0.8, 43°.61N×69°.70E, h0^{km}, mb3.8, mpv3.1, Error ellipse: s-maj=4.2km s-min=3.9km az=172.0, Suspected Mining explosion.*

SOME ***14*** *09:52:04.0, 43°.57N×69°.78E*

KRNET ***14*** *09:52:05.3±0.1, 43°.62N×69°.93E, mb3.1*

ISC 14 09:52:09.1±1.7**, 43°.60N**±0°.07×**70°.07E**±0°.07**, h0**^{km}**, n16, σ1^{s}03**/27**, 13C-9D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	0.59	147	⇓P	Pg	09 52 19.2	-1.2
	1.6nm,0.2s,baz=326,slow=17,SNR=220						
KK31				⇑S	Sb	09 52 30.1	-1.2
	18nm,0.3s,baz=312,slow=30,SNR=101						
BRLS	Borolday	0.60	197	P	Pg	09 52 19.9	-0.6
	4.7nm,0.4s						
BRLS				S	Sb	09 52 31.2	-0.2
	0.2nm,0.2s						
MNAS	Manas	2.10	121	⇓*e*P	Pn	09 52 45.4	-0.3
MNAS				⇓*e*S	Sb	09 53 14.7	-0.2
TRKS	Terek-Say	2.21	159	⇑*e*P	Pn	09 52 47.4	+0.1
TRKS				⇑*e*S	Sb	09 53 18.2	+0.1
ARK	Arkit	2.28	142	⇑*e*P	Pn	09 52 47.7	-0.4
ARK				⇑*e*S	Sn	09 53 18.5	+1.6
MRKS	Merke	2.46	109	Pg	Pb	09 52 53.6	-0.6
	5.5nm,0.4s						
MRKS				Lg	Lg	09 53 29.0	
	14nm,0.3s						
EKS2	Erkin-Say	2.87	108	⇑*e*P	Pn	09 52 56.2	0.0
EKS2				⇑*e*S	Sn	09 53 33.2	+1.7
ARSB	Arslanbob	3.13	136	⇓*e*P	Pn	09 52 59.6	-0.3
ARSB				⇓*e*S	Sn	09 53 39.1	+1.1
BTLS	Baital	3.19	62	Pg	Pb	09 53 06.6	-0.1
	24nm,0.5s						
BTLS				Lg	Lg	09 53 49.6	
	4.4nm,0.6s						
USP	Ospenovka	3.24	94	⇑*e*P	Pn	09 53 01.2	-0.1
USP				⇑*e*S	Sn	09 53 41.9	+1.3
SGDS	Sogindy	3.32	91	Pg	Pg	09 53 11.0	-1.7
	2.7nm,0.6s						
SGDS				Lg	Lg	09 53 58.1	
	8.7nm,0.6s						
AAK	Ala-Archa	3.38	105	⇑*e*P	Pn	09 53 03.2	-0.1
AAK				⇑*e*S	Sn	09 53 45.5	+1.4
AAK	Ala-Archa	3.38	105	⇓Pg	Pb	09 53 09.8	-0.2
	2.1nm,0.5s						
AAK				⇓Lg	Lg	09 53 60.0	
	2.5nm,0.5s						
UCH	Uchtor	3.54	111	⇓*e*P	Pn	09 53 05.7	0.0
UCH				⇓*e*S	Sn	09 53 49.7	+1.2
ARLS	Aral	3.58	118	⇑*e*P	Pn	09 53 06.2	+0.1
ARLS				⇑*e*S	Sn	09 53 50.5	+1.3
DGS	Degeres	4.17	93	Pg	Pb	09 53 25.6	+2.3
	4.0nm,0.3s						
DGS				Lg	Lg	09 54 23.9	
	5.0nm,0.8s						

IDC ***14*** *09:55:44.4±1.8, 2°.08S×140°.33E, h0^{km}, mb3.5/2, mbtmp3.6/3, ML3.7/1, Error ellipse: s-maj=33.1km s-min=19.0km az=54.0*

DJA ***14*** *09:55:47.6±1.3, 2°S±13°×14°1E±°, h10^{km}, M3.6/4, MLv3.6/4*

ISC 14 09:55:46.5±1.5**, 2°.5S**±0°.2×**141°.1E**±0°.1**, h10**^{km}**, n14, σ0^{s}55**/9**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	0.40	261	Pg	Pb	09 55 55.4	-0.4
	152nm,0.3s,baz=141,slow=8.8,SNR=139						
JAY	Jayapura	0.40	261	P	Pg	09 55 55.2	+0.7
JAY				S	Sb	09 56 01.2	-0.8
GENI	Genyem	0.94	262	P	Pb	09 56 05.1	+0.1
SMPI	Sarmi	2.43	281	P	Pn	09 56 26.5	+0.1
WAMI	Wamena	2.78	239	P	Pn	09 56 30.8	-0.3
WRA	Warramunga Arr	18.59	200	P	P	10 00 04.2	+0.1
	0.2nm,0.3s,baz=22,slow=12,SNR=13						
	1.2nm,0.6s						
ASAR	Alice Springs	22.21	198	P	P	10 00 43.9	+0.5
	0.9nm,0.7s,baz=25,slow=10.0,SNR=9.5						
	0.9nm,0.7s						
H11S3	WAKE ISLAND Hy	32.68	49	T	T	10 36 47.9	
	baz=232,slow=75,SNR=113						
H11S2	WAKE ISLAND Hy	32.69	49	T	T	10 36 48.5	
	baz=232,slow=75,SNR=59						
H11S1	WAKE ISLAND Hy	32.69	49	T	T	10 36 47.9	
	baz=232,slow=75,SNR=44						
H11N1	WAKE ISLAND Hy	33.57	48	T	T	10 37 57.9	
	baz=229,slow=74,SNR=6.9						
H11N2	WAKE ISLAND Hy	33.58	48	T	T	10 38 00.6	
	baz=229,slow=74,SNR=7.5						
H11N3	WAKE ISLAND Hy	33.58	48	T	T	10 37 58.5	
	baz=229,slow=74,SNR=4.3						
ILAR	Eielson Array	84.62	24	P	P	10 08 19.7	-0.4
	0.5nm,0.8s,baz=252,slow=5.0,SNR=5.6						
	0.5nm,0.8s						

JMA ***14*** *10:08:34.0±0.2, 25°N±2°×12°2E±°, h63^{km}, MV2.0/6, TAIWAN REGION*

TAP ***14*** *10:08:34.5, 24°.71N×122°.01E, h61^{km}, ML2.6, C*

ISC 14 10:08:34.2±1.3**, 24°.70N**±0°.03×**122°.11E**±0°.03**, h60**^{km}±7^{km}**, n55, σ0^{s}65**/96**, 1C-3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		0.22	311	*e*P	Pn	10 08 44.0	+0.2
TWC	Suao	0.26	249	*i* P	Pn	10 08 43.7	-0.3
TWC				*i* S	Sn	10 08 50.4	-0.7
ESAO	Su ao	0.27	243	*e*P	Pn	10 08 43.9	-0.2
ESAO				S	Sn	10 08 51.3	0.0
EOS2	EOS2	0.30	159	*i* P	Pn	10 08 44.7	+0.5
EOS2				*i* S	Sn	10 08 52.9	+1.5
TWB1	Santiao Chiao	0.33	340	⇑*i*P	Pn	10 08 44.4	-0.1
TWB1				*i* S	Sn	10 08 51.8	-0.3
NDS	Dongshan	0.36	259	*i* S	Sn	10 08 52.6	0.0
TIPB	Shuangxi	0.37	316	P	Pn	10 08 44.9	-0.1
TIPB				S	Sn	10 08 52.5	-0.3
EWUT	Wuta	0.40	230	P	Pn	10 08 45.0	-0.1
EWUT				*i* S	Sn	10 08 52.7	-0.3
TWE	Neicheng	0.40	273	P	Pn	10 08 45.3	+0.1
TWE				S	Sn	10 08 53.1	-0.1
ENA	Nanau	0.43	231	P	Pn	10 08 45.6	+0.1
ENA				S	Sn	10 08 53.9	+0.2
SXI1	Grass Mountain	0.45	331	P	Pn	10 08 45.9	+0.2
SXI1				*i* S	Sn	10 08 54.3	+0.2
EOS3	EOS3	0.45	155	*e*P	Pn	10 08 45.8	+0.3
EOS3				*e*S	Sn	10 08 55.0	+1.3
NWF	Wu-fen Shan	0.47	321	*e*S	Sn	10 08 54.2	-0.4
WFSB	Wu-fen Shan	0.47	321	P	Pn	10 08 46.1	+0.2
WFSB				S	Sn	10 08 54.0	-0.4
FUSB	Fushanzhiwuyua	0.48	277	⇓*i*P	Pn	10 08 46.0	0.0
FUSB				*i* S	Sn	10 08 54.1	-0.5
ENTT	Nioudou	0.50	263	*i* P	Pn	10 08 46.5	+0.4
ENTT				S	Sn	10 08 55.0	+0.1
TWA	Mucha	0.55	300	S	Sn	10 08 55.4	-0.5
LATG	Datong	0.56	253	P	Pn	10 08 47.2	+0.3
LATG				S	Sn	10 08 56.1	-0.1
NWLT	Wulai	0.56	278	P	Pn	10 08 46.8	0.0
NWLT				*e*S	Sn	10 08 55.6	-0.5
NHDH	Xindian Distri	0.59	296	*e*P	Pn	10 08 47.2	0.0

NHDH				eS	Sn	10 08 56.4	-0.3
EOS4	EOS4	0.61	162	eS	Sn	10 08 56.9	+0.5
YM01	YM01	0.66	312	eP	Pn	10 08 47.9	-0.1
YM01				eS	Sn	10 08 57.9	-0.3
YHNB	Yeheng	0.67	267	⇓iP	Pn	10 08 48.5	+0.4
YHNB				S	Sn	10 08 58.3	-0.1
YM08	YM08	0.68	316	S	Sn	10 08 57.6	-0.9
NSK	Sanguang	0.69	268	⇓P	Pn	10 08 48.6	+0.3
NSK				S	Sn	10 08 58.8	+0.1
ZUZH	Zhuzihu	0.69	312	P	Pn	10 08 48.1	-0.2
ZUZH				S	Sn	10 08 57.8	-1.0
ETL	Fush Village	0.70	220	eS	Sn	10 08 58.6	-0.3
NACB	Ninganchiao	0.70	222	eP	Pn	10 08 48.0	-0.5
NACB				eS	Sn	10 08 58.4	-0.6
NNSB	Datong	0.72	248	eP	Pn	10 08 48.9	+0.1
NNSB				S	Sn	10 08 59.2	-0.3
NNS	Nan Shan	0.72	249	eP	Pn	10 08 48.9	+0.1
NNS				eS	Sn	10 08 59.2	-0.3
ANP	Anpu	0.72	312	eS	Sn	10 08 58.3	-1.2
TWS1	Kuangyinshan	0.74	302	P	Pn	10 08 49.0	+0.1
TWS1				eS	Sn	10 09 00.1	+0.2
ETLH	Xiulin Townshi	0.76	229	eP	Pn	10 08 48.7	-0.5
ETLH				S	Sn	10 08 59.6	-0.6
NTST	Danshui	0.76	308	eP	Pn	10 08 49.2	+0.1
NTST				eS	Sn	10 09 00.3	+0.2
JYNG	Yonagunijimaku	0.80	108	P	Pn	10 08 49.5	-0.2
JYNG				eS	Sn	10 09 00.7	-0.3
KSHI	Guanxi Townshi	0.85	275	eP	Pn	10 08 50.7	+0.4
KSHI				eS	Sn	10 09 03.6	+1.3
NFF	Wufeng Townshi	0.91	266	eP	Pn	10 08 51.4	+0.3
NFF				eS	Sn	10 09 03.9	+0.3
ETM	Tongmen	0.92	218	eS	Sn	10 09 02.6	-1.3
WHF	Hehuan Shan	0.95	234	eS	Sn	10 09 03.9	-1.2
TWT	Tachien	0.96	243	eS	Sn	10 09 05.3	+0.3
TDCB	Techi	0.98	243	eP	Pn	10 08 52.5	+0.4
TDCB				eS	Sn	10 09 05.1	-0.1
LIOB	Emei	1.00	267	eP	Pn	10 08 52.5	+0.3
LIOB				eS	Sn	10 09 06.3	+0.8
NSTT	Nanjuang	1.01	266	eP	Pn	10 08 52.6	+0.3
NSTT				eS	Sn	10 09 06.2	+0.3
ESL	Shilin	1.08	215	eS	Sn	10 09 05.5	-2.0
OWD	Renai	1.13	229	eP	Pn	10 08 53.8	-0.3
OWD				eS	Sn	10 09 07.7	-1.2
WHP	Taichung City	1.14	249	eP	Pn	10 08 55.2	+1.0
WHP				eS	Sn	10 09 09.9	+0.8
WUSB	Renai	1.15	232	eP	Pn	10 08 54.3	0.0
WUSB				eS	Sn	10 09 08.7	-0.6
WARBT	Fenglin Townsh	1.18	214	eP	Pn	10 08 54.4	-0.3
WARBT				eS	Sn	10 09 07.3	-2.6
VWDT	VWDT	1.29	223	eS	Sn	10 09 11.5	-1.0
IRIF	Iriomote-Funau	1.52	104	P	Pn	10 08 58.9	-0.2
IRIF				eS	Sn	10 09 17.8	-0.1
WHYT	Xinyi Township	1.52	229	eP	Pn	10 09 00.4	+1.1
WHYT				eS	Sn	10 09 19.2	+1.1
CHN5	Tsauling	1.71	230	eP	Pn	10 09 02.5	+0.7
CHN5				eS	Sn	10 09 23.6	+0.9
JKRS	Kuro-shima	1.79	105	eP	Pn	10 09 03.1	+0.3
JKRS				eS	Sn	10 09 24.8	+0.3
JIJ	Ishigaki jima	1.88	100	eP	Pn	10 09 04.0	0.0
JIJ				eS	Sn	10 09 25.9	-0.8
JISG	Ishigakijimahi	2.00	93	eP	Pn	10 09 05.9	+0.2

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*MEX **14** 10:14:05.9±0.8, 27°.69N×111°.70W, h8^{km}±9^{km}, MD4.1*

*IDC **14** 10:14:07.4±4.9, 27°.51N×111°.47W, h0^{km}, mbtmp3.3/3, ML3.8/3, Error ellipse: s-maj=65.6km s-min=17.3km az=16.0*

ISC 14 10:14:02.8±1.3**, 27°.71N**±0°.03×**111°.70W**±0°.03**, h4**^{km}±11^{km}**, n23, σ1^{s}.94**/29**, 4C-3D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRIG	Santa Rosalia	0.62	231	⇑eP	Pn	10 14 18.5	+0.1
SRIG				eS	Sn	10 14 27.6	-1.1
SRIG				IAML		10 14 28.0	
	comp=E,10µm,0.6s						
SRIG				⇑e		10 14 28.0	
SRIG				⇑e		10 14 28.3	
SRIG				IAML		10 14 28.3	
	comp=N,13µm,0.7s						
SRIG	Santa Rosalia	0.62	231	eP	Pn	10 14 18.5	+0.1
SRIG				eS	Sn	10 14 27.2	-1.5
GUYB	Guaymas	0.76	76	eP	Pn	10 14 20.3	+0.1
GUYB				eS	Sn	10 14 30.9	-1.3
GUYB				IAML		10 14 31.9	
	comp=E,3µm,0.2s						
GUYB				e		10 14 31.9	
GUYB	Guaymas	0.76	76	eP	Pn	10 14 20.3	+0.1
GUYB				eS	Sn	10 14 30.9	-1.3
BKIRB	Bahia Kino	1.17	347	eP	Pg	10 14 25.8	+0.6
BKIRB				eS	Sb	10 14 40.1	-1.0
SNIRB	San Nicol¡s	1.18	173	⇓eP	Pg	10 14 27.7	+2.3
CDOB	Cd. Obregon	1.43	102	⇑eP	Pg	10 14 30.6	+0.4
CDOB				eS	Sg	10 14 49.4	+0.8
CDOB				⇓e		10 14 51.4	
CDOB				IAML		10 14 51.4	
	comp=N,1µm,0.6s						
HSIG		1.46	27	eP	Pg	10 14 30.4	-0.4
HSIG		1.46	27	eP	Pg	10 14 30.5	-0.4
HSIG				eS	Sg	10 14 50.8	+1.0
BAHB	Baha de los	2.05	307	eP	Pn	10 14 37.6	-0.4
BAHB				IAML		10 15 22.7	
	comp=E,148nm,1.4s						
BAHB				⇓e		10 15 22.7	
BAHB	Baha de los	2.05	307	eP	Pn	10 14 37.7	-0.4
BAHB				eS	Sg	10 15 08.5	-0.1
NOVRB	El Novillo Son	2.19	56	eP	Pb	10 14 41.4	-1.6
NE80	Navojoa	2.34	109	eP	Pb	10 14 43.3	-2.2
LAPR	La Primavera	2.83	349	eP	Pn	10 14 49.6	+0.8
EVAR0	San Evaristo	2.93	162	eP	Pb	10 14 52.2	-3.4
NZIG	Nacozari, Sono	3.25	35	eP	Pg	10 15 04.3	-0.8
NZIG				eS	Sb	10 15 38.3	-2.9
TUC	Tucson	4.65	10	eP	Pn	10 15 16.7	+2.8
TUC				eS	Sb	10 16 19.5	-1.9
TXAR	Lajitas Array	7.25	75	Pn	Pn	10 15 53.6	+4.0
	comp=E,0.9nm,0.3s,baz=254,slow=12,SNR=66						
TXAR				Sn	Sn	10 17 14.0	+1.4
	comp=E,0.3nm,0.3s,baz=291,slow=16,SNR=1.3						
TXAR				Lg	Lg	10 17 51.0	
	comp=E,1.2nm,0.3s,baz=246,slow=31,SNR=6.3						
	comp=E,1.0nm,0.4s						
NVAR	Mina Array Bea	12.03	334	Pn	Pn	10 17 06.2	+11
	comp=E,0.1nm,0.3s,baz=150,slow=13,SNR=5.2						
	comp=E,0.7nm,0.7s						
PDAR	Pinedale Array	15.12	6	Pn	P	10 17 48.8	+6.0
	comp=E,0.1nm,0.3s,baz=179,slow=13,SNR=4.3						
	comp=E,0.5nm,0.8s						
H03N2	Juan Fernandez	68.31	151	T	T	11 39 36.7	
	baz=331,slow=78,SNR=6.5						
H03N1	Juan Fernandez	68.32	151	T	T	11 39 37.2	
	baz=331,slow=78,SNR=8.5						
H03N3	Juan Fernandez	68.33	151	T	T	11 39 36.7	
	baz=331,slow=78,SNR=5.9						

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*SJA **14** 10:19:47.5±0.7, 26°.64S×71°.44W, h26^{km}±3^{km}, ML3.6, MW3.8*

*GUC **14** 10:19:50.0±0.8, 26°.70S×71°.36W, h40^{km}±3^{km}, ML3.5*

ISC 14 10:19:47.3±2.2**, 26°.63S**±0°.02×**71°.35W**±0°.06**, h2**^{km}±16^{km}**, n27, σ1^{s}.76**/48**, 1C-3D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC01	Pan de Azucar	0.83	55	⇓iP	Pn	10 20 05.4	-0.7
AC01				eS	Sb	10 20 15.8	-0.4
AC01				IAML		10 20 18.2	
	comp=Z,3µm,0.1s						
AC01	Pan de Azucar	0.83	55	eP	Pn	10 20 05.5	-0.7
AC01				eS	Sn	10 20 17.8	-1.3
AC01				IAML		10 20 17.9	
	comp=Z,1µm,0.3s						
AC06	Mina Casimiro	1.15	129	⇓iP	Pb	10 20 09.7	-0.3
AC06				eS	Sb	10 20 24.0	-1.4
AC06				IAML		10 20 24.8	
	comp=N,3µm,0.3s						
GO03	Copiapo	1.38	134	⇓iP	Pb	10 20 13.7	-0.3
GO03				eS	Sb	10 20 30.7	-1.5
GO03				IAML		10 20 33.6	
	comp=N,1µm,0.4s						
GO03	Copiapo	1.38	134	eP	Pb	10 20 13.8	-0.2
GO03				eS	Sg	10 20 32.3	+0.5
GO03				IAML		10 20 33.8	
	comp=Z,781nm,0.4s						
AC04	Llanos de Chal	1.59	171	eP	Pn	10 20 16.1	-0.4
AC04				eS	Sn	10 20 34.6	-3.0
AC04	Llanos de Chal	1.59	171	eP	Pn	10 20 16.0	-0.6
AC04				eS	Sn	10 20 22.8	-15
AC04				IAML		10 20 42.7	
	comp=Z,322nm,0.5s						
AC02	Maricunga	2.00	96	⇑iP	Pb	10 20 24.4	-0.4
AC02				eS	Sb	10 20 49.0	-1.4
AC02				IAML		10 20 51.2	
	comp=N,1µm,0.2s						
AC02	Maricunga	2.00	96	eP	Pb	10 20 24.4	-0.4
AC02				eS	Sb	10 20 50.3	0.0
AC02				IAML		10 20 51.3	
	comp=Z,1µm,0.2s						
GO02	Mina Guanaco	2.16	48	eP	Pb	10 20 26.3	-1.1
GO02				eS	Sb	10 20 54.4	-0.4
GO02				IAML		10 21 01.7	
	comp=N,430nm,0.5s						
GO02	Mina Guanaco	2.16	48	eP	Pn	10 20 25.6	+0.9
GO02				IAML		10 21 01.9	
	comp=Z,441nm,0.4s						
PB14	IPOC Station P	2.17	23	eP	Pn	10 20 25.1	+0.2
PB14				IAML		10 21 08.2	
	comp=N,174nm,0.7s						
PB14	IPOC Station P	2.17	23	eP	Pn	10 20 24.9	0.0
PB14				eS	Sb	10 20 53.3	-1.9
PB14				IAML		10 21 07.6	
	comp=Z,362nm,0.6s						
AC05	El Transito	2.40	157	eP	Pn	10 20 28.9	+1.1
AC05				eS	Sn	10 20 56.3	-1.6
AC05				IAML		10 21 08.4	
	comp=N,397nm,0.6s						
AC05	El Transito	2.40	157	eP	Pn	10 20 29.0	+1.2
AC05				eS	Sb	10 20 59.9	-1.6
AC05				IAML		10 21 06.6	
	comp=Z,197nm,0.3s						
LCO	Las Campanas	2.44	166	eP	Pn	10 20 28.9	+0.4
LCO				eS	Sn	10 20 57.5	-1.7
LCO	Las Campanas	2.44	166	eP	Pn	10 20 28.9	+0.4
LCO				eS	Sn	10 20 59.0	-0.1
LCO				IAML		10 21 11.8	
	comp=Z,598nm,0.5s						
PB10	IPOC Station P	3.19	13	eP	Pn	10 20 38.1	-0.5
CO01	Juntas del Tor	3.51	162	eP	Pn	10 20 46.2	+2.9
CO01				eS	Sb	10 21 29.8	-3.9
CO01				IAML		10 21 38.2	
	comp=Z,113nm,0.6s						
TINO	Tinogasta	3.66	114	eP	Pn	10 20 44.4	-0.7
TINO				eS	Sb	10 21 40.3	+2.6
PB05	IPOC Station P	3.91	16	eP	Pn	10 20 48.4	-0.2
PB05				eS	Sg	10 21 52.4	-0.5
PB05				IAML		10 22 04.7	
	comp=Z,46nm,1.3s						
CO03	El Pedregal	4.23	172	eP	Pn	10 20 53.9	+0.9
CO03				eS	Sb	10 21 55.2	+0.9
CO03				IAML		10 22 08.8	
	comp=Z,73nm,1.3s						
CO02	Combarbal	4.57	176	eP	Pn	10 20 58.3	+0.7
CO02				eS	Sn	10 21 56.0	+4.7
CO02				IAML		10 22 14.8	
	comp=Z,146nm,0.7s						
ACLC	CERRO LA CRUZ	4.78	127	eP	Pn	10 21 04.2	+3.5
ACLC				eS	Sb	10 22 11.6	+1.4
ACLC				IAML		10 22 32.9	
	comp=Z,19nm,1.1s						
PB03	IPOC Station P	4.79	18	eP	Pn	10 20 46.1	-15
PB03				eS	Sb	10 22 14.7	+4.3
PB03				IAML		10 22 41.3	
	comp=Z,57nm,0.5s						
PB07	IPOC Station P	5.06	16	eP	Pn	10 21 04.1	-0.4
PB07				IAML		10 22 36.1	
	comp=Z,36nm,0.3s						
PB09	IPOC Station P	5.19	22	eP	Pn	10 21 06.6	+0.4
PB09				eS	Sb	10 22 25.3	+3.5
PB09				IAML		10 22 47.5	
	comp=Z,52nm,0.5s						

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*IDC **14** 10:24:58.0±13.0, 7°.81S×116°.20E, h0^{km}, mb3.5/3, mbtmp3.6/3, Error ellipse: s-maj=256.4km s-min=161.9km az=13.0*

*DJA **14** 10:25:09.5±0.3, 8°S±7°×11°7E±°, h10^{km}, M3.8/13, mb4.0/2, MLv3.6/13*

ISC 14 10:25:11.6±1.1**, 8°.5S**±0°.1×**116°.89E**±0°.04**, h35**^{km}**, n17, σ1^{s}.17**/19**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLNI	Mataram	0.79	273	P	Pn	10 25 24.3	-1.9
KLNI				S	Sn	10 25 36.1	-0.7
PLAI	Plampang	0.95	113	P	Pn	10 25 26.8	-1.7
PLAI				S	Sn	10 25 39.3	-1.5
KHKI	Kahang-Kahang	1.27	274	P	Pn	10 25 33.7	+0.8
DBNI	Kabupaten Domp	1.41	92	P	Pn	10 25 35.0	+0.2
IGBI	Denpasar	1.76	258	P	Pn	10 25 40.9	+1.3
RTBI	Rangdo, Negare	1.93	270	P	Pn	10 25 42.3	+0.4
JAGI	Jajag, Banyuwa	2.71	270	P	Pn	10 25 52.4	-0.3
WBSI	Waikabubak, Su	2.74	116	P	Pn	10 25 54.3	+1.2
LBFI	Labuhan Bajo,	2.97	91	P	Pn	10 25 56.6	+0.4
GMJI	Gumukmas	3.41	273	P	Pn	10 26 01.9	-0.5
BKSI	Bulukumba	4.47	46	P	Pn	10 26 16.8	-0.1
EDFI	Ende, Flores	4.76	94	P	Pn	10 26 22.5	+1.6
SNJI	Sawahan-Nganju	5.12	277	P	Pn	10 26 27.2	+1.2
	0.1nm24nm,1.4s						
PCJI	Pacitan	5.66	272	P	Pn	10 26 33.8	+0.6
WRA	Warramunga Arr	20.38	126	P	P	10 29 46.7	+1.1
	0.8nm,0.4s,baz=301,slow=12,SNR=19						
	0.8nm,0.4s						
ASAR	Alice Springs	22.23	135	P	P	10 30 06.9	+1.5
	0.6nm,0.6s,baz=311,slow=9.5,SNR=15						
	0.6nm,0.6s						
STKA	Stephens Creek	32.71	139	P	P	10 31 40.0	-0.9
	0.7nm,0.5s,baz=333,slow=16,SNR=3.0						
	0.7nm,0.5s						

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*IDC **14** 10:35:16.1±9.4, 20°.30S×178°.41W, h470^{km}±93^{km}, mb2.7/4, mbtmp3.5/4, Error ellipse: s-maj=110.6km s-min=36.0km az=148.0*

ISC 14 10:35:28.0±1.9**, 20°.1S**±0°.7×**178°.8W**±0°.4**, h600**^{km}**, n8, σ1^{s}.06**/8**, mb3.1**/4**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.87	256	P	P	10 42 42.2	-0.7
	0.3nm,0.6s,baz=96,slow=8.1,SNR=8.0						
ASAR				PcP	PcP	10 44 17.1	+1.5
	0.4nm,0.6s,baz=98,slow=3.9,SNR=11						
	0.3nm,0.6s						
WRA	Warramunga Arr	43.90	262	P	P	10 42 42.8	-0.4
	0.8nm,1.0s,baz=97,slow=7.5,SNR=5.0						
	0.8nm,1.0s						
TXAR	Lajitas Array	87.49	58	P	P	10 47 12.7	-0.6
	0.2nm,0.7s,baz=246,slow=5.6,SNR=2.4						
	0.2nm,0.7s						
ILAR	Eielson Array	88.11	13	P	P	10 47 15.2	0.0
	0.4nm,1.0s,baz=207,slow=5.1,SNR=3.6						
	0.4nm,1.0s						
HFS	Hagfors	139.04	350	PKhKP	PKPpre	10 53 42.4	
	7.4nm,1.2s,baz=94,slow=4.3,SNR=4.6						
AKASG	Malin Array Be	142.31	331	PKP	PKPdf	10 53 52.3	-0.7
	2.4nm,0.5s,baz=45,slow=4.0,SNR=16						
BRTR	Keskin Array B	146.02	312	PKPbc	PKiKP	10 54 04.4	0.0
	0.6nm,0.6s,baz=148,slow=5.6,SNR=2.9						
GERES	GERESS Array B	149.62	344	PKPbc	PKiKP	10 54 12.9	+1.4
	0.6nm,0.7s,baz=1.7,slow=5.4,SNR=2.1						

IDC 14 10:47:07.2±16.0**, 6°.64S**×**128°.88E, h110**^{km}±168^{km}**, mb2.9**/1**, mbtmp3.1**/3**, ML3.1**/2**, Error ellipse: s-maj=134.9km s-min=59.3km az=41.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.82	195	P	Pn	10 49 52.2	-0.2
	baz=13,slow=11						
WRA	Warramunga Arr	14.25	159	P	Pn	10 50 25.7	+1.6
	0.1nm,0.3s,baz=339,slow=13,SNR=4.6						
WRA				S	Sn	10 52 52.6	-8.6
	0.3nm,0.3s,baz=333,slow=22,SNR=5.7						
	0.5nm,1.1s						
ASAR	Alice Springs	17.61	165	P	P	10 51 04.3	-0.9
	0.1nm,0.3s,baz=337,slow=9.7,SNR=8.2						
	0.2nm,0.5s						
MKAR	Makanchi Array	67.32	327	P	P	10 57 50.5	+0.1
	0.1nm,0.5s,baz=119,slow=7.7,SNR=1.8						
	0.1nm,0.5s						

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*IDC **14** 10:52:33.7±2.5, 9°.03S×116°.41E, h0^{km}, mb3.7/3, mbtmp3.8/3, Error ellipse: s-maj=221.9km s-min=29.2km az=43.0*

*DJA **14** 10:52:36.4±0.2, 8°S±6°×11°7E±°, h10^{km}, M4.0/16, mb4.1/1, MLv4.0/16*

ISC 14 10:52:34.9±0.8**, 8°.36S**±0°.07×**116°.92E**±0°.03**, h10**^{km}**, n23, σ1^{s}.91**/28**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLNI	Mataram	0.82	266	P	Pg	10 52 50.2	-0.5
KLNI				S	Sb	10 53 03.4	+1.0
PLAI	Plampang	0.96	119	P	Pg	10 52 53.7	+0.2
PLAI				S	Sg	10 53 06.2	+0.2
KHKI	Kahang-Kahang	1.30	270	P	Pn	10 53 00.4	+1.3
DBNI	Kabupaten Domp	1.38	96	P	Pn	10 53 01.4	+1.1
DNP	Denpasar	1.72	259	P	Pn	10 53 06.4	+1.5
IGBI	Denpasar	1.81	255	P	Pn	10 53 07.4	+1.2
RTBI	Rangdo, Negare	1.96	267	P	Pn	10 53 09.7	+1.4
JAGI	Jajag, Banyuwa	2.74	268	P	Pn	10 53 19.6	+0.6
WBSI	Waikabubak, Su	2.75	118	P	Pn	10 53 20.8	+1.7
LBFI	Labuhan Bajo,	2.94	92	P	Pn	10 53 23.7	+2.0
KMMI	Kalianget	3.21	294	P	Pn	10 53 29.0	+3.6
BLJI	Banyuglugur	3.35	280	P	Pn	10 53 28.9	+1.5
GMJI	Gumukmas	3.44	271	P	Pn	10 53 29.6	+1.0
WSI	Waingapu	3.58	112	P	Pn	10 53 32.4	+1.9
BASI	Baing, Sumba	4.05	117	P	Pn	10 53 40.3	+3.3
KAPI	Kappang	4.36	40	Sn	Sg	10 54 53.4	-1.4
	4.1nm,0.3s,baz=59,slow=23,SNR=3.7						
BKSI	Bulukumba	4.38	47	P	Pn	10 53 42.4	+0.8
EDFI	Ende, Flores	4.73	95	P	Pn	10 53 49.2	+2.7
SNJI	Sawahan-Nganju	5.14	276	P	Pn	10 53 54.0	+1.8
PCJI	Pacitan	5.69	271	P	Pn	10 53 58.9	-0.6
WRA	Warramunga Arr	20.41	126	P	P	10 57 12.9	+0.5
	2.1nm,0.7s,baz=302,slow=12,SNR=7.6						
WRA				S	S	11 00 55.9	-5.2
	0.7nm,0.8s,baz=287,slow=23,SNR=4.8						
	2.1nm,0.7s						
ASAR	Alice Springs	22.27	135	P	P	10 57 32.4	-0.1
	1.5nm,0.6s,baz=307,slow=9.0,SNR=13						
ASAR				PcP	PcP	11 01 28.4	-0.2
	0.3nm,0.6s,baz=316,slow=1.0,SNR=5.0						
ASAR				S	S	11 01 38.1	+0.4
	0.8nm,0.8s,baz=314,slow=24,SNR=7.3						
	1.5nm,0.6s						
STKA	Stephens Creek	32.76	139	P	P	10 59 06.9	-1.3
	1.4nm,0.7s,baz=313,slow=15,SNR=3.8						
	1.4nm,0.7s						

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*WEL **14** 10:57:56.5±0.7, 33°S±5°×17°7W±1°1, h33^{km}, mB5.1/12, ML4.8/20, MLv5.1/19, Mw(mB)4.4/12, Error ellipse: s-maj=15.1km s-min=3.5km az=111.4, confirmed*

*IDC **14** 10:57:57.6±0.8, 32°.72S×177°.96W, h0^{km}, mb4.6/5, mbtmp4.6/7, ML4.1/2, MS3.8/16, Error ellipse: s-maj=29.6km s-min=21.9km az=172.0*

*NEIC **14** 10:58:00.2±1.8, 32°.6S±0°.1×178°.3W±0°.2, h10^{km}±2^{km}, mb4.6/23, Error ellipse: s-maj=23.9km s-min=20.3km az=97.0*

ISC 14 10:58:00.2±0.7**, 32°.54S**±0°.06×**178°.1W**±0°.1**, h20**^{km}**, n110, σ1^{s}.44**/114**, mb4.6**/16**, MS3.8**/15**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.28	3	P	Pn	10 58 48.6	-1.8
GLKZ				S	Sn	10 59 26.5	-2.3
MXZ	Matakaoa Point	5.80	209	Pn	Pn	10 59 23.2	-1.8
WMGZ	Waiomatatini S	5.98	207	P	Pn	10 59 27.6	+0.1
WMGZ				S	Sn	11 00 37.7	+2.3
PKGZ	Pakihiroa	6.15	209	P	Pn	10 59 29.2	-0.8
PKGZ				S	Sn	11 00 39.9	+0.2
HAZ	Te Kaha	6.19	212	P	Pn	10 59 29.9	-0.4
HAZ				S	Sn	11 00 41.6	+1.1
PUZ	Puketiti	6.26	207	P	Pn	10 59 30.0	-1.4
PUZ				S	Sn	11 00 42.5	+0.2
RUGZ	Raukumara Rang	6.41	211	P	Pn	10 59 34.1	+0.6
RUGZ				S	Sn	11 00 46.7	+0.5
TWGZ	Tauwhareparae	6.46	208	P	Pn	10 59 33.9	-0.3
TWGZ				S	Sn	11 00 47.7	+0.4
KUZ	Kuaotunu	6.58	229	P	Pn	10 59 43.4	+7.6
CNGZ	Carnagh Statio	6.64	206	P	Pn	10 59 36.2	-0.4
TKGZ	Te Karaka	6.74	208	P	Pn	10 59 37.9	0.0
TKGZ				S	Sn	11 00 53.8	-0.2
MWZ	Matawai	6.78	210	P	Pn	10 59 37.3	-1.3
URZ	Urewera	6.90	213	Pn	Pn	10 59 39.4	-0.8
	7.4nm,0.3s,baz=270,slow=2.8,SNR=31						
URZ				Sn	Sn	11 00 57.5	-0.6
	13nm,0.3s,baz=95,slow=23,SNR=12						
	18nm,0.3s						
URZ	Urewera	6.90	213	P	Pn	10 59 40.1	-0.1
URZ				S	Sn	11 00 58.4	+0.3
TGRZ	Tauranga	6.92	220	P	Pn	10 59 41.3	+0.8
RAGZ	Rawiri	6.96	210	P	Pn	10 59 40.2	-0.9
RAGZ				S	Sn	11 00 58.9	-0.9
RIGZ	Rimuhau	7.00	207	P	Pn	10 59 40.5	-1.1
RIGZ				S	Sn	11 01 00.4	-0.3
WCZ	Waipu Caves	7.09	239	P	Pn	10 59 48.7	+5.9
PRGZ	Paritu Road	7.14	206	P	Pn	10 59 42.7	-0.9
SNGZ	Shannon Statio	7.23	209	P	Pn	10 59 45.4	+0.6
SNGZ				S	Sn	11 01 06.8	+0.4
MUGZ	Murupara	7.24	214	P	Pn	10 59 44.0	-0.9
RTZ	Ruatahuna	7.25	212		Pn	10 59 44.6	-0.5
RTZ	Ruatahuna	7.25	212	P	Pn	10 59 45.5	+0.4
RTZ				S	Sn	11 01 06.3	-0.5
KNZ	Kokohu	7.31	207	P	Pn	10 59 44.8	-1.0
KNZ				S	Sn	11 01 06.6	-1.6
MHGZ	Mahia Peninsul	7.34	205	P	Pn	10 59 44.1	-2.1
TOZ	Tahuroa Road	7.35	223	P	Pn	10 59 49.1	+2.8
OUZ	Omahuta	7.38	247	P	Pn	10 59 52.0	+5.2
RAHZ	Arahi	7.45	210	P	Pn	10 59 48.6	+0.7
RAHZ				S	Sn	11 01 10.4	-1.4
MTHZ	Maungataniwha	7.51	212	P	Pn	10 59 50.0	+1.4
WHHZ	Waihua	7.53	209	P	Pn	10 59 50.2	+1.3
WHHZ				S	Sn	11 01 13.0	-0.6
MRHZ	Matea Rd	7.69	214	P	Pn	10 59 52.2	+1.2
NMHZ	Naumai	7.72	211	P	Pn	10 59 52.8	+1.2
ARHZ	Aropaoanui	7.78	209	P	Pn	10 59 51.4	-1.0
ARHZ				S	Sn	11 01 18.6	-1.3
BKZ	Black Stump Fm	7.92	212		Pn	10 59 53.9	-0.3
BKZ	Black Stump Fm	7.92	212	P	Pn	10 59 55.0	+0.8
BKZ				S	Sn	11 01 21.0	-2.3
MCHZ	McNeill Hill	8.06	210	P	Pn	10 59 55.5	-0.7
MCHZ				S	Sn	11 01 25.2	-1.5
KWHZ	Kaweka Forest	8.16	211	P	Pn	10 59 57.5	0.0
KWHZ				S	Sn	11 01 27.3	-2.0
TMVZ	Te Maari	8.25	216	P	Pn	10 59 58.5	-0.3
TMVZ				S	Sn	11 01 28.6	-3.0
ETVZ	East Tongariro	8.26	216	P	Pn	10 59 59.4	+0.4
KAHZ	Kahuranaki	8.29	208	P	Pn	10 59 55.0	-4.3
KAHZ				S	Sn	11 01 29.4	-2.9
NNVZ	North Ngauruho	8.31	216	P	Pn	11 00 01.5	+1.8
NGZ	Ngauruhoe	8.35	216	P	Pn	11 00 00.6	+0.4
KRHZ	Kereru	8.37	211	P	Pn	10 59 56.5	-3.9
MOVZ	Moawhango	8.45	214	P	Pn	11 00 01.6	0.0
WNVZ	Wahianoa	8.47	215	P	Pn	11 00 01.9	+0.1
PNHZ	Pukenui	8.66	210	P	Pn	11 00 02.7	-1.8
BFZ	Birch Farm	9.29	208	P	Pn	11 00 10.3	-2.7
TMWZ	Te Maipa	9.80	208	P	Pn	11 00 17.5	-2.4
OGWZ	Otaki Gorge	9.85	211	P	Pn	11 00 17.9	-2.8
NIUE	Niue	15.30	31	P	Pn	11 01 15.9	-19
PINNC	Pines Island,	16.15	304	P	P	11 01 51.9	+2.7
PINNC				IAmb	IAmb	11 01 55.3	
	comp=Z,58nm,1.0s						
ONTNC	Ouen Toro	17.05	303		Pn	11 01 57.0	-0.5
ONTNC				IAmb	IAmb	11 02 06.8	
	comp=Z,43nm,1.0s						
DZM	Mont Dzumac	17.21	303	P	P	11 02 03.5	+2.4
	comp=Z,0.4nm,0.3s,baz=113,slow=17,SNR=9.0						
DZM				LR	LR	11 07 43.1	
	comp=Z,731nm,18.5s,baz=174,slow=34						
	comp=Z,17nm,0.8s						
DZM	Mont Dzumac	17.21	303	ePn	P	11 02 01.9	+0.8
	comp=Z,49nm,1.0s						
DZM				eLR	LR	11 05 58.8	
	comp=Z,499nm,22.5s						

DZM	Mont Dzumac	17.21	303	P	Pn	11 01 58.9	-0.6
RAR	Rarotonga	19.85	60	LR	LR	11 10 56.4	
	comp=Z,152nm,18.4s,baz=258,slow=39						
ARMA	Armidale	25.84	267	P	P	11 03 30.2	-0.3
ARMA				IAmb	IAmb	11 03 53.5	
	comp=Z,12nm,1.1s						
TBI	Tubuai	26.86	77	*e*LR	LR	11 10 15.2	
	comp=Z,579nm,29.2s						
EIDS	Eidsvold	27.81	277		P	11 03 48.4	+0.2
EIDS				IAmb	IAmb	11 03 52.7	
	comp=Z,9.2nm,0.8s						
PPT2	Papeete2	29.72	67	*e*LR	LR	11 11 34.0	
	comp=Z,111nm,27.5s						
PPT	Papeete	29.73	67	LR	LR	11 16 16.8	
	comp=Z,90nm,18.3s,baz=237,slow=37						
STKA	Stephens Creek	33.95	260	P	P	11 04 44.5	+2.2
	comp=Z,3.0nm,0.8s,baz=101,slow=7.0,SNR=6.0						
STKA				LR	LR	11 18 06.3	
	comp=Z,268nm,18.0s,baz=34,slow=36						
	comp=Z,3.0nm,0.8s						
CTA	Charters Tower	34.09	282	P	P	11 04 46.1	+2.5
	comp=Z,7.1nm,0.6s,baz=118,slow=11,SNR=17						
CTA				LR	LR	11 17 08.0	
	comp=Z,115nm,18.7s,baz=64,slow=34						
	comp=Z,7.1nm,0.6s						
CTAO	Charters Tower	34.09	282		P	11 04 43.0	-0.7
CTAO				IAmb	IAmb	11 04 50.9	
	comp=Z,8.9nm,0.7s						
INKA	Innaminka	35.73	267		P	11 04 56.7	-0.9
INKA				IAmb	IAmb	11 05 01.6	
	comp=Z,5.9nm,0.7s						
BBOO	Buckleboo	38.33	257	P	P	11 05 17.5	-2.3
PMG	Port Moresby	39.47	298	LR	LR	11 21 26.6	
	comp=Z,113nm,18.1s,baz=138,slow=36						
PMG	Port Moresby	39.47	298	P	P	11 05 29.4	0.0
RABL	Rabaul	39.60	309	P	P	11 05 30.4	-0.1
COEN	Coen	39.80	289		P	11 05 32.1	-0.1
COEN				IAmb	IAmb	11 05 36.5	
	comp=Z,13nm,1.1s						
TAOE	Nuku Hiva Isla	42.28	65	*e*LR	LR	11 17 18.0	
	comp=Z,87nm,30.6s						
AS31	Alice Springs	42.93	269		P	11 05 58.8	+0.9
ASAR	Alice Springs	42.93	269	P	P	11 05 58.5	+0.7
	comp=Z,9.1nm,0.8s,baz=107,slow=7.5,SNR=16						
ASAR				S	S	11 12 19.8	-2.2
	comp=Z,0.6nm,1.0s,baz=123,slow=17,SNR=5.0						
ASAR				LR	LR	11 23 47.0	
	comp=Z,99nm,18.3s,baz=110,slow=36						
	comp=Z,9.1nm,0.8s						
ASAR	Alice Springs	42.93	269		P	11 05 58.8	+0.9
WR0	Warramunga Arr	43.94	275	P	P	11 06 06.6	+0.6
WR0				IAmb	IAmb	11 06 08.6	
	comp=Z,15nm,0.9s						
WR8	Warramunga Arr	43.97	275	P	P	11 06 07.0	+0.7
WR8				IAmb	IAmb	11 06 08.9	
	comp=Z,16nm,0.8s						
WRA	Warramunga Arr	44.11	274	P	P	11 06 08.0	+0.5
	comp=Z,16nm,0.8s,baz=113,slow=8.0,SNR=58						
	comp=Z,16nm,0.8s						
WRA	Warramunga Arr	44.11	274		P	11 06 07.1	-0.3
WB0	Warramunga Arr	44.15	275		P	11 06 08.4	+0.7
FORT	Forrest	45.43	257		P	11 06 17.4	-0.4
VNDA	Vanda	45.96	186	LR	LR	11 24 31.0	
	comp=Z,46nm,19.2s,baz=358,slow=35						
MTN	Manton Dam	50.24	281	P	P	11 06 54.3	-0.9
MTN				IAmb	IAmb	11 06 55.9	
	comp=Z,6.9nm,0.8s						
KNRA	Kununurra	50.79	276	P	P	11 06 57.9	-1.5
CASY	Casey	53.20	209	P	P	11 07 17.7	+1.0
CASY				IAmb	IAmb	11 07 33.2	
	comp=Z,16nm,1.1s						
PSA00	Pilbara Seismi	55.64	265	P	P	11 07 32.9	-2.1
PSA00				IAmb	IAmb	11 07 48.2	
	comp=Z,5.4nm,1.1s						
MORW	Morawa	55.84	255	P	P	11 07 34.7	-1.7
MORW				IAmb	IAmb	11 07 39.0	
	comp=Z,5.7nm,0.9s						
MBWA	Marble Bar	55.91	265	P	P	11 07 35.1	-1.9
QSPA	South Pole Qui	57.57	180	P	P	11 07 51.9	+3.6
	comp=Z,1.2nm,0.7s,baz=3.0,slow=0.8,SNR=6.3						
BATI	Baumata	57.84	279	LR	LR	11 32 39.1	
	comp=Z,162nm,20.7s,baz=134,slow=36						
RPN	Rapa Nui	58.99	104	LR	LR	11 30 18.7	
	comp=Z,56nm,18.0s,baz=296,slow=33						
KAPI	Kappang	63.90	281	LR	LR	11 36 10.7	
	comp=Z,75nm,19.5s,baz=105,slow=36						
JNU	Nakatsue	81.09	319	LR	LR	11 41 37.9	
	comp=Z,46nm,21.2s,baz=24,slow=32						
PLCA	Paso Flores	81.13	133	P	P	11 10 13.8	-0.5
	comp=Z,2.3nm,1.1s,baz=241,slow=10,SNR=2.2						
	comp=Z,2.3nm,1.1s						
ASAJ	Asahikawa	84.29	333	LR	LR	11 44 16.4	
	comp=Z,41nm,18.4s,baz=264,slow=33						
KSRS	Korea Array	85.91	320	LR	LR	11 46 28.0	
	comp=Z,13µm,19.9s,baz=105,slow=34						
CMIG	Matias Romero	93.52	72	LR	LR	11 47 16.9	
	comp=Z,32nm,18.0s,baz=282,slow=32						
MA2	Magadan	95.33	345	LR	LR	11 58 09.2	
	comp=Z,24nm,18.6s,baz=118,slow=38						
NEW	Newport	97.17	36	LR	LR	11 50 48.9	
	comp=Z,86nm,18.3s,baz=231,slow=33						
MKAR	Makanchi Array	119.05	309	PKP	PKiKP	11 16 47.7	+0.4
	comp=Z,1.3nm,0.9s,baz=82,slow=2.7,SNR=7.1						
KURBB	Kurchatov Arra	122.47	313	PKP	PKiKP	11 16 54.5	+0.7
	comp=Z,2.3nm,0.9s,baz=107,slow=2.0,SNR=16						
BVAR	Borovoye Array	127.84	315	PKP	PKiKP	11 17 05.2	+0.7
	comp=Z,1.6nm,0.5s,baz=120,slow=2.1,SNR=8.6						
KBZ	Khabaz	146.17	301	PKPbc	PKPab	11 17 39.6	+0.1
	comp=Z,4.8nm,0.8s,baz=132,slow=4.6,SNR=6.7						
FINES	FINESS Array B	147.11	339	PKPbc	PKPbc	11 17 42.1	+1.1
	comp=Z,16nm,0.9s,baz=52,slow=3.6,SNR=39						
NB2	NORSAR Subarra	150.85	351	PKP	PKiKP	11 17 51.8	+0.6
	comp=Z,1.4nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	150.85	351	PKPbc	PKiKP	11 17 51.6	+0.4
	comp=Z,4.5nm,1.0s,baz=15,slow=4.1,SNR=7.3						
HFS	Hagfors	151.31	348	PKPbc	PKPbc	11 17 52.1	+0.5
	comp=Z,7.1nm,0.9s,baz=90,slow=3.1,SNR=7.2						
MMAI	Mount Meron Ar	151.87	280	PKPbc	PKiKP	11 17 56.1	+1.8
	comp=Z,3.3nm,0.6s,baz=101,slow=2.6,SNR=6.1						
AKASG	Malin Array Be	152.90	320	PKPbc	PKiKP	11 17 57.0	+1.3
	comp=Z,3.9nm,0.8s,baz=59,slow=2.1,SNR=11						
BRTR	Keskin Array B	153.46	295	PKPbc	PKiKP	11 17 58.5	+1.1
	comp=Z,2.2nm,0.5s,baz=145,slow=4.1,SNR=11						
GERES	GERESS Array B	161.45	335	PKPab	PKPab	11 18 43.6	-0.1
	comp=Z,0.9nm,0.5s,baz=338,slow=4.2,SNR=4.9						

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*IDC **14** 11:08:11.0±1.8, 14°.22S×167°.84E, h0km, mb3.8/5, mbtmp3.8/6, ML3.6/1, Error ellipse: s-maj=57.9km s-min=27.8km az=123.0*

ISC 14 11:08:15.3±1.7**, 14°.4S**±0°.1×**167°.9E**±0°.3**, h30**km**, n6, σ1s.05**/6**, mb3.7**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.79	190	Pn	Pn	11 10 07.9	+1.1
	0.9nm,0.3s,baz=122,slow=21,SNR=12						
DZM				Sn	Sn	11 11 32.8	-1.3
	1.0nm,0.3s,baz=135,slow=23,SNR=5.8						
	4.4nm,0.5s						
STKA	Stephens Creek	29.70	230	P	P	11 14 18.9	+0.2
	1.0nm,0.5s,baz=70,slow=12,SNR=3.4						
	1.0nm,0.5s						
WRA	Warramunga Arr	32.51	255	P	P	11 14 43.7	0.0
	0.3nm,0.7s,baz=86,slow=11,SNR=1.5						
	0.3nm,0.7s						
ASAR	Alice Springs	33.38	249	P	P	11 14 51.0	-0.3
	1.0nm,0.9s,baz=74,slow=9.6,SNR=9.4						
	1.0nm,0.9s						
ILAR	Eielson Array	85.99	18	P	P	11 20 52.0	-0.4
	0.3nm,0.8s,baz=205,slow=4.9,SNR=3.9						
	0.3nm,0.8s						
MKAR	Makanchi Array	97.36	316	P	Pdif	11 21 46.5	+0.6
	0.6nm,0.7s,baz=95,slow=5.9,SNR=5.9						
	0.6nm,0.7s						

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*IDC **14** 11:38:27.1±0.7, 28°.36N×127°.92E, h177km±10km, mb3.1/7, mbtmp3.6/8, Error ellipse: s-maj=25.2km s-min=16.2km az=82.0*

*JMA **14** 11:38:28.5±0.2, 28°N±1°×12°8E±°, h162km±3km, MV3.9/37, NW OFF AMAMI-OSHIMA IS*

ISC 14 11:38:27.1±0.8**, 28°.41N**±0°.05×**127°.96E**±0°.07**, h177**km±7km**, n32, σ1s.04**/53**, mb3.3**/7**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTK	Tokunoshima	1.07	125	*i* P	Pn	11 38 55.6	+0.5
JTK				S	Sn	11 39 16.1	-0.5
JAMN	Amaminishikomi	1.08	99	*i* P	Pn	11 38 55.5	+0.4
JAMN				S	Sn	11 39 16.2	-0.5
JOKE	Okinoerabujima	1.18	153	*i* P	Pn	11 38 56.5	+0.6
JOKE				S	Sn	11 39 17.4	-0.8
JTAJ	Takarajima	1.31	56	P	Pn	11 38 57.9	+0.9
JTAJ				*e*S	Sn	11 39 20.1	-0.2
JIH	Iheya	1.37	180	*i* P	Pn	11 38 58.5	+0.9
JIH				*e*S	Sn	11 39 20.7	-0.5
JAM	Amami Oshima	1.45	90	*i* P	Pn	11 38 58.9	+0.6
JAM				S	Sn	11 39 21.6	-0.7
JYRO	Yoronjima	1.45	163	*i* P	Pn	11 38 59.2	+0.8
JYRO				*e*S	Sn	11 39 21.5	-1.1
JOW	Kunigami	1.60	170	P	Pn	11 39 00.5	+0.6
	625nm,0.3s,baz=116,slow=26,SNR=1007						
JOW				S	Sn	11 39 24.1	-1.0
	541nm,0.2s,baz=110,slow=27,SNR=34						
JOW	Kunigami	1.60	170	*i* P	Pn	11 39 00.6	+0.7
JOW				S	Sn	11 39 24.3	-0.9
JZK	Kikaishima	1.77	93	P	Pn	11 39 03.5	+2.0
JZK				S	Sn	11 39 29.2	+1.0
JNTH	Nagotoyohara	1.89	178	*i* P	Pn	11 39 03.8	+1.0
JNTH				S	Sn	11 39 29.4	-1.0
JAGN	Aguni-jima	1.93	200	P	Pn	11 39 03.8	+0.6
JAGN				*e*S	Sn	11 39 30.7	-0.4
JNN	Nakanoshima	2.20	49	*e*P	Pn	11 39 07.5	+1.4
JNN				*e*S	Sn	11 39 36.9	+0.4
JJT3	Tamagusuku3	2.27	184	*e*P	Pn	11 39 08.3	+1.3
JJT3				S	Sn	11 39 38.1	+0.1
JKE	Kume jima 2	2.33	207	*i* P	Pn	11 39 08.2	+0.5
JKE				S	Sn	11 39 37.6	-1.5
JKC	Kuchinoerabu	2.82	43	*e*P	Pn	11 39 14.1	+0.7
JYAK	Yakushimahirau	2.87	50	*e*P	Pn	11 39 14.0	-0.1
JYAK				*e*S	Sn	11 39 48.1	-2.5
JMTN	Minamitane	3.24	52	*e*P	Pn	11 39 18.1	-0.4
JMTN				*e*S	Sn	11 39 56.5	-2.2
JTN	Tanegashima 3	3.45	49	*i* P	Pn	11 39 21.7	+0.5
JTN				*e*S	Sn	11 40 02.2	-1.2
JSJ	Shimokoshiki	3.59	25	P	Pn	11 39 23.9	+1.0
JTSR	Tashiro 2	3.76	42	*e*P	Pn	11 39 26.0	+0.9
JSU	Suzuyama	3.77	34	P	Pn	11 39 26.4	+1.2
JKDJ	Kitadaitoujima	3.85	129	*e*P	Pn	11 39 27.3	+1.0
JKDJ				S	Sn	11 40 11.3	-1.2
JNU	Nakatsue	5.32	27	P	Pn	11 39 47.0	+1.8
	39nm,0.8s,baz=232,slow=7.0,SNR=24						
SONM	Songino Array	25.61	325	P	P	11 43 42.2	+2.0
	1.3nm,0.7s,baz=142,slow=9.7,SNR=7.8						
	1.3nm,0.7s						
MKAR	Makanchi Array	39.93	310	P	P	11 45 43.0	-1.0
	0.2nm,0.4s,baz=92,slow=9.8,SNR=2.9						
MKAR				PcP	PcP	11 47 46.2	+0.3
	0.6nm,0.6s,baz=111,slow=2.1,SNR=5.6						
	0.2nm,0.4s						
ZALV	Zalesovo Beam	40.38	321	P	P	11 45 46.1	-1.4
	0.6nm,0.5s,baz=122,slow=8.1,SNR=2.7						
	0.6nm,0.5s						
KURBB	Kurchatov Arra	43.13	315	P	P	11 46 09.2	-0.7
	0.5nm,0.4s,baz=102,slow=9.1,SNR=7.4						
KURBB				PcP	PcP	11 47 55.9	-0.4
	0.5nm,1.0s,baz=105,slow=3.8,SNR=4.3						
	0.5nm,0.4s						
WRA	Warramunga Arr	48.47	172	P	P	11 46 52.2	+0.3
	0.3nm,0.5s,baz=353,slow=8.3,SNR=5.4						
	0.3nm,0.5s						
BVAR	Borovoye Array	48.51	317	PcP	PcP	11 48 14.9	-0.1
	1.2nm,0.4s,baz=123,slow=3.7,SNR=5.8						
ILAR	Eielson Array	62.64	29	P	P	11 48 31.6	-0.8
	0.2nm,0.8s,baz=256,slow=3.6,SNR=4.9						
	0.2nm,0.8s						
YKA	Yellowknife Ar	76.65	25	P	P	11 49 58.5	+0.4
	0.5nm,0.7s,baz=300,slow=6.4,SNR=6.5						
	0.5nm,0.7s						

IDC 14 11:54:13.8±8.3**, 5°.98S**×**149°.98E, h57**km±62km**, mb3.4**/3**, mbtmp3.8**/4**, ML1.8**/1**, MS2.9**/1**, Error ellipse: s-maj=73.2km s-min=51.2km az=112.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.41	219	P	Pn	11 55 18.4	+0.2
	3.7nm,0.3s,baz=48,slow=6.9,SNR=14						
PMG				S	Sn	11 56 09.4	+1.1
	19nm,0.4s,baz=161,slow=23,SNR=6.7						
	7.2nm,0.3s						
CTA	Charters Tower	14.49	194	LR	LR	12 02 12.1	
	comp=Z,42nm,18.5s,baz=41,slow=33						
WRA	Warramunga Arr	20.59	226	P	P	11 58 48.0	-0.3
	3.3nm,0.7s,baz=53,slow=11,SNR=35						
	3.3nm,0.7s						
ASAR	Alice Springs	23.43	220	P	P	11 59 16.8	-1.4
	0.3nm,0.3s,baz=56,slow=9.0,SNR=12						
	0.3nm,0.3s						
STKA	Stephens Creek	26.94	196	P	P	11 59 51.4	+1.4
	1.5nm,0.7s,baz=351,slow=13,SNR=3.8						
	1.5nm,0.7s						
TORD	Torodi Ar. Bea	147.95	285	PKPbc	PKPbc	12 13 53.4	-0.5
	1.8nm,0.3s,baz=51,slow=5.1,SNR=2.1						

RSNC 14 11:57:23.5±0.0**, 7°N**±1°×**7°7W**±°**, h29**km±6km**, M3.1, mb4.1, mB4.9, ML2.7, Mw(mB)4.2, Panama-Colombia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTAC	Punta Ardita,	0.71	253	P	Pb	11 57 36.6	-0.9
PTAC				S	Sb	11 57 47.0	0.0
APAC	Apartado, Choc	0.76	45	P	Pb	11 57 37.1	-1.1
APAC				S	Sn	11 57 48.7	-0.1
DBBC	Dabeiba	0.96	111	P	Pn	11 57 38.6	-2.6
DBBC				S	Sn	11 57 51.5	-2.5
SOLC	Bahia Solano	1.16	194	P	Pn	11 57 42.3	-1.5
SOLC				S	Sn	11 57 59.1	+0.4
CAPC	Capurgana	1.29	350	P	Pn	11 57 43.4	-2.2
UREC	San Jos de Ur	1.62	76	P	Pn	11 57 48.9	-1.3
UREC				S	Sn	11 58 08.9	-1.2
LCBC	Los crdobas,	1.66	27	P	Pn	11 57 51.3	+0.6
LCBC				S	Sb	11 58 15.3	+1.2
CBOC	Ciudad Bolivar	1.85	143	P	Pn	11 57 50.8	-2.7
PIZC	Pizarro, Choco	2.39	186	P	Pn	11 58 00.1	-0.7
PIZC				S	Sn	11 58 28.4	-0.7
PLMC	San Jos del P	2.58	161	P	Pn	11 57 59.6	-3.8
GUY2C	Guyana, Caldas	2.75	140	P	Pn	11 58 05.3	-0.8
GUY2C				S	Sn	11 58 37.7	-0.9
PTBC	PUERTO BERRIO,	2.77	107	P	Pn	11 58 05.2	-0.7
PTBC				S	Sn	11 58 38.7	+0.3
NIZA	Niza - Manizal	2.81	144	P	Pn	11 58 06.6	-0.2
NORC	Norcasia	2.86	128	P	Pn	11 58 07.8	+0.5
SJCC	San Jacinto, C	3.17	37	P	Pn	11 58 11.4	-0.1
SJCC				S	Sn	11 58 45.5	-2.9
BCIP	Isla Barro Col	3.23	304	P	Pn	11 58 12.0	-0.3
BCIP				S	Sn	11 58 49.4	-0.5
YOTC	Yotoco, Valle	3.44	167	P	Pn	11 58 12.1	-3.2
YOTC				S	Sn	11 58 49.9	-5.3
SPBC	San Pablo de B	3.47	119	P	Pn	11 58 16.9	+1.2
OCAC	Ocana	3.87	77	P	Pn	11 58 21.4	+0.2
OCAC				S	Sn	11 59 01.6	-4.1
ORTC	Ortega, Tolima	3.90	151	P	Pn	11 58 22.5	+0.9
ORTC				S	Sn	11 59 09.3	+2.8
BARC	Barichara	3.98	101	P	Pn	11 58 23.5	+0.6
JAMC	Jamundi, Valle	4.14	174	P	Pn	11 58 23.2	-1.9
JAMC				S	Sn	11 59 08.4	-4.3
PRAC	Prado	4.25	148	P	Pn	11 58 27.1	+0.7
PRAC				S	Sn	11 59 14.5	-0.6
RUSC	La Rusia	4.27	110	P	Pn	11 58 27.3	+0.3
RUSC				S	Sn	11 59 15.3	-0.8
CHIC	Chingaza	4.33	129	P	Pn	11 58 29.4	+1.7
POPC	Popayan, Colom	4.81	175	P	Pn	11 58 33.9	-0.3
URMC	La Uribe, Meta	4.91	146	P	Pn	11 58 35.8	+0.3
BBAC	Balboa, Cauca	5.30	181	P	Pn	11 58 42.3	+1.3
BBAC				P	Pn	11 58 42.4	+1.4

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*IDC **14** 11:58:36.0±68.0, 13°.09S×168°.52E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=1160.0km s-min=126.5km az=64.0*

*NOU **14** 11:58:48.5, 14°.46S×167°.80E, h2km, MLv4.5/11, Vanuatu Islands*

ISC 14 11:58:53.2±3.0**, 14°.5S**±0°.1×**167°.7E**±0°.3**, h35**km**, n8, σ1s.69**/8**, mb3.6**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.02	206	P	Pn	11 59 09.2	-1.9
SANVU	Saraoutou	1.02	206	S	Sn	11 59 25.2	+1.0
DZM	Mont Dzumac	7.60	189	P	Pn	12 00 42.7	+1.1
NGOA	Tingoa Renbel	7.98	291	P	Pn	12 00 47.1	+0.4
TATA	Tatamba Isabel	9.83	308	P	Pn	12 01 11.7	-0.4
STKA	Stephens Creek	29.42	230	P	P	12 04 55.0	+1.4
	1.9nm,0.5s,baz=42,slow=10,SNR=5.7						
	1.9nm,0.5s						
WRA	Warramunga Arr	32.25	256	P	P	12 05 16.2	-2.5
	0.4nm,0.8s,baz=84,slow=9.1,SNR=2.2						
	0.4nm,0.8s						
ASAR	Alice Springs	33.11	249	P	P	12 05 25.9	-0.2
	0.5nm,0.6s,baz=81,slow=8.6,SNR=7.2						
	0.5nm,0.6s						

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*IDC **14** 12:06:17.5±0.5, 6°.17S×152°.27E, h0km, mb4.4/19, mbtmp4.4/20, ML3.0/1, MS3.6/13, Error ellipse: s-maj=20.2km s-min=13.9km az=96.0*

*NEIC **14** 12:06:20.1±1.4, 6°.19S±0°.06×152°.34E±0°.08, h10km±1km, mb4.9/88, Error ellipse: s-maj=13.5km s-min=9.2km az=243.0*

*DJA **14** 12:06:26.8±2.1, 6°S±9°×15°2E±1°2, h57km±15km, M4.8/14, mb4.8/14, mB5.0/6, MLv5.2/1, Mw(mB)4.3/6*

ISC 14 12:06:23.3±0.4**, 6°.22S**±0°.06×**152°.31E**±0°.07**, h38**km**, n143, σ1s.21**/105**, mb4.8**/74**, MS3.7**/12**, 1C-3D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	2.02	356		Pn	12 06 53.6	-1.2
PMG	Port Moresby	6.01	238	Pn	Pn	12 07 48.9	-0.8
	26nm,0.3s,baz=54,slow=6.4,SNR=50						
PMG				Sn	Sn	12 08 58.3	+1.1
	50nm,0.3s,baz=138,slow=24,SNR=16						
	75nm,0.2s						
PMG	Port Moresby	6.01	238		Pn	12 07 49.5	-0.2
PMG	Port Moresby	6.01	238	P	Pn	12 07 50.1	+0.4
	100nm,0.7s						
PMG	Port Moresby	6.01	238	P	Pn	12 07 50.0	+0.4
	1.6nm2µm100nm,0.7s						
MANU	Manus Island	6.44	310		Pn	12 07 58.8	+3.2
COEN	Coen	11.83	229	Pn	Pn	12 09 07.6	-2.0
MTSU	Mount Surprise	14.18	213	P	Pn	12 09 41.6	-0.1
	13nm,1.0s						
CTA	Charters Tower	14.99	203	Pn	Pn	12 09 53.5	+0.9
	0.1nm,0.3s,baz=34,slow=14,SNR=3.9						
CTA				LR	LR	12 15 08.3	
	comp=Z,400nm,18.3s,baz=50,slow=35						
CTAO	Charters Tower	14.99	203	P	P	12 09 57.7	+0.1
QIS	Mount Isa	18.85	220	P	Pn	12 10 40.6	-0.4
	28nm,0.9s						
EIDS	Eidsvold	19.08	183	P	P	12 10 43.0	+0.3
EIDS	Eidsvold	19.08	183	P	Pn	12 10 45.4	+1.7
	15nm,2.1s						
FAKI	Fak Fak	20.26	278	P	P	12 10 54.0	-1.8
DZM	Mont Dzumac	20.86	140	P	P	12 11 02.1	0.0
	5.8nm,0.9s,baz=354,slow=7.5,SNR=3.1						
DZM				LR	LR	12 18 02.7	
	comp=Z,148nm,20.8s,baz=5.5,slow=34						
	5.8nm,0.9s						
DZM	Mont Dzumac	20.86	140	P	P	12 11 01.6	-0.5
TW1H	Toowoomba 1 Ha	21.21	181	P	P	12 11 07.9	+2.0
	48nm,0.9s						
QLP	Quilpie	21.67	200	P	P	12 11 11.8	+1.1
	39nm,0.9s						
MTN	Manton Dam	21.89	251	P	P	12 11 13.5	+0.3
DRS	Darwin Rock St	22.00	252	P	P	12 11 17.5	+3.1
	57nm,0.8s						
WB0	Warramunga Arr	22.02	231		P	12 11 14.8	+0.3
WR8	Warramunga Arr	22.05	230	P	P	12 11 15.3	+0.4
WRAB	Tennant Creek	22.15	230		P	12 11 17.1	+1.2
WRAB	Tennant Creek	22.15	230	P	P	12 11 16.7	+0.7
	16nm,0.7s						
WRA	Warramunga Arr	22.16	230	P	P	12 11 15.6	-0.6
	14nm,0.6s,baz=56,slow=10.0,SNR=136						
WRA				PcP	PcP	12 15 13.1	+0.7
	2.0nm,0.9s,baz=58,slow=2.2,SNR=5.6						
	14nm,0.6s						
WRA	Warramunga Arr	22.16	230		P	12 11 14.7	-1.4
AULRC	Lightning Ridg	23.45	190	P	P	12 11 29.7	+0.4
	23nm,1.1s						
KRAI	Karang Ratu	24.00	276	P	P	12 11 37.0	+2.2
INKA	Innaminka	24.06	206		P	12 11 35.1	+0.1
INKA				IAmb	IAmb	12 11 40.0	
	comp=Z,42nm,1.7s						
AS31	Alice Springs	24.79	224		P	12 11 41.9	+0.1
ASAR	Alice Springs	24.79	224	P	P	12 11 41.5	-0.3
	comp=Z,11nm,0.7s,baz=59,slow=8.4,SNR=192						
ASAR				PcP	PcP	12 15 17.4	-0.5
	comp=Z,0.8nm,0.7s,baz=62,slow=2.4,SNR=2.9						
ASAR				LR	LR	12 21 01.3	
	comp=Z,115nm,20.6s,baz=62,slow=36						
	comp=Z,11nm,0.7s						
KNRA	Kununurra	24.93	246		P	12 11 43.2	+0.1
STKA	Stephens Creek	27.43	200	P	P	12 12 05.2	-0.3
	comp=Z,8.3nm,1.0s,baz=12,slow=12,SNR=12						
STKA				LR	LR	12 23 01.2	
	comp=Z,222nm,18.6s,baz=32,slow=37						
	comp=Z,8.3nm,1.0s						
STKA	Stephens Creek	27.43	200		P	12 12 05.9	+0.3
EDFI	Ende, Flores	30.46	263	P	P	12 12 30.5	-2.4
	comp=Z,28nm,1.0s						
FORT	Forrest	33.39	220		P	12 12 57.9	-0.4
JCJ	Chichijima	34.54	344	LR	LR	12 25 24.0	
	comp=Z,55nm,22.0s,baz=138,slow=33						
MBWA	Marble Bar	34.86	242	P	P	12 13 11.4	+0.2
MBWA				IAmb	IAmb	12 13 21.3	
	comp=Z,31nm,1.4s						
URZ	Urewera	39.03	148	LR	LR	12 29 13.3	
	comp=Z,114nm,19.6s,baz=274,slow=35						
SNJI	Sawahan-Nganju	40.27	265	P	P	12 13 55.7	-1.5
	comp=Z,15nm,1.3s						
KPJI	Karang Pucung	43.08	266	P	P	12 14 31.9	+12
BBJI	Bungbulang	44.35	266	P	P	12 14 27.4	-3.0
	comp=Z,16nm,0.8s						
MJAR	Matsushiro Arr	44.54	344	LR	LR	12 30 39.5	
	comp=Z,70nm,21.4s,baz=146,slow=33						
CNJI	Cibinong	44.87	266	P	P	12 14 34.1	-0.3
	comp=Z,32nm,1.3s						
PPBI	Pangkal Pinang	46.21	273	P	P	12 14 56.5	+11
MDSI	Maura Dua	47.94	270	P	P	12 14 57.5	-1.1
	comp=Z,23nm,1.2s						
KSRS	Korea Array	49.05	334	P	P	12 15 05.7	-0.9
	comp=Z,1.7nm,0.9s,baz=161,slow=7.0,SNR=2.2						
	comp=Z,1.7nm,0.9s						
NJ2	Nanjing	49.64	322	*e*P	P	12 15 13.1	+1.8
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
ASAJ	Asahikawa	50.86	351	LR	LR	12 32 49.7	
	comp=Z,26nm,21.2s,baz=190,slow=31						
PPI	Padang Panjang	52.12	274	P	P	12 15 29.6	-0.7
HNS	HongShan	55.79	324	⇓P	P	12 15 58.9	+2.3
HNS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	57.32	317	*e*P	P	12 16 06.9	-0.8
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
CM31	Chiang Mai Arr	58.05	296	P	P	12 16 13.5	+0.5
CM31				IAmb	IAmb	12 16 16.4	
	comp=Z,5.5nm,0.4s						
CMAR	Chiang Mai Arr	58.05	296	P	P	12 16 11.8	-1.2
	comp=Z,0.8nm,0.3s,baz=112,slow=4.8,SNR=8.0						
	comp=Z,0.8nm,0.3s						
CMAR	Chiang Mai Arr	58.05	296	P	P	12 16 13.1	0.0
PZH	PanZhiHua	58.80	306	P	P	12 16 21.8	+3.5
PETK	Petropavlovsk-	59.27	4	P	P	12 16 20.6	-0.3
	comp=Z,1.6nm,0.6s,baz=169,slow=5.1,SNR=4.5						
	comp=Z,1.6nm,0.6s						
HHC	Hu-ho-hao-te	59.91	325	*e*P	P	12 16 28.8	+3.1
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,63nm,4.9s						
LZDM	Lanzhou Array	61.94	316	P	P	12 16 38.2	-1.6
	comp=Z,0.8nm,0.3s,baz=89,slow=7.5,SNR=2.0						
	comp=Z,0.8nm,0.3s						
SHL	Shillong	66.61	301	P	P	12 17 09.8	-0.7
SHL				IAmb	IAmb	12 17 10.7	
	comp=Z,6.8nm,1.0s						
SONM	Songino Array	67.26	328	P	P	12 17 14.7	+0.5
	comp=Z,1.0nm,0.5s,baz=141,slow=5.2,SNR=9.6						

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                comp=Z,1.0nm,0.5s
SONM  Songino Array     67.26 328  P        P        12 17 14.6 +0.5
VNDA  Vanda             71.44 178  P        P        12 17 38.7 -0.6
        comp=Z,1.4nm,0.6s,baz=338,slow=6.4,SNR=12
        comp=Z,1.4nm,0.6s
VNDA  Vanda             71.44 178  P        P        12 17 40.2 +0.9
VNDA                               IAmb     IAmb     12 19 53.2
        comp=Z,13nm,1.6s
EVN   Everest           71.66 302           P        12 17 41.2 -1.1
BILL  Bilibino          74.74   5           P        12 18 00.1 +1.3
BILL                               IAmb     IAmb     12 18 01.8
        comp=Z,11nm,1.1s
O14K  Tigyukauivet M    74.94  23  P        P        12 18 02.6 +2.4
M14K  Bethel            75.69  21  P        P        12 18 06.2 +1.8
J14K  Nanvaranak Lak    76.53  19  IAmb     IAmb     12 18 13.2
        comp=Z,16nm,1.0s
ACHA  Angle Creek He    76.69  26  P        P        12 18 11.1 +0.7
OHAK  Old Harbor        77.02  27  P        P        12 18 12.2 +0.2
J16K  Anvik River       77.88  20  P        P        12 18 18.6 +1.8
J17K  VABM Dome         78.47  20  IAmb     IAmb     12 18 26.1
        comp=Z,20nm,1.2s
G16K  Koyuk River       78.76  18  IAmb     IAmb     12 18 24.6
        comp=Z,9.1nm,0.9s
H17K  Granite Mounta    79.21  19  IAmb     IAmb     12 19 19.1
        comp=Z,25nm,1.6s
L19K  White Mountain    79.23  22  IAmb     IAmb     12 18 32.8
        comp=Z,21nm,1.2s
F17K  Baldwin Pennin    79.81  17  IAmb     IAmb     12 18 30.5
        comp=Z,13nm,1.1s
K20K  Telida            80.22  22  IAmb     IAmb     12 18 35.0
        comp=Z,25nm,1.4s
J20K  Nowinta River     80.67  21  IAmb     IAmb     12 18 37.6
        comp=Z,20nm,1.2s
H19K  Roundabout Mou    80.71  19  IAmb     IAmb     12 18 38.7
        comp=Z,21nm,1.4s
G19K  Purcell Mounta    80.89  19  IAmb     IAmb     12 18 36.8
        comp=Z,12nm,1.2s
MK31  Makanchi Array    81.07 319  P        P        12 18 34.6 +0.1
MKAR  Makanchi Array    81.07 319  P        P        12 18 34.8 +0.2
        comp=Z,2.8nm,1.0s,baz=101,slow=6.3,SNR=12
        comp=Z,2.8nm,1.0s
MKAR  Makanchi Array    81.07 319           P        12 18 34.6  0.0
MAKZ  Makanchi          81.28 319           P        12 18 36.1 +0.5
E19K  Redstone River    81.67  17  IAmb     IAmb     12 18 43.7
        comp=Z,11nm,0.9s
IMAR  Indian Mountai    81.87  20  P        P        12 18 40.1 +1.8
I21K  Tanana            82.01  21  IAmb     IAmb     12 18 44.3
        comp=Z,16nm,1.1s
ZAA0  Zalesovo Array    82.06 327           P        12 18 39.2 -0.3
ZAA0                               IAmb     IAmb     12 18 39.7
        comp=Z,7.3nm,0.8s
ZALV  Zalesovo Beam     82.06 327  P        P        12 18 39.0 -0.6
        comp=Z,6.8nm,0.6s,baz=114,slow=5.3,SNR=27
        comp=Z,6.8nm,0.6s
ZALV  Zalesovo Beam     82.06 327           P        12 18 38.8 -0.7
C19K  Lookout Ridge     82.08  16  IAmb     IAmb     12 18 42.4
        comp=Z,10.0nm,1.0s
CCB   Clear Creek Bu    83.24  22  P        P        12 18 46.1 +0.6
CCB                                IAmb     IAmb     12 18 46.7
        comp=Z,6.3nm,1.0s
E21K  Killik River      83.25  17  IAmb     IAmb     12 18 48.2
        comp=Z,13nm,1.2s
KSH   Kashi             83.48 311  P        P        12 18 49.6 +2.1
G23K  Bananza Creek     83.53  20  IAmb     IAmb     12 18 49.7
        comp=Z,7.4nm,1.0s
IL31                    83.64  22  IAmb     IAmb     12 18 50.9
        comp=Z,14nm,1.2s
ILAR  Eielson Array     83.64  22  P        P        12 18 47.5 -0.1
        comp=Z,4.4nm,0.8s,baz=247,slow=5.4,SNR=50
ILAR                               LR       LR       12 48 49.3
        comp=Z,43nm,21.1s,baz=116,slow=30
        comp=Z,4.4nm,0.8s
ILAR  Eielson Array     83.64  22  P        P        12 18 47.8 +0.2
E22K  Anaktuvuk Pass    83.73  18           P        12 18 49.9 +1.9
E22K                               IAmb     IAmb     12 18 50.7
        comp=Z,5.1nm,0.9s
QSPA  South Pole Qui    83.75 180  P        P        12 18 48.5 +0.3
        comp=Z,3.9nm,0.7s,baz=330,slow=2.7,SNR=25
        comp=Z,3.9nm,0.7s
QSPA  South Pole Qui    83.75 180           P        12 18 48.6 +0.3
QSPA                               IAmb     IAmb     12 18 49.1
        comp=Z,5.5nm,0.8s
D22K  Ayikyak River     83.89  17  IAmb     IAmb     12 18 52.0
        comp=Z,11nm,1.0s
E23K  Chandalar         84.38  19  IAmb     IAmb     12 18 56.8
        comp=Z,12nm,1.1s
KURK  Kurchatov         84.58 322           P        12 18 52.7 +0.1
KURK                               IAmb     IAmb     12 18 54.0
        comp=Z,10.0nm,0.9s
KURBB Kurchatov Arra    84.61 322  P        P        12 18 52.3 -0.5
        comp=Z,5.0nm,0.9s,baz=110,slow=4.1,SNR=34
        comp=Z,5.0nm,0.9s
F24K  Squaw Lake        84.66  20  IAmb     IAmb     12 18 55.8
        comp=Z,6.3nm,0.8s
AAK   Ala-Archa         85.28 314           P        12 18 57.1 +0.5
AAK                                IAmb     IAmb     12 18 58.4
        comp=Z,6.5nm,0.8s
F25K  Christian Rive    85.45  20  IAmb     IAmb     12 20 57.1
        comp=Z,18nm,1.9s
BMAR  Burnt Mountain    85.73  20  P        P        12 19 00.2 +2.1
F26K  Sheenjek River    86.00  20  IAmb     IAmb     12 19 07.8
        comp=Z,13nm,1.4s
I27K  Kandik River      86.01  22  IAmb     IAmb     12 19 02.4
        comp=Z,13nm,1.1s
D25K  Kavik River       86.05  18  IAmb     IAmb     12 19 02.0
        comp=Z,6.3nm,1.0s
H27K  Steamboat Moun    86.30  22  IAmb     IAmb     12 19 04.0
        comp=Z,10nm,0.9s
C27K  Jago River        87.02  18  IAmb     IAmb     12 19 07.3
        comp=Z,8.1nm,1.0s
E27K  Coleen River      87.09  20  IAmb     IAmb     12 19 07.3
        comp=Z,4.4nm,0.8s
NRIK  Noril'sk          87.14 341  P        P        12 19 04.7 -0.2
        comp=Z,1.7nm,0.4s,baz=115,slow=4.5,SNR=2.8
        comp=Z,1.7nm,0.4s
I29M  Ogilvie Camp,     87.19  23  IAmb     IAmb     12 19 07.8
        comp=Z,7.4nm,0.9s
J30M  Hart River        87.70  24  IAmb     IAmb     12 19 11.0
        comp=Z,8.4nm,0.9s
D27M  Malcolm River     87.73  19  IAmb     IAmb     12 19 11.1
        comp=Z,4.9nm,0.9s
E28M  Babbage River     87.95  20  IAmb     IAmb     12 19 12.1
        comp=Z,15nm,1.6s
KK31  Karatay Array     88.25 314  IAmb     IAmb     12 19 12.2
        comp=Z,7.6nm,1.3s
KKAR  Karatay Array     88.25 314  P        P        12 19 11.0 +0.1
BBB   Bella Bella       88.51  37  LR       LR       12 54 54.4
        comp=Z,31nm,18.7s,baz=256,slow=33
DLBC  Dease Lake        88.84  31  LR       LR       12 52 52.0
        comp=Z,29nm,20.2s,baz=279,slow=32
BVAR  Borovoye Array    90.08 323  P        P        12 19 18.7 -0.5
        comp=Z,4.5nm,0.8s,baz=104,slow=6.3,SNR=17
        comp=Z,4.5nm,0.8s
BORK  Borovoye          90.12 323           P        12 19 19.3  0.0
SYO   Syowa Base        92.18 199⇑eP        P        12 19 29.0 +0.4
NVAR  Mina Array Bea    93.34  52  P        P        12 19 35.2 +0.3
        comp=Z,1.7nm,0.8s,baz=252,slow=5.2,SNR=7.4
        comp=Z,1.7nm,0.8s
NVAR  Mina Array Bea    93.34  52  P        P        12 19 34.3 -0.6
PFO   Pinyon Flats O    94.42  57  LR       LR       12 55 57.1
        comp=Z,67nm,19.4s,baz=256,slow=32
NEW   Newport           94.97  42  LR       LR       12 55 30.3
        comp=Z,35nm,20.8s,baz=297,slow=31
AB31  Akbulak array     96.21 319  P        P        12 19 46.2 -1.3
AB31                               IAmb     IAmb     12 21 27.9
        comp=Z,9.8nm,1.9s
ABKAR Akbulak array     96.21 319  P        P        12 19 46.0 -1.5
YKA   Yellowknife Ar    96.90  28  P        P        12 19 50.4 +0.1
        comp=Z,0.5nm,0.9s,baz=276,slow=5.4,SNR=4.0
        comp=Z,0.5nm,0.9s
PDAR  Pinedale Array   100.16  48  P        Pdif     12 20 05.6 -0.1
        comp=Z,0.1nm,0.5s,baz=295,slow=2.5,SNR=2.7
WLF   Walferdange      128.19 333 dPKPdf    PKPdf    12 25 24.9 -0.7
BMRD  Maredsous        128.35 334 dPKPdf    PKPdf    12 25 24.6 -1.3
LPAZ  La Paz           134.16 120  PKP      PKiKP    12 25 39.7 -0.3
        comp=Z,0.8nm,0.7s,baz=209,slow=3.0,SNR=3.6
SDV   Santo Domingo    137.36  84  PKP      PKPdf    12 25 43.7 -0.4
        comp=Z,1.0nm,0.3s,baz=270,slow=3.0,SNR=4.0
ESDC  Sonseca Array    140.43 331  PKP      PKPdf    12 25 47.3 -1.6
        comp=Z,0.6nm,0.7s,baz=54,slow=2.2,SNR=3.0
TORD  Torodi Ar. Bea   150.25 286  PKPbc    PKPbc    12 26 11.6 +0.1
        comp=Z,5.5nm,0.5s,baz=73,slow=5.0,SNR=4.0
BDFB  Brasilia         150.39 137  PKPbc    PKPbc    12 26 12.2 +0.3
        comp=Z,4.3nm,0.6s,baz=135,slow=3.8,SNR=5.9
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CATAC ***14*** *12:28:32.2±0.5, 9°N±2°×8°5W±°, h12^{km}±2^{km}, M3.9/13, MLv3.9/13, Error ellipse: s-maj=5.8km s-min=2.7km az=40.8, confirmed*

UCR ***14*** *12:28:33.9±0.6, 9°.47N×84°.76W, h30^{km}±1^{km}, MW3.9, Fault plane solution: NP1:ϕ_s309.33000°, δ84.92000°, λ-19.37000°.*

ISC 14 12:28:33.5±1.0, **9°.46N**±0°.04×**84°.76W**±0°.03, **h21**^{km}, **n104**, σ**0^s.56**/110, **25C-11D**, **Costa Rica**

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Code  Station Name        Δ°  AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s   ISC
BITO  Garabito Jaco      0.21  42⇓eP         Pb       12 28 40.7 +1.3
BITO                               eS        Sb       12 28 45.4 +1.8
PAQE  Paquera            0.39 334⇑eP         Pn       12 28 42.9 -1.0
PAQE                               eS        Sn       12 28 49.4 -1.3
ROBF  Roble, Puntare     0.51   3⇑eP         Pb       12 28 44.6 +0.7
ROBF                               eS        Sb       12 28 52.3 +1.5
ENAS  Puntarenas         0.52 352  eP        Pn       12 28 44.7 -0.9
ENAS                               eS        Sn       12 28 52.8 -0.9
JCR1  Jicaral            0.52 318⇑eP         Pn       12 28 44.8 -0.9
ARZA  Esparza            0.53  10⇑eP         Pb       12 28 44.7 +0.5
PICV  PH. Pirrs          0.58  74⇓eP         Pn       12 28 45.6 -1.0
PURI  Puriscal           0.58  49  eP        Pb       12 28 45.6 +0.4
SVQ2  Quepos             0.59  93  eP        Pb       12 28 45.4 +0.3
QUEP  Quepos             0.59  93  eP        Pb       12 28 45.3 +0.1
ATEO  Atenas             0.63  36  eP        Pb       12 28 46.1 +0.1
ACOS  Acosta             0.67  61⇓eP         Pb       12 28 46.8 +0.1
RAMO  San Ramon          0.68  25  eP        Pb       12 28 47.0 +0.2
TCS1  Tacares            0.73  38   P        Pn       12 28 48.1 -0.6
NARAN Naranjo de Ala     0.73  31  eP        Pn       12 28 48.1 -0.6
SANTA Santa Ana          0.73  51  eP        Pb       12 28 47.5 -0.1
SARCI Sarchi             0.74  33  eP        Pn       12 28 48.5 -0.4
PITB  Pirrs, San         0.75  75  eP        Pb       12 28 48.0  0.0
RAZU  San Marcos de      0.75  75  eP        Pb       12 28 47.9 -0.1
BELE  Belen              0.76  48⇓eP         Pb       12 28 48.1  0.0
LCR2  La Lucha 2         0.79  70   S        Sb       12 28 59.0 -0.1
ZARE  Zarcero            0.80  27  eP        Pn       12 28 49.4 -0.4
PIEC  Cerro El Cedra     0.81  79⇓eP         Pn       12 28 49.1 -0.8
AMPA  Desamparados       0.81  58  eP        Pb       12 28 48.7 -0.3
LUJA  Lujan              0.82  56  eP        Pb       12 28 49.2 +0.1
JUNT  Juntas             0.84 346⇑eP         Pb       12 28 49.4  0.0
ECI   Escuela Centro     0.84  56  eP        Pb       12 28 49.3 -0.2
JTS   Las Juntas de      0.84 347   P        Pb       12 28 49.4  0.0
JTS                                 S        Sb       12 29 00.6 +0.2
JTS   Las Juntas de      0.84 347⇑eP         Pb       12 28 49.4  0.0
CMARA Lajas Hojancha     0.85 310   P        Pb       12 28 49.4 -0.3
CMARA Lajas Hojancha     0.85 310   S        Sb       12 29 00.5 -0.2
CMARA Lajas Hojancha     0.85 310  eP        Pb       12 28 49.3 -0.3
VPS8  V Poas             0.88  36⇑eP         Pn       12 28 50.4 -0.4
VPS5  V. Poas            0.89  36  eP        Pb       12 28 50.0 -0.5
QUEU  Ciudad Quesada     0.91  21  eP        Pn       12 28 51.5 +0.4
VPL2  V. Platanar        0.92  24⇑eP         Pn       12 28 51.0 -0.3
SOCE  Pocosol            0.92   9   S        Sn       12 29 03.9 -0.1
SOCE  Pocosol            0.92   9   P        Pn       12 28 51.2 -0.2
SOCE  Pocosol            0.92   9⇑eP         Pn       12 28 51.1 -0.2
NICO  Nicoya             0.95 315  eP        Pb       12 28 50.9 -0.3
REPA  Paraso             0.95  68⇓eP         Pb       12 28 51.0 -0.4
CASO  Castillo           0.96   2⇑eP         Pn       12 28 51.8 -0.1
CVIMO Finca Echandi      0.98  55  eP        Pb       12 28 51.8 -0.1
CHIK  Chiripa            0.98 352⇑eP         Pn       12 28 52.2  0.0
ARE1  Arenal 1           0.99   2⇑eP         Pn       12 28 52.5 +0.3
VARE2 V. Arenal          0.99   2⇑eP         Pn       12 28 52.5 +0.2
FORC  Fortuna            1.00   5⇑eP         Pn       12 28 52.5 +0.2
BUS1  Rivas              1.00  85⇓eP         Pb       12 28 52.0 -0.5
VACR  Volcan Arenal      1.01   5⇑eP         Pn       12 28 52.5 +0.1
CNAS  Canas              1.01 341  eP        Pn       12 28 53.3 +0.8
CEDE  Laguna Cedeo       1.02   3⇑eP         Pn       12 28 52.9 +0.3
TILA  Tilaran            1.02 348⇑eP         Pn       12 28 52.5 -0.2
TABAC Tabacon            1.03 360⇑eP         Pn       12 28 53.1 +0.4
PCAYA Pacayas            1.04  64  eP        Pn       12 28 52.8 -0.2
VICA  Volcano Irazu      1.04  60⇓eP         Pb       12 28 52.7 -0.3
INVE  Universidad In     1.05 344⇑eP         Pb       12 28 53.0  0.0
PLVR  Palo Verde         1.05 327  eP        Pb       12 28 52.4 -0.7
RAFA  San Farael, Vo     1.06  62  eP        Pb       12 28 53.0 -0.3
REZ   Monterrey de S     1.06   3  eP        Pb       12 28 53.7 +0.6
VINA  Juan Vinas         1.09  67⇓eP         Pn       12 28 53.2 -0.4
ITAL  Pital              1.09  26  eP        Pb       12 28 53.6 -0.1
CVTQ  Turrialba Volc     1.12  61  eP        Pb       12 28 54.2 -0.1
CVTV  Tajo               1.13  62  eP        Pb       12 28 54.4 -0.2
TIMP  Tierras Morena     1.14 347⇑eP         Pn       12 28 54.2 -0.1
VERB  Verbena            1.15  65  eP        Pb       12 28 54.5 -0.3
QUEB  Quebradon, Cot     1.16 353⇑eP         Pb       12 28 54.7 -0.2
ABRB  Las Abras (San     1.16  62  eP        Pb       12 28 54.8 -0.2
EDPE  Pejibaye, P        1.21 104  eP        Pn       12 28 54.4 -0.8
PILE  Guapiles           1.21  52  eP        Pb       12 28 55.5 -0.2
RESJ  San Isidro (Tu     1.24  63  eP        Pb       12 28 55.8 -0.4
SAJE  San Jernim         1.24  95⇓eP         Pn       12 28 55.1 -0.7
CUI   Cuipilapa          1.25 342⇑eP         Pn       12 28 55.8  0.0
TENO  El Achiote         1.25 350  eP        Pn       12 28 55.6 -0.2
MOTZ  Rio Naranjo        1.25 346  eP        Pb       12 28 56.2 -0.2
COVE  Coope Vega, Sa     1.30  16   P        Pn       12 28 56.6 +0.2
COVE  Coope Vega, Sa     1.30  16   S        Sb       12 29 14.0 +0.6
MESS  Mesas              1.34 341⇑eP         Pn       12 28 57.1  0.0
VMAR  Armenia, Volca     1.38 345  eP        Pb       12 28 58.2 -0.5
GPS2  Hotel Rincn d      1.41 336  eP        Pn       12 28 57.8 -0.2
ELI1  Hacienda Flor      1.41 326   S        Sn       12 29 15.7 -0.1
ELI1  Hacienda Flor      1.41 326   P        Pn       12 28 58.2 +0.3
ELI1  Hacienda Flor      1.41 326  eP        Pn       12 28 58.1 +0.2
GPS1  Guardaparques      1.43 336  eP        Pn       12 28 58.3 +0.1
UPAL  Upala              1.45 350   S        Sb       12 29 18.8 +1.1
UPAL  Upala              1.45 350   P        Pb       12 28 59.3 -0.4
LAPC  Finca la Perla     1.45 333⇑eP         Pn       12 28 58.4 -0.2
VORI  VORI               1.46 337  eP        Pn       12 28 58.6 -0.3
FIMO  Fila Mora          1.47 109  eP        Pn       12 28 58.6 -0.3
TRT2  Tortugero          1.48  43   P        Pn       12 28 59.2 +0.3
TRT2  Tortugero          1.48  43   S        Sb       12 29 19.2 +0.4
TRT2  Tortugero          1.48  43⇑eP         Pn       12 28 58.9  0.0
DRK0  Durika             1.51  98   P        Pn       12 28 59.0 -0.5
DRK0  Durika             1.51  98   S        Sn       12 29 18.0 -0.6
DRK0  Durika             1.51  98⇓eP         Pn       12 28 58.8 -0.6
PEJA  Penjamo Buenos     1.52 339  eP        Pb       12 29 00.2 -0.9
PTJ1  Puerto Jimnez      1.71 123   S        Sn       12 29 23.0 -0.3
PIRO  Carate, Puerto     1.76 127   P        Pn       12 29 03.1 +0.4
PIRO  Carate, Puerto     1.76 127   S        Sn       12 29 24.6 +0.1
CARN  Rivas              1.87 336   P        Pn       12 29 04.8 +0.5
CARN                                S        Sb       12 29 28.7 -1.2
ALCO  Alturas Coton,     1.97 105  eP        Pn       12 29 05.3 -0.6
BRU2  Volcan             2.15 108   P        Pn       12 29 08.9 +0.7
BRU2  Volcan             2.15 108   S        Sn       12 29 34.3 -0.1
BOAB  BOACO BROADBAN3.10 343        P        Pn       12 29 21.1  0.0
BOAB  BOACO BROADBAN3.10 343        S        Sn       12 29 59.6 +2.0
```

DJA 14 12:36:45.4±0.3, **8°S**±3°×**10°7E**±°, **h10**^{km}, **M3.9**/12, **mB5.1**/1, **mb4.3**/1, **MLv3.6**/12, **Mw(mB)4.4**/1, **Jawa**

```
Code  Station Name        Δ°  AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s   ISC
CNJI  Cibinong           0.64  10   P        Pb       12 36 59.1 +0.5
BBJI  Bungbulang         0.78  53   P        Pg       12 37 00.7 +0.1
BBJI                                S        Sg       12 37 10.3 -0.5
SKJI  Sukabumi           1.04 334   P        Pg       12 37 05.1 -0.3
SKJI                                S        Sg       12 37 18.1 -0.8
KPJI  Karang Pucung      1.99  72   P        Pn       12 37 19.1  0.0
CTJI  Waduk Cacaban      2.34  67   P        Pn       12 37 24.0 +0.1
KASI  Kota Agung         3.47 314   P        Pn       12 37 39.8 +0.3
UGM   Wanagama           3.47  90   P        Pn       12 37 39.1 -0.4
KLSI                     3.95 325   P        Pn       12 37 48.3 +2.2
PCJI  Pacitan            4.12  94   P        Pn       12 37 48.0 -0.5
MDSI  Maura Dua          4.44 320   P        Pn       12 37 53.3 +0.4
SNJI  Sawahan-Nganju     4.70  88   P        Pn       12 37 57.9 +1.3
SJI   Sawahan            4.71  88   P        Pn       12 37 57.3 +0.7
EGSI  Enggano, Bengk     5.37 298   P        Pn       12 38 04.7 -0.9
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KRSC ***14*** *12:50:57.2±1.7, 48°.71N×156°.25E, h8^{km}±27^{km}, Ml4.9*

SKHL ***14*** *12:50:58.8±0.6, 48°.60N×155°.50E, h60^{km}±5^{km}, mb5.2/9*

MOS ***14*** *12:50:59.8±1.1, 48°.77N×155°.16E, h62^{km}, mb4.7/22, Error ellipse: s-maj=9.0km s-min=3.4km az=73.4*

IDC ***14*** *12:51:00.2±0.7, 48°.89N×154°.83E, h50^{km}±6^{km}, mb3.9/29, mbtmp4.2/33, MS3.7/40, Error ellipse: s-maj=12.7km s-min=9.1km az=142.0*

NEIC ***14*** *12:51:02.8±1.4, 49°.0N±0°.1×154°.9E±0°.2, h61^{km}±6^{km}, mb4.5/96, Error ellipse: s-maj=18.2km s-min=10.3km az=135.0*

ISC 14 12:51:00.7±0.4, **48°.81N**±0°.05×**155°.04E**±0°.05, **h55**^{km}, **n306**, σ**1^s.34**/281, **mb4.5**/91, **MS3.8**/35, **8C-5D**, **Kuril Islands**

```
Code  Station Name        Δ°  AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s   ISC
SKR   Severo-Kuril's     2.00  20⇓iPN        Pn       12 51 31.6 -0.5
SKR                                eS        Sn       12 51 56.2 +0.2
SKR                                 pmax     pmax
        comp=Z,226nm,0.5s
SKR                                 smax     smax
        comp=E,1µm,0.5s
SKR                                 smax     smax
        comp=N,2µm,0.8s
SKR   Severo-Kuril's     2.00  20  eP        Pn       12 51 31.3 -0.8
SKR                                eS        Sn       12 51 55.9 -0.1
SKR   Severo-Kuril's     2.00  20  eP        Pn       12 51 31.6 -0.5
SKR                                 AMB      AMB      12 51 31.8
        comp=N,230nm,0.5s
SKR                                eS        Sn       12 51 56.2 +0.2
SKR                                 A        A        12 51 57.5
        comp=N,2µm,0.6s
SKR                                 A        A        12 51 57.5
        comp=N,1µm,0.6s
PAU   Pauzhetka          2.90  22   PN       Pn       12 51 44.2 -0.1
PAU                                 S        Sn       12 52 18.7 +0.9
PAU   Pauzhetka          2.90  22  eP        Pn       12 51 44.3 -0.1
PAU                                eS        Sn       12 52 18.7 +0.9
PAU   Pauzhetka          2.90  22  eP        Pn       12 51 44.4 +0.1
PAU                                 AMB      AMB      12 51 48.8
        comp=N,310nm,0.3s
PAU                                eS        Sn       12 52 18.0 +0.1
PAU                                 A        A        12 52 22.7
        comp=N,1µm,0.2s
PAU                                 A        A        12 52 22.7
        comp=N,1µm,0.2s
KDTR  Khodutka, Kamc     3.58  32   PN       Pn       12 51 52.9 -0.8
KDTR                                S        Sn       12 52 33.5 -1.1
KDTR  Khodutka, Kamc     3.58  32  eP        Pn       12 51 52.9 -0.8
KDTR                               eS        Sn       12 52 33.6 -1.1
KDTR  Khodutka, Kamc     3.58  32  eP        Pn       12 51 52.9 -0.8
KDTR                               eS        Sn       12 52 33.5 -1.1
MIPR  Malaya Ipel'ka     3.64  17   PN       Pn       12 51 55.2 +0.7
MIPR  Malaya Ipel'ka     3.64  17  eP        Pn       12 51 55.3 +0.7
ASAK  Asacha             4.02  26   PN       Pn       12 52 00.6 +0.9
ASAK  Asacha             4.02  26  eP        Pn       12 52 00.7 +0.9
MTVR  Mutnovka           4.19  27   PN       Pn       12 52 02.7 +0.6
MTVR                                S        Sn       12 52 50.7 +0.9
MTVR  Mutnovka           4.19  27  eP        Pn       12 52 02.8 +0.6
MTVR                               eS        Sn       12 52 50.7 +0.9
GRL   Gorelyy            4.21  26   PN       Pn       12 52 03.6 +1.1
GRL   Gorelyy            4.21  26  eP        Pn       12 52 03.6 +1.1
RUS   Russkaya           4.25  30   PN       Pn       12 52 02.1 -0.7
RUS                                 S        Sn       12 52 50.5 -0.6
RUS   Russkaya           4.25  30  eP        Pn       12 52 02.1 -0.7
RUS                                eS        Sn       12 52 50.5 -0.6
APC   Apacha             4.33  17   PN       Pn       12 52 06.6 +2.6
APC   Apacha             4.33  17  eP        Pn       12 52 06.6 +2.6
KRMR  Karymshinskiy      4.48  25   PN       Pn       12 52 07.2 +1.2
KRMR  Karymshinskiy      4.48  25  eP        Pn       12 52 07.2 +1.2
PEA0B Petropavlovsk-     4.62  20            Pn       12 52 09.7 +1.7
PEA0B Petropavlovsk-     4.62  20cePN        Pn       12 52 09.8 +1.8
PETK  Petropavlovsk-     4.62  20   P        Pn       12 52 08.6 +0.6
        comp=N,32nm,0.4s,baz=182,slow=12,SNR=172
PETK                                S        Sn       12 53 00.2 -0.1
        comp=N,17nm,0.6s,baz=245,slow=14,SNR=1.1
PETK                                LR       LR       12 54 12.8
        comp=N,757nm,20.7s,baz=187,slow=42
PETK  Petropavlovsk-     4.62  20            Pn       12 52 09.2 +1.2
PET   Petropavlovsk      4.80  27   Pn       Pn       12 52 11.2 +0.8
PET   Petropavlovsk      4.80  27  ePN       Pn       12 52 11.4 +1.0
PET                                eS        Sn       12 53 05.6 +1.0
PET                                 smax     smax
        comp=E,372nm,0.6s
PET                                 smax     smax
        comp=N,562nm,0.8s
PET                                 MLR      MLR
        comp=Z,400nm,16.0s
PET   Petropavlovsk      4.80  27  eP        Pn       12 52 10.7 +0.3
PET                                 AMB      AMB      12 52 16.6
        comp=Z,70nm,0.4s
PET                                eS        Sn       12 53 04.4 -0.2
PET                                 A        A        12 53 14.4
        comp=Z,560nm,0.7s
PET                                 A        A        12 53 14.4
        comp=Z,370nm,0.7s
INSR  Institute          4.82  27   PN       Pn       12 52 11.4 +0.7
INSR                                S        Sn       12 53 06.8 +1.7
INSR  Institute          4.82  27  eP        Pn       12 52 11.5 +0.7
INSR                               eS        Sn       12 53 06.9 +1.7
DALK  Dalny              4.84  28   PN       Pn       12 52 11.3 +0.5
DALK                                S        Sn       12 53 06.1 +0.7
DALK  Dalny              4.84  28  eP        Pn       12 52 11.4 +0.5
DALK                               eS        Sn       12 53 06.2 +0.7
UGLR  Uglovaya           5.01  27   PN       Pn       12 52 14.5 +1.1
UGLR  Uglovaya           5.01  27  eP        Pn       12 52 14.5 +1.1
KOK   Koryaka            5.03  25   PN       Pn       12 52 15.6 +2.0
KOK   Koryaka            5.03  25  eP        Pn       12 52 15.7 +2.0
KOK   Koryaka            5.03  25  eP        Pn       12 52 15.6 +2.0
AVH   Avacha             5.04  26   PN       Pn       12 52 15.3 +1.6
AVH   Avacha             5.04  26  eP        Pn       12 52 15.4 +1.6
SMAR  Somma              5.05  27   PN       Pn       12 52 15.1 +1.1
SMAR  Somma              5.05  27  eP        Pn       12 52 15.2 +1.1
KRER  Koryakskii         5.07  26   PN       Pn       12 52 15.7 +1.4
KRER  Koryakskii         5.07  26  eP        Pn       12 52 15.8 +1.4
SDLR  Sedlovina          5.09  27   PN       Pn       12 52 14.7 +0.3
SDLR  Sedlovina          5.09  27  eP        Pn       12 52 14.8 +0.3
KRX   Arik               5.09  25   PN       Pn       12 52 15.9 +1.4
KRX   Arik               5.09  25  eP        Pn       12 52 16.0 +1.4
SPN   Mys Shipunski      5.33  34   PN       Pn       12 52 17.1 -0.5
SPN   Mys Shipunski      5.33  34  eP        Pn       12 52 17.1 -0.5
KII   Karymskiy          5.92  26   PN       Pn       12 52 27.8 +2.1
KII   Karymskiy          5.92  26  eP        Pn       12 52 27.9 +2.1
KUR   Kuril'sk           6.07 237   PN       Pn       12 52 28.8 +1.0
KUR                                eS        Sn       12 53 38.0 +2.2
KUR                                 pmax     pmax
        comp=Z,133nm,0.6s
KUR                                 pmax     pmax
        comp=E,96nm,0.7s
KUR                                 smax     smax
        comp=E,256nm,1.0s
KUR                                 smax     smax
        comp=N,128nm,0.7s
KUR   Kuril'sk           6.07 237  eP        Pn       12 52 29.0 +1.2
KUR                                 AMB      AMB      12 52 32.0
        comp=N,100nm,0.5s
KUR                                eS        Sn       12 53 36.7 +0.9
KUR                                 A        A        12 53 40.2
        comp=N,230nm,0.6s
KUR                                 A        A        12 53 40.2
        comp=N,200nm,0.6s
KZV   Kizimen            7.10  25   PN       Pn       12 52 42.2 +0.2
KZV   Kizimen            7.10  25  eP        Pn       12 52 42.3 +0.2
ESO   Esso               7.47  16   PN       Pn       12 52 50.0 +3.0
ESO   Esso               7.47  16  eP        Pn       12 52 50.1 +3.0
KMNR  Kamenistaya        7.65  23   PN       Pn       12 52 52.2 +2.7
KMNR  Kamenistaya        7.65  23  eP        Pn       12 52 52.2 +2.7
YUK   Yuzh-Kuril'sk      7.94 236  ePN       Pn       12 52 53.3 -0.1
YUK                                 pmax     pmax
        comp=Z,213nm,0.5s
YUK                                 pmax     pmax
        comp=E,70nm,0.1s
YUK                                 pmax     pmax
        comp=N,96nm,0.2s
YUK   Yuzh-Kuril'sk      7.94 236  eP        Pn       12 52 53.6 +0.2
YUK                                 AMB      AMB      12 52 54.5
        comp=N,150nm,0.2s
YUK                                eS        Sn       12 54 20.5 -1.2
YUK                                 A        A        12 54 31.9
        comp=N,460nm,1.2s
YUK                                 A        A        12 54 31.9
        comp=N,420nm,1.2s
TYV   Tymovskoe          8.27 289  ePN       Pn       12 53 03.6 +5.7
TYV                                eS        Sn       12 54 42.4  +13
TYV                                 pmax     pmax
        comp=Z,35nm,1.0s
TYV                                 pmax     pmax
        comp=Z,100nm,3.3s
TYV                                 smax     smax
        comp=N,200nm,3.5s
TYV                                 smax     smax
        comp=E,200nm,3.5s
TYV                                 smax     smax
        comp=N,11nm,1.2s
TYV                                 smax     smax
        comp=E,11nm,1.2s
TYV   Tymovskoe          8.27 289  eP        Pn       12 53 03.6 +5.7
GLVR  Golovnino          8.32 236   PN       Pn       12 52 58.9 +0.3
GLVR                                pmax     pmax
```

	comp=Z,88nm,0.1s						
GLVR	**Golovnino**	**8.32**	**236**	*e*P	**Pn**	**12 52 58.9**	**+0.3**
GLVR				AMB	AMB	12 53 00.3	
	comp=Z,90nm,0.2s						
GLVR				*e*S	**Sn**	**12 54 29.5**	**-1.5**
NMR	**Nemuro--Hokkai**	**8.45**	**233**	*e*PN	**Pn**	**12 52 58.2**	**-2.2**
YSS	**Yuzhno-Sakhali**	**8.47**	**262**		**Pn**	**12 53 03.6**	**+3.1**
YSS	**Yuzhno-Sakhali**	**8.47**	**262**	⇑*e*PN	**Pn**	**12 53 03.7**	**+3.1**
YSS				pmax	pmax		
	comp=Z,50nm,0.8s						
YSS				MLR	MLR		
	comp=Z,500nm,14.0s						
YSS	**Yuzhno-Sakhali**	**8.47**	**262**	*e*P	**Pn**	**12 53 03.5**	**+2.9**
YSS				AMB	AMB	12 53 06.1	
	comp=Z,50nm,0.7s						
YSS				*e*S	**Sn**	**12 54 34.8**	**+0.2**
SRKR	**Sorokina**	**8.69**	**23**	PN	**Pn**	**12 53 04.3**	**+0.6**
SRKR	**Sorokina**	**8.69**	**23**	*e*P	**Pn**	**12 53 04.4**	**+0.6**
KBTR	**Krutoberegovo**	**8.79**	**30**	PN	**Pn**	**12 53 03.8**	**-1.2**
KBTR	**Krutoberegovo**	**8.79**	**30**	*e*P	**Pn**	**12 53 03.9**	**-1.2**
OKH	**Okha**	**8.96**	**307**	*e*P	**Pn**	**12 53 09.7**	**+2.4**
OKH				AMB	AMB	12 53 10.4	
	comp=Z,40nm,0.4s						
AKK	**Akkeshi**	**9.16**	**235**	*e*P	**Pn**	**12 53 09.7**	**-0.5**
JKA	**Kamikawa-asahi**	**9.78**	**246**		**Pn**	**12 53 22.0**	**+3.4**
JKA	**Kamikawa-asahi**	**9.78**	**246**	*e*P	**Pn**	**12 53 22.0**	**+3.4**
ASAJ	**Asahikawa**	**9.78**	**246**	P	**Pn**	**12 53 20.5**	**+1.9**
	comp=Z,99nm,0.8s,baz=67,slow=14,SNR=77						
ASAJ				S	**Sn**	**12 55 07.9**	**+1.0**
	comp=Z,13nm,0.9s,baz=122,slow=19,SNR=1.7						
ASAJ				LR	LR	12 56 42.6	
	comp=Z,291nm,21.7s,baz=66,slow=35						
ASAJ	**Asahikawa**	**9.78**	**246**	PN	**Pn**	**12 53 22.0**	**+3.4**
NKL	**Nikolayevsk**	**10.04**	**301**	*e*P	**Pn**	**12 53 26.4**	**+4.3**
ERM	**Erimo**	**10.76**	**235**	Pn	**Pn**	**12 53 32.4**	**+0.4**
ERM	**Erimo**	**10.76**	**235**	PN	**Pn**	**12 53 32.4**	**+0.4**
MA2	**Magadan**	**11.07**	**349**	P	**Pn**	**12 53 36.9**	**+0.7**
	comp=Z,7.8nm,0.5s,baz=156,slow=13,SNR=10						
MA2				LR	LR	12 58 11.2	
	comp=Z,228nm,19.0s,baz=177,slow=39						
MA2	**Magadan**	**11.07**	**349**	*de*PN	**Pn**	**12 53 37.6**	**+1.4**
MA2				pmax	pmax		
	comp=Z,16nm,0.9s						
MA2	**Magadan**	**11.07**	**349**	*e*P	**Pn**	**12 53 37.6**	**+1.4**
SHEM	**Shemya Is, Ala**	**12.68**	**65**	LR	LR	12 58 08.6	
	comp=Z,180nm,21.5s,baz=302,slow=34						
SEY	**Seymchan**	**14.23**	**355**	P	**Pn**	**12 54 19.4**	**+0.3**
	comp=Z,4.6nm,1.0s,baz=170,slow=8.0,SNR=8.1						
SEY				S	**Sn**	**12 56 55.0**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=179,slow=23,SNR=1.3						
SEY				LR	LR	13 00 04.4	
	comp=Z,226nm,21.1s,baz=145,slow=38						
SEY	**Seymchan**	**14.23**	**355**	*e*P	**Pn**	**12 54 19.6**	**+0.5**
SEY				pmax	pmax		
	comp=Z,13nm,1.5s						
SEY	**Seymchan**	**14.23**	**355**	*e*P	**Pn**	**12 54 19.6**	**+0.5**
USRK	**Ussuriysk Ar.**	**16.50**	**262**	P	**Pn**	**12 54 49.5**	**+1.1**
	comp=Z,2.4nm,0.6s,baz=68,slow=16,SNR=5.2						
MJA0	**Matsu Arr-Jizo**	**17.35**	**231**	*e*P	**P**	**12 55 02.0**	**+2.3**
MAJO	**Matsushiro**	**17.37**	**231**		**Pn**	**12 54 59.6**	**+0.4**
MAJO	**Matsushiro**	**17.37**	**231**	P	**Pn**	**12 54 59.6**	**+0.4**
MAJO				pmax	pmax		
	comp=Z,24nm,1.0s						
MJAR	**Matsushiro Arr**	**17.37**	**231**	P	**Pn**	**12 54 59.1**	**-0.2**
	comp=Z,5.7nm,1.0s,baz=25,slow=11,SNR=6.8						
MJAR	**Matsushiro Arr**	**17.37**	**231**	P	**P**	**12 55 01.0**	**+1.1**
MJAR	**Matsushiro Arr**	**17.37**	**231**	P	**P**	**12 55 01.0**	**+1.1**
MJAR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MJB9	**Matsu-Tunnel**	**17.37**	**231**	P	**Pn**	**12 55 00.1**	**+0.9**
HEH	**HeiHe**	**17.96**	**285**	*e*P	**Pn**	**12 55 08.0**	**+1.8**
HEH				pmax	pmax		
	comp=Z,33nm,1.0s						
HEH				LR	LR		
	comp=N,230nm,14.0s						
HEH				LR	LR		
	comp=E,340nm,14.4s						
HEH				LR	LR		
	comp=Z,460nm,16.4s						
PSTR	**Posyet**	**17.97**	**259**	*c* *i*P	**Pn**	**12 55 08.0**	**+1.6**
ZEA	**Zeya**	**18.01**	**296**	*e*P	**Pn**	**12 55 09.9**	**+3.0**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA	**Zeya**	**18.01**	**296**	*e*P	**Pn**	**12 55 09.9**	**+3.0**
JGF	**Kuroka**	**18.54**	**231**		**P**	**12 55 12.7**	**-0.1**
JGF				IAmb	IAmb	12 55 41.2	
	comp=Z,47nm,1.4s						
BNX	**BinXian**	**18.96**	**271**	⇑P	**Pn**	**12 55 20.3**	**+1.9**
BNX				pmax	pmax		
	comp=Z,15nm,1.0s						
YAK	**Yakutsk**	**19.38**	**323**	P	**P**	**12 55 20.2**	**-1.4**
	comp=Z,30nm,0.8s,baz=152,slow=5.0,SNR=11						
YAK				S	**S**	**12 58 52.9**	**-4.8**
	comp=Z,4.8nm,0.4s,baz=185,slow=12,SNR=1.5						
YAK				LR	LR	13 02 41.4	
	comp=Z,177nm,21.3s,baz=108,slow=36						
YAK	**Yakutsk**	**19.38**	**323**	P	**P**	**12 55 20.9**	**-0.8**
YAK				IAmb	IAmb	12 55 25.0	
	comp=Z,28nm,0.8s						
YAK	**Yakutsk**	**19.38**	**323**	*e*P	**P**	**12 55 23.3**	**+1.6**
YAK				*e*S	**S**	**12 58 57.5**	**-0.2**
YAK				pmax	pmax		
	comp=Z,24nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,14nm,1.3s						
YAK				smax	smax		
	comp=N,107nm,3.3s						
YAK				smax	smax		
	comp=E,41nm,2.5s						
YAK				MLR	MLR		
	comp=Z,163nm,20.0s						
YAK				MLR	MLR		
	comp=N,76nm,23.0s						
YAK				MLR	MLR		
	comp=E,34nm,11.0s						
BILL	**Bilibino**	**20.10**	**12**		**P**	**12 55 28.6**	**-0.9**
BILL	**Bilibino**	**20.10**	**12**	*d* *i*P	**P**	**12 55 28.1**	**-1.3**
BILL				pmax	pmax		
	comp=Z,13nm,1.0s						
CN2	**Changchun**	**20.97**	**267**	*e*P	**P**	**12 55 38.1**	**-1.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KSRS	**Korea Array**	**22.69**	**250**	P	**P**	**12 55 57.4**	**-0.2**
	comp=Z,12nm,0.8s,baz=48,slow=10.0,SNR=40						
	comp=Z,12nm,0.8s						
KSRS	**Korea Array**	**22.69**	**250**	*e*P	**P**	**12 55 57.3**	**-0.2**
KSRS				pmax	pmax		
	comp=Z,13nm,0.8s						
KS19	**Wonju Array Si**	**22.69**	**250**	P	**P**	**12 55 57.8**	**+0.2**
KS19				IAmb	IAmb	12 56 29.7	
	comp=Z,26nm,1.2s						
KSAR	**Wonju Array Be**	**22.72**	**250**		**P**	**12 55 57.1**	**-0.8**
KSAR	**Wonju Array Be**	**22.72**	**250**	P	**P**	**12 55 57.1**	**-0.8**
HILR	**Hailar Array B**	**22.96**	**285**	P	**P**	**12 55 59.0**	**-1.3**
	comp=Z,1.4nm,0.3s,baz=66,slow=9.6,SNR=2.9						
	comp=Z,1.4nm,0.3s						
TJN	**Taejon**	**23.72**	**249**	P	**P**	**12 56 07.5**	**-0.1**
TJN	**Taejon**	**23.72**	**249**	P	**P**	**12 56 07.5**	**-0.1**
TJN				pmax	pmax		
	comp=Z,185nm,1.3s						
JCJ	**Chichijima**	**23.86**	**209**	LR	LR	13 06 23.9	
	comp=Z,14nm,19.1s,baz=319,slow=39						
TIXI	**Tiksi**	**25.89**	**341**	LR	LR	13 07 03.1	
	comp=Z,137nm,19.1s,baz=15,slow=37						
TIXI	**Tiksi**	**25.89**	**341**		**P**	**12 56 25.8**	**-1.2**
TIXI				IAmb	IAmb	12 56 43.8	
	comp=Z,13nm,0.8s						
TIXI	**Tiksi**	**25.89**	**341**	P	**P**	**12 56 25.8**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,13nm,0.8s						
J14K	**Nanvaranak Lak**	**26.58**	**43**	P	**P**	**12 56 33.7**	**+0.5**
J14K				IAmb	IAmb	12 56 42.4	
	comp=Z,26nm,1.5s						
C16K	**Lisburne Hills**	**27.63**	**31**	IAmb	IAmb	12 57 14.1	
	comp=Z,16nm,1.4s						
L16K	**Owhat River**	**28.30**	**46**	P	**P**	**12 56 49.3**	**+0.7**
C18K	**Utukok River**	**29.19**	**31**	IAmb	IAmb	12 57 24.3	
	comp=Z,14nm,1.4s						
M17K	**Holitna River**	**29.24**	**47**	P	**P**	**12 56 58.3**	**+1.2**
M17K				IAmb	IAmb	12 56 59.2	
	comp=Z,25nm,1.2s						
C19K	**Lookout Ridge**	**29.89**	**31**	P	**P**	**12 57 03.4**	**+0.6**
H19K	**Roundabout Mou**	**30.17**	**38**	IAmb	IAmb	12 57 19.0	
	comp=Z,8.7nm,0.9s						
D19K	**Kuna River**	**30.21**	**32**	IAmb	IAmb	12 57 06.7	
	comp=Z,8.2nm,1.1s						
J19K	**Poorman**	**30.30**	**42**	P	**P**	**12 57 07.2**	**+0.8**
J19K				IAmb	IAmb	12 57 32.9	
	comp=Z,15nm,1.4s						
H11N2	**WAKE ISLAND Hy**	**30.54**	**158**	T	T	13 29 01.4	
	baz=345,slow=76,SNR=200						
H11N1	**WAKE ISLAND Hy**	**30.56**	**158**	T	T	13 29 01.9	
	baz=345,slow=76,SNR=331						
H11N3	**WAKE ISLAND Hy**	**30.56**	**158**	T	T	13 29 07.8	
	baz=345,slow=76,SNR=147						
D20K	**Etivluk River**	**30.80**	**32**	IAmb	IAmb	12 57 11.6	
	comp=Z,8.1nm,0.9s						
HNS	**HongShan**	**31.23**	**264**	⇑P	**P**	**12 57 15.3**	**+0.5**
HNS				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC	**Hu-ho-hao-te**	**31.48**	**272**	*e*P	**P**	**12 57 18.3**	**+1.1**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,77nm,4.7s						
HHC				pmax	pmax		
	comp=Z,170nm,11.0s						
HHC				LR	LR		
	comp=N,150nm,9.7s						
HHC				LR	LR		
	comp=Z,130nm,9.8s						
H11S1	**WAKE ISLAND Hy**	**31.67**	**159**	T	T	13 30 29.9	
	baz=345,slow=76,SNR=2927						
H11S3	**WAKE ISLAND Hy**	**31.68**	**159**	T	T	13 30 27.1	
	baz=345,slow=76,SNR=3177						
H11S2	**WAKE ISLAND Hy**	**31.68**	**159**	T	T	13 30 31.3	
	baz=345,slow=76,SNR=1676						
NJ2	**Nanjing**	**31.86**	**252**	*e*P	**P**	**12 57 22.6**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
SONM	**Songino Array**	**31.93**	**287**	P	**P**	**12 57 20.1**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=61,slow=10,SNR=2.1						
SONM				PcP	**PcP**	**13 00 10.2**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=92,slow=2.0,SNR=9.6						
SONM				LR	LR	13 11 36.7	
	comp=Z,228nm,18.5s,baz=88,slow=39						
	comp=Z,0.4nm,0.5s						
STLK	**Strandline Lak**	**31.94**	**47**	P	**P**	**12 57 22.0**	**+1.1**
STLK				IAmb	IAmb	12 57 22.7	
	comp=Z,6.9nm,0.9s						
B22K	**Teshekpuk Lake**	**32.31**	**30**	P	**P**	**12 57 24.4**	**+0.5**
E22K	**Anaktuvuk Pass**	**32.41**	**34**		**P**	**12 57 25.4**	**+0.5**
E22K				IAmb	IAmb	12 57 38.5	
	comp=Z,6.2nm,0.6s						
TRF	**Thorofare Moun**	**32.64**	**43**	P	**P**	**12 57 28.0**	**+0.9**
TRF				IAmb	IAmb	12 57 43.0	
	comp=Z,18nm,1.4s						
COLD	**Coldfoot**	**32.90**	**36**		**P**	**12 57 30.0**	**+0.8**
COLD				IAmb	IAmb	12 57 42.1	
	comp=Z,4.1nm,0.6s						
E23K	**Chandalar**	**33.22**	**34**	IAmb	IAmb	12 57 45.5	
	comp=Z,8.1nm,0.7s						
SML	**Sawmill**	**33.59**	**46**	P	**P**	**12 57 35.9**	**+0.6**
SML	**Sawmill**	**33.59**	**46**	P	**P**	**12 57 35.9**	**+0.6**
SML				pmax	pmax		
	comp=Z,31nm,0.9s						
COLA	**College**	**33.72**	**40**	⇑*e*P	**P**	**12 57 36.4**	**+0.1**
COLA				pmax	pmax		
	comp=Z,11nm,0.9s						
IL31		**34.13**	**40**	P	**P**	**12 57 40.8**	**+1.0**
IL31				IAmb	IAmb	12 58 02.8	
	comp=Z,12nm,1.5s						
ILAR	**Eielson Array**	**34.13**	**40**	P	**P**	**12 57 39.4**	**-0.6**
	comp=Z,1.5nm,0.9s,baz=264,slow=9.2,SNR=13						
ILAR				LR	LR	13 12 36.0	
	comp=Z,48nm,18.3s,baz=144,slow=38						
	comp=Z,1.5nm,0.9s						
ILAR	**Eielson Array**	**34.13**	**40**	P	**P**	**12 57 40.7**	**+0.8**
ILAR	**Eielson Array**	**34.13**	**40**	*e*P	**P**	**12 57 40.0**	**+0.1**
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
E25K	**Arctic Village**	**34.74**	**34**	IAmb	IAmb	12 57 47.3	
	comp=Z,7.4nm,1.1s						
BMAR	**Burnt Mountain**	**35.09**	**36**	P	**P**	**12 57 49.5**	**+1.4**
C27K	**Jago River**	**35.49**	**32**	IAmb	IAmb	12 58 06.4	
	comp=Z,9.8nm,1.1s						
GUMO	**Guam**	**36.11**	**197**	LR	LR	13 10 24.6	
	comp=Z,29nm,21.2s,baz=78,slow=32						
E27K	**Coleen River**	**36.22**	**34**	IAmb	IAmb	12 58 00.0	
	comp=Z,8.0nm,1.1s						
D27M	**Malcolm River**	**36.45**	**33**	IAmb	IAmb	12 58 01.7	
	comp=Z,6.8nm,0.8s						
BCAR	**Beaver Creek A**	**36.50**	**43**		**P**	**12 58 01.4**	**+1.1**
F28M	**Old Crow**	**36.89**	**35**	IAmb	IAmb	12 58 17.9	
	comp=Z,4.8nm,0.8s						
I28M	**Miner Creek**	**37.03**	**39**	IAmb	IAmb	12 58 32.8	
	comp=Z,8.9nm,1.2s						
E29M	**Blow River**	**37.59**	**34**	IAmb	IAmb	12 58 11.8	
	comp=Z,8.2nm,1.1s						
NRIK	**Noril'sk**	**37.69**	**328**	LR	LR	13 13 33.5	
	comp=Z,82nm,20.4s,baz=65,slow=36						
CNSH	**ChangSha**	**38.24**	**253**	P	**P**	**12 58 14.8**	**-0.5**
I30M	**Mount Dempster**	**38.54**	**39**	IAmb	IAmb	12 58 32.0	
	comp=Z,7.1nm,0.9s						
LZH	**Lanzhou**	**39.14**	**271**	*e*P	**P**	**12 58 22.4**	**-0.7**
LZH				pP	pP	12 58 40.9	+3.9
LZH				pmax	pmax		
	comp=Z,11nm,1.3s						
INK	**Inuvik**	**39.21**	**34**	P	**P**	**12 58 23.4**	**+0.4**
	comp=Z,3.2nm,0.8s,baz=286,slow=7.9,SNR=11						
	comp=Z,3.2nm,0.8s						
INK	**Inuvik**	**39.21**	**34**		**P**	**12 58 24.3**	**+1.3**
INK				IAmb	IAmb	12 58 37.0	
	comp=Z,4.5nm,0.8s						
GTA	**Gaotai**	**39.96**	**278**	*e*P	**P**	**12 58 29.1**	**-0.6**
GTA				sP	sP	12 58 55.6	+5.5
GTA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
P33M	**Teslin, Yukon**	**41.30**	**46**	P	**P**	**12 58 42.3**	**+1.9**
P33M				IAmb	IAmb	12 58 44.1	
	comp=Z,8.6nm,1.1s						
A36M	**Sachs Harbour**	**41.43**	**28**		**P**	**12 58 42.6**	**+1.4**
C36M	**Paulatuk**	**42.38**	**31**		**P**	**12 58 49.8**	**+0.7**
C36M				IAmb	IAmb	12 58 51.3	
	comp=Z,14nm,1.0s						
R33M	**Jennings River**	**42.44**	**47**		**P**	**12 58 52.0**	**+2.1**
R33M				IAmb	IAmb	12 58 53.4	
	comp=Z,13nm,1.1s						
ZALV	**Zalesovo Beam**	**42.49**	**305**	P	**P**	**12 58 48.6**	**-1.5**
	comp=Z,0.7nm,0.4s,baz=65,slow=7.3,SNR=5.5						
ZALV				PcP	**PcP**	**13 00 42.3**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=74,slow=2.6,SNR=6.6						
ZALV				LR	LR	13 16 41.4	
	comp=Z,87nm,19.4s,baz=62,slow=36						
	comp=Z,0.7nm,0.4s						
ZALV	**Zalesovo Beam**	**42.49**	**305**	*e*P	**P**	**12 58 50.8**	**+0.7**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
DGZ	**Jazzator, Alta**	**42.77**	**298**	⇑*e*P	**P**	**12 58 55.0**	**+2.3**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WTLY	**Watson Lake, Y**	**43.23**	**45**	IAmb	IAmb	12 58 58.9	
	comp=Z,11nm,1.1s						
GOMU	**GeErMu**	**45.03**	**277**	P	**P**	**12 59 10.0**	**-1.3**
GOMU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PZH	**PanZhiHua**	**46.60**	**261**	P	**P**	**12 59 24.1**	**+0.7**
KMI	**Kunming**	**46.90**	**259**	P	**P**	**12 59 25.8**	**-0.1**
KMI				pmax	pmax		
	comp=Z,15nm,0.7s						
MKAR	**Makanchi Array**	**47.17**	**297**	P	**P**	**12 59 25.4**	**-2.1**
	comp=Z,0.8nm,0.5s,baz=64,slow=7.9,SNR=8.8						
MKAR				PcP	**PcP**	**13 00 58.5**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=56,slow=4.5,SNR=2.2						
MKAR				S	**S**	**13 06 10.9**	**-5.0**
	comp=Z,0.3nm,0.8s,baz=174,slow=32,SNR=5.4						
MKAR				LR	LR	13 20 22.1	
	comp=Z,152nm,19.7s,baz=68,slow=38						
	comp=Z,0.8nm,0.5s						
MKAR	**Makanchi Array**	**47.17**	**297**	P	**P**	**12 59 26.3**	**-1.2**
MKAR	**Makanchi Array**	**47.17**	**297**	P	**P**	**12 59 26.3**	**-1.2**
KURK	**Kurchatov**	**47.32**	**303**		**P**	**12 59 27.6**	**-0.9**
KURK	**Kurchatov**	**47.32**	**303**	*i* P	**P**	**12 59 28.5**	**-0.1**
KURK	**Kurchatov**	**47.32**	**303**	*e*P	**P**	**12 59 28.5**	**-0.1**
KURBB	**Kurchatov Arra**	**47.42**	**303**	P	**P**	**12 59 28.1**	**-1.2**
	comp=Z,1.3nm,0.7s,baz=67,slow=8.3,SNR=8.0						
KURBB				LR	LR	13 20 36.1	
	comp=Z,97nm,19.2s,baz=176,slow=38						
	comp=Z,1.3nm,0.7s						
YKAW3	**Yellowknife Wh**	**48.46**	**38**	P	**P**	**12 59 37.9**	**+0.6**
YKAW3				IAmb	IAmb	12 59 38.9	
	comp=Z,6.4nm,1.0s						
RES	**Resolute Bay**	**48.47**	**19**	LR	LR	13 22 36.3	
	comp=Z,74nm,18.4s,baz=352,slow=39						
YKA	**Yellowknife Ar**	**48.50**	**38**	P	**P**	**12 59 37.2**	**-0.3**
	comp=Z,2.9nm,0.9s,baz=299,slow=8.4,SNR=21						
YKA				PcP	**PcP**	**13 01 02.8**	**+0.1**
	comp=Z,0.1nm,0.5s,baz=308,slow=4.4,SNR=1.1						
	comp=Z,2.9nm,0.9s						
YKA	**Yellowknife Ar**	**48.50**	**38**	*e*P	**P**	**12 59 38.4**	**+0.9**
YKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YKAW1	**Yellowknife Wh**	**48.55**	**38**		**P**	**12 59 39.0**	**+1.1**
SLVN	**Son La**	**48.84**	**255**		**P**	**12 59 40.7**	**0.0**
SLVN				IAmb	IAmb	12 59 42.8	
	comp=Z,5.9nm,0.9s						
BVAR	**Borovoye Array**	**50.57**	**309**	P	**P**	**12 59 51.9**	**-1.5**
	comp=Z,1.2nm,0.4s,baz=58,slow=7.3,SNR=7.5						
BVAR				PcP	**PcP**	**13 01 09.2**	**-1.2**
	comp=Z,1.0nm,0.5s,baz=46,slow=4.3,SNR=5.0						
BVAR				LR	LR	13 21 59.9	
	comp=Z,153nm,19.4s,baz=62,slow=37						
	comp=Z,1.2nm,0.4s						
BORK	**Borovoye**	**50.59**	**309**	*i* P	**P**	**12 59 55.3**	**+1.7**
SPITS	**Spitsbergen Ar**	**50.81**	**350**	P	**P**	**12 59 52.4**	**-2.6**
	comp=Z,3.7nm,0.8s,baz=61,slow=8.7,SNR=6.2						
	comp=Z,3.7nm,0.8s						
JAY	**Jayapura**	**52.61**	**198**	LR	LR	13 18 49.0	
	comp=Z,22nm,21.0s,baz=336,slow=32						
EDM	**Edmonton**	**53.96**	**48**		**P**	**13 00 19.3**	**+0.7**
EDM	**Edmonton**	**53.96**	**48**	P	**P**	**13 00 19.3**	**+0.7**
EDM				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AAK	**Ala-Archa**	**54.09**	**296**	LR	LR	13 24 51.3	
	comp=Z,109nm,19.5s,baz=47,slow=38						
CM31	**Chiang Mai Arr**	**54.12**	**256**	P	**P**	**13 00 20.7**	**+0.6**
CMAR	**Chiang Mai Arr**	**54.12**	**256**	P	**P**	**13 00 19.6**	**-0.5**
	comp=Z,8.5nm,0.8s,baz=33,slow=7.4,SNR=64						
CMAR				pP	**pP**	**13 00 34.0**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=40,slow=7.6,SNR=3.5						
	comp=Z,8.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**54.12**	**256**		**P**	**13 00 21.1**	**+1.0**
CMAR	**Chiang Mai Arr**	**54.12**	**256**	*e*P	**P**	**13 00 20.9**	**+0.8**
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ARTI	**Arti**	**54.48**	**317**	LR	LR	13 25 39.9	
	comp=Z,53nm,19.9s,baz=39,slow=38						
ARTI	**Arti**	**54.48**	**317**	*c* *i*P	**P**	**13 00 20.5**	**-1.8**
ARTI						13 01 23.7	
ARTI				S	**S**	**13 07 52.8**	**-4.0**
ARTI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ILON	**Igloolik, Nuna**	**55.00**	**21**	P	**P**	**13 00 26.1**	**+0.2**
EVN	**Everest**	**55.47**	**274**	IAmb	IAmb	13 00 32.5	
	comp=Z,4.0nm,0.7s						
BRDH	**Bariadhala**	**55.87**	**266**	LR	LR	13 25 45.5	
	comp=Z,63nm,18.7s,baz=258,slow=37						
K05A	**Summer Lake**	**56.11**	**62**	P	**P**	**13 00 36.2**	**+1.7**
KK31	**Karatay Array**	**56.15**	**299**	P	**P**	**13 00 34.8**	**+0.3**
KK31	**Karatay Array**	**56.15**	**299**	P	**P**	**13 00 34.8**	**+0.3**
KK31				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KKAR	**Karatay Array**	**56.15**	**299**	P	**P**	**13 00 34.8**	**+0.3**
KKAR	**Karatay Array**	**56.15**	**299**	P	**P**	**13 00 34.8**	**+0.3**
ARCES	**ARCESS Array B**	**56.33**	**341**	P	**P**	**13 00 33.9**	**-1.5**
	comp=Z,1.1nm,0.6s,baz=40,slow=6.9,SNR=8.5						
ARCES				LR	LR	13 28 47.6	
	comp=Z,103nm,19.3s,baz=22,slow=40						
	comp=Z,1.1nm,0.6s						
ARCES	**ARCESS Array B**	**56.33**	**341**	P	**P**	**13 00 34.8**	**-0.6**
ARCES	**ARCESS Array B**	**56.33**	**341**	*e*P	**P**	**13 00 34.6**	**-0.8**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KIRV	**Kirov**	**56.91**	**323**	LR	LR	13 26 45.3	
	comp=Z,56nm,21.1s,baz=40,slow=38						
PLID	**Pearl Lake**	**57.45**	**57**		**P**	**13 00 45.0**	**+1.1**
PLID				IAmb	IAmb	13 01 01.8	
	comp=Z,4.1nm,0.8s						
AB31	**Akbulak array**	**58.11**	**310**		**P**	**13 00 47.0**	**-1.1**
ABKAR	**Akbulak array**	**58.11**	**310**	P	**P**	**13 00 47.1**	**-1.1**
AKTO	**Aktyubinsk**	**58.32**	**312**	LR	LR	13 27 28.9	
	comp=Z,65nm,20.1s,baz=212,slow=38						
PMG	**Port Moresby**	**58.38**	**189**	LR	LR	13 20 57.9	
	comp=Z,30nm,21.9s,baz=344,slow=31						
SUMG	**Summit**	**58.55**	**5**		**P**	**13 00 51.5**	**+0.1**
SUMG	**Summit**	**58.55**	**5**	P	**P**	**13 00 51.5**	**+0.1**
SUMG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KLMR	**Klimovskoe**	**59.01**	**329**	*e*P	**P**	**13 00 51.9**	**-2.4**
KLMR				pmax	pmax		
	comp=Z,24nm,1.6s						
BOZ	**Bozeman (W)**	**59.51**	**54**	IAmb	IAmb	13 01 00.3	
	comp=Z,3.1nm,0.8s						
NVAR	**Mina Array Bea**	**60.35**	**64**	P	**P**	**13 01 05.0**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=296,slow=7.1,SNR=6.6						
	comp=Z,1.2nm,0.7s						
NVAR	**Mina Array Bea**	**60.35**	**64**	P	**P**	**13 01 05.1**	**+1.0**
YHH	**Holmes Hill**	**60.46**	**55**	P	**P**	**13 01 06.2**	**+1.3**
DUG	**Dugway, Tooele**	**62.39**	**60**	IAmb	IAmb	13 01 20.9	
	comp=Z,2.8nm,0.9s						
BW06	**Boulder Array**	**62.50**	**56**	IAmb	IAmb	13 01 20.8	
	comp=Z,2.6nm,0.8s						
PD31	**Pinedale Array**	**62.50**	**56**	IAmb	IAmb	13 01 20.8	
	comp=Z,2.6nm,0.8s						
PDAR	**Pinedale Array**	**62.50**	**56**	P	**P**	**13 01 18.9**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=314,slow=2.6,SNR=22						
	comp=Z,2.6nm,0.8s						
PDAR	**Pinedale Array**	**62.50**	**56**	P	**P**	**13 01 19.3**	**+0.7**
FRB	**Frobisher Bay**	**62.67**	**20**	LR	LR	13 30 15.1	
	comp=Z,52nm,19.3s,baz=312,slow=38						
FIA1	**FINESS Array S**	**62.72**	**335**	P	**P**	**13 01 18.3**	**-1.1**
FINES	**FINESS Array B**	**62.72**	**335**	P	**P**	**13 01 18.3**	**-1.1**
	comp=Z,2.8nm,0.7s,baz=37,slow=7.4,SNR=18						
FINES				LR	LR	13 30 58.2	
	comp=Z,138nm,19.8s,baz=20,slow=38						
	comp=Z,2.8nm,0.7s						
SFJD	**Kangerlussuaq**	**62.89**	**11**	P	**P**	**13 01 20.5**	**+0.1**
SFJD	**Kangerlussuaq**	**62.89**	**11**	P	**P**	**13 01 20.5**	**+0.1**
SFJD				pmax	pmax		
	comp=Z,31nm,1.5s						
TMUT	**Trail Mountain**	**63.91**	**60**	IAmb	IAmb	13 01 30.8	
	comp=Z,6.8nm,1.3s						
ULM	**Lac du Bonnet**	**64.12**	**42**	P	**P**	**13 01 28.5**	**-0.4**
	comp=Z,2.0nm,0.7s,baz=240,slow=4.1,SNR=3.7						
	comp=Z,2.0nm,0.7s						
ULM	**Lac du Bonnet**	**64.12**	**42**	*e*P	**P**	**13 01 29.6**	**+0.7**
ULM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
OBN	**Obninsk**	**64.34**	**326**	*e*P	**P**	**13 01 33.0**	**+2.8**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SRU	**San Rafael Swe**	**64.43**	**59**	IAmb	IAmb	13 01 33.5	
	comp=Z,6.0nm,0.8s						
RSSD	**Black Hills**	**64.51**	**52**		**P**	**13 01 32.8**	**+1.0**
RSSD				IAmb	IAmb	13 01 33.4	
	comp=Z,10.0nm,1.3s						
RSSD	**Black Hills**	**64.51**	**52**	P	**P**	**13 01 32.8**	**+1.0**
RSSD				pmax	pmax		
	comp=Z,10.0nm,1.3s						
NB2	**NORSAR Subarra**	**66.69**	**342**	P	**P**	**13 01 44.1**	**-1.3**
	comp=Z,1.4nm,0.8s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**66.69**	**342**	P	**P**	**13 01 44.7**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=29,slow=6.6,SNR=4.7						
NOA				LR	LR	13 34 20.4	
	comp=Z,58nm,18.9s,baz=15,slow=39						
	comp=Z,0.8nm,0.6s						
NOA	**NORSAR Array B**	**66.69**	**342**	*e*P	**P**	**13 01 46.7**	**+1.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ISCO	**Idaho Springs**	**66.69**	**56**	IAmb	IAmb	13 01 48.2	
	comp=Z,3.7nm,0.9s						
NORES	**NORESS Array B**	**66.90**	**341**	P	**P**	**13 01 49.4**	**+2.8**
HFS	**Hagfors**	**66.97**	**340**	P	**P**	**13 01 46.0**	**-1.1**
	comp=Z,1.6nm,0.6s,baz=38,slow=3.4,SNR=7.8						
HFS				LR	LR	13 33 01.0	
	comp=Z,24nm,21.8s,baz=11,slow=38						
	comp=Z,1.6nm,0.6s						
HFS	**Hagfors**	**66.97**	**340**	P	**P**	**13 01 46.0**	**-1.1**
KBZ	**Khabaz**	**70.36**	**315**	LR	LR	13 35 22.9	
	comp=Z,85nm,20.8s,baz=10.0,slow=38						
AKASG	**Malin Array Be**	**70.55**	**327**	P	**P**	**13 02 08.2**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=33,slow=6.2,SNR=4.6						
AKASG				LR	LR	13 35 37.1	
	comp=Z,89nm,18.1s,baz=48,slow=38						
	comp=Z,0.5nm,0.3s						
319A	**Douglas**	**70.56**	**64**	IAmb	IAmb	13 02 12.4	

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      comp=Z,5.9nm,0.8s
WRAB  Tennant Creek     70.88 201 deP     P       13 02 11.2 -0.6
WRAB                              pmax    pmax
      comp=Z,2.0nm,0.8s
WRA   Warramunga Arr    70.89 201  P      P       13 02 11.1 -0.7
      comp=Z,2.3nm,0.8s,baz=17,slow=6.2,SNR=8.8
WRA                                pP     pP      13 02 24.7 -2.4
      comp=Z,1.9nm,0.8s,baz=17,slow=6.2,SNR=5.6
      comp=Z,2.3nm,0.8s
SCHQ  Schefferville     70.90  24  P      P       13 02 11.1 -0.5
      comp=Z,4.3nm,0.7s,baz=332,slow=5.0,SNR=11
      comp=Z,4.3nm,0.7s
DZM   Mont Dzumac       71.29 169  LR     LR      13 28 56.2
      comp=Z,29nm,19.7s,baz=27,slow=32
DZM   Mont Dzumac       71.29 169 eLR     LR      13 24 07.4
      comp=Z,84nm,23.4s
STHS  Stebnicka Huta    74.37 331 eP      P       13 02 33.4 +1.1
STHS  Stebnicka Huta    74.37 331 eP      P       13 02 33.4 +1.1
BUR08 Bucovina Ar. S    74.55 327         P       13 02 33.4 -0.1
BUR08                              IAmb   IAmb    13 02 52.4
      comp=Z,8.4nm,1.4s
BURAR Bucovina Array    74.57 327  P      P       13 02 33.7 +0.1
BURAR Bucovina Array    74.57 327  P      P       13 02 33.7 +0.1
BURAR                              pmax   pmax
      comp=Z,2.0nm,1.0s
AS31  Alice Springs     74.58 200  P      P       13 02 34.2 +0.6
ASAR  Alice Springs     74.58 200  P      P       13 02 34.0 +0.3
      comp=Z,1.2nm,0.6s,baz=13,slow=5.6,SNR=31
      comp=Z,1.2nm,0.6s
ASAR  Alice Springs     74.58 200  P      P       13 02 34.2 +0.5
ASAR  Alice Springs     74.58 200  P      P       13 02 34.2 +0.5
EKA   Eskdalemuir Ar    74.63 347  P      P       13 02 33.8 +0.1
      comp=Z,2.5nm,0.6s,baz=17,slow=5.1,SNR=9.3
      comp=Z,2.5nm,0.6s
TX31  Lajitas Ar. Si    75.36  62  IAmb   IAmb    13 02 40.0
      comp=Z,3.6nm,0.8s
TXAR  Lajitas Array     75.36  62  P      P       13 02 39.4 +0.9
      comp=Z,2.9nm,0.7s,baz=299,slow=4.3,SNR=48
TXAR                               pP     pP      13 02 52.7 -1.1
      comp=Z,1.6nm,0.6s,baz=299,slow=3.9,SNR=7.7
      comp=Z,2.9nm,0.7s
VRAC  Vranov            75.91 333  LR     LR      13 38 35.1
      comp=Z,130nm,18.9s,baz=22,slow=38
MLR   Muntele Rosu      76.11 326  LR     LR      13 38 10.2
      comp=Z,71nm,19.1s,baz=4.0,slow=37
MODS  Modra-Piesok      76.54 333 eP      P       13 02 46.0 +1.3
MODS  Modra-Piesok      76.54 333 eP      P       13 02 46.0 +1.3
GERES GERESS Array B    77.16 335  P      P       13 02 48.5 +0.2
      comp=Z,0.5nm,0.5s,baz=46,slow=7.6,SNR=3.4
GERES                              LR     LR      13 39 56.4
      comp=Z,144nm,18.2s,baz=356,slow=38
      comp=Z,0.5nm,0.5s
BRTR  Keskin Array B    77.76 318  P      P       13 02 52.0 +0.1
      comp=Z,1.2nm,0.9s,baz=129,slow=1.8,SNR=5.4
      comp=Z,1.2nm,0.9s
BRTR  Keskin Array B    77.76 318 eP      P       13 02 52.8 +0.9
BRTR                               pmax   pmax
      comp=Z,1.0nm,0.9s
DAVOX Davos/Dischmat    80.09 337  LR     LR      13 42 02.8
      comp=Z,62nm,18.2s,baz=80,slow=38
TUE   Stuetta           80.51 337  P      P       13 03 07.1 +0.2
TAOE  Nuku Hiva Isla    80.60 115 eLR     LR      13 28 23.5
      comp=Z,91nm,23.3s
PPT   Papeete           82.35 128  LR     LR      13 36 32.2
      comp=Z,21nm,19.9s,baz=265,slow=33
PPT2  Papeete2          82.37 128 eLR     LR      13 29 25.4
      comp=Z,57nm,23.5s
MMAI  Mount Meron Ar    82.40 313  P      P       13 03 17.4 +0.4
      comp=Z,4.1nm,0.6s,baz=45,slow=8.4,SNR=4.0
      comp=Z,4.1nm,0.6s
FORT  Forrest           82.82 203  P      P       13 03 19.6 +0.9
FORT                               IAmb   IAmb    13 03 20.0
      comp=Z,4.1nm,0.7s
EIL   Elat              85.35 311  LR     LR      13 45 21.9
      comp=Z,54nm,19.6s,baz=358,slow=38
TBI   Tubuai            87.22 131 eLR     LR      13 31 19.3
      comp=Z,388nm,25.5s
ESDC  Sonseca Array     89.96 344  P      P       13 03 53.0 -1.0
      comp=Z,1.0nm,0.9s,baz=354,slow=2.6,SNR=3.0
ESDC                               LR     LR      13 49 09.9
      comp=Z,55nm,19.6s,baz=5.0,slow=39
      comp=Z,1.0nm,0.9s
KEST  Kesra             90.46 333  LR     LR      13 48 16.3
      comp=Z,66nm,19.3s,baz=320,slow=38
RKT   Rikitea           94.86 120 eLR     LR      13 34 55.6
      comp=Z,12µm,35.0s
MDT   Midelt            96.73 343  LR     LR      13 53 04.5
      comp=Z,41nm,19.0s,baz=23,slow=38
BOSA  Boshof           136.84 279  PKP    PKPdf   13 10 16.9  0.0
      comp=Z,3.3nm,0.6s,baz=105,slow=2.2,SNR=6.3
BOSA  Boshof           136.84 279  PKIKP  PKPdf   13 10 17.0  0.0
H03N2 Juan Fernandez   137.45  89  T      T       15 43 23.7
      baz=310,slow=77,SNR=144
H03N1 Juan Fernandez   137.46  89  T      T       15 43 25.0
      baz=310,slow=77,SNR=145
H03N3 Juan Fernandez   137.46  89  T      T       15 43 19.9
      baz=310,slow=77,SNR=130
QSPA  South Pole Qui   138.55 180  PKP    PKPdf   13 10 19.3 +0.5
      comp=Z,0.5nm,0.6s,baz=332,slow=1.6,SNR=7.0
CPUP  Villa Florida    146.31  60  PKPbc  PKPdf   13 10 33.2 -0.6
      comp=Z,0.5nm,0.7s,baz=0.3,slow=2.0,SNR=5.5
ELIB  Princess Elisa   148.21 206 dPKPdf  PKPbc   13 10 38.9 -0.3
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*IGIL **14** 12:54:41.5, 37°.14N×3°.76W, h1km*
*MDD **14** 12:54:41.1±0.1, 37°.14N×3°.76W, h1km, mb_Lg3.5/63, Error ellipse: s-maj=1.4km s-min=1.1km az=156.0*
*INMG **14** 12:54:41.3±1.5, 37°.11N×3°.74W, h0km±2km, ML3.0, Error ellipse: s-maj=1.7km s-min=1.3km az=1.0, #DIST_RANGE: REGIONAL #IPMA_REGION: W Granada (ESP)*
*SFS **14** 12:54:41.6, 37°.14N×3°.74W, h0km, ML3.7/23, ML3.6/23, MLv3.4/23*
ISC 14 12:54:40.3±0.8**, 37°.14N**±0°.02×**3°.74W**±0°.01**, h8**km±6km**,**
n102, σ1ˢ.17/225**, 3C, Spain**

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Code  Station Name        Δ°  AZ°    Phase ID          Time     Res
                                    Op     ISC       h  m  s    ISC
EXGRA Granada            0.12  65   Pg     Pg       12 54 43.8 +0.8
EXGRA                               Sg     Sg       12 54 45.6 +0.7
EXCAB Granada            0.12  74   Pg     Pg       12 54 40.7 -2.3
EXCAB                               Sg     Sg       12 54 43.3 -1.7
EXAGR Agron              0.14 214  ⇑Pg     Pg       12 54 43.6 +0.3
EXAGR                               Sg     Sg       12 54 45.1 -0.3
EQTA  Presa de Quent     0.24  75   Sg     Sg       12 54 49.0 +0.5
EQTA                                Pg     Pg       12 54 45.6 +0.3
EQUE  Quentar            0.25  75  ⇑Pg     Pg       12 54 45.6 +0.4
EQUE                                Sg     Sg       12 54 48.8 +0.1
EQUE                              i IVmb_Lg         12 54 50.8
ELGU  Los Guajares,      0.29 162   Sg     Sg       12 54 50.8 +0.9
ELGU                                Pg     Pg       12 54 46.2 +0.1
ELGU  Los Guajares,      0.29 162   Pg     Pg       12 54 46.2 +0.1
ELGU                                Sg     Sg       12 54 49.5 -0.4
ELGU                              i IVmb_Lg         12 54 52.4
EGOR  Sierra Gorda,      0.30 264   Pg     Pg       12 54 46.2 -0.1
EGOR  Sierra Gorda,      0.30 264  ⇑Pg     Pg       12 54 46.2 -0.1
EGOR                                Sg     Sg       12 54 49.8 -0.5
EGOR                              i IVmb_Lg         12 54 54.4
EXEJI El Ejido           0.83 116   Pg     Pg       12 54 56.2  0.0
EXEJI                               Sg     Sg       12 55 07.2 +0.2
EQES  Quesada            0.85  39   Pg     Pb       12 54 57.3 -0.1
EQES                                Sg     Sb       12 55 09.1 +0.2
EQES                              i IVmb_Lg         12 55 15.7
E0802 Ubeda,Jaen         0.93  18   Pg     Pb       12 54 58.8 +0.1
E0802                               Sg     Sb       12 55 12.1 +0.9
EMIJ  Mijas              1.01 235   Sg     Sb       12 55 13.8 +0.3
EMIJ                                Pg     Pg       12 54 58.2 -1.5
EMIJ  Mijas              1.01 235   Pg     Pg       12 54 58.0 -1.7
EMIJ                                Pg     Pg       12 54 58.0 -1.7
EMIJ                                Sg     Sg       12 55 11.1 -1.7
EMIJ                                Sg     Sb       12 55 11.7 -1.8
EMIJ                              i IVmb_Lg         12 55 17.1
UMV12 Villanueva de      1.16 266   Pg     Pn       12 55 03.2 +0.4
UMV12                               Sg     Sb       12 55 18.1 +0.4
EADA  Adamuz             1.22 327   Sg     Sb       12 55 19.7 +0.1
EADA                                Pg     Pb       12 55 03.9 +0.2
EADA  Adamuz             1.22 327   Pg     Pn       12 55 04.0 +0.3
EADA                                Sg     Sb       12 55 20.4 +0.8
EADA                              i IVmb_Lg         12 55 25.6
ENIJ  Nijar              1.24  97   Sg     Sn       12 55 21.8 +0.9
ENIJ                                Pg     Pg       12 55 03.6 -0.5
ENIJ  Nijar              1.24  97   Pg     Pg       12 55 03.6 -0.5
ENIJ                                Sg     Sg       12 55 18.8 -1.3
ENIJ                              i IVmb_Lg         12 55 26.4
EALB  Alboran            1.33 154   Pn     Pb       12 55 05.8 +0.3
EALB  Alboran            1.33 154   Pg     Pg       12 55 04.9 -0.9
EALB                                Sg     Sg       12 55 21.3 -1.7
EALB                                Sg     Sb       12 55 21.4 -1.2
EALB                              i IVmb_Lg         12 55 28.9
EJIF  Jimena Fronter     1.55 244   Pn     Pn       12 55 08.8 +0.6
EJIF                                Pg     Pg       12 55 10.6 +0.5
EJIF                                Sn     Sn       12 55 28.9 +0.4
ECAB  El Cabril          1.63 305   Pn     Pn       12 55 09.4 +0.1
ECAB                                Sn     Sg       12 55 32.9 +0.3
ECAB  El Cabril          1.63 305   Pn     Pn       12 55 09.9 +0.6
ECAB                                Pg     Pb       12 55 10.8 +0.2
ECAB                                Sn     Sn       12 55 30.6 +0.2
ECAB                              i IVmb_Lg         12 55 35.8
ELOR  Lorca, Murcia      1.66  72   Pn     Pn       12 55 09.7 -0.1
ELOR                                Pg     Pg       12 55 12.2  0.0
ELOR                                Sn     Sn       12 55 32.0 +0.7
ELOR                                Sg     Sg       12 55 34.6 +0.8
ELOR                              i IVmb_Lg         12 55 39.2
PSIM  Granatula de C     1.67 360   Pn     Pn       12 55 10.4 +0.4
PSIM                                Sn     Sb       12 55 32.9 +0.2
TLOR  Lorca, Murcia      1.71  72   Pn     Pg       12 55 13.0 -0.1
ESPR  Espera             1.72 261   Pn     Pb       12 55 12.5 +0.4
ESPR  Espera             1.72 261   Pn     Pn       12 55 10.8 +0.3
ESPR                                Pg     Pg       12 55 12.8 -0.5
ESPR                                Sn     Sn       12 55 33.0 +0.4
ESPR                              i IVmb_Lg         12 55 47.1
ECEU  Ceuta              1.81 227   Pn     Pb       12 55 13.9 +0.1
EMUR  La Murta           2.11  70   Pn     Pb       12 55 17.8 -1.1
EMUR  La Murta           2.11  70   Pn     Pb       12 55 17.7 -1.1
EMUR                                Sn     Sn       12 55 42.9 +0.6
EMUR                              i IVmb_Lg         12 55 56.0
CART  Cartagena          2.23  78   Sn     Sn       12 55 45.9 +0.8
CART                                Pn     Pn       12 55 18.7 +1.2
ETOB  Tobarra            2.29  48   Pn     Pn       12 55 19.6 +1.1
ETOB  Tobarra            2.29  48   Pn     Pn       12 55 19.5 +1.0
ETOB                                Sn     Sb       12 55 49.3 -1.1
ETOB                              i IVmb_Lg         12 55 57.2
EMIN  Mina Concepcio     2.42 286   Pn     Pn       12 55 20.1 -0.1
EMIN                                Sn     Sn       12 55 50.6 +0.8
EMIN  Mina Concepcio     2.42 286   Pn     Pn       12 55 20.0 -0.1
EMIN                                Sn     Sn       12 55 49.4 -0.4
EMIN                              i IVmb_Lg         12 56 03.6
PAB   San Pablo          2.45 349   Pn     Pn       12 55 22.2 +1.6
PAB                                 Sn     Sn       12 55 51.5 +0.7
PAB                                 Sg     Sg       12 55 58.0 -0.9
PAB                               i IVmb_Lg         12 56 03.7
ESDC  Sonseca Array      2.53 356   Pn     Pn       12 55 21.9 +0.1
ESDC                                Pg     Pb       12 55 26.9 +0.8
ESDC                                Sn     Sn       12 55 54.0 +1.1
ESDC                              i IVmb_Lg         12 56 06.5
ESBB  Sonseca Array      2.53 356   Pn     Pn       12 55 22.9 +1.1
ESBB                                Pg     Pg       12 55 27.2 -1.6
ESBB                                Sn     Sn       12 55 53.8 +1.0
PBAR  Barrancos          2.81 292   Pn     Pn       12 55 25.5  0.0
PBAR                                Sn     Sn       12 56 00.5 +0.8
PBAR  Barrancos          2.81 292  ePn     Pn       12 55 25.9 +0.3
PBAR                               eSn     Sn       12 56 00.7 +1.0
PBAR                               eSg     Sg       12 56 11.1 +0.4
PBAR                              i IAML            12 56 16.7
PBAR                              i IAML            12 56 24.1
PBAR                              i IAML            12 56 25.1
AFON  Font Roja          2.95  58   Pn     Pn       12 55 29.0 +1.5
AFON                                Sn     Sn       12 56 04.1 +0.9
AFON                              i IVmb_Lg         12 56 26.2
EVIV  Cofrentes, Val     2.96  43   Pn     Pn       12 55 28.4 +0.8
EVIV                                Pg     Pb       12 55 34.3 +0.9
EVIV                                Sn     Sn       12 56 03.5 +0.2
EVIV                                Sg     Sg       12 56 15.6 +0.3
EVIV                              i IVmb_Lg         12 56 24.6
EGRO  El Granado         3.01 279   Pn     Pn       12 55 28.6 +0.3
EGRO                                Sn     Sn       12 56 04.9 +0.4
EGRO  El Granado         3.01 279   Pn     Pn       12 55 28.2 -0.1
EGRO                                Sn     Sn       12 56 04.0 -0.5
EGRO                              i IVmb_Lg         12 56 19.3
EBAD  Badajoz            3.05 303   Pn     Pn       12 55 29.1 +0.3
EBAD  Badajoz            3.05 303   Pn     Pn       12 55 28.8  0.0
EBAD                                Pg     Pb       12 55 35.7 +0.9
EBAD                                Sn     Sn       12 56 04.2 -1.3
EBAD                                Sg     Sg       12 56 17.3 -0.9
EBAD                              i IVmb_Lg         12 56 22.9
UCM   Universidad Co     3.18   7   Pg     Pg       12 55 40.7 -0.7
UCM                                 Sg     Sg       12 56 23.2 +0.6
PVAQ  Vaqueiros          3.18 276  ePn     Pn       12 55 30.6  0.0
PVAQ                               eSn     Sn       12 56 09.1 +0.3
PVAQ                               eSg     Sg       12 56 23.5 +0.9
PVAQ                              i IAML            12 56 31.7
PVAQ                              i IAML            12 56 35.3
PVAQ                              i IAML            12 56 39.6
EBEN2 Beniarda presa     3.20  60   Pn     Pn       12 55 32.4 +1.5
ECHE  Chera              3.27  41   Pn     Pn       12 55 32.8 +0.9
ECHE                                Sg     Sg       12 56 25.4  0.0
ECHE  Chera              3.27  41   Pn     Pn       12 55 32.8 +0.9
ECHE                              i IVmb_Lg         12 56 32.9
PBDV  Barranco-do-Ve     3.35 273   Pn     Pn       12 55 33.3 +0.3
PBDV                                Sn     Sn       12 56 12.3 -0.6
PBDV  Barranco-do-Ve     3.35 273  ePn     Pn       12 55 33.3 +0.3
PBDV                               eSn     Sn       12 56 13.7 +0.8
PBDV                              i IAML            12 56 37.7
PBDV                              i IAML            12 56 38.0
PBDV                              i IAML            12 56 45.7
PBEJ  Beja               3.40 286  ePn     Pn       12 55 35.1 +1.5
PBEJ                               eSn     Sn       12 56 14.5 +0.4
PBEJ                               eSg     Sg       12 56 29.1 -0.3
PBEJ                              i IAML            12 56 34.9
PBEJ                              i IAML            12 56 35.4
PBEJ                              i IAML            12 56 43.4
YEBES Yebes (Guadala     3.41   8   Pn     Pn       12 55 35.0 +1.1
YEBES                               Sg     Sg       12 56 29.7 -0.2
YEBES                             i IVmb_Lg         12 56 41.6
EPLA  Plasencia          3.44 329   Pn     Pn       12 55 35.9 +1.6
EPLA                                Sn     Sn       12 56 15.0 -0.3
EPLA                                Sg     Sg       12 56 29.4 -1.6
EPLA                              i IVmb_Lg         12 56 38.3
PCVE  Castro Verde       3.46 279   Pn     Pn       12 55 35.1 +0.6
PCVE  Castro Verde       3.46 279  ePn     Pn       12 55 35.1 +0.6
PCVE                               eSn     Sn       12 56 17.0 +1.3
PCVE                               eSg     Sg       12 56 31.7 +0.3
PCVE                              i IAML            12 56 34.6
PCVE                              i IAML            12 56 45.0
PCVE                              i IAML            12 56 49.1
PESTR Estremoz           3.50 301   Pn     Pn       12 55 36.0 +1.1
PESTR                               Sn     Sn       12 56 17.8 +1.3
PESTR Estremoz           3.50 301  ePn     Pn       12 55 37.0 +2.0
PESTR                              eSn     Sn       12 56 17.1 +0.6
PESTR                              eSg     Sg       12 56 33.9 +1.4
PESTR                             i IAML            12 56 41.1
PESTR                             i IAML            12 56 41.8
PESTR                             i IAML            12 56 42.8
MESJ  Messejana          3.63 282  eP      Pn       12 55 36.9  0.0
MESJ  Messejana          3.63 282  ePn     Pn       12 55 37.0 +0.2
MESJ                               eSn     Sn       12 56 20.0 +0.2
MESJ                               eSg     Sg       12 56 37.7 +0.8
MESJ                              i IAML            12 56 41.3
MESJ                              i IAML            12 56 42.6
MESJ                              i IAML            12 56 43.1
EVO   Evora              3.66 294   Pn     Pn       12 55 38.0 +0.8
EVO                                 Sn     Sn       12 56 19.1 -1.4
EVO   Evora              3.66 294  ePn     Pn       12 55 38.3 +1.2
EVO                                eSn     Sn       12 56 20.4 -0.1
EVO                                eSg     Sg       12 56 37.4 -0.3
EVO                               i IAML            12 56 41.6
EVO                               i IAML            12 56 42.4
EVO                               i IAML            12 56 47.3
PMRV  Marv??o            3.67 310  ePn     Pn       12 55 39.2 +1.8
PMRV                               eSn     Sn       12 56 21.7 +0.9
PMRV                               eSg     Sg       12 56 38.8 +0.7
PMRV                              i IAML            12 56 43.1
PMRV                              i IAML            12 56 46.3
PMRV                              i IAML            12 56 46.5
PARRA Arraiolos          3.79 297  ePn     Pn       12 55 39.9 +1.0
PARRA                              eSn     Sn       12 56 23.6 -0.1
PARRA                              eSg     Sg       12 56 39.9 -2.0
PARRA                             i IAML            12 56 50.9
PARRA                             i IAML            12 56 52.4
PARRA                             i IAML            12 56 52.8
MOE   Montemor           3.90 292  ePn     Pn       12 55 40.8 +0.3
MOE                                eSn     Sn       12 56 27.3 +0.8
MOE                                eSg     Sg       12 56 46.7 +1.1
MOE                               i IAML            12 56 49.7
MOE                               i IAML            12 56 51.1
MOE                               i IAML            12 56 51.9
E0901 Celadas (Terue     3.91  31   Pn     Pn       12 55 42.0 +1.2
E0901                               Sn     Sn       12 56 28.1 +1.3
E0901                               Sg     Sg       12 56 45.0 -0.8
E0901                             i IVmb_Lg         12 56 57.5
MORF  Marmelete          3.92 274  eP      Pn       12 55 40.9  0.0
MORF  Marmelete          3.92 274  ePn     Pn       12 55 41.6 +0.7
MORF                               eSn     Sn       12 56 27.8 +0.6
MORF                               eSg     Sg       12 56 48.0 +1.6
MORF                              i IAML            12 56 53.9
MORF                              i IAML            12 56 55.3
MORF                              i IAML            12 56 58.2
PCBR  Castelo Branco     3.98 314  ePn     Pn       12 55 43.1 +1.4
PCBR                               eSn     Sn       12 56 28.7 +0.2
PCBR                               eSg     Sg       12 56 48.5 +0.4
PCBR                              i IAML            12 56 56.1
PCBR                              i IAML            12 57 00.7
PCBR                              i IAML            12 57 01.2
PTEO  Sao Teotonio       3.99 277  ePn     Pn       12 55 42.3 +0.6
PTEO                               eSn     Sn       12 56 29.1 +0.3
PTEO                              i IAML            12 56 30.4
PTEO                               eSg     Sg       12 56 51.6 +3.1
PTEO                              i IAML            12 56 53.8
PTEO                              i IAML            12 56 54.3
PMTG  Montargil          4.03 300  ePn     Pn       12 55 43.3 +1.0
PMTG                               eSn     Sn       12 56 28.8 -0.8
PMTG                               eSg     Sg       12 56 51.4 +1.8
PMTG                              i IAML            12 56 54.1
PMTG                              i IAML            12 56 58.0
PMTG                              i IAML            12 56 58.0
PFVI  Vila Bisbo         4.07 271   Pn     Pn       12 55 43.5 +0.7
PFVI                                Sn     Sn       12 56 29.5 -1.0
PFVI  Vila Bisbo         4.07 271  ePn     Pn       12 55 43.5 +0.7
PFVI                               eSn     Sn       12 56 29.7 -0.8
PFVI                              i IAML            12 56 35.2
PFVI                              i IAML            12 56 35.5
PFVI                              i IAML            12 56 40.8
EMOS  Mosqueruela        4.11  37   Pn     Pn       12 55 44.8 +1.3
EMOS                                Sn     Sn       12 56 30.1 -1.7
EMOS                              i IVmb_Lg         12 57 02.8
PSARD Sardoal            4.25 307  ePn     Pn       12 55 46.8 +1.4
PSARD                              eSn     Sn       12 56 34.9 -0.4
PSARD                              eSg     Sg       12 56 57.2 +0.3
PSARD                             i IAML            12 57 02.4
PSARD                             i IAML            12 57 03.2
PSARD                             i IAML            12 57 04.2
EJUZ  Juzbado, Salam     4.28 338   Pn     Pn       12 55 45.5 -0.2
EJUZ                                Sn     Sn       12 56 37.6 +1.7
MTE   Manteigas          4.41 319  ePn     Pn       12 55 49.0 +1.4
MTE                                eSn     Sn       12 56 39.5 +0.5
MTE                                eSg     Sg       12 57 00.1 -1.7
MTE                               i IAML            12 57 10.2
MTE                               i IAML            12 57 10.5
MTE                               i IAML            12 57 21.0
ECOL  Islas Columbre     4.43  50   Pn     Pn       12 55 47.8 +0.1
EIBI  Ibiza              4.43  63   Pn     Pn       12 55 48.9 +1.1
EIBI  Ibiza              4.43  63   Pn     Pn       12 55 48.7 +1.0
EIBI                              i IVmb_Lg         12 57 17.3
PSBE  So Bento           4.63 302  ePn     Pn       12 55 51.8 +1.3
PSBE                               eSn     Sn       12 56 44.3 -0.1
PSBE                              i IAML            12 57 16.2
PSBE                              i IAML            12 57 24.2
PSBE                              i IAML            12 57 26.6
PCAS  Casmilo, Conde     4.73 309  ePn     Pn       12 55 53.8 +1.9
PCAS                               eSn     Sn       12 56 45.4 -1.4
PCAS                               eSg     Sg       12 57 10.8 -1.3
PCAS                              i IAML            12 57 22.4
PCAS                              i IAML            12 57 28.5
PCAS                              i IAML            12 57 29.5
PMAFR Mafra              4.74 294  ePn     Pn       12 55 52.5 +0.6
PMAFR                              eSn     Sn       12 56 46.5 -0.6
PMAFR                             i IAML            12 57 18.0
PMAFR                             i IAML            12 57 21.7
PMAFR                             i IAML            12 57 30.2
MVO   Moncorvo           4.76 329  ePn     Pn       12 55 54.0 +1.5
MVO                                eSn     Sn       12 56 46.5 -1.3
MVO                                eSg     Sg       12 57 14.4 +1.2
MVO                               i IAML            12 57 15.2
MVO                               i IAML            12 57 18.6
MVO                               i IAML            12 57 20.4
PVIS  Viseu              4.82 319  ePn     Pn       12 55 54.4 +1.2
PVIS                               eSn     Sn       12 56 47.8 -1.4
PVIS                               eSg     Sg       12 57 15.7 +0.6
PVRL  Vila Real          5.15 324  ePn     Pn       12 55 59.5 +1.7
PVRL                               eSn     Sn       12 56 55.0 -2.4
PBRG  Braganca           5.20 334  ePn     Pn       12 56 00.3 +1.8
PBRG                               eSn     Sn       12 56 55.6 -3.1
PBRG                               eSg     Sg       12 57 28.0 +0.6
PBRG                              i IAML            12 57 30.7
PBRG                              i IAML            12 57 38.5
PBRG                              i IAML            12 57 38.9
POLO  Lamas de Olo       5.27 325  ePn     Pn       12 56 01.1 +1.7
POLO                               eSn     Sn       12 56 58.2 -2.2
POLO                              i IAML            12 56 58.6
POLO                              i IAML            12 57 01.9
POLO                              i IAML            12 57 03.8
ECAL  Calabor            5.32 335   Sn     Sn       12 56 59.6 -2.0
ECAL                                Pn     Pn       12 56 01.6 +1.4
ECAL  Calabor            5.32 335   Pn     Pn       12 55 59.1 -1.0
ECAL                                Sn     Sn       12 56 57.9 -3.8
ECAL                                Sg     Sg       12 57 28.6 -2.5
ECAL                              i IVmb_Lg         12 57 45.7
EPOB  Poblet             5.62  40   Pn     Pn       12 56 05.5 +1.2
EPOB                                Sn     Sn       12 57 06.7 -2.4
EPOB                              i IVmb_Lg         12 57 47.9
PCAB  Cabril             5.64 325  ePn     Pn       12 56 06.0 +1.5
PCAB                               eSn     Sn       12 57 08.0 -1.5
ETOS  Mallorca           5.77  61   Pn     Pn       12 56 08.0 +1.7
ETOS  Mallorca           5.77  61   Pn     Pn       12 56 05.6 -0.7
ETOS                                Sn     Sn       12 57 12.9 +0.3
ETOS                              i IVmb_Lg         12 57 55.8
ELOB  Lobios             5.78 326   Pn     Pn       12 56 06.1 -0.3
ELOB                                Sn     Sn       12 57 08.7 -4.3
ELOB                              i IVmb_Lg         12 57 50.8
PGAV  Gavieira, Arco     5.95 325  ePn     Pn       12 56 10.5 +1.7
PGAV                               eSn     Sn       12 57 14.1 -3.1
PGAV                               eSg     Sg       12 57 52.3 +0.9
PGAV                              i IAML            12 57 53.9
PGAV                              i IAML            12 57 56.8
ELAN  Lanestosa          6.09   2   Pn     Pn       12 56 11.5 +0.9
ELAN                              i IVmb_Lg         12 57 58.1
EAGO  Agolada(Pontev     6.56 331   Pn     Pn       12 56 17.5 +0.3
EAGO                                Sn     Sn       12 57 27.6 -4.6
EAGO                              i IVmb_Lg         12 58 28.4
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*IDC **14** 13:22:37.5±0.6, 10°.02N×126°.46E, h0km, mb4.0/21, mbtmp4.0/22, MS3.1/2, Error ellipse: s-maj=30.0km s-min=12.3km az=74.0*
ISC 14 13:22:43.4±0.6**, 10°.00N**±0°.07×**126°.4E**±0°.2**, h42**km**, n30,**
σ0ˢ.68/24**, mb3.9**/20**, Philippine Islands region**

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Code  Station Name        Δ°  AZ°    Phase ID          Time     Res
                                    Op     ISC       h  m  s    ISC
DAV   Davao City (W)     3.03 196   Pn     Pn       13 23 27.7 -1.3
      129nm,0.4s,baz=67,slow=18,SNR=1.0
DAV                                 Sn     Sn       13 24 05.8 +1.8
      160nm,0.3s,baz=228,slow=18,SNR=3.8
BATI  Baumata           20.26 188   P      P        13 27 14.9 -0.6
      11nm,0.4s,baz=268,slow=11,SNR=1.9
      11nm,0.4s
KSRS  Korea Array       27.37   3   P      P        13 28 24.5 -0.2
      0.4nm,0.6s,baz=187,slow=9.9,SNR=1.4
KSRS                                LR     LR       13 41 41.2
      comp=Z,9µm,18.1s,baz=320,slow=42
      0.4nm,0.6s
CMAR  Chiang Mai Arr    27.91 291   P      P        13 28 29.8  0.0
      0.6nm,0.8s,baz=104,slow=7.2,SNR=6.4
CMAR                                LR     LR       13 39 38.3
      comp=Z,19nm,18.2s,baz=270,slow=37
      0.6nm,0.8s
WRA   Warramunga Arr    30.76 165   P      P        13 28 54.6 -0.4
      0.4nm,0.7s,baz=345,slow=8.5,SNR=4.8
      0.4nm,0.7s
ASAR  Alice Springs     34.25 168   P      P        13 29 25.4 -0.2
      0.3nm,0.3s,baz=348,slow=7.4,SNR=12
      0.3nm,0.3s
CTA   Charters Tower    35.70 147   P      P        13 29 38.3 +0.2
      4.3nm,0.9s,baz=317,slow=12,SNR=3.8
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	4.3nm,0.9s						
H11S3	WAKE ISLAND Hy	39.84	73	T	T	14 13 10.1	
	baz=262,slow=74,SNR=20						
H11S1	WAKE ISLAND Hy	39.86	73	T	T	14 13 10.7	
	baz=262,slow=74,SNR=7.7						
H11S2	WAKE ISLAND Hy	39.86	73	T	T	14 13 16.5	
	baz=262,slow=74,SNR=7.7						
H11N1	WAKE ISLAND Hy	40.19	71	T	T	14 13 39.4	
	baz=264,slow=74,SNR=28						
H11N2	WAKE ISLAND Hy	40.19	71	T	T	14 13 37.8	
	baz=264,slow=74,SNR=22						
H11N3	WAKE ISLAND Hy	40.20	71	T	T	14 13 38.7	
	baz=264,slow=74,SNR=24						
SONM	Songino Array	41.33	340	P	P	13 30 24.2	-1.0
	0.5nm,0.7s,baz=148,slow=8.7,SNR=6.2						
	0.5nm,0.7s						
STKA	Stephens Creek	44.10	161	P	P	13 30 47.9	+0.2
	0.9nm,0.5s,baz=319,slow=10,SNR=3.2						
	0.9nm,0.5s						
MKAR	Makanchi Array	52.34	323	P	P	13 31 51.1	0.0
	2.5nm,0.6s,baz=120,slow=8.2,SNR=26						
	2.5nm,0.6s						
ZALV	Zalesovo Beam	54.94	331	P	P	13 32 10.3	+0.3
	0.7nm,0.4s,baz=120,slow=8.5,SNR=5.5						
	0.7nm,0.4s						
SEY	Seymchan	56.04	14	LR	LR	13 57 38.9	
	comp=Z,32nm,18.6s,baz=143,slow=38						
KURBB	Kurchatov Arra	56.38	325	P	P	13 32 21.4	+0.9
	1.6nm,0.7s,baz=126,slow=6.9,SNR=26						
	1.6nm,0.7s						
BVAR	Borovoye Array	61.98	325	P	P	13 32 58.7	-0.5
	1.2nm,0.7s,baz=122,slow=7.2,SNR=5.4						
	1.2nm,0.7s						
ILAR	Eielson Array	79.61	26	P	P	13 34 45.9	-0.1
	0.2nm,0.6s,baz=233,slow=5.5,SNR=1.9						
	0.2nm,0.6s						
SPITS	Spitsbergen Ar	84.31	349	P	P	13 35 11.4	+0.9
	4.4nm,0.8s,baz=69,slow=7.9,SNR=2.3						
	4.4nm,0.8s						
ARCES	ARCESS Array B	84.50	340	P	P	13 35 12.5	+0.9
	3.0nm,0.7s,baz=80,slow=6.2,SNR=15						
	3.0nm,0.7s						
BRTR	Keskin Array B	85.83	309	P	P	13 35 18.9	-0.1
	0.3nm,0.3s,baz=98,slow=4.4,SNR=2.5						
	0.3nm,0.3s						
FINES	FINESS Array B	86.20	332	P	P	13 35 20.2	0.0
	1.7nm,0.6s,baz=71,slow=4.8,SNR=15						
	1.7nm,0.6s						
AKASG	Malin Array Be	86.87	321	P	P	13 35 23.7	0.0
	0.2nm,0.3s,baz=65,slow=4.5,SNR=1.2						
	0.2nm,0.3s						
HFS	Hagfors	92.36	332	P	P	13 35 49.0	-0.4
	3.8nm,0.9s,baz=88,slow=12,SNR=4.0						
	3.8nm,0.9s						
NOA	NORSAR Array B	93.07	334	P	P	13 35 52.9	+0.2
	0.3nm,0.6s,baz=65,slow=4.5,SNR=1.5						
	0.3nm,0.6s						
YKA	Yellowknife Ar	93.94	24	P	P	13 35 57.0	+0.5
	0.4nm,0.7s,baz=301,slow=5.2,SNR=6.4						
	0.4nm,0.7s						
PLCA	Paso Flores	145.90	157	PKPbc	PKPdf	13 42 17.9	-0.3
	1.1nm,0.8s,baz=248,slow=5.4,SNR=2.9						

NOU 14 13:24:55.8, 14°.41S×167°.79E, h0^{km}, MLv4.4/10, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.18	209	P	Pg	13 25 16.8	-1.6
SANVU	Saraoutou	1.18	209	S	Sg	13 25 33.6	-0.1
YATNC	Mamie plateau,	7.66	186	P	Pn	13 26 48.8	+0.1
DZM	Mont Dzumac	7.73	189	P	Pn	13 26 51.0	+1.3
NGOA	Tingoa Renbel	8.05	290	P	Pn	13 26 53.3	-0.8
TATA	Tatamba Isabel	9.85	307	P	Pn	13 27 19.2	+0.4

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*TIR **14** 13:31:21.1, 41°.39N×19°.63E, h26^{km}, Md2.8/3, Ml2.5/3*

*THE **14** 13:31:42.5, 40°N±3°×2°0E±°, h12^{km}, MLh1.9/3*

ISC 14 13:31:22.4±1.2, **41°.46N**±0°.04×**19°.74E**±0°.05, **h17**^{km}±9^{km}, **n10**, σ**2.^{s}74**/16, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.14	139	Pg	Pg	13 31 25.7	-0.8
TIR				Sg	Sb	13 31 30.3	+0.9
TIR				AML	AML	13 31 31.5	
	2.6nm,0.4s						
PHP	Peshkopia	0.57	66	Pg	Pb	13 31 34.3	+0.2
PHP				Sg	Sn	13 31 43.9	-1.0
PHP				AML	AML	13 31 47.7	
	0.8nm,0.5s						
PHP				AMd		13 32 25.4	
PDG	Podgorica	1.04	340	Pg	Pb	13 31 41.3	-0.6
PDG				Sg	Sn	13 31 56.8	+0.6
PDG				AMd		13 32 26.1	
KBN	Korca	1.15	136	Sn	Sb	13 31 58.9	+0.4
NEST	Nestorio	1.44	136	P	Pg	13 31 51.0	+0.9
NEST				S	Sn	13 31 58.6	-7.7
PENT	Pentalofos	1.65	139	P	Pb	13 31 52.7	+0.4
PENT				S	Sn	13 32 00.5	-11
KEK	Kerkira	1.74	178	P	Pg	13 31 57.7	+1.8
KEK				S	Sn	13 32 10.5	-3.2
IGT	Igoumenitsa	1.98	167	Sn	Sn	13 32 20.9	+1.5
IGT	Igoumenitsa	1.98	167	P	Pn	13 31 56.9	+1.9
IGT				S	Sn	13 32 09.7	-10
NOCI	Noci	2.13	253	Pn	Pn	13 31 57.1	0.0
NOCI				Sn	Sn	13 32 20.4	-2.7
NOCI				AML	AML	13 32 21.0	
	0.1nm,0.2s						
NOCI				AMd		13 33 10.1	

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*NEIC **14** 13:41:46.3±1.2, 6°.29S±0°.06×132°.0E±0°.1, h10^{km}±1^{km}, mb4.4/8, Error ellipse: s-maj=24.3km s-min=9.5km az=99.0*

*IDC **14** 13:41:46.2±0.8, 6°.18S×131°.83E, h0^{km}, mb3.8/10, mbtmp3.9/12, ML3.9/2, MS3.2/5, Error ellipse: s-maj=34.3km s-min=12.5km az=52.0*

*DJA **14** 13:41:51.9±0.2, 6°S±2°×13°2E±°, h71^{km}±4^{km}, M4.8/31, mb4.6/31, mB5.4/9, MLv4.8/18, Mw(mB)4.8/9*

ISC 14 13:41:46.3±0.5, **6°.34S**±0°.05×**132°.05E**±0°.05, **h10**^{km}, **n69**, σ**2.^{s}64**/67, **mb3.9**/15, **Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.79	204		Pn	13 42 17.3	-0.1
SAUI	Saumlaki	1.79	204	P	Pg	13 42 26.7	+5.9
BNDI	Bandanaira	2.80	310	P	Pb	13 42 33.8	-2.6
KMPI	Kaimana, Papua	3.13	32	P	Pn	13 42 35.7	-0.1
FAKI	Fak Fak	3.40	3		Pn	13 42 37.6	-1.9
FAKI	Fak Fak	3.40	3	P	Pn	13 42 38.5	-1.1
MSAI	Masohi	4.30	314	P	Pn	13 42 53.6	+1.7
AAI	Ambon	4.66	304	P	Pn	13 42 59.8	+3.0
KRAI	Karang Ratu	4.72	309	P	Pn	13 43 01.2	+3.5
RKPI	Ransiki, Papua	5.25	24	P	Pn	13 43 05.4	+0.5
SWI	Sorong	5.50	352	P	Pn	13 43 07.0	-1.3
	1.3nm3µm56nm,0.5s						
MWPI	Manokwari, Pap	5.73	20	P	Pn	13 43 12.5	+1.0
NLAI	Namlea	5.81	302	P	Pn	13 43 17.0	+4.3
	0.3nm2µm60nm,0.5s						
SRPI	Serui, Papua	6.10	43	P	Pn	13 43 17.3	+0.7
	0.7nm67nm,0.6s						
BAKI	Biak	6.52	39	P	Pn	13 43 24.0	+1.6
MTN	Manton Dam	6.53	188		Pn	13 43 22.8	+0.3
WAMI	Wamena	7.07	70	P	Pn	13 43 32.4	+2.5
SANI	Sanana	7.40	305	P	Pn	13 43 36.3	+1.9
	0.3nm990nm50nm,0.4s						
SMPI	Sarmi	7.92	57	P	Pn	13 43 43.6	+1.9
	0.2nm36nm,1.0s						
SOEI	Soe	8.42	246	P	Pn	13 43 53.6	+5.0
	68nm,0.9s						
GENI	Genyem	8.91	66	P	Pn	13 43 54.5	-0.7
BATI	Baumata	9.14	245	Pn	Pn	13 44 02.0	+3.5
	10nm,0.3s,baz=280,slow=2.1,SNR=6.0						
BATI				Sn	Sn	13 45 38.7	-2.9
	11nm,0.3s,baz=74,slow=16,SNR=5.9						
BATI	Baumata	9.14	245	P	Pn	13 44 03.3	+4.8
	40nm,0.6s						
JAY	Jayapura	9.43	67	Pn	Pn	13 44 04.9	+2.5
	1.3nm,0.3s,baz=4.0,slow=22,SNR=1.5						
JAY				Sn	Sn	13 45 46.3	-2.2
	1.7nm,0.3s,baz=287,slow=22,SNR=3.0						
	8.1nm,0.5s						
KNRA	Kununurra	9.82	199		Pn	13 44 11.3	+3.6
EDFI	Ende, Flores	10.55	256	P	Pn	13 44 22.4	+4.6
	16nm,1.1s						
LUWI	Luwuk	10.65	299	P	Pn	13 44 20.9	+1.8
	5µm34nm,1.2s						
GTOI	Gorontalo	11.38	307	P	Pn	13 44 33.7	+4.6
	15nm,0.9s						
LBFI	Labuhan Bajo,	12.24	259	P	Pn	13 44 44.6	+3.6
	23nm,0.8s						
KAPI	Kappang	12.31	276	LR	LR	13 49 57.2	
	comp=Z,56nm,18.7s,baz=89,slow=41						
WBSI	Waikabubak, Su	12.96	255	P	Pn	13 44 53.1	+2.4
	30nm,0.7s						
COEN	Coen	13.31	126		Pn	13 44 56.0	+0.5
WB0	Warramunga Arr	13.54	171		Pn	13 44 58.8	+0.2
WRAB	Tennant Creek	13.70	171		Pn	13 45 00.1	-0.7
WRA	Warramunga Arr	13.70	171	Pn	Pn	13 45 01.0	+0.1
	1.8nm,0.3s,baz=344,slow=13,SNR=34						
WRA				Sn	Sn	13 47 26.4	-6.9
	2.9nm,0.3s,baz=358,slow=23,SNR=9.4						
WRA	Warramunga Arr	13.70	171		Pn	13 45 01.1	+0.1
WR8	Warramunga Arr	13.74	170		Pn	13 45 01.3	-0.1
DBNI	Kabupaten Domp	13.79	260	P	Pn	13 45 05.7	+3.6
PLAI	Plampang	14.36	259	P	Pn	13 45 11.1	+1.2
	22nm,1.1s						
PMG	Port Moresby	15.27	102	Pn	Pn	13 45 24.1	+1.8
	0.9nm,0.3s,baz=304,slow=5.4,SNR=11						
PMG				Sn	Sn	13 48 03.3	-8.3
	0.3nm,0.3s,baz=273,slow=18,SNR=1.7						
PMG				LR	LR	13 53 04.0	
	comp=Z,95nm,18.2s,baz=254,slow=44						
PMG	Port Moresby	15.27	102	Pn	Pn	13 45 23.9	+1.7
PMG				IAmb	IAmb	13 45 41.3	
	comp=Z,16nm,0.8s						
PMG	Port Moresby	15.27	102	P	Pn	13 45 23.2	+1.0
	comp=Z,24nm,1.6s						
AS31	Alice Springs	17.32	174		Pn	13 45 48.3	-0.1
ASAR	Alice Springs	17.32	174	P	Pn	13 45 48.6	+0.2
	comp=Z,5.5nm,0.6s,baz=16,slow=13,SNR=63						
ASAR				S	Sn	13 48 52.9	-8.4
	comp=Z,7.4nm,0.8s,baz=358,slow=26,SNR=8.8						
ASAR	Alice Springs	17.32	174		Pn	13 45 47.5	-0.9
CTA	Charters Tower	19.42	136	P	Pn	13 46 16.7	+2.6
	comp=Z,0.2nm,0.3s,baz=318,slow=10,SNR=5.0						
CTA				S	S	13 50 00.8	+8.1
	comp=Z,1.6nm,0.6s,baz=223,slow=19,SNR=1.1						
CTA				LR	LR	13 54 39.4	
	comp=Z,81nm,18.4s,baz=29,slow=39						
	comp=Z,6.4nm,0.9s						
SNJI	Sawahan-Nganju	20.19	265	P	P	13 46 21.9	+0.3
PCJI	Pacitan	20.79	264	P	P	13 46 28.1	+0.2
	comp=Z,28nm,1.1s						
BBJI	Bungbulang	24.25	266	P	P	13 47 03.0	-0.9
	comp=Z,14nm,0.7s						
FORT	Forrest	24.60	188		P	13 47 06.4	-0.4
CNJI	Cibinong	24.76	266	P	P	13 47 08.4	-0.1
	comp=Z,16nm,0.7s						
STKA	Stephens Creek	26.93	162	P	P	13 47 30.9	+3.0
	comp=Z,1.2nm,0.6s,baz=330,slow=13,SNR=2.9						
STKA				S	S	13 51 53.2	-12
	comp=Z,1.0nm,0.8s,baz=333,slow=14,SNR=1.4						
	comp=Z,1.2nm,0.6s						
STKA	Stephens Creek	26.93	162	P	P	13 47 27.2	-0.7
CMAR	Chiang Mai Arr	40.91	308	P	P	13 49 27.3	-1.9
	comp=Z,0.5nm,0.4s,baz=133,slow=7.2,SNR=8.2						
	comp=Z,0.5nm,0.4s						
MJAR	Matsushiro Arr	43.05	7	P	P	13 49 46.2	-0.2
	comp=Z,1.5nm,0.9s,baz=196,slow=8.4,SNR=1.7						
MJAR				LR	LR	14 06 49.0	
	comp=Z,35nm,21.5s,baz=113,slow=35						
	comp=Z,1.5nm,0.9s						
MJAR	Matsushiro Arr	43.05	7	P	P	13 49 43.4	-3.0
ASAJ	Asahikawa	51.12	10	LR	LR	14 12 18.8	
	comp=Z,22nm,19.4s,baz=258,slow=36						
EVN	Everest	55.39	310	P	P	13 51 20.4	-1.5
EVN				IAmb	IAmb	13 51 40.1	
	comp=Z,4.0nm,0.7s						
SONM	Songino Array	58.49	340	P	P	13 51 42.4	-0.4
	comp=Z,0.3nm,0.5s,baz=68,slow=4.1,SNR=2.0						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	68.81	326	P	P	13 52 51.5	+0.6
	comp=Z,0.9nm,0.4s,baz=113,slow=8.1,SNR=33						
	comp=Z,0.9nm,0.4s						
MKAR	Makanchi Array	68.81	326	P	P	13 52 50.2	-0.7
KSH	Kashi	68.93	317	P	P	13 52 52.3	+0.4
KSH				pmax	pmax		
	comp=Z,4.0nm,1.7s						
MAKZ	Makanchi	68.99	326	P	P	13 52 51.9	-0.1
MAKZ				IAmb	IAmb	13 53 05.7	
	comp=Z,2.7nm,0.9s						
ZALV	Zalesovo Beam	71.91	333	P	P	13 53 09.7	0.0
	comp=Z,0.5nm,0.5s,baz=123,slow=5.3,SNR=2.9						
	comp=Z,0.5nm,0.5s						
KURBB	Kurchatov Arra	73.03	328	P	P	13 53 16.3	-0.1
	comp=Z,0.7nm,0.7s,baz=123,slow=4.7,SNR=6.9						
	comp=Z,0.7nm,0.7s						
BVAR	Borovoye Array	78.61	327	P	P	13 53 48.8	+0.5
	comp=Z,0.5nm,0.7s,baz=116,slow=9.9,SNR=2.7						
	comp=Z,0.5nm,0.7s						
QSPA	South Pole Qui	83.63	180	P	P	13 54 17.6	+2.6
	comp=Z,0.9nm,0.8s,baz=333,slow=0.9,SNR=5.9						
	comp=Z,0.9nm,0.8s						
QSPA	South Pole Qui	83.63	180	P	P	13 54 17.4	+2.4
QSPA				IAmb	IAmb	13 54 35.8	
	comp=Z,2.1nm,0.8s						
ILAR	Eielson Array	91.89	25	P	P	13 54 56.1	+1.4
	comp=Z,0.5nm,1.0s,baz=302,slow=6.0,SNR=1.4						
	comp=Z,0.5nm,1.0s						

WEL 14 14:09:29.2±1.5, **34°S**±26°×**18°0W**±2°9, **h171**^{km}±63^{km}, **mB4.3**/2, **ML3.7**/12, **MLv3.8**/4, **Mw(mB)3.4**/2, **Error ellipse: s-maj=45.6km s-min=21.9km az=129.1, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	4.52	198	P	Pn	14 10 37.7	+1.0
WMGZ				S	Sn	14 11 30.3	+0.8
HAZ	Te Kaha	4.65	204	P	Pn	14 10 38.6	+0.3
PKGZ	Pakihiroa	4.66	201	P	Pn	14 10 35.5	-3.0
PKGZ				S	Sn	14 11 31.5	-1.3
PUZ	Puketiti	4.80	199	P	Pn	14 10 39.8	-0.5
PUZ				S	Sn	14 11 35.6	-0.5
RUGZ	Raukumara Rang	4.88	204	P	Pn	14 10 42.3	+1.0
RUGZ				S	Sn	14 11 39.9	+1.9
CNGZ	Carnagh Statio	5.20	197	P	Pn	14 10 46.6	+1.2
TKGZ	Te Karaka	5.26	201	P	Pn	14 10 45.8	-0.4
TKGZ				S	Sn	14 11 46.8	+0.1
MWZ	Matawai	5.26	203	P	Pn	14 10 45.8	-0.5
MWZ				S	Sn	14 11 49.5	+2.6
URZ	Urewera	5.34	207	P	Pn	14 10 47.7	+0.3
URZ				S	Sn	14 11 50.2	+1.4
RIGZ	Rimuhau	5.53	200	P	Pn	14 10 50.0	+0.1
RIGZ				S	Sn	14 11 53.1	-0.1
MUGZ	Murupara	5.66	208	P	Pn	14 10 51.2	-0.4
MUGZ				S	Sn	14 11 54.6	-1.8
RTZ	Ruatahuna	5.71	206	P	Pn	14 10 52.0	-0.1
SNGZ	Shannon Statio	5.73	203	P	Pn	14 10 53.3	+0.8
MTHZ	Maungataniwha	5.96	206	P	Pn	14 10 56.0	+0.4
BKZ	Black Stump Fm	6.37	207	P	Pn	14 11 00.1	-0.8

DJA 14 14:10:35.0±0.4, **8°S**±4°×**10°6E**±°, **h10**^{km}, **M3.8**/13, **mb4.2**/3, **MLv3.6**/13, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKJI	Sukabumi	1.03	41	P	Pg	14 10 53.2	-1.7
CNJI	Cibinong	1.34	69	P	Pn	14 10 58.1	-1.6
SBJI	Serang	1.68	9	P	Pn	14 11 03.9	-0.6
BBJI	Bungbulang	1.79	80	P	Pn	14 11 05.4	-0.7
KASI	Kota Agung	2.63	329	P	Pn	14 11 17.5	-0.1
KPJI	Karang Pucung	3.07	82	P	Pn	14 11 24.2	+0.6
KLSI		3.28	340	P	Pn	14 11 27.3	+0.8
EGSI	Enggano, Bengk	4.31	304	P	Pn	14 11 40.9	+0.2
MNAI	Manna	4.47	319	P	Pn	14 11 43.0	+0.1
UGM	Wanagama	4.61	92	P	Pn	14 11 45.1	+0.2
PCJI	Pacitan	5.27	95	P	Pn	14 11 54.1	+0.2
	0.2nm22nm,1.2s						
SNJI	Sawahan-Nganju	5.83	90	P	Pn	14 12 03.7	+1.9
	0.1nm8.8nm,1.3s						
BASI	Baing, Sumba	14.73	101	P	Pn	14 14 03.0	-0.5

IDC 14 14:29:05.0±26.0, **18°.95S**×**173°.53W**, **h0**^{km}, **mb4.0**/4, **mbtmp4.0**/4, **Error ellipse: s-maj=491.1km s-min=163.5km az=73.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	37.86	261	P	P	14 36 24.4	+0.6
	1.9nm,0.5s,baz=94,slow=12,SNR=6.8						
	1.9nm,0.5s						
STKA	Stephens Creek	42.24	243	P	P	14 37 00.0	-0.2
	0.6nm,0.5s,baz=73,slow=11,SNR=1.7						
	0.6nm,0.5s						
ASAR	Alice Springs	48.98	255	P	P	14 37 53.1	-0.5
	1.0nm,0.5s,baz=96,slow=7.8,SNR=30						
	1.0nm,0.5s						
WRA	Warramunga Arr	49.00	260	P	P	14 37 53.6	-0.2
	0.6nm,0.3s,baz=96,slow=7.4,SNR=25						
	0.6nm,0.3s						

GCG 14 14:50:07.3±1.5, **13°.85N**×**91°.28W**, **h44**^{km}±63^{km}, **MD3.9**, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG5	El Palmar, Qui	0.55	353	*e*P	Pn	14 50 23.7	+4.7
STG5				*e*S	Sn	14 50 35.4	+8.0
STG2	El Palmar, Qui	0.59	351	*e*P	Pn	14 50 24.4	+4.9
STG2				*e*S	Sn	14 50 37.1	+8.9
STG8	El Palmar, Qui	0.60	353	*e*P	Pn	14 50 24.6	+4.9
STG8				*e*S	Sn	14 50 37.8	+9.2
ESSG	Sabana Grande	0.69	39	*e*P	Pn	14 50 20.8	0.0
FG16	Alotenango, Sa	0.86	61	*e*P	Pn	14 50 22.0	-1.1
PCG5	San Vicente Pa	0.95	67	*e*P	Pn	14 50 23.1	-1.2
PCG5				*e*S	Sn	14 50 34.7	-2.1
APG	El Apazote	1.39	34	*e*P	Pn	14 50 32.3	+1.8
NUBE	Las Nubes	1.46	88	*e*P	Pn	14 50 31.9	+0.5
NUBE				*i* S	Sn	14 50 48.9	-0.4
MTO3	Montecristo	1.94	73	*e*P	Pn	14 50 38.2	+0.2

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*IDC **14** 14:56:26.0±3.8, 6°.34S×154°.83E, h84^{km}±33^{km}, mb3.8/15, mbtmp4.1/18, MS3.1/7, Error ellipse: s-maj=21.8km s-min=16.4km az=89.0*

ISC 14 14:56:22.7±0.6, **6°.3S**±0°.1×**155°.0E**±0°.1, **h56**^{km}, **n20**, σ**0.^{s}86**/21, **mb4.1**/15, **MS3.2**/4, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	8.34	248	P	Pn	14 58 22.0	+0.9
	20nm,0.7s,baz=74,slow=8.9,SNR=14						
PMG				S	Sn	14 59 54.9	+1.0
	16nm,0.7s,baz=348,slow=22,SNR=6.3						
PMG				LR	LR	15 00 54.9	
	comp=Z,91nm,20.4s,baz=84,slow=33						
CTA	Charters Tower	16.12	211	P	Pn	15 00 05.8	0.0
	5.9nm,0.9s,baz=28,slow=14,SNR=4.4						
CTA				LR	LR	15 05 46.8	
	comp=Z,78nm,18.5s,baz=40,slow=35						
DZM	Mont Dzumac	19.20	146	P	Pn	15 00 44.6	+0.9
	4.2nm,0.7s,baz=312,slow=14,SNR=5.7						
DZM				LR	LR	15 06 49.4	
	comp=Z,65nm,20.2s,baz=44,slow=32						
WRA	Warramunga Arr	24.21	234	P	P	15 01 33.6	-0.7
	5.6nm,0.8s,baz=58,slow=9.4,SNR=29						
WRA				PcP	PcP	15 05 13.7	-0.3
	0.4nm,0.8s,baz=69,slow=2.7,SNR=0.9						
	5.6nm,0.8s						
ASAR	Alice Springs	26.63	227	P	P	15 01 55.5	-0.9
	1.8nm,0.7s,baz=58,slow=8.7,SNR=44						
ASAR				PcP	PcP	15 05 19.9	+0.5
	0.7nm,0.7s,baz=67,slow=2.3,SNR=7.2						
ASAR				LR	LR	15 11 20.9	
	comp=Z,39nm,20.0s,baz=68,slow=34						
	1.8nm,0.7s						
STKA	Stephens Creek	28.36	204	P	P	15 02 10.9	-0.8
	1.8nm,0.6s,baz=31,slow=12,SNR=7.4						
	1.8nm,0.6s						
KSRS	Korea Array	50.31	332	P	P	15 05 12.5	-1.4
	1.5nm,0.8s,baz=144,slow=6.0,SNR=3.0						
	1.5nm,0.8s						
PETK	Petropavlovsk-	59.22	2	P	P	15 06 19.4	+1.4
	4.3nm,0.6s,baz=156,slow=6.1,SNR=10						
PETK				LR	LR	15 32 12.3	
	comp=Z,14nm,18.7s,baz=115,slow=36						
	4.3nm,0.6s						
CMAR	Chiang Mai Arr	60.47	295	P	P	15 06 27.6	+0.3
	4.1nm,0.7s,baz=118,slow=5.1,SNR=34						
	4.1nm,0.7s						
MA2	Magadan	65.74	358	LR	LR	15 33 57.8	
	comp=Z,21nm,20.0s,baz=126,slow=34						
SONM	Songino Array	68.74	327	P	P	15 07 20.7	-0.2
	0.4nm,0.4s,baz=160,slow=5.0,SNR=2.4						
	0.4nm,0.4s						
TIXI	Tiksi	79.66	352	LR	LR	15 41 13.8	
	comp=Z,14nm,21.1s,baz=207,slow=34						
ILAR	Eielson Array	82.73	22	P	P	15 08 41.0	+0.8
	0.4nm,0.4s,baz=242,slow=5.1,SNR=13						
	0.4nm,0.4s						
MKAR	Makanchi Array	82.87	319	P	P	15 08 41.2	-0.2
	1.4nm,0.6s,baz=92,slow=6.7,SNR=16						
	1.4nm,0.6s						
ZALV	Zalesovo Beam	83.59	326	P	P	15 08 44.1	-0.7
	1.0nm,0.5s,baz=79,slow=3.2,SNR=6.7						
	1.0nm,0.5s						
QSPA	South Pole Qui	83.68	180	P	P	15 08 44.5	-0.8
	0.7nm,0.6s,baz=27,slow=3.3,SNR=8.5						
	0.7nm,0.6s						
KURBB	Kurchatov Arra	86.31	322	P	P	15 08 57.9	-0.7
	0.4nm,0.5s,baz=98,slow=5.0,SNR=8.4						
	0.4nm,0.5s						
NVAR	Mina Array Bea	91.30	52	P	P	15 09 23.3	+0.5
	0.6nm,0.6s,baz=275,slow=7.3,SNR=2.2						
	0.6nm,0.6s						
BVAR	Borovoye Array	91.73	323	P	P	15 09 22.8	-1.4
	0.8nm,0.6s,baz=104,slow=6.1,SNR=5.1						
	0.8nm,0.6s						
YKA	Yellowknife Ar	95.72	28	P	P	15 09 42.5	+0.2
	0.3nm,0.7s,baz=268,slow=5.4,SNR=5.2						
	0.3nm,0.7s						

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*UPA **14** 15:43:51.5±1.2, 8°.47N×82°.86W, h16^{km}±4^{km}, ML3.4, MW3.4*

*UCR **14** 15:43:51.4±0.9, 8°.41N×82°.86W, h28^{km}±2^{km}, MW4.1*

*CATAC **14** 15:43:52.8±0.6, 8°N±4°×8°3W±°, h9^{km}±1^{km}, M3.8/10, MLv3.8/10, Error ellipse: s-maj=8.4km s-min=3.8km az=151.2, confirmed*

ISC 14 15:43:51.6±1.0, **8°.43N**±0°.03×**82°.86W**±0°.02, **h30**^{km}±5^{km}, **n60**, σ**1.^{s}20**/74, **Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPPC	Paso Canoas	0.10	11	*e*P	Pb	15 43 56.2	-0.8
LPPC				*e*S	Sb	15 44 00.6	-0.1
CDITO	Canoas	0.14	354	P	Pb	15 43 57.1	-0.2
CDITO				S	Sb	15 43 59.5	-1.7
PTPM	Petroterminale	0.23	185	*e*P	Pb	15 43 57.1	-1.0
PTPM				*e*S	Sb	15 44 03.0	+0.3
PTPA	Petro Terminal	0.23	183	*e*P	Pb	15 43 57.4	-0.8
PTPA				*e*S	Sb	15 44 03.2	+0.5
NELY	Ciudad Neily	0.23	338	*e*P	Pb	15 43 57.7	-0.5
NELY				*e*S	Sb	15 44 03.2	+0.4
LMNES	Limones	0.33	180	*e*P	Pb	15 43 58.5	-1.0
FITO	Golfito	0.35	303	*e*P	Pb	15 43 58.4	-1.3
FITO				*e*S	Sb	15 44 04.0	-1.3
EDAD	Golfito	0.37	306	*e*P	Pb	15 43 58.9	-1.3
EDAD				*e*S	Sb	15 44 04.9	-1.1
RSRNO	Rio Sereno	0.38	360	*e*P	Pb	15 44 00.5	+0.1
BRU2	Volcan	0.40	25	*e*P	Pb	15 44 00.5	-0.1
BRU2				AMP		15 44 00.9	
	comp=Z,7µm,0.2s						
BRU2				*e*S	Sb	15 44 05.6	-1.1
BRU2	Volcan	0.40	25	S	Sn	15 44 07.4	-0.6
BRU2	Volcan	0.40	25	P	Pb	15 44 00.6	0.0
BRU2	Volcan	0.40	25	*e*P	Pb	15 44 00.6	-0.1
JEFFS	S de V. Baru	0.40	54	*e*P	Pb	15 44 00.5	-0.1
VITO	San Vito	0.40	344	*e*P	Pb	15 44 00.5	-0.1
DVD	David	0.40	90	*e*P	Pb	15 44 00.2	-0.4
DVD				AMP		15 44 00.4	
	comp=Z,2µm,0.0s						
DVD				*e*S	Sb	15 44 06.8	+0.2
SCLRA	Santa Clara, W	0.41	11	*e*P	Pb	15 44 00.9	+0.1
TBS2		0.41	29	*e*P	Pn	15 44 01.6	0.0
PTJ1	Puerto Jimnez	0.45	283	P	Pb	15 44 00.5	-0.8
PTJ1	Puerto Jimnez	0.45	283	S	Sb	15 44 07.8	-0.1
PTJ1	Puerto Jimnez	0.45	283	*e*P	Pb	15 44 00.3	-1.0

PIRO	Carate, Puerto	0.47	267	*e*P	Pb	15 44 00.9	-0.7
PIRO				*e*S	Sb	15 44 07.9	-0.6
PIRO	Carate, Puerto	0.47	267	P	Pb	15 44 00.9	-0.7
PIRO	Carate, Puerto	0.47	267	*e*P	Pb	15 44 00.6	-1.0
BQTLY	Boquete Panama	0.51	51	*e*P	Pb	15 44 01.8	-0.5
EDP2	Potrero Grande	0.66	332	*e*P	Pb	15 44 04.2	-0.5
EDP2				*e*S	Sn	15 44 14.9	+0.7
FIMO	Fila Mora	0.74	319	*e*P	Pb	15 44 05.4	-0.7
PBNVO	Pueblo Nuevo,	0.80	55	*e*P	Pb	15 44 06.0	-1.1
RBALA	Bur	0.83	58	*e*P	Pb	15 44 06.6	-0.9
CHGR2	Aguacate	0.87	55	*e*P	Pb	15 44 07.2	-1.0
CHGR2				*e*S	Sb	15 44 18.2	-1.3
DRK0	Durika	0.91	335	*e*P	Pb	15 44 07.9	-1.1
DRK0				*e*S	Sb	15 44 20.6	-0.2
DRK0	Durika	0.91	335	P	Pb	15 44 07.9	-1.1
DRK0	Durika	0.91	335	*e*P	Pb	15 44 07.6	-1.4
EDPE	Pejibaye, P	1.01	316	*e*P	Pn	15 44 09.0	-0.8
OCHAL	Ojochal	1.02	310	P	Pn	15 44 09.8	-0.1
OCHAL	Ojochal	1.02	310	S	Sb	15 44 23.3	-0.5
SAJE	San Jernim	1.11	325	*e*P	Pn	15 44 10.6	-0.7
KKNTU	Kakintº	1.12	69	*e*P	Pn	15 44 10.6	-0.6
CEUA	Cerro Uatsi, L	1.18	356	*e*P	Pb	15 44 13.5	0.0
BUS1	Rivas	1.42	322	*e*P	Pn	15 44 15.4	-0.3
PIEC	Cerro El Cedra	1.60	318	*e*P	Pn	15 44 18.4	+0.2
LCR2	La Lucha 2	1.73	319	P	Pn	15 44 21.0	+1.3
LCR2	La Lucha 2	1.73	319	S	Sb	15 44 44.9	+0.8
VTCV	VTCV, Calle Va	1.76	331	*e*P	Pn	15 44 21.1	+0.9
PICV	PH. Pirrs	1.77	312	*e*P	Pn	15 44 21.1	+0.8
CVTV	Tajo	1.79	331	*e*P	Pn	15 44 21.9	+1.1
CVTQ	Turrialba Volc	1.80	330	*e*P	Pn	15 44 21.5	+0.6
VTR0	Volcan Turrial	1.81	331	*e*P	Pn	15 44 22.2	+1.1
CVTR	Volcan Turrial	1.81	331	*e*P	Pn	15 44 22.2	+1.1
RVLA	Villa Bonita	1.81	337	*e*P	Pn	15 44 22.3	+1.5
VICA	Volcano Irazu	1.82	328	*e*P	Pn	15 44 22.1	+0.8
ACOS	Acosta	1.87	317	*e*P	Pb	15 44 24.1	-1.1
TRT2	Tortugero	2.28	338	P	Pn	15 44 29.1	+1.8
TRT2	Tortugero	2.28	338	S	Sb	15 44 58.0	-1.9
SOCE	Pocosol	2.60	318	P	Pb	15 44 35.1	-2.5
SOCE	Pocosol	2.60	318	S	Sb	15 45 06.5	-2.7
COVE	Coope Vega, Sa	2.73	326	P	Pn	15 44 36.5	+3.1
JTS	Las Juntas de	2.77	312	P	Pn	15 44 36.8	+2.7
JTS				S	Sn	15 45 09.0	+2.5
JTS	Las Juntas de	2.77	312	*e*P	Pn	15 44 36.7	+2.7
LAPC	Finca la Perla	3.44	313	*e*P	Pn	15 44 45.8	+2.6

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*IDC **14** 16:12:15.8±0.7, 13°.94N×92°.89E, h0^{km}, mb4.0/16, mbtmp3.9/17, ML3.6/1, Error ellipse: s-maj=25.8km s-min=15.4km az=61.0*

ISC 14 16:12:20.9±0.8**, 14°.0N**±0°.1×**93°.0E**±0°.1**, h32^{km}, n23, σ0°.92**/20**, mb4.0**/16**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.19	51	Pn	Pn	16 14 04.4	+0.6
	0.3nm,0.3s,baz=241,slow=15,SNR=8.5						
CMAR				Sn	Sn	16 15 22.4	-2.0
	0.4nm,0.3s,baz=242,slow=28,SNR=6.2						
	0.4nm,0.6s						
H08S3	Diego Garcia H	29.64	225	T	T	16 49 24.0	
	baz=37						
H08S2	Diego Garcia H	29.65	225	T	T	16 49 30.4	
	baz=37						
H08S1	Diego Carcia H	29.66	225	T	T	16 49 25.0	
	baz=37						
MKAR	Makanchi Array	33.89	347	P	P	16 19 01.3	+0.5
	1.6nm,0.6s,baz=171,slow=7.6,SNR=18						
	1.6nm,0.6s						
SONM	Songino Array	35.50	16	P	P	16 19 16.0	+1.2
	0.5nm,0.5s,baz=194,slow=6.7,SNR=3.8						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	38.36	345	P	P	16 19 39.3	+0.4
	1.6nm,0.6s,baz=165,slow=7.9,SNR=14						
	1.6nm,0.6s						
ZALV	Zalesovo Beam	40.36	353	P	P	16 19 55.5	0.0
	1.7nm,0.7s,baz=174,slow=9.1,SNR=8.3						
	1.7nm,0.7s						
HILR	Hailar Array B	41.64	26	P	P	16 20 07.9	+1.6
	0.4nm,0.3s,baz=208,slow=12,SNR=2.6						
	0.4nm,0.3s						
BVAR	Borovoye Array	42.87	340	P	P	16 20 15.6	-0.5
	0.5nm,0.5s,baz=149,slow=9.8,SNR=3.7						
	0.5nm,0.5s						
WRA	Warramunga Arr	52.82	129	P	P	16 21 33.3	-0.4
	0.5nm,0.6s,baz=307,slow=9.4,SNR=8.8						
WRA				PcP	PcP	16 22 42.6	-0.2
	0.2nm,0.5s,baz=315,slow=3.9,SNR=1.8						
	0.5nm,0.6s						
ASAR	Alice Springs	54.77	133	P	P	16 21 47.4	-0.5
	0.5nm,0.4s,baz=312,slow=7.3,SNR=25						
ASAR				PcP	PcP	16 22 51.7	+1.5
	0.3nm,1.0s,baz=307,slow=3.8,SNR=1.4						
	0.5nm,0.4s						
BRTR	Keskin Array B	57.70	308	P	P	16 22 07.8	-1.1
	1.2nm,0.8s,baz=108,slow=7.9,SNR=8.4						
	1.2nm,0.8s						
FINES	FINESS Array B	66.82	331	P	P	16 23 08.8	-0.4
	4.6nm,0.9s,baz=114,slow=4.6,SNR=6.8						
	4.6nm,0.9s						
ARCES	ARCESS Array B	69.16	340	P	P	16 23 23.8	-0.1
	0.9nm,0.6s,baz=109,slow=6.9,SNR=7.3						
	0.9nm,0.6s						
H04N2	CROZET ISLANDS	70.47	209	T	T	17 40 38.5	
	baz=42,slow=75,SNR=3.5						
H04N1	CROZET ISLANDS	70.48	209	T	T	17 40 38.7	
	baz=42,slow=75,SNR=4.5						
H04N3	CROZET ISLANDS	70.49	209	T	T	17 40 38.6	
	baz=42,slow=75,SNR=3.5						
HFS	Hagfors	72.65	329	P	P	16 23 44.7	-0.5
	2.6nm,0.8s,baz=151,slow=6.6,SNR=4.0						
	2.6nm,0.8s						
SPITS	Spitsbergen Ar	73.64	348	P	P	16 23 50.3	-0.5
	4.8nm,0.8s,baz=120,slow=8.5,SNR=7.2						
	4.8nm,0.8s						
NOA	NORSAR Array B	73.89	330	P	P	16 23 51.7	-0.9
	0.6nm,0.6s,baz=90,slow=5.4,SNR=1.8						
	0.6nm,0.6s						
BOSA	Boshof	77.99	236	P	P	16 24 16.8	+0.2
	2.3nm,0.6s,baz=76,slow=6.9,SNR=6.0						
	2.3nm,0.6s						
ILAR	Eielson Array	89.48	22	P	P	16 25 14.5	-0.2
	0.4nm,0.8s,baz=297,slow=4.0,SNR=3.0						
	0.4nm,0.8s						

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*PRE **14** 16:28:27.9±0.6, 26°.82S×26°.67E, h2^{km}, ML2.6*
*BGSI **14** 16:28:34.2±1.0, 26°.98S×26°.82E, h3^{km}±33^{km}, ML2.9*

ISC 14 16:28:30.3±0.9**, 27°.01S**±0°.04×**26°.66E**±0°.05**, h5^{km}, n13, σ1°.60**/24**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	Boshof	2.03	218	*e*P	Pb	16 29 06.6	-1.1
BOSA				*e*S	Sb	16 29 34.1	+0.7
BOSA				IAML		16 29 39.6	
	comp=Z,33nm,0.2s						
MAKGR	Makgori	2.05	305	*i* P	Pg	16 29 09.1	-0.6
MAKGR				*i* S	Sg	16 29 35.4	-0.9
MAKGR				IAML		16 29 40.2	
	comp=E,434nm,0.2s						
SKOMA	Sekoma	3.50	315	*i* P	Pn	16 29 28.7	+3.2
SKOMA				IAML		16 30 26.5	
	comp=N,45nm,0.4s						
LPHEP	Lephephe	3.70	349	*i* P	Pn	16 29 30.5	+2.1
LPHEP				*i* S	Sn	16 30 12.6	+0.1
LPHEP				IAML		16 30 28.5	
	comp=E,27nm,0.4s						
PMBG	Pietermaritzbu	4.21	127	*e*P	Pn	16 29 35.9	+0.6
PMBG				*e*S	Sn	16 30 24.8	-0.1
PMBG				IAML		16 30 44.8	
	comp=Z,30nm,0.4s						
KSTD	Kokstad	4.28	148	*e*P	Pn	16 29 37.0	+0.7
KSTD				*e*S	Sn	16 30 28.1	+1.3
KSTD				IAML		16 30 48.4	
	comp=Z,14nm,0.4s						
MREMI	Moremi	4.48	9	*i* P	Pn	16 29 40.5	+1.5
MREMI				IAML		16 30 51.5	
	comp=N,98nm,0.3s						
ALKP	Alkanpan, Nort	4.86	232	*e*P	Pn	16 29 44.4	+0.2
ALKP				*e*S	Sn	16 30 41.2	+0.2
ALKP				IAML		16 31 12.7	
	comp=Z,19nm,0.4s						
BFON	Badsfontein, M	5.43	208	*e*P	Pn	16 29 53.2	+1.0
BFON				*e*S	Sn	16 30 55.6	+0.5
BFON				IAML		16 31 23.5	
	comp=Z,14nm,0.6s						
BRAK	Brakfontein	5.78	214	*e*P	Pn	16 29 58.2	+1.3
BRAK				*e*S	Sn	16 31 03.5	-0.2
BRAK				IAML		16 31 43.9	
	comp=Z,11nm,0.5s						
KGCAE	Kacgae	5.79	315	*i* P	Pn	16 30 00.5	+3.5
KGCAE				*i* S	Sn	16 31 02.5	-1.4
KGCAE				IAML		16 31 38.8	
	comp=E,47nm,1.3s						
BROLN	Tlhalogang	5.92	6	*i* P	Pn	16 29 59.5	+0.7
BROLN				*i* S	Sn	16 31 03.5	-3.5
BROLN				IAML		16 31 41.1	
	comp=N,16nm,4.3s						
FRAZ	Fraserburg	6.71	222	*e*P	Pn	16 30 10.3	+0.7
FRAZ				*e*S	Sn	16 31 25.9	-0.7
FRAZ				IAML		16 32 08.8	
	comp=Z,6.9nm,0.6s						

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*NEIC **14** 16:36:03.7±2.0, 16°.3S±0°.1×176°.97E±0°.08, h10^{km}±2^{km}, mb4.6/16, Error ellipse: s-maj=18.9km s-min=9.9km az=28.0*

*IDC **14** 16:36:08.1±0.8, 16°.80S×176°.40E, h0^{km}, mb4.1/12, mbtmp4.1/12, MS3.8/39, Error ellipse: s-maj=32.5km s-min=20.0km az=145.0*

*GCMT **14** 16:36:11.7±0.2, 16°.54S±0°.02×176°.55E±0°.01, h21^{km}±1^{km}, MW4.9/94, Moment Tensor Solution. s24,c29; s94,c132; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.19±.13; $M_{\theta\theta}$-0.25±.11; $M_{\phi\phi}$0.44±.10; $M_{r\theta}$0.09±.18; $M_{\theta\phi}$2.73±.09; $M_{\phi r}$-0.13±.17; Best double couple: $M_0$2.75700×10^{16} NP1:ϕ_s266.00000°,δ87.00000°,λ-2.00000°. NP2: ϕ_s356.00000°,δ88.00000°,λ-177.00000°. Principal axes: T 2.8460, Plg1.0000°, Azm131.0000°; N -0.1790, Plg86.0000°, Azm30.0000°; P -2.6670, Plg4.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 16:36:04.5±0.7**, 16°.26S**±0°.10×**176°.96E**±0°.07**, h14^{km}, n83, σ1°.46**/40**, mb4.5**/21**, MS3.9**/37**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	1.80	145		Pn	16 36 37.1	+1.8
MSVF				Sn	Sn	16 36 57.5	-0.5
SANVU	Saraoutou	9.42	274	Pn	Pn	16 38 17.8	-2.1
MARNC	Mare, Loyalty	9.92	237		Pn	16 38 26.1	-0.6
PINNC	Pines Island,	10.97	233		Pn	16 38 40.8	-0.4
DZM	Mont Dzumac	11.49	238	Pn	Pn	16 38 47.0	-1.4
	0.5nm,0.3s,baz=58,slow=16,SNR=8.1						
DZM				LR	LR	16 42 01.5	
	comp=Z,608nm,19.6s,baz=62,slow=33						
DZM	Mont Dzumac	11.49	238	*e*Pn	Pn	16 38 48.0	-0.4
	74nm,1.5s						
DZM				*e*LR	LR	16 41 31.8	
	1μm,26.8s						
DZM	Mont Dzumac	11.49	238	Pn	Pn	16 38 47.6	-0.7
ONTNC	Ouen Toro	11.60	237		Pn	16 38 47.9	-1.8
NIUE	Niue	12.81	105	Pn	Pn	16 39 04.0	-2.3
RAO	Raoul Island	13.77	161	LR	LR	16 43 45.2	
	comp=Z,392nm,20.0s,baz=340,slow=34						
TOZ	Tahuroa Road	21.43	183	P	P	16 40 52.4	+0.3
URZ	Urewera	21.92	180	LR	LR	16 47 57.8	
	comp=Z,208nm,20.4s,baz=354,slow=33						
RTZ	Ruatahuna	22.27	180	P	P	16 40 59.7	-1.7
RTZ				IAmb	IAmb	16 41 06.0	
	comp=Z,36nm,1.3s						
RAR	Rarotonga	22.57	106	P	P	16 41 02.6	-2.0
NNZ	Nelson	25.07	186	P	P	16 41 26.1	-2.3
EIDS	Eidsvold	25.79	245	P	P	16 41 34.1	-1.2
EIDS				IAmb	IAmb	16 42 11.9	
	comp=Z,16nm,1.3s						
LBZ	Lake Benmore	28.62	190	P	P	16 41 59.1	-1.4
CTA	Charters Tower	29.40	258	LR	LR	16 52 24.2	
	comp=Z,144nm,19.4s,baz=70,slow=34						
PMG	Port Moresby	29.82	280	LR	LR	16 53 04.4	
	comp=Z,200nm,19.8s,baz=342,slow=35						
MLZ	Mavora Lakes	29.96	193	P	P	16 42 11.0	-1.4
PPT2	Papeete2	32.02	97	*e*S	S	16 47 41.6	-1.0
	comp=Z,40nm,23.5s						
PPT2				*e*LR	LR	16 50 58.9	
	comp=Z,406nm,30.0s						
PPT2				*e*LR	LR	16 51 07.2	
	comp=Z,178nm,40.2s						
PPT	Papeete	32.02	97	LR	LR	16 54 54.0	
	comp=Z,50nm,18.2s,baz=264,slow=35						
TBI	Tubuai	32.32	108	*e*S	S	16 47 47.8	+0.8
	comp=Z,362nm,25.8s						
TBI				*e*LR	LR	16 51 10.2	
	comp=Z,682nm,38.5s						
TBI				*e*LR	LR	16 51 10.5	
	comp=Z,2μm,33.0s						
TOO	Toolangi	34.93	226	P	P	16 42 54.8	-1.2
TOO				IAmb	IAmb	16 43 00.3	
	comp=Z,9.1nm,1.4s						
INKA	Innaminka	35.34	245		P	16 42 59.2	-0.4
INKA				IAmb	IAmb	16 43 01.5	
	comp=Z,7.3nm,1.0s						
STKA	Stephens Creek	35.65	238	P	P	16 43 03.2	+1.0
	comp=Z,22nm,0.8s,baz=70,slow=8.4,SNR=45						
STKA				LR	LR	16 55 48.5	
	comp=Z,254nm,21.4s,baz=47,slow=34						
	comp=Z,22nm,0.8s						
STKA	Stephens Creek	35.65	238		P	16 43 02.0	-0.2
H11S2	WAKE ISLAND Hy	35.97	343	T	T	17 21 14.7	
	baz=163,slow=9.2,SNR=40						
H11S3	WAKE ISLAND Hy	35.98	343	T	T	17 21 15.4	
	baz=163,slow=9.2,SNR=31						
H11S1	WAKE ISLAND Hy	35.99	343	T	T	17 21 15.7	
	baz=163,slow=9.2,SNR=22						
H11N3	WAKE ISLAND Hy	37.09	344	T	T	17 22 40.0	
	baz=165,slow=76,SNR=61						
H11N1	WAKE ISLAND Hy	37.09	344	T	T	17 22 39.6	
	baz=165,slow=76,SNR=98						
H11N2	WAKE ISLAND Hy	37.10	344	T	T	17 22 40.8	
	baz=165,slow=76,SNR=32						
JAY	Jayapura	38.19	287	LR	LR	16 58 58.7	
	comp=Z,226nm,18.8s,baz=82,slow=36						
BBOO	Buckleboo	40.41	238	P	P	16 43 42.0	-0.4
BBOO				IAmb	IAmb	16 43 55.6	
	comp=Z,9.7nm,1.1s						
WB0	Warramunga Arr	40.55	258	P	P	16 43 42.5	-1.3
WB0				IAmb	IAmb	16 43 43.9	
	comp=Z,7.2nm,0.9s						
WRA	Warramunga Arr	40.60	258	P	P	16 43 43.3	-0.9
	comp=Z,5.0nm,1.0s,baz=91,slow=8.7,SNR=26						
	comp=Z,5.0nm,1.0s						
WRA	Warramunga Arr	40.60	258	P	P	16 43 42.9	-1.3
AS31	Alice Springs	41.01	253		P	16 43 46.3	-1.2
ASAR	Alice Springs	41.01	253	P	P	16 43 47.2	-0.4
	comp=Z,7.1nm,0.8s,baz=82,slow=9.0,SNR=88						
ASAR				LR	LR	16 59 49.1	
	comp=Z,137nm,18.9s,baz=88,slow=35						
	comp=Z,7.1nm,0.8s						
ASAR	Alice Springs	41.01	253		P	16 43 47.1	-0.5
TAOE	Nuku Hiva Isla	42.44	85	*e*LR	LR	16 55 45.1	
	comp=Z,240nm,27.8s						
GUMO	Guam	43.42	311	LR	LR	16 58 52.4	
	comp=Z,40nm,19.5s,baz=132,slow=31						
RKT	Rikitea	45.61	107	*e*LR	LR	16 57 18.7	
	comp=Z,3μm,34.8s						
KNRA	Kununurra	46.25	264	P	P	16 44 29.5	-0.3
KNRA				IAmb	IAmb	16 45 13.6	
	comp=Z,19nm,1.4s						
BATI	Baumata	52.11	270	LR	LR	17 04 03.7	
	comp=Z,74nm,21.8s,baz=119,slow=32						
JCJ	Chichijima	54.74	321	LR	LR	17 05 58.1	
	comp=Z,38nm,21.1s,baz=112,slow=33						
DAV	Davao City (W)	55.87	290	LR	LR	17 08 32.6	
	comp=Z,57nm,19.5s,baz=94,slow=35						
NWAO	Narrogin (SRO)	56.10	241	LR	LR	17 10 00.2	
	comp=Z,117nm,18.1s,baz=83,slow=37						
VNDA	Vanda	61.75	184	LR	LR	17 09 50.3	
	comp=Z,46nm,18.8s,baz=22,slow=33						
JOW	Kunigami	63.78	312	LR	LR	17 11 06.5	
	comp=Z,61nm,20.8s,baz=162,slow=33						
JNU	Nakatsue	65.93	319	LR	LR	17 10 21.3	
	comp=Z,55nm,21.4s,baz=124,slow=31						
ASAJ	Asahikawa	67.78	334	LR	LR	17 10 38.6	
	comp=Z,66nm,20.5s,baz=128,slow=30						
RPN	Rapa Nui	68.51	113	LR	LR	17 12 20.1	
	comp=Z,20nm,18.6s,baz=36,slow=32						
NJ2	Nanjing	73.50	311	*e*P	P	16 47 37.4	+0.5
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
QSPA	South Pole Qui	73.79	180	P	P	16 47 40.5	+2.2
	comp=Z,3.0nm,1.0s,baz=16,slow=4.2,SNR=7.1						
QSPA				LR	LR	17 13 03.5	
	comp=Z,27nm,21.3s,baz=34,slow=30						
	comp=Z,3.0nm,1.0s						
QSPA	South Pole Qui	73.79	180	P	P	16 47 39.3	+1.0
QSPA				IAmb	IAmb	16 47 50.5	
	comp=Z,18nm,1.3s						
KDAK	Kodiak Island	77.96	16	LR	LR	17 19 35.8	
	comp=Z,66nm,20.1s,baz=211,slow=33						
PFO	Pinyon Flats O	80.49	51	LR	LR	17 20 54.8	
	comp=Z,61nm,18.4s,baz=203,slow=33						
NVAR	Mina Array Bea	81.39	46	P	P	16 48 31.7	+10
	comp=Z,0.3nm,0.6s,baz=240,slow=4.2,SNR=4.0						
NVAR				LR	LR	17 17 39.7	
	comp=Z,130nm,19.3s,baz=268,slow=30						
	comp=Z,0.3nm,0.6s						
HHC	Hu-ho-hao-te	82.98	316	*e*P	P	16 48 30.5	+1.0
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,5.7s						
BBB	Bella Bella	83.07	31	LR	LR	17 20 02.0	
	comp=Z,84nm,19.1s,baz=232,slow=31						
CMAR	Chiang Mai Arr	84.16	291	P	P	16 48 40.9	+5.0
	comp=Z,0.7nm,0.8s,baz=110,slow=3.5,SNR=6.7						
CMAR				LR	LR	17 22 15.0	
	comp=Z,40nm,21.9s,baz=110,slow=33						
	comp=Z,0.7nm,0.8s						
CMAR	Chiang Mai Arr	84.16	291	P	P	16 48 38.9	+3.0
PZH	PanZhiHua	84.48	299	P	P	16 48 36.8	-0.7
ELK	Elko	84.56	45	LR	LR	17 19 55.5	
	comp=Z,120nm,19.7s,baz=245,slow=31						
ILAR	Eielson Array	85.35	15	P	P	16 48 49.0	+8.2
	comp=Z,0.9nm,0.8s,baz=209,slow=4.9,SNR=8.9						
ILAR				LR	LR	17 29 05.2	
	comp=Z,40nm,18.4s,baz=220,slow=37						
	comp=Z,0.9nm,0.8s						
DLBC	Dease Lake	86.14	25	LR	LR	17 27 53.0	
	comp=Z,47nm,18.5s,baz=279,slow=36						
YAK	Yakutsk	86.45	340	LR	LR	17 21 23.8	
	comp=Z,53nm,20.9s,baz=114,slow=31						
LZDM	Lanzhou Array	86.46	309	P	P	16 48 53.5	+6.2
	comp=Z,2.3nm,0.4s,baz=104,slow=5.0,SNR=1.5						
	comp=Z,2.3nm,0.4s						
NEW	Newport	86.85	38	LR	LR	17 22 42.9	
	comp=Z,75nm,18.3s,baz=246,slow=32						
PMSA	Palmer Station	87.03	158	LR	LR	17 20 00.0	
	comp=Z,43nm,18.8s,baz=242,slow=30						
ANMO	Albuquerque	88.60	53	LR	LR	17 24 46.4	
	comp=Z,56nm,18.8s,baz=216,slow=33						
TXAR	Lajitas Array	88.91	59	P	P	16 49 09.0	+10
	comp=Z,0.2nm,0.7s,baz=223,slow=5.1,SNR=3.6						
TXAR				LR	LR	17 21 23.3	
	comp=Z,102nm,19.4s,baz=223,slow=30						
	comp=Z,0.2nm,0.7s						
PDAR	Pinedale Array	89.26	45	P	P	16 49 10.2	+10
	comp=Z,0.2nm,0.9s,baz=262,slow=8.4,SNR=1.5						
PDAR				LR	LR	17 23 28.9	
	comp=Z,40nm,18.9s,baz=228,slow=32						
	comp=Z,0.2nm,0.9s						
SONM	Songino Array	89.44	321	P	P	16 49 07.9	+6.7
	comp=Z,0.2nm,0.3s,baz=116,slow=5.0,SNR=2.7						
SONM				LR	LR	17 24 23.1	
	comp=Z,37nm,21.8s,baz=171,slow=32						
	comp=Z,0.2nm,0.3s						
ELIB	Princess Elisa	90.23	188	*d*P	P	16 49 06.0	+1.5
BRDH	Bariadhala	91.96	293	LR	LR	17 31 54.2	
	comp=Z,40nm,18.4s,baz=302,slow=36						
SNAA	Sanae	92.29	180	P	P	16 49 17.3	+3.3
	comp=Z,0.6nm,0.6s,baz=201,slow=12,SNR=1.6						
	comp=Z,0.6nm,0.6s						
TIXI	Tiksi	93.48	346	LR	LR	17 27 04.4	
	comp=Z,39nm,19.3s,baz=189,slow=33						
YKA	Yellowknife Ar	94.73	26	LR	LR	17 29 41.3	
	comp=Z,37nm,19.0s,baz=330,slow=34						
PLCA	Paso Flores	95.65	135	LR	LR	17 29 33.1	
	comp=Z,20nm,18.0s,baz=238,slow=34						
GERES	GERESS Array B	144.73	341	PKPbc	PKiKP	16 55 45.7	+0.9
	comp=Z,0.5nm,0.7s,baz=22,slow=4.2,SNR=3.0						

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*IDC **14** 16:49:59.3±0.8, 4°.60N×127°.01E, h0^{km}, mb3.8/12, mbtmp3.8/12, Error ellipse: s-maj=57.5km s-min=14.3km az=66.0*

*NEIC **14** 16:50:06.7±2.2, 4°.6N±0°.1×127°.0E±0°.1, h61^{km}±10^{km}, mb4.3/16, Error ellipse: s-maj=20.6km s-min=13.5km az=56.0*

*DJA **14** 16:50:07.2±1.8, 4°N±13°×12°7E±°, h22^{km}±9^{km}, M4.2/13, mb4.2/13, mB4.8/4, MLv4.2/12, Mw(mB)4.0/4*

ISC 14 16:50:08.6±0.6**, 4°.49N**±0°.08×**127°.0E**±0°.1**, h81^{km}, n48, σ1°.59**/49**, mb4.0**/19**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.62	241	P	Pn	16 50 34.2	-1.3
TNTI	Ternate	3.72	174		Pn	16 51 02.4	-1.3
TNTI	Ternate	3.72	174	P	Pn	16 51 02.3	-1.3
GTOI	Gorontalo	5.49	226	P	Pn	16 51 28.8	+1.0
	14nm,0.7s						
MRSI	Marisa	6.39	232	P	Pn	16 51 42.0	+1.8
SANI	Sanana	6.56	188	P	Pn	16 51 40.3	-2.2
	0.2nm787nm26nm,0.7s						
SWI	Sorong	6.84	141	P	Pn	16 51 45.5	-0.8
	0.1nm18nm,1.1s						
LUWI	Luwuk	6.90	217	Pn	Pn	16 51 44.9	-2.2
LUWI	Luwuk	6.90	217	P	Pn	16 51 48.9	+1.8
TOLI2	Tolitoli	7.01	242	Pn	Pn	16 51 48.9	+0.3
NLAI	Namlea	7.68	179	P	Pn	16 51 57.1	-0.6
	23nm,1.0s						
KRAI	Karang Ratu	7.89	169	P	Pn	16 52 02.7	+2.1
	0.1nm9.1nm,0.8s						
MPSI	Mapaga	8.16	240	P	Pn	16 52 07.9	+3.6
FAKI	Fak Fak	9.07	144	Pn	Pn	16 52 15.1	-1.6
FAKI	Fak Fak	9.07	144	P	Pn	16 52 15.8	-0.9
	13nm,1.0s						
BKSI	Bulukumba	11.89	215	P	Pn	16 52 57.0	+1.8
	230nm4.1nm,0.9s						
SOEI	Soe	14.40	191		Pn	16 53 28.6	0.0
SOEI	Soe	14.40	191	P	Pn	16 53 30.2	+1.6
MTN	Manton Dam	17.71	166	Pn	P	16 54 06.8	-3.0
KNRA	Kununurra	20.12	175	P	P	16 54 36.7	+0.7
KNRA				IAmb	IAmb	16 54 43.5	
	comp=Z,19nm,1.1s						
WB0	Warramunga Arr	25.19	163	P	P	16 55 27.2	+0.4
WB0				IAmb	IAmb	16 55 30.1	
	comp=Z,8.0nm,1.0s						
WRA	Warramunga Arr	25.34	164	P	P	16 55 29.1	+1.0
	comp=Z,4.5nm,0.8s,baz=344,slow=10.0,SNR=20						
	comp=Z,4.5nm,0.8s						
WRA	Warramunga Arr	25.34	164	P	P	16 55 24.5	-3.6
WR8	Warramunga Arr	25.40	163	P	P	16 55 28.7	+0.1
WR8				IAmb	IAmb	16 55 31.7	
	comp=Z,5.5nm,0.9s						
MBWA	Marble Bar	26.45	195	P	P	16 55 37.0	-1.1
PSA00	Pilbara Seismi	26.82	195	P	P	16 55 42.7	+1.3
PSA00				IAmb	IAmb	16 55 44.8	
	comp=Z,5.4nm,0.8s						
AS31	Alice Springs	28.79	167	P	P	16 55 59.3	+0.2
ASAR	Alice Springs	28.80	167	P	P	16 55 59.9	+0.8
	comp=Z,2.1nm,0.7s,baz=350,slow=7.9,SNR=28						
ASAR				PcP	PcP	16 59 09.2	+1.8
	comp=Z,0.4nm,0.8s,baz=349,slow=2.3,SNR=4.0						
	comp=Z,2.1nm,0.7s						
ASAR	Alice Springs	28.80	167	P	P	16 56 00.3	+1.2
CMAR	Chiang Mai Arr	30.68	299	P	P	16 56 15.7	-0.2
	comp=Z,0.1nm,0.3s,baz=103,slow=9.8,SNR=1.6						
	comp=Z,0.1nm,0.3s						
INKA	Innaminka	34.70	158	P	P	16 56 51.0	+0.2
MORW	Morawa	34.97	197	P	P	16 56 50.7	-2.4
BBOO	Buckleboo	38.09	168	P	P	16 57 18.7	-0.9
BBOO				IAmb	IAmb	16 57 21.5	
	comp=Z,7.2nm,0.9s						
STKA	Stephens Creek	38.76	160	P	P	16 57 26.5	+1.3
	comp=Z,7.9nm,0.7s,baz=338,slow=8.9,SNR=19						
	comp=Z,7.9nm,0.7s						
STKA	Stephens Creek	38.76	160	P	P	16 57 25.0	-0.2
ARMA	Armidale	41.98	147	P	P	16 57 53.3	+1.3
ARMA				IAmb	IAmb	16 58 11.7	
	comp=Z,13nm,1.4s						
EVN	Everest	44.72	306	P	P	16 58 12.2	-2.6
EVN				IAmb	IAmb	16 58 23.4	
	comp=Z,5.5nm,1.4s						
SONM	Songino Array	46.65	341	P	P	16 58 30.3	+1.2
	comp=Z,0.5nm,0.9s,baz=161,slow=6.1,SNR=3.1						
	comp=Z,0.5nm,0.9s						

MKAR	Makanchi Array	57.06	325	P	P	16 59 48.2	+1.8
	comp=Z,0.2nm,0.3s,baz=117,slow=8.2,SNR=9.5						
	comp=Z,0.2nm,0.3s						
MKAR	Makanchi Array	57.06	325	P	P	16 59 47.3	+0.9
ZALV	Zalesovo Beam	60.02	333	P	P	17 00 07.9	+1.2
	comp=Z,0.2nm,0.3s,baz=126,slow=7.3,SNR=1.3						
	comp=Z,0.2nm,0.3s						
KURBB	Kurchatov Arra	61.22	327	P	P	17 00 16.0	+1.0
	comp=Z,0.9nm,0.7s,baz=127,slow=6.1,SNR=7.2						
	comp=Z,0.9nm,0.7s						
KURK	Kurchatov	61.22	327	P	P	17 00 14.0	-1.0
KURK				IAmb	IAmb	17 00 27.5	
	comp=Z,1.8nm,0.7s						
KBL	Kabul	61.24	307	P	P	17 00 14.0	-1.6
BVAR	Borovoye Array	66.81	327	P	P	17 00 50.8	-0.8
	comp=Z,0.2nm,0.3s						
	comp=Z,0.2nm,0.3s						
VNDA	Vanda	84.15	173	P	P	17 02 32.3	+2.1
	comp=Z,1.8nm,0.9s,baz=320,slow=7.1,SNR=5.2						
	comp=Z,1.8nm,0.9s						
ILAR	Eielson Array	84.33	25	P	P	17 02 31.5	+0.1
	comp=Z,0.2nm,0.6s,baz=259,slow=5.3,SNR=1.5						
	comp=Z,0.2nm,0.6s						
BRTR	Keskin Array B	89.71	310	P	P	17 02 58.6	+0.4
	comp=Z,0.4nm,0.6s,baz=81,slow=4.5,SNR=3.0						
	comp=Z,0.4nm,0.6s						

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*NEIC **14** 17:01:58.8±0.8, 43°.62N±0°.05×105°.42W±0°.04, h0^{km}±1^{km}, ML3.0/52, Error ellipse: s-maj=9.9km s-min=3.9km az=331.0*

*IDC **14** 17:01:59.4±2.5, 43°.26N×105°.21W, h0^{km}, mbtmp3.2/2, ML3.1/2, Error ellipse: s-maj=50.7km s-min=10.4km az=154.0*

ISC 14 17:01:59.2±1.2**, 43°.58N**±0°.06×**105°.40W**±0°.06**, h0^{km}, n33, σ1^{s}.45**/32**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.13	61		Pn	17 02 21.7	-0.7
K22A	Casper	1.24	222		Pn	17 02 26.9	+3.0
BW06	Boulder Array	3.15	257		Pn	17 02 51.0	+0.7
PD31	Pinedale Array	3.15	257	Pn	Pn	17 02 51.0	+0.7
PDAR	Pinedale Array	3.15	257	Pn	Pb	17 02 55.0	-1.1
	1.4nm,0.3s,baz=72,slow=16,SNR=13						
PDAR				Pg	Pg	17 03 00.8	+1.2
	1.5nm,0.3s,baz=66,slow=18,SNR=16						
PDAR				Lg	Lg	17 03 40.4	
	0.4nm,0.3s,baz=79,slow=32,SNR=4.3						
	0.7nm,0.3s						
LAO	LASA Array	3.17	350		Pn	17 02 49.4	-1.0
RLMT	Red Lodge	3.17	300		Pn	17 02 50.7	+0.1
RLMT				IAML		17 03 45.1	
	23nm,2.4s						
HAYD	Hayden	3.35	205		Pn	17 02 54.6	+1.5
HAYD				IAML		17 04 35.0	
	comp=E,33nm,1.5s						
HAYD				IAML		17 04 39.5	
	comp=N,31nm,1.5s						
YNE	Yellowstone No	3.60	295		Pn	17 02 57.7	+1.2
YNE				IAML		17 03 58.9	
	comp=N,22nm,0.8s						
YNE				IAML		17 04 09.6	
	comp=E,16nm,0.9s						
YMP	Mirror Lake Pl	3.62	290		Pn	17 02 57.5	+0.8
YMP				IAML		17 04 07.7	
	comp=E,33nm,0.7s						
OGNE	Ogallala	3.63	135		Pn	17 02 58.2	+1.6
LOHW	Long Hollow	3.78	272		Pn	17 02 59.8	+0.8
LOHW				IAML		17 04 33.3	
	comp=E,17nm,3.9s						
H17A	Grant Village	3.82	284		Pn	17 03 02.8	+3.2
H17A				IAML		17 04 50.3	
	comp=N,18nm,5.0s						
MOOW	Moose Ponds	3.88	274		Pn	17 03 01.6	+1.3
YPP	Pitchstone Pla	3.96	282		Pn	17 03 02.4	+0.9
YPP				IAML		17 04 27.7	
	comp=N,13nm,4.9s						
YPP				IAML		17 04 59.7	
	comp=E,13nm,4.9s						
YHH	Holmes Hill	4.10	289		Pn	17 03 04.8	+1.3
YMR	Madison River	4.15	287		Pn	17 03 03.8	-0.3
YMR				IAML		17 04 24.0	
	comp=N,24nm,2.3s						
YMR				IAML		17 04 45.7	
	comp=E,21nm,3.0s						
AHID	Auburn Hatcher	4.25	261	Pn	Pn	17 03 04.0	-1.4
AHID				IAML		17 04 23.8	
	comp=E,22nm,0.9s						
AHID				IAML		17 04 29.0	
	comp=E,20nm,1.1s						
RDMU	Red Mountain	4.32	227		Pn	17 03 03.5	-2.8
RDMU				IAML		17 04 26.9	
	comp=N,15nm,2.1s						
YHB	Horse Butte	4.33	288	Pn	Pn	17 03 07.0	+0.5
YHB				IAML		17 04 10.1	
	comp=N,9.2nm,1.6s						
YHB				IAML		17 05 28.7	
	comp=E,12nm,1.4s						
YHL	Hebgen Lake	4.35	289		Pn	17 03 07.4	+0.6
YHL				IAML		17 04 40.8	
	comp=E,19nm,2.4s						
YHL				IAML		17 04 45.1	
	comp=N,15nm,1.7s						
BOZ	Bozeman (W)	4.89	297		Pn	17 03 16.9	+2.8
BOZ				IAML		17 03 59.3	
	comp=N,11nm,4.8s						
BOZ				IAML		17 04 55.6	
	comp=N,9.3nm,4.8s						
HWUT	Hardware Ranch	4.96	249	IAML		17 06 09.0	
	comp=N,13nm,5.0s						
P18A	Preston Nutter	5.36	224		Pn	17 03 20.3	-0.5
PV23	Carpenter Ridg	5.80	209		Pn	17 03 27.6	+0.8
PV04	Paradox Valley	5.82	208		Pn	17 03 26.7	-0.2
PV20	West Nyswonger	5.88	208		Pn	17 03 26.4	-1.4
PV11	David Mesa, Pa	5.89	208		Pn	17 03 27.1	-0.8
PV16	Nyswonger Mesa	5.89	208		Pn	17 03 28.5	+0.5
PV19	Morning Glory	5.92	208		Pn	17 03 29.6	+1.3
S22A	4UR Ranch, Cre	5.92	191		Pn	17 03 29.5	+1.0
I10CA	LAC DU BONNET	9.22	41	I	I	17 59 40.0	
	baz=222,slow=305,SNR=1.2						
ULM	Lac du Bonnet	9.32	41	Pn	Pn	17 04 14.2	-0.6
	comp=N,0.4nm,0.3s,baz=214,slow=7.3,SNR=2.5						
ULM				Lg	Lg	17 06 53.7	
	comp=N,0.1nm,0.3s,baz=119,slow=22,SNR=3.6						
	comp=N,1.3nm,0.4s						

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*CNRM **14** 17:25:45.3, 35°.75N×7°.89W, h66^{km}, ML3.9*

*MDD **14** 17:25:48.8±0.5, 35°.90N×7°.62W, h38^{km}±13^{km}, mb_Lg2.9/11, Error ellipse: s-maj=4.7km s-min=3.0km az=34.0*

*IGIL **14** 17:25:48.8, 35°.90N×7°.69W, h25^{km}, ML2.1*

*SFS **14** 17:25:49.2, 36°.09N×7°.55W, h11^{km}, ML3.1/12, ML3.0/16, MLv2.5/16*

*INMG **14** 17:25:49.6±1.5, 35°.91N×7°.65W, h31^{km}±12^{km}, ML2.3, Error ellipse: s-maj=6.9km s-min=4.1km az=28.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Mar de Marrocos*

ISC 14 17:25:47.0±1.2**, 35°.90N**±0°.04×**7°.60W**±0°.03**, h35^{km}, n82, σ1^{s}.53**/132**, 2D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBDV	Barranco-do-Ve	1.37	349	Pn	Pn	17 26 10.5	+0.8
PBDV				Sn	Sn	17 26 26.4	-0.1
PBDV	Barranco-do-Ve	1.37	349⇓	*e*P	Pn	17 26 10.4	+0.8
PBDV				*e*S	Sn	17 26 26.5	-0.1
PBDV				*i* IAML		17 26 26.8	
PBDV				*i* IAML		17 26 27.3	
PBDV				*i* IAML		17 26 30.9	
PVAQ	Vaqueiros	1.50	357	*e*P	Pn	17 26 12.4	+0.9
PVAQ				*e*S	Sn	17 26 29.4	-0.4
PVAQ				*i* IAML		17 26 30.2	
PVAQ				*i* IAML		17 26 30.4	
PVAQ				*i* IAML		17 26 32.1	
PVAQ	Vaqueiros	1.50	357	P	Pn	17 26 12.4	+0.9
PVAQ	Vaqueiros	1.50	357	S	Sn	17 26 32.5	+2.6
PFVI	Vila Bisbo	1.58	322	Pn	Pn	17 26 13.1	+0.6
PFVI				Sn	Sn	17 26 32.9	+1.3
PFVI	Vila Bisbo	1.58	322⇓	*e*P	Pn	17 26 13.1	+0.6
PFVI				*e*S	Sn	17 26 32.7	+1.1
PFVI				*i* IAML		17 26 37.3	
PFVI				*i* IAML		17 26 38.5	
PFVI				*i* IAML		17 26 40.2	
PFVI	Vila Bisbo	1.58	322	P	Pn	17 26 11.2	-1.3
PFVI	Vila Bisbo	1.58	322	S	Sn	17 26 31.7	0.0
EGRO	El Granado	1.64	3	Pn	Pn	17 26 14.4	+1.1
EGRO				Sn	Sn	17 26 32.8	-0.3
EGRO	El Granado	1.64	3	P	Pn	17 26 14.5	+1.3
EGRO				S	Sn	17 26 32.8	-0.3
EGRO				*i* IVmb_Lg		17 26 34.4	
MORF	Marmelete	1.64	329	*e*P	Pn	17 26 14.0	+0.7
MORF				*e*S	Sn	17 26 32.6	-0.6
MORF				IAML		17 26 37.3	
	comp=N,24nm,0.2s						
MORF	Marmelete	1.64	329	*e*P	Pn	17 26 14.0	+0.7
MORF				*e*S	Sn	17 26 32.2	-1.0
MORF				*i* IAML		17 26 39.0	
MORF				*i* IAML		17 26 39.2	
MORF				*i* IAML		17 26 40.0	
ESPR	Espera	1.71	55	P	Pn	17 26 15.6	+1.3
ESPR				S	Sn	17 26 35.8	+0.9
ESPR				*i* IVmb_Lg		17 26 36.5	
PCVE	Castro Verde	1.77	349	Pn	Pn	17 26 16.2	+1.2
PCVE				Sn	Sn	17 26 35.5	-0.7
PCVE	Castro Verde	1.77	349	*e*P	Pn	17 26 16.3	+1.2
PCVE				*e*S	Sn	17 26 36.3	0.0
PCVE				*i* IAML		17 26 36.9	
PCVE				*i* IAML		17 26 36.9	
PCVE				*i* IAML		17 26 37.2	
EJIF	Jimena Fronter	1.81	72	P	Pn	17 26 17.9	+2.2
SMIR	Smir Dam	1.82	96	P	Pn	17 26 17.0	+1.2
SMIR	Smir Dam	1.82	96	S	Sn	17 26 41.4	+3.8
PTEO	Sao Teotonio	1.87	332	*e*P	Pn	17 26 17.5	+1.0
PTEO				*e*S	Sn	17 26 39.5	+0.5
PTEO				*i* IAML		17 26 43.7	
PTEO				*i* IAML		17 26 47.0	
PTEO				*i* IAML		17 26 48.5	
MESJ	Messejana	2.00	346	*e*P	Pn	17 26 19.4	+1.1
MESJ				*e*S	Sn	17 26 41.6	-0.5
MESJ				IAML		17 26 44.0	
	comp=N,11nm,0.1s						
MESJ	Messejana	2.00	346	*e*P	Pn	17 26 19.5	+1.2
MESJ				*e*S	Sn	17 26 41.7	-0.4
MESJ				*i* IAML		17 26 43.4	
MESJ				*i* IAML		17 26 43.5	
MESJ				*i* IAML		17 26 44.4	
EMIN	Mina Concepcio	2.01	22	Pn	Pn	17 26 19.8	+1.4
EMIN				Sn	Sn	17 26 41.3	-1.0
EMIN	Mina Concepcio	2.01	22	P	Pn	17 26 19.8	+1.4
EMIN				S	Sn	17 26 41.2	-1.1
EMIN				*i* IVmb_Lg		17 26 45.3	
PBEJ	Beja	2.13	354	*e*P	Pn	17 26 21.4	+1.3
PBEJ				*e*S	Sn	17 26 45.1	-0.3
PBEJ				*i* IAML		17 26 45.8	
PBEJ				*i* IAML		17 26 45.9	
PBEJ				*i* IAML		17 26 55.0	
PBAR	Barrancos	2.32	11	Pn	Pn	17 26 23.9	+1.3
PBAR				Sn	Sn	17 26 49.0	-0.9
PBAR	Barrancos	2.32	11	*e*P	Pn	17 26 23.9	+1.3
PBAR				*e*S	Sn	17 26 49.8	-0.1
PBAR				*i* IAML		17 26 54.6	
PBAR				*i* IAML		17 26 54.9	
PBAR				*i* IAML		17 26 57.0	
EMIJ	Mijas	2.38	73	P	Pn	17 26 24.5	+0.9
EMIJ				S	Sn	17 26 51.9	+0.4
EVO	Evora	2.65	353	Pn	Pn	17 26 28.3	+1.1
EVO				Sn	Sn	17 26 57.6	-0.5
EVO	Evora	2.65	353	*e*P	Pn	17 26 28.4	+1.2
EVO				*e*S	Sn	17 26 57.9	-0.2
EVO				*i* IAML		17 26 59.9	
EVO				*i* IAML		17 27 08.5	
EVO				*i* IAML		17 27 09.1	
MOE	Montemor	2.69	347	*e*P	Pn	17 26 29.0	+1.3
MOE				*e*S	Sn	17 26 58.7	-0.3
MOE				*i* IAML		17 26 59.1	
MOE				*i* IAML		17 27 00.2	
MOE				*i* IAML		17 27 01.4	
ECAB	El Cabril	2.79	38	Pn	Pn	17 26 30.0	+0.8
ECAB				Sn	Sn	17 27 00.1	-1.5
ECAB	El Cabril	2.79	38	P	Pn	17 26 30.1	+1.0
ECAB				S	Sn	17 26 59.6	-2.0
ECAB				*i* IVmb_Lg		17 27 03.1	
EBAD	Badajoz	2.89	9	Pn	Pn	17 26 31.5	+0.9
EBAD	Badajoz	2.89	9	P	Pn	17 26 31.4	+0.8
EBAD				S	Sn	17 27 02.6	-1.5
EBAD				*i* IVmb_Lg		17 27 05.2	
PARRA	Arraiolos	2.93	353	*e*P	Pn	17 26 32.2	+1.1
PARRA				*e*S	Sn	17 27 04.5	-0.6
PARRA				*i* IAML		17 27 05.2	
PARRA				*i* IAML		17 27 07.4	
PARRA				*i* IAML		17 27 07.7	
PESTR	Estremoz	2.96	0	Pn	Pn	17 26 32.4	+0.9
PESTR				Sn	Sn	17 27 04.3	-1.6
PESTR	Estremoz	2.96	0	*e*P	Pn	17 26 32.5	+1.0
PESTR				*e*S	Sn	17 27 05.2	-0.7
PESTR				*i* IAML		17 27 06.8	
PESTR				*i* IAML		17 27 07.3	
PESTR				*i* IAML		17 27 07.3	
EGOR	Sierra Gorda,	3.06	66	Pn	Pn	17 26 35.0	+2.0
EGOR				Sn	Sn	17 27 09.0	+0.5
EGOR	Sierra Gorda,	3.06	66	P	Pn	17 26 35.0	+2.0
EGOR				S	Sn	17 27 07.1	-1.5
PMTG	Montargil	3.20	351	*e*P	Pn	17 26 35.8	+1.0
PMTG				*e*S	Sn	17 27 10.7	-1.0
PMTG				*i* IAML		17 27 13.6	
PMTG				*i* IAML		17 27 15.2	
PMTG				*i* IAML		17 27 16.1	
EADA	Adamuz	3.32	46	Pn	Pn	17 26 37.8	+1.4
EADA				Sn	Sn	17 27 12.8	-1.8
EADA	Adamuz	3.32	46	P	Pn	17 26 37.6	+1.2
EADA				S	Sn	17 27 13.8	-0.8
EADA				*i* IVmb_Lg		17 27 16.6	
PMAFR	Mafra	3.33	337	Pn	Pn	17 26 38.4	+1.8
PMAFR				Sn	Sn	17 27 14.7	-0.2
PMAFR	Mafra	3.33	337	*e*P	Pn	17 26 37.9	+1.3
PMAFR				*e*S	Sn	17 27 15.3	+0.4
PMAFR				*i* IAML		17 27 17.6	
PMAFR				*i* IAML		17 27 17.7	
PMAFR				*i* IAML		17 27 19.8	
ELGU	Los Guajares,	3.35	72	Pn	Pn	17 26 38.9	+2.0
ELGU	Los Guajares,	3.35	72	P	Pn	17 26 38.7	+1.7
AKLM	AKL	3.36	113	P	Pn	17 26 35.9	-1.2
AKLM	AKL	3.36	113	S	Sn	17 27 16.0	+0.2
PMRV	Marv??o	3.53	3	*e*P	Pn	17 26 40.4	+1.0
PMRV				*e*S	Sn	17 27 17.9	-1.9
PMRV				*i* IAML		17 27 19.4	
PMRV				*i* IAML		17 27 20.8	
PMRV				*i* IAML		17 27 21.6	
EQTA	Presa de Quent	3.60	67	Pn	Pn	17 26 42.3	+2.0
EQTA				Sn	Sn	17 27 22.9	+1.3
EQUE	Quentar	3.60	68	P	Pn	17 26 42.2	+1.9
EQUE				S	Sn	17 27 20.6	-1.1
PSARD	Sardoal	3.72	353	*e*P	Pn	17 26 43.2	+1.2
PSARD				*e*S	Sn	17 27 23.0	-1.6
PSARD				*i* IAML		17 27 25.9	
PSARD				*i* IAML		17 27 26.2	
PSARD				*i* IAML		17 27 27.1	
PSBE	So Bento	3.73	346	*e*P	Pn	17 26 43.4	+1.2
PSBE				*e*S	Sn	17 27 24.7	-0.1
MD31	MD31	3.83	141	P	Pn	17 26 42.7	-0.9
MD31	MD31	3.83	141	S	Sn	17 27 27.3	-0.1
PCBR	Castelo Branco	3.94	1	*e*P	Pn	17 26 46.1	+1.3
PCBR				*e*S	Sn	17 27 28.4	-1.4
PCBR				*i* IAML		17 27 29.8	
PCBR				*i* IAML		17 27 30.1	
PCBR				*i* IAML		17 27 30.2	
MDT	Midelt	3.95	140	P	Pn	17 26 44.5	-0.8
MDT	Midelt	3.95	140	S	Sn	17 27 30.4	0.0
EQES	Quesada	4.10	61	P	Pn	17 26 49.0	+1.7
EQES				S	Sn	17 27 33.1	-1.0
EQES				*i* IVmb_Lg		17 27 36.6	
PCAS	Casmilo, Conde	4.21	351	*e*P	Pn	17 26 50.3	+1.6
PCAS				*e*S	Sn	17 27 36.0	-0.6
PSIM	Granatula de C	4.23	45	P	Pn	17 26 50.1	+1.1
PSIM				S	Sn	17 27 33.7	-3.5
TISM	Timmit	4.28	167	P	Pn	17 26 47.4	-2.2
TISM	Timmit	4.28	167	S	Sn	17 27 36.0	-2.3
EPLA	Plasencia	4.33	16	P	Pn	17 26 51.8	+1.5
EPLA				S	Sn	17 27 38.0	-1.6
EPLA				*i* IVmb_Lg		17 27 39.5	
PAB	San Pablo	4.46	34	P	Pn	17 26 54.1	+1.9
PAB				S	Sn	17 27 38.8	-4.1
PAB				*i* IVmb_Lg		17 27 43.0	
MTE	Manteigas	4.49	1	*e*S	Sn	17 27 41.8	-1.9
MTE				*i* IAML		17 27 43.2	
MTE				*i* IAML		17 27 44.3	
OUK	Oukaimeden	4.68	183	P	Pn	17 26 52.4	-3.1
OUK	Oukaimeden	4.68	183	S	Sn	17 27 44.4	-4.4
PVIS	Viseu	4.81	357	*e*P	Pn	17 26 58.3	+1.3
PVIS				*e*S	Sn	17 27 50.3	-1.3
TIO	Tiouine	4.97	177	P	Pn	17 26 56.3	-2.9
TIO	Tiouine	4.97	177	S	Sn	17 27 50.7	-4.8
OUZM	OUZ	5.03	172	P	Pn	17 26 57.6	-2.5
OUZM	OUZ	5.03	172	S	Sn	17 27 55.5	-1.4
MVO	Moncorvo	5.28	5	*e*P	Pn	17 27 04.6	+1.2
MVO				*e*S	Sn	17 28 00.4	-2.6
MVO				*i* IAML		17 28 01.4	
MVO				*i* IAML		17 28 01.8	
MVO				*i* IAML		17 28 02.8	
PVRL	Vila Real	5.37	359	*e*S	Sn	17 28 03.5	-1.8
POLO	Lamas de Olo	5.47	358	*e*P	Pn	17 27 07.1	+1.1
POLO				*e*S	Sn	17 28 06.0	-1.8
POLO				*i* IAML		17 28 06.9	
POLO				*i* IAML		17 28 07.1	
POLO				*i* IAML		17 28 07.4	
ETOB	Tobarra	5.55	59	Pn	Pn	17 27 08.0	+0.9
ETOB				Sn	Sn	17 28 06.6	-3.2
ETOB	Tobarra	5.55	59	P	Pn	17 27 08.0	+0.9
ETOB				S	Sn	17 28 07.2	-2.6
PBRG	Braganca	5.94	6	*e*P	Pn	17 27 13.4	+1.0
PBRG				*e*S	Sn	17 28 17.1	-2.1
PBRG				*i* IAML		17 28 17.9	
PBRG				*i* IAML		17 28 18.2	
PBRG				*i* IAML		17 28 19.9	
ELOB	Lobios	5.97	357	S	Sn	17 28 17.8	-2.3
ECAL	Calabor	6.07	6	S	Sn	17 28 19.8	-2.7

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*ISK **14** 17:27:47.7, 38°.45N×39°.62E, h12^{km}, ML2.5/13*

*AFAD **14** 17:27:48.0, 38°.41N×39°.62E, h3^{km}±2^{km}, ML2.7*

ISC 14 17:27:48.2±1.1**, 38°.45N**±0°.03×**39°.63E**±0°.03**, h9^{km}**±10^{km}**, n22, σ0^{s}.65**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVRC	Sivrice-ELAZID	0.27	254	Pg	Pg	17 27 53.2	-0.4
SVRC				Sg	Sg	17 27 58.1	+0.9
KOVA	Elazig, Kovanc	0.29	29	P	Pg	17 27 54.8	+0.8
KOVA				S	Sb	17 28 00.1	-0.5
ELZG	Elazig	0.51	276	P	Pg	17 27 58.0	-0.1
ELZG				S	Sg	17 28 05.3	+0.5
DYBB	Diyarbakir	0.64	141	Pg	Pb	17 28 00.7	-0.8
DYBB				Sg	Sb	17 28 09.7	-0.8
TNCL	Tunceli-Merkez	0.67	354	P	Pg	17 28 01.1	0.0
TNCL				S	Sg	17 28 09.1	-0.7
NARI	Adyaman-Kaht	0.89	231	P	Pb	17 28 05.3	-0.5
MAYA	Malatya/Merkez	0.96	263	P	Pg	17 28 06.0	-0.5
MAYA				S	Sb	17 28 19.9	+0.2
BNGB	Bingl	0.98	56	Pg	Pg	17 28 07.3	+0.3
BNGB				Sg	Sb	17 28 21.4	+0.9
HANM	anlurfa/Hi	1.05	215	P	Pn	17 28 08.5	-0.6
HANM				S	Sb	17 28 22.2	-0.2
HANM				*i* IAML		17 28 24.0	
	comp=E,127nm,0.6s						
HANM				*i* IAML		17 28 25.0	
	comp=N,167nm,0.3s						
ERZN	Erzincan	1.14	4	Pn	Pg	17 28 09.7	-0.3
ARPR	Arapgir-MALATY	1.20	303	Pn	Pg	17 28 10.7	-0.5
YEDI	Yedisu-Bingol	1.22	36	Pn	Pg	17 28 11.1	-0.4
AZEY	Adyaman-Merk	1.26	240	P	Pg	17 28 12.6	+0.2
AZEY				S	Sn	17 28 31.2	+2.0
ILIC	ilic-Erzincan	1.30	321	Pn	Pn	17 28 12.1	-0.5
SANL	SANLIURFA_Merk	1.38	202	P	Pg	17 28 14.1	-0.5
SANL				S	Sg	17 28 33.1	+0.8
KARO	Karliova-Bingo	1.40	52	Pn	Pn	17 28 13.7	-0.4
VRTB	Varto-Mus	1.59	63	Pn	Pn	17 28 16.5	-0.2
GURO	Guroymak-BITLI	1.89	86	Pn	Pn	17 28 20.9	+0.2
BAYT	Aydıntepe-Bayb	1.98	11	Pn	Pn	17 28 22.1	+0.1
GAZ	Gaziantep	2.30	237	Pn	Pn	17 28 26.3	-0.1
KMRS	Kahramanmaras	2.36	247	Pn	Pn	17 28 27.1	0.0
SARI	SarD1z-Kayseri	2.52	270	Pn	Pn	17 28 29.5	0.0

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*MOS **14** 17:35:05.2±1.6, 52°.25N×160°.92E, h8^{km}, mb4.4/19, Error ellipse: s-maj=6.6km s-min=4.1km az=107.3*

*IDC **14** 17:35:06.8±0.6, 52°.58N×160°.65E, h0^{km}, mb4.0/26, mbtmp4.1/29, ML4.2/3, MS3.5/7, Error ellipse: s-maj=15.0km s-min=10.4km az=174.0*

*KRSC **14** 17:35:08.2±2.1, 52°.43N×160°.81E, h13^{km}±24^{km}, Ml4.8, Felt [II-III] at cape Shipunskiy.*

*NEIC **14** 17:35:08.3±2.0, 52°.51N±0°.02×160°.72E±0°.08, h10^{km}±1^{km}, mb4.4/92, Error ellipse: s-maj=8.0km s-min=3.8km az=100.0*

ISC 14 17:35:08.4±1.4**, 52°.52N**±0°.04×**160°.79E**±0°.03**, h16^{km}**±8^{km}**, n260, σ1^{s}.64**/266**, mb4.3**/80**, MS3.7**/6**, 7C-8D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.75	322	PN	Pb	17 35 23.6	+0.7
SPN	Mys Shipunski	0.75	322	*e*P	Pb	17 35 23.7	+0.7
SPN				*e*S	Sg	17 35 31.8	-1.0
NLC	Nalytchevo	1.09	307	PN	Pb	17 35 29.4	+0.5
NLC				S	Sn	17 35 44.9	+1.2
NLC	Nalytchevo	1.09	307	*e*P	Pb	17 35 29.4	+0.5
NLC				*e*S	Sn	17 35 44.9	+1.2
DALK	Dalny	1.34	294	PN	Pn	17 35 33.3	+1.0
DALK				S	Sg	17 35 51.6	0.0
DALK	Dalny	1.34	294	*e*P	Pn	17 35 33.4	+1.0
DALK				*e*S	Sg	17 35 51.6	0.0
UGLR	Uglovaya	1.38	301	PN	Pb	17 35 34.6	+0.8
UGLR	Uglovaya	1.38	301	*e*P	Pb	17 35 34.6	+0.8
SDLR	Sedlovina	1.38	304	PN	Pn	17 35 33.9	+0.8
SDLR	Sedlovina	1.38	304	*e*P	Pn	17 35 33.9	+0.8
PET	Petropavlovsk	1.39	292		Pn	17 35 33.6	+0.5
PET					Sn	17 35 50.7	-0.4
PET	Petropavlovsk	1.39	292	*e*PN	Pn	17 35 34.1	+1.0
PET				*e*S	Sn	17 35 52.3	+1.2
PET				pmax	pmax		
	comp=Z,1µm,0.5s						
PET				smax	smax		
	comp=E,13µm,0.8s						
PET				smax	smax		
	comp=N,6µm,0.6s						
PET	Petropavlovsk	1.39	292	*e*P	Pn	17 35 34.0	+1.0
PET				*e*S	Sb	17 35 52.9	+1.4
RUS	Russkaya	1.39	268	PN	Pb	17 35 34.3	+0.3
RUS				S	Sb	17 35 52.6	+1.2
RUS	Russkaya	1.39	268	*e*P	Pb	17 35 34.3	+0.3
RUS				*e*S	Sb	17 35 52.7	+1.2
SMAR	Somma	1.42	303	PN	Pn	17 35 34.7	+1.1
SMAR	Somma	1.42	303	*e*P	Pn	17 35 34.8	+1.1
INSR	Institute	1.44	293	PN	Pn	17 35 34.8	+1.1
INSR				S	Sg	17 35 54.4	-0.3
INSR	Institute	1.44	293	*e*P	Pn	17 35 34.8	+1.1
INSR				*e*S	Sg	17 35 54.4	-0.3
AVH	Avacha	1.45	302	PN	Pb	17 35 35.5	+0.5
AVH	Avacha	1.45	302	*e*P	Pb	17 35 35.6	+0.5
KRER	Koryakskii	1.47	303	PN	Pb	17 35 35.8	+0.5
KRER	Koryakskii	1.47	303	*e*P	Pb	17 35 35.9	+0.5
KOK	Koryaka	1.52	302	PN	Pb	17 35 36.3	+0.2
KOK	Koryaka	1.52	302	*e*P	Pb	17 35 36.4	+0.2
KRX	Arik	1.54	304	PN	Pn	17 35 36.6	+1.3
KRX	Arik	1.54	304	*e*P	Pn	17 35 36.6	+1.3
MTVR	Mutnovka	1.59	270	PN	Pn	17 35 37.3	+1.4
MTVR	Mutnovka	1.59	270	*e*P	Pn	17 35 37.4	+1.4
KRMR	Karymshinskiy	1.65	282	PN	Pn	17 35 38.0	+1.4
KRMR				S	Sg	17 36 02.0	+0.6
KRMR	Karymshinskiy	1.65	282	*e*P	Pn	17 35 38.0	+1.4
KRMR				*e*S	Sg	17 36 02.0	+0.6
GRL	Gorelyy	1.66	272	PN	Pb	17 35 39.6	+1.0
GRL	Gorelyy	1.66	272	*e*P	Pb	17 35 39.6	+1.0
KII	Karymskiy	1.72	333	PN	Pb	17 35 39.5	-0.1
KII	Karymskiy	1.72	333	*e*P	Pb	17 35 39.6	-0.1
ASAK	Asacha	1.77	267	PN	Pb	17 35 40.3	-0.2
ASAK	Asacha	1.77	267	*e*P	Pb	17 35 40.4	-0.2
KDTR	Khodutka, Kamc	1.81	248	PN	Pn	17 35 39.5	+0.7
KDTR	Khodutka, Kamc	1.81	248	*e*P	Pn	17 35 39.5	+0.7
PEA0B	Petropavlovsk-	1.97	289		Pn	17 35 42.6	+1.7

PEA0B				Sn	Sn	17 36 02.1	-3.2
PEA0B	Petropavlovsk-	1.97	289*c*	*i*PN	Pn	17 35 42.7	+1.7
PETK	Petropavlovsk-	1.97	289	Pn	Pn	17 35 42.0	+1.0
	comp=N,88nm,0.3s,baz=99,slow=20,SNR=862						
PETK				Lg	Lg	17 36 08.4	
	comp=N,156nm,0.3s,baz=103,slow=20,SNR=4.6						
PETK	Petropavlovsk-	1.97	289		Pn	17 35 42.4	+1.4
PETK	Petropavlovsk-	1.97	289	PN	Pn	17 35 42.4	+1.4
APC	Apacha	2.25	282	PN	Pb	17 35 47.7	-0.8
APC	Apacha	2.25	282	*e*P	Pb	17 35 47.7	-0.8
KZV	Kizimen	2.62	354	PN	Pn	17 35 52.5	+2.4
KZV	Kizimen	2.62	354	*e*P	Pn	17 35 52.5	+2.4
PAU	Pauzhetka	2.67	248	PN	Pn	17 35 51.9	+1.2
PAU	Pauzhetka	2.67	248	*e*P	Pn	17 35 51.9	+1.2
KMNR	Kamenistaya	3.26	355	PN	Pb	17 36 03.0	-2.9
KMNR	Kamenistaya	3.26	355	*e*P	Pb	17 36 03.0	-2.9
SKR	Severo-Kuril’s	3.44	240	*e*PN	Pn	17 36 01.4	+0.2
SKR				pmax	pmax		
	comp=Z,85nm,0.5s						
SKR				MLR	MLR		
	comp=Z,900nm,12.0s						
SKR				MLR	MLR		
	comp=N,1µm,15.0s						
SKR				MLR	MLR		
	comp=E,900nm,13.0s						
SKR	Severo-Kuril’s	3.44	240	*e*P	Pn	17 36 02.1	+0.9
BZWR	Bezymyannyi-We	3.46	357	PN	Pn	17 36 05.8	+4.1
BZWR	Bezymyannyi-We	3.46	357	*e*P	Pn	17 36 05.8	+4.1
ZLN	Zelenaya	3.51	0	PN	Pb	17 36 08.3	-1.8
ZLN	Zelenaya	3.51	0	*e*P	Pb	17 36 08.3	-1.8
KOZ	Kozyrevsk	3.59	352	PN	Pb	17 36 08.0	-3.4
KOZ	Kozyrevsk	3.59	352	*e*P	Pb	17 36 08.1	-3.4
CIRR	Tsirk	3.61	360	PN	Pb	17 36 10.0	-1.8
CIRR	Tsirk	3.61	360	*e*P	Pb	17 36 10.1	-1.8
ESO	Esso	3.63	341	PN	Pn	17 36 06.7	+2.9
ESO	Esso	3.63	341	*e*P	Pn	17 36 06.7	+2.9
KLY	Klyuchi	3.81	359	PN	Pb	17 36 12.0	-3.1
KLY				S	Sb	17 36 58.8	-2.0
KLY	Klyuchi	3.81	359	*e*P	Pb	17 36 12.0	-3.1
KLY				*e*S	Sb	17 36 58.9	-2.0
KBTR	Krutoberegovo	3.89	17	PN	Pn	17 36 09.2	+1.9
KBTR	Krutoberegovo	3.89	17	*e*P	Pn	17 36 09.3	+1.9
KBG	Krutoberegovo	3.91	16	PN	Pb	17 36 15.7	-1.2
KBG	Krutoberegovo	3.91	16	*e*P	Pb	17 36 15.7	-1.2
SRKR	Sorokina	4.15	3	PN	Pn	17 36 16.3	+5.2
SRKR	Sorokina	4.15	3	*e*P	Pn	17 36 16.3	+5.2
SHEM	Shemya Is, Ala	8.11	83	Pn	Pn	17 37 07.2	+1.9
	comp=E,8.5nm,0.3s,baz=266,slow=16,SNR=4.6						
SHEM				Sn	Sn	17 38 34.0	-2.4
	comp=E,5.2nm,0.3s,baz=239,slow=23,SNR=1.0						
	comp=E,57nm,0.6s						
SMY	Shemya	8.11	83	Pn	Pn	17 37 06.6	+1.3
SMY	Shemya	8.11	83	PN	Pn	17 37 06.6	+1.3
MA2	Magadan	9.02	326	LR	LR	17 41 18.6	
	comp=E,198nm,19.1s,baz=126,slow=42						
SEY	Seymchan	11.36	340	LR	LR	17 42 34.2	
	comp=E,144nm,20.5s,baz=146,slow=40						
YUK	Yuzh-Kuril'sk	13.05	235⇓	*e*PN	Pn	17 38 10.0	-2.9
JKA	Kamikawa-asahi	14.70	242	Pn	Pn	17 38 33.3	-2.1
ASAJ	Asahikawa	14.70	242	Pn	Pn	17 38 36.1	+0.7
	comp=E,1.2nm,0.3s,baz=70,slow=15,SNR=11						
	comp=E,12nm,0.8s						
ASAJ	Asahikawa	14.70	242	P	Pn	17 38 33.3	-2.2
GRNR	Gornyy	15.21	273⇓	*i*P	P	17 38 48.3	+1.1
GRNR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,140nm,13.0s						
GRNR				MLR	MLR		
	comp=N,110nm,14.0s						
BILL	Bilibino	15.80	8		P	17 38 52.9	-0.8
BILL	Bilibino	15.80	8⇓	*e*P	Pn	17 38 52.0	+2.2
BILL				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ERM	Erimo	15.88	236	Pn	Pn	17 38 47.0	-4.0
ERM	Erimo	15.88	236	P	Pn	17 38 47.0	-4.0
ERM				pmax	pmax		
	comp=Z,166nm,1.4s						
NIKH	Nikolski High	18.32	76	P	Pn	17 39 20.3	-1.3
YAK	Yakutsk	19.14	312	P	P	17 39 29.5	-0.9
	comp=Z,0.6nm,0.3s,baz=305,slow=6.1,SNR=5.9						
YAK				LR	LR	17 47 46.8	
	comp=Z,97nm,18.8s,baz=108,slow=40						
	comp=Z,9.2nm,0.8s						
YAK	Yakutsk	19.14	312		P	17 39 28.5	-2.0
YAK				IAmb	IAmb	17 39 37.6	
	comp=Z,22nm,0.8s						
YAK	Yakutsk	19.14	312	*e*P	P	17 39 28.6	-1.8
YAK				*e*S	Sn	17 43 07.2	+2.1
YAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
YAK				smax	smax		
	comp=N,8.0nm,1.3s						
YAK				smax	smax		
	comp=E,41nm,2.4s						
YAK				MLR	MLR		
	comp=Z,165nm,12.0s						
YAK				MLR	MLR		
	comp=E,116nm,12.0s						
YAK				MLR	MLR		
	comp=N,60nm,12.0s						
ZEA	Zeya	20.06	287	*e*P	Pn	17 39 46.1	+3.7
USRK	Ussuriysk Ar.	20.75	258	P	P	17 39 48.1	-0.1
	comp=N,5.1nm,0.8s,baz=58,slow=10.0,SNR=4.8						
	comp=N,5.1nm,0.8s						
USRK	Ussuriysk Ar.	20.75	258	*e*P	P	17 39 47.6	-0.6
USRK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HEH	HeiHe	20.85	277	*e*P	P	17 39 50.0	+0.8
HEH				pmax	pmax		
	comp=Z,12nm,0.7s						
HEH				LR	LR		
	comp=N,130nm,14.2s						
HEH				LR	LR		
	comp=E,260nm,12.9s						
HEH				LR	LR		
	comp=Z,360nm,15.1s						
ANM	Nome	21.07	42	P	P	17 39 50.7	-0.8
ANM	Nome	21.07	42	P	P	17 39 50.7	-0.8
ANM				pmax	pmax		
	comp=Z,15nm,1.5s						
M13K	Dall Lake	21.10	54	P	P	17 39 51.5	-0.3
JSD	Sado	21.34	236	P	P	17 39 50.7	-3.8
J14K	Nanvaranak Lak	21.37	47	P	P	17 39 55.6	+1.0
J14K				IAmb	IAmb	17 39 57.9	
	comp=Z,30nm,1.3s						
N14K	Kuskokwak Cree	21.89	55	P	P	17 40 00.1	-0.2
K15K	Wolf Creek Mou	22.21	49	P	P	17 40 02.1	-1.6
K15K				IAmb	IAmb	17 40 48.7	
	comp=Z,25nm,1.4s						
MJB9	Matsu-Tunnel	22.53	234	P	P	17 40 02.4	-5.0
MJB9				IAmb	IAmb	17 40 25.3	
	comp=Z,16nm,1.0s						
MAJO	Matsushiro	22.53	234	P	P	17 40 01.4	-5.9
MAJO				IAmb	IAmb	17 40 24.3	
	comp=Z,18nm,1.1s						
MAJO	Matsushiro	22.53	234⇑	*e*P	P	17 40 02.1	-5.3
MAJO				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MJAR	Matsushiro Arr	22.53	234	P	P	17 40 08.0	+0.6
	comp=Z,5.2nm,0.8s,baz=178,slow=20,SNR=9.8						
	comp=Z,5.2nm,0.8s						
MJAR	Matsushiro Arr	22.53	234	P	P	17 40 08.0	+0.6
C16K	Lisburne Hills	22.55	33	P	P	17 40 07.9	+0.6
G16K	Koyuk River	22.55	41	P	P	17 40 07.9	+0.6
BNX	BinXian	22.72	266	⇓P	P	17 40 09.3	0.0
BNX				pmax	pmax		
	comp=Z,8.0nm,0.9s						
J16K	Anvik River	22.79	47	P	P	17 40 11.0	+1.1
J16K				IAmb	IAmb	17 40 42.4	
	comp=Z,13nm,1.4s						
L16K	Owhat River	23.10	51	P	P	17 40 14.2	+1.2
L16K				IAmb	IAmb	17 40 25.6	
	comp=Z,15nm,1.4s						
M16K	Timber Creek	23.30	53	P	P	17 40 15.9	+0.8
F17K	Baldwin Pennin	23.30	39	P	P	17 40 15.4	+0.3
H17K	Granite Mounta	23.43	43	P	P	17 40 17.9	+1.5
H17K				IAmb	IAmb	17 40 41.5	
	comp=Z,8.6nm,1.2s						
J17K	VABM Dome	23.49	47	P	P	17 40 18.4	+1.4
J17K				IAmb	IAmb	17 40 52.4	
	comp=Z,21nm,1.4s						
JGF	Kuroka	23.70	234	P	P	17 40 18.4	-0.8
JGF				IAmb	IAmb	17 40 22.9	
	comp=Z,16nm,1.1s						
O16K	Kokwok River B	23.70	56	P	P	17 40 18.4	-0.7
K17K	Iditarod	23.75	49	P	P	17 40 18.4	-1.1
TIXI	Tiksi	23.78	335	LR	LR	17 49 55.6	
	comp=Z,90nm,19.8s,baz=186,slow=38						
TIXI	Tiksi	23.78	335		P	17 40 19.1	-0.6
TIXI	Tiksi	23.78	335⇓	*e*P	P	17 40 19.1	-0.6
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
M17K	Holitna River	24.05	52	P	P	17 40 23.9	+1.5
M17K				IAmb	IAmb	17 40 25.4	
	comp=Z,11nm,0.8s						
C18K	Utukok River	24.10	34	P	P	17 40 23.6	+0.7
C18K				IAmb	IAmb	17 40 26.1	
	comp=Z,7.6nm,1.2s						
H18K	Honhosa River	24.11	43	P	P	17 40 24.3	+1.3
H18K				IAmb	IAmb	17 41 04.3	
	comp=Z,14nm,1.5s						
N17K	Nushagak Hills	24.15	54	P	P	17 40 24.1	+0.8
N17K				IAmb	IAmb	17 40 28.8	
	comp=Z,19nm,1.3s						
L18K	Granite Mounta	24.45	50	P	P	17 40 26.6	+0.5
J18K	Innoko River	24.55	47	P	P	17 40 27.4	+0.4
J18K				IAmb	IAmb	17 40 30.5	
	comp=Z,8.1nm,0.9s						
C19K	Lookout Ridge	24.81	33		P	17 40 30.8	+1.5
C19K				IAmb	IAmb	17 40 32.6	
	comp=Z,9.5nm,0.8s						
D19K	Kuna River	25.10	35		P	17 40 32.7	+0.8
D19K				IAmb	IAmb	17 40 34.2	
	comp=Z,12nm,1.2s						
N19K	Bonanza Creek	25.48	53	P	P	17 40 37.0	+1.5
D20K	Etivluk River	25.69	35		P	17 40 38.4	+1.2
D20K				IAmb	IAmb	17 40 40.1	
	comp=Z,9.7nm,1.1s						
J20K	Nowinta River	25.76	46	P	P	17 40 39.1	+1.2
J20K				IAmb	IAmb	17 41 02.5	
	comp=Z,10nm,1.3s						
OHAK	Old Harbor	26.44	61	P	P	17 40 44.4	+0.3
KDAK	Kodiak Island	26.72	60	P	P	17 40 47.7	+1.1
KDAK	Kodiak Island	26.72	60	P	P	17 40 47.7	+1.1
KDAK				pmax	pmax		
	comp=Z,22nm,1.0s						
D22K	Ayikyak River	27.11	35	P	P	17 40 50.9	+0.8
B22K	Teshekpuk Lake	27.25	32	P	P	17 40 52.5	+1.3
B22K				IAmb	IAmb	17 40 53.5	
	comp=Z,7.5nm,0.9s						
KSRS	Korea Array	27.40	250	P	P	17 40 53.4	+0.5
	comp=Z,1.9nm,0.8s,baz=43,slow=10,SNR=5.7						
	comp=Z,1.9nm,0.8s						
C23K	Itkillik River	28.05	34	P	P	17 41 00.6	+2.3
C23K				IAmb	IAmb	17 41 31.8	
	comp=Z,6.7nm,1.3s						
TOLK	Toolik Lake Re	28.18	36	P	P	17 41 01.6	+2.0
ILAR	Eielson Array	28.93	45	P	P	17 41 07.2	+0.9
	comp=Z,0.5nm,0.7s,baz=253,slow=6.5,SNR=9.5						
	comp=Z,0.5nm,0.7s						
ILAR	Eielson Array	28.93	45	P	P	17 41 08.0	+1.8
ILAR	Eielson Array	28.93	45	*e*P	P	17 41 07.6	+1.3
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
E25K	Arctic Village	29.59	38	P	P	17 41 13.7	+1.6
BMAR	Burnt Mountain	29.92	39	P	P	17 41 16.8	+1.7
BCAR	Beaver Creek A	31.29	48	P	P	17 41 28.4	+1.1
M29M	Somme Creek	32.90	48	P	P	17 41 43.0	+1.6
M29M				IAmb	IAmb	17 41 46.8	
	comp=Z,4.5nm,1.1s						
H11N2	WAKE ISLAND Hy	33.06	169	T	T	18 17 16.7	
	baz=353						
H11N3	WAKE ISLAND Hy	33.08	169	T	T	18 17 35.3	
	baz=353,slow=74						
H11N1	WAKE ISLAND Hy	33.08	169	T	T	18 17 07.5	
	baz=353,slow=74						
INK	Inuvik	34.07	37	P	P	17 41 53.3	+1.9
INK				IAmb	IAmb	17 42 25.8	
	comp=Z,5.8nm,1.4s						
INK	Inuvik	34.07	37	P	P	17 41 53.3	+1.9
INK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
H11S1	WAKE ISLAND Hy	34.25	170	T	T	18 19 24.8	
	baz=352,slow=76,SNR=6.3						
H11S3	WAKE ISLAND Hy	34.26	170	T	T	18 19 25.9	
	baz=352,slow=76,SNR=9.9						
H11S2	WAKE ISLAND Hy	34.27	170	T	T	18 19 28.8	
	baz=352,slow=76,SNR=3.6						
SONM	Songino Array	34.45	284	P	P	17 41 54.8	-0.3
	comp=Z,0.5nm,0.6s,baz=69,slow=8.1,SNR=6.8						
SONM				LR	LR	17 57 28.3	
	comp=Z,140nm,19.9s,baz=54,slow=39						
	comp=Z,0.5nm,0.6s						
SONM	Songino Array	34.45	284	P	P	17 41 53.6	-1.5
HHC	Hu-ho-hao-te	35.06	271	*e*P	P	17 41 59.3	-1.1
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,69nm,4.4s						
HHC				LR	LR		
	comp=N,110nm,10.4s						
HHC				LR	LR		
	comp=E,88nm,10.2s						
HHC				LR	LR		
	comp=Z,100nm,10.0s						
A36M	Sachs Harbour	36.41	30		P	17 42 13.6	+2.1
A36M				IAmb	IAmb	17 42 16.2	
	comp=Z,4.8nm,0.9s						
NRIK	Noril'sk	36.62	325	LR	LR	17 58 27.9	
	comp=Z,126nm,19.1s,baz=48,slow=38						
YKA	Yellowknife Ar	43.30	42	P	P	17 43 09.6	+0.7
	comp=Z,0.9nm,1.0s,baz=301,slow=8.5,SNR=5.1						
	comp=Z,0.9nm,1.0s						
ZALV	Zalesovo Beam	43.45	303	P	P	17 43 09.5	-0.6
	comp=Z,0.3nm,0.3s,baz=61,slow=9.2,SNR=4.0						
	comp=Z,0.3nm,0.3s						
RES	Resolute Bay	43.70	22	P	P	17 43 14.0	+2.1
RES	Resolute Bay	43.70	22	P	P	17 43 14.0	+2.1
RES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
DGZ	Jazzator, Alta	44.30	297⇓	*e*P	P	17 43 16.4	-0.9
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WMQ	Urumqi	47.56	290	*e*P	P	17 43 42.5	-0.4
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
SPITS	Spitsbergen Ar	47.77	351	P	P	17 43 44.3	+0.3
	comp=Z,2.6nm,0.4s,baz=54,slow=11,SNR=29						
	comp=Z,2.6nm,0.4s						
SPB2	Spitsbergen Ar	47.78	351	P	P	17 43 45.0	+0.9
KURK	Kurchatov	48.40	303		P	17 43 47.6	-1.5
KURK				IAmb	IAmb	17 43 55.4	
	comp=Z,3.3nm,0.6s						
KURK				PcP	PcP	17 45 13.0	-2.4
KURK	Kurchatov	48.40	303⇑	*e*P	P	17 43 46.7	-2.5
KURK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KURBB	Kurchatov Arra	48.50	303	P	P	17 43 49.0	-1.0
	comp=Z,1.3nm,0.4s,baz=60,slow=7.6,SNR=25						
KURBB				LR	LR	18 05 45.7	
	comp=Z,84nm,18.5s,baz=186,slow=38						
	comp=Z,1.3nm,0.4s						
MK31	Makanchi Array	48.79	296⇑	*e*P	P	17 43 50.5	-1.8
MKAR	Makanchi Array	48.79	296	P	P	17 43 51.2	-1.1
	comp=Z,0.4nm,0.4s,baz=50,slow=6.3,SNR=15						
	comp=Z,0.4nm,0.4s						
MKAR	Makanchi Array	48.79	296	P	P	17 43 50.8	-1.5
MKAR	Makanchi Array	48.79	296	*e*P	P	17 43 50.9	-1.4
MAKZ	Makanchi	48.95	297	P	P	17 43 52.2	-1.3
MAKZ	Makanchi	48.95	297	P	P	17 43 52.2	-1.3
MAKZ				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BLKN	Baker Lake	49.34	34	P	P	17 43 57.0	+0.8
ILON	Igloolik, Nuna	50.17	24	P	P	17 44 04.2	+1.8
ILON				PcP	PcP	17 45 19.3	-2.2
KRPM	Rodgers	50.44	71	P	P	17 44 05.6	+0.6
PZH	PanZhiHua	50.73	263	P	P	17 44 07.6	+0.2
BVAR	Borovoye Array	51.08	309	P	P	17 44 09.2	-0.4
	comp=Z,0.8nm,0.3s,baz=58,slow=8.2,SNR=9.1						
	comp=Z,0.8nm,0.3s						
BORK	Borovoye	51.10	309	P	P	17 44 09.8	+0.1
BORK	Borovoye	51.10	309⇓	*e*P	P	17 44 08.5	-1.2
BORK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
JTMT	Jette	51.65	59	P	P	17 44 15.5	+1.4
PLID	Pearl Lake	52.42	63	P	P	17 44 21.6	+1.6
BPMT	Black Pine Rid	52.92	60	P	P	17 44 24.4	+0.7
LYMT	Lyon Mountain	53.18	59	P	P	17 44 27.3	+1.7
BEKR	Beckworth	53.40	70	P	P	17 44 28.8	+1.6
BEKR				IAmb	IAmb	17 44 40.2	
	comp=Z,3.7nm,1.2s						
FCC	Fort Churchill	53.67	39	P	P	17 44 30.0	+1.3
FCC				IAmb	IAmb	17 44 48.4	
	comp=Z,4.3nm,1.1s						
FCC	Fort Churchill	53.67	39	P	P	17 44 30.0	+1.3
FCC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
LRM	Limekiln Ridge	53.85	60	P	P	17 44 32.1	+1.6
ARCES	ARCESS Array B	53.97	342	P	P	17 44 30.7	0.0
	comp=Z,3.3nm,0.8s,baz=48,slow=6.9,SNR=8.5						
	comp=Z,3.3nm,0.8s						
ARCES	ARCESS Array B	53.97	342	P	P	17 44 31.3	+0.5
ARCES	ARCESS Array B	53.97	342	*e*P	P	17 44 29.7	-1.0
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARTI	Arti	54.21	318*c*	*i*P	P	17 44 29.0	-3.7
ARTI				S	S	17 52 05.2	-3.6
ARTI				SS	SS	17 55 49.1	-0.8
ARTI				pmax	pmax		
	comp=Z,10.0nm,1.6s						
BOZ	Bozeman (W)	54.43	60	P	P	17 44 36.0	+1.4
BOZ				IAmb	IAmb	17 44 42.1	
	comp=Z,5.0nm,1.5s						
BOZ	Bozeman (W)	54.43	60	P	P	17 44 36.0	+1.4
BOZ				pmax	pmax		
	comp=Z,5.0nm,1.5s						
WAKR	Walker	54.84	71	P	P	17 44 39.7	+1.9
WAKR				IAmb	IAmb	17 44 41.1	
	comp=Z,2.3nm,0.7s						
YHL	Hebgen Lake	55.16	60	P	P	17 44 42.2	+2.1
YHB	Horse Butte	55.22	60	P	P	17 44 42.2	+1.7
YHB				IAmb	IAmb	17 45 11.5	
	comp=Z,4.4nm,0.9s						
YHH	Holmes Hill	55.38	60	P	P	17 44 43.9	+2.2
NVAR	Mina Array Bea	55.54	70	P	P	17 44 45.5	+2.6
	comp=Z,0.8nm,0.6s,baz=300,slow=7.3,SNR=4.7						
	comp=Z,0.8nm,0.6s						
NVAR	Mina Array Bea	55.54	70	P	P	17 44 44.8	+1.9
AAK	Ala-Archa	55.71	297⇓	*e*P	P	17 44 41.2	-2.8
AAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
RLMT	Red Lodge	55.98	59	P	P	17 44 48.1	+2.1
RLMT				IAmb	IAmb	17 45 15.9	
	comp=Z,7.6nm,1.4s						
KIRV	Kirov	56.11	324⇑	*e*P	P	17 44 44.4	-1.9
MOOW	Moose Ponds	56.13	61	P	P	17 44 48.7	+1.7
SPR3	Spring Creek 3	57.41	67	P	P	17 44 58.7	+2.4
SPR3				IAmb	IAmb	17 44 59.9	
	comp=Z,2.5nm,0.7s						
PDAR	Pinedale Array	57.44	61	P	P	17 44 58.5	+2.2
	comp=Z,1.8nm,0.7s,baz=306,slow=2.4,SNR=20						
	comp=Z,1.8nm,0.7s						
KLMR	Klimovskoe	57.66	330	*e*P	P	17 44 53.7	-3.6
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.5s						
CMAR	Chiang Mai Arr	58.48	259	P	P	17 45 05.0	+1.4
	comp=Z,1.8nm,0.9s,baz=24,slow=7.0,SNR=14						
	comp=Z,1.8nm,0.9s						
AB31	Akbulak array	58.49	311	P	P	17 45 02.7	-0.5
AB31				IAmb	IAmb	17 45 21.0	
	comp=Z,2.8nm,1.2s						
ABKAR	Akbulak array	58.49	311	P	P	17 45 02.9	-0.4
EVN	Everest	58.77	276	P	P	17 45 04.3	-2.0
EVN				IAmb	IAmb	17 45 07.6	
	comp=Z,1.8nm,0.8s						
RDMU	Red Mountain	58.96	63	P	P	17 45 07.2	+0.3
RDMU				IAmb	IAmb	17 45 10.1	
	comp=Z,3.1nm,0.7s						
CCUT	Cedar City	58.97	68	P	P	17 45 09.3	+2.2
RSSD	Black Hills	59.38	56		P	17 45 10.6	+0.8
RSSD	Black Hills	59.38	56	P	P	17 45 10.6	+0.8
RSSD				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SRU	San Rafael Swe	59.46	65	P	P	17 45 12.7	+2.3
SRU	San Rafael Swe	59.46	65	P	P	17 45 12.7	+2.3
SRU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FIA1	FINESS Array S	60.82	337	P	P	17 45 20.1	+1.0
FINES	FINESS Array B	60.82	337	P	P	17 45 20.0	+0.9
	comp=Z,3.4nm,0.7s,baz=45,slow=6.9,SNR=11						
	comp=Z,3.4nm,0.7s						
PV22	Blue Mesa, Par	60.82	64	P	P	17 45 21.9	+2.1
PV22				IAmb	IAmb	17 45 46.3	
	comp=Z,4.6nm,1.1s						
PV18	Skein Mesa, Pa	60.96	64		P	17 45 22.0	+1.3
YUH	Yuha Desert	60.97	73	P	P	17 45 22.7	+2.1
PV01	Paradox Valley	61.23	64	P	P	17 45 23.9	+1.3
CHGR	Chuyangaron	61.39	297	P	P	17 45 22.4	-1.1
CHGR	Chuyangaron	61.39	297	P	P	17 45 22.4	-1.1
CHGR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NC204	NORSAR Array S	64.07	344	P	P	17 45 40.7	-0.2
NC204				IAmb	IAmb	17 46 01.8	
	comp=Z,2.9nm,0.8s						
NOA	NORSAR Array B	64.22	344	P	P	17 45 41.9	+0.1
	comp=Z,0.8nm,0.8s,baz=22,slow=6.7,SNR=2.1						
	comp=Z,0.8nm,0.8s						
HFS	Hagfors	64.63	342	P	P	17 45 44.1	-0.4
	comp=Z,2.4nm,0.9s,baz=56,slow=7.7,SNR=5.5						
	comp=Z,2.4nm,0.9s						
WMOK	Wichita Mounta	69.03	60	P	P	17 46 13.5	+0.5
WMOK				IAmb	IAmb	17 46 16.2	
	comp=Z,4.3nm,1.1s						
WMOK	Wichita Mounta	69.03	60	P	P	17 46 13.5	+0.5
WMOK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
AKASG	Malin Array Be	69.33	329	P	P	17 46 14.4	-0.1
	comp=Z,0.7nm,0.3s,baz=29,slow=6.3,SNR=5.2						
	comp=Z,0.7nm,0.3s						
AKASG	Malin Array Be	69.33	329	IAmb	IAmb	17 46 37.8	
	comp=Z,2.2nm,1.0s						
AKASG	Malin Array Be	69.33	329	*e*P	P	17 46 15.3	+0.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKBB	Malin Array Si	69.33	329⇑	*e*P	P	17 46 12.9	-1.6
KBZ	Khabaz	70.25	317	P	P	17 46 21.1	+0.8
	comp=Z,3.1nm,0.8s,baz=45,slow=4.3,SNR=4.8						
	comp=Z,3.1nm,0.8s						
TX31	Lajitas Ar. Si	70.47	67		P	17 46 22.3	+0.2
TX31				IAmb	IAmb	17 46 24.4	
	comp=Z,2.4nm,0.7s						
TXAR	Lajitas Array	70.47	67	P	P	17 46 23.7	+1.6
	comp=Z,1.7nm,0.6s,baz=296,slow=4.3,SNR=27						
	comp=Z,1.7nm,0.6s						
TXAR	Lajitas Array	70.47	67	P	P	17 46 22.8	+0.7
TXAR	Lajitas Array	70.47	67	P	P	17 46 22.8	+0.7
D62A	Allapoint, All	72.03	33	P	P	17 46 30.9	-0.2
WB0	Warramunga Arr	75.56	206	P	P	17 46 51.7	-0.2
WR8	Warramunga Arr	75.71	205	P	P	17 46 53.1	+0.3
WR8				IAmb	IAmb	17 47 06.2	
	comp=Z,6.8nm,1.4s						
WRA	Warramunga Arr	75.74	206	P	P	17 46 53.4	+0.4
	comp=Z,1.5nm,0.9s,baz=20,slow=6.1,SNR=5.9						
	comp=Z,1.5nm,0.9s						
WRA	Warramunga Arr	75.74	206	IAmb	IAmb	17 46 54.5	
	comp=Z,0.3nm,1.1s						
BRTR	Keskin Array B	77.33	321	P	P	17 47 03.1	+1.0
	comp=Z,0.4nm,0.4s,baz=14,slow=3.0,SNR=5.5						
	comp=Z,0.4nm,0.4s						
BRTR	Keskin Array B	77.33	321	P	P	17 47 03.0	+0.8
BRTR	Keskin Array B	77.33	321	P	P	17 47 03.0	+0.8
AS31	Alice Springs	79.41	205	P	P	17 47 13.9	+0.5
ASAR	Alice Springs	79.41	205	P	P	17 47 14.8	+1.4
	comp=Z,1.8nm,0.7s,baz=16,slow=5.3,SNR=28						
	comp=Z,1.8nm,0.7s						
ASAR	Alice Springs	79.41	205	P	P	17 47 14.3	+0.9
ASAR	Alice Springs	79.41	205	P	P	17 47 14.3	+0.9
ITM	Ithomi	83.76	328	P	P	17 47 36.6	+0.1
STKA	Stephens Creek	85.70	196	P	P	17 47 46.9	+0.9
	comp=Z,1.8nm,0.8s,baz=13,slow=14,SNR=4.5						
	comp=Z,1.8nm,0.8s						
STKA	Stephens Creek	85.70	196	IAmb	IAmb	17 47 52.8	
	comp=Z,28nm,1.4s						
ESDC	Sonseca Array	87.23	348	P	P	17 47 54.1	+0.3
	comp=Z,2.0nm,1.1s,baz=12,slow=3.9,SNR=4.8						
	comp=Z,2.0nm,1.1s						
ESDC	Sonseca Array	87.23	348	IAmb	IAmb	17 48 06.1	
	comp=Z,4.5nm,1.5s						

JMA ***14*** *17:37:05.5±0.2, 30°N±1°×14°0E±°, h425km, MV3.6/44,*
NEAR TORISHIMA IS
IDC ***14*** *17:37:06.6±1.0, 30.°18N×139.°06E, h390km±18km, mb3.1/8,*
mbtmp3.9/10, Error ellipse: s-maj=57.2km s-min=12.4km
az=76.0

ISC 14 17:37:06.9±0.8, 30°.20N±0°.07×139°.5E±0°.1, h400^{km}, n28, σ1^{s}10/32, mb3.2/9, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	2.92	6	eP	Pn	17 38 10.5	+1.2
JHJ	Hachijo jima 2	2.92	5	P	Pn	17 38 10.2	+0.9
	102nm,0.4s,baz=276,slow=14,SNR=2.1						
JHJ				S	S	17 38 59.1	-0.9
	46nm,0.3s,baz=248,slow=24,SNR=1.2						
JMYK	Miyake Tsubota	3.85	1	eS	S	17 39 14.2	-0.5
CBIJ	Chichi jima	3.91	142	eP	Pn	17 38 18.5	+0.3
CBIJ				eS	S	17 39 14.8	-1.1
JCJ	Chichijima	3.91	142	P	Pn	17 38 08.3	-10
	30nm,0.5s,baz=353,slow=22,SNR=27						
JCJ				S	S	17 39 05.1	-11
	77nm,0.3s,baz=229,slow=23,SNR=14						
BSO1	Boso 1	4.62	16	eP	Pn	17 38 26.0	+1.7
BSO1				eS	S	17 39 28.7	+1.3
BSO3	Boso 3	4.67	11	eP	Pn	17 38 25.3	+0.2
BSO3				eS	S	17 39 28.1	-0.7
JIE	Ise	4.79	331	eP	Pn	17 38 27.4	+0.8
JHMK	Hamakita	4.83	343	eP	Pn	17 38 27.5	+0.7
BSO4	Boso 4	4.83	8	eP	Pn	17 38 27.4	+0.5
JOD2	Odawara 2	5.06	356	eP	Pn	17 38 29.4	+0.1
JNY	Yasuok	5.32	346	eP	Pn	17 38 32.9	+0.7
JAO	Obara	5.38	340	eP	Pn	17 38 33.2	+0.4
JEG	Eigenji	5.56	333	eP	Pn	17 38 35.7	+1.0
JRY	Ryogami san	5.82	355	eP	Pn	17 38 37.6	+0.2
JYT	Yasato	6.04	6	eP	Pn	17 38 39.2	-0.6
JAG	Ashikaga	6.21	360	eP	Pn	17 38 40.6	-1.0
MJAR	Matsushiro Arr	6.41	351	P	Pn	17 38 42.8	-1.1
	2.8nm,0.3s,baz=168,slow=11,SNR=37						
MJAR				S	S	17 40 01.4	-1.7
	0.8nm,0.7s,baz=178,slow=17,SNR=1.3						
JMK	Ichinoseki	8.85	9	eP	P	17 39 12.7	+1.2
SONM	Songino Array	30.84	314	P	P	17 42 46.3	-1.6
	0.4nm,0.4s,baz=117,slow=7.6,SNR=5.7						
	0.4nm,0.4s						
GTA	Gaotai	33.61	297	eP	P	17 43 14.5	+2.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
ZALV	Zalesovo Beam	45.59	318	P	P	17 44 47.4	-1.4
	comp=Z,0.6nm,0.5s,baz=122,slow=5.7,SNR=2.0						
	comp=Z,0.6nm,0.5s						
KURBB	Kurchatov Arra	49.18	313	P	P	17 45 14.6	-1.5
	comp=Z,0.7nm,0.5s,baz=92,slow=9.3,SNR=5.6						
	comp=Z,0.7nm,0.5s						
WRA	Warramunga Arr	50.10	186	P	P	17 45 23.3	0.0
	comp=Z,0.4nm,0.3s,baz=6.6,slow=8.0,SNR=17						
	comp=Z,0.4nm,0.3s						
ASAR	Alice Springs	53.82	186	P	P	17 45 50.5	+0.1
	comp=Z,0.4nm,0.5s,baz=3.3,slow=7.2,SNR=19						
	comp=Z,0.4nm,0.5s						
ARCES	ARCESS Array B	69.83	340	P	P	17 47 35.9	+0.8
	comp=Z,0.9nm,0.7s,baz=61,slow=6.3,SNR=5.3						
	comp=Z,0.9nm,0.7s						
FINES	FINESS Array B	74.11	333	P	P	17 47 59.8	-0.5
	comp=Z,4.2nm,1.0s,baz=63,slow=4.7,SNR=6.1						
	comp=Z,4.2nm,1.0s						
HFS	Hagfors	79.63	336	P	P	17 48 30.1	-0.6
	comp=Z,2.2nm,0.9s,baz=64,slow=6.6,SNR=1.3						
	comp=Z,2.2nm,0.9s						

IDC 14 17:38:07.2±7.1, 18°.49S×176°.85W, h0^{km}, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=310.6km s-min=35.9km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	45.98	260	P	P	17 46 32.0	-0.6
	0.3nm,0.5s,baz=97,slow=7.6,SNR=9.2						
	0.3nm,0.5s						
ASAR	Alice Springs	46.06	255	P	P	17 46 33.5	+0.3
	0.9nm,0.5s,baz=90,slow=8.9,SNR=23						
	0.9nm,0.5s						
ILAR	Eielson Array	86.13	12	P	P	17 50 49.6	-0.1
	0.3nm,0.4s,baz=220,slow=4.6,SNR=8.1						
	0.3nm,0.4s						

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*CATAC **14** 17:47:55.7±0.3, 12°N±2°×8°8W±°, h28^{km}±2^{km}, M4.5/44, mb5.1/4, mB5.6/2, MLv4.2/44, Mw(mB)5.2/2, Error ellipse: s-maj=3.9km s-min=2.5km az=36.0, confirmed*

*SNET **14** 17:47:56.0±0.8, 12°.34N×87°.71W, h55^{km}±8^{km}, ML4.1*

*IDC **14** 17:47:57.6±1.2, 12°.39N×87°.41W, h83^{km}±19^{km}, mb3.7/8, mbtmp3.9/10, MS1.9/1, Error ellipse: s-maj=54.2km s-min=9.8km az=39.0*

ISC 14 17:47:55.4±1.0, 12°.27N±0°.05×87°.70W±0°.04, h60^{km}±10^{km}, n91, σ1^{s}28/101, mb4.0/8, 8C-13D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	Cosiguina Volc	0.72	11	⇓P	Pn	17 48 09.8	-0.2
POTN	Potosi Cosigui	0.75	14	⇓P	Pn	17 48 10.2	-0.1
POTN				S	Sn	17 48 21.1	-0.1
CRIN	San Cristobal	0.76	56	P	Pn	17 48 11.2	+0.7
PKGN	Cerro Pekin	0.81	60	P	Pn	17 48 11.5	+0.5
ALEN	Leon	0.83	77	P	Pn	17 48 10.3	-0.9
QUEN	Al S del Volca	0.89	69	⇓P	Pn	17 48 12.0	0.0
PACN	Al O del Volca	0.91	75	P	Pn	17 48 12.3	0.0
POLN	Al Sur del Vol	0.94	66	⇑P	Pn	17 48 12.4	-0.3
CNGA	Al SSO del Vol	1.00	77	⇓P	Pn	17 48 13.2	-0.2
CNGA				S	Sn	17 48 27.1	+0.2
CNGN	Cerro Negro	1.00	77	⇓P	Pn	17 48 13.4	-0.2
CNGN	Cerro Negro	1.00	77	S	Sn	17 48 27.7	+0.7
CNCH	Conchagua	1.01	352	⇓iP	Pn	17 48 13.8	+0.1
CNCH				eS	Sn	17 48 27.4	+0.2
CNCH	Conchagua	1.01	352	⇓P	Pn	17 48 13.8	+0.1
ILCN	San Idelfonso	1.02	72	⇑P	Pn	17 48 13.4	-0.3
ILCN				S	Sn	17 48 27.7	+0.3
LCND	La Caada	1.05	350	⇓eP	Pn	17 48 14.3	+0.1
LCND	La Caada	1.05	350	⇓P	Pn	17 48 14.2	+0.1
COPN	Copaltepe	1.08	95	⇑P	Pn	17 48 14.4	-0.1
MOMN	Momotombo	1.14	83	P	Pn	17 48 15.3	0.0
MOM2	El Cardon	1.20	82	⇑P	Pn	17 48 16.1	+0.1
CNRM	Centro Naciona	1.28	339	P	Pn	17 48 17.6	+0.4
LCY	Lacayo	1.29	333	eP	Pn	17 48 17.4	0.0
RANC	El Ranchito	1.29	334	⇑eP	Pn	17 48 17.5	0.0
APQ3	Volcan Apoyequ	1.30	90	P	Pn	17 48 23.3	+6.0
APYN	Apoyeque	1.32	91	P	Pn	17 48 18.3	+0.6
APYN				S	Sn	17 48 34.6	+0.2
PACA	Pacayal	1.34	333	eP	Pn	17 48 18.3	+0.2
PACA	Pacayal	1.34	333	⇑P	Pn	17 48 18.2	+0.1
ALLN	Telcor Managua	1.40	94	P	Pn	17 48 18.6	-0.1
MGAN	Managua	1.42	95	S	Sn	17 48 37.4	+0.6
TECA	Tecapa	1.45	327	⇓iP	Pn	17 48 19.7	0.0
MAS3	Al N del Volca	1.51	99	P	Pn	17 48 20.4	+0.2
MAS3				S	Sn	17 48 39.2	+0.3
LIMN	Finca el Limon	1.52	59	⇑P	Pn	17 48 20.6	+0.2
SABN	Sabanita	1.53	101	P	Pn	17 48 21.0	+0.4
MASN	Masaya	1.54	100	P	Pn	17 48 21.1	+0.5
NANN	Nandasmo	1.57	102	⇓P	Pn	17 48 22.5	+1.3
TECO	Alcaldia de Te	1.65	320	eP	Pn	17 48 22.0	-0.1
TECO	Alcaldia de Te	1.65	320	⇓P	Pn	17 48 22.0	-0.1
TECO	Alcaldia de Te	1.65	320	S	Sn	17 48 41.6	-0.7
NADN	Granada	1.71	107	S	Sn	17 48 43.5	-0.3
UESV	Universidad de	1.73	322	P	Pn	17 48 23.4	+0.2
SCLA	Alcaldia de Sa	1.74	325	eP	Pn	17 48 24.0	+0.6
SCLA	Alcaldia de Sa	1.74	325	⇓P	Pn	17 48 24.1	+0.6
OCON	Estacion meteo	1.80	41	P	Pn	17 48 25.1	+0.8
TGUH	Tegucigalpa,Un	1.83	13	P	Pn	17 48 25.5	+0.9
MATN	Matagalpa	1.85	69	P	Pn	17 48 24.3	-0.6
YUSH	Yuscaran	1.87	26	S	Sn	17 48 48.9	+1.0
YUSH	Yuscaran	1.87	26	⇑P	Pn	17 48 26.0	+0.7
PAVA	Las Pavas	1.88	320	eP	Pn	17 48 25.8	+0.5
PAVA	Las Pavas	1.88	320	P	Pn	17 48 25.9	+0.6
RCFN	Al S de San Ju	1.92	49	P	Pn	17 48 27.1	+1.2
RCFN				S	Sn	17 48 50.5	+1.4
RCON	San Juan de Ri	1.93	51	P	Pn	17 48 27.5	+1.4
RCON	San Juan de Ri	1.93	51	S	Sn	17 48 51.3	+1.9
RCVN	Varillal2	1.96	48	P	Pn	17 48 27.5	+1.0
RCVN	Varillal2	1.96	48	S	Sn	17 48 51.4	+1.2
LOMA	Loma Larga	1.98	314	eP	Pn	17 48 26.7	-0.1
LOMA	Loma Larga	1.98	314	P	Pn	17 48 26.9	+0.1
BOAB	BOACO BROADBAN	1.99	85	P	Pn	17 48 27.2	+0.4
RCPN	Sur Rio San Ju	2.00	51	P	Pn	17 48 28.4	+1.4
RCPN	Sur Rio San Ju	2.00	51	S	Sn	17 48 52.2	+1.2
BOQS	Boqueron	2.12	314	eP	Pn	17 48 29.4	+0.6
BOQS				eS	Sn	17 48 55.1	+0.9
MORN	Al O del Volca	2.13	109	P	Pn	17 48 29.1	+0.4
PMON	Piamonte	2.13	312	eP	Pn	17 48 29.0	+0.2
PMON	Piamonte	2.13	312	P	Pn	17 48 29.1	+0.3
JAYA	Jayaque - finc	2.19	309	eP	Pn	17 48 29.6	0.0
JAYA	Jayaque - finc	2.19	309	P	Pn	17 48 30.1	+0.4
LLGN	La Laguna	2.24	327	P	Pn	17 48 31.4	+1.1
CEVE	Cerro Verde	2.44	310	eP	Pn	17 48 34.2	+1.2
SBLS	San Blas	2.44	310	eP	Pn	17 48 33.5	+0.3
NUBE	Las Nubes	2.60	309	eP	Pn	17 48 35.8	+0.6
NUBE	Las Nubes	2.60	309	P	Pn	17 48 35.8	+0.6
NUBE	Las Nubes	2.60	309	S	Sn	17 49 05.0	-0.7
RBDL	Robledal	2.67	314	eP	Pn	17 48 37.1	+0.9
CMARA	Lajas Hojancha	3.16	135	P	Pn	17 48 43.3	+0.5
JTS	Las Juntas de	3.33	126	P	Pn	17 48 45.7	+0.6
	6.1nm,0.2s,baz=313,slow=19,SNR=6.7						
JTS				S	Sn	17 49 23.1	-0.4
	27nm,0.4s,baz=264,slow=21,SNR=5.4						
JTS				LR	LR	17 49 31.7	
	comp=Z,19nm,19.0s,baz=349,slow=30						
APG	El Apazote	3.83	316	P	Pn	17 48 56.5	+4.5
	0.5nm,0.6s,baz=135,slow=11,SNR=5.4						
APG				S	Sn	17 49 42.2	+6.3
	0.6nm,0.5s,baz=229,slow=19,SNR=1.7						
TRT2	Tortugero	4.24	113	P	Pn	17 48 57.7	+0.2
LCR2	La Lucha 2	4.41	124	P	Pn	17 49 03.1	+3.0
OCHAL	Ojochal	5.08	128	P	Pn	17 49 11.1	+2.1
DRK0	Durika	5.30	124	P	Pn	17 49 14.6	+2.4
DRK0	Durika	5.30	124	S	Sn	17 50 09.8	-2.2
PTJ1	Puerto Jimnez	5.70	130	P	Pn	17 49 20.6	+3.1
PIRO	Carate, Puerto	5.76	131	P	Pn	17 49 20.7	+2.4
CDITO	Canoas	6.00	127	P	Pn	17 49 24.0	+2.4
CMIG	Matias Romero	8.45	305	P	Pn	17 49 57.8	+2.7
	1.1nm,0.4s,baz=133,slow=18,SNR=1.8						
CMIG				S	Sn	17 51 28.7	-0.4
	0.9nm,0.3s,baz=108,slow=20,SNR=1.7						
TXAR	Lajitas Array	22.56	321	P	P	17 52 52.0	+1.1
	4.9nm,0.8s,baz=134,slow=8.9,SNR=6.5						
	4.9nm,0.8s						
PFO	Pinyon Flats O	33.76	314	P	P	17 54 31.9	+0.3
	2.1nm,0.2s,baz=119,slow=12,SNR=5.8						
	2.1nm,0.2s						
PDAR	Pinedale Array	35.82	332	P	P	17 54 49.8	+0.3
	1.0nm,0.6s,baz=126,slow=10,SNR=9.0						
	1.0nm,0.6s						
ELK	Elko	37.27	325	P	P	17 55 04.0	+2.1
	0.6nm,0.4s,baz=155,slow=5.9,SNR=3.7						
	0.6nm,0.4s						
ULM	Lac du Bonnet	38.46	352	P	P	17 55 09.7	-1.7
	2.1nm,0.5s,baz=148,slow=7.3,SNR=4.7						
	2.1nm,0.5s						
SCHQ	Schefferville	45.52	17	P	P	17 56 07.2	-1.7
	2.5nm,0.4s,baz=208,slow=7.1,SNR=11						
	2.5nm,0.4s						
YKA	Yellowknife Ar	53.72	345	P	P	17 57 10.3	-0.8
	0.4nm,0.8s,baz=98,slow=18,SNR=5.6						
	0.4nm,0.8s						
ILAR	Eielson Array	66.09	336	P	P	17 58 35.4	-0.6
	0.3nm,0.6s,baz=155,slow=5.4,SNR=9.0						
	0.3nm,0.6s						

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*IDC **14** 17:48:49.2±6.6, 23°.71N×108°.76W, h0^{km}, mb3.3/2, mbtmp3.2/5, ML3.7/3, MS3.2/9, Error ellipse: s-maj=108.1km s-min=28.8km az=161.0*

*MEX **14** 17:48:53.4±1.0, 23°.95N×108°.70W, h16^{km}±16^{km}, MD4.1*

ISC 14 17:48:52.2±1.2, 23°.92N±0°.09×108°.75W±0°.04, h22^{km}, n23, σ2^{s}59/18, MS3.1/4, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLBS	Sierra La Lagu	1.12	258	eP	Pn	17 49 10.1	-2.6
LPIG	La Paz	1.44	278	Pg	Pn	17 49 15.4	-1.6
	33nm,0.3s,baz=90,slow=5.1,SNR=13						
LPIG				LR	LR	17 49 23.6	
	comp=Z,57nm,19.8s,baz=75,slow=23						
LPIG				Lg	Lg	17 49 33.6	
	103nm,0.3s,baz=228,slow=16,SNR=7.0						
LPIG	La Paz	1.44	278	eP	Pn	17 49 15.2	-1.8
LPIG				eS	Sn	17 49 33.4	-1.8
TSIG	Topolobambo	1.70	351	eP	Pb	17 49 21.0	-1.7
TSIG				eS	Sn	17 49 38.4	-3.2
SSIG	Sanalona	1.72	58	eP	Pn	17 49 19.2	-1.7
SSIG				eS	Sn	17 49 37.3	-5.0
MAIG	Mazatlaan	2.25	108	eP	Pn	17 49 27.3	-0.9
PDIG	Papasquiaro	3.25	69	eP	Pn	17 49 41.4	-0.8
PDIG				eS	Sn	17 50 17.1	-3.3
BCIG	La Boquilla	4.70	39	eP	Pn	17 49 59.0	-3.0
TXAR	Lajitas Array	7.06	39	Pn	Pn	17 50 35.2	+0.9
	0.2nm,0.3s,baz=209,slow=14,SNR=9.8						
TXAR				Sn	Sn	17 51 54.2	+0.3
	0.4nm,0.3s,baz=179,slow=27,SNR=6.2						
TXAR				Lg	Lg	17 52 30.1	
	0.4nm,0.3s,baz=220,slow=31,SNR=3.9						
TXAR				LR	LR	17 53 32.6	
	comp=Z,92nm,21.7s,baz=218,slow=39						
	0.3nm,0.3s						
ANMO	Albuquerque	11.17	10	LR	LR	17 56 14.3	
	comp=Z,86nm,21.8s,baz=190,slow=39						
CMIG	Matias Romero	14.65	115	LR	LR	17 57 50.4	
	comp=Z,120nm,19.1s,baz=301,slow=37						
NVAR	Mina Array Bea	16.60	333	Pn	P	17 52 46.6	+0.4
	baz=139,slow=9.6,SNR=5.4						
	0.1nm,0.4s						
ELK	Elko	17.64	344	LR	LR	18 00 19.7	
	comp=Z,66nm,20.4s,baz=196,slow=39						
PDAR	Pinedale Array	18.81	358	P	Pn	17 53 14.5	+3.3
	0.1nm,0.3s,baz=170,slow=9.6,SNR=7.6						
PDAR				LR	LR	18 01 16.4	
	comp=Z,41nm,19.2s,baz=190,slow=39						
	0.6nm,0.6s						
TKL	Tuckaleechee C	24.56	56	LR	LR	18 05 09.8	
	comp=Z,86nm,18.0s,baz=286,slow=40						
NEW	Newport	25.19	347	LR	LR	18 04 59.9	
	comp=Z,68nm,20.1s,baz=102,slow=38						
JTS	Las Juntas de	26.42	117	LR	LR	18 04 50.8	
	comp=Z,57nm,18.3s,baz=54,slow=36						
YKA	Yellowknife Ar	38.76	356	P	P	17 56 16.6	+1.9
	0.4nm,0.8s,baz=178,slow=7.5,SNR=3.9						
	0.4nm,0.8s						
SDV	Santo Domingo	39.35	106	LR	LR	18 13 19.7	
	comp=Z,26nm,18.6s,baz=26,slow=37						
ILAR	Eielson Array	47.72	339	P	P	17 57 30.0	+2.9
	0.5nm,0.9s,baz=146,slow=7.4,SNR=6.4						
	0.5nm,0.9s						
H03N2	Juan Fernandez	63.72	152	T	T	19 08 33.5	
	baz=331,slow=77,SNR=24						
H03N1	Juan Fernandez	63.73	152	T	T	19 08 31.6	
	baz=331,slow=77,SNR=34						
H03N3	Juan Fernandez	63.74	152	T	T	19 08 26.5	
	baz=331,slow=77,SNR=28						

IDC 14 18:02:10.8±2.1, 6°.10S×128°.45E, h0^{km}, mb3.3/1, mbtmp3.6/3, ML3.7/2, MS3.5/1, Error ellipse: s-maj=118.7km s-min=31.2km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.91	158	Pn	Pn	18 05 44.2	+1.1
	0.3nm,0.3s,baz=337,slow=13,SNR=17						
WRA				Sn	Sn	18 08 19.6	-9.4
	0.1nm,0.3s,baz=332,slow=22,SNR=2.6						
	0.4nm,0.3s						
ASAR	Alice Springs	18.24	164	P	Pn	18 06 24.8	-0.8
	0.5nm,0.3s,baz=337,slow=10,SNR=53						
ASAR				S	Sn	18 09 44.1	-6.0
	0.2nm,0.7s,baz=322,slow=22,SNR=4.4						
	2.4nm,0.7s						
HILR	Hailar Array B	55.94	353	LR	LR	18 37 08.5	
	comp=Z,45nm,20.6s,baz=225,slow=38						
MKAR	Makanchi Array	66.63	327	P	P	18 13 03.3	+0.1
	0.3nm,0.8s,baz=111,slow=8.2,SNR=4.8						
	0.3nm,0.8s						

RSNC 14 18:02:13.7±0.0, 5°N±1°×7°6W±°, h76^{km}±3^{km}, M2.8, mb4.1, ML2.6, Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLMC	San Jos del P	0.17	68	P	Pn	18 02 23.7	-1.3
PLMC				S	Sn	18 02 32.1	-1.2
YOTC	Yotoco, Valle	0.86	174	P	Pn	18 02 29.2	-1.8
YOTC				S	Sn	18 02 42.0	-1.8
PIZC	Pizarro, Choco	0.93	278	P	Pn	18 02 30.8	-0.8
PIZC				S	Sn	18 02 45.1	+0.1
CBOC	Ciudad Bolivar	1.10	23	P	Pn	18 02 33.6	-0.4
CBOC				S	Sn	18 02 49.2	+0.1
GUY2C	Guyana, Caldas	1.14	70	P	Pn	18 02 34.5	-0.2
GUY2C				S	Sn	18 02 50.8	+0.5
ORTC	Ortega, Tolima	1.51	128	P	Pn	18 02 38.4	-0.6
ORTC				S	Sn	18 02 58.0	-0.1
HELC	Santa Helena	1.62	34	P	Pn	18 02 39.8	-1.0
HELC				S	Sn	18 02 59.7	-1.6
NORC	Norcasia	1.72	65	P	Pn	18 02 42.0	+0.1
NORC				S	Sn	18 03 04.6	+1.4
PRAC	Prado	1.91	126	P	Pn	18 02 44.0	-0.4
PRAC				S	Sn	18 03 08.3	+0.6
DBBC	Dabeiba	2.17	6	P	Pn	18 02 47.4	-0.6
DBBC				S	Sn	18 03 14.6	+0.5
POPC	Popayan, Colom	2.30	186	P	Pn	18 02 48.9	-0.8
POPC				S	Sn	18 03 16.9	-0.3
GR1C	Gorgona, Isla	2.51	223	P	Pn	18 02 48.8	-3.6
GR1C				S	Sn	18 03 16.6	-5.4
URMC	La Uribe, Meta	2.59	128	P	Pn	18 02 52.7	-0.9
URMC				S	Sn	18 03 24.3	+0.1
PTBC	PUERTO BERRIO,	2.60	49	P	Pn	18 02 52.6	-1.0
PTAC	Punta Ardita,	2.67	329	P	Pn	18 02 51.8	-2.7
PTAC				S	Sn	18 03 20.8	-5.0
CHIC	Chingaza	2.71	94	P	Pn	18 02 56.7	+1.3
GARC	Garzon, Huila	2.80	160	P	Pn	18 02 55.6	-0.9
GARC				S	Sn	18 03 29.1	-0.3
VILC	Villavicencio,	2.83	105	P	Pn	18 02 58.0	+1.1
BBAC	Balboa, Cauca	2.91	196	P	Pn	18 02 56.4	-1.7
BBAC				S	Sn	18 03 30.5	-1.6
UREC	San Jos de Ur	3.03	17	P	Pn	18 02 58.3	-1.2
UREC				S	Sn	18 03 33.4	-1.3
CRUC	La Cruz	3.29	189	P	Pn	18 03 03.0	-0.3
FLOC	Florencia	3.33	166	P	Pn	18 03 02.5	-1.1
FLOC				S	Sn	18 03 40.2	-1.8
RUSC	La Rusia	3.50	72	P	Pn	18 03 06.8	+0.5
GCUF	Volcan Galeras	3.70	194	P	Pn	18 03 07.7	-1.3
GCUF				S	Sn	18 03 48.3	-3.5
TUMC	Tumaco	3.77	217	P	Pn	18 03 08.9	-0.6
PAMC	Pamplona, Colo	4.47	56	P	Pn	18 03 19.1	-0.4
PAMC				S	Sn	18 04 09.7	-0.9
OCAC	Ocana	4.58	42	P	Pn	18 03 19.7	-1.0
OCAC				S	Sn	18 04 10.7	-2.1
OTAV	Otavalo	4.99	204	P	Pn	18 03 23.0	-3.6
OTAV				S	Sn	18 04 15.9	-7.4
BCIP	Isla Barro Col	5.46	322	P	Pn	18 03 30.4	-2.2
BCIP				S	Sn	18 04 31.8	-2.3

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*IDC **14** 18:11:59.7±6.9, 32°.80S×179°.47E, h535^{km}±96^{km}, mb2.6/2, mbtmp3.8/3, Error ellipse: s-maj=140.2km s-min=38.9km az=6.0*

*WEL **14** 18:12:03.1±1.7, 33°S±37°×18°0E±2°9, h440^{km}±73^{km}, M4.2/6, mB4.6/3, MLv4.2/6, Mw(mB)3.8/3, Error ellipse: s-maj=53.8km s-min=29.1km az=32.1, confirmed*

ISC 14 18:11:58.7±2.0, 32°.5S±0°.1×179°.4E±0°.2, h500^{km}, n18, σ1^{s}72/22, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	5.41	189	P	P	18 13 29.0	-0.1
WMGZ				S	S	18 14 43.5	+0.2
HAZ	Te Kaha	5.45	194	P	P	18 13 30.4	+0.9
HAZ				S	S	18 14 42.6	-1.4
PKGZ	Pakihiroa	5.50	191	P	P	18 13 32.6	+2.5
WIAZ	Waiheke Island	5.58	218	P	P	18 13 33.2	+2.3
RUGZ	Raukumara Rang	5.67	194	P	P	18 13 32.2	+0.4
RUGZ				S	S	18 14 45.5	-2.6
PUZ	Puketiti	5.67	189	P	P	18 13 33.0	+1.3
MKAZ	Moumakai	5.81	216	P	P	18 13 35.5	+2.5
TWGZ	Tauwhareparae	5.82	191	P	P	18 13 35.0	+1.9
TWGZ				S	S	18 14 50.8	+0.3
WTAZ	Waiatarua	5.99	221	P	P	18 13 37.2	+2.5
MWZ	Matawai	6.06	194	P	P	18 13 36.9	+1.5
URZ	Urewera	6.08	198	P	P	18 13 36.1	+0.5
	20nm,0.3s,baz=27,slow=4.6,SNR=39						
URZ				S	S	18 14 53.7	-1.3
	8.3nm,0.4s,baz=46,slow=24,SNR=10						
CNGZ	Carnagh Statio	6.09	189	P	P	18 13 38.3	+2.6
RIGZ	Rimuhau	6.37	192	P	P	18 13 40.0	+1.5
MUGZ	Murupara	6.38	199	P	P	18 13 38.8	+0.3
PRGZ	Paritu Road	6.56	191	P	P	18 13 44.1	+3.7
ASAR	Alice Springs	40.87	271	P	P	18 18 55.8	-0.9
	0.3nm,0.6s,baz=113,slow=8.6,SNR=3.1						
	0.3nm,0.6s						
WRA	Warramunga Arr	42.05	276	P	P	18 19 04.3	-1.8
	0.4nm,0.3s,baz=111,slow=8.0,SNR=13						
	0.4nm,0.3s						
FINES	FINESS Array B	146.26	337	PKPbc	PKPdf	18 30 40.2	+0.3
	1.4nm,0.5s,baz=47,slow=3.9,SNR=10						

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*PDG **14** 18:16:26.2±0.2, 43°.13N×17°.92E, h10^{km}±1^{km}, MD2.8/1, ML2.7/13, Error ellipse: s-maj=0.7km s-min=0.6km az=90.0*

*BEO **14** 18:16:27.2±0.3, 43°.10N×17°.90E, h8^{km}±2^{km}, ML2.4/13*

*RHSSO **14** 18:16:27.7±0.4, 43°.12N×18°.06E, h8^{km}, ML2.6/6*

*VIE **14** 18:16:33.1±1.1, 43°.42N×17°.77E, h8^{km}, mb3.0/4, ml2.2/6, ms4.0/2, Error ellipse: s-maj=19.5km s-min=9.3km az=53.0 69 km SW of Sarajevo*

ISC 14 18:16:26.1±1.1, 43°.12N±0°.02×17°.95E±0°.01, h3^{km}±9^{km}, n63, σ1^{s}24/115, 9C-5D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STON	Ston	0.30	217	ePg	Pg	18 16 32.1	+0.2
STON				Sg	Sg	18 16 36.5	+0.6
STON	Ston	0.30	217	ePg	Pg	18 16 32.2	+0.2
STON				eSg	Sg	18 16 37.0	+1.1
DBRK	Dubrovnik	0.47	162	ePg	Pg	18 16 35.7	+0.6
DBRK				Sg	Sg	18 16 42.3	+1.1
KLINJ	Klinje	0.47	83	ePg	Pg	18 16 34.1	-1.0
KLINJ				eSg	Sg	18 16 41.4	+0.2
BRY	Bratogost	0.48	116	⇓iPg	Pg	18 16 35.6	+0.2
BRY				i Sg	Sb	18 16 44.1	-0.7
TREB	Trebinje	0.49	143	⇑iPg	Pg	18 16 35.9	+0.3
TREB				eSg	Sb	18 16 43.8	-1.2
TREB	Trebinje	0.49	143	ePg	Pg	18 16 35.8	+0.2
TREB				eSg	Sb	18 16 44.3	-0.7
MAKA	Makarska	0.70	285	ePg	Pg	18 16 38.6	-1.0
MAKA				Sg	Sg	18 16 48.7	0.0
UPM	Unac-Piva	0.70	82	⇑iPg	Pg	18 16 39.6	0.0
UPM				i Sg	Sb	18 16 51.8	+0.5
RICI	Ricice	0.71	303	ePg	Pg	18 16 38.6	-1.1
RICI				Sg	Sg	18 16 48.7	-0.2
HCY	Herceg Novi	0.78	149	⇓iPg	Pg	18 16 40.4	-0.6
HCY				i Sg	Sb	18 16 53.3	+0.1
NKME	Niksic	0.81	115	⇓iPg	Pg	18 16 41.5	-0.2
NKME				eSg	Sn	18 16 55.2	-1.9
LSTV	Lastovo	0.85	246	ePg	Pg	18 16 41.2	-1.3
LSTV				Sg	Sg	18 16 52.7	-0.7
CEME	Cevo	0.91	128	⇑iPg	Pg	18 16 43.4	-0.2
CEME				eSg	Sn	18 16 58.3	-1.2
BUM	Brajici-Budva	1.07	139	⇑iPg	Pg	18 16 46.1	-0.5
BUM				i Sg	Sn	18 17 03.6	+0.2
PLE	Pljevlja	1.07	78	⇑iPg	Pb	18 16 47.0	-0.4
PLE				i Sg	Sn	18 17 03.7	+0.1
HVAR	Hvar	1.10	274	ePg	Pg	18 16 45.8	-1.4
HVAR				Sg	Sb	18 17 02.1	-0.3
RUDO	Rudo	1.15	64	ePg	Pg	18 16 47.0	-1.2
RUDO				eSg	Sg	18 17 02.4	-0.7
RUDO	Rudo	1.15	64	ePg	Pg	18 16 47.4	-0.8
RUDO				eSg	Sn	18 17 05.4	0.0
KOME	Kolasin	1.18	102	⇓iPg	Pg	18 16 48.1	-0.6
KOME				eSg	Sn	18 17 06.5	+0.3
PDG	Podgorica	1.18	125	ePg	Pn	18 16 49.0	-0.5
PDG	Podgorica	1.18	125	⇑iPg	Pg	18 16 48.2	-0.5
PDG				i Sg	Sn	18 17 08.2	+2.2
BBLS	Lazi&#263i	1.30	54	ePg	Pn	18 16 50.9	-0.3
BBLS				eSg	Sn	18 17 10.2	+1.1
DRME	Dracevica, Mon	1.30	135	⇑iPg	Pn	18 16 50.7	-0.4
DRME				eSg	Sn	18 17 11.1	+2.1
KIJV	Kijevo	1.43	309	ePg	Pg	18 16 54.1	+0.5
KIJV				Sg	Sg	18 17 12.6	+0.4
IVA	Berane	1.45	99	⇑iPg	Pg	18 16 53.7	-0.1
IVA				i Sg	Sn	18 17 15.6	+2.8
SJES	Sjenica	1.49	84	ePg	Pg	18 16 55.2	+0.6
SJES				eSg	Sg	18 17 17.0	+3.1
ULC	Ulcinj	1.50	140	⇓iPg	Pg	18 16 54.5	-0.3
ULC				i Sg	Sg	18 17 16.9	+2.7
PVY	Plav	1.57	109	⇑iPn	Pg	18 16 55.7	-0.4
PVY				i Sn	Sg	18 17 17.7	+1.3

IVAS	**Ivanjica**	**1.67**	**73**	*e*Pn	**Pb**	**18 16 57.0**	**-0.5**
IVAS				*e*Sn	**Sg**	**18 17 20.2**	**+0.4**
BLY	**Banja Luka**	**1.73**	**342**	*e*Pn	**Pb**	**18 16 58.2**	**-0.2**
BLY				*e*Sn	**Sb**	**18 17 20.6**	**+0.1**
BLY	**Banja Luka**	**1.73**	**342**	*e*Pg	**Pb**	**18 16 58.4**	**0.0**
BLY				*e*Sg	**Sg**	**18 17 24.1**	**+2.6**
ZIRJ	**Zirje**	**1.77**	**289**	*e*Pn	**Pb**	**18 16 58.7**	**-0.4**
ZIRJ				Sn	**Sb**	**18 17 22.2**	**+0.6**
DIVS	**Divibare**	**1.78**	**56**	*e*Pn	**Pn**	**18 16 58.0**	**+0.2**
DIVS				*e*Sn	**Sb**	**18 17 22.1**	**0.0**
MORI	**Morici**	**1.80**	**295**	*e*Pn	**Pb**	**18 16 59.0**	**-0.6**
MORI				Sn	**Sg**	**18 17 23.9**	**+0.1**
TEKS	**Tekeris**	**1.83**	**38**	*e*Pn	**Pn**	**18 16 58.2**	**-0.3**
TEKS				*e*Sn	**Sn**	**18 17 22.4**	**+0.2**
TRUS	**Trudelj**	**2.10**	**57**	*e*Pn	**Pn**	**18 17 01.9**	**-0.2**
UDBI	**Udbina**	**2.12**	**313**	*e*Pn	**Pb**	**18 17 04.8**	**-0.4**
UDBI				Sn	**Sb**	**18 17 32.4**	**+0.4**
KNYS	**Krupa na Uni**	**2.13**	**327**	*e*Pn	**Pb**	**18 17 04.5**	**-0.8**
KNYS				*e*Sn	**Sb**	**18 17 31.6**	**-0.5**
GRUS	**Gruza**	**2.15**	**68**	*e*Pn	**Pn**	**18 17 02.9**	**0.0**
GOCS	**Kraljevo Serbi**	**2.18**	**77**	*e*Pn	**Pn**	**18 17 03.5**	**+0.2**
GOCS				*e*Sn	**Sb**	**18 17 32.8**	**-0.8**
DUGI	**Dugi Otok**	**2.28**	**294**	*e*Pn	**Pb**	**18 17 06.2**	**-1.6**
DUGI				Sn	**Sb**	**18 17 35.8**	**-0.6**
SELS	**Selova**	**2.32**	**86**	*e*Pn	**Pb**	**18 17 06.6**	**-2.0**
SELS				*e*Sn	**Sb**	**18 17 36.2**	**-1.5**
VIRC	**Vir**	**2.41**	**300**	*e*Pn	**Pb**	**18 17 08.2**	**-1.8**
VIRC				Sn	**Sb**	**18 17 39.0**	**-1.1**
AVAS	**Avala Beograd**	**2.44**	**49**	*e*Sn	**Sn**	**18 17 37.3**	**+0.2**
PLIT	**Plitvice**	**2.44**	**317**	*e*Pn	**Pn**	**18 17 08.1**	**+1.3**
PLIT				Sn	**Sb**	**18 17 40.1**	**-0.9**
FRGS	**Fruska Gora**	**2.44**	**33**	*e*Pn	**Pn**	**18 17 08.1**	**+1.2**
FRGS				*e*Sn	**Sn**	**18 17 37.4**	**+0.2**
NVLJ	**Novalja**	**2.66**	**304**	*e*Pn	**Pb**	**18 17 12.0**	**-2.3**
NVLJ				Sn	**Sb**	**18 17 45.1**	**-2.2**
RABC	**Rab**	**2.81**	**307**	*e*Pn	**Pn**	**18 17 12.7**	**+0.8**
RABC				Sn	**Sn**	**18 17 48.7**	**+2.4**
BARS	**Barje**	**2.85**	**95**	*e*Pn	**Pb**	**18 17 14.7**	**-2.9**
BOJS	**Bojanci**	**3.08**	**322**	*e*Pn	**Pn**	**18 17 17.5**	**+2.0**
BOJS				*e*Sn	**Sn**	**18 17 54.3**	**+1.5**
MORH	**Mrgy, Hungar**	**3.14**	**9**	*e*Pn	**Pn**	**18 17 17.0**	**+0.6**
MORH				*e*Sn	**Sn**	**18 17 54.5**	**+0.1**
ZAGS	**Zajecar**	**3.19**	**76**	*e*Pn	**Pn**	**18 17 17.3**	**+0.1**
ZAPS	**Zavoj**	**3.43**	**86**	*e*Pn	**Pn**	**18 17 21.3**	**+0.9**
BEHE	**Becsehely**	**3.46**	**346**	*e*Pn	**Pn**	**18 17 21.4**	**+0.6**
BEHE				*e*Sn	**Sn**	**18 18 03.1**	**+0.9**
SOKA	**Soboth**	**4.12**	**331**	*i* Pn	**Pn**	**18 17 31.4**	**+1.4**
	0.6nm,0.1s						
SOKA				*i* Sn	**Sn**	**18 18 18.3**	**-0.4**
	1.9nm,0.7s						
OBKA	**Obir**	**4.17**	**326**	*i* Pn	**Pn**	**18 17 31.9**	**+1.2**
	0.3nm,0.2s						
OBKA				*i* Sn	**Sn**	**18 18 18.6**	**-1.3**
	4.0nm,0.7s						
ARSA	**Arzberg**	**4.48**	**338**	*i* Pn	**Pn**	**18 17 36.2**	**+1.4**
	1.0nm,0.3s						
ABTA	**Abfaltersbach**	**5.30**	**315**	*i* Pn	**Pn**	**18 17 48.7**	**+2.5**
	0.6nm,0.3s						
MOA	**Molln**	**5.40**	**333**	*i* Pn	**Pn**	**18 17 49.6**	**+2.2**
	0.9nm,0.4s						
MOA				*e*Sn	**Sn**	**18 18 50.4**	**+0.4**
	1.7nm,0.4s						
LESA	**Schwarzleotal**	**5.69**	**321**	*i* Pn	**Pn**	**18 17 53.3**	**+1.7**
	1.0nm,0.3s						
WTTA	**Wattenberg**	**6.09**	**315**	*i* Pn	**Pn**	**18 18 00.2**	**+3.1**
	2.8nm,0.5s						
WTTA				*i* Sn	**Sn**	**18 19 04.4**	**-3.0**
	2.9nm,0.4s						
SQTA	**Sankt Quirin**	**6.29**	**313**	*i* Pn	**Pn**	**18 18 02.6**	**+2.8**
	0.8nm,0.4s						

ISK ***14*** *18:20:13.2, 35.°68N×35.°53E, h3^{km}, ML2.5/13*
AFAD ***14*** *18:20:15.8, 35.°61N×35.°68E, h16^{km}±3^{km}, ML2.6*
GRAL ***14*** *18:20:16.0±0.5, 35.°49N×35.°80E, h0^{km}±3^{km}, MD3.1*
ISC 14 18:20:11.8±1.3**, 35.°57N**±0.°02×**35.°64E**±0.°04**, h0**^{km}±12^{km}**,**
n36, σ**0.^{s}97**/56**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAHT	**Tahtakopru-Hat**	**0.92**	**29**	Pg	**Pb**	**18 20 30.7**	**+0.1**
TAHT				Sg	**Sb**	**18 20 43.6**	**+0.2**
RHAN	**Hatay/Reyhanl**	**1.05**	**48**	P	**Pb**	**18 20 32.4**	**-0.3**
RHAN				S	**Sb**	**18 20 46.4**	**-0.6**
RHAN				*i* IAML		18 20 48.0	
	comp=N,161nm,0.3s						
BEIL	**Beino**	**1.12**	**156**	*e*P	**Pg**	**18 20 33.8**	**+0.7**
BEIL				*e*S	**Sg**	**18 20 47.2**	**-0.4**
YURE	**YUREGIR**	**1.26**	**360**	P	**Pg**	**18 20 36.7**	**+0.8**
YURE				S	**Sn**	**18 20 56.8**	**+2.6**
YURE				*i* IAML		18 21 01.0	
	comp=E,98nm,1.5s						
YURE				*i* IAML		18 21 09.0	
	comp=N,118nm,2.0s						
HWQ	**Hawqa**	**1.31**	**169**	*e*P	**Pb**	**18 20 37.4**	**+0.2**
HWQ				*e*S	**Sb**	**18 20 54.0**	**-0.7**
HASA	**Hatay-Hassa-Ha**	**1.37**	**30**	P	**Pn**	**18 20 37.9**	**-0.2**
HASA				S	**Sb**	**18 20 55.4**	**-0.9**
HASA				*i* IAML		18 21 00.0	
	comp=E,138nm,0.4s						
HASA				*i* IAML		18 21 01.0	
	comp=N,162nm,0.4s						
FKH	**Fakeheh**	**1.46**	**154**	*e*P	**Pb**	**18 20 39.9**	**0.0**
FKH				*e*S	**Sb**	**18 20 57.4**	**-1.7**
KIZK	**Mersin**	**1.52**	**307**	Pn	**Pn**	**18 20 39.9**	**-0.2**
KIZK				Sn	**Sn**	**18 20 59.7**	**-0.8**
MERS	**Mersin**	**1.58**	**326**	Pn	**Pn**	**18 20 40.8**	**-0.3**
MERS				Sn	**Sn**	**18 21 01.1**	**-1.2**
BHL	**Bhannes**	**1.66**	**179**	*e*P	**Pb**	**18 20 43.6**	**+0.4**
KUZU	**Kuzuini**	**1.68**	**44**	P	**Pg**	**18 20 44.4**	**+0.5**
KUZU				S	**Sg**	**18 21 04.8**	**-0.8**
ZAHL	**Zahle**	**1.72**	**173**	*e*P	**Pb**	**18 20 44.6**	**+0.4**
IKL	**Isikli**	**1.72**	**294**	Pn	**Pn**	**18 20 42.9**	**0.0**
IKL				Sn	**Sn**	**18 21 05.2**	**-0.4**
KARA	**Karaisali**	**1.75**	**345**	Pn	**Pn**	**18 20 43.4**	**0.0**
KARA				Sn	**Sn**	**18 21 05.9**	**-0.6**
KEBE	**Keben-Mersin**	**1.79**	**300**	Pn	**Pn**	**18 20 44.2**	**+0.2**
KEBE				Sn	**Sn**	**18 21 06.8**	**-0.6**
KAMA	**Osmaniye**	**1.82**	**27**	P	**Pg**	**18 20 46.9**	**+0.2**
GULE	**Gulek**	**1.85**	**338**	P	**Pb**	**18 20 46.8**	**+0.3**
GULE				S	**Sn**	**18 21 09.4**	**+0.4**
GULE				*i* IAML		18 21 17.0	
	comp=E,57nm,0.7s						
GULE				*i* IAML		18 21 58.0	
	comp=N,56nm,2.9s						
DQRL	**Deir Qamar**	**1.86**	**182**	*e*P	**Pb**	**18 20 47.0**	**+0.4**
KOZT	**Kozan**	**1.92**	**5**	Pn	**Pn**	**18 20 46.2**	**+0.5**
QRWL	**Qaraoun**	**2.01**	**179**	*e*P	**Pb**	**18 20 49.0**	**-0.2**
GAZ	**Gaziantep**	**2.05**	**38**	Pn	**Pb**	**18 20 49.3**	**-0.5**
RCY	**Rachaya**	**2.07**	**175**	*e*P	**Pb**	**18 20 49.7**	**-0.5**
ANDN	**Andirin**	**2.09**	**16**	P	**Pb**	**18 20 49.3**	**-1.3**
ANDN				S	**Sn**	**18 21 13.5**	**-1.4**
BERE	**Bereket-Mersin**	**2.11**	**292**	Pn	**Pn**	**18 20 49.5**	**+1.1**
TEKE	**Tekeli-Mersin**	**2.13**	**286**	Pn	**Pn**	**18 20 48.8**	**+0.3**
CMRD	**Camardi-Nigde**	**2.16**	**346**	Pn	**Pn**	**18 20 49.2**	**+0.2**
KMRS	**Kahramanmaras**	**2.19**	**27**	Pn	**Pb**	**18 20 50.6**	**-1.6**
KERG	**Konya-Eregli**	**2.21**	**327**	P	**Pn**	**18 20 51.3**	**+1.5**
KERG				*i* IAML		18 21 17.0	
	comp=N,46nm,2.1s						
KERG				S	**Sb**	**18 21 21.1**	**+0.4**
SHBL	**Chebaa**	**2.21**	**178**	*e*P	**Pb**	**18 20 51.8**	**-0.9**
GZT	**Gaziantep**	**2.37**	**40**	P	**Pn**	**18 20 52.0**	**0.0**
GZT				S	**Sg**	**18 21 27.9**	**0.0**
GZT				*i* IAML		18 21 33.0	
	comp=N,28nm,0.7s						
GZT				*i* IAML		18 21 34.0	
	comp=E,33nm,0.6s						
NIDE	**Nigde/Merkez-G**	**2.53**	**344**	P	**Pn**	**18 20 56.0**	**+1.8**
AKCA	**Adyaman/G¶l**	**2.77**	**36**	P	**Pg**	**18 21 05.6**	**+0.8**
AKCA				S	**Sg**	**18 21 39.5**	**-1.2**
AKCA				*i* IAML		18 21 44.0	
	comp=N,29nm,0.6s						
AKCA				*i* IAML		18 21 45.0	
	comp=E,29nm,0.7s						
SARI	**SarD1z-Kayseri**	**2.90**	**12**	Pn	**Pn**	**18 21 00.7**	**+1.3**
AKCD	**Akcadag**	**3.28**	**33**	P	**Pn**	**18 21 06.2**	**+1.6**
AKCD				*i* IAML		18 22 08.0	
	comp=N,18nm,0.7s						
AKCD				*i* IAML		18 22 11.0	
	comp=E,14nm,0.9s						
HANM	**anlurfa/Hi**	**3.29**	**51**	P	**Pn**	**18 21 05.7**	**+1.0**
HANM				S	**Sb**	**18 21 53.8**	**+2.1**
HANM				*i* IAML		18 22 07.0	
	comp=E,14nm,1.1s						
HANM				*i* IAML		18 22 08.0	
	comp=N,24nm,0.8s						
NARI	**Adyaman-Kaht**	**3.41**	**46**	P	**Pn**	**18 21 07.7**	**+1.4**
NARI				S	**Sg**	**18 21 59.7**	**-1.8**
NARI				*i* IAML		18 22 15.0	
	comp=N,14nm,0.8s						

AEIC ***14*** *18:20:48.4±1.8, 54.°67N±0.°05×160.°62W±0.°03, h13^{km}±5^{km},*
Error ellipse: s-maj=7.8km s-min=2.1km az=169.0
NEIC 14 18:20:47.0±1.3**, 54.°59N**±0.°05×**160.°64W**±0.°02**, h9**^{km}±9^{km}**,**
mb3.6/9**, ML3.7**/36**, ML3.4**(AEIC)**, Error ellipse:**
s-maj=7.1km s-min=1.0km az=172.0, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.66**	**69**		Pg	18 20 59.7	+0.1
CNBA	**Chernabura Isl**	**0.66**	**69**		Sg	18 21 08.0	-0.2
SDPT	**Sand Point**	**0.77**	**7**		Pb	18 21 02.3	-0.2
SDPT					Sg	18 21 11.9	0.0
DOL	**Dolgoi Island**	**0.90**	**309**		Pg	18 21 04.5	+0.1
DOL					Sb	18 21 16.7	-0.2
PVV	**Pavlof Volcano**	**1.03**	**321**		Pg	18 21 06.7	-0.1
HAG	**Hague Volcano**	**1.03**	**316**		Pb	18 21 07.0	0.0
PS4A	**Pavlof South-4**	**1.03**	**318**		Pg	18 21 06.9	0.0
PS4A					Sg	18 21 20.3	0.0
PS1A	**Pavlof South-1**	**1.05**	**323**		Pb	18 21 07.2	-0.1
PS1A					Sg	18 21 20.0	-0.8
DT1	**Dutton Round H**	**1.08**	**300**		Pg	18 21 07.1	-0.7
DT1					Sg	18 21 21.1	-0.7
DTNA	**Dutton South F**	**1.09**	**302**		Pg	18 21 07.3	-0.5
DTNA					Sb	18 21 22.2	0.0
PN7A	**Pavlof North-7**	**1.15**	**318**		Pg	18 21 09.2	+0.1
S12K	**Black Hills**	**1.39**	**325**		Pn	18 21 12.7	+0.2
S12K				IAML		18 21 34.0	
	comp=N,2µm,0.3s						
S12K	**Black Hills**	**1.39**	**325**		Sb	18 21 30.6	-0.1
VNKR	**Veniaminof 5**	**1.62**	**26**		Pn	18 21 15.6	-0.2
FALS	**False Pass**	**1.63**	**281**	Pn	Pn	18 21 15.3	-0.5
FALS				IAML		18 21 49.7	
	comp=E,1µm,0.5s						
VNSG	**Veniaminof 6**	**1.78**	**29**		Pn	18 21 17.8	-0.1
VNFG	**Fog Glacier, M**	**1.81**	**20**		Pn	18 21 18.1	-0.3
VNFG				IAML		18 21 51.0	
	comp=N,807nm,0.7s						
VNFG				IAML		18 21 56.0	
	comp=E,782nm,0.7s						
ISNN	**Isanotski Nort**	**1.83**	**279**		Pb	18 21 19.9	-0.7
VNHG	**Veniaminof 1**	**1.84**	**27**		Pn	18 21 19.2	+0.3
AKUT	**Akutan**	**3.03**	**264**	Pn	Pn	18 21 34.0	-1.1
AKUT				IAML		18 22 36.8	
	comp=N,213nm,4.9s						
AKUT				IAML		18 22 52.5	
	comp=E,224nm,2.3s						
CHIR	**Chirikof Islan**	**3.13**	**65**	Pn	Pn	18 21 35.0	-1.4
CHIR				IAML		18 22 13.2	
	comp=N,311nm,1.8s						
CHIR				IAML		18 23 15.2	
	comp=E,218nm,2.6s						
LVA	**Lava Point**	**3.18**	**265**	Pn	Pn	18 21 36.9	-0.3
LVA				IAML		18 22 48.3	
	comp=E,226nm,3.7s						
R16K	**Pilot Point**	**3.45**	**29**	Pn	Pn	18 21 39.9	-0.8
UNV	**Unalaska Valle**	**3.52**	**260**	Pn	Pn	18 21 41.6	-0.1
UNV				IAML		18 22 18.5	
	comp=N,117nm,4.6s						
PLK4	**Peulik 4**	**3.88**	**36**	Pn	Pn	18 21 47.2	+0.4
PLK4				IAML		18 22 50.7	
	comp=E,150nm,3.5s						
PLK4				IAML		18 22 53.6	
	comp=N,92nm,2.5s						
O15K	**Ungalikthiuk R**	**4.63**	**5**	Pn	Pn	18 21 57.3	+0.4
ACHA	**Angle Creek He**	**4.68**	**37**	Pn	Pn	18 21 57.1	-0.7
P16K	**Nushagak River**	**4.69**	**17**	Pn	Pn	18 21 57.6	-0.2
O14K	**Tigyukauivet M**	**4.69**	**356**	Pn	Pn	18 21 56.9	-0.9
O14K				IAML		18 23 01.7	
	comp=N,55nm,3.0s						
O14K				IAML		18 23 09.1	
	comp=E,45nm,2.8s						
OHAK	**Old Harbor**	**4.91**	**54**	Pn	Pn	18 21 59.3	-1.5
OHAK				IAML		18 24 35.0	
	comp=E,56nm,3.7s						
OHAK				IAML		18 25 17.9	
	comp=N,65nm,3.3s						
O16K	**Kokwok River B**	**5.21**	**14**	Pn	Pn	18 22 04.3	-0.7
O16K				IAML		18 23 37.3	
	comp=E,32nm,3.8s						
O16K				IAML		18 23 56.2	
	comp=N,33nm,3.6s						
N14K	**Kuskokwak Cree**	**5.38**	**354**	Pn	Pn	18 22 06.5	-0.8
KDAK	**Kodiak Island**	**5.53**	**51**	Pn	Pn	18 22 07.9	-1.4
N15K	**Kwethluk River**	**5.61**	**3**		Pn	18 22 10.3	-0.1
Q19K	**Cape Douglas,**	**5.81**	**39**	Pn	Pn	18 22 13.1	-0.1
M13K	**Dall Lake**	**6.02**	**347**	Pn	Pn	18 22 16.3	+0.2
O18K	**Koktuh Hills**	**6.05**	**27**	Pn	Pn	18 22 16.9	+0.4
SYI	**Shuyak Island**	**6.09**	**45**	Pn	Pn	18 22 17.8	+0.9
M14K	**Bethel**	**6.22**	**354**		Pn	18 22 18.6	-0.3
N17K	**Nushagak Hills**	**6.24**	**16**	Pn	Pn	18 22 19.0	-0.1
M16K	**Timber Creek**	**6.52**	**7**		Pn	18 22 23.0	+0.1
M11K	**Mekoryuk**	**6.54**	**335**	Pn	Pn	18 22 23.9	+0.7
N18K	**Kilae Creek**	**6.62**	**21**	Pn	Pn	18 22 25.0	+0.6
L14K	**Kuka Creek**	**6.86**	**352**		Pn	18 22 27.2	-0.4
M17K	**Holitna River**	**7.04**	**13**	Pn	Pn	18 22 29.9	-0.2
N19K	**Bonanza Creek**	**7.06**	**25**	Pn	Pn	18 22 31.1	+0.7
L16K	**Owhat River**	**7.17**	**4**	Pn	Pn	18 22 32.3	+0.4
RED	**Redoubt Volcan**	**7.22**	**33**	Pn	Pn	18 22 33.5	+0.9
M18K	**Stony River**	**7.38**	**18**		Pn	18 22 35.6	+0.9
K13K	**Kusilvak Mount**	**7.67**	**346**	Pn	Pn	18 22 39.8	+1.2
K15K	**Wolf Creek Mou**	**7.75**	**357**	Pn	Pn	18 22 40.1	+0.3
L18K	**Granite Mounta**	**7.93**	**14**	Pn	Pn	18 22 42.7	+0.4
SPU	**Mount Spurr**	**8.04**	**31**	Pn	Pn	18 22 44.0	+0.2
SLKM	**Skilak Lake**	**8.16**	**39**	Pn	Pn	18 22 46.5	+1.0
SEW	**Seward**	**8.19**	**43**	Pn	Pn	18 22 45.8	0.0
L19K	**White Mountain**	**8.20**	**19**	Pn	Pn	18 22 46.6	+0.6
K17K	**Iditarod**	**8.25**	**8**	Pn	Pn	18 22 46.8	+0.2
M20K	**Styx River**	**8.32**	**25**	Pn	Pn	18 22 48.0	+0.3
J14K	**Nanvaranak Lak**	**8.33**	**351**		Pn	18 22 47.6	-0.1
STLK	**Strandline Lak**	**8.35**	**30**	Pn	Pn	18 22 49.0	+0.8
SUA	**Susitna One**	**8.66**	**33**	Pn	Pn	18 22 52.1	-0.3
J16K	**Anvik River**	**8.73**	**0**	Pn	Pn	18 22 52.8	-0.4
SKT	**Skwentna**	**8.82**	**29**	Pn	Pn	18 22 55.3	+0.8
J17K	**VABM Dome**	**8.88**	**5**	Pn	Pn	18 22 54.9	-0.3
PWL	**Port Wells**	**9.10**	**41**	Pn	Pn	18 22 56.9	-1.4
J18K	**Innoko River**	**9.13**	**11**	Pn	Pn	18 22 58.3	-0.4
PPLA	**Purkeypile**	**9.41**	**24**	Pn	Pn	18 23 03.3	+0.6
GHO	**Glory Hole Cre**	**9.49**	**36**	Pn	Pn	18 23 03.0	-0.6
CUT	**Chulitna**	**9.53**	**30**	Pn	Pn	18 23 03.3	-0.8
HIN	**Hinchinbrook I**	**9.57**	**47**		Pn	18 23 03.9	-0.9
GLI	**Glacier Island**	**9.59**	**43**	Pn	Pn	18 23 03.7	-1.4
FID	**Port Fidalgo**	**9.77**	**45**	Pn	Pn	18 23 05.4	-2.1
J19K	**Poorman**	**9.78**	**13**	Pn	Pn	18 23 07.3	-0.3
SCM	**Sheep Creek Mo**	**10.09**	**39**	Pn	Pn	18 23 10.5	-1.4
J20K	**Nowinta River**	**10.17**	**16**	Pn	Pn	18 23 12.1	-0.8
ANM	**Nome**	**10.29**	**349**	Pn	Pn	18 23 14.5	-0.1
KLU	**Klutina**	**10.41**	**42**	Pn	Pn	18 23 15.6	-0.7
H18K	**Honhosa River**	**10.66**	**5**		Pn	18 23 20.0	+0.4
BMRM	**Bremner River**	**10.67**	**47**	Pn	Pn	18 23 19.2	-0.6
M24K	**Tolsona, Glenn**	**10.69**	**39**	Pn	Pn	18 23 19.4	-0.7
G16K	**Koyuk River**	**10.88**	**356**	Pn	Pn	18 23 23.0	+0.4
N25K	**Chitina, Valde**	**11.00**	**44**	Pn	Pn	18 23 24.3	-0.1
H19K	**Roundabout Mou**	**11.17**	**9**	Pn	Pn	18 23 27.4	+0.8
GLB	**Gilahina Butte**	**11.24**	**46**	Pn	Pn	18 23 26.6	-1.0
F15K	**North Star Dit**	**11.33**	**352**	Pn	Pn	18 23 29.3	+0.5
TGL	**Tana Glacier**	**11.34**	**50**	Pn	Pn	18 23 29.6	+0.5
PAX	**Paxson**	**11.49**	**37**	Pn	Pn	18 23 30.6	-0.5
TNA	**Tin City**	**11.58**	**345**	Pn	Pn	18 23 33.1	+0.9
H21K	**Melozitna Rive**	**11.76**	**16**	Pn	Pn	18 23 34.1	-0.6
IMAR	**Indian Mountai**	**11.93**	**14**	Pn	Pn	18 23 37.3	+0.4
M26K	**Nabesna, AK**	**12.07**	**42**	Pn	Pn	18 23 38.9	0.0
H22K	**Ishtalitna Cre**	**12.22**	**18**	Pn	Pn	18 23 42.3	+1.3
IL31		**12.32**	**29**	Pn	Pn	18 23 41.3	-0.9
G21K	**Allakaket**	**12.46**	**13**	Pn	Pn	18 23 45.7	+1.5
O28M	**Mount Upton**	**12.54**	**52**	Pn	Pn	18 23 45.6	-0.1
J26L	**Joseph Creek**	**13.13**	**34**	Pn	Pn	18 23 50.1	-3.4
S31K	**Pelican**	**13.95**	**66**	Pn	Pn	18 24 02.7	-1.8
E22K	**Anaktuvuk Pass**	**14.21**	**14**	Pn	Pn	18 24 10.3	+2.2
DAWY	**Dawson**	**14.34**	**40**	Pn	Pn	18 24 09.6	-0.3
TOLK	**Toolik Lake Re**	**15.01**	**16**	P	Pn	18 24 20.0	+1.0
TOLK				IAmb	IAmb	18 24 58.1	
	comp=Z,3.9nm,1.4s						
J30M	**Hart River**	**15.75**	**41**	P	Pn	18 24 29.6	+0.8
J30M				IAmb	IAmb	18 24 39.2	
	comp=Z,4.2nm,1.0s						
H29M	**Whitestone**	**15.91**	**34**	P	Pn	18 24 31.3	+0.5
B22K	**Teshekpuk Lake**	**16.14**	**9**	P	Pn	18 24 33.8	+0.2
G29M	**Pine Creek**	**16.44**	**32**	P	Pn	18 24 36.9	-0.6
G30M	**tAoh Zraii Nji**	**17.05**	**34**	P	Pn	18 24 43.1	-2.2
G30M				IAmb	IAmb	18 25 12.1	
	comp=Z,5.8nm,1.3s						
H31M	**Peel River**	**17.07**	**38**	P	Pn	18 24 43.4	-2.2
H31M				IAmb	IAmb	18 25 00.5	
	comp=Z,3.4nm,0.9s						
F30M	**Barrier River**	**17.55**	**32**	P	Pn	18 24 50.3	-1.3
F30M				IAmb	IAmb	18 24 58.8	
	comp=Z,6.9nm,1.3s						
G31M	**Satah River**	**17.66**	**35**	P	Pn	18 24 51.5	-1.3

TEH ***14*** *18:23:23.7, 28.°36N×57.°29E, h8^{km}±39^{km}*
DSN ***14*** *18:23:25.1±1.3, 28.°37N×57.°10E, h15^{km}, ML2.5/5, Error*
ellipse: s-maj=24.3km s-min=7.6km az=90.0
OMAN ***14*** *18:23:25.9±0.1, 28.°19N×57.°14E, h10^{km}±1^{km}, mb4.1/5,*
ml2.9/13, Error ellipse: s-maj=2.6km s-min=1.0km az=4.0
ISC 14 18:23:23.5±0.9**, 28.°36N**±0.°03×**57.°22E**±0.°04**, h10**^{km}**, n46,**
σ**1.^{s}89**/63**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	**0.59**	**134**	Pg	**Pg**	**18 23 34.7**	**-0.3**
IBND	**Bandar-abas**	**1.09**	**214**	Pg	**Pn**	**18 23 46.1**	**+1.3**
KBAM	**BAM**	**1.33**	**54**	Pg	**Pb**	**18 23 48.0**	**-0.6**
GENO	**Geno**	**1.33**	**225**	Pg	**Pb**	**18 23 49.6**	**+0.9**
CHMN	**Cheshme madani**	**1.52**	**10**	Pg	**Pn**	**18 23 51.4**	**+0.2**
KRBR	**Kerman**	**1.67**	**346**	Pg	**Pg**	**18 23 56.3**	**+0.7**
KHGB	**Koh Gabri**	**2.12**	**342**	Pn	**Pb**	**18 24 01.3**	**-0.8**
KRM1	**Kerman Provinc**	**2.14**	**1**	Pn	**Pb**	**18 24 01.8**	**-0.7**
SHME	**Shamm**	**2.49**	**203**	P	**Pn**	**18 24 04.8**	**+0.7**
	SNR=9.0						
SHME				S	**Sn**	**18 24 35.3**	**+0.7**
SHME	**Shamm**	**2.49**	**203**	*e*P	**Pn**	**18 24 04.7**	**+0.5**
	SNR=10						
BANOM	**Banah**	**2.56**	**199**	P	**Pn**	**18 24 05.8**	**+0.7**
BANOM				S	**Sn**	**18 24 35.1**	**-1.3**
BANOM	**Banah**	**2.56**	**199**	*e*P	**Pn**	**18 24 05.5**	**+0.4**
	SNR=23						
BANOM				S	**Sn**	**18 24 37.6**	**+1.3**
UMQ	**Umm Al-Quwin**	**3.15**	**207**	P	**Pn**	**18 24 14.7**	**+1.5**
MDH	**Madha**	**3.16**	**195**	P	**Pn**	**18 24 14.6**	**+1.4**
IBAF	**Bafgh**	**3.53**	**336**	Pn	**Pn**	**18 24 21.8**	**+3.3**
ASHO	**Ashiyiah**	**3.80**	**196**	P	**Pn**	**18 24 23.9**	**+1.6**
	SNR=5.6						
FAQ	**Al Faqa, Dubai**	**3.88**	**202**	P	**Pn**	**18 24 25.0**	**+1.7**
	SNR=5.2						
NHDN	**Nehbandan**	**3.90**	**38**	Pn	**Pn**	**18 24 25.7**	**+2.2**
BSRN	**Basiran**	**3.96**	**24**	Pn	**Pn**	**18 24 27.7**	**+3.3**
ASUD	**Al Ashush, Dub**	**4.08**	**205**	P	**Pn**	**18 24 28.0**	**+1.9**
	SNR=42						
ASUD				S	**Sn**	**18 25 14.1**	**+0.2**
ASUD	**Al Ashush, Dub**	**4.08**	**205**	*i* P	**Pn**	**18 24 27.6**	**+1.5**
	SNR=42						
SOHO	**SOHO**	**4.25**	**189**	P	**Pn**	**18 24 27.3**	**-1.0**
SOHO				S	**Sn**	**18 25 17.9**	**-0.1**
AJN	**Ajban**	**4.28**	**208**	P	**Pn**	**18 24 30.1**	**+1.4**
	SNR=7.9						
AJN	**Ajban**	**4.28**	**208**	*i* P	**Pn**	**18 24 29.6**	**+0.9**
	SNR=7.9						
IKOO	**Kooshah**	**4.34**	**20**	Pn	**Pn**	**18 24 32.2**	**+2.4**
NGCH	**Negor - Chabah**	**4.60**	**130**	P	**Pn**	**18 24 35.0**	**+2.0**
NGCH				S	**Sn**	**18 25 27.7**	**+1.1**
NGCH	**Negor - Chabah**	**4.60**	**130**	Pn	**Pn**	**18 24 34.8**	**+1.7**
TPRV	**Parvadeh(Tabas**	**4.68**	**354**	Pn	**Pn**	**18 24 37.1**	**+2.8**
ITEG	**Tejag**	**4.71**	**16**	Pn	**Pn**	**18 24 37.2**	**+2.4**
HOQ	**Hoqain**	**4.75**	**179**	P	**Pn**	**18 24 35.0**	**-0.3**
HOQ				S	**Sn**	**18 25 29.0**	**-1.5**
BIDO	**Bidbid**	**4.88**	**170**	P	**Pn**	**18 24 37.1**	**+0.1**
ARQ	**Araqi**	**5.04**	**187**	P	**Pn**	**18 24 41.0**	**+1.8**
	SNR=25						
ARQ				S	**Sn**	**18 25 37.6**	**+0.1**
TKDS	**Koohdasht(Taba**	**5.24**	**359**	Pn	**Pn**	**18 24 44.4**	**+2.4**
WSAR	**Wadi Sarin**	**5.25**	**166**	P	**Pn**	**18 24 43.6**	**+1.5**
	SNR=10						
WSAR				S	**Sn**	**18 25 40.4**	**-2.4**
SMDO	**Samad**	**5.33**	**172**	P	**Pn**	**18 24 44.4**	**+1.1**
SMDO				S	**Sn**	**18 25 44.6**	**-0.1**
KLNJ	**Kolanjah**	**5.57**	**300**	Pn	**Pn**	**18 24 49.8**	**+3.0**
BSY	**Bisya**	**5.59**	**180**	P	**Pn**	**18 24 49.1**	**+2.3**
	SNR=12						
BSY				S	**Sn**	**18 25 53.3**	**+2.2**
GHWR	**Ruwais**	**5.87**	**223**	P	**Pn**	**18 24 50.0**	**-0.5**
GHWR				S	**Sn**	**18 25 54.0**	**-3.8**
WBK	**Wadi Bani Khal**	**5.94**	**164**	P	**Pn**	**18 24 52.4**	**+0.8**
	SNR=21						
WBK				S	**Sn**	**18 25 57.5**	**-2.1**
JMDO	**Jabal Madar**	**6.01**	**172**	P	**Pn**	**18 24 53.7**	**+1.1**
SHMA	**Al-Shehemyia**	**6.11**	**247**	P	**Pn**	**18 24 54.9**	**+1.0**
	SNR=10						
SHMA				S	**Sn**	**18 26 00.1**	**-3.7**
TRNA	**Turayna**	**6.48**	**238**	P	**Pn**	**18 24 58.8**	**-0.2**
TRNA				S	**Sn**	**18 26 07.8**	**-5.1**
JLN	**Jalan Bani Buh**	**6.49**	**162**	P	**Pn**	**18 24 59.9**	**+0.7**
JLN				S	**Sn**	**18 26 10.0**	**-3.3**
MHTO	**MHTO**	**7.37**	**175**	P	**Pn**	**18 25 12.5**	**+1.3**
MHTO				S	**Sn**	**18 26 31.8**	**-3.1**
WHFO	**Wadi Hawf**	**10.86**	**198**	P	**Pn**	**18 25 57.9**	**-1.2**
ABTO	**Aybut**	**11.53**	**199**	P	**Pn**	**18 26 06.4**	**-2.0**

CATAC ***14*** *18:28:00.6±0.4, 10°N±2°×8°3W±°, h2^{km}±3^{km}, M3.6/11,*
MLv3.6/11, Error ellipse: s-maj=6.3km s-min=3.3km
az=48.4, confirmed
UCR ***14*** *18:28:01.6±1.1, 9.°91N×82.°79W, h12^{km}±9^{km}, MW3.6*
ISC 14 18:27:59.8±1.2**, 9.°91N**±0.°03×**82.°79W**±0.°03**, h13**^{km}±9^{km}**,**
n72, σ**0.^{s}57**/85**, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRIBI	**Bribri**	**0.29**	**185**	*e*P	**Pn**	**18 28 08.8**	**-1.1**
BRIBI				*e*S	**Sn**	**18 28 15.4**	**-0.8**
CEUA	**Cerro Uatsi, L**	**0.33**	**207**	*e*P	**Pn**	**18 28 09.1**	**-1.3**
DRK0	**Durika**	**0.79**	**215**	P	**Pb**	**18 28 15.7**	**+0.1**
DRK0	**Durika**	**0.79**	**215**	S	**Sg**	**18 28 26.0**	**+0.5**
DRK0	**Durika**	**0.79**	**215**	*e*P	**Pb**	**18 28 15.6**	**+0.1**
RESJ	**San Isidro (Tu**	**0.85**	**278**	*e*P	**Pn**	**18 28 17.6**	**0.0**
TURIB	**Turrialba**	**0.88**	**270**	*e*P	**Pn**	**18 28 17.7**	**-0.3**
VERB	**Verbena**	**0.89**	**272**	*e*P	**Pn**	**18 28 18.1**	**-0.1**
SAJE	**San Jernim**	**0.91**	**232**	*e*P	**Pb**	**18 28 17.4**	**-0.1**
SAJE				*e*S	**Sg**	**18 28 28.6**	**-0.6**
BURE	**Buenos Aires**	**0.91**	**216**	*e*P	**Pg**	**18 28 17.9**	**+0.4**
ABRB	**Las Abras (San**	**0.92**	**276**	*e*P	**Pn**	**18 28 18.7**	**0.0**
ABRB				*e*S	**Sn**	**18 28 31.7**	**-0.3**
VTCV	**VTCV, Calle Va**	**0.93**	**274**	*e*P	**Pn**	**18 28 18.8**	**0.0**
VTCV				*e*S	**Sn**	**18 28 31.4**	**-0.6**
CVTV	**Tajo**	**0.95**	**275**	*e*P	**Pn**	**18 28 19.4**	**+0.2**
CVTV				*e*S	**Sn**	**18 28 32.3**	**-0.5**
ALCO	**Alturas Coton,**	**0.96**	**183**	*e*P	**Pn**	**18 28 18.6**	**-0.6**
CVTR	**Volcan Turrial**	**0.96**	**276**	*e*P	**Pn**	**18 28 19.3**	**-0.1**
VTR0	**Volcan Turrial**	**0.96**	**276**	*e*P	**Pn**	**18 28 19.4**	**0.0**
CVTQ	**Turrialba Volc**	**0.97**	**275**	*e*P	**Pn**	**18 28 19.6**	**+0.1**
EDP2	**Potrero Grande**	**0.97**	**203**	*e*P	**Pn**	**18 28 18.9**	**-0.3**
RAFA	**San Farael, Vo**	**1.01**	**273**	*e*P	**Pn**	**18 28 20.1**	**+0.1**
BUS1	**Rivas**	**1.01**	**249**	*e*P	**Pg**	**18 28 19.6**	**+0.2**
PILE	**Guapiles**	**1.03**	**287**	*e*P	**Pn**	**18 28 20.4**	**+0.4**
PILE				*e*S	**Sn**	**18 28 34.7**	**+0.4**
CARI	**Cariari**	**1.03**	**296**	*e*P	**Pn**	**18 28 20.7**	**+0.7**
CARI				*e*S	**Sn**	**18 28 35.2**	**+0.8**
VICA	**Volcano Irazu**	**1.04**	**274**	*e*P	**Pn**	**18 28 20.4**	**-0.2**
FIMO	**Fila Mora**	**1.07**	**211**	*e*P	**Pg**	**18 28 21.0**	**+0.5**
EDPE	**Pejibaye, P**	**1.08**	**226**	*e*P	**Pg**	**18 28 20.7**	**+0.1**
EDPE				*e*S	**Sb**	**18 28 34.5**	**+0.1**
BRU2	**Volcan**	**1.12**	**175**	P	**Pg**	**18 28 21.5**	**+0.1**
BRU2	**Volcan**	**1.12**	**175**	S	**Sg**	**18 28 35.9**	**-0.1**
BRU2	**Volcan**	**1.12**	**175**	*e*P	**Pn**	**18 28 20.9**	**-0.4**
BRU2				*e*S	**Sg**	**18 28 36.1**	**+0.2**
TBS2		**1.12**	**173**	*e*P	**Pb**	**18 28 20.6**	**-0.6**
TRT2	**Tortugero**	**1.13**	**305**	P	**Pg**	**18 28 21.7**	**+0.2**
TRT2	**Tortugero**	**1.13**	**305**	S	**Sn**	**18 28 37.0**	**+0.3**
TRT2	**Tortugero**	**1.13**	**305**	*e*P	**Pg**	**18 28 21.4**	**-0.2**
CVIMO	**Finca Echandi**	**1.14**	**276**	*e*P	**Pg**	**18 28 22.4**	**+0.5**
CVIMO				*e*S	**Sn**	**18 28 37.8**	**+0.4**
OCHAL	**Ojochal**	**1.17**	**226**	P	**Pg**	**18 28 23.0**	**+0.6**
OCHAL	**Ojochal**	**1.17**	**226**	S	**Sn**	**18 28 38.2**	**+0.4**

PIEC	Cerro El Cedra	1.19	256	*e*P	Pb	18 28 22.5	+0.1
BQTLY	Boquete Panama	1.19	164	*e*P	Pg	18 28 22.7	-0.2
RBALA	Bur	1.21	149	*e*P	Pn	18 28 21.6	-0.9
LCR2	La Lucha 2	1.21	262	P	Pg	18 28 23.8	+0.6
JEFFS	S de V. Baru	1.26	168	*e*P	Pb	18 28 23.4	-0.2
EDAD	Golfito	1.31	197	*e*P	Pb	18 28 24.5	+0.2
FITO	Golfito	1.33	196	*e*P	Pb	18 28 24.7	0.0
CDITO	Canoas	1.33	184	S	Sg	18 28 43.4	+0.6
CDITO	Canoas	1.33	184	P	Pg	18 28 25.5	0.0
ACOS	Acosta	1.36	265	*e*P	Pb	18 28 25.6	+0.4
BELE	Belen	1.38	273	*e*P	Pb	18 28 25.4	-0.2
PICV	PH. Pirrs	1.41	258	*e*P	Pb	18 28 25.8	-0.4
PICV				*e*S	Sb	18 28 44.5	+0.3
QUEP	Quepos	1.44	251	P	Pb	18 28 26.9	+0.4
QUEP	Quepos	1.44	251	S	Sb	18 28 46.1	+1.3
KKNTU	Kakintº	1.44	138	*e*P	Pb	18 28 26.2	-0.4
VPS8	V Poas	1.45	281	*e*P	Pg	18 28 27.5	-0.3
PTJ1	Puerto Jimnez	1.46	200	P	Pb	18 28 27.0	+0.1
PTJ1	Puerto Jimnez	1.46	200	S	Sb	18 28 45.9	+0.5
PTJ1	Puerto Jimnez	1.46	200	*e*P	Pb	18 28 27.0	+0.1
ARTO	Ro Cuarto	1.47	287	*e*P	Pb	18 28 27.2	+0.2
ARTO				*e*S	Sb	18 28 46.1	+0.5
PIRO	Carate, Puerto	1.59	200	P	Pb	18 28 29.2	0.0
PIRO	Carate, Puerto	1.59	200	S	Sb	18 28 50.4	+1.1
COVE	Coope Vega, Sa	1.78	297	S	Sg	18 28 56.2	-0.8
SOCE	Pocosol	1.86	285	P	Pb	18 28 33.6	-0.1
SOCE	Pocosol	1.86	285	S	Sg	18 28 58.9	-0.7
SOCE	Pocosol	1.86	285	*e*P	Pb	18 28 33.5	-0.2
CEDE	Laguna Cedeo	1.97	287	*e*P	Pb	18 28 35.9	+0.3
ARE1	Arenal 1	1.98	286	*e*P	Pb	18 28 35.4	-0.3
JTS	Las Juntas de	2.16	280	P	Pb	18 28 38.5	-0.3
JTS				S	Sb	18 29 05.4	-0.3
JTS	Las Juntas de	2.16	280	*e*P	Pb	18 28 38.5	-0.3
JCR1	Jicaral	2.29	269	*e*P	Pb	18 28 40.6	-0.4
BLUN	Bluefields	2.29	335	S	Sb	18 29 09.6	+0.3
CUI	Cuipilapa	2.45	288	*e*P	Pb	18 28 43.6	-0.3
VMAR	Armenia, Volca	2.45	292	*e*P	Pb	18 28 42.6	-1.2
CMARA	Lajas Hojancha	2.60	273	P	Pb	18 28 43.9	-2.4
CMARA	Lajas Hojancha	2.60	273	S	Sb	18 29 17.9	-0.3
BCIP	Isla Barro Col	3.00	104	P	Pn	18 28 48.5	+1.3

NEIC ***14*** *18:30:18.5±1.5, 37.°58N±0.°07×20.°56E±0.°06, h10^{km}±1^{km}, mb4.4/25, Error ellipse: s-maj=11.7km s-min=7.5km az=204.0*

THE ***14*** *18:30:21.3, 38°N±1°×2°1E±°, h0^{km}±1^{km}, M3.8/55, MLh3.8/55*

ATH ***14*** *18:30:21.8±0.3, 37.°73N×20.°61E, h7^{km}±1^{km}, ML3.8/32, Manual Solution by D.Makaris First location: 2019/12/14 18:31:19, This location: 2019/12/14 19:59:32 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

IDC ***14*** *18:30:24.2±1.1, 37.°67N×20.°56E, h49^{km}±14^{km}, mb3.6/13, mbtmp3.8/22, ML3.5/7, MS3.2/8, Error ellipse: s-maj=16.7km s-min=9.0km az=17.0*

NAO ***14*** *18:30:37.3, 39.°32N×20.°03E, h10^{km}, MB4.4*

ISC 14 18:30:20.0±0.5**, 37.°68N**±0.°03×**20.°56E**±0.°03**, h15**^{km}**, n266,** σ**2.**^{s}**03**/352**, mb4.2**/23**, MS3.4**/3**, 13C-7D, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ORTH	Orthonies,Zaky	0.21	32	P	Pg	18 30 25.8	+1.0
ORTH				S	Sg	18 30 28.7	+0.8
ORTH	Orthonies,Zaky	0.21	32	P	Pg	18 30 25.9	+1.0
ORTH				S	Sg	18 30 28.8	+0.8
LTHK	Lithakia	0.22	81	P	Pg	18 30 25.1	+0.1
LTHK				S	Sg	18 30 28.0	-0.4
ZAK2	Zakynthos	0.29	67	P	Pg	18 30 26.8	+0.6
ZAK2				S	Sg	18 30 31.6	+1.2
RTZL	Ratzakli, Kefa	0.43	23	P	Pg	18 30 29.0	+0.2
RTZL				S	Sg	18 30 35.5	+0.9
VLS	Valsamata	0.50	3	P	Pg	18 30 30.2	+0.3
VLS				S	Sg	18 30 37.8	+1.1
VLS	Valsamata	0.50	3	P	Pg	18 30 30.3	+0.3
VLS				S	Sg	18 30 38.0	+1.2
ARG2	Argostoli	0.51	354	P	Pg	18 30 30.6	+0.6
ARG2				S	Sg	18 30 38.9	+2.0
LXR1	Lixouri, Cepha	0.53	350	P	Pg	18 30 31.5	+0.9
LXR1				S	Sg	18 30 39.5	+1.8
DMLN	Damoulianata-K	0.58	345	P	Pg	18 30 32.1	+0.6
DMLN				S	Sb	18 30 41.8	+1.8
FSK	Fiskardo	0.78	0	P	Pg	18 30 35.2	-0.1
FSK				S	Sg	18 30 46.8	+1.2
FSK	Fiskardo	0.78	0	P	Pg	18 30 35.5	+0.3
FSK				S	Sb	18 30 47.6	+1.8
RLS	Riolos of Patr	0.81	62	P	Pg	18 30 35.6	-0.3
RLS				S	Sg	18 30 47.4	+0.9
RLS	Riolos of Patr	0.81	62	P	Pg	18 30 35.6	-0.3
RLS				S	Sg	18 30 47.4	+0.9
AXS	Araxos	0.83	51	P	Pg	18 30 35.7	-0.5
AXS				S	Sg	18 30 47.4	+0.3
AXS	Araxos	0.83	51	P	Pg	18 30 36.3	+0.1
AXS				S	Sg	18 30 48.1	+1.1
EVGI	Lefkada island	0.95	5	P	Pb	18 30 38.0	-0.1
EVGI				S	Sg	18 30 52.7	+1.9
DRO	Drossia	0.95	73	P	Pb	18 30 37.9	-0.3
DRO				S	Sn	18 30 53.0	+0.8
DRO	Drossia	0.95	73	P	Pb	18 30 38.5	+0.3
DRO				S	Sb	18 30 51.5	+0.8
AST1	Astakos	0.96	26	P	Pb	18 30 38.1	-0.2
AST1				S	Sn	18 30 53.2	+0.9
DRAG	Dragano-Lefkad	1.01	1	P	Pb	18 30 39.0	-0.2
DRAG				S	Sb	18 30 53.7	+1.4
NYDR	Nydri-Lefkada	1.04	6	P	Pb	18 30 39.7	-0.1
NYDR				S	Sn	18 30 56.7	+2.3
UPR	University Cam	1.15	58	P	Pb	18 30 42.1	+0.6
UPR				S	Sn	18 30 58.6	+1.7
ITM	Ithomi	1.20	114	P	Pn	18 30 43.6	+1.4
ITM				S	Sg	18 31 01.4	+2.7
ITM	Ithomi	1.20	114		Pn	18 30 42.0	-0.2
ITM				Sn	Sb	18 30 56.0	-1.7
ITM	Ithomi	1.20	114	P	Pn	18 30 43.8	+1.6
ITM				S	Sn	18 30 59.9	+1.6
PYL	PYLOS	1.22	129	P	Pn	18 30 43.7	+1.1
PYL				S	Sg	18 31 01.5	+1.9
PYL	PYLOS	1.22	129	P	Pn	18 30 43.8	+1.2
PYL				S	Sg	18 31 01.5	+1.9
EFP	Efpalio	1.30	54	P	Pn	18 30 44.0	+0.3
EFP				S	Sg	18 31 02.7	+0.6
EFP	Efpalio	1.30	54	P	Pn	18 30 44.2	+0.6
EFP				S	Sb	18 31 00.6	-0.1
KLV	Kalavryta, Ach	1.31	73	P	Pn	18 30 44.1	+0.3
KLV				S	Sg	18 31 04.3	+1.9
KLV	Kalavryta, Ach	1.31	73	P	Pn	18 30 44.2	+0.3
KLV				S	Sb	18 31 02.3	+1.2
AMPL	Ampelaki	1.35	22	P	Pn	18 30 44.7	+0.4
SERG	Sergoula	1.39	58	P	Pn	18 30 45.1	+0.2
SERG				S	Sg	18 31 05.6	+0.6
ANX	Ano Chora	1.41	49	P	Pn	18 30 45.8	+0.5
ANX				S	Sg	18 31 06.5	+0.9
ANX	Ano Chora	1.41	49	P	Pn	18 30 46.0	+0.7
ANX				S	Sn	18 31 05.0	+1.4
GUR	Goura	1.44	79	P	Pn	18 30 46.2	+0.5
GUR				S	Sg	18 31 06.8	+0.4
GUR	Goura	1.44	79	P	Pn	18 30 46.3	+0.6
GUR				S	Sb	18 31 05.9	+1.2
KALE	Kalithea	1.44	60	P	Pn	18 30 45.9	+0.3
KALE				S	Sg	18 31 07.6	+1.1
KALE	Kalithea	1.44	60	P	Pn	18 30 46.0	+0.3
KALE				S	Sb	18 31 06.4	+1.7
VLX	Vlachokerasia	1.48	101	P	Pn	18 30 47.0	+0.8
VLX				S	Sg	18 31 08.7	+1.0
EVR	Evrytania	1.58	38	P	Pn	18 30 49.2	+1.5
EVR				S	Sg	18 31 11.2	+0.1
EVR	Evrytania	1.58	38	P	Pn	18 30 49.3	+1.7
EVR				S	Sn	18 31 09.0	+1.1
TETR	Tetrakomo, Epi	1.76	18	P	Pn	18 30 52.1	+2.0
TETR	Tetrakomo, Epi	1.76	18	P	Pn	18 30 51.9	+1.9
TETR				S	Sn	18 31 14.1	+1.9
MAKR	Makrakomi, Fth	1.82	42	P	Pb	18 30 53.7	+0.6
MAKR	Makrakomi, Fth	1.82	42	P	Pn	18 30 52.8	+1.9
MAKR				S	Sn	18 31 15.2	+1.5
IGT	Igoumenitsa	1.86	355	P	Pn	18 30 53.1	+1.7
LTK	Loutraki	1.94	79	P	Pn	18 30 55.1	+2.7
LTK	Loutraki	1.94	79	P	Pn	18 30 55.2	+2.8
LTK				S	Sn	18 31 18.7	+2.1
AXAR	Agios Charalam	1.98	56	P	Pn	18 30 55.7	+2.7
AXAR	Agios Charalam	1.98	56	P	Pn	18 30 54.9	+1.9
AXAR				S	Sn	18 31 20.0	+2.4
JAN	Janina	1.99	7	P	Pn	18 30 55.5	+2.3
JAN	Janina	1.99	7	P	Pn	18 30 55.6	+2.4
JAN				S	Sn	18 31 19.9	+2.0
KEK	Kerkira	2.12	344	Pn	Pb	18 31 01.0	+2.9
KEK	Kerkira	2.12	344	P	Pn	18 30 57.5	+2.6
KEK				S	Sb	18 31 25.1	+0.8
VLI	Veliai	2.13	116	P	Pb	18 30 58.6	+0.4
VLI	Veliai	2.13	116	P	Pb	18 30 58.6	+0.4
VLI				S	Sb	18 31 26.0	+1.6
LKR	Lokris	2.16	62	P	Pn	18 30 58.1	+2.7
LKR	Lokris	2.16	62	P	Pn	18 30 58.4	+3.0
LKR				S	Sn	18 31 24.6	+2.7
ATAL	Atalanti	2.19	62	P	Pn	18 30 58.7	+2.8
THL	Klokotos Trika	2.20	31	P	Pn	18 30 58.1	+2.0
THL	Klokotos Trika	2.20	31	P	Pn	18 30 58.7	+2.6
THL				S	Sn	18 31 24.4	+1.4
VIL2	Platees	2.21	75	P	Pn	18 30 58.9	+2.7
VIL2				S	Sn	18 31 26.2	+3.0
MET5	Makryloggos,Me	2.22	91	P	Pn	18 30 58.3	+2.0
MET5				S	Sb	18 31 26.9	-0.3
VILL	Villia	2.23	77	P	Pn	18 30 58.9	+2.4
MET4	Agioi Theodoro	2.25	90	P	Pn	18 30 59.3	+2.5
MET4				S	Sn	18 31 26.8	+2.5
KPRO	Kipourio	2.36	15	P	Pn	18 31 01.6	+3.3
MAGU	Magoula	2.37	79	P	Pn	18 31 00.6	+2.2
MAGU	Magoula	2.37	79	P	Pn	18 31 00.8	+2.4
MAGU				S	Sn	18 31 30.1	+2.8
STFN	Stefani	2.41	77	P	Pn	18 31 00.9	+1.9
STFN	Stefani	2.41	77	P	Pn	18 31 01.8	+2.8
STFN				S	Sn	18 31 31.2	+2.9
TYRN	Tyrnavos	2.42	32	P	Pn	18 31 02.0	+3.0
KTHA	Kythira Island	2.45	124	P	Pn	18 31 02.7	+3.2
ATH	Athens Observa	2.52	82	P	Pn	18 31 02.6	+2.2
ATH	Athens Observa	2.52	82	P	Pn	18 31 02.5	+2.2
ATH				S	Sn	18 31 34.3	+3.5
PENT	Pentalofos	2.56	10	P	Pn	18 31 04.5	+3.5
PENT	Pentalofos	2.56	10	P	Pn	18 31 03.4	+2.3
PENT				S	Sn	18 31 33.7	+1.8
VLY	Voula,Athens	2.57	85	P	Pn	18 31 03.0	+1.8
VLY	Voula,Athens	2.57	85	P	Pn	18 31 03.3	+2.2
VLY				S	Sn	18 31 35.6	+3.5
ATHU	Athens Univers	2.57	83	P	Pn	18 31 03.3	+2.1
ATHU	Athens Univers	2.57	83	P	Pn	18 31 03.2	+2.1
ATHU				S	Sn	18 31 35.5	+3.4
PTL	Penteli	2.64	81	P	Pn	18 31 03.9	+1.7
PTL	Penteli	2.64	81	P	Pn	18 31 04.2	+2.0
PTL				S	Sn	18 31 36.8	+2.8
NEO	Neokhori	2.65	51	P	Pn	18 31 04.4	+2.2
NEO	Neokhori	2.65	51	P	Pn	18 31 04.6	+2.3
NEO				S	Sn	18 31 37.2	+3.0
DION	Dionisos Attik	2.70	80	P	Pn	18 31 05.2	+2.2
DION	Dionisos Attik	2.70	80	P	Pn	18 31 05.2	+2.2
DION				S	Sn	18 31 38.6	+3.3
NEST	Nestorio	2.76	8	P	Pn	18 31 07.0	+3.1
KZN	Kozani	2.79	19	P	Pn	18 31 07.1	+2.8
KZN	Kozani	2.79	19	P	Pn	18 31 05.7	+1.4
KZN				S	Sn	18 31 40.3	+2.6
ANKY	Antikythira Is	2.85	129	P	Pn	18 31 07.9	+3.0
LIT	Litokhoron	2.85	31	P	Pn	18 31 07.6	+2.6
LIT	Litokhoron	2.85	31		Pn	18 31 06.2	+1.2
KYMI	Kymi, Euboea I	2.95	70	P	Pn	18 31 08.9	+2.5
KYMI	Kymi, Euboea I	2.95	70	P	Pn	18 31 08.6	+2.3
KYMI				S	Sn	18 31 43.5	+2.0
AOS	Alonnisos	3.00	59	P	Pn	18 31 08.9	+1.8
KARY	Karystos	3.09	82	P	Pn	18 31 09.6	+1.3
KARY				S	Sn	18 31 47.9	+2.9
TIP	Timpagrande	3.34	298		Pn	18 31 12.1	+0.3
OHR	Ohrid	3.44	3	*i* Pn	Pn	18 31 16.6	+3.5
THE	Thessaloniki	3.50	32	P	Pn	18 31 15.9	+2.1
PLG	Polygyros	3.51	39	P	Pn	18 31 16.1	+2.1
PLG	Polygyros	3.51	39	P	Pn	18 31 16.3	+2.2
MESG	Mesagne	3.59	325	P	Pn	18 31 16.6	+1.5
VAM	Vamos	3.70	127	P	Pn	18 31 17.7	+1.0
OUR	Ouranopolis	3.76	44	P	Pn	18 31 19.8	+2.4
APE	Apeiranthos	4.01	97	P	Pn	18 31 21.8	+0.9
APE	Apeiranthos	4.01	97	P	Pn	18 31 22.1	+1.2
PHP	Peshkopia	4.01	359	P	Pn	18 31 23.2	+2.3
SRS	Serrai	4.16	33	P	Pn	18 31 25.4	+2.4
IDI	Anoyia	4.22	123	P	Pn	18 31 26.6	+2.6
	20nm,1.0s,baz=282,slow=18,SNR=13						
IDI				S	Sn	18 32 14.6	+1.6
	20nm,0.3s,baz=272,slow=21,SNR=9.0						
IDI				LR	LR	18 33 24.1	
	comp=Z,257nm,20.3s,baz=295,slow=43						
IDI	Anoyia	4.22	123	Pn	Pn	18 31 21.9	-2.1
IDI	Anoyia	4.22	123	P	Pn	18 31 26.2	+2.2
LIA	Limnos Island	4.24	57	P	Pn	18 31 25.9	+1.9
CUC	Castrocucco	4.37	303	Pn	Pn	18 31 25.7	-0.2
NPS	Neapolis	4.73	119	P	Pn	18 31 33.9	+3.0
ACER	Acerenza	4.74	312		Pn	18 31 30.9	-0.1
PDG	Podgorica	4.85	349	Pn	Pn	18 31 33.2	+0.7
VAE	Valguarnera	4.89	270	P	Pn	18 31 36.2	+3.2
	32nm,1.1s,baz=74,slow=19,SNR=1.7						
VAE				S	Sn	18 32 32.5	+3.1
	32nm,0.6s,baz=174,slow=18,SNR=4.7						
RAFF	Raffo Rosso	4.95	267	Pn	Pn	18 31 33.9	0.0
WDD	Wied Dalam	5.18	251	Pn	Pn	18 31 36.4	-0.6
RDO	Rodhopi	5.18	46		Pn	18 31 37.1	+0.1
RDO	Rodhopi	5.18	46	P	Pn	18 31 38.8	+1.8
ALN	Alexandroupoli	5.33	51	Pn	Pn	18 31 38.5	-0.6
SGRT	San Giovanni R	5.51	319	Pn	Pn	18 31 41.7	+0.1
PAOL	Paolisi	5.73	308		Pn	18 31 44.4	-0.1
BOVS	Bovan	6.02	8	⇓P	Pn	18 31 49.5	+1.0
BALB	Balikesir	6.06	69	Pn	Pn	18 31 48.7	-0.3
ARG	Arkhangelos	6.23	101	Pn	Pn	18 31 50.9	-0.5
MANT	Manisa	6.36	80	Pn	Pn	18 31 52.9	-0.6
PLVB	Pleven	6.49	27	⇑P	Pn	18 31 58.3	+3.3
ELND	Elena	6.63	36	⇑P	Pn	18 32 00.6	+3.6
INTR	Introdacqua	6.71	312	Pn	Pn	18 31 57.5	-0.5
CAMP	Campotosto	7.32	314		Pn	18 32 07.2	+0.8
HERR	Herculane	7.33	10	⇓P	Pn	18 32 07.2	+0.7
AKAS	Kas	7.38	99	Pn	Pn	18 32 05.7	-1.7
RAZG	Razgrad	7.42	36	⇑P	Pn	18 32 12.5	+4.7
ELL	Elmali	7.52	94	Pn	Pn	18 32 08.8	-0.4
HUMR	Humele	7.62	25	⇑P	Pn	18 32 13.1	+2.7
NRCA	Norcia	7.68	314		Pn	18 32 13.0	+1.7
GUMA	Gualdo di Mace	7.70	317	Pn	Pn	18 32 12.5	+0.8
FDMO	Fiordimonte	7.82	316		Pn	18 32 15.1	+1.8
CESX	Cesi	7.85	311	Pn	Pn	18 32 15.1	+1.5
GZR	Gura Zlata	7.89	11	⇑P	Pn	18 32 15.5	+1.3
LOT	Lotru	8.13	16	⇑P	Pn	18 32 18.0	+0.5
ARR	Arges	8.27	20	⇑P	Pn	18 32 21.1	+1.6
MURB	Monte Urbino	8.28	315	Pn	Pn	18 32 19.9	+0.3
SAHE	Sakarya_HENDEK	8.59	65	⇓P	Pn	18 32 30.7	+6.9
MORH	Mrgy, Hungar	8.65	351	⇓P	Pn	18 32 22.8	-1.8
MLR	Muntele Rosu	8.79	26	P	Pn	18 32 29.8	+3.2
	0.6nm,0.3s,baz=90,slow=12,SNR=22						
MLR				S	Sn	18 34 08.8	+3.4
	1.2nm,0.4s,baz=278,slow=12,SNR=4.4 9.0nm,0.8s						
MLR	Muntele Rosu	8.79	26		Pn	18 32 26.8	+0.2
MLR	Muntele Rosu	8.79	26	⇑P	Pn	18 32 31.4	+4.8
NEHR	Nehoiu	8.86	27	⇓P	Pn	18 32 32.2	+4.8
CASP	Castiglione de	9.00	308	Pn	Pn	18 32 26.9	-2.5
DOPR	Dopca	9.03	22	⇓P	Pn	18 32 32.6	+2.7
OSSC	Osservatorio P	9.18	312	Pn	Pn	18 32 30.1	-1.7
KEST	Kesra	9.21	261	P	Pn	18 32 35.0	+2.6
	0.1nm,0.3s,baz=212,slow=17,SNR=1.8						
KEST				S	Sn	18 34 16.9	+1.0
	5.9nm,1.0s,baz=310,slow=14,SNR=2.0						
KEST				LR	LR	18 35 55.0	
	comp=Z,25nm,20.1s,baz=25,slow=36 4.9nm,1.0s						
BEHE	Becsehely	9.23	343	Pn	Pn	18 32 29.6	-2.9
DRGR		9.25	9	⇓P	Pn	18 32 37.4	+4.6
OZUR		9.27	23	⇑P	Pn	18 32 35.6	+2.5
TURR	Turia	9.31	24	⇑P	Pn	18 32 36.6	+3.0
PLOR	Plostina	9.35	27	⇑P	Pn	18 32 37.5	+3.3
VRI	Vrincioaia	9.39	27	⇑P	Pn	18 32 38.2	+3.4
TRI	Trieste	9.50	330	Pn	Pn	18 32 33.9	-2.3
ONER	Baraj Valea Uz	9.68	25	⇑P	Pn	18 32 42.6	+3.9
SABO	M.te Sabotino	9.79	330		Pn	18 32 39.1	-1.1
ZCCA	Zocca	9.84	316	Pn	Pn	18 32 39.6	-1.3
SOKA	Soboth	9.88	337		Pn	18 32 41.6	+0.1
SOKA					Sn	18 34 25.3	-6.9
SOKA	Soboth	9.88	337	*e*Pn	Pn	18 32 41.6	+0.1
	6.3nm,0.3s,SNR=21						
SOKA				*i* Sn	Sn	18 34 25.3	-6.9
	3.1nm,0.5s						
OBKA	Obir	9.89	335		Pn	18 32 41.9	+0.2
OBKA					Sn	18 34 29.3	-3.1
OBKA	Obir	9.89	335	*i* Pn	Pn	18 32 41.9	+0.2
	2.3nm,0.2s,SNR=9.5						
OBKA				*i* Sn	Sn	18 34 29.3	-3.1
	7.1nm,0.4s						
TEOL	Teolo	10.16	322	Pn	Pn	18 32 44.0	-1.4
PSZ	Piszkesteto	10.25	357	Pn	Pn	18 32 45.5	-1.0
ARSA	Arzberg	10.26	340	Pn	Pn	18 32 45.7	-1.0
ARSA	Arzberg	10.26	340		Sn	18 34 39.0	-2.5
ARSA	Arzberg	10.26	340	*i* Pn	Pn	18 32 46.3	-0.4
	1.3nm,0.4s						
ARSA				*e*Sn	Sn	18 34 39.0	-2.5
	1.7nm,0.5s						
MYKA	Terra Mystica	10.31	332		Pn	18 32 47.6	+0.2
MYKA					Sn	18 34 38.7	-4.0
MYKA	Terra Mystica	10.31	332	*i* Pn	Pn	18 32 47.6	+0.2
	1.8nm,0.3s						
MYKA				*i* Sn	Sn	18 34 38.7	-4.0
	4.1nm,0.6s						
STAL	STALIGIAL	10.37	328	Pn	Pn	18 32 47.6	-0.6
BRTR	Keskin Array B	10.43	75	P	Pn	18 32 51.5	+2.4
	0.2nm,0.3s,baz=258,slow=13,SNR=6.8						
BRTR				LR	LR	18 37 47.6	
	comp=Z,75nm,19.4s,baz=276,slow=42 0.5nm,0.7s						
CIMO	Cimolais	10.53	328	Pn	Pn	18 32 50.2	-0.1
CSS	Mathiatis	10.65	101	Pn	Pn	18 32 52.1	0.0
CTI	Castel Tesino	10.68	324		Pn	18 32 51.5	-0.9
ILGA	Ilgaz	10.73	68	Pn	Pn	18 32 52.4	-0.9
ABTA	Abfaltersbach	10.85	329		Pn	18 32 55.3	+0.5
ABTA					Sn	18 34 51.1	-4.8
ABTA	Abfaltersbach	10.85	329	*i* Pn	Pn	18 32 55.3	+0.5
	2.2nm,0.4s						
ABTA				*i* Sn	Sn	18 34 51.1	-4.8
	8.0nm,0.6s						
MODS	Modra-Piesok	10.96	348	*e*PN	Pn	18 32 54.7	-1.5
MODS				*e*SN	Sn	18 34 54.8	-3.7
MOA	Molln	11.17	338		Pn	18 33 00.0	+1.0
MOA					Sn	18 34 58.2	-5.3
MOA	Molln	11.17	338	*e*Pn	Pn	18 33 00.0	+1.0
	6.5nm,0.4s,SNR=8.5						
MOA				*i* Sn	Sn	18 34 58.3	-5.3
	2.5nm,0.4s						
BZK	Bozkurt	11.19	63	Pn	Pn	18 32 59.8	+0.4
BIOA	Bad Ischl, Aus	11.22	335		Pn	18 33 00.6	+0.7
BIOA					Sn	18 35 00.9	-4.2
BIOA	Bad Ischl, Aus	11.22	335	*i* Pn	Pn	18 33 00.6	+0.7
	3.3nm,0.3s,SNR=5.6						
BIOA				*i* Sn	Sn	18 35 00.9	-4.2
	3.2nm,0.5s						
LESA	Schwarzleotal	11.34	332		Pn	18 33 01.9	+0.4
LESA					Sn	18 35 02.8	-5.1
LESA	Schwarzleotal	11.34	332	*e*Pn	Pn	18 33 01.8	+0.4
	12nm,0.5s,SNR=16						
LESA				*i* Sn	Sn	18 35 02.8	-5.1
	4.5nm,0.5s						
WTTA	Wattenberg	11.62	328		Pn	18 33 06.7	+1.3
WTTA					Sn	18 35 11.6	-3.3
WTTA	Wattenberg	11.62	328	*i* Pn	Pn	18 33 06.7	+1.3
	1.7nm,0.3s						
WTTA				*e*Sn	Sn	18 35 11.6	-3.3
	4.1nm,0.5s						
WATA	Walderalm	11.70	328		Pn	18 33 06.8	+0.3
WATA					Sn	18 35 12.9	-4.0
WATA	Walderalm	11.70	328	*e*Pn	Pn	18 33 06.8	+0.3
	2.0nm,0.4s						
WATA				*i* Sn	Sn	18 35 12.9	-4.0
	2.0nm,0.3s						
FUORN	Ofenpass-Fuorn	11.75	323	Pn	Pn	18 33 06.3	-1.0
SQTA	Sankt Quirin	11.77	327		Pn	18 33 09.6	+2.3
SQTA					Sn	18 35 16.4	-2.1
SQTA	Sankt Quirin	11.77	327	*i* Pn	Pn	18 33 09.6	+2.3
	1.3nm,0.3s						
SQTA				*i* Sn	Sn	18 35 16.4	-2.1
	4.9nm,0.6s						
VRAC	Vranov	11.98	347	LR	LR	18 39 16.2	
	comp=Z,97nm,20.7s,baz=174,slow=44						
CKRC	Cesky Krumlov	12.03	340	*e*PN	Pn	18 33 11.4	+0.5
CKRC				*e*SN	Sn	18 35 19.1	-5.6
DAVOX	Davos/Dischmat	12.05	322	P	Pn	18 33 13.3	+2.0
	0.2nm,0.3s,baz=144,slow=18,SNR=2.1						
DAVOX				S	Sn	18 35 20.8	-4.6
	1.4nm,0.4s,baz=125,slow=22,SNR=1.9 2.2nm,0.7s						
TUE	Stuetta	12.10	320	Pn	Pn	18 33 12.6	+0.6
RETA	Reutte	12.17	327		Pn	18 33 15.5	+2.7
RETA					Sn	18 35 24.9	-3.3
RETA	Reutte	12.17	327	*i* Pn	Pn	18 33 15.5	+2.7
	0.7nm,0.3s						
RETA				*i* Sn	Sn	18 35 24.9	-3.3
	3.8nm,0.6s						
GEC2	GERESS Array S	12.22	338	Pn	Pn	18 33 10.9	-2.7
GERES	GERESS Array B	12.22	338	P	Pn	18 33 14.6	+1.0
	baz=155,slow=13,SNR=6.9						
GERES				S	Sn	18 35 27.2	-2.4
	0.6nm,0.4s,baz=152,slow=22,SNR=4.0 0.4nm,0.3s						
DAVA	Damuels	12.41	324		Sn	18 35 31.2	-3.1
DAVA	Damuels	12.41	324	*i* Sn	Sn	18 35 31.2	-3.1
	4.7nm,0.4s						
KHC	Kasperske Hory	12.52	338		Pn	18 33 15.8	-1.8
KHC	Kasperske Hory	12.52	338	*e*PN	Pn	18 33 17.7	+0.1
MMAI	Mount Meron Ar	12.98	107	P	Pn	18 33 23.9	0.0
	0.9nm,0.3s,baz=290,slow=12,SNR=4.4						
MMAI				S	Sn	18 35 39.8	-8.3
	3.6nm,0.7s,baz=322,slow=32,SNR=1.7 0.5nm,0.3s						
SENIN	Lac Senin/Sane	13.12	316	Pn	Pn	18 33 25.6	-0.4
GHAJ	Ghor Haditha	13.91	113	Pn	Pn	18 33 34.5	-2.0
ECH	Echery	14.37	321	Pn	Pn	18 33 40.1	-2.8
EIL	Elat	14.39	119	P	Pn	18 33 42.1	-1.1
	0.9nm,0.3s,baz=331,slow=6.0,SNR=7.5						
AKASG	Malin Array Be	14.41	23	P	Pn	18 33 42.9	-0.5
	1.1nm,0.4s,baz=210,slow=8.7,SNR=6.0						
AKASG				LR	LR	18 39 29.8	
	comp=Z,117nm,21.3s,baz=226,slow=38						
CLL	Collm	14.64	341	*e*PP	P	18 33 56.0	+3.2
MARD	Mardin	16.06	85	P	Pn	18 34 04.7	-0.6
SUW	Suwalki	16.44	5	P	Pn	18 34 08.4	-1.5
PABE	Paberze	17.98	6	P	Pn	18 34 28.1	-1.2
PABE				IAmb	IAmb	18 34 29.7	
	comp=Z,24nm,0.7s						
ESDC	Sonseca Array	19.24	284	P	P	18 34 44.3	+0.5
	comp=Z,0.1nm,0.3s,baz=78,slow=8.9,SNR=6.0 comp=Z,0.5nm,0.8s						
OBN	Obninsk	20.56	27	P	P	18 34 57.4	-0.5
HFS	Hagfors	22.90	351	P	P	18 35 22.8	-0.1
	comp=Z,7.1nm,0.8s,baz=169,slow=11,SNR=23 comp=Z,7.1nm,0.8s						
NC602	NORSAR Array S	23.78	349	P	P	18 35 31.1	-0.6
NC602				IAmb	IAmb	18 36 04.5	
	comp=Z,18nm,1.2s						
EKA	Eskdalemuir Ar	23.86	325	P	P	18 35 33.3	+0.8
	comp=Z,2.7nm,0.7s,baz=125,slow=9.6,SNR=4.4 comp=Z,2.7nm,0.7s						
NAO01	NORSAR Array S	23.98	348	P	P	18 35 33.0	-0.7
FINES	FINESS Array B	24.04	7	P	P	18 35 33.9	-0.3
	comp=Z,2.9nm,0.7s,baz=169,slow=10,SNR=16						
FINES				LR	LR	18 45 12.8	
	comp=Z,123nm,18.8s,baz=215,slow=37 comp=Z,2.9nm,0.7s						
FINES	FINESS Array B	24.04	7	P	P	18 35 33.5	-0.7
FIA1	FINESS Array S	24.04	7	P	P	18 35 33.5	-0.7
NC405	NORSAR Array S	24.11	349	P	P	18 35 34.4	-0.5
NC405				IAmb	IAmb	18 36 12.8	
	comp=Z,11nm,1.0s						
NB2	NORSAR Subarra	24.12	349	P	P	18 35 35.3	+0.3
	comp=Z,26nm,1.7s,baz=162,slow=11						
NOA	NORSAR Array B	24.12	349	P	P	18 35 35.2	+0.3
	comp=Z,0.8nm,0.6s,baz=152,slow=11,SNR=4.2 comp=Z,0.8nm,0.6s						
NC303	NORSAR Array S	24.27	349	P	P	18 35 35.8	-0.5
AB31	Akbulak array	30.50	55	P	P	18 36 31.5	-0.8
AB31				IAmb	IAmb	18 37 14.2	
	comp=Z,4.8nm,1.5s						
ABKAR	Akbulak array	30.50	55	P	P	18 36 32.0	-0.3
ARTI	Arti	31.31	41	P	P	18 36 38.4	-1.0
ARTI				IAmb	IAmb	18 36 39.7	
	comp=Z,12nm,1.5s						
ARCES	ARCESS Array B	32.03	3	P	P	18 36 45.8	+0.3
	comp=Z,1.2nm,0.7s,baz=190,slow=10.0,SNR=9.7 comp=Z,1.2nm,0.7s						
ARCES	ARCESS Array B	32.03	3	P	P	18 36 44.3	-1.3
ARCES				IAmb	IAmb	18 36 56.0	
	comp=Z,13nm,1.5s						

BVAR	**Borovoye Array**	**37.42**	**49**	P	**P**	**18 37 33.1**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=276,slow=6.8,SNR=2.5						
	comp=Z,0.5nm,0.5s						
CHGR	**Chuyangaron**	**37.87**	**73**	P	**P**	**18 37 36.1**	**-0.3**
CHGR				IAmb	IAmb	18 37 58.7	
	comp=Z,9.1nm,1.0s						
KK31	**Karatay Array**	**37.97**	**66**	P	**P**	**18 37 36.3**	**-0.8**
KKAR	**Karatay Array**	**37.97**	**66**	P	**P**	**18 37 36.2**	**-1.0**
SPITS	**Spitsbergen Ar**	**40.65**	**359**	P	**P**	**18 37 57.0**	**-2.1**
	comp=Z,8.7nm,1.0s,baz=186,slow=12,SNR=6.1						
	comp=Z,8.7nm,1.0s						
KURBB	**Kurchatov Arra**	**42.51**	**53**	P	**P**	**18 38 13.2**	**-1.4**
	comp=Z,0.8nm,0.3s,baz=278,slow=8.9,SNR=2.5						
	comp=Z,0.8nm,0.3s						
TARG	**Taragay, Kyrgy**	**43.54**	**66**	P	**P**	**18 38 23.1**	**-0.5**
TARG				IAmb	IAmb	18 38 48.9	
	comp=Z,18nm,1.5s						
MAKZ	**Makanchi**	**45.33**	**58**	P	**P**	**18 38 36.8**	**-0.5**
MK31	**Makanchi Array**	**45.54**	**58**	P	**P**	**18 38 37.5**	**-1.5**
MKAR	**Makanchi Array**	**45.54**	**58**	P	**P**	**18 38 38.7**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=276,slow=7.6,SNR=12						
	comp=Z,0.6nm,0.6s						
MKAR	**Makanchi Array**	**45.54**	**58**	P	**P**	**18 38 37.7**	**-1.3**
ZAA0	**Zalesovo Array**	**46.01**	**48**	P	**P**	**18 38 41.6**	**-0.9**
ZAA0				IAmb	IAmb	18 38 56.3	
	comp=Z,3.9nm,1.1s						
ZALV	**Zalesovo Beam**	**46.01**	**48**	P	**P**	**18 38 42.0**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=272,slow=9.0,SNR=8.6						
	comp=Z,1.2nm,0.5s						
ZALV	**Zalesovo Beam**	**46.01**	**48**	P	**P**	**18 38 40.8**	**-1.7**
FRB	**Frobisher Bay**	**56.59**	**328**	LR	LR	19 04 34.3	
	comp=Z,30nm,18.1s,baz=78,slow=36						
SHEL	**Horse Pasture**	**58.81**	**210**	P	P	18 40 13.6	-4.3
SONM	**Songino Array**	**60.75**	**50**	P	**P**	**18 40 31.6**	**+0.4**
	comp=Z,1.0nm,1.2s,baz=294,slow=7.2,SNR=3.6						
	comp=Z,1.0nm,1.2s						
CMAR	**Chiang Mai Arr**	**69.93**	**82**	P	**P**	**18 41 30.9**	**0.0**
	comp=Z,0.4nm,0.6s,baz=306,slow=8.1,SNR=6.0						
	comp=Z,0.4nm,0.6s						
YKA	**Yellowknife Ar**	**73.87**	**340**	P	**P**	**18 41 54.7**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=38,slow=5.2,SNR=3.0						
	comp=Z,0.2nm,0.5s						
G31M	**Satah River**	**73.96**	**350**	P	**P**	**18 41 53.0**	**-1.3**
G30M	**tAoh Zraii Nji**	**74.17**	**351**	P	**P**	**18 41 53.5**	**-2.1**
G30M				IAmb	IAmb	18 42 29.6	
	comp=Z,3.2nm,1.2s						
G29M	**Pine Creek**	**74.46**	**351**	P	**P**	**18 41 54.6**	**-2.6**
H29M	**Whitestone**	**75.16**	**351**	P	**P**	**18 42 00.5**	**-0.8**
H29M				IAmb	IAmb	18 42 13.8	
	comp=Z,2.7nm,1.0s						
I30M	**Mount Dempster**	**75.86**	**350**	P	**P**	**18 42 05.0**	**-0.5**
I30M				IAmb	IAmb	18 42 43.3	
	comp=Z,2.9nm,1.1s						
MJAR	**Matsushiro Arr**	**86.32**	**46**	LR	LR	19 26 44.5	
	comp=Z,34nm,20.5s,baz=41,slow=39						

DJA 14 18:37:13.9±0.7**,3°S**±2°×**12°2E**±°**,h11**^{km}±6^{km}**,M3.8**/19**,**
mB5.2/1**,mb4.1**/6**,MLv3.7**/19**,Mw(mB)4.6**/1**,Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**1.60**	**360**	P	Pn	18 37 41.5	-0.6
KKSI	**Kolaka, Sulawe**	**1.64**	**180**	P	Pb	18 37 43.7	-0.5
KDI	**Kendari**	**1.73**	**146**	P	Pn	18 37 44.3	+0.4
LUWI	**Luwuk**	**1.85**	**37**	P	Pn	18 37 44.8	-0.8
LUWI				S	Sb	18 38 10.7	-0.2
TTSI	**Tana Toraja**	**1.90**	**254**	P	Pn	18 37 45.3	-1.0
SPSI	**Sidrap Palu**	**2.36**	**233**	P	Pn	18 37 52.2	-0.5
SPSI				S	Sn	18 38 23.0	+1.3
PCI	**Palu**	**2.42**	**311**	P	Pn	18 37 55.3	+1.8
BNSI	**Bone**	**2.42**	**219**	P	Pn	18 37 53.5	0.0
BNSI				S	Sn	18 38 24.0	+0.9
MMSI	**Mamuju**	**2.74**	**266**	P	Pn	18 37 58.0	+0.1
PMSI	**Majene**	**2.90**	**250**	P	Pn	18 38 02.1	+2.0
MRSI	**Marisa**	**2.99**	**6**	P	Pn	18 38 00.7	-0.6
KAPI	**Kappang**	**3.12**	**217**	P	Pn	18 38 03.1	0.0
BKSI	**Bulukumba**	**3.17**	**209**	P	Pn	18 38 03.0	-0.8
BKSI				S	Sn	18 38 41.8	+0.1
MPSI	**Mapaga**	**3.33**	**328**	P	Pn	18 38 04.4	-1.6
GTOI	**Gorontalo**	**3.42**	**23**	P	Pn	18 38 07.4	+0.2
GTOI				S	Sn	18 38 49.4	+1.7
MKS	**Makassar**	**3.45**	**219**	P	Pn	18 38 07.9	+0.3
SANI	**Sanana**	**4.36**	**84**	P	Pn	18 38 16.9	-3.2
BKB	**Balikpapan**	**4.91**	**285**	P	Pn	18 38 27.4	-0.3
EDFI	**Ende, Flores**	**6.19**	**180**	P	Pn	18 38 45.0	-0.4

IDC ***14*** *18:38:16.8±1.6,2°.63S×138°.15E,h0^{km},mb3.3/2,*
mbtmp3.4/4,ML3.5/2,Error ellipse: s-maj=30.9km
s-min=26.9km az=162.0

DJA ***14*** *18:38:19.9±0.3,3°S±3°×13°8E±°,h10^{km},M3.6/7,mb3.8/2,*
MLv3.4/7

ISC 14 18:38:21.5±1.0**,2°.71S**±0°.08×**138°.35E**±0°.05**,h32**^{km}**,n10,**
σ**1^{s}49**/13**,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.80**	**27**	P	**Pn**	**18 38 33.4**	**-3.1**
SMPI				S	**Sb**	**18 38 49.5**	**+2.1**
GENI	**Genyem**	**1.82**	**86**	P	**Pn**	**18 38 51.8**	**+1.2**
SRPI	**Serui, Papua**	**2.27**	**291**	P	**Pn**	**18 38 56.6**	**-0.2**
SRPI				S	**Sn**	**18 39 24.9**	**+1.2**
JAY	**Jayapura**	**2.36**	**85**	Pn	**Pn**	**18 38 58.3**	**+0.2**
	5.9nm,0.3s,baz=266,slow=19,SNR=21						
JAY				Sn	**Sb**	**18 39 31.4**	**-0.8**
	1.5nm,0.3s,baz=103,slow=13,SNR=2.1						
	17nm,0.5s						
JAY	**Jayapura**	**2.36**	**85**	P	**Pn**	**18 38 58.6**	**+0.6**
BAKI	**Biak**	**2.70**	**304**	P	**Pn**	**18 39 04.0**	**+1.3**
FAKI	**Fak Fak**	**6.10**	**268**	P	**Pn**	**18 39 48.1**	**-1.4**
	14nm,1.1s						
WRA	**Warramunga Arr**	**17.57**	**193**	P	**Pn**	**18 42 23.2**	**-0.9**
	0.2nm,0.3s,baz=9.6,slow=12,SNR=7.9						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**21.28**	**191**	P	**P**	**18 43 05.3**	**-0.1**
	0.4nm,0.5s,baz=17,slow=12,SNR=11						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**69.57**	**323**	P	**P**	**18 49 27.5**	**0.0**
	0.4nm,0.8s,baz=102,slow=5.5,SNR=3.7						
	0.4nm,0.8s						

IDC ***14*** *18:40:55.8±3.5,27°.11N×44°.52W,h0^{km},mb3.7/7,*
mbtmp3.7/7,MS3.3/11,Error ellipse: s-maj=109.5km
s-min=30.1km az=179.0

ISC 14 18:40:58.1±3.2**,27°.1N**±0°.7×**44°.5W**±0°.2**,h16**^{km}**,n21,**
σ**0^{s}49**/7**,mb3.8**/7**,MS3.4**/11**,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**21.82**	**250**	LR	LR	18 52 40.9	
	comp=Z,32nm,21.5s,baz=152,slow=32						
SADO	**Sadowa**	**32.81**	**312**	LR	LR	18 57 52.0	
	comp=Z,63nm,19.7s,baz=55,slow=31						
TKL	**Tuckaleechee C**	**34.40**	**294**	LR	LR	18 59 18.1	
	comp=Z,60nm,18.0s,baz=54,slow=32						
JTS	**Las Juntas de**	**41.53**	**254**	LR	LR	19 04 02.6	
	comp=Z,16nm,21.7s,baz=92,slow=33						
DBIC	**Dimbokro**	**42.79**	**111**	LR	LR	19 03 50.6	
	comp=Z,42nm,22.0s,baz=310,slow=32						
H10N2	**ASCENSION HYDR**	**45.28**	**136**	T	T	19 37 16.3	
	baz=321,slow=75,SNR=25						
H10N3	**ASCENSION HYDR**	**45.29**	**136**	T	T	19 37 16.0	
	baz=321,slow=75,SNR=28						
H10N1	**ASCENSION HYDR**	**45.30**	**136**	T	T	19 37 17.7	
	baz=321,slow=75,SNR=39						
H10S3	**ASCENSION HYDR**	**46.05**	**137**	T	T	19 38 15.0	
	baz=320,slow=74,SNR=30						
H10S2	**ASCENSION HYDR**	**46.07**	**137**	T	T	19 38 15.5	
	baz=260,slow=74,SNR=28						
TXAR	**Lajitas Array**	**51.67**	**287**	P	**P**	**18 50 04.2**	**-0.5**
	0.3nm,0.5s,baz=75,slow=7.1,SNR=1.4						
	0.3nm,0.5s						
ANMO	**Albuquerque**	**52.92**	**295**	LR	LR	19 10 58.6	
	comp=Z,32nm,20.2s,baz=30,slow=34						
PDAR	**Pinedale Array**	**54.30**	**305**	P	**P**	**18 50 24.6**	**+0.5**
	2.3nm,0.9s,baz=76,slow=4.3,SNR=14						
PDAR				LR	LR	19 13 23.4	
	comp=Z,21nm,18.1s,baz=46,slow=36						
	2.3nm,0.9s						
YKA	**Yellowknife Ar**	**57.19**	**329**	P	**P**	**18 50 43.7**	**-0.3**
	0.6nm,0.9s,baz=91,slow=6.5,SNR=6.3						
	0.6nm,0.9s						
ELK	**Elko**	**58.79**	**303**	LR	LR	19 15 32.6	
	comp=Z,40nm,18.2s,baz=144,slow=35						
IDI	**Anoyia**	**58.91**	**63**	LR	LR	19 15 02.0	
	comp=Z,60nm,20.1s,baz=295,slow=35						
NEW	**Newport**	**59.00**	**312**	LR	LR	19 16 57.3	
	comp=Z,47nm,18.1s,baz=73,slow=37						
NVAR	**Mina Array Bea**	**61.58**	**301**	P	**P**	**18 51 15.7**	**+0.6**
	0.3nm,0.4s,baz=77,slow=7.1,SNR=1.8						
NVAR				LR	LR	19 15 42.9	
	comp=Z,40nm,19.6s,baz=264,slow=34						
	0.3nm,0.4s						
BRTR	**Keskin Array B**	**64.61**	**57**	P	**P**	**18 51 35.2**	**+0.1**
	0.6nm,0.6s,baz=274,slow=6.8,SNR=3.9						
	0.6nm,0.6s						
ILAR	**Eielson Array**	**70.91**	**334**	P	**P**	**18 52 14.3**	**+0.1**
	1.3nm,0.8s,baz=79,slow=5.4,SNR=13						
	1.3nm,0.8s						
BVAR	**Borovoye Array**	**82.33**	**34**	P	**P**	**18 53 18.9**	**-0.2**
	0.3nm,0.5s,baz=324,slow=7.1,SNR=2.4						
	0.3nm,0.5s						

IDC ***14*** *18:53:15.1±0.6,38°.82N×79°.16E,h0^{km},mb4.3/22,*
mbtmp4.4/29,ML3.4/5,MS3.7/37,Error ellipse:
s-maj=14.3km s-min=10.0km az=39.0

BJI ***14*** *18:53:17.7,38°.89N×79°.14E,h24^{km},mB4.6/11,mb4.6/48,*
ML4.9/10,Ms4.2/23,Ms7 3.9/22

SOME ***14*** *18:53:18.8,38°.97N×79°.13E,h10^{km},MS3.7*

MOS ***14*** *18:53:19.4±1.0,38°.85N×79°.15E,h34^{km},mb4.9/28,Error*
ellipse: s-maj=6.0km s-min=3.7km az=116.1

NEIC ***14*** *18:53:20.7,38°.90N×79°.16E,h35^{km}*

NNC ***14*** *18:53:20.5±1.9,39°.07N×79°.32E,h0^{km},mb5.0,mpv4.7,*
Error ellipse: s-maj=14.1km s-min=12.1km az=141.0

NEIC ***14*** *18:53:21.2±1.2,38°.93N±0°.06×79°.17E±0°.09,h38^{km}±5^{km},*
mb4.7/110,Mwr4.2/14,Error ellipse: s-maj=10.6km
s-min=8.2km az=130.0,Moment Tensor Solution.
Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.20; M$_{\theta\theta}$1.08;
M$_{\phi\phi}$0.11; M$_{r\theta}$2.07; M$_{\theta\phi}$0.96; M$_{\phi r}$-1.44; Fault plane solution:
M$_0$2.93000×10^{15} NP1:φ$_s$38.77000°,δ27.55000°,
λ-155.21000°. NP2:φ$_s$286.51000°,δ78.82000°,
λ-64.66000°. Principal axes: T 2.3097, Plg29.0000°,
Azm356.0000°; N 0.9838, Plg25.0000°, Azm101.0000°; P
-3.2935, Plg50.0000°, Azm224.0000°;

ISC 14 18:53:17.4±0.3**,38°.95N**±0°.03×**79°.16E**±0°.03**,h10**^{km}**,**
h10^{km}**:pP-P,n632,**σ**1^{s}80**/646**,mb4.7**/110**,MS3.8**/39**,**
34C-23D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WUS	**Wushi**	**2.25**	**1**		**Pn**	**18 53 57.2**	**+2.3**
WUS				Sn	**Sn**	**18 54 22.6**	**-0.2**
KSH	**Kashi**	**2.54**	**284**	Pn	**Pb**	**18 54 05.3**	**+2.2**
KSH				Sn	**Sg**	**18 54 39.4**	**+0.5**
KSH				smax	smax		
	comp=N,4μm,0.7s						
KSH				smax	smax		
	comp=E,3μm,1.0s						
TARG	**Taragay, Kyrgy**	**2.97**	**340**		**Pb**	**18 54 09.0**	**-1.6**
TARG				Sn	**Sn**	**18 54 41.7**	**+0.9**
TARG	**Taragay, Kyrgy**	**2.97**	**340**	P	**Pb**	**18 54 09.0**	**-1.6**
TARG						18 54 41.7	
KDJ	**Kajisay**	**3.52**	**335**	Pn	**Pn**	**18 54 16.2**	**+3.8**
KDJ	**Kajisay**	**3.52**	**335**	P	**Pn**	**18 54 16.2**	**+3.8**
PRZ	**Przheval'sk**	**3.58**	**351**		**Pn**	**18 54 17.5**	**+4.3**
PRZ	**Przheval'sk**	**3.58**	**351**	P	**Pn**	**18 54 17.5**	**+4.3**
ULHL	**Ulahol**	**3.97**	**327**	P	**Pn**	**18 54 22.7**	**+4.1**
	SNR=5.3						
SATY	**Saty**	**4.15**	**352**	Pg	**Pg**	**18 54 35.8**	**-1.1**
	191nm,0.6s						
SATY				Lg	Lg	18 55 32.3	
	1μm,0.9s						
UZB	**Uzynbulak**	**4.20**	**359**	Pg	**Pg**	**18 54 36.5**	**-1.3**
	141nm,0.4s						
UZB				Lg	Lg	18 55 32.7	
	351nm,0.5s						
UZB	**Uzynbulak**	**4.20**	**359**	*e*P	**Pg**	**18 54 36.5**	**-1.3**
	141nm,0.4s						
UZB				*e*S	**Sg**	**18 55 32.7**	**+0.5**
	351nm,0.5s						
SHLS	**Shalkode**	**4.21**	**3**	Pg	**Pg**	**18 54 37.6**	**-0.6**
SHLS				Lg	Lg	18 55 34.9	
	3μm,0.4s						
SHLS	**Shalkode**	**4.21**	**3**	*e*P	**Pg**	**18 54 36.6**	**-1.5**
	227nm,0.2s						
SHLS				*e*S	**Sg**	**18 55 32.2**	**-0.5**
	3μm,0.6s						
BOOM	**Boomskoye usch**	**4.30**	**326**		**Pn**	**18 54 26.5**	**+3.4**
BOOM	**Boomskoye usch**	**4.30**	**326**	P	**Pn**	**18 54 26.5**	**+3.4**
PDGK	**Podgornoye**	**4.39**	**3**	⇓Pn	**Pn**	**18 54 27.3**	**+3.1**
	350nm,0.7s						
PDGK				⇑Sn	**Sn**	**18 55 17.1**	**+1.7**
	951nm,0.7s						
PDGK				⇓Lg	Lg	18 55 33.9	
	2μm,0.8s						
PDGK	**Podgornoye**	**4.39**	**3**	P	**Pn**	**18 54 27.3**	**+3.1**
PDGK				S	**Sn**	**18 55 17.1**	**+1.7**
TNSS	**Tian-Shan**	**4.42**	**338**	*e*P	**Pb**	**18 54 39.5**	**+4.2**
	23nm,0.6s						
TNSS				*e*S	**Sg**	**18 55 37.7**	**-1.5**
	179nm,1.1s						
MDOK	**Medeo**	**4.50**	**340**	Pg	**Pb**	**18 54 41.0**	**+4.3**
	211nm,0.6s						
MDOK				Lg	Lg	18 55 41.4	
IZV	**Izvestkoviy**	**4.52**	**336**	Pg	**Pg**	**18 54 42.0**	**-1.9**
	85nm,0.4s						
IZV				Lg	Lg	18 55 42.4	
IZV	**Izvestkoviy**	**4.52**	**336**	*e*P	**Pg**	**18 54 42.0**	**-1.9**
	85nm,0.4s						
IZV				*e*S	**Sg**	**18 55 42.4**	**0.0**
KPKS	**Kokpek**	**4.53**	**356**	Pg	**Pg**	**18 54 42.9**	**-1.3**
	0.5nm,0.2s						
KPKS				Lg	Lg	18 55 43.9	
	526nm,0.4s						
KPKS	**Kokpek**	**4.53**	**356**	*e*P	**Pb**	**18 54 41.5**	**+4.4**
	55nm,0.4s						
KPKS				*e*S	**Sg**	**18 55 40.9**	**-1.9**
	526nm,0.4s						
KOTS	**Kotyrbulak**	**4.55**	**341**	*e*P	**Pg**	**18 54 42.4**	**-2.2**
	76nm,0.3s						
KOTS				*e*S	**Sg**	**18 55 42.6**	**-1.0**
	1μm,0.7s						
KNDC	**Almaty**	**4.58**	**340**	⇑Pn	**Pn**	**18 54 30.6**	**+3.8**
	80nm,0.7s						
KNDC				⇑Pg	**Pg**	**18 54 43.7**	**-1.4**
	417nm,0.7s						
KNDC				⇑Lg	Lg	18 55 44.7	
	3μm,1.0s						
KNDC	**Almaty**	**4.58**	**340**	P	**Pn**	**18 54 30.6**	**+3.8**
AAA	**Alma-Ata**	**4.58**	**339**	Pg	**Pg**	**18 54 42.8**	**-2.4**
	116nm,0.3s						
AAA				Lg	Lg	18 55 43.7	
	32nm,0.7s						
AAA	**Alma-Ata**	**4.58**	**339**	*e*P	**Pg**	**18 54 42.8**	**-2.4**
	116nm,0.3s						
AAA				*e*S	**Sg**	**18 55 43.8**	**-0.8**
	32nm,0.7s						
MTBS	**Maitube**	**4.66**	**335**	Pg	**Pg**	**18 54 44.0**	**-2.7**
	44nm,0.4s						
MTBS				Lg	Lg	18 55 45.8	
	250nm,0.5s						
MTBS	**Maitube**	**4.66**	**335**	*e*P	**Pg**	**18 54 44.0**	**-2.7**
	44nm,0.4s						
MTBS				*e*S	**Sg**	**18 55 45.8**	**-1.3**
	250nm,0.5s						
ARLS	**Aral**	**4.70**	**310**	P	**Pn**	**18 54 30.9**	**+2.4**
KST	**Kastek**	**4.75**	**330**	Pg	**Pb**	**18 54 44.6**	**+3.7**
	41nm,0.6s						
KST				Lg	Lg	18 55 47.1	
	204nm,0.8s						
KST	**Kastek**	**4.75**	**330**	*e*P	**Pb**	**18 54 44.6**	**+3.7**
	41nm,0.6s						
KST				*e*S	**Sg**	**18 55 47.0**	**-3.0**
	204nm,0.8s						
TKM2	**Tokmak 2**	**4.80**	**327**	P	**Pn**	**18 54 34.0**	**+4.1**
	SNR=34						
UCH	**Uchtor**	**4.82**	**314**	P	**Pn**	**18 54 33.9**	**+3.4**
	SNR=7.3						
KBK	**Karagaybulak**	**4.89**	**321**	P	**Pn**	**18 54 35.2**	**+4.0**
	SNR=5.9						
ALCI	**Alchi Leh**	**4.98**	**199**	*e*P	**Pn**	**18 54 35.4**	**+2.8**
ALCI				*e*S	**Sn**	**18 55 28.3**	**-2.2**
ALCI				IAML		18 55 41.5	
	comp=N,322nm,0.5s						
ALCI				IAML		18 55 42.3	
	comp=E,262nm,0.7s						
AAK	**Ala-Archa**	**5.11**	**318**	Pn	**Pn**	**18 54 37.4**	**+3.2**
	comp=E,0.8nm,0.3s,baz=127,slow=6.5,SNR=18						
AAK				Lg	Lg	18 56 03.1	
	comp=E,13nm,0.3s,baz=337,slow=17,SNR=9.9						
AAK				LR	LR	18 56 55.3	
	comp=E,437nm,21.5s,baz=146,slow=42						
	comp=E,3.6nm,0.4s						
AAK	**Ala-Archa**	**5.11**	**318**		**Pn**	**18 54 36.6**	**+2.4**
AAK	**Ala-Archa**	**5.11**	**318**	⇓Pg	**Pg**	**18 54 53.1**	**-2.2**
	comp=E,25nm,0.5s						
AAK				⇑Lg	Lg	18 56 01.2	
	comp=E,177nm,0.7s						
AAK	**Ala-Archa**	**5.11**	**318**	⇓*e*P	**Pn**	**18 54 37.6**	**+3.4**
AAK				pmax	pmax		
	comp=Z,11nm,1.3s						
OHH	**Osh**	**5.16**	**290**	*e*P	**Pn**	**18 54 36.3**	**+1.5**
FRU1	**Bishkek**	**5.16**	**320**		**Pn**	**18 54 36.4**	**+1.6**
FRU1	**Bishkek**	**5.16**	**320**	P	**Pn**	**18 54 36.4**	**+1.6**
CHKK	**Chushkaly**	**5.17**	**342**	*e*P	**Pg**	**18 54 53.5**	**-2.9**
	comp=Z,32nm,0.4s						
CHKK				*e*S	**Sg**	**18 56 01.4**	**-1.9**
	comp=Z,495nm,0.7s						
CHMS	**Chumysh**	**5.25**	**322**	P	**Pn**	**18 54 39.6**	**+3.7**
	SNR=14						
ARSB	**Arslanbob**	**5.29**	**299**		**Pn**	**18 54 38.6**	**+1.9**
ARSB	**Arslanbob**	**5.29**	**299**	P	**Pn**	**18 54 38.6**	**+1.9**
KUU	**Kurty**	**5.38**	**338**	*e*P	**Pg**	**18 54 58.6**	**-1.8**
	comp=Z,9.2nm,0.1s						
KUU				*e*S	**Sg**	**18 56 10.4**	**+0.4**
	comp=Z,194nm,0.6s						
KNOS	**Konyrlen**	**5.41**	**0**	Pg	**Pg**	**18 54 57.8**	**-3.2**
	comp=Z,39nm,0.2s						
KNOS				Lg	Lg	18 56 09.4	
	comp=Z,176nm,0.5s						
KRBS	**Karabastau**	**5.42**	**332**	Pg	**Pb**	**18 54 57.0**	**+4.8**
	comp=Z,31nm,0.5s						
KRBS				Lg	Lg	18 56 08.8	
	comp=Z,115nm,0.4s						
EKS2	**Erkin-Say**	**5.52**	**314**	P	**Pn**	**18 54 44.0**	**+4.3**
	SNR=7.9						
USP	**Ospenovka**	**5.57**	**322**	P	**Pb**	**18 54 58.5**	**+3.8**
	SNR=8.0						
SGDS	**Sogindy**	**5.65**	**324**	Pg	**Pg**	**18 55 02.4**	**-3.2**
	comp=Z,12nm,0.4s						
SGDS				Lg	Lg	18 56 17.5	
	comp=Z,85nm,0.8s						
DRK	**Karamyk**	**5.74**	**278**		**Pn**	**18 54 44.2**	**+1.3**
DRK	**Karamyk**	**5.74**	**278**	P	**Pn**	**18 54 44.2**	**+1.3**
MRKS	**Merke**	**5.88**	**312**	Pg	Pb	18 55 05.8	+5.6
	comp=Z,25nm,0.5s						
MRKS				Lg	Lg	18 56 23.4	
	comp=Z,59nm,0.6s						
MRKS	**Merke**	**5.88**	**312**	*e*P	**Pg**	**18 55 07.4**	**-2.7**
	comp=Z,25nm,0.5s						
MRKS				*e*S	**Sg**	**18 56 25.2**	**-1.0**
	comp=Z,78nm,0.6s						
SRNI	**Srinagar**	**6.01**	**217**	*e*P	**Pn**	**18 54 48.8**	**+2.2**
SRNI				IAML		18 56 09.1	
	comp=N,799nm,0.4s						
SRNI				IAML		18 56 09.3	
	comp=E,990nm,0.5s						
MANEM	**Manem**	**6.05**	**259**		**Pn**	**18 54 50.5**	**+3.4**
ARK	**Arkit**	**6.19**	**300**	P	**Pn**	**18 54 50.0**	**+1.1**
ARK				pmax	pmax		
	comp=Z,26nm,0.4s						
KAPS	**Kapalarasan**	**6.34**	**1**	Pg	**Pg**	**18 55 16.4**	**-2.4**
	comp=Z,34nm,0.5s						
KAPS				Lg	Lg	18 56 41.4	
	comp=Z,146nm,0.5s						
TRKS	**Terek-Say**	**6.65**	**295**	P	**Pn**	**18 54 55.4**	**0.0**
TRKS				pmax	pmax		
	comp=Z,25nm,0.7s						
GAR	**Garm**	**6.89**	**273**		**Pn**	**18 54 59.8**	**+1.2**
JMU	**Jammu**	**7.08**	**211**	*e*P	**Pn**	**18 55 03.9**	**+2.8**
JMU				*e*S	**Sn**	**18 56 17.6**	**-4.1**
JMU				IAML		18 56 25.2	
	comp=N,693nm,0.3s						
JMU				IAML		18 56 28.1	
	comp=E,437nm,0.5s						
NIL	**Nilore**	**7.12**	**224**		**Pn**	**18 55 04.3**	**+2.7**
NIL	**Nilore**	**7.12**	**224**	P	**Pn**	**18 55 04.3**	**+2.7**
BTLS	**Baital**	**7.18**	**330**	*e*P	**Pg**	**18 55 32.2**	**-2.6**
	comp=E,14nm,0.5s						
BTLS				*e*S	**Sg**	**18 57 08.0**	**+0.2**
	comp=E,54nm,0.6s						
TLWR	**Talawar**	**7.45**	**201**	*e*P	**Pn**	**18 55 09.0**	**+2.9**
TLWR				*e*S	**Sn**	**18 56 26.1**	**-4.6**
TLWR				IAML		18 56 35.2	
	comp=N,316nm,0.5s						
TLWR				IAML		18 56 41.2	
	comp=E,144nm,0.7s						
KK31	**Karatay Array**	**7.74**	**305**		**Pn**	**18 55 12.3**	**+2.1**
KK31	**Karatay Array**	**7.74**	**305**	⇑Pn	**Pn**	**18 55 14.4**	**+4.2**
	comp=E,1.1nm,0.4s,baz=124,slow=12,SNR=26						
KK31				⇑Pg	**Pg**	**18 55 45.6**	**0.0**
	comp=E,25nm,0.8s,baz=125,slow=12,SNR=2.6						
KK31				⇑Lg	Lg	18 57 30.0	
	comp=E,22nm,0.6s						
KK31	**Karatay Array**	**7.74**	**305**	P	**Pn**	**18 55 12.3**	**+2.1**
KKAR	**Karatay Array**	**7.74**	**305**		**Pn**	**18 55 12.0**	**+1.8**
KKAR	**Karatay Array**	**7.74**	**305**	P	**Pn**	**18 55 12.0**	**+1.8**
CHGR	**Chuyangaron**	**7.81**	**271**		**Pn**	**18 55 11.7**	**+0.4**
CHGR	**Chuyangaron**	**7.81**	**271**	P	**Pn**	**18 55 11.7**	**+0.4**
BHK	**Bhakra**	**7.87**	**198**	*e*P	**Pn**	**18 55 13.0**	**+1.1**
BHK				*e*S	Sn	18 56 33.6	-7.5
BHK				IAML		18 56 41.8	
	comp=E,644nm,0.7s						
BHK				IAML		18 56 42.1	
	comp=N,888nm,0.7s						
SMLA	**Simla**	**7.97**	**192**	*e*P	**Pn**	**18 55 16.0**	**+2.7**
SMLA				*e*S	**Sn**	**18 56 38.2**	**-5.3**
SMLA				IAML		18 56 43.0	
	comp=N,1μm,0.6s						
SMLA				IAML		18 56 43.4	
	comp=E,894nm,0.5s						
WMQ	**Urumqi**	**8.06**	**50**	P	**Pn**	**18 55 16.8**	**+2.3**
WMQ				S	**Sn**	**18 56 44.9**	**-0.8**
WMQ				smax	smax		
	comp=E,320nm,1.9s						
WMQ				smax	smax		
	comp=E,260nm,1.7s						
MAKZ	**Makanchi**	**8.13**	**14**		**Pn**	**18 55 17.8**	**+2.4**
MAKZ	**Makanchi**	**8.13**	**14**	⇑Pn	**Pn**	**18 55 17.4**	**+2.0**
	comp=E,112nm,0.5s						
MAKZ				⇑Sn	**Sn**	**18 56 44.7**	**-2.6**
	comp=E,130nm,0.6s						
MAKZ	**Makanchi**	**8.13**	**14**	P	**Pn**	**18 55 17.8**	**+2.4**
MK31	**Makanchi Array**	**8.17**	**15**	⇑Pn	**Pn**	**18 55 18.4**	**+2.3**
	comp=E,6.7nm,0.2s,baz=204,slow=13,SNR=1071						
MK31				⇓Sn	**Sn**	**18 56 46.0**	**-2.5**
	comp=E,379nm,0.9s,baz=198,slow=23,SNR=23						
MK31	**Makanchi Array**	**8.17**	**15**	*ce*P	**Pn**	**18 55 18.4**	**+2.3**
MKAR	**Makanchi Array**	**8.17**	**15**	Pn	**Pn**	**18 55 18.6**	**+2.5**
	comp=E,29nm,0.4s,baz=204,slow=14,SNR=1742						
MKAR				Sn	**Sn**	**18 56 46.8**	**-1.8**
	comp=E,49nm,0.3s,baz=192,slow=17,SNR=18						
MKAR				Lg	Lg	18 57 38.1	
	baz=195,slow=30						
MKAR				LR	LR	18 58 49.4	
	comp=E,521nm,19.5s,baz=183,slow=40						
MKAR	**Makanchi Array**	**8.17**	**15**		**Pn**	**18 55 18.7**	**+2.6**
MKAR	**Makanchi Array**	**8.17**	**15**	P	**Pn**	**18 55 18.7**	**+2.6**
DDI	**Dehra Dun**	**8.65**	**186**	*e*P	**Pn**	**18 55 25.0**	**+2.3**
DDI				*e*S	**Sn**	**18 56 54.2**	**-6.1**
DDI				IAML		18 57 04.4	
	comp=N,573nm,0.3s						
DDI				IAML		18 57 04.4	
	comp=E,585nm,0.5s						
SHAA	**Shahritus**	**8.79**	**264**		**Pn**	**18 55 23.7**	**-0.9**
KBL	**Kabul**	**9.23**	**245**		**Pn**	**18 55 31.3**	**+0.6**
KBL	**Kabul**	**9.23**	**245**	P	**Pn**	**18 55 31.3**	**+0.6**
LGTI	**Lohaghat**	**9.55**	**175**	*e*P	**Pn**	**18 55 37.5**	**+2.3**
LGTI				*e*S	Sn	18 57 15.7	-7.1
LGTI				IAML		18 57 19.2	
	comp=E,65nm,0.5s						
LGTI				IAML		18 57 19.2	
	comp=N,126nm,0.0s						
KURBB	**Kurchatov Arra**	**11.69**	**358**	Pn	**Pn**	**18 56 04.8**	**+0.7**
	comp=N,0.4nm,0.3s,baz=188,slow=12,SNR=15						
KURBB				Sn	**Sn**	**18 58 09.2**	**-5.3**
	comp=N,0.2nm,0.3s,baz=177,slow=26,SNR=4.7						
KURBB				Lg	Lg	18 59 27.8	
	comp=N,0.6nm,0.3s,baz=165,slow=28,SNR=7.9						
KURBB				LR	LR	19 00 47.1	
	comp=N,312nm,18.9s,baz=164,slow=38						
	comp=N,3.4nm,0.2s						
KURBB	**Kurchatov Arra**	**11.69**	**358**	⇓Pn	**Pn**	**18 56 04.4**	**+0.3**

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             comp=N,14nm,0.8s
KURBB                                ⇓Lg       Lg        18 59 27.1
             comp=N,84nm,0.7s
KURBB Kurchatov Arra    11.69 358     P        Pn        18 56 04.4 +0.3
KURK  Kurchatov         11.78 358              Pn        18 56 04.3  -1.1
KURK  Kurchatov         11.78 358 ⇑Pn          Pn        18 56 05.3  -0.1
             comp=N,5.8nm,0.8s
KURK                                 ⇑Lg       Lg        18 59 27.1
             comp=N,68nm,1.3s
KURK  Kurchatov         11.78 358ceP           Pn        18 56 05.9 +0.6
KURK                                  pmax     pmax
             comp=Z,12nm,1.0s
DGZ   Jazzator, Alta    12.27  26c iP          Pn        18 56 13.4 +1.2
DGZ                                   pmax     pmax
             comp=Z,46nm,0.9s
EVN   Everest           12.68 148              Pn        18 56 18.1  -0.3
GOMU  GeErMu            12.72  98     P        Pn        18 56 19.1 +0.4
GOMU                                  S        Sn        18 58 35.8  -4.8
LSA   Lhasa             13.53 129              Pn        18 56 29.2  -0.6
LSA   Lhasa             13.53 129     P        Pn        18 56 29.2  -0.6
HRA   Herat             14.31 257              Pn        18 56 38.4  -1.9
BVAR  Borovoye Array    15.32 340     Pn       Pn        18 56 52.8  -0.9
             comp=Z,0.1nm,0.3s,baz=151,slow=13,SNR=56
BVAR                                  Lg       Lg        19 01 26.1
             comp=Z,0.1nm,0.3s,baz=149,slow=29,SNR=3.5
BVAR                                  LR       LR        19 03 01.4
             comp=Z,324nm,19.2s,baz=147,slow=38
             comp=Z,9.4nm,0.7s
BORK  Borovoye          15.36 340              Pn        18 56 52.7  -1.4
BORK  Borovoye          15.36 340   i P        Pn        18 56 52.9  -1.3
ZAA0  Zalesovo Array    15.50  13              Pn        18 56 53.1  -2.8
ZALV  Zalesovo Beam     15.50  13     Pn       Pn        18 56 54.6  -1.3
             comp=Z,1.0nm,0.3s,baz=194,slow=12,SNR=31
ZALV                                  Sn       Sn        18 59 39.9  -7.7
             comp=Z,1.4nm,0.3s,baz=196,slow=22,SNR=13
ZALV                                  Lg       Lg        19 01 29.9
             baz=176,slow=26
ZALV                                  LR       LR        19 03 22.0
             comp=Z,282nm,20.2s,baz=203,slow=39
             comp=Z,5.0nm,0.5s
ZALV  Zalesovo Beam     15.50  13              Pn        18 56 53.4  -2.5
ZALV  Zalesovo Beam     15.50  13   i P        Pn        18 56 54.2  -1.7
ZALV                                  pmax     pmax
             comp=Z,5.0nm,0.5s
BHPL  Bhopal            15.72 186   eP         Pn        18 57 00.8 +1.8
BHPL                                eS         Sn        18 59 39.9   -14
BHPL                                  IAML               18 59 44.5
             comp=N,33nm,0.6s
BHPL                                  IAML               18 59 48.6
             comp=E,49nm,0.6s
GTA   Gaotai            16.03  82     P        Pn        18 57 01.3  -1.7
GTA                                   pmax     pmax
             comp=E,14nm,1.1s
GTA                                   LR       LR
             comp=E,190nm,11.3s
GTA                                   LR       LR
             comp=E,410nm,10.5s
GTA                                   LR       LR
             comp=E,350nm,14.5s
SHL   Shillong          17.12 137              Pn        18 57 14.8  -2.1
SHL   Shillong          17.12 137   eP         P         18 57 20.6 +1.9
SHL   Shillong          17.12 137     P        Pn        18 57 14.8  -2.1
SHL                                   pmax     pmax
             comp=Z,13nm,0.8s
AB31  Akbulak array     17.18 313              Pn        18 57 15.8  -1.5
ABKAR Akbulak array     17.18 313              Pn        18 57 15.8  -1.5
KNGR  Kungurtug, Tuv    17.43  42⇑eP           Pn        18 57 21.4 +0.7
KNGR                                  pmax     pmax
             comp=Z,13nm,0.7s
AKTO  Aktyubinsk        18.84 314     P        P         18 57 37.8 +0.4
             comp=Z,0.2nm,0.3s,baz=105,slow=9.2,SNR=11
AKTO                                  LR       LR        19 05 27.0
             comp=Z,198nm,21.5s,baz=31,slow=39
             comp=Z,3.0nm,0.7s
LZDM  Lanzhou Array     19.70  91     P        P         18 57 46.5  -0.7
             comp=Z,22nm,0.6s,baz=282,slow=7.4,SNR=15
LZH   Lanzhou           19.77  91   eP         P         18 57 49.3 +1.4
LZH                                   pP       sP        18 57 59.9 +7.4
LZH                                   sP       pP        18 58 05.1   +14
LZH                                   pmax     pmax
             comp=Z,50nm,1.7s
LZH                                   LR       LR
             comp=Z,350nm,14.9s
LZH                                   LR       LR
             comp=Z,310nm,14.0s
LZH                                   LR       LR
             comp=Z,330nm,15.9s
MOY   Mondy             19.85  43   eP         Pn        18 57 50.6 +0.6
MOY                                   pmax     pmax
             comp=Z,22nm,2.2s
ZAK   Zakamensk         20.52  48   eP         P         18 57 55.7  -0.1
ZAK                                   pmax     pmax
             comp=Z,21nm,1.4s
TLY   Talaya            21.30  45     P        P         18 58 03.9  -0.1
TNCH  TengChong         21.44 125  ⇓P          P         18 58 07.6 +1.6
TNCH                                  pP       sP        18 58 13.1 +2.5
TNCH                                  sP       pP        18 58 17.1 +7.9
TNCH                                  PP       PnPn      18 58 34.0 +8.0
TNCH                                  S        S         19 01 55.4  -8.6
TNCH                                  SS       SnSn      19 02 35.4 +8.5
TNCH                                  pmax     pmax
             comp=Z,22nm,0.9s
TNCH                                  pmax     pmax
             comp=Z,120nm,4.7s
TNCH                                  LR       LR
             comp=Z,160nm,4.0s
TNCH                                  LR       LR
             comp=Z,140nm,5.7s
TNCH                                  LR       LR
             comp=Z,130nm,5.2s
SONM  Songino Array     21.61  57     P        P         18 58 08.7 +1.1
             comp=Z,18nm,0.7s,baz=254,slow=11,SNR=140
             comp=Z,18nm,0.7s
SONM  Songino Array     21.61  57              P         18 58 07.8 +0.2
SONM                                  IAmb     IAmb      18 58 10.1
             comp=Z,22nm,0.8s
SVE   Sverdlovsk        21.65 332   eP         P         18 58 08.9 +1.1
SVE                                   pmax     pmax
             comp=Z,25nm,1.0s
CD2   Chengdu           21.66 104     P        P         18 58 09.5 +1.3
CD2                                   pmax     pmax
             comp=Z,30nm,0.8s
IRK   Irkutsk           21.90  44   eP         P         18 58 11.7 +1.2
IRK                                   pmax     pmax
             comp=Z,57nm,1.6s
ULN   Ulaanbaatar       22.04  57              P         18 58 11.7  -0.5
ULN   Ulaanbaatar       22.04  57c iP          P         18 58 13.2 +0.9
ULN                                   pmax     pmax
             comp=Z,15nm,1.3s
ARTI  Arti              22.21 329     P        P         18 58 15.7 +1.8
             comp=Z,5.9nm,0.5s,baz=133,slow=8.0,SNR=17
ARTI                                  LR       LR        19 07 31.5
             comp=Z,145nm,19.8s,baz=128,slow=38
             comp=Z,5.9nm,0.5s
ARTI  Arti              22.21 329              P         18 58 12.6  -1.3
ARTI                                  IAmb     IAmb      18 58 32.7
             comp=Z,25nm,1.2s
ARTI  Arti              22.21 329c iP          P         18 58 15.2 +1.4
ARTI                                                     18 58 35.6
ARTI                                  S        S         19 02 19.8 +1.6
ARTI                                  SS       Sn        19 02 49.8   +20
ARTI                                  pmax     pmax
             comp=Z,17nm,1.0s
PZH   PanZhiHua         22.62 117     P        P         18 58 21.3 +2.7
PZH                                   pmax     pmax
             comp=Z,10.0nm,1.4s
BTO   Baotou            23.72  76   eP         P         18 58 29.4  -0.3
BTO                                   pP       sP        18 58 41.0 +6.6
BTO                                   PP       PnPn      18 59 03.6 +6.6
BTO                                   pmax     pmax
             comp=Z,30nm,0.9s
BTO                                   pmax     pmax
             comp=Z,260nm,6.3s
BTO                                   LR       LR
             comp=Z,420nm,13.5s
BTO                                   LR       LR
             comp=Z,960nm,19.2s
BTO                                   LR       LR
             comp=Z,1µm,17.5s
UOSS  Minazif           23.88 241     P        P         18 58 30.7  -0.5
MAK   Makhachkala       24.16 290   eP         P         18 58 30.6  -3.0
MAK                                 e*PP       sP        18 58 43.3 +4.9
MAK                                 e*SP       pP        18 58 49.8   +13
MAK                                 eS         S         19 02 45.3  -6.2
MAK                                 e*SS       sS        19 03 08.4   +11
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MAK                                 eSS        SnSn      19 03 32.1  -0.7
MAK                                   MLR      MLR
             comp=Z,252nm,14.0s
KMI   Kunming           24.19 118     P        P         18 58 35.5 +1.1
KMI                                   pP       sP        18 58 44.6 +5.4
KMI                                   pmax     pmax
             comp=Z,12nm,0.7s
XAN   Xi'an             24.37  92     P        P         18 58 36.0 +0.3
XAN                                   pmax     pmax
             comp=Z,23nm,0.9s
XAN                                   LR       LR
             comp=Z,280nm,14.4s
XAN                                   LR       LR
             comp=Z,390nm,15.1s
XAN                                   LR       LR
             comp=Z,350nm,15.1s
HHC   Hu-ho-hao-te      24.86  75   eP         P         18 58 41.8 +1.6
HHC                                   pmax     pmax
             comp=Z,9.0nm,0.5s
HHC                                   pmax     pmax
             comp=Z,81nm,4.5s
GYA   Guiyang           26.18 110  ⇓P          P         18 58 53.0 +0.8
GYA                                   pmax     pmax
             comp=Z,12nm,0.9s
ENH   Enshi             26.33 100     P        P         18 58 53.0  -0.5
ENH                                   IAmb     IAmb      18 58 58.0
             comp=Z,21nm,1.2s
CHTO  Chiang Mai        26.40 134     P        P         18 58 53.0  -1.2
CHTO  Chiang Mai        26.40 134     P        P         18 58 53.0  -1.2
CHTO                                  pmax     pmax
             comp=Z,11nm,0.9s
CM31  Chiang Mai Arr    26.68 134     P        P         18 58 55.3  -1.4
CMAR  Chiang Mai Arr    26.68 134     P        P         18 58 55.9  -0.8
             comp=Z,1.0nm,0.5s,baz=314,slow=11,SNR=15
CMAR                                  LR       LR        19 11 08.0
             comp=Z,29nm,18.4s,baz=305,slow=40
             comp=Z,1.0nm,0.5s
CMAR  Chiang Mai Arr    26.68 134     P        P         18 58 55.4  -1.3
KIRV  Kirov             27.39 326⇑eP           P         18 59 02.3  -0.3
KBZ   Khabaz            27.50 292     LR       LR        19 13 10.5
             comp=Z,108nm,18.1s,baz=46,slow=43
HNS   HongShan          27.89  82  ⇑P          P         18 59 08.6 +1.2
HNS                                   S        S         19 03 50.3  -0.5
HNS                                   pmax     pmax
             comp=Z,12nm,0.8s
HNS                                   LR       LR
             comp=Z,180nm,16.5s
HNS                                   LR       LR
             comp=Z,200nm,17.1s
WHN   Wuhan             29.96  95     P        P         18 59 26.8 +0.9
WHN                                   pmax     pmax
             comp=Z,38nm,0.7s
TIA   Tai'an            30.07  83     P        P         18 59 28.0 +1.2
TIA                                   pmax     pmax
             comp=Z,15nm,0.9s
HILR  Hailar Array B    30.61  56     LR       LR        19 13 40.0
             comp=Z,267nm,20.1s,baz=315,slow=40
NRIK  Noril'sk          30.79   6     P        P         18 59 33.4 +0.6
             comp=Z,4.2nm,0.6s,baz=180,slow=6.7,SNR=12
NRIK                                  LR       LR        19 13 56.2
             comp=Z,42nm,18.3s,baz=220,slow=40
             comp=Z,4.2nm,0.6s
NRIK  Noril'sk          30.79   6              P         18 59 33.0 +0.2
NRIK  Noril'sk          30.79   6d iP          P         18 59 33.5 +0.7
NRIK                                  pmax     pmax
             comp=Z,6.0nm,0.9s
MOS   Moscow            32.17 315   eP         P         18 59 44.3  -0.8
RAYN  Ar Rayn           32.41 252              P         18 59 46.9  -0.7
RAYN  Ar Rayn           32.41 252     P        P         18 59 46.9  -0.7
RAYN                                  pmax     pmax
             comp=Z,3.0nm,0.7s
OBN   Obninsk           32.62 314⇓eP           P         18 59 49.1 +0.1
OBN                                 e                    19 00 54.5
OBN                                 eS         S         19 05 02.1  -2.5
OBN                                   pmax     pmax
             comp=Z,24nm,1.7s
OBN                                   MLR      MLR
             comp=Z,97nm,18.0s
NJ2   Nanjing           32.85  90   eP         P         18 59 50.8  -0.5
NJ2                                   pmax     pmax
             comp=Z,10.0nm,1.4s
KLMR  Klimovskoe        32.88 325   eP         P         18 59 49.7  -1.5
KLMR                                e*PP       sP        19 00 00.5 +4.5
KLMR                                  pmax     pmax
             comp=Z,22nm,1.6s
ASF   Jabal al Asfar    34.80 272     LR       LR        19 16 49.9
             comp=Z,14µm,19.7s,baz=28,slow=41
BR131 Keskin Array S    34.92 286              P         19 00 09.5   0.0
BR131                                 IAmb     IAmb      19 00 19.2
             comp=Z,4.8nm,0.7s
BR131 Keskin Array S    34.92 286ceP           P         19 00 09.7 +0.3
BRTR  Keskin Array B    34.92 286     P        P         19 00 09.9 +0.4
             comp=Z,2.6nm,0.7s,baz=94,slow=7.7,SNR=17
             comp=Z,2.6nm,0.7s
BRTR  Keskin Array B    34.92 286   i P        P         19 00 09.8 +0.3
BRTR                                  pmax     pmax
             comp=Z,3.0nm,0.7s
BR104 Keskin Array S    34.93 286     P        P         19 00 09.2  -0.3
             comp=Z,5.7nm,0.8s
BR104                                 pP       sP        19 00 21.0 +6.7
             comp=Z,5.7nm,0.8s
BR106 Keskin Array S    34.94 286     P        P         19 00 10.0 +0.4
             comp=Z,5.9nm,0.8s
BR105 Keskin Array S    34.94 286     P        P         19 00 10.0 +0.4
             comp=Z,6.7nm,0.9s
HEH   HeiHe             35.58  55   eP         P         19 00 16.0 +1.2
HEH                                   pP       sP        19 00 27.1 +7.5
HEH                                   pmax     pmax
             comp=Z,25nm,0.9s
HEH                                   LR       LR
             comp=Z,100nm,15.0s
HEH                                   LR       LR
             comp=Z,430nm,16.0s
HEH                                   LR       LR
             comp=Z,490nm,14.4s
ZEA   Zeya              35.61  49   eP         P         19 00 16.7 +1.7
MMAI  Mount Meron Ar    35.63 274     P        P         19 00 15.9 +0.4
             comp=Z,1.4nm,0.6s,baz=72,slow=9.4,SNR=1.4
             comp=Z,1.4nm,0.6s
BNX   BinXian           35.85  63  ⇑P          P         19 00 18.0 +0.8
BNX                                   pmax     pmax
             comp=Z,10.0nm,0.7s
AK09  Malin Array Si    36.61 305     P        P         19 00 23.0  -0.6
AK10  Malin Array Si    36.63 305     P        P         19 00 23.0  -0.8
AKASG Malin Array Be    36.65 305     P        P         19 00 23.3  -0.6
             comp=Z,0.8nm,0.5s,baz=81,slow=7.2,SNR=5.5
AKASG                                 LR       LR        19 17 12.2
             comp=Z,156nm,20.1s,baz=59,slow=39
             comp=Z,0.8nm,0.5s
AKASG Malin Array Be    36.65 305   i P        P         19 00 23.2  -0.7
AKASG                                 pmax     pmax
             comp=Z,1.0nm,0.4s
AKBB  Malin Array Si    36.65 305     P        P         19 00 23.1  -0.8
AKBB                                  IAmb     IAmb      19 00 24.1
             comp=Z,9.6nm,1.1s
AKBB  Malin Array Si    36.65 305⇓eP           P         19 00 23.4  -0.5
KIEV  Kiev              36.66 305     P        P         19 00 23.2  -0.8
KIEV                                  IAmb     IAmb      19 00 24.1
             comp=Z,7.9nm,1.1s
KIEV  Kiev              36.66 305     P        P         19 00 23.2  -0.8
KIEV                                  pmax     pmax
             comp=Z,8.0nm,1.1s
AK05  Malin Array Si    36.66 305     P        P         19 00 23.9  -0.1
AK07  Malin Array Si    36.66 305     P        P         19 00 23.3  -0.7
AK06  Malin Array Si    36.66 305     P        P         19 00 23.3  -0.8
AK04  Malin Array Si    36.68 305     P        P         19 00 24.0  -0.2
AK11  Malin Array Si    36.68 305     P        P         19 00 23.2  -1.0
AK12  Malin Array Si    36.69 305     P        P         19 00 23.3  -1.0
AK16  Malin Array Si    36.72 305     P        P         19 00 23.6  -0.9
EIL   Elat              37.36 269     LR       LR        19 18 26.6
             comp=Z,114nm,19.9s,baz=46,slow=40
MNK   Minsk             37.53 312   i P        P         19 00 30.7  -0.7
             comp=E,9.0nm,0.8s
MNK                                 i P        P         19 00 30.7  -0.7
             comp=N,6.0nm,0.7s
MNK                                 i P        P         19 00 30.7  -0.7
             comp=Z,17nm,0.8s,baz=92
MNK                                 i pP       sP        19 00 43.8 +7.6
MNK                                 i sP       pP        19 00 50.0   +15
MNK                                 i PP       PP        19 01 57.2 +0.4
MNK                                 i S        S         19 06 18.6  -1.6
MNK                                 i sS       ScP       19 06 50.2   +14
MNK                                 i SS       SS        19 09 23.7   +19
MNK   Minsk             37.53 312   i P        P         19 00 30.6  -0.7
MNK                                 i *PP      sP        19 00 43.8 +7.6
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MNK                                 i *SP      pP        19 00 49.9   +15
MNK                                 i                    19 01 57.2
MNK                                 i                    19 02 47.4
MNK                                 i S        S         19 06 18.5  -1.6
MNK                                 i                    19 06 40.6
MNK                                 i SS       SS        19 09 23.6   +19
MNK                                   pmax     pmax
             comp=E,9.0nm,0.8s
MNK                                   pmax     pmax
             comp=Z,17nm,0.8s
MNK                                   pmax     pmax
             comp=N,6.0nm,0.7s
LVZ   Lovozero          37.82 334     P        P         19 00 32.7  -1.0
LVZ   Lovozero          37.82 334     P        P         19 00 32.7  -1.0
LVZ                                   pmax     pmax
             comp=Z,47nm,1.3s
TJN   Taejon            37.90  78     P        P         19 00 33.7  -1.0
TJN   Taejon            37.90  78     P        P         19 00 33.7  -1.0
TJN                                   pmax     pmax
             comp=Z,229nm,1.5s
KS19  Wonju Array Si    37.93  76     P        P         19 00 34.1  -0.9
KSAR  Wonju Array Be    37.96  77     P        P         19 00 33.9  -1.4
KSAR  Wonju Array Be    37.96  77     P        P         19 00 33.9  -1.4
KSRS  Korea Array       37.99  76     P        P         19 00 35.5 +0.1
             comp=Z,3.7nm,0.5s,baz=289,slow=9.2,SNR=21
             comp=Z,3.7nm,0.5s
YAK   Yakutsk           38.20  36     LR       LR        19 17 55.7
             comp=Z,137nm,18.5s,baz=280,slow=39
YAK   Yakutsk           38.20  36              P         19 00 36.1  -0.9
YAK   Yakutsk           38.20  36   eP         P         19 00 36.8  -0.1
YAK                                 e                    19 02 57.0
YAK                                 eS         S         19 06 24.7  -5.5
YAK                                 eSS        SnSn      19 09 03.4   -10
YAK                                 eSSS       SSS       19 09 37.3
YAK                                   pmax     pmax
             comp=Z,14nm,0.9s
YAK                                   pmax     pmax
             comp=N,3.0nm,1.3s
YAK                                   pmax     pmax
             comp=E,8.0nm,1.5s
YAK                                   smax     smax
             comp=N,149nm,4.0s
YAK                                   smax     smax
             comp=E,76nm,2.8s
YAK                                   MLR      MLR
             comp=Z,121nm,16.0s
YAK                                   MLR      MLR
             comp=E,24nm,13.0s
YAK                                   MLR      MLR
             comp=N,40nm,14.0s
TPUB  Ta-pu             38.43 102     P        P         19 00 38.8  -0.5
TESR  Tescani           38.69 299  ⇓P          P         19 00 41.6 +0.3
VRI   Vrincioaia        38.73 298  ⇓P          P         19 00 43.2 +1.6
VRI   Vrincioaia        38.73 298  ⇓P          P         19 00 43.2 +1.6
RNPP5 Staryi Chortor    38.74 306     P        P         19 00 41.0  -0.6
PLOR  Plostina          38.79 298  ⇑P          P         19 00 43.5 +1.4
PLOR  Plostina          38.79 298  ⇑P          P         19 00 43.5 +1.4
COVR  Voineasa-Covas    39.10 298  ⇑P          P         19 00 45.8 +1.1
TURR  Turia             39.19 298  ⇓P          P         19 00 46.4 +0.9
FIA1  FINESS Array S    39.27 323     P        P         19 00 45.3  -0.6
FINES FINESS Array B    39.28 323     P        P         19 00 45.8  -0.2
             comp=N,5.4nm,0.9s,baz=104,slow=8.9,SNR=18
FINES                                 LR       LR        19 16 04.6
             comp=N,80nm,21.5s,baz=42,slow=35
             comp=N,5.4nm,0.9s
MLR   Muntele Rosu      39.34 297     LR       LR        19 19 27.2
             comp=N,154nm,18.2s,baz=78,slow=40
MLR   Muntele Rosu      39.34 297              P         19 00 47.8 +0.9
MLR   Muntele Rosu      39.34 297  ⇑P          P         19 00 48.3 +1.5
MLR   Muntele Rosu      39.34 297  ⇑P          P         19 00 48.3 +1.5
PABE  Paberze           39.82 313     P        P         19 00 50.3  -0.2
STNU  Starunia          39.84 303     P        P         19 00 50.5  -0.4
ARR   Arges             40.27 297  ⇑P          P         19 00 54.9 +0.4
SHIU  Shidnytsya        40.53 303     P        P         19 00 56.6   0.0
TIXI  Tiksi             41.10  22     LR       LR        19 18 56.3
             comp=N,135nm,20.4s,baz=202,slow=37
TIXI  Tiksi             41.10  22              P         19 01 00.9   0.0
TIXI                                  IAmb     IAmb      19 01 02.7
             comp=Z,8.0nm,0.7s
TIXI  Tiksi             41.10  22⇑eP           P         19 01 00.6  -0.4
TIXI                                  pmax     pmax
             comp=Z,9.0nm,0.8s
KEV   Kevo              41.11 335     P        P         19 01 00.9  -0.2
KEV                                   IAmb     IAmb      19 01 16.9
             comp=Z,18nm,1.2s
KEV   Kevo              41.11 335     P        P         19 01 00.9  -0.2
KEV                                   pmax     pmax
             comp=Z,18nm,1.2s
DRGR                    41.32 300  ⇓P          P         19 01 03.8 +0.6
DRGR                    41.32 300  ⇓P          P         19 01 03.8 +0.6
ARCES ARCESS Array B    41.53 335     P        P         19 01 04.4  -0.2
             comp=Z,6.3nm,0.7s,baz=98,slow=8.5,SNR=18
ARCES                                 LR       LR        19 20 04.3
             comp=Z,60nm,20.4s,baz=297,slow=39
             comp=Z,6.3nm,0.7s
ARCES ARCESS Array B    41.53 335     P        P         19 01 04.4  -0.2
GZR   Gura Zlata        41.54 298  ⇑P          P         19 01 05.5 +0.5
GZR   Gura Zlata        41.54 298  ⇑P          P         19 01 05.5 +0.5
STHS  Stebnicka Huta    41.87 304   eP         P         19 01 07.4  -0.2
STHS  Stebnicka Huta    41.87 304   eP         P         19 01 07.4  -0.2
BZS   Buzias            42.30 298  ⇓P          P         19 01 11.7 +0.6
BZS   Buzias            42.30 298  ⇓P          P         19 01 11.7 +0.6
JOW   Kunigami          42.51  91     LR       LR        19 20 50.0
             comp=Z,55nm,19.2s,baz=128,slow=39
JOW   Kunigami          42.51  91     P        P         19 01 12.4  -0.7
OJC   Ojcow             42.69 305     P        P         19 01 13.8  -0.4
OJC   Ojcow             42.69 305     P        P         19 01 13.8  -0.4
STEB  Steborice         44.02 305   eP         P         19 01 25.2 +0.2
MORH  Mrgy, Hungar      44.19 300  ⇑P          P         19 01 26.2  -0.2
MORC  Moravsky Berou    44.19 305     P        P         19 01 26.7 +0.2
MORC  Moravsky Berou    44.19 305     P        P         19 01 26.7 +0.2
MORC                                  pmax     pmax
             comp=Z,8.0nm,1.5s
DPC   Dobruska-Polom    44.86 306   eP         P         19 01 31.7  -0.1
DPC   Dobruska-Polom    44.86 306   eP         P         19 01 31.7  -0.1
VRAC  Vranov            44.89 305     LR       LR        19 23 38.5
             comp=Z,122nm,21.3s,baz=60,slow=41
CHVC  Chvalec           44.99 306   eP         P         19 01 33.1 +0.3
CHVC  Chvalec           44.99 306   eP         P         19 01 33.1 +0.3
HFS   Hagfors           45.25 320     P        P         19 01 34.3  -0.3
             comp=Z,6.4nm,0.7s,baz=103,slow=9.4,SNR=18
HFS                                   LR       LR        19 21 18.2
             comp=Z,181nm,19.7s,baz=67,slow=37
             comp=Z,6.4nm,0.7s
DEL   Delary            45.44 315   i P        P         19 01 35.6  -0.5
CONA  Conrad Observa    45.65 303   i P        P         19 01 38.1   0.0
             comp=Z,2.0nm,0.5s
JGF   Kuroka            45.76  75     P        P         19 01 38.5  -0.6
LUNU  Lund              45.77 314   eP         P         19 01 38.4  -0.4
BORU  Boraas            45.91 317   i P        P         19 01 39.3  -0.6
BJUU  Bjuv              45.95 314   i P        P         19 01 40.1  -0.1
MJAR  Matsushiro Arr    46.05  74     P        P         19 01 40.8  -0.6
             comp=Z,2.7nm,0.8s,baz=278,slow=8.7,SNR=5.1
             comp=Z,2.7nm,0.8s
PRU   Pruhonice         46.06 306   eP         P         19 01 41.1  -0.1
PRU   Pruhonice         46.06 306   eP         P         19 01 41.1  -0.1
NC405 NORSAR Array S    46.17 322     P        P         19 01 41.0  -0.9
NORES NORESS Array B    46.28 321     P        P         19 01 44.7 +1.9
ZVC   Zvikov            46.40 305   eP         P         19 01 44.2 +0.3
NB2   NORSAR Subarra    46.42 321     P        P         19 01 43.4  -0.5
             comp=Z,2.4nm,0.7s,baz=86,slow=7.9
NOA   NORSAR Array B    46.42 321     P        P         19 01 43.2  -0.7
             comp=Z,3.2nm,0.7s,baz=87,slow=7.7,SNR=13
NOA                                   LR       LR        19 21 52.3
             comp=Z,78nm,21.8s,baz=275,slow=37
             comp=Z,3.2nm,0.7s
CKRC  Cesky Krumlov     46.46 304   eP         P         19 01 45.0 +0.6
CKRC  Cesky Krumlov     46.46 304   eP         P         19 01 45.0 +0.6
SOKA  Soboth            46.50 301     P        P         19 01 44.6  -0.2
SOKA  Soboth            46.50 301   i P        P         19 01 44.6  -0.2
             comp=Z,3.9nm,0.8s
STRU  Stroemstad        46.60 319   i P        P         19 01 44.8  -0.5
NC204 NORSAR Array S    46.62 322     P        P         19 01 44.6  -0.9
NC204                                 IAmb     IAmb      19 02 24.3
             comp=Z,8.3nm,1.1s
SPITS Spitsbergen Ar    46.68 345     P        P         19 01 46.4 +0.7
SPITS                                 pmax     pmax
             comp=Z,37nm,1.2s
ASAJ  Asahikawa         46.73  62     LR       LR        19 24 00.4
             comp=Z,156nm,18.1s,baz=318,slow=39
ASAJ  Asahikawa         46.73  62     P        P         19 01 45.5  -1.1
ASAJ                                  pmax     pmax
             comp=Z,68nm,1.4s
JKA   Kamikawa-asahi    46.73  62     P        P         19 01 45.5  -1.1
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GEC2  GERESS Array S  46.84 305   P      P        19 01 47.4 -0.1
GERES GERESS Array B  46.84 305   P      P        19 01 47.6 +0.1
      comp=Z,2.5nm,0.6s,baz=66,slow=7.8,SNR=18
      comp=Z,2.5nm,0.6s
KHC   Kasperske Hory  46.86 305   P      P        19 01 46.5 -1.0
KHC   Kasperske Hory  46.86 305  eP      P        19 01 46.3 -1.2
KHC   Kasperske Hory  46.86 305  eP      P        19 01 46.3 -1.2
KONO  Kongsberg       47.34 320   P      P        19 01 50.8 -0.3
KONO  Kongsberg       47.34 320   P      P        19 01 50.8 -0.3
KONO                              pmax   pmax
      comp=Z,18nm,1.2s
TRI   Trieste         47.61 300   P      P        19 01 52.5 -0.9
TRI   Trieste         47.61 300   P      P        19 01 52.5 -0.9
TRI                               pmax   pmax
      comp=Z,14nm,0.6s
KBS   Kingsbay        47.73 346   P      P        19 01 54.0 +0.1
KBS   Kingsbay        47.73 346   P      P        19 01 54.0 +0.1
KBS                               pmax   pmax
      comp=Z,19nm,1.0s
LESA  Schwarzleotal   47.86 303   P      P        19 01 55.5  0.0
LESA  Schwarzleotal   47.86 303 i P      P        19 01 55.4  0.0
      comp=Z,2.8nm,0.5s
CIMO  Cimolais        48.33 302   P      P        19 01 57.0 -1.9
MA2   Magadan         48.39  40   LR     LR       19 23 17.1
      comp=Z,53nm,19.0s,baz=270,slow=37
MA2   Magadan         48.39  40⇓eP      P        19 01 59.9 +0.7
MA2                               pmax   pmax
      comp=Z,23nm,1.3s
SEY   Seymchan        48.73  36  eP      P        19 02 00.8 -1.0
SEY                               pmax   pmax
      comp=Z,11nm,1.3s
SNART Snartemo        48.75 318 i P      P        19 02 02.1 +0.2
FDMO  Fiordimonte     48.88 297   P      P        19 02 03.1 -0.2
FDMO                              IAmb   IAmb     19 02 24.1
      comp=Z,13nm,1.4s
NRCA  Norcia          48.93 297   P      P        19 02 03.4 -0.4
RETA  Reutte          49.10 303   P      P        19 02 04.9  0.0
RETA  Reutte          49.10 303  eP      P        19 02 04.9  0.0
      comp=Z,9.4nm,1.2s
TEOL  Teolo           49.12 301   P      P        19 02 05.2 +0.1
TEOL                              IAmb   IAmb     19 02 17.6
      comp=Z,9.7nm,1.0s
FUORN Ofenpass-Fuorn  49.67 302   P      P        19 02 08.4 -1.2
FUORN                             IAmb   IAmb     19 02 36.2
      comp=Z,11nm,1.3s
DAVA  Damuels         49.73 303   P      P        19 02 10.2 +0.4
DAVA  Damuels         49.73 303 i P      P        19 02 10.2 +0.4
      comp=Z,16nm,1.3s
DAVOX Davos/Dischmat  49.88 303   LR     LR       19 25 33.4
      comp=Z,146nm,18.6s,baz=77,slow=39
PRMA  PARMA           50.22 300   P      P        19 02 13.0 -0.4
TUE   Stuetta         50.32 303   P      P        19 02 13.3 -1.2
SENIN Lac Senin/Sane  51.70 303   P      P        19 02 22.9 -1.9
SENIN                             IAmb   IAmb     19 02 44.2
      comp=Z,7.7nm,1.1s
BNI   Bardonecchia    52.55 302   P      P        19 02 30.0 -1.1
BNI   Bardonecchia    52.55 302   P      P        19 02 30.0 -1.1
BNI                               pmax   pmax
      comp=Z,21nm,1.5s
BILL  Bilibino        53.50  28          P        19 02 38.0 +0.5
BILL                              IAmb   IAmb     19 02 39.3
      comp=Z,8.4nm,0.7s
BILL  Bilibino        53.50  28c iP      P        19 02 38.0 +0.5
BILL                              pmax   pmax
      comp=Z,7.0nm,0.9s
PETK  Petropavlovsk-  53.64  47   LR     LR       19 26 41.8
      comp=Z,133nm,21.7s,baz=278,slow=37
DAG   Danmarks Havn   54.21 344   P      P        19 02 42.4 -0.2
DAG                               P      sP       19 02 53.6 +6.1
DAG                               pmax   pmax
      comp=Z,17nm,1.4s
DAG   Danmarks Havn   54.21 344 i P      P        19 02 41.1 -1.5
DAG                               IAmb   IAmb     19 02 43.3
      comp=Z,9.6nm,0.8s
EKA   Eskdalemuir Ar  55.02 316   P      P        19 02 47.9 -0.8
      comp=Z,5.7nm,0.7s,baz=90,slow=9.0,SNR=13
EKA                               LR     LR       19 27 28.0
      comp=Z,203nm,21.8s,baz=14,slow=37
      comp=Z,5.7nm,0.7s
EKB   Eskdalemuir     55.03 316   P      P        19 02 48.0 -0.9
ESK   Eskdalemuir     55.05 316   P      P        19 02 48.3 -0.7
ESK   Eskdalemuir     55.05 316   P      P        19 02 48.3 -0.7
ESK                               pmax   pmax
      comp=Z,23nm,1.2s
SCO   Scoresbysund    57.38 337   P      P        19 03 05.2 -0.2
SCO                               IAmb   IAmb     19 03 16.8
      comp=Z,16nm,1.5s
SCO   Scoresbysund    57.38 337   P      P        19 03 05.2 -0.2
SCO                               pmax   pmax
      comp=Z,16nm,1.5s
BORG  Borgarnes       59.69 331   LR     LR       19 27 02.4
      comp=Z,106nm,18.0s,baz=109,slow=34
NEEM  North Greenlan  59.95 349 i P      P        19 03 22.5 -1.1
NEEM                              IAmb   IAmb     19 03 24.2
      comp=Z,13nm,0.5s
SUMG  Summit          60.79 342          P        19 03 28.8 -0.7
SUMG  Summit          60.79 342   P      P        19 03 28.8 -0.7
SUMG                              pmax   pmax
      comp=Z,12nm,1.1s
SUMG  Summit          60.79 342 i P      P        19 03 28.9 -0.6
ESDC  Sonseca Array   61.95 300   P      P        19 03 36.6 -0.9
      comp=Z,0.4nm,0.4s,baz=62,slow=6.4,SNR=5.9
      comp=Z,0.4nm,0.4s
A19K  Wainwright      62.83  19   P      P        19 03 43.0 +0.3
      baz=310
C16K  Lisburne Hills  62.87  22          P        19 03 42.6 -0.4
C16K  Lisburne Hills  62.87  22   P      P        19 03 42.9 -0.1
      baz=308
A21K  Barrow          63.17  17   P      P        19 03 44.5 -0.5
      baz=314
B18K  Kokolik River   63.18  20   P      P        19 03 45.8 +0.7
      baz=310
C17K  DeLong Mountai  63.37  21   P      P        19 03 46.1 -0.3
      baz=309
GAMB  Gambell         63.43  28   P      P        19 03 45.7 -1.2
      baz=305
TNA   Tin City        63.71  25   P      P        19 03 48.7 +0.1
      baz=307
RDOG  Red Dog Mine    63.72  22   P      P        19 03 48.2 -0.5
      baz=310
A22K  Sinclair Lake   63.78  17   P      P        19 03 49.0  0.0
      baz=315
C18K  Utukok River    63.82  21   IAmb   IAmb     19 03 50.2
      comp=Z,5.2nm,0.8s
C18K                              PcP    PcP      19 04 25.0 -0.2
C18K  Utukok River    63.82  21   P      P        19 03 49.1 -0.4
      baz=311
D17K  Noatak River    63.90  22   P      P        19 03 49.9 +0.1
      baz=310,SNR=9.2
C19K  Lookout Ridge   63.95  20          P        19 03 50.6 +0.3
C19K                              IAmb   IAmb     19 03 52.8
      comp=Z,11nm,1.1s
C19K  Lookout Ridge   63.95  20   P      P        19 03 50.2 -0.1
      baz=312,SNR=5.8
B20K  Meade River     63.95  19   P      P        19 03 50.2  0.0
      baz=314
F14K  Arctic Creek    64.29  25   P      P        19 03 52.5  0.0
      baz=308
B22K  Teshekpuk Lake  64.62  17   IAmb   IAmb     19 03 55.6
      comp=Z,11nm,1.1s
B22K  Teshekpuk Lake  64.62  17   P      P        19 03 54.5  0.0
      baz=317
E17K  Hotham Inlet    64.67  22   P      P        19 03 55.3 +0.4
      baz=311
F15K  North Star Dit  64.69  24   P      P        19 03 55.9 +0.8
      baz=309
D19K  Kuna River      64.76  20          P        19 03 55.2 -0.3
D19K  Kuna River      64.76  20   P      P        19 03 55.7 +0.1
      baz=314
E18K  Tukpahlearik C  64.80  22          P        19 03 55.7 -0.1
E18K                              IAmb   IAmb     19 03 56.6
      comp=Z,5.0nm,0.6s
E18K  Tukpahlearik C  64.80  22   P      P        19 03 55.9 +0.1
      baz=312
B21K  Ikpikpuk River  64.86  18   P      P        19 03 56.4 +0.3
      baz=316
D20K  Etivluk River   65.00  19          P        19 03 57.2 +0.1
D20K                              IAmb   IAmb     19 03 58.3
      comp=Z,8.0nm,0.9s
D20K                              PcP    PcP      19 04 30.0  0.0
D20K  Etivluk River   65.00  19   P      P        19 03 57.5 +0.3
      baz=315
C21K  Knifeblade Rid  65.15  19   P      P        19 03 58.1  0.0
      baz=316
ANM   Nome            65.18  25   P      P        19 03 58.6 +0.3
      baz=309
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F17K  Baldwin Pennin  65.26  23   P      P        19 03 59.3 +0.5
      baz=312
G15K  Niukluk         65.34  25   P      P        19 03 59.6 +0.2
      baz=310
E20K  Nigu River      65.44  20   P      P        19 03 59.8 -0.2
      baz=315
G16K  Koyuk River     65.62  24   P      P        19 04 01.4 +0.2
      baz=311
F18K  Selawik         65.63  22   P      P        19 04 01.2  0.0
      baz=313,SNR=6.1
C23K  Itkillik River  65.64  17   P      P        19 04 01.1 -0.1
      baz=319
E19K  Redstone River  65.72  21   IAmb   IAmb     19 04 02.3
      comp=Z,4.2nm,0.8s
E19K  Redstone River  65.72  21   P      P        19 04 01.7 -0.1
      baz=315
D22K  Ayikyak River   65.87  18   IAmb   IAmb     19 04 03.5
      comp=Z,5.9nm,0.7s
D22K  Ayikyak River   65.87  18   P      P        19 04 02.8 +0.1
      baz=318
E21K  Killik River    65.87  19   P      P        19 04 02.8  0.0
      baz=317
F19K  Shaleruckik Mo  66.01  21   P      P        19 04 03.3 -0.3
      baz=314
G17K  Kiwalik Mounta  66.08  23   P      P        19 04 04.6 +0.4
      baz=312
C24K  Franklin Bluff  66.15  16   P      P        19 04 04.5  0.0
      baz=321
H16K  Elim            66.16  24   P      P        19 04 05.1 +0.4
      baz=312
D23K  Nanushuk River  66.28  18   P      P        19 04 05.6 +0.2
      baz=319
G18K  Tagagawik       66.41  22   P      P        19 04 06.2  0.0
      baz=314
F20K  Avaraart Lake   66.42  20   P      P        19 04 06.1 -0.2
      baz=316
D24K  Happy Valley    66.57  17   P      P        19 04 07.3 +0.1
      baz=321
E22K  Anaktuvuk Pass  66.64  18   IAmb   IAmb     19 04 08.1
      comp=Z,4.3nm,0.7s
E22K  Anaktuvuk Pass  66.64  18   P      P        19 04 07.3 -0.4
      baz=319
G19K  Purcell Mounta  66.69  22   IAmb   IAmb     19 04 16.3
      comp=Z,4.2nm,0.8s
G19K  Purcell Mounta  66.69  22   P      P        19 04 07.9 -0.2
      baz=315
H17K  Granite Mounta  66.69  23   P      P        19 04 08.6 +0.5
      baz=313
TOLK  Toolik Lake Re  66.79  17          P        19 04 08.5 -0.2
TOLK                              IAmb   IAmb     19 04 09.5
      comp=Z,8.6nm,0.8s
TOLK  Toolik Lake Re  66.79  17   P      P        19 04 08.7  0.0
      baz=320,SNR=6.1
C26K  Camden Bay      66.80  15   P      P        19 04 09.2 +0.6
      baz=324
F21K  Alatna River    66.90  20   P      P        19 04 09.4  0.0
      baz=318
D25K  Kavik River     66.97  16   P      P        19 04 09.7 -0.2
      baz=323
J14K  Nanvaranak Lak  66.97  26   P      P        19 04 10.3 +0.4
      baz=311
H18K  Honhosa River   67.02  23   P      P        19 04 10.0 -0.2
      baz=314
F22K  John River      67.02  19   P      P        19 04 10.3 +0.2
      baz=319
K13K  Kusilvak Mount  67.12  27   P      P        19 04 10.6 -0.2
      baz=311
I17K  Unalakleet      67.17  25   P      P        19 04 11.5 +0.4
      baz=313
E23K  Chandalar       67.23  18   IAmb   IAmb     19 04 12.3
      comp=Z,12nm,1.2s
E23K  Chandalar       67.23  18   P      P        19 04 11.3 -0.3
      baz=320
C27K  Jago River      67.28  15   P      P        19 04 11.9 +0.2
      baz=325
H19K  Roundabout Mou  67.32  22   P      P        19 04 12.4 +0.4
      baz=316
G21K  Allakaket       67.42  20   IAmb   IAmb     19 04 13.2
      comp=Z,6.1nm,0.6s
G21K  Allakaket       67.42  20   P      P        19 04 12.1 -0.5
      baz=318
E24K  Your Creek      67.49  17   P      P        19 04 13.0 -0.1
      baz=321
M11K  Mekoryuk        67.55  29   P      P        19 04 13.4 -0.1
      baz=310
J16K  Anvik River     67.61  25   P      P        19 04 14.2 +0.3
      baz=313
G22K  Bettles         67.64  19   P      P        19 04 13.8 -0.3
      baz=319
SFJD  Kangerlussuaq   67.69 341   LR     LR       19 36 26.6
      comp=Z,48nm,18.4s,baz=66,slow=38
COLD  Coldfoot        67.73  19          P        19 04 14.1 -0.5
COLD                              IAmb   IAmb     19 04 16.1
      comp=Z,10nm,1.0s
COLD  Coldfoot        67.73  19   P      P        19 04 14.6 -0.1
      baz=320,SNR=7.9
IMAR  Indian Mountai  67.75  21   P      P        19 04 14.2 -0.6
GCSA  Galena City Sc  67.75  23   P      P        19 04 15.2 +0.4
      baz=316
H20K  Anotleneega Mo  67.79  21   P      P        19 04 15.3 +0.3
      baz=317
K15K  Wolf Creek Mou  67.98  26   P      P        19 04 16.7 +0.5
      baz=313
J17K  VABM Dome       68.03  24   P      P        19 04 16.9 +0.4
      baz=314
A36M  Sachs Harbour   68.04   8   P      P        19 04 15.9 -0.5
      baz=340
F24K  Squaw Lake      68.07  18   P      P        19 04 16.4 -0.3
      baz=322
E25K  Arctic Village  68.12  17   P      P        19 04 17.0 -0.1
      baz=324
D27M  Malcolm River   68.14  14   P      P        19 04 17.4 +0.1
      baz=327
G23K  Bananza Creek   68.18  19   P      P        19 04 17.6 +0.1
      baz=321
L14K  Kuka Creek      68.22  27   P      P        19 04 18.2 +0.5
      baz=312
H21K  Melozitna Rive  68.25  21   P      P        19 04 17.8 -0.1
      baz=319
L15K  Ungalak Mounta  68.41  27   P      P        19 04 18.4 -0.5
      baz=313
H22K  Ishtalitna Cre  68.46  20   P      P        19 04 19.6 +0.3
      baz=320
D28M  Stokes Point    68.49  14   P      P        19 04 19.6 +0.3
      baz=329
F25K  Christian Rive  68.53  17   IAmb   IAmb     19 04 21.1
      comp=Z,7.4nm,1.0s
F25K  Christian Rive  68.53  17   P      P        19 04 19.1 -0.6
      baz=324,SNR=6.0
M13K  Dall Lake       68.60  28   P      P        19 04 20.1 -0.1
      baz=312
J19K  Poorman         68.68  23   P      P        19 04 21.1 +0.5
      baz=317
J18K  Innoko River    68.73  24   P      P        19 04 21.0 +0.1
      baz=316
K17K  Iditarod        68.76  25   P      P        19 04 21.8 +0.7
      baz=315
F26K  Sheenjek River  68.78  16   P      P        19 04 21.3 +0.1
      baz=325
G24K  Hadweenzic Riv  68.82  18   IAmb   IAmb     19 04 22.6
      comp=Z,7.7nm,0.9s
G24K  Hadweenzic Riv  68.82  18   P      P        19 04 21.8 +0.4
      baz=323
I21K  Tanana          68.84  21   P      P        19 04 21.7 +0.2
      baz=319
M14K  Bethel          68.88  27   P      P        19 04 22.6 +0.7
      baz=313
E27K  Coleen River    68.91  15   IAmb   IAmb     19 04 23.0
      comp=Z,8.5nm,1.1s
E27K  Coleen River    68.91  15   P      P        19 04 22.1 +0.1
      baz=327,SNR=6.5
E28M  Babbage River   68.96  14   P      P        19 04 22.6 +0.3
      baz=328
J20K  Nowinta River   68.98  22   IAmb   IAmb     19 04 24.0
      comp=Z,8.7nm,0.9s
J20K  Nowinta River   68.98  22   P      P        19 04 23.0 +0.5
      baz=318
H23K  Yukon River     68.99  19   P      P        19 04 23.0 +0.4
      baz=321
L16K  Owhat River     69.08  26   P      P        19 04 24.2 +1.0
      baz=315
G25K  Bearman Lake    69.09  18   P      P        19 04 23.7 +0.6
      baz=324
L17K  Donlin          69.18  25   P      P        19 04 24.0 +0.2
      baz=315
MLY   Manley          69.29  20   P      P        19 04 24.3 -0.2
      baz=320
M15K  Kasigluk River  69.37  27   P      P        19 04 24.7 -0.2
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      baz=314
H24K  Noodor Dome     69.41  19   P      P        19 04 24.9 -0.3
      baz=322
E29M  Blow River      69.45  14   P      P        19 04 25.1 -0.3
E29M                              IAmb   IAmb     19 04 26.5
      comp=Z,6.9nm,0.8s
E29M  Blow River      69.45  14   P      P        19 04 25.5 +0.2
      baz=330
G26K  Porcupine Rive  69.47  17   P      P        19 04 25.6 +0.2
      baz=326
N14K  Kuskokwak Cree  69.55  28   P      P        19 04 25.9 -0.1
      baz=313
I23K  Minto, Yukon-K  69.57  20   P      P        19 04 26.2 +0.2
      baz=322
K20K  Telida          69.61  23   P      P        19 04 26.8 +0.3
      baz=318
L18K  Granite Mounta  69.64  24   P      P        19 04 26.8 +0.2
      baz=316
CHUM  Lake Minchumin  69.73  22   P      P        19 04 27.3 +0.1
      baz=320
F28M  Old Crow        69.74  15   IAmb   IAmb     19 04 28.1
      comp=Z,8.3nm,1.2s
F28M  Old Crow        69.74  15   P      P        19 04 27.2  0.0
      baz=328
M16K  Timber Creek    69.75  26   P      P        19 04 27.7 +0.4
      baz=315
BPAW  Bear Paw Mtn.   69.94  21   P      P        19 04 28.3 -0.2
      baz=320
N15K  Kwethluk River  69.95  27   P      P        19 04 28.1 -0.5
      baz=314
M17K  Holitna River   69.99  25   P      P        19 04 29.3 +0.5
      baz=316
G27K  Doyon Strip     70.06  16   P      P        19 04 29.2 +0.1
      baz=327
NEA2  Nenana          70.08  20   P      P        19 04 29.2 -0.1
      baz=322
POKR  Poker Plat Res  70.09  19   P      P        19 04 29.5 +0.1
      baz=323
O14K  Tigyukauivet M  70.17  28   P      P        19 04 28.9 -0.9
      baz=314
COLA  College         70.18  19⇓eP      P        19 04 30.2 +0.4
COLA                              pmax   pmax
      comp=Z,8.0nm,0.9s
COLA  College         70.18  19   P      P        19 04 29.6 -0.2
      baz=323
N16K  Nishlik Lake    70.20  26   P      P        19 04 29.7 -0.4
      baz=315
L19K  White Mountain  70.25  24   P      P        19 04 30.3 -0.1
      baz=318
INK   Inuvik          70.30  12          P        19 04 29.7 -0.8
INK                               IAmb   IAmb     19 04 31.6
      comp=Z,5.1nm,0.8s
INK   Inuvik          70.30  12   P      P        19 04 29.7 -0.8
INK                               pmax   pmax
      comp=Z,5.0nm,0.9s
INK   Inuvik          70.30  12   P      P        19 04 30.6 +0.1
      baz=333,SNR=6.0
M18K  Stony River     70.45  25   P      P        19 04 31.2 -0.4
      baz=317
IL31                  70.51  19          P        19 04 30.6 -1.2
ILAR  Eielson Array   70.51  19   P      P        19 04 30.6 -1.3
      comp=Z,3.6nm,0.8s,baz=318,slow=5.3,SNR=39
ILAR                              LR     LR       19 36 43.7
      comp=Z,51nm,21.3s,baz=258,slow=37
      comp=Z,3.6nm,0.8s
PPLA  Purkeypile      70.53  22   P      P        19 04 31.7 -0.5
      baz=320
F30M  Barrier River   70.53  13   IAmb   IAmb     19 04 32.8
      comp=Z,8.2nm,1.0s
F30M  Barrier River   70.53  13   P      P        19 04 32.0  0.0
      baz=332
H27K  Steamboat Moun  70.57  16   P      P        19 04 32.3 -0.1
      baz=327
TRF   Thorofare Moun  70.65  21   P      P        19 04 32.2 -0.8
      baz=321
C36M  Paulatuk        70.67   9   P      P        19 04 31.9 -0.8
      baz=341,SNR=23
N17K  Nushagak Hills  70.71  26   P      P        19 04 32.6 -0.6
      baz=317
G29M  Pine Creek      70.72  15   P      P        19 04 32.9 -0.3
      baz=330
O15K  Ungalikthiuk R  70.75  28   P      P        19 04 32.4 -1.1
      baz=315
HDA   Harding Lake    70.79  19   P      P        19 04 32.5 -1.1
      baz=324
MCK   McKinley        70.80  21   P      P        19 04 33.8 +0.1
      baz=322
I26K  Coal Creek Min  70.98  17   P      P        19 04 34.7  0.0
      baz=326
G30M  tAoh Zraii Nji  71.00  14   P      P        19 04 34.7 -0.2
      baz=332
M20K  Styx River      71.01  23   P      P        19 04 34.6 -0.5
      baz=319
J25K  Salcha River,   71.02  19   P      P        19 04 34.6 -0.5
      baz=325
N18K  Kilae Creek     71.03  25   P      P        19 04 34.0 -1.2
      baz=318
F31M  Tsiigehtchic    71.04  13   P      P        19 04 34.7 -0.3
      baz=333
O16K  Kokwok River B  71.07  27   P      P        19 04 34.5 -0.8
      baz=316
I27K  Kandik River    71.08  17   P      P        19 04 34.8 -0.7
      baz=327
NIKH  Nikolski High   71.22  36   P      P        19 04 35.2 -1.2
      baz=310
H29M  Whitestone      71.25  15   IAmb   IAmb     19 04 36.8
      comp=Z,7.0nm,0.6s
H29M  Whitestone      71.25  15   P      P        19 04 35.9 -0.5
      baz=330,SNR=5.4
O17K  Koliganek Bris  71.29  26   P      P        19 04 35.9 -0.8
      baz=317
N19K  Bonanza Creek   71.39  25   P      P        19 04 36.7 -0.7
      baz=318
G31M  Satah River     71.41  13   IAmb   IAmb     19 04 37.5
      comp=Z,8.2nm,0.8s
G31M  Satah River     71.41  13   P      P        19 04 36.4 -0.9
      baz=333,SNR=8.4
SKT   Skwentna        71.43  23   P      P        19 04 36.9 -0.6
      baz=320
EPYK  Eagle Plains    71.44  14   P      P        19 04 37.0 -0.6
      baz=331
CUT   Chulitna        71.47  22   P      P        19 04 36.7 -1.0
      baz=321
P16K  Nushagak River  71.51  27   P      P        19 04 36.1 -1.9
      baz=316
J26L  Joseph Creek    71.56  18   P      P        19 04 37.8 -0.6
      baz=326
I28M  Miner Creek     71.59  16   IAmb   IAmb     19 04 38.8
      comp=Z,4.7nm,0.7s
I28M  Miner Creek     71.59  16   P      P        19 04 37.9 -0.6
      baz=329,SNR=5.9
WAT1  Susitna Watana  71.62  21   P      P        19 04 37.9 -0.8
      baz=323
UNV   Unalaska Valle  71.71  35   P      P        19 04 38.8 -0.5
      baz=312
DHY   Denali Highway  71.75  20   P      P        19 04 38.7 -0.9
      baz=323
SPCR  Spurr Chakacha  71.82  23   P      P        19 04 39.2 -0.8
      baz=320
RIDG  Independent Ri  71.87  19   P      P        19 04 39.4 -0.8
      baz=325
O18K  Koktuh Hills    71.87  26   P      P        19 04 40.3  0.0
      baz=318
SCRK  Sand Creek      71.89  19          P        19 04 39.9 -0.5
SCRK                              IAmb   IAmb     19 04 41.0
      comp=Z,15nm,1.3s
SCRK  Sand Creek      71.89  19   P      P        19 04 39.6 -0.8
      baz=326
O19K  Port Alsworth   71.91  25   P      P        19 04 39.0 -1.4
      baz=319
P17K  Kvichak River   71.94  27   P      P        19 04 39.0 -1.6
      baz=317
I29M  Ogilvie Camp,   72.01  16   P      P        19 04 40.5 -0.5
      baz=330
WAT6  Susitna Watana  72.05  21   P      P        19 04 40.8 -0.6
      baz=323
SUA   Susitna One     72.06  23   P      P        19 04 40.2 -1.4
      baz=321
TORD  Torodi Ar. Bea  72.16 273   P      P        19 04 41.3 -1.4
      comp=Z,4.6nm,0.5s,baz=43,slow=6.3,SNR=14
      comp=Z,4.6nm,0.5s
TORD  Torodi Ar. Bea  72.16 273   P      P        19 04 41.1 -1.6
P18K  Big Mountain,   72.21  26   P      P        19 04 42.1 -0.2
      baz=318
K27K  Chicken         72.31  18   P      P        19 04 42.3 -0.5
      baz=327
S12K  Black Hills     72.33  31   P      P        19 04 42.6 -0.4
      baz=314
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PAX	Paxson	72.34	20	IAmb	IAmb	19 04 44.2	
	comp=Z,11nm,1.0s						
PAX	Paxson	72.34	20	P	P	19 04 42.3	-0.9
	baz=325						
H31M	Peel River	72.40	14	P	P	19 04 42.2	-1.1
	baz=333						
PMR	Palmer	72.44	22	P	P	19 04 43.0	-0.6
	baz=322						
CAPN	Captain Cook N	72.48	23	P	P	19 04 42.7	-1.2
	baz=321						
SML	Sawmill	72.50	22	P	P	19 04 43.3	-0.7
	baz=323						
I30M	Mount Dempster	72.53	15	P	P	19 04 43.2	-1.0
	baz=332,SNR=6.7						
RC01	Rabbit Creek A	72.66	23	P	P	19 04 43.5	-1.4
	baz=322						
P19K	Oil Pt	72.68	25	P	P	19 04 43.9	-1.3
	baz=320						
M23K	Glacier View	72.69	21	P	P	19 04 43.8	-1.2
	baz=323						
R16K	Pilot Point	72.73	28	P	P	19 04 44.2	-1.2
	baz=317						
SCM	Sheep Creek Mo	72.77	21	P	P	19 04 45.1	-0.5
	baz=324						
KNK	Knik Glacier	72.78	22	P	P	19 04 45.8	+0.1
	baz=323						
J29N	Klondike Camp	72.82	16	P	P	19 04 46.2	+0.3
	baz=330						
L26K	Log Cabin Wild	72.84	19	P	P	19 04 46.5	+0.5
	baz=327						
Q18K	Katmai Hardscr	72.85	26	P	P	19 04 46.7	+0.5
	baz=319						
M24K	Tolsona, Glenn	72.86	20	P	P	19 04 46.1	0.0
	baz=325						
HARP	HAARP	72.90	20	P	P	19 04 46.1	-0.2
	baz=325						
DAWY	Dawson	72.90	17		P	19 04 45.8	-0.6
DAWY				IAmb	IAmb	19 04 46.6	
	comp=Z,6.7nm,1.0s						
DAWY	Dawson	72.90	17	P	P	19 04 45.6	-0.7
	baz=330						
S14K	Fog Glacier	72.92	30	P	P	19 04 45.5	-1.1
	baz=316						
Q19K	Cape Douglas,	73.10	26	P	P	19 04 46.1	-1.5
	baz=320						
J30M	Hart River	73.11	15	P	P	19 04 47.2	-0.5
	baz=332						
R17L	Mt. Peulik Vol	73.13	28	P	P	19 04 46.5	-1.3
	baz=318						
O22K	Cooper Landing	73.15	23	P	P	19 04 46.7	-1.1
	baz=322						
L27K	Beaver Creek,	73.19	18	IAmb	IAmb	19 04 49.5	
	comp=Z,12nm,1.3s						
L27K	Beaver Creek,	73.19	18	P	P	19 04 48.1	0.0
	baz=328						
SDPT	Sand Point	73.22	31	P	P	19 04 46.7	-1.5
	baz=315						
PWL	Port Wells	73.26	22	P	P	19 04 48.1	-0.4
	baz=323						
BRSE	Bradley Lake S	73.42	24	P	P	19 04 49.1	-0.3
	baz=322						
KLU	Klutina	73.44	21	P	P	19 04 49.1	-0.5
	baz=325						
M26K	Nabesna, AK	73.46	19	P	P	19 04 48.8	-0.9
	baz=327						
K29M	Barlow Dome	73.50	16	IAmb	IAmb	19 04 50.8	
	comp=Z,6.7nm,1.0s						
K29M	Barlow Dome	73.50	16	P	P	19 04 49.1	-0.9
	baz=331						
SEW	Seward	73.53	23	P	P	19 04 48.5	-1.5
	baz=322						
GLI	Glacier Island	73.61	22	P	P	19 04 49.2	-1.4
	baz=324						
N25K	Chitina, Valde	73.70	20	P	P	19 04 50.5	-0.7
	baz=326						
Q20K	Shuyak Island	73.76	25	P	P	19 04 50.0	-1.4
	baz=320						
M27K	Edge Creek, AK	73.77	19	P	P	19 04 51.4	-0.3
	baz=328						
CHNA	Chernabura Isl	73.95	31	P	P	19 04 52.3	-0.3
	baz=316						
BVCY	Beaver Creek	73.98	18	P	P	19 04 52.6	-0.1
	baz=329						
L29M	L29M	74.01	17	P	P	19 04 52.8	-0.2
	baz=331						
BMRM	Bremner River	74.23	21	P	P	19 04 52.8	-1.4
	baz=326						
P23K	Montague Islan	74.23	22	P	P	19 04 52.5	-1.7
	baz=324						
EYAK	Cordova Ski Ar	74.26	21	P	P	19 04 52.9	-1.4
	baz=325						
MCARA	McCarthy VSAT	74.31	20	P	P	19 04 53.2	-1.4
	baz=327						
KDAK	Kodiak Island	74.34	26	LR	LR	19 39 27.7	
	comp=Z,100nm,18.8s,baz=215,slow=37						
KDAK	Kodiak Island	74.34	26	P	P	19 04 53.3	-1.6
	baz=321						
FRB	Frobisher Bay	74.48	346	LR	LR	19 41 09.8	
	comp=Z,68nm,18.4s,baz=329,slow=38						
M29M	Somme Creek	74.52	17	P	P	19 04 55.1	-0.8
	baz=330						
OHAK	Old Harbor	74.53	27	P	P	19 04 55.8	-0.1
	baz=320						
YUK3	Moose Creek	74.62	18	P	P	19 04 55.4	-1.3
	baz=329						
CHIR	Chirikof Islan	74.75	29	P	P	19 04 55.7	-1.6
	baz=319						
M30M	Minto, Yukon	74.78	16	P	P	19 04 56.5	-0.9
	baz=332						
CRQE	Cirque	74.82	20	P	P	19 04 57.1	-0.6
	baz=327						
Q23K	Middleton Isla	75.00	22	P	P	19 04 58.0	-0.6
	baz=325						
CTG	Chitna Glacier	75.10	19	P	P	19 04 58.8	-0.5
	baz=328						
KAIM	Kayak Island	75.15	21	P	P	19 04 58.8	-0.7
	baz=326						
YUK8	Steele Glacier	75.22	18	P	P	19 04 59.6	-0.6
	baz=330						
YUK4	Talbot Arm	75.43	18	P	P	19 05 00.7	-0.7
	baz=330						
O28M	Mount Upton	75.55	19	P	P	19 05 00.4	-1.7
	baz=329						
M31M	Drury Creek, Y	75.62	16	P	P	19 05 02.0	-0.3
	baz=334						
N30M	Aishikik Lake	75.70	17	P	P	19 05 02.7	0.0
	baz=332						
YUK6	Outpost Mounta	75.85	18	P	P	19 05 04.0	+0.1
	baz=331						
N31M	Braeburn, Yuko	75.97	16	P	P	19 05 04.1	-0.2
	baz=333						
PINM	Pinnacle	76.12	19	P	P	19 05 03.4	-1.7
	baz=329						
HYT	Haines Junctio	76.16	18	P	P	19 05 05.1	-0.3
	baz=331						
O29M	Mount Kennedy	76.36	18	P	P	19 05 06.1	-0.5
	baz=331						
O30N	Mendenhall	76.53	17	P	P	19 05 07.3	-0.2
	baz=332						
WRGLY	Wrigley	76.58	10	IAmb	IAmb	19 05 08.6	
	comp=Z,8.8nm,0.8s						
WRGLY	Wrigley	76.58	10	P	P	19 05 07.0	-0.6
	baz=342						
N32M	Quiet Lake	76.85	15	P	P	19 05 08.3	-0.9
	baz=335						
WHY	Whitehorse	76.90	16	P	P	19 05 08.8	-0.9
	baz=333						
P30M	Million Dollar	76.91	18	P	P	19 05 09.0	-0.6
	baz=332						
BLKN	Baker Lake	77.00	358		P	19 05 09.2	-0.8
P29M	Windy Craggy	77.16	18	P	P	19 05 10.0	-1.0
	baz=331						
PLBC	Pleasant Camp	77.64	18	P	P	19 05 12.9	-0.7
	baz=332						
P33M	Teslin, Yukon	77.75	16	IAmb	IAmb	19 05 14.8	
	comp=Z,7.4nm,0.9s						
P33M	Teslin, Yukon	77.75	16	P	P	19 05 13.3	-1.1
	baz=335						
SKAG	Skagway	77.88	17	P	P	19 05 14.7	-0.3
	baz=333						
WRA	Warramunga Arr	78.08	128	P	P	19 05 15.8	-0.8
	comp=Z,2.7nm,0.9s,baz=325,slow=5.1,SNR=14						
	comp=Z,2.7nm,0.9s						
WRAB	Tennant Creek	78.08	128	⇓*e*P	P	19 05 16.0	-0.6
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.0s						
P32M	Atlin	78.12	16	P	P	19 05 15.6	-0.8
	baz=334						
YKA	Yellowknife Ar	78.30	6	P	P	19 05 16.1	-1.1
	comp=Z,4.4nm,0.7s,baz=341,slow=5.6,SNR=51						
	comp=Z,4.4nm,0.7s						
YKA	Yellowknife Ar	78.30	6		P	19 05 16.2	-1.0
YKA					PcP	19 05 28.4	+1.9
WTLY	Watson Lake, Y	78.64	14	P	P	19 05 18.9	-0.4
	baz=338						
R33M	Jennings River	78.89	15	P	P	19 05 19.9	-0.8
	baz=336						
S31K	Pelican	79.00	18	P	P	19 05 20.2	-0.9
	baz=333						
Q32M	Nakina River	79.01	16	P	P	19 05 20.3	-1.1
	baz=336						
KOTAN	Kotaneelee Air	79.44	12	P	P	19 05 22.8	-0.8
	baz=342						
LIRD	Liard River Hi	79.79	13	P	P	19 05 24.7	-0.8
	baz=340						
S32K	Killisnoo	79.84	18	P	P	19 05 24.7	-1.1
	baz=334						
DLBC	Dease Lake	79.96	15	P	P	19 05 26.1	-0.4
	baz=337						
SIT	Sitka	80.03	18	P	P	19 05 26.4	-0.4
	baz=333						
S34M	Telegraph Cree	80.22	16		P	19 05 27.8	0.0
S34M				IAmb	IAmb	19 05 29.9	
	comp=Z,13nm,1.0s						
S34M	Telegraph Cree	80.22	16	P	P	19 05 27.1	-0.7
	baz=336						
TOAD	Toad River Com	80.47	13	P	P	19 05 28.4	-0.7
	baz=341						
AS31	Alice Springs	80.63	131	P	P	19 05 29.3	-1.2
ASAR	Alice Springs	80.63	131	P	P	19 05 29.6	-0.9
	comp=Z,2.7nm,0.8s,baz=326,slow=5.5,SNR=37						
	comp=Z,2.7nm,0.8s						
ASAR	Alice Springs	80.63	131	P	P	19 05 29.2	-1.2
LBTB	Lobatse	80.97	228	LR	LR	19 43 14.8	
	comp=Z,23nm,19.9s,baz=20,slow=37						
DBIC	Dimbokro	81.20	271	LR	LR	19 49 36.6	
	comp=Z,50nm,18.2s,baz=67,slow=42						
CRAG	Craig	82.00	18	P	P	19 05 36.3	-1.0
	baz=335						
BOSA	Boshof	83.93	226	LR	LR	19 46 26.9	
	comp=Z,14nm,18.3s,baz=14,slow=38						
BBB	Bella Bella	86.19	16	LR	LR	19 52 32.8	
	comp=Z,44nm,19.7s,baz=263,slow=41						
FFC	Flin Flon	86.69	1		P	19 05 59.8	-1.3
FFC	Flin Flon	86.69	1	*e*P	P	19 06 00.6	-0.6
ULM	Lac du Bonnet	91.08	357	LR	LR	19 51 10.8	
	comp=Z,51nm,18.4s,baz=8.5,slow=38						
PDAR	Pinedale Array	98.28	6	P	P	19 06 54.4	-1.0
	comp=Z,0.2nm,0.6s,baz=327,slow=3.9,SNR=1.9						
	comp=Z,0.2nm,0.6s						
NVL	N'lazarevskaya	119.41	201	*e*PKIKP	PKiKP	19 12 08.2	+2.3
NVL				*e*PPP	PPP	19 15 58.9	
NVL				*e*SS	SS	19 29 51.4	+1.0
NVL				*e*SSS	SSS	19 34 16.5	
NVL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NVL				MLR	MLR		
	comp=Z,664nm,22.0s						

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*IDC **14** 19:24:28.7±2.1, 37°.61N×142°.27E, h0^{km}, mb3.5/6, mbtmp3.4/7, ML2.4/1, Error ellipse: s-maj=43.6km s-min=31.5km az=78.0*

*JMA **14** 19:24:33.0±0.2, 37°.4N±0°.5×142°.0E±0°.9, h34^{km}±3^{km}, MV3.6/33, E OFF FUKUSHIMA PREF*

ISC 14 19:24:30.9±2.2, 37°.45N±0°.05×142°.00E±0°.08, h4^{km}±11^{km}, n24, σ1^{s}.29/29, mb3.5/6, 4D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	0.90	265	P	Pg	19 24 48.9	+0.7
JFK				*e*S	Sg	19 24 59.4	-0.5
JMST	Minamisoumatoc	0.93	287	P	Pg	19 24 49.4	+0.8
JMST				*e*S	Sg	19 25 00.8	+0.2
JIKH	Ishinomakikobu	0.96	334	⇓*i*P	Pb	19 24 50.3	+0.3
JIKH				⇓*e*S	Sg	19 25 02.4	+0.7
ONAJ	Iwakimizuishiy	1.02	250	P	Pg	19 24 50.2	-0.3
ONAJ				*e*S	Sg	19 25 02.5	-1.2
JMM	Marumori	1.04	294	P	Pg	19 24 51.4	+0.5
JMM				S	Sg	19 25 04.2	-0.3
JIO	Ouri	1.13	333	⇓P	Pg	19 24 52.9	+0.4
JIO				⇓S	Sg	19 25 06.4	-0.7
JOTO	OTAMA OYAMA	1.33	275	P	Pn	19 24 56.1	-0.1
JOTO				*e*S	Sg	19 25 12.3	-1.4
JOU	Okura	1.40	311	P	Pn	19 24 57.3	+0.1
JOU				S	Sg	19 25 14.8	-1.1
JMK	Ichinoseki	1.62	338	P	Pn	19 25 00.3	+0.2
JYS	Shirataka	1.71	297	P	Pn	19 25 02.8	+1.3
JYS				*e*S	Sn	19 25 22.8	-1.1
JFY	Yanaizu	1.83	269	P	Pn	19 25 03.0	-0.1
JFY				*e*S	Sn	19 25 25.7	-1.0
MJAR	Matsushiro Arr	3.17	255	Pn	Pn	19 25 21.9	+0.4
	0.4nm,0.3s,baz=81,slow=15,SNR=24						
MJAR				Sn	Sn	19 26 04.2	+4.4
	0.4nm,0.3s,baz=188,slow=18,SNR=5.9						
	1.5nm,0.3s						
SONM	Songino Array	27.95	303	P	P	19 30 23.6	+1.2
	0.1nm,0.3s,baz=106,slow=7.7,SNR=1.6						
	0.1nm,0.3s						
H11N2	WAKE ISLAND Hy	27.96	122	T	T	19 59 52.1	
	baz=315,slow=75,SNR=14						
H11N1	WAKE ISLAND Hy	27.97	122	T	T	19 59 49.3	
	baz=315,slow=75,SNR=7.5						
H11N3	WAKE ISLAND Hy	27.98	122	T	T	19 59 50.5	
	baz=315,slow=75,SNR=9.2						
H11S1	WAKE ISLAND Hy	28.70	124	T	T	20 00 39.3	
	baz=317,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	28.70	124	T	T	20 00 49.4	
	baz=317,slow=76,SNR=11						
H11S2	WAKE ISLAND Hy	28.71	124	T	T	20 00 44.9	
	baz=317,slow=76,SNR=11						
ZALV	Zalesovo Beam	41.98	312	P	P	19 32 21.6	-1.2
	0.3nm,0.3s,baz=81,slow=8.9,SNR=2.7						
	0.3nm,0.3s						
MKAR	Makanchi Array	44.30	302	P	P	19 32 40.4	-1.3
	0.4nm,0.6s,baz=84,slow=9.7,SNR=5.0						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	46.12	308	P	P	19 32 54.7	-1.3
	0.6nm,0.4s,baz=84,slow=7.9,SNR=3.6						
	0.6nm,0.4s						
BVAR	Borovoye Array	50.64	312	P	P	19 33 28.8	-2.0
	0.2nm,0.5s,baz=69,slow=7.9,SNR=2.1						
	0.2nm,0.5s						
WRA	Warramunga Arr	57.54	189	P	P	19 34 21.8	+0.3
	0.7nm,1.0s,baz=20,slow=8.3,SNR=2.3						
	0.7nm,1.0s						

NOU 14 19:35:05.4, 17°.64S×169°.00E, h216^{km}, MLv3.6/14, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTV	Rentapao	0.57	254	P	Pn	19 35 36.4	+1.8
RTV	Rentapao	0.57	254	S	S	19 35 58.8	+1.5
DVP	Devils Point	0.78	264	P	Pn	19 35 36.6	+1.1
DVP	Devils Point	0.78	264	S	S	19 36 00.4	+1.5
SANVU	Saraoutou	2.78	321	P	Pn	19 35 52.9	-0.5
MARNC	Mare, Loyalty	3.93	193	P	Pn	19 36 06.0	-0.9
YATNC	Mamie plateau,	4.82	204	P	Pn	19 36 18.7	+0.7
DZM	Mont Dzumac	5.02	208	P	Pn	19 36 21.4	+0.8
OUENC	Ouen Island, N	5.17	203	P	Pn	19 36 22.5	+0.2
ONTNC	Ouen Toro	5.22	207	P	Pn	19 36 22.7	-0.3

IDC 14 19:43:13.3±8.2, 6°.92S×129°.62E, h147^{km}±85^{km}, mb3.0/2, mbtmp3.8/5, Error ellipse: s-maj=74.7km s-min=27.5km az=37.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	6.73	241	P	Pn	19 44 51.2	+1.3
	36nm,0.4s,baz=110,slow=3.4,SNR=29						
BATI				S	Sn	19 46 04.9	-0.6
	9.7nm,0.3s,baz=52,slow=19,SNR=6.0						
WRA	Warramunga Arr	13.73	161	P	Pn	19 46 20.1	-2.0
	1.0nm,0.3s,baz=344,slow=13,SNR=26						
WRA				S	Sn	19 48 49.2	-4.9
	0.6nm,0.4s,baz=332,slow=22,SNR=5.2						
ASAR	Alice Springs	17.15	167	P	Pn	19 47 05.0	+0.8
	1.5nm,0.8s,baz=340,slow=9.5,SNR=30						
ASAR				S	S	19 50 11.3	-3.7
	0.2nm,0.3s,baz=348,slow=26,SNR=4.3						
MKAR	Makanchi Array	67.95	327	P	P	19 53 56.6	+0.2
	0.2nm,0.4s,baz=124,slow=7.0,SNR=6.1						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	72.25	329	P	P	19 54 21.9	-0.5
	0.2nm,0.5s,baz=115,slow=6.5,SNR=2.2						
	0.2nm,0.5s						

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*IDC **14** 19:44:20.9±8.8, 23°.94S×179°.73W, h474^{km}±83^{km}, mb3.3/7, mbtmp4.3/8, Error ellipse: s-maj=72.2km s-min=19.4km az=48.0*

ISC 14 19:44:25.5±1.2, 24°.2S±0°.1×179°.8W±0°.2, h518^{km}, n33, σ1^{s}.61/37, mb3.8/8, 3C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUZ	Omahuta	12.35	206	P	P	19 47 08.4	+0.9
WCZ	Waipu Caves	12.71	202	P	P	19 47 12.8	+1.6
DZM	Mont Dzumac	12.84	277	P	P	19 47 14.8	+1.8
	2.7nm,0.7s,baz=103,slow=9.2,SNR=1.9						
KUZ	Kuaotunu	13.04	196	P	P	19 47 15.7	+1.0
MXZ	Matakaoa Point	13.38	187	P	P	19 47 18.9	+0.7
ETAZ	East Tamaki Re	13.46	198	P	P	19 47 20.5	+1.5
MKAZ	Moumakai	13.53	197	P	P	19 47 21.2	+1.4
WMGZ	Waiomatatini S	13.62	186	P	P	19 47 21.6	+0.9
HAZ	Te Kaha	13.63	188	P	P	19 47 21.2	+0.3
HAZ				S	S	19 49 44.1	-1.3
RUGZ	Raukumara Rang	13.85	188	P	P	19 47 23.8	+0.5
PUZ	Puketiti	13.89	186	P	P	19 47 24.2	+0.6
TWGZ	Tauwhareparae	14.02	187	P	P	19 47 25.2	+0.2
TWGZ				S	S	19 49 53.8	+0.7
URZ	Urewera	14.22	190	P	P	19 47 25.5	-1.6
	28nm,0.5s,baz=310,slow=1.0,SNR=26						
URZ				S	S	19 49 53.9	-2.9
	8.8nm,0.5s,baz=31,slow=23,SNR=11						
URZ	Urewera	14.22	190	P	P	19 47 25.4	-1.6
MWZ	Matawai	14.23	189	P	P	19 47 27.5	+0.3
MWZ				S	S	19 49 55.4	-1.8
CNGZ	Carnagh Statio	14.30	186	P	P	19 47 29.0	+1.1
MUGZ	Murupara	14.49	191	P	P	19 47 29.1	-0.8
HIZ	Hauiti	14.94	196	P	P	19 47 37.3	+2.7
BKZ	Black Stump Fm	15.21	191	P	P	19 47 31.9	-5.5
ETVZ	East Tongariro	15.33	193	P	P	19 47 38.1	-0.7
CTA	Charters Tower	31.66	271	P	P	19 50 05.5	-0.8
	4.6nm,0.3s,baz=94,slow=10,SNR=16						
	4.6nm,0.3s						
STKA	Stephens Creek	34.77	249	P	P	19 50 31.8	-0.5
	1.7nm,0.5s,baz=89,slow=8.2,SNR=3.7						
	1.7nm,0.5s						
ASAR	Alice Springs	42.16	261	P	P	19 51 31.4	-1.2
	1.0nm,0.6s,baz=96,slow=7.8,SNR=6.9						
	1.0nm,0.6s						
WRA	Warramunga Arr	42.57	266	P	P	19 51 34.0	-1.7
	1.6nm,0.4s,baz=99,slow=8.4,SNR=6.3						
	1.6nm,0.4s						
VNDA	Vanda	54.06	185	P	P	19 53 02.0	+1.6
	0.9nm,0.9s,baz=27,slow=6.9,SNR=1.5						
	0.9nm,0.9s						
QSPA	South Pole Qui	65.84	180	P	P	19 54 20.5	+1.4
	4.3nm,0.6s,baz=11,slow=5.2,SNR=36						
	4.3nm,0.6s						
TROLL	Troll, Antarti	83.99	181	⇑P	P	19 56 01.6	+0.8
	comp=Z,67nm,0.3s						
SNAA	Sanae	84.32	179	⇑P	P	19 56 02.5	+0.2
	comp=Z,3.4nm,0.3s						
SNAA	Sanae	84.32	179	P	P	19 56 02.3	0.0
	comp=Z,1.0nm,0.6s,baz=202,slow=5.4,SNR=12						
	comp=Z,1.0nm,0.6s						
VNA3	Neumayer Olymp	84.53	177	⇑P	P	19 56 03.8	+0.5
	comp=Z,0.6nm,0.2s						
MKAR	Makanchi Array	112.52	313	PKiKP	PKiKP	20 02 02.3	-0.2
	comp=Z,0.3nm,0.7s,baz=55,slow=1.3,SNR=2.6						
HFS	Hagfors	142.92	349	PKP	PKPdf	20 02 57.4	-2.0
	comp=Z,0.6nm,0.3s,baz=57,slow=2.8,SNR=9.8						
BRTR	Keskin Array B	147.93	307	PKPbc	PKPbc	20 03 12.2	-0.4
	comp=Z,0.6nm,0.8s,baz=44,slow=4.4,SNR=3.6						

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*IDC **14** 19:57:16.6±2.1, 7°.53S×127°.37E, h0^{km}, mb3.6/1, mbtmp3.4/3, ML3.4/2, MS3.0/1, Error ellipse: s-maj=285.8km s-min=31.3km az=63.0*

ISC 14 19:57:29.9±0.9, 7°.93S±0°.08×127°.96E±0°.08, h150^{km}, n13, σ2^{s}.56/14, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	4.08	243	P	Pn	19 58 31.7	+0.4
SOEI	Soe	4.08	243	S	Sn	19 59 18.1	-0.9
DRS	Darwin Rock St	5.33	147	P	Pn	19 58 48.6	+0.9
MMRI	Maumere	5.71	263	P	Pn	19 58 51.5	-1.3
SANI	Sanana	6.16	341	P	Pn	19 58 58.0	-0.9
FAKI	Fak Fak	6.56	41	P	Pn	19 59 02.4	-1.8
WRAB	Tennant Creek	13.44	153	P	Pn	20 00 36.7	+1.8
WRA	Warramunga Arr	13.45	153	Pn	Pn	20 00 35.3	+0.4
	0.2nm,0.3s,baz=327,slow=14,SNR=9.1						
WRA				Sn	Sn	20 02 59.4	-4.4
	0.8nm,0.3s,baz=332,slow=22,SNR=10						
	0.3nm,0.5s						
COEN	Coen	16.09	113	P	P	20 01 09.7	+1.4
ASAR	Alice Springs	16.65	161	P	Pn	20 01 20.2	+5.5
	0.1nm,0.3s,baz=340,slow=11,SNR=7.6						
ASAR				S	S	20 04 18.0	-1.9
	0.5nm,0.5s,baz=336,slow=28,SNR=5.9						
	0.7nm,0.7s						
QIS	Mount Isa	16.86	139	P	Pn	20 01 19.7	+2.4
PMG	Port Moresby	19.04	96	LR	LR	20 10 05.8	
	comp=Z,45nm,21.4s,baz=118,slow=39						
MKAR	Makanchi Array	67.92	328	P	P	20 08 13.1	+0.7
	0.3nm,0.5s,baz=125,slow=8.0,SNR=8.6						
	0.3nm,0.5s						

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*IDC **14** 20:03:23.1±0.7, 14°.01N×144°.99E, h118^{km}±3^{km}, mb3.6/12, mbtmp3.9/12, Error ellipse: s-maj=32.4km s-min=13.2km az=85.0*

*NEIC **14** 20:03:24.6±1.3, 13°.96N±0°.06×144°.8E±0°.1, h121^{km}±4^{km}, mb4.3/17, Error ellipse: s-maj=15.0km s-min=8.9km az=101.0*

ISC 14 20:03:24.2±0.5, 13°.98N±0°.06×144°.9E±0°.1, h125^{km}, n41, σ0^{s}.79/38, mb4.1/19, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	0.38	179	P	Pn	20 03 42.1	-0.1
	4µm,0.4s,baz=286,slow=3.8,SNR=912						
GUMO				S	Sn	20 03 55.3	-0.4
	2µm,0.3s,baz=93,slow=20,SNR=37						
GUMO	Guam	0.38	179		Pn	20 03 42.2	+0.1
GUMO				Sn	Sn	20 03 54.9	-0.8
DPSS	Saipan	1.54	35		Pn	20 03 53.4	+0.9
DPSS				Sn	Sn	20 04 14.0	0.0
PATS	Pohnpei	15.00	117	Pn	Pn	20 06 49.6	-0.3
RABL	Rabaul	19.45	158	P	P	20 07 41.2	0.0
FAKI	Fak Fak	20.93	218	P	P	20 07 58.4	+1.1
FAKI				IAmb	IAmb	20 08 14.4	
	comp=Z,17nm,1.0s						
H11S3	WAKE ISLAND Hy	21.42	75	T	T	20 29 23.2	
	baz=263,slow=74,SNR=3.3						
H11S1	WAKE ISLAND Hy	21.44	75	T	T	20 29 38.3	
	baz=263,slow=74,SNR=6.4						
H11S2	WAKE ISLAND Hy	21.44	75	T	T	20 29 49.1	
	baz=263,slow=74,SNR=4.0						
H11N1	WAKE ISLAND Hy	21.83	72	T	T	20 31 18.9	
	baz=257,slow=75,SNR=4.4						
H11N2	WAKE ISLAND Hy	21.84	72	T	T	20 31 20.5	
	baz=257,slow=75,SNR=3.7						
H11N3	WAKE ISLAND Hy	21.85	72	T	T	20 31 11.9	
	baz=257,slow=75,SNR=5.2						
MJAR	Matsushiro Arr	23.25	346	P	P	20 08 19.5	-1.1
	comp=Z,0.8nm,0.4s,baz=150,slow=9.9,SNR=1.0						
	comp=Z,0.8nm,0.4s						
PMG	Port Moresby	23.34	174	P	P	20 08 21.5	0.0
	comp=Z,9.0nm,0.7s,baz=344,slow=9.4,SNR=6.6						
	comp=Z,9.0nm,0.7s						
PMG	Port Moresby	23.34	174	P	P	20 08 21.1	-0.4
PMG				IAmb	IAmb	20 08 22.7	
	comp=Z,9.9nm,0.8s						
COEN	Coen	27.80	184	P	P	20 09 01.1	-0.7
COEN				IAmb	IAmb	20 09 19.6	
	comp=Z,7.4nm,1.1s						
CTAO	Charters Tower	33.88	178	P	P	20 09 55.2	+0.1
CTAO				IAmb	IAmb	20 10 22.2	
	comp=Z,8.2nm,1.1s						
WB0	Warramunga Arr	35.08	197	P	P	20 10 05.1	-0.4
WB0				IAmb	IAmb	20 10 05.9	
	comp=Z,3.6nm,0.5s						

WRA	Warramunga Arr	35.26	197	P	P	20 10 06.9	-0.2
	comp=Z,2.1nm,0.5s,baz=18,slow=9.2,SNR=16						
	comp=Z,2.1nm,0.5s						
WRA	Warramunga Arr	35.26	197	P	P	20 10 06.5	-0.6
AS31	Alice Springs	38.91	196	P	P	20 10 37.5	-0.5
ASAR	Alice Springs	38.92	196	P	P	20 10 37.6	-0.4
	comp=Z,0.5nm,0.4s,baz=17,slow=6.7,SNR=28						
	comp=Z,0.5nm,0.4s						
ASAR	Alice Springs	38.92	196	P	P	20 10 37.0	-1.0
EIDS	Eidsvold	39.57	171	P	P	20 10 43.1	-0.2
EIDS				IAmb	IAmb	20 10 54.3	
	comp=Z,7.8nm,1.1s						
DZM	Mont Dzumac	41.61	149	P	P	20 11 00.8	+0.6
STKA	Stephens Creek	45.70	184	P	P	20 11 32.2	-0.5
	comp=Z,2.4nm,0.6s,baz=7.9,slow=6.5,SNR=4.9						
	comp=Z,2.4nm,0.6s						
SONM	Songino Array	46.41	325	P	P	20 11 38.4	0.0
	comp=Z,0.3nm,0.3s,baz=118,slow=7.6,SNR=2.2						
	comp=Z,0.3nm,0.3s						
SONM	Songino Array	46.41	325	P	P	20 11 40.5	+2.1
BBOO	Buckleboo	47.28	190	P	P	20 11 44.8	-0.2
BBOO				IAmb	IAmb	20 11 45.7	
	comp=Z,8.1nm,1.1s						
CAN	Canberra	49.18	176	P	P	20 12 00.4	+0.7
CAN				IAmb	IAmb	20 12 18.1	
	comp=Z,7.6nm,1.1s						
TOO	Toolangi	51.27	179	P	P	20 12 16.9	+1.5
TOO				IAmb	IAmb	20 12 27.3	
	comp=Z,3.0nm,1.1s						
QRZ	Quartz Range	60.25	156	P	P	20 13 20.1	+0.7
MKAR	Makanchi Array	61.21	316	P	P	20 13 26.6	+0.7
	comp=Z,0.3nm,0.4s,baz=93,slow=8.7,SNR=9.6						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	61.21	316	P	P	20 13 26.1	+0.1
MAKZ	Makanchi	61.42	316	P	P	20 13 27.6	+0.3
KURBB	Kurchatov Arra	64.33	320	P	P	20 13 46.5	0.0
	comp=Z,0.4nm,0.3s,baz=98,slow=6.9,SNR=4.0						
	comp=Z,0.4nm,0.3s						
ILAR	Eielson Array	68.22	25	P	P	20 14 09.2	-1.9
	comp=Z,0.2nm,0.4s,baz=247,slow=5.5,SNR=6.0						
	comp=Z,0.2nm,0.4s						
BVAR	Borovoye Array	69.62	322	P	P	20 14 19.1	-0.8
	comp=Z,0.5nm,0.3s,baz=102,slow=8.1,SNR=8.0						
	comp=Z,0.5nm,0.3s						
ABKAR	Akbulak array	76.25	318	P	P	20 14 58.4	-0.7
NVAR	Mina Array Bea	86.68	51	P	P	20 15 54.4	-0.2
	comp=Z,0.5nm,0.6s,baz=291,slow=5.1,SNR=2.1						
	comp=Z,0.5nm,0.6s						
VNDA	Vanda	91.85	176	P	P	20 16 18.6	+1.0
	comp=Z,2.9nm,1.1s,baz=39,slow=6.8,SNR=3.7						
	comp=Z,2.9nm,1.1s						

IDC 14 20:26:27.9±1.9, 2°.53N×127°.84E, h0^{km}, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=153.5km s-min=22.1km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.23	164	P	P	20 31 37.0	+0.1
	1.3nm,0.4s,baz=344,slow=10.0,SNR=21						
	1.3nm,0.4s						
ASAR	Alice Springs	26.70	168	P	P	20 32 08.6	-0.6
	0.2nm,0.3s,baz=345,slow=9.9,SNR=11						
	0.2nm,0.3s						
MKAR	Makanchi Array	59.17	325	P	P	20 36 30.9	+0.2
	0.1nm,0.3s,baz=107,slow=8.1,SNR=4.3						
	0.1nm,0.3s						
KURBB	Kurchatov Arra	63.34	327	P	P	20 36 59.2	+0.3
	0.6nm,0.9s,baz=121,slow=6.8,SNR=2.6						
	0.6nm,0.9s						

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*IDC **14** 20:38:23.4±2.9, 0°.92S×134°.76E, h0^{km}, mb3.6/3, mbtmp3.6/4, ML3.5/1, MS2.6/1, Error ellipse: s-maj=155.0km s-min=28.6km az=77.0*

*DJA **14** 20:38:27.6±0.5, 1°S±3°×13°4E±°, h21^{km}±4^{km}, M4.0/12, mb4.1/6, mB5.4/3, MLv3.9/12, Mw(mB)4.9/3*

ISC 14 20:38:27.8±0.9, 0°.97S±0°.07×134°.44E±0°.05, h27^{km}, n18, σ0ˢ.95/20, mb3.5/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MWPI	Manokwari, Pap	0.41	276	Pg	Pn	20 38 37.5	-0.4
MWPI				Sg	Sb	20 38 41.8	-0.8
RKPI	Ransiki, Papua	0.60	206	Pg	Pb	20 38 39.1	-0.7
RKPI				Sg	Sb	20 38 47.5	-0.4
BAKI	Biak	1.68	98	P	Pn	20 38 55.1	-0.3
BAKI				S	Sn	20 39 15.5	-0.6
SRPI	Serui, Papua	2.00	116	P	Pn	20 39 00.1	+0.1
KMPI	Kaimana, Papua	2.77	195	P	Pn	20 39 11.7	+1.2
FAKI	Fak Fak	2.93	229	P	Pn	20 39 13.0	+0.4
SWI	Sorong	3.19	272	P	Pn	20 39 17.9	+1.7
SMPI	Sarmi	4.38	103	P	Pn	20 39 32.7	0.0
BNDI	Bandanaira	5.75	232	P	Pn	20 39 50.4	-1.0
JAY	Jayapura	6.44	104	P	Pn	20 40 03.0	+2.0
	0.1nm22nm,1.1s						
KRAI	Karang Ratu	6.48	249	P	Pn	20 40 02.4	+0.9
	9.0nm,0.6s						
TNTI	Ternate	7.29	284	P	Pn	20 40 13.1	+0.5
SOEI	Soe	13.37	229	P	Pn	20 41 35.8	-0.2
WRA	Warramunga Arr	18.86	180	P	P	20 42 44.6	-1.4
	0.2nm,0.3s,baz=0.2,slow=11,SNR=5.8						
	0.9nm,0.6s						
ASAR	Alice Springs	22.57	181	P	P	20 43 26.6	+0.4
	0.7nm,0.5s,baz=8.1,slow=11,SNR=19						
	0.7nm,0.5s						
JOW	Kunigami	28.27	348	LR	LR	20 57 24.4	
	comp=Z,11nm,18.1s,baz=108,slow=40						
MKAR	Makanchi Array	65.84	324	P	P	20 49 11.7	+0.7
	0.3nm,0.7s,baz=111,slow=7.9,SNR=3.5						
	0.3nm,0.7s						
QSPA	South Pole Qui	88.97	180	P	P	20 51 20.5	+0.5
	0.5nm,0.6s,baz=314,slow=0.5,SNR=1.8						
	0.5nm,0.6s						

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*SJA **14** 20:49:12.3±0.7, 23°.07S×66°.40W, h258^{km}±7^{km}, ML3.5, MW3.5*

*GUC **14** 20:49:16.5±0.4, 23°.02S×66°.80W, h258^{km}±14^{km}, ML3.4*

ISC 14 20:49:14.0±2.2, 23°.06S±0°.05×66°.51W±0°.07, h237^{km}±18^{km}, n31, σ1ˢ.27/57, 6C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	1.27	46	eP	Pn	20 49 50.2	+0.3
YJA				eS	S	20 50 15.9	-2.0
PB09	IPOC Station P	2.83	296⇑	eP	Pn	20 50 05.7	+1.7
PB09				eS	S	20 50 43.7	+0.5
PB09				IAML		20 50 47.3	
	comp=N,26nm,0.2s						
PB09	IPOC Station P	2.83	296	eP	Pn	20 50 05.3	+1.4
PB09				eS	S	20 50 44.2	+0.9
PB06	IPOC Station P	2.85	277	eP	Pn	20 50 05.7	+1.5
PB06				eS	S	20 50 42.3	-1.3
PB06				IAML		20 50 48.3	
	comp=E,38nm,0.4s						
PB06	IPOC Station P	2.85	277	eP	Pn	20 50 05.4	+1.2
PB06				eS	S	20 50 44.6	+1.0
PB03	IPOC Station P	3.17	288⇑	eP	Pn	20 50 08.6	+0.9
PB03				eS	S	20 50 48.7	-1.2
PB03	IPOC Station P	3.17	288	eP	Pn	20 50 08.7	+0.9
PB03				eS	S	20 50 49.7	-0.2
PB03				IAML		20 50 50.5	
	comp=Z,49nm,0.3s						
PB07	IPOC Station P	3.40	292	eP	Pn	20 50 11.4	+1.1
PB07				eS	S	20 50 53.3	-1.4
PB07				IAML		20 50 56.6	
	comp=E,40nm,0.2s						
PB07	IPOC Station P	3.40	292	eP	Pn	20 50 11.4	+1.1
PB07				eS	S	20 50 54.8	+0.1
PB07				IAML		20 50 56.4	
	comp=Z,30nm,0.2s						
PB05	IPOC Station P	3.41	273⇑	eP	Pn	20 50 11.4	+1.0
PB05				eS	S	20 50 51.6	-3.3
PB05	IPOC Station P	3.41	273	eP	Pn	20 50 11.5	+1.0
PB05				eP		20 50 11.6	
PB05				eS	S	20 50 54.7	-0.2
PB01	IPOC Station P	3.42	305	eP	Pn	20 50 11.5	+1.0
PB01	IPOC Station P	3.42	305	eP	Pn	20 50 11.6	+1.1
PB01				eS	S	20 50 54.8	-0.2
PB01				eS	S	20 50 55.0	0.0
PB01				IAML		20 50 57.1	
	comp=Z,83nm,0.2s						
GO02	Mina Guanaco	3.51	233	eP	Pn	20 50 12.5	+0.8
GO02				eS	S	20 50 57.4	+0.1
GO02				eS	S	20 50 58.2	+0.9
GO02				IAML		20 50 59.1	
	comp=Z,110nm,0.4s						
PB02	IPOC Station P	3.59	298⇑	eP	Pn	20 50 13.2	+0.8
PB02				eS	S	20 50 56.7	-1.9
PB02	IPOC Station P	3.59	298	eP	Pn	20 50 13.2	+0.8
PB02				eS	S	20 50 58.2	-0.4
PB02				IAML		20 51 01.4	
	comp=Z,67nm,0.3s						
PB10	IPOC Station P	3.75	262⇑	iP	Pn	20 50 15.2	+1.0
PB10				eS	S	20 50 59.4	-2.4
PB10	IPOC Station P	3.75	262	eP	Pn	20 50 14.8	+0.5
PB10				eS	S	20 51 01.1	-0.7
PB10				IAML		20 51 02.6	
	comp=Z,21nm,0.3s						
PB08	IPOC Station P	3.81	319⇑	eP	Pn	20 50 17.3	+1.9
PB08				eS	S	20 51 03.8	0.0
PB08	IPOC Station P	3.81	319	eP	Pn	20 50 16.8	+1.4
PB08				eS	S	20 51 03.8	0.0
PB08				IAML		20 51 08.2	
	comp=Z,31nm,0.7s						
PB14	IPOC Station P	3.90	246	eP	Pn	20 50 16.8	+0.6
PB14				eS	S	20 51 04.6	-0.8
PB14				IAML		20 51 07.7	
	comp=Z,47nm,0.3s						
PATCX	Punta Patache	4.05	303	eP	Pn	20 50 18.7	+0.8
PATCX	Punta Patache	4.05	303	eP	Pn	20 50 18.5	+0.5
PATCX				eS	S	20 51 07.4	-1.1
PATCX				IAML		20 51 12.5	
	comp=Z,39nm,0.5s						
HMBC	Humberstone	4.19	311	eP	Pn	20 50 19.9	+0.3
HMBC				eS	S	20 51 10.1	-1.5
HMBC				IAML		20 51 13.1	
	comp=Z,90nm,0.3s						
TA01	Diego Aracena	4.22	305	eP	Pn	20 50 20.6	+0.7
TA01				eS	S	20 51 09.6	-2.4
TA01	Diego Aracena	4.22	305	eP	Pn	20 50 20.3	+0.4
TA01				eS	S	20 51 10.9	-1.1
TA01				IAML		20 51 13.0	
	comp=Z,26nm,0.3s						
PB11	IPOC Station P	4.40	318	eP	Pn	20 50 22.7	+0.4
PB11	IPOC Station P	4.40	318	eP	Pn	20 50 22.6	+0.3
PB11				eS	S	20 51 15.1	-1.2
PB11				IAML		20 51 18.3	
	comp=Z,40nm,0.2s						
AC02	Maricunga	4.45	212	eP	Pn	20 50 24.6	+1.6
AC01	Pan de Azucar	4.83	230	eP	Pn	20 50 27.4	+0.1
AC01				eS	S	20 51 22.6	-2.8
AC01				IAML		20 51 24.7	
	comp=Z,23nm,0.3s						
TINO	Tinogasta	5.07	191	eP	Pn	20 50 31.9	+1.6

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*IDC **14** 21:01:50.9±1.9, 43°.43N×105°.25W, h0^{km}, mbtmp3.9/2, ML3.7/2, Error ellipse: s-maj=46.8km s-min=8.7km az=153.0*

*NEIC **14** 21:01:51.9±0.7, 43°.80N±0°.06×105°.4W±0°.1, h0^{km}±1^{km}, ML3.3/72, Error ellipse: s-maj=13.9km s-min=9.1km az=66.0*

ISC 14 21:01:53.1±1.0, 43°.83N±0°.06×105°.32W±0°.06, h0^{km}, n39, σ0ˢ.70/37, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.97	72		Pg	21 02 11.7	-0.1
RSSD	Black Hills	0.97	72	IAML		21 02 16.1	
	155nm,0.3s						
RSSD				IAML		21 02 35.9	
	209nm,0.4s						
K22A	Casper	1.47	217		Pn	21 02 18.7	-2.3
K22A				IAML		21 02 43.0	
	626nm,0.3s						
LAO	LASA Array	2.93	348		Pn	21 02 40.8	-0.1
RLMT	Red Lodge	3.10	296		Pn	21 02 43.6	+0.1
RLMT				IAML		21 03 38.5	
	118nm,0.3s						
RLMT				IAML		21 03 40.7	
	117nm,0.3s						
BW06	Boulder Array	3.27	252		Pn	21 02 45.5	-0.3
BW06				IAML		21 03 34.0	
	86nm,0.3s						
BW06				IAML		21 03 36.0	
	59nm,0.4s						
PD31	Pinedale Array	3.27	252	Pn	Pn	21 02 45.7	-0.1
PDAR	Pinedale Array	3.27	252	Pn	Pn	21 02 45.6	-0.1
	7.3nm,0.3s,baz=69,slow=16,SNR=227						
PDAR				Pg	Pb	21 02 52.8	+0.7
	27nm,0.3s,baz=67,slow=18,SNR=22						
PDAR				Lg	Lg	21 03 32.0	
	12nm,0.3s,baz=68,slow=31,SNR=2.1						
	8.4nm,0.3s						
YNE	Yellowstone No	3.56	291		Pn	21 02 49.9	+0.2
YMP	Mirror Lake Pl	3.59	286		Pn	21 02 50.4	+0.1
HAYD	Hayden	3.61	204		Pn	21 02 51.2	+0.8
HAYD				IAML		21 03 47.1	
	comp=N,55nm,0.4s						
HAYD				IAML		21 03 58.7	
	comp=E,57nm,0.9s						
LKWY	Lake	3.73	283		Pn	21 02 52.0	-0.1
LKWY				IAML		21 04 02.6	
	comp=E,40nm,1.4s						
LKWY				IAML		21 04 10.5	
	comp=E,46nm,1.1s						
OGNE	Ogallala	3.77	139		Pn	21 02 52.5	-0.1
H17A	Grant Village	3.83	280		Pn	21 02 53.0	-0.4
H17A				IAML		21 03 53.9	
	comp=E,34nm,0.3s						
H17A				IAML		21 03 56.9	
	comp=N,43nm,0.3s						
LOHW	Long Hollow	3.83	269		Pn	21 02 53.9	+0.3
MOOW	Moose Ponds	3.93	271		Pn	21 02 55.3	+0.5
YNR	Norris Junctio	3.95	285		Pn	21 02 53.9	-1.3
SNOW	Snow King Moun	3.96	267		Pn	21 02 54.3	-1.0
SNOW				IAML		21 04 03.8	
	comp=N,39nm,0.9s						
SNOW				IAML		21 04 21.1	
	comp=N,48nm,1.3s						
YPP	Pitchstone Pla	3.98	278		Pn	21 02 55.0	-0.6
ISCO	Idaho Springs	4.03	183	Pn	Pn	21 02 56.1	-0.3
ISCO				IAML		21 04 02.0	
	comp=N,24nm,1.1s						
E28A	Huff	4.27	48		Pn	21 02 59.2	-0.2
O20A	White River Ci	4.29	212		Pn	21 02 59.8	+0.1
YHL	Hebgen Lake	4.33	286		Pn	21 02 59.5	-0.9
YHL				IAML		21 04 19.8	
	comp=E,46nm,1.1s						
YHL				IAML		21 04 26.6	
	comp=N,35nm,1.2s						
RDMU	Red Mountain	4.53	226		Pn	21 03 03.7	+0.5
RDMU				IAML		21 04 20.3	
	comp=N,27nm,1.0s						
RDMU				IAML		21 04 24.2	
	comp=E,33nm,1.3s						
DGMT	Dagmar	4.71	9		Pn	21 03 06.6	+1.3
BOZ	Bozeman (W)	4.83	294		Pn	21 03 07.7	+0.6
BOZ				IAML		21 04 33.9	
	comp=E,21nm,1.1s						
BOZ				IAML		21 04 39.5	
	comp=E,21nm,3.0s						
Q24A	Divide	4.86	178	Pn	Pn	21 03 07.1	-0.6
HWUT	Hardware Ranch	5.11	246		Pn	21 03 10.8	-0.2
HWUT				IAML		21 04 41.2	
	comp=E,28nm,1.4s						
BSUT	Blindstream Ca	5.21	233		Pn	21 03 12.2	-0.4
BSUT				IAML		21 04 40.5	
	comp=N,16nm,2.4s						
BSUT				IAML		21 04 58.2	
	comp=E,15nm,2.1s						
EGMT	Eagleton	5.21	325		Pn	21 03 12.0	-0.3
KSCO	Kaye Shedlock’	5.22	156		Pn	21 03 11.4	-1.2
LYMT	Lyon Mountain	5.82	305		Pn	21 03 21.0	+0.1
PV21	Cone Mtn., Par	5.94	209	Pn	Pn	21 03 22.6	+0.1
SDCO	Great Sand Dun	6.08	181	Pn	Pn	21 03 23.9	-0.6
S22A	4UR Ranch, Cre	6.18	191	Pn	Pn	21 03 25.7	-0.2
ECSD	EROS Data Cent	6.30	88		Pn	21 03 26.5	-0.8
I10CA	LAC DU BONNET	8.99	42	I	I	21 57 30.0	
	baz=224,slow=332,SNR=0.4						
ULM	Lac du Bonnet	9.10	42	Pn	Pn	21 04 05.1	-0.4
	comp=E,2.0nm,0.3s,baz=226,slow=14,SNR=13						
ULM				Pg		21 04 37.5	
	comp=E,0.9nm,0.3s,baz=224,slow=12,SNR=4.3						
ULM				Lg	Lg	21 06 36.5	
	comp=E,0.7nm,0.3s,baz=126,slow=22,SNR=3.0						
	comp=E,4.2nm,0.3s						
TXAR	Lajitas Array	14.53	174	Pg	P	21 06 09.5	+43
	baz=354,slow=19,SNR=1.5						
TXAR				Lg	Lg	21 09 14.8	
	baz=344,slow=34,SNR=1.4						

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*CNRM **14** 21:13:07.5, 36°.90N×7°.00W, h88^{km}, ML2.5*

*SFS **14** 21:13:10.4, 36°.56N×7°.34W, h45^{km}, ML2.5/6, ML2.6/6, MLv2.6/6*

*INMG **14** 21:13:10.8±1.6, 36°.60N×7°.38W, h20^{km}±4^{km}, ML1.6, Error ellipse: s-maj=5.0km s-min=3.2km az=75.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Golfo de Cadiz*

*IGIL **14** 21:13:11.5, 36°.59N×7°.37W, h30^{km}, ML1.4*

*MDD **14** 21:13:11.9±0.8, 36°.67N×7°.33W, h46^{km}±25^{km}, mb_Lg2.2/7, Error ellipse: s-maj=8.0km s-min=3.9km az=3.0*

ISC 14 21:13:09.1±1.3, 36°.59N±0°.05×7°.30W±0°.03, h33^{km}±10^{km}, n43, σ1ˢ.12/72, 2C-3D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBDV	Barranco-do-Ve	0.83	322	Pn	Pn	21 13 25.2	+0.8
PBDV	Barranco-do-Ve	0.83	322⇓	eP	Pn	21 13 25.2	+0.8
PBDV				eS	Sn	21 13 35.4	-0.2
PBDV				i IAML		21 13 36.6	
PBDV				i IAML		21 13 36.9	
PVAQ	Vaqueiros	0.88	338⇓	iP	Pn	21 13 26.1	+1.0
PVAQ				eS	Sn	21 13 36.9	0.0
PVAQ				i IAML		21 13 37.1	
PVAQ				i IAML		21 13 37.3	
PVAQ				i IAML		21 13 37.4	
PVAQ	Vaqueiros	0.88	338	P	Pb	21 13 24.7	-1.2
PVAQ	Vaqueiros	0.88	338	S	Sn	21 13 37.6	+0.7
EGRO	El Granado	0.96	351	Pn	Pn	21 13 27.3	+1.1
EGRO	El Granado	0.96	351	P	Pn	21 13 27.3	+1.1
EGRO				S	Sn	21 13 38.9	+0.2
EGRO				i IVmb_Lg		21 13 41.8	
ESPR	Espera	1.19	76	P	Pb	21 13 32.7	+1.5
ESPR				S	Sb	21 13 46.1	-0.1
ESPR				i IVmb_Lg		21 13 46.8	
PCVE	Castro Verde	1.20	331	Pn	Pb	21 13 30.6	-0.6
PCVE				Sn	Sn	21 13 44.7	0.0
PCVE	Castro Verde	1.20	331	eP	Pb	21 13 30.6	-0.6
PCVE				eS	Sn	21 13 45.0	+0.3
PCVE				i IAML		21 13 45.1	
PCVE				i IAML		21 13 45.2	
PCVE				i IAML		21 13 45.4	
EMIN	Mina Concepcio	1.28	23	P	Pb	21 13 31.6	-1.0
EMIN				S	Sn	21 13 46.1	-0.6
EMIN				i IVmb_Lg		21 13 49.5	
MORF	Marmelete	1.30	304	eP	Pb	21 13 31.5	-1.4
MORF				eS	Sn	21 13 46.4	-0.8
MORF				IAML		21 13 47.8	
	comp=N,8.8nm,0.1s						
MORF	Marmelete	1.30	304	eP	Pb	21 13 31.6	-1.4
MORF				eS	Sn	21 13 46.9	-0.4
MORF				i IAML		21 13 47.9	
MORF				i IAML		21 13 48.0	
PFVI	Vila Bisbo	1.34	294	Pn	Pb	21 13 32.0	-1.5
PFVI				Sn	Sn	21 13 47.3	-0.8
PFVI	Vila Bisbo	1.34	294	eP	Pb	21 13 32.3	-1.3
PFVI				eS	Sn	21 13 47.5	-0.7
PFVI				i IAML		21 13 53.9	
PFVI				i IAML		21 13 56.4	
PFVI				i IAML		21 13 59.5	
PFVI	Vila Bisbo	1.34	294	P	Pn	21 13 31.8	+0.4
PFVI	Vila Bisbo	1.34	294	S	Sb	21 13 53.1	+2.6
MESJ	Messejana	1.45	330	eP	Pb	21 13 34.0	-1.5
MESJ				eS	Sn	21 13 50.2	-0.6
MESJ				IAML		21 13 51.6	
	comp=N,3.2nm,0.1s						
MESJ	Messejana	1.45	330⇓	eP	Pb	21 13 34.0	-1.5
MESJ				eS	Sn	21 13 50.6	-0.3
MESJ				i IAML		21 13 52.0	
MESJ				i IAML		21 13 52.0	
MESJ				i IAML		21 13 52.5	
PTEO	Sao Teotonio	1.49	310⇑	eP	Pb	21 13 34.6	-1.5
PTEO				eS	Sn	21 13 51.7	-0.1
PTEO				i IAML		21 13 52.4	
PBEJ	Beja	1.50	343	eP	Pb	21 13 34.7	-1.7
PBAR	Barrancos	1.60	7	Pn	Pb	21 13 36.1	-1.9
PBAR				Sn	Sn	21 13 54.8	+0.3
PBAR	Barrancos	1.60	7	eP	Pb	21 13 36.2	-1.7
PBAR				eS	Sn	21 13 54.9	+0.3
PBAR				i IAML		21 14 01.5	
PBAR				i IAML		21 14 01.5	
PBAR				i IAML		21 14 02.7	
EVO	Evora	2.02	344	Pn	Pn	21 13 42.0	+1.2
EVO				Sn	Sn	21 14 05.1	+0.1
EVO	Evora	2.02	344⇑	eP	Pn	21 13 42.0	+1.2
EVO				eS	Sn	21 14 05.2	+0.1
EVO				i IAML		21 14 05.5	
EVO				i IAML		21 14 05.5	
EVO				i IAML		21 14 05.5	
MOE	Montemor	2.10	337	eP	Pn	21 13 43.2	+1.2
MOE				eS	Sn	21 14 07.4	+0.4
MOE				i IAML		21 14 07.7	
MOE				i IAML		21 14 08.3	
MOE				i IAML		21 14 08.5	
ECAB	El Cabril	2.11	45	Pn	Pn	21 13 42.9	+0.8
ECAB	El Cabril	2.11	45	P	Pn	21 13 42.6	+0.5
ECAB				S	Sn	21 14 05.7	-1.5
ECAB				i IVmb_Lg		21 14 09.6	
EBAD	Badajoz	2.18	6	Pn	Pn	21 13 43.8	+0.8
EBAD	Badajoz	2.18	6	P	Pn	21 13 43.8	+0.8
EBAD				S	Sn	21 14 07.9	-0.9
EBAD				i IVmb_Lg		21 14 14.4	
PESTR	Estremoz	2.29	354	eP	Pn	21 13 45.5	+0.9
PESTR				eS	Sn	21 14 11.5	-0.1
PARRA	Arraiolos	2.30	345	eP	Pn	21 13 45.7	+1.0
PARRA				eS	Sn	21 14 12.2	+0.3
PARRA				i IAML		21 14 12.2	
PARRA				i IAML		21 14 12.2	
PARRA				i IAML		21 14 13.3	
PMTG	Montargil	2.58	344	eP	Pn	21 13 49.6	+1.0
PMTG				eS	Sn	21 14 19.1	+0.2
PMTG				i IAML		21 14 20.1	
PMTG				i IAML		21 14 20.3	
PMTG				i IAML		21 14 20.9	
EADA	Adamuz	2.68	53	S	Sn	21 14 20.4	-0.9
EADA				i IVmb_Lg		21 14 23.5	
PMRV	Marv??o	2.84	359	eP	Pn	21 13 53.0	+0.9
PMRV				eS	Sn	21 14 24.7	-0.5
PMRV				i IAML		21 14 25.2	
PMRV				i IAML		21 14 26.0	
PMRV				i IAML		21 14 26.4	
PMAFR	Mafra	2.84	327	eS	Sn	21 14 25.7	+0.5
PSARD	Sardoal	3.08	348	eP	Pn	21 13 56.6	+1.2
PSARD				eS	Sn	21 14 30.5	-0.8
PSARD				i IAML		21 14 31.0	
PSARD				i IAML		21 14 32.0	
PSARD				i IAML		21 14 32.0	
PSBE	So Bento	3.15	338	eP	Pn	21 13 57.9	+1.5
PCBR	Castelo Branco	3.25	358	eP	Pn	21 13 58.8	+1.0
PCBR				eS	Sn	21 14 34.0	-1.3
PCBR				i IAML		21 14 35.6	
PCBR				i IAML		21 14 35.6	
EPLA	Plasencia	3.60	15	P	Pn	21 14 04.5	+1.9
EPLA				S	Sn	21 14 42.9	-1.2
PAB	San Pablo	3.76	37	P	Pn	21 14 06.2	+1.4
PAB				S	Sn	21 14 44.7	-3.4
MD31	MD31	4.26	150	P	Pn	21 14 12.4	+0.6
MDT	Midelt	4.37	149	P	Pn	21 14 13.5	+0.3

WEL 14 21:17:15.1±1.1, 33°S±13°×17°9E±1°8, h364^{km}±22^{km}, M4.0/5, mB4.8/1, ML3.7/7, MLv4.0/5, Mw(mB)4.0/1, Error ellipse: s-maj=23.7km s-min=17.3km az=87.0, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.15	190	P	Pn	21 18 27.2	+0.9
MXZ				S	S	21 19 24.9	+1.0
WMGZ	Waiomatatini S	4.39	188	P	Pn	21 18 29.1	+0.3
WMGZ				S	S	21 19 29.3	+0.9
HAZ	Te Kaha	4.43	195	P	Pn	21 18 28.9	-0.3
HAZ				S	S	21 19 30.6	+1.4

PKGZ	Pakihiroa	4.48	192	S	S	21 19 28.9	-1.3
PUZ	Puketiti	4.66	189	P	Pn	21 18 30.6	-1.0
PUZ				S	S	21 19 32.8	-0.8
RUGZ	Raukumara Rang	4.66	195	P	Pn	21 18 31.7	0.0
RUGZ				S	S	21 19 34.2	+0.4
TWGZ	Tauwhareparae	4.80	192	S	S	21 19 39.1	+2.7
OUZ	Omahuta	4.97	248	P	Pn	21 18 34.5	-0.5
MWZ	Matawai	5.04	195	P	Pn	21 18 35.9	+0.1
MWZ				S	S	21 19 41.4	+0.3
CNGZ	Carnagh Statio	5.07	189	P	Pn	21 18 35.9	0.0
URZ	Urewera	5.08	199	P	Pn	21 18 35.4	-0.7
URZ				S	S	21 19 42.1	+0.4
TKGZ	Te Karaka	5.08	192	P	Pn	21 18 37.0	+0.9
TKGZ				S	S	21 19 42.5	+0.7
RIGZ	Rimuhau	5.36	192	P	Pn	21 18 37.6	-1.5
RIGZ				S	S	21 19 47.3	-0.1
MUGZ	Murupara	5.38	201	P	Pn	21 18 39.8	+0.5
MUGZ				S	S	21 19 48.9	+1.1
RAHZ	Arahi	5.70	197	P	Pn	21 18 44.5	+1.6
RAHZ				S	S	21 19 55.3	+1.0
MHGZ	Mahia Peninsul	5.77	190	P	Pn	21 18 44.8	+1.1
MHGZ				S	S	21 19 54.3	-1.3
BKZ	Black Stump Fm	6.09	200	P	Pn	21 18 47.5	+0.1
BFZ	Birch Farm	7.58	197	P	Pn	21 19 04.4	0.0

IDC 14 21:21:54.7±3.0, 30°.68S×177°.58W, h0^{km}, mb3.5/2, mbtmp3.5/3, ML3.0/1, Error ellipse: s-maj=73.9km s-min=45.4km az=125.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	8.74	209	Pn	Pn	21 24 02.1	-0.2
	0.2nm,0.3s,baz=356,slow=23,SNR=1.2						
URZ				Sn	Sn	21 25 21.5	-20
	0.5nm,0.3s,baz=9.9,slow=21,SNR=1.6						
	2.3nm,0.7s						
ASAR	Alice Springs	43.45	267	P	P	21 30 00.1	+0.4
	0.1nm,0.3s,baz=107,slow=7.3,SNR=6.9						
	0.1nm,0.3s						
WRA	Warramunga Arr	44.47	272	P	P	21 30 07.3	-0.6
	0.5nm,0.4s,baz=110,slow=8.0,SNR=11						
	0.5nm,0.4s						
FINES	FINESS Array B	145.53	340	PKPbc	PKPdf	21 41 33.4	-0.7
	1.8nm,0.6s,baz=58,slow=4.4,SNR=12						

KRSC 14 21:26:32.5±1.9, 53°.83N×164°.50E, h61^{km}±23^{km}, Ml3.9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	1.62	31	eP	Pn	21 27 00.8	+2.1
BKI				eS	Sn	21 27 19.0	+0.4
KBTR	Krutoberegovo	2.57	339	eP	Pn	21 27 12.8	+1.2
KBTR				eS	Sn	21 27 42.7	+1.1
KBG	Krutoberegovo	2.64	338	eP	Pn	21 27 14.1	+1.6
KBG				eS	Sn	21 27 44.9	+1.6
KZV	Kizimen	2.77	299	eP	Pn	21 27 17.8	+3.3
KZV				eS	Sn	21 27 50.4	+3.6
SPN	Mys Shipunski	2.77	256	eP	Pn	21 27 17.0	+2.6
KII	Karymskiy	2.99	276	eP	Pn	21 27 20.4	+3.0
KMNR	Kamenistaya	3.13	310	eP	Pn	21 27 23.6	+4.3
BZWR	Bezymyannyi-We	3.15	314	eP	Pn	21 27 25.1	+5.5
NLC	Nalytchevo	3.15	260	eP	Pn	21 27 22.2	+2.7
KIRR	Kirishev	3.20	313	eP	Pn	21 27 26.6	+6.2
KLY	Klyuchi	3.33	320	eP	Pn	21 27 24.2	+2.3
SDLR	Sedlovina	3.39	263	eP	Pn	21 27 26.2	+3.2
SRKR	Sorokina	3.41	327	eP	Pn	21 27 26.3	+3.1
UGLR	Uglovaya	3.44	262	eP	Pn	21 27 27.2	+3.5
SMAR	Somma	3.44	263	eP	Pn	21 27 27.0	+3.2
KRER	Koryakskii	3.47	264	eP	Pn	21 27 27.5	+3.5
AVH	Avacha	3.48	263	eP	Pn	21 27 27.7	+3.6
KRX	Arik	3.52	265	eP	Pn	21 27 27.9	+3.2
DALK	Dalny	3.53	259	eP	Pn	21 27 28.3	+3.6
KOK	Koryaka	3.54	264	eP	Pn	21 27 28.3	+3.4
RUS	Russkaya	3.87	251	eP	Pn	21 27 32.1	+2.8
KRMR	Karymshinskiy	3.95	258	eP	Pn	21 27 33.7	+3.3
KRMR				eS	Sn	21 28 18.4	+3.0
MTVR	Mutnovka	4.03	253	eP	Pn	21 27 34.9	+3.1
MTVR				eS	Sn	21 28 18.8	+1.0
GRL	Gorelyy	4.07	254	eP	Pn	21 27 36.2	+3.9
ASAK	Asacha	4.23	253	eP	Pn	21 27 38.2	+3.8
KDTR	Khodutka, Kamc	4.39	245	eS	Sn	21 28 26.1	-0.1
APC	Apacha	4.49	261	eP	Pn	21 27 42.3	+4.5

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*NEIC **14** 22:09:41.4±1.6, 3°.8N±0°.1×122°.5E±0°.2, h571^{km}±9^{km}, mb4.1/17, Error ellipse: s-maj=25.9km s-min=13.5km az=60.0*

*IDC **14** 22:09:42.1±1.4, 3°.77N×122°.54E, h588^{km}±16^{km}, mb3.2/11, mbtmp4.3/12, Error ellipse: s-maj=42.5km s-min=8.3km az=65.0*

*DJA **14** 22:09:42.0±0.5, 4°N±5°×12°3E±°, h552^{km}±4^{km}, M4.1/13, mb4.1/12, mB4.6/7, MLv4.3/13, Mw(mB)3.9/7*

ISC 14 22:09:40.7±0.5, 3°.77N±0°.07×122°.5E±0°.1, h571^{km}, n56, σ1^{s}.21/70, mb4.0/20, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	2.99	92	P	P	22 10 58.0	+0.5
TOLI2	Tolitoli	3.17	214	P	P	22 10 59.0	+0.5
MRSI	Marisa	3.33	190	P	P	22 11 00.2	+0.6
MRSI				S	S	22 12 03.6	-0.1
MPSI	Mapaga	4.31	218	P	P	22 11 06.4	-0.1
APSI	Ampana	4.74	191	P	P	22 11 10.0	+0.2
LUWI	Luwuk	4.79	177	P	P	22 11 09.9	-0.3
LUWI	Luwuk	4.79	177	P	P	22 11 10.5	+0.3
PCI	Palu	5.37	210	P	P	22 11 14.6	-0.4
GAMI	Galela, Maluku	5.59	110	P	P	22 11 16.6	-0.3
TNTI	Ternate	5.68	122	P	P	22 11 17.4	-0.1
TNTI	Ternate	5.68	122	P	P	22 11 17.5	-0.1
KKM	Kota Kinabalu	6.69	290	P	P	22 11 26.7	-0.1
KKM	Kota Kinabalu	6.69	290	P	P	22 11 27.0	+0.2
	0.1nm24nm,0.8s						
SANI	Sanana	6.74	149	P	P	22 11 25.8	-1.4
	0.2nm1µm21nm,0.7s						
NLAI	Namlea	8.33	147	P	P	22 11 43.8	+1.4
	922nm70nm,0.7s						
KRAI	Karang Ratu	9.16	140	P	P	22 11 53.8	+3.1
	23nm,0.8s						
MSAI	Masohi	9.53	138	P	P	22 11 55.4	+1.0
	39nm,0.4s						
FAKI	Fak Fak	11.77	124	P	P	22 12 18.0	+0.9
FAKI	Fak Fak	11.77	124	P	P	22 12 18.5	+1.4
EDFI	Ende, Flores	12.47	184	P	P	22 12 25.5	+1.1
BATI	Baumata	13.93	175	P	P	22 12 40.5	+1.2
	16nm,0.4s,baz=65,slow=7.2,SNR=3.0						
BATI				S	S	22 15 07.6	+1.6
	7.6nm,0.5s,baz=227,slow=23,SNR=1.5						
BATI	Baumata	13.93	175	P	P	22 12 40.5	+1.2
	25nm,0.8s						
MTN	Manton Dam	18.59	153	P	P	22 13 23.2	+0.1
MTN				IAmb	IAmb	22 13 48.0	
	comp=Z,12nm,1.1s						
WB0	Warramunga Arr	26.14	154	P	P	22 14 30.3	-0.2
WRA	Warramunga Arr	26.27	154	P	P	22 14 31.4	-0.4
	comp=Z,2.3nm,0.4s,baz=337,slow=9.4,SNR=59						
WRA				PcP	PcP	22 17 38.3	-0.5
	comp=Z,0.3nm,0.5s,baz=294,slow=6.5,SNR=1.8						
WRA				S	S	22 18 19.1	-5.8
	comp=Z,0.6nm,0.7s,baz=337,slow=16,SNR=2.2						
WRA				ScP	ScP	22 20 23.6	-1.5
	comp=Z,0.2nm,0.6s,baz=340,slow=3.0,SNR=4.5						
	comp=Z,2.3nm,0.4s						
CMAR	Chiang Mai Arr	27.30	304	P	P	22 14 41.8	+1.0
	comp=Z,0.9nm,0.3s,baz=122,slow=7.7,SNR=6.3						
	comp=Z,0.9nm,0.3s						
AS31	Alice Springs	29.44	158	P	P	22 14 59.8	+0.5
AS31				IAmb	IAmb	22 15 00.6	
	comp=Z,0.8nm,0.6s						
ASAR	Alice Springs	29.44	158	P	P	22 14 59.9	+0.6
	comp=Z,1.5nm,0.5s,baz=340,slow=7.1,SNR=47						
ASAR				PcP	PcP	22 17 46.8	0.0
	comp=Z,0.2nm,0.8s,baz=335,slow=2.3,SNR=4.3						
ASAR				S	S	22 19 13.2	-0.9
	comp=Z,0.4nm,0.6s,baz=335,slow=15,SNR=8.1						
ASAR				ScP	ScP	22 20 33.5	-1.5
	comp=Z,0.5nm,0.6s,baz=341,slow=3.1,SNR=8.3						
	comp=Z,1.5nm,0.5s						
ASAR	Alice Springs	29.44	158	P	P	22 15 00.2	+0.9
ASAR				PcP	PcP	22 17 46.7	0.0
ASAR					ScP	22 20 33.1	-1.9
MORW	Morawa	33.24	190	P	P	22 15 31.9	+0.2
MORW				IAmb	IAmb	22 15 45.0	
	comp=Z,14nm,1.4s						
FORT	Forrest	34.76	172	P	P	22 15 44.4	+0.1
FORT				IAmb	IAmb	22 16 06.6	
	comp=Z,3.9nm,0.8s						
SHL	Shillong	36.54	309	P	P	22 15 59.4	0.0
SHL				IAmb	IAmb	22 16 00.4	
	comp=Z,7.4nm,0.7s						
BBOO	Buckleboo	38.58	162	P	P	22 16 16.3	+0.7
STKA	Stephens Creek	39.82	154	P	P	22 16 26.6	+1.0
	comp=Z,1.5nm,0.3s,baz=336,slow=8.5,SNR=7.9						
	comp=Z,1.5nm,0.3s						
GTA	Gaotai	41.03	333	eP	P	22 16 37.6	+2.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
EVN	Everest	41.65	309	P	P	22 16 41.5	+0.5
ARMA	Armidale	43.92	143	P	P	22 16 58.7	+0.7
ARMA				IAmb	IAmb	22 17 02.5	
	comp=Z,6.0nm,1.1s						
HILR	Hailar Array B	45.68	357	P	P	22 17 11.7	+0.6
	comp=Z,5.2nm,0.4s,baz=176,slow=11,SNR=3.9						
SONM	Songino Array	46.04	345	P	P	22 17 14.5	+0.5
	comp=Z,0.9nm,0.7s,baz=160,slow=8.1,SNR=7.3						
	comp=Z,0.9nm,0.7s						
SONM	Songino Array	46.04	345	P	P	22 17 13.8	-0.1
CAN	Canberra	46.14	150	P	P	22 17 16.1	+1.3
MKAR	Makanchi Array	55.19	327	P	P	22 18 20.9	+0.6
	comp=Z,1.0nm,0.3s,baz=124,slow=8.1,SNR=45						
MKAR				PcP	PcP	22 19 12.2	-0.4
	comp=Z,0.5nm,0.5s,baz=118,slow=4.4,SNR=5.1						
MKAR				ScP	ScP	22 22 15.6	-1.4
	comp=Z,0.3nm,0.6s,baz=132,slow=3.9,SNR=2.9						
	comp=Z,1.0nm,0.3s						
MKAR	Makanchi Array	55.19	327	P	P	22 18 20.6	+0.3
MKAR					PcP	22 19 12.2	-0.4
MKAR					ScP	22 22 15.2	-1.8
MAKZ	Makanchi	55.37	327	P	P	22 18 21.9	+0.3
ZALV	Zalesovo Beam	58.71	335	P	P	22 18 43.5	-0.6
	comp=Z,0.6nm,0.3s,baz=141,slow=6.7,SNR=5.1						
	comp=Z,0.6nm,0.3s						
KURBB	Kurchatov Arra	59.50	329	P	P	22 18 49.3	-0.2
	comp=Z,1.0nm,0.6s,baz=128,slow=6.0,SNR=7.4						
	comp=Z,1.0nm,0.6s						
KURK	Kurchatov	59.51	329	P	P	22 18 49.5	0.0
KURK				IAmb	IAmb	22 18 50.4	
	comp=Z,2.9nm,0.5s						
KKAR	Karatay Array	60.38	318	P	P	22 18 54.5	-1.0
BVAR	Borovoye Array	65.04	328	P	P	22 19 24.9	-0.3
	comp=Z,0.4nm,0.3s,baz=130,slow=7.1,SNR=9.1						
	comp=Z,0.4nm,0.3s						
BORK	Borovoye	65.09	328	P	P	22 19 25.2	-0.4
BKZ	Black Stump Fm	65.46	136	P	P	22 19 28.9	+0.7
BKZ				IAmb	IAmb	22 19 51.9	
	comp=Z,14nm,1.3s						
AB31	Akbulak array	69.49	322	P	P	22 19 52.3	-0.2
ABKAR	Akbulak array	69.49	322	P	P	22 19 52.0	-0.5
SPITS	Spitsbergen Ar	89.62	349	P	P	22 21 36.8	-0.9
	comp=Z,5.1nm,0.9s,baz=108,slow=9.3,SNR=9.8						
	comp=Z,5.1nm,0.9s						
FINES	FINESS Array B	89.80	331	P	P	22 21 37.4	-1.4
	comp=Z,6.1nm,1.1s,baz=251,slow=4.3,SNR=1.9						
	comp=Z,6.1nm,1.1s						
TORD	Torodi Ar. Bea	118.92	287	PKP	PKPdf	22 27 23.9	-2.1
	comp=Z,0.8nm,1.1s,baz=45,slow=2.0,SNR=2.4						

IDC 14 22:12:11.9±1.9, 26°.87N×142°.39E, h0^{km}, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=60.7km s-min=11.4km az=66.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	0.29	321	Pn	Pn	22 12 22.9	-0.6
	193nm,0.3s,baz=102,slow=23,SNR=85						
JCJ				Sn	Sb	22 12 32.1	+6.6
	152nm,0.3s,baz=296,slow=22,SNR=7.6						
BATI	Baumata	41.09	209	P	P	22 19 57.7	0.0
	21nm,0.5s,baz=68,slow=5.4,SNR=4.6						
WRA	Warramunga Arr	47.18	190	P	P	22 20 47.0	+0.5
	0.8nm,0.6s,baz=12,slow=8.7,SNR=7.6						
	0.8nm,0.6s						
ASAR	Alice Springs	50.90	190	P	P	22 21 14.3	-0.7
	0.1nm,0.3s,baz=8.3,slow=6.4,SNR=1.8						
	0.1nm,0.3s						
FINES	FINESS Array B	78.23	334	P	P	22 24 15.1	+1.9
	1.4nm,0.8s,baz=57,slow=5.1,SNR=7.9						
	1.4nm,0.8s						

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*PDG **14** 22:25:55.1±0.2, 41°.49N×19°.55E, h16^{km}±1^{km}, MD3.0/2, ML2.9/7, Error ellipse: s-maj=0.7km s-min=0.7km az=0.0*

*SKO **14** 22:25:55.0, 41°.49N×19°.49E, h3^{km}, ML2.7*

*THE **14** 22:25:56.3, 42°N±4°×2°0E±°, h12^{km}, M2.9/13, MLh2.9/13*

*IDC **14** 22:26:09.7±31.0, 42°.94N×21°.93E, h0^{km}, mb3.5/3, mbtmp3.6/4, ML3.1/1, Error ellipse: s-maj=552.0km s-min=64.1km az=51.0*

ISC 14 22:25:54.6±1.0, 41°.47N±0°.02×19°.52E±0°.03, h14^{km}±7^{km}, n51, σ1^{s}.29/70, mb3.6/3, 9C-14D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.29	115	⇓iPg	Pg	22 26 00.4	-0.2
TIR				iSg	Sg	22 26 05.2	+0.5
ULC	Ulcinj	0.54	338	⇑iPg	Pg	22 26 04.9	-0.2
ULC				iSg	Sb	22 26 14.1	+0.7
DRME	Dracevica, Mon	0.76	341	ePg	Pg	22 26 09.4	+0.1
BUM	Brajici-Budva	0.95	331	⇑iPg	Pg	22 26 13.0	0.0
BUM				iSg	Sn	22 26 28.2	+1.2
PDG	Podgorica	0.98	349	⇑P	Pg	22 26 13.8	+0.3
PDG				⇓S	Sn	22 26 28.7	+1.2
PDG	Podgorica	0.98	349	⇑iPg	Pg	22 26 12.9	-0.6
PDG				iSg	Sn	22 26 29.2	+1.6
VLO	Vlora	1.00	181	P	Pn	22 26 16.9	+2.8
VLO				S	Sn	22 26 30.3	+2.4
OHR	Ohrid	1.03	110	iPg	Pg	22 26 13.4	-1.0
OHR				iSg	Sn	22 26 29.6	+0.8
OHR				eLg	Lg	22 26 29.9	
	comp=N,129nm,0.5s						
OHR				eLg	Lg	22 26 30.5	
	comp=E,132nm,0.5s						
PVY	Plav	1.17	16	⇓iPg	Pb	22 26 16.0	-0.7
PVY				iSg	Sn	22 26 34.4	+1.9
HCY	Herceg Novi	1.24	322	⇓iPg	Pg	22 26 18.8	+0.3
HCY				iSg	Sn	22 26 37.3	+3.3
KBN	Korca	1.28	131	P	Pn	22 26 18.9	+0.9
KBN				S	Sn	22 26 37.7	+2.7
KOME	Kolasin	1.38	360	ePg	Pb	22 26 20.8	+0.6
SKO	Skopje	1.52	70	iPg	Pb	22 26 23.1	+0.5
SKO				iSg	Sg	22 26 43.3	-0.4
NEST	Nestorio	1.57	132	P	Pb	22 26 24.0	+0.6
NEST				S	Sg	22 26 45.8	+0.8
BRY	Bratogost	1.61	333	⇓iPn	Pb	22 26 24.4	+0.3
BRY				iSn	Sb	22 26 45.6	+1.3
PENT	Pentalofos	1.77	135	P	Pb	22 26 27.0	+0.1
PENT				S	Sb	22 26 50.4	+1.5
PLE	Pljevlja	1.86	357	⇓iPn	Pn	22 26 27.9	+1.8
PLE				iSn	Sb	22 26 51.8	+0.2
IGT	Igoumenitsa	2.03	162	P	Pn	22 26 29.5	+1.2
IGT				S	Sn	22 26 55.2	+1.7
KPRO	Kipourio	2.06	137	P	Pb	22 26 31.3	-0.5
KPRO				S	Sn	22 26 56.5	+2.2
KZN	Kozani	2.06	123	P	Pn	22 26 30.4	+1.5
JAN	Janina	2.08	150	P	Pb	22 26 31.5	-0.5
BARS	Barje	2.17	51	iPn	Pn	22 26 31.6	+1.3
GRG	Griva	2.23	102	P	Pn	22 26 31.6	+0.4
GRG				S	Sn	22 26 59.6	+1.0
GRG	Griva	2.23	102	iPn	Pn	22 26 32.4	+1.2
MATE	Matera	2.28	250	⇓P	Pn	22 26 31.5	-0.2
BOVS	Bovan	2.70	36	⇓P	Pn	22 26 38.7	+1.2
BOVS				⇑S	Sn	22 27 11.4	+1.3
TYRN	Tyrnavos	2.71	129	P	Pn	22 26 39.1	+1.4
KKB	Krupnik	2.73	81	P	Pn	22 26 38.6	+0.7
KKB	Krupnik	2.73	81	iPn	Pn	22 26 39.3	+1.3
THE	Thessaloniki	2.74	107	iPn	Pn	22 26 38.6	+0.5
NYDR	Nydri-Lefkada	2.90	161	P	Pn	22 26 40.4	+0.2
EVGI	Lefkada island	2.98	163	P	Pn	22 26 41.6	+0.2
VTS	Vitosha	3.00	66	P	Pn	22 26 42.7	+1.0
SRS	Serrai	3.09	95	P	Pn	22 26 43.7	+0.8
SRS	Serrai	3.09	95	iPn	Pn	22 26 43.6	+0.8
TIP	Timpagrande	3.11	224	⇓P	Pn	22 26 42.3	-1.0
PLG	Polygyros	3.17	109	P	Pn	22 26 44.7	+0.7
BLKB	Belogradchik	3.17	46	⇑S	Sn	22 27 23.7	+1.9
MMB	Musomishta	3.18	87	iPn	Pn	22 26 45.6	+1.4
MDVR	Moldovita	3.68	25	⇑P	Pn	22 26 52.0	+0.9
HERR	Herculane	4.01	31	⇓P	Pn	22 26 56.5	+0.8
BZS	Buzias	4.42	19	⇓P	Pn	22 27 01.8	+0.7
GZR	Gura Zlata	4.58	30	⇑P	Pn	22 27 04.2	+0.7
MORH	Mrgy, Hungar	4.79	353	⇓P	Pn	22 27 06.8	+0.6
SIRR	Siria	5.04	17	⇓P	Pn	22 27 10.2	+0.5
ARR	Arges	5.39	42	⇑P	Pn	22 27 15.5	+1.0
DRGR		5.80	22	⇓P	Pn	22 27 20.5	+0.4
FINES	FINESS Array B	20.40	9	P	P	22 30 29.1	-1.6
	comp=E,0.2nm,0.3s,baz=188,slow=9.6,SNR=7.7						
	comp=E,6.3nm,1.1s						
BVAR	Borovoye Array	35.69	53	P	P	22 32 48.5	-3.7
	comp=E,0.2nm,0.5s,baz=262,slow=5.2,SNR=1.5						
	comp=E,0.2nm,0.5s						
ZALV	Zalesovo Beam	44.13	50	P	P	22 34 00.9	-1.3
	comp=E,0.4nm,0.4s,baz=265,slow=8.5,SNR=2.4						
	comp=E,0.4nm,0.4s						
MKAR	Makanchi Array	44.31	61	P	P	22 34 03.0	-0.8
	comp=E,0.5nm,0.6s,baz=277,slow=7.4,SNR=9.9						
	comp=E,0.5nm,0.6s						

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*NEIC **14** 22:34:44.9±1.7, 3°.73N±0°.07×122°.44E±0°.08, h579^{km}±6^{km}, mb4.4/65, Error ellipse: s-maj=12.7km s-min=9.4km az=126.0*

*DJA **14** 22:34:44.0±0.2, 4°N±3°×12°3E±°, h570^{km}±3^{km}, M4.4/45, mb4.4/45, mB4.9/12, MLv4.7/15, Mw(mB)4.2/12*

*IDC **14** 22:34:44.8±0.8, 3°.72N×122°.54E, h590^{km}±10^{km}, mb3.4/21, mbtmp4.3/22, Error ellipse: s-maj=20.9km s-min=6.6km az=68.0*

ISC 14 22:34:44.3±0.5, 3°.70N±0°.05×122°.44E±0°.06, h581^{km}±6^{km}, n176, σ1^{s}.07/195, mb4.3/60, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOLI2	Tolitoli	3.06	213		P	22 36 01.9	-0.4
TOLI2	Tolitoli	3.06	213	P	P	22 36 02.2	-0.1
TOLI2	Tolitoli	3.06	213	S	S	22 37 04.4	-1.3
GTOI	Gorontalo	3.10	169	P	P	22 36 00.9	-1.7
MRSI	Marisa	3.24	189	P	P	22 36 03.4	-0.1
MPSI	Mapaga	4.20	217	P	P	22 36 09.6	-0.3
DAV	Davao City (W)	4.58	43	P	P	22 36 13.7	+1.0
	103nm,0.3s,baz=225,slow=1.4,SNR=9.4						
DAV				S	S	22 37 25.8	+0.9
	73nm,0.5s,baz=217,slow=21,SNR=6.0						
APSI	Ampana	4.65	190	P	P	22 36 13.1	-0.2
LUWI	Luwuk	4.73	176		P	22 36 12.0	-2.0
LUWI	Luwuk	4.73	176	P	P	22 36 13.3	-0.6
LUWI	Luwuk	4.73	176	S	S	22 37 24.2	-2.7
LUWI	Luwuk	4.73	176	P	P	22 36 12.9	-1.0
TARAI	Tarakan	4.87	266	P	P	22 36 14.5	-0.6
PCI	Palu	5.26	210	P	P	22 36 17.9	-0.4
GAMI	Galela, Maluku	5.66	109	P	P	22 36 19.3	-2.3
TNTI	Ternate	5.72	120		P	22 36 20.1	-2.0
TNTI	Ternate	5.72	120	P	P	22 36 20.3	-1.9
	0.5nm2µm134nm,0.9s						
KKM	Kota Kinabalu	6.62	291		P	22 36 29.4	-0.9
KKM	Kota Kinabalu	6.62	291	P	P	22 36 30.1	-0.1
KKM	Kota Kinabalu	6.62	291	P	P	22 36 29.6	-0.6
	0.4nm97nm,0.8s						
SANI	Sanana	6.73	148	P	P	22 36 28.5	-2.6
SANI	Sanana	6.73	148	P	P	22 36 28.5	-2.6
	0.4nm2µm81nm,0.6s						
TTSI	Tana Toraja	7.20	201	P	P	22 36 37.0	+1.6
SPSI	Sidrap Palu	8.07	199	P	P	22 36 45.3	+1.5
NLAI	Namlea	8.32	146	P	P	22 36 47.6	+1.4
BNSI	Bone	8.38	196	P	P	22 36 48.3	+1.5
KRAI	Karang Ratu	9.17	139	P	P	22 36 56.2	+1.6
	109nm,0.8s						
AAI	Ambon	9.33	142	P	P	22 36 56.5	+0.4
	67nm,0.9s						
MSAI	Masohi	9.55	137	P	P	22 36 59.3	+1.0
SWI	Sorong	9.92	117	P	P	22 37 01.5	-0.5
	45nm,0.9s						
SBUM	Sibu	10.28	263		P	22 37 06.6	+1.0
SBUM	Sibu	10.28	263	P	P	22 37 07.3	+1.7
SBUM	Sibu	10.28	263	P	P	22 37 07.1	+1.5
PKKI	Palangkaraya	10.32	235	P	P	22 37 06.4	+0.4
	95nm,0.4s						
BNDI	Bandanaira	11.07	138	P	P	22 37 13.4	-0.2
FAKI	Fak Fak	11.81	124		P	22 37 20.7	-0.5
FAKI	Fak Fak	11.81	124	P	P	22 37 20.3	-0.9
	25nm,0.8s						
LBFI	Labuhan Bajo,	12.37	192	P	P	22 37 28.9	+2.1
	26nm,0.7s						
EDFI	Ende, Flores	12.39	183	P	P	22 37 29.2	+2.0
	20nm,0.8s						
PLAI	Plampang	13.29	200	P	P	22 37 36.6	+0.3
SOEI	Soe	13.49	172	P	P	22 37 38.7	+0.2
SOEI	Soe	13.49	172	P	P	22 37 40.1	+1.6
	15nm,0.8s						
WBSI	Waikabubak, Su	13.60	193	P	P	22 37 40.3	+0.8
	14nm,0.9s						
KLNI	Mataram	13.60	208	P	P	22 37 41.6	+2.1
	9.9nm,0.7s						
BATI	Baumata	13.87	175	P	P	22 37 42.7	+0.4
	67nm,0.4s,baz=61,slow=1.6,SNR=18						
BATI				S	S	22 40 09.2	+1.0
	24nm,0.6s,baz=216,slow=22,SNR=17						
BATI	Baumata	13.87	175	P	P	22 37 42.5	+0.2
	1µm94nm,0.7s						
BAKI	Biak	14.50	109	P	P	22 37 48.7	+0.2
	47nm,0.7s						
JAGI	Jajag, Banyuwa	14.65	214	P	P	22 37 50.2	+0.4
	15nm,0.8s						
DLV	Lat	16.05	301	P	P	22 38 02.4	-1.0
TPI	Tanjungpandan	16.11	247	P	P	22 38 04.7	+1.0
	27nm,1.1s						
SMPI	Sarmi	17.22	109	P	P	22 38 15.0	+1.2
	23nm,0.6s						
KPJI	Karang Pucung	17.37	231	P	P	22 38 17.2	+2.0
	21nm,1.2s						
DRS	Darwin Rock St	18.10	152	P	P	22 38 22.6	+0.8
TPRI	Tanjung Pinang	18.11	262	P	P	22 38 23.3	+1.4
	52nm,0.6s						
BBJI	Bungbulang	18.46	233	P	P	22 38 26.3	+1.1
	8.0nm,0.8s						
MTN	Manton Dam	18.57	152		P	22 38 26.3	+0.2
MTN				IAmb	IAmb	22 38 30.6	
	comp=Z,9.0nm,0.5s						
MYKOM	Kota Tinggi	18.66	265	P	P	22 38 28.3	+1.3
	comp=Z,21nm,0.7s						
MDSI	Maura Dua	19.97	246	P	P	22 38 40.6	+1.7
KNRA	Kununurra	20.25	162	P	P	22 38 41.7	+0.4
KNRA				IAmb	IAmb	22 38 43.3	
	comp=Z,12nm,0.7s						
IPM	Ipoh	21.37	273	P	P	22 38 51.4	0.0
KULM	Kulim	21.77	275	P	P	22 38 55.1	0.0
KULM				IAmb	IAmb	22 39 14.8	
	comp=Z,31nm,1.4s						
KULM	Kulim	21.77	275	P	P	22 38 55.4	+0.3
	comp=Z,17nm,2.1s						
SISI	Saibi	23.86	258	P	P	22 39 14.0	+0.4
	comp=Z,43nm,0.7s						
KCSI	Kotacane, Aceh	24.62	270	P	P	22 39 19.9	-0.4
	comp=Z,10nm,0.7s						
MBWA	Marble Bar	24.85	186	P	P	22 39 21.9	-0.4
MBWA				IAmb	IAmb	22 39 22.7	
	comp=Z,27nm,1.2s						
GSI	Gunungsitoli	24.95	265		P	22 39 22.8	-0.5
GSI	Gunungsitoli	24.95	265	P	P	22 39 22.9	-0.4
	comp=Z,32nm,0.8s						
SLVN	Son La	25.13	316	P	P	22 39 26.0	+1.2
TPTI		25.21	270	P	P	22 39 25.2	-0.4
	comp=Z,10nm,0.9s						
WB0	Warramunga Arr	26.12	154		P	22 39 33.0	-0.4
WRAB	Tennant Creek	26.25	154	P	P	22 39 34.2	-0.4
WRA	Warramunga Arr	26.25	154	P	P	22 39 34.1	-0.5
	comp=Z,14nm,0.6s,baz=337,slow=9.5,SNR=142						
WRA				PcP	PcP	22 42 41.1	-0.2
	comp=Z,1.0nm,0.5s,baz=323,slow=3.2,SNR=7.0						
WRA				S	S	22 43 23.6	-3.6
	comp=Z,2.5nm,0.7s,baz=340,slow=16,SNR=7.2						
WRA				ScP	ScP	22 45 26.5	-0.3
	comp=Z,1.9nm,0.5s,baz=340,slow=3.1,SNR=15						
	comp=Z,14nm,0.6s						
WRA	Warramunga Arr	26.25	154		P	22 39 33.0	-1.6
WRA					ScP	22 45 26.7	-0.1
COEN	Coen	27.04	131	P	P	22 39 40.4	-1.2
COEN				IAmb	IAmb	22 39 49.2	
	comp=Z,21nm,1.4s						
CM31	Chiang Mai Arr	27.26	304	P	P	22 39 43.7	+0.2
CM31				IAmb	IAmb	22 39 45.6	
	comp=Z,4.9nm,0.8s						

CMAR	Chiang Mai Arr	27.26	304	P	P	22 39 44.5	+1.0
	comp=Z,2.9nm,0.7s,baz=128,slow=7.3,SNR=26						
CMAR				ScP	ScP	22 45 30.6	+0.7
	comp=Z,1.1nm,0.3s,baz=118,slow=2.9,SNR=5.7						
	comp=Z,2.9nm,0.7s						
CMAR	Chiang Mai Arr	27.26	304	P	P	22 39 44.0	+0.5
CHTO	Chiang Mai	27.44	305		P	22 39 45.5	+0.4
CHTO				IAmb	IAmb	22 39 46.7	
	comp=Z,10.0nm,0.8s						
CHTO	Chiang Mai	27.44	305	P	P	22 39 46.1	+1.0
CHTO	Chiang Mai	27.44	305	P	P	22 39 45.6	+0.5
	comp=Z,14nm,0.8s						
PMG	Port Moresby	27.87	118	P	P	22 39 48.2	-0.6
PMG				IAmb	IAmb	22 39 49.4	
	comp=Z,12nm,1.0s						
KMI	Kunming	28.50	320	P	P	22 39 57.6	+3.1
KMI				pmax	pmax		
	comp=Z,11nm,0.9s						
ENH	Enshi	29.12	337		P	22 39 59.7	+0.1
ENH	Enshi	29.12	337	P	P	22 40 00.0	+0.4
BULU	Kimbe	29.32	108	P	P	22 40 00.7	-0.8
AS31	Alice Springs	29.41	158	P	P	22 40 02.2	0.0
AS31				IAmb	IAmb	22 40 03.7	
	comp=Z,3.6nm,0.5s						
ASAR	Alice Springs	29.41	158	P	P	22 40 02.8	+0.6
	comp=Z,7.3nm,0.6s,baz=340,slow=7.1,SNR=187						
ASAR				PcP	PcP	22 42 49.2	0.0
	comp=Z,1.1nm,0.4s,baz=337,slow=3.0,SNR=7.3						
ASAR				S	S	22 44 15.4	-0.9
	comp=Z,2.8nm,0.8s,baz=338,slow=19,SNR=19						
ASAR				ScP	ScP	22 45 36.2	-0.5
	comp=Z,2.2nm,0.6s,baz=344,slow=2.7,SNR=18						
	comp=Z,7.3nm,0.6s						
ASAR	Alice Springs	29.41	158	P	P	22 40 02.6	+0.4
ASAR					PcP	22 42 49.7	+0.4
ASAR					ScP	22 45 36.4	-0.3
QIS	Mount Isa	29.41	146	P	P	22 40 03.0	+0.8
PZH	PanZhiHua	30.11	321	P	P	22 40 08.9	+0.6
PZH				pmax	pmax		
	comp=Z,20nm,0.8s						
RABL	Rabaul	30.72	105	P	P	22 40 14.3	+0.7
LYN	LuoYang	32.06	344	P	P	22 40 25.3	+0.7
LYN				pmax	pmax		
	comp=Z,25nm,0.6s						
XAN	Xi'an	32.70	339	P	P	22 40 30.0	-0.1
XAN				pmax	pmax		
	comp=Z,16nm,0.9s						
MORW	Morawa	33.16	190	P	P	22 40 34.3	+0.3
MORW				IAmb	IAmb	22 40 35.0	
	comp=Z,6.4nm,0.5s						
CTAO	Charters Tower	33.26	136	P	P	22 40 35.1	+0.2
CTAO				IAmb	IAmb	22 40 51.5	
	comp=Z,14nm,1.2s						
KSRS	Korea Array	33.96	8	P	P	22 40 40.4	-0.2
	comp=Z,1.1nm,0.6s,baz=188,slow=9.4,SNR=5.2						
	comp=Z,1.1nm,0.6s						
FORT	Forrest	34.71	171		P	22 40 47.3	+0.4
INKA	Innaminka	35.90	152	P	P	22 40 58.1	+1.3
LZDM	Lanzhou Array	36.46	334	P	P	22 41 02.6	+0.9
	comp=Z,0.7nm,0.3s,baz=178,slow=10,SNR=4.1						
	comp=Z,0.7nm,0.3s						
LZH	Lanzhou	36.51	334	*e*P	P	22 41 03.4	+1.5
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
SHL	Shillong	36.51	309		P	22 41 02.1	0.0
QLP	Quilpie	36.76	146	P	P	22 41 05.2	+1.3
NWAO	Narrogin (SRO)	36.76	187	P	P	22 41 04.6	+0.8
NWAO				IAmb	IAmb	22 41 05.3	
	comp=Z,7.6nm,0.6s						
HHC	Hu-ho-hao-te	38.26	347	*e*P	P	22 41 16.5	+0.5
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,41nm,4.7s						
BBOO	Buckleboo	38.54	161		P	22 41 19.0	+0.7
BBOO				IAmb	IAmb	22 41 19.9	
	comp=Z,14nm,0.8s						
BBOO	Buckleboo	38.54	161	P	P	22 41 19.5	+1.2
LSA	Lhasa	39.32	315	P	P	22 41 26.1	+0.9
LSA				IAmb	IAmb	22 41 27.6	
	comp=Z,13nm,0.6s						
AUJCS	Jamestown Cent	39.77	159	P	P	22 41 29.8	+1.6
STKA	Stephens Creek	39.80	154	P	P	22 41 29.3	+0.9
	comp=Z,5.3nm,0.3s,baz=324,slow=8.0,SNR=26						
	comp=Z,5.3nm,0.3s						
HTT	Hallett	40.09	158	P	P	22 41 32.3	+1.5
EIDS	Eidsvold	40.10	138	P	P	22 41 31.2	+0.3
EIDS				IAmb	IAmb	22 41 32.1	
	comp=Z,18nm,1.1s						
GTA	Gaotai	41.04	333	P	P	22 41 40.0	+1.7
GTA				PcP	PcP	22 43 25.8	+1.8
GTA				pmax	pmax		
	comp=Z,17nm,1.5s						
AULRC	Lightning Ridg	41.05	145	P	P	22 41 39.7	+1.3
GOMU	GeErMu	41.16	325	P	P	22 41 40.6	+1.0
GOMU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
USRK	Ussuriysk Ar.	41.20	10	P	P	22 41 38.7	-0.6
	comp=Z,1.2nm,0.5s,baz=194,slow=5.5,SNR=4.9						
	comp=Z,1.2nm,0.5s						
CMSA	Cobar Meteorol	41.46	149	P	P	22 41 43.3	+1.8
EVN	Everest	41.62	309	P	P	22 41 44.3	+0.6
ARMA	Armidale	43.93	143	P	P	22 42 02.8	+1.9
ARMA				IAmb	IAmb	22 42 04.4	
	comp=Z,14nm,0.8s						
ARMA	Armidale	43.93	143	P	P	22 42 03.5	+2.5
MGBR	Mount Gambier	44.53	159	P	P	22 42 06.4	+1.1
HILR	Hailar Array B	45.74	358	P	P	22 42 14.3	-0.1
	comp=Z,40nm,1.0s,baz=176,slow=9.2,SNR=2.5						
	comp=Z,40nm,1.0s						
ULN	Ulaanbaatar	45.95	346	P	P	22 42 16.2	0.0
SONM	Songino Array	46.08	345	P	P	22 42 17.0	-0.2
	comp=Z,2.8nm,0.7s,baz=164,slow=8.4,SNR=22						
SONM				ScP	ScP	22 46 39.2	-0.3
	comp=Z,1.2nm,0.9s,baz=145,slow=3.4,SNR=6.1						
	comp=Z,2.8nm,0.7s						
SONM	Songino Array	46.08	345	P	P	22 42 17.0	-0.2
SONM				ScP	ScP	22 46 39.4	-0.2
CAN	Canberra	46.13	150	P	P	22 42 19.1	+1.5
TOO	Toolangi	46.32	155	P	P	22 42 20.3	+1.3
NIL	Nilore	54.59	309	P	P	22 43 19.8	+0.6
NIL				IAmb	IAmb	22 43 21.3	
	comp=Z,18nm,1.4s						
KSH	Kashi	55.08	317	P	P	22 43 24.4	+1.7
KSH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MKAR	Makanchi Array	55.20	327	P	P	22 43 23.6	+0.4
	comp=Z,3.0nm,0.4s,baz=123,slow=8.2,SNR=115						
MKAR				PcP	PcP	22 44 14.5	-0.8
	comp=Z,1.1nm,0.6s,baz=116,slow=4.8,SNR=7.4						
MKAR				ScP	ScP	22 47 17.9	-1.0
	comp=Z,1.0nm,0.5s,baz=128,slow=5.1,SNR=11						
	comp=Z,3.0nm,0.4s						
MKAR	Makanchi Array	55.20	327	P	P	22 43 23.6	+0.4
MKAR				PcP	PcP	22 44 14.9	-0.5
MKAR					ScP	22 47 18.3	-0.6
MAKZ	Makanchi	55.38	327	P	P	22 43 24.6	+0.2
MANEM	Manem	57.27	313	P	P	22 43 38.6	+0.7
MANEM				IAmb	IAmb	22 43 40.7	
	comp=Z,9.7nm,0.6s						
AAK	Ala-Archa	57.55	320	P	P	22 43 40.4	+0.8
ARSB	Arslanbob	57.94	318	P	P	22 43 42.5	+0.3
ARSB				IAmb	IAmb	22 44 15.2	
	comp=Z,17nm,1.5s						
KBL	Kabul	58.16	309	P	P	22 43 43.9	-0.1
KBL				IAmb	IAmb	22 43 45.5	
	comp=Z,7.2nm,0.6s						
ZAA0	Zalesovo Array	58.73	335	P	P	22 43 46.3	-0.8
ZALV	Zalesovo Beam	58.73	335	P	P	22 43 46.2	-0.9
	comp=Z,1.2nm,0.4s,baz=132,slow=4.9,SNR=9.8						
	comp=Z,1.2nm,0.4s						
ZALV	Zalesovo Beam	58.73	335	P	P	22 43 46.0	-1.1
GAR	Garm	58.82	314	P	P	22 43 48.6	+0.4
GAR				IAmb	IAmb	22 43 50.8	
	comp=Z,8.5nm,0.8s						
KURBB	Kurchatov Arra	59.51	329	P	P	22 43 52.1	-0.3
	comp=Z,2.0nm,0.3s,baz=128,slow=6.6,SNR=12						
	comp=Z,2.0nm,0.3s						
KURK	Kurchatov	59.52	329	P	P	22 43 52.2	-0.2
KURK				IAmb	IAmb	22 43 53.1	
	comp=Z,7.6nm,0.6s						
CHGR	Chuyangaron	59.53	313	P	P	22 43 52.3	-0.6
CHGR				IAmb	IAmb	22 43 55.5	
	comp=Z,11nm,1.1s						
KK31	Karatay Array	60.37	318	P	P	22 43 58.1	-0.2
KKAR	Karatay Array	60.37	318	P	P	22 43 58.1	-0.1
WHZ	Wether Hill Ro	63.74	146	P	P	22 44 20.4	+0.5
TOZ	Tahuroa Road	64.13	135	P	P	22 44 23.2	+0.6
TOZ				IAmb	IAmb	22 44 25.2	
	comp=Z,5.6nm,0.9s						
BVAR	Borovoye Array	65.05	328	P	P	22 44 27.6	-0.5
	comp=Z,1.2nm,0.4s,baz=129,slow=7.4,SNR=12						
	comp=Z,1.2nm,0.4s						
BORK	Borovoye	65.09	328	P	P	22 44 28.1	-0.3
RTZ	Ruatahuna	65.57	136	P	P	22 44 32.1	+0.4
RTZ				IAmb	IAmb	22 44 33.2	
	comp=Z,18nm,0.8s						
NRIK	Noril'sk	69.48	347	P	P	22 44 54.3	-0.5
	comp=Z,2.1nm,0.5s,baz=131,slow=6.3,SNR=5.5						
	comp=Z,2.1nm,0.5s						
NRIK	Noril'sk	69.48	347	P	P	22 44 54.2	-0.7
AB31	Akbulak array	69.48	322	P	P	22 44 54.3	-1.0
P08K	Saint George I	74.93	32	P	P	22 45 26.2	-0.2
RAYN	Ar Rayn	76.55	293	P	P	22 45 35.6	-0.7
VOI	Vohitsoka	78.11	247	P	P	22 45 44.3	-0.5
VOI				IAmb	IAmb	22 45 54.1	
	comp=Z,40nm,1.5s						
GURO	Guroymak-BITLI	80.20	308	P	P	22 45 56.0	+0.4
G16K	Koyuk River	80.51	24	P	P	22 45 56.3	-0.1
J16K	Anvik River	80.85	26	P	P	22 45 58.8	+0.6
J16K				IAmb	IAmb	22 46 01.1	
	comp=Z,24nm,1.4s						
C18K	Utukok River	81.61	21	P	P	22 46 02.3	+0.2
D19K	Kuna River	82.70	21	P	P	22 46 08.5	+0.9
VNDA	Vanda	83.97	172	P	P	22 46 13.8	+0.2
	comp=Z,0.9nm,0.6s,baz=316,slow=6.9,SNR=6.7						
	comp=Z,0.9nm,0.6s						
VNDA	Vanda	83.97	172	P	P	22 46 14.2	+0.6
VNDA				IAmb	IAmb	22 46 31.4	
	comp=Z,6.7nm,1.4s						
IMAR	Indian Mountai	84.11	24	P	P	22 46 14.9	+0.3
C23K	Itkillik River	85.49	20	P	P	22 46 22.1	+1.0
C23K				IAmb	IAmb	22 46 49.3	
	comp=Z,6.5nm,1.5s						
BRTR	Keskin Array B	86.73	309	P	P	22 46 27.3	-0.6
	comp=Z,0.3nm,0.6s,baz=144,slow=2.7,SNR=6.9						
	comp=Z,0.3nm,0.6s						
ILAR	Eielson Array	86.97	25	P	P	22 46 26.5	-1.7
	comp=Z,0.2nm,0.6s,baz=213,slow=4.5,SNR=4.9						
	comp=Z,0.2nm,0.6s						
BMAR	Burnt Mountain	87.76	23	P	P	22 46 32.8	+0.9
ARCES	ARCESS Array B	88.98	340	P	P	22 46 36.2	-1.4
	comp=Z,2.0nm,0.8s,baz=90,slow=3.6,SNR=4.3						
	comp=Z,2.0nm,0.8s						
SPB2	Spitsbergen Ar	89.66	349	P	P	22 46 39.9	-0.7
SPITS	Spitsbergen Ar	89.67	349	P	P	22 46 39.6	-0.9
	comp=Z,1.4nm,0.3s,baz=95,slow=7.6,SNR=16						
	comp=Z,1.4nm,0.3s						
FINES	FINESS Array B	89.82	331	P	P	22 46 39.6	-1.9
	comp=Z,0.9nm,0.6s,baz=55,slow=7.2,SNR=6.2						
	comp=Z,0.9nm,0.6s						
FINES	FINESS Array B	89.82	331	P	P	22 46 39.9	-1.6
QSPA	South Pole Qui	93.61	180	P	P	22 46 57.0	-2.0
	comp=Z,0.3nm,0.4s,baz=328,slow=2.9,SNR=3.4						
	comp=Z,0.3nm,0.4s						
QSPA	South Pole Qui	93.61	180	P	P	22 46 59.6	+0.5
QSPA				IAmb	IAmb	22 47 08.6	
	comp=Z,4.2nm,1.4s						
TORD	Torodi Ar. Bea	118.84	287	PKP	PKPdf	22 52 27.4	-1.0
	comp=Z,0.4nm,0.8s,baz=112,slow=3.9,SNR=2.4						
TXAR	Lajitas Array	124.95	50	PKP	PKiKP	22 52 40.2	-0.2
	comp=Z,0.1nm,0.6s,baz=340,slow=3.2,SNR=3.4						

IDC 14 22:46:00.2±55.0**, 17°.88S**×**179°.47E, h0**km**, mb4.0**/3**,**
mbtmp4.0/3**, Error ellipse: s-maj=987.5km**
s-min=158.9km az=78.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	36.88	241	P	P	22 53 11.4	+0.8
	0.9nm,0.3s,baz=77,slow=10,SNR=3.7						
	0.9nm,0.3s						
WRA	Warramunga Arr	42.65	260	P	P	22 53 58.5	-0.4
	0.4nm,0.5s,baz=97,slow=7.6,SNR=6.0						
	0.4nm,0.5s						
ASAR	Alice Springs	42.85	254	P	P	22 54 00.0	-0.5
	2.6nm,0.5s,baz=89,slow=8.7,SNR=44						
	2.6nm,0.5s						

*SKO **14** 22:48:09.5, 41°.60N×19°.26E, h0km, ML3.3*
*TIR **14** 22:48:09.9, 41°.62N×19°.24E, h44km±5km, Ml3.4/9*
*THE **14** 22:48:10.4, 42°N±4°×1°9E±°, h12km, M3.2/13, MLh3.2/13*
*PDG **14** 22:48:10.3±0.5, 41°.56N×19°.28E, h22km±1km, MD3.2/6,*
ML3.1/7, Error ellipse: s-maj=0.8km s-min=1.8km az=0.0
*BEO **14** 22:48:11.1±0.6, 41°.55N×19°.35E, h21km±2km, ML3.1/16*
*IDC **14** 22:48:17.4±3.7, 41°.85N×19°.40E, h67km±31km, mb3.5/4,*
mbtmp3.6/10, ML3.1/6, Error ellipse: s-maj=47.5km
s-min=19.8km az=27.0

ISC 14 22:48:10.1±1.0**, 41°.56N**±0°.02×**19°.35E**±0°.02**, h13**km±7km**,**
n111, σ1§45/170**, mb3.8**/3**, 11C-11D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULC	Ulcinj	0.41	349	⇓*i*Pg	Pg	22 48 18.2	-0.1
ULC				*i* Sg	Sb	22 48 26.4	+0.9
TIR	Tirane	0.44	118	Pg	Pg	22 48 17.9	-0.9
TIR				Sg	Sg	22 48 23.7	-1.1
TIR				AML	AML	22 48 25.2	
	7.9nm,0.4s						
TIR	Tirane	0.44	118	*i* Pg	Pg	22 48 17.9	-0.9
TIR				*i* Sg	Sg	22 48 25.4	+0.6
DRME	Dracevica, Mon	0.64	349	*e*Pg	Pg	22 48 22.8	+0.3
BUM	Brajici-Budva	0.81	336	⇑*i*Pg	Pg	22 48 25.8	-0.1
BUM				*i* Sg	Sn	22 48 38.6	-0.8
PHP	Peshkopia	0.83	81	Pg	Pg	22 48 24.4	-1.7
PHP				Sg	Sb	22 48 38.3	+0.8
PHP				AML	AML	22 48 42.8	
	4.3nm,0.6s						
PHP				AML	AML	22 48 44.4	
	2.0nm,1.2s						
PDG	Podgorica	0.87	356	Pg	Pg	22 48 26.7	-0.3
PDG				Sg	Sg	22 48 38.0	-0.4
PDG	Podgorica	0.87	356	⇑P	Pb	22 48 27.3	+0.2
PDG				⇑S	Sn	22 48 40.0	-0.7
PDG	Podgorica	0.87	356	*e*Pg	Pg	22 48 26.7	-0.3
PDG				*e*Sg	Sn	22 48 41.1	+0.4
PDG	Podgorica	0.87	356	⇓*i*Pg	Pg	22 48 26.7	-0.3
PDG				*i* Sg	Sn	22 48 40.9	+0.2
HCY	Herceg Novi	1.09	325	⇑*i*Pg	Pb	22 48 31.0	+0.2
HCY				*i* Sg	Sn	22 48 47.6	+1.5
VLO	Vlora	1.09	174	Pg	Pg	22 48 32.3	+1.1
VLO				Sg	Sn	22 48 48.5	+2.4
VLO				AML	AML	22 48 51.9	
	7.9nm,0.8s						
VLO				AML	AML	22 48 58.4	
	6.1nm,0.3s						
VLO	Vlora	1.09	174	P	Pg	22 48 32.2	+1.1
VLO				S	Sn	22 48 48.2	+2.1
PVY	Plav	1.13	24	⇑*i*Pg	Pb	22 48 30.7	-0.9
PVY				*i* Sg	Sn	22 48 49.6	+2.4
OHR	Ohrid	1.18	112	*i* Pg	Pn	22 48 31.3	-1.1
OHR				*i* Sg	Sn	22 48 51.1	+2.8
OHR				*e*Lg	Lg	22 48 51.3	
	comp=N,369nm,0.6s						
OHR				*e*Lg	Lg	22 48 53.6	
	comp=E,495nm,0.7s						
KOME	Kolasin	1.30	5	*e*Pg	Pb	22 48 34.6	+0.2
TREB	Trebinje	1.37	328	*e*Pn	Pb	22 48 36.2	+0.5
KBN	Korca	1.44	130	Pg	Pb	22 48 37.3	+0.5
KBN				Sg	Sg	22 48 57.3	+1.0
KBN				AML	AML	22 49 00.6	
	comp=E,3.3nm,0.6s						
KBN	Korca	1.44	130	P	Pb	22 48 37.1	+0.4
KBN				S	Sg	22 48 57.7	+1.4
BRY	Bratogost	1.47	336	⇓*i*Pg	Pb	22 48 37.9	+0.5
BRY				*i* Sg	Sg	22 48 57.3	-0.1
SKO	Skopje	1.62	75	*i* Pg	Pb	22 48 40.1	+0.3
SKO				*i* Sg	Sg	22 49 01.9	-0.3
KLINJ	Klinje	1.71	341	*e*Pn	Pb	22 48 41.6	+0.2
NEST	Nestorio	1.72	131	Pn	Pb	22 48 41.4	-0.2
NEST				Sg	Sg	22 49 04.9	-0.6
NEST				AML	AML	22 49 10.1	
	comp=E,1.2nm,0.6s						
NEST	Nestorio	1.72	131	P	Pb	22 48 41.4	-0.2
NEST				S	Sg	22 49 05.7	+0.2
SJES	Sjenica	1.76	15	*e*Pg	Pb	22 48 42.0	-0.4
SJES				*e*Sg	Sg	22 49 07.5	+0.7
PLE	Pljevlja	1.77	1	⇑*i*Pn	Pb	22 48 42.4	-0.1
PLE				*i* Sn	Sb	22 49 04.8	+0.1
STON	Ston	1.79	318	*e*Pn	Pn	22 48 41.1	+0.4
STON				*e*Sg	Sg	22 49 08.4	+0.6
NOCI	Noci	1.89	247	Pn	Pn	22 48 41.6	-0.5
NOCI				Sn	Sn	22 49 03.8	-1.9
NOCI				AML	AML	22 49 19.8	
	comp=E,1.3nm,0.5s						
PENT	Pentalofos	1.92	134	P	Pb	22 48 44.3	-0.8
PENT				S	Sb	22 49 09.9	+0.9
IVAS	Ivanjica	2.10	16	*e*Pn	Pn	22 48 45.7	+0.6
IVAS				*e*Sn	Sn	22 49 12.0	+0.9
SELS	Selova	2.12	38	*e*Pn	Pn	22 48 46.0	+0.8
SELS				*e*Sn	Sn	22 49 11.4	0.0
IGT	Igoumenitsa	2.16	159	Pn	Pn	22 48 46.4	+0.6
IGT				Sn	Sn	22 49 13.9	+1.5
IGT				AML	AML	22 49 35.4	
	comp=E,0.7nm,1.2s						
IGT	Igoumenitsa	2.16	159	P	Pn	22 48 46.0	+0.3
IGT				S	Sn	22 49 13.2	+0.8
MATE	Matera	2.19	246	⇑P	Pn	22 48 45.8	-0.4
KPRO	Kipourio	2.22	136	P	Pn	22 48 48.5	+1.8
KPRO				S	Sb	22 49 16.7	-0.7
JAN	Janina	2.22	148	P	Pn	22 48 47.3	+0.7
JAN				S	Sn	22 49 15.9	+1.9
BARS	Barje	2.22	55	*i* Pn	Pn	22 48 47.5	+0.8
BARS	Barje	2.22	55	*e*Pn	Pn	22 48 47.2	+0.5
BARS				*e*Sn	Sn	22 49 13.6	-0.4
GOCS	Kraljevo Serbi	2.30	29	*e*Pn	Pn	22 48 49.1	+1.3
GOCS				*e*Sn	Sn	22 49 15.2	-0.8
BBLS	Lazi&#263i	2.31	1	*e*Pn	Pn	22 48 49.2	+1.3
BBLS				*e*Sn	Sn	22 49 15.5	-0.7
GRG	Griva	2.38	104	P	Pn	22 48 49.5	+0.7
GRG	Griva	2.38	104	*i* Pn	Pn	22 48 49.6	+0.7
MRVN	Minervino Murg	2.42	259	Pn	Pn	22 48 49.4	-0.1
MRVN				AML	AML	22 49 44.8	
	comp=E,0.5nm,0.5s						
BOSS	Bosilegrad	2.52	67	*e*Pn	Pn	22 48 51.0	+0.3
GRUS	Gruza	2.54	23	*e*Pn	Pn	22 48 51.8	+0.8
DIVS	Divibare	2.58	10	*e*Pn	Pn	22 48 52.4	+0.7
DIVS				*e*Sn	Sn	22 49 22.0	-1.0
TETR	Tetrakomo, Epi	2.66	146	P	Pn	22 48 54.0	+1.3
SGRT	San Giovanni R	2.71	275	Pn	Pn	22 48 53.1	-0.2
SGRT				Sn	Sn	22 49 21.3	-4.8
BOVS	Bovan	2.71	39	⇓P	Pn	22 48 54.0	+0.6
BOVS				⇓S	Sn	22 49 27.0	+1.0
BOVS	Bovan	2.71	39	*e*Pn	Pn	22 48 53.8	+0.5
BOVS				*e*Sn	Sn	22 49 26.8	+0.8
TRUS	Trudelj	2.77	16	*e*Pn	Pn	22 48 55.1	+0.9
KKB	Krupnik	2.85	83	P	Pn	22 48 56.4	+1.2
KKB	Krupnik	2.85	83	*i* Pn	Pn	22 48 56.8	+1.6
THL	Klokotos Trika	2.85	134	P	Pn	22 48 55.9	+0.8
TYRN	Tyrnavos	2.87	129	P	Pn	22 48 56.5	+1.0
THE	Thessaloniki	2.89	108	P	Pn	22 48 55.9	+0.2
THE	Thessaloniki	2.89	108	*i* Pn	Pn	22 48 56.1	+0.4
ZAPS	Zavoj	2.98	54	*e*Pn	Pn	22 48 58.1	+1.1
ZAPS				*e*Sn	Sn	22 49 31.8	-0.8
TEKS	Tekeris	2.99	2	*e*Pn	Pn	22 48 57.4	+0.2
HORT	Hortiatis	3.00	107	P	Pn	22 48 57.3	-0.1
AMPL	Ampelaki	3.00	151	P	Pn	22 48 57.8	+0.6
NYDR	Nydri-Lefkada	3.02	160	P	Pn	22 48 57.3	-0.3
VTS	Vitosha	3.08	69	P	Pn	22 48 59.4	+0.8
TIP	Timpagrande	3.09	221	⇑P	Pn	22 48 58.3	-0.4
ZAGS	Zajecar	3.10	42	*e*Pn	Pn	22 48 59.5	+0.8
ZAGS				*e*Sn	Sn	22 49 36.8	+1.2
BORS2	Bor- Borsko je	3.20	37	*e*Pn	Pn	22 48 59.4	-0.7
BORS2				*e*Sn	Sn	22 49 37.4	-0.8
SRS	Serrai	3.23	96	P	Pn	22 49 00.9	+0.5
SRS	Serrai	3.23	96	*i* Pn	Pn	22 49 01.0	+0.6
MMB	Musomishta	3.30	89	P	Pn	22 49 02.6	+1.1
PLG	Polygyros	3.32	110	P	Pn	22 49 01.8	0.0
KUBS	Kucevo	3.32	30	*e*Pn	Pn	22 49 00.7	-1.1
KUBS				*e*Sn	Sn	22 49 39.8	-1.4
BLY	Banja Luka	3.56	334	⇓P	Pn	22 49 05.0	0.0
BLY	Banja Luka	3.56	334	*e*Pn	Pn	22 49 06.0	+1.0
BLY				*e*Sn	Sn	22 49 47.2	+0.3
FRGS	Fruska Gora	3.61	5	*e*Pn	Pn	22 49 06.0	+0.2
MDVR	Moldovita	3.66	27	⇓P	Pn	22 49 06.9	+0.5
KNYS	Krupa na Uni	4.00	327	*e*Pn	Pn	22 49 11.9	+0.9
HERR	Herculane	4.01	33	⇓P	Pn	22 49 12.0	+0.9
BZS	Buzias	4.38	21	⇑P	Pn	22 49 16.9	+0.6
AQU	L'Aquila	4.50	282	*e*Pn	Pn	22 49 17.9	-0.1
GZR	Gura Zlata	4.57	32	⇑P	Pn	22 49 20.5	+1.5
MORH	Mrgy, Hungar	4.68	354	*e*Pn	Pn	22 49 21.5	+1.1
MORH	Mrgy, Hungar	4.68	354	⇓P	Pn	22 49 21.0	+0.6
SIRR	Siria	5.00	19	⇑P	Pn	22 49 25.2	+0.5
DRGR		5.76	24	⇓P	Pn	22 49 36.4	+1.0
SOKA	Soboth	5.99	330	*i* Pn	Pn	22 49 38.9	+0.5
	comp=E,1.1nm,0.3s						
SOKA				*e*Sn	Sn	22 50 44.2	-2.6
	comp=E,6.3nm,0.7s						
OBKA	Obir	6.04	327	*i* Pn	Pn	22 49 40.3	+1.2
	comp=E,1.0nm,0.4s						
OBKA				*e*Sn	Sn	22 50 49.6	+1.5
	comp=E,14nm,1.0s						
MLR	Muntele Rosu	6.20	48	P	Pn	22 49 44.1	+2.7
	comp=E,0.5nm,0.3s,baz=144,slow=15,SNR=4.3						
	comp=E,4.7nm,0.7s						
ARSA	Arzberg	6.31	336	*i* Pn	Pn	22 49 43.8	+0.9
	comp=E,1.4nm,0.5s						
ARSA				*e*Sn	Sn	22 50 57.9	+3.0
	comp=E,1.8nm,0.5s						
CONA	Conrad Observa	6.83	340	*i* Pn	Pn	22 49 49.0	-1.1
	comp=E,0.8nm,0.5s						
CONA				*i* Sn	Sn	22 51 10.5	+2.7
	comp=E,1.6nm,0.5s						
VRI	Vrincioaia	6.86	49	⇓P	Pn	22 49 52.2	+1.8
MODS	Modra-Piesok	6.97	349	*e*PN	Pn	22 49 56.1	+4.2
MODS				*e*SN	Sn	22 51 07.7	-3.3
KECS	Kecovo	6.97	6	*e*PN	Pn	22 49 57.5	+5.6
KECS				*e*SN	Sn	22 51 08.1	-2.9
KBA	Koelnbreinsper	7.00	324	*i* Pn	Pn	22 49 53.5	+1.1
	comp=E,0.7nm,0.4s						
KBA				*i* Sn	Sn	22 51 11.4	-0.4
	comp=E,1.1nm,0.5s						
ABTA	Abfaltersbach	7.14	319	*i* Pn	Pn	22 49 54.6	+0.3
	comp=E,0.9nm,0.3s						
ABTA				*i* Sn	Sn	22 51 16.9	+1.5
	comp=E,2.3nm,0.3s						
MOA	Molln	7.25	332	*e*Pn	Pn	22 49 55.7	-0.1
	comp=E,0.7nm,0.6s						
MOA				*i* Sn	Sn	22 51 20.1	+2.1
	comp=E,2.3nm,0.5s						
BIOA	Bad Ischl, Aus	7.36	328	*i* Pn	Pn	22 49 54.8	-2.4
	comp=E,1.0nm,0.3s						
BIOA				*e*Sn	Sn	22 51 20.0	-0.6
	comp=E,2.2nm,0.5s						
LESA	Schwarzleotal	7.56	323	*e*Pn	Pn	22 49 59.8	-0.2
	comp=E,2.0nm,0.4s						
LESA				*e*Sn	Sn	22 51 25.6	+0.1
	comp=E,2.8nm,0.6s						
WTTA	Wattenberg	7.93	319	*e*Pn	Pn	22 50 07.6	+2.4
	comp=E,0.7nm,0.2s						
WTTA				*i* Sn	Sn	22 51 35.2	+0.2
	comp=E,3.2nm,0.5s						
WATA	Walderalm	8.01	319	*e*Pn	Pn	22 50 08.4	+2.1
	comp=E,1.8nm,0.3s						
WATA				*i* Sn	Sn	22 51 38.1	+1.2
	comp=E,2.8nm,0.5s						
SQTA	Sankt Quirin	8.12	317	*i* Pn	Pn	22 50 07.0	-0.7
	comp=E,1.6nm,0.4s						
SQTA				*e*Sn	Sn	22 51 39.5	0.0
	comp=E,2.9nm,0.5s						
FETA	Feichten	8.24	314	*i* Pn	Pn	22 50 11.6	+2.1
	comp=E,0.6nm,0.4s						
FETA				*i* Sn	Sn	22 51 34.3	-8.3
	comp=E,0.7nm,0.4s						
GERES	GERESS Array B	8.30	333	P	Pn	22 50 12.1	+1.9
	baz=155,slow=13,SNR=2.0						
GERES				S	Sn	22 51 41.0	-2.9
	comp=E,0.7nm,0.7s,baz=150,slow=20,SNR=2.1						
	comp=E,0.2nm,0.4s						
RETA	Reutte	8.53	317	*e*Sn	Sn	22 51 44.1	-5.2
	comp=E,1.6nm,0.6s						
DAVOX	Davos/Dischmat	8.57	311	P	Pn	22 50 15.3	+1.3
	comp=E,0.3nm,0.3s,baz=119,slow=19,SNR=6.9						
DAVOX				S	Sn	22 51 51.5	+0.8
	comp=E,1.5nm,0.6s,baz=276,slow=20,SNR=1.8						
	comp=E,1.6nm,0.6s						
MMAI	Mount Meron Ar	15.35	119	P	P	22 51 51.7	+0.6
	comp=E,0.4nm,0.3s,baz=303,slow=17,SNR=1.9						
	comp=E,3.4nm,0.9s						
NOA	NORSAR Array B	20.13	348	P	P	22 52 44.1	+0.5
	baz=131,slow=18,SNR=3.3						

	comp=E,0.8nm,0.8s						
EKA	**Eskdalemuir Ar**	**20.19**	**321**	P	**P**	**22 52 44.7**	**+0.4**
	baz=111,slow=8.3						
	comp=E,0.7nm,0.6s						
FINES	**FINESS Array B**	**20.33**	**9**	P	**P**	**22 52 44.4**	**-1.3**
	comp=E,3.1nm,0.9s,baz=182,slow=9.7,SNR=5.1						
	comp=E,3.1nm,0.9s						
BVAR	**Borovoye Array**	**35.73**	**54**	P	**P**	**22 55 07.6**	**-0.7**
	comp=E,0.8nm,0.7s,baz=284,slow=5.8,SNR=8.8						
	comp=E,0.8nm,0.7s						
ZALV	**Zalesovo Beam**	**44.17**	**51**	P	**P**	**22 56 17.4**	**-0.9**
	comp=E,0.9nm,0.5s,baz=286,slow=9.9,SNR=7.0						
	comp=E,0.9nm,0.5s						
MKAR	**Makanchi Array**	**44.38**	**61**	P	**P**	**22 56 18.9**	**-1.2**
	comp=E,0.9nm,0.7s,baz=284,slow=6.5,SNR=10						
	comp=E,0.9nm,0.7s						

**THE 14 22:48:25.0,38°N±2°×2°1E±°,h15^{km}±2^{km},M2.4/11,
MLh2.4/11,Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ORTH	**Orthonies,Zaky**	**0.20**	**13**	P	Pg	22 48 30.0	+0.3
ORTH				S	Sg	22 48 33.2	+0.4
ZAK2	**Zakynthos**	**0.24**	**58**	P	Pg	22 48 30.0	-0.4
ZAK2				S	Sb	22 48 34.9	-0.3
RTZL	**Ratzakli, Kefa**	**0.43**	**14**	P	Pg	22 48 33.6	-0.1
RTZL				S	Sg	22 48 39.9	+0.4
VLS	**Valsamata**	**0.52**	**356**	P	Pg	22 48 34.8	-0.6
VLS				S	Sb	22 48 43.3	+0.1
RLS	**Riolos of Patr**	**0.77**	**58**	P	Pg	22 48 38.8	-1.1
RLS				S	Sb	22 48 50.7	+0.5
AXS	**Araxos**	**0.79**	**47**	P	Pg	22 48 39.0	-1.5
AXS				S	Sb	22 48 51.6	+0.6
DRO	**Drossia**	**0.90**	**71**	P	Pb	22 48 41.0	-1.3
DRO				S	Sn	22 48 55.8	0.0
EVGI	**Lefkada island**	**0.96**	**1**	P	Pb	22 48 42.7	-0.6
EVGI				S	Sn	22 48 57.2	-0.1
NYDR	**Nydri-Lefkada**	**1.05**	**2**	P	Pb	22 48 44.8	-0.2
ITM	**Ithomi**	**1.13**	**115**	P	Pb	22 48 45.6	-0.6
KLV	**Kalavryta, Ach**	**1.26**	**72**	P	Pn	22 48 47.5	-0.5
SERG	**Sergoula**	**1.35**	**56**	P	Pn	22 48 48.3	-1.0

*TIR **14** 22:54:49.5,41°.61N×19°.26E,h34^{km}±2^{km},Ml3.1/6*
*PDG **14** 22:54:50.7±0.7,41°.54N×19°.24E,h22^{km}±2^{km},MD3.2/5,
ML3.1/7,Error ellipse: s-maj=1.0km s-min=3.1km az=0.0*
*THE **14** 22:54:50.6,42°N±4°×1°9E±°,h12^{km},M3.1/5,MLh3.1/5*
*SKO **14** 22:54:51.2,41°.58N×19°.33E,h5^{km},ML2.8*
*IDC **14** 22:55:04.5±4.2,41°.92N×18°.39E,h190^{km}±40^{km},mb3.1/4,
mbtmp3.4/7,Error ellipse: s-maj=88.7km s-min=28.8km
az=35.0*
ISC 14 22:54:50.3±1.0,**41°.57N**±0°.02×**19°.32E**±0°.03,**h13**^{km}±7^{km},
n72,σ1^{s}**55**/106,**mb3.5**/3,**12C-13D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULC	**Ulcinj**	**0.40**	**352**	⇓*i*Pg	**Pg**	**22 54 58.5**	**+0.2**
ULC				*i* Sg	**Sb**	**22 55 06.6**	**+1.4**
TIR	**Tirane**	**0.47**	**118**	Pg	**Pg**	**22 54 58.2**	**-1.4**
TIR				Sg	**Sg**	**22 55 04.4**	**-1.4**
TIR				AML	AML	22 55 05.2	
	2.8nm,0.7s						
TIR				AML	AML	22 55 06.1	
	2.8nm,0.4s						
TIR	**Tirane**	**0.47**	**118**	*i* Pg	**Pg**	**22 54 58.5**	**-1.1**
TIR				*i* Sg	**Sg**	**22 55 05.8**	**0.0**
DRME	**Dracevica, Mon**	**0.62**	**351**	*e*Pg	**Pg**	**22 55 02.9**	**+0.4**
BUM	**Brajici-Budva**	**0.79**	**337**	⇑*i*Pg	**Pb**	**22 55 06.7**	**+0.7**
BUM				*i* Sg	**Sn**	**22 55 18.8**	**-0.2**
PHP	**Peshkopia**	**0.85**	**82**	Pg	**Pb**	**22 55 04.7**	**-2.3**
PHP				Sg	**Sb**	**22 55 18.1**	**-0.2**
PHP				AML	AML	22 55 20.7	
	1.2nm,0.7s						
PHP				AML	AML	22 55 21.7	
	2.6nm,0.4s						
PDG	**Podgorica**	**0.86**	**357**	Pg	**Pb**	**22 55 06.1**	**-0.9**
PDG				Sg	**Sn**	**22 55 20.0**	**-0.5**
PDG	**Podgorica**	**0.86**	**357**	⇓P	**Pn**	**22 55 08.4**	**+0.4**
PDG				⇓S	**Sn**	**22 55 20.9**	**+0.4**
PDG	**Podgorica**	**0.86**	**357**	⇓*i*Pg	**Pb**	**22 55 06.5**	**-0.6**
PDG				*i* Sg	**Sn**	**22 55 22.0**	**+1.5**
HCY	**Herceg Novi**	**1.07**	**325**	⇑*i*Pg	**Pn**	**22 55 11.6**	**+0.6**
HCY				*i* Sg	**Sn**	**22 55 27.4**	**+1.7**
VLO	**Vlora**	**1.11**	**173**	Pg	**Pn**	**22 55 12.7**	**+1.2**
VLO				Sg	**Sb**	**22 55 26.7**	**+1.0**
VLO				AML	AML	22 55 33.9	
	2.5nm,0.6s						
VLO				AML	AML	22 55 34.8	
	2.8nm,0.4s						
VLO	**Vlora**	**1.11**	**173**	P	**Pn**	**22 55 12.6**	**+1.1**
VLO				S	**Sg**	**22 55 29.2**	**+3.0**
PVY	**Plav**	**1.13**	**25**	⇑*i*Pg	**Pb**	**22 55 10.9**	**-0.8**
PVY				*i* Sg	**Sn**	**22 55 30.5**	**+3.2**
OHR	**Ohrid**	**1.21**	**112**	*i* Pg	**Pn**	**22 55 12.6**	**-0.3**
OHR				*i* Sg	**Sg**	**22 55 30.8**	**+1.5**
OHR				*e*Lg	Lg	22 55 31.3	
	comp=N,198nm,0.7s						
OHR				*e*Lg	Lg	22 55 32.0	
	comp=E,178nm,0.7s						
KOME	**Kolasin**	**1.29**	**7**	*e*Pg	**Pb**	**22 55 14.9**	**+0.5**
TREB	**Trebinje**	**1.35**	**328**	*e*Pn	**Pb**	**22 55 16.5**	**+1.0**
BRY	**Bratogost**	**1.45**	**337**	⇓*i*Pg	**Pb**	**22 55 17.6**	**+0.4**
BRY				*i* Sg	**Sg**	**22 55 37.4**	**+0.4**
KBN	**Korca**	**1.46**	**130**	Pn	**Pn**	**22 55 17.6**	**+1.2**
KBN				Sn	**Sn**	**22 55 36.9**	**+1.5**
KBN	**Korca**	**1.46**	**130**	P	**Pn**	**22 55 17.6**	**+1.2**
KBN				S	**Sg**	**22 55 38.6**	**+1.2**
SKO	**Skopje**	**1.64**	**75**	*i* Pg	**Pb**	**22 55 21.6**	**+1.2**
SKO				*i* Sg	**Sb**	**22 55 42.0**	**+1.1**
KLINJ	**Klinje**	**1.69**	**341**	*e*Pn	**Pb**	**22 55 22.0**	**+0.8**
NEST	**Nestorio**	**1.75**	**131**	Pn	**Pn**	**22 55 21.7**	**+1.3**
NEST				Sn	**Sb**	**22 55 45.8**	**+1.6**
NEST				AML	AML	22 55 48.5	
	comp=E,0.5nm,1.1s						
NEST	**Nestorio**	**1.75**	**131**	P	**Pn**	**22 55 21.7**	**+1.3**
NEST				S	**Sb**	**22 55 46.0**	**+1.9**
PLE	**Pljevlja**	**1.76**	**2**	⇓*i*Pn	**Pb**	**22 55 22.4**	**-0.1**
PLE				*i* Sn	**Sg**	**22 55 45.6**	**-1.3**
NOCI	**Noci**	**1.87**	**246**	Pn	**Pn**	**22 55 22.0**	**0.0**
NOCI				Sn	**Sn**	**22 55 45.7**	**+0.2**
NOCI				AML	AML	22 56 00.2	
	comp=E,0.6nm,0.5s						
PENT	**Pentalofos**	**1.95**	**134**	P	**Pn**	**22 55 25.1**	**+1.9**
PENT				S	**Sn**	**22 55 49.0**	**+1.5**
RUDO	**Rudo**	**2.04**	**1**	*e*Pn	**Pn**	**22 55 26.2**	**+1.8**
MATE	**Matera**	**2.18**	**246**	⇑P	**Pn**	**22 55 27.2**	**+1.0**
IGT	**Igoumenitsa**	**2.18**	**159**	Pg	**Pn**	**22 55 26.9**	**+0.7**
IGT				Sg	**Sn**	**22 55 55.3**	**+2.2**
IGT	**Igoumenitsa**	**2.18**	**159**	P	**Pn**	**22 55 27.1**	**+0.9**
IGT				S	**Sn**	**22 55 56.1**	**+3.1**
BARS	**Barje**	**2.23**	**55**	*i* Pn	**Pn**	**22 55 27.6**	**+0.6**
GRG	**Griva**	**2.41**	**104**	P	**Pn**	**22 55 29.4**	**0.0**
GRG				S	**Sn**	**22 55 59.4**	**+0.7**
GRG	**Griva**	**2.41**	**104**	*i* Pn	**Pn**	**22 55 29.9**	**+0.6**
MRVN	**Minervino Murg**	**2.41**	**259**	Pn	**Pn**	**22 55 29.6**	**+0.3**
MRVN				AML	AML	22 56 26.8	
	comp=E,0.2nm,0.6s						
SGRT	**San Giovanni R**	**2.68**	**275**	Pn	**Pn**	**22 55 33.3**	**+0.1**
BOVS	**Bovan**	**2.71**	**40**	⇓P	**Pn**	**22 55 35.8**	**+2.2**
KKB	**Krupnik**	**2.87**	**83**	*i* Pn	**Pn**	**22 55 36.9**	**+1.2**
TIP	**Timpagrande**	**3.09**	**220**	⇑P	**Pn**	**22 55 38.4**	**-0.3**
SRS	**Serrai**	**3.25**	**97**	*i* Pn	**Pn**	**22 55 41.2**	**+0.2**
BLY	**Banja Luka**	**3.54**	**335**	*e*Pn	**Pb**	**22 55 49.7**	**-3.0**
BLY	**Banja Luka**	**3.54**	**335**	⇓P	**Pn**	**22 55 47.4**	**+2.5**
MDVR	**Moldovita**	**3.66**	**28**	⇓P	**Pn**	**22 55 47.6**	**+1.0**
KNYS	**Krupa na Uni**	**3.98**	**328**	*e*Pn	**Pn**	**22 55 53.1**	**+2.2**
HERR	**Herculane**	**4.01**	**33**	⇓P	**Pn**	**22 55 52.2**	**+0.8**
PLVB	**Pleven**	**4.32**	**63**	⇓P	**Pn**	**22 55 56.7**	**+1.1**
BZS	**Buzias**	**4.38**	**22**	⇑P	**Pn**	**22 55 57.8**	**+1.4**
AQU	**L'Aquila**	**4.48**	**282**	*e*Pn	**Pn**	**22 55 58.9**	**+1.0**
GZR	**Gura Zlata**	**4.57**	**32**	⇑P	**Pn**	**22 56 01.0**	**+1.8**
MORH	**Mrgy, Hungar**	**4.67**	**354**	*e*Pn	**Pn**	**22 56 02.4**	**+2.0**
MORH	**Mrgy, Hungar**	**4.67**	**354**	⇓P	**Pn**	**22 56 02.9**	**+2.5**
SIRR	**Siria**	**4.99**	**19**	⇑P	**Pn**	**22 56 07.4**	**+2.6**
ELND	**Elena**	**5.05**	**72**	⇓P	**Pn**	**22 56 07.4**	**+1.7**
ARR	**Arges**	**5.42**	**44**	⇑P	**Pn**	**22 56 12.9**	**+2.1**
DRGR		**5.76**	**24**	⇑P	**Pn**	**22 56 17.0**	**+1.5**
SOKA	**Soboth**	**5.96**	**330**	*i* Pn	**Pn**	**22 56 19.0**	**+0.7**
	comp=E,1.1nm,0.3s						
SOKA				*i* Sn	**Sn**	**22 57 23.7**	**-2.7**
	comp=E,3.0nm,0.7s						
OBKA	**Obir**	**6.01**	**327**	*e*Pn	**Pn**	**22 56 18.4**	**-0.6**
	comp=E,0.3nm,0.1s						
OBKA				*e*Sn	**Sn**	**22 57 27.5**	**-0.2**
	comp=E,2.3nm,0.4s						
ARSA	**Arzberg**	**6.29**	**336**	*i* Pn	**Pn**	**22 56 25.1**	**+2.3**
	comp=E,1.0nm,0.4s						
ARSA				*i* Sn	**Sn**	**22 57 35.1**	**+0.6**
	comp=E,0.8nm,0.4s						
PSZ	**Piszkesteto**	**6.36**	**4**	⇑P	**Pn**	**22 56 25.9**	**+2.2**
VRI	**Vrincioaia**	**6.87**	**49**	⇑P	**Pn**	**22 56 32.9**	**+2.2**
KBA	**Koelnbreinsper**	**6.97**	**324**	*e*Pn	**Pn**	**22 56 34.1**	**+1.9**
	comp=E,0.9nm,0.4s						
KBA				*i* Sn	**Sn**	**22 57 51.7**	**+0.2**
	comp=E,0.8nm,0.4s						
ABTA	**Abfaltersbach**	**7.12**	**319**	*i* Pn	**Pn**	**22 56 36.8**	**+2.6**
	comp=E,1.9nm,0.6s						
ABTA				*e*Sn	**Sn**	**22 57 55.1**	**+0.2**
	comp=E,4.0nm,0.8s						
MOA	**Molln**	**7.23**	**332**	*i* Pn	**Pn**	**22 56 37.5**	**+1.9**
	comp=E,0.7nm,0.3s						
MOA				*i* Sn	**Sn**	**22 57 59.0**	**+1.3**
	comp=E,2.0nm,0.6s						
BIOA	**Bad Ischl, Aus**	**7.34**	**328**	*i* Pn	**Pn**	**22 56 40.6**	**+3.5**
	comp=E,1.2nm,0.4s						
BIOA				*i* Sn	**Sn**	**22 58 02.5**	**+2.4**
	comp=E,1.7nm,0.4s						
LESA	**Schwarzleotal**	**7.53**	**323**	*i* Pn	**Pn**	**22 56 40.8**	**+0.9**
	comp=E,1.5nm,0.5s						
LESA				*i* Sn	**Sn**	**22 58 03.7**	**-1.4**
	comp=E,1.3nm,0.5s						
SQTA	**Sankt Quirin**	**8.10**	**317**	*i* Pn	**Pn**	**22 56 49.9**	**+2.3**
	comp=E,1.3nm,0.4s						
SQTA				*i* Sn	**Sn**	**22 58 18.0**	**-1.0**
	comp=E,1.6nm,0.4s						
GERES	**GERESS Array B**	**8.28**	**333**	P	**Pn**	**22 56 52.7**	**+2.6**
	comp=E,0.2nm,0.4s,baz=150,slow=14,SNR=2.0						
DAVOX	**Davos/Dischmat**	**8.55**	**311**	P	**Pn**	**22 56 55.4**	**+1.6**
	comp=E,1.0nm,0.5s,baz=136,slow=16,SNR=1.8						
DAVOX				S	**Sn**	**22 58 29.3**	**-0.9**
	comp=E,0.7nm,0.3s,baz=167,slow=10,SNR=3.1						
BRTR	**Keskin Array B**	**11.04**	**95**	P	Pn	22 57 46.9	+19
	comp=E,0.3nm,0.5s,baz=287,slow=10,SNR=2.2						
FINES	**FINESS Array B**	**20.32**	**9**	P	**P**	**22 59 23.6**	**-2.2**
	comp=E,4.0nm,0.9s,baz=181,slow=11,SNR=3.6						
	comp=E,4.0nm,0.9s						
BVAR	**Borovoye Array**	**35.74**	**54**	P	**P**	**23 01 47.4**	**-1.1**
	comp=E,0.5nm,0.6s,baz=268,slow=12,SNR=4.5						
	comp=E,0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**44.18**	**51**	P	**P**	**23 02 56.6**	**-1.9**
	comp=E,0.6nm,0.5s,baz=273,slow=6.3,SNR=2.7						
	comp=E,0.6nm,0.5s						
MKAR	**Makanchi Array**	**44.39**	**61**	P	**P**	**23 02 59.2**	**-1.2**
	comp=E,0.5nm,0.7s,baz=281,slow=7.4,SNR=5.8						
	comp=E,0.5nm,0.7s						

IDC 14 22:59:12.0±1.8,**31°.39S**×**179°.09W,h0**^{km}**,mb3.8**/4,
mbtmp3.9/5,**ML3.8**/1,**MS3.4**/5,**Error ellipse:
s-maj=49.5km s-min=30.5km az=56.0,Kermadec
Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.53**	**203**	Pn	Pn	23 01 01.8	-1.3
	1.3nm,0.3s,baz=33,slow=5.6,SNR=9.1						
	5.7nm,0.4s						
DZM	**Mont Dzumac**	**15.90**	**302**	LR	LR	23 07 49.3	
	comp=Z,99nm,18.2s,baz=182,slow=32						
CTA	**Charters Tower**	**33.05**	**281**	LR	LR	23 17 23.0	
	comp=Z,50nm,18.8s,baz=66,slow=33						
ASAR	**Alice Springs**	**42.13**	**269**	P	P	23 07 07.4	+1.1
	0.6nm,0.8s,baz=109,slow=7.6,SNR=7.0						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**43.21**	**274**	P	P	23 07 13.8	-1.3
	0.8nm,0.9s,baz=115,slow=8.2,SNR=3.8						
	0.8nm,0.9s						
QSPA	**South Pole Qui**	**58.72**	**180**	P	P	23 09 11.5	+0.1
	4.5nm,1.0s,baz=333,slow=0.5,SNR=12						
	4.5nm,1.0s						
SNAA	**Sanae**	**77.19**	**179**	P	P	23 11 07.6	+0.3
	1.1nm,0.9s,baz=105,slow=2.8,SNR=2.5						
	1.1nm,0.9s						
H03S2	**Juan Fernandez**	**80.70**	**124**	T	T	00 40 14.7	
	baz=236,slow=74,SNR=58						
H03S1	**Juan Fernandez**	**80.71**	**124**	T	T	00 40 15.9	
	baz=236,slow=74,SNR=48						
H03S3	**Juan Fernandez**	**80.71**	**124**	T	T	00 40 14.7	
	baz=236,slow=74,SNR=56						
H03N3	**Juan Fernandez**	**80.90**	**124**	T	T	00 40 32.9	
	baz=241,slow=72,SNR=37						
H03N2	**Juan Fernandez**	**80.90**	**124**	T	T	00 40 33.0	
	baz=241,slow=72,SNR=26						
H03N1	**Juan Fernandez**	**80.91**	**124**	T	T	00 40 27.0	
	baz=241,slow=72,SNR=86						
ASAJ	**Asahikawa**	**82.89**	**333**	LR	LR	23 48 14.9	
	comp=Z,16nm,18.1s,baz=114,slow=36						
PSI	**Prapat**	**84.61**	**277**	LR	LR	23 50 38.8	
	comp=Z,47nm,18.2s,baz=11,slow=36						
PETK	**Petropavlovsk-**	**86.54**	**346**	LR	LR	23 47 04.4	
	comp=Z,16nm,19.0s,baz=94,slow=33						
FINES	**FINESS Array B**	**145.74**	**339**	PKPbc	PKPdf	23 18 50.8	-0.9
	9.1nm,1.2s,baz=35,slow=5.1,SNR=5.6						

*IDC **14** 23:07:06.7±1.7,23°.16S×66°.65W,h188^{km}±24^{km},mb3.1/2,
mbtmp3.7/6,Error ellipse: s-maj=40.5km s-min=13.6km
az=96.0*
*SJA **14** 23:07:07.7±0.8,23°.09S×66°.79W,h223^{km}±4^{km},ML3.6,
MW3.6*
*NEIC **14** 23:07:09.3±2.0,23°.14S±0°.08×66°.9W±0°.2,h219^{km}±13^{km},
mb4.1/5,ML3.8(GUC),Error ellipse: s-maj=22.8km
s-min=11.8km az=97.0*
*GUC **14** 23:07:10.4±0.6,23°.08S×67°.12W,h245^{km}±10^{km},ML3.8*
ISC 14 23:07:08.2±0.7,**23°.15S**±0°.04×**66°.86W**±0°.04,**h219**^{km}±7^{km},
n70,σ1^{s}**37**/102,**7C,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALTA		**1.17**	**156**	*e*P	**Pn**	**23 07 41.9**	**+0.3**
SALTA				*e*S	**S**	**23 08 06.5**	**-1.2**
AF01	**San Pedro de A**	**1.24**	**279**		**Pn**	**23 07 43.0**	**+1.1**
AF01	**San Pedro de A**	**1.24**	**279**	*e*P	**Pn**	**23 07 42.5**	**+0.6**
AF01				*e*S	**S**	**23 08 09.1**	**+1.1**
AF01				IAML		23 08 36.5	
	comp=Z,113nm,0.3s						
YJA	**Yavi**	**1.57**	**52**	*e*P	**Pn**	**23 07 44.8**	**0.0**
YJA				*e*S	**S**	**23 08 11.7**	**-1.4**
SLA	**San Lorenzo**	**1.99**	**142**	*e*P	**Pn**	**23 07 49.2**	**+0.9**
SLA				*e*S	**S**	**23 08 19.4**	**0.0**
PB06	**IPOC Station P**	**2.54**	**280**		**Pn**	**23 07 54.9**	**+0.9**
PB06	**IPOC Station P**	**2.54**	**280**	⇑*e*P	**Pn**	**23 07 54.9**	**+0.9**
PB06				*e*S	**S**	**23 08 29.0**	**-0.4**
PB06				IAML		23 08 31.6	
	comp=E,296nm,0.1s						
PB06	**IPOC Station P**	**2.54**	**280**	*e*P	**Pn**	**23 07 54.9**	**+0.9**
PB06				*e*S	**S**	**23 08 29.8**	**+0.3**
PB06				IAML		23 08 34.0	
	comp=Z,120nm,0.3s						
PB09	**IPOC Station P**	**2.59**	**301**		**Pn**	**23 07 55.8**	**+1.3**
PB09	**IPOC Station P**	**2.59**	**301**	⇑*e*P	**Pn**	**23 07 55.8**	**+1.3**
PB09				*e*S	**S**	**23 08 30.7**	**+0.3**
PB09				IAML		23 08 33.3	
	comp=N,100nm,0.3s						
PB09	**IPOC Station P**	**2.59**	**301**	*e*P	**Pn**	**23 07 55.9**	**+1.3**
PB09				*e*S	**S**	**23 08 32.6**	**+2.2**
PB09				IAML		23 08 34.5	
	comp=Z,75nm,0.3s						
PB03	**IPOC Station P**	**2.90**	**292**		**Pn**	**23 07 58.7**	**+0.9**
PB03	**IPOC Station P**	**2.90**	**292**	⇑*e*P	**Pn**	**23 07 58.6**	**+0.7**
PB03				*e*S	**S**	**23 08 35.2**	**-1.2**
PB03				IAML		23 08 38.3	
	comp=N,146nm,0.3s						
PB03	**IPOC Station P**	**2.90**	**292**	*e*P	**Pn**	**23 07 58.5**	**+0.7**
PB03				*e*S	**S**	**23 08 36.1**	**-0.3**
PB03				IAML		23 08 38.4	
	comp=Z,236nm,0.2s						
FSA	**Cafayete**	**3.05**	**165**	*e*P	**Pn**	**23 08 00.7**	**+1.1**
PB05	**IPOC Station P**	**3.10**	**275**		**Pn**	**23 08 01.1**	**+0.9**
PB05	**IPOC Station P**	**3.10**	**275**	⇑*e*P	**Pn**	**23 08 00.9**	**+0.9**
PB05				*e*S	**S**	**23 08 39.1**	**-1.4**
PB05				IAML		23 08 42.2	
	comp=N,123nm,0.4s						
PB05	**IPOC Station P**	**3.10**	**275**	*e*P	**Pn**	**23 08 01.0**	**+0.9**
PB05				*e*S	**S**	**23 08 39.8**	**-0.7**
PB05				IAML		23 08 42.3	
	comp=Z,79nm,0.4s						
PB07	**IPOC Station P**	**3.14**	**296**		**Pn**	**23 08 01.5**	**+0.8**
PB07	**IPOC Station P**	**3.14**	**296**	*e*P	**Pn**	**23 08 01.4**	**+0.8**
PB07				*e*S	**S**	**23 08 40.9**	**-0.7**
PB07				IAML		23 08 41.9	
	comp=Z,164nm,0.2s						
GO02	**Mina Guanaco**	**3.20**	**231**		**Pn**	**23 08 03.2**	**+1.7**
GO02	**Mina Guanaco**	**3.20**	**231**	*e*P	**Pn**	**23 08 03.1**	**+1.7**
GO02				IAML		23 08 46.6	
	comp=Z,169nm,0.2s						
PB01	**IPOC Station P**	**3.22**	**310**		**Pn**	**23 08 02.1**	**+0.6**
PB01	**IPOC Station P**	**3.22**	**310**	⇑*e*P	**Pn**	**23 08 02.1**	**+0.6**
PB01				*e*S	**S**	**23 08 41.8**	**-1.3**
PB01	**IPOC Station P**	**3.22**	**310**	*e*P	**Pn**	**23 08 02.1**	**+0.6**
PB01				*e*S	**S**	**23 08 43.1**	**0.0**
PB01				IAML		23 08 45.8	
	comp=Z,119nm,0.2s						
PB02	**IPOC Station P**	**3.36**	**302**		**Pn**	**23 08 03.6**	**+0.5**
PB02	**IPOC Station P**	**3.36**	**302**	*e*P	**Pn**	**23 08 03.6**	**+0.5**
PB02				*e*S	**S**	**23 08 45.1**	**-0.9**
PB02				IAML		23 08 47.8	
	comp=Z,223nm,0.4s						
PB10	**IPOC Station P**	**3.42**	**263**		**Pn**	**23 08 04.8**	**+1.1**
PB10	**IPOC Station P**	**3.42**	**263**	⇑*i*P	**Pn**	**23 08 04.8**	**+1.1**
PB10				*e*S	**S**	**23 08 45.2**	**-1.9**
PB10	**IPOC Station P**	**3.42**	**263**	*e*P	**Pn**	**23 08 04.7**	**+0.9**
PB10				*e*S	**S**	**23 08 46.5**	**-0.6**
PB10				IAML		23 08 48.2	
	comp=Z,57nm,1.0s						
PB14	**IPOC Station P**	**3.56**	**245**		**Pn**	**23 08 06.8**	**+1.1**
PB14	**IPOC Station P**	**3.56**	**245**	*e*P	**Pn**	**23 08 06.2**	**+0.4**
PB14				*e*S	**S**	**23 08 50.4**	**-0.3**
PB14				IAML		23 08 54.2	
	comp=Z,100nm,0.2s						
PB08	**IPOC Station P**	**3.68**	**324**		**Pn**	**23 08 08.8**	**+1.5**
PB08	**IPOC Station P**	**3.68**	**324**	⇑*e*P	**Pn**	**23 08 08.5**	**+1.2**
PB08	**IPOC Station P**	**3.68**	**324**	*e*P	**Pn**	**23 08 08.1**	**+0.8**
PB08				*e*S	**S**	**23 08 54.2**	**+0.8**
PB08				IAML		23 08 58.2	
	comp=Z,69nm,0.4s						
PATCX	**Punta Patache**	**3.84**	**307**		**Pn**	**23 08 09.1**	**+0.2**
PATCX	**Punta Patache**	**3.84**	**307**	*e*P	**Pn**	**23 08 08.9**	**0.0**
PATCX				*e*S	**S**	**23 08 54.8**	**-1.6**
PATCX				IAML		23 08 56.3	
	comp=Z,78nm,0.6s						
HMBC	**Humberstone**	**4.02**	**315**	Pn	**Pn**	**23 08 11.1**	**0.0**
TA01	**Diego Aracena**	**4.02**	**309**		**Pn**	**23 08 10.8**	**-0.2**
TA01	**Diego Aracena**	**4.02**	**309**	*e*P	**Pn**	**23 08 10.6**	**-0.4**
TA01				*e*S	**S**	**23 08 56.1**	**-4.1**
TA01	**Diego Aracena**	**4.02**	**309**	*e*P	**Pn**	**23 08 10.8**	**-0.2**
TA01				*e*S	**S**	**23 08 58.3**	**-1.9**
TA01				IAML		23 08 58.4	
	comp=Z,56nm,0.6s						
GO01	**Chusmiza**	**4.10**	**327**		**Pn**	**23 08 13.2**	**+0.8**
GO01	**Chusmiza**	**4.10**	**327**	*e*P	**Pn**	**23 08 13.2**	**+0.8**
GO01				*e*S	**S**	**23 09 04.5**	**+1.8**
GO01				IAML		23 09 07.8	
	comp=Z,47nm,0.1s						
TA02	**Huaiquique**	**4.18**	**313**	*e*P	**Pn**	**23 08 12.7**	**-0.3**
TA02				*e*S	**S**	**23 09 00.7**	**-3.1**
AC02	**Maricunga**	**4.21**	**209**		**Pn**	**23 08 15.1**	**+1.4**
AC02	**Maricunga**	**4.21**	**209**	*e*P	**Pn**	**23 08 15.1**	**+1.4**
AC02				*e*S	**S**	**23 09 04.9**	**-0.2**
PB11	**IPOC Station P**	**4.27**	**322**		**Pn**	**23 08 13.9**	**-0.2**
PB11	**IPOC Station P**	**4.27**	**322**	*e*P	**Pn**	**23 08 13.8**	**-0.3**
PB11				*e*S	**S**	**23 09 02.9**	**-3.0**
PB11	**IPOC Station P**	**4.27**	**322**	*e*P	**Pn**	**23 08 13.9**	**-0.2**
PB11				*e*S	**S**	**23 09 03.9**	**-2.1**
PB11				IAML		23 09 07.5	
	comp=Z,130nm,0.3s						
AC01	**Pan de Azucar**	**4.53**	**228**	Pn	**Pn**	**23 08 17.0**	**-0.1**
AC01	**Pan de Azucar**	**4.53**	**228**	*e*P	**Pn**	**23 08 17.2**	**0.0**
AC01				*e*S	**S**	**23 09 10.2**	**-1.3**
AC01				IAML		23 09 14.1	
	comp=Z,33nm,0.3s						
AC06	**Mina Casimiro**	**5.25**	**216**	Pn	**Pn**	**23 08 26.1**	**-0.1**
GO03	**Copiapo**	**5.38**	**214**	*e*P	**Pn**	**23 08 27.9**	**0.0**
GO03				*e*S	**S**	**23 09 29.3**	**-1.6**
GO03				IAML		23 09 31.2	
	comp=Z,21nm,0.6s						
PB16	**IPOC Station P**	**5.40**	**332**		**Pn**	**23 08 29.5**	**+0.8**
PB12	**IPOC Station P**	**5.56**	**324**		**Pn**	**23 08 29.6**	**-0.7**
PB18	**Visviri**	**6.06**	**336**	Pn	**Pn**	**23 08 38.9**	**+1.8**
LCO	**Las Campanas**	**6.78**	**210**	Pn	**Pn**	**23 08 44.9**	**-1.1**
LPAZ	**La Paz**	**6.94**	**350**	P	**Pn**	**23 08 49.2**	**+0.8**
	comp=Z,4.5nm,0.3s,baz=178,slow=8.5,SNR=36						
LPAZ				S	**S**	**23 10 04.5**	**-3.6**
	comp=Z,1.7nm,0.7s,baz=354,slow=5.4,SNR=1.8						
LPAZ	**La Paz**	**6.94**	**350**		**Pn**	**23 08 49.4**	**+1.0**
CFA	**Coronel Fontan**	**8.51**	**188**	P	**Pn**	**23 09 07.7**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=44,slow=16,SNR=18						
CFA				S	**S**	**23 10 38.0**	**-6.0**
	comp=Z,1.4nm,0.3s,baz=198,slow=16,SNR=9.6						
TRQA	**Tornquist**	**15.43**	**165**	P	**P**	**23 10 34.0**	**-0.5**
TRQA				IAmb	IAmb	23 10 59.8	
	comp=Z,13nm,1.4s						
PLCA	**Paso Flores**	**17.80**	**189**	P	**Pn**	**23 11 03.0**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=17,slow=12,SNR=4.1						
PLCA	**Paso Flores**	**17.80**	**189**	P	**Pn**	**23 11 02.7**	**-0.2**
PLCA				IAmb	IAmb	23 11 09.4	
	comp=Z,6.6nm,1.1s						
VAO	**Valinhos**	**18.30**	**93**	P	**P**	**23 11 05.9**	**-0.3**
BDFB	**Brasilia**	**19.27**	**71**	P	**P**	**23 11 17.1**	**+0.4**
	comp=Z,2.0nm,0.5s,baz=278,slow=11,SNR=5.1						
BDFB	**Brasilia**	**19.27**	**71**	P	**P**	**23 11 16.3**	**-0.4**
BDFB				IAmb	IAmb	23 11 18.9	
	comp=Z,6.9nm,1.2s						
SNAA	**Sanae**	**60.10**	**161**	P	**P**	**23 16 54.3**	**+2.2**
	comp=Z,1.0nm,0.9s,baz=266,slow=9.0,SNR=2.1						
	comp=Z,1.0nm,0.9s						
SNAA	**Sanae**	**60.10**	**161**	P	**P**	**23 16 54.6**	**+2.6**
TORD	**Torodi Ar. Bea**	**76.14**	**69**	P	**P**	**23 18 32.0**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=246,slow=2.8,SNR=21						
	comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**145.79**	**39**	PKPbc	**PKiKP**	**23 26 23.9**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=274,slow=4.2,SNR=2.0						

IDC 14 23:24:06.4±2.6,**1°.76N**×**133°.24E,h0**^{km}**,mb3.9**/5,
mbtmp3.9/5,**MS3.5**/2,**Error ellipse: s-maj=155.3km
s-min=21.3km az=75.0,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**17.76**	**129**	LR	LR	23 37 15.4	
	comp=Z,75nm,18.2s,baz=22,slow=44						
WRA	**Warramunga Arr**	**21.60**	**177**	P	P	23 28 57.9	-0.1
	2.7nm,0.6s,baz=356,slow=11,SNR=20						
	2.7nm,0.6s						
ASAR	**Alice Springs**	**25.28**	**179**	P	P	23 29 34.8	+0.1
	1.7nm,0.7s,baz=2.7,slow=9.8,SNR=22						
	1.7nm,0.7s						
H11N1	**WAKE ISLAND Hy**	**37.43**	**59**	T	T	00 11 20.8	
	baz=245,slow=75,SNR=14						
H11N2	**WAKE ISLAND Hy**	**37.44**	**59**	T	T	00 11 22.2	
	baz=245,slow=75,SNR=15						
H11N3	**WAKE ISLAND Hy**	**37.45**	**59**	T	T	00 11 22.7	
	baz=245,slow=75,SNR=16						
RAO	**Raoul Island**	**55.94**	**127**	LR	LR	23 55 04.6	
	comp=Z,84nm,19.1s,baz=104,slow=33						
MKAR	**Makanchi Array**	**62.95**	**323**	P	P	23 34 35.1	+0.3
	0.5nm,0.7s,baz=112,slow=7.9,SNR=6.4						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**66.96**	**326**	P	P	23 35 00.6	-0.2
	0.5nm,0.2s,baz=106,slow=5.7,SNR=1.6						
	0.5nm,0.2s						
BVAR	**Borovoye Array**	**72.55**	**326**	P	P	23 35 35.2	-0.1
	1.2nm,0.9s,baz=97,slow=9.3,SNR=3.6						
	1.2nm,0.9s						

IDC 14 23:31:08.2±2.7,**6°.29N**×**124°.70E,h0**^{km}**,mb3.5**/3,
mbtmp3.5/3,**Error ellipse: s-maj=252.7km
s-min=29.4km az=64.0,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**27.74**	**160**	P	P	23 36 58.3	-0.3
	0.2nm,0.4s,baz=341,slow=8.2,SNR=1.4						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**31.10**	**164**	P	P	23 37 28.6	+0.1
	0.6nm,0.3s,baz=341,slow=7.4,SNR=18						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**54.32**	**325**	P	P	23 40 36.5	0.0
	0.2nm,0.6s,baz=111,slow=8.2,SNR=2.1						

0.2nm,0.6s

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*BUL **14** 23:32:13.6±0.8, 26°.36S×25°.70E, h10^{km}, MD3.5*
*BGSI **14** 23:32:14.4±3.6, 27°.05S×26°.84E, h10^{km}, ML2.8*
ISC 14 23:32:14.2±1.4**, 26°.85S**±0°.06×**26°.68E**±0°.07**, h5^{km}, n8, σ1^{s}50**/12**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAKGR	Makgori	1.98	301	*i*P	Pb	23 32 51.6	+0.8
MAKGR				*i*S	Sg	23 33 17.3	-0.6
MAKGR				IAML		23 33 19.6	
	comp=E,383nm,0.6s						
BOSA	Boshof	2.16	215	*i*P	Pn	23 32 51.3	+0.3
BOSA				*i*S	Sn	23 33 18.1	-0.2
SKOMA	Sekoma	3.40	313	*i*P	Pn	23 33 09.0	+1.0
SKOMA				*i*S	Sn	23 33 47.2	-1.7
SKOMA				IAML		23 34 05.2	
	comp=E,24nm,0.3s						
LPHEP	Lephephe	3.56	348	*i*P	Pn	23 33 12.2	+2.0
LPHEP				*i*S	Sn	23 33 53.7	+1.0
LPHEP				IAML		23 34 08.7	
	comp=E,16nm,0.2s						
PHPEN	Phepeng	3.70	291	*i*P	Pn	23 33 11.0	-1.2
MREMI	Moremi	4.32	9	*i*P	Pn	23 33 19.9	-0.9
MREMI				IAML		23 34 30.6	
	comp=E,94nm,0.3s						
MUSN	Musina, Limpop	5.39	33	*i*P	Pn	23 33 36.3	+0.9
MUSN				*i*S	Sn	23 34 35.1	-2.7
BLWY	Bulawayo	6.91	15	*i*P	Pn	23 33 50.6	-5.8

NOU 14 23:36:35.6, 14°.47S×167°.35E, h82^{km}, mb4.2/14**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.98	188	P	Pn	23 36 54.2	-0.4
SANVU	Saraoutou	0.98	188	P	Sn	23 37 09.7	+1.0
DVP	Devils Point	3.33	166	P	Pn	23 37 25.9	+0.4
DVP	Devils Point	3.33	166	S	Sn	23 38 04.8	+0.7
RTV	Rentapao	3.46	163	P	Pn	23 37 27.9	+0.7
RTV	Rentapao	3.46	163	S	Sn	23 38 07.1	-0.1
YATNC	Mamie plateau,	7.56	183	P	Pn	23 38 21.2	-1.9
DZM	Mont Dzumac	7.61	186	P	Pn	23 38 23.9	0.0
ONTNC	Ouen Toro	7.84	186	P	Pn	23 38 27.9	+0.9
OUENC	Ouen Island, N	7.92	183	P	Pn	23 38 28.4	+0.4

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*IDC **15** 00:09:36.9±2.3, 30°.65N×141°.70E, h0^{km}, mb3.8/9, mbtmp3.8/11, ML3.2/2, Error ellipse: s-maj=97.1km s-min=16.9km az=73.0*
*NIED **15** 00:09:38.0, 30°.75N×142°.06E, h49^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$2.27; M$_{\theta\theta}$0.96; M$_{\phi\phi}$-3.23; M$_{r\theta}$0.80; M$_{\theta\phi}$-1.06; M$_{\phi r}$5.32; Fault plane solution: M$_0$6.10000×10^{14} NP1: φ$_s$203.00000°, δ14.00000°, λ105.00000°. NP2:φ$_s$8.00000°, δ76.00000°, λ86.00000°.*
*JMA **15** 00:09:38.0±0.2, 30°.8N±0°.8×14°2E±°, h49^{km}, MV4.0/20, NEAR TORISHIMA IS*
*NEIC **15** 00:09:38.8±0.8, 30°.7N±0°.1×141°.7E±0°.2, h10^{km}±1^{km}, mb4.2/12, Error ellipse: s-maj=28.4km s-min=17.2km az=63.0*
ISC 15 00:09:39.8±0.8**, 30°.71N**±0°.06×**141°.8E**±0°.1**, h23^{km}, n42, σ1^{s}14**/44**, mb4.0**/15**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	2.92	326	Pn	Pn	00 10 23.9	-0.9
JHJ2	Mitsune	2.92	326	*e*P	Pn	00 10 25.2	+0.4
JHJ	Hachijo jima 2	2.94	325	Pn	Pn	00 10 25.2	+0.1
	13nm,0.3s,baz=76,slow=16,SNR=5.3						
JHJ				Sn	Sn	00 10 57.0	-2.8
	31nm,0.3s,baz=91,slow=22,SNR=7.7						
	71nm,0.6s						
CBIJ	Chichi jima	3.62	174	*e*S	Sn	00 11 15.2	-1.3
JCJ	Chichijima	3.62	174	Pn	Pn	00 10 24.7	-10
	6.0nm,0.3s,baz=290,slow=22,SNR=5.2						
JCJ				Sn	Sn	00 11 04.8	-12
	13nm,0.3s,baz=97,slow=23,SNR=6.3						
BSO1	Boso 1	3.99	350	*e*S	Sn	00 11 23.7	-1.1
BSO3	Boso 3	4.22	346	*e*S	Sn	00 11 30.5	-0.4
JRY	Ryogami san	5.82	336	*e*S	Sn	00 12 10.4	-0.2
JHO	Hitachi	5.97	351	*e*P	Pn	00 11 06.0	-0.8
JHO				*e*S	Sn	00 12 10.0	-4.4
JAG	Ashikaga	6.02	342	*e*P	Pn	00 11 07.7	+0.2
JGF	Kuroka	6.13	324	Pn	Pn	00 11 09.3	+0.4
MJAR	Matsushiro Arr	6.54	334	Pn	Pn	00 11 15.2	+0.6
	0.3nm,0.3s,baz=160,slow=12,SNR=11						
MJAR				Sn	Sn	00 12 31.3	+3.0
	0.1nm,0.3s,baz=131,slow=30,SNR=4.2						
	2.2nm,0.4s						
MJAR	Matsushiro Arr	6.54	334		Pn	00 11 14.9	+0.3
MAJO	Matsushiro	6.54	334		Pn	00 11 15.2	+0.7
MJB9	Matsu-Tunnel	6.54	334		Pn	00 11 15.5	+0.9
SONM	Songino Array	31.95	312	P	P	00 16 04.8	+0.9
	0.5nm,0.6s,baz=123,slow=7.5,SNR=3.9						
	0.5nm,0.6s						
ZALV	Zalesovo Beam	46.58	317	P	P	00 18 05.7	+0.1
	0.4nm,0.6s,baz=116,slow=6.6,SNR=2.2						
	0.4nm,0.6s						
EVN	Everest	47.60	281	P	P	00 18 13.8	-1.0
EVN				IAmb	IAmb	00 18 18.6	
	comp=Z,2.7nm,1.2s						
MKAR	Makanchi Array	47.96	307	P	P	00 18 16.8	+0.2
	comp=Z,0.6nm,0.5s,baz=88,slow=9.1,SNR=14						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	47.96	307	P	P	00 18 16.4	-0.3
MAKZ	Makanchi	48.18	307	P	P	00 18 18.2	-0.1
MAKZ				IAmb	IAmb	00 18 19.2	
	comp=Z,5.2nm,1.4s						
KURK	Kurchatov	50.25	312	P	P	00 18 33.7	-0.3
KURK				IAmb	IAmb	00 18 35.5	
	comp=Z,1.7nm,0.9s						
KURBB	Kurchatov Arra	50.31	312	P	P	00 18 34.5	0.0
	comp=Z,1.3nm,0.9s,baz=91,slow=9.0,SNR=11						
	comp=Z,1.3nm,0.9s						
WB0	Warramunga Arr	50.69	189	P	P	00 18 37.2	-0.3
WB0				IAmb	IAmb	00 18 38.1	
	comp=Z,2.3nm,0.7s						
WRA	Warramunga Arr	50.87	189	P	P	00 18 39.1	+0.2
	comp=Z,1.2nm,0.5s,baz=7.3,slow=7.7,SNR=17						
	comp=Z,1.2nm,0.5s						
WRA	Warramunga Arr	50.87	189	P	P	00 18 37.7	-1.2
B21K	Ikpikpuk River	52.40	23	P	P	00 18 51.3	+1.5
AS31	Alice Springs	54.59	189	P	P	00 19 06.3	-0.2
ASAR	Alice Springs	54.59	189	P	P	00 19 06.7	+0.2
	comp=Z,0.5nm,0.5s,baz=3.6,slow=5.9,SNR=12						
	comp=Z,0.5nm,0.5s						
ASAR	Alice Springs	54.59	189	P	P	00 19 06.0	-0.5
BVAR	Borovoye Array	55.19	316	P	P	00 19 10.8	+0.3
	comp=Z,0.4nm,0.4s,baz=96,slow=6.7,SNR=4.3						
	comp=Z,0.4nm,0.4s						
BMAR	Burnt Mountain	55.77	27	P	P	00 19 15.5	+1.0
NIL	Nilore	57.10	292	P	P	00 19 23.6	-1.0
CHGR	Chuyangaron	58.84	299	P	P	00 19 36.7	0.0
ARTI	Arti	61.49	321	P	P	00 19 54.2	-0.2
AB31	Akbulak array	62.36	313	P	P	00 20 00.7	+0.3
AB31				IAmb	IAmb	00 20 01.4	
	comp=Z,1.0nm,0.7s						
ABKAR	Akbulak array	62.36	313	P	P	00 20 00.7	+0.3
FINES	FINESS Array B	74.57	333	P	P	00 21 17.3	+0.8
	comp=Z,1.5nm,0.6s,baz=58,slow=5.1,SNR=13						
	comp=Z,1.5nm,0.6s						
FINES	FINESS Array B	74.57	333	P	P	00 21 16.2	-0.3
BRTR	Keskin Array B	83.30	312	P	P	00 22 05.8	+0.8
	comp=Z,0.5nm,0.6s,baz=90,slow=3.0,SNR=4.3						
	comp=Z,0.5nm,0.6s						
BRTR	Keskin Array B	83.30	312	P	P	00 22 05.1	0.0
RAYN	Ar Rayn	83.39	293	P	P	00 22 05.6	0.0
RAYN				IAmb	IAmb	00 22 06.9	
	comp=Z,1.6nm,0.6s						

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*VAO **15** 00:11:21.2±1.8, 28°.11S×69°.51W, h97^{km}±9^{km}, mb4.6, Presumed earthquake*
*SJA **15** 00:11:21.7±0.8, 28°.12S×69°.47W, h118^{km}±6^{km}, ML4.4, MW4.4*
*NEIC **15** 00:11:23.9, 28°.17S×69°.52W, h109^{km}*
*GUC **15** 00:11:23.6±0.8, 28°.20S×69°.52W, h116^{km}±4^{km}, ML4.5*
*NEIC **15** 00:11:24.1±1.5, 28°.17S±0°.04×69°.53W±0°.07, h105^{km}±1^{km}, mb4.7/34, Mwr4.4/37, Mwr4.5(GUC), Error ellipse: s-maj=8.3km s-min=5.2km az=88.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-4.73; M$_{\theta\theta}$4.46; M$_{\phi\phi}$0.28; M$_{r\theta}$0.60; M$_{\theta\phi}$-2.11; M$_{\phi r}$-0.74; Fault plane solution: M$_0$5.15000×10^{15} NP1:φ$_s$298.48000°, δ50.01000°, λ-82.19000°. NP2:φ$_s$106.43000°, δ40.62000°, λ-99.21000°. Principal axes: T 5.4044, Plg5.0000°, Azm23.0000°; N -0.5537, Plg6.0000°, Azm113.0000°; P -4.8508, Plg82.0000°, Azm255.0000°;*
*IDC **15** 00:11:25.1±0.5, 28°.23S×69°.15W, h114^{km}±4^{km}, mb4.2/11, mbtmp4.5/12, MS2.9/2 Error ellipse: s-maj=18.1km s-min=9.4km az=75.0*
ISC 15 00:11:23.1±0.5**, 28°.18S**±0°.02×**69°.48W**±0°.03**, h107^{km}**±4^{km}**, n193, σ1^{s}62**/229**, mb4.6**/25**, 22C-3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO03	Copiapo	0.89	311		Pn	00 11 43.4	+0.3
GO03				Sn	Sn	00 11 58.4	+0.3
GO03	Copiapo	0.89	311	⇓*e*P	Pn	00 11 43.4	+0.3
GO03				*e*S	Sn	00 11 58.6	+0.5
GO03				IAML		00 11 59.6	
	comp=E,10µm,0.2s						
GO03	Copiapo	0.89	311	*e*P	Pn	00 11 43.4	+0.3
GO03				*e*S	Sn	00 11 58.9	+0.8
GO03				IAML		00 12 00.5	
	comp=Z,4µm,0.3s						
AC05	El Transito	0.96	227		Pn	00 11 44.4	+0.6
AC05				Sn	Sn	00 12 00.0	+0.5
AC05	El Transito	0.96	227	⇑*e*P	Pn	00 11 44.5	+0.6
AC05				*e*S	Sn	00 11 59.9	+0.4
AC05				IAML		00 12 00.4	
	comp=E,11µm,0.3s						
AC05	El Transito	0.96	227	*e*P	Pn	00 11 44.3	+0.5
AC05				*e*S	Sn	00 12 00.5	+1.0
AC05				IAML		00 12 10.5	
	comp=Z,4µm,1.1s						
AC06	Mina Casimiro	1.13	316		Pn	00 11 45.9	+0.3
AC06				Sn	Sn	00 12 02.1	-0.4
AC06	Mina Casimiro	1.13	316	⇓*e*P	Pn	00 11 45.9	+0.3
AC06				*e*S	Sn	00 12 02.7	+0.2
AC06				IAML		00 12 03.6	
	comp=N,5µm,0.3s						
VCA	Vinchina	1.25	117	⇓*e*P	Pn	00 11 48.0	+1.0
VCA				*e*S	Sn	00 12 06.8	+1.8
VCA				IAML		00 12 07.3	
	comp=E,9µm,0.5s						
VCA	Vinchina	1.25	117	*e*P	Pn	00 11 47.7	+0.7
VCA				*e*S	Sn	00 12 07.0	+1.9
VCA				IAML		00 12 09.2	
	comp=Z,5µm,0.6s						
LCO	Las Campanas	1.36	232		Pn	00 11 48.8	+0.4
LCO				Sn	Sn	00 12 08.0	+0.5
LCO	Las Campanas	1.36	232	⇑*e*P	Pn	00 11 48.4	0.0
LCO				*e*S	Sn	00 12 08.1	+0.6
LCO				IAML		00 12 10.5	
	comp=Z,30µm,0.4s						
LCO	Las Campanas	1.36	232	*e*P	Pn	00 11 48.8	+0.4
LCO				*e*S	Sn	00 12 09.1	+1.6
LCO				IAML		00 12 11.6	
	comp=Z,6µm,0.6s						
AC02	Maricunga	1.37	13		Pn	00 11 50.1	+1.3
AC02	Maricunga	1.37	13	⇑*e*P	Pn	00 11 50.2	+1.4
AC02				*e*S	Sn	00 12 10.0	+1.8
AC02				IAML		00 12 10.9	
	comp=E,12µm,0.3s						
AC02	Maricunga	1.37	13	*e*S	Sn	00 12 10.4	+2.3
AC02				IAML		00 12 12.1	
	comp=Z,3µm,0.2s						
AC04	Llanos de Chal	1.41	269		Pn	00 11 49.0	+0.4
AC04				Sn	Sn	00 12 08.2	+0.1
AC04	Llanos de Chal	1.41	269	⇑*e*P	Pn	00 11 49.1	+0.4
AC04				*e*S	Sn	00 12 08.5	+0.3
AC04				IAML		00 12 09.2	
	comp=N,4µm,0.4s						
AC04	Llanos de Chal	1.41	269	*e*P	Pn	00 11 48.4	-0.3
AC04				*e*S	Sn	00 12 08.8	+0.7
AC04				IAML		00 12 10.8	
	comp=Z,2µm,0.5s						
AGUA	GUANDACOL	1.56	147	*e*P	Pn	00 11 52.0	+1.3
TINO	Tinogasta	1.69	86	*e*P	Pn	00 11 51.9	-0.3
TINO				*e*S	Sn	00 12 14.2	-0.1
CO01	Juntas del Tor	1.87	197		Pn	00 11 56.0	+1.3
CO01	Juntas del Tor	1.87	197	⇑*e*P	Pn	00 11 55.9	+1.3
CO01				*e*S	Sn	00 12 21.0	+2.4
CO01	Juntas del Tor	1.87	197	*e*P	Pn	00 11 56.0	+1.3
CO01				*e*S	Sn	00 12 21.4	+2.8
CO01				IAML		00 12 21.9	
	comp=Z,955nm,0.6s						
ACDV	Cuesta del Vie	2.01	171	*e*P	Pn	00 11 57.9	+1.7
ACDV				*e*S	Sn	00 12 22.3	+0.7
ACDV				IAML		00 12 27.8	
	comp=Z,851nm,0.8s						
AC01	Pan de Azucar	2.26	333		Pn	00 11 59.9	+0.5
AC01	Pan de Azucar	2.26	333	*e*P	Pn	00 11 59.9	+0.5
AC01				*e*S	Sn	00 12 24.4	-2.6
AC01				IAML		00 12 33.6	
	comp=N,3µm,0.1s						
AC01	Pan de Azucar	2.26	333	*e*S	Sn	00 12 24.7	-2.4
AC01				IAML		00 12 34.7	
	comp=Z,2µm,0.6s						
GO04	Tololo Observa	2.30	210		Pn	00 12 00.1	0.0
GO04	Tololo Observa	2.30	210	⇑*e*P	Pn	00 12 00.1	0.0
GO04				*e*S	Sn	00 12 28.6	+0.3
GO04				IAML		00 12 30.7	
	comp=E,5µm,0.3s						
CO05	La Serena	2.32	221		Pn	00 11 59.8	-0.3
CO05	La Serena	2.32	221	⇑*e*P	Pn	00 11 59.9	-0.3
CO05				*e*S	Sn	00 12 27.6	-0.9
CO05				IAML		00 12 34.7	
	comp=N,3µm,0.7s						
AANI	Anillaco	2.32	106	*e*S	Sn	00 12 28.9	+0.2
AANI				IAML		00 12 30.3	
	comp=Z,3µm,1.1s						
ACCO	Cerro Coronel	2.42	172	*e*P	Pn	00 12 03.2	+1.4
ACCO				*e*S	Sn	00 12 34.5	+3.1
ACLC	CERRO LA CRUZ	2.54	120	*e*P	Pn	00 12 03.6	+0.5
ACLC				*e*S	Sn	00 12 34.2	+0.4
CO03	El Pedregal	2.85	201		Pn	00 12 07.2	0.0
CO03	El Pedregal	2.85	201	⇑*e*P	Pn	00 12 07.2	0.0
CO03				*e*S	Sn	00 12 40.8	-0.4
CO03				IAML		00 12 43.7	
	comp=E,2µm,0.4s						
GO02	Mina Guanaco	3.01	358		Pn	00 12 10.3	+0.9
GO02	Mina Guanaco	3.01	358	⇑*e*P	Pn	00 12 10.4	+0.9
GO02	Mina Guanaco	3.01	358	*e*S	Sn	00 12 47.1	+2.0
GO02				IAML		00 12 51.7	
	comp=Z,1µm,0.3s						
CO06	Fray Jorge	3.12	217		Pn	00 12 09.3	-1.3
CO06	Fray Jorge	3.12	217	*e*P	Pn	00 12 09.4	-1.3
CO06				IAML		00 13 01.8	
	comp=E,590nm,0.5s						
CYA	Choya	3.25	95	⇑*e*P	Pn	00 12 12.1	-0.3
CYA				*e*S	Sn	00 12 47.1	-3.4
CYA				IAML		00 12 49.6	
	comp=E,537nm,0.6s						
CO02	Combarbal	3.29	203		Pn	00 12 12.4	-0.7
CO02	Combarbal	3.29	203	⇑*e*P	Pn	00 12 12.4	-0.7
CO02				*e*S	Sn	00 12 50.6	-1.0
CO02				IAML		00 12 51.9	
	comp=N,3µm,0.5s						
CFA	Coronel Fontan	3.58	163	P	Pn	00 12 17.1	+0.3
	comp=N,66nm,0.3s,baz=332,slow=14,SNR=453						
CFA				S	Sn	00 12 57.1	-1.2
	comp=N,171nm,0.4s,baz=121,slow=19,SNR=14						
PB14	IPOC Station P	3.64	347		Pn	00 12 17.7	-0.2
PB14	IPOC Station P	3.64	347	*e*S	Sn	00 12 58.5	-1.7
PB14				IAML		00 13 12.2	
	comp=Z,1µm,0.7s						
FSA	Cafayete	3.73	57	*e*P	Pn	00 12 14.3	-4.8
VA06	Catapilco	4.64	199		Pn	00 12 29.2	-1.8
VA06	Catapilco	4.64	199	⇑*e*P	Pn	00 12 29.2	-1.8
VA03	San Esteban	4.66	191		Pn	00 12 30.7	-0.6
VA03	San Esteban	4.66	191	⇑*e*P	Pn	00 12 30.8	-0.6
PB10	IPOC Station P	4.75	348		Pn	00 12 31.1	-1.4
PB10	IPOC Station P	4.75	348	⇑*e*P	Pn	00 12 31.0	-1.6
PB10	IPOC Station P	4.75	348	*e*P	Pn	00 12 31.1	-1.4
PB10				*e*S	Sn	00 13 33.8	+7.3
PB10				IAML		00 13 50.7	
	comp=Z,271nm,0.6s						
SALTA		4.84	36	⇑*e*P	Pn	00 12 35.0	+0.7
SALTA		4.84	36	*e*P	Pn	00 12 21.0	-13
SALTA				*e*P	Pn	00 12 29.5	-4.8
SALTA				*e*P	Pn	00 12 29.7	-4.6
SALTA				IAML		00 13 27.3	
	comp=Z,121nm,1.8s						
SLA	San Lorenzo	4.95	47	⇑*e*P	Pn	00 12 37.1	+1.6
PEL	Peldehue	5.06	192		Pn	00 12 35.1	-1.6
PEL	Peldehue	5.06	192	*e*P	Pn	00 12 35.2	-1.5
MT10	Hacienda Santa	5.16	190	*e*P	Pn	00 12 37.0	-1.1
VA01	Torpederas	5.18	201	*e*P	Pn	00 12 35.0	-3.3
MT02	Curacav	5.26	195		Pn	00 12 37.0	-2.5
MT08	Bocatoma Ro	5.27	185		Pn	00 12 39.9	+0.1
MT14	Cerro Cal¡n	5.28	190	*e*P	Pn	00 12 38.7	-1.0
MT05	Renca	5.31	192		Pn	00 12 38.5	-1.6
MT16	CCHEN	5.31	190		Pn	00 12 38.9	-1.2
MT16	CCHEN	5.31	190	*e*P	Pn	00 12 39.0	-1.2
AF01	San Pedro de A	5.34	13		Pn	00 12 40.6	-0.2
AF01	San Pedro de A	5.34	13	*e*P	Pn	00 12 37.7	-3.1
AF01				*e*S	Sn	00 13 21.9	-19
PB05	IPOC Station P	5.35	353		Pn	00 12 38.4	-2.4
PB05	IPOC Station P	5.35	353	⇑*e*P	Pn	00 12 38.7	-2.0
PB05	IPOC Station P	5.35	353	*e*S	Sn	00 13 49.5	+8.3
PB05				IAML		00 14 11.2	
	comp=Z,233nm,1.0s						
MT03	Universidad Ad	5.37	189		Pn	00 12 39.9	-1.1
PB06	IPOC Station P	5.45	359		Pn	00 12 40.8	-1.5
PB06	IPOC Station P	5.45	359	*e*P	Pn	00 12 27.1	-15
PB06				IAML		00 14 19.3	
	comp=Z,342nm,0.6s						
MT15	Las Vizcachas	5.47	189	*e*P	Pn	00 12 41.1	-1.3
MT13	San Alfonso	5.59	187		Pn	00 12 43.3	-0.6
MT13	San Alfonso	5.59	187	*e*P	Pn	00 12 43.4	-0.6
MT12	Pirque	5.61	189	*e*P	Pn	00 12 42.4	-1.8
LMEL	Las Melosas	5.68	186		Pn	00 12 44.5	-0.8
MT09	Talagante	5.73	193	*e*P	Pn	00 12 43.1	-2.7
VA05	Santo Domingo	5.76	198	*e*P	Pn	00 12 42.7	-3.4
PB03	IPOC Station P	6.11	358		Pn	00 12 48.8	-2.4
PB09	IPOC Station P	6.36	2		Pn	00 12 53.2	-1.4
BO02	Sierra Bellavi	6.69	189		Pn	00 12 56.1	-2.7
PB02	IPOC Station P	6.84	357	Pn	Pn	00 12 58.1	-2.9
TA01	Diego Aracena	7.61	355	Pn	Pn	00 13 08.6	-2.7
H03N1	Juan Fernandez	9.66	235	P	Pn	00 13 37.6	-1.3
	baz=115,slow=18,SNR=12						
H03N2	Juan Fernandez	9.67	235	P	Pn	00 13 36.7	-2.3
	baz=115,slow=18,SNR=9.7						
H03N3	Juan Fernandez	9.67	235	P	Pn	00 13 36.8	-2.3
	baz=115,slow=18,SNR=9.4						
VA04	Juan Fernndez	9.70	234	Pn	Pn	00 13 38.5	-1.1
PSAL	Palomas, Salto	10.72	109	*e*P	Pn	00 13 52.1	-1.4
CPUP	Villa Florida	10.96	83	P	Pn	00 13 53.0	-3.9
	comp=Z,0.6nm,0.4s,baz=259,slow=12,SNR=10						
CPUP	Villa Florida	10.96	83	Pn	Pn	00 13 54.4	-2.4
TRQA	Tornquist	11.68	149	Pn	Pn	00 14 03.7	-2.6
LPAZ	La Paz	11.90	6	P	Pn	00 14 07.9	-2.1
	comp=Z,6.3nm,0.4s,baz=190,slow=8.9,SNR=25						
LPAZ	La Paz	11.90	6	Pn	Pn	00 14 07.6	-2.4
LPAZ	La Paz	11.90	6	*e*P	Pn	00 14 07.8	-2.2
PLCA	Paso Flores	12.55	184	P	Pn	00 14 16.4	-1.5
	comp=Z,4.6nm,0.8s,baz=358,slow=12,SNR=11						
PLCA				LR	LR	00 18 33.6	
	comp=Z,33nm,20.5s,baz=1.5,slow=34						
AMBA	Amambai (Brazi	14.08	71	*e*P	Pn	00 14 36.8	-1.1
SIV	San Ignacio	14.41	34	P	Pn	00 14 37.4	-4.7
	comp=Z,7.6nm,0.6s,baz=213,slow=6.2,SNR=34						
LL07	Hotel Espejo d	14.97	191		Pn	00 14 50.4	+1.4
GO07	Milladeo Hill,	15.28	192	Pn	Pn	00 14 53.4	+0.5
PTLB	Pontes e Lacer	15.88	39	Pn	Pn	00 15 00.3	-0.3
PTLB	Pontes e Lacer	15.88	39	*e*P	Pn	00 14 58.5	-2.1
AY01	Puyuhuapi	16.41	188	P	Pn	00 15 06.7	-0.2
AY01				IAmb	IAmb	00 15 10.4	
	comp=Z,30nm,0.8s						
PP1B	Ponte de Pedra	17.06	55	*e*P	Pn	00 15 13.0	-2.2
VILB	Vilhena	17.45	32	P	P	00 15 18.5	-1.1
VILB				IAmb	IAmb	00 15 21.4	
	comp=Z,41nm,1.0s						
VILB	Vilhena	17.45	32	*e*P	P	00 15 18.5	-1.1
COYC	Coyhaique	17.48	186	P	P	00 15 19.6	-0.1
COYC				IAmb	IAmb	00 15 23.4	
	comp=Z,46nm,1.0s						
SALV	Santo Antonio	17.66	49	*e*P	P	00 15 19.5	-2.3
ITRB	Iturama	19.39	68	*e*P	P	00 15 40.0	-0.8
PDRB	Porto dos Gac	20.35	38	*e*P	P	00 15 50.8	-0.4
ARAG	Araguaiana, MT	20.52	56	*e*P	P	00 15 52.6	-0.4
RCLB	Rio Claro- Sao	20.64	79	*e*P	P	00 15 53.7	-0.6
VAO	Valinhos	20.93	81	P	P	00 15 56.4	-1.1
CLDB	Colider	21.47	39	*e*P	P	00 16 02.0	-1.2
SNDB	Serra Nova Dou	23.43	50	*e*P	P	00 16 21.4	-1.5
BDFB	Brasilia	23.45	62	P	P	00 16 21.2	-2.0
	comp=Z,2.6nm,0.5s,baz=237,slow=13,SNR=6.6						
BDFB				LR	LR	00 26 25.3	
	comp=Z,39nm,19.2s,baz=279,slow=39						
	comp=Z,2.6nm,0.5s						
BDFB	Brasilia	23.45	62	P	P	00 16 21.4	-1.8
NPGB	Novo Progresso	24.91	35	*e*P	P	00 16 34.1	-2.2
TEFE	Tefe	24.96	12	*e*P	P	00 16 34.1	-2.6
ITTB	Itaituba	27.05	31	*e*P	P	00 16 53.4	-2.2
SMTB	Santa Maria do	28.19	51	*e*P	P	00 17 05.3	-0.5
RUSC	La Rusia	34.05	354	P	P	00 17 55.6	-2.1
BELA	Belgrano 2	52.24	171		P	00 20 23.7	+1.0
BELA				IAmb	IAmb	00 20 24.5	
	comp=Z,3.1nm,0.7s						
BELA				PcP	PcP	00 21 33.4	+0.7
VNA3	Neumayer Olymp	53.97	160	⇑P	P	00 20 36.1	+0.6
	comp=Z,4.2nm,0.7s						
VNA1	Neumayer--Stat	54.22	159	⇑P	P	00 20 38.0	+0.7
	comp=Z,3.7nm,0.9s						
VNA2	Neumayer--Watz	54.58	159	⇑P	P	00 20 39.5	-0.4
	comp=Z,5.6nm,0.6s,baz=284,slow=8.5						
SNAA	Sanae	56.19	160	⇑P	P	00 20 51.9	+0.4
	comp=Z,93nm,0.4s						
SNAA	Sanae	56.19	160	P	P	00 20 52.1	+0.5
	comp=Z,5.1nm,0.5s,baz=278,slow=7.4,SNR=84						
SNAA				pP	pP	00 21 20.5	+1.7
	comp=Z,3.0nm,0.9s,baz=283,slow=2.9,SNR=3.7						
	comp=Z,5.1nm,0.5s						
SNAA	Sanae	56.19	160	P	P	00 20 52.0	+0.5
SNAA				IAmb	IAmb	00 20 53.0	
	comp=Z,16nm,1.3s						
TROLL	Troll, Antarti	57.91	160	⇑P	P	00 21 03.7	0.0
	comp=Z,205nm,0.5s						
QSPA	South Pole Qui	62.04	180	P	P	00 21 33.6	+1.6
	comp=Z,7.8nm,0.6s,baz=188,slow=0.4,SNR=83						
QSPA				pP	pP	00 22 02.4	+2.6
	comp=Z,6.0nm,0.9s,baz=121,slow=3.9,SNR=5.2						
	comp=Z,7.8nm,0.6s						
QSPA	South Pole Qui	62.04	180	P	P	00 21 33.5	+1.4
DRIO	Del Rio	64.56	330		P	00 21 48.9	0.0
DRIO				IAmb	IAmb	00 21 52.6	
	comp=Z,5.7nm,1.1s						
V53A	Saluda	64.74	348	P	P	00 21 50.6	+0.7
V53A				IAmb	IAmb	00 22 21.9	
	comp=Z,14nm,1.4s						
SWET	Sewanee	64.94	345	P	P	00 21 51.8	+0.6
SWET				IAmb	IAmb	00 21 52.9	
	comp=Z,12nm,0.8s						
OXF	Oxford	65.14	342	P	P	00 21 53.0	+0.5
BRDY	Brady	65.49	332		P	00 21 56.4	+1.5
BRDY				IAmb	IAmb	00 21 57.6	
	comp=Z,8.9nm,0.8s						
SAND	Sanderson	65.69	329	P	P	00 21 58.1	+1.9
SAND				IAmb	IAmb	00 21 59.8	
	comp=Z,16nm,1.2s						
TXAR	Lajitas Array	65.88	327	P	P	00 21 59.9	+2.3
	comp=Z,3.0nm,0.9s,baz=151,slow=8.6,SNR=23						
TXAR				pP	PcP	00 22 29.1	+1.5
	comp=Z,0.6nm,0.6s,baz=151,slow=5.9,SNR=3.1						
	comp=Z,3.0nm,0.9s						
TXAR	Lajitas Array	65.88	327	P	P	00 21 59.3	+1.8
U49A	Red Boiling Sp	66.15	346	P	P	00 21 59.4	+0.4
U49A				IAmb	IAmb	00 22 01.4	
	comp=Z,9.9nm,1.3s						
WVT	Waverly	66.26	344	P	P	00 22 00.2	+0.5
WVT				IAmb	IAmb	00 22 01.2	
	comp=Z,9.1nm,0.7s						
Z35A	Perchaven, San	66.61	335	P	P	00 22 03.7	+1.7
RLO	Rose Lookout	68.38	338	P	P	00 22 13.8	+0.8
RLO				IAmb	IAmb	00 22 15.1	
	comp=Z,11nm,0.6s						
MGMO	Mountain Grove	68.43	341	P	P	00 22 14.4	+1.0
MGMO				IAmb	IAmb	00 22 15.6	
	comp=Z,5.3nm,0.8s						
GDL2	Guadalupe Moun	68.61	329	P	P	00 22 15.9	+1.2
CCM	Cathedral Cave	68.97	342	P	P	00 22 17.5	+0.8
OK048	Pawnee Station	69.26	337	P	P	00 22 19.6	+1.1

R40A	Maddies Statio	69.48	341	P	P	00 22 20.8	+1.0
VNDA	Vanda	70.21	190	P	P	00 22 24.3	+0.4
P40A	Paris	70.57	342		P	00 22 27.8	+1.3
DBIC	Dimbokro	71.24	71	P	P	00 22 32.0	+0.9
	comp=Z,10nm,0.8s,baz=253,slow=6.4,SNR=13						
	comp=Z,10nm,0.8s						
DBIC	Dimbokro	71.24	71	P	P	00 22 31.6	+0.5
DBIC				IAmb	IAmb	00 22 32.3	
	comp=Z,8.6nm,0.6s						
ANMO	Albuquerque	71.86	329		P	00 22 36.3	+1.7
X16A	Lo Mia Camp, P	73.84	325		P	00 22 48.3	+2.0
X16A				IAmb	IAmb	00 22 50.4	
	comp=Z,15nm,1.3s						
WUAZ	Wupatki	74.67	326	P	P	00 22 51.8	+0.7
WUAZ				IAmb	IAmb	00 22 55.3	
	comp=Z,13nm,0.9s						
PDAR	Pinedale Array	79.66	331	P	P	00 23 20.6	+1.8
	comp=Z,1.9nm,0.5s,baz=128,slow=7.8,SNR=34						
	comp=Z,1.9nm,0.5s						
PDAR	Pinedale Array	79.66	331	P	P	00 23 20.3	+1.5
TORD	Torodi Ar. Bea	80.13	69	P	P	00 23 21.4	-0.3
	comp=Z,3.3nm,0.5s,baz=291,slow=4.7,SNR=17						
	comp=Z,3.3nm,0.5s						
TORD	Torodi Ar. Bea	80.13	69	P	P	00 23 22.2	+0.5
NVAR	Mina Array Bea	80.47	323	P	P	00 23 25.7	+2.4
	comp=Z,1.6nm,0.7s,baz=159,slow=5.6,SNR=8.5						
	comp=Z,1.6nm,0.7s						
NVAR	Mina Array Bea	80.47	323	P	P	00 23 24.7	+1.4
BOSA	Boshof	80.81	117	P	P	00 23 25.4	-0.1
	comp=Z,4.5nm,0.6s,baz=265,slow=3.2,SNR=14						
	comp=Z,4.5nm,0.6s						
BOSA	Boshof	80.81	117	P	P	00 23 25.8	+0.4
ULM	Lac du Bonnet	81.52	343	P	P	00 23 29.4	+1.0
	comp=Z,5.6nm,0.8s,baz=100,slow=3.3,SNR=5.4						
	comp=Z,5.6nm,0.8s						
FCC	Fort Churchill	89.01	347		P	00 24 06.8	+1.5
FCC				IAmb	IAmb	00 24 07.8	
	comp=Z,7.2nm,0.8s						
YKA	Yellowknife Ar	97.29	341	P	Pdif	00 24 44.4	+1.0
	comp=Z,1.0nm,0.7s,baz=148,slow=3.8,SNR=16						
	comp=Z,1.0nm,0.7s						
YKA	Yellowknife Ar	97.29	341	P	Pdif	00 24 44.3	+0.8
AKASG	Malin Array Be	116.58	45	PKP	PKPdf	00 29 53.1	-1.0
	comp=Z,0.8nm,0.6s,baz=277,slow=1.7,SNR=4.5						
BRTR	Keskin Array B	116.97	57	PKP	PKiKP	00 29 55.8	+0.3
	comp=Z,0.8nm,0.7s,baz=184,slow=4.5,SNR=6.7						
BRTR	Keskin Array B	116.97	57		PKPdf	00 29 55.1	-0.4
ARCES	ARCESS Array B	117.82	23	PKP	PKiKP	00 29 56.4	+0.3
	comp=Z,3.1nm,1.1s,baz=232,slow=3.0,SNR=2.1						
MARD	Mardin	121.82	62	PKPdf	PKiKP	00 30 05.2	+0.2
ASAR	Alice Springs	123.74	206	PKP	PKiKP	00 30 09.1	-0.1
	comp=Z,1.7nm,0.4s,baz=130,slow=1.8,SNR=40						
ASAR				pPKP	pPKPdf	00 30 39.2	-0.5
	comp=Z,0.7nm,0.7s,baz=131,slow=2.0,SNR=4.3						
ASAR	Alice Springs	123.74	206		PKPdf	00 30 08.6	-0.4
AS31	Alice Springs	123.74	206	PKPdf	PKiKP	00 30 09.2	-0.1
WR8	Warramunga Arr	126.83	209	PKPdf	PKiKP	00 30 15.3	-0.1
WRA	Warramunga Arr	126.91	208	PKP	PKiKP	00 30 15.4	-0.1
	comp=Z,3.1nm,0.5s,baz=153,slow=1.8,SNR=50						
WRA				pPKP	pPKPdf	00 30 45.8	-0.1
	comp=Z,1.6nm,0.7s,baz=160,slow=1.6,SNR=5.9						
WRA	Warramunga Arr	126.91	208		PKPdf	00 30 15.2	+0.2
ABKAR	Akbulak array	136.23	47	PKPdf	PKiKP	00 30 32.8	-0.6
BVAR	Borovoye Array	141.45	39	PKhKP	PKPpre	00 30 37.1	
	comp=Z,0.8nm,0.7s,baz=298,slow=4.1,SNR=6.5						
KURBB	Kurchatov Arra	147.04	38	PKPbc	PKPbc	00 30 52.5	-0.6
	comp=Z,12nm,0.6s,baz=303,slow=3.1,SNR=122						
KURK	Kurchatov	147.04	38		PKPbc	00 30 52.8	-0.2
AAK	Ala-Archa	147.55	54	PKPbc	PKPbc	00 30 54.9	-0.1
ZALV	Zalesovo Beam	148.11	29	PKPbc	PKiKP	00 30 57.1	-0.4
	comp=Z,25nm,0.5s,baz=305,slow=3.4,SNR=124						
ZALV				pPKPbc	pPKPbc	00 31 26.8	+0.5
	comp=Z,3.9nm,0.6s,baz=309,slow=3.5,SNR=3.0						
ZALV	Zalesovo Beam	148.11	29		PKPbc	00 30 54.4	-1.5
MKAR	Makanchi Array	151.13	42	PKP	PKPdf	00 30 58.4	+0.7
	comp=Z,0.5nm,0.7s,baz=18,slow=1.5,SNR=5.8						
MKAR				PKPbc	PKiKP	00 31 04.6	+0.5
	comp=Z,20nm,0.7s,baz=292,slow=1.9,SNR=252						
MKAR				pPKPbc	pPKPbc	00 31 34.6	+0.6
	comp=Z,1.9nm,0.6s,baz=289,slow=2.7,SNR=2.2						
SONM	Songino Array	160.12	8	PKP	PKPdf	00 31 10.7	+1.0
	comp=Z,0.6nm,0.8s,baz=161,slow=2.0,SNR=4.1						
SONM				PKPab	sPKPdf	00 31 51.8	-0.4
	comp=Z,0.4nm,0.5s,baz=314,slow=4.4,SNR=4.3						

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*IDC **15** 00:13:13.0±3.7, 24°.30S×69°.47E, h0^{km}, mb3.9/8, mbtmp3.9/8, MS3.5/5, Error ellipse: s-maj=112.9km s-min=28.8km az=50.0*

ISC 15 00:13:15.0±4.1**, 24°.3S**±0°.5×**69°.5E**±0°.7**, h10**^{km}**, n18, σ0^{s}.37**/8**, mb3.9**/8**, MS3.6**/5**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	Diego Carcia H	16.77	10	T	T	00 34 10.9	
	baz=190,slow=76,SNR=7.4						
H08S2	Diego Garcia H	16.77	10	T	T	00 34 10.0	
	baz=190,slow=76,SNR=7.1						
H08S3	Diego Garcia H	16.79	10	T	T	00 34 07.2	
	baz=190,slow=76,SNR=36						
H04N2	CROZET ISLANDS	26.10	209	T	T	00 46 16.4	
	baz=40,slow=74,SNR=55						
H04N1	CROZET ISLANDS	26.11	209	T	T	00 46 17.2	
	baz=40,slow=74,SNR=74						
H04N3	CROZET ISLANDS	26.12	209	T	T	00 46 15.9	
	baz=40,slow=74,SNR=51						
PSI	Prapat	39.24	51	LR	LR	00 33 43.1	
	comp=Z,48nm,18.1s,baz=310,slow=31						
BOSA	Boshof	39.72	254	LR	LR	00 34 23.1	
	comp=Z,108nm,18.2s,baz=113,slow=32						
LBTB	Lobatse	39.82	259	LR	LR	00 33 56.6	
	comp=Z,84nm,20.9s,baz=103,slow=31						
CMAR	Chiang Mai Arr	51.24	37	P	P	00 22 18.9	-0.1
	2.5nm,0.3s,baz=222,slow=7.3,SNR=6.0						
CMAR				LR	LR	00 40 14.3	
	comp=Z,22nm,21.3s,baz=350,slow=32						
	2.5nm,0.3s						
ASAR	Alice Springs	58.31	104	P	P	00 23 10.6	+0.1
	0.5nm,0.7s,baz=255,slow=6.4,SNR=9.9						
	0.5nm,0.7s						
WRA	Warramunga Arr	59.72	100	P	P	00 23 20.3	0.0
	0.6nm,0.7s,baz=252,slow=6.4,SNR=4.0						
	0.6nm,0.7s						
MKAR	Makanchi Array	71.66	9	P	P	00 24 36.7	0.0
	0.9nm,0.8s,baz=191,slow=5.9,SNR=10.0						
	0.9nm,0.8s						
KURBB	Kurchatov Arra	74.98	6	P	P	00 24 56.7	+0.5
	0.8nm,0.9s,baz=200,slow=6.2,SNR=6.0						
	0.8nm,0.9s						
BVAR	Borovoye Array	76.97	1	P	P	00 25 07.1	-0.4
	1.0nm,0.7s,baz=160,slow=4.7,SNR=7.1						
	1.0nm,0.7s						
DBIC	Dimbokro	78.66	283	LR	LR	00 58 16.4	
	comp=Z,30nm,18.6s,baz=253,slow=34						
ZALV	Zalesovo Beam	79.00	9	P	P	00 25 18.2	-0.5
	0.9nm,0.7s,baz=212,slow=5.3,SNR=5.2						
	0.9nm,0.7s						
SONM	Songino Array	79.05	24	P	P	00 25 19.5	+0.2
	1.3nm,1.2s,baz=224,slow=6.0,SNR=2.8						
	1.3nm,1.2s						

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*KRSC **15** 00:26:22.6±2.4, 48°.69N×156°.81E, h6^{km}±40^{km}, Ml4.9*
*SKHL **15** 00:26:23.8±0.3, 48°.70N×155°.30E, h65^{km}±5^{km}, mb5.0/5*
*MOS **15** 00:26:24.0±1.2, 48°.91N×154°.88E, h57^{km}, mb4.7/22, Error ellipse: s-maj=9.6km s-min=3.6km az=73.6*
*IDC **15** 00:26:25.9±2.2, 48°.90N×154°.83E, h62^{km}±19^{km}, mb3.9/28, mbtmp4.2/35, MS3.5/2, Error ellipse: s-maj=14.5km s-min=10.5km az=144.0*
*NEIC **15** 00:26:26.7±0.9, 48°.95N±0°.09×154°.8E±0°.1, h66^{km}±6^{km}, mb4.6/70, Error ellipse: s-maj=16.0km s-min=9.3km az=130.0*

ISC 15 00:26:24.5±0.7**, 48°.83N**±0°.05×**155°.03E**±0°.05**, h52**^{km}±6^{km}**, n566, σ1^{s}.12**/578**, mb4.5**/95**, 11C-4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril’s	1.98	20	ePN	Pn	00 26 55.9	+0.3
SKR				eS	Sn	00 27 19.5	+0.2
SKR				pmax	pmax		
	comp=Z,236nm,0.5s						
SKR				smax	smax		
	comp=N,1μm,0.2s						
SKR				smax	smax		
	comp=E,2μm,0.2s						
SKR	Severo-Kuril’s	1.98	20	eP	Pn	00 26 56.0	+0.4
SKR				eS	Sn	00 27 20.1	+0.8
SKR	Severo-Kuril’s	1.98	20	eP	Pn	00 26 55.7	+0.1
SKR				AMB	AMB	00 26 57.6	
	comp=E,400nm,0.4s						
SKR				eS	Sn	00 27 19.5	+0.2
SKR				A	A	00 27 22.4	
	comp=E,2μm,0.4s						
SKR				A	A	00 27 22.4	
	comp=E,1μm,0.4s						
PAU	Pauzhetka	2.88	23	PN	Pn	00 27 08.4	+0.5
PAU				S	Sn	00 27 43.4	+2.2
PAU	Pauzhetka	2.88	23	eP	Pn	00 27 08.4	+0.5
PAU				eS	Sn	00 27 43.4	+2.2
PAU	Pauzhetka	2.88	23	eP	Pn	00 27 08.6	+0.7
PAU				AMB	AMB	00 27 10.6	
	comp=E,180nm,0.3s						
PAU				eS	Sn	00 27 42.0	+0.8
PAU				A	A	00 27 46.6	
	comp=E,1μm,0.3s						
PAU				A	A	00 27 46.6	
	comp=E,2μm,0.3s						
KDTR	Khodutka, Kamc	3.57	32	PN	Pn	00 27 17.1	-0.1
KDTR				S	Sn	00 27 57.4	-0.7
KDTR	Khodutka, Kamc	3.57	32	eP	Pn	00 27 17.2	-0.1
KDTR				eS	Sn	00 27 57.5	-0.7
KDTR	Khodutka, Kamc	3.57	32	eP	Pn	00 27 17.1	-0.1
KDTR				eS	Sn	00 27 57.4	-0.7
ASAK	Asacha	4.00	26	PN	Pn	00 27 24.7	+1.4
ASAK	Asacha	4.00	26	eP	Pn	00 27 24.8	+1.4
MTVR	Mutnovka	4.17	28	PN	Pn	00 27 26.9	+1.2
MTVR				S	Sn	00 28 14.4	+1.2
MTVR	Mutnovka	4.17	28	eP	Pn	00 27 26.9	+1.2
MTVR				eS	Sn	00 28 14.4	+1.2
GRL	Gorelyy	4.20	26	PN	Pn	00 27 27.6	+1.5
GRL	Gorelyy	4.20	26	eP	Pn	00 27 27.7	+1.5
RUS	Russkaya	4.24	30	PN	Pn	00 27 26.3	-0.1
RUS				S	Sn	00 28 13.3	-1.2
RUS	Russkaya	4.24	30	eP	Pn	00 27 26.4	-0.1
RUS				eS	Sn	00 28 13.4	-1.2
APC	Apacha	4.32	17	PN	Pn	00 27 30.6	+3.1
APC	Apacha	4.32	17	eP	Pn	00 27 30.7	+3.1
KRMR	Karymshinskiy	4.46	25	PN	Pn	00 27 31.4	+1.9
KRMR	Karymshinskiy	4.46	25	eP	Pn	00 27 31.4	+1.9
PEA0B	Petropavlovsk-	4.60	20		Pn	00 27 33.5	+2.0
PEA0B	Petropavlovsk-	4.60	20c	iPN	Pn	00 27 33.4	+1.9
PETK	Petropavlovsk-	4.60	20	P	Pn	00 27 33.2	+1.7
	comp=E,101nm,0.9s,baz=183,slow=12,SNR=85						
PETK	Petropavlovsk-	4.60	20		Pn	00 27 33.1	+1.6
PETK	Petropavlovsk-	4.60	20	PN	Pn	00 27 33.1	+1.6
PET	Petropavlovsk	4.78	27		Pn	00 27 34.6	+0.6
PET				Sn	Sn	00 28 28.4	+0.4
PET	Petropavlovsk	4.78	27	ePN	Pn	00 27 34.7	+0.7
PET				eS	Sn	00 28 29.5	+1.5
PET				pmax	pmax		
	comp=Z,75nm,0.7s						
PET				smax	smax		
	comp=N,633nm,0.9s						
PET				smax	smax		
	comp=E,332nm,0.6s						
PET				MLR	MLR		
	comp=Z,200nm,13.0s						
PET				MLR	MLR		
	comp=Z,600nm,13.0s						
PET	Petropavlovsk	4.78	27	eP	Pn	00 27 35.0	+1.0
PET				eS	Sn	00 28 30.2	+2.1
PET	Petropavlovsk	4.78	27	eP	Pn	00 27 34.9	+1.0
PET				AMB	AMB	00 27 35.0	
	comp=Z,60nm,0.6s						
PET				eS	Sn	00 28 28.3	+0.3
PET				A	A	00 28 42.9	
	comp=Z,230nm,0.7s						
PET				A	A	00 28 42.9	
	comp=Z,260nm,0.7s						
INSR	Institute	4.81	27	PN	Pn	00 27 35.6	+1.3
INSR				S	Sn	00 28 30.4	+1.8
INSR	Institute	4.81	27	eP	Pn	00 27 35.6	+1.3
INSR				eS	Sn	00 28 30.5	+1.8
DALK	Dalny	4.82	28	PN	Pn	00 27 35.0	+0.6
DALK				S	Sn	00 28 30.5	+1.6
DALK	Dalny	4.82	28	eP	Pn	00 27 35.1	+0.6
DALK				eS	Sn	00 28 30.5	+1.6
UGLR	Uglovaya	5.00	27	PN	Pn	00 27 38.7	+1.7
UGLR	Uglovaya	5.00	27	eP	Pn	00 27 38.8	+1.7
KOK	Koryaka	5.01	26	PN	Pn	00 27 39.5	+2.3
KOK	Koryaka	5.01	26	eP	Pn	00 27 39.5	+2.3
KOK	Koryaka	5.01	26	eP	Pn	00 27 39.5	+2.3
AVH	Avacha	5.02	26	PN	Pn	00 27 39.3	+2.0
AVH	Avacha	5.02	26	eP	Pn	00 27 39.4	+2.0
SMAR	Somma	5.04	27	PN	Pn	00 27 39.2	+1.6
SMAR	Somma	5.04	27	eP	Pn	00 27 39.2	+1.6
KRER	Koryakskii	5.06	26	PN	Pn	00 27 39.7	+1.8
KRER	Koryakskii	5.06	26	eP	Pn	00 27 39.7	+1.8
SDLR	Sedlovina	5.07	27	PN	Pn	00 27 39.1	+1.1
SDLR	Sedlovina	5.07	27	eP	Pn	00 27 39.2	+1.1
KRX	Arik	5.08	25	PN	Pn	00 27 39.9	+1.8
KRX	Arik	5.08	25	eP	Pn	00 27 39.9	+1.8
NLC	Nalytchevo	5.13	30	PN	Pn	00 27 38.3	-0.4
NLC	Nalytchevo	5.13	30	eP	Pn	00 27 38.3	-0.4
GNL	Ganaly	5.20	19	PN	Pn	00 27 42.4	+2.6
GNL	Ganaly	5.20	19	eP	Pn	00 27 42.5	+2.6
SPN	Mys Shipunski	5.31	35	PN	Pn	00 27 40.6	-0.6
SPN	Mys Shipunski	5.31	35	eP	Pn	00 27 40.7	-0.6
KUR	Kuril'sk	6.07	236	PN	Pn	00 27 55.0	+3.3
KUR				S	Sn	00 29 05.1	+5.3
KUR				pmax	pmax		
	comp=Z,140nm,0.5s						
KUR				smax	smax		
	comp=E,218nm,0.6s						
KUR	Kuril'sk	6.07	236	eP	Pn	00 27 52.8	+1.1
KUR				AMB	AMB	00 27 53.8	
	comp=E,120nm,0.6s						
KUR				eS	Sn	00 28 59.5	-0.3
KUR				A	A	00 29 18.5	
	comp=E,150nm,0.6s						
KUR				A	A	00 29 18.5	
	comp=E,260nm,0.6s						
KZV	Kizimen	7.08	25	PN	Pn	00 28 06.4	+0.8
KZV	Kizimen	7.08	25	eP	Pn	00 28 06.5	+0.8
ESO	Esso	7.45	16	PN	Pn	00 28 17.9	+7.4
ESO	Esso	7.45	16	eP	Pn	00 28 18.0	+7.4
KMNR	Kamenistaya	7.63	23	PN	Pn	00 28 16.3	+3.2
KMNR	Kamenistaya	7.63	23	eP	Pn	00 28 16.4	+3.2
TYV	Tymovskoe	8.25	289	ePN	Pn	00 28 28.0	+6.5
TYV				pmax	pmax		
	comp=Z,30nm,1.1s						
TYV				pmax	pmax		
	comp=Z,200nm,3.2s						
TYV	Tymovskoe	8.25	289	eP	Pn	00 28 24.5	+3.0
TYV				eS	Sn	00 29 54.7	+1.5
NMR	Nemuro--Hokkai	8.46	233	eP	Pn	00 28 23.0	-1.3
NMR				eS	Sn	00 29 53.0	-5.3
YSS	Yuzhno-Sakhali	8.46	262	Pn	Pn	00 28 26.0	+1.7
YSS	Yuzhno-Sakhali	8.46	262	ePN	Pn	00 28 28.2	+3.9
YSS				eS	Sn	00 29 59.9	+1.6
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
YSS	Yuzhno-Sakhali	8.46	262	eP	Pn	00 28 27.3	+3.0
YSS				AMB	AMB	00 28 30.9	
	comp=Z,40nm,0.3s						
YSS				eS	Sn	00 29 59.2	+0.9
UGL	Uglegorsk	8.54	277	eP	Pn	00 28 29.3	+3.9
OKH	Okha	8.94	306	eP	Pn	00 28 34.8	+3.9
AKK	Akkeshi	9.17	234	eP	Pn	00 28 35.3	+1.2
JKA	Kamikawa-asahi	9.78	246		Pn	00 28 45.7	+3.2
JKA	Kamikawa-asahi	9.78	246	eP	Pn	00 28 45.7	+3.2
ASAJ	Asahikawa	9.78	246	P	Pn	00 28 44.0	+1.5
	comp=Z,40nm,0.6s,baz=75,slow=14,SNR=47						
ASAJ	Asahikawa	9.78	246	PN	Pn	00 28 45.7	+3.2
NKL	Nikolayevsk	10.02	301	eP	Pn	00 28 48.8	+3.1
ERM	Erimo	10.76	235	Pn	Pn	00 28 55.7	-0.2
ERM	Erimo	10.76	235	PN	Pn	00 28 55.7	-0.2
MA2	Magadan	11.05	349	P	Pn	00 29 01.0	+1.3
	comp=Z,13nm,0.8s,baz=171,slow=10,SNR=8.4						
MA2	Magadan	11.05	349		Pn	00 29 00.1	+0.5
MA2	Magadan	11.05	349	cePN	Pn	00 29 01.2	+1.5
MA2				pmax	pmax		
	comp=Z,31nm,1.5s						
MA2	Magadan	11.05	349	eP	Pn	00 29 01.2	+1.5
SEY	Seymchan	14.21	355	P	Pn	00 29 43.6	+0.9
	comp=Z,1.9nm,0.6s,baz=155,slow=10,SNR=5.8						
SEY	Seymchan	14.21	355	eP	Pn	00 29 43.5	+0.9
SEY				pmax	pmax		
	comp=Z,9.0nm,1.0s						
USRK	Ussuriysk Ar.	16.50	262	P	Pn	00 30 11.9	-0.4
	comp=Z,5.3nm,0.7s,baz=64,slow=17,SNR=4.2						
USRK	Ussuriysk Ar.	16.50	262	eP	P	00 30 15.6	+1.4
MJA0	Matsu Arr-Jizo	17.36	231	eP	Pn	00 30 23.0	-0.1
MAJO	Matsushiro	17.38	231	⇓eP	P	00 30 24.4	+0.4
MJAR	Matsushiro Arr	17.38	231	P	Pn	00 30 21.7	-1.6
	comp=Z,3.9nm,1.0s,baz=30,slow=13,SNR=5.0						
MJAR	Matsushiro Arr	17.38	231		Pn	00 30 21.2	-2.0
MJB9	Matsu-Tunnel	17.38	231		Pn	00 30 22.3	-0.9
MJB9				IAmb	IAmb	00 30 35.1	
	comp=Z,20nm,0.7s						
HEH	HeiHe	17.94	285	eP	P	00 30 32.6	+2.5
HEH				pmax	pmax		
	comp=Z,16nm,0.9s						
HEH				LR	LR		
	comp=N,170nm,12.4s						
HEH				LR	LR		
	comp=E,310nm,13.1s						
HEH				LR	LR		
	comp=Z,310nm,14.5s						
PSTR	Posyet	17.96	259	ceP	P	00 30 30.3	0.0
PSTR	Posyet	17.96	259	eP	P	00 30 30.3	0.0
ZEA	Zeya	17.99	296	eP	P	00 30 36.7	+6.1
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
JGF	Kuroka	18.54	231	P	Pn	00 30 38.1	+0.6
INU	Inuyama	18.91	231	P	Pn	00 30 42.3	+0.4
INU				IAmb	IAmb	00 30 58.4	
	comp=Z,35nm,1.4s						
BNX	BinXian	18.95	271	⇑P	P	00 30 37.1	-4.1
BNX				pmax	pmax		
	comp=Z,7.0nm,1.2s						
YAK	Yakutsk	19.36	322	P	P	00 30 43.6	-1.8
	comp=Z,11nm,0.4s,baz=179,slow=3.3,SNR=6.0						
YAK	Yakutsk	19.36	322	P	P	00 30 43.7	-1.8
YAK				IAmb	IAmb	00 31 00.5	
	comp=Z,38nm,1.1s						
YAK	Yakutsk	19.36	322	eP	P	00 30 43.9	-1.6
YAK				eS	S	00 34 17.2	-4.3
YAK				pmax	pmax		
	comp=Z,27nm,1.3s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.5s						
YAK				smax	smax		
	comp=E,167nm,4.3s						
YAK				smax	smax		
	comp=N,98nm,3.7s						
BILL	Bilibino	20.08	12		P	00 30 51.4	-1.9
BILL	Bilibino	20.08	12	ceP	P	00 30 52.6	-0.7
BILL				pmax	pmax		
	comp=Z,11nm,0.9s						
CN2	Changchun	20.97	267	eP	P	00 31 00.5	-2.6
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SPIA	Saint Paul Isl	22.29	55	P	P	00 31 17.9	+0.8
	baz=263						
P08K	Saint George I	22.61	56	P	P	00 31 20.7	+0.1
	baz=265						
KSRS	Korea Array	22.69	250	P	P	00 31 20.9	-0.6
	comp=Z,7.2nm,0.7s,baz=48,slow=10.0,SNR=20						
	comp=Z,7.2nm,0.7s						
KSRS	Korea Array	22.69	250	eP	P	00 31 23.7	+2.2
KSRS				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KS19	Wonju Array Si	22.69	250	P	P	00 31 21.5	-0.2
KS19				IAmb	IAmb	00 32 01.2	
	comp=Z,28nm,1.4s						
KSAR	Wonju Array Be	22.72	250		P	00 31 20.0	-1.9
KSAR	Wonju Array Be	22.72	250	P	P	00 31 20.0	-1.9
HILR	Hailar Array B	22.94	285	P	P	00 31 23.0	-1.1
	comp=Z,13nm,0.5s,baz=74,slow=8.4,SNR=1.7						
	comp=Z,13nm,0.5s						
NIKH	Nikolski High	22.99	66	P	P	00 31 25.1	+0.5
	baz=275						
GAMB	Gambell	23.38	38	P	P	00 31 28.0	-0.2
	baz=246						
JCJ	Chichijima	23.88	209	LR	LR	00 42 25.7	
	comp=Z,46nm,19.6s,baz=136,slow=40						
UNV	Unalaska Valle	24.33	63	P	P	00 31 37.8	+0.7
	baz=274						
M11K	Mekoryuk	24.86	48	P	P	00 31 42.3	+0.5
	baz=260						
TNA	Tin City	25.59	35	P	P	00 31 49.0	+0.7
TNA				IAmb	IAmb	00 31 51.8	
	comp=Z,29nm,1.0s						
TNA	Tin City	25.59	35	P	P	00 31 48.1	-0.2
	baz=248						
TIK	Tiksi	25.86	341	eP	P	00 31 49.5	-1.3
TIXI	Tiksi	25.87	341	⇓eP	P	00 31 49.5	-1.4
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
K13K	Kusilvak Mount	25.89	44	P	P	00 31 51.9	+0.7
	baz=259						
FALS	False Pass	26.07	61	P	P	00 31 53.0	+0.2
	baz=274						
F14K	Arctic Creek	26.17	36	P	P	00 31 54.2	+0.5
	baz=250						
ANM	Nome	26.25	38	P	P	00 31 54.6	+0.2
ANM	Nome	26.25	38	P	P	00 31 54.6	+0.2
ANM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ANM	Nome	26.25	38	P	P	00 31 54.5	0.0
	baz=253						
M13K	Dall Lake	26.27	48	P	P	00 31 55.1	+0.6
	baz=263						
J14K	Nanvaranak Lak	26.57	43	P	P	00 31 57.6	+0.4
	baz=258						
L14K	Kuka Creek	26.72	46	P	P	00 31 59.2	+0.6
	baz=262						
S12K	Black Hills	26.79	59	P	P	00 32 00.5	+1.2
	baz=274						
F15K	North Star Dit	26.91	36	P	P	00 32 00.5	+0.1
	baz=251						
G15K	Niukluk	26.93	38	P	P	00 32 00.9	+0.4
	baz=253						
M14K	Bethel	26.99	48	P	P	00 32 01.7	+0.6
	baz=264						
N14K	Kuskokwak Cree	27.04	49	P	P	00 32 02.7	+1.2
	baz=266						
XLT	XiLinHaoTe	27.11	274	eP	P	00 32 01.8	-0.7
XLT				pmax	pmax		
	comp=Z,7.0nm,0.7s						
XLT				pmax	pmax		
	comp=Z,76nm,4.8s						
O14K	Tigyukauivet M	27.21	51	P	P	00 32 03.9	+0.8
	baz=267						
L15K	Ungalak Mounta	27.33	46	P	P	00 32 05.3	+1.1
	baz=262						
K15K	Wolf Creek Mou	27.40	44	P	P	00 32 05.8	+1.0
	baz=261						
H16K	Elim	27.57	39	P	P	00 32 06.8	+0.6
	baz=256						
M15K	Kasigluk River	27.60	48	P	P	00 32 07.3	+0.7
	baz=265						
C16K	Lisburne Hills	27.61	31		P	00 32 06.3	-0.2
C16K				IAmb	IAmb	00 32 07.6	
	comp=Z,11nm,1.1s						
C16K	Lisburne Hills	27.61	31	P	P	00 32 06.8	+0.2
	baz=246						
SDPT	Sand Point	27.71	59	P	P	00 32 08.5	+0.9
	baz=276						
G16K	Koyuk River	27.72	38	P	P	00 32 08.1	+0.5
	baz=254						
N15K	Kwethluk River	27.86	49	P	P	00 32 09.4	+0.5
	baz=267						
O15K	Ungalikthiuk R	27.95	51	P	P	00 32 10.6	+0.9
	baz=269						
J16K	Anvik River	27.99	42	P	P	00 32 10.2	+0.2
	baz=260						
I17K	Unalakleet	28.06	41	P	P	00 32 10.9	+0.3
	baz=259						
S14K	Fog Glacier	28.16	57	P	P	00 32 12.2	+0.5
	baz=274						
D17K	Noatak River	28.18	33	P	P	00 32 11.9	+0.3
	baz=250,SNR=5.7						
CHNA	Chernabura Isl	28.27	60	P	P	00 32 13.1	+0.6
	baz=277						
L16K	Owhat River	28.29	46	P	P	00 32 13.1	+0.4
	baz=264						
RDOG	Red Dog Mine	28.37	32	P	P	00 32 13.4	+0.1
	baz=249						
E17K	Hotham Inlet	28.43	34	P	P	00 32 14.2	+0.4

	baz=252						
C17K	DeLong Mountai	28.43	31	P	P	00 32 13.7	-0.2
	baz=248						
G17K	Kiwalik Mounta	28.44	38	P	P	00 32 13.6	-0.4
	baz=256						
F17K	Baldwin Pennin	28.45	36	P	P	00 32 14.7	+0.7
	baz=254						
M16K	Timber Creek	28.47	47	P	P	00 32 15.0	+0.6
	baz=266						
N16K	Nishlik Lake	28.53	48	P	P	00 32 15.6	+0.6
	baz=267						
H17K	Granite Mounta	28.61	39	P	P	00 32 15.8	+0.3
	baz=258						
J17K	VABM Dome	28.69	42	P	P	00 32 16.1	-0.1
	baz=262						
O16K	Kokwok River B	28.84	50	P	P	00 32 18.1	+0.5
	baz=270						
L17K	Donlin	28.89	45	P	P	00 32 18.0	0.0
	baz=265						
P16K	Nushagak River	28.89	51	P	P	00 32 18.3	+0.2
	baz=271						
K17K	Iditarod	28.95	44	P	P	00 32 18.5	0.0
	baz=264						
E18K	Tukpahlearik C	28.98	34	P	P	00 32 18.6	-0.2
	baz=253						
F18K	Selawik	29.11	36	P	P	00 32 19.9	0.0
	baz=255						
R16K	Pilot Point	29.16	55	P	P	00 32 20.7	+0.3
	baz=274						
C18K	Utukok River	29.17	31	P	P	00 32 20.2	-0.4
	baz=250						
B18K	Kokolik River	29.23	30	P	P	00 32 20.8	-0.2
	baz=248						
M17K	Holitna River	29.23	47	P	P	00 32 21.5	+0.4
	baz=267						
H18K	Honhosa River	29.30	39	P	P	00 32 22.0	+0.3
	baz=259						
N17K	Nushagak Hills	29.32	48	P	P	00 32 22.7	+0.9
	baz=269						
G18K	Tagagawik	29.34	37	P	P	00 32 21.8	-0.2
	baz=258						
O17K	Koliganek Bris	29.35	50	P	P	00 32 22.7	+0.6
	baz=270						
Q16K	King Salmon	29.59	52	P	P	00 32 24.7	+0.5
	baz=272						
L18K	Granite Mounta	29.64	45	P	P	00 32 25.1	+0.3
L18K				IAmb	IAmb	00 32 36.6	
	comp=Z,20nm,1.4s						
L18K	Granite Mounta	29.64	45	P	P	00 32 25.0	+0.3
	baz=266						
P17K	Kvichak River	29.69	51	P	P	00 32 25.9	+0.8
	baz=272						
J18K	Innoko River	29.75	42	P	P	00 32 26.0	+0.3
	baz=264						
A19K	Wainwright	29.79	28	P	P	00 32 26.5	+0.7
	baz=248,SNR=5.5						
R17L	Mt. Peulik Vol	29.80	54	P	P	00 32 26.4	+0.2
	baz=274						
GCSA	Galena City Sc	29.85	40	P	P	00 32 26.8	+0.3
	baz=262						
C19K	Lookout Ridge	29.88	31	P	P	00 32 26.9	+0.1
C19K	Lookout Ridge	29.88	31	P	P	00 32 27.0	+0.3
	baz=251						
F19K	Shaleruckik Mo	29.89	36	P	P	00 32 26.7	-0.2
	baz=257						
N18K	Kilae Creek	29.96	48	P	P	00 32 27.9	+0.3
	baz=270						
G19K	Purcell Mounta	30.01	37	P	P	00 32 27.8	-0.2
	baz=259						
M18K	Stony River	30.01	47	P	P	00 32 28.5	+0.6
	baz=268						
Q17K	Contact Creek	30.02	53	P	P	00 32 28.3	+0.2
	baz=274						
H19K	Roundabout Mou	30.16	38	P	P	00 32 29.6	+0.4
H19K				IAmb	IAmb	00 32 31.4	
	comp=Z,14nm,1.0s						
H19K	Roundabout Mou	30.16	38	P	P	00 32 29.3	+0.1
	baz=261,SNR=5.3						
D19K	Kuna River	30.20	32	P	P	00 32 29.1	-0.5
	baz=254						
E19K	Redstone River	30.25	35	P	P	00 32 29.8	-0.2
	baz=256						
J19K	Poorman	30.29	42	P	P	00 32 30.5	0.0
	baz=264						
O18K	Koktuh Hills	30.30	50	P	P	00 32 31.1	+0.5
	baz=272						
P18K	Big Mountain,	30.30	51	P	P	00 32 30.0	-0.6
	baz=272						
CHIR	Chirikof Islan	30.40	58	P	P	00 32 32.0	+0.6
	baz=278						
Q18K	Katmai Hardscr	30.45	52	P	P	00 32 32.4	+0.4
	baz=274						
L19K	White Mountain	30.50	45	P	P	00 32 32.2	-0.1
	baz=268						
H11N2	WAKE ISLAND Hy	30.57	158	T	T	01 04 49.5	
	baz=345,slow=76,SNR=172						
H11N1	WAKE ISLAND Hy	30.58	158	T	T	01 04 26.4	
	baz=345,slow=76,SNR=214						
H11N3	WAKE ISLAND Hy	30.58	158	T	T	01 04 54.9	
	baz=345,slow=76,SNR=118						
N19K	Bonanza Creek	30.65	48	P	P	00 32 34.1	+0.3
	baz=270						
F20K	Avaraart Lake	30.73	36	P	P	00 32 34.3	+0.1
	baz=259						
O19K	Port Alsworth	30.74	49	P	P	00 32 35.0	+0.6
	baz=272						
D20K	Etivluk River	30.79	32	P	P	00 32 34.5	-0.3
	baz=255,SNR=7.5						
H20K	Anotleneega Mo	30.80	39	P	P	00 32 34.8	-0.1
	baz=262						
E20K	Nigu River	30.82	33	P	P	00 32 35.0	-0.2
	baz=256						
R18K	Karluk	30.83	54	P	P	00 32 35.7	+0.5
	baz=276						
I20K	Naaghedeneel	30.88	40	P	P	00 32 35.0	-0.5
	baz=264						
K20K	Telida	30.93	43	P	P	00 32 36.0	-0.1
	baz=267						
J20K	Nowinta River	30.96	41	P	P	00 32 36.6	+0.4
	baz=265						
B20K	Meade River	30.98	30	P	P	00 32 36.7	+0.3
B20K				IAmb	IAmb	00 32 37.8	
	comp=Z,18nm,1.1s						
B20K	Meade River	30.98	30	P	P	00 32 35.8	-0.5
	baz=252						
SII	Sitkinak Islan	31.09	56	P	P	00 32 37.8	+0.2
	baz=278						
Q19K	Cape Douglas,	31.14	52	P	P	00 32 37.8	-0.2
	baz=274						
HNS	HongShan	31.22	264	⇓P	P	00 32 40.3	+1.5
HNS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
M20K	Styx River	31.31	46	P	P	00 32 38.9	-0.6
	baz=270						
P19K	Oil Pt	31.31	50	P	P	00 32 39.7	+0.2
	baz=274						
IMAR	Indian Mountai	31.33	38	P	P	00 32 39.9	+0.3
HHC	Hu-ho-hao-te	31.47	272	*e*P	P	00 32 42.4	+1.2
HHC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,64nm,4.8s						
OHAK	Old Harbor	31.50	55	P	P	00 32 42.2	+1.1
	baz=277						
G21K	Allakaket	31.50	37	P	P	00 32 41.2	+0.2
G21K				IAmb	IAmb	00 32 43.8	
	comp=Z,9.6nm,1.4s						
G21K	Allakaket	31.50	37	P	P	00 32 41.4	+0.3
	baz=262						
C21K	Knifeblade Rid	31.54	32	P	P	00 32 41.8	+0.4
	baz=256,SNR=6.8						
A21K	Barrow	31.57	27	P	P	00 32 41.3	-0.2
	baz=251,SNR=7.4						
O20K	Slope Mountain	31.59	49	P	P	00 32 42.7	+0.7
	baz=273						
F21K	Alatna River	31.62	36	P	P	00 32 42.4	+0.2
	baz=261						
E21K	Killik River	31.67	33	P	P	00 32 42.4	-0.1
E21K	Killik River	31.67	33	P	P	00 32 42.8	+0.3
	baz=258						
H21K	Melozitna Rive	31.67	39	P	P	00 32 43.1	+0.5
H21K				IAmb	IAmb	00 32 44.9	
	comp=Z,11nm,1.2s						
H21K	Melozitna Rive	31.67	39	P	P	00 32 43.0	+0.5
	baz=264						
H11S1	WAKE ISLAND Hy	31.69	159	T	T	01 06 06.6	
	baz=345,slow=76,SNR=1240						
H11S3	WAKE ISLAND Hy	31.70	159	T	T	01 06 12.6	
	baz=345,slow=76,SNR=1591						
H11S2	WAKE ISLAND Hy	31.71	159	T	T	01 05 49.7	
	baz=345,slow=76,SNR=917						
B21K	Ikpikpuk River	31.71	31	P	P	00 32 43.2	+0.4
B21K	Ikpikpuk River	31.71	31	P	P	00 32 43.1	+0.3
	baz=256						
CHUM	Lake Minchumin	31.74	42	P	P	00 32 43.0	-0.1
	baz=267						
SPCR	Spurr Chakacha	31.75	47	P	P	00 32 43.6	+0.2
	baz=272						
PPLA	Purkeypile	31.76	44	P	P	00 32 43.6	+0.1
	baz=269						
KDAK	Kodiak Island	31.81	54	P	P	00 32 43.6	-0.2
	baz=277						
Q20K	Shuyak Island	31.82	52	P	P	00 32 43.6	-0.2
	baz=276						
NJ2	Nanjing	31.86	252	*e*P	P	00 32 46.0	+1.5
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SONM	Songino Array	31.91	287	P	P	00 32 43.9	-1.1
	comp=Z,0.4nm,0.6s,baz=74,slow=5.1,SNR=1.7						
SONM				PcP	PcP	00 35 34.4	+0.1
	comp=Z,1.5nm,0.8s,baz=90,slow=1.1,SNR=7.6						
	comp=Z,0.4nm,0.6s						
STLK	Strandline Lak	31.93	47	P	P	00 32 45.5	+0.6
STLK				IAmb	IAmb	00 32 49.0	
	comp=Z,9.0nm,1.1s						
I21K	Tanana	31.97	40	P	P	00 32 45.2	0.0
	baz=266						
A22K	Sinclair Lake	31.98	28	P	P	00 32 44.9	-0.2
	baz=253						
SKT	Skwentna	32.06	46	P	P	00 32 46.2	+0.2
	baz=271						
HOM	Homer	32.11	50	P	P	00 32 46.6	+0.1
	baz=275						
F22K	John River	32.16	35	P	P	00 32 46.8	0.0
	baz=262						
D22K	Ayikyak River	32.22	33	P	P	00 32 47.6	+0.2
	baz=259						
CAPN	Captain Cook N	32.28	48	P	P	00 32 47.8	-0.2
	baz=273						
H22K	Ishtalitna Cre	32.28	38	P	P	00 32 48.0	0.0
	baz=265						
B22K	Teshekpuk Lake	32.29	30	P	P	00 32 48.2	+0.3
B22K	Teshekpuk Lake	32.29	30	P	P	00 32 47.7	-0.2
	baz=256,SNR=12						
BPAW	Bear Paw Mtn.	32.33	42	P	P	00 32 48.8	+0.4
	baz=268						
G22K	Bettles	32.34	36	P	P	00 32 48.2	-0.2
	baz=263						
E22K	Anaktuvuk Pass	32.40	34	P	P	00 32 48.9	-0.1
	baz=261						
SUA	Susitna One	32.45	47	P	P	00 32 49.8	+0.3
	baz=273						
MLY	Manley	32.48	40	P	P	00 32 49.4	-0.3
	baz=267						
BRSE	Bradley Lake S	32.56	50	P	P	00 32 50.5	0.0
	baz=275						
TRF	Thorofare Moun	32.63	43	P	P	00 32 50.9	-0.2
	baz=270						
CUT	Chulitna	32.65	45	P	P	00 32 50.8	-0.3
	baz=272						
M22K	Willow	32.74	46	P	P	00 32 52.0	+0.1
	baz=273						
COLD	Coldfoot	32.89	36	P	P	00 32 53.1	0.0
	baz=264						
G23K	Bananza Creek	32.91	37	P	P	00 32 53.6	+0.2
	baz=265						
D23K	Nanushuk River	32.95	33	P	P	00 32 53.7	0.0
	baz=261						
RC01	Rabbit Creek A	32.96	47	P	P	00 32 54.3	+0.4
	baz=274						
H23K	Yukon River	33.03	38	P	P	00 32 54.9	+0.5
	baz=267						
I23K	Minto, Yukon-K	33.07	40	P	P	00 32 55.2	+0.4
	baz=268						
C23K	Itkillik River	33.12	31	P	P	00 32 55.4	+0.2
	baz=260						
SEW	Seward	33.18	49	P	P	00 32 56.7	+1.0
	baz=276						
NEA2	Nenana	33.18	41	P	P	00 32 56.3	+0.5
	baz=269						
E23K	Chandalar	33.20	34		P	00 32 56.7	+0.6
E23K				IAmb	IAmb	00 32 59.3	
	comp=Z,11nm,0.8s						
E23K	Chandalar	33.20	34	P	P	00 32 56.4	+0.4
	baz=263						
PMR	Palmer	33.22	46	P	P	00 32 56.9	+0.9
	baz=274						
MCK	McKinley	33.24	42	P	P	00 32 56.3	0.0
	baz=271						
TOLK	Toolik Lake Re	33.30	33	P	P	00 32 56.4	-0.4
	baz=262						
WAT1	Susitna Watana	33.43	44	P	P	00 32 57.9	-0.1
	baz=272						
KNK	Knik Glacier	33.55	47	P	P	00 32 58.9	-0.1
	baz=275						
SML	Sawmill	33.58	46		P	00 32 59.7	+0.3
SML	Sawmill	33.58	46	P	P	00 32 59.7	+0.3
SML				pmax	pmax		
	comp=Z,24nm,0.8s						
SML	Sawmill	33.58	46	P	P	00 32 59.2	-0.2
	baz=274						
E24K	Your Creek	33.63	34	P	P	00 32 59.2	-0.5
	baz=264						
D24K	Happy Valley	33.63	32	P	P	00 32 59.6	0.0
	baz=262						
PWL	Port Wells	33.66	48	P	P	00 33 00.3	+0.4
	baz=276						
COLA	College	33.71	40	*ce*P	P	00 33 01.0	+0.7
COLA				pmax	pmax		
	comp=Z,13nm,0.9s						
COLA	College	33.71	40	P	P	00 33 00.4	+0.1
	baz=270						
H24K	Noodor Dome	33.72	39	P	P	00 33 00.3	-0.2
	baz=268						
C24K	Franklin Bluff	33.76	31	P	P	00 33 00.4	-0.3
	baz=262						
F24K	Squaw Lake	33.81	35	P	P	00 33 01.3	+0.1
	baz=266						
WAT6	Susitna Watana	33.81	44	P	P	00 33 01.6	+0.1
	baz=273						
M23K	Glacier View	33.87	46	P	P	00 33 02.2	+0.4
	baz=275						
POKR	Poker Plat Res	33.89	40	P	P	00 33 02.5	+0.6
	baz=270,SNR=5.4						
G24K	Hadweenzic Riv	33.91	37	P	P	00 33 03.2	+1.0
G24K				IAmb	IAmb	00 33 04.5	
	comp=Z,10nm,0.9s						
G24K	Hadweenzic Riv	33.91	37	P	P	00 33 02.7	+0.6
	baz=268,SNR=8.6						
DHY	Denali Highway	33.95	43	P	P	00 33 02.5	-0.2
	baz=273						
SCM	Sheep Creek Mo	34.06	46	P	P	00 33 03.2	-0.3
	baz=275						
HDA	Harding Lake	34.10	41	P	P	00 33 03.7	-0.1
	baz=271						
IL31		34.12	40		P	00 33 04.0	+0.1
IL31				IAmb	IAmb	00 33 05.0	
	comp=Z,7.1nm,1.1s						
ILAR	Eielson Array	34.12	40	P	P	00 33 04.3	+0.4
	comp=Z,2.2nm,0.8s,baz=259,slow=8.6,SNR=20						
	comp=Z,2.2nm,0.8s						
ILAR	Eielson Array	34.12	40	P	P	00 33 03.9	-0.1
ILAR	Eielson Array	34.12	40	P	P	00 33 03.9	-0.1
P23K	Montague Islan	34.21	49	P	P	00 33 04.7	0.0
	baz=278						
GLI	Glacier Island	34.26	47	P	P	00 33 05.3	+0.1
	baz=276						
G25K	Bearman Lake	34.46	37	P	P	00 33 06.8	-0.1
	baz=269						
D25K	Kavik River	34.52	32	P	P	00 33 07.0	-0.4
	baz=265						
M24K	Tolsona, Glenn	34.58	45	P	P	00 33 08.1	+0.2
	baz=275						
K24K	Donnelly Dome	34.64	42	P	P	00 33 08.2	-0.2
	baz=273						
F25K	Christian Rive	34.67	35	P	P	00 33 08.6	-0.1
	baz=268						
E25K	Arctic Village	34.72	34	P	P	00 33 09.3	+0.1
	baz=267,SNR=5.6						
KLU	Klutina	34.76	46	P	P	00 33 09.2	-0.4
	baz=276						
J25K	Salcha River,	34.78	41	P	P	00 33 08.7	-1.0
	baz=272						
Q23K	Middleton Isla	34.82	50	P	P	00 33 10.3	+0.4
	baz=279						
PAX	Paxson	34.83	44	P	P	00 33 10.0	-0.2
	baz=275						
EYAK	Cordova Ski Ar	34.95	48	P	P	00 33 11.3	+0.1
	baz=278						
HARP	HAARP	35.02	45	P	P	00 33 11.7	0.0
	baz=276						
RIDG	Independent Ri	35.05	42	P	P	00 33 11.9	-0.2
	baz=274						
BMAR	Burnt Mountain	35.07	36	P	P	00 33 13.2	+1.0
C26K	Camden Bay	35.09	31	P	P	00 33 12.6	+0.4
	baz=265,SNR=8.0						
F26K	Sheenjek River	35.25	35	P	P	00 33 14.0	+0.3
	baz=269						
N25K	Chitina, Valde	35.37	46	P	P	00 33 14.6	-0.2
	baz=277						
G26K	Porcupine Rive	35.38	37	P	P	00 33 15.0	+0.2
	baz=271,SNR=6.3						
SCRK	Sand Creek	35.42	42	P	P	00 33 15.0	-0.3
	baz=275						
BMRM	Bremner River	35.45	47	P	P	00 33 15.2	-0.4
	baz=278						
C27K	Jago River	35.48	32	P	P	00 33 15.9	+0.3
	baz=267,SNR=5.8						
J26L	Joseph Creek	35.56	41	P	P	00 33 15.7	-0.7
	baz=274						
I26K	Coal Creek Min	35.69	39	P	P	00 33 17.1	-0.3
	baz=273						
KAIM	Kayak Island	35.70	49	P	P	00 33 17.9	+0.3
	baz=280						
WHN	Wuhan	35.72	254	P	P	00 33 18.1	+0.1
M26K	Nabesna, AK	36.02	44	P	P	00 33 20.7	+0.3
	baz=278						
MCARA	McCarthy VSAT	36.15	46	P	P	00 33 22.0	+0.5
	baz=279						
E27K	Coleen River	36.21	34	P	P	00 33 22.3	+0.4
	baz=271						
CRQE	Cirque	36.22	47	P	P	00 33 22.8	+0.6
	baz=280						
G27K	Doyon Strip	36.23	37	P	P	00 33 22.3	+0.2
	baz=273						
K27K	Chicken	36.25	42	P	P	00 33 23.0	+0.8
K27K				IAmb	IAmb	00 33 24.1	
	comp=Z,12nm,1.0s						
K27K	Chicken	36.25	42	P	P	00 33 21.9	-0.3
	baz=276						
H27K	Steamboat Moun	36.30	38	P	P	00 33 22.3	-0.5
	baz=274						
I27K	Kandik River	36.31	39	P	P	00 33 22.6	-0.2
	baz=274						
D27M	Malcolm River	36.44	33	P	P	00 33 23.6	-0.3
	baz=270						
L27K	Beaver Creek,	36.47	43	P	P	00 33 24.0	-0.2
	baz=278						
BCAR	Beaver Creek A	36.49	43		P	00 33 25.3	+1.0
M27K	Edge Creek, AK	36.55	44	P	P	00 33 24.7	-0.3
	baz=279						
F28M	Old Crow	36.88	35	P	P	00 33 26.7	-0.9
	baz=273						
E28M	Babbage River	36.97	34	P	P	00 33 27.3	-1.0
	baz=272						
BVCY	Beaver Creek	37.01	44	P	P	00 33 27.9	-0.9
	baz=279						
I28M	Miner Creek	37.02	39	P	P	00 33 27.7	-1.2
	baz=276						
CTG	Chitna Glacier	37.03	47	P	P	00 33 28.2	-0.8
	baz=281						
D28M	Stokes Point	37.23	32	P	P	00 33 30.6	+0.2
	baz=272						
YUK3	Moose Creek	37.30	45	P	P	00 33 31.6	+0.2
	baz=280						
DAWY	Dawson	37.42	41	P	P	00 33 32.4	+0.2
	baz=278						
E29M	Blow River	37.58	34	P	P	00 33 33.9	+0.5
	baz=274						
H29M	Whitestone	37.58	38	P	P	00 33 33.9	+0.3
	baz=276						
O28M	Mount Upton	37.62	47	P	P	00 33 34.2	0.0
	baz=282						
G29M	Pine Creek	37.65	36	P	P	00 33 34.4	+0.3
	baz=276						
NRIK	Noril'sk	37.67	328	⇑*e*P	P	00 33 33.3	-0.9
NRIK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
I29M	Ogilvie Camp,	37.71	39	P	P	00 33 34.5	-0.1
	baz=278						
YUK8	Steele Glacier	37.72	46	P	P	00 33 35.3	+0.3
	baz=282						
PINM	Pinnacle	37.73	48	P	P	00 33 34.8	-0.1
	baz=283						
J29N	Klondike Camp	37.87	40	P	P	00 33 36.5	+0.4
	baz=279						
M29M	Somme Creek	38.10	44	P	P	00 33 38.2	+0.1
	baz=281						
L29M	L29M	38.13	43	P	P	00 33 38.6	+0.4
	baz=280						
EPYK	Eagle Plains	38.23	37	P	P	00 33 39.1	+0.1
	baz=278						
YUK4	Talbot Arm	38.23	46	P	P	00 33 39.6	+0.3
	baz=282						
CNSH	ChangSha	38.24	253	P	P	00 33 39.8	+0.4
CNSH				pmax	pmax		
	comp=Z,22nm,0.9s						
K29M	Barlow Dome	38.27	41	P	P	00 33 39.4	-0.1
	baz=280						
G30M	tAoh Zraii Nji	38.35	36	P	P	00 33 39.8	-0.2
	baz=277						
F30M	Barrier River	38.44	35	P	P	00 33 41.0	+0.2
	baz=277						
YUK6	Outpost Mounta	38.45	46	P	P	00 33 41.6	+0.4
	baz=283						
O29M	Mount Kennedy	38.50	47	P	P	00 33 41.6	+0.2
	baz=284						
I30M	Mount Dempster	38.53	39	P	P	00 33 42.3	+0.6
	baz=279,SNR=7.8						
J30M	Hart River	38.66	40	P	P	00 33 42.5	-0.2
	baz=280						
M30M	Minto, Yukon	38.83	43	P	P	00 33 44.2	+0.1
	baz=282						
HYT	Haines Junctio	38.89	46	P	P	00 33 44.6	-0.1
	baz=284						
N30M	Aishikik Lake	38.94	45	P	P	00 33 45.2	+0.2
	baz=283						
MAYO	Mayo, Yukon	39.03	42	P	P	00 33 46.3	+0.6
	baz=282						
P29M	Windy Craggy	39.07	48	P	P	00 33 46.1	0.0
	baz=285						
G31M	Satah River	39.12	36	P	P	00 33 46.5	+0.2
	baz=279						
INK	Inuvik	39.20	34	P	P	00 33 47.6	+0.6
INK	Inuvik	39.20	34	P	P	00 33 47.6	+0.6
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
INK	Inuvik	39.20	34	P	P	00 33 46.9	-0.1
	baz=278						
F31M	Tsiigehtchic	39.24	35	P	P	00 33 47.6	+0.3
	baz=279						
H31M	Peel River	39.27	38	P	P	00 33 47.8	+0.1
	baz=280						
P30M	Million Dollar	39.32	47	P	P	00 33 48.2	-0.1
	baz=285						
N31M	Braeburn, Yuko	39.54	45	P	P	00 33 49.3	-0.7
	baz=284						
O30N	Mendenhall	39.58	46	P	P	00 33 49.6	-0.7
	baz=285						
PLBC	Pleasant Camp	39.79	48	P	P	00 33 53.3	+1.3
	baz=286						
GTA	Gaotai	39.94	278	*e*P	P	00 33 54.1	+0.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
M31M	Drury Creek, Y	40.01	43	P	P	00 33 54.7	+0.8
	baz=284						
WHY	Whitehorse	40.18	46	P	P	00 33 56.3	+0.9
	baz=286						
S31K	Pelican	40.29	50	P	P	00 33 57.2	+1.0
	baz=288						
SKAG	Skagway	40.30	48	P	P	00 33 57.3	+1.0
	baz=287						
N32M	Quiet Lake	40.89	45	P	P	00 34 01.3	+0.1
	baz=287						
P32M	Atlin	41.05	47	P	P	00 34 03.0	+0.5
	baz=288						
SIT	Sitka	41.05	51	P	P	00 34 03.0	+0.6
	baz=290						
P33M	Teslin, Yukon	41.29	46	P	P	00 34 05.7	+1.1
	baz=288						
S32K	Killisnoo	41.29	50	P	P	00 34 06.0	+1.6
	baz=290						
A36M	Sachs Harbour	41.41	28		P	00 34 06.2	+0.9
A36M	Sachs Harbour	41.41	28	P	P	00 34 05.4	+0.2

	baz=281,SNR=22						
C36M	Paulatuk	42.37	31	P	P	00 34 13.6	+0.5
	baz=285,SNR=8.3						
R33M	Jennings River	42.44	47		P	00 34 15.7	+1.7
R33M				IAmb	IAmb	00 34 17.2	
	comp=Z,8.5nm,0.8s						
R33M	Jennings River	42.44	47	P	P	00 34 14.7	+0.7
	baz=290						
ZALV	Zalesovo Beam	42.47	305	P	P	00 34 12.5	-1.6
	comp=Z,0.3nm,0.4s,baz=60,slow=7.1,SNR=2.7						
ZALV				PcP	PcP	00 36 06.9	+0.8
	comp=Z,1.0nm,0.7s,baz=48,slow=2.2,SNR=5.3						
	comp=Z,0.3nm,0.4s						
U33K	Whale Pass	42.52	52	P	P	00 34 15.6	+1.1
	baz=292						
CRAG	Craig	42.76	53	P	P	00 34 17.5	+1.1
	baz=293						
WRAK	Wrangell Islan	42.81	51	P	P	00 34 18.0	+1.2
	baz=292						
S34M	Telegraph Cree	42.87	49	P	P	00 34 18.2	+0.8
	baz=291						
WTLY	Watson Lake, Y	43.22	45	P	P	00 34 21.2	+1.0
	baz=291,SNR=6.2						
DLBC	Dease Lake	43.23	48	P	P	00 34 21.0	+0.7
	baz=292						
V35K	Ketchikan	43.61	53	P	P	00 34 24.0	+0.7
	baz=294						
T35M	Bob Quinn	43.66	50	P	P	00 34 24.0	+0.2
	baz=293						
WRGLY	Wrigley	44.49	40	P	P	00 34 31.0	+0.8
	baz=291						
LIRD	Liard River Hi	44.75	45	P	P	00 34 33.5	+1.1
	baz=293						
TOAD	Toad River Com	45.38	46	P	P	00 34 38.5	+1.1
	baz=294,SNR=5.9						
WMQ	Urumqi	45.40	290	eP	P	00 34 35.6	-2.2
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
KOTAN	Kotaneelee Air	45.41	44	P	P	00 34 38.4	+0.7
	baz=294						
PZH	PanZhiHua	46.59	261	P	P	00 34 48.5	+1.0
MKAR	Makanchi Array	47.15	296	P	P	00 34 50.0	-1.5
	comp=Z,0.6nm,0.6s,baz=56,slow=5.3,SNR=5.9						
MKAR				PcP	PcP	00 36 22.0	-0.3
	comp=Z,0.9nm,0.8s,baz=67,slow=5.7,SNR=3.0						
	comp=Z,0.6nm,0.6s						
MKAR	Makanchi Array	47.15	296	P	P	00 34 50.0	-1.5
MKAR	Makanchi Array	47.15	296	eP	P	00 34 52.2	+0.7
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	47.15	296	eP	P	00 34 52.2	+0.7
KURK	Kurchatov	47.30	303	P	P	00 34 51.8	-0.8
KURK	Kurchatov	47.30	303	P	P	00 34 52.2	-0.4
KURK	Kurchatov	47.30	303	eP	P	00 34 52.2	-0.4
MAKZ	Makanchi	47.33	297	P	P	00 34 51.4	-1.5
MAKZ	Makanchi	47.33	297	P	P	00 34 51.4	-1.5
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.4s						
KURBB	Kurchatov Arra	47.40	303	P	P	00 34 52.1	-1.2
	comp=Z,0.8nm,0.5s,baz=66,slow=8.4,SNR=7.9						
	comp=Z,0.8nm,0.5s						
YKAW3	Yellowknife Wh	48.45	38		P	00 35 01.8	+0.6
YKAW3				IAmb	IAmb	00 35 04.2	
	comp=Z,6.0nm,1.0s						
YKA	Yellowknife Ar	48.49	38	P	P	00 35 02.2	+0.6
	comp=Z,3.3nm,0.8s,baz=299,slow=8.4,SNR=22						
	comp=Z,3.3nm,0.8s						
YKA	Yellowknife Ar	48.49	38	P	P	00 35 01.7	+0.2
YKA	Yellowknife Ar	48.49	38	eP	P	00 35 02.6	+1.1
YKA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BVAR	Borovoye Array	50.55	309	P	P	00 35 16.1	-1.3
	comp=Z,0.5nm,0.4s,baz=56,slow=7.9,SNR=6.6						
BVAR				PcP	PcP	00 36 34.2	-0.3
	comp=Z,1.3nm,0.8s,baz=60,slow=5.8,SNR=4.6						
	comp=Z,0.5nm,0.4s						
BORK	Borovoye	50.57	309	⇑eP	P	00 35 17.4	-0.2
BORK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SPITS	Spitsbergen Ar	50.79	350	P	P	00 35 17.1	-1.8
	comp=Z,4.2nm,0.8s,baz=45,slow=6.5,SNR=1.5						
	comp=Z,4.2nm,0.8s						
POIN	Pond Inlet	53.33	17	P	P	00 35 37.3	-0.5
POIN				IAmb	IAmb	00 35 43.1	
	comp=Z,7.9nm,1.2s						
CHTO	Chiang Mai	53.85	257		P	00 35 42.5	+0.2
CHTO	Chiang Mai	53.85	257	P	P	00 35 42.5	+0.2
CHTO				pmax	pmax		
	comp=Z,13nm,0.9s						
EDM	Edmonton	53.95	48		P	00 35 43.0	+0.3
EDM	Edmonton	53.95	48	P	P	00 35 43.0	+0.3
EDM				pmax	pmax		
	comp=Z,11nm,0.9s						
CMAR	Chiang Mai Arr	54.11	256	P	P	00 35 45.1	+0.9
	comp=Z,6.5nm,0.7s,baz=42,slow=7.3,SNR=5.5						
	comp=Z,6.5nm,0.7s						
CMAR	Chiang Mai Arr	54.11	256	P	P	00 35 43.7	-0.6
ARTI	Arti	54.46	317	P	P	00 35 44.8	-1.5
ARTI				IAmb	IAmb	00 35 45.7	
	comp=Z,4.1nm,0.6s						
ARTI	Arti	54.46	317	c iP	P	00 35 44.7	-1.5
ARTI				*PP	sP	00 36 02.7	-3.4
ARTI						00 36 46.8	
ARTI						00 37 45.4	
ARTI				S	S	00 43 16.6	-4.3
ARTI				SS	SKiKP	00 46 55.0	+4.4
ARTI				pmax	pmax		
	comp=Z,9.0nm,2.5s						
ILON	Igloolik, Nuna	54.98	21	P	P	00 35 49.9	+0.1
ILON				IAmb	IAmb	00 35 51.0	
	comp=Z,7.4nm,0.7s						
KKAR	Karatay Array	56.13	299	P	P	00 35 59.1	+0.6
KKAR	Karatay Array	56.13	299	P	P	00 35 59.1	+0.6
ARCES	ARCESS Array B	56.31	341	P	P	00 35 57.9	-1.5
	comp=Z,2.3nm,0.9s,baz=45,slow=7.3,SNR=2.1						
	comp=Z,2.3nm,0.9s						
PLID	Pearl Lake	57.44	57		P	00 36 09.0	+0.9
AB31	Akbulak array	58.09	310	P	P	00 36 10.9	-1.2
AB31				IAmb	IAmb	00 36 31.5	
	comp=Z,3.8nm,1.3s						
ABKAR	Akbulak array	58.09	310	P	P	00 36 11.0	-1.2
SUMG	Summit	58.53	5		P	00 36 14.6	-0.8
SUMG	Summit	58.53	5	P	P	00 36 14.6	-0.8
SUMG				pmax	pmax		
	comp=Z,17nm,1.0s						
GAR	Garm	58.81	295	P	P	00 36 16.8	-0.7
GAR				IAmb	IAmb	00 36 39.8	
	comp=Z,5.2nm,1.0s						
FCC	Fort Churchill	58.81	35	P	P	00 36 17.3	+0.2
FCC	Fort Churchill	58.81	35	P	P	00 36 17.3	+0.2
FCC				pmax	pmax		
	comp=Z,12nm,1.4s						
KLMR	Klimovskoe	58.99	329	eP	P	00 36 16.0	-2.3
KLMR				pmax	pmax		
	comp=Z,15nm,1.6s						
BOZ	Bozeman (W)	59.51	54	P	P	00 36 23.0	+0.7
BOZ				IAmb	IAmb	00 36 24.6	
	comp=Z,5.8nm,0.8s						
BOZ	Bozeman (W)	59.51	54	P	P	00 36 23.0	+0.7
BOZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
QLMT	Earthquake Lak	60.11	55	P	P	00 36 26.9	+0.3
NVAR	Mina Array Bea	60.35	64	P	P	00 36 28.9	+0.7
	comp=Z,1.6nm,0.7s,baz=290,slow=7.3,SNR=9.4						
	comp=Z,1.6nm,0.7s						
NVAR	Mina Array Bea	60.35	64	P	P	00 36 28.7	+0.4
YHH	Holmes Hill	60.45	55	P	P	00 36 29.9	+0.9
RLMT	Red Lodge	61.08	54		P	00 36 34.0	+0.9
RLMT				IAmb	IAmb	00 36 36.0	
	comp=Z,9.5nm,1.2s						
R11B	Troy Canyon, C	62.01	63	P	P	00 36 40.0	+0.5
R11B				IAmb	IAmb	00 36 41.2	
	comp=Z,2.9nm,0.9s						
SPR3	Spring Creek 3	62.31	62		P	00 36 42.6	+0.9
SPR3				IAmb	IAmb	00 36 44.2	
	comp=Z,2.8nm,0.8s						
PD31	Pinedale Array	62.49	56		P	00 36 43.2	+0.5
PD31				IAmb	IAmb	00 36 44.6	
	comp=Z,5.4nm,0.9s						
PDAR	Pinedale Array	62.49	56	P	P	00 36 43.4	+0.6
	comp=Z,3.9nm,0.8s,baz=310,slow=1.8,SNR=38						
	comp=Z,3.9nm,0.8s						
PDAR	Pinedale Array	62.49	56		P	00 36 43.5	+0.8
FRB	Frobisher Bay	62.66	20	LR	LR	01 06 42.8	
	comp=Z,70nm,18.5s,baz=306,slow=39						
FINES	FINESS Array B	62.70	335	P	P	00 36 42.5	-1.0
	comp=Z,3.2nm,0.7s,baz=44,slow=6.6,SNR=11						
	comp=Z,3.2nm,0.7s						
SFJD	Kangerlussuaq	62.87	11	P	P	00 36 44.4	-0.1
	comp=Z,7.1nm,0.9s,baz=0.0,slow=9.1,SNR=1.7						
	comp=Z,7.1nm,0.9s						
CCUT	Cedar City	63.85	62		P	00 36 52.5	+0.7
ULM	Lac du Bonnet	64.11	42	P	P	00 36 53.4	+0.4
	comp=Z,2.6nm,0.7s,baz=307,slow=8.1,SNR=4.4						
	comp=Z,2.6nm,0.7s						
LCMT	Little Creek M	64.28	63	P	P	00 36 55.7	+1.2
LCMT				IAmb	IAmb	00 36 56.7	
	comp=Z,4.7nm,0.9s						
NC405	NORSAR Array S	66.50	342	P	P	00 37 08.2	0.0
NB2	NORSAR Subarra	66.67	342	P	P	00 37 09.3	-0.1
	comp=Z,1.3nm,0.8s,baz=30,slow=6.5						
NOA	NORSAR Array B	66.67	342	P	P	00 37 08.2	-1.2
	comp=Z,0.7nm,0.6s,baz=28,slow=6.6,SNR=4.4						
	comp=Z,0.7nm,0.6s						
HFS	Hagfors	66.95	340	P	P	00 37 10.2	-0.9
	comp=Z,3.5nm,0.8s,baz=72,slow=4.8,SNR=7.6						
	comp=Z,3.5nm,0.8s						
ANMO	Albuquerque	69.66	60	⇑eP	P	00 37 29.8	+1.1
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KBZ	Khabaz	70.33	315	P	P	00 37 32.1	-0.4
	comp=Z,0.9nm,0.8s,baz=96,slow=10,SNR=4.0						
	comp=Z,0.9nm,0.8s						
AKASG	Malin Array Be	70.52	327	P	P	00 37 32.6	-0.8
	comp=Z,1.1nm,0.6s,baz=33,slow=6.2,SNR=4.5						
	comp=Z,1.1nm,0.6s						
AKASG	Malin Array Be	70.52	327	eP	P	00 37 33.6	+0.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
319A	Douglas	70.56	64		P	00 37 35.0	+0.8
WB0	Warramunga Arr	70.73	201	P	P	00 37 34.5	-0.5
WRA	Warramunga Arr	70.91	201	P	P	00 37 35.7	-0.4
	comp=Z,2.3nm,0.7s,baz=16,slow=6.1,SNR=12						
	comp=Z,2.3nm,0.7s						
WRA	Warramunga Arr	70.91	201	P	P	00 37 35.4	-0.7
STHS	Stebnicka Huta	74.35	331	eP	P	00 38 00.5	+4.2
STHS	Stebnicka Huta	74.35	331	eP	P	00 38 00.5	+4.2
BUR08	Bucovina Ar. S	74.53	327	P	P	00 37 57.3	-0.2
BURAR	Bucovina Array	74.55	327	P	P	00 37 56.8	-0.8
AS31	Alice Springs	74.60	200	P	P	00 37 58.4	+0.4
ASAR	Alice Springs	74.60	200	P	P	00 37 58.3	+0.4
	comp=Z,1.6nm,0.6s,baz=13,slow=5.7,SNR=30						
	comp=Z,1.6nm,0.6s						
ASAR	Alice Springs	74.60	200	P	P	00 37 58.1	+0.2
EKA	Eskdalemuir Ar	74.61	347	P	P	00 37 57.4	-0.3
	comp=Z,3.4nm,0.6s,baz=16,slow=5.9,SNR=13						
	comp=Z,3.4nm,0.6s						
ALPN	Alpine	74.61	62		P	00 37 58.9	+0.6
ALPN				IAmb	IAmb	00 37 59.7	
	comp=Z,6.3nm,1.1s						
CLL	Collm	75.09	336	eP	P	00 38 01.0	+0.5
CLL	Collm	75.09	336	eP	P	00 38 01.0	+0.5
LANS	Liptovska Anna	75.15	332	eP	P	00 38 02.7	+1.7
LANS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LANS	Liptovska Anna	75.15	332	eP	P	00 38 02.7	+1.7
MORC	Moravsky Berou	75.18	333	eP	P	00 38 02.0	+0.8
TXAR	Lajitas Array	75.36	62	P	P	00 38 03.5	+0.9
	comp=Z,4.5nm,0.7s,baz=298,slow=4.3,SNR=67						
	comp=Z,4.5nm,0.7s						
TXAR	Lajitas Array	75.36	62	P	P	00 38 03.4	+0.8
KECS	Kecovo	75.41	331	eP	P	00 38 07.2	+4.8
KECS				pmax	pmax		
	comp=Z,15nm,1.0s						
KECS	Kecovo	75.41	331	eP	P	00 38 07.2	+4.8
VRAC	Vranov	75.88	333	eP	P	00 38 06.3	+1.1
SMOL	Smolenice	76.34	333	eP	P	00 38 09.6	+1.8
MODS	Modra-Piesok	76.51	333	eP	P	00 38 11.2	+2.4
MODS	Modra-Piesok	76.51	333	eP	P	00 38 11.2	+2.4
SRO	Srobarova	76.69	332	eP	P	00 38 09.8	+0.1
SRO	Srobarova	76.69	332	eP	P	00 38 09.8	+0.1
DSB	Dublin	77.08	349	P	P	00 38 11.8	-0.1
GERES	GERESS Array B	77.13	335	P	P	00 38 12.6	+0.2
	comp=Z,0.6nm,0.7s,baz=26,slow=6.4,SNR=5.9						
	comp=Z,0.6nm,0.7s						
GERES	GERESS Array B	77.13	335	eP	P	00 38 12.9	+0.6
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CONA	Conrad Observa	77.34	333	eP	P	00 38 14.7	+1.2
	comp=Z,7.1nm,1.7s						
RONA	Rosalia, Austr	77.41	333	eP	P	00 38 15.5	+1.7
	comp=Z,4.6nm,1.2s						
BR131	Keskin Array S	77.74	318	⇑eP	P	00 38 16.3	+0.4
BRTR	Keskin Array B	77.74	318	P	P	00 38 16.1	+0.1
	comp=Z,1.2nm,0.9s,baz=60,slow=3.6,SNR=7.3						
	comp=Z,1.2nm,0.9s						
BRTR	Keskin Array B	77.74	318	P	P	00 38 15.5	-0.4
BRTR	Keskin Array B	77.74	318	eP	P	00 38 17.1	+1.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MOA	Molln	77.88	334	eP	P	00 38 18.5	+2.1
	comp=Z,5.3nm,1.5s						
ARSA	Arzberg	78.05	333	eP	P	00 38 18.2	+0.8
	comp=Z,3.8nm,1.2s						
BIOA	Bad Ischl, Aus	78.20	334	P	P	00 38 19.4	+1.2
BIOA	Bad Ischl, Aus	78.20	334	eP	P	00 38 19.4	+1.2
	comp=Z,9.1nm,1.6s						
SOKA	Soboth	78.71	333	P	P	00 38 21.4	+0.3
SOKA	Soboth	78.71	333	i P	P	00 38 21.4	+0.3
	comp=Z,3.2nm,0.7s						
LESA	Schwarzleotal	78.71	335	P	P	00 38 22.1	+1.0
LESA	Schwarzleotal	78.71	335	eP	P	00 38 22.1	+1.0
	comp=Z,4.1nm,0.7s						
KBA	Koelnbreinsper	78.84	334	i P	P	00 38 23.3	+1.3
	comp=Z,7.9nm,0.7s						
OBKA	Obir	79.00	333	i P	P	00 38 15.7	-7.1
	comp=Z,8.6nm,1.6s						
WATA	Walderalm	79.10	336	i P	P	00 38 19.2	-4.1
	comp=Z,9.0nm,1.6s						
WTTA	Wattenberg	79.15	336	P	P	00 38 24.1	+0.5
WTTA	Wattenberg	79.15	336	i P	P	00 38 24.1	+0.5
	comp=Z,13nm,1.3s						
WTTA	Wattenberg	79.15	336	P	P	00 38 24.2	+0.5
MYKA	Terra Mystica	79.16	334	eP	P	00 38 17.3	-6.2
	comp=Z,3.9nm,1.1s						
SQTA	Sankt Quirin	79.30	336	P	P	00 38 25.2	+0.8
SQTA	Sankt Quirin	79.30	336	i P	P	00 38 25.2	+0.8
	comp=Z,7.1nm,1.0s						
SQTA	Sankt Quirin	79.30	336	P	P	00 38 25.2	+0.8
ABTA	Abfaltersbach	79.38	335	P	P	00 38 24.7	-0.1
ABTA	Abfaltersbach	79.38	335	eP	P	00 38 24.7	-0.1
	comp=Z,6.8nm,1.3s						
DAVA	Damuels	79.59	337	P	P	00 38 23.9	-2.1
DAVA	Damuels	79.59	337	eP	P	00 38 23.9	-2.1
	comp=Z,13nm,1.1s						
FETA	Feichten	79.61	336	P	P	00 38 27.0	+0.8
FETA	Feichten	79.61	336	eP	P	00 38 27.0	+0.8
	comp=Z,11nm,1.8s						
CIMO	Cimolais	79.80	335	P	P	00 38 26.6	-0.4
FUORN	Ofenpass-Fuorn	80.11	336	P	P	00 38 29.3	+0.4
FUORN				IAmb	IAmb	00 38 30.7	
	comp=Z,16nm,1.4s						
TUE	Stuetta	80.49	337	P	P	00 38 31.2	+0.2
TUE				IAmb	IAmb	00 38 35.7	
	comp=Z,10nm,0.9s						
PDG	Podgorica	81.14	328	P	P	00 38 33.6	-0.6
M65A	Busby, Falmout	81.40	33	P	P	00 38 35.6	0.0
	baz=332						
MMAI	Mount Meron Ar	82.38	313	P	P	00 38 41.9	+0.9
	comp=Z,3.2nm,0.6s,baz=36,slow=7.2,SNR=6.4						
	comp=Z,3.2nm,0.6s						
BNI	Bardonecchia	82.49	338	P	P	00 38 42.0	+0.6
BNI				IAmb	IAmb	00 38 48.5	
	comp=Z,15nm,1.3s						
BNI	Bardonecchia	82.49	338	P	P	00 38 42.0	+0.6
BNI				pmax	pmax		
	comp=Z,15nm,1.3s						
NRCA	Norcia	82.77	333	P	P	00 38 42.1	-0.7
FORT	Forrest	82.84	203	P	P	00 38 43.1	+0.2
FORT				IAmb	IAmb	00 38 44.3	
	comp=Z,6.4nm,0.8s						
BBOO	Buckleboo	83.02	196	P	P	00 38 43.8	-0.1
BBOO				IAmb	IAmb	00 38 58.8	
	comp=Z,15nm,1.5s						
BFZ	Birch Farm	91.08	164	P	P	00 39 24.5	+1.6
H03N2	Juan Fernandez	137.46	89	T	T	03 18 48.3	
	baz=310,slow=77,SNR=156						
H03N1	Juan Fernandez	137.47	89	T	T	03 18 46.4	
	baz=310,slow=77,SNR=128						
H03N3	Juan Fernandez	137.47	89	T	T	03 18 51.1	
	baz=310,slow=77,SNR=131						
QSPA	South Pole Qui	138.57	180	PKP	PKPdf	00 45 43.3	+0.2
	comp=Z,0.7nm,0.6s,baz=290,slow=2.4,SNR=2.1						
CPUP	Villa Florida	146.31	60	PKPbc	PKPdf	00 45 58.8	+0.8
	comp=Z,0.8nm,0.8s,baz=306,slow=4.2,SNR=7.3						
PLCA	Paso Flores	147.07	93	PKPbc	PKPbc	00 46 00.7	-0.4
	comp=Z,2.0nm,1.0s,baz=326,slow=3.6,SNR=3.2						
ELIB	Princess Elisa	148.23	206	dPKPdf	PKPbc	00 46 02.8	-0.6
SNAA	Sanae	154.91	196	PKPab	PKPab	00 46 33.2	-1.2
	comp=Z,1.8nm,0.8s,baz=106,slow=2.9,SNR=6.7						

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*KRSC **15** 00:33:39.3±1.8, 48°.64N×155°.84E, h30km±26km, Ml5.0*

*MOS **15** 00:33:42.3±1.0, 48°.86N×154°.99E, h67km, mb4.7/35, Error ellipse: s-maj=8.9km s-min=3.5km az=72.4*

*SKHL **15** 00:33:42.8±0.4, 48°.70N×155°.30E, h70km±5km, mb5.0/5*

*NEIC **15** 00:33:43.8±1.0, 48°.92N±0°.09×154°.8E±0°.1, h62km±6km, mb4.6/95, Error ellipse: s-maj=15.4km s-min=9.5km az=134.0*

*IDC **15** 00:33:44.0±2.4, 48°.90N×154°.83E, h63km±21km, mb3.9/30, mbtmp4.2/36, MS3.7/36, Error ellipse: s-maj=14.4km s-min=10.4km az=146.0*

ISC 15 00:33:43.7±0.6**, 48°.82N**±0°.05×**155°.02E**±0°.04**, h68**km±5km**,**
n598, σ1s.05/602**, mb4.5**/106**, 10C-9D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.00	20	ePN	Pn	00 34 14.0	-1.3
SKR				eS	Sn	00 34 37.7	-1.5
SKR				pmax	pmax		
	comp=Z,462nm,0.3s						
SKR				smax	smax		
	comp=N,3µm,0.6s						
SKR				smax	smax		
	comp=E,1µm,0.3s						
SKR	Severo-Kuril's	2.00	20	eP	Pn	00 34 13.7	-1.5
SKR				eS	Sn	00 34 37.4	-1.8
SKR	Severo-Kuril's	2.00	20	eP	Pn	00 34 13.9	-1.3
SKR				AMB	AMB	00 34 16.0	
	comp=E,490nm,0.5s						
SKR				eS	Sn	00 34 36.9	-2.3
SKR				A	A	00 34 42.5	
	comp=E,2µm,0.3s						
SKR				A	A	00 34 42.5	
	comp=E,2µm,0.3s						
PAU	Pauzhetka	2.89	23	PN	Pn	00 34 26.5	-0.9
PAU				S	Sn	00 35 01.2	+0.3
PAU	Pauzhetka	2.89	23	eP	Pn	00 34 26.5	-0.9
PAU				eS	Sn	00 35 01.2	+0.3
PAU	Pauzhetka	2.89	23	eP	Pn	00 34 26.4	-0.9
PAU				AMB	AMB	00 34 29.3	
	comp=E,180nm,0.4s						
PAU				eS	Sn	00 35 00.4	-0.5
PAU				A	A	00 35 06.0	
	comp=E,2µm,0.4s						
PAU				A	A	00 35 06.0	
	comp=E,2µm,0.4s						
KDTR	Khodutka, Kamc	3.58	32	PN	Pn	00 34 35.1	-1.6
KDTR				S	Sn	00 35 15.5	-2.1
KDTR	Khodutka, Kamc	3.58	32	eP	Pn	00 34 35.1	-1.6
KDTR				eS	Sn	00 35 15.6	-2.1
KDTR	Khodutka, Kamc	3.58	32	eP	Pn	00 34 35.1	-1.6
KDTR				eS	Sn	00 35 15.5	-2.1
ASAK	Asacha	4.01	26	PN	Pn	00 34 43.1	+0.4
ASAK	Asacha	4.01	26	eP	Pn	00 34 43.1	+0.4
MTVR	Mutnovka	4.18	28	PN	Pn	00 34 45.0	-0.1
MTVR				S	Sn	00 35 33.0	+0.3
MTVR	Mutnovka	4.18	28	eP	Pn	00 34 45.0	-0.1
MTVR				eS	Sn	00 35 33.0	+0.3
GRL	Gorelyy	4.21	26	PN	Pn	00 34 46.3	+0.8
GRL				S	Sn	00 35 35.0	+1.6
GRL	Gorelyy	4.21	26	eP	Pn	00 34 46.3	+0.8
GRL				eS	Sn	00 35 35.0	+1.6
RUS	Russkaya	4.25	30	PN	Pn	00 34 44.5	-1.3
RUS				S	Sn	00 35 31.7	-2.3
RUS	Russkaya	4.25	30	eP	Pn	00 34 44.6	-1.3
RUS				eS	Sn	00 35 31.7	-2.3
APC	Apacha	4.33	17	PN	Pn	00 34 49.4	+2.5
APC	Apacha	4.33	17	eP	Pn	00 34 49.4	+2.5
KRMR	Karymshinskiy	4.47	25	PN	Pn	00 34 49.3	+0.4
KRMR	Karymshinskiy	4.47	25	eP	Pn	00 34 49.3	+0.4
PEA0B	Petropavlovsk-	4.62	21		Pn	00 34 51.6	+0.7
PEA0B	Petropavlovsk-	4.62	21	c iPN	Pn	00 34 51.7	+0.8
PETK	Petropavlovsk-	4.62	21	P	Pn	00 34 51.3	+0.4
	comp=E,74nm,0.7s,baz=184,slow=11,SNR=133						
PETK	Petropavlovsk-	4.62	21		Pn	00 34 51.1	+0.2
PET	Petropavlovsk	4.80	27		Pn	00 34 53.1	-0.2
PET	Petropavlovsk	4.80	27	ePN	Pn	00 34 52.8	-0.5
PET				eS	Sn	00 35 48.1	+0.6
PET				pmax	pmax		
	comp=Z,107nm,0.6s						
PET				smax	smax		
	comp=E,527nm,0.7s						
PET				smax	smax		
	comp=N,814nm,0.8s						
PET				MLR	MLR		
	comp=Z,400nm,13.0s						
PET				MLR	MLR		
	comp=Z,600nm,14.0s						
PET	Petropavlovsk	4.80	27	eP	Pn	00 34 53.4	+0.1
PET				eS	Sn	00 35 47.6	+0.1
PET	Petropavlovsk	4.80	27	eP	Pn	00 34 53.2	-0.1
PET				AMB	AMB	00 34 53.5	
	comp=Z,100nm,0.5s						
PET				eS	Sn	00 35 46.3	-1.2
PET				A	A	00 35 57.2	
	comp=Z,820nm,0.7s						
PET				A	A	00 35 57.2	
	comp=Z,520nm,0.7s						
INSR	Institute	4.82	27	PN	Pn	00 34 53.7	+0.1
INSR				S	Sn	00 35 48.4	+0.4
INSR	Institute	4.82	27	eP	Pn	00 34 53.8	+0.1
INSR				eS	Sn	00 35 48.5	+0.4
DALK	Dalny	4.83	28	PN	Pn	00 34 53.3	-0.5
DALK				S	Sn	00 35 48.6	+0.2
DALK	Dalny	4.83	28	eP	Pn	00 34 53.3	-0.5
DALK				eS	Sn	00 35 48.7	+0.2
UGLR	Uglovaya	5.01	27	PN	Pn	00 34 56.8	+0.5
UGLR	Uglovaya	5.01	27	eP	Pn	00 34 56.9	+0.5
KOK	Koryaka	5.03	26	PN	Pn	00 34 57.7	+1.2
KOK	Koryaka	5.03	26	eP	Pn	00 34 57.7	+1.2
KOK	Koryaka	5.03	26	eP	Pn	00 34 57.7	+1.2
AVH	Avacha	5.03	26	PN	Pn	00 34 57.3	+0.7
AVH	Avacha	5.03	26	eP	Pn	00 34 57.4	+0.7
SMAR	Somma	5.05	27	PN	Pn	00 34 57.6	+0.6
SMAR	Somma	5.05	27	eP	Pn	00 34 57.6	+0.6
KRER	Koryakskii	5.07	26	PN	Pn	00 34 57.8	+0.6
KRER	Koryakskii	5.07	26	eP	Pn	00 34 57.9	+0.6
SDLR	Sedlovina	5.09	27	PN	Pn	00 34 57.3	-0.1
SDLR	Sedlovina	5.09	27	eP	Pn	00 34 57.4	-0.1
KRX	Arik	5.09	25	PN	Pn	00 34 58.2	+0.8
KRX	Arik	5.09	25	eP	Pn	00 34 58.3	+0.8
NLC	Nalytchevo	5.14	30	PN	Pn	00 34 55.9	-2.1
NLC	Nalytchevo	5.14	30	eP	Pn	00 34 56.0	-2.1
GNL	Ganaly	5.21	19	PN	Pn	00 35 00.7	+1.6
GNL	Ganaly	5.21	19	eP	Pn	00 35 00.8	+1.6
SPN	Mys Shipunski	5.32	35	PN	Pn	00 34 58.9	-1.6
SPN	Mys Shipunski	5.32	35	eP	Pn	00 34 58.9	-1.6
KII	Karymskiy	5.91	26	PN	Pn	00 35 09.4	+0.8
KII	Karymskiy	5.91	26	eP	Pn	00 35 09.4	+0.8
KUR	Kuril'sk	6.06	236	ePN	Pn	00 35 12.4	+1.7
KUR				eS	Sn	00 36 21.4	+2.8
KUR				smax	smax		
	comp=N,240nm,0.5s						
KUR				smax	smax		
	comp=E,182nm,0.5s						
KUR	Kuril'sk	6.06	236	eP	Pn	00 35 12.0	+1.3
KUR				AMB	AMB	00 35 20.6	
	comp=E,160nm,0.5s						
KUR				eS	Sn	00 36 18.3	-0.3
KUR				A	A	00 36 28.7	
	comp=E,240nm,0.6s						
KUR				A	A	00 36 28.7	
	comp=E,110nm,0.6s						
KZV	Kizimen	7.09	25	PN	Pn	00 35 24.3	-0.5
KZV	Kizimen	7.09	25	eP	Pn	00 35 24.4	-0.5
ESO	Esso	7.46	16	PN	Pn	00 35 29.8	0.0
ESO	Esso	7.46	16	eP	Pn	00 35 29.8	0.0
TYV	Tymovskoe	8.25	289	ePN	Pn	00 35 44.9	+4.4
TYV				eS	Sn	00 37 23.2	+11
TYV				pmax	pmax		
	comp=Z,28nm,1.2s						
TYV				pmax	pmax		
	comp=Z,100nm,3.2s						

TYV				smax	smax		
	comp=N,13nm,1.6s						
TYV				smax	smax		
	comp=E,12nm,1.6s						
TYV				smax	smax		
	comp=N,400nm,3.9s						
TYV				smax	smax		
	comp=E,300nm,3.9s						
TYV	**Tymovskoe**	**8.25**	**289**	*e*P	**Pn**	**00 35 43.4**	**+2.9**
TYV				*e*S	**Sn**	**00 37 13.0**	**+0.9**
NMR	**Nemuro--Hokkai**	**8.45**	**233**	*e*P	**Pn**	**00 35 41.0**	**-2.2**
YSS	**Yuzhno-Sakhali**	**8.45**	**262**		**Pn**	**00 35 44.1**	**+0.8**
YSS	**Yuzhno-Sakhali**	**8.45**	**262**	*e*PN	**Pn**	**00 35 45.8**	**+2.5**
YSS	**Yuzhno-Sakhali**	**8.45**	**262**	*e*P	**Pn**	**00 35 45.8**	**+2.5**
YSS				AMB	AMB	00 35 47.0	
	comp=E,50nm,0.6s						
YSS				*e*S	**Sn**	**00 37 17.5**	**+0.4**
OKH	**Okha**	**8.94**	**307**	*e*P	**Pn**	**00 35 50.1**	**+0.1**
AKK	**Akkeshi**	**9.16**	**234**	*e*P	**Pn**	**00 35 53.4**	**+0.4**
JKA	**Kamikawa-asahi**	**9.77**	**246**		**Pn**	**00 36 03.5**	**+2.1**
JKA	**Kamikawa-asahi**	**9.77**	**246**	*e*P	**Pn**	**00 36 03.5**	**+2.1**
ASAJ	**Asahikawa**	**9.77**	**246**	P	**Pn**	**00 36 03.7**	**+2.3**
	comp=E,60nm,0.7s,baz=71,slow=14,SNR=50						
ASAJ	**Asahikawa**	**9.77**	**246**	PN	**Pn**	**00 36 03.5**	**+2.1**
ERM	**Erimo**	**10.75**	**235**	Pn	**Pn**	**00 36 14.0**	**-0.8**
ERM	**Erimo**	**10.75**	**235**	PN	**Pn**	**00 36 14.0**	**-0.8**
MA2	**Magadan**	**11.06**	**349**	P	**Pn**	**00 36 19.5**	**+0.7**
	comp=E,9.3nm,0.5s,baz=164,slow=7.9,SNR=9.1						
MA2	**Magadan**	**11.06**	**349**		**Pn**	**00 36 18.5**	**-0.3**
MA2	**Magadan**	**11.06**	**349**	⇓*e*PN	**Pn**	**00 36 19.8**	**+1.0**
MA2				pmax	pmax		
	comp=Z,26nm,1.3s						
MA2	**Magadan**	**11.06**	**349**	*e*P	**Pn**	**00 36 19.8**	**+1.0**
SHEM	**Shemya Is, Ala**	**12.69**	**65**	P	**Pn**	**00 36 38.1**	**-2.9**
	comp=Z,43nm,0.5s,baz=236,slow=18,SNR=9.6						
SHEM				S	Sn	00 38 48.3	-12
	comp=Z,41nm,0.7s,baz=269,slow=21,SNR=2.2						
SHEM				LR	LR	00 42 14.5	
	comp=Z,108nm,19.1s,baz=270,slow=40						
SMY	**Shemya**	**12.69**	**65**	Pn	**Pn**	**00 36 38.0**	**-3.0**
SMY	**Shemya**	**12.69**	**65**	PN	**Pn**	**00 36 38.0**	**-3.0**
SEY	**Seymchan**	**14.22**	**355**	P	**Pn**	**00 37 01.4**	**0.0**
	comp=Z,4.7nm,0.9s,baz=162,slow=11,SNR=7.7						
SEY				LR	LR	00 42 56.4	
	comp=Z,240nm,20.6s,baz=144,slow=39						
SEY	**Seymchan**	**14.22**	**355**	*e*P	**Pn**	**00 37 01.1**	**-0.3**
SEY				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SEY	**Seymchan**	**14.22**	**355**	*e*P	**Pn**	**00 37 01.1**	**-0.3**
USRK	**Ussuriysk Ar.**	**16.49**	**262**	P	**P**	**00 37 30.3**	**-1.8**
	comp=Z,7.4nm,0.7s,baz=67,slow=14,SNR=7.6						
MJA0	**Matsu Arr-Jizo**	**17.35**	**231**	*e*P	**P**	**00 37 40.5**	**-1.1**
MAJO	**Matsushiro**	**17.37**	**231**		**Pn**	**00 37 40.3**	**-1.1**
MAJO	**Matsushiro**	**17.37**	**231**	⇑*e*P	**Pn**	**00 37 39.9**	**-1.5**
MJAR	**Matsushiro Arr**	**17.37**	**231**	P	**Pn**	**00 37 40.2**	**-1.2**
	comp=Z,2.7nm,0.8s,baz=27,slow=13,SNR=6.1						
MJAR				LR	LR	00 45 00.1	
	comp=Z,100nm,21.7s,baz=41,slow=39						
MJAR	**Matsushiro Arr**	**17.37**	**231**		**Pn**	**00 37 40.0**	**-1.4**
HEH	**HeiHe**	**17.94**	**285**	*e*P	**Pn**	**00 37 49.3**	**+1.0**
HEH				pmax	pmax		
	comp=Z,18nm,1.0s						
HEH				LR	LR		
	comp=N,160nm,17.9s						
HEH				LR	LR		
	comp=E,310nm,17.3s						
HEH				LR	LR		
	comp=Z,410nm,16.1s						
PSTR	**Posyet**	**17.95**	**259**	*ce*P	**Pn**	**00 37 50.2**	**+1.7**
ZEA	**Zeya**	**17.99**	**296**	*e*P	Pn	00 37 59.9	+11
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ADK	**Adak**	**18.27**	**70**	P	**Pn**	**00 37 52.6**	**+0.4**
ADK	**Adak**	**18.27**	**70**	P	**Pn**	**00 37 52.6**	**+0.4**
ADK				pmax	pmax		
	comp=Z,99nm,1.2s						
JGF	**Kuroka**	**18.53**	**231**	P	**Pn**	**00 37 54.2**	**-1.3**
INU	**Inuyama**	**18.90**	**231**	P	**P**	**00 37 57.0**	**-1.7**
BNX	**BinXian**	**18.95**	**271**	⇑P	**Pn**	**00 38 02.4**	**+2.0**
BNX				pmax	pmax		
	comp=Z,7.0nm,0.9s						
YAK	**Yakutsk**	**19.36**	**323**	P	**P**	**00 38 02.4**	**-1.1**
	comp=Z,9.9nm,0.3s,baz=90,slow=4.6,SNR=7.6						
YAK				LR	LR	00 45 22.6	
	comp=Z,214nm,20.4s,baz=104,slow=36						
YAK	**Yakutsk**	**19.36**	**323**	P	**P**	**00 38 00.1**	**-3.3**
YAK				IAmb	IAmb	00 38 18.5	
	comp=Z,19nm,0.8s						
YAK	**Yakutsk**	**19.36**	**323**	*e*P	**Pn**	**00 38 06.0**	**+0.8**
YAK				*e*S	**Sn**	**00 41 42.8**	**+1.2**
YAK				pmax	pmax		
	comp=Z,25nm,1.1s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.3s						
YAK				smax	smax		
	comp=E,129nm,4.3s						
YAK				smax	smax		
	comp=N,68nm,2.9s						
YAK	**Yakutsk**	**19.36**	**323**	*e*P	**Pn**	**00 38 06.0**	**+0.8**
JHJ	**Hachijo jima 2**	**19.39**	**222**	LR	LR	00 47 35.3	
	comp=N,34nm,18.8s,baz=84,slow=43						
BILL	**Bilibino**	**20.09**	**12**		**P**	**00 38 09.7**	**-1.6**
BILL	**Bilibino**	**20.09**	**12**	*de*P	**P**	**00 38 10.3**	**-1.0**
BILL				pmax	pmax		
	comp=Z,13nm,0.8s						
JMN	**Monobe**	**21.80**	**234**	P	**P**	**00 38 31.1**	**+1.1**
JMN				IAmb	IAmb	00 39 03.5	
	comp=Z,54nm,1.3s						
SPIA	**Saint Paul Isl**	**22.30**	**55**	P	**P**	**00 38 35.4**	**+0.2**
	baz=263						
P08K	**Saint George I**	**22.62**	**56**	P	**P**	**00 38 38.8**	**+0.2**
	baz=266						
KSRS	**Korea Array**	**22.68**	**250**	P	**P**	**00 38 39.5**	**+0.2**
	comp=Z,7.6nm,0.5s,baz=49,slow=9.9,SNR=28						
	comp=Z,7.6nm,0.5s						
KS19	**Wonju Array Si**	**22.68**	**250**	P	**P**	**00 38 38.6**	**-0.9**
KS19				IAmb	IAmb	00 38 41.9	
	comp=Z,15nm,0.9s						
KSAR	**Wonju Array Be**	**22.71**	**250**		**P**	**00 38 38.0**	**-1.7**
KSAR	**Wonju Array Be**	**22.71**	**250**	P	**P**	**00 38 38.0**	**-1.7**
HILR	**Hailar Array B**	**22.94**	**285**	P	**P**	**00 38 40.7**	**-1.3**
	comp=Z,6.2nm,0.3s,baz=74,slow=8.6,SNR=3.1						
HILR				LR	LR	00 48 38.2	
	comp=Z,278nm,18.5s,baz=90,slow=39						
	comp=Z,6.2nm,0.3s						
NIKH	**Nikolski High**	**23.00**	**66**	P	**P**	**00 38 43.3**	**+0.8**
	baz=275						
GAMB	**Gambell**	**23.39**	**38**	P	**P**	**00 38 45.6**	**-0.5**
	baz=246						
TJN	**Taejon**	**23.71**	**249**	P	**P**	**00 38 49.1**	**-0.1**
TJN	**Taejon**	**23.71**	**249**	P	**P**	**00 38 49.1**	**-0.1**
TJN				pmax	pmax		
	comp=Z,128nm,1.4s						
JNU	**Nakatsue**	**23.90**	**238**	P	**P**	**00 38 51.4**	**+0.4**
	comp=Z,17nm,1.1s,baz=21,slow=6.1,SNR=2.9						
JNU				LR	LR	00 48 22.8	
	comp=Z,64nm,18.1s,baz=37,slow=37						
	comp=Z,17nm,1.1s						
JNU	**Nakatsue**	**23.90**	**238**	P	**P**	**00 38 51.1**	**0.0**
JNU				IAmb	IAmb	00 38 57.2	
	comp=Z,36nm,1.2s						
UNV	**Unalaska Valle**	**24.34**	**63**	P	**P**	**00 38 55.3**	**+0.5**
	baz=274						
M11K	**Mekoryuk**	**24.87**	**48**	P	**P**	**00 38 59.3**	**-0.2**
	baz=260						
TNA	**Tin City**	**25.60**	**35**	P	**P**	**00 39 07.0**	**+0.9**
TNA				IAmb	IAmb	00 39 09.6	
	comp=Z,17nm,0.9s						
TNA	**Tin City**	**25.60**	**35**	P	**P**	**00 39 05.3**	**-0.8**
	baz=248						
TIXI	**Tiksi**	**25.88**	**341**	LR	LR	00 50 45.8	
	comp=Z,118nm,18.3s,baz=147,slow=40						
TIXI	**Tiksi**	**25.88**	**341**	P	**P**	**00 39 07.0**	**-1.5**
TIXI				IAmb	IAmb	00 39 26.1	
	comp=Z,11nm,0.8s						
TIXI	**Tiksi**	**25.88**	**341**	⇓*e*P	**P**	**00 39 07.5**	**-1.1**
TIXI				*i* *PP	**pP**	**00 39 24.5**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,11nm,1.0s						
K13K	**Kusilvak Mount**	**25.91**	**44**	P	**P**	**00 39 09.4**	**+0.5**
	baz=259						
FALS	**False Pass**	**26.07**	**61**	P	**P**	**00 39 11.1**	**+0.6**
	baz=274						
F14K	**Arctic Creek**	**26.18**	**36**	P	**P**	**00 39 11.0**	**-0.4**
	baz=250						
ANM	**Nome**	**26.27**	**38**	P	**P**	**00 39 13.0**	**+0.8**
ANM	**Nome**	**26.27**	**38**	P	**P**	**00 39 13.0**	**+0.8**
ANM				pmax	pmax		
	comp=Z,12nm,1.1s						
ANM	**Nome**	**26.27**	**38**	P	**P**	**00 39 11.7**	**-0.5**
	baz=253						
M13K	**Dall Lake**	**26.28**	**48**	P	**P**	**00 39 12.8**	**+0.5**
	baz=263						
J14K	**Nanvaranak Lak**	**26.58**	**43**	P	**P**	**00 39 15.3**	**+0.4**
	baz=258						
L14K	**Kuka Creek**	**26.73**	**46**	P	**P**	**00 39 16.5**	**+0.2**
	baz=262						
S12K	**Black Hills**	**26.80**	**59**	P	**P**	**00 39 17.2**	**+0.1**
	baz=274						
F15K	**North Star Dit**	**26.92**	**36**	P	**P**	**00 39 18.0**	**-0.1**
	baz=251						
G15K	**Niukluk**	**26.94**	**38**	P	**P**	**00 39 18.1**	**-0.1**
	baz=253						
M14K	**Bethel**	**27.00**	**48**	P	**P**	**00 39 19.0**	**+0.2**
	baz=264						
N14K	**Kuskokwak Cree**	**27.05**	**49**	P	**P**	**00 39 19.5**	**+0.3**
	baz=266						
XLT	**XiLinHaoTe**	**27.11**	**274**	*e*P	**P**	**00 39 19.8**	**-0.3**
XLT				pmax	pmax		
	comp=Z,7.0nm,0.6s						
XLT				LR	LR		
	comp=N,14nm,15.8s						
XLT				LR	LR		
	comp=E,200nm,16.1s						
XLT				LR	LR		
	comp=Z,170nm,12.1s						
O14K	**Tigyukauivet M**	**27.22**	**51**	P	**P**	**00 39 20.9**	**+0.2**
	baz=267						
L15K	**Ungalak Mounta**	**27.34**	**46**	P	**P**	**00 39 22.0**	**+0.1**
	baz=262						
K15K	**Wolf Creek Mou**	**27.41**	**44**	P	**P**	**00 39 22.4**	**-0.1**
	baz=261						
H16K	**Elim**	**27.58**	**39**	P	**P**	**00 39 23.8**	**-0.1**
	baz=256						
M15K	**Kasigluk River**	**27.61**	**48**	P	**P**	**00 39 24.0**	**-0.3**
	baz=265						
C16K	**Lisburne Hills**	**27.63**	**31**		**P**	**00 39 24.1**	**-0.3**
C16K	**Lisburne Hills**	**27.63**	**31**	P	**P**	**00 39 24.0**	**-0.3**
	baz=246						
SDPT	**Sand Point**	**27.72**	**59**	P	**P**	**00 39 25.9**	**+0.6**
	baz=276						
G16K	**Koyuk River**	**27.73**	**38**	P	**P**	**00 39 25.1**	**-0.2**
	baz=254						
N15K	**Kwethluk River**	**27.87**	**49**	P	**P**	**00 39 26.8**	**+0.2**
	baz=267						
O15K	**Ungalikthiuk R**	**27.96**	**51**	P	**P**	**00 39 27.6**	**+0.2**
	baz=269						
J16K	**Anvik River**	**28.00**	**42**	P	**P**	**00 39 27.8**	**0.0**
	baz=260						
I17K	**Unalakleet**	**28.07**	**41**	P	**P**	**00 39 28.6**	**+0.3**
	baz=259						
S14K	**Fog Glacier**	**28.16**	**57**	P	**P**	**00 39 29.4**	**+0.1**
	baz=274						
D17K	**Noatak River**	**28.19**	**33**	P	**P**	**00 39 29.2**	**-0.2**
	baz=250,SNR=6.5						
CHNA	**Chernabura Isl**	**28.28**	**60**	P	**P**	**00 39 30.3**	**+0.1**
	baz=277						
L16K	**Owhat River**	**28.30**	**46**	P	**P**	**00 39 30.7**	**+0.3**
	baz=264						
RDOG	**Red Dog Mine**	**28.38**	**32**	P	**P**	**00 39 31.1**	**+0.1**
RDOG				IAmb	IAmb	00 39 32.8	
	comp=Z,23nm,1.4s						
RDOG	**Red Dog Mine**	**28.38**	**32**	P	**P**	**00 39 31.0**	**0.0**
	baz=249						
E17K	**Hotham Inlet**	**28.44**	**34**	P	**P**	**00 39 31.4**	**-0.2**
	baz=252,SNR=7.5						
C17K	**DeLong Mountai**	**28.44**	**31**	P	**P**	**00 39 30.7**	**-0.9**
	baz=248						
G17K	**Kiwalik Mounta**	**28.45**	**38**	P	**P**	**00 39 30.6**	**-1.1**
	baz=256						
F17K	**Baldwin Pennin**	**28.46**	**36**	P	**P**	**00 39 32.4**	**+0.6**
F17K				IAmb	IAmb	00 39 34.2	
	comp=Z,12nm,1.1s						
F17K	**Baldwin Pennin**	**28.46**	**36**	P	**P**	**00 39 32.2**	**+0.5**
	baz=254						
M16K	**Timber Creek**	**28.48**	**47**	P	**P**	**00 39 33.1**	**+1.0**
	baz=266						
N16K	**Nishlik Lake**	**28.54**	**48**	P	**P**	**00 39 33.5**	**+0.9**
	baz=267						
H17K	**Granite Mounta**	**28.62**	**39**	P	**P**	**00 39 34.2**	**+0.9**
	baz=258						
J17K	**VABM Dome**	**28.70**	**42**	P	**P**	**00 39 33.4**	**-0.5**
J17K				IAmb	IAmb	00 39 49.0	
	comp=Z,16nm,1.4s						
J17K	**VABM Dome**	**28.70**	**42**	P	**P**	**00 39 34.6**	**+0.7**
	baz=262						
O16K	**Kokwok River B**	**28.85**	**50**	P	**P**	**00 39 36.0**	**+0.7**
	baz=270						
L17K	**Donlin**	**28.90**	**45**	P	**P**	**00 39 36.7**	**+1.0**
	baz=265						
P16K	**Nushagak River**	**28.90**	**51**	P	**P**	**00 39 36.2**	**+0.5**
	baz=271						
K17K	**Iditarod**	**28.96**	**44**	P	**P**	**00 39 36.7**	**+0.5**
	baz=264						
E18K	**Tukpahlearik C**	**29.00**	**34**	P	**P**	**00 39 36.8**	**+0.3**
	baz=253						
F18K	**Selawik**	**29.12**	**36**	P	**P**	**00 39 38.5**	**+0.9**
	baz=255						
R16K	**Pilot Point**	**29.17**	**54**	P	**P**	**00 39 39.2**	**+1.1**
	baz=274						
C18K	**Utukok River**	**29.18**	**31**		**P**	**00 39 38.5**	**+0.2**
C18K	**Utukok River**	**29.18**	**31**	P	**P**	**00 39 38.6**	**+0.3**
	baz=250,SNR=7.2						
B18K	**Kokolik River**	**29.24**	**30**	P	**P**	**00 39 38.7**	**+0.1**
	baz=248						
M17K	**Holitna River**	**29.25**	**47**	P	**P**	**00 39 39.6**	**+0.8**
	baz=267						
H18K	**Honhosa River**	**29.31**	**39**	P	**P**	**00 39 39.3**	**0.0**
	baz=259						
N17K	**Nushagak Hills**	**29.33**	**48**	P	**P**	**00 39 40.7**	**+1.2**
	baz=269						
G18K	**Tagagawik**	**29.35**	**37**	P	**P**	**00 39 40.2**	**+0.5**
G18K	**Tagagawik**	**29.35**	**37**	P	**P**	**00 39 39.6**	**0.0**
	baz=258						
O17K	**Koliganek Bris**	**29.36**	**50**	P	**P**	**00 39 40.3**	**+0.5**
	baz=270						
Q16K	**King Salmon**	**29.60**	**52**	P	**P**	**00 39 42.8**	**+0.8**
	baz=272						
L18K	**Granite Mounta**	**29.66**	**45**	P	**P**	**00 39 43.5**	**+1.1**
L18K				IAmb	IAmb	00 40 10.0	
	comp=Z,14nm,1.4s						
L18K	**Granite Mounta**	**29.66**	**45**	P	**P**	**00 39 42.8**	**+0.4**
	baz=266						
P17K	**Kvichak River**	**29.70**	**51**	P	**P**	**00 39 43.7**	**+0.9**
	baz=272						
J18K	**Innoko River**	**29.76**	**42**	P	**P**	**00 39 44.1**	**+0.7**
	baz=264						
A19K	**Wainwright**	**29.80**	**28**	P	**P**	**00 39 43.6**	**0.0**
	baz=248						
R17L	**Mt. Peulik Vol**	**29.81**	**54**	P	**P**	**00 39 44.7**	**+0.8**
	baz=274						
GCSA	**Galena City Sc**	**29.86**	**40**	P	**P**	**00 39 44.7**	**+0.5**
	baz=262						
C19K	**Lookout Ridge**	**29.89**	**31**	P	**P**	**00 39 44.7**	**+0.2**
	baz=251,SNR=5.2						
F19K	**Shaleruckik Mo**	**29.91**	**36**	P	**P**	**00 39 45.1**	**+0.6**
	baz=257						
N18K	**Kilae Creek**	**29.97**	**48**	P	**P**	**00 39 45.4**	**+0.2**
	baz=270						
G19K	**Purcell Mounta**	**30.02**	**37**	P	**P**	**00 39 45.2**	**-0.4**
	baz=259						
M18K	**Stony River**	**30.02**	**46**	P	**P**	**00 39 45.7**	**+0.1**
	baz=268						
Q17K	**Contact Creek**	**30.02**	**53**	P	**P**	**00 39 46.3**	**+0.4**
	baz=274						
H19K	**Roundabout Mou**	**30.17**	**38**	P	**P**	**00 39 47.5**	**+0.6**
H19K				IAmb	IAmb	00 39 49.5	
	comp=Z,10nm,0.9s						
H19K	**Roundabout Mou**	**30.17**	**38**	P	**P**	**00 39 46.2**	**-0.7**
	baz=261						
JOW	**Kunigami**	**30.20**	**233**	LR	LR	00 52 25.6	
	comp=Z,61nm,20.5s,baz=89,slow=37						
D19K	**Kuna River**	**30.21**	**32**	P	**P**	**00 39 46.6**	**-0.7**
	baz=254						
E19K	**Redstone River**	**30.26**	**34**	P	**P**	**00 39 47.4**	**-0.2**
	baz=256						
J19K	**Poorman**	**30.30**	**42**	P	**P**	**00 39 48.2**	**0.0**
	baz=264						
O18K	**Koktuh Hills**	**30.31**	**50**	P	**P**	**00 39 48.8**	**+0.5**
	baz=272						
P18K	**Big Mountain,**	**30.31**	**51**	P	**P**	**00 39 49.0**	**+0.7**
	baz=272						
CHIR	**Chirikof Islan**	**30.41**	**58**	P	**P**	**00 39 49.7**	**+0.6**
	baz=278						
Q18K	**Katmai Hardscr**	**30.46**	**52**	P	**P**	**00 39 49.8**	**0.0**
	baz=274						
L19K	**White Mountain**	**30.51**	**45**	P	**P**	**00 39 50.2**	**+0.2**
	baz=268						
H11N2	**WAKE ISLAND Hy**	**30.56**	**158**	T	T	01 12 16.5	
	baz=344,SNR=50						
H11N1	**WAKE ISLAND Hy**	**30.57**	**158**	T	T	01 11 45.7	
	baz=344,slow=74,SNR=108						
H11N3	**WAKE ISLAND Hy**	**30.57**	**158**	T	T	01 11 40.5	
	baz=344,slow=74,SNR=48						
N19K	**Bonanza Creek**	**30.66**	**48**	P	**P**	**00 39 51.5**	**+0.1**
	baz=270						
F20K	**Avaraart Lake**	**30.74**	**36**	P	**P**	**00 39 52.1**	**+0.3**
	baz=259						
O19K	**Port Alsworth**	**30.75**	**49**	P	**P**	**00 39 52.7**	**+0.7**
	baz=272						
D20K	**Etivluk River**	**30.80**	**32**		**P**	**00 39 53.3**	**+0.8**
D20K				IAmb	IAmb	00 39 53.9	
	comp=Z,11nm,0.9s						
D20K	**Etivluk River**	**30.80**	**32**	P	**P**	**00 39 53.5**	**+1.1**
	baz=255,SNR=12						
H20K	**Anotleneega Mo**	**30.81**	**39**	P	**P**	**00 39 52.4**	**-0.2**
	baz=262						
E20K	**Nigu River**	**30.84**	**33**	P	**P**	**00 39 53.3**	**+0.4**
	baz=256						
R18K	**Karluk**	**30.84**	**54**	P	**P**	**00 39 54.4**	**+1.5**
	baz=276						
I20K	**Naaghedeneel**	**30.89**	**40**	P	**P**	**00 39 54.4**	**+1.2**
	baz=264						
K20K	**Telida**	**30.94**	**43**	P	**P**	**00 39 54.5**	**+0.8**
	baz=267						
J20K	**Nowinta River**	**30.97**	**41**	P	**P**	**00 39 54.5**	**+0.6**
	baz=265						
B20K	**Meade River**	**30.99**	**30**		**P**	**00 39 54.9**	**+0.9**
B20K	**Meade River**	**30.99**	**30**	P	**P**	**00 39 54.8**	**+0.7**
	baz=252,SNR=19						
SII	**Sitkinak Islan**	**31.11**	**56**	P	**P**	**00 39 56.3**	**+1.0**
	baz=278						
Q19K	**Cape Douglas,**	**31.15**	**52**	P	**P**	**00 39 56.5**	**+0.8**
	baz=274						
M20K	**Styx River**	**31.32**	**46**	P	**P**	**00 39 58.1**	**+0.9**
M20K				IAmb	IAmb	00 40 01.4	
	comp=Z,18nm,1.5s						
M20K	**Styx River**	**31.32**	**46**	P	**P**	**00 39 58.2**	**+1.0**
	baz=270						
P19K	**Oil Pt**	**31.32**	**50**	P	**P**	**00 39 58.0**	**+0.8**
	baz=274						
IMAR	**Indian Mountai**	**31.34**	**38**	P	**P**	**00 39 57.3**	**+0.1**
OHAK	**Old Harbor**	**31.51**	**55**	P	**P**	**00 39 59.4**	**+0.7**
	baz=278						
G21K	**Allakaket**	**31.51**	**37**	P	**P**	**00 39 59.1**	**+0.3**
	baz=262						
C21K	**Knifeblade Rid**	**31.55**	**32**	P	**P**	**00 39 59.4**	**+0.3**
	baz=256						
A21K	**Barrow**	**31.58**	**27**	P	**P**	**00 39 59.6**	**+0.4**
	baz=251,SNR=11						
O20K	**Slope Mountain**	**31.60**	**49**	P	**P**	**00 39 59.9**	**+0.2**
	baz=273						
F21K	**Alatna River**	**31.63**	**36**	P	**P**	**00 40 00.4**	**+0.6**
	baz=261						
E21K	**Killik River**	**31.68**	**33**	P	**P**	**00 39 59.8**	**-0.4**
	baz=258						
H11S1	**WAKE ISLAND Hy**	**31.68**	**159**	T	T	01 13 14.8	
	baz=345,slow=76,SNR=226						
H21K	**Melozitna Rive**	**31.68**	**39**	P	**P**	**00 40 00.5**	**+0.2**
	baz=264						
H11S3	**WAKE ISLAND Hy**	**31.69**	**159**	T	T	01 13 13.6	
	baz=345,slow=76,SNR=789						
H11S2	**WAKE ISLAND Hy**	**31.70**	**159**	T	T	01 13 12.6	
	baz=345,slow=76,SNR=1321						
B21K	**Ikpikpuk River**	**31.73**	**31**	P	**P**	**00 40 01.4**	**+0.9**
	baz=256						
CHUM	**Lake Minchumin**	**31.75**	**42**	P	**P**	**00 40 01.6**	**+0.8**
	baz=267						
SPCR	**Spurr Chakacha**	**31.76**	**47**	P	**P**	**00 40 02.0**	**+0.9**
	baz=272						
PPLA	**Purkeypile**	**31.77**	**44**	P	**P**	**00 40 02.0**	**+0.8**
	baz=269						
KDAK	**Kodiak Island**	**31.82**	**54**	LR	LR	00 53 01.9	
	comp=Z,127nm,22.0s,baz=250,slow=36						
KDAK	**Kodiak Island**	**31.82**	**54**	P	**P**	**00 40 02.4**	**+1.0**
	baz=277						
Q20K	**Shuyak Island**	**31.83**	**52**	P	**P**	**00 40 03.0**	**+1.4**
	baz=276						
SONM	**Songino Array**	**31.91**	**287**	P	**P**	**00 40 03.9**	**+1.3**
	comp=Z,0.3nm,0.4s,baz=72,slow=7.8,SNR=2.0						
SONM				PcP	**PcP**	**00 42 52.0**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=111,slow=2.3,SNR=9.0						
SONM				LR	LR	00 54 09.1	
	comp=Z,226nm,18.8s,baz=68,slow=39						
	comp=Z,0.3nm,0.4s						
STLK	**Strandline Lak**	**31.94**	**47**	P	**P**	**00 40 02.9**	**+0.3**
STLK				IAmb	IAmb	00 40 05.0	
	comp=Z,6.6nm,0.8s						
I21K	**Tanana**	**31.98**	**40**	P	**P**	**00 40 03.5**	**+0.6**
	baz=266						
A22K	**Sinclair Lake**	**31.99**	**28**	P	**P**	**00 40 02.8**	**+0.1**
	baz=253,SNR=26						
SKT	**Skwentna**	**32.07**	**46**	P	**P**	**00 40 04.3**	**+0.6**
	baz=271						
HOM	**Homer**	**32.12**	**50**	P	**P**	**00 40 04.9**	**+0.7**
	baz=275						
F22K	**John River**	**32.18**	**35**	P	**P**	**00 40 05.8**	**+1.2**
	baz=262						
D22K	**Ayikyak River**	**32.23**	**33**	P	**P**	**00 40 06.0**	**+1.0**
	baz=259						
CAPN	**Captain Cook N**	**32.30**	**48**	P	**P**	**00 40 06.0**	**+0.4**
	baz=273						
H22K	**Ishtalitna Cre**	**32.30**	**38**	P	**P**	**00 40 05.3**	**-0.3**
	baz=265						
B22K	**Teshekpuk Lake**	**32.30**	**30**	P	**P**	**00 40 06.2**	**+0.6**
	baz=256,SNR=12						
BPAW	**Bear Paw Mtn.**	**32.34**	**42**	P	**P**	**00 40 06.5**	**+0.4**
BPAW				IAmb	IAmb	00 40 08.7	
	comp=Z,5.9nm,0.9s						
BPAW	**Bear Paw Mtn.**	**32.34**	**42**	P	**P**	**00 40 06.7**	**+0.6**
	baz=268						
G22K	**Bettles**	**32.35**	**36**	P	**P**	**00 40 06.3**	**+0.2**
	baz=263						
E22K	**Anaktuvuk Pass**	**32.41**	**34**	P	**P**	**00 40 06.9**	**+0.3**
	baz=261						
SUA	**Susitna One**	**32.46**	**47**	P	**P**	**00 40 07.6**	**+0.4**
	baz=273						
MLY	**Manley**	**32.50**	**40**	P	**P**	**00 40 07.5**	**0.0**
	baz=267						
BRSE	**Bradley Lake S**	**32.57**	**50**	P	**P**	**00 40 08.7**	**+0.5**
	baz=275						
TRF	**Thorofare Moun**	**32.64**	**43**	P	**P**	**00 40 10.0**	**+1.1**
	baz=270						
CUT	**Chulitna**	**32.66**	**45**	P	**P**	**00 40 09.4**	**+0.6**
	baz=272						
COLD	**Coldfoot**	**32.90**	**36**	P	**P**	**00 40 10.8**	**0.0**
	baz=264						
G23K	**Bananza Creek**	**32.92**	**37**	P	**P**	**00 40 12.4**	**+1.3**
	baz=265						
D23K	**Nanushuk River**	**32.96**	**33**	P	**P**	**00 40 12.8**	**+1.5**
	baz=261						
RC01	**Rabbit Creek A**	**32.97**	**47**	P	**P**	**00 40 12.8**	**+1.3**
	baz=274						
H23K	**Yukon River**	**33.04**	**38**	P	**P**	**00 40 13.2**	**+1.0**
	baz=267						
I23K	**Minto, Yukon-K**	**33.09**	**40**	P	**P**	**00 40 13.5**	**+1.0**
	baz=268						
C23K	**Itkillik River**	**33.13**	**31**	P	**P**	**00 40 14.1**	**+1.3**
	baz=260						
SEW	**Seward**	**33.19**	**49**	P	**P**	**00 40 15.0**	**+1.6**
	baz=276						
NEA2	**Nenana**	**33.19**	**41**	P	**P**	**00 40 13.9**	**+0.5**
NEA2				IAmb	IAmb	00 40 16.0	
	comp=Z,12nm,0.9s						
NEA2	**Nenana**	**33.19**	**41**	P	**P**	**00 40 14.7**	**+1.2**
	baz=269						
E23K	**Chandalar**	**33.22**	**34**	P	**P**	**00 40 14.9**	**+1.1**
	baz=263						
PMR	**Palmer**	**33.23**	**46**	P	**P**	**00 40 15.2**	**+1.5**
	baz=274						
MCK	**McKinley**	**33.25**	**42**	P	**P**	**00 40 15.1**	**+1.2**
	baz=271,SNR=5.5						
TOLK	**Toolik Lake Re**	**33.31**	**33**	P	**P**	**00 40 15.5**	**+1.1**
	baz=263,SNR=5.3						
WAT1	**Susitna Watana**	**33.44**	**44**	P	**P**	**00 40 16.5**	**+0.8**
	baz=272						
KNK	**Knik Glacier**	**33.56**	**47**	P	**P**	**00 40 16.8**	**+0.1**
KNK	**Knik Glacier**	**33.56**	**47**	P	**P**	**00 40 17.6**	**+0.9**
	baz=275						
SML	**Sawmill**	**33.59**	**46**		**P**	**00 40 17.6**	**+0.6**

SML	**Sawmill**	**33.59**	**46**	P	**P**	**00 40 18.2**	**+1.1**
	baz=274,SNR=7.1						
E24K	**Your Creek**	**33.64**	**34**	P	**P**	**00 40 18.4**	**+1.1**
	baz=264						
D24K	**Happy Valley**	**33.65**	**32**	P	**P**	**00 40 18.4**	**+1.0**
	baz=262						
PWL	**Port Wells**	**33.67**	**48**	P	**P**	**00 40 18.9**	**+1.3**
	baz=276						
COLA	**College**	**33.72**	**40**	⇑*e*P	**P**	**00 40 18.6**	**+0.6**
COLA				pmax	pmax		
	comp=Z,22nm,1.0s						
COLA	**College**	**33.72**	**40**	P	**P**	**00 40 19.0**	**+1.0**
	baz=270						
H24K	**Noodor Dome**	**33.73**	**38**	P	**P**	**00 40 19.5**	**+1.3**
	baz=268						
C24K	**Franklin Bluff**	**33.77**	**31**	P	**P**	**00 40 19.4**	**+1.0**
	baz=262						
F24K	**Squaw Lake**	**33.82**	**35**	P	**P**	**00 40 20.2**	**+1.3**
	baz=266						
WAT6	**Susitna Watana**	**33.82**	**44**	P	**P**	**00 40 20.7**	**+1.5**
	baz=274						
M23K	**Glacier View**	**33.88**	**46**	P	**P**	**00 40 21.0**	**+1.5**
	baz=275						
POKR	**Poker Plat Res**	**33.90**	**40**	P	**P**	**00 40 20.9**	**+1.3**
	baz=270						
G24K	**Hadweenzic Riv**	**33.93**	**37**	P	**P**	**00 40 20.7**	**+0.9**
	baz=268						
DHY	**Denali Highway**	**33.97**	**43**	P	**P**	**00 40 21.4**	**+1.0**
	baz=273						
SCM	**Sheep Creek Mo**	**34.07**	**46**	P	**P**	**00 40 22.6**	**+1.5**
	baz=275						
HDA	**Harding Lake**	**34.11**	**41**	P	**P**	**00 40 22.5**	**+1.1**
	baz=271						
ILAR	**Eielson Array**	**34.13**	**40**	P	**P**	**00 40 22.3**	**+0.7**
	comp=Z,5.0nm,1.1s,baz=256,slow=9.0,SNR=24						
ILAR				LR	LR	00 54 13.7	
	comp=Z,57nm,19.3s,baz=248,slow=36						
	comp=Z,5.0nm,1.1s						
P23K	**Montague Islan**	**34.22**	**49**	P	**P**	**00 40 23.3**	**+0.9**
	baz=278						
GLI	**Glacier Island**	**34.27**	**47**	P	**P**	**00 40 24.0**	**+1.2**
	baz=276						
G25K	**Bearman Lake**	**34.47**	**37**	P	**P**	**00 40 25.7**	**+1.2**
	baz=269						
D25K	**Kavik River**	**34.53**	**32**	P	**P**	**00 40 25.6**	**+0.6**
	baz=265						
M24K	**Tolsona, Glenn**	**34.59**	**45**	P	**P**	**00 40 26.1**	**+0.5**
	baz=276						
K24K	**Donnelly Dome**	**34.65**	**42**	P	**P**	**00 40 26.6**	**+0.5**
	baz=273						
F25K	**Christian Rive**	**34.68**	**35**	P	**P**	**00 40 26.8**	**+0.4**
	baz=268						
E25K	**Arctic Village**	**34.73**	**34**	P	**P**	**00 40 27.1**	**+0.3**
	baz=267						
KLU	**Klutina**	**34.77**	**46**	P	**P**	**00 40 27.9**	**+0.7**
	baz=277						
J25K	**Salcha River,**	**34.79**	**41**	P	**P**	**00 40 27.7**	**+0.3**
	baz=272						
Q23K	**Middleton Isla**	**34.83**	**50**	P	**P**	**00 40 28.2**	**+0.6**
	baz=279						
PAX	**Paxson**	**34.84**	**44**	P	**P**	**00 40 28.4**	**+0.5**
	baz=275						
EYAK	**Cordova Ski Ar**	**34.97**	**48**	P	**P**	**00 40 28.9**	**+0.1**
	baz=278						
HARP	**HAARP**	**35.03**	**45**	P	**P**	**00 40 29.8**	**+0.4**
	baz=276						
RIDG	**Independent Ri**	**35.06**	**42**	P	**P**	**00 40 30.6**	**+0.9**
	baz=274						
BMAR	**Burnt Mountain**	**35.09**	**36**	P	**P**	**00 40 30.6**	**+0.7**
C26K	**Camden Bay**	**35.10**	**31**	P	**P**	**00 40 30.5**	**+0.6**
	baz=265						
F26K	**Sheenjek River**	**35.26**	**35**	P	**P**	**00 40 32.0**	**+0.7**
	baz=269						
N25K	**Chitina, Valde**	**35.38**	**46**	P	**P**	**00 40 33.2**	**+0.7**
	baz=278						
G26K	**Porcupine Rive**	**35.39**	**37**	P	**P**	**00 40 33.0**	**+0.6**
	baz=271						
SCRK	**Sand Creek**	**35.43**	**42**		**P**	**00 40 33.0**	**+0.1**
SCRK				IAmb	IAmb	00 40 34.8	
	comp=Z,6.1nm,1.0s						
SCRK	**Sand Creek**	**35.43**	**42**	P	**P**	**00 40 33.0**	**+0.1**
	baz=275						
BMRM	**Bremner River**	**35.47**	**47**	P	**P**	**00 40 34.3**	**+1.1**
	baz=278						
C27K	**Jago River**	**35.49**	**32**	P	**P**	**00 40 33.8**	**+0.6**
	baz=267,SNR=7.7						
J26L	**Joseph Creek**	**35.57**	**41**	P	**P**	**00 40 34.8**	**+0.7**
	baz=274						
I26K	**Coal Creek Min**	**35.70**	**39**	P	**P**	**00 40 36.0**	**+1.0**
	baz=274						
KAIM	**Kayak Island**	**35.72**	**49**	P	**P**	**00 40 36.0**	**+0.7**
	baz=280						
L26K	**Log Cabin Wild**	**35.80**	**43**	P	**P**	**00 40 36.7**	**+0.7**
	baz=276						
M26K	**Nabesna, AK**	**36.03**	**44**	P	**P**	**00 40 38.3**	**+0.3**
	baz=278						
GUMO	**Guam**	**36.12**	**197**	LR	LR	00 52 47.7	
	comp=Z,79nm,20.9s,baz=70,slow=32						
MCARA	**McCarthy VSAT**	**36.16**	**46**	P	**P**	**00 40 40.2**	**+1.1**
	baz=279						
CRQM	**Cirque**	**36.21**	**47**	P	**P**	**00 40 40.5**	**+0.8**
E27K	**Coleen River**	**36.22**	**34**	P	**P**	**00 40 40.5**	**+0.9**
	baz=271						
CRQE	**Cirque**	**36.23**	**47**	P	**P**	**00 40 40.7**	**+0.9**
	baz=280						
G27K	**Doyon Strip**	**36.24**	**37**	P	**P**	**00 40 40.4**	**+0.7**
	baz=273						
K27K	**Chicken**	**36.26**	**42**	P	**P**	**00 40 40.3**	**+0.4**
	baz=276						
H27K	**Steamboat Moun**	**36.32**	**38**	P	**P**	**00 40 40.6**	**+0.2**
	baz=274						
I27K	**Kandik River**	**36.32**	**39**	P	**P**	**00 40 40.4**	**-0.1**
	baz=274						
D27M	**Malcolm River**	**36.45**	**33**	P	**P**	**00 40 41.7**	**+0.1**
	baz=270,SNR=10.0						
L27K	**Beaver Creek,**	**36.48**	**43**	P	**P**	**00 40 41.8**	**-0.1**
	baz=278						
BCAR	**Beaver Creek A**	**36.50**	**43**		**P**	**00 40 43.0**	**+1.0**
M27K	**Edge Creek, AK**	**36.56**	**44**	P	**P**	**00 40 43.0**	**+0.4**
	baz=279						
F28M	**Old Crow**	**36.89**	**35**	P	**P**	**00 40 45.7**	**+0.5**
	baz=273,SNR=8.8						
E28M	**Babbage River**	**36.98**	**34**	P	**P**	**00 40 47.0**	**+1.1**
	baz=272						
BVCY	**Beaver Creek**	**37.02**	**44**	P	**P**	**00 40 47.8**	**+1.4**
	baz=279						
I28M	**Miner Creek**	**37.03**	**39**	P	**P**	**00 40 47.4**	**+0.9**
	baz=276						
CTG	**Chitna Glacier**	**37.04**	**47**	P	**P**	**00 40 47.1**	**+0.5**
	baz=281						
D28M	**Stokes Point**	**37.24**	**32**	P	**P**	**00 40 48.9**	**+0.8**
	baz=272						
YUK3	**Moose Creek**	**37.31**	**45**	P	**P**	**00 40 49.8**	**+0.8**
	baz=280						
DAWY	**Dawson**	**37.43**	**41**	P	**P**	**00 40 50.6**	**+0.8**
	baz=278						
E29M	**Blow River**	**37.59**	**34**	P	**P**	**00 40 51.2**	**+0.1**
	baz=274						
H29M	**Whitestone**	**37.59**	**38**	P	**P**	**00 40 51.9**	**+0.7**
	baz=276						
O28M	**Mount Upton**	**37.63**	**47**	P	**P**	**00 40 52.2**	**+0.4**
	baz=282						
G29M	**Pine Creek**	**37.66**	**36**	P	**P**	**00 40 52.4**	**+0.7**
	baz=276						
NRIK	**Noril'sk**	**37.67**	**328**	LR	LR	00 57 01.0	
	comp=Z,84nm,21.1s,baz=57,slow=37						
I29M	**Ogilvie Camp,**	**37.72**	**39**	P	**P**	**00 40 53.6**	**+1.4**
	baz=278						
YUK8	**Steele Glacier**	**37.73**	**46**	P	**P**	**00 40 53.7**	**+1.1**
	baz=282						
PINM	**Pinnacle**	**37.74**	**48**	P	**P**	**00 40 53.9**	**+1.3**
	baz=283						
J29N	**Klondike Camp**	**37.88**	**40**	P	**P**	**00 40 55.0**	**+1.3**
	baz=279						
M29M	**Somme Creek**	**38.11**	**44**	P	**P**	**00 40 57.1**	**+1.4**
	baz=281						
L29M	**L29M**	**38.14**	**43**	P	**P**	**00 40 57.4**	**+1.6**
	baz=281						
EPYK	**Eagle Plains**	**38.24**	**37**	P	**P**	**00 40 57.9**	**+1.2**
	baz=278						
YUK4	**Talbot Arm**	**38.24**	**45**	P	**P**	**00 40 58.3**	**+1.3**
	baz=282						
K29M	**Barlow Dome**	**38.28**	**41**	P	**P**	**00 40 57.9**	**+0.8**
	baz=280						
G30M	**tAoh Zraii Nji**	**38.36**	**36**	P	**P**	**00 40 58.1**	**+0.5**
	baz=277						
F30M	**Barrier River**	**38.45**	**35**	P	**P**	**00 40 59.1**	**+0.8**
	baz=277						
YUK6	**Outpost Mounta**	**38.46**	**46**	P	**P**	**00 40 59.4**	**+0.6**
	baz=283						
O29M	**Mount Kennedy**	**38.51**	**47**	P	**P**	**00 40 60.0**	**+0.9**
	baz=284						
I30M	**Mount Dempster**	**38.54**	**39**	P	**P**	**00 40 59.6**	**+0.3**
	baz=279						
J30M	**Hart River**	**38.67**	**40**	P	**P**	**00 41 01.4**	**+1.0**
	baz=280						
M30M	**Minto, Yukon**	**38.84**	**43**	P	**P**	**00 41 03.1**	**+1.3**
	baz=282						
HYT	**Haines Junctio**	**38.90**	**46**	P	**P**	**00 41 03.6**	**+1.3**
	baz=284						
N30M	**Aishikik Lake**	**38.95**	**45**	P	**P**	**00 41 04.0**	**+1.3**
	baz=283						
MAYO	**Mayo, Yukon**	**39.04**	**42**	P	**P**	**00 41 03.6**	**+0.3**
	baz=282						
P29M	**Windy Craggy**	**39.08**	**48**	P	**P**	**00 41 03.8**	**+0.1**
	baz=285						
G31M	**Satah River**	**39.13**	**36**	P	**P**	**00 41 04.2**	**+0.2**
	baz=279						
INK	**Inuvik**	**39.21**	**34**		**P**	**00 41 05.3**	**+0.7**
INK				IAmb	IAmb	00 41 06.8	
	comp=Z,5.6nm,0.9s						
INK	**Inuvik**	**39.21**	**34**	P	**P**	**00 41 05.3**	**+0.7**
INK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
INK	**Inuvik**	**39.21**	**34**	P	**P**	**00 41 05.2**	**+0.5**
	baz=278,SNR=5.2						
F31M	**Tsiigehtchic**	**39.25**	**35**	P	**P**	**00 41 05.3**	**+0.3**
	baz=279						
H31M	**Peel River**	**39.28**	**38**	P	**P**	**00 41 05.9**	**+0.5**
	baz=280						
P30M	**Million Dollar**	**39.33**	**47**	P	**P**	**00 41 06.9**	**+1.1**
	baz=285						
N31M	**Braeburn, Yuko**	**39.55**	**45**	P	**P**	**00 41 08.5**	**+0.8**
	baz=284						
O30N	**Mendenhall**	**39.59**	**46**	P	**P**	**00 41 08.9**	**+0.9**
	baz=285						
PLBC	**Pleasant Camp**	**39.80**	**48**	P	**P**	**00 41 11.1**	**+1.4**
	baz=286						
GTA	**Gaotai**	**39.94**	**278**	*e*P	**P**	**00 41 11.6**	**+0.3**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
M31M	**Drury Creek, Y**	**40.02**	**43**	P	**P**	**00 41 12.1**	**+0.6**
	baz=284						
WHY	**Whitehorse**	**40.19**	**46**	P	**P**	**00 41 13.5**	**+0.5**
	baz=286						
S31K	**Pelican**	**40.30**	**50**	P	**P**	**00 41 14.4**	**+0.5**
	baz=288						
SKAG	**Skagway**	**40.31**	**48**	P	**P**	**00 41 15.0**	**+1.2**
	baz=287						
P32M	**Atlin**	**41.06**	**47**	P	**P**	**00 41 20.8**	**+0.7**
	baz=288						
P33M	**Teslin, Yukon**	**41.30**	**46**	P	**P**	**00 41 22.7**	**+0.6**
	baz=288,SNR=6.7						
S32K	**Killisnoo**	**41.30**	**50**	P	**P**	**00 41 23.5**	**+1.4**
	baz=290						
A36M	**Sachs Harbour**	**41.42**	**28**	P	**P**	**00 41 24.0**	**+1.2**
A36M	**Sachs Harbour**	**41.42**	**28**	P	**P**	**00 41 23.8**	**+0.9**
	baz=281,SNR=31						
C36M	**Paulatuk**	**42.38**	**31**	P	**P**	**00 41 31.4**	**+0.7**
	baz=285,SNR=11						
R33M	**Jennings River**	**42.45**	**47**	P	**P**	**00 41 31.7**	**+0.2**
	baz=290						
ZAA0	**Zalesovo Array**	**42.47**	**305**	P	**P**	**00 41 30.0**	**-1.6**
ZALV	**Zalesovo Beam**	**42.47**	**305**	P	**P**	**00 41 29.9**	**-1.7**
	comp=Z,0.8nm,0.4s,baz=55,slow=7.2,SNR=6.9						
ZALV				PcP	**PcP**	**00 43 24.2**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=90,slow=1.5,SNR=7.2						
	comp=Z,0.8nm,0.4s						
ZALV	**Zalesovo Beam**	**42.47**	**305**	P	**P**	**00 41 30.2**	**-1.4**
ZALV	**Zalesovo Beam**	**42.47**	**305**	*e*P	**P**	**00 41 32.9**	**+1.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
U33K	**Whale Pass**	**42.53**	**52**	P	**P**	**00 41 33.1**	**+1.1**
	baz=292						
CRAG	**Craig**	**42.77**	**53**	P	**P**	**00 41 35.5**	**+1.5**
	baz=293						
WRAK	**Wrangell Islan**	**42.82**	**51**	P	**P**	**00 41 36.1**	**+1.7**
	baz=292						
S34M	**Telegraph Cree**	**42.88**	**49**	P	**P**	**00 41 36.7**	**+1.8**
	baz=291						
WTLY	**Watson Lake, Y**	**43.23**	**45**	P	**P**	**00 41 39.0**	**+1.3**
	baz=291,SNR=6.5						
DLBC	**Dease Lake**	**43.24**	**48**	P	**P**	**00 41 39.2**	**+1.3**
	baz=292						
V35K	**Ketchikan**	**43.62**	**53**	P	**P**	**00 41 42.4**	**+1.5**
	baz=294						
T35M	**Bob Quinn**	**43.67**	**50**	P	**P**	**00 41 42.1**	**+0.7**
	baz=293						
WRGLY	**Wrigley**	**44.50**	**40**	P	**P**	**00 41 48.9**	**+1.1**
	baz=291						
LIRD	**Liard River Hi**	**44.76**	**45**	P	**P**	**00 41 51.8**	**+1.8**
	baz=293						
GOMU	**GeErMu**	**45.02**	**277**	P	**P**	**00 41 52.3**	**-0.5**
GOMU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TOAD	**Toad River Com**	**45.39**	**46**	P	**P**	**00 41 56.5**	**+1.5**
	baz=294,SNR=7.1						
KOTAN	**Kotaneelee Air**	**45.43**	**44**	P	**P**	**00 41 56.7**	**+1.4**
	baz=294						
BBB	**Bella Bella**	**46.86**	**55**	LR	LR	01 00 32.6	
	comp=Z,36nm,20.6s,baz=225,slow=34						
MK31	**Makanchi Array**	**47.15**	**297**	*ce*P	**P**	**00 42 08.3**	**-0.7**
MKAR	**Makanchi Array**	**47.15**	**297**	P	**P**	**00 42 08.3**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=70,slow=9.6,SNR=12						
MKAR				LR	LR	01 03 04.8	
	comp=Z,152nm,21.5s,baz=54,slow=38						
	comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	**47.15**	**297**	P	**P**	**00 42 08.2**	**-0.7**
KURK	**Kurchatov**	**47.30**	**303**	P	**P**	**00 42 08.8**	**-1.3**
KURK	**Kurchatov**	**47.30**	**303**	P	**P**	**00 42 09.9**	**-0.2**
KURK	**Kurchatov**	**47.30**	**303**	*e*P	**P**	**00 42 09.9**	**-0.2**
MAKZ	**Makanchi**	**47.33**	**297**		**P**	**00 42 09.4**	**-1.0**
MAKZ	**Makanchi**	**47.33**	**297**	P	**P**	**00 42 09.4**	**-1.0**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KURBB	**Kurchatov Arra**	**47.40**	**303**	P	**P**	**00 42 09.9**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=67,slow=8.9,SNR=14						
KURBB				LR	LR	01 03 08.3	
	comp=Z,121nm,21.0s,baz=192,slow=37						
	comp=Z,0.9nm,0.6s						
RES	**Resolute Bay**	**48.46**	**19**	LR	LR	01 04 46.7	
	comp=Z,78nm,19.4s,baz=5.0,slow=38						
RES	**Resolute Bay**	**48.46**	**19**		**P**	**00 42 18.9**	**+0.3**
RES				IAmb	IAmb	00 42 20.8	
	comp=Z,6.4nm,0.9s						
RES	**Resolute Bay**	**48.46**	**19**	P	**P**	**00 42 18.9**	**+0.3**
RES				pmax	pmax		
	comp=Z,6.0nm,1.0s						
YKA	**Yellowknife Ar**	**48.50**	**38**	P	**P**	**00 42 20.1**	**+1.1**
	comp=Z,4.2nm,0.9s,baz=299,slow=8.4,SNR=26						
YKA				PcP	**PcP**	**00 43 46.2**	**+2.1**
	comp=Z,0.6nm,0.9s,baz=312,slow=4.3,SNR=3.6						
	comp=Z,4.2nm,0.9s						
YKA	**Yellowknife Ar**	**48.50**	**38**	P	**P**	**00 42 19.2**	**+0.2**
YKA	**Yellowknife Ar**	**48.50**	**38**	*e*P	**P**	**00 42 20.7**	**+1.6**
YKA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BVAR	**Borovoye Array**	**50.55**	**309**	P	**P**	**00 42 33.7**	**-1.2**
	comp=Z,1.0nm,0.4s,baz=60,slow=7.6,SNR=14						
BVAR				PcP	**PcP**	**00 43 52.8**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=54,slow=3.7,SNR=5.2						
BVAR				LR	LR	01 06 13.4	
	comp=Z,108nm,18.8s,baz=45,slow=39						
	comp=Z,1.0nm,0.4s						
BORK	**Borovoye**	**50.57**	**309**	P	**P**	**00 42 34.2**	**-0.8**
BORK	**Borovoye**	**50.57**	**309**	⇑*e*P	**P**	**00 42 36.2**	**+1.2**
BORK				pmax	pmax		
	comp=Z,14nm,3.9s						
SPITS	**Spitsbergen Ar**	**50.80**	**350**	P	**P**	**00 42 34.6**	**-1.8**
	comp=Z,2.7nm,0.6s,baz=44,slow=9.8,SNR=5.9						
	comp=Z,2.7nm,0.6s						
SPITS	**Spitsbergen Ar**	**50.80**	**350**	P	**P**	**00 42 35.1**	**-1.3**
SPITS				pmax	pmax		
	comp=Z,37nm,1.3s						
JAY	**Jayapura**	**52.62**	**198**	LR	LR	01 02 14.8	
	comp=Z,17nm,21.4s,baz=14,slow=32						
BOOM	**Boomskoye usch**	**53.30**	**295**	P	**P**	**00 42 54.6**	**-1.1**
BOOM	**Boomskoye usch**	**53.30**	**295**	P	**P**	**00 42 54.6**	**-1.1**
BOOM				pmax	pmax		
	comp=Z,55nm,1.5s						
POIN	**Pond Inlet**	**53.34**	**17**	P	**P**	**00 42 55.4**	**+0.1**
POIN				IAmb	IAmb	00 42 56.6	
	comp=Z,6.5nm,1.1s						
CHTO	**Chiang Mai**	**53.85**	**257**		**P**	**00 43 00.1**	**+0.4**
CHTO	**Chiang Mai**	**53.85**	**257**	P	**P**	**00 43 00.1**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,20nm,1.1s						
EDM	**Edmonton**	**53.96**	**48**		**P**	**00 43 00.8**	**+0.6**
EDM	**Edmonton**	**53.96**	**48**	P	**P**	**00 43 00.8**	**+0.6**
EDM				pmax	pmax		
	comp=Z,11nm,0.9s						
AAK	**Ala-Archa**	**54.07**	**296**	LR	LR	01 06 49.2	
	comp=Z,122nm,20.0s,baz=43,slow=37						
CMAR	**Chiang Mai Arr**	**54.11**	**256**	P	**P**	**00 43 02.9**	**+1.3**
	comp=Z,6.2nm,0.7s,baz=32,slow=7.5,SNR=34						
CMAR				LR	LR	01 07 58.0	
	comp=Z,25nm,18.1s,baz=280,slow=38						
	comp=Z,6.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**54.11**	**256**	P	**P**	**00 43 01.7**	**+0.1**
CMAR	**Chiang Mai Arr**	**54.11**	**256**	*e*P	**P**	**00 43 03.2**	**+1.6**
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BLKN	**Baker Lake**	**54.42**	**30**	P	**P**	**00 43 03.9**	**+0.7**
BLKN				IAmb	IAmb	00 43 18.8	
	comp=Z,14nm,1.3s						
ARTI	**Arti**	**54.46**	**317**	LR	LR	01 07 30.8	
	comp=Z,82nm,18.1s,baz=30,slow=37						
ARTI	**Arti**	**54.46**	**317**	P	**P**	**00 43 02.7**	**-1.0**
ARTI				IAmb	IAmb	00 43 05.3	
	comp=Z,9.5nm,1.2s						
ARTI	**Arti**	**54.46**	**317**	*c i*P	**P**	**00 43 02.0**	**-1.7**
ARTI						00 44 05.5	
ARTI				S	**S**	**00 50 35.7**	**-1.3**
ARTI				SS	**SS**	**00 54 16.9**	**-2.6**
ARTI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
ILON	**Igloolik, Nuna**	**55.00**	**21**		**P**	**00 43 08.0**	**+0.7**
PINE	**Pine Mountain**	**55.44**	**61**	P	**P**	**00 43 12.2**	**+0.9**
PINE				IAmb	IAmb	00 43 13.9	
	comp=Z,12nm,1.3s						
EVN	**Everest**	**55.45**	**274**	P	**P**	**00 43 11.0**	**-1.0**
EVN				IAmb	IAmb	00 43 14.7	
	comp=Z,3.6nm,0.7s						
K05A	**Summer Lake**	**56.12**	**62**	P	**P**	**00 43 17.6**	**+1.5**
K05A				IAmb	IAmb	00 43 20.2	
	comp=Z,9.2nm,1.1s						
KKAR	**Karatay Array**	**56.13**	**299**	P	**P**	**00 43 16.0**	**0.0**
KKAR	**Karatay Array**	**56.13**	**299**	P	**P**	**00 43 16.0**	**0.0**
ARCES	**ARCESS Array B**	**56.32**	**341**	P	**P**	**00 43 15.7**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=39,slow=7.7,SNR=7.0						
	comp=Z,0.8nm,0.6s						
ARCES	**ARCESS Array B**	**56.32**	**341**	P	**P**	**00 43 16.1**	**-0.7**
ARCES				IAmb	IAmb	00 43 45.6	
	comp=Z,7.8nm,1.2s						
ARCES	**ARCESS Array B**	**56.32**	**341**	*e*P	**P**	**00 43 18.3**	**+1.5**
ARCES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
PLID	**Pearl Lake**	**57.45**	**57**		**P**	**00 43 26.7**	**+1.2**
PLID				IAmb	IAmb	00 43 28.3	
	comp=Z,6.3nm,0.8s						
AB31	**Akbulak array**	**58.09**	**310**		**P**	**00 43 29.0**	**-0.6**
ABKAR	**Akbulak array**	**58.09**	**310**	P	**P**	**00 43 29.1**	**-0.5**
AKTO	**Aktyubinsk**	**58.30**	**312**	LR	LR	01 11 50.1	
	comp=Z,56nm,20.7s,baz=144,slow=39						
PMG	**Port Moresby**	**58.39**	**189**	LR	LR	01 03 52.9	
	comp=Z,38nm,21.7s,baz=170,slow=31						
SUMG	**Summit**	**58.54**	**5**		**P**	**00 43 33.4**	**+0.5**
SUMG	**Summit**	**58.54**	**5**	P	**P**	**00 43 33.4**	**+0.5**
SUMG				pmax	pmax		
	comp=Z,12nm,0.9s						
GAR	**Garm**	**58.81**	**295**	P	**P**	**00 43 34.5**	**-0.4**
GAR				IAmb	IAmb	00 43 37.4	
	comp=Z,3.8nm,0.8s						
LRM	**Limekiln Ridge**	**58.93**	**55**	P	**P**	**00 43 37.2**	**+1.4**
KLMR	**Klimovskoe**	**59.00**	**329**	*e*P	**P**	**00 43 34.0**	**-1.7**
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BCYI	**Bear Canyon**	**59.38**	**57**	P	**P**	**00 43 39.5**	**+0.6**
BOZ	**Bozeman (W)**	**59.52**	**54**	P	**P**	**00 43 40.7**	**+0.9**
BOZ				IAmb	IAmb	00 43 42.6	
	comp=Z,4.6nm,0.8s						
BOZ	**Bozeman (W)**	**59.52**	**54**	P	**P**	**00 43 40.7**	**+0.9**
BOZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CHGR	**Chuyangaron**	**59.72**	**295**	P	**P**	**00 43 40.4**	**-0.8**
CHGR				IAmb	IAmb	00 43 43.8	
	comp=Z,7.9nm,1.1s						
CHGR	**Chuyangaron**	**59.72**	**295**	P	**P**	**00 43 40.4**	**-0.8**
CHGR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
YHL	**Hebgen Lake**	**60.24**	**55**	P	**P**	**00 43 45.7**	**+0.8**
YHL				IAmb	IAmb	00 44 22.3	
	comp=Z,7.4nm,1.4s						
NVAR	**Mina Array Bea**	**60.36**	**64**	P	**P**	**00 43 46.9**	**+1.2**
	comp=Z,1.4nm,0.7s,baz=293,slow=7.9,SNR=7.5						
	comp=Z,1.4nm,0.7s						
NVAR	**Mina Array Bea**	**60.36**	**64**	P	**P**	**00 43 46.6**	**+0.9**
YHH	**Holmes Hill**	**60.46**	**55**		**P**	**00 43 47.4**	**+0.9**
R11B	**Troy Canyon, C**	**62.02**	**63**		**P**	**00 43 57.5**	**+0.6**
SPR3	**Spring Creek 3**	**62.32**	**62**		**P**	**00 44 00.2**	**+1.1**
SPR3				IAmb	IAmb	00 44 02.2	
	comp=Z,2.9nm,0.8s						
DUG	**Dugway, Tooele**	**62.40**	**60**		**P**	**00 44 00.5**	**+1.1**
DUG				IAmb	IAmb	00 44 02.2	
	comp=Z,4.4nm,0.8s						
DUG	**Dugway, Tooele**	**62.40**	**60**	P	**P**	**00 44 00.5**	**+1.1**
DUG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PD31	**Pinedale Array**	**62.50**	**56**		**P**	**00 44 00.9**	**+0.8**
PD31				IAmb	IAmb	00 44 02.8	
	comp=Z,5.7nm,0.9s						
PDAR	**Pinedale Array**	**62.50**	**56**	P	**P**	**00 44 01.9**	**+1.8**
	comp=Z,4.1nm,0.8s,baz=318,slow=2.0,SNR=37						
	comp=Z,4.1nm,0.8s						
PDAR	**Pinedale Array**	**62.50**	**56**		**P**	**00 44 00.9**	**+0.8**
TPNV	**Topopah Spring**	**62.56**	**64**	P	**P**	**00 44 01.2**	**+0.7**
TPNV				IAmb	IAmb	00 44 03.0	
	comp=Z,3.6nm,0.9s						
TPNV	**Topopah Spring**	**62.56**	**64**	P	**P**	**00 44 01.2**	**+0.7**
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
FIA1	**FINESS Array S**	**62.71**	**335**	P	**P**	**00 44 00.1**	**-0.7**
FINES	**FINESS Array B**	**62.71**	**335**	P	**P**	**00 44 00.3**	**-0.6**
	comp=Z,2.8nm,0.8s,baz=32,slow=8.4,SNR=20						
FINES				LR	LR	01 13 15.3	
	comp=Z,181nm,18.8s,baz=28,slow=38						
	comp=Z,2.8nm,0.8s						
FINES	**FINESS Array B**	**62.71**	**335**	P	**P**	**00 44 00.1**	**-0.8**
SFJD	**Kangerlussuaq**	**62.88**	**11**	P	**P**	**00 44 02.1**	**+0.2**
SFJD	**Kangerlussuaq**	**62.88**	**11**	P	**P**	**00 44 02.1**	**+0.2**
SFJD				pmax	pmax		
	comp=Z,40nm,1.4s						
COEN	**Coen**	**63.38**	**193**	P	**P**	**00 44 06.2**	**+0.5**
CCUT	**Cedar City**	**63.86**	**62**		**P**	**00 44 10.1**	**+0.9**
ULM	**Lac du Bonnet**	**64.12**	**42**	P	**P**	**00 44 10.8**	**+0.4**
	comp=Z,2.6nm,0.7s,baz=332,slow=7.0,SNR=3.8						
ULM				LR	LR	01 13 11.4	
	comp=Z,61nm,18.9s,baz=316,slow=37						
	comp=Z,2.6nm,0.7s						
ULM	**Lac du Bonnet**	**64.12**	**42**	⇓*e*P	**P**	**00 44 11.5**	**+1.1**
ULM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
RSSD	**Black Hills**	**64.52**	**52**		**P**	**00 44 14.1**	**+0.7**
RSSD				IAmb	IAmb	00 44 15.8	
	comp=Z,14nm,1.4s						
RSSD	**Black Hills**	**64.52**	**52**	P	**P**	**00 44 14.1**	**+0.7**
RSSD				pmax	pmax		
	comp=Z,14nm,1.4s						
NB201	**NORSAR Array S**	**66.65**	**342**	P	**P**	**00 44 26.4**	**-0.2**
NB2	**NORSAR Subarra**	**66.67**	**342**	P	**P**	**00 44 26.3**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=26,slow=6.5						
NOA	**NORSAR Array B**	**66.67**	**342**	P	**P**	**00 44 26.2**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=29,slow=6.6,SNR=5.8						
NOA				LR	LR	01 18 47.8	
	comp=Z,64nm,18.7s,baz=40,slow=41						
	comp=Z,0.8nm,0.6s						
NOA	**NORSAR Array B**	**66.67**	**342**	*e*P	**P**	**00 44 26.5**	**-0.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ISCO	**Idaho Springs**	**66.70**	**56**	P	**P**	**00 44 28.1**	**+0.5**
ISCO				IAmb	IAmb	00 44 30.6	
	comp=Z,3.9nm,0.8s						
ISCO	**Idaho Springs**	**66.70**	**56**	P	**P**	**00 44 28.1**	**+0.5**
ISCO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NORES	**NORESS Array B**	**66.88**	**341**	P	**P**	**00 44 29.8**	**+1.8**
HFS	**Hagfors**	**66.96**	**340**	P	**P**	**00 44 28.3**	**-0.2**
	comp=Z,1.4nm,0.5s,baz=48,slow=4.4,SNR=8.5						
HFS				LR	LR	01 17 48.8	
	comp=Z,99nm,18.2s,baz=346,slow=40						
	comp=Z,1.4nm,0.5s						

KNRA	Kununurra	68.32	207	P	P	00 44 37.5	0.0
KNRA				IAmb	IAmb	00 44 49.7	
	comp=Z,15nm,1.4s						
ECSD	EROS Data Cent	68.53	48	P	P	00 44 39.1	+0.4
ECSD				IAmb	IAmb	00 44 40.3	
	comp=Z,5.6nm,1.0s						
IVI	Ivigtut	68.75	12	P	P	00 44 40.1	+0.5
ANMO	Albuquerque	69.67	60	LR	LR	01 16 19.1	
	comp=Z,20nm,18.2s,baz=340,slow=37						
ANMO	Albuquerque	69.67	60	⇓eP	P	00 44 47.0	+0.9
ANMO				pmax	pmax		
	comp=Z,11nm,2.5s						
KIV	Kislovodsk	70.26	315	eP	P	00 44 49.4	-0.1
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,46nm,17.0s						
KIV	Kislovodsk	70.26	315	eP	P	00 44 49.4	-0.1
KBZ	Khabaz	70.34	315	P	P	00 44 49.9	+0.1
	comp=Z,0.8nm,0.6s,baz=112,slow=4.7,SNR=4.7						
	comp=Z,0.8nm,0.6s						
KBZ	Khabaz	70.34	315	eP	P	00 44 53.3	+3.5
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	Malin Array Be	70.53	327	P	P	00 44 50.6	-0.2
	comp=Z,1.0nm,0.5s,baz=33,slow=6.3,SNR=5.0						
AKASG				LR	LR	01 18 29.7	
	comp=Z,104nm,18.1s,baz=14,slow=38						
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	70.53	327	eP	P	00 44 54.2	+3.4
WB0	Warramunga Arr	70.72	201	P	P	00 44 52.2	-0.1
WB0				IAmb	IAmb	00 45 07.0	
	comp=Z,7.7nm,1.4s						
WRAB	Tennant Creek	70.89	201	⇑eP	P	00 44 49.1	-4.2
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WRA	Warramunga Arr	70.90	201	P	P	00 44 53.4	0.0
	comp=Z,1.7nm,0.6s,baz=17,slow=6.2,SNR=9.3						
	comp=Z,1.7nm,0.6s						
WRA	Warramunga Arr	70.90	201	P	P	00 44 53.4	0.0
VHRN	Van Horn	73.53	62		P	00 45 09.7	+0.3
VHRN				IAmb	IAmb	00 45 11.9	
	comp=Z,4.5nm,0.9s						
BUR08	Bucovina Ar. S	74.53	327		P	00 45 15.4	+0.5
BUR08				IAmb	IAmb	00 45 29.7	
	comp=Z,11nm,1.4s						
BURAR	Bucovina Array	74.55	327	P	P	00 45 14.9	-0.1
AS31	Alice Springs	74.59	200		P	00 45 16.0	+0.8
ASAR	Alice Springs	74.59	200	P	P	00 45 16.2	+1.0
	comp=Z,1.4nm,0.5s,baz=13,slow=5.6,SNR=36						
	comp=Z,1.4nm,0.5s						
ASAR	Alice Springs	74.59	200	P	P	00 45 15.8	+0.6
EKA	Eskdalemuir Ar	74.62	347	P	P	00 45 15.8	+0.8
	comp=Z,2.3nm,0.6s,baz=14,slow=4.9,SNR=12						
	comp=Z,2.3nm,0.6s						
EKB	Eskdalemuir	74.62	347	P	P	00 45 15.7	+0.6
CLL	Collm	75.10	336	eP	P	00 45 19.0	+1.1
CLL				i *SP	sP	00 45 44.1	+0.5
CLL	Collm	75.10	336	eP	P	00 45 19.0	+1.1
CLL				i sP	sP	00 45 44.1	+0.5
MORC	Moravsky Berou	75.19	333	eP	P	00 45 20.4	+1.9
TX31	Lajitas Ar. Si	75.37	62		P	00 45 21.3	+1.3
TX31				IAmb	IAmb	00 45 22.4	
	comp=Z,5.0nm,0.8s						
TXAR	Lajitas Array	75.37	62	P	P	00 45 21.3	+1.3
	comp=Z,4.1nm,0.8s,baz=296,slow=4.2,SNR=52						
	comp=Z,4.1nm,0.8s						
TXAR	Lajitas Array	75.37	62		P	00 45 21.0	+1.0
TXAR	Lajitas Array	75.37	62	P	P	00 45 21.0	+1.0
VRAC	Vranov	75.89	333	LR	LR	01 21 50.0	
	comp=Z,144nm,19.6s,baz=358,slow=38						
VRAC	Vranov	75.89	333	eP	P	00 45 24.5	+2.0
JAVC	Velka Javorina	75.97	333	eP	P	00 45 25.7	+2.7
KRUC	Moravsky	76.17	333	eP	P	00 45 25.8	+1.7
KHC	Kasperske Hory	76.92	335	P	P	00 45 28.4	0.0
KHC	Kasperske Hory	76.92	335	P	P	00 45 28.4	0.0
KHC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
DSB	Dublin	77.09	349	P	P	00 45 29.4	+0.2
GERES	GERESS Array B	77.14	335	P	P	00 45 30.5	+0.8
	comp=Z,0.4nm,0.4s,baz=42,slow=4.2,SNR=4.9						
GERES				LR	LR	01 23 00.0	
	comp=Z,217nm,18.6s,baz=19,slow=38						
	comp=Z,0.4nm,0.4s						
CONA	Conrad Observa	77.34	333	i P	P	00 45 32.8	+2.0
	comp=Z,8.1nm,1.4s						
RONA	Rosalia, Austr	77.42	333	eP	P	00 45 33.3	+2.2
	comp=Z,3.9nm,0.9s						
MEM	Membach	77.44	340	dP	P	00 45 31.9	+0.7
	comp=Z,7.6nm,1.1s						
BR131	Keskin Array S	77.74	318	⇑eP	P	00 45 33.7	+0.4
BRTR	Keskin Array B	77.74	318	P	P	00 45 34.5	+1.3
	comp=Z,1.6nm,1.0s,baz=53,slow=1.6,SNR=6.2						
	comp=Z,1.6nm,1.0s						
BRTR	Keskin Array B	77.74	318	P	P	00 45 33.6	+0.3
MOA	Molln	77.88	334	P	P	00 45 34.3	+0.6
MOA	Molln	77.88	334	eP	P	00 45 34.3	+0.6
	comp=Z,6.7nm,1.4s						
BMRD	Maredsous	78.00	341	dP	P	00 45 35.0	+0.7
ARSA	Arzberg	78.05	333	eP	P	00 45 36.4	+1.7
	comp=Z,2.4nm,1.2s						
WLF	Walferdange	78.30	340	dPP	PP	00 48 31.4	-1.4
SOKA	Soboth	78.72	333	eP	P	00 45 39.6	+1.2
	comp=Z,3.0nm,0.7s						
LESA	Schwarzleotal	78.72	335	i P	P	00 45 39.7	+1.3
	comp=Z,2.2nm,0.6s						
KBA	Koelnbreinsper	78.84	334	i P	P	00 45 41.1	+1.9
	comp=Z,4.1nm,0.5s						
OBKA	Obir	79.01	333	eP	P	00 45 40.7	+0.6
	comp=Z,5.1nm,1.2s						
WATA	Walderalm	79.10	336	i P	P	00 45 42.1	+1.5
	comp=Z,3.9nm,0.7s						
WTTA	Wattenberg	79.15	336	i P	P	00 45 42.4	+1.5
	comp=Z,14nm,1.2s						
RETA	Reutte	79.19	336	eP	P	00 45 41.1	+0.1
	comp=Z,6.6nm,1.3s						
SQTA	Sankt Quirin	79.31	336	i P	P	00 45 43.3	+1.5
	comp=Z,6.7nm,1.4s						
ABTA	Abfaltersbach	79.38	335	eP	P	00 45 38.6	-3.5
	comp=Z,7.5nm,1.7s						
DAVA	Damuels	79.60	337	eP	P	00 45 39.2	-4.2
	comp=Z,13nm,1.4s						
FETA	Feichten	79.62	336	eP	P	00 45 45.3	+1.8
	comp=Z,6.5nm,1.2s						
CIMO	Cimolais	79.80	335	P	P	00 45 44.1	-0.2
CIMO				IAmb	IAmb	00 45 48.1	
	comp=Z,6.9nm,1.2s						
RDO	Rodhopi	79.95	324	P	P	00 45 45.6	+0.5
RDO				IAmb	IAmb	00 45 48.4	
	comp=Z,5.3nm,0.9s						
FUORN	Ofenpass-Fuorn	80.12	336	P	P	00 45 47.2	+0.9
FUORN				IAmb	IAmb	00 45 48.3	
	comp=Z,12nm,1.2s						
TUE	Stuetta	80.50	337	P	P	00 45 48.6	+0.4
TUE				IAmb	IAmb	00 45 53.6	
	comp=Z,10nm,1.0s						
STKA	Stephens Creek	81.22	192	LR	LR	01 19 37.6	
	comp=Z,38nm,21.6s,baz=25,slow=34						
MMAI	Mount Meron Ar	82.38	313	P	P	00 45 59.9	+1.6
	comp=Z,4.5nm,0.7s,baz=44,slow=6.4,SNR=9.3						
	comp=Z,4.5nm,0.7s						
PPT2	Papeete2	82.38	128	eLR	LR	01 11 21.5	
	comp=Z,67nm,22.5s						
NRCA	Norcia	82.78	333	P	P	00 45 59.2	-1.0
FORT	Forrest	82.83	203	P	P	00 46 01.0	+0.9
FORT				IAmb	IAmb	00 46 01.9	
	comp=Z,6.1nm,0.7s						
RAYN	Ar Rayn	84.54	300		P	00 46 09.3	-0.2
RAYN				IAmb	IAmb	00 46 11.0	
	comp=Z,3.7nm,0.7s						
RAYN	Ar Rayn	84.54	300	P	P	00 46 09.3	-0.2
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ITM	Ithomi	84.78	324	P	P	00 46 09.7	-0.7
TBI	Tubuai	87.24	131	eLR	LR	01 13 44.5	
	comp=Z,901nm,30.5s						
CMIG	Matias Romero	89.89	64	LR	LR	01 25 36.9	
	comp=Z,14nm,19.2s,baz=324,slow=35						
ESDC	Sonseca Array	89.94	344	P	P	00 46 34.9	-0.4
	comp=Z,1.0nm,1.0s,baz=19,slow=3.1,SNR=2.9						
ESDC				LR	LR	01 31 41.3	
	comp=Z,116nm,19.6s,baz=346,slow=39						
	comp=Z,1.0nm,1.0s						
KEST	Kesra	90.44	333	P	P	00 46 38.0	+0.2
	comp=Z,5.6nm,1.0s,baz=56,slow=3.6,SNR=2.7						
	comp=Z,5.6nm,1.0s						
H03N2	Juan Fernandez	137.46	89	T	T	03 26 08.4	
	baz=310,slow=77,SNR=63						
H03N1	Juan Fernandez	137.48	89	T	T	03 26 09.5	
	baz=310,slow=77,SNR=57						
H03N3	Juan Fernandez	137.48	89	T	T	03 26 03.6	
	baz=310,slow=77,SNR=59						
QSPA	South Pole Qui	138.56	180	PKP	PKiKP	00 53 02.2	-0.2
	comp=Z,0.8nm,0.5s,baz=328,slow=2.5,SNR=7.7						
CPUP	Villa Florida	146.32	60	PKPbc	PKiKP	00 53 17.2	-2.2
	comp=Z,0.9nm,0.9s,baz=288,slow=2.2,SNR=7.4						
ELIB	Princess Elisa	148.22	206	dPKPdf	PKiKP	00 53 20.8	-1.4
SNAA	Sanae	154.90	196	PKPab	PKPab	00 53 50.5	-1.1
	comp=Z,1.5nm,0.8s,baz=196,slow=4.2,SNR=5.4						

IDC ***15*** *01:16:58.1±11.0, 21°.64S×177°.28W, h404km±109km, mb3.3/4, mbtmp4.1/4, Error ellipse: s-maj=51.4km s-min=37.5km az=57.0*

ISC 15 01:16:55.9±1.3, 21°.6S±0°.3×177°.3W±0°.3, h381km, n7, σ0s.64/7, mb3.5/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	44.93	258	P	P	01 24 35.6	+0.7
	2.7nm,0.5s,baz=96,slow=7.9,SNR=52						
ASAR				PcP	PcP	01 26 08.8	-0.1
	0.3nm,0.9s,baz=108,slow=5.0,SNR=5.4						
	2.7nm,0.5s						
WRA	Warramunga Arr	45.12	263	P	P	01 24 36.0	-0.4
	1.8nm,0.7s,baz=97,slow=7.2,SNR=21						
	1.8nm,0.7s						
VNDA	Vanda	56.86	185	P	P	01 26 01.7	0.0
	0.5nm,0.4s,baz=0.0,slow=3.0,SNR=3.0						
	0.5nm,0.4s						
ILAR	Eielson Array	89.25	13	P	P	01 29 09.5	+0.4
	0.9nm,1.1s,baz=198,slow=4.7,SNR=4.6						
	0.9nm,1.1s						
AKASG	Malin Array Be	144.32	331	PKP	PKPbc	01 35 44.1	-2.2
	1.3nm,0.4s,baz=44,slow=4.3,SNR=5.9						
BRTR	Keskin Array B	148.09	311	PKPbc	PKPbc	01 35 56.7	-0.9
	0.4nm,0.6s,baz=138,slow=4.9,SNR=2.6						
MMAI	Mount Meron Ar	148.95	298	PKPbc	PKPbc	01 35 59.8	-0.1
	1.5nm,0.6s,baz=89,slow=5.1,SNR=5.4						

NAO ***15*** *01:18:32.4, 40°.78N×17°.94E, h10km, MB3.2*

IDC ***15*** *01:18:33.7±0.8, 41°.33N×19°.47E, h0km, mb3.9/10, mbtmp3.9/18, ML3.1/6, MS3.5/2, Error ellipse: s-maj=14.1km s-min=11.2km az=32.0*

TIR ***15*** *01:18:35.9, 41°.50N×19°.56E, h46km±2km, Ml4.0/5*

MOS ***15*** *01:18:35.5±0.9, 41°.37N×19°.51E, h12km, mb4.5/10, Error ellipse: s-maj=4.7km s-min=3.5km az=86.4*

PDG ***15*** *01:18:36.1±0.7, 41°.36N×19°.53E, h10km±1km, MD4.0/3, ML3.9/7, Error ellipse: s-maj=0.6km s-min=1.2km az=0.0*

THE ***15*** *01:18:36.6, 41°N±3°×1°9E±°, h16km, M3.6/37, MLh3.6/37*

NEIC ***15*** *01:18:36.2±2.5, 41°.32N±0°.05×19°.54E±0°.07, h10km±1km, mb4.3/15, Error ellipse: s-maj=9.0km s-min=8.1km az=230.0*

BEO ***15*** *01:18:36.6±0.5, 41°.30N×19°.57E, h12km±2km, ML3.7/25*

SKO ***15*** *01:18:37.4, 41°.39N×19°.58E, h7km, ML3.8*

PRU ***15*** *01:18:37.4, 41°.18N×19°.40E, h10km, M4.5*

AFAD ***15*** *01:18:42.0, 41°.32N×19°.87E, h113km, MW4.0*

ISC 15 01:18:36.5±0.8, 41°.37N±0°.02×19°.57E±0°.02, h15km±5km, n351, σ1s.80/458, mb4.4/17, 35C-29D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.23	96	Pg	Pg	01 18 41.2	-0.4
TIR				Sg	Sg	01 18 43.8	-1.3
TIR				AML	AML	01 18 44.4	
	141nm,0.5s						
TIR				AML	AML	01 18 45.0	
	54nm,0.4s						
TIR	Tirane	0.23	96	⇓iPg	Pg	01 18 41.2	-0.4
TIR				i Sg	Sg	01 18 45.4	+0.3
ULC	Ulcinj	0.64	338	P	Pg	01 18 48.8	-0.2
ULC				S	Sb	01 18 59.0	+0.9
ULC	Ulcinj	0.64	338	⇓iPg	Pg	01 18 49.1	+0.1
ULC				i Sg	Sb	01 18 59.8	+1.7
PHP	Peshkopia	0.73	64	Pg	Pg	01 18 49.3	-1.4
PHP				Sg	Sg	01 19 00.1	-0.2
PHP				AML	AML	01 19 04.4	
	23nm,0.6s						
PHP	Peshkopia	0.73	64	P	Pg	01 18 49.5	-1.2
DRME	Dracevica, Mon	0.86	341	ePg	Pg	01 18 52.9	-0.3
VLO	Vlora	0.90	183	Pg	Pn	01 18 55.8	+1.3
VLO				Sg	Sn	01 19 08.8	+1.5
VLO				AML	AML	01 19 15.3	
	33nm,0.6s						
VLO				AML	AML	01 19 17.5	
	24nm,0.8s						
VLO	Vlora	0.90	183	P	Pn	01 18 55.7	+1.1
VLO				S	Sn	01 19 09.4	+2.1
VLO	Vlora	0.90	183	P	Pn	01 18 55.7	+1.1
OHR	Ohrid	0.97	105	i Pg	Pg	01 18 54.1	-1.1
OHR				i Sg	Sn	01 19 09.6	+0.6
OHR				eLg	Lg	01 19 12.9	
	comp=N,2µm,0.6s						
OHR				eLg	Lg	01 19 14.0	
	comp=E,2µm,0.6s						
BUM	Brajici-Budva	1.05	332	⇓iPg	Pn	01 18 57.8	+1.0
BUM				i Sg	Sn	01 19 13.9	+2.7
PDG	Podgorica	1.08	348	Pg	Pb	01 18 56.7	-0.1
PDG				Sg	Sn	01 19 12.3	+0.5
PDG	Podgorica	1.08	348		Pb	01 18 56.5	-0.4
PDG				Sn	Sn	01 19 15.4	+3.7
PDG	Podgorica	1.08	348	⇑P	Pn	01 18 58.2	+1.2
PDG				⇑S	Sn	01 19 14.8	+3.0
PDG	Podgorica	1.08	348	ePg	Pn	01 18 58.3	+1.2
PDG				eSg	Sn	01 19 14.7	+3.0
PDG	Podgorica	1.08	348	⇓iPg	Pb	01 18 56.7	-0.1
PDG				i Sg	Sn	01 19 14.4	+2.6
TTG	Podgorica	1.08	348	P	Pb	01 18 56.8	-0.1
TTG				S	Sn	01 19 14.0	+2.2
KBN	Korca	1.19	129	Pn	Pn	01 18 58.4	-0.2
KBN				Sn	Sn	01 19 15.7	+1.2
KBN				AML	AML	01 19 22.2	
	comp=E,9.5nm,0.4s						
KBN	Korca	1.19	129	P	Pg	01 19 00.1	+0.7
KBN				S	Sn	01 19 18.2	+3.7
KBN	Korca	1.19	129	P	Pg	01 19 00.4	+1.0
PVY	Plav	1.26	13	⇓iPg	Pn	01 18 59.2	-0.4
PVY				i Sg	Sg	01 19 19.1	+2.0
HCY	Herceg Novi	1.34	324	P	Pb	01 19 01.8	+0.5
HCY				S	Sg	01 19 21.0	+1.3
HCY	Herceg Novi	1.34	324	⇑iPg	Pn	01 19 01.0	+0.4
HCY				i Sg	Sg	01 19 20.5	+0.8
NEST	Nestorio	1.48	130	Pn	Pb	01 19 03.8	+0.1
NEST	Nestorio	1.48	130	P	Pn	01 19 03.6	+1.0
NEST				S	Sg	01 19 26.4	+2.3
KOME	Kolasin	1.48	359	ePg	Pb	01 19 04.7	+1.0
IVA	Berane	1.52	9	⇑iPg	Pn	01 19 03.0	-0.2
SKO	Skopje	1.53	66	i Pg	Pb	01 19 05.2	+0.7
SKO				i Sg	Sb	01 19 25.0	+1.4
TREB	Trebinje	1.62	326	ePn	Pn	01 19 05.6	+1.1
KEK	Kerkira	1.67	174		Pg	01 19 10.9	+2.4
PENT	Pentalofos	1.68	134	P	Pb	01 19 07.6	+0.6
PENT				S	Sg	01 19 31.8	+1.3
BRY	Bratogost	1.71	334	P	Pb	01 19 07.3	-0.3
BRY				S	Sb	01 19 30.0	+1.0
BRY	Bratogost	1.71	334	⇓iPn	Pb	01 19 07.4	-0.2
BRY				i Sn	Sb	01 19 29.5	+0.5
SJES	Sjenica	1.91	9	ePg	Pb	01 19 11.4	+0.3
SJES				eSg	Sg	01 19 37.7	-0.4
IGT	Igoumenitsa	1.93	162	Pn	Pn	01 19 10.0	+1.3
IGT	Igoumenitsa	1.93	162	P	Pn	01 19 09.8	+1.1
IGT				S	Sb	01 19 36.3	+1.1
IGT	Igoumenitsa	1.93	162	P	Pn	01 19 09.8	+1.1
KLINJ	Klinje	1.94	338	ePn	Pb	01 19 11.4	-0.1
PLE	Pljevlja	1.96	356	P	Pn	01 19 10.8	+1.5
PLE				S	Sb	01 19 36.0	-0.2
PLE	Pljevlja	1.96	356	ePn	Pn	01 19 10.9	+1.6
PLE				i Sn	Sb	01 19 36.5	+0.3
KPRO	Kipourio	1.97	135	P	Pb	01 19 11.7	-0.4
KPRO				S	Sg	01 19 38.6	-1.2
JAN	Janina	1.97	150	P	Pb	01 19 11.8	-0.3
JAN				S	Sb	01 19 37.4	+0.9
JAN	Janina	1.97	150	P	Pn	01 19 11.0	+1.6
NOCI	Noci	1.98	254	Pn	Pn	01 19 09.5	+0.1
NOCI				Sn	Sb	01 19 35.7	-0.9
NOCI				AML	AML	01 19 51.9	
	comp=E,2.6nm,0.4s						
KZN	Kozani	1.98	122	P	Pn	01 19 11.4	+1.8
KZN				S	Sb	01 19 37.3	+0.5
KZN	Kozani	1.98	122	P	Pn	01 19 11.0	+1.5
STON	Ston	2.04	318	ePn	Pn	01 19 11.4	+1.2
STON				eSn	Sn	01 19 37.0	+1.6
SELS	Selova	2.18	31	ePn	Pn	01 19 13.7	+1.6
SELS				eSn	Sn	01 19 40.2	+1.4
GRG	Griva	2.18	100	P	Pn	01 19 13.6	+1.4
GRG				S	Sn	01 19 41.8	+2.9
GRG	Griva	2.18	100	i Pn	Pn	01 19 13.6	+1.4
GRG	Griva	2.18	100	P	Pn	01 19 14.1	+1.9
BARS	Barje	2.21	48	i Pn	Pn	01 19 13.9	+1.4
BARS	Barje	2.21	48	ePn	Pn	01 19 14.0	+1.4
BARS				eSn	Sb	01 19 43.2	-0.1
IVAS	Ivanjica	2.25	11	ePn	Pn	01 19 14.5	+1.4
IVAS				eSn	Sn	01 19 43.3	+2.7
MATE	Matera	2.28	252	⇑P	Pn	01 19 13.3	-0.2
MATE				⇓S	Sn	01 19 41.6	+0.3
GOCS	Kraljevo Serbi	2.39	23	ePn	Pn	01 19 16.7	+1.5
GOCS				eSn	Sn	01 19 45.7	+1.4
TETR	Tetrakomo, Epi	2.41	147	P	Pn	01 19 17.8	+2.4
TETR				S	Sb	01 19 48.5	-0.6
BOSS	Bosilegrad	2.45	62	ePn	Pn	01 19 17.0	+1.1
BOSS				eSn	Sn	01 19 46.5	+1.0
BBLS	Lazi&#263i	2.50	357	ePn	Pn	01 19 18.8	+2.2
BBLS				eSn	Sb	01 19 50.8	-0.7
LIT	Litokhoron	2.56	119	P	Pn	01 19 19.9	+2.5
LIT	Litokhoron	2.56	119		Pn	01 19 18.7	+1.3
LIT	Litokhoron	2.56	119	P	Pn	01 19 18.7	+1.3
MRVN	Minervino Murg	2.56	264	Pn	Pn	01 19 17.6	+0.2
THL	Klokotos Trika	2.60	133	P	Pn	01 19 19.0	+1.1
TYRN	Tyrnavos	2.62	128	P	Pn	01 19 19.7	+1.5
GRUS	Gruza	2.66	18	ePn	Pn	01 19 20.6	+1.9
THE	Thessaloniki	2.68	105	P	Pn	01 19 19.8	+0.9
THE	Thessaloniki	2.68	105	i Pn	Pn	01 19 20.1	+1.1
THE	Thessaloniki	2.68	105	P	Pn	01 19 20.3	+1.3
KKB	Krupnik	2.71	79	P	Pn	01 19 20.8	+1.3
KKB	Krupnik	2.71	79	i Pn	Pn	01 19 20.8	+1.3
KKB	Krupnik	2.71	79	P	Pn	01 19 21.4	+1.9
DIVS	Divibare	2.74	6	ePn	Pn	01 19 21.5	+1.5
DIVS				eSn	Sn	01 19 54.6	+1.7
LRSO	Larissa Observ	2.74	127	P	Pn	01 19 21.9	+2.0
AMPL	Ampelaki	2.75	152	P	Pn	01 19 21.8	+1.8
BOVS	Bovan	2.76	34	⇓P	Pn	01 19 21.8	+1.7
BOVS				⇓S	Sb	01 19 57.4	-1.7
BOVS	Bovan	2.76	34	ePn	Pn	01 19 21.9	+1.8
BOVS				eSn	Sn	01 19 54.8	+1.6
HORT	Hortiatis	2.79	105	P	Pn	01 19 21.4	+0.8
NYDR	Nydri-Lefkada	2.79	161	P	Pn	01 19 21.2	+0.6
DRAG	Dragano-Lefkad	2.79	164	P	Pn	01 19 20.9	+0.3
ACER	Acerenza	2.80	259		Pn	01 19 21.5	+0.8
EVGI	Lefkada island	2.87	163	P	Pn	01 19 22.0	+0.4
SGRT	San Giovanni R	2.89	279	Pn	Pn	01 19 22.3	+0.2
SGRT	San Giovanni R	2.89	279		Pn	01 19 22.3	+0.2
TRUS	Trudelj	2.92	12	ePn	Pn	01 19 23.6	+1.3
TRUS				eSn	Sn	01 19 58.7	+1.7
ZAPS	Zavoj	2.96	49	ePn	Pn	01 19 24.9	+1.9
ZAPS				eSn	Sn	01 19 59.4	+1.1
EVR	Evrytania	3.00	144	P	Pn	01 19 26.1	+2.7
VTS	Vitosha	3.01	64	P	Pn	01 19 25.0	+1.4
VTS	Vitosha	3.01	64	P	Pn	01 19 24.8	+1.2
VTS				S	Sn	01 20 02.0	+2.6
SRS	Serrai	3.05	93	P	Pn	01 19 25.5	+1.4
SRS	Serrai	3.05	93	i Pn	Pn	01 19 25.2	+1.1
SRS	Serrai	3.05	93	P	Pn	01 19 25.5	+1.4
AST1	Astakos	3.06	157	P	Pn	01 19 26.2	+2.0
TIP	Timpagrande	3.07	225		Pn	01 19 24.4	0.0
TIP	Timpagrande	3.07	225	⇑P	Pn	01 19 24.7	+0.3
MAKR	Makrakomi, Fth	3.07	139	P	Pn	01 19 26.8	+2.4
PLG	Polygyros	3.11	107	P	Pn	01 19 26.2	+1.2
PLG	Polygyros	3.11	107	P	Pn	01 19 26.3	+1.4
ZAGS	Zajecar	3.13	38	ePn	Pn	01 19 27.2	+1.9
ZAGS				eSn	Sn	01 20 05.6	+3.2
SVIS	Svilajnac	3.14	22	ePn	Pn	01 19 26.8	+1.5
SVIS				eSn	Sn	01 20 04.2	+1.8
MMB	Musomishta	3.15	85	P	Pn	01 19 27.2	+1.7
MMB	Musomishta	3.15	85	i Pn	Pn	01 19 27.2	+1.7
MMB	Musomishta	3.15	85	P	Pn	01 19 27.9	+2.4
MMB				S	Sn	01 20 04.0	+1.2
AGG	Agios Georgios	3.16	137	P	Pn	01 19 27.9	+2.1
AGG	Agios Georgios	3.16	137	P	Pn	01 19 27.8	+2.1
CUC	Castrocucco	3.17	245		Pn	01 19 26.5	+0.7
TEKS	Tekeris	3.18	360	ePn	Pn	01 19 26.8	+0.9
BLKB	Belogradchik	3.22	45	⇓S	Sn	01 20 08.8	+4.3
LXR1	Lixouri, Cepha	3.24	168	P	Pn	01 19 26.7	0.0
BORS2	Bor- Borsko je	3.26	33	ePn	Pn	01 19 26.9	-0.2
BORS2				eSn	Sn	01 20 07.2	+1.6
ARG2	Argostoli	3.27	167	P	Pn	01 19 26.8	-0.2
VLS	Valsamata	3.29	166	P	Pn	01 19 27.1	-0.3
VLS	Valsamata	3.29	166	P	Pn	01 19 26.0	-1.4
ANX	Ano Chora	3.31	146	P	Pn	01 19 30.5	+2.7
AVAS	Avala Beograd	3.39	12	ePn	Pn	01 19 29.9	+1.0
AVAS				eSn	Sn	01 20 10.1	+1.3
KUBS	Kucevo	3.41	26	ePn	Pn	01 19 28.9	-0.2
KUBS				eSn	Sn	01 20 12.0	+2.8
RTZL	Ratzakli, Kefa	3.42	164	P	Pn	01 19 29.2	+0.1
AXS	Araxos	3.46	156	P	Pn	01 19 31.0	+1.1
NEO	Neokhori	3.48	125	P	Pn	01 19 31.0	+1.0
BEO	Beograd	3.50	11	P	Pn	01 19 31.3	+1.0
OUR	Ouranopolis	3.51	106	P	Pn	01 19 31.5	+1.2
OUR	Ouranopolis	3.51	106	P	Pn	01 19 32.2	+1.8
AXAR	Agios Charalam	3.52	137	P	Pn	01 19 32.8	+2.2
SERG	Sergoula	3.52	146	P	Pn	01 19 33.1	+2.5
KALE	Kalithea	3.58	146	P	Pn	01 19 33.4	+2.0
RLS	Riolos of Patr	3.62	155	P	Pn	01 19 33.2	+1.3
PGB	Panagyurishte	3.62	70	P	Pn	01 19 34.6	+2.6
PGB				S	Sn	01 20 17.8	+3.3
MDVR	Moldovita	3.75	24	⇓P	Pn	01 19 35.3	+1.5
KAVA	Kavala	3.75	94	P	Pn	01 19 35.2	+1.5
ATAL	Atalanti	3.77	134	P	Pn	01 19 36.0	+2.0
PAOL	Paolisi	3.79	266		Pn	01 19 35.8	+1.5
LKR	Lokris	3.79	135	P	Pn	01 19 35.6	+1.4
FRGS	Fruska Gora	3.79	3	ePn	Pn	01 19 34.9	+0.6
FRGS				eSn	Sn	01 20 19.7	+1.1
DRO	Drossia	3.79	153	P	Pn	01 19 35.5	+1.1
BLY	Banja Luka	3.80	333	ePn	Pn	01 19 36.0	+1.6
BLY	Banja Luka	3.80	333	⇓P	Pn	01 19 35.9	+1.6
BLY	Banja Luka	3.80	333	ePn	Pn	01 19 36.0	+1.6
BLY				eSn	Sn	01 20 22.8	+4.0
PUNG	Punghina	3.82	39	⇑P	Pn	01 19 37.0	+2.4
KLV	Kalavryta, Ach	3.88	148	P	Pn	01 19 37.2	+1.7
RZN	Rozhen	3.90	84	P	Pn	01 19 37.4	+1.5
RZN	Rozhen	3.90	84	P	Pn	01 19 38.4	+2.5
RZN				S	Sn	01 20 23.1	+1.6
DJES	Djerdap	3.94	32	⇓P	Pn	01 19 38.3	+2.0
DJES	Djerdap	3.94	32	ePn	Pn	01 19 38.0	+1.6
DJES				eSn	Sn	01 20 23.3	+1.0
VRSS	Vrsac	3.96	18	ePn	Pn	01 19 37.8	+1.1
VRSS				eSn	Sn	01 20 22.7	-0.1
HERR	Herculane	4.08	30	⇓P	Pn	01 19 39.9	+1.7
BANR	Banloc	4.17	15	⇓P	Pn	01 19 41.2	+1.8
SRE	Strehaia	4.24	38	⇑P	Pn	01 19 42.7	+2.2
SRE	Strehaia	4.24	38	P	Pn	01 19 42.6	+2.2
KNYS	Krupa na Uni	4.24	327	ePn	Pn	01 19 42.1	+1.6
PLVB	Pleven	4.25	60	⇓P	Pn	01 19 43.1	+2.5
INTR	Introdacqua	4.29	280		Pn	01 19 42.2	+1.0
VILL	Villia	4.31	137	P	Pn	01 19 43.1	+1.6
KDZ	Kurdzhali	4.34	85	P	Pn	01 19 43.4	+1.5
KDZ	Kurdzhali	4.34	85	P	Pn	01 19 44.2	+2.3
VLAD	Vladila	4.43	52	⇑P	Pn	01 19 46.3	+3.2
BZS	Buzias	4.50	19	⇓P	Pn	01 19 45.3	+1.3
BZS	Buzias	4.50	19	P	Pn	01 19 45.3	+1.3
RDO	Rodhopi	4.51	91	P	Pn	01 19 45.6	+1.5
RDO	Rodhopi	4.51	91		Pn	01 19 45.2	+1.0
GZR	Gura Zlata	4.65	29	⇓P	Pn	01 19 48.6	+2.4
GZR	Gura Zlata	4.65	29	P	Pn	01 19 48.6	+2.4
ATH	Athens Observa	4.67	135	P	Pn	01 19 50.0	+3.7
AQU	L'Aquila	4.71	284	ePn	Pn	01 19 48.1	+1.2
AQU	L'Aquila	4.71	284	P	Pn	01 19 48.5	+1.6
CAMP	Campotosto	4.74	286		Pn	01 19 48.5	+1.1
MORH	Mrgy, Hungar	4.89	352	ePn	Pn	01 19 50.1	+0.8
MORH	Mrgy, Hungar	4.89	352	⇓P	Pn	01 19 50.3	+1.0
ALN	Alexandroupoli	4.92	93		Pn	01 19 51.5	+1.7
ALN	Alexandroupoli	4.92	93	P	Pn	01 19 51.5	+1.7
GUMA	Gualdo di Mace	4.92	292		Pn	01 19 50.9	+0.9
ELND	Elena	4.94	70	⇑P	Pn	01 19 52.2	+2.1
NRCA	Norcia	5.02	289		Pn	01 19 52.5	+1.3
CAVK	Edirne/Enez-Ca	5.04	96	⇑P	Pn	01 19 53.9	+2.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
HUMR	Humele	5.07	50	⇑P	Pn	01 19 54.4	+2.5
FDMO	Fiordimonte	5.09	291		Pn	01 19 53.2	+1.0
LOT	Lotru	5.10	36	⇑P	Pn	01 19 54.2	+1.9
SZH	Strazhitsa	5.12	66	P	Pn	01 19 54.6	+2.1
SZH				S	Sn	01 20 51.2	-0.1
DEV	Deva	5.12	27	⇑P	Pn	01 19 55.5	+2.9
DEV	Deva	5.12	27	P	Pn	01 19 55.4	+2.9
SIRR	Siria	5.12	16	⇓P	Pn	01 19 53.8	+1.2
BOJS	Bojanci	5.19	324	i Pn	Pn	01 19 54.7	+1.2
BOJS				eSn	Sn	01 20 49.9	-3.1
JMB	Yambol	5.31	76	P	Pn	01 19 57.9	+2.7
CESX	Cesi	5.35	286		Pn	01 19 57.2	+1.4
GOKT	Kean, EDRN	5.39	95	P	Pn	01 19 57.8	+1.5
GOKT				S	Sn	01 20 52.7	-5.2
KESN	Edirne-Kesan	5.40	93	P	Pn	01 19 57.0	+0.2
KESN				S	Sn	01 20 57.0	-1.8
RIY	Rijeka	5.42	319	ePn	Pn	01 19 57.6	+1.0
RIY				eSn	Sn	01 20 56.8	-1.8
TNR	Turnu Rosu	5.48	37	⇓P	Pn	01 20 00.8	+3.3
TNR	Turnu Rosu	5.48	37	P	Pn	01 20 00.8	+3.3
BEHE	Becsehely	5.48	339	ePn	Pn	01 20 04.6	+7.1
PRK	Paraskevi	5.55	110	P	Pn	01 20 01.0	+2.6
MURB	Monte Urbino	5.55	292		Pn	01 19 59.9	+1.4
MTUR	Matau	5.56	44	⇓P	Pn	01 20 01.6	+2.9
MTUR	Matau	5.56	44	P	Pn	01 20 01.6	+2.9
BAYC	CANAKKALE_Bayr	5.56	105	P	Pn	01 20 00.3	+1.6
BAYC				S	Sn	01 20 59.8	-2.4
VAE	Valguarnera	5.57	227	Pn	Pn	01 19 58.0	-0.8
	comp=E,7.2nm,0.8s,baz=61,slow=10,SNR=1.6						
LOZB	Loznitsa	5.58	67	⇑P	Pn	01 20 00.9	+2.1
RAZG	Razgrad	5.58	65	⇑P	Pn	01 20 01.8	+2.9
KIRK	Kırklareli	5.66	83	P	Pn	01 20 01.2	+1.1
KIRK				S	Sn	01 21 03.4	-1.3
RAFF	Raffo Rosso	5.78	226	Pn	Pn	01 20 00.6	-1.1
DRGR		5.87	22	⇑P	Pn	01 20 04.5	+1.5
DRGR		5.87	22	P	Pn	01 20 04.4	+1.5
MARR	Marisel-Cluj	5.89	25	⇑P	Pn	01 20 04.6	+1.4
BUHA	Balikesir, Bur	6.03	106	P	Pn	01 20 06.6	+1.6
BUHA				S	Sn	01 21 13.8	+0.1
TRI	Trieste	6.05	318	Pn	Pn	01 20 05.7	+0.5
TRI	Trieste	6.05	318	P	Pn	01 20 05.7	+0.5
BUD	Budapest	6.12	357	P	Pn	01 20 07.6	+1.3
BUD				pmax	pmax		
	comp=Z,16nm,0.6s						
MLR	Muntele Rosu	6.21	46	Pn	Pn	01 20 10.3	+2.8
	comp=Z,7.3nm,0.4s,baz=153,slow=12,SNR=12						
MLR				Sn	Sn	01 21 15.0	-3.3
	comp=Z,0.3nm,0.3s,baz=280,slow=19,SNR=2.2						
MLR	Muntele Rosu	6.21	46		Pn	01 20 11.0	+3.4
MLR	Muntele Rosu	6.21	46	⇑P	Pn	01 20 11.0	+3.4
MLR	Muntele Rosu	6.21	46	P	Pn	01 20 11.0	+3.4
SOKA	Soboth	6.23	330		Pn	01 20 11.9	+4.1
SOKA					Sn	01 21 16.7	-2.1
SOKA	Soboth	6.23	330	i Pn	Pn	01 20 12.0	+4.1
	comp=Z,2.0nm,0.2s						
SOKA				i Sn	Sn	01 21 16.7	-2.1
	comp=Z,7.0nm,0.5s						
DOPR	Dopca	6.24	41	⇓P	Pn	01 20 11.0	+3.1
OBKA	Obir	6.28	327		Pn	01 20 11.5	+2.9
OBKA					Sn	01 21 18.4	-1.7
OBKA	Obir	6.28	327	i Pn	Pn	01 20 11.5	+2.9
	comp=Z,1.9nm,0.5s,SNR=7.1						
OBKA				i Sn	Sn	01 21 18.4	-1.7
	comp=Z,21nm,0.5s						
APE	Apeiranthos	6.32	131	⇑P	Pn	01 20 10.5	+1.4
APE	Apeiranthos	6.32	131	⇑eP	Pn	01 20 10.4	+1.3
ISR	Istrita	6.32	51	⇑P	Pn	01 20 12.6	+3.5
ISR	Istrita	6.32	51	P	Pn	01 20 12.6	+3.5
NEHR	Nehoiu	6.36	48	⇑P	Pn	01 20 10.5	+0.9
BAND	Balkesir-Ban	6.55	96	⇓P	Pn	01 20 14.7	+2.5
PSZ	Piszkesteto	6.55	2		Pn	01 20 13.3	+1.1
PSZ	Piszkesteto	6.55	2	⇑P	Pn	01 20 13.6	+1.3
PSZ	Piszkesteto	6.55	2	P	Pn	01 20 13.5	+1.3
ARSA	Arzberg	6.55	335		Pn	01 20 13.5	+1.2
ARSA	Arzberg	6.55	335		Sn	01 21 26.3	-0.3
ARSA	Arzberg	6.55	335	i Pn	Pn	01 20 13.6	+1.3
	comp=Z,1.3nm,0.4s						
ARSA				eSn	Sn	01 21 26.3	-0.3
	comp=Z,4.7nm,0.5s						
BALB	Balikesir	6.57	103		Pn	01 20 15.4	+3.0
COVR	Voineasa-Covas	6.57	45	⇑P	Pn	01 20 15.4	+2.9
BKES	Balkesir-Mer	6.58	102	P	Pn	01 20 14.2	+1.6
BKES				S	Sn	01 21 24.6	-2.7
TURR	Turia	6.61	43	⇓P	Pn	01 20 16.1	+3.0
ICOR	Ion Corvin	6.66	63	⇑P	Pn	01 20 16.4	+2.8
BISRR	Bisoca	6.67	49	⇑P	Pn	01 20 16.2	+2.3
GRER		6.72	51	⇓P	Pn	01 20 17.4	+2.9
RONA	Rosalia, Austr	6.74	341		Pn	01 20 18.7	+3.8
RONA					Sn	01 21 31.3	-0.1
RONA	Rosalia, Austr	6.74	341	ePn	Pn	01 20 18.7	+3.8
	comp=Z,0.9nm,0.3s						
RONA				eSn	Sn	01 21 31.3	-0.1
	comp=Z,2.8nm,0.5s						
MYKA	Terra Mystica	6.77	323		Pn	01 20 16.3	+1.0
MYKA					Sn	01 21 33.7	+1.6
MYKA	Terra Mystica	6.77	323	i Pn	Pn	01 20 16.3	+1.0
	comp=Z,1.4nm,0.3s						
MYKA				eSn	Sn	01 21 33.7	+1.6
	comp=Z,5.0nm,0.4s						
PLOR	Plostina	6.82	47	⇑P	Pn	01 20 19.0	+3.0
PLOR	Plostina	6.82	47	P	Pn	01 20 18.9	+3.0
VRI	Vrincioaia	6.87	47	⇓P	Pn	01 20 19.9	+3.3
VRI	Vrincioaia	6.87	47	P	Pn	01 20 19.9	+3.3
DURS	Dursunbey	7.02	102	P	Pn	01 20 19.3	+0.5
CONA	Conrad Observa	7.07	339	i Pn	Pn	01 20 26.0	+6.6
	comp=Z,0.7nm,0.3s						
CONA				eSn	Sn	01 21 40.8	+1.4
	comp=Z,3.0nm,0.6s						
KECS	Kecovo	7.14	5	eP	Pn	01 20 22.4	+2.1
KECS				e		01 21 40.8	
KECS	Kecovo	7.14	5	ePN	Pn	01 20 22.4	+2.1
KECS				eSN	Sn	01 21 40.8	-0.3
MODS	Modra-Piesok	7.19	348	eP	Pn	01 20 24.7	+3.8
MODS				e		01 21 41.0	
MODS	Modra-Piesok	7.19	348	ePN	Pn	01 20 24.7	+3.8
MODS				eSN	Sn	01 21 41.0	-1.2
KBA	Koelnbreinsper	7.24	324		Pn	01 20 23.0	+1.1
KBA					Sn	01 21 42.8	-1.1
KBA	Koelnbreinsper	7.24	324	i Pn	Pn	01 20 23.0	+1.1
	comp=Z,1.5nm,0.3s						
KBA				i Sn	Sn	01 21 42.8	-1.1
	comp=Z,7.1nm,0.8s						
CFR	Carcaliu	7.32	56	⇓P	Pn	01 20 25.2	+2.5
CFR	Carcaliu	7.32	56	P	Pn	01 20 25.2	+2.5
TPGR	Topolog	7.36	59	⇑P	Pn	01 20 25.9	+2.6
IDI	Anoyia	7.38	144	Pn	Pn	01 20 21.7	-1.9
	comp=Z,8.5nm,0.8s,baz=332,slow=15,SNR=8.3						
IDI				Sn	Sn	01 21 39.1	-7.9
	comp=Z,2.1nm,0.3s,baz=112,slow=11,SNR=9.7						
ABTA	Abfaltersbach	7.39	319		Pn	01 20 24.1	+0.3
ABTA					Sn	01 21 46.9	-0.5
ABTA	Abfaltersbach	7.39	319	ePn	Pn	01 20 24.1	+0.3
	comp=Z,1.0nm,0.4s						
ABTA				i Sn	Sn	01 21 46.9	-0.5
	comp=Z,20nm,0.5s						
BURAR	Bucovina Array	7.43	31	⇑P	Pn	01 20 27.0	+2.5
BURAR	Bucovina Array	7.43	31	P	Pn	01 20 26.9	+2.5
BUR08	Bucovina Ar. S	7.45	31		Pn	01 20 27.0	+2.3
MANT	Manisa	7.49	110	Pn	Pn	01 20 26.3	+1.0
MOA	Molln	7.50	332		Pn	01 20 27.6	+2.4
MOA					Sn	01 21 49.2	-0.7
MOA	Molln	7.50	332	i Pn	Pn	01 20 27.6	+2.4
	comp=Z,2.4nm,0.5s						
MOA				i Sn	Sn	01 21 49.2	-0.7
	comp=Z,4.2nm,0.7s						
BIOA	Bad Ischl, Aus	7.60	328		Pn	01 20 28.6	+1.9
BIOA					Sn	01 21 51.9	-0.7
BIOA	Bad Ischl, Aus	7.60	328	i Pn	Pn	01 20 28.6	+1.9
	comp=Z,1.7nm,0.4s,SNR=6.8						
BIOA				i Sn	Sn	01 21 51.9	-0.7
	comp=Z,8.2nm,0.6s						
TLCR		7.75	57	⇑P	Pn	01 20 31.6	+2.9
TLCR		7.75	57	P	Pn	01 20 31.5	+2.9
LESA	Schwarzleotal	7.80	323		Pn	01 20 30.0	+0.5
LESA					Sn	01 21 56.5	-1.0
LESA	Schwarzleotal	7.80	323	ePn	Pn	01 20 30.0	+0.5
	comp=Z,1.7nm,0.3s						
LESA				i Sn	Sn	01 21 56.5	-1.0
	comp=Z,4.9nm,0.5s						
STHS	Stebnicka Huta	8.13	8	eP	Pn	01 20 40.4	+6.5
STHS				e		01 22 08.1	
STHS	Stebnicka Huta	8.13	8	ePN	Pn	01 20 40.4	+6.5
STHS				eSN	Sn	01 22 08.1	+2.6
WTTA	Wattenberg	8.18	319		Pn	01 20 36.9	+2.1
WTTA					Sn	01 22 04.7	-2.3
WTTA	Wattenberg	8.18	319	i Pn	Pn	01 20 36.8	+2.1
	comp=Z,5.9nm,0.5s,SNR=16						
WTTA				eSn	Sn	01 22 04.7	-2.3
	comp=Z,25nm,0.6s						
WTTA	Wattenberg	8.18	319	P	Pn	01 20 36.9	+2.1
WTTA						01 22 04.7	
WATA	Walderalm	8.26	319		Pn	01 20 38.2	+2.4
WATA					Sn	01 22 06.5	-2.3
WATA	Walderalm	8.26	319	i Pn	Pn	01 20 38.2	+2.4
	comp=Z,4.1nm,0.4s,SNR=16						
WATA				i Sn	Sn	01 22 06.5	-2.3
	comp=Z,24nm,0.7s						
CKRC	Cesky Krumlov	8.32	335	eP	Pn	01 20 38.1	+1.6
CKRC	Cesky Krumlov	8.32	335	ePN	Pn	01 20 38.1	+1.6
SQTA	Sankt Quirin	8.37	317		Pn	01 20 39.0	+1.8
SQTA					Sn	01 22 12.6	+1.1
SQTA	Sankt Quirin	8.37	317	i Pn	Pn	01 20 39.0	+1.8
	comp=Z,3.1nm,0.3s,SNR=5.7						
SQTA				eSn	Sn	01 22 12.6	+1.1
	comp=Z,13nm,0.5s						
SQTA	Sankt Quirin	8.37	317	P	Pn	01 20 39.0	+1.8
SQTA						01 22 12.6	
FETA	Feichten	8.49	315		Pn	01 20 40.5	+1.6
FETA					Sn	01 22 15.3	+0.7
FETA	Feichten	8.49	315	ePn	Pn	01 20 40.5	+1.6
	comp=Z,1.0nm,0.4s						
FETA				eSn	Sn	01 22 15.3	+0.7
	comp=Z,2.4nm,0.8s						
GERES	GERESS Array B	8.54	333	Pn	Pn	01 20 41.0	+1.4
	baz=156,slow=13,SNR=8.3						
GERES				Sn	Sn	01 22 13.4	-2.3
	comp=Z,0.1nm,0.3s,baz=152,slow=23,SNR=10						
	comp=Z,0.7nm,0.6s						
GERES	GERESS Array B	8.54	333	eP	Pn	01 20 43.2	+3.6
RETA	Reutte	8.77	317		Pn	01 20 42.0	-0.7
RETA					Sn	01 22 21.3	0.0
RETA	Reutte	8.77	317	ePn	Pn	01 20 42.0	-0.7
	comp=Z,0.8nm,0.3s						
RETA				i Sn	Sn	01 22 21.3	0.0
	comp=Z,8.4nm,0.5s						
DAVOX	Davos/Dischmat	8.82	311	Pn	Pn	01 20 45.6	+2.1
	comp=Z,0.7nm,0.3s,baz=117,slow=16,SNR=13						
DAVOX				Sn	Sn	01 22 18.2	-4.5
	comp=Z,1.0nm,0.3s,baz=204,slow=21,SNR=3.4						
KHC	Kasperske Hory	8.83	333	eP	Pn	01 20 45.7	+2.2
KHC				e		01 22 22.4	
KHC	Kasperske Hory	8.83	333	ePN	Pn	01 20 45.7	+2.2
KHC				eSN	Sn	01 22 22.4	-0.3
DAVA	Damuels	9.11	314		Pn	01 20 49.7	+2.2
DAVA					Sn	01 22 28.9	-1.0
DAVA	Damuels	9.11	314	i Pn	Pn	01 20 49.7	+2.2
	comp=Z,3.6nm,0.4s						
DAVA				i Sn	Sn	01 22 28.9	-1.0
	comp=Z,4.2nm,0.6s						
KEST	Kesra	9.78	238	Pn	Pn	01 20 58.5	+1.9
	comp=Z,0.1nm,0.3s,baz=18,slow=9.6,SNR=1.8						
BRTR	Keskin Array B	10.84	94	Pn	Pn	01 21 12.1	+0.9
	baz=249,slow=11,SNR=2.2						
CLL	Collm	10.92	338	ePn	Pn	01 21 05.0	-7.0
CLL				e(Sg)		01 24 20.0	
MNK	Minsk	14.26	20	i P	Pn	01 21 55.9	-1.7
	comp=E,21nm,1.1s						
MNK				i P	Pn	01 21 55.9	-1.7
	comp=N,7.0nm,1.0s						
MNK				i P	Pn	01 21 55.9	-1.7
	comp=Z,5.0nm,1.0s,baz=206						
MNK				i PP	P	01 22 03.3	-1.6
MNK				i S	Sn	01 24 34.6	-0.7
MNK				i SS	SnSn	01 24 48.5	+0.7
MNK				i LR	LR	01 26 40.7	
MNK				i LRM	MLR	01 27 43.3	
	comp=Z,28nm,8.3s						
MNK				i LRM	MLR	01 27 46.2	
	comp=N,91nm,12.9s						
MNK				i LRM	MLR	01 28 11.2	
	comp=E,204nm,19.1s						
MNK	Minsk	14.26	20	i P	Pn	01 21 55.9	-1.7
MNK				i S	Sn	01 24 34.6	-0.7
MNK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MNK				pmax	pmax		
	comp=E,21nm,1.1s						
MNK				pmax	pmax		
	comp=N,7.0nm,1.0s						
MNK				MLR	MLR		
	comp=Z,28nm,8.0s						
MNK				MLR	MLR		
	comp=N,91nm,13.0s						
MNK				MLR	MLR		
	comp=E,204nm,19.0s						
NACGM	Naroch	14.36	17	eP	Pn	01 21 58.7	-0.3
	comp=Z,12nm,1.1s,baz=202						
MMAI	Mount Meron Ar	15.11	118	Pn	Pn	01 22 08.8	-0.6
	comp=Z,0.3nm,0.3s,baz=298,slow=14,SNR=2.3						
	comp=Z,4.6nm,0.9s						
KIV	Kislovodsk	17.19	74	eP	Pn	01 22 35.9	-0.1
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KBZ	Khabaz	17.34	74	P	P	01 22 39.4	+0.3
	comp=Z,0.1nm,0.3s,baz=270,slow=6.1,SNR=2.8						
	comp=Z,1.9nm,0.8s						
OBN	Obninsk	17.74	33	⇑eP	Pn	01 22 43.3	+0.6
OBN				S	Sn	01 25 58.0	-1.9
OBN				pmax	pmax		
	comp=Z,30nm,1.7s						
OBN				MLR	MLR		
	comp=Z,63nm,11.0s						
ESDC	Sonseca Array	17.96	272	P	Pn	01 22 45.7	+0.1
	baz=85,slow=10,SNR=1.7						
	comp=Z,0.6nm,0.9s						
HFS	Hagfors	19.13	351	P	P	01 22 58.7	0.0
	comp=Z,0.2nm,0.3s,baz=161,slow=14,SNR=4.9						
	comp=Z,4.8nm,0.9s						
NC602	NORSAR Array S	20.00	348	P	P	01 23 08.0	-0.3
NC602				IAmb	IAmb	01 23 49.5	
	comp=Z,38nm,1.5s						
NORES	NORESS Array B	20.00	348	P	P	01 23 08.7	+0.5
NB2	NORSAR Subarra	20.34	348	P	P	01 23 12.3	+0.3
	comp=Z,0.9nm,0.7s,baz=165,slow=11						
NOA	NORSAR Array B	20.34	348	P	P	01 23 11.6	-0.4
	comp=Z,0.7nm,0.8s,baz=161,slow=10,SNR=3.5						
	comp=Z,0.7nm,0.8s						
EKA	Eskdalemuir Ar	20.44	321	P	P	01 23 12.3	-0.7
	comp=Z,0.5nm,0.5s,baz=111,slow=8.8,SNR=4.5						
	comp=Z,0.5nm,0.5s						
FINES	FINESS Array B	20.49	9	P	P	01 23 12.9	-0.6
	comp=Z,5.8nm,0.6s,baz=173,slow=12,SNR=26						
	comp=Z,5.8nm,0.6s						
FIA1	FINESS Array S	20.49	9	P	P	01 23 12.8	-0.6
MDT	Midelt	21.04	254	P	P	01 23 16.8	-3.0
	comp=Z,2.0nm,0.7s,baz=81,slow=13,SNR=1.8						
	comp=Z,2.0nm,0.7s						
KLMR	Klimovskoe	23.00	25	eP	P	01 23 38.2	-2.2
KLMR				pmax	pmax		
	comp=Z,17nm,1.4s						
ARCES	ARCESS Array B	28.40	4	eP	P	01 24 32.5	+2.6
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARTI	Arti	29.15	46	P	P	01 24 35.7	-0.9
ARTI	Arti	29.15	46	c iP	P	01 24 35.8	-0.9
ARTI				S	S	01 29 28.9	+0.9
ARTI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AB31	Akbulak array	29.18	61	P	P	01 24 36.6	-0.4
AB31				IAmb	IAmb	01 25 13.1	
	comp=Z,4.2nm,1.4s						
ABKAR	Akbulak array	29.18	61	P	P	01 24 36.1	-0.9
SVE	Sverdlovsk	30.46	45	eP	P	01 24 48.3	0.0
SVE				pmax	pmax		
	comp=Z,12nm,1.0s						
TORD	Torodi Ar. Bea	32.16	214	P	P	01 25 03.3	-0.2
	comp=Z,1.0nm,0.3s,baz=23,slow=12,SNR=3.4						
	comp=Z,1.0nm,0.3s						
TORD	Torodi Ar. Bea	32.16	214	IAmb	IAmb	01 25 25.6	
	comp=Z,1.2nm,0.7s						
BORK	Borovoye	35.67	53	P	P	01 25 34.4	+0.7
BORK				IAmb	IAmb	01 25 35.6	
	comp=Z,4.6nm,0.7s						
BORK	Borovoye	35.67	53	deP	P	01 25 34.4	+0.7
BORK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BVAR	Borovoye Array	35.72	53	P	P	01 25 34.8	+0.6
	comp=Z,2.7nm,0.6s,baz=282,slow=6.7,SNR=18						
	comp=Z,2.7nm,0.6s						
KKAR	Karatay Array	37.29	70	P	P	01 25 47.2	-0.4
KKAR	Karatay Array	37.29	70	P	P	01 25 47.3	-0.4
DRK	Karamyk	39.31	75	IAmb	IAmb	01 26 07.2	
	comp=Z,14nm,1.0s						
KURBB	Kurchatov Arra	41.00	56	P	P	01 26 18.3	-0.3
	comp=Z,0.8nm,0.3s,baz=291,slow=9.9,SNR=4.6						
	comp=Z,0.8nm,0.3s						
KURK	Kurchatov	41.04	56	P	P	01 26 18.3	-0.6
KURK	Kurchatov	41.04	56	IAmb	IAmb	01 26 21.4	
	comp=Z,1.9nm,0.9s						
KURK	Kurchatov	41.04	56	P	P	01 26 18.3	-0.6
ZAA0	Zalesovo Array	44.17	50	P	P	01 26 44.3	0.0
ZALV	Zalesovo Beam	44.17	50	P	P	01 26 44.1	-0.2
	comp=Z,6.2nm,0.4s,baz=286,slow=8.3,SNR=33						
	comp=Z,6.2nm,0.4s						
ZALV	Zalesovo Beam	44.17	50	P	P	01 26 44.2	0.0
MK31	Makanchi Array	44.33	61	P	P	01 26 45.7	0.0
MK31	Makanchi Array	44.33	61	ceP	P	01 26 45.2	-0.5
MKAR	Makanchi Array	44.33	61	P	P	01 26 45.3	-0.4
	comp=Z,2.4nm,0.6s,baz=285,slow=7.0,SNR=15						
	comp=Z,2.4nm,0.6s						
MKAR	Makanchi Array	44.33	61	P	P	01 26 45.7	0.0
MKAR	Makanchi Array	44.33	61	P	P	01 26 45.7	0.0
DGZ	Jazzator, Alta	46.77	56	⇑iP	P	01 27 05.0	-0.2
DGZ				pmax	pmax		
	comp=Z,18nm,3.9s						
EVN	Everest	55.63	81	P	P	01 28 11.1	-1.4
EVN				IAmb	IAmb	01 28 12.0	
	comp=Z,3.0nm,0.8s						
TIXI	Tiksi	56.92	21	LR	LR	01 58 34.4	
	comp=Z,36nm,18.0s,baz=202,slow=42						
SONM	Songino Array	59.03	52	P	P	01 28 36.0	+0.3
	comp=Z,1.4nm,0.6s,baz=289,slow=7.0,SNR=9.5						
	comp=Z,1.4nm,0.6s						
SONM	Songino Array	59.03	52	IAmb	IAmb	01 28 36.5	
	comp=Z,2.5nm,1.0s						
HHC	Hu-ho-hao-te	65.85	56	eP	P	01 29 21.8	+0.4
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,56nm,5.3s						
FCC	Fort Churchill	66.13	329	P	P	01 29 23.3	+0.6
FCC	Fort Churchill	66.13	329	P	P	01 29 23.3	+0.6
FCC				pmax	pmax		
	comp=Z,7.0nm,1.5s						
PZH	PanZhiHua	67.42	74	P	P	01 29 32.8	+1.2
NJ2	Nanjing	75.84	60	eP	P	01 30 21.4	-0.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
DLBC	Dease Lake	77.37	344	LR	LR	02 05 44.0	
	comp=Z,34nm,18.9s,baz=103,slow=37						
ASAR	Alice Springs	123.18	94	PKP	PKPdf	01 37 31.5	-1.2
	comp=Z,0.3nm,0.6s,baz=322,slow=1.4,SNR=5.0						

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*IDC **15** 01:34:53.9±2.8, 29°.00N×139°.00E, h433km±37km, mb2.8/5, mbtmp3.6/6, Error ellipse: s-maj=89.3km s-min=18.6km az=80.0*

*JMA **15** 01:34:53.1±0.2, 29°N±1°×14°0E±°, h468km, MV3.5/33, NEAR TORISHIMA IS*

ISC 15 01:34:53.5±0.9**, 29°.0N**±0°.1×**139°.3E**±0°.2**, h423**km**, n18,** $\sigma 1^{s}.$**93**/19**, mb2.9**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.16	127	eP	P	01 36 00.7	+1.0
CBIJ				eS	S	01 36 53.8	+0.3
JHH2	Haha-jima-NKT2	3.46	133	eS	S	01 36 59.1	+1.2
JHJ2	Mitsune	4.11	6	eP	P	01 36 10.5	+2.8
JIE	Ise	5.81	338	eP	P	01 36 28.6	+4.0
JKN2	Miekihoku	5.83	334	eP	P	01 36 28.7	+3.9
JOD2	Odawara 2	6.24	358	eP	P	01 36 30.2	+1.1
JNY	Yasuok	6.45	349	eP	P	01 36 33.8	+2.4
JRY	Ryogami san	6.99	357	eP	P	01 36 38.2	+0.5
JYT	Yasato	7.23	6	eP	P	01 36 40.2	0.0
JAG	Ashikaga	7.39	1	eP	P	01 36 41.3	-0.7
MJAR	Matsushiro Arr	7.57	353	P	P	01 36 43.9	0.0
	1.6nm,0.4s,baz=176,slow=12,SNR=8.5						
JHO	Hitachi	7.65	7	eP	P	01 36 44.8	+0.1
JMK	Ichinoseki	10.04	8	eP	P	01 37 12.9	+2.0
WRA	Warramunga Arr	48.91	186	P	P	01 42 58.7	-0.5
	0.2nm,0.3s,baz=2.7,slow=7.4,SNR=5.1						
	0.2nm,0.3s						
KURBB	Kurchatov Arra	49.90	313	P	P	01 43 04.6	-1.6
	0.1nm,0.4s,baz=91,slow=7.6,SNR=4.3						
	0.1nm,0.4s						
ASAR	Alice Springs	52.64	186	P	P	01 43 25.4	-1.1
	0.2nm,0.7s,baz=355,slow=6.1,SNR=1.9						
	0.2nm,0.7s						
ARCES	ARCESS Array B	70.90	340	P	P	01 45 25.2	-0.7
	0.7nm,0.6s,baz=61,slow=5.9,SNR=3.7						
	0.7nm,0.6s						
FINES	FINESS Array B	75.11	333	P	P	01 45 49.0	-1.4
	1.9nm,1.0s,baz=68,slow=5.9,SNR=4.9						
	1.9nm,1.0s						

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*SOME **15** 01:38:58.8, 39°.48N×72°.78E, h20km*

*KRNET **15** 01:39:01.5±0.1, 39°.50N×73°.06E, h14km, mb3.5*

*NNC **15** 01:39:07.3±4.0, 39°.75N×73°.19E, h0km, mb3.7, mpv3.6, Error ellipse: s-maj=30.6km s-min=17.3km az=0.0*

ISC 15 01:38:58.3±1.3**, 39°.51N**±0°.04×**73°.11E**±0°.03**, h9**km±10km**, n43,** $\sigma 1^{s}.$**73**/72**, 32C-15D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.59	31	⇑iP	Pn	01 39 13.4	+0.3
SFK				⇑iS	Sn	01 39 22.4	-0.7
DRK	Karamyk	1.01	269	⇑iP	Pn	01 39 20.4	+1.4
DRK				⇑iS	Sn	01 39 34.1	+0.6
OHH	Osh	1.04	346	⇓iP	Pn	01 39 21.5	+2.2
OHH				⇓iS	Sn	01 39 36.1	+2.0
SALK	Salom-Alik	1.48	21	⇓eP	Pg	01 39 29.5	+2.8
SALK				⇓eS	Sg	01 39 50.5	+4.6
ARSB	Arslanbob	1.82	357	⇑eP	Pg	01 39 35.2	+2.1
ARSB				⇑eS	Sg	01 40 00.4	+3.7
GAR	Garm	2.23	258	⇑eP	Pg	01 39 41.0	+0.1
GAR				⇑iS	Sg	01 40 10.0	+0.2
ARK	Arkit	2.45	340	⇓iP	Pg	01 39 44.8	-0.4
ARK				⇓iS	Sg	01 40 16.2	-0.7
JNKS	Jany-Kuch	2.49	51	⇑iP	Pg	01 39 45.7	-0.3
JNKS				⇑iS	Sg	01 40 18.2	0.0
TRKS	Terek-Say	2.52	324	⇑iP	Pg	01 39 44.5	-2.0
TRKS				⇑iS	Sg	01 40 16.1	-3.0
ARLS	Aral	2.53	21	⇑iP	Pg	01 39 46.0	-0.7
ARLS				⇑iS	Sg	01 40 18.6	-0.8
UCH	Uchtor	2.92	21	P	Pg	01 39 53.6	-0.6
	SNR=8.2						
UCH	Uchtor	2.92	21	⇑eP	Pb	01 39 51.8	+1.0
UCH				⇑iS	Sb	01 40 28.5	+1.7
MNAS	Manas	3.01	351	⇑eP	Pb	01 39 52.6	+0.4
MNAS				⇑iS	Sb	01 40 29.9	+0.8
CHGR	Chuyangaron	3.19	256	⇓eP	Pb	01 39 54.6	-0.6
CHGR				⇓iS	Sb	01 40 33.3	-0.9
EKS2	Erkin-Say	3.19	9	P	Pg	01 39 58.4	-1.0
	SNR=18						
EKS2	Erkin-Say	3.19	9	⇑iP	Pb	01 39 55.3	+0.1
EKS2				⇑iS	Sb	01 40 34.4	+0.1
MRKS	Merke	3.24	2	Pg	Pg	01 39 57.6	-2.6
	7.5nm,0.3s						
MRKS				Lg	Lg	01 40 39.6	
	39nm,0.5s						
MRKS	Merke	3.24	2	eP	Pg	01 39 57.6	-2.6
	7.5nm,0.3s						
MRKS				eS	Sg	01 40 39.6	-2.6
	39nm,0.5s						
AAK	Ala-Archa	3.30	18	P	Pg	01 39 59.3	-2.2
	SNR=20						
AAK	Ala-Archa	3.30	18	⇑iP	Pb	01 39 57.0	-0.1
AAK				⇑iS	Sb	01 40 37.2	-0.2
AAK	Ala-Archa	3.30	18	⇓Pn	Pg	01 39 59.0	-2.5
	7.3nm,0.5s						
AAK				⇓Lg	Lg	01 40 45.5	
	9.1nm,0.7s						
KBK	Karagaybulak	3.44	23	⇑iP	Pb	01 39 58.9	-0.6
KBK				⇑iS	Sb	01 40 40.8	-0.7
FRU1	Bishkek	3.49	19	⇑eP	Pb	01 39 59.6	-0.8
FRU1				⇑iS	Sb	01 40 42.3	-0.7
IUG	Iuzhnay	3.52	319	Pg	Pb	01 40 01.5	+0.6
	17nm,0.2s						
IUG				Lg	Lg	01 40 46.3	
	59nm,0.4s						

ULHL	Ulahol	3.62	40	⇓iP	Pb	01 40 01.7	-1.0
ULHL				⇓iS	Sb	01 40 45.3	-1.5
DZA	Taraz	3.64	339	Pg	Pb	01 40 03.9	+1.1
	51nm,0.1s						
DZA				Lg	Lg	01 40 50.4	
	43nm,0.2s						
DZA	Taraz	3.64	339	eP	Pb	01 40 03.9	+1.1
	51nm,0.1s						
DZA				eS	Sg	01 40 50.4	-4.7
	43nm,0.2s						
BOOM	Boomskoye usch	3.67	35	⇑iP	Pb	01 40 02.1	-1.3
BOOM				⇑iS	Sb	01 40 46.4	-1.7
CHMS	Chumysh	3.70	19	P	Pb	01 40 04.4	+0.6
	SNR=21						
CHM	Chimkent	3.87	318	eP	Pb	01 40 06.5	-0.1
	40nm,0.2s						
CHM				eS	Sb	01 40 55.0	+1.5
	68nm,0.2s						
TKM2	Tokmak 2	3.89	28	⇑iP	Pb	01 40 05.1	-2.1
TKM2				⇑iS	Sb	01 40 51.5	-3.1
USP	Ospenovka	3.90	15	P	Pb	01 40 06.8	-0.5
	SNR=12						
USP	Ospenovka	3.90	15	⇓iP	Pb	01 40 05.2	-2.1
USP				⇓iS	Sb	01 40 51.6	-3.0
KK31	Karatay Array	4.09	332	Pn	Pb	01 40 09.6	-0.9
	1.0nm,0.3s,baz=134,slow=12,SNR=35						
KK31				⇑Pg	Pg	01 40 19.2	+2.6
	1.4nm,0.3s						
KK31				⇑Sn	Sb	01 40 58.4	-1.6
	7.0nm,0.4s,baz=161,slow=24,SNR=8.2						
KK31				⇓Lg	Lg	01 41 13.5	
	7.3nm,0.3s,baz=147,slow=30,SNR=4.1						
DGS	Degeres	4.24	27	Pg	Pg	01 40 19.2	-0.2
	6.9nm,0.7s						
DGS				Lg	Lg	01 41 16.8	
	12nm,0.9s						
BRLS	Borolday	4.30	326	Pg	Pb	01 40 12.7	-1.3
	2.5nm,0.3s						
BRLS				Lg	Lg	01 41 05.6	
	0.6nm,0.6s						
BRLS	Borolday	4.30	326	eP	Pb	01 40 12.7	-1.3
	2.5nm,0.3s						
BRLS				eS	Sb	01 41 05.6	-0.4
	0.6nm,0.6s						
MTBS	Maitube	4.40	34	Pg	Pg	01 40 22.0	-0.6
	8.0nm,1.0s						
MTBS				Lg	Lg	01 41 21.4	
	7.3nm,0.5s						
MTBS	Maitube	4.40	34	eP	Pg	01 40 21.9	-0.6
	8.0nm,1.0s						
MTBS				eS	Sg	01 41 21.4	+1.9
	7.3nm,0.5s						
KRBS	Karabastau	4.61	24	Pg	Pg	01 40 25.8	-0.7
	2.9nm,0.5s						
KRBS				Lg	Lg	01 41 28.1	
	9.3nm,0.7s						
KOTS	Kotyrbulak	4.79	38	Pg	Pg	01 40 29.5	-0.5
	6.1nm,0.4s						
KOTS				Lg	Lg	01 41 34.6	
	32nm,0.9s						
KOTS	Kotyrbulak	4.79	38	eP	Pg	01 40 29.5	-0.5
	6.1nm,0.4s						
KOTS				eS	Sg	01 41 34.6	+2.6
	32nm,0.9s						
AB31	Akbulak array	13.53	320	Pn	P	01 42 19.3	-0.3
	0.8nm,0.8s,baz=138,slow=10.0,SNR=8.0						

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*SKO **15** 01:46:30.2, 41°.52N×19°.31E, h7^{km}, ML2.7*
*THE **15** 01:46:30.7, 42°N±4°×1°9E±°, h12^{km}, M3.0/12, MLh3.0/12*
*TIR **15** 01:46:30.1, 41°.62N×19°.25E, h48^{km}±3^{km}, Ml3.1/5*
*PDG **15** 01:46:32.0±0.3, 41°.70N×19°.45E, h14^{km}±1^{km}, MD3.0/1, ML2.9/13, Error ellipse: s-maj=1.6km s-min=1.5km az=90.0*
ISC 15 01:46:29.5±1.0**, 41°.58N**±0°.02×**19°.39E**±0°.02**, h12**^{km}±9^{km}**, n73,** σ**1^{s}.19**/107**, 20C-13D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULC	Ulcinj	0.40	345	⇑iPg	Pg	01 46 37.7	+0.2
ULC				i Sg	Sb	01 46 43.7	-1.0
TIR	Tirane	0.43	122	Pg	Pg	01 46 37.6	-0.4
TIR				Sg	Sg	01 46 43.6	-0.1
TIR				AML	AML	01 46 43.7	
	2.7nm,0.6s						
TIR	Tirane	0.43	122	i Pg	Pg	01 46 37.5	-0.4
TIR				i Sg	Sb	01 46 44.8	-0.7
DRME	Dracevica, Mon	0.63	346	⇑iPg	Pb	01 46 42.2	-0.2
DRME				eSg	Sb	01 46 52.4	+1.2
PHP	Peshkopia	0.80	82	Pg	Pg	01 46 43.9	-1.0
PHP				Sg	Sn	01 46 57.1	-1.5
PHP				AML	AML	01 47 04.2	
	1.6nm,0.4s						
BUM	Brajici-Budva	0.81	333	⇑iPg	Pb	01 46 45.8	+0.2
BUM				i Sg	Sb	01 46 57.3	+0.8
PDG	Podgorica	0.86	354	Pg	Pb	01 46 46.2	-0.1
PDG				Sg	Sn	01 46 58.8	-1.1
PDG	Podgorica	0.86	354	⇑P	Pn	01 46 46.8	-0.6
PDG				⇓S	Sn	01 47 00.2	+0.3
PDG	Podgorica	0.86	354	⇓iPg	Pb	01 46 46.3	-0.1
PDG				i Sg	Sn	01 47 00.0	+0.1
CEME	Cevo	1.03	340	⇓iPg	Pn	01 46 50.1	+0.2
CEME				eSg	Sn	01 47 04.0	-0.3
HCY	Herceg Novi	1.09	323	⇑iPg	Pg	01 46 50.6	0.0
HCY				i Sg	Sn	01 47 07.8	+2.0
PVY	Plav	1.10	23	⇓iPg	Pg	01 46 49.8	-0.9
PVY				i Sg	Sn	01 47 05.6	-0.6
VLO	Vlora	1.11	176	Pg	Pn	01 46 52.1	+1.2
VLO				Sg	Sn	01 47 07.2	+1.1
VLO				AML	AML	01 47 14.0	
	3.2nm,0.4s						
VLO	Vlora	1.11	176	P	Pn	01 46 52.1	+1.2
VLO				S	Sn	01 47 07.5	+1.4
OHR	Ohrid	1.16	113	i Pg	Pb	01 46 51.4	-0.2
OHR				i Sg	Sn	01 47 09.7	+2.1
OHR				eLg	Lg	01 47 10.6	
	comp=N,146nm,0.5s						
OHR				eLg	Lg	01 47 11.0	
	comp=E,101nm,0.8s						
NKME	Niksic	1.23	345	⇓iPg	Pg	01 46 53.6	+0.4
NKME				eSg	Sn	01 47 11.0	+1.8
KOME	Kolasin	1.27	4	⇓iPg	Pg	01 46 53.7	-0.3
KOME				eSg	Sn	01 47 11.3	+0.9
IVA	Berane	1.35	16	⇓iPg	Pb	01 46 54.5	-0.3
IVA				i Sg	Sg	01 47 13.2	+0.3
KBN	Korca	1.43	132	Pn	Pg	01 46 56.9	0.0
KBN				Sn	Sg	01 47 16.3	+0.9
KBN	Korca	1.43	132	P	Pg	01 46 56.7	-0.2
KBN				S	Sg	01 47 16.3	+0.9
BRY	Bratogost	1.46	335	⇑iPg	Pg	01 46 57.6	-0.1
BRY				i Sg	Sg	01 47 18.7	+2.0
SKO	Skopje	1.59	75	i Pg	Pg	01 47 00.7	+0.8
SKO				i Sg	Sg	01 47 21.5	+0.9
UPM	Unac-Piva	1.66	348	⇑iPg	Pg	01 47 00.9	-0.5
UPM				i Sg	Sg	01 47 24.9	+1.9
NEST	Nestorio	1.71	132	Pn	Pb	01 47 01.0	0.0
NEST				AML	AML	01 47 31.9	
	comp=E,0.5nm,0.6s						
NEST	Nestorio	1.71	132	P	Pb	01 47 00.8	-0.2
NEST				S	Sg	01 47 24.1	-0.5
PLE	Pljevlja	1.75	0	⇓iPn	Pb	01 47 01.3	-0.4
PLE				i Sn	Sg	01 47 24.2	-1.6
PENT	Pentalofos	1.92	136	P	Pb	01 47 03.8	-0.7
PENT				S	Sb	01 47 29.6	+1.2
NOCI	Noci	1.92	247	Pn	Pn	01 47 01.5	-0.6
NOCI				Sn	Sn	01 47 25.2	-1.1
NOCI				AML	AML	01 47 36.1	
	comp=E,0.5nm,0.4s						
IGT	Igoumenitsa	2.17	160	Pn	Pn	01 47 06.4	+0.9
IGT	Igoumenitsa	2.17	160	P	Pn	01 47 05.6	+0.2
IGT				S	Sn	01 47 33.2	+0.9
BARS	Barje	2.19	55	i Pn	Pb	01 47 07.7	-1.4
KZN	Kozani	2.21	124	P	Pn	01 47 07.5	+1.4
KZN				S	Sb	01 47 37.0	+0.2
KPRO	Kipourio	2.21	137	P	Pb	01 47 08.0	-1.5
KPRO				S	Sb	01 47 36.8	-0.1
JAN	Janina	2.22	149	P	Pn	01 47 07.5	+1.2
JAN				S	Sb	01 47 36.2	-0.9
MATE	Matera	2.23	246	⇑P	Pn	01 47 06.3	0.0
GRG	Griva	2.36	104	P	Pn	01 47 08.4	+0.3
GRG				S	Sb	01 47 38.8	-2.2
GRG	Griva	2.36	104	i Pn	Pn	01 47 09.1	+1.0
MRVN	Minervino Murg	2.46	259	Pn	Pn	01 47 08.9	-0.6
TETR	Tetrakomo, Epi	2.66	147	P	Pn	01 47 12.6	+0.3
BOVS	Bovan	2.67	39	⇑P	Pn	01 47 12.1	-0.3
BOVS				⇑S	Sn	01 47 46.3	+1.5
SGRT	San Giovanni R	2.73	275	Pn	Pn	01 47 12.7	-0.6
SGRT				Sn	Sn	01 47 41.5	-4.9
KKB	Krupnik	2.81	83	i Pn	Pn	01 47 16.1	+1.8
TYRN	Tyrnavos	2.86	130	P	Pn	01 47 16.6	+1.6
AMPL	Ampelaki	3.00	152	P	Pn	01 47 17.4	+0.5
NYDR	Nydri-Lefkada	3.03	160	P	Pn	01 47 16.9	-0.4
EVGI	Lefkada island	3.11	161	P	Pn	01 47 17.8	-0.6
TIP	Timpagrande	3.13	221	⇓P	Pn	01 47 18.1	-0.7
BLKB	Belogradchik	3.17	49	⇓S	Sb	01 48 00.1	-4.4
SRS	Serrai	3.20	97	i Pn	Pn	01 47 20.4	+0.7
MMB	Musomishta	3.27	89	i Pn	Pn	01 47 23.6	+2.9
MDVR	Moldovita	3.62	27	⇓P	Pn	01 47 25.7	+0.2
HERR	Herculane	3.98	33	⇑P	Pn	01 47 31.0	+0.7
PLVB	Pleven	4.27	63	⇓P	Pn	01 47 35.2	+0.9
BZS	Buzias	4.35	21	⇑P	Pn	01 47 35.8	+0.4
GZR	Gura Zlata	4.54	32	⇑P	Pn	01 47 39.3	+1.2
MORH	Mrgy, Hungar	4.67	354	⇓P	Pn	01 47 40.2	+0.5
SIRR	Siria	4.97	19	⇑P	Pn	01 47 44.8	+0.9
ELND	Elena	5.00	72	⇑P	Pn	01 47 44.9	+0.5
HUMR	Humele	5.05	52	⇑P	Pn	01 47 44.7	-0.3
OBKA	Obir	6.04	326	ePn	Pn	01 48 00.3	+1.6
	comp=E,0.8nm,0.3s						
MLR	Muntele Rosu	6.17	48	⇑P	Pn	01 48 00.8	+0.3
LEHL	Lehliu	6.17	60	⇑P	Pn	01 48 00.6	+0.2
ARSA	Arzberg	6.31	335	i Pn	Pn	01 48 03.2	+0.8
	comp=E,1.0nm,0.5s						
PLOR	Plostina	6.78	49	⇑P	Pn	01 48 08.8	0.0
CONA	Conrad Observa	6.83	340	ePn	Pn	01 48 10.5	+0.9
	comp=E,0.2nm,0.3s						
VRI	Vrincioaia	6.83	49	⇑P	Pn	01 48 09.5	0.0
KBA	Koelnbreinsper	7.00	324	ePn	Pn	01 48 12.5	+0.6
	comp=E,0.2nm,0.2s						
ABTA	Abfaltersbach	7.15	319	ePn	Pn	01 48 15.2	+1.2
	comp=E,0.3nm,0.2s						
MOA	Molln	7.25	332	ePn	Pn	01 48 17.6	+2.3
	comp=E,0.2nm,0.2s						
BIOA	Bad Ischl, Aus	7.36	328	ePn	Pn	01 48 17.2	+0.5
	comp=E,0.4nm,0.3s						
LESA	Schwarzleotal	7.56	323	ePn	Pn	01 48 19.6	0.0
	comp=E,0.5nm,0.3s						
WTTA	Wattenberg	7.94	318	ePn	Pn	01 48 26.7	+1.8
	comp=E,0.6nm,0.3s						
WATA	Walderalm	8.02	319	i Pn	Pn	01 48 27.4	+1.5
	comp=E,0.3nm,0.2s						

IDC 15 02:06:50.6±2.4**, 1°.56N×126°.59E, h0**^{km}**, mb3.1**/3**, mbtmp3.1**/3**, Error ellipse: s-maj=193.3km s-min=28.6km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.68	161	P	P	02 11 52.8	-1.2
	0.2nm,0.3s,baz=339,slow=10,SNR=5.1						
	0.2nm,0.3s						
ASAR	Alice Springs	26.07	165	P	P	02 12 26.8	+0.7
	0.1nm,0.3s,baz=347,slow=12,SNR=5.2						
	0.1nm,0.3s						
MKAR	Makanchi Array	59.25	326	P	P	02 16 54.1	+0.1
	0.1nm,0.3s,baz=124,slow=8.3,SNR=1.7						
	0.1nm,0.3s						

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*UPP **15** 02:09:27.1±0.0, 67°.84N×20°.10E, h0^{km}, ML2.2, Confirmed Induced event*
*IDC **15** 02:09:29.0±1.4, 67°.86N×20°.74E, h0^{km}, mbtmp3.0/3, ML1.8/3, Error ellipse: s-maj=20.5km s-min=8.0km az=114.0*
ISC 15 02:09:27.1±0.9**, 67°.82N**±0°.04×**20°.17E**±0°.04**, h0**^{km}**, n11,** σ**1^{s}.02**/14**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.15	26	P	Pg	02 09 30.1	+0.2
KUA				S	Sg	02 09 32.1	+0.2
RATU	Laukkuluspa	0.22	271	P	Pg	02 09 31.0	-0.3
KOVU	Salmi	0.40	360	P	Pg	02 09 34.9	+0.1
NIKU	Nikkaluokta	0.43	276	P	Pg	02 09 34.6	-0.8
DUNU	Dundret	0.72	167	P	Pb	02 09 41.6	-1.0
DUNU				S	Sb	02 09 52.3	-0.7
LANU	Lannavaara	0.73	71	P	Pg	02 09 40.5	-0.5
SALU	Saltoluokta	0.78	236	P	Pg	02 09 41.8	-0.1
MASU	Masugnsbyn	0.79	117	P	Pg	02 09 42.2	-0.1
ARCES	ARCESS Array B	2.60	46	Pn	Pn	02 10 09.8	-0.6
	0.2nm,0.3s,baz=230,slow=14,SNR=24						
ARCES				Lg	Lg	02 10 45.5	
	1.4nm,0.3s,baz=227,slow=25,SNR=16						
	0.6nm,0.3s						
FINES	FINESS Array B	6.89	156	Pn	Pn	02 11 11.0	+1.8
	0.1nm,0.3s,baz=346,slow=11,SNR=1.4						
FINES				Sn	Sn	02 12 27.6	-0.5
	0.1nm,0.3s,baz=347,slow=23,SNR=1.3						
FINES				Lg	Lg	02 13 02.4	
	0.3nm,0.3s,baz=344,slow=25,SNR=5.4						
	3.8nm,1.1s						
NOA	NORSAR Array B	7.82	214	Pn	Pn	02 11 24.3	+2.2
	baz=25,slow=11,SNR=1.4						
	1.2nm,1.0s						

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*IDC **15** 02:10:20.3±0.6, 33°.28N×137°.54E, h362^{km}±7^{km}, mb3.1/14, mbtmp3.9/18, Error ellipse: s-maj=18.7km s-min=10.5km az=66.0*
*JMA **15** 02:10:20.3±0.1, 33°.3N±1°.0×137°.4E±0°.9, h363^{km}±1^{km}, MV3.3/36, SE OFF KII PENINSULA*
ISC 15 02:10:20.4±0.8**, 33°.31N**±0°.08×**137°.41E**±0°.07**, h362**^{km}±6^{km}**, n40,** σ**0^{s}.65**/51**, mb3.2**/13**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTO2	TONANKAI O.B.S	0.53	323	P	Pn	02 11 06.4	+0.8
TTO2				eS	S	02 11 44.1	+2.0
TTO1	TONANKAI O.B.S	0.61	301	P	Pn	02 11 06.5	+0.7
TK02	Tokai 2	0.70	24	P	Pn	02 11 06.6	+0.5
JIE	Ise	1.23	332	P	Pn	02 11 08.5	+0.2
JIE				eS	S	02 11 46.5	-0.5
JKN2	Miekihoku	1.33	315	eP	Pn	02 11 08.8	0.0
JKN2				eS	S	02 11 46.8	-0.9
JTNC	Tanabenakahech	1.59	289	P	Pn	02 11 10.1	-0.1
JTNC				eS	S	02 11 49.4	-0.9
JNTK	Naratenkawa	1.59	307	P	Pn	02 11 10.4	0.0
TSUJ	Tsu 2	1.62	330	P	Pn	02 11 10.8	+0.4
JWY	Kouya	1.77	301	P	Pn	02 11 11.7	+0.3
JWY				S	S	02 11 51.5	-0.9
JWM	Minabe	1.80	288	P	Pn	02 11 11.3	-0.3
JWM				eS	S	02 11 51.6	-1.0
JHE	Heguri	1.96	314	P	Pn	02 11 12.7	+0.2
JHE				eS	S	02 11 53.1	-1.4
JHJ	Hachijo jima 2	2.00	95	P	Pn	02 11 12.2	-0.7
	44nm,0.5s,baz=35,slow=23,SNR=12						
JHJ				S	S	02 11 54.5	-0.5
	34nm,0.3s,baz=124,slow=22,SNR=6.1						
INU	Inuyama	2.06	351	P	Pn	02 11 13.0	-0.2
JGF	Kuroka	2.29	359	P	Pn	02 11 14.5	-0.4
JYTA	Yamagatataniai	2.35	346	P	Pn	02 11 15.6	+0.3
JAI	Aioi	2.52	282	eP	Pn	02 11 16.7	+0.1
JWT	Wachi	2.58	320	P	Pn	02 11 17.3	+0.3
JWT				eS	S	02 12 02.0	-0.7
JKS	Kasai	2.71	309	P	Pn	02 11 18.2	0.0
JMN	Monobe	2.98	279	P	Pn	02 11 20.7	+0.1
MJAR	Matsushiro Arr	3.29	11	P	Pn	02 11 22.9	-0.3
	3.4nm,0.4s,baz=191,slow=9.7,SNR=15						
MJAR				S	S	02 12 13.8	-0.2
	1.6nm,0.3s,baz=180,slow=15,SNR=6.0						
MAJO	Matsushiro	3.29	11	P	Pn	02 11 23.2	-0.1
JSD	Sado	4.77	8	P	Pn	02 11 37.6	-0.4
JNU	Nakatsue	5.48	270	P	Pn	02 11 46.5	+0.6
	14nm,0.4s,baz=73,slow=2.2,SNR=26						
JTU	Tsushima	6.77	283	P	Pn	02 11 58.9	-1.5
	74nm,2.0s						
KSRS	Korea Array	8.78	301	P	P	02 12 25.5	-0.2
	3.0nm,0.7s,baz=110,slow=12,SNR=8.9						
USRK	Ussuriysk Ar.	11.67	340	P	Pn	02 12 58.2	+0.3
	4.2nm,0.6s,baz=147,slow=11,SNR=9.7						
HILR	Hailar Array B	20.86	326	P	P	02 14 35.9	+0.6
	1.6nm,0.4s,baz=132,slow=11,SNR=7.3						
	1.6nm,0.4s						
SONM	Songino Array	27.45	311	P	P	02 15 35.0	+0.5
	0.6nm,0.5s,baz=104,slow=7.6,SNR=4.8						
	0.6nm,0.5s						
ZALV	Zalesovo Beam	42.13	316	P	P	02 17 39.1	+0.8
	0.5nm,0.4s,baz=94,slow=9.3,SNR=2.8						
	0.5nm,0.4s						
MKAR	Makanchi Array	43.44	305	P	P	02 17 49.5	+0.6
	0.7nm,0.5s,baz=86,slow=9.6,SNR=14						
MKAR				PcP	PcP	02 19 29.8	+0.1
	0.1nm,0.3s,baz=86,slow=7.8,SNR=4.4						
	0.7nm,0.5s						
KURBB	Kurchatov Arra	45.81	310	P	P	02 18 07.6	+0.3
	2.4nm,0.3s,baz=84,slow=6.7,SNR=7.1						
	2.4nm,0.3s						
BVAR	Borovoye Array	50.72	314	P	P	02 18 44.8	+0.4
	1.6nm,0.7s,baz=98,slow=9.6,SNR=7.4						
	1.6nm,0.7s						
WRA	Warramunga Arr	53.03	184	P	P	02 19 00.9	-0.7
	0.4nm,0.3s,baz=0.8,slow=7.7,SNR=7.0						
	0.4nm,0.3s						
ILAR	Eielson Array	54.38	31	P	P	02 19 09.8	-0.9
	0.5nm,0.9s,baz=274,slow=8.4,SNR=2.4						
	0.5nm,0.9s						
ASAR	Alice Springs	56.76	184	P	P	02 19 27.5	-0.5
	0.2nm,0.4s,baz=16,slow=11,SNR=7.8						
	0.2nm,0.4s						
ARCES	ARCESS Array B	66.31	339	P	P	02 20 31.0	+0.4
	1.1nm,0.5s,baz=65,slow=8.3,SNR=16						
	1.1nm,0.5s						
FINES	FINESS Array B	70.55	332	P	P	02 20 56.8	+0.1
	1.4nm,0.5s,baz=60,slow=5.3,SNR=16						
	1.4nm,0.5s						
HFS	Hagfors	76.08	335	P	P	02 21 28.8	+0.1
	1.0nm,0.6s,baz=70,slow=8.3,SNR=1.1						
	1.0nm,0.6s						
NOA	NORSAR Array B	76.30	336	P	P	02 21 29.9	0.0
	0.2nm,0.4s,baz=45,slow=5.6,SNR=1.3						
	0.2nm,0.4s						
BRTR	Keskin Array B	78.80	310	P	P	02 21 44.8	+0.6
	0.7nm,0.7s,baz=117,slow=3.5,SNR=5.2						
	0.7nm,0.7s						

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*NOU **15** 02:12:39.9, 42°.34S×173°.85E, h12^{km}, MLv3.4/10, South Island, New Zealand*
*WEL **15** 02:12:40.6±0.3, 42°S±2°×17°4E±°, h13^{km}±3^{km}, M3.0/12, ML2.8/13, MLv3.0/12, Error ellipse: s-maj=4.8km s-min=2.8km az=114.8, confirmed*
ISC 15 02:12:40.4±0.9**, 42°.28S**±0°.03×**173°.79E**±0°.03**, h21**^{km}**, n53,** σ**0^{s}.73**/60**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIKS	Kaikoura	0.17	209	P	Pb	02 12 45.9	-0.4
KIKS				S	Sb	02 12 49.7	-0.9
KHZ	Kahutara	0.23	234	P	Pb	02 12 46.9	+0.5
KHZ	Kahutara	0.23	234	S	Sb	02 12 50.0	-0.5
KHZ	Kahutara	0.23	234	P	Pb	02 12 46.3	0.0
LOKS	Mount Lookout	0.35	319	P	Pb	02 12 47.3	-0.7
MOLW	Molesworth Sta	0.44	296	P	Pb	02 12 48.7	-0.7
MOLW				S	Sb	02 12 54.3	-1.2
BSWZ	Blackbirch Sta	0.57	6	P	Pb	02 12 51.7	0.0
WTMC	Te Mara Farm W	0.64	238	P	Pb	02 12 53.9	+0.9
SEDS	Seddon Fire St	0.65	19	P	Pn	02 12 54.3	+0.1
WVFS	Wairau Valley	0.74	333	P	Pb	02 12 55.1	+0.6
THZ	Tophouse	0.84	308	P	Pb	02 12 56.3	0.0
THZ				S	Sb	02 13 07.3	+0.1
BWRS	Waikakaho Road	0.85	6	P	Pn	02 12 57.3	+0.3
TUWZ	Tuamarina	0.86	8	P	Pn	02 12 57.5	+0.3
TUWZ				S	Sn	02 13 09.6	+0.5
GVZ	Greta Valley S	0.88	219	P	Pn	02 12 58.5	+0.9
GVZ				S	Sn	02 13 11.5	+1.7
NNZ	Nelson	1.11	344	P	Pn	02 13 01.0	+0.3
TCW	Tory Channel	1.13	19	P	Pb	02 13 01.6	+0.4
TCW				S	Sn	02 13 16.8	+1.0
MRNZ	Matariki Terra	1.17	318	P	Pb	02 13 02.4	+0.5
SNZO	South Karori	1.19	35	P	Pb	02 13 02.6	+0.5
SNZO	South Karori	1.19	35	S	Sn	02 13 18.5	+1.3
BHW	Baring Head	1.19	43	P	Pn	02 13 02.3	+0.6
AMCZ	Amberley	1.23	223	P	Pb	02 13 03.8	+1.0
LTZ	Lake Taylor	1.23	246	P	Pn	02 13 03.1	+0.7
WEL	Wellington	1.24	37	P	Pn	02 13 01.8	-0.6
MSWZ	Moikau Station	1.39	52	P	Pn	02 13 04.8	+0.3
MSWZ				S	Sb	02 13 23.2	+0.3
TKNZ	Takaka Hill	1.39	333	P	Pb	02 13 05.7	0.0
DUWZ	D’Urville Isla	1.48	4	P	Pn	02 13 06.7	+0.9
CAW	Cannon Point	1.51	40	P	Pn	02 13 06.8	+0.6
PAWZ	Paruwai Farm	1.52	54	P	Pn	02 13 06.4	+0.1
DSZ	Denniston Nort	1.57	289	P	Pb	02 13 09.1	+0.3
KIW	Kapiti Island	1.65	31	P	Pn	02 13 09.0	+0.9
MQZ	McQueen’s Vall	1.65	210	P	Pn	02 13 07.7	-0.4
MQZ				S	Sn	02 13 28.2	-0.4
OXZ	Oxford	1.66	230	P	Pn	02 13 06.3	-1.9
TRWZ	Traveller	1.67	59	P	Pn	02 13 08.1	-0.3
MTW	Mount Morrison	1.70	49	P	Pn	02 13 08.8	-0.1
AKCZ	Akaroa Harbour	1.72	202	P	Pn	02 13 09.3	+0.2
QRZ	Quartz Range	1.74	327	P	Pb	02 13 11.5	0.0
QRZ	Quartz Range	1.74	327	S	Sb	02 13 34.2	+1.3
QRZ	Quartz Range	1.74	327	P	Pb	02 13 11.1	-0.4
INZ	Inchbonnie	1.79	255	P	Pn	02 13 11.3	+1.2
OGWZ	Otaki Gorge	1.79	36	P	Pn	02 13 10.5	+0.5
TMWZ	Te Maipa	1.96	54	P	Pn	02 13 12.1	-0.3
MHCZ	Mount Hutt	2.06	232	P	Pn	02 13 13.5	-0.2
MRZ	Mangatainoka R	2.10	40	P	Pn	02 13 14.4	0.0
WACZ	Wakanui South	2.19	220	P	Pn	02 13 15.7	+0.2
BFZ	Birch Farm	2.44	50	P	Pn	02 13 19.7	+0.7
BFZ	Birch Farm	2.44	50	P	Pn	02 13 18.3	-0.7
ARCZ	Arundel	2.54	228	P	Pn	02 13 20.5	+0.2
TMZ	Timaru	2.92	223	P	Pn	02 13 25.9	+0.2
KHEZ	Kahui Hut	2.99	3	P	Pn	02 13 27.4	+0.8
BKZ	Black Stump Fm	3.73	34	P	Pn	02 13 37.2	+0.5
HIZ	Hauiti	3.85	13	P	Pn	02 13 38.5	+0.1
ASAR	Alice Springs	37.85	287	P	P	02 20 02.2	+6.6
	0.5nm,0.4s,baz=104,slow=7.7,SNR=10.0						
	0.5nm,0.4s						
WRA	Warramunga Arr	39.97	291	P	P	02 20 11.9	-1.6
	1.1nm,0.4s,baz=113,slow=8.1,SNR=11						
	1.1nm,0.4s						

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*IDC **15** 02:27:39.1±8.0, 37°.68N×72°.29E, h187^{km}±54^{km}, mb3.4/3, mbtmp3.8/8, MS3.8/2, Error ellipse: s-maj=73.8km s-min=50.8km az=178.0*
*NNC **15** 02:27:39.9±1.9, 37°.80N×71°.98E, h174^{km}±29^{km}, mb2.8, mpv4.1, Error ellipse: s-maj=20.2km s-min=9.9km az=14.0*
ISC 15 02:27:31.7±0.9**, 37°.29N**±0°.06×**71°.9E**±0°.1**, h130**^{km}**, n29,** σ**1^{s}.96**/32**, mb3.6**/3**, 3C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRNI	Srinagar	3.99	143	eP	Pn	02 28 32.1	+1.1
SRNI				eS	Sn	02 29 17.7	+0.6
SRNI				IAML		02 29 25.5	
	comp=E,361nm,0.2s						
SRNI				IAML		02 29 25.6	
	comp=N,342nm,0.4s						
ALCI	Alchi Leh	5.26	124	eP	Pn	02 28 50.5	+1.8
ALCI				eS	Sn	02 29 50.4	+1.9
ALCI				IAML		02 29 51.7	
	comp=N,123nm,0.3s						
ALCI				IAML		02 29 52.1	
	comp=E,130nm,0.3s						
UCH	Uchtor	5.32	21	P	Pn	02 28 51.7	+2.3
	SNR=80						
EKS2	Erkin-Say	5.55	14	P	Pn	02 28 54.9	+2.7
	SNR=42						
AAK	Ala-Archa	5.69	19	P	Pn	02 28 56.6	+2.5
	SNR=22						
AAK	Ala-Archa	5.69	19	P	Pn	02 28 56.7	+2.5
	comp=E,17nm,0.3s,baz=180,slow=4.1,SNR=124						
AAK				S	Sn	02 29 57.6	-0.8
	comp=E,9.1nm,0.3s,baz=338,slow=22,SNR=12						
AAK	Ala-Archa	5.69	19	⇑P	Pn	02 28 56.6	+2.5
	comp=E,10nm,0.6s						
AAK				⇑S	Sn	02 29 57.3	-1.1
	comp=E,12nm,0.7s						
KBK	Karagaybulak	5.84	22	P	Pn	02 28 59.1	+2.9
	SNR=9.8						
KK31	Karatay Array	5.91	350	⇓P	Pn	02 28 59.7	+2.8
	comp=E,2.3nm,0.1s,baz=156,slow=11,SNR=182						
KK31				S	Sn	02 30 01.3	-2.1
	comp=E,14nm,0.3s,baz=169,slow=22,SNR=22						
CHMS	Chumysh	6.09	20	P	Pn	02 29 01.6	+2.1
	SNR=5.3						
USP	Ospenovka	6.28	17	P	Pn	02 29 03.4	+1.4
	SNR=20						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TKM2	Tokmak 2	6.28	25	P	Pn	02 29 04.8	+2.6
	SNR=5.3						
MTBS	Maitube	6.77	29	P	Pn	02 29 10.3	+1.7
	comp=E,18nm,0.7s						
KRBS	Karabastau	7.00	23	Lg	Lg	02 30 27.4	
	comp=E,3.6nm,0.4s						
SDNR	Sundarnagar	7.12	143	eS	Sn	02 30 29.2	-3.6
SDNR				IAML		02 30 33.1	
	comp=E,125nm,0.3s						
SDNR				IAML		02 30 33.8	
	comp=N,123nm,0.2s						
KOTS	Kotyrbulak	7.13	32	P	Pn	02 29 15.3	+1.8
	comp=N,9.1nm,0.5s						
SMLA	Simla	7.52	143	eP	Pn	02 29 19.2	+0.5
SMLA				eP		02 29 21.9	
SMLA				eS	Sn	02 30 39.5	-3.0
SMLA				eS		02 30 40.4	
SMLA				IAML		02 30 44.4	
	comp=E,103nm,0.5s						
SMLA				IAML		02 30 44.4	
	comp=E,94nm,0.6s						
SMLA				IAML		02 30 44.4	
	comp=N,74nm,0.6s						
SMLA				IAML		02 30 44.5	
	comp=N,78nm,0.6s						
MK31	Makanchi Array	12.21	36	⇓P	Pn	02 30 22.5	+1.3
	comp=N,0.5nm,0.7s,baz=222,slow=13,SNR=4.7						
MKAR	Makanchi Array	12.21	36	P	Pn	02 30 20.5	-0.8
	comp=N,0.3nm,0.6s,baz=225,slow=14,SNR=4.9						
KURBB	Kurchatov Arra	14.14	17	P	Pn	02 30 44.8	-1.2
	comp=N,0.8nm,0.2s,baz=194,slow=11,SNR=1.4						
AB31	Akbulak array	14.78	328	⇑P	P	02 30 55.8	-1.0
	comp=N,0.9nm,0.5s,baz=136,slow=12,SNR=5.4						
BVA0	Borovoye Array	15.77	357	P	Pn	02 31 06.4	0.0
	comp=N,0.1nm,0.5s,baz=148,slow=8.1,SNR=3.9						
BVAR	Borovoye Array	15.77	357	P	Pn	02 31 06.3	-0.1
	comp=N,0.5nm,0.4s,baz=172,slow=12,SNR=5.7						
ZALV	Zalesovo Beam	18.89	24	P	P	02 31 40.3	-1.5
	comp=N,1.1nm,0.3s,baz=216,slow=9.1,SNR=7.6						
FINES	FINESS Array B	37.25	325	P	P	02 34 30.9	+0.5
	comp=N,8.0nm,1.2s,baz=122,slow=7.2,SNR=3.5						
	comp=N,8.0nm,1.2s						
ARCES	ARCESS Array B	40.70	337	P	P	02 34 59.1	0.0
	comp=N,0.7nm,0.6s,baz=112,slow=8.0,SNR=9.7						
	comp=N,0.7nm,0.6s						
NOA	NORSAR Array B	44.20	322	P	P	02 35 27.6	+0.1
	comp=N,0.7nm,0.9s,baz=93,slow=8.0,SNR=1.4						
	comp=N,0.7nm,0.9s						
DAV	Davao City (W)	57.11	108	LR	LR	03 03 55.6	
	comp=N,95nm,19.5s,baz=22,slow=38						
RES	Resolute Bay	67.96	356	LR	LR	03 09 21.5	
	comp=N,57nm,18.6s,baz=14,slow=37						

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*ATH **15** 02:41:01.9, 37°.96N×27°.04E, h8^{km}±2^{km}, ML3.3/7, Manual Solution by S.Liakopoulos First location: 2019/12/15 02:42:28, This location: 2019/12/15 03:22:02 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 3 km*
*ISK **15** 02:41:03.1, 38°.00N×26°.97E, h8^{km}, ML3.7/43*
*AFAD **15** 02:41:03.3, 37°.99N×26°.98E, h7^{km}±2^{km}, MW3.7*
*THE **15** 02:41:03.8, 38°N±1°×2°7E±°, h11^{km}±3^{km}, M3.4/24, MLh3.4/24*
ISC 15 02:41:03.6±0.9**, 37°.99N**±0°.02×**26°.98E**±0°.02**, h13**^{km}±6^{km}**, n125, σ0^{s}.74**/159**, 7C-5D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMLD	Gumuldur	0.10	332	Pg	Pg	02 41 06.5	-0.1
KUSD	Kusadasi-Aydin	0.28	117	Pg	Pg	02 41 09.2	-0.2
KUSD				Sg	Sg	02 41 13.6	+0.4
GCAM	G?zelcaml?	0.35	145	P	Pg	02 41 10.8	+0.1
GCAM				S	Sg	02 41 15.9	+0.4
GCAM	G?zelcaml?	0.35	145	Pg	Pg	02 41 10.8	+0.1
GCAM				Sg	Sg	02 41 16.2	+0.7
BLCB	Balcova	0.40	7	P	Pg	02 41 11.5	-0.1
BLCB				S	Sg	02 41 17.0	0.0
BLCB	Balcova	0.40	7	Pg	Pg	02 41 11.3	-0.3
BLCB				Sg	Sg	02 41 16.7	-0.3
ZEYE	Izmir, Urla-Ze	0.45	304	P	Pg	02 41 12.3	-0.2
ZEYE				S	Sg	02 41 18.9	+0.3
URLA	Izmir	0.48	321	P	Pg	02 41 12.8	-0.3
URLA	Izmir	0.48	321	Pg	Pg	02 41 12.6	-0.5
URLA				Sg	Sg	02 41 19.6	+0.2
DDIM	Aydin, Didim	0.57	158	P	Pb	02 41 15.1	-0.3
DDIM				S	Sg	02 41 22.9	+0.6
CESE	eme	0.63	303	Pg	Pg	02 41 15.6	-0.4
DIDI	Didim-Aydin	0.65	161	Pg	Pg	02 41 16.3	+0.1
AYDB	Zeytinkoy-Aydi	0.72	93	Pg	Pg	02 41 17.6	-0.1
IZMR	zmir-demi	0.78	79	P	Pg	02 41 18.4	-0.4
IZMR				P	Pb	02 41 18.6	-0.6
IZMR				S	Sg	02 41 28.1	-1.0
KARB	zmir-Karabur	0.81	327	P	Pg	02 41 18.5	-0.7
KARB				S	Sb	02 41 30.4	0.0
CHOS	Chios island	0.83	299	P	Pg	02 41 19.3	-0.4
CHOS				S	Sb	02 41 31.4	+0.3
CHOS	Chios island	0.83	299	Pg	Pg	02 41 19.3	-0.4
CHOS				Sg	Sb	02 41 31.1	+0.1
CHOS	Chios island	0.83	299	P	Pg	02 41 19.2	-0.4
CHOS				S	Sb	02 41 30.8	-0.2
EAG2	Marmaro, Chios	0.88	309	P	Pg	02 41 20.0	-0.6
EAG2				S	Sb	02 41 32.6	+0.1
YKAV	Yalikavak-Bodr	0.90	164	Pg	Pb	02 41 21.0	0.0
ODEM	Odemis-Izmir	0.91	71	Pg	Pg	02 41 20.8	-0.5
MLSB	Milas	0.94	137	Pg	Pb	02 41 21.8	0.0
BODT	Bodrum	0.96	164	P	Pn	02 41 23.6	+0.7
BODT				S	Sn	02 41 37.1	+0.7
BODT	Bodrum	0.96	164	Pg	Pb	02 41 22.3	+0.1
BDRM	Kayabasi	0.99	158	P	Pg	02 41 22.2	-0.6
BDRM				S	Sg	02 41 35.5	-0.2
IZMD	zmir-Dikili-	0.99	358	P	Pb	02 41 22.5	-0.3
IZMD				S	Sg	02 41 35.3	-0.5
GOMA	Golmarmara-Man	1.03	46	Pg	Pn	02 41 23.6	-0.2
NAZL	Nazilli-Aydin	1.04	91	Pg	Pb	02 41 23.7	+0.2
DKL	Dikili	1.08	357	Pg	Pg	02 41 24.0	-0.5
ESEN	Aydn-Nazilli	1.10	99	P	Pg	02 41 23.9	-1.0
ESEN				S	Sg	02 41 38.3	-0.8
KIRA	zmir-Kiraz	1.14	79	P	Pg	02 41 24.5	-1.1
KIRA				S	Sg	02 41 38.2	-2.3
SOMA	Soma-Manisa	1.25	20	Pn	Pn	02 41 26.8	0.0
MULA	Mugla, Merkez-	1.29	124	P	Pn	02 41 27.0	-0.5
MULA				S	Sn	02 41 45.5	+0.7
GORD	Gordes-Manisa	1.32	45	Pn	Pg	02 41 28.4	-0.5
AYVA	Ayvalik	1.34	350	P	Pn	02 41 28.2	+0.2
AYVA				S	Sg	02 41 46.2	-0.5
MANT	Manisa	1.34	68	P	Pn	02 41 28.5	+0.2
MANT				S	Sb	02 41 43.8	-2.2
YER	Yerkesik	1.34	129	P	Pn	02 41 27.6	-0.5
YER				S	Sb	02 41 45.3	-0.5
YER	Yerkesik	1.34	129	Pn	Pb	02 41 28.9	+0.2
DAT	Datca	1.34	159	P	Pn	02 41 27.4	-0.8
DAT				S	Sg	02 41 47.2	+0.3
YAZI	Mula-Dat§a-	1.36	164	P	Pb	02 41 29.3	+0.4
PRK	Paraskevi	1.37	336	P	Pn	02 41 27.6	-0.9
PRK				S	Sn	02 41 46.8	+0.3
PRK	Paraskevi	1.37	336	P	Pn	02 41 27.4	-1.1
PRK				S	Sg	02 41 47.2	-0.6
NISR	Nisiros	1.38	175	P	Pn	02 41 28.2	-0.4
NISR				S	Sg	02 41 47.7	-0.3
KULA	Kula-Manisa	1.43	68	Pn	Pb	02 41 30.0	-0.1
APE	Apeiranthos	1.47	232	P	Pn	02 41 28.3	-1.6
APE				S	Sn	02 41 49.3	+0.2
APE	Apeiranthos	1.47	232	⇑P	Pn	02 41 28.4	-1.6
APE	Apeiranthos	1.47	232	P	Pn	02 41 28.1	-1.8
STEP	BALIKESIR_Sava	1.50	22	P	Pn	02 41 29.4	-0.9
STEP				S	Sb	02 41 50.8	+0.4
BUHA	Balikesir, Bur	1.51	3	P	Pn	02 41 29.8	-0.7
BUHA				S	Sg	02 41 51.8	-0.5
TURN	Turunc	1.58	140	P	Pn	02 41 31.8	+0.5
GPNR	Gulpinar-Canak	1.61	336	Pn	Pn	02 41 32.3	+0.6
TAVA	DENIZLI_Tavas	1.62	108	P	Pn	02 41 31.6	-0.5
TAVA				S	Sg	02 41 56.8	+1.0
YAYO	Edremit-Balk	1.62	3	Pn	Pb	02 41 32.7	-0.7
DNIZ	Denizli-Tavas-	1.67	102	P	Pn	02 41 32.6	-0.2
DNIZ				S	Sg	02 41 58.7	+1.2
DEMI	Demirci	1.72	52	P	Pn	02 41 32.8	-0.6
DEMI				S	Sg	02 41 57.8	-1.3
USAK	Uak-Merkez	1.76	65	P	Pn	02 41 33.3	-0.6
USAK				S	Sb	02 41 57.4	-0.5
BALB	Balikesir	1.79	23	Pn	Pn	02 41 35.1	+0.8
EZNE	Ezine-Canakkal	1.83	345	Pn	Pn	02 41 35.5	+0.7
EZN	Ezine	1.90	345	P	Pn	02 41 35.5	-0.3
EZN				S	Sn	02 42 00.6	+0.9
EZN	Ezine	1.90	345	Pn	Pn	02 41 36.6	+0.8
SIMA	Simav-Kutahya	1.92	55	Pn	Pn	02 41 37.1	+1.0
SMAA	Simav-Kutahya	1.92	54	Pn	Pn	02 41 37.1	+0.9
THR8	Santorini-Mono	1.98	218	P	Pn	02 41 36.4	-0.5
BOZC	Bozcaada	1.99	339	Pn	Pn	02 41 37.9	+0.9
ARG	Arkhangelos	1.99	152	P	Pn	02 41 37.1	+0.1
ARG				S	Sn	02 42 02.8	+0.9
ARG	Arkhangelos	1.99	152	P	Pn	02 41 35.5	-1.6
KARY	Karystos	2.01	272	P	Pn	02 41 36.8	-0.4
KARY	Karystos	2.01	272	P	Pn	02 41 36.4	-0.9
THERA	Ancient Thera,	2.01	217	P	Pn	02 41 36.5	-0.9
THERA	Ancient Thera,	2.01	217	P	Pn	02 41 36.6	-0.7
THR3	Thira Island,	2.02	219	P	Pn	02 41 38.3	+1.0
CANM	Can-anakkale	2.02	2	Pn	Pn	02 41 38.3	+0.9
SNT5	Nea Kammeni, S	2.02	219	P	Pn	02 41 37.8	+0.4
SAP3	Santorini-Thir	2.02	221	P	Pn	02 41 36.6	-0.9
SHAP	Saphane-Kutahy	2.04	59	Pn	Pn	02 41 38.8	+1.0
THR6	Thira Island,	2.06	218	P	Pn	02 41 38.1	+0.2
DST	Dursunbey	2.06	38	Pn	Pn	02 41 38.6	+0.6
SKY	Skiros Island	2.10	296	P	Pn	02 41 38.7	+0.1
SKY	Skiros Island	2.10	296	P	Pn	02 41 38.6	+0.1
GONE	Gonen-Balikesi	2.13	15	Pn	Pn	02 41 38.8	-0.1
COMU	Canakkale	2.14	350	Pn	Pn	02 41 40.0	+0.9
SUSR	Susurluk-Balik	2.15	23	Pn	Pn	02 41 39.7	+0.4
BIGA	Biga-Canakkale	2.29	3	Pn	Pn	02 41 41.8	+0.6
KYMI	Kymi, Euboea I	2.35	287	P	Pn	02 41 42.5	+0.5
KYMI	Kymi, Euboea I	2.35	287	P	Pn	02 41 42.2	+0.2
GADA	Gvkgeada	2.35	339	P	Pn	02 41 41.5	-0.5
GADA	Gvkgeada	2.35	339	Pn	Pn	02 41 42.6	+0.6
LIA	Limnos Island	2.37	324	P	Pn	02 41 41.8	-0.4
LIA	Limnos Island	2.37	324	P	Pn	02 41 41.6	-0.6
LPK	Lapseki	2.39	356	Pn	Pn	02 41 43.0	+0.5
DION	Dionisos Attik	2.41	273	P	Pn	02 41 42.5	-0.2
DION	Dionisos Attik	2.41	273	P	Pn	02 41 42.5	-0.2
KRBG	Karabiga-Canak	2.42	6	Pn	Pn	02 41 43.4	+0.6
TVSB	Tavsanli	2.43	52	Pn	Pn	02 41 42.5	-0.7
GELI	Tayfur-Gelibol	2.44	351	Pn	Pn	02 41 43.1	-0.1
EDC	Edincik	2.45	16	Pn	Pn	02 41 44.5	+1.1
PTL	Penteli	2.46	272	P	Pn	02 41 43.3	-0.2
PTL	Penteli	2.46	272	P	Pn	02 41 43.1	-0.3
BAND	Balkesir-Ban	2.52	20	⇑P	Pb	02 41 49.8	+1.1
VLY	Voula,Athens	2.52	268	P	Pn	02 41 44.1	-0.2
ATHU	Athens Univers	2.52	270	P	Pn	02 41 44.6	+0.3
ORLT	Orhaneli	2.54	35	Pn	Pn	02 41 45.3	+0.7
MRMT	Marmara Adasi	2.66	10	Pn	Pn	02 41 47.1	+0.9
RKY	Sarkoy-Tekirda	2.70	3	Pn	Pn	02 41 47.9	+1.1
ERIK	Erikli-Kesan	2.70	353	Pn	Pn	02 41 47.0	+0.2
SMTH	Samothraki Isl	2.72	336	P	Pn	02 41 46.5	-0.6
CAVK	Edirne/Enez-Ca	2.77	347	⇓P	Pg	02 41 58.2	+1.4
MDNY	Mudanya-Bursa	2.80	31	Pn	Pn	02 41 49.4	+1.2
ENEZ	Enez	2.82	347	P	Pn	02 41 48.3	0.0
ENEZ	Enez	2.82	347	Pn	Pn	02 41 48.8	+0.4
NPS	Neapolis	2.93	202	P	Pn	02 41 49.2	-0.8
ARMT	Armutlu	2.96	29	Pn	Pn	02 41 51.6	+1.2
ALN	Alexandroupoli	2.99	346	P	Pn	02 41 50.3	-0.5
ALN	Alexandroupoli	2.99	346	Pn	Pn	02 41 50.3	-0.5
UKOP	Uzunkopru-Edir	3.15	355	Pn	Pn	02 41 52.9	0.0
CRLT	Corlu	3.19	10	Pn	Pn	02 41 53.1	-0.4
ANTO	Ankara	4.91	66	⇓P	Pg	02 42 38.1	+0.4
ELND	Elena	5.01	351	⇑P	Pn	02 42 18.6	+0.1
MLR	Muntele Rosu	7.54	354	⇓P	Pn	02 42 55.5	+2.2
LOT	Lotru	7.83	343	⇑P	Pb	02 43 10.8	-8.4
MDVR	Moldovita	7.86	331	⇓P	Pn	02 42 57.8	+0.2
PLOR	Plostina	7.86	358	⇓P	Pn	02 42 59.2	+1.6
VRI	Vrincioaia	7.87	359	⇑P	Pb	02 43 09.5	-10
GZR	Gura Zlata	8.04	338	⇑P	Pn	02 43 09.4	+9.3
TURR	Turia	8.09	355	⇑P	Pn	02 43 02.6	+1.8

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*IDC **15** 02:42:44.0±1.9, 2°.48S×128°.77E, h0^{km}, mb3.7/3, mbtmp3.8/4, ML3.9/1, MS3.0/1, Error ellipse: s-maj=144.6km s-min=23.7km az=69.0*
*DJA **15** 02:42:49.1±0.5, 3°S±3°×12°8E±°, h14^{km}±5^{km}, M4.4/14, mb4.7/6, mB5.3/3, MLv4.2/14, Mw(mB)4.7/3*
ISC 15 02:42:50.5±0.8**, 2°.93S**±0°.06×**127°.78E**±0°.04**, h38**^{km}**, n18, σ1^{s}.78**/25**, mb3.8**/3**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRAI	Karang Ratu	0.72	122	P	Pn	02 43 03.6	-0.6
KRAI				S	Sn	02 43 15.4	+1.4
NLAI	Namlea	0.75	246	P	Pn	02 43 05.8	+1.2
NLAI				S	Sn	02 43 17.0	+2.3
AAI	Ambon	0.85	151	P	Pn	02 43 06.9	+0.8
MSAI	Masohi	1.22	110	P	Pn	02 43 12.8	+1.8
MSAI				S	Sn	02 43 29.2	+3.0
SANI	Sanana	2.00	296	P	Pn	02 43 20.9	-0.8
SANI				S	Sn	02 43 44.8	-0.7
BNDI	Bandanaira	2.64	127	P	Pn	02 43 32.9	+2.3
SWI	Sorong	4.04	59	P	Pn	02 43 49.7	-0.1
SWI				S	Sn	02 44 36.5	+0.6
FAKI	Fak Fak	4.46	90	P	Pn	02 43 55.4	-0.2
LUWI	Luwuk	5.35	290	P	Pn	02 44 08.7	+0.8
	0.3nm54nm,0.7s						
APSI	Ampana	6.45	288	P	Pn	02 44 24.9	+1.9
RKPI	Ransiki, Papua	6.54	78	P	Pn	02 44 22.8	-1.5
	35nm,0.6s						
MWPI	Manokwari, Pap	6.56	72	P	Pn	02 44 25.0	+0.5
MRSI	Marisa	6.75	300	P	Pn	02 44 27.4	+0.2
MRSI				S	Sn	02 45 45.4	+2.6
DAV	Davao City (W)	10.18	348	LR	LR	02 49 34.9	
	comp=Z,73nm,18.3s,baz=348,slow=41						
WRA	Warramunga Arr	18.08	160	P	Pn	02 46 57.6	-1.3
	0.4nm,0.3s,baz=342,slow=12,SNR=9.9						
WRA				S	Sn	02 50 16.0	-3.7
	0.6nm,0.8s,baz=338,slow=22,SNR=3.0						
	2.8nm,0.8s						
ASAR	Alice Springs	21.45	164	P	P	02 47 36.1	+0.4
	3.3nm,0.6s,baz=346,slow=11,SNR=54						
ASAR				S	S	02 51 28.4	-3.3
	0.9nm,0.8s,baz=350,slow=21,SNR=7.0						
	3.3nm,0.6s						
MKAR	Makanchi Array	63.64	327	P	P	02 53 17.8	0.0
	0.5nm,0.7s,baz=121,slow=8.3,SNR=4.9						
	0.5nm,0.7s						
KURBB	Kurchatov Arra	67.91	329	P	P	02 53 45.9	+0.6
	0.7nm,0.8s,baz=127,slow=5.8,SNR=4.4						
	0.7nm,0.8s						

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*CATAC **15** 02:42:58.4±0.7, 13°N±3°×9°0W±°, h12^{km}±2^{km}, M3.0/10, MLv3.0/10, Error ellipse: s-maj=7.3km s-min=4.9km az=25.6, confirmed*
*GCG **15** 02:42:59.0±1.2, 13°.31N×90°.34W, h13^{km}±14^{km}, MD4.1, ML3.4*
*SNET **15** 02:43:00.2±0.6, 13°.25N×90°.23W, h22^{km}, ML3.1*
ISC 15 02:43:00.0±1.5**, 13°.34N**±0°.07×**90°.21W**±0°.04**, h10**^{km}**, n39, σ1^{s}.10**/43**, 1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	0.54	21	P	Pb	02 43 12.2	+0.7
NUBE	Las Nubes	0.70	37	⇓eP	Pb	02 43 14.6	+0.2
NUBE				eS	Sb	02 43 25.9	+1.7
NUBE	Las Nubes	0.70	37	P	Pb	02 43 14.6	+0.2
CEVE	Cerro Verde	0.75	50	eP	Pb	02 43 15.8	+0.4
CEVE				eS	Sn	02 43 28.4	-0.1
CEVE	Cerro Verde	0.75	50	P	Pb	02 43 15.9	+0.5
SLOZ	Alcaldia de Sa	0.80	31	P	Pg	02 43 11.6	-3.9
JAYA	Jayaque - finc	0.81	67	eP	Pb	02 43 16.0	-0.3
JAYA				eS	Sb	02 43 27.9	+0.6
JAYA	Jayaque - finc	0.81	67	i P	Pb	02 43 16.0	-0.3
JAYA				eS	Sb	02 43 27.8	+0.6
JAYA	Jayaque - finc	0.81	67	P	Pb	02 43 16.0	-0.3
JAYA	Jayaque - finc	0.81	67	S	Sn	02 43 29.4	-0.3
LALI	Alcalda de L	0.88	80	P	Pg	02 43 16.6	-0.4
LALI	Alcalda de L	0.88	80	S	Sg	02 43 28.8	+0.3
UNIC	Universidad Ca	0.91	45	P	Pg	02 43 17.8	+0.3
UNIC	Universidad Ca	0.91	45	S	Sb	02 43 31.7	+1.6
CEDA	San Andres	0.92	60	S	Sn	02 43 32.4	0.0
PMON	Piamonte	0.95	67	P	Pb	02 43 18.3	-0.3
PMON	Piamonte	0.95	67	S	Sn	02 43 35.1	+1.9
UEES	Universidad Ev	1.02	68	S	Sn	02 43 35.8	+0.9
UEES	Universidad Ev	1.02	68	P	Pg	02 43 18.0	-1.6
PANCS	Alcalda de	1.04	75	S	Sn	02 43 35.6	+0.2
UDBS	Universidad Do	1.09	70	S	Sn	02 43 37.3	+0.6
ESSG	Sabana Grande	1.20	330	eP	Pn	02 43 19.9	-3.1
PAVA	Las Pavas	1.29	73	S	Sg	02 43 43.3	+1.6
MTO3	Montecristo	1.34	38	eP	Pn	02 43 24.5	-0.5
MTO3	Montecristo	1.34	38	P	Pn	02 43 24.5	-0.5
MTO3	Montecristo	1.34	38	S	Sn	02 43 43.7	+0.6
UESV	Universidad de	1.42	78	S	Sg	02 43 45.9	+0.2
ESQI	Esquipulas	1.48	35	S	Sn	02 43 46.9	+0.7
ESQI	Esquipulas	1.48	35	P	Pn	02 43 25.9	-1.0
LLGN	La Laguna	1.48	56	P	Pn	02 43 26.5	-0.3
LLGN	La Laguna	1.48	56	S	Sb	02 43 47.4	+0.8
SCLA	Alcaldia de Sa	1.49	76	P	Pn	02 43 26.0	-0.9
SCLA	Alcaldia de Sa	1.49	76	S	Sg	02 43 48.2	+0.2
STG5	El Palmar, Qui	1.53	314	eP	Pg	02 43 29.8	+0.4
STG8	El Palmar, Qui	1.56	315	eP	Pg	02 43 30.5	+0.4
APG	El Apazote	1.67	352	eP	Pn	02 43 29.3	-0.3
PACA	Pacayal	1.84	86	S	Sb	02 43 57.5	+0.4
CNCH	Conchagua	2.32	91	S	Sn	02 44 08.2	+1.2
CNCH	Conchagua	2.32	91	P	Pn	02 43 37.8	-0.6

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*MOS **15** 02:49:31.1±0.9, 48°.41N×155°.61E, h17^{km}, mb4.1/1, Error ellipse: s-maj=31.8km s-min=4.9km az=75.0*
*KRSC **15** 02:49:36.2±1.7, 48°.78N×156°.40E, h16^{km}±29^{km}, Ml4.1*
*SKHL **15** 02:49:36.1±0.0, 48°.70N×155°.20E, h59^{km}±6^{km}, mb4.7/2*
*IDC **15** 02:49:38.1±6.6, 48°.69N×155°.19E, h63^{km}±65^{km}, mb3.2/2, mbtmp3.7/4, ML3.6/2, Error ellipse: s-maj=134.1km s-min=24.0km az=142.0*
ISC 15 02:49:36.1±1.3**, 48°.7N**±0°.1×**155°.5E**±0°.1**, h36**^{km}**, n63, σ1^{s}.65**/61**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.08	11	ePN	Pn	02 50 07.8	-0.6
SKR				pmax	pmax		
	comp=Z,72nm,0.3s						
SKR				MLR	MLR		
	comp=Z,600nm,10.0s						
SKR	Severo-Kuril's	2.08	11	eP	Pn	02 50 07.8	-0.6
SKR				eS	Sn	02 50 32.1	-0.9
SKR	Severo-Kuril's	2.08	11	eP	Pn	02 50 07.7	-0.6
SKR				AMB	AMB	02 50 09.2	
	comp=Z,110nm,0.2s						
SKR				eS	Sn	02 50 31.4	-1.6
SKR				A	A	02 50 33.9	
	comp=Z,330nm,0.3s						
SKR				A	A	02 50 33.9	
	comp=Z,460nm,0.3s						
PAU	Pauzhetka	2.95	17	eP	Pn	02 50 20.6	+0.3
PAU				AMB	AMB	02 50 25.1	
	comp=Z,50nm,0.3s						
PAU				eS	Sn	02 50 54.0	-0.5
PAU				A	A	02 51 00.9	
	comp=Z,340nm,0.4s						
PAU				A	A	02 51 00.9	
	comp=Z,300nm,0.4s						
KDTR	Khodutka, Kamc	3.58	27	PN	Pn	02 50 29.2	+0.3
KDTR	Khodutka, Kamc	3.58	27	eP	Pn	02 50 29.3	+0.3
KDTR				eS	Sn	02 51 09.3	-0.7
KDTR	Khodutka, Kamc	3.58	27	eP	Pn	02 50 29.2	+0.3
ASAK	Asacha	4.05	22	PN	Pn	02 50 36.8	+1.3
ASAK	Asacha	4.05	22	eP	Pn	02 50 36.9	+1.3
MTVR	Mutnovka	4.21	23	PN	Pn	02 50 39.1	+1.3
MTVR	Mutnovka	4.21	23	eP	Pn	02 50 39.2	+1.3
GRL	Gorelyy	4.25	22	PN	Pn	02 50 39.4	+1.2
GRL	Gorelyy	4.25	22	eP	Pn	02 50 39.5	+1.2
RUS	Russkaya	4.26	26	PN	Pn	02 50 39.2	+0.9
RUS	Russkaya	4.26	26	eP	Pn	02 50 39.2	+0.9
RUS				eS	Sn	02 51 25.9	-0.8
RUS	Russkaya	4.26	26	eP	Pn	02 50 39.2	+0.9
KRMR	Karymshinskiy	4.52	21	PN	Pn	02 50 43.8	+2.0
KRMR	Karymshinskiy	4.52	21	eP	Pn	02 50 43.9	+2.0
KRMR	Karymshinskiy	4.52	21	eP	Pn	02 50 43.8	+2.0
PEA0B	Petropavlovsk-	4.69	17	PN	Pn	02 50 46.1	+1.9
PETK	Petropavlovsk-	4.69	17	P	Pn	02 50 46.2	+2.0
	comp=Z,2.1nm,0.3s,baz=185,slow=12,SNR=32						
	comp=Z,4.8nm,0.4s						
PET	Petropavlovsk	4.83	24	ePN	Pn	02 50 47.2	+1.2
PET	Petropavlovsk	4.83	24	eP	Pn	02 50 48.4	+2.4
PET				AMB	AMB	02 50 48.8	
	comp=Z,20nm,0.4s						
PET				eS	Sn	02 51 40.8	+0.2
PET				A	A	02 51 48.9	
	comp=Z,40nm,0.4s						
PET				A	A	02 51 48.9	
	comp=Z,40nm,0.4s						
DALK	Dalny	4.86	24	PN	Pn	02 50 46.9	+0.4
DALK	Dalny	4.86	24	eP	Pn	02 50 46.9	+0.4
UGLR	Uglovaya	5.04	24	PN	Pn	02 50 50.8	+1.7
UGLR	Uglovaya	5.04	24	eP	Pn	02 50 50.8	+1.7
KOK	Koryaka	5.07	22	PN	Pn	02 50 51.9	+2.5
KOK	Koryaka	5.07	22	eP	Pn	02 50 52.0	+2.5
KOK	Koryaka	5.07	22	eP	Pn	02 50 51.9	+2.5
AVH	Avacha	5.07	23	PN	Pn	02 50 52.0	+2.6
AVH	Avacha	5.07	23	eP	Pn	02 50 52.1	+2.6
SMAR	Somma	5.08	23	PN	Pn	02 50 52.6	+2.9
SMAR	Somma	5.08	23	eP	Pn	02 50 52.7	+2.9
KRER	Koryakskii	5.10	23	PN	Pn	02 50 51.9	+1.8
KRER	Koryakskii	5.10	23	eP	Pn	02 50 51.9	+1.8
SDLR	Sedlovina	5.12	24	PN	Pn	02 50 51.0	+0.9
SDLR	Sedlovina	5.12	24	eP	Pn	02 50 51.1	+0.9
KRX	Arik	5.13	22	PN	Pn	02 50 50.6	+0.3
KRX	Arik	5.13	22	eP	Pn	02 50 50.7	+0.3
GNL	Ganaly	5.29	16	PN	Pn	02 50 55.4	+2.9
GNL	Ganaly	5.29	16	eP	Pn	02 50 55.4	+2.9
SPN	Mys Shipunski	5.31	31	PN	Pn	02 50 53.4	+0.8
SPN	Mys Shipunski	5.31	31	eP	Pn	02 50 53.5	+0.8
SPN				eS	Sn	02 51 50.5	-2.0
SPN	Mys Shipunski	5.31	31	eP	Pn	02 50 55.4	+2.7
KZV	Kizimen	7.13	23	PN	Pn	02 51 20.6	+2.8
KZV	Kizimen	7.13	23	eP	Pn	02 51 20.7	+2.8
TYV	Tymovskoe	8.59	290	eP	Pn	02 51 36.6	-1.0
KBTR	Krutoberegovo	8.80	28	PN	Pn	02 51 41.2	+0.7
KBTR	Krutoberegovo	8.80	28	eP	Pn	02 51 41.2	+0.7
JKA	Kamikawa-asahi	9.97	248	eP	Pn	02 51 57.0	+0.3
ASAJ	Asahikawa	9.98	248	P	Pn	02 51 57.0	+0.3
	comp=Z,1.5nm,0.3s,baz=67,slow=14,SNR=9.1						
	comp=Z,8.0nm,0.6s						
KSRS	Korea Array	22.90	251	P	P	02 54 34.8	-1.7
	comp=Z,1.3nm,0.7s,baz=45,slow=11,SNR=4.2						
	comp=Z,1.3nm,0.7s						
H11N2	WAKE ISLAND Hy	30.29	158	T	T	03 28 05.6	
	baz=345,slow=76,SNR=9.3						
H11N1	WAKE ISLAND Hy	30.30	158	T	T	03 28 07.8	
	baz=345,slow=76,SNR=8.7						
H11N3	WAKE ISLAND Hy	30.30	158	T	T	03 27 59.8	
	baz=345,slow=76,SNR=6.4						
H11S1	WAKE ISLAND Hy	31.41	159	T	T	03 29 31.6	
	baz=346,slow=76,SNR=90						
H11S3	WAKE ISLAND Hy	31.43	159	T	T	03 29 30.0	
	baz=346,slow=76,SNR=125						
H11S2	WAKE ISLAND Hy	31.43	159	T	T	03 29 33.0	
	baz=346,slow=76,SNR=94						
TXAR	Lajitas Array	75.19	62	P	P	03 01 14.9	0.0
	comp=Z,0.2nm,0.6s,baz=323,slow=6.1,SNR=3.8						
	comp=Z,0.2nm,0.6s						
H03N2	Juan Fernandez	137.17	90	T	T	05 41 57.4	
	baz=310,slow=77,SNR=9.0						
H03N1	Juan Fernandez	137.18	90	T	T	05 41 57.9	
	baz=310,slow=77,SNR=6.7						
H03N3	Juan Fernandez	137.18	90	T	T	05 41 59.7	
	baz=310,slow=77,SNR=9.0						

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*NNC **15** 02:53:59.0±0.3, 44°.21N×79°.09E, h2^{km}±3^{km}, mb3.9, mpv3.8, Error ellipse: s-maj=2.8km s-min=2.3km az=83.0*
*SOME **15** 02:54:00.8, 44°.20N×79°.05E, h20^{km}*
ISC 15 02:53:59.7±0.9**, 44°.21N**±0°.02×**79°.10E**±0°.02**, h14**^{km}±6^{km}**, n51, σ1^{s}.60**/88**, 12C-3D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNOS	Konyrlen	0.16	20	P	Pg	02 54 04.3	+0.4
	462nm,0.1s						
KNOS				S	Sg	02 54 07.1	+0.4
	7µm,0.2s						
BLB	Baldybastay	0.46	257	P	Pb	02 54 09.3	-0.4
	156nm,0.2s						
BLB				S	Sb	02 54 15.7	-0.8
	667nm,0.3s						
KPKS	Kokpek	0.80	202	P	Pg	02 54 15.2	-0.1
	56nm,0.1s						
KPKS				S	Sg	02 54 25.9	+0.1
	405nm,0.2s						
ARXS	Arharly	0.92	271	P	Pg	02 54 17.0	-0.5

	43nm,0.3s						
ARXS				S	**Sg**	**02 54 28.9**	**-0.6**
	152nm,0.3s						
ARXS	**Arharly**	**0.92**	**271**	*e*P	**Pg**	**02 54 17.0**	**-0.5**
	43nm,0.3s						
ARXS				*e*S	**Sg**	**02 54 28.9**	**-0.6**
	152nm,0.3s						
PDGK	**Podgornoye**	**0.92**	**162**	⇑P	**Pg**	**02 54 17.0**	**-0.6**
	50nm,0.3s						
PDGK				⇑S	**Sg**	**02 54 29.8**	**+0.2**
	66nm,0.3s						
TDK	**Taldyqorghan**	**0.94**	**328**	P	**Pg**	**02 54 17.0**	**-0.9**
	239nm,0.3s						
TDK				S	**Sg**	**02 54 28.9**	**-1.2**
	443nm,0.2s						
TDK	**Taldyqorghan**	**0.94**	**328**	*e*P	**Pg**	**02 54 17.0**	**-0.9**
	239nm,0.3s						
TDK				*e*S	**Sg**	**02 54 28.9**	**-1.2**
	443nm,0.2s						
KURS	**Kuram**	**0.98**	**223**	P	**Pg**	**02 54 18.6**	**-0.2**
	49nm,0.2s						
KURS				S	**Sb**	**02 54 31.6**	**+0.1**
	101nm,0.3s						
UZB	**Uzynbulak**	**1.06**	**183**	P	**Pg**	**02 54 19.6**	**-0.6**
	81nm,0.2s						
UZB				S	**Sg**	**02 54 33.4**	**-0.7**
	267nm,0.4s						
UZB	**Uzynbulak**	**1.06**	**183**	*e*P	**Pg**	**02 54 19.6**	**-0.6**
	81nm,0.2s						
UZB				*e*S	**Sg**	**02 54 33.4**	**-0.7**
	267nm,0.4s						
SHLS	**Shalkode**	**1.08**	**166**	*e*P	**Pn**	**02 54 21.5**	**+1.0**
	85nm,0.2s						
SHLS				*e*S	**Sn**	**02 54 36.4**	**+0.9**
	873nm,0.3s						
KAPS	**Kapalarasan**	**1.09**	**10**	P	**Pb**	**02 54 19.6**	**-0.9**
	65nm,0.2s						
KAPS				S	**Sb**	**02 54 33.5**	**-1.2**
	420nm,0.1s						
KTMS	**Ketmen**	**1.18**	**130**	P	**Pb**	**02 54 20.9**	**-1.2**
	40nm,0.2s						
KTMS				S	**Sb**	**02 54 35.7**	**-1.6**
	230nm,0.4s						
KTMS	**Ketmen**	**1.18**	**130**	*e*P	**Pb**	**02 54 20.9**	**-1.2**
	40nm,0.2s						
KTMS				*e*S	**Sb**	**02 54 35.7**	**-1.6**
	230nm,0.4s						
SATY	**Saty**	**1.25**	**204**	P	**Pn**	**02 54 22.9**	**0.0**
	52nm,0.1s						
SATY				S	**Sb**	**02 54 39.1**	**-0.2**
	631nm,0.2s						
CHKK	**Chushkaly**	**1.56**	**258**	P	**Pn**	**02 54 27.7**	**+0.6**
	32nm,0.5s						
CHKK				S	**Sn**	**02 54 47.6**	**+0.4**
	272nm,0.3s						
CHKK	**Chushkaly**	**1.56**	**258**	*e*P	**Pn**	**02 54 27.7**	**+0.6**
	32nm,0.5s						
CHKK				*e*S	**Sn**	**02 54 47.6**	**+0.4**
	272nm,0.3s						
KOTS	**Kotyrbulak**	**1.74**	**237**	P	**Pb**	**02 54 31.3**	**-0.2**
	12nm,0.2s						
KOTS				S	**Sb**	**02 54 53.4**	**+0.1**
	213nm,0.3s						
KOTS	**Kotyrbulak**	**1.74**	**237**	*e*P	**Pb**	**02 54 31.3**	**-0.2**
	12nm,0.2s						
KOTS				*e*S	**Sb**	**02 54 53.4**	**+0.1**
	213nm,0.3s						
KTBS	**Karatobe**	**1.81**	**255**	P	**Pb**	**02 54 32.1**	**-0.7**
	28nm,0.2s						
KTBS				S	**Sb**	**02 54 54.7**	**-0.7**
	71nm,0.2s						
MDOK	**Medeo**	**1.82**	**236**	Pg	**Pb**	**02 54 32.3**	**-0.5**
	44nm,0.5s						
MDOK				Lg	Lg	02 54 55.2	
	78nm,0.5s						
KNDC	**Almaty**	**1.84**	**238**	⇑P	**Pb**	**02 54 32.8**	**-0.3**
	82nm,0.5s						
KNDC				⇓S	**Sg**	**02 54 58.4**	**-0.5**
	169nm,0.5s						
AAA	**Alma-Ata**	**1.87**	**239**	P	**Pb**	**02 54 33.3**	**-0.4**
	28nm,0.2s						
AAA				S	**Sb**	**02 54 56.9**	**-0.2**
	15nm,0.2s						
AAA	**Alma-Ata**	**1.87**	**239**	*e*P	**Pb**	**02 54 33.3**	**-0.4**
	28nm,0.2s						
AAA				*e*S	**Sb**	**02 54 56.9**	**-0.2**
	15nm,0.2s						
TNSS	**Tian-Shan**	**1.95**	**234**	P	**Pb**	**02 54 34.8**	**-0.5**
	12nm,0.8s						
TNSS				S	**Sb**	**02 54 59.2**	**-0.5**
	16nm,0.4s						
TNSS	**Tian-Shan**	**1.95**	**234**	*e*P	**Pb**	**02 54 34.8**	**-0.5**
	12nm,0.8s						
TNSS				*e*S	**Sb**	**02 54 59.2**	**-0.5**
	16nm,0.4s						
KUU	**Kurty**	**2.02**	**262**	P	**Pb**	**02 54 35.4**	**-0.7**
	4.0nm,0.1s						
KUU				S	**Sb**	**02 55 00.6**	**-0.6**
	78nm,0.3s						
KUU	**Kurty**	**2.02**	**262**	*e*P	**Pb**	**02 54 35.4**	**-0.7**
	4.0nm,0.1s						
KUU				*e*S	**Sb**	**02 55 00.6**	**-0.6**
	78nm,0.3s						
IZV	**Izvestkoviy**	**2.15**	**238**	Pg	**Pb**	**02 54 37.8**	**-0.8**
	18nm,0.2s						
IZV				Lg	Lg	02 55 04.6	
	104nm,0.4s						
IZV	**Izvestkoviy**	**2.15**	**238**	*e*P	**Pb**	**02 54 37.8**	**-0.8**
	18nm,0.2s						
IZV				*e*S	**Sb**	**02 55 04.6**	**-0.6**
	104nm,0.4s						
MTBS	**Maitube**	**2.22**	**242**	Pg	**Pb**	**02 54 39.7**	**+0.1**
	33nm,0.4s						
MTBS				Lg	Lg	02 55 07.5	
	131nm,0.2s						
MTBS	**Maitube**	**2.22**	**242**	*e*P	**Pb**	**02 54 39.7**	**+0.1**
	33nm,0.4s						
MTBS				*e*S	**Sb**	**02 55 07.5**	**+0.6**
	131nm,0.2s						
KRBS	**Karabastau**	**2.53**	**260**	Pg	**Pb**	**02 54 44.8**	**-0.1**
	7.4nm,0.3s						
KRBS				Lg	Lg	02 55 16.5	
	25nm,0.2s						
DGS	**Degeres**	**2.60**	**249**	Pg	**Pb**	**02 54 45.8**	**-0.3**
	11nm,0.3s						
DGS				Lg	Lg	02 55 18.4	
	70nm,0.4s						
MAKZ	**Makanchi**	**3.29**	**37**	⇑Pn	**Pn**	**02 54 52.5**	**+1.6**
MAKZ				⇑Pg	**Pb**	**02 54 59.3**	**+1.3**
	3.3nm,0.7s						
MAKZ				⇑Lg	Lg	02 55 40.7	
	14nm,0.6s						
SGDS	**Sogindy**	**3.32**	**258**	Pg	**Pb**	**02 54 58.9**	**+0.5**
	2.5nm,0.2s						
SGDS				Lg	Lg	02 55 40.7	
	16nm,0.4s						
MK31	**Makanchi Array**	**3.42**	**40**	Pn	**Pn**	**02 54 53.5**	**+0.8**
	0.1nm,0.1s,baz=214,slow=15,SNR=111						
MK31				⇑Pg	**Pb**	**02 54 59.8**	**-0.3**
	1.7nm,0.3s,baz=216,slow=15,SNR=24						
MK31				Sn	**Sn**	**02 55 34.8**	**+1.7**
	21nm,0.6s,baz=216,slow=26,SNR=7.7						
MK31				⇑Lg	Lg	02 55 45.4	
	22nm,0.7s,baz=214,slow=25,SNR=5.0						
AAK	**Ala-Archa**	**3.70**	**247**	⇓Pn	**Pn**	**02 54 58.4**	**+1.7**
	3.8nm,0.7s						
AAK				⇑Lg	Lg	02 55 59.6	
	5.3nm,0.5s						
BTLS	**Baital**	**3.70**	**285**	Pg	**Pb**	**02 55 06.0**	**+1.1**
	8.6nm,0.3s						
BTLS				Lg	Lg	02 55 52.7	
	29nm,0.5s						
BTLS	**Baital**	**3.70**	**285**	*e*P	**Pb**	**02 55 06.0**	**+1.1**
	8.6nm,0.3s						
BTLS				*e*S	**Sb**	**02 55 52.7**	**+3.1**
	29nm,0.5s						
MRKS	**Merke**	**4.52**	**253**	Pg	**Pb**	**02 55 21.0**	**+2.1**
	4.8nm,0.5s						
MRKS				Lg	Lg	02 56 18.5	
	12nm,0.3s						
MRKS	**Merke**	**4.52**	**253**	*e*P	**Pb**	**02 55 21.0**	**+2.1**
	4.8nm,0.5s						
MRKS				*e*S	**Sb**	**02 56 18.5**	**+5.3**
	12nm,0.3s						
ZSN	**Zaisan**	**5.17**	**49**	Pg	**Pb**	**02 55 34.1**	**+4.2**
	3.5nm,0.3s						
ZSN				Lg	Lg	02 56 41.1	
	9.4nm,0.3s						
ZSN	**Zaisan**	**5.17**	**49**	*e*P	**Pb**	**02 55 34.1**	**+4.2**
	3.5nm,0.3s						
ZSN				*e*S	**Sg**	**02 56 41.1**	**-4.6**
	9.4nm,0.3s						
KK31	**Karatay Array**	**6.33**	**263**	⇑Pg	**Pg**	**02 55 56.3**	**-4.5**
	0.6nm,0.4s,baz=72,slow=16,SNR=4.5						
KK31				⇑Lg	Lg	02 57 23.1	
	1.9nm,0.4s,baz=74,slow=28,SNR=8.6						
IUG	**Iuzhnay**	**6.94**	**256**	Pg	**Pg**	**02 56 08.6**	**-4.0**
	4.3nm,0.3s						
IUG				Lg	Lg	02 57 39.3	
	14nm,0.8s						
BRZS	**Berezniki**	**7.25**	**325**	Pg	**Pg**	**02 56 14.9**	**-3.5**
	1.2nm,0.2s						
BRZS				Lg	Lg	02 57 49.9	
	10nm,0.6s						
BRZS	**Berezniki**	**7.25**	**325**	*e*P	**Pg**	**02 56 14.9**	**-3.5**
	1.2nm,0.2s						
BRZS				*e*S	**Sg**	**02 57 49.9**	**-2.4**
	10nm,0.6s						
BVA0	**Borovoye Array**	**10.53**	**330**	⇓Sn	**Sn**	**02 58 30.3**	**+2.4**
	2.6nm,1.1s						
BVA0				⇑Lg	Lg	02 59 36.1	
	2.6nm,0.6s,baz=145,slow=22,SNR=3.8						
AB31	**Akbulak array**	**14.06**	**298**	P	**Pn**	**02 57 18.9**	**+0.4**
	1.5nm,1.1s,baz=98,slow=4.9,SNR=4.2						

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*IDC **15** 03:15:44.1±5.5, 36°.12N×70°.96E, h88^{km}±47^{km}, mb3.5/10, mbtmp3.8/14, Error ellipse: s-maj=36.3km s-min=20.2km az=27.0*

*NEIC **15** 03:15:46.6±1.4, 36°.32N±0°.02×70°.73E±0°.09, h119^{km}±8^{km}, mb3.9/11, Error ellipse: s-maj=10.6km s-min=3.6km az=92.0*

*NNC **15** 03:15:50.5±3.3, 36°.66N×70°.67E, h83^{km}±49^{km}, mb3.5, mpv3.8, Error ellipse: s-maj=24.6km s-min=21.5km az=21.0*

ISC 15 03:15:45.7±0.6**, 36°.26N**±0°.05×**70°.95E**±0°.06**, h100**^{km}**, n63, σ2^{s}.31**/65**, mb3.8**/12**, 4C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANEM	**Manem**	**1.41**	**24**		**Pn**	**03 16 13.4**	**+2.3**
MANEM				Sn	**Sn**	**03 16 33.5**	**+3.2**
KBL	**Kabul**	**2.31**	**223**		**Pn**	**03 16 23.7**	**+1.2**
SHAA	**Shahritus**	**2.61**	**301**		**Pn**	**03 16 25.5**	**-0.8**
GAR	**Garm**	**2.79**	**350**		**Pn**	**03 16 29.3**	**+0.6**
CHGR	**Chuyangaron**	**2.79**	**330**		**Pn**	**03 16 28.1**	**-0.5**
NIL	**Nilore**	**3.21**	**143**		**Pn**	**03 16 37.3**	**+3.0**
DRK	**Karamyk**	**3.29**	**12**		**Pn**	**03 16 37.8**	**+2.3**
SRNI	**Srinagar**	**3.85**	**124**	*e*S	**Sn**	**03 17 27.0**	**0.0**
SRNI				IAML		03 17 32.2	
	comp=N,474nm,0.3s						
SRNI				IAML		03 17 33.2	
	comp=E,466nm,0.3s						
JMU	**Jammu**	**4.72**	**136**	*e*S	**Sn**	**03 17 47.2**	**-3.0**
JMU				IAML		03 17 52.8	
	comp=N,250nm,0.0s						
JMU				IAML		03 17 53.6	
	comp=E,239nm,0.1s						
KSH	**Kashi**	**5.13**	**49**	Pn	**Pn**	**03 16 58.4**	**-1.9**
KSH				Sn	**Sn**	**03 17 51.3**	**-7.1**
KSH				smax	smax		
	comp=N,320nm,0.4s						
KSH				smax	smax		
	comp=E,190nm,0.6s						
ARSB	**Arslanbob**	**5.30**	**17**		**Pn**	**03 17 03.3**	**+0.7**
ALCI	**Alchi Leh**	**5.49**	**110**	*e*P	**Pn**	**03 17 05.6**	**+0.2**
ALCI				*e*S	**Sn**	**03 18 06.3**	**-1.1**
ALCI				IAML		03 18 08.7	
	comp=E,60nm,0.4s						
ALCI				IAML		03 18 09.9	
	comp=N,63nm,0.2s						
UCH	**Uchtor**	**6.57**	**24**	P	**Pn**	**03 17 20.7**	**+0.6**
	SNR=7.7						
KK31	**Karatay Array**	**6.85**	**357**		**Pn**	**03 17 23.2**	**-0.2**
KK31	**Karatay Array**	**6.85**	**357**	⇑P	**Pn**	**03 17 23.2**	**-0.2**
	comp=N,5.8nm,0.5s,baz=181,slow=11,SNR=85						
KK31				S	**Sn**	**03 18 35.8**	**-4.0**
	comp=N,13nm,0.5s,baz=183,slow=17,SNR=9.8						
KKAR	**Karatay Array**	**6.85**	**357**		**Pn**	**03 17 23.2**	**-0.2**
AAK	**Ala-Archa**	**6.94**	**22**	P	**Pn**	**03 17 25.6**	**+0.8**
	SNR=8.1						
AAK	**Ala-Archa**	**6.94**	**22**	P	**Pn**	**03 17 25.9**	**+1.1**
	comp=N,7.2nm,0.4s,baz=189,slow=6.2,SNR=40						
AAK				S	**Sn**	**03 18 41.7**	**-0.4**
	comp=N,17nm,0.5s,baz=156,slow=22,SNR=17						
AAK	**Ala-Archa**	**6.94**	**22**	⇓P	**Pn**	**03 17 25.5**	**+0.7**
	comp=N,2.3nm,0.5s						
AAK				⇓S	**Sn**	**03 18 40.5**	**-1.7**
	comp=N,11nm,0.6s						
SMLA	**Simla**	**7.28**	**133**	*e*P	**Pn**	**03 17 29.0**	**-0.2**
SMLA				*e*S	**Sn**	**03 18 45.9**	**-4.4**
SMLA				IAML		03 18 52.7	
	comp=N,97nm,0.6s						
SMLA				IAML		03 18 53.8	
	comp=E,111nm,1.1s						
BOOM	**Boomskoye usch**	**7.33**	**30**	Pn	**Pn**	**03 17 31.4**	**+1.4**
CHMS	**Chumysh**	**7.34**	**22**	P	**Pn**	**03 17 31.4**	**+1.2**
	SNR=7.0						
HNLY	**HANLEY**	**7.47**	**115**	*e*P	**Pn**	**03 17 32.3**	**-0.2**
HNLY				*e*S	**Sn**	**03 18 50.3**	**-5.6**
HNLY				IAML		03 18 55.7	
	comp=E,97nm,0.2s						
HNLY				IAML		03 19 04.7	
	comp=N,95nm,0.8s						
USP	**Ospenovka**	**7.51**	**20**	P	**Pn**	**03 17 33.3**	**+0.8**
	SNR=7.6						
TKM2	**Tokmak 2**	**7.56**	**27**	P	**Pn**	**03 17 34.4**	**+1.1**
	SNR=5.5						
MAKZ	**Makanchi**	**13.38**	**35**		**Pn**	**03 18 51.3**	**0.0**
MKAR	**Makanchi Array**	**13.51**	**35**	P	**Pn**	**03 18 53.4**	**+0.2**
	comp=N,0.2nm,0.4s,baz=226,slow=16,SNR=11						
MK31	**Makanchi Array**	**13.51**	**35**	⇑P	**Pn**	**03 18 54.9**	**+1.8**
	comp=N,0.6nm,0.5s,baz=207,slow=11,SNR=10						
WMQ	**Urumqi**	**14.87**	**54**	*e*P	**Pn**	**03 19 12.6**	**+1.9**
AB31	**Akbulak array**	**15.28**	**332**		**Pn**	**03 19 13.9**	**-1.8**
AB31				IAmb	IAmb	03 19 34.3	
	comp=Z,3.9nm,1.2s						
AB31	**Akbulak array**	**15.28**	**332**	⇑P	**Pn**	**03 19 13.6**	**-2.1**
	comp=Z,1.0nm,0.4s,baz=154,slow=12,SNR=61						
AB31				⇓S	**Sn**	**03 21 56.8**	**-7.5**
	comp=Z,4.0nm,0.8s,baz=151,slow=26,SNR=6.2						
ABKAR	**Akbulak array**	**15.28**	**332**	Pn	**Pn**	**03 19 14.3**	**-1.4**
KURBB	**Kurchatov Arra**	**15.37**	**18**	P	**Pn**	**03 19 18.5**	**+1.7**
	comp=Z,1.0nm,0.5s,baz=206,slow=11,SNR=6.5						
KURBB	**Kurchatov Arra**	**15.37**	**18**	⇑P	**P**	**03 19 19.1**	**-0.1**
	comp=Z,2.8nm,0.6s						
KURK	**Kurchatov**	**15.47**	**19**	P	**Pn**	**03 19 18.5**	**+0.3**
KURK	**Kurchatov**	**15.47**	**19**	IAmb	IAmb	03 19 25.8	
	comp=Z,2.0nm,0.7s						
BVA0	**Borovoye Array**	**16.77**	**359**	P	**P**	**03 19 37.4**	**+2.6**
	comp=Z,2.9nm,1.1s,baz=255,slow=40,SNR=5.7						
BVAR	**Borovoye Array**	**16.77**	**359**	P	**Pn**	**03 19 30.4**	**-3.8**
	comp=Z,0.6nm,0.5s,baz=173,slow=13,SNR=4.0						
BORK	**Borovoye**	**16.79**	**359**	Pn	**Pn**	**03 19 29.4**	**-5.1**
AKTO	**Aktyubinsk**	**16.97**	**331**	P	**Pn**	**03 19 37.0**	**+0.2**
	comp=Z,2.5nm,0.5s,baz=127,slow=9.9,SNR=11						
AKTO				S	Sn	03 22 34.6	-11
	comp=Z,2.1nm,0.8s,baz=4.8,slow=18,SNR=4.5						
AKTO	**Aktyubinsk**	**16.97**	**331**	⇓P	**Pn**	**03 19 37.4**	**+0.7**
	comp=Z,2.0nm,0.7s						
ZAA0	**Zalesovo Array**	**20.15**	**24**	P	**P**	**03 20 12.2**	**+0.5**
ZAA0				IAmb	IAmb	03 20 14.4	
	comp=Z,4.7nm,0.6s						
ZALV	**Zalesovo Beam**	**20.15**	**24**	P	**P**	**03 20 12.4**	**+0.7**
	comp=Z,3.1nm,0.3s,baz=221,slow=11,SNR=20						
	comp=Z,3.1nm,0.3s						
ZALV	**Zalesovo Beam**	**20.15**	**24**	P	**P**	**03 20 12.1**	**+0.4**
ARTI	**Arti**	**21.86**	**341**	P	**P**	**03 20 32.0**	**+2.1**
	comp=Z,0.8nm,0.3s,baz=167,slow=14,SNR=3.5						
	comp=Z,0.8nm,0.3s						
ARTI	**Arti**	**21.86**	**341**	IAmb	IAmb	03 20 35.6	
	comp=Z,7.3nm,1.3s						
GTA	**Gaotai**	**22.97**	**73**	*e*P	**P**	**03 20 45.9**	**+4.2**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
PZH	**PanZhiHua**	**27.93**	**102**	P	**P**	**03 21 27.8**	**+1.1**
BRTR	**Keskin Array B**	**29.47**	**288**	P	**P**	**03 21 40.3**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=107,slow=8.3,SNR=2.1						
	comp=Z,0.3nm,0.6s						
HHC	**Hu-ho-hao-te**	**31.89**	**69**	*e*P	**P**	**03 22 02.0**	**+0.5**
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,5.9s						
AKBB	**Malin Array Si**	**33.07**	**309**	P	P	03 22 06.6	-4.9
KIEV	**Kiev**	**33.08**	**309**	P	P	03 22 06.7	-4.8
NRIK	**Noril'sk**	**34.37**	**10**	P	**P**	**03 22 24.8**	**+2.2**
	comp=Z,1.2nm,0.5s,baz=197,slow=11,SNR=2.1						
	comp=Z,1.2nm,0.5s						
NRIK	**Noril'sk**	**34.37**	**10**	IAmb	IAmb	03 22 44.5	
	comp=Z,3.3nm,1.1s						
FINES	**FINESS Array B**	**37.66**	**326**	P	**P**	**03 22 51.1**	**+0.3**
	comp=Z,1.9nm,0.9s,baz=111,slow=8.5,SNR=1.2						
	comp=Z,1.9nm,0.9s						
ARCES	**ARCESS Array B**	**41.35**	**338**	P	**P**	**03 23 21.9**	**+0.6**
	comp=Z,2.5nm,0.9s,baz=116,slow=8.3,SNR=3.9						
	comp=Z,2.5nm,0.9s						
ARCES	**ARCESS Array B**	**41.35**	**338**	IAmb	IAmb	03 23 26.4	
	comp=Z,6.9nm,1.2s						
HFS	**Hagfors**	**43.23**	**322**	P	**P**	**03 23 36.5**	**-0.2**
	comp=Z,2.4nm,0.9s,baz=102,slow=12,SNR=5.5						
	comp=Z,2.4nm,0.9s						
NOA	**NORSAR Array B**	**44.55**	**323**	P	**P**	**03 23 46.6**	**-0.6**
	comp=Z,0.9nm,0.9s,baz=96,slow=7.8,SNR=3.3						
	comp=Z,0.9nm,0.9s						
TOLK	**Toolik Lake Re**	**71.17**	**15**	P	**P**	**03 26 53.5**	**+0.4**
TOLK				IAmb	IAmb	03 27 01.7	
	comp=Z,2.2nm,1.0s						
WRA	**Warramunga Arr**	**81.90**	**122**	P	**P**	**03 27 53.5**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=325,slow=5.0,SNR=4.8						
	comp=Z,0.2nm,0.3s						
WRA	**Warramunga Arr**	**81.90**	**122**	IAmb	IAmb	03 27 58.8	
	comp=Z,0.3nm,1.0s						
ASAR	**Alice Springs**	**84.15**	**125**	P	**P**	**03 28 05.0**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=312,slow=5.1,SNR=5.7						
	comp=Z,0.3nm,0.7s						

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*AEIC **15** 03:18:47.3±0.8, 53°.75N±0°.08×164°.57W±0°.09, h30^{km}±8^{km}, Error ellipse: s-maj=12.8km s-min=4.4km az=150.0*

NEIC 15 03:18:47.7±0.9**, 53°.72N**±0°.02×**164°.54W**±0°.06**, h35**^{km}±2^{km}**, ML3.5**/12**, ML3.4**(AEIC)**, Error ellipse: s-maj=5.9km s-min=3.1km az=249.0, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKSA	**Akutan Strait**	**0.80**	**302**		Pn	03 19 02.0	-0.5
AKSA					Sn	03 19 12.7	-0.5
AKUT	**Akutan**	**0.84**	**300**		Pn	03 19 02.6	-0.4
AKUT				IAML		03 19 15.6	
	comp=E,2µm,0.4s						
AKUT				IAML		03 19 15.8	
	comp=N,2µm,0.3s						
AKUT	**Akutan**	**0.84**	**300**		Sn	03 19 14.0	-0.1
AHB	**Akutan Harbor**	**0.85**	**298**		Pn	03 19 02.8	-0.4
AHB					Sn	03 19 14.5	0.0
WEBT	**Westdahl Beart**	**0.88**	**352**		Pn	03 19 03.3	-0.3
WEBT					Sn	03 19 15.4	+0.2
AKBBA	**Akutan Broad B**	**0.91**	**295**		Pn	03 19 03.5	-0.5
AKBBA					Sn	03 19 16.1	+0.3
ZRO	**Akutan Zero**	**0.93**	**294**		Pn	03 19 03.8	-0.5
ZRO					Sn	03 19 16.3	-0.1
AKV	**Akutan Volcano**	**0.93**	**296**		Pn	03 19 04.1	-0.3
AKV					Sn	03 19 16.7	+0.1
AKLV	**Akutan Long Va**	**0.95**	**298**		Pn	03 19 03.8	-0.7
AKLV					Sn	03 19 16.3	-0.5
AKMO	**Akutan Morgan**	**0.95**	**294**		Pn	03 19 04.0	-0.5
AKMO					Sn	03 19 16.8	0.0
AKGG	**Akutan Green G**	**0.98**	**300**		Pn	03 19 04.7	-0.3
AKGG					Sn	03 19 17.8	+0.1
LVA	**Lava Point**	**0.99**	**297**		Pn	03 19 04.6	-0.4
LVA	**Lava Point**	**0.99**	**297**	IAML		03 19 18.8	
	comp=N,1µm,0.7s						
SSLS	**Shishaldin Sou**	**1.04**	**18**		Pn	03 19 05.4	-0.5
SSBA	**Shishaldin**	**1.08**	**13**		Pn	03 19 05.9	-0.5
UNV	**Unalaska Valle**	**1.17**	**277**		Pn	03 19 06.8	-0.7
ISNN	**Isanotski Nort**	**1.20**	**22**		Pn	03 19 08.0	0.0
MREP	**Makushin Rep't**	**1.31**	**275**		Pn	03 19 09.6	0.0
FALS	**False Pass**	**1.31**	**30**		Pn	03 19 09.2	-0.3
MGOD	**Makushin Gods**	**1.39**	**274**		Pn	03 19 10.6	0.0
MAPS	**Pakushin South**	**1.43**	**274**		Pn	03 19 11.3	+0.2
DT1	**Dutton Round H**	**1.92**	**43**		Pn	03 19 18.0	+0.1
DTNA	**Dutton South F**	**1.96**	**42**		Pn	03 19 18.7	+0.3
OKTU	**Okmok Mt. Tuli**	**2.12**	**262**		Pn	03 19 21.6	+1.0
HAG	**Hague Volcano**	**2.22**	**43**		Pn	03 19 22.7	+0.7
PN7A	**Pavlof North-7**	**2.27**	**40**		Pn	03 19 23.3	+0.6
PS1A	**Pavlof South-1**	**2.36**	**43**		Pn	03 19 25.1	+1.2
S12K	**Black Hills**	**2.45**	**35**		Pn	03 19 25.2	0.0
S12K	**Black Hills**	**2.45**	**35**	IAML		03 20 06.5	
	comp=E,231nm,1.1s						
S12K				IAML		03 20 07.2	
	comp=N,194nm,0.3s						
SDPT	**Sand Point**	**2.88**	**54**		Pn	03 19 31.2	+0.2
SDPT				IAML		03 20 18.4	
	comp=E,312nm,1.2s						
VNKR	**Veniaminof 5**	**3.78**	**50**		Pn	03 19 44.0	+0.5
KLU	**Klutina**	**12.62**	**45**		Pn	03 21 41.9	-2.6

SJA 15 03:31:05.4±0.7**, 33°.77S**×**66°.87W, h17**^{km}±2^{km}**, ML3.6, MW3.6, San Luis Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACAN	**Cantantal**	**1.51**	**350**	*e*P	Pg	03 31 34.1	-0.4
ACAN				*e*S	Sg	03 31 54.8	+0.5
ACAN				IAML		03 31 58.4	
	comp=Z,2µm,0.2s						
MRA	**San Martin**	**1.65**	**36**	*e*P	Pg	03 31 37.3	+0.1
MRA				*e*S	Sg	03 31 58.5	-0.3
MRA				*e*S	Sb	03 32 01.0	+4.9
MRA				IAML		03 32 02.3	
	comp=Z,462nm,0.2s						
AAGR	**Agrelo**	**1.78**	**292**	*e*P	Pb	03 31 37.7	+0.1
AAGR				*e*S	Sb	03 32 01.0	+1.3
AAGR				IAML		03 32 02.5	
	comp=Z,512nm,0.3s						
ARCO	**CERRO ARCO**	**1.96**	**297**	*e*P	Pb	03 31 40.7	-0.1
ARCO				*e*S	Sb	03 32 06.7	+1.7
ARCO				IAML		03 32 08.2	
	comp=Z,622nm,0.3s						
ASAL	**Salagasta**	**2.03**	**305**	*e*P	Pn	03 31 35.5	-3.4
ACHE	**Chepes**	**2.60**	**4**	*e*P	Pb	03 31 53.4	+1.6
ACHE				*e*S	Sb	03 32 22.3	-1.2
AUSP	**Uspallata**	**2.62**	**305**	*e*P	Pb	03 31 50.3	-1.8
AUSP				*e*S	Sb	03 32 23.2	-0.9
RTLL	**Cerro Villicun**	**2.79**	**330**	*e*P	Pn	03 31 51.0	+1.7
RTLL				*e*S	Sn	03 32 20.0	-2.6
RTLL				*e*S	Sb	03 32 27.0	-1.7
RTLL				IAML		03 32 38.3	
	comp=Z,113nm,0.5s						
RTLS	**Leoncito**	**2.84**	**313**	*e*P	Pb	03 31 53.2	-2.6
RTLS				*e*S	Sb	03 32 28.8	-1.6
RTLS				IAML		03 32 41.3	
	comp=Z,295nm,0.8s						
TCA	**Tanti**	**3.09**	**39**	*e*P	Pn	03 31 51.0	-2.5
TCA				*e*P	Pb	03 31 56.3	-3.7
TCA				*e*S	Sb	03 32 34.3	-3.2
TCA				*e*S	Sg	03 32 39.5	-5.2
TCA				IAML		03 32 50.0	
	comp=Z,195nm,0.5s						
AVFE	**Valle Fertil**	**3.14**	**351**	*e*P	Pn	03 31 56.7	+2.5
AVFE				*e*S	Sb	03 32 35.7	-3.2
AVFE				IAML		03 32 42.7	
	comp=Z,153nm,0.4s						
VA03	**San Esteban**	**3.25**	**287**	*e*P	Pb	03 31 59.4	-3.3
VA03				*e*S	Sb	03 32 39.5	-2.5
VA03				IAML		03 32 52.0	
	comp=Z,94nm,0.3s						
PEL	**Peldehue**	**3.25**	**280**	*e*P	Pb	03 32 01.0	-1.8
PEL				*e*S	Sb	03 32 39.5	-2.6
PEL				IAML		03 32 51.6	
	comp=Z,66nm,1.2s						
APLL	**PUNTA DE LOS L**	**3.37**	**5**	*e*P	Pn	03 32 00.2	+2.8
APLL				*e*S	Sb	03 32 44.5	-1.1
APLL				IAML		03 33 00.3	
	comp=Z,91nm,0.5s						
ROC1	**El Roble**	**3.56**	**282**	*e*P	Pn	03 32 02.5	+2.3
ROC1				*e*S	Sb	03 32 52.5	+1.3
ACCO	**Cerro Coronel**	**3.68**	**329**	*e*P	Pn	03 32 05.4	+3.6
ACCO				*e*S	Sb	03 32 55.0	+0.4
ACDV	**Cuesta del Vie**	**4.07**	**331**	*e*P	Pn	03 32 10.5	+3.5
ACDV				IAML		03 33 20.1	
	comp=Z,42nm,1.0s						
AROD	**Rodeo**	**4.22**	**328**	*e*P	Pb	03 32 16.0	-3.4
AROD				*e*S	Sg	03 33 16.4	-4.5
ACLC	**CERRO LA CRUZ**	**4.33**	**359**	*e*P	Pn	03 32 08.5	-2.2

ACLC				eS	Sb	03 33 16.0	+2.8
ACLC				IAML		03 33 25.7	
	comp=Z,47nm,0.3s						
AGUA	GUANDACOL	4.49	342	eP	Pn	03 32 11.0	-1.8
AGUA				eS	Sb	03 33 20.0	+2.3
AGUA				IAML		03 33 31.0	
	comp=Z,96nm,0.7s						
AANI	Anillaco	4.94	359	eP	Pn	03 32 22.0	+3.0
VCA	Vinchina	5.14	347	eP	Pn	03 32 25.5	+3.6
VCA				eS	Sb	03 33 39.5	+2.8
VCA				IAML		03 33 54.7	
	comp=Z,95nm,0.5s						
CYA	Choya	5.39	10	eP	Pn	03 32 28.4	+3.3
CYA				eS	Sb	03 33 39.5	-4.0
CYA				eS	Sg	03 33 48.0	-10
CYA				IAML		03 33 58.4	
	comp=Z,54nm,0.4s						
TINO	Tinogasta	5.72	354	eP	Pn	03 32 29.0	-0.7
TRQA	Tornquist	5.83	139	eP	Pn	03 32 35.0	+3.8
TRQA				IAML		03 34 24.3	
	comp=Z,12nm,0.7s						
AHML	Horco Molle	7.08	11	eP	Pn	03 32 39.4	-9.0
AHML				eS	Sb	03 34 28.0	-4.4
AHML				IAML		03 34 36.7	
	comp=Z,20nm,1.7s						
FSA	Cafayete	7.67	6	eP	Pn	03 32 54.0	-2.6

IDC ***15*** *03:36:21.6±1.7, 7°.69S×107°.01E, h0^{km}, mb3.8/7, mbtmp3.8/7, MS3.2/3, Error ellipse: s-maj=111.4km s-min=18.1km az=48.0*

DJA ***15*** *03:36:26.0±0.3, 8°S±2°×10°7E±°, h10^{km}, M4.3/20, mB5.2/2, mb4.7/4, MLv4.2/20, Mw(mB)4.6/2*

NEIC ***15*** *03:36:28.1±0.7, 7°.7S±0°.1×107°.0E±0°.1, h44^{km}±9^{km}, mb4.3/10, Error ellipse: s-maj=22.3km s-min=12.8km az=211.0*

ISC 15 03:36:22.7±1.7, **8°.07S**±0°.06×**106°.80E**±0°.05, **h14**^{km}±10^{km}, **n59**, σ**1^s.63**/51, **mb4.1**/11, **MS2.9**/3, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNJI	Cibinong	0.83	23	P	Pn	03 36 40.8	+0.8
CNJI				S	Sn	03 36 50.4	-1.7
BBJI	Bungbulang	1.04	54	P	Pb	03 36 42.1	-0.5
BBJI				S	Sb	03 36 54.2	-2.0
SKJI	Sukabumi	1.09	347	P	Pn	03 36 46.6	+3.0
SKJI				S	Sn	03 37 02.7	+4.2
DBJI	Dramaga	1.51	358	P	Pg	03 36 52.6	+0.8
DBJI				S	Sg	03 37 13.3	+1.9
TNG	Tangerang	1.89	355	P	Pg	03 36 58.3	-0.8
TNG				P	Pb	03 36 58.4	+1.2
SBJI	Serang	2.05	341	P	Pg	03 37 01.4	-0.7
SBJI				S	Sg	03 37 28.7	0.0
KPJI	Karang Pucung	2.24	71	P	Pn	03 37 00.3	+0.8
KPJI				S	Sn	03 37 26.7	-0.3
CTJI	Waduk Cacaban	2.59	66	P	Pn	03 37 05.8	+1.5
CTJI				S	Sn	03 37 34.4	-1.3
KASI	Kota Agung	3.41	318	P	Pb	03 37 21.6	-1.4
YOGI	Yogyakarta	3.47	86	P	Pn	03 37 17.3	+0.8
YOGI				S	Sn	03 37 56.5	-1.0
UGM	Wanagama	3.69	88		Pn	03 37 19.7	+0.1
UGM	Wanagama	3.69	88	P	Pn	03 37 19.7	+0.1
SMRI	Semarang	3.75	75	Pn	Pn	03 37 19.0	-1.4
SMRI	Semarang	3.75	75	P	Pn	03 37 20.3	0.0
KLSI		3.94	328	P	Pb	03 37 29.0	-3.0
LWLI	Liwa	4.08	318	P	Pb	03 37 30.4	-4.1
PCJI	Pacitan	4.34	92	P	Pn	03 37 28.8	+0.4
MDSI	Maura Dua	4.41	324	P	Pb	03 37 34.7	-5.4
SNJI	Sawahan-Nganju	4.92	87	P	Pn	03 37 37.5	+0.9
SJI	Sawahan	4.93	86	P	Pn	03 37 37.1	+0.4
EGSI	Enggano, Bengk	5.24	301	P	Pb	03 37 46.8	-7.4
	0.5nm4μm101nm,0.7s						
MNAI	Manna	5.31	314	P	Pn	03 37 46.9	+5.2
	162nm,1.3s						
TPI	Tanjungpandan	5.35	9	P	Pn	03 37 44.9	+2.6
	0.1nm25nm,0.5s						
JAGI	Jajag, Banyuwa	7.29	94	Pn	Pn	03 38 12.3	+3.3
JAGI	Jajag, Banyuwa	7.29	94	P	Pn	03 38 09.6	+0.6
GSI	Gunungsitoli	13.09	315	Pn	Pn	03 39 29.6	+1.1
GIRL	Giralia	16.16	155	Pn	Pn	03 40 11.3	+1.8
GIRL				IAmb	IAmb	03 40 44.9	
	comp=Z,82nm,1.4s						
LUWI	Luwuk	17.38	67	P	Pn	03 40 22.7	-2.4
LUWI				IAmb	IAmb	03 40 40.9	
	comp=Z,34nm,0.8s						
KNRA	Kununurra	22.77	111	P	P	03 41 24.2	-0.8
CMAR	Chiang Mai Arr	27.48	344	LR	LR	03 55 12.7	
	comp=Z,23nm,18.2s,baz=280,slow=42						
H01W3	Cape Leeuwin H	27.52	167	T	T	04 11 45.0	
	baz=347,slow=76,SNR=17						
H01W1	Cape Leeuwin H	27.54	167	T	T	04 11 46.3	
	baz=347,slow=76,SNR=13						
H01W2	Cape Leeuwin H	27.54	167	T	T	04 11 46.0	
	baz=347,slow=76,SNR=19						
WRA	Warramunga Arr	29.16	117	P	P	03 42 23.7	-0.1
	comp=Z,0.4nm,0.9s,baz=291,slow=8.8,SNR=4.9						
	comp=Z,0.4nm,0.9s						
WB2	Warramunga Arr	29.17	117	P	P	03 42 23.6	-0.4
WR8	Warramunga Arr	29.30	117	P	P	03 42 25.6	+0.5
WR8				IAmb	IAmb	03 42 40.7	
	comp=Z,6.1nm,1.3s						
ASAR	Alice Springs	30.25	124	P	P	03 42 35.5	+1.9
	comp=Z,0.2nm,0.6s,baz=295,slow=8.7,SNR=5.7						
ASAR				LR	LR	03 55 44.3	
	comp=Z,25nm,19.3s,baz=105,slow=38						
	comp=Z,0.2nm,0.6s						
H08S2	Diego Garcia H	33.98	268	T	T	04 18 50.8	
	baz=90						
H08S3	Diego Garcia H	33.99	268	T	T	04 18 47.6	
	baz=90,slow=74						
H08S1	Diego Carcia H	34.00	268	T	T	04 18 46.6	
	baz=90,slow=74						
STKA	Stephens Creek	40.08	131	P	P	03 44 00.0	+1.9
	comp=Z,1.4nm,0.3s,baz=312,slow=9.9,SNR=6.9						
	comp=Z,1.4nm,0.3s						
STKA	Stephens Creek	40.08	131	P	P	03 43 59.9	+1.8
MKAR	Makanchi Array	58.82	341	P	P	03 46 19.9	-0.9
	comp=Z,0.6nm,0.6s,baz=142,slow=7.2,SNR=7.1						
MKAR				LR	LR	04 16 32.7	
	comp=Z,55nm,19.0s,baz=322,slow=41						
	comp=Z,0.6nm,0.6s						
MKAR	Makanchi Array	58.82	341	P	P	03 46 17.6	-3.3
H04N2	CROZET ISLANDS	60.32	221	T	T	04 52 57.5	
	baz=69,slow=75,SNR=114						
H04N1	CROZET ISLANDS	60.34	221	T	T	04 52 58.5	
	baz=69,slow=75,SNR=113						
H04N3	CROZET ISLANDS	60.34	221	T	T	04 52 57.3	
	baz=69,slow=75,SNR=51						
H04S1	CROZET ISLANDS	60.50	220	T	T	04 53 05.4	
	baz=68,slow=76,SNR=15						
H04S3	CROZET ISLANDS	60.51	220	T	T	04 53 11.1	
	baz=68,slow=76,SNR=3.9						
H04S2	CROZET ISLANDS	60.52	220	T	T	04 53 10.0	
	baz=68,slow=76,SNR=5.1						
KURBB	Kurchatov Arra	63.38	340	P	P	03 46 51.0	-0.7
	comp=Z,0.9nm,0.7s,baz=147,slow=6.4,SNR=10						
	comp=Z,0.9nm,0.7s						
KURK	Kurchatov	63.44	340	P	P	03 46 50.5	-1.5
KURK				IAmb	IAmb	03 46 52.7	
	comp=Z,1.8nm,1.0s						
BVAR	Borovoye Array	68.27	337	P	P	03 47 22.4	-0.7
	comp=Z,1.5nm,0.5s,baz=148,slow=8.0,SNR=11						
	comp=Z,1.5nm,0.5s						
BORK	Borovoye	68.31	337	P	P	03 47 22.7	-0.7
BORK				IAmb	IAmb	03 47 23.5	
	comp=Z,1.4nm,0.7s						
AB31	Akbulak array	70.23	329		P	03 47 35.0	-0.4
AB31				IAmb	IAmb	03 47 35.7	
	comp=Z,4.2nm,0.7s						
ABKAR	Akbulak array	70.23	329		P	03 47 34.9	-0.5
ARTI	Arti	75.55	335		P	03 48 06.5	-0.3
BRTR	Keskin Array B	82.39	312	P	P	03 48 45.3	+0.4
	comp=Z,0.7nm,0.8s,baz=111,slow=6.8,SNR=4.0						
	comp=Z,0.7nm,0.8s						
BRTR	Keskin Array B	82.39	312	P	P	03 48 45.1	+0.2

SKO ***15*** *03:49:10.1, 41°.60N×19°.24E, h0^{km}, ML3.4*

BEO ***15*** *03:49:10.2±0.6, 41°.46N×19°.42E, h3^{km}±2^{km}, ML3.2/18*

TIR ***15*** *03:49:10.0, 41°.67N×19°.29E, h33^{km}±2^{km}, Ml3.5/7*

PDG ***15*** *03:49:11.0±0.2, 41°.54N×19°.47E, h13^{km}, MD3.4/6, ML3.4/13, Error ellipse: s-maj=1.0km s-min=1.4km az=0.0*

IDC ***15*** *03:49:11.3±2.1, 41°.88N×19°.75E, h0^{km}, mb3.9/3, mbtmp3.6/10, ML2.7/6, MS2.8/2, Error ellipse: s-maj=33.9km s-min=15.0km az=35.0*

THE ***15*** *03:49:12.4, 42°N±5°×1°9E±°, h12^{km}, M3.4/21, MLh3.4/21*

ISC 15 03:49:11.4±1.0, **41°.58N**±0°.02×**19°.38E**±0°.02, **h12**^{km}±8^{km}, **n146**, σ**1^s.57**/190, **mb3.9**/3, **19C-23D**, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULC	Ulcinj	0.39	346	⇓iPg	Pg	03 49 19.3	0.0
ULC				i Sg	Sb	03 49 27.1	+0.7
TIR	Tirane	0.44	122	Pg	Pg	03 49 19.3	-0.7
TIR				Sg	Sg	03 49 25.1	-0.7
TIR				AML	AML	03 49 25.4	
	6.2nm,0.5s						
TIR				AML	AML	03 49 27.1	
	7.2nm,0.6s						
TIR	Tirane	0.44	122	i Pg	Pg	03 49 19.1	-0.9
TIR				i Sg	Sg	03 49 26.4	+0.6
DRME	Dracevica, Mon	0.62	347	⇑iPg	Pg	03 49 23.6	0.0
DRME				eSg	Sn	03 49 34.8	-1.2
BUM	Brajici-Budva	0.80	334	⇑iPg	Pb	03 49 27.3	-0.1
BUM				i Sg	Sn	03 49 41.3	+0.7
PHP	Peshkopia	0.81	82	Pg	Pg	03 49 25.5	-1.5
PHP				Sg	Sb	03 49 39.0	+0.7
PHP				AML	AML	03 49 44.0	
	4.9nm,0.9s						
PDG	Podgorica	0.85	354	Pg	Pg	03 49 27.6	-0.3
PDG				Sg	Sn	03 49 42.6	+1.0
PDG	Podgorica	0.85	354	⇓P	Pb	03 49 27.8	-0.3
PDG				⇓S	Sb	03 49 39.8	+0.3
PDG	Podgorica	0.85	354	ePg	Pg	03 49 27.6	-0.3
PDG				eSg	Sn	03 49 42.7	+1.0
PDG	Podgorica	0.85	354	⇓iPg	Pg	03 49 27.6	-0.3
PDG				i Sg	Sn	03 49 41.9	+0.2
CEME	Cevo	1.02	341	⇑iPg	Pb	03 49 31.0	-0.1
CEME				eSg	Sn	03 49 47.8	+1.8
HCY	Herceg Novi	1.09	323	⇑iPg	Pb	03 49 32.6	+0.4
HCY				i Sg	Sn	03 49 50.5	+3.0
PVY	Plav	1.10	23	⇑iPg	Pg	03 49 30.9	-1.8
PVY				i Sg	Sn	03 49 49.3	+1.3
VLO	Vlora	1.12	175	Pg	Pg	03 49 33.1	+0.2
VLO				Sg	Sg	03 49 48.7	+1.2
VLO				AML	AML	03 49 59.6	
	8.7nm,0.4s						
VLO	Vlora	1.12	175	P	Pg	03 49 33.3	+0.4
VLO				S	Sb	03 49 48.8	+1.7
OHR	Ohrid	1.17	113	i Pg	Pg	03 49 32.4	-1.6
OHR				i Sg	Sn	03 49 52.0	+2.4
OHR				eLg	Lg	03 49 52.3	
	comp=N,451nm,0.4s						
OHR				eLg	Lg	03 49 53.8	
	comp=E,602nm,0.6s						
NKME	Niksic	1.23	345	⇑iPg	Pn	03 49 35.3	+0.9
NKME				eSg	Sn	03 49 54.0	+3.0
KOME	Kolasin	1.27	5	⇓iPg	Pb	03 49 35.5	+0.1
KOME				eSg	Sn	03 49 56.7	+4.5
IVA	Berane	1.34	16	⇑iPg	Pn	03 49 35.5	-0.6
IVA				i Sg	Sn	03 49 58.2	+4.2
TREB	Trebinje	1.37	326	ePn	Pg	03 49 37.6	-0.1
KBN	Korca	1.43	131	Pn	Pn	03 49 38.4	+1.1
KBN				Sn	Sg	03 49 58.3	+0.7
KBN				AML	AML	03 50 01.8	
	comp=E,3.9nm,0.7s						
KBN	Korca	1.43	131	P	Pn	03 49 38.3	+1.0
KBN				S	Sg	03 49 58.7	+1.1
BRY	Bratogost	1.46	335	⇓iPg	Pg	03 49 38.9	-0.6
BRY				i Sg	Sn	03 50 00.8	+4.0
SKO	Skopje	1.59	75	i Pg	Pb	03 49 41.1	+0.3
SKO				i Sg	Sg	03 50 03.1	+0.5
UPM	Unac-Piva	1.66	348	⇓iPn	Pb	03 49 42.2	+0.2
UPM				i Sn	Sg	03 50 05.4	+0.6
KLINJ	Klinje	1.69	340	ePn	Pg	03 49 43.1	-0.8
NEST	Nestorio	1.72	132	Pn	Pn	03 49 42.3	+1.0
NEST				Sn	Sb	03 50 06.4	+1.7
NEST				AML	AML	03 50 11.4	
	comp=E,1.2nm,0.7s						
NEST	Nestorio	1.72	132	P	Pn	03 49 42.3	+1.0
NEST				S	Sn	03 50 05.0	+1.7
SJES	Sjenica	1.74	15	ePg	Pb	03 49 43.5	+0.2
SJES				eSg	Sg	03 50 09.0	+1.7
PLE	Pljevlja	1.75	0	⇑iPn	Pn	03 49 42.5	+0.8
PLE				i Sn	Sg	03 50 07.9	+0.2
STON	Ston	1.79	317	ePn	Pb	03 49 43.6	-0.6
STON				eSn	Sg	03 50 09.4	+0.3
NOCI	Noci	1.92	246	Pn	Pn	03 49 42.9	-1.0
NOCI				AML	AML	03 50 21.1	
	comp=E,2.1nm,0.7s						
PENT	Pentalofos	1.92	135	P	Pn	03 49 45.8	+1.7
PENT				S	Sn	03 50 10.7	+2.4
RUDO	Rudo	2.04	360	ePn	Pn	03 49 46.8	+1.3
IVAS	Ivanjica	2.07	16	ePn	Pn	03 49 47.0	+0.9
IVAS				eSn	Sn	03 50 13.7	+1.8
SELS	Selova	2.08	38	ePn	Pn	03 49 47.3	+1.1
SELS				eSn	Sn	03 50 13.2	+1.1
IGT	Igoumenitsa	2.17	160	Pn	Pn	03 49 48.4	+1.0
IGT	Igoumenitsa	2.17	160	P	Pn	03 49 47.3	-0.1
IGT				S	Sn	03 50 14.9	+0.6
BARS	Barje	2.19	55	i Pn	Pn	03 49 48.5	+0.8
BARS	Barje	2.19	55	ePn	Pn	03 49 48.5	+0.8
BARS				eSn	Sb	03 50 17.4	-0.7
KZN	Kozani	2.22	124	P	Pn	03 49 49.7	+1.6
KZN				S	Sn	03 50 17.8	+2.4
KPRO	Kipourio	2.22	136	P	Pn	03 49 49.5	+1.4
MATE	Matera	2.22	246	⇑P	Pn	03 49 47.1	-0.9
JAN	Janina	2.23	149	P	Pn	03 49 49.3	+1.2
GOCS	Kraljevo Serbi	2.27	29	ePn	Pn	03 49 49.6	+0.8
GOCS				eSn	Sb	03 50 20.8	+0.4
BBLS	Lazi&#263i	2.28	1	ePn	Pn	03 49 50.5	+1.5
BBLS				eSn	Sb	03 50 20.5	-0.3
GRG	Griva	2.37	104	P	Pn	03 49 50.6	+0.5
GRG	Griva	2.37	104	i Pn	Pn	03 49 50.9	+0.8
MRVN	Minervino Murg	2.45	259	Pn	Pn	03 49 50.8	-0.4
MRVN				AML	AML	03 50 46.1	
	comp=E,0.6nm,0.7s						
BOSS	Bosilegrad	2.49	67	ePn	Pn	03 49 52.5	+0.8
BOSS				eSn	Sn	03 50 24.1	+2.1
GRUS	Gruza	2.51	23	ePn	Pn	03 49 53.2	+1.2
DIVS	Divibare	2.56	10	ePn	Pn	03 49 53.6	+0.8
DIVS				eSn	Sb	03 50 26.9	-1.8
TETR	Tetrakomo, Epi	2.66	146	P	Pn	03 49 55.5	+1.3
BOVS	Bovan	2.68	39	⇓P	Pn	03 49 55.5	+1.2
BOVS	Bovan	2.68	39	ePn	Pn	03 49 55.1	+0.8
BOVS				eSn	Sn	03 50 27.6	+0.9
SGRT	San Giovanni R	2.73	275	Pn	Pn	03 49 54.3	-0.8
TRUS	Trudelj	2.75	16	ePn	Pn	03 49 56.3	+1.0
KKB	Krupnik	2.82	83	i Pn	Pn	03 49 58.0	+1.7
THL	Klokotos Trika	2.85	134	P	Pn	03 49 58.3	+1.7
TYRN	Tyrnavos	2.87	130	P	Pn	03 49 58.1	+1.2
THE	Thessaloniki	2.87	108	P	Pn	03 49 57.2	+0.2
THE	Thessaloniki	2.87	108	i Pn	Pn	03 49 57.2	+0.2
ZAPS	Zavoj	2.94	54	ePn	Pn	03 49 59.1	+1.0
ZAPS				eSn	Sn	03 50 35.7	+2.3
TEKS	Tekeris	2.97	2	ePn	Pn	03 49 58.9	+0.5
AMPL	Ampelaki	3.01	152	P	Pn	03 49 59.1	+0.2
DRAG	Dragano-Lefkad	3.04	162	P	Pn	03 49 58.8	-0.5
NYDR	Nydri-Lefkada	3.04	160	P	Pn	03 49 58.3	-1.0
ZAGS	Zajecar	3.07	42	ePn	Pn	03 50 00.6	+0.9
EVGI	Lefkada island	3.12	161	P	Pn	03 49 59.3	-1.1
TIP	Timpagrande	3.12	221	⇓P	Pn	03 49 59.7	-0.8
BORS2	Bor- Borsko je	3.17	37	ePn	Pn	03 50 00.9	-0.3
BORS2				eSn	Sn	03 50 40.4	+1.5
BLKB	Belogradchik	3.18	49	⇑S	Sn	03 50 42.8	+3.8
SRS	Serrai	3.21	97	P	Pn	03 50 01.9	+0.2
SRS	Serrai	3.21	97	i Pn	Pn	03 50 02.2	+0.5
AVAS	Avala Beograd	3.22	15	ePn	Pn	03 50 02.3	+0.5
EVR	Evrytania	3.25	144	P	Pn	03 50 03.8	+1.5
MMB	Musomishta	3.28	89	i Pn	Pn	03 50 03.9	+1.2
KUBS	Kucevo	3.29	30	ePn	Pn	03 50 02.1	-0.7
KUBS				eSn	Sn	03 50 43.8	+1.9
MAKR	Makrakomi, Fth	3.32	140	P	Pn	03 50 04.5	+1.3
AGG	Agios Georgios	3.41	138	P	Pn	03 50 05.4	+1.0
BLY	Banja Luka	3.55	334	ePn	Pn	03 50 07.1	+0.8
BLY	Banja Luka	3.55	334	⇑P	Pn	03 50 06.4	+0.1
BLY	Banja Luka	3.55	334	ePn	Pn	03 50 07.9	+1.6
BLY				eSn	Sn	03 50 52.1	+3.9
ANX	Ano Chora	3.57	146	P	Pn	03 50 07.9	+1.3
FRGS	Fruska Gora	3.59	5	ePn	Pn	03 50 07.7	+0.8
MDVR	Moldovita	3.63	27	⇓P	Pn	03 50 08.4	+0.9
RTZL	Ratzakli, Kefa	3.66	162	P	Pn	03 50 07.5	-0.4
AXAR	Agios Charalam	3.77	137	P	Pn	03 50 09.9	+0.5
SERG	Sergoula	3.77	146	P	Pn	03 50 10.2	+0.7
RLS	Riolos of Patr	3.87	155	P	Pn	03 50 10.5	-0.2
HERR	Herculane	3.98	33	⇓P	Pn	03 50 13.1	+0.9
KNYS	Krupa na Uni	3.99	327	ePn	Pn	03 50 13.4	+1.0
DRO	Drossia	4.05	153	P	Pn	03 50 13.0	-0.2
KLV	Kalavryta, Ach	4.13	148	P	Pn	03 50 15.1	+0.7
SRE	Strehaia	4.16	41	⇑P	Pn	03 50 16.9	+2.1
PLVB	Pleven	4.28	63	⇓P	Pn	03 50 18.4	+2.1
BZS	Buzias	4.35	21	⇑P	Pn	03 50 18.3	+1.0
AQU	L'Aquila	4.52	282	ePn	Pn	03 50 19.0	-0.7
GZR	Gura Zlata	4.54	32	⇓P	Pn	03 50 21.8	+1.8
MORH	Mrgy, Hungar	4.66	354	ePn	Pn	03 50 21.8	+0.2
MORH	Mrgy, Hungar	4.66	354	⇓P	Pn	03 50 22.1	+0.5
SIRR	Siria	4.97	19	⇓P	Pn	03 50 27.3	+1.5
DEV	Deva	5.00	30	⇑P	Pn	03 50 28.8	+2.5
ELND	Elena	5.01	72	⇓P	Pn	03 50 28.0	+1.6
LOT	Lotru	5.01	38	⇓P	Pn	03 50 27.8	+1.3
HUMR	Humele	5.05	52	⇓P	Pn	03 50 28.8	+1.8
BEHE	Becsehely	5.23	340	ePn	Pn	03 50 34.9	+5.4
ARR	Arges	5.38	44	⇑P	Pn	03 50 33.3	+1.8
TNR	Turnu Rosu	5.40	39	⇓P	Pn	03 50 34.5	+2.7
LOZB	Loznitsa	5.63	69	⇑P	Pn	03 50 36.9	+2.0
DRGR		5.73	24	⇓P	Pn	03 50 37.3	+0.9
MDB	Medias	5.82	37	⇑P	Pn	03 50 38.9	+1.4
SOKA	Soboth	5.98	330	i Pn	Pn	03 50 40.3	+0.5
	comp=E,2.6nm,0.8s						
OBKA	Obir	6.03	326	i Pn	Pn	03 50 42.3	+1.8
	comp=E,0.7nm,0.4s						
MLR	Muntele Rosu	6.17	48	Pn	Pn	03 50 40.0	-2.4
	comp=E,0.6nm,0.3s,baz=235,slow=16,SNR=4.3						
MLR				LR	LR	03 52 43.3	
	comp=E,111nm,21.7s,baz=94,slow=37						
	comp=E,2.4nm,0.4s						
MLR	Muntele Rosu	6.17	48	⇓P	Pn	03 50 44.0	+1.6
ARSA	Arzberg	6.30	335	ePn	Pn	03 50 44.2	0.0
	comp=E,1.1nm,0.4s						
PSZ	Piszkesteto	6.35	3	⇓P	Pn	03 50 45.9	+1.1
RONA	Rosalia, Austr	6.50	341	ePn	Pn	03 50 48.2	+1.4
	comp=E,0.7nm,0.3s						
COVR	Voineasa-Covas	6.53	47	⇑P	Pn	03 50 49.3	+2.0
PLOR	Plostina	6.78	49	⇓P	Pn	03 50 53.5	+2.7
CONA	Conrad Observa	6.82	340	ePn	Pn	03 50 53.6	+2.3
	comp=E,0.6nm,0.4s						
VRI	Vrincioaia	6.83	49	⇑P	Pn	03 50 53.8	+2.4
KECS	Kecovo	6.95	6	ePN	Pn	03 50 58.2	+5.2
KECS				eSN	Sn	03 52 10.8	-1.0
MODS	Modra-Piesok	6.95	348	ePN	Pn	03 50 51.4	-1.7
MODS				eSN	Sn	03 52 06.3	-5.7
KBA	Koelnbreinsper	6.99	324	ePn	Pn	03 50 55.1	+1.4
	comp=E,0.9nm,0.4s						
ABTA	Abfaltersbach	7.14	319	i Pn	Pn	03 50 55.6	-0.1
	comp=E,1.4nm,0.5s						
MOA	Molln	7.25	332	i Pn	Pn	03 50 58.9	+1.8
	comp=E,0.3nm,0.3s						
BIOA	Bad Ischl, Aus	7.35	328	i Pn	Pn	03 50 59.9	+1.4
	comp=E,1.3nm,0.3s						
LESA	Schwarzleotal	7.55	323	i Pn	Pn	03 51 01.5	+0.1
	comp=E,0.9nm,0.4s						
IDI	Anoyia	7.63	144	Pn	Pn	03 51 04.8	+2.3
	comp=E,7.3nm,0.8s,baz=336,slow=12,SNR=1.6						
IDI				Sn	Sn	03 52 22.2	-6.6
	comp=E,0.3nm,0.3s,baz=23,slow=16,SNR=2.1						
WTTA	Wattenberg	7.93	318	i Pn	Pn	03 51 08.5	+1.8
	comp=E,1.1nm,0.3s						
WATA	Walderalm	8.01	319	i Pn	Pn	03 51 09.3	+1.6
	comp=E,4.3nm,0.6s						
SQTA	Sankt Quirin	8.12	317	i Pn	Pn	03 51 11.2	+2.0
	comp=E,1.2nm,0.4s						
FETA	Feichten	8.24	314	ePn	Pn	03 51 12.4	+1.5
	comp=E,0.1nm,0.2s						
GERES	GERESS Array B	8.29	333	Pn	Pn	03 51 12.2	+0.7
	baz=141,slow=13,SNR=2.0						
GERES				Sn	Sn	03 52 43.0	-2.0
	baz=149,slow=25,SNR=2.6						
	comp=E,0.2nm,0.6s						
RETA	Reutte	8.52	317	i Pn	Pn	03 51 16.5	+1.8
	comp=E,0.6nm,0.5s						
DAVOX	Davos/Dischmat	8.57	310	Pn	Pn	03 51 16.6	+1.2
	comp=E,0.3nm,0.3s,baz=128,slow=16,SNR=7.4						
	comp=E,1.2nm,0.5s						
DAVA	Damuels	8.87	313	ePn	Pn	03 51 14.0	-5.5
	comp=E,1.6nm,0.5s						
BRTR	Keskin Array B	11.00	95	LR	LR	03 56 14.2	
	comp=E,41nm,20.8s,baz=298,slow=39						
HFS	Hagfors	18.91	351	P	P	03 53 30.6	-1.0
	comp=E,0.1nm,0.3s,baz=173,slow=13,SNR=2.1						
	comp=E,2.7nm,0.8s						
NOA	NORSAR Array B	20.11	348	P	P	03 53 44.8	-0.1
	baz=155,slow=7.8,SNR=1.8						
	comp=E,0.6nm,0.9s						
FINES	FINESS Array B	20.30	9	P	P	03 53 45.6	-1.3
	comp=E,0.1nm,0.3s,baz=183,slow=11,SNR=5.3						
	comp=E,2.0nm,0.8s						
BVAR	Borovoye Array	35.70	54	P	P	03 56 06.9	-2.6
	comp=E,1.3nm,0.7s,baz=257,slow=5.8,SNR=7.1						
	comp=E,1.3nm,0.7s						
ZALV	Zalesovo Beam	44.14	51	P	P	03 57 18.1	-1.5
	comp=E,1.2nm,0.6s,baz=282,slow=9.4,SNR=6.7						
	comp=E,1.2nm,0.6s						
MKAR	Makanchi Array	44.35	61	P	P	03 57 19.9	-1.4
	comp=E,1.0nm,0.7s,baz=279,slow=7.0,SNR=9.7						
	comp=E,1.0nm,0.7s						

IDC ***15*** *03:53:32.5±4.1, 24°.82N×95°.13E, h113^{km}±41^{km}, mb3.6/10, mbtmp3.9/11, Error ellipse: s-maj=34.5km s-min=15.2km az=63.0*

NEIC ***15*** *03:53:33.0±2.1, 24°.92N±0°.08×95°.09E±0°.06, h111^{km}±7^{km}, mb4.4/13, Error ellipse: s-maj=13.5km s-min=4.0km az=146.0*

NDI ***15*** *03:53:34.1±2.1, 24°.91N×94°.95E, h25^{km}±10^{km}, ML4.2, MW4.0, mb4.4(NEIC)*

ISC 15 03:53:32.7±1.0, **24°.95N**±0°.04×**95°.01E**±0°.08, **h109**^{km}±8^{km}, **n37**, σ**1^s.16**/44, **mb4.0**/16, **Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MORE	Moreh	0.96	223		Pn	03 53 54.2	+0.9
MORE				Sn	Sn	03 54 09.6	+0.6
KOHI	KOHIMA	1.12	313	eP	Pn	03 53 55.1	-0.2
KOHI				eS	Sn	03 54 10.5	-1.9
KOHI				IAML		03 54 13.9	
	comp=N,4μm,0.7s						
KOHI				IAML		03 54 14.8	
	comp=E,4μm,0.3s						
MOKO	MOKOCHONG	1.44	342	eP	Pn	03 53 59.5	+0.7
MOKO				eS	Sn	03 54 18.4	-0.4
MOKO				IAML		03 54 20.3	
	comp=E,3μm,0.6s						
MOKO				IAML		03 54 21.8	
	comp=N,3μm,0.5s						
ITAN	ITANAGAR	2.48	332	eS	Sn	03 54 41.9	+0.1
ITAN				IAML		03 54 42.2	
	comp=E,2μm,0.3s						
ITAN				IAML		03 54 42.7	
	comp=N,2μm,0.3s						
TEZP	TEZPUR	2.60	310	eP	Pn	03 54 13.6	+0.3
TEZP				eS	Sn	03 54 43.2	-1.3
TEZP				IAML		03 54 45.2	
	comp=N,3μm,0.2s						
TEZP				IAML		03 54 45.2	
	comp=E,2μm,0.2s						
SHL	Shillong	2.90	283		Pn	03 54 17.8	+0.3
SHL	Shillong	2.90	283	eP	Pn	03 54 17.7	+0.2
SHL				eS	Sn	03 54 49.5	-2.5
SHL				IAML		03 54 53.1	
	comp=E,3μm,0.2s						
SHL				IAML		03 54 53.1	
	comp=N,3μm,0.1s						
SAIH	SAIHA	3.07	218	eP	Pn	03 54 20.5	+0.8
SAIH				eS	Sn	03 54 54.5	-1.5
SAIH				IAML		03 54 59.4	
	comp=N,2μm,0.3s						
SAIH				IAML		03 54 59.6	
	comp=E,2μm,0.3s						
GUWA	GUWAHATI	3.25	293	eP	Pn	03 54 21.6	-0.3
GUWA				eS	Sn	03 54 57.9	-2.1
GUWA				IAML		03 54 59.5	
	comp=E,958nm,0.2s						
GUWA				IAML		03 54 59.5	
	comp=N,984nm,0.1s						
BRDH	Bariadhala	3.83	234	P	Pn	03 54 29.6	-0.1
	comp=N,55nm,0.3s,baz=236,slow=20,SNR=1.3						
BRDH				S	Sn	03 55 14.8	+1.0
	comp=N,165nm,0.3s,baz=229,slow=21,SNR=12						
HYB	Hyderabad	17.07	247	eP	Pn	03 57 34.2	+9.5

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MKAR  Makanchi Array    24.05 338   P      P      03 58 39.2 +1.5
      comp=N,3.1nm,0.5s,baz=151,slow=9.1,SNR=42
      comp=N,3.1nm,0.5s
MAKZ  Makanchi          24.17 338   P      P      03 58 40.1 +1.4
SONM  Songino Array     24.56  19   P      P      03 58 42.0 -0.3
      comp=N,0.3nm,0.5s,baz=189,slow=8.5,SNR=2.9
      comp=N,0.3nm,0.5s
SONM  Songino Array     24.56  19   P      P      03 58 42.1 -0.3
KURBB Kurchatov Arra    28.62 338   P      P      03 59 19.5 +0.9
      comp=N,0.7nm,0.5s,baz=148,slow=9.3,SNR=5.8
      comp=N,0.7nm,0.5s
KURK  Kurchatov         28.67 338   P      P      03 59 19.9 +0.8
BVAR  Borovoye Array    33.62 333   P      P      04 00 03.5 +1.0
      comp=N,0.8nm,0.4s,baz=123,slow=11,SNR=4.5
      comp=N,0.8nm,0.4s
UOSS  Minazif           35.11 278   P      P      04 00 15.4 -0.4
AB31  Akbulak array     36.52 321   P      P      04 00 28.4 +1.0
AB31                                IAmb   IAmb   04 00 30.0
      comp=Z,1.8nm,0.9s
ABKAR Akbulak array     36.52 321   P      P      04 00 29.1 +1.6
ARTI  Arti              41.08 330   P      P      04 01 06.2 +0.8
AKBB  Malin Array Si    55.91 316   P      P      04 03 01.3 +2.2
AKBB                                IAmb   IAmb   04 03 30.5
      comp=Z,9.4nm,1.4s
KIEV  Kiev              55.92 316   P      P      04 03 01.4 +2.2
KIEV                                IAmb   IAmb   04 03 30.5
      comp=Z,8.5nm,1.4s
FINES FINESS Array B    58.36 328   P      P      04 03 16.4 +0.2
      comp=Z,7.4nm,1.1s,baz=93,slow=6.8,SNR=7.2
      comp=Z,7.4nm,1.1s
FINES FINESS Array B    58.36 328   P      P      04 03 15.9 -0.3
WB0   Warramunga Arr    58.68 136   P      P      04 03 17.7 -1.3
WB0                                 IAmb   IAmb   04 03 52.2
      comp=Z,6.3nm,1.4s
WRA   Warramunga Arr    58.77 136   P      P      04 03 18.0 -1.6
      comp=Z,0.6nm,0.6s,baz=320,slow=7.6,SNR=5.7
      comp=Z,0.6nm,0.6s
ARCES ARCESS Array B    59.71 338   P      P      04 03 26.0 +0.6
      comp=Z,3.0nm,1.1s,baz=108,slow=5.8,SNR=6.8
      comp=Z,3.0nm,1.1s
ARCES ARCESS Array B    59.71 338   P      P      04 03 25.8 +0.4
ARCES                               IAmb   IAmb   04 03 53.4
      comp=Z,14nm,1.4s
ASAR  Alice Springs     61.29 139   P      P      04 03 35.1 -1.7
      comp=Z,0.4nm,0.6s,baz=323,slow=6.7,SNR=7.3
      comp=Z,0.4nm,0.6s
HFS   Hagfors           64.42 327   P      P      04 03 57.4 +0.3
      comp=Z,1.9nm,0.6s,baz=88,slow=4.9,SNR=10
      comp=Z,1.9nm,0.6s
NB2   NORSAR Subarra    65.53 328   P      P      04 04 04.2 -0.1
      comp=Z,0.9nm,0.5s,baz=83,slow=6.2
NOA   NORSAR Array B    65.53 328   P      P      04 04 04.3 -0.1
      comp=Z,0.4nm,0.5s,baz=92,slow=5.2,SNR=1.7
      comp=Z,0.4nm,0.5s
NC204 NORSAR Array S    65.72 328   P      P      04 04 05.8 +0.3
BBOO  Buckleboo         69.49 144   P      P      04 04 27.9 -1.6
BBOO                                IAmb   IAmb   04 05 00.6
      comp=Z,5.6nm,1.2s
B22K  Teshekpuk Lake    73.64  19   P      P      04 04 52.8 -1.0
B22K                                IAmb   IAmb   04 05 31.0
      comp=Z,3.1nm,1.4s
```

PDG ***15*** *03:55:54.5±0.3, 41°.49N×19°.32E, h15km, MD3.1/1, ML3.0/13, Error ellipse: s-maj=0.4km s-min=0.8km az=0.0*
SKO ***15*** *03:55:54.3, 41°.59N×19°.25E, h0km*
IDC ***15*** *03:55:54.8±5.7, 41°.77N×19°.68E, h0km, mb3.5/3, mbtmp3.5/6, ML2.5/3, Error ellipse: s-maj=106.0km s-min=26.1km az=26.0*
BEO ***15*** *03:55:54.3±0.6, 41°.46N×19°.48E, h7km±2km, ML2.9/18*
TIR ***15*** *03:55:56.2, 41°.61N×19°.47E, h30km±4km, Ml3.0/5*
THE ***15*** *03:55:56.3, 42°N±7°×1°9E±°, h12km, M3.0/13, MLh3.0/13*
ISC 15 03:55:55.8±1.0**, 41°.58N**±0°.02×**19°.41E**±0°.02**, h14**km±7km**,**
n122, σ1.**22**/164**, 17C-12D, Albania**

```
Code  Station Name         Δ°  AZ°    Phase ID        Time      Res
                                      Op      ISC     h  m  s   ISC
ULC   Ulcinj             0.41 343⇑iPg     Pg      03 56 03.3 -0.6
ULC                              i Sg     Sb      03 56 12.1 +1.3
TIR   Tirane             0.41 124  Pg     Pg      03 56 03.2 -0.8
TIR                                Sg     Sg      03 56 09.2 -0.4
TIR                                AML    AML     03 56 10.8
      6.5nm,0.3s
TIR   Tirane             0.41 124 i Pg    Pg      03 56 03.3 -0.7
TIR                               i Sg    Sg      03 56 10.3 +0.6
DRME  Dracevica, Mon     0.63 345⇑iPg     Pg      03 56 08.5 +0.3
DRME                              eSg     Sn      03 56 19.5 -0.8
PHP   Peshkopia          0.78  82  Pg     Pg      03 56 09.7 -1.3
PHP                                Sg     Sg      03 56 21.1 -0.2
PHP                                AML    AML     03 56 25.3
      1.1nm,0.5s
PHP                                AML    AML     03 56 29.6
      2.4nm,0.4s
BUM   Brajici-Budva      0.82 332⇑iPg     Pg      03 56 11.3 -0.4
BUM                               i Sg    Sn      03 56 24.5 -0.5
PDG   Podgorica          0.86 352  Pg     Pb      03 56 12.8 +0.3
PDG                                Sg     Sb      03 56 24.4 +0.5
PDG   Podgorica          0.86 352 ⇑P      Pb      03 56 12.8 +0.3
PDG   Podgorica          0.86 352 ePg     Pg      03 56 12.5  0.0
PDG                               eSg     Sn      03 56 25.6 -0.2
PDG   Podgorica          0.86 352⇓iPg     Pg      03 56 12.1 -0.4
PDG                               i Sg    Sn      03 56 27.2 +1.4
CEME  Cevo               1.03 340⇓iPg     Pb      03 56 15.6 +0.1
CEME                              eSg     Sn      03 56 32.4 +2.1
PVY   Plav               1.10  22⇓iPg     Pb      03 56 15.4 -1.2
PVY                               i Sg    Sn      03 56 34.9 +3.0
HCY   Herceg Novi        1.10 322⇓iPg     Pb      03 56 16.5 -0.2
HCY                               i Sg    Sn      03 56 34.5 +2.6
VLO   Vlora              1.11 177  Pg     Pb      03 56 17.7 +0.9
VLO                                Sg     Sb      03 56 32.7 +1.7
VLO                                AML    AML     03 56 39.5
      3.7nm,0.4s
VLO   Vlora              1.11 177  P      Pb      03 56 17.7 +0.9
VLO                                S      Sn      03 56 33.9 +2.0
OHR   Ohrid              1.15 114 i Pg    Pb      03 56 16.9 -0.5
OHR                               i Sg    Sn      03 56 35.2 +2.2
NKME  Niksic             1.24 344⇑iPg     Pn      03 56 18.6 -0.1
NKME                              eSg     Sg      03 56 38.9 +3.2
KOME  Kolasin            1.27   4⇓iPg     Pn      03 56 18.9 -0.4
KOME                              eSg     Sg      03 56 39.2 +2.2
IVA   Berane             1.34  15⇑iPg     Pb      03 56 21.0 +0.2
IVA                               i Sg    Sg      03 56 41.9 +2.8
TREB  Trebinje           1.38 326 ePn     Pn      03 56 21.3 +0.6
KBN   Korca              1.41 132  Pn     Pn      03 56 22.4 +1.2
KBN   Korca              1.41 132  P      Pn      03 56 22.2 +1.0
KBN                                S      Sb      03 56 41.6 +1.7
BRY   Bratogost          1.47 334⇓iPg     Pn      03 56 22.5 +0.4
BRY                               i Sg    Sg      03 56 44.0 +0.7
SKO   Skopje             1.57  75 i Pg    Pn      03 56 24.3 +1.0
SKO                               i Sg    Sg      03 56 47.1 +0.7
UPM   Unac-Piva          1.67 347⇑iPn     Pb      03 56 26.2 -0.2
UPM                               i Sn    Sg      03 56 49.1 -0.4
NEST  Nestorio           1.70 133  Pn     Pn      03 56 26.7 +1.5
NEST                               AML    AML     03 56 55.3
      0.6nm,0.3s
NEST                               AML    AML     03 56 57.4
      0.7nm,0.6s
NEST  Nestorio           1.70 133  P      Pn      03 56 26.1 +1.0
NEST                               S      Sn      03 56 48.4 +1.6
KLINJ Klinje             1.70 339 ePn     Pb      03 56 26.9 -0.1
SJES  Sjenica            1.73  14 ePg     Pb      03 56 27.3 -0.2
SJES                              eSg     Sg      03 56 51.7 +0.1
PLE   Pljevlja           1.75 360⇑iPn     Pb      03 56 27.2 -0.6
PLE                               i Sn    Sg      03 56 51.5 -0.7
STON  Ston               1.81 316 ePn     Pn      03 56 26.6 +0.1
STON                              eSn     Sg      03 56 53.6 -0.5
PENT  Pentalofos         1.91 136  P      Pn      03 56 29.3 +1.4
PENT                               S      Sb      03 56 54.7 +0.6
NOCI  Noci               1.94 247  Pn     Pb      03 56 30.9 +0.1
NOCI                               AML    AML     03 57 03.5
      0.6nm,0.3s
RUDO  Rudo               2.04 359 ePn     Pn      03 56 30.9 +1.2
IVAS  Ivanjica           2.07  15 ePn     Pn      03 56 30.4 +0.2
IVAS                              eSn     Sb      03 56 59.1 +0.2
SELS  Selova             2.07  37 ePn     Pn      03 56 31.0 +0.8
SELS                              eSn     Sb      03 56 57.9 -1.0
IGT   Igoumenitsa        2.16 161  Pn     Pn      03 56 31.8 +0.4
IGT   Igoumenitsa        2.16 161  P      Pn      03 56 31.2 -0.2
IGT                                S      Sn      03 56 57.9 -0.1
BARS  Barje              2.18  55 i Pn    Pn      03 56 32.4 +0.7
BARS  Barje              2.18  55 ePn     Pn      03 56 32.1 +0.5
BARS                              eSn     Sn      03 56 58.1 -0.3
KZN   Kozani             2.19 125  P      Pn      03 56 33.7 +1.8
KPRO  Kipourio           2.20 137  P      Pn      03 56 33.6 +1.6
JAN   Janina             2.21 150  P      Pn      03 56 32.6 +0.5
MATE  Matera             2.24 246 ⇑P      Pb      03 56 36.7 +0.7
GOCS  Kraljevo Serbi     2.26  28 ePn     Pn      03 56 33.9 +1.1
GOCS                              eSn     Sb      03 57 03.3 -1.0
BBLS  Lazi&#263i         2.29 360 ePn     Pn      03 56 34.7 +1.5
BBLS                              eSn     Sb      03 57 04.4 -0.7
GRG   Griva              2.34 104  P      Pn      03 56 34.6 +0.7
GRG   Griva              2.34 104 i Pn    Pn      03 56 34.6 +0.7
BOSS  Bosilegrad         2.47  67 ePn     Pn      03 56 36.6 +1.0
BOSS                              eSn     Sn      03 57 04.1 -1.4
MRVN  Minervino Murg     2.47 259  Pn     Pn      03 56 34.3 -1.4
GRUS  Gruza              2.50  22 ePn     Pn      03 56 37.2 +1.1
GRUS                              eSn     Sb      03 57 09.2 -2.0
DIVS  Divibare           2.56   9 ePn     Pn      03 56 37.3 +0.4
DIVS                              eSn     Sn      03 57 09.0 +1.2
TETR  Tetrakomo, Epi     2.65 147  P      Pn      03 56 39.0 +0.8
BOVS  Bovan              2.67  39 ⇓P      Pn      03 56 38.9 +0.6
BOVS  Bovan              2.67  39 ePn     Pn      03 56 39.2 +0.9
BOVS                              eSn     Sn      03 57 12.1 +1.7
TRUS  Trudelj            2.75  15 ePn     Pn      03 56 39.6 +0.2
SGRT  San Giovanni R     2.75 275  Pn     Pn      03 56 37.9 -1.6
KKB   Krupnik            2.80  83  P      Pn      03 56 41.5 +1.3
KKB   Krupnik            2.80  83 i Pn    Pn      03 56 41.4 +1.3
THL   Klokotos Trika     2.83 135  P      Pn      03 56 41.2 +0.7
TYRN  Tyrnavos           2.84 130  P      Pn      03 56 41.6 +0.8
ZAPS  Zavoj              2.93  54 ePn     Pn      03 56 42.9 +0.9
ZAPS                              eSn     Sn      03 57 18.8 +1.8
TEKS  Tekeris            2.97   2 ePn     Pn      03 56 42.7 +0.1
AMPL  Ampelaki           2.99 152  P      Pn      03 56 43.2 +0.4
DRAG  Dragano-Lefkad     3.03 162  P      Pn      03 56 41.9 -1.4
NYDR  Nydri-Lefkada      3.03 160  P      Pn      03 56 42.5 -0.8
ZAGS  Zajecar            3.05  42 ePn     Pn      03 56 44.4 +0.8
ZAGS                              eSn     Sn      03 57 20.9 +0.9
EVGI  Lefkada island     3.10 162  P      Pn      03 56 43.3 -1.1
TIP   Timpagrande        3.14 221 ⇑P      Pn      03 56 43.5 -1.3
BORS2 Bor- Borsko je     3.16  37 ePn     Pn      03 56 44.5 -0.6
BORS2                             eSn     Sn      03 57 22.3 -0.4
SRS   Serrai             3.18  97 i Pn    Pn      03 56 46.0 +0.6
AVAS  Avala Beograd      3.22  14 ePn     Pn      03 56 46.1 +0.1
EVR   Evrytania          3.23 145  P      Pn      03 56 47.5 +1.3
MMB   Musomishta         3.26  89 i Pn    Pn      03 56 47.9 +1.4
KUBS  Kucevo             3.29  30 ePn     Pn      03 56 45.9 -1.0
KUBS                              eSn     Sn      03 57 26.1 +0.4
PLG   Polygyros          3.29 110  P      Pn      03 56 47.5 +0.6
MAKR  Makrakomi, Fth     3.30 140  P      Pn      03 56 48.0 +0.9
AGG   Agios Georgios     3.39 138  P      Pn      03 56 49.0 +0.6
VLS   Valsamata          3.52 165  P      Pn      03 56 48.6 -1.4
ANX   Ano Chora          3.55 146  P      Pn      03 56 51.4 +0.9
BLY   Banja Luka         3.56 334 ePn     Pn      03 56 51.9 +1.3
BLY   Banja Luka         3.56 334 ⇑P      Pb      03 56 59.4 +0.8
BLY   Banja Luka         3.56 334 ePn     Pn      03 56 52.9 +2.3
FRGS  Fruska Gora        3.59   5 ePn     Pn      03 56 50.6 -0.5
RTZL  Ratzakli, Kefa     3.65 163  P      Pn      03 56 51.1 -0.8
HERR  Herculane          3.97  33 ⇓P      Pn      03 56 57.2 +1.0
KNYS  Krupa na Uni       4.01 327 ePn     Pn      03 56 57.1 +0.4
BZS   Buzias             4.34  21 ⇓P      Pn      03 57 01.7 +0.3
GZR   Gura Zlata         4.53  32 ⇑P      Pn      03 57 05.7 +1.7
AQU   L'Aquila           4.54 282 ePn     Pn      03 57 03.6 -0.6
MORH  Mrgy, Hungar       4.67 353 ePn     Pn      03 57 05.1 -0.7
MORH  Mrgy, Hungar       4.67 353 ⇑P      Pn      03 57 09.0 +3.2
SIRR  Siria              4.96  18 ⇑P      Pn      03 57 12.1 +2.2
ELND  Elena              4.99  72 ⇓P      Pn      03 57 11.8 +1.6
HUMR  Humele             5.04  52 ⇑P      Pn      03 57 13.7 +2.8
BEHE  Becsehely          5.25 340 ePn     Pn      03 57 14.5 +0.7
LOZB  Loznitsa           5.61  69 ⇑P      Pn      03 57 19.1 +0.3
DRGR                     5.73  23 ⇓P      Pn      03 57 22.0 +1.5
SOKA  Soboth             5.99 330 i Pn    Pn      03 57 24.2 +0.1
      0.7nm,0.4s
OBKA  Obir               6.05 326 ePn     Pn      03 57 25.5 +0.7
      1.0nm,0.4s
ARSA  Arzberg            6.32 335 i Pn    Pn      03 57 28.5  0.0
      0.7nm,0.4s
RONA  Rosalia, Austr     6.51 341 ePn     Pn      03 57 32.1 +1.0
      1.2nm,0.5s
PLOR  Plostina           6.76  48 ⇑P      Pn      03 57 38.7 +4.0
VRI   Vrincioaia         6.82  49 ⇓P      Pn      03 57 38.4 +3.0
CONA  Conrad Observa     6.83 340 ePn     Pn      03 57 36.3 +0.7
      0.5nm,0.2s
KBA   Koelnbreinsper     7.01 324 i Pn    Pn      03 57 37.4 -0.7
      0.4nm,0.3s
ABTA  Abfaltersbach      7.16 319 i Pn    Pn      03 57 40.0 -0.2
      0.2nm,0.2s
MOA   Molln              7.26 331 ePn     Pn      03 57 41.4 -0.1
      0.7nm,0.3s
BIOA  Bad Ischl, Aus     7.37 328 ePn     Pn      03 57 43.9 +1.0
      0.6nm,0.3s
LESA  Schwarzleotal      7.57 323 ePn     Pn      03 57 45.2 -0.5
      0.3nm,0.2s
WTTA  Wattenberg         7.95 318 i Pn    Pn      03 57 52.7 +1.6
      0.6nm,0.3s
WATA  Walderalm          8.03 318 i Pn    Pn      03 57 53.5 +1.4
      1.1nm,0.4s
SQTA  Sankt Quirin       8.14 317 ePn     Pn      03 57 52.3 -1.3
      1.0nm,0.3s
FETA  Feichten           8.26 314 ePn     Pn      03 57 55.1 -0.2
      0.1nm,0.2s
GERES GERESS Array B     8.31 333  Pn     Pn      03 57 57.2 +1.4
      baz=168,slow=15,SNR=2.3
      0.3nm,0.7s
RETA  Reutte             8.54 317 ePn     Pn      03 57 58.1 -1.0
      0.1nm,0.2s
DAVOX Davos/Dischmat     8.60 310  Pn     Pn      03 58 00.2 +0.3
      0.3nm,0.3s,baz=326,slow=5.6,SNR=3.3
DAVOX                              Sn     Sn      03 59 35.1 -1.6
      0.1nm,0.3s,baz=84,slow=13,SNR=1.8
      1.2nm,0.5s
DAVA  Damuels            8.89 313 i Pn    Pn      03 58 05.2 +1.3
      0.9nm,0.4s
HFS   Hagfors           18.91 351  P      P       04 00 15.1 -0.8
      baz=163,slow=10,SNR=1.3
      2.4nm,0.9s
FINES FINESS Array B    20.30   9  P      P       04 00 28.6 -2.4
      2.8nm,0.9s,baz=178,slow=11,SNR=3.4
      2.8nm,0.9s
ZALV  Zalesovo Beam     44.13  51  P      P       04 04 02.7 -0.8
      0.3nm,0.3s,baz=294,slow=6.6,SNR=2.5
      0.3nm,0.3s
MKAR  Makanchi Array    44.33  61  P      P       04 04 04.1 -1.1
      0.2nm,0.4s,baz=281,slow=7.5,SNR=4.2
      0.2nm,0.4s
```

DJA 15 04:08:40.8±0.6**, 1°S**±4°×**9°7E**±°**, h10**km**, M4.1**/13**, mb5.0**/1**,**
MLv3.7/13**, Southwest of Sumatera**

```
Code  Station Name         Δ°  AZ°    Phase ID        Time      Res
                                      Op      ISC     h  m  s   ISC
PBSI  Pulau Batu         1.49  41  P      Pb      04 09 08.2 -0.3
PBSI                               S      Sn      04 09 25.8 -1.3
SISI  Saibi              1.79  95  P      Pn      04 09 11.7 -0.1
GSI   Gunungsitoli       2.48   6  P      Pn      04 09 22.4 +1.1
MNSI  Mandailing Nat     3.01  49  P      Pn      04 09 28.8 +0.3
PPSI  Pulau Pagai        3.13 120  P      Pn      04 09 30.2  0.0
PDSI  Padang             3.17  85  P      Pn      04 09 30.5 -0.3
PPI   Padang Panjang     3.18  77  P      Pn      04 09 29.8 -1.1
SNSI  Sinabang, Aceh     3.69 345  P      Pn      04 09 33.7 -4.3
KRJI  Kerinci            4.26 102  P      Pn      04 09 46.4 +0.6
PSI   Prapat             4.28  22  P      Pn      04 09 45.9 -0.2
TPTI                     4.41 358  P      Pn      04 09 48.9 +1.0
KCSI  Kotacane, Aceh     4.69   6  P      Pn      04 09 53.1 +1.3
MNAI  Manna              6.47 119  P      Pn      04 10 16.2  0.0
```

IDC 15 04:11:33.6±2.4**, 0°.97N**×**124°.67E, h0**km**, mb3.4**/3**,**
mbtmp3.4/3**, Error ellipse: s-maj=336.5km**
s-min=25.8km az=63.0, Minahassa Peninsula, Sulawesi

```
Code  Station Name         Δ°  AZ°    Phase ID        Time      Res
                                      Op      ISC     h  m  s   ISC
WRA   Warramunga Arr    22.84 156  P      P       04 16 38.1 -0.4
      1.3nm,0.8s,baz=332,slow=9.8,SNR=7.8
      1.3nm,0.8s
ASAR  Alice Springs     26.08 160  P      P       04 17 09.2  0.0
      0.2nm,0.5s,baz=346,slow=15,SNR=4.3
      0.2nm,0.5s
MKAR  Makanchi Array    58.70 327  P      P       04 21 33.3 +0.2
      0.3nm,0.4s,baz=125,slow=7.9,SNR=6.2
      0.3nm,0.4s
```

MOS ***15*** *04:38:13.9±1.0, 45°.85N×142°.85E, h332km, mb4.4/19, Error ellipse: s-maj=8.4km s-min=6.2km az=95.1*
NIED ***15*** *04:38:14.6, 45°.76N×142°.90E, h334km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.57; $M_{\theta\theta}$2.15; $M_{\phi\phi}$-2.72; $M_{r\theta}$0.35; $M_{\theta\phi}$-2.15; $M_{\phi r}$-2.82; Fault plane solution: $M_0$4.25000×10^{15} NP1:ϕ_s68.00000°, δ49.00000°, λ177.00000°. NP2:ϕ_s160.00000°, δ88.00000°, λ41.00000°.*
NEIC ***15*** *04:38:15.0±1.9, 45°.90N±0°.07×142°.8E±0°.1, h322km±5km, mb4.3/242 Error ellipse: s-maj=12.1km s-min=10.3km az=112.0*
JMA ***15*** *04:38:14.6±0.3, 46°N±1°×14°3E±°, h334km±2km, MV4.4/40, NE OFF HOKKAIDO*
IDC ***15*** *04:38:14.5±0.5, 45°.94N×142°.82E, h319km±5km, mb3.7/25, mbtmp4.6/35, Error ellipse: s-maj=9.7km s-min=8.3km az=157.0*
SKHL ***15*** *04:38:15.6±0.3, 45°.70N×143°.10E, h323km±1km, mb5.4/4, mbv5.4/1, msha5.9/2*
ISC 15 04:38:14.5±0.5**, 45°.83N**±0°.03×**142°.91E**±0°.04**, h325**km±4km**,**
n566, σ0.**98**/495**, mb4.3**/148**, 14C-16D, Hokkaido region**

```
Code  Station Name         Δ°  AZ°    Phase ID        Time      Res
                                      Op      ISC     h  m  s   ISC
JWK2  Keihoku            0.88 235 eP      Pn      04 38 58.1 +0.9
JWK2                              eS      S       04 39 31.4 +0.2
JSE   Soyaes             0.90 195  P      Pn      04 38 58.0 +0.7
JSE                               eS      S       04 39 31.4  0.0
YSS   Yuzhno-Sakhali     1.13 354         Pn      04 38 59.2 +1.0
YSS   Yuzhno-Sakhali     1.13 354  P      Pn      04 38 59.0 +0.9
YSS   Yuzhno-Sakhali     1.13 354  S      S       04 39 33.1 +0.1
YSS   Yuzhno-Sakhali     1.13 354αePN     Pn      04 38 59.1 +1.0
YSS                               eS      S       04 39 32.7 -0.3
YSS                                pmax   pmax
      comp=Z,500nm,0.5s
YSS                                smax   smax
      comp=N,600nm,3.4s
YSS                                smax   smax
      comp=E,700nm,3.4s
YSS                                smax   smax
      comp=N,430nm,0.8s
YSS                                smax   smax
      comp=E,370nm,0.7s
YSS   Yuzhno-Sakhali     1.13 354 eP      Pn      04 38 59.0 +0.9
YSS                                AMB    AMB     04 38 59.3
      comp=E,640nm,0.4s
YSS                               eS      S       04 39 33.1 +0.1
YSS                                A      A       04 39 34.0
      comp=E,410nm,0.7s
YSS                                A      A       04 39 34.0
      comp=E,310nm,0.7s
JRR   Rishiri            1.32 239  P      Pn      04 39 00.1 +0.9
JRR                               eS      S       04 39 35.6 +0.8
JRBN  Rebuntou           1.36 253  P      Pn      04 38 59.7 +0.3
JRBN                              eS      S       04 39 33.9 -1.3
JSS   Shosan             1.61 208  P      Pn      04 39 01.9 +0.9
ASAJ  Asahikawa          1.73 188  P      Pn      04 39 03.0 +1.3
      comp=E,379nm,0.6s,baz=4.9,slow=6.8,SNR=278
ASAJ                               S      S       04 39 39.3 -0.1
      comp=E,45nm,0.5s,baz=72,slow=32,SNR=9.3
ASAJ  Asahikawa          1.73 188  P      Pn      04 39 02.6 +0.8
JKA   Kamikawa-asahi     1.73 188         Pn      04 39 02.6 +0.9
JKA   Kamikawa-asahi     1.73 188         S       04 39 39.3 -0.1
JYG   Yagishiri          1.75 217 eP      Pn      04 39 02.5 +0.7
JYG                               eS      S       04 39 39.6  0.0
JMP   Maruseppu          1.85 170  P      Pn      04 39 03.3 +0.7
JMP                               eS      S       04 39 41.0  0.0
JKK2  Kamakawa 2         1.96 184  P      Pn      04 39 04.2 +0.8
JKK2                              eS      S       04 39 42.9 +0.4
JTKR  Abashiri--Toko     1.99 159 eP      Pn      04 39 04.4 +0.8
JTKR                              eS      S       04 39 43.2 +0.4
JHR   Hokuryu            2.25 203  P      Pn      04 39 06.3 +0.7
JRA   Rausu              2.46 140 ⇓P      Pn      04 39 08.4 +1.1
JAR   Ashorobuto         2.60 166  P      Pn      04 39 09.4 +0.8
JAR                               eS      S       04 39 51.8  0.0
YUK   Yuzh-Kuril'sk      2.76 130 ePN     Pn      04 39 09.9 +0.1
YUK                               eS      S       04 39 55.8 +1.7
YUK                                pmax   pmax
      comp=Z,337nm,0.4s
YUK                                pmax   pmax
      comp=N,67nm,0.2s
YUK                                pmax   pmax
      comp=Z,750nm,1.0s
YUK                                smax   smax
      comp=N,697nm,0.6s
YUK                                smax   smax
      comp=E,262nm,0.4s
YUK   Yuzh-Kuril'sk      2.76 130 eP      Pn      04 39 11.0 +1.2
YUK                                AMB    AMB     04 39 15.8
      comp=E,340nm,0.3s
YUK                                AMB    AMB     04 39 16.2
      comp=E,750nm,1.0s
GLVR  Golovnino          2.79 137 ePN     Pn      04 39 10.6 +0.4
GLVR                              eS      S       04 39 56.9 +2.1
GLVR                               pmax   pmax
      comp=N,118nm,0.2s
GLVR                               pmax   pmax
      comp=E,137nm,0.2s
GLVR                               pmax   pmax
      comp=Z,282nm,0.2s
GLVR                               smax   smax
      comp=N,693nm,0.2s
GLVR                               smax   smax
      comp=E,1μm,0.3s
GLVR  Golovnino          2.79 137 eP      Pn      04 39 10.6 +0.4
GLVR                               AMB    AMB     04 39 14.8
      comp=E,280nm,0.2s
GLVR                              eS      S       04 39 56.9 +2.1
GLVR                               A      A       04 40 05.3
      comp=E,690nm,0.3s
GLVR                               A      A       04 40 05.3
      comp=E,1μm,0.3s
JAK   Akkeshi            3.11 155 eP      Pn      04 39 12.5 -0.6
JAK                               eS      S       04 39 57.7 -2.4
AKK   Akkeshi            3.13 153 eP      Pn      04 39 12.7 -0.7
JEW   Eniwo              3.17 200 eP      Pn      04 39 14.6 +0.9
JEW                               eS      S       04 40 00.5 -0.7
NMR   Nemuro--Hokkai     3.18 140⇓iPN     Pn      04 39 12.2 -1.5
NMR                               i S     S       04 39 57.0 -4.3
NMR   Nemuro--Hokkai     3.18 140 i P     Pn      04 39 12.3 -1.5
NMR                               i S     S       04 39 57.0 -4.3
NEM2  Nemuro 2           3.19 140 eP      Pn      04 39 12.2 -1.6
NEM2                              eS      S       04 39 56.9 -4.5
JCH   Churui             3.23 174 eP      Pn      04 39 13.3 -1.0
JCH                               eS      S       04 39 58.0 -4.4
UGL   Uglegorsk          3.30 350⇑iPN     Pn      04 39 16.0 +1.2
UGL                               eS      S       04 40 03.8 +0.6
UGL                                pmax   pmax
      comp=Z,500nm,0.7s
UGL                                smax   smax
      comp=N,200nm,1.0s
UGL                                smax   smax
      comp=E,300nm,1.0s
UGL   Uglegorsk          3.30 350 i P     Pn      04 39 15.6 +0.8
UGL                                AMB    AMB     04 39 16.7
      comp=E,470nm,0.7s
UGL                               eS      S       04 40 03.1 -0.1
UGL                                A      A       04 40 05.1
      comp=E,170nm,1.0s
UGL                                A      A       04 40 05.1
      comp=E,330nm,1.0s
KUR   Kuril'sk           3.53  98⇓ePN     Pn      04 39 17.2  0.0
JNBK  Urakawa-nobuka     3.55 182  P      Pn      04 39 16.6 -0.9
ERM   Erimo              3.82 177         Pn      04 39 20.0 -0.3
ERM   Erimo              3.82 177  P      Pn      04 39 20.2  0.0
ERM   Erimo              3.82 177  PN     Pn      04 39 20.0 -0.3
JEM   Erimo              3.82 177  P      Pn      04 39 20.3 +0.1
JEM   Erimo              3.82 177  S      S       04 40 12.3 -0.7
JOSM  Okushiri--Mats     4.49 215 eP      Pn      04 39 27.2 -0.3
TEY   Ternei             4.51 262 ePN     Pn      04 39 28.5 +0.9
TEY                               e               04 40 24.5
JOT   Ohata              4.65 198 eP      Pn      04 39 28.0 -1.2
TYV   Tymovskoe          5.04 358 ePN     Pn      04 39 34.0 +0.7
TYV                               eS      S       04 40 36.4 -0.5
TYV                                pmax   pmax
      comp=Z,159nm,0.6s
TYV                                smax   smax
      comp=N,36nm,1.2s
TYV                                smax   smax
      comp=E,38nm,1.2s
TYV   Tymovskoe          5.04 358 eP      Pn      04 39 33.8 +0.5
TYV                                AMB    AMB     04 39 34.3
      comp=E,160nm,0.6s
TYV                               eS      S       04 40 36.5 -0.5
TYV                                A      A       04 40 39.2
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	comp=E,40nm,1.0s						
TYV				A	A	04 40 39.2	
	comp=E,40nm,1.0s						
GRNR	**Gornyy**	**6.57**	**321**	⇓*i*PN	**Pn**	**04 39 51.2**	**+0.1**
GRNR				pmax	pmax		
	comp=N,40nm,0.8s						
GRNR				pmax	pmax		
	comp=E,40nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,60nm,0.9s						
GRNR				MLR	MLR		
	comp=E,180nm,13.0s						
OKH	**Okha**	**7.73**	**0**	*de*PN	Pn	04 39 56.0	-8.8
OKH				MLR	MLR		
	comp=Z,100nm,4.0s						
OKH				MLR	MLR		
	comp=N,100nm,6.0s						
USRK	**Ussuriysk Ar.**	**7.91**	**262**	P	**Pn**	**04 40 07.7**	**+0.5**
	comp=N,46nm,0.4s,baz=72,slow=12,SNR=93						
USRK				S	**S**	**04 41 37.2**	**-1.7**
	comp=N,3.5nm,0.8s,baz=73,slow=22,SNR=4.6						
JSD	**Sado**	**8.52**	**206**		**Pn**	**04 40 14.1**	**-0.6**
JSD	**Sado**	**8.52**	**206**	P	**Pn**	**04 40 14.0**	**-0.6**
PSTR	**Posyet**	**9.26**	**254**	*de*PN	**Pn**	**04 40 23.5**	**+0.1**
MDJ	**Mudanjiang**	**9.48**	**267**		**Pn**	**04 40 26.4**	**+0.2**
MDJ	**Mudanjiang**	**9.48**	**267**	P	**Pn**	**04 40 26.6**	**+0.4**
MDJ				pmax	pmax		
	comp=Z,120nm,1.1s						
MDJ	**Mudanjiang**	**9.48**	**267**	P	**Pn**	**04 40 26.7**	**+0.5**
MJB9	**Matsu-Tunnel**	**9.93**	**203**		**Pn**	**04 40 31.5**	**-0.2**
MAJO	**Matsushiro**	**9.93**	**203**		**Pn**	**04 40 31.5**	**-0.2**
MAJO	**Matsushiro**	**9.93**	**203**	P	**Pn**	**04 40 31.4**	**-0.3**
MAJO	**Matsushiro**	**9.93**	**203**	*c i*PN	**Pn**	**04 40 31.4**	**-0.3**
MJAR	**Matsushiro Arr**	**9.93**	**203**	P	**Pn**	**04 40 32.2**	**+0.5**
	comp=Z,57nm,0.6s,baz=24,slow=9.3,SNR=260						
SKR	**Severo-Kuril's**	**10.05**	**56**	*c i*PN	**P**	**04 40 35.3**	**-0.1**
SKR	**Severo-Kuril's**	**10.05**	**56**	*e*P	**P**	**04 40 35.3**	**-0.1**
PAU	**Pauzhetka**	**10.78**	**53**	*e*P	**P**	**04 40 43.3**	**-0.2**
BNX	**BinXian**	**10.84**	**275**	⇓P	**Pn**	**04 40 42.0**	**-0.5**
BNX				pmax	pmax		
	comp=Z,64nm,0.7s						
JGF	**Kuroka**	**11.05**	**204**		**Pn**	**04 40 45.0**	**-0.3**
JGF	**Kuroka**	**11.05**	**204**	P	**Pn**	**04 40 44.8**	**-0.5**
HEH	**HeiHe**	**11.28**	**299**	⇓*i*P	**Pn**	**04 40 47.3**	**-0.5**
HEH				pmax	pmax		
	comp=Z,74nm,0.8s						
INU	**Inuyama**	**11.38**	**205**		**Pn**	**04 40 48.7**	**-0.6**
INU	**Inuyama**	**11.38**	**205**	P	**Pn**	**04 40 48.9**	**-0.3**
PEA0B	**Petropavlovsk-**	**12.05**	**47**	*de*PN	**P**	**04 40 58.9**	**+1.3**
PETK	**Petropavlovsk-**	**12.05**	**47**	P	**P**	**04 40 58.4**	**+0.9**
	comp=Z,9.8nm,0.8s,baz=229,slow=9.5,SNR=12						
PET	**Petropavlovsk**	**12.51**	**49**	P	**P**	**04 41 04.2**	**+1.7**
PET	**Petropavlovsk**	**12.51**	**49**	*e*PN	**P**	**04 41 03.3**	**+0.7**
PET				*e*S	**S**	**04 43 20.9**	**+0.1**
PET				pmax	pmax		
	comp=Z,29nm,0.8s						
PET	**Petropavlovsk**	**12.51**	**49**	*e*P	**P**	**04 41 04.3**	**+1.7**
ZEA	**Zeya**	**12.83**	**314**	*e*PN	**Pn**	**04 41 05.9**	**-0.4**
ZEA				pmax	pmax		
	comp=E,30nm,0.5s						
ZEA				pmax	pmax		
	comp=N,50nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,100nm,0.7s						
JHJ	**Hachijo jima 2**	**12.92**	**192**	P	**Pn**	**04 41 08.2**	**+0.6**
	comp=Z,133nm,0.4s,baz=92,slow=6.8,SNR=8.8						
JHJ2	**Mitsune**	**12.92**	**192**	P	**Pn**	**04 41 08.4**	**+0.7**
JMN	**Monobe**	**13.93**	**213**		**Pn**	**04 41 19.4**	**-0.2**
JMN	**Monobe**	**13.93**	**213**	P	**Pn**	**04 41 19.6**	**0.0**
KSRS	**Korea Array**	**13.97**	**238**	P	**Pn**	**04 41 21.2**	**+1.3**
	comp=Z,3.2nm,0.8s,baz=44,slow=11,SNR=11						
MA2	**Magadan**	**14.55**	**16**	P	**Pn**	**04 41 26.0**	**-0.6**
	comp=Z,41nm,0.8s,baz=198,slow=8.8,SNR=26						
MA2	**Magadan**	**14.55**	**16**		**Pn**	**04 41 26.2**	**-0.4**
MA2	**Magadan**	**14.55**	**16**	*c i*P	**Pn**	**04 41 25.9**	**-0.6**
MA2				pmax	pmax		
	comp=Z,54nm,0.8s						
JTU	**Tsushima**	**15.28**	**227**	P	**P**	**04 41 33.7**	**+0.4**
JNU	**Nakatsue**	**15.71**	**220**	P	**P**	**04 41 39.0**	**+1.0**
	comp=Z,14nm,0.9s,baz=48,slow=7.4,SNR=7.0						
JNU	**Nakatsue**	**15.71**	**220**	IAmb	IAmb	04 41 42.1	
	comp=Z,24nm,1.0s						
JNU	**Nakatsue**	**15.71**	**220**	P	**P**	**04 41 39.2**	**+1.2**
HIA	**Hailar**	**16.00**	**291**		**P**	**04 41 40.0**	**-1.1**
HIA	**Hailar**	**16.00**	**291**	P	**P**	**04 41 40.6**	**-0.5**
HIA	**Hailar**	**16.00**	**291**	P	**P**	**04 41 40.0**	**-1.1**
HIA				pmax	pmax		
	comp=Z,42nm,0.8s						
HILR	**Hailar Array B**	**16.02**	**292**	P	**P**	**04 41 40.4**	**-0.8**
	comp=Z,57nm,0.6s,baz=94,slow=11,SNR=54						
YAK	**Yakutsk**	**17.94**	**339**	P	**P**	**04 42 01.1**	**-0.6**
	comp=Z,13nm,0.3s,baz=122,slow=4.5,SNR=9.4						
YAK	**Yakutsk**	**17.94**	**339**	IAmb	IAmb	04 42 05.3	
	comp=Z,14nm,0.6s						
YAK	**Yakutsk**	**17.94**	**339**	*ce*P	**P**	**04 42 01.0**	**-0.7**
YAK				pmax	pmax		
	comp=Z,13nm,0.3s						
SEY	**Seymchan**	**17.97**	**14**	P	**P**	**04 42 02.2**	**+0.2**
	comp=Z,46nm,0.7s,baz=210,slow=8.2,SNR=96						
SEY	**Seymchan**	**17.97**	**14**	*e*P	**P**	**04 41 59.1**	**-2.9**
SEY				pmax	pmax		
	comp=Z,65nm,1.1s						
BJT	**Baijiatuau**	**20.38**	**263**		**P**	**04 42 26.9**	**-0.6**
BJT	**Baijiatuau**	**20.38**	**263**	P	**P**	**04 42 26.9**	**-0.6**
BJT				pmax	pmax		
	comp=Z,21nm,0.8s						
ULN	**Ulaanbaatar**	**24.48**	**288**		**P**	**04 43 05.0**	**0.0**
ULN	**Ulaanbaatar**	**24.48**	**288**	*d i*P	**P**	**04 43 04.7**	**-0.3**
ULN				pmax	pmax		
	comp=Z,28nm,1.0s						
SONM	**Songino Array**	**24.92**	**288**	P	**P**	**04 43 08.9**	**0.0**
	comp=Z,11nm,0.5s,baz=86,slow=8.5,SNR=60						
SONM				ScP	**ScP**	**04 49 42.5**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=165,slow=1.8,SNR=5.4						
	comp=Z,11nm,0.5s						
SONM	**Songino Array**	**24.92**	**288**		**P**	**04 43 08.9**	**0.0**
SONM				IAmb	IAmb	04 43 09.7	
	comp=Z,14nm,0.6s						
LYN	**LuoYang**	**25.69**	**255**	P	**P**	**04 43 17.3**	**+1.5**
LYN				S	**S**	**04 47 20.6**	**+0.8**
LYN				pmax	pmax		
	comp=Z,18nm,0.9s						
LYN				pmax	pmax		
	comp=Z,110nm,6.6s						
XAN	**Xi'an**	**28.39**	**258**	*e*P	**P**	**04 43 39.9**	**+0.1**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SPIA	**Saint Paul Isl**	**30.67**	**51**	P	**P**	**04 43 58.7**	**-0.7**
	baz=269						
GAMB	**Gambell**	**30.83**	**38**	P	**P**	**04 44 00.7**	**0.0**
	baz=256						
LZDM	**Lanzhou Array**	**30.97**	**265**	P	**P**	**04 44 03.5**	**+0.9**
	comp=Z,2.5nm,0.4s,baz=46,slow=6.4,SNR=6.7						
	comp=Z,2.5nm,0.4s						
P08K	**Saint George I**	**31.05**	**52**	P	**P**	**04 44 01.9**	**-0.9**
	baz=270						
NIKH	**Nikolski High**	**31.68**	**59**	P	**P**	**04 44 08.1**	**-0.1**
	baz=277						
GTA	**Gaotai**	**32.05**	**274**	P	**P**	**04 44 13.0**	**+1.2**
GTA				pmax	pmax		
	comp=Z,32nm,1.3s						
TNA	**Tin City**	**32.82**	**35**	P	**P**	**04 44 17.0**	**-0.9**
	baz=258						
M11K	**Mekoryuk**	**32.90**	**45**	P	**P**	**04 44 18.4**	**-0.3**
	baz=267						
UNV	**Unalaska Valle**	**32.97**	**57**	P	**P**	**04 44 18.6**	**-0.7**
	baz=277						
F14K	**Arctic Creek**	**33.46**	**36**	P	**P**	**04 44 23.0**	**-0.4**
	baz=259						
ANM	**Nome**	**33.70**	**38**	P	**P**	**04 44 25.3**	**-0.2**
	baz=262						
K13K	**Kusilvak Mount**	**33.74**	**42**	P	**P**	**04 44 24.9**	**-0.9**
	baz=266						
F15K	**North Star Dit**	**34.19**	**36**	IAmb	IAmb	04 44 30.2	
	comp=Z,7.1nm,0.9s						
F15K	**North Star Dit**	**34.19**	**36**	P	**P**	**04 44 29.2**	**-0.4**
	baz=261						
J14K	**Nanvaranak Lak**	**34.31**	**41**	P	**P**	**04 44 29.7**	**-0.9**
	baz=266						
M13K	**Dall Lake**	**34.32**	**45**	P	**P**	**04 44 30.0**	**-0.8**
	baz=270						
G15K	**Niukluk**	**34.33**	**37**	P	**P**	**04 44 30.6**	**-0.3**
	baz=262						
C16K	**Lisburne Hills**	**34.44**	**31**	P	**P**	**04 44 30.4**	**-1.3**
C16K				IAmb	IAmb	04 44 31.1	
	comp=Z,8.7nm,0.9s						
C16K	**Lisburne Hills**	**34.44**	**31**	P	**P**	**04 44 30.4**	**-1.3**
	baz=256,SNR=6.6						
FALS	**False Pass**	**34.63**	**55**	P	**P**	**04 44 32.5**	**-1.0**
	baz=278						
L14K	**Kuka Creek**	**34.66**	**44**	P	**P**	**04 44 32.7**	**-0.9**
	baz=269						
M14K	**Bethel**	**35.00**	**45**	P	**P**	**04 44 36.1**	**-0.5**
	baz=270						
H16K	**Elim**	**35.05**	**38**	P	**P**	**04 44 36.1**	**-0.9**
	baz=265,SNR=12						
G16K	**Koyuk River**	**35.09**	**36**	P	**P**	**04 44 36.5**	**-0.8**
	baz=263						
D17K	**Noatak River**	**35.15**	**32**	P	**P**	**04 44 36.9**	**-0.9**
	baz=259,SNR=6.8						
N14K	**Kuskokwak Cree**	**35.16**	**46**	P	**P**	**04 44 37.3**	**-0.6**
	baz=272						
K15K	**Wolf Creek Mou**	**35.23**	**42**	P	**P**	**04 44 38.3**	**-0.2**
	baz=269						
L15K	**Ungalak Mounta**	**35.24**	**43**	P	**P**	**04 44 38.0**	**-0.5**
	baz=270						
C17K	**DeLong Mountai**	**35.27**	**31**	P	**P**	**04 44 37.9**	**-0.9**
	baz=258						
RDOG	**Red Dog Mine**	**35.28**	**32**	P	**P**	**04 44 38.3**	**-0.6**
	baz=259						
S12K	**Black Hills**	**35.29**	**53**	P	**P**	**04 44 39.0**	**-0.2**
	baz=278						
O14K	**Tigyukauivet M**	**35.40**	**47**	P	**P**	**04 44 39.3**	**-0.6**
	baz=273						
E17K	**Hotham Inlet**	**35.52**	**34**	P	**P**	**04 44 40.4**	**-0.6**
	baz=262,SNR=18						
M15K	**Kasigluk River**	**35.63**	**45**	P	**P**	**04 44 41.4**	**-0.6**
	baz=272						
F17K	**Baldwin Pennin**	**35.66**	**35**	P	**P**	**04 44 41.7**	**-0.4**
F17K				IAmb	IAmb	04 44 43.5	
	comp=Z,7.3nm,0.6s						
F17K	**Baldwin Pennin**	**35.66**	**35**	P	**P**	**04 44 41.2**	**-0.9**
	baz=263						
I17K	**Unalakleet**	**35.67**	**39**	P	**P**	**04 44 42.4**	**+0.2**
I17K				IAmb	IAmb	04 44 43.9	
	comp=Z,13nm,0.8s						
I17K	**Unalakleet**	**35.67**	**39**	P	**P**	**04 44 41.6**	**-0.6**
	baz=267,SNR=5.4						
J16K	**Anvik River**	**35.69**	**40**	P	**P**	**04 44 41.9**	**-0.5**
	baz=268						
G17K	**Kiwalik Mounta**	**35.81**	**36**	P	**P**	**04 44 43.0**	**-0.4**
	baz=265,SNR=6.8						
B18K	**Kokolik River**	**35.94**	**30**	P	**P**	**04 44 44.1**	**-0.3**
	baz=258						
N15K	**Kwethluk River**	**35.95**	**46**	P	**P**	**04 44 43.0**	**-1.6**
	baz=273						
C18K	**Utukok River**	**36.02**	**31**	IAmb	IAmb	04 44 44.7	
	comp=Z,9.4nm,0.8s						
C18K	**Utukok River**	**36.02**	**31**	P	**P**	**04 44 44.0**	**-1.2**
	baz=260						
E18K	**Tukpahlearik C**	**36.05**	**33**	P	**P**	**04 44 44.0**	**-1.3**
	baz=262						
H17K	**Granite Mounta**	**36.07**	**37**	IAmb	IAmb	04 44 46.4	
	comp=Z,11nm,0.8s						
H17K	**Granite Mounta**	**36.07**	**37**	P	**P**	**04 44 44.1**	**-1.5**
	baz=266,SNR=10						
O15K	**Ungalikthiuk R**	**36.14**	**47**	P	**P**	**04 44 45.2**	**-1.0**
	baz=274						
L16K	**Owhat River**	**36.20**	**43**	P	**P**	**04 44 46.0**	**-0.7**
	baz=271						
SDPT	**Sand Point**	**36.23**	**54**	P	**P**	**04 44 46.2**	**-0.8**
	baz=279						
F18K	**Selawik**	**36.32**	**35**	P	**P**	**04 44 46.4**	**-1.2**
	baz=264,SNR=12						
A19K	**Wainwright**	**36.36**	**28**	P	**P**	**04 44 46.7**	**-1.2**
	baz=258						
J17K	**VABM Dome**	**36.38**	**40**	P	**P**	**04 44 46.7**	**-1.4**
	baz=269						
M16K	**Timber Creek**	**36.47**	**44**	P	**P**	**04 44 47.5**	**-1.4**
	baz=273						
N16K	**Nishlik Lake**	**36.59**	**45**	P	**P**	**04 44 48.3**	**-1.7**
	baz=274						
S14K	**Fog Glacier**	**36.61**	**52**	P	**P**	**04 44 48.5**	**-1.8**
	baz=279						
G18K	**Tagagawik**	**36.66**	**36**	P	**P**	**04 44 49.5**	**-1.0**
	baz=266,SNR=14						
C19K	**Lookout Ridge**	**36.67**	**30**	P	**P**	**04 44 49.8**	**-0.8**
	baz=261,SNR=5.0						
K17K	**Iditarod**	**36.73**	**41**	P	**P**	**04 44 49.9**	**-1.2**
	baz=271						
H18K	**Honhosa River**	**36.74**	**37**	IAmb	IAmb	04 44 52.2	
	comp=Z,14nm,1.0s						
H18K	**Honhosa River**	**36.74**	**37**	P	**P**	**04 44 50.0**	**-1.2**
	baz=268						
L17K	**Donlin**	**36.74**	**42**	P	**P**	**04 44 50.1**	**-1.2**
	baz=272						
DGZ	**Jazzator, Alta**	**36.78**	**297**	⇓*e*P	**P**	**04 44 52.0**	**+0.1**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CHNA	**Chernabura Isl**	**36.82**	**55**	P	**P**	**04 44 50.4**	**-1.5**
	baz=280						
O16K	**Kokwok River B**	**36.99**	**46**	P	**P**	**04 44 52.2**	**-1.2**
	baz=275						
GOMU	**GeErMu**	**37.05**	**272**	P	**P**	**04 44 54.6**	**-0.1**
GOMU				pmax	pmax		
	comp=Z,28nm,0.8s						
F19K	**Shaleruckik Mo**	**37.08**	**34**	P	**P**	**04 44 52.9**	**-1.1**
	baz=266						
P16K	**Nushagak River**	**37.10**	**47**	P	**P**	**04 44 53.2**	**-1.0**
	baz=276						
D19K	**Kuna River**	**37.11**	**32**	IAmb	IAmb	04 44 54.1	
	comp=Z,11nm,0.8s						
D19K	**Kuna River**	**37.11**	**32**	P	**P**	**04 44 53.4**	**-1.0**
	baz=263						
M17K	**Holitna River**	**37.18**	**43**	P	**P**	**04 44 53.8**	**-1.1**
	baz=273						
G19K	**Purcell Mounta**	**37.31**	**36**	IAmb	IAmb	04 44 55.8	
	comp=Z,12nm,0.7s						
G19K	**Purcell Mounta**	**37.31**	**36**	P	**P**	**04 44 54.6**	**-1.4**
	baz=267						
ZALV	**Zalesovo Beam**	**37.34**	**304**	P	**P**	**04 44 54.7**	**-1.6**
	comp=Z,2.4nm,0.6s,baz=89,slow=4.9,SNR=10						
	comp=Z,2.4nm,0.6s						
ZALV	**Zalesovo Beam**	**37.34**	**304**	*i* P	**P**	**04 44 58.2**	**+1.9**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
E19K	**Redstone River**	**37.34**	**33**	IAmb	IAmb	04 44 56.4	
	comp=Z,16nm,0.8s						
E19K	**Redstone River**	**37.34**	**33**	P	**P**	**04 44 55.2**	**-1.1**
	baz=266						
GCSA	**Galena City Sc**	**37.36**	**38**	P	**P**	**04 44 54.9**	**-1.4**
	baz=270						
N17K	**Nushagak Hills**	**37.36**	**45**	P	**P**	**04 44 55.5**	**-1.0**
	baz=275						
J18K	**Innoko River**	**37.44**	**40**	P	**P**	**04 44 55.8**	**-1.3**
	baz=271						
O17K	**Koliganek Bris**	**37.48**	**46**	P	**P**	**04 44 56.7**	**-0.7**
	baz=276						
L18K	**Granite Mounta**	**37.49**	**42**	P	**P**	**04 44 56.3**	**-1.2**
	baz=273						
R16K	**Pilot Point**	**37.49**	**50**	P	**P**	**04 44 56.0**	**-1.6**
	baz=278						
H19K	**Roundabout Mou**	**37.56**	**37**	P	**P**	**04 44 56.7**	**-1.2**
	baz=269						
B20K	**Meade River**	**37.64**	**29**	P	**P**	**04 44 57.0**	**-1.6**
	baz=262						
D20K	**Etivluk River**	**37.69**	**31**	P	**P**	**04 44 57.9**	**-1.2**
	baz=264						
E20K	**Nigu River**	**37.80**	**32**	P	**P**	**04 44 58.7**	**-1.4**
	baz=266						
Q16K	**King Salmon**	**37.83**	**48**	P	**P**	**04 44 58.9**	**-1.4**
	baz=278						
P17K	**Kvichak River**	**37.87**	**47**	P	**P**	**04 44 59.7**	**-0.9**
	baz=277						
F20K	**Avaraart Lake**	**37.90**	**34**	P	**P**	**04 44 59.3**	**-1.5**
	baz=268,SNR=5.5						
J19K	**Poorman**	**37.91**	**39**	IAmb	IAmb	04 45 01.5	
	comp=Z,8.1nm,0.8s						
J19K	**Poorman**	**37.91**	**39**	P	**P**	**04 44 59.8**	**-1.1**
	baz=272						
PZH	**PanZhiHua**	**37.91**	**254**	P	**P**	**04 45 02.0**	**+0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
M18K	**Stony River**	**37.95**	**43**	P	**P**	**04 45 00.2**	**-1.1**
	baz=275						
N18K	**Kilae Creek**	**37.99**	**44**	P	**P**	**04 45 01.1**	**-0.6**
	baz=276						
A21K	**Barrow**	**38.02**	**27**	P	**P**	**04 45 00.3**	**-1.4**
	baz=261,SNR=6.8						
H20K	**Anotleneega Mo**	**38.21**	**37**	P	**P**	**04 45 02.5**	**-1.0**
	baz=270						
Q17K	**Contact Creek**	**38.28**	**48**	P	**P**	**04 45 02.8**	**-1.5**
	baz=279						
L19K	**White Mountain**	**38.35**	**42**	P	**P**	**04 45 03.5**	**-1.2**
	baz=275						
C21K	**Knifeblade Rid**	**38.38**	**31**	P	**P**	**04 45 03.4**	**-1.4**
	baz=266						
I20K	**Naaghedeneel**	**38.39**	**38**	P	**P**	**04 45 03.6**	**-1.2**
	baz=272						
O18K	**Koktuh Hills**	**38.42**	**46**	P	**P**	**04 45 03.8**	**-1.4**
	baz=277						
P18K	**Big Mountain,**	**38.46**	**46**	P	**P**	**04 45 04.7**	**-0.9**
	baz=278						
B21K	**Ikpikpuk River**	**38.48**	**30**	IAmb	IAmb	04 45 06.2	
	comp=Z,15nm,0.8s						
B21K	**Ikpikpuk River**	**38.48**	**30**	P	**P**	**04 45 04.0**	**-1.5**
	baz=265,SNR=14						
A22K	**Sinclair Lake**	**38.50**	**28**	P	**P**	**04 45 04.9**	**-0.8**
	baz=263,SNR=17						
J20K	**Nowinta River**	**38.55**	**39**	IAmb	IAmb	04 45 07.7	
	comp=Z,12nm,0.7s						
J20K	**Nowinta River**	**38.55**	**39**	P	**P**	**04 45 05.4**	**-0.8**
	baz=273,SNR=7.3						
WMQ	**Urumqi**	**38.56**	**287**	*e*P	**P**	**04 45 08.3**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,24nm,0.7s						
K20K	**Telida**	**38.63**	**40**	P	**P**	**04 45 05.9**	**-1.1**
	baz=274						
E21K	**Killik River**	**38.63**	**32**	P	**P**	**04 45 05.5**	**-1.4**
	baz=267						
N19K	**Bonanza Creek**	**38.66**	**44**	P	**P**	**04 45 06.7**	**-0.6**
	baz=277						
IMAR	**Indian Mountai**	**38.67**	**36**	P	**P**	**04 45 06.5**	**-0.7**
Q18K	**Katmai Hardscr**	**38.68**	**48**	P	**P**	**04 45 07.0**	**-0.6**
	baz=279						
G21K	**Allakaket**	**38.77**	**35**	IAmb	IAmb	04 45 09.0	
	comp=Z,20nm,0.8s						
G21K	**Allakaket**	**38.77**	**35**	P	**P**	**04 45 06.8**	**-1.2**
	baz=270						
F21K	**Alatna River**	**38.78**	**34**	P	**P**	**04 45 07.0**	**-1.1**
	baz=269						
O19K	**Port Alsworth**	**38.81**	**45**	P	**P**	**04 45 07.7**	**-0.8**
	baz=278						
B22K	**Teshekpuk Lake**	**38.95**	**29**	P	**P**	**04 45 08.6**	**-0.8**
	baz=266						
H21K	**Melozitna Rive**	**39.07**	**36**	P	**P**	**04 45 09.6**	**-0.9**
	baz=272,SNR=5.7						
D22K	**Ayikyak River**	**39.12**	**31**	IAmb	IAmb	04 45 11.7	
	comp=Z,9.4nm,0.9s						
D22K	**Ayikyak River**	**39.12**	**31**	P	**P**	**04 45 10.0**	**-0.9**
	baz=268,SNR=7.1						
M20K	**Styx River**	**39.19**	**42**	P	**P**	**04 45 10.7**	**-0.9**
	baz=276						
F22K	**John River**	**39.29**	**33**	P	**P**	**04 45 11.6**	**-0.7**
	baz=270						
Q19K	**Cape Douglas,**	**39.34**	**47**	P	**P**	**04 45 12.1**	**-0.7**
	baz=280						
CHUM	**Lake Minchumin**	**39.38**	**39**	P	**P**	**04 45 12.4**	**-0.6**
	baz=275						
E22K	**Anaktuvuk Pass**	**39.43**	**32**	IAmb	IAmb	04 45 13.6	
	comp=Z,12nm,0.8s						
E22K	**Anaktuvuk Pass**	**39.43**	**32**	P	**P**	**04 45 12.4**	**-1.1**
	baz=270,SNR=14						
I21K	**Tanana**	**39.43**	**37**	P	**P**	**04 45 12.4**	**-1.1**
	baz=273						
P19K	**Oil Pt**	**39.43**	**46**	P	**P**	**04 45 12.9**	**-0.7**
	baz=279						
SII	**Sitkinak Islan**	**39.49**	**51**	P	**P**	**04 45 13.4**	**-0.7**
	baz=282						
PPLA	**Purkeypile**	**39.52**	**41**	P	**P**	**04 45 13.5**	**-0.9**
	baz=276						
G22K	**Bettles**	**39.56**	**34**	P	**P**	**04 45 13.6**	**-0.9**
	baz=272						
H22K	**Ishtalitna Cre**	**39.65**	**36**	P	**P**	**04 45 14.0**	**-1.3**
	baz=273						
O20K	**Slope Mountain**	**39.67**	**45**	P	**P**	**04 45 14.8**	**-0.8**
	baz=279						
SPCR	**Spurr Chakacha**	**39.71**	**43**	P	**P**	**04 45 15.2**	**-0.7**
	baz=278						
OHAK	**Old Harbor**	**39.84**	**50**	P	**P**	**04 45 16.6**	**-0.3**
OHAK	**Old Harbor**	**39.84**	**50**	P	**P**	**04 45 16.0**	**-0.9**
	baz=282						
D23K	**Nanushuk River**	**39.85**	**31**	P	**P**	**04 45 16.2**	**-0.6**
	baz=270,SNR=5.9						
C23K	**Itkillik River**	**39.88**	**30**		**P**	**04 45 16.5**	**-0.6**
C23K				IAmb	IAmb	04 45 17.2	
	comp=Z,10nm,0.8s						
C23K	**Itkillik River**	**39.88**	**30**	P	**P**	**04 45 16.6**	**-0.4**
	baz=269,SNR=7.2						
SKT	**Skwentna**	**39.93**	**42**	P	**P**	**04 45 16.7**	**-0.9**
	baz=278						
BPAW	**Bear Paw Mtn.**	**39.94**	**39**	P	**P**	**04 45 16.8**	**-0.9**
	baz=276						
MLY	**Manley**	**39.97**	**37**		**P**	**04 45 18.6**	**+0.7**
MLY	**Manley**	**39.97**	**37**	P	**P**	**04 45 17.2**	**-0.7**
	baz=275						
Q20K	**Shuyak Island**	**40.04**	**47**	P	**P**	**04 45 17.2**	**-1.3**
	baz=281						
COLD	**Coldfoot**	**40.06**	**34**		**P**	**04 45 17.4**	**-1.1**
COLD	**Coldfoot**	**40.06**	**34**	P	**P**	**04 45 17.2**	**-1.4**
	baz=272,SNR=9.4						
KDAK	**Kodiak Island**	**40.10**	**49**	P	**P**	**04 45 17.6**	**-1.4**
	baz=282						
G23K	**Bananza Creek**	**40.15**	**35**	IAmb	IAmb	04 45 20.0	
	comp=Z,10nm,0.8s						
G23K	**Bananza Creek**	**40.15**	**35**	P	**P**	**04 45 18.1**	**-1.3**
	baz=273,SNR=7.7						
HOM	**Homer**	**40.23**	**46**	P	**P**	**04 45 18.8**	**-1.2**
	baz=280						
E23K	**Chandalar**	**40.25**	**32**	P	**P**	**04 45 19.2**	**-1.0**
	baz=272,SNR=7.2						
TOLK	**Toolik Lake Re**	**40.25**	**32**		**P**	**04 45 19.6**	**-0.6**
TOLK	**Toolik Lake Re**	**40.25**	**32**	P	**P**	**04 45 19.1**	**-1.1**
	baz=271						
CAPN	**Captain Cook N**	**40.28**	**44**	P	**P**	**04 45 19.4**	**-1.0**
	baz=279						
TRF	**Thorofare Moun**	**40.32**	**40**	P	**P**	**04 45 20.2**	**-0.8**
	baz=277						
SUA	**Susitna One**	**40.37**	**43**	P	**P**	**04 45 20.3**	**-1.0**
	baz=279						
H23K	**Yukon River**	**40.41**	**36**	IAmb	IAmb	04 45 23.0	
	comp=Z,9.7nm,0.8s						
H23K	**Yukon River**	**40.41**	**36**	P	**P**	**04 45 20.5**	**-0.9**
	baz=275						
CUT	**Chulitna**	**40.46**	**41**	P	**P**	**04 45 21.0**	**-0.8**
	baz=278						
D24K	**Happy Valley**	**40.51**	**31**	IAmb	IAmb	04 45 22.7	
	comp=Z,17nm,0.7s						
D24K	**Happy Valley**	**40.51**	**31**	P	**P**	**04 45 21.1**	**-1.2**
	baz=271						
I23K	**Minto, Yukon-K**	**40.54**	**37**	P	**P**	**04 45 22.0**	**-0.4**
	baz=276,SNR=5.5						
C24K	**Franklin Bluff**	**40.55**	**30**	P	**P**	**04 45 21.6**	**-0.8**
	baz=271,SNR=8.3						
M22K	**Willow**	**40.62**	**42**	P	**P**	**04 45 22.5**	**-0.7**
	baz=279						
BRSE	**Bradley Lake S**	**40.66**	**45**	P	**P**	**04 45 23.2**	**-0.4**
	baz=281						
E24K	**Your Creek**	**40.68**	**32**	P	**P**	**04 45 22.9**	**-0.8**
	baz=273						
NEA2	**Nenana**	**40.72**	**38**	IAmb	IAmb	04 45 25.2	
	comp=Z,9.7nm,0.7s						
NEA2	**Nenana**	**40.72**	**38**	P	**P**	**04 45 23.3**	**-0.7**
	baz=276,SNR=7.0						
MCK	**McKinley**	**40.88**	**39**	P	**P**	**04 45 25.0**	**-0.4**
	baz=278						
RC01	**Rabbit Creek A**	**40.91**	**43**	P	**P**	**04 45 25.5**	**-0.1**
	baz=280						
F24K	**Squaw Lake**	**40.94**	**33**	P	**P**	**04 45 25.5**	**-0.2**
	baz=274,SNR=11						
MK31	**Makanchi Array**	**40.97**	**294**	*de*P	**P**	**04 45 25.6**	**-0.6**
MKAR	**Makanchi Array**	**40.97**	**294**	P	**P**	**04 45 25.8**	**-0.5**
	comp=Z,4.7nm,0.5s,baz=77,slow=8.5,SNR=73						
MKAR				ScP	**ScP**	**04 50 38.0**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=68,slow=4.5,SNR=4.6						
	comp=Z,4.7nm,0.5s						
MKAR	**Makanchi Array**	**40.97**	**294**	P	**P**	**04 45 25.6**	**-0.7**
H24K	**Noodor Dome**	**41.09**	**36**	P	**P**	**04 45 26.9**	**-0.1**
	baz=276,SNR=6.7						
PMR	**Palmer**	**41.12**	**42**	P	**P**	**04 45 27.0**	**-0.2**
	baz=280						
WRH	**Wood River Hil**	**41.16**	**38**	IAmb	IAmb	04 45 28.9	
	comp=Z,18nm,1.3s						
MAKZ	**Makanchi**	**41.16**	**294**	P	**P**	**04 45 27.4**	**-0.4**
MAKZ	**Makanchi**	**41.16**	**294**	P	**P**	**04 45 27.4**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
G24K	**Hadweenzic Riv**	**41.16**	**35**	P	**P**	**04 45 27.7**	**+0.2**
	baz=275						
WAT1	**Susitna Watana**	**41.18**	**40**	P	**P**	**04 45 28.0**	**+0.2**
	baz=279						
COLA	**College**	**41.21**	**37**	P	**P**	**04 45 27.7**	**-0.1**

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COLA  College            41.21  37di P     P      04 45 27.8 -0.1
COLA                                 pmax  pmax
      comp=Z,11nm,0.9s
COLA  College            41.21  37   P     P      04 45 27.7 -0.1
      baz=277
SEW   Seward             41.23  45   P     P      04 45 27.7 -0.4
      baz=281
POKR  Poker Plat Res     41.35  37   P     P      04 45 28.5 -0.6
      baz=277
D25K  Kavik River        41.38  30   IAmb  IAmb   04 45 29.6
      comp=Z,10.0nm,0.8s
D25K  Kavik River        41.38  30   P     P      04 45 28.6 -0.7
      baz=273,SNR=13
SML   Sawmill            41.45  42   P     P      04 45 29.9 -0.1
      baz=280
KNK   Knik Glacier       41.47  43   P     P      04 45 30.2 +0.1
KNK                                  IAmb  IAmb   04 46 04.2
      comp=Z,23nm,1.4s
KNK   Knik Glacier       41.47  43   P     P      04 45 29.1 -0.9
      baz=281
WAT6  Susitna Watana     41.59  41   P     P      04 45 30.2 -1.0
      baz=280
PWL   Port Wells         41.63  43   P     P      04 45 31.0 -0.4
      baz=281
IL31                     41.63  37   IAmb  IAmb   04 45 32.5
      comp=Z,18nm,1.5s
ILAR  Eielson Array      41.63  37   P     P      04 45 30.6 -0.8
      comp=Z,3.7nm,0.6s,baz=260,slow=5.8,SNR=65
ILAR                                 PcP   PcP    04 47 20.8 -0.4
      comp=Z,1.1nm,0.6s,baz=272,slow=3.5,SNR=7.7
      comp=Z,3.7nm,0.6s
ILAR  Eielson Array      41.63  37   P     P      04 45 30.9 -0.4
ILAR  Eielson Array      41.63  37   P     P      04 45 30.9 -0.4
HDA   Harding Lake       41.66  38   P     P      04 45 30.3 -1.2
      baz=278
DHY   Denali Highway     41.67  40   P     P      04 45 31.0 -0.9
      baz=280
G25K  Bearman Lake       41.70  34   P     P      04 45 30.9 -0.9
      baz=277
M23K  Glacier View       41.74  42   P     P      04 45 31.5 -0.7
      baz=281
E25K  Arctic Village     41.77  32   P     P      04 45 31.9 -0.5
      baz=276
F25K  Christian Rive     41.79  33   P     P      04 45 32.4 -0.3
      baz=276,SNR=5.9
C26K  Camden Bay         41.85  30   P     P      04 45 32.4 -0.6
      baz=274
KURK  Kurchatov          41.87 301   P     P      04 45 32.5 -0.9
KURK  Kurchatov          41.87 301deP     P      04 45 32.5 -0.9
KURK                                 pmax  pmax
      comp=Z,10.0nm,0.9s
SCM   Sheep Creek Mo     41.92  42   P     P      04 45 32.8 -0.9
      baz=281
KURBB Kurchatov Arra     41.95 301   P     P      04 45 33.2 -0.9
      comp=Z,7.7nm,0.5s,baz=73,slow=8.2,SNR=46
      comp=Z,7.7nm,0.5s
BMAR  Burnt Mountain     42.21  33   P     P      04 45 35.9 -0.2
GLI   Glacier Island     42.22  43   P     P      04 45 36.2 +0.1
      baz=282
K24K  Donnelly Dome      42.26  39   P     P      04 45 36.4  0.0
      baz=280
P23K  Montague Islan     42.26  44   P     P      04 45 36.1 -0.3
      baz=283
C27K  Jago River         42.29  30   IAmb  IAmb   04 45 37.5
      comp=Z,14nm,0.8s
C27K  Jago River         42.29  30   P     P      04 45 36.1 -0.4
      baz=276
J25K  Salcha River,      42.30  37   P     P      04 45 36.0 -0.7
      baz=280
F26K  Sheenjek River     42.35  33   P     P      04 45 36.8 -0.2
      baz=277,SNR=12
M24K  Tolsona, Glenn     42.40  41   P     P      04 45 37.3 -0.2
      baz=282
PAX   Paxson             42.55  40   P     P      04 45 38.6 -0.2
      baz=281
G26K  Porcupine Rive     42.59  34   P     P      04 45 38.3 -0.6
      baz=278
KLU   Klutina            42.64  42   P     P      04 45 38.7 -0.8
      baz=282
RIDG  Independent Ri     42.68  39   P     P      04 45 39.4 -0.4
      baz=281
HARP  HAARP              42.81  41   P     P      04 45 40.1 -0.7
      baz=282
Q23K  Middleton Isla     42.91  45   P     P      04 45 41.6 +0.1
      baz=284
EYAK  Cordova Ski Ar     42.94  43   P     P      04 45 43.0 +1.2
EYAK  Cordova Ski Ar     42.94  43   P     P      04 45 41.4 -0.3
      baz=284
SCRK  Sand Creek         43.01  38   P     P      04 45 41.6 -0.9
      baz=281,SNR=7.7
J26L  Joseph Creek       43.09  37   P     P      04 45 42.6 -0.4
      baz=281
I26K  Coal Creek Min     43.11  36   P     P      04 45 42.5 -0.5
      baz=281
E27K  Coleen River       43.23  32   P     P      04 45 44.2 +0.1
      baz=279
N25K  Chitina, Valde     43.24  42   P     P      04 45 44.2 -0.1
      baz=283
D27M  Malcolm River      43.30  30   P     P      04 45 44.2 -0.4
      baz=278
BMRM  Bremner River      43.38  43   P     P      04 45 45.2 -0.2
      baz=284
G27K  Doyon Strip        43.44  34   P     P      04 45 45.4 -0.4
      baz=280
L26K  Log Cabin Wild     43.48  40   P     P      04 45 45.8 -0.3
      baz=283
H27K  Steamboat Moun     43.59  35   P     P      04 45 46.7 -0.3
      baz=281
I27K  Kandik River       43.68  36   P     P      04 45 47.5 -0.2
      baz=282,SNR=5.1
KAIM  Kayak Island       43.73  44   P     P      04 45 48.2 +0.1
      baz=285
M26K  Nabesna, AK        43.79  40   P     P      04 45 48.4 -0.2
      baz=284
K27K  Chicken            43.82  38   IAmb  IAmb   04 45 49.5
      comp=Z,26nm,1.4s
K27K  Chicken            43.82  38   P     P      04 45 48.5 -0.2
      baz=283
E28M  Babbage River      43.91  31   P     P      04 45 49.1 -0.4
      baz=280
F28M  Old Crow           43.97  33   P     P      04 45 49.8 -0.2
      baz=281,SNR=7.6
MCARA McCarthy VSAT      44.02  42   P     P      04 45 50.2 -0.2
      baz=285
D28M  Stokes Point       44.07  30   P     P      04 45 50.4 -0.2
      baz=280
L27K  Beaver Creek,      44.15  39   P     P      04 45 51.2 -0.3
      baz=284
CRQE  Cirque             44.16  43   P     P      04 45 51.5 -0.1
      baz=285
M27K  Edge Creek, AK     44.30  40   P     P      04 45 53.3 +0.5
      baz=285
I28M  Miner Creek        44.40  36   P     P      04 45 53.1 -0.3
      baz=283,SNR=11
E29M  Blow River         44.55  31   P     P      04 45 54.4  0.0
      baz=282
BVCY  Beaver Creek       44.75  40   P     P      04 45 56.4 +0.3
      baz=285
G29M  Pine Creek         44.82  33   IAmb  IAmb   04 45 57.9
      comp=Z,24nm,1.4s
G29M  Pine Creek         44.82  33   P     P      04 45 56.6  0.0
      baz=283
H29M  Whitestone         44.85  34   P     P      04 45 56.6 -0.2
      baz=284,SNR=6.2
CTG   Chitna Glacier     44.92  42   P     P      04 45 57.6 -0.1
      baz=286
DAWY  Dawson             44.96  37   P     P      04 45 57.3 -0.4
      baz=285
YUK3  Moose Creek        45.10  41   P     P      04 45 58.4 -0.7
      baz=286
SHL   Shillong           45.25 261   P     P      04 46 00.4 -0.3
SHL                                  IAmb  IAmb   04 46 01.3
      comp=Z,10nm,0.7s
SHL   Shillong           45.25 261   P     P      04 46 00.4 -0.3
SHL                                  pmax  pmax
      comp=Z,10.0nm,0.7s
J29N  Klondike Camp      45.35  37   P     P      04 46 00.7 -0.1
      baz=286
CMAR  Chiang Mai Arr     45.36 248   P     P      04 46 02.4 +1.0
      comp=Z,0.8nm,0.3s,baz=30,slow=8.0,SNR=5.5
      comp=Z,0.8nm,0.3s
CMAR  Chiang Mai Arr     45.36 248 i P     P      04 46 03.7 +2.3
EPYK  Eagle Plains       45.46  34   IAmb  IAmb   04 46 02.3
      comp=Z,12nm,0.6s
EPYK  Eagle Plains       45.46  34   P     P      04 46 01.7 +0.1
      baz=285,SNR=13
G30M  tAoh Zraii Nji     45.49  33   P     P      04 46 01.5 -0.3
      baz=285
F30M  Barrier River      45.50  32   IAmb  IAmb   04 46 04.1
      comp=Z,14nm,0.8s
F30M  Barrier River      45.50  32   P     P      04 46 01.8 -0.1
      baz=284
O28M  Mount Upton        45.52  42   P     P      04 46 02.6 +0.2
      baz=288
YUK8  Steele Glacier     45.56  41   P     P      04 46 01.8 -0.9
      baz=287
PINM  Pinnacle           45.69  43   P     P      04 46 04.1 +0.6
      baz=288
L29M  L29M               45.76  39   P     P      04 46 04.7 +0.7
      baz=287
M29M  Somme Creek        45.81  39   P     P      04 46 05.0 +0.5
      baz=287
K29M  Barlow Dome        45.81  37   P     P      04 46 04.8 +0.4
      baz=287
BVAR  Borovoye Array     45.85 307   P     P      04 46 04.2 -0.5
      comp=Z,5.7nm,0.5s,baz=82,slow=9.3,SNR=28
      comp=Z,5.7nm,0.5s
BORK  Borovoye           45.88 307   P     P      04 46 04.5 -0.5
BORK  Borovoye           45.88 307ceP     P      04 46 04.6 -0.4
I30M  Mount Dempster     45.90  35   P     P      04 46 04.6 -0.6
      baz=286
YUK4  Talbot Arm         46.06  41   P     P      04 46 05.6 -0.9
      baz=288
J30M  Hart River         46.10  36   P     P      04 46 06.4 -0.3
      baz=287
INK   Inuvik             46.15  31   P     P      04 46 06.4 -0.3
      baz=286,SNR=8.5
G31M  Satah River        46.25  33   P     P      04 46 07.1 -0.5
      baz=286,SNR=6.6
F31M  Tsiigehtchic       46.30  32   P     P      04 46 07.6 -0.4
      baz=286
YUK6  Outpost Mounta     46.31  41   P     P      04 46 08.1 -0.4
      baz=289
O29M  Mount Kennedy      46.42  42   P     P      04 46 09.0 -0.2
      baz=289
M30M  Minto, Yukon       46.51  39   P     P      04 46 09.9 +0.1
      baz=288
H31M  Peel River         46.55  34   IAmb  IAmb   04 46 11.8
      comp=Z,12nm,0.6s
H31M  Peel River         46.55  34   P     P      04 46 09.7 -0.2
      baz=287
MAYO  Mayo, Yukon        46.58  37   P     P      04 46 10.2 -0.1
      baz=288
N30M  Aishikik Lake      46.73  41   P     P      04 46 11.6 +0.1
      baz=289
HYT   Haines Junctio     46.75  41   P     P      04 46 13.6 +1.8
HYT                                  IAmb  IAmb   04 46 16.5
      comp=Z,9.2nm,0.8s
HYT   Haines Junctio     46.75  41   P     P      04 46 12.2 +0.5
      baz=289,SNR=6.5
P29M  Windy Craggy       47.04  43   IAmb  IAmb   04 46 16.7
      comp=Z,16nm,0.7s
P29M  Windy Craggy       47.04  43   P     P      04 46 14.3 +0.4
      baz=290
P30M  Million Dollar     47.24  42   P     P      04 46 15.9 +0.4
      baz=290
N31M  Braeburn, Yuko     47.32  40   P     P      04 46 16.4 +0.5
      baz=290
O30N  Mendenhall         47.42  41   P     P      04 46 17.1 +0.3
      baz=290
M31M  Drury Creek, Y     47.69  39   P     P      04 46 19.1 +0.3
      baz=290
A36M  Sachs Harbour      47.74  25   IAmb  IAmb   04 46 20.4
      comp=Z,8.5nm,0.8s
A36M  Sachs Harbour      47.74  25   P     P      04 46 18.6 -0.3
      baz=289,SNR=8.6
AAK   Ala-Archa          47.76 292⇓eP     P      04 46 19.5 -0.3
PLBC  Pleasant Camp      47.76  43   P     P      04 46 19.7 +0.4
      baz=291
WHY   Whitehorse         48.02  41   P     P      04 46 21.3 -0.1
      baz=291
FARO  Faro, Yukon        48.13  39   P     P      04 46 23.2 +1.0
      baz=291
KSH   Kashi              48.32 288   P     P      04 46 28.5 +4.4
KSH                                  pmax  pmax
      comp=Z,11nm,0.8s
S31K  Pelican            48.38  45   P     P      04 46 23.9 -0.1
      baz=293
N32M  Quiet Lake         48.65  40   P     P      04 46 25.2 -1.0
      baz=292
P32M  Atlin              48.96  42   P     P      04 46 28.4  0.0
      baz=293
C36M  Paulatuk           49.05  28   P     P      04 46 28.6 -0.3
      baz=293,SNR=9.1
P33M  Teslin, Yukon      49.13  41   P     P      04 46 31.2 +1.4
P33M  Teslin, Yukon      49.13  41   P     P      04 46 30.6 +0.8
      baz=293,SNR=5.0
JIS   Juneau Island      49.16  44   P     P      04 46 31.8 +1.9
SIT   Sitka              49.19  46   P     P      04 46 30.4 +0.2
      baz=294
S32K  Killisnoo          49.40  45   P     P      04 46 32.5 +0.9
      baz=294
Q32M  Nakina River       49.90  42   P     P      04 46 34.2 -1.5
      baz=295
KK31  Karatay Array      50.09 294   IAmb  IAmb   04 46 37.8
      comp=Z,8.3nm,0.7s
KKAR  Karatay Array      50.09 294   P     P      04 46 37.0 -0.2
KKAR  Karatay Array      50.09 294   P     P      04 46 37.0 -0.2
R33M  Jennings River     50.32  42   P     P      04 46 39.1 +0.4
      baz=295
U33K  Whale Pass         50.70  46   P     P      04 46 42.1 +0.8
      baz=296
ARTI  Arti               50.86 314   P     P      04 46 41.7 -1.0
ARTI                                 IAmb  IAmb   04 46 42.7
      comp=Z,9.6nm,0.5s
ARTI  Arti               50.86 314c iP     P      04 46 41.6 -1.0
ARTI                                              04 47 52.4
ARTI                                 S     S      04 53 32.1 -0.7
ARTI                                 SS    SS     04 57 08.2 -3.4
ARTI                                 pmax  pmax
      comp=Z,6.0nm,0.9s
S34M  Telegraph Cree     50.88  43   P     P      04 46 43.2 +0.5
      baz=296
WRAK  Wrangell Islan     50.95  45   P     P      04 46 43.5 +0.3
      baz=296
CRAG  Craig              50.98  47   P     P      04 46 46.0 +2.5
CRAG  Craig              50.98  47   P     P      04 46 43.8 +0.3
      baz=297
WTLY  Watson Lake, Y     51.00  40   IAmb  IAmb   04 46 45.6
      comp=Z,7.3nm,0.6s
WTLY  Watson Lake, Y     51.00  40   P     P      04 46 44.3 +0.6
      baz=296,SNR=7.6
DLBC  Dease Lake         51.18  42   P     P      04 46 45.8 +0.8
      baz=296
T35M  Bob Quinn          51.73  44   IAmb  IAmb   04 46 52.3
      comp=Z,10.0nm,0.7s
T35M  Bob Quinn          51.73  44   P     P      04 46 50.1 +1.1
      baz=297
V35K  Ketchikan          51.81  46   P     P      04 46 50.7 +1.1
      baz=298
WRGLY Wrigley            51.88  35   P     P      04 46 51.1 +1.2
      baz=298
MANEM Manem              52.22 288   IAmb  IAmb   04 46 54.9
      comp=Z,23nm,0.7s
U35K  Hyder              52.34  45   P     P      04 46 54.6 +1.2
      baz=298
LIRD  Liard River Hi     52.54  40   P     P      04 46 55.9 +1.0
      baz=298
KOTAN Kotaneelee Air     53.10  39   P     P      04 46 59.8 +0.8
      baz=299
TOAD  Toad River Com     53.20  40   P     P      04 47 01.1 +1.4
      baz=299,SNR=15
NIL   Nilore             53.34 283         P      04 47 01.7 +0.6
NIL                                  IAmb  IAmb   04 47 02.7
      comp=Z,19nm,0.9s
NIL   Nilore             53.34 283   P     P      04 47 01.7 +0.6
NIL                                  pmax  pmax
      comp=Z,19nm,0.9s
ABKAR Akbulak array      53.41 306   P     P      04 47 01.0 -0.3
RES   Resolute Bay       53.83  16   IAmb  IAmb   04 47 04.0
      comp=Z,10.0nm,0.7s
SHAA  Shahritus          54.57 290   IAmb  IAmb   04 47 11.0
      comp=Z,41nm,0.6s
KBL   Kabul              55.68 286   P     P      04 47 16.9 -1.1
KBL                                  IAmb  IAmb   04 47 17.9
      comp=Z,9.7nm,0.7s
KBL   Kabul              55.68 286   P     P      04 47 16.9 -1.1
KBL                                  pmax  pmax
      comp=Z,10.0nm,0.7s
YKAW3 Yellowknife Wh     55.69  33   IAmb  IAmb   04 47 18.4
      comp=Z,10nm,0.6s
YKA   Yellowknife Ar     55.73  33   P     P      04 47 17.9 +0.2
      comp=Z,6.2nm,0.6s,baz=305,slow=7.4,SNR=82
      comp=Z,6.2nm,0.6s
YKAW1 Yellowknife Wh     55.79  33   IAmb  IAmb   04 47 19.0
      comp=Z,9.8nm,0.6s
ARCES ARCESS Array B     56.22 338   P     P      04 47 21.1 +0.1
      comp=Z,2.3nm,1.0s,baz=41,slow=6.6,SNR=1.4
      comp=Z,2.3nm,1.0s
ILON  Igloolik, Nuna     60.49  17   P     P      04 47 49.1 -1.1
ILON                                 IAmb  IAmb   04 47 49.7
      comp=Z,7.5nm,0.9s
BLKN  Baker Lake         60.91  25   P     P      04 47 52.4 -0.7
FINES FINESS Array B     61.62 331   P     P      04 47 57.1 -0.8
      comp=Z,3.1nm,0.5s,baz=40,slow=7.6,SNR=40
      comp=Z,3.1nm,0.5s
EDM   Edmonton           61.87  41   P     P      04 48 00.8 +1.0
EDM                                  IAmb  IAmb   04 48 01.5
      comp=Z,14nm,1.0s
EDM   Edmonton           61.87  41   P     P      04 48 00.8 +1.0
EDM                                  pmax  pmax
      comp=Z,15nm,1.0s
SUMG  Summit             61.89   0   IAmb  IAmb   04 48 40.1
      comp=Z,17nm,1.5s
B08A  Colville Reser     61.98  48   IAmb  IAmb   04 48 07.5
      comp=Z,9.2nm,1.3s
HAWA  Hanford            63.10  50   IAmb  IAmb   04 48 09.8
      comp=Z,5.4nm,0.7s
NEW   Newport            63.19  48   IAmb  IAmb   04 48 10.9
      comp=Z,6.2nm,0.8s
E09A  Wood Farm, Sta     63.77  50   IAmb  IAmb   04 48 14.5
      comp=Z,7.9nm,0.9s
PINE  Pine Mountain      63.97  53         P      04 48 16.0 +2.1
YBH   Yreka Blue Hor     64.27  56   IAmb  IAmb   04 48 21.8
      comp=Z,4.4nm,0.9s
F10A  Beach Ranch, E     64.60  50   IAmb  IAmb   04 48 27.7
      comp=Z,7.5nm,1.2s
BMO   Blue Mountains     65.29  50   IAmb  IAmb   04 48 24.4
      comp=Z,6.3nm,1.4s
FFC   Flin Flon          65.78  35         P      04 48 25.4 +0.4
FFC   Flin Flon          65.78  35   P     P      04 48 25.4 +0.4
FFC                                  pmax  pmax
      comp=Z,14nm,0.8s
PLID  Pearl Lake         65.83  50   IAmb  IAmb   04 48 27.6
      comp=Z,3.8nm,0.8s
WRA   Warramunga Arr     65.92 189   P     P      04 48 26.6 +0.4
      comp=Z,1.0nm,0.8s,baz=6.9,slow=6.8,SNR=4.8
      comp=Z,1.0nm,0.8s
WRA   Warramunga Arr     65.92 189   P     P      04 48 25.8 -0.4
KIV   Kislovodsk         66.12 309 eP     P      04 48 28.0 +0.6
KIV                                  pmax  pmax
      comp=Z,13nm,1.1s
WVOR  Wild Horse Val     66.14  53   IAmb  IAmb   04 48 30.1
      comp=Z,13nm,1.2s
KBZ   Khabaz             66.15 309   P     P      04 48 27.8 +0.3
      comp=Z,3.3nm,0.8s,baz=76,slow=4.9,SNR=7.5
      comp=Z,3.3nm,0.8s
NB2   NORSAR Subarra     66.54 337   P     P      04 48 29.9 +0.2
      comp=Z,0.4nm,0.4s,baz=23,slow=6.5
NOA   NORSAR Array B     66.54 337   P     P      04 48 29.1 -0.6
      comp=Z,0.8nm,0.7s,baz=214,slow=3.9,SNR=8.5
      comp=Z,0.8nm,0.7s
HFS   Hagfors            66.57 335   P     P      04 48 29.0 -0.8
      comp=Z,2.0nm,0.5s,baz=64,slow=6.8,SNR=21
      comp=Z,2.0nm,0.5s
NORES NORESS Array B     66.70 336   P     P      04 48 31.2 +0.6
BEKR  Beckworth          66.83  56   P     P      04 48 33.3 +1.2
BEKR                                 IAmb  IAmb   04 48 34.1
      comp=Z,5.8nm,0.9s
MFID  Camas Ranch        67.04  51   IAmb  IAmb   04 48 36.1
      comp=Z,3.9nm,0.8s
PAHR  Pah Rah Range      67.50  56   IAmb  IAmb   04 48 38.5
      comp=Z,7.1nm,0.8s
BOZ   Bozeman (W)        67.77  47   IAmb  IAmb   04 48 39.6
      comp=Z,5.7nm,0.6s
CMB   Columbia Colle     68.02  58   IAmb  IAmb   04 48 41.7
      comp=Z,4.4nm,0.9s
AKASG Malin Array Be     68.09 321   P     P      04 48 38.1 -1.4
      comp=Z,1.1nm,0.5s,baz=44,slow=6.7,SNR=6.1
      comp=Z,1.1nm,0.5s
AKASG Malin Array Be     68.09 321 i P     P      04 48 37.2 -2.3
AKASG                                pmax  pmax
      comp=Z,1.0nm,0.4s
YHL   Hebgen Lake        68.52  47   IAmb  IAmb   04 48 45.0
      comp=Z,6.2nm,1.1s
YMR   Madison River      68.75  47   IAmb  IAmb   04 49 04.2
      comp=Z,4.3nm,0.7s
NVAR  Mina Array Bea     68.98  56   P     P      04 48 46.5 +1.0
      comp=Z,4.8nm,0.6s,baz=298,slow=5.7,SNR=37
      comp=Z,4.8nm,0.6s
NVAR  Mina Array Bea     68.98  56   P     P      04 48 46.3 +0.8
YNE   Yellowstone No     69.01  47   IAmb  IAmb   04 48 47.6
      comp=Z,8.1nm,1.4s
NV11  Mina Array Sit     69.06  56   IAmb  IAmb   04 48 48.3
      comp=Z,3.8nm,0.8s
RLMT  Red Lodge          69.30  46   IAmb  IAmb   04 48 49.2
      comp=Z,3.7nm,0.7s
MOOW  Moose Ponds        69.51  48   IAmb  IAmb   04 48 51.4
      comp=Z,9.6nm,1.4s
ASAR  Alice Springs      69.65 189   P     P      04 48 50.7 +1.5
      comp=Z,1.5nm,0.5s,baz=5.0,slow=5.4,SNR=25
      comp=Z,1.5nm,0.5s
HWUT  Hardware Ranch     70.57  50   IAmb  IAmb   04 48 57.5
      comp=Z,5.3nm,0.8s
BW06  Boulder Array      70.81  48   IAmb  IAmb   04 48 58.2
      comp=Z,5.9nm,0.8s
PD31  Pinedale Array     70.81  48   IAmb  IAmb   04 48 58.2
      comp=Z,5.9nm,0.8s
PDAR  Pinedale Array     70.81  48   P     P      04 48 57.3 +0.8
      comp=Z,4.3nm,0.6s,baz=294,slow=2.2,SNR=57
      comp=Z,4.3nm,0.6s
SPR3  Spring Creek 3     70.86  54   IAmb  IAmb   04 48 60.0
      comp=Z,12nm,1.4s
DUG   Dugway, Tooele     70.88  52   IAmb  IAmb   04 48 59.3
      comp=Z,4.8nm,0.8s
WCT   Wildcat Mounta     71.07  57   IAmb  IAmb   04 48 59.7
      comp=Z,2.6nm,0.7s
CLC   China Lake         71.17  58   IAmb  IAmb   04 49 00.6
      comp=Z,5.7nm,0.9s
PSUT  Pine Spring        71.46  54   IAmb  IAmb   04 49 02.5
      comp=Z,4.1nm,0.9s
PRN   Pahroc Range       71.56  55   IAmb  IAmb   04 49 03.5
      comp=Z,6.4nm,1.1s
ULM   Lac du Bonnet      71.61  35   P     P      04 49 00.7 -0.1
      comp=Z,6.0nm,0.6s,baz=316,slow=6.6,SNR=8.4
      comp=Z,6.0nm,0.6s
ULM   Lac du Bonnet      71.61  35   IAmb  IAmb   04 49 01.2
      comp=Z,6.5nm,0.6s
ULM   Lac du Bonnet      71.61  35ceP     P      04 49 00.5 -0.2
MPU   Maple Canyon       71.65  51   IAmb  IAmb   04 49 03.7
      comp=Z,5.8nm,0.8s
BSUT  Blindstream Ca     71.76  50   IAmb  IAmb   04 49 04.7
      comp=Z,7.3nm,1.1s
SHPR  Sheep Range        72.12  56   IAmb  IAmb   04 49 06.9
      comp=Z,3.4nm,0.9s
TCRU  Three Creeks R     72.19  53   IAmb  IAmb   04 49 06.9
      comp=Z,5.5nm,1.1s
TMUT  Trail Mountain     72.39  52   IAmb  IAmb   04 49 08.1
      comp=Z,5.4nm,0.8s
P17A  Butcher Ranch,     72.52  51   IAmb  IAmb   04 49 09.5
      comp=Z,7.8nm,1.1s
RSSD  Black Hills        72.61  44   P     P      04 49 06.6 -0.5
RSSD                                 IAmb  IAmb   04 49 09.2
      comp=Z,3.8nm,0.6s
RSSD  Black Hills        72.61  44   P     P      04 49 06.6 -0.5
RSSD                                 pmax  pmax
      comp=Z,4.0nm,0.6s
P18A  Preston Nutter     72.68  51   IAmb  IAmb   04 49 10.1
      comp=Z,6.0nm,1.0s
SRU   San Rafael Swe     72.90  51   IAmb  IAmb   04 49 11.3
      comp=Z,7.7nm,0.8s
O20A  White River Ci     73.39  49   IAmb  IAmb   04 49 14.1
      comp=Z,4.9nm,0.8s
U15A  North Rim          73.82  54   IAmb  IAmb   04 49 17.0
      comp=Z,6.7nm,0.8s
BRTR  Keskin Array B     73.91 311   P     P      04 49 15.1 +0.4
      comp=Z,1.5nm,0.7s,baz=85,slow=3.4,SNR=5.8
      comp=Z,1.5nm,0.7s
BRTR  Keskin Array B     73.91 311   P     P      04 49 15.0 +0.4
CLL   Collm              74.04 330 eP     P      04 49 13.0 -1.9
PV04  Paradox Valley     74.29  51   IAmb  IAmb   04 49 18.6
      comp=Z,7.6nm,1.0s
PV16  Nyswonger Mesa     74.34  51   IAmb  IAmb   04 49 19.4
      comp=Z,12nm,1.3s
PV11  David Mesa, Pa     74.38  51   IAmb  IAmb   04 49 19.6
      comp=Z,11nm,1.1s
BLYC  Blythe             74.42  58   IAmb  IAmb   04 49 19.8
      comp=Z,6.7nm,0.9s
PV03  Paradox Valley     74.42  51   IAmb  IAmb   04 49 19.8
      comp=Z,4.7nm,0.8s
PV13  Radium Mtn., P     74.51  51   IAmb  IAmb   04 49 20.9
      comp=Z,5.8nm,0.9s
PV15  Paradox Valley     74.56  51   IAmb  IAmb   04 49 20.9
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	comp=Z,7.3nm,0.9s						
PV01	**Paradox Valley**	**74.66**	**51**	IAmb	IAmb	04 49 21.0	
	comp=Z,3.7nm,0.7s						
Y14A	**Wickenburg**	**75.17**	**57**	IAmb	IAmb	04 49 24.1	
	comp=Z,3.6nm,0.7s						
EKA	**Eskdalemuir Ar**	**75.21**	**341**	P	**P**	**04 49 21.8**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=21,slow=6.1,SNR=3.9						
	comp=Z,0.7nm,0.5s						
KHC	**Kasperske Hory**	**75.64**	**328**	⇓*e*P	**P**	**04 49 24.6**	**+0.5**
KHC				pmax	pmax		
	comp=Z,21nm,2.8s						
X16A	**Lo Mia Camp, P**	**75.74**	**55**	IAmb	IAmb	04 49 27.8	
	comp=Z,4.4nm,0.8s						
S22A	**4UR Ranch, Cre**	**75.88**	**50**	IAmb	IAmb	04 49 28.2	
	comp=Z,4.6nm,1.1s						
SCHQ	**Schefferville**	**76.59**	**17**	P	**P**	**04 49 28.5**	**-0.7**
	comp=Z,4.4nm,0.6s,baz=357,slow=5.8,SNR=13						
	comp=Z,4.4nm,0.6s						
T25A	**Trinidad**	**77.62**	**49**	IAmb	IAmb	04 49 36.9	
	comp=Z,3.7nm,0.7s						
MMAI	**Mount Meron Ar**	**77.82**	**305**	P	**P**	**04 49 37.7**	**+1.1**
	comp=Z,2.6nm,0.7s,baz=54,slow=7.3,SNR=1.7						
	comp=Z,2.6nm,0.7s						
TASM	**ASL Pad, Albuq**	**78.15**	**52**	IAmb	IAmb	04 49 41.7	
	comp=Z,3.0nm,0.9s						
TASM	**ASL Pad, Albuq**	**78.15**	**52**	IAmb	IAmb	04 49 41.7	
	comp=Z,3.1nm,0.9s						
TASM	**ASL Pad, Albuq**	**78.15**	**52**	IAmb	IAmb	04 49 41.7	
	comp=Z,2.9nm,0.9s						
TASM	**ASL Pad, Albuq**	**78.15**	**52**	IAmb	IAmb	04 49 41.7	
	comp=Z,3.1nm,0.9s						
ANMO	**Albuquerque**	**78.15**	**52**	P	**P**	**04 49 40.3**	**+1.8**
ANMO	**Albuquerque**	**78.15**	**52**	⇑*e*P	**P**	**04 49 39.7**	**+1.2**
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ABQ	**Albuquerque**	**78.16**	**52**	IAmb	IAmb	04 49 41.7	
	comp=Z,3.5nm,1.0s						
121A	**Cookes Peak, D**	**79.20**	**54**	IAmb	IAmb	04 49 46.9	
	comp=Z,4.8nm,0.8s						
MNTX	**Cornudas Mount**	**81.17**	**53**	IAmb	IAmb	04 49 56.2	
	comp=Z,3.2nm,0.6s						
PECS	**Pecos**	**82.27**	**52**	IAmb	IAmb	04 50 02.8	
	comp=Z,6.1nm,0.8s						
MNHN	**Monahans**	**82.90**	**52**	IAmb	IAmb	04 50 05.5	
	comp=Z,6.4nm,1.0s						
ALPN	**Alpine**	**83.15**	**53**	IAmb	IAmb	04 50 06.7	
	comp=Z,4.6nm,0.6s						
SGCY	**Sterling City**	**83.35**	**50**	IAmb	IAmb	04 50 07.3	
	comp=Z,5.9nm,0.7s						
TXAR	**Lajitas Array**	**83.93**	**54**	P	**P**	**04 50 10.1**	**+1.4**
	comp=Z,2.2nm,0.4s,baz=294,slow=4.3,SNR=86						
	comp=Z,2.2nm,0.4s						
TXAR	**Lajitas Array**	**83.93**	**54**	P	**P**	**04 50 10.2**	**+1.5**
FCAR	**Ozark Folk Cen**	**84.73**	**42**	IAmb	IAmb	04 50 13.3	
	comp=Z,6.0nm,0.9s						
DRIO	**Del Rio**	**85.55**	**52**	IAmb	IAmb	04 50 18.3	
	comp=Z,7.0nm,0.9s						
SIV	**San Ignacio**	**144.11**	**42**	PKP	**PKPab**	**04 57 10.9**	**+0.4**
	comp=Z,5.0nm,0.7s,baz=28,slow=1.8,SNR=11						
PTLB	**Pontes e Lacer**	**144.51**	**39**		**PKPdf**	**04 57 12.7**	**+0.2**
TROLL	**Troll, Antarti**	**147.88**	**202**	⇑P	**PKPbc**	**04 57 21.2**	**+0.9**
	comp=Z,117nm,0.3s						
BDFB	**Brasilia**	**148.54**	**20**	PKPbc	**PKPbc**	**04 57 23.8**	**+0.3**
	comp=Z,4.2nm,0.7s,baz=14,slow=1.3,SNR=6.9						
BDFB	**Brasilia**	**148.54**	**20**		**PKPbc**	**04 57 24.0**	**+0.5**
BDFB	**Brasilia**	**148.54**	**20**	PKP2	**PKPbc**	**04 57 24.0**	**+0.5**
SNAA	**Sanae**	**149.44**	**200**	PKPbc	**PKPbc**	**04 57 23.7**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=263,slow=4.1,SNR=8.4						
SNAA	**Sanae**	**149.44**	**200**		**PKPbc**	**04 57 24.4**	**+0.4**
VNA2	**Neumayer--Watz**	**151.03**	**200**	⇑P	**PKiKP**	**04 57 28.5**	**+0.3**
	comp=Z,10nm,0.6s,baz=136,slow=3.6						
VNA3	**Neumayer Olymp**	**151.31**	**198**	⇑P	**PKPbc**	**04 57 28.8**	**+0.4**
	comp=Z,2.3nm,0.3s						

JMA 15 04:38:41.2±0.1, 24°.7N±0°.8×124°.8E±0°.3, h19^{km}, MD4.1/10, MV3.9/10, NEAR MIYAKOJIMA ISLAND

JMA Felt I J1 at NEAR MIYAKOJIMA ISLAND .

NIED 15 04:38:41.2, 24°.69N×124°.83E, h19^{km}, MW3.8, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}-4.99; $M_{\theta\theta}$-0.28; $M_{\phi\phi}$5.27; $M_{r\theta}$0.17; $M_{\theta\phi}$-3.74; $M_{\phi r}$-1.34; Fault plane solution: $M_0$6.24000×10^{14} NP1: ϕ_s144.00000°, δ40.00000°, λ-103.00000°. NP2: ϕ_s341.00000°, δ51.00000°, λ-79.00000°.

ISC 15 04:38:41.1±1.2, 24°.6N±0°.1×124°.87E±0°.04, h13^{km}±9^{km}, n33, σ1s.04/34, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTJ	**Tarama**	**0.17**	**298**	P	**Pg**	**04 38 45.3**	**+0.1**
JTJ				*e*S	**Sg**	**04 38 48.2**	**+0.3**
JTJ	**Tarama**	**0.17**	**298**	A	A	04 38 45.3	
	comp=N,92nm,0.7s,comp=E,59nm,0.7s						
JIRB	**Irabujima**	**0.39**	**46**	P	**Pg**	**04 38 48.1**	**-0.8**
JIRB				*e*S	**Sg**	**04 38 53.3**	**-0.7**
JIRB	**Irabujima**	**0.39**	**46**	A	A	04 38 48.1	
	comp=N,16nm,1.8s,comp=E,12nm,2.0s						
JMJ2	**Miyako jima3**	**0.46**	**66**	P	**Pg**	**04 38 50.2**	**+0.1**
JMJ2				*e*S	**Sg**	**04 38 56.7**	**+0.5**
JMJ	**Miyako jima 2**	**0.46**	**57**	P	**Pg**	**04 38 50.1**	**-0.2**
JMJ	**Miyako jima 2**	**0.46**	**57**	S	**Sb**	**04 38 57.8**	**-0.1**
JMJ	**Miyako jima 2**	**0.46**	**57**	P	**Pg**	**04 38 50.3**	**0.0**
JMJ	**Miyako jima 2**	**0.46**	**57**	S	**Sb**	**04 38 58.0**	**+0.1**
JIKM	**Ikemajima**	**0.50**	**43**	P	**Pg**	**04 38 50.1**	**-0.9**
JIKM				*e*S	**Sg**	**04 38 56.8**	**-0.9**
JISG	**Ishigakijimahi**	**0.51**	**273**	P	**Pg**	**04 38 50.9**	**-0.2**
JISG				*e*S	**Sg**	**04 38 57.8**	**-0.1**
JISG	**Ishigakijimahi**	**0.51**	**273**	A	A	04 38 50.9	
	comp=N,29nm,0.5s,comp=E,31nm,0.8s						
JOGS	**Gusukube**	**0.53**	**68**	P	**Pg**	**04 38 51.6**	**+0.1**
JOGS	**Gusukube**	**0.53**	**68**	A	A	04 38 51.6	
	comp=N,19nm,2.9s,comp=E,21nm,3.0s						
JIJ	**Ishigaki jima**	**0.69**	**254**	*e*P	**Pb**	**04 38 54.3**	**-0.6**
JIJ				*e*S	**Sb**	**04 39 04.2**	**-0.2**
JIJ	**Ishigaki jima**	**0.69**	**254**	A	A	04 38 54.3	
	comp=N,6.0nm,1.1s,comp=E,8.0nm,0.8s						
JKRS	**Kuro-shima**	**0.85**	**248**	P	**Pb**	**04 38 57.7**	**+0.1**
JKRS				*e*S	**Sn**	**04 39 10.1**	**-0.9**
JKRS	**Kuro-shima**	**0.85**	**248**	A	A	04 38 57.7	
	comp=N,20nm,0.7s,comp=E,16nm,1.8s						
IRIF	**Iriomote-Funau**	**1.06**	**258**	P	**Pg**	**04 39 00.7**	**-0.9**
IRIF				*e*S	**Sn**	**04 39 16.0**	**-0.3**
IRIF	**Iriomote-Funau**	**1.06**	**258**	A	A	04 39 00.7	
	comp=N,7.0nm,1.2s,comp=E,12nm,1.7s						
HATJ	**Hateruma jima**	**1.09**	**243**	*e*P	**Pn**	**04 39 02.1**	**0.0**
HATJ				*e*S	**Sn**	**04 39 16.7**	**-0.3**
HATJ	**Hateruma jima**	**1.09**	**243**	A	A	04 39 02.1	
	comp=N,12nm,2.7s,comp=E,9.0nm,1.4s						
YOJ	**Yonaguni jima**	**1.69**	**267**	P	**Pn**	**04 39 10.3**	**-0.1**
YOJ	**Yonaguni jima**	**1.69**	**267**	P	**Pb**	**04 39 11.7**	**-0.4**
NACB	**Ninganchiao**	**3.01**	**263**	P	**Pn**	**04 39 29.3**	**+0.8**
NACB	**Ninganchiao**	**3.01**	**263**	P	**Pn**	**04 39 29.7**	**+1.2**
YHNB	**Yeheng**	**3.18**	**273**	P	**Pn**	**04 39 32.6**	**+1.7**
YHNB	**Yeheng**	**3.18**	**273**	P	**Pn**	**04 39 33.1**	**+2.2**
YULB	**Yu-li**	**3.47**	**251**	P	**Pn**	**04 39 35.4**	**+0.6**
YULB	**Yu-li**	**3.47**	**251**	P	**Pn**	**04 39 36.9**	**+2.1**
TWGBT	**Beinan**	**3.88**	**244**	P	**Pn**	**04 39 40.2**	**-0.3**
TPUB	**Ta-pu**	**4.08**	**253**	P	**Pn**	**04 39 45.0**	**+1.8**
TPUB	**Ta-pu**	**4.08**	**253**	P	**Pn**	**04 39 46.1**	**+2.9**

ISK 15 04:46:15.7, 37°.25N×36°.31E, h15^{km}, ML3.0/9

AFAD 15 04:46:16.1, 37°.23N×36°.32E, h7^{km}±4^{km}, ML3.0

ISC 15 04:46:15.9±1.0, 37°.24N±0°.02×36°.32E±0°.03, h11^{km}±8^{km}, n22, σ0s.40/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAMA	**Osmaniye**	**0.28**	**101**	P	**Pg**	**04 46 21.7**	**-0.1**
KAMA				S	**Sg**	**04 46 24.7**	**-1.0**
ANDN	**Andirin**	**0.34**	**3**	P	**Pg**	**04 46 23.0**	**+0.2**
ANDN				S	**Sg**	**04 46 28.4**	**+1.0**
ANDN				*i* IAML		04 46 30.0	
	comp=N,2μm,0.2s						
KOZT	**Kozan**	**0.46**	**301**	Pg	**Pg**	**04 46 25.4**	**+0.4**
KOZT				Sg	**Sb**	**04 46 32.1**	**-0.8**
HASA	**Hatay-Hassa-Ha**	**0.51**	**165**	P	**Pg**	**04 46 26.1**	**+0.2**
HASA				S	**Sg**	**04 46 32.6**	**0.0**
HASA				*i* IAML		04 46 34.0	
	comp=N,1μm,0.3s						
KMRS	**Kahramanmaras**	**0.53**	**60**	Pg	**Pg**	**04 46 26.2**	**-0.1**
KHMN	**Narli-Kahraman**	**0.68**	**77**	Pg	**Pb**	**04 46 29.7**	**-0.2**
KHMN				Sg	**Sb**	**04 46 39.8**	**+0.4**
YURE	**YUREGIR**	**0.69**	**233**	P	**Pn**	**04 46 31.8**	**+0.2**
GAZ	**Gaziantep**	**0.71**	**95**	Pg	**Pb**	**04 46 30.7**	**+0.3**
SAIM	**ADANA**	**0.76**	**346**	P	**Pg**	**04 46 30.4**	**-0.3**
SAIM				S	**Sb**	**04 46 41.7**	**+0.1**
SAIM				*i* IAML		04 46 47.0	
	comp=E,563nm,0.3s						
SAIM				*i* IAML		04 46 48.0	
	comp=N,708nm,0.2s						
KUZU	**Kuzuini**	**0.76**	**128**	P	**Pb**	**04 46 31.3**	**+0.1**
KUZU				S	**Sb**	**04 46 41.4**	**-0.3**
KUZU				*i* IAML		04 46 45.0	
	comp=N,1μm,0.3s						
KUZU				*i* IAML		04 46 46.0	
	comp=E,1μm,0.3s						
TAHT	**Tahtakopru-Hat**	**0.87**	**187**	Pg	**Pg**	**04 46 32.7**	**-0.1**
GZT	**Gaziantep**	**1.00**	**83**	P	**Pb**	**04 46 35.5**	**+0.2**
GZT				S	**Sn**	**04 46 49.7**	**-0.4**
GZT				*i* IAML		04 46 51.0	
	comp=N,451nm,0.2s						
GZT				*i* IAML		04 46 52.0	
	comp=E,505nm,0.2s						
RHAN	**Hatay/Reyhanl**	**1.01**	**167**	P	**Pn**	**04 46 35.8**	**-0.2**
RHAN				S	**Sn**	**04 46 49.9**	**-0.2**
KARA	**Karaisali**	**1.01**	**271**	Pg	**Pn**	**04 46 35.7**	**-0.3**
ASUZ	**Hatay-Arsuz**	**1.04**	**205**	P	**Pn**	**04 46 37.0**	**+0.6**
ASUZ				S	**Sn**	**04 46 51.3**	**+0.3**
NZIP	**Nizip/Gaziante**	**1.10**	**100**	P	**Pg**	**04 46 37.2**	**+0.1**
NZIP				S	**Sn**	**04 46 52.5**	**0.0**
NZIP				*i* IAML		04 46 54.0	
	comp=N,796nm,0.3s						
CMRD	**Camardi-Nigde**	**1.14**	**292**	Pn	**Pb**	**04 46 37.4**	**-0.3**
SARI	**SarD1z-Kayseri**	**1.17**	**4**	Pn	**Pb**	**04 46 37.9**	**-0.3**
AKCA	**Adyaman/G¶l**	**1.22**	**63**	P	**Pg**	**04 46 39.5**	**+0.1**
AKCA				S	**Sn**	**04 46 56.0**	**+0.5**
AKCA				*i* IAML		04 46 59.0	
	comp=E,421nm,0.5s						
AKCA				*i* IAML		04 47 00.0	
	comp=N,433nm,0.6s						
MERS	**Mersin**	**1.49**	**256**	Pn	**Pn**	**04 46 42.9**	**+0.3**
BNN	**Bunyan**	**1.65**	**347**	Pn	**Pn**	**04 46 44.9**	**-0.1**
SVRC	**Sivrice-ELAZID**	**2.62**	**63**	Pn	**Pn**	**04 46 58.5**	**+0.1**

IDC 15 04:59:54.7±0.8, 24°.13S×69°.72E, h0^{km}, mb4.0/12, mbtmp4.0/12, MS3.8/20, Error ellipse: s-maj=33.9km s-min=19.0km az=75.0

NEIC 15 04:59:56.5±0.8, 24°.14S±0°.10×69°.6E±0°.2, h10^{km}±1^{km}, mb4.5/7, Error ellipse: s-maj=28.5km s-min=4.1km az=235.0

ISC 15 04:59:56.5±0.7, 24°.1S±0°.1×69°.8E±0°.2, h10^{km}, n49, σ0s.56/25, mb4.2/16, MS3.8/20, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**16.60**	**9**	T	T	05 20 51.3	
	baz=190,slow=76,SNR=28						
H08S2	**Diego Garcia H**	**16.61**	**10**	T	T	05 20 52.6	
	baz=190,slow=76,SNR=12						
H08S3	**Diego Garcia H**	**16.62**	**9**	T	T	05 20 51.5	
	baz=190,slow=76,SNR=88						
H04N2	**CROZET ISLANDS**	**26.32**	**209**	T	T	05 32 53.1	
	baz=40,slow=74,SNR=197						
H04N1	**CROZET ISLANDS**	**26.32**	**209**	T	T	05 32 57.8	
	baz=40,slow=74,SNR=438						
H04N3	**CROZET ISLANDS**	**26.33**	**209**	T	T	05 32 52.5	
	baz=40,slow=74,SNR=224						
MATP	**Matopo**	**38.27**	**267**	LR	LR	05 19 33.1	
	comp=Z,188nm,19.5s,baz=104,slow=31						
PSI	**Prapat**	**39.00**	**51**	LR	LR	05 19 40.5	
	comp=Z,84nm,19.6s,baz=226,slow=30						
H01W2	**Cape Leeuwin H**	**39.79**	**116**	T	T	05 49 45.4	
	baz=273,slow=75,SNR=23						
H01W3	**Cape Leeuwin H**	**39.79**	**116**	T	T	05 49 45.5	
	baz=273,slow=75,SNR=23						
H01W1	**Cape Leeuwin H**	**39.81**	**116**	T	T	05 49 46.7	
	baz=273,slow=75,SNR=21						
BOSA	**Boshof**	**39.95**	**254**	LR	LR	05 21 31.6	
	comp=Z,254nm,18.3s,baz=134,slow=32						
LBTB	**Lobatse**	**40.04**	**259**	LR	LR	05 20 48.7	
	comp=Z,138nm,18.5s,baz=104,slow=31						
MBAR	**Mbarara**	**44.44**	**296**	LR	LR	05 25 09.2	
	comp=Z,49nm,19.9s,baz=122,slow=34						
TSUM	**Tsumeb**	**48.52**	**265**	LR	LR	05 26 10.4	
	comp=Z,65nm,20.2s,baz=142,slow=32						
CMAR	**Chiang Mai Arr**	**51.01**	**37**	P	**P**	**05 08 59.3**	**+0.4**
	1.3nm,0.3s,baz=219,slow=7.3,SNR=7.2						
CMAR				LR	LR	05 28 21.9	
	comp=Z,71nm,19.5s,baz=220,slow=34						
	1.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**51.01**	**37**	P	**P**	**05 09 00.3**	**+1.4**
BRDH	**Bariadhala**	**51.16**	**26**	LR	LR	05 29 10.6	
	comp=Z,127nm,19.8s,baz=241,slow=34						
KAPI	**Kappang**	**51.65**	**77**	LR	LR	05 29 58.0	
	comp=Z,16nm,19.5s,baz=264,slow=35						
BBOO	**Buckleboo**	**58.09**	**115**	P	**P**	**05 09 50.0**	**-0.4**
ASAR	**Alice Springs**	**58.15**	**104**	P	**P**	**05 09 51.4**	**+0.4**
	1.5nm,0.9s,baz=256,slow=6.1,SNR=15						
ASAR				LR	LR	05 31 23.6	
	comp=Z,64nm,21.3s,baz=293,slow=32						
	1.5nm,0.9s						
ASAR	**Alice Springs**	**58.15**	**104**	P	**P**	**05 09 51.0**	**0.0**
WRA	**Warramunga Arr**	**59.54**	**100**	P	**P**	**05 10 00.2**	**-0.5**
	1.2nm,0.8s,baz=255,slow=6.8,SNR=5.5						
	1.2nm,0.8s						
WB0	**Warramunga Arr**	**59.64**	**100**	P	**P**	**05 10 01.1**	**-0.2**
WB0				IAmb	IAmb	05 10 08.5	
	comp=Z,6.4nm,1.4s						
WR8	**Warramunga Arr**	**59.69**	**100**	P	**P**	**05 10 00.9**	**-0.7**
WR8				IAmb	IAmb	05 10 08.3	
	comp=Z,4.5nm,1.1s						
SNAA	**Sanae**	**61.83**	**200**	P	**P**	**05 10 15.8**	**+0.4**
DAV	**Davao City (W)**	**62.63**	**68**	LR	LR	05 35 03.1	
	comp=Z,33nm,20.3s,baz=320,slow=34						
INKA	**Innaminka**	**63.12**	**110**	P	**P**	**05 10 26.0**	**+1.3**
INKA				IAmb	IAmb	05 10 32.6	
	comp=Z,2.4nm,0.7s						
QSPA	**South Pole Qui**	**65.99**	**180**	P	**P**	**05 10 42.9**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=260,slow=1.4,SNR=6.5						
QSPA				LR	LR	05 35 17.1	
	comp=Z,45nm,21.9s,baz=260,slow=32						
	comp=Z,0.8nm,0.4s						
AAK	**Ala-Archa**	**66.58**	**4**	LR	LR	05 37 28.1	
	comp=Z,101nm,18.1s,baz=237,slow=34						
KKAR	**Karatay Array**	**66.91**	**1**	P	**P**	**05 10 49.5**	**+0.6**
VNDA	**Vanda**	**67.07**	**166**	P	**P**	**05 10 49.3**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=288,slow=4.4,SNR=4.6						
	comp=Z,1.5nm,0.8s						
VNDA	**Vanda**	**67.07**	**166**	P	**P**	**05 10 49.8**	**+0.3**
VNDA				IAmb	IAmb	05 10 56.6	
	comp=Z,3.8nm,0.9s						
CTA	**Charters Tower**	**70.16**	**104**	LR	LR	05 39 40.1	
	comp=Z,113nm,19.5s,baz=220,slow=34						
MKAR	**Makanchi Array**	**71.50**	**9**	P	**P**	**05 11 16.9**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=198,slow=6.9,SNR=12						
MKAR				LR	LR	05 40 07.3	
	comp=Z,42nm,18.6s,baz=330,slow=34						
	comp=Z,1.7nm,0.8s						
MKAR	**Makanchi Array**	**71.50**	**9**	P	**P**	**05 11 16.8**	**-0.5**
BRTR	**Keskin Array B**	**71.92**	**331**	P	**P**	**05 11 20.2**	**0.0**
	comp=Z,0.5nm,0.9s,baz=142,slow=4.7,SNR=3.6						
	comp=Z,0.5nm,0.9s						
AB31	**Akbulak array**	**73.58**	**353**		**P**	**05 11 29.1**	**-0.5**
AB31				IAmb	IAmb	05 11 36.7	
	comp=Z,4.1nm,0.9s						
ABKAR	**Akbulak array**	**73.58**	**353**		**P**	**05 11 29.4**	**-0.3**
PMG	**Port Moresby**	**74.77**	**94**	LR	LR	05 43 56.0	
	comp=Z,58nm,18.9s,baz=160,slow=35						
KURBB	**Kurchatov Arra**	**74.83**	**6**	P	**P**	**05 11 36.5**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=202,slow=6.4,SNR=6.5						
	comp=Z,1.1nm,0.8s						
AKTO	**Aktyubinsk**	**74.97**	**352**	LR	LR	05 43 34.6	
	comp=Z,65nm,18.1s,baz=91,slow=35						
BVAR	**Borovoye Array**	**76.83**	**0**	P	**P**	**05 11 48.0**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=175,slow=6.7,SNR=7.7						
	comp=Z,1.5nm,0.7s						
DBIC	**Dimbokro**	**78.83**	**283**	LR	LR	05 44 51.7	
	comp=Z,77nm,18.3s,baz=132,slow=34						
ZALV	**Zalesovo Beam**	**78.84**	**9**	P	**P**	**05 11 59.2**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=193,slow=6.1,SNR=9.4						
	comp=Z,1.1nm,0.6s						
ZALV	**Zalesovo Beam**	**78.84**	**9**		**P**	**05 11 59.1**	**-0.4**
SONM	**Songino Array**	**78.84**	**24**	P	**P**	**05 11 59.1**	**-0.7**
	comp=Z,1.2nm,0.9s,baz=218,slow=1.7,SNR=3.8						
SONM				LR	LR	05 45 37.8	
	comp=Z,54nm,21.6s,baz=166,slow=35						
	comp=Z,1.2nm,0.9s						
JNU	**Nakatsue**	**81.42**	**48**	LR	LR	05 48 32.2	
	comp=Z,63nm,18.1s,baz=287,slow=36						
AKASG	**Malin Array Be**	**82.66**	**335**	P	**P**	**05 12 20.1**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=126,slow=4.1,SNR=4.1						
	comp=Z,0.3nm,0.3s						

IDC 15 05:17:12.3±2.8, 1°.62N×133°.07E, h0^{km}, mb3.6/4, mbtmp3.7/4, Error ellipse: s-maj=164.3km s-min=22.4km az=74.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.46**	**177**	P	P	05 22 02.7	+0.2
	1.3nm,0.9s,baz=356,slow=11,SNR=6.0						
	1.3nm,0.9s						
ASAR	**Alice Springs**	**25.14**	**178**	P	P	05 22 39.2	-0.1
	1.4nm,0.9s,baz=357,slow=11,SNR=18						
	1.4nm,0.9s						
H11N1	**WAKE ISLAND Hy**	**37.65**	**59**	T	T	06 04 31.0	
	baz=245,slow=75,SNR=9.9						
H11N2	**WAKE ISLAND Hy**	**37.66**	**59**	T	T	06 04 30.8	
	baz=245,slow=75,SNR=13						
H11N3	**WAKE ISLAND Hy**	**37.66**	**59**	T	T	06 04 31.2	
	baz=245,slow=75,SNR=12						
MKAR	**Makanchi Array**	**62.96**	**323**	P	P	05 27 40.0	-0.8
	0.7nm,0.8s,baz=126,slow=6.1,SNR=5.6						
	0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**66.99**	**326**	P	P	05 28 07.6	+0.7
	0.9nm,0.7s,baz=121,slow=5.4,SNR=7.9						
	0.9nm,0.7s						

IDC 15 05:35:01.9±2.6, 26°.79N×126°.39E, h115^{km}±27^{km}, mb3.1/5, mbtmp3.4/5, Error ellipse: s-maj=41.7km s-min=20.1km az=64.0

JMA 15 05:35:02.7±0.3, 27°N±2°×12°6E±°, h112^{km}±2^{km}, MV3.3/22, NW OFF OKINAWAJIMA IS

ISC 15 05:35:01.9±0.9, 26°.73N±0°.08×126°.49E±0°.07, h121^{km}±9^{km}, n25, σ1s.22/37, mb3.2/5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.48**	**147**	P	**Pn**	**05 35 19.7**	**0.0**
JAGN	**Aguni-jima**	**0.68**	**101**	P	**Pn**	**05 35 21.4**	**+0.2**
JAGN				S	**Sn**	**05 35 35.4**	**-0.3**
JJT3	**Tamagusuku3**	**1.29**	**116**	P	**Pn**	**05 35 28.1**	**+1.1**
JJT3				S	**Sn**	**05 35 46.5**	**+0.4**
JIH	**Iheya**	**1.35**	**77**	P	**Pn**	**05 35 28.3**	**+0.7**
JIH				S	**Sn**	**05 35 47.0**	**-0.2**
JNTH	**Nagotoyohara**	**1.38**	**98**	P	**Pn**	**05 35 28.8**	**+0.8**
JNTH				S	**Sn**	**05 35 46.9**	**-1.0**
JOW	**Kunigami**	**1.60**	**86**	P	**Pn**	**05 35 31.0**	**+0.5**
	43nm,0.3s,baz=111,slow=27,SNR=90						
JOW	**Kunigami**	**1.60**	**86**	P	**Pn**	**05 35 31.0**	**+0.5**
JOW				*e*S	**Sn**	**05 35 51.6**	**-0.6**
JYRO	**Yoronjima**	**1.77**	**80**	P	**Pn**	**05 35 33.2**	**+0.6**
JYRO				*e*S	**Sn**	**05 35 55.2**	**-0.8**
JOKE	**Okinoerabujima**	**1.96**	**71**	P	**Pn**	**05 35 35.0**	**+0.2**
JOKE				S	**Sn**	**05 35 59.6**	**-0.5**
JIKM	**Ikemajima**	**2.12**	**212**	*e*P	**Pn**	**05 35 37.1**	**+0.2**
JIKM				S	**Sn**	**05 36 02.7**	**-0.9**
JOGS	**Gusukube**	**2.19**	**207**	*e*S	**Sn**	**05 36 05.1**	**-0.2**
JIRB	**Irabujima**	**2.23**	**212**	*e*S	**Sn**	**05 36 04.7**	**-1.6**
JMJ2	**Miyako jima3**	**2.24**	**208**	*e*P	**Pn**	**05 35 38.9**	**+0.5**
JMJ2				*e*S	**Sn**	**05 36 05.2**	**-1.2**
JTK	**Tokunoshima**	**2.43**	**64**	P	**Pn**	**05 35 40.9**	**+0.1**
JTK				S	**Sn**	**05 36 09.4**	**-1.3**
JTJ	**Tarama**	**2.63**	**218**	*e*S	**Sn**	**05 36 13.1**	**-2.2**
JAMN	**Amaminishikomi**	**2.82**	**57**	*i* P	**Pn**	**05 35 45.6**	**-0.2**
JAMN				*e*S	**Sn**	**05 36 18.1**	**-1.5**
JAM	**Amami Oshima**	**3.23**	**58**	P	**Pn**	**05 35 51.1**	**-0.1**
JAM				S	**Sn**	**05 36 27.5**	**-1.8**
JTAJ	**Takarajima**	**3.40**	**44**	*e*P	**Pn**	**05 35 54.4**	**+0.9**
JZK	**Kikaishima**	**3.47**	**62**	*e*S	**Sn**	**05 36 34.8**	**-0.1**
JKDJ	**Kitadaitoujima**	**4.38**	**99**	*e*S	**Sn**	**05 36 52.0**	**-4.7**
MKAR	**Makanchi Array**	**40.05**	**312**	P	**P**	**05 42 24.5**	**-0.6**
	0.2nm,0.4s,baz=97,slow=10,SNR=10						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**40.91**	**323**	P	**P**	**05 42 31.8**	**-0.2**
	1.0nm,0.4s,baz=113,slow=8.3,SNR=6.0						
	1.0nm,0.4s						
WRA	**Warramunga Arr**	**47.01**	**170**	P	**P**	**05 43 21.5**	**+0.4**
	0.2nm,0.5s,baz=350,slow=8.0,SNR=1.7						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**50.61**	**171**	P	**P**	**05 43 50.1**	**+1.6**
	0.2nm,0.6s,baz=358,slow=15,SNR=4.4						
	0.2nm,0.6s						
YKA	**Yellowknife Ar**	**78.73**	**24**	P	**P**	**05 46 51.1**	**+0.5**
	0.2nm,0.5s,baz=299,slow=6.3,SNR=5.3						
	0.2nm,0.5s						

CRAAG 15 05:49:50.3, 36°.33N×3°.47E, Ml3.6, Algerie 02km SW Mihoub

MDD 15 05:49:51.5±0.9, 36°.31N×3°.65E, h3^{km}±18^{km}, Mb4.3/14, Error ellipse: s-maj=23.0km s-min=4.9km az=140.0

CNRM 15 05:50:25.9, 34°.87N×1°.01E, h53^{km}, ML2.8

ISC 15 05:49:51.4±1.3, 36°.35N±0°.03×3°.45E±0°.03, h9^{km}±11^{km}, n40, σ1s.82/46, 8C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADJB	**Djebel Djouab**	**0.19**	**182**	P	**Pg**	**05 49 55.0**	**-0.4**
ABMS	**Boumerdes**	**0.40**	**4**	P	**Pb**	**05 50 00.8**	**+0.1**
AKET	**Djebel Ketaf**	**0.46**	**130**	P	**Pg**	**05 50 00.4**	**0.0**
ADOR	**Douera**	**0.53**	**306**	P	**Pg**	**05 50 01.9**	**+0.1**
ATKB	**Taksebt**	**0.63**	**59**	P	**Pg**	**05 50 03.1**	**-0.6**
ABRIN	**Birine**	**0.77**	**200**	P	**Pg**	**05 50 06.4**	**+0.2**
ABKD	**Sidi Amar**	**0.94**	**282**	P	**Pg**	**05 50 09.2**	**-0.2**
CTCHA	**Tamokra**	**0.97**	**85**	P	**Pb**	**05 50 10.8**	**+0.4**
EDDR	**Deurdeur**	**1.05**	**251**	P	**Pg**	**05 50 10.8**	**-0.9**
EHRZ	**Djelida**	**1.09**	**263**	P	**Pg**	**05 50 12.5**	**+0.1**
ABSD	**Ouled Sidi Bra**	**1.09**	**146**	P	**Pb**	**05 50 12.4**	**-0.1**
AFDJ	**Sidi Ladjel**	**1.18**	**217**	P	**Pb**	**05 50 13.5**	**-0.5**
CAZD	**Ain Tagrout**	**1.39**	**97**	P	**Pg**	**05 50 19.1**	**+1.0**
ADCK	**Dar Chioukh**	**1.43**	**180**	P	**Pb**	**05 50 18.5**	**+0.2**
EIBI	**Ibiza**	**3.15**	**329**	Pn	**Pn**	**05 50 41.6**	**+0.4**
EIBI				Sn	**Sn**	**05 51 15.3**	**-3.6**
EIBI	**Ibiza**	**3.15**	**329**	Pn	**Pn**	**05 50 42.6**	**+1.4**
EIBI				⇑*i*IVmb_VC		05 50 50.6	
	720nm,SNR=1.5						
EIBI				Sn	**Sn**	**05 51 18.8**	**-0.2**
ETOS	**Mallorca**	**3.45**	**352**	Pn	**Pn**	**05 50 45.6**	**+0.3**
ETOS				Sn	**Sn**	**05 51 21.3**	**-5.1**
ETOS	**Mallorca**	**3.45**	**352**	Pn	**Pn**	**05 50 45.1**	**-0.2**
ETOS				⇑*i*IVmb_VC		05 50 48.9	
	458nm,SNR=1.0						
ETOS				Sn	**Sn**	**05 51 25.3**	**-1.1**
EBEN2	**Beniarda presa**	**3.71**	**310**	Pn	**Pn**	**05 50 50.3**	**+1.4**
EBEN2				⇑*i*IVmb_VC		05 51 00.1	
	462nm,SNR=1.6						
EBEN2				Sn	**Sn**	**05 51 34.9**	**+2.2**
CART	**Cartagena**	**3.77**	**290**	Pn	**Pn**	**05 50 48.3**	**-1.4**
CART				Sn	**Sn**	**05 51 28.5**	**-5.7**
EMUR	**La Murta**	**4.03**	**293**	Pn	**Pn**	**05 50 53.3**	**0.0**
EMUR	**La Murta**	**4.03**	**293**	Pn	**Pn**	**05 50 54.9**	**+1.6**
EMUR				Sn	**Sn**	**05 51 44.6**	**+3.9**
TLOR	**Lorca, Murcia**	**4.31**	**289**	Pn	**Pn**	**05 50 56.0**	**-1.1**
ETOB	**Tobarra**	**4.59**	**302**	Pn	**Pn**	**05 51 01.7**	**+0.7**
ETOB	**Tobarra**	**4.59**	**302**	Pn	**Pn**	**05 51 01.2**	**+0.2**
ETOB				⇑*i*IVmb_VC		05 51 01.7	
	178nm,SNR=0.9						
ETOB				Sn	**Sn**	**05 51 54.5**	**+0.2**
EVIV	**Cofrentes, Val**	**4.64**	**310**	Pn	**Pn**	**05 51 04.2**	**+2.4**
EVIV				⇑*i*IVmb_VC		05 51 05.7	
	306nm,SNR=1.5						
EVIV				Sn	**Sn**	**05 51 57.6**	**+1.9**
ECHE	**Chera**	**4.76**	**314**	Pn	**Pn**	**05 51 04.7**	**+1.3**
TAF	**Taforalt**	**5.01**	**254**	P	**Pn**	**05 51 08.2**	**+1.3**
TAF	**Taforalt**	**5.01**	**254**	S	Sn	05 51 41.8	-23
EMOS	**Mosqueruela**	**5.06**	**324**	Pn	**Pn**	**05 51 07.7**	**+0.2**
EMOS				⇑*i*IVmb_VC		05 51 11.4	
	244nm,SNR=1.8						
EMOS				Sn	**Sn**	**05 52 04.7**	**-1.4**
EQES	**Quesada**	**5.41**	**288**	Pn	**Pn**	**05 51 14.6**	**+2.3**
EQES				⇑*i*IVmb_VC		05 51 23.1	
	141nm,SNR=1.1						
EQES				Sn	**Sn**	**05 52 16.2**	**+1.5**
FIGM	**Figuig**	**5.73**	**224**	P	**Pn**	**05 51 15.6**	**-1.2**
FIGM	**Figuig**	**5.73**	**224**	S	Sn	05 51 54.8	-28
EJON	**La Jonquera**	**6.11**	**356**	Pn	**Pn**	**05 51 23.0**	**+1.2**
EJON				⇑*i*IVmb_VC		05 51 23.4	
	275nm,SNR=1.2						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKLM	AKL	6.24	255	P	Pn	05 51 26.3	+2.5
AKLM	AKL	6.24	255	S	Sn	05 52 14.0	-21
MDT	Midelt	7.52	244	P	Pn	05 51 40.0	-1.3
MDT	Midelt	7.52	244	S	Sn	05 52 37.7	-29
MD31	MD31	7.60	245	P	Pn	05 51 41.4	-1.0
MD31	MD31	7.60	245	S	Sn	05 52 40.7	-28

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*IDC **15** 05:50:58.7±2.0, 11°.71S×115°.45E, h0km, mb3.5/3, mbtmp3.6/5, ML3.6/2, Error ellipse: s-maj=61.6km s-min=25.5km az=51.0*

*DJA **15** 05:51:01.7±1.2, 12°S±8°×11°6E±°, h16km±14km, M4.3/18, mb4.3/7, MLv4.3/18*

ISC 15 05:51:03.0±1.1**, 11°.62S**±0°.09×**115°.73E**±0°.06**, h35km, n26, σ2^{s}04**/31**, mb3.6**/3**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGBI	Denpasar	2.84	348	P	Pn	05 51 44.4	-1.5
DNP	Denpasar	2.97	350	P	Pn	05 51 47.4	-0.3
DNP				S	Sn	05 52 22.3	+0.2
TWSI	Taliwang, Sumb	3.08	22	P	Pn	05 51 49.0	-0.3
KLNI	Mataram	3.20	7	P	Pn	05 51 50.6	-0.3
RTBI	Rangdo, Negare	3.23	346	P	Pn	05 51 51.0	-0.4
KHKI	Kahang-Kahang	3.24	358	P	Pn	05 51 52.7	+1.3
KHKI				S	Sn	05 52 29.7	+1.0
PLAI	Plampang	3.43	36	P	Pn	05 51 54.2	+0.1
JAGI	Jajag, Banyuwa	3.49	334	P	Pn	05 51 53.6	-1.3
DBNI	Kabupaten Domp	4.01	40	P	Pn	05 52 02.8	+0.7
GMJI	Gumukmas	4.01	326	P	Pn	05 52 00.8	-1.3
ABJI	Asem Bagus	4.07	339	P	Pn	05 52 01.4	-1.5
WBSI	Waikabubak, Su	4.11	62	P	Pn	05 52 03.1	-0.3
BLJI	Banyuglugur	4.38	331	P	Pn	05 52 05.8	-1.4
KMMI	Kalianget	4.86	339	P	Pn	05 52 13.5	-0.2
WSI	Waingapu	4.89	67	P	Pn	05 52 15.5	+1.3
SNJI	Sawahan-Nganju	5.46	314	P	Pn	05 52 22.1	0.0
SNJI				S	Sn	05 53 23.5	-0.4
PCJI	Pacitan	5.63	307	P	Pn	05 52 22.7	-1.5
	0.1nm19nm,0.6s						
UGM	Wanagama	6.31	305	P	Pn	05 52 33.1	-0.6
EDFI	Ende, Flores	6.53	65	P	Pn	05 52 38.2	+1.4
	12nm,0.6s						
BKSI	Bulukumba	7.62	35	P	Pn	05 52 52.0	+0.4
	0.1nm24nm,0.6s						
KAPI	Kappang	7.68	32	Pn	Pn	05 52 54.1	+1.7
	3.6nm,0.3s,baz=196,slow=7.4,SNR=7.1						
KAPI				Sn	Sn	05 54 12.1	-6.1
	0.1nm,0.3s,baz=254,slow=23,SNR=1.2 9.2nm,0.3s						
KAPI	Kappang	7.68	32	P	Pn	05 52 53.2	+0.8
WRA	Warramunga Arr	19.72	117	P	P	05 55 31.7	+1.9
	0.1nm,0.3s,baz=291,slow=12,SNR=3.3						
WRA				S	S	05 58 54.2	-16
	0.3nm,0.8s,baz=283,slow=24,SNR=1.6 0.6nm,0.7s						
ASAR	Alice Springs	21.03	127	P	P	05 55 46.4	+2.3
	0.8nm,0.6s,baz=301,slow=9.5,SNR=14						
ASAR				S	S	05 59 30.0	-6.5
	0.9nm,1.1s,baz=306,slow=24,SNR=6.9 0.8nm,0.6s						
SONM	Songino Array	59.77	353	P	P	06 01 06.5	+1.9
	0.3nm,0.6s,baz=158,slow=4.2,SNR=2.2 0.3nm,0.6s						
MKAR	Makanchi Array	65.39	335	P	P	06 01 42.7	+0.7
	0.9nm,0.7s,baz=151,slow=7.9,SNR=5.0 0.9nm,0.7s						

IDC 15 06:01:55.1±6.4**, 17°.89S×170°.08W, h0km, mb3.7**/2**, mbtmp3.7**/2**, Error ellipse: s-maj=359.9km s-min=53.3km az=147.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	52.42	254	P	P	06 11 09.8	0.0
	0.3nm,0.4s,baz=98,slow=7.7,SNR=6.7 0.3nm,0.4s						
WRA	Warramunga Arr	52.42	258	P	P	06 11 09.8	-0.1
	0.4nm,0.3s,baz=97,slow=8.0,SNR=11 0.4nm,0.3s						
GERES	GERESS Array B	148.97	355	PKPbc	PKPbc	06 21 44.4	-0.8
	0.2nm,0.3s,baz=5.7,slow=1.0,SNR=3.9						

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*IDC **15** 06:07:13.5±1.2, 36°.37N×3°.42E, h0km, mb3.5/6, mbtmp3.6/10, ML3.5/4, MS3.3/2, Error ellipse: s-maj=27.7km s-min=21.0km az=138.0*

*CRAAG **15** 06:07:14.1, 36°.33N×3°.52E, Ml3.9, Algerie 05km SE Mihoub*

*MDD **15** 06:07:17.1±0.4, 36°.34N×3°.55E, h12km, Mb4.5/74, M_mb3.9/75, Error ellipse: s-maj=3.9km s-min=2.4km az=150.0*

*CNRM **15** 06:07:17.6, 36°.41N×3°.49E, h46km, ML4.0*

ISC 15 06:07:16.5±0.6**, 36°.37N**±0°.03×**3°.43E**±0°.03**, h18km, n99, σ1^{s}75**/128**, mb3.4**/5**, 31C-1D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADJB	Djebel Djouab	0.21	179	P	Pb	06 07 18.9	-2.8
ABMS	Boumerdes	0.38	6	P	Pg	06 07 24.0	-0.4
ADOR	Douera	0.51	305	P	Pg	06 07 23.8	-3.0
ATKB	Taksebt	0.63	61	P	Pg	06 07 26.8	-2.2
ABRIN	Birine	0.78	199	P	Pb	06 07 30.4	-1.2
ABKD	Sidi Amar	0.92	281	P	Pb	06 07 33.4	-0.5
CTCHA	Tamokra	0.99	86	P	Pn	06 07 35.5	+0.1
EDDR	Deurdeur	1.05	250	P	Pb	06 07 34.9	-1.3
EHRZ	Djelida	1.08	261	P	Pn	06 07 36.1	-0.7
ABSD	Ouled Sidi Bra	1.12	146	P	Pb	06 07 36.4	-1.0
EARB	Arib	1.15	267	P	Pn	06 07 37.4	-0.3
AFDJ	Sidi Ladjel	1.19	216	P	Pn	06 07 37.7	-0.6
CAZD	Ain Tagrout	1.41	97	P	Pg	06 07 43.1	-0.6
ADCK	Dar Chioukh	1.46	179	P	Pb	06 07 43.1	0.0
EBGR	Bougara	1.46	237	P	Pn	06 07 42.1	+0.1
EBNH	Beni Haoua	1.52	276	P	Pb	06 07 44.9	+0.8
SET	Setif	1.60	96	P	Pg	06 07 48.0	+0.7
ECHA	Ech Chlef	1.68	263	P	Pn	06 07 46.2	+1.2
CKHR	Kef el Ahmar	1.72	101	P	Pb	06 07 47.6	0.0
EZEK	Zmalet El Emir	1.76	212	P	Pb	06 07 48.2	-0.1
EANR	'Ain N'Sour	1.93	258	P	Pn	06 07 51.0	+2.5
DFRA	Djebel Bou Aff	1.98	84	P	Pg	06 07 53.9	-0.6
CTEI	Djebel Teioual	2.42	96	P	Pg	06 08 03.2	+0.2
CKFL	Kef-Lekhel	2.65	88	P	Pn	06 07 59.0	+0.5
CAEH	'Ain El Ouahch	2.78	81	P	Pb	06 08 07.2	+1.5
EIBI	Ibiza	3.13	329	Pn	Pn	06 08 05.5	+0.7
EIBI				Sn	Sn	06 08 40.4	-1.4
EIBI	Ibiza	3.13	329	⇓Pn	Pn	06 08 05.2	+0.4
EIBI				⇑*i*IVmb_VC		06 08 05.8	
	2µm,SNR=3.3						
EIBI				Sn	Sn	06 08 40.6	-1.2
CMAH	Djebel Manchou	3.22	84	P	Pn	06 08 05.8	-0.5
ETOS	Mallorca	3.43	352	Pn	Pn	06 08 09.2	+0.1
ETOS				Sn	Sn	06 08 45.4	-3.8
ETOS	Mallorca	3.43	352	Pn	Pn	06 08 09.0	0.0
ETOS				⇑*i*IVmb_VC		06 08 16.8	
	683nm,SNR=1.5						
ETOS				Sn	Sn	06 08 47.9	-1.3
MAHO	Mahon	3.58	10	Pn	Pn	06 08 10.7	-0.3
MAHO				Sn	Sn	06 08 48.6	-4.3
EBEN2	Beniarda presa	3.69	310	Pn	Pn	06 08 11.7	-0.8
EBEN2				⇑*i*IVmb_VC		06 08 20.6	
	655nm,SNR=2.3						
EBEN2				Sn	Sn	06 08 56.8	+1.2
ETRV	Los Montesinos	3.73	297	Pn	Pn	06 08 13.9	+0.7
ETRV				⇑*i*IVmb_VC		06 08 17.5	
	1µm,SNR=2.0						
ETRV				Sn	Sn	06 08 57.9	+1.3
CART	Cartagena	3.75	290	Pn	Pn	06 08 13.2	-0.3
CART				Sn	Sn	06 08 55.1	-2.0
AFON	Font Roja	3.90	307	Pn	Pn	06 08 17.8	+2.2
AFON				⇑*i*IVmb_VC		06 08 21.9	
	278nm,SNR=1.4						
AFON				Sn	Sn	06 09 04.9	+3.9
EMUR	La Murta	4.01	293	Pn	Pn	06 08 17.1	0.0
EMUR				Sn	Sn	06 09 03.6	-0.1
EMUR	La Murta	4.01	293	Pn	Pn	06 08 17.1	0.0
EMUR				⇑*i*IVmb_VC		06 08 24.1	
	273nm,SNR=2.2						
EMUR				Sn	Sn	06 09 05.9	+2.2
ECOL	Islas Columbre	4.13	329	Pn	Pn	06 08 18.6	-0.1
ECOL				Sn	Sn	06 09 04.7	-1.9
TLOR	Lorca, Murcia	4.29	289	Sn	Sn	06 09 10.4	-0.2
ETOB	Tobarra	4.56	301	Pn	Pn	06 08 25.4	+0.7
ETOB	Tobarra	4.56	301	Pn	Pn	06 08 25.0	+0.3
ETOB				⇑*i*IVmb_VC		06 08 31.2	
	714nm,SNR=4.4						
ETOB				Sn	Sn	06 09 15.9	-1.4
EVIV	Cofrentes, Val	4.62	310	Pn	Pn	06 08 26.5	+1.1
EVIV				⇑*i*IVmb_VC		06 08 31.5	
	555nm,SNR=2.7						
EVIV				Sn	Sn	06 09 17.4	-1.2
ECHE	Chera	4.73	314	Pn	Pn	06 08 27.8	+0.8
ECHE	Chera	4.73	314	Pn	Pn	06 08 28.2	+1.2
ECHE				⇑*i*IVmb_VC		06 08 31.1	
	830nm,SNR=4.5						
KEST	Kesra	4.83	96	Pn	Pn	06 08 28.4	0.0
	2.2nm,0.3s,baz=283,slow=5.9,SNR=26						
KEST				Sn	Sn	06 09 22.4	-1.6
	5.7nm,0.3s,baz=101,slow=8.2,SNR=6.6 33nm,0.7s						
TAF	Taforalt	5.01	254	P	Pn	06 08 30.8	0.0
TAF	Taforalt	5.01	254	S	Sn	06 09 30.3	+2.0
EMOS	Mosqueruela	5.03	324	Pn	Pn	06 08 31.7	+0.5
EMOS				⇑*i*IVmb_VC		06 08 37.3	
	570nm,SNR=4.1						
EMOS				Sn	Sn	06 09 26.0	-2.9
EPOB	Poblet	5.30	340	Pn	Pn	06 08 35.7	+0.8
EPOB				⇑*i*IVmb_VC		06 08 41.2	
	145nm,SNR=1.1						
EPOB				Sn	Sn	06 09 31.1	-4.4
GOG	Mont Gurugu	5.35	260	P	Pn	06 08 35.1	-0.4
GOG	Mont Gurugu	5.35	260	S	Sn	06 09 36.5	-0.2
EQES	Quesada	5.39	287	Pn	Pn	06 08 38.1	+2.0
EQES				⇑*i*IVmb_VC		06 08 42.8	
	306nm,SNR=2.9						
EQES				Sn	Sn	06 09 40.6	+2.9
E0901	Celadas (Terue	5.45	320	Pn	Pn	06 08 38.9	+2.1
E0901				⇑*i*IVmb_VC		06 08 47.4	
	724nm,SNR=5.2						
E0901				Sn	Sn	06 09 40.6	+1.5
EQUE	Quentar	5.58	281	Pn	Pn	06 08 40.2	+1.5
EQUE				⇑*i*IVmb_VC		06 08 46.7	
	153nm,SNR=2.2						
EQTA	Presa de Quent	5.58	281	Pn	Pn	06 08 39.5	+0.8
VSL	Villasalto	5.64	55	Pn	Pn	06 08 38.5	-1.0
VSL				Sn	Sn	06 09 39.6	-4.2
ELGU	Los Guajares,	5.70	277	Pn	Pn	06 08 40.2	-0.1
ELGU				Sn	Sn	06 09 44.1	-1.2
ELGU	Los Guajares,	5.70	277	Pn	Pn	06 08 41.6	+1.3
ELGU				⇑*i*IVmb_VC		06 08 45.5	
	187nm,SNR=1.9						
ELGU				Sn	Sn	06 09 44.5	-0.8
FIGM	Figuig	5.74	224	P	Pn	06 08 41.2	+0.3
FIGM	Figuig	5.74	224	S	Sn	06 09 46.7	+0.2
EJON	La Jonquera	6.08	356	Pn	Pn	06 08 46.9	+1.4
EJON				⇑*i*IVmb_VC		06 08 52.1	
	437nm,SNR=2.3						
EJON				Sn	Sn	06 09 51.8	-2.9
PALE	Palemas	6.10	261	P	Pn	06 08 46.2	+0.4
PALE	Palemas	6.10	261	S	Sn	06 09 54.5	-0.6
EGOR	Sierra Gorda,	6.10	279	Pn	Pn	06 08 47.8	+2.0
EGOR				⇑*i*IVmb_VC		06 08 52.8	
	145nm,SNR=1.7						
EGOR				Sn	Sn	06 09 59.5	+4.2
ESAC	San Caprasio	6.14	332	Pn	Pn	06 08 47.4	+1.0
ESAC				⇑*i*IVmb_VC		06 08 53.1	
	668nm,SNR=2.5						
ESAC				Sn	Sn	06 09 54.9	-1.4
PSIM	Granatula de C	6.21	295	Pn	Pn	06 08 47.5	+0.3
PSIM				Sn	Sn	06 09 57.5	-0.3
AKLM	AKL	6.24	255	P	Pn	06 08 48.7	+1.0
AKLM	AKL	6.24	255	S	Sn	06 10 00.1	+1.5
YEBES	Yebes (Guadala	6.59	311	Pn	Pn	06 08 55.7	+3.2
YEBES				⇑*i*IVmb_VC		06 09 03.4	
	467nm,SNR=1.6						
EMIJ	Mijas	6.61	274	Pn	Pn	06 08 51.4	-1.4
EMIJ				⇑*i*IVmb_VC		06 08 59.2	
	156nm,SNR=1.6						
EMIJ				Sn	Sn	06 10 03.7	-4.1
EADA	Adamuz	6.63	288	Pn	Pn	06 08 54.6	+1.5
EADA				⇑*i*IVmb_VC		06 08 58.9	
	138nm,SNR=1.0						
EADA				Sn	Sn	06 10 15.6	+7.3
ESBB	Sonseca Array	6.70	302	Pn	Pn	06 08 55.5	+1.5
ESBB				⇑*i*IVmb_VC		06 09 02.2	
	205nm,SNR=2.0						
ESDC	Sonseca Array	6.70	302	Pn	Pn	06 08 54.1	0.0
ESDC				⇑*i*IVmb_VC		06 08 55.3	
	192nm,SNR=1.8						
ESDC	Sonseca Array	6.70	302	Pn	Pn	06 08 54.2	+0.1
	0.7nm,0.3s,baz=113,slow=13,SNR=23						
ESDC				Sn	Sn	06 10 07.9	-2.1
	0.2nm,0.3s,baz=112,slow=21,SNR=4.2						
ESDC				LR	LR	06 11 23.6	
	comp=Z,241nm,21.9s,baz=135,slow=37 3.3nm,0.5s						
PAB	San Pablo	6.92	300	Pn	Pn	06 08 56.7	-0.3
PAB				⇑*i*IVmb_VC		06 09 03.3	
	175nm,SNR=1.5						
ECAB	El Cabril	7.26	286	Pn	Pn	06 09 03.2	+1.5
ECAB				⇑*i*IVmb_VC		06 09 08.1	
	163nm,SNR=1.0						
EARA	Aranguren	7.47	330	Pn	Pn	06 09 06.6	+2.1
EARA				⇑*i*IVmb_VC		06 09 16.0	
	671nm,SNR=1.9						
MDT	Midelt	7.52	244	Pn	Pn	06 09 04.9	-0.4
	0.3nm,0.3s,baz=71,slow=16,SNR=13						
MDT				Lg	Lg	06 10 58.8	
	0.3nm,0.3s,baz=310,slow=6.4,SNR=2.5 4.2nm,0.7s						
MDT	Midelt	7.52	244	P	Pn	06 09 05.7	+0.4
MDT	Midelt	7.52	244	S	Sn	06 10 31.4	+1.3
MD31	MD31	7.60	245	P	Pn	06 09 06.5	+0.1
MD31	MD31	7.60	245	S	Sn	06 10 32.9	+0.7
EPLA	Plasencia	8.35	299	Pn	Pn	06 09 18.8	+2.2
EPLA				⇑*i*IVmb_VC		06 09 20.6	
	245nm,SNR=1.1						
EBAD	Badajoz	8.63	289	Pn	Pn	06 09 22.2	+1.7
EBAD				⇑*i*IVmb_VC		06 09 31.4	
	166nm,SNR=1.2						
ELAN	Lanestosa	8.65	324	Pn	Pn	06 09 22.2	+1.5
ELAN				⇑*i*IVmb_VC		06 09 29.8	
	321nm,SNR=1.0						
EGRO	El Granado	8.81	281	Pn	Pn	06 09 24.3	+1.3
EGRO				⇑*i*IVmb_VC		06 09 24.7	
	190nm,SNR=1.4						
BNI	Bardonecchia	9.02	15	Pn	Pn	06 09 26.8	+0.9
PCP	Piancastagn	9.04	24	Pn	Pn	06 09 25.8	-0.4
ECAL	Calabor	9.66	308	Pn	Pn	06 09 35.5	+0.9
ECAL				⇑*i*IVmb_VC		06 09 39.5	
	585nm,SNR=2.1						
DAVOX	Davos/Dischmat	11.46	23	Pn	Pn	06 10 00.2	+0.8
	0.2nm,0.3s,baz=197,slow=17,SNR=2.1						
DAVOX				LR	LR	06 13 46.2	
	comp=Z,132nm,19.0s,baz=262,slow=34 2.2nm,0.9s						
GERES	GERESS Array B	14.56	28	Pn	Pn	06 10 42.6	+0.9
	baz=218,slow=11,SNR=5.3						
MODS	Modra-Piesok	15.73	36	*e*PN	Pn	06 10 57.1	0.0
MODS	Modra-Piesok	15.73	36	*e*P	P	06 11 05.7	+4.7
TORD	Torodi Ar. Bea	23.18	184	P	P	06 12 21.6	-0.6
	1.1nm,0.6s,baz=5.1,slow=12,SNR=5.3 1.1nm,0.6s						
AKASG	Malin Array Be	23.40	44	P	P	06 12 23.2	-0.9
	0.5nm,0.4s,baz=243,slow=11,SNR=2.7 0.5nm,0.4s						
BRTR	Keskin Array B	23.97	73	P	P	06 12 31.5	+1.5
	0.4nm,0.6s,baz=269,slow=8.6,SNR=2.5 0.4nm,0.6s						
HFS	Hagfors	24.68	12	P	P	06 12 35.2	-0.9
	1.1nm,0.6s,baz=180,slow=9.7,SNR=1.3 1.1nm,0.6s						
KURBB	Kurchatov Arra	54.03	50	P	P	06 16 39.2	-0.3
	0.6nm,0.4s,baz=283,slow=8.2,SNR=2.8 0.6nm,0.4s						
MKAR	Makanchi Array	57.58	53	P	P	06 17 04.1	-1.0
	0.2nm,0.5s,baz=296,slow=6.1,SNR=4.1 0.2nm,0.5s						

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*SDD **15** 06:08:45.4±1.8, 18°.50N×71°.49W, h20km±14km, MD2.5, ML2.1, MW2.2, Presumed earthquake*

*OSPL **15** 06:08:46.4±1.1, 18°.41N×71°.58W, h4km±38km, ML1.7, Presumed earthquake*

ISC 15 06:08:45.9±1.1**, 18°.41N**±0°.04×**71°.56W**±0°.05**, h7km**±14km**, n8, σ0^{s}64**/16**, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LODU1	El Espartillar	0.10	125	*i* P	Pg	06 08 47.7	-0.5
LODU1				*e*S	Sg	06 08 50.1	+0.3
LODU1				IAML		06 08 50.1	
	comp=Z,448nm,1.0s						
NEDR	Neiba UASD	0.15	62	*e*Pg	Pb	06 08 49.7	+0.6
NEDR				*e*Sg	Sg	06 08 50.1	-1.2
NEDR				IAML		06 08 54.1	
	comp=N,264nm,0.3s						
LONE3	El Aguacate, B	0.22	27	*i* P	Pb	06 08 50.7	+0.4
LONE3				*e*S	Sg	06 08 53.9	+0.6
JIDR	Jimani	0.28	286	*e*Pg	Pg	06 08 51.4	-0.1
JIDR				*e*Sg	Sb	06 08 57.8	-0.6
JIDR				IAML		06 08 59.5	
	comp=N,121nm,0.3s						
PODR	Polo	0.36	132	*e*Pg	Pg	06 08 52.4	-0.7
PODR				*e*Sg	Sg	06 08 58.6	+0.7
PODR				IAML		06 09 04.4	
	comp=N,418nm,0.3s						
PODR	Polo	0.36	132	*i* P	Pg	06 08 53.0	-0.1
PODR				*e*S	Sg	06 08 58.5	+0.7
LOBH	Bahia de las A	0.55	188	*i* P	Pg	06 08 56.2	-0.4
LOBH				*e*S	Sg	06 09 03.9	+0.1
LOBH				IAML		06 09 06.3	
	comp=Z,36nm,2.6s						
LOVI	El Cajuil, Ovi	0.64	163	*i* P	Pg	06 08 57.7	-0.6
LOVI				*e*S	Sg	06 09 06.8	+0.3

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*MAN **15** 06:11:49.2, 6°.77N×125°.14E, h6km, mb6.7, ML5.9, MS6.7*

MAN INTENSITY VII - DIGOS CITY BANSALAN HAGONOY MAGSAYSAY MATANAO KIBLAWAN PADADA AND SANTA CRUZ DAVAO DEL SUR; INTENSITY VI - GENERAL SANTOS CITY; KORONADAL CITY SOUTH COTABATO; KIDAPAWAN CITY COTABATO; MALALAG AND SULOP DAVAO DEL SUR; COLUMBIO SULTAN KUDARAT; MALUNGON ; SARANGANI; SANTA MARIA DAVAO OCCIDENTAL; INTENSITY V - DAVAO CITY; COTABATO CITY; ANTIPAS ARAKAN CARMEN MAGPET MAKILALA MATALAM M"LANG AND TULUNAN COTABATO; POLOMOLOK TAMPAKAN AND TUPI SOUTH ; COTABATO; ALABEL GLAN AND MALAPATAN SARANGANI; LUPON DAVAO ORIENTAL; INTENSITY IV - BANISILAN AND PIKIT COTABATO; ISULAN SULTAN KUDARAT; DAMULOG DON CARLOS KADINGILAN KALILANGAN KITAOTAO PANGANTUCAN AND TALAKAG BUKIDNON; LAKE SEBU ; NORALA SURALLAH AND T"BOLI SOUTH COTABATO; KIAMBA AND MAASIM SARANGANI; GOVERNOR GENEROSO AND SAN ISIDRO DAVAO ORIENTAL; INTENSITY III - MATI CITY AND TARRAGONA DAVAO ORIENTAL; DANGCAGAN AND MARAMAG BUKIDNON; CAGAYAN DE ORO CITY; GINGOOG CITY MISAMIS ORIENTAL; INTENSITY II - BUTUAN CITY; ALEOSAN COTABATO; IMPASUG-ONG AND LIBONA BUKIDNON; TUBOD LANAO DEL NORTE; DIPOLOG CITY ZAMBOANGA DEL NORTE; INTENSITY I - BISLIG CITY SURIGAO DEL SUR; MOLAVE ZAMBOANGA DEL SUR.

*MOS **15** 06:11:50.9±1.0, 6°.66N×125°.19E, h16km, mb6.4/79, MS6.5/61, Error ellipse: s-maj=7.1km s-min=3.8km az=112.5*

*GFZ **15** 06:11:50.9, 6°.64N×125°.16E, h29km, MW6.7, Moment Tensor Solution. s102 Moment tensor: M_{rr}-0.26; $M_{\theta\theta}$1.26; $M_{\phi\phi}$-1.01; $M_{r\theta}$-0.69; $M_{\theta\phi}$-0.17; $M_{\phi r}$-0.52; Fault plane solution: NP1:ϕ_s318.00000°, δ52.00000°, λ-7.00000°. NP2:ϕ_s53.00000°, δ84.00000°, λ-14.00000°. Principal axes: T 1.5300, Plg21.0000°, Azm179.0000°; N -0.1700, Plg51.0000°, Azm60.0000°; P -1.3700, Plg31.0000°, Azm283.0000°;*

*NEIC **15** 06:11:50.5, 6°.61N×125°.35E, h18km, Moment Tensor Solution. Duration: 11^{s}6 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.13; $M_{\theta\theta}$1.44; $M_{\phi\phi}$-1.31; $M_{r\theta}$0.34; $M_{\theta\phi}$-0.25; $M_{\phi r}$-1.03; Fault plane solution: $M_0$1.77000×10^{19} NP1:ϕ_s54.45000°, δ56.02000°, λ-169.81000°. NP2:ϕ_s318.72000°, δ81.57000°, λ-34.40000°. Principal axes: T 1.5975, Plg17.0000°, Azm11.0000°; N 0.3080, Plg55.0000°, Azm127.0000°; P -1.9055, Plg30.0000°, Azm271.0000°;*

*IDC **15** 06:11:50.2±1.3, 6°.69N×125°.17E, h21km±7km, mb5.2/41, mbtmp5.3/45, ML5.2/4, MS6.6/62 Error ellipse: s-maj=9.9km s-min=6.5km az=58.0*

*NEIC **15** 06:11:50.5, 6°.71N×125°.14E, h18km*

*BJI **15** 06:11:50.4, 6°.55N×125°.25E, h30km, mB6.8/78, mb5.8/85, Ms6.9/91, Ms7 6.7/96*

*ISC-PP **15** 06:11:51, 6°.70N×125°.17E, h25km, Mwppsm6.7, Moment Tensor Solution. s44 Moment tensor: Scale 10^{19}Nm; M_{rr}0.65±.12; $M_{\theta\theta}$0.35±.17; $M_{\phi\phi}$-0.06±.15; $M_{r\theta}$-0.41±.12; $M_{\theta\phi}$0.23±.15; $M_{\phi r}$0.06±.11; Fault plane solution: $M_0$1.45000×10^{19} NP1:ϕ_s316.00000°, δ72.80000°, λ66.10000°. NP2:ϕ_s192.30000°, δ29.10000°, λ142.60000°.*

*NEIC **15** 06:11:51.8, 6°.72N×125°.23E, h22km*

*NEIC **15** 06:11:51.2±2.1, 6°.70N±0°.07×125°.17E±0°.07, h18km±1km, mb6.3/250, Ms_20 6.8/616, Mwb6.6/200, Mww6.8/37, Error ellipse: s-maj=12.9km s-min=11.4km az=36.0, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}0.09; $M_{\theta\theta}$0.98; $M_{\phi\phi}$-1.07; $M_{r\theta}$-0.35; $M_{\theta\phi}$0.14; $M_{\phi r}$0.01; Fault plane solution: $M_0$1.09000×10^{19} NP1: ϕ_s219.58000°, δ75.42000°, λ167.75000°. NP2: ϕ_s312.70000°, δ78.15000°, λ14.90000°. Principal axes: T 1.1060, Plg19.0000°, Azm176.0000°; N -0.0275, Plg71.0000°, Azm350.0000°; P -1.0785, Plg2.0000°, Azm86.0000°;*

*IPGP **15** 06:11:52.0, 6°.73N×125°.21E, h21km, Mw6.7, Fault plane solution: NP1:ϕ_s225.00000°, δ76.00000°, λ164.00000°. NP2:ϕ_s319.00000°, δ74.00000°, λ14.00000°.*

*DJA **15** 06:11:55.1±0.2, 7°N±1°×12°5E±°, h46km±2km, M6.7/155, mB6.9/151, mb6.3/155, MLv7.1/8, Mw6.8/82, Mw(mB)6.8/151, MwMwp6.6/142, Mwp6.5/142*

*GCMT **15** 06:11:56.2±0.0, 6°.72N×125°.14E, h12km, MW6.7/165, Moment Tensor Solution. s165,c437; s162,c772; Duration: 5^{s}7 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.02±.00; $M_{\theta\theta}$1.48±.00; $M_{\phi\phi}$-1.46±.01; $M_{r\theta}$-0.67±.01; $M_{\theta\phi}$-0.13±.00; $M_{\phi r}$-0.02±.01; Best double couple: $M_0$1.60200×10^{19} NP1:ϕ_s320.00000°, δ74.00000°, λ13.00000°. NP2:ϕ_s226.00000°, δ77.00000°, λ163.00000°. Principal axes: T 1.7370, Plg21.0000°, Azm182.0000°; N -0.2660, Plg69.0000°, Azm9.0000°; P -1.4680, Plg2.0000°, Azm273.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 15 06:11:51.7±0.3**, 6°.59N**±0°.02×**125°.25E**±0°.02**, h24km**±1km**, h24km:pP-P, n2155, σ2^{s}74**/2466**, mb6.2**/306**, MS6.8**/457**, 151C-36D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.58	35	Pg	Pb	06 12 00.6	-2.5
DAV	Davao City (W)	0.58	35	P	Pb	06 12 01.1	-2.1
DAV	Davao City (W)	0.58	35	P	Pb	06 12 00.8	-2.4
DAV	Davao City (W)	0.58	35	P	Pb	06 12 01.6	-1.6
DAV	Davao City (W)	0.58	35	⇑P	Pb	06 12 00.7	-2.5
SGSI	Sangihe	2.90	174	P	Pn	06 12 38.7	+2.3
SGSI				S	Sb	06 13 15.6	-2.3
GAMI	Galela, Maluku	5.36	152	P	Pn	06 13 12.4	+2.2
TNTI	Ternate	6.16	160		Pn	06 13 23.6	+2.4
TNTI	Ternate	6.16	160	P	Pn	06 13 25.2	+4.0
TNTI	Ternate	6.16	160	P	Pn	06 13 23.5	+2.4
TNTI				S	Sn	06 14 35.3	+4.4
TNTI	Ternate	6.16	160	⇑P	Pn	06 13 23.6	+2.4
GTOI	Gorontalo	6.32	201	P	Pn	06 13 23.2	-0.2
GTOI				S	Sn	06 14 36.9	+1.9
MRSI	Marisa	6.91	209	P	Pn	06 13 31.7	+0.2
MRSI				S	Sn	06 14 54.8	+5.3
TOLI2	Tolitoli	7.03	219		Pn	06 13 31.6	-1.6
TOLI2	Tolitoli	7.03	219	P	Pn	06 13 31.6	-1.6
TOLI2	Tolitoli	7.03	219	S	Sn	06 14 54.9	+2.4
LUWI	Luwuk	7.98	198	P	Pn	06 13 49.1	+3.0
LUWI				S	Sn	06 15 26.4	+11
LUWI	Luwuk	7.98	198		Pn	06 13 49.5	+3.3
LUWI	Luwuk	7.98	198	P	Pn	06 13 50.0	+3.9

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LUWI  Luwuk             7.98 198  P     Pn     06 13 50.2 +4.1
LUWI  Luwuk             7.98 198 ⇑P     Pn     06 13 48.0 +1.8
MPSI  Mapaga            8.19 221  P     Pn     06 13 49.6 +0.5
      315µm792nm,0.8s
APSI  Ampana            8.27 206  P     Pn     06 13 53.7 +3.5
TARAI Tarakan           8.31 247  P     Pn     06 13 53.3 +2.6
      63µm2µm,0.8s
TGY   Tagaytay City     8.58 331  Pn    Pn     06 13 53.4  -1.1
      84nm,0.3s,baz=129,slow=12,SNR=5.0
TGY                               LR    LR     06 18 13.5
      comp=Z,463µm,18.5s,baz=144,slow=45
      181nm,0.3s
SANI  Sanana            8.62 175  S     Sn     06 15 33.2 +1.8
SANI                              P     Pn     06 13 54.9  0.0
SANI  Sanana            8.62 175  P     Pn     06 13 55.6 +0.6
SANI  Sanana            8.62 175  S     Sn     06 15 34.9 +3.4
SANI  Sanana            8.62 175  P     Pn     06 13 55.3 +0.3
KKM   Kota Kinabalu     8.99 267        Pn     06 14 01.5 +1.3
KKM   Kota Kinabalu     8.99 267  P     Pn     06 14 02.2 +2.0
KKM   Kota Kinabalu     8.99 267  P     Pn     06 14 02.7 +2.5
      37µm878nm,1.1s
KKM   Kota Kinabalu     8.99 267 ⇑P     Pn     06 14 01.0 +0.8
PCI   Palu              9.20 216  P     Pn     06 14 06.0 +3.0
      439µm59µm2µm,1.0s
I39PW PALAU INFRASON    9.28  84  Pn    Pn     06 14 05.0 +1.0
      baz=294,slow=87
I39PW                             Sn    Sn     06 15 41.8  -5.9
      baz=292,slow=11
I39PW                             I     I      07 03 13.4
      0.1nm,0.6s,baz=266,slow=309,SNR=4.5
SWI   Sorong            9.53 141  P     Pn     06 14 10.6 +3.1
      301µm49µm2µm,1.1s
SWI                               S     Sn     06 15 58.0 +4.0
      301µm49µm2µm,1.1s
NLAI  Namlea            9.94 169  P     Pn     06 14 14.7 +1.6
NLAI                              S     Sn     06 16 08.6 +4.6
KRAI  Karang Ratu      10.34 162  P     Pn     06 14 20.3 +1.8
      575µm62µm4µm,1.0s
KRAI                              S     Sn     06 16 16.9 +3.2
      575µm62µm4µm,1.0s
MSAI  Masohi           10.54 159  P     Pn     06 14 23.9 +2.6
      562µm55µm3µm,1.1s
AAI   Ambon            10.63 164  P     Pn     06 14 24.7 +2.2
      517µm43µm3µm,1.3s
AAI                               S     Sn     06 16 24.8 +3.9
      517µm43µm3µm,1.3s
KDI   Kendari          10.80 194  P     Pn     06 14 26.6 +1.7
TTSI  Tana Toraja      11.00 210  P     Pn     06 14 34.0 +6.4
      359µm46µm2µm,1.2s
MMSI  Mamuju           11.18 215  P     Pn     06 14 34.3 +4.2
      312µm32µm1µm,1.3s
KKSI  Kolaka, Sulawe   11.28 199  P     Pn     06 14 35.5 +4.0
      43µm1µm,0.8s
BKB   Balikpapan       11.42 227        Pn     06 14 34.7 +1.3
BKB   Balikpapan       11.42 227  P     Pn     06 14 33.5 +0.2
BKB   Balikpapan       11.42 227  P     Pn     06 14 32.5  -0.8
      346µm53µm2µm,1.0s
BKB   Balikpapan       11.42 227 ⇑P     Pn     06 14 31.9  -1.4
MWPI  Manokwari, Pap   11.53 130  P     Pn     06 14 41.2 +6.3
FAKI  Fak Fak          11.76 143        Pn     06 14 40.9 +2.9
FAKI  Fak Fak          11.76 143  P     Pn     06 14 40.7 +2.7
FAKI  Fak Fak          11.76 143  P     Pn     06 14 41.4 +3.4
      201µm66µm3µm,1.1s
FAKI  Fak Fak          11.76 143 ⇑P     Pn     06 14 40.9 +2.9
SPSI  Sidrap Palu      11.83 208  P     Pn     06 14 44.6 +5.7
      385µm45µm1µm,1.1s
PMSI  Majene           11.85 212  P     Pn     06 14 43.7 +4.4
      292µm38µm2µm,1.4s
SZP   Santa            11.85 337  P     Pn     06 14 40.3 +1.0
BNDI  Bandanaira       11.98 157  P     Pn     06 14 43.6 +2.5
BNDI  Bandanaira       11.98 157  P     Pn     06 14 44.0 +2.9
      439µm4µm,1.2s
BNDI  Bandanaira       11.98 157 ⇑P     Pn     06 14 42.2 +1.2
RKPI  Ransiki, Papua   12.01 132  P     Pn     06 14 47.8 +6.3
      258µm3µm,1.7s
BNSI  Bone             12.07 205  P     Pn     06 14 46.7 +4.5
      499µm92µm3µm,1.4s
MTKI  Muara Teweh, K   12.76 234  P     P      06 14 57.7  -4.8
      187µm47µm989nm,1.2s
KAPI  Kappang          12.77 206  Pn    Pn     06 14 52.6 +0.8
      7.3nm,0.3s,baz=22,slow=13,SNR=54
KAPI                              Sn    Sn     06 17 13.8 +0.5
      baz=204,slow=14
KAPI                              LR    LR     06 20 16.7
      comp=Z,533µm,19.0s,baz=43,slow=40
      42nm,0.8s
KAPI  Kappang          12.77 206  P     Pn     06 14 50.6  -1.2
KAPI                              P     Pn     06 14 50.6  -1.2
KAPI                              P     Pn     06 14 50.6  -1.2
KAPI                              S     Sn     06 17 15.1 +1.8
KAPI                              S     Sn     06 17 15.1 +1.8
KAPI                              S     Sn     06 17 15.1 +1.8
KAPI  Kappang          12.77 206        Pn     06 14 53.5 +1.7
KAPI  Kappang          12.77 206  P     Pn     06 14 55.2 +3.4
KAPI  Kappang          12.77 206  P     Pn     06 14 56.6 +4.8
      205µm35µm838nm,1.3s
KAPI  Kappang          12.77 206c iP    Pn     06 14 55.3 +3.4
KAPI  Kappang          12.77 206 ⇑P     Pn     06 14 53.1 +1.3
BKSI  Bulukumba        12.89 203  P     Pn     06 14 57.3 +3.8
KMPI  Kaimana, Papua   13.23 140  P     Pn     06 15 01.1 +2.9
      183µm72µm2µm,1.2s
BAKI  Biak             13.32 125  P     P      06 15 06.3  -2.5
      310µm92µm3µm,1.3s
SBUM  Sibu             13.62 253        Pn     06 15 05.9 +2.5
SBUM  Sibu             13.62 253  P     Pn     06 15 05.2 +1.7
SBUM  Sibu             13.62 253  P     Pn     06 15 06.5 +3.0
      150µm823nm,1.1s
SBUM  Sibu             13.62 253 ⇑P     Pn     06 15 05.4 +1.9
SRPI  Serui, Papua     13.83 127  P     P      06 15 13.8  -0.6
      154µm50µm3µm,0.9s
BBKI  Banjar Baru      14.41 226  P     Pn     06 15 17.1 +2.8
      199µm73µm4µm,1.3s
MMRI  Maumere          15.42 191        Pn     06 15 29.4 +1.5
MMRI                              IAmb  IAmb   06 15 36.3
      comp=Z,4µm,1.8s
MMRI  Maumere          15.42 191  P     P      06 15 30.2  -2.0
MMRI  Maumere          15.42 191  P     P      06 15 32.1  -0.1
      comp=Z,370µmcomp=Z,92µmcomp=Z,5µm,2.0s
MMRI  Maumere          15.42 191 ⇑P     Pn     06 15 29.2 +1.3
EDFI  Ende, Flores     15.65 193  P     Pn     06 15 32.5 +1.6
      comp=Z,42µmcomp=Z,936nm,1.0s
SAUI  Saumlaki         15.69 157        Pn     06 15 30.1  -1.2
SAUI                              IAmb  IAmb   06 15 40.3
      comp=Z,4µm,1.3s
SAUI  Saumlaki         15.69 157  P     Pn     06 15 33.1 +1.8
SAUI  Saumlaki         15.69 157  P     P      06 15 36.4 +1.3
SAUI  Saumlaki         15.69 157 ⇑P     Pn     06 15 29.8  -1.5
LBFI  Labuhan Bajo,    15.90 200  P     Pn     06 15 35.3 +1.3
      comp=Z,2µm,1.3s
SMPI  Sarmi            15.92 122  P     P      06 15 38.0 +0.3
      comp=Z,303µmcomp=Z,58µmcomp=Z,1µm,1.3s
SOEI  Soe              16.27 183  P     P      06 15 41.5  -0.3
SOEI  Soe              16.27 183  P     P      06 15 41.1  -0.6
SOEI                              IAmb  IAmb   06 15 48.1
      comp=Z,4µm,2.0s
SOEI  Soe              16.27 183  P     P      06 15 41.1  -0.6
SOEI  Soe              16.27 183  P     P      06 15 41.7   0.0
      comp=Z,4µm,1.0s
SOEI  Soe              16.27 183 ⇑P     P      06 15 40.4  -1.3
DBNI  Kabupaten Domp   16.51 205  P     P      06 15 44.6 +0.3
      comp=Z,209µmcomp=Z,72µmcomp=Z,1µm,1.6s
TWGBT Beinan           16.62 346  P     Pn     06 15 43.8 +0.6
TWG   Pinlang          16.63 346  P     Pn     06 15 43.5 +0.3
BATI  Baumata          16.76 185  Pn    Pn     06 15 45.6 +0.6
      comp=Z,4.6nm,0.3s,baz=4.2,slow=0.7,SNR=22
BATI                              Sn    Sn     06 18 48.4  -2.3
      comp=Z,7.1nm,0.3s,baz=128,slow=22,SNR=1.0
BATI                              LR    LR     06 23 20.5
      comp=Z,336µm,20.4s,baz=6.0,slow=41
      comp=Z,255nm,1.0s
BATI  Baumata          16.76 185  P     P      06 15 48.1 +1.0
      comp=Z,86µmcomp=Z,5µm,1.3s
WSI   Waingapu         16.89 197  P     P      06 15 50.3 +1.8
      comp=Z,3µm,1.3s
PLAI  Plampang         17.03 206  P     P      06 15 51.3 +1.2
PLAI  Plampang         17.03 206  P     P      06 15 51.4 +1.3
      comp=Z,350µmcomp=Z,4µm,1.4s
YULB  Yu-li            17.13 348  P     Pn     06 15 48.6  -1.0
YULB  Yu-li            17.13 348  P     P      06 15 50.7  -0.4
WBSI  Waikabubak, Su   17.15 200  P     P      06 15 52.9 +1.5
      comp=Z,3µm,2.1s
TPUB  Ta-pu            17.20 346  P     Pn     06 15 49.3  -1.1
TPUB  Ta-pu            17.20 346  P     Pn     06 15 49.1  -1.3
BASI  Baing, Sumba     17.34 196  P     P      06 15 58.1 +4.7
      comp=Z,86µmcomp=Z,4µm,1.5s
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TWSI  Taliwang, Sumb   17.36 209  P     P      06 15 55.2 +1.5
      comp=Z,311µmcomp=Z,3µm,1.3s
DLV    Lat             17.37 289  P     Pn     06 15 53.2 +0.4
DLV    Lat             17.37 289  P     P      06 15 54.6 +0.6
DLV    Lat             17.37 289 ⇑P     P      06 15 55.1 +1.1
GENI  Genyem           17.47 121  P     P      06 15 56.4 +1.5
GENI  Genyem           17.47 121  P     P      06 15 58.6 +3.7
      comp=Z,326µmcomp=Z,71µmcomp=Z,2µm,1.1s
GENI  Genyem           17.47 121 ⇑P     Pn     06 15 54.4 +0.5
KLNI  Mataram          17.48 212  P     P      06 15 56.9 +1.8
      comp=Z,310µmcomp=Z,112µmcomp=Z,6µm,1.3s
KMMI  Kalianget        17.61 220  P     P      06 15 59.5 +3.0
      comp=Z,269µmcomp=Z,2µm,1.1s
KHKI  Kahang-Kahang    17.70 213  P     P      06 16 00.8 +3.4
      comp=Z,299µmcomp=Z,82µmcomp=Z,1µm,1.2s
NACB  Ninganchiao      17.83 349  P     Pn     06 15 58.1  -0.2
NACB  Ninganchiao      17.83 349  P     P      06 15 59.2 +0.4
JAY   Jayapura         17.89 120  P     P      06 15 59.5  -0.1
      comp=Z,11nm,0.3s,baz=282,slow=2.8,SNR=27
JAY                               S     Sn     06 19 19.9 +1.8
      comp=Z,31nm,0.9s,baz=249,slow=22,SNR=0.8
JAY                               LR    LR     06 22 38.0
      comp=Z,240µm,21.8s,baz=309,slow=36
      comp=Z,77nm,0.8s
JAY   Jayapura         17.89 120  P     P      06 16 02.3 +2.7
YOJ   Yonaguni jima    17.90 353  P     Pn     06 15 57.8  -1.2
YOJ   Yonaguni jima    17.90 353  P     P      06 16 01.8 +2.3
YOJ   Yonaguni jima    17.90 353  P     Pn     06 15 57.8  -1.2
YOJ                               pmax  pmax
      comp=Z,1µm,1.4s
YOJ   Yonaguni jima    17.90 353 ⇑P     Pn     06 15 58.1  -0.9
ABJI  Asem Bagus       18.02 218  P     P      06 16 02.6 +1.6
      comp=Z,219µmcomp=Z,82µmcomp=Z,1µm,1.8s
JMJ   Miyako jima 2    18.12   0  P     P      06 16 03.2 +1.2
RTBI  Rangdo, Negare   18.14 215  P     P      06 16 04.4 +2.0
      comp=Z,258µmcomp=Z,100µmcomp=Z,3µm,1.1s
DNP   Denpasar         18.17 214  P     P      06 16 05.2 +2.6
      comp=Z,300µmcomp=Z,5µm,1.2s
IGBI  Denpasar         18.32 213  P     Pn     06 16 06.2 +1.8
YHNB  Yeheng           18.35 349  P     P      06 16 02.5  -2.2
YHNB  Yeheng           18.35 349  P     P      06 16 04.4  -0.3
BLJI  Banyuglugur      18.38 219  P     Pn     06 16 06.9 +1.8
GRJI  Gresik           18.50 224  P     Pn     06 16 07.9 +1.4
      comp=Z,224µmcomp=Z,98µmcomp=Z,3µm,1.5s
JAGI  Jajag, Banyuwa   18.61 217  P     Pn     06 16 08.4 +0.6
JAGI                              IAmb  IAmb   06 16 19.6
      comp=Z,5µm,1.4s
JAGI  Jajag, Banyuwa   18.61 217  P     Pn     06 16 09.3 +1.5
JAGI  Jajag, Banyuwa   18.61 217  P     Pn     06 16 09.0 +1.2
      comp=Z,220µmcomp=Z,66µmcomp=Z,2µm,1.2s
JAGI  Jajag, Banyuwa   18.61 217 ⇑P     Pn     06 16 08.1 +0.3
TATO  Taipei           18.63 349  P     Pn     06 16 09.5 +1.5
TATO                              P     Pn     06 16 09.5 +1.5
TATO                              P     Pn     06 16 09.5 +1.5
TATO                              S     S      06 19 43.5 +5.0
TATO                              S     S      06 19 43.5 +5.0
TATO                              S     S      06 19 43.5 +5.0
TATO  Taipei           18.63 349  P     P      06 16 07.1  -0.5
TATO  Taipei           18.63 349  P     Pn     06 16 09.3 +1.3
TBJI  Tambak Boyo      18.87 225  P     Pn     06 16 13.4 +2.4
      comp=Z,245µmcomp=Z,109µmcomp=Z,4µm,1.4s
GMJI  Gumukmas         18.88 219  P     Pn     06 16 13.4 +2.2
      comp=Z,182µmcomp=Z,51µmcomp=Z,2µm,2.2s
HKPS  Hong Kong Po S   18.92 327  P     Pn     06 16 12.2 +0.6
HKC   Hong Kong Obse   18.92 327 ⇑P     P      06 16 10.0  -0.9
MCO   Taipa Grande     19.12 325  P     P      06 16 13.0  -0.1
QZH   Quanzhou         19.33 341⇑iP     P      06 16 15.4 +0.1
QZH                               S     Sn     06 19 45.8  -6.8
QZH                               pmax  pmax
      comp=Z,580nm,1.5s
QZH                               pmax  pmax
      comp=Z,132µm,9.4s
QZH                               LR    LR
      comp=Z,254µm,21.6s
QZH                               LR    LR
      comp=Z,673µm,24.4s
QZH                               LR    LR
      comp=Z,508µm,23.7s
QIZ   Qiongzhong       19.43 311  P     P      06 16 16.2  -0.3
QIZ   Qiongzhong       19.43 311  P     P      06 16 16.1  -0.3
QIZ                               sP    sP     06 16 24.8  -1.6
QIZ                               S     S      06 19 54.1  -0.7
QIZ                               pmax  pmax
      comp=Z,240nm,1.5s
QIZ                               pmax  pmax
      comp=Z,26µm,4.9s
QIZ                               LR    LR
      comp=Z,296µm,19.2s
QIZ                               LR    LR
      comp=Z,187µm,19.2s
QIZ                               LR    LR
      comp=Z,251µm,19.3s
QIZ   Qiongzhong       19.43 311  P     P      06 16 16.3  -0.1
NGJI  Ngawi            19.53 225  P     Pn     06 16 21.1 +2.2
      comp=Z,93µmcomp=Z,3µm,1.0s
SJI   Sawahan          19.58 224  P     Pn     06 16 19.8 +0.2
      comp=Z,144µmcomp=Z,41µmcomp=Z,2µm,1.7s
SNJI  Sawahan-Nganju   19.62 223  P     Pn     06 16 20.2   0.0
      comp=Z,175µmcomp=Z,47µmcomp=Z,3µm,1.6s
DRS   Darwin Rock St   19.72 163  P     P      06 16 20.2 +0.6
TPI   Tanjungpandan    19.87 243  P     Pn     06 16 22.4  -0.6
      comp=Z,176µmcomp=Z,25µmcomp=Z,1µm,1.4s
GZH   Guangzhou        20.01 326  P     Pn     06 16 25.3 +0.8
GZH                               S     Sn     06 20 13.8 +4.8
GZH                               pmax  pmax
      comp=Z,250nm,1.3s
GZH                               LR    LR
      comp=Z,341µm,22.0s
GZH                               LR    LR
      comp=Z,309µm,19.4s
GZH                               LR    LR
      comp=Z,430µm,18.6s
SMRI  Semarang         20.05 228  P     Pn     06 16 25.4 +0.3
SMRI                              IAMs_20 IAMs_20 06 25 28.3
      comp=Z,353µm,21.0s
SMRI  Semarang         20.05 228  P     Pn     06 16 26.8 +1.7
SMRI  Semarang         20.05 228  P     Pn     06 16 24.9  -0.2
      comp=Z,208µmcomp=Z,98µmcomp=Z,4µm,2.5s
SMRI  Semarang         20.05 228 ⇑P     Pn     06 16 25.9 +0.8
MTN   Manton Dam       20.18 163  P     P      06 16 24.9 +0.3
MTN                               IAmb  IAmb   06 16 39.2
      comp=Z,1µm,0.9s
MTN   Manton Dam       20.18 163 ⇑P     P      06 16 24.6   0.0
PCJI  Pacitan          20.31 224  P     Pn     06 16 28.2   0.0
      comp=Z,97µmcomp=Z,42µmcomp=Z,2µm,1.5s
JOW   Kunigami         20.33   8  P     P      06 16 25.1  -1.1
      comp=Z,354nm,1.2s,baz=184,slow=11,SNR=21
JOW                               S     S      06 20 06.5  -6.7
      comp=Z,37nm,1.1s,baz=185,slow=20,SNR=0.9
JOW                               LR    LR     06 23 42.6
      comp=Z,294µm,22.0s,baz=176,slow=35
      comp=Z,354nm,1.2s
JOW   Kunigami         20.33   8  P     P      06 16 24.9  -1.4
JOW                               IAmb  IAmb   06 16 39.1
      comp=Z,1µm,1.0s
JOW   Kunigami         20.33   8  P     P      06 16 26.7 +0.5
JOW   Kunigami         20.33   8 ⇑P     P      06 16 26.5 +0.3
JOW   Kunigami         20.33   8  P     P      06 16 26.3 +0.1
KDU   Kakadu           20.46 159 ⇑P     P      06 16 27.8 +0.2
GUMO  Guam             20.52  69  P     P      06 16 27.6  -0.7
      comp=Z,384nm,1.0s,baz=279,slow=2.5,SNR=8.0
GUMO                              S     S      06 20 14.8  -2.2
      comp=Z,79nm,0.7s,baz=129,slow=16,SNR=1.6
GUMO                              LR    LR     06 23 08.3
      comp=Z,75µm,21.1s,baz=230,slow=33
      comp=Z,384nm,1.0s
UGM   Wanagama         20.57 226  P     Pn     06 16 30.2  -1.1
UGM                               IAmb  IAmb   06 16 39.6
      comp=Z,1µm,1.1s
UGM   Wanagama         20.57 226  P     Pn     06 16 31.1  -0.2
UGM   Wanagama         20.57 226  P     Pn     06 16 31.3   0.0
      comp=Z,55µmcomp=Z,2µm,1.6s
YOGI  Yogyakarta       20.67 226  P     Pn     06 16 32.1  -0.3
      comp=Z,134µmcomp=Z,74µmcomp=Z,4µm,1.5s
CTJI  Waduk Cacaban    20.96 230  P     Pn     06 16 35.8   0.0
      comp=Z,166µmcomp=Z,66µmcomp=Z,2µm,1.1s
PPBI  Pangkal Pinang   20.96 246  P     Pn     06 16 35.9   0.0
UBPT  Khong Chiam      21.23 296  P     P      06 16 35.8  -0.3
UBPT  Khong Chiam      21.23 296 ⇑P     P      06 16 35.5  -0.5
MMPI  Merauke          21.25 135  P     P      06 16 39.5 +3.2
KPJI  Karang Pucung    21.36 230  P     P      06 16 39.9 +2.5
      comp=Z,183µmcomp=Z,71µmcomp=Z,3µm,1.4s
TPRI  Tanjung Pinang   21.42 256  P     P      06 16 40.3 +2.2
      comp=Z,187µmcomp=Z,24µmcomp=Z,875nm,1.4s
DSRI  Dabo             21.79 252  P     P      06 16 43.1 +1.0
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      comp=Z,158µmcomp=Z,25µmcomp=Z,1µm,1.6s
MYKOM Kota Tinggi      21.86 258  P     P      06 16 44.4 +1.6
MYKOM Kota Tinggi      21.86 258  P     P      06 16 44.0 +1.2
MYKOM Kota Tinggi      21.86 258 ⇑P     P      06 16 44.6 +1.7
BTDF  Bukit Timah Da   22.04 257  P     P      06 16 45.7 +1.0
JAM   Amami Oshima     22.09  10  P     P      06 16 44.8  -0.3
KNRA  Kununurra        22.40 171  P     P      06 16 48.5   0.0
BBJI  Bungbulang       22.43 232  P     P      06 16 50.0 +1.0
BBJI  Bungbulang       22.43 232  P     P      06 16 51.0 +2.0
      comp=Z,29µmcomp=Z,1µm,1.3s
TNG   Tangerang        22.48 236  P     P      06 16 51.6 +2.1
      comp=Z,40µmcomp=Z,2µm,2.0s
TNG                               P     P      06 16 51.2 +1.7
      comp=Z,113µmcomp=Z,74µmcomp=Z,4µm,2.0s
PMBI  Palembang        22.52 246  P     P      06 16 50.9 +0.9
PMBI                              IAmb  IAmb   06 17 11.3
      comp=Z,1µm,0.9s
PMBI  Palembang        22.52 246  P     P      06 16 53.0 +3.1
PMBI  Palembang        22.52 246  P     P      06 16 52.3 +2.4
      comp=Z,135µmcomp=Z,34µmcomp=Z,2µm,1.3s
DBJI  Dramaga          22.61 235  P     P      06 16 53.3 +2.4
      comp=Z,121µmcomp=Z,81µmcomp=Z,3µm,2.0s
CNJI  Cibinong         22.74 233  P     P      06 16 53.4 +1.1
      comp=Z,23µmcomp=Z,2µm,1.2s
SBJI  Serang           22.88 237  P     P      06 16 55.8 +2.1
SKJI  Sukabumi         23.02 234  P     P      06 16 57.4 +2.2
      comp=Z,101µmcomp=Z,4µm,1.1s
JMBI  JAMBI            23.06 250  P     P      06 17 00.1 +4.5
      comp=Z,155µmcomp=Z,63µmcomp=Z,3µm,1.1s
BLSI  Bandar Lampung   23.23 240  P     P      06 16 59.7 +2.4
      comp=Z,96µmcomp=Z,41µmcomp=Z,2µm,1.6s
KLI   Kotabumi         23.32 241  P     P      06 16 59.6 +1.4
KLSI                   23.35 242  P     P      06 16 59.9 +1.4
      comp=Z,49µmcomp=Z,2µm,1.2s
GULI  GuiLin           23.41 324  P     P      06 16 57.3  -1.7
GULI                              S     S      06 21 06.9  -4.1
GULI                              pmax  pmax
      comp=Z,370nm,1.2s
GULI                              pmax  pmax
      comp=Z,26µm,7.6s
GULI                              LR    LR
      comp=Z,184µm,23.5s
GULI                              LR    LR
      comp=Z,211µm,20.6s
GULI                              LR    LR
      comp=Z,256µm,23.0s
MANU  Manus Island     23.69 111  P     P      06 17 02.5 +0.7
MANU  Manus Island     23.69 111 ⇑P     P      06 16 59.2  -2.7
MDSI  Maura Dua        23.74 243  P     P      06 17 03.3 +1.0
      comp=Z,119µmcomp=Z,31µmcomp=Z,1µm,1.4s
KASI  Kota Agung       23.95 240  P     P      06 17 05.8 +1.5
      comp=Z,72µmcomp=Z,28µmcomp=Z,1µm,1.1s
LWLI  Liwa             24.09 242  P     P      06 17 08.2 +2.5
IPM   Ipoh             24.20 266  P     P      06 17 06.1  -0.6
IPM                               IAmb  IAmb   06 17 36.2
      comp=Z,2µm,1.3s
IPM   Ipoh             24.20 266  P     P      06 17 06.0  -0.6
IPM   Ipoh             24.20 266  P     P      06 17 06.8 +0.2
      comp=Z,118µmcomp=Z,25µmcomp=Z,1µm,1.4s
IPM   Ipoh             24.20 266 ⇑P     P      06 17 05.8  -0.8
CNSH  ChangSha         24.44 333  P     P      06 17 10.3 +1.7
CNSH                              S     S      06 21 31.6 +4.3
CNSH                              pmax  pmax
      comp=Z,31µm,6.9s
CNSH                              LR    LR
      comp=Z,168µm,21.0s
CNSH                              LR    LR
      comp=Z,284µm,19.8s
CNSH                              LR    LR
      comp=Z,218µm,17.1s
KULM  Kulim            24.50 268  P     P      06 17 09.1  -0.3
KULM                              IAmb  IAmb   06 17 18.7
      comp=Z,1µm,1.3s
KULM  Kulim            24.50 268  P     P      06 17 09.8 +0.5
KULM  Kulim            24.50 268  P     P      06 17 09.3   0.0
      comp=Z,112µmcomp=Z,25µmcomp=Z,856nm,1.8s
KULM  Kulim            24.50 268 ⇑P     P      06 17 09.5 +0.2
SSE   Sheshan          24.67 352  P     P      06 17 10.8 +0.1
SSE                               sP    pP     06 17 19.1 +1.1
SSE                               S     S      06 21 28.4  -2.6
SSE                               ScS   ScS    06 28 12.4  -0.9
SSE                               pmax  pmax
      comp=Z,4µm,4.1s
MNAI  Manna            24.77 245  P     P      06 17 11.9   0.0
MNAI  Manna            24.77 245  P     P      06 17 13.9 +2.1
MNAI  Manna            24.77 245  P     P      06 17 12.5 +0.7
      comp=Z,85µmcomp=Z,61µmcomp=Z,3µm,1.3s
MNAI  Manna            24.77 245 ⇑P     P      06 17 12.3 +0.5
KSI   Kapahiang        24.80 246  P     P      06 17 13.0 +0.9
      comp=Z,192µmcomp=Z,51µmcomp=Z,2µm,1.9s
MASI  Maura Aman, Be   24.92 248  P     P      06 17 14.8 +1.6
      comp=Z,84µmcomp=Z,44µmcomp=Z,2µm,1.2s
BKNI  Bangkinang       24.94 257  P     P      06 17 12.8  -0.5
BKNI  Bangkinang       24.94 257  P     P      06 17 13.6 +0.2
BKNI                              IAmb  IAmb   06 17 30.4
      comp=Z,1µm,1.1s
BKNI  Bangkinang       24.94 257  P     P      06 17 14.5 +1.1
BKNI  Bangkinang       24.94 257  P     P      06 17 16.2 +2.9
      comp=Z,112µmcomp=Z,23µmcomp=Z,998nm,1.7s
UBSI  University, Be   25.14 246  P     P      06 17 18.6 +3.5
      comp=Z,80µmcomp=Z,64µmcomp=Z,2µm,1.0s
JSU   Suzuyama         25.26  10  P     P      06 17 14.4  -1.7
KRJI  Kerinci          25.26 251  P     P      06 17 17.9 +1.5
SLVN  Son La           25.32 307  P     P      06 17 16.2  -0.5
SLVN                              IAmb  IAmb   06 17 32.4
      comp=Z,1µm,1.7s
SLVN  Son La           25.32 307  P     P      06 17 16.6  -0.2
PPI   Padang Panjang   25.77 255  P     P      06 17 22.0 +1.1
      comp=Z,126µmcomp=Z,24µmcomp=Z,799nm,1.1s
XMI   Christmas Isla   25.80 229  P     P      06 17 20.8  -0.4
XMI   Christmas Isla   25.80 229 ⇑P     P      06 17 19.4  -1.7
EGSI  Enggano, Bengk   25.82 243  P     P      06 17 21.9 +0.6
      comp=Z,60µmcomp=Z,27µmcomp=Z,2µm,1.1s
PDSI  Padang           25.84 254  P     P      06 17 22.3 +0.8
      comp=Z,109µmcomp=Z,20µmcomp=Z,857nm,0.8s
WHN   Wuhan            25.93 338⇓iP     P      06 17 22.3 +0.2
WHN                               S     S      06 21 53.1 +2.0
WHN                               pmax  pmax
      comp=Z,94µm,7.6s
WHN                               LR    LR
      comp=Z,751µm,19.6s
JCJ   Chichijima       25.98  36  P     P      06 17 08.6   -14
      comp=Z,293nm,0.5s,baz=264,slow=6.1,SNR=27
JCJ                               S     S      06 21 34.9   -17
      comp=Z,67nm,0.9s,baz=298,slow=20,SNR=1.5
JCJ   Chichijima       25.98  36  P     P      06 17 21.5  -1.2
JCJ   Chichijima       25.98  36  P     P      06 17 22.3  -0.4
JCJ   Chichijima       25.98  36 ⇑P     P      06 17 21.6  -1.0
NJ2   Nanjing          26.02 348 ⇑P     P      06 17 24.4 +1.5
NJ2                               pP    pP     06 17 30.6 +0.4
NJ2                               sP    sP     06 17 35.6 +2.4
NJ2                               S     S      06 21 55.3 +2.8
NJ2                               pmax  pmax
      comp=Z,110nm,1.8s
NJ2                               pmax  pmax
      comp=Z,33µm,7.1s
NJ2                               LR    LR
      comp=Z,80µm,21.8s
NJ2                               LR    LR
      comp=Z,315µm,21.8s
NJ2                               LR    LR
      comp=Z,139µm,23.7s
MNSI  Mandailing Nat   26.24 258  P     P      06 17 25.8 +0.6
      comp=Z,32µmcomp=Z,391nm,1.0s
PSI   Prapat           26.50 263  LR    LR     06 30 00.0
      comp=Z,134µm,20.9s,baz=102,slow=41
GYA   Guiyang          26.53 320 ⇑P     P      06 17 28.1 +0.3
GYA                               S     S      06 22 00.3  -0.6
GYA                               pmax  pmax
      comp=Z,45nm,1.4s
GYA                               pmax  pmax
      comp=Z,27µm,10.6s
GYA                               LR    LR
      comp=Z,147µm,17.5s
GYA                               LR    LR
      comp=Z,153µm,21.6s
GYA                               LR    LR
      comp=Z,214µm,23.5s
TSI   Tuntungan        26.75 265  P     P      06 17 31.7 +1.9
      comp=Z,171µmcomp=Z,30µmcomp=Z,818nm,1.3s
PPSI  Pulau Pagai      26.85 251  P     P      06 17 31.5 +0.8
      comp=Z,100µmcomp=Z,30µmcomp=Z,1µm,0.8s
JNU   Nakatsue         26.91  10  P     P      06 17 28.8  -2.2
      comp=Z,74nm,1.1s,baz=133,slow=5.2,SNR=14
JNU                               S     S      06 22 04.0  -2.7
      comp=Z,12nm,0.9s,baz=165,slow=14,SNR=1.0
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JNU				LR	LR	06 28 01.1	
	comp=Z,149µm,21.9s,baz=193,slow=36						
	comp=Z,74nm,1.1s						
JNU	**Nakatsue**	**26.91**	**10**	P	**P**	**06 17 30.1**	**-1.0**
JNU	**Nakatsue**	**26.91**	**10**	P	**P**	**06 17 29.8**	**-1.2**
JNU	**Nakatsue**	**26.91**	**10**	⇑P	**P**	**06 17 29.6**	**-1.4**
JNU	**Nakatsue**	**26.91**	**10**	P	**P**	**06 17 29.2**	**-1.8**
PMG	**Port Moresby**	**27.01**	**126**	P	**P**	**06 17 32.3**	**+0.3**
	comp=Z,535nm,0.8s,baz=327,slow=7.6,SNR=183						
PMG				S	**S**	**06 22 10.4**	**+1.9**
	comp=Z,381nm,1.3s,baz=156,slow=20,SNR=10						
PMG	**Port Moresby**	**27.01**	**126**	P	**P**	**06 17 32.7**	**+0.7**
PMG	**Port Moresby**	**27.01**	**126**	P	**P**	**06 17 33.0**	**+1.0**
PMG	**Port Moresby**	**27.01**	**126**	P	**P**	**06 17 32.7**	**+0.7**
	comp=Z,67µmcomp=Z,21µmcomp=Z,2µm,1.5s						
PMG	**Port Moresby**	**27.01**	**126**	*c i*P	**P**	**06 17 32.6**	**+0.6**
PMG				pmax	pmax		
	comp=Z,2µm,1.0s						
PMG				MLR	MLR		
	comp=Z,159µm,21.0s						
PMG	**Port Moresby**	**27.01**	**126**	⇑P	**P**	**06 17 32.4**	**+0.4**
COEN	**Coen**	**27.09**	**139**	P	**P**	**06 17 32.8**	**0.0**
COEN	**Coen**	**27.09**	**139**	P	**P**	**06 17 33.5**	**+0.8**
COEN	**Coen**	**27.09**	**139**	⇑P	**P**	**06 17 32.5**	**-0.2**
SISI	**Saibi**	**27.27**	**254**	P	**P**	**06 17 35.9**	**+1.5**
	comp=Z,124µmcomp=Z,24µmcomp=Z,2µm,1.1s						
KCSI	**Kotacane, Aceh**	**27.53**	**265**	P	**P**	**06 17 37.4**	**+0.6**
	comp=Z,92µmcomp=Z,436nm,1.1s						
WB0	**Warramunga Arr**	**27.70**	**161**	P	**P**	**06 17 37.4**	**-0.8**
PBSI	**Pulau Batu**	**27.70**	**257**	P	**P**	**06 17 41.2**	**+2.9**
	comp=Z,148µmcomp=Z,20µmcomp=Z,284nm,0.9s						
ENH	**Enshi**	**27.82**	**330**	P	**P**	**06 17 38.1**	**-1.2**
ENH				IAmb	IAmb	06 18 14.6	
	comp=Z,648nm,1.4s						
ENH				IAMs_20	IAMs_20	06 29 57.9	
	comp=Z,200µm,18.0s						
ENH	**Enshi**	**27.82**	**330**	P	**P**	**06 17 39.7**	**+0.4**
WRAB	**Tennant Creek**	**27.84**	**161**	P	**P**	**06 17 39.0**	**-0.5**
WRAB				IAmb	IAmb	06 18 13.2	
	comp=Z,869nm,0.9s						
WRAB	**Tennant Creek**	**27.84**	**161**	P	**P**	**06 17 39.0**	**-0.5**
WRAB	**Tennant Creek**	**27.84**	**161**	*c i*P	**P**	**06 17 38.8**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,807nm,1.3s						
WRAB				MLR	MLR		
	comp=Z,173µm,21.0s						
WRAB	**Tennant Creek**	**27.84**	**161**	⇑P	**P**	**06 17 38.3**	**-1.2**
WRA	**Warramunga Arr**	**27.85**	**161**	P	**P**	**06 17 38.5**	**-1.0**
	comp=Z,93nm,0.9s,baz=340,slow=9.5,SNR=52						
WRA				S	**S**	**06 22 15.4**	**-6.1**
	comp=Z,12nm,0.7s,baz=149,slow=36,SNR=1.5						
	comp=Z,93nm,0.9s						
WRA	**Warramunga Arr**	**27.85**	**161**	*i* P	**P**	**06 17 38.0**	**-1.5**
WRA				pmax	pmax		
	comp=Z,100nm,0.9s						
WR8	**Warramunga Arr**	**27.91**	**161**	P	**P**	**06 17 39.3**	**-0.8**
JTU	**Tsushima**	**28.06**	**7**	P	**P**	**06 17 43.9**	**+2.7**
JTU	**Tsushima**	**28.06**	**7**	⇑P	**P**	**06 17 45.2**	**+4.0**
GSI	**Gunungsitoli**	**28.09**	**260**	P	**P**	**06 17 40.9**	**-0.9**
GSI				IAmb	IAmb	06 17 52.9	
	comp=Z,880nm,0.9s						
GSI	**Gunungsitoli**	**28.09**	**260**	P	**P**	**06 17 41.1**	**-0.7**
GSI	**Gunungsitoli**	**28.09**	**260**	P	**P**	**06 17 42.4**	**+0.6**
	comp=Z,175µmcomp=Z,24µmcomp=Z,1µm,1.4s						
GSI	**Gunungsitoli**	**28.09**	**260**	⇑P	**P**	**06 17 40.6**	**-1.2**
MBWA	**Marble Bar**	**28.11**	**191**	P	**P**	**06 17 41.8**	**0.0**
MBWA				S	**S**	**06 22 28.9**	**+3.3**
MBWA	**Marble Bar**	**28.11**	**191**	P	**P**	**06 17 40.8**	**-1.0**
MBWA				IAmb	IAmb	06 18 06.1	
	comp=Z,664nm,1.1s						
MBWA	**Marble Bar**	**28.11**	**191**	P	**P**	**06 17 41.5**	**-0.3**
MBWA	**Marble Bar**	**28.11**	**191**	⇑P	**P**	**06 17 40.7**	**-1.0**
TPTI		**28.15**	**265**	P	**P**	**06 17 43.8**	**+1.5**
	comp=Z,177µmcomp=Z,10µmcomp=Z,236nm,0.8s						
JMN	**Monobe**	**28.16**	**15**	P	**P**	**06 17 40.6**	**-1.6**
JMN				IAmb	IAmb	06 17 53.4	
	comp=Z,530nm,1.0s						
JMN	**Monobe**	**28.16**	**15**	P	**P**	**06 17 41.5**	**-0.7**
JMN	**Monobe**	**28.16**	**15**	⇑P	**P**	**06 17 41.3**	**-1.0**
JMN	**Monobe**	**28.16**	**15**	P	**P**	**06 17 41.3**	**-1.0**
LHMI	**Lhok Sumawe**	**28.18**	**269**	P	**P**	**06 17 43.0**	**+0.5**
LHMI				IAmb	IAmb	06 18 17.7	
	comp=Z,796nm,1.0s						
LHMI	**Lhok Sumawe**	**28.18**	**269**	P	**P**	**06 17 44.3**	**+1.7**
LHMI	**Lhok Sumawe**	**28.18**	**269**	P	**P**	**06 17 44.4**	**+1.8**
	comp=Z,183µmcomp=Z,27µmcomp=Z,753nm,1.3s						
LHMI	**Lhok Sumawe**	**28.18**	**269**	⇑P	**P**	**06 17 44.0**	**+1.4**
CM31	**Chiang Mai Arr**	**28.20**	**297**	P	**P**	**06 17 43.2**	**+0.4**
	SNR=86						
CM31				P	**P**	**06 17 43.2**	**+0.4**
	SNR=86						
CM31				P	**P**	**06 17 43.2**	**+0.4**
	SNR=86						
CM31				S	**S**	**06 22 34.0**	**+6.6**
CM31				S	**S**	**06 22 34.0**	**+6.6**
CM31				S	**S**	**06 22 34.0**	**+6.6**
CM31	**Chiang Mai Arr**	**28.20**	**297**	P	**P**	**06 17 42.3**	**-0.5**
CM31				IAmb	IAmb	06 18 36.2	
	comp=Z,546nm,1.4s						
CMAR	**Chiang Mai Arr**	**28.20**	**297**	P	**P**	**06 17 41.9**	**-0.9**
	comp=Z,18nm,0.7s,baz=121,slow=7.5,SNR=98						
CMAR				S	**S**	**06 22 25.8**	**-1.6**
	comp=Z,1.7nm,0.4s,baz=338,slow=28,SNR=1.3						
CMAR				ScP	**ScP**	**06 24 33.0**	**-3.0**
	comp=Z,23nm,1.1s,baz=106,slow=3.0,SNR=6.8						
CMAR				LR	LR	06 29 55.4	
	comp=Z,108µm,18.8s,baz=110,slow=39						
CMAR				P3KPbc		06 50 04.2	
	comp=Z,1.4nm,0.4s,baz=284,slow=2.9,SNR=11						
	comp=Z,18nm,0.7s						
CMAR	**Chiang Mai Arr**	**28.20**	**297**	P	**P**	**06 17 42.2**	**-0.6**
CMAR	**Chiang Mai Arr**	**28.20**	**297**	*i* P	**P**	**06 17 42.5**	**-0.3**
CMAR				pmax	pmax		
	comp=Z,39nm,0.8s						
CHTO	**Chiang Mai**	**28.34**	**298**	P	**P**	**06 17 45.4**	**+1.5**
CHTO				P	**P**	**06 17 45.4**	**+1.5**
CHTO				P	**P**	**06 17 45.4**	**+1.5**
CHTO				S	**S**	**06 22 35.6**	**+6.2**
CHTO				S	**S**	**06 22 35.6**	**+6.2**
CHTO				S	**S**	**06 22 35.6**	**+6.2**
CHTO	**Chiang Mai**	**28.34**	**298**	P	**P**	**06 17 43.4**	**-0.6**
CHTO				IAmb	IAmb	06 17 51.8	
	comp=Z,991nm,1.8s						
CHTO	**Chiang Mai**	**28.34**	**298**	P	**P**	**06 17 43.2**	**-0.7**
CHTO	**Chiang Mai**	**28.34**	**298**	P	**P**	**06 17 42.5**	**-1.4**
CHTO	**Chiang Mai**	**28.34**	**298**	P	**P**	**06 17 43.4**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,991nm,1.8s						
CHTO				MLR	MLR		
	comp=Z,97µm,18.0s						
CHTO	**Chiang Mai**	**28.34**	**298**	⇑P	**P**	**06 17 43.3**	**-0.6**
KMI	**Kunming**	**28.34**	**313**	⇓P	**P**	**06 17 44.6**	**+0.4**
KMI				pP	pP	06 17 51.0	-0.5
KMI				S	**S**	**06 22 33.3**	**+3.6**
KMI				pmax	pmax		
	comp=Z,620nm,1.2s						
KMI				pmax	pmax		
	comp=Z,15µm,9.4s						
KMI				LR	LR		
	comp=Z,164µm,20.4s						
KMI				LR	LR		
	comp=Z,186µm,21.3s						
KMI				LR	LR		
	comp=Z,213µm,20.8s						
PSA00	**Pilbara Seismi**	**28.49**	**191**	P	**P**	**06 17 44.2**	**-1.0**
PSA00				IAmb	IAmb	06 18 15.2	
	comp=Z,578nm,1.1s						
PSA00	**Pilbara Seismi**	**28.49**	**191**	P	**P**	**06 17 44.7**	**-0.5**
MLSI	**Meulaboh, Aceh**	**28.80**	**267**	P	**P**	**06 17 48.0**	**-0.1**
	comp=Z,147µmcomp=Z,18µmcomp=Z,732nm,1.4s						
SNSI	**Sinabang, Aceh**	**29.12**	**263**	P	**P**	**06 17 51.6**	**+0.6**
	comp=Z,136µmcomp=Z,16µmcomp=Z,1µm,1.2s						
JHS	**Saijyo**	**29.18**	**13**	P	**P**	**06 17 50.7**	**-0.6**
JIE	**Ise**	**29.62**	**19**	P	**P**	**06 17 52.3**	**-2.9**
JHJ	**Hachijo jima 2**	**29.65**	**25**	P	**P**	**06 17 54.5**	**-0.9**
	comp=Z,86nm,0.8s,baz=212,slow=19,SNR=1.8						
JHJ				S	**S**	**06 22 50.5**	**+0.8**
	comp=Z,83nm,0.9s,baz=245,slow=4.6,SNR=3.5						
JHJ				LR	LR	06 30 31.9	
	comp=Z,148µm,18.9s,baz=241,slow=38						
	comp=Z,86nm,0.8s						
TJN	**Taejon**	**29.71**	**3**	P	**P**	**06 17 57.6**	**+1.7**
TJN	**Taejon**	**29.71**	**3**	*i* P	**P**	**06 17 54.8**	**-1.1**
PZH	**PanZhiHua**	**29.89**	**314**	P	**P**	**06 17 57.1**	**-0.7**
PZH				pP	**sP**	**06 18 08.4**	**+0.4**
PZH				S	**S**	**06 22 59.5**	**+5.7**
PZH				pmax	pmax		
	comp=Z,80nm,1.3s						
PZH				pmax	pmax		
	comp=Z,11µm,8.8s						
PZH				LR	LR		
	comp=Z,96µm,19.0s						
PZH				LR	LR		
	comp=Z,81µm,16.9s						
PZH				LR	LR		
	comp=Z,142µm,18.6s						
LYN	**LuoYang**	**30.22**	**339**	⇓*i*P	**P**	**06 18 00.1**	**-0.3**
LYN				pP	pP	06 18 06.8	-0.9
LYN				sP	sP	06 18 11.8	+1.1
LYN				PP	**PnPn**	**06 19 01.1**	**+2.6**
LYN				S	**S**	**06 23 03.5**	**+4.9**
LYN				sS	sS	06 23 13.6	+2.8
LYN				pmax	pmax		
	comp=Z,84nm,1.6s						
LYN				pmax	pmax		
	comp=Z,24µm,6.9s						
LYN				LR	LR		
	comp=Z,378µm,26.8s						
JSG	**Sagara**	**30.39**	**21**	P	**P**	**06 18 05.6**	**+3.7**
JSG	**Sagara**	**30.39**	**21**	⇑P	**P**	**06 18 04.5**	**+2.6**
TIA	**Tai'an**	**30.40**	**347**	P	**P**	**06 18 00.8**	**-1.3**
TIA				S	**S**	**06 22 57.8**	**-3.7**
TIA				pmax	pmax		
	comp=Z,120nm,1.8s						
TIA				pmax	pmax		
	comp=Z,19µm,8.4s						
TIA				LR	LR		
	comp=Z,127µm,24.7s						
TIA				LR	LR		
	comp=Z,330µm,24.7s						
TIA				LR	LR		
	comp=Z,197µm,23.7s						
QIS	**Mount Isa**	**30.45**	**153**	P	**P**	**06 18 03.2**	**+0.6**
INU	**Inuyama**	**30.60**	**19**	IAMs_20	IAMs_20	06 31 11.5	
	comp=Z,185µm,19.0s						
INU	**Inuyama**	**30.60**	**19**	P	**P**	**06 18 01.9**	**-1.9**
INU	**Inuyama**	**30.60**	**19**	⇑P	**P**	**06 18 02.1**	**-1.7**
INCN	**Inchon**	**30.77**	**2**	P	**P**	**06 18 06.6**	**+1.3**
INCN				P	**P**	**06 18 06.6**	**+1.3**
INCN				P	**P**	**06 18 06.6**	**+1.3**
INCN				S	**S**	**06 23 14.4**	**+7.1**
INCN				S	**S**	**06 23 14.4**	**+7.1**
INCN				S	**S**	**06 23 14.4**	**+7.1**
INCN	**Inchon**	**30.77**	**2**	P	**P**	**06 18 04.5**	**-0.8**
INCN	**Inchon**	**30.77**	**2**	P	**P**	**06 18 06.1**	**+0.8**
INCN	**Inchon**	**30.77**	**2**	P	**P**	**06 18 04.5**	**-0.8**
INCN				pmax	pmax		
	comp=Z,89nm,1.0s						
INCN				MLR	MLR		
	comp=Z,137µm,20.0s						
KSAR	**Wonju Array Be**	**30.80**	**4**	P	**P**	**06 18 05.3**	**-0.2**
KSAR	**Wonju Array Be**	**30.80**	**4**	P	**P**	**06 18 05.3**	**-0.2**
KSRS	**Korea Array**	**30.82**	**4**	P	**P**	**06 18 04.8**	**-0.8**
	comp=Z,88nm,1.2s,baz=182,slow=9.1,SNR=53						
KSRS				PcP	**PcP**	**06 21 02.0**	**-0.6**
	comp=Z,15nm,1.0s,baz=192,slow=3.7,SNR=2.9						
KSRS				S	**S**	**06 23 05.6**	**-2.2**
	comp=Z,4.2nm,1.0s,baz=198,slow=7.5,SNR=1.4						
KSRS				ScP	**ScP**	**06 24 43.0**	**-1.0**
	comp=Z,2.7nm,1.0s,baz=188,slow=3.7,SNR=1.4						
KSRS				LR	LR	06 30 01.7	
	comp=Z,95499µm,21.6s,baz=185,slow=36						
	comp=Z,88nm,1.2s						
KS19	**Wonju Array Si**	**30.86**	**4**	P	**P**	**06 18 06.0**	**0.0**
KS19				IAmb	IAmb	06 18 13.5	
	comp=Z,1µm,2.0s						
JGF	**Kuroka**	**30.94**	**19**	P	**P**	**06 18 05.3**	**-1.5**
JGF				IAmb	IAmb	06 18 13.9	
	comp=Z,704nm,2.0s						
JGF	**Kuroka**	**30.94**	**19**	P	**P**	**06 18 08.7**	**+1.8**
JGF	**Kuroka**	**30.94**	**19**	⇑P	**P**	**06 18 05.3**	**-1.5**
JGF	**Kuroka**	**30.94**	**19**	P	**P**	**06 18 04.9**	**-2.0**
MTSU	**Mount Surprise**	**30.95**	**143**	P	**P**	**06 18 09.0**	**+1.9**
GIRL	**Giralia**	**30.99**	**200**	P	**P**	**06 18 07.5**	**+0.2**
GIRL	**Giralia**	**30.99**	**200**	⇑P	**P**	**06 18 07.5**	**+0.2**
XAN	**Xi'an**	**31.21**	**333**	⇓P	**P**	**06 18 08.3**	**-1.0**
XAN				pP	pP	06 18 15.6	-0.9
XAN				PP	**PP**	**06 19 14.9**	**-5.1**
XAN				S	**S**	**06 23 13.9**	**-0.4**
XAN				pmax	pmax		
	comp=Z,510nm,1.1s						
XAN				pmax	pmax		
	comp=Z,16µm,5.7s						
XAN				LR	LR		
	comp=Z,106µm,19.0s						
XAN				LR	LR		
	comp=Z,298µm,20.8s						
XAN				LR	LR		
	comp=Z,206µm,17.7s						
AS31	**Alice Springs**	**31.24**	**165**	P	**P**	**06 18 09.3**	**-0.4**
ASAR	**Alice Springs**	**31.24**	**165**	P	**P**	**06 18 09.1**	**-0.5**
	comp=Z,64nm,0.5s,baz=333,slow=5.7,SNR=193						
ASAR				PcP	**PcP**	**06 21 04.4**	**+0.4**
	comp=Z,37nm,0.8s,baz=330,slow=2.5,SNR=2.1						
ASAR				S	**S**	**06 23 09.3**	**-5.6**
	comp=Z,6.9nm,0.7s,baz=129,slow=42,SNR=1.1						
ASAR				ScP	**ScP**	**06 24 44.9**	**-0.8**
	comp=Z,28nm,1.1s,baz=311,slow=1.6,SNR=1.1						
ASAR				LR	LR	06 32 53.7	
	comp=Z,65µm,18.7s,baz=333,slow=40						
	comp=Z,64nm,0.5s						
ASAR	**Alice Springs**	**31.24**	**165**	P	**P**	**06 18 08.9**	**-0.7**
HJU	**Haeju**	**31.31**	**1**	P	**P**	**06 18 11.5**	**+1.5**
HJU				S	**S**	**06 23 16.8**	**+1.2**
HJU				AmB			
	comp=Z,17µm,6.0s						
HJU				AMS	AMS		
	comp=Z,134µm,16.8s						
TNCH	**TengChong**	**31.46**	**309**	⇓P	**P**	**06 18 11.8**	**0.0**
TNCH				pP	pP	06 18 18.3	-0.9
TNCH				sP	sP	06 18 22.3	-0.1
TNCH				PP	**PnPn**	**06 19 17.5**	**+2.4**
TNCH				S	**S**	**06 23 22.1**	**+3.4**
TNCH				sS	sS	06 23 32.0	+1.1
TNCH				SS	**SnSn**	**06 25 09.3**	**+5.2**
TNCH				pmax	pmax		
	comp=Z,180nm,1.5s						
TNCH				pmax	pmax		
	comp=Z,4µm,4.9s						
TNCH				LR	LR		
	comp=Z,52µm,17.6s						
TNCH				LR	LR		
	comp=Z,64µm,19.9s						
TNCH				LR	LR		
	comp=Z,110µm,34.0s						
CD2	**Chengdu**	**31.48**	**323**	⇓P	**P**	**06 18 10.8**	**-0.9**
CD2				S	**S**	**06 23 19.3**	**+0.8**
CD2				pmax	pmax		
	comp=Z,220nm,1.1s						
CD2				pmax	pmax		
	comp=Z,18µm,6.9s						
CD2				LR	LR		
	comp=Z,95µm,18.2s						
CD2				LR	LR		
	comp=Z,254µm,20.5s						
CD2				LR	LR		
	comp=Z,198µm,19.2s						
JGN	**Niukaw**	**31.50**	**19**	P	**P**	**06 18 09.6**	**-2.2**
WRKA	**Warakurna**	**31.58**	**175**	⇑P	**P**	**06 18 11.9**	**-0.7**
JRY	**Ryogami san**	**31.85**	**21**	P	**P**	**06 18 12.6**	**-2.3**
MJAR	**Matsushiro Arr**	**32.08**	**20**	P	**P**	**06 18 14.0**	**-2.9**
	comp=Z,11nm,0.7s,baz=194,slow=9.3,SNR=28						
MJAR				S	**S**	**06 23 23.2**	**-4.5**
	comp=Z,3.5nm,1.1s,baz=285,slow=39,SNR=1.6						
MJAR				ScP	**ScP**	**06 24 47.8**	**-0.5**
	comp=Z,3.2nm,0.9s,baz=190,slow=3.5,SNR=1.6						
MJAR				LR	LR	06 30 48.5	
	comp=Z,136µm,19.8s,baz=210,slow=36						
MJAR				P3KPbc		06 49 44.6	
	comp=Z,0.6nm,0.6s,baz=12,slow=4.8,SNR=2.0						
	comp=Z,11nm,0.7s						
MJAR	**Matsushiro Arr**	**32.08**	**20**	P	**P**	**06 18 14.3**	**-2.6**
MJAR	**Matsushiro Arr**	**32.08**	**20**	P	**P**	**06 18 14.3**	**-2.6**
MJAR				pmax	pmax		
	comp=Z,356nm,1.7s						
MAJO	**Matsushiro**	**32.08**	**20**	P	**P**	**06 18 13.6**	**-3.2**
MAJO	**Matsushiro**	**32.08**	**20**	IAMs_20	IAMs_20	06 30 26.6	
	comp=Z,148µm,20.0s						
MAJO	**Matsushiro**	**32.08**	**20**	P	**P**	**06 18 14.3**	**-2.6**
MAJO	**Matsushiro**	**32.08**	**20**	*i* P	**P**	**06 18 13.9**	**-3.0**
MAJO				pmax	pmax		
	comp=Z,256nm,1.4s						
MAJO				MLR	MLR		
	comp=Z,140µm,19.0s						
MAJO	**Matsushiro**	**32.08**	**20**	⇑P	**P**	**06 18 14.2**	**-2.7**
MAT	**Matsushiro**	**32.08**	**20**	P	**P**	**06 18 14.0**	**-2.9**
MJB9	**Matsu-Tunnel**	**32.08**	**20**	P	**P**	**06 18 14.4**	**-2.5**
HNS	**HongShan**	**32.13**	**344**	⇓P	**P**	**06 18 16.6**	**-0.6**
HNS				pP	**pP**	**06 18 22.8**	**-1.7**
HNS				sP	**sP**	**06 18 27.9**	**+0.4**
HNS				PP	**PP**	**06 19 23.8**	**-6.3**
HNS				S	**S**	**06 23 30.8**	**+2.4**
HNS				pmax	pmax		
	comp=Z,61nm,1.5s						
HNS				LR	LR		
	comp=Z,49µm,20.1s						
HNS				LR	LR		
	comp=Z,309µm,22.0s						
HNS				LR	LR		
	comp=Z,186µm,21.4s						
PYAG	**Pyongyang**	**32.32**	**1**	P	**P**	**06 18 20.6**	**+1.8**
PYAG				S	**S**	**06 23 32.7**	**+1.5**
PYAG				AmB			
	comp=Z,11µm,4.0s						
DL2	**Dalian**	**32.33**	**355**	⇑*i*P	**P**	**06 18 19.0**	**0.0**
DL2				PP	**PP**	**06 19 26.3**	**-6.0**
DL2				S	**S**	**06 23 33.3**	**+1.8**
DL2				pmax	pmax		
	comp=Z,880nm,1.1s						
DL2				pmax	pmax		
	comp=Z,18µm,7.0s						
DL2				LR	LR		
	comp=Z,63µm,23.7s						
DL2				LR	LR		
	comp=Z,202µm,25.9s						
DL2				LR	LR		
	comp=Z,186µm,21.2s						
PATS	**Pohnpei**	**32.84**	**88**	P	**P**	**06 18 26.1**	**+2.3**
TIY	**Taiyuan**	**33.10**	**341**	*e*P	**P**	**06 18 25.3**	**-0.5**
TIY				S	**S**	**06 23 48.8**	**+5.2**
TIY				pmax	pmax		
	comp=Z,200nm,1.0s						
TIY				pmax	pmax		
	comp=Z,14µm,6.1s						
TIY				LR	LR		
	comp=Z,184µm,29.5s						
TIY				LR	LR		
	comp=Z,191µm,28.2s						
TIY				LR	LR		
	comp=Z,237µm,26.1s						
TV1H	**Townsville Har**	**33.33**	**141**	P	**P**	**06 18 29.7**	**+1.8**
JSD	**Sado**	**33.46**	**19**	P	**P**	**06 18 27.4**	**-1.5**
JSD	**Sado**	**33.46**	**19**	P	**P**	**06 18 30.8**	**+2.0**
CTA	**Charters Tower**	**33.62**	**143**	P	**P**	**06 18 30.6**	**+0.2**
	comp=Z,123nm,0.9s,baz=317,slow=9.9,SNR=37						
CTA				S	**S**	**06 23 49.0**	**-2.9**
	comp=Z,39nm,1.0s,baz=213,slow=23,SNR=1.4						
CTA				LR	LR	06 34 07.9	
	comp=Z,188µm,19.6s,baz=307,slow=40						
	comp=Z,123nm,0.9s						
CTAO	**Charters Tower**	**33.62**	**143**	P	**P**	**06 18 31.5**	**+1.0**
CTAO	**Charters Tower**	**33.62**	**143**	IAMs_20	IAMs_20	06 33 47.2	
	comp=Z,191µm,20.0s						
CTAO	**Charters Tower**	**33.62**	**143**	P	**P**	**06 18 31.7**	**+1.2**
CTAO	**Charters Tower**	**33.62**	**143**	P	**P**	**06 18 31.5**	**+1.0**
CTAO				pmax	pmax		
	comp=Z,2µm,1.7s						
CTAO				MLR	MLR		
	comp=Z,191µm,20.0s						
CTAO	**Charters Tower**	**33.62**	**143**	⇑P	**P**	**06 18 31.2**	**+0.8**
MEEK	**Meekatharra**	**33.65**	**191**	P	**P**	**06 18 30.2**	**-0.5**
COCO	**West Island**	**33.86**	**237**	P	**P**	**06 18 31.7**	**-0.8**
COCO				P	**P**	**06 18 31.7**	**-0.8**
COCO				P	**P**	**06 18 31.7**	**-0.8**
COCO				S	**S**	**06 23 58.3**	**+2.6**
COCO				S	**S**	**06 23 58.3**	**+2.6**
COCO				S	**S**	**06 23 58.3**	**+2.6**
COCO	**West Island**	**33.86**	**237**	P	**P**	**06 18 31.7**	**-0.8**
COCO				IAmb	IAmb	06 18 38.8	
	comp=Z,676nm,1.1s						
COCO	**West Island**	**33.86**	**237**	P	**P**	**06 18 33.3**	**+0.7**
COCO	**West Island**	**33.86**	**237**	P	**P**	**06 18 32.9**	**+0.3**
	comp=Z,324nm,1.1s						
COCO	**West Island**	**33.86**	**237**	P	**P**	**06 18 31.7**	**-0.8**
COCO				pmax	pmax		
	comp=Z,676nm,1.1s						
COCO				MLR	MLR		
	comp=Z,93µm,22.0s						
COCO	**West Island**	**33.86**	**237**	⇑P	**P**	**06 18 30.9**	**-1.7**
JMM	**Marumori**	**34.19**	**22**	P	**P**	**06 18 33.5**	**-1.7**
BJT	**Baijiatuau**	**34.26**	**348**	P	**P**	**06 18 35.1**	**-0.7**
BJI	**Beijing**	**34.28**	**348**	P	**P**	**06 18 34.8**	**-1.2**
BJI				pP	**pP**	**06 18 42.0**	**-1.3**
BJI				PP	**PP**	**06 19 51.3**	**-2.6**
BJI				S	**S**	**06 24 00.5**	**-1.3**
BJI				SS	**SnSn**	**06 26 11.5**	**-0.5**
BJI				pmax	pmax		
	comp=Z,65nm,1.2s						
BJI				pmax	pmax		
	comp=Z,2µm,4.8s						
BJI				LR	LR		
	comp=Z,28µm,25.0s						
BJI				LR	LR		
	comp=Z,121µm,26.9s						
BJI				LR	LR		
	comp=Z,56µm,21.2s						
JYA	**Atsumi**	**34.44**	**20**	P	**P**	**06 18 36.4**	**-1.0**
SAIH	**SAIHA**	**34.88**	**300**	*e*P	**P**	**06 18 40.2**	**-1.3**
SAIH				IAmb	IAmb	06 18 49.1	
	comp=Z,429nm,0.6s						
SNY	**Shenyang**	**35.12**	**358**	⇑P	**P**	**06 18 43.4**	**+0.2**
SNY				sP	**sP**	**06 18 55.1**	**+1.6**
SNY				S	**S**	**06 24 20.9**	**+6.3**
SNY				SS	**SnSn**	**06 26 33.6**	**+1.5**
SNY				pmax	pmax		
	comp=Z,84nm,1.1s						
SNY				LR	LR		
	comp=Z,117µm,19.9s						
SNY				LR	LR		
	comp=Z,46µm,17.1s						
SNY				LR	LR		
	comp=Z,170µm,19.9s						
MOKO	**MOKOCHONG**	**35.24**	**307**	*e*P	**P**	**06 18 42.6**	**-2.0**
MOKO				IAmb	IAmb	06 18 51.8	
	comp=Z,597nm,1.7s						
LZDM	**Lanzhou Array**	**35.28**	**329**	P	**P**	**06 18 44.3**	**-0.8**
	comp=Z,58nm,1.0s,baz=137,slow=9.3,SNR=41						
LZDM				S	**S**	**06 24 14.9**	**-3.0**
	comp=Z,1.2nm,0.3s,baz=274,slow=25,SNR=1.4						
LZDM				LR	LR	06 34 29.0	
	comp=Z,102µm,18.3s,baz=115,slow=39						
	comp=Z,58nm,1.0s						
KOHI	**KOHIMA**	**35.28**	**306**	*e*P	**P**	**06 18 43.0**	**-2.0**
KOHI				IAmb	IAmb	06 18 52.8	
	comp=Z,197nm,0.5s						
LZH	**Lanzhou**	**35.30**	**329**	⇓P	**P**	**06 18 45.8**	**+0.7**
LZH				pP	pP	06 18 52.8	+0.4
LZH				sP	sP	06 18 55.8	+0.4
LZH				S	**S**	**06 24 24.8**	**+6.8**
LZH				pmax	pmax		
	comp=Z,350nm,1.5s						
LZH				pmax	pmax		
	comp=Z,7µm,4.0s						
LZH				LR	LR		
	comp=Z,189µm,17.5s						
LZH				LR	LR		
	comp=Z,215µm,18.1s						
LZH				LR	LR		
	comp=Z,160µm,20.9s						
PASG	**PASIGHAT**	**35.48**	**311**	*e*P	**P**	**06 18 44.6**	**-1.9**
PASG				IAmb	IAmb	06 18 57.5	
SILR	**SILCHAR**	**35.94**	**304**	IAmb	IAmb	06 18 59.5	
	comp=Z,117nm,0.5s						
BRDH	**Bariadhala**	**36.10**	**300**	LR	LR	06 35 33.1	
	comp=Z,124µm,20.1s,baz=125,slow=40						
MSHR	**Mys Shultsa**	**36.22**	**7**	*i* P	**P**	**06 18 50.8**	**-1.8**
HHC	**Hu-ho-hao-te**	**36.24**	**342**	*e*P	**P**	**06 18 52.8**	**-0.2**
HHC				PP	**PP**	**06 20 17.0**	**+1.4**
HHC				S	**S**	**06 24 33.1**	**+1.0**
HHC				SS	**SnSn**	**06 26 52.8**	**-6.6**
HHC				ScS	**ScS**	**06 29 07.8**	**-1.2**
HHC				pmax	pmax		
	comp=Z,300nm,1.8s						
HHC				pmax	pmax		
	comp=Z,17µm,6.6s						

HHC				LR	LR		
	comp=Z,144μm,19.6s						
HHC				LR	LR		
	comp=Z,45μm,17.9s						
HHC				LR	LR		
	comp=Z,214μm,19.6s						
PSTR	**Posyet**	**36.24**	**7**	*i* P	**P**	**06 18 52.1**	**-0.7**
ZIRO	**ZIRO**	**36.34**	**309**	*e*P	**P**	**06 18 50.4**	**-3.7**
ZIRO				IAmb	IAmb	06 19 01.4	
	comp=Z,174nm,0.4s						
BELO	**BELONIA**	**36.48**	**301**	*e*P	**P**	**06 18 53.5**	**-1.6**
BTO	**Baotou**	**36.51**	**340**	*e*P	**P**	**06 18 57.4**	**+2.1**
BTO				pP	**sP**	**06 19 07.0**	**+1.4**
BTO				sP	pP	06 19 11.3	+8.7
BTO				PP	**PP**	**06 20 22.9**	**+4.3**
BTO				S	**S**	**06 24 39.8**	**+3.6**
BTO				SS	**SnSn**	**06 27 06.5**	**+0.6**
BTO				pmax	pmax		
	comp=Z,130nm,2.3s						
BTO				pmax	pmax		
	comp=Z,35μm,11.3s						
BTO				LR	LR		
	comp=Z,374μm,22.6s						
BTO				LR	LR		
	comp=Z,753μm,24.7s						
BTO				LR	LR		
	comp=Z,594μm,22.9s						
MORW	**Morawa**	**36.55**	**194**	P	**P**	**06 18 54.7**	**-0.9**
MORW				IAmb	IAmb	06 19 14.7	
	comp=Z,277nm,0.9s						
MORW	**Morawa**	**36.55**	**194**	P	**P**	**06 18 55.4**	**-0.2**
MORW	**Morawa**	**36.55**	**194**	⇑P	**P**	**06 18 54.5**	**-1.0**
TEZP	**TEZPUR**	**36.74**	**307**	*e*P	**P**	**06 18 55.6**	**-1.7**
TEZP				IAmb	IAmb	06 19 06.2	
	comp=Z,644nm,2.3s						
VLA	**Vladivostok**	**36.85**	**8**	*i* P	**P**	**06 18 58.7**	**+0.7**
VLA				pmax	pmax		
	comp=Z,1μm,1.3s						
AGT	**Agartala**	**36.88**	**301**	*e*P	**P**	**06 18 57.0**	**-1.6**
AGT				IAmb	IAmb	06 19 24.9	
	comp=Z,684nm,1.5s						
SHL	**Shillong**	**37.02**	**304**	P	**P**	**06 19 00.5**	**+0.5**
	SNR=280						
SHL				S	**S**	**06 24 51.6**	**+7.0**
SHL	**Shillong**	**37.02**	**304**	IAmb	IAmb	06 19 12.5	
	comp=Z,791nm,0.9s						
SHL	**Shillong**	**37.02**	**304**	P	**P**	**06 18 58.6**	**-1.4**
SHL				pmax	pmax		
	comp=Z,967nm,0.9s						
CN2	**Changchun**	**37.06**	**0**	*e*P	**P**	**06 18 59.1**	**-0.7**
CN2				*e*pP	pP	06 19 08.4	+1.3
CN2				*e*sP	sP	06 19 13.1	+3.0
CN2				PP	**PP**	**06 20 27.8**	**+3.3**
CN2				PcP	**PcP**	**06 21 25.8**	**+5.6**
CN2				*e*S	**S**	**06 24 49.1**	**+4.8**
CN2				pmax	pmax		
	comp=Z,11μm,8.0s						
CN2				LR	LR		
	comp=Z,71μm,23.0s						
CN2				LR	LR		
	comp=Z,87μm,23.0s						
CN2				LR	LR		
	comp=Z,76μm,25.6s						
FORT	**Forrest**	**37.26**	**176**	P	**P**	**06 19 01.4**	**-0.2**
FORT				IAmb	IAmb	06 19 12.2	
	comp=Z,315nm,0.8s						
FORT	**Forrest**	**37.26**	**176**	⇑P	**P**	**06 19 01.1**	**-0.4**
INKA	**Innaminka**	**37.28**	**157**	P	**P**	**06 19 02.2**	**+0.4**
GUWA	**GUWAHATI**	**37.44**	**305**	*e*P	**P**	**06 19 01.4**	**-1.9**
GUWA				IAmb	IAmb	06 19 11.7	
	comp=Z,916nm,1.1s						
TATA	**Tatamba Isabel**	**37.53**	**113**	P	**P**	**06 19 05.9**	**+1.7**
QLP	**Quilpie**	**37.77**	**152**	P	**P**	**06 19 05.3**	**-0.7**
QLP	**Quilpie**	**37.77**	**152**	⇑P	**P**	**06 19 05.5**	**-0.6**
SAVO	**Savo Central**	**37.83**	**114**	P	**P**	**06 19 09.4**	**+2.6**
BLDU	**Ballidu**	**37.89**	**192**	P	**P**	**06 19 06.3**	**-0.7**
USRK	**Ussuriysk Ar.**	**37.92**	**8**	P	**P**	**06 19 06.5**	**-0.5**
	comp=Z,106nm,1.0s,baz=188,slow=4.6,SNR=59						
	comp=Z,106nm,1.0s						
TAWA	**Tawang**	**37.92**	**307**	*e*P	**P**	**06 19 05.6**	**-2.2**
TAWA				IAmb	IAmb	06 19 16.0	
	comp=Z,602nm,1.5s						
XLT	**XiLinHaoTe**	**38.02**	**349**	*e*P	**P**	**06 19 07.8**	**-0.2**
XLT				pP	pP	06 19 14.0	-1.4
XLT				sP	sP	06 19 18.1	-0.3
XLT				S	**S**	**06 24 53.1**	**-6.0**
XLT				ScP	**ScP**	**06 25 10.4**	**+0.8**
XLT				pmax	pmax		
	comp=Z,54nm,1.4s						
XLT				LR	LR		
	comp=Z,214μm,24.9s						
XLT				LR	LR		
	comp=Z,108μm,24.0s						
MDJ	**Mudanjiang**	**38.06**	**5**	P	**P**	**06 19 07.9**	**-0.4**
MDJ	**Mudanjiang**	**38.06**	**5**	P	**P**	**06 19 09.4**	**+1.1**
MDJ				sP	sP	06 19 19.5	+0.9
MDJ				S	**S**	**06 24 59.8**	**+0.3**
MDJ				pmax	pmax		
	comp=Z,200nm,1.2s						
MDJ				LR	LR		
	comp=Z,89μm,22.3s						
MDJ				LR	LR		
	comp=Z,125μm,24.4s						
MDJ				LR	LR		
	comp=Z,146μm,23.4s						
MDJ	**Mudanjiang**	**38.06**	**5**	P	**P**	**06 19 08.6**	**+0.3**
JSH	**Shimam**	**38.21**	**18**	P	**P**	**06 19 11.5**	**+2.0**
KLBR	**Kellerberrin**	**38.64**	**190**	P	**P**	**06 19 13.0**	**-0.3**
ERM	**Erimo**	**38.69**	**22**	P	**P**	**06 19 11.7**	**-1.9**
ERM	**Erimo**	**38.69**	**22**	IAMs_20	IAMs_20	06 34 56.7	
	comp=Z,138μm,21.0s						
ERM	**Erimo**	**38.69**	**22**	P	**P**	**06 19 15.5**	**+1.9**
ERM	**Erimo**	**38.69**	**22**	P	**P**	**06 19 11.7**	**-1.9**
ERM				pmax	pmax		
	comp=Z,279nm,1.0s						
ERM				MLR	MLR		
	comp=Z,138μm,21.0s						
JEM	**Erimo**	**38.69**	**22**	P	**P**	**06 19 15.6**	**+2.0**
DHUB	**DHUBRI**	**38.76**	**304**	*e*P	**P**	**06 19 12.7**	**-1.7**
DHUB				IAmb	IAmb	06 19 18.9	
	comp=Z,497nm,1.7s						
JEW	**Eniwo**	**38.83**	**19**	P	**P**	**06 19 15.5**	**+0.8**
CAL	**Calcutta**	**38.94**	**298**	*e*P	**P**	**06 19 14.2**	**-1.8**
BNX	**BinXian**	**39.04**	**2**	⇑P	**P**	**06 19 15.8**	**-0.7**
BNX				pP	**pP**	**06 19 25.1**	**+1.2**
BNX				sP	**sP**	**06 19 29.3**	**+2.5**
BNX				S	**S**	**06 25 15.1**	**+0.8**
BNX				sS	**sS**	**06 25 28.8**	**+2.0**
BNX				pmax	pmax		
	comp=Z,470nm,1.8s						
BNX				pmax	pmax		
	comp=Z,14μm,6.2s						
BNX				LR	LR		
	comp=Z,79μm,21.7s						
BNX				LR	LR		
	comp=Z,95μm,21.7s						
BNX				LR	LR		
	comp=Z,156μm,21.7s						
NGOA	**Tingoa Renbel**	**39.05**	**117**	P	**P**	**06 19 17.6**	**+0.6**
COBR	**COOCHBEHAR**	**39.31**	**304**	*e*P	**P**	**06 19 17.5**	**-1.5**
MUN	**Mundaring**	**39.31**	**192**	P	**P**	**06 19 18.6**	**-0.3**
MUN	**Mundaring**	**39.31**	**192**	P	**P**	**06 19 19.3**	**+0.4**
MTKN	**Mount Kenneth**	**39.36**	**193**	P	**P**	**06 19 21.0**	**+1.7**
GD1S	**Gladstone Soft**	**39.44**	**141**	P	**P**	**06 19 21.9**	**+1.8**
LSA	**Lhasa**	**39.46**	**310**	P	**P**	**06 19 16.6**	**-4.2**
LSA				pmax	pmax		
	comp=Z,82nm,1.4s						
LSA				LR	LR		
	comp=Z,71μm,30.2s						
LSA				LR	LR		
	comp=Z,34μm,31.4s						
LSA	**Lhasa**	**39.46**	**310**	P	**P**	**06 19 19.9**	**-0.9**
LSA	**Lhasa**	**39.46**	**310**	P	**P**	**06 19 20.3**	**-0.5**
TEY	**Ternei**	**39.55**	**13**	⇑*e*P	**P**	**06 19 20.7**	**0.0**
TEY				pmax	pmax		
	comp=E,10.0nm,1.1s						
TEY				pmax	pmax		
	comp=N,80nm,1.0s						
TEY				pmax	pmax		
	comp=Z,130nm,1.0s						
TEY				pmax	pmax		
	comp=N,1μm,4.8s						
TEY				pmax	pmax		
	comp=Z,2μm,4.7s						
GTA	**Gaotai**	**39.90**	**329**	P	**P**	**06 19 24.1**	**+0.2**
GTA				pP	sP	06 19 34.8	+0.5
GTA				PP	**PP**	**06 21 04.9**	**+9.1**
GTA				S	**S**	**06 25 34.0**	**+6.4**
GTA				pmax	pmax		
	comp=Z,140nm,1.6s						
GTA				pmax	pmax		
	comp=Z,6μm,8.2s						
GTA				LR	LR		
	comp=Z,167μm,21.1s						
GTA				LR	LR		
	comp=Z,100μm,20.4s						
GTA				LR	LR		
	comp=Z,176μm,18.5s						
JPG	**JALPAIGURI**	**40.02**	**304**	*e*P	**P**	**06 19 23.2**	**-1.8**
NWAO	**Narrogin (SRO)**	**40.03**	**190**	P	**P**	**06 19 24.1**	**-0.8**
NWAO				P	**P**	**06 19 24.1**	**-0.8**
NWAO				S	**S**	**06 25 32.0**	**+2.6**
NWAO				S	**S**	**06 25 32.0**	**+2.6**
NWAO	**Narrogin (SRO)**	**40.03**	**190**	P	**P**	**06 19 24.6**	**-0.3**
NWAO				IAmb	IAmb	06 19 44.7	
	comp=Z,999nm,1.0s						
NWAO	**Narrogin (SRO)**	**40.03**	**190**	P	**P**	**06 19 25.1**	**+0.2**
NWAO	**Narrogin (SRO)**	**40.03**	**190**	P	**P**	**06 19 24.6**	**-0.3**
NWAO				pmax	pmax		
	comp=Z,999nm,1.0s						
NWAO				MLR	MLR		
	comp=Z,82μm,22.0s						
HURO	**Huro Makira**	**40.24**	**115**	P	**P**	**06 19 30.5**	**+3.6**
ASAJ	**Asahikawa**	**40.35**	**19**	P	**P**	**06 19 27.1**	**-0.3**
	comp=Z,73nm,1.1s,baz=248,slow=3.2,SNR=20						
ASAJ				S	**S**	**06 25 29.2**	**-4.7**
	comp=Z,24nm,1.1s,baz=252,slow=9.5,SNR=2.2						
ASAJ				LR	LR	06 37 28.6	
	comp=Z,100μm,18.8s,baz=224,slow=38						
	comp=Z,73nm,1.1s						
JKA	**Kamikawa-asahi**	**40.35**	**19**	⇑P	**P**	**06 19 28.2**	**+0.9**
GTK	**Tadong**	**40.42**	**305**	*e*P	**P**	**06 19 26.6**	**-1.8**
GTK				IAmb	IAmb	06 19 41.6	
	comp=Z,332nm,0.9s						
AUHAR	**St Anne's Scho**	**40.45**	**192**	P	**P**	**06 19 30.7**	**+2.4**
EIDS	**Eidsvold**	**40.51**	**143**	P	**P**	**06 19 28.7**	**-0.3**
EIDS				IAmb	IAmb	06 19 40.2	
	comp=Z,469nm,1.1s						
EIDS	**Eidsvold**	**40.51**	**143**	P	**P**	**06 19 28.8**	**-0.1**
EIDS	**Eidsvold**	**40.51**	**143**	⇑P	**P**	**06 19 28.5**	**-0.5**
BBOO	**Buckleboo**	**40.51**	**166**	P	**P**	**06 19 29.0**	**+0.1**
BBOO	**Buckleboo**	**40.51**	**166**	P	**P**	**06 19 28.8**	**-0.1**
GOMU	**GeErMu**	**40.54**	**321**	P	**P**	**06 19 29.8**	**+0.2**
GOMU				S	**S**	**06 25 36.8**	**-1.0**
GOMU				SS	**SS**	**06 28 37.1**	**-0.8**
GOMU				pmax	pmax		
	comp=Z,210nm,1.6s						
GOMU				LR	LR		
	comp=Z,80μm,19.0s						
GOMU				LR	LR		
	comp=Z,136μm,18.2s						
GOMU				LR	LR		
	comp=Z,257μm,19.3s						
BWNR	**Bhubaneshwar**	**40.55**	**293**	*e*P	**P**	**06 19 27.7**	**-1.7**
AUBUS	**Georgiana Moll**	**41.11**	**193**	P	**P**	**06 19 36.2**	**+2.4**
WHYH	**Whyalla**	**41.11**	**164**	P	**P**	**06 19 34.2**	**+0.4**
STKA	**Stephens Creek**	**41.31**	**159**	P	**P**	**06 19 35.9**	**+0.4**
	comp=Z,631nm,1.1s,baz=329,slow=8.9,SNR=157						
STKA				PP	**PP**	**06 21 14.8**	**+3.5**
	comp=Z,69nm,0.8s,baz=333,slow=12,SNR=0.6						
STKA				S	**S**	**06 25 46.6**	**-1.9**
	comp=Z,153nm,1.2s,baz=166,slow=16,SNR=5.5						
STKA				LR	LR	06 38 54.7	
	comp=Z,57μm,21.1s,baz=334,slow=39						
STKA	**Stephens Creek**	**41.31**	**159**	P	**P**	**06 19 36.0**	**+0.5**
STKA	**Stephens Creek**	**41.31**	**159**	P	**P**	**06 19 36.0**	**+0.5**
STKA				pmax	pmax		
	comp=Z,7μm,1.3s						
PTPS	**Port Pirie**	**41.36**	**164**	P	**P**	**06 19 37.9**	**+2.1**
YUK	**Yuzh-Kuril'sk**	**41.44**	**23**	*c i*P	**P**	**06 19 39.0**	**+2.6**
YUK				*i*		06 21 10.9	
YUK				*i* PPP	PPP	06 21 36.7	
YUK				*i* S	**S**	**06 25 55.2**	**+5.1**
YUK				pmax	pmax		
	comp=Z,1μm,2.1s						
YUK				pmax	pmax		
	comp=Z,968nm,1.1s						
YUK				pmax	pmax		
	comp=N,592nm,0.7s						
YUK				pmax	pmax		
	comp=E,241nm,0.7s						
JMUI	**Jamui**	**41.53**	**300**	*e*P	**P**	**06 19 35.5**	**-1.9**
AUJCS	**Jamestown Cent**	**41.56**	**163**	P	**P**	**06 19 38.4**	**+0.9**
AUCAS	**Cummins Area S**	**41.82**	**167**	P	**P**	**06 19 40.7**	**+1.1**
HTT	**Hallett**	**41.87**	**163**	P	**P**	**06 19 40.4**	**+0.3**
HTT	**Hallett**	**41.87**	**163**	P	**P**	**06 19 40.8**	**+0.7**
HTT	**Hallett**	**41.87**	**163**	⇑P	**P**	**06 19 40.4**	**+0.3**
AUALB	**St Joseph's Co**	**41.95**	**189**	P	**P**	**06 19 42.0**	**+1.4**
AULRC	**Lightning Ridg**	**41.96**	**150**	P	**P**	**06 19 40.1**	**-0.7**
GAYA	**Gaya**	**42.34**	**300**	*e*P	**P**	**06 19 42.4**	**-1.7**
RAGD	**RAYAGADA**	**42.50**	**291**	*e*P	**P**	**06 19 43.9**	**-1.6**
CMSA	**Cobar Meteorol**	**42.65**	**154**	P	**P**	**06 19 47.0**	**+0.6**
TW1H	**Toowoomba 1 Ha**	**42.66**	**144**	P	**P**	**06 19 47.9**	**+1.3**
JHSG	**JHARSUGUGA**	**42.78**	**295**	*e*P	**P**	**06 19 46.0**	**-1.6**
HIA	**Hailar**	**42.78**	**355**	P	**P**	**06 19 46.5**	**-0.8**
HIA				IAmb	IAmb	06 20 03.0	
	comp=Z,468nm,1.2s						
HIA	**Hailar**	**42.78**	**355**	IAMs_20	IAMs_20	06 38 36.9	
	comp=Z,94μm,20.0s						
HIA	**Hailar**	**42.78**	**355**	P	**P**	**06 19 47.8**	**+0.5**
HIA	**Hailar**	**42.78**	**355**	P	**P**	**06 19 46.5**	**-0.8**
HIA				pmax	pmax		
	comp=Z,468nm,1.2s						
HIA				MLR	MLR		
	comp=Z,94μm,20.0s						
YSS	**Yuzhno-Sakhali**	**42.94**	**18**	P	**P**	**06 19 47.7**	**-0.8**
YSS	**Yuzhno-Sakhali**	**42.94**	**18**	P	**P**	**06 19 50.1**	**+1.6**
YSS	**Yuzhno-Sakhali**	**42.94**	**18**	*e*P	**P**	**06 19 49.4**	**+0.9**
YSS				*e**PP	**sP**	**06 20 00.5**	**+1.6**
YSS				*e**SP	pP	06 20 07.1	+11
YSS				*e*		06 21 23.8	
YSS				*e*		06 21 39.4	
YSS				*e*S	**S**	**06 26 08.1**	**-4.0**
YSS				*e**SS	**sS**	**06 26 28.1**	**+3.1**
YSS				pmax	pmax		
	comp=Z,4μm,11.2s						
YSS				pmax	pmax		
	comp=N,2μm,9.7s						
YSS				pmax	pmax		
	comp=E,1μm,9.4s						
YSS				pmax	pmax		
	comp=Z,260nm,1.0s						
YSS	**Yuzhno-Sakhali**	**42.94**	**18**	⇑P	**P**	**06 19 48.4**	**-0.1**
STMR	**SITAMARHI**	**42.96**	**303**	*e*P	**P**	**06 19 47.1**	**-1.9**
HILR	**Hailar Array B**	**43.07**	**355**	P	**P**	**06 19 48.7**	**-0.9**
	comp=Z,19nm,0.5s,baz=168,slow=11,SNR=20						
HILR				S	S	06 26 03.2	-11
	comp=Z,0.5nm,0.3s,baz=33,slow=16,SNR=1.1						
HILR				LR	LR	06 40 41.8	
	comp=Z,75μm,18.4s,baz=120,slow=40						
	comp=Z,19nm,0.5s						
AUMAR	**Marden Senior**	**43.15**	**164**	P	**P**	**06 19 51.5**	**+1.1**
GHSS	**Government Hou**	**43.17**	**164**	P	**P**	**06 19 53.2**	**+2.6**
AUWSH	**Wavell State H**	**43.19**	**143**	P	**P**	**06 19 51.5**	**+0.7**
KUR	**Kuril'sk**	**43.22**	**23**	*e*P	**P**	**06 19 52.5**	**+1.6**
KUR				PPP	PPP	06 22 02.6	
KUR				S	**S**	**06 26 22.1**	**+5.7**
KUR				pmax	pmax		
	comp=Z,1μm,1.1s						
KUR				pmax	pmax		
	comp=N,453nm,1.2s						
KUR				pmax	pmax		
	comp=Z,11μm,9.0s						
KUR				MLR	MLR		
	comp=Z,68μm,20.0s						
KUR				MLR	MLR		
	comp=E,63μm,19.0s						
KUR				MLR	MLR		
	comp=N,26μm,15.0s						
HEH	**HeiHe**	**43.55**	**2**	*e*P	**P**	**06 19 52.9**	**-0.6**
HEH				pP	**sP**	**06 20 03.3**	**-0.6**
HEH				PP	**PP**	**06 21 34.9**	**-0.1**
HEH				S	**S**	**06 26 19.9**	**-1.2**
HEH				pmax	pmax		
	comp=N,330nm,1.3s						
HEH				pmax	pmax		
	comp=N,18μm,6.1s						
HEH				LR	LR		
	comp=N,48μm,22.4s						
HEH				LR	LR		
	comp=N,93μm,22.8s						
HEH				LR	LR		
	comp=N,175μm,20.9s						
AUMBR	**Murray Bridge**	**43.56**	**163**	P	**P**	**06 19 54.8**	**+1.1**
ULN	**Ulaanbaatar**	**43.96**	**342**	P	**P**	**06 19 57.4**	**+0.4**
ULN				P	**P**	**06 19 57.4**	**+0.4**
ULN				P	**P**	**06 19 57.4**	**+0.4**
ULN				S	**S**	**06 26 34.2**	**+6.7**
ULN				S	**S**	**06 26 34.2**	**+6.7**
ULN				S	**S**	**06 26 34.2**	**+6.7**
ULN	**Ulaanbaatar**	**43.96**	**342**	P	**P**	**06 19 56.1**	**-0.9**
ULN				IAmb	IAmb	06 20 11.6	
	comp=Z,645nm,1.5s						
ULN	**Ulaanbaatar**	**43.96**	**342**	P	**P**	**06 19 56.8**	**-0.2**
	comp=Z,1μm,1.7s						
ULN	**Ulaanbaatar**	**43.96**	**342**	*ce*P	**P**	**06 19 56.8**	**-0.2**
ULN				pmax	pmax		
	comp=Z,488nm,1.5s						
ULN				MLR	MLR		
	comp=Z,213μm,22.0s						
ULN	**Ulaanbaatar**	**43.96**	**342**	⇑P	**P**	**06 19 56.8**	**-0.2**
GC1S	**Gold Coast 1 S**	**44.03**	**143**	P	**P**	**06 20 00.1**	**+2.5**
SONM	**Songino Array**	**44.13**	**342**	P	**P**	**06 19 56.8**	**-1.6**
	comp=Z,7.9nm,1.0s,baz=163,slow=8.8,SNR=27						
SONM				S	**S**	**06 26 24.8**	**-5.2**
	comp=Z,3.5nm,0.9s,baz=186,slow=4.0,SNR=1.4						
SONM				LR	LR	06 39 35.2	
	comp=Z,234μm,21.9s,baz=157,slow=38						
SONM				PKPPKP	**P'P'df**	**06 51 43.6**	**-1.8**
	comp=Z,2.0nm,1.0s,baz=6.6,slow=1.7,SNR=4.2						
	comp=Z,7.9nm,1.0s						
SONM	**Songino Array**	**44.13**	**342**	P	**P**	**06 19 57.4**	**-1.0**
SONM	**Songino Array**	**44.13**	**342**	P	**P**	**06 19 57.4**	**-1.0**
SONM				pmax	pmax		
	comp=Z,400nm,1.4s						
HALK	**Hakmana**	**44.28**	**272**	⇑P	**P**	**06 20 02.5**	**+2.5**
BLSP	**Bilaspur**	**44.29**	**295**	*e*P	**P**	**06 19 58.4**	**-1.5**
MALK	**Mahakanadarawa**	**44.34**	**275**	P	**P**	**06 20 02.1**	**+1.7**
MALK	**Mahakanadarawa**	**44.34**	**275**	⇑P	**P**	**06 20 03.3**	**+2.9**
VAR	**Varanasi**	**44.42**	**300**	*e*P	**P**	**06 19 58.1**	**-2.8**
AUDCS	**Dubbo College**	**44.58**	**151**	P	**P**	**06 20 03.2**	**+1.2**
ARMA	**Armidale**	**44.66**	**147**	P	**P**	**06 20 03.5**	**+0.8**
ARMA	**Armidale**	**44.66**	**147**	P	**P**	**06 20 03.8**	**+1.1**
ARMA	**Armidale**	**44.66**	**147**	⇑P	**P**	**06 20 03.5**	**+0.8**
UGL	**Uglegorsk**	**44.66**	**16**	⇑*i*P	**P**	**06 20 03.4**	**+1.0**
UGL				*e*S	**S**	**06 26 31.4**	**-5.9**
UGL				pmax	pmax		
	comp=Z,200nm,1.1s						
UGL				pmax	pmax		
	comp=Z,14μm,12.0s						
VJD	**Vijayawada**	**44.70**	**287**	*e*P	**P**	**06 20 00.5**	**-2.6**
AUPHS	**Peel High Scho**	**44.80**	**148**	P	**P**	**06 20 05.3**	**+1.6**
GRNR	**Gornyy**	**45.01**	**10**	⇑*i*P	**P**	**06 20 05.5**	**+0.4**
GRNR				pmax	pmax		
	comp=Z,40nm,1.3s						
GRNR				MLR	MLR		
	comp=E,11μm,14.0s						
ALBI	**Allahabad**	**45.46**	**299**	*e*P	**P**	**06 20 07.5**	**-1.6**
ALBI				IAmb	IAmb	06 20 19.4	
	comp=Z,334nm,0.6s						
AUMAG	**Moama Anglican**	**46.25**	**158**	P	**P**	**06 20 17.7**	**+2.6**
CIT	**Chita**	**46.30**	**350**	*e*P	**P**	**06 20 16.2**	**+0.8**
CIT				*e*		06 20 22.8	
CIT				*e*		06 22 41.2	
CIT				*e*S	**S**	**06 27 05.4**	**+4.4**
BRCI	**Bahraich**	**46.31**	**302**	*e*P	**P**	**06 20 14.1**	**-1.7**
MGBR	**Mount Gambier**	**46.35**	**163**	P	**P**	**06 20 16.7**	**+0.8**
TYV	**Tymovskoe**	**46.45**	**15**	*e*P	**P**	**06 20 17.7**	**+1.2**
TYV				*e*S	**S**	**06 27 01.4**	**-1.6**
TYV				pmax	pmax		
	comp=Z,3μm,3.3s						
TYV				pmax	pmax		
	comp=Z,155nm,1.4s						
TYV				smax	smax		
	comp=N,26nm,2.5s						
TYV				smax	smax		
	comp=E,28nm,2.5s						
TYV				smax	smax		
	comp=N,11μm,5.7s						
TYV				smax	smax		
	comp=E,7μm,5.7s						
MGCD	**Mangrove Creek**	**46.59**	**150**	P	**P**	**06 20 20.5**	**+2.7**
SALM	**Salem**	**46.72**	**280**	*e*P	**P**	**06 20 17.7**	**-1.5**
HYB	**Hyderabad**	**46.80**	**288**	*e*P	**P**	**06 20 18.8**	**-1.1**
HYB				*e*pP	**pP**	**06 20 24.4**	**-3.1**
HYB				IVmB_BB		06 20 25.0	
	comp=Z,3μm,4.8s						
HYB				*e*PcP	**PcP**	**06 21 51.8**	**-1.1**
HYB				*e*PP	**PP**	**06 22 09.3**	**-0.9**
HYB				*e*S	**S**	**06 27 09.5**	**+0.4**
HYB				IVMs_BB	IVMs_BB	06 35 56.3	
	comp=Z,17μm,30.2s						
SYDH	**Sydney Hard Ro**	**46.85**	**151**	P	**P**	**06 20 22.4**	**+2.6**
KOUNC	**Koumac, New Ca**	**46.90**	**126**	P	**P**	**06 20 23.1**	**+2.6**
AUKHS	**Kincumber High**	**46.92**	**150**	P	**P**	**06 20 24.3**	**+3.9**
NGP	**Nagpur**	**46.94**	**293**	*e*P	**P**	**06 20 18.7**	**-2.2**
SANVU	**Saraoutou**	**46.98**	**118**	P	**P**	**06 20 22.9**	**+1.8**
SANVU	**Saraoutou**	**46.98**	**118**	P	**P**	**06 20 22.8**	**+1.6**
SANVU	**Saraoutou**	**46.98**	**118**	⇑P	**P**	**06 20 23.1**	**+1.8**
ZEA	**Zeya**	**47.03**	**2**	*e*P	**P**	**06 20 20.6**	**-0.4**
ZEA				*e*		06 20 38.1	
ZEA				*e*		06 22 17.4	
ZEA				*e*S	**S**	**06 27 14.7**	**+3.4**
ZEA				pmax	pmax		
	comp=E,40nm,1.0s						
ZEA				pmax	pmax		
	comp=N,20nm,1.5s						
ZEA				pmax	pmax		
	comp=Z,260nm,1.1s						
ZEA				pmax	pmax		
	comp=N,3μm,7.1s						
ZEA				pmax	pmax		
	comp=Z,6μm,7.6s						
ZEA				pmax	pmax		
	comp=N,4μm,8.2s						
ZEA				pmax	pmax		
	comp=Z,10μm,9.2s						
ZEA				smax	smax		
	comp=N,11μm,16.0s						
RIV	**Riverview**	**47.11**	**150**	P	**P**	**06 20 24.4**	**+2.5**
RIV	**Riverview**	**47.11**	**150**	P	**P**	**06 20 23.7**	**+1.9**
RIV	**Riverview**	**47.11**	**150**	⇑P	**P**	**06 20 23.8**	**+1.9**
AUHPC	**Hawkesdale P12**	**47.23**	**162**	P	**P**	**06 20 25.0**	**+2.3**
BRAT	**Ballarat**	**47.25**	**160**	P	**P**	**06 20 25.0**	**+2.1**
AUMTC	**Mt Clear Colle**	**47.29**	**160**	P	**P**	**06 20 24.9**	**+1.7**
AUDAR	**Daramalan Coll**	**47.32**	**153**	P	**P**	**06 20 25.6**	**+2.0**
ZAK	**Zakamensk**	**47.35**	**341**	*e*P	**P**	**06 20 24.0**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,169nm,2.0s						
KOD	**Kodaikanal**	**47.37**	**278**	*e*P	**P**	**06 20 22.8**	**-1.9**
AUMHS	**Melrose High S**	**47.39**	**153**	P	**P**	**06 20 26.2**	**+2.1**
WOLH	**Wollongong Har**	**47.43**	**151**	P	**P**	**06 20 27.2**	**+2.8**
CNB	**Canberra Magne**	**47.48**	**153**	P	**P**	**06 20 26.4**	**+1.6**
TARA	**Tarawa**	**47.83**	**94**	P	**P**	**06 20 30.5**	**+2.7**
TOO	**Toolangi**	**47.83**	**158**	P	**P**	**06 20 29.0**	**+1.5**
TOO				IAmb	IAmb	06 20 46.7	
	comp=Z,458nm,1.2s						
TOO	**Toolangi**	**47.83**	**158**	P	**P**	**06 20 29.0**	**+1.5**
TOO				pmax	pmax		
	comp=Z,458nm,1.2s						
TOO	**Toolangi**	**47.83**	**158**	⇑P	**P**	**06 20 28.7**	**+1.2**
MLBS	**Spotswood, Mel**	**47.84**	**159**	P	**P**	**06 20 30.2**	**+2.7**
AUUHS	**Ulladulla High**	**48.02**	**152**	P	**P**	**06 20 31.4**	**+2.5**
AUSMG	**Snowy Mountain**	**48.07**	**155**	P	**P**	**06 20 31.4**	**+1.9**
NKL	**Nikolayevsk**	**48.10**	**12**	*e*P	**P**	**06 20 26.3**	**-3.0**
NKL				*e*S	**S**	**06 27 24.8**	**-1.6**
NKL				pmax	pmax		
	comp=E,1μm,1.0s						
NKL				pmax	pmax		
	comp=N,671nm,1.1s						
NKL				pmax	pmax		
	comp=Z,4μm,1.2s						
NKL				smax	smax		
	comp=E,11μm,5.3s						
NKL				smax	smax		
	comp=N,7μm,7.0s						
NKL				MLR	MLR		
	comp=N,138μm,18.0s						
NKL				MLR	MLR		
	comp=E,188μm,20.0s						
NKL				MLR	MLR		
	comp=Z,288μm,20.0s						
PTH	**Pithoragarh**	**48.13**	**304**	*e*P	**P**	**06 20 28.2**	**-2.0**

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LGTI  Lohaghat          48.16 304 eP       P        06 20 29.0  -1.4
JHNI  Jhansi            48.28 298 eP       P        06 20 29.1  -2.1
TLY   Talaya            48.37 342  P       P        06 20 32.5 +1.0
TLY                                P       P        06 20 32.5 +1.0
TLY                                S       S        06 27 37.7 +7.3
TLY                                S       S        06 27 37.7 +7.3
TLY   Talaya            48.37 342  P       P        06 20 30.9  -0.5
TLY   Talaya            48.37 342ceP       P        06 20 31.7 +0.2
TLY                                pmax    pmax
      comp=Z,316nm,1.5s
TLY                                MLR     MLR
      comp=Z,182µm,24.0s
TLY   Talaya            48.37 342 ⇑P       P        06 20 33.0 +1.6
IRK   Irkutsk           48.67 343 eP       P        06 20 38.8 +5.0
IRK                               eS       S        06 27 46.3  +12
IRK                                pmax    pmax
      comp=Z,671nm,3.0s
AKL   Akola             48.73 292 eP       P        06 20 32.6  -2.1
AKL                                IAmb    IAmb     06 20 56.4
      comp=Z,650nm,1.5s
DVP   Devils Point      48.80 120  P       P        06 20 37.5 +2.2
MILA  Mila              48.84 154  P       P        06 20 37.5 +2.1
MILA  Mila              48.84 154 ⇑P       P        06 20 36.8 +1.5
AUSSC Sale College,     48.89 157  P       P        06 20 37.4 +1.8
NRDN  NARMADA NAGAR48.95 294 eP       P        06 20 34.6  -1.8
RTV   Rentapao          49.04 120  P       P        06 20 39.2 +2.1
TKRD  Thakurdwara       49.10 303 eP       P        06 20 35.5  -2.0
MOY   Mondy             49.20 340 eP       P        06 20 38.5 +0.5
MOY                                pmax    pmax
      comp=Z,695nm,2.5s
GUNA  GUNA              49.22 297 eP       P        06 20 36.7  -1.7
DZM   Mont Dzumac       49.40 126  LR      LR       06 39 59.1
      comp=Z,56µm,21.9s,baz=308,slow=34
DZM   Mont Dzumac       49.40 126 eP       P        06 20 39.6  -0.3
      comp=Z,2µm,1.2s
DZM                               eS       S        06 27 49.4 +3.5
      comp=Z,27µm,28.6s
DZM                               eSS      SS       06 31 15.9  -2.1
      comp=Z,39µm,27.2s
DZM                               eLQ      LQ       06 32 40.6
      comp=Z,388µm,38.2s
DZM                               eLR      LR       06 34 52.1
      comp=Z,238µm,29.4s
DZM   Mont Dzumac       49.40 126  P       P        06 20 40.6 +0.7
DZM                                IAmb    IAmb     06 20 57.3
      comp=Z,437nm,0.8s
DZM   Mont Dzumac       49.40 126  P       P        06 20 40.4 +0.5
DZM   Mont Dzumac       49.40 126 ⇑P       P        06 20 39.7  -0.2
ONTNC Ouen Toro         49.53 127  P       P        06 20 41.2 +0.4
ONTNC                              IAMs_20 IAMs_20  06 39 31.0
      comp=Z,77µm,22.0s
ONTNC Ouen Toro         49.53 127  P       P        06 20 41.6 +0.8
ONTNC Ouen Toro         49.53 127 ⇑P       P        06 20 41.1 +0.4
WMQ   Urumqi            49.55 325 eP       P        06 20 41.5 +0.8
WMQ                                PP      PP       06 22 39.8 +4.6
WMQ                                S       S        06 27 44.8  -2.5
WMQ                                pmax    pmax
      comp=Z,370nm,1.7s
WMQ                                pmax    pmax
      comp=Z,12µm,6.5s
WMQ                                LR      LR
      comp=Z,115µm,20.5s
WMQ                                LR      LR
      comp=Z,61µm,21.3s
WMQ                                LR      LR
      comp=Z,63µm,21.3s
KNGR  Kungurtug, Tuv    49.59 337 i P      P        06 20 40.9  -0.1
KNGR                               pmax    pmax
      comp=Z,350nm,1.3s
KNGR                               MLR     MLR
      comp=Z,55µm,17.0s
UGON  Onchagaon         49.65 302 eP       P        06 20 40.1  -1.5
YATNC Mamie plateau,    49.75 126  P       P        06 20 43.5 +1.0
LHI   Lord Howe Isla    49.79 142  P       P        06 20 43.3 +0.6
LHI                                IAmb    IAmb     06 21 04.8
      comp=Z,281nm,1.1s
LHI   Lord Howe Isla    49.79 142  P       P        06 20 42.4  -0.2
LHI   Lord Howe Isla    49.79 142 ⇑P       P        06 20 43.5 +0.9
OUENC Ouen Island, N    49.89 127  P       P        06 20 44.9 +1.4
MNGI  Mangalore         49.98 281 eP       P        06 20 42.4  -1.9
MERT  Meerut            49.99 302 eP       P        06 20 42.7  -1.6
JMIU  JAMIA UNIVERSI    50.24 302 eP       P        06 20 44.6  -1.6
LDR   Lodi Road         50.31 302 eP       P        06 20 44.9  -1.8
NDI   New Delhi         50.34 302 eP       P        06 20 45.4  -1.6
KLP   Kalpa             50.36 306 eP       P        06 20 45.7  -1.7
AYAN  Aya Nagar         50.36 302 eP       P        06 20 45.7  -1.4
NPLP  NPLP New Delhi    50.37 302 eP       P        06 20 45.3  -1.8
MARNC Mare, Loyalty     50.39 125  P       P        06 20 48.9 +1.6
MARNC Mare, Loyalty     50.39 125 ⇑P       P        06 20 48.0 +0.6
PINNC Pines Island,     50.47 126  P       P        06 20 49.6 +1.7
INH   Isangel           50.53 122  P       P        06 20 49.8 +1.4
JHJR  Jhajjar           50.80 302 eP       P        06 20 48.4  -2.0
KUDL  Kundal            50.81 301 eP       P        06 20 48.9  -1.5
SKR   Severo-Kuril's    50.91  25 eP       P        06 20 51.6 +0.8
SKR                               e                 06 22 42.7
SKR                               eS       S        06 28 05.0  -0.9
SKR                               eSS      ScS      06 30 29.9   -10
SKR                                pmax    pmax
      comp=Z,8µm,8.7s
SKR                                MLR     MLR
      comp=Z,58µm,16.0s
KAD   Karad             50.94 287 eP       P        06 20 49.7  -1.9
KKR   Kurukshetra       51.04 303 eP       P        06 20 49.9  -2.2
AUBRN Burnie High Sc    51.04 160  P       P        06 20 53.7 +1.8
RTK   Rohtak            51.11 302 eP       P        06 20 51.5  -1.3
CGRH  CHANDIGARH        51.30 304 eP       P        06 20 52.6  -1.6
HMDM  Hanimaadhoo       51.69 273  P       P        06 20 57.1  -0.2
HMDM                               S       S        06 28 20.1 +2.3
HMDM  Hanimaadhoo       51.69 273  P       P        06 20 56.4  -0.8
HMDM                               IAmb    IAmb     06 21 13.4
      comp=Z,784nm,1.2s
HMDM  Hanimaadhoo       51.69 273  P       P        06 20 57.7 +0.4
      comp=Z,32µmcomp=Z,13µmcomp=Z,563nm,1.2s
GLAD  Gladstone         51.76 158  P       P        06 20 59.8 +2.6
BHK   Bhakra            51.83 305 eP       P        06 20 53.0  -5.1
BOD   Bodaibo           51.84 352 eP       P        06 20 56.3  -1.4
BOD                                pmax    pmax
      comp=Z,431nm,1.9s
CORO  Coronation Par    51.85 159  P       P        06 21 00.4 +2.5
AJM   Ajmer             51.99 298 eP       P        06 20 57.5  -1.9
ALCI  Alchi Leh         52.12 309 eP       P        06 20 58.4  -2.2
TLWR  Talawar           52.35 306 eP       P        06 21 00.3  -1.7
UDPR  Udaipur           52.42 296 eP       P        06 20 59.4  -3.2
KAAM  Kaadhehdhoo       52.47 266  P       P        06 21 03.0  -0.1
KAAM                               S       S        06 28 31.3 +2.8
KAAM  Kaadhehdhoo       52.47 266  P       P        06 21 04.1 +1.0
      comp=Z,7µmcomp=Z,358nm,1.1s
KAAM  Kaadhehdhoo       52.47 266 ⇑P       P        06 21 04.5 +1.4
MOO   Moorlands         52.74 160  P       P        06 21 07.2 +2.6
MOO   Moorlands         52.74 160  P       P        06 21 07.8 +3.2
TAU   Tasmania Unive    53.20 160  P       P        06 21 08.6 +0.7
TAU                                IAmb    IAmb     06 21 26.6
      comp=Z,559nm,1.2s
TAU   Tasmania Unive    53.20 160  P       P        06 21 10.2 +2.3
TAU   Tasmania Unive    53.20 160  P       P        06 21 08.6 +0.7
TAU                                pmax    pmax
      comp=Z,559nm,1.2s
TAU   Tasmania Unive    53.20 160 ⇑P       P        06 21 09.0 +1.1
AUTAR Taroona High S    53.24 160  P       P        06 21 10.2 +2.0
ZSN   Zaisan            53.31 327 eP       P        06 21 08.3  -0.5
ZSN                               eS       S        06 28 40.1 +1.0
ZSN   Zaisan            53.31 327 eP       P        06 21 08.3  -0.5
ZSN                               eS       S        06 28 40.1 +1.0
PEA0B Petropavlovsk-    53.39  24ceP       P        06 21 07.3  -1.9
PETK  Petropavlovsk-    53.39  24  P       P        06 21 09.1  -0.1
      comp=Z,91nm,0.9s,baz=202,slow=3.2,SNR=47
PETK                               S       S        06 28 39.1  -0.8
      comp=Z,2.2nm,0.9s,baz=150,slow=24,SNR=1.3
      comp=Z,91nm,0.9s
PETK  Petropavlovsk-    53.39  24  P       P        06 21 08.8  -0.5
DGZ   Jazzator, Alta    53.39 330 i P      P        06 21 08.6  -0.9
DGZ                                pmax    pmax
      comp=Z,385nm,1.5s
DGZ                                MLR     MLR
      comp=Z,105µm,18.0s
WUS   Wushi             53.46 317  P       P        06 21 09.5  -0.6
WUS                                IAmb    IAmb     06 21 24.9
      comp=Z,877nm,1.4s
WUS   Wushi             53.46 317  IAMs_20 IAMs_20  06 46 20.5
      comp=Z,79µm,21.0s
SRGN  SRI GANGA NAGA53.48 302 eP       P        06 21 08.8  -1.5
JMU   Jammu             53.50 306 eP       P        06 21 09.0  -1.5
BKNR  BIKANER           53.53 300 eP       P        06 21 09.2  -1.5
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PET   Petropavlovsk     53.71  24  P       P        06 21 11.2  -0.3
PET                                IAMs_20 IAMs_20  06 45 26.1
      comp=Z,79µm,19.0s
PET   Petropavlovsk     53.71  24  P       P        06 21 13.4 +1.9
PET   Petropavlovsk     53.71  24 eP       P        06 21 11.8 +0.2
PET                               e                 06 22 17.3
PET                               eS       S        06 28 44.0  -0.2
PET                               e                 06 30 47.6
PET                                                 06 34 14.6
PET                                pmax    pmax
      comp=Z,653nm,1.6s
PET                                pmax    pmax
      comp=Z,9µm,9.7s
PET                                pmax    pmax
      comp=Z,9µm,11.6s
PET                                smax    smax
      comp=E,19µm,10.6s
PET                                smax    smax
      comp=N,27µm,16.8s
PET                                MLR     MLR
      comp=Z,49µm,18.0s
PET   Petropavlovsk     53.71  24 ⇑P       P        06 21 11.7 +0.2
PET   Petropavlovsk     53.71  24  P       P        06 21 11.2  -0.3
      comp=Z,13µmcomp=Z,619nm,1.6s
SRNI  Srinagar          53.92 308 eP       P        06 21 11.9  -1.8
SHLS  Shalkode          54.22 320 eP       P        06 21 12.7  -2.9
      comp=Z,386nm,1.9s
SHLS                              eS       S        06 28 48.4  -3.4
SHLS  Shalkode          54.22 320 eP       P        06 21 12.7  -2.9
SHLS                              eS       S        06 28 48.3  -3.4
SHLS                               pmax    pmax
      comp=Z,386nm,1.9s
PDGK  Podgornoye        54.28 320  P       P        06 21 15.3  -0.8
MK31  Makanchi Array    54.38 325ceP       P        06 21 16.4  -0.2
MKAR  Makanchi Array    54.38 325  P       P        06 21 15.5  -1.1
      comp=Z,16nm,0.6s,baz=122,slow=7.8,SNR=56
MKAR                               S       S        06 28 51.4  -2.2
      comp=Z,1.9nm,0.8s,baz=133,slow=8.1,SNR=1.1
MKAR                               LR      LR       06 45 54.5
      comp=Z,88µm,20.1s,baz=122,slow=38
MKAR                               PKPPKP           06 51 28.4
      comp=Z,1.6nm,0.8s,baz=279,slow=2.8,SNR=6.1
      comp=Z,16nm,0.6s
MKAR  Makanchi Array    54.38 325  P       P        06 21 15.9  -0.7
MKAR  Makanchi Array    54.38 325 i P      P        06 21 16.0  -0.7
MKAR                               pmax    pmax
      comp=Z,29nm,0.6s
DGAR  Diego Garcia      54.47 256  P       P        06 21 17.3  -0.4
DGAR                               P       P        06 21 17.3  -0.4
DGAR                               S       S        06 28 58.1 +2.5
DGAR                               S       S        06 28 58.1 +2.5
DGAR  Diego Garcia      54.47 256  P       P        06 21 16.3  -1.4
DGAR                               IAmb    IAmb     06 21 44.6
      comp=Z,715nm,1.4s
DGAR  Diego Garcia      54.47 256  IAMs_20 IAMs_20  06 43 02.9
      comp=Z,71µm,21.0s
DGAR  Diego Garcia      54.47 256ceP       P        06 21 18.0 +0.3
DGAR                               pmax    pmax
      comp=Z,1µm,2.5s
DGAR  Diego Garcia      54.47 256 ⇑P       P        06 21 16.8  -1.0
UZB   Uzynbulak         54.49 320 eP       P        06 21 16.8  -1.0
      comp=Z,311nm,1.8s
UZB                               eS       S        06 28 56.0 +0.5
UZB   Uzynbulak         54.49 320 eP       P        06 21 16.7  -1.0
UZB                               eS       S        06 28 56.0 +0.5
UZB                                pmax    pmax
      comp=Z,311nm,1.8s
MAKZ  Makanchi          54.56 325  P       P        06 21 17.0  -1.0
MAKZ                               IAmb    IAmb     06 21 29.0
      comp=Z,507nm,1.2s
MAKZ                               IAMs_20 IAMs_20  06 45 48.8
      comp=Z,85µm,20.0s
MAKZ  Makanchi          54.56 325  P       P        06 21 17.2  -0.7
MAKZ  Makanchi          54.56 325 ⇑P       P        06 21 17.3  -0.7
SATY  Saty              54.85 319 eP       P        06 21 19.4  -0.8
      comp=Z,386nm,2.2s
SATY                              eS       S        06 29 01.0 +0.7
SATY  Saty              54.85 319 eP       P        06 21 19.4  -0.8
SATY                              eS       S        06 29 00.9 +0.7
SATY                               pmax    pmax
      comp=Z,386nm,2.2s
KSH   Kashi             54.99 314  P       P        06 21 22.6 +1.3
KSH                                PP      PP       06 23 31.6 +7.0
KSH                                S       S        06 29 07.5 +5.2
KSH                                SS      SS       06 32 46.5 +0.4
KSH                                pmax    pmax
      comp=Z,71nm,1.4s
KSH                                pmax    pmax
      comp=Z,9µm,7.0s
KSH                                LR      LR
      comp=Z,91µm,20.6s
KSH                                LR      LR
      comp=Z,56µm,21.0s
KSH                                LR      LR
      comp=Z,88µm,17.9s
NIL   Nilore            55.03 307  P       P        06 21 20.6  -1.0
NIL   Nilore            55.03 307  P       P        06 21 20.6  -1.0
NIL                                pmax    pmax
      comp=Z,1µm,1.4s
KDJ   Kajisay           55.24 318  P       P        06 21 22.9  -0.3
KDJ                                IAmb    IAmb     06 21 36.9
      comp=Z,650nm,1.2s
KDJ   Kajisay           55.24 318  P       P        06 21 22.9  -0.3
KDJ                                pmax    pmax
      comp=Z,650nm,1.2s
YAK   Yakutsk           55.42   3  LR      LR       06 45 38.6
      comp=Z,85µm,21.8s,baz=186,slow=37
YAK   Yakutsk           55.42   3  P       P        06 21 23.3  -0.5
YAK   Yakutsk           55.42   3  IAMs_20 IAMs_20  06 46 54.3
      comp=Z,87µm,20.0s
YAK   Yakutsk           55.42   3 eP       P        06 21 23.3  -0.5
YAK                               e*PP     sP       06 21 37.3 +3.0
YAK                               e                 06 22 21.7
YAK                               e                 06 23 26.7
YAK                               ePPP     PPP      06 24 37.7
YAK                               eS       S        06 29 05.7  -1.2
YAK                               eSS      SS       06 32 48.6  -3.1
YAK                                pmax    pmax
      comp=Z,1µm,1.4s
YAK                                pmax    pmax
      comp=N,467nm,1.4s
YAK                                pmax    pmax
      comp=E,290nm,1.5s
YAK                                pmax    pmax
      comp=Z,3µm,4.7s
YAK                                pmax    pmax
      comp=N,3µm,4.6s
YAK                                pmax    pmax
      comp=E,313nm,2.2s
YAK                                smax    smax
      comp=E,34µm,12.2s
YAK                                smax    smax
      comp=N,32µm,14.7s
YAK                                MLR     MLR
      comp=Z,98µm,24.0s
YAK                                MLR     MLR
      comp=N,53µm,26.0s
YAK                                MLR     MLR
      comp=E,55µm,24.0s
YAK   Yakutsk           55.42   3 ⇑P       P        06 21 23.1  -0.7
ARXS  Arharly           55.76 320 eP       P        06 21 25.9  -0.8
TDK   Taldyqorghan      55.77 321 eP       P        06 21 25.9  -0.8
      comp=E,442nm,1.6s
TDK                               eS       S        06 29 12.9 +0.6
TDK                                LR      LR       06 48 10.1
      comp=E,42µm,17.7s
TDK   Taldyqorghan      55.77 321 eP       P        06 21 25.9  -0.8
TDK                               eS       S        06 29 12.8 +0.6
TDK                                pmax    pmax
      comp=Z,442nm,1.6s
TDK                                MLR     MLR
      comp=Z,42µm,18.0s
MDOK  Medeo             55.78 319 eP       P        06 21 26.1  -0.9
MDOK                              eS       S        06 29 13.2 +0.3
MDOK                               LR      LR       06 48 00.5
MDOK  Medeo             55.78 319 eP       P        06 21 26.1  -0.9
MDOK                              eS       S        06 29 13.1 +0.3
TNSS  Tian-Shan         55.80 319 eP       P        06 21 26.1  -1.4
TNSS  Tian-Shan         55.80 319 eP       P        06 21 26.0  -1.4
FUNA  Funafuti          55.84 105  IAMs_20 IAMs_20  06 42 52.4
      comp=Z,80µm,20.0s
FUNA  Funafuti          55.84 105  P       P        06 21 30.1 +2.4
FUNA  Funafuti          55.84 105 ⇑P       P        06 21 29.4 +1.7
KNDC  Almaty            55.86 319  P       P        06 21 27.6 +0.1
AAA   Alma-Ata          55.89 319 eP       P        06 21 26.8  -0.9
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AAA                                LR      LR       06 48 06.9
      comp=Z,47µm,20.7s
AAA   Alma-Ata          55.89 319 eP       P        06 21 26.8  -0.9
AAA                                MLR     MLR
      comp=Z,47µm,21.0s
ULHL  Ulahol            55.92 317  P       P        06 21 28.3 +0.2
      SNR=15
CHKK  Chushkaly         56.13 319 eP       P        06 21 28.6  -0.8
CHKK  Chushkaly         56.13 319 eP       P        06 21 28.5  -0.8
MA2   Magadan           56.33  15  P       P        06 21 30.2  -0.2
MA2                                IAmb    IAmb     06 21 37.0
      comp=Z,788nm,1.5s
MA2                                IAMs_20 IAMs_20  06 47 10.8
      comp=Z,72µm,21.0s
MA2   Magadan           56.33  15  P       P        06 21 31.1 +0.7
MA2   Magadan           56.33  15ceP       P        06 21 29.5  -0.9
MA2                                pmax    pmax
      comp=Z,689nm,2.5s
MA2                                MLR     MLR
      comp=Z,69µm,21.0s
MA2   Magadan           56.33  15 ⇑P       P        06 21 30.9 +0.5
MA2   Magadan           56.33  15  P       P        06 21 30.4   0.0
      comp=Z,11µmcomp=Z,345nm,1.2s
KUU   Kurty             56.57 319 eP       P        06 21 31.8  -0.7
      comp=Z,403nm,1.3s
KUU                               eS       S        06 29 23.8 +0.8
KUU                                LR      LR       06 48 46.8
KUU   Kurty             56.57 319 eP       P        06 21 31.8  -0.7
KUU                               eS       S        06 29 23.7 +0.8
KUU                                pmax    pmax
      comp=Z,403nm,1.3s
TKM2  Tokmak 2          56.64 318  P       P        06 21 33.2   0.0
      SNR=33
KBK   Karagaybulak      56.96 317  P       P        06 21 35.6 +0.2
      SNR=36
UCH   Uchtor            57.08 317  P       P        06 21 37.2 +0.5
      SNR=60
CHMS  Chumysh           57.24 318  P       P        06 21 36.7  -0.5
      SNR=24
AAK   Ala-Archa         57.26 317  P       P        06 21 37.4  -0.2
      SNR=33
AAK   Ala-Archa         57.26 317  P       P        06 21 35.7  -1.8
      comp=Z,26nm,0.9s,baz=123,slow=5.4,SNR=25
AAK                                S       S        06 29 27.2  -5.2
      comp=Z,4.7nm,0.9s,baz=284,slow=2.3,SNR=2.0
AAK                                LR      LR       06 46 21.0
      comp=Z,111µm,21.5s,baz=106,slow=36
      comp=Z,26nm,0.9s
AAK   Ala-Archa         57.26 317  P       P        06 21 38.0 +0.5
AAK                                P       P        06 21 38.0 +0.5
AAK                                S       S        06 29 37.0 +4.6
AAK                                S       S        06 29 37.0 +4.6
AAK   Ala-Archa         57.26 317  P       P        06 21 36.9  -0.6
AAK                                IAmb    IAmb     06 21 54.2
      comp=Z,367nm,1.3s
AAK   Ala-Archa         57.26 317 i P      P        06 21 35.8  -1.8
      SNR=43
AAK   Ala-Archa         57.26 317ceP       P        06 21 37.7 +0.1
AAK                                pmax    pmax
      comp=Z,411nm,1.4s
AAK                                MLR     MLR
      comp=Z,127µm,22.0s
AAK   Ala-Archa         57.26 317 ⇑P       P        06 21 37.0  -0.6
ZAA0  Zalesovo Array    57.38 333  P       P        06 21 35.6  -2.4
ZAA0                               IAmb    IAmb     06 22 14.7
      comp=Z,618nm,1.9s
ZALV  Zalesovo Beam     57.38 333  P       P        06 21 35.5  -2.4
      comp=Z,15nm,0.6s,baz=121,slow=7.1,SNR=35
ZALV                               PP      PP       06 23 45.1  -0.3
      comp=Z,16nm,0.9s,baz=116,slow=6.6,SNR=1.1
ZALV                               S       S        06 29 29.7  -3.5
      comp=Z,0.5nm,0.3s,baz=64,slow=34,SNR=0.9
ZALV                               LR      LR       06 50 19.9
      comp=Z,34µm,18.5s,baz=136,slow=40
ZALV                               PKPPKP  P'P'df   06 51 25.2  -1.9
      comp=Z,2.7nm,0.8s,baz=298,slow=3.1,SNR=4.6
ZALV                               PKP2bc  P'P'bc   06 51 36.3  -2.9
      comp=Z,11nm,1.0s,baz=298,slow=3.2,SNR=8.3
      comp=Z,15nm,0.6s
ZALV  Zalesovo Beam     57.38 333  P       P        06 21 35.7  -2.2
ZALV  Zalesovo Beam     57.38 333 i P      P        06 21 36.0  -2.0
ZALV                               pmax    pmax
      comp=Z,17nm,0.7s
MANEM Manem             57.44 311  P       P        06 21 39.2 +0.2
MANEM                              IAmb    IAmb     06 21 53.1
      comp=Z,3µm,1.6s
MSVF  Nonsavu           57.46 116  IAMs_20 IAMs_20  06 44 50.0
      comp=Z,70µm,21.0s
MSVF  Nonsavu           57.46 116  P       P        06 21 41.9 +2.7
MSVF  Nonsavu           57.46 116c iP      P        06 21 40.0 +0.8
MSVF                               pmax    pmax
      comp=Z,1µm,1.2s
SGDS  Sogindy           57.50 318 eP       P        06 21 38.2  -0.9
USP   Ospenovka         57.51 318  P       P        06 21 38.9  -0.2
      SNR=61
EKS2  Erkin-Say         57.76 317  P       P        06 21 41.4 +0.4
      SNR=36
DRK   Karamyk           57.98 313  P       P        06 21 43.1 +0.2
DRK                                IAmb    IAmb     06 21 58.9
      comp=Z,410nm,1.0s
DRK   Karamyk           57.98 313  P       P        06 21 43.1 +0.2
DRK                                pmax    pmax
      comp=Z,409nm,1.0s
MIDW  Midway            58.25  61  P       P        06 21 47.3 +2.8
KURBB Kurchatov Arra    58.55 327  P       P        06 21 44.4  -1.8
      comp=Z,40nm,0.8s,baz=126,slow=6.1,SNR=94
KURBB                              S       S        06 29 45.0  -3.6
      comp=Z,2.9nm,1.0s,baz=109,slow=31,SNR=1.5
KURBB                              LR      LR       06 50 13.9
      comp=Z,47µm,18.8s,baz=128,slow=39
KURBB                              PKPPKP  P'P'bc   06 51 15.9   -21
      comp=Z,4.2nm,1.0s,baz=280,slow=3.0,SNR=4.2
      comp=Z,40nm,0.8s
KURBB Kurchatov Arra    58.55 327  P       P        06 21 45.2  -1.0
BTLS  Baital            58.55 320 eP       P        06 21 44.8  -1.5
KURK  Kurchatov         58.55 327  P       P        06 21 46.1  -0.1
KURK                               P       P        06 21 46.1  -0.1
KURK                               S       S        06 29 53.9 +5.3
KURK                               S       S        06 29 53.9 +5.3
KURK  Kurchatov         58.55 327  P       P        06 21 45.0  -1.2
KURK                               IAmb    IAmb     06 22 28.1
      comp=Z,567nm,1.2s
KURK  Kurchatov         58.55 327  IAMs_20 IAMs_20  06 49 53.1
      comp=Z,60µm,20.0s
KURK  Kurchatov         58.55 327ceP       P        06 21 45.1  -1.1
KURK                               pmax    pmax
      comp=Z,498nm,1.1s
KURK                               MLR     MLR
      comp=Z,58µm,19.0s
KURK  Kurchatov         58.55 327 ⇑P       P        06 21 45.1  -1.1
KBU   Kabul Universi    58.55 307  P       P        06 21 46.1  -0.7
KBL   Kabul             58.63 307  P       P        06 21 46.6  -0.8
      SNR=188
KBL                                P       P        06 21 46.6  -0.8
      SNR=188
KBL                                S       S        06 29 54.5 +3.8
KBL                                S       S        06 29 54.5 +3.8
KBL   Kabul             58.63 307  P       P        06 21 46.2  -1.2
KBL                                IAmb    IAmb     06 21 55.8
      comp=Z,193nm,0.8s
KBL   Kabul             58.63 307  P       P        06 21 46.2  -1.2
KBL                                pmax    pmax
      comp=Z,193nm,0.9s
GAR   Garm              58.92 312  P       P        06 21 47.9  -1.3
DZA   Taraz             59.51 316 eP       P        06 21 52.3  -0.8
DZA   Taraz             59.51 316 eP       P        06 21 52.3  -0.8
SEY   Seymchan          59.61  14  LR      LR       06 46 52.2
      comp=Z,43µm,22.0s,baz=211,slow=35
SEY   Seymchan          59.61  14 eP       P        06 21 53.0  -0.3
SEY                               e                 06 24 02.9
SEY                               eS       S        06 30 03.1 +1.2
SEY                                pmax    pmax
      comp=Z,558nm,1.5s
SEY                                smax    smax
      comp=N,40µm,14.6s
SEY                                smax    smax
      comp=E,29µm,15.8s
CHGR  Chuyangaron       59.67 311  P       P        06 21 53.3  -1.1
SHAA  Shahritus         60.14 310  IAmb    IAmb     06 22 35.7
      comp=Z,774nm,1.4s
KK31  Karatay Array     60.15 316  P       P        06 21 56.8  -0.7
KK31  Karatay Array     60.15 316  P       P        06 21 56.8  -0.7
KK31                               pmax    pmax
      comp=Z,1µm,1.7s
KKAR  Karatay Array     60.15 316  P       P        06 21 56.6  -0.8
KKAR  Karatay Array     60.15 316  P       P        06 21 56.6  -0.8
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IUG	Iuzhnay	60.15	315	eP	P	06 21 56.9	-0.8
	comp=Z,360nm,2.0s						
IUG	Iuzhnay	60.15	315	eP	P	06 21 56.8	-0.8
IUG				pmax	pmax		
	comp=Z,360nm,2.0s						
CHM	Chimkent	60.51	315	eP	P	06 21 59.3	-0.7
	comp=Z,556nm,2.0s						
CHM				LR	LR	06 50 59.4	
	comp=Z,27µm,19.6s						
CHM	Chimkent	60.51	315	eP	P	06 21 59.2	-0.7
CHM				pmax	pmax		
	comp=Z,556nm,2.0s						
CHM				MLR	MLR		
	comp=Z,27µm,20.0s						
BRLS	Borolday	60.59	316	eP	P	06 21 59.5	-1.0
BRLS				eS	S	06 30 16.0	+0.7
BRLS	Borolday	60.59	316	eP	P	06 21 59.4	-1.0
BRLS				eS	S	06 30 16.0	+0.7
SHEM	Shemya Is, Ala	60.78	32	LR	LR	06 50 42.5	
	comp=Z,14µm,18.2s,baz=226,slow=38						
SMY	Shemya	60.78	32	P	P	06 22 03.8	+2.3
SMY	Shemya	60.78	32	⇑P	P	06 22 04.7	+3.1
BRZS	Berezniki	61.51	324	eP	P	06 22 06.0	-0.6
BRZS				eS	S	06 30 27.9	+1.1
BRZS	Berezniki	61.51	324	eP	P	06 22 06.0	-0.6
BRZS				eS	S	06 30 27.9	+1.1
OUZ	Omahuta	61.63	136	P	P	06 22 09.6	+2.0
OUZ	Omahuta	61.63	136	⇑P	P	06 22 09.2	+1.6
AIS	Amsterdam Isla	62.59	221	IAMs_20	IAMs_20	06 47 29.7	
	comp=Z,50µm,20.0s						
AMKA	Amchitka	62.98	35	P	P	06 22 15.3	-1.0
AMKA				IAmb	IAmb	06 22 25.9	
	comp=Z,226nm,0.9s						
WTAZ	Waiatarua	63.22	137	P	P	06 22 24.4	+6.2
NGCH	Negor - Chabah	63.83	295	P	P	06 22 23.3	+0.8
	SNR=14						
NGCH				S	S	06 31 01.2	+4.5
JCZ	Jackson Bay	63.90	146	P	P	06 22 24.4	+1.8
KUZ	Kuaotunu	63.90	136	P	P	06 22 24.5	+1.8
KUZ	Kuaotunu	63.90	136	P	P	06 22 28.0	+5.3
DCZ	Deep Cove	63.94	148	IAMs_20	IAMs_20	06 50 35.3	
	comp=Z,53µm,21.0s						
DCZ	Deep Cove	63.94	148	P	P	06 22 26.3	+3.5
NBEZ	Newall Road No	64.03	140	P	P	06 22 31.6	+8.1
PKE	Pukeiti	64.07	139	P	P	06 22 30.7	+6.9
QRZ	Quartz Range	64.08	142	P	P	06 22 25.8	+2.0
QRZ	Quartz Range	64.08	142	P	P	06 22 25.6	+1.8
HRA	Herat	64.08	305	P	P	06 22 22.6	-1.7
FOZ	Fox Glacier	64.12	145	IAMs_20	IAMs_20	06 50 41.1	
	comp=Z,75µm,21.0s						
FOZ	Fox Glacier	64.12	145	P	P	06 22 26.9	+2.9
BVA0	Borovoye Array	64.13	327	iP	P	06 22 22.6	-1.4
BVAR	Borovoye Array	64.13	327	P	P	06 22 22.6	-1.4
	comp=Z,41nm,0.8s,baz=116,slow=6.8,SNR=86						
BVAR				PP	PP	06 24 43.6	-1.6
	comp=Z,40nm,0.9s,baz=105,slow=9.1,SNR=1.4						
BVAR				S	S	06 30 56.8	-2.7
	comp=Z,1.6nm,0.7s,baz=134,slow=6.4,SNR=1.2						
BVAR				LR	LR	06 50 05.4	
	comp=Z,51µm,21.8s,baz=115,slow=36						
BVAR				PKPPKP	P'P'df	06 51 13.2	-3.6
	comp=Z,4.5nm,1.1s,baz=318,slow=2.0,SNR=6.2						
	comp=Z,41nm,0.8s						
KHEZ	Kahui Hut	64.14	140	P	P	06 22 26.3	+2.0
PYZ	Puysegur Point	64.18	149	IAMs_20	IAMs_20	06 51 53.5	
	comp=Z,61µm,19.0s						
PYZ	Puysegur Point	64.18	149	P	P	06 22 26.7	+2.4
BORK	Borovoye	64.18	327	P	P	06 22 23.1	-1.2
BORK				IAmb	IAmb	06 22 39.0	
	comp=Z,262nm,1.0s						
BORK	Borovoye	64.18	327	IAMs_20	IAMs_20	06 53 50.0	
	comp=Z,61µm,19.0s						
BORK	Borovoye	64.18	327	ceP	P	06 22 23.0	-1.2
BORK				pmax	pmax		
	comp=Z,258nm,0.9s						
BORK				MLR	MLR		
	comp=Z,70µm,21.0s						
DSZ	Denniston Nort	64.18	143	P	P	06 22 29.5	+5.0
HIZ	Hauiti	64.26	138	IAMs_20	IAMs_20	06 48 00.4	
	comp=Z,55µm,20.0s						
HIZ	Hauiti	64.26	138	P	P	06 22 27.7	+2.7
TOZ	Tahuroa Road	64.27	137	IAMs_20	IAMs_20	06 47 59.7	
	comp=Z,60µm,21.0s						
TOZ	Tahuroa Road	64.27	137	P	P	06 22 30.8	+5.7
WVZ	Waitaha Valley	64.36	145	P	P	06 22 30.2	+4.6
MLZ	Mavora Lakes	64.38	148	IAMs_20	IAMs_20	06 50 16.0	
	comp=Z,61µm,20.0s						
MLZ	Mavora Lakes	64.38	148	P	P	06 22 29.4	+3.7
WKZ	Wanaka	64.51	147	P	P	06 22 34.0	+7.4
VRZ	Vera Road	64.53	139	P	P	06 22 31.7	+4.9
INZ	Inchbonnie	64.56	144	IAMs_20	IAMs_20	06 50 46.6	
	comp=Z,76µm,21.0s						
TLZ	Tolley Road	64.61	138	P	P	06 22 32.2	+4.9
KMRZ	Kaimai	64.63	137	P	P	06 22 31.9	+4.5
WHZ	Wether Hill Ro	64.64	148	IAmb	IAmb	06 22 39.5	
	comp=Z,534nm,1.4s						
WHZ				IAMs_20	IAMs_20	06 50 45.8	
	comp=Z,57µm,21.0s						
WHZ	Wether Hill Ro	64.64	148	P	P	06 22 30.4	+3.0
TGRZ	Tauranga	64.78	137	P	P	06 22 33.8	+5.3
NNZ	Nelson	64.83	142	P	P	06 22 28.7	0.0
THZ	Tophouse	64.86	142	IAmb	IAmb	06 22 40.0	
	comp=Z,297nm,0.8s						
THZ	Tophouse	64.86	142	P	P	06 22 29.5	+0.6
LBZ	Lake Benmore	64.87	146	P	P	06 22 30.1	+1.2
KUTZ	Kaahu Road	64.89	138	P	P	06 22 34.7	+5.5
NGRZ	Ngongotaha	64.93	137	P	P	06 22 37.0	+7.5
EAZ	Earnscleugh	64.93	147	P	P	06 22 32.0	+2.7
RPZ	Rata Peaks	64.94	145	P	P	06 22 31.8	+2.4
TWVZ	Taurewa	64.94	139	P	P	06 22 34.3	+4.7
WATZ	Wairara	64.94	138	P	P	06 22 35.6	+6.1
PKVZ	Pokaka	65.00	139	P	P	06 22 34.9	+4.9
WAZ	Wanganui	65.02	140	P	P	06 22 35.5	+5.6
TIXI	Tiksi	65.02	1	LR	LR	06 52 18.4	
	comp=Z,100µm,20.6s,baz=202,slow=37						
TIXI	Tiksi	65.02	1	P	P	06 22 27.7	-1.7
TIXI				IAmb	IAmb	06 22 43.0	
	comp=Z,245nm,1.0s						
TIXI	Tiksi	65.02	1	iP	P	06 22 27.8	-1.7
TIXI				pmax	pmax		
	comp=Z,300nm,1.0s						
TIXI				MLR	MLR		
	comp=Z,135µm,21.0s						
OMRZ	Omania	65.05	137	P	P	06 22 35.7	+5.4
RATZ	Rangitukua	65.06	138	P	P	06 22 33.8	+3.5
KATZ	Kakaramea	65.06	138	P	P	06 22 38.0	+7.6
WTVZ	West Tongariro	65.07	139	P	P	06 22 33.2	+2.8
LTZ	Lake Taylor	65.08	144	P	P	06 22 30.5	+0.1
COVZ	Chateau Observ	65.08	139	P	P	06 22 35.9	+5.4
KRVZ	Karewarewa	65.09	139	P	P	06 22 35.6	+5.0
NNVZ	North Ngauruho	65.09	139	P	P	06 22 33.9	+3.2
NGZ	Ngauruhoe	65.11	139	P	P	06 22 34.5	+3.8
NTVZ	North Tongarir	65.11	139	P	P	06 22 33.4	+2.6
HLRZ	Highlands Stat	65.12	138	P	P	06 22 37.7	+7.1
FWVZ	Far West T-bar	65.12	139	P	P	06 22 35.6	+4.7
WPRZ	Whakapapatarin	65.13	138	P	P	06 22 36.6	+5.9
MAVZ	Matarangi	65.13	139	P	P	06 22 37.0	+5.9
SNVZ	South Ngauruho	65.14	139	P	P	06 22 34.9	+3.9
TRVZ	Turoa	65.14	139	P	P	06 22 34.6	+3.6
HRRZ	Handcock Road	65.14	138	P	P	06 22 36.5	+5.7
OTVZ	Oturere	65.14	139	P	P	06 22 36.7	+5.7
TMVZ	Te Maari	65.14	139	P	P	06 22 34.7	+3.7
WHVZ	Whangaehu Hut	65.16	139	P	P	06 22 37.0	+5.8
ETVZ	East Tongariro	65.16	139	P	P	06 22 34.0	+3.0
RITZ	Rihia Road	65.17	138	P	P	06 22 36.6	+5.6
JLN	Jalan Bani Buh	65.18	291	P	P	06 22 30.7	-0.7
	SNR=51						
JLN				P	P	06 22 30.7	-0.7
	SNR=51						
JLN				S	S	06 31 17.3	+3.9
JLN				S	S	06 31 17.3	+3.9
KIWB	Kanaga Island	65.19	35	IAmb	IAmb	06 22 35.7	
	comp=Z,387nm,1.0s						
RAO	Raoul Island	65.20	126	LR	LR	06 50 11.4	
	comp=Z,18µm,21.8s,baz=294,slow=35						
RAO	Raoul Island	65.20	126	P	P	06 22 30.4	-0.9
RAO	Raoul Island	65.20	126	P	P	06 22 30.5	-0.9
RAO				pmax	pmax		
	comp=Z,558nm,1.1s						
RAO				MLR	MLR		
	comp=Z,27µm,20.0s						
GLKZ	Green Lake	65.20	126	P	P	06 22 32.1	+0.8
TARZ	Mount Tarawera	65.21	137	P	P	06 22 37.4	+6.0
OXZ	Oxford	65.27	144	P	P	06 22 31.6	+0.1
OXZ				IAmb	IAmb	06 22 53.5	
	comp=Z,173nm,0.7s						
RRRZ	Republican Roa	65.27	138	P	P	06 22 37.1	+5.4
EDRZ	Edgecumbe	65.30	137	P	P	06 22 37.4	+5.5
MOVZ	Moawhango	65.33	139	P	P	06 22 35.8	+3.7
MRHZ	Matea Rd	65.47	138	P	P	06 22 34.9	+1.9
ADK	Adak	65.47	35	P	P	06 22 32.0	-0.7
ADK				IAmb	IAmb	06 22 37.2	
	comp=Z,448nm,1.1s						
ADK	Adak	65.47	35	P	P	06 22 35.1	+2.4
ADK	Adak	65.47	35	P	P	06 22 32.0	-0.7
ADK				pmax	pmax		
	comp=Z,448nm,1.2s						
MUGZ	Murupara	65.51	138	P	P	06 22 35.2	+2.0
ODZ	Otahua Downs	65.54	146	IAMs_20	IAMs_20	06 51 01.5	
	comp=Z,60µm,20.0s						
ODZ	Otahua Downs	65.54	146	⇑P	P	06 22 34.9	+1.6
WBK	Wadi Bani Khal	65.61	292	P	P	06 22 33.9	-0.3
	SNR=48						
WBK				S	S	06 31 22.6	+3.8
KHZ	Kahutara	65.62	143	IAmb	IAmb	06 22 43.9	
	comp=Z,164nm,0.7s						
KHZ	Kahutara	65.62	143	P	P	06 22 33.8	+0.1
KHZ	Kahutara	65.62	143	⇑P	P	06 22 33.7	0.0
URZ	Urewera	65.63	137	LR	LR	06 52 42.3	
	comp=Z,47µm,19.6s,baz=300,slow=37						
URZ	Urewera	65.63	137	P	P	06 22 34.6	+0.7
GVZ	Greta Valley S	65.64	143	IAMs_20	IAMs_20	06 51 32.3	
	comp=Z,60µm,20.0s						
GVZ	Greta Valley S	65.64	143	P	P	06 22 36.6	+2.6
BKZ	Black Stump Fm	65.69	138	P	P	06 22 34.9	+0.5
BKZ	Black Stump Fm	65.69	138	P	P	06 22 35.2	+0.8
SYZ	Scrubby Hill	65.69	148	P	P	06 22 36.8	+2.7
SYZ	Scrubby Hill	65.69	148	P	P	06 22 36.3	+2.2
SNZO	South Karori	65.70	141	P	P	06 22 33.8	-0.5
SNZO	South Karori	65.70	141	P	P	06 22 35.0	+0.7
SNZO	South Karori	65.70	141	⇑P	P	06 22 33.7	-0.6
RTZ	Ruatahuna	65.73	138	IAMs_20	IAMs_20	06 48 36.2	
	comp=Z,69µm,22.0s						
RTZ	Ruatahuna	65.73	138	P	P	06 22 39.1	+4.5
AFI	Afiamalu	65.73	108	IAMs_20	IAMs_20	06 48 28.5	
	comp=Z,44µm,20.0s						
AFI	Afiamalu	65.73	108	P	P	06 22 37.4	+2.3
AFI	Afiamalu	65.73	108	P	P	06 22 34.9	-0.2
AFI	Afiamalu	65.73	108	⇑P	P	06 22 37.2	+2.1
MTHZ	Maungataniwha	65.76	138	P	P	06 22 37.0	+2.1
KWHZ	Kaweka Forest	65.78	139	P	P	06 22 36.2	+1.2
TSZ	Takapari Road	65.82	139	P	P	06 22 37.4	+2.2
HAZ	Te Kaha	65.83	136	P	P	06 22 36.1	+0.8
MQZ	McQueen's Vall	65.85	144	IAMs_20	IAMs_20	06 51 45.9	
	comp=Z,47µm,20.0s						
KRHZ	Kereru	65.86	139	P	P	06 22 36.5	+1.1
NMHZ	Naumai	65.86	138	P	P	06 22 38.6	+3.1
BHW	Baring Head	65.86	141	IAMs_20	IAMs_20	06 53 03.2	
	comp=Z,47µm,21.0s						
RUGZ	Raukumara Rang	65.87	137	P	P	06 22 35.9	+0.3
POWZ	Post Office Ro	65.87	140	P	P	06 22 38.4	+3.0
PNHZ	Pukenui	65.89	139	P	P	06 22 38.3	+2.6
MRZ	Mangatainoka R	65.90	140	IAmb	IAmb	06 22 46.4	
	comp=Z,506nm,1.3s						
MRZ				IAMs_20	IAMs_20	06 50 26.1	
	comp=Z,55µm,22.0s						
MRZ	Mangatainoka R	65.90	140	P	P	06 22 37.6	+2.0
GSTR	Great Sitkin T	65.91	35	P	P	06 22 34.9	-0.6
MWZ	Matawai	65.95	137	P	P	06 22 37.8	+1.7
RAHZ	Arahi	65.95	138	P	P	06 22 37.6	+1.6
WSAR	Wadi Sarin	65.95	292	LR	LR	06 53 39.6	
	comp=Z,76nm,20.5s,baz=108,slow=38						
WSAR	Wadi Sarin	65.95	292	S	S	06 31 26.4	+3.4
RAGZ	Rawiri	65.96	137	P	P	06 22 39.3	+3.1
MCHZ	McNeill Hill	65.97	138	P	P	06 22 37.9	+1.8
SNGZ	Shannon Statio	66.05	138	P	P	06 22 39.6	+2.9
ARHZ	Aropaoanui	66.07	138	P	P	06 22 39.0	+2.3
DVHZ	Dannevirke	66.08	139	P	P	06 22 39.8	+3.0
PRWZ	Pori Road	66.09	140	P	P	06 22 37.9	+1.0
MXZ	Matakaoa Point	66.10	136	P	P	06 22 37.8	+0.9
MXZ	Matakaoa Point	66.10	136	P	P	06 22 41.8	+4.9
MTW	Mount Morrison	66.12	141	P	P	06 22 41.4	+4.3
WPHZ	Waipukurau	66.13	139	P	P	06 22 39.8	+2.7
WHHZ	Waihua	66.14	138	P	P	06 22 40.1	+2.9
TWGZ	Tauwhareparae	66.18	137	P	P	06 22 39.9	+2.4
PAWZ	Paruwai Farm	66.20	141	P	P	06 22 40.5	+2.9
TKGZ	Te Karaka	66.22	137	P	P	06 22 43.1	+5.4
KAHZ	Kahuranaki	66.27	139	P	P	06 22 39.7	+1.6
RIGZ	Rimuhau	66.30	137	P	P	06 22 40.3	+2.0
WMGZ	Waiomatatini S	66.30	136	P	P	06 22 40.5	+2.2
PUZ	Puketiti	66.31	136	P	P	06 22 39.7	+1.3
BFZ	Birch Farm	66.33	140	IAmb	IAmb	06 22 49.5	
	comp=Z,344nm,1.0s						
BFZ				IAMs_20	IAMs_20	06 49 53.6	
	comp=Z,65µm,21.0s						
BFZ	Birch Farm	66.33	140	P	P	06 22 38.1	-0.3
BFZ	Birch Farm	66.33	140	P	P	06 22 40.1	+1.7
TMWZ	Te Maipa	66.34	140	P	P	06 22 40.0	+1.5
PRHZ	Porangahau	66.36	139	P	P	06 22 44.1	+5.5
TRWZ	Traveller	66.37	141	P	P	06 22 40.5	+1.9
PXZ	Pawanui	66.39	139	P	P	06 22 40.0	+1.3
JMDO	Jabal Madar	66.40	291	P	P	06 22 38.0	-1.3
	SNR=54						
JMDO				S	S	06 31 31.3	+3.0
KNZ	Kokohu	66.40	138	P	P	06 22 41.4	+2.6
BIDO	Bidbid	66.43	293	P	P	06 22 39.1	-0.4
	SNR=112						
BIDO				S	S	06 31 32.8	+4.1
MHTO	MHTO	66.47	290	P	P	06 22 39.0	-0.7
	SNR=57						
MHTO				P	P	06 22 39.0	-0.7
	SNR=57						
MHTO				S	S	06 31 32.2	+3.0
MHTO				S	S	06 31 32.2	+3.0
SMDO	Samad	66.48	292	P	P	06 22 39.3	-0.5
	SNR=36						
SMDO				P	P	06 22 39.3	-0.5
	SNR=36						
SMDO				S	S	06 31 32.7	+3.1
SMDO				S	S	06 31 32.7	+3.1
CNGZ	Carnagh Statio	66.49	137	P	P	06 22 44.6	+5.1
PRGZ	Paritu Road	66.49	137	P	P	06 22 43.6	+4.1
MHGZ	Mahia Peninsul	66.62	138	P	P	06 22 42.2	+1.9
DQM	DQM	66.84	289	P	P	06 22 41.9	-0.2
	SNR=40						
DQM				S	S	06 31 36.3	+2.5
ATKA	Atka Island	67.02	36	P	P	06 22 43.1	+0.5
HOQ	Hoqain	67.18	293	P	P	06 22 43.4	-0.9
	SNR=62						
HOQ				P	P	06 22 43.4	-0.9
	SNR=62						
HOQ				S	S	06 31 40.4	+2.6
HOQ				S	S	06 31 40.4	+2.6
BILL	Bilibino	67.19	16	P	P	06 22 42.7	-0.8
BILL				IAMs_20	IAMs_20	06 53 56.9	
	comp=Z,56µm,20.0s						
BILL	Bilibino	67.19	16	ceP	P	06 22 44.2	+0.8
BILL				pmax	pmax		
	comp=Z,234nm,1.7s						
BILL				MLR	MLR		
	comp=Z,55µm,20.0s						
BSY	Bisya	67.25	292	P	P	06 22 43.6	-1.1
	SNR=45						
BSY				S	S	06 31 41.7	+3.0
NRIK	Noril'sk	67.32	346	P	P	06 22 41.4	-2.8
	comp=Z,12nm,0.6s,baz=131,slow=3.5,SNR=3.6						
NRIK				PP	PP	06 25 11.6	-1.0
	comp=Z,50nm,1.1s,baz=126,slow=8.7,SNR=2.2						
NRIK				S	S	06 31 33.1	-4.7
	comp=Z,3.3nm,0.8s,baz=268,slow=5.1,SNR=1.5						
NRIK				PKPPKP	P'P'df	06 51 10.9	+0.2
	comp=Z,0.9nm,0.5s,baz=335,slow=3.3,SNR=3.6						
NRIK				LR	LR	06 54 14.1	
	comp=Z,156µm,20.2s,baz=152,slow=38						
	comp=Z,12nm,0.6s						
NRIK	Noril'sk	67.32	346	P	P	06 22 43.1	-1.1
NRIK				IAmb	IAmb	06 23 07.3	
	comp=Z,153nm,0.9s						
NRIK	Noril'sk	67.32	346	iP	P	06 22 41.9	-2.3
NRIK				pmax	pmax		
	comp=Z,152nm,1.0s						
NRIK				MLR	MLR		
	comp=Z,156µm,19.0s						
ARQ	Araqi	67.90	292	P	P	06 22 49.0	+0.2
	SNR=27						
ARQ				P	P	06 22 49.0	+0.2
	SNR=27						
ARQ				S	S	06 31 49.9	+3.5
ARQ				S	S	06 31 49.9	+3.5
SOHO	SOHO	67.92	293	P	P	06 22 48.0	-0.9
SOHO				P	P	06 22 48.0	-0.9
SOHO				S	S	06 31 50.0	+3.4
SOHO				S	S	06 31 50.0	+3.4
MDH	Madha	68.19	295	P	P	06 22 49.3	-1.3
	SNR=12						
MDH				S	S	06 31 53.2	+3.3
MDH	Madha	68.19	295	iP	P	06 22 48.3	-2.3
	SNR=10						
BANOM	Banah	68.22	295	P	P	06 22 51.0	+0.2
BANOM				P	P	06 22 51.0	+0.2
BANOM				S	S	06 31 52.7	+2.5
BANOM				S	S	06 31 52.7	+2.5
BANOM	Banah	68.22	295	iP	P	06 22 48.2	-2.6
	SNR=51						
UOSS	Minazif	68.26	294	P	P	06 22 50.7	-0.3
UOSS				S	S	06 31 53.8	+3.1
UOSS	Minazif	68.26	294	P	P	06 22 49.2	-1.8
UOSS	Minazif	68.26	294	iP	P	06 22 48.5	-2.5
	SNR=27						
HATD	Hatta, Dubai	68.32	294	P	P	06 22 51.1	-0.3
	SNR=56						
HATD				S	S	06 31 53.3	+1.9
HATD	Hatta, Dubai	68.32	294	iP	P	06 22 48.8	-2.6
	SNR=10						
MASF	Masafi	68.32	295	P	P	06 22 51.7	+0.3
	SNR=34						
MASF				P	P	06 22 51.7	+0.3
	SNR=34						
MASF				S	S	06 31 55.0	+3.5
MASF				S	S	06 31 55.0	+3.5
MSFE	Esma-Masafi	68.32	295	iP	P	06 22 49.5	-1.9
	SNR=13						
SHME	Shamm	68.37	295	P	P	06 22 53.1	+1.4
	SNR=27						
SHME				P	P	06 22 53.1	+1.4
	SNR=27						
SHME				S	S	06 31 55.8	+3.9
SHME				S	S	06 31 55.8	+3.9
SHME	Shamm	68.37	295	iP	P	06 22 50.2	-1.4
	SNR=12						
ASHO	Ashiyiah	68.38	294	P	P	06 22 51.6	-0.2
	SNR=63						
ASHO				S	S	06 31 55.8	+3.6
ASHO	Ashiyiah	68.38	294	iP	P	06 22 49.4	-2.4
	SNR=26						
ALNE	Al Ain	68.63	293	P	P	06 22 53.4	0.0
	SNR=82						
ALNE				S	S	06 31 58.2	+3.0
ALNE	Al Ain	68.63	293	iP	P	06 22 51.3	-2.1
	SNR=13						
SHAO	Shalim	68.64	287	P	P	06 22 53.7	+0.2
	SNR=48						
SHAO				S	S	06 31 58.8	+3.5
SHAO	Shalim	68.64	287	iP	P	06 22 51.3	-2.2
	SNR=38						
NIUE	Niue	68.74	113	P	P	06 22 54.1	+0.1
NIUE	Niue	68.74	113	P	P	06 22 56.6	+2.6
NIUE	Niue	68.74	113	P	P	06 22 59.1	+5.1
NAZ	Nazwa, Dubai	68.75	294	P	P	06 22 54.3	+0.3
	SNR=32						
NAZ				P	P	06 22 54.3	+0.3
	SNR=32						
NAZ				S	S	06 32 00.2	+3.6
NAZ				S	S	06 32 00.2	+3.6
NAZ	Nazwa, Dubai	68.75	294	iP	P	06 22 53.4	-0.7
	SNR=19						
UMQ	Umm Al-Quwin	68.78	295	S	S	06 32 00.3	+3.5
UMQ	Umm Al-Quwin	68.78	295	iP	P	06 22 53.1	-1.1
	SNR=14						
FAQ	Al Faqa, Dubai	68.80	294	P	P	06 22 54.6	+0.2
	SNR=30						
FAQ				P	P	06 22 54.6	+0.2
	SNR=30						
FAQ				S	S	06 32 02.1	+5.0
FAQ				S	S	06 32 02.1	+5.0
FAQ	Al Faqa, Dubai	68.80	294	iP	P	06 22 52.7	-1.7
	SNR=22						
AB31	Akbulak array	69.01	320	P	P	06 22 53.6	-1.6
AB31				IAmb	IAmb	06 23 06.2	
	comp=Z,393nm,1.4s						
AB31	Akbulak array	69.01	320	iP	P	06 22 53.7	-1.6
ABKAR	Akbulak array	69.01	320	P	P	06 22 53.1	-2.1
ASUD	Al Ashush, Dub	69.04	294	P	P	06 22 56.1	+0.3
	SNR=21						
ASUD				P	P	06 22 56.1	+0.3
	SNR=21						
ASUD				S	S	06 32 02.4	+2.5
ASUD				S	S	06 32 02.4	+2.5
ASUD	Al Ashush, Dub	69.04	294	iP	P	06 22 54.7	-1.1
	SNR=10.0						
DMTO	DMTO	69.28	286	P	P	06 22 57.5	+0.1
	SNR=58						
DMTO				S	S	06 32 07.2	+4.2
AJN	Ajban	69.35	294	P	P	06 22 58.1	+0.3
	SNR=20						
AJN				P	P	06 22 58.1	+0.3
	SNR=20						
AJN				S	S	06 32 05.9	+2.3
AJN				S	S	06 32 05.9	+2.3
AJN	Ajban	69.35	294	iP	P	06 22 55.9	-1.9
	SNR=25						
RBK	Rabkut	70.00	286	P	P	06 23 02.5	+0.6
	SNR=51						
RBK				S	S	06 32 12.9	+1.4
DOK	Doka	70.06	287	S	S	06 32 15.7	+3.6
NIKH	Nikolski High	70.36	36	P	P	06 23 02.3	-1.1
	baz=254						
NIKH				S	S	06 32 22.5	+8.1
	baz=254						
WHFO	Wadi Hawf	70.40	287	P	P	06 23 04.6	+0.2
	SNR=42						
WHFO				S	S	06 32 18.7	+2.4
AKTO	Aktyubinsk	70.51	321	P	P	06 23 02.2	-2.3
	comp=Z,17nm,0.7s,baz=104,slow=5.7,SNR=37						
AKTO				S	S	06 32 10.6	-5.7
	comp=Z,0.9nm,0.3s,baz=243,slow=12,SNR=1.3						
AKTO				PKPPKP	P'P'df	06 51 02.4	-3.9
	comp=Z,0.7nm,0.3s,baz=337,slow=1.6,SNR=3.9						
AKTO				LR	LR	06 56 49.0	
	comp=Z,56µm,18.6s,baz=108,slow=38						
	comp=Z,17nm,0.7s						
MSEY	Mahe Island	70.53	263	P	P	06 23 03.8	-1.5
MSEY				IAmb	IAmb	06 23 10.3	
	comp=Z,194nm,1.2s						
MSEY	Mahe Island	70.53	263	IAMs_20	IAMs_20	06 55 35.4	
	comp=Z,43µm,18.0s						
MSEY	Mahe Island	70.53	263	iP	P	06 23 03.6	-1.7
	SNR=20						
MSEY	Mahe Island	70.53	263	P	P	06 23 03.8	-1.5
MSEY				pmax	pmax		
	comp=Z,194nm,1.3s						
MSEY				MLR	MLR		
	comp=Z,43µm,18.0s						
MZR	Muzera	70.69	292	P	P	06 23 06.2	+0.1
	SNR=68						
MZR				S	S	06 32 21.6	+2.2
MZR	Muzera	70.69	292	iP	P	06 23 04.3	-1.7
	SNR=20						
SVE	Sverdlovsk	70.76	328	eP	P	06 23 04.3	-1.5
SVE				eS	S	06 32 18.5	-0.5
SVE				eSS	SS	06 36 48.4	-2.9
SVE				pmax	pmax		
	comp=Z,382nm,1.6s						
SVE				MLR	MLR		
	comp=Z,60µm,23.0s						
SPIA	Saint Paul Isl	70.82	31	P	P	06 23 05.0	-1.1
	baz=252						
SPIA				S	S	06 32 30.2	+11
	baz=252						
ABTO	Aybut	70.86	286	P	P	06 23 08.0	+0.8
	SNR=54						
ABTO				S	S	06 32 24.3	+2.7
P08K	Saint George I	71.01	32	P	P	06 23 05.9	-1.4
	baz=253						
P08K				S	S	06 32 33.8	+12
	baz=253						
P08K				S	S	06 32 33.8	+12
	baz=253						
JRN	Qarnain Island	71.30	294	P	P	06 23 10.3	+0.6
	SNR=11						
JRN				S	S	06 32 29.4	+3.0
ARTI	Arti	71.83	327	P	P	06 23 09.3	-2.9
	comp=Z,15nm,0.6s,baz=85,slow=2.0,SNR=16						
ARTI				S	S	06 32 21.9	-9.5

	comp=Z,2.4nm,0.5s,baz=92,slow=19,SNR=1.1						
ARTI				PKPPKP	P'P'df	06 51 02.5	-1.1
	comp=Z,3.2nm,0.8s,baz=268,slow=2.2,SNR=3.6						
ARTI				LR	LR	06 58 10.8	
	comp=Z,45µm,20.1s,baz=102,slow=39						
	comp=Z,15nm,0.6s						
ARTI	Arti	71.83	327	P	P	06 23 10.4	-1.8
ARTI				IAMs_20	IAMs_20	06 57 59.2	
	comp=Z,65µm,22.0s						
ARTI	Arti	71.83	327	*d i*P	P	06 23 10.8	-1.5
ARTI				S	S	06 32 31.3	0.0
ARTI				pmax	pmax		
	comp=Z,51nm,1.3s						
ARTI				pmax	pmax		
	comp=Z,2µm,8.2s						
ARTI				MLR	MLR		
	comp=Z,59µm,21.0s						
UNV	Unalaska Valle	71.94	35	P	P	06 23 12.1	-0.9
UNV	Unalaska Valle	71.94	35	P	P	06 23 12.8	-0.2
UNV	Unalaska Valle	71.94	35	P	P	06 23 11.5	-1.4
	baz=256						
UNV				S	S	06 32 40.0	+7.3
	baz=256						
SLWR	Sila	72.34	293	P	P	06 23 16.2	+0.3
SLWR				S	S	06 32 41.4	+3.0
GAMB	Gambell	72.41	25	P	P	06 23 15.3	-0.3
	baz=248						
GAMB				S	SKiKP	06 32 46.8	-2.8
	baz=248						
AKUT	Akutan	72.43	35	P	P	06 23 15.7	-0.2
CTZ	Chatham Island	72.45	140	P	P	06 23 18.1	+1.9
CTZ	Chatham Island	72.45	140	P	P	06 23 16.0	-0.1
TRNA	Turayna	72.78	294	S	S	06 32 45.7	+2.3
SHMA	Al-Shehemyia	73.02	295	P	P	06 23 20.7	+0.7
	SNR=9.5						
SHMA				S	S	06 32 48.7	+2.6
SMRA	Abu-Samra	73.14	294	P	P	06 23 21.2	+0.5
	SNR=13						
SMRA				S	SKiKP	06 32 49.8	-2.0
CASY	Casey	73.48	186	P	P	06 23 21.1	-0.7
CASY				IAmb	IAmb	06 23 33.4	
	comp=Z,162nm,0.8s						
M11K	Mekoryuk	73.78	29	P	P	06 23 22.9	-0.8
	baz=254						
M11K				S	S	06 33 03.1	+10
	baz=254						
M11K				S	S	06 33 03.1	+10
	baz=254						
FALS	False Pass	73.93	35	IAMs_20	IAMs_20	06 51 05.5	
	comp=Z,57µm,21.0s						
FALS	False Pass	73.93	35	P	P	06 23 26.3	+1.6
FALS	False Pass	73.93	35	P	P	06 23 24.1	-0.7
	baz=258						
FALS				S	S	06 33 05.4	+10
	baz=258						
TNA	Tin City	74.55	23	IAMs_20	IAMs_20	06 58 45.3	
	comp=Z,36µm,19.0s						
TNA	Tin City	74.55	23	P	P	06 23 27.2	-1.0
	baz=251,SNR=7.5						
TNA				S	S	06 33 09.8	+7.9
	baz=251						
S12K	Black Hills	74.85	34	P	P	06 23 28.3	-1.9
	baz=259						
S12K				S	S	06 33 12.7	+7.0
	baz=259						
S12K				S	S	06 33 12.7	+7.0
	baz=259						
K13K	Kusilvak Mount	74.90	27	P	P	06 23 29.3	-0.9
	baz=255						
K13K				S	S	06 33 15.7	+10
	baz=255						
K13K				S	S	06 33 15.7	+10
	baz=255						
M13K	Dall Lake	75.15	29	P	P	06 23 30.4	-1.3
	baz=257						
M13K				S	S	06 33 18.5	+10
	baz=257						
F14K	Arctic Creek	75.16	24	P	P	06 23 31.6	-0.1
	baz=253						
F14K				S	S	06 33 16.9	+8.2
	baz=253						
ANM	Nome	75.29	25	P	P	06 23 32.3	-0.1
	baz=254						
ANM				S	S	06 33 19.8	+10
	baz=254						
KIP	Kipapa	75.30	70	P	P	06 23 36.0	+2.7
KIP	Kipapa	75.30	70	P	P	06 23 36.1	+2.7
KIP	Kipapa	75.30	70	*ce*P	P	06 23 34.5	+1.1
KIP				pmax	pmax		
	comp=Z,266nm,1.0s						
KIP				MLR	MLR		
	comp=Z,25µm,19.0s						
LKRN	Lenkeran, Azer	75.35	308	P	P	06 23 35.5	+2.2
J14K	Nanvaranak Lak	75.60	27	P	P	06 23 34.8	+0.5
J14K				IAmb	IAmb	06 24 04.6	
	comp=Z,358nm,1.6s						
J14K	Nanvaranak Lak	75.60	27	P	P	06 23 33.9	-0.3
	baz=256						
J14K				S	S	06 33 22.5	+8.8
	baz=256						
SDPT	Sand Point	75.68	35	P	P	06 23 37.0	+2.2
SDPT	Sand Point	75.68	35	P	P	06 23 34.6	-0.2
	baz=261						
SDPT				S	S	06 33 20.7	+6.0
	baz=261						
L14K	Kuka Creek	75.68	28	P	P	06 23 34.5	-0.3
	baz=257,SNR=38						
L14K				S	S	06 33 23.4	+8.9
	baz=257						
L14K				S	S	06 33 23.4	+8.9
	baz=257						
N14K	Kuskokwak Cree	75.86	30	P	P	06 23 35.9	+0.1
	baz=259						
N14K				S	S	06 33 23.7	+7.1
	baz=259						
F15K	North Star Dit	75.89	24	IAMs_20	IAMs_20	06 59 26.8	
	comp=Z,35µm,20.0s						
F15K	North Star Dit	75.89	24	P	P	06 23 36.1	+0.2
	baz=254						
F15K				S	S	06 33 24.4	+7.5
	baz=254						
F15K				S	S	06 33 24.4	+7.5
	baz=254						
M14K	Bethel	75.90	29	P	P	06 23 35.8	-0.2
	baz=258						
M14K				S	S	06 33 24.4	+7.4
	baz=258						
M14K				S	S	06 33 24.4	+7.4
	baz=258						
O14K	Tigyukauivet M	75.94	31	P	P	06 23 35.9	-0.4
	baz=259						
O14K				S	S	06 33 23.3	+5.8
	baz=259						
O14K				S	S	06 33 23.3	+5.8
	baz=259						
G15K	Niukluk	75.95	24	P	P	06 23 36.5	+0.2
	baz=255						
G15K				S	S	06 33 25.0	+7.5
	baz=255						
CHNA	Chernabura Isl	76.10	35	P	P	06 23 40.3	+3.0
CHNA	Chernabura Isl	76.10	35	P	P	06 23 36.9	-0.4
	baz=262						
CHNA				S	S	06 33 27.2	+7.7
	baz=262						
L15K	Ungalak Mounta	76.31	28	P	P	06 23 38.4	0.0
	baz=258						
L15K				S	S	06 33 30.6	+9.1
	baz=258						
AKT	Akhty	76.31	311	*e*P	P	06 23 37.1	-1.9
AKT				*e*		06 26 35.1	
AKT				*e*PPP	PPP	06 28 20.2	
AKT				*e*S	S	06 33 21.5	-1.1
AKT				*e*		06 33 51.9	
AKT				*e*SS	SS	06 38 08.9	-7.9
AKT				pmax	pmax		
	comp=Z,5µm,5.8s						
AKT				pmax	pmax		
	comp=Z,521nm,1.2s						
AKT				pmax	pmax		
	comp=N,71nm,0.7s						
AKT				pmax	pmax		
	comp=E,341nm,1.6s						
AKT				smax	smax		
	comp=E,12µm,14.1s						
AKT				smax	smax		
	comp=N,15µm,12.8s						
S14K	Fog Glacier	76.34	34	P	P	06 23 38.6	-0.2
	baz=261						
S14K				S	S	06 33 29.3	+7.0
	baz=261						
S14K				S	S	06 33 29.3	+7.0
	baz=261						
C16K	Lisburne Hills	76.35	21	IAmb	IAmb	06 23 55.7	
	comp=Z,410nm,1.2s						
C16K	Lisburne Hills	76.35	21	P	P	06 23 38.7	+0.2
	baz=253,SNR=106						
C16K				S	S	06 33 29.4	+7.6
	baz=253						
C16K				S	S	06 33 29.4	+7.6
	baz=253						
K15K	Wolf Creek Mou	76.42	27	P	P	06 23 39.3	+0.4
	baz=258						
K15K				S	S	06 33 31.7	+9.0
	baz=258						
K15K				S	S	06 33 31.7	+9.0
	baz=258						
M15K	Kasigluk River	76.50	29	P	P	06 23 39.2	-0.2
	baz=259						
M15K				S	S	06 33 30.0	+6.4
	baz=259						
MAK	Makhachkala	76.57	312	*e*P	P	06 23 38.0	-2.2
MAK				*e*		06 26 30.4	
MAK				*e*PPP	PPP	06 28 20.0	
MAK				*e*S	S	06 33 21.6	-3.4
MAK				*e*SS	SS	06 38 20.7	+0.4
MAK				pmax	pmax		
	comp=Z,5µm,3.7s						
MAK				pmax	pmax		
	comp=Z,558nm,1.2s						
MAK				MLR	MLR		
	comp=E,71µm,27.0s						
MAK				MLR	MLR		
	comp=N,40µm,21.0s						
MAK				MLR	MLR		
	comp=Z,39µm,21.0s						
H16K	Elim	76.61	25	P	P	06 23 39.4	-0.6
	baz=257,SNR=50						
H16K				S	S	06 33 32.3	+7.5
	baz=257						
H16K				S	S	06 33 32.3	+7.5
	baz=257						
O15K	Ungalikthiuk R	76.66	31	P	P	06 23 39.8	-0.6
	baz=260						
O15K				S	S	06 33 30.9	+5.5
	baz=260						
N15K	Kwethluk River	76.69	30	IAMs_20	IAMs_20	06 59 22.3	
	comp=Z,37µm,21.0s						
N15K	Kwethluk River	76.69	30	P	P	06 23 40.5	-0.1
	baz=260						
N15K				S	S	06 33 33.0	+7.2
	baz=260						
N15K				S	S	06 33 33.0	+7.2
	baz=260						
SEKA	Sheki	76.70	311	P	P	06 23 42.6	+1.5
G16K	Koyuk River	76.74	24	IAmb	IAmb	06 23 52.2	
	comp=Z,541nm,1.9s						
G16K				IAMs_20	IAMs_20	07 01 44.2	
	comp=Z,37µm,20.0s						
G16K	Koyuk River	76.74	24	P	P	06 23 40.6	-0.1
	baz=257						
G16K				S	S	06 33 33.3	+7.1
	baz=257						
MNGR	Mingechevir, A	76.76	310	P	P	06 23 42.9	+1.6
D17K	Noatak River	77.02	22	P	P	06 23 42.8	+0.5
	baz=256,SNR=159						
D17K				S	S	06 33 35.6	+6.6
	baz=256						
D17K				S	S	06 33 35.6	+6.6
	baz=256						
KIRV	Kirov	77.02	329	P	P	06 23 40.0	-2.4
	comp=Z,49nm,0.8s,baz=92,slow=6.4,SNR=17						
KIRV				PP	PP	06 26 34.7	-1.1
	comp=Z,16nm,0.7s,baz=112,slow=11,SNR=1.0						
KIRV				S	S	06 33 24.1	-5.3
	comp=Z,4.6nm,0.6s,baz=67,slow=19,SNR=1.4						
KIRV				LR	LR	07 01 12.5	
	comp=Z,43µm,20.0s,baz=98,slow=38						
	comp=Z,49nm,0.8s						
KIRV	Kirov	77.02	329	*ce*P	P	06 23 40.9	-1.5
J16K	Anvik River	77.03	26	P	P	06 23 42.8	+0.4
	baz=259						
J16K				S	S	06 33 37.4	+8.0
	baz=259						
I17K	Unalakleet	77.11	26	P	P	06 23 43.4	+0.5
	baz=259,SNR=26						
I17K				S	S	06 33 37.3	+7.1
	baz=259						
XMAS	Kiritimati	77.16	89	P	P	06 23 46.5	+2.4
RDOG	Red Dog Mine	77.17	21	P	P	06 23 43.1	-0.1
	baz=256,SNR=24						
RDOG				S	S	06 33 36.5	+5.7
	baz=256						
C17K	DeLong Mountai	77.18	21	P	P	06 23 42.9	-0.3
	baz=255						
C17K				S	S	06 33 34.9	+4.0
	baz=255						
BELG	Belogornoye	77.25	322	P	P	06 23 41.5	-2.4
	comp=Z,100nm,1.0s,baz=333,slow=2.9,SNR=30						
BELG				S	S	06 33 21.8	-10
	comp=Z,5.9nm,0.5s,baz=216,slow=3.3,SNR=4.3						
BELG				LR	LR	06 58 38.8	
	comp=Z,41µm,21.2s,baz=90,slow=36						
	comp=Z,100nm,1.0s						
BELG	Belogornoye	77.25	322	*i* P	P	06 23 41.8	-2.0
BELG				pmax	pmax		
	comp=Z,72nm,1.0s						
BELG				MLR	MLR		
	comp=Z,10µm,23.0s						
L16K	Owhat River	77.26	28	P	P	06 23 44.2	+0.5
	baz=260						
L16K				S	S	06 33 38.1	+6.2
	baz=260						
L16K				S	S	06 33 38.1	+6.2
	baz=260						
GANJ	Ganja	77.33	310	P	P	06 23 45.9	+1.2
E17K	Hotham Inlet	77.34	23	P	P	06 23 44.7	+0.6
	baz=257,SNR=70						
E17K				S	S	06 33 38.7	+6.1
	baz=257						
M16K	Timber Creek	77.39	29	P	P	06 23 44.0	-0.5
	baz=261						
M16K				S	S	06 33 41.7	+8.3
	baz=261						
M16K				S	S	06 33 41.7	+8.3
	baz=261						
N16K	Nishlik Lake	77.39	30	P	P	06 23 44.9	+0.4
	baz=261						
N16K				S	S	06 33 42.5	+9.0
	baz=261						
F17K	Baldwin Pennin	77.42	23	P	P	06 23 44.9	+0.4
	baz=258						
F17K				S	S	06 33 42.1	+8.6
	baz=258						
G17K	Kiwalik Mounta	77.46	24	P	P	06 23 45.3	+0.5
	baz=258,SNR=27						
G17K				S	S	06 33 41.5	+7.5
	baz=258						
G17K				S	S	06 33 41.5	+7.5
	baz=258						
P16K	Nushagak River	77.57	31	P	P	06 23 45.8	+0.3
	baz=262						
P16K				S	S	06 33 40.4	+5.1
	baz=262						
P16K				S	S	06 33 40.4	+5.1
	baz=262						
R16K	Pilot Point	77.59	33	P	P	06 23 46.1	+0.5
	baz=263						
O16K	Kokwok River B	77.60	30	P	P	06 23 45.7	+0.1
	baz=262						
O16K				S	S	06 33 40.0	+4.4
	baz=262						
H17K	Granite Mounta	77.65	25	P	P	06 23 46.0	+0.1
	baz=259						
H17K				S	S	06 33 40.8	+4.7
	baz=259						
H17K				S	S	06 33 40.8	+4.7
	baz=259						
POHA	Pohakuloa	77.68	71	IAMs_20	IAMs_20	06 50 49.3	
	comp=Z,39µm,22.0s						
POHA	Pohakuloa	77.68	71	P	P	06 23 50.0	+2.8
J17K	VABM Dome	77.73	27	P	P	06 23 46.3	0.0
	baz=260						
J17K				S	S	06 33 43.6	+6.6
	baz=260						
J17K				S	S	06 33 43.6	+6.6
	baz=260						
L17K	Donlin	77.88	28	P	P	06 23 47.1	-0.1
	baz=261,SNR=13						
L17K				S	S	06 33 44.0	+5.4
	baz=261						
L17K				S	S	06 33 44.0	+5.4
	baz=261						
E18K	Tukpahlearik C	77.88	22	P	P	06 23 47.0	-0.1
	baz=258						
E18K				S	S	06 33 43.2	+4.7
	baz=258						
E18K				S	S	06 33 43.2	+4.7
	baz=258						
B18K	Kokolik River	77.88	20	P	P	06 23 47.7	+0.7
	baz=256						
B18K				S	S	06 33 42.6	+4.2
	baz=256						
B18K				S	S	06 33 42.6	+4.2
	baz=256						
NAX	Nakhchivan	77.93	309	P	P	06 23 50.2	+2.2
C18K	Utukok River	77.93	21	IAmb	IAmb	06 24 04.0	
	comp=Z,284nm,1.2s						
C18K	Utukok River	77.93	21	P	P	06 23 47.4	0.0
	baz=257						
C18K				S	S	06 33 44.3	+5.1
	baz=257						
C18K				S	S	06 33 44.3	+5.1
	baz=257						
K17K	Iditarod	77.97	27	P	P	06 23 47.5	-0.1
	baz=261						
K17K				S	S	06 33 45.9	+6.3
	baz=261						
RAYN	Ar Rayn	78.02	293	P	P	06 23 48.7	-0.1
RAYN				S	S	06 33 44.0	+2.3
RAYN	Ar Rayn	78.02	293	P	P	06 23 47.1	-1.7
RAYN				IAmb	IAmb	06 23 58.3	
	comp=Z,160nm,0.8s						
RAYN	Ar Rayn	78.02	293	*i* P	P	06 23 46.2	-2.6
	SNR=43						
RAYN	Ar Rayn	78.02	293	P	P	06 23 48.3	-0.5
KNHH	Kane Nui o Ham	78.04	72	P	P	06 23 49.5	+0.5
F18K	Selawik	78.08	23	P	P	06 23 48.2	+0.1
	baz=259,SNR=52						
F18K				S	S	06 33 46.0	+5.4
	baz=259						
F18K				S	S	06 33 46.0	+5.4
	baz=259						
O17K	Koliganek Bris	78.12	30	P	P	06 23 48.2	-0.3
	baz=263						
O17K				S	S	06 33 46.8	+5.5
	baz=263						
M17K	Holitna River	78.17	29	P	P	06 23 48.8	0.0
	baz=262						
M17K				S	S	06 33 47.9	+6.0
	baz=262						
N17K	Nushagak Hills	78.18	30	P	P	06 23 48.7	-0.1
	baz=262						
N17K				S	S	06 33 47.1	+5.2
	baz=262						
Q16K	King Salmon	78.21	31	P	P	06 23 48.4	-0.7
	baz=263						
Q16K				S	S	06 33 47.6	+5.3
	baz=263						
A19K	Wainwright	78.33	20	P	P	06 23 50.0	+0.6
	baz=257						
A19K				S	S	06 33 45.6	+2.5
	baz=257						
A19K				S	S	06 33 45.6	+2.5
	baz=257						
H18K	Honhosa River	78.34	25	P	P	06 23 49.7	0.0
	baz=260						
H18K				S	S	06 33 47.7	+4.2
	baz=260						
G18K	Tagagawik	78.34	24	P	P	06 23 49.4	-0.3
	baz=260,SNR=17						
G18K				S	S	06 33 48.0	+4.4
	baz=260						
P17K	Kvichak River	78.38	31	P	P	06 23 49.5	-0.5
	baz=263,SNR=13						
P17K				S	S	06 33 48.5	+4.4
	baz=263						
P17K				S	S	06 33 48.5	+4.4
	baz=263						
CHIR	Chirikof Islan	78.47	34	IAMs_20	IAMs_20	06 54 18.6	
	comp=Z,37µm,22.0s						
CHIR	Chirikof Islan	78.47	34	P	P	06 23 50.0	-0.5
	baz=265						
CHIR				S	S	06 33 49.5	+4.3
	baz=265						
RAR	Rarotonga	78.51	113	LR	LR	06 56 22.5	
	comp=Z,8µm,18.5s,baz=274,slow=34						
RAR	Rarotonga	78.51	113	P	P	06 23 54.3	+2.9
RAR	Rarotonga	78.51	113	P	P	06 23 53.1	+1.7
TBLG	Delisi	78.56	311	P	P	06 23 51.7	+0.3
Q17K	Contact Creek	78.57	32	P	P	06 23 50.4	-0.8
	baz=264						
Q17K				S	S	06 33 49.0	+2.6
	baz=264						
Q17K				S	S	06 33 49.0	+2.6
	baz=264						
C19K	Lookout Ridge	78.60	21	P	P	06 23 51.3	+0.2
	baz=258						
C19K				S	S	06 33 50.4	+4.2
	baz=258						
C19K				S	S	06 33 50.4	+4.2
	baz=258						
L18K	Granite Mounta	78.64	28	P	P	06 23 51.6	+0.2
	baz=263						
L18K				S	S	06 33 51.5	+4.7
	baz=263						
L18K				S	S	06 33 51.5	+4.7
	baz=263						
J18K	Innoko River	78.79	27	P	P	06 23 52.0	-0.3
	baz=262,SNR=10						
J18K				S	S	06 33 52.1	+3.6
	baz=262						
N18K	Kilae Creek	78.83	29	P	P	06 23 52.6	+0.1
	baz=264						
N18K				S	S	06 33 53.7	+4.7
	baz=264						
N18K				S	S	06 33 53.7	+4.7
	baz=264						
F19K	Shaleruckik Mo	78.86	23	P	P	06 23 51.6	-0.9
	baz=261,SNR=50						
F19K				S	S	06 33 53.2	+4.3
	baz=261						
GCSA	Galena City Sc	78.90	25	P	P	06 23 52.3	-0.4
	baz=262,SNR=17						
GCSA				S	S	06 33 53.5	+4.0
	baz=262						
M18K	Stony River	78.95	29	P	P	06 23 53.1	0.0
	baz=264,SNR=12						
M18K				S	S	06 33 55.7	+5.5
	baz=264						
D19K	Kuna River	79.01	21	IAmb	IAmb	06 24 03.8	
	comp=Z,882nm,1.7s						
D19K	Kuna River	79.01	21	P	P	06 23 53.2	-0.1
	baz=260						
D19K				S	S	06 33 54.9	+4.2
	baz=260						
G19K	Purcell Mounta	79.02	24	P	P	06 23 53.5	+0.1
	baz=261						
G19K				S	S	06 33 56.0	+5.3
	baz=261						
G19K				S	S	06 33 56.0	+5.3
	baz=261						
P18K	Big Mountain,	79.02	31	P	P	06 23 53.3	-0.3
	baz=264						
P18K				S	S	06 33 56.7	+5.6
	baz=264						
P18K				S	S	06 33 56.7	+5.6
	baz=264						
TRLG	Trialeti	79.04	311	P	P	06 23 53.5	-0.7
Q18K	Katmai Hardscr	79.06	32	P	P	06 23 54.1	+0.1
	baz=265,SNR=9.8						
Q18K				S	S	06 33 55.9	+4.2
	baz=265						
Q18K				S	S	06 33 55.9	+4.2
	baz=265						
O18K	Koktuh Hills	79.08	30	P	P	06 23 54.0	+0.1
	baz=264						
O18K				S	S	06 33 57.8	+6.1
	baz=264						
O18K				S	S	06 33 57.8	+6.1
	baz=264						
E19K	Redstone River	79.16	23	IAmb	IAmb	06 24 11.2	
	comp=Z,395nm,1.2s						
E19K	Redstone River	79.16	23	P	P	06 23 54.4	+0.2

	baz=261						
E19K				S	S	06 33 57.9	+5.6
	baz=261						
E19K				S	S	06 33 57.9	+5.6
	baz=261						
H19K	Roundabout Mou	79.19	25	P	P	06 23 54.7	+0.4
	baz=262						
H19K				S	SKSac	06 34 01.9	-6.7
	baz=262						
R18K	Karluk	79.27	33	P	P	06 23 55.5	+0.6
	baz=266						
R18K				S	S	06 34 01.1	+7.5
	baz=266						
R18K				S	S	06 34 01.1	+7.5
	baz=266						
SII	Sitkinak Islan	79.33	34	IAMs_20	IAMs_20	06 54 50.4	
	comp=Z,48µm,22.0s						
SII	Sitkinak Islan	79.33	34	P	P	06 23 58.0	+2.7
SII	Sitkinak Islan	79.33	34	P	P	06 23 55.7	+0.3
	baz=266						
SII				S	S	06 34 02.8	+8.3
	baz=266						
J19K	Poorman	79.34	26	P	P	06 23 55.2	0.0
	baz=263						
J19K				S	S	06 34 02.3	+8.1
	baz=263						
J19K				S	S	06 34 02.3	+8.1
	baz=263						
NCK	Nalchik	79.44	313	*i* P	P	06 23 54.1	-2.1
NCK				pmax	pmax		
	comp=Z,209nm,1.4s						
NCK				MLR	MLR		
	comp=Z,18µm,22.0s						
L19K	White Mountain	79.49	28	P	P	06 23 56.3	+0.2
	baz=264,SNR=18						
L19K				S	SKSac	06 34 05.4	-5.6
	baz=264						
L19K				S	SKSac	06 34 05.4	-5.6
	baz=264						
N19K	Bonanza Creek	79.53	29	P	P	06 23 56.5	0.0
	baz=265,SNR=16						
N19K				S	SKSac	06 34 06.0	-5.4
	baz=265						
N19K				S	SKSac	06 34 06.0	-5.4
	baz=265						
O19K	Port Alsworth	79.56	30	P	P	06 23 56.3	-0.1
	baz=265						
O19K				S	SKSac	06 34 05.7	-5.6
	baz=265						
O19K				S	SKSac	06 34 05.7	-5.6
	baz=265						
D20K	Etivluk River	79.59	21	P	P	06 23 56.6	+0.1
	baz=261						
D20K				S	S	06 34 03.2	+6.4
	baz=261						
D20K				S	S	06 34 03.2	+6.4
	baz=261						
B20K	Meade River	79.60	20	IAmb	IAmb	06 24 07.2	
	comp=Z,537nm,1.4s						
B20K	Meade River	79.60	20	P	P	06 23 56.8	+0.3
	baz=261						
B20K				S	S	06 34 03.7	+7.0
	baz=261						
B20K				S	S	06 34 03.7	+7.0
	baz=261						
E20K	Nigu River	79.67	22	P	P	06 23 57.1	0.0
	baz=262						
E20K				S	SKSac	06 34 06.3	-5.8
	baz=262						
F20K	Avaraart Lake	79.68	23	IAmb	IAmb	06 24 06.7	
	comp=Z,500nm,1.6s						
F20K	Avaraart Lake	79.68	23	P	P	06 23 57.1	+0.1
	baz=263,SNR=46						
F20K				S	SKSac	06 34 07.3	-4.8
	baz=263						
F20K				S	SKSac	06 34 07.3	-4.8
	baz=263						
Q19K	Cape Douglas,	79.80	31	P	P	06 23 57.2	-0.6
	baz=266						
Q19K				S	S	06 34 05.7	+6.4
	baz=266						
Q19K				S	S	06 34 05.7	+6.4
	baz=266						
H20K	Anotleneega Mo	79.83	25	P	P	06 23 57.8	-0.1
	baz=264						
H20K				S	SKSac	06 34 08.5	-4.7
	baz=264						
H20K				S	SKSac	06 34 08.5	-4.7
	baz=264						
GOF	Gofitskoye	79.86	314	*ce*P	P	06 23 56.9	-1.5
GOF				*e*S	S	06 33 50.3	-10
OHAK	Old Harbor	79.87	33	IAmb	IAmb	06 24 31.5	
	comp=Z,398nm,1.3s						
OHAK	Old Harbor	79.87	33	P	P	06 24 00.2	+2.0
OHAK	Old Harbor	79.87	33	P	P	06 23 58.0	-0.2
	baz=266						
OHAK				S	SKSac	06 34 08.4	-5.3
	baz=266						
I20K	Naaghedeneel	79.93	25	P	P	06 23 58.8	+0.5
	baz=264,SNR=12						
I20K				S	SKSac	06 34 08.6	-5.2
	baz=264						
KBZ	Khabaz	79.95	313	P	P	06 23 56.4	-2.6
	comp=Z,13nm,1.1s,baz=88,slow=4.5,SNR=27						
KBZ				S	S	06 33 57.5	-3.9
	comp=Z,2.6nm,1.0s,baz=290,slow=7.2,SNR=1.5						
	comp=Z,13nm,1.1s						
KBZ	Khabaz	79.95	313	*ce*P	P	06 23 58.5	-0.4
KBZ				pmax	pmax		
	comp=Z,223nm,1.3s						
K20K	Telida	79.96	27	P	P	06 23 59.0	+0.4
	baz=265,SNR=14						
K20K				S	SKSac	06 34 09.7	-4.5
	baz=265						
K20K				S	SKSac	06 34 09.7	-4.5
	baz=265						
A21K	Barrow	79.99	19	P	P	06 23 58.6	+0.1
	baz=261,SNR=60						
A21K				S	SKSac	06 34 08.5	-5.6
	baz=261						
A21K				S	SKSac	06 34 08.5	-5.6
	baz=261						
J20K	Nowinta River	80.01	26	P	P	06 23 59.0	+0.2
	baz=264,SNR=17						
J20K				S	SKSac	06 34 09.0	-5.4
	baz=264						
J20K				S	SKSac	06 34 09.0	-5.4
	baz=264						
P19K	Oil Pt	80.06	31	P	P	06 23 59.4	+0.2
	baz=266						
P19K				S	S	06 34 07.6	+5.5
	baz=266						
P19K				S	S	06 34 07.6	+5.5
	baz=266						
NEUR	Neytrino	80.09	313	*i* P	P	06 23 58.8	-1.2
NEUR				pmax	pmax		
	comp=Z,205nm,1.4s						
KVAR	Kislovodsk Arr	80.10	313	P	P	06 23 59.6	-0.3
	comp=Z,7.0nm,0.7s,baz=90,slow=5.1,SNR=3.5						
KVAR				S	S	06 33 58.3	-5.0
	comp=Z,3.6nm,0.8s,baz=46,slow=22,SNR=1.3						
	comp=Z,7.0nm,0.7s						
KIV	Kislovodsk	80.11	313	P	P	06 24 00.7	+0.8
KIV				S	S	06 34 07.1	+3.8
KIV	Kislovodsk	80.11	313	P	P	06 23 58.3	-1.6
KIV				IAMs_20	IAMs_20	07 06 28.7	
	comp=Z,36µm,20.0s						
KIV	Kislovodsk	80.11	313	⇓P	P	06 23 59.7	-0.2
KIV	Kislovodsk	80.11	313	*i* P	P	06 23 58.0	-1.9
	SNR=48						
KIV	Kislovodsk	80.11	313	*e*P	P	06 23 58.0	-1.9
KIV				*e*		06 27 00.8	
KIV				*e*PPP	PPP	06 28 46.8	
KIV				*e*S	S	06 34 02.8	-0.5
KIV				*e*SS	SS	06 39 15.5	+1.7
KIV				pmax	pmax		
	comp=Z,227nm,4.0s						
KIV				pmax	pmax		
	comp=Z,77nm,1.0s						
KIV	Kislovodsk	80.11	313	P	P	06 23 58.1	-1.8
	comp=Z,4µmcomp=Z,138nm,1.0s						
SHA1	Shidzhatmaz	80.13	313	*ce*P	P	06 24 00.4	+0.2
M20K	Styx River	80.27	28	P	P	06 24 00.7	+0.3
	baz=266,SNR=19						
M20K				S	S	06 34 10.5	+6.2
	baz=266						
M20K				S	S	06 34 10.5	+6.2
	baz=266						
KDAK	Kodiak Island	80.28	33	LR	LR	06 56 21.9	
	comp=Z,30µm,21.8s,baz=251,slow=33						
KDAK	Kodiak Island	80.28	33	P	P	06 24 00.0	-0.4
KDAK	Kodiak Island	80.28	33	IAMs_20	IAMs_20	06 56 43.4	
	comp=Z,47µm,22.0s						
KDAK	Kodiak Island	80.28	33	P	P	06 24 00.0	-0.4
KDAK				pmax	pmax		
	comp=Z,921nm,1.6s						
KDAK	Kodiak Island	80.28	33	P	P	06 24 00.4	0.0
	baz=267						
KDAK				S	SKSac	06 34 11.9	-4.7
	baz=267						
C21K	Knifeblade Rid	80.30	21	P	P	06 24 00.3	0.0
	baz=263						
C21K				S	SKSac	06 34 12.4	-4.0
	baz=263						
C21K				S	SKSac	06 34 12.4	-4.0
	baz=263						
IMAR	Indian Mountai	80.35	24	P	P	06 24 00.6	-0.1
O20K	Slope Mountain	80.39	30	P	P	06 24 00.4	-0.6
	baz=267						
O20K				S	S	06 34 11.6	+6.0
	baz=267						
O20K				S	S	06 34 11.6	+6.0
	baz=267						
B21K	Ikpikpuk River	80.42	20	P	P	06 24 01.1	+0.2
	baz=263,SNR=88						
B21K				S	SKSac	06 34 14.3	-2.8
	baz=263						
Q20K	Shuyak Island	80.43	32	P	P	06 24 00.4	-0.8
	baz=267						
Q20K				S	S	06 34 11.8	+6.0
	baz=267						
Q20K				S	S	06 34 11.8	+6.0
	baz=267						
A22K	Sinclair Lake	80.47	19	P	P	06 24 01.3	+0.2
	baz=263						
A22K				S	SKSac	06 34 13.7	-3.7
	baz=263						
A22K				S	SKSac	06 34 13.7	-3.7
	baz=263						
G21K	Allakaket	80.50	24	P	P	06 24 01.6	+0.2
	baz=265						
G21K				S	SKSac	06 34 14.8	-3.1
	baz=265						
E21K	Killik River	80.51	22	P	P	06 24 01.1	-0.4
	baz=264,SNR=47						
E21K				S	SKSac	06 34 14.4	-3.5
	baz=264						
E21K				S	SKSac	06 34 14.4	-3.5
	baz=264						
F21K	Alatna River	80.57	23	P	P	06 24 01.3	-0.5
	baz=265						
F21K				S	SKSac	06 34 15.6	-2.8
	baz=265						
F21K				S	SKSac	06 34 15.6	-2.8
	baz=265						
N20K	Mount Spurr	80.67	29	P	P	06 24 01.8	-0.8
	baz=267						
N20K				S	SKSac	06 34 15.7	-3.6
	baz=267						
N20K				S	SKSac	06 34 15.7	-3.6
	baz=267						
SPCR	Spurr Chakacha	80.67	29	P	P	06 24 01.6	-0.9
	baz=267						
SPCR				S	SKSac	06 34 15.7	-3.6
	baz=267						
H21K	Melozitna Rive	80.71	25	P	P	06 24 02.7	+0.2
	baz=266,SNR=41						
H21K				S	SKSac	06 34 17.7	-1.6
	baz=266						
H21K				S	SKSac	06 34 17.7	-1.6
	baz=266						
PPLA	Purkeypile	80.78	27	IAmb	IAmb	06 24 14.6	
	comp=Z,757nm,1.6s						
PPLA	Purkeypile	80.78	27	P	P	06 24 02.9	-0.3
	baz=266,SNR=16						
PPLA				S	SKSac	06 34 17.6	-2.6
	baz=266						
CHUM	Lake Minchumin	80.78	26	P	P	06 24 03.4	+0.4
	baz=266,SNR=14						
CHUM				S	SKSac	06 34 18.1	-1.7
	baz=266						
VRH	Novokhopyorsk	80.84	321	*e*P	P	06 24 00.3	-3.2
VRH				*e*S	S	06 34 03.8	-6.7
VRH				pmax	pmax		
	comp=Z,370nm,2.0s						
VRH				smax	smax		
	comp=E,8µm,11.3s						
VRH				MLR	MLR		
	comp=Z,38µm,23.0s						
HOM	Homer	80.86	31	P	P	06 24 02.9	-0.6
	baz=268						
HOM				S	SKSac	06 34 16.3	-4.2
	baz=268						
ABPO	Ambohimpanom	80.90	250	P	P	06 24 02.8	-1.9
ABPO	Ambohimpanom	80.90	250	P	P	06 24 02.8	-1.9
ABPO				pmax	pmax		
	comp=Z,97nm,1.1s						
B22K	Teshekpuk Lake	80.91	20	IAmb	IAmb	06 24 17.1	
	comp=Z,552nm,1.4s						
B22K	Teshekpuk Lake	80.91	20	P	P	06 24 03.5	0.0
	baz=264						
B22K				S	SKSac	06 34 18.7	-1.7
	baz=264						
B22K				S	SKSac	06 34 18.7	-1.7
	baz=264						
I21K	Tanana	81.02	25	P	P	06 24 04.4	+0.2
	baz=266,SNR=16						
I21K				S	SKSac	06 34 20.6	-0.7
	baz=266						
I21K				S	SKSac	06 34 20.6	-0.7
	baz=266						
D22K	Ayikyak River	81.03	21	P	P	06 24 04.4	+0.2
	baz=265,SNR=103						
D22K				S	SKSac	06 34 19.3	-2.1
	baz=265						
D22K				S	SKSac	06 34 19.3	-2.1
	baz=265						
SKT	Skwentna	81.03	28	IAmb	IAmb	06 24 27.9	
	comp=Z,240nm,1.1s						
SKT	Skwentna	81.03	28	P	P	06 24 03.0	-1.4
	baz=267,SNR=11						
SKT				S	SKSac	06 34 19.0	-2.7
	baz=267						
F22K	John River	81.10	23	P	P	06 24 05.3	+0.6
	baz=266						
F22K				S	SKSac	06 34 20.6	-1.3
	baz=266						
CAPN	Captain Cook N	81.16	30	P	P	06 24 04.3	-0.7
	baz=268						
CAPN				S	SKSac	06 34 20.5	-1.9
	baz=268						
E22K	Anaktuvuk Pass	81.29	22	P	P	06 24 05.8	+0.1
	baz=266,SNR=59						
E22K				S	SKSac	06 34 22.5	-0.8
	baz=266						
E22K				S	SKSac	06 34 22.5	-0.8
	baz=266						
ATD	Arta Tunnel	81.29	281	LR	LR	06 59 45.6	
	comp=Z,308nm,21.3s,baz=68,slow=35						
ATD	Arta Tunnel	81.29	281	P	P	06 24 06.5	-0.2
	SNR=14						
ATD				S	S	06 34 20.4	+3.8
H22K	Ishtalitna Cre	81.31	24	P	P	06 24 06.1	+0.2
	baz=267						
H22K				S	SKSac	06 34 24.4	+1.0
	baz=267						
H22K				S	SKSac	06 34 24.4	+1.0
	baz=267						
G22K	Bettles	81.32	23	P	P	06 24 06.0	+0.2
	baz=266						
G22K				S	SKSac	06 34 23.6	+0.2
	baz=266						
BRSE	Bradley Lake S	81.33	31	P	P	06 24 05.4	-0.6
	baz=268						
BRSE				S	SKSac	06 34 21.9	-1.9
	baz=268						
BPAW	Bear Paw Mtn.	81.38	26	IAmb	IAmb	06 24 25.3	
	comp=Z,453nm,1.2s						
BPAW	Bear Paw Mtn.	81.38	26	P	P	06 24 06.2	0.0
	baz=267,SNR=43						
BPAW				S	SKSac	06 34 23.9	-0.1
	baz=267						
SUA	Susitna One	81.38	29	IAmb	IAmb	06 24 16.8	
	comp=Z,408nm,1.2s						
SUA	Susitna One	81.38	29	P	P	06 24 05.7	-0.7
	baz=268,SNR=19						
SUA				S	SKSac	06 34 20.8	-3.5
	baz=268						
KTH	Kantishna Hill	81.39	27	IAmb	IAmb	06 24 38.5	
	comp=Z,202nm,1.1s						
L22K	Petersville	81.41	28	IAmb	IAmb	06 24 19.3	
	comp=Z,399nm,1.1s						
LABN	Labinsk	81.51	314	*e*P	P	06 24 04.2	-3.1
LABN				*e*S	S	06 34 20.8	+3.0
LABN				pmax	pmax		
	comp=Z,149nm,1.0s						
LABN				pmax	pmax		
	comp=N,22nm,0.7s						
LABN				pmax	pmax		
	comp=E,65nm,1.1s						
LABN				pmax	pmax		
	comp=Z,5µm,4.3s						
LABN				pmax	pmax		
	comp=N,2µm,5.4s						
LABN				pmax	pmax		
	comp=E,2µm,4.5s						
LABN				smax	smax		
	comp=N,17µm,8.7s						
LABN				smax	smax		
	comp=E,15µm,7.9s						
MLY	Manley	81.53	25	P	P	06 24 06.6	-0.4
	baz=268,SNR=34						
MLY				S	SKSac	06 34 24.7	-0.4
	baz=268						
SLKM	Skilak Lake	81.61	30	IAmb	IAmb	06 24 34.4	
	comp=Z,380nm,1.1s						
CUT	Chulitna	81.64	28	P	P	06 24 07.0	-0.5
	baz=268						
CUT				S	SKSac	06 34 24.4	-1.3
	baz=268						
TRF	Thorofare Moun	81.67	27	IAmb	IAmb	06 24 28.1	
	comp=Z,590nm,1.4s						
TRF	Thorofare Moun	81.67	27	P	P	06 24 07.4	-0.5
	baz=268,SNR=17						
TRF				S	SKSac	06 34 25.0	-1.3
	baz=268						
ERBR	Yeremizino-Bor	81.67	315	*e*P	P	06 24 05.0	-3.1
ERBR				*e*S	S	06 34 20.8	+1.5
ERBR				pmax	pmax		
	comp=Z,236nm,1.1s						
ERBR				pmax	pmax		
	comp=N,35nm,0.9s						
ERBR				pmax	pmax		
	comp=N,543nm,1.8s						
ERBR				pmax	pmax		
	comp=E,2µm,4.6s						
ERBR				pmax	pmax		
	comp=Z,4µm,4.3s						
ERBR				smax	smax		
	comp=E,21µm,10.4s						
ERBR				smax	smax		
	comp=N,9µm,7.1s						
M22K	Willow	81.69	29	P	P	06 24 06.6	-1.2
	baz=268,SNR=15						
M22K				S	SKSac	06 34 23.8	-2.2
	baz=268						
D23K	Nanushuk River	81.75	21	P	P	06 24 08.5	+0.4
	baz=267,SNR=75						
D23K				S	SKSac	06 34 24.9	-1.4
	baz=267						
VOI	Vohitsoka	81.81	247	P	P	06 24 08.6	-0.9
	SNR=7.7						
VOI				S	S	06 34 24.0	+2.1
VOI	Vohitsoka	81.81	247	P	P	06 24 07.8	-1.6
VOI				IAMs_20	IAMs_20	06 57 53.4	
	comp=Z,44µm,21.0s						
C23K	Itkillik River	81.83	20	IAmb	IAmb	06 24 23.3	
	comp=Z,395nm,1.2s						
C23K	Itkillik River	81.83	20	P	P	06 24 08.6	+0.2
	baz=267,SNR=91						
C23K				S	SKSac	06 34 25.8	-1.0
	baz=267						
C23K				S	SKSac	06 34 25.8	-1.0
	baz=267						
COLD	Coldfoot	81.85	23	P	P	06 24 08.8	+0.2
	baz=268,SNR=51						
COLD				S	SKSac	06 34 25.9	-1.1
	baz=268						
O22K	Cooper Landing	81.85	30	P	P	06 24 08.2	-0.6
	baz=269						
O22K				S	SKSac	06 34 26.0	-1.2
	baz=269						
RC01	Rabbit Creek A	81.86	29	P	P	06 24 08.4	-0.4
	baz=269						
RC01				S	S	06 34 24.2	+3.5
	baz=269						
G23K	Bananza Creek	81.90	24	P	P	06 24 09.4	+0.4
	baz=268,SNR=31						
G23K				S	SKSac	06 34 26.2	-1.3
	baz=268						
G23K				S	SKSac	06 34 26.2	-1.3
	baz=268						
SEW	Seward	81.98	30	P	P	06 24 09.0	-0.4
SEW				IAmb	IAmb	06 24 42.7	
	comp=Z,280nm,1.1s						
SEW	Seward	81.98	30	P	P	06 24 08.9	-0.4
	baz=269						
SEW				S	SKSac	06 34 25.8	-2.3
	baz=269						
H23K	Yukon River	82.06	24	P	P	06 24 10.2	+0.4
	baz=268						
H23K				S	SKSac	06 34 27.9	-0.6
	baz=268						
H23K				S	SKSac	06 34 27.9	-0.6
	baz=268						
E23K	Chandalar	82.11	22	P	P	06 24 10.5	+0.5
	baz=268,SNR=86						
E23K				S	SKSac	06 34 27.7	-1.2
	baz=268						
I23K	Minto, Yukon-K	82.12	25	P	P	06 24 10.5	+0.5
	baz=269,SNR=26						
I23K				S	SKSac	06 34 27.8	-1.1
	baz=269						
I23K				S	SKSac	06 34 27.8	-1.1
	baz=269						
TOLK	Toolik Lake Re	82.14	22	P	P	06 24 10.4	+0.2
	baz=268,SNR=50						
TOLK				S	SKSac	06 34 29.5	+0.5
	baz=268						
TOLK				S	SKSac	06 34 29.5	+0.5
	baz=268						
PMR	Palmer	82.16	29	IAmb	IAmb	06 24 33.2	
	comp=Z,367nm,1.2s						
PMR	Palmer	82.16	29	P	P	06 24 09.5	-0.8
PMR	Palmer	82.16	29	P	P	06 24 09.5	-0.8
PMR	Palmer	82.16	29	P	P	06 24 09.8	-0.5
	baz=269,SNR=18						
PMR				S	SKSac	06 34 27.6	-1.6
	baz=269						
KLMR	Klimovskoe	82.20	330	*d i*P	P	06 24 08.5	-2.0
KLMR				*e*		06 27 15.6	
KLMR				S	S	06 34 22.4	-1.8
KLMR				SS	SS	06 39 43.1	-0.8
KLMR				SSS	SSS	06 43 10.6	
KLMR				pmax	pmax		
	comp=Z,287nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,40µm,18.0s						
NEA2	Nenana	82.23	26	IAmb	IAmb	06 24 35.2	
	comp=Z,343nm,1.4s						
NEA2				IAMs_20	IAMs_20	07 01 14.4	
	comp=Z,31µm,20.0s						
NEA2	Nenana	82.23	26	P	P	06 24 10.5	-0.2
	baz=269,SNR=29						
NEA2				S	SKSac	06 34 29.7	0.0
	baz=269						
SOC	Sochi	82.26	313	*e*P	P	06 24 08.3	-2.9
SOC				*e*S	S	06 34 24.6	-0.9
SOC				pmax	pmax		
	comp=Z,57nm,0.8s						
SOC				MLR	MLR		
	comp=Z,30µm,20.0s						
MCK	McKinley	82.28	27	IAmb	IAmb	06 24 24.6	
	comp=Z,377nm,0.9s						
MCK	McKinley	82.28	27	P	P	06 24 10.5	-0.5
	baz=269,SNR=47						
MCK				S	SKSac	06 34 30.4	+0.3
	baz=269						
RND	Reindeer	82.31	27	IAmb	IAmb	06 24 25.8	
	comp=Z,517nm,1.4s						
RND				IAMs_20	IAMs_20	07 03 52.5	
	comp=Z,41µm,20.0s						
VORD	Divnogorie	82.37	320	*e*P	P	06 24 10.0	-1.6

VORD				*e*S	**S**	**06 34 24.8**	**-1.5**
VORD				pmax	pmax		
	comp=Z,80nm,0.9s						
VORD				smax	smax		
	comp=N,580nm,6.1s						
VORR	**Voronezh**	**82.41**	**321**	*e*P	**P**	**06 24 11.0**	**-0.8**
VORR				*e*S	**S**	**06 34 28.6**	**+1.9**
VORR				pmax	pmax		
	comp=Z,170nm,0.9s						
VORR				smax	smax		
	comp=E,650nm,5.9s						
D24K	**Happy Valley**	**82.43**	**21**	IAmb	IAmb	06 24 22.6	
	comp=Z,211nm,0.9s						
D24K				IAMs_20	IAMs_20	07 04 54.3	
	comp=Z,41µm,21.0s						
D24K	**Happy Valley**	**82.43**	**21**	P	**P**	**06 24 11.9**	**+0.3**
	baz=269						
D24K				S	**SKSac**	**06 34 32.0**	**+1.2**
	baz=269						
D24K				S	**SKSac**	**06 34 32.0**	**+1.2**
	baz=269						
WAT1	**Susitna Watana**	**82.44**	**28**	P	**P**	**06 24 10.7**	**-1.1**
	baz=270						
WAT1				S	**SKSac**	**06 34 31.7**	**+0.5**
	baz=270						
VSR	**Storozhevoye**	**82.45**	**321**	*e*P	**P**	**06 24 10.5**	**-1.5**
VSR				*e*S	**S**	**06 34 21.0**	**-6.1**
VSR				pmax	pmax		
	comp=Z,130nm,1.1s						
VSR				smax	smax		
	comp=E,8µm,13.4s						
VSR				MLR	MLR		
	comp=Z,42µm,24.0s						
KNK	**Knik Glacier**	**82.48**	**29**	P	**P**	**06 24 11.5**	**-0.5**
	baz=270,SNR=18						
KNK				S	**SKSac**	**06 34 31.9**	**+0.4**
	baz=270						
C24K	**Franklin Bluff**	**82.49**	**21**	IAMs_20	IAMs_20	07 04 37.8	
	comp=Z,40µm,21.0s						
C24K	**Franklin Bluff**	**82.49**	**21**	P	**P**	**06 24 11.9**	**+0.1**
	baz=269						
C24K				S	**SKSac**	**06 34 31.9**	**+0.7**
	baz=269						
E24K	**Your Creek**	**82.53**	**22**	P	**P**	**06 24 11.8**	**-0.4**
	baz=269						
E24K				S	**SKSac**	**06 34 33.4**	**+1.8**
	baz=269						
E24K				S	**SKSac**	**06 34 33.4**	**+1.8**
	baz=269						
PWL	**Port Wells**	**82.54**	**30**	P	**P**	**06 24 11.8**	**-0.5**
	baz=270,SNR=11						
PWL				S	**SKSac**	**06 34 32.2**	**+0.3**
	baz=270						
SML	**Sawmill**	**82.54**	**29**	P	**P**	**06 24 12.0**	**-0.4**
	baz=270,SNR=26						
SML				S	**SKSac**	**06 34 32.2**	**+0.3**
	baz=270						
LPSR	**Galich'ya Gora**	**82.57**	**322**	*e*P	**P**	**06 24 10.8**	**-1.8**
LPSR				*e*S	**SKSac**	**06 34 30.5**	**-1.8**
LPSR				pmax	pmax		
	comp=Z,170nm,1.1s						
LPSR				smax	smax		
	comp=E,11µm,14.5s						
LPSR				MLR	MLR		
	comp=Z,58µm,27.0s						
WRH	**Wood River Hil**	**82.66**	**26**	IAmb	IAmb	06 24 23.6	
	comp=Z,564nm,1.4s						
H24K	**Noodor Dome**	**82.75**	**24**	P	**P**	**06 24 13.7**	**+0.3**
	baz=270,SNR=30						
H24K				S	**S**	**06 34 35.9**	**+6.2**
	baz=270						
H24K				S	**S**	**06 34 35.9**	**+6.2**
	baz=270						
F24K	**Squaw Lake**	**82.75**	**23**	P	**P**	**06 24 13.9**	**+0.5**
	baz=270,SNR=41						
F24K				S	**S**	**06 34 35.9**	**+6.2**
	baz=270						
COLA	**College**	**82.76**	**25**	P	**P**	**06 24 12.3**	**-1.0**
COLA	**College**	**82.76**	**25**	P	**P**	**06 24 12.3**	**-1.0**
COLA	**College**	**82.76**	**25**	*i* P	**P**	**06 24 11.6**	**-1.7**
COLA				pmax	pmax		
	comp=Z,123nm,0.9s						
COLA				MLR	MLR		
	comp=Z,28µm,20.0s						
COLA	**College**	**82.76**	**25**	P	**P**	**06 24 12.6**	**-0.8**
	baz=270						
COLA				S	**SKSac**	**06 34 35.5**	**+2.4**
	baz=270						
WAT6	**Susitna Watana**	**82.82**	**28**	P	**P**	**06 24 13.6**	**-0.4**
	baz=270,SNR=67						
WAT6				S	**SKSac**	**06 34 35.0**	**+1.0**
	baz=270						
M23K	**Glacier View**	**82.83**	**29**	P	**P**	**06 24 13.4**	**-0.4**
	baz=271						
M23K				S	**SKSac**	**06 34 35.0**	**+1.2**
	baz=271						
M23K				S	**SKSac**	**06 34 35.0**	**+1.2**
	baz=271						
G24K	**Hadweenzic Riv**	**82.91**	**24**	P	**P**	**06 24 14.2**	**0.0**
	baz=270,SNR=48						
G24K				S	**SKSac**	**06 34 35.9**	**+1.7**
	baz=270						
G24K				S	**SKSac**	**06 34 35.9**	**+1.7**
	baz=270						
POKR	**Poker Plat Res**	**82.94**	**25**	IAmb	IAmb	06 24 41.0	
	comp=Z,195nm,1.2s						
POKR	**Poker Plat Res**	**82.94**	**25**	P	**P**	**06 24 13.5**	**-0.8**
	baz=270,SNR=6.2						
POKR				S	**S**	**06 34 37.3**	**+5.7**
	baz=270						
POKR				S	**S**	**06 34 37.3**	**+5.7**
	baz=270						
DHY	**Denali Highway**	**82.98**	**27**	IAMs_20	IAMs_20	07 04 04.2	
	comp=Z,35µm,20.0s						
DHY	**Denali Highway**	**82.98**	**27**	P	**P**	**06 24 14.1**	**-0.7**
	baz=271,SNR=9.9						
DHY				S	**SKSac**	**06 34 36.7**	**+1.6**
	baz=271						
P23K	**Montague Islan**	**83.01**	**30**	P	**P**	**06 24 14.2**	**-0.6**
	baz=271						
P23K				S	**SKSac**	**06 34 36.0**	**+1.0**
	baz=271						
P23K				S	**SKSac**	**06 34 36.0**	**+1.0**
	baz=271						
SCM	**Sheep Creek Mo**	**83.02**	**29**	P	**P**	**06 24 14.2**	**-0.7**
	baz=271,SNR=11						
SCM				S	**SKSac**	**06 34 37.8**	**+2.6**
	baz=271						
GLI	**Glacier Island**	**83.15**	**29**	P	**P**	**06 24 15.1**	**-0.4**
	baz=271,SNR=5.8						
GLI				S	**SKSac**	**06 34 38.5**	**+2.6**
	baz=271						
HDA	**Harding Lake**	**83.15**	**26**	P	**P**	**06 24 14.3**	**-1.1**
	baz=271,SNR=24						
HDA				S	**SKSac**	**06 34 38.0**	**+2.2**
	baz=271						
IL31		**83.17**	**26**	IAmb	IAmb	06 24 25.5	
	comp=Z,295nm,1.4s						
ILAR	**Eielson Array**	**83.17**	**26**	P	**P**	**06 24 14.0**	**-1.5**
	comp=Z,10nm,0.8s,baz=255,slow=4.3,SNR=52						
ILAR				S	**S**	**06 34 34.5**	**+0.6**
	comp=Z,1.4nm,1.1s,baz=232,slow=1.6,SNR=2.1						
ILAR				PKKPbc	**PKKPbc**	**06 42 38.7**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=111,slow=2.6,SNR=3.1						
ILAR				PKPPKP		06 50 41.1	
	comp=Z,4.1nm,1.2s,baz=148,slow=0.5,SNR=4.3						
ILAR				LR	LR	06 59 30.2	
	comp=Z,22µm,21.9s,baz=264,slow=34						
	comp=Z,10nm,0.8s						
ILAR	**Eielson Array**	**83.17**	**26**	P	**P**	**06 24 13.7**	**-1.9**
MOS	**Moscow**	**83.26**	**325**	*e*P	**P**	**06 24 12.8**	**-3.3**
MOS				*e*		06 27 23.8	
MOS				*e*PPP	PPP	06 29 17.4	
MOS				*e*S	**S**	**06 34 29.2**	**-5.9**
MOS				*e*SS	**SS**	**06 39 52.9**	**-6.9**
MOS				pmax	pmax		
	comp=Z,1µm,2.3s						
MOS				pmax	pmax		
	comp=Z,213nm,1.5s						
MOS				MLR	MLR		
	comp=Z,56µm,23.0s						
MOS				MLR	MLR		
	comp=E,48µm,23.0s						
D25K	**Kavik River**	**83.30**	**21**	IAMs_20	IAMs_20	07 05 19.4	
	comp=Z,37µm,21.0s						
D25K	**Kavik River**	**83.30**	**21**	P	**P**	**06 24 16.6**	**+0.4**
	baz=271,SNR=83						
D25K				S	**S**	**06 34 39.6**	**+4.3**
	baz=271						
D25K				S	**S**	**06 34 39.6**	**+4.3**
	baz=271						
G25K	**Bearman Lake**	**83.46**	**24**	P	**P**	**06 24 17.5**	**+0.6**
	baz=272,SNR=52						
G25K				S	**S**	**06 34 42.2**	**+5.5**
	baz=272						
M24K	**Tolsona, Glenn**	**83.56**	**28**	P	**P**	**06 24 17.9**	**+0.2**
	baz=272,SNR=15						
M24K				S	**S**	**06 34 42.3**	**+4.2**
	baz=272						
Q23K	**Middleton Isla**	**83.56**	**31**	P	**P**	**06 24 17.8**	**+0.2**
	baz=272						
Q23K				S	**S**	**06 34 42.4**	**+4.4**
	baz=272						
Q23K				S	**S**	**06 34 42.4**	**+4.4**
	baz=272						
F25K	**Christian Rive**	**83.61**	**23**	P	**P**	**06 24 18.7**	**+0.8**
	baz=272,SNR=51						
F25K				S	**S**	**06 34 44.3**	**+5.9**
	baz=272						
E25K	**Arctic Village**	**83.62**	**22**	IAMs_20	IAMs_20	07 05 56.0	
	comp=Z,40µm,21.0s						
E25K	**Arctic Village**	**83.62**	**22**	P	**P**	**06 24 18.2**	**+0.3**
	baz=272,SNR=78						
E25K				S	**S**	**06 34 43.1**	**+4.5**
	baz=272						
E25K				S	**S**	**06 34 43.1**	**+4.5**
	baz=272						
K24K	**Donnelly Dome**	**83.68**	**27**	IAmb	IAmb	06 24 38.5	
	comp=Z,310nm,1.0s						
K24K	**Donnelly Dome**	**83.68**	**27**	P	**P**	**06 24 17.7**	**-0.6**
	baz=272,SNR=14						
K24K				S	**S**	**06 34 42.5**	**+3.3**
	baz=272						
K24K				S	**S**	**06 34 42.5**	**+3.3**
	baz=272						
KLU	**Klutina**	**83.70**	**29**	P	**P**	**06 24 18.0**	**-0.4**
	baz=272,SNR=16						
KLU				S	**SKSac**	**06 34 42.6**	**+3.0**
	baz=272						
C26K	**Camden Bay**	**83.80**	**20**	P	**P**	**06 24 19.1**	**+0.5**
	baz=272						
C26K				S	**S**	**06 34 41.7**	**+1.6**
	baz=272						
C26K				S	**S**	**06 34 41.7**	**+1.6**
	baz=272						
EYAK	**Cordova Ski Ar**	**83.82**	**30**	P	**P**	**06 24 21.3**	**+2.4**
EYAK	**Cordova Ski Ar**	**83.82**	**30**	P	**P**	**06 24 19.1**	**+0.2**
	baz=272,SNR=14						
EYAK				S	**S**	**06 34 42.8**	**+2.2**
	baz=272						
J25K	**Salcha River,**	**83.83**	**26**	P	**P**	**06 24 17.7**	**-1.3**
	baz=272						
J25K				S	**S**	**06 34 42.8**	**+2.0**
	baz=272						
J25K				S	**S**	**06 34 42.8**	**+2.0**
	baz=272						
PAX	**Paxson**	**83.85**	**27**	IAMs_20	IAMs_20	07 04 51.3	
	comp=Z,35µm,20.0s						
PAX	**Paxson**	**83.85**	**27**	P	**P**	**06 24 18.6**	**-0.6**
	baz=272,SNR=55						
PAX				S	**S**	**06 34 44.7**	**+3.6**
	baz=272						
ANN	**Anapa**	**83.85**	**314**	*e*P	**P**	**06 24 17.6**	**-1.8**
ANN				*e*S	**S**	**06 34 40.6**	**-1.0**
ANN				*e*SSS	SSS	06 43 28.6	
ANN				pmax	pmax		
	comp=Z,295nm,1.0s						
ANN				pmax	pmax		
	comp=Z,3µm,5.2s						
OBN	**Obninsk**	**83.88**	**325**	LR	LR	07 04 41.2	
	comp=Z,34µm,20.9s,baz=26,slow=38						
OBN	**Obninsk**	**83.88**	**325**	P	**P**	**06 24 17.6**	**-1.7**
OBN				IAMs_20	IAMs_20	07 04 38.9	
	comp=Z,46µm,22.0s						
OBN	**Obninsk**	**83.88**	**325**	⇑P	**P**	**06 24 19.5**	**+0.2**
OBN	**Obninsk**	**83.88**	**325**	*d i*P	**P**	**06 24 17.4**	**-1.9**
OBN				*i*		06 24 29.0	
OBN				*i*		06 24 35.9	
OBN				*i*		06 27 27.3	
OBN				PPP	PPP	06 29 23.1	
OBN				*e*S	**SKSac**	**06 34 40.9**	**+0.1**
OBN				*e*PS	PnS	06 36 03.1	+27
OBN				*i* SS	**SS**	**06 40 09.6**	**+0.5**
OBN				pmax	pmax		
	comp=Z,222nm,1.7s						
OBN				MLR	MLR		
	comp=Z,54µm,24.0s						
OBN	**Obninsk**	**83.88**	**325**	P	**P**	**06 24 18.1**	**-1.2**
	comp=Z,7µmcomp=Z,250nm,2.1s						
HARP	**HAARP**	**84.02**	**28**	P	**P**	**06 24 19.4**	**-0.6**
	baz=273,SNR=15						
HARP				S	**S**	**06 34 46.0**	**+3.3**
	baz=273						
HARP				S	**S**	**06 34 46.0**	**+3.3**
	baz=273						
BMAR	**Burnt Mountain**	**84.03**	**23**	P	**P**	**06 24 20.2**	**+0.2**
RIDG	**Independent Ri**	**84.10**	**27**	P	**P**	**06 24 20.2**	**-0.2**
	baz=273,SNR=45						
RIDG				S	**S**	**06 34 44.6**	**+1.1**
	baz=273						
LVZ	**Lovozero**	**84.16**	**338**	*i* P	**P**	**06 24 20.0**	**-0.6**
LVZ				pmax	pmax		
	comp=Z,190nm,1.6s						
LVZ				MLR	MLR		
	comp=Z,75µm,24.0s						
F26K	**Sheenjek River**	**84.18**	**23**	P	**P**	**06 24 21.2**	**+0.5**
	baz=273,SNR=42						
F26K				S	**S**	**06 34 48.6**	**+4.4**
	baz=273						
C27K	**Jago River**	**84.23**	**21**	P	**P**	**06 24 21.2**	**+0.3**
	baz=273						
C27K				S	**S**	**06 34 47.5**	**+2.9**
	baz=273						
C27K				S	**S**	**06 34 47.5**	**+2.9**
	baz=273						
N25K	**Chitina, Valde**	**84.33**	**29**	P	**P**	**06 24 21.7**	**0.0**
	baz=273,SNR=30						
N25K				S	**S**	**06 34 47.1**	**+1.2**
	baz=273						
N25K				S	**S**	**06 34 47.1**	**+1.2**
	baz=273						
BMRM	**Bremner River**	**84.36**	**29**	P	**P**	**06 24 21.6**	**-0.2**
	baz=273,SNR=14						
BMRM				S	**S**	**06 34 48.6**	**+2.4**
	baz=273						
G26K	**Porcupine Rive**	**84.36**	**23**	P	**P**	**06 24 21.7**	**+0.1**
	baz=274,SNR=78						
G26K				S	**S**	**06 34 48.6**	**+2.7**
	baz=274						
DOT	**Dot Lake**	**84.45**	**27**	IAMs_20	IAMs_20	07 02 35.0	
	comp=Z,33µm,22.0s						
SCRK	**Sand Creek**	**84.46**	**26**	P	**P**	**06 24 21.9**	**-0.5**
	baz=274,SNR=41						
SCRK				S	**S**	**06 34 49.1**	**+1.8**
	baz=274						
KAIM	**Kayak Island**	**84.51**	**30**	P	**P**	**06 24 22.7**	**+0.2**
	baz=274						
KAIM				S	**S**	**06 34 51.0**	**+3.4**
	baz=274						
J26L	**Joseph Creek**	**84.61**	**26**	P	**P**	**06 24 22.8**	**-0.2**
	baz=274						
J26L				S	**S**	**06 34 48.1**	**-0.6**
	baz=274						
J26L				S	**S**	**06 34 48.1**	**-0.6**
	baz=274						
MENT	**Mentasta**	**84.65**	**27**	IAmb	IAmb	06 24 44.2	
	comp=Z,206nm,1.1s						
MENT	**Mentasta**	**84.65**	**27**	P	**P**	**06 24 23.2**	**0.0**
APA	**Apatity**	**84.66**	**337**	⇓*i*P	**P**	**06 24 21.9**	**-1.2**
APA				*i*		06 27 42.9	
APA				*i* S	**S**	**06 34 48.5**	**-0.3**
I26K	**Coal Creek Min**	**84.73**	**25**	P	**P**	**06 24 23.1**	**-0.4**
	baz=274						
I26K				S	**S**	**06 34 50.9**	**+1.3**
	baz=274						
I26K				S	**S**	**06 34 50.9**	**+1.3**
	baz=274						
L26K	**Log Cabin Wild**	**84.81**	**27**	IAMs_20	IAMs_20	07 05 19.8	
	comp=Z,32µm,19.0s						
L26K	**Log Cabin Wild**	**84.81**	**27**	P	**P**	**06 24 24.1**	**+0.1**
	baz=274,SNR=45						
L26K				S	**S**	**06 34 52.7**	**+2.1**
	baz=274						
L26K				S	**S**	**06 34 52.7**	**+2.1**
	baz=274						
VRDI	**Verde Repeater**	**84.90**	**29**	IAmb	IAmb	06 24 47.0	
	comp=Z,226nm,1.2s						
VRDI				IAMs_20	IAMs_20	06 57 27.1	
	comp=Z,32µm,22.0s						
M26K	**Nabesna, AK**	**85.02**	**28**	P	**P**	**06 24 25.0**	**-0.1**
	baz=275						
M26K				S	**S**	**06 34 52.4**	**-0.4**
	baz=275						
M26K				S	**S**	**06 34 52.4**	**-0.4**
	baz=275						
CRQM	**Cirque**	**85.09**	**30**	IAMs_20	IAMs_20	07 07 55.8	
	comp=Z,30µm,19.0s						
MCARA	**McCarthy VSAT**	**85.09**	**29**	P	**P**	**06 24 25.1**	**-0.3**
	baz=275,SNR=12						
MCARA				S	**S**	**06 34 53.7**	**+0.3**
	baz=275						
E27K	**Coleen River**	**85.11**	**22**	IAMs_20	IAMs_20	07 05 42.1	
	comp=Z,31µm,20.0s						
E27K	**Coleen River**	**85.11**	**22**	P	**P**	**06 24 25.6**	**+0.2**
	baz=276,SNR=89						
E27K				S	**S**	**06 34 53.2**	**-0.1**
	baz=276						
E27K				S	**S**	**06 34 53.2**	**-0.1**
	baz=276						
CRQE	**Cirque**	**85.11**	**30**	P	**P**	**06 24 25.3**	**-0.4**
	baz=275,SNR=11						
CRQE				S	**S**	**06 34 55.1**	**+1.2**
	baz=275						
ASF	**Jabal al Asfar**	**85.14**	**302**	LR	LR	07 09 11.2	
	comp=Z,3155µm,19.1s,baz=333,slow=40						
G27K	**Doyon Strip**	**85.21**	**23**	P	**P**	**06 24 26.3**	**+0.3**
	baz=276,SNR=87						
G27K				S	**S**	**06 34 56.0**	**+1.5**
	baz=276						
G27K				S	**S**	**06 34 56.0**	**+1.5**
	baz=276						
D27M	**Malcolm River**	**85.23**	**21**	P	**P**	**06 24 26.3**	**+0.3**
	baz=276						
D27M				S	**S**	**06 34 54.7**	**+0.1**
	baz=276						
TGL	**Tana Glacier**	**85.24**	**30**	IAMs_20	IAMs_20	07 08 00.2	
	comp=Z,30µm,20.0s						
SNH	**Sunshine Point**	**85.29**	**30**	IAMs_20	IAMs_20	07 00 33.4	
	comp=Z,28µm,20.0s						
K27K	**Chicken**	**85.30**	**26**	IAMs_20	IAMs_20	07 04 52.5	
	comp=Z,30µm,20.0s						
K27K	**Chicken**	**85.30**	**26**	P	**P**	**06 24 26.7**	**+0.4**
	baz=275						
K27K				S	**S**	**06 34 56.0**	**+0.7**
	baz=275						
K27K				S	**S**	**06 34 56.0**	**+0.7**
	baz=275						
H27K	**Steamboat Moun**	**85.32**	**24**	P	**P**	**06 24 26.8**	**+0.3**
	baz=276						
H27K				S	**S**	**06 34 55.2**	**-0.4**
	baz=276						
I27K	**Kandik River**	**85.34**	**25**	P	**P**	**06 24 26.8**	**+0.2**
	baz=276						
I27K				S	**S**	**06 34 56.2**	**+0.4**
	baz=276						
I27K				S	**S**	**06 34 56.2**	**+0.4**
	baz=276						
FKH	**Fakeheh**	**85.38**	**304**	*e*P	**P**	**06 24 26.5**	**-1.0**
BNN	**Bunyan**	**85.45**	**308**	IAmb	IAmb	06 24 43.5	
	comp=Z,268nm,1.2s						
L27K	**Beaver Creek,**	**85.50**	**27**	P	**P**	**06 24 27.4**	**0.0**
	baz=276						
L27K				S	**S**	**06 34 58.3**	**+0.9**
	baz=276						
BCAR	**Beaver Creek A**	**85.52**	**27**	P	**P**	**06 24 28.0**	**+0.4**
BEIL	**Beino**	**85.54**	**304**	*e*P	**P**	**06 24 26.9**	**-1.3**
M27K	**Edge Creek, AK**	**85.55**	**28**	P	**P**	**06 24 27.6**	**-0.2**
	baz=276						
M27K				S	**S**	**06 34 59.9**	**+1.8**
	baz=276						
M27K				S	**S**	**06 34 59.9**	**+1.8**
	baz=276						
HWQ	**Hawqa**	**85.75**	**304**	*e*P	**P**	**06 24 27.8**	**-1.7**
YAH	**Yahtse**	**85.81**	**30**	IAMs_20	IAMs_20	07 08 20.2	
	comp=Z,30µm,19.0s						
F28M	**Old Crow**	**85.81**	**22**	IAMs_20	IAMs_20	07 07 11.9	
	comp=Z,47µm,21.0s						
F28M	**Old Crow**	**85.81**	**22**	P	**P**	**06 24 28.9**	**0.0**
	baz=277,SNR=62						
F28M				S	**S**	**06 34 59.8**	**-0.5**
	baz=277						
E28M	**Babbage River**	**85.82**	**21**	IAMs_20	IAMs_20	07 06 59.9	
	comp=Z,33µm,20.0s						
E28M	**Babbage River**	**85.82**	**21**	P	**P**	**06 24 28.9**	**0.0**
	baz=277						
E28M				S	**S**	**06 34 58.1**	**-2.2**
	baz=277						
ZAHL	**Zahle**	**85.84**	**303**	*e*P	**P**	**06 24 28.9**	**-1.0**
VADS	**Vadso**	**85.85**	**340**	*e*P	P	06 24 23.6	-5.3
VADS				*e*SKSac	**SKSac**	**06 34 51.5**	**-1.3**
VADS				IVMs_BB	IVMs_BB	07 10 59.4	
	comp=Z,13µm,20.6s						
RCY	**Rachaya**	**85.92**	**303**	*e*P	**P**	**06 24 29.6**	**-0.7**
CTG	**Chitna Glacier**	**85.95**	**29**	P	**P**	**06 24 29.8**	**0.0**
	baz=276,SNR=47						
CTG				S	**S**	**06 35 02.3**	**+0.2**
	baz=276						
D28M	**Stokes Point**	**86.01**	**21**	P	**P**	**06 24 29.8**	**+0.1**
	baz=278,SNR=9.6						
D28M				S	**S**	**06 35 05.6**	**+3.6**
	baz=278						
SHBL	**Chebaa**	**86.01**	**303**	*e*P	**P**	**06 24 30.3**	**-0.5**
BVCY	**Beaver Creek**	**86.01**	**28**	P	**P**	**06 24 30.5**	**+0.5**
	baz=277,SNR=19						
BVCY				S	**S**	**06 35 04.0**	**+1.5**
	baz=277						
HOPEN	**Hopen**	**86.02**	**347**	*e*P	**P**	**06 24 30.7**	**+1.0**
HOPEN				*e*SKSac	**SKSac**	**06 34 54.7**	**+0.9**
HOPEN				*e*SS	**SS**	**06 40 42.4**	**+2.8**
HOPEN				IVMs_BB	IVMs_BB	07 07 47.2	
	comp=Z,34µm,20.5s						
BHL	**Bhannes**	**86.03**	**304**	*e*P	**P**	**06 24 28.8**	**-2.0**
QRWL	**Qaraoun**	**86.04**	**303**	*e*P	**P**	**06 24 30.1**	**-0.7**
I28M	**Miner Creek**	**86.06**	**25**	P	**P**	**06 24 30.5**	**+0.2**
	baz=277						
I28M				S	**S**	**06 35 08.6**	**+5.7**
	baz=277						
SIM	**Simferopol'**	**86.19**	**315**	*e*P	**P**	**06 24 29.0**	**-2.2**
SIM				*e*S	**S**	**06 35 05.0**	**+0.2**
SIM				pmax	pmax		
	comp=Z,176nm,0.9s						
BALJ	**Balqa**	**86.21**	**302**	IAmb	IAmb	06 24 40.0	
	comp=Z,289nm,1.2s						
YUK3	**Moose Creek**	**86.27**	**28**	P	**P**	**06 24 31.0**	**-0.5**
	baz=277,SNR=19						
YUK3				S	**S**	**06 35 09.7**	**+4.3**
	baz=277						
MMAI	**Mount Meron Ar**	**86.32**	**303**	P	**P**	**06 24 30.8**	**-1.4**
	comp=Z,8.0nm,0.7s,baz=70,slow=9.8,SNR=13						
MMAI				S	**SKSac**	**06 34 56.2**	**-1.3**
	comp=Z,0.9nm,0.3s,baz=62,slow=18,SNR=1.2						
MMAI				LR	LR	07 07 44.5	
	comp=Z,17µm,20.6s,baz=82,slow=39						
	comp=Z,8.0nm,0.7s						
GHAJ	**Ghor Haditha**	**86.34**	**301**	P	**P**	**06 24 31.1**	**-1.1**
GHAJ				IAmb	IAmb	06 24 44.6	
	comp=Z,362nm,1.1s						
GHAJ				IAMs_20	IAMs_20	07 08 12.0	
	comp=Z,40µm,22.0s						
VNDA	**Vanda**	**86.44**	**173**	P	**P**	**06 24 29.8**	**-1.9**
	comp=Z,23nm,0.9s,baz=312,slow=6.3,SNR=45						
VNDA				S	**SKSac**	**06 34 54.0**	**-2.1**
	comp=Z,1.4nm,0.9s,baz=121,slow=13,SNR=1.7						
VNDA				LR	LR	07 04 57.2	
	comp=Z,21µm,18.5s,baz=339,slow=37						
	comp=Z,23nm,0.9s						
E29M	**Blow River**	**86.44**	**22**	IAmb	IAmb	06 25 13.5	
	comp=Z,264nm,1.6s						
E29M				IAMs_20	IAMs_20	07 07 19.5	
	comp=Z,30µm,21.0s						
E29M	**Blow River**	**86.44**	**22**	P	**P**	**06 24 31.7**	**-0.3**
	baz=279						
E29M				S	**S**	**06 35 10.9**	**+4.5**
	baz=279						
DAWY	**Dawson**	**86.47**	**26**	P	**P**	**06 24 32.0**	**-0.2**
	baz=278,SNR=30						
DAWY				S	**S**	**06 35 10.6**	**+3.7**
	baz=278						
O28M	**Mount Upton**	**86.53**	**29**	P	**P**	**06 24 32.8**	**-0.1**
	baz=277						
O28M				S	**S**	**06 35 12.3**	**+4.2**
	baz=277						
BZK	**Bozkurt**	**86.56**	**312**	⇑P	**P**	**06 24 30.6**	**-2.5**

PINM	**Pinnacle**	**86.58**	**30**	P	**P**	**06 24 32.2**	**-0.7**
	baz=277						
PINM				S	**S**	**06 35 14.3**	**+6.2**
	baz=277						
H29M	**Whitestone**	**86.59**	**24**	IAmb	IAmb	06 25 26.9	
	comp=Z,413nm,1.4s						
H29M	**Whitestone**	**86.59**	**24**	P	**P**	**06 24 32.5**	**-0.2**
	baz=279,SNR=16						
H29M				S	**S**	**06 35 13.0**	**+5.1**
	baz=279						
G29M	**Pine Creek**	**86.62**	**23**	IAmb	IAmb	06 24 44.5	
	comp=Z,207nm,0.9s						
G29M	**Pine Creek**	**86.62**	**23**	P	**P**	**06 24 32.1**	**-0.8**
	baz=279,SNR=35						
G29M				S	**S**	**06 35 12.3**	**+4.0**
	baz=279						
YUK8	**Steele Glacier**	**86.67**	**29**	P	**P**	**06 24 33.7**	**+0.2**
	baz=278,SNR=19						
YUK8				S	**S**	**06 35 17.1**	**+7.7**
	baz=278						
KEV	**Kevo**	**86.71**	**340**	IAMs_20	IAMs_20	07 10 19.4	
	comp=Z,46μm,21.0s						
I29M	**Ogilvie Camp,**	**86.75**	**25**	IAmb	IAmb	06 24 44.0	
	comp=Z,463nm,1.7s						
I29M	**Ogilvie Camp,**	**86.75**	**25**	P	**P**	**06 24 32.9**	**-0.6**
	baz=279,SNR=22						
I29M				S	**S**	**06 35 16.8**	**+7.3**
	baz=279						
ILGA	**Ilgaz**	**86.87**	**311**	IAmb	IAmb	06 25 18.1	
	comp=Z,147nm,1.2s						
KIRS	**Kirsehir-Merke**	**86.92**	**309**	⇓P	**P**	**06 24 34.4**	**-0.6**
J29N	**Klondike Camp**	**86.92**	**26**	IAMs_20	IAMs_20	07 05 23.3	
	comp=Z,33μm,21.0s						
J29N	**Klondike Camp**	**86.92**	**26**	P	**P**	**06 24 34.3**	**-0.1**
	baz=279,SNR=16						
J29N				S	**S**	**06 35 20.1**	**+8.8**
	baz=279						
EIL	**Elat**	**87.03**	**299**	LR	LR	07 08 37.5	
	comp=Z,49μm,21.0s,baz=70,slow=39						
BR104	**Keskin Array S**	**87.07**	**309**	P	**P**	**06 24 33.7**	**-2.1**
	comp=Z,412nmcomp=Z,52nm,1.0s						
BR131	**Keskin Array S**	**87.07**	**309**	P	**P**	**06 24 35.7**	**-0.1**
BR131				S	**SKSac**	**06 35 03.8**	**+1.8**
BR131	**Keskin Array S**	**87.07**	**309**	P	**P**	**06 24 33.8**	**-2.0**
BR131	**Keskin Array S**	**87.07**	**309**	P	**P**	**06 24 33.8**	**-2.0**
BR131				pmax	pmax		
	comp=Z,55nm,1.0s						
BRTR	**Keskin Array B**	**87.07**	**309**	P	**P**	**06 24 33.7**	**-2.1**
	comp=Z,7.3nm,0.9s,baz=108,slow=3.8,SNR=18						
BRTR				PP	**PP**	**06 27 58.1**	**-1.2**
	comp=Z,4.2nm,0.9s,baz=94,slow=7.5,SNR=3.7						
BRTR				S	**SKSac**	**06 34 57.7**	**-4.3**
	comp=Z,0.6nm,0.7s,baz=36,slow=5.5,SNR=1.5						
BRTR				PKKPbc	**PKKPbc**	**06 42 29.6**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=213,slow=3.9,SNR=4.3						
BRTR				LR	LR	07 09 32.5	
	comp=Z,14μm,20.6s,baz=82,slow=40						
	comp=Z,7.3nm,0.9s						
BRTR	**Keskin Array B**	**87.07**	**309**	P	**P**	**06 24 33.3**	**-2.5**
BR106	**Keskin Array S**	**87.08**	**309**	P	**P**	**06 24 33.8**	**-2.1**
	comp=Z,381nmcomp=Z,50nm,0.9s						
BR105	**Keskin Array S**	**87.09**	**309**	P	**P**	**06 24 33.8**	**-2.1**
	comp=Z,440nmcomp=Z,60nm,0.9s						
M29M	**Somme Creek**	**87.11**	**28**	P	**P**	**06 24 35.6**	**+0.2**
	baz=279						
M29M				S	S	06 35 22.3	+9.0
	baz=279						
L29M	**L29M**	**87.17**	**27**	IAMs_20	IAMs_20	07 00 36.9	
	comp=Z,41μm,22.0s						
L29M	**L29M**	**87.17**	**27**	P	**P**	**06 24 35.5**	**-0.1**
	baz=279						
L29M				S	S	06 35 23.2	+10
	baz=279						
YUK4	**Talbot Arm**	**87.19**	**29**	P	**P**	**06 24 35.3**	**-0.7**
	baz=279,SNR=5.4						
EPYK	**Eagle Plains**	**87.22**	**24**	IAmb	IAmb	06 25 27.5	
	comp=Z,193nm,1.1s						
EPYK	**Eagle Plains**	**87.22**	**24**	P	**P**	**06 24 35.0**	**-0.8**
	baz=280,SNR=14						
EPYK				S	**S**	**06 35 19.7**	**+5.6**
	baz=280						
ARA0	**ARCESS Array S**	**87.27**	**340**	*e*P	**P**	**06 24 35.1**	**-0.9**
ARA0				IVmB_BB		06 24 39.7	
	comp=Z,1μm,4.5s						
ARA0				*e*S	**S**	**06 35 07.8**	**-6.5**
ARA0				IVMs_BB	IVMs_BB	07 08 27.7	
	comp=Z,19μm,17.0s						
ARCES	**ARCESS Array B**	**87.27**	**340**	P	**P**	**06 24 33.9**	**-2.0**
	comp=Z,20nm,0.9s,baz=75,slow=5.8,SNR=18						
ARCES				PKiKP	**PKiKP**	**06 29 39.5**	**-0.8**
	comp=Z,3.7nm,0.8s,baz=125,slow=1.4,SNR=1.8						
ARCES				S	**SKSac**	**06 35 00.7**	**-1.1**
	comp=Z,2.7nm,0.9s,baz=254,slow=0.9,SNR=2.2						
ARCES				PKKPbc	**PKKPbc**	**06 42 30.1**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=251,slow=3.7,SNR=4.5						
ARCES				LR	LR	07 08 49.5	
	comp=Z,56μm,19.1s,baz=84,slow=39						
	comp=Z,20nm,0.9s						
ARCES	**ARCESS Array B**	**87.27**	**340**	P	**P**	**06 24 34.6**	**-1.4**
ARCES	**ARCESS Array B**	**87.27**	**340**	P	**P**	**06 24 34.6**	**-1.4**
ARCES				pmax	pmax		
	comp=Z,79nm,1.1s						
G30M	**tAoh Zraii Nji**	**87.31**	**23**	P	**P**	**06 24 35.5**	**-0.7**
	baz=280,SNR=35						
G30M				S	**S**	**06 35 21.4**	**+6.4**
	baz=280						
K29M	**Barlow Dome**	**87.32**	**26**	P	**P**	**06 24 35.8**	**-0.6**
	baz=280						
K29M				S	**S**	**06 35 22.3**	**+7.0**
	baz=280						
CIDE	**Kastamonu/Cide**	**87.36**	**312**	⇑P	**P**	**06 24 35.9**	**-1.0**
SBA	**Scott Base**	**87.36**	**172**	P	**P**	**06 24 37.1**	**+1.0**
SBA				IAmb	IAmb	06 25 16.9	
	comp=Z,266nm,1.4s						
SBA	**Scott Base**	**87.36**	**172**	P	**P**	**06 24 37.1**	**+1.0**
SBA				pmax	pmax		
	comp=Z,266nm,1.4s						
F30M	**Barrier River**	**87.36**	**22**	IAmb	IAmb	06 25 17.0	
	comp=Z,213nm,1.2s						
F30M	**Barrier River**	**87.36**	**22**	P	**P**	**06 24 35.9**	**-0.6**
	baz=281						
F30M				S	**S**	**06 35 21.1**	**+5.8**
	baz=281						
O29M	**Mount Kennedy**	**87.38**	**30**	IAMs_20	IAMs_20	07 06 05.9	
	comp=Z,31μm,21.0s						
O29M	**Mount Kennedy**	**87.38**	**30**	P	**P**	**06 24 36.5**	**-0.3**
	baz=279						
O29M				S	**S**	**06 35 24.3**	**+8.2**
	baz=279						
YUK6	**Outpost Mounta**	**87.39**	**29**	P	**P**	**06 24 36.3**	**-0.7**
	baz=279						
YUK6				S	S	06 35 26.1	+10
	baz=279						
PPT	**Papeete**	**87.40**	**108**	S	**SKSac**	**06 35 08.8**	**+4.4**
	comp=Z,22nm,0.8s,baz=92,slow=18,SNR=1.4						
PPT				LR	LR	06 55 43.7	
	comp=Z,17μm,21.8s,baz=268,slow=30						
PPT2	**Papeete2**	**87.40**	**108**	*e*PKIKP	P	06 24 46.1	+8.4
	comp=Z,133nm,1.3s						
PPT2	**Papeete2**	**87.40**	**108**	*e*S	**SKSac**	**06 35 09.8**	**+5.2**
	comp=Z,10μm,30.5s						
PPT2				*e*SS	**SS**	**06 40 56.2**	**-6.8**
	comp=Z,18μm,23.5s						
PPT2				*e*LQ	LQ	06 48 41.1	
	comp=Z,231μm,39.5s						
PPT2				*e*LR	LR	06 52 22.2	
	comp=Z,69μm,27.5s						
PPT2				*e*LR	LR	06 52 24.8	
	comp=Z,93μm,26.0s						
SPA0	**Spitsbergen Ar**	**87.40**	**349**	*e*P	**P**	**06 24 37.8**	**+1.4**
SPA0				IVMs_BB	IVMs_BB	07 06 09.5	
	comp=Z,16μm,19.3s						
SPITS	**Spitsbergen Ar**	**87.40**	**349**	P	**P**	**06 24 35.2**	**-1.3**
	comp=Z,7.2nm,0.7s,baz=84,slow=7.6,SNR=9.3						
SPITS				LR	LR	07 09 42.8	
	comp=Z,44μm,18.6s,baz=62,slow=40						
	comp=Z,7.2nm,0.7s						
PAE	**Paea**	**87.41**	**108**	*e*PKIKP	P	06 24 46.5	+8.9
	comp=Z,54nm,1.2s						
PAE	**Paea**	**87.41**	**108**	*e*S	**S**	**06 35 13.6**	**-3.8**
	comp=Z,1μm,31.0s						
PAE				*e*SS	**SS**	**06 41 03.5**	**+0.6**
	comp=Z,3μm,26.5s						
PAE	**Paea**	**87.41**	**108**	*e*LR	LR	06 52 21.2	
	comp=Z,15μm,25.2s						
KIBK	**Kibwezi**	**87.48**	**267**	P	**P**	**06 24 36.0**	**-2.3**
KIBK	**Kibwezi**	**87.48**	**267**	P	**P**	**06 24 37.0**	**-1.3**
KIBK				IAmb	IAmb	06 24 47.2	
	comp=Z,114nm,1.1s						
I30M	**Mount Dempster**	**87.57**	**25**	IAMs_20	IAMs_20	07 09 07.4	
	comp=Z,34μm,21.0s						
I30M	**Mount Dempster**	**87.57**	**25**	P	**P**	**06 24 37.0**	**-0.7**
	baz=280						
TIAR	**Tiarei**	**87.61**	**108**	*e*PKIKP	**P**	**06 24 40.9**	**+2.3**
	comp=Z,250nm,1.0s						
TIAR	**Tiarei**	**87.61**	**108**	*e*SS	SS	06 41 02.6	-3.4
	comp=Z,9μm,24.8s						
TIAR	**Tiarei**	**87.61**	**108**	*e*LR	LR	06 52 25.7	
	comp=Z,62μm,24.8s						
HAMF	**Hammerfest**	**87.64**	**341**	*e*P	**P**	**06 24 38.5**	**+0.8**
HAMF				*e*SKSac	**SKSac**	**06 35 04.8**	**+0.9**
HAMF				IVMs_BB	IVMs_BB	07 12 12.7	
	comp=Z,17μm,18.4s						
ANTO	**Ankara**	**87.70**	**310**	P	**P**	**06 24 39.5**	**+0.8**
ANTO				S	**SKSac**	**06 35 07.3**	**+1.6**
ANTO	**Ankara**	**87.70**	**310**	⇓P	**P**	**06 24 37.4**	**-1.4**
ANTO	**Ankara**	**87.70**	**310**	P	**P**	**06 24 37.3**	**-1.4**
ANTO	**Ankara**	**87.70**	**310**	P	**P**	**06 24 36.8**	**-2.0**
	comp=Z,2μmcomp=Z,21nm,1.7s						
J30M	**Hart River**	**87.70**	**25**	IAmb	IAmb	06 24 59.9	
	comp=Z,184nm,1.6s						
J30M	**Hart River**	**87.70**	**25**	P	**P**	**06 24 37.8**	**-0.6**
	baz=280,SNR=17						
J30M				S	**S**	**06 35 26.8**	**+7.8**
	baz=280						
TVO	**Taravao**	**87.73**	**108**	*e*PKIKP	**P**	**06 24 44.0**	**+4.7**
	comp=Z,78nm,1.1s						
TVO	**Taravao**	**87.73**	**108**	*e*SS	SS	06 41 08.9	+1.1
	comp=Z,3μm,26.4s						
TVO	**Taravao**	**87.73**	**108**	*e*LR	LR	06 52 30.1	
	comp=Z,15μm,25.2s						
HYT	**Haines Junctio**	**87.82**	**29**	P	**P**	**06 24 38.4**	**-0.6**
HYT	**Haines Junctio**	**87.82**	**29**	P	**P**	**06 24 38.4**	**-0.6**
	baz=280						
HYT				S	**S**	**06 35 28.7**	**+8.5**
	baz=280						
CSS	**Mathiatis**	**87.83**	**305**	P	**P**	**06 24 37.4**	**-2.0**
	comp=Z,6μmcomp=Z,173nm,1.9s						
M30M	**Minto, Yukon**	**87.86**	**27**	P	**P**	**06 24 38.7**	**-0.2**
	baz=280,SNR=27						
M30M				S	S	06 35 30.2	+10
	baz=280						
P29M	**Windy Craggy**	**87.90**	**30**	IAmb	IAmb	06 24 51.5	
	comp=Z,150nm,1.2s						
P29M	**Windy Craggy**	**87.90**	**30**	P	**P**	**06 24 39.1**	**-0.1**
	baz=280						
P29M				S	**S**	**06 35 28.7**	**+7.9**
	baz=280						
N30M	**Aishikik Lake**	**87.91**	**28**	P	**P**	**06 24 38.9**	**-0.4**
	baz=280						
N30M				S	**S**	**06 35 28.3**	**+7.3**
	baz=280						
KBS	**Kingsbay**	**87.94**	**350**	*e*P	**P**	**06 24 39.6**	**+0.5**
KBS				*i*		06 28 13.8	
KBS				*e*		06 35 13.2	
KBS				IVMs_BB	IVMs_BB	07 05 23.5	
	comp=Z,16μm,20.3s						
HSPB	**Hornsund (broa**	**87.98**	**348**	*e*P	**P**	**06 24 36.2**	**-3.0**
BJO1	**Bjornoya**	**87.99**	**345**	*e*P	**P**	**06 24 40.5**	**+1.3**
BJO1				IVMs_BB	IVMs_BB	07 07 01.2	
	comp=Z,15μm,21.3s						
OUL	**Oulu**	**88.00**	**335**	P	**P**	**06 24 42.9**	**+3.4**
OUL				pmax	pmax		
	comp=Z,54nm,0.8s						
INK	**Inuvik**	**88.05**	**21**	LR	LR	07 07 56.1	
	comp=Z,12μm,19.2s,baz=285,slow=38						
INK	**Inuvik**	**88.05**	**21**	P	**P**	**06 24 38.7**	**-1.0**
INK	**Inuvik**	**88.05**	**21**	P	**P**	**06 24 38.6**	**-1.1**
	baz=283,SNR=17						
INK				S	**S**	**06 35 28.4**	**+6.6**
	baz=283						
MAYO	**Mayo, Yukon**	**88.08**	**26**	P	**P**	**06 24 39.1**	**-0.9**
	baz=281,SNR=14						
MAYO				S	**S**	**06 35 26.4**	**+4.1**
	baz=281						
G31M	**Satah River**	**88.08**	**23**	IAmb	IAmb	06 25 05.4	
	comp=Z,97nm,0.9s						
G31M	**Satah River**	**88.08**	**23**	P	**P**	**06 24 38.6**	**-1.2**
	baz=282,SNR=16						
G31M				S	**S**	**06 35 24.5**	**+2.5**
	baz=282						
KMBO	**Kilima Mbogo**	**88.13**	**269**	LR	LR	07 00 53.5	
	comp=Z,17μm,21.4s,baz=106,slow=33						
F31M	**Tsiigehtchic**	**88.17**	**22**	IAmb	IAmb	06 25 01.9	
	comp=Z,94nm,0.9s						
F31M	**Tsiigehtchic**	**88.17**	**22**	P	**P**	**06 24 39.2**	**-1.1**
	baz=283,SNR=24						
F31M				S	**S**	**06 35 26.7**	**+3.8**
	baz=283						
KTK1	**Kautokeino**	**88.17**	**339**	*e*P	**P**	**06 24 40.8**	**+0.5**
KTK1				*i*		06 28 20.3	
KTK1				*e*SKSac	**SKSac**	**06 35 07.5**	**+0.2**
KTK1				IVMs_BB	IVMs_BB	07 06 31.8	
	comp=Z,15μm,20.6s						
P30M	**Million Dollar**	**88.21**	**30**	P	**P**	**06 24 39.3**	**-1.4**
	baz=280						
P30M				S	**S**	**06 35 31.5**	**+7.7**
	baz=280						
TBI	**Tubuai**	**88.28**	**114**	*e*P	**P**	**06 24 44.4**	**+2.7**
	comp=Z,16μm,28.0s						
TBI	**Tubuai**	**88.28**	**114**	*e*P	**P**	**06 24 46.4**	**+4.7**
	comp=Z,415nm,1.2s						
TBI	**Tubuai**	**88.28**	**114**	*e*S	**S**	**06 35 26.3**	**+0.6**
	comp=Z,58μm,28.2s						
TBI				*e*SS	**SS**	**06 41 22.7**	**+7.2**
	comp=Z,92μm,27.8s						
TBI				*e*LQ	LQ	06 49 07.0	
	comp=Z,354μm,36.2s						
TBI				*e*LR	LR	06 52 55.9	
	comp=Z,379μm,28.5s						
H31M	**Peel River**	**88.28**	**24**	IAmb	IAmb	06 25 42.4	
	comp=Z,190nm,1.4s						
H31M	**Peel River**	**88.28**	**24**	P	**P**	**06 24 39.9**	**-1.0**
	baz=282,SNR=15						
H31M				S	**S**	**06 35 31.8**	**+7.5**
	baz=282						
O30N	**Mendenhall**	**88.51**	**29**	P	**P**	**06 24 41.1**	**-1.1**
	baz=281,SNR=6.1						
O30N				S	**S**	**06 35 35.1**	**+8.5**
	baz=281						
N31M	**Braeburn, Yuko**	**88.53**	**28**	IAmb	IAmb	06 25 09.5	
	comp=Z,141nm,0.9s						
N31M				IAMs_20	IAMs_20	07 02 42.0	
	comp=Z,33μm,22.0s						
N31M	**Braeburn, Yuko**	**88.53**	**28**	P	**P**	**06 24 41.8**	**-0.4**
	baz=281,SNR=23						
N31M				S	S	06 35 36.1	+9.4
	baz=281						
PLBC	**Pleasant Camp**	**88.62**	**30**	P	**P**	**06 24 41.9**	**-0.7**
	baz=281,SNR=8.2						
PLBC				S	**S**	**06 35 36.1**	**+8.5**
	baz=281						
FINES	**FINESS Array B**	**88.63**	**332**	P	**P**	**06 24 40.7**	**-1.9**
	comp=Z,15nm,0.7s,baz=99,slow=3.8,SNR=25						
FINES				PKiKP	**PKiKP**	**06 29 42.2**	**-0.6**
	comp=Z,3.1nm,0.9s,baz=354,slow=1.4,SNR=0.8						
FINES				S	**SKSac**	**06 35 07.6**	**-2.5**
	comp=Z,2.9nm,0.8s,baz=134,slow=16,SNR=1.8						
FINES				PKKPbc	**PKKPbc**	**06 42 25.1**	**-0.7**
	comp=Z,8.3nm,1.0s,baz=318,slow=1.9,SNR=3.6						
FINES				LR	LR	07 08 04.9	
	comp=Z,63μm,21.2s,baz=80,slow=38						
	comp=Z,15nm,0.7s						
FINES	**FINESS Array B**	**88.63**	**332**	P	**P**	**06 24 41.4**	**-1.1**
FINES	**FINESS Array B**	**88.63**	**332**	P	**P**	**06 24 41.4**	**-1.1**
PMOR	**Pomariorio Ree**	**88.67**	**105**	*e*P	**P**	**06 24 45.7**	**+2.0**
	comp=Z,764nm,1.4s						
PMOR	**Pomariorio Ree**	**88.67**	**105**	*e*S	**S**	**06 35 33.2**	**+3.7**
	comp=Z,14μm,24.9s						
PMOR				*e*SS	**SS**	**06 41 27.4**	**+6.0**
	comp=Z,18μm,25.8s						
PMOR	**Pomariorio Ree**	**88.67**	**105**	*e*LR	LR	06 52 59.4	
	comp=Z,100μm,23.6s						
AK09	**Malin Array Si**	**88.73**	**321**	P	**P**	**06 24 40.6**	**-2.7**
AK08	**Malin Array Si**	**88.74**	**321**	P	**P**	**06 24 40.7**	**-2.6**
AKASG	**Malin Array Be**	**88.75**	**321**	P	**P**	**06 24 40.6**	**-2.8**
	comp=Z,5.4nm,0.8s,baz=72,slow=4.3,SNR=16						
AKASG				PP	**PP**	**06 28 11.1**	**-1.1**
	comp=Z,1.4nm,0.6s,baz=73,slow=7.7,SNR=1.7						
AKASG				PKiKP	**PKiKP**	**06 29 42.8**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=70,slow=3.2,SNR=0.7						
AKASG				S	**SKSac**	**06 35 04.9**	**-6.5**
	comp=Z,0.4nm,0.4s,baz=216,slow=44,SNR=1.7						
AKASG				PKKPbc	**PKKPbc**	**06 42 23.5**	**-1.7**
	comp=Z,0.3nm,0.4s,baz=270,slow=1.9,SNR=1.9						
AKASG				LR	LR	07 08 07.3	
	comp=Z,30μm,20.8s,baz=74,slow=38						
	comp=Z,5.4nm,0.8s						
AKASG	**Malin Array Be**	**88.75**	**321**	P	**P**	**06 24 41.2**	**-2.2**
AKASG	**Malin Array Be**	**88.75**	**321**	*i* P	**P**	**06 24 40.7**	**-2.7**
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AKBB	**Malin Array Si**	**88.75**	**321**	*i* P	**P**	**06 24 41.1**	**-2.3**
AKBB				pmax	pmax		
	comp=Z,111nm,1.1s						
AKBB				MLR	MLR		
	comp=Z,77μm,23.0s						
AKBB	**Malin Array Si**	**88.75**	**321**	P	**P**	**06 24 40.7**	**-2.7**
AK01	**Malin Array Si**	**88.76**	**321**	P	**P**	**06 24 40.8**	**-2.6**
KIEV	**Kiev**	**88.76**	**321**	P	**P**	**06 24 40.7**	**-2.7**
KIEV	**Kiev**	**88.76**	**321**	⇑P	**P**	**06 24 42.5**	**-0.9**
KIEV	**Kiev**	**88.76**	**321**	*i* P	**P**	**06 24 40.4**	**-3.1**
	SNR=9.5						
KIEV	**Kiev**	**88.76**	**321**	P	**P**	**06 24 42.5**	**-0.9**
KIEV	**Kiev**	**88.76**	**321**	P	**P**	**06 24 40.7**	**-2.7**
	comp=Z,12μmcomp=Z,321nm,1.1s						
AK02	**Malin Array Si**	**88.77**	**321**	P	**P**	**06 24 40.8**	**-2.7**
AK05	**Malin Array Si**	**88.78**	**321**	P	**P**	**06 24 40.9**	**-2.6**
AK04	**Malin Array Si**	**88.79**	**321**	P	**P**	**06 24 40.9**	**-2.6**
AK06	**Malin Array Si**	**88.79**	**321**	P	**P**	**06 24 40.9**	**-2.6**
AK07	**Malin Array Si**	**88.79**	**321**	P	**P**	**06 24 40.9**	**-2.7**
AK11	**Malin Array Si**	**88.79**	**321**	P	**P**	**06 24 40.9**	**-2.7**
VSU	**Vasula**	**88.87**	**329**	*i* P	**P**	**06 24 41.6**	**-2.1**
VSU				pmax	pmax		
	comp=Z,75nm,0.9s						
MNK	**Minsk**	**88.94**	**325**	*i* P	**P**	**06 24 44.0**	**-0.2**
MNK				*i*		06 28 12.8	
MNK				*i* PPP	PPP	06 30 10.5	
MNK				*i* S	**SKSac**	**06 35 13.2**	**+0.9**
MNK				*i* SSS	SSS	06 44 59.1	
MNK				pmax	pmax		
	comp=E,23nm,0.8s						
MNK				pmax	pmax		
	comp=N,44nm,1.1s						
MNK				pmax	pmax		
	comp=Z,72nm,0.9s						
PURM	**Purcari**	**88.95**	**317**	⇑P	**P**	**06 24 44.9**	**+0.5**
VAH	**Vaihoa**	**88.95**	**105**	*e*P	P	06 24 50.2	+5.2
	comp=Z,32nm,1.4s						
VAH	**Vaihoa**	**88.95**	**105**	*e*LR	LR	06 53 05.6	
	comp=Z,11μm,24.4s						
S31K	**Pelican**	**88.97**	**32**	P	**P**	**06 24 43.3**	**-0.9**
	baz=281						
S31K				S	**S**	**06 35 39.0**	**+8.2**
	baz=281						
S31K				S	**S**	**06 35 39.0**	**+8.2**
	baz=281						
JETT	**Jettan, Norway**	**89.00**	**340**	*e*P	**P**	**06 24 43.3**	**-0.9**
JETT				IVmB_BB		06 24 49.0	
	comp=Z,1μm,1.8s						
JETT				*e*SKSac	**SKSac**	**06 35 14.6**	**+2.4**
JETT				IVMs_BB	IVMs_BB	07 10 34.9	
	comp=Z,18μm,21.0s						
M31M	**Drury Creek, Y**	**89.03**	**27**	P	**P**	**06 24 44.0**	**-0.5**
	baz=282,SNR=11						
M31M				S	**S**	**06 35 38.8**	**+7.5**
	baz=282						
WHY	**Whitehorse**	**89.12**	**29**	IAmb	IAmb	06 25 07.5	
	comp=Z,275nm,1.0s						
WHY	**Whitehorse**	**89.12**	**29**	P	**P**	**06 24 44.5**	**-0.6**
	baz=282,SNR=32						
WHY				S	S	06 35 42.3	+10
	baz=282						
R31K	**City Hall, Gus**	**89.14**	**31**	P	**P**	**06 24 43.9**	**-1.1**
	baz=281						
R31K				S	**S**	**06 35 39.8**	**+7.5**
	baz=281						
SKAG	**Skagway**	**89.14**	**30**	P	**P**	**06 24 47.6**	**+2.6**
SKAG	**Skagway**	**89.14**	**30**	P	**P**	**06 24 44.8**	**-0.2**
	baz=282,SNR=13						
SKAG				S	**S**	**06 35 38.5**	**+6.1**
	baz=282						
TRO	**Tromso**	**89.48**	**340**	*e*P	**P**	**06 24 45.7**	**-0.7**
TRO				*e*SKSac	**SKSac**	**06 35 16.2**	**+1.3**
TRO				IVMs_BB	IVMs_BB	07 09 48.4	
	comp=Z,19μm,19.2s						
LODK	**Lodwar**	**89.50**	**273**	P	**P**	**06 24 47.5**	**-0.3**
	SNR=40						
LODK				S	**SKSac**	**06 35 17.7**	**+0.3**
FARO	**Faro, Yukon**	**89.50**	**27**	IAmb	IAmb	06 25 08.9	
	comp=Z,180nm,1.0s						
FARO	**Faro, Yukon**	**89.50**	**27**	P	**P**	**06 24 46.2**	**-0.5**
	baz=283,SNR=50						
FARO				S	**S**	**06 35 43.3**	**+7.5**
	baz=283						
MILM	**Milestii Mici**	**89.61**	**317**	⇑P	**P**	**06 24 46.9**	**-0.7**
MILM	**Milestii Mici**	**89.61**	**317**	P	**P**	**06 24 46.8**	**-0.7**
SIT	**Sitka**	**89.62**	**33**	P	**P**	**06 24 46.7**	**-0.6**
	baz=282						
SIT				S	S	06 35 47.8	+11
	baz=282						
MI28	**Mi28,Pidlybu**	**89.69**	**321**	P	**P**	**06 24 45.3**	**-2.5**
A36M	**Sachs Harbour**	**89.70**	**17**	P	**P**	**06 24 46.8**	**-0.6**
	baz=291,SNR=18						
A36M				S	**S**	**06 35 44.1**	**+6.9**
	baz=291						
ISP	**Isparta**	**89.72**	**308**	P	**P**	**06 24 47.6**	**-0.8**
ISP				pmax	pmax		
	comp=Z,85nm,0.8s						
SORM	**Soroca**	**89.72**	**318**	⇑P	**P**	**06 24 46.9**	**-1.2**
SORM	**Soroca**	**89.72**	**318**	P	**P**	**06 24 46.8**	**-1.2**
LUBAR	**Lubar, Ukraine**	**89.81**	**320**	P	**P**	**06 24 45.8**	**-2.6**
JIS	**Juneau Island**	**89.87**	**31**	P	**P**	**06 24 51.1**	**+2.7**
N32M	**Quiet Lake**	**89.87**	**28**	IAmb	IAmb	06 25 10.7	
	comp=Z,271nm,0.9s						
N32M	**Quiet Lake**	**89.87**	**28**	P	**P**	**06 24 47.5**	**-1.0**
	baz=284						
N32M				S	S	06 35 49.5	+10
	baz=284						
P32M	**Atlin**	**89.92**	**30**	P	**P**	**06 24 48.0**	**-0.8**
	baz=283						
P32M				S	S	06 35 49.8	+10
	baz=283						
S32K	**Killisnoo**	**89.94**	**32**	P	**P**	**06 24 47.6**	**-1.1**
	baz=282						
S32K				S	**S**	**06 35 47.6**	**+7.7**
	baz=282						
S32K				S	**S**	**06 35 47.6**	**+7.7**
	baz=282						
P33M	**Teslin, Yukon**	**90.22**	**29**	IAMs_20	IAMs_20	07 01 36.7	
	comp=Z,38μm,22.0s						
P33M	**Teslin, Yukon**	**90.22**	**29**	P	**P**	**06 24 49.6**	**-0.6**
	baz=284,SNR=9.9						
P33M				S	**S**	**06 35 50.6**	**+8.0**
	baz=284						
TPGR	**Topolog**	**90.22**	**315**	⇑P	**P**	**06 24 50.3**	**-0.2**
TIRR	**Tirgusor**	**90.29**	**315**	IAMs_20	IAMs_20	07 12 27.0	
	comp=Z,39μm,20.0s						
TIRR	**Tirgusor**	**90.29**	**315**	P	**P**	**06 24 51.7**	**+1.0**
VLDR	**Vladesti**	**90.29**	**316**	⇑P	**P**	**06 24 49.9**	**-0.8**
VASR	**Vaslui**	**90.35**	**317**	⇑P	**P**	**06 24 50.4**	**-0.6**
TATR	**Tatarca**	**90.35**	**316**	⇑P	**P**	**06 24 50.2**	**-0.8**
ELL	**Elmali**	**90.36**	**307**	P	**P**	**06 24 51.1**	**-0.3**
CFR	**Carcaliu**	**90.36**	**315**	⇓P	**P**	**06 24 49.9**	**-1.1**
CFR	**Carcaliu**	**90.36**	**315**	P	**P**	**06 24 49.9**	**-1.1**
IZVR	**Izvoarele**	**90.56**	**316**	⇑P	**P**	**06 24 51.6**	**-0.4**
RNPP9	**Sopachiv**	**90.70**	**322**	P	**P**	**06 24 50.2**	**-2.3**
RNPP5	**Staryi Chortor**	**90.74**	**322**	P	**P**	**06 24 50.4**	**-2.3**
Q32M	**Nakina River**	**90.79**	**30**	P	**P**	**06 24 52.0**	**-1.0**
	baz=284						
Q32M				S	**S**	**06 35 56.4**	**+8.2**
	baz=284						
HORU	**Horodok**	**90.79**	**320**	P	**P**	**06 24 51.2**	**-1.8**
COSR	**Cosmesti PH**	**90.82**	**316**	⇑P	**P**	**06 24 52.7**	**-0.4**
PANC	**Panciu**	**90.93**	**316**	⇓P	**P**	**06 24 53.8**	**+0.1**
T33K	**Petersburg**	**90.94**	**33**	P	**P**	**06 24 52.4**	**-1.1**
	baz=284						
T33K				S	**S**	**06 35 57.1**	**+8.0**
	baz=284						
ODBI	**Odobesti**	**91.01**	**316**	⇑P	**P**	**06 24 53.3**	**-0.7**
U33K	**Whale Pass**	**91.02**	**33**	P	**P**	**06 24 53.0**	**-0.8**
	baz=283						
U33K				S	**S**	**06 35 57.0**	**+7.2**
	baz=283						
U33K				S	**S**	**06 35 57.0**	**+7.2**
	baz=283						
C36M	**Paulatuk**	**91.02**	**19**	IAmb	IAmb	06 25 06.4	
	comp=Z,134nm,1.4s						
C36M	**Paulatuk**	**91.02**	**19**	P	**P**	**06 24 52.3**	**-1.3**
	baz=292,SNR=36						
C36M				S	**S**	**06 35 56.5**	**+7.0**

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             baz=292
TESR   Tescani           91.15 317 ⇓P        P         06 24 54.0 -0.7
MANT   Manisa            91.15 309  IAmb     IAmb      06 25 05.8
             comp=Z,112nm,1.1s
CRAG   Craig             91.16  34  P        P         06 24 53.2 -1.3
             baz=283
CRAG                                S        S         06 35 58.2 +6.9
             baz=283
GIRR   Girov             91.17 317 ⇑P        P         06 24 53.9 -0.8
BAND   Balkesir-Ban      91.20 311 ⇑P        P         06 24 54.6 -0.5
VRI    Vrincioaia        91.22 316 ⇓P        P         06 24 54.6 -0.4
VRI    Vrincioaia        91.22 316  P        P         06 24 54.6 -0.4
PLOR   Plostina          91.27 316 ⇑P        P         06 24 54.3 -1.1
PLOR   Plostina          91.27 316  P        P         06 24 54.2 -1.1
PRAR   RASCA             91.27 318 ⇑P        P         06 24 54.7 -0.5
BISRR  Bisoca            91.29 316 ⇑P        P         06 24 55.8 +0.3
STEI   Steigen           91.31 339 eP        P         06 24 53.3 -1.6
STEI                               eSKSac    SKSac     06 35 27.9 +2.4
STEI                                IVMs_BB  IVMs_BB   07 03 43.0
             comp=Z,21µm,23.3s
R33M   Jennings River    91.33  30  P        P         06 24 54.5 -0.9
             baz=285
R33M                                S        S         06 36 00.6 +7.7
             baz=285
WRAK   Wrangell Islan    91.36  33  P        P         06 24 54.5 -1.0
             baz=284
WRAK                                S        S         06 35 59.5 +6.5
             baz=284
BALB   Balikesir         91.48 310  IAmb     IAmb      06 25 11.0
             comp=Z,140nm,1.3s
FAUS   Fauske            91.49 339 eP        P         06 24 52.1 -3.7
FAUS                                IVmB_BB            06 25 00.2
             comp=Z,1µm,2.9s
FAUS                               eSKSac    SKSac     06 35 27.0 +0.4
FAUS                               i                   06 42 13.0
FAUS                                IVMs_BB  IVMs_BB   07 10 49.7
             comp=Z,30µm,18.7s
COVR   Voineasa-Covas    91.58 316 ⇑P        P         06 24 55.7 -1.0
S34M   Telegraph Cree    91.63  31  P        P         06 24 55.7 -1.0
             baz=285,SNR=13
S34M                                S        S         06 36 02.1 +6.6
             baz=285
TURR   Turia             91.67 317 ⇑P        P         06 24 56.1 -1.0
SUW    Suwalki           91.75 325  IAMs_20  IAMs_20   07 12 00.8
             comp=Z,38µm,19.0s
SUW    Suwalki           91.75 325  P        P         06 24 58.4 +1.1
OZUR                     91.82 317 ⇑P        P         06 24 58.0 +0.2
MLR    Muntele Rosu      91.83 316  PKPPKP             06 50 21.3
             comp=Z,1.2nm,0.5s,baz=218,slow=4.2,SNR=4.2
MLR                                 LR       LR        07 11 11.5
             comp=Z,40µm,21.8s,baz=66,slow=39
MLR    Muntele Rosu      91.83 316  IAmb     IAmb      06 25 39.5
             comp=Z,113nm,1.2s
MLR                                 IAMs_20  IAMs_20   07 10 59.6
             comp=Z,43µm,22.0s
MLR    Muntele Rosu      91.83 316 ⇑P        P         06 24 57.0 -1.0
MLR    Muntele Rosu      91.83 316  P        P         06 24 57.0 -1.0
LOF    Lofoten           91.83 340 eP        P         06 24 59.1 +1.8
LOF                                eSKSac    SKSac     06 35 32.2 +3.7
LOF                                 IVMs_BB  IVMs_BB   07 13 53.8
             comp=Z,13µm,18.8s
KSV    Kosov             91.85 319  P        P         06 24 55.7 -2.2
BURAR  Bucovina Array    91.89 318  P        P         06 24 56.3 -2.0
BURAR  Bucovina Array    91.89 318 ⇓P        P         06 24 57.6 -0.7
BURAR  Bucovina Array    91.89 318  P        P         06 24 57.5 -0.7
BOSR   Bodos             91.91 317 ⇑P        P         06 24 57.3 -0.9
V35K   Ketchikan         92.03  34  P        P         06 24 57.8 -0.8
             baz=285
DLBC   Dease Lake        92.05  31  LR       LR        07 03 16.5
             comp=Z,11µm,21.5s,baz=276,slow=34
DLBC   Dease Lake        92.05  31  P        P         06 24 58.3 -0.4
             baz=286,SNR=9.3
DLBC                                S        S         06 36 04.9 +5.5
             baz=286
DOPR   Dopca             92.11 317 ⇓P        P         06 24 58.2 -1.0
WTLY   Watson Lake, Y    92.18  29  P        P         06 24 58.9 -0.4
             baz=287,SNR=34
WTLY                                S        S         06 36 05.4 +5.0
             baz=287
LVV    L'vov             92.19 321  P        P         06 24 57.5 -2.0
MOR8   Moi Rana          92.24 338 eP        P         06 24 59.7 +0.3
MOR8                               eSKSac    SKSac     06 35 29.5 -1.5
MOR8                                IVMs_BB  IVMs_BB   07 09 45.9
             comp=Z,22µm,22.1s
RAUS   Rausandaksla      92.29 338 eP        P         06 24 58.2 -1.3
RAUS                               ePP       PP        06 28 41.1 +1.3
RAUS                               eSKSac    SKSac     06 35 30.1 -1.1
RAUS                                IVMs_BB  IVMs_BB   07 08 35.2
             comp=Z,21µm,22.9s
T35M   Bob Quinn         92.34  32  P        P         06 24 59.7 -0.3
             baz=286,SNR=11
T35M                                S        S         06 36 08.0 +6.1
             baz=286
ELND   Elena             92.37 314 ⇓P        P         06 24 59.2 -1.2
VAGH   Vaagaholmen       92.47 338 eP        P         06 25 01.6 +1.2
VAGH                               e                   06 28 52.9
VAGH                               eSKSac    SKSac     06 35 34.4 +2.3
VAGH                               e                   06 42 31.3
VAGH                                IVMs_BB  IVMs_BB   07 12 10.5
             comp=Z,23µm,21.3s
ALN    Alexandroupoli    92.64 311  P        P         06 25 02.0 +0.3
HUMR   Humele            92.69 315 ⇑P        P         06 25 00.4 -1.5
STOK   Stokkvaagen       92.71 338 eP        P         06 25 05.8 +4.3
STOK                               eSKSac    SKSac     06 35 36.6 +3.2
STOK                                IVMs_BB  IVMs_BB   07 07 48.4
             comp=Z,20µm,24.0s
U35K   Hyder             92.75  33  P        P         06 25 01.1 -0.8
             baz=286
U35K                                S        S         06 36 11.2 +5.8
             baz=286
ARR    Arges             92.75 316 ⇑P        P         06 25 00.7 -1.5
LEIR   Leirfjorden       92.76 338 eP        P         06 25 05.9 +4.2
LEIR                               eSKSac    SKSac     06 35 33.0 -0.8
LEIR                                IVMs_BB  IVMs_BB   07 07 49.0
             comp=Z,20µm,26.7s
MDB    Medias            92.76 317 ⇓P        P         06 25 01.6 -0.7
MDB    Medias            92.76 317  P        P         06 25 01.5 -0.7
TNR    Turnu Rosu        92.94 316 ⇑P        P         06 25 02.4 -0.7
TNR    Turnu Rosu        92.94 316  P        P         06 25 02.4 -0.7
CJR    Cluj-Napoca       93.17 318 ⇑P        P         06 25 02.3 -1.9
CJR    Cluj-Napoca       93.17 318  P        P         06 25 02.2 -1.9
TRSU   Trosnyk           93.27 319  P        P         06 25 04.7 +0.2
LOT    Lotru             93.33 316 ⇓P        P         06 25 04.2 -0.8
R9F13  Warsaw-Wawer      93.38 323 eP        P         06 25 06.2 +1.3
             comp=Z,1.4nm,0.7s
R9F13                              ePP       PP        06 28 58.0 +9.2
R9F13                              e                   06 32 38.5
MARR   Marisel-Cluj      93.50 318 ⇑P        P         06 25 04.4 -1.3
WRGLY  Wrigley           93.54  25  IAmb     IAmb      06 25 53.5
             comp=Z,84nm,1.0s
WRGLY  Wrigley           93.54  25  P        P         06 25 04.7 -0.7
             baz=292
WRGLY                               S        S         06 36 14.7 +2.5
             baz=292
BEL    Belsk             93.69 323  P        P         06 25 06.6 +0.3
LIRD   Liard River Hi    93.70  29  P        P         06 25 05.8 -0.4
             baz=290,SNR=30
LIRD                                S        S         06 36 17.7 +3.9
             baz=290
DRGR                     93.74 318 ⇑P        P         06 25 05.3 -1.5
DRGR                     93.74 318  P        P         06 25 05.3 -1.5
DEV    Deva              93.83 317 ⇓P        P         06 25 06.7 -0.4
DEV    Deva              93.83 317  P        P         06 25 06.6 -0.4
NSS    Namsos            93.84 337 eSKSac    SKSac     06 35 38.9 -0.8
NSS                                 IVMs_BB  IVMs_BB   07 09 51.6
             comp=Z,19µm,25.5s
SRE    Strehaia          93.90 316 ⇓P        P         06 25 07.8 +0.4
SRE    Strehaia          93.90 316  P        P         06 25 07.8 +0.4
GZR    Gura Zlata        94.03 316 ⇑P        P         06 25 07.5 -0.6
GZR    Gura Zlata        94.03 316  P        P         06 25 07.5 -0.6
STHS   Stebnicka Huta    94.05 321 eP        P         06 25 07.9 -0.2
STHS   Stebnicka Huta    94.05 321 eP        P         06 25 07.9 -0.2
DAG    Danmarks Havn     94.24 352  P        P         06 25 06.9 -1.4
DAG                                 pmax     pmax
             comp=Z,91nm,1.1s
TOAD   Toad River Com    94.31  29  P        P         06 25 08.4 -0.7
             baz=290,SNR=27
TOAD                                S        S         06 36 22.3 +3.0
             baz=290
DJES   Djerdap           94.37 316 ⇑P        P         06 25 09.1 -0.5
HERR   Herculane         94.39 316 ⇓P        P         06 25 08.6 -1.1
KOTAN  Kotaneelee Air    94.42  28  P        P         06 25 08.8 -0.7
             baz=291,SNR=8.2
KOTAN                               S        S         06 36 22.8 +2.7
             baz=291
MBAR   Mbarara           94.55 270  LR       LR        07 05 03.1
             comp=Z,27µm,21.8s,baz=74,slow=34
SYO    Syowa Base        94.55 201 ⇑iP       P         06 25 11.8 +2.0
SYO    Syowa Base        94.55 201 ⇓isP      sP        06 25 19.4 -1.4
SIRR   Siria             94.57 317 ⇓P        P         06 25 09.7 -0.9
IDI    Anoyia            94.62 306  LR       LR        07 12 37.2
             comp=Z,5µm,20.9s,baz=76,slow=39
OJC    Ojcow             94.74 322  P        P         06 25 09.8 -1.4
BZS    Buzias            94.76 317 ⇑P        P         06 25 10.3 -1.1
BZS    Buzias            94.76 317  P        P         06 25 10.3 -1.1
HFS    Hagfors           94.81 332  P        P         06 25 08.6 -2.7
             comp=Z,5.7nm,0.7s,baz=123,slow=5.5,SNR=9.3
HFS                                 PP       PP        06 28 58.3 -1.3
             comp=Z,9.5nm,0.9s,baz=89,slow=7.8,SNR=2.9
HFS                                 S        SKSac     06 35 39.2 -6.0
             comp=Z,1.6nm,0.7s,baz=146,slow=14,SNR=1.6
HFS                                 PKKPbc   PKKPdf    06 42 08.9 -0.4
             comp=Z,2.8nm,0.7s,baz=174,slow=1.5,SNR=4.7
HFS                                 LR       LR        07 11 07.6
             comp=Z,68µm,21.8s,baz=58,slow=38
             comp=Z,5.7nm,0.7s
MDVR   Moldovita         94.90 316 ⇓P        P         06 25 12.0 -0.2
BOVS   Bovan             95.19 315 ⇑P        P         06 25 13.1 -0.3
RES    Resolute Bay      95.27  10  LR       LR        07 12 49.3
             comp=Z,18µm,19.2s,baz=322,slow=38
RES    Resolute Bay      95.27  10  P        P         06 25 11.9 -1.2
PSZ    Piszkesteto       95.31 319 ⇓P        P         06 25 13.2 -0.7
PSZ    Piszkesteto       95.31 319  P        P         06 25 13.2 -0.7
GKP    Gorka Klasztor    95.35 325 eP        P         06 25 15.7 +1.8
LIT    Litokhoron        95.45 311  IAmb     IAmb      06 25 24.0
             comp=Z,94nm,1.2s
LIT    Litokhoron        95.45 311  P        P         06 25 11.9 -2.8
TAOE   Nuku Hiva Isla    95.53  98 eP        P         06 25 12.1 -3.5
             comp=Z,2µm,26.0s
TAOE   Nuku Hiva Isla    95.53  98 eS        S         06 36 30.0 -1.6
             comp=Z,17µm,25.3s
TAOE                               eSS       SS        06 43 01.9 +1.5
             comp=Z,14µm,25.1s
TAOE                               eLQ       LQ        06 52 12.1
             comp=Z,27µm,29.4s
TAOE                               eLR       LR        06 56 09.0
             comp=Z,119µm,26.2s
NC602  NORSAR Array S    95.56 333 eSKSac    SKSac     06 35 47.6 -1.6
NC602                               IVMs_BB  IVMs_BB   07 08 46.4
             comp=Z,18µm,22.0s
NB2    NORSAR Subarra    95.58 333  P        P         06 25 12.4 -2.4
             comp=Z,44nm,1.2s,baz=66,slow=4.6
NB2                                 PKKP     PKKPbc    06 42 08.8 +0.7
             comp=Z,22nm,1.7s,baz=248,slow=2.3
NB2    NORSAR Subarra    95.58 333  P        P         06 25 12.4 -2.4
             baz=66,slow=4.6
NOA    NORSAR Array B    95.58 333  P        P         06 25 11.7 -3.1
             comp=Z,5.7nm,1.0s,baz=66,slow=4.5,SNR=12
NOA                                 PP       PP        06 29 05.1 -0.6
             comp=Z,6.8nm,1.0s,baz=66,slow=8.3,SNR=3.6
NOA                                 S        SKSac     06 35 47.2 -2.2
             comp=Z,0.5nm,0.7s,baz=30,slow=6.6,SNR=2.1
NOA                                 PKKPbc   PKKPdf    06 42 06.7 -1.2
             comp=Z,2.6nm,0.8s,baz=299,slow=8.3,SNR=6.9
NOA                                 LR       LR        07 12 25.3
             comp=Z,49µm,19.5s,baz=65,slow=38
             comp=Z,5.7nm,1.0s
RAC    Raciborz          95.76 322 eP        P         06 25 19.0 +3.2
RAC    Raciborz          95.76 322 eP        P         06 25 19.0 +3.2
RAC                                 MLR      MLR
             comp=Z,35µm,22.6s
AGG    Agios Georgios    95.82 310  P        P         06 25 16.8 +0.4
OKC    Ostrava-Krasne    95.87 322  AMS      AMS       07 13 30.0
             comp=Z,21µm,20.0s
STEB   Steborice         96.07 322 eP        P         06 25 22.0 +4.7
DOMB   Dombas            96.08 335 eP        P         06 25 17.9 +0.8
DOMB                               e                   06 29 18.8
DOMB                               eSKSac    SKSac     06 35 50.3 -1.7
DOMB                               i                   06 43 33.9
DOMB                                IVMs_BB  IVMs_BB   07 12 56.6
             comp=Z,38µm,19.4s
MORC   Moravsky Berou    96.26 322 ⇑P        P         06 25 17.5 -0.7
MORC   Moravsky Berou    96.26 322 eP        P         06 25 17.0 -1.2
MORC                               epP       pP        06 25 24.8 -1.4
MORC   Moravsky Berou    96.26 322  P        P         06 25 17.4 -0.7
OSL    Oslo              96.26 333  IVMs_BB  IVMs_BB   07 10 47.8
             comp=Z,21µm,19.8s
JAVC   Velka Javorina    96.46 321 eP        P         06 25 18.2 -0.9
MOL    Molde             96.47 336 eP        P         06 25 21.8 +3.0
MOL                                eSKSac    SKSac     06 35 53.1 -0.8
MOL                                 IVMs_BB  IVMs_BB   07 12 22.4
             comp=Z,29µm,21.1s
QSPA   South Pole Qui    96.48 180  P        P         06 25 17.2 -1.7
             comp=Z,8.8nm,0.9s,baz=330,slow=2.2,SNR=15
QSPA                                S        SKSac     06 35 48.3 -5.6
             comp=Z,10nm,1.0s,baz=119,slow=20,SNR=13
QSPA                                PKKPbc   PKKPbc    06 42 06.0 -0.8
             comp=Z,1.2nm,0.2s,baz=67,slow=2.9,SNR=1.7
QSPA                                LR       LR        07 10 05.0
             comp=Z,27µm,21.0s,baz=356,slow=36
             comp=Z,8.8nm,0.9s
QSPA   South Pole Qui    96.48 180  P        P         06 25 17.7 -1.1
QSPA                                IAmb     IAmb      06 25 37.5
             comp=Z,94nm,1.2s
MORH   Mrgy, Hungar      96.61 318 ⇓P        P         06 25 19.0 -0.8
KRLC   Kraliky           96.63 322 eP        P         06 25 23.2 +3.3
KRLC                                MLR      MLR
             comp=Z,30µm,17.8s
KRLC   Kraliky           96.63 322 eP        P         06 25 23.2 +3.3
KRLC                                AMS      AMS       07 15 10.0
             comp=Z,30µm,17.8s
KSP    Ksiaz             96.68 323  P        P         06 25 19.0 -1.0
JNE    Jan Mayen East    96.69 346  IVMs_BB  IVMs_BB   07 01 08.3
             comp=Z,10µm,30.2s
OSTC   Ostas             96.82 323 eP        P         06 25 25.2 +4.5
OSTC                                MLR      MLR
             comp=Z,54µm,19.7s
OSTC   Ostas             96.82 323 eP        P         06 25 25.2 +4.5
OSTC                               ePP       PP        06 29 24.4 +8.8
OSTC                                AMS      AMS       07 15 00.0
             comp=Z,54µm,19.7s
DPC    Dobruska-Polom    96.82 322 eP        P         06 25 22.6 +1.9
DPC                                 MLR      MLR
             comp=Z,35µm,22.0s
DPC    Dobruska-Polom    96.82 322 eP        P         06 25 22.6 +1.9
DPC                                ePP       PP        06 29 26.0  +10
DPC                                 AMS      AMS       07 13 10.0
             comp=Z,35µm,22.0s
MODS   Modra-Piesok      96.85 320 eP        P         06 25 21.3 +0.4
MODS   Modra-Piesok      96.85 320 eP        P         06 25 21.3 +0.4
MODS                               ePP       PP        06 29 27.8  +12
AKN    Aaknes            96.89 335 eP        P         06 25 21.4 +0.7
AKN                                 IVmB_BB            06 25 24.5
             comp=Z,3µm,3.9s
AKN                                eSKSac    SKSac     06 35 57.1 +1.0
AKN                                 IVMs_BB  IVMs_BB   07 09 32.1
             comp=Z,24µm,17.6s
KONO   Kongsberg         96.90 333 eSKSac    SKSac     06 35 58.4 +2.1
KONO                                IVMs_BB  IVMs_BB   07 11 07.1
             comp=Z,17µm,19.1s
CHVC   Chvalec           96.91 323 eP        P         06 25 24.5 +3.4
CHVC                                MLR      MLR
             comp=Z,65µm,19.4s
CHVC   Chvalec           96.91 323 eP        P         06 25 24.5 +3.4
CHVC                                AMS      AMS       07 15 00.0
             comp=Z,65µm,19.4s
UPC    Upice             96.96 323 eP        P         06 25 24.6 +3.3
UPC                                 MLR      MLR
             comp=Z,66µm,19.5s
UPC    Upice             96.96 323 eP        P         06 25 24.6 +3.3
UPC                                 AMS      AMS       07 15 00.0
             comp=Z,66µm,19.5s
VRAC   Vranov            96.99 321  LR       LR        07 14 18.3
             comp=Z,20µm,20.0s,baz=66,slow=39
VRAC   Vranov            96.99 321 ⇓P        P         06 25 21.3 -0.2
VRAC   Vranov            96.99 321 eP        P         06 25 19.8 -1.7
VRAC                               epP       pP        06 25 28.3 -1.2
VRAC                               e                   06 29 23.4
VRAC                               eS        S         06 36 40.7 -2.1
VRAC   Vranov            96.99 321  P        P         06 25 21.2 -0.2
SKAR   Skarslia          97.02 334 eP        Pdif      06 25 25.2 +3.7
SKAR                               eSKSac    SKSac     06 35 54.7 -2.3
SKAR                                IVMs_BB  IVMs_BB   07 10 29.4
             comp=Z,30µm,21.9s
KRUC   Moravsky          97.19 321 eP        P         06 25 21.1 -1.3
KRUC                               epP       pP        06 25 28.7 -1.7
KRUC                               e                   06 29 20.8
PDG    Podgorica         97.23 314 ⇓P        Pdif      06 25 22.8  0.0
YKA    Yellowknife Ar    97.51  24  P        P         06 25 22.0 -1.4
             comp=Z,4.6nm,0.9s,baz=298,slow=5.2,SNR=45
YKA                                 PP       PP        06 29 20.9 +0.6
             comp=Z,6.3nm,1.0s,baz=298,slow=7.7,SNR=4.2
YKA                                 S        SKSac     06 35 59.1 -0.1
             comp=Z,0.2nm,0.8s,baz=145,slow=37,SNR=1.6
YKA                                 PKKPbc   PKKPbc    06 42 00.0 -2.8
             comp=Z,2.6nm,0.9s,baz=118,slow=1.6,SNR=8.3
             comp=Z,4.6nm,0.9s
YKA    Yellowknife Ar    97.51  24  P        P         06 25 22.2 -1.3
YKA    Yellowknife Ar    97.51  24 i P       P         06 25 22.8 -0.7
YKA                                 pmax     pmax
             comp=Z,11nm,1.1s
RUE    Ruedersdorf       97.59 325 ePdiff    Pdif      06 25 29.1 +5.0
TREC   Trest             97.68 322 eP        Pdif      06 25 29.8 +5.1
TREC                                MLR      MLR
             comp=Z,58µm,19.3s
TREC   Trest             97.68 322 eP        Pdif      06 25 29.8 +5.1
TREC                                AMS      AMS       07 15 40.0
             comp=Z,58µm,19.3s
RONA   Rosalia, Austr    97.69 320 i PcP     P         06 25 24.0 -0.7
             comp=Z,9.5nm,1.3s
RONA                               ePP       PP        06 29 21.9 -0.5
             comp=Z,32nm,1.1s
RONA                               ePKKP     PKKPbc    06 42 02.2 +0.2
             comp=Z,5.9nm,1.0s
HYA    Hoyanger          97.71 335 eP        Pdif      06 25 26.4 +2.0
HYA                                eSKSac    SKSac     06 36 03.0 +2.8
HYA                                 IVMs_BB  IVMs_BB   07 13 47.9
             comp=Z,32µm,18.1s
PVCC   Panska Ves        97.82 323 eP        Pdif      06 25 27.7 +2.5
PVCC                                MLR      MLR
             comp=Z,40µm,17.7s
PVCC   Panska Ves        97.82 323 eP        Pdif      06 25 27.7 +2.5
PVCC                               ePP       PP        06 29 34.6  +11
PVCC                                AMS      AMS       07 15 30.0
             comp=Z,40µm,17.7s
CONA   Conrad Observa    97.89 320 i PcP     P         06 25 25.2 -0.4
             comp=Z,13nm,1.5s
CONA                               i PP      PP        06 29 23.4 -0.6
             comp=Z,65nm,1.4s
CONA                               ePKKP     PKKPbc    06 42 00.3 -1.2
             comp=Z,11nm,1.7s
FOO    Floro             97.98 335 eP        Pdif      06 25 27.0 +1.4
FOO                                eSKSac    SKSac     06 36 05.0 +3.4
FOO                                 IVMs_BB  IVMs_BB   07 13 08.5
             comp=Z,24µm,20.3s
HOMB   Homborsund        98.01 332 eSKSac    SKSac     06 36 02.9 +0.9
HOMB                                IVMs_BB  IVMs_BB   07 13 37.4
             comp=Z,26µm,21.1s
BLY    Banja Luka        98.02 317 ⇑P        P         06 25 23.5 -2.6
PRU    Pruhonice         98.02 322 eP        Pdif      06 25 28.4 +2.3
PRU                                 MLR      MLR
             comp=Z,48µm,23.7s
PRU    Pruhonice         98.02 322 eP        Pdif      06 25 28.4 +2.3
PRU                                ePP       PP        06 29 34.8  +10
PRU                                 AMS      AMS       07 11 20.0
             comp=Z,48µm,23.7s
PRA    Prague            98.06 323  AMS      AMS       07 11 30.0
             comp=Z,47µm,23.5s
ODD1   Odda              98.12 333 eP        Pdif      06 25 26.7 +0.3
ODD1                               eSKSac    SKSac     06 36 03.7 +1.1
ODD1                                IVMs_BB  IVMs_BB   07 13 42.3
             comp=Z,22µm,17.9s
ARSA   Arzberg           98.33 320 i PcP     P         06 25 27.5 -0.1
             comp=Z,16nm,2.0s
ARSA                               i PP      PP        06 29 25.2 -2.1
             comp=Z,30nm,1.7s
ARSA                               ePKKP     PKKPbc    06 41 57.5 -2.6
             comp=Z,11nm,1.7s
SUE    Sulen             98.37 335 eP        P         06 25 26.7 -0.6
SUE                                ePP       PP        06 29 36.7  +10
SUE                                eSKSac    SKSac     06 36 04.2 +0.6
SUE                                 IVMs_BB  IVMs_BB   07 16 14.8
             comp=Z,28µm,18.2s
ZVC    Zvikov            98.43 322 eP        Pdif      06 25 32.3 +4.4
ZVC                                 AMS      AMS       07 13 20.0
             comp=Z,39µm,19.9s
BLS5   Blasjo            98.43 333 eP        P         06 25 26.3 -1.4
BLS5                               eSKSac    SKSac     06 36 01.8 -2.4
BLS5                                IVMs_BB  IVMs_BB   07 11 15.2
             comp=Z,21µm,21.6s
BER    Bergen            98.46 334 eP        P         06 25 25.9 -1.9
BER                                ePP       PP        06 29 32.3 +4.6
BER                                eSKSac    SKSac     06 36 05.7 +1.6
ASK    Askoy             98.47 334 ePdif     Pdif      06 25 28.8 +1.0
ASK                                eSKSac    SKSac     06 36 06.9 +2.7
ASK                                 IVMs_BB  IVMs_BB   07 11 21.2
             comp=Z,23µm,24.1s
CLL    Collm             98.47 324 eP        P         06 25 27.0 -1.0
CLL                                i                   06 25 40.4
CLL                                e                   06 29 28.0
CLL                                e                   06 36 02.0
CLL                                eS        S         06 36 54.0 -1.3
CLL                                 pmax     pmax
             comp=Z,84nm,1.6s
CLL                                 pmax     pmax
             comp=Z,72nm,1.5s
CLL                                 MLR      MLR
             comp=Z,63µm,22.1s
CLL    Collm             98.47 324 ePdiff    Pdif      06 25 32.7 +4.7
HSKC   Hora Svate Kat    98.47 323 eP        Pdif      06 25 32.3 +4.2
HSKC                                AMS      AMS       07 12 10.0
             comp=Z,48µm,23.4s
CKRC   Cesky Krumlov     98.57 321 eP        Pdif      06 25 30.2 +1.6
CKRC                               e                   06 36 07.6
CKRC                                MLR      MLR
             comp=Z,55µm,19.6s
CKRC   Cesky Krumlov     98.57 321 eP        Pdif      06 25 30.2 +1.6
CKRC                               ePP       PP        06 29 40.4  +11
CKRC                               eSKS      SKSac     06 36 07.6 +2.3
CKRC                                AMS      AMS       07 16 20.0
             comp=Z,55µm,19.6s
MATP   Matopo            98.57 250  LR       LR        07 08 41.5
             comp=Z,25µm,19.1s,baz=79,slow=35
SNART  Snartemo          98.59 332 eSKSac    SKSac     06 36 06.5 +1.6
SNART                               IVMs_BB  IVMs_BB   07 11 35.0
             comp=Z,46µm,19.4s
SOKA   Soboth            98.84 319 ePdiff    Pdif      06 25 30.4 +0.5
             comp=Z,12nm,1.1s
SOKA                               ePP       PP        06 29 30.3 -0.9
             comp=Z,62nm,2.0s
SOKA                               ePKKP     PKKPbc    06 41 52.2 -6.6
             comp=Z,8.9nm,1.2s
KHC    Kasperske Hory    98.91 322  IAMs_20  IAMs_20   07 10 16.6
             comp=Z,36µm,22.0s
KHC    Kasperske Hory    98.91 322 eP        Pdif      06 25 30.9 +0.7
KHC                                e                   06 29 35.0
KHC                                e                   06 36 04.0
KHC                                 MLR      MLR
             comp=Z,34µm,18.1s
KHC    Kasperske Hory    98.91 322 eP        Pdif      06 25 30.9 +0.7
KHC                                epP       pP        06 25 36.5 -1.7
KHC                                ePP       PP        06 29 35.0 +3.3
KHC                                eSKS      SKSac     06 36 04.0 -3.1
KHC                                 AMS      AMS       07 17 30.0
             comp=Z,34µm,18.1s
MOA    Molln             98.93 320 i Pdiff   P         06 25 29.8 -0.4
             comp=Z,24nm,1.2s
MOA                                ePP       PP        06 29 28.6 -3.2
             comp=Z,26nm,1.6s
MOA                                ePKKP     PKKPbc    06 41 58.5  0.0
             comp=Z,9.8nm,1.5s
GEC2   GERESS Array S    98.94 322 ePdiff    Pdif      06 25 35.1 +4.8
GERES  GERESS Array B    98.94 322  P        P         06 25 28.1 -2.3
             comp=Z,0.6nm,0.7s,baz=139,slow=3.0,SNR=4.5
GERES                               PP       PP        06 29 30.5 -1.4
             comp=Z,6.6nm,1.0s,baz=71,slow=7.6,SNR=4.1
GERES                               S        SKSac     06 36 05.6 -1.7
             comp=Z,0.2nm,0.4s,baz=266,slow=40,SNR=1.2
GERES                               PKKPbc   PKKPdf    06 42 00.5 -1.3
             comp=Z,1.9nm,0.9s,baz=204,slow=2.9,SNR=3.5
GERES                               LR       LR        07 14 12.0
             comp=Z,26µm,20.9s,baz=62,slow=38
             comp=Z,0.6nm,0.7s
NLWA   Neilton Lookou    99.03  40  IAMs_20  IAMs_20   07 02 17.0
             comp=Z,25µm,22.0s
KMY    Karmoy            99.07 333 ePdif     Pdif      06 25 35.9 +5.3
KMY                                ePP       PP        06 29 39.1 +6.7
KMY                                e         SKSac     06 36 08.3 +1.0
KMY                                eSKSac    SKSac     06 36 08.3 +1.0
KMY                                 IVMs_BB  IVMs_BB   07 15 46.5
             comp=Z,18µm,18.2s
FLTG   Flechtingen       99.09 325 ePdiff    Pdif      06 25 35.2 +4.5
TANN   Tannenbergstha    99.12 323 ePdiff    Pdif      06 25 35.8 +4.8
OBKA   Obir              99.21 319 ePdiff    Pdif      06 25 31.2 -0.4
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      comp=Z,13nm,1.3s
OBKA                               i PP        PP        06 29 34.2 +0.1
      comp=Z,31nm,1.5s
OBKA                               ePKKP       PKKPbc    06 41 56.4 -1.3
      comp=Z,7.8nm,0.9s
WET   Wettzell          99.34 322  ePdiff      Pdif      06 25 37.2 +5.2
LJU   Ljubljana         99.38 319  ePdiff      Pdif      06 25 36.0 +3.7
LJU                                ePP         PP        06 29 43.3 +8.0
LJU                                eSdiff      S         06 37 03.5 +0.3
LJU                                e                     06 38 38.2
LJU                                eSS         SS        06 43 58.3 +5.9
LJU                                e                     06 44 37.9
BIOA  Bad Ischl, Aus    99.38 320  i Pdiff     Pdif      06 25 31.8 -0.5
      comp=Z,10nm,1.4s
BIOA                               i PP        PP        06 29 34.9 -0.4
      comp=Z,41nm,1.6s
BIOA                               ePKKP       PKKPbc    06 41 55.0 -2.2
      comp=Z,7.3nm,0.9s
MOX   Moxa              99.53 324  ePdiff      Pdif      06 25 38.2 +5.3
MOX                                eL          L         07 15 58.0
      comp=Z,57µm,21.9s
MYKA  Terra Mystica     99.75 319  ePdiff      Pdif      06 25 32.5 -1.5
      comp=Z,5.4nm,1.1s
MYKA                               i PP        PP        06 29 36.8 -1.4
      comp=Z,12nm,1.0s
MYKA                               i PKKP      PKKPbc    06 41 54.7 -1.5
      comp=Z,9.5nm,0.8s
KBA   Koelnbreinsper    99.79 320  i Pdiff     Pdif      06 25 32.5 -1.8
      comp=Z,9.8nm,1.1s
KBA                                ePP         PP        06 29 38.2 -0.4
      comp=Z,16nm,1.6s
KBA                                i PKKP      PKKPbc    06 41 55.1 -1.1
      comp=Z,6.3nm,0.9s
ELIB  Princess Elisa    99.92 198  dPP         PP        06 29 36.3 -2.8
TIP   Timpagrande       99.97 312   IAMs_20    IAMs_20   07 19 04.5
      comp=Z,34µm,22.0s
LESA  Schwarzleotal    100.09 320  i Pdiff     Pdif      06 25 34.9 -0.6
      comp=Z,8.5nm,1.0s
LESA                               i PP        PP        06 29 39.2 -1.5
      comp=Z,44nm,1.6s
LESA                               i PKKP      PKKPbc    06 41 53.5 -1.7
      comp=Z,13nm,0.8s
GTTG  Gottingen        100.13 325  ePdiff      Pdif      06 25 40.9 +5.5
GRF   Grafenberg Arr   100.13 323  eL          L         07 16 14.7
      comp=Z,50µm,20.2s
SUMG  Summit           100.28 355   PKP        PP        06 29 49.6 +7.9
SUMG  Summit           100.28 355   IAMs_20    IAMs_20   07 15 41.5
      comp=Z,28µm,20.0s
SUMG  Summit           100.28 355   P          Pdif      06 25 36.3 +0.1
UBBA  Unterbreizbach   100.40 324  ePdiff      Pdif      06 25 44.0 +7.4
CUC   Castrocucco      100.42 313   IAMs_20    IAMs_20   07 19 46.4
      comp=Z,25µm,20.0s
ABTA  Abfaltersbach    100.44 320  i Pdiff     Pdif      06 25 36.4 -0.6
      comp=Z,10nm,1.3s
ABTA                               i PP        PP        06 29 42.1 -1.3
      comp=Z,13nm,1.4s
ABTA                               i PKKP      PKKPbc    06 41 53.4 -0.8
      comp=Z,16nm,1.3s
WTTA  Wattenberg       100.81 321  ePdiff      Pdif      06 25 37.8 -1.0
      comp=Z,24nm,1.4s
WTTA                               i PP        PP        06 29 44.7 -1.6
      comp=Z,56nm,1.6s
WTTA                               ePKKP       PKKPbc    06 41 51.2 -2.2
      comp=Z,21nm,1.3s
WATA  Walderalm        100.82 321  i Pdiff     Pdif      06 25 37.7 -1.1
      comp=Z,14nm,0.9s
WATA                               i PP        PP        06 29 45.1 -1.2
      comp=Z,38nm,1.3s
WATA                               ePKKP       PKKPbc    06 41 51.4 -1.9
      comp=Z,5.3nm,0.8s
SQTA  Sankt Quirin     101.09 321  i Pdiff     Pdif      06 25 39.2 -0.8
      comp=Z,19nm,1.4s
SQTA                               i PKiKP     PKiKP     06 29 58.6 -6.4
      comp=Z,54nm,1.4s
SQTA                               ePKKP       PKKPbc    06 41 47.1 -5.4
      comp=Z,6.4nm,0.8s
KASTN Kahler Asten     101.15 325  ePdiff      Pdif      06 25 45.4 +5.3
KMPM  Mount Pierce     101.17  47   IAMs_20    IAMs_20   07 03 48.3
      comp=Z,25µm,21.0s
RETA  Reutte           101.27 321  i Pdiff     Pdif      06 25 38.0 -2.8
      comp=Z,13nm,1.3s
RETA                               i PP        PP        06 29 46.9 -2.7
      comp=Z,52nm,1.4s
RETA                               ePKKP       PKKPbc    06 41 48.1 -3.8
      comp=Z,13nm,1.2s
AQU   L'Aquila         101.39 315   PKP        PP        06 29 57.4 +6.7
FETA  Feichten         101.47 321  i Pdiff     Pdif      06 25 41.6 -0.2
      comp=Z,14nm,1.1s
FETA                               i PP        PP        06 29 48.2 -3.1
      comp=Z,45nm,1.3s
FETA                               i PKKP      PKKPbc    06 41 48.9 -2.6
      comp=Z,18nm,1.3s
RKT   Rikitea          101.53 112  eP          Pdif      06 25 41.8 -0.5
      comp=Z,4µm,29.0s
RKT   Rikitea          101.53 112  ePP         PP        06 29 45.6 -7.0
      comp=Z,6µm,26.2s
RKT                                eS                    06 37 20.3
      comp=Z,45µm,25.5s
RKT                                eSS         SS        06 44 22.6 -1.6
      comp=Z,48µm,27.5s
RKT   Rikitea          101.53 112  eLQ         LQ        06 54 38.6
      comp=Z,173µm,31.8s
RKT                                eLR         LR        06 58 56.4
      comp=Z,162µm,29.8s
BUG   Bochum--Univer   101.70 326  ePdiff      Pdif      06 25 47.5 +5.1
M02C  Callahan         101.75  45   IAMs_20    IAMs_20   07 03 36.7
      comp=Z,26µm,22.0s
KCPM  Cahto Peak       101.79  47   IAMs_20    IAMs_20   07 07 57.0
      comp=Z,31µm,21.0s
BOSA  Boshof           101.88 242   P          Pdif      06 25 44.1 +0.2
      comp=Z,7.8nm,1.2s,baz=59,slow=3.0,SNR=2.3
BOSA                                PP         PP        06 29 54.2 -1.0
      comp=Z,20nm,1.2s,baz=95,slow=9.0,SNR=3.9
DAVA  Damuels          101.90 321  ePdiff      Pdif      06 25 42.8 -0.9
      comp=Z,13nm,1.4s
DAVA                               i PP        PP        06 29 51.5 -3.0
      comp=Z,23nm,1.3s
DAVA                               ePKKP       PKKPbc    06 41 52.0 +1.8
      comp=Z,15nm,1.2s
HOPS  Hopland Field    102.39  48   IAMs_20    IAMs_20   07 03 55.8
      comp=Z,34µm,21.0s
VLC   Villacollemand   102.79 318   PKP        PP        06 30 02.6 +1.4
MCCM  Marconi Confer   102.81  49   IAMs_20    IAMs_20   07 03 22.0
      comp=Z,25µm,22.0s
FARB  Farallon Islan   102.86  49   IAMs_20    IAMs_20   07 03 33.5
      comp=Z,24µm,21.0s
CVS   Carmenet Viney   103.06  48   IAMs_20    IAMs_20   07 04 14.6
      comp=Z,23µm,21.0s
BIGH  Upper Bighouse   103.44 335   IAMs_20    IAMs_20   07 08 24.1
      comp=Z,61µm,27.2s
JRSC  Jasper Ridge     103.53  49   IAMs_20    IAMs_20   07 03 52.2
      comp=Z,28µm,21.0s
DRUM  Mains of Drumt   103.77 333   IAMs_20    IAMs_20   07 17 22.9
      comp=Z,82µm,21.0s
MHC   Mount Hamilton   104.00  49   IAMs_20    IAMs_20   07 04 06.6
      comp=Z,27µm,21.0s
FORD  Fort Ord Natur   104.11  50   IAMs_20    IAMs_20   07 03 55.7
      comp=Z,25µm,22.0s
WELL  Weller Preserv   104.31  48   IAMs_20    IAMs_20   07 04 34.5
      comp=Z,23µm,21.0s
WVOR  Wild Horse Val   104.31  43   IAMs_20    IAMs_20   07 07 01.0
      comp=Z,26µm,21.0s
ILULI Ilulissat        104.32 359   IAMs_20    IAMs_20   07 14 10.1
      comp=Z,32µm,22.0s
SAO   San Andreas Ge   104.34  50   IAMs_20    IAMs_20   07 21 12.7
      comp=Z,24µm,18.0s
GDLE  Glaisdale, N Y   104.43 331   IAMs_20    IAMs_20   07 15 19.3
      comp=Z,72µm,22.5s
BORG  Borgarnes        104.63 346   IAMs_20    IAMs_20   07 22 35.7
      comp=Z,22µm,20.0s
CMB   Columbia Colle   104.70  48   IAMs_20    IAMs_20   07 05 16.9
      comp=Z,28µm,22.0s
EDMD  Edmundbyers      104.75 332   IAMs_20    IAMs_20   07 15 48.0
      comp=Z,81µm,23.1s
HULI  Fort Hunter Li   104.75  50   IAMs_20    IAMs_20   07 22 04.7
      comp=Z,20µm,19.0s
KPL   Plockton         104.88 335   IAMs_20    IAMs_20   07 20 38.4
      comp=Z,53µm,18.5s
EKA   Eskdalemuir Ar   105.01 332   PP         PP        06 30 15.9 -1.2
      comp=Z,6.8nm,1.0s,baz=57,slow=7.7,SNR=3.6
EKA                                 PKKPbc     PKKPbc    06 41 39.1 -1.8
      comp=Z,2.1nm,0.6s,baz=231,slow=2.6,SNR=6.6
ESK   Eskdalemuir      105.04 332   IAMs_20    IAMs_20   07 14 49.8
      comp=Z,71µm,23.9s
HPK   Haverah Park     105.08 331   IAMs_20    IAMs_20   07 16 01.9
      comp=Z,57µm,25.4s
ELSH  Elham, Standar   105.21 327   IAMs_20    IAMs_20   07 19 01.1
      comp=Z,64µm,19.9s
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LBWR  Ladybower, Pea   105.45 330   IAMs_20    IAMs_20   07 15 14.9
      comp=Z,63µm,24.6s
LAWE  Loch Awe, Argy   105.45 334   IAMs_20    IAMs_20   07 16 03.1
      comp=Z,69µm,21.8s
SUR   Sutherland       105.68 238   IAMs_20    IAMs_20   07 09 24.6
      comp=Z,23µm,20.0s
HMNX  Herstmonceux     105.78 327   IAMs_20    IAMs_20   07 17 33.8
      comp=Z,68µm,22.6s
TROLL Troll, Antarti   105.98 196  ⇑P          Pdif      06 26 11.4  +10
      comp=Z,211nm,0.9s
GAL1  Galloway         106.01 333   IAMs_20    IAMs_20   07 15 16.2
      comp=Z,70µm,23.1s
PTCN  Pitcairn Islan   106.03 114   IAMs_20    IAMs_20   07 10 19.4
      comp=Z,26µm,19.0s
NVAR  Mina Array Bea   106.08  47   Pdiff      Pdif      06 26 06.5 +4.0
      comp=Z,3.1nm,0.9s,baz=286,slow=5.1,SNR=10
NVAR                                PKiKP      PKiKP     06 30 13.9 -0.6
      comp=Z,2.3nm,1.0s,baz=326,slow=3.1,SNR=1.8
NVAR                                PP         PP        06 30 23.5 -2.5
      comp=Z,2.6nm,0.7s,baz=297,slow=7.1,SNR=5.0
NVAR                                PKKPbc     PKKPbc    06 41 35.1 -2.4
      comp=Z,1.6nm,0.8s,baz=122,slow=3.4,SNR=4.7
NVAR                                PKKPab     PKKPab    06 41 52.5 -1.3
      comp=Z,3.3nm,0.8s,baz=120,slow=3.9,SNR=8.7
CLGH  Cloghs, Cushen   106.50 333   IAMs_20    IAMs_20   07 19 04.1
      comp=Z,74µm,21.0s
HLM1  Long Mynd        106.53 330   IAMs_20    IAMs_20   07 15 59.2
      comp=Z,54µm,24.3s
SFJD  Kangerlussuaq    106.53 358   IAMs_20    IAMs_20   07 15 28.5
      comp=Z,21µm,20.0s
TIN   Tinemaha, Big    106.65  48   IAMs_20    IAMs_20   07 05 42.7
      comp=Z,30µm,22.0s
KEST  Kesra            106.66 310   PKiKP      PKiKP     06 30 15.0 -0.5
      comp=Z,12nm,1.1s,baz=340,slow=3.8,SNR=3.8
KEST                                PP         PP        06 30 28.7 -1.5
      comp=Z,8.9nm,1.0s,baz=63,slow=4.5,SNR=3.8
CWC   Cottonwood Cre   106.99  49   IAMs_20    IAMs_20   07 05 47.7
      comp=Z,32µm,22.0s
OSI   Osito Audit: C   107.16  51   IAMs_20    IAMs_20   07 11 33.6
      comp=Z,27µm,21.0s
FFC   Flin Flon        107.37  26   IAMs_20    IAMs_20   07 20 18.9
      comp=Z,26µm,21.0s
SNAA  Sanae            107.58 195  ⇑P          Pdif      06 26 15.2 +7.0
      comp=Z,65nm,0.8s
SNAA  Sanae            107.58 195   Pdiff      Pdif      06 26 08.7 +0.5
      comp=Z,2.4nm,1.1s,baz=325,slow=2.6,SNR=6.8
SNAA                                PKiKP      PKiKP     06 30 14.7 -1.4
      comp=Z,8.6nm,1.0s,baz=148,slow=2.7,SNR=3.4
SNAA                                PP         PP        06 30 35.2 -0.8
      comp=Z,14nm,1.1s,baz=124,slow=9.2,SNR=4.7
SNAA                                PKKPbc     PKKPbc    06 41 31.6 -2.0
      comp=Z,6.0nm,1.1s,baz=266,slow=4.0,SNR=6.9
PASC  Pasadena Art C   107.74  51   IAMs_20    IAMs_20   07 11 51.9
      comp=Z,24µm,21.0s
MWC   Mount Wilson     107.82  51   IAMs_20    IAMs_20   07 12 05.0
      comp=Z,27µm,21.0s
BFSC  Mount Baldy Ra   108.12  51   IAMs_20    IAMs_20   07 12 14.0
      comp=Z,30µm,20.0s
TPNV  Topopah Spring   108.15  48   IAMs_20    IAMs_20   07 07 07.4
      comp=Z,23µm,21.0s
HTL   Hartland         108.23 329   IAMs_20    IAMs_20   07 16 14.7
      comp=Z,47µm,24.6s
MAHO  Mahon            108.69 316   IAMs_20    IAMs_20   07 20 09.0
      comp=Z,27µm,22.0s
TSUM  Tsumeb           108.79 252   IAMs_20    IAMs_20   07 14 52.0
      comp=Z,26µm,20.0s
LOHW  Long Hollow      109.07  39   IAMs_20    IAMs_20   07 13 51.5
      comp=Z,27µm,22.0s
CCA1  Carnmenellis     109.10 329   IAMs_20    IAMs_20   07 17 06.7
      comp=Z,52µm,26.0s
PFO   Pinyon Flats O   109.28  51   IAMs_20    IAMs_20   07 20 10.7
      comp=Z,19µm,19.0s
BELC  Belle Mtn. Jos   109.49  51   IAMs_20    IAMs_20   07 13 07.1
      comp=Z,28µm,21.0s
DANC  Danby, Needles   109.71  50   IAMs_20    IAMs_20   07 08 19.9
      comp=Z,24µm,22.0s
BC3   Big Chuckawall   110.04  51   IAMs_20    IAMs_20   07 13 33.7
      comp=Z,23µm,22.0s
IRM   Iron Mountain    110.08  50   IAMs_20    IAMs_20   07 16 08.7
      comp=Z,21µm,20.0s
LAO   LASA Array       110.08  35   IAMs_20    IAMs_20   07 27 06.6
      comp=Z,20µm,21.0s
PDAR  Pinedale Array   110.15  40   Pdiff      Pdif      06 26 18.2 -2.4
      comp=Z,0.6nm,1.0s,baz=288,slow=5.2,SNR=2.6
PDAR                                PKiKP      PKiKP     06 30 19.3 -2.7
      comp=Z,1.1nm,0.7s,baz=302,slow=3.3,SNR=4.6
PDAR                                PP         PP        06 30 55.4  0.0
      comp=Z,2.5nm,0.7s,baz=308,slow=7.9,SNR=6.0
PDAR                                PKKPbc     PKKPbc    06 41 25.1 +0.3
      comp=Z,1.0nm,0.5s,baz=104,slow=1.3,SNR=6.9
PDAR                                PKKP       PKKPdf    06 41 39.8 -1.4
      comp=Z,3.1nm,1.0s,baz=126,slow=4.0,SNR=5.7
DGMT  Dagmar           110.17  33   IAMs_20    IAMs_20   07 20 45.7
      comp=Z,24µm,22.0s
GLA   Glamis           110.75  51   IAMs_20    IAMs_20   07 13 44.7
      comp=Z,20µm,21.0s
IVI   Ivigtut          112.21 357   IAMs_20    IAMs_20   07 28 14.6
      comp=Z,29µm,20.0s
O20A  White River Ci   112.33  42   IAMs_20    IAMs_20   07 11 44.1
      comp=Z,23µm,22.0s
ECHE  Chera            112.40 318   PP         PP        06 31 17.4 +5.9
MDND  Maddock          112.96  31   IAMs_20    IAMs_20   07 22 26.5
      comp=Z,23µm,20.0s
ULM   Lac du Bonnet    113.14  27   PKiKP      PKiKP     06 30 24.8 -2.4
      comp=Z,4.1nm,0.6s,baz=224,slow=2.2,SNR=4.6
ULM                                 PP         PP        06 31 15.9 -0.2
      comp=Z,23nm,1.2s,baz=315,slow=9.0,SNR=3.7
ULM                                 PKKPbc     PKKPbc    06 41 12.6 -2.3
      comp=Z,4.1nm,0.8s,baz=152,slow=4.0,SNR=3.5
ETOB  Tobarra          113.27 317   PP         PP        06 31 20.8 +3.1
CART  Cartagena        113.41 316   PP         PP        06 31 16.5 -2.2
EMUR  La Murta         113.45 316   PP         PP        06 31 21.7 +2.6
TUC   Tucson           114.17  50   IAMs_20    IAMs_20   07 15 39.7
      comp=Z,25µm,22.0s
ISCO  Idaho Springs    114.23  41   IAMs_20    IAMs_20   07 13 21.8
      comp=Z,25µm,22.0s
ESDC  Sonseca Array    114.34 319   PKP        PKiKP     06 30 27.1 -2.8
      comp=Z,0.9nm,1.0s,baz=40,slow=2.1,SNR=2.1
ESDC                                PP         PP        06 31 25.5 +0.2
      comp=Z,8.1nm,1.1s,baz=63,slow=7.3,SNR=6.6
ESDC                                PKKPbc     PKKPbc    06 41 09.5 -1.0
      comp=Z,5.0nm,0.9s,baz=232,slow=3.5,SNR=12
EDA   Edea             114.39 277   IAMs_20    IAMs_20   07 17 02.2
      comp=Z,25µm,22.0s
AGMN  Agassiz Nation   114.52  29   IAMs_20    IAMs_20   07 23 28.7
      comp=Z,26µm,21.0s
PAB   San Pablo        114.66 319   IAMs_20    IAMs_20   07 27 56.6
      comp=Z,22µm,20.0s
MVO   Moncorvo         115.45 322  ePP         PP        06 31 27.3 -5.7
MVO                                i tx        tx        06 41 01.5
MVO                                eLQ         LQ        07 03 40.7
MVO                                eLR         LR        07 08 49.1
MVO                                i IAMs_20   IAMs_20   07 23 05.1
      comp=Z,28µm,20.0s
SUSD  Miller           115.50  34   IAMs_20    IAMs_20   07 21 48.0
      comp=Z,20µm,22.0s
PGAV  Gavieira, Arco   115.73 323  ePP         PP        06 31 43.8 +8.9
PGAV                               i tx        tx        06 41 12.9
PGAV                               eLQ         LQ        07 03 04.3
PGAV                               eLR         LR        07 07 32.4
PGAV                               i IAMs_20   IAMs_20   07 24 30.9
      comp=Z,26µm,22.0s
PCAB  Cabril           115.74 323  ePP         PP        06 31 49.8  +15
POLO  Lamas de Olo     115.80 322  ePKPdf      PKPdf     06 30 33.5 +0.8
POLO                               ePP         PP        06 31 48.4  +13
OGNE  Ogallala         115.86  38   IAMs_20    IAMs_20   07 25 14.9
      comp=Z,23µm,22.0s
F33A  5 Mile Ranch,    116.00  31   IAMs_20    IAMs_20   07 28 33.7
      comp=Z,21µm,21.0s
ANMO  Albuquerque      116.15  46   IAMs_20    IAMs_20   07 17 35.9
      comp=Z,24µm,21.0s
MTE   Manteigas        116.22 321  ePKP        PKPdf     06 30 51.0  +18
MTE                                ePP         PP        06 31 49.4  +11
MTE                                i tx        tx        06 41 16.6
MTE                                eLQ         LQ        07 03 58.7
MTE                                eLR         LR        07 09 14.1
MTE                                i IAMs_20   IAMs_20   07 21 39.9
      comp=Z,29µm,22.0s
PVIS  Viseu            116.25 322  ePP         PP        06 31 52.6  +14
PTO   Porto            116.43 323  ePP         PP        06 31 50.7  +11
PCBR  Castelo Branco   116.50 321  ePKPdf      PKiKP     06 30 35.5 +1.5
PCBR                               ePP         PP        06 31 46.1 +5.9
KSCO  Kaye Shedlock'   116.59  40   IAMs_20    IAMs_20   07 12 38.8
      comp=Z,24µm,21.0s
PMRV  Marv??o          116.68 320  i tx        tx        06 41 19.5
PMRV                               eLQ         LQ        07 03 56.5
PMRV                               eLR         LR        07 09 41.7
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PMRV                               i IAMs_20   IAMs_20   07 25 19.9
      comp=Z,29µm,22.0s
EYMN  Ely              116.80  27   IAMs_20    IAMs_20   07 19 27.4
      comp=Z,19µm,22.0s
PCAS  Casmilo, Conde   117.01 322  ePP         PP        06 31 53.9  +10
PSARD Sardoal          117.07 321  ePKPdf      PKiKP     06 30 35.2 +0.1
PSARD                              ePP         PP        06 31 50.7 +6.5
PESTR Estremoz         117.13 320  ePKP        PKiKP     06 30 55.7  +20
PESTR                              ePP         PP        06 31 46.6 +1.8
PBAR  Barrancos        117.17 319  ePKPdf      PKiKP     06 30 36.6 +1.3
PBAR                               ePP         PP        06 31 53.9 +8.9
ECSD  EROS Data Cent   117.24  33   IAMs_20    IAMs_20   07 30 37.0
      comp=Z,21µm,21.0s
PMTG  Montargil        117.42 320  ePKP        PKiKP     06 31 02.9  +27
PMTG                               ePP         PP        06 31 50.3 +3.6
PARRA Arraiolos        117.45 320  ePKP        PKPdf     06 30 25.8  -10
PARRA                              ePP         PP        06 31 57.6  +11
CNIL  Conil            117.51 317   PKP        PKPdf     06 30 35.9  0.0
PSBE  So Bento         117.51 321  ePP         PP        06 31 57.6  +10
EVO   Evora            117.59 320  ePP         PP        06 31 57.2 +9.2
E38A  The Farm, Brul   117.77  28   IAMs_20    IAMs_20   07 27 35.3
      comp=Z,20µm,21.0s
PBEJ  Beja             117.79 319  ePKP        PKiKP     06 30 44.1 +7.6
PBEJ                               ePP         PP        06 31 56.2 +6.9
SCHQ  Schefferville    117.97   8   PKP        PKPdf     06 30 33.4 -3.0
      comp=Z,14nm,1.0s,baz=291,slow=2.3,SNR=8.1
SCHQ                                PP         PP        06 31 49.6 -0.1
      comp=Z,9.3nm,0.9s,baz=0.0,slow=7.1,SNR=1.1
SCHQ                                PKKPab     PKKPab    06 40 59.7 -1.2
      comp=Z,5.6nm,0.8s,baz=159,slow=6.8,SNR=4.3
PVAQ  Vaqueiros        118.05 319  ePKP        PKiKP     06 30 57.7  +21
PVAQ                               ePP         PP        06 32 01.3  +10
PVAQ                               i tx        tx        06 41 41.6
PVAQ                               eLQ         LQ        07 06 31.0
PVAQ                               eLR         LR        07 10 21.0
PVAQ                               i IAMs_20   IAMs_20   07 23 30.8
      comp=Z,23µm,20.0s
MESJ  Messejana        118.12 319  ePP         PP        06 31 51.5 -0.2
MESJ                               eSS         SS        06 48 06.1 +1.0
MESJ                                IAMs_20    IAMs_20   07 17 27.1
      comp=E,32µm,26.0s
MESJ  Messejana        118.12 319  ePKPdf      PKiKP     06 30 39.8 +2.6
MESJ                               ePP         PP        06 32 00.8 +9.2
PCVE  Castro Verde     118.13 319  ePKPdf      PKPdf     06 30 37.1  0.0
PCVE                               ePP         PP        06 31 52.6 +0.9
PMAFR Mafra            118.15 321  ePP         PP        06 32 03.6  +12
SPMN  Marine on St.    118.18  30   IAMs_20    IAMs_20   07 27 17.2
      comp=Z,19µm,20.0s
LIS   Lisbon           118.21 321  ePP         PP        06 31 52.2 +0.1
LIS                                 IAMs_20    IAMs_20   07 15 45.1
      comp=E,95µm,32.2s
LIS   Lisbon           118.21 321  ePP         PP        06 32 03.6  +11
PBDV  Barranco-do-Ve   118.28 319  ePKPdf      PKiKP     06 30 41.6 +4.1
IFR   Ifrane           118.35 314   PKP        PKPdf     06 30 35.1 -2.9
CBKS  Cedar Bluff      118.54  39   IAMs_20    IAMs_20   07 14 17.1
      comp=Z,20µm,21.0s
L34A  Svendsen Farm,   118.55  34   IAMs_20    IAMs_20   07 29 48.6
      comp=Z,17µm,20.0s
PTEO  Sao Teotonio     118.62 319  ePP         PP        06 32 05.9  +11
MORF  Marmelete        118.71 319  ePP         PP        06 31 55.9 +0.1
MORF                                IAMs_20    IAMs_20   07 18 51.1
      comp=E,44µm,20.4s
MORF  Marmelete        118.71 319  ePP         PP        06 32 06.3  +11
I37A  Lemond, Waseca   118.74  31   IAMs_20    IAMs_20   07 23 24.3
      comp=Z,20µm,20.0s
PFVI  Vila Bisbo       118.93 319  ePP         PP        06 32 04.0 +6.8
MSTX  Muleshoe         119.26  45   IAMs_20    IAMs_20   07 18 45.2
      comp=Z,21µm,22.0s
G40A  Rib Lake         119.39  28   IAMs_20    IAMs_20   07 25 19.2
      comp=Z,27µm,21.0s
R32A  Long Quarter,    119.42  39   IAMs_20    IAMs_20   07 30 25.3
      comp=Z,19µm,20.0s
AMTX  Amarillo         119.53  44   IAMs_20    IAMs_20   07 14 01.9
      comp=Z,23µm,22.0s
AVE   Averroes         120.10 315   PKP        PKiKP     06 30 44.5 +3.4
AVE   Averroes         120.10 315   IAMs_20    IAMs_20   07 24 01.1
      comp=Z,18µm,22.0s
I40A  Norwalk          120.22  29   IAMs_20    IAMs_20   07 28 47.2
      comp=Z,26µm,21.0s
KSU1  Kansas State U   120.27  37   IAMs_20    IAMs_20   07 24 11.7
      comp=Z,20µm,21.0s
SCIA  State Center     120.32  33   IAMs_20    IAMs_20   07 26 54.2
      comp=Z,18µm,20.0s
TORD  Torodi Ar. Bea   120.60 289   PKP        PKPdf     06 30 40.5 -2.0
      comp=Z,5.4nm,0.5s,baz=47,slow=3.5,SNR=3.4
TXAR  Lajitas Array    120.97  50   Pdiff      Pdif      06 27 09.4 +0.6
      comp=Z,0.2nm,0.8s,baz=331,slow=6.5,SNR=2.5
TXAR                                PKP        PKPdf     06 30 42.1 -0.9
      comp=Z,10nm,1.0s,baz=283,slow=2.0,SNR=8.7
TXAR                                PP         PP        06 32 12.7 +0.9
      comp=Z,1.3nm,0.7s,baz=325,slow=5.9,SNR=0.7
TXAR                                PKKPbc     PKKPbc    06 40 45.2 -1.4
      comp=Z,2.7nm,1.0s,baz=129,slow=4.4,SNR=7.2
TXAR  Lajitas Array    120.97  50              PKPdf     06 30 41.4 -1.6
TXAR  Lajitas Array    120.97  50   PKIKP      PKPdf     06 30 41.4 -1.6
N38A  Joes South For   121.08  33   IAMs_20    IAMs_20   07 27 01.6
      comp=Z,17µm,21.0s
H43A  Windswept, Lux   121.12  27   IAMs_20    IAMs_20   07 31 33.8
      comp=Z,27µm,21.0s
TIO   Tiouine          121.23 312   PKP        PKPdf     06 30 38.5 -5.0
L40A  Anamosa          121.25  31   IAMs_20    IAMs_20   07 33 45.8
      comp=Z,18µm,21.0s
PMSA  Palmer Station   121.55 175   IAMs_20    IAMs_20   07 24 22.2
      comp=Z,17µm,20.0s
PMSA  Palmer Station   121.55 175  eP          PKPdf     06 30 40.6 -2.2
WMOK  Wichita Mounta   121.57  42   IAMs_20    IAMs_20   07 16 52.9
      comp=Z,24µm,22.0s
P38A  Dawn             121.72  35   IAMs_20    IAMs_20   07 21 45.6
      comp=Z,19µm,22.0s
T35A  Sooner Cattle    121.72  39   IAMs_20    IAMs_20   07 34 00.2
      comp=Z,18µm,19.0s
OK051 E0350 and S346   121.77  39   IAMs_20    IAMs_20   07 15 30.7
      comp=Z,27µm,22.0s
L42A  Oliver, Polo     122.08  30   IAMs_20    IAMs_20   07 24 08.7
      comp=Z,25µm,21.0s
OK052 Battle Ridge R   122.11  40   IAMs_20    IAMs_20   07 33 53.7
      comp=Z,24µm,21.0s
ABTX  Abilene, Hawle   122.19  45   IAMs_20    IAMs_20   07 27 53.6
      comp=Z,22µm,22.0s
GLMI  Grayling         122.21  25   IAMs_20    IAMs_20   07 28 42.3
      comp=Z,21µm,22.0s
N41A  Harden Midland   122.42  32   IAMs_20    IAMs_20   07 33 19.8
      comp=Z,22µm,20.0s
P40A  Paris            122.61  34   IAMs_20    IAMs_20   07 22 13.1
      comp=Z,18µm,22.0s
TUL3  Leonard          122.80  39   IAMs_20    IAMs_20   07 15 60.0
      comp=Z,24µm,22.0s
U38A  Gravette         123.34  38   IAMs_20    IAMs_20   07 34 49.9
      comp=Z,18µm,20.0s
HDIL  Hopedale         123.34  31   IAMs_20    IAMs_20   07 29 30.2
      comp=Z,19µm,20.0s
R40A  Maddies Statio   123.35  35   IAMs_20    IAMs_20   07 33 40.8
      comp=Z,22µm,22.0s
I49A  Point Hope       123.67  24   IAMs_20    IAMs_20   07 31 52.9
      comp=Z,22µm,20.0s
P43A  Skaggs, Pawnee   123.90  32   IAMs_20    IAMs_20   07 26 57.9
      comp=Z,24µm,21.0s
WHTX  Lake Whitney,    124.07  44   IAMs_20    IAMs_20   07 31 09.3
      comp=Z,19µm,20.0s
CCM   Cathedral Cave   124.09  35              PKPdf     06 30 47.8 -0.8
CCM   Cathedral Cave   124.09  35   IAMs_20    IAMs_20   07 26 40.4
      comp=Z,19µm,22.0s
CCM   Cathedral Cave   124.09  35   PKIKP      PKPdf     06 30 47.8 -0.8
CCM                                 MLR        MLR
      comp=Z,19µm,22.0s
VA02  Isla de Pascua   124.30 118   IAMs_20    IAMs_20   07 18 45.3
      comp=Z,17µm,20.0s
RPN   Rapa Nui         124.39 118   IAMs_20    IAMs_20   07 18 45.8
      comp=Z,16µm,20.0s
SFIN  Lafayette        124.58  30   IAMs_20    IAMs_20   07 34 50.8
      comp=Z,22µm,21.0s
Q44A  Meyer Farm, Va   124.70  32   IAMs_20    IAMs_20   07 29 07.3
      comp=Z,25µm,22.0s
K50A  Casco            124.71  25   IAMs_20    IAMs_20   07 35 14.6
      comp=Z,19µm,20.0s
Z38A  Mt. Pleasant     124.98  41   IAMs_20    IAMs_20   07 19 51.8
      comp=Z,21µm,21.0s
MIAR  Mount Ida        125.07  39   IAMs_20    IAMs_20   07 19 54.9
      comp=Z,25µm,22.0s
D62A  Allapoint, All   125.08  12   IAMs_20    IAMs_20   07 33 31.1
      comp=Z,21µm,21.0s
P46A  Rosedale         125.11  30   IAMs_20    IAMs_20   07 35 11.7
      comp=Z,19µm,21.0s
S44A  Carbondale       125.45  33   IAMs_20    IAMs_20   07 37 06.3
      comp=Z,22µm,21.0s
735A  Kenedy           125.59  47   IAMs_20    IAMs_20   07 30 56.2
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	comp=Z,20µm,21.0s						
M50A	Fremont	125.66	26	IAMs_20	IAMs_20	07 28 07.8	
	comp=Z,25µm,21.0s						
LONY	Lake Ozonia	125.98	17	IAMs_20	IAMs_20	07 29 58.6	
	comp=Z,26µm,22.0s						
P48A	Milroy	126.11	29	IAMs_20	IAMs_20	07 29 42.1	
	comp=Z,20µm,22.0s						
NATX	Nacogdoches	126.12	43	IAMs_20	IAMs_20	07 22 48.2	
	comp=Z,21µm,20.0s						
J55A	Hilton	126.14	21	IAMs_20	IAMs_20	07 30 19.1	
	comp=Z,22µm,21.0s						
M52A	Chesterland	126.26	25	IAMs_20	IAMs_20	07 29 01.6	
	comp=Z,25µm,21.0s						
PMPST	Porto Santo, M	126.27	320	*e*PP	PP	06 32 56.0	+9.1
T45A	Paducah	126.28	34	IAMs_20	IAMs_20	07 33 52.2	
	comp=Z,19µm,20.0s						
ERPA	Erie	126.33	23	IAMs_20	IAMs_20	07 32 24.2	
	comp=Z,21µm,20.0s						
N51A	Ashland	126.34	26	IAMs_20	IAMs_20	07 28 47.0	
	comp=Z,25µm,21.0s						
F64A	Sherman	126.38	12	IAMs_20	IAMs_20	07 31 31.7	
	comp=Z,23µm,20.0s						
HKT	Hockley	126.39	45	PKIKP	PKiKP	06 30 54.0	+0.4
WCI	Wyandotte Cave	126.62	31		PKPdf	06 30 52.9	-0.5
WCI	Wyandotte Cave	126.62	31	PKIKP	PKPdf	06 30 52.9	-0.5
WCI				MLR	MLR		
	comp=Z,28µm,22.0s						
PMAR	Madeira	126.87	320	*e*PKPdf	PKPdf	06 30 54.4	+0.1
PMAR				*e*PP	PP	06 32 59.2	+8.1
H62A	Milan	126.97	15	IAMs_20	IAMs_20	07 28 38.4	
	comp=Z,22µm,22.0s						
PMOZ	Porto Moniz, M	126.98	320	*e*PKPdf	PP	06 33 00.8	+9.0
PMOZ				*e*PP	PP	06 33 02.9	+11
PMOZ				*i* tx	tx	06 42 49.0	
PMOZ				*e*LQ	LQ	07 04 28.1	
PMOZ				*e*LR	LR	07 12 14.4	
PMOZ				*i* IAMs_20	IAMs_20	07 32 49.9	
	comp=Z,12µm,20.0s						
J59A	Piesco	127.06	18	IAMs_20	IAMs_20	07 30 13.0	
	comp=Z,23µm,20.0s						
T47A	Sharon Grove	127.13	33	IAMs_20	IAMs_20	07 35 05.7	
	comp=Z,17µm,20.0s						
R49A	Shelbyville	127.14	30	IAMs_20	IAMs_20	07 30 27.5	
	comp=Z,24µm,22.0s						
WVT	Waverly	127.37	34		PKPdf	06 30 54.5	-0.4
WVT	Waverly	127.37	34	IAMs_20	IAMs_20	07 30 55.2	
	comp=Z,25µm,22.0s						
WVT	Waverly	127.37	34	PKIKP	PKPdf	06 30 54.5	-0.4
HNH	Hanover	127.48	16	IAMs_20	IAMs_20	07 30 41.0	
	comp=Z,24µm,21.0s						
I63A	Otisfield	127.60	14	IAMs_20	IAMs_20	07 31 17.1	
	comp=Z,22µm,20.0s						
OXF	Oxford	127.63	36	IAMs_20	IAMs_20	07 28 56.3	
	comp=Z,23µm,21.0s						
EMMW	East Machias	127.67	11	IAMs_20	IAMs_20	07 34 27.7	
	comp=Z,23µm,21.0s						
BINY	Binghamton	127.72	20	IAMs_20	IAMs_20	07 34 24.6	
	comp=Z,20µm,20.0s						
441A	DeRidder	127.73	43	IAMs_20	IAMs_20	07 38 58.9	
	comp=Z,19µm,19.0s						
J61A	Chester	127.74	16	IAMs_20	IAMs_20	07 31 22.9	
	comp=Z,22µm,20.0s						
TRY	Troy	127.98	18	IAMs_20	IAMs_20	07 30 37.4	
	comp=Z,18µm,21.0s						
PLAL	Pickwick Lake	128.07	35	IAMs_20	IAMs_20	07 31 12.7	
	comp=Z,17µm,21.0s						
CMLA	Cha da Macela	128.14	331	IAMs_20	IAMs_20	07 25 07.8	
	comp=Z,20µm,22.0s						
V48A	Smith Brothers	128.21	33	IAMs_20	IAMs_20	07 37 33.3	
	comp=Z,22µm,20.0s						
T50A	Nancy	128.29	31	IAMs_20	IAMs_20	07 32 11.0	
	comp=Z,23µm,22.0s						
K62A	Royalston	128.46	16	IAMs_20	IAMs_20	07 33 43.9	
	comp=Z,21µm,20.0s						
DBIC	Dimbokro	128.50	284	PKP	PKPdf	06 30 55.7	-1.9
	comp=Z,13nm,1.0s,baz=171,slow=2.4,SNR=4.7						
L61B	Northampton	128.53	17	IAMs_20	IAMs_20	07 31 49.8	
	comp=Z,22µm,21.0s						
Q54A	Coxs Mills	128.61	26	IAMs_20	IAMs_20	07 34 43.9	
	comp=Z,21µm,20.0s						
HRV	Adam Dziewonsk	128.79	16	IAMs_20	IAMs_20	07 30 56.7	
	comp=Z,21µm,22.0s						
WES	Weston	128.97	16	IAMs_20	IAMs_20	07 30 26.4	
	comp=Z,26µm,22.0s						
X48A	Hartselle	129.03	35	IAMs_20	IAMs_20	07 31 58.3	
	comp=Z,21µm,21.0s						
UNM	Universidad Na	129.23	59	IAMs_20	IAMs_20	07 19 26.2	
	comp=Z,23µm,21.0s						
Z47A	Carrollton	129.34	37	IAMs_20	IAMs_20	07 22 50.7	
	comp=Z,21µm,22.0s						
W50A	Signal Mountai	129.43	33	IAMs_20	IAMs_20	07 38 20.5	
	comp=Z,17µm,21.0s						
WSPT	Westport, CT	129.50	18	IAMs_20	IAMs_20	07 31 23.8	
	comp=Z,21µm,21.0s						
M63A	Gales Ferry	129.67	17	IAMs_20	IAMs_20	07 29 45.2	
	comp=Z,25µm,22.0s						
N62A	Caumsett State	129.68	18	IAMs_20	IAMs_20	07 29 32.4	
	comp=Z,24µm,22.0s						
346A	Big Creek Wild	129.74	39	IAMs_20	IAMs_20	07 21 16.7	
	comp=Z,20µm,21.0s						
M65A	Busby, Falmout	129.92	16	P	PKPdf	06 30 58.3	-1.3
	baz=339						
LRAL	Lakeview Retre	130.09	36	IAMs_20	IAMs_20	07 23 17.2	
	comp=Z,23µm,22.0s						
X51A	Calhoun	130.16	33	IAMs_20	IAMs_20	07 37 05.7	
	comp=Z,20µm,21.0s						
HOPE	Hope Point	130.21	194	IAMs_20	IAMs_20	07 23 53.4	
	comp=Z,20µm,22.0s						
BLA	Blacksburg	130.26	27	IAMs_20	IAMs_20	07 33 28.6	
	comp=Z,23µm,21.0s						
P61A	Hammonton	130.38	20	IAMs_20	IAMs_20	07 35 52.1	
	comp=Z,23µm,21.0s						
MG01	Puerto William	130.70	170	IAMs_20	IAMs_20	07 30 19.3	
	comp=Z,19µm,20.0s						
T57A	Hurt	130.95	26	IAMs_20	IAMs_20	07 30 31.9	
	comp=Z,23µm,21.0s						
Y52A	Lilburn	131.12	33	IAMs_20	IAMs_20	07 35 52.1	
	comp=Z,21µm,21.0s						
BRAL	Brewton	131.38	38	IAMs_20	IAMs_20	07 33 03.9	
	comp=Z,22µm,20.0s						
152A	Waverly Hall	131.66	34	IAMs_20	IAMs_20	07 31 45.7	
	comp=Z,21µm,22.0s						
352A	Blakely	132.42	36	IAMs_20	IAMs_20	07 24 51.5	
	comp=Z,22µm,22.0s						
MG02	Cerro Sombrero	132.45	168	IAMs_20	IAMs_20	07 31 49.6	
	comp=Z,17µm,20.0s						
MG05	Puerto Natales	132.72	165	IAMs_20	IAMs_20	07 28 10.8	
	comp=Z,16µm,20.0s						
GO09	Cerro Castillo	133.13	165	IAMs_20	IAMs_20	07 26 22.8	
	comp=Z,20µm,22.0s						
TIGA	Tifton	133.21	34	IAMs_20	IAMs_20	07 33 26.8	
	comp=Z,21µm,22.0s						
553A	Crawfordville	133.65	36	IAMs_20	IAMs_20	07 25 24.8	
	comp=Z,21µm,20.0s						
257A	Skidaway Islan	134.19	32	IAMs_20	IAMs_20	07 36 15.3	
	comp=Z,22µm,21.0s						
EFI	East Falkland	134.98	177	IAMs_20	IAMs_20	07 29 31.3	
	comp=Z,17µm,22.0s						
TEIG	Tepich	137.61	50	IAMs_20	IAMs_20	07 44 20.9	
	comp=Z,15µm,21.0s						
COYC	Coyhaique	138.36	162	IAMs_20	IAMs_20	07 28 29.3	
	comp=Z,19µm,22.0s						
AY01	Puyuhuapi	139.20	160	IAMs_20	IAMs_20	07 31 29.6	
	comp=Z,16µm,20.0s						
ASCN	Ascension	139.92	266	IAMs_20	IAMs_20	07 30 35.6	
	comp=Z,15µm,22.0s						
GO07	Milladeo Hill,	139.99	158	IAMs_20	IAMs_20	07 26 37.6	
	comp=Z,17µm,22.0s						
BBSR	BB Station	140.11	13	IAMs_20	IAMs_20	07 34 17.2	
	comp=Z,21µm,22.0s						
LL07	Hotel Espejo d	140.30	158	IAMs_20	IAMs_20	07 26 45.8	
	comp=Z,18µm,22.0s						
CAMR	Camarioca	140.68	41	*e*P	PKPdf	06 31 20.1	0.0
LL01	San Ignacio de	141.08	159	IAMs_20	IAMs_20	07 32 04.4	
	comp=Z,16µm,21.0s						
LL05	Los Muermos	141.53	157	IAMs_20	IAMs_20	07 26 30.5	
	comp=Z,14µm,22.0s						
LL03	Petrohue	142.17	158	IAMs_20	IAMs_20	07 27 38.8	
	comp=Z,15µm,22.0s						
MGV	Manicaragua	142.25	40	*e*P	PKiKP	06 31 27.5	+1.5
SACV	Santiago Islan	142.42	305	IAMs_20	IAMs_20	07 38 00.7	
	comp=Z,16µm,22.0s						
PLCA	Paso Flores	143.19	160	PKP	PKPbc	06 31 21.2	0.0
	comp=Z,8.9nm,0.6s,baz=260,slow=2.7,SNR=33						
PLCA				PP	PP	06 34 34.5	+1.0
	comp=Z,8.4nm,1.0s,baz=190,slow=7.6,SNR=1.6						
PLCA				SKPbc	SKPbc	06 35 01.6	+0.4
	comp=Z,66nm,1.1s,baz=191,slow=4.1,SNR=7.2						
PLCA	Paso Flores	143.19	160	*e*P	PKPab	06 31 19.9	+0.1
LR03	Panguipulli	143.50	157	IAMs_20	IAMs_20	07 39 12.5	
	comp=Z,13µm,20.0s						
JTS	Las Juntas de	145.57	61	PKPbc	PKPdf	06 31 26.5	-2.5
	comp=Z,34nm,1.0s,baz=234,slow=6.4,SNR=13						
BI05	Punta Hualpn	145.58	153	IAMs_20	IAMs_20	07 35 15.0	
	comp=Z,15µm,20.0s						
HLGC	Holguin	145.59	37	*e*P	PKPdf	06 31 24.5	-4.4
LMGC	Las Mercedes	145.64	39	*e*P	PKPdf	06 31 27.1	-1.8
PINC	Pinares de May	146.06	37	*e*P	PKPab	06 31 31.1	+0.1
CHIV	Chivirico	146.07	38	*e*P	PKPdf	06 31 29.8	+0.1
MARVS	Santiago de Cu	146.37	38	*e*P	PKPdf	06 31 30.6	+0.4
MOAC	Moa	146.42	36	*e*P	PKPab	06 31 32.5	+0.1
HDC	Heredia	146.43	61	*e*P	PKPdf	06 31 26.4	-4.2
BI02	San Fabin de	146.48	156	PKPdf	PKPdf	06 31 29.6	-0.4
NMDO	Nuevo Mundo	146.48	36	*e*P	PKPbc	06 31 31.1	-0.6
RCC	Rio Carpintero	146.50	38	*e*P	PKPdf	06 31 28.5	-2.0
MTDJ	Mount Denham	146.63	42	IAMs_20	IAMs_20	07 43 52.5	
	comp=Z,19µm,22.0s						
MTDJ	Mount Denham	146.63	42	*i* P	PKPbc	06 31 32.8	+0.4
QMBU	Quimbuelo	146.86	36	*e*P	PKPbc	06 31 32.5	-0.4
GTBY	Guantanamo Bay	146.90	37	IAMs_20	IAMs_20	07 47 51.7	
	comp=Z,16µm,20.0s						
GTBY	Guantanamo Bay	146.90	37	*e*P	PKiKP	06 31 37.8	+2.2
STH	Stony Hill	147.22	41	⇓*i*P	PKPbc	06 31 33.7	-0.3
MASC	Masc	147.22	35	*e*P	PKPdf	06 31 32.5	+0.8
HOJ	Hope	147.31	41	*i* P	PKPbc	06 31 34.4	+0.2
TRQA	Tornquist	148.00	169		PKPdf	06 31 31.6	-0.8
TRQA	Tornquist	148.00	169	PKIKP	PKPdf	06 31 31.7	-0.8
TRQA				MLR	MLR		
	comp=Z,23µm,21.0s						
BO02	Sierra Bellavi	148.28	154		PKPdf	06 31 33.6	+0.5
BO02				IAMs_20	IAMs_20	07 39 23.4	
	comp=Z,16µm,21.0s						
BO01	Tunca	148.49	154	IAMs_20	IAMs_20	07 35 23.0	
	comp=Z,16µm,22.0s						
MT01	Popeta	148.86	153	IAMs_20	IAMs_20	07 39 51.8	
	comp=Z,13µm,19.0s						
VA05	Santo Domingo	148.86	152	IAMs_20	IAMs_20	07 33 42.0	
	comp=Z,16µm,20.0s						
BO04	La Punta	149.04	154	IAMs_20	IAMs_20	07 38 26.5	
	comp=Z,13µm,21.0s						
MT09	Talagante	149.05	153	IAMs_20	IAMs_20	07 38 50.8	
	comp=Z,12µm,20.0s						
LMEL	Las Melosas	149.34	154	IAMs_20	IAMs_20	07 36 53.3	
	comp=Z,16µm,21.0s						
VA01	Torpederas	149.37	151	IAMs_20	IAMs_20	07 39 15.6	
	comp=Z,18µm,22.0s						
MT13	San Alfonso	149.39	154	IAMs_20	IAMs_20	07 37 46.7	
	comp=Z,16µm,22.0s						
MT02	Curacav	149.41	152	IAMs_20	IAMs_20	07 34 33.6	
	comp=Z,18µm,20.0s						
MT05	Renca	149.49	153	IAMs_20	IAMs_20	07 37 22.4	
	comp=Z,16µm,22.0s						
MT03	Universidad Ad	149.50	153	IAMs_20	IAMs_20	07 34 47.8	
	comp=Z,14µm,22.0s						
MT16	CCHEN	149.55	153	IAMs_20	IAMs_20	07 34 38.1	
	comp=Z,15µm,20.0s						
PEL	Peldehue	149.72	153	IAMs_20	IAMs_20	07 38 17.7	
	comp=Z,19µm,22.0s						
SC01	Santiago de lo	149.73	31		PKPdf	06 31 37.2	+1.4
MT08	Bocatoma Ro	149.76	154	IAMs_20	IAMs_20	07 40 53.1	
	comp=Z,15µm,21.0s						
SDDR	Presa de Saban	149.81	32	IAMs_20	IAMs_20	07 45 44.2	
	comp=Z,16µm,20.0s						
SDDR	Presa de Saban	149.81	32	*e*P	PKPbc	06 31 40.4	-0.3
VA03	San Esteban	150.10	153	IAMs_20	IAMs_20	07 39 38.6	
	comp=Z,14µm,22.0s						
BCIP	Isla Barro Col	150.50	58	IAMs_20	IAMs_20	07 35 33.8	
	comp=Z,17µm,22.0s						
CO02	Combarbal	151.17	150	IAMs_20	IAMs_20	07 38 39.3	
	comp=Z,15µm,21.0s						
CO06	Fray Jorge	151.28	149	IAMs_20	IAMs_20	07 32 48.3	
	comp=Z,14µm,21.0s						
CO03	El Pedregal	151.62	150	IAMs_20	IAMs_20	07 46 20.3	
	comp=Z,13µm,20.0s						
CO05	La Serena	152.09	148	IAMs_20	IAMs_20	07 28 52.7	
	comp=Z,15µm,22.0s						
AOPR	Arecibo Observ	152.53	25		PKPab	06 31 53.6	-3.6
CO01	Juntas del Tor	152.62	150	IAMs_20	IAMs_20	07 43 48.7	
	comp=Z,11µm,20.0s						
SJG	San Juan	153.00	24	PKPbc	PKPbc	06 31 45.8	-2.2
	comp=Z,21nm,0.5s,baz=262,slow=4.3,SNR=4.7						
LCO	Las Campanas	153.09	148	IAMs_20	IAMs_20	07 33 28.3	
	comp=Z,16µm,21.0s						
AC05	El Transito	153.46	148	IAMs_20	IAMs_20	07 33 10.9	
	comp=Z,14µm,21.0s						
AC04	Llanos de Chal	153.52	146	IAMs_20	IAMs_20	07 36 36.9	
	comp=Z,15µm,21.0s						
GO03	Copiapo	154.46	147	IAMs_20	IAMs_20	07 39 23.7	
	comp=Z,13µm,22.0s						
AC06	Mina Casimiro	154.58	146	IAMs_20	IAMs_20	07 38 35.9	
	comp=Z,12µm,22.0s						
SEUS	St. Eustatius	154.72	19	IAMs_20	IAMs_20	07 42 37.7	
	comp=Z,19µm,22.0s						
ANWB	Willy Bob	154.91	16	*e*P	PKPdf	06 31 46.6	+3.2
AC01	Pan de Azucar	155.37	144	IAMs_20	IAMs_20	07 35 28.1	
	comp=Z,16µm,20.0s						
OTAV	Otavalo	155.40	75	IAMs_20	IAMs_20	07 36 26.2	
	comp=Z,14µm,21.0s						
OTAV	Otavalo	155.40	75	*e*P	PKPdf	06 31 39.6	-5.2
PSAL	Palomas, Salto	155.49	174	*e*P	PKPdf	06 31 40.6	-3.3
AC02	Maricunga	155.66	147	IAMs_20	IAMs_20	07 34 02.4	
	comp=Z,13µm,21.0s						
MBWH	Windy Hill	155.68	18	*e*P	PKPdf	06 31 52.5	+7.9
ABD	La Joyeuse, An	156.13	16	IAMs_20	IAMs_20	07 39 06.8	
	comp=Z,18µm,22.0s						
DSDZ	La Diserade, G	156.40	15	*e*P	PKPdf	06 31 46.6	+1.2
GDSD	La Dsirade Is	156.40	15	IAMs_20	IAMs_20	07 48 33.8	
	comp=Z,16µm,20.0s						
MMLZ	Guadeloupe Bro	156.49	17	*e*P	PKPdf	06 31 46.6	+1.0
ATAH	Atahualpa	156.52	93	PKP	PKPdf	06 31 46.5	+0.2
	comp=Z,14nm,1.2s,baz=293,slow=2.1,SNR=11						
PB14	IPOC Station P	156.62	142	IAMs_20	IAMs_20	07 37 02.4	
	comp=Z,15µm,20.0s						
GO02	Mina Guanaco	156.71	144	IAMs_20	IAMs_20	07 31 56.5	
	comp=Z,17µm,22.0s						
DWS	Wesley	157.04	16	*e*P	PKPdf	06 31 47.9	+1.6
DSLB	Salisbury	157.14	17	*e*P	PKPdf	06 31 46.6	+0.2
DLPL	La Plaine	157.28	16	*e*P	PKPdf	06 31 51.2	+4.5
PB10	IPOC Station P	157.33	140	IAMs_20	IAMs_20	07 37 25.4	
	comp=Z,15µm,21.0s						
ROSC	El Rosal	157.41	60	PKP	PKPdf	06 31 45.7	-1.7
	comp=Z,20nm,1.0s,baz=334,slow=0.7,SNR=14						
NNA	Nana	157.56	105	PKP	PKPdf	06 31 45.8	-1.3
	comp=Z,36nm,0.9s,baz=312,slow=3.4,SNR=10						
NNA				PKPab	PKPab	06 32 18.7	-0.4
	comp=Z,107nm,1.2s,baz=238,slow=2.8,SNR=4.2						
NNA	Nana	157.56	105	IAMs_20	IAMs_20	07 39 05.1	
	comp=Z,15µm,20.0s						
SVN	Savane Anatole	157.77	17	IAMs_20	IAMs_20	07 56 17.4	
	comp=Z,15µm,22.0s						
SVN	Savane Anatole	157.77	17	*e*P	PKPdf	06 31 51.2	+3.9
SDV	Santo Domingo	157.93	46	PKP	PKPdf	06 31 46.1	-1.6
	comp=Z,16nm,0.9s,baz=52,slow=0.4,SNR=16						
SDV				PP	PP	06 35 59.6	0.0
	comp=Z,12nm,1.0s,baz=296,slow=6.1,SNR=2.0						
SDV	Santo Domingo	157.93	46		PKPdf	06 31 46.4	-1.4
SDV	Santo Domingo	157.93	46	*e*P	PKPdf	06 31 43.7	-4.1
PB05	IPOC Station P	158.03	139	IAMs_20	IAMs_20	07 35 22.9	
	comp=Z,13µm,22.0s						
BIM	Bigot	158.11	17	*e*P	PKPdf	06 31 49.9	+2.2
PB06	IPOC Station P	158.54	140	IAMs_20	IAMs_20	07 34 37.3	
	comp=Z,16µm,21.0s						
SLBI	Saint Lucia, B	158.61	17	*e*P	PKPdf	06 31 52.5	+4.2
AF01	San Pedro de A	159.22	143	IAMs_20	IAMs_20	07 38 39.1	
	comp=Z,14µm,22.0s						
SVB	Belmont	159.24	18	*e*P	PKPdf	06 31 57.5	+8.5
PB02	IPOC Station P	159.29	136	IAMs_20	IAMs_20	07 35 28.6	
	comp=Z,13µm,21.0s						
ITAB	Concordia	159.32	187	*e*P	PKPdf	06 31 45.8	-3.1
PATCX	Punta Patache	159.44	135	IAMs_20	IAMs_20	07 38 16.8	
	comp=Z,12µm,20.0s						
TA01	Diego Aracena	159.59	134	IAMs_20	IAMs_20	07 45 08.8	
	comp=Z,15µm,22.0s						
PB01	IPOC Station P	159.76	137	IAMs_20	IAMs_20	07 35 39.9	
	comp=Z,12µm,21.0s						
GRHS	Sauteurs	160.09	20	*e*P	PKPdf	06 31 49.7	-0.3
GRGR	Grenville	160.17	20	*e*P	PKPdf	06 31 51.5	+1.3
CPUP	Villa Florida	160.22	173	PKP	PKPdf	06 31 48.1	-1.7
	comp=Z,4.7nm,0.9s,baz=28,slow=2.3,SNR=10						
CPUP				PKPab	PKPab	06 32 29.4	-0.5
	comp=Z,20nm,1.1s,baz=186,slow=3.3,SNR=7.2						
CPUP				PP	PP	06 36 11.1	+0.6
	comp=Z,1.8nm,0.9s,baz=225,slow=8.9,SNR=1.4						
CAM01	Campos-RJ	160.26	219	*e*P	PKPdf	06 31 46.9	-3.2
NBPV	Pedro Velho	160.66	269	*e*P	PKPdf	06 31 46.9	-3.8
VAS01	Vassouras-RJ	160.96	214	*e*P	PKPdf	06 31 45.9	-5.0
PET01	Itanhaem-SP	161.00	201	*e*P	PKPdf	06 31 47.6	-3.2
RIB01	Linhares ES	161.16	227	*e*P	PKPdf	06 31 47.8	-3.3
SPB	Sao Paulo	161.69	202	*e*P	PKPdf	06 31 48.1	-3.4
PTGB	Pitanga	161.80	188	*e*P	PKPdf	06 31 48.2	-3.5
VAO	Valinhos	162.04	204	*e*P	PKPdf	06 31 48.3	-3.7
GUA01	Guaratinga, BA	162.32	235	*e*P	PKPdf	06 31 49.0	-3.3
NBPA	Parau_RN	162.44	272	*e*P	PKPdf	06 31 48.9	-3.7
CMC01	Camacan, BA	162.70	239	*e*P	PKPdf	06 31 49.5	-3.2
NBIT	Itapeh - BA	162.83	240	*e*P	PKPdf	06 31 49.3	-3.6
NBTA	Tacaratu-PE	163.28	260	*e*P	PKPdf	06 31 49.7	-3.7
LPAZ	La Paz	163.74	127	PKP	PKPdf	06 31 54.0	-0.5
	comp=Z,17nm,1.1s,baz=8.5,slow=1.5,SNR=38						
LPAZ				PKPab	PKPab	06 32 47.2	+0.7
	comp=Z,62nm,1.0s,baz=230,slow=2.2,SNR=6.8						
LPAZ				PP	PP	06 36 32.5	+0.8
	comp=Z,7.7nm,0.8s,baz=239,slow=4.9,SNR=1.7						
LPAZ	La Paz	163.74	127	*e*P	PKPdf	06 31 50.1	-4.4
AMBA	Amambai (Brazi	163.76	179	*e*P	PKPdf	06 31 50.2	-3.4
DIAM	Diamantina, MG	164.12	222	*e*P	PKPdf	06 31 50.5	-3.7
BB19B	Bebedouro	164.40	202	*e*P	PKPdf	06 31 50.8	-3.5
NBMO	Morrinhos-CE	164.99	282	*e*P	PKPdf	06 31 50.9	-4.0
AQDB	Aquidauana	166.17	176	*e*P	PKPdf	06 31 52.1	-3.6
ITRB	Iturama	166.28	198	*e*P	PKPdf	06 31 52.3	-3.5
NBPS	Pedro II - PI	166.57	279	*e*P	PKPdf	06 31 52.6	-3.7
JANB	Januaria	166.74	230	*e*P	PKPdf	06 31 52.8	-3.6
IPMB	Ipameri, GO	167.00	209	*e*P	PKPdf	06 31 53.0	-3.5
C2SB	Chapadao do Su	167.75	189	*e*P	PKPdf	06 31 55.2	-1.7
MDP	Montagnes des	168.19	350	PKP	PKPdf	06 31 55.9	-1.5
	comp=Z,30nm,1.2s,baz=352,slow=6.1,SNR=1.8						
MDP				PKPab	PKPab	06 33 04.0	-1.2
	comp=Z,33nm,1.1s,baz=30,slow=5.0,SNR=3.6						
MDP				PP	PP	06 36 52.8	+0.5
	comp=Z,10nm,1.1s,baz=40,slow=5.0,SNR=0.9						
SDBA	SAO DESIDERIO	168.70	239	*e*P	PKPdf	06 31 54.1	-3.7
SIV	San Ignacio	168.80	147	PKP	PKPdf	06 31 57.2	-0.5
	comp=Z,8.3nm,0.9s,baz=148,slow=1.3,SNR=32						
SIV				PKPab	PKPab	06 33 09.3	+1.4
	comp=Z,31nm,0.9s,baz=200,slow=2.5,SNR=6.3						
SIV				PP	PP	06 36 57.6	+1.4
	comp=Z,10nm,0.9s,baz=216,slow=8.7,SNR=3.4						
BDFB	Brasilia	168.84	216	PKP	PKPdf	06 31 56.7	-1.2
	comp=Z,16nm,1.1s,baz=0.3,slow=2.3,SNR=12						
BDFB				PKPab	PKPab	06 33 07.8	-0.5
	comp=Z,16nm,1.1s,baz=268,slow=3.6,SNR=1.2						
BDFB				PP	PP	06 36 57.5	+0.8
	comp=Z,12nm,1.1s,baz=146,slow=7.7,SNR=2.4						
BDFB	Brasilia	168.84	216		PKPdf	06 31 56.3	-1.6
BDFB	Brasilia	168.84	216	PKIKP	PKPdf	06 31 56.3	-1.6
PP1B	Ponte de Pedra	169.06	179	*e*P	PKPdf	06 31 54.2	-3.7
BOAV	Boa Vista	169.38	33	*e*P	PKPdf	06 31 54.6	-3.6
TEFE	Tefe	169.69	73	*e*P	PKPdf	06 31 54.6	-3.7
PTLB	Pontes e Lacer	170.21	154	*e*P	PKPdf	06 31 55.9	-2.6
ARAG	Araguaiana, MT	170.50	197	*e*P	PKPdf	06 31 55.3	-3.4
SALV	Santo Antonio	170.70	174	*e*P	PKPdf	06 31 54.8	-4.0
VILB	Vilhena	171.71	140	*e*P	PKPdf	06 31 55.8	-3.6
TMAB	Tom-Au,PA,Br	172.15	302	*e*P	PKPdf	06 31 56.4	-3.3
SMTB	Santa Maria do	172.55	252	*e*P	PKPdf	06 31 56.8	-3.0
MACA	Manacapuru-AM	173.18	60	*e*P	PKPdf	06 31 56.4	-3.7
SNDB	Serra Nova Dou	173.66	212	*e*P	PKPdf	06 31 57.6	-2.6
PDRB	Porto dos Gac	174.65	159	*e*P	PKPdf	06 31 57.6	-2.9
PRPB	Parauapebas	175.07	275	*e*P	PKPdf	06 31 57.2	-3.5
CLDB	Colider	175.62	166	*e*P	PKPdf	06 31 57.4	-3.4
ITTB	Itaituba	177.58	24	*e*P	PKPdf	06 31 57.9	-3.3
NPGB	Novo Progresso	179.25	127	*e*P	PKPdf	06 31 58.4	-3.0

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*IDC **15** 06:24:19.7±0.9, 6°.59N×125°.14E, h0km, mb4.3/14, mbtmp4.3/14, Error ellipse: s-maj=26.3km s-min=19.2km az=82.0*

*NEIC **15** 06:24:22.0±1.1, 6°.61N±0°.09×125°.0E±0°.1, h10km±1km, mb4.6/21, Error ellipse: s-maj=17.8km s-min=15.1km az=85.0*

ISC 15 06:24:24.9±0.5**, 6°.57N**±0°.06×**125°.0E**±0°.1**, h35**km**, n43, σ0s.69**/42**, mb4.4**/22**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOLI2	Tolitoli	6.87	218	Pn	Pn	06 26 03.0	-0.2
LUWI	Luwuk	7.88	197	Pn	Pn	06 26 16.2	-0.9
SBUM	Sibu	13.39	253	Pn	Pn	06 27 32.5	-0.1
MMRI	Maumere	15.36	190	Pn	Pn	06 27 59.4	+0.3
TPUB	Ta-pu	17.16	346	P	Pn	06 28 21.4	-0.7
TPUB				IAmb	IAmb	06 28 35.4	
	comp=Z,31nm,1.0s						
MTN	Manton Dam	20.22	162	P	P	06 28 57.8	+0.7
MTN				IAmb	IAmb	06 29 04.3	
	comp=Z,28nm,1.0s						
PMBI	Palembang	22.30	246	P	P	06 29 19.1	-0.4
KNRA	Kununurra	22.41	170	P	P	06 29 20.2	-0.4
PSI	Prapat	26.27	263	P	P	06 29 58.1	+0.8
	comp=Z,7.6nm,0.7s,baz=74,slow=7.4,SNR=4.8						
	comp=Z,7.6nm,0.7s						
COEN	Coen	27.22	139	P	P	06 30 06.1	+0.3
WB0	Warramunga Arr	27.75	161	P	P	06 30 10.9	+0.5
WB0				IAmb	IAmb	06 30 18.2	
	comp=Z,16nm,0.9s						
GSI	Gunungsitoli	27.86	260	P	P	06 30 11.0	-0.5
GSI				IAmb	IAmb	06 30 14.4	
	comp=Z,15nm,0.8s						
WRA	Warramunga Arr	27.90	161	P	P	06 30 11.2	-0.6
	comp=Z,3.8nm,0.7s,baz=330,slow=10,SNR=1.2						
	comp=Z,3.8nm,0.7s						
WR8	Warramunga Arr	27.96	161	P	P	06 30 12.6	+0.2
WR8				IAmb	IAmb	06 30 15.7	
	comp=Z,7.9nm,0.8s						
CMAR	Chiang Mai Arr	28.01	297	P	P	06 30 14.1	+1.2
	comp=Z,1.5nm,0.3s,baz=110,slow=9.7,SNR=4.9						
	comp=Z,1.5nm,0.3s						
JMN	Monobe	28.25	16	P	P	06 30 14.7	-0.1
JMN				IAmb	IAmb	06 30 21.5	
	comp=Z,11nm,1.0s						
PSA00	Pilbara Seismi	28.42	190	P	P	06 30 16.4	0.0
KSRS	Korea Array	30.86	5	P	P	06 30 36.8	-1.0
	comp=Z,1.5nm,0.6s,baz=180,slow=9.3,SNR=4.8						
	comp=Z,1.5nm,0.6s						
AS31	Alice Springs	31.28	164	P	P	06 30 42.1	+0.3
ASAR	Alice Springs	31.28	164	P	P	06 30 42.0	+0.2
	comp=Z,2.9nm,0.6s,baz=350,slow=8.1,SNR=5.6						
	comp=Z,2.9nm,0.6s						
ASAR	Alice Springs	31.28	164	P	P	06 30 41.7	-0.1
JYT	Yasato	32.63	23	P	P	06 30 52.8	-0.7
FORT	Forrest	37.25	176	P	P	06 31 33.5	+0.2
FORT				IAmb	IAmb	06 31 40.1	
	comp=Z,7.6nm,0.8s						
USRK	Ussuriysk Ar.	37.98	8	P	P	06 31 38.4	-1.0
	comp=Z,3.8nm,0.8s,baz=198,slow=6.6,SNR=4.4						
	comp=Z,3.8nm,0.8s						
HILR	Hailar Array B	43.07	355	P	P	06 32 21.7	+0.3
	comp=Z,1.4nm,0.5s,baz=179,slow=12,SNR=3.9						
	comp=Z,1.4nm,0.5s						
PETK	Petropavlovsk-	53.50	24	P	P	06 33 42.4	+0.6
	comp=Z,10.0nm,0.9s,baz=208,slow=8.4,SNR=7.7						
	comp=Z,10.0nm,0.9s						
PETK	Petropavlovsk-	53.50	24	P	P	06 33 41.8	-0.1
MKAR	Makanchi Array	54.26	325	P	P	06 33 49.0	+1.5
	comp=Z,2.1nm,0.8s,baz=125,slow=8.2,SNR=3.9						
	comp=Z,2.1nm,0.8s						
MKAR	Makanchi Array	54.26	325	P	P	06 33 48.2	+0.7
MAKZ	Makanchi	54.45	325	P	P	06 33 49.2	+0.3
MAKZ				IAmb	IAmb	06 34 00.5	
	comp=Z,6.3nm,1.0s						
KURBB	Kurchatov Arra	58.44	327	P	P	06 34 16.4	-0.8
	comp=Z,1.7nm,0.9s,baz=123,slow=7.0,SNR=4.6						
	comp=Z,1.7nm,0.9s						
KURK	Kurchatov	58.44	327	P	P	06 34 16.2	-1.0
KURK				IAmb	IAmb	06 34 30.3	
	comp=Z,5.2nm,0.9s						
BVAR	Borovoye Array	64.02	327	P	P	06 34 55.7	+0.8
	comp=Z,1.2nm,0.8s,baz=111,slow=7.9,SNR=1.9						
	comp=Z,1.2nm,0.8s						
H19K	Roundabout Mou	79.31	25	P	P	06 36 26.7	+0.1
H19K				IAmb	IAmb	06 36 30.7	
	comp=Z,12nm,1.0s						
B21K	Ikpikpuk River	80.53	20	P	P	06 36 33.7	+0.6
G21K	Allakaket	80.61	24	P	P	06 36 34.5	+0.8
ILAR	Eielson Array	83.29	26	P	P	06 36 46.5	-1.4
	comp=Z,2.6nm,0.9s,baz=236,slow=4.4,SNR=9.4						
	comp=Z,2.6nm,0.9s						
ILAR	Eielson Array	83.29	26	P	P	06 36 48.3	+0.5
I27K	Kandik River	85.46	25	P	P	06 37 00.1	+1.2
L27K	Beaver Creek,	85.63	27	P	P	06 37 00.0	+0.3
L27K				IAmb	IAmb	06 37 04.2	

	comp=Z,6.1nm,0.9s						
FINES	FINESS Array B	88.54	332	P	P	06 37 13.8	0.0
	comp=Z,1.8nm,0.7s,baz=33,slow=7.3,SNR=3.5						
	comp=Z,1.8nm,0.7s						
FINES	FINESS Array B	88.54	332	P	P	06 37 14.3	+0.6
YKA	Yellowknife Ar	97.62	24	P	Pdif	06 37 56.5	+0.8
	comp=Z,0.9nm,0.9s,baz=299,slow=5.5,SNR=4.0						
	comp=Z,0.9nm,0.9s						

*IDC **15** 06:25:14.0±1.2, 6°.69N×125°.34E, h0^{km}, mb4.2/5, mbtmp4.2/5, Error ellipse: s-maj=66.6km s-min=23.9km az=72.0*

*NEIC **15** 06:25:15.8±0.6, 6°.72N±0°.04×125°.2E±0°.1, h10^{km}±1^{km}, mb4.6/10, Error ellipse: s-maj=19.8km s-min=5.5km az=256.0*

ISC 15 06:25:15.2±0.6**, 6°.68N**±0°.09×**125°.2E**±0°.1**, h10^{km}, n20, σ0^{s}.67**/20**, mb4.5**/9**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	6.24	160	Pn	Pn	06 26 47.6	+0.1
TOLI2	Tolitoli	7.09	219	Pn	Pn	06 26 59.7	+0.7
KKM	Kota Kinabalu	8.98	266	Pn	Pn	06 27 25.1	0.0
JAGI	Jajag, Banyuwa	18.66	216	P	Pn	06 29 33.9	0.0
JAGI				IAmb	IAmb	06 29 37.7	
	comp=Z,58nm,1.1s						
MTN	Manton Dam	20.26	163	P	P	06 29 51.5	+0.5
MTN				IAmb	IAmb	06 29 53.9	
	comp=Z,27nm,1.1s						
KNRA	Kununurra	22.48	171	P	P	06 30 15.2	+0.3
COEN	Coen	27.16	139		P	06 30 58.7	-0.3
COEN				IAmb	IAmb	06 31 15.4	
	comp=Z,13nm,1.1s						
WRA	Warramunga Arr	27.93	161	P	P	06 31 07.5	+1.6
	comp=Z,1.4nm,0.6s,baz=344,slow=8.9,SNR=0.9						
	comp=Z,1.4nm,0.6s						
LHMI	Lhok Sumawe	28.16	269	P	P	06 31 07.1	-0.9
ASAR	Alice Springs	31.33	165	P	P	06 31 34.6	-1.4
	comp=Z,2.2nm,0.8s,baz=346,slow=9.1,SNR=1.5						
	comp=Z,2.2nm,0.8s						
JEW	Eniwo	38.76	19	P	P	06 32 39.7	-0.2
EIDS	Eidsvold	40.58	143		P	06 32 55.6	+0.3
BBOO	Buckleboo	40.60	166	P	P	06 32 55.3	+0.1
CAN	Canberra	47.40	153	P	P	06 33 49.9	0.0
CAN				IAmb	IAmb	06 33 50.7	
	comp=Z,9.8nm,1.0s						
PETK	Petropavlovsk-	53.32	24	P	P	06 34 34.7	+0.2
	comp=Z,2.5nm,0.8s,baz=238,slow=7.4,SNR=1.3						
	comp=Z,2.5nm,0.8s						
PETK	Petropavlovsk-	53.32	24	P	P	06 34 34.1	-0.3
KURBB	Kurchatov Arra	58.47	327	P	P	06 35 11.8	+0.5
	comp=Z,3.0nm,0.8s,baz=122,slow=7.2,SNR=4.8						
	comp=Z,3.0nm,0.8s						
KURK	Kurchatov	58.47	327	P	P	06 35 11.6	+0.2
KURK				IAmb	IAmb	06 35 17.1	
	comp=Z,5.1nm,0.8s						
KBL	Kabul	58.56	307	P	P	06 35 12.9	+0.3
KBL				IAmb	IAmb	06 35 18.7	
	comp=Z,4.3nm,0.8s						
BVAR	Borovoye Array	64.05	327	P	P	06 35 50.1	+0.9
	comp=Z,3.8nm,1.0s,baz=111,slow=7.9,SNR=3.6						
	comp=Z,3.8nm,1.0s						

*IDC **15** 06:26:24.6±1.5, 6°.70N×125°.18E, h0^{km}, mb4.0/5, mbtmp4.0/5, Error ellipse: s-maj=82.4km s-min=28.8km az=70.0*

*NEIC **15** 06:26:27.2±0.6, 6°.80N±0°.09×125°.2E±0°.1, h10^{km}±1^{km}, mb4.4/5, Error ellipse: s-maj=21.6km s-min=8.7km az=53.0*

ISC 15 06:26:26.9±0.8**, 6°.79N**±0°.09×**125°.2E**±0°.1**, h13^{km}, n16, σ0^{s}.43**/16**, mb4.2**/8**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	Luwuk	8.15	198	Pn	Pn	06 28 25.5	+0.5
KKM	Kota Kinabalu	8.98	266	Pn	Pn	06 28 36.3	-0.2
KNRA	Kununurra	22.59	171	P	P	06 31 26.9	-0.5
JNU	Nakatsue	26.73	11	P	P	06 32 05.9	-0.3
WRA	Warramunga Arr	28.03	162	P	P	06 32 17.1	-0.9
	2.5nm,0.8s,baz=340,slow=9.3,SNR=2.0						
	2.5nm,0.8s						
KSRS	Korea Array	30.63	4	P	P	06 32 40.8	0.0
	1.3nm,0.9s,baz=180,slow=9.9,SNR=2.5						
	1.3nm,0.9s						
MDJ	Mudanjiang	37.88	5	P	P	06 33 43.6	0.0
MDJ				IAmb	IAmb	06 33 51.6	
	comp=Z,4.8nm,1.0s						
ARMA	Armidale	44.83	147	P	P	06 34 41.4	+0.4
PETK	Petropavlovsk-	53.22	24	P	P	06 35 45.2	+0.3
MKAR	Makanchi Array	54.21	325	P	P	06 35 52.7	+0.4
	comp=Z,1.3nm,0.7s,baz=119,slow=8.7,SNR=3.1						
	comp=Z,1.3nm,0.7s						
MKAR	Makanchi Array	54.21	325	P	P	06 35 51.7	-0.7
KURBB	Kurchatov Arra	58.38	327	P	P	06 36 22.1	+0.1
	comp=Z,1.6nm,0.8s,baz=124,slow=6.5,SNR=3.8						
	comp=Z,1.6nm,0.8s						
KURK	Kurchatov	58.38	327	P	P	06 36 21.9	0.0
KURK				IAmb	IAmb	06 36 27.3	
	comp=Z,4.2nm,1.1s						
KK31	Karatay Array	59.99	316	P	P	06 36 33.5	+0.1
KK31				IAmb	IAmb	06 36 34.4	
	comp=Z,3.0nm,0.9s						
KKAR	Karatay Array	59.99	316	P	P	06 36 33.5	+0.1
BVAR	Borovoye Array	63.96	327	P	P	06 36 60.0	+0.2
	comp=Z,2.0nm,0.9s,baz=116,slow=6.6,SNR=2.6						
	comp=Z,2.0nm,0.9s						

*IDC **15** 06:27:12.1±0.9, 6°.49N×125°.27E, h0^{km}, mb4.1/14, mbtmp4.1/14, Error ellipse: s-maj=31.7km s-min=19.2km az=76.0*

*NEIC **15** 06:27:13.9±1.2, 6°.5N±0°.1×125°.4E±0°.1, h10^{km}±1^{km}, mb4.7/25, Error ellipse: s-maj=22.5km s-min=16.1km az=62.0*

ISC 15 06:27:13.2±0.5**, 6°.51N**±0°.08×**125°.3E**±0°.1**, h10^{km}, n49, σ0^{s}.81**/49**, mb4.3**/27**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNRA	Kununurra	22.31	171	P	P	06 32 12.9	+1.9
KNRA				IAmb	IAmb	06 32 20.9	
	comp=Z,26nm,0.7s						
COEN	Coen	26.97	139	P	P	06 32 54.7	-0.7
COEN				IAmb	IAmb	06 33 04.7	
	comp=Z,18nm,1.1s						
JNU	Nakatsue	26.98	10		P	06 32 54.6	-0.6
JNU				IAmb	IAmb	06 33 00.9	
	comp=Z,12nm,0.9s						
WB0	Warramunga Arr	27.60	161	P	P	06 32 59.0	-1.9
WRA	Warramunga Arr	27.75	162	P	P	06 33 03.2	+1.0
	comp=Z,2.3nm,1.0s,baz=343,slow=8.1,SNR=1.9						
	comp=Z,2.3nm,1.0s						
WR8	Warramunga Arr	27.81	161	P	P	06 33 01.9	-0.9
WR8				IAmb	IAmb	06 33 13.7	
	comp=Z,14nm,1.1s						
GSI	Gunungsitoli	28.15	261	P	P	06 33 06.3	+0.4
CMAR	Chiang Mai Arr	28.31	297	P	P	06 33 06.8	-0.5
	comp=Z,1.9nm,0.7s,baz=112,slow=8.9,SNR=5.6						
	comp=Z,1.9nm,0.7s						
CMAR	Chiang Mai Arr	28.31	297	P	P	06 33 06.1	-1.2
CHTO	Chiang Mai	28.44	298	P	P	06 33 08.8	+0.3
KSAR	Wonju Array Be	30.88	4	P	P	06 33 30.0	+0.2
KSRS	Korea Array	30.89	4	P	P	06 33 30.6	+0.7
	comp=Z,2.2nm,1.1s,baz=182,slow=10,SNR=6.6						
	comp=Z,2.2nm,1.1s						
AS31	Alice Springs	31.14	165	P	P	06 33 32.3	-0.1
ASAR	Alice Springs	31.14	165	P	P	06 33 31.9	-0.5
	comp=Z,3.9nm,1.1s,baz=341,slow=6.9,SNR=4.2						
	comp=Z,3.9nm,1.1s						
ASAR	Alice Springs	31.14	165	P	P	06 33 30.4	-2.0
MJAR	Matsushiro Arr	32.13	20	P	P	06 33 40.3	-0.7
	comp=Z,1.0nm,0.8s,baz=196,slow=9.8,SNR=5.3						
	comp=Z,1.0nm,0.8s						
CTAO	Charters Tower	33.51	143	P	P	06 33 52.9	-0.2
MORW	Morawa	36.49	194	P	P	06 34 18.2	-0.5
SHL	Shillong	37.13	304	P	P	06 34 24.6	0.0
FORT	Forrest	37.17	176	P	P	06 34 24.4	-0.2
INKA	Innaminka	37.17	157	P	P	06 34 23.7	-0.8
USRK	Ussuriysk Ar.	37.99	8	P	P	06 34 32.3	+1.0
	comp=Z,4.7nm,0.8s,baz=186,slow=8.4,SNR=5.2						
	comp=Z,4.7nm,0.8s						
MDJ	Mudanjiang	38.14	5	P	P	06 34 33.0	+0.4
MDJ				IAmb	IAmb	06 34 42.3	
	comp=Z,21nm,1.0s						
NWAO	Narrogin (SRO)	39.97	191	P	P	06 34 48.1	+0.1
NWAO				IAmb	IAmb	06 34 49.6	
	comp=Z,12nm,0.9s						
BBOO	Buckleboo	40.42	166	P	P	06 34 51.9	+0.2
BBOO				IAmb	IAmb	06 35 00.5	
	comp=Z,14nm,0.8s						
STKA	Stephens Creek	41.21	159	P	P	06 34 59.3	+0.9
HILR	Hailar Array B	43.15	355	P	P	06 35 13.5	-0.5
	comp=Z,2.9nm,0.7s,baz=172,slow=12,SNR=3.7						
	comp=Z,2.9nm,0.7s						
SONM	Songino Array	44.23	342	P	P	06 35 22.6	-0.2
	comp=Z,1.1nm,1.0s,baz=165,slow=6.0,SNR=1.5						
	comp=Z,1.1nm,1.0s						
TOO	Toolangi	47.73	158		P	06 35 50.3	-0.1
PETK	Petropavlovsk-	53.43	24	P	P	06 36 34.4	+1.2
	comp=Z,2.0nm,0.7s,baz=245,slow=10,SNR=2.2						
	comp=Z,2.0nm,0.7s						
PETK	Petropavlovsk-	53.43	24	P	P	06 36 33.8	+0.6
MKAR	Makanchi Array	54.49	325	P	P	06 36 41.4	+0.2
	comp=Z,1.4nm,0.7s,baz=122,slow=7.8,SNR=3.9						
	comp=Z,1.4nm,0.7s						
MKAR	Makanchi Array	54.49	325	P	P	06 36 41.0	-0.1
MAKZ	Makanchi	54.67	325	P	P	06 36 43.2	+0.7
MAKZ				IAmb	IAmb	06 36 48.0	
	comp=Z,5.2nm,1.1s						
ZALV	Zalesovo Beam	57.49	333	P	P	06 37 03.7	+1.3
	comp=Z,1.4nm,0.8s,baz=133,slow=6.3,SNR=2.4						
	comp=Z,1.4nm,0.8s						
ZALV	Zalesovo Beam	57.49	333	P	P	06 37 02.8	+0.3
ARSB	Arslanbob	57.90	315	P	P	06 37 06.3	+0.4
ARSB				IAmb	IAmb	06 37 09.2	
	comp=Z,4.7nm,0.9s						
KURBB	Kurchatov Arra	58.66	327	P	P	06 37 11.4	+0.8
	comp=Z,1.8nm,0.8s,baz=127,slow=6.3,SNR=4.7						
	comp=Z,1.8nm,0.8s						
KURK	Kurchatov	58.66	327	P	P	06 37 11.0	+0.3
KURK				IAmb	IAmb	06 37 13.5	
	comp=Z,4.9nm,1.0s						
GAR	Garm	59.03	312	P	P	06 37 12.9	-0.8
KK31	Karatay Array	60.26	316		P	06 37 21.2	-0.7
KK31				IAmb	IAmb	06 37 28.8	
	comp=Z,4.3nm,0.8s						
KKAR	Karatay Array	60.26	316	P	P	06 37 22.9	+0.9
BVAR	Borovoye Array	64.24	327	P	P	06 37 49.0	+0.6
	comp=Z,1.2nm,0.7s,baz=116,slow=6.6,SNR=3.2						
	comp=Z,1.2nm,0.7s						
AB31	Akbulak array	69.12	320	P	P	06 38 19.6	-0.1
AB31				IAmb	IAmb	06 38 26.5	
	comp=Z,6.1nm,1.1s						
CLES	Cleveland East	69.73	36	P	P	06 38 22.4	-1.0
ILAR	Eielson Array	83.21	26	P	P	06 39 40.8	+1.2
	comp=Z,0.7nm,0.8s,baz=232,slow=5.2,SNR=6.6						
	comp=Z,0.7nm,0.8s						
K27K	Chicken	85.34	26	P	P	06 39 50.7	+0.3
K27K				IAmb	IAmb	06 40 01.6	
	comp=Z,7.3nm,1.0s						
H27K	Steamboat Moun	85.36	24	P	P	06 39 50.4	-0.2
I27K	Kandik River	85.39	25	P	P	06 39 51.1	+0.5

*IDC **15** 06:27:51.3±1.0, 6°.69N×125°.38E, h0^{km}, mb4.3/13, mbtmp4.3/13, Error ellipse: s-maj=34.0km s-min=19.0km az=76.0*

*NEIC **15** 06:27:53.2±1.1, 6°.74N±0°.08×125°.47E±0°.07, h10^{km}±1^{km}, mb4.6/20, Error ellipse: s-maj=16.9km s-min=3.3km az=39.0*

ISC 15 06:27:52.7±0.5**, 6°.73N**±0°.06×**125°.5E**±0°.1**, h10^{km}, n45, σ0^{s}.70**/45**, mb4.4**/23**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOLI2	Tolitoli	7.28	220	Pn	Pn	06 29 39.7	+0.5
LUWI	Luwuk	8.18	199	Pn	Pn	06 29 52.4	+0.8
FAKI	Fak Fak	11.73	145	Pn	Pn	06 30 40.9	+0.5
SBUM	Sibu	13.87	253	Pn	Pn	06 31 10.4	+0.9
KNRA	Kununurra	22.50	172	P	P	06 32 53.1	+0.5
WRA	Warramunga Arr	27.91	162	P	P	06 33 43.9	+0.7
	3.3nm,0.7s,baz=340,slow=9.1,SNR=2.6						
	3.3nm,0.7s						
CM31	Chiang Mai Arr	28.34	297	P	P	06 33 46.9	-0.2
CMAR	Chiang Mai Arr	28.34	297	P	P	06 33 47.9	+0.8
	1.2nm,0.4s,baz=111,slow=8.5,SNR=1.7						
	1.2nm,0.4s						
CMAR	Chiang Mai Arr	28.34	297	P	P	06 33 46.0	-1.1
KSRS	Korea Array	30.66	4	P	P	06 34 08.5	+1.1
	2.6nm,0.9s,baz=184,slow=8.9,SNR=4.7						
	2.6nm,0.9s						
ASAR	Alice Springs	31.32	165	P	P	06 34 12.7	-0.7
	2.4nm,0.8s,baz=342,slow=7.5,SNR=4.8						
	2.4nm,0.8s						
ASAR	Alice Springs	31.32	165	P	P	06 34 13.1	-0.3
MJAR	Matsushiro Arr	31.88	20	P	P	06 34 18.0	-0.2
	2.1nm,0.8s,baz=188,slow=9.1,SNR=2.7						
	2.1nm,0.8s						
MJAR	Matsushiro Arr	31.88	20	P	P	06 34 18.5	+0.3
CTAO	Charters Tower	33.59	143	P	P	06 34 33.4	0.0
BJT	Baijiatuau	34.18	347	P	P	06 34 38.3	0.0
BJT				IAmb	IAmb	06 34 51.8	
	comp=Z,12nm,1.0s						
MORW	Morawa	36.73	194	P	P	06 34 59.2	-1.1
INKA	Innaminka	37.32	157	P	P	06 35 04.8	-0.5
INKA				IAmb	IAmb	06 35 14.6	
	comp=Z,4.0nm,0.8s						
FORT	Forrest	37.38	176	P	P	06 35 05.3	-0.4
FORT				IAmb	IAmb	06 35 14.2	
	comp=Z,8.5nm,0.8s						
USRK	Ussuriysk Ar.	37.76	8	P	P	06 35 10.3	+1.4
	comp=Z,7.6nm,0.9s,baz=190,slow=7.2,SNR=4.7						
	comp=Z,7.6nm,0.9s						
MDJ	Mudanjiang	37.91	5	P	P	06 35 09.9	-0.3
NWAO	Narrogin (SRO)	40.21	191	P	P	06 35 28.9	-0.6
NWAO				IAmb	IAmb	06 35 35.8	
	comp=Z,15nm,1.1s						
BBOO	Buckleboo	40.59	166	P	P	06 35 32.8	+0.1
BBOO				IAmb	IAmb	06 35 46.6	
	comp=Z,5.0nm,0.6s						
HILR	Hailar Array B	42.95	355	P	P	06 35 52.9	+1.0
	comp=Z,3.8nm,0.8s,baz=152,slow=6.5,SNR=1.8						
	comp=Z,3.8nm,0.8s						
ULN	Ulaanbaatar	43.90	342	P	P	06 36 00.4	+0.7
SONM	Songino Array	44.07	342	P	P	06 35 59.7	-1.4
	comp=Z,0.7nm,0.4s,baz=159,slow=8.6,SNR=2.4						
	comp=Z,0.7nm,0.4s						
SONM	Songino Array	44.07	342	P	P	06 35 60.0	-1.1
CAN	Canberra	47.34	154	P	P	06 36 26.6	-0.4
CAN				IAmb	IAmb	06 36 36.6	
	comp=Z,8.9nm,0.9s						
TOO	Toolangi	47.87	158	P	P	06 36 30.4	-0.7
PETK	Petropavlovsk-	53.17	24	P	P	06 37 11.9	+1.0
	comp=Z,10nm,1.0s,baz=202,slow=7.7,SNR=4.7						
	comp=Z,10nm,1.0s						
PETK	Petropavlovsk-	53.17	24	P	P	06 37 10.6	-0.3
MKAR	Makanchi Array	54.39	325	P	P	06 37 19.7	-0.3
	comp=Z,2.9nm,0.7s,baz=138,slow=7.8,SNR=4.7						
	comp=Z,2.9nm,0.7s						
MKAR	Makanchi Array	54.39	325	P	P	06 37 19.1	-0.9
MAKZ	Makanchi	54.58	325	P	P	06 37 21.1	-0.2
MAKZ				IAmb	IAmb	06 37 26.1	
	comp=Z,3.9nm,0.9s						
NIL	Nilore	55.12	307	P	P	06 37 24.8	-0.7
YAK	Yakutsk	55.27	2	P	P	06 37 26.6	+0.6
ZAA0	Zalesovo Array	57.36	333	P	P	06 37 40.4	-0.7
ZAA0				IAmb	IAmb	06 37 41.5	
	comp=Z,4.7nm,1.1s						
ZALV	Zalesovo Beam	57.36	333	P	P	06 37 40.2	-0.8
	comp=Z,3.1nm,0.8s,baz=104,slow=6.3,SNR=4.5						
	comp=Z,3.1nm,0.8s						
ZALV	Zalesovo Beam	57.36	333	P	P	06 37 41.1	0.0
DRK	Karamyk	58.05	313	P	P	06 37 46.1	-0.5
DRK				IAmb	IAmb	06 37 55.1	
	comp=Z,12nm,1.0s						
KURBB	Kurchatov Arra	58.55	327	P	P	06 37 49.7	+0.2
	comp=Z,6.6nm,0.8s,baz=126,slow=6.0,SNR=9.5						
	comp=Z,6.6nm,0.8s						
KURK	Kurchatov	58.55	327	P	P	06 37 49.3	-0.2
KKAR	Karatay Array	60.20	316	P	P	06 38 00.7	-0.4
BVAR	Borovoye Array	64.14	327	P	P	06 38 27.4	+0.1
	comp=Z,6.3nm,1.0s,baz=111,slow=8.1,SNR=5.5						
	comp=Z,6.3nm,1.0s						
BORK	Borovoye	64.18	327	P	P	06 38 27.6	0.0
BORK				IAmb	IAmb	06 38 31.5	
	comp=Z,7.0nm,0.8s						

RSPR 15 06:31:02.9, 17°.85N×65°.72W, h3^{km}±1^{km}, MD2.6/5**, 4C-1D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUMP	Col San Antoni	0.31	336⇑	*e*P	Pg	06 31 09.7	+0.7
HUMP	Col San Antoni	0.31	336	*e*S	Sg	06 31 14.7	+1.6
SJG	San Juan	0.48	302⇑	*e*P	Pg	06 31 12.7	+0.5
SJG	San Juan	0.48	302	*e*S	Sg	06 31 20.0	+1.5
GCPR	Guaynabo City	0.57	322⇓	*e*P	Pg	06 31 13.9	0.0
GCPR	Guaynabo City	0.57	322	*e*S	Sb	06 31 22.7	-1.4
ECPR	Experimental S	0.77	307⇑	*e*P	Pg	06 31 17.3	-0.4
ECPR	Experimental S	0.77	307	*e*S	Sb	06 31 28.8	-0.9
MLPR	Magueyes Islan	1.27	275⇑	*e*P	Pg	06 31 23.5	-3.7

*IDC **15** 06:31:25.6±1.0, 6°.40N×125°.25E, h0^{km}, mb3.9/9, mbtmp3.9/9, Error ellipse: s-maj=46.8km s-min=18.9km az=76.0*

*NEIC **15** 06:31:28.1±1.0, 6°.5N±0°.1×125°.3E±0°.1, h10^{km}±1^{km}, mb4.4/14, Error ellipse: s-maj=25.7km s-min=18.3km az=70.0*

ISC 15 06:31:30.9±0.6**, 6°.44N**±0°.09×**125°.3E**±0°.2**, h35^{km}, n30, σ0^{s}.83**/30**, mb4.1**/17**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WB0	Warramunga Arr	27.52	161	P	P	06 37 14.4	0.0
WRAB	Tennant Creek	27.66	161	P	P	06 37 15.8	+0.1
WRAB				IAmb	IAmb	06 37 18.3	
	comp=Z,4.1nm,0.9s						
WRA	Warramunga Arr	27.67	162	P	P	06 37 15.7	0.0
	comp=Z,1.6nm,0.8s,baz=344,slow=9.2,SNR=2.2						
	comp=Z,1.6nm,0.8s						
WR8	Warramunga Arr	27.73	161	P	P	06 37 16.9	+0.6
JMN	Monobe	28.29	15	P	P	06 37 21.3	+0.1
JMN				IAmb	IAmb	06 37 28.0	
	comp=Z,13nm,1.0s						
PSA00	Pilbara Seismi	28.35	191	P	P	06 37 22.1	+0.3
PSA00				IAmb	IAmb	06 37 36.1	
	comp=Z,14nm,1.1s						
RABL	Rabaul	28.79	111	P	P	06 37 25.5	-0.3
ASAR	Alice Springs	31.07	165	P	P	06 37 47.4	+1.5
	comp=Z,0.6nm,0.5s,baz=342,slow=8.3,SNR=1.7						
	comp=Z,0.6nm,0.5s						
MJAR	Matsushiro Arr	32.20	20	P	P	06 37 56.9	+1.2
	comp=Z,1.7nm,0.8s,baz=202,slow=8.5,SNR=4.0						
	comp=Z,1.7nm,0.8s						
MJAR	Matsushiro Arr	32.20	20	P	P	06 37 55.9	+0.2
BJT	Baijiatuau	34.44	347	P	P	06 38 15.4	+0.3
BJT				IAmb	IAmb	06 38 20.8	
	comp=Z,3.1nm,0.6s						
FORT	Forrest	37.09	176	P	P	06 38 38.0	0.0
FORT				IAmb	IAmb	06 38 39.0	
	comp=Z,4.6nm,0.9s						
INKA	Innaminka	37.10	157	P	P	06 38 37.4	-0.7
NWAO	Narrogin (SRO)	39.90	191	P	P	06 39 02.3	+0.7
BBOO	Buckleboo	40.34	166	P	P	06 39 05.9	+0.7
BBOO				IAmb	IAmb	06 39 13.4	
	comp=Z,8.5nm,0.7s						
STKA	Stephens Creek	41.13	159	P	P	06 39 09.7	-2.1
	comp=Z,2.0nm,0.7s,baz=340,slow=12,SNR=1.8						
	comp=Z,2.0nm,0.7s						
PETK	Petropavlovsk-	53.49	24	P	P	06 40 48.7	+1.0
	comp=Z,1.9nm,0.7s,baz=195,slow=5.2,SNR=4.5						
	comp=Z,1.9nm,0.7s						
PETK	Petropavlovsk-	53.49	24	P	P	06 40 48.5	+0.8
MKAR	Makanchi Array	54.56	325	P	P	06 40 55.6	-0.1
	comp=Z,0.6nm,0.6s,baz=122,slow=7.6,SNR=1.3						
	comp=Z,0.6nm,0.6s						
MKAR	Makanchi Array	54.56	325	P	P	06 40 55.2	-0.5
ZAA0	Zalesovo Array	57.56	333	P	P	06 41 15.5	-1.5
ZALV	Zalesovo Beam	57.56	333	P	P	06 41 17.3	+0.4
	comp=Z,0.2nm,0.3s,baz=103,slow=6.5,SNR=2.0						
	comp=Z,0.2nm,0.3s						
ZALV	Zalesovo Beam	57.56	333	P	P	06 41 15.9	-1.0
KURBB	Kurchatov Arra	58.73	327	P	P	06 41 24.4	-0.8
	comp=Z,0.8nm,0.7s,baz=124,slow=6.5,SNR=4.9						
	comp=Z,0.8nm,0.7s						
KURK	Kurchatov	58.73	327	P	P	06 41 25.1	-0.1
KURK				IAmb	IAmb	06 41 35.1	
	comp=Z,1.7nm,0.8s						
KBL	Kabul	58.80	307	P	P	06 41 25.5	-0.8
KK31	Karatay Array	60.33	316	P	P	06 41 36.2	-0.2
KK31				IAmb	IAmb	06 41 48.5	
	comp=Z,3.3nm,1.1s						
KKAR	Karatay Array	60.33	316		P	06 41 36.1	-0.3
ABKAR	Akbulak array	69.19	320	P	P	06 42 34.5	+0.5
ILAR	Eielson Array	83.27	26	P	P	06 43 52.5	-1.2
	comp=Z,1.1nm,0.8s,baz=235,slow=4.9,SNR=4.2						
	comp=Z,1.1nm,0.8s						

*IDC **15** 06:32:21.5±0.6, 6°.50N×125°.19E, h0^{km}, mb4.5/24, mbtmp4.5/25, ML5.3/1, Error ellipse: s-maj=13.7km s-min=8.5km az=117.0*

*MOS **15** 06:32:22.2±0.9, 6°.66N×125°.23E, h11^{km}, mb5.1/34, Error ellipse: s-maj=10.9km s-min=6.0km az=114.9*

*BJI **15** 06:32:22.6, 6°.49N×125°.35E, h11^{km}, mb4.7/37*

*NEIC **15** 06:32:25.1±1.7, 6°.63N±0°.05×125°.26E±0°.07, h11^{km}±4^{km}, mb5.0/81, Error ellipse: s-maj=10.4km s-min=6.3km az=124.0*

*DJA **15** 06:32:29.8±0.8, 6°N±6°×12°5E±°, h14^{km}±9^{km}, M5.5/24, mb5.2/24, MLv5.7/11*

ISC 15 06:32:24.1±0.3**, 6°.61N**±0°.04×**125°.26E**±0°.05**, h10^{km}, n234, σ1^{s}.40**/224**, mb4.9**/98**, 2C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.56	34	Pg	Pg	06 32 34.3	-0.7
DAV				Lg	Lg	06 32 44.8	
DAV	Davao City (W)	0.56	34		Pg	06 32 35.5	+0.5
SGSI	Sangihe	2.91	175	P	Pn	06 33 11.8	+1.3
SGSI				S	Sn	06 33 45.4	-0.2
GAMI	Galela, Maluku	5.36	152	P	Pn	06 33 48.4	+4.1
GAMI				S	Sn	06 34 48.2	+2.1
TNTI	Ternate	6.16	160	Pn	Pn	06 33 54.4	-0.9
TNTI	Ternate	6.16	160	P	Pn	06 33 58.1	+2.8
	149nm,0.8s						
GTOI	Gorontalo	6.34	201	P	Pn	06 33 57.5	-0.2
GTOI				S	Sn	06 35 07.1	-3.2
MRSI	Marisa	6.93	209	P	Pn	06 34 06.0	+0.2
	2.6nm465nm,0.7s						
MRSI				S	Sn	06 35 23.3	-1.5
	2.6nm465nm,0.7s						
TOLI2	Tolitoli	7.05	220	Pn	Pn	06 34 05.1	-2.4
LUWI	Luwuk	7.99	198	Pn	Pn	06 34 20.9	+0.5
LUWI	Luwuk	7.99	198	P	Pn	06 34 20.7	+0.3
	501nm,1.2s						
MPSI	Mapaga	8.21	221	P	Pn	06 34 23.7	+0.3
APSI	Ampana	8.29	206	P	Pn	06 34 27.3	+2.8
	229nm,0.9s						
TARAI	Tarakan	8.33	247	P	Pn	06 34 26.2	+1.2
	482nm,1.2s						
SANI	Sanana	8.63	175	P	Pn	06 34 29.3	+0.2
	137nm,0.6s						
KKM	Kota Kinabalu	9.01	267	Pn	Pn	06 34 34.8	+0.2
KKM	Kota Kinabalu	9.01	267	P	Pn	06 34 37.0	+2.5
SWI	Sorong	9.53	141	P	Pn	06 34 44.2	+2.7
	58nm,0.7s						
NLAI	Namlea	9.95	169	P	Pn	06 34 48.4	+1.1
	168nm,0.8s						
KRAI	Karang Ratu	10.34	162	P	Pn	06 34 55.3	+2.6
	73nm,0.5s						
MSAI	Masohi	10.54	160	P	Pn	06 34 58.0	+2.6
	52nm,0.6s						
AAI	Ambon	10.63	164	P	Pn	06 35 00.2	+3.5
	109nm,0.7s						
TTSI	Tana Toraja	11.02	210	P	Pn	06 35 04.1	+2.2
	117nm,0.9s						
MMSI	Mamuju	11.20	215	P	Pn	06 35 06.8	+2.3
KKSI	Kolaka, Sulawe	11.30	199	P	Pn	06 35 06.5	+0.8
	48nm,0.8s						
MWPI	Manokwari, Pap	11.52	130	P	Pn	06 35 14.8	+6.0
FAKI	Fak Fak	11.75	143	Pn	Pn	06 35 13.2	+1.2
FAKI	Fak Fak	11.75	143	P	Pn	06 35 15.5	+3.5
SPSI	Sidrap Palu	11.85	208	P	Pn	06 35 15.4	+2.2
PMSI	Majene	11.87	212	P	Pn	06 35 14.9	+1.3
	49nm,0.8s						
BNDI	Bandanaira	11.98	157	P	Pn	06 35 18.9	+3.7
	168nm,1.7s						
BNSI	Bone	12.08	205	P	Pn	06 35 17.8	+1.3
	43nm,0.7s						
KAPI	Kappang	12.79	206	Pn	Pn	06 35 28.0	+1.9

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      1.1nm,0.3s,baz=16,slow=11,SNR=7.6
KAPI  Kappang            12.79 206          Pn      06 35 29.2 +3.1
KAPI  Kappang            12.79 206   P      Pn      06 35 28.8 +2.7
KAPI  Kappang            12.79 206   P      Pn      06 35 29.2 +3.1
BKSI  Bulukumba          12.91 204   P      Pn      06 35 28.7 +0.9
BAKI  Biak               13.31 125   P      Pn      06 35 38.8 +5.5
      86nm,1.5s
SBUM  Sibu               13.64 253          Pn      06 35 38.6 +0.8
SBUM  Sibu               13.64 253   P      Pn      06 35 39.5 +1.7
SRPI  Serui, Papua       13.82 127   P      P       06 35 46.0 -2.7
      83nm,1.1s
BBKI  Banjar Baru        14.43 226   P      Pn      06 35 51.5 +2.8
MMRI  Maumere            15.44 191   Pn     Pn      06 36 02.8 +0.6
MMRI                                 IAmb   IAmb    06 36 10.8
      comp=Z,162nm,1.5s
SOEI  Soe                16.28 184          Pn      06 36 13.9 +0.7
SOEI                                 IAmb   IAmb    06 36 25.1
      comp=Z,152nm,1.3s
BATI  Baumata            16.78 185   Pn     Pn      06 36 17.6 -1.8
      comp=Z,11nm,0.3s,baz=164,slow=3.5,SNR=6.0
      comp=Z,11nm,0.4s
TPUB  Ta-pu              17.19 345   P      Pn      06 36 24.8 +0.2
JAGI  Jajag, Banyuwa     18.63 217          Pn      06 36 43.9 +1.6
JAGI                                 IAmb   IAmb    06 36 51.4
      comp=Z,100nm,1.1s
MTN   Manton Dam         20.18 163   P      P       06 36 58.8 -0.3
      comp=Z,65nm,1.4s
MTN   Manton Dam         20.18 163          P       06 36 59.5 +0.5
MTN                                  IAmb   IAmb    06 37 07.9
      comp=Z,40nm,0.6s
JOW   Kunigami           20.32   8   P      P       06 36 59.5 -1.0
      comp=Z,23nm,0.7s,baz=155,slow=3.5,SNR=5.0
      comp=Z,23nm,0.7s
JOW   Kunigami           20.32   8   P      P       06 37 00.1 -0.4
KDU   Kakadu             20.46 159   P      P       06 37 01.0 -1.0
      comp=Z,64nm,0.8s
KNRA  Kununurra          22.41 171   P      P       06 37 22.1 -0.9
      comp=Z,139nm,1.1s
KNRA  Kununurra          22.41 171   P      P       06 37 23.9 +0.8
PMBI  Palembang          22.54 246   P      P       06 37 26.4 +1.9
IPM   Ipoh               24.21 266          P       06 37 42.5 +1.2
IPM                                  IAmb   IAmb    06 37 47.0
      comp=Z,39nm,1.1s
SLVN  Son La             25.32 307   P      P       06 37 52.0 +0.7
NJ2   Nanjing            26.02 348  eP      P       06 37 59.0 +1.6
NJ2                                  pmax   pmax
      comp=Z,9.0nm,0.5s
PSI   Prapat             26.52 263   P      P       06 38 01.6 -0.8
      comp=Z,35nm,1.0s,baz=51,slow=3.7,SNR=9.8
      comp=Z,35nm,1.0s
JNU   Nakatsue           26.90  10   P      P       06 38 06.2 +0.8
      comp=Z,9.1nm,0.8s,baz=147,slow=10.0,SNR=4.4
      comp=Z,9.1nm,0.8s
PMG   Port Moresby       27.00 126   P      P       06 38 05.4 -1.1
      comp=Z,37nm,0.9s,baz=279,slow=5.5,SNR=12
      comp=Z,37nm,0.9s
PMG   Port Moresby       27.00 126          P       06 38 06.5  0.0
PMG                                  IAmb   IAmb    06 38 09.4
      comp=Z,43nm,0.8s
PMG   Port Moresby       27.00 126 i P      P       06 38 06.1 -0.4
PMG                                  pmax   pmax
      comp=Z,50nm,0.9s
COEN  Coen               27.08 139   P      P       06 38 09.9 +2.6
      comp=Z,47nm,1.0s
COEN  Coen               27.08 139          P       06 38 07.0 -0.2
COEN                                 IAmb   IAmb    06 38 17.8
      comp=Z,33nm,0.8s
WB0   Warramunga Arr     27.70 161   P      P       06 38 11.9 -0.9
WB0                                  IAmb   IAmb    06 38 29.3
      comp=Z,31nm,0.8s
WRAB  Tennant Creek      27.85 161 i P      P       06 38 14.7 +0.7
WRAB                                 pmax   pmax
      comp=Z,21nm,1.0s
WRA   Warramunga Arr     27.85 161   P      P       06 38 11.5 -2.6
      comp=Z,3.4nm,0.7s,baz=330,slow=11,SNR=7.9
      comp=Z,3.4nm,0.7s
WR8   Warramunga Arr     27.91 161   P      P       06 38 15.4 +0.7
WR8                                  IAmb   IAmb    06 38 28.8
      comp=Z,17nm,0.8s
GSI   Gunungsitoli       28.11 260          P       06 38 16.0 -0.5
JMN   Monobe             28.15  15   P      P       06 38 15.8 -0.9
JMN                                  IAmb   IAmb    06 38 20.8
      comp=Z,23nm,0.9s
CMAR  Chiang Mai Arr     28.22 297   P      P       06 38 15.3 -2.1
      comp=Z,2.0nm,0.3s,baz=120,slow=7.3,SNR=12
      comp=Z,2.0nm,0.3s
CMAR  Chiang Mai Arr     28.22 297   P      P       06 38 17.5 +0.1
KMI   Kunming            28.34 313   P      P       06 38 19.3 +0.6
KMI                                  pmax   pmax
      comp=Z,17nm,1.3s
CHTO  Chiang Mai         28.35 298   P      P       06 38 18.5 -0.1
CHTO                                 pmax   pmax
      comp=Z,14nm,0.5s
PSA00 Pilbara Seismi     28.50 191   P      P       06 38 20.3 +0.4
      comp=Z,24nm,1.2s
PSA00 Pilbara Seismi     28.50 191   P      P       06 38 20.4 +0.5
PSAB3 Pilbara Seismi     28.52 191   P      P       06 38 19.9 -0.1
      comp=Z,24nm,1.3s
PZH   PanZhiHua          29.89 314   P      P       06 38 32.4 +0.1
LYN   LuoYang            30.22 339   P      P       06 38 37.9 +2.9
LYN                                  pP     sP      06 38 42.0 +2.6
LYN                                  pmax   pmax
      comp=Z,14nm,0.6s
QIS   Mount Isa          30.45 153   P      P       06 38 38.6 +1.4
      comp=Z,40nm,0.8s
INU   Inuyama            30.58  19   P      P       06 38 38.6 +0.5
INU                                  IAmb   IAmb    06 38 45.5
      comp=Z,37nm,1.3s
KSRS  Korea Array        30.80   4   P      P       06 38 40.1  0.0
      comp=Z,3.5nm,0.9s,baz=182,slow=10,SNR=8.8
      comp=Z,3.5nm,0.9s
KS19  Wonju Array Si     30.85   4   P      P       06 38 41.4 +0.9
KS19                                 IAmb   IAmb    06 38 52.3
      comp=Z,42nm,1.5s
MTSU  Mount Surprise     30.95 143   P      P       06 38 42.2 +0.6
      comp=Z,7.9nm,0.9s
AS31  Alice Springs      31.25 165   P      P       06 38 43.8 -0.4
ASAR  Alice Springs      31.25 165   P      P       06 38 42.6 -1.6
      comp=Z,1.8nm,0.4s,baz=341,slow=7.1,SNR=11
      comp=Z,1.8nm,0.4s
ASAR  Alice Springs      31.25 165   P      P       06 38 43.8 -0.4
ASAR  Alice Springs      31.25 165   P      P       06 38 43.8 -0.4
CD2   Chengdu            31.48 323   P      P       06 38 48.8 +2.6
MJAR  Matsushiro Arr     32.06  20   P      P       06 38 48.6 -2.7
      comp=Z,4.3nm,0.8s,baz=197,slow=9.3,SNR=7.5
HNS   HongShan           32.13 344  ⇑P      P       06 38 53.8 +2.1
HNS                                  pmax   pmax
      comp=Z,15nm,0.9s
CTAO  Charters Tower     33.62 143   P      P       06 39 06.3 +1.3
CTAO  Charters Tower     33.62 143   P      P       06 39 06.3 +1.3
CTAO                                 pmax   pmax
      comp=Z,12nm,1.1s
BJI   Beijing            34.28 348   P      P       06 39 11.8 +1.3
BJI                                  pmax   pmax
      comp=Z,10.0nm,0.8s
LZDM  Lanzhou Array      35.28 329   P      P       06 39 19.1 -0.5
      comp=Z,1.0nm,0.4s,baz=179,slow=6.8,SNR=4.9
      comp=Z,1.0nm,0.4s
LZH   Lanzhou            35.30 329  eP      P       06 39 23.1 +3.5
LZH                                  sP     sP      06 39 30.8 +6.7
LZH                                  pmax   pmax
      comp=Z,37nm,1.3s
HHC   Hu-ho-hao-te       36.23 342  eP      P       06 39 29.9 +2.4
MORW  Morawa             36.56 194   P      P       06 39 29.1 -1.2
VLA   Vladivostok        36.83   8 i P      P       06 39 33.0 +0.6
VLA                                  pmax   pmax
      comp=Z,51nm,1.2s
SHL   Shillong           37.03 304   P      P       06 39 33.6 -1.0
SHL                                  IAmb   IAmb    06 39 39.5
      comp=Z,37nm,1.0s
SHL   Shillong           37.03 304   P      P       06 39 33.6 -1.0
SHL                                  pmax   pmax
      comp=Z,37nm,1.0s
FORT  Forrest            37.27 176   P      P       06 39 31.5 -4.7
FORT  Forrest            37.27 176   P      P       06 39 35.3 -1.0
KMBL  Kambalda           37.90 185   P      P       06 39 38.7 -2.9
USRK  Ussuriysk Ar.      37.91   8   P      P       06 39 40.4 -1.1
      comp=Z,6.1nm,0.8s,baz=197,slow=8.8,SNR=8.5
      comp=Z,6.1nm,0.8s
MDJ   Mudanjiang         38.05   5   P      P       06 39 45.5 +2.8
MDJ                                  pmax   pmax
      comp=Z,30nm,1.7s
KLBR  Kellerberrin       38.65 190   P      P       06 39 45.8 -2.1
BNX   BinXian            39.03   2  ⇓P      P       06 39 53.1 +2.1
BNX                                  pmax   pmax
      comp=Z,9.0nm,1.4s
GTA   Gaotai             39.90 329  eP      P       06 39 59.3 +0.8
GTA                                  pmax   pmax
      comp=Z,6.0nm,1.7s
EIDS  Eidsvold           40.51 143   P      P       06 40 02.2 -1.3
BBOO  Buckleboo          40.52 166   P      P       06 40 02.1 -1.4
      comp=Z,63nm,0.8s
BBOO  Buckleboo          40.52 166   P      P       06 40 03.0 -0.5
GOMU  GeErMu             40.54 321   P      P       06 40 04.5 +0.3
STKA  Stephens Creek     41.32 159   P      P       06 40 09.7 -0.4
      comp=Z,6.4nm,0.7s,baz=348,slow=8.7,SNR=9.2
      comp=Z,6.4nm,0.7s
STKA  Stephens Creek     41.32 159   P      P       06 40 10.2 +0.2
STKA  Stephens Creek     41.32 159   P      P       06 40 10.3 +0.2
STKA                                 pmax   pmax
      comp=Z,187nm,1.1s
CMSA  Cobar Meteorol     42.66 154   P      P       06 40 21.0  0.0
HIA   Hailar             42.77 355 i P      P       06 40 23.2 +1.4
HIA                                  pmax   pmax
      comp=Z,9.0nm,0.9s
HILR  Hailar Array B     43.06 355   P      P       06 40 25.2 +1.1
      comp=Z,8.0nm,0.7s,baz=156,slow=11,SNR=8.2
      comp=Z,8.0nm,0.7s
HEH   HeiHe              43.54   2  eP      P       06 40 28.1 +0.1
HEH                                  pmax   pmax
      comp=Z,16nm,1.0s
ULN   Ulaanbaatar        43.95 342 i P      P       06 40 32.7 +1.2
ULN                                  pmax   pmax
      comp=Z,9.0nm,1.0s
SONM  Songino Array      44.13 342   P      P       06 40 31.8 -1.1
      comp=Z,0.6nm,0.6s,baz=163,slow=8.0,SNR=3.6
      comp=Z,0.6nm,0.6s
ARMA  Armidale           44.66 147   P      P       06 40 37.3 -0.1
ARMA  Armidale           44.66 147   P      P       06 40 38.0 +0.6
ARPS  Mount Arapiles     45.86 161   P      P       06 40 46.4 -0.2
HYB   Hyderabad          46.82 288  eP      P       06 40 55.1 +0.5
HYB                                 ePcP    PcP     06 42 28.5 +0.8
HYB                                 ePP     PP      06 42 45.7 +0.9
SANVU Saraoutou          46.97 118   P      P       06 40 56.2 +0.5
ZEA   Zeya               47.02   2  eP      P       06 40 55.8 +0.3
TOO   Toolangi           47.83 158   P      P       06 41 03.0 +0.8
TOO   Toolangi           47.83 158   P      P       06 41 03.0 +0.8
TOO                                  pmax   pmax
      comp=Z,6.0nm,1.0s
DZM   Mont Dzumac        49.39 126   P      P       06 41 14.0 -0.5
WMQ   Urumqi             49.55 325  eP      P       06 41 17.5 +2.1
PEA0B Petropavlovsk-     53.37  24   P      P       06 41 44.3 +0.6
PEA0B                                IAmb   IAmb    06 41 59.0
      comp=Z,25nm,1.1s
PEA0B Petropavlovsk-     53.37  24   P      P       06 41 44.3 +0.6
PEA0B                                pmax   pmax
      comp=Z,25nm,1.1s
PETK  Petropavlovsk-     53.37  24   P      P       06 41 43.2 -0.5
      comp=Z,8.1nm,0.8s,baz=237,slow=2.7,SNR=11
      comp=Z,8.1nm,0.8s
PETK  Petropavlovsk-     53.37  24   P      P       06 41 44.0 +0.3
DGZ   Jazzator, Alta     53.39 330   P      P       06 41 43.3 -0.8
DGZ                                  pmax   pmax
      comp=Z,4.0nm,1.2s
PET   Petropavlovsk      53.69  24 i P      P       06 41 45.5 -0.5
PET                                  pmax   pmax
      comp=Z,22nm,1.1s
MK31  Makanchi Array     54.38 325 i P      P       06 41 51.0 -0.3
MKAR  Makanchi Array     54.38 325   P      P       06 41 50.9 -0.3
      comp=Z,3.0nm,0.6s,baz=125,slow=7.7,SNR=7.4
      comp=Z,3.0nm,0.6s
MKAR  Makanchi Array     54.38 325   P      P       06 41 51.5 +0.2
MAKZ  Makanchi           54.56 325   P      P       06 41 53.5 +0.9
MAKZ  Makanchi           54.56 325  ⇓P      P       06 41 52.3 -0.3
NIL   Nilore             55.03 307   P      P       06 41 55.6 -0.6
NIL   Nilore             55.03 307   P      P       06 41 55.7 -0.6
NIL                                  pmax   pmax
      comp=Z,32nm,1.2s
YAK   Yakutsk            55.41   3   P      P       06 41 57.1 -1.2
YAK                                  IAmb   IAmb    06 42 10.9
      comp=Z,17nm,0.8s
YAK   Yakutsk            55.41   3  eP      P       06 41 56.5 -1.8
YAK                                  pmax   pmax
      comp=Z,19nm,1.0s
YAK                                  pmax   pmax
      comp=N,7.0nm,1.4s
YAK                                  pmax   pmax
      comp=E,4.0nm,1.3s
MA2   Magadan            56.31  15   P      P       06 42 06.2 +1.3
MA2                                  IAmb   IAmb    06 42 12.3
      comp=Z,16nm,0.9s
MA2   Magadan            56.31  15 i P      P       06 42 04.6 -0.3
MA2                                  pmax   pmax
      comp=Z,16nm,0.8s
MA2   Magadan            56.31  15   P      P       06 42 05.2 +0.3
      comp=Z,29nm,0.8s
AAK   Ala-Archa          57.27 317   P      P       06 42 12.1 -0.1
AAK   Ala-Archa          57.27 317 i P      P       06 42 11.5 -0.7
AAK                                  pmax   pmax
      comp=Z,24nm,1.9s
ZAA0  Zalesovo Array     57.38 333   P      P       06 42 13.1 +0.5
ZALV  Zalesovo Beam      57.38 333   P      P       06 42 12.1 -0.5
      comp=Z,1.6nm,0.7s,baz=113,slow=7.0,SNR=5.5
      comp=Z,1.6nm,0.7s
ZALV  Zalesovo Beam      57.38 333   P      P       06 42 12.6  0.0
ZALV  Zalesovo Beam      57.38 333 i P      P       06 42 12.6  0.0
ZALV                                 pmax   pmax
      comp=Z,2.0nm,0.7s
MANEM Manem              57.44 311   P      P       06 42 13.7  0.0
MANEM                                IAmb   IAmb    06 42 31.7
      comp=Z,22nm,1.1s
MSVF  Nonsavu            57.45 116 i P      P       06 42 14.0 +0.2
MSVF                                 pmax   pmax
      comp=Z,49nm,1.4s
ARSB  Arslanbob          57.80 315   P      P       06 42 16.5 +0.5
ARSB                                 IAmb   IAmb    06 42 20.2
      comp=Z,14nm,0.9s
ARSB  Arslanbob          57.80 315   P      P       06 42 16.5 +0.5
ARSB                                 pmax   pmax
      comp=Z,14nm,0.9s
DRK   Karamyk            57.99 313   P      P       06 42 17.6  0.0
DRK                                  IAmb   IAmb    06 42 22.1
      comp=Z,15nm,0.8s
DRK   Karamyk            57.99 313   P      P       06 42 17.6  0.0
DRK                                  pmax   pmax
      comp=Z,15nm,0.8s
KURBB Kurchatov Arra     58.55 327   P      P       06 42 21.3 +0.4
      comp=Z,4.4nm,0.8s,baz=123,slow=7.5,SNR=12
      comp=Z,4.4nm,0.8s
KURK  Kurchatov          58.55 327 i P      P       06 42 20.7 -0.1
KURK                                 pmax   pmax
      comp=Z,18nm,1.5s
GAR   Garm               58.92 312   P      P       06 42 23.3 -0.6
SEY   Seymchan           59.59  14  eP      P       06 42 27.8 -0.1
SEY                                  pmax   pmax
      comp=Z,17nm,1.6s
CHGR  Chuyangaron        59.68 311   P      P       06 42 31.0 +1.9
CHGR                                 pmax   pmax
      comp=Z,24nm,1.5s
KK31  Karatay Array      60.15 316   P      P       06 42 31.1 -1.0
KK31                                 IAmb   IAmb    06 42 37.4
      comp=Z,16nm,1.1s
KK31  Karatay Array      60.15 316   P      P       06 42 31.1 -1.0
KK31                                 pmax   pmax
      comp=Z,16nm,1.2s
KKAR  Karatay Array      60.15 316   P      P       06 42 31.0 -1.1
KKAR  Karatay Array      60.15 316   P      P       06 42 31.0 -1.1
BVAR  Borovoye Array     64.13 327   P      P       06 42 58.5 -0.1
      comp=Z,3.9nm,0.9s,baz=116,slow=6.8,SNR=7.5
      comp=Z,3.9nm,0.9s
BORK  Borovoye           64.18 327   P      P       06 42 59.8 +0.8
BORK                                 IAmb   IAmb    06 43 13.6
      comp=Z,7.7nm,0.9s
BORK  Borovoye           64.18 327 i P      P       06 42 58.1 -0.8
BORK                                 pmax   pmax
      comp=Z,11nm,1.0s
TIXI  Tiksi              65.01   1   P      P       06 43 04.9 +0.9
TIXI                                 IAmb   IAmb    06 43 08.1
      comp=Z,21nm,1.5s
TIXI  Tiksi              65.01   1 i P      P       06 43 03.9 -0.1
TIXI                                 pmax   pmax
      comp=Z,15nm,1.5s
BKZ   Black Stump Fm     65.69 138   P      P       06 43 09.3 +0.3
BILL  Bilibino           67.18  16 i P      P       06 43 18.0  0.0
BILL                                 pmax   pmax
      comp=Z,12nm,1.2s
NRIK  Noril'sk           67.31 346 i P      P       06 43 19.5 +0.7
NRIK                                 pmax   pmax
      comp=Z,8.0nm,1.0s
AB31  Akbulak array      69.02 320   P      P       06 43 29.5 -0.5
ABKAR Akbulak array      69.02 320   P      P       06 43 29.3 -0.6
MSEY  Mahe Island        70.55 263   P      P       06 43 39.3 -0.8
MSEY                                 IAmb   IAmb    06 43 49.8
      comp=Z,11nm,1.1s
MSEY  Mahe Island        70.55 263   P      P       06 43 39.3 -0.8
MSEY                                 pmax   pmax
      comp=Z,11nm,1.1s
SVE   Sverdlovsk         70.76 328  eP      P       06 43 42.9 +2.4
ARTI  Arti               71.83 327c iP      P       06 43 46.7 -0.3
ARTI                                 S      S       06 53 08.2 +0.7
ARTI                                 pmax   pmax
      comp=Z,10.0nm,1.9s
AKT   Akhty              76.32 311  eP      P       06 44 13.3 -0.4
AKT                                 e               06 44 24.1
AKT                                 e               06 47 05.0
AKT                                  pmax   pmax
      comp=Z,18nm,1.1s
KIRV  Kirov              77.02 329 i P      P       06 44 17.7 +0.6
BELG  Belogornoye        77.25 322 i P      P       06 44 18.3 -0.3
BELG                                 pmax   pmax
      comp=Z,5.0nm,1.4s
M16K  Timber Creek       77.37  29   P      P       06 44 19.5 +0.4
C18K  Utukok River       77.91  21   P      P       06 44 23.1 +1.0
RAYN  Ar Rayn            78.03 293   P      P       06 44 23.2 -0.4
RAYN                                 IAmb   IAmb    06 44 27.0
      comp=Z,8.4nm,0.8s
RAYN  Ar Rayn            78.03 293   P      P       06 44 23.2 -0.4
RAYN                                 pmax   pmax
      comp=Z,8.0nm,0.8s
L18K  Granite Mounta     78.62  28   P      P       06 44 26.3 +0.3
KBZ   Khabaz             79.96 313   P      P       06 44 33.4 -0.2
      comp=Z,1.8nm,0.7s,baz=48,slow=6.4,SNR=3.9
      comp=Z,1.8nm,0.7s
KIV   Kislovodsk         80.11 313  eP      P       06 44 32.8 -1.9
KIV                                  pmax   pmax
      comp=Z,9.0nm,1.0s
E22K  Anaktuvuk Pass     81.27  22          P       06 44 40.4 +0.1
E22K                                 IAmb   IAmb    06 44 47.2
      comp=Z,16nm,1.1s
TRF   Thorofare Moun     81.65  27   IAmb   IAmb    06 44 49.6
      comp=Z,18nm,0.9s
D23K  Nanushuk River     81.74  21   IAmb   IAmb    06 44 49.6
      comp=Z,9.7nm,0.9s
C23K  Itkillik River     81.81  20   IAmb   IAmb    06 44 58.6
      comp=Z,22nm,1.2s
COLD  Coldfoot           81.83  23   IAmb   IAmb    06 44 50.6
      comp=Z,13nm,1.0s
E23K  Chandalar          82.09  22   IAmb   IAmb    06 44 54.8
      comp=Z,13nm,1.1s
KLMR  Klimovskoe         82.20 330  eP      P       06 44 42.9 -2.4
KLMR                                 pmax   pmax
      comp=Z,19nm,1.1s
NEA2  Nenana             82.22  26   IAmb   IAmb    06 44 51.7
      comp=Z,11nm,0.8s
WRH   Wood River Hil     82.64  26   IAmb   IAmb    06 44 54.5
      comp=Z,10nm,0.9s
H24K  Noodor Dome        82.73  24   IAmb   IAmb    06 44 56.9
      comp=Z,12nm,0.9s
COLA  College            82.74  25   P      P       06 44 48.1 +0.1
COLA                                 pmax   pmax
      comp=Z,11nm,0.9s
CCB   Clear Creek Bu     82.76  26   IAmb   IAmb    06 44 52.1
      comp=Z,16nm,1.2s
IL31                     83.15  26   IAmb   IAmb    06 44 56.5
      comp=Z,6.6nm,0.8s
ILAR  Eielson Array      83.15  26   P      P       06 44 49.6 -0.6
      comp=Z,1.8nm,0.6s,baz=238,slow=4.3,SNR=10
      comp=Z,1.8nm,0.6s
BMAR  Burnt Mountain     84.01  23   P      P       06 44 55.4 +0.8
C27K  Jago River         84.22  21   IAmb   IAmb    06 44 59.6
      comp=Z,10nm,1.0s
F28M  Old Crow           85.80  22   IAmb   IAmb    06 45 13.7
      comp=Z,16nm,1.2s
I28M  Miner Creek        86.04  25   IAmb   IAmb    06 45 09.8
      comp=Z,12nm,0.8s
BRTR  Keskin Array B     87.08 309   P      P       06 45 07.8 -2.8
      comp=Z,2.2nm,0.9s,baz=120,slow=5.9,SNR=5.6
      comp=Z,2.2nm,0.9s
BRTR  Keskin Array B     87.08 309   P      P       06 45 09.0 -1.6
BRTR  Keskin Array B     87.08 309   P      P       06 45 09.0 -1.6
BR106 Keskin Array S     87.09 309   P      P       06 45 10.0 -0.7
      comp=Z,3.4nm,1.0s
BR105 Keskin Array S     87.09 309   P      P       06 45 10.1 -0.6
L29M  L29M               87.15  27   P      P       06 45 09.9 -0.4
L29M                                 IAmb   IAmb    06 45 16.1
      comp=Z,9.1nm,1.2s
ARCES ARCESS Array B     87.26 340   P      P       06 45 09.4 -1.3
ARCES ARCESS Array B     87.26 340   P      P       06 45 09.4 -1.3
FINES FINESS Array B     88.62 332   P      P       06 45 14.8 -2.5
      comp=Z,2.5nm,0.9s,baz=62,slow=5.5,SNR=4.3
      comp=Z,2.5nm,0.9s
AK03  Malin Array Si     88.75 321   P      P       06 45 18.6 +0.5
AK10  Malin Array Si     88.75 321   P      P       06 45 18.3 +0.2
AKASG Malin Array Be     88.76 321   P      P       06 45 15.4 -2.7
      comp=Z,1.5nm,0.8s,baz=68,slow=4.3,SNR=1.9
      comp=Z,1.5nm,0.8s
AKBB  Malin Array Si     88.76 321 i P      P       06 45 17.8 -0.3
AKBB                                 pmax   pmax
      comp=Z,37nm,3.8s
FARO  Faro, Yukon        89.48  27   IAmb   IAmb    06 45 31.4
      comp=Z,9.5nm,1.1s
SYO   Syowa Base         94.56 201⇓eP      P       06 45 45.6 +1.0
YKA   Yellowknife Ar     97.49  24   P      P       06 45 57.3 -0.8
      comp=Z,0.9nm,0.8s,baz=302,slow=5.4,SNR=6.2
      comp=Z,0.9nm,0.8s
CLL   Collm              98.47 324 i P      P       06 46 02.8  0.0
CLL                                i                06 50 03.2
CLL   Collm              98.47 324 i Pdif   P       06 46 02.8  0.0
      comp=Z,267nm,3.6s
CLL                                i PP     PP      06 50 03.2 +0.5
PLCA  Paso Flores       143.19 160   PKP    PKPbc   06 51 57.2 +1.2
      comp=Z,1.3nm,0.8s,baz=224,slow=6.2,SNR=4.7
LPAZ  La Paz            163.74 127   PKP    PKPdf   06 52 26.4 -2.9
      comp=Z,0.8nm,0.8s,baz=340,slow=1.2,SNR=2.4
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*IDC **15** 06:33:36.7±1.2, 6°.55N×124°.98E, h0^{km}, mb4.4/6, mbtmp4.4/6, Error ellipse: s-maj=23.6km s-min=13.0km az=141.0*

*NEIC **15** 06:33:38.4±1.4, 6°.53N±0°.08×125°.08E±0°.08, h10^{km}±1^{km}, mb4.7/6, Error ellipse: s-maj=17.5km s-min=8.1km az=319.0*

ISC 15 06:33:37.9±0.7, **6°.46N**±0°.10×**125°.0E**±0°.1, **h10**^{km}**, n23,** σ**0^{s}.81**/20, **mb4.5**/10, **Mindanao**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
DAV   Davao City (W)      0.85  45   Pg     Pg      06 33 51.7 -2.7
      baz=48,slow=20
DAV                                  Lg     Lg      06 34 02.7
      2µm,0.3s,baz=44,slow=23,SNR=1.2
DAV   Davao City (W)      0.85  45          Pg      06 33 52.2 -2.2
TNTI  Ternate             6.14 157   Pn     Pn      06 35 08.2 -0.6
TNTI  Ternate             6.14 157   S      Pn      06 35 07.7 -1.0
      149nm,0.8s
TOLI2 Tolitoli            6.76 218   Pn     Pn      06 35 17.3  0.0
FAKI  Fak Fak            11.82 142   Pn     Pn      06 36 25.8 -0.9
KAPI  Kappang            12.54 205   Pn     Pn      06 36 37.5 +0.9
PMG   Port Moresby       27.15 125   P      P       06 39 21.8 +0.1
      5.8nm,0.6s,baz=306,slow=11,SNR=3.7
      5.8nm,0.6s
PMG   Port Moresby       27.15 125   P      P       06 39 21.5 -0.2
COEN  Coen               27.17 138   P      P       06 39 21.6 -0.2
COEN                                 IAmb   IAmb    06 39 36.1
      comp=Z,15nm,0.9s
GSI   Gunungsitoli       27.80 261   P      P       06 39 26.0 -1.6
GSI                                  IAmb   IAmb    06 39 36.4
      comp=Z,18nm,0.8s
ASAR  Alice Springs      31.19 164   P      P       06 39 58.8 +1.3
      comp=Z,4.4nm,0.9s,baz=344,slow=9.3,SNR=1.5
      comp=Z,4.4nm,0.9s
INKA  Innaminka          37.27 157   P      P       06 40 50.5 +0.4
INKA                                 IAmb   IAmb    06 40 52.8
      comp=Z,9.3nm,1.1s
PETK  Petropavlovsk-     53.61  24   P      P       06 43 00.7 +1.3
      comp=Z,5.5nm,0.8s,baz=228,slow=8.4,SNR=3.8
      comp=Z,5.5nm,0.8s
PETK  Petropavlovsk-     53.61  24   P      P       06 42 59.0 -0.4
MKAR  Makanchi Array     54.33 325   P      P       06 43 05.5 +0.8
      comp=Z,3.1nm,0.8s,baz=114,slow=6.5,SNR=2.0
      comp=Z,3.1nm,0.8s
MKAR  Makanchi Array     54.33 325   P      P       06 43 05.0 +0.3
AAK   Ala-Archa          57.17 317   P      P       06 43 25.0 -0.4
KURBB Kurchatov Arra     58.51 327   P      P       06 43 32.6 -1.8
      comp=Z,3.7nm,1.0s,baz=130,slow=5.8,SNR=1.7
      comp=Z,3.7nm,1.0s
KK31  Karatay Array      60.05 317   P      P       06 43 45.2 -0.1
```

KK31				IAmb	IAmb	06 43 48.6	
	comp=Z,10nm,1.1s						
KKAR	Karatay Array	60.05	317	P	P	06 43 45.2	-0.1
BVAR	Borovoye Array	64.09	327	P	P	06 44 11.4	-0.7
	comp=Z,3.2nm,0.9s,baz=117,slow=5.5,SNR=1.7						
	comp=Z,3.2nm,0.9s						
ABKAR	Akbulak array	68.94	320	P	P	06 44 43.5	+0.2

IDC ***15*** *06:34:51.4±0.6, 6°.48N×125°.15E, h0^{km}, mb4.3/21, mbtmp4.3/21, Error ellipse: s-maj=15.2km s-min=9.3km az=121.0*

NEIC ***15*** *06:34:57.5±2.0, 6°.81N±0°.07×125°.29E±0°.07, h18^{km}±5^{km}, mb4.9/47, Error ellipse: s-maj=12.3km s-min=6.7km az=134.0*

ISC 15 06:34:58.7±0.4**, 6°.76N**±0°.05×**125°.36E**±0°.08**, h35^{km}, n91, σ1^{s}.90**/79**, mb4.7**/54**, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.37	35	Pg	Pn	06 35 05.5	-2.1
	1μm,0.3s,baz=255,slow=18,SNR=0.9						
DAV				Lg	Lg	06 35 15.9	
	4μm,0.3s,baz=176,slow=22,SNR=13						
DAV	Davao City (W)	0.37	35		Pn	06 35 05.8	-1.9
FAKI	Fak Fak	11.82	144	Pn	Pn	06 37 46.7	+1.8
KAPI	Kappang	12.97	206	Pn	Pn	06 38 02.2	+1.5
	0.6nm,0.3s,baz=42,slow=7.9,SNR=3.1						
KAPI	Kappang	12.97	206	Pn	Pn	06 38 02.8	+2.1
SBUM	Sibu	13.78	252		Pn	06 38 13.1	+1.3
BATI	Baumata	16.94	186	Pn	Pn	06 38 52.0	-1.3
	1.8nm,0.3s,baz=205,slow=20,SNR=1.1						
MTN	Manton Dam	20.31	164	P	P	06 39 29.3	-2.4
KNRA	Kununurra	22.55	171	P	P	06 39 53.2	-2.7
IPM	Ipoh	24.32	266	P	P	06 40 11.7	-1.8
IPM				IAmb	IAmb	06 40 18.5	
	comp=Z,31nm,1.2s						
NJ2	Nanjing	25.88	347	eP	P	06 40 29.8	+2.5
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
PSI	Prapat	26.63	263	P	P	06 40 30.1	-4.4
	comp=Z,2.9nm,0.3s,baz=170,slow=1.4,SNR=4.6						
	comp=Z,2.9nm,0.3s						
PMG	Port Moresby	27.01	126	P	P	06 40 35.2	-2.5
	comp=Z,41nm,0.9s,baz=319,slow=8.5,SNR=8.6						
	comp=Z,41nm,0.9s						
PMG	Port Moresby	27.01	126		P	06 40 38.1	+0.4
COEN	Coen	27.14	139		P	06 40 41.2	+2.4
COEN				IAmb	IAmb	06 40 43.0	
	comp=Z,27nm,0.9s						
WB0	Warramunga Arr	27.82	162	P	P	06 40 45.7	+0.8
WB0				IAmb	IAmb	06 40 55.7	
	comp=Z,18nm,0.8s						
WRA	Warramunga Arr	27.97	162	P	P	06 40 42.6	-3.6
	comp=Z,6.0nm,0.8s,baz=344,slow=8.4,SNR=3.5						
	comp=Z,6.0nm,0.8s						
CMAR	Chiang Mai Arr	28.23	297	P	P	06 40 46.4	-2.2
	comp=Z,1.2nm,0.3s,baz=116,slow=7.3,SNR=4.1						
	comp=Z,1.2nm,0.3s						
GSI	Gunungsitoli	28.23	260	P	P	06 40 46.8	-1.9
GSI				IAmb	IAmb	06 40 49.2	
	comp=Z,44nm,1.3s						
PSA00	Pilbara Seismi	28.68	191	P	P	06 40 54.0	+1.5
PZH	PanZhiHua	29.85	314	P	P	06 41 06.0	+2.9
LYN	LuoYang	30.11	338	eP	P	06 41 06.1	+1.0
LYN				pmax	pmax		
	comp=Z,12nm,0.6s						
KSRS	Korea Array	30.64	4	P	P	06 41 09.0	-0.7
	comp=Z,1.5nm,0.8s,baz=182,slow=9.5,SNR=3.1						
	comp=Z,1.5nm,0.8s						
AS31	Alice Springs	31.37	165	P	P	06 41 17.4	+1.0
ASAR	Alice Springs	31.37	165	P	P	06 41 12.1	-4.3
	comp=Z,1.4nm,0.4s,baz=337,slow=8.6,SNR=4.8						
	comp=Z,1.4nm,0.4s						
ASAR	Alice Springs	31.37	165	P	P	06 41 18.1	+1.7
MJAR	Matsushiro Arr	31.88	20	P	P	06 41 18.7	-2.1
	comp=Z,2.3nm,0.8s,baz=208,slow=8.4,SNR=3.6						
HNS	HongShan	32.00	344	⇓P	P	06 41 24.8	+3.1
HNS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CTAO	Charters Tower	33.68	143	P	P	06 41 38.4	+1.8
BJI	Beijing	34.14	347	P	P	06 41 43.5	+3.1
BJI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LZDM	Lanzhou Array	35.19	329	P	P	06 41 48.3	-1.6
	comp=Z,1.6nm,0.3s,baz=154,slow=8.0,SNR=2.0						
	comp=Z,1.6nm,0.3s						
HHC	Hu-ho-hao-te	36.11	342	eP	P	06 42 01.1	+3.6
HHC				pmax	pmax		
	comp=Z,18nm,0.6s						
HHC				pmax	pmax		
	comp=Z,20μm,5.5s						
USRK	Ussuriysk Ar.	37.74	8	P	P	06 42 11.3	+0.2
	comp=Z,5.8nm,0.9s,baz=201,slow=7.7,SNR=3.2						
	comp=Z,5.8nm,0.9s						
BNX	BinXian	38.87	2	⇑P	P	06 42 20.8	+0.2
BNX				pmax	pmax		
	comp=Z,9.0nm,1.4s						
GTA	Gaotai	39.81	329	eP	P	06 42 31.4	+2.6
GTA				pmax	pmax		
	comp=Z,10.0nm,1.8s						
NWAO	Narrogin (SRO)	40.22	191	P	P	06 42 32.6	+0.6
NWAO				IAmb	IAmb	06 42 48.6	
	comp=Z,18nm,0.9s						
EIDS	Eidsvold	40.57	143	P	P	06 42 36.2	+1.2
BBOO	Buckleboo	40.65	166	P	P	06 42 32.8	-2.8
BBOO				IAmb	IAmb	06 42 41.3	
	comp=Z,18nm,0.6s						
STKA	Stephens Creek	41.43	159	P	P	06 42 38.6	-3.5
	comp=Z,5.0nm,0.8s,baz=337,slow=8.1,SNR=4.9						
	comp=Z,5.0nm,0.8s						
HILR	Hailar Array B	42.91	355	P	P	06 42 54.5	+0.5
	comp=Z,7.8nm,0.9s,baz=172,slow=13,SNR=4.2						
	comp=Z,7.8nm,0.9s						
SONM	Songino Array	44.01	342	P	P	06 43 03.6	+0.7
	comp=Z,1.1nm,0.8s,baz=148,slow=8.5,SNR=3.5						
	comp=Z,1.1nm,0.8s						
PETK	Petropavlovsk-	53.18	24	P	P	06 44 13.0	-0.3
	comp=Z,6.3nm,0.9s,baz=188,slow=3.9,SNR=4.8						
	comp=Z,6.3nm,0.9s						
PETK	Petropavlovsk-	53.18	24	P	P	06 44 14.6	+1.3
MKAR	Makanchi Array	54.31	325	P	P	06 44 20.8	-0.9
	comp=Z,1.7nm,0.7s,baz=119,slow=7.7,SNR=4.4						
	comp=Z,1.7nm,0.7s						
MKAR	Makanchi Array	54.31	325	P	P	06 44 21.6	0.0
ZALV	Zalesovo Beam	57.28	333	P	P	06 44 40.8	-2.0
	comp=Z,1.3nm,0.8s,baz=134,slow=4.2,SNR=2.2						
	comp=Z,1.3nm,0.8s						
ZALV	Zalesovo Beam	57.28	333	P	P	06 44 42.1	-0.7
MSVF	Nonsavu	57.43	116	P	P	06 44 44.7	+0.2
MSVF				IAmb	IAmb	06 44 50.9	
	comp=Z,29nm,1.1s						
KURBB	Kurchatov Arra	58.47	327	P	P	06 44 49.9	-1.3
	comp=Z,2.0nm,0.7s,baz=124,slow=6.2,SNR=5.2						
	comp=Z,2.0nm,0.7s						
KURK	Kurchatov	58.47	327	P	P	06 44 51.4	+0.2
GAR	Garm	58.89	312	P	P	06 44 54.7	+0.2
CHGR	Chuyangaron	59.65	311	P	P	06 44 59.5	-0.2
CHGR				IAmb	IAmb	06 45 02.7	
	comp=Z,14nm,1.1s						
KK31	Karatay Array	60.10	316	P	P	06 45 03.3	+0.6
KK31				IAmb	IAmb	06 45 06.3	
	comp=Z,8.0nm,0.9s						
KKAR	Karatay Array	60.10	316	P	P	06 45 01.8	-0.9
BVAR	Borovoye Array	64.05	327	P	P	06 45 28.9	-0.1
	comp=Z,2.5nm,0.8s,baz=116,slow=6.6,SNR=3.2						
	comp=Z,2.5nm,0.8s						
AB31	Akbulak array	68.96	320	P	P	06 46 01.4	+1.0
ABKAR	Akbulak array	68.96	320	P	P	06 46 01.3	+0.9
UNV	Unalaska Valle	71.73	35	P	P	06 46 18.4	+1.2
C16K	Lisburne Hills	76.15	21	P	P	06 46 43.4	+0.6
C16K				IAmb	IAmb	06 46 50.0	
	comp=Z,9.9nm,1.1s						
RAYN	Ar Rayn	78.06	293		P	06 46 53.7	-0.8
RAYN				IAmb	IAmb	06 46 58.0	
	comp=Z,17nm,1.2s						
C19K	Lookout Ridge	78.40	21		P	06 46 56.8	+1.4
C19K				IAmb	IAmb	06 46 59.4	
	comp=Z,24nm,1.4s						
B20K	Meade River	79.40	20	IAmb	IAmb	06 47 02.7	
	comp=Z,12nm,1.1s						
K20K	Telida	79.76	27	P	P	06 47 06.3	+3.3
E22K	Anaktuvuk Pass	81.09	22		P	06 47 11.3	+1.2
MLY	Manley	81.33	25		P	06 47 12.7	+1.3
MLY				IAmb	IAmb	06 47 16.0	
	comp=Z,12nm,1.2s						
I23K	Minto, Yukon-K	81.92	25	P	P	06 47 17.7	+3.3
MCK	McKinley	82.07	27		P	06 47 15.9	+0.5
D24K	Happy Valley	82.23	21	IAmb	IAmb	06 47 27.7	
	comp=Z,10nm,0.8s						
H24K	Noodor Dome	82.55	24		P	06 47 20.3	+2.5
H24K				IAmb	IAmb	06 47 26.8	
	comp=Z,7.7nm,0.8s						
HDA	Harding Lake	82.95	26	P	P	06 47 20.7	+0.8
HDA				IAmb	IAmb	06 47 26.2	
	comp=Z,7.5nm,0.8s						
ILAR	Eielson Array	82.97	26	P	P	06 47 18.6	-1.4
	comp=Z,2.0nm,0.9s,baz=244,slow=6.0,SNR=5.0						
	comp=Z,2.0nm,0.9s						
KLU	Klutina	83.49	29	P	P	06 47 26.9	+4.0
DIV	Divide	83.58	29	P	P	06 47 25.6	+2.4
BMAR	Burnt Mountain	83.83	23	P	P	06 47 25.3	+0.9
C27K	Jago River	84.03	21	IAmb	IAmb	06 47 31.2	
	comp=Z,14nm,1.1s						
G26K	Porcupine Rive	84.16	23	IAmb	IAmb	06 47 33.8	
	comp=Z,11nm,1.1s						
E27K	Coleen River	84.90	22	IAmb	IAmb	06 47 34.2	
	comp=Z,12nm,1.1s						
G27K	Doyon Strip	85.01	23	IAmb	IAmb	06 47 38.7	
	comp=Z,8.2nm,1.1s						
D27M	Malcolm River	85.03	21	IAmb	IAmb	06 47 34.4	
	comp=Z,10nm,1.1s						
E28M	Babbage River	85.62	22	IAmb	IAmb	06 47 43.3	
	comp=Z,11nm,1.2s						
G29M	Pine Creek	86.42	23	IAmb	IAmb	06 47 45.2	
	comp=Z,11nm,0.8s						
M29M	Somme Creek	86.91	28	P	P	06 47 40.3	+0.3
L29M	L29M	86.96	27	P	P	06 47 41.0	+0.9
L29M				IAmb	IAmb	06 48 00.3	
	comp=Z,9.6nm,1.4s						
BRTR	Keskin Array B	87.05	309	P	P	06 47 39.1	-2.1
	comp=Z,1.1nm,0.9s,baz=104,slow=4.8,SNR=3.2						
	comp=Z,1.1nm,0.9s						
FINES	FINESS Array B	88.53	332	P	P	06 47 45.1	-2.5
	comp=Z,2.0nm,0.7s,baz=66,slow=5.0,SNR=2.1						
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	88.53	332	P	P	06 47 46.0	-1.5
AKASG	Malin Array Be	88.70	321	P	P	06 47 47.1	-1.4
	comp=Z,0.1nm,0.3s,baz=68,slow=5.1,SNR=1.9						
	comp=Z,0.1nm,0.3s						
FARO	Faro, Yukon	89.29	27	IAmb	IAmb	06 47 55.1	
	comp=Z,9.8nm,1.0s						
YKA	Yellowknife Ar	97.31	24	P	P	06 48 26.9	-1.1
	comp=Z,0.8nm,0.9s,baz=300,slow=5.4,SNR=4.6						
	comp=Z,0.8nm,0.9s						
TXAR	Lajitas Array	120.77	50	PKP	PKiKP	06 53 48.7	+0.6
	comp=Z,0.6nm,1.0s,baz=338,slow=3.5,SNR=3.4						
PLCA	Paso Flores	143.31	160	PKP	PKPbc	06 54 28.1	+1.2
	comp=Z,1.5nm,0.8s,baz=221,slow=5.8,SNR=3.5						

UPA ***15*** *06:35:19.8±1.7, 8°.72N×83°.27W, h18^{km}±3^{km}, MW3.5, Fault plane solution: NP1:ϕ_s112.00000°, δ81.00000°, λ-42.00000°.*

UCR ***15*** *06:35:19.7±1.1, 8°.70N×83°.28W, h23^{km}±2^{km}, MW3.5*

ISC 15 06:35:19.5±0.9**, 8°.70N**±0°.02×**83°.28W**±0°.02**, h19**^{km}±2^{km}**, n81, σ0^{s}.66**/99**, 3C-7D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDAD	Golfito	0.12	113	eP	Pg	06 35 23.7	0.0
EDAD				eS	Sg	06 35 26.7	+0.3
FITO	Golfito	0.14	121	eP	Pg	06 35 23.7	-0.1
FITO				eS	Sg	06 35 26.9	+0.2
PTJ1	Puerto Jimnez	0.16	188	eP	Pg	06 35 24.4	+0.3
PTJ1				eS	Sg	06 35 28.9	+1.8
PTJ1	Puerto Jimnez	0.16	188	eP	Pg	06 35 24.4	+0.3
PTJ1				eS	Sg	06 35 28.8	+1.6
PIRO	Carate, Puerto	0.30	191	⇑eP	Pb	06 35 26.2	-0.1
PIRO				eS	Sn	06 35 33.5	-1.3
PIRO	Carate, Puerto	0.30	191	eP	Pb	06 35 26.2	-0.1
FIMO	Fila Mora	0.30	346	eP	Pb	06 35 26.7	+0.3
PANP	Palmar Norte	0.32	325	eP	Pg	06 35 26.5	+0.1
PANP				eS	Sb	06 35 32.0	+0.6
VITO	San Vito	0.33	68	eP	Pb	06 35 27.6	+0.7
EDP2	Potrero Grande	0.33	18	eP	Pb	06 35 27.3	+0.3
NELY	Ciudad Neily	0.33	98	eP	Pb	06 35 27.1	+0.2
RSRNO	Rio Sereno	0.43	74	⇓iP	Pb	06 35 29.3	+0.6
RSRNO				eS	Sn	06 35 37.4	-0.8
RSRNO	Rio Sereno	0.43	74	eP	Pb	06 35 29.2	+0.6
MLIR3	Monte Lirio, C	0.46	78	eP	Pb	06 35 29.8	+0.6
BURE	Buenos Aires	0.47	353	eP	Pb	06 35 29.4	0.0
ALCO	Alturas Coton,	0.51	60	eP	Pg	06 35 29.9	+0.1
SCLRA	Santa Clara, W	0.51	75	⇓iP	Pb	06 35 30.4	+0.4
SCLRA	Santa Clara, W	0.51	75	eP	Pb	06 35 30.3	+0.4
EDPE	Pejibaye, P	0.54	328	eP	Pb	06 35 30.1	-0.3
DRK0	Durika	0.56	3	⇓eP	Pb	06 35 30.5	-0.3
DRK0				eS	Sg	06 35 39.3	+0.7
DRK0	Durika	0.56	3	eP	Pb	06 35 30.5	-0.3
BRU2	Volcan	0.59	81	⇓iP	Pb	06 35 31.3	+0.1
BRU2				⇓eP	Pb	06 35 31.3	+0.1
BRU2				eS	Sg	06 35 40.6	+1.3
BRU2	Volcan	0.59	81	eP	Pb	06 35 31.3	+0.1
TBS2		0.62	81	eP	Pg	06 35 32.5	+0.6
PTPM	Petroterminale	0.63	141	eP	Pg	06 35 32.2	+0.2
PTPM				eS	Sn	06 35 43.9	+0.9
PTPA	Petro Terminal	0.64	141	eP	Pb	06 35 32.1	+0.1
SAJE	San Jernim	0.68	341	eP	Pb	06 35 32.4	-0.6
LMNES	Limones	0.72	145	eP	Pb	06 35 33.5	-0.1
LMNES	Limones	0.72	145	eP	Pb	06 35 33.4	-0.2
JEFFS	S de V. Baru	0.74	92	eP	Pb	06 35 33.5	-0.4
ZEDO	Perez Zeledon	0.77	329	eP	Pb	06 35 33.9	-0.4
PTAR3	Potrerillos Ar	0.77	90	eP	Pb	06 35 34.2	-0.3
PTAR3				eS	Sg	06 35 45.8	+0.7
BQTLY	Boquete Panama	0.81	86	⇓iP	Pb	06 35 34.5	-0.6
BQTLY				eS	Sb	06 35 46.0	+0.3
BQTLY	Boquete Panama	0.81	86	eP	Pb	06 35 34.5	-0.6
LNBQ3	Los Naranjos,	0.83	84	eP	Pb	06 35 34.6	-0.9
LNBQ3				eS	Sb	06 35 45.9	-0.5
BQSF3	Alto Boquete,	0.84	87	eP	Pb	06 35 34.9	-0.6
BQSF3				eP	Pb	06 35 34.9	-0.6
DVD	David	0.86	108	eS	Sn	06 35 48.4	-0.3
LOCO3	Loma Colorada,	0.90	109	eS	Sn	06 35 50.2	+0.6
LOMA3	Las Lomas, Chi	0.92	107	eP	Pb	06 35 37.2	+0.3
PSOM3	Paja de Sombre	0.94	91	eP	Pb	06 35 36.6	-0.8
PSOM3				eS	Sb	06 35 49.1	-0.4
BUS1	Rivas	0.97	331	eP	Pb	06 35 37.0	-1.1
CEUA	Cerro Uatsi, L	0.98	20	eP	Pn	06 35 38.4	+0.1
BRIBI	Bribri	1.02	26	eP	Pn	06 35 39.2	+0.3
CNI2	El Empalme, Bo	1.07	48	⇓eP	Pb	06 35 38.7	-0.8
CNI2				eS	Sb	06 35 53.4	+0.1
PBNVO	Pueblo Nuevo,	1.09	80	eP	Pn	06 35 38.6	-1.2
RBALA	Bur	1.13	81	⇑iP	Pn	06 35 39.3	-1.1
RBALA				eS	Sb	06 35 53.4	-1.3
RBALA	Bur	1.13	81	eP	Pn	06 35 38.9	-1.5
PIEC	Cerro El Cedra	1.14	324	eP	Pn	06 35 39.9	-0.8
RAZU	San Marcos de	1.21	322	eP	Pb	06 35 41.8	-0.1
PITB	Pirrs, San	1.21	322	eP	Pn	06 35 41.5	-0.1
REPA	Paraso	1.27	333	eP	Pn	06 35 41.6	-0.8
VINA	Juan Vinas	1.28	339	eP	Pn	06 35 42.4	-0.1
PICV	PH. Pirrs	1.29	316	eP	Pn	06 35 41.4	-1.3
VERB	Verbena	1.30	342	eP	Pn	06 35 42.4	-0.5
PCAYA	Pacayas	1.32	337	eP	Pn	06 35 42.0	-1.2
VTCV	VTCV, Calle Va	1.35	341	eP	Pn	06 35 43.0	-0.6
RAFA	San Farael, Vo	1.36	337	eP	Pn	06 35 43.4	-0.4
ABRB	Las Abras (San	1.37	342	eP	Pn	06 35 43.8	-0.1
RESJ	San Isidro (Tu	1.37	345	eP	Pn	06 35 44.0	+0.3
CVTV	Tajo	1.38	340	eP	Pn	06 35 43.9	-0.2
CVTQ	Turrialba Volc	1.39	340	eP	Pn	06 35 44.1	-0.1
VTR0	Volcan Turrial	1.39	340	eP	Pn	06 35 44.0	-0.4
VICA	Volcano Irazu	1.40	336	eP	Pn	06 35 44.1	-0.3
CVTR	Volcan Turrial	1.40	340	eP	Pn	06 35 43.8	-0.6
ACOS	Acosta	1.40	321	eP	Pn	06 35 43.6	-0.6
IRES	Siquirres	1.41	351	eP	Pn	06 35 44.2	+0.1
RVLA	Villa Bonita	1.44	348	eP	Pb	06 35 45.2	-0.5
ECI	Escuela Centro	1.45	328	eP	Pb	06 35 46.7	+0.6
KKNTU	Kakintº	1.46	84	⇑iP	Pn	06 35 44.2	-0.7
KKNTU	Kakintº	1.46	84	eP	Pn	06 35 44.0	-1.0
CVIMO	Finca Echandi	1.47	334	eP	Pn	06 35 45.5	+0.2
PURI	Puriscal	1.53	318	eP	Pn	06 35 44.4	-1.6
HEME	Heredia, Merce	1.54	327	eP	Pb	06 35 47.5	-0.2
BELE	Belen	1.56	325	eP	Pb	06 35 47.7	-0.1
PILE	Guapiles	1.59	342	eP	Pn	06 35 47.0	+0.2
PDCAN	Manzana , Fuen	1.61	104	eP	Pn	06 35 47.2	+0.1
ATEO	Atenas	1.68	319	eP	Pn	06 35 47.5	-0.4
CARI	Cariari	1.72	345	eP	Pn	06 35 47.9	-0.5
OROT	Orotina	1.72	314	eP	Pb	06 35 50.1	-0.5
ARTO	Ro Cuarto	1.88	331	eP	Pn	06 35 50.9	+0.2
VPL2	V. Platanar	1.93	326	eP	Pn	06 35 52.9	+1.3

MEX ***15*** *06:36:01.8±0.6, 15°.11N×92°.71W, h97^{km}±9^{km}, MD4.1*

GCG ***15*** *06:36:02.2±0.7, 15°.23N×92°.54W, h88^{km}±7^{km}, MD4.3, ML2.6*

ISC 15 06:35:56.6±2.0**, 14°.94N**±0°.08×**92°.66W**±0°.07**, h124**^{km}±11^{km}**, n17, σ2^{s}.33**/31**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.39	94	eP	Pn	06 36 16.1	+1.8
THIG				eS	Sn	06 36 26.8	-0.9
THIG		0.39	94	iP	Pn	06 36 16.3	+2.0
THIG				eS	Sn	06 36 27.2	-0.5
PATR	El Naranjo	0.45	67	eP	Pn	06 36 15.8	+0.8
PATR				eS	Sn	06 36 27.0	-1.8
PAVE	Pavencul	0.54	61	eP	Pn	06 36 16.3	+0.8
PAVE				eS	Sn	06 36 28.0	-1.6
CHUJ	Union Juarez	0.56	74	eP	Pn	06 36 16.6	+1.0
CHUJ				eS	Sn	06 36 28.9	-1.1
SMCA	Catarina	0.57	98	eP	Pn	06 36 16.8	+1.4
SMCA				iS	Sn	06 36 29.5	-0.1
PCIG		0.93	325	eP	Pn	06 36 20.1	+1.9
PCIG				eS	Sn	06 36 34.1	-0.6
STG8	El Palmar, Qui	1.36	111	eP	Pn	06 36 22.8	-0.2
STG8				IAML		06 36 44.1	
	comp=E,179nm,0.2s						
STG5	El Palmar, Qui	1.38	112	eP	Pn	06 36 23.1	+0.1
STG5				eS	Sn	06 36 39.0	-4.1
CCIG	Comitan	1.43	21	eP	Pn	06 36 25.0	+1.3
CCIG				eS	Sn	06 36 43.1	-1.2
CCIG	Comitan	1.43	21	eP	Pn	06 36 26.4	+2.7
CCIG				iS	Sn	06 36 43.8	-0.4
CCIG				IAML		06 36 46.9	
	comp=N,47nm,0.3s						
TGIG		1.88	346	eP	Pn	06 36 29.8	+0.9
TGIG				eS	Sn	06 36 50.4	-3.1
TGIG		1.88	346	eS	Sn	06 36 51.6	-1.9
APG	El Apazote	2.13	88	eP	Pn	06 36 35.9	+3.9
UXUV	UXUV	2.76	329	eP	Pn	06 36 42.3	+2.3
UXUV				eS	Sn	06 37 08.8	-4.5
CMIG	Matias Romero	3.02	315	eP	Pn	06 36 46.5	+3.2
CMIG				eS	Sn	06 37 16.0	-3.4
SCIG	Sabancuy	4.25	19	eP	Pn	06 37 01.9	+2.3
SCIG				eS	Sn	06 37 44.8	-3.6

RSNC 15 06:36:34.7±0.0**, 3°N**±1°×**7°6W**±°**, h3**^{km}±1^{km}**, M2.6, ML2.1, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BETC	Betania	0.61	130	P	Pg	06 36 45.3	-1.1
BETC				S	Sg	06 36 53.6	-0.7
JAMC	Jamundi, Valle	0.78	281	P	Pg	06 36 48.9	-0.7
JAMC				S	Sg	06 36 59.9	+0.2
POPC	Popayan, Colom	0.93	235	P	Pg	06 36 51.3	-1.2
POPC				S	Sg	06 37 03.4	-1.2
GARC	Garzon, Huila	0.97	155	P	Pg	06 36 52.5	-0.9
GARC				S	Sg	06 37 05.7	-0.3
YOTC	Yotoco, Valle	1.01	334	S	Sg	06 37 05.7	-1.4
YOTC	Yotoco, Valle	1.01	334	P	Pg	06 36 52.1	-1.9
YOTC				S	Sg	06 37 05.3	-1.8
YOTC	Yotoco, Valle	1.01	334	P	Pg	06 36 52.3	-1.7
YOTC	Yotoco, Valle	1.01	334	P	Pg	06 36 52.3	-1.7
ORTC	Ortega, Tolima	1.06	38	P	Pg	06 36 54.3	-0.9
ORTC	Ortega, Tolima	1.06	38	P	Pg	06 36 54.1	-1.1
ORTC				S	Sg	06 37 08.6	-0.4
ORTC	Ortega, Tolima	1.06	38	P	Pg	06 36 54.2	-1.0
ORTC	Ortega, Tolima	1.06	38	P	Pg	06 36 54.2	-1.0
PRAC	Prado	1.21	58	P	Pg	06 36 56.8	-1.1
PRAC	Prado	1.21	58	P	Pg	06 36 56.6	-1.2
PRAC				S	Sg	06 37 12.9	-0.6
PRAC	Prado	1.21	58	P	Pg	06 36 56.8	-1.1
FLOC	Florencia	1.50	170	P	Pn	06 37 01.6	-1.0
FLOC				S	Sn	06 37 21.7	-1.0
URMC	La Uribe, Meta	1.54	83	P	Pn	06 37 02.4	-0.7
URMC				S	Sn	06 37 22.5	-1.2
BBAC	Balboa, Cauca	1.69	232	P	Pn	06 37 05.6	+0.2
BBAC				P	Pb	06 37 06.4	-0.3
BBAC	Balboa, Cauca	1.69	232	P	Pn	06 37 05.1	-0.3
BBAC				S	Sn	06 37 26.7	-1.0
PLMC	San Jos del P	1.86	348	P	Pn	06 37 06.3	-1.3
PLMC				S	Sn	06 37 30.9	-0.8
GUY2C	Guyana, Caldas	2.21	14	P	Pn	06 37 13.6	+0.9
GUY2C				S	Sn	06 37 41.8	+1.0
MACC	Macarena, Meta	2.26	114	P	Pb	06 37 14.8	-1.3
MACC				P	Pn	06 37 15.3	+2.3
MACC				P	Pg	06 37 16.0	-2.0
MACC	Macarena, Meta	2.26	114	P	Pb	06 37 14.6	-1.5
MACC				S	Sb	06 37 43.5	-1.0
GCUF	Volcan Galeras	2.33	218	P	Pg	06 37 19.8	+0.4
GCUF				S	Sg	06 37 48.7	-0.9
CVER	Cruz Verde, Cu	2.33	52	P	Pb	06 37 16.7	-1.0
CVER				S	Sb	06 37 45.7	-1.4
VILC	Villavicencio,	2.44	65	P	Pb	06 37 18.5	-0.9
VILC				S	Sg	06 37 52.1	-1.2
CHIC	Chingaza	2.67	54	P	Pn	06 37 20.2	+1.2
CHIC				S	Sb	06 37 56.2	-0.6
CBOC	Ciudad Bolivar	2.78	358	P	Pn	06 37 22.6	+2.3

KOLA ***15*** *06:36:40.1, 79°.84N×19°.97E, h0^{km}, ML2.2, Error ellipse: s-maj=16.4km s-min=14.1km az=40.0, Spitsbergen*

NAO ***15*** *06:36:42.8±0.8, 79°.92N×19°.46E, h10^{km}, ML2.8*

FCIAR ***15*** *06:36:43.0, 79°.82N×19°.83E, h10^{km}, station ZFI2 has station magnitude of 3.20 station OMEGA has station magnitude of 3.20*

BER ***15*** *06:36:44.8±3.6, 79°.96N×19°.39E, h17^{km}±18^{km}, ML2.3, ML2.8(NAO), Confirmed Earthquake*

ISC 15 06:36:41.9±1.6**, 79°.86N**±0°.05×**19°.79E**±0°.04**, h13**^{km}±10^{km}**, n22, σ1^{s}.47**/51**, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.73	241	Pn	Pn	06 37 11.8	+0.1
KBS				Pg	Pg	06 37 14.8	-0.3
KBS				Sg	Sb	06 37 36.1	+1.0
KBS	Kingsbay	1.73	241	P	Pn	06 37 11.7	+0.1
KBS				S	Sb	06 37 35.5	+0.4
KBS	Kingsbay	1.73	241	eP	Pn	06 37 11.8	+0.1
KBS				ePg	Pg	06 37 14.8	-0.3
KBS				eSg	Sb	06 37 35.3	+0.2
KBS				IAML		06 37 37.6	
	comp=Z,67nm,0.3s						
SPA0	Spitsbergen Ar	1.81	203	Pn	Pn	06 37 13.3	+0.4
	baz=22,slow=18						
SPA0				Pg	Pg	06 37 16.5	-0.2
	baz=30,slow=16						
SPA0				Sn	Sn	06 37 36.1	+0.4
	baz=29,slow=28						
SPA0				Sg	Sg	06 37 40.4	+0.2
	baz=29,slow=37						
SPA0	Spitsbergen Ar	1.81	203	eP	Pn	06 37 13.3	+0.4
SPA0				eS	Sn	06 37 35.5	-0.2
SPA0	Spitsbergen Ar	1.81	203	Pn	Pn	06 37 13.3	+0.4
	baz=22,slow=18						
SPA0				Pg	Pg	06 37 16.5	-0.2
	baz=30,slow=16						
SPA0				Sn	Sn	06 37 36.1	+0.4
	baz=29,slow=28						
SPA0				Sg	Sg	06 37 40.4	+0.2
	baz=29,slow=37						
SPA0				IAML		06 37 44.7	
	comp=Z,44nm,0.6s						
SPITS	Spitsbergen Ar	1.81	203	P	Pn	06 37 13.2	+0.4
SPITS				S	Sb	06 37 37.7	+0.1
BRBB	Barentsburg B	2.08	214	Pn	Pn	06 37 16.9	+0.5
BRBB				Sg	Sg	06 37 47.5	-1.0
BRBB	Barentsburg B	2.08	214	P	Pn	06 37 16.8	+0.4
BRBB				S	Sn	06 37 41.3	-0.8
BRBB	Barentsburg B	2.08	214	Pn	Pn	06 37 16.9	+0.5
BRBB				Sg	Sg	06 37 47.5	-1.0
BRBA	Barentsburg A	2.10	213	Pn	Pn	06 37 17.4	+0.6
BRBA				Sg	Sg	06 37 49.4	0.0
BRBA	Barentsburg A	2.10	213	Pn	Pn	06 37 17.4	+0.6
BRBA				Sg	Sg	06 37 49.4	0.0
HSPB	Hornsund (broa	3.00	199	Pn	Pn	06 37 31.1	+2.0
HSPB				Sg	Sg	06 38 17.3	-0.8
HSPB	Hornsund (broa	3.00	199	P	Pn	06 37 30.6	+1.5

HSPB				S	Sn	06 38 03.0	-1.8
HSPB	Hornsund (broa	3.00	199	P	Pn	06 37 30.1	+1.0
HSPB				*e*S	Sn	06 38 05.2	+0.3
HSPB	Hornsund (broa	3.00	199	Pn	Pn	06 37 31.1	+2.0
HSPB				Sg	Sg	06 38 17.3	-0.8
HOPEN	Hopen	3.54	160	Pn	Pn	06 37 38.9	+2.5
HOPEN				Sn	Sn	06 38 19.1	+1.0
HOPEN				Sg	Sg	06 38 34.9	-0.4
HOPEN	Hopen	3.54	160	*e*P	Pn	06 37 39.0	+2.5
HOPEN				Sn	Sn	06 38 19.1	+1.0
HOPEN				Sg	Sg	06 38 34.9	-0.4
ZFI2	Zemlya Franca-	4.75	65	*e*P	Pn	06 37 53.9	+0.8
ZFI2				*e*S	Sn	06 38 47.1	-0.9
	comp=Z,19nm,3.0s						
OMEGA	Omega	4.77	65	*e*P	Pn	06 37 54.0	+0.6
OMEGA				*e*S	Sn	06 38 47.3	-1.1
	comp=Z,17nm,4.1s						
DAG	Danmarks Havn	8.24	268	*e*P	Pn	06 38 41.0	+0.1
ARA0	ARCESS Array S	10.48	169	Pn	Pn	06 39 13.1	+1.4
	baz=1.9,slow=10						
ARA0				S	Sn	06 41 01.1	-7.7
	baz=354,slow=22						

*IDC **15** 06:36:49.0±1.0, 6°.57N×125°.05E, h0^{km}, mb3.9/8, mbtmp3.9/8, Error ellipse: s-maj=24.4km s-min=12.1km az=134.0*

*NEIC **15** 06:36:51.5±0.6, 6°.75N±0°.04×125°.13E±0°.06, h10^{km}±1^{km}, mb4.5/17, Error ellipse: s-maj=10.0km s-min=7.5km az=283.0*

ISC 15 06:36:50.9±0.5**, 6°.71N**±0°.07×**125°.14E**±0°.09**, h10^{km}, n30, σ0^{s}.71**/30**, mb4.3**/17**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.56	51	Pg	Pb	06 37 02.9	0.0
	980nm,0.3s,baz=64,slow=15,SNR=1.3						
DAV				Lg	Lg	06 37 13.4	
	1µm,0.3s,baz=74,slow=22,SNR=2.0						
DAV	Davao City (W)	0.56	51		Pg	06 37 02.0	+0.2
MTN	Manton Dam	20.32	163	P	P	06 41 27.7	+0.3
KNRA	Kununurra	22.53	171	P	P	06 41 50.7	-0.5
KULM	Kulim	24.39	268	P	P	06 42 10.2	+0.4
KULM				IAmb	IAmb	06 42 21.3	
	comp=Z,14nm,1.1s						
PMG	Port Moresby	27.16	126	P	P	06 42 34.0	-0.7
PMG				IAmb	IAmb	06 42 47.5	
	comp=Z,10nm,0.9s						
COEN	Coen	27.24	139	P	P	06 42 35.1	-0.4
COEN				IAmb	IAmb	06 42 44.2	
	comp=Z,10nm,0.9s						
WB0	Warramunga Arr	27.84	161	P	P	06 42 41.0	+0.2
WB0				IAmb	IAmb	06 42 55.8	
	comp=Z,8.8nm,0.7s						
WRA	Warramunga Arr	27.99	161	P	P	06 42 40.7	-1.5
	comp=Z,1.2nm,0.7s,baz=334,slow=9.0,SNR=1.1						
	comp=Z,1.2nm,0.7s						
GSI	Gunungsitoli	28.01	260	P	P	06 42 41.9	-0.5
MBWA	Marble Bar	28.20	191	P	P	06 42 44.2	+0.2
MBWA				IAmb	IAmb	06 42 54.5	
	comp=Z,12nm,1.1s						
PSA00	Pilbara Seismi	28.59	190	P	P	06 42 47.1	-0.3
PSA00				IAmb	IAmb	06 43 00.4	
	comp=Z,8.9nm,1.0s						
INCN	Inchon	30.66	2	P	P	06 43 05.0	-0.7
ASAR	Alice Springs	31.38	164	P	P	06 43 11.0	-1.2
	comp=Z,1.5nm,0.7s,baz=350,slow=8.5,SNR=1.1						
	comp=Z,1.5nm,0.7s						
MJAR	Matsushiro Arr	32.01	20	P	P	06 43 16.6	-0.9
	comp=Z,1.3nm,0.8s,baz=188,slow=7.4,SNR=4.2						
	comp=Z,1.3nm,0.8s						
FORT	Forrest	37.38	176	P	P	06 44 04.5	+0.5
FORT				IAmb	IAmb	06 44 10.5	
	comp=Z,5.1nm,0.7s						
INKA	Innaminka	37.43	157	P	P	06 44 04.4	0.0
NWAO	Narrogin (SRO)	40.13	190	P	P	06 44 27.1	0.0
BBOO	Buckleboo	40.65	166	P	P	06 44 31.3	-0.1
TOO	Toolangi	47.98	158	P	P	06 45 31.0	+0.9
WUS	Wushi	53.30	317	P	P	06 46 09.9	-0.5
WUS				IAmb	IAmb	06 46 11.2	
	comp=Z,4.2nm,1.1s						
PETK	Petropavlovsk-	53.32	24	P	P	06 46 10.4	+0.2
	comp=Z,2.1nm,0.6s,baz=230,slow=8.2,SNR=2.2						
	comp=Z,2.1nm,0.6s						
PETK	Petropavlovsk-	53.32	24	P	P	06 46 10.0	-0.2
MKAR	Makanchi Array	54.22	325	P	P	06 46 17.8	+0.9
	comp=Z,0.7nm,0.5s,baz=119,slow=7.9,SNR=1.5						
	comp=Z,0.7nm,0.5s						
MKAR	Makanchi Array	54.22	325	P	P	06 46 16.2	-0.7
KURBB	Kurchatov Arra	58.39	327	P	P	06 46 47.5	+1.0
	comp=Z,1.2nm,1.0s,baz=130,slow=6.5,SNR=2.1						
	comp=Z,1.2nm,1.0s						
KURK	Kurchatov	58.39	327	P	P	06 46 46.5	0.0
KURK				IAmb	IAmb	06 46 54.1	
	comp=Z,4.3nm,0.9s						
BVAR	Borovoye Array	63.97	327	P	P	06 47 23.9	-0.5
	comp=Z,0.5nm,0.5s,baz=114,slow=6.8,SNR=2.6						
	comp=Z,0.5nm,0.5s						
ILAR	Eielson Array	83.11	26	P	P	06 49 18.1	+1.3
	comp=Z,0.8nm,0.7s,baz=223,slow=6.1,SNR=6.3						
	comp=Z,0.8nm,0.7s						
CLL	Collm	98.31	324	*ex*	P	06 50 30.0	+1.1

*IDC **15** 06:38:47.9±0.8, 6°.42N×125°.35E, h0^{km}, mb4.1/13, mbtmp4.0/13, Error ellipse: s-maj=24.7km s-min=9.8km az=103.0*

*NEIC **15** 06:38:49.8±1.6, 6°.58N±0°.07×125°.33E±0°.09, h10^{km}±1^{km}, mb4.4/23, Error ellipse: s-maj=17.8km s-min=6.7km az=303.0*

ISC 15 06:38:49.0±0.5**, 6°.55N**±0°.07×**125°.38E**±0°.10**, h10^{km}, n41, σ1^{s}.06**/40**, mb4.2**/24**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.56	21	Pg	Pb	06 39 00.6	-0.4
	655nm,0.3s,baz=80,slow=23,SNR=1.2						
DAV				Lg	Lg	06 39 11.1	
	1µm,0.3s,baz=56,slow=23,SNR=7.7						
DAV	Davao City (W)	0.56	21		Pb	06 39 00.4	-0.5
SBUM	Sibu	13.73	253	Pn	Pn	06 42 03.1	-0.9
MTN	Manton Dam	20.09	163	P	P	06 43 23.9	+0.9
MTN				IAmb	IAmb	06 43 34.4	
	comp=Z,17nm,1.1s						
KNRA	Kununurra	22.33	171	P	P	06 43 47.9	+0.7
COEN	Coen	26.96	139	P	P	06 44 31.9	+0.8
WB0	Warramunga Arr	27.61	161	P	P	06 44 38.2	+1.4
WB0				IAmb	IAmb	06 44 50.7	
	comp=Z,8.9nm,1.1s						
WRA	Warramunga Arr	27.76	162	P	P	06 44 39.0	+0.8
	comp=Z,1.3nm,0.6s,baz=329,slow=10,SNR=2.2						
	comp=Z,1.3nm,0.6s						
WR8	Warramunga Arr	27.82	161	P	P	06 44 38.6	-0.1
WR8				IAmb	IAmb	06 44 41.3	
	comp=Z,6.9nm,1.0s						
GSI	Gunungsitoli	28.21	261	P	P	06 44 41.2	-1.2
CM31	Chiang Mai Arr	28.35	297	P	P	06 44 43.1	-0.4
CM31				IAmb	IAmb	06 44 58.2	
	comp=Z,4.3nm,0.9s						
CMAR	Chiang Mai Arr	28.35	297	P	P	06 44 44.5	+1.0
	comp=Z,1.0nm,0.3s,baz=112,slow=9.5,SNR=1.9						
	comp=Z,1.0nm,0.3s						
CHTO	Chiang Mai	28.48	298	P	P	06 44 45.4	+0.8
KSRS	Korea Array	30.85	4	P	P	06 45 06.9	+1.4
	comp=Z,0.5nm,0.4s,baz=186,slow=9.9,SNR=2.5						
	comp=Z,0.5nm,0.4s						
ASAR	Alice Springs	31.16	165	P	P	06 45 07.3	-1.0
	comp=Z,1.1nm,0.8s,baz=342,slow=8.4,SNR=6.4						
	comp=Z,1.1nm,0.8s						
ASAR	Alice Springs	31.16	165	P	P	06 45 07.9	-0.4
MJAR	Matsushiro Arr	32.08	20	P	P	06 45 15.1	-1.3
	comp=Z,1.2nm,0.7s,baz=188,slow=8.9,SNR=2.9						
MORW	Morawa	36.53	194	P	P	06 45 56.1	+1.1
SHL	Shillong	37.16	304	P	P	06 46 00.7	+0.1
SHL				IAmb	IAmb	06 46 09.3	
	comp=Z,10nm,1.0s						
USRK	Ussuriysk Ar.	37.95	8	P	P	06 46 06.8	0.0
	comp=Z,2.8nm,0.8s,baz=202,slow=7.2,SNR=3.2						
	comp=Z,2.8nm,0.8s						
LSA	Lhasa	39.60	310	P	P	06 46 20.6	-0.8
LSA				IAmb	IAmb	06 46 38.5	
	comp=Z,6.4nm,1.1s						
NWAO	Narrogin (SRO)	40.01	191	P	P	06 46 25.5	+1.3
NWAO				IAmb	IAmb	06 46 41.9	
	comp=Z,8.6nm,1.1s						
BBOO	Buckleboo	40.43	166	P	P	06 46 28.9	+1.1
STKA	Stephens Creek	41.22	159	P	P	06 46 32.4	-1.8
	comp=Z,2.1nm,0.6s,baz=299,slow=7.3,SNR=3.0						
	comp=Z,2.1nm,0.6s						
STKA	Stephens Creek	41.22	159	P	P	06 46 33.6	-0.7
SONM	Songino Array	44.22	342	P	P	06 47 01.4	+2.8
	comp=Z,1.1nm,0.9s,baz=151,slow=6.6,SNR=2.3						
	comp=Z,1.1nm,0.9s						
SONM	Songino Array	44.22	342	P	P	06 46 57.9	-0.7
ARMA	Armidale	44.54	147	P	P	06 47 00.0	-1.4
ARMA				IAmb	IAmb	06 47 16.5	
	comp=Z,8.8nm,1.1s						
PETK	Petropavlovsk-	53.38	24	P	P	06 48 08.8	+0.1
	comp=Z,4.8nm,0.8s,baz=192,slow=5.5,SNR=4.6						
	comp=Z,4.8nm,0.8s						
WUS	Wushi	53.59	317	P	P	06 48 10.9	+0.2
WUS				IAmb	IAmb	06 48 23.3	
	comp=Z,2.6nm,0.9s						
MK31	Makanchi Array	54.49	325		P	06 48 16.3	-0.8
MKAR	Makanchi Array	54.49	325	P	P	06 48 17.2	+0.1
	comp=Z,0.7nm,0.6s,baz=131,slow=6.6,SNR=2.5						
	comp=Z,0.7nm,0.6s						
MKAR	Makanchi Array	54.49	325	P	P	06 48 16.1	-0.9
KURBB	Kurchatov Arra	58.66	327	P	P	06 48 47.0	+0.4
	comp=Z,0.8nm,0.6s,baz=123,slow=6.9,SNR=4.3						
	comp=Z,0.8nm,0.6s						
KURK	Kurchatov	58.66	327	P	P	06 48 45.8	-0.8
KURK				IAmb	IAmb	06 49 04.8	
	comp=Z,2.0nm,0.8s						
AKTO	Aktyubinsk	70.63	321	P	P	06 50 06.0	+1.1
	comp=Z,1.1nm,0.5s,baz=71,slow=5.7,SNR=3.6						
	comp=Z,1.1nm,0.5s						
D19K	Kuna River	79.00	21	P	P	06 50 53.7	+0.7
D19K				IAmb	IAmb	06 50 58.3	
	comp=Z,4.1nm,0.8s						
G19K	Purcell Mounta	79.01	24	P	P	06 50 52.4	-0.7
H19K	Roundabout Mou	79.18	25	P	P	06 50 53.5	-0.3
H19K				IAmb	IAmb	06 51 03.9	
	comp=Z,3.5nm,0.9s						
ILAR	Eielson Array	83.16	26	P	P	06 51 17.1	+2.0
	comp=Z,1.8nm,0.7s,baz=238,slow=5.0,SNR=15						
	comp=Z,1.8nm,0.7s						
YKA	Yellowknife Ar	97.50	24	P	Pdif	06 52 25.3	+2.2
	comp=Z,0.5nm,0.8s,baz=298,slow=5.4,SNR=4.8						
	comp=Z,0.5nm,0.8s						

*SOME **15** 06:39:02.2, 44°.33N×83°.05E, h10^{km}*

*NNC **15** 06:39:05.7±1.9, 44°.16N×82°.89E, h0^{km}, mb3.5, mpv3.0, Error ellipse: s-maj=20.3km s-min=7.8km az=130.0*

ISC 15 06:39:05.1±3.3**, 44°.2N**±0°.2×**83°.1E**±0°.2**, h24^{km}, n9, σ1^{s}.30**/12**, 2C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	2.16	249	Pg	Pn	06 39 40.3	+0.7
	2.1nm,0.2s						
KTMS				Lg	Lg	06 40 07.5	
	7.5nm,0.2s						
KTMS	Ketmen	2.16	249	*e*P	Pn	06 39 40.3	+0.7
	2.1nm,0.2s						
KTMS				*e*S	Sb	06 40 07.5	-2.4
	7.5nm,0.2s						
MK31	Makanchi Array	2.62	347	⇓Pn	Pb	06 39 50.7	-0.6
	0.1nm,0.1s,baz=163,slow=14,SNR=39						
MK31				⇑Lg	Lg	06 40 28.2	
	1.8nm,0.4s,baz=162,slow=27,SNR=7.1						
PDGK	Podgornoye	2.79	252	⇑Pn	Pn	06 39 49.5	+1.2
	6.6nm,1.2s						
PDGK				⇓Lg	Lg	06 40 29.4	
	8.5nm,1.1s						
KNOS	Konyrlen	2.84	274	Pg	Pb	06 39 54.6	-0.5
	4.1nm,0.2s						
KNOS				Lg	Lg	06 40 31.9	
	7.8nm,0.5s						
SHLS	Shalkode	2.87	249	Pg	Pn	06 39 49.7	+0.3
	6.2nm,0.3s						
SHLS				Lg	Lg	06 40 23.5	
	8.2nm,0.5s						
SHLS	Shalkode	2.87	249	*e*P	Pn	06 39 49.7	+0.3
	6.2nm,0.3s						
SHLS				*e*S	Sn	06 40 23.5	+0.3
	8.2nm,0.5s						
UZB	Uzynbulak	3.17	251	*e*P	Pb	06 40 00.1	-0.6
	3.1nm,0.1s						
UZB				*e*S	Sb	06 40 41.1	+2.1
	2.0nm,0.2s						
SATY	Saty	3.62	253	Pg	Pb	06 40 07.4	-1.0
	14nm,1.0s						
SATY				Lg	Lg	06 40 53.9	
	14nm,0.6s						

*IDC **15** 06:42:59.4±1.0, 6°.65N×125°.23E, h0^{km}, mb4.0/7, mbtmp4.0/7, Error ellipse: s-maj=52.0km s-min=18.9km az=65.0*

ISC 15 06:43:04.6±1.0**, 6°.6N**±0°.2×**125°.2E**±0°.3**, h35^{km}, n7, σ0^{s}.63**/7**, mb3.9**/7**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.87	161	P	P	06 48 52.4	+1.1
	2.1nm,0.8s,baz=339,slow=9.0,SNR=5.4						
	2.1nm,0.8s						
CMAR	Chiang Mai Arr	28.14	297	P	P	06 48 53.8	+0.1
	0.8nm,0.2s,baz=113,slow=8.9,SNR=2.1						
	0.8nm,0.2s						
ASAR	Alice Springs	31.26	164	P	P	06 49 20.9	-0.4
	1.1nm,0.5s,baz=342,slow=6.7,SNR=7.8						
	1.1nm,0.5s						
STKA	Stephens Creek	41.34	159	P	P	06 50 47.0	-0.2
	2.6nm,0.7s,baz=344,slow=8.6,SNR=6.4						
	2.6nm,0.7s						
MKAR	Makanchi Array	54.34	325	P	P	06 52 27.5	-0.3
	2.1nm,0.9s,baz=130,slow=6.2,SNR=4.6						
	2.1nm,0.9s						
KURBB	Kurchatov Arra	58.51	327	P	P	06 52 57.5	+0.2
	0.7nm,0.9s,baz=133,slow=6.6,SNR=1.1						
	0.7nm,0.9s						
ILAR	Eielson Array	83.20	26	P	P	06 55 27.1	0.0
	0.5nm,0.7s,baz=238,slow=5.0,SNR=9.5						
	0.5nm,0.7s						

*IDC **15** 06:43:27.9±1.1, 6°.58N×125°.16E, h0^{km}, mb4.2/10, mbtmp4.1/10, Error ellipse: s-maj=26.9km s-min=11.2km az=138.0*

*NEIC **15** 06:43:30.7±0.9, 6°.7N±0°.1×125°.1E±0°.2, h10^{km}±1^{km}, mb4.6/10, Error ellipse: s-maj=27.2km s-min=20.3km az=249.0*

ISC 15 06:43:29.5±0.6**, 6°.68N**±0°.09×**125°.15E**±0°.10**, h10^{km}, n27, σ1^{s}.05**/27**, mb4.5**/15**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.58	48	Pg	Pg	06 43 39.7	-1.1
	646nm,0.3s,baz=88,slow=23,SNR=3.9						
DAV				Lg	Lg	06 43 49.3	
	514nm,0.3s,baz=76,slow=20,SNR=3.3						
JOW	Kunigami	20.26	8	P	P	06 48 04.3	-1.0
JOW				IAmb	IAmb	06 48 08.8	
	comp=Z,19nm,0.9s						
KNRA	Kununurra	22.50	171	P	P	06 48 29.2	-0.2
GSI	Gunungsitoli	28.01	260	P	P	06 49 21.2	+0.2
GSI				IAmb	IAmb	06 49 23.3	
	comp=Z,12nm,0.9s						
CMAR	Chiang Mai Arr	28.08	297	P	P	06 49 21.9	+0.2
	comp=Z,1.2nm,0.6s,baz=116,slow=8.8,SNR=5.2						
	comp=Z,1.2nm,0.6s						
CMAR	Chiang Mai Arr	28.08	297	P	P	06 49 19.5	-2.1
KSRS	Korea Array	30.74	4	P	P	06 49 45.7	+0.8
	comp=Z,1.2nm,0.7s,baz=180,slow=9.2,SNR=5.1						
	comp=Z,1.2nm,0.7s						
ASAR	Alice Springs	31.35	164	P	P	06 49 49.3	-1.2
	comp=Z,1.7nm,0.6s,baz=350,slow=10,SNR=4.4						
	comp=Z,1.7nm,0.6s						
CTAO	Charters Tower	33.74	142	P	P	06 50 12.7	+1.1
CTAO				IAmb	IAmb	06 50 29.1	
	comp=Z,7.6nm,1.0s						
BJT	Baijiatuau	34.16	348	P	P	06 50 14.8	-0.1
BJT				IAmb	IAmb	06 50 17.6	
	comp=Z,6.7nm,0.7s						
SHL	Shillong	36.89	304	P	P	06 50 38.4	-0.4
PETK	Petropavlovsk-	53.35	24	P	P	06 52 51.2	+2.2
	comp=Z,5.6nm,0.8s,baz=180,slow=2.0,SNR=4.1						
	comp=Z,5.6nm,0.8s						
PETK	Petropavlovsk-	53.35	24	P	P	06 52 50.0	+1.0
MKAR	Makanchi Array	54.25	325	P	P	06 52 57.6	+1.9
	comp=Z,1.4nm,0.9s,baz=122,slow=8.0,SNR=4.7						
	comp=Z,1.4nm,0.9s						
MKAR	Makanchi Array	54.25	325	P	P	06 52 56.5	+0.7
MAKZ	Makanchi	54.44	325	P	P	06 52 57.2	+0.1
TARG	Taragay, Kyrgy	54.52	317	P	P	06 52 58.0	-0.3
KURBB	Kurchatov Arra	58.42	327	P	P	06 53 24.1	-1.3
	comp=Z,1.2nm,0.8s,baz=122,slow=6.9,SNR=4.9						
	comp=Z,1.2nm,0.8s						
KURK	Kurchatov	58.42	327	P	P	06 53 25.8	+0.4
KURK				IAmb	IAmb	06 53 43.2	
	comp=Z,4.2nm,0.9s						
KKAR	Karatay Array	60.02	316	P	P	06 53 36.5	-0.2
AB31	Akbulak array	68.89	320	P	P	06 54 34.4	-0.2
AB31				IAmb	IAmb	06 54 45.1	
	comp=Z,3.5nm,1.0s						
ABKAR	Akbulak array	68.89	320	P	P	06 54 34.6	+0.1
AKTO	Aktyubinsk	70.39	321	P	P	06 54 43.5	-0.3
	comp=Z,2.1nm,0.5s,baz=81,slow=6.2,SNR=3.9						
	comp=Z,2.1nm,0.5s						
KIRV	Kirov	76.90	329	P	P	06 55 23.5	+1.6
	comp=Z,5.5nm,0.5s,baz=143,slow=3.0,SNR=3.7						
	comp=Z,5.5nm,0.5s						
ILAR	Eielson Array	83.14	26	P	P	06 55 56.5	+0.9
	comp=Z,0.6nm,0.7s,baz=244,slow=4.2,SNR=6.0						
	comp=Z,0.6nm,0.7s						
ILAR	Eielson Array	83.14	26	P	P	06 55 55.5	0.0
YKA	Yellowknife Ar	97.47	24	P	P	06 57 02.6	-0.9
	comp=Z,0.3nm,0.7s,baz=301,slow=5.4,SNR=4.4						
	comp=Z,0.3nm,0.7s						

*IDC **15** 06:43:50.1±1.3, 6°.54N×125°.03E, h0^{km}, mb4.1/6, mbtmp4.1/6, Error ellipse: s-maj=31.2km s-min=13.4km az=134.0*

*NEIC **15** 06:43:51.3±1.0, 6°.53N±0°.06×125°.1E±0°.1, h10^{km}±1^{km}, mb4.6/6, Error ellipse: s-maj=18.6km s-min=7.7km az=112.0*

ISC 15 06:43:51.0±0.7**, 6°.50N**±0°.08×**125°.2E**±0°.1**, h10^{km}, n18, σ0^{s}.86**/18**, mb4.2**/9**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.71	37	Pg	Pg	06 44 04.9	+0.1
	3µm,0.3s,baz=155,slow=23,SNR=2.4						
DAV				Lg	Lg	06 44 15.3	
	2µm,0.3s,baz=69,slow=23,SNR=2.9						
DAV	Davao City (W)	0.71	37		Pg	06 44 04.7	-0.1
TOLI2	Tolitoli	6.90	219	Pn	Pn	06 45 32.9	+0.6
SOEI	Soe	16.17	183	Pn	Pn	06 47 38.2	-0.3
SOEI				IAmb	IAmb	06 47 48.0	
	comp=Z,21nm,0.8s						
PMG	Port Moresby	27.03	126	P	P	06 49 33.5	-0.2
PMG				IAmb	IAmb	06 49 37.7	
	comp=Z,12nm,0.8s						
COEN	Coen	27.08	139	P	P	06 49 33.7	-0.4
COEN				IAmb	IAmb	06 49 42.1	
	comp=Z,15nm,0.8s						
CRAI	Chiangrai	27.64	302	P	P	06 49 38.1	-1.0
KSRS	Korea Array	30.92	4	P	P	06 50 09.7	+1.7
	comp=Z,1.1nm,0.8s,baz=187,slow=9.5,SNR=2.4						
	comp=Z,1.1nm,0.8s						
ASAR	Alice Springs	31.17	164	P	P	06 50 11.9	+1.5
	comp=Z,3.9nm,0.9s,baz=345,slow=10,SNR=5.7						
	comp=Z,3.9nm,0.9s						
ASAR	Alice Springs	31.17	164	P	P	06 50 09.1	-1.4
USRK	Ussuriysk Ar.	38.03	8	P	P	06 51 09.0	-0.5
	comp=Z,3.0nm,0.8s,baz=167,slow=7.2,SNR=4.8						
	comp=Z,3.0nm,0.8s						
PETK	Petropavlovsk-	53.52	24	P	P	06 53 12.4	+0.7
	comp=Z,1.9nm,0.7s,baz=223,slow=9.5,SNR=1.4						
	comp=Z,1.9nm,0.7s						
PETK	Petropavlovsk-	53.52	24	P	P	06 53 12.0	+0.3
PET	Petropavlovsk	53.84	24	P	P	06 53 13.2	-0.8
KURBB	Kurchatov Arra	58.57	327	P	P	06 53 48.0	+0.1
	comp=Z,1.7nm,0.8s,baz=121,slow=7.7,SNR=1.7						
	comp=Z,1.7nm,0.8s						
KURK	Kurchatov	58.58	327	P	P	06 53 47.1	-0.8
KURK				IAmb	IAmb	06 53 53.7	
	comp=Z,6.4nm,1.1s						
ILAR	Eielson Array	83.30	26	P	P	06 56 17.7	-0.1
	comp=Z,0.9nm,0.9s,baz=254,slow=5.4,SNR=4.5						
	comp=Z,0.9nm,0.9s						
ILAR	Eielson Array	83.30	26	P	P	06 56 18.0	+0.2

*DJA **15** 06:52:42.1±0.4, 7°N±11°×12°5E±°, h31^{km}±18^{km}, M5.2/14, mb5.0/14, mB7.0/1, MLv5.3/9, Mw(mB)7.0/1*

*NEIC **15** 06:52:43.2±1.5, 6°.53N±0°.05×125°.36E±0°.09, h10^{km}±1^{km}, mb4.9/53, Error ellipse: s-maj=16.5km s-min=7.5km az=107.0*

*IDC **15** 06:52:45.1±1.8, 6°.64N×125°.42E, h30^{km}±11^{km}, mb4.0/23, mbtmp4.2/23, Error ellipse: s-maj=24.6km s-min=10.7km az=65.0*

ISC 15 06:52:42.8±0.4**, 6°.57N**±0°.04×**125°.22E**±0°.06**, h10^{km}, n114, σ1^{s}.72**/116**, mb4.8**/54**, 2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.61	35	Pg	Pg	06 52 54.2	-0.4
	3µm,0.3s,baz=257,slow=6.7,SNR=28						
DAV				Lg	Lg	06 53 03.0	
	5µm,0.3s,baz=316,slow=22,SNR=12						
DAV	Davao City (W)	0.61	35	P	Pg	06 52 53.8	-0.9
DAV				S	Sb	06 53 03.2	-1.1
SGSI	Sangihe	2.88	174	P	Pn	06 53 30.6	+1.9
SGSI				S	Sb	06 54 08.7	-0.9
GAMI	Galela, Maluku	5.35	151	P	Pn	06 54 06.5	+3.8
	2.1nm197nm,1.1s						
GAMI				S	Sn	06 55 10.4	+5.9
	2.1nm197nm,1.1s						
TNTI	Ternate	6.14	160		Pn	06 54 11.6	-2.0
TNTI	Ternate	6.14	160	P	Pn	06 54 15.5	+1.9
	84nm,1.0s						
TNTI				S	Sn	06 55 29.6	+5.6
	84nm,1.0s						
GTOI	Gorontalo	6.29	201	P	Pn	06 54 15.4	-0.3
	1.4nm280nm,0.6s						
GTOI				S	Sn	06 55 29.2	+1.5
	1.4nm280nm,0.6s						
MRSI	Marisa	6.88	209	P	Pn	06 54 24.3	+0.5
MRSI				S	Sn	06 55 43.4	+1.2
TOLI2	Tolitoli	7.00	219		Pn	06 54 24.1	-1.4
LUWI	Luwuk	7.95	198	Pn	Pn	06 54 38.5	+0.1
LUWI	Luwuk	7.95	198	P	Pn	06 54 42.5	+4.1
	158nm,1.2s						
MPSI	Mapaga	8.16	221	P	Pn	06 54 38.9	-2.4
APSI	Ampana	8.24	206	P	Pn	06 54 43.9	+1.4
	157nm,1.2s						
SANI	Sanana	8.59	175	P	Pn	06 54 47.1	-0.2
	82nm,0.8s						
NLAI	Namlea	9.92	169	P	Pn	06 55 06.0	+0.5
	67nm,0.4s						
KRAI	Karang Ratu	10.32	162	P	Pn	06 55 13.2	+2.2
MSAI	Masohi	10.52	159	P	Pn	06 55 15.9	+2.2
	40nm,0.6s						
KDI	Kendari	10.77	194	P	Pn	06 55 18.6	+1.4
TTSI	Tana Toraja	10.97	210	P	Pn	06 55 20.5	+0.6
KAPI	Kappang	12.73	206	Pn	Pn	06 55 49.9	+5.8
	0.3nm,0.3s,baz=21,slow=5.9,SNR=7.3						
KAPI	Kappang	12.73	206		Pn	06 55 44.0	-0.1
SBUM	Sibu	13.59	253	Pn	Pn	06 55 54.1	-1.7
SOEI	Soe	16.24	183	Pn	Pn	06 56 26.1	-5.3
MTN	Manton Dam	20.16	163		P	06 57 16.1	-1.4
KNRA	Kununurra	22.38	171		P	06 57 40.7	-0.6
KNRA				IAmb	IAmb	06 57 52.2	
	comp=Z,29nm,0.8s						
NJ2	Nanjing	26.04	348	*e*P	P	06 58 17.9	+1.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
PMG	Port Moresby	27.01	126	P	P	06 58 23.5	-1.8
	comp=Z,7.8nm,0.5s,baz=336,slow=8.8,SNR=6.9						
	comp=Z,7.8nm,0.5s						
PMG	Port Moresby	27.01	126	P	P	06 58 22.8	-2.5
COEN	Coen	27.08	139		P	06 58 24.9	-1.0
COEN				IAmb	IAmb	06 58 36.8	
	comp=Z,20nm,1.1s						
WB0	Warramunga Arr	27.68	161		P	06 58 30.1	-1.1
WB0				IAmb	IAmb	06 58 44.4	
	comp=Z,23nm,1.1s						
WRA	Warramunga Arr	27.83	161	P	P	06 58 31.1	-1.4
	comp=Z,1.0nm,0.4s,baz=340,slow=8.9,SNR=13						
	comp=Z,1.0nm,0.4s						
WR8	Warramunga Arr	27.89	161	P	P	06 58 31.9	-1.2
GSI	Gunungsitoli	28.06	260	P	P	06 58 35.6	+0.8

GSI				IAmb	IAmb	06 58 39.9	
	comp=Z,24nm,1.0s						
MBWA	Marble Bar	28.08	191	P	P	06 58 34.5	-0.2
MBWA				IAmb	IAmb	06 59 02.7	
	comp=Z,25nm,1.4s						
CMAR	Chiang Mai Arr	28.20	297	P	P	06 58 36.1	+0.2
	comp=Z,1.0nm,0.3s,baz=116,slow=9.1,SNR=6.6						
	comp=Z,1.0nm,0.3s						
CMAR	Chiang Mai Arr	28.20	297	P	P	06 58 37.3	+1.4
PZH	PanZhiHua	29.89	314	P	P	06 58 55.3	+4.3
LYN	LuoYang	30.24	339	*e*P	P	06 58 59.8	+6.0
LYN				pmax	pmax		
	comp=Z,12nm,0.6s						
KSRS	Korea Array	30.84	4	P	P	06 58 57.1	-1.9
	comp=Z,3.4nm,1.1s,baz=184,slow=11,SNR=6.5						
	comp=Z,3.4nm,1.1s						
AS31	Alice Springs	31.22	165		P	06 58 59.6	-3.0
ASAR	Alice Springs	31.22	165	P	P	06 59 01.8	-0.8
	comp=Z,1.6nm,0.4s,baz=346,slow=6.8,SNR=24						
ASAR				PcP	PcP	07 01 57.5	+0.1
	comp=Z,0.5nm,0.4s,baz=349,slow=2.6,SNR=4.2						
	comp=Z,1.6nm,0.4s						
XAN	Xi'an	31.22	333	*e*P	P	06 59 05.3	+2.7
MJAR	Matsushiro Arr	32.11	20	P	P	06 59 07.4	-3.0
	comp=Z,1.2nm,0.7s,baz=189,slow=9.9,SNR=3.0						
	comp=Z,1.2nm,0.7s						
HNS	HongShan	32.15	344	⇓P	P	06 59 15.9	+5.3
HNS				pmax	pmax		
	comp=Z,11nm,1.1s						
CTA	Charters Tower	33.61	142	P	P	06 59 24.0	+0.4
	comp=Z,2.9nm,0.8s,baz=311,slow=9.3,SNR=3.1						
	comp=Z,2.9nm,0.8s						
BJT	Baijiatuau	34.28	348	P	P	06 59 29.9	+0.6
BJT				IAmb	IAmb	06 59 35.4	
	comp=Z,19nm,1.2s						
BJI	Beijing	34.30	348	P	P	06 59 30.6	+1.2
BJI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
LZDM	Lanzhou Array	35.29	329	P	P	06 59 39.0	+0.7
	comp=Z,0.6nm,0.3s,baz=42,slow=46,SNR=1.3						
	comp=Z,0.6nm,0.3s						
HHC	Hu-ho-hao-te	36.25	342	*e*P	P	06 59 48.3	+2.0
MORW	Morawa	36.52	194	P	P	06 59 47.1	-1.4
MORW				IAmb	IAmb	07 00 00.8	
	comp=Z,63nm,2.0s						
SHL	Shillong	37.02	304	P	P	06 59 53.5	+0.3
SHL				IAmb	IAmb	07 00 12.5	
	comp=Z,23nm,1.3s						
FORT	Forrest	37.23	176	P	P	06 59 53.5	-1.1
USRK	Ussuriysk Ar.	37.95	8	P	P	06 59 58.6	-1.9
	comp=Z,4.2nm,0.8s,baz=151,slow=4.4,SNR=4.2						
	comp=Z,4.2nm,0.8s						
JEW	Eniwo	38.87	19		P	07 00 09.6	+1.4
BNX	BinXian	39.07	2	⇓P	P	07 00 08.6	-1.3
BNX				pmax	pmax		
	comp=Z,7.0nm,1.5s						
GTA	Gaotai	39.91	329	*e*P	P	07 00 19.8	+2.6
GTA				pP	sP	07 00 23.5	+1.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
BBOO	Buckleboo	40.49	166		P	07 00 21.2	-0.7
BBOO				IAmb	IAmb	07 00 30.1	
	comp=Z,22nm,1.1s						
STKA	Stephens Creek	41.30	159	P	P	07 00 27.6	-1.1
	comp=Z,3.1nm,0.5s,baz=338,slow=9.3,SNR=9.1						
	comp=Z,3.1nm,0.5s						
STKA	Stephens Creek	41.30	159		P	07 00 27.9	-0.7
STKA				IAmb	IAmb	07 00 36.4	
	comp=Z,32nm,0.8s						
SONM	Songino Array	44.15	342	P	P	07 00 52.0	+0.2
	comp=Z,0.5nm,0.6s,baz=171,slow=11,SNR=2.9						
	comp=Z,0.5nm,0.6s						
TOO	Toolangi	47.81	158	P	P	07 01 20.6	0.0
TOO				IAmb	IAmb	07 02 50.2	
	comp=Z,14nm,1.5s						
DZM	Mont Dzumac	49.40	126	P	P	07 01 32.5	-0.8
	comp=Z,5.9nm,0.6s,baz=245,slow=12,SNR=8.6						
	comp=Z,5.9nm,0.6s						
DZM	Mont Dzumac	49.40	126	P	P	07 01 32.0	-1.2
DZM				IAmb	IAmb	07 01 46.1	
	comp=Z,11nm,1.0s						
PETK	Petropavlovsk-	53.42	24	P	P	07 02 00.4	-2.3
	comp=Z,2.3nm,0.8s,baz=207,slow=5.2,SNR=4.8						
	comp=Z,2.3nm,0.8s						
PETK	Petropavlovsk-	53.42	24	P	P	07 02 01.6	-1.1
MKAR	Makanchi Array	54.38	325	P	P	07 02 08.5	-1.4
	comp=Z,0.8nm,0.5s,baz=121,slow=8.1,SNR=12						
	comp=Z,0.8nm,0.5s						
MKAR	Makanchi Array	54.38	325		P	07 02 09.9	-0.1
MAKZ	Makanchi	54.57	325		P	07 02 13.4	+2.1
MAKZ				IAmb	IAmb	07 02 18.2	
	comp=Z,20nm,1.6s						
NIL	Nilore	55.02	307	P	P	07 02 16.7	+1.8
NIL				IAmb	IAmb	07 02 43.6	
	comp=Z,8.2nm,0.8s						
YAK	Yakutsk	55.45	3	P	P	07 02 19.7	+2.4
ZAA0	Zalesovo Array	57.40	333	P	P	07 02 33.3	+2.0
ZALV	Zalesovo Beam	57.40	333	P	P	07 02 29.4	-1.9
	comp=Z,0.5nm,0.5s,baz=145,slow=5.4,SNR=4.3						
	comp=Z,0.5nm,0.5s						
ZALV	Zalesovo Beam	57.40	333	P	P	07 02 29.6	-1.8
MANEM	Manem	57.44	311	P	P	07 02 32.2	-0.1
MANEM				IAmb	IAmb	07 02 40.1	
	comp=Z,32nm,1.5s						
ARSB	Arslanbob	57.79	315	P	P	07 02 34.8	+0.1
ARSB				IAmb	IAmb	07 02 41.0	
	comp=Z,35nm,1.7s						
DRK	Karamyk	57.98	313	P	P	07 02 36.0	-0.2
DRK				IAmb	IAmb	07 02 47.9	
	comp=Z,8.5nm,1.0s						
KURBB	Kurchatov Arra	58.56	327	P	P	07 02 37.9	-1.7
	comp=Z,1.8nm,0.9s,baz=124,slow=6.6,SNR=9.0						
	comp=Z,1.8nm,0.9s						
KURK	Kurchatov	58.56	327	P	P	07 02 38.8	-0.8
KURK				IAmb	IAmb	07 02 45.7	
	comp=Z,8.5nm,0.9s						
GAR	Garm	58.92	312	P	P	07 02 42.6	+0.1
CHGR	Chuyangaron	59.67	311	P	P	07 02 47.6	-0.1
CHGR				IAmb	IAmb	07 03 22.9	
	comp=Z,25nm,1.5s						
KK31	Karatay Array	60.15	316		P	07 02 50.5	-0.3
KK31				IAmb	IAmb	07 02 57.4	
	comp=Z,15nm,1.4s						
KKAR	Karatay Array	60.15	316		P	07 02 50.2	-0.6
BVAR	Borovoye Array	64.14	327	P	P	07 03 17.1	-0.2
	comp=Z,3.7nm,1.1s,baz=116,slow=6.8,SNR=6.4						
	comp=Z,3.7nm,1.1s						
BORK	Borovoye	64.19	327	P	P	07 03 18.6	+0.9
BORK				IAmb	IAmb	07 03 23.5	
	comp=Z,9.6nm,1.2s						
NRIK	Noril'sk	67.34	346	P	P	07 03 38.4	+0.8
	comp=Z,2.8nm,0.9s,baz=106,slow=3.6,SNR=4.1						
	comp=Z,2.8nm,0.9s						
NRIK	Noril'sk	67.34	346	P	P	07 03 39.1	+1.4
AB31	Akbulak array	69.02	320	P	P	07 03 50.4	+1.7
AB31				IAmb	IAmb	07 03 54.5	
	comp=Z,6.5nm,1.1s						
ABKAR	Akbulak array	69.02	320		P	07 03 51.0	+2.4
AKTO	Aktyubinsk	70.52	321	P	P	07 03 58.5	+0.7
	comp=Z,3.4nm,0.6s,baz=117,slow=5.7,SNR=9.5						
	comp=Z,3.4nm,0.6s						
M16K	Timber Creek	77.42	29	P	P	07 04 38.4	+0.4
J17K	VABM Dome	77.76	27	P	P	07 04 40.5	+0.6
C18K	Utukok River	77.96	21	P	P	07 04 40.9	-0.1
C18K				IAmb	IAmb	07 04 49.7	
	comp=Z,33nm,2.0s						
RAYN	Ar Rayn	78.00	293		P	07 04 40.8	-1.3
C19K	Lookout Ridge	78.63	21	P	P	07 04 44.8	+0.1
G19K	Purcell Mounta	79.05	24	P	P	07 04 47.3	+0.3
G19K				IAmb	IAmb	07 06 43.4	
	comp=Z,15nm,1.6s						
H19K	Roundabout Mou	79.22	25	P	P	07 04 48.6	+0.7
H19K				IAmb	IAmb	07 06 53.2	
	comp=Z,40nm,2.0s						
B20K	Meade River	79.63	20	P	P	07 04 50.4	+0.4
IMAR	Indian Mountai	80.38	24	P	P	07 04 55.0	+0.8
B21K	Ikpikpuk River	80.45	20	P	P	07 04 54.8	+0.4
B21K				IAmb	IAmb	07 05 04.5	
	comp=Z,34nm,2.0s						
B22K	Teshekpuk Lake	80.94	20	P	P	07 04 57.7	+0.7
BPAW	Bear Paw Mtn.	81.42	26	P	P	07 05 00.1	+0.3
ILAR	Eielson Array	83.20	26	P	P	07 05 06.7	-2.4
	comp=Z,0.9nm,0.7s,baz=235,slow=5.0,SNR=13						
	comp=Z,0.9nm,0.7s						
I26K	Coal Creek Min	84.76	25	IAmb	IAmb	07 05 24.5	
	comp=Z,22nm,1.6s						
I27K	Kandik River	85.38	25		P	07 05 20.2	0.0
BCAR	Beaver Creek A	85.55	27	P	P	07 05 19.8	-1.4
E28M	Babbage River	85.85	21		P	07 05 22.1	-0.4
E28M				IAmb	IAmb	07 05 29.5	
	comp=Z,22nm,1.9s						
I28M	Miner Creek	86.09	25		P	07 05 23.9	+0.1
BRTR	Keskin Array B	87.07	309	P	P	07 05 30.3	+1.1
	comp=Z,0.2nm,0.4s,baz=77,slow=6.4,SNR=2.3						
	comp=Z,0.2nm,0.4s						
BRTR	Keskin Array B	87.07	309	P	P	07 05 29.4	+0.1
FINES	FINESS Array B	88.64	332	P	P	07 05 36.9	+0.9
	comp=Z,5.6nm,1.0s,baz=67,slow=3.6,SNR=3.0						
	comp=Z,5.6nm,1.0s						
FINES	FINESS Array B	88.64	332	P	P	07 05 36.5	+0.5
YKAW3	Yellowknife Wh	97.50	24	P	P	07 06 15.6	-1.3
YKA	Yellowknife Ar	97.54	24	P	P	07 06 16.5	-0.5
	comp=Z,0.5nm,0.8s,baz=310,slow=6.0,SNR=2.6						
	comp=Z,0.5nm,0.8s						
CLL	Collm	98.48	324	*i* Pdif	Pdif	07 06 23.2	+1.7

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*IDC **15** 06:55:06.6±1.2, 32°.82S×178°.06W, h0^{km}, mb4.4/3, mbtmp4.4/4, ML4.1/1, Error ellipse: s-maj=47.3km s-min=27.2km az=146.0*

*WEL **15** 06:55:08.3±0.8, 33°S±6°×17°8W±1°5, h12^{km}, M4.6/13, mB4.8/6, ML4.9/15, MLv4.9/13, Mw(mB)4.1/6, Error ellipse: s-maj=20.6km s-min=4.1km az=107.8, confirmed*

ISC 15 06:55:08.4±0.9**, 32°.67S**±0°.07×**177°.7W**±0°.1**, h21^{km}, n39, σ1^{s}.70**/53**, mb4.5**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.40	357	P	Pn	06 55 58.5	-1.7
GLKZ				S	Sn	06 56 35.9	-4.0
WMGZ	Waiomatatini S	6.03	210	P	Pn	06 56 36.9	+0.6
WMGZ				S	Sn	06 57 46.2	+1.5
HAZ	Te Kaha	6.26	215	P	Pn	06 56 40.0	+0.5
HAZ				S	Sn	06 57 51.9	+1.4
PUZ	Puketiti	6.31	210	P	Pn	06 56 40.3	+0.1
PUZ				S	Sn	06 57 50.7	-0.9
RUGZ	Raukumara Rang	6.48	214	P	Pn	06 56 43.6	+1.0
RUGZ				S	Sn	06 57 54.6	-1.4
TWGZ	Tauwhareparae	6.51	211	P	Pn	06 56 44.7	+1.6
TWGZ				S	Sn	06 57 55.9	-0.8
CNGZ	Carnagh Statio	6.68	209	P	Pn	06 56 47.3	+2.0
MWZ	Matawai	6.85	213	P	Pn	06 56 48.0	+0.4
MWZ				S	Sn	06 58 03.9	-1.0
URZ	Urewera	6.99	216	Pn	Pn	06 56 46.3	-3.2
	4.0nm,0.3s,baz=338,slow=5.0,SNR=16						
URZ				Sn	Sn	06 58 05.5	-2.7
	6.7nm,0.3s,baz=264,slow=22,SNR=15						
	6.7nm,0.4s						
URZ	Urewera	6.99	216	P	Pn	06 56 49.7	+0.3
URZ				S	Sn	06 58 06.5	-1.7
RIGZ	Rimuhau	7.05	210	P	Pn	06 56 50.9	+0.5
RIGZ				S	Sn	06 58 08.9	-1.0
PRGZ	Paritu Road	7.18	208	P	Pn	06 56 52.9	+0.7
WCZ	Waipu Caves	7.32	241	P	Pn	06 56 55.5	+1.5
MUGZ	Murupara	7.32	216	P	Pn	06 56 52.7	-1.5
MUGZ				S	Sn	06 58 13.3	-3.3
KNZ	Kokohu	7.35	209	P	Pn	06 56 53.6	-0.9
KNZ				S	Sn	06 58 13.9	-3.4
MHGZ	Mahia Peninsul	7.37	207	P	Pn	06 56 56.3	+1.5
MHGZ				S	Sn	06 58 14.0	-3.8
RAHZ	Arahi	7.52	213	P	Pn	06 56 57.9	+1.0
RAHZ				S	Sn	06 58 18.8	-2.7
MTHZ	Maungataniwha	7.58	214	P	Pn	06 56 58.8	+1.1
OUZ	Omahuta	7.64	248	P	Pn	06 57 00.6	+2.1
BKZ	Black Stump Fm	8.00	214	P	Pn	06 57 03.8	+0.4
MCHZ	McNeill Hill	8.13	212	P	Pn	06 57 04.8	-0.4
KWHZ	Kaweka Forest	8.23	213	P	Pn	06 57 07.3	+0.6
KAHZ	Kahuranaki	8.34	210	P	Pn	06 57 06.7	-1.3
ETVZ	East Tongariro	8.36	218	P	Pn	06 57 08.4	-0.1
OTVZ	Oturere	8.40	218	P	Pn	06 57 08.7	-0.4
DZM	Mont Dzumac	17.56	303	P	P	06 59 15.8	+2.9
	8.1nm,0.9s,baz=109,slow=13,SNR=5.4						
CTA	Charters Tower	34.45	282	P	P	07 01 54.5	-0.2
	3.5nm,0.6s,baz=124,slow=9.7,SNR=5.8						
	3.5nm,0.6s						
ASAR	Alice Springs	43.26	269	P	P	07 03 07.7	-0.9
	3.7nm,0.8s,baz=109,slow=7.7,SNR=20						
	3.7nm,0.8s						
WRA	Warramunga Arr	44.45	274	P	P	07 03 17.1	-1.1
	6.5nm,0.7s,baz=116,slow=8.0,SNR=16						
	6.5nm,0.7s						
MKAR	Makanchi Array	119.39	309	PKP	PKiKP	07 13 56.7	+0.7
	0.5nm,0.9s,baz=88,slow=3.6,SNR=3.2						
KURBB	Kurchatov Arra	122.80	313	PKP	PKiKP	07 14 02.5	0.0
	0.7nm,0.8s,baz=90,slow=1.5,SNR=5.8						
BVAR	Borovoye Array	128.17	315	PKP	PKiKP	07 14 14.7	+1.6
	0.7nm,0.5s,baz=107,slow=5.0,SNR=4.0						
ARCES	ARCESS Array B	140.85	347	PKP	PKPdf	07 14 36.3	+0.5
	1.8nm,0.8s,baz=355,slow=3.2,SNR=2.2						
FINES	FINESS Array B	147.34	339	PKPbc	PKPab	07 14 51.2	-0.3
	2.8nm,0.5s,baz=44,slow=3.9,SNR=28						
NOA	NORSAR Array B	151.02	351	PKPbc	PKiKP	07 15 00.5	+0.9
	1.0nm,1.0s,baz=14,slow=2.4,SNR=3.5						
HFS	Hagfors	151.51	348	PKPbc	PKiKP	07 15 03.2	+2.7
	2.0nm,0.7s,baz=114,slow=3.6,SNR=1.7						
MMAI	Mount Meron Ar	152.22	280	PKPbc	PKiKP	07 15 03.9	+0.8
	1.2nm,0.3s,baz=80,slow=1.6,SNR=2.5						
AKASG	Malin Array Be	153.21	320	PKPbc	PKiKP	07 15 05.2	+0.8
	1.1nm,0.6s,baz=60,slow=1.8,SNR=5.1						
BRTR	Keskin Array B	153.81	295	PKPbc	PKiKP	07 15 07.5	+1.4
	1.4nm,0.9s,baz=140,slow=6.0,SNR=6.3						

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*TEH **15** 06:56:45.8, 36°.79N×45°.26E, h14^{km}±45^{km}*

*ISN **15** 06:56:48.8±2.3, 36°.70N×45°.20E, h25^{km}±20^{km}, ML2.8*

ISC 15 06:56:46.6±1.1**, 36°.79N**±0°.06×**45°.27E**±0°.05**, h10^{km}, n8, σ0^{s}.67**/11**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAHB	Mahabad	0.35	94	Pg	Pg	06 56 53.1	-0.4
MAHB				Sg	Sg	06 56 58.3	+0.1
IAZR	Azarshahr	1.05	32	Pg	Pg	06 57 06.4	-0.4
ISHB	Shabestar	1.51	10	Pg	Pn	06 57 13.2	-0.7
IKRK	Kirkuk	1.58	209	*e*Pg	Pn	06 57 14.0	-0.7
	baz=28						
IKRK				*e*Sg	Sb	06 57 36.0	0.0
IKRK				AML	AML	06 57 41.4	
	comp=E,151nm,0.6s						
IKRK				AML	AML	06 58 06.3	
	comp=N,139nm,0.5s						
ITBZ	Tabriz	1.60	25	Pg	Pn	06 57 14.7	-0.4
IHSH	Hashtrud	1.67	72	Pg	Pn	06 57 16.6	+0.4
MSL	Mosul	1.79	258	*e*Pn	Pn	06 57 18.0	+0.5
MSL				*e*Sn	Sn	06 57 41.0	+0.8
IHRS	Heris	2.07	42	Pn	Pn	06 57 22.6	+1.0

IDC 15 06:56:49.1±1.4**, 6°.54N×125°.19E, h0^{km}, mb3.5**/4**, mbtmp3.5**/4**, Error ellipse: s-maj=34.4km s-min=11.2km az=127.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.65	36	Pg	Pb	06 57 02.8	-0.6
	590nm,0.3s,baz=261,slow=3.8,SNR=5.3						
DAV				Lg	Lg	06 57 10.2	
	2µm,0.3s,baz=245,slow=1.0,SNR=19						
WRA	Warramunga Arr	27.81	161	P	P	07 02 40.1	-0.1
	0.3nm,0.5s,baz=342,slow=10.0,SNR=1.3						
	0.3nm,0.5s						
MKAR	Makanchi Array	54.39	325	P	P	07 06 17.9	0.0
	0.1nm,0.4s,baz=124,slow=7.2,SNR=1.8						
	0.1nm,0.4s						
KURBB	Kurchatov Arra	58.56	327	P	P	07 06 47.2	-0.4
	0.4nm,0.7s,baz=126,slow=5.9,SNR=2.8						
	0.4nm,0.7s						
ILAR	Eielson Array	83.24	26	P	P	07 09 17.1	-0.2
	0.4nm,0.7s,baz=247,slow=5.1,SNR=9.9						
	0.4nm,0.7s						

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*IDC **15** 06:58:07.1±0.7, 6°.54N×125°.18E, h0^{km}, mb4.1/14, mbtmp4.1/14, Error ellipse: s-maj=16.9km s-min=8.9km az=124.0*

*NEIC **15** 06:58:09.5±1.1, 6°.60N±0°.07×125°.20E±0°.08, h10^{km}±1^{km}, mb4.6/27, Error ellipse: s-maj=16.3km s-min=4.4km az=130.0*

ISC 15 06:58:08.9±0.5**, 6°.60N**±0°.06×**125°.21E**±0°.10**, h10^{km}, n52, σ0^{s}.70**/48**, mb4.5**/28**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.59	38	Pg	Pg	06 58 21.3	+0.8
	1µm,0.3s,baz=273,slow=5.3,SNR=9.5						
DAV				Lg	Lg	06 58 27.9	
	6µm,0.3s,baz=258,slow=3.5,SNR=16						
DAV	Davao City (W)	0.59	38		Pg	06 58 21.0	+0.5
TNTI	Ternate	6.17	160	Pn	Pn	06 59 40.8	+0.5
TOLI2	Tolitoli	7.02	219	Pn	Pn	06 59 49.9	-1.9
KAPI	Kappang	12.76	205	Pn	Pn	07 01 16.9	+6.4
	1.7nm,0.3s,baz=47,slow=11,SNR=5.5						
JAGI	Jajag, Banyuwa	18.59	217		P	07 02 26.6	+0.2
JAGI				IAmb	IAmb	07 02 33.4	
	comp=Z,38nm,1.0s						
MTN	Manton Dam	20.19	163	P	P	07 02 44.0	0.0
KNRA	Kununurra	22.41	171		P	07 03 08.0	+0.1
PMG	Port Moresby	27.04	126	P	P	07 03 50.6	-1.0
COEN	Coen	27.11	139	P	P	07 03 52.1	-0.2
COEN				IAmb	IAmb	07 04 03.6	
	comp=Z,15nm,1.1s						
WB0	Warramunga Arr	27.71	161	P	P	07 03 58.4	+0.7
WB0				IAmb	IAmb	07 04 12.6	
	comp=Z,11nm,1.1s						
WRAB	Tennant Creek	27.86	161	P	P	07 03 58.7	-0.2
WRAB				IAmb	IAmb	07 04 12.2	
	comp=Z,15nm,1.3s						
WRA	Warramunga Arr	27.86	161	P	P	07 03 57.7	-1.2
	comp=Z,2.0nm,0.7s,baz=338,slow=8.8,SNR=4.8						
	comp=Z,2.0nm,0.7s						
WRA	Warramunga Arr	27.86	161	P	P	07 03 56.7	-2.2
WR8	Warramunga Arr	27.92	161	P	P	07 03 58.8	-0.8
WR8				IAmb	IAmb	07 04 14.1	
	comp=Z,7.1nm,0.8s						
MBWA	Marble Bar	28.10	191	P	P	07 04 01.4	+0.3
MBWA				IAmb	IAmb	07 04 08.0	
	comp=Z,17nm,1.3s						
CMAR	Chiang Mai Arr	28.18	297	P	P	07 04 02.1	+0.2
	comp=Z,0.9nm,0.3s,baz=116,slow=8.9,SNR=6.9						
	comp=Z,0.9nm,0.3s						
CMAR	Chiang Mai Arr	28.18	297	P	P	07 04 01.9	0.0
KSRS	Korea Array	30.81	4	P	P	07 04 24.1	-0.9
	comp=Z,2.3nm,0.9s,baz=182,slow=9.1,SNR=7.2						
	comp=Z,2.3nm,0.9s						
AS31	Alice Springs	31.25	165	P	P	07 04 28.4	-0.7
ASAR	Alice Springs	31.25	165	P	P	07 04 27.8	-1.3
	comp=Z,1.5nm,0.6s,baz=354,slow=8.5,SNR=7.8						
	comp=Z,1.5nm,0.6s						
CTAO	Charters Tower	33.64	142	P	P	07 04 50.6	+0.6
CTAO				IAmb	IAmb	07 04 58.4	
	comp=Z,10nm,1.2s						
FORT	Forrest	37.26	176	P	P	07 05 20.3	-0.7
USRK	Ussuriysk Ar.	37.92	8	P	P	07 05 26.9	+0.4
	comp=Z,3.4nm,0.7s,baz=173,slow=7.3,SNR=5.7						
	comp=Z,3.4nm,0.7s						
BBOO	Buckleboo	40.52	166		P	07 05 48.2	-0.1
BBOO				IAmb	IAmb	07 05 53.3	
	comp=Z,12nm,0.8s						
STKA	Stephens Creek	41.33	159	P	P	07 05 54.7	-0.3
	comp=Z,4.6nm,0.7s,baz=340,slow=9.3,SNR=8.8						
	comp=Z,4.6nm,0.7s						
STKA	Stephens Creek	41.33	159	P	P	07 05 55.0	0.0
HIA	Hailar	42.77	355	P	P	07 06 05.6	-1.1
HIA				IAmb	IAmb	07 06 24.5	
	comp=Z,8.8nm,0.9s						
SONM	Songino Array	44.12	342	P	P	07 06 17.6	0.0
	comp=Z,0.3nm,0.4s,baz=171,slow=10,SNR=2.6						
	comp=Z,0.3nm,0.4s						
PETK	Petropavlovsk-	53.40	24	P	P	07 07 29.3	+0.6
	comp=Z,4.5nm,0.9s,baz=226,slow=12,SNR=4.9						
	comp=Z,4.5nm,0.9s						
PETK	Petropavlovsk-	53.40	24	P	P	07 07 28.6	-0.1
MKAR	Makanchi Array	54.35	325	P	P	07 07 36.3	+0.4
	comp=Z,1.2nm,0.5s,baz=120,slow=7.7,SNR=15						
	comp=Z,1.2nm,0.5s						
MKAR	Makanchi Array	54.35	325	P	P	07 07 35.9	-0.1
ZALV	Zalesovo Beam	57.36	333	P	P	07 07 55.7	-1.6
	comp=Z,0.6nm,0.5s,baz=122,slow=5.6,SNR=4.4						
	comp=Z,0.6nm,0.5s						
ZALV	Zalesovo Beam	57.36	333	P	P	07 07 55.9	-1.4
MANEM	Manem	57.41	311	P	P	07 07 58.0	-0.3
MANEM				IAmb	IAmb	07 08 11.4	
	comp=Z,9.8nm,1.1s						
ARSB	Arslanbob	57.77	315	P	P	07 08 01.1	+0.5
ARSB				IAmb	IAmb	07 08 03.9	
	comp=Z,9.4nm,1.4s						
DRK	Karamyk	57.96	313	P	P	07 08 02.4	+0.3
DRK				IAmb	IAmb	07 08 06.7	
	comp=Z,6.9nm,1.1s						
KURBB	Kurchatov Arra	58.53	327	P	P	07 08 05.3	-0.2
	comp=Z,2.7nm,0.7s,baz=125,slow=6.0,SNR=23						
	comp=Z,2.7nm,0.7s						
KURK	Kurchatov	58.53	327		P	07 08 05.4	-0.1
KURK				IAmb	IAmb	07 08 06.0	
	comp=Z,4.0nm,0.8s						
GAR	Garm	58.89	312	P	P	07 08 08.4	-0.1
KK31	Karatay Array	60.12	316		P	07 08 16.6	-0.1
KK31				IAmb	IAmb	07 08 17.8	
	comp=Z,4.0nm,0.8s						
KKAR	Karatay Array	60.12	316		P	07 08 16.9	+0.1
BVAR	Borovoye Array	64.11	327	P	P	07 08 42.5	-0.8
	comp=Z,2.2nm,0.8s,baz=120,slow=8.8,SNR=7.8						
	comp=Z,2.2nm,0.8s						
BORK	Borovoye	64.16	327	P	P	07 08 43.7	+0.1
BORK				IAmb	IAmb	07 08 44.2	
	comp=Z,3.6nm,0.8s						
AB31	Akbulak array	68.99	320		P	07 09 14.4	-0.2
NIKH	Nikolski High	70.37	36	P	P	07 09 22.3	-0.7
E22K	Anaktuvuk Pass	81.30	22	P	P	07 10 24.6	-0.6
E22K				IAmb	IAmb	07 10 30.1	
	comp=Z,12nm,1.4s						
ILAR	Eielson Array	83.18	26	P	P	07 10 36.0	+0.8
	comp=Z,0.7nm,0.8s,baz=242,slow=5.6,SNR=4.8						
	comp=Z,0.7nm,0.8s						
ILAR	Eielson Array	83.18	26	P	P	07 10 35.4	+0.3
I27K	Kandik River	85.36	25		P	07 10 46.9	+0.6
BRTR	Keskin Array B	87.04	309	P	P	07 10 56.8	+1.6
	comp=Z,0.5nm,0.7s,baz=96,slow=4.5,SNR=2.6						
	comp=Z,0.5nm,0.7s						

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*IDC **15** 06:59:21.4±0.9, 6°.60N×125°.03E, h0^{km}, mb4.1/10, mbtmp4.1/10, Error ellipse: s-maj=20.3km s-min=10.8km az=134.0*

*NEIC **15** 06:59:23.2±0.6, 6°.68N±0°.08×125°.15E±0°.07, h10^{km}±1^{km}, mb4.5/13, Error ellipse: s-maj=15.9km s-min=7.2km az=321.0*

ISC 15 06:59:22.7±0.6**, 6°.65N**±0°.06×**125°.1E**±0°.1**, h10^{km}, n29, σ0^{s}.75**/29**, mb4.2**/17**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.60	46	Pg	Pb	06 59 35.1	-0.3
	baz=318,slow=11						
DAV				Lg	Lg	06 59 45.6	
	709nm,0.3s,baz=155,slow=22,SNR=6.9						
DAV	Davao City (W)	0.60	46		Pg	06 59 34.4	0.0
TNTI	Ternate	6.25	159	Pn	Pn	07 00 55.5	+0.4
LUWI	Luwuk	8.00	197	Pn	Pn	07 01 19.6	+0.4
SAUI	Saumlaki	15.78	157	Pn	Pn	07 03 05.2	-0.1
KNRA	Kununurra	22.48	171	P	P	07 04 22.2	-0.2
PMG	Port Moresby	27.13	126	P	P	07 05 05.5	-0.7
PMG				IAmb	IAmb	07 05 13.1	
	comp=Z,12nm,0.9s						
COEN	Coen	27.20	139	P	P	07 05 06.6	-0.3
COEN				IAmb	IAmb	07 05 13.0	
	comp=Z,11nm,0.8s						
WB0	Warramunga Arr	27.79	161	P	P	07 05 11.7	-0.4
WB0				IAmb	IAmb	07 05 26.1	
	comp=Z,8.4nm,1.1s						
WRA	Warramunga Arr	27.94	161	P	P	07 05 13.6	+0.1
	comp=Z,2.2nm,1.0s,baz=338,slow=9.6,SNR=1.6						
	comp=Z,2.2nm,1.0s						
WRA	Warramunga Arr	27.94	161	P	P	07 05 12.7	-0.8
WR8	Warramunga Arr	28.00	161	P	P	07 05 14.0	0.0
WR8				IAmb	IAmb	07 05 18.0	
	comp=Z,16nm,1.4s						
AS31	Alice Springs	31.33	164		P	07 05 43.1	-0.5
ASAR	Alice Springs	31.33	164	P	P	07 05 43.2	-0.3
	comp=Z,2.0nm,0.8s,baz=342,slow=8.7,SNR=2.5						
	comp=Z,2.0nm,0.8s						
BJT	Baijiatuau	34.18	348	P	P	07 06 07.7	-0.6
BJT				IAmb	IAmb	07 06 11.6	
	comp=Z,6.0nm,0.8s						
USRK	Ussuriysk Ar.	37.88	8	P	P	07 06 41.7	+1.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,4.2nm,0.8s,baz=169,slow=8.2,SNR=4.7						
	comp=Z,4.2nm,0.8s						
BBOO	Buckleboo	40.60	166	P	P	07 07 02.8	0.0
BBOO				IAmb	IAmb	07 07 14.2	
	comp=Z,11nm,1.1s						
STKA	Stephens Creek	41.41	159	P	P	07 07 10.3	+0.9
	comp=Z,2.8nm,0.5s,baz=325,slow=9.3,SNR=4.1						
	comp=Z,2.8nm,0.5s						
STKA	Stephens Creek	41.41	159	P	P	07 07 10.6	+1.1
PETK	Petropavlovsk-	53.37	24	P	P	07 08 43.7	+1.3
	comp=Z,5.5nm,0.9s,baz=223,slow=7.9,SNR=3.0						
	comp=Z,5.5nm,0.9s						
PETK	Petropavlovsk-	53.37	24	P	P	07 08 43.0	+0.6
MKAR	Makanchi Array	54.27	325	P	P	07 08 49.8	+0.7
	comp=Z,0.7nm,0.6s,baz=122,slow=7.7,SNR=2.2						
	comp=Z,0.7nm,0.6s						
KURBB	Kurchatov Arra	58.44	327	P	P	07 09 18.4	-0.3
	comp=Z,1.6nm,0.8s,baz=126,slow=6.2,SNR=5.1						
	comp=Z,1.6nm,0.8s						
KURK	Kurchatov	58.44	327	P	P	07 09 18.7	0.0
KK31	Karatay Array	60.03	316	P	P	07 09 29.4	-0.6
KK31				IAmb	IAmb	07 09 33.3	
	comp=Z,5.3nm,1.1s						
KKAR	Karatay Array	60.03	316	P	P	07 09 29.2	-0.8
BVAR	Borovoye Array	64.02	327	P	P	07 09 57.5	+0.9
	comp=Z,1.6nm,1.0s,baz=120,slow=8.5,SNR=1.8						
	comp=Z,1.6nm,1.0s						
ILAR	Eielson Array	83.16	26	P	P	07 11 47.9	-0.9
	comp=Z,1.3nm,0.9s,baz=240,slow=6.5,SNR=6.0						
	comp=Z,1.3nm,0.9s						
YKA	Yellowknife Ar	97.49	24	P	P	07 12 55.6	-1.2
	comp=Z,0.6nm,1.1s,baz=297,slow=5.4,SNR=2.7						
	comp=Z,0.6nm,1.1s						

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*IDC **15** 07:07:37.4±1.0, 7°.01N×126°.36E, h0^{km}, mb3.5/6, mbtmp3.5/6, Error ellipse: s-maj=23.2km s-min=10.5km az=8.0*

ISC 15 07:07:38.9±1.1, **6°.9N**±0°.2×**126°.1E**±0°.2, **h10**^{km}, **n7**, σ**0^s.39**/7, **mb3.5**/6, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.56	284	Pg	Pn	07 07 53.0	+0.1
	3μm,0.3s,baz=254,slow=3.4,SNR=37						
DAV				Lg	Lg	07 08 03.3	
	726nm,0.3s,baz=103,slow=18,SNR=17						
WRA	Warramunga Arr	27.91	163	P	P	07 13 29.7	+0.4
	0.4nm,0.5s,baz=330,slow=11,SNR=4.8						
	0.4nm,0.5s						
ASAR	Alice Springs	31.35	166	P	P	07 13 59.6	-0.2
	0.2nm,0.5s,baz=345,slow=8.2,SNR=7.8						
	0.2nm,0.5s						
MKAR	Makanchi Array	54.60	324	P	P	07 17 07.2	-0.5
	0.5nm,0.7s,baz=123,slow=8.1,SNR=4.0						
	0.5nm,0.7s						
KURBB	Kurchatov Arra	58.74	327	P	P	07 17 37.1	+0.2
	0.5nm,0.6s,baz=124,slow=6.5,SNR=5.8						
	0.5nm,0.6s						
BVAR	Borovoye Array	64.33	326	P	P	07 18 15.0	+0.3
	0.3nm,0.5s,baz=134,slow=6.2,SNR=1.7						
	0.3nm,0.5s						
ILAR	Eielson Array	82.49	26	P	P	07 20 01.6	+0.1
	0.2nm,0.8s,baz=221,slow=3.6,SNR=4.5						
	0.2nm,0.8s						

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*IDC **15** 07:08:58.6±1.0, 6°.22N×125°.34E, h0^{km}, mb3.8/6, mbtmp3.8/6, Error ellipse: s-maj=33.2km s-min=11.5km az=101.0*

ISC 15 07:08:59.9±1.1, **6°.2N**±0°.1×**125°.4E**±0°.3, **h10**^{km}, **n7**, σ**1^s.62**/7, **mb3.8**/6, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.88	14	Pg	Pb	07 09 16.3	-1.0
	777nm,0.3s,baz=76,slow=18,SNR=2.1						
DAV				Lg	Lg	07 09 26.7	
	1μm,0.3s,baz=61,slow=22,SNR=7.4						
WRA	Warramunga Arr	27.45	161	P	P	07 14 46.8	+0.5
	1.3nm,0.9s,baz=342,slow=8.7,SNR=5.3						
	1.3nm,0.9s						
ASAR	Alice Springs	30.84	165	P	P	07 15 15.1	-1.4
	0.4nm,0.6s,baz=360,slow=7.8,SNR=1.7						
	0.4nm,0.6s						
MKAR	Makanchi Array	54.76	325	P	P	07 18 30.0	+0.2
	0.6nm,0.6s,baz=111,slow=7.9,SNR=4.0						
	0.6nm,0.6s						
KURBB	Kurchatov Arra	58.93	327	P	P	07 18 60.0	+0.6
	1.0nm,0.4s,baz=124,slow=6.5,SNR=6.0						
	1.0nm,0.4s						
BVAR	Borovoye Array	64.51	327	P	P	07 19 35.6	-1.4
	0.8nm,0.7s,baz=126,slow=7.5,SNR=5.0						
	0.8nm,0.7s						
ILAR	Eielson Array	83.46	26	P	P	07 21 29.8	+2.2
	0.5nm,0.8s,baz=239,slow=5.1,SNR=5.3						
	0.5nm,0.8s						

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*BJI **15** 07:09:14.7, 6°.00N×125°.63E, h10^{km}, mB6.3/14, mb5.3/88, Ms5.7/42, Ms7 5.5/44*

*MOS **15** 07:09:18.5±1.0, 6°.51N×125°.34E, h14^{km}, mb5.8/78, MS5.5/5, Error ellipse: s-maj=8.2km s-min=4.0km az=113.3*

*MAN **15** 07:09:20.9, 6°.57N×125°.33E, h8^{km}, mb6.0, ML5.1, MS5.6*

MAN INTENSITY IV - KIDAPAWAN CITY AND M"LANG COTABATO; INTENSITY III - DAVAO CITY; INTENSITY II - DAMULOG KADINGILAN KALILANGAN AND PANGANTUCAN BUKIDNON; INTENSITY I - CAGAYAN DE ORO CITY.

*NEIC **15** 07:09:20.9±1.7, 6°.53N±0°.06×125°.26E±0°.07, h10^{km}±1^{km}, mb5.7/340, Mww5.6/32, Error ellipse: s-maj=12.6km s-min=10.2km az=66.0*

*GFZ **15** 07:09:21.3, 6°.54N×125°.43E, h22^{km}, MW5.6, Moment Tensor Solution. s74 Moment tensor: M$_{rr}$-0.70; M$_{\theta\theta}$2.69; M$_{\phi\phi}$-1.98; M$_{r\theta}$-0.79; M$_{\theta\phi}$-0.99; M$_{\phi r}$-0.21; Fault plane solution: NP1:φ$_s$327.00000°,δ72.00000°,λ-1.00000°. NP2:φ$_s$57.00000°,δ88.00000°,λ-16.00000°. Principal axes: T 3.0300, Plg11.0000°, Azm191.0000°; N -0.7600, Plg72.0000°, Azm63.0000°; P -2.2700, Plg14.0000°, Azm283.0000°;*

*NEIC **15** 07:09:21.3, 6°.53N×125°.31E, h16^{km}*

*IDC **15** 07:09:21.3±1.6, 6°.44N×125°.36E, h22^{km}±9^{km}, mb5.0/35, mbtmp5.1/36, ML5.2/1, MS5.3/17, Error ellipse: s-maj=15.5km s-min=8.8km az=81.0*

*NEIC **15** 07:09:21.3, 6°.53N×125°.41E, h16^{km}, Moment Tensor Solution. Duration: 3^s.3 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.32; M$_{\theta\theta}$3.04; M$_{\phi\phi}$-2.72; M$_{r\theta}$-0.58; M$_{\theta\phi}$-0.85; M$_{\phi r}$0.53; Fault plane solution: M$_0$3.12000×10^{17} NP1: φ$_s$233.06000°,δ75.72000°,λ179.66000°. NP2: φ$_s$323.15000°,δ89.67000°,λ14.28000°. Principal axes: T 3.2832, Plg10.0000°, Azm189.0000°; N -0.3611, Plg76.0000°, Azm324.0000°; P -2.9221, Plg10.0000°, Azm97.0000°;*

*GCMT **15** 07:09:23.9±0.3, 6°.47N±0°.02×125°.20E±0°.02, h26^{km}±1^{km}, MW5.8/103, Moment Tensor Solution. s7,c9; s103,c159; Duration: 2^s.0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.62±.32; M$_{\theta\theta}$3.93±.18; M$_{\phi\phi}$-5.55±.24; M$_{r\theta}$-4.33±.66; M$_{\theta\phi}$-1.34±.16; M$_{\phi r}$0.85±.49; Best double couple: M$_0$6.59800×10^{17} NP1:φ$_s$226.00000°,δ63.00000°,λ154.00000°. NP2:φ$_s$329.00000°,δ67.00000°,λ30.00000°. Principal axes: T 7.4490, Plg37.0000°, Azm189.0000°; N -1.7020, Plg53.0000°, Azm3.0000°; P -5.7470, Plg3.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **15** 07:09:26.8±0.3, 6°N±2°×12°5E±°, h42^{km}±3^{km}, M6.0/111, mB6.3/70, mb5.7/111, MLv6.1/11, Mw(mB)6.0/70*

ISC 15 07:09:20.9±0.4, **6°.49N**±0°.02×**125°.35E**±0°.03, **h16**^{km}±2^{km}, **h16**^{km}**:pP-P**, **n1289**, σ**1^s.61**/1215, **mb5.7**/324, **MS5.4**/34, **36C-21D**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.62	22	Pg	Pb	07 09 33.4	-0.1
	11μm,0.3s,baz=141,slow=1.5,SNR=81						
DAV				Lg	Lg	07 09 42.4	
	60μm,0.3s,baz=142,slow=17,SNR=14						
DAV	Davao City (W)	0.62	22	P	Pb	07 09 33.6	+0.1
DAV				S	Sn	07 09 43.8	-1.1
DAV	Davao City (W)	0.62	22		Pb	07 09 33.0	-0.5
DAV	Davao City (W)	0.62	22	P	Pb	07 09 33.6	+0.1
DAV	Davao City (W)	0.62	22	S	Sb	07 09 43.6	+1.6
DAV	Davao City (W)	0.62	22	P	Pg	07 09 31.0	-2.2
SGSI	Sangihe	2.79	176	P	Pn	07 10 06.9	+1.9
SGSI				S	Sb	07 10 41.9	-2.5
GAMI	Galela, Maluku	5.22	152	P	Pn	07 10 41.3	+2.9
	15nm21μm2μm,0.7s						
GAMI				S	Sn	07 11 42.3	+3.9
	15nm21μm2μm,0.7s						
TNTI	Ternate	6.03	160		Pn	07 10 52.9	+3.4
TNTI	Ternate	6.03	160	P	Pn	07 10 53.5	+4.0
TNTI	Ternate	6.03	160	P	Pn	07 10 52.3	+2.8
	773nm,0.8s						
TNTI				S	Sn	07 12 00.7	+2.5
	773nm,0.8s						
GTOI	Gorontalo	6.26	202	P	Pn	07 10 53.4	+0.7
GTOI				S	Sn	07 12 04.2	+0.2
MRSI	Marisa	6.87	210	P	Pn	07 11 01.9	+0.8
MRSI				S	Sn	07 12 19.6	+0.6
TOLI2	Tolitoli	7.02	221	Pn	Pn	07 11 02.5	-0.6
TOLI2	Tolitoli	7.02	221	P	Pn	07 11 02.7	-0.4
LUWI	Luwuk	7.91	199		Pn	07 11 17.1	+1.8
LUWI	Luwuk	7.91	199	P	Pn	07 11 20.0	+4.7
LUWI	Luwuk	7.91	199	P	Pn	07 11 20.1	+4.7
LUWI				S	Sn	07 12 45.7	+1.1
MPSI	Mapaga	8.18	222	P	Pn	07 11 19.2	+0.2
	274nm,0.8s						
APSI	Ampana	8.22	207	P	Pn	07 11 23.3	+3.6
TARAI	Tarakan	8.36	248	P	Pn	07 11 25.0	+3.5
	1μm,0.8s						
SANI	Sanana	8.50	176	P	Pn	07 11 24.3	+0.8
SANI	Sanana	8.50	176	P	Pn	07 11 24.1	+0.6
	10μm483nm,0.7s						
TGY	Tagaytay City	8.72	331	Pn	Pn	07 11 27.1	+0.5
	25nm,0.3s,baz=212,slow=19,SNR=1.2						
	108nm,0.3s						
KKM	Kota Kinabalu	9.09	268		Pn	07 11 31.5	-0.1
KKM	Kota Kinabalu	9.09	268	P	Pn	07 11 35.0	+3.4
KKM	Kota Kinabalu	9.09	268	P	Pn	07 11 35.3	+3.7
	240nm,1.1s						
PCI	Palu	9.17	217	P	Pn	07 11 35.4	+2.7
	24μm419nm,1.1s						
I39PW	PALAU INFRASON	9.19	83	I	I	08 02 36.0	
	baz=268,slow=313,SNR=1.5						
SWI	Sorong	9.39	141	P	Pn	07 11 39.6	+3.9
NLAI	Namlea	9.82	170	P	Pn	07 11 42.9	+1.3
	842nm,0.8s						
KRAI	Karang Ratu	10.21	163	P	Pn	07 11 49.5	+2.6
	6μm348nm,1.2s						
MSAI	Masohi	10.40	160	P	Pn	07 11 52.5	+2.9
	399nm,1.2s						
AAI	Ambon	10.50	164	P	Pn	07 11 53.1	+2.2
	397nm,0.9s						
KDI	Kendari	10.73	195	P	Pn	07 11 56.4	+2.4
TTSI	Tana Toraja	10.96	210	P	Pn	07 11 59.8	+2.6
	7μm693nm,1.4s						
MMSI	Mamuju	11.15	215	P	Pn	07 12 02.0	+2.1
KKSI	Kolaka, Sulawe	11.21	199	P	Pn	07 12 04.0	+3.3
	529nm,1.2s						
MWPI	Manokwari, Pap	11.38	130	P	Pn	07 12 09.0	+6.0
	507nm,1.3s						
BKB	Balikpapan	11.42	228		Pn	07 12 02.5	-1.0
BKB	Balikpapan	11.42	228	P	Pn	07 12 05.0	+1.5
BKB	Balikpapan	11.42	228	S	Sn	07 14 11.7	+0.9
BKB	Balikpapan	11.42	228	P	Pn	07 12 03.6	+0.1
	397nm,1.0s						
FAKI	Fak Fak	11.61	143		Pn	07 12 08.5	+2.3
FAKI	Fak Fak	11.61	143	P	Pn	07 12 09.7	+3.6
FAKI	Fak Fak	11.61	143	P	Pn	07 12 09.8	+3.6
	265nm,1.1s						
SPSI	Sidrap Palu	11.78	208	P	Pn	07 12 12.0	+3.5
	6μm164nm,1.0s						
PMSI	Majene	11.82	213	P	Pn	07 12 12.6	+3.6
	428nm,1.7s						
BNDI	Bandanaira	11.85	157	P	Pn	07 12 12.3	+2.9
BNDI	Bandanaira	11.85	157	P	Pn	07 12 13.0	+3.6
	16μm636nm,1.4s						
RKPI	Ransiki, Papua	11.87	132	P	Pn	07 12 12.9	+3.2
	465nm,1.0s						
SZP	Santa	11.99	337	P	Pn	07 12 13.3	+2.0
BNSI	Bone	12.01	206	P	Pn	07 12 15.2	+3.6
	12μm436nm,1.3s						
KAPI	Kappang	12.72	206	Pn	Pn	07 12 25.1	+3.8
	6.3nm,0.3s,baz=27,slow=8.5,SNR=75						
KAPI	Kappang	12.72	206	P	Pn	07 12 22.5	+1.3
KAPI				S	Sn	07 14 46.8	+4.2
KAPI	Kappang	12.72	206		Pn	07 12 22.3	+1.0
KAPI	Kappang	12.72	206	P	Pn	07 12 25.0	+3.8
KAPI	Kappang	12.72	206	P	Pn	07 12 24.5	+3.2
KAPI	Kappang	12.72	206	*c i*P	Pn	07 12 22.7	+1.4
MTKI	Muara Teweh, K	12.78	235	P	Pn	07 12 25.4	+3.3
	460nm,0.5s						
BKSI	Bulukumba	12.84	204	P	Pn	07 12 25.6	+2.7
	14μm373nm,1.5s						
KMPI	Kaimana, Papua	13.09	140	P	Pn	07 12 29.8	+3.5
	442nm,1.3s						
BAKI	Biak	13.18	125	P	Pn	07 12 32.1	+4.6
	542nm,2.4s						
SRPI	Serui, Papua	13.68	127	P	P	07 12 39.4	-3.8
	261nm,0.9s						
SBUM	Sibu	13.68	254		Pn	07 12 35.1	+0.7
SBUM	Sibu	13.68	254	P	Pn	07 12 38.7	+4.2
SBUM	Sibu	13.68	254	P	Pn	07 12 38.2	+3.7
	256nm,1.3s						
BBKI	Banjar Baru	14.41	227	P	Pn	07 12 46.0	+1.5
	17μm550nm,1.2s						
MMRI	Maumere	15.34	192		Pn	07 12 59.0	+2.1
MMRI	Maumere	15.34	192	P	Pn	07 12 59.3	+2.3
MMRI	Maumere	15.34	192	P	Pn	07 12 59.2	+2.3
	13μm350nm,0.9s						
SAUI	Saumlaki	15.55	157		Pn	07 12 59.8	0.0
SAUI				IAmb	IAmb	07 13 09.0	
	comp=Z,339nm,0.7s						
SAUI	Saumlaki	15.55	157	P	Pn	07 13 01.8	+2.1
SAUI	Saumlaki	15.55	157	P	P	07 13 03.3	-0.7
	comp=Z,912nm,1.1s						
EDFI	Ende, Flores	15.57	194	P	Pn	07 13 01.0	+1.0
SMPI	Sarmi	15.78	122	P	P	07 13 05.6	-0.9
	comp=Z,371nm,1.8s						
LBFI	Labuhan Bajo,	15.83	200	P	P	07 13 05.6	-1.5
	comp=Z,16μmcomp=Z,607nm,1.9s						
SOEI	Soe	16.17	184		P	07 13 10.4	-0.5
SOEI				IAmb	IAmb	07 13 12.3	
	comp=Z,737nm,1.4s						
SOEI	Soe	16.17	184	P	P	07 13 10.3	-0.7
SOEI	Soe	16.17	184	P	P	07 13 10.3	-0.7
	comp=Z,16μmcomp=Z,998nm,1.5s						
DBNI	Kabupaten Domp	16.46	205	P	P	07 13 14.4	+0.3
	comp=Z,9μmcomp=Z,280nm,1.3s						
BATI	Baumata	16.67	186	Pn	P	07 13 16.4	0.0
	comp=Z,15nm,0.3s,baz=110,slow=1.7,SNR=27						
BATI				Sn	Sn	07 16 17.2	-1.8
	comp=Z,5.1nm,0.3s,baz=180,slow=2.0,SNR=1.3						
BATI				LR	LR	07 20 46.1	
	comp=Z,9μm,18.8s,baz=253,slow=41						
BATI	Baumata	16.67	186	P	P	07 13 16.3	-0.1
	comp=Z,8μmcomp=Z,704nm,1.0s						
TWGBT	Beinan	16.75	346	P	P	07 13 16.9	-0.3
TWG	Pinlang	16.75	346		Pn	07 13 14.9	-0.2
WSI	Waingapu	16.82	197	P	P	07 13 18.2	+0.2
	comp=Z,17μmcomp=Z,751nm,1.7s						
PLAI	Plampang	16.98	206	P	P	07 13 21.2	+1.4
PLAI	Plampang	16.98	206	P	P	07 13 21.4	+1.6
	comp=Z,12μmcomp=Z,786nm,1.5s						
WBSI	Waikabubak, Su	17.08	200	P	P	07 13 21.4	+0.4
	comp=Z,17μmcomp=Z,666nm,1.4s						
YULB	Yu-li	17.25	347		Pn	07 13 20.4	-1.0
YULB	Yu-li	17.25	347	P	Pn	07 13 21.4	0.0
BASI	Baing, Sumba	17.26	196	P	P	07 13 23.2	+0.3
	comp=Z,11μmcomp=Z,437nm,1.9s						
TWSI	Taliwang, Sumb	17.32	209	P	P	07 13 25.5	+1.9
	comp=Z,14μmcomp=Z,898nm,1.3s						
TPUB	Ta-pu	17.32	345		Pn	07 13 21.8	-0.5
TPUB	Ta-pu	17.32	345	P	P	07 13 24.6	+1.0
GENI	Genyem	17.33	121	P	P	07 13 23.4	-0.3
GENI	Genyem	17.33	121	P	P	07 13 27.1	+3.4
KLNI	Mataram	17.45	212	P	P	07 13 26.3	+1.3
	comp=Z,16μmcomp=Z,572nm,2.1s						
DLV	Lat	17.50	289	P	P	07 13 28.2	+2.4
KMMI	Kalianget	17.60	220	P	P	07 13 29.0	+2.3
	comp=Z,15μmcomp=Z,862nm,2.2s						
KHKI	Kahang-Kahang	17.66	213	P	P	07 13 29.4	+2.0
	comp=Z,8μmcomp=Z,340nm,1.0s						
JAY	Jayapura	17.75	120	P	P	07 13 29.9	+1.5
	comp=Z,38nm,0.9s,baz=260,slow=3.1,SNR=6.0						
JAY				LR	LR	07 20 33.6	
	comp=Z,4μm,18.9s,baz=324,slow=38						
JAY	Jayapura	17.75	120	P	P	07 13 31.2	+2.8
JAY	Jayapura	17.75	120	P	P	07 13 30.0	+1.5
NACB	Ninganchiao	17.95	349	P	Pn	07 13 29.4	-0.7
NACB	Ninganchiao	17.95	349	P	P	07 13 33.1	+2.6
ABJI	Asem Bagus	18.00	218	P	P	07 13 32.7	+1.6
	comp=Z,9μmcomp=Z,321nm,1.1s						
YOJ	Yonaguni jima	18.01	353	P	P	07 13 32.5	+1.3
YOJ				pmax	pmax		
	comp=Z,175nm,1.8s						
RTBI	Rangdo, Negare	18.11	215	P	P	07 13 35.1	+2.7
	comp=Z,14μmcomp=Z,989nm,1.5s						
DNP	Denpasar	18.14	214	P	P	07 13 36.0	+3.4
	comp=Z,712nm,1.4s						
IGBI	Denpasar	18.29	214	P	P	07 13 36.9	+2.6
	comp=Z,18μmcomp=Z,936nm,1.3s						
BLJI	Banyuglugur	18.36	220	P	P	07 13 37.1	+2.0
	comp=Z,288nm,1.3s						
YHNB	Yeheng	18.48	349	P	Pn	07 13 38.5	+2.0
GRJI	Gresik	18.49	224	P	Pn	07 13 39.3	+2.6
	comp=Z,12μmcomp=Z,610nm,1.1s						
JAGI	Jajag, Banyuwa	18.58	217	P	Pn	07 13 39.8	+2.0
JAGI	Jajag, Banyuwa	18.58	217	P	Pn	07 13 40.0	+2.2
	comp=Z,8μmcomp=Z,360nm,1.0s						
TATO	Taipei	18.75	349	P	P	07 13 39.3	0.0
GMJI	Gumukmas	18.86	219	P	Pn	07 13 42.7	+1.5
	comp=Z,10μmcomp=Z,317nm,1.6s						
TBJI	Tambak Boyo	18.87	226	P	Pn	07 13 43.3	+2.0
	comp=Z,16μmcomp=Z,796nm,1.3s						
HKPS	Hong Kong Po S	19.06	327	P	Pn	07 13 46.8	+3.2
KNMB	Chin-men Tao	19.08	340		P	07 13 41.4	-1.5
QZH	Quanzhou	19.46	341	⇑*i*P	Pn	07 13 52.3	+4.0
QZH				pmax	pmax		
	comp=Z,350nm,1.4s						
QZH				LR	LR		
	comp=Z,9μm,15.1s						
QZH				LR	LR		
	comp=Z,25μm,19.6s						
QZH				LR	LR		
	comp=Z,16μm,21.0s						
SJI	Sawahan	19.57	224	P	Pn	07 13 49.9	+0.1
	comp=Z,7μmcomp=Z,390nm,1.1s						
QIZ	Qiongzhong	19.57	311	P	P	07 13 47.7	-0.7
QIZ	Qiongzhong	19.57	311	P	Pn	07 13 49.6	-0.1
QIZ				S	Sn	07 17 29.6	+0.3
QIZ				pmax	pmax		
	comp=Z,93nm,1.4s						
QIZ				LR	LR		
	comp=Z,13μm,18.6s						
QIZ				LR	LR		
	comp=Z,7μm,16.6s						
QIZ				LR	LR		
	comp=Z,13μm,15.1s						
QIZ	Qiongzhong	19.57	311	P	Pn	07 13 51.5	+1.8
DRS	Darwin Rock St	19.59	164	P	Pn	07 13 50.1	+0.2
SNJI	Sawahan-Nganju	19.61	224	P	Pn	07 13 51.6	+1.2
	comp=Z,8μmcomp=Z,740nm,1.1s						
TPI	Tanjungpandan	19.91	243	P	Pn	07 13 54.5	+0.7
MTN	Manton Dam	20.05	163	P	P	07 13 53.6	0.0
	comp=Z,311nm,1.1s						
MTN	Manton Dam	20.05	163		P	07 13 53.9	+0.3
MTN				IAmb	IAmb	07 14 02.2	
	comp=Z,163nm,0.7s						
SMRI	Semarang	20.05	228	P	Pn	07 13 57.1	+1.7
SMRI	Semarang	20.05	228	P	Pn	07 13 56.3	+0.9
GZH	Guangzhou	20.15	326	P	Pn	07 13 59.1	+2.6
GZH				S	Sn	07 17 55.0	+12
GZH				pmax	pmax		
	comp=Z,110nm,1.1s						
GZH				LR	LR		
	comp=Z,12μm,14.3s						
GZH				LR	LR		
	comp=Z,9μm,14.7s						
GZH				LR	LR		
	comp=Z,23μm,17.9s						
PCJI	Pacitan	20.30	224	P	Pn	07 13 58.3	-0.1
	comp=Z,6μmcomp=Z,373nm,1.6s						
KDU	Kakadu	20.32	160	P	P	07 13 56.5	-0.1
	comp=Z,221nm,0.8s						
JOW	Kunigami	20.43	8	P	P	07 13 57.7	0.0
	comp=Z,76nm,0.6s,baz=200,slow=8.8,SNR=26						
JOW				LR	LR	07 21 33.6	
	comp=Z,11μm,21.5s,baz=184,slow=36						
	comp=Z,76nm,0.6s						
JOW	Kunigami	20.43	8		P	07 13 57.6	0.0
JOW				IAmb	IAmb	07 14 06.3	
	comp=Z,281nm,1.0s						
JOW	Kunigami	20.43	8	P	P	07 13 57.9	+0.3
GUMO	Guam	20.47	68	P	P	07 13 56.6	-1.5
	comp=Z,104nm,0.5s,baz=208,slow=8.8,SNR=6.1						
GUMO				LR	LR	07 20 25.0	
	comp=Z,4μm,21.8s,baz=244,slow=32						
	comp=Z,104nm,0.5s						
UGM	Wanagama	20.57	226		Pn	07 14 00.9	-0.6
UGM				IAmb	IAmb	07 14 11.2	
	comp=Z,238nm,0.9s						
UGM	Wanagama	20.57	226	P	Pn	07 14 01.4	-0.2
UGM	Wanagama	20.57	226	P	Pn	07 14 02.5	+0.9
	comp=Z,406nm,1.2s						
YOGI	Yogyakarta	20.67	227	P	Pn	07 14 03.1	+0.4
	comp=Z,13μmcomp=Z,911nm,1.0s						
CTJI	Waduk Cacaban	20.97	231	P	Pn	07 14 06.8	+0.6
	comp=Z,11μmcomp=Z,682nm,1.3s						
PPBI	Pangkal Pinang	21.01	246	P	P	07 14 07.3	+3.2
MMPI	Merauke	21.11	135	P	P	07 14 11.6	+6.5
UBPT	Khong Chiam	21.37	296	P	P	07 14 09.7	+1.8
KPJI	Karang Pucung	21.37	230	P	P	07 14 10.3	+2.4
	comp=Z,10μmcomp=Z,575nm,1.4s						
TPRI	Tanjung Pinang	21.49	256	P	P	07 14 11.6	+2.4
	comp=Z,331nm,1.1s						
DSRI	Dabo	21.85	252	P	P	07 14 15.6	+2.5
MYKOM	Kota Tinggi	21.93	259	P	P	07 14 16.5	+2.5
MYKOM	Kota Tinggi	21.93	259	P	P	07 14 17.4	+3.4
	comp=Z,264nm,1.5s						
BTDF	Bukit Timah Da	22.11	258	P	P	07 14 18.1	+2.2
KNRA	Kununurra	22.28	171	P	P	07 14 17.0	-0.6
	comp=Z,536nm,0.8s						
KNRA	Kununurra	22.28	171		P	07 14 17.8	+0.1
BBJI	Bungbulang	22.44	232	P	P	07 14 20.9	+1.4
BBJI	Bungbulang	22.44	232	P	P	07 14 20.3	+0.8
	comp=Z,271nm,1.5s						
TNG	Tangerang	22.50	236	P	sP	07 14 24.6	-2.1
	comp=Z,13μmcomp=Z,659nm,1.0s						
TNG				P	P	07 14 24.4	+4.3
PMBI	Palembang	22.57	246	P	P	07 14 20.9	+0.1
PMBI				IAmb	IAmb	07 14 33.8	
	comp=Z,439nm,1.0s						
PMBI	Palembang	22.57	246	P	P	07 14 24.2	+3.4
PMBI	Palembang	22.57	246	P	P	07 14 25.8	+5.0
	comp=Z,10μmcomp=Z,453nm,1.2s						
DBJI	Dramaga	22.63	235	P	P	07 14 24.0	+2.5
	comp=Z,17μmcomp=Z,616nm,1.4s						
CNJI	Cibinong	22.76	233	P	P	07 14 24.7	+1.9
	comp=Z,5μmcomp=Z,479nm,1.1s						
SBJI	Serang	22.90	237	P	P	07 14 27.2	+2.9
SKJI	Sukabumi	23.04	235	P	P	07 14 27.2	+1.4
	comp=Z,16μmcomp=Z,1μm,1.3s						
JMBI	JAMBI	23.12	250	P	P	07 14 30.0	+3.4
BLSI	Bandar Lampung	23.26	240	P	P	07 14 30.9	+2.9
	comp=Z,9μmcomp=Z,564nm,0.9s						
KLI	Kotabumi	23.36	242	P	P	07 14 30.9	+2.0
	comp=Z,11μmcomp=Z,913nm,1.1s						
KLSI		23.38	242	P	P	07 14 31.6	+2.4
	comp=Z,8μmcomp=Z,435nm,1.0s						
GULI	GuiLin	23.56	324	P	P	07 14 33.8	+2.9
GULI				pmax	pmax		
	comp=Z,110nm,1.1s						
MANU	Manus Island	23.56	110	P	P	07 14 30.6	-0.4
MDSI	Maura Dua	23.78	243	P	P	07 14 34.4	+1.3
	comp=Z,226nm,1.1s						
KASI	Kota Agung	23.99	241	P	P	07 14 36.2	+1.1
	comp=Z,4μmcomp=Z,279nm,1.2s						
LWLI	Liwa	24.13	242	P	P	07 14 37.6	+1.1
IPM	Ipoh	24.29	267		P	07 14 38.3	+0.4
IPM				IAmb	IAmb	07 14 59.3	
	comp=Z,327nm,1.4s						
IPM	Ipoh	24.29	267	P	P	07 14 39.0	+1.1
IPM	Ipoh	24.29	267	P	P	07 14 39.7	+1.8
	comp=Z,200nm,1.5s						
CNSH	ChangSha	24.58	333	P	P	07 14 41.6	+1.3
KULM	Kulim	24.59	269	P	P	07 14 40.1	-0.6
KULM				IAmb	IAmb	07 15 02.4	
	comp=Z,380nm,1.4s						
KULM	Kulim	24.59	269	P	P	07 14 42.3	+1.6

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KULM  Kulim              24.59 269   P      P      07 14 42.7 +2.0
      comp=Z,210nm,1.2s
MNAI  Manna              24.81 245   P      P      07 14 42.4 -0.3
MNAI  Manna              24.81 245   P      P      07 14 44.2 +1.5
MNAI  Manna              24.81 245   P      P      07 14 44.0 +1.3
      comp=Z,10µmcomp=Z,628nm,1.1s
KSI   Kapahiang          24.85 247   P      P      07 14 44.3 +1.3
      comp=Z,379nm,1.0s
MASI  Maura Aman, Be     24.97 248   P      P      07 14 45.5 +1.4
      comp=Z,7µmcomp=Z,636nm,1.4s
BKNI  Bangkinang         25.01 257   P      P      07 14 44.5 +0.1
BKNI  Bangkinang         25.01 257   P      P      07 14 46.9 +2.4
BKNI  Bangkinang         25.01 257   P      P      07 14 46.0 +1.5
      comp=Z,9µmcomp=Z,384nm,0.9s
UBSI  University, Be     25.19 247   P      P      07 14 47.4 +1.4
      comp=Z,9µmcomp=Z,310nm,0.6s
KRJI  Kerinci            25.32 251   P      P      07 14 48.7 +1.3
SLVN  Son La             25.46 308   P      P      07 14 48.3 -0.2
SLVN                                 IAmb   IAmb   07 15 03.0
      comp=Z,215nm,1.5s
SLVN  Son La             25.46 308   P      P      07 14 51.8 +3.3
XMI   Christmas Isla     25.81 229   P      P      07 14 53.2 +1.5
PPI   Padang Panjang     25.84 255   P      P      07 14 53.5 +1.6
      comp=Z,204nm,1.6s
EGSI  Enggano, Bengk     25.86 243   P      P      07 14 52.5 +0.4
      comp=Z,283nm,1.3s
PDSI  Padang             25.90 254   P      P      07 14 53.1 +0.5
      comp=Z,154nm,1.5s
JCJ   Chichijima         26.01  36   P      P      07 14 40.6  -13
      comp=Z,200nm,0.9s,baz=81,slow=20,SNR=5.7
JCJ                                  LR     LR     07 25 47.0
      comp=Z,4µm,19.7s,baz=232,slow=38
JCJ   Chichijima         26.01  36          P      07 14 52.1 -1.3
JCJ   Chichijima         26.01  36   P      P      07 14 52.7 -0.7
WHN   Wuhan              26.07 338   P      P      07 14 53.9 +0.1
NJ2   Nanjing            26.15 347 ⇑ P      P      07 14 56.8 +2.3
NJ2                                  pP     sP     07 14 59.1 -2.3
NJ2                                  pmax   pmax
      comp=Z,43nm,0.9s
MNSI  Mandailing Nat     26.32 259   P      P      07 14 57.8 +1.5
      comp=Z,129nm,1.1s
GYA   Guiyang            26.67 320 ⇑ P      P      07 15 01.8 +2.3
GYA                                  pmax   pmax
      comp=Z,24nm,0.5s
TSI   Tuntungan          26.84 265   P      P      07 15 03.0 +2.0
      comp=Z,9µmcomp=Z,207nm,1.1s
PMG   Port Moresby       26.87 126   ScP    ScP    07 22 02.0 -1.6
      comp=Z,36nm,1.1s,baz=340,slow=6.2,SNR=5.6
PMG                                  LR     LR     07 26 43.6
      comp=Z,4µm,18.0s,baz=300,slow=39
PMG   Port Moresby       26.87 126          P      07 15 01.1 -0.2
PMG                                  IAmb   IAmb   07 15 10.5
      comp=Z,192nm,0.9s
PMG   Port Moresby       26.87 126   P      P      07 15 01.4 +0.2
PMG   Port Moresby       26.87 126   P      P      07 15 01.2  0.0
      comp=Z,212nm,1.2s
PMG   Port Moresby       26.87 126ceP       P      07 15 01.8 +0.6
PMG                                  pmax   pmax
      comp=Z,243nm,1.0s
PPSI  Pulau Pagai        26.91 251   P      P      07 15 02.7 +1.0
      comp=Z,324nm,1.0s
COEN  Coen               26.94 139   P      P      07 15 02.8 +0.9
      comp=Z,170nm,1.2s
COEN  Coen               26.94 139          P      07 15 02.9 +1.0
COEN                                 IAmb   IAmb   07 15 09.0
      comp=Z,324nm,1.4s
COEN  Coen               26.94 139   P      P      07 15 02.5 +0.6
JNU   Nakatsue           27.00  10   LR     LR     07 25 51.3
      comp=Z,4µm,21.0s,baz=170,slow=37
JNU   Nakatsue           27.00  10          P      07 15 01.1 -1.2
JNU   Nakatsue           27.00  10   P      P      07 15 02.0 -0.3
SISI  Saibi              27.33 254   P      P      07 15 05.7 +0.2
WB0   Warramunga Arr     27.57 161          P      07 15 06.9 -0.6
WB0                                  IAmb   IAmb   07 15 33.3
      comp=Z,140nm,0.8s
KCSI  Kotacane, Aceh     27.62 265   P      P      07 15 09.1 +1.0
      comp=Z,153nm,1.2s
WRAB  Tennant Creek      27.71 162   P      P      07 15 08.5 -0.2
WRAB                                 IAmb   IAmb   07 15 36.3
      comp=Z,113nm,0.8s
WRAB  Tennant Creek      27.71 162   P      P      07 15 08.3 -0.4
WRAB  Tennant Creek      27.71 162ceP       P      07 15 08.4 -0.3
WRAB                                 pmax   pmax
      comp=Z,192nm,1.3s
WRA   Warramunga Arr     27.71 162   P      P      07 15 07.0 -1.8
      comp=Z,55nm,1.0s,baz=338,slow=9.6,SNR=54
WRA                                  S      S      07 19 45.9 -4.8
      comp=Z,24nm,1.1s,baz=338,slow=15,SNR=6.1
      comp=Z,55nm,1.0s
PBSI  Pulau Batu         27.78 257   P      P      07 15 09.7 +0.2
WR8   Warramunga Arr     27.78 161   IAmb   IAmb   07 15 35.3
      comp=Z,138nm,1.0s
ENH   Enshi              27.97 330   P      P      07 15 10.6 -0.4
ENH                                  IAmb   IAmb   07 15 44.8
      comp=Z,142nm,1.1s
ENH   Enshi              27.97 330   P      P      07 15 13.8 +2.8
MBWA  Marble Bar         28.02 191   P      P      07 15 11.1 -0.4
MBWA  Marble Bar         28.02 191   P      P      07 15 10.6 -0.9
MBWA  Marble Bar         28.02 191   P      P      07 15 11.3 -0.2
MBWA                                 IAmb   IAmb   07 15 30.2
      comp=Z,95nm,0.9s
MBWA  Marble Bar         28.02 191   P      P      07 15 11.3 -0.2
GSI   Gunungsitoli       28.17 261          P      07 15 12.0 -0.9
GSI                                  IAmb   IAmb   07 15 22.8
      comp=Z,183nm,1.0s
GSI   Gunungsitoli       28.17 261   P      P      07 15 13.4 +0.4
JMN   Monobe             28.24  15          P      07 15 12.7 -0.7
JMN                                  IAmb   IAmb   07 15 26.8
      comp=Z,90nm,0.9s
JMN   Monobe             28.24  15   P      P      07 15 15.3 +1.9
LHMI  Lhok Sumawe        28.28 269   P      P      07 15 16.0 +2.1
CM31  Chiang Mai Arr     28.34 297   P      P      07 15 16.4 +1.9
      SNR=23
CMAR  Chiang Mai Arr     28.34 297   P      P      07 15 15.2 +0.7
      comp=Z,15nm,0.8s,baz=119,slow=7.6,SNR=34
CMAR                                 ScP    ScP    07 22 04.7 -3.3
      comp=Z,4.8nm,0.8s,baz=120,slow=1.4,SNR=12
CMAR                                 LR     LR     07 28 13.6
      comp=Z,5µm,18.1s,baz=95,slow=40
      comp=Z,15nm,0.8s
CMAR  Chiang Mai Arr     28.34 297 i P      P      07 15 15.6 +1.1
CMAR                                 pmax   pmax
      comp=Z,14nm,0.8s
PSAC1 Pilbara Seismi     28.37 191   P      P      07 15 13.9 -0.7
PSA00 Pilbara Seismi     28.40 191   P      P      07 15 13.6 -1.3
PSA00                                IAmb   IAmb   07 15 23.0
      comp=Z,259nm,1.4s
PSA00 Pilbara Seismi     28.40 191          P      07 15 13.8 -1.1
PSA00                                IAmb   IAmb   07 15 22.9
      comp=Z,152nm,1.3s
PSA00 Pilbara Seismi     28.40 191   P      P      07 15 14.6 -0.3
PSAB3 Pilbara Seismi     28.42 191   P      P      07 15 14.8 -0.2
      comp=Z,159nm,1.0s
CHTO  Chiang Mai         28.47 298   P      P      07 15 16.1 +0.5
CHTO  Chiang Mai         28.47 298   P      P      07 15 16.5 +0.9
CHTO  Chiang Mai         28.47 298   P      P      07 15 17.0 +1.4
CHTO  Chiang Mai         28.47 298   P      P      07 15 16.5 +0.9
CHTO                                 pmax   pmax
      comp=Z,49nm,1.1s
KMI   Kunming            28.48 313   P      P      07 15 17.8 +1.9
KMI                                  sP     sP     07 15 22.3 -0.4
KMI                                  pmax   pmax
      comp=Z,84nm,1.3s
KMI                                  LR     LR
      comp=Z,4µm,17.0s
KMI                                  LR     LR
      comp=Z,10µm,19.3s
KMI                                  LR     LR
      comp=Z,9µm,17.7s
JHJ   Hachijo jima 2     29.70  25   LR     LR     07 28 17.7
      comp=Z,6µm,18.2s,baz=263,slow=38
TJN   Taejon             29.81   3   P      P      07 15 27.4 +0.2
TJN   Taejon             29.81   3 i P      P      07 15 27.1 -0.1
PZH   PanZhiHua          30.03 314   P      P      07 15 30.1 +0.6
PZH                                  S      S      07 20 27.8 +0.4
PZH                                  pmax   pmax
      comp=Z,20nm,1.0s
PZH                                  LR     LR
      comp=Z,5µm,19.0s
PZH                                  LR     LR
      comp=Z,6µm,16.3s
PZH                                  LR     LR
      comp=Z,9µm,17.6s
QIS   Mount Isa          30.31 153   P      P      07 15 32.8 +0.9
      comp=Z,124nm,0.7s
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QIS   Mount Isa          30.31 153   P      P      07 15 31.9  0.0
LYN   LuoYang            30.36 339⇑iP       P      07 15 33.8 +1.7
LYN                                  pP     sP     07 15 37.6 -1.3
LYN                                  sP     pP     07 15 39.9 +2.9
LYN                                  S      S      07 20 27.8 -4.2
LYN                                  pmax   pmax
      comp=Z,77nm,1.3s
LYN                                  LR     LR
      comp=Z,10µm,22.7s
LYN                                  LR     LR
      comp=Z,13µm,24.1s
LYN                                  LR     LR
      comp=Z,10µm,18.2s
INU   Inuyama            30.67  19   P      P      07 15 34.0 -0.8
MTSU  Mount Surprise     30.81 143   P      P      07 15 37.7 +1.4
KSAR  Wonju Array Be     30.90   4   P      P      07 15 36.9  0.0
KSAR  Wonju Array Be     30.90   4   P      P      07 15 36.9  0.0
KSRS  Korea Array        30.91   4   P      P      07 15 37.3 +0.3
      comp=Z,24nm,1.0s,baz=183,slow=10.0,SNR=61
KSRS                                 ScP    ScP    07 22 12.9 -2.9
      comp=Z,2.8nm,0.8s,baz=184,slow=3.2,SNR=6.9
      comp=Z,24nm,1.0s
KS19  Wonju Array Si     30.96   4   IAmb   IAmb   07 15 46.7
      comp=Z,193nm,1.5s
JGF   Kuroka             31.01  19   P      P      07 15 37.0 -0.9
AS31  Alice Springs      31.11 165   P      P      07 15 36.9 -2.0
ASAR  Alice Springs      31.11 165   P      P      07 15 39.0 +0.1
      comp=Z,17nm,0.5s,baz=340,slow=7.2,SNR=75
ASAR                                 S      S      07 20 42.8 -1.3
      comp=Z,6.7nm,0.8s,baz=351,slow=17,SNR=4.0
ASAR                                 ScP    ScP    07 22 13.9 -2.9
      comp=Z,15nm,1.0s,baz=344,slow=2.6,SNR=9.4
      comp=Z,17nm,0.5s
ASAR  Alice Springs      31.11 165   P      P      07 15 37.2 -1.8
XAN   Xi'an              31.35 333 ⇓ P      P      07 15 41.9 +0.9
XAN                                  pmax   pmax
      comp=Z,150nm,1.2s
XAN                                  LR     LR
      comp=Z,5µm,19.2s
XAN                                  LR     LR
      comp=Z,7µm,19.2s
XAN                                  LR     LR
      comp=Z,9µm,16.5s
WRKA  Warakurna          31.46 175   P      P      07 15 41.8 -0.2
      comp=Z,41nm,0.9s
TNCH  TengChong          31.61 309 e P      P      07 15 48.4 +4.9
TNCH                                 pP     sP     07 15 51.3 +0.9
TNCH                                 pmax   pmax
      comp=Z,190nm,1.4s
CD2   Chengdu            31.62 323   P      P      07 15 44.5 +1.1
CD2                                  S      S      07 20 54.4 +2.3
CD2                                  pmax   pmax
      comp=Z,120nm,1.2s
MAJO  Matsushiro         32.15  20   P      P      07 15 44.6 -3.3
MAJO  Matsushiro         32.15  20   P      P      07 15 45.7 -2.2
MAJO  Matsushiro         32.15  20 i P      P      07 15 44.3 -3.6
MAJO                                 pmax   pmax
      comp=Z,51nm,1.1s
MJAR  Matsushiro Arr     32.15  20   P      P      07 15 45.4 -2.5
      comp=Z,15nm,0.7s,baz=194,slow=9.4,SNR=40
MJAR                                 ScP    ScP    07 22 18.4 -1.7
      comp=Z,6.0nm,1.0s,baz=202,slow=4.0,SNR=6.5
MJAR                                 LR     LR     07 29 55.9
      comp=Z,5µm,18.0s,baz=250,slow=38
MJAR  Matsushiro Arr     32.15  20          P      07 15 46.1 -1.8
MJAR  Matsushiro Arr     32.15  20   P      P      07 15 46.1 -1.8
MJAR                                 pmax   pmax
      comp=Z,63nm,1.8s
HNS   HongShan           32.26 344 ⇑ P      P      07 15 50.3 +1.5
HNS                                  pmax   pmax
      comp=Z,78nm,1.0s
DL2   Dalian             32.45 355⇓iP       P      07 15 51.8 +1.3
DL2                                 eS      S      07 21 06.6 +2.0
DL2                                  pmax   pmax
      comp=Z,230nm,0.9s
DL2                                  LR     LR
      comp=Z,6µm,19.6s
DL2                                  LR     LR
      comp=Z,6µm,13.7s
DL2                                  LR     LR
      comp=Z,10µm,21.1s
TV1H  Townsville Har     33.18 141   P      P      07 15 58.6 +1.5
TIY   Taiyuan            33.23 341 e P      P      07 15 59.0 +1.6
TIY                                  S      S      07 21 19.1 +2.1
TIY                                  pmax   pmax
      comp=Z,31nm,0.6s
TIY                                  LR     LR
      comp=Z,6µm,20.6s
TIY                                  LR     LR
      comp=Z,7µm,23.4s
TIY                                  LR     LR
      comp=Z,7µm,24.7s
CTA   Charters Tower     33.47 143   ScP    ScP    07 22 23.0 -1.9
      comp=Z,15nm,1.0s,baz=298,slow=2.9,SNR=4.2
CTAO  Charters Tower     33.47 143   P      P      07 16 01.0 +1.3
CTAO  Charters Tower     33.47 143   P      P      07 16 01.3 +1.6
MEEK  Meekatharra        33.57 191   P      P      07 15 59.4 -1.0
COCO  West Island        33.88 237   P      P      07 16 02.6 -0.6
BJT   Baijiatuau         34.39 347   P      P      07 16 07.3 -0.1
BJT   Baijiatuau         34.39 347   P      P      07 16 09.2 +1.8
BJT   Baijiatuau         34.39 347   P      P      07 16 07.3 -0.1
BJT                                  pmax   pmax
      comp=Z,740nm,1.9s
BJI   Beijing            34.41 347   P      P      07 16 08.6 +1.1
BJI                                  pP     sP     07 16 14.8 +0.4
BJI                                  sP     pP     07 16 17.4 +5.0
BJI                                  pmax   pmax
      comp=Z,80nm,1.6s
SAIH  SAIHA              35.02 300 e P      P      07 16 12.6 -0.7
SAIH                                 IAmb   IAmb   07 16 35.3
      comp=Z,418nm,1.3s
SNY   Shenyang           35.23 358 ⇓ P      P      07 16 15.8 +1.2
SNY                                  pmax   pmax
      comp=Z,140nm,0.9s
MOKO  MOKOCHONG          35.38 307 e P      P      07 16 15.7 -0.6
MOKO                                 IAmb   IAmb   07 16 52.2
      comp=Z,124nm,1.1s
LZDM  Lanzhou Array      35.42 329   P      P      07 16 19.0 +2.3
      comp=Z,57nm,0.9s,baz=133,slow=10,SNR=34
LZDM                                 LR     LR     07 32 38.8
      comp=Z,4µm,18.5s,baz=35,slow=39
KOHI  KOHIMA             35.43 306 e P      P      07 16 15.2 -1.5
KOHI                                 IAmb   IAmb   07 16 40.7
      comp=Z,103nm,0.9s
LZH   Lanzhou            35.44 329 ⇑ P      P      07 16 19.5 +2.7
LZH                                  sP     sP     07 16 25.8 +2.2
LZH                                  pmax   pmax
      comp=Z,200nm,1.7s
LZH                                  LR     LR
      comp=Z,8µm,20.3s
LZH                                  LR     LR
      comp=Z,10µm,20.6s
LZH                                  LR     LR
      comp=Z,7µm,21.5s
PASG  PASIGHAT           35.62 311 e P      P      07 16 18.7 +0.5
PASG                                 IAmb   IAmb   07 16 25.9
      comp=Z,36nm,0.6s
MSHR  Mys Shultsa        36.31   7 i P      P      07 16 24.5 +0.6
PSTR  Posyet             36.34   7 i P      P      07 16 22.2 -1.9
HHC   Hu-ho-hao-te       36.37 342 e P      P      07 16 26.3 +1.7
HHC                                  pmax   pmax
      comp=Z,14nm,1.0s
HHC                                  pmax   pmax
      comp=Z,5µm,7.4s
HHC                                  LR     LR
      comp=Z,5µm,20.4s
HHC                                  LR     LR
      comp=Z,5µm,21.3s
HHC                                  LR     LR
      comp=Z,6µm,20.2s
MORW  Morawa             36.47 194          P      07 16 24.9 -0.5
MORW                                 IAmb   IAmb   07 16 33.3
      comp=Z,108nm,1.3s
MORW  Morawa             36.47 194   P      P      07 16 24.6 -0.8
BTO   Baotou             36.64 340 e P      P      07 16 31.9 +5.0
BTO                                  PP     PP     07 17 57.4 +7.0
BTO                                  pmax   pmax
      comp=Z,58nm,2.4s
BTO                                  LR     LR
      comp=Z,11µm,15.9s
BTO                                  LR     LR
      comp=Z,25µm,22.2s
BTO                                  LR     LR
      comp=Z,18µm,23.5s
TEZP  TEZPUR             36.88 307 e P      P      07 16 28.1 -0.9
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TEZP                                 IAmb   IAmb   07 16 50.1
      comp=Z,57nm,0.6s
VLA   Vladivostok        36.94   8 i P      P      07 16 28.5 -0.7
VLA                                  pmax   pmax
      comp=Z,369nm,1.3s
INKA  Innaminka          37.14 157   P      P      07 16 31.8 +0.6
FORT  Forrest            37.15 176          P      07 16 30.8 -0.3
FORT                                 IAmb   IAmb   07 16 32.4
      comp=Z,85nm,0.9s
SHL   Shillong           37.16 304   P      P      07 16 33.8 +2.1
      SNR=59
SHL   Shillong           37.16 304          P      07 16 31.2 -0.5
SHL   Shillong           37.16 304 e P      P      07 16 31.1 -0.6
SHL   Shillong           37.16 304   P      P      07 16 31.2 -0.5
SHL                                  pmax   pmax
      comp=Z,291nm,1.0s
CN2   Changchun          37.17   0 e P      P      07 16 31.5 +0.3
CN2                                  pmax   pmax
      comp=Z,30nm,0.7s
TATA  Tatamba Isabel     37.40 113   P      P      07 16 35.0 +1.4
GUWA  GUWAHATI           37.59 305 e P      P      07 16 34.9 -0.1
GUWA                                 IAmb   IAmb   07 16 55.6
      comp=Z,24nm,0.9s
QLP   Quilpie            37.63 152   P      P      07 16 35.3  0.0
BLDU  Ballidu            37.81 192   P      P      07 16 36.5 -0.3
USRK  Ussuriysk Ar.      38.01   8   P      P      07 16 38.9 +0.5
      comp=Z,67nm,0.8s,baz=190,slow=6.8,SNR=67
      comp=Z,67nm,0.8s
XLT   XiLinHaoTe         38.14 349 e P      P      07 16 40.8 +1.2
XLT                                  pP     sP     07 16 44.3 -2.2
XLT                                  sP     pP     07 16 47.4 +2.9
XLT                                  pmax   pmax
      comp=Z,42nm,0.6s
XLT                                  pmax   pmax
      comp=Z,3µm,4.9s
XLT                                  LR     LR
      comp=Z,5µm,16.5s
XLT                                  LR     LR
      comp=Z,3µm,18.0s
MDJ   Mudanjiang         38.16   5   P      P      07 16 39.7 +0.1
MDJ                                  IAmb   IAmb   07 16 43.8
      comp=Z,204nm,1.1s
MDJ   Mudanjiang         38.16   5   P      P      07 16 40.8 +1.2
MDJ                                  pmax   pmax
      comp=Z,130nm,1.1s
MDJ   Mudanjiang         38.16   5   P      P      07 16 40.7 +1.2
KLBR  Kellerberrin       38.55 190   P      P      07 16 42.6 -0.4
DHUB  DHUBRI             38.90 304 e P      P      07 16 45.5 -0.6
DHUB                                 IAmb   IAmb   07 17 03.7
NGOA  Tingoa Renbel      38.91 117   P      P      07 16 47.9 +1.6
CAL   Calcutta           39.08 298 e P      P      07 16 45.1 -2.5
BNX   BinXian            39.14   2 ⇓ P      P      07 16 47.5 -0.3
BNX                                  pmax   pmax
      comp=Z,74nm,1.3s
MUN   Mundaring          39.23 192   P      P      07 16 48.5 -0.2
LSA   Lhasa              39.61 310   P      P      07 16 51.9 -0.6
LSA   Lhasa              39.61 310   P      P      07 16 50.3 -2.2
LSA   Lhasa              39.61 310 i P      P      07 16 53.4 +0.9
      SNR=19
LSA   Lhasa              39.61 310   P      P      07 16 51.9 -0.6
LSA                                  pmax   pmax
      comp=Z,107nm,1.2s
TEY   Ternei             39.63  13⇑eP       P      07 16 52.8 +0.9
TEY                                 e              07 25 42.2
TEY                                  pmax   pmax
      comp=N,90nm,0.9s
TEY                                  pmax   pmax
      comp=Z,120nm,0.9s
NWAO  Narrogin (SRO)     39.95 191   P      P      07 16 54.4 -0.2
NWAO  Narrogin (SRO)     39.95 191          P      07 16 54.7  0.0
NWAO                                 IAmb   IAmb   07 17 02.5
      comp=Z,208nm,1.2s
NWAO  Narrogin (SRO)     39.95 191   P      P      07 16 54.9 +0.2
NWAO  Narrogin (SRO)     39.95 191   P      P      07 16 54.7  0.0
NWAO                                 pmax   pmax
      comp=Z,209nm,1.2s
GTA   Gaotai             40.04 329   P      P      07 16 57.8 +2.2
GTA                                  sP     sP     07 17 04.8 +2.3
GTA                                  pmax   pmax
      comp=Z,68nm,1.4s
GTA                                  LR     LR
      comp=Z,8µm,21.1s
GTA                                  LR     LR
      comp=Z,5µm,22.9s
GTA                                  LR     LR
      comp=Z,12µm,18.9s
EIDS  Eidsvold           40.36 143          P      07 16 58.3 +0.1
EIDS  Eidsvold           40.36 143   P      P      07 16 58.4 +0.2
AUHAR St Anne's Scho     40.37 192   P      P      07 16 59.1 +1.0
BBOO  Buckleboo          40.39 166          P      07 16 58.4 +0.1
BBOO  Buckleboo          40.39 166   P      P      07 16 58.7 +0.4
ASAJ  Asahikawa          40.42  19   LR     LR     07 33 43.2
      comp=Z,3µm,20.9s,baz=280,slow=36
JKA   Kamikawa-asahi     40.42  19   IAmb   IAmb   07 17 10.1
      comp=Z,155nm,1.2s
GTK   Tadong             40.56 305 e P      P      07 16 59.4 -0.7
GTK                                  IAmb   IAmb   07 17 14.2
      comp=Z,108nm,0.7s
GOMU  GeErMu             40.69 321   P      P      07 17 03.8 +2.5
GOMU                                 pmax   pmax
      comp=Z,63nm,1.3s
BWNR  Bhubaneshwar       40.69 294 e P      P      07 17 00.5 -0.7
WHYH  Whyalla            40.98 164   P      P      07 17 03.4 +0.2
STKA  Stephens Creek     41.18 159   P      P      07 17 05.7 +0.8
      comp=Z,142nm,0.9s,baz=335,slow=8.2,SNR=119
      comp=Z,142nm,0.9s
STKA  Stephens Creek     41.18 159          P      07 17 05.2 +0.3
AUJCS Jamestown Cent     41.43 163   P      P      07 17 07.6 +0.6
BOK   Bokaro             41.60 299 e P      P      07 17 08.1 -0.4
AUCAS Cummins Area S     41.70 167   P      P      07 17 10.6 +1.5
HTT   Hallett            41.74 163   P      P      07 17 10.4 +0.9
AULRC Lightning Ridg     41.82 150   P      P      07 17 10.2  0.0
AUALB St Joseph's Co     41.86 189   P      P      07 17 11.6 +1.3
VIS   Vishakhapatnam     42.47 289 e P      P      07 17 15.2 -0.5
GAYA  Gaya               42.48 300 e P      P      07 17 15.2 -0.5
H01W3 Cape Leeuwin H     42.49 194   P      P      07 17 20.3 +5.1
      baz=9.9,slow=4.5,SNR=4.0
H01W1 Cape Leeuwin H     42.49 194   P      P      07 17 17.2 +2.0
      baz=9.9,slow=4.5,SNR=3.4
H01W2 Cape Leeuwin H     42.50 194   P      P      07 17 18.1 +2.7
      baz=9.9,slow=4.5,SNR=3.0
CMSA  Cobar Meteorol     42.51 154   P      P      07 17 16.7 +0.9
TW1H  Toowoomba 1 Ha     42.51 144   P      P      07 17 17.9 +1.9
RAGD  RAYAGADA           42.63 291 e P      P      07 17 16.5 -0.5
HIA   Hailar             42.90 355   P      P      07 17 19.4 +0.6
HIA                                  IAmb   IAmb   07 17 23.7
      comp=Z,241nm,1.4s
HIA   Hailar             42.90 355   P      P      07 17 20.0 +1.3
HIA   Hailar             42.90 355 i P      P      07 17 19.0 +0.3
HIA                                  pmax   pmax
      comp=Z,171nm,1.3s
YSS   Yuzhno-Sakhali     43.01  17   P      P      07 17 19.4 -0.2
YSS                                  IAmb   IAmb   07 17 29.7
      comp=Z,178nm,1.3s
YSS   Yuzhno-Sakhali     43.01  17   P      P      07 17 21.7 +2.1
YSS   Yuzhno-Sakhali     43.01  17 e P      P      07 17 19.7 +0.1
YSS                                  pmax   pmax
      comp=Z,90nm,1.2s
AUMAR Marden Senior      43.02 164   P      P      07 17 21.0 +1.1
AUWSH Wavell State H     43.04 143   P      P      07 17 21.5 +1.4
HILR  Hailar Array B     43.18 355   P      P      07 17 22.4 +1.3
      comp=Z,24nm,0.6s,baz=165,slow=12,SNR=31
HILR                                 ScP    ScP    07 22 59.5 -1.8
      comp=Z,8.9nm,0.9s,baz=157,slow=4.2,SNR=5.3
HILR                                 LR     LR     07 36 58.4
      comp=Z,4µm,18.8s,baz=95,slow=38
      comp=Z,24nm,0.6s
AUMBR Murray Bridge      43.44 163   P      P      07 17 24.2 +1.0
HEH   HeiHe              43.66   2 e P      P      07 17 25.0 +0.2
HEH                                  pP     sP     07 17 29.6 -2.1
HEH                                  S      S      07 23 53.6 -0.3
HEH                                  pmax   pmax
      comp=Z,190nm,1.3s
HEH                                  LR     LR
      comp=Z,7µm,15.3s
HEH                                  LR     LR
      comp=Z,4µm,14.5s
HEH                                  LR     LR
      comp=Z,12µm,16.7s
ULN   Ulaanbaatar        44.09 342   P      P      07 17 28.9 +0.3
ULN                                  S      S      07 24 01.3 +0.7
ULN   Ulaanbaatar        44.09 342   P      P      07 17 27.9 -0.7
ULN                                  IAmb   IAmb   07 17 50.9
      comp=Z,111nm,1.2s
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ULN	**Ulaanbaatar**	**44.09**	**342**	P	**P**	**07 17 27.9**	**-0.7**
ULN				pmax	pmax		
	comp=Z,111nm,1.3s						
SONM	**Songino Array**	**44.26**	**342**	P	**P**	**07 17 31.1**	**+1.2**
	comp=Z,26nm,0.9s,baz=166,slow=8.6,SNR=35						
SONM				PcP	**PcP**	**07 19 14.7**	**+0.5**
	comp=Z,4.1nm,0.8s,baz=142,slow=5.4,SNR=1.1						
SONM				ScP	**ScP**	**07 23 04.1**	**-1.7**
	comp=Z,1.4nm,0.9s,baz=124,slow=7.2,SNR=2.2						
SONM				LR	LR	07 36 20.6	
	comp=Z,7µm,21.4s,baz=158,slow=36						
	comp=Z,26nm,0.9s						
SONM	**Songino Array**	**44.26**	**342**	P	**P**	**07 17 30.4**	**+0.5**
SONM	**Songino Array**	**44.26**	**342**	P	**P**	**07 17 30.4**	**+0.5**
SONM				pmax	pmax		
	comp=Z,94nm,1.3s						
AUDCS	**Dubbo College**	**44.44**	**151**	P	**P**	**07 17 32.6**	**+1.3**
BLSP	**Bilaspur**	**44.48**	**295**	*e*P	**P**	**07 17 31.5**	**-0.4**
ARMA	**Armidale**	**44.51**	**147**	P	**P**	**07 17 33.1**	**+1.0**
ARMA				IAmb	IAmb	07 17 47.2	
	comp=Z,88nm,1.0s						
ARMA	**Armidale**	**44.51**	**147**	P	**P**	**07 17 33.5**	**+1.4**
AUPHS	**Peel High Scho**	**44.65**	**148**	P	**P**	**07 17 34.7**	**+1.6**
UGL	**Uglegorsk**	**44.74**	**16**	⇑ *i*P	**P**	**07 17 34.6**	**+1.1**
UGL				*e*S	**S**	**07 24 12.9**	**+3.2**
UGL				pmax	pmax		
	comp=Z,200nm,0.7s						
VJD	**Vijayawada**	**44.82**	**287**	*e*P	**P**	**07 17 31.1**	**-3.5**
GRNR	**Gornyy**	**45.10**	**10**	⇓ *i*P	**P**	**07 17 37.4**	**+1.1**
GRNR				pmax	pmax		
	comp=N,40nm,1.3s						
GRNR				pmax	pmax		
	comp=Z,60nm,1.2s						
GRNR				MLR	MLR		
	comp=E,950nm,16.0s						
GRNR				MLR	MLR		
	comp=N,1µm,15.0s						
GRNR				MLR	MLR		
	comp=Z,3µm,14.0s						
AUMAG	**Moama Anglican**	**46.12**	**158**	P	**P**	**07 17 46.2**	**+1.6**
CIT	**Chita**	**46.42**	**350**	*e*P	**P**	**07 17 46.8**	**-0.1**
CIT				*e*		07 17 52.4	
CIT				*e*		07 19 22.8	
CIT				*e*		07 24 44.4	
CIT				*e*		07 27 47.2	
CIT				pmax	pmax		
	comp=Z,358nm,3.2s						
TYV	**Tymovskoe**	**46.53**	**15**	*e*P	**P**	**07 17 48.9**	**+1.3**
TYV				*e*S	**S**	**07 24 37.7**	**+2.3**
TYV				pmax	pmax		
	comp=Z,43nm,1.0s						
TYV				pmax	pmax		
	comp=Z,1µm,3.7s						
TYV				smax	smax		
	comp=N,18nm,1.9s						
TYV				smax	smax		
	comp=E,16nm,1.9s						
TYV				smax	smax		
	comp=N,800nm,3.5s						
TYV				smax	smax		
	comp=E,500nm,3.5s						
SYDH	**Sydney Hard Ro**	**46.71**	**151**	P	**P**	**07 17 51.3**	**+2.1**
SALM	**Salem**	**46.79**	**280**	*e*P	**P**	**07 17 49.0**	**-1.3**
SANVU	**Saraoutou**	**46.84**	**118**	P	**P**	**07 17 51.6**	**+1.0**
SANVU	**Saraoutou**	**46.84**	**118**	P	**P**	**07 17 52.9**	**+2.3**
HYB	**Hyderabad**	**46.93**	**288**	*e*P	**P**	**07 17 51.8**	**+0.4**
HYB				*e*PP	**PP**	**07 19 41.0**	**-0.9**
NGP	**Nagpur**	**47.07**	**293**	*e*P	**P**	**07 17 51.6**	**-0.8**
AUHPC	**Hawkesdale P12**	**47.10**	**162**	P	**P**	**07 17 54.0**	**+1.8**
BRAT	**Ballarat**	**47.12**	**160**	P	**P**	**07 17 54.1**	**+1.7**
ZEA	**Zeya**	**47.14**	**2**	*e*P	**P**	**07 17 53.2**	**+0.9**
ZEA				pmax	pmax		
	comp=E,20nm,1.0s						
ZEA				pmax	pmax		
	comp=N,50nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,100nm,1.2s						
AUMTC	**Mt Clear Colle**	**47.16**	**160**	P	**P**	**07 17 54.3**	**+1.6**
CAN	**Canberra**	**47.18**	**153**	P	**P**	**07 17 53.7**	**+0.7**
CAN	**Canberra**	**47.18**	**153**	P	**P**	**07 17 53.7**	**+0.7**
CAN				pmax	pmax		
	comp=Z,146nm,1.1s						
AUDAR	**Daramalan Coll**	**47.18**	**153**	P	**P**	**07 17 54.7**	**+1.7**
AUMHS	**Melrose High S**	**47.25**	**153**	P	**P**	**07 17 55.3**	**+1.7**
WOLH	**Wollongong Har**	**47.29**	**151**	P	**P**	**07 17 56.4**	**+2.6**
CNB	**Canberra Magne**	**47.34**	**153**	P	**P**	**07 17 56.4**	**+2.1**
KOD	**Kodaikanal**	**47.48**	**278**	*e*P	**P**	**07 17 55.3**	**-0.7**
ZAK	**Zakamensk**	**47.48**	**341**	*e*P	**P**	**07 17 55.4**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,44nm,1.7s						
TOO	**Toolangi**	**47.69**	**158**	P	**P**	**07 17 57.9**	**+1.0**
TOO				IAmb	IAmb	07 18 00.2	
	comp=Z,114nm,1.6s						
TOO	**Toolangi**	**47.69**	**158**	P	**P**	**07 17 57.9**	**+1.0**
TOO				pmax	pmax		
	comp=Z,114nm,1.7s						
MLBS	**Spotswood, Mel**	**47.71**	**159**	P	**P**	**07 17 59.5**	**+2.5**
AUUHS	**Ulladulla High**	**47.88**	**152**	P	**P**	**07 17 59.8**	**+1.4**
AUSMG	**Snowy Mountain**	**47.93**	**155**	P	**P**	**07 18 00.4**	**+1.5**
TRD	**Trivandrum**	**47.99**	**276**	*e*P	**P**	**07 17 58.6**	**-1.1**
PTH	**Pithoragarh**	**48.25**	**304**	*e*P	**P**	**07 18 01.2**	**-0.5**
LGTI	**Lohaghat**	**48.30**	**304**	*e*P	**P**	**07 18 01.2**	**+0.3**
JHNI	**Jhansi**	**48.42**	**298**	*e*P	**P**	**07 18 03.3**	**0.0**
TLY	**Talaya**	**48.50**	**342**	P	**P**	**07 18 03.6**	**+0.7**
TLY				S	**S**	**07 25 02.8**	**-0.8**
TLY	**Talaya**	**48.50**	**342**	P	**P**	**07 18 03.7**	**+0.7**
TLY				IAmb	IAmb	07 18 27.9	
	comp=Z,58nm,1.0s						
TLY	**Talaya**	**48.50**	**342**	*ce*P	**P**	**07 18 04.9**	**+1.9**
TLY				pmax	pmax		
	comp=Z,52nm,1.0s						
IRK	**Irkutsk**	**48.80**	**343**	*e*P	P	07 18 10.6	+5.3
IRK				*e*		07 20 05.1	
IRK				pmax	pmax		
	comp=Z,125nm,1.8s						
BHPL	**Bhopal**	**48.96**	**295**	*e*P	**P**	**07 18 05.7**	**-1.4**
NRDN	**NARMADA NAGAR**	**49.09**	**294**	*e*P	**P**	**07 18 07.9**	**-0.1**
JOSI	**Joshimath**	**49.12**	**305**	*e*P	**P**	**07 18 07.9**	**-0.5**
DZM	**Mont Dzumac**	**49.26**	**126**	LR	LR	07 39 19.0	
	comp=Z,3µm,18.1s,baz=320,slow=36						
DZM	**Mont Dzumac**	**49.26**	**126**	IAmb	IAmb	07 18 18.0	
	comp=Z,132nm,1.0s						
DZM	**Mont Dzumac**	**49.26**	**126**	P	**P**	**07 18 10.6**	**+1.3**
MOY	**Mondy**	**49.34**	**340**	*e*P	**P**	**07 18 10.3**	**+0.8**
MOY				pmax	pmax		
	comp=Z,128nm,2.3s						
GUNA	**GUNA**	**49.35**	**297**	*e*P	**P**	**07 18 09.7**	**-0.3**
ONTNC	**Ouen Toro**	**49.38**	**127**	P	**P**	**07 18 10.9**	**+0.7**
ONTNC				IAmb	IAmb	07 18 18.6	
	comp=Z,79nm,0.9s						
ONTNC	**Ouen Toro**	**49.38**	**127**	P	**P**	**07 18 11.9**	**+1.7**
YATNC	**Mamie plateau,**	**49.61**	**126**	P	**P**	**07 18 13.3**	**+1.4**
WMQ	**Urumqi**	**49.69**	**325**	*e*P	**P**	**07 18 13.8**	**+1.5**
WMQ				pP	sP	07 18 18.8	-0.5
WMQ				pmax	pmax		
	comp=Z,25nm,2.1s						
KNGR	**Kungurtug, Tuv**	**49.73**	**337**	*i* P	**P**	**07 18 11.8**	**-0.7**
KNGR				pmax	pmax		
	comp=Z,83nm,1.0s						
OUENC	**Ouen Island, N**	**49.75**	**127**	P	**P**	**07 18 14.4**	**+1.4**
MARNC	**Mare, Loyalty**	**50.25**	**125**	P	**P**	**07 18 18.4**	**+1.6**
DDI	**Dehra Dun**	**50.27**	**304**	*e*P	**P**	**07 18 16.5**	**-0.4**
PINNC	**Pines Island,**	**50.33**	**126**	IAmb	IAmb	07 18 21.5	
	comp=Z,161nm,1.1s						
PINNC	**Pines Island,**	**50.33**	**126**	P	**P**	**07 18 19.8**	**+2.4**
HNLY	**HANLEY**	**50.35**	**308**	*e*P	**P**	**07 18 17.0**	**-1.1**
NDI	**New Delhi**	**50.48**	**302**	*e*P	**P**	**07 18 18.3**	**-0.2**
KLP	**Kalpa**	**50.50**	**306**	*e*P	**P**	**07 18 18.3**	**-0.7**
NPLP	**NPLP New Delhi**	**50.51**	**302**	*e*P	**P**	**07 18 17.3**	**-1.4**
AUBRN	**Burnie High Sc**	**50.91**	**160**	P	**P**	**07 18 22.8**	**+1.4**
KUDL	**Kundal**	**50.95**	**301**	*e*P	**P**	**07 18 21.5**	**-0.5**
KAD	**Karad**	**51.06**	**287**	*e*P	**P**	**07 18 23.9**	**+0.8**
SMLA	**Simla**	**51.25**	**305**	*e*P	**P**	**07 18 23.7**	**-0.5**
POO	**Poona**	**51.51**	**288**	*e*P	**P**	**07 18 25.9**	**-0.5**
GLAD	**Gladstone**	**51.62**	**158**	P	**P**	**07 18 28.4**	**+1.6**
CORO	**Coronation Par**	**51.72**	**159**	P	**P**	**07 18 28.9**	**+1.4**
BOD	**Bodaibo**	**51.96**	**352**	*e*P	**P**	**07 18 29.0**	**-0.1**
BOD				pmax	pmax		
	comp=Z,82nm,1.3s						
DHRM	**DHARAMSHALA**	**52.30**	**306**	*e*P	**P**	**07 18 31.2**	**-1.2**
UDPR	**Udaipur**	**52.56**	**296**	*e*P	**P**	**07 18 33.6**	**-0.6**
PEA0B	**Petropavlovsk-**	**53.44**	**24**	P	**P**	**07 18 40.6**	**+0.5**
PEA0B	**Petropavlovsk-**	**53.44**	**24**	P	**P**	**07 18 40.6**	**+0.5**
PEA0B				pmax	pmax		
	comp=Z,205nm,1.3s						
PETK	**Petropavlovsk-**	**53.44**	**24**	P	**P**	**07 18 40.6**	**+0.5**
	comp=Z,63nm,1.0s,baz=199,slow=4.1,SNR=38						
	comp=Z,63nm,1.0s						
ZSN	**Zaisan**	**53.46**	**327**	*e*P	**P**	**07 18 40.8**	**+0.3**
ZSN	**Zaisan**	**53.46**	**327**	*e*P	**P**	**07 18 40.7**	**+0.3**
DGZ	**Jazzator, Alta**	**53.53**	**330**	*i* P	**P**	**07 18 41.6**	**+0.5**
DGZ				pmax	pmax		
	comp=Z,70nm,1.4s						
PET	**Petropavlovsk**	**53.77**	**24**	P	**P**	**07 18 43.1**	**+0.6**
PET	**Petropavlovsk**	**53.77**	**24**	P	**P**	**07 18 43.9**	**+1.4**
PET	**Petropavlovsk**	**53.77**	**24**	*e*P	**P**	**07 18 42.5**	**0.0**
PET				pmax	pmax		
	comp=Z,134nm,1.3s						
PET	**Petropavlovsk**	**53.77**	**24**	P	**P**	**07 18 42.7**	**+0.2**
	comp=Z,149nm,1.7s						
SHLS	**Shalkode**	**54.36**	**320**	*e*P	**P**	**07 18 45.4**	**-1.8**
	comp=Z,109nm,1.1s						
SHLS	**Shalkode**	**54.36**	**320**	*e*P	**P**	**07 18 45.4**	**-1.8**
SHLS				pmax	pmax		
	comp=Z,109nm,1.1s						
PDGK	**Podgornoye**	**54.43**	**320**	P	**P**	**07 18 47.7**	**0.0**
MK31	**Makanchi Array**	**54.52**	**325**	P	**P**	**07 18 48.5**	**+0.3**
MK31				IAmb	IAmb	07 18 56.9	
	comp=Z,59nm,0.9s						
MK31	**Makanchi Array**	**54.52**	**325**	*e*P	**P**	**07 18 48.1**	**-0.1**
MKAR	**Makanchi Array**	**54.52**	**325**	P	**P**	**07 18 48.3**	**+0.1**
	comp=Z,13nm,0.8s,baz=123,slow=7.4,SNR=38						
MKAR				PKPPKP	**P'P'df**	**07 48 58.3**	**-4.3**
	comp=Z,1.7nm,1.0s,baz=292,slow=3.3,SNR=7.9						
	comp=Z,13nm,0.8s						
MKAR	**Makanchi Array**	**54.52**	**325**	*i* P	**P**	**07 18 48.2**	**0.0**
MKAR				pmax	pmax		
	comp=Z,13nm,0.8s						
UZB	**Uzynbulak**	**54.64**	**320**	*e*P	**P**	**07 18 49.5**	**+0.2**
	comp=Z,88nm,1.1s						
UZB	**Uzynbulak**	**54.64**	**320**	*e*P	**P**	**07 18 49.4**	**+0.2**
UZB				pmax	pmax		
	comp=Z,88nm,1.1s						
MAKZ	**Makanchi**	**54.71**	**325**	P	**P**	**07 18 50.0**	**+0.4**
MAKZ				IAmb	IAmb	07 18 58.3	
	comp=Z,132nm,1.1s						
MAKZ	**Makanchi**	**54.71**	**325**	P	**P**	**07 18 49.2**	**-0.3**
SATY	**Saty**	**55.00**	**319**	*e*P	**P**	**07 18 51.9**	**0.0**
	comp=Z,134nm,1.2s						
SATY	**Saty**	**55.00**	**319**	*e*P	**P**	**07 18 51.8**	**0.0**
SATY				pmax	pmax		
	comp=Z,134nm,1.2s						
KSH	**Kashi**	**55.14**	**314**	P	**P**	**07 18 55.3**	**+2.4**
KSH				pmax	pmax		
	comp=Z,82nm,1.2s						
KSH				pmax	pmax		
	comp=Z,5µm,12.0s						
KSH				LR	LR		
	comp=Z,3µm,15.1s						
KSH				LR	LR		
	comp=Z,4µm,18.2s						
KSH				LR	LR		
	comp=Z,5µm,17.9s						
NIL	**Nilore**	**55.17**	**307**	P	**P**	**07 18 53.4**	**+0.3**
NIL	**Nilore**	**55.17**	**307**	P	**P**	**07 18 52.7**	**-0.5**
NIL	**Nilore**	**55.17**	**307**	P	**P**	**07 18 52.7**	**-0.5**
NIL				pmax	pmax		
	comp=Z,309nm,1.1s						
KDJ	**Kajisay**	**55.39**	**318**	P	**P**	**07 18 54.6**	**-0.1**
KDJ	**Kajisay**	**55.39**	**318**	P	**P**	**07 18 54.6**	**-0.1**
KDJ				pmax	pmax		
	comp=Z,297nm,1.3s						
YAK	**Yakutsk**	**55.52**	**2**	P	**P**	**07 18 55.6**	**+0.6**
	comp=Z,151nm,0.7s,baz=184,slow=3.3,SNR=50						
	comp=Z,151nm,0.7s						
YAK	**Yakutsk**	**55.52**	**2**	P	**P**	**07 18 55.6**	**+0.6**
YAK	**Yakutsk**	**55.52**	**2**	*e*P	**P**	**07 18 55.3**	**+0.2**
YAK				*e**PP	**sP**	**07 19 03.4**	**+1.3**
YAK				*e*		07 19 55.0	
YAK				*e*PPP	PPP	07 22 08.6	
YAK				*e*S	**S**	**07 26 38.5**	**-1.1**
YAK				*e**SS	sS	07 26 55.1	+7.3
YAK				pmax	pmax		
	comp=Z,274nm,1.3s						
YAK				pmax	pmax		
	comp=N,252nm,1.5s						
YAK				pmax	pmax		
	comp=E,93nm,1.4s						
YAK				smax	smax		
	comp=E,3µm,10.2s						
YAK				smax	smax		
	comp=N,2µm,9.7s						
YAK				MLR	MLR		
	comp=Z,6µm,21.0s						
YAK				MLR	MLR		
	comp=N,4µm,21.0s						
YAK				MLR	MLR		
	comp=E,3µm,21.0s						
FUNA	**Funafuti**	**55.72**	**105**	P	**P**	**07 18 58.0**	**+0.7**
ARXS	**Arharly**	**55.91**	**320**	*e*P	**P**	**07 18 56.8**	**-1.5**
TDK	**Taldyqorghan**	**55.91**	**321**	*e*P	**P**	**07 18 58.8**	**+0.5**
	comp=E,126nm,1.1s						
TDK	**Taldyqorghan**	**55.91**	**321**	*e*P	**P**	**07 18 58.7**	**+0.5**
TDK				pmax	pmax		
	comp=Z,126nm,1.1s						
MDOK	**Medeo**	**55.93**	**319**	*e*P	**P**	**07 18 58.8**	**+0.2**
MDOK				*e*S	**S**	**07 26 47.3**	**+1.2**
MDOK	**Medeo**	**55.93**	**319**	*e*P	**P**	**07 18 58.8**	**+0.2**
MDOK				*e*S	**S**	**07 26 47.3**	**+1.2**
TNSS	**Tian-Shan**	**55.94**	**319**	*e*P	**P**	**07 18 59.0**	**0.0**
TNSS	**Tian-Shan**	**55.94**	**319**	*e*P	**P**	**07 18 58.9**	**0.0**
BHUJ	**Bhuj**	**56.00**	**294**	*e*P	**P**	**07 18 59.5**	**+0.3**
AAA	**Alma-Ata**	**56.04**	**319**	*e*P	**P**	**07 18 59.6**	**+0.4**
	comp=Z,84nm,1.1s						
AAA	**Alma-Ata**	**56.04**	**319**	*e*P	**P**	**07 18 59.6**	**+0.4**
AAA				pmax	pmax		
	comp=Z,84nm,1.1s						
ULHL	**Ulahol**	**56.07**	**317**	P	**P**	**07 19 01.6**	**+1.9**
	SNR=16						
CHKK	**Chushkaly**	**56.28**	**319**	*e*P	**P**	**07 19 01.1**	**+0.1**
CHKK	**Chushkaly**	**56.28**	**319**	*e*P	**P**	**07 19 01.0**	**+0.1**
BOOM	**Boomskoye usch**	**56.37**	**318**	P	**P**	**07 19 01.4**	**-0.4**
BOOM	**Boomskoye usch**	**56.37**	**318**	P	**P**	**07 19 01.4**	**-0.4**
BOOM				pmax	pmax		
	comp=Z,182nm,1.4s						
MA2	**Magadan**	**56.40**	**15**	P	**P**	**07 19 02.3**	**+0.8**
	comp=Z,88nm,0.8s,baz=194,slow=6.2,SNR=60						
	comp=Z,88nm,0.8s						
MA2	**Magadan**	**56.40**	**15**	P	**P**	**07 19 01.6**	**+0.1**
MA2	**Magadan**	**56.40**	**15**	P	**P**	**07 19 02.0**	**+0.6**
MA2	**Magadan**	**56.40**	**15**	*ce*P	**P**	**07 19 02.2**	**+0.8**
MA2				pmax	pmax		
	comp=Z,275nm,1.7s						
MA2	**Magadan**	**56.40**	**15**	P	**P**	**07 19 01.6**	**+0.1**
	comp=Z,189nm,1.0s						
KUU	**Kurty**	**56.72**	**319**	*e*P	**P**	**07 19 04.5**	**+0.4**
	comp=Z,104nm,1.2s						
KUU	**Kurty**	**56.72**	**319**	*e*P	**P**	**07 19 04.4**	**+0.4**
KUU				pmax	pmax		
	comp=Z,103nm,1.2s						
TKM2	**Tokmak 2**	**56.78**	**318**	P	**P**	**07 19 05.3**	**+0.5**
	SNR=26						
KBK	**Karagaybulak**	**57.11**	**317**	P	**P**	**07 19 08.2**	**+1.1**
	SNR=27						
UCH	**Uchtor**	**57.23**	**317**	P	**P**	**07 19 09.6**	**+1.4**
	SNR=46						
MSVF	**Nonsavu**	**57.33**	**116**	P	**P**	**07 19 10.3**	**+1.5**
MSVF	**Nonsavu**	**57.33**	**116**	*i* P	**P**	**07 19 09.7**	**+0.9**
MSVF				pmax	pmax		
	comp=Z,219nm,1.5s						
CHMS	**Chumysh**	**57.38**	**318**	P	**P**	**07 19 09.2**	**+0.5**
	SNR=23						
AAK	**Ala-Archa**	**57.41**	**317**	P	P	07 19 00.0	-9.1
	SNR=14						
AAK	**Ala-Archa**	**57.41**	**317**	P	**P**	**07 19 09.6**	**+0.5**
AAK	**Ala-Archa**	**57.41**	**317**	P	**P**	**07 19 09.5**	**+0.3**
AAK				IAmb	IAmb	07 19 20.4	
	comp=Z,117nm,1.2s						
AAK	**Ala-Archa**	**57.41**	**317**	*i* P	**P**	**07 19 09.0**	**-0.1**
	SNR=21						
AAK	**Ala-Archa**	**57.41**	**317**	*ce*P	**P**	**07 19 10.7**	**+1.6**
AAK				pmax	pmax		
	comp=Z,69nm,1.7s						
ZAA0	**Zalesovo Array**	**57.52**	**333**	P	**P**	**07 19 08.8**	**-0.7**
ZALV	**Zalesovo Beam**	**57.52**	**333**	P	**P**	**07 19 08.4**	**-1.0**
	comp=Z,16nm,0.9s,baz=122,slow=5.4,SNR=37						
ZALV				PKP2bc	**P'P'bc**	**07 49 06.0**	**-3.6**
	comp=Z,4.8nm,1.0s,baz=236,slow=1.6,SNR=7.8						
	comp=Z,16nm,0.9s						
ZALV	**Zalesovo Beam**	**57.52**	**333**	P	**P**	**07 19 08.7**	**-0.8**
ZALV	**Zalesovo Beam**	**57.52**	**333**	*i* P	**P**	**07 19 08.3**	**-1.2**
ZALV				pmax	pmax		
	comp=Z,16nm,0.9s						
MANEM	**Manem**	**57.58**	**311**	P	**P**	**07 19 11.5**	**+0.9**
MANEM				IAmb	IAmb	07 19 18.3	
	comp=Z,547nm,1.3s						
SGDS	**Sogindy**	**57.65**	**318**	*e*P	**P**	**07 19 11.0**	**+0.3**
USP	**Ospenovka**	**57.66**	**318**	P	**P**	**07 19 11.5**	**+0.7**
	SNR=34						
EKS2	**Erkin-Say**	**57.90**	**317**	P	**P**	**07 19 13.8**	**+1.3**
	SNR=28						
KURBB	**Kurchatov Arra**	**58.69**	**327**	P	**P**	**07 19 17.4**	**-0.3**
	comp=Z,24nm,0.7s,baz=129,slow=5.9,SNR=55						
KURBB				PKPPKP	**P'P'df**	**07 48 49.9**	**-6.3**
	comp=Z,1.6nm,0.2s,baz=289,slow=3.3,SNR=5.2						
	comp=Z,24nm,0.7s						
KURBB	**Kurchatov Arra**	**58.69**	**327**	P	**P**	**07 19 16.7**	**-1.0**
KURK	**Kurchatov**	**58.69**	**327**	P	**P**	**07 19 17.3**	**-0.4**
KURK	**Kurchatov**	**58.69**	**327**	P	**P**	**07 19 17.4**	**-0.4**
KURK	**Kurchatov**	**58.69**	**327**	*ce*P	**P**	**07 19 17.9**	**+0.2**
KURK				pmax	pmax		
	comp=Z,158nm,1.3s						
BTLS	**Baital**	**58.69**	**320**	*e*P	**P**	**07 19 17.1**	**-0.8**
	comp=Z,44nm,1.1s						
BTLS	**Baital**	**58.69**	**320**	*e*P	**P**	**07 19 17.1**	**-0.8**
BTLS				pmax	pmax		
	comp=Z,44nm,1.1s						
KBL	**Kabul**	**58.77**	**307**	P	**P**	**07 19 18.8**	**0.0**
	SNR=44						
KBL	**Kabul**	**58.77**	**307**	P	**P**	**07 19 18.9**	**0.0**
KBL				IAmb	IAmb	07 19 24.0	
	comp=Z,60nm,0.9s						
KBL	**Kabul**	**58.77**	**307**	P	**P**	**07 19 18.9**	**0.0**
KBL				pmax	pmax		
	comp=Z,60nm,0.9s						
DZA	**Taraz**	**59.66**	**316**	*e*P	**P**	**07 19 24.9**	**+0.2**
	comp=Z,80nm,1.3s						
DZA	**Taraz**	**59.66**	**316**	*e*P	**P**	**07 19 24.8**	**+0.2**
DZA				pmax	pmax		
	comp=Z,80nm,1.3s						
SEY	**Seymchan**	**59.69**	**14**	P	**P**	**07 19 25.3**	**+0.9**
	comp=Z,88nm,1.2s,baz=226,slow=6.6,SNR=60						
	comp=Z,88nm,1.2s						
SEY	**Seymchan**	**59.69**	**14**	*e*P	**P**	**07 19 23.2**	**-1.2**
SEY				pmax	pmax		
	comp=Z,207nm,1.9s						
SHAA	**Shahritus**	**60.29**	**310**	IAmb	IAmb	07 19 58.3	
	comp=Z,227nm,1.3s						
KK31	**Karatay Array**	**60.29**	**316**	*i* P	**P**	**07 19 28.8**	**-0.2**
KKAR	**Karatay Array**	**60.29**	**316**	P	**P**	**07 19 28.7**	**-0.3**
KKAR	**Karatay Array**	**60.29**	**316**	P	**P**	**07 19 28.7**	**-0.3**
IUG	**Iuzhnay**	**60.29**	**315**	*e*P	**P**	**07 19 29.4**	**+0.3**
	comp=Z,63nm,1.0s						
IUG	**Iuzhnay**	**60.29**	**315**	*e*P	**P**	**07 19 29.4**	**+0.3**
IUG				pmax	pmax		
	comp=Z,63nm,1.0s						
CHM	**Chimkent**	**60.65**	**315**	*e*P	**P**	**07 19 31.8**	**+0.3**
	comp=Z,56nm,1.1s						
CHM	**Chimkent**	**60.65**	**315**	*e*P	**P**	**07 19 31.7**	**+0.3**
CHM				pmax	pmax		
	comp=Z,56nm,1.1s						
BRLS	**Borolday**	**60.73**	**316**	*e*P	**P**	**07 19 32.5**	**+0.4**
	comp=Z,74nm,1.3s						
BRLS	**Borolday**	**60.73**	**316**	*e*P	**P**	**07 19 32.4**	**+0.4**
BRLS				pmax	pmax		
	comp=Z,74nm,1.3s						
OUZ	**Omahuta**	**61.49**	**136**	P	**P**	**07 19 38.8**	**+1.6**
BRZS	**Berezniki**	**61.66**	**324**	*e*P	**P**	**07 19 38.7**	**+0.6**
BRZS	**Berezniki**	**61.66**	**324**	*e*P	**P**	**07 19 38.7**	**+0.6**
MKAZ	**Moumakai**	**63.56**	**137**	P	**P**	**07 19 53.3**	**+2.4**
MSZ	**Milford Sound**	**63.68**	**147**	P	**P**	**07 19 53.2**	**+1.7**
JCZ	**Jackson Bay**	**63.75**	**146**	P	**P**	**07 19 53.6**	**+1.4**
JCZ	**Jackson Bay**	**63.75**	**146**	P	**P**	**07 19 53.7**	**+1.5**
DCZ	**Deep Cove**	**63.80**	**148**	IAmb	IAmb	07 20 05.2	
	comp=Z,79nm,0.9s						
NGCH	**Negor - Chabah**	**63.96**	**295**	P	**P**	**07 19 55.6**	**+1.7**
HRA	**Herat**	**64.22**	**305**	P	**P**	**07 19 55.2**	**-0.5**
BVA0	**Borovoye Array**	**64.27**	**327**	P	**P**	**07 19 54.2**	**-1.2**
BVAR	**Borovoye Array**	**64.27**	**327**	P	**P**	**07 19 54.9**	**-0.6**
	comp=Z,27nm,1.0s,baz=127,slow=6.5,SNR=44						
BVAR				PKPPKP	**P'P'df**	**07 48 45.8**	**-1.5**
	comp=Z,1.1nm,0.9s,baz=316,slow=4.1,SNR=4.3						
	comp=Z,27nm,1.0s						
BORK	**Borovoye**	**64.32**	**327**	P	**P**	**07 19 55.3**	**-0.4**
BORK	**Borovoye**	**64.32**	**327**	*ce*P	**P**	**07 19 55.5**	**-0.2**
BORK				pmax	pmax		
	comp=Z,98nm,1.3s						
TKNZ	**Takaka Hill**	**64.32**	**142**	P	**P**	**07 19 56.9**	**+0.9**
MRNZ	**Matariki Terra**	**64.41**	**142**	P	**P**	**07 19 56.8**	**+0.3**
LBZ	**Lake Benmore**	**64.72**	**146**	P	**P**	**07 19 59.6**	**+1.1**
WTVZ	**West Tongariro**	**64.92**	**139**	P	**P**	**07 20 02.6**	**+2.6**
NNVZ	**North Ngauruho**	**64.95**	**139**	P	**P**	**07 20 02.7**	**+2.4**
TMVZ	**Te Maari**	**65.00**	**139**	P	**P**	**07 20 03.5**	**+2.9**
WNVZ	**Wahianoa**	**65.04**	**139**	P	**P**	**07 20 02.5**	**+1.7**
TIXI	**Tiksi**	**65.13**	**1**	P	**P**	**07 19 59.6**	**-1.0**
	comp=Z,37nm,1.0s,baz=184,slow=6.6,SNR=27						
	comp=Z,37nm,1.0s						
TIXI	**Tiksi**	**65.13**	**1**	IAmb	IAmb	07 20 05.6	
	comp=Z,132nm,1.2s						
TIXI	**Tiksi**	**65.13**	**1**	*ce*P	**P**	**07 20 00.0**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,119nm,1.3s						
JLN	**Jalan Bani Buh**	**65.31**	**291**	P	**P**	**07 20 02.9**	**+0.1**
	SNR=6.6						
BKZ	**Black Stump Fm**	**65.54**	**138**	P	**P**	**07 20 04.8**	**+0.8**
BKZ	**Black Stump Fm**	**65.54**	**138**	P	**P**	**07 20 04.7**	**+0.8**
OGWZ	**Otaki Gorge**	**65.58**	**140**	P	**P**	**07 20 04.3**	**+0.2**
AFI	**Afiamalu**	**65.60**	**108**	P	**P**	**07 20 06.0**	**+1.2**
AFI	**Afiamalu**	**65.60**	**108**	P	**P**	**07 20 06.6**	**+1.8**
AFI	**Afiamalu**	**65.60**	**108**	P	**P**	**07 20 06.0**	**+1.2**
MTHZ	**Maungataniwha**	**65.61**	**138**	P	**P**	**07 20 05.3**	**+0.9**
KWHZ	**Kaweka Forest**	**65.63**	**139**	P	**P**	**07 20 05.4**	**+0.8**
HAZ	**Te Kaha**	**65.69**	**136**	P	**P**	**07 20 05.5**	**+0.6**
KRHZ	**Kereru**	**65.72**	**139**	P	**P**	**07 20 05.7**	**+0.7**
NMHZ	**Naumai**	**65.72**	**138**	P	**P**	**07 20 06.1**	**+0.9**
BHW	**Baring Head**	**65.72**	**141**	IAmb	IAmb	07 20 12.4	
	comp=Z,46nm,0.9s						
WBK	**Wadi Bani Khal**	**65.74**	**292**	P	**P**	**07 20 06.3**	**+0.7**
	SNR=11						
MRZ	**Mangatainoka R**	**65.75**	**140**	IAmb	IAmb	07 20 12.7	
	comp=Z,141nm,1.7s						
MCHZ	**McNeill Hill**	**65.83**	**138**	P	**P**	**07 20 06.7**	**+0.9**
HOWZ	**Holdsworth Sta**	**65.84**	**140**	P	**P**	**07 20 05.6**	**-0.3**
ARHZ	**Aropaoanui**	**65.93**	**138**	P	**P**	**07 20 09.3**	**+2.9**
DVHZ	**Dannevirke**	**65.93**	**140**	P	**P**	**07 20 07.7**	**+1.2**
WSAR	**Wadi Sarin**	**66.09**	**292**	P	**P**	**07 20 07.5**	**-0.4**
	SNR=9.4						
KAHZ	**Kahuranaki**	**66.13**	**139**	P	**P**	**07 20 08.4**	**+0.7**
BFZ	**Birch Farm**	**66.19**	**140**	IAmb	IAmb	07 20 22.2	
	comp=Z,69nm,1.1s						
BFZ	**Birch Farm**	**66.19**	**140**	P	**P**	**07 20 08.6**	**+0.5**
BFZ	**Birch Farm**	**66.19**	**140**	P	**P**	**07 20 07.8**	**-0.2**
TMWZ	**Te Maipa**	**66.19**	**140**	P	**P**	**07 20 09.0**	**+0.9**
PXZ	**Pawanui**	**66.24**	**139**	P	**P**	**07 20 08.8**	**+0.5**
JMDO	**Jabal Madar**	**66.53**	**291**	P	**P**	**07 20 09.7**	**-1.0**
	SNR=16						
BIDO	**Bidbid**	**66.56**	**293**	P	**P**	**07 20 11.1**	**+0.3**
	SNR=26						
MHTO	**MHTO**	**66.60**	**290**	P	**P**	**07 20 10.3**	**-0.8**
	SNR=13						
SMDO	**Samad**	**66.61**	**292**	P	**P**	**07 20 10.5**	**-0.8**
	SNR=12						
DQM	**DQM**	**66.97**	**289**	P	**P**	**07 20 13.2**	**-0.3**
	SNR=8.9						
ATKA	**Atka Island**	**67.05**	**36**	P	**P**	**07 20 13.5**	**+0.2**
BILL	**Bilibino**	**67.27**	**15**	P	**P**	**07 20 14.5**	**0.0**
BILL	**Bilibino**	**67.27**	**15**	*ce*P	**P**	**07 20 15.5**	**+1.0**
BILL				pmax	pmax		
	comp=Z,149nm,2.5s						
HOQ	**Hoqain**	**67.31**	**293**	P	**P**	**07 20 15.1**	**-0.5**
	SNR=18						
BSY	**Bisya**	**67.38**	**292**	P	**P**	**07 20 15.5**	**-0.6**
	SNR=7.4						
NRIK	**Noril'sk**	**67.44**	**346**	P	**P**	**07 20 14.6**	**-1.0**
	comp=Z,12nm,0.9s,baz=137,slow=6.8,SNR=21						
NRIK				LR	LR	07 51 43.6	
	comp=Z,5µm,19.3s,baz=292,slow=38						
	comp=Z,12nm,0.9s						
NRIK	**Noril'sk**	**67.44**	**346**	IAmb	IAmb	07 20 21.2	
	comp=Z,124nm,1.6s						
NRIK	**Noril'sk**	**67.44**	**346**	*i* P	**P**	**07 20 13.8**	**-1.7**
NRIK				pmax	pmax		
	comp=Z,81nm,1.5s						
ARQ	**Araqi**	**68.03**	**292**	P	**P**	**07 20 19.5**	**-0.7**

	SNR=5.3						
SOHO	SOHO	68.05	293	iP	P	07 20 19.6	-0.6
	SNR=9.0						
MDH	Madha	68.32	295	P	P	07 20 21.8	-0.1
MDH	Madha	68.32	295	P	P	07 20 20.1	-1.8
BANOM	Banah	68.36	295	P	P	07 20 21.8	-0.4
BANOM	Banah	68.36	295	iP	P	07 20 21.4	-0.8
	SNR=12						
HATD	Hatta, Dubai	68.45	294	P	P	07 20 22.2	-0.6
	SNR=12						
HATD	Hatta, Dubai	68.45	294	iP	P	07 20 21.9	-0.9
	SNR=6.2						
MSFE	Esma-Masafi	68.45	295	iP	P	07 20 19.9	-2.9
	SNR=8.8						
MASF	Masafi	68.45	295	P	P	07 20 22.8	0.0
	SNR=9.9						
SHME	Shamm	68.51	295	P	P	07 20 23.0	-0.1
ASHO	Ashiyiah	68.51	294	P	P	07 20 22.7	-0.5
	SNR=13						
NIUE	Niue	68.61	113	P	P	07 20 24.8	+1.0
SHAO	Shalim	68.76	287	P	P	07 20 24.9	0.0
	SNR=10						
SHAO				S	S	07 29 29.8	+1.6
SHAO	Shalim	68.76	287	iP	P	07 20 26.0	+1.2
	SNR=11						
ALNE	Al Ain	68.76	293	P	P	07 20 24.0	-0.7
	SNR=18						
ALNE	Al Ain	68.76	293	iP	P	07 20 25.5	+0.7
	SNR=7.4						
NAZ	Nazwa, Dubai	68.89	294	P	P	07 20 26.4	+1.0
	SNR=9.1						
NAZ	Nazwa, Dubai	68.89	294	P	P	07 20 25.1	-0.4
FAQ	Al Faqa, Dubai	68.94	294	P	P	07 20 26.2	+0.4
	SNR=5.2						
FAQ	Al Faqa, Dubai	68.94	294	iP	P	07 20 24.5	-1.3
	SNR=6.0						
AB31	Akbulak array	69.16	320	IAmb	IAmb	07 20 34.4	
	comp=Z,102nm,1.1s						
AB31	Akbulak array	69.16	320	iP	P	07 20 25.3	-1.4
ABKAR	Akbulak array	69.16	320	P	P	07 20 25.5	-1.1
ASUD	Al Ashush, Dub	69.17	294	P	P	07 20 26.1	-1.1
	SNR=5.8						
ASUD	Al Ashush, Dub	69.17	294	iP	P	07 20 28.0	+0.7
	SNR=6.1						
DMTO	DMTO	69.41	286	P	P	07 20 28.7	-0.1
	SNR=10						
DMTO				S	S	07 29 37.9	+2.0
AJN	Ajban	69.48	294	iP	P	07 20 29.3	+0.1
	SNR=5.8						
RBK	Rabkut	70.12	286	P	P	07 20 33.4	+0.1
	SNR=14						
RBK				S	S	07 29 45.0	+0.6
DOK	Doka	70.18	287	P	P	07 20 33.0	-0.6
	SNR=22						
DOK				S	S	07 29 45.3	+0.3
NIKH	Nikolski High	70.38	36	P	P	07 20 34.4	+0.2
	baz=254						
WHFO	Wadi Hawf	70.53	287	P	P	07 20 34.8	-1.0
	SNR=11						
MSEY	Mahe Island	70.62	263	iP	P	07 20 40.7	+4.3
	SNR=6.0						
AKTO	Aktyubinsk	70.66	321	P	P	07 20 34.6	-1.3
MZR	Muzera	70.82	292	P	P	07 20 36.6	-0.8
	SNR=20						
MZR	Muzera	70.82	292	iP	P	07 20 36.9	-0.6
	SNR=24						
SPIA	Saint Paul Isl	70.86	31	P	P	07 20 36.5	-0.5
	baz=252						
SVE	Sverdlovsk	70.91	328	eP	P	07 20 36.4	-0.9
SVE				pmax	pmax		
	comp=Z,97nm,1.3s						
ABTO	Aybut	70.99	286	P	P	07 20 37.8	-0.8
	SNR=14						
JRN	Qarnain Island	71.44	294	P	P	07 20 40.0	-1.1
ARTI	Arti	71.97	327	P	P	07 20 42.1	-1.6
ARTI	Arti	71.97	327c	iP	P	07 20 42.7	-1.0
ARTI				S	S	07 30 04.2	-0.2
ARTI				pmax	pmax		
	comp=Z,23nm,1.0s						
UNV	Unalaska Valle	71.97	35	P	P	07 20 43.6	-0.1
	baz=256						
GAMB	Gambell	72.46	25	IAmb	IAmb	07 20 58.1	
	comp=Z,93nm,1.2s						
GAMB	Gambell	72.46	25	P	P	07 20 46.4	0.0
	baz=248						
SLWR	Sila	72.47	293	P	P	07 20 46.2	-1.1
SLWR				S	S	07 30 10.5	-0.9
TRNA	Turayna	72.92	294	P	P	07 20 49.6	-0.3
TRNA				S	S	07 30 16.2	-0.2
SHMA	Al-Shehemyia	73.16	295	P	P	07 20 50.8	-0.6
SHMA				S	S	07 30 17.6	-1.5
CASY	Casey	73.38	186	P	P	07 20 51.6	-0.1
CASY				IAmb	IAmb	07 20 58.0	
	comp=Z,56nm,0.8s						
SAKB	Bahrain	73.54	295	P	P	07 20 52.8	-0.8
SAKB				S	S	07 30 23.0	-0.5
M11K	Mekoryuk	73.82	29	P	P	07 20 54.4	-0.1
	baz=254						
FALS	False Pass	73.96	35	P	P	07 20 55.1	-0.4
	baz=258						
TNA	Tin City	74.61	23	P	P	07 20 59.2	+0.1
	baz=251						
S12K	Black Hills	74.88	34	P	P	07 21 01.8	+0.9
	baz=259						
K13K	Kusilvak Mount	74.95	27	IAmb	IAmb	07 21 04.4	
	comp=Z,90nm,1.2s						
K13K	Kusilvak Mount	74.95	27	P	P	07 21 02.8	+1.7
	baz=255						
M13K	Dall Lake	75.20	29	P	P	07 21 03.8	+1.2
	baz=257						
F14K	Arctic Creek	75.22	24	P	P	07 21 04.1	+1.5
	baz=253,SNR=7.2						
KIP	Kipapa	75.25	70	ceP	P	07 21 03.8	+0.2
KIP				pmax	pmax		
	comp=Z,241nm,1.7s						
ANM	Nome	75.34	25	P	P	07 21 04.9	+1.6
	baz=254						
LKRN	Lenkeran, Azer	75.49	308	P	P	07 21 06.7	+2.0
J14K	Nanvaranak Lak	75.65	27	P	P	07 21 06.7	+1.6
	baz=256						
SDPT	Sand Point	75.71	35	P	P	07 21 05.9	+0.3
	baz=261						
L14K	Kuka Creek	75.72	28	P	P	07 21 07.1	+1.5
	baz=257						
N14K	Kuskokwak Cree	75.91	30	IAmb	IAmb	07 21 18.2	
	comp=Z,88nm,0.9s						
N14K	Kuskokwak Cree	75.91	30	P	P	07 21 07.9	+1.3
	baz=258						
M14K	Bethel	75.94	29	P	P	07 21 08.6	+1.8
	baz=258,SNR=7.3						
F15K	North Star Dit	75.95	24	P	P	07 21 08.4	+1.5
	baz=254,SNR=9.8						
O14K	Tigyukauivet M	75.98	30	P	P	07 21 08.6	+1.5
	baz=259						
G15K	Niukluk	76.01	24	P	P	07 21 08.5	+1.3
	baz=255						
CHNA	Chernabura Isl	76.13	35	P	P	07 21 08.8	+0.7
	baz=262						
L15K	Ungalak Mounta	76.36	28	P	P	07 21 10.2	+1.0
	baz=258						
S14K	Fog Glacier	76.37	34	P	P	07 21 10.1	+0.6
	baz=261						
C16K	Lisburne Hills	76.42	21	IAmb	IAmb	07 21 20.9	
	comp=Z,90nm,1.1s						
C16K	Lisburne Hills	76.42	21	P	P	07 21 10.4	+1.0
	baz=253						
AKT	Akhty	76.46	311	eP	P	07 21 11.7	+1.3
AKT				e		07 21 22.3	
AKT				e		07 24 03.2	
AKT				pmax	pmax		
	comp=Z,73nm,1.2s						
AKT				MLR	MLR		
	comp=Z,3µm,17.0s						
K15K	Wolf Creek Mou	76.47	27	IAmb	IAmb	07 21 12.5	
	comp=Z,82nm,1.4s						
K15K	Wolf Creek Mou	76.47	27	P	P	07 21 11.4	+1.6
	baz=258						
M15K	Kasigluk River	76.54	29	P	P	07 21 11.3	+1.0
	baz=259,SNR=5.2						
H16K	Elim	76.67	25	P	P	07 21 12.2	+1.2
	baz=257,SNR=8.2						
O15K	Ungalikthiuk R	76.70	31	P	P	07 21 12.0	+0.9
	baz=260						
N15K	Kwethluk River	76.74	30	IAmb	IAmb	07 21 14.3	
	comp=Z,119nm,1.2s						
N15K	Kwethluk River	76.74	30	P	P	07 21 12.8	+1.4
	baz=260						
G16K	Koyuk River	76.80	24	P	P	07 21 13.0	+1.4
	baz=256,SNR=6.6						
SEKA	Sheki	76.84	311	P	P	07 21 14.2	+1.7
MNGR	Mingechevir, A	76.91	310	P	P	07 21 15.1	+2.4
XMAS	Kiritimati	77.07	89	P	P	07 21 17.1	+2.9
XMAS	Kiritimati	77.07	89	P	P	07 21 15.9	+1.7
D17K	Noatak River	77.08	22	P	P	07 21 14.7	+1.6
	baz=255,SNR=42						
J16K	Anvik River	77.08	26	IAmb	IAmb	07 21 24.3	
	comp=Z,60nm,1.3s						
J16K	Anvik River	77.08	26	P	P	07 21 14.8	+1.5
	baz=259						
I17K	Unalakleet	77.17	26	IAmb	IAmb	07 21 25.4	
	comp=Z,48nm,1.0s						
I17K	Unalakleet	77.17	26	P	P	07 21 15.6	+1.9
	baz=258,SNR=13						
KIRV	Kirov	77.17	329	ceP	P	07 21 12.8	-1.0
RDOG	Red Dog Mine	77.23	21	IAmb	IAmb	07 21 25.7	
	comp=Z,81nm,1.1s						
RDOG	Red Dog Mine	77.23	21	P	P	07 21 15.8	+1.8
	baz=255,SNR=12						
C17K	DeLong Mountai	77.24	21	P	P	07 21 15.5	+1.4
	baz=255,SNR=23						
MHA	Mahukona	77.26	71	P	P	07 21 17.6	+2.5
MHA	Mahukona	77.26	71	P	P	07 21 17.6	+2.5
L16K	Owhat River	77.31	28	IAmb	IAmb	07 21 16.9	
	comp=Z,80nm,1.2s						
L16K	Owhat River	77.31	28	P	P	07 21 16.3	+1.8
	baz=260,SNR=10						
BELG	Belogornoye	77.40	322	iP	P	07 21 13.3	-1.9
BELG				pmax	pmax		
	comp=Z,29nm,1.1s						
E17K	Hotham Inlet	77.40	23	P	P	07 21 16.8	+1.8
	baz=257,SNR=33						
M16K	Timber Creek	77.43	29	IAmb	IAmb	07 21 17.6	
	comp=Z,66nm,1.1s						
M16K	Timber Creek	77.43	29	P	P	07 21 16.6	+1.3
	baz=261						
N16K	Nishlik Lake	77.44	29	P	P	07 21 17.1	+1.7
	baz=261						
GANJ	Ganja	77.48	310	P	P	07 21 18.9	+2.9
G17K	Kiwalik Mounta	77.52	24	P	P	07 21 17.2	+1.5
	baz=258,SNR=14						
P16K	Nushagak River	77.61	31	P	P	07 21 17.6	+1.3
	baz=262						
POHA	Pohakuloa	77.62	71	P	P	07 21 18.7	+1.2
R16K	Pilot Point	77.63	33	P	P	07 21 17.1	+0.7
	baz=263						
O16K	Kokwok River B	77.64	30	IAmb	IAmb	07 21 18.6	
	comp=Z,78nm,1.1s						
O16K	Kokwok River B	77.64	30	P	P	07 21 17.5	+1.1
	baz=262						
H17K	Granite Mounta	77.71	25	P	P	07 21 18.4	+1.6
	baz=259						
J17K	VABM Dome	77.78	26	P	P	07 21 18.9	+1.7
	baz=260						
L17K	Donlin	77.92	28	P	P	07 21 19.7	+1.7
	baz=261						
E18K	Tukpahlearik C	77.94	22	IAmb	IAmb	07 21 25.9	
	comp=Z,43nm,0.8s						
E18K	Tukpahlearik C	77.94	22	P	P	07 21 19.9	+1.9
	baz=258						
B18K	Kokolik River	77.95	20	P	P	07 21 20.1	+2.1
	baz=256,SNR=30						
C18K	Utukok River	77.99	21	IAmb	IAmb	07 21 28.5	
	comp=Z,43nm,0.9s						
C18K	Utukok River	77.99	21	P	P	07 21 19.6	+1.2
	baz=257						
K17K	Iditarod	78.02	27	IAmb	IAmb	07 21 30.8	
	comp=Z,70nm,1.1s						
K17K	Iditarod	78.02	27	P	P	07 21 20.3	+1.8
	baz=261,SNR=12						
NAX	Nakhchivan	78.07	309	P	P	07 21 22.3	+2.9
F18K	Selawik	78.14	23	P	P	07 21 20.7	+1.7
	baz=259,SNR=16						
RAYN	Ar Rayn	78.15	293	P	P	07 21 19.7	-0.4
RAYN	Ar Rayn	78.15	293	P	P	07 21 19.6	-0.5
RAYN				IAmb	IAmb	07 21 37.8	
	comp=Z,56nm,0.8s						
RAYN	Ar Rayn	78.15	293	iP	P	07 21 19.5	-0.5
	SNR=15						
RAYN				iP	P	07 21 19.6	-0.5
	SNR=46						
RAYN	Ar Rayn	78.15	293	P	P	07 21 19.6	-0.5
RAYN				pmax	pmax		
	comp=Z,56nm,0.8s						
O17K	Koliganek Bris	78.17	30	P	P	07 21 20.7	+1.3
	baz=262,SNR=5.6						
M17K	Holitna River	78.22	29	IAmb	IAmb	07 21 31.5	
	comp=Z,77nm,1.2s						
M17K	Holitna River	78.22	29	P	P	07 21 21.5	+1.9
	baz=262						
N17K	Nushagak Hills	78.22	30	IAmb	IAmb	07 21 36.8	
	comp=Z,121nm,1.5s						
N17K	Nushagak Hills	78.22	30	P	P	07 21 21.4	+1.8
	baz=262						
Q16K	King Salmon	78.25	31	P	P	07 21 21.3	+1.4
	baz=263						
R17L	Mt. Peulik Vol	78.28	33	P	P	07 21 21.1	+1.0
	baz=264						
H18K	Honhosa River	78.39	25	P	P	07 21 22.1	+1.6
	baz=260						
A19K	Wainwright	78.39	19	P	P	07 21 21.9	+1.5
	baz=257						
G18K	Tagagawik	78.40	24	P	P	07 21 21.8	+1.2
	baz=260						
P17K	Kvichak River	78.42	31	P	P	07 21 22.2	+1.4
	baz=263,SNR=5.5						
CHIR	Chirikof Islan	78.50	34	P	P	07 21 22.4	+1.1
	baz=265						
Q17K	Contact Creek	78.61	32	P	P	07 21 22.7	+0.7
	baz=264						
C19K	Lookout Ridge	78.66	21	IAmb	IAmb	07 21 30.3	
	comp=Z,87nm,0.9s						
C19K	Lookout Ridge	78.66	21	P	P	07 21 23.9	+1.9
	baz=258,SNR=39						
L18K	Granite Mounta	78.69	28	P	P	07 21 24.0	+1.8
	baz=262						
TBLG	Delisi	78.71	311	P	P	07 21 26.2	+3.4
J18K	Innoko River	78.84	27	P	P	07 21 24.9	+1.9
	baz=262						
N18K	Kilae Creek	78.87	29	IAmb	IAmb	07 21 26.0	
	comp=Z,81nm,1.4s						
N18K	Kilae Creek	78.87	29	P	P	07 21 25.0	+1.7
	baz=263						
F19K	Shaleruckik Mo	78.91	23	P	P	07 21 25.0	+1.6
	baz=260						
GCSA	Galena City Sc	78.95	25	P	P	07 21 25.3	+1.7
	baz=262,SNR=11						
M18K	Stony River	79.00	29	P	P	07 21 25.7	+1.8
	baz=263,SNR=6.3						
D19K	Kuna River	79.07	21	P	P	07 21 26.0	+1.7
	baz=260						
G19K	Purcell Mounta	79.08	24	P	P	07 21 25.9	+1.6
	baz=261,SNR=21						
Q18K	Katmai Hardscr	79.10	32	P	P	07 21 25.9	+1.2
	baz=265						
O18K	Koktuh Hills	79.12	30	IAmb	IAmb	07 21 36.6	
	comp=Z,90nm,1.0s						
O18K	Koktuh Hills	79.12	30	P	P	07 21 26.3	+1.6
	baz=264,SNR=5.1						
E19K	Redstone River	79.22	23	IAmb	IAmb	07 21 41.8	
	comp=Z,81nm,1.1s						
E19K	Redstone River	79.22	23	P	P	07 21 27.0	+1.9
	baz=261						
H19K	Roundabout Mou	79.24	25	IAmb	IAmb	07 21 37.9	
	comp=Z,82nm,1.1s						
H19K	Roundabout Mou	79.24	25	P	P	07 21 27.2	+2.1
	baz=262,SNR=23						
R18K	Karluk	79.30	33	P	P	07 21 27.1	+1.5
	baz=265						
SII	Sitkinak Islan	79.37	34	P	P	07 21 27.4	+1.3
	baz=266						
J19K	Poorman	79.39	26	P	P	07 21 27.6	+1.5
	baz=263,SNR=11						
L19K	White Mountain	79.53	28	P	P	07 21 28.3	+1.3
	baz=264,SNR=6.5						
N19K	Bonanza Creek	79.57	29	IAmb	IAmb	07 21 45.1	
	comp=Z,83nm,1.4s						
N19K	Bonanza Creek	79.57	29	P	P	07 21 28.4	+1.1
	baz=265						
NCK	Nalchik	79.59	313	iP	P	07 21 26.4	-1.2
NCK				pmax	pmax		
	comp=Z,191nm,3.6s						
O19K	Port Alsworth	79.60	30	IAmb	IAmb	07 21 37.7	
	comp=Z,138nm,1.6s						
O19K	Port Alsworth	79.60	30	P	P	07 21 28.6	+1.4
	baz=265						
D20K	Etivluk River	79.65	21	P	P	07 21 28.9	+1.4
	baz=261						
B20K	Meade River	79.67	20	IAmb	IAmb	07 21 35.7	
	comp=Z,52nm,0.9s						
B20K	Meade River	79.67	20	P	P	07 21 28.7	+1.3
	baz=260,SNR=21						
E20K	Nigu River	79.74	22	P	P	07 21 29.2	+1.3
	baz=262						
F20K	Avaraart Lake	79.74	23	P	P	07 21 29.3	+1.4
	baz=262						
Q19K	Cape Douglas,	79.83	31	P	P	07 21 29.9	+1.3
	baz=266						
H20K	Anotleneega Mo	79.89	25	P	P	07 21 30.0	+1.3
	baz=263,SNR=25						
OHAK	Old Harbor	79.90	33	P	P	07 21 30.2	+1.2
	baz=266						
KARS	Kars	79.95	310	IAmb	IAmb	07 21 36.6	
	comp=Z,107nm,1.1s						
I20K	Naaghedeneel	79.98	25	IAmb	IAmb	07 21 41.5	
	comp=Z,157nm,1.2s						
I20K	Naaghedeneel	79.98	25	P	P	07 21 30.7	+1.5
	baz=264						
GOF	Gofitskoye	80.01	315	ceP	P	07 21 29.8	0.0
K20K	Telida	80.01	27	P	P	07 21 30.8	+1.4
	baz=265						
J20K	Nowinta River	80.06	26	IAmb	IAmb	07 21 46.7	
	comp=Z,154nm,1.8s						
J20K	Nowinta River	80.06	26	P	P	07 21 31.1	+1.4
	baz=264,SNR=15						
A21K	Barrow	80.06	19	P	P	07 21 30.6	+1.1
	baz=261,SNR=25						
KBZ	Khabaz	80.10	313	P	P	07 21 31.1	+0.8
	comp=Z,10nm,1.0s,baz=24,slow=2.7,SNR=10						
	comp=Z,10nm,1.0s						
KBZ	Khabaz	80.10	313	ceP	P	07 21 30.5	+0.2
KBZ				pmax	pmax		
	comp=Z,35nm,1.4s						
P19K	Oil Pt	80.10	31	P	P	07 21 31.3	+1.3
	baz=266						
ILSW	Iliamna Southw	80.17	30	IAmb	IAmb	07 22 52.7	
	comp=Z,73nm,0.7s						
KIV	Kislovodsk	80.25	313	P	P	07 21 30.7	-0.6
KIV				IAmb	IAmb	07 21 39.1	
	comp=Z,80nm,1.2s						
KIV	Kislovodsk	80.25	313	iP	P	07 21 34.1	+2.9
	SNR=13						
KIV	Kislovodsk	80.25	313	eP	P	07 21 31.1	-0.2
KIV				pmax	pmax		
	comp=Z,38nm,1.0s						
KIV	Kislovodsk	80.25	313	P	P	07 21 31.4	+0.1
	comp=Z,43nm,1.7s						
SHA1	Shidzhatmaz	80.27	313	iP	P	07 21 31.6	0.0
M20K	Styx River	80.31	28	IAmb	IAmb	07 21 43.9	
	comp=Z,78nm,1.1s						
M20K	Styx River	80.31	28	P	P	07 21 32.6	+1.4
	baz=266						
KDAK	Kodiak Island	80.32	33	P	P	07 21 30.1	-1.1
	comp=Z,30nm,0.8s,baz=269,slow=3.5,SNR=12						
	comp=Z,30nm,0.8s						
KDAK	Kodiak Island	80.32	33	P	P	07 21 31.4	+0.3
KDAK	Kodiak Island	80.32	33	P	P	07 21 31.9	+0.8
	baz=267						
C21K	Knifeblade Rid	80.37	21	P	P	07 21 32.6	+1.3
	baz=263,SNR=7.9						
IMAR	Indian Mountai	80.41	24	P	P	07 21 32.2	+0.7
Q20K	Shuyak Island	80.46	32	P	P	07 21 33.1	+1.1
	baz=267						
B21K	Ikpikpuk River	80.48	20	IAmb	IAmb	07 21 39.8	
	comp=Z,58nm,0.9s						
B21K	Ikpikpuk River	80.48	20	P	P	07 21 33.1	+1.3
	baz=263						
A22K	Sinclair Lake	80.54	19	P	P	07 21 33.4	+1.3
	baz=262						
G21K	Allakaket	80.56	24	P	P	07 21 33.6	+1.3
	baz=264						
E21K	Killik River	80.58	22	IAmb	IAmb	07 21 44.7	
	comp=Z,182nm,1.9s						
E21K	Killik River	80.58	22	P	P	07 21 34.2	+1.7
	baz=264						
F21K	Alatna River	80.63	23	P	P	07 21 34.1	+1.4
	baz=264,SNR=7.5						
N20K	Mount Spurr	80.71	29	P	P	07 21 34.4	+1.0
	baz=267						
SPCR	Spurr Chakacha	80.71	29	P	P	07 21 34.1	+0.8
	baz=267						
H21K	Melozitna Rive	80.76	25	IAmb	IAmb	07 21 46.2	
	comp=Z,85nm,1.5s						
H21K	Melozitna Rive	80.76	25	P	P	07 21 35.2	+1.7
	baz=265,SNR=13						
GURO	Guroymak-BITLI	80.77	308	IAmb	IAmb	07 21 42.3	
	comp=Z,76nm,1.0s						
PPLA	Purkeypile	80.83	27	IAmb	IAmb	07 21 44.3	
	comp=Z,218nm,1.8s						
PPLA	Purkeypile	80.83	27	P	P	07 21 34.8	+0.8
	baz=266,SNR=5.4						
CHUM	Lake Minchumin	80.84	26	P	P	07 21 35.4	+1.5
	baz=266,SNR=9.4						
HOM	Homer	80.91	31	P	P	07 21 35.2	+0.9
	baz=267						
ABPO	Ambohimpanom	80.95	250	P	P	07 21 34.3	-1.3
ABPO	Ambohimpanom	80.95	250	P	P	07 21 34.3	-1.3
ABPO				pmax	pmax		
	comp=Z,13nm,0.9s						
B22K	Teshekpuk Lake	80.98	20	IAmb	IAmb	07 21 42.2	
	comp=Z,43nm,0.8s						
B22K	Teshekpuk Lake	80.98	20	P	P	07 21 36.2	+1.7
	baz=264						
VRH	Novokhopyorsk	80.99	321	eP	P	07 21 31.4	-3.5
VRH				pmax	pmax		
	comp=Z,30nm,1.0s						
I21K	Tanana	81.07	25	IAmb	IAmb	07 21 53.9	
	comp=Z,73nm,1.0s						
I21K	Tanana	81.07	25	P	P	07 21 36.2	+1.2
	baz=266,SNR=8.8						
SKT	Skwentna	81.08	28	IAmb	IAmb	07 21 44.6	
	comp=Z,51nm,1.0s						
SKT	Skwentna	81.08	28	P	P	07 21 35.8	+0.6
	baz=267,SNR=12						
D22K	Ayikyak River	81.09	21	P	P	07 21 36.3	+1.2
	baz=265						
F22K	John River	81.16	23	P	P	07 21 36.3	+0.7
	baz=266						
CAPN	Captain Cook N	81.20	30	P	P	07 21 35.3	-0.6
	baz=268						
E22K	Anaktuvuk Pass	81.35	22	P	P	07 21 38.4	+1.8
	baz=266,SNR=15						
BRSE	Bradley Lake S	81.37	31	P	P	07 21 37.5	+0.7
	baz=268						
H22K	Ishtalitna Cre	81.37	24	IAmb	IAmb	07 21 53.7	
	comp=Z,57nm,1.2s						
H22K	Ishtalitna Cre	81.37	24	P	P	07 21 38.3	+1.6
	baz=267						
G22K	Bettles	81.38	23	P	P	07 21 37.2	+0.5
	baz=266						
SUA	Susitna One	81.43	29	IAmb	IAmb	07 21 46.6	
	comp=Z,78nm,0.9s						
SUA	Susitna One	81.43	29	P	P	07 21 37.7	+0.5
	baz=268,SNR=6.6						
BPAW	Bear Paw Mtn.	81.43	26	IAmb	IAmb	07 21 40.0	
	comp=Z,109nm,1.1s						
BPAW	Bear Paw Mtn.	81.43	26	P	P	07 21 37.7	+0.6
	baz=267,SNR=41						
KTH	Kantishna Hill	81.44	27	IAmb	IAmb	07 21 49.7	
	comp=Z,86nm,1.1s						
L22K	Petersville	81.46	28	IAmb	IAmb	07 21 48.5	
	comp=Z,112nm,1.1s						
MLY	Manley	81.59	25	IAmb	IAmb	07 21 53.6	
	comp=Z,53nm,1.0s						
MLY	Manley	81.59	25	P	P	07 21 38.7	+0.8
	baz=267,SNR=28						
SLKM	Skilak Lake	81.65	30	IAmb	IAmb	07 21 49.5	
	comp=Z,67nm,1.0s						
CUT	Chulitna	81.69	28	P	P	07 21 39.2	+0.8
	baz=268						
TRF	Thorofare Moun	81.72	27	IAmb	IAmb	07 21 54.2	
	comp=Z,94nm,1.0s						
TRF	Thorofare Moun	81.72	27	P	P	07 21 39.5	+0.7
	baz=268,SNR=13						
M22K	Willow	81.74	29	P	P	07 21 39.3	+0.7
	baz=268,SNR=12						
D23K	Nanushuk River	81.82	21	P	P	07 21 40.2	+1.2
	baz=267						
VOI	Vohitsoka	81.86	247	P	P	07 21 38.4	-1.9
VOI	Vohitsoka	81.86	247	P	P	07 21 38.7	-1.6
C23K	Itkillik River	81.89	20	IAmb	IAmb	07 21 45.8	
	comp=Z,89nm,1.4s						
C23K	Itkillik River	81.89	20	P	P	07 21 40.7	+1.3
	baz=267						

O22K	Cooper Landing	81.90	30	P	P	07 21 40.5	+1.0
	baz=269						
RC01	Rabbit Creek A	81.90	29	P	P	07 21 40.6	+1.1
	baz=269						
COLD	Coldfoot	81.91	23	P	P	07 21 40.6	+1.2
	baz=268,SNR=16						
SEW	Seward	82.02	30	IAmb	IAmb	07 21 51.2	
	comp=Z,104nm,1.2s						
SEW	Seward	82.02	30	P	P	07 21 41.3	+1.1
	baz=269						
H23K	Yukon River	82.12	24	IAmb	IAmb	07 21 44.2	
	comp=Z,45nm,1.0s						
H23K	Yukon River	82.12	24	P	P	07 21 42.4	+1.8
	baz=268						
E23K	Chandalar	82.17	22	IAmb	IAmb	07 21 51.9	
	comp=Z,56nm,1.1s						
E23K	Chandalar	82.17	22	P	P	07 21 43.0	+2.1
	baz=268						
I23K	Minto, Yukon-K	82.17	25	IAmb	IAmb	07 21 58.5	
	comp=Z,58nm,1.0s						
I23K	Minto, Yukon-K	82.17	25	P	P	07 21 42.5	+1.6
	baz=268,SNR=19						
PMR	Palmer	82.20	29	IAmb	IAmb	07 21 52.4	
	comp=Z,66nm,1.0s						
PMR	Palmer	82.20	29	P	P	07 21 41.4	+0.3
PMR	Palmer	82.20	29	P	P	07 21 41.9	+0.8
	baz=269,SNR=8.8						
TOLK	Toolik Lake Re	82.20	22	IAmb	IAmb	07 21 46.9	
	comp=Z,128nm,1.8s						
TOLK	Toolik Lake Re	82.20	22	P	P	07 21 43.0	+1.9
	baz=268,SNR=13						
NEA2	Nenana	82.28	26	IAmb	IAmb	07 21 44.5	
	comp=Z,41nm,1.0s						
NEA2	Nenana	82.28	26	P	P	07 21 42.4	+0.9
	baz=269,SNR=14						
GHO	Glory Hole Cre	82.31	29	IAmb	IAmb	07 21 59.1	
	comp=Z,68nm,1.0s						
MCK	McKinley	82.33	27	P	P	07 21 42.5	+0.7
	baz=269,SNR=33						
KLMR	Klimovskoe	82.34	330	*e*P	P	07 21 40.5	-1.4
KLMR				*e*		07 24 47.2	
KLMR				pmax	pmax		
	comp=Z,120nm,1.4s						
SOC	Sochi	82.41	313	*e*P	P	07 21 43.5	+0.9
SOC				*e*S	S	07 31 58.3	-0.1
SOC				pmax	pmax		
	comp=Z,21nm,0.7s						
WAT1	Susitna Watana	82.49	28	P	P	07 21 43.8	+1.1
	baz=270						
D24K	Happy Valley	82.49	21	IAmb	IAmb	07 21 55.7	
	comp=Z,55nm,1.1s						
D24K	Happy Valley	82.49	21	P	P	07 21 43.9	+1.4
	baz=268						
VORD	Divnogorie	82.52	320	*e*P	P	07 21 40.8	-2.2
VORD				pmax	pmax		
	comp=Z,40nm,1.0s						
KNK	Knik Glacier	82.53	29	IAmb	IAmb	07 21 54.3	
	comp=Z,102nm,1.2s						
KNK	Knik Glacier	82.53	29	P	P	07 21 44.0	+1.1
	baz=270,SNR=5.2						
C24K	Franklin Bluff	82.55	21	IAmb	IAmb	07 21 55.5	
	comp=Z,77nm,1.2s						
C24K	Franklin Bluff	82.55	21	P	P	07 21 43.9	+1.1
	baz=268						
VORR	Voronezh	82.56	321	*e*P	P	07 21 40.8	-2.4
VORR				pmax	pmax		
	comp=Z,60nm,1.0s						
PWL	Port Wells	82.58	30	P	P	07 21 44.7	+1.5
	baz=270,SNR=6.1						
SML	Sawmill	82.59	29	P	P	07 21 44.7	+1.5
	baz=270,SNR=8.7						
E24K	Your Creek	82.59	22	IAmb	IAmb	07 21 49.0	
	comp=Z,81nm,1.8s						
E24K	Your Creek	82.59	22	P	P	07 21 44.4	+1.3
	baz=269						
VSR	Storozhevoye	82.59	321	*e*P	P	07 21 41.2	-2.2
VSR				pmax	pmax		
	comp=Z,20nm,1.0s						
WRH	Wood River Hil	82.71	26	IAmb	IAmb	07 22 04.0	
	comp=Z,73nm,1.2s						
LPSR	Galich'ya Gora	82.72	322	*e*P	P	07 21 40.4	-3.6
LPSR				pmax	pmax		
	comp=Z,50nm,1.0s						
H24K	Noodor Dome	82.80	24	IAmb	IAmb	07 22 12.8	
	comp=Z,33nm,0.8s						
H24K	Noodor Dome	82.80	24	P	P	07 21 45.9	+1.6
	baz=270,SNR=17						
COLA	College	82.81	25	P	P	07 21 44.6	+0.4
COLA				IAmb	IAmb	07 22 01.9	
	comp=Z,36nm,1.0s						
COLA	College	82.81	25	P	P	07 21 44.6	+0.4
COLA	College	82.81	25	*i* P	P	07 21 42.8	-1.4
COLA				pmax	pmax		
	comp=Z,31nm,0.9s						
COLA	College	82.81	25	P	P	07 21 45.4	+1.2
	baz=270						
F24K	Squaw Lake	82.81	23	IAmb	IAmb	07 21 57.5	
	comp=Z,168nm,1.9s						
F24K	Squaw Lake	82.81	23	P	P	07 21 45.9	+1.6
	baz=270						
CCB	Clear Creek Bu	82.83	26	IAmb	IAmb	07 21 55.6	
	comp=Z,64nm,1.2s						
WAT6	Susitna Watana	82.86	28	P	P	07 21 46.1	+1.3
	baz=270,SNR=30						
M23K	Glacier View	82.87	29	P	P	07 21 46.2	+1.5
	baz=270						
G24K	Hadweenzic Riv	82.97	24	IAmb	IAmb	07 21 53.3	
	comp=Z,44nm,1.1s						
G24K	Hadweenzic Riv	82.97	24	P	P	07 21 47.0	+1.9
	baz=270,SNR=16						
POKR	Poker Plat Res	82.99	25	P	P	07 21 46.3	+1.1
	baz=270						
DHY	Denali Highway	83.03	27	IAmb	IAmb	07 22 17.1	
	comp=Z,32nm,0.9s						
DHY	Denali Highway	83.03	27	P	P	07 21 47.3	+1.7
	baz=271,SNR=6.1						
SCM	Sheep Creek Mo	83.06	29	P	P	07 21 46.7	+0.9
	baz=271,SNR=6.3						
GLI	Glacier Island	83.19	29	P	P	07 21 47.2	+0.9
	baz=271						
HDA	Harding Lake	83.20	26	P	P	07 21 47.2	+0.9
	baz=271,SNR=13						
IL31		83.22	26	IAmb	IAmb	07 21 57.1	
	comp=Z,44nm,1.2s						
ILAR	Eielson Array	83.22	26	P	P	07 21 45.9	-0.6
	comp=Z,9.4nm,0.9s,baz=244,slow=4.3,SNR=51						
	comp=Z,9.4nm,0.9s						
ILAR	Eielson Array	83.22	26	P	P	07 21 45.1	-1.3
ILAR	Eielson Array	83.22	26	P	P	07 21 45.1	-1.3
D25K	Kavik River	83.37	21	IAmb	IAmb	07 22 10.2	
	comp=Z,40nm,1.1s						
D25K	Kavik River	83.37	21	P	P	07 21 48.0	+0.8
	baz=271						
MOS	Moscow	83.40	325	*e*P	P	07 21 45.2	-2.3
MOS				*e*		07 24 58.7	
MOS				*e*PPP	PPP	07 26 50.4	
MOS				pmax	pmax		
	comp=Z,81nm,1.3s						
G25K	Bearman Lake	83.51	24	P	P	07 21 48.5	+0.7
	baz=271						
M24K	Tolsona, Glenn	83.60	28	P	P	07 21 49.2	+0.7
	baz=272						
F25K	Christian Rive	83.67	23	IAmb	IAmb	07 22 01.1	
	comp=Z,93nm,1.8s						
F25K	Christian Rive	83.67	23	P	P	07 21 50.2	+1.5
	baz=272						
E25K	Arctic Village	83.69	22	IAmb	IAmb	07 22 00.3	
	comp=Z,114nm,1.6s						
E25K	Arctic Village	83.69	22	P	P	07 21 50.1	+1.3
	baz=272,SNR=11						
K24K	Donnelly Dome	83.73	27	P	P	07 21 50.3	+1.2
	baz=272,SNR=7.9						
KLU	Klutina	83.74	29	IAmb	IAmb	07 22 01.6	
	comp=Z,53nm,1.2s						
KLU	Klutina	83.74	29	P	P	07 21 50.1	+0.9
	baz=272,SNR=6.7						
EYAK	Cordova Ski Ar	83.86	30	P	P	07 21 50.6	+0.9
	baz=272						
C26K	Camden Bay	83.87	20	P	P	07 21 51.3	+1.7
	baz=272						
J25K	Salcha River,	83.88	26	P	P	07 21 50.6	+0.7
	baz=272						
PAX	Paxson	83.90	27	IAmb	IAmb	07 22 33.0	
	comp=Z,53nm,1.2s						
PAX	Paxson	83.90	27	P	P	07 21 50.6	+0.6
	baz=272,SNR=14						
ANN	Anapa	84.00	314	*e*P	P	07 21 48.4	-2.3
ANN				pmax	pmax		
	comp=Z,124nm,1.3s						
OBN	Obninsk	84.03	325	*ce*P	P	07 21 50.1	-0.6
OBN				*i* *PP	pP	07 21 53.8	-2.1
OBN				*i* *SP	sP	07 21 56.4	-1.4
OBN				*e*PS	PnS	07 33 15.2	+7.3
OBN				pmax	pmax		
	comp=Z,79nm,1.3s						
OBN				MLR	MLR		
	comp=Z,2µm,18.0s						
HARP	HAARP	84.07	28	P	P	07 21 52.0	+1.2
	baz=273						
BMAR	Burnt Mountain	84.09	23	P	P	07 21 51.5	+0.7
RIDG	Independent Ri	84.15	27	P	P	07 21 52.1	+0.8
	baz=273,SNR=25						
F26K	Sheenjek River	84.24	23	P	P	07 21 53.2	+1.6
	baz=273						
C27K	Jago River	84.30	21	IAmb	IAmb	07 22 05.9	
	comp=Z,77nm,1.4s						
C27K	Jago River	84.30	21	P	P	07 21 53.2	+1.4
	baz=273,SNR=20						
N25K	Chitina, Valde	84.37	29	IAmb	IAmb	07 22 05.2	
	comp=Z,79nm,1.2s						
N25K	Chitina, Valde	84.37	29	P	P	07 21 54.0	+1.6
	baz=273,SNR=11						
BMRM	Bremner River	84.40	29	IAmb	IAmb	07 21 55.7	
	comp=Z,85nm,1.1s						
BMRM	Bremner River	84.40	29	P	P	07 21 53.9	+1.4
	baz=273,SNR=7.1						
G26K	Porcupine Rive	84.42	23	IAmb	IAmb	07 22 06.6	
	comp=Z,77nm,1.3s						
G26K	Porcupine Rive	84.42	23	P	P	07 21 54.3	+1.9
	baz=273						
DOT	Dot Lake	84.50	27	IAmb	IAmb	07 21 55.2	
	comp=Z,39nm,1.1s						
SCRK	Sand Creek	84.51	26	P	P	07 21 54.5	+1.3
	baz=274,SNR=15						
KAIM	Kayak Island	84.56	30	P	P	07 21 54.9	+1.7
	baz=274						
GAZ	Gaziantep	84.64	307	P	P	07 21 54.1	-0.2
J26L	Joseph Creek	84.67	26	P	P	07 21 54.1	+0.2
J26L				IAmb	IAmb	07 22 11.3	
	comp=Z,30nm,0.8s						
J26L	Joseph Creek	84.67	26	P	P	07 21 55.1	+1.2
	baz=274						
MENT	Mentasta	84.70	27	IAmb	IAmb	07 22 15.4	
	comp=Z,34nm,0.9s						
MENT	Mentasta	84.70	27	P	P	07 21 55.6	+1.6
I26K	Coal Creek Min	84.78	25	IAmb	IAmb	07 22 00.3	
	comp=Z,87nm,1.2s						
I26K	Coal Creek Min	84.78	25	P	P	07 21 55.7	+1.4
	baz=274						
L26K	Log Cabin Wild	84.86	27	IAmb	IAmb	07 21 58.1	
	comp=Z,35nm,1.1s						
L26K	Log Cabin Wild	84.86	27	P	P	07 21 56.7	+1.9
	baz=274,SNR=13						
VRDI	Verde Repeater	84.94	29	IAmb	IAmb	07 21 57.9	
	comp=Z,62nm,1.2s						
TOKA	Tokat	84.99	310	IAmb	IAmb	07 22 03.3	
	comp=Z,61nm,1.1s						
M26K	Nabesna, AK	85.07	28	IAmb	IAmb	07 22 12.6	
	comp=Z,86nm,1.4s						
M26K	Nabesna, AK	85.07	28	P	P	07 21 57.6	+1.7
	baz=274,SNR=11						
MCARA	McCarthy VSAT	85.14	29	IAmb	IAmb	07 22 16.0	
	comp=Z,63nm,1.0s						
MCARA	McCarthy VSAT	85.14	29	P	P	07 21 58.0	+1.8
	baz=275,SNR=6.1						
CRQE	Cirque	85.16	30	P	P	07 21 57.8	+1.4
	baz=275,SNR=9.0						
E27K	Coleen River	85.17	22	IAmb	IAmb	07 22 10.1	
	comp=Z,83nm,1.2s						
E27K	Coleen River	85.17	22	P	P	07 21 57.8	+1.6
	baz=275						
G27K	Doyon Strip	85.27	23	IAmb	IAmb	07 22 10.7	
	comp=Z,92nm,1.6s						
G27K	Doyon Strip	85.27	23	P	P	07 21 58.1	+1.3
	baz=275						
TGL	Tana Glacier	85.28	30	IAmb	IAmb	07 21 59.7	
	comp=Z,79nm,1.1s						
D27M	Malcolm River	85.29	21	IAmb	IAmb	07 22 08.8	
	comp=Z,76nm,1.3s						
D27M	Malcolm River	85.29	21	P	P	07 21 58.4	+1.4
	baz=276						
K27K	Chicken	85.35	26	P	P	07 21 58.9	+1.7
	baz=275						
H27K	Steamboat Moun	85.38	24	IAmb	IAmb	07 22 00.9	
	comp=Z,60nm,1.2s						
H27K	Steamboat Moun	85.38	24	P	P	07 21 58.9	+1.5
	baz=276						
I27K	Kandik River	85.40	25	P	P	07 21 59.0	+1.5
	baz=276						
L27K	Beaver Creek,	85.55	27	IAmb	IAmb	07 22 02.1	
	comp=Z,56nm,1.3s						
L27K	Beaver Creek,	85.55	27	P	P	07 22 00.1	+1.8
	baz=276						
BCAR	Beaver Creek A	85.57	27	P	P	07 21 59.1	+0.7
M27K	Edge Creek, AK	85.59	28	IAmb	IAmb	07 22 12.0	
	comp=Z,53nm,1.2s						
M27K	Edge Creek, AK	85.59	28	P	P	07 22 00.8	+2.1
	baz=276,SNR=9.9						
GRNC	Granite Creek	85.81	29	IAmb	IAmb	07 22 03.5	
	comp=Z,59nm,1.0s						
BARN	Barnard Glacie	85.83	29	IAmb	IAmb	07 22 12.9	
	comp=Z,77nm,1.0s						
F28M	Old Crow	85.88	23	IAmb	IAmb	07 22 13.2	
	comp=Z,80nm,1.1s						
F28M	Old Crow	85.88	23	P	P	07 22 02.0	+2.3
	baz=277,SNR=30						
E28M	Babbage River	85.88	21	IAmb	IAmb	07 22 14.2	
	comp=Z,81nm,1.4s						
E28M	Babbage River	85.88	21	P	P	07 22 01.9	+2.2
	baz=277,SNR=40						
CTG	Chitna Glacier	85.99	29	P	P	07 22 02.6	+2.0
	baz=276,SNR=18						
BVCY	Beaver Creek	86.06	28	P	P	07 22 03.2	+2.4
	baz=276						
D28M	Stokes Point	86.07	21	P	P	07 22 03.1	+2.5
	baz=278						
I28M	Miner Creek	86.11	25	P	P	07 22 03.3	+2.2
	baz=277						
LOGN	Logan Glacier	86.17	29	IAmb	IAmb	07 22 14.7	
	comp=Z,63nm,1.1s						
VNDA	Vanda	86.32	173	P	P	07 22 00.4	-1.2
	comp=Z,12nm,0.8s,baz=311,slow=6.2,SNR=27						
	comp=Z,12nm,0.8s						
YUK3	Moose Creek	86.32	28	P	P	07 22 04.5	+2.1
	baz=277						
SIM	Simferopol'	86.34	315	*e*P	P	07 21 58.4	-4.1
SIM				*e*S	SKSac	07 32 32.8	+4.3
SIM				pmax	pmax		
	comp=Z,73nm,1.1s						
SIM				smax	smax		
	comp=E,2µm,14.7s						
MMAI	Mount Meron Ar	86.46	303	P	P	07 22 02.4	-1.1
	comp=E,9.8nm,0.9s,baz=126,slow=1.4,SNR=14						
	comp=E,9.8nm,0.9s						
E29M	Blow River	86.51	22	P	P	07 22 04.8	+1.9
	baz=279						
DAWY	Dawson	86.52	26	IAmb	IAmb	07 22 06.8	
	comp=Z,64nm,1.6s						
DAWY	Dawson	86.52	26	P	P	07 22 05.0	+1.9
	baz=278,SNR=14						
O28M	Mount Upton	86.57	29	IAmb	IAmb	07 22 17.3	
	comp=Z,37nm,1.1s						
O28M	Mount Upton	86.57	29	P	P	07 22 05.0	+1.3
	baz=277						
PINM	Pinnacle	86.62	30	P	P	07 22 05.2	+1.5
	baz=277						
H29M	Whitestone	86.65	24	P	P	07 22 05.6	+2.0
	baz=278						
G29M	Pine Creek	86.68	23	IAmb	IAmb	07 22 52.9	
	comp=Z,88nm,1.2s						
G29M	Pine Creek	86.68	23	P	P	07 22 05.7	+1.9
	baz=279						
YUK8	Steele Glacier	86.71	29	P	P	07 22 05.7	+1.4
	baz=278,SNR=6.6						
I29M	Ogilvie Camp,	86.80	25	IAmb	IAmb	07 22 54.2	
	comp=Z,40nm,1.1s						
I29M	Ogilvie Camp,	86.80	25	P	P	07 22 06.5	+2.1
	baz=278,SNR=13						
J29N	Klondike Camp	86.97	26	IAmb	IAmb	07 22 51.0	
	comp=Z,42nm,1.2s						
J29N	Klondike Camp	86.97	26	P	P	07 22 06.8	+1.5
	baz=279,SNR=8.4						
ILGA	Ilgaz	87.02	311	IAmb	IAmb	07 22 13.1	
	comp=Z,58nm,1.5s						
M29M	Somme Creek	87.16	28	P	P	07 22 07.3	+1.0
	baz=278						
BR104	Keskin Array S	87.21	309	P	P	07 22 06.8	-0.3
	comp=Z,101nmcomp=Z,11nm,1.0s						
BR131	Keskin Array S	87.21	309	P	P	07 22 05.7	-1.4
	SNR=5.3						
BR131	Keskin Array S	87.21	309	P	P	07 22 06.8	-0.3
BR131	Keskin Array S	87.21	309	P	P	07 22 06.8	-0.3
BR131				pmax	pmax		
	comp=Z,16nm,1.1s						
BRTR	Keskin Array B	87.21	309	P	P	07 22 06.8	-0.3
	comp=Z,2.0nm,0.8s,baz=107,slow=4.2,SNR=9.9						
BRTR				PP	PP	07 25 28.1	-2.9
	comp=Z,2.6nm,1.0s,baz=64,slow=2.9,SNR=4.4						
	comp=Z,2.0nm,0.8s						
BRTR	Keskin Array B	87.21	309	P	P	07 22 06.2	-0.9
BRTR	Keskin Array B	87.21	309	P	P	07 22 06.2	-0.9
L29M	L29M	87.21	27	P	P	07 22 07.8	+1.3
	baz=279						
BR106	Keskin Array S	87.23	309	P	P	07 22 07.0	-0.2
	comp=Z,95nmcomp=Z,11nm,1.0s						
BR105	Keskin Array S	87.23	309	P	P	07 22 06.7	-0.5
	comp=Z,109nmcomp=Z,11nm,0.9s						
YUK4	Talbot Arm	87.24	29	P	P	07 22 07.7	+0.9
	baz=278						
EPYK	Eagle Plains	87.28	24	IAmb	IAmb	07 22 34.2	
	comp=Z,37nm,1.1s						
EPYK	Eagle Plains	87.28	24	P	P	07 22 07.8	+1.1
	baz=280,SNR=9.8						
K29M	Barlow Dome	87.37	26	P	P	07 22 08.5	+1.2
	baz=279						
G30M	tAoh Zraii Nji	87.37	23	IAmb	IAmb	07 22 10.9	
	comp=Z,64nm,1.5s						
G30M	tAoh Zraii Nji	87.37	23	P	P	07 22 08.1	+0.9
	baz=280						
ARCES	ARCESS Array B	87.40	340	P	P	07 22 06.0	-1.2
	comp=Z,5.0nm,0.9s,baz=69,slow=6.6,SNR=9.4						
	comp=Z,5.0nm,0.9s						
ARCES	ARCESS Array B	87.40	340	P	P	07 22 06.4	-0.8
F30M	Barrier River	87.42	22	P	P	07 22 07.7	+0.3
F30M				IAmb	IAmb	07 22 11.0	
	comp=Z,40nm,1.1s						
F30M	Barrier River	87.42	22	P	P	07 22 08.3	+1.0
	baz=281						
O29M	Mount Kennedy	87.42	30	P	P	07 22 08.8	+1.2
	baz=278						
YUK6	Outpost Mounta	87.43	29	P	P	07 22 08.7	+0.9
	baz=279						
SPITS	Spitsbergen Ar	87.53	349	P	P	07 22 05.9	-1.8
	comp=Z,4.2nm,0.7s,baz=97,slow=6.8,SNR=6.3						
	comp=Z,4.2nm,0.7s						
KIBK	Kibwezi	87.58	267	P	P	07 22 08.2	-1.1
	SNR=12						
KIBK	Kibwezi	87.58	267	P	P	07 22 09.0	-0.3
I30M	Mount Dempster	87.62	25	P	P	07 22 10.2	+1.7
	baz=280						
J30M	Hart River	87.76	25	P	P	07 22 10.7	+1.6
	baz=280						
HYT	Haines Junctio	87.87	29	P	P	07 22 11.3	+1.5
	baz=279						
M30M	Minto, Yukon	87.91	27	IAmb	IAmb	07 22 14.1	
	comp=Z,57nm,1.9s						
M30M	Minto, Yukon	87.91	27	P	P	07 22 11.4	+1.6
	baz=280,SNR=6.3						
P29M	Windy Craggy	87.94	30	IAmb	IAmb	07 22 28.3	
	comp=Z,57nm,1.4s						
P29M	Windy Craggy	87.94	30	P	P	07 22 11.3	+1.3
	baz=279						
N30M	Aishikik Lake	87.96	28	P	P	07 22 11.4	+1.2
	baz=280						
INK	Inuvik	88.12	21	P	P	07 22 11.5	+0.9
	baz=283,SNR=9.8						
MAYO	Mayo, Yukon	88.13	26	P	P	07 22 11.6	+0.8
	baz=281						
G31M	Satah River	88.14	23	IAmb	IAmb	07 22 24.7	
	comp=Z,25nm,0.9s						
G31M	Satah River	88.14	23	P	P	07 22 11.2	+0.5
	baz=282,SNR=11						
F31M	Tsiigehtchic	88.23	22	P	P	07 22 12.0	+0.9
	baz=283,SNR=13						
P30M	Million Dollar	88.25	30	P	P	07 22 12.2	+0.7
	baz=280						
H31M	Peel River	88.34	24	P	P	07 22 12.9	+1.1
	baz=282,SNR=7.5						
O30N	Mendenhall	88.56	29	P	P	07 22 13.2	+0.2
	baz=281						
N31M	Braeburn, Yuko	88.57	28	IAmb	IAmb	07 22 27.0	
	comp=Z,27nm,0.9s						
N31M	Braeburn, Yuko	88.57	28	P	P	07 22 13.7	+0.7
	baz=281						
PLBC	Pleasant Camp	88.66	30	P	P	07 22 14.1	+0.7
	baz=280						
FINES	FINESS Array B	88.77	332	P	P	07 22 11.9	-1.9
	comp=Z,4.0nm,0.7s,baz=62,slow=5.8,SNR=22						
	comp=Z,4.0nm,0.7s						
FINES	FINESS Array B	88.77	332	P	P	07 22 12.6	-1.2
FINES	FINESS Array B	88.77	332	*i* P	P	07 22 15.6	+1.8
FINES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AK09	Malin Array Si	88.87	321	P	P	07 22 14.4	-0.1
AK08	Malin Array Si	88.89	321	P	P	07 22 14.5	-0.1
AK03	Malin Array Si	88.90	321	P	P	07 22 14.0	-0.6
AK10	Malin Array Si	88.90	321	P	P	07 22 14.0	-0.7
AKASG	Malin Array Be	88.90	321	P	P	07 22 13.2	-1.4
	comp=Z,3.0nm,0.6s,baz=71,slow=4.2,SNR=12						
AKASG				PP	PP	07 25 44.6	+0.7
	comp=Z,9.2nm,1.0s,baz=73,slow=7.4,SNR=6.7						
	comp=Z,3.0nm,0.6s						
AKASG	Malin Array Be	88.90	321	P	P	07 22 13.7	-1.0
AKBB	Malin Array Si	88.90	321	P	P	07 22 14.0	-0.6
AKBB	Malin Array Si	88.90	321	*ce*P	P	07 22 14.9	+0.2
AKBB				pmax	pmax		
	comp=Z,58nm,2.9s						
AKBB	Malin Array Si	88.90	321	P	P	07 22 13.7	-1.0
AK01	Malin Array Si	88.91	321	P	P	07 22 14.2	-0.5
KIEV	Kiev	88.91	321	P	P	07 22 14.2	-0.5
KIEV	Kiev	88.91	321	⇑P	P	07 22 15.4	+0.7
KIEV	Kiev	88.91	321	P	P	07 22 14.2	-0.5
KIEV				pmax	pmax		
	comp=Z,22nm,1.1s						
KIEV	Kiev	88.91	321	P	P	07 22 13.7	-1.0
	comp=Z,77nm,1.1s						
AK02	Malin Array Si	88.92	321	P	P	07 22 14.0	-0.7
AK05	Malin Array Si	88.92	321	P	P	07 22 13.8	-1.0
AK07	Malin Array Si	88.93	321	P	P	07 22 14.2	-0.6
AK11	Malin Array Si	88.94	321	P	P	07 22 14.1	-0.7
AK12	Malin Array Si	88.95	321	P	P	07 22 13.7	-1.2
MDUB	Mudurnu	88.98	310	P	P	07 22 14.1	-1.3
MDUB				IAmb	IAmb	07 22 20.3	
	comp=Z,88nm,1.6s						
S31K	Pelican	89.00	32	P	P	07 22 15.3	+0.3
	baz=281						
M31M	Drury Creek, Y	89.08	27	P	P	07 22 16.1	+0.8
	baz=282						
MNK	Minsk	89.09	325	*i* P	P	07 22 12.3	-3.2
MNK				*i*		07 25 41.5	
MNK				*i* PPP	PPP	07 27 39.1	
MNK				*i* S	SKSac	07 32 41.6	-3.1
MNK				*i* PS	PnS	07 34 08.5	-0.3
MNK				*i* SS	SS	07 38 54.9	-1.8
MNK				*i* SSS	SSS	07 42 33.1	
MNK				pmax	pmax		
	comp=E,14nm,0.8s						
MNK				pmax	pmax		
	comp=N,8.0nm,0.7s						
MNK				pmax	pmax		
	comp=Z,23nm,0.8s						
MNK				MLR	MLR		
	comp=E,2µm,17.0s						
MNK				MLR	MLR		
	comp=N,2µm,19.0s						
MNK				MLR	MLR		
	comp=Z,2µm,17.0s						
WHY	Whitehorse	89.16	29	IAmb	IAmb	07 22 21.5	
	comp=Z,44nm,1.0s						
WHY	Whitehorse	89.16	29	P	P	07 22 16.3	+0.5
	baz=282						
SKAG	Skagway	89.18	30	P	P	07 22 17.4	+1.6
SKAG	Skagway	89.18	30	P	P	07 22 16.8	+1.0
	baz=281						
FARO	Faro, Yukon	89.55	27	P	P	07 22 18.3	+0.8
	baz=283						
LODK	Lodwar	89.60	273	P	P	07 22 17.7	-1.1
BORA	Eskisehir	89.63	310	IAmb	IAmb	07 22 24.0	
	comp=Z,36nm,1.2s						
NACGM	Naroch	89.65	325	*e*P	P	07 22 18.6	+0.5
	comp=Z,23nm,1.1s,baz=79						
A36M	Sachs Harbour	89.78	17	P	P	07 22 19.9	+1.5

	baz=290,SNR=15						
MI28	Mi28,Pidlybu	89.83	321	P	P	07 22 17.6	-1.4
ISP	Isparta	89.86	308	IAmb	IAmb	07 22 24.8	
	comp=Z,75nm,1.4s						
ISP	Isparta	89.86	308	P	P	07 22 23.9	+4.2
ISP				pmax	pmax		
	comp=Z,42nm,1.5s						
SORM	Soroca	89.87	318	⇑P	P	07 22 19.9	+0.6
SORM	Soroca	89.87	318	P	P	07 22 19.9	+0.6
N32M	Quiet Lake	89.92	28	IAmb	IAmb	07 22 37.4	
	comp=Z,28nm,0.8s						
N32M	Quiet Lake	89.92	28	P	P	07 22 20.1	+0.7
	baz=283						
LUBAR	Lubar, Ukraine	89.95	320	P	P	07 22 18.9	-0.7
P32M	Atlin	89.96	30	P	P	07 22 20.4	+0.8
	baz=283						
VLDR	Vladesti	90.43	316	⇑P	P	07 22 23.3	+1.3
VASR	Vaslui	90.50	317	⇓P	P	07 22 23.9	+1.7
CFR	Carcaliu	90.51	315	⇓P	P	07 22 22.9	+0.6
CFR	Carcaliu	90.51	315	P	P	07 22 22.9	+0.6
Q32M	Nakina River	90.83	30	P	P	07 22 24.4	+0.6
	baz=284						
RNPP5	Staryi Chortor	90.88	322	P	P	07 22 23.2	-0.7
KMPD	K-Podol'skiy	91.03	319	P	P	07 22 23.4	-1.3
U33K	Whale Pass	91.05	33	P	P	07 22 25.0	+0.4
	baz=283						
C36M	Paulatuk	91.09	19	P	P	07 22 25.5	+1.0
	baz=292,SNR=14						
CRAG	Craig	91.20	34	P	P	07 22 26.0	+0.8
	baz=283						
MANT	Manisa	91.30	309	IAmb	IAmb	07 22 32.3	
	comp=Z,50nm,1.2s						
TESR	Tescani	91.30	317	⇓P	P	07 22 26.7	+0.8
TESR	Tescani	91.30	317	P	P	07 22 26.3	+0.3
	comp=Z,36nm,1.6s						
VRI	Vrincioaia	91.36	316	⇑P	P	07 22 27.9	+1.6
VRI	Vrincioaia	91.36	316	P	P	07 22 27.9	+1.6
VRI	Vrincioaia	91.36	316	P	P	07 22 26.6	+0.3
	comp=Z,39nm,1.3s						
R33M	Jennings River	91.37	30	P	P	07 22 26.9	+0.7
	baz=285						
WRAK	Wrangell Islan	91.40	33	P	P	07 22 27.4	+1.2
	baz=284						
PLOR	Plostina	91.42	316	⇓P	P	07 22 28.6	+2.0
PLOR	Plostina	91.42	316	P	P	07 22 28.6	+2.0
BISRR	Bisoca	91.43	316	⇓P	P	07 22 28.6	+1.8
S34M	Telegraph Cree	91.67	31	P	P	07 22 28.5	+1.1
	baz=285						
NEHR	Nehoiu	91.74	316	⇑P	P	07 22 28.9	+0.8
TURR	Turia	91.81	317	⇑P	P	07 22 29.0	+0.6
MLR	Muntele Rosu	91.97	316	IAmb	IAmb	07 22 36.4	
	comp=Z,34nm,1.2s						
MLR	Muntele Rosu	91.97	316	⇓P	P	07 22 30.1	+0.7
MLR	Muntele Rosu	91.97	316	P	P	07 22 30.0	+0.7
MLR	Muntele Rosu	91.97	316	P	P	07 22 29.6	+0.3
	comp=Z,32nm,1.8s						
BURAR	Bucovina Array	92.04	318	P	P	07 22 29.3	-0.3
BURAR	Bucovina Array	92.04	318	⇑P	P	07 22 30.0	+0.5
BURAR	Bucovina Array	92.04	318	P	P	07 22 30.0	+0.5
DLBC	Dease Lake	92.09	31	P	P	07 22 30.2	+0.7
	baz=286						
WTLY	Watson Lake, Y	92.23	29	IAmb	IAmb	07 22 32.8	
	comp=Z,35nm,1.3s						
WTLY	Watson Lake, Y	92.23	29	P	P	07 22 30.7	+0.7
	baz=287						
T35M	Bob Quinn	92.38	32	P	P	07 22 31.7	+0.9
	baz=286						
U35K	Hyder	92.78	33	P	P	07 22 33.8	+1.2
	baz=286						
ARR	Arges	92.90	316	⇓P	P	07 22 34.4	+0.9
TNR	Turnu Rosu	93.09	316	⇑P	P	07 22 36.0	+1.7
TNR	Turnu Rosu	93.09	316	P	P	07 22 36.0	+1.7
KWP	Kalwaria Pacla	93.22	321	*e*P	P	07 22 38.4	+3.6
WRGLY	Wrigley	93.59	25	IAmb	IAmb	07 22 54.1	
	comp=Z,26nm,1.1s						
WRGLY	Wrigley	93.59	25	P	P	07 22 37.4	+1.2
	baz=292						
MARR	Marisel-Cluj	93.64	318	⇓P	P	07 22 38.0	+1.0
LIRD	Liard River Hi	93.74	29	P	P	07 22 37.9	+0.9
	baz=289						
BEL	Belsk	93.84	323	*e*P	P	07 22 38.7	+1.1
DRGR		93.89	318	⇓P	P	07 22 38.7	+0.6
DRGR		93.89	318	P	P	07 22 38.6	+0.6
DEV	Deva	93.97	317	⇓P	P	07 22 39.7	+1.3
DEV	Deva	93.97	317	P	P	07 22 39.6	+1.3
GZR	Gura Zlata	94.17	316	⇓P	P	07 22 40.2	+0.8
GZR	Gura Zlata	94.17	316	P	P	07 22 40.2	+0.8
STHS	Stebnicka Huta	94.19	321	*e*P	P	07 22 44.3	+5.0
STHS	Stebnicka Huta	94.19	321	*e*P	P	07 22 44.3	+5.0
TOAD	Toad River Com	94.35	29	P	P	07 22 41.0	+1.1
	baz=290						
DAG	Danmarks Havn	94.36	352	P	P	07 22 40.0	+0.5
DAG				pmax	pmax		
	comp=Z,32nm,1.1s						
KOTAN	Kotaneelee Air	94.47	28	P	P	07 22 41.6	+1.3
	baz=291						
SYO	Syowa Base	94.48	201	⇑*i*PcP	PcP	07 22 41.3	+0.9
HERR	Herculane	94.54	316	⇓P	P	07 22 41.7	+0.7
SIRR	Siria	94.72	317	⇓P	P	07 22 42.6	+0.8
OJC	Ojcow	94.88	322	*e*P	P	07 22 43.7	+1.3
OJC	Ojcow	94.88	322	P	P	07 22 43.0	+0.6
	comp=Z,19nm,1.1s						
BZS	Buzias	94.91	317	⇓P	P	07 22 44.0	+1.3
BZS	Buzias	94.91	317	P	P	07 22 43.9	+1.3
HFS	Hagfors	94.95	332	P	P	07 22 40.1	-2.4
	comp=Z,2.2nm,0.9s,baz=87,slow=7.9,SNR=8.8						
	comp=Z,2.2nm,0.9s						
MDVR	Moldovita	95.05	316	⇑P	P	07 22 43.7	+0.3
BOVS	Bovan	95.33	315	⇓P	P	07 22 46.3	+1.7
NB2	NORSAR Subarra	95.72	333	P	P	07 22 45.3	-0.8
	comp=Z,12nm,1.1s,baz=66,slow=4.6						
NB2	NORSAR Subarra	95.72	333	P	P	07 22 45.3	-0.8
	baz=66,slow=4.6						
NOA	NORSAR Array B	95.72	333	P	P	07 22 43.9	-2.2
	comp=Z,0.8nm,0.7s,baz=66,slow=4.6,SNR=5.4						
NOA				LR	LR	08 11 38.7	
	comp=Z,1µm,18.0s,baz=235,slow=39						
	comp=Z,0.8nm,0.7s						
QSPA	South Pole Qui	96.38	180	P	P	07 22 47.0	-2.0
	comp=Z,9.6nm,0.8s,baz=309,slow=2.1,SNR=20						
QSPA				PP	PP	07 26 40.4	-2.1
	comp=Z,8.4nm,1.0s,baz=348,slow=6.1,SNR=3.4						
	comp=Z,9.6nm,0.8s						
QSPA	South Pole Qui	96.38	180	P	P	07 22 48.0	-0.9
MORC	Moravsky Berou	96.40	322	*e*P	P	07 22 46.4	-3.0
MORH	Mrgy, Hungar	96.75	318	⇑P	P	07 22 51.4	+0.4
MORH	Mrgy, Hungar	96.75	318	P	P	07 22 51.0	0.0
MODS	Modra-Piesok	97.00	320	*e*PP	PP	07 26 55.8	+8.3
VRAC	Vranov	97.14	321	*e*P	P	07 22 51.3	-1.4
VRAC				*e*PP	PP	07 26 48.3	-0.2
KRUC	Moravsky	97.34	321	*e*P	Pdif	07 22 53.9	+0.2
YKA	Yellowknife Ar	97.56	24	P	P	07 22 54.1	-0.2
	comp=Z,3.9nm,0.9s,baz=301,slow=5.3,SNR=37						
YKA				PP	PP	07 26 51.9	+0.6
	comp=Z,1.9nm,1.0s,baz=303,slow=8.2,SNR=3.8						
YKA				PKKPbc	PKKPbc	07 39 27.4	-5.9
	comp=Z,0.5nm,0.7s,baz=121,slow=1.5,SNR=7.6						
	comp=Z,3.9nm,0.9s						
YKA	Yellowknife Ar	97.56	24	*i* P	P	07 22 54.0	-0.3
YKA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YKAW1	Yellowknife Wh	97.62	24	IAmb	IAmb	07 23 11.3	
	comp=Z,29nm,1.6s						
RONA	Rosalia, Austr	97.83	320	*e*PcP	Pdif	07 22 57.3	+1.3
	comp=Z,3.6nm,0.9s						
RONA				*e*PP	PP	07 26 55.1	+1.1
	comp=Z,14nm,1.3s						
CONA	Conrad Observa	98.04	320	*e*PcP	Pdif	07 22 58.1	+1.1
	comp=Z,7.9nm,2.2s						
CONA				*e*PP	PP	07 26 57.0	+1.4
	comp=Z,13nm,1.2s						
ARSA	Arzberg	98.48	320	*e*pP	pP	07 23 02.6	-1.6
	comp=Z,5.1nm,1.6s						
ARSA				*e*PP	PP	07 27 00.2	+1.3
	comp=Z,9.6nm,1.2s						
CLL	Collm	98.61	324	*e*P	Pdif	07 23 02.0	+2.7
CLL				*e*		07 27 01.0	
CLL				pmax	pmax		
	comp=Z,39nm,1.8s						
CLL				pmax	pmax		
	comp=Z,38nm,1.6s						
CLL	Collm	98.61	324	*e*Pdif	Pdif	07 23 02.0	+2.7
	comp=Z,18nm,1.5s						
CLL				*i* x	x	07 23 17.1	
	comp=Z,39nm,1.8s						
CLL				*e*PP	PP	07 27 01.0	+1.3
	comp=Z,38nm,1.6s						
CLL				*e*x	x	07 34 19.0	
SOKA	Soboth	98.98	319	*e*pPdiff	Pdif	07 23 05.6	+4.4
	comp=Z,6.2nm,1.6s						
SOKA				*e*PP	PP	07 27 00.5	-2.4
	comp=Z,25nm,1.2s						
MOA	Molln	99.08	320	*e*pPdiff	Pdif	07 23 03.4	+1.9
	comp=Z,12nm,1.3s						
MOA				PP	PP	07 27 04.8	+1.4
	comp=Z,8.5nm,1.3s						
GERES	GERESS Array B	99.08	322	P	Pdif	07 23 02.2	+0.6
	comp=Z,0.5nm,0.6s,baz=53,slow=3.8,SNR=5.9						
	comp=Z,0.5nm,0.6s						
OBKA	Obir	99.35	319	*e*pPdiff	Pdif	07 23 05.2	+2.3
	comp=Z,11nm,1.9s						
OBKA				*e*PP	PP	07 27 04.6	-1.1
	comp=Z,12nm,1.2s						
BIOA	Bad Ischl, Aus	99.53	320	*e*PP	PP	07 27 03.5	-3.4
	comp=Z,5.2nm,1.0s						
ELIB	Princess Elisa	99.85	198	*d*Pdif	Pdif	07 23 04.4	-0.1
	comp=Z,4.7nm,1.2s						
MYKA	Terra Mystica	99.90	319	PP	PP	07 27 14.3	+4.5
	comp=Z,5.7nm,1.1s						
KBA	Koelnbreinsper	99.93	320	*e*Pdiff	Pdif	07 23 04.6	-1.0
	comp=Z,5.2nm,1.3s						
KBA				*e*PP	PP	07 27 08.2	-2.0
	comp=Z,8.2nm,1.2s						
LESA	Schwarzleotal	100.23	320	*e*pPdiff	Pdif	07 23 08.7	+1.9
	comp=Z,6.1nm,1.6s						
LESA				*e*PP	PP	07 27 12.7	+0.3
	comp=Z,12nm,1.2s						
ABTA	Abfaltersbach	100.58	320	*e*pPdiff	pPdif	07 23 10.4	-3.2
	comp=Z,8.0nm,1.5s						
ABTA				*e*PP	PP	07 27 10.6	-4.4
	comp=Z,7.5nm,1.5s						
WTTA	Wattenberg	100.95	321	*e*Pdiff	Pdif	07 23 10.4	+0.4
	comp=Z,8.7nm,1.4s						
WTTA				*e*PP	PP	07 27 15.7	-2.2
	comp=Z,12nm,1.4s						
WATA	Walderalm	100.96	321	*e*Pdiff	Pdif	07 23 07.5	-2.6
	comp=Z,10nm,1.3s						
WATA				*e*PP	PP	07 27 17.4	-0.5
	comp=Z,8.8nm,1.3s						
SQTA	Sankt Quirin	101.24	321	*e*pPdiff	pPdif	07 23 15.4	-1.1
	comp=Z,8.2nm,1.1s						
SQTA				*e*PP	PP	07 27 19.1	-0.9
	comp=Z,6.4nm,0.9s						
RETA	Reutte	101.41	321	*e*pPdiff	pPdif	07 23 14.4	-2.9
	comp=Z,8.7nm,1.8s						
RETA				*e*PP	PP	07 27 20.8	-0.4
	comp=Z,13nm,1.4s						
FETA	Feichten	101.61	321	*e*pPdiff	pPdif	07 23 15.7	-2.6
	comp=Z,3.4nm,1.0s						
FETA				*e*PP	PP	07 27 23.5	+0.6
	comp=Z,12nm,1.3s						
DAVA	Damuels	102.04	321	*e*Pdiff	Pdif	07 23 15.7	+0.8
	comp=Z,13nm,1.8s						
DAVA				*e*PP	PP	07 27 25.7	-0.3
	comp=Z,24nm,1.6s						
NVAR	Mina Array Bea	106.08	47	Pdiff	Pdif	07 23 33.7	+0.6
	comp=Z,1.4nm,0.8s,baz=259,slow=4.4,SNR=7.9						
NVAR				PKKPab	PKKPab	07 39 22.8	-1.7
	comp=Z,0.8nm,0.8s,baz=85,slow=6.3,SNR=3.5						
SNAA	Sanae	107.51	195	PKKPbc	PKKPbc	07 39 01.3	-3.2
	comp=Z,1.4nm,0.8s,baz=357,slow=6.3,SNR=3.5						
SNAA				PKKPab	PKKPab	07 39 15.9	-0.4
	comp=Z,2.2nm,0.9s,baz=343,slow=7.4,SNR=4.5						
PDAR	Pinedale Array	110.17	40	PKiKP	PKiKP	07 27 52.5	-0.2
	comp=Z,0.8nm,0.8s,baz=298,slow=2.7,SNR=3.6						
PDAR				PKKPab	PKKPab	07 39 05.5	-0.7
	comp=Z,0.9nm,0.8s,baz=129,slow=4.0,SNR=6.1						
PDAR				SKKPbc	SKKPbc	07 42 35.2	-3.3
	comp=Z,1.3nm,1.0s,baz=75,slow=2.3,SNR=4.3						
ULM	Lac du Bonnet	113.19	27	PKiKP	PKiKP	07 27 56.5	-1.4
	comp=Z,2.1nm,0.6s,baz=20,slow=4.5,SNR=3.6						
ESDC	Sonseca Array	114.49	319	PP	PP	07 28 54.6	-2.2
	comp=Z,2.7nm,1.2s,baz=62,slow=5.5,SNR=4.9						
ANMO	Albuquerque	116.15	46		PKPdf	07 28 03.5	-0.8
ANMO	Albuquerque	116.15	46	PKIKP	PKPdf	07 28 03.5	-0.8
ECSD	EROS Data Cent	117.28	33		PKPdf	07 28 05.2	-0.8
SCHQ	Schefferville	118.06	8	PKP	PKPdf	07 28 05.8	-1.4
	comp=Z,7.4nm,0.9s,baz=33,slow=2.5,SNR=7.6						
MNTX	Cornudas Mount	118.52	49		PKPdf	07 28 08.3	-0.5
TXAR	Lajitas Array	120.96	50	PKP	PKPdf	07 28 12.5	-1.1
	comp=Z,2.0nm,0.8s,baz=216,slow=0.9,SNR=18						
TXAR				SKP	SKPdf	07 31 47.5	-1.2
	comp=Z,1.1nm,1.0s,baz=300,slow=1.1,SNR=3.7						
TXAR				PKKPab	PKKPab	07 38 21.9	+3.3
	comp=Z,0.6nm,0.8s,baz=127,slow=5.1,SNR=5.1						
TXAR	Lajitas Array	120.96	50		PKPdf	07 28 13.0	-0.6
P38A	Dawn	121.75	35		PKPdf	07 28 14.3	-0.3
CCM	Cathedral Cave	124.12	35		PKPdf	07 28 18.4	-0.9
CCM	Cathedral Cave	124.12	35	PKIKP	PKPdf	07 28 18.4	-0.9
HKT	Hockley	126.40	45		PKiKP	07 28 25.3	+1.1
HKT	Hockley	126.40	45	PKIKP	PKiKP	07 28 25.3	+1.1
WCI	Wyandotte Cave	126.66	31		PKPdf	07 28 24.1	0.0
WCI	Wyandotte Cave	126.66	31	PKIKP	PKPdf	07 28 24.1	0.0
WVT	Waverly	127.41	34		PKPdf	07 28 25.4	-0.2
WVT	Waverly	127.41	34	PKIKP	PKPdf	07 28 25.4	-0.2
DBIC	Dimbokro	128.62	284	PKP	PKPdf	07 28 27.1	-1.4
	comp=Z,5.6nm,0.9s,baz=125,slow=2.5,SNR=4.4						
PLCA	Paso Flores	143.05	160	PKP	PKPbc	07 28 51.2	-0.2
	comp=Z,8.2nm,1.0s,baz=264,slow=1.9,SNR=16						
PLCA	Paso Flores	143.05	160		PKPpre	07 28 50.4	
BOAB	BOACO BROADBA	143.89	59		PKPab	07 28 54.1	+0.4
HLGC	Holguin	145.62	37	*e*P	PKPdf	07 28 59.4	-0.2
LMGC	Las Mercedes	145.66	39	*e*P	PKPdf	07 28 59.5	-0.1
PINC	Pinares de May	146.09	37	*e*P	PKPdf	07 29 00.5	+0.1
NMDO	Nuevo Mundo	146.51	36		PKPbc	07 29 02.9	+0.5
RCC	Rio Carpintero	146.52	38	*e*P	PKPdf	07 29 01.9	+0.8
QMBU	Quimbuelo	146.89	36	*e*P	PKPbc	07 29 04.1	+0.5
GTBY	Guantanamo Bay	146.92	37	*e*P	PKPbc	07 29 03.1	-0.5
MASC	Masc	147.25	36	*e*P	PKPbc	07 29 05.5	+1.0
TRQA	Tornquist	147.88	169		PKPdf	07 29 03.6	+0.7
TRQA	Tornquist	147.88	169	PKP2	PKPdf	07 29 03.6	+0.7
LCO	Las Campanas	152.95	148		PKPbc	07 29 15.6	-3.1
LCO	Las Campanas	152.95	148	PKIKP	PKPbc	07 29 15.6	-3.1
OTAV	Otavalo	155.33	75	*e*P	PKPdf	07 29 11.3	-4.2
ROSC	El Rosal	157.37	61	PKP	PKPdf	07 29 16.5	-1.5
	comp=Z,21nm,1.0s,baz=249,slow=2.3,SNR=9.5						
ROSC	El Rosal	157.37	61		PKPdf	07 29 18.1	+0.1
SDV	Santo Domingo	157.93	46		PKPdf	07 29 17.7	-0.7
SDV	Santo Domingo	157.93	46	*e*P	PKPdf	07 29 14.7	-3.7
CPUP	Villa Florida	160.10	173	PKP	PKPdf	07 29 19.5	-0.9
	comp=Z,3.8nm,1.2s,baz=176,slow=4.6,SNR=8.1						
CPUP				PKPab	PKPab	07 29 58.4	-1.6
	comp=Z,3.8nm,0.9s,baz=173,slow=3.2,SNR=14						
LPAZ	La Paz	163.60	128	PKP	PKPdf	07 29 24.6	-0.4
	comp=Z,29nm,1.1s,baz=354,slow=1.9,SNR=34						
LPAZ				PKPab	PKPab	07 30 16.2	-0.3
	comp=Z,22nm,1.1s,baz=244,slow=2.4,SNR=6.1						
LPAZ	La Paz	163.60	128	*e*P	PKPdf	07 29 21.2	-3.8
DIAM	Diamantina, MG	164.11	221	*e*P	PKPdf	07 29 21.9	-2.9
PMNB	Patos De Minas	165.59	213	*e*P	PKPdf	07 29 23.3	-2.7
BDQN	Bodoquena, MS	165.97	172	*e*P	PKPdf	07 29 23.9	-2.3
AQDB	Aquidauana	166.06	176	*e*P	PKPdf	07 29 23.7	-2.5
ITRB	Iturama	166.21	197	*e*P	PKPdf	07 29 24.1	-2.4
JANB	Januaria	166.75	229	*e*P	PKPdf	07 29 24.1	-2.8
IPMB	Ipameri, GO	166.96	208	*e*P	PKPdf	07 29 24.3	-2.8
C2SB	Chapadao do Su	167.66	188	*e*P	PKPdf	07 29 24.7	-2.8
SDBA	SAO DESIDERIO	168.73	238	*e*P	PKPdf	07 29 25.6	-2.8
BDFB	Brasilia	168.81	215	PKP	PKPdf	07 29 27.0	-1.5
	comp=Z,13nm,1.1s,baz=8.0,slow=5.3,SNR=4.9						
BDFB				PKPab	PKPab	07 30 37.5	-1.3
	comp=Z,4.3nm,0.9s,baz=125,slow=7.4,SNR=3.2						
BDFB	Brasilia	168.81	215		PKPdf	07 29 27.6	-0.9
PP1B	Ponte de Pedra	168.95	179	*e*P	PKPdf	07 29 27.2	-1.2
BOAV	Boa Vista	169.41	34		PKPdf	07 29 28.2	-0.6
BOAV	Boa Vista	169.41	34	*e*P	PKPdf	07 29 25.6	-3.2
TEFE	Tefe	169.63	74	*e*P	PKPdf	07 29 24.0	-5.0
PTLB	Pontes e Lacer	170.07	154	*e*P	PKPdf	07 29 28.1	-1.0
ARAG	Araguaiana, MT	170.42	197	*e*P	PKPdf	07 29 26.4	-2.9
VILB	Vilhena	171.57	140	*e*P	PKPdf	07 29 28.0	-2.0
SMTB	Santa Maria do	172.61	251	*e*P	PKPdf	07 29 27.7	-2.8
MACA	Manacapuru-AM	173.15	61	*e*P	PKPdf	07 29 27.6	-3.1
SNDB	Serra Nova Dou	173.62	211	*e*P	PKPdf	07 29 28.3	-2.5
PDRB	Porto dos Gac	174.51	158	*e*P	PKPdf	07 29 28.4	-2.8
PRPB	Parauapebas	175.18	273	*e*P	PKPdf	07 29 28.5	-2.9
CLDB	Colider	175.50	166	*e*P	PKPdf	07 29 28.5	-2.9
ITTB	Itaituba	177.64	27	*e*P	PKPdf	07 29 29.0	-2.9
NPGB	Novo Progresso	179.11	129	*e*P	PKPdf	07 29 29.1	-2.9

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*DJA **15** 07:18:05.4±1.0, 7˚N±9˚×12˚6E±˚, h15^{km}±13^{km}, M5.3/22, mb5.2/22, mB6.2/1, MLv5.4/8, Mw(mB)5.9/1*

*MOS **15** 07:18:09.3±0.7, 6˚.74N×125˚.30E, h13^{km}, mb5.1/30, Error ellipse: s-maj=19.9km s-min=10.5km az=102.3*

*IDC **15** 07:18:09.3±0.5, 6˚.66N×125˚.19E, h0^{km}, mb4.4/31, mbtmp4.5/32, ML5.2/1, Error ellipse: s-maj=12.1km s-min=8.3km az=124.0*

*BJI **15** 07:18:10.8, 6˚.62N×125˚.33E, h12^{km}, mb4.8/54, Ms5.5/3, Ms7 5.3/3*

*NEIC **15** 07:18:12.3±1.2, 6˚.72N±0˚.05×125˚.28E±0˚.06, h14^{km}±4^{km}, mb5.0/64, Error ellipse: s-maj=10.2km s-min=6.2km az=122.0*

ISC 15 07:18:11.3±0.3**, 6˚.69N**±0˚.04×**125˚.30E**±0˚.06**, h10^{km}, n207,** σ1^{s}.70/181**, mb4.9**/97**, 4C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.47	36	Pg	Pb	07 18 21.1	-0.5
	2µm,0.3s,baz=250,slow=3.0,SNR=8.4						
DAV				Lg	Lg	07 18 26.7	
	2µm,0.3s,baz=78,slow=16,SNR=7.3						
DAV	Davao City (W)	0.47	36		Pb	07 18 21.5	-0.2
SGSI	Sangihe	2.99	176	P	Pn	07 18 59.6	+0.8
SGSI				S	Sb	07 19 42.0	+0.6
GAMI	Galela, Maluku	5.42	153	P	Pn	07 19 31.1	-1.1
	2.0nm422nm,1.1s						
TNTI	Ternate	6.23	161	Pn	Pn	07 19 44.0	+0.7
TNTI	Ternate	6.23	161	P	Pn	07 19 42.8	-0.5
	174nm,1.1s						
GTOI	Gorontalo	6.43	201	P	Pn	07 19 47.5	+1.4
MRSI	Marisa	7.02	209	P	Pn	07 19 51.8	-2.4
	1.4nm216nm,0.7s						
LUWI	Luwuk	8.09	198	Pn	Pn	07 20 09.1	+0.3
LUWI	Luwuk	8.09	198	P	Pn	07 20 10.9	+2.1
	402nm,1.2s						
MPSI	Mapaga	8.30	221	P	Pn	07 20 13.8	+2.0
	170nm,0.6s						
APSI	Ampana	8.38	206	P	Pn	07 20 16.2	+3.3
	207nm,0.9s						
TARAI	Tarakan	8.39	247	P	Pn	07 20 12.6	-0.5
SANI	Sanana	8.71	175	P	Pn	07 20 15.0	-2.4
	103nm,0.9s						
KKM	Kota Kinabalu	9.05	266	Pn	Pn	07 20 22.1	-0.1
KKM	Kota Kinabalu	9.05	266	P	Pn	07 20 18.9	-3.3
NLAI	Namlea	10.03	170	P	Pn	07 20 33.2	-2.3
	96nm,0.8s						
KRAI	Karang Ratu	10.41	163	P	Pn	07 20 41.4	+0.6
	51nm,0.5s						
MSAI	Masohi	10.61	160	P	Pn	07 20 42.7	-0.7
	52nm,0.7s						
AAI	Ambon	10.71	164	P	Pn	07 20 46.2	+1.4
	92nm,0.6s						
TTSI	Tana Toraja	11.11	210	P	Pn	07 20 52.9	+2.6
	51nm,1.0s						
FAKI	Fak Fak	11.80	144	P	Pn	07 20 58.2	-1.6
	51nm,1.4s						
SPSI	Sidrap Palu	11.94	208	P	Pn	07 21 02.5	+0.8
	27nm,0.9s						
BNSI	Bone	12.18	205	P	Pn	07 21 08.3	+3.4
	49nm,1.4s						
KAPI	Kappang	12.88	206	Pn	Pn	07 21 15.0	+0.5
	2.2nm,0.3s,baz=61,slow=19,SNR=1.8						
KAPI	Kappang	12.88	206	Pn	Pn	07 21 15.5	+1.0
KAPI	Kappang	12.88	206	P	Pn	07 21 16.4	+1.9
KAPI	Kappang	12.88	206	P	Pn	07 21 15.5	+1.0
BKSI	Bulukumba	13.00	204	P	Pn	07 21 20.5	+4.3
	23nm,1.2s						
SBUM	Sibu	13.70	253	Pn	Pn	07 21 25.6	-0.1
SBUM	Sibu	13.70	253	P	Pn	07 21 22.4	-3.3
BBKI	Banjar Baru	14.52	226	P	Pn	07 21 38.8	+1.8
LBFI	Labuhan Bajo,	16.01	200	P	P	07 22 11.1	+11
PBKI	Pangkalan Bun	16.50	236	P	P	07 22 18.8	+13
BATI	Baumata	16.86	186	Pn	Pn	07 22 07.6	-0.1
	8.5nm,0.3s,baz=302,slow=5.5,SNR=4.0						
	35nm,0.7s						
WBSI	Waikabubak, Su	17.26	200	P	P	07 22 26.0	+12
DLV	Lat	17.39	289	P	Pn	07 22 14.5	+0.1
KLNI	Mataram	17.59	212	P	P	07 22 26.3	+8.5
SJI	Sawahan	19.68	224	P	Pn	07 22 55.4	+13
JOW	Kunigami	20.23	8	P	Pn	07 22 47.8	-0.8
	33nm,1.0s,baz=238,slow=7.9,SNR=4.8						
	33nm,1.0s						
JOW	Kunigami	20.23	8	P	P	07 22 45.6	-1.0
MTN	Manton Dam	20.25	163		P	07 22 46.6	-0.4
KNRA	Kununurra	22.49	171		P	07 23 09.5	-1.5
KNRA				IAmb	IAmb	07 23 22.6	
	comp=Z,45nm,0.8s						
BBJI	Bungbulang	22.53	232	P	P	07 23 22.5	+11
KLSI		23.44	242	P	P	07 23 32.2	+11
IPM	Ipoh	24.26	266	P	P	07 23 27.9	-1.0
WHN	Wuhan	25.86	338	P	P	07 23 46.0	+2.8
NJ2	Nanjing	25.94	347	*e*P	P	07 23 47.9	+4.0
NJ2				pmax	pmax		
	comp=Z,19nm,0.5s						
PMG	Port Moresby	27.02	126	P	P	07 23 53.4	-0.4
	comp=Z,12nm,0.7s,baz=340,slow=3.1,SNR=4.7						
	comp=Z,12nm,0.7s						
PMG	Port Moresby	27.02	126		P	07 23 54.3	+0.5
PMG	Port Moresby	27.02	126	P	P	07 23 54.3	+0.5
PMG				pmax	pmax		
	comp=Z,17nm,0.8s						
COEN	Coen	27.12	139	P	P	07 23 55.5	+0.8
COEN				IAmb	IAmb	07 24 11.6	
	comp=Z,29nm,1.1s						
WRAB	Tennant Creek	27.91	162	*i* P	P	07 24 02.8	+1.0
WRAB				pmax	pmax		
	comp=Z,67nm,2.8s						
WRA	Warramunga Arr	27.92	162	P	P	07 24 00.1	-1.8
	comp=Z,4.4nm,0.8s,baz=330,slow=11,SNR=6.4						
	comp=Z,4.4nm,0.8s						
WRA	Warramunga Arr	27.92	162	P	P	07 24 02.5	+0.7
WRA	Warramunga Arr	27.92	162	*i* P	P	07 24 01.5	-0.4
WRA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WR8	Warramunga Arr	27.98	161	P	P	07 24 02.1	-0.3
WR8				IAmb	IAmb	07 24 49.8	
	comp=Z,17nm,0.9s						
GSI	Gunungsitoli	28.16	260		P	07 24 02.1	-2.0
CMAR	Chiang Mai Arr	28.21	297	P	P	07 24 03.0	-1.5
	comp=Z,1.1nm,0.3s,baz=120,slow=7.9,SNR=6.2						
	comp=Z,1.1nm,0.3s						
CMAR	Chiang Mai Arr	28.21	297	P	P	07 24 03.4	-1.1
CMAR	Chiang Mai Arr	28.21	297	P	P	07 24 03.4	-1.1
KMI	Kunming	28.31	313	P	P	07 24 05.8	+0.2
KMI				pmax	pmax		
	comp=Z,18nm,0.8s						
PZH	PanZhiHua	29.86	314	P	P	07 24 21.9	+2.7
LYN	LuoYang	30.15	339	P	P	07 24 24.6	+3.1
LYN				sP	sP	07 24 37.6	+12
LYN				pmax	pmax		
	comp=Z,21nm,0.7s						
LYN				LR	LR		
	comp=Z,6µm,15.8s						
LYN				LR	LR		
	comp=Z,5µm,18.2s						
LYN				LR	LR		
	comp=Z,6µm,12.0s						
KSRS	Korea Array	30.71	4	P	P	07 24 26.1	-0.3
	comp=Z,3.5nm,1.0s,baz=183,slow=9.1,SNR=9.3						
	comp=Z,3.5nm,1.0s						
XAN	Xi'an	31.15	333	P	P	07 24 32.5	+2.1
XAN				pmax	pmax		
	comp=Z,14nm,1.2s						
ASAR	Alice Springs	31.32	165	P	P	07 24 30.9	-1.0
	comp=Z,2.4nm,0.6s,baz=341,slow=7.4,SNR=11						
	comp=Z,2.4nm,0.6s						
ASAR	Alice Springs	31.32	165	P	P	07 24 31.5	-0.5
ASAR	Alice Springs	31.32	165	P	P	07 24 31.5	-0.5
CD2	Chengdu	31.43	323	P	P	07 24 34.0	+1.0
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
MJAR	Matsushiro Arr	31.97	20	P	P	07 24 36.3	-1.3
	comp=Z,3.7nm,0.8s,baz=192,slow=9.4,SNR=9.0						
	comp=Z,3.7nm,0.8s						
HNS	HongShan	32.05	344	⇑P	P	07 24 40.8	+2.6
HNS				pmax	pmax		
	comp=Z,16nm,1.1s						
BJI	Beijing	34.20	347	P	P	07 24 58.8	+1.8
BJI				pmax	pmax		
	comp=Z,15nm,1.0s						
LZDM	Lanzhou Array	35.22	329	P	P	07 25 04.8	-1.5
	comp=Z,4.4nm,0.7s,baz=149,slow=12,SNR=5.8						
	comp=Z,4.4nm,0.7s						
LZH	Lanzhou	35.25	329	*e*P	P	07 25 10.0	+3.7
LZH				pP	sP	07 25 17.3	+6.6
LZH				pmax	pmax		

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      comp=Z,22nm,1.5s
HHC   Hu-ho-hao-te        36.16 342 eP      P       07 25 16.8 +2.8
HHC                                  pmax   pmax
      comp=Z,15nm,0.7s
BTO   Baotou              36.43 340 eP      P       07 25 21.3 +4.9
BTO                                  pmax   pmax
      comp=Z,21nm,0.9s
VLA   Vladivostok         36.74   8 i P     P       07 25 17.2 -1.6
VLA                                  pmax   pmax
      comp=Z,102nm,1.7s
CN2   Changchun           36.96   0 eP      P       07 25 22.5 +1.8
CN2                                  pmax   pmax
      comp=Z,10.0nm,0.8s
SHL   Shillong            37.01 304         P       07 25 20.4 -1.2
SHL   Shillong            37.01 304  P      P       07 25 20.4 -1.2
SHL                                  pmax   pmax
      comp=Z,38nm,1.1s
USRK  Ussuriysk Ar.       37.82   8  P      P       07 25 26.7 -1.2
      comp=Z,5.7nm,0.8s,baz=196,slow=9.1,SNR=9.2
      comp=Z,5.7nm,0.8s
XLT   XiLinHaoTe          37.94 349 eP      P       07 25 30.3 +1.3
XLT                                  pmax   pmax
      comp=Z,15nm,0.8s
MDJ   Mudanjiang          37.96   5  P      P       07 25 30.1 +0.9
MDJ   Mudanjiang          37.96   5  P      P       07 25 31.4 +2.2
MDJ                                  pmax   pmax
      comp=Z,34nm,1.2s
BNX   BinXian             38.94   2 ⇑P      P       07 25 37.3 -0.1
BNX                                  pmax   pmax
      comp=Z,10.0nm,1.2s
GTA   Gaotai              39.84 329  P      P       07 25 47.9 +2.7
GTA                                  sP     sP      07 25 55.9 +6.4
GTA                                  pmax   pmax
      comp=Z,35nm,1.2s
GOMU  GeErMu              40.50 321  P      P       07 25 53.8 +2.8
BBOO  Buckleboo           40.59 166         P       07 25 52.2 +1.0
BBOO                                 IAmb   IAmb    07 25 57.3
      comp=Z,23nm,0.9s
STKA  Stephens Creek      41.38 159  P      P       07 25 57.6 -0.2
      comp=Z,6.0nm,0.6s,baz=341,slow=8.4,SNR=7.6
      comp=Z,6.0nm,0.6s
HIA   Hailar              42.69 355 i P     P       07 26 07.3 -1.0
HIA                                  pmax   pmax
      comp=Z,12nm,0.8s
YSS   Yuzhno-Sakhali      42.83  18 eP      P       07 26 20.6  +11
YSS                                  pmax   pmax
      comp=Z,20nm,1.0s
HILR  Hailar Array B      42.98 355  P      P       07 26 11.1 +0.4
      comp=Z,3.9nm,0.5s,baz=161,slow=9.4,SNR=7.8
      comp=Z,3.9nm,0.5s
HEH   HeiHe               43.45   2 eP      P       07 26 16.8 +2.4
HEH                                  pmax   pmax
      comp=Z,17nm,1.2s
ULN   Ulaanbaatar         43.88 342         P       07 26 18.1  0.0
ULN   Ulaanbaatar         43.88 342  P      P       07 26 18.1  0.0
ULN                                  pmax   pmax
      comp=Z,13nm,1.3s
SONM  Songino Array       44.06 342  P      P       07 26 19.2 -0.3
      comp=Z,4.3nm,1.0s,baz=137,slow=5.2,SNR=7.4
      comp=Z,4.3nm,1.0s
SONM  Songino Array       44.06 342  P      P       07 26 19.1 -0.4
SONM  Songino Array       44.06 342  P      P       07 26 19.1 -0.4
SONM                                 pmax   pmax
      comp=Z,18nm,1.6s
HYB   Hyderabad           46.82 288 eP      P       07 26 41.8  0.0
ZEA   Zeya                46.94   2 eP      P       07 26 45.4 +3.4
ZEA                                  pmax   pmax
      comp=Z,10.0nm,1.3s
DZM   Mont Dzumac         49.41 127  P      P       07 27 01.9 +0.2
      comp=Z,4.9nm,0.8s,baz=273,slow=9.5,SNR=6.1
      comp=Z,4.9nm,0.8s
DZM   Mont Dzumac         49.41 127  P      P       07 27 01.4 -0.4
DZM                                  IAmb   IAmb    07 27 27.8
      comp=Z,22nm,1.2s
WMQ   Urumqi              49.50 324 eP      P       07 27 04.6 +2.5
PEA0B Petropavlovsk-      53.28  24  P      P       07 27 30.3 +0.1
PEA0B Petropavlovsk-      53.28  24  P      P       07 27 30.3 +0.1
PEA0B                                pmax   pmax
      comp=Z,63nm,1.4s
PETK  Petropavlovsk-      53.28  24  P      P       07 27 29.9 -0.3
      comp=Z,11nm,0.8s,baz=216,slow=7.3,SNR=9.2
      comp=Z,11nm,0.8s
PETK  Petropavlovsk-      53.28  24         P       07 27 30.4 +0.3
PETK  Petropavlovsk-      53.28  24  P      P       07 27 30.5 +0.3
DGZ   Jazzator, Alta      53.33 330 i P     P       07 27 29.6 -1.3
DGZ                                  pmax   pmax
      comp=Z,14nm,1.5s
MK31  Makanchi Array      54.33 325 i P     P       07 27 37.4 -0.7
MKAR  Makanchi Array      54.33 325  P      P       07 27 37.1 -0.9
      comp=Z,4.8nm,0.8s,baz=124,slow=6.2,SNR=15
      comp=Z,4.8nm,0.8s
MKAR  Makanchi Array      54.33 325         P       07 27 37.6 -0.4
MKAR  Makanchi Array      54.33 325  P      P       07 27 37.6 -0.4
MAKZ  Makanchi            54.52 325         P       07 27 40.6 +1.2
MAKZ                                 IAmb   IAmb    07 27 53.1
      comp=Z,13nm,1.1s
MAKZ  Makanchi            54.52 325  P      P       07 27 40.6 +1.2
MAKZ                                 pmax   pmax
      comp=Z,13nm,1.1s
KSH   Kashi               54.96 314  P      P       07 27 45.4 +2.5
KSH                                  sP     sP      07 27 55.4 +8.0
KSH                                  pmax   pmax
      comp=Z,10.0nm,1.9s
NIL   Nilore              55.01 307         P       07 27 43.6 +0.4
NIL                                  IAmb   IAmb    07 27 47.2
      comp=Z,20nm,1.1s
NIL   Nilore              55.01 307  P      P       07 27 43.7 +0.4
NIL                                  pmax   pmax
      comp=Z,20nm,1.1s
YAK   Yakutsk             55.32   3  P      P       07 27 45.2 +0.3
      comp=Z,12nm,0.5s,baz=102,slow=4.9,SNR=4.2
      comp=Z,12nm,0.5s
YAK   Yakutsk             55.32   3  P      P       07 27 45.0 +0.1
YAK   Yakutsk             55.32   3 eP      P       07 27 46.4 +1.5
YAK                                 e*PP    sP      07 27 56.7 +7.4
YAK                                 eS      S       07 35 28.3 -0.5
YAK                                 e*SS    sS      07 35 45.4  +11
YAK                                 eSS     SS      07 39 08.7 -4.5
YAK                                  pmax   pmax
      comp=Z,10.0nm,0.8s
YAK                                  pmax   pmax
      comp=N,5.0nm,1.2s
YAK                                  pmax   pmax
      comp=E,5.0nm,1.0s
YAK                                  smax   smax
      comp=E,1µm,9.5s
YAK                                  smax   smax
      comp=N,265nm,5.8s
MA2   Magadan             56.22  15  P      P       07 27 51.7 +0.3
      comp=N,3.6nm,0.3s,baz=212,slow=10.0,SNR=5.8
      comp=N,3.6nm,0.3s
MA2   Magadan             56.22  15  P      P       07 27 51.3 -0.1
MA2                                  IAmb   IAmb    07 27 55.7
      comp=Z,13nm,0.9s
MA2   Magadan             56.22  15 i P     P       07 27 49.7 -1.7
MA2                                  pmax   pmax
      comp=Z,17nm,1.0s
AAK   Ala-Archa           57.23 317 i P     P       07 27 57.7 -1.4
AAK                                  pmax   pmax
      comp=Z,17nm,2.3s
ZALV  Zalesovo Beam       57.32 333  P      P       07 27 57.8 -1.6
      comp=Z,2.1nm,0.9s,baz=116,slow=6.8,SNR=3.5
      comp=Z,2.1nm,0.9s
ZALV  Zalesovo Beam       57.32 333  P      P       07 27 59.2 -0.1
ZALV  Zalesovo Beam       57.32 333 i P     P       07 28 02.5 +3.2
ZALV                                 pmax   pmax
      comp=Z,2.0nm,0.7s
KURBB Kurchatov Arra      58.49 327  P      P       07 28 07.0 -0.6
      comp=Z,5.3nm,0.9s,baz=127,slow=5.9,SNR=18
      comp=Z,5.3nm,0.9s
KURK  Kurchatov           58.50 327         P       07 28 08.3 +0.7
KURK                                 IAmb   IAmb    07 28 23.8
      comp=Z,19nm,1.1s
KURK  Kurchatov           58.50 327 i P     P       07 28 06.4 -1.2
KURK                                 pmax   pmax
      comp=Z,25nm,1.1s
GAR   Garm                58.89 312  P      P       07 28 11.2 +0.4
SEY   Seymchan            59.50  14  P      P       07 28 14.8 +0.4
      comp=Z,3.4nm,0.7s,baz=219,slow=7.4,SNR=5.3
      comp=Z,3.4nm,0.7s
SEY   Seymchan            59.50  14 eP      P       07 28 15.5 +1.1
SEY                                  pmax   pmax
      comp=Z,19nm,1.4s
KK31  Karatay Array       60.11 316         P       07 28 17.6 -1.4
KK31                                 IAmb   IAmb    07 28 22.1
      comp=Z,13nm,0.8s
KK31  Karatay Array       60.11 316  P      P       07 28 17.6 -1.4
KK31                                 pmax   pmax
      comp=Z,13nm,0.8s
KKAR  Karatay Array       60.11 316         P       07 28 17.8 -1.3
KKAR  Karatay Array       60.11 316  P      P       07 28 17.8 -1.3
BVAR  Borovoye Array      64.08 327  P      P       07 28 44.0 -1.5
      comp=Z,3.3nm,0.9s,baz=126,slow=7.5,SNR=7.5
      comp=Z,3.3nm,0.9s
BVAR  Borovoye Array      64.08 327  P      P       07 28 44.0 -1.5
BORK  Borovoye            64.13 327 eP      P       07 28 44.3 -1.4
BORK                                 pmax   pmax
      comp=Z,15nm,1.0s
TIXI  Tiksi               64.93   1 eP      P       07 28 50.4 -0.2
TIXI                                 pmax   pmax
      comp=Z,16nm,1.2s
RTZ   Ruatahuna           65.76 138         P       07 28 56.4 -0.3
BILL  Bilibino            67.09  16 i P     P       07 29 03.1 -1.5
BILL                                 pmax   pmax
      comp=Z,14nm,1.6s
NRIK  Noril'sk            67.23 346  P      P       07 29 06.0 +0.5
      comp=Z,3.7nm,0.8s,baz=135,slow=4.9,SNR=5.4
      comp=Z,3.7nm,0.8s
NRIK  Noril'sk            67.23 346  P      P       07 29 05.5  0.0
NRIK  Noril'sk            67.23 346 i P     P       07 29 03.3 -2.2
NRIK                                 pmax   pmax
      comp=Z,13nm,1.7s
AB31  Akbulak array       68.97 320         P       07 29 16.1 -0.7
AB31                                 IAmb   IAmb    07 29 19.4
      comp=Z,8.4nm,0.9s
ABKAR Akbulak array       68.97 320         P       07 29 15.9 -0.9
ARTI  Arti                71.77 327c iP     P       07 29 33.2 -0.6
ARTI                                                07 32 11.0
ARTI                                 S      S       07 38 55.1 +1.1
ARTI                                 SS     SS      07 43 24.2 -5.7
ARTI                                 pmax   pmax
      comp=Z,8.0nm,1.4s
CASY  Casey               73.58 186  P      P       07 29 45.7 +1.5
AKT   Akhty               76.29 311 eP      P       07 30 00.4 -0.3
AKT                                 e               07 30 12.2
AKT                                  pmax   pmax
      comp=Z,38nm,1.4s
KIRV  Kirov               76.97 329 i P     P       07 30 01.9 -2.1
BELG  Belogornoye         77.21 322 i P     P       07 30 05.0 -0.5
BELG                                 pmax   pmax
      comp=Z,3.0nm,1.1s
E18K  Tukpahlearik C      77.77  22  IAmb   IAmb    07 30 12.6
      comp=Z,14nm,1.1s
RAYN  Ar Rayn             78.03 293  P      P       07 30 11.5 +0.8
RAYN                                 IAmb   IAmb    07 30 20.4
      comp=Z,13nm,0.9s
RAYN  Ar Rayn             78.03 293  P      P       07 30 11.5 +0.8
RAYN                                 pmax   pmax
      comp=Z,13nm,1.0s
C19K  Lookout Ridge       78.49  21  IAmb   IAmb    07 30 27.0
      comp=Z,11nm,0.9s
D19K  Kuna River          78.90  21  IAmb   IAmb    07 30 19.6
      comp=Z,24nm,1.4s
D20K  Etivluk River       79.48  21  IAmb   IAmb    07 30 34.3
      comp=Z,24nm,1.4s
B20K  Meade River         79.49  20  IAmb   IAmb    07 30 36.4
      comp=Z,10nm,0.9s
KBZ   Khabaz              79.93 313  P      P       07 30 21.6 +1.0
      comp=Z,2.2nm,0.9s,baz=331,slow=1.3,SNR=3.8
      comp=Z,2.2nm,0.9s
KBZ   Khabaz              79.93 313 i P     P       07 30 19.5 -1.1
KBZ                                  pmax   pmax
      comp=Z,7.0nm,1.0s
KIV   Kislovodsk          80.08 313 eP      P       07 30 20.3 -1.3
KIV                                  pmax   pmax
      comp=Z,9.0nm,1.1s
KDAK  Kodiak Island       80.17  33  P      P       07 30 23.5 +1.8
      comp=Z,6.0nm,0.6s,baz=252,slow=4.6,SNR=1.6
      comp=Z,6.0nm,0.6s
IMAR  Indian Mountai      80.24  24  P      P       07 30 22.0 +0.1
BPAW  Bear Paw Mtn.       81.27  26  IAmb   IAmb    07 30 44.5
      comp=Z,19nm,1.2s
L22K  Petersville         81.30  28  IAmb   IAmb    07 30 37.8
      comp=Z,14nm,0.9s
LABN  Labinsk             81.48 314 eP      P       07 30 25.1 -3.9
LABN                                 pmax   pmax
      comp=Z,18nm,0.5s
ERBR  Yeremizino-Bor      81.64 315 eP      P       07 30 37.0 +7.2
ERBR                                 pmax   pmax
      comp=Z,13nm,0.8s
D23K  Nanushuk River      81.65  21  IAmb   IAmb    07 30 48.0
      comp=Z,23nm,1.4s
C23K  Itkillik River      81.72  20         P       07 30 29.6 -0.1
E23K  Chandalar           82.00  22  IAmb   IAmb    07 30 54.1
      comp=Z,8.5nm,0.8s
KLMR  Klimovskoe          82.14 330 eP      P       07 30 28.3 -3.8
KLMR                                 pmax   pmax
      comp=Z,27nm,1.6s
H24K  Noodor Dome         82.64  24  IAmb   IAmb    07 30 40.3
      comp=Z,13nm,1.1s
F24K  Squaw Lake          82.64  23  IAmb   IAmb    07 31 08.0
      comp=Z,13nm,1.4s
COLA  College             82.65  25 i P     P       07 30 32.9 -1.8
COLA                                 pmax   pmax
      comp=Z,16nm,2.3s
HDA   Harding Lake        83.04  26  IAmb   IAmb    07 30 41.9
      comp=Z,6.5nm,0.7s
ILAR  Eielson Array       83.06  26  P      P       07 30 37.0 +0.1
      comp=Z,2.3nm,0.7s,baz=239,slow=4.8,SNR=14
      comp=Z,2.3nm,0.7s
ILAR  Eielson Array       83.06  26  P      P       07 30 36.9 +0.1
ILAR  Eielson Array       83.06  26  P      P       07 30 36.9 +0.1
ANN   Anapa               83.82 314 eP      P       07 30 39.4 -1.8
ANN                                  pmax   pmax
      comp=Z,18nm,0.9s
BMAR  Burnt Mountain      83.92  23  P      P       07 30 41.2 -0.1
C27K  Jago River          84.12  21  IAmb   IAmb    07 31 01.3
      comp=Z,8.7nm,1.1s
J26L  Joseph Creek        84.50  26  IAmb   IAmb    07 31 07.7
      comp=Z,11nm,1.1s
E27K  Coleen River        85.00  22  IAmb   IAmb    07 31 04.4
      comp=Z,12nm,1.2s
D27M  Malcolm River       85.12  21  IAmb   IAmb    07 31 22.7
      comp=Z,13nm,1.2s
H27K  Steamboat Moun      85.21  24  IAmb   IAmb    07 31 30.2
      comp=Z,10nm,1.2s
BCAR  Beaver Creek A      85.41  27  P      P       07 30 47.8 -1.1
F28M  Old Crow            85.71  23  IAmb   IAmb    07 30 58.6
      comp=Z,8.4nm,0.9s
E28M  Babbage River       85.71  21  IAmb   IAmb    07 31 18.0
      comp=Z,13nm,1.3s
MMAI  Mount Meron Ar      86.31 303  P      P       07 30 52.7 -1.3
      comp=Z,0.5nm,0.2s,baz=116,slow=6.6,SNR=2.7
      comp=Z,0.5nm,0.2s
VNDA  Vanda               86.53 173  P      P       07 30 54.8 +0.8
      comp=Z,1.7nm,0.9s,baz=299,slow=5.4,SNR=4.3
      comp=Z,1.7nm,0.9s
BRTR  Keskin Array B      87.05 309  P      P       07 30 56.9 -0.8
      comp=Z,0.6nm,0.7s,baz=132,slow=5.7,SNR=3.8
      comp=Z,0.6nm,0.7s
BRTR  Keskin Array B      87.05 309  P      P       07 30 56.7 -0.9
BRTR  Keskin Array B      87.05 309  P      P       07 30 56.7 -0.9
L29M  L29M                87.05  27  P      P       07 30 56.7 -0.3
L29M                                 IAmb   IAmb    07 32 50.1
      comp=Z,19nm,1.5s
FINES FINESS Array B      88.57 332  P      P       07 31 03.8 -0.4
      comp=Z,3.2nm,0.9s,baz=147,slow=3.9,SNR=4.8
      comp=Z,3.2nm,0.9s
FINES FINESS Array B      88.57 332  P      P       07 31 03.6 -0.5
FINES FINESS Array B      88.57 332 i P     P       07 31 05.0 +0.8
FINES                                pmax   pmax
      comp=Z,3.0nm,0.9s
AKASG Malin Array Be      88.71 321  P      P       07 31 04.0 -1.1
      comp=Z,0.3nm,0.4s,baz=76,slow=3.9,SNR=2.1
      comp=Z,0.3nm,0.4s
AKASG Malin Array Be      88.71 321  P      P       07 31 04.0 -1.1
SYO   Syowa Base          94.66 201⇑ePcP    P       07 31 34.6 +2.4
YKA   Yellowknife Ar      97.40  24  P      Pdif    07 31 45.0  0.0
      comp=Z,0.4nm,0.7s,baz=301,slow=5.3,SNR=6.6
      comp=Z,0.4nm,0.7s
YKA   Yellowknife Ar      97.40  24  P      Pdif    07 31 45.0 +0.1
PLCA  Paso Flores        143.26 160  PKP    PKPdf   07 37 45.2 -1.1
      comp=Z,1.0nm,0.7s,baz=187,slow=1.7,SNR=4.6
```

IDC ***15*** *07:26:55.7±0.8,6°.41N×125°.43E,h0^{km},mb4.0/11, mbtmp4.0/11,Error ellipse: s-maj=24.0km s-min=8.9km az=97.0*

NEIC ***15*** *07:26:58.0±1.8,6°.53N±0°.05×125°.4E±0°.1,h10^{km}±1^{km}, mb4.5/19,Error ellipse: s-maj=21.9km s-min=5.4km az=110.0*

ISC 15 07:26:57.3±0.5**,6°.48N**±0°.06×**125°.4E**±0°.1**,h10^{km},n39,** σ**0^s.84**/39**,mb4.4**/22**,Mindanao**

```
Code  Station Name          Δ°  AZ°   Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
DAV   Davao City (W)       0.61  18  Pg     Pg      07 27 08.4 -0.8
      560nm,0.3s,baz=255,slow=7.9,SNR=8.3
DAV                                  Lg     Lg      07 27 18.6
      643nm,0.3s,baz=223,slow=22,SNR=9.5
DAV   Davao City (W)       0.61  18         Pg      07 27 08.9 -0.3
TOLI2 Tolitoli             7.04 221  Pn     Pn      07 28 39.2 -1.4
LUWI  Luwuk                7.92 199  Pn     Pn      07 28 52.8 +0.1
MTN   Manton Dam          20.03 163  P      Pn      07 31 31.6 -0.8
KNRA  Kununurra           22.27 171  P      P       07 31 56.1 +1.3
KNRA                                 IAmb   IAmb    07 31 59.0
      comp=Z,19nm,1.1s
COEN  Coen                26.91 139  P      P       07 32 38.4 -0.5
COEN                                 IAmb   IAmb    07 32 44.7
      comp=Z,11nm,1.0s
JNU   Nakatsue            26.99  10         P       07 32 40.5 +0.9
JNU                                  IAmb   IAmb    07 32 53.6
      comp=Z,23nm,1.5s
WB0   Warramunga Arr      27.55 161  P      P       07 32 44.3 -0.4
WB0                                  IAmb   IAmb    07 32 57.8
      comp=Z,11nm,1.4s
WRAB  Tennant Creek       27.69 162  P      P       07 32 46.0 +0.1
WRAB                                 IAmb   IAmb    07 32 57.4
      comp=Z,10nm,1.4s
WRA   Warramunga Arr      27.70 162  P      P       07 32 45.6 -0.3
      comp=Z,1.6nm,1.0s,baz=348,slow=10.0,SNR=8.0
      comp=Z,1.6nm,1.0s
WRA   Warramunga Arr      27.70 162  P      P       07 32 44.0 -2.0
WR8   Warramunga Arr      27.76 161  P      P       07 32 47.5 +1.0
GSI   Gunungsitoli        28.21 261  P      P       07 32 50.9 +0.2
CMAR  Chiang Mai Arr      28.38 297  P      P       07 32 53.2 +1.1
      comp=Z,0.8nm,0.2s,baz=110,slow=9.0,SNR=5.3
      comp=Z,0.8nm,0.2s
KS19  Wonju Array Si      30.96   4  P      P       07 33 14.7  0.0
KS19                                 IAmb   IAmb    07 33 21.2
      comp=Z,15nm,1.4s
ASAR  Alice Springs       31.10 165  P      P       07 33 16.1 -0.1
      comp=Z,0.8nm,0.6s,baz=351,slow=8.5,SNR=11
      comp=Z,0.8nm,0.6s
ASAR  Alice Springs       31.10 165  P      P       07 33 16.8 +0.6
FORT  Forrest             37.14 176  P      P       07 34 08.1 -0.3
FORT                                 IAmb   IAmb    07 34 14.2
      comp=Z,7.4nm,1.4s
USRK  Ussuriysk Ar.       38.01   8  P      P       07 34 16.6 +1.0
      comp=Z,3.0nm,0.7s,baz=198,slow=9.1,SNR=4.1
      comp=Z,3.0nm,0.7s
BBOO  Buckleboo           40.37 166  P      P       07 34 35.9 +0.4
BBOO                                 IAmb   IAmb    07 34 36.6
      comp=Z,8.1nm,0.7s
STKA  Stephens Creek      41.16 159  P      P       07 34 41.0 -1.1
      comp=Z,2.2nm,0.6s,baz=349,slow=9.0,SNR=6.1
      comp=Z,2.2nm,0.6s
STKA  Stephens Creek      41.16 159  P      P       07 34 42.4 +0.4
SONM  Songino Array       44.28 342  P      P       07 35 07.6 +0.3
      comp=Z,1.2nm,1.1s,baz=132,slow=8.6,SNR=2.1
      comp=Z,1.2nm,1.1s
SONM  Songino Array       44.28 342  P      P       07 35 07.8 +0.4
TOO   Toolangi            47.67 158  P      P       07 35 35.6 +1.4
TOO                                  IAmb   IAmb    07 35 41.9
      comp=Z,3.8nm,1.2s
PETK  Petropavlovsk-      53.43  24  P      P       07 36 17.4  0.0
      comp=Z,5.4nm,0.9s,baz=218,slow=6.7,SNR=4.0
      comp=Z,5.4nm,0.9s
PETK  Petropavlovsk-      53.43  24  P      P       07 36 17.0 -0.4
MKAR  Makanchi Array      54.55 325  P      P       07 36 25.9 +0.2
      comp=Z,0.9nm,0.6s,baz=123,slow=7.5,SNR=10
      comp=Z,0.9nm,0.6s
MKAR  Makanchi Array      54.55 325  P      P       07 36 25.0 -0.7
YAK   Yakutsk             55.52   2  P      P       07 36 33.0 +0.7
KURBB Kurchatov Arra      58.71 327  P      P       07 36 55.7 +0.5
      comp=Z,1.1nm,0.3s,baz=126,slow=6.0,SNR=18
      comp=Z,1.1nm,0.3s
KURK  Kurchatov           58.72 327  P      P       07 36 54.4 -0.9
KURK                                 IAmb   IAmb    07 36 57.1
      comp=Z,2.9nm,0.8s
GAR   Garm                59.09 312  P      P       07 36 58.0 -0.2
KK31  Karatay Array       60.32 316  P      P       07 37 05.0 -1.5
KK31                                 IAmb   IAmb    07 37 08.6
      comp=Z,4.7nm,1.2s
KKAR  Karatay Array       60.32 316  P      P       07 37 05.4 -1.2
BVAR  Borovoye Array      64.30 327  P      P       07 37 33.3 +0.4
      comp=Z,1.8nm,0.8s,baz=120,slow=8.9,SNR=7.0
      comp=Z,1.8nm,0.8s
ILAR  Eielson Array       83.21  26  P      P       07 39 22.5 -1.2
      comp=Z,0.5nm,0.7s,baz=246,slow=5.7,SNR=7.2
      comp=Z,0.5nm,0.7s
ILAR  Eielson Array       83.21  26  P      P       07 39 23.3 -0.4
```

IDC ***15*** *07:30:51.0±0.9,6°.95N×126°.26E,h0^{km},mb3.8/8, mbtmp3.8/8,Error ellipse: s-maj=20.3km s-min=9.7km az=18.0*

NEIC ***15*** *07:30:52.0±0.8,7°.0N±0°.1×126°.23E±0°.03,h10^{km}±1^{km}, mb4.4/14,Error ellipse: s-maj=20.9km s-min=5.2km az=182.0*

ISC 15 07:30:51.9±0.6**,6°.9N**±0°.1×**126°.0E**±0°.1**,h10^{km},n32,** σ**1^s.10**/32**,mb4.2**/17**,Mindanao**

```
Code  Station Name          Δ°  AZ°   Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
DAV   Davao City (W)       0.49 290  Pg     Pn      07 31 04.9 -0.1
      958nm,0.3s,baz=59,slow=22,SNR=14
DAV                                  Lg     Lg      07 31 13.3
      1µm,0.3s,baz=68,slow=23,SNR=12
DAV   Davao City (W)       0.49 290         Pn      07 31 04.8 -0.3
KNRA  Kununurra           22.59 173  P      P       07 35 53.3 +0.5
COEN  Coen                26.81 141  P      P       07 36 32.4 -0.2
COEN                                 IAmb   IAmb    07 36 45.2
      comp=Z,7.6nm,0.9s
WB0   Warramunga Arr      27.75 163  P      P       07 36 40.9 -0.1
WB0                                  IAmb   IAmb    07 36 56.2
      comp=Z,5.6nm,1.0s
WRA   Warramunga Arr      27.90 163  P      P       07 36 43.0 +0.7
      comp=Z,1.0nm,0.6s,baz=347,slow=9.9,SNR=6.0
      comp=Z,1.0nm,0.6s
WR8   Warramunga Arr      27.96 163  P      P       07 36 43.1 +0.3
KSRS  Korea Array         30.46   3  P      P       07 37 04.7 -0.1
      comp=Z,0.3nm,0.4s,baz=215,slow=7.1,SNR=5.0
      comp=Z,0.3nm,0.4s
AS31  Alice Springs       31.34 166  P      P       07 37 12.6 -0.2
ASAR  Alice Springs       31.34 166  P      P       07 37 12.6 -0.2
      comp=Z,0.6nm,0.5s,baz=344,slow=6.9,SNR=9.1
      comp=Z,0.6nm,0.5s
ASAR  Alice Springs       31.34 166  P      P       07 37 12.2 -0.6
LSA   Lhasa               39.88 309  P      P       07 38 27.1 +0.4
LSA                                  IAmb   IAmb    07 38 45.4
      comp=Z,4.9nm,0.4s
EIDS  Eidsvold            40.28 144  P      P       07 38 28.1 -1.3
EIDS                                 IAmb   IAmb    07 38 37.4
      comp=Z,14nm,1.4s
NWAO  Narrogin (SRO)      40.48 191  P      P       07 38 31.6 +0.6
NWAO                                 IAmb   IAmb    07 38 34.4
      comp=Z,12nm,1.2s
BBOO  Buckleboo           40.63 167  P      P       07 38 32.5 +0.3
BBOO                                 IAmb   IAmb    07 38 38.4
      comp=Z,7.1nm,0.8s
STKA  Stephens Creek      41.32 160  P      P       07 38 38.6 +0.6
      comp=Z,0.9nm,0.4s,baz=327,slow=11,SNR=3.9
      comp=Z,0.9nm,0.4s
STKA  Stephens Creek      41.32 160  P      P       07 38 38.4 +0.4
MKAR  Makanchi Array      54.59 324  P      P       07 40 20.4 -0.2
      comp=Z,0.5nm,0.5s,baz=122,slow=8.0,SNR=7.4
      comp=Z,0.5nm,0.5s
MKAR  Makanchi Array      54.59 324  P      P       07 40 20.8 +0.1
ZALV  Zalesovo Beam       57.47 332  P      P       07 40 40.4 -0.6
KURK  Kurchatov           58.72 327  P      P       07 40 49.1 -0.7
KURK                                 IAmb   IAmb    07 40 53.3
      comp=Z,2.1nm,0.7s
KURBB Kurchatov Arra      58.72 327  P      P       07 40 50.7 +0.8
      comp=Z,1.2nm,0.7s,baz=125,slow=6.2,SNR=9.1
      comp=Z,1.2nm,0.7s
KK31  Karatay Array       60.47 316  P      P       07 41 01.9 -0.3
KK31                                 IAmb   IAmb    07 41 04.5
      comp=Z,2.4nm,0.8s
KKAR  Karatay Array       60.47 316  P      P       07 41 00.7 -1.5
BVAR  Borovoye Array      64.31 326  P      P       07 41 30.3 +2.6
      comp=Z,1.4nm,0.8s,baz=125,slow=9.8,SNR=4.1
      comp=Z,1.4nm,0.8s
AB31  Akbulak array       69.28 320  P      P       07 41 58.7 -0.7
ABKAR Akbulak array       69.28 320  P      P       07 41 58.9 -0.6
J14K  Nanvaranak Lak      74.97  27  P      P       07 42 32.9 -0.2
ILAR  Eielson Array       82.55  26  P      P       07 43 18.4 +3.5
```

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,1.1nm,0.7s,baz=251,slow=4.0,SNR=17						
ILAR	**Eielson Array**	82.55	26	P	**P**	**07 43 13.8**	**-1.1**
BRTR	**Keskin Array B**	87.49	310	P	**P**	**07 43 42.5**	**+2.0**
	comp=Z,0.4nm,0.8s,baz=96,slow=8.8,SNR=2.5						
	comp=Z,0.4nm,0.8s						
BRTR	**Keskin Array B**	87.49	310	P	**P**	**07 43 39.4**	**-1.1**

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*BJI **15** 07:33:52.7, 6°.55N×125°.78E, h12^{km}, mb4.5/37, Ms5.2/2, Ms7 5.0/2*

*IDC **15** 07:33:52.6±0.6, 6°.48N×125°.20E, h0^{km}, mb4.2/18, mbtmp4.2/18, MS5.1/1, Error ellipse: s-maj=14.8km s-min=8.7km az=114.0*

*NEIC **15** 07:33:55.2±1.3, 6°.61N±0°.04×125°.26E±0°.08, h11^{km}±5^{km}, mb4.7/39, Error ellipse: s-maj=12.1km s-min=4.9km az=112.0*

*DJA **15** 07:34:01.0±0.6, 7°N±3°×12°5E±°, h38^{km}±6^{km}, M5.2/25, mb4.9/25, mB5.7/4, MLv5.3/9, Mw(mB)5.2/4*

ISC 15 07:33:55.0±0.4**, 6°.64N**±0°.04×**125°.33E**±0°.06**, h10^{km}, n118, σ1^{s}.66**/112**, mb4.6**/49**, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	0.49	30	Pg	**Pb**	**07 34 06.3**	**+0.6**
	4µm,0.3s,baz=230,slow=3.5,SNR=57						
DAV				Lg	Lg	07 34 16.4	
	9µm,0.3s,baz=150,slow=20,SNR=13						
DAV	**Davao City (W)**	0.49	30		**Pb**	**07 34 06.0**	**+0.2**
SGSI	**Sangihe**	2.94	176	P	**Pn**	**07 34 43.0**	**+1.1**
SGSI				S	**Sn**	**07 35 18.3**	**+1.0**
GAMI	**Galela, Maluku**	5.36	153	P	**Pn**	**07 35 17.6**	**+2.4**
	1.9nm306nm,0.9s						
GAMI				S	**Sn**	**07 36 18.0**	**+0.9**
	1.9nm306nm,0.9s						
TNTI	**Ternate**	6.17	161		**Pn**	**07 35 25.8**	**-0.5**
TNTI	**Ternate**	6.17	161	P	**Pn**	**07 35 27.3**	**+1.0**
	0.5nm105nm,0.7s						
TNTI				S	**Sn**	**07 36 36.5**	**-0.6**
	0.5nm105nm,0.7s						
GTOI	**Gorontalo**	6.40	201	P	**Pn**	**07 35 27.9**	**-1.5**
GTOI				S	**Sn**	**07 36 39.3**	**-3.3**
MRSI	**Marisa**	7.00	209	P	**Pn**	**07 35 36.6**	**-1.0**
MRSI				S	**Sn**	**07 36 58.2**	**+0.9**
TOLI2	**Tolitoli**	7.13	220		**Pn**	**07 35 35.8**	**-3.6**
LUWI	**Luwuk**	8.05	199		**Pn**	**07 35 49.8**	**-2.3**
LUWI	**Luwuk**	8.05	199	P	**Pn**	**07 35 55.5**	**+3.4**
MPSI	**Mapaga**	8.28	221	P	**Pn**	**07 35 59.3**	**+4.0**
APSI	**Ampana**	8.36	206	P	**Pn**	**07 35 59.4**	**+3.1**
	165nm,0.7s						
SANI	**Sanana**	8.66	176	P	**Pn**	**07 36 00.9**	**+0.4**
	74nm,0.7s						
KKM	**Kota Kinabalu**	9.08	267	P	Pn	07 36 13.5	+7.1
	26nm,0.9s						
NLAI	**Namlea**	9.97	170	P	**Pn**	**07 36 19.3**	**+0.8**
	86nm,0.9s						
KRAI	**Karang Ratu**	10.36	163	P	**Pn**	**07 36 26.5**	**+2.7**
	4µm36nm,0.7s						
KDI	**Kendari**	10.87	194	P	**Pn**	**07 36 32.9**	**+2.1**
TTSI	**Tana Toraja**	11.09	210	P	**Pn**	**07 36 35.5**	**+1.8**
	44nm,1.0s						
SPSI	**Sidrap Palu**	11.91	208	P	Pn	07 36 58.3	+13
PMSI	**Majene**	11.94	213	P	Pn	07 36 29.8	-16
BNSI	**Bone**	12.15	206	P	**Pn**	**07 36 51.0**	**+2.7**
	29nm,0.7s						
KAPI	**Kappang**	12.85	206	Pn	**Pn**	**07 37 00.6**	**+2.7**
	0.6nm,0.3s,baz=20,slow=19,SNR=5.7						
KAPI	**Kappang**	12.85	206	Pn	**Pn**	**07 36 58.0**	**+0.2**
KAPI	**Kappang**	12.85	206	P	Pn	07 37 08.6	+11
EDFI	**Ende, Flores**	15.71	193	P	P	07 37 56.4	+16
SOEI	**Soe**	16.32	184		**Pn**	**07 37 45.9**	**+1.2**
SOEI	**Soe**	16.32	184	P	**P**	**07 37 49.0**	**+1.4**
	45nm,0.8s						
BATI	**Baumata**	16.82	186	Pn	**P**	**07 37 54.6**	**+1.7**
	6.7nm,0.3s,baz=311,slow=1.1,SNR=4.9						
PLAI	**Plampang**	17.11	206	P	P	07 38 06.4	+10
GENI	**Genyem**	17.42	121	P	Pn	07 37 47.5	-11
KLNI	**Mataram**	17.57	212	P	**P**	**07 38 06.5**	**+5.2**
	2µm70nm,0.9s						
JAGI	**Jajag, Banyuwa**	18.70	217	P	**P**	**07 38 13.6**	**-0.2**
JAGI	**Jajag, Banyuwa**	18.70	217	P	**Pn**	**07 38 17.9**	**+3.8**
	35nm,1.0s						
SJI	**Sawahan**	19.67	224	P	Pn	07 38 34.6	+8.7
SNJI	**Sawahan-Nganju**	19.71	224	P	**Pn**	**07 38 28.3**	**+1.8**
	22nm,0.9s						
MTN	**Manton Dam**	20.20	163		**P**	**07 38 29.9**	**-0.2**
MTN				IAmb	IAmb	07 38 39.5	
	comp=Z,24nm,0.9s						
KPJI	**Karang Pucung**	21.46	230	P	P	07 38 55.5	+12
KNRA	**Kununurra**	22.43	171		**P**	**07 38 54.0**	**-0.2**
MDSI	**Maura Dua**	23.84	243	P	**P**	**07 39 13.4**	**+4.8**
NJ2	**Nanjing**	25.99	347	*e*P	**P**	**07 39 29.3**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PMG	**Port Moresby**	26.97	126	P	**P**	**07 39 36.0**	**-1.1**
	comp=Z,8.7nm,0.7s,baz=316,slow=5.4,SNR=5.4						
	comp=Z,8.7nm,0.7s						
PMG	**Port Moresby**	26.97	126		**P**	**07 39 36.4**	**-0.7**
PMG				IAmb	IAmb	07 39 44.3	
	comp=Z,16nm,0.8s						
PMG	**Port Moresby**	26.97	126	P	**P**	**07 39 37.8**	**+0.7**
	comp=Z,20nm,0.8s						
COEN	**Coen**	27.07	139		**P**	**07 39 37.4**	**-0.5**
WB0	**Warramunga Arr**	27.72	161		**P**	**07 39 42.6**	**-1.2**
WB0				IAmb	IAmb	07 40 01.8	
	comp=Z,14nm,1.0s						
WRAB	**Tennant Creek**	27.86	162		**P**	**07 39 46.2**	**+1.2**
WRAB				IAmb	IAmb	07 39 57.5	
	comp=Z,9.1nm,0.8s						
WRA	**Warramunga Arr**	27.87	162	P	**P**	**07 39 42.8**	**-2.3**
	comp=Z,1.1nm,0.4s,baz=332,slow=11,SNR=12						
	comp=Z,1.1nm,0.4s						
WR8	**Warramunga Arr**	27.93	161	P	**P**	**07 39 44.5**	**-1.1**
WR8				IAmb	IAmb	07 40 01.8	
	comp=Z,10nm,0.6s						
GSI	**Gunungsitoli**	28.18	260	P	**P**	**07 39 48.5**	**+0.5**
GSI				IAmb	IAmb	07 39 55.1	
	comp=Z,12nm,0.7s						
CMAR	**Chiang Mai Arr**	28.26	297	P	**P**	**07 39 47.2**	**-1.4**
	comp=Z,0.9nm,0.3s,baz=117,slow=7.4,SNR=8.0						
	comp=Z,0.9nm,0.3s						
CMAR	**Chiang Mai Arr**	28.26	297	P	**P**	**07 39 47.5**	**-1.2**
KMI	**Kunming**	28.37	313	P	P	07 39 54.9	+5.0
KMI				pmax	pmax		
	comp=Z,13nm,0.6s						
PSA00	**Pilbara Seismi**	28.55	191	P	**P**	**07 39 49.5**	**-1.6**
PZH	**PanZhiHua**	29.91	314	P	**P**	**07 40 05.6**	**+2.2**
KSAR	**Wonju Array Be**	30.75	4	P	**P**	**07 40 11.3**	**+0.8**
KSRS	**Korea Array**	30.76	4	P	**P**	**07 40 09.6**	**-1.0**
	comp=Z,5.9nm,1.1s,baz=177,slow=10.0,SNR=13						
	comp=Z,5.9nm,1.1s						
XAN	**Xi'an**	31.21	333	P	**P**	**07 40 16.9**	**+2.2**
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
AS31	**Alice Springs**	31.27	165		**P**	**07 40 14.4**	**-0.9**
ASAR	**Alice Springs**	31.27	165	P	**P**	**07 40 14.1**	**-1.2**
	comp=Z,1.7nm,0.5s,baz=348,slow=7.2,SNR=18						
	comp=Z,1.7nm,0.5s						
ASAR	**Alice Springs**	31.27	165		**P**	**07 40 14.3**	**-0.9**
MJAR	**Matsushiro Arr**	32.01	20	P	**P**	**07 40 19.3**	**-2.4**
	comp=Z,1.3nm,0.7s,baz=198,slow=8.9,SNR=4.1						
HNS	**HongShan**	32.11	344	⇑P	**P**	**07 40 21.9**	**-0.6**
HNS				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CTAO	**Charters Tower**	33.60	143	P	**P**	**07 40 34.5**	**-1.3**
CTAO				IAmb	IAmb	07 40 41.5	
	comp=Z,15nm,1.2s						
BJI	**Beijing**	34.25	347	P	**P**	**07 40 42.6**	**+1.4**
BJI				pP	**sP**	**07 40 46.8**	**+1.3**
BJI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LZDM	**Lanzhou Array**	35.28	329	P	**P**	**07 40 50.9**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=134,slow=10,SNR=5.3						
	comp=Z,0.8nm,0.3s						
LZH	**Lanzhou**	35.30	329	*e*P	P	07 40 56.8	+6.2
LZH				pmax	pmax		
	comp=Z,40nm,1.5s						
HHC	**Hu-ho-hao-te**	36.22	342	*e*P	**P**	**07 41 01.3**	**+3.0**
MORW	**Morawa**	36.61	194	P	**P**	**07 41 00.1**	**-1.5**
MORW				IAmb	IAmb	07 41 07.7	
	comp=Z,14nm,1.4s						
SHL	**Shillong**	37.06	304		**P**	**07 41 06.5**	**+0.7**
SHL				IAmb	IAmb	07 41 15.8	
	comp=Z,15nm,0.9s						
FORT	**Forrest**	37.30	176		**P**	**07 41 05.2**	**-2.2**
FORT				IAmb	IAmb	07 41 15.3	
	comp=Z,7.3nm,0.6s						
USRK	**Ussuriysk Ar.**	37.86	8	P	**P**	**07 41 11.5**	**-0.6**
	comp=Z,7.4nm,0.6s,baz=173,slow=7.7,SNR=12						
	comp=Z,7.4nm,0.6s						
MDJ	**Mudanjiang**	38.01	5		**P**	**07 41 12.3**	**-0.9**
MDJ	**Mudanjiang**	38.01	5	P	**P**	**07 41 13.8**	**+0.5**
MDJ				pmax	pmax		
	comp=Z,28nm,1.2s						
BNX	**BinXian**	38.99	2	⇓P	**P**	**07 41 21.1**	**-0.4**
BNX				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GTA	**Gaotai**	39.90	329	*e*P	**P**	**07 41 30.0**	**+0.6**
GTA				pP	sP	07 41 35.9	+2.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NWAO	**Narrogin (SRO)**	40.10	191	P	**P**	**07 41 27.6**	**-3.3**
NWAO				IAmb	IAmb	07 41 39.9	
	comp=Z,11nm,0.9s						
JKA	**Kamikawa-asahi**	40.27	19		**P**	**07 41 32.4**	**+0.1**
JKA				IAmb	IAmb	07 41 33.0	
	comp=Z,20nm,1.2s						
EIDS	**Eidsvold**	40.49	143	P	**P**	**07 41 33.6**	**-0.7**
BBOO	**Buckleboo**	40.54	166		**P**	**07 41 33.8**	**-0.8**
BBOO				IAmb	IAmb	07 41 39.6	
	comp=Z,20nm,0.8s						
STKA	**Stephens Creek**	41.33	159	P	**P**	**07 41 39.8**	**-1.3**
	comp=Z,4.7nm,0.6s,baz=333,slow=7.9,SNR=12						
	comp=Z,4.7nm,0.6s						
STKA	**Stephens Creek**	41.33	159		**P**	**07 41 40.3**	**-0.8**
HILR	**Hailar Array B**	43.03	355	P	**P**	**07 41 54.6**	**-0.2**
	comp=Z,6.6nm,0.9s,baz=172,slow=15,SNR=4.1						
	comp=Z,6.6nm,0.9s						
HEH	**HeiHe**	43.50	2	*e*P	**P**	**07 41 58.6**	**+0.1**
HEH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ULN	**Ulaanbaatar**	43.94	342	P	**P**	**07 42 03.6**	**+1.2**
SONM	**Songino Array**	44.11	342	P	**P**	**07 42 05.6**	**+1.9**
	comp=Z,0.5nm,0.6s,baz=134,slow=4.2,SNR=2.2						
	comp=Z,0.5nm,0.6s						
ARMA	**Armidale**	44.65	147	P	**P**	**07 42 08.0**	**-0.2**
DZM	**Mont Dzumac**	49.36	127	LR	LR	08 04 06.5	
	comp=Z,2µm,18.1s,baz=330,slow=37						
DZM	**Mont Dzumac**	49.36	127	P	**P**	**07 42 44.8**	**-0.3**
DZM				IAmb	IAmb	07 42 57.7	
	comp=Z,8.7nm,0.9s						
PEA0B	**Petropavlovsk-**	53.31	24	P	**P**	**07 43 14.7**	**+0.6**
PETK	**Petropavlovsk-**	53.31	24	P	**P**	**07 43 14.2**	**0.0**
	comp=Z,3.3nm,0.7s,baz=192,slow=4.2,SNR=4.6						
	comp=Z,3.3nm,0.7s						
MKAR	**Makanchi Array**	54.39	325	P	**P**	**07 43 21.5**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=126,slow=7.9,SNR=6.9						
	comp=Z,0.8nm,0.5s						
MKAR	**Makanchi Array**	54.39	325		**P**	**07 43 21.7**	**-0.5**
MAKZ	**Makanchi**	54.57	325	P	**P**	**07 43 24.4**	**+0.9**
MAKZ				IAmb	IAmb	07 43 29.6	
	comp=Z,9.6nm,1.5s						
TARG	**Taragay, Kyrgy**	54.67	317	P	**P**	**07 43 24.7**	**-0.1**
TARG				IAmb	IAmb	07 43 35.2	
	comp=Z,11nm,1.2s						
KSH	**Kashi**	55.02	314	P	**P**	**07 43 27.8**	**+0.7**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YAK	**Yakutsk**	55.37	2	P	**P**	**07 43 29.4**	**+0.4**
ZAA0	**Zalesovo Array**	57.38	333	P	**P**	**07 43 41.5**	**-1.9**
ZALV	**Zalesovo Beam**	57.38	333	P	**P**	**07 43 44.9**	**+1.4**
	comp=Z,1.6nm,0.7s,baz=126,slow=7.5,SNR=6.8						
	comp=Z,1.6nm,0.7s						
ZALV	**Zalesovo Beam**	57.38	333	P	**P**	**07 43 42.3**	**-1.1**
KURBB	**Kurchatov Arra**	58.55	327	P	**P**	**07 43 50.5**	**-1.3**
	comp=Z,1.0nm,0.3s,baz=126,slow=6.0,SNR=17						
	comp=Z,1.0nm,0.3s						
KURK	**Kurchatov**	58.55	327		**P**	**07 43 50.8**	**-0.9**
KURK				IAmb	IAmb	07 44 03.9	
	comp=Z,4.3nm,0.8s						
GAR	**Garm**	58.95	312	P	**P**	**07 43 54.2**	**-0.7**
KK31	**Karatay Array**	60.17	316		**P**	**07 44 02.1**	**-1.1**
KK31				IAmb	IAmb	07 44 03.1	
	comp=Z,9.3nm,1.5s						
KKAR	**Karatay Array**	60.17	316	P	**P**	**07 44 01.7**	**-1.4**
BVAR	**Borovoye Array**	64.14	327	P	**P**	**07 44 28.2**	**-1.4**
	comp=Z,1.2nm,0.6s,baz=134,slow=8.5,SNR=4.6						
	comp=Z,1.2nm,0.6s						
BORK	**Borovoye**	64.18	327	P	**P**	**07 44 29.2**	**-0.7**
BORK				IAmb	IAmb	07 44 36.1	
	comp=Z,4.7nm,0.8s						
AB31	**Akbulak array**	69.03	320		**P**	**07 44 59.7**	**-1.3**
AB31				IAmb	IAmb	07 45 06.0	
	comp=Z,7.5nm,1.1s						
ABKAR	**Akbulak array**	69.03	320		**P**	**07 44 59.4**	**-1.6**
RAYN	**Ar Rayn**	78.08	293		**P**	**07 45 53.4**	**-1.3**
KBZ	**Khabaz**	79.98	313	P	**P**	**07 46 05.5**	**+0.9**
	comp=Z,3.5nm,1.0s,baz=63,slow=2.3,SNR=3.6						
	comp=Z,3.5nm,1.0s						
B21K	**Ikpikpuk River**	80.34	20		**P**	**07 46 06.9**	**+0.8**
ILAR	**Eielson Array**	83.09	26	P	**P**	**07 46 19.9**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=232,slow=5.1,SNR=9.2						
	comp=Z,0.6nm,0.7s						
ILAR	**Eielson Array**	83.09	26	P	**P**	**07 46 20.6**	**-0.1**
I27K	**Kandik River**	85.27	25		**P**	**07 46 32.5**	**+0.6**
I28M	**Miner Creek**	85.98	25		**P**	**07 46 35.2**	**-0.3**
I28M				IAmb	IAmb	07 46 43.4	
	comp=Z,6.5nm,0.8s						
BRTR	**Keskin Array B**	87.10	309	P	**P**	**07 46 42.0**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=116,slow=3.1,SNR=4.0						
	comp=Z,0.7nm,0.8s						
BRTR	**Keskin Array B**	87.10	309	P	**P**	**07 46 40.3**	**-1.3**

IDC 15 07:43:08.6±1.8**, 7°.00N**×**126°.28E, h0^{km}, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=38.7km s-min=12.1km az=18.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	0.70	276	Pg	Pg	07 43 21.9	-0.1
	637nm,0.3s,baz=262,slow=6.4,SNR=6.6						
DAV				Lg	Lg	07 43 32.0	
	788nm,0.3s,baz=61,slow=22,SNR=4.2						
WRA	**Warramunga Arr**	27.93	164	P	P	07 49 01.6	+0.8
	0.3nm,0.7s,baz=343,slow=9.0,SNR=2.1						
	0.3nm,0.7s						
ASAR	**Alice Springs**	31.38	166	P	P	07 49 30.7	-0.7
	0.3nm,0.5s,baz=345,slow=7.1,SNR=5.5						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	54.64	324	P	P	07 52 39.2	-0.1
	0.2nm,0.7s,baz=118,slow=12,SNR=2.2						
	0.2nm,0.7s						

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*BJI **15** 07:49:49.0, 6°.27N×125°.43E, h15^{km}, mB5.4/2, mb4.6/52, Ms5.1/4, Ms7 5.0/4*

*IDC **15** 07:49:50.7±0.6, 6°.59N×124°.96E, h0^{km}, mb4.4/27, mbtmp4.4/28, Error ellipse: s-maj=12.8km s-min=9.0km az=134.0*

*MOS **15** 07:49:51.5±1.2, 6°.65N×125°.10E, h14^{km}, mb5.0/30, Error ellipse: s-maj=12.6km s-min=6.3km az=107.0*

*NEIC **15** 07:49:54.5±1.2, 6°.70N±0°.06×125°.16E±0°.06, h14^{km}±4^{km}, mb5.0/85, Error ellipse: s-maj=11.6km s-min=6.5km az=136.0*

*DJA **15** 07:49:56.2±0.4, 7°N±3°×12°5E±°, h10^{km}, M5.2/31, mb5.0/31, mB5.7/7, MLv5.4/10, Mw(mB)5.2/7*

ISC 15 07:49:53.6±0.3**, 6°.71N**±0°.04×**125°.10E**±0°.05**, h10^{km}, n495, σ1^{s}.30**/476**, mb4.9**/100**, 4C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	0.59	53	Pg	**Pg**	**07 50 05.4**	**+0.2**
	5µm,0.3s,baz=250,slow=3.3,SNR=69						
DAV				Lg	Lg	07 50 16.5	
	4µm,0.3s,baz=108,slow=19,SNR=9.6						
DAV	**Davao City (W)**	0.59	53	P	**Pg**	**07 50 04.0**	**-1.2**
SGSI	**Sangihe**	3.04	172	P	**Pn**	**07 50 42.8**	**+1.0**
SGSI				S	**Sn**	**07 51 20.8**	**+2.6**
GAMI	**Galela, Maluku**	5.54	151	P	**Pn**	**07 51 18.7**	**+2.5**
	2.3nm436nm,1.1s						
GAMI				S	**Sn**	**07 52 24.2**	**+4.3**
	2.3nm436nm,1.1s						
TNTI	**Ternate**	6.32	159		**Pn**	**07 51 27.8**	**+0.8**
TNTI	**Ternate**	6.32	159	P	**Pn**	**07 51 29.2**	**+2.3**
	0.7nm117nm,0.9s						
TNTI				S	**Sn**	**07 52 42.3**	**+3.0**
	0.7nm117nm,0.9s						
GTOI	**Gorontalo**	6.39	199	P	**Pn**	**07 51 26.8**	**-1.0**
MRSI	**Marisa**	6.95	207	P	**Pn**	**07 51 35.2**	**-0.4**
MRSI				S	**Sn**	**07 52 56.1**	**+1.3**
TOLI2	**Tolitoli**	7.04	218		**Pn**	**07 51 33.7**	**-3.0**
LUWI	**Luwuk**	8.05	197	Pn	**Pn**	**07 51 51.0**	**+0.3**
LUWI	**Luwuk**	8.05	197	P	**Pn**	**07 51 54.1**	**+3.4**
MPSI	**Mapaga**	8.19	220	P	**Pn**	**07 51 53.5**	**+0.9**
APSI	**Ampana**	8.32	205	P	Pn	07 51 59.7	+5.3
	1.0nm157nm,0.9s						
SANI	**Sanana**	8.75	174	P	**Pn**	**07 51 58.9**	**-1.4**
	72nm,0.7s						
SWI	**Sorong**	9.72	141	P	**Pn**	**07 52 16.6**	**+3.0**
	47nm,0.9s						
NLAI	**Namlea**	10.09	169	P	**Pn**	**07 52 21.0**	**+2.4**
	109nm,0.9s						
KRAI	**Karang Ratu**	10.49	162	P	**Pn**	**07 52 26.1**	**+1.8**
MSAI	**Masohi**	10.70	159	P	**Pn**	**07 52 29.3**	**+2.2**
	58nm,0.9s						
KDI	**Kendari**	10.88	193	P	**Pn**	**07 52 33.0**	**+3.4**
TTSI	**Tana Toraja**	11.03	209	P	**Pn**	**07 52 33.0**	**+1.4**
	60nm,1.0s						
SPSI	**Sidrap Palu**	11.87	207	P	**Pn**	**07 52 45.5**	**+2.5**
	23nm,0.8s						
PMSI	**Majene**	11.88	212	P	**Pn**	**07 52 45.1**	**+1.9**
	41nm,1.0s						
FAKI	**Fak Fak**	11.94	143		**Pn**	**07 52 43.2**	**-0.8**
FAKI	**Fak Fak**	11.94	143	P	**Pn**	**07 52 45.9**	**+1.9**
	57nm,1.0s						
BNSI	**Bone**	12.11	204	P	**Pn**	**07 52 47.9**	**+1.5**
	2µm37nm,1.0s						
BNDI	**Bandanaira**	12.15	157	P	**Pn**	**07 52 48.8**	**+1.9**
	99nm,0.6s						
KAPI	**Kappang**	12.81	205	Pn	**Pn**	**07 52 58.8**	**+2.8**
	0.7nm,0.3s,baz=30,slow=8.5,SNR=6.8						
KAPI	**Kappang**	12.81	205		**Pn**	**07 52 56.1**	**+0.1**
KAPI	**Kappang**	12.81	205	P	**Pn**	**07 52 57.0**	**+0.9**
KAPI	**Kappang**	12.81	205	*i* P	**Pn**	**07 52 56.9**	**+0.9**
BKSI	**Bulukumba**	12.95	203	P	**Pn**	**07 52 59.5**	**+1.7**
	30nm,1.1s						
SBUM	**Sibu**	13.52	252	Pn	**Pn**	**07 53 07.2**	**+1.6**
MMRI	**Maumere**	15.51	191	Pn	**Pn**	**07 53 32.0**	**-0.6**
EDFI	**Ende, Flores**	15.73	193	P	**Pn**	**07 53 37.5**	**+1.9**
	23nm,1.1s						
SAUI	**Saumlaki**	15.85	157	Pn	**Pn**	**07 53 37.1**	**0.0**
SAUI				IAmb	IAmb	07 53 45.1	
	comp=Z,88nm,1.1s						
LBFI	**Labuhan Bajo,**	15.96	199	P	**P**	**07 53 41.6**	**-0.4**
	comp=Z,41nm,1.1s						
SOEI	**Soe**	16.38	183		**Pn**	**07 53 43.6**	**-0.4**
SOEI	**Soe**	16.38	183	P	**P**	**07 53 47.4**	**+0.6**
	comp=Z,97nm,1.2s						
DBNI	**Kabupaten Domp**	16.56	204	P	**P**	**07 53 48.2**	**-0.5**
BATI	**Baumata**	16.87	185	Pn	**Pn**	**07 53 48.0**	**-2.1**
	comp=Z,25nm,0.7s,baz=90,slow=2.0,SNR=1.5						
BATI	**Baumata**	16.87	185	P	**P**	**07 53 52.4**	**+0.3**
	comp=Z,70nm,0.9s						
PLAI	**Plampang**	17.08	205	P	**Pn**	**07 53 52.5**	**-0.2**
	comp=Z,61nm,1.0s						
WBSI	**Waikabubak, Su**	17.21	199	P	**P**	**07 53 55.7**	**-0.3**
	comp=Z,48nm,0.8s						
TWSI	**Taliwang, Sumb**	17.40	208	P	**P**	**07 53 57.9**	**-0.1**
	comp=Z,59nm,1.2s						
KLNI	**Mataram**	17.51	211	P	**P**	**07 54 00.4**	**+1.2**
	comp=Z,68nm,1.1s						
GENI	**Genyem**	17.66	121	P	**P**	**07 54 04.3**	**+3.5**
YOJ	**Yonaguni jima**	17.76	354		**P**	**07 54 02.3**	**+0.4**
YOJ				IAmb	IAmb	07 54 05.9	
	comp=Z,196nm,1.5s						
YOJ	**Yonaguni jima**	17.76	354	P	**P**	**07 54 02.3**	**+0.4**
YOJ				pmax	pmax		
	comp=Z,196nm,1.5s						
JAGI	**Jajag, Banyuwa**	18.62	216		**Pn**	**07 54 12.1**	**+0.4**
QIZ	**Qiongzhong**	19.24	311	P	**Pn**	**07 54 20.8**	**+1.6**
QIZ				S	**S**	**07 57 57.4**	**+1.0**
QIZ				pmax	pmax		
	comp=Z,30nm,2.0s						
JOW	**Kunigami**	20.24	8	P	**P**	**07 54 29.2**	**+0.1**
	comp=Z,24nm,0.7s,baz=193,slow=9.1,SNR=5.5						
	comp=Z,24nm,0.7s						
JOW	**Kunigami**	20.24	8		**P**	**07 54 28.4**	**-0.7**
JOW				IAmb	IAmb	07 54 37.1	
	comp=Z,79nm,1.1s						
MTN	**Manton Dam**	20.33	163		**P**	**07 54 29.6**	**-0.6**
MTN				IAmb	IAmb	07 54 39.0	
	comp=Z,27nm,0.6s						
KNRA	**Kununurra**	22.54	171		**P**	**07 54 52.6**	**-1.3**
KNRA				IAmb	IAmb	07 55 02.2	
	comp=Z,58nm,0.8s						
NJ2	**Nanjing**	25.88	348	*e*P	**P**	**07 55 28.3**	**+2.6**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
JNU	**Nakatsue**	26.82	11	P	**P**	**07 55 34.2**	**0.0**
	comp=Z,26nm,1.1s,baz=160,slow=8.6,SNR=4.7						
	comp=Z,26nm,1.1s						
JNU	**Nakatsue**	26.82	11	P	**P**	**07 55 34.2**	**0.0**
JNU				IAmb	IAmb	07 55 39.0	
	comp=Z,43nm,1.2s						
PMG	**Port Moresby**	27.20	126		**P**	**07 55 36.4**	**-1.3**
PMG				IAmb	IAmb	07 55 38.5	
	comp=Z,46nm,1.1s						
PMG	**Port Moresby**	27.20	126	*i* P	**P**	**07 55 37.0**	**-0.8**
PMG				pmax	pmax		
	comp=Z,45nm,1.1s						
COEN	**Coen**	27.27	139	P	**P**	**07 55 37.6**	**-0.8**
WB0	**Warramunga Arr**	27.86	161		**P**	**07 55 42.2**	**-1.4**
WB0				IAmb	IAmb	07 56 22.4	
	comp=Z,28nm,1.0s						
GSI	**Gunungsitoli**	27.97	260	P	**P**	**07 55 44.5**	**-0.3**
GSI				IAmb	IAmb	07 55 60.0	
	comp=Z,37nm,1.0s						
WRAB	**Tennant Creek**	28.00	161	P	**P**	**07 55 43.3**	**-1.6**
WRAB				IAmb	IAmb	07 56 01.4	
	comp=Z,13nm,0.7s						
WRAB	**Tennant Creek**	28.00	161	*i* P	**P**	**07 55 43.0**	**-1.9**
WRAB				pmax	pmax		
	comp=Z,15nm,0.7s						
WRA	**Warramunga Arr**	28.00	161	P	**P**	**07 55 42.2**	**-2.8**
	comp=Z,2.1nm,0.5s,baz=342,slow=9.6,SNR=16						
	comp=Z,2.1nm,0.5s						
WRA	**Warramunga Arr**	28.00	161	P	**P**	**07 55 44.0**	**-1.0**
WRA	**Warramunga Arr**	28.00	161	*i* P	**P**	**07 55 43.5**	**-1.5**
WRA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CM31	**Chiang Mai Arr**	28.02	297	P	**P**	**07 55 44.9**	**-0.3**
CMAR	**Chiang Mai Arr**	28.02	297	P	**P**	**07 55 42.0**	**-3.2**
	comp=Z,1.4nm,0.3s,baz=113,slow=9.0,SNR=4.6						
	comp=Z,1.4nm,0.3s						
CMAR	**Chiang Mai Arr**	28.02	297	P	**P**	**07 55 45.3**	**+0.1**
CMAR	**Chiang Mai Arr**	28.02	297	*i* P	**P**	**07 55 45.0**	**-0.2**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WR8	**Warramunga Arr**	28.07	161	P	**P**	**07 55 43.6**	**-1.9**
JMN	**Monobe**	28.09	16	P	**P**	**07 55 45.4**	**-0.2**
CHTO	**Chiang Mai**	28.15	298	P	**P**	**07 55 50.6**	**+4.2**
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.3s						
PSA00	**Pilbara Seismi**	28.58	190		**P**	**07 55 48.1**	**-1.9**
PSA00	**Pilbara Seismi**	28.58	190	P	**P**	**07 55 47.7**	**-2.4**
PSA00				IAmb	IAmb	07 55 52.6	
	comp=Z,29nm,1.2s						
PZH	**PanZhiHua**	29.70	314	P	**P**	**07 56 03.3**	**+3.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LYN	**LuoYang**	30.06	339	*e*P	**P**	**07 56 05.6**	**+2.5**
LYN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KSAR	**Wonju Array Be**	30.69	4	P	**P**	**07 56 08.5**	**-0.1**
KSAR	**Wonju Array Be**	30.69	4	P	**P**	**07 56 08.5**	**-0.1**
KSRS	**Korea Array**	30.71	4	P	**P**	**07 56 06.8**	**-1.9**
	comp=Z,2.0nm,0.8s,baz=176,slow=11,SNR=11						
	comp=Z,2.0nm,0.8s						
KS19	**Wonju Array Si**	30.75	4		**P**	**07 56 09.6**	**+0.4**
XAN	**Xi'an**	31.04	333	⇓P	**P**	**07 56 14.9**	**+3.1**
CD2	**Chengdu**	31.30	323	P	**P**	**07 56 14.4**	**+0.3**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
AS31	**Alice Springs**	31.39	164		**P**	**07 56 14.4**	**-0.6**
ASAR	**Alice Springs**	31.39	164	P	**P**	**07 56 12.3**	**-2.7**
	comp=Z,2.1nm,0.7s,baz=333,slow=6.6,SNR=27						
	comp=Z,2.1nm,0.7s						
ASAR	**Alice Springs**	31.39	164	P	**P**	**07 56 12.9**	**-2.1**
ASAR	**Alice Springs**	31.39	164	P	**P**	**07 56 12.9**	**-2.1**
HNS	**HongShan**	31.98	344	⇑P	**P**	**07 56 20.0**	**+0.1**
HNS				pmax	pmax		
	comp=Z,11nm,0.8s						
MJAR	**Matsushiro Arr**	32.02	20	P	**P**	**07 56 17.4**	**-3.0**
	comp=Z,4.9nm,0.7s,baz=196,slow=9.4,SNR=12						
MJAR	**Matsushiro Arr**	32.02	20	P	**P**	**07 56 20.6**	**+0.2**

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MJAR  Matsushiro Arr   32.02  20   P      P      07 56 20.6 +0.2
MJAR                               pmax   pmax
      comp=Z,22nm,1.9s
CTAO  Charters Tower   33.80 142   P      P      07 56 40.1 +4.0
CTAO                               pmax   pmax
      comp=Z,13nm,1.4s
BJT   Baijiatuau       34.12 348          P      07 56 37.9 -0.7
BJT                                IAmb   IAmb   07 56 42.7
      comp=Z,25nm,1.1s
BJT   Baijiatuau       34.12 348   P      P      07 56 37.9 -0.7
BJT                                pmax   pmax
      comp=Z,25nm,1.1s
BJI   Beijing          34.14 348   P      P      07 56 41.3 +2.5
BJI                                pP     sP     07 56 45.6 +2.4
BJI                                sP     pP     07 56 48.0 +6.1
BJI                                pmax   pmax
      comp=Z,10.0nm,1.0s
LZDM  Lanzhou Array    35.10 329   P      P      07 56 45.0 -2.6
      comp=Z,1.4nm,0.4s,baz=155,slow=12,SNR=5.8
      comp=Z,1.4nm,0.4s
LZH   Lanzhou          35.13 329  eP      P      07 56 52.8 +5.2
LZH                                pP     sP     07 56 58.1 +6.0
LZH                                pmax   pmax
      comp=Z,23nm,1.7s
HHC   Hu-ho-hao-te     36.08 342  eP      P      07 56 58.5 +2.8
HHC                                pmax   pmax
      comp=Z,8.0nm,0.6s
VLA   Vladivostok      36.75   8 i P      P      07 57 01.8 +0.6
VLA                                pmax   pmax
      comp=Z,63nm,0.9s
SHL   Shillong         36.84 304   IAmb   IAmb   07 57 07.4
      comp=Z,33nm,0.9s
SHL   Shillong         36.84 304   P      P      07 57 04.2 +1.7
SHL                                pmax   pmax
      comp=Z,35nm,1.1s
CN2   Changchun        36.94   0  eP      P      07 57 05.8 +2.9
CN2                                pmax   pmax
      comp=Z,10.0nm,1.0s
FORT  Forrest          37.39 176   P      P      07 57 05.7 -1.1
INKA  Innaminka        37.44 157   P      P      07 57 06.5 -0.8
USRK  Ussuriysk Ar.    37.82   8   P      P      07 57 10.0 -0.4
      comp=Z,27nm,0.8s,baz=194,slow=7.9,SNR=18
      comp=Z,27nm,0.8s
XLT   XiLinHaoTe       37.88 349  eP      P      07 57 14.3 +3.4
XLT                                pmax   pmax
      comp=Z,15nm,0.9s
MDJ   Mudanjiang       37.96   5          P      07 57 11.6 +0.1
MDJ   Mudanjiang       37.96   5   P      P      07 57 12.0 +0.5
MDJ                                pmax   pmax
      comp=Z,28nm,0.9s
BNX   BinXian          38.93   3 ⇑P      P      07 57 19.3 -0.3
BNX                                pmax   pmax
      comp=Z,13nm,1.0s
GTA   Gaotai           39.72 329  eP      P      07 57 27.3 +0.8
GTA                                pP     sP     07 57 31.8 +0.8
GTA                                pmax   pmax
      comp=Z,14nm,1.2s
ASAJ  Asahikawa        40.28  20   P      P      07 57 31.2 +0.2
      comp=Z,23nm,1.0s,baz=190,slow=9.8,SNR=4.8
      comp=Z,23nm,1.0s
GOMU  GeErMu           40.36 321   P      P      07 57 32.9 +0.8
GOMU                               pmax   pmax
      comp=Z,8.0nm,1.3s
EIDS  Eidsvold         40.69 143   P      P      07 57 35.1 +0.6
STKA  Stephens Creek   41.48 159   P      P      07 57 39.2 -1.8
      comp=Z,4.8nm,0.6s,baz=342,slow=6.6,SNR=10
      comp=Z,4.8nm,0.6s
STKA  Stephens Creek   41.48 159   P      P      07 57 40.0 -0.9
STKA  Stephens Creek   41.48 159 i P      P      07 57 38.9 -2.0
HIA   Hailar           42.65 355 i P      P      07 57 49.8 -0.5
HIA                                pmax   pmax
      comp=Z,14nm,1.1s
HILR  Hailar Array B   42.94 355   P      P      07 57 52.5 -0.2
      comp=Z,10nm,0.8s,baz=170,slow=11,SNR=11
      comp=Z,10nm,0.8s
HEH   HeiHe            43.44   2  eP      P      07 57 56.5 -0.2
HEH                                pmax   pmax
      comp=Z,15nm,0.8s
ULN   Ulaanbaatar      43.80 342 i P      P      07 58 00.5 +0.7
ULN                                pmax   pmax
      comp=Z,20nm,1.3s
SONM  Songino Array    43.97 342   P      P      07 58 02.0 +0.8
      comp=Z,1.7nm,0.9s,baz=171,slow=10,SNR=6.2
      comp=Z,1.7nm,0.9s
GRNR  Gornyy           44.92  10  eP      P      07 58 09.2 +0.7
CIT   Chita            46.16 350  eP      P      07 58 23.0 +4.6
TYV   Tymovskoe        46.37  15  eP      P      07 58 22.0 +2.0
TYV                                pmax   pmax
      comp=Z,10.0nm,1.1s
TYV                                pmax   pmax
      comp=Z,400nm,3.8s
HYB   Hyderabad        46.63 288  eP      P      07 58 22.7 +0.1
HYB                               eS      S      08 05 12.8 +0.6
ZEA   Zeya             46.92   2  eP      P      07 58 27.9 +3.6
ZEA                                pmax   pmax
      comp=N,10.0nm,0.6s
ZEA                                pmax   pmax
      comp=Z,10.0nm,0.9s
WMQ   Urumqi           49.37 325  eP      P      07 58 46.1 +2.6
DGZ   Jazzator, Alta   53.22 330  eP      P      07 59 11.0 -1.4
DGZ                                pmax   pmax
      comp=Z,9.0nm,1.5s
PETK  Petropavlovsk-   53.34  24   P      P      07 59 13.8 +0.9
      comp=Z,5.8nm,0.7s,baz=230,slow=8.2,SNR=7.1
      comp=Z,5.8nm,0.7s
PETK  Petropavlovsk-   53.34  24   P      P      07 59 13.1 +0.1
PETK  Petropavlovsk-   53.34  24   P      P      07 59 13.1 +0.1
MK31  Makanchi Array   54.20 325 i P      P      07 59 18.0 -1.5
MKAR  Makanchi Array   54.20 325   P      P      07 59 19.4  0.0
      comp=Z,2.5nm,0.7s,baz=121,slow=7.1,SNR=15
      comp=Z,2.5nm,0.7s
MKAR  Makanchi Array   54.20 325   P      P      07 59 19.3 -0.2
MAKZ  Makanchi         54.38 325          P      07 59 20.4 -0.4
MAKZ                               IAmb   IAmb   07 59 31.2
      comp=Z,13nm,1.1s
MAKZ  Makanchi         54.38 325   P      P      07 59 20.4 -0.4
MAKZ                               pmax   pmax
      comp=Z,13nm,1.1s
NIL   Nilore           54.84 307   P      P      07 59 24.9 +0.5
NIL   Nilore           54.84 307   P      P      07 59 24.9 +0.5
NIL                                pmax   pmax
      comp=Z,35nm,1.2s
YAK   Yakutsk          55.31   3  eP      P      07 59 26.4 -0.7
YAK                                pmax   pmax
      comp=Z,20nm,1.0s
YAK                                pmax   pmax
      comp=N,15nm,1.3s
YAK                                pmax   pmax
      comp=E,4.0nm,1.2s
MA2   Magadan          56.25  15   P      P      07 59 34.1 +0.1
      comp=E,8.9nm,0.7s,baz=181,slow=6.5,SNR=8.1
      comp=E,8.9nm,0.7s
MA2   Magadan          56.25  15   P      P      07 59 34.2 +0.2
MA2                                IAmb   IAmb   07 59 38.7
      comp=Z,16nm,0.9s
MA2   Magadan          56.25  15   P      P      07 59 34.2 +0.2
MA2                                pmax   pmax
      comp=Z,16nm,0.9s
AAK   Ala-Archa        57.08 317 i P      P      07 59 38.4 -2.0
AAK                                pmax   pmax
      comp=Z,10.0nm,1.6s
ZAA0  Zalesovo Array   57.21 333          P      07 59 39.4 -1.5
ZALV  Zalesovo Beam    57.21 333   P      P      07 59 39.1 -1.8
      comp=Z,0.5nm,0.4s,baz=90,slow=4.3,SNR=5.1
      comp=Z,0.5nm,0.4s
ZALV  Zalesovo Beam    57.21 333   P      P      07 59 39.4 -1.5
ZALV  Zalesovo Beam    57.21 333 i P      P      07 59 42.7 +1.8
ZALV                               pmax   pmax
      comp=Z,2.0nm,0.8s
MANEM Manem            57.25 311   P      P      07 59 42.9 +1.0
MANEM                              IAmb   IAmb   07 59 59.7
      comp=Z,15nm,0.9s
MSVF  Nonsavu          57.64 116 i P      P      07 59 45.1 +0.4
MSVF                               pmax   pmax
      comp=Z,55nm,1.3s
KURBB Kurchatov Arra   58.37 327   P      P      07 59 48.1 -1.0
      comp=Z,3.2nm,0.8s,baz=125,slow=6.1,SNR=12
      comp=Z,3.2nm,0.8s
KURK  Kurchatov        58.37 327   P      P      07 59 49.2 +0.1
KURK                               IAmb   IAmb   08 00 32.1
      comp=Z,22nm,1.3s
KURK  Kurchatov        58.37 327 i P      P      07 59 46.8 -2.3
KURK                               pmax   pmax
      comp=Z,16nm,1.3s
GAR   Garm             58.73 312   P      P      07 59 51.3 -0.7
CHGR  Chuyangaron      59.49 311          P      07 59 57.0 -0.3
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CHGR  Chuyangaron      59.49 311   P      P      07 59 57.0 -0.3
CHGR                               pmax   pmax
      comp=Z,78nm,2.0s
SEY   Seymchan         59.53  14   P      P      07 59 56.8 -0.1
      comp=Z,2.7nm,0.8s,baz=214,slow=4.2,SNR=6.6
      comp=Z,2.7nm,0.8s
SEY   Seymchan         59.53  14  eP      P      07 59 56.2 -0.7
SEY                                pmax   pmax
      comp=Z,14nm,1.5s
KK31  Karatay Array    59.96 316          P      08 00 00.1 -0.2
KK31  Karatay Array    59.96 316   P      P      08 00 00.1 -0.2
KK31                               pmax   pmax
      comp=Z,7.0nm,0.9s
KKAR  Karatay Array    59.96 316          P      08 00 00.1 -0.3
KKAR  Karatay Array    59.96 316   P      P      08 00 00.1 -0.3
BVAR  Borovoye Array   63.95 327   P      P      08 00 25.4 -1.6
      comp=Z,1.2nm,0.6s,baz=133,slow=8.3,SNR=6.3
      comp=Z,1.2nm,0.6s
BORK  Borovoye         64.00 327 i P      P      08 00 25.0 -2.3
BORK                               pmax   pmax
      comp=Z,11nm,1.3s
TIXI  Tiksi            64.91   1   P      P      08 00 33.0 +0.1
TIXI  Tiksi            64.91   1 i P      P      08 00 30.8 -2.1
TIXI                               pmax   pmax
      comp=Z,8.0nm,1.3s
BKZ   Black Stump Fm   65.87 138   P      P      08 00 39.0 -0.7
BILL  Bilibino         67.12  16 i P      P      08 00 47.3 +0.1
BILL                               pmax   pmax
      comp=Z,16nm,1.8s
NRIK  Noril'sk         67.17 346   P      P      08 00 47.3 -0.1
      comp=Z,1.5nm,0.6s,baz=144,slow=4.2,SNR=4.3
      comp=Z,1.5nm,0.6s
NRIK  Noril'sk         67.17 346   P      P      08 00 48.0 +0.5
NRIK  Noril'sk         67.17 346 i P      P      08 00 47.9 +0.5
NRIK                               pmax   pmax
      comp=Z,9.0nm,1.3s
UOSS  Minazif          68.08 294   P      P      08 00 53.9 -0.2
AB31  Akbulak array    68.83 320   P      P      08 00 57.0 -1.2
AB31                               IAmb   IAmb   08 01 12.1
      comp=Z,12nm,1.4s
ABKAR Akbulak array    68.83 320          P      08 00 57.1 -1.1
NIKH  Nikolski High    70.34  36   P      P      08 01 07.5 -0.1
      baz=254
SPIA  Saint Paul Isl   70.79  31   P      P      08 01 10.4 +0.2
      baz=252
P08K  Saint George I   70.98  32   P      P      08 01 12.1 +0.7
      baz=253
ARTI  Arti             71.65 327c iP      P      08 01 14.5 -0.9
ARTI                                             08 03 51.2
ARTI                               S      S      08 10 33.0 -2.0
ARTI                               pmax   pmax
      comp=Z,6.0nm,1.8s
UNV   Unalaska Valle   71.93  35   P      P      08 01 17.6 +0.5
      baz=256
GAMB  Gambell          72.36  25   P      P      08 01 20.4 +0.9
      baz=248
CASY  Casey            73.58 186   P      P      08 01 26.5 -0.1
CASY                               IAmb   IAmb   08 02 37.0
      comp=Z,17nm,1.2s
M11K  Mekoryuk         73.74  29   P      P      08 01 28.5 +0.8
      baz=254
FALS  False Pass       73.91  35   P      P      08 01 28.6 -0.2
      baz=258
TNA   Tin City         74.50  23   P      P      08 01 32.9 +0.8
      baz=252
S12K  Black Hills      74.83  34   P      P      08 01 34.5 +0.2
      baz=259
K13K  Kusilvak Mount   74.86  27   P      P      08 01 34.8 +0.5
      baz=256
F14K  Arctic Creek     75.11  24   P      P      08 01 35.8 +0.2
      baz=253
M13K  Dall Lake        75.12  29   P      P      08 01 35.7 -0.1
      baz=257
ANM   Nome             75.24  25   P      P      08 01 36.9 +0.5
      baz=254
J14K  Nanvaranak Lak   75.56  27   P      P      08 01 38.5 +0.2
      baz=256
L14K  Kuka Creek       75.64  28   P      P      08 01 40.0 +1.2
      baz=257
SDPT  Sand Point       75.66  35   P      P      08 01 39.7 +0.7
      baz=261
N14K  Kuskokwak Cree   75.83  30   P      P      08 01 41.0 +1.2
      baz=259
F15K  North Star Dit   75.84  24   P      P      08 01 41.0 +1.2
      baz=254
M14K  Bethel           75.86  29   P      P      08 01 40.0 -0.1
      baz=258
G15K  Niukluk          75.91  24   P      P      08 01 41.0 +0.8
      baz=255
O14K  Tigyukauivet M   75.91  31   P      P      08 01 40.8 +0.4
      baz=259
CHNA  Chernabura Isl   76.09  35   P      P      08 01 42.0 +0.5
      baz=262
L15K  Ungalak Mounta   76.27  28   P      P      08 01 42.8 +0.4
      baz=258
C16K  Lisburne Hills   76.29  21   IAmb   IAmb   08 01 55.3
      comp=Z,17nm,1.2s
C16K  Lisburne Hills   76.29  21   P      P      08 01 43.5 +1.1
      baz=253
S14K  Fog Glacier      76.32  34   P      P      08 01 43.9 +1.0
      baz=261
K15K  Wolf Creek Mou   76.38  27   P      P      08 01 44.1 +1.2
      baz=258
M15K  Kasigluk River   76.47  29   P      P      08 01 44.2 +0.7
      baz=259
H16K  Elim             76.57  25   P      P      08 01 45.2 +1.2
      baz=257
O15K  Ungalikthiuk R   76.63  31   P      P      08 01 45.5 +1.1
      baz=260
N15K  Kwethluk River   76.66  30   P      P      08 01 44.9 +0.3
      baz=260
G16K  Koyuk River      76.69  24   P      P      08 01 45.1 +0.5
      baz=257
KIRV  Kirov            76.85 329 i P      P      08 01 45.8 +0.2
D17K  Noatak River     76.96  22   P      P      08 01 47.1 +1.0
      baz=256
J16K  Anvik River      76.99  27   P      P      08 01 47.7 +1.3
      baz=259
I17K  Unalakleet       77.07  26   P      P      08 01 47.9 +1.1
      baz=259
RDOG  Red Dog Mine     77.11  22   P      P      08 01 48.1 +1.1
      baz=256
C17K  DeLong Mountai   77.12  21   P      P      08 01 47.9 +0.8
      baz=255
L16K  Owhat River      77.22  28   P      P      08 01 47.9 +0.1
      baz=260
E17K  Hotham Inlet     77.29  23   P      P      08 01 48.9 +0.9
      baz=257
M16K  Timber Creek     77.36  29   P      P      08 01 49.0 +0.5
      baz=261
N16K  Nishlik Lake     77.36  30   P      P      08 01 49.5 +0.9
      baz=261
F17K  Baldwin Pennin   77.37  23   P      P      08 01 49.5 +1.1
      baz=258
G17K  Kiwalik Mounta   77.41  24   P      P      08 01 49.5 +0.8
      baz=258
P16K  Nushagak River   77.54  31   P      P      08 01 49.6 +0.1
      baz=262
O16K  Kokwok River B   77.57  30   P      P      08 01 49.8 +0.1
      baz=262
R16K  Pilot Point      77.57  33   P      P      08 01 49.1 -0.7
      baz=263
H17K  Granite Mounta   77.61  25   P      P      08 01 49.7 -0.2
      baz=259
J17K  VABM Dome        77.69  27   P      P      08 01 50.4  0.0
      baz=260
B18K  Kokolik River    77.82  20   P      P      08 01 50.9  0.0
      baz=256
E18K  Tukpahlearik C   77.82  22   IAmb   IAmb   08 01 57.8
      comp=Z,11nm,0.9s
E18K  Tukpahlearik C   77.82  22   P      P      08 01 50.7 -0.3
      baz=258
RAYN  Ar Rayn          77.84 293   P      P      08 01 51.9 -0.2
RAYN  Ar Rayn          77.84 293   P      P      08 01 51.9 -0.2
RAYN                               pmax   pmax
      comp=Z,6.0nm,0.9s
L17K  Donlin           77.84  28   P      P      08 01 50.8 -0.4
      baz=261
C18K  Utukok River     77.87  21   P      P      08 01 51.2 -0.2
      baz=257
K17K  Iditarod         77.93  27   P      P      08 01 51.9 +0.2
      baz=261
F18K  Selawik          78.03  23   P      P      08 01 52.1  0.0
      baz=259
O17K  Koliganek Bris   78.09  30   P      P      08 01 52.0 -0.6
      baz=263
M17K  Holitna River    78.14  29   P      P      08 01 52.7 -0.2
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      baz=262
N17K  Nushagak Hills   78.14  30   P      P      08 01 53.4 +0.5
      baz=262
Q16K  King Salmon      78.19  32   P      P      08 01 53.3 +0.1
      baz=263
R17L  Mt. Peulik Vol   78.23  33   P      P      08 01 53.3 -0.2
      baz=264
A19K  Wainwright       78.26  20   P      P      08 01 53.0 -0.3
      baz=257
H18K  Honhosa River    78.29  25   P      P      08 01 53.2 -0.4
      baz=260
G18K  Tagagawik        78.30  24   P      P      08 01 53.7  0.0
      baz=260
P17K  Kvichak River    78.36  31   P      P      08 01 54.0 -0.1
      baz=263
CHIR  Chirikof Islan   78.45  34   P      P      08 01 54.6 -0.1
      baz=265
C19K  Lookout Ridge    78.54  21   IAmb   IAmb   08 02 05.5
      comp=Z,20nm,1.1s
C19K  Lookout Ridge    78.54  21   P      P      08 01 55.4 +0.4
      baz=259
Q17K  Contact Creek    78.54  32   P      P      08 01 55.8 +0.5
      baz=264
L18K  Granite Mounta   78.60  28   P      P      08 01 55.9 +0.5
      baz=263
J18K  Innoko River     78.75  27   P      P      08 01 56.9 +0.6
      baz=262
N18K  Kilae Creek      78.80  30   P      P      08 01 56.5  0.0
      baz=264
F19K  Shaleruckik Mo   78.80  23   P      P      08 01 56.7 +0.3
      baz=261
GCSA  Galena City Sc   78.85  25   P      P      08 01 57.2 +0.5
      baz=262
M18K  Stony River      78.92  29   P      P      08 01 57.6 +0.4
      baz=264
D19K  Kuna River       78.95  21   P      P      08 01 57.8 +0.5
      baz=260
G19K  Purcell Mounta   78.97  24   P      P      08 01 58.1 +0.7
      baz=262
P18K  Big Mountain,    79.00  31   P      P      08 01 57.6 -0.1
      baz=264
Q18K  Katmai Hardscr   79.04  32   P      P      08 01 57.9 -0.2
      baz=265
O18K  Koktuh Hills     79.05  30   P      P      08 01 58.0 +0.1
      baz=264
E19K  Redstone River   79.11  23   P      P      08 01 58.0 -0.2
      baz=261
H19K  Roundabout Mou   79.14  25   IAmb   IAmb   08 02 05.1
      comp=Z,22nm,1.0s
H19K  Roundabout Mou   79.14  25   P      P      08 01 58.5 +0.3
      baz=262,SNR=5.2
R18K  Karluk           79.24  33   P      P      08 01 58.0 -1.0
      baz=266
J19K  Poorman          79.30  26   P      P      08 01 59.0 -0.3
      baz=263
SII   Sitkinak Islan   79.31  34   P      P      08 01 59.4  0.0
      baz=266
L19K  White Mountain   79.45  28   P      P      08 02 00.7 +0.6
      baz=264
N19K  Bonanza Creek    79.50  29   P      P      08 02 01.4 +0.9
      baz=265
O19K  Port Alsworth    79.53  30   P      P      08 02 01.2 +0.7
      baz=265
D20K  Etivluk River    79.53  21   IAmb   IAmb   08 02 19.1
      comp=Z,14nm,1.2s
D20K  Etivluk River    79.53  21   P      P      08 02 00.6 +0.2
      baz=261
B20K  Meade River      79.54  20   IAmb   IAmb   08 02 05.3
      comp=Z,9.9nm,0.8s
B20K  Meade River      79.54  20   P      P      08 02 00.9 +0.5
      baz=261
E20K  Nigu River       79.62  22   P      P      08 02 01.3 +0.3
      baz=262
F20K  Avaraart Lake    79.63  23   P      P      08 02 01.7 +0.8
      baz=263
KBZ   Khabaz           79.77 313   P      P      08 02 02.2 +0.1
      comp=Z,2.1nm,0.9s,baz=50,slow=6.5,SNR=4.5
      comp=Z,2.1nm,0.9s
KBZ   Khabaz           79.77 313 i P      P      08 02 00.1 -2.0
KBZ                                pmax   pmax
      comp=Z,11nm,1.6s
Q19K  Cape Douglas,    79.77  31   P      P      08 02 02.4 +0.5
      baz=266
H20K  Anotleneega Mo   79.78  25   P      P      08 02 02.6 +0.8
      baz=264
OHAK  Old Harbor       79.85  33   P      P      08 02 02.8 +0.5
      baz=266
I20K  Naaghedeneel     79.88  25   P      P      08 02 03.0 +0.7
      baz=264
K20K  Telida           79.92  27   P      P      08 02 02.9 +0.2
      baz=265
A21K  Barrow           79.93  19   P      P      08 02 03.4 +1.0
      baz=261
L20K  Farewell, AK     79.93  28   P      P      08 02 02.0 -0.7
      baz=265
J20K  Nowinta River    79.96  26   P      P      08 02 03.2 +0.4
      baz=264
P19K  Oil Pt           80.03  31   P      P      08 02 03.1 -0.2
      baz=266
M20K  Styx River       80.23  28   P      P      08 02 03.5 -0.9
      baz=266
C21K  Knifeblade Rid   80.25  21   P      P      08 02 03.5 -0.7
      baz=263
KDAK  Kodiak Island    80.26  33   P      P      08 02 03.6 -0.9
      baz=267
B21K  Ikpikpuk River   80.36  20   IAmb   IAmb   08 02 10.2
      comp=Z,16nm,0.8s
B21K  Ikpikpuk River   80.36  20   P      P      08 02 05.1 +0.2
      baz=263
O20K  Slope Mountain   80.36  30   P      P      08 02 04.3 -0.8
      baz=267
Q20K  Shuyak Island    80.40  32   P      P      08 02 04.6 -0.6
      baz=267
A22K  Sinclair Lake    80.41  19   P      P      08 02 05.1 +0.1
      baz=263
G21K  Allakaket        80.45  24   P      P      08 02 05.2 -0.2
      baz=265
E21K  Killik River     80.46  22   P      P      08 02 04.8 -0.7
      baz=264
F21K  Alatna River     80.52  23   P      P      08 02 05.1 -0.7
      baz=265
SPCR  Spurr Chakacha   80.63  29   P      P      08 02 05.9 -0.7
      baz=267
N20K  Mount Spurr      80.63  29   P      P      08 02 06.1 -0.5
      baz=267
H21K  Melozitna Rive   80.66  25   P      P      08 02 06.4 -0.2
      baz=266
PPLA  Purkeypile       80.74  27   P      P      08 02 07.0 -0.2
      baz=266
CHUM  Lake Minchumin   80.74  26   P      P      08 02 07.0 -0.1
      baz=266
B22K  Teshekpuk Lake   80.85  20   IAmb   IAmb   08 02 12.2
      comp=Z,11nm,0.9s
B22K  Teshekpuk Lake   80.85  20   P      P      08 02 08.0 +0.6
      baz=264
D22K  Ayikyak River    80.97  21   P      P      08 02 08.0 -0.2
      baz=265
I21K  Tanana           80.97  25   P      P      08 02 08.4 +0.2
      baz=266
SKT   Skwentna         81.00  28   P      P      08 02 08.5 +0.1
      baz=267
F22K  John River       81.05  23   P      P      08 02 08.6  0.0
      baz=266
E22K  Anaktuvuk Pass   81.23  22   P      P      08 02 10.0 +0.4
      baz=266
H22K  Ishtalitna Cre   81.26  24   P      P      08 02 10.5 +0.7
      baz=267
G22K  Bettles          81.27  23   P      P      08 02 10.2 +0.5
      baz=266
BRSE  Bradley Lake S   81.30  31   P      P      08 02 10.3 +0.2
      baz=268
BPAW  Bear Paw Mtn.    81.34  26   P      P      08 02 10.5 +0.2
      baz=267,SNR=7.7
SUA   Susitna One      81.35  29   P      P      08 02 10.4 -0.1
      baz=268
MLY   Manley           81.49  25   P      P      08 02 10.9 -0.2
      baz=268,SNR=6.6
CUT   Chulitna         81.60  28   P      P      08 02 11.5 -0.1
      baz=268
TRF   Thorofare Moun   81.62  27   P      P      08 02 11.3 -0.7
      baz=268
M22K  Willow           81.66  29   P      P      08 02 12.1 +0.2
      baz=268
D23K  Nanushuk River   81.70  21   P      P      08 02 12.1 +0.1
      baz=267
C23K  Itkillik River   81.77  20   IAmb   IAmb   08 02 18.3
      comp=Z,15nm,1.1s
C23K  Itkillik River   81.77  20   P      P      08 02 12.5 +0.2
      baz=267
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COLD	Coldfoot	81.80	23	P	P	08 02 12.6	+0.1
	baz=268						
O22K	Cooper Landing	81.82	30	P	P	08 02 13.0	+0.2
	baz=269						
RC01	Rabbit Creek A	81.83	29	P	P	08 02 12.5	-0.3
	baz=269						
G23K	Bananza Creek	81.85	24	P	P	08 02 12.5	-0.4
	baz=268,SNR=7.8						
SEW	Seward	81.95	30	P	P	08 02 13.0	-0.5
	baz=269						
H23K	Yukon River	82.01	24	P	P	08 02 13.6	-0.2
	baz=268						
KLMR	Klimovskoe	82.03	330	eP	P	08 02 09.5	-4.4
KLMR				pmax	pmax		
	comp=Z,19nm,1.2s						
E23K	Chandalar	82.05	22	P	P	08 02 14.0	0.0
	baz=268						
I23K	Minto, Yukon-K	82.08	25	IAmb	IAmb	08 02 21.4	
	comp=Z,12nm,0.8s						
I23K	Minto, Yukon-K	82.08	25	P	P	08 02 13.4	-0.6
	baz=269						
TOLK	Toolik Lake Re	82.09	22	IAmb	IAmb	08 02 19.2	
	comp=Z,9.2nm,0.8s						
TOLK	Toolik Lake Re	82.09	22	P	P	08 02 14.1	-0.1
	baz=268						
PMR	Palmer	82.12	29	P	P	08 02 14.1	-0.3
	baz=269						
NEA2	Nenana	82.19	26	P	P	08 02 15.0	+0.3
	baz=269						
MCK	McKinley	82.24	27	P	P	08 02 14.4	-0.6
MCK	McKinley	82.24	27	P	P	08 02 14.4	-0.6
MCK				pmax	pmax		
	comp=Z,41nm,1.0s						
MCK	McKinley	82.24	27	P	P	08 02 14.9	-0.1
	baz=269,SNR=7.9						
D24K	Happy Valley	82.37	21	IAmb	IAmb	08 02 21.6	
	comp=Z,12nm,0.9s						
D24K	Happy Valley	82.37	21	P	P	08 02 15.3	-0.2
	baz=269,SNR=7.8						
WAT1	Susitna Watana	82.40	28	P	P	08 02 15.6	-0.3
	baz=270						
C24K	Franklin Bluff	82.43	21	P	P	08 02 15.5	-0.3
	baz=269						
KNK	Knik Glacier	82.45	29	P	P	08 02 15.8	-0.3
	baz=270						
E24K	Your Creek	82.47	22	P	P	08 02 15.6	-0.6
	baz=269						
SML	Sawmill	82.51	29	P	P	08 02 16.1	-0.4
	baz=270						
PWL	Port Wells	82.51	30	P	P	08 02 16.0	-0.5
	baz=270						
F24K	Squaw Lake	82.70	23	P	P	08 02 17.1	-0.2
	baz=270						
H24K	Noodor Dome	82.70	24	P	P	08 02 17.1	-0.3
	baz=270						
COLA	College	82.71	25	i P	P	08 02 16.2	-1.2
COLA				pmax	pmax		
	comp=Z,26nm,2.7s						
COLA	College	82.71	25	P	P	08 02 17.0	-0.3
	baz=270						
CCB	Clear Creek Bu	82.73	26	P	P	08 02 17.7	+0.2
CCB				IAmb	IAmb	08 02 25.9	
	comp=Z,29nm,1.6s						
WAT6	Susitna Watana	82.78	28	P	P	08 02 17.5	-0.5
	baz=270,SNR=5.6						
M23K	Glacier View	82.79	29	P	P	08 02 17.3	-0.6
	baz=271						
G24K	Hadweenzic Riv	82.86	24	P	P	08 02 18.3	+0.1
	baz=270,SNR=7.7						
POKR	Poker Plat Res	82.89	25	P	P	08 02 18.2	-0.1
	baz=270						
DHY	Denali Highway	82.94	27	P	P	08 02 18.6	-0.3
	baz=271						
P23K	Montague Islan	82.98	30	P	P	08 02 18.4	-0.5
	baz=271						
SCM	Sheep Creek Mo	82.98	29	P	P	08 02 18.3	-0.7
	baz=271						
HDA	Harding Lake	83.11	26	IAmb	IAmb	08 02 25.4	
	comp=Z,12nm,0.8s						
HDA	Harding Lake	83.11	26	P	P	08 02 19.1	-0.4
	baz=271						
GLI	Glacier Island	83.11	29	P	P	08 02 19.0	-0.6
	baz=271						
IL31		83.13	26	IAmb	IAmb	08 02 34.1	
	comp=Z,20nm,1.6s						
ILAR	Eielson Array	83.13	26	P	P	08 02 19.8	+0.2
	comp=Z,2.5nm,0.9s,baz=262,slow=2.9,SNR=18						
	comp=Z,2.5nm,0.9s						
ILAR	Eielson Array	83.13	26	P	P	08 02 18.9	-0.7
ILAR	Eielson Array	83.13	26	P	P	08 02 18.9	-0.7
D25K	Kavik River	83.25	21	P	P	08 02 20.1	-0.1
	baz=271						
G25K	Bearman Lake	83.41	24	P	P	08 02 21.3	+0.4
	baz=272						
M24K	Tolsona, Glenn	83.52	28	P	P	08 02 21.5	-0.2
	baz=272						
Q23K	Middleton Isla	83.53	31	P	P	08 02 21.9	+0.2
	baz=272						
F25K	Christian Rive	83.56	23	P	P	08 02 22.1	+0.3
	baz=272,SNR=5.2						
E25K	Arctic Village	83.57	22	P	P	08 02 21.9	+0.1
	baz=272						
K24K	Donnelly Dome	83.64	27	P	P	08 02 22.6	+0.3
	baz=272						
KLU	Klutina	83.66	29	P	P	08 02 22.4	-0.1
	baz=272						
C26K	Camden Bay	83.74	20	P	P	08 02 23.2	+0.6
	baz=272						
J25K	Salcha River,	83.78	26	P	P	08 02 23.1	+0.1
	baz=272						
EYAK	Cordova Ski Ar	83.79	30	P	P	08 02 22.9	-0.1
	baz=272						
PAX	Paxson	83.81	27	P	P	08 02 23.1	-0.1
	baz=272						
BMAR	Burnt Mountain	83.97	23	P	P	08 02 24.7	+0.8
HARP	HAARP	83.98	28	P	P	08 02 23.5	-0.5
	baz=273						
RIDG	Independent Ri	84.06	27	P	P	08 02 24.4	-0.1
	baz=273						
F26K	Sheenjek River	84.13	23	P	P	08 02 24.6	0.0
	baz=273						
C27K	Jago River	84.17	21	IAmb	IAmb	08 02 30.7	
	comp=Z,10.0nm,0.9s						
C27K	Jago River	84.17	21	P	P	08 02 25.3	+0.5
	baz=273,SNR=8.2						
N25K	Chitina, Valde	84.29	29	P	P	08 02 25.2	-0.5
	baz=273						
G26K	Porcupine Rive	84.31	23	P	P	08 02 26.3	+0.7
	baz=274						
BMRM	Bremner River	84.33	29	P	P	08 02 26.3	+0.4
	baz=274						
SCRK	Sand Creek	84.42	26	P	P	08 02 26.3	0.0
	baz=274						
KAIM	Kayak Island	84.48	30	P	P	08 02 26.2	-0.4
	baz=274						
J26L	Joseph Creek	84.57	26	IAmb	IAmb	08 02 37.2	
	comp=Z,12nm,1.0s						
J26L	Joseph Creek	84.57	26	P	P	08 02 26.7	-0.3
	baz=274						
I26K	Coal Creek Min	84.68	25	IAmb	IAmb	08 02 35.0	
	comp=Z,14nm,1.0s						
I26K	Coal Creek Min	84.68	25	P	P	08 02 27.7	+0.2
	baz=274						
L26K	Log Cabin Wild	84.78	27	P	P	08 02 28.2	+0.2
	baz=274,SNR=5.6						
M26K	Nabesna, AK	84.99	28	P	P	08 02 29.2	0.0
	baz=275,SNR=5.5						
E27K	Coleen River	85.05	22	IAmb	IAmb	08 02 35.6	
	comp=Z,16nm,1.1s						
E27K	Coleen River	85.05	22	P	P	08 02 29.2	-0.2
	baz=276,SNR=8.1						
MCARA	McCarthy VSAT	85.06	29	P	P	08 02 29.5	0.0
	baz=275						
CRQE	Cirque	85.08	30	P	P	08 02 29.3	-0.5
	baz=275						
G27K	Doyon Strip	85.16	23	P	P	08 02 30.1	+0.1
	baz=276						
D27M	Malcolm River	85.17	21	IAmb	IAmb	08 02 36.3	
	comp=Z,9.9nm,1.1s						
D27M	Malcolm River	85.17	21	P	P	08 02 29.8	-0.2
	baz=276						
K27K	Chicken	85.26	26	P	P	08 02 30.6	+0.2
	baz=275						
H27K	Steamboat Moun	85.27	24	P	P	08 02 30.6	+0.1
	baz=276,SNR=10						
I27K	Kandik River	85.30	25	P	P	08 02 30.7	+0.1
	baz=276,SNR=33						
L27K	Beaver Creek,	85.46	27	P	P	08 02 31.8	+0.2
	baz=276						
M27K	Edge Creek, AK	85.51	28	P	P	08 02 31.9	0.0
	baz=276						
E28M	Babbage River	85.76	21	IAmb	IAmb	08 02 39.6	
	comp=Z,15nm,1.2s						
E28M	Babbage River	85.76	21	P	P	08 02 32.8	0.0
	baz=277,SNR=7.9						
F28M	Old Crow	85.76	22	P	P	08 02 32.4	-0.5
	baz=277,SNR=7.7						
CTG	Chitna Glacier	85.91	29	P	P	08 02 32.8	-1.1
	baz=276						
D28M	Stokes Point	85.95	21	P	P	08 02 33.5	-0.2
	baz=278						
BVCY	Beaver Creek	85.97	28	P	P	08 02 33.3	-0.8
	baz=277						
I28M	Miner Creek	86.01	25	P	P	08 02 33.2	-1.0
	baz=277						
YUK3	Moose Creek	86.24	28	P	P	08 02 34.8	-0.8
	baz=277						
E29M	Blow River	86.39	22	P	P	08 02 35.4	-0.5
	baz=279						
DAWY	Dawson	86.42	26	P	P	08 02 35.8	-0.5
	baz=278,SNR=5.7						
O28M	Mount Upton	86.49	29	P	P	08 02 36.3	-0.7
	baz=277						
H29M	Whitestone	86.54	24	P	P	08 02 35.7	-1.0
	baz=279						
PINM	Pinnacle	86.55	30	P	P	08 02 35.9	-1.1
	baz=277						
G29M	Pine Creek	86.57	23	P	P	08 02 36.8	-0.1
	baz=279,SNR=7.3						
VNDA	Vanda	86.57	173	P	P	08 02 34.9	-1.7
	comp=Z,1.2nm,0.9s,baz=321,slow=5.3,SNR=4.7						
	comp=Z,1.2nm,0.9s						
VNDA	Vanda	86.57	173	P	P	08 02 35.5	-1.1
VNDA	Vanda	86.57	173	P	P	08 02 35.5	-1.1
VNDA				pmax	pmax		
	comp=Z,10.0nm,1.6s						
YUK8	Steele Glacier	86.63	29	P	P	08 02 36.3	-1.4
	baz=278						
I29M	Ogilvie Camp,	86.70	25	P	P	08 02 37.3	-0.3
	baz=279,SNR=7.7						
J29N	Klondike Camp	86.88	26	P	P	08 02 38.5	0.0
	baz=279						
BRTR	Keskin Array B	86.88	309	P	P	08 02 36.6	-2.5
	comp=Z,0.5nm,0.6s,baz=90,slow=3.1,SNR=2.1						
	comp=Z,0.5nm,0.6s						
BRTR	Keskin Array B	86.88	309	P	P	08 02 37.2	-2.0
BRTR	Keskin Array B	86.88	309	P	P	08 02 37.2	-2.0
M29M	Somme Creek	87.08	28	P	P	08 02 39.0	-0.6
	baz=279						
L29M	L29M	87.12	27	P	P	08 02 39.8	+0.1
	baz=279						
YUK4	Talbot Arm	87.16	29	P	P	08 02 40.0	-0.1
	baz=279						
EPYK	Eagle Plains	87.17	24	IAmb	IAmb	08 02 47.6	
	comp=Z,16nm,1.1s						
EPYK	Eagle Plains	87.17	24	P	P	08 02 39.7	-0.2
	baz=280						
G30M	tAoh Zraii Nji	87.26	23	P	P	08 02 40.5	+0.2
	baz=280						
K29M	Barlow Dome	87.28	26	P	P	08 02 40.2	-0.3
	baz=280						
F30M	Barrier River	87.31	22	IAmb	IAmb	08 02 53.8	
	comp=Z,12nm,1.1s						
F30M	Barrier River	87.31	22	P	P	08 02 40.6	+0.1
	baz=281						
O29M	Mount Kennedy	87.35	30	P	P	08 02 40.5	-0.4
	baz=279						
YUK6	Outpost Mounta	87.36	29	P	P	08 02 41.0	-0.1
	baz=279						
I30M	Mount Dempster	87.52	25	P	P	08 02 41.7	0.0
	baz=280						
J30M	Hart River	87.66	25	P	P	08 02 42.1	-0.2
	baz=280						
HYT	Haines Junctio	87.79	29	P	P	08 02 43.1	0.0
	baz=280						
M30M	Minto, Yukon	87.82	27	P	P	08 02 43.2	+0.2
	baz=280						
P29M	Windy Craggy	87.87	30	P	P	08 02 43.2	-0.1
	baz=280						
N30M	Aishikik Lake	87.88	28	P	P	08 02 41.9	-1.5
	baz=280						
INK	Inuvik	88.00	21	IAmb	IAmb	08 02 47.1	
	comp=Z,5.8nm,1.1s						
INK	Inuvik	88.00	21	P	P	08 02 42.4	-1.3
	baz=283						
G31M	Satah River	88.02	23	P	P	08 02 42.4	-1.5
	baz=282						
MAYO	Mayo, Yukon	88.03	26	P	P	08 02 42.8	-1.3
	baz=281						
F31M	Tsiigehtchic	88.11	22	P	P	08 02 43.4	-0.9
	baz=283						
P30M	Million Dollar	88.18	30	P	P	08 02 43.9	-1.0
	baz=280						
H31M	Peel River	88.23	24	P	P	08 02 43.8	-1.1
	baz=282						
FINES	FINESS Array B	88.45	332	P	P	08 02 43.8	-2.2
	comp=Z,4.0nm,1.1s,baz=65,slow=4.7,SNR=4.7						
	comp=Z,4.0nm,1.1s						
FINES	FINESS Array B	88.45	332	P	P	08 02 45.5	-0.5
FINES	FINESS Array B	88.45	332	i P	P	08 02 46.7	+0.7
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
O30N	Mendenhall	88.48	29	P	P	08 02 45.1	-1.2
	baz=281						
N31M	Braeburn, Yuko	88.49	28	P	P	08 02 44.8	-1.5
	baz=281						
AKASG	Malin Array Be	88.57	321	P	P	08 02 44.3	-2.5
	comp=Z,1.2nm,0.8s,baz=82,slow=4.3,SNR=4.5						
	comp=Z,1.2nm,0.8s						
AKASG	Malin Array Be	88.57	321	i P	P	08 02 47.2	+0.4
PLBC	Pleasant Camp	88.59	30	P	P	08 02 45.3	-1.5
	baz=281						
S31K	Pelican	88.94	32	P	P	08 02 46.6	-1.8
	baz=281						
M31M	Drury Creek, Y	88.99	27	P	P	08 02 47.6	-1.0
	baz=282						
WHY	Whitehorse	89.09	29	P	P	08 02 47.7	-1.4
	baz=282						
R31K	City Hall, Gus	89.11	31	P	P	08 02 48.1	-1.0
	baz=281						
SKAG	Skagway	89.11	30	P	P	08 02 47.1	-2.0
	baz=282						
FARO	Faro, Yukon	89.46	27	P	P	08 02 48.5	-2.3
	baz=283						
SIT	Sitka	89.60	33	P	P	08 02 49.3	-2.2
	baz=282						
A36M	Sachs Harbour	89.63	17	P	P	08 02 49.7	-1.7
	baz=291						
N32M	Quiet Lake	89.83	28	P	P	08 02 51.2	-1.4
	baz=284						
P32M	Atlin	89.89	30	P	P	08 02 51.3	-1.6
	baz=283						
S32K	Killisnoo	89.91	32	P	P	08 02 51.5	-1.4
	baz=282						
P33M	Teslin, Yukon	90.18	29	P	P	08 02 52.6	-1.7
	baz=284						
Q32M	Nakina River	90.76	30	P	P	08 02 55.1	-2.0
	baz=284						
C36M	Paulatuk	90.96	19	P	P	08 02 55.9	-1.6
	baz=292						
U33K	Whale Pass	91.00	33	P	P	08 02 56.2	-1.8
	baz=283						
CRAG	Craig	91.14	34	P	P	08 02 56.7	-2.0
	baz=283						
R33M	Jennings River	91.30	30	P	P	08 02 57.2	-2.3
	baz=285						
WRAK	Wrangell Islan	91.34	33	P	P	08 02 57.5	-2.1
	baz=284						
S34M	Telegraph Cree	91.60	31	P	P	08 02 57.9	-2.9
	baz=285						
V35K	Ketchikan	92.01	34	P	P	08 03 00.1	-2.6
	baz=285						
DLBC	Dease Lake	92.03	31	P	P	08 03 00.0	-2.8
	baz=286						
WTLY	Watson Lake, Y	92.15	29	P	P	08 03 00.9	-2.4
	baz=287						
T35M	Bob Quinn	92.31	32	P	P	08 03 01.9	-2.2
	baz=286						
U35K	Hyder	92.73	33	P	P	08 03 03.0	-3.1
	baz=286						
WRGLY	Wrigley	93.49	25	P	P	08 03 06.8	-2.6
	baz=292						
LIRD	Liard River Hi	93.67	29	P	P	08 03 07.6	-2.8
	baz=290						
TOAD	Toad River Com	94.28	29	P	P	08 03 10.0	-3.2
	baz=290						
KOTAN	Kotaneelee Air	94.38	28	P	P	08 03 10.6	-3.0
	baz=291						
SYO	Syowa Base	94.61	201	⇓eP	P	08 03 14.2	-0.1
SYO	Syowa Base	94.61	201	⇑epP	pP	08 03 20.2	+2.5
YKA	Yellowknife Ar	97.46	24	P	P	08 03 26.5	-1.0
	comp=Z,0.8nm,0.9s,baz=301,slow=5.5,SNR=12						
	comp=Z,0.8nm,0.9s						
CLL	Collm	98.29	324	eP	Pdif	08 03 37.0	+5.5
CLL				e		08 07 32.0	
CLL	Collm	98.29	324	ePdif	Pdif	08 03 37.0	+5.5
CLL				ePP	PP	08 07 32.0	+1.1
M65A	Busby, Falmout	129.84	15	P	PKPdf	08 09 00.4	-3.4
	baz=339						
PLCA	Paso Flores	143.35	160	PKP	PKPdf	08 09 27.9	-1.0
	comp=Z,1.3nm,0.8s,baz=149,slow=2.4,SNR=3.5						
LPAZ	La Paz	163.93	127	PKP	PKPdf	08 09 59.2	+0.2
	comp=Z,1.7nm,0.9s,baz=225,slow=2.9,SNR=5.8						

MOS ***15*** *07:53:40.8±0.7, 6.°64N×125.°32E, h13^{km}, mb5.1/52, Error ellipse: s-maj=10.5km s-min=5.1km az=114.1*

IDC ***15*** *07:53:40.5±0.6, 6.°52N×125.°09E, h0^{km}, mb4.5/26, mbtmp4.5/27, ML5.0/1, MS4.7/2, Error ellipse: s-maj=14.2km s-min=8.9km az=125.0*

NEIC ***15*** *07:53:44.0±1.2, 6.°60N±0.°04×125.°29E±0.°06, h16^{km}±4^{km}, mb5.0/115, Error ellipse: s-maj=9.9km s-min=2.6km az=122.0*

BJI ***15*** *07:53:45.1, 6.°60N×125.°20E, h27^{km}, mB5.5/5, mb4.8/55, Ms5.0/5, Ms7 4.9/5*

DJA ***15*** *07:53:46.9±0.4, 7°N±3°×12°5E±°, h43^{km}±6^{km}, M5.2/31, mb5.0/31, mB5.6/16, MLv5.4/11, Mw(mB)5.1/16*

ISC 15 07:53:42.7±0.3, **6.°57N**±0.°04×**125.°31E**±0.°05, **h10^{km}, n305,** σ1^{s}**22**/284, **mb4.9**/124, **MS4.8**/3, **15C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.56	28	Pg	Pb	07 53 55.2	+0.5
	3µm,0.3s,baz=259,slow=3.8,SNR=11						
DAV				Lg	Lg	07 54 03.9	
	7µm,0.3s,baz=73,slow=19,SNR=8.8						
DAV	Davao City (W)	0.56	28		Pb	07 53 55.0	+0.3
DAV	Davao City (W)	0.56	28	P	Pb	07 53 56.1	+1.4
DAV	Davao City (W)	0.56	28	P	Pn	07 53 59.0	+2.2
SGSI	Sangihe	2.87	176	P	Pn	07 54 30.7	+2.2
SGSI				S	Sn	07 55 02.7	-0.4
GAMI	Galela, Maluku	5.30	152	P	Pn	07 55 02.7	+0.7
	2.6nm8µm469nm,1.0s						
GAMI				S	Sn	07 56 02.0	-1.3
	2.6nm8µm469nm,1.0s						
TNTI	Ternate	6.11	160		Pn	07 55 13.9	+0.8
TNTI	Ternate	6.11	160	P	Pn	07 55 13.4	+0.3
	209nm,0.7s						
GTOI	Gorontalo	6.32	201	P	Pn	07 55 15.1	-0.9
GTOI				S	Sn	07 56 26.7	-1.7
MRSI	Marisa	6.92	209	P	Pn	07 55 23.8	-0.5
MRSI				S	Sn	07 56 42.8	-0.3
TOLI2	Tolitoli	7.06	220		Pn	07 55 24.0	-2.1
LUWI	Luwuk	7.97	199		Pn	07 55 39.6	+0.9
LUWI	Luwuk	7.97	199	P	Pn	07 55 42.3	+3.6
MPSI	Mapaga	8.21	221	P	Pn	07 55 46.1	+4.1
	25nm,0.5s						
APSI	Ampana	8.28	206	P	Pn	07 55 47.4	+4.5
SANI	Sanana	8.59	175	P	Pn	07 55 47.7	+0.6
	126nm,0.6s						
KKM	Kota Kinabalu	9.06	267	Pn	Pn	07 55 53.9	+0.2
I39PW	PALAU INFRASON	9.21	83	I	I	08 46 10.0	
	baz=267,slow=312,SNR=1.5						
NLAI	Namlea	9.90	170	P	Pn	07 56 05.9	+0.7
	3µm168nm,0.8s						
KRAI	Karang Ratu	10.29	163	P	Pn	07 56 12.0	+1.5
	82nm,0.9s						
KDI	Kendari	10.79	195	P	Pn	07 56 19.7	+2.3
TTSI	Tana Toraja	11.01	210	P	Pn	07 56 24.3	+3.9
	108nm,1.1s						
FAKI	Fak Fak	11.69	143		Pn	07 56 29.7	0.0
FAKI	Fak Fak	11.69	143	P	Pn	07 56 32.3	+2.6
	72nm,0.9s						
BNSI	Bone	12.07	206	P	Pn	07 56 44.9	+10
KAPI	Kappang	12.77	206	Pn	Pn	07 56 48.8	+4.3
	1.7nm,0.3s,baz=22,slow=4.3,SNR=10						
KAPI	Kappang	12.77	206		Pn	07 56 45.3	+0.8
KAPI	Kappang	12.77	206	P	Pn	07 56 48.0	+3.5
KAPI	Kappang	12.77	206	i P	Pn	07 56 48.4	+3.9
BKSI	Bulukumba	12.90	204	P	Pn	07 56 49.2	+3.0
	2µm75nm,1.9s						
SBUM	Sibu	13.68	253		Pn	07 56 56.5	-0.4
SBUM	Sibu	13.68	253	P	Pn	07 56 59.7	+2.9
BBKI	Banjar Baru	14.44	227	P	P	07 57 23.6	+9.4
MMRI	Maumere	15.41	192		Pn	07 57 20.1	-0.2
MMRI				IAmb	IAmb	07 57 30.0	
	comp=Z,180nm,1.4s						
MMRI	Maumere	15.41	192	P	Pn	07 57 22.1	+1.7
	comp=Z,3µmcomp=Z,67nm,1.3s						
EDFI	Ende, Flores	15.64	193	P	P	07 57 25.4	-2.2
LBFI	Labuhan Bajo,	15.89	200	P	P	07 57 28.2	-2.2
	comp=Z,3µmcomp=Z,89nm,1.5s						
SOEI	Soe	16.25	184	P	P	07 57 33.2	-1.2
SOEI				IAmb	IAmb	07 57 47.5	
	comp=Z,137nm,1.2s						
SOEI	Soe	16.25	184	P	Pn	07 57 31.4	+0.1
	comp=Z,3µmcomp=Z,176nm,2.1s						
DBNI	Kabupaten Domp	16.52	205	P	P	07 57 35.9	-1.4
	comp=Z,2µmcomp=Z,59nm,1.9s						
BATI	Baumata	16.74	186	Pn	Pn	07 57 36.4	-1.2
	comp=Z,5.5nm,0.3s,baz=239,slow=21,SNR=5.9						
	comp=Z,55nm,0.8s						
BATI	Baumata	16.74	186	P	Pn	07 57 38.1	+0.6
	comp=Z,148nm,1.1s						
PLAI	Plampang	17.04	206	P	P	07 57 42.1	-0.9
	comp=Z,2µmcomp=Z,87nm,1.6s						
WBSI	Waikabubak, Su	17.15	200	P	Pn	07 57 41.8	-0.8
	comp=Z,2µmcomp=Z,81nm,1.5s						
YULB	Yu-li	17.17	347	P	Pn	07 57 43.2	+0.3
TPUB	Ta-pu	17.24	345	Pn	Pn	07 57 43.1	-0.6
TWSI	Taliwang, Sumb	17.37	209	P	P	07 57 45.9	-0.8
	comp=Z,84nm,1.2s						
KLNI	Mataram	17.50	212	P	Pn	07 57 46.8	-0.2
	comp=Z,2µmcomp=Z,107nm,0.5s						
KMMI	Kalianget	17.64	220	P	P	07 57 49.8	+0.1
	comp=Z,2µmcomp=Z,96nm,1.4s						
KHKI	Kahang-Kahang	17.71	213	P	P	07 58 07.2	+17
JAY	Jayapura	17.82	120	LR	LR	08 04 22.9	
	comp=Z,2µm,21.4s,baz=18,slow=36						
BLJI	Banyuglugur	18.40	220	P	P	07 57 58.2	+0.1
JAGI	Jajag, Banyuwa	18.63	217	P	P	07 57 59.7	-0.9
GMJI	Gumukmas	18.91	219	P	Pn	07 58 04.7	+0.5
QIZ	Qiongzhong	19.50	311		P	07 58 09.5	-0.6
QIZ				IAmb	IAmb	07 58 17.4	
	comp=Z,116nm,1.5s						
QIZ	Qiongzhong	19.50	311	P	Pn	07 58 13.0	+1.6
QIZ				S	S	08 01 51.8	+1.2
QIZ				pmax	pmax		
	comp=Z,52nm,1.4s						
SNJI	Sawahan-Nganju	19.64	224	P	Pn	07 58 18.2	+4.9
MTN	Manton Dam	20.13	163		P	07 58 17.1	0.0
MTN				IAmb	IAmb	07 58 29.0	
	comp=Z,61nm,1.1s						
JOW	Kunigami	20.35	8	P	P	07 58 20.3	+0.9
	comp=Z,28nm,0.8s,baz=187,slow=13,SNR=4.7						
	comp=Z,28nm,0.8s						
JOW	Kunigami	20.35	8		P	07 58 19.4	0.0
JOW				IAmb	IAmb	07 58 29.9	
	comp=Z,57nm,1.0s						
KNRA	Kununurra	22.36	171		P	07 58 41.1	0.0
IPM	Ipoh	24.26	266		P	07 59 00.5	+0.2
BKNI	Bangkinang	25.00	257	P	P	07 59 07.6	+0.6
SLVN	Son La	25.39	307	P	P	07 59 09.8	-0.7
SLVN				IAmb	IAmb	07 59 16.5	
	comp=Z,29nm,1.3s						
NJ2	Nanjing	26.06	347	eP	P	07 59 18.8	+2.4
NJ2				pP	sP	07 59 21.9	+1.2
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
GYA	Guiyang	26.59	320	⇑P	P	07 59 21.6	+0.2
GYA				pmax	pmax		
	comp=Z,29nm,1.0s						
JNU	Nakatsue	26.92	10	P	P	07 59 25.7	+1.5
	comp=Z,17nm,1.0s,baz=132,slow=9.9,SNR=4.7						
	comp=Z,17nm,1.0s						
JNU	Nakatsue	26.92	10	P	P	07 59 23.6	-0.6
PMG	Port Moresby	26.94	126	P	P	07 59 25.0	+0.5
PMG				IAmb	IAmb	07 59 26.1	
	comp=Z,35nm,0.9s						
PMG	Port Moresby	26.94	126	i P	P	07 59 24.8	+0.3

PMG				pmax	pmax		
	comp=Z,45nm,1.0s						
COEN	**Coen**	**27.02**	**139**	P	**P**	**07 59 25.7**	**+0.4**
COEN				IAmb	IAmb	07 59 30.8	
	comp=Z,40nm,0.9s						
WB0	**Warramunga Arr**	**27.65**	**161**	P	**P**	**07 59 30.1**	**-0.7**
WB0				IAmb	IAmb	07 59 43.5	
	comp=Z,54nm,1.4s						
WRAB	**Tennant Creek**	**27.79**	**162**	P	**P**	**07 59 31.6**	**-0.5**
WRAB				IAmb	IAmb	07 59 44.5	
	comp=Z,41nm,1.2s						
WRAB	**Tennant Creek**	**27.79**	**162**	*i* P	**P**	**07 59 30.9**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,54nm,1.5s						
WRA	**Warramunga Arr**	**27.80**	**162**	P	**P**	**07 59 31.1**	**-1.0**
	comp=Z,4.1nm,0.7s,baz=329,slow=11,SNR=10						
	comp=Z,4.1nm,0.7s						
WRA	**Warramunga Arr**	**27.80**	**162**	P	**P**	**07 59 32.7**	**+0.5**
WRA	**Warramunga Arr**	**27.80**	**162**	P	**P**	**07 59 32.7**	**+0.5**
WR8	**Warramunga Arr**	**27.86**	**161**	P	**P**	**07 59 31.5**	**-1.3**
WR8				IAmb	IAmb	07 59 45.1	
	comp=Z,17nm,0.6s						
GSI	**Gunungsitoli**	**28.15**	**260**	P	**P**	**07 59 35.4**	**0.0**
JMN	**Monobe**	**28.17**	**15**	P	**P**	**07 59 35.6**	**+0.2**
JMN				IAmb	IAmb	07 59 42.8	
	comp=Z,40nm,1.2s						
CM31	**Chiang Mai Arr**	**28.28**	**297**	P	**P**	**07 59 36.3**	**-0.3**
CMAR	**Chiang Mai Arr**	**28.28**	**297**	P	**P**	**07 59 35.5**	**-1.0**
	comp=Z,1.9nm,0.3s,baz=122,slow=7.7,SNR=11						
	comp=Z,1.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**28.28**	**297**	P	**P**	**07 59 36.0**	**-0.5**
CHTO	**Chiang Mai**	**28.41**	**298**	P	**P**	**07 59 37.0**	**-0.7**
CHTO	**Chiang Mai**	**28.41**	**298**	P	**P**	**07 59 37.0**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,12nm,0.9s						
KMI	**Kunming**	**28.41**	**313**	P	**P**	**07 59 41.6**	**+3.7**
KMI				pmax	pmax		
	comp=Z,25nm,1.2s						
PZH	**PanZhiHua**	**29.95**	**314**	P	**P**	**07 59 53.9**	**+2.4**
PZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LYN	**LuoYang**	**30.27**	**339**	P	**P**	**07 59 54.9**	**+0.9**
LYN				pmax	pmax		
	comp=Z,18nm,0.7s						
KSAR	**Wonju Array Be**	**30.82**	**4**	P	**P**	**07 59 58.5**	**-0.3**
KSAR	**Wonju Array Be**	**30.82**	**4**	P	**P**	**07 59 58.5**	**-0.3**
KSRS	**Korea Array**	**30.84**	**4**	P	**P**	**07 59 59.3**	**+0.4**
	comp=Z,2.3nm,0.8s,baz=184,slow=9.5,SNR=7.9						
	comp=Z,2.3nm,0.8s						
AS31	**Alice Springs**	**31.20**	**165**	P	**P**	**08 00 01.8**	**-0.5**
ASAR	**Alice Springs**	**31.20**	**165**	P	**P**	**08 00 02.1**	**-0.2**
	comp=Z,3.8nm,0.6s,baz=346,slow=7.0,SNR=21						
	comp=Z,3.8nm,0.6s						
ASAR	**Alice Springs**	**31.20**	**165**	P	**P**	**08 00 01.5**	**-0.8**
ASAR	**Alice Springs**	**31.20**	**165**	P	**P**	**08 00 01.5**	**-0.8**
XAN	**Xi'an**	**31.27**	**333**	P	**P**	**08 00 03.4**	**+0.5**
XAN				pmax	pmax		
	comp=Z,13nm,1.3s						
CD2	**Chengdu**	**31.54**	**323**	P	**P**	**08 00 06.3**	**+1.0**
CD2				pmax	pmax		
	comp=Z,30nm,0.7s						
MAJO	**Matsushiro**	**32.08**	**20**	*i* P	**P**	**08 00 08.6**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,57nm,3.6s						
MJAR	**Matsushiro Arr**	**32.08**	**20**	P	**P**	**08 00 09.0**	**-1.0**
	comp=Z,4.1nm,0.8s,baz=195,slow=9.6,SNR=9.7						
	comp=Z,4.1nm,0.8s						
MJAR	**Matsushiro Arr**	**32.08**	**20**	P	**P**	**08 00 08.6**	**-1.4**
MJAR	**Matsushiro Arr**	**32.08**	**20**	P	**P**	**08 00 09.0**	**-1.0**
HNS	**HongShan**	**32.18**	**344**	⇑P	**P**	**08 00 11.3**	**+0.6**
HNS				pmax	pmax		
	comp=Z,12nm,1.0s						
DL2	**Dalian**	**32.37**	**355**	P	P	08 00 17.0	+4.6
DL2				S	**S**	**08 05 28.1**	**+1.6**
DL2				pmax	pmax		
	comp=Z,40nm,1.0s						
DL2				pmax	pmax		
	comp=Z,380nm,4.9s						
DL2				LR	LR		
	comp=Z,780nm,18.9s						
DL2				LR	LR		
	comp=Z,2μm,16.6s						
DL2				LR	LR		
	comp=Z,2μm,16.7s						
CTA	**Charters Tower**	**33.55**	**143**	LR	LR	08 14 42.7	
	comp=Z,2μm,18.1s,baz=324,slow=38						
CTAO	**Charters Tower**	**33.55**	**143**	P	**P**	**08 00 24.1**	**+1.1**
CTAO				IAmb	IAmb	08 00 40.8	
	comp=Z,24nm,1.2s						
CTAO	**Charters Tower**	**33.55**	**143**	P	**P**	**08 00 24.1**	**+1.1**
CTAO				pmax	pmax		
	comp=Z,24nm,1.3s						
BJT	**Baijiatuau**	**34.30**	**347**	P	**P**	**08 00 28.6**	**-0.7**
BJT				IAmb	IAmb	08 00 39.2	
	comp=Z,19nm,1.1s						
BJT	**Baijiatuau**	**34.30**	**347**	P	**P**	**08 00 28.6**	**-0.7**
BJT				pmax	pmax		
	comp=Z,19nm,1.1s						
BJI	**Beijing**	**34.33**	**348**	P	**P**	**08 00 29.5**	**0.0**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BJI				pmax	pmax		
	comp=Z,510nm,12.0s						
LZDM	**Lanzhou Array**	**35.34**	**329**	P	**P**	**08 00 36.2**	**-2.4**
	comp=Z,0.6nm,0.3s,baz=206,slow=9.4,SNR=5.2						
	comp=Z,0.6nm,0.3s						
LZH	**Lanzhou**	**35.36**	**329**	*e*P	**P**	**08 00 40.0**	**+1.3**
LZH				pP	sP	08 00 44.5	+1.4
LZH				pmax	pmax		
	comp=Z,46nm,1.5s						
HHC	**Hu-ho-hao-te**	**36.28**	**342**	*e*P	**P**	**08 00 49.1**	**+2.6**
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
MORW	**Morawa**	**36.54**	**194**	P	**P**	**08 00 48.1**	**-0.5**
BTO	**Baotou**	**36.55**	**340**	*e*P	**P**	**08 00 51.6**	**+2.8**
BTO				pP	sP	08 01 01.3	+8.1
BTO				sP	pP	08 01 05.4	+13
BTO				pmax	pmax		
	comp=Z,31nm,0.6s						
VLA	**Vladivostok**	**36.86**	**8**	*i* P	**P**	**08 00 50.3**	**-0.9**
VLA				pmax	pmax		
	comp=Z,83nm,1.8s						
CN2	**Changchun**	**37.09**	**0**	*e*P	**P**	**08 00 55.5**	**+2.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FORT	**Forrest**	**37.23**	**176**	P	**P**	**08 00 54.1**	**-0.4**
FORT				IAmb	IAmb	08 01 00.9	
	comp=Z,12nm,0.7s						
USRK	**Ussuriysk Ar.**	**37.94**	**8**	P	**P**	**08 00 58.9**	**-1.5**
	comp=Z,7.7nm,0.8s,baz=194,slow=8.6,SNR=10						
	comp=Z,7.7nm,0.8s						
BNX	**BinXian**	**39.07**	**2**	⇓P	**P**	**08 01 11.4**	**+1.6**
BNX				pmax	pmax		
	comp=Z,16nm,1.4s						
LSA	**Lhasa**	**39.53**	**310**		**P**	**08 01 13.4**	**-1.1**
LSA	**Lhasa**	**39.53**	**310**	P	**P**	**08 01 13.4**	**-1.1**
LSA				pmax	pmax		
	comp=Z,14nm,0.9s						
GTA	**Gaotai**	**39.96**	**329**	*e*P	**P**	**08 01 19.4**	**+1.9**
GTA				pmax	pmax		
	comp=Z,19nm,1.4s						
NWAO	**Narrogin (SRO)**	**40.02**	**191**	P	**P**	**08 01 17.6**	**-0.3**
NWAO	**Narrogin (SRO)**	**40.02**	**191**	P	**P**	**08 01 17.6**	**-0.3**
NWAO				pmax	pmax		
	comp=Z,17nm,0.9s						
EIDS	**Eidsvold**	**40.44**	**143**	P	**P**	**08 01 21.7**	**+0.1**
EIDS				IAmb	IAmb	08 01 26.7	
	comp=Z,28nm,1.4s						
BBOO	**Buckleboo**	**40.47**	**166**	P	**P**	**08 01 21.7**	**0.0**
GOMU	**GeErMu**	**40.60**	**321**	P	**P**	**08 01 24.4**	**+1.2**
GOMU				pmax	pmax		
	comp=Z,8.0nm,1.3s						
STKA	**Stephens Creek**	**41.27**	**159**	P	**P**	**08 01 28.1**	**-0.1**
	comp=Z,13nm,0.7s,baz=332,slow=8.1,SNR=19						
	comp=Z,13nm,0.7s						
STKA	**Stephens Creek**	**41.27**	**159**	P	**P**	**08 01 28.8**	**+0.5**
STKA	**Stephens Creek**	**41.27**	**159**	*i* P	**P**	**08 01 27.9**	**-0.3**
HIA	**Hailar**	**42.81**	**355**	*i* P	**P**	**08 01 39.2**	**-1.5**
HIA				pmax	pmax		
	comp=Z,23nm,1.7s						
HILR	**Hailar Array B**	**43.10**	**355**	P	**P**	**08 01 42.6**	**-0.4**
	comp=Z,1.6nm,0.5s,baz=165,slow=12,SNR=6.5						
	comp=Z,1.6nm,0.5s						
ULN	**Ulaanbaatar**	**44.00**	**342**	P	**P**	**08 01 49.4**	**-1.1**
ULN	**Ulaanbaatar**	**44.00**	**342**	*ce*P	**P**	**08 01 49.1**	**-1.4**
ULN				pmax	pmax		
	comp=Z,13nm,1.5s						
SONM	**Songino Array**	**44.18**	**342**	P	**P**	**08 01 50.8**	**-1.1**
	comp=Z,1.3nm,0.8s,baz=158,slow=8.7,SNR=6.0						
	comp=Z,1.3nm,0.8s						
SONM	**Songino Array**	**44.18**	**342**	P	**P**	**08 01 50.8**	**-1.1**
ARMA	**Armidale**	**44.60**	**147**	P	**P**	**08 01 55.7**	**+0.3**
GRNR	**Gornyy**	**45.02**	**10**	⇑*i*P	**P**	**08 01 58.5**	**+0.1**
GRNR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MGBR	**Mount Gambier**	**46.31**	**163**	P	**P**	**08 02 09.8**	**+1.1**
TYV	**Tymovskoe**	**46.46**	**15**	*e*P	**P**	**08 02 11.9**	**+2.2**
TYV				pmax	pmax		
	comp=Z,12nm,1.1s						
TYV				pmax	pmax		
	comp=Z,300nm,3.1s						
HYB	**Hyderabad**	**46.88**	**288**	*e*P	**P**	**08 02 13.5**	**-0.1**
HYB				*e*PcP	**PcP**	**08 03 47.7**	**+1.2**
HYB				*e*PP	**PP**	**08 04 03.5**	**-0.4**
SANVU	**Saraoutou**	**46.91**	**118**	P	**P**	**08 02 13.8**	**0.0**
ZEA	**Zeya**	**47.06**	**2**	*e*P	**P**	**08 02 16.9**	**+2.5**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TOO	**Toolangi**	**47.78**	**158**	P	**P**	**08 02 21.4**	**+1.2**
TOO	**Toolangi**	**47.78**	**158**	P	**P**	**08 02 21.5**	**+1.2**
TOO				pmax	pmax		
	comp=Z,8.0nm,1.2s						
DZM	**Mont Dzumac**	**49.33**	**126**	P	**P**	**08 02 33.6**	**+1.0**
WMQ	**Urumqi**	**49.61**	**325**	*e*P	**P**	**08 02 36.4**	**+2.0**
ZSN	**Zaisan**	**53.38**	**327**	*e*P	**P**	**08 03 02.4**	**-0.1**
ZSN	**Zaisan**	**53.38**	**327**	*e*P	**P**	**08 03 02.3**	**-0.1**
PEA0B	**Petropavlovsk-**	**53.38**	**24**	P	**P**	**08 03 03.6**	**+1.3**
PEA0B	**Petropavlovsk-**	**53.38**	**24**	*ce*P	**P**	**08 03 02.0**	**-0.4**
PETK	**Petropavlovsk-**	**53.38**	**24**	P	**P**	**08 03 03.5**	**+1.1**
	comp=Z,19nm,0.8s,baz=208,slow=6.9,SNR=15						
	comp=Z,19nm,0.8s						
PETK	**Petropavlovsk-**	**53.38**	**24**	P	**P**	**08 03 02.5**	**+0.1**
PETK	**Petropavlovsk-**	**53.38**	**24**	P	**P**	**08 03 02.5**	**+0.1**
DGZ	**Jazzator, Alta**	**53.45**	**330**	*i* P	**P**	**08 03 02.8**	**-0.3**
DGZ				pmax	pmax		
	comp=Z,10.0nm,1.5s						
PET	**Petropavlovsk**	**53.71**	**24**	P	**P**	**08 03 04.3**	**-0.4**
PET	**Petropavlovsk**	**53.71**	**24**	*ce*P	**P**	**08 03 04.7**	**0.0**
PET				pmax	pmax		
	comp=Z,66nm,1.7s						
PET	**Petropavlovsk**	**53.71**	**24**	P	**P**	**08 03 04.7**	**0.0**
	comp=Z,36nm,1.6s						
SHLS	**Shalkode**	**54.28**	**320**	*e*P	**P**	**08 03 07.2**	**-2.1**
	comp=Z,16nm,1.2s						
SHLS	**Shalkode**	**54.28**	**320**	*e*P	**P**	**08 03 07.2**	**-2.1**
SHLS				pmax	pmax		
	comp=Z,16nm,1.2s						
MK31	**Makanchi Array**	**54.44**	**325**	P	**P**	**08 03 09.9**	**-0.4**
MK31	**Makanchi Array**	**54.44**	**325**	P	**P**	**08 03 09.9**	**-0.4**
MK31				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MKAR	**Makanchi Array**	**54.44**	**325**	P	**P**	**08 03 10.1**	**-0.2**
	comp=Z,4.5nm,0.7s,baz=113,slow=8.1,SNR=11						
	comp=Z,4.5nm,0.7s						
MKAR	**Makanchi Array**	**54.44**	**325**	P	**P**	**08 03 10.3**	**+0.1**
MKAR	**Makanchi Array**	**54.44**	**325**	*i* P	**P**	**08 03 11.0**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
UZB	**Uzynbulak**	**54.56**	**320**	*e*P	**P**	**08 03 11.2**	**-0.2**
	comp=Z,12nm,1.2s						
UZB	**Uzynbulak**	**54.56**	**320**	*e*P	**P**	**08 03 11.1**	**-0.2**
UZB				pmax	pmax		
	comp=Z,12nm,1.2s						
MAKZ	**Makanchi**	**54.63**	**325**	P	**P**	**08 03 11.1**	**-0.5**
MAKZ				IAmb	IAmb	08 03 18.6	
	comp=Z,11nm,1.0s						
MAKZ	**Makanchi**	**54.63**	**325**	P	**P**	**08 03 11.1**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,11nm,1.0s						
SATY	**Saty**	**54.92**	**319**	*e*P	**P**	**08 03 13.7**	**-0.2**
	comp=Z,17nm,1.1s						
SATY	**Saty**	**54.92**	**319**	*e*P	**P**	**08 03 13.7**	**-0.2**
SATY				pmax	pmax		
	comp=Z,17nm,1.1s						
KSH	**Kashi**	**55.06**	**314**	P	**P**	**08 03 18.3**	**+3.3**
KSH				sP	sP	08 03 28.4	+8.9
KSH				pmax	pmax		
	comp=Z,19nm,1.9s						
NIL	**Nilore**	**55.10**	**307**	P	**P**	**08 03 14.8**	**-0.4**
NIL	**Nilore**	**55.10**	**307**	P	**P**	**08 03 14.9**	**-0.4**
NIL				pmax	pmax		
	comp=Z,45nm,1.4s						
KDJ	**Kajisay**	**55.31**	**318**	P	**P**	**08 03 16.0**	**-0.9**
KDJ				IAmb	IAmb	08 03 21.7	
	comp=Z,21nm,1.0s						
KDJ	**Kajisay**	**55.31**	**318**	P	**P**	**08 03 16.0**	**-0.9**
KDJ				pmax	pmax		
	comp=Z,21nm,1.0s						
YAK	**Yakutsk**	**55.44**	**2**	P	**P**	**08 03 18.3**	**+1.1**
	comp=Z,14nm,0.6s,baz=194,slow=13,SNR=7.9						
	comp=Z,14nm,0.6s						
YAK	**Yakutsk**	**55.44**	**2**	P	**P**	**08 03 16.4**	**-0.8**
YAK				IAmb	IAmb	08 03 22.0	
	comp=Z,18nm,0.8s						
YAK	**Yakutsk**	**55.44**	**2**	*e*P	**P**	**08 03 17.0**	**-0.2**
YAK				pmax	pmax		
	comp=Z,20nm,1.3s						
YAK				pmax	pmax		
	comp=N,17nm,1.5s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.5s						
TDK	**Taldyqorghan**	**55.83**	**321**	*e*P	**P**	**08 03 20.2**	**-0.2**
	comp=E,11nm,0.8s						
TDK	**Taldyqorghan**	**55.83**	**321**	*e*P	**P**	**08 03 20.2**	**-0.2**
TDK				pmax	pmax		
	comp=Z,11nm,0.8s						
MDOK	**Medeo**	**55.85**	**319**	*e*P	**P**	**08 03 20.3**	**-0.4**
MDOK	**Medeo**	**55.85**	**319**	*e*P	**P**	**08 03 20.3**	**-0.4**
TNSS	**Tian-Shan**	**55.86**	**319**	*e*P	**P**	**08 03 20.5**	**-0.6**
TNSS	**Tian-Shan**	**55.86**	**319**	*e*P	**P**	**08 03 20.4**	**-0.6**
AAA	**Alma-Ata**	**55.96**	**319**	*e*P	**P**	**08 03 21.2**	**-0.2**
AAA	**Alma-Ata**	**55.96**	**319**	*e*P	**P**	**08 03 21.2**	**-0.2**
MA2	**Magadan**	**56.33**	**15**	P	**P**	**08 03 24.6**	**+1.0**
	comp=Z,17nm,0.8s,baz=195,slow=4.5,SNR=11						
	comp=Z,17nm,0.8s						
MA2	**Magadan**	**56.33**	**15**	P	**P**	**08 03 23.5**	**-0.1**
MA2				IAmb	IAmb	08 03 28.8	
	comp=Z,18nm,0.8s						
MA2	**Magadan**	**56.33**	**15**	*ce*P	**P**	**08 03 21.8**	**-1.8**
MA2				pmax	pmax		
	comp=Z,26nm,1.2s						
MA2	**Magadan**	**56.33**	**15**	P	**P**	**08 03 23.6**	**-0.1**
	comp=Z,32nm,1.2s						
AAK	**Ala-Archa**	**57.33**	**317**	P	**P**	**08 03 31.1**	**-0.2**
AAK				IAmb	IAmb	08 03 38.2	
	comp=Z,32nm,1.4s						
AAK	**Ala-Archa**	**57.33**	**317**	*ce*P	**P**	**08 03 30.4**	**-0.8**
AAK				pmax	pmax		
	comp=Z,31nm,1.7s						
MSVF	**Nonsavu**	**57.39**	**116**	P	**P**	**08 03 31.9**	**0.0**
MSVF	**Nonsavu**	**57.39**	**116**	P	**P**	**08 03 31.9**	**0.0**
MSVF				pmax	pmax		
	comp=Z,51nm,1.4s						
ZAA0	**Zalesovo Array**	**57.44**	**333**	P	**P**	**08 03 30.8**	**-0.7**
ZALV	**Zalesovo Beam**	**57.44**	**333**	P	**P**	**08 03 29.9**	**-1.7**
	comp=Z,4.7nm,0.9s,baz=119,slow=6.8,SNR=7.0						
	comp=Z,4.7nm,0.9s						
ZALV	**Zalesovo Beam**	**57.44**	**333**	P	**P**	**08 03 30.8**	**-0.7**
ZALV	**Zalesovo Beam**	**57.44**	**333**	P	**P**	**08 03 30.8**	**-0.7**
MANEM	**Manem**	**57.51**	**311**	P	**P**	**08 03 32.1**	**-0.6**
MANEM				IAmb	IAmb	08 03 46.8	
	comp=Z,74nm,1.4s						
ARSB	**Arslanbob**	**57.86**	**315**	IAmb	IAmb	08 03 46.0	
	comp=Z,21nm,1.2s						
DRK	**Karamyk**	**58.05**	**313**	IAmb	IAmb	08 03 41.3	
	comp=Z,24nm,1.1s						
KURBB	**Kurchatov Arra**	**58.61**	**327**	P	**P**	**08 03 39.1**	**-0.7**
	comp=Z,9.9nm,0.8s,baz=125,slow=6.2,SNR=14						
	comp=Z,9.9nm,0.8s						
KURK	**Kurchatov**	**58.61**	**327**	P	**P**	**08 03 40.0**	**+0.2**
KURK				IAmb	IAmb	08 03 43.8	
	comp=Z,15nm,0.8s						
KURK	**Kurchatov**	**58.61**	**327**	*ce*P	**P**	**08 03 40.5**	**+0.7**
KURK				pmax	pmax		
	comp=Z,20nm,0.9s						
KBL	**Kabul**	**58.70**	**307**	P	**P**	**08 03 40.8**	**-0.3**
KBL	**Kabul**	**58.70**	**307**	P	**P**	**08 03 40.8**	**-0.3**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DZA	**Taraz**	**59.58**	**316**	*e*P	**P**	**08 03 46.6**	**-0.1**
	comp=Z,6.5nm,0.8s						
DZA	**Taraz**	**59.58**	**316**	*e*P	**P**	**08 03 46.6**	**-0.1**
DZA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SEY	**Seymchan**	**59.62**	**14**	*e*P	**P**	**08 03 46.8**	**+0.2**
SEY				pmax	pmax		
	comp=Z,18nm,1.9s						
CHGR	**Chuyangaron**	**59.74**	**311**	P	**P**	**08 03 46.3**	**-1.7**
CHGR	**Chuyangaron**	**59.74**	**311**	P	**P**	**08 03 46.3**	**-1.7**
CHGR				pmax	pmax		
	comp=Z,40nm,1.3s						
KK31	**Karatay Array**	**60.21**	**316**	P	**P**	**08 03 51.1**	**-0.1**
KK31				IAmb	IAmb	08 03 55.1	
	comp=Z,19nm,1.1s						
KK31	**Karatay Array**	**60.21**	**316**	P	**P**	**08 03 51.1**	**-0.1**
KK31				pmax	pmax		
	comp=Z,19nm,1.1s						
KKAR	**Karatay Array**	**60.21**	**316**	P	**P**	**08 03 50.8**	**-0.3**
KKAR	**Karatay Array**	**60.21**	**316**	P	**P**	**08 03 50.8**	**-0.3**
IUG	**Iuzhnay**	**60.22**	**315**	*e*P	**P**	**08 03 51.2**	**-0.1**
	comp=Z,9.9nm,0.9s						
IUG	**Iuzhnay**	**60.22**	**315**	*e*P	**P**	**08 03 51.2**	**-0.1**
IUG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CHM	**Chimkent**	**60.57**	**315**	*e*P	**P**	**08 03 53.5**	**-0.1**
CHM	**Chimkent**	**60.57**	**315**	*e*P	**P**	**08 03 53.5**	**-0.1**
BRLS	**Borolday**	**60.65**	**316**	*e*P	**P**	**08 03 54.3**	**+0.1**
	comp=Z,13nm,1.5s						
BRLS	**Borolday**	**60.65**	**316**	*e*P	**P**	**08 03 54.2**	**+0.1**
BRLS				pmax	pmax		
	comp=Z,13nm,1.5s						
BRZS	**Berezniki**	**61.58**	**324**	*e*P	**P**	**08 04 00.1**	**-0.1**
BRZS	**Berezniki**	**61.58**	**324**	*e*P	**P**	**08 04 00.1**	**-0.1**
HRA	**Herat**	**64.15**	**305**	P	**P**	**08 04 18.0**	**+0.1**
BVAR	**Borovoye Array**	**64.19**	**327**	P	**P**	**08 04 16.6**	**-1.0**
	comp=Z,9.0nm,0.9s,baz=111,slow=8.1,SNR=16						
	comp=Z,9.0nm,0.9s						
BORK	**Borovoye**	**64.24**	**327**	P	**P**	**08 04 17.4**	**-0.5**
BORK				IAmb	IAmb	08 04 21.5	
	comp=Z,14nm,0.8s						
BORK	**Borovoye**	**64.24**	**327**	*ce*P	**P**	**08 04 18.3**	**+0.4**
BORK				pmax	pmax		
	comp=Z,16nm,0.9s						
THZ	**Tophouse**	**64.79**	**142**	P	**P**	**08 04 22.0**	**+0.2**
TIXI	**Tiksi**	**65.05**	**1**	P	**P**	**08 04 22.5**	**-0.3**
TIXI				IAmb	IAmb	08 04 25.7	
	comp=Z,7.6nm,0.8s						
TIXI	**Tiksi**	**65.05**	**1**	*ce*P	**P**	**08 04 22.7**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,12nm,1.0s						
KHZ	**Kahutara**	**65.56**	**143**	P	**P**	**08 04 26.2**	**-0.3**
BKZ	**Black Stump Fm**	**65.62**	**138**	P	**P**	**08 04 27.2**	**0.0**
RTZ	**Ruatahuna**	**65.66**	**138**		**P**	**08 04 28.0**	**+0.5**
ATKA	**Atka Island**	**67.00**	**36**	P	**P**	**08 04 35.5**	**-0.3**
BILL	**Bilibino**	**67.20**	**16**	*ce*P	**P**	**08 04 36.1**	**-0.6**
BILL				pmax	pmax		
	comp=Z,28nm,2.0s						
NRIK	**Noril'sk**	**67.36**	**346**	P	**P**	**08 04 35.6**	**-2.1**
	comp=Z,2.5nm,0.6s,baz=142,slow=3.6,SNR=5.2						
	comp=Z,2.5nm,0.6s						
NRIK	**Noril'sk**	**67.36**	**346**	P	**P**	**08 04 37.1**	**-0.6**
NRIK				IAmb	IAmb	08 04 40.5	
	comp=Z,8.0nm,1.1s						
NRIK	**Noril'sk**	**67.36**	**346**	*i* P	**P**	**08 04 36.3**	**-1.4**
NRIK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
AB31	**Akbulak array**	**69.08**	**320**	P	**P**	**08 04 48.4**	**-0.4**
AB31				IAmb	IAmb	08 04 55.0	
	comp=Z,15nm,1.3s						
ABKAR	**Akbulak array**	**69.08**	**320**	P	**P**	**08 04 48.3**	**-0.6**
SVE	**Sverdlovsk**	**70.82**	**328**	*e*P	**P**	**08 04 59.4**	**0.0**
SVE				pmax	pmax		
	comp=Z,13nm,0.9s						
ARTI	**Arti**	**71.88**	**327**	P	**P**	**08 05 04.2**	**-1.6**
ARTI				IAmb	IAmb	08 05 07.8	
	comp=Z,6.5nm,0.7s						
ARTI	**Arti**	**71.88**	**327**	*d i*P	**P**	**08 05 04.3**	**-1.6**
ARTI				S	**S**	**08 14 25.5**	**-1.2**
ARTI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CASY	**Casey**	**73.46**	**186**	P	**P**	**08 05 14.9**	**0.0**
M14K	**Bethel**	**75.89**	**29**	P	**P**	**08 05 28.9**	**-0.3**
C16K	**Lisburne Hills**	**76.35**	**21**	P	**P**	**08 05 32.9**	**+1.2**
C16K				IAmb	IAmb	08 05 37.0	
	comp=Z,13nm,1.1s						
AKT	**Akhty**	**76.38**	**311**	*e*P	**P**	**08 05 30.7**	**-1.9**
AKT				*e*		08 05 41.3	
AKT				*e*		08 08 23.7	
AKT				*e*PPP	PPP	08 10 06.1	
AKT				pmax	pmax		
	comp=Z,40nm,1.7s						
KIRV	**Kirov**	**77.08**	**329**	*ce*P	**P**	**08 05 35.9**	**-0.1**
BELG	**Belogornoye**	**77.32**	**322**	*i* P	**P**	**08 05 35.5**	**-2.0**
BELG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
C18K	**Utukok River**	**77.93**	**21**	IAmb	IAmb	08 05 46.1	
	comp=Z,10nm,1.2s						
RAYN	**Ar Rayn**	**78.09**	**293**	P	**P**	**08 05 41.9**	**-0.6**
RAYN	**Ar Rayn**	**78.09**	**293**	P	**P**	**08 05 41.9**	**-0.6**
RAYN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
C19K	**Lookout Ridge**	**78.60**	**21**	IAmb	IAmb	08 05 51.1	
	comp=Z,9.8nm,0.8s						
D19K	**Kuna River**	**79.01**	**21**	IAmb	IAmb	08 05 52.3	
	comp=Z,32nm,1.5s						
E19K	**Redstone River**	**79.16**	**23**	IAmb	IAmb	08 06 05.1	
	comp=Z,14nm,1.1s						
D20K	**Etivluk River**	**79.59**	**21**	IAmb	IAmb	08 05 55.4	
	comp=Z,31nm,1.5s						
B20K	**Meade River**	**79.60**	**20**	P	**P**	**08 05 49.2**	**-0.5**
B20K				IAmb	IAmb	08 05 55.5	
	comp=Z,25nm,1.4s						
KBZ	**Khabaz**	**80.02**	**313**	P	**P**	**08 05 50.9**	**-1.6**
	comp=Z,2.9nm,1.0s,baz=82,slow=7.1,SNR=3.7						
	comp=Z,2.9nm,1.0s						
KBZ	**Khabaz**	**80.02**	**313**	⇑*e*P	**P**	**08 05 51.0**	**-1.6**
KBZ				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KIV	**Kislovodsk**	**80.17**	**313**	*e*P	**P**	**08 05 50.6**	**-3.0**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
B21K	**Ikpikpuk River**	**80.42**	**20**	IAmb	IAmb	08 05 59.9	
	comp=Z,10nm,0.9s						
GURO	**Guroymak-BITLI**	**80.70**	**308**	P	**P**	**08 05 55.9**	**-0.6**
GURO				IAmb	IAmb	08 06 01.0	
	comp=Z,18nm,1.0s						
B22K	**Teshekpuk Lake**	**80.91**	**20**	IAmb	IAmb	08 06 02.4	
	comp=Z,37nm,1.5s						
E22K	**Anaktuvuk Pass**	**81.29**	**22**	P	**P**	**08 05 59.4**	**+0.4**
E22K				IAmb	IAmb	08 06 12.5	
	comp=Z,12nm,1.1s						
SUA	**Susitna One**	**81.37**	**29**	P	**P**	**08 06 00.2**	**+0.6**
BPAW	**Bear Paw Mtn.**	**81.38**	**26**	P	**P**	**08 05 59.4**	**0.0**
BPAW				IAmb	IAmb	08 06 04.8	
	comp=Z,17nm,1.0s						
L22K	**Petersville**	**81.40**	**28**	P	**P**	**08 05 59.9**	**+0.2**
L22K				IAmb	IAmb	08 06 04.1	
	comp=Z,17nm,1.0s						
C23K	**Itkillik River**	**81.83**	**20**	IAmb	IAmb	08 06 08.0	
	comp=Z,17nm,0.9s						
E23K	**Chandalar**	**82.11**	**22**	IAmb	IAmb	08 06 09.5	
	comp=Z,13nm,1.1s						
KLMR	**Klimovskoe**	**82.26**	**330**	*e*P	**P**	**08 06 01.8**	**-2.3**
KLMR				pmax	pmax		
	comp=Z,24nm,1.5s						
D24K	**Happy Valley**	**82.43**	**21**	P	**P**	**08 06 05.5**	**+0.6**
D24K				IAmb	IAmb	08 06 24.7	
	comp=Z,9.7nm,0.9s						
COLA	**College**	**82.75**	**25**	*i* P	**P**	**08 06 06.4**	**-0.2**
COLA				pmax	pmax		
	comp=Z,22nm,2.5s						
CCB	**Clear Creek Bu**	**82.77**	**26**	P	**P**	**08 06 05.7**	**-1.1**
G24K	**Hadweenzic Riv**	**82.91**	**24**	IAmb	IAmb	08 06 13.5	
	comp=Z,16nm,1.2s						
IL31		**83.17**	**26**	P	**P**	**08 06 08.5**	**-0.2**
ILAR	**Eielson Array**	**83.17**	**26**	P	**P**	**08 06 08.6**	**-0.3**
	comp=Z,1.7nm,0.7s,baz=238,slow=4.5,SNR=15						
	comp=Z,1.7nm,0.7s						
ILAR	**Eielson Array**	**83.17**	**26**	P	**P**	**08 06 09.1**	**+0.3**
D25K	**Kavik River**	**83.30**	**21**	IAmb	IAmb	08 06 15.2	
	comp=Z,7.7nm,0.9s						
OBN	**Obninsk**	**83.94**	**325**	⇓*i*P	**P**	**08 06 12.5**	**-0.4**
OBN				*e**PP	**pP**	**08 06 15.1**	**-1.2**
OBN				*e**SP	**sP**	**08 06 18.0**	**+0.5**
OBN				S	**S**	**08 16 37.0**	**+0.2**
OBN				PS	PnS	08 17 48.0	+19

OBN				pmax	pmax		
	comp=Z,14nm,1.2s						
OBN				MLR	MLR		
	comp=Z,2µm,21.0s						
BMAR	Burnt Mountain	84.03	23	P	P	08 06 14.0	+0.8
C27K	Jago River	84.23	21	IAmb	IAmb	08 06 20.4	
	comp=Z,8.4nm,1.0s						
SCRK	Sand Creek	84.46	26	P	P	08 06 16.1	+0.5
SCRK				IAmb	IAmb	08 06 20.2	
	comp=Z,15nm,1.3s						
E27K	Coleen River	85.10	22	IAmb	IAmb	08 06 24.8	
	comp=Z,9.2nm,1.0s						
D27M	Malcolm River	85.23	21	IAmb	IAmb	08 06 25.9	
	comp=Z,12nm,1.0s						
H27K	Steamboat Moun	85.32	24	IAmb	IAmb	08 06 26.1	
	comp=Z,7.4nm,1.0s						
F28M	Old Crow	85.81	23	IAmb	IAmb	08 06 28.6	
	comp=Z,8.6nm,0.9s						
E28M	Babbage River	85.82	21	IAmb	IAmb	08 06 28.8	
	comp=Z,17nm,1.4s						
I28M	Miner Creek	86.05	25	IAmb	IAmb	08 06 29.9	
	comp=Z,12nm,0.9s						
BRTR	Keskin Array B	87.14	309	P	P	08 06 26.4	-3.0
	comp=Z,1.2nm,1.0s,baz=134,slow=3.6,SNR=3.9						
	comp=Z,1.2nm,1.0s						
BRTR	Keskin Array B	87.14	309	*i* P	P	08 06 30.7	+1.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BR106	Keskin Array S	87.15	309	P	P	08 06 29.6	+0.1
F31M	Tsiigehtchic	88.17	22	IAmb	IAmb	08 06 41.0	
	comp=Z,6.8nm,1.1s						
FINES	FINESS Array B	88.68	332	P	P	08 06 33.9	-2.3
	comp=Z,3.8nm,0.9s,baz=58,slow=7.5,SNR=6.9						
	comp=Z,3.8nm,0.9s						
FINES	FINESS Array B	88.68	332	*i* P	P	08 06 37.5	+1.4
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AK09	Malin Array Si	88.79	321	P	P	08 06 35.9	-1.0
AK08	Malin Array Si	88.81	321	P	P	08 06 35.8	-1.1
AKASG	Malin Array Be	88.82	321	P	P	08 06 35.0	-2.0
	comp=Z,0.7nm,0.5s,baz=70,slow=4.5,SNR=5.0						
	comp=Z,0.7nm,0.5s						
AKASG	Malin Array Be	88.82	321	P	P	08 06 36.0	-1.0
AKBB	Malin Array Si	88.82	321	*ce*P	P	08 06 38.2	+1.2
AKBB				pmax	pmax		
	comp=Z,10.0nm,1.6s						
SYO	Syowa Base	94.55	201	⇓*e*sP	P	08 07 12.8	+10
YKA	Yellowknife Ar	97.50	24	P	Pdif	08 07 18.3	+1.4
	comp=Z,0.4nm,0.8s,baz=304,slow=5.5,SNR=5.1						
	comp=Z,0.4nm,0.8s						
CLL	Collm	98.53	324	*e*P	P	08 07 21.0	-0.6
CLL	Collm	98.53	324	*e*Pdif	P	08 07 21.0	-0.6
PLCA	Paso Flores	143.14	160	PKP	PKPbc	08 13 15.1	+0.8
	comp=Z,1.0nm,0.7s,baz=256,slow=1.9,SNR=3.2						

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*IDC **15** 07:56:45.5±0.7, 6°.70N×124°.97E, h0km, mb4.1/18, mbtmp4.1/18, Error ellipse: s-maj=15.9km s-min=9.5km az=153.0*

*NEIC **15** 07:56:50.0±1.6, 6°.80N±0°.07×125°.21E±0°.07, h15km±5km, mb4.9/64, Error ellipse: s-maj=12.9km s-min=6.3km az=142.0*

ISC 15 07:56:48.5±0.4**, 6°.78N**±0°.05×**125°.22E**±0°.06**, h10km, n109, σ1s.54**/97**, mb4.8**/60**, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.46	51	Pg	Pg	07 56 58.9	+1.4
	2µm,0.3s,baz=216,slow=2.9,SNR=5.3						
DAV				Lg	Lg	07 57 10.3	
	2µm,0.3s,baz=27,slow=23,SNR=13						
DAV	Davao City (W)	0.46	51		Pb	07 56 59.2	+0.4
DAV	Davao City (W)	0.46	51	P	Pn	07 57 07.0	+5.8
TOLI2	Tolitoli	7.16	218	Pn	Pn	07 58 32.4	-0.9
KAPI	Kappang	12.92	205	Pn	Pn	07 59 57.1	+4.8
	3.9nm,0.3s,baz=195,slow=15,SNR=4.1						
KAPI	Kappang	12.92	205	Pn	Pn	07 59 53.3	+1.0
SBUM	Sibu	13.65	252		Pn	08 00 04.0	+1.8
SAUI	Saumlaki	15.87	157	Pn	Pn	08 00 32.6	+0.5
SAUI				IAmb	IAmb	08 00 48.3	
	comp=Z,111nm,1.0s						
SOEI	Soe	16.45	183	Pn	P	08 00 40.7	-1.7
SOEI				IAmb	IAmb	08 00 59.6	
	comp=Z,88nm,1.3s						
BATI	Baumata	16.94	185	Pn	P	08 00 50.1	+2.3
	comp=Z,1.9nm,0.3s,baz=90,slow=7.1,SNR=1.9						
JAGI	Jajag, Banyuwa	18.74	216		Pn	08 01 08.3	+0.3
MTN	Manton Dam	20.36	163	P	P	08 01 24.2	-1.1
KNRA	Kununurra	22.59	171		P	08 01 48.0	-1.2
KNRA				IAmb	IAmb	08 01 56.2	
	comp=Z,50nm,1.2s						
NJ2	Nanjing	25.84	348	*e*P	P	08 02 21.1	+1.0
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
PMG	Port Moresby	27.14	126		P	08 02 31.6	-0.5
COEN	Coen	27.24	139	P	P	08 02 33.9	+0.8
COEN				IAmb	IAmb	08 02 41.5	
	comp=Z,17nm,0.8s						
WRAB	Tennant Creek	28.02	161	P	P	08 02 37.8	-2.1
WRAB				IAmb	IAmb	08 02 53.5	
	comp=Z,33nm,1.4s						
WRA	Warramunga Arr	28.03	161	P	P	08 02 39.1	-0.9
	comp=Z,2.1nm,0.7s,baz=332,slow=10,SNR=3.5						
	comp=Z,2.1nm,0.7s						
WRA	Warramunga Arr	28.03	161	P	P	08 02 38.1	-1.9
CMAR	Chiang Mai Arr	28.09	297	P	P	08 02 38.6	-2.0
	comp=Z,1.5nm,0.3s,baz=114,slow=5.5,SNR=5.4						
	comp=Z,1.5nm,0.3s						
CMAR	Chiang Mai Arr	28.09	297	P	P	08 02 40.7	0.0
LHMI	Lhok Sumawe	28.15	268	P	P	08 02 40.8	-0.5
KMI	Kunming	28.19	313	P	P	08 02 44.6	+2.9
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CHTO	Chiang Mai	28.22	298	P	P	08 02 40.6	-1.2
PSA00	Pilbara Seismi	28.66	190	P	P	08 02 46.4	+0.8
PSA00				IAmb	IAmb	08 02 52.8	
	comp=Z,19nm,1.1s						
PZH	PanZhiHua	29.74	314	P	P	08 02 57.3	+2.0
LYN	LuoYang	30.04	339	*e*P	P	08 02 58.3	+0.6
LYN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KSAR	Wonju Array Be	30.62	4	P	P	08 03 03.1	+0.3
KSRS	Korea Array	30.64	4	P	P	08 03 01.1	-1.9
	comp=Z,1.1nm,0.8s,baz=182,slow=11,SNR=6.2						
	comp=Z,1.1nm,0.8s						
XAN	Xi'an	31.03	333	*e*P	P	08 03 08.3	+1.7
XAN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
AS31	Alice Springs	31.43	165	P	P	08 03 11.4	+1.3
ASAR	Alice Springs	31.43	165	P	P	08 03 07.8	-2.4
	comp=Z,1.2nm,0.6s,baz=342,slow=6.6,SNR=5.2						
	comp=Z,1.2nm,0.6s						
ASAR	Alice Springs	31.43	165	P	P	08 03 11.0	+0.8
MJAR	Matsushiro Arr	31.92	20	P	P	08 03 12.7	-1.7
	comp=Z,2.3nm,0.9s,baz=201,slow=7.6,SNR=4.4						
	comp=Z,2.3nm,0.9s						
HNS	HongShan	31.95	344	⇑P	P	08 03 19.6	+5.1
HNS				pmax	pmax		
	comp=Z,16nm,1.0s						
CTAO	Charters Tower	33.78	143	P	P	08 03 31.0	+0.2
CTAO				IAmb	IAmb	08 03 46.8	
	comp=Z,23nm,1.4s						
BJT	Baijiatuau	34.08	348	P	P	08 03 33.5	+0.3
BJT				IAmb	IAmb	08 03 38.2	
	comp=Z,24nm,1.3s						
BJI	Beijing	34.10	348	P	P	08 03 33.6	+0.3
BJI				pP	sP	08 03 37.8	+0.1
BJI				S	S	08 08 51.8	-7.4
BJI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BJI				LR	LR		
	comp=N,550nm,19.4s						
BJI				LR	LR		
	comp=E,490nm,20.1s						
BJI				LR	LR		
	comp=Z,940nm,23.6s						
LZH	Lanzhou	35.13	329	*e*P	P	08 03 46.3	+3.8
LZH				pP	sP	08 03 51.6	+4.7
LZH				pmax	pmax		
	comp=Z,19nm,1.6s						
HHC	Hu-ho-hao-te	36.05	342	*e*P	P	08 03 53.4	+3.1
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,470nm,8.3s						
CN2	Changchun	36.88	0	*e*P	P	08 04 00.3	+3.1
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SHL	Shillong	36.90	304		P	08 03 57.0	-0.9
SHL				IAmb	IAmb	08 04 02.9	
	comp=Z,34nm,1.4s						
USRK	Ussuriysk Ar.	37.74	8	P	P	08 04 03.1	-1.4
	comp=Z,5.9nm,0.8s,baz=177,slow=7.0,SNR=8.3						
	comp=Z,5.9nm,0.8s						
MDJ	Mudanjiang	37.88	5		P	08 04 06.0	+0.3
MDJ				IAmb	IAmb	08 04 12.0	
	comp=Z,34nm,1.3s						
BNX	BinXian	38.86	2	⇓P	P	08 04 13.6	-0.3
BNX				pmax	pmax		
	comp=Z,9.0nm,1.5s						
LSA	Lhasa	39.32	310	P	P	08 04 19.4	+0.7
GTA	Gaotai	39.73	329	*e*P	P	08 04 23.4	+2.0
GTA				sP	sP	08 04 31.3	+5.5
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BBOO	Buckleboo	40.70	166		P	08 04 27.6	-1.7
BBOO				IAmb	IAmb	08 04 36.3	
	comp=Z,15nm,0.7s						
STKA	Stephens Creek	41.50	159	P	P	08 04 34.6	-1.3
	comp=Z,4.7nm,0.8s,baz=337,slow=11,SNR=4.4						
	comp=Z,4.7nm,0.8s						
STKA	Stephens Creek	41.50	159	P	P	08 04 35.1	-0.8
HILR	Hailar Array B	42.88	355	P	P	08 04 47.2	+0.1
	comp=Z,4.9nm,0.7s,baz=163,slow=11,SNR=5.3						
	comp=Z,4.9nm,0.7s						
HEH	HeiHe	43.37	2	*e*P	P	08 04 51.4	+0.5
HEH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SONM	Songino Array	43.95	342	P	P	08 04 54.7	-1.1
	comp=Z,0.6nm,0.4s,baz=157,slow=7.8,SNR=3.7						
	comp=Z,0.6nm,0.4s						
SONM	Songino Array	43.95	342	P	P	08 04 57.2	+1.4
WMQ	Urumqi	49.38	324	*e*P	P	08 05 40.4	+2.0
DZM	Mont Dzumac	49.53	127	P	P	08 05 40.4	+0.5
DZM				IAmb	IAmb	08 05 50.4	
	comp=Z,17nm,1.1s						
PETK	Petropavlovsk-	53.23	24	P	P	08 06 06.0	-1.0
	comp=Z,3.4nm,1.0s,baz=225,slow=6.9,SNR=4.6						
	comp=Z,3.4nm,1.0s						
PETK	Petropavlovsk-	53.23	24	P	P	08 06 06.6	-0.5
PET	Petropavlovsk	53.56	24	P	P	08 06 09.8	+0.4
MKAR	Makanchi Array	54.21	325	P	P	08 06 11.9	-2.5
	comp=Z,1.1nm,0.8s,baz=130,slow=10.0,SNR=4.0						
	comp=Z,1.1nm,0.8s						
MKAR	Makanchi Array	54.21	325	P	P	08 06 13.6	-0.8
MAKZ	Makanchi	54.40	325	P	P	08 06 16.0	+0.3
MAKZ				IAmb	IAmb	08 06 27.4	
	comp=Z,11nm,1.4s						
KSH	Kashi	54.84	314	P	P	08 06 21.0	+1.7
KSH				pmax	pmax		
	comp=Z,6.0nm,1.5s						
YAK	Yakutsk	55.24	3	P	P	08 06 22.7	+1.2
AAK	Ala-Archa	57.11	317	P	P	08 06 33.7	-1.8
AAK				IAmb	IAmb	08 06 48.5	
	comp=Z,10nm,1.3s						
ZAA0	Zalesovo Array	57.21	333	P	P	08 06 35.1	-0.6
ZALV	Zalesovo Beam	57.21	333	P	P	08 06 33.7	-2.0
	comp=Z,1.0nm,0.7s,baz=93,slow=7.5,SNR=2.5						
	comp=Z,1.0nm,0.7s						
ZALV	Zalesovo Beam	57.21	333	P	P	08 06 35.4	-0.3
MANEM	Manem	57.30	311	P	P	08 06 37.0	0.0
MANEM				IAmb	IAmb	08 06 55.7	
	comp=Z,22nm,1.1s						
ARSB	Arslanbob	57.64	315		P	08 06 39.2	-0.1
DRK	Karamyk	57.84	313	P	P	08 06 40.5	-0.4
KURBB	Kurchatov Arra	58.38	327	P	P	08 06 42.5	-1.5
	comp=Z,1.0nm,0.4s,baz=125,slow=5.4,SNR=4.7						
	comp=Z,1.0nm,0.4s						
KURK	Kurchatov	58.38	327	P	P	08 06 44.1	+0.1
KURK				IAmb	IAmb	08 06 57.3	
	comp=Z,15nm,1.3s						
GAR	Garm	58.77	312	P	P	08 06 46.9	-0.3
CHGR	Chuyangaron	59.53	311	P	P	08 06 52.1	-0.3
CHGR				IAmb	IAmb	08 06 58.8	
	comp=Z,13nm,1.1s						
KK31	Karatay Array	59.99	316		P	08 06 54.5	-1.0
KKAR	Karatay Array	59.99	316		P	08 06 54.5	-0.9
BVAR	Borovoye Array	63.96	327	P	P	08 07 19.8	-2.1
	comp=Z,2.4nm,0.9s,baz=129,slow=11,SNR=3.8						
	comp=Z,2.4nm,0.9s						
AB31	Akbulak array	68.85	320	P	P	08 07 52.1	-1.2
AB31				IAmb	IAmb	08 08 05.0	
	comp=Z,11nm,1.4s						
ABKAR	Akbulak array	68.85	320		P	08 07 52.1	-1.2
CNBA	Chernabura Isl	75.97	35	P	P	08 08 35.7	+0.1
C16K	Lisburne Hills	76.19	21		P	08 08 37.1	+0.5
C16K				IAmb	IAmb	08 08 42.8	
	comp=Z,15nm,1.2s						
L16K	Owhat River	77.11	28	P	P	08 08 42.3	+0.4
M16K	Timber Creek	77.24	29	P	P	08 08 43.3	+0.6
F17K	Baldwin Pennin	77.26	23	P	P	08 08 42.8	+0.1
C18K	Utukok River	77.77	21		P	08 08 45.4	-0.3
K17K	Iditarod	77.82	27	P	P	08 08 46.7	+0.8
RAYN	Ar Rayn	77.92	293		P	08 08 46.5	-0.9
C19K	Lookout Ridge	78.44	21		P	08 08 51.9	+2.6
B20K	Meade River	79.44	20	IAmb	IAmb	08 09 00.3	
	comp=Z,18nm,1.2s						
B21K	Ikpikpuk River	80.26	20	IAmb	IAmb	08 09 05.2	
	comp=Z,14nm,1.1s						
C23K	Itkillik River	81.67	20	IAmb	IAmb	08 09 25.7	
	comp=Z,19nm,1.3s						
ILAR	Eielson Array	83.02	26	P	P	08 09 12.7	-1.2
	comp=Z,1.5nm,1.0s,baz=234,slow=6.3,SNR=7.7						
	comp=Z,1.5nm,1.0s						
D25K	Kavik River	83.14	21	IAmb	IAmb	08 09 20.2	
	comp=Z,8.8nm,1.2s						
E25K	Arctic Village	83.47	22	IAmb	IAmb	08 09 34.1	
	comp=Z,11nm,1.4s						
BMAR	Burnt Mountain	83.87	23	P	P	08 09 20.5	+2.2
C27K	Jago River	84.07	21	IAmb	IAmb	08 09 25.2	
	comp=Z,9.3nm,1.1s						
G26K	Porcupine Rive	84.21	23	IAmb	IAmb	08 09 23.3	
	comp=Z,12nm,1.4s						
J26L	Joseph Creek	84.46	26	IAmb	IAmb	08 09 31.7	
	comp=Z,8.0nm,1.1s						
E27K	Coleen River	84.95	22	IAmb	IAmb	08 09 29.1	
	comp=Z,11nm,1.2s						
H27K	Steamboat Moun	85.16	24	IAmb	IAmb	08 09 36.5	
	comp=Z,7.8nm,1.1s						
BRTR	Keskin Array B	86.93	309	P	P	08 09 34.0	-0.2
	comp=Z,0.2nm,0.4s,baz=101,slow=7.5,SNR=2.4						
	comp=Z,0.2nm,0.4s						
M29M	Somme Creek	86.97	28	P	P	08 09 33.6	-0.3
EPYK	Eagle Plains	87.07	24	P	P	08 09 34.4	+0.2
EPYK				IAmb	IAmb	08 09 40.2	
	comp=Z,13nm,1.4s						
ARCES	ARCESS Array B	87.09	340	P	P	08 09 33.5	-0.7
ARCES				IAmb	IAmb	08 09 37.9	
	comp=Z,13nm,1.3s						
F31M	Tsiigehtchic	88.01	22	P	P	08 09 37.6	-1.0
F31M				IAmb	IAmb	08 09 48.4	
	comp=Z,4.6nm,0.9s						
AKASG	Malin Array Be	88.59	321	P	P	08 09 41.4	-0.3
	comp=Z,0.7nm,0.6s,baz=79,slow=3.0,SNR=2.2						
	comp=Z,0.7nm,0.6s						
AKASG	Malin Array Be	88.59	321	IAmb	IAmb	08 09 47.0	
	comp=Z,3.3nm,1.1s						
YKA	Yellowknife Ar	97.35	24	P	P	08 10 21.9	+0.1
	comp=Z,0.2nm,0.6s,baz=297,slow=5.4,SNR=6.9						
	comp=Z,0.2nm,0.6s						

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*PDG **15** 07:57:39.8±0.5, 41°.49N×19°.35E, h16km±1km, MD3.1/3, ML3.0/13, Error ellipse: s-maj=0.9km s-min=2.0km az=0.0*

*TIR **15** 07:57:40.9, 41°.54N×19°.23E, h45km±2km, Ml3.0/5*

*THE **15** 07:57:41.2, 42°N±7°×1°9E±1°0, h12km, M2.8/12, MLh2.8/12*

ISC 15 07:57:40.6±1.1**, 41°.53N**±0°.02×**19°.31E**±0°.02**, h10km**±9km**, n62, σ1s.21**/96**, 13C-20D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULC	Ulcinj	0.43	354	⇓*i*Pg	Pg	07 57 48.6	-0.6
ULC				*i* Sg	Sb	07 57 56.8	-0.2
TIR	Tirane	0.46	113	⇑Pg	Pg	07 57 48.4	-1.1
TIR				Sg	Sg	07 57 54.3	-1.3
TIR				AML	AML	07 57 54.5	
	2.8nm,0.6s						
TIR				AML	AML	07 57 56.1	
	4.0nm,0.6s						
DRME	Dracevica, Mon	0.66	352	⇓*i*Pg	Pb	07 57 54.0	-0.3
DRME				*e*Sg	Sn	07 58 04.2	-2.3
BUM	Brajici-Budva	0.83	338	⇓*i*Pg	Pb	07 57 56.6	-0.6
BUM				*i* Sg	Sn	07 58 10.0	-0.7
PHP	Peshkopia	0.86	79	Pg	Pb	07 57 54.9	-2.8
PHP				Sg	Sb	07 58 07.0	-2.3
PHP				AML	AML	07 58 12.1	
	2.1nm,0.5s						
PDG	Podgorica	0.90	357	⇑Pg	Pg	07 57 58.2	+0.2
PDG				Sg	Sn	07 58 11.0	-1.3
PDG	Podgorica	0.90	357	⇑P	Pn	07 57 58.5	-0.8
PDG				⇓S	Sn	07 58 13.9	+1.6
PDG	Podgorica	0.90	357	⇓*i*Pg	Pb	07 57 58.0	-0.3
PDG				*i* Sg	Sn	07 58 12.0	-0.3
CEME	Cevo	1.06	344	⇑*i*Pg	Pn	07 58 00.9	-0.6
CEME				*e*Sg	Sn	07 58 17.6	+1.3
VLO	Vlora	1.07	172	Pg	Pb	07 58 00.7	-0.5
HCY	Herceg Novi	1.10	327	⇓*i*Pg	Pg	07 58 01.8	0.0
HCY				*i* Sg	Sn	07 58 18.8	+1.5
PVY	Plav	1.17	24	⇑*i*Pg	Pn	07 58 01.1	-2.0
PVY				*i* Sg	Sg	07 58 20.0	+1.7
OHR	Ohrid	1.20	110	*i* Pg	Pn	07 58 02.1	-1.3
OHR				*i* Sg	Sg	07 58 21.6	+2.4
NKME	Niksic	1.26	348	⇑*i*Pg	Pb	07 58 04.5	0.0
NKME				*e*Sg	Sg	07 58 23.7	+2.4
KOME	Kolasin	1.33	7	⇓*i*Pg	Pn	07 58 04.8	-0.5
KOME				*e*Sg	Sg	07 58 24.8	+1.4
IVA	Berane	1.41	18	⇓*i*Pg	Pn	07 58 05.7	-0.7
IVA				*i* Sg	Sg	07 58 26.7	+0.7
KBN	Korca	1.44	129	Pn	Pb	07 58 07.7	+0.2
KBN				Sn	Sb	07 58 26.6	+0.7
KBN	Korca	1.44	129	P	Pb	07 58 07.8	+0.2
KBN				S	Sg	07 58 28.7	+1.9
BRY	Bratogost	1.48	338	⇓*i*Pg	Pb	07 58 08.2	-0.2
BRY				*i* Sg	Sg	07 58 29.2	+0.8
SKO	Skopje	1.65	74	*i* Pg	Pn	07 58 10.4	+0.8
SKO				*i* Sg	Sb	07 58 32.4	+0.4
UPM	Unac-Piva	1.70	350	⇑*i*Pn	Pn	07 58 10.7	+0.2
UPM				*i* Sn	Sb	07 58 33.6	+0.1
NEST	Nestorio	1.73	130	Pn	Pn	07 58 11.8	+1.0
NEST				Sn	Sb	07 58 34.3	+0.1
NEST				AML	AML	07 58 38.9	
	0.4nm,0.5s						
NEST	Nestorio	1.73	130	P	Pn	07 58 11.7	+1.0
NEST				S	Sb	07 58 35.1	+0.9
PLE	Pljevlja	1.80	2	⇑*i*Pn	Pn	07 58 12.1	+0.3
PLE				*i* Sn	Sb	07 58 36.0	-0.4
NOCI	Noci	1.85	247	Pn	Pb	07 58 12.5	-2.0
NOCI				Sn	Sb	07 58 34.9	-2.8
NOCI				AML	AML	07 58 47.4	
	0.5nm,0.4s						
PENT	Pentalofos	1.92	133	P	Pn	07 58 14.8	+1.3
PENT				S	Sn	07 58 37.1	-0.7
IGT	Igoumenitsa	2.14	158	Pn	Pn	07 58 16.7	+0.3
IGT				Sn	Sb	07 58 44.7	-1.4
IGT	Igoumenitsa	2.14	158	P	Pn	07 58 16.3	-0.1
IGT				S	Sb	07 58 44.6	-1.4
MATE	Matera	2.16	247	⇓P	Pb	07 58 17.9	-1.8
MATE				⇓S	Sb	07 58 46.0	-0.4
JAN	Janina	2.21	147	P	Pn	07 58 18.4	+1.1
JAN				S	Sn	07 58 45.7	+1.0
KPRO	Kipourio	2.22	135	P	Pn	07 58 18.3	+0.9
KPRO				S	Sn	07 58 46.6	+1.7
KZN	Kozani	2.23	122	P	Pn	07 58 18.4	+0.8
KZN				S	Sn	07 58 46.6	+1.3
MRVN	Minervino Murg	2.39	260	Pn	Pn	07 58 19.8	-0.1
GRG	Griva	2.40	103	P	Pn	07 58 19.8	-0.2
GRG				S	Sn	07 58 49.6	+0.2
TETR	Tetrakomo, Epi	2.65	145	P	Pn	07 58 23.8	+0.4
TETR				S	Sn	07 58 57.0	+1.3
SGRT	San Giovanni R	2.68	276	Pn	Pn	07 58 23.5	-0.4
BOVS	Bovan	2.75	39	⇓P	Pn	07 58 24.2	-0.5
BOVS				⇓S	Sn	07 58 57.6	-0.3
THL	Klokotos Trika	2.85	133	P	Pn	07 58 25.1	-0.9
TYRN	Tyrnavos	2.87	128	P	Pn	07 58 25.5	-0.9
KKB	Krupnik	2.88	83	P	Pn	07 58 26.7	+0.2
NYDR	Nydri-Lefkada	3.01	159	P	Pn	07 58 27.7	-0.6
TIP	Timpagrande	3.05	221	⇑P	Pn	07 58 28.6	-0.4
EVGI	Lefkada island	3.08	160	P	Pn	07 58 28.5	-0.8
BLY	Banja Luka	3.57	335	⇑P	Pn	07 58 38.2	+2.2
MDVR	Moldovita	3.69	28	⇓P	Pn	07 58 37.3	-0.5
HERR	Herculane	4.05	33	⇓P	Pn	07 58 42.4	-0.1
BZS	Buzias	4.42	22	⇑P	Pn	07 58 47.3	-0.3
GZR	Gura Zlata	4.61	32	⇑P	Pn	07 58 50.5	+0.1
MORH	Mrgy, Hungar	4.71	354	⇓P	Pn	07 58 53.4	+1.8
SIRR	Siria	5.03	19	⇓P	Pn	07 58 56.4	+0.3
LOT	Lotru	5.08	38	⇓P	Pn	07 58 55.5	-1.4
ARR	Arges	5.45	44	⇓P	Pn	07 59 00.6	-1.3
MARR	Marisel-Cluj	5.83	27	⇓P	Pn	07 59 06.5	-0.6
SOKA	Soboth	6.00	331	*i* Pn	Pn	07 59 10.7	+1.3
	0.3nm,0.2s						
OBKA	Obir	6.04	327	*i* Pn	Pn	07 59 12.5	+2.4
	0.6nm,0.3s						
MLR	Muntele Rosu	6.24	48	⇑P	Pn	07 59 11.9	-0.9
ARSA	Arzberg	6.33	336	*e*Pn	Pn	07 59 16.2	+2.3
	0.8nm,0.3s						
RONA	Rosalia, Austr	6.53	342	*e*Pn	Pn	07 59 19.3	+2.6
	0.6nm,0.3s						
WTTA	Wattenberg	7.94	319	*e*Pn	Pn	07 59 36.1	0.0
	0.5nm,0.2s						
WATA	Walderalm	8.02	319	*e*Pn	Pn	07 59 36.7	-0.5
	0.6nm,0.3s						
SQTA	Sankt Quirin	8.12	317	*e*Pn	Pn	07 59 40.4	+1.7
	0.6nm,0.2s						
FETA	Feichten	8.24	315	*e*Pn	Pn	07 59 40.4	+0.1
	0.5nm,0.4s						

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*IDC **15** 08:08:16.3±0.9, 6°.51N×125°.33E, h0km, mb3.4/6, mbtmp3.4/6, Error ellipse: s-maj=25.4km s-min=9.0km az=108.0*

ISC 15 08:08:17.8±0.9**, 6°.52N**±0°.10×**125°.3E**±0°.2**, h10km, n8, σ0s.99**/8**, mb3.6**/7**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.60	23	Pg	Pg	08 08 29.3	-0.1
	337nm,0.3s,baz=249,slow=4.9,SNR=8.5						
DAV				Lg	Lg	08 08 35.5	
	2µm,0.3s,baz=222,slow=5.3,SNR=24						
WRA	Warramunga Arr	27.74	162	P	P	08 14 06.3	-0.5
	0.4nm,0.7s,baz=329,slow=10,SNR=1.7						
	0.4nm,0.7s						
CMAR	Chiang Mai Arr	28.33	297	P	P	08 14 11.6	-0.5
	2.0nm,0.3s,baz=119,slow=9.1,SNR=4.1						
ASAR	Alice Springs	31.14	165	P	P	08 14 36.9	-0.1
	0.3nm,0.6s,baz=351,slow=8.9,SNR=5.9						
	0.3nm,0.6s						
STKA	Stephens Creek	41.21	159	P	P	08 16 03.5	+0.6
	0.4nm,0.3s,baz=316,slow=6.3,SNR=4.6						
	0.4nm,0.3s						
SONM	Songino Array	44.23	342	P	P	08 16 29.2	+1.7
	0.2nm,0.6s,baz=146,slow=8.0,SNR=1.7						
	0.2nm,0.6s						
MKAR	Makanchi Array	54.49	325	P	P	08 17 45.2	-0.6
	0.4nm,0.5s,baz=120,slow=7.2,SNR=4.1						
	0.4nm,0.5s						
ILAR	Eielson Array	83.20	26	P	P	08 20 43.2	-0.9
	0.3nm,0.7s,baz=254,slow=5.4,SNR=7.2						
	0.3nm,0.7s						

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*IDC **15** 08:14:53.6±1.1, 6°.56N×125°.11E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=23.8km s-min=10.3km az=125.0*

ISC 15 08:14:55.0±1.2**, 6°.6N**±0°.1×**125°.2E**±0°.2**, h10km, n6, σ0s.50**/6**, mb3.6**/5**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.59	37	Pg	Pb	08 15 07.4	0.0
	254nm,0.3s,baz=263,slow=22,SNR=4.1						
DAV				Lg	Lg	08 15 16.1	
	598nm,0.3s,baz=253,slow=22,SNR=8.4						
WRA	Warramunga Arr	27.86	161	P	P	08 20 45.5	+0.5
	0.5nm,0.8s,baz=331,slow=10.0,SNR=1.1						
	0.5nm,0.8s						
ASAR	Alice Springs	31.25	165	P	P	08 21 14.6	-0.5
	0.2nm,0.2s,baz=352,slow=8.0,SNR=4.3						
	0.2nm,0.2s						
STKA	Stephens Creek	41.33	159	P	P	08 22 41.2	+0.2
	1.6nm,0.9s,baz=342,slow=6.4,SNR=4.0						
	1.6nm,0.9s						
MKAR	Makanchi Array	54.36	325	P	P	08 24 22.3	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.3nm,0.7s,baz=111,slow=6.8,SNR=3.4						
	0.3nm,0.7s						
KURBB	Kurchatov Arra	58.53	327	P	P	08 24 51.3	-0.3
	0.7nm,0.6s,baz=125,slow=6.2,SNR=7.7						
	0.7nm,0.6s						

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*IDC **15** 08:16:24.4±0.9, 6°.53N×125°.20E, h0^{km}, mb3.6/7, mbtmp3.6/7, Error ellipse: s-maj=22.9km s-min=9.5km az=118.0*

ISC 15 08:16:25.9±1.0, **6°.5N**±0°.1×**125°.2E**±0°.2, **h10**^{km}, **n8**, σ**0^{s}40**/8, **mb3.7**/7, **Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.67	36	Pg	Pg	08 16 38.6	-0.2
	456nm,0.3s,baz=94,slow=2.0,SNR=1.8						
DAV				Lg	Lg	08 16 45.3	
	3µm,0.3s,baz=264,slow=2.0,SNR=18						
WRA	Warramunga Arr	27.80	161	P	P	08 22 15.1	-0.3
	0.7nm,0.7s,baz=331,slow=10,SNR=5.1						
	0.7nm,0.7s						
ASAR	Alice Springs	31.19	164	P	P	08 22 45.5	0.0
	0.3nm,0.4s,baz=355,slow=7.9,SNR=7.3						
	0.3nm,0.4s						
STKA	Stephens Creek	41.27	159	P	P	08 24 11.6	0.0
	0.9nm,0.9s,baz=345,slow=7.8,SNR=5.5						
	0.9nm,0.9s						
MKAR	Makanchi Array	54.40	325	P	P	08 25 53.1	-0.1
	0.4nm,0.5s,baz=135,slow=7.5,SNR=6.5						
	0.4nm,0.5s						
ZALV	Zalesovo Beam	57.42	333	P	P	08 26 15.0	+0.3
	0.4nm,0.4s,baz=106,slow=9.2,SNR=1.7						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	58.57	327	P	P	08 26 22.2	-0.6
	0.6nm,0.7s,baz=126,slow=6.1,SNR=2.4						
	0.6nm,0.7s						
ILAR	Eielson Array	83.26	26	P	P	08 28 53.0	+0.5
	0.5nm,0.8s,baz=266,slow=5.7,SNR=7.6						
	0.5nm,0.8s						

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*IDC **15** 08:17:33.6±0.8, 6°.42N×125°.21E, h0^{km}, mb3.8/11, mbtmp3.8/11, Error ellipse: s-maj=20.5km s-min=10.9km az=111.0*

*NEIC **15** 08:17:35.2±1.0, 6°.62N±0°.08×125°.09E±0°.07, h10^{km}±1^{km}, mb4.3/10, Error ellipse: s-maj=16.5km s-min=4.0km az=319.0*

ISC 15 08:17:34.9±0.5, **6°.55N**±0°.07×**125°.12E**±0°.08, **h10**^{km}, **n32**, σ**0^{s}97**/31, **mb4.2**/16, **Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.69	41	Pg	Pb	08 17 48.9	-0.1
	624nm,0.3s,baz=139,slow=20,SNR=1.7						
DAV				Lg	Lg	08 17 57.1	
	1µm,0.3s,baz=104,slow=23,SNR=2.2						
DAV	Davao City (W)	0.69	41		Pg	08 17 48.0	-0.3
TNTI	Ternate	6.16	159	Pn	Pn	08 19 06.8	+0.7
TOLI2	Tolitoli	6.92	219	Pn	Pn	08 19 16.5	-0.1
SBUM	Sibu	13.49	253	Pn	Pn	08 20 47.0	+0.5
DLV	Lat	17.27	289	P	Pn	08 21 35.4	-1.1
KNRA	Kununurra	22.38	171	P	P	08 22 33.5	0.0
COEN	Coen	27.13	139	P	P	08 23 19.1	+0.6
COEN				IAmb	IAmb	08 23 32.0	
	comp=Z,4.1nm,0.8s						
WB0	Warramunga Arr	27.70	161	P	P	08 23 24.9	+1.4
WB0				IAmb	IAmb	08 23 38.9	
	comp=Z,3.7nm,0.7s						
WRA	Warramunga Arr	27.85	161	P	P	08 23 23.8	-1.0
	comp=Z,0.8nm,0.6s,baz=342,slow=9.9,SNR=4.8						
	comp=Z,0.8nm,0.6s						
WRA	Warramunga Arr	27.85	161	P	P	08 23 24.4	-0.5
CMAR	Chiang Mai Arr	28.11	297	P	P	08 23 27.4	+0.1
	comp=Z,1.2nm,0.3s,baz=114,slow=12,SNR=1.5						
	comp=Z,1.2nm,0.3s						
PSA00	Pilbara Seismi	28.42	190	P	P	08 23 30.0	+0.1
PSA00				IAmb	IAmb	08 23 44.7	
	comp=Z,9.3nm,1.4s						
ASAR	Alice Springs	31.23	164	P	P	08 23 53.5	-1.4
	comp=Z,0.4nm,0.6s,baz=346,slow=9.1,SNR=8.2						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	31.23	164	P	P	08 23 54.8	-0.1
FORT	Forrest	37.22	176	P	P	08 24 46.8	+0.1
BBOO	Buckleboo	40.50	166	P	P	08 25 14.5	+0.3
BBOO				IAmb	IAmb	08 25 27.9	
	comp=Z,6.3nm,1.0s						
EIDS	Eidsvold	40.55	142	P	P	08 25 15.0	+0.3
EIDS				IAmb	IAmb	08 25 34.7	
	comp=Z,6.7nm,1.1s						
STKA	Stephens Creek	41.32	159	P	P	08 25 19.1	-1.9
	comp=Z,0.5nm,0.5s,baz=333,slow=7.7,SNR=3.7						
	comp=Z,0.5nm,0.5s						
PETK	Petropavlovsk-	53.48	24	P	P	08 26 56.1	+0.8
	comp=Z,2.1nm,0.7s,baz=204,slow=6.5,SNR=3.8						
	comp=Z,2.1nm,0.7s						
PETK	Petropavlovsk-	53.48	24	P	P	08 26 54.4	-0.9
MKAR	Makanchi Array	54.34	325	P	P	08 27 02.5	+0.7
	comp=Z,0.3nm,0.5s,baz=135,slow=7.1,SNR=8.0						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	54.34	325	P	P	08 27 00.6	-1.2
ZALV	Zalesovo Beam	57.36	333	P	P	08 27 24.6	+1.3
	comp=Z,0.3nm,0.3s,baz=110,slow=8.1,SNR=3.7						
	comp=Z,0.3nm,0.3s						
ZALV	Zalesovo Beam	57.36	333	P	P	08 27 23.0	-0.3
KURBB	Kurchatov Arra	58.52	327	P	P	08 27 33.0	+1.6
	comp=Z,0.5nm,0.7s,baz=126,slow=6.2,SNR=6.8						
	comp=Z,0.5nm,0.7s						
KURK	Kurchatov	58.52	327	P	P	08 27 31.4	0.0
KURK				IAmb	IAmb	08 27 41.7	
	comp=Z,2.5nm,0.8s						
BVAR	Borovoye Array	64.10	327	P	P	08 28 11.3	+2.1
	comp=Z,1.5nm,0.8s,baz=126,slow=9.3,SNR=6.2						
	comp=Z,1.5nm,0.8s						
ILAR	Eielson Array	83.26	26	P	P	08 30 03.1	+1.6
	comp=Z,0.6nm,0.6s,baz=240,slow=4.8,SNR=12						
	comp=Z,0.6nm,0.6s						
ILAR	Eielson Array	83.26	26	P	P	08 30 01.3	-0.3
YKA	Yellowknife Ar	97.60	24	P	Pdif	08 31 10.5	+1.0
	comp=Z,0.3nm,0.7s,baz=301,slow=5.0,SNR=5.2						
	comp=Z,0.3nm,0.7s						
YKA	Yellowknife Ar	97.60	24	P	P	08 31 08.7	-0.7

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*IDC **15** 08:20:40.3±0.7, 6°.50N×125°.23E, h0^{km}, mb4.0/18, mbtmp4.0/18, Error ellipse: s-maj=17.6km s-min=9.2km az=114.0*

*NEIC **15** 08:20:42.5±1.0, 6°.57N±0°.03×125°.37E±0°.08, h10^{km}±1^{km}, mb4.6/24, Error ellipse: s-maj=13.3km s-min=5.4km az=87.0*

ISC 15 08:20:41.8±0.5, **6°.55N**±0°.06×**125°.35E**±0°.10, **h10**^{km}, **n52**, σ**0^{s}65**/46, **mb4.2**/28, **Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.57	24	Pg	Pg	08 20 52.9	+0.1
	754nm,0.3s,baz=254,slow=8.3,SNR=8.9						
DAV				Lg	Lg	08 21 02.9	
	958nm,0.3s,baz=240,slow=21,SNR=7.3						
DAV	Davao City (W)	0.57	24	P	Pn	08 21 01.0	+5.0
TOLI2	Tolitoli	7.06	220	Pn	Pn	08 22 25.0	-0.3
LUWI	Luwuk	7.96	199	Pn	Pn	08 22 38.3	+0.6
KKM	Kota Kinabalu	9.09	267	Pn	Pn	08 22 53.6	+0.4
KNRA	Kununurra	22.34	171		P	08 25 40.2	+0.3
COEN	Coen	26.98	139	P	P	08 26 23.9	-0.1
COEN				IAmb	IAmb	08 26 39.2	
	comp=Z,8.9nm,0.9s						
WB0	Warramunga Arr	27.62	161	P	P	08 26 29.9	+0.2
WRA	Warramunga Arr	27.77	162	P	P	08 26 31.3	+0.3
	comp=Z,1.1nm,0.6s,baz=337,slow=9.9,SNR=6.0						
	comp=Z,1.1nm,0.6s						
WRA	Warramunga Arr	27.77	162	P	P	08 26 29.4	-1.6
WR8	Warramunga Arr	27.84	161	P	P	08 26 33.1	+1.5
CMAR	Chiang Mai Arr	28.31	297	P	P	08 26 35.0	-1.0
	comp=Z,0.9nm,0.3s,baz=111,slow=8.8,SNR=2.2						
	comp=Z,0.9nm,0.3s						
CMAR	Chiang Mai Arr	28.31	297	P	P	08 26 35.9	0.0
KSRS	Korea Array	30.85	4	P	P	08 26 58.4	+0.2
	comp=Z,1.5nm,0.8s,baz=188,slow=10.0,SNR=5.8						
	comp=Z,1.5nm,0.8s						
AS31	Alice Springs	31.17	165		P	08 27 02.0	+0.8
ASAR	Alice Springs	31.17	165	P	P	08 27 01.4	+0.2
	comp=Z,1.4nm,0.5s,baz=341,slow=7.5,SNR=6.1						
	comp=Z,1.4nm,0.5s						
ASAR	Alice Springs	31.17	165	P	P	08 27 00.5	-0.7
CTA	Charters Tower	33.52	143	P	P	08 27 21.8	0.0
	comp=Z,1.9nm,0.8s,baz=348,slow=14,SNR=1.8						
	comp=Z,1.9nm,0.8s						
USRK	Ussuriysk Ar.	37.95	8	P	P	08 27 59.0	-0.6
	comp=Z,2.1nm,0.7s,baz=188,slow=10,SNR=5.6						
	comp=Z,2.1nm,0.7s						
MDJ	Mudanjiang	38.10	5	P	P	08 28 01.0	+0.2
MDJ				IAmb	IAmb	08 28 10.1	
	comp=Z,18nm,1.2s						
BBOO	Buckleboo	40.45	166		P	08 28 21.0	+0.5
BBOO				IAmb	IAmb	08 28 25.9	
	comp=Z,8.4nm,0.7s						
STKA	Stephens Creek	41.24	159	P	P	08 28 26.1	-1.0
	comp=Z,2.8nm,0.9s,baz=345,slow=4.5,SNR=2.8						
	comp=Z,2.8nm,0.9s						
HILR	Hailar Array B	43.12	355	P	P	08 28 41.9	-0.4
	comp=Z,0.6nm,0.4s,baz=150,slow=12,SNR=1.9						
	comp=Z,0.6nm,0.4s						
SONM	Songino Array	44.21	342	P	P	08 28 50.5	-0.7
	comp=Z,0.7nm,1.0s,baz=152,slow=6.7,SNR=3.6						
	comp=Z,0.7nm,1.0s						
SONM	Songino Array	44.21	342	P	P	08 28 51.1	-0.1
ARMA	Armidale	44.56	147	P	P	08 28 53.9	-0.3
PETK	Petropavlovsk-	53.39	24	P	P	08 30 02.6	+1.1
	comp=Z,3.2nm,0.8s,baz=222,slow=7.6,SNR=2.5						
	comp=Z,3.2nm,0.8s						
PETK	Petropavlovsk-	53.39	24	P	P	08 30 01.6	+0.1
MK31	Makanchi Array	54.47	325		P	08 30 10.1	+0.5
MKAR	Makanchi Array	54.47	325	P	P	08 30 09.2	-0.4
	comp=Z,0.9nm,0.6s,baz=124,slow=7.9,SNR=9.7						
	comp=Z,0.9nm,0.6s						
MKAR	Makanchi Array	54.47	325	P	P	08 30 09.4	-0.2
MA2	Magadan	56.34	15	P	P	08 30 22.5	-0.3
MA2				IAmb	IAmb	08 30 26.9	
	comp=Z,11nm,1.0s						
ZALV	Zalesovo Beam	57.47	333	P	P	08 30 31.4	+0.6
	comp=Z,0.5nm,0.6s,baz=101,slow=7.5,SNR=1.7						
	comp=Z,0.5nm,0.6s						
ZALV	Zalesovo Beam	57.47	333	P	P	08 30 31.0	+0.2
KURBB	Kurchatov Arra	58.64	327	P	P	08 30 39.7	+0.5
	comp=Z,1.2nm,0.6s,baz=125,slow=6.4,SNR=5.1						
	comp=Z,1.2nm,0.6s						
KURK	Kurchatov	58.64	327	P	P	08 30 39.0	-0.1
KURK				IAmb	IAmb	08 30 52.9	
	comp=Z,9.2nm,1.4s						
GAR	Garm	59.02	312	P	P	08 30 42.7	+0.5
BVAR	Borovoye Array	64.22	327	P	P	08 31 18.0	+1.1
	comp=Z,0.6nm,0.6s,baz=123,slow=7.6,SNR=3.6						
	comp=Z,0.6nm,0.6s						
AB31	Akbulak array	69.11	320		P	08 31 47.8	-0.4
AB31				IAmb	IAmb	08 31 59.4	
	comp=Z,4.8nm,1.4s						
RAYN	Ar Rayn	78.12	293		P	08 32 41.5	-0.3
RAYN				IAmb	IAmb	08 32 44.9	
	comp=Z,5.1nm,1.1s						
C19K	Lookout Ridge	78.60	21	IAmb	IAmb	08 32 48.0	
	comp=Z,11nm,1.4s						
E19K	Redstone River	79.17	23	P	P	08 32 47.2	+0.6
E19K				IAmb	IAmb	08 32 56.7	
	comp=Z,5.6nm,1.1s						
B20K	Meade River	79.61	20	IAmb	IAmb	08 32 53.2	
	comp=Z,5.6nm,1.1s						
B22K	Teshekpuk Lake	80.92	20	IAmb	IAmb	08 33 00.2	
	comp=Z,5.7nm,0.9s						
ILAR	Eielson Array	83.17	26	P	P	08 33 09.1	+1.1
	comp=Z,1.1nm,0.7s,baz=238,slow=4.7,SNR=17						
	comp=Z,1.1nm,0.7s						
ILAR	Eielson Array	83.17	26	P	P	08 33 08.0	0.0
I28M	Miner Creek	86.06	25	IAmb	IAmb	08 33 27.4	
	comp=Z,5.5nm,0.8s						
BRTR	Keskin Array B	87.17	309	P	P	08 33 28.4	-0.4
	comp=Z,0.4nm,0.4s,baz=57,slow=5.3,SNR=1.7						
	comp=Z,0.4nm,0.4s						
BRTR	Keskin Array B	87.17	309	P	P	08 33 28.1	-0.6
YKA	Yellowknife Ar	97.51	24	P	Pdif	08 34 17.1	+1.2
	comp=Z,0.3nm,0.8s,baz=293,slow=5.7,SNR=3.6						
	comp=Z,0.3nm,0.8s						
YKA	Yellowknife Ar	97.51	24	P	P	08 34 15.3	-0.5
GERES	GERESS Array B	99.03	322	P	Pdif	08 34 24.2	+1.0
	comp=Z,0.3nm,0.4s,baz=95,slow=5.5,SNR=1.5						
	comp=Z,0.3nm,0.4s						

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*IDC **15** 08:21:39.1±0.6, 24°.18S×69°.82E, h0^{km}, mb4.2/15, mbtmp4.2/15, Error ellipse: s-maj=20.9km s-min=16.6km az=65.0*

*NEIC **15** 08:21:40.4±1.1, 24°.18S±0°.06×69°.8E±0°.1, h10^{km}±1^{km}, mb4.6/23, Error ellipse: s-maj=21.6km s-min=8.7km az=255.0*

ISC 15 08:21:40.2±0.5, **24°.2S**±0°.1×**69°.8E**±0°.1, **h10**^{km}, **n56**, σ**0^{s}62**/48, **mb4.4**/25, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	16.63	9	T	T	08 42 38.6	
	baz=190,slow=76						
H08S2	Diego Garcia H	16.64	9	T	T	08 42 40.7	
	baz=190,slow=76						
H08S3	Diego Garcia H	16.65	9	T	T	08 42 43.4	
	baz=190,slow=76						
ABPO	Ambohimpanom	21.61	279	P	P	08 26 29.6	-1.2
OPO	Ambohidratompo	21.78	280	P	P	08 26 34.2	+1.5
	2.0nm,0.8s,baz=124,slow=12,SNR=4.3						
	2.0nm,0.8s						
MSEY	Mahe Island	23.80	322	P	P	08 26 53.8	+0.3
H04N2	CROZET ISLANDS	26.30	209	T	T	08 54 39.2	
	baz=39,slow=75						
H04N1	CROZET ISLANDS	26.31	209	T	T	08 54 28.1	
	baz=39,slow=75						
H04N3	CROZET ISLANDS	26.32	209	T	T	08 54 34.3	
	baz=39,slow=75						
H01W2	Cape Leeuwin H	39.73	116	T	T	09 11 21.2	
	baz=273,slow=75,SNR=49						
H01W3	Cape Leeuwin H	39.73	116	T	T	09 11 21.7	
	baz=273,slow=75,SNR=46						
H01W1	Cape Leeuwin H	39.75	116	T	T	09 11 22.8	
	baz=273,slow=75,SNR=62						
BOSA	Boshof	39.99	254	P	P	08 29 16.5	+1.0
	2.5nm,0.8s,baz=96,slow=12,SNR=1.9						
	2.5nm,0.8s						
BOSA	Boshof	39.99	254	P	P	08 29 15.0	-0.4
LODK	Lodwar	43.31	305	P	P	08 29 42.6	-0.1
KGCAE	Kacgae	43.51	262	P	P	08 29 43.3	-1.0
KGCAE				IAmb	IAmb	08 29 56.5	
	comp=Z,16nm,1.1s						
CMAR	Chiang Mai Arr	51.02	36	P	P	08 30 44.0	+1.3
	comp=Z,0.5nm,0.3s,baz=244,slow=6.2,SNR=5.0						
	comp=Z,0.5nm,0.3s						
CMAR	Chiang Mai Arr	51.02	36	P	P	08 30 42.0	-0.7
ASAR	Alice Springs	58.10	104	P	P	08 31 35.0	+0.8
	comp=Z,1.9nm,0.8s,baz=254,slow=6.6,SNR=15						
ASAR				PcP	PcP	08 32 26.0	-0.1
	comp=Z,0.5nm,0.8s,baz=261,slow=3.5,SNR=4.2						
	comp=Z,1.9nm,0.8s						
ASAR	Alice Springs	58.10	104	P	P	08 31 34.4	+0.1
KBL	Kabul	58.40	359	P	P	08 31 36.4	+0.2
KBL				IAmb	IAmb	08 31 44.7	
	comp=Z,5.7nm,0.7s						
WRA	Warramunga Arr	59.49	100	P	P	08 31 44.8	+0.8
	comp=Z,2.4nm,0.9s,baz=254,slow=6.9,SNR=9.1						
	comp=Z,2.4nm,0.9s						
WRA	Warramunga Arr	59.49	100	P	P	08 31 44.2	+0.2
WRAB	Tennant Creek	59.51	100	P	P	08 31 44.1	0.0
WRAB				IAmb	IAmb	08 31 54.2	
	comp=Z,6.0nm,1.1s						
WB0	Warramunga Arr	59.59	100	P	P	08 31 44.1	-0.6
WB0				IAmb	IAmb	08 31 52.2	
	comp=Z,6.0nm,1.1s						
WR8	Warramunga Arr	59.63	100	P	P	08 31 43.4	-1.5
MANEM	Manem	61.41	2	P	P	08 31 56.2	-0.7
MANEM				IAmb	IAmb	08 32 05.3	
	comp=Z,7.5nm,0.8s						
STKA	Stephens Creek	62.81	115	P	P	08 32 06.3	-0.1
	comp=Z,2.4nm,0.9s,baz=246,slow=1.5,SNR=3.3						
	comp=Z,2.4nm,0.9s						
STKA	Stephens Creek	62.81	115	P	P	08 32 05.7	-0.6
INKA	Innaminka	63.06	110	P	P	08 32 07.9	-0.2
INKA				IAmb	IAmb	08 32 10.3	
	comp=Z,3.6nm,0.8s						
QSPA	South Pole Qui	65.95	180	P	P	08 32 26.7	+0.2
	comp=Z,2.7nm,0.8s,baz=283,slow=1.8,SNR=8.7						
	comp=Z,2.7nm,0.8s						
QSPA	South Pole Qui	65.95	180	P	P	08 32 26.5	+0.1
TARG	Taragay, Kyrgy	65.99	7	P	P	08 32 26.8	-0.4
KKAR	Karatay Array	66.95	1		P	08 32 32.8	-0.1
VNDA	Vanda	67.02	166	P	P	08 32 33.1	+0.1
	comp=Z,3.3nm,0.9s,baz=285,slow=7.2,SNR=8.2						
	comp=Z,3.3nm,0.9s						
VNDA	Vanda	67.02	166	P	P	08 32 33.2	+0.3
VNDA				IAmb	IAmb	08 32 40.6	
	comp=Z,5.5nm,1.1s						
MKAR	Makanchi Array	71.53	9	P	P	08 33 01.4	+0.2
	comp=Z,2.3nm,0.9s,baz=190,slow=6.0,SNR=10						
	comp=Z,2.3nm,0.9s						
MKAR	Makanchi Array	71.53	9	P	P	08 33 01.1	-0.1
BRTR	Keskin Array B	71.98	331	P	P	08 33 04.0	-0.2
	comp=Z,1.1nm,0.8s,baz=163,slow=9.0,SNR=5.3						
	comp=Z,1.1nm,0.8s						
BRTR	Keskin Array B	71.98	331	P	P	08 33 03.5	-0.8
AB31	Akbulak array	73.63	353	P	P	08 33 14.0	+0.4
AB31				IAmb	IAmb	08 33 14.9	
	comp=Z,6.5nm,1.1s						
ABKAR	Akbulak array	73.63	353	P	P	08 33 13.6	+0.1
KURBB	Kurchatov Arra	74.86	6	P	P	08 33 21.5	+0.7
	comp=Z,1.7nm,0.9s,baz=202,slow=6.4,SNR=7.0						
	comp=Z,1.7nm,0.9s						
KURK	Kurchatov	74.97	6		P	08 33 21.0	-0.3
KURK				IAmb	IAmb	08 33 29.3	
	comp=Z,4.9nm,1.1s						
BVAR	Borovoye Array	76.87	0	P	P	08 33 32.4	+0.2
	comp=Z,2.9nm,0.8s,baz=165,slow=7.0,SNR=10						
	comp=Z,2.9nm,0.8s						
SONM	Songino Array	78.86	24	P	P	08 33 44.0	+0.4
	comp=Z,1.8nm,1.0s,baz=206,slow=5.8,SNR=9.7						
	comp=Z,1.8nm,1.0s						
SONM	Songino Array	78.86	24	P	P	08 33 43.5	0.0
SONM				IAmb	IAmb	08 33 51.4	
	comp=Z,4.6nm,1.2s						
ZAA0	Zalesovo Array	78.87	9	P	P	08 33 42.8	-0.5
ZAA0				IAmb	IAmb	08 33 44.4	
	comp=Z,3.8nm,0.9s						
ZALV	Zalesovo Beam	78.87	9	P	P	08 33 43.8	+0.5
	comp=Z,3.4nm,0.9s,baz=205,slow=3.1,SNR=10						
	comp=Z,3.4nm,0.9s						
ZALV	Zalesovo Beam	78.87	9	P	P	08 33 43.0	-0.3
ULN	Ulaanbaatar	79.13	25	P	P	08 33 44.8	-0.3
ULN				IAmb	IAmb	08 33 53.2	
	comp=Z,13nm,1.5s						
AKASG	Malin Array Be	82.72	335	P	P	08 34 04.5	+0.6
	comp=Z,2.4nm,0.8s,baz=144,slow=4.5,SNR=8.5						
	comp=Z,2.4nm,0.8s						
AKASG	Malin Array Be	82.72	335	P	P	08 34 03.5	-0.5
AKASG				IAmb	IAmb	08 34 05.3	
	comp=Z,3.5nm,1.2s						
AKBB	Malin Array Si	82.72	335	P	P	08 34 03.9	0.0
AKBB				IAmb	IAmb	08 34 06.3	
	comp=Z,3.9nm,0.9s						
YKA	Yellowknife Ar	141.58	3	PKP	PKPdf	08 41 11.8	+0.6
	comp=Z,0.7nm,0.9s,baz=332,slow=2.7,SNR=5.6						
NVAR	Mina Array Bea	164.20	24	PKPab	PKPab	08 42 38.3	+0.2
	comp=Z,0.7nm,0.7s,baz=310,slow=5.2,SNR=4.2						

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*IDC **15** 08:24:00.9±4.2, 24°.64S×69°.16E, h0^{km}, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=129.3km s-min=32.4km az=50.0*

ISC 15 08:24:03.5±4.1, **24°.5S**±0°.5×**69°.3E**±0°.7, **h10**^{km}, **n13**, σ**0^{s}92**/7, **mb3.8**/7, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	17.05	11	T	T	08 45 03.0	
	baz=191						
H08S2	Diego Garcia H	17.05	11	T	T	08 45 02.8	
	baz=191						
H08S3	Diego Garcia H	17.07	11	T	T	08 45 03.7	
	baz=191						
H04N2	CROZET ISLANDS	25.79	209	T	T	08 56 57.1	
	baz=39						
H04N1	CROZET ISLANDS	25.80	209	T	T	08 56 57.9	
	baz=39						
H04N3	CROZET ISLANDS	25.81	209	T	T	08 56 56.8	
	baz=39						
CMAR	Chiang Mai Arr	51.55	37	P	P	08 33 10.4	+0.4
	1.7nm,0.3s,baz=201,slow=6.5,SNR=1.3						
	1.7nm,0.3s						
ASAR	Alice Springs	58.44	104	P	P	08 34 00.5	+0.6
	0.5nm,0.7s,baz=252,slow=7.3,SNR=4.0						
	0.5nm,0.7s						
WRA	Warramunga Arr	59.87	100	P	P	08 34 09.1	-0.8
	0.9nm,0.9s,baz=247,slow=6.6,SNR=4.7						
	0.9nm,0.9s						
MKAR	Makanchi Array	71.94	9	P	P	08 35 25.5	-1.4
	0.7nm,0.8s,baz=200,slow=6.4,SNR=4.0						
	0.7nm,0.8s						
KURBB	Kurchatov Arra	75.25	6	P	P	08 35 46.2	0.0
	0.5nm,0.8s,baz=199,slow=6.3,SNR=2.5						
	0.5nm,0.8s						
BVAR	Borovoye Array	77.22	1	P	P	08 35 58.0	+0.5
	0.5nm,0.5s,baz=168,slow=7.4,SNR=3.7						
	0.5nm,0.5s						
ZALV	Zalesovo Beam	79.28	9	P	P	08 36 08.9	+0.1
	0.2nm,0.3s,baz=176,slow=5.5,SNR=1.6						
	0.2nm,0.3s						

GCG 15 08:25:53.0±0.5, **15°.57N**×**91°.48W**, **h7**^{km}±4^{km}, **MD3.6, ML2.3**, **Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUEH	Huehuetenango	0.26	184	*i* P	Pb	08 25 59.2	-0.9
HUEH				*i* S	Sb	08 26 04.3	-0.5
HUEH				IAML		08 26 04.7	
	comp=N,546nm,0.4s						
QUIS	Sacapulas	0.47	127	*e*P	Pb	08 26 03.0	-0.7
QUIS				*e*S	Sb	08 26 10.8	-0.2
STG8	El Palmar, Qui	1.12	173	*i* P	Pg	08 26 09.0	-5.6
STG8				IAML		08 26 25.9	
	comp=N,86nm,0.1s						
STG5	El Palmar, Qui	1.17	174	*i* P	Pg	08 26 10.4	-5.1
STG5				*e*S	Sg	08 26 23.3	-7.4

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*TIR **15** 08:28:54.7, 41°.43N×19°.49E, h12^{km}±2^{km}, Ml2.4/4*

*THE **15** 08:28:56.6, 41°N±13°×1°9E±1°2, h12^{km}, M2.6/8, MLh2.6/8*

*PDG **15** 08:28:58.4±0.3, 41°.54N×19°.52E, h12^{km}±1^{km}, ML2.6/12, Error ellipse: s-maj=1.4km s-min=1.7km az=0.0*

ISC 15 08:28:56.0±1.2, **41°.43N**±0°.03×**19°.51E**±0°.03, **h3**^{km}±10^{km}, **n29**, σ**0^{s}84**/50, **7C-6D**, **Albania**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.28	106	⇓Pg	Pg	08 29 01.6	+0.2
TIR				Sg	Sg	08 29 05.3	+0.3
TIR				AML	AML	08 29 06.1	
	2.3nm,0.2s						
TIR				AML	AML	08 29 07.0	
	2.5nm,0.2s						
ULC	Ulcinj	0.57	340	⇓*i*Pg	Pg	08 29 07.0	0.0
ULC				*i* Sg	Sg	08 29 15.4	+0.9
PHP	Peshkopia	0.75	69	Pg	Pg	08 29 09.7	-0.6
PHP				Sg	Sg	08 29 20.0	0.0
PHP				AML	AML	08 29 23.6	
	0.6nm,0.2s						
DRME	Dracevica, Mon	0.80	342	⇓*i*Pg	Pg	08 29 11.7	+0.4
DRME				*e*Sg	Sb	08 29 23.4	-0.3
BUM	Brajici-Budva	0.99	333	⇓*i*Pg	Pg	08 29 14.9	0.0
BUM				*i* Sg	Sb	08 29 29.8	+0.6
PDG	Podgorica	1.02	349	Pg	Pg	08 29 13.9	-1.7
PDG				Sg	Sb	08 29 29.6	-0.5
PDG	Podgorica	1.02	349	⇑*i*Pg	Pb	08 29 16.3	0.0
PDG				*i* Sg	Sn	08 29 31.0	-1.0
CEME	Cevo	1.20	339	⇑*i*Pg	Pb	08 29 19.4	-0.1
CEME				*e*Sg	Sn	08 29 37.2	+0.6
PVY	Plav	1.22	16	⇑*i*Pg	Pg	08 29 18.8	-0.5
PVY				*i* Sg	Sn	08 29 36.7	-0.3
HCY	Herceg Novi	1.27	324	⇑*i*Pg	Pg	08 29 20.0	-0.4
HCY				*i* Sg	Sn	08 29 39.9	+1.7
NKME	Niksic	1.40	343	⇑*i*Pg	Pn	08 29 22.1	-0.4
NKME				*e*Sg	Sn	08 29 42.6	+1.1
KOME	Kolasin	1.42	0	⇓*i*Pg	Pn	08 29 22.8	0.0
KOME				*e*Sg	Sn	08 29 43.4	+1.3
IVA	Berane	1.47	11	⇑*i*Pg	Pn	08 29 22.8	-0.7
IVA				*i* Sg	Sn	08 29 44.4	+1.1
NEST	Nestorio	1.54	130	Pn	Pn	08 29 25.1	+0.6
NEST				Sn	Sg	08 29 45.9	+0.3
NEST				AML	AML	08 29 50.6	
	0.2nm,0.4s						
NEST	Nestorio	1.54	130	P	Pn	08 29 25.1	+0.6
NEST				S	Sg	08 29 45.9	+0.3
BRY	Bratogost	1.64	334	⇓*i*Pg	Pb	08 29 26.9	-0.1
BRY				*i* Sg	Sg	08 29 49.6	+0.8
PENT	Pentalofos	1.74	134	P	Pn	08 29 27.6	+0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PENT				S	Sb	08 29 51.1	+0.1
UPM	Unac-Piva	1.83	346	⇑iPn	Pn	08 29 29.0	+0.5
UPM				i Sn	Sb	08 29 53.2	-0.4
NOCI	Noci	1.95	252	Pn	Pn	08 29 30.3	+0.3
NOCI				Sn	Sb	08 29 57.6	+0.7
NOCI				AML	AML	08 30 00.8	
	0.1nm,0.2s						
IGT	Igoumenitsa	1.99	161	Pn	Pn	08 29 32.1	+1.5
IGT				Sn	Sb	08 29 58.8	+0.8
IGT	Igoumenitsa	1.99	161	P	Pn	08 29 30.0	-0.5
IGT				S	Sn	08 29 54.6	-1.3
KPRO	Kipourio	2.04	136	P	Pn	08 29 31.7	+0.5
GRG	Griva	2.23	101	P	Pn	08 29 33.7	-0.1
TETR	Tetrakomo, Epi	2.48	146	P	Pn	08 29 36.7	-0.5
THL	Klokotos Trika	2.67	133	P	Pn	08 29 39.5	-0.2
KKB	Krupnik	2.75	80	P	Pn	08 29 40.5	-0.4
AMPL	Ampelaki	2.82	152	P	Pn	08 29 40.9	-1.1
SGRT	San Giovanni R	2.84	278	Pn	Pn	08 29 39.9	-2.4
EVGI	Lefkada island	2.94	162	P	Pn	08 29 42.1	-1.4

IDC ***15*** *08:31:57.1±8.0, 38°.77N×49°.02E, h0km, mb3.9/5, mbtmp3.8/6, ML3.0/1, MS4.2/1, Error ellipse: s-maj=152.2km s-min=20.2km az=15.0*

AZER ***15*** *08:32:03.6, 38°.99N×48°.85E, h38km, ml3.3*

TEH ***15*** *08:32:03.5, 38°.95N×48°.95E, h40km*

NNC ***15*** *08:32:09.8±6.4, 39°.63N×49°.63E, h18km±80km, mb3.7, Error ellipse: s-maj=85.3km s-min=47.7km az=74.0*

ISC 15 08:32:03.5±0.8**, 38°.93N**±0°.03×**48°.91E**±0°.03**, h46**km±8km**, n67, σ1s77**/98**, mb3.6**/4**, 2C-2D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LKRN	Lenkeran, Azer	0.25	205	P	Pn	08 32 12.8	+1.1
LKRN				S	Sn	08 32 19.4	+1.9
LKRN	Lenkeran, Azer	0.25	205	Pg	Pn	08 32 12.8	+1.1
ASTR	Astara	0.38	194	P	Pn	08 32 14.2	+1.1
ASTR				S	Sn	08 32 22.0	+2.1
ASTR	Astara	0.38	194	Pg	Pn	08 32 14.2	+1.1
GLBA	Clilabad	0.51	308	P	Pn	08 32 15.1	+0.4
GLBA				S	Sn	08 32 23.7	+1.2
YRD	Yardimli	0.52	268	P	Pn	08 32 15.6	+0.5
YRD				S	Sn	08 32 24.1	+0.9
YRD	Yardimli	0.52	268	Pg	Pn	08 32 15.5	+0.5
LRK	Lerik	0.53	237	P	Pn	08 32 15.9	+0.7
LRK				S	Sn	08 32 24.9	+1.5
LRK	Lerik	0.53	237	Pg	Pn	08 32 15.8	+0.7
GAS1	Astara - Iran	0.55	186	Pg	Pn	08 32 15.9	+0.8
SAAT	Saatly	1.00	338	P	Pn	08 32 22.7	+1.6
SAAT				S	Sn	08 32 37.4	+3.3
SAAT	Saatly	1.00	338	Pg	Pn	08 32 22.7	+1.6
ALIB	&Aumlli-Bayram	1.03	4	P	Pn	08 32 23.3	+1.8
ALIB				S	Sn	08 32 37.0	+2.3
ALIB	&Aumlli-Bayram	1.03	4	Pg	Pn	08 32 23.6	+2.1
BLQ	Beylaqan	1.31	307	P	Pn	08 32 25.7	+0.3
BLQ				S	Sn	08 32 43.1	+1.4
BLQ	Beylaqan	1.31	307	Pg	Pn	08 32 25.7	+0.3
QRD	Qoradiz	1.34	294	P	Pn	08 32 26.6	+0.8
QRD				S	Sn	08 32 43.2	+0.7
QRD	Qoradiz	1.34	294	Pg	Pn	08 32 26.6	+0.8
ISRB	Sarab	1.48	222	Pg	Pn	08 32 30.0	+2.1
KDMR	Kurdemir	1.55	339	Pn	Pn	08 32 29.4	+0.8
KDMR				Sn	Sn	08 32 48.9	+1.5
KDMR	Kurdemir	1.55	339	Pg	Pn	08 32 29.4	+0.8
IHRS	Heris	1.59	248	Pg	Pn	08 32 31.0	+1.6
GOBA	Gobu	1.60	23	Sn	Sn	08 32 54.1	+5.4
GBS	Qobustan	1.60	1	Pn	Pn	08 32 31.5	+2.1
GBS				Sn	Sn	08 32 51.2	+2.3
ZRD	Zardab	1.65	325	Pn	Pn	08 32 31.2	+1.3
ZRD				Sn	Sn	08 32 52.3	+2.4
AGDM	Agdam	1.82	311	Pn	Pn	08 32 33.2	+0.8
AGDM				Sn	Sn	08 32 55.9	+1.6
NDR	Nardaran	1.84	26	Sn	Sn	08 32 58.5	+3.7
PQL	Pirkuli	1.87	353	Pn	Pn	08 32 34.4	+1.2
PQL				Sn	Sn	08 32 56.5	+0.8
BRDA	Brd	1.89	315	Pn	Pn	08 32 35.0	+1.8
BRDA				Sn	Sn	08 32 57.4	+1.6
ATGJ	Altiaghaj	1.93	1	Pn	Pn	08 32 35.9	+2.0
ATGJ				Sn	Sn	08 33 00.2	+3.2
IML	Ismayilli	1.94	343	Pn	Pn	08 32 34.7	+0.7
IML				Sn	Sn	08 32 57.6	+0.3
IHSH	Hashtrud	2.08	219	Pn	Pn	08 32 37.8	+1.6
SIZA	Siyzn	2.14	360	Pn	Pn	08 32 38.5	+1.7
SIZA				Sn	Sn	08 33 05.4	+3.1
QBL	Gabala	2.17	338	Pn	Pn	08 32 38.0	+0.8
QBL				Sn	Sn	08 33 02.7	-0.3
ORD	Ordubad	2.28	271	Pn	Pn	08 32 40.6	+1.9
ORD				Sn	Sn	08 33 08.3	+2.8
XNQ	Khinaliq	2.31	345	Pn	Pn	08 32 39.6	+0.3
XNQ				Sn	Sn	08 33 06.4	-0.2
JIR1	Jirandeh	2.33	162	Pn	Pn	08 32 39.7	+0.2
QUBA	Quba, Azerbaij	2.44	353	Pn	Pn	08 32 42.2	+1.3
QUBA				Sn	Sn	08 33 11.6	+2.0
SEKA	Sheki	2.63	330	Pn	Pn	08 32 43.7	+0.2
SEKA				Sn	Sn	08 33 13.7	-0.5
QSAR	Qusar	2.63	349	Pn	Pn	08 32 44.8	+1.3
QSAR				Sn	Sn	08 33 14.7	+0.6
GANJ	Ganja	2.63	311	Pn	Pn	08 32 43.6	+0.1
GANJ				Sn	Sn	08 33 14.1	0.0
SBZ	Shahbuz	2.65	281	Pn	Pn	08 32 45.8	+2.0
SBZ				Sn	Sn	08 33 17.6	+2.8
ISHB	Shabestar	2.66	257	Pn	Pn	08 32 44.6	+0.5
NAX	Nakhchivan	2.67	276	Pn	Pn	08 32 46.3	+2.2
NAX				Sg	Sn	08 33 25.2	+10
VSHL	Vashlovani	3.00	321	P	Pn	08 32 50.2	+1.7
VSHL				S	Sn	08 33 24.9	+1.7
GDB	GEDABAY	3.02	307	Pn	Pn	08 32 50.1	+1.2
GDB				Sn	Sn	08 33 24.4	+0.5
ZKTA	Zakatala	3.22	328	Pn	Pn	08 32 52.9	+1.4
ZKTA				Sn	Sn	08 33 28.4	-0.3
HYR	Heyderabad	3.25	285	Pn	Pn	08 32 54.1	+2.1
HYR				Sn	Sn	08 33 33.1	+3.7
QABG	Abgarm-Qazvin	3.26	170	Pn	Pn	08 32 53.7	+1.3
QZX	Qazax, Azerbai	3.45	309	Pn	Pn	08 32 56.1	+1.4
QZX				Sn	Sn	08 33 34.8	+0.5
DGRG	David-gareji	3.70	314	P	Pn	08 32 59.9	+1.8
IPRN	Peran	3.82	134	Pn	Pn	08 33 00.7	+0.8
IALA	Alasht	4.21	131	Pn	Pn	08 33 06.5	+1.1
IGLO	Ghaloghah	4.59	120	Pn	Pn	08 33 11.5	+0.9
IKIA	Kiasar	4.67	124	Pn	Pn	08 33 12.8	+1.2
ALIG	Mtskhetisjvari	5.11	310	P	Pn	08 33 19.5	+1.9
ISFB	Sefidab	5.30	149	Pn	Pn	08 33 22.3	+2.1
KBZ	Khabaz	6.59	319	Pn	Pn	08 33 40.5	+2.7
	0.3nm,0.3s,baz=142,slow=12,SNR=6.3						
KBZ				Sn	Sn	08 35 01.0	+10
	0.2nm,0.3s,baz=227,slow=2.0,SNR=2.4						
KBZ				LR	LR	08 36 47.0	
	comp=Z,2μm,21.6s,baz=336,slow=43						
	1.6nm,0.6s						
AB31	Akbulak array	13.00	34	Pn	Pn	08 35 01.2	-4.1
	0.4nm,0.3s,baz=204,slow=12,SNR=43						
AB31				⇓Sn	Sn	08 37 18.5	-10
	0.6nm,0.4s,baz=222,slow=24,SNR=8.1						
AKTO	Aktyubinsk	13.19	26	⇑Pn	Pn	08 35 04.4	-3.5
	2.2nm,0.8s						
AKTO				⇑Sn	Sn	08 37 20.1	-13
	1.8nm,0.5s						
KK31	Karatay Array	16.82	69	P	Pn	08 35 53.8	-1.8
	1.0nm,0.6s,baz=268,slow=15,SNR=6.3						
BVA0	Borovoye Array	20.42	39	⇓P	P	08 36 36.3	-0.3
	3.2nm,0.9s,baz=228,slow=10,SNR=8.0						
BVAR	Borovoye Array	20.42	39	P	P	08 36 36.1	-0.4
	2.0nm,0.6s,baz=230,slow=9.7,SNR=12						
	2.0nm,0.6s						
KURBB	Kurchatov Arra	23.89	51	P	P	08 37 13.1	+0.4
	1.3nm,0.6s,baz=258,slow=9.1,SNR=7.4						
	1.3nm,0.6s						
MKAR	Makanchi Array	25.55	61	P	P	08 37 27.2	-0.7
	1.6nm,0.8s,baz=267,slow=7.6,SNR=7.6						
	1.6nm,0.8s						
FINES	FINESS Array B	26.59	335	P	P	08 37 38.8	+1.8
	5.2nm,1.1s,baz=134,slow=8.3,SNR=2.2						
	5.2nm,1.1s						
ZALV	Zalesovo Beam	28.57	46	P	P	08 37 55.0	+0.1
	0.5nm,0.3s,baz=251,slow=10,SNR=3.2						
	0.5nm,0.3s						

IDC 15 08:34:20.4±1.4**, 6°.48N**×**125°.25E, h0**km**, mb3.3**/4**, mbtmp3.3**/4**, Error ellipse: s-maj=37.2km s-min=9.5km az=110.0, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.68	29	Pg	Pg	08 34 33.3	-0.1
	324nm,0.3s,baz=257,slow=8.1,SNR=17						
DAV				Lg	Lg	08 34 43.0	
	260nm,0.3s,baz=57,slow=22,SNR=18						
DAV	Davao City (W)	0.68	29	P	Pn	08 34 40.0	+2.7
WRA	Warramunga Arr	27.73	161	P	P	08 40 12.0	+1.1
	0.3nm,0.5s,baz=342,slow=9.4,SNR=2.5						
	0.3nm,0.5s						
ASAR	Alice Springs	31.13	165	P	P	08 40 41.2	+0.2
	0.1nm,0.5s,baz=343,slow=8.4,SNR=5.0						
	0.1nm,0.5s						
STKA	Stephens Creek	41.20	159	P	P	08 42 05.8	-1.3
	0.6nm,0.7s,baz=338,slow=11,SNR=3.1						
	0.6nm,0.7s						
KURBB	Kurchatov Arra	58.65	327	P	P	08 44 19.4	-0.1
	0.6nm,0.8s,baz=117,slow=5.3,SNR=3.8						
	0.6nm,0.8s						

IDC 15 08:35:32.3±1.3**, 6°.38N**×**125°.43E, h0**km**, mb3.5**/4**, mbtmp3.5**/4**, Error ellipse: s-maj=48.6km s-min=10.2km az=95.0, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.70	12	Pg	Pg	08 35 45.6	-0.2
	435nm,0.3s,baz=52,slow=21,SNR=4.7						
DAV				Lg	Lg	08 35 55.6	
	279nm,0.3s,baz=224,slow=21,SNR=1.8						
WRA	Warramunga Arr	27.59	162	P	P	08 41 22.5	+1.0
	0.5nm,0.7s,baz=339,slow=10,SNR=4.7						
	0.5nm,0.7s						
ASAR	Alice Springs	30.99	165	P	P	08 41 50.6	-1.0
	0.4nm,0.5s,baz=343,slow=7.2,SNR=6.7						
	0.4nm,0.5s						
STKA	Stephens Creek	41.05	159	P	P	08 43 17.5	-0.2
	0.6nm,0.8s,baz=314,slow=8.6,SNR=4.5						
	0.6nm,0.8s						
MKAR	Makanchi Array	54.66	325	P	P	08 45 03.4	+0.2
	0.5nm,0.8s,baz=116,slow=8.2,SNR=4.2						
	0.5nm,0.8s						

IDC ***15*** *08:43:09.8±1.0, 6°.60N×125°.10E, h0km, mb3.5/7, mbtmp3.5/7, Error ellipse: s-maj=23.5km s-min=9.7km az=128.0*

ISC 15 08:43:11.3±1.0**, 6°.6N**±0°.1×**125°.1E**±0°.2**, h10**km**, n8, σ1s02**/8**, mb3.5**/7**, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.61	45	Pg	Pg	08 43 23.5	+0.2
	266nm,0.3s,baz=243,slow=3.9,SNR=10						
DAV				Lg	Lg	08 43 31.4	
	1μm,0.3s,baz=314,slow=22,SNR=17						
WRA	Warramunga Arr	27.92	161	P	P	08 49 00.7	-1.2
	0.2nm,0.6s,baz=330,slow=11,SNR=1.9						
	0.2nm,0.6s						
ASAR	Alice Springs	31.31	164	P	P	08 49 31.3	-0.7
	0.3nm,0.6s,baz=339,slow=7.0,SNR=7.5						
	0.3nm,0.6s						
STKA	Stephens Creek	41.39	159	P	P	08 50 59.1	+1.2
	0.9nm,0.8s,baz=355,slow=11,SNR=3.2						
	0.9nm,0.8s						
PETK	Petropavlovsk-	53.39	24	P	P	08 52 30.2	-0.9
	1.1nm,0.6s,baz=230,slow=8.2,SNR=1.5						
	1.1nm,0.6s						
MKAR	Makanchi Array	54.29	325	P	P	08 52 38.8	+0.9
	0.4nm,0.9s,baz=128,slow=6.3,SNR=3.6						
	0.4nm,0.9s						
KURBB	Kurchatov Arra	58.46	327	P	P	08 53 07.0	-0.5
	0.3nm,0.6s,baz=129,slow=7.3,SNR=1.7						
	0.3nm,0.6s						
ILAR	Eielson Array	83.18	26	P	P	08 55 37.8	+0.2
	0.3nm,0.8s,baz=237,slow=5.2,SNR=6.5						
	0.3nm,0.8s						

IDC ***15*** *08:48:18.3±0.8, 6°.81N×73°.01W, h159km±17km, mb3.2/3, mbtmp3.8/5, Error ellipse: s-maj=49.5km s-min=7.7km az=132.0*

RSNC ***15*** *08:48:18.7±0.0, 7°N±1°×7°3W±°, h146km±1km, M3.3, mb3.7, ML3.0*

ISC 15 08:48:17.5±0.8**, 6°.84N**±0°.03×**73°.10W**±0°.04**, h151**km±6km**, n39, σ1s30**/71**, mb3.5**/3**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.26	198	P	Pn	08 48 38.5	+0.1
BARC				S	Sn	08 48 53.0	-1.2
PAMC	Pamplona, Colo	0.63	39	P	Pn	08 48 41.2	+0.9
PAMC				S	Sn	08 48 58.1	+0.5
BRJC	Barrancabermej	0.65	281	P	Pn	08 48 40.1	+0.3
BRJC				S	Sn	08 48 56.9	+0.2
RUSC	La Rusia	0.95	179	P	Pn	08 48 42.4	-0.1
RUSC				S	Sn	08 49 00.9	-0.7
PTBC	PUERTO BERRIO,	1.38	257	P	Pn	08 48 44.9	-1.1
PTBC				S	Sn	08 49 05.8	-1.9
OCAC	Ocana	1.40	351	P	Pn	08 48 46.7	+0.4
OCAC				S	Sn	08 49 08.5	+0.1
SPBC	San Pablo de B	1.53	219	P	Pn	08 48 47.3	-0.3
CHIC	Chingaza	2.29	196	P	Pn	08 48 56.4	-0.2
CHIC				S	Sn	08 49 26.4	-0.2
ROSC	El Rosal	2.33	211	P	Pn	08 48 58.7	+1.6
	97nm,0.3s,baz=31,slow=18,SNR=168						
ROSC				S	Sn	08 49 29.9	+2.4
	176nm,0.3s,baz=343,slow=22,SNR=13						
ROSC	El Rosal	2.33	211	P	Pn	08 48 58.3	+1.2
ROSC				S	Sn	08 49 29.1	+1.6
CVER	Cruz Verde, Cu	2.50	203	P	Pn	08 48 59.5	+0.3
CVER				S	Sn	08 49 32.7	+1.4
UREC	San Jos de Ur	2.58	291	P	Pn	08 48 58.9	-0.8
UREC				S	Sn	08 49 30.1	-2.0
GUY2C	Guyana, Caldas	2.77	235	P	Pn	08 49 03.3	+0.8
GUY2C				S	Sn	08 49 38.2	+1.1
VILC	Villavicencio,	2.78	192	P	Pn	08 49 01.8	-0.5
VILC				S	Sn	08 49 37.2	+0.3
NIZA	Niza - Manizal	2.95	233	P	Pn	08 49 06.4	+1.8
NIZA				S	Sn	08 49 42.6	+1.6
CBOC	Ciudad Bolivar	3.05	252	P	Pn	08 49 06.4	+0.6
CBOC				S	Sn	08 49 43.2	+0.1
DBBC	Dabeiba	3.09	273	P	Pn	08 49 06.5	+0.3
DBBC				S	Sn	08 49 43.9	+0.1
SDV	Santo Domingo	3.18	50	P	Pn	08 49 08.3	+0.9
	39nm,0.3s,baz=243,slow=11,SNR=62						
SDV				S	Sn	08 49 46.5	+0.5
	44nm,0.4s,baz=63,slow=23,SNR=29						
SDV	Santo Domingo	3.18	50	P	Pn	08 49 08.0	+0.6
SDV				S	Sn	08 49 45.9	0.0
ARGC	Ariguani, Magd	3.20	339	P	Pn	08 49 09.0	+1.5
ARGC				S	Sn	08 49 48.3	+2.0
PRAC	Prado	3.58	210	P	Pn	08 49 12.0	-0.5
PRAC				S	Sn	08 49 54.9	-0.2
APAC	Apartado, Choc	3.61	287	P	Pn	08 49 12.9	+0.2
APAC				S	Sn	08 49 55.3	-0.2
ORTC	Ortega, Tolima	3.62	216	P	Pn	08 49 12.8	-0.1
ORTC				S	Sn	08 49 56.5	+0.7
SJCC	San Jacinto, C	3.67	326	P	Pn	08 49 12.7	-0.8
SJCC				S	Sn	08 49 54.8	-2.2
PLMC	San Jos del P	3.71	239	P	Pn	08 49 14.4	+0.3
PLMC				S	Sn	08 49 56.5	-1.5
URMC	La Uribe, Meta	3.79	200	P	Pn	08 49 15.0	-0.3
URMC				S	Sn	08 49 59.0	-1.1
YOTC	Yotoco, Valle	4.30	229	P	Pn	08 49 21.3	-0.6
YOTC				S	Sn	08 50 12.4	+0.4
PIZC	Pizarro, Choco	4.63	246	P	Pn	08 49 27.3	+1.2
PIZC				S	Sn	08 50 20.0	+0.5
MACC	Macarena, Meta	4.73	189	P	Pn	08 49 25.6	-1.8
MACC				S	Sn	08 50 18.4	-3.5
URIC	Uribia, Colomb	4.95	13	P	Pn	08 49 29.3	-1.0
URIC				S	Sn	08 50 24.4	-2.7
GARC	Garzon, Huila	5.21	207	P	Pn	08 49 32.7	-1.3
GARC				S	Sn	08 50 30.4	-3.2
POPC	Popayan, Colom	5.57	220	P	Pn	08 49 39.1	+0.3
	5.6nm,0.5s						
POPC				S	Sn	08 50 39.5	-2.7
	5.6nm,0.5s						
FLOC	Florencia	5.81	206	P	Pn	08 49 41.1	-0.8
	12nm,1.2s						
BBAC	Balboa, Cauca	6.33	221	P	Pn	08 49 49.6	+0.7
GCUF	Volcan Galeras	7.00	217	P	Pn	08 49 59.8	+1.6
GCUF				S	Sn	08 51 14.0	-3.0
TXAR	Lajitas Array	36.46	312	P	P	08 55 09.3	+1.0
	0.1nm,0.4s,baz=119,slow=8.7,SNR=4.5						
	0.1nm,0.4s						
ULM	Lac du Bonnet	47.27	340	P	P	08 56 35.4	-0.2
	1.6nm,0.4s,baz=148,slow=9.5,SNR=2.5						
	1.6nm,0.4s						
YKA	Yellowknife Ar	63.25	340	P	P	08 58 29.8	+0.1
	0.4nm,0.6s,baz=139,slow=5.9,SNR=11						
	0.4nm,0.6s						
WRA	Warramunga Arr	150.37	241	PKPbc	PKPbc	09 07 51.8	-0.3
	0.2nm,0.5s,baz=117,slow=1.8,SNR=1.4						

BJI ***15*** *08:51:03.9, 5°.79N×125°.63E, h20km, mB5.3/4, mb4.6/37, Ms4.8/3, Ms7 4.7/2*

IDC ***15*** *08:51:08.1±0.6, 6°.43N×125°.51E, h0km, mb4.4/20, mbtmp4.4/22, ML4.7/2, Error ellipse: s-maj=22.9km s-min=7.6km az=92.0*

NEIC ***15*** *08:51:08.7±1.7, 6°.53N±0°.06×125°.12E±0°.08, h10km±3km, mb4.7/37, Error ellipse: s-maj=12.7km s-min=5.8km az=125.0*

DJA ***15*** *08:51:18.1±0.4, 6°N±3°×12°5E±°, h10km, M5.0/24, mb4.8/24, mB5.6/7, MLv5.0/11, Mw(mB)5.1/7, MwMwp6.1/1, Mwp6.1/1*

ISC 15 08:51:09.0±0.4**, 6°.52N**±0°.04×**125°.32E**±0°.07**, h10**km**, n122, σ1s94**/115**, mb4.6**/54**, 2D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.60	25	Pg	Pb	08 51 21.9	+0.2
	2μm,0.3s,baz=149,slow=2.0,SNR=102						
DAV				Lg	Lg	08 51 28.9	
	5μm,0.3s,baz=250,slow=23,SNR=28						
DAV	Davao City (W)	0.60	25		Pb	08 51 22.3	+0.6
DAV	Davao City (W)	0.60	25	P	Pg	08 51 21.0	+0.2
SGSI	Sangihe	2.82	176	P	Pn	08 51 55.5	+1.2
GAMI	Galela, Maluku	5.26	152	P	Pn	08 52 33.1	+5.3
TNTI	Ternate	6.07	160	Pn	Pn	08 52 40.2	+1.4
TNTI	Ternate	6.07	160	P	Pn	08 52 40.7	+1.8
	0.4nm74nm,0.8s						
GTOI	Gorontalo	6.28	202	P	Pn	08 52 42.6	+0.7
GTOI				S	Sn	08 53 50.8	-3.0
MRSI	Marisa	6.89	209	P	Pn	08 52 51.3	+1.2
MRSI				S	Sn	08 54 07.3	-1.3
TOLI2	Tolitoli	7.03	220		Pn	08 52 50.1	-2.0
LUWI	Luwuk	7.93	199	Pn	Pn	08 53 02.8	-1.7
LUWI	Luwuk	7.93	199	P	Pn	08 53 09.5	+5.0
	1.1nm4μm275nm,0.8s						
LUWI				S	Sn	08 54 32.6	-1.8
	1.1nm4μm275nm,0.8s						
MPSI	Mapaga	8.19	222	P	Pn	08 53 14.0	+6.0
	23nm,0.8s						
APSI	Ampana	8.24	207	P	Pn	08 53 13.3	+4.5
SANI	Sanana	8.54	175	P	Pn	08 53 12.1	-0.8
	39nm,0.7s						
KKM	Kota Kinabalu	9.06	268	P	Pn	08 53 28.1	+8.0
I39PW	PALAU INFRASON	9.21	83	I	I	09 48 10.0	
	baz=266,slow=294,SNR=0.4						
NLAI	Namlea	9.86	170	P	Pn	08 53 33.0	+2.1
	81nm,0.7s						
KRAI	Karang Ratu	10.24	162	P	Pn	08 53 39.3	+3.0
KDI	Kendari	10.75	195	P	Pn	08 53 45.1	+1.9
TTSI	Tana Toraja	10.97	210	P	Pn	08 53 50.3	+4.0
	53nm,1.1s						
MMSI	Mamuju	11.16	215	P	Pn	08 53 51.6	+2.7
	27nm,0.8s						
FAKI	Fak Fak	11.65	143	Pn	Pn	08 53 56.5	+0.9
SPSI	Sidrap Palu	11.80	208	P	Pn	08 53 59.0	+1.5
	19nm,0.6s						
BNDI	Bandanaira	11.89	157	P	Pn	08 54 01.5	+2.8
	72nm,0.5s						
BNSI	Bone	12.03	206	P	Pn	08 54 03.6	+2.9
	38nm,0.8s						
KAPI	Kappang	12.73	206	Pn	Pn	08 54 12.2	+1.8
	1.2nm,0.3s,baz=27,slow=7.5,SNR=7.4						
	12nm,0.9s						
KAPI	Kappang	12.73	206	Pn	Pn	08 54 09.7	-0.6
KAPI	Kappang	12.73	206	P	Pn	08 54 12.9	+2.5
BKSI	Bulukumba	12.86	204	P	Pn	08 54 13.9	+1.9
	18nm,1.0s						
SBUM	Sibu	13.67	253	P	P	08 54 30.6	-1.4
BBKI	Banjar Baru	14.41	227	P	P	08 54 50.7	+10
EDFI	Ende, Flores	15.60	193	P	P	08 54 52.3	-1.2
	51μm13nm,0.8s						
SOEI	Soe	16.20	184	Pn	Pn	08 54 55.7	-1.4
SOEI	Soe	16.20	184	P	P	08 55 01.2	+0.9
	64nm,1.1s						
BATI	Baumata	16.70	186	Pn	Pn	08 55 03.4	0.0
	8.0nm,0.3s,baz=343,slow=14,SNR=4.9						
	34nm,0.8s						
WSI	Waingapu	16.84	197	P	Pn	08 55 05.9	+0.8
SJI	Sawahan	19.58	224	P	Pn	08 55 44.6	+5.8
SNJI	Sawahan-Nganju	19.61	224	P	Pn	08 55 43.8	+4.5
	1μm36nm,1.0s						
MTN	Manton Dam	20.09	163		P	08 55 43.6	+0.7
JOW	Kunigami	20.39	8	P	P	08 55 45.1	-1.1
JOW				IAmb	IAmb	08 55 48.4	
	comp=Z,28nm,1.0s						
KPJI	Karang Pucung	21.37	230	P	P	08 56 02.8	+5.9
	comp=Z,31nm,1.0s						
KNRA	Kununurra	22.32	171		P	08 56 06.8	-0.2
BBJI	Bungbulang	22.44	232	P	P	08 56 11.8	+3.3
	comp=Z,19nm,0.9s						
SLVN	Son La	25.42	308	P	P	08 56 33.8	-3.3
NJ2	Nanjing	26.11	347	eP	P	08 56 44.6	+1.4
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PMG	Port Moresby	26.91	126	P	P	08 56 48.3	-2.3
PMG				IAmb	IAmb	08 57 04.7	
	comp=Z,12nm,0.8s						
JNU	Nakatsue	26.97	10	P	P	08 56 51.7	+0.7
	comp=Z,6.6nm,0.9s,baz=201,slow=7.3,SNR=2.1						
	comp=Z,6.6nm,0.9s						
COEN	Coen	26.98	139	P	P	08 56 51.1	-0.2
COEN				IAmb	IAmb	08 57 03.9	
	comp=Z,16nm,0.9s						
WB0	Warramunga Arr	27.61	161	P	P	08 56 55.9	-0.9
WB0				IAmb	IAmb	08 57 07.7	
	comp=Z,14nm,1.1s						
WRAB	Tennant Creek	27.75	162		P	08 56 56.7	-1.4
WRAB				IAmb	IAmb	08 57 09.5	
	comp=Z,9.7nm,0.6s						
WRA	Warramunga Arr	27.75	162	P	P	08 56 57.2	-1.0
	comp=Z,3.0nm,0.7s,baz=329,slow=11,SNR=29						
	comp=Z,3.0nm,0.7s						
WRA	Warramunga Arr	27.75	162	P	P	08 56 56.8	-1.3
WR8	Warramunga Arr	27.82	161	P	P	08 56 57.8	-0.9
CMAR	Chiang Mai Arr	28.30	297	P	P	08 57 06.8	+3.7
	comp=Z,1.1nm,0.4s,baz=109,slow=7.5,SNR=5.9						
	comp=Z,1.1nm,0.4s						
PSA00	Pilbara Seismi	28.43	191	P	P	08 57 02.6	-1.6
PSA00				IAmb	IAmb	08 57 04.0	
	comp=Z,14nm,0.9s						
KMI	Kunming	28.44	313	P	P	08 57 01.8	-2.7
KMI				pmax	pmax		
	comp=Z,15nm,0.6s						
PZH	PanZhiHua	29.99	314	P	P	08 57 18.5	+0.4
KSRS	Korea Array	30.88	4	P	P	08 57 26.3	+0.6
	comp=Z,1.8nm,1.0s,baz=185,slow=11,SNR=8.1						
	comp=Z,1.8nm,1.0s						
AS31	Alice Springs	31.15	165		P	08 57 27.4	-0.8
AS31				IAmb	IAmb	08 57 41.2	
	comp=Z,2.8nm,0.4s						
ASAR	Alice Springs	31.15	165	P	P	08 57 27.6	-0.7
	comp=Z,2.3nm,0.5s,baz=344,slow=7.3,SNR=78						
	comp=Z,2.3nm,0.5s						
ASAR	Alice Springs	31.15	165	P	P	08 57 27.4	-0.9
XAN	Xi'an	31.31	333	P	P	08 57 34.8	+5.2
XAN				pmax	pmax		
	comp=Z,12nm,1.0s						
MJAR	Matsushiro Arr	32.12	20	P	P	08 57 35.6	-1.2
	comp=Z,1.2nm,0.8s,baz=198,slow=9.9,SNR=2.6						
	comp=Z,1.2nm,0.8s						
HNS	HongShan	32.22	344	⇓P	P	08 57 38.9	+1.4
HNS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HNS				LR	LR		
	comp=Z,430nm,18.6s						
HNS				LR	LR		
	comp=Z,1μm,20.7s						
HNS				LR	LR		
	comp=Z,2μm,22.0s						
BJI	Beijing	34.37	348	P	P	08 57 58.8	+2.6
BJI				pP	sP	08 58 03.1	+2.5

BJI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LZH	Lanzhou	35.40	329	*e*P	P	08 58 12.3	+6.9
LZH				pP	sP	08 58 19.1	+9.2
LZH				pmax	pmax		
	comp=Z,22nm,1.5s						
HHC	Hu-ho-hao-te	36.33	342	*e*P	P	08 58 13.5	+0.3
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,300nm,8.2s						
MORW	Morawa	36.49	194	P	P	08 58 11.2	-3.4
MORW				IAmb	IAmb	08 58 12.7	
	comp=Z,19nm,1.5s						
CN2	Changchun	37.13	0	*e*P	P	08 58 16.0	-3.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
FORT	Forrest	37.18	176		P	08 58 20.0	-0.5
INKA	Innaminka	37.18	157		P	08 58 20.2	-0.3
USRK	Ussuriysk Ar.	37.98	8	P	P	08 58 28.0	+0.9
	comp=Z,6.9nm,0.9s,baz=196,slow=8.8,SNR=7.3						
	comp=Z,6.9nm,0.9s						
XLT	XiLinHaoTe	38.10	349	*e*P	P	08 58 30.4	+2.2
XLT				pP	sP	08 58 33.3	+0.6
XLT				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MDJ	Mudanjiang	38.13	5	P	P	08 58 34.0	+5.7
MDJ				pmax	pmax		
	comp=Z,24nm,1.2s						
BNX	BinXian	39.11	2	⇓P	P	08 58 37.9	+1.3
BNX				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NWAO	Narrogin (SRO)	39.98	191	P	P	08 58 43.1	-0.8
NWAO				IAmb	IAmb	08 58 53.1	
	comp=Z,23nm,1.4s						
GTA	Gaotai	40.00	329	*e*P	P	08 58 51.1	+6.9
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ASAJ	Asahikawa	40.39	19	P	P	08 58 48.6	+1.3
	comp=Z,12nm,1.1s,baz=207,slow=14,SNR=2.2						
	comp=Z,12nm,1.1s						
BBOO	Buckleboo	40.43	166	P	P	08 58 47.7	0.0
GOMU	GeErMu	40.64	321	P	P	08 58 48.4	-1.5
STKA	Stephens Creek	41.22	159	P	P	08 58 54.5	+0.2
	comp=Z,12nm,0.8s,baz=335,slow=7.4,SNR=31						
	comp=Z,12nm,0.8s						
STKA	Stephens Creek	41.22	159	P	P	08 58 54.3	0.0
HILR	Hailar Array B	43.15	355	P	P	08 59 11.5	+1.7
	comp=Z,8.6nm,0.8s,baz=165,slow=12,SNR=7.4						
	comp=Z,8.6nm,0.8s						
HEH	HeiHe	43.62	2	*e*P	P	08 59 14.3	+0.8
HEH				pmax	pmax		
	comp=Z,15nm,0.9s						
SONM	Songino Array	44.22	342	P	P	08 59 22.1	+3.5
	comp=Z,1.5nm,0.8s,baz=153,slow=8.3,SNR=7.4						
	comp=Z,1.5nm,0.8s						
SONM	Songino Array	44.22	342	P	P	08 59 17.8	-0.9
ARMA	Armidale	44.56	147	P	P	08 59 21.8	+0.3
ARMA				IAmb	IAmb	08 59 32.9	
	comp=Z,12nm,1.1s						
TOO	Toolangi	47.73	158	P	P	08 59 47.0	+0.7
DZM	Mont Dzumac	49.30	126	P	P	08 59 58.4	-0.3
DZM				IAmb	IAmb	09 00 07.0	
	comp=Z,11nm,1.0s						
PETK	Petropavlovsk-	53.42	24	P	P	09 00 29.0	0.0
	comp=Z,4.5nm,0.8s,baz=186,slow=7.4,SNR=5.9						
	comp=Z,4.5nm,0.8s						
PETK	Petropavlovsk-	53.42	24	P	P	09 00 27.7	-1.3
MKAR	Makanchi Array	54.48	325	P	P	09 00 37.6	+0.7
	comp=Z,2.6nm,0.7s,baz=123,slow=8.1,SNR=17						
	comp=Z,2.6nm,0.7s						
MKAR	Makanchi Array	54.48	325	P	P	09 00 34.3	-2.6
MAKZ	Makanchi	54.66	325	P	P	09 00 36.4	-1.9
MAKZ				IAmb	IAmb	09 00 47.0	
	comp=Z,7.8nm,1.2s						
KSH	Kashi	55.09	314	P	P	09 00 43.5	+1.9
KSH				pP	sP	09 00 48.6	+2.4
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NIL	Nilore	55.13	307	P	P	09 00 39.5	-2.4
YAK	Yakutsk	55.49	2		P	09 00 43.5	-0.4
MA2	Magadan	56.38	15	P	P	09 00 49.0	-1.3
MA2				IAmb	IAmb	09 00 52.1	
	comp=Z,10nm,0.9s						
ZALV	Zalesovo Beam	57.48	333	P	P	09 00 58.4	+0.2
	comp=Z,1.8nm,0.6s,baz=104,slow=6.3,SNR=3.8						
	comp=Z,1.8nm,0.6s						
ZALV	Zalesovo Beam	57.48	333	P	P	09 00 57.8	-0.4
KURBB	Kurchatov Arra	58.65	327	P	P	09 01 06.5	+0.1
	comp=Z,5.2nm,0.8s,baz=125,slow=6.2,SNR=22						
	comp=Z,5.2nm,0.8s						
KURK	Kurchatov	58.65	327	P	P	09 01 04.6	-1.9
KKAR	Karatay Array	60.25	316	P	P	09 01 15.0	-2.7
BVAR	Borovoye Array	64.23	327	P	P	09 01 47.2	+3.0
	comp=Z,3.6nm,0.9s,baz=123,slow=7.9,SNR=15						
	comp=Z,3.6nm,0.9s						
TIXI	Tiksi	65.09	1		P	09 01 48.3	-1.1
TIXI				IAmb	IAmb	09 01 54.2	
	comp=Z,6.5nm,1.1s						
NRIK	Noril'sk	67.40	346	P	P	09 02 05.4	+1.0
	comp=Z,1.6nm,0.6s,baz=95,slow=5.9,SNR=4.3						
	comp=Z,1.6nm,0.6s						
AB31	Akbulak array	69.12	320	P	P	09 02 13.2	-2.3
AB31				IAmb	IAmb	09 02 26.4	
	comp=Z,4.5nm,1.1s						
ABKAR	Akbulak array	69.12	320		P	09 02 13.5	-2.0
L22K	Petersville	81.44	28	P	P	09 03 25.8	-0.5
TRF	Thorofare Moun	81.70	27	P	P	09 03 28.4	+0.6
TRF				IAmb	IAmb	09 03 30.8	
	comp=Z,9.4nm,1.2s						
SEW	Seward	82.01	30	P	P	09 03 30.2	+1.0
MCK	McKinley	82.31	27	P	P	09 03 31.7	+0.9
CCB	Clear Creek Bu	82.81	26	P	P	09 03 34.0	+0.7
CCB				IAmb	IAmb	09 03 35.4	
	comp=Z,9.5nm,1.4s						
IL31		83.20	26	P	P	09 03 36.1	+0.8
IL31				IAmb	IAmb	09 03 55.6	
	comp=Z,9.6nm,1.4s						
ILAR	Eielson Array	83.20	26	P	P	09 03 35.4	0.0
	comp=Z,0.8nm,0.6s,baz=236,slow=5.5,SNR=21						
	comp=Z,0.8nm,0.6s						
ILAR	Eielson Array	83.20	26	P	P	09 03 35.9	+0.6
F28M	Old Crow	85.85	23	P	P	09 03 49.0	+0.3
F28M				IAmb	IAmb	09 04 06.8	
	comp=Z,5.0nm,0.9s						
QSPA	South Pole Qui	96.41	180	P	P	09 04 37.9	-0.3
	comp=Z,1.5nm,0.2s,baz=272,slow=3.3,SNR=3.8						
	comp=Z,1.5nm,0.2s						
YKA	Yellowknife Ar	97.54	24	P	P	09 04 43.4	+0.1
	comp=Z,0.3nm,0.6s,baz=298,slow=5.0,SNR=5.0						
	comp=Z,0.3nm,0.6s						
TXAR	Lajitas Array	120.95	50	PKP	PKiKP	09 10 05.0	+2.2
	comp=Z,0.4nm,0.9s,baz=350,slow=4.9,SNR=3.0						
PLCA	Paso Flores	143.09	160	PKhKP	PKPpre	09 10 37.7	
	comp=Z,0.6nm,0.7s,baz=197,slow=6.4,SNR=3.3						

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*IDC **15** 08:53:03.0±1.4, 29°.91N×143°.52E, h0^{km}, mb4.0/7, mbtmp3.9/8, ML3.4/1, Error ellipse: s-maj=36.5km s-min=25.8km az=109.0*

*JMA **15** 08:53:04.6±0.2, 30°.8N±0°.8×14°2E±°, h74^{km}, MV3.7/23, NEAR TORISHIMA IS*

ISC 15 08:53:17.6±1.9,**31°.9N**±0°.3×**143°.1E**±0°.2,**h35**^{km}**,n17,** σ**2^{s}74**/15**,mb3.9**/7**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	3.28	329	P	Pn	08 54 05.6	-0.4
BSO3	Boso 3	3.62	325	*e*P	Pn	08 54 09.6	-1.3
BSO4	Boso 4	3.85	325	*e*P	Pn	08 54 14.9	+0.6
JOD2	Odawara 2	4.74	317	*e*P	Pn	08 54 22.9	-3.7
CBIJ	Chichi jima	4.81	189	*e*P	Pn	08 53 59.7	-28
CBIJ				*e*S	Sn	08 54 41.8	-40
JCJ	Chichijima	4.81	189	Pn	Pn	08 53 51.5	-36
	5.0nm,0.3s,baz=339,slow=19,SNR=7.6						
JCJ				Sn	Sn	08 54 31.5	-51
	10nm,0.3s,baz=272,slow=20,SNR=2.4						
	41nm,0.7s						
JHO	Hitachi	5.16	337	P	Pn	08 54 31.4	-0.9
JRY	Ryogami san	5.39	321	P	Pn	08 54 32.6	-2.9
JAG	Ashikaga	5.44	328	P	Pn	08 54 34.2	-2.0
JNY	Yasuok	5.56	310	*e*S	Sn	08 55 39.7	-0.8
ZALV	Zalesovo Beam	46.48	316	P	P	09 01 45.8	+4.7
	0.6nm,0.4s,baz=87,slow=6.1,SNR=1.3						
	0.6nm,0.4s						
MKAR	Makanchi Array	48.14	306	P	P	09 01 54.7	+0.5
	1.0nm,0.8s,baz=96,slow=9.1,SNR=2.0						
	1.0nm,0.8s						
KURBB	Kurchatov Arra	50.35	312	P	P	09 02 13.7	+2.8
	2.0nm,0.6s,baz=88,slow=7.7,SNR=8.7						
	2.0nm,0.6s						
ILAR	Eielson Array	53.20	30	P	P	09 02 32.5	+0.5
	0.7nm,1.0s,baz=254,slow=5.2,SNR=4.1						
	0.7nm,1.0s						
BVAR	Borovoye Array	55.12	315	P	P	09 02 50.4	+4.2
	2.3nm,0.6s,baz=100,slow=8.4,SNR=6.9						
	2.3nm,0.6s						
FINES	FINESS Array B	74.02	334	P	P	09 04 49.7	+0.3
	2.8nm,1.0s,baz=64,slow=4.4,SNR=4.6						
	2.8nm,1.0s						
TXAR	Lajitas Array	92.15	53	P	P	09 06 20.5	-3.5
	0.4nm,0.9s,baz=305,slow=5.1,SNR=3.6						
	0.4nm,0.9s						

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*IDC **15** 08:55:07.8±0.6, 6°.56N×125°.18E, h0^{km}, mb4.3/18, mbtmp4.2/19, ML3.7/1, Error ellipse: s-maj=14.9km s-min=8.4km az=123.0*

*NEIC **15** 08:55:11.9±1.3, 6°.64N±0°.05×125°.40E±0°.08, h10^{km}±1^{km}, mb4.7/87, Error ellipse: s-maj=14.6km s-min=6.8km az=110.0*

*DJA **15** 08:55:23.7±1.3, 6°N±12°×12°5E±°, h47^{km}±9^{km}, M4.9/17, mb4.8/17, mB5.3/6, MLv5.1/8, Mw(mB)4.7/6*

ISC 15 08:55:11.0±0.3,**6°.65N**±0°.04×**125°.43E**±0°.07**,h10**^{km}**,n148,** σ**1^{s}58**/120**,mb4.7**/71**,1C-1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.45	20	Pg	Pb	08 55 21.2	+0.2
	2µm,0.3s,baz=79,slow=3.4,SNR=18						
DAV				Lg	Lg	08 55 29.1	
	4µm,0.3s,baz=261,slow=24,SNR=18						
DAV	Davao City (W)	0.45	20		Pb	08 55 20.9	-0.1
DAV	Davao City (W)	0.45	20	P	Pb	08 55 21.0	0.0
TNTI	Ternate	6.15	162	Pn	Pn	08 56 44.5	+2.5
TNTI	Ternate	6.15	162	P	Pb	08 56 53.3	-4.9
GTOI	Gorontalo	6.44	202	P	Pn	08 56 44.7	-1.2
MRSI	Marisa	7.05	210	P	Pn	08 56 52.0	-2.3
TOLI2	Tolitoli	7.19	220		Pn	08 56 50.7	-5.6
LUWI	Luwuk	8.09	199	Pn	Pn	08 57 10.6	+2.0
LUWI	Luwuk	8.09	199	P	Pn	08 57 10.5	+2.0
APSI	Ampana	8.40	207	P	Pn	08 57 16.0	+3.1
	0.7nm144nm,1.2s						
SANI	Sanana	8.66	176	P	Pn	08 57 14.5	-1.9
	0.3nm41nm,0.8s						
KRAI	Karang Ratu	10.33	163	P	Pn	08 57 39.9	+0.5
	23nm,0.8s						
TTSI	Tana Toraja	11.14	210	P	Pn	08 57 53.6	+3.2
	1µm63nm,0.9s						
FAKI	Fak Fak	11.69	144	Pn	Pn	08 57 58.6	+0.6
FAKI	Fak Fak	11.69	144	P	Pn	08 58 16.5	+18
BNSI	Bone	12.19	206	P	Pn	08 58 26.7	+22
KAPI	Kappang	12.89	206	Pn	Pn	08 58 11.3	-3.2
	0.4nm,0.3s,baz=34,slow=14,SNR=4.6						
	2.4nm,0.5s						
KAPI	Kappang	12.89	206		Pn	08 58 14.4	-0.1
KAPI	Kappang	12.89	206	P	Pn	08 58 24.4	+10
BKSI	Bulukumba	13.02	204	P	Pn	08 58 18.4	+2.3
SBUM	Sibu	13.81	253		Pn	08 58 27.5	+0.6
SBUM	Sibu	13.81	253	P	P	08 58 34.2	-1.3
BBKI	Banjar Baru	14.58	227	P	P	08 58 52.7	+8.6
MMRI	Maumere	15.51	192	Pn	Pn	08 58 50.8	+0.8
MMRI				IAmb	IAmb	08 59 01.6	
	comp=Z,45nm,1.2s						
EDFI	Ende, Flores	15.74	194	P	P	08 59 03.0	+5.9
SOEI	Soe	16.34	184	Pn	Pn	08 59 00.9	+0.1
DBNI	Kabupaten Domp	16.64	205	P	P	08 59 06.3	-0.6
	comp=Z,21nm,1.0s						
PLAI	Plampang	17.16	206	P	Pn	08 59 12.0	+0.9
	comp=Z,46nm,0.9s						
WBSI	Waikabubak, Su	17.26	200	P	P	08 59 14.3	+0.4
	comp=Z,38nm,0.9s						
TWSI	Taliwang, Sumb	17.50	209	P	Pn	08 59 15.7	+0.4
	comp=Z,42nm,1.1s						
KLNI	Mataram	17.63	212	P	P	08 59 19.8	+1.9
	comp=Z,70nm,1.0s						
KMMI	Kalianget	17.77	220	P	P	08 59 23.1	+3.6
	comp=Z,83nm,1.2s						
JAGI	Jajag, Banyuwa	18.76	217		P	08 59 30.2	-0.2
JAGI				IAmb	IAmb	08 59 35.3	
	comp=Z,39nm,0.9s						
JAGI	Jajag, Banyuwa	18.76	217	P	Pn	08 59 31.6	+0.8
	comp=Z,1µmcomp=Z,38nm,1.2s						
NGJI	Ngawi	19.70	225	P	Pn	08 59 43.6	+1.5
SJI	Sawahan	19.74	224	P	Pn	08 59 42.5	-0.2
MTN	Manton Dam	20.18	164	P	P	08 59 45.0	-0.8
KNRA	Kununurra	22.42	172		P	09 00 06.7	-3.4
MDSI	Maura Dua	23.92	243	P	P	09 00 37.2	+12
IPM	Ipoh	24.38	266	P	P	09 00 29.8	+0.1
IPM				IAmb	IAmb	09 00 30.6	
	comp=Z,38nm,1.3s						
BKNI	Bangkinang	25.13	257	P	P	09 00 36.7	+0.3
NJ2	Nanjing	26.01	347	*e*P	P	09 00 47.0	+2.8
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
PMG	Port Moresby	26.89	126	P	P	09 00 52.7	+0.3
COEN	Coen	27.00	139		P	09 00 54.2	+0.8
COEN				IAmb	IAmb	09 01 05.0	
	comp=Z,13nm,0.8s						
WB0	Warramunga Arr	27.69	162		P	09 00 59.6	+0.1
WB0				IAmb	IAmb	09 01 19.1	
	comp=Z,7.2nm,0.6s						
WRA	Warramunga Arr	27.84	162	P	P	09 00 58.0	-2.8
	comp=Z,4.0nm,0.9s,baz=339,slow=9.8,SNR=7.6						
	comp=Z,4.0nm,0.9s						
WRA	Warramunga Arr	27.84	162	P	P	09 01 02.6	+1.7
WR8	Warramunga Arr	27.90	162	P	P	09 01 02.9	+1.5
GSI	Gunungsitoli	28.28	260		P	09 01 05.3	+0.4
CM31	Chiang Mai Arr	28.34	297	P	P	09 01 04.9	-0.5
CMAR	Chiang Mai Arr	28.34	297	P	P	09 01 02.8	-2.6
	comp=Z,2.2nm,0.6s,baz=117,slow=7.6,SNR=12						
	comp=Z,2.2nm,0.6s						
CMAR	Chiang Mai Arr	28.34	297	P	P	09 01 05.3	-0.1
CHTO	Chiang Mai	28.47	298	P	P	09 01 06.7	+0.1
PSA00	Pilbara Seismi	28.57	191	P	P	09 01 06.2	-1.2
PZH	PanZhiHua	29.98	314	P	P	09 01 22.8	+2.8
LYN	LuoYang	30.24	338	*e*P	P	09 01 27.0	+5.0
LYN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
INU	Inuyama	30.49	19	P	P	09 01 25.0	+0.8
INU				IAmb	IAmb	09 01 33.9	
	comp=Z,8.3nm,0.9s						
KSRS	Korea Array	30.75	4	P	P	09 01 24.0	-2.5
	comp=Z,4.7nm,1.1s,baz=181,slow=10.0,SNR=9.6						
	comp=Z,4.7nm,1.1s						
AS31	Alice Springs	31.24	165		P	09 01 29.9	-1.1
ASAR	Alice Springs	31.25	165	P	P	09 01 28.9	-2.2
	comp=Z,3.6nm,0.5s,baz=349,slow=8.2,SNR=21						
	comp=Z,3.6nm,0.5s						
ASAR	Alice Springs	31.25	165		P	09 01 29.2	-1.8
XAN	Xi'an	31.25	333	P	P	09 01 32.4	+1.4
XAN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MJAR	Matsushiro Arr	31.97	20	P	P	09 01 35.6	-1.7
	comp=Z,1.3nm,0.7s,baz=191,slow=9.3,SNR=5.0						
	comp=Z,1.3nm,0.7s						
HNS	HongShan	32.13	344	⇑P	P	09 01 40.8	+2.2
HNS				pmax	pmax		
	comp=Z,15nm,0.8s						
HNS				LR	LR		
	comp=Z,1µm,22.0s						
HNS				LR	LR		
	comp=Z,890nm,22.2s						
HNS				LR	LR		
	comp=Z,2µm,20.2s						
CTAO	Charters Tower	33.55	143	P	P	09 01 51.2	-0.1
BJI	Beijing	34.27	347	P	P	09 01 57.8	+0.5
BJI				pP	sP	09 02 02.5	+1.2
BJI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LZDM	Lanzhou Array	35.33	329	P	P	09 02 04.7	-2.2
	comp=Z,0.8nm,0.3s,baz=206,slow=9.9,SNR=3.8						
	comp=Z,0.8nm,0.3s						
HHC	Hu-ho-hao-te	36.24	342	*e*P	P	09 02 16.3	+1.9
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,590nm,7.2s						
HHC				LR	LR		
	comp=Z,2µm,20.4s						
HHC				LR	LR		
	comp=Z,530nm,21.3s						
HHC				LR	LR		
	comp=Z,2µm,18.7s						
CN2	Changchun	37.01	0	*e*P	P	09 02 21.0	+0.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SHL	Shillong	37.14	304	P	P	09 02 22.0	-0.4
FORT	Forrest	37.30	176		P	09 02 22.2	-1.2
USRK	Ussuriysk Ar.	37.84	8	P	P	09 02 27.0	-0.8
	comp=Z,7.7nm,0.9s,baz=192,slow=6.4,SNR=7.1						
	comp=Z,7.7nm,0.9s						
BNX	BinXian	38.98	2	⇓P	P	09 02 36.6	-0.8
BNX				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA	Gaotai	39.95	329	*e*P	P	09 02 49.3	+3.5
GTA				pP	sP	09 02 53.9	+3.8
GTA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
NWAO	Narrogin (SRO)	40.12	191	P	P	09 02 47.5	+0.4
NWAO				IAmb	IAmb	09 02 48.5	
	comp=Z,21nm,1.3s						
BBOO	Buckleboo	40.52	166		P	09 02 48.8	-1.6
BBOO				IAmb	IAmb	09 02 54.4	
	comp=Z,17nm,0.7s						
GOMU	GeErMu	40.61	321	P	P	09 02 52.3	+0.7
STKA	Stephens Creek	41.30	159	P	P	09 02 55.5	-1.3
	comp=Z,5.3nm,0.8s,baz=335,slow=7.3,SNR=8.0						
	comp=Z,5.3nm,0.8s						
STKA	Stephens Creek	41.30	159	P	P	09 02 56.5	-0.3
HILR	Hailar Array B	43.03	355	P	P	09 03 09.3	-1.5
	comp=Z,1.6nm,0.5s,baz=178,slow=10,SNR=5.8						
	comp=Z,1.6nm,0.5s						
HEH	HeiHe	43.49	2	*e*P	P	09 03 13.8	-0.6
HEH				pmax	pmax		
	comp=Z,14nm,1.1s						
SONM	Songino Array	44.14	342	P	P	09 03 18.9	-0.9
	comp=Z,0.4nm,0.6s,baz=155,slow=5.9,SNR=2.4						
	comp=Z,0.4nm,0.6s						
SONM	Songino Array	44.14	342	P	P	09 03 19.5	-0.4
ARMA	Armidale	44.60	147	P	P	09 03 22.1	-1.7
ARMA				IAmb	IAmb	09 03 27.2	
	comp=Z,13nm,1.1s						
TOO	Toolangi	47.81	158	P	P	09 03 48.5	-0.4
TOO				IAmb	IAmb	09 03 56.7	
	comp=Z,8.1nm,1.2s						
PEA0B	Petropavlovsk-	53.27	24	P	P	09 04 31.4	+1.5
PETK	Petropavlovsk-	53.27	24	P	P	09 04 30.1	+0.3
	comp=Z,7.3nm,0.8s,baz=204,slow=4.0,SNR=9.3						
	comp=Z,7.3nm,0.8s						
PETK	Petropavlovsk-	53.27	24	P	P	09 04 30.1	+0.2
MKAR	Makanchi Array	54.44	325	P	P	09 04 37.2	-1.4
	comp=Z,1.9nm,0.7s,baz=120,slow=7.6,SNR=15						
	comp=Z,1.9nm,0.7s						
MKAR	Makanchi Array	54.44	325		P	09 04 38.9	+0.3
MAKZ	Makanchi	54.63	325		P	09 04 40.8	+0.9
MAKZ				IAmb	IAmb	09 04 43.3	
	comp=Z,10nm,1.4s						
KSH	Kashi	55.09	314	P	P	09 04 46.8	+3.3
KSH				pmax	pmax		
	comp=Z,8.0nm,1.7s						
NIL	Nilore	55.14	307		P	09 04 43.8	-0.1
NIL				IAmb	IAmb	09 04 53.9	
	comp=Z,9.1nm,0.8s						
YAK	Yakutsk	55.36	2	P	P	09 04 43.9	-1.0
MA2	Magadan	56.23	15	P	P	09 04 51.1	-0.1
ZAA0	Zalesovo Array	57.42	333	P	P	09 05 00.2	+0.4
ZALV	Zalesovo Beam	57.42	333	P	P	09 04 57.9	-1.8
	comp=Z,1.7nm,0.6s,baz=99,slow=7.7,SNR=5.3						
	comp=Z,1.7nm,0.6s						
ZALV	Zalesovo Beam	57.42	333	P	P	09 04 59.8	0.0
MANEM	Manem	57.54	311		P	09 05 01.3	0.0
MANEM				IAmb	IAmb	09 05 04.9	
	comp=Z,28nm,1.4s						
KURBB	Kurchatov Arra	58.60	327	P	P	09 05 06.0	-2.1
	comp=Z,3.9nm,0.6s,baz=126,slow=6.0,SNR=22						
	comp=Z,3.9nm,0.6s						
KURK	Kurchatov	58.60	327	P	P	09 05 09.1	+1.0
KURK				IAmb	IAmb	09 05 11.4	
	comp=Z,7.1nm,0.8s						
GAR	Garm	59.02	312	P	P	09 05 10.8	-0.6
CHGR	Chuyangaron	59.77	311	P	P	09 05 16.7	+0.1
KK31	Karatay Array	60.23	316		P	09 05 19.8	+0.2
KK31				IAmb	IAmb	09 05 27.6	
	comp=Z,6.2nm,1.1s						
KKAR	Karatay Array	60.23	316	P	P	09 05 19.7	+0.1
BVAR	Borovoye Array	64.19	327	P	P	09 05 43.7	-2.2
	comp=Z,3.5nm,0.8s,baz=103,slow=6.5,SNR=12						
	comp=Z,3.5nm,0.8s						
BORK	Borovoye	64.23	327		P	09 05 47.2	+1.0
BORK				IAmb	IAmb	09 05 49.5	
	comp=Z,4.3nm,0.7s						
TIXI	Tiksi	64.97	1	P	P	09 05 50.8	+0.2
BILL	Bilibino	67.09	15		P	09 06 04.2	-0.1
BILL				IAmb	IAmb	09 06 04.5	
	comp=Z,13nm,1.5s						
NRIK	Noril'sk	67.31	346	P	P	09 06 06.0	+0.3
AB31	Akbulak array	69.09	320		P	09 06 17.6	+0.4
AB31				IAmb	IAmb	09 06 25.3	
	comp=Z,6.7nm,1.0s						
ABKAR	Akbulak array	69.09	320		P	09 06 17.4	+0.1
CASY	Casey	73.55	186	P	P	09 06 44.4	+0.6
CASY				IAmb	IAmb	09 06 45.9	
	comp=Z,12nm,1.2s						
C16K	Lisburne Hills	76.24	21	IAmb	IAmb	09 07 05.7	
	comp=Z,8.3nm,1.1s						
RAYN	Ar Rayn	78.16	293	P	P	09 07 10.8	-0.4
RAYN				IAmb	IAmb	09 07 13.9	
	comp=Z,3.7nm,0.7s						
C19K	Lookout Ridge	78.48	21	IAmb	IAmb	09 07 21.7	
	comp=Z,8.4nm,0.9s						
H19K	Roundabout Mou	79.06	25	IAmb	IAmb	09 07 21.4	
	comp=Z,12nm,1.2s						
D20K	Etivluk River	79.47	21	IAmb	IAmb	09 07 23.4	
	comp=Z,11nm,1.1s						
B21K	Ikpikpuk River	80.31	20	IAmb	IAmb	09 07 29.6	
	comp=Z,8.8nm,0.9s						
B22K	Teshekpuk Lake	80.80	20	P	P	09 07 25.5	+1.0
B22K				IAmb	IAmb	09 07 32.2	
	comp=Z,5.1nm,0.8s						
E22K	Anaktuvuk Pass	81.17	22		P	09 07 27.5	+0.8
BPAW	Bear Paw Mtn.	81.25	26		P	09 07 27.5	+0.4
BPAW				IAmb	IAmb	09 07 33.4	
	comp=Z,8.3nm,0.9s						
L22K	Petersville	81.28	28	P	P	09 07 28.7	+1.4
MLY	Manley	81.41	25	IAmb	IAmb	09 07 35.5	
	comp=Z,7.4nm,0.9s						
D23K	Nanushuk River	81.64	21	IAmb	IAmb	09 07 37.4	
	comp=Z,11nm,1.1s						
C23K	Itkillik River	81.72	20	IAmb	IAmb	09 07 37.2	
	comp=Z,7.3nm,0.8s						
COLD	Coldfoot	81.73	23	IAmb	IAmb	09 07 37.1	
	comp=Z,6.9nm,0.9s						
KOPT	Kop Dagi	81.89	309		P	09 07 34.1	+2.7
KOPT				IAmb	IAmb	09 07 37.3	
	comp=Z,14nm,1.3s						
E23K	Chandalar	81.99	22	IAmb	IAmb	09 07 32.7	
	comp=Z,6.7nm,1.1s						
NEA2	Nenana	82.11	26	IAmb	IAmb	09 07 49.4	
	comp=Z,7.3nm,1.1s						
D24K	Happy Valley	82.31	21	IAmb	IAmb	09 07 43.8	
	comp=Z,5.0nm,0.8s						
H24K	Noodor Dome	82.62	24	IAmb	IAmb	09 07 42.8	
	comp=Z,5.5nm,0.9s						
G24K	Hadweenzic Riv	82.79	24	IAmb	IAmb	09 07 47.5	
	comp=Z,12nm,1.4s						
IL31		83.05	26	IAmb	IAmb	09 07 44.5	
	comp=Z,6.0nm,1.0s						
ILAR	Eielson Array	83.05	26	P	P	09 07 35.3	-1.2
	comp=Z,1.4nm,0.8s,baz=237,slow=5.2,SNR=7.3						
	comp=Z,1.4nm,0.8s						
ILAR	Eielson Array	83.05	26	P	P	09 07 35.8	-0.7
F25K	Christian Rive	83.49	23	IAmb	IAmb	09 07 48.0	
	comp=Z,6.1nm,1.1s						
E25K	Arctic Village	83.51	22	P	P	09 07 39.7	+0.9
C27K	Jago River	84.12	21	IAmb	IAmb	09 07 52.4	
	comp=Z,3.7nm,0.8s						
E27K	Coleen River	84.99	22	IAmb	IAmb	09 07 48.1	
	comp=Z,7.3nm,1.1s						
F28M	Old Crow	85.70	23	IAmb	IAmb	09 07 55.1	
	comp=Z,5.3nm,0.8s						
E28M	Babbage River	85.70	22	IAmb	IAmb	09 07 52.1	
	comp=Z,7.1nm,1.2s						
G29M	Pine Creek	86.50	23	IAmb	IAmb	09 07 56.7	
	comp=Z,8.9nm,1.1s						
F31M	Tsiigehtchic	88.05	22	IAmb	IAmb	09 08 06.0	
	comp=Z,4.4nm,0.8s						

FINES	FINESS Array B	88.67	332	P	P	09 08 02.3	-2.1
	comp=Z,3.1nm,1.0s,baz=64,slow=6.6,SNR=4.0						
	comp=Z,3.1nm,1.0s						
YKA	Yellowknife Ar	97.39	24	P	P	09 08 43.2	-1.3
	comp=Z,0.4nm,0.9s,baz=293,slow=5.5,SNR=4.7						
	comp=Z,0.4nm,0.9s						
LPAZ	La Paz	163.63	127	PKP	PKPdf	09 15 13.7	-2.4
	comp=Z,1.0nm,0.9s,baz=297,slow=2.3,SNR=3.6						
LPAZ				PKPab	PKPab	09 16 08.9	+1.2
	comp=Z,1.7nm,0.9s,baz=142,slow=2.5,SNR=4.9						

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*IDC **15** 08:56:11.1±0.6, 6°.41N×125°.29E, h0^{km}, mb4.4/21, mbtmp4.4/22, ML3.8/1, MS4.8/1, Error ellipse: s-maj=18.3km s-min=8.7km az=107.0*

*NEIC **15** 08:56:13.2±1.5, 6°.51N±0°.06×125°.26E±0°.09, h10^{km}±1^{km}, mb4.9/47, Error ellipse: s-maj=15.8km s-min=8.0km az=114.0*

*DJA **15** 08:56:23.5±0.6, 6°N±5°×12°5E±°, h10^{km}, M4.9/17, mb4.8/17, mB5.3/5, MLv5.0/6, Mw(mB)4.8/5, MwMwp5.9/1, Mwp6.0/1*

ISC 15 08:56:13.0±0.4**, 6°.54N**±0°.04×**125°.43E**±0°.08**, h10^{km}, n102, σ1^{s}73**/69**, mb4.8**/45**, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.55	16	Pg	Pb	08 56 25.8	+1.1
	5µm,0.3s,baz=213,slow=4.9,SNR=11						
DAV				Lg	Lg	08 56 34.7	
	4µm,0.3s,baz=322,slow=23,SNR=7.5						
DAV	Davao City (W)	0.55	16		Pb	08 56 25.5	+0.8
SGSI	Sangihe	2.84	178	P	Pn	08 56 42.4	-16
SGSI				S	Sb	08 57 37.5	-1.2
GAMI	Galela, Maluku	5.23	153	P	Pg	08 57 52.0	-1.3
TNTI	Ternate	6.05	161	P	Pn	08 57 48.3	+5.7
	92nm,1.0s						
GTOI	Gorontalo	6.34	202	P	Pn	08 57 48.6	+1.9
TOLI2	Tolitoli	7.11	221	Pn	Pn	08 57 54.7	-2.6
LUWI	Luwuk	7.99	200	Pn	Pn	08 58 06.2	-3.1
APSI	Ampana	8.31	207	P	Pn	08 58 19.1	+5.4
SANI	Sanana	8.55	176	P	Pn	08 58 20.5	+3.5
	58µm100nm,1.0s						
KKM	Kota Kinabalu	9.18	267	Pn	Pn	08 58 22.2	-3.5
NLAI	Namlea	9.86	170	P	Pn	08 58 41.1	+6.2
KRAI	Karang Ratu	10.23	163	P	Pn	08 58 46.5	+6.4
	32nm,0.9s						
TTSI	Tana Toraja	11.05	211	P	Pn	08 58 59.4	+8.1
	103nm,1.0s						
MMSI	Mamuju	11.25	216	P	Pn	08 59 00.0	+6.0
	1µm27nm,1.0s						
FAKI	Fak Fak	11.61	144	P	Pn	08 59 06.8	+7.9
	32nm,0.9s						
KAPI	Kappang	12.80	206	Pn	Pn	08 59 13.3	-2.0
	0.5nm,0.3s,baz=34,slow=19,SNR=4.4						
	8.0nm,0.8s						
BKSI	Bulukumba	12.92	204	P	Pn	08 59 23.2	+6.3
	34nm,1.2s						
SBUM	Sibu	13.78	253	P	P	08 59 39.4	+2.2
LBFI	Labuhan Bajo,	15.91	200	P	P	09 00 03.7	+2.8
	1µm70nm,1.9s						
SOEI	Soe	16.23	184	P	P	09 00 16.7	+12
DBNI	Kabupaten Domp	16.54	205	P	P	09 00 11.3	+3.4
BATI	Baumata	16.73	186	P	P	09 00 21.8	+12
PLAI	Plampang	17.07	207	P	P	09 00 18.1	+4.3
	67nm,1.3s						
WBSI	Waikabubak, Su	17.17	201	P	P	09 00 19.3	+4.4
	54nm,1.5s						
KLNI	Mataram	17.54	212	P	P	09 00 23.3	+4.3
	97nm,0.8s						
JAGI	Jajag, Banyuwa	18.68	217	P	Pn	09 00 38.0	+6.1
	44nm,0.7s						
QIZ	Qiongzhong	19.60	311	P	P	09 00 40.1	-1.6
TPI	Tanjungpandan	20.01	243	P	Pn	09 00 54.8	+6.9
KNRA	Kununurra	22.32	172	P	P	09 01 10.3	-0.7
PPI	Padang Panjang	25.93	255	P	P	09 01 49.0	+3.2
PMG	Port Moresby	26.83	126		P	09 01 54.3	+0.4
PMG	Port Moresby	26.83	126	P	P	09 01 56.8	+2.9
COEN	Coen	26.93	139	P	P	09 01 55.4	+0.6
COEN				IAmb	IAmb	09 02 02.3	
	comp=Z,29nm,1.1s						
WB0	Warramunga Arr	27.59	162	P	P	09 01 59.7	-1.0
WB0				IAmb	IAmb	09 02 18.1	
	comp=Z,20nm,0.9s						
KCSI	Kotacane, Aceh	27.71	265	P	P	09 02 03.8	+1.9
WRA	Warramunga Arr	27.74	162	P	P	09 02 01.3	-0.7
	comp=Z,3.2nm,0.8s,baz=337,slow=10,SNR=8.0						
	comp=Z,3.2nm,0.8s						
WRA	Warramunga Arr	27.74	162	P	P	09 02 00.3	-1.7
WR8	Warramunga Arr	27.80	161	P	P	09 02 02.0	-0.6
JMN	Monobe	28.16	15	P	P	09 02 04.7	-1.0
JMN				IAmb	IAmb	09 02 17.7	
	comp=Z,20nm,1.1s						
GSI	Gunungsitoli	28.26	261	P	P	09 02 08.8	+2.0
CMAR	Chiang Mai Arr	28.39	297	P	P	09 02 08.1	+0.2
	comp=Z,5.7nm,1.0s,baz=121,slow=7.4,SNR=9.9						
	comp=Z,5.7nm,1.0s						
CHTO	Chiang Mai	28.52	298	P	P	09 02 10.7	+1.6
KSRS	Korea Array	30.85	4	P	P	09 02 29.8	+0.4
	comp=Z,4.5nm,1.1s,baz=182,slow=10,SNR=6.0						
	comp=Z,4.5nm,1.1s						
AS31	Alice Springs	31.14	165	P	P	09 02 31.8	-0.5
ASAR	Alice Springs	31.14	165	P	P	09 02 30.1	-2.1
	comp=Z,1.6nm,0.4s,baz=333,slow=7.3,SNR=8.7						
	comp=Z,1.6nm,0.4s						
ASAR	Alice Springs	31.14	165	P	P	09 02 31.9	-0.4
MJAR	Matsushiro Arr	32.07	20	P	P	09 02 39.6	-0.6
	comp=Z,2.7nm,0.8s,baz=198,slow=10,SNR=5.9						
	comp=Z,2.7nm,0.8s						
MJAR	Matsushiro Arr	32.07	20	P	P	09 02 40.7	+0.5
BJT	Baijiatuau	34.35	347	P	P	09 02 57.8	-2.3
LZDM	Lanzhou Array	35.41	329	P	P	09 03 09.8	0.0
	comp=Z,1.0nm,0.3s,baz=126,slow=7.4,SNR=4.4						
LZDM				LR	LR	09 18 42.7	
	comp=Z,1µm,20.1s,baz=355,slow=38						
	comp=Z,1.0nm,0.3s						
MORW	Morawa	36.54	194	P	P	09 03 18.0	-1.1
INKA	Innaminka	37.16	157	P	P	09 03 24.5	+0.2
SHL	Shillong	37.20	304	P	P	09 03 23.8	-1.2
USRK	Ussuriysk Ar.	37.95	8	P	P	09 03 31.9	+1.1
	comp=Z,5.0nm,0.7s,baz=179,slow=8.6,SNR=4.5						
	comp=Z,5.0nm,0.7s						
STKA	Stephens Creek	41.20	159	P	P	09 03 57.7	-0.4
	comp=Z,9.9nm,0.9s,baz=324,slow=10.0,SNR=4.9						
	comp=Z,9.9nm,0.9s						
HILR	Hailar Array B	43.13	355	P	P	09 04 15.3	+1.6
	comp=Z,6.1nm,0.8s,baz=170,slow=11,SNR=5.6						
	comp=Z,6.1nm,0.8s						
SONM	Songino Array	44.24	342	P	P	09 04 24.4	+1.6
	comp=Z,1.4nm,1.0s,baz=162,slow=7.7,SNR=4.2						
	comp=Z,1.4nm,1.0s						
SONM	Songino Array	44.24	342	P	P	09 04 20.9	-1.9
PETK	Petropavlovsk-	53.36	24	P	P	09 05 33.7	+1.1
	comp=Z,6.2nm,0.8s,baz=228,slow=8.4,SNR=7.8						
	comp=Z,6.2nm,0.8s						
PETK	Petropavlovsk-	53.36	24	P	P	09 05 32.5	-0.1
MKAR	Makanchi Array	54.52	325	P	P	09 05 41.2	0.0
	comp=Z,2.7nm,0.7s,baz=120,slow=7.9,SNR=9.4						
	comp=Z,2.7nm,0.7s						
MKAR	Makanchi Array	54.52	325	P	P	09 05 40.8	-0.5
ZALV	Zalesovo Beam	57.51	333	P	P	09 06 00.7	-1.8
	comp=Z,0.7nm,0.5s,baz=109,slow=7.8,SNR=1.9						
	comp=Z,0.7nm,0.5s						
MANEM	Manem	57.61	311	P	P	09 06 03.0	-0.8
MANEM				IAmb	IAmb	09 06 09.2	
	comp=Z,15nm,1.1s						
KURBB	Kurchatov Arra	58.69	327	P	P	09 06 10.2	-0.6
	comp=Z,3.5nm,0.7s,baz=126,slow=6.5,SNR=4.9						
	comp=Z,3.5nm,0.7s						
KURK	Kurchatov	58.69	327	P	P	09 06 10.2	-0.5
KURK				IAmb	IAmb	09 06 25.6	
	comp=Z,7.5nm,0.9s						
KKAR	Karatay Array	60.31	316		P	09 06 21.1	-1.1
BVAR	Borovoye Array	64.27	327	P	P	09 06 47.4	-1.1
	comp=Z,2.2nm,0.8s,baz=124,slow=7.9,SNR=4.5						
	comp=Z,2.2nm,0.8s						
C16K	Lisburne Hills	76.33	21		P	09 08 02.2	+0.2
C16K				IAmb	IAmb	09 08 08.5	
	comp=Z,12nm,1.0s						
C19K	Lookout Ridge	78.58	21	IAmb	IAmb	09 08 25.3	
	comp=Z,13nm,1.1s						
D19K	Kuna River	78.99	21	IAmb	IAmb	09 08 23.4	
	comp=Z,9.2nm,0.9s						
H19K	Roundabout Mou	79.16	25	IAmb	IAmb	09 08 24.8	
	comp=Z,12nm,0.9s						
B20K	Meade River	79.59	20	IAmb	IAmb	09 08 24.6	
	comp=Z,12nm,0.9s						
KBZ	Khabaz	80.12	313	P	P	09 08 23.7	+0.2
	comp=Z,4.7nm,0.9s,baz=99,slow=0.6,SNR=4.5						
	comp=Z,4.7nm,0.9s						
B21K	Ikpikpuk River	80.40	20	IAmb	IAmb	09 08 29.0	
	comp=Z,13nm,0.9s						
BPAW	Bear Paw Mtn.	81.35	26	IAmb	IAmb	09 08 36.2	
	comp=Z,12nm,0.9s						
MLY	Manley	81.50	25	IAmb	IAmb	09 08 38.4	
	comp=Z,8.8nm,0.9s						
C23K	Itkillik River	81.81	20	IAmb	IAmb	09 08 37.7	
	comp=Z,7.4nm,0.8s						
COLD	Coldfoot	81.82	23	IAmb	IAmb	09 08 39.5	
	comp=Z,9.4nm,0.8s						
H23K	Yukon River	82.03	24	IAmb	IAmb	09 08 41.0	
	comp=Z,7.9nm,1.0s						
E23K	Chandalar	82.08	22	IAmb	IAmb	09 08 40.9	
	comp=Z,7.0nm,0.9s						
TOLK	Toolik Lake Re	82.12	22	IAmb	IAmb	09 08 38.3	
	comp=Z,5.6nm,0.8s						
D24K	Happy Valley	82.41	21	IAmb	IAmb	09 08 39.8	
	comp=Z,10.0nm,0.8s						
IL31		83.14	26	IAmb	IAmb	09 08 46.0	
	comp=Z,5.9nm,0.9s						
ILAR	Eielson Array	83.14	26	P	P	09 08 39.5	+0.5
	comp=Z,3.0nm,0.8s,baz=234,slow=5.3,SNR=14						
	comp=Z,3.0nm,0.8s						
ILAR	Eielson Array	83.14	26	P	P	09 08 39.1	+0.1
D25K	Kavik River	83.28	21	P	P	09 08 40.1	+0.4
C27K	Jago River	84.21	21	IAmb	IAmb	09 08 49.5	
	comp=Z,6.6nm,0.9s						
K27K	Chicken	85.26	26	IAmb	IAmb	09 08 56.4	
	comp=Z,9.3nm,0.9s						
I28M	Miner Creek	86.03	25	IAmb	IAmb	09 09 11.9	
	comp=Z,12nm,1.1s						
L29M	L29M	87.13	27	P	P	09 09 00.3	+1.2
BRTR	Keskin Array B	87.24	309	P	P	09 08 59.0	-1.3
	comp=Z,1.0nm,0.8s,baz=91,slow=7.4,SNR=4.1						
	comp=Z,1.0nm,0.8s						
G30M	tAoh Zraii Nji	87.29	23	P	P	09 08 59.9	0.0
G30M				IAmb	IAmb	09 09 06.0	
	comp=Z,5.0nm,1.1s						
F31M	Tsiigehtchic	88.14	22	IAmb	IAmb	09 09 08.9	
	comp=Z,4.3nm,0.8s						
FINES	FINESS Array B	88.76	332	P	P	09 09 05.6	-1.2
	comp=Z,3.4nm,0.9s,baz=70,slow=6.3,SNR=4.7						
	comp=Z,3.4nm,0.9s						
FINES	FINESS Array B	88.76	332	P	P	09 09 05.9	-0.9
SYO	Syowa Base	94.57	201⇑	*e*P	P	09 09 33.5	0.0
QSPA	South Pole Qui	96.43	180	P	P	09 09 41.7	-0.6
	comp=Z,1.6nm,0.3s,baz=64,slow=4.3,SNR=3.3						
	comp=Z,1.6nm,0.3s						
YKA	Yellowknife Ar	97.48	24	P	Pdif	09 09 47.7	+0.6
	comp=Z,0.7nm,0.8s,baz=300,slow=5.3,SNR=5.0						
	comp=Z,0.7nm,0.8s						
TXAR	Lajitas Array	120.86	50	PKP	PKiKP	09 15 06.6	0.0
	comp=Z,0.3nm,0.9s,baz=318,slow=1.6,SNR=2.0						
PLCA	Paso Flores	143.07	160	PKP	PKPbc	09 15 45.4	+0.8
	comp=Z,1.5nm,0.9s,baz=264,slow=1.3,SNR=3.4						

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*GCG **15** 09:04:49.6±0.8, 14°.91N×94°.09W, h34^{km}±56^{km}, MD4.2, ML2.8*

*MEX **15** 09:04:50.4±0.6, 15°.11N×94°.22W, h40^{km}±821^{km}, MD3.8*

ISC 15 09:04:43.5±2.9**, 14°.86N**±0°.10×**94°.21W**±0°.07**, h3^{km}**±14^{km}**, n14, σ2^{s}07**/22**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.27	49	*e*P	Pg	09 05 08.5	+0.7
PCIG				*e*S	Sg	09 05 21.6	-2.7
PATR	El Naranjo	1.92	82	*e*P	Pn	09 05 19.1	+1.8
PATR				*e*S	Sn	09 05 39.3	-2.8
PAVE	Pavencul	1.99	80	*e*P	Pn	09 05 20.2	+1.9
PAVE				*e*S	Sn	09 05 43.0	-0.7
CHUJ	Union Juarez	2.04	83	*e*P	Pn	09 05 21.0	+2.1
CHUJ				*e*S	Sn	09 05 44.8	-0.3
HUIG	Huatulco	2.04	296	*e*P	Pn	09 05 18.8	0.0
HUIG				*e*S	Sn	09 05 38.3	-6.5
TGIG		2.17	29	*e*P	Pn	09 05 22.0	+1.4
TGIG				*e*S	Sn	09 05 47.1	-1.0
TGIG		2.17	29	*e*P	Pn	09 05 22.2	+1.6
TGIG				*e*S	Sn	09 05 47.1	-1.0
TGIG				IAML		09 05 49.1	
	comp=E,59nm,0.4s						
CMIG	Matias Romero	2.31	344	*e*P	Pn	09 05 22.8	+0.3
CMIG				*e*S	Sn	09 05 48.3	-3.1
CCIG	Comitan	2.44	54	*e*P	Pn	09 05 27.7	+3.2
CCIG				*e*S	Sn	09 05 55.3	+0.4
CCIG	Comitan	2.44	54	*e*P	Pn	09 05 26.5	+2.1
CCIG				*e*S	Sn	09 05 55.3	+0.4
CCIG				IAML		09 06 01.4	
	comp=N,46nm,0.4s						
UXUV	UXUV	2.44	1	*e*P	Pn	09 05 26.5	+2.2
UXUV				*e*S	Sn	09 05 51.6	-3.1
STG8	El Palmar, Qui	2.79	98	*i* P	Pn	09 05 27.8	-1.5
STG8				*e*S	Sn	09 05 56.7	-6.9
STG8				IAML		09 06 02.4	
	comp=N,73nm,0.3s						
PEIG	Puerto Escondi	3.05	292	*e*P	Pn	09 05 32.9	+0.2
PEIG				*e*S	Sn	09 06 02.9	-6.9
NEUV	Arroyo Zacate	3.22	332	*e*P	Pn	09 05 31.2	-3.8
NEUV				*e*S	Sn	09 06 15.2	+1.3

IDC 15 09:22:58.9±1.4**, 6°.45N×125°.22E, h0^{km}, mb3.5**/4**, mbtmp3.5**/4**, MS4.3**/2**, Error ellipse: s-maj=37.4km s-min=9.8km az=110.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.71	30	Pg	Pg	09 23 12.6	+0.1
	367nm,0.3s,baz=240,slow=2.9,SNR=9.2						
DAV				Lg	Lg	09 23 22.6	
	340nm,0.3s,baz=100,slow=22,SNR=7.5						
JOW	Kunigami	20.48	8	LR	LR	09 35 01.5	
	comp=Z,1µm,21.9s,baz=137,slow=35						
GUMO	Guam	20.60	68	LR	LR	09 35 11.1	
	comp=Z,556nm,20.6s,baz=167,slow=36						
WRA	Warramunga Arr	27.72	161	P	P	09 28 48.6	-0.5
	0.4nm,0.7s,baz=339,slow=9.3,SNR=5.3						
	0.4nm,0.7s						
ASAR	Alice Springs	31.11	164	P	P	09 29 19.8	+0.5
	0.4nm,0.6s,baz=352,slow=8.8,SNR=11						
	0.4nm,0.6s						
STKA	Stephens Creek	41.19	159	P	P	09 30 45.0	-0.3
	1.1nm,0.8s,baz=349,slow=10,SNR=3.0						
	1.1nm,0.8s						
MKAR	Makanchi Array	54.48	325	P	P	09 32 28.3	-0.1
	0.2nm,0.6s,baz=126,slow=7.3,SNR=2.1						
	0.2nm,0.6s						

IDC 15 09:32:33.2±1.6**, 6°.48N×125°.17E, h0^{km}, mb3.3**/3**, mbtmp3.3**/3**, MS4.0**/1**, Error ellipse: s-maj=36.9km s-min=10.8km az=118.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.71	35	Pg	Pg	09 32 46.9	+0.1
	195nm,0.3s,baz=68,slow=23,SNR=4.5						
DAV				Lg	Lg	09 32 56.8	
	356nm,0.3s,baz=259,slow=22,SNR=19						
GUMO	Guam	20.63	68	LR	LR	09 45 17.8	
	comp=Z,439nm,20.5s,baz=168,slow=37						
WRA	Warramunga Arr	27.77	161	P	P	09 38 23.5	-0.5
	0.2nm,0.7s,baz=337,slow=9.1,SNR=1.1						
	0.2nm,0.7s						
ASAR	Alice Springs	31.16	164	P	P	09 38 54.3	+0.3
	0.2nm,0.6s,baz=340,slow=6.6,SNR=4.3						
	0.2nm,0.6s						
MKAR	Makanchi Array	54.42	325	P	P	09 42 02.2	0.0
	0.5nm,0.9s,baz=133,slow=8.5,SNR=2.4						
	0.5nm,0.9s						

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*IDC **15** 09:36:45.7±0.9, 6°.47N×125°.45E, h0^{km}, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=32.6km s-min=8.6km az=96.0*

ISC 15 09:36:47.1±1.0**, 6°.58N**±0°.10×**125°.6E**±0°.4**, h10^{km}, n9, σ0^{s}93**/9**, mb3.7**/7**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.49	359	Pg	Pb	09 36 57.4	-0.4
	1µm,0.3s,baz=252,slow=3.3,SNR=37						
DAV				Lg	Lg	09 37 05.5	
	1µm,0.3s,baz=100,slow=22,SNR=12						
DAV	Davao City (W)	0.49	359	P	Pg	09 36 56.0	-0.6
WRA	Warramunga Arr	27.73	162	P	P	09 42 35.4	-0.5
	0.6nm,0.7s,baz=336,slow=10,SNR=7.5						
	0.6nm,0.7s						
ASAR	Alice Springs	31.14	165	P	P	09 43 05.3	-0.9
	0.5nm,0.5s,baz=342,slow=7.0,SNR=13						
	0.5nm,0.5s						
STKA	Stephens Creek	41.18	159	P	P	09 44 32.0	+0.1
	1.4nm,0.8s,baz=342,slow=9.7,SNR=4.0						
	1.4nm,0.8s						
MKAR	Makanchi Array	54.58	325	P	P	09 46 16.1	+0.4
	0.4nm,0.6s,baz=118,slow=8.2,SNR=6.7						
	0.4nm,0.6s						
ZALV	Zalesovo Beam	57.55	333	P	P	09 46 38.0	+1.3
	0.4nm,0.4s,baz=134,slow=6.2,SNR=1.5						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	58.74	327	P	P	09 46 44.5	-0.6
	0.6nm,0.7s,baz=125,slow=6.7,SNR=6.0						
	0.6nm,0.7s						
ILAR	Eielson Array	83.04	26	P	P	09 49 13.8	+1.2
	0.4nm,0.9s,baz=239,slow=5.7,SNR=6.2						
	0.4nm,0.9s						

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*SJA **15** 09:43:18.9±0.6, 22°.54S×66°.17W, h224^{km}±5^{km}, ML3.8, MW3.6*

*GUC **15** 09:43:24.1±0.6, 22°.53S×66°.51W, h218^{km}±5^{km}, ML3.7*

ISC 15 09:43:20.3±1.3**, 22°.50S**±0°.04×**66°.51W**±0°.06**, h245^{km}, n42, σ1^{s}98**/58**, 11C-2D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YJA	Yavi	0.98	71	*e*P	Pn	09 43 55.8	+0.5
YJA				*e*S	S	09 44 19.5	-3.0
YJA	Yavi	0.98	71	*e*P	Pn	09 43 50.9	-4.3
YJA				*e*S	S	09 44 14.4	-8.1
HJA	Humahuaca	1.23	125	*e*P	Pn	09 43 52.3	-4.4
AF01	San Pedro de A	1.61	254	*e*P	Pn	09 43 59.5	+0.2
SALTA		1.72	175⇑	*e*P	Pn	09 44 02.0	+1.5
SALTA		1.72	175	*e*P	Pn	09 43 57.0	-3.5
SLA	San Lorenzo	2.39	158	*e*P	Pn	09 44 08.2	+1.9
SLA	San Lorenzo	2.39	158	*e*P	Pn	09 44 02.8	-3.5
PB09	IPOC Station P	2.63	285⇑	*e*P	Pn	09 44 10.9	+2.1
PB09				*e*S	S	09 44 46.8	-0.1
PB09				IAML		09 44 50.4	
	comp=E,115nm,0.5s						
PB09	IPOC Station P	2.63	285	*e*P	Pn	09 44 11.2	+2.4
PB09				*e*S	S	09 44 42.9	-4.0
PB09				IAML		09 44 48.6	
	comp=Z,106nm,0.4s						
PB06	IPOC Station P	2.84	265⇓	*e*P	Pn	09 44 12.7	+1.8
PB06				*e*S	S	09 44 50.3	-0.5
PB06				IAML		09 44 54.8	
	comp=E,138nm,0.3s						
PB06	IPOC Station P	2.84	265	*e*P	Pn	09 44 12.6	+1.7
PB06				*e*S	S	09 44 51.7	+0.9
PB06				IAML		09 44 55.9	
	comp=Z,116nm,0.5s						
PB03	IPOC Station P	3.04	278⇑	*e*P	Pn	09 44 14.3	+1.3
PB03	IPOC Station P	3.04	278	*e*P	Pn	09 44 14.4	+1.3
PB03				*e*S	S	09 44 53.7	-1.1
PB03				IAML		09 44 56.5	
	comp=Z,251nm,0.4s						
PB01	IPOC Station P	3.13	297⇑	*e*P	Pn	09 44 15.4	+1.4
PB01	IPOC Station P	3.13	297	*e*P	Pn	09 44 15.4	+1.4
PB01				*e*S	S	09 44 56.0	-0.4
PB01				IAML		09 45 01.6	
	comp=Z,77nm,0.5s						
PB07	IPOC Station P	3.23	283⇑	*e*P	Pn	09 44 16.6	+1.5
PB07	IPOC Station P	3.23	283	*e*P	Pn	09 44 16.7	+1.5
PB07				*e*S	S	09 44 57.9	-0.7
PB07				IAML		09 44 58.3	
	comp=Z,219nm,0.4s						
PB02	IPOC Station P	3.36	290⇑	*e*P	Pn	09 44 17.9	+1.3
PB02	IPOC Station P	3.36	290	*e*P	Pn	09 44 18.2	+1.6
PB02				*e*S	S	09 44 51.6	-9.5
PB02				IAML		09 44 57.7	
	comp=Z,299nm,0.2s						
PB08	IPOC Station P	3.41	313⇑	*e*P	Pn	09 44 19.8	+2.3
PB08	IPOC Station P	3.41	313	*e*P	Pn	09 44 20.1	+2.6
PB08				*e*S	S	09 45 04.0	+1.3
PB08				IAML		09 45 05.0	
	comp=Z,42nm,0.6s						
PB05	IPOC Station P	3.43	263⇑	*e*P	Pn	09 44 18.8	+1.4
PB05	IPOC Station P	3.43	263	*e*P	Pn	09 44 18.9	+1.5
PB05				*e*S	S	09 44 56.2	-6.3
PB05				IAML		09 45 02.9	
	comp=Z,64nm,0.7s						
GO01	Chusmiza	3.77	318⇑	*e*P	Pn	09 44 23.8	+2.0
GO01	Chusmiza	3.77	318	*e*P	Pn	09 44 23.5	+1.7
GO01				*e*S	S	09 45 12.3	+1.9
GO01				IAML		09 45 15.1	
	comp=Z,56nm,0.5s						
PATCX	Punta Patache	3.78	296	*e*P	Pn	09 44 22.6	+1.2
PATCX	Punta Patache	3.78	296	*e*P	Pn	09 44 22.3	+0.8
PATCX				*e*S	S	09 45 08.2	-1.7
PATCX				IAML		09 45 12.3	
	comp=Z,128nm,0.4s						
PB10	IPOC Station P	3.86	254⇓	*e*P	Pn	09 44 23.9	+1.6
PB10	IPOC Station P	3.86	254	*e*P	Pn	09 44 23.9	+1.6
PB10				*e*S	S	09 45 09.7	-1.6
PB10				IAML		09 45 12.5	
	comp=Z,42nm,0.2s						
GO02	Mina Guanaco	3.87	226⇑	*e*P	Pn	09 44 24.3	+1.7
GO02	Mina Guanaco	3.87	226	*e*P	Pn	09 44 24.8	+2.1
GO02				*e*S	S	09 45 12.2	+0.1
GO02				IAML		09 45 13.1	
	comp=Z,138nm,0.1s						
TA01	Diego Aracena	3.93	299⇑	*e*P	Pn	09 44 23.8	+0.8
TA01	Diego Aracena	3.93	299	*e*P	Pn	09 44 23.3	+0.3
TA01				*e*S	S	09 45 10.6	-2.2
TA01				IAML		09 45 11.3	
	comp=Z,62nm,0.5s						
PB11	IPOC Station P	4.01	312	*e*P	Pn	09 44 25.1	+0.9
PB11	IPOC Station P	4.01	312	*e*P	Pn	09 44 25.3	+1.1
PB11				*e*S	S	09 45 13.8	-1.0
PB11				IAML		09 45 15.0	
	comp=Z,88nm,0.5s						
PB14	IPOC Station P	4.15	239	*e*P	Pn	09 44 27.6	+1.6
PB14				*e*S	S	09 45 16.5	-1.5
PB14				IAML		09 45 19.0	
	comp=Z,74nm,0.1s						
AC02	Maricunga	4.93	208	*e*P	Pn	09 44 39.3	+3.8
AC02				*e*S	S	09 45 31.2	-4.1
AC01	Pan de Azucar	5.20	225	*e*P	Pn	09 44 39.1	+0.7
AC01	Pan de Azucar	5.20	225	*e*P	Pn	09 44 39.3	+0.9
AC01				*e*S	S	09 45 38.9	-1.8
AC01				IAML		09 45 39.9	
	comp=Z,22nm,0.3s						
PB12	IPOC Station P	5.27	317	*e*P	Pn	09 44 39.2	-0.2
PB12	IPOC Station P	5.27	317	*e*P	Pn	09 44 39.6	+0.2
PB12				*e*S	S	09 45 39.1	-3.4
PB12				IAML		09 45 40.6	
	comp=Z,31nm,0.3s						

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*IDC **15** 09:52:22.3±1.0, 37°.23S×177°.35E, h154^{km}±8^{km}, mb4.8/17, mbtmp5.2/17, Error ellipse: s-maj=15.7km s-min=10.1km az=48.0*

*NOU **15** 09:52:22.2, 37°.62S×177°.39E, h153^{km}, mb5.2/90, Off E. Coast of N. Island, N.Z.*

*NEIC **15** 09:52:23.1±2.0, 37°.54S±0°.08×177°.20E±0°.09, h151^{km}±7^{km}, mb5.1/48, Mww5.1/11, Error ellipse: s-maj=11.6km s-min=9.9km az=186.0*

*WEL **15** 09:52:23.8±0.6, 37°S±3°×17°7E±°, h134^{km}±5^{km}, M5.0/36, ML5.0/25, MLv5.0/36, Error ellipse: s-maj=5.0km s-min=4.4km az=66.6, confirmed*

*MOS **15** 09:52:23.6±1.4, 37°.38S×177°.12E, h169^{km}, mb5.1/10, Error ellipse: s-maj=14.4km s-min=10.3km az=36.5*

*WEL **15** 09:52:23.8, 37°.43S×177°.22E, h144^{km}, ML5.0, Mw5.0, Moment Tensor Solution. s13 Moment tensor: Scale 10^{16}Nm; M_{rr}1.50; $M_{\theta\theta}$-0.38; $M_{\phi\phi}$-1.12; $M_{r\theta}$2.26; $M_{\theta\phi}$-0.63; $M_{\phi r}$3.26; Fault plane solution: $M_0$4.24000×10^{16} NP1: ϕ_s34.00000°, δ80.00000°, λ92.00000°. NP2: ϕ_s206.00000°, δ10.00000°, λ81.00000°. Principal axes: T -4.2232, Plg55.0000°, Azm306.0000°; N -0.0266, Plg2.0000°, Azm213.0000°; P 4.2498, Plg35.0000°, Azm123.0000°; Stations used: HAZ OPRZ MXZ MWZ PUZ RTZ KUZ TLZ MKAZ GRZ OTVZ HIZ WCZ REVERSE FAULTING*

*NEIC **15** 09:52:23, 37°.64S×176°.70E, h150^{km}, Moment Tensor*

Solution. Duration: $1^{s}6$ Moment tensor: Scale 10^{16}Nm; M_{rr}0.43; $M_{\theta\theta}$-1.08; $M_{\phi\phi}$0.65; $M_{r\theta}$1.89; $M_{\theta\phi}$3.10; $M_{\phi r}$3.17;
Fault plane solution: $M_0$4.91000×10^{16} NP1:ϕ_s90.79000°, δ56.11000°,λ18.33000°. NP2:ϕ_s350.32000°,δ74.87000°, λ144.72000°. Principal axes: T 5.6066, Plg35.0000°, Azm305.0000°; N -2.0866, Plg52.0000°, Azm150.0000°; P -3.5200, Plg12.0000°, Azm44.0000°;

NEIC ***15** 09:52:23,37°.54S×177°.21E,h150^{km}*

ISC 15 09:52:22.8±0.3**,37°.47S**±0°.04×**177°.26E**±0°.04**,h158**^{km}±2^{km}**, h158**^{km}**:pP-P,n553,**σ**1^{s}59**/594**,mb5.2**/101**,14C-18D,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WIZ	White Island	0.08	223	P	Pn	09 52 42.2	-1.7
WIZ				S	Sn	09 52 57.4	-2.6
WSRZ	White Island S	0.08	232	P	Pn	09 52 42.1	-1.7
WHRZ	Whale Island	0.44	210	P	Pn	09 52 43.8	-0.9
WHRZ				S	Sn	09 53 00.7	-1.0
HAZ	Te Kaha	0.51	124	P	Pn	09 52 44.0	-1.0
HAZ				S	Sn	09 53 00.2	-1.8
RUGZ	Raukumara Rang	0.60	146	P	Pn	09 52 44.2	-1.5
RUGZ				S	Sn	09 53 00.5	-2.7
OPRZ	Ohinepanea	0.67	236	P	Pn	09 52 44.6	-1.3
OPRZ				S	Sn	09 53 00.9	-2.7
MARZ	Manawahe	0.69	222	P	Pn	09 52 45.1	-1.0
EDRZ	Edgecumbe	0.76	213	P	Pn	09 52 45.5	-1.0
URZ	Urewera	0.80	188	P	Pn	09 52 46.0	-0.7
	4µm,0.3s,baz=277,slow=2.7,SNR=8332						
URZ				S	Sn	09 53 02.0	-3.2
	12µm,0.3s,baz=221,slow=22,SNR=20						
URZ	Urewera	0.80	188	P	Pn	09 52 45.6	-1.1
URZ				S	Sn	09 53 02.2	-3.0
MYRZ	Mayor Island	0.83	283	P	Pn	09 52 45.9	-1.1
TGRZ	Tauranga	0.83	252	P	Pn	09 52 45.7	-1.3
TGRZ				S	Sn	09 53 03.5	-2.0
MXZ	Matakaoa Point	0.84	97		Pn	09 52 46.9	-0.2
MXZ	Matakaoa Point	0.84	97	P	Pn	09 52 46.7	-0.3
MXZ	Matakaoa Point	0.84	97	S	Sn	09 53 04.4	-1.2
MXZ	Matakaoa Point	0.84	97	P	Pn	09 52 46.9	-0.2
MXZ				S	Sn	09 53 04.6	-1.0
LIRZ	Lichensteins R	0.87	232	P	Pn	09 52 46.5	-0.8
MWZ	Matawai	0.89	166	P	Pn	09 52 46.7	-0.8
MWZ				S	Sn	09 53 05.1	-1.4
TWGZ	Tauwhareparae	0.91	141	P	Pn	09 52 47.6	0.0
MKRZ	Makatiti	0.91	223	P	Pn	09 52 47.5	-0.2
OMRZ	Omania	0.94	228	P	Pn	09 52 47.0	-0.9
TARZ	Mount Tarawera	0.97	218	P	Pn	09 52 47.7	-0.5
KARZ	Kaharoa	0.97	235	P	Pn	09 52 47.1	-1.0
WMGZ	Waiomatatini S	0.98	111	P	Pn	09 52 48.3	+0.1
PUZ	Puketiti	0.99	127	P	Pn	09 52 48.0	-0.2
RAGZ	Rawiri	1.03	173	P	Pn	09 52 48.0	-0.6
RRRZ	Republican Roa	1.05	214	P	Pn	09 52 47.9	-0.8
NGRZ	Ngongotaha	1.05	233	P	Pn	09 52 48.2	-0.6
HLRZ	Highlands Stat	1.06	222	P	Pn	09 52 48.3	-0.5
MUGZ	Murupara	1.07	201	P	Pn	09 52 48.0	-0.9
TKGZ	Te Karaka	1.07	154	P	Pn	09 52 48.4	-0.5
UTU	Utuhina	1.10	230	P	Pn	09 52 48.9	-0.2
KMRZ	Kaimai	1.11	250	P	Pn	09 52 48.3	-0.9
KMRZ				S	Sn	09 53 07.8	-1.8
HSRZ	Hossack Road	1.16	223	P	Pn	09 52 49.3	-0.3
RTZ	Ruatahuna	1.16	191		Pn	09 52 48.2	-1.5
RTZ	Ruatahuna	1.16	191	P	Pn	09 52 48.7	-1.1
RTZ				S	Sn	09 53 08.3	-2.3
HRRZ	Handcock Road	1.20	220	P	Pn	09 52 49.5	-0.5
PRRZ	Plateau Road	1.23	213	P	Pn	09 52 49.6	-0.7
CNGZ	Carnagh Statio	1.26	144	P	Pn	09 52 50.9	+0.3
RIGZ	Rimuhau	1.30	162	P	Pn	09 52 50.8	-0.2
ALRZ	Allen Road	1.31	213	P	Pn	09 52 50.3	-0.7
SNGZ	Shannon Statio	1.31	177	P	Pn	09 52 50.5	-0.6
WPRZ	Whakapapatarin	1.36	219	P	Pn	09 52 51.1	-0.4
TOZ	Tahuroa Road	1.42	259		Pn	09 52 51.3	-0.7
TOZ	Tahuroa Road	1.42	259	P	Pn	09 52 51.3	-0.7
MTHZ	Maungataniwha	1.42	193	P	Pn	09 52 51.1	-1.0
KUZ	Kuaotunu	1.42	300	P	Pn	09 52 50.8	-1.4
KUZ	Kuaotunu	1.42	300	P	Pn	09 52 50.7	-1.4
RAHZ	Arahi	1.45	185	P	Pn	09 52 52.0	-0.4
MRHZ	Matea Rd	1.51	206	P	Pn	09 52 52.0	-1.1
KUTZ	Kaahu Road	1.52	228	P	Pn	09 52 52.9	-0.3
PRGZ	Paritu Road	1.53	161	P	Pn	09 52 53.0	-0.3
WHTZ	Whakaora	1.57	220	P	Pn	09 52 53.6	-0.2
KNZ	Kokohu	1.58	168	P	Pn	09 52 53.2	-0.5
WHHZ	Waihua	1.60	181	P	Pn	09 52 53.5	-0.5
TLZ	Tolley Road	1.61	237	P	Pn	09 52 53.6	-0.4
NMHZ	Naumai	1.66	192	P	Pn	09 52 54.3	-0.4
HATZ	Hinemaiaia	1.69	213	P	Pn	09 52 54.2	-0.8
MKAZ	Moumakai	1.71	282	P	Pn	09 52 54.3	-0.8
WATZ	Wairara	1.72	224	P	Pn	09 52 54.9	-0.4
MHGZ	Mahia Peninsul	1.76	163	P	Pn	09 52 55.7	+0.1
BKZ	Black Stump Fm	1.79	199		Pn	09 52 54.3	-1.8
BKZ	Black Stump Fm	1.79	199	P	Pn	09 52 54.8	-1.3
ARHZ	Aropaoanui	1.80	186	P	Pn	09 52 55.6	-0.5
RATZ	Rangitukua	1.82	220	P	Pn	09 52 55.8	-0.6
WIAZ	Waiheke Island	1.82	291	P	Pn	09 52 55.5	-0.8
RITZ	Rihia Road	1.86	216	P	Pn	09 52 56.4	-0.5
GRZ	Great Barrier	1.89	310	P	Pn	09 52 55.8	-1.3
KBAZ	Karaka Road Bo	1.92	281	P	Pn	09 52 57.4	0.0
ETAZ	East Tamaki Re	1.93	285	P	Pn	09 52 57.0	-0.5
KATZ	Kakaramea	1.94	219	P	Pn	09 52 57.0	-0.8
MBAZ	Motutapu North	2.01	290	P	Pn	09 52 57.9	-0.6
MCHZ	McNeill Hill	2.02	192	P	Pn	09 52 57.9	-0.7
NTVZ	North Tongarir	2.05	217	P	Pn	09 52 58.3	-0.7
TMVZ	Te Maari	2.05	216	P	Pn	09 52 58.1	-0.9
KWHZ	Kaweka Forest	2.06	198	P	Pn	09 52 58.0	-1.1
ETVZ	East Tongariro	2.06	216	P	Pn	09 52 58.3	-0.9
ETVZ				S	Sn	09 53 26.0	-1.2
KRVZ	Karewarewa	2.06	218	P	Pn	09 52 58.4	-0.7
EPAZ	Eden Park BICE	2.09	286	P	Pn	09 52 59.0	-0.3
NNVZ	North Ngauruho	2.10	217	P	Pn	09 52 58.8	-0.8
WTVZ	West Tongariro	2.10	218	P	Pn	09 52 58.7	-0.9
OTVZ	Oturere	2.10	216	P	Pn	09 52 58.9	-0.8
OTVZ				S	Sn	09 53 26.5	-1.7
HBAZ	Herne Bay Bore	2.11	286	P	Pn	09 52 59.3	-0.3
AWAZ	Awhitu Peninsu	2.12	280	P	Pn	09 52 59.1	-0.7
ABAZ	Army Bay	2.12	293	P	Pn	09 52 59.2	-0.5
SNVZ	South Ngauruho	2.13	216	P	Pn	09 52 59.2	-0.8
NGZ	Ngauruhoe	2.14	217	P	Pn	09 52 59.4	-0.8
TWVZ	Taurewa	2.14	221	P	Pn	09 52 59.3	-0.8
TWVZ				S	Sn	09 53 28.4	-0.6
HIZ	Hauiti	2.16	241		Pn	09 53 00.0	-0.2
HIZ	Hauiti	2.16	241	P	Pn	09 53 00.3	+0.1
HIZ	Hauiti	2.16	241	P	Sn	09 53 29.8	+0.6
HIZ	Hauiti	2.16	241	P	Pn	09 53 00.1	-0.1
CKHZ	Cape Kidnapper	2.19	184	P	Pn	09 52 59.7	-0.8
CKHZ				S	Sn	09 53 29.4	-0.4
COVZ	Chateau Observ	2.19	217	P	Pn	09 53 00.0	-0.6
WTAZ	Waiatarua	2.21	283	P	Pn	09 53 00.3	-0.5
FWVZ	Far West T-bar	2.23	216	P	Pn	09 53 00.1	-1.1
MAVZ	Matarangi	2.23	216	P	Pn	09 53 00.4	-1.0
RVAZ	Riverhead Bore	2.25	287	P	Pn	09 53 00.5	-0.7
TRVZ	Turoa	2.27	216	P	Pn	09 53 00.5	-1.1
KRHZ	Kereru	2.28	197	P	Pn	09 53 00.0	-1.6
KRHZ				S	Sn	09 53 29.0	-2.7
KAHZ	Kahuranaki	2.34	187	P	Pn	09 53 01.4	-1.0
KAHZ				S	Sn	09 53 32.6	-0.5
PKVZ	Pokaka	2.35	219	P	Pn	09 53 01.6	-0.9
MTVZ	Mangateitei	2.37	216	P	Pn	09 53 01.7	-1.0
VRZ	Vera Road	2.57	229	P	Pn	09 53 05.0	0.0
PNHZ	Pukenui	2.58	198	P	Pn	09 53 03.3	-1.9
PXZ	Pawanui	2.58	187	P	Pn	09 53 03.6	-1.6
WPHZ	Waipukurau	2.67	194	P	Pn	09 53 04.4	-1.8
TSZ	Takapari Road	2.77	201	P	Pn	09 53 05.3	-2.3
WCZ	Waipu Caves	2.79	302	P	Pn	09 53 07.0	-0.9
MHEZ	Mangahewa	2.81	234	P	Pn	09 53 09.2	+1.1
PRHZ	Porangahau	2.83	190	P	Pn	09 53 06.6	-1.8
WAZ	Wanganui	2.89	217	P	Pn	09 53 07.8	-1.3
DVHZ	Dannevirke	2.95	196	P	Pn	09 53 07.3	-2.5
DREZ	Durham Road	2.95	234	P	Pn	09 53 09.9	+0.1
LREZ	Lake Rotokare	2.99	228	P	Pn	09 53 11.2	+0.9
ANWZ	Angora Road	3.05	191	P	Pn	09 53 09.2	-1.8
NEZ	North Egmont	3.06	233	P	Pn	09 53 13.9	+2.6
PREZ	Palmer Road	3.07	232	P	Pn	09 53 14.7	+3.4
PKE	Pukeiti	3.09	235	P	Pn	09 53 11.4	-0.2
OHWZ	Ohakea	3.12	208	P	Pn	09 53 10.5	-1.4
KHEZ	Kahui Hut	3.13	233	P	Pn	09 53 12.1	0.0
KHEZ	Kahui Hut	3.13	233	S	Sn	09 53 50.6	+0.2
KHEZ	Kahui Hut	3.13	233	P	Pn	09 53 12.3	+0.2
POWZ	Post Office Ro	3.14	201	P	Pn	09 53 09.9	-2.3
NBEZ	Newall Road No	3.21	235	P	Pn	09 53 13.1	0.0
PRWZ	Pori Road	3.24	198	P	Pn	09 53 11.2	-2.1
NMEZ	Namu Road	3.29	233	P	Pn	09 53 14.9	+0.9
BFZ	Birch Farm	3.30	193		Pn	09 53 11.3	-2.9
BFZ	Birch Farm	3.30	193	P	Pn	09 53 11.8	-2.4
BFZ	Birch Farm	3.30	193	S	Sn	09 53 50.8	-3.4
BFZ	Birch Farm	3.30	193	P	Pn	09 53 11.6	-2.6
MRZ	Mangatainoka R	3.44	202		Pn	09 53 13.1	-2.9
MRZ	Mangatainoka R	3.44	202	P	Pn	09 53 12.9	-3.1
TIWZ	Tintock	3.47	197	P	Pn	09 53 13.9	-2.4
CPWZ	Castlepoint	3.53	193	P	Pn	09 53 15.2	-1.9
HOWZ	Holdsworth Sta	3.68	201	P	Pn	09 53 16.0	-3.0
OUZ	Omahuta	3.71	306	P	Pn	09 53 18.9	-0.6
OUZ	Omahuta	3.71	306	P	Pn	09 53 18.9	-0.6
OGWZ	Otaki Gorge	3.71	205	P	Pn	09 53 16.3	-3.2
TMWZ	Te Maipa	3.78	196	P	Pn	09 53 17.4	-3.0
KIW	Kapiti Island	3.84	208	P	Pn	09 53 17.8	-3.4
TRWZ	Traveller	4.11	197	P	Pn	09 53 21.2	-3.4
MSWZ	Moikau Station	4.24	201		Pn	09 53 22.5	-3.7
SNZO	South Karori	4.31	206		Pn	09 53 23.3	-3.9
BHW	Baring Head	4.34	204		Pn	09 53 23.3	-4.3
TCW	Tory Channel	4.39	211		Pn	09 53 24.1	-4.1
TUWZ	Tuamarina	4.71	212		Pn	09 53 28.2	-4.2
NNZ	Nelson	4.80	218		Pn	09 53 30.2	-3.4
CMWZ	Cape Campbell	4.88	208		Pn	09 53 31.6	-3.0
TKNZ	Takaka Hill	4.88	222		Pn	09 53 30.7	-3.9
QRZ	Quartz Range	4.97	226		Pn	09 53 31.9	-3.9
BSWZ	Blackbirch Sta	4.98	211		Pn	09 53 31.5	-4.5
MRNZ	Matariki Terra	5.25	220		Pn	09 53 35.5	-4.0
THZ	Tophouse	5.45	217		Pn	09 53 38.3	-3.8
KHZ	Kahutara	5.71	209		Pn	09 53 41.2	-4.3
GVZ	Greta Valley S	6.37	209		Pn	09 53 49.9	-4.5
LTZ	Lake Taylor	6.54	214		Pn	09 53 51.8	-4.8
INZ	Inchbonnie	6.88	219		Pn	09 53 56.1	-5.1
OXZ	Oxford	7.07	213		Pn	09 53 59.0	-4.7
MQZ	McQueen’s Vall	7.14	208		Pn	09 53 59.2	-5.4
CTZ	Chatham Island	7.80	145	P	Pn	09 54 12.3	-1.1
CTZ	Chatham Island	7.80	145	S	Sn	09 55 36.2	-4.2
CTZ	Chatham Island	7.80	145	P	Pn	09 54 14.4	+1.1
RPZ	Rata Peaks	7.82	215		Pn	09 54 09.0	-4.6
RPZ	Rata Peaks	7.82	215	P	Pn	09 54 09.6	-4.0
LBZ	Lake Benmore	8.73	216		Pn	09 54 21.2	-4.6
ODZ	Otahua Downs	9.05	211		Pn	09 54 25.1	-4.9
ODZ	Otahua Downs	9.05	211	P	Pn	09 54 25.6	-4.4
MSZ	Milford Sound	10.06	221	P	Pn	09 54 40.7	-2.6
MLZ	Mavora Lakes	10.45	218		Pn	09 54 43.8	-4.7
WHZ	Wether Hill Ro	10.91	217		Pn	09 54 49.2	-5.3
DCZ	Deep Cove	11.00	220		Pn	09 54 50.5	-5.2
NFK	Norfolk Island	11.46	314	P	Pn	09 55 03.0	+1.3
	comp=Z,95nm,1.3s						
LHI	Lord Howe Isla	16.12	286	P	P	09 56 02.8	+2.0
	comp=Z,89nm,1.1s						
LHI	Lord Howe Isla	16.12	286	P	P	09 56 02.2	+1.4
LHI				IAmb	IAmb	09 56 05.0	
	comp=Z,78nm,1.1s						
PINNC	Pines Island,	17.05	328		Pn	09 56 12.6	+0.8
PINNC				IAmb	IAmb	09 56 23.5	
	comp=Z,106nm,1.0s						
PINNC	Pines Island,	17.05	328	P	Pn	09 56 13.0	+1.2
OUENC	Ouen Island, N	17.49	326	P	Pn	09 56 18.1	+1.1
ONTNC	Ouen Toro	17.76	325		Pn	09 56 20.0	-0.2
ONTNC	Ouen Toro	17.76	325	P	Pn	09 56 20.7	+0.5
YATNC	Mamie plateau,	17.78	327	P	Pn	09 56 21.1	+0.6
MARNC	Mare, Loyalty	17.83	331		Pn	09 56 20.6	-0.4
MARNC	Mare, Loyalty	17.83	331	P	Pn	09 56 21.5	+0.4
DZM	Mont Dzumac	17.97	326	P	Pn	09 56 22.4	-0.4
	comp=Z,45nm,0.6s,baz=169,slow=9.2,SNR=74						
DZM	Mont Dzumac	17.97	326		Pn	09 56 22.6	-0.2
DZM				IAmb	IAmb	09 56 29.9	
	comp=Z,69nm,0.7s						
DZM	Mont Dzumac	17.97	326	P	Pn	09 56 23.1	+0.3
INH	Isangel	19.17	336	P	Pn	09 56 35.7	-1.1
MSVF	Nonsavu	19.68	2		Pn	09 56 41.7	-1.2
MSVF				IAmb	IAmb	09 56 47.9	
	comp=Z,66nm,0.8s						
MSVF	Nonsavu	19.68	2	P	Pn	09 56 41.7	-1.2
MSVF	Nonsavu	19.68	2	*i* P	P	09 56 39.7	-0.1
KOUNC	Koumac, New Ca	20.28	323	P	Pn	09 56 48.8	-1.2
AUKHS	Kincumber High	21.43	273	P	P	09 57 00.7	+2.4
MGCD	Mangrove Creek	21.72	273	P	P	09 56 59.5	-2.0
SYDH	Sydney Hard Ro	21.84	272	P	P	09 57 03.9	+1.2
ARMA	Armidale	22.35	281	P	P	09 57 10.2	+2.4
	comp=Z,63nm,1.4s						
ARMA	Armidale	22.35	281		P	09 57 10.3	+2.4
ARMA				IAmb	IAmb	09 57 11.8	
	comp=Z,53nm,1.1s						
ARMA	Armidale	22.35	281	P	P	09 57 10.3	+2.4
CNB	Canberra Magne	22.53	267	P	P	09 57 11.8	+2.3
	comp=Z,64nm,1.1s						
CNB	Canberra Magne	22.53	267	P	P	09 57 11.7	+2.3
AUPHS	Peel High Scho	22.65	278	P	P	09 57 12.7	+2.1
AUWSH	Wavell State H	22.71	289	P	P	09 57 13.7	+2.6
AUDAR	Daramalan Coll	22.72	267	P	P	09 57 13.2	+2.0
AUMHS	Melrose High S	22.73	267	P	P	09 57 13.3	+2.0
CAN	Canberra	22.81	267	P	P	09 57 13.6	+1.5
CAN	Canberra	22.81	267	P	P	09 57 13.6	+1.5
CAN				pmax	pmax		
	comp=Z,33nm,0.8s						
AUSMG	Snowy Mountain	22.89	264	P	P	09 57 14.4	+1.6
TW1H	Toowoomba 1 Ha	23.45	288	P	P	09 57 19.0	+1.1
YNG	Young	23.55	269	P	P	09 57 20.7	+1.9
	comp=Z,30nm,1.8s						
SANVU	Saraoutou	23.68	335		P	09 57 20.4	+0.4
SANVU	Saraoutou	23.68	335	P	P	09 57 20.7	+0.7
AUDCS	Dubbo College	24.02	274	P	P	09 57 24.6	+1.6
TOO	Toolangi	25.14	260	P	P	09 57 32.6	-0.5
	comp=Z,7.7nm,1.1s						
TOO	Toolangi	25.14	260	P	P	09 57 33.4	+0.3
TOO	Toolangi	25.14	260	P	P	09 57 33.4	+0.3
TOO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
EIDS	Eidsvold	25.30	291	P	P	09 57 35.6	+1.0
	comp=Z,58nm,0.9s						
EIDS	Eidsvold	25.30	291		P	09 57 35.3	+0.7
EIDS				IAmb	IAmb	09 57 40.3	
	comp=Z,64nm,1.1s						
EIDS	Eidsvold	25.30	291	P	P	09 57 36.0	+1.3
AULRC	Lightning Ridg	25.63	280	P	P	09 57 39.5	+1.8
BRAT	Ballarat	26.36	260	P	P	09 57 45.1	+1.0
RMQ	Roma	26.44	286	P	P	09 57 46.1	+1.1
	comp=Z,260nm,1.7s						
CMSA	Cobar Meteorol	26.60	273	P	P	09 57 47.4	+1.0
	comp=Z,63nm,0.7s						
CMSA	Cobar Meteorol	26.60	273	P	P	09 57 47.6	+1.3
STKA	Stephens Creek	29.73	270	P	P	09 58 15.5	+1.4
	comp=Z,24nm,0.6s,baz=105,slow=9.8,SNR=71						
STKA				PcP	PcP	10 01 13.3	-0.7
	comp=Z,12nm,0.8s,baz=80,slow=1.9,SNR=8.6						
STKA				ScP	ScP	10 04 38.1	-3.0
	comp=Z,9.7nm,0.8s,baz=83,slow=4.1,SNR=15						
	comp=Z,24nm,0.6s						
STKA	Stephens Creek	29.73	270		P	09 58 14.8	+0.7
QLP	Quilpie	29.89	282	P	P	09 58 16.4	+0.9
	comp=Z,129nm,1.0s						
QLP	Quilpie	29.89	282	P	P	09 58 16.4	+0.9
HURO	Huro Makira	30.23	329	P	P	09 58 19.8	+1.1
AUMBR	Murray Bridge	30.55	263	P	P	09 58 22.6	+1.3
AUMAR	Marden Senior	31.13	263	P	P	09 58 28.2	+1.8
HTT	Hallett	31.34	266	P	P	09 58 29.3	+1.0
	comp=Z,6.0nm,0.6s						
HTT	Hallett	31.34	266	P	P	09 58 29.2	+0.8
HTT	Hallett	31.34	266	P	P	09 58 29.3	+1.0
AUJCS	Jamestown Cent	31.66	266	P	P	09 58 32.3	+1.2
CTA	Charters Tower	32.02	294	P	P	09 58 35.7	+1.3
	comp=Z,65nm,0.6s,baz=122,slow=9.6,SNR=150						
	comp=Z,65nm,0.6s						
CTAO	Charters Tower	32.02	294		P	09 58 35.3	+0.9
CTAO	Charters Tower	32.02	294	P	P	09 58 35.6	+1.2
CTAO	Charters Tower	32.02	294	P	P	09 58 35.3	+0.9
CTAO				pmax	pmax		
	comp=Z,79nm,0.8s						
CTAO	Charters Tower	32.02	294	P	P	09 58 35.6	+1.2
CTAO				pP	pP	09 59 06.3	-1.4
CTAO				PcP	PcP	10 01 20.4	0.0
INKA	Innaminka	32.08	277	P	P	09 58 35.4	+0.6
TV1H	Townsville Har	32.16	296	P	P	09 58 37.0	+1.4
WHYH	Whyalla	32.54	266	P	P	09 58 39.6	+0.9
TATA	Tatamba Isabel	32.99	327	P	P	09 58 42.3	-0.5
BBOO	Buckleboo	33.81	265	P	P	09 58 49.5	-0.3
	comp=Z,29nm,1.2s						
BBOO	Buckleboo	33.81	265		P	09 58 49.8	-0.1
BBOO				IAmb	IAmb	09 58 50.3	
	comp=Z,18nm,0.5s						
BBOO	Buckleboo	33.81	265	P	P	09 58 49.9	+0.1
MTSU	Mount Surprise	34.67	295	P	P	09 58 58.5	+1.1
	comp=Z,47nm,0.8s						
MTSU	Mount Surprise	34.67	295	P	P	09 58 58.5	+1.1
DRV	Dumont d’Urvil	36.10	204	P	P	09 59 11.1	+2.2
QIS	Mount Isa	36.70	287	P	P	09 59 15.0	+0.3
	comp=Z,49nm,0.9s						
QIS	Mount Isa	36.70	287	P	P	09 59 15.1	+0.5
COEN	Coen	38.28	299	P	P	09 59 28.4	+0.5
	comp=Z,228nm,0.8s						
COEN	Coen	38.28	299		P	09 59 28.9	+0.9
COEN	Coen	38.28	299	P	P	09 59 28.6	+0.7
PMG	Port Moresby	38.96	308	P	P	09 59 34.7	+1.1
	comp=Z,140nm,0.7s,baz=104,slow=4.9,SNR=99						
	comp=Z,140nm,0.7s						
PMG	Port Moresby	38.96	308		P	09 59 34.9	+1.3
PMG	Port Moresby	38.96	308	P	P	09 59 34.6	+1.1
PMG	Port Moresby	38.96	308	P	P	09 59 34.5	+0.9
PMG	Port Moresby	38.96	308	*i* P	P	09 59 34.5	+0.9
PMG				pmax	pmax		
	comp=Z,138nm,0.7s						
PMG	Port Moresby	38.96	308	P	P	09 59 34.5	+0.9
PMG				pP	pP	10 00 07.7	0.0
AS31	Alice Springs	39.44	278		P	09 59 37.4	-0.2
AS31				IAmb	IAmb	09 59 38.6	
	comp=Z,17nm,0.6s						
ASAR	Alice Springs	39.44	278	P	P	09 59 37.4	-0.3
	comp=Z,39nm,0.7s,baz=120,slow=8.1,SNR=673						
ASAR				PcP	PcP	10 01 41.0	-1.4
	comp=Z,10nm,0.5s,baz=119,slow=4.0,SNR=8.9						
ASAR				ScP	ScP	10 05 13.1	-3.0
	comp=Z,7.3nm,0.7s,baz=119,slow=3.9,SNR=18						
ASAR				S	S	10 05 25.8	-1.9
	comp=Z,2.6nm,0.8s,baz=128,slow=14,SNR=8.6						
ASAR				PKiKP	PKiKP	10 08 52.0	-2.1
	comp=Z,0.4nm,0.6s,baz=96,slow=1.2,SNR=4.7						
ASAR				ScS	ScS	10 09 24.1	-4.8
	comp=Z,1.8nm,0.8s,baz=121,slow=5.9,SNR=10						
ASAR				P3KPbc		10 29 32.0	
	comp=Z,0.2nm,0.4s,baz=304,slow=4.1,SNR=5.3						
	comp=Z,39nm,0.7s						
RABL	Rabaul	40.30	319		P	09 59 45.7	+1.0
VNDA	Vanda	40.70	185	P	P	09 59 50.3	+3.1
	comp=Z,3.3nm,0.7s,baz=352,slow=8.1,SNR=17						
VNDA				ScP	ScP	10 05 18.7	-1.3
	comp=Z,5.8nm,0.8s,baz=323,slow=4.3,SNR=11						
	comp=Z,3.3nm,0.7s						
VNDA	Vanda	40.70	185	P	P	09 59 49.4	+2.2
VNDA	Vanda	40.70	185	P	P	09 59 49.4	+2.2
VNDA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SBA	Scott Base	40.73	183	P	P	09 59 44.1	-3.4
FORT	Forrest	40.89	264	P	P	09 59 48.9	-0.5
	comp=Z,44nm,1.1s						
FORT	Forrest	40.89	264		P	09 59 49.2	-0.2
FORT				IAmb	IAmb	09 59 50.0	
	comp=Z,24nm,0.6s						
WR8	Warramunga Arr	40.97	283	P	P	09 59 49.7	-0.5
WR8				IAmb	IAmb	09 59 50.9	
	comp=Z,60nm,0.8s						
WRAB	Tennant Creek	41.10	283	P	P	09 59 50.8	-0.4
WRAB	Tennant Creek	41.10	283	P	P	09 59 50.7	-0.5
WRAB	Tennant Creek	41.10	283	*i* P	P	09 59 50.5	-0.7
WRAB				pmax	pmax		
	comp=Z,68nm,0.6s						
WRAB	Tennant Creek	41.10	283	P	P	09 59 50.8	-0.4
WRAB				pP	pP	10 00 23.7	-2.1
WRA	Warramunga Arr	41.10	283	P	P	09 59 50.8	-0.4
	comp=Z,64nm,0.6s,baz=121,slow=8.3,SNR=309						
WRA				PcP	PcP	10 01 47.7	-0.1
	comp=Z,4.3nm,0.9s,baz=118,slow=3.5,SNR=4.9						
WRA				ScP	ScP	10 05 19.6	-3.0
	comp=Z,18nm,0.8s,baz=125,slow=3.9,SNR=41						
WRA				S	S	10 05 52.1	-0.3
	comp=Z,3.3nm,0.8s,baz=123,slow=14,SNR=5.9						
	comp=Z,64nm,0.6s						
WRA	Warramunga Arr	41.10	283	P	P	09 59 50.2	-1.0
WB0	Warramunga Arr	41.16	283	P	P	09 59 51.2	-0.5
WRKA	Warakurna	43.21	272	P	P	10 00 06.8	-1.5
	comp=Z,10nm,0.8s						
CCD	Concordia, Ant	45.07	197	P	P	10 00 25.3	+2.5
CCD				PcP	PcP	10 02 01.4	+0.7
KMBL	Kambalda	45.53	261	P	P	10 00 25.7	-0.9
	comp=Z,15nm,1.0s						
KDU	Kakadu	46.90	290	P	P	10 00 36.6	-0.8
	comp=Z,7.7nm,1.3s						
CASY	Casey	47.06	211		P	10 00 37.7	-0.3
CASY				IAmb	IAmb	10 00 39.7	
	comp=Z,20nm,0.7s						
CASY	Casey	47.06	211	P	P	10 00 37.9	-0.1
CASY				PcP	PcP	10 02 07.3	0.0
MTN	Manton Dam	47.80	288	P	P	10 00 44.5	+0.1
	comp=Z,51nm,0.6s						
MTN	Manton Dam	47.80	288		P	10 00 44.3	-0.1
MTN				IAmb	IAmb	10 00 45.0	
	comp=Z,35nm,0.7s						
KNRA	Kununurra	47.89	283	P	P	10 00 45.1	0.0
	comp=Z,72nm,1.0s						
KNRA	Kununurra	47.89	283	P	P	10 00 45.0	0.0
KNRA				IAmb	IAmb	10 00 46.0	
	comp=Z,44nm,0.7s						
JAY	Jayapura	48.32	307	P	P	10 00 49.4	+1.0
	comp=Z,36nm,0.7s,baz=196,slow=6.5,SNR=9.6						
	comp=Z,36nm,0.7s						
JAY	Jayapura	48.32	307	P	P	10 00 49.1	+0.7
	comp=Z,68nm,1.2s						
NWAO	Narrogin (SRO)	48.54	256	P	P	10 00 48.4	-1.5
	comp=Z,25nm,0.8s						
NWAO	Narrogin (SRO)	48.54	256		P	10 00 48.8	-1.1
NWAO	Narrogin (SRO)	48.54	256	P	P	10 00 48.8	-1.1
NWAO				pmax	pmax		
	comp=Z,12nm,0.7s						
GENI	Genyem	48.60	307	P	P	10 00 51.7	+1.2
KLBR	Kellerberrin	48.67	258	P	P	10 00 49.5	-1.4
	comp=Z,101nm,0.7s						
KLBR	Kellerberrin	48.67	258	P	P	10 00 49.9	-1.0
MUN	Mundaring	49.72	257	P	P	10 00 58.1	-0.8
	comp=Z,44nm,1.4s						
MUN	Mundaring	49.72	257	P	P	10 00 58.5	-0.3
MUN	Mundaring	49.72	257	P	P	10 00 58.0	-0.8
BLDU	Ballidu	49.89	259	P	P	10 00 58.6	-1.6
	comp=Z,36nm,0.7s						
BLDU	Ballidu	49.89	259	P	P	10 00 59.2	-1.0
MEEK	Meekatharra	50.15	265	P	P	10 01 00.7	-1.6
	comp=Z,82nm,1.1s						
MEEK	Meekatharra	50.15	265	P	P	10 01 01.0	-1.3
SAUI	Saumlaki	50.84	293	P	P	10 01 08.9	+1.4
SAUI	Saumlaki	50.84	293	P	P	10 01 08.7	+1.2
MORW	Morawa	51.08	260	P	P	10 01 08.0	-1.1
	comp=Z,37nm,0.9s						
MORW	Morawa	51.08	260	P	P	10 01 08.8	-0.4
MORW				IAmb	IAmb	10 01 09.2	
	comp=Z,26nm,0.8s						
MORW	Morawa	51.08	260	P	P	10 01 08.5	-0.6
PSAC2	Pilbara Seismi	51.62	271	P	P	10 01 11.3	-1.9
	comp=Z,28nm,1.1s						
PSAB3	Pilbara Seismi	51.64	271	P	P	10 01 11.7	-1.6
	comp=Z,27nm,1.2s						
PSA00	Pilbara Seismi	51.66	271	P	P	10 01 11.6	-1.9
	comp=Z,28nm,1.0s						
PSA00	Pilbara Seismi	51.66	271	P	P	10 01 12.3	-1.2
PSA00	Pilbara Seismi	51.66	271	P	P	10 01 12.4	-1.1
MBWA	Marble Bar	51.97	271	P	P	10 01 13.8	-2.0
	comp=Z,33nm,1.1s						
MBWA	Marble Bar	51.97	271	P	P	10 01 14.8	-0.9
MBWA				IAmb	IAmb	10 01 15.4	
	comp=Z,35nm,1.1s						
MBWA	Marble Bar	51.97	271	P	P	10 01 14.7	-1.1
BAKI	Biak	52.30	304	P	P	10 01 25.4	+7.1
QSPA	South Pole Qui	52.65	180	P	P	10 01 23.8	+3.4
	comp=Z,40nm,0.6s,baz=26,slow=1.6,SNR=76						
	comp=Z,40nm,0.6s						
QSPA	South Pole Qui	52.65	180		P	10 01 23.4	+3.0
QSPA	South Pole Qui	52.65	180	P	P	10 01 23.8	+3.4
QSPA				pP	pP	10 01 57.6	+0.9
QSPA				PcP	PcP	10 02 30.9	+2.8
FAKI	Fak Fak	53.67	299	P	P	10 01 27.5	-0.8
FAKI				IAmb	IAmb	10 01 28.2	
	comp=Z,32nm,0.7s						
FAKI	Fak Fak	53.67	299	P	P	10 01 27.5	-0.8
FAKI	Fak Fak	53.67	299	P	P	10 01 27.5	-0.8
	comp=Z,43nm,0.8s						
SOEI	Soe	54.96	286	P	P	10 01 38.6	+0.8
SOEI	Soe	54.96	286	P	P	10 01 39.1	+1.3
SOEI	Soe	54.96	286	P	P	10 01 39.5	+1.7

	comp=Z,66nm,1.3s						
BATI	Baumata	55.15	285	P	P	10 01 40.6	+1.6
	comp=Z,76nm,0.8s						
GIRL	Giralia	55.57	266	P	P	10 01 42.1	+0.2
GIRL				IAmb	IAmb	10 01 43.0	
	comp=Z,24nm,0.8s						
MSAI	Masohi	55.72	296	P	P	10 01 42.6	-0.5
	comp=Z,92nm,0.8s						
SWI	Sorong	55.82	300	P	P	10 01 44.5	+0.7
	comp=Z,2µmcomp=Z,84nm,1.1s						
KRAI	Karang Ratu	56.12	295	P	P	10 01 45.2	-0.7
	comp=Z,40nm,1.0s						
NLAI	Namlea	57.11	294	P	P	10 01 52.8	-0.1
	comp=Z,900nmcomp=Z,71nm,0.9s						
MMRI	Maumere	57.22	286	P	P	10 01 53.9	+0.2
MMRI	Maumere	57.22	286	P	P	10 01 53.9	+0.2
	comp=Z,82nm,0.8s						
BASI	Baing, Sumba	57.52	283	P	P	10 01 58.1	+2.3
EDFI	Ende, Flores	57.57	285	P	P	10 01 55.5	-0.8
	comp=Z,666nmcomp=Z,39nm,1.0s						
WSI	Waingapu	58.07	283	P	P	10 02 00.9	+1.3
SANI	Sanana	58.73	294	P	P	10 02 03.7	-0.5
SANI	Sanana	58.73	294	P	P	10 02 03.6	-0.6
	comp=Z,750nmcomp=Z,94nm,1.2s						
WBSI	Waikabubak, Su	58.79	283	P	P	10 02 06.0	+1.3
	comp=Z,49nm,0.8s						
LBFI	Labuhan Bajo,	59.12	284	P	P	10 02 06.7	-0.2
	comp=Z,651nmcomp=Z,56nm,0.8s						
DBNI	Kabupaten Domp	60.33	283	P	P	10 02 15.6	+0.4
	comp=Z,20nm,0.8s						
PLAI	Plampang	60.55	282	P	P	10 02 16.8	+0.1
PLAI	Plampang	60.55	282	P	P	10 02 16.7	+0.1
	comp=Z,536nmcomp=Z,49nm,1.0s						
BKSI	Bulukumba	60.94	287	P	P	10 02 20.3	+1.0
TWSI	Taliwang, Sumb	61.30	282	P	P	10 02 22.0	+0.3
	comp=Z,787nmcomp=Z,62nm,1.2s						
KAPI	Kappang	61.42	287	i P	P	10 02 22.9	+0.4
KAPI				pmax	pmax		
	comp=Z,15nm,0.9s						
BNSI	Bone	61.54	288	P	P	10 02 24.3	+1.0
SPSI	Sidrap Palu	62.08	288	P	P	10 02 26.8	-0.1
KLNI	Mataram	62.11	281	P	P	10 02 29.1	+2.0
	comp=Z,2µmcomp=Z,46nm,1.0s						
TTSI	Tana Toraja	62.64	289	P	P	10 02 30.5	-0.1
APSI	Ampana	62.68	292	P	P	10 02 32.1	+1.2
	comp=Z,61nm,0.8s						
BELA	Belgrano 2	63.30	173	P	P	10 02 33.6	-0.5
BELA				IAmb	IAmb	10 02 36.8	
	comp=Z,17nm,0.8s						
MMSI	Mamuju	63.55	288	P	P	10 02 37.3	+0.6
	comp=Z,32nm,0.7s						
GMJI	Gumukmas	64.27	280	P	P	10 02 41.3	-0.1
	comp=Z,70nm,0.9s						
TOLI2	Tolitoli	64.68	293		P	10 02 43.2	-0.8
TOLI2				IAmb	IAmb	10 02 48.6	
	comp=Z,13nm,0.7s						
TOLI2	Tolitoli	64.68	293	P	P	10 02 44.9	+0.9
MPSI	Mapaga	64.81	291	P	P	10 02 46.1	+1.3
	comp=Z,2µmcomp=Z,22nm,0.9s						
DAV	Davao City (W)	65.44	301	P	P	10 02 49.0	+0.1
SNJI	Sawahan-Nganju	65.89	279	P	P	10 02 53.2	+1.2
	comp=Z,33nm,1.0s						
SJI	Sawahan	65.91	279	P	P	10 02 52.9	+0.8
	comp=Z,2µmcomp=Z,35nm,0.5s						
PCJI	Pacitan	66.10	278	P	P	10 02 53.7	+0.6
	comp=Z,1µmcomp=Z,89nm,0.9s						
BBKI	Banjar Baru	66.16	285	P	P	10 02 54.3	+0.7
PMSA	Palmer Station	67.44	156	P	P	10 03 03.3	+2.5
PMSA				pP	pP	10 03 39.3	+0.5
PMSA				sP	sP	10 03 57.1	+1.2
KPJI	Karang Pucung	68.39	277	P	P	10 03 07.7	+0.1
	comp=Z,14µmcomp=Z,30nm,0.7s						
XMI	Christmas Isla	69.11	273	P	P	10 03 11.9	-0.1
SYO	Syowa Base	69.32	195	⇓eP	P	10 03 11.6	-0.8
SYO	Syowa Base	69.32	195	⇑ePcP	PcP	10 03 34.2	-0.7
SYO	Syowa Base	69.32	195	⇑epP	pP	10 03 47.6	-2.8
BBJI	Bungbulang	69.32	277	P	P	10 03 12.8	-0.6
BBJI	Bungbulang	69.32	277	P	P	10 03 13.4	0.0
	comp=Z,25nm,0.8s						
CNJI	Cibinong	69.83	276	P	P	10 03 18.7	+2.3
	comp=Z,28nm,0.7s						
DBJI	Dramaga	70.58	277	P	P	10 03 22.0	+1.0
	comp=Z,61nm,0.8s						
TROLL	Troll, Antarti	70.76	182	⇓P	P	10 03 22.9	+1.5
	comp=Z,2µm,1.0s						
SNAA	Sanae	71.16	180	⇓P	P	10 03 25.4	+1.7
	comp=Z,333nm,0.4s						
SNAA	Sanae	71.16	180	P	P	10 03 25.4	+1.7
	comp=Z,9.7nm,0.4s,baz=200,slow=7.8,SNR=78						
	comp=Z,9.7nm,0.4s						
SNAA	Sanae	71.16	180		P	10 03 24.9	+1.2
SNAA				IAmb	IAmb	10 03 28.0	
	comp=Z,41nm,1.1s						
KKM	Kota Kinabalu	71.35	293	P	P	10 03 25.0	-0.8
KKM				IAmb	IAmb	10 03 26.7	
	comp=Z,30nm,1.0s						
VNA3	Neumayer Olymp	71.48	178	⇓P	P	10 03 26.8	+1.2
	comp=Z,47nm,0.7s						
NVL	N'lazarevskaya	71.56	185	eP	P	10 03 27.9	+1.9
NVL				e		10 06 08.3	
NVL				ePPP	PPP	10 07 52.6	
NVL				eS	S	10 12 35.0	+3.4
NVL				eSS	SS	10 17 13.9	+5.1
NVL				pmax	pmax		
	comp=Z,40nm,0.7s						
VNA2	Neumayer--Watz	71.86	178	⇓P	P	10 03 29.4	+1.6
	comp=Z,31nm,0.6s,baz=172,slow=5.2						
SBUM	Sibu	71.95	288	P	P	10 03 28.9	-0.3
SBUM	Sibu	71.95	288	P	P	10 03 29.5	+0.3
SBUM	Sibu	71.95	288	P	P	10 03 30.4	+1.2
VNA1	Neumayer--Stat	72.11	178	⇓P	P	10 03 31.1	+1.9
	comp=Z,46nm,0.8s						
KLSI		73.30	277	P	P	10 03 38.7	+1.5
	comp=Z,27nm,0.9s						
MDSI	Maura Dua	73.86	277	P	P	10 03 38.9	-1.6
	comp=Z,33nm,0.8s						
KSI	Kapahiang	75.62	276	P	P	10 03 51.9	+1.2
MASI	Maura Aman, Be	76.21	277	P	P	10 03 53.5	-0.5
COYC	Coyhaique	76.47	137		P	10 03 56.7	+1.8
LL02	Futaleuf	78.14	136		P	10 04 05.6	+1.3
EFI	East Falkland	78.92	149	i P	P	10 04 08.6	+0.2
EFI				pmax	pmax		
	comp=Z,17nm,0.8s						
H03N3	Juan Fernandez	80.01	124	T	T	11 31 14.9	
	baz=234,slow=72,SNR=81						
H03N2	Juan Fernandez	80.01	124	T	T	11 31 16.2	
	baz=234,slow=72,SNR=62						
H03N1	Juan Fernandez	80.03	124	T	T	11 31 15.5	
	baz=234,slow=72,SNR=62						
YULB	Yu-li	80.21	309	P	P	10 04 14.6	-1.1
PLCA	Paso Flores	80.48	134	P	P	10 04 19.3	+2.1
	comp=Z,8.1nm,0.9s,baz=227,slow=4.7,SNR=26						
	comp=Z,8.1nm,0.9s						
PLCA	Paso Flores	80.48	134		P	10 04 18.8	+1.6
PLCA	Paso Flores	80.48	134	P	P	10 04 19.8	+2.6
PLCA				pP	pP	10 04 55.6	-0.8
INU	Inuyama	81.51	328	P	P	10 04 22.9	+0.6
INU	Inuyama	81.51	328	P	P	10 04 22.9	+0.6
INU				pP	pP	10 05 00.3	-0.7
INU				sP	sP	10 05 16.5	-0.9
JMN	Monobe	81.54	325	P	P	10 04 24.3	+1.8
JGF	Kuroka	81.58	328	P	P	10 04 22.5	-0.3
MJAR	Matsushiro Arr	82.04	329	P	P	10 04 24.7	-0.3
	comp=Z,12nm,0.9s,baz=161,slow=5.4,SNR=27						
	comp=Z,12nm,0.9s						
MAJO	Matsushiro	82.04	329	P	P	10 04 25.4	+0.3
MAJO	Matsushiro	82.04	329	i P	P	10 04 23.7	-1.4
MAJO				pmax	pmax		
	comp=Z,26nm,1.1s						
MAJO	Matsushiro	82.04	329	P	P	10 04 25.4	+0.3
JNU	Nakatsue	82.46	322		P	10 04 27.4	+0.1
JNU				IAmb	IAmb	10 04 29.0	
	comp=Z,50nm,0.9s						
JNU	Nakatsue	82.46	322	P	P	10 04 28.2	+0.8
GSI	Gunungsitoli	82.60	277	P	P	10 04 28.1	-0.5
GSI				IAmb	IAmb	10 04 29.8	
	comp=Z,40nm,0.7s						
TJN	Taejon	86.79	322	P	P	10 04 50.6	+1.7
KSRS	Korea Array	87.38	323	P	P	10 04 52.6	+1.0
	comp=Z,26nm,0.9s,baz=142,slow=5.5,SNR=80						
	comp=Z,26nm,0.9s						
KSAR	Wonju Array Be	87.39	323		P	10 04 53.4	+1.6
KSAR	Wonju Array Be	87.39	323	P	P	10 04 53.4	+1.6
INCN	Inchon	88.02	322	P	P	10 04 56.8	+2.0
NJ2	Nanjing	88.05	314	eP	P	10 04 58.5	+3.5
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
YSS	Yuzhno-Sakhali	89.55	337	P	P	10 05 03.0	+1.3
YSS	Yuzhno-Sakhali	89.55	337	eP	P	10 05 02.6	+0.9
YSS				pmax	pmax		
	comp=Z,60nm,0.8s						
YSS	Yuzhno-Sakhali	89.55	337	P	P	10 05 02.7	+1.0
WHN	Wuhan	89.64	310	P	P	10 05 04.0	+1.5
PSTR	Posyet	90.26	328	i P	P	10 05 06.1	+1.0
USRK	Ussuriysk Ar.	91.04	329	P	P	10 05 07.4	-1.3
	comp=Z,12nm,0.8s,baz=122,slow=4.0,SNR=11						
	comp=Z,12nm,0.8s						
PETK	Petropavlovsk-	91.79	348	P	P	10 05 11.7	-0.3
	comp=Z,7.0nm,0.8s,baz=118,slow=5.9,SNR=24						
	comp=Z,7.0nm,0.8s						
CM31	Chiang Mai Arr	92.16	292	P	P	10 05 15.2	+0.7
CM31				IAmb	IAmb	10 05 16.7	
	comp=Z,17nm,0.8s						
CMAR	Chiang Mai Arr	92.16	292	P	P	10 05 15.3	+0.8
	comp=Z,11nm,0.6s,baz=144,slow=3.5,SNR=48						
CMAR				PP	PP	10 08 55.4	-1.7
	comp=Z,0.9nm,0.4s,baz=126,slow=8.2,SNR=5.9						
	comp=Z,11nm,0.6s						
CHTO	Chiang Mai	92.38	292	P	P	10 05 16.0	+0.5
CHTO	Chiang Mai	92.38	292	P	P	10 05 16.4	+0.8
CHTO	Chiang Mai	92.38	292	P	P	10 05 16.1	+0.5
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TYV	Tymovskoe	93.07	339	eP	P	10 05 11.6	-6.3
TYV				pmax	pmax		
	comp=Z,200nm,2.7s						
TYV				pmax	pmax		
	comp=Z,13nm,1.5s						
CN2	Changchun	93.53	325	eP	P	10 05 19.0	-1.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PFO	Pinyon Flats O	93.83	50	i P	P	10 05 22.6	+0.6
PFO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PZH	PanZhiHua	95.19	299	P	P	10 05 30.4	+1.9
BJI	Beijing	95.32	318	P	P	10 05 32.4	+3.9
BJI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
NVAR	Mina Array Bea	96.05	45	P	P	10 05 32.6	+0.4
	comp=Z,0.8nm,0.7s,baz=222,slow=8.2,SNR=6.4						
HHC	Hu-ho-hao-te	98.41	316	eP	Pdif	10 05 46.1	+3.5
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,180nm,7.1s						
LPAZ	La Paz	98.59	118	P	Pdif	10 05 46.1	+1.4
	comp=Z,1.0nm,0.7s,baz=193,slow=10.0,SNR=5.1						
	comp=Z,1.0nm,0.7s						
TXAR	Lajitas Array	99.42	60	P	Pdif	10 05 48.0	+0.6
	comp=Z,0.3nm,0.7s,baz=222,slow=5.0,SNR=4.2						
TXAR				PKKPbc	PKKPbc	10 22 09.4	0.0
	comp=Z,0.5nm,0.8s,baz=36,slow=5.4,SNR=4.6						
	comp=Z,0.3nm,0.7s						
PDAR	Pinedale Array	103.91	47	PKKPbc	PKKPbc	10 21 56.1	-1.0
	comp=Z,0.4nm,0.7s,baz=104,slow=6.3,SNR=5.1						
ILAR	Eielson Array	105.72	15	PKiKP	PKiKP	10 10 25.6	-0.7
	comp=Z,0.6nm,0.7s,baz=281,slow=2.4,SNR=6.3						
ILAR				PKKPbc	PKKPbc	10 21 49.1	-3.0
	comp=Z,0.4nm,0.6s,baz=15,slow=2.9,SNR=6.8						
ILAR				PKKPab	PKKPab	10 22 06.0	+1.5
	comp=Z,2.1nm,0.8s,baz=5.4,slow=3.8,SNR=17						
SONM	Songino Array	105.78	319	PKKPbc	PKKPbc	10 21 51.3	-0.1
	comp=Z,0.2nm,0.5s,baz=308,slow=3.5,SNR=3.8						
YKA	Yellowknife Ar	113.51	28	PKiKP	PKiKP	10 10 39.8	-1.2
	comp=Z,0.4nm,0.7s,baz=264,slow=2.1,SNR=8.5						
YKA				PP	PP	10 11 34.5	-1.3
	comp=Z,0.9nm,1.0s,baz=243,slow=7.1,SNR=6.7						
YKA				PKKPbc	PKKPbc	10 21 22.9	-3.8
	comp=Z,0.5nm,0.7s,baz=39,slow=3.6,SNR=7.4						
YKA				PKKPab	PKKPab	10 21 31.6	+1.3
	comp=Z,0.5nm,0.9s,baz=38,slow=4.8,SNR=4.4						
WMQ	Urumqi	114.43	307	ePKP	PKiKP	10 10 45.5	+2.0
MKAR	Makanchi Array	119.17	308	PKP	PKPdf	10 10 50.5	-1.9
	comp=Z,1.0nm,0.4s,baz=119,slow=0.8,SNR=15						
MKAR				PKKPbc	PKKPab	10 21 07.8	+1.1
	comp=Z,1.6nm,0.7s,baz=298,slow=3.1,SNR=7.3						
ZALV	Zalesovo Beam	120.57	317	PKP	PKPdf	10 10 52.2	-2.6
	comp=Z,1.1nm,0.5s,baz=167,slow=1.8,SNR=7.0						
KURK	Kurchatov	122.93	312	PKIKP	PKPdf	10 10 57.8	-1.7
KURBB	Kurchatov Arra	122.95	311	PKP	PKPdf	10 10 57.8	-1.7
	comp=Z,3.2nm,0.5s,baz=116,slow=1.8,SNR=33						
KURBB				PKKPbc	PKKPbc	10 20 53.5	+1.2
	comp=Z,2.4nm,0.9s,baz=289,slow=4.6,SNR=12						
NRIK	Noril'sk	124.39	335	PKP	PKPdf	10 11 00.6	-1.2
	comp=Z,1.9nm,0.4s,baz=81,slow=2.8,SNR=5.6						
KMBO	Kilima Mbogo	126.70	233	i PKIKP	PKPdf	10 11 05.3	-3.0
KMBO				pmax	pmax		
	comp=Z,39nm,0.4s						
BVAR	Borovoye Array	128.48	312	PKP	PKPdf	10 11 09.2	-0.8
	comp=Z,2.2nm,0.5s,baz=80,slow=1.7,SNR=13						
SCHQ	Schefferville	134.05	46	SKPbc	SKPbc	10 14 32.0	-3.0
	comp=Z,4.5nm,0.9s,baz=270,slow=1.0,SNR=1.9						
ARTI	Arti	135.81	316	PKP	PKPdf	10 11 24.0	+0.2
	comp=Z,4.2nm,0.6s,baz=48,slow=2.3,SNR=6.4						
ARTI				SKPbc	SKPbc	10 14 39.6	-1.0
	comp=Z,6.5nm,0.8s,baz=106,slow=2.7,SNR=9.1						
ARTI	Arti	135.81	316	i PKIKP	PKPdf	10 11 22.9	-0.9
RAYN	Ar Rayn	136.61	265	⇓PKIKP	PKPdf	10 11 26.0	-0.4
SPITS	Spitsbergen Ar	138.40	354	PKhKP	PKPpre	10 11 19.6	
	comp=Z,2.0nm,0.6s,baz=78,slow=4.4,SNR=6.1						
SPITS				PKP	PKPdf	10 11 29.1	+1.0
	comp=Z,6.7nm,0.8s,baz=66,slow=1.7,SNR=2.3						
SPITS				SKPbc	SKPbc	10 14 45.8	-1.8
	comp=Z,21nm,1.1s,baz=68,slow=4.6,SNR=4.7						
AKT	Akhty	141.28	292	ePKIKP	PKPdf	10 11 32.1	-2.4
AKT				e		10 12 12.5	
AKT				e		10 18 28.9	
AKT				pmax	pmax		
	comp=Z,37nm,1.3s						
ARCES	ARCESS Array B	144.45	343	PKP	PKPab	10 11 37.2	-0.6
	comp=Z,31nm,0.6s,baz=39,slow=2.6,SNR=193						
KLMR	Klimovskoe	144.73	325	ePKHKP	PKPpre	10 11 36.1	
KLMR				pmax	pmax		
	comp=Z,58nm,0.9s						
KBZ	Khabaz	145.14	295	PKPbc	PKPbc	10 11 40.2	-0.6
	comp=Z,39nm,1.0s,baz=138,slow=1.4,SNR=38						
GOF	Gofitskoye	145.14	297c	ePKHKP	PKPpre	10 11 37.8	
KIV	Kislovodsk	145.31	295	⇓P	PKPdf	10 11 40.7	-0.8
KIV	Kislovodsk	145.31	295	ePKIKP	PKPdf	10 11 40.2	-1.2
KIV				pmax	pmax		
	comp=Z,27nm,1.0s						
KTK1	Kautokeino	145.36	344	eP	PKPdf	10 11 40.1	-0.5
JETT	Jettan, Norway	145.51	346	eP	PKPbc	10 11 41.2	-0.1
VRH	Novokhopyorsk	145.90	308	ePKIKP	PKPdf	10 11 39.9	-2.1
VRH				e*PP	pPKPdf	10 12 21.2	-2.5
VRH				pmax	pmax		
	comp=Z,40nm,0.8s						
LABN	Labinsk	146.76	296	i PKP2	PKPbc	10 11 45.3	-0.5
LABN				pmax	pmax		
	comp=Z,24nm,0.7s						
ERBR	Yeremizino-Bor	146.97	298	i PKP2	PKPbc	10 11 45.4	-0.9
MOS	Moscow	147.40	317	ePKIKP	PKPdf	10 11 44.5	+0.1
MOS				e		10 12 27.7	
VORR	Voronezh	147.40	309	ePKIKP	PKPdf	10 11 45.4	+0.9
VORR				pmax	pmax		
	comp=Z,32nm,0.6s						
LPSR	Galich'ya Gora	147.41	311	ePKIKP	PKPdf	10 11 44.2	-0.3
LPSR				e*PP	pPKPdf	10 12 26.7	+0.5
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
VORD	Divnogorie	147.45	308	ePKIKP	PKPdf	10 11 45.3	+0.7
VORD				e*PP	pPKPdf	10 12 25.8	-0.5
VORD				pmax	pmax		
	comp=Z,20nm,0.9s						
VSR	Storozhevoye	147.50	309	ePKIKP	PKPdf	10 11 44.2	-0.5
VSR				e*PP	pPKPdf	10 12 26.7	+0.3
VSR				pmax	pmax		
	comp=Z,20nm,1.0s						
OBN	Obninsk	148.16	316c	iPKIKP	PKPbc	10 11 47.9	-1.2
OBN				i		10 11 51.8	
OBN				pmax	pmax		
	comp=Z,13nm,0.5s						
OBN				pmax	pmax		
	comp=Z,55nm,1.3s						
RCY	Rachaya	148.48	275	eP	PKPbc	10 11 50.8	-0.1
SHBL	Chebaa	148.51	274	eP	PKPbc	10 11 50.9	-0.1
BEIL	Beino	148.52	277	eP	PKPbc	10 11 50.8	0.0
ZAHL	Zahle	148.56	275	eP	PKPbc	10 11 50.8	-0.3
QRWL	Qaraoun	148.62	275	eP	PKPbc	10 11 51.1	-0.1
MMAI	Mount Meron Ar	148.67	273	PKPbc	PKPbc	10 11 51.6	+0.2
	comp=Z,39nm,0.6s,baz=90,slow=4.2,SNR=41						
BHL	Bhannes	148.75	275	eP	PKPbc	10 11 51.0	-0.5
DQRL	Deir Qamar	148.76	275	eP	PKPbc	10 11 51.6	+0.1
ANN	Anapa	149.11	297	i PKHKP	PKPbc	10 11 50.8	-1.1
ANN				pmax	pmax		
	comp=Z,65nm,0.8s						
DBIC	Dimbokro	149.28	176	PKPbc	PKPbc	10 11 53.6	+0.3
	comp=Z,7.7nm,0.6s,baz=190,slow=2.0,SNR=22						
FINES	FINESS Array B	150.02	332	PKPbc	PKPbc	10 11 52.4	-1.2
	comp=Z,12nm,0.8s,baz=42,slow=2.8,SNR=43						
SIM	Simferopol'	151.47	297	i PKIKP	PKPbc	10 11 56.6	-0.9
SIM				e		10 12 06.7	
SIM				pmax	pmax		
	comp=Z,33nm,0.7s						
SIM				pmax	pmax		
	comp=Z,24nm,1.0s						
BZK	Bozkurt	151.52	291	⇑P	PKPbc	10 11 56.8	-1.0
BRTR	Keskin Array B	151.59	286	PKPbc	PKPbc	10 11 57.3	-0.9
	comp=Z,41nm,0.8s,baz=141,slow=6.0,SNR=9.2						
ANTO	Ankara	152.26	286	⇑P	PKPbc	10 11 58.5	-1.1
ANTO	Ankara	152.26	286	⇑PKIKP	PKPbc	10 11 58.5	-1.1
MNK	Minsk	153.05	319	i PKIKP	PKPbc	10 12 00.3	-0.4
MNK				i		10 15 46.3	
MNK				i PPP	PPP	10 19 14.7	
MNK				i SS	SS	10 35 05.3	-1.6
MNK				i SSS	SSS	10 41 01.2	
MNK				pmax	pmax		
	comp=Z,18nm,0.9s						
MNK				pmax	pmax		
	comp=E,9.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,5.0nm,0.5s						
NACGM	Naroch	153.43	320	ePKP	PKPbc	10 12 01.2	-0.4
	comp=Z,22nm,0.8s						
AKASG	Malin Array Be	153.73	310	PKPbc	PKPbc	10 12 01.0	-1.3
	comp=Z,2.4nm,0.5s,baz=64,slow=2.6,SNR=12						
AKASG				PKPab	PKPab	10 12 15.0	-0.9
	comp=Z,5.6nm,0.7s,baz=60,slow=4.3,SNR=14						
SAHE	Sakarya_HENDEK	153.82	288	⇑P	PKPbc	10 12 01.2	-1.8
NB2	NORSAR Subarra	154.82	344	PKP	PKPbc	10 12 03.5	-0.9
	comp=Z,15nm,1.1s,baz=26,slow=4.3						
NB2	NORSAR Subarra	154.82	344	PKP	PKPbc	10 12 03.5	-0.9
	baz=26,slow=4.3						
NOA	NORSAR Array B	154.82	344	PKPbc	PKPbc	10 12 03.0	-1.4
	comp=Z,0.8nm,0.6s,baz=30,slow=2.1,SNR=5.5						
NOA				PKPab	PKPab	10 12 17.9	-2.4
	comp=Z,6.0nm,0.8s,baz=27,slow=3.4,SNR=17						
SORM	Soroca	154.98	305	⇓P	PKPbc	10 12 02.0	-3.1
SORM	Soroca	154.98	305	⇓PKIKP	PKPbc	10 12 02.0	-3.1
HFS	Hagfors	155.01	340	PKPbc	PKPbc	10 12 03.8	
	comp=Z,3.1nm,0.9s,baz=88,slow=10,SNR=4.2						
HFS				PKPab	PKPab	10 12 19.9	-1.2
	comp=Z,7.8nm,0.7s,baz=89,slow=7.7,SNR=5.4						
TORD	Torodi Ar. Bea	155.46	190	PKP	PKPdf	10 11 58.5	+0.6
	comp=Z,8.7nm,1.1s,baz=50,slow=2.3,SNR=4.8						
TORD				PKPab	PKPab	10 12 22.7	-1.3
	comp=Z,13nm,0.8s,baz=134,slow=3.0,SNR=9.5						
VRI	Vrincioaia	156.54	300	⇑P	PKPab	10 12 28.4	+0.2
VRI	Vrincioaia	156.54	300	⇑PKP2	PKPab	10 12 28.4	+0.2
PLOR	Plostina	156.60	300	⇑P	PKPab	10 12 28.3	-0.1
PLOR	Plostina	156.60	300	⇑PKP2	PKPab	10 12 28.3	-0.1
NEHR	Nehoiu	156.92	299	⇑P	PKPab	10 12 29.7	-0.1
MLR	Muntele Rosu	157.15	300	⇓P	PKPab	10 12 28.8	-2.2
MLR	Muntele Rosu	157.15	300	⇓PKP2	PKPab	10 12 28.8	-2.2
BURAR	Bucovina Array	157.15	305	⇓P	PKPab	10 12 29.6	-1.2
BURAR	Bucovina Array	157.15	305	⇓PKP2	PKPab	10 12 29.6	-1.2
STHS	Stebnicka Huta	158.98	312	ePKP2	PKPab	10 12 39.8	+1.2
STHS	Stebnicka Huta	158.98	312	ePKP	PKPab	10 12 39.8	+1.2
KECS	Kecovo	159.83	310	ePKP2	PKPab	10 12 43.2	+0.9
KECS	Kecovo	159.83	310	ePKP	PKPab	10 12 43.2	+0.9
MDVR	Moldovita	160.23	299	⇑P	PKPab	10 12 44.0	-0.3
STEB	Steborice	160.71	317	ePKPAB	PKPab	10 12 46.1	0.0
MORC	Moravsky Berou	160.92	317	⇓P	PKPab	10 12 47.0	0.0
MORC	Moravsky Berou	160.92	317	ePKP	PKPab	10 12 47.1	0.0
MORC	Moravsky Berou	160.92	317	⇓PKP2	PKPab	10 12 47.0	0.0
MAUC	Maruska	160.97	315	ePKPAB	PKPab	10 12 48.0	+0.7
OSTC	Ostas	161.18	320	ePKP2	PKPab	10 12 48.4	+0.3
OSTC	Ostas	161.18	320	ePKPAB	PKPab	10 12 48.4	+0.3
CHVC	Chvalec	161.24	320	ePKP2	PKPab	10 12 48.6	+0.2
CHVC	Chvalec	161.24	320	ePKPAB	PKPab	10 12 48.6	+0.2
DPC	Dobruska-Polom	161.24	319	ePKP2	PKPab	10 12 49.2	+0.7
DPC	Dobruska-Polom	161.24	319	ePKPAB	PKPab	10 12 49.2	+0.7
UPC	Upice	161.31	320	ePKP2	PKPab	10 12 48.8	+0.1
UPC	Upice	161.31	320	ePKPAB	PKPab	10 12 48.8	+0.1
JAVC	Velka Javorina	161.32	314	ePKP	PKPab	10 12 50.4	+1.5
SMOL	Smolenice	161.63	313	ePKP2	PKPab	10 12 51.2	+1.0
VRAC	Vranov	161.69	316	ePKP	PKPab	10 12 49.6	-0.8
MODS	Modra-Piesok	161.79	313	ePKIKP	PKPdf	10 12 07.2	+2.8
MODS				e		10 12 51.8	
MODS	Modra-Piesok	161.79	313	ePKP	PKPdf	10 12 07.2	+2.8
MODS				e		10 12 51.8	
MORH	Mrgy, Hungar	161.87	306	⇓P	PKPab	10 12 51.0	-0.3
KRUC	Moravsky	161.93	316	ePKP	PKPab	10 12 51.5	0.0
EKA	Eskdalemuir Ar	162.13	1	PKPab	PKPab	10 12 51.4	-0.6
	comp=Z,1.1nm,0.7s,baz=0.2,slow=2.9,SNR=4.8						
CLL	Collm	162.22	326	⇓ePKIKP	PKPdf	10 12 13.0	+8.3
CLL				i		10 12 51.9	
CLL				pmax	pmax		
	comp=Z,22nm,0.9s						
HSKC	Hora Svate Kat	162.51	324	ePKPAB	PKPab	10 12 52.3	-1.7
RONA	Rosalia, Austr	162.69	312	ePKP	PKPab	10 12 55.3	+0.4
	comp=Z,3.0nm,1.2s						
CONA	Conrad Observa	162.83	313	i PKP	PKPab	10 12 55.8	+0.2
	comp=Z,16nm,1.0s						
ZVC	Zvikov	162.89	320	ePKPAB	PKPab	10 12 52.0	-3.7
CKRC	Cesky Krumlov	163.20	318	ePKP2	PKPab	10 12 56.8	-0.3
CKRC	Cesky Krumlov	163.20	318	ePKPAB	PKPab	10 12 56.8	-0.3
ARSA	Arzberg	163.37	312	ePKP	PKPab	10 12 58.3	+0.4
	comp=Z,6.8nm,1.0s						
KHC	Kasperske Hory	163.40	320	ePKP2	PKPab	10 12 59.4	+1.5
KHC	Kasperske Hory	163.40	320	ePKPAB	PKPab	10 12 59.4	+1.5
GERES	GERESS Array B	163.51	319	PKPab	PKPab	10 12 56.6	-2.0
	comp=Z,1.2nm,0.7s,baz=74,slow=8.2,SNR=2.9						
MOA	Molln	163.78	315	ePKP	PKPab	10 12 59.5	-0.2
	comp=Z,3.9nm,0.7s						
SOKA	Soboth	163.94	311	i PKP	PKPab	10 13 00.8	+0.3
	comp=Z,11nm,1.6s						
BIOA	Bad Ischl, Aus	164.22	316	ePKP	PKPab	10 13 01.8	+0.2
	comp=Z,3.3nm,0.8s						
OBKA	Obir	164.31	311	ePKP	PKPab	10 13 02.1	-0.1
	comp=Z,10nm,1.2s						
KBA	Koelnbreinsper	164.73	314	i PKP	PKPab	10 13 03.6	-0.4
	comp=Z,7.1nm,0.9s						
MYKA	Terra Mystica	164.79	312	i PKP	PKPab	10 13 04.1	-0.1
	comp=Z,4.7nm,1.0s						
LESA	Schwarzleotal	164.91	316	ePKP	PKPab	10 13 04.0	-0.8
	comp=Z,6.1nm,1.3s						
ABTA	Abfaltersbach	165.39	314	i PKP	PKPab	10 13 05.4	-1.4
	comp=Z,14nm,1.1s						
FETA	Feichten	166.21	318	i PKP	PKPab	10 13 04.5	-6.1
	comp=Z,6.4nm,1.3s						
ESDC	Sonseca Array	177.60	23	PKPab	PKPab	10 14 00.1	-0.9
	comp=Z,1.5nm,0.9s,baz=11,slow=6.2,SNR=4.8						

DJA **15** *10:08:28.2±3.2, 8°N±28°×12°5E±°, h66^{km}±28^{km}, M4.9/11, mb4.8/11, mB5.2/6, MLv5.1/7, Mw(mB)4.6/6*

IDC **15** *10:08:37.6±0.8, 6°.68N×125°.03E, h0^{km}, mb3.9/10, mbtmp3.9/10, MS3.5/1, Error ellipse: s-maj=16.4km s-min=9.1km az=143.0*

NEIC **15** *10:08:40.1±0.8, 6°.73N±0°.07×125°.14E±0°.07, h10^{km}±1^{km}, mb4.5/16, Error ellipse: s-maj=14.9km s-min=7.7km az=140.0*

ISC 15 10:08:39.9±0.6**, 6°.77N**±0°.07×**125°.12E**±0°.08**, h13^{km}, n47, σ1^{s}07**/43**, mb4.0**/18**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.54	56	Pg	Pg	10 08 51.0	+0.4
	2µm,0.3s,baz=256,slow=5.3,SNR=57						
DAV				Lg	Lg	10 08 59.8	
	859nm,0.3s,baz=323,slow=18,SNR=14						
DAV				LR	LR	10 09 13.9	
	comp=Z,2µm,21.3s,baz=6.0,slow=54						
DAV	Davao City (W)	0.54	56		Pg	10 08 50.8	+0.1
DAV	Davao City (W)	0.54	56	P	Pg	10 08 51.0	+0.4
DAV	Davao City (W)	0.54	56	P	Pg	10 08 48.0	-2.6
TNTI	Ternate	6.36	159	Pn	Pn	10 10 12.2	-1.3
GTOI	Gorontalo	6.45	199	P	Pn	10 10 14.5	-0.1
	0.4nm116nm,0.6s						
MRSI	Marisa	7.01	207	P	Pn	10 10 23.5	+1.1
	60nm,0.7s						
TOLI2	Tolitoli	7.09	218	Pn	Pn	10 10 21.6	-1.9
LUWI	Luwuk	8.11	197	Pn	Pn	10 10 35.7	-1.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APSI	Ampana	8.38	205	P	Pn	10 10 40.6	-0.6
	801nm56nm,0.7s						
SANI	Sanana	8.80	174	P	Pn	10 10 49.6	+2.6
	23nm,0.8s						
KKM	Kota Kinabalu	8.88	266	Pn	Pn	10 10 47.8	-0.4
NLAI	Namlea	10.13	169	P	Pn	10 11 10.5	+5.2
	29nm,0.8s						
KRAI	Karang Ratu	10.54	162	P	Pn	10 11 14.9	+4.1
	13nm,0.7s						
TTSI	Tana Toraja	11.09	209	P	Pn	10 11 17.9	-0.5
BATI	Baumata	16.93	185	Pn	P	10 12 40.9	+2.2
	3.3nm,0.3s,baz=343,slow=2.7,SNR=3.9						
MTN	Manton Dam	20.38	163	P	P	10 13 15.8	-0.8
MTN				IAmb	IAmb	10 13 30.5	
	comp=Z,20nm,1.2s						
KNRA	Kununurra	22.59	171	P	P	10 13 39.9	-0.4
KNRA				IAmb	IAmb	10 14 06.0	
	comp=Z,33nm,1.1s						
COEN	Coen	27.29	139	P	P	10 14 23.4	-1.1
COEN				IAmb	IAmb	10 14 39.4	
	comp=Z,7.6nm,0.9s						
WB0	Warramunga Arr	27.90	161	P	P	10 14 29.2	-0.7
WB0				IAmb	IAmb	10 15 13.5	
	comp=Z,5.1nm,0.8s						
CMAR	Chiang Mai Arr	28.02	297	P	P	10 14 31.3	+0.3
	comp=Z,0.5nm,0.3s,baz=115,slow=6.4,SNR=5.1						
	comp=Z,0.5nm,0.3s						
JMN	Monobe	28.03	16	P	P	10 14 31.2	+0.2
WRA	Warramunga Arr	28.05	161	P	P	10 14 30.6	-0.6
	comp=Z,2.1nm,0.9s,baz=334,slow=10,SNR=11						
	comp=Z,2.1nm,0.9s						
WRA	Warramunga Arr	28.05	161	P	P	10 14 30.0	-1.2
AS31	Alice Springs	31.44	164	P	P	10 15 01.0	-0.3
ASAR	Alice Springs	31.44	164	P	P	10 15 00.6	-0.7
	comp=Z,1.3nm,0.6s,baz=354,slow=8.9,SNR=19						
	comp=Z,1.3nm,0.6s						
ASAR	Alice Springs	31.44	164	P	P	10 15 00.8	-0.5
FORT	Forrest	37.44	176	P	P	10 15 54.7	+1.6
USRK	Ussuriysk Ar.	37.77	8	P	P	10 15 55.8	+0.1
	comp=Z,2.6nm,0.8s,baz=175,slow=6.5,SNR=4.6						
	comp=Z,2.6nm,0.8s						
ASAJ	Asahikawa	40.23	20	LR	LR	10 31 48.4	
	comp=Z,68nm,19.8s,baz=156,slow=34						
BBOO	Buckleboo	40.71	166	P	P	10 16 20.0	-0.5
BBOO				IAmb	IAmb	10 16 23.8	
	comp=Z,9.3nm,1.1s						
STKA	Stephens Creek	41.52	159	P	P	10 16 26.0	-1.2
	comp=Z,1.9nm,0.6s,baz=340,slow=8.1,SNR=6.6						
	comp=Z,1.9nm,0.6s						
SONM	Songino Array	43.93	342	P	P	10 16 51.6	+4.9
	comp=Z,0.7nm,0.7s,baz=157,slow=7.8,SNR=3.8						
PETK	Petropavlovsk-	53.28	24	P	P	10 17 58.3	-0.1
	comp=Z,2.2nm,0.8s,baz=213,slow=7.5,SNR=2.7						
	comp=Z,2.2nm,0.8s						
PETK	Petropavlovsk-	53.28	24	P	P	10 17 58.5	+0.1
MKAR	Makanchi Array	54.17	325	P	P	10 18 04.0	-1.1
	comp=Z,0.7nm,0.7s,baz=138,slow=9.7,SNR=3.6						
	comp=Z,0.7nm,0.7s						
MKAR	Makanchi Array	54.17	325	P	P	10 18 05.6	+0.5
ZALV	Zalesovo Beam	57.17	333	P	P	10 18 27.8	+1.3
	comp=Z,0.3nm,0.4s,baz=116,slow=13,SNR=1.8						
	comp=Z,0.3nm,0.4s						
KURBB	Kurchatov Arra	58.34	327	P	P	10 18 34.0	-0.7
	comp=Z,0.7nm,0.7s,baz=124,slow=5.9,SNR=8.0						
	comp=Z,0.7nm,0.7s						
CASY	Casey	73.64	186	P	P	10 20 13.7	+1.0
M16K	Timber Creek	77.30	29	P	P	10 20 34.8	+0.7
C18K	Utukok River	77.81	21	P	P	10 20 36.7	-0.1
C18K				IAmb	IAmb	10 21 04.0	
	comp=Z,3.8nm,1.1s						
C19K	Lookout Ridge	78.48	21	P	P	10 20 41.1	+0.6
C19K				IAmb	IAmb	10 20 48.5	
	comp=Z,4.6nm,1.0s						
D19K	Kuna River	78.89	21	P	P	10 20 43.3	+0.6
H19K	Roundabout Mou	79.08	25	P	P	10 20 44.4	+0.6
H19K				IAmb	IAmb	10 21 00.8	
	comp=Z,12nm,1.3s						
L19K	White Mountain	79.39	28	P	P	10 20 46.4	+0.7
ILAR	Eielson Array	83.07	26	P	P	10 21 04.9	-0.2
	comp=Z,0.5nm,0.8s,baz=253,slow=4.6,SNR=5.6						
	comp=Z,0.5nm,0.8s						

KRSC 15 10:13:44.4±1.4**, 48°.54N×156°.37E, h6^{km}**±36^{km}**, Ml3.6, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.15	356	*e*P	Pn	10 14 21.5	+0.7
SKR				*e*S	Sb	10 14 49.2	-1.4
PAU	Pauzhetka	2.95	5	*e*S	Sb	10 15 10.6	-2.8
KDTR	Khodutka, Kamc	3.45	18	*e*P	Pn	10 14 41.7	+3.1
KDTR				*e*S	Sb	10 15 24.5	-3.5
ASAK	Asacha	3.97	14	*e*P	Pn	10 14 49.2	+3.3
MTVR	Mutnovka	4.12	16	*e*P	Pn	10 14 51.5	+3.6
MTVR				*e*S	Sb	10 15 42.1	-5.2
RUS	Russkaya	4.13	19	*e*S	Sn	10 15 40.8	+4.3
GRL	Gorelyy	4.16	15	*e*P	Pn	10 14 52.1	+3.6
UGLR	Uglovaya	4.93	17	*e*P	Pn	10 15 03.3	+4.3
AVH	Avacha	4.96	17	*e*P	Pn	10 15 04.7	+5.2
KOK	Koryaka	4.97	16	*e*P	Pn	10 15 04.7	+5.2
SMAR	Somma	4.98	17	*e*P	Pn	10 15 03.7	+4.0
SDLR	Sedlovina	5.01	18	*e*P	Pn	10 15 02.8	+2.8
KRX	Arik	5.04	16	*e*P	Pn	10 15 04.3	+3.8

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*DJA **15** 10:16:19.6±0.2, 0°S±2°×12°3E±°, h70^{km}±6^{km}, M4.3/23, mB5.1/3, mb4.2/11, MLv4.2/23, Mw(mB)4.4/3*

*IDC **15** 10:16:24.3±2.6, 0°.46S×122°.49E, h159^{km}±21^{km}, mb3.4/4, mbtmp3.8/5, Error ellipse: s-maj=32.5km s-min=15.2km az=64.0*

ISC 15 10:16:19.0±1.0**, 0°.28S**±0°.06×**122°.88E**±0°.05**, h78^{km}, n30, σ1^{s}.72**/31**, mb3.8**/4**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	0.76	188	P	Pn	10 16 36.7	+1.5
LUWI				S	Sn	10 16 50.3	+3.1
GTOI	Gorontalo	0.92	8	P	Pn	10 16 38.1	+1.0
GTOI				S	Sn	10 16 52.6	+2.1
MRSI	Marisa	1.21	309	P	Pn	10 16 39.4	-1.1
APSI	Ampana	1.38	243	P	Pn	10 16 43.2	+0.4
MPSI	Mapaga	3.05	282	P	Pn	10 17 05.0	0.0
PCI	Palu	3.11	259	P	Pn	10 17 06.3	+0.4
SANI	Sanana	3.57	119	P	Pn	10 17 10.7	-1.4
KDI	Kendari	3.66	184	P	Pn	10 17 14.1	+0.7
KKSI	Kolaka, Sulawe	4.05	198	P	Pn	10 17 19.0	+0.3
TTSI	Tana Toraja	4.11	228	P	Pn	10 17 20.0	+0.5
TNTI	Ternate	4.61	77	P	Pn	10 17 26.9	+0.7
MMSI	Mamuju	4.63	239	P	Pn	10 17 27.6	+0.9
SPSI	Sidrap Palu	4.80	220	P	Pn	10 17 30.1	+1.2
BNSI	Bone	4.94	214	P	Pn	10 17 32.2	+1.4
PMSI	Majene	5.09	231	P	Pn	10 17 33.6	+0.7
	0.3nm62nm,0.9s						
NLAI	Namlea	5.14	125	P	Pn	10 17 34.6	+1.1
	0.4nm1μm77nm,0.9s						
GAMI	Galela, Maluku	5.34	67	P	Pn	10 17 36.9	+0.7
	0.3nm36nm,0.9s						
KAPI	Kappang	5.64	214	P	Pn	10 17 41.2	+0.8
	9.9nm,0.5s,baz=30,slow=14,SNR=10						
KAPI				S	Sn	10 18 42.0	-2.0
	16nm,0.6s,baz=229,slow=19,SNR=9.4						
KAPI	Kappang	5.64	214	P	Pn	10 17 40.8	+0.4
BKSI	Bulukumba	5.71	209	P	Pn	10 17 42.1	+0.7
	0.1nm17nm,1.0s						
MKS	Makassar	5.97	215	P	Pn	10 17 45.7	+0.8
KRAI	Karang Ratu	6.28	119	P	Pn	10 17 51.0	+1.9
EDFI	Ende, Flores	8.49	188	P	Pn	10 18 21.3	+1.8
	6.1nm,0.7s						
FAKI	Fak Fak	9.72	106	P	Pn	10 18 34.5	-1.6
	13nm,1.0s						
PCJI	Pacitan	14.06	236	P	Pn	10 19 38.5	+3.7
	13nm,1.2s						
BBJI	Bungbulang	16.78	244	P	Pn	10 20 10.3	+1.0
WRA	Warramunga Arr	22.53	151	P	P	10 21 10.3	-2.4
	1.7nm,0.7s,baz=340,slow=9.0,SNR=17						
WRA				ScP	ScP	10 28 22.0	-13
	1.7nm,0.9s,baz=321,slow=2.9,SNR=14						
	1.7nm,0.7s						
ASAR	Alice Springs	25.59	156	P	P	10 21 39.0	-2.2
	0.5nm,0.7s,baz=342,slow=7.5,SNR=16						
ASAR				PcP	PcP	10 25 06.5	-4.1
	0.3nm,0.5s,baz=341,slow=1.9,SNR=7.9						
ASAR				ScP	ScP	10 28 32.4	-11
	0.1nm,0.5s,baz=338,slow=2.6,SNR=4.1						
	0.5nm,0.7s						
CMAR	Chiang Mai Arr	30.00	310	P	P	10 22 17.5	-3.1
	1.1nm,0.3s,baz=126,slow=6.7,SNR=6.2						
	1.1nm,0.3s						
MKAR	Makanchi Array	58.79	328	P	P	10 26 04.8	-4.4
	0.4nm,0.3s,baz=127,slow=8.3,SNR=9.9						
	0.4nm,0.3s						

IDC 15 10:23:27.6±1.4**, 6°.42N×125°.49E, h0^{km}, mb3.2**/3**, mbtmp3.2**/3**, Error ellipse: s-maj=58.6km s-min=9.9km az=94.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.65	8	Pg	Pg	10 23 39.4	-0.6
	215nm,0.3s,baz=245,slow=7.3,SNR=7.2						
DAV				Lg	Lg	10 23 49.5	
	370nm,0.3s,baz=354,slow=23,SNR=32						
WRA	Warramunga Arr	27.61	162	P	P	10 29 16.8	-0.1
	0.2nm,0.7s,baz=340,slow=9.2,SNR=1.8						
	0.2nm,0.7s						
ASAR	Alice Springs	31.02	165	P	P	10 29 47.4	+0.2
	0.1nm,0.6s,baz=352,slow=8.0,SNR=6.5						
	0.1nm,0.6s						
MKAR	Makanchi Array	54.65	325	P	P	10 32 58.5	+0.2
	0.3nm,0.5s,baz=134,slow=4.2,SNR=2.2						
	0.3nm,0.5s						

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*IDC **15** 10:25:01.1±0.8, 6°.57N×125°.11E, h0^{km}, mb3.9/11, mbtmp3.9/11, MS3.7/1, Error ellipse: s-maj=17.4km s-min=9.4km az=128.0*

*NEIC **15** 10:25:02.1±1.6, 6°.64N±0°.07×125°.12E±0°.07, h10^{km}±1^{km}, mb4.4/13, Error ellipse: s-maj=17.0km s-min=3.0km az=316.0*

*DJA **15** 10:25:02.5±0.5, 7°N±5°×12°5E±°, h10^{km}, M4.6/16, mb4.6/16, mB5.1/6, MLv4.8/10, Mw(mB)4.5/6*

ISC 15 10:25:02.6±0.5**, 6°.63N**±0°.06×**125°.10E**±0°.07**, h10^{km}, n53, σ1^{s}.62**/53**, mb4.1**/19**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.64	48	Pg	Pg	10 25 14.1	-1.0
	598nm,0.3s,baz=263,slow=6.8,SNR=15						
DAV				Lg	Lg	10 25 23.7	
	783nm,0.3s,baz=265,slow=11,SNR=7.4						
DAV	Davao City (W)	0.64	48		Pg	10 25 13.9	-1.2
DAV	Davao City (W)	0.64	48	P	Pg	10 25 14.0	-1.2
DAV	Davao City (W)	0.64	48	P	Pn	10 25 21.0	+3.2
SGSI	Sangihe	2.96	172	P	Pn	10 25 50.2	+0.5
GAMI	Galela, Maluku	5.46	151	P	Pn	10 26 25.3	+1.1
	0.6nm96nm,0.8s						
TNTI	Ternate	6.25	159	Pn	Pn	10 26 33.8	-1.1
TNTI	Ternate	6.25	159	P	Pn	10 26 38.5	+3.6
	0.2nm43nm,0.9s						
GTOI	Gorontalo	6.31	199	P	Pn	10 26 36.6	+0.8
	0.4nm1μm86nm,0.6s						
MRSI	Marisa	6.88	207	P	Pn	10 26 45.4	+1.8
	0.3nm950nm84nm,0.8s						
TOLI2	Tolitoli	6.97	218	Pn	Pn	10 26 44.3	-0.7
APSI	Ampana	8.25	205	P	Pn	10 27 00.7	-1.7
	64nm,1.0s						
SANI	Sanana	8.67	174	P	Pn	10 27 09.3	+1.1
	0.1nm26nm,0.9s						
KKM	Kota Kinabalu	8.85	267	P	Pn	10 27 09.5	-1.3
	22nm,1.8s						
NLAI	Namlea	10.01	168	P	Pn	10 27 28.1	+1.5
	593nm23nm,0.8s						
KRAI	Karang Ratu	10.42	162	P	Pn	10 27 34.9	+2.7
	14nm,0.8s						
KDI	Kendari	10.81	193	P	Pn	10 27 39.9	+2.4
KKSI	Kolaka, Sulawe	11.27	198	P	Pn	10 27 44.7	+0.8
MWPI	Manokwari, Pap	11.66	130	P	Pn	10 27 50.0	+0.7
FAKI	Fak Fak	11.87	143	Pn	Pn	10 27 52.6	+0.4
FAKI	Fak Fak	11.87	143	P	Pn	10 27 54.4	+2.2
	8.9nm,0.9s						
WBSI	Waikabubak, Su	17.14	199	P	Pn	10 29 03.9	+1.4
	24nm,1.0s						
SJI	Sawahan	19.51	223	P	Pn	10 29 32.5	+0.9
SNJI	Sawahan-Nganju	19.55	223	P	Pn	10 29 33.4	+1.3
	27nm,1.3s						
MTN	Manton Dam	20.26	163	P	P	10 29 38.3	-0.1
MTN				IAmb	IAmb	10 29 50.8	
	comp=Z,19nm,1.2s						
KPJI	Karang Pucung	21.27	230	P	P	10 29 51.3	+1.9
KNRA	Kununurra	22.46	171	P	P	10 29 58.4	-3.7
KNRA				IAmb	IAmb	10 30 11.0	
	comp=Z,15nm,0.8s						
COEN	Coen	27.21	139	P	P	10 30 45.0	-1.9
COEN				IAmb	IAmb	10 31 02.6	
	comp=Z,6.0nm,0.9s						
ENH	Enshi	27.72	330	P	P	10 30 51.1	-0.3
ENH				IAmb	IAmb	10 31 22.0	
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	27.93	161	P	P	10 30 52.1	-1.2
	comp=Z,1.3nm,0.9s,baz=335,slow=11,SNR=7.2						
	comp=Z,1.3nm,0.9s						
WRA	Warramunga Arr	27.93	161	P	P	10 30 51.4	-1.9
CMAR	Chiang Mai Arr	28.06	297	P	P	10 30 54.6	+0.1
	comp=Z,0.9nm,0.4s,baz=113,slow=6.9,SNR=5.3						
	comp=Z,0.9nm,0.4s						
KSAR	Wonju Array Be	30.77	4	P	P	10 31 17.0	-1.3
KS19	Wonju Array Si	30.83	4	P	P	10 31 17.4	-1.5
AS31	Alice Springs	31.32	164	P	P	10 31 22.4	-0.9
ASAR	Alice Springs	31.32	164	P	P	10 31 22.4	-0.9
	comp=Z,0.7nm,0.5s,baz=340,slow=7.0,SNR=9.6						
	comp=Z,0.7nm,0.5s						
ASAR	Alice Springs	31.32	164	P	P	10 31 22.9	-0.4
MJAR	Matsushiro Arr	32.09	20	P	P	10 31 29.7	-0.3
	comp=Z,1.5nm,0.9s,baz=193,slow=10,SNR=2.7						
	comp=Z,1.5nm,0.9s						
SHL	Shillong	36.88	304	P	P	10 32 09.8	-2.1
USRK	Ussuriysk Ar.	37.90	8	P	P	10 32 22.4	+2.4
	comp=Z,2.5nm,0.9s,baz=218,slow=5.9,SNR=6.7						
	comp=Z,2.5nm,0.9s						
GTA	Gaotai	39.79	329	*e*P	P	10 32 38.5	+2.4
GTA				pP	sP	10 32 41.5	+0.9
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BBOO	Buckleboo	40.59	166	P	P	10 32 41.1	-1.4
STKA	Stephens Creek	41.40	159	P	P	10 32 50.0	+0.7
	comp=Z,2.9nm,0.9s,baz=334,slow=8.8,SNR=6.7						
	comp=Z,2.9nm,0.9s						
HILR	Hailar Array B	43.02	355	P	P	10 33 04.6	+2.3
	comp=Z,3.3nm,0.6s,baz=163,slow=11,SNR=5.0						
HILR				LR	LR	10 53 13.3	
	comp=Z,89nm,19.9s,baz=245,slow=39						
	comp=Z,3.3nm,0.6s						
HEH	HeiHe	43.52	2	*e*P	P	10 33 09.0	+2.7
HEH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MKAR	Makanchi Array	54.26	325	P	P	10 34 29.7	+0.8
	comp=Z,0.7nm,0.7s,baz=123,slow=8.9,SNR=6.3						
	comp=Z,0.7nm,0.7s						
KURBB	Kurchatov Arra	58.44	327	P	P	10 34 57.9	-0.7
	comp=Z,0.6nm,0.6s,baz=129,slow=5.4,SNR=6.6						
	comp=Z,0.6nm,0.6s						
BVAR	Borovoye Array	64.02	327	P	P	10 35 36.2	-0.2
	comp=Z,1.4nm,1.0s,baz=104,slow=6.1,SNR=2.6						
	comp=Z,1.4nm,1.0s						
M16K	Timber Creek	77.42	29	P	P	10 36 58.2	+0.3
C18K	Utukok River	77.95	21	P	P	10 37 00.0	-0.7
C18K				IAmb	IAmb	10 37 23.2	
	comp=Z,3.8nm,1.2s						
C19K	Lookout Ridge	78.61	21	P	P	10 37 04.2	-0.2
C19K				IAmb	IAmb	10 37 13.5	
	comp=Z,3.0nm,0.9s						
D19K	Kuna River	79.02	21	P	P	10 37 05.7	-1.0
D19K				IAmb	IAmb	10 37 13.4	
	comp=Z,5.2nm,1.2s						
ILAR	Eielson Array	83.20	26	P	P	10 37 28.7	-0.3
	comp=Z,0.6nm,0.7s,baz=237,slow=4.9,SNR=9.1						
	comp=Z,0.6nm,0.7s						

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*IDC **15** 10:31:24.0±0.8, 6°.60N×125°.33E, h0^{km}, mb3.8/9, mbtmp3.8/9, Error ellipse: s-maj=54.8km s-min=16.3km az=72.0*

*DJA **15** 10:32:01.1±0.7, 4°N±5°×12°6E±°, h10^{km}, M4.3/9, mb4.6/6, MLv4.1/9*

ISC 15 10:31:25.8±0.7**, 6°.61N**±0°.06×**125°.4E**±0°.1**, h10^{km}, n23, σ1^{s}.62**/16**, mb3.8**/9**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.51	25	Lg	Lg	10 31 46.8	
	776nm,0.3s,baz=345,slow=23,SNR=11						
DAV	Davao City (W)	0.51	25	P	Pn	10 31 41.0	+1.8
SGSI	Sangihe	2.91	177	P	Pg	10 32 24.6	+3.0
TNTI	Ternate	6.13	161	P	Pg	10 33 24.3	+0.9
GTOI	Gorontalo	6.38	202	P	Pn	10 32 59.0	-1.0
MRSI	Marisa	6.98	209	P	Pn	10 33 06.6	-1.6
LUWI	Luwuk	8.03	199	P	Pn	10 33 24.3	+1.7
APSI	Ampana	8.34	207	P	Pn	10 33 32.9	+6.0
	50nm,0.8s						
SANI	Sanana	8.62	176	P	Pn	10 33 27.9	-2.9
	0.1nm32nm,0.7s						
PCI	Palu	9.28	217	P	Pn	10 33 54.7	+15
NLAI	Namlea	9.93	170	P	Pn	10 33 42.9	-5.9
KRAI	Karang Ratu	10.31	163	P	Pn	10 34 03.1	+9.1
TTSI	Tana Toraja	11.07	210	P	Pn	10 34 17.7	+13
SOEI	Soe	16.29	184	P	P	10 35 36.5	+18
WRA	Warramunga Arr	27.82	162	P	P	10 37 15.6	+0.1
	0.8nm,0.5s,baz=343,slow=10,SNR=10						
	0.8nm,0.5s						
ASAR	Alice Springs	31.22	165	P	P	10 37 46.1	+0.4
	1.1nm,0.6s,baz=341,slow=7.1,SNR=9.1						
	1.1nm,0.6s						
USRK	Ussuriysk Ar.	37.89	8	P	P	10 38 42.4	-0.7
	1.3nm,0.7s,baz=173,slow=7.6,SNR=4.9						
	1.3nm,0.7s						
STKA	Stephens Creek	41.29	159	P	P	10 39 10.2	-1.4
	1.3nm,0.7s,baz=332,slow=11,SNR=4.5						
	1.3nm,0.7s						
SONM	Songino Array	44.16	342	P	P	10 39 36.2	+1.3
	0.4nm,0.6s,baz=160,slow=8.8,SNR=1.6						
	0.4nm,0.6s						
MKAR	Makanchi Array	54.43	325	P	P	10 40 53.2	-0.2
	1.5nm,0.9s,baz=124,slow=8.1,SNR=8.6						
	1.5nm,0.9s						
KURBB	Kurchatov Arra	58.60	327	P	P	10 41 22.3	-0.6
	1.3nm,1.0s,baz=127,slow=5.7,SNR=7.0						
	1.3nm,1.0s						
BVAR	Borovoye Array	64.18	327	P	P	10 41 59.5	-1.2
	0.4nm,0.5s,baz=117,slow=8.8,SNR=1.6						
	0.4nm,0.5s						
ILAR	Eielson Array	83.11	26	P	P	10 43 51.9	+0.2
	0.4nm,0.7s,baz=238,slow=5.1,SNR=8.5						
	0.4nm,0.7s						

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*IDC **15** 10:40:25.5±0.9, 6°.47N×125°.29E, h0^{km}, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=22.9km s-min=8.8km az=109.0*

*NEIC **15** 10:40:27.2±1.2, 6°.60N±0°.07×125°.25E±0°.10, h10^{km}±1^{km}, mb4.4/13, Error ellipse: s-maj=19.3km s-min=4.8km az=304.0*

ISC 15 10:40:26.9±0.6**, 6°.59N**±0°.07×**125°.28E**±0°.10**, h10^{km}, n30, σ0^{s}.87**/29**, mb4.0**/13**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.56	32	Pg	Pg	10 40 37.8	-0.1
	398nm,0.3s,baz=260,slow=8.4,SNR=18						
DAV				Lg	Lg	10 40 48.1	
	668nm,0.3s,baz=147,slow=23,SNR=13						
DAV				LR	LR	10 41 12.2	
	comp=Z,641nm,21.9s,baz=244,slow=71						
DAV	Davao City (W)	0.56	32		Pb	10 40 38.0	-0.9
DAV	Davao City (W)	0.56	32	P	Pn	10 40 46.0	+5.0
TNTI	Ternate	6.14	160	Pn	Pn	10 41 58.9	+1.2
TOLI2	Tolitoli	7.05	220	Pn	Pn	10 42 08.7	-1.6
LUWI	Luwuk	7.98	198	Pn	Pn	10 42 23.5	+0.4
MTN	Manton Dam	20.16	163	P	P	10 45 01.7	+0.1
MTN				IAmb	IAmb	10 45 08.9	
	comp=Z,22nm,1.3s						
KNRA	Kununurra	22.39	171	P	P	10 45 25.2	-0.4
COEN	Coen	27.06	139	P	P	10 46 09.1	-0.7
COEN				IAmb	IAmb	10 46 22.0	
	comp=Z,6.1nm,0.9s						
WB0	Warramunga Arr	27.68	161	P	P	10 46 14.6	-0.8
WRA	Warramunga Arr	27.83	162	P	P	10 46 15.8	-0.8
	comp=Z,1.6nm,0.9s,baz=328,slow=10,SNR=9.5						
	comp=Z,1.6nm,0.9s						
WRA	Warramunga Arr	27.83	162	P	P	10 46 15.5	-1.2
CMAR	Chiang Mai Arr	28.24	297	P	P	10 46 21.6	+1.2
	comp=Z,0.5nm,0.3s,baz=118,slow=9.2,SNR=4.1						
	comp=Z,0.5nm,0.3s						
AS31	Alice Springs	31.23	165	P	P	10 46 46.5	-0.3
ASAR	Alice Springs	31.23	165	P	P	10 46 46.2	-0.6
	comp=Z,0.7nm,0.5s,baz=341,slow=6.8,SNR=24						
	comp=Z,0.7nm,0.5s						
ASAR	Alice Springs	31.23	165	P	P	10 46 46.1	-0.7
BBOO	Buckleboo	40.50	166	P	P	10 48 05.6	-0.5
BBOO				IAmb	IAmb	10 48 10.3	
	comp=Z,12nm,1.2s						
STKA	Stephens Creek	41.30	159	P	P	10 48 12.2	-0.6
	comp=Z,3.0nm,0.9s,baz=352,slow=8.5,SNR=8.3						
	comp=Z,3.0nm,0.9s						
MKAR	Makanchi Array	54.40	325	P	P	10 49 53.8	-0.4
	comp=Z,0.2nm,0.6s,baz=120,slow=8.7,SNR=4.0						
	comp=Z,0.2nm,0.6s						
MKAR	Makanchi Array	54.40	325	P	P	10 49 53.6	-0.7
KURBB	Kurchatov Arra	58.57	327	P	P	10 50 25.8	+2.0
	comp=Z,0.4nm,0.3s,baz=127,slow=6.1,SNR=5.6						
	comp=Z,0.4nm,0.3s						
KKAR	Karatay Array	60.18	316	P	P	10 50 35.9	+0.8
CASY	Casey	73.47	186	P	P	10 51 59.7	+0.4
M16K	Timber Creek	77.38	29	P	P	10 52 20.9	-1.0
C18K	Utukok River	77.92	21	P	P	10 52 24.0	-0.9
C18K				IAmb	IAmb	10 52 36.0	
	comp=Z,5.3nm,1.5s						
C19K	Lookout Ridge	78.59	21	P	P	10 52 28.5	-0.1
C19K				IAmb	IAmb	10 52 59.2	
	comp=Z,4.6nm,1.1s						
D19K	Kuna River	79.00	21	P	P	10 52 31.0	+0.2
D19K				IAmb	IAmb	10 52 52.0	
	comp=Z,4.9nm,1.3s						
D20K	Etivluk River	79.58	21	P	P	10 52 33.9	-0.1
D20K				IAmb	IAmb	10 52 47.2	
	comp=Z,5.8nm,1.4s						
IMAR	Indian Mountai	80.34	24	P	P	10 52 39.1	+1.0
ILAR	Eielson Array	83.16	26	P	P	10 52 52.8	-0.2
	comp=Z,0.3nm,0.7s,baz=243,slow=5.2,SNR=6.7						
	comp=Z,0.3nm,0.7s						

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*IDC **15** 10:46:06.3±1.1, 6°.53N×125°.22E, h0^{km}, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=27.5km s-min=9.8km az=119.0*

ISC 15 10:46:07.7±1.2**, 6°.5N**±0°.1×**125°.2E**±0°.2**, h10^{km}, n6, σ0^{s}.52**/6**, mb3.5**/5**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.65	33	Pg	Pg	10 46 20.3	0.0
	526nm,0.3s,baz=262,slow=5.9,SNR=22						
DAV				Lg	Lg	10 46 26.5	
	4μm,0.3s,baz=243,slow=5.7,SNR=62						
WRA	Warramunga Arr	27.78	161	P	P	10 51 56.5	-0.5
	0.4nm,0.6s,baz=340,slow=8.8,SNR=1.6						
	0.4nm,0.6s						
ASAR	Alice Springs	31.17	164	P	P	10 52 27.3	+0.2
	0.3nm,0.4s,baz=341,slow=7.1,SNR=8.9						
	0.3nm,0.4s						
MKAR	Makanchi Array	54.43	325	P	P	10 55 35.5	+0.3
	0.4nm,0.8s,baz=109,slow=7.1,SNR=5.0						
	0.4nm,0.8s						
KURBB	Kurchatov Arra	58.60	327	P	P	10 56 04.2	-0.6
	0.4nm,0.7s,baz=124,slow=6.1,SNR=5.0						
	0.4nm,0.7s						
ILAR	Eielson Array	83.25	26	P	P	10 58 34.5	+0.2
	0.2nm,0.7s,baz=249,slow=5.5,SNR=4.3						
	0.2nm,0.7s						

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*IDC **15** 11:01:42.3±0.8, 6°.53N×125°.20E, h0^{km}, mb3.7/8, mbtmp3.7/8, Error ellipse: s-maj=20.1km s-min=9.3km az=118.0*

ISC 15 11:01:43.7±0.9**, 6°.6N**±0°.1×**125°.3E**±0°.2**, h10^{km}, n9, σ0^{s}.47**/9**, mb3.7**/8**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.57	29	Pg	Pb	11 01 56.1	+0.3
	484nm,0.3s,baz=261,slow=4.0,SNR=10.0						
DAV				Lg	Lg	11 02 03.3	
	1μm,0.3s,baz=68,slow=20,SNR=10						
DAV				LR	LR	11 02 24.5	
	comp=Z,2μm,20.1s,baz=137,slow=64						
WRA	Warramunga Arr	27.81	162	P	P	11 07 33.3	+0.1

	0.6nm,0.8s,baz=331,slow=11,SNR=7.5						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**31.20**	**165**	P	**P**	**11 08 03.4**	**0.0**
	0.5nm,0.6s,baz=344,slow=7.2,SNR=10.0						
	0.5nm,0.6s						
STKA	**Stephens Creek**	**41.27**	**159**	P	**P**	**11 09 29.6**	**+0.3**
	2.4nm,0.8s,baz=337,slow=12,SNR=5.2						
	2.4nm,0.8s						
SONM	**Songino Array**	**44.17**	**342**	P	**P**	**11 09 52.8**	**-0.1**
	0.4nm,0.8s,baz=150,slow=9.3,SNR=3.6						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**54.43**	**325**	P	**P**	**11 11 11.8**	**+0.6**
	0.6nm,0.6s,baz=128,slow=8.3,SNR=7.6						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**58.60**	**327**	P	**P**	**11 11 40.7**	**0.0**
	1.5nm,0.6s,baz=124,slow=6.3,SNR=21						
	1.5nm,0.6s						
BVAR	**Borovoye Array**	**64.18**	**327**	P	**P**	**11 12 18.3**	**-0.2**
	0.6nm,0.6s,baz=150,slow=6.8,SNR=3.8						
	0.6nm,0.6s						
ILAR	**Eielson Array**	**83.17**	**26**	P	**P**	**11 14 09.0**	**-0.9**
	0.2nm,0.8s,baz=254,slow=5.7,SNR=4.0						
	0.2nm,0.8s						

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*IDC **15** 11:04:32.0±1.9, 30°.82S×178°.29W, h134^{km}±13^{km}, mb3.5/3, mbtmp3.9/4, Error ellipse: s-maj=51.1km s-min=16.0km az=111.0*

ISC 15 11:04:30.9±2.3, 30°.9S±0°.1×177°.9W±0°.4, h150^{km}, n6, σ1^{s}.37/8, mb3.7/3, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.63**	**359**	P	**Pn**	**11 05 02.1**	**+0.3**
	360nm,0.4s,baz=71,slow=21,SNR=2.5						
RAO				S	**Sn**	**11 05 23.8**	**-1.8**
	323nm,0.2s,baz=71,slow=23,SNR=3.6						
URZ	**Urewera**	**8.42**	**208**	P	**Pn**	**11 06 29.6**	**-0.2**
	5.1nm,0.8s,baz=321,slow=21,SNR=1.7						
URZ				S	**Sn**	**11 08 02.2**	**-1.2**
	2.6nm,0.4s,baz=349,slow=23,SNR=10						
STKA	**Stephens Creek**	**34.45**	**258**	P	**P**	**11 11 05.9**	**+1.6**
	1.0nm,0.4s,baz=96,slow=10,SNR=4.5						
	1.0nm,0.4s						
ASAR	**Alice Springs**	**43.17**	**267**	P	**P**	**11 12 16.9**	**0.0**
	0.4nm,0.4s,baz=105,slow=7.5,SNR=9.2						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**44.20**	**273**	P	**P**	**11 12 24.2**	**-1.0**
	0.8nm,0.4s,baz=111,slow=8.1,SNR=12						
	0.8nm,0.4s						
FINES	**FINESS Array B**	**145.63**	**340**	PKPbc	**PKPab**	**11 23 52.6**	**+1.0**
	1.2nm,0.3s,baz=42,slow=4.0,SNR=25						

IDC 15 11:05:05.8±1.2, 6°.47N×125°.11E, h0^{km}, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=26.7km s-min=10.6km az=123.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.76**	**38**	Pg	Pg	11 05 20.5	+0.2
	520nm,0.3s,baz=239,slow=4.1,SNR=22						
DAV				Lg	Lg	11 05 30.7	
	654nm,0.3s,baz=264,slow=23,SNR=9.1						
WRA	**Warramunga Arr**	**27.78**	**161**	P	P	11 10 56.1	-0.5
	0.2nm,0.4s,baz=338,slow=10,SNR=4.8						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**31.16**	**164**	P	P	11 11 27.0	+0.4
	0.2nm,0.5s,baz=344,slow=6.8,SNR=6.5						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**54.40**	**325**	P	P	11 14 35.0	+0.4
	0.2nm,0.4s,baz=128,slow=8.5,SNR=2.3						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**58.57**	**327**	P	P	11 15 03.8	-0.4
	0.4nm,0.7s,baz=125,slow=6.5,SNR=5.5						
	0.4nm,0.7s						

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*ATH **15** 11:07:41.6, 34°.94N×26°.36E, h8^{km}±1^{km}, ML2.8/3, Manual Solution by A.Moschou First location: 2019/12/15 11:09:02, This location: 2019/12/15 11:20:37 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

*THE **15** 11:07:42.4, 35°N±4°×2°6E±°, h5^{km}±2^{km}, M3.0/15, MLh3.0/15*

*ISK **15** 11:07:42.0, 34°.97N×26°.31E, h13^{km}, ML3.3/9*

*AFAD **15** 11:07:44.4, 35°.34N×26°.35E, h10^{km}±1^{km}, ML2.8*

*IDC **15** 11:07:50.3±7.5, 34°.86N×28°.15E, h0^{km}, mb3.4/4, mbtmp3.3/5, ML2.4/1, Error ellipse: s-maj=212.1km s-min=98.4km az=114.0*

ISC 15 11:07:42.9±1.3, 35°.00N±0°.06×26°.36E±0°.03, h10^{km}±6^{km}, n61, σ1^{s}.16/87, mb3.4/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.16**	**314**	P	**Pg**	**11 07 46.3**	**-0.2**
ZKR				S	**Sg**	**11 07 49.7**	**+0.7**
ZKR	**Zakros**	**0.16**	**314**	Pg	**Pg**	**11 07 46.1**	**-0.4**
ZKR				Sg	**Sg**	**11 07 49.2**	**+0.2**
ZKR	**Zakros**	**0.16**	**314**	P	**Pg**	**11 07 45.9**	**-0.6**
ZKR				S	**Sg**	**11 07 49.1**	**+0.1**
SIT2	**Siteia**	**0.29**	**315**	P	**Pg**	**11 07 48.2**	**-0.6**
SIT2				S	**Sg**	**11 07 52.7**	**+0.1**
KSS1	**Kassos Island**	**0.62**	**48**	P	**Pg**	**11 07 54.5**	**-0.5**
NPS	**Neapolis**	**0.66**	**293**	P	**Pg**	**11 07 55.3**	**-0.5**
NPS				S	**Sb**	**11 08 06.1**	**+0.2**
NPS	**Neapolis**	**0.66**	**293**	P	**Pg**	**11 07 55.2**	**-0.6**
NPS				S	**Sg**	**11 08 04.3**	**-0.2**
IACM	**Heraklion**	**1.10**	**286**	P	**Pg**	**11 08 03.0**	**-1.1**
IACM				S	**Sn**	**11 08 19.2**	**-0.4**
IDI	**Anoyia**	**1.24**	**284**	P	**Pn**	**11 08 05.6**	**-0.7**
IDI				S	**Sn**	**11 08 22.9**	**-0.2**
IDI	**Anoyia**	**1.24**	**284**	Pn	**Pn**	**11 08 05.2**	**-1.1**
THERA	**Ancient Thera,**	**1.54**	**332**	P	**Pn**	**11 08 10.1**	**-0.4**
THERA	**Ancient Thera,**	**1.54**	**332**	P	**Pn**	**11 08 09.6**	**-0.9**
THERA				S	**Sn**	**11 08 31.6**	**+1.1**
THR6	**Thira Island,**	**1.56**	**330**	P	**Pn**	**11 08 10.9**	**+0.2**
THR6	**Thira Island,**	**1.56**	**330**	P	**Pn**	**11 08 11.2**	**+0.5**
THR8	**Santorini-Mono**	**1.57**	**333**	P	**Pn**	**11 08 10.6**	**-0.3**
SNT5	**Nea Kammeni, S**	**1.60**	**331**	P	**Pn**	**11 08 11.2**	**0.0**
SNT5				S	**Sb**	**11 08 33.6**	**+0.7**
SNT5	**Nea Kammeni, S**	**1.60**	**331**	P	**Pn**	**11 08 11.1**	**-0.2**
THR3	**Thira Island,**	**1.60**	**331**	P	**Pn**	**11 08 11.2**	**-0.1**
THR3	**Thira Island,**	**1.60**	**331**	P	**Pn**	**11 08 10.9**	**-0.4**
THR2	**Thira island,**	**1.62**	**333**	P	**Pn**	**11 08 11.8**	**+0.2**
THR2	**Thira island,**	**1.62**	**333**	P	**Pn**	**11 08 11.2**	**-0.5**
VAM	**Vamos**	**1.81**	**283**	P	**Pn**	**11 08 14.9**	**+0.7**
VAM				S	**Sn**	**11 08 38.0**	**+0.8**
VAM	**Vamos**	**1.81**	**283**	P	**Pn**	**11 08 13.9**	**-0.3**
ARG	**Arkhangelos**	**1.88**	**49**	P	**Pn**	**11 08 16.2**	**+1.1**
ARG				S	**Sn**	**11 08 40.5**	**+1.6**
ARG	**Arkhangelos**	**1.88**	**49**	Pn	**Pn**	**11 08 15.8**	**+0.7**
YAZI	**Mula-Dat§a-**	**1.90**	**28**	P	**Pn**	**11 08 14.3**	**-1.1**
YAZI				S	**Sn**	**11 08 37.1**	**-2.2**
DAT	**Datca**	**1.99**	**30**	P	**Pn**	**11 08 16.3**	**-0.4**
DAT				S	**Sn**	**11 08 40.3**	**-1.3**
DAT	**Datca**	**1.99**	**30**	P	**Pn**	**11 08 16.8**	**+0.1**
DAT				S	**Sn**	**11 08 43.6**	**+1.9**
DAT	**Datca**	**1.99**	**30**	Pn	**Pn**	**11 08 16.8**	**+0.1**
IMMV	**Iera Moni Meta**	**2.00**	**284**	P	**Pn**	**11 08 16.7**	**-0.1**
IMMV	**Iera Moni Meta**	**2.00**	**284**	Pn	**Pn**	**11 08 16.2**	**-0.5**
APE	**Apeiranthos**	**2.17**	**342**	P	**Pn**	**11 08 19.2**	**+0.1**
APE	**Apeiranthos**	**2.17**	**342**	Pn	**Pn**	**11 08 18.8**	**-0.3**
BODT	**Bodrum**	**2.19**	**20**	P	**Pn**	**11 08 20.3**	**+0.8**
BODT				S	**Sb**	**11 08 49.8**	**-0.1**
BDRM	**Kayabasi**	**2.24**	**23**	P	**Pn**	**11 08 22.1**	**+2.0**
TURN	**Turunc**	**2.34**	**40**	P	**Pn**	**11 08 22.0**	**+0.5**
TURN				S	**Sn**	**11 08 48.5**	**-1.6**
TURN	**Turunc**	**2.34**	**40**	Pn	**Pn**	**11 08 21.9**	**+0.5**
DALY	**Dalyan (Mula)**	**2.60**	**45**	Pn	**Pn**	**11 08 25.6**	**+0.7**
YER	**Yerkesik**	**2.64**	**36**	P	**Pn**	**11 08 26.1**	**+0.5**
IZZE	**Mula-Seydike**	**2.74**	**58**	P	**Pn**	**11 08 25.7**	**-1.2**
IZZE				S	**Sn**	**11 08 55.7**	**-4.3**
MULA	**Mugla, Merkez-**	**2.75**	**35**	P	**Pn**	**11 08 28.5**	**+1.4**
MULA				S	**Sn**	**11 08 58.0**	**-2.6**
MULA				*i* IAML		11 09 22.0	
	comp=E,42nm,0.9s						
KTHA	**Kythira Island**	**2.96**	**296**	P	**Pn**	**11 08 30.9**	**+0.9**
KTHA	**Kythira Island**	**2.96**	**296**	Pn	**Pn**	**11 08 29.6**	**-0.4**
DNZT	**Denizli-Tavas-**	**3.13**	**43**	P	**Pn**	**11 08 32.0**	**-0.4**
DNZT				S	**Sn**	**11 09 10.2**	**+0.3**
DNZT				*i* IAML		11 09 35.0	
	comp=E,28nm,2.6s						
TAVA	**DENIZLI_Tavas**	**3.21**	**39**	P	**Pn**	**11 08 34.5**	**+1.0**
TAVA				S	**Sn**	**11 09 12.6**	**+0.8**
TAVA				*i* IAML		11 09 42.0	
	comp=E,39nm,2.5s						
ESEN	**Aydn-Nazilli**	**3.22**	**29**	P	**Pn**	**11 08 34.1**	**+0.6**
ESEN				S	**Sn**	**11 09 10.5**	**-1.4**
ESEN				*i* IAML		11 09 30.0	
	comp=N,27nm,2.8s						
ZEYE	**Izmir, Urla-Ze**	**3.23**	**2**	P	**Pn**	**11 08 32.5**	**-1.2**
ZEYE				S	**Sn**	**11 09 08.3**	**-3.9**
ZEYE				*i* IAML		11 09 42.0	
	comp=N,26nm,0.8s						
VLI	**Veliai**	**3.26**	**303**	P	**Pn**	**11 08 34.6**	**+0.5**
URLA	**Izmir**	**3.36**	**3**	P	**Pn**	**11 08 35.6**	**+0.2**
URLA				S	**Sn**	**11 09 14.3**	**-1.0**
URLA				*i* IAML		11 09 42.0	
	comp=N,35nm,1.4s						
CHOS	**Chios island**	**3.39**	**356**	P	**Pn**	**11 08 36.4**	**+0.5**
DNIZ	**Denizli-Tavas-**	**3.40**	**39**	P	**Pn**	**11 08 38.5**	**+2.4**
DNIZ				*i* IAML		11 09 33.0	
	comp=N,28nm,0.7s						
DNIZ				*i* IAML		11 09 35.0	
	comp=E,51nm,0.4s						
KARY	**Karystos**	**3.40**	**333**	P	**Pn**	**11 08 36.8**	**+0.8**
GOLH	**Golhisar**	**3.42**	**48**	P	**Pn**	**11 08 35.6**	**-0.8**
GOLH				S	**Sn**	**11 09 18.4**	**+1.4**
KIRA	**zmir-Kiraz**	**3.59**	**27**	P	**Pn**	**11 08 40.0**	**+1.3**
KIRA				S	**Sn**	**11 09 19.3**	**-1.8**
DION	**Dionisos Attik**	**3.64**	**328**	P	**Pn**	**11 08 40.2**	**+0.9**
MANT	**Manisa**	**3.90**	**26**	P	**Pn**	**11 08 43.2**	**+0.1**
MANT				*i* IAML		11 10 37.0	
	comp=E,16nm,2.6s						
BRTR	**Keskin Array B**	**7.47**	**49**	Pn	**Pn**	**11 09 29.5**	**-2.6**
	0.1nm,0.3s,baz=222,slow=16,SNR=2.5						
	0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**40.46**	**51**	P	**P**	**11 15 22.6**	**+1.1**
	0.3nm,0.6s,baz=275,slow=8.7,SNR=6.1						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**43.04**	**57**	P	**P**	**11 15 41.9**	**-0.8**
	0.2nm,0.5s,baz=269,slow=9.8,SNR=5.0						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**44.40**	**46**	P	**P**	**11 15 54.2**	**+0.7**
	0.3nm,0.4s,baz=284,slow=5.8,SNR=1.3						
	0.3nm,0.4s						
SONM	**Songino Array**	**58.82**	**51**	P	**P**	**11 17 42.6**	**+1.0**
	0.2nm,0.4s,baz=290,slow=6.0,SNR=1.4						
	0.2nm,0.4s						

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*IDC **15** 11:12:24.6±1.0, 6°.50N×125°.22E, h0^{km}, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=26.0km s-min=9.5km az=114.0*

ISC 15 11:12:26.0±1.1, 6°.5N±0°.1×125°.3E±0°.2, h10^{km}, n7, σ0^{s}.26/7, mb3.6/6, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.65**	**29**	Pg	**Pg**	**11 12 38.7**	**+0.1**
	441nm,0.3s,baz=33,slow=13,SNR=3.7						
DAV				Lg	Lg	11 12 46.2	
	2µm,0.3s,baz=36,slow=23,SNR=14						
WRA	**Warramunga Arr**	**27.75**	**161**	P	**P**	**11 18 15.4**	**+0.3**
	0.4nm,0.5s,baz=335,slow=10,SNR=4.7						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**31.15**	**165**	P	**P**	**11 18 45.4**	**+0.1**
	0.4nm,0.5s,baz=349,slow=8.2,SNR=9.2						
	0.4nm,0.5s						
STKA	**Stephens Creek**	**41.22**	**159**	P	**P**	**11 20 11.2**	**-0.1**
	1.2nm,0.6s,baz=328,slow=11,SNR=3.7						
	1.2nm,0.6s						
MKAR	**Makanchi Array**	**54.46**	**325**	P	**P**	**11 21 54.0**	**+0.2**
	0.3nm,0.5s,baz=108,slow=7.8,SNR=4.9						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**58.63**	**327**	P	**P**	**11 22 23.3**	**-0.1**
	0.7nm,0.7s,baz=125,slow=6.4,SNR=5.3						
	0.7nm,0.7s						
ILAR	**Eielson Array**	**83.25**	**26**	P	**P**	**11 24 52.3**	**-0.3**
	0.3nm,0.7s,baz=251,slow=4.6,SNR=4.2						
	0.3nm,0.7s						

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*KRNET **15** 11:14:12.6±0.1, 40°.99N×79°.75E, mb3.0*

*SOME **15** 11:14:14.9, 41°.13N×79°.82E, h10^{km}*

*NNC **15** 11:14:15.9±1.4, 41°.12N×79°.76E, h0^{km}, mb3.5, mpv2.9, Error ellipse: s-maj=9.0km s-min=8.5km az=20.0*

ISC 15 11:14:14.4±3.5, 41°.0N±0°.1×79°.90E±0°.09, h16^{km}±26^{km}, n24, σ0^{s}.76/40, 20C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.76**	**297**	⇑*i*P	**Pn**	**11 14 43.1**	**-1.4**
TARG				⇑*i*S	**Sn**	**11 15 05.5**	**-1.2**
PRZ	**Przheval'sk**	**1.89**	**324**	⇑*i*P	**Pn**	**11 14 46.1**	**-0.1**
PRZ				⇑*i*S	**Sb**	**11 15 10.7**	**-1.4**
UZB	**Uzynbulak**	**2.28**	**344**	Pg	**Pb**	**11 14 54.3**	**-1.0**
	3.0nm,0.2s						
UZB				Lg	Lg	11 15 22.6	
	17nm,0.6s						
UZB	**Uzynbulak**	**2.28**	**344**	*e*P	**Pb**	**11 14 54.3**	**-1.0**
	3.0nm,0.2s						
UZB				*e*S	**Sb**	**11 15 22.6**	**-0.7**
	17nm,0.6s						
KDJ	**Kajisay**	**2.35**	**301**	⇑*i*P	**Pn**	**11 14 52.5**	**0.0**
KDJ				⇑*i*S	**Sn**	**11 15 21.7**	**+0.6**
SATY	**Saty**	**2.38**	**333**	Pg	**Pb**	**11 14 56.3**	**-0.5**
	4.2nm,0.3s						
SATY				Lg	Lg	11 15 26.3	
	20nm,0.6s						
KTMS	**Ketmen**	**2.51**	**8**	Pg	**Pb**	**11 14 58.9**	**-0.2**
	1.1nm,0.2s						
KTMS				Lg	Lg	11 15 30.8	
	12nm,0.2s						
KTMS	**Ketmen**	**2.51**	**8**	*e*P	**Pb**	**11 14 58.9**	**-0.2**
	1.1nm,0.2s						
KTMS				*e*S	**Sb**	**11 15 30.8**	**+1.0**
	12nm,0.2s						
KPKS	**Kokpek**	**2.67**	**341**	Pg	**Pb**	**11 15 01.0**	**-0.7**
	0.1nm,0.1s						
KPKS				Lg	Lg	11 15 34.6	
	18nm,0.3s						
KURS	**Kuram**	**2.84**	**334**	Pg	**Pb**	**11 15 04.4**	**-0.3**
	3.6nm,0.6s						
KURS				Lg	Lg	11 15 40.1	
	11nm,0.6s						
ULHL	**Ulahol**	**3.03**	**296**	⇑*i*P	**Pn**	**11 15 02.2**	**+0.4**
ULHL				⇑*i*S	**Sn**	**11 15 38.2**	**+0.3**
MDOK	**Medeo**	**3.06**	**317**	Pg	**Pb**	**11 15 07.3**	**-1.2**
	3.1nm,0.3s						
MDOK				Lg	Lg	11 15 45.2	
	6.9nm,0.7s						
KOTS	**Kotyrbulak**	**3.08**	**319**	*e*P	**Pb**	**11 15 08.7**	**-0.1**
	2.0nm,0.1s						
KOTS				*e*S	**Sb**	**11 15 47.2**	**+1.0**
	13nm,0.6s						
IZV	**Izvestkoviy**	**3.21**	**311**	*e*P	**Pb**	**11 15 11.1**	**0.0**
	3.6nm,0.4s						
IZV				*e*S	**Sb**	**11 15 51.3**	**+1.2**
	10nm,0.5s						
JNKS	**Jany-Kuch**	**3.21**	**273**	⇓*i*P	**Pn**	**11 15 04.7**	**+0.3**
JNKS				⇓*i*S	**Sn**	**11 15 42.5**	**0.0**
BOOM	**Boomskoye usch**	**3.34**	**299**	⇑*i*P	**Pn**	**11 15 06.3**	**+0.3**
BOOM				⇑*i*S	**Sn**	**11 15 45.4**	**+0.1**
KNOS	**Konyrlen**	**3.44**	**351**	Pg	**Pb**	**11 15 15.5**	**+0.5**
	1.8nm,0.4s						
KNOS				Lg	Lg	11 15 59.2	
	2.6nm,0.3s						
CHKK	**Chushkaly**	**3.61**	**324**	Pg	**Pb**	**11 15 18.1**	**+0.3**
	8.3nm,0.4s						
CHKK				Lg	Lg	11 16 03.4	
	7.0nm,0.5s						
CHKK	**Chushkaly**	**3.61**	**324**	*e*P	**Pb**	**11 15 18.1**	**+0.3**
	8.3nm,0.4s						
CHKK				*e*S	**Sb**	**11 16 03.4**	**+2.1**
	7.0nm,0.5s						
TKM2	**Tokmak 2**	**3.76**	**303**	⇑*i*P	**Pn**	**11 15 12.1**	**+0.2**
TKM2				⇑*i*S	**Sn**	**11 15 55.8**	**-0.1**
KBK	**Karagaybulak**	**4.07**	**296**	⇑*i*P	**Pn**	**11 15 16.4**	**+0.3**
KBK				⇑*i*S	**Sn**	**11 16 03.2**	**-0.3**
UCH	**Uchtor**	**4.23**	**289**	⇑*i*P	**Pn**	**11 15 18.9**	**+0.3**
UCH				⇑*i*S	**Sn**	**11 16 07.3**	**-0.6**
ARLS	**Aral**	**4.29**	**284**	⇑*i*P	**Pn**	**11 15 19.3**	**+0.2**
ARLS				⇑*i*S	**Sn**	**11 16 08.0**	**-0.8**
AAK	**Ala-Archa**	**4.38**	**294**	⇑*i*P	**Pn**	**11 15 20.8**	**+0.5**
AAK				⇑*i*S	**Sn**	**11 16 10.5**	**-0.5**

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*IDC **15** 11:15:33.3±0.6, 6°.54N×125°.18E, h0^{km}, mb4.3/21, mbtmp4.3/23, ML4.3/2, MS3.6/9, Error ellipse: s-maj=14.8km s-min=8.1km az=119.0*

*NEIC **15** 11:15:35.4±1.1, 6°.58N±0°.06×125°.17E±0°.07, h10^{km}±1^{km}, mb4.7/49, Error ellipse: s-maj=13.0km s-min=8.0km az=123.0*

*DJA **15** 11:15:45.0±0.4, 6°N±3°×12°5E±°, h57^{km}±4^{km}, M4.8/53, mb4.7/53, mB5.3/18, MLv5.0/12, Mw(mB)4.7/18, MwMwp6.1/1, Mwp6.1/1*

ISC 15 11:15:35.1±0.3, 6°.64N±0°.04×125°.30E±0°.06, h10^{km}, n159, σ1^{s}.65/156, mb4.6/59, MS3.6/11, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.51**	**33**	Pg	**Pn**	**11 15 47.7**	**-0.8**
	1µm,0.3s,baz=256,slow=5.9,SNR=11						
DAV				Lg	Lg	11 15 54.2	
	5µm,0.3s,baz=104,slow=1.3,SNR=20						
DAV	**Davao City (W)**	**0.51**	**33**	P	**Pn**	**11 15 50.0**	**+1.5**
SGSI	**Sangihe**	**2.94**	**176**	P	**Pn**	**11 16 23.6**	**+1.7**
SGSI				S	**Sn**	**11 16 53.9**	**-3.4**
GAMI	**Galela, Maluku**	**5.37**	**152**	P	**Pn**	**11 16 58.4**	**+3.0**
TNTI	**Ternate**	**6.18**	**160**		**Pn**	**11 17 07.1**	**+0.6**
TNTI	**Ternate**	**6.18**	**160**	P	**Pn**	**11 17 09.0**	**+2.5**
	0.3nm53nm,0.7s						
GTOI	**Gorontalo**	**6.38**	**201**	P	**Pn**	**11 17 10.3**	**+1.0**
GTOI				S	**Sn**	**11 18 19.2**	**-3.1**
MRSI	**Marisa**	**6.98**	**209**	P	**Pn**	**11 17 17.3**	**-0.1**
TOLI2	**Tolitoli**	**7.10**	**220**	Pn	**Pn**	**11 17 16.9**	**-2.3**
LUWI	**Luwuk**	**8.04**	**198**		**Pn**	**11 17 34.4**	**+2.4**
LUWI	**Luwuk**	**8.04**	**198**	P	**Pn**	**11 17 35.3**	**+3.3**
MPSI	**Mapaga**	**8.26**	**221**	P	**Pn**	**11 17 38.5**	**+3.4**
APSI	**Ampana**	**8.34**	**206**	P	**Pn**	**11 17 38.9**	**+2.8**
SANI	**Sanana**	**8.66**	**175**	P	**Pn**	**11 17 40.2**	**-0.3**
	666nm73nm,0.8s						
I39PW	**PALAU INFRASON**	**9.22**	**84**	I	I	12 11 30.0	
	baz=265,slow=304,SNR=0.7						
NLAI	**Namlea**	**9.97**	**170**	P	**Pn**	**11 18 00.9**	**+2.3**
	749nm68nm,0.7s						
KRAI	**Karang Ratu**	**10.36**	**163**	P	**Pn**	**11 18 04.9**	**+1.0**
	32nm,0.4s						
MSAI	**Masohi**	**10.56**	**160**	P	**Pn**	**11 18 09.0**	**+2.4**
	2µm44nm,0.7s						
AAI	**Ambon**	**10.65**	**164**	P	**Pn**	**11 18 09.7**	**+1.8**
	41nm,0.5s						
TTSI	**Tana Toraja**	**11.07**	**210**	P	**Pn**	**11 18 16.7**	**+3.1**
	830nm49nm,1.0s						
MMSI	**Mamuju**	**11.25**	**215**	P	**Pn**	**11 18 19.3**	**+3.2**
	27nm,0.8s						
KKSI	**Kolaka, Sulawe**	**11.34**	**199**	P	**Pn**	**11 18 19.6**	**+2.3**
	19nm,0.5s						
BKB	**Balikpapan**	**11.49**	**227**	P	**Pn**	**11 18 22.4**	**+3.1**
MWPI	**Manokwari, Pap**	**11.51**	**130**	P	**Pn**	**11 18 23.5**	**+3.8**
	74nm,1.6s						
FAKI	**Fak Fak**	**11.76**	**144**		**Pn**	**11 18 23.2**	**+0.2**
FAKI	**Fak Fak**	**11.76**	**144**	P	**Pn**	**11 18 26.0**	**+3.0**
	29nm,1.1s						
SPSI	**Sidrap Palu**	**11.89**	**208**	P	**Pn**	**11 18 27.7**	**+2.8**
	14nm,0.6s						
PMSI	**Majene**	**11.92**	**213**	P	**Pn**	**11 18 28.1**	**+2.8**
	33nm,1.1s						
BNDI	**Bandanaira**	**12.00**	**157**	P	**Pn**	**11 18 28.5**	**+2.2**
	53nm,0.9s						
BNSI	**Bone**	**12.13**	**205**	P	**Pn**	**11 18 30.2**	**+2.1**
	30nm,0.9s						
KAPI	**Kappang**	**12.83**	**206**	Pn	**Pn**	**11 18 37.1**	**-0.6**
	0.6nm,0.3s,baz=61,slow=10,SNR=5.5						
KAPI				LR	LR	11 23 57.8	
	comp=Z,231nm,20.6s,baz=44,slow=40						
	9.3nm,0.9s						
KAPI	**Kappang**	**12.83**	**206**	P	**Pn**	**11 18 39.3**	**+1.6**
BKSI	**Bulukumba**	**12.96**	**204**	P	**Pn**	**11 18 41.8**	**+2.4**
SBUM	**Sibu**	**13.69**	**253**		**Pn**	**11 18 47.2**	**-2.1**
SBUM	**Sibu**	**13.69**	**253**	P	**P**	**11 18 55.0**	**-3.2**
BBKI	**Banjar Baru**	**14.48**	**226**	P	**P**	**11 19 05.6**	**-1.5**
	44nm,0.8s						
EDFI	**Ende, Flores**	**15.70**	**193**	P	**Pn**	**11 19 17.6**	**+0.9**
SAUI	**Saumlaki**	**15.71**	**158**	P	**Pn**	**11 19 18.3**	**+1.7**
LBFI	**Labuhan Bajo,**	**15.96**	**200**	P	**Pn**	**11 19 20.6**	**+0.7**
	655nm50nm,2.0s						
SOEI	**Soe**	**16.32**	**184**		**Pn**	**11 19 23.1**	**-1.5**
SOEI				IAmb	IAmb	11 19 55.3	
	comp=Z,42nm,0.9s						
SOEI	**Soe**	**16.32**	**184**	P	**Pn**	**11 19 25.1**	**+0.5**
	comp=Z,38nm,0.8s						
DBNI	**Kabupaten Domp**	**16.57**	**205**	P	**Pn**	**11 19 28.9**	**+1.1**
BATI	**Baumata**	**16.81**	**186**	Pn	**Pn**	**11 19 30.4**	**-0.4**
	comp=Z,2.8nm,0.3s,baz=174,slow=4.0,SNR=3.8						
	comp=Z,11nm,0.5s						
BATI	**Baumata**	**16.81**	**186**	P	**Pn**	**11 19 31.9**	**+1.1**
	comp=Z,63nm,1.0s						
WSI	**Waingapu**	**16.95**	**197**	P	**Pn**	**11 19 33.9**	**+1.4**
	comp=Z,8µmcomp=Z,48nm,1.0s						
PLAI	**Plampang**	**17.10**	**206**	P	**Pn**	**11 19 35.9**	**+1.5**
	comp=Z,45nm,1.0s						
WBSI	**Waikabubak, Su**	**17.21**	**200**	P	**Pn**	**11 19 36.9**	**+1.1**
	comp=Z,45nm,1.6s						
TWSI	**Taliwang, Sumb**	**17.43**	**209**	P	**Pn**	**11 19 40.0**	**+1.5**
KLNI	**Mataram**	**17.55**	**212**	P	**P**	**11 19 42.2**	**+1.1**
	comp=Z,3µmcomp=Z,58nm,0.6s						
KMMI	**Kalianget**	**17.68**	**220**	P	**P**	**11 19 43.3**	**+0.7**
	comp=Z,36nm,1.0s						
KHKI	**Kahang-Kahang**	**17.76**	**213**	P	**Pn**	**11 19 43.8**	**+1.1**
	comp=Z,34nm,1.3s						
DNP	**Denpasar**	**18.24**	**214**	P	**P**	**11 19 50.4**	**+1.7**
JAGI	**Jajag, Banyuwa**	**18.68**	**217**	P	**Pn**	**11 19 55.7**	**+1.8**
	comp=Z,33nm,0.8s						
QIZ	**Qiongzhong**	**19.44**	**311**	P	**P**	**11 20 01.3**	**-0.7**
QIZ				S	**Sn**	**11 23 39.5**	**-2.0**
QIZ				LR	LR		
	comp=N,190nm,10.6s						
QIZ				LR	LR		
	comp=E,130nm,10.5s						
QIZ				LR	LR		
	comp=Z,300nm,15.4s						
SJI	**Sawahan**	**19.65**	**224**	P	**P**	**11 20 05.4**	**+1.1**
	comp=Z,1µmcomp=Z,15nm,0.6s						
SNJI	**Sawahan-Nganju**	**19.69**	**224**	P	**P**	**11 20 06.5**	**+1.7**
	comp=Z,30nm,1.5s						
MTN	**Manton Dam**	**20.20**	**163**		**P**	**11 20 09.6**	**-0.7**
JOW	**Kunigami**	**20.28**	**8**	P	Pn	11 20 12.9	-0.1
	comp=Z,19nm,0.8s,baz=186,slow=9.2,SNR=3.6						
JOW				LR	LR	11 28 29.1	
	comp=Z,163nm,19.8s,baz=158,slow=38						
	comp=Z,19nm,0.8s						
PCJI	**Pacitan**	**20.38**	**224**	P	Pn	11 20 15.1	+0.8
	comp=Z,25nm,1.1s						
CTJI	**Waduk Cacaban**	**21.03**	**230**	P	**P**	**11 20 22.4**	**+3.1**
	comp=Z,31nm,1.2s						
KPJI	**Karang Pucung**	**21.43**	**230**	P	**P**	**11 20 26.1**	**+2.5**
	comp=Z,24nm,0.9s						
KNRA	**Kununurra**	**22.43**	**171**		**P**	**11 20 34.0**	**-0.3**
KNRA				IAmb	IAmb	11 20 38.8	
	comp=Z,27nm,0.6s						
BBJI	**Bungbulang**	**22.50**	**232**	P	**P**	**11 20 36.6**	**+1.5**
KLSI		**23.42**	**242**	P	**P**	**11 20 48.5**	**+3.9**
	comp=Z,28nm,1.1s						
NJ2	**Nanjing**	**25.99**	**347**	*e*P	**P**	**11 21 10.3**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
JNU	**Nakatsue**	**26.86**	**10**	P	**P**	**11 21 16.2**	**+0.1**
	comp=Z,13nm,1.0s,baz=188,slow=11,SNR=3.6						
JNU				LR	LR	11 31 10.7	
	comp=Z,113nm,21.3s,baz=214,slow=35						
	comp=Z,13nm,1.0s						
PMG	**Port Moresby**	**26.99**	**126**		**P**	**11 21 17.4**	**+0.1**
PMG				IAmb	IAmb	11 21 25.5	
	comp=Z,16nm,0.9s						
PMG	**Port Moresby**	**26.99**	**126**	P	**P**	**11 21 18.0**	**+0.6**
	comp=Z,19nm,1.0s						
COEN	**Coen**	**27.08**	**139**		**P**	**11 21 18.0**	**-0.2**
COEN				IAmb	IAmb	11 21 23.1	
	comp=Z,15nm,1.0s						
SISI	**Saibi**	**27.33**	**254**	P	**P**	**11 21 24.2**	**+3.7**
	comp=Z,32nm,1.0s						
KCSI	**Kotacane, Aceh**	**27.59**	**265**	P	**P**	**11 21 26.8**	**+3.9**
	comp=Z,390nmcomp=Z,11nm,1.1s						
WRAB	**Tennant Creek**	**27.86**	**162**	P	**P**	**11 21 23.8**	**-1.4**
WRA	**Warramunga Arr**	**27.87**	**162**	P	**P**	**11 21 23.8**	**-1.4**
	comp=Z,1.3nm,0.5s,baz=333,slow=11,SNR=13						
	comp=Z,1.3nm,0.5s						
WRA	**Warramunga Arr**	**27.87**	**162**	P	**P**	**11 21 22.6**	**-2.6**
CMAR	**Chiang Mai Arr**	**28.23**	**297**	P	**P**	**11 21 29.1**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=114,slow=7.4,SNR=6.2						
	comp=Z,1.6nm,0.8s						

JHJ	Hachijo jima 2	29.59	25	LR	LR	11 34 14.3	
	comp=Z,149nm,19.5s,baz=121,slow=38						
PZH	PanZhiHua	29.90	314	P	P	11 21 45.6	+2.2
KSAR	Wonju Array Be	30.75	4	P	P	11 21 50.7	+0.1
KSRS	Korea Array	30.77	4	P	P	11 21 51.5	+0.8
	comp=Z,4.7nm,1.0s,baz=185,slow=9.8,SNR=14						
	comp=Z,4.7nm,1.0s						
AS31	Alice Springs	31.27	165	P	P	11 21 54.3	-1.1
ASAR	Alice Springs	31.27	165	P	P	11 21 54.6	-0.7
	comp=Z,1.9nm,0.6s,baz=346,slow=7.4,SNR=13						
	comp=Z,1.9nm,0.6s						
ASAR	Alice Springs	31.27	165	P	P	11 21 54.5	-0.9
MJAR	Matsushiro Arr	32.02	20	P	P	11 22 00.9	-0.9
	comp=Z,2.2nm,0.7s,baz=195,slow=9.5,SNR=7.7						
MJAR				LR	LR	11 35 18.2	
	comp=Z,79nm,18.7s,baz=191,slow=37						
	comp=Z,2.2nm,0.7s						
HNS	HongShan	32.11	344	⇓P	P	11 22 06.3	+3.8
HNS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CTAO	Charters Tower	33.62	143	P	P	11 22 16.9	+0.9
CTAO				IAmb	IAmb	11 22 40.1	
	comp=Z,6.7nm,0.9s						
BJI	Beijing	34.25	348	P	P	11 22 21.6	+0.3
BJI				PP	PnPn	11 23 35.6	+0.1
BJI				S	S	11 27 47.1	-1.1
BJI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BJI				pmax	pmax		
	comp=Z,42nm,4.4s						
BJI				LR	LR		
	comp=N,75nm,21.4s						
BJI				LR	LR		
	comp=E,81nm,23.0s						
BJI				LR	LR		
	comp=Z,70nm,22.6s						
LZDM	Lanzhou Array	35.27	329	P	P	11 22 29.5	-1.0
	comp=Z,0.7nm,0.3s,baz=144,slow=8.1,SNR=4.6						
	comp=Z,0.7nm,0.3s						
LZH	Lanzhou	35.29	329	*e*P	P	11 22 35.8	+5.2
LZH				pP	sP	11 22 41.5	+6.6
LZH				pmax	pmax		
	comp=Z,23nm,1.4s						
HHC	Hu-ho-hao-te	36.21	342	*e*P	P	11 22 40.3	+2.0
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,150nm,7.1s						
HHC				LR	LR		
	comp=N,120nm,21.3s						
HHC				LR	LR		
	comp=E,220nm,18.7s						
HHC				LR	LR		
	comp=Z,120nm,18.7s						
SHL	Shillong	37.04	304		P	11 22 45.4	-0.3
SHL				IAmb	IAmb	11 22 50.5	
	comp=Z,12nm,1.0s						
INKA	Innaminka	37.30	157	P	P	11 22 47.2	-0.3
FORT	Forrest	37.30	176		P	11 22 46.7	-0.8
USRK	Ussuriysk Ar.	37.87	8	P	P	11 22 53.0	+0.8
	comp=Z,11nm,0.8s,baz=201,slow=8.9,SNR=12						
	comp=Z,11nm,0.8s						
XLT	XiLinHaoTe	37.99	349	*e*P	P	11 22 56.4	+3.1
XLT				pmax	pmax		
	comp=Z,6.0nm,1.4s						
XLT				pmax	pmax		
	comp=Z,77nm,5.4s						
BNX	BinXian	39.00	2	⇑P	P	11 23 02.3	+0.6
BNX				pmax	pmax		
	comp=Z,14nm,1.0s						
GTA	Gaotai	39.89	329	*e*P	P	11 23 11.3	+1.9
GTA				pP	sP	11 23 15.8	+2.0
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GTA				LR	LR		
	comp=Z,170nm,14.5s						
NWAO	Narrogin (SRO)	40.09	191	P	P	11 23 09.4	-1.5
ASAJ	Asahikawa	40.29	19	LR	LR	11 37 42.5	
	comp=Z,83nm,22.0s,baz=282,slow=33						
JKA	Kamikawa-asahi	40.29	19	P	P	11 23 13.2	+0.8
BBOO	Buckleboo	40.54	166		P	11 23 14.6	-0.1
BBOO				IAmb	IAmb	11 23 21.8	
	comp=Z,16nm,0.8s						
GOMU	GeErMu	40.54	321	P	P	11 23 15.3	+0.1
GOMU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
STKA	Stephens Creek	41.34	159	P	P	11 23 21.1	-0.2
	comp=Z,6.6nm,0.8s,baz=343,slow=7.0,SNR=8.5						
	comp=Z,6.6nm,0.8s						
HILR	Hailar Array B	43.03	355	P	P	11 23 36.2	+1.3
	comp=Z,3.5nm,0.7s,baz=186,slow=10,SNR=4.1						
	comp=Z,3.5nm,0.7s						
HEH	HeiHe	43.51	2	*e*P	P	11 23 39.4	+0.7
HEH				pmax	pmax		
	comp=Z,11nm,0.9s						
SONM	Songino Array	44.11	342	P	P	11 23 44.6	+0.9
	comp=Z,1.0nm,0.9s,baz=171,slow=10,SNR=5.8						
SONM				LR	LR	11 43 28.7	
	comp=Z,143nm,19.0s,baz=162,slow=38						
	comp=Z,1.0nm,0.9s						
ARMA	Armidale	44.66	147	P	P	11 23 48.5	+0.1
ARMA				IAmb	IAmb	11 24 10.5	
	comp=Z,24nm,1.5s						
SANVU	Saraoutou	46.95	118	P	P	11 24 06.1	-0.4
CAN	Canberra	47.33	153	P	P	11 24 09.0	-0.3
DZM	Mont Dzumac	49.38	126	P	P	11 24 25.6	+0.3
DZM				IAmb	IAmb	11 24 32.4	
	comp=Z,8.7nm,0.9s						
PEA0B	Petropavlovsk-	53.33	24	P	P	11 24 52.4	-2.0
PETK	Petropavlovsk-	53.33	24	P	P	11 24 52.1	-2.3
MK31	Makanchi Array	54.37	325	P	P	11 25 02.1	-0.1
MKAR	Makanchi Array	54.37	325	P	P	11 25 02.5	+0.3
	comp=Z,3.1nm,0.6s,baz=125,slow=8.2,SNR=38						
MKAR				LR	LR	11 49 38.5	
	comp=Z,78nm,20.2s,baz=50,slow=38						
	comp=Z,3.1nm,0.6s						
MKAR	Makanchi Array	54.37	325		P	11 25 02.2	0.0
MAKZ	Makanchi	54.56	325		P	11 25 04.1	+0.5
KSH	Kashi	55.00	314	P	P	11 25 08.8	+1.8
KSH				pP	sP	11 25 14.8	+3.3
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NIL	Nilore	55.05	307	P	P	11 25 07.0	-0.4
YAK	Yakutsk	55.37	3	LR	LR	11 50 44.1	
	comp=Z,46nm,18.3s,baz=291,slow=38						
YAK	Yakutsk	55.37	3	P	P	11 25 09.1	0.0
MA2	Magadan	56.27	15		P	11 25 16.4	+0.8
ZAA0	Zalesovo Array	57.37	333	P	P	11 25 21.9	-1.6
ZALV	Zalesovo Beam	57.37	333	P	P	11 25 22.6	-0.9
	comp=Z,2.3nm,0.8s,baz=132,slow=5.2,SNR=9.6						
	comp=Z,2.3nm,0.8s						
ZALV	Zalesovo Beam	57.37	333	P	P	11 25 22.4	-1.1
MANEM	Manem	57.45	311		P	11 25 23.8	-1.0
MANEM				IAmb	IAmb	11 25 38.6	
	comp=Z,12nm,0.9s						
KURBB	Kurchatov Arra	58.54	327	P	P	11 25 31.8	0.0
	comp=Z,6.6nm,0.7s,baz=125,slow=6.2,SNR=62						
	comp=Z,6.6nm,0.7s						
KURK	Kurchatov	58.54	327		P	11 25 31.2	-0.6
GAR	Garm	58.93	312	P	P	11 25 35.0	+0.1
KK31	Karatay Array	60.16	316		P	11 25 43.2	+0.1
KK31				IAmb	IAmb	11 25 44.2	
	comp=Z,8.3nm,0.9s						
KKAR	Karatay Array	60.16	316		P	11 25 42.5	-0.7
BVAR	Borovoye Array	64.12	327	P	P	11 26 09.0	-0.6
	comp=Z,5.6nm,0.8s,baz=120,slow=9.0,SNR=20						
	comp=Z,5.6nm,0.8s						
BORK	Borovoye	64.17	327		P	11 26 09.5	-0.4
BORK				IAmb	IAmb	11 26 10.1	
	comp=Z,6.0nm,0.8s						
TIXI	Tiksi	64.98	1		P	11 26 14.1	-0.7
TIXI				IAmb	IAmb	11 26 14.7	
	comp=Z,4.5nm,0.8s						
BKZ	Black Stump Fm	65.68	138	P	P	11 26 19.0	-1.0
AB31	Akbulak array	69.02	320		P	11 26 39.9	-1.1
AB31				IAmb	IAmb	11 26 44.5	
	comp=Z,4.5nm,1.1s						
ABKAR	Akbulak array	69.02	320	P	P	11 26 39.6	-1.3
CASY	Casey	73.52	186	P	P	11 27 06.5	-1.2
CASY				IAmb	IAmb	11 27 45.7	
	comp=Z,13nm,1.4s						
C16K	Lisburne Hills	76.29	21	P	P	11 27 25.1	+1.3
C16K				IAmb	IAmb	11 27 26.7	
	comp=Z,8.9nm,1.2s						
C18K	Utukok River	77.87	21		P	11 27 33.2	+0.4
C18K				IAmb	IAmb	11 27 35.1	
	comp=Z,6.4nm,1.0s						
C19K	Lookout Ridge	78.54	21		P	11 27 38.1	+1.6
C19K				IAmb	IAmb	11 27 40.3	
	comp=Z,17nm,1.5s						
D19K	Kuna River	78.95	21	P	P	11 27 39.3	+0.5
D19K				IAmb	IAmb	11 27 41.2	
	comp=Z,5.2nm,0.8s						
E19K	Redstone River	79.10	23		P	11 27 40.0	+0.4
B21K	Ikpikpuk River	80.36	20		P	11 27 46.5	+0.2
B21K				IAmb	IAmb	11 27 49.1	
	comp=Z,6.8nm,0.8s						
B22K	Teshekpuk Lake	80.85	20	P	P	11 27 49.6	+0.6
SUA	Susitna One	81.32	29	P	P	11 27 51.9	+0.1
L22K	Petersville	81.35	28	P	P	11 27 52.2	+0.3
L22K				IAmb	IAmb	11 27 53.3	
	comp=Z,8.6nm,0.8s						
F24K	Squaw Lake	82.69	23		P	11 27 59.5	+0.8
F24K				IAmb	IAmb	11 28 01.9	
	comp=Z,4.0nm,0.8s						
IL31		83.11	26	P	P	11 28 01.5	+0.7
IL31				IAmb	IAmb	11 28 04.7	
	comp=Z,4.7nm,1.1s						
ILAR	Eielson Array	83.11	26	P	P	11 28 01.1	+0.1
	comp=Z,1.5nm,0.7s,baz=236,slow=5.0,SNR=32						
	comp=Z,1.5nm,0.7s						
ILAR	Eielson Array	83.11	26	P	P	11 28 01.6	+0.6
BMAR	Burnt Mountain	83.97	23	P	P	11 28 05.8	+0.4
C27K	Jago River	84.17	21	P	P	11 28 07.3	+1.0
C27K				IAmb	IAmb	11 28 09.0	
	comp=Z,5.3nm,1.1s						
K27K	Chicken	85.23	26	P	P	11 28 12.2	+0.4
H27K	Steamboat Moun	85.26	24	P	P	11 28 12.5	+0.6
H27K				IAmb	IAmb	11 28 26.4	
	comp=Z,11nm,1.4s						
VNDA	Vanda	86.47	173	P	P	11 28 17.1	-0.5
	comp=Z,1.3nm,1.0s,baz=303,slow=8.5,SNR=2.4						
	comp=Z,1.3nm,1.0s						
BRTR	Keskin Array B	87.08	309	P	P	11 28 19.6	-2.0
	comp=Z,0.5nm,0.6s,baz=95,slow=7.4,SNR=3.8						
	comp=Z,0.5nm,0.6s						
AKASG	Malin Array Be	88.75	321	P	P	11 28 29.4	+0.2
	comp=Z,0.3nm,0.4s,baz=85,slow=3.4,SNR=1.9						
	comp=Z,0.3nm,0.4s						
YKA	Yellowknife Ar	97.44	24	P	Pdif	11 29 09.7	+0.7
	comp=Z,0.4nm,0.8s,baz=298,slow=5.5,SNR=4.6						
	comp=Z,0.4nm,0.8s						
TXAR	Lajitas Array	120.89	50	PKP	PKPdf	11 34 27.6	-1.0
	comp=Z,0.2nm,0.7s,baz=351,slow=4.0,SNR=1.7						
PLCA	Paso Flores	143.21	160	PKP	PKPdf	11 35 09.5	-0.6
	comp=Z,0.8nm,0.7s,baz=177,slow=6.9,SNR=4.3						

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*IDC **15** 11:19:10.3±0.9, 6°.50N×125°.27E, h0^{km}, mb3.8/9, mbtmp3.8/9, Error ellipse: s-maj=23.5km s-min=9.3km az=112.0*

*NEIC **15** 11:19:11.3±1.1, 6°.49N±0°.06×125°.34E±0°.06, h10^{km}±1^{km}, mb4.2/9, Error ellipse: s-maj=11.7km s-min=7.9km az=314.0*

ISC 15 11:19:11.2±0.6**, 6°.49N**±0°.06×**125°.4E**±0°.1**, h10^{km}, n27, σ0^{s}.90**/27**, mb3.9**/13**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.61	21	Pg	Pb	11 19 23.9	-0.2
	1μm,0.3s,baz=261,slow=5.8,SNR=10						
DAV				Lg	Lg	11 19 30.7	
	2μm,0.3s,baz=355,slow=3.7,SNR=9.9						
DAV	Davao City (W)	0.61	21		Pg	11 19 23.6	+0.4
TNTI	Ternate	6.03	161	Pn	Pn	11 20 40.0	-0.5
TOLI2	Tolitoli	7.03	221	Pn	Pn	11 20 54.6	+0.3
LUWI	Luwuk	7.92	199	Pn	Pn	11 21 05.8	-0.7
MTN	Manton Dam	20.05	163	P	P	11 23 44.3	-0.4
MTN				IAmb	IAmb	11 24 14.0	
	comp=Z,14nm,1.2s						
COEN	Coen	26.93	139	P	P	11 24 52.3	-0.7
WRAB	Tennant Creek	27.71	162	P	P	11 24 58.2	-1.7
WRAB				IAmb	IAmb	11 25 40.1	
	comp=Z,6.0nm,1.1s						
WRA	Warramunga Arr	27.72	162	P	P	11 25 00.1	+0.1
	comp=Z,1.3nm,0.9s,baz=338,slow=10,SNR=5.7						
	comp=Z,1.3nm,0.9s						
WRA	Warramunga Arr	27.72	162	P	P	11 24 59.0	-1.0
AS31	Alice Springs	31.11	165	P	P	11 25 29.7	-0.5
ASAR	Alice Springs	31.12	165	P	P	11 25 31.1	+0.9
	comp=Z,0.6nm,0.5s,baz=344,slow=6.7,SNR=6.9						
	comp=Z,0.6nm,0.5s						
FORT	Forrest	37.15	176	P	P	11 26 24.0	+1.7
FORT				IAmb	IAmb	11 26 31.8	
	comp=Z,3.6nm,0.8s						
STKA	Stephens Creek	41.18	159	P	P	11 26 57.3	+1.2
	comp=Z,1.7nm,0.8s,baz=334,slow=9.0,SNR=3.7						
	comp=Z,1.7nm,0.8s						
SONM	Songino Array	44.26	342	P	P	11 27 22.4	+1.3
	comp=Z,0.4nm,0.7s,baz=140,slow=11,SNR=1.7						
	comp=Z,0.4nm,0.7s						
PETK	Petropavlovsk-	53.43	24	P	P	11 28 32.5	+1.2
	comp=Z,4.6nm,1.0s,baz=234,slow=6.9,SNR=2.4						
	comp=Z,4.6nm,1.0s						
PETK	Petropavlovsk-	53.43	24	P	P	11 28 30.9	-0.3
MKAR	Makanchi Array	54.52	325	P	P	11 28 39.6	+0.1
	comp=Z,0.5nm,0.8s,baz=125,slow=8.1,SNR=3.0						
	comp=Z,0.5nm,0.8s						
MKAR	Makanchi Array	54.52	325	P	P	11 28 39.0	-0.4
KURBB	Kurchatov Arra	58.69	327	P	P	11 29 08.7	-0.3
	comp=Z,0.7nm,0.6s,baz=123,slow=6.7,SNR=5.9						
	comp=Z,0.7nm,0.6s						
KKAR	Karatay Array	60.30	316	P	P	11 29 19.1	-1.2
BVAR	Borovoye Array	64.28	327	P	P	11 29 46.7	0.0
	comp=Z,0.8nm,0.6s,baz=115,slow=7.0,SNR=4.6						
	comp=Z,0.8nm,0.6s						
ABKAR	Akbulak array	69.16	320	P	P	11 30 17.1	-0.8
J14K	Nanvaranak Lak	75.64	27	P	P	11 30 55.9	-0.4
D19K	Kuna River	79.06	21	P	P	11 31 14.6	-0.9
D19K				IAmb	IAmb	11 31 31.8	
	comp=Z,4.2nm,1.4s						
G21K	Allakaket	80.54	24	P	P	11 31 22.2	-1.3
G21K				IAmb	IAmb	11 31 57.4	
	comp=Z,4.5nm,1.3s						
ILAR	Eielson Array	83.21	26	P	P	11 31 38.1	+0.5
	comp=Z,0.9nm,1.1s,baz=246,slow=4.6,SNR=4.1						
	comp=Z,0.9nm,1.1s						

GUC 15 11:19:30.3±0.8**, 36°.95S**×**73°.52W, h21^{km}**±4^{km}**, ML3.7, 2C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BI05	Punta Hualpn	0.33	52	⇓*i*P	Pb	11 19 37.0	-0.4
BI05				*e*S	Sb	11 19 41.8	-0.5
BI05				IAML		11 19 42.7	
	comp=E,17μm,0.1s						
BI04	Isla Mocha	1.49	191	*e*P	Pn	11 19 55.0	-0.8
BI04				*e*S	Sn	11 20 13.6	-1.0
BI04				IAML		11 20 25.6	
	comp=N,1μm,0.3s						
BI02	San Fabin de	1.82	82	⇑*i*P	Pn	11 20 00.6	+0.1
BI02				*e*S	Sn	11 20 23.5	+0.4
BI02				IAML		11 20 26.9	
	comp=E,960nm,0.5s						
LC02	Puerto Saavedr	1.84	177	⇓*e*P	Pn	11 20 00.7	0.0
LC02				IAML		11 20 34.3	
	comp=N,3μm,0.5s						
ML02	Panimavida	2.07	56	*e*P	Pn	11 20 04.5	+0.7
ML02				*e*S	Sn	11 20 30.6	+1.6
ML02				IAML		11 20 43.0	
	comp=E,1μm,0.6s						
GO05	Hualane	2.33	34	*e*P	Pn	11 20 07.5	+0.1
GO05				*e*S	Sn	11 20 36.7	+1.3
GO05				IAML		11 20 52.9	
	comp=E,472nm,0.8s						
LC01	Cunco	2.34	147	*e*P	Pn	11 20 08.7	+1.1
LC01				IAML		11 20 43.0	
	comp=E,421nm,0.1s						
BO03	Pichilemu	2.76	28	*e*P	Pn	11 20 11.6	-1.7
BO03				IAML		11 21 02.1	
	comp=E,229nm,0.7s						
GO06	Curarrehue	3.08	149	⇑*e*P	Pn	11 20 18.9	+1.0
GO06				IAML		11 21 13.0	
	comp=E,93nm,0.6s						
BO02	Sierra Bellavi	3.10	47	*e*P	Pn	11 20 18.1	+0.1
BO02				IAML		11 21 06.5	
	comp=E,369nm,0.4s						
BO01	Tunca	3.23	39	*e*P	Pn	11 20 19.7	-0.1
MT01	Popeta	3.59	32	*e*P	Pn	11 20 23.9	-0.9
MT09	Talagante	3.78	34	*e*P	Pn	11 20 26.9	-0.6
BO04	La Punta	3.79	40	*e*P	Pn	11 20 27.1	-0.4
MT12	Pirque	4.03	38	*e*P	Pn	11 20 30.1	-0.7
LMEL	Las Melosas	4.11	42	*e*P	Pn	11 20 32.3	+0.2
MT02	Curacav	4.17	29	*e*P	Pn	11 20 31.0	-1.7
MT05	Renca	4.22	33	*e*P	Pn	11 20 31.7	-1.7

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*TAP **15** 11:25:22.3, 24°.84N×122°.14E, h16^{km}, ML3.7, C*

*JMA **15** 11:25:23.8±0.1, 24°.8N±0°.8×122°.1E±0°.5, h34^{km}, MV2.6/10, TAIWAN REGION*

ISC 15 11:25:22.6±0.9**, 24°.87N**±0°.02×**122°.13E**±0°.02**, h15^{km}**±7^{km}**, n108, σ0^{s}.68**/192**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		0.18	262	*i* P	Pb	11 25 27.4	-0.2
EGS				S	Sg	11 25 29.9	+0.2
TWB1	Santiao Chiao	0.19	317	*i* P	Pb	11 25 27.6	-0.1
TWB1				*i* S	Sb	11 25 30.9	-0.3
NTC	Toucheng	0.27	267	*e*P	Pb	11 25 28.9	-0.2
NTC				*e*S	Sb	11 25 33.2	-0.4
TIPB	Shuangxi	0.29	290	*i* P	Pb	11 25 29.4	-0.2
TIPB				*i* S	Sb	11 25 33.9	-0.4
SXI1	Grass Mountain	0.32	314	*i* P	Pb	11 25 30.4	+0.3
SXI1				S	Sb	11 25 36.0	+0.8
ILA	Ilan	0.36	253	P	Pb	11 25 30.7	0.0
ILA				*e*S	Sb	11 25 36.1	-0.1
TWC	Suao	0.36	224	*i* P	Pg	11 25 29.4	-0.6
NWF	Wu-fen Shan	0.37	302	*i* P	Pb	11 25 31.2	+0.3
NWF				*e*S	Sb	11 25 37.0	+0.3
WFSB	Wu-fen Shan	0.37	302	*e*P	Pb	11 25 31.3	+0.4
WFSB				*e*S	Sb	11 25 37.5	+0.9
ESAO	Su ao	0.39	222	*e*P	Pg	11 25 30.2	-0.3
ESAO				*e*S	Sg	11 25 35.5	-0.3
TNOU	National Taiwa	0.43	311	*e*P	Pb	11 25 31.9	0.0
TNOU				*e*S	Sb	11 25 38.5	+0.4
NDS	Dongshan	0.44	238	*e*P	Pg	11 25 31.7	+0.2
NDS				*e*S	Sg	11 25 37.5	+0.1
TWE	Neicheng	0.45	251	P	Pg	11 25 31.3	-0.2
TWE				*e*S	Sg	11 25 37.7	+0.2
EOS2	EOS2	0.46	168	*e*P	Pg	11 25 32.1	+0.5
EOS2				*e*S	Sg	11 25 37.3	-0.5
FUSB	Fushanzhiwuyua	0.50	258	P	Pg	11 25 32.7	+0.1
FUSB				S	Sb	11 25 40.3	-0.1
TWA	Mucha	0.51	283	*e*P	Pb	11 25 33.4	+0.2
TWA				*e*S	Sb	11 25 41.2	+0.8
EWUT	Wuta	0.53	217	*e*P	Pg	11 25 33.0	-0.1
EWUT				*e*S	Sg	11 25 39.2	-0.9
NHY	Taipei	0.54	288	*e*P	Pn	11 25 34.6	-1.1
NHY				*e*S	Sb	11 25 42.0	+0.8
NWRT	Kuosheng	0.54	308	*e*P	Pn	11 25 34.6	-1.2
NWRT				*e*S	Sn	11 25 42.6	-2.0
ENTT	Nioudou	0.56	246	*e*P	Pg	11 25 33.6	0.0
ENTT				*e*S	Sg	11 25 41.0	0.0
ENA	Nanau	0.56	219	*e*P	Pg	11 25 33.6	-0.1
ENA				*e*S	Sg	11 25 40.6	-0.6
NWLT	Wulai	0.58	261	*e*P	Pg	11 25 34.0	+0.1
NWLT				*e*S	Sb	11 25 42.2	-0.3
YM01	YM01	0.58	299	*e*P	Pn	11 25 35.5	-0.9
YM08	YM08	0.58	303	*e*P	Pn	11 25 35.2	-1.2
YM08				*e*S	Sb	11 25 43.2	+0.6
TATO	Taipei	0.59	280	*e*P	Pb	11 25 34.9	+0.2
TATO				*e*S	Sb	11 25 43.4	+0.5
ZUZH	Zhuzihu	0.60	299	*e*P	Pn	11 25 35.9	-0.9
EOS3	EOS3	0.61	163	*e*P	Pg	11 25 34.9	+0.5
EOS3				*e*S	Sg	11 25 41.7	-0.7
TWY	Chenhua	0.63	310	*e*P	Pn	11 25 36.0	-1.0
ANP	Anpu	0.64	300	*e*P	Pn	11 25 36.6	-0.6
BACT	New Taipei Cit	0.64	282	*e*P	Pb	11 25 35.7	+0.3
BACT				*e*S	Sn	11 25 45.3	-1.7
LATG	Datong	0.64	239	*e*P	Pg	11 25 35.1	-0.1
LATG				*e*S	Sg	11 25 43.8	+0.1
EAHA	Aohua	0.64	213	*e*P	Pg	11 25 35.4	+0.2
EAHA				*e*S	Sg	11 25 43.5	-0.2
NTST	Danshui	0.68	296	*e*P	Pn	11 25 37.2	-0.5
NTST				*e*S	Sn	11 25 46.9	-1.2
TWS1	Kuangyinshan	0.69	290	*e*P	Pn	11 25 37.2	-0.6
YHNB	Yeheng	0.71	254	*e*P	Pg	11 25 36.2	-0.3
YHNB				*e*S	Sg	11 25 45.5	-0.5
NSK	Sanguang	0.73	255	*e*P	Pg	11 25 36.6	-0.2
NSK				*e*S	Sg	11 25 45.8	-0.6
PCYT	Pengchaiyu	0.76	356	*e*P	Pn	11 25 39.0	+0.2
EOS4	EOS4	0.77	167	*e*P	Pg	11 25 37.8	+0.4
NNSB	Datong	0.81	237	P	Pg	11 25 38.1	-0.2
NNSB				S	Sg	11 25 48.7	-0.3
NNSH	Datong	0.81	237	*e*P	Pg	11 25 38.3	0.0
NNSH				*e*S	Sg	11 25 49.1	+0.1
NNS	Nan Shan	0.81	238	*e*P	Pg	11 25 38.1	-0.2
NNS				*e*S	Sg	11 25 48.3	-0.7
ETL	Fush Village	0.84	213	*e*P	Pb	11 25 38.3	-0.7
ETL				*e*S	Sg	11 25 49.2	-0.9
NACB	Ninganchiao	0.85	215	*i* P	Pb	11 25 38.3	-0.7
NACB				S	Sg	11 25 48.8	-1.3
JYNG	Yonagunijimaku	0.85	119	P	Pg	11 25 39.3	+0.2
JYNG				S	Sb	11 25 51.3	+0.9
NCU	National Centr	0.86	277	*e*P	Pn	11 25 40.0	-0.2
NCU				*e*S	Sn	11 25 53.0	+0.5
NCUH	Zhongli	0.86	277	*e*P	Pn	11 25 40.7	+0.5
KSHI	Guanxi Townshi	0.87	264	*e*P	Pn	11 25 40.8	+0.4
ETLH	Xiulin Townshi	0.89	222	*e*P	Pb	11 25 39.5	-0.2
ETLH				*e*S	Sb	11 25 51.4	+0.1
YOJ	Yonaguni jima	0.90	117	*e*P	Pg	11 25 40.2	+0.2
YOJ				*e*S	Sb	11 25 51.6	-0.1
YOJ	Yonaguni jima	0.90	117	*e*P	Pn	11 25 41.2	+0.5
YOJ				*e*S	Sg	11 25 52.8	+1.0
TWD	Chiawan	0.92	212	*e*P	Pb	11 25 39.7	-0.6
TWD				*e*S	Sb	11 25 51.5	-0.9
NFF	Wufeng Townshi	0.95	256	*e*P	Pn	11 25 42.3	+0.8
NFF				*e*S	Sg	11 25 54.1	+0.7
NJD	Zhudong	0.95	262	*e*P	Pn	11 25 41.7	+0.2
NJD				*e*S	Sn	11 25 55.1	+0.3
HWA	Hwalien	1.01	208	*e*P	Pb	11 25 42.0	+0.2
HWA				*e*S	Sg	11 25 55.7	+0.5
FUSS	Fushou	1.02	233	*e*P	Pb	11 25 41.8	-0.2
FUSS				*e*S	Sb	11 25 55.6	+0.3
SBCB	Hsinchu	1.04	266	*e*P	Pb	11 25 42.4	+0.1
SBCB				*e*S	Sn	11 25 57.4	+0.4
NSTT	Nanjuang	1.05	257	*e*P	Pg	11 25 44.0	+1.1
NSTT				*e*S	Sn	11 25 57.2	-0.1
TWT	Tachien	1.06	235	*e*P	Pg	11 25 44.0	+0.9
TWT				*e*S	Sg	11 25 57.4	+0.3
ETM	Tongmen	1.07	213	*e*P	Pb	11 25 42.7	-0.2
ETM				*e*S	Sb	11 25 56.8	+0.1
TDCB	Techi	1.08	235	*e*P	Pn	11 25 43.3	+0.1
TDCB				*e*S	Sb	11 25 56.6	-0.3
TEYL	Yanliau Villag	1.11	206	*e*P	Pg	11 25 44.1	+0.1
TEYL				*e*S	Sg	11 25 58.7	+0.3
SHUL	Shoufeng	1.20	206	*e*P	Pg	11 25 45.8	+0.2
SHUL				*e*S	Sg	11 26 02.4	+1.2
ESL	Shilin	1.23	211	*e*P	Pn	11 25 45.4	+0.2
ESL				*e*S	Sb	11 26 01.1	-0.1
WHP	Taichung City	1.23	242	*e*P	Pg	11 25 46.3	0.0
WHP				*e*S	Sb	11 26 01.1	-0.1
OWD	Renai	1.26	224	*i* P	Pn	11 25 46.1	+0.3
OWD				*e*S	Sb	11 26 01.1	-1.1
NMLH	Miaoli	1.26	255	*e*P	Pg	11 25 48.0	+1.1
WUSB	Renai	1.27	227	*e*P	Pb	11 25 46.5	+0.1
WUSB				*e*S	Sb	11 26 02.2	-0.3
NSY	Sanyi	1.32	250	*e*P	Pb	11 25 47.4	+0.2
NSY				*e*S	Sg	11 26 05.9	+0.6
WARBT	Fenglin Townsh	1.33	211	P	Pn	11 25 47.0	+0.3
WARBT				*e*S	Sn	11 26 03.3	-0.9
TWQ1	Liyutan	1.34	247	*e*P	Pg	11 25 48.6	+0.3
TWQ1				*e*S	Sg	11 26 06.6	+0.9
WPL	Puli Township	1.37	232	*e*P	Pg	11 25 48.9	0.0
WPL				*e*S	Sn	11 26 05.1	0.0
WCS	Beigang Elemen	1.37	234	*e*P	Pg	11 25 48.8	-0.2
WCS				*e*S	Sg	11 26 06.8	-0.1
VWDT	VWDT	1.43	219	*e*P	Pb	11 25 49.2	+0.3
VWDT				*e*S	Sb	11 26 07.3	+0.3
SMLT	Sun Moon Lake	1.49	229	*e*P	Pg	11 25 51.1	-0.1
TCU	Taichung	1.51	242	*e*P	Pg	11 25 52.6	+1.1
TCU				*e*S	Sg	11 26 13.1	+2.0
TYC	Yuchr	1.51	231	*e*P	Pb	11 25 50.8	+0.5
TYC				*e*S	Sb	11 26 10.0	+0.8
HGSD	Ruisui	1.52	205	*e*P	Pb	11 25 50.2	-0.2
HGSD				*e*S	Sb	11 26 10.5	+1.1
WWF	Wufeng	1.54	238	*e*P	Pg	11 25 52.9	+0.7
WWF				*e*S	Sg	11 26 14.1	+1.8

EHY	Hungye	1.54	209	*e*P	Pn	11 25 50.0	+0.4
EHY				*e*S	Sn	11 26 09.5	+0.1
EHYH	Wanrong	1.55	208	*e*P	Pb	11 25 50.6	-0.3
EHYH				*e*S	Sb	11 26 10.6	+0.2
IRIF	Iriomote-Funau	1.55	110	*e*P	Pn	11 25 49.4	-0.3
WNT	Mingjian	1.65	233	*e*P	Pg	11 25 54.4	+0.2
WNT				*e*S	Sg	11 26 17.0	+1.4
WHYT	Xinyi Township	1.65	225	*e*P	Pb	11 25 53.5	+0.8
WHYT				*e*S	Sg	11 26 15.6	-0.1
YULB	Yu-li	1.66	207	*e*P	Pn	11 25 52.0	+0.8
YULB				*e*S	Sn	11 26 12.4	+0.3
TWF1	Yuli	1.69	207	*e*P	Pn	11 25 52.7	+1.1
YUS	Yu-Shan	1.75	218	*e*P	Pb	11 25 55.0	+0.4
YUS				*e*S	Sb	11 26 18.1	+1.6
CHKH	Chenggong	1.80	202	*e*P	Pn	11 25 52.7	-0.4
ALS	Alishan	1.81	222	*e*P	Pb	11 25 55.0	-0.7
ALS				*e*S	Sb	11 26 18.6	+0.2
JKRS	Kuro-shima	1.82	110	*e*P	Pn	11 25 54.3	+0.8
FULB	Fuli	1.83	205	*e*P	Pn	11 25 53.8	+0.2
CHN5	Tsauling	1.83	227	*e*P	Pb	11 25 55.3	-0.6
CHN5				*e*S	Sb	11 26 20.1	+1.4
WDLH	Douliu	1.87	231	*e*P	Pb	11 25 56.7	+0.3
WDLH				*e*S	Sg	11 26 21.8	-0.9
CHKT	Chengkung	1.90	202	*e*P	Pn	11 25 53.4	-1.0
CHKT				*e*S	Sn	11 26 16.6	-1.5
JIJ	Ishigaki jima	1.90	105	*e*P	Pb	11 25 56.5	-0.5
EHD	Haiduan	1.91	206	*e*P	Pn	11 25 55.5	+0.8
EHD				*e*S	Sn	11 26 18.3	-0.2
ELDTW	Lidau	1.96	211	*e*P	Pb	11 25 57.1	-0.9
WCKO	Fanlu	1.99	225	*e*P	Pb	11 25 59.1	+0.5
WCKO				*e*S	Sg	11 26 26.0	-0.7
JISG	Ishigakijimahi	2.00	98	*e*P	Pb	11 25 57.9	-0.8
CHN4	Tsaushan	2.06	223	*e*P	Pb	11 25 59.2	-0.5
CHN4				*e*S	Sg	11 26 27.5	-1.5
TPUB	Ta-pu	2.08	222	*e*P	Pb	11 26 00.5	+0.5
TPUB				*e*S	Sg	11 26 28.0	-1.5
STYH	Taoyuan	2.10	216	*e*P	Pb	11 26 00.3	0.0
STYT	Tauyuan	2.11	217	*e*P	Pb	11 25 59.8	-0.8
WTP	Ta-pu	2.13	221	*e*P	Pb	11 25 60.0	-0.9
WTP				*e*S	Sb	11 26 28.4	+1.2
WSL	Shuilin Townsh	2.19	233	*e*P	Pb	11 26 01.3	-0.7
WSL				*e*S	Sb	11 26 30.7	+1.8
CHN1	Nanshi	2.23	221	*e*P	Pb	11 26 02.7	+0.2
CHN1				*e*S	Sb	11 26 30.8	+0.8
TWGBT	Beinan	2.26	205	*e*P	Pn	11 25 59.8	+0.4
SGST	Jiashian	2.27	219	*e*P	Pb	11 26 02.3	-1.0
SGST				*e*S	Sb	11 26 31.5	+0.2
TTN	Taitung	2.29	203	*e*P	Pn	11 25 59.9	0.0

*IDC **15** 11:31:59.5±0.9, 6°.64N×125°.11E, h0^{km}, mb3.5/7, mbtmp3.5/7, MS3.2/2, Error ellipse: s-maj=20.3km s-min=9.6km az=131.0*
ISC 15 11:32:01.0±0.9, **6°.6N**±0°.1×**125°.1E**±0°.1, **h10**^{km}, **n11**, σ**0^s.60**/9, **mb3.6**/7, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.64	48	Pg	Pg	11 32 12.9	-0.5
	168nm,0.3s,baz=282,slow=6.5,SNR=8.9						
DAV				Lg	Lg	11 32 19.4	
	584nm,0.3s,baz=350,slow=23,SNR=8.9						
DAV	Davao City (W)	0.64	48	P	Pb	11 32 15.0	+0.7
JCJ	Chichijima	26.03	37	LR	LR	11 46 52.7	
	comp=Z,40nm,21.0s,baz=105,slow=34						
PSI	Prapat	26.36	263	LR	LR	11 48 31.7	
	comp=Z,73nm,19.3s,baz=69,slow=38						
WRA	Warramunga Arr	27.94	161	P	P	11 37 51.5	-0.2
	0.5nm,1.0s,baz=340,slow=9.0,SNR=6.7						
	0.5nm,1.0s						
ASAR	Alice Springs	31.33	164	P	P	11 38 21.6	-0.2
	0.4nm,0.5s,baz=346,slow=7.5,SNR=11						
	0.4nm,0.5s						
STKA	Stephens Creek	41.41	159	P	P	11 39 48.1	+0.3
	0.7nm,0.6s,baz=8.0,slow=6.0,SNR=4.1						
	0.7nm,0.6s						
SONM	Songino Array	44.04	342	P	P	11 40 08.3	-0.8
	0.2nm,0.6s,baz=162,slow=6.1,SNR=2.0						
	0.2nm,0.6s						
MKAR	Makanchi Array	54.25	325	P	P	11 41 27.8	+0.6
	0.5nm,0.7s,baz=116,slow=8.2,SNR=5.9						
	0.5nm,0.7s						
BVAR	Borovoye Array	64.01	327	P	P	11 42 35.1	+0.4
	0.2nm,0.3s,baz=132,slow=6.0,SNR=2.6						
	0.2nm,0.3s						
ILAR	Eielson Array	83.19	26	P	P	11 44 26.9	-0.4
	0.7nm,1.1s,baz=261,slow=5.9,SNR=4.2						
	0.7nm,1.1s						

*SOME **15** 11:54:32.3, 40°.77N×79°.90E, h15^{km}*
*NNC **15** 11:54:34.5±2.2, 40°.80N×79°.61E, h0^{km}, mb3.4, mpv3.1, Error ellipse: s-maj=15.0km s-min=12.0km az=166.0*
*KRNET **15** 11:54:38.4±0.1, 40°.98N×79°.77E, mb2.8*
ISC 15 11:54:38.6±2.1, **40°.97N**±0°.09×**79°.84E**±0°.06, **h10**^{km}, **n32**, σ**1^s.88**/47, **8C-5D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	Taragay, Kyrgy	1.71	297	⇑*e*P	Pb	11 55 09.1	-1.3
TARG				⇑*e*S	Sb	11 55 31.5	-0.7
PRZ	Przheval'sk	1.86	325	⇑*e*P	Pb	11 55 12.1	-0.7
PRZ				⇑*e*S	Sb	11 55 36.8	+0.6
SHLS	Shalkode	2.21	353	Pg	Pb	11 55 17.0	-1.7
	3.8nm,0.3s						
SHLS				Lg	Lg	11 55 49.3	
	24nm,0.7s						
SHLS	Shalkode	2.21	353	*e*P	Pb	11 55 17.0	-1.7
	3.8nm,0.3s						
SHLS				*e*S	Sg	11 55 49.3	-0.2
	24nm,0.7s						
UZB	Uzynbulak	2.26	345	Pg	Pb	11 55 17.3	-2.4
	3.2nm,0.3s						
UZB				Lg	Lg	11 55 49.9	
	17nm,0.7s						
UZB	Uzynbulak	2.26	345	*e*P	Pb	11 55 17.3	-2.4
	3.2nm,0.3s						
UZB				*e*S	Sg	11 55 49.9	-1.5
	17nm,0.7s						
KDJ	Kajisay	2.31	301	⇓*e*P	Pb	11 55 18.2	-2.3
KDJ				⇓*e*S	Sb	11 55 47.2	-2.0
SATY	Saty	2.35	333	Pg	Pn	11 55 18.2	+0.8
	5.7nm,0.3s						
SATY				Lg	Lg	11 55 51.5	
	17nm,0.3s						
PDGK	Podgornoye	2.38	354	⇑Pn	Pb	11 55 18.9	-2.7
	3.2nm,0.3s						
PDGK				⇑Sn	Sb	11 55 52.6	+1.6
	33nm,0.7s						
KTMS	Ketmen	2.51	9	Pg	Pb	11 55 22.0	-1.9
	2.5nm,0.3s						
KTMS				Lg	Lg	11 55 57.6	
	21nm,0.5s						
KTMS	Ketmen	2.51	9	*e*P	Pb	11 55 22.0	-1.9
	2.5nm,0.3s						
KTMS				*e*S	Sg	11 55 57.6	-1.6
	21nm,0.5s						
KPKS	Kokpek	2.64	341	Pg	Pb	11 55 23.8	-2.3
	0.3nm,0.2s						
KPKS				Lg	Lg	11 56 01.0	
	9.8nm,0.5s						
KURS	Kuram	2.81	334	Pg	Pb	11 55 26.9	-2.0
	4.4nm,0.8s						
KURS				Lg	Lg	11 56 06.0	
	8.4nm,0.5s						
TNSS	Tian-Shan	2.99	315	Pg	Pb	11 55 29.9	-2.3
	0.8nm,0.2s						
TNSS				Lg	Lg	11 56 11.4	
	3.6nm,0.6s						
TNSS	Tian-Shan	2.99	315	*e*P	Pb	11 55 29.9	-2.3
	0.8nm,0.2s						
TNSS				*e*S	Sb	11 56 11.4	+2.5
	3.6nm,0.6s						
MDOK	Medeo	3.02	317	Pg	Pb	11 55 30.8	-1.8
	1.9nm,0.2s						
MDOK				Lg	Lg	11 56 12.7	
	8.2nm,0.6s						
KOTS	Kotyrbulak	3.04	319	Pg	Pn	11 55 28.8	+1.8
	2.9nm,0.2s						
KOTS				Lg	Lg	11 56 09.7	
	14nm,0.8s						
KOTS	Kotyrbulak	3.04	319	*e*P	Pn	11 55 28.8	+1.8
	2.9nm,0.2s						
KOTS				*e*S	Sb	11 56 09.7	-0.5
	14nm,0.8s						
JNKS	Jany-Kuch	3.17	273	⇓*e*P	Pn	11 55 30.2	+1.4
JNKS				⇓*e*S	Sn	11 56 08.0	+1.2
IZV	Izvestkoviy	3.17	312	Pg	Pb	11 55 33.4	-1.8
	2.3nm,0.3s						
IZV				Lg	Lg	11 56 17.5	
	8.3nm,0.5s						
IZV	Izvestkoviy	3.17	312	*e*P	Pb	11 55 33.4	-1.8
	2.3nm,0.3s						
IZV				*e*S	Sg	11 56 17.6	-3.0
	8.3nm,0.5s						
BLB	Baldybastay	3.29	343	Pg	Pb	11 55 35.2	-1.9
	4.5nm,0.1s						
BLB				Lg	Lg	11 56 20.4	
	6.7nm,0.4s						
BOOM	Boomskoye usch	3.29	299	⇑*e*P	Pn	11 55 31.9	+1.5
BOOM				⇑*e*S	Sn	11 56 11.5	+1.8
MTBS	Maitube	3.34	312	Pg	Pn	11 55 32.5	+1.6
	2.2nm,0.3s						
MTBS				Lg	Lg	11 56 15.8	
	2.8nm,0.1s						
KNOS	Konyrlen	3.43	352	Pg	Pb	11 55 37.1	-2.4
	1.9nm,0.3s						
KNOS				Lg	Lg	11 56 23.6	
	1.8nm,0.3s						
ARXS	Arharly	3.57	336	Pg	Pb	11 55 42.1	+0.2
	0.5nm,0.1s						
ARXS				Lg	Lg	11 56 32.3	
	4.1nm,0.1s						
ARXS	Arharly	3.57	336	*e*P	Pb	11 55 42.1	+0.2
	0.5nm,0.1s						
ARXS				*e*S	Sg	11 56 32.3	-0.9
	4.1nm,0.1s						
CHKK	Chushkaly	3.58	325	Pg	Pb	11 55 40.0	-2.0
	0.8nm,0.1s						
CHKK				Lg	Lg	11 56 28.7	
	4.9nm,0.4s						
CHKK	Chushkaly	3.58	325	*e*P	Pb	11 55 40.0	-2.0
	0.8nm,0.1s						
CHKK				*e*S	Sb	11 56 28.7	+3.3
	4.9nm,0.4s						
KTBS	Karatobe	3.61	321	Pg	Pb	11 55 41.1	-1.4
	1.0nm,0.5s						
KTBS				Lg	Lg	11 56 30.4	
	0.2nm,0.1s						
DGS	Degeres	3.79	308	Pg	Pb	11 55 44.2	-1.4
	2.6nm,0.5s						
DGS				Lg	Lg	11 56 35.5	
	4.0nm,0.7s						
MK31	Makanchi Array	6.09	16	Pn	Pn	11 56 08.8	+0.2
	1.3nm,0.8s,baz=200,slow=14,SNR=7.6						
MK31				⇓Sn	Sn	11 57 21.0	+2.6
	1.2nm,0.8s,baz=193,slow=23,SNR=3.6						

IDC 15 12:00:24.0±1.2, **6°.48N**×**125°.12E**, **h0**^{km}, **mb3.6**/4, **mbtmp3.6**/4, **Error ellipse: s-maj=27.7km s-min=10.6km az=122.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.75	38	Pg	Pg	12 00 37.4	-0.9
	243nm,0.3s,baz=217,slow=1.4,SNR=5.9						
DAV				Lg	Lg	12 00 49.3	
	290nm,0.3s,baz=276,slow=23,SNR=12						
WRA	Warramunga Arr	27.78	161	P	P	12 06 14.9	+0.1
	0.6nm,1.0s,baz=331,slow=10,SNR=5.0						
	0.6nm,1.0s						
ASAR	Alice Springs	31.17	164	P	P	12 06 44.9	0.0
	0.2nm,0.6s,baz=342,slow=8.3,SNR=7.6						
	0.2nm,0.6s						
MKAR	Makanchi Array	54.40	325	P	P	12 09 53.7	+0.8
	0.4nm,0.8s,baz=123,slow=7.4,SNR=2.5						
	0.4nm,0.8s						
KURBB	Kurchatov Arra	58.57	327	P	P	12 10 22.2	-0.3
	1.1nm,0.2s,baz=127,slow=7.1,SNR=1.0						
	1.1nm,0.2s						

*TIR **15** 12:22:30.8, 41°.58N×19°.39E, h10^{km}±2^{km}, Ml2.0/2*
*PDG **15** 12:22:33.3±0.2, 41°.61N×19°.45E, h10^{km}, ML2.5/12, Error ellipse: s-maj=0.9km s-min=1.1km az=0.0*
ISC 15 12:22:30.3±1.2, **41°.47N**±0°.03×**19°.42E**±0°.04, **h8**^{km}±10^{km}, **n19**, σ**0^s.88**/34, **10C-4D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.36	110	⇑Pg	Pn	12 22 40.0	-1.8
TIR				Sg	Sb	12 22 45.6	+0.8
TIR				AML	AML	12 22 48.0	
	0.6nm,0.4s						
TIR				AML	AML	12 22 49.0	
	0.5nm,0.4s						
ULC	Ulcinj	0.51	345	⇓*i*Pg	Pg	12 22 40.2	0.0
ULC				*e*Sg	Sg	12 22 46.9	-0.1
DRME	Dracevica, Mon	0.74	346	⇑*i*Pg	Pg	12 22 44.5	-0.1
DRME				*e*Sg	Sg	12 22 54.5	+0.3
PHP	Peshkopia	0.80	74	Pn	Pb	12 22 46.3	-0.2
PHP				Sn	Sb	12 22 57.2	-0.2
PHP				AML	AML	12 23 03.5	
	0.4nm,0.3s						
BUM	Brajici-Budva	0.92	335	⇑*i*Pg	Pb	12 22 48.2	-0.4
BUM				*e*Sg	Sb	12 23 00.7	-0.4
PDG	Podgorica	0.97	353	⇑Pg	Pg	12 22 47.5	-1.4
PDG				Sg	Sg	12 22 59.9	-1.6
PDG	Podgorica	0.97	353	⇓*i*Pg	Pb	12 22 49.1	-0.3
PDG				*e*Sg	Sb	12 23 02.4	0.0
CEME	Cevo	1.14	341	⇑*i*Pg	Pn	12 22 52.1	-0.6
CEME				*e*Sg	Sn	12 23 08.8	+0.2
PVY	Plav	1.20	19	⇑*i*Pg	Pn	12 22 52.5	-1.0
PVY				*e*Sg	Sb	12 23 09.6	+0.6
HCY	Herceg Novi	1.20	325	⇓*i*Pg	Pg	12 22 53.9	+0.6
HCY				*e*Sg	Sn	12 23 11.0	+1.1
NKME	Niksic	1.34	345	⇓*i*Pg	Pg	12 22 56.7	+0.6
NKME				*e*Sg	Sg	12 23 14.4	+0.9
KOME	Kolasin	1.38	3	⇑*i*Pg	Pg	12 22 56.6	-0.3
KOME				*e*Sg	Sg	12 23 15.9	+1.1
IVA	Berane	1.45	14	⇑*i*Pg	Pn	12 22 56.8	-0.1
IVA				*e*Sg	Sg	12 23 18.3	+1.5
BRY	Bratogost	1.57	336	⇑*i*Pg	Pg	12 23 00.2	-0.3
BRY				*e*Sg	Sg	12 23 21.9	+0.9
NEST	Nestorio	1.62	130	Pn	Pg	12 23 03.1	+1.7
PLE	Pljevlja	1.86	359	⇑*i*Pn	Pb	12 23 04.5	-0.2
PLE				*e*Sn	Sb	12 23 29.0	+0.8
NOCI	Noci	1.90	250	Pn	Pg	12 23 06.6	-0.2
IGT	Igoumenitsa	2.06	160	Sn	Sg	12 23 35.3	-1.1
SGRT	San Giovanni R	2.77	277	Pn	Pn	12 23 15.3	+0.2

*UPA **15** 12:32:45.7±2.0, 7°.37N×77°.08W, h13^{km}±10^{km}, MD3.8*
*RSNC **15** 12:32:46.6±0.0, 7°N±1°×7°7W±°, h18^{km}±2^{km}, M3.8, mB4.7, mb4.6, ML3.5, Mw(mB)4.0*
*IDC **15** 12:32:52.5±2.0, 7°.41N×76°.78W, h93^{km}±20^{km}, mb3.3/5, mbtmp3.8/8, MS3.4/5, Error ellipse: s-maj=20.9km s-min=15.7km az=60.0*
ISC 15 12:32:44.5±1.2, **7°.33N**±0°.02×**77°.09W**±0°.02, **h18**^{km}±8^{km}, **n74**, σ**1^s.93**/108, **mb3.7**/5, **Panama-Colombia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTAC	Punta Ardita,	0.74	256	*e*P	Pb	12 32 59.7	+0.8
PTAC				*e*S	Sn	12 33 12.5	+1.6
PTAC	Punta Ardita,	0.74	256	P	Pb	12 32 59.7	+0.8
PTAC				S	Sb	12 33 10.6	+2.0
APAC	Apartado, Choc	0.76	42	P	Pn	12 33 00.2	-0.2
APAC				S	Sn	12 33 11.8	+0.4
DBBC	Dabeiba	0.93	110	P	Pg	12 33 01.5	-1.1
DBBC				S	Sg	12 33 13.8	-1.1
SOLC	Bahia Solano	1.14	196	P	Pn	12 33 05.2	-0.5
SOLC				S	Sb	12 33 21.6	+1.2
CAPC	Capurgana	1.32	349	P	Pn	12 33 07.0	-1.1
CAPC				S	Sg	12 33 29.1	+1.8
CAP2	Capurgana	1.34	348	*e*P	Pn	12 33 07.3	-1.1
UPD2	Meteti	1.52	323	*e*P	Pn	12 33 11.3	+0.5
UREC	San Jos de Ur	1.60	75	*e*P	Pn	12 33 12.5	+0.6
UREC				*e*S	Sb	12 33 33.9	+0.4
UREC	San Jos de Ur	1.60	75	P	Pn	12 33 12.4	+0.4
UREC				S	Sn	12 33 32.8	+0.6
LCBC	Los crdobas,	1.67	25	P	Pb	12 33 14.6	-0.3
LCBC				S	Sg	12 33 39.0	+0.4
CBOC	Ciudad Bolivar	1.81	144	P	Pn	12 33 13.5	-1.5
CBOC				S	Sn	12 33 34.6	-3.0
MEDEC	Medelln, Ant	1.82	125	P	Pn	12 33 16.2	+1.0
HELC	Santa Helena	1.92	126	*e*P	Pn	12 33 17.4	+0.6
HELC				*e*S	Sn	12 33 43.0	+2.4
HELC	Santa Helena	1.92	126	P	Pn	12 33 17.1	+0.4
HELC				S	Sn	12 33 42.5	+1.9
TOTI	Torti	2.00	323	*e*P	Pb	12 33 19.5	-0.8
PIZC	Pizarro, Choco	2.37	187	P	Pn	12 33 23.3	+0.8
PIZC				S	Sb	12 33 59.7	+4.1
PLMC	San Jos del P	2.54	162	P	Pn	12 33 22.5	-2.5
PLMC				S	Sn	12 33 49.7	-5.9
CNTA3	Canitas, Panam	2.59	317	*e*P	Pn	12 33 27.0	+1.4
GUY2C	Guyana, Caldas	2.71	141	P	Pn	12 33 27.8	+0.2
GUY2C				S	Sn	12 34 00.4	+0.2
PTBC	PUERTO BERRIO,	2.73	107	P	Pn	12 33 28.5	+1.0
PTBC				S	Sn	12 34 02.0	+1.9
NORC	Norcasia	2.82	128	P	Pn	12 33 30.1	+1.3
NORC				S	Sn	12 34 05.4	+3.0
UPA	Univ. de Panam	2.92	304	*e*P	Pn	12 33 30.7	+0.6
PCRI3	Pocri, Los San	3.02	276	*e*P	Pn	12 33 32.8	+1.2
CHOR3	La Chorrera	3.07	301	*e*S	Sn	12 34 10.0	+1.4
SJCC	San Jacinto, C	3.17	36	*e*P	Pn	12 33 34.9	+1.2
SJCC				*e*S	Sn	12 34 09.8	-1.3
SJCC	San Jacinto, C	3.17	36	P	Pn	12 33 34.5	+0.8
SJCC				S	Sn	12 34 09.9	-1.2
AZU	Azuero	3.19	278	*e*P	Pn	12 33 35.0	+1.1
AZU				*e*S	Sn	12 34 12.9	+1.4
BCIP	Isla Barro Col	3.27	304	*e*P	Pn	12 33 35.4	+0.4
BCIP				*e*S	Sn	12 34 15.2	+1.7
BCIP	Isla Barro Col	3.27	304	P	Pn	12 33 35.0	0.0
BCIP				S	Sn	12 34 14.0	+0.5
TOSI3	Tonosi	3.33	271	*e*P	Pn	12 33 37.5	+1.8
BRJC	Barrancabermej	3.34	96	P	Pn	12 33 38.7	+2.8
BRJC				S	Sn	12 34 15.4	+0.3
CHIT3	Chitre	3.36	281	*e*P	Pn	12 33 37.2	+1.1
CHIT3				*e*S	Sn	12 34 14.7	-0.9
PNME	Penonome	3.41	290	*e*P	Pn	12 33 38.5	+1.7
YOTC	Yotoco, Valle	3.41	167	P	Pn	12 33 35.3	-1.7
YOTC				S	Sn	12 34 12.3	-4.7
SPBC	San Pablo de B	3.43	119	P	Pn	12 33 39.5	+2.2
SPBC				S	Sn	12 34 20.6	+3.0
ROSC	El Rosal	3.70	132	P	Pn	12 33 45.0	+3.7
	66nm,0.5s,baz=292,slow=2.1,SNR=34						
ROSC				S	Sn	12 34 27.2	+2.6
	158nm,0.8s,baz=296,slow=17,SNR=8.4						
ROSC	El Rosal	3.70	132	P	Pn	12 33 44.3	+3.0
ROSC				S	Sn	12 34 25.8	+1.1
CACAO	El Cacao, Vera	3.74	270	*e*P	Pn	12 33 41.8	+0.4
CACAO				*e*S	Sn	12 34 24.6	-0.5
OCAC	Ocana	3.84	76	P	Pn	12 33 44.7	+1.7
OCAC				S	Sn	12 34 26.3	-1.5
ORTC	Ortega, Tolima	3.86	152	P	Pn	12 33 44.9	+1.7
ORTC				S	Sn	12 34 32.3	+4.1
MARI3	Mariato, Verag	3.88	275	*e*P	Pn	12 33 45.1	+1.8
BARC	Barichara	3.95	100	P	Pn	12 33 46.8	+2.3
BARC				S	Sn	12 34 31.8	+1.3
CVER	Cruz Verde, Cu	4.10	133	P	Pn	12 33 50.2	+3.4
CVER				S	Sb	12 34 42.1	-3.8
JAMC	Jamundi, Valle	4.11	174	P	Pn	12 33 46.2	-0.5
JAMC				S	Sn	12 34 31.3	-3.2
GMAL	Guarumal, Vera	4.13	276	*e*P	Pn	12 33 48.8	+2.0
GMAL				*e*S	Sn	12 34 35.7	+1.0
PRAC	Prado	4.21	149	P	Pn	12 33 50.2	+2.3
RUSC	La Rusia	4.23	110	P	Pn	12 33 50.5	+1.9
RUSC				S	Sn	12 34 38.7	+0.9
CHIC	Chingaza	4.29	129	P	Pn	12 33 52.8	+3.5
PAMC	Pamplona, Colo	4.35	90	P	Pn	12 33 52.2	+1.9
PAMC				S	Sn	12 34 41.8	+0.9
GR1C	Gorgona, Isla	4.43	194	P	Pn	12 33 52.6	+1.6
VILC	Villavicencio,	4.65	133	P	Pn	12 33 58.4	+4.3
POPC	Popayan, Colom	4.78	175	P	Pn	12 33 56.7	+0.8
POPC				S	Sn	12 34 50.1	-0.9
URMC	La Uribe, Meta	4.87	146	P	Pn	12 33 57.6	+0.5
BBAC	Balboa, Cauca	5.28	182	P	Pn	12 34 05.9	+3.1
GARC	Garzon, Huila	5.35	163	P	Pn	12 34 04.6	+0.7
	1μm46nm,0.7s						
FLOC	Florencia	5.89	166	P	Pn	12 34 12.5	+1.5
	471nm40nm,1.4s						
GCUF	Volcan Galeras	6.07	182	P	Pn	12 34 16.6	+2.6
SDV	Santo Domingo	6.58	76	P	Pn	12 34 22.6	+2.0
	7.2nm,0.3s,baz=249,slow=8.6,SNR=11						
SDV				S	Sn	12 35 32.7	-2.5
	56nm,0.4s,baz=268,slow=7.8,SNR=3.3						
SDV				LR	LR	12 37 32.9	
	comp=Z,243nm,18.7s,baz=140,slow=45						
SDV	Santo Domingo	6.58	76	P	Pn	12 34 22.7	+2.1
	446nm39nm,0.6s						
URIC	Uribia, Colomb	6.64	49	P	Pn	12 34 22.0	+0.7
JTS	Las Juntas de	8.31	291	P	Pn	12 34 54.5	+10
	2.0nm,0.4s,baz=87,slow=18,SNR=3.9						
ATAH	Atahualpa	14.43	185	LR	LR	12 42 37.8	
	comp=Z,75nm,18.9s,baz=10,slow=40						
CMIG	Matias Romero	19.89	301	LR	LR	12 46 06.1	
	comp=Z,80nm,18.1s,baz=127,slow=39						
MDP	Montagnes des	24.40	94	LR	LR	12 48 02.4	
	comp=Z,144nm,20.6s,baz=328,slow=38						
LPAZ	La Paz	25.09	159	P	P	12 38 09.3	+0.3
	1.5nm,0.8s,baz=13,slow=8.3,SNR=4.8						
	1.5nm,0.8s						
TXAR	Lajitas Array	33.24	315	PcP	PcP	12 42 04.6	+1.2
	0.8nm,1.0s,baz=64,slow=0.7,SNR=5.4						
PFO	Pinyon Flats O	44.78	311	LR	LR	13 01 56.6	
	comp=Z,47nm,18.7s,baz=164,slow=39						
PDAR	Pinedale Array	45.41	326	P	P	12 41 02.8	+0.3
	0.3nm,0.7s,baz=148,slow=6.9,SNR=2.8						
	0.3nm,0.7s						
YKA	Yellowknife Ar	61.47	341	P	P	12 42 59.3	-0.6
	1.0nm,0.9s,baz=141,slow=6.1,SNR=9.5						
	1.0nm,0.9s						
ESDC	Sonseca Array	72.37	51	P	P	12 44 07.8	-2.0
	1.1nm,1.0s,baz=258,slow=5.1,SNR=3.9						
	1.1nm,1.0s						
ILAR	Eielson Array	74.85	335	P	P	12 44 23.1	-0.7
	0.5nm,0.8s,baz=100,slow=5.7,SNR=5.7						
	0.5nm,0.8s						
ASAR	Alice Springs	146.12	238	PKPbc	PKPdf	12 52 23.4	-0.3
	0.9nm,0.5s,baz=121,slow=3.7,SNR=8.3						
WRA	Warramunga Arr	147.06	244	PKPbc	PKPdf	12 52 24.2	-1.1
	1.4nm,0.8s,baz=102,slow=3.6,SNR=3.9						

*NEIC **15** 12:32:53.2±0.5, 44°.40N±0°.01×111°.15W±0°.03, h15^{km}±6^{km}, Error ellipse: s-maj=3.4km s-min=0.6km az=55.0*
UUSS 15 12:32:52.1±0.5, **44°.399N**±0°.009×**111°.14W**±0°.03, **h17**^{km}±5^{km}, **ML3.5**/14, **ML3.3**/38(NEIC), **Error ellipse: s-maj=3.0km s-min=1.1km az=74.0, Hebgen Lake region, Montana**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YPWB	West Boundary	0.21	8		Pb	12 32 58.5	+0.8
MCID	Moose Creek	0.21	188		Pb	12 32 58.4	+0.7
YFT	Old Faithful	0.22	76		Pb	12 32 58.5	+0.6
YFT				IAML		12 33 05.9	
	comp=N,6μm,0.8s						
YFT				IAML		12 33 06.0	
	comp=E,6μm,0.7s						
YPP	Pitchstone Pla	0.27	118		Pb	12 32 59.3	+0.5
YPP	Pitchstone Pla	0.27	118	Sg	Sb	12 33 03.3	+0.1
YPP				IAML		12 33 04.0	
	comp=N,6μm,0.2s						
YPP				IAML		12 33 07.8	
	comp=E,4μm,0.4s						
YMR	Madison River	0.30	25		Pb	12 32 59.9	+0.7
YMR					Sb	12 33 05.2	+1.3
YMR	Madison River	0.30	25	IAML		12 33 05.3	
	comp=E,13μm,0.6s						
YMR				IAML		12 33 08.1	
	comp=N,15μm,0.5s						
YPDC	Denny Creek	0.32	347		Pb	12 33 00.0	+0.5
YPM	Purple Mountai	0.32	37		Pb	12 33 00.6	+0.9
YHB	Horse Butte	0.35	354		Pb	12 33 00.6	+0.5
YHB				Sg	Sb	12 33 05.6	0.0
YHB				IAML		12 33 06.2	
	comp=E,6μm,0.3s						
YMC	Maple Creek	0.37	15		Pb	12 33 01.1	+0.6
GCR	Grayling Creek	0.40	4		Pb	12 33 01.7	+0.8
YLT	Little Thumb C	0.40	84		Pb	12 33 01.9	+1.0
H17A	Grant Village	0.40	90		Pb	12 33 02.2	+1.1
YML	Mary Lake	0.41	60		Pb	12 33 01.8	+0.6
YHH	Holmes Hill	0.44	28		Pb	12 33 02.2	+0.5
YHL	Hebgen Lake	0.45	356		Pb	12 33 02.5	+0.6
YHL	Hebgen Lake	0.45	356	Sg	Sb	12 33 08.8	+0.3
YHL				IAML		12 33 09.2	
	comp=N,4μm,0.5s						
YHL				IAML		12 33 09.4	

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	comp=E,5µm,0.6s						
YNM	Yellowstone No	0.45	43		Pb	12 33 02.5	+0.6
YNM	Yellowstone No	0.45	43	IAML		12 33 08.9	
	comp=E,3µm,0.2s						
YNM				IAML		12 33 09.4	
	comp=N,3µm,0.2s						
YNR	Norris Junctio	0.46	46		Pb	12 33 02.5	+0.6
YNR	Norris Junctio	0.46	46		Pb	12 33 02.5	+0.5
YNR	Norris Junctio	0.46	46	IAML		12 33 09.3	
	comp=N,2µm,0.2s						
YNR				IAML		12 33 11.2	
	comp=E,2µm,0.4s						
YMS	Mount Sheridan	0.46	107		Pb	12 33 03.0	+1.0
QLMT	Earthquake Lak	0.48	335		Pb	12 33 02.8	+0.5
TPMT	Tepee Creek	0.50	312		Pb	12 33 03.7	+1.0
YUF	Upper Falls	0.55	55		Pb	12 33 04.4	+0.9
LKWY	Lake	0.56	72		Pn	12 33 05.5	-0.1
LKWY				IAML		12 33 18.7	
	comp=E,898nm,0.6s						
YTP	The Promontory	0.61	90		Pb	12 33 05.3	+0.8
YPLA	Lake Butte	0.63	79		Pn	12 33 06.2	-0.4
YMV	Mammoth Vault	0.66	29		Pb	12 33 06.1	+0.8
MOOW	Moose Ponds	0.71	156		Pb	12 33 06.7	+0.5
MOOW	Moose Ponds	0.71	156	IAML		12 33 16.3	
	comp=E,1µm,0.4s						
YPPC	Pelican Cone	0.72	69		Pn	12 33 09.0	+1.1
YMP	Mirror Lake Pl	0.78	64		Pn	12 33 08.8	+0.1
YHR	Hawk`s Rest	0.81	111		Pn	12 33 09.0	-0.2
YPSB	Soda Butte	0.86	55		Pn	12 33 09.5	-0.1
LOHW	Long Hollow	0.88	154		Pn	12 33 09.8	-0.1
YPK	Parker Peak, Y	0.93	69		Pn	12 33 10.8	0.0
SNOW	Snow King Moun	0.98	163		Pn	12 33 11.9	+0.6
SNOW	Snow King Moun	0.98	163	IAML		12 33 27.8	
	comp=E,2µm,0.6s						
SNOW				IAML		12 33 28.2	
	comp=E,1µm,0.5s						
YNE	Yellowstone No	1.01	53		Pn	12 33 12.1	+0.3
BGMT	Barton Gulch	1.05	323		Pg	12 33 13.1	+0.5
BOZ	Bozeman (W)	1.25	344		Pg	12 33 16.3	0.0
BOZ	Bozeman (W)	1.25	344	IAML		12 33 33.5	
	comp=E,984nm,0.3s						
BZMT	Bozeman Pass	1.27	11		Pg	12 33 17.0	+0.2
MCMT	McKenzie Canyo	1.29	290		Pg	12 33 17.8	+0.6
DLMT	Dillon	1.42	313		Pg	12 33 19.9	+0.5
DLMT				IAML		12 33 40.0	
	comp=E,672nm,0.3s						
RLMT	Red Lodge	1.52	61		Pb	12 33 20.6	+0.6
RLMT				IAML		12 33 42.3	
	comp=E,211nm,0.9s						
RLMT				IAML		12 33 44.1	
	comp=E,198nm,0.7s						
BW06	Boulder Array	2.00	144		Pb	12 33 28.7	+0.6
BW06	Boulder Array	2.00	144	IAML		12 33 57.2	
	comp=E,103nm,0.6s						
PDAR	Pinedale Array	2.00	144		Pb	12 33 28.3	+0.2
LYMT	Lyon Mountain	2.69	343		Pn	12 33 35.6	+0.7
HWUT	Hardware Ranch	2.81	187		Pn	12 33 37.0	+0.5
HWUT				IAML		12 34 28.4	
	comp=E,50nm,0.8s						
MSO	Missoula	3.13	322		Pn	12 33 43.7	+3.0
BGU	Big Grassy Mou	3.74	203		Pn	12 33 51.8	+2.6
EGMT	Eagleton	3.75	14		Pn	12 33 52.5	+3.1
BSUT	Blindstream Ca	3.87	176		Pn	12 33 54.4	+3.2
JTMT	Jette	4.00	328		Pn	12 33 57.0	+4.3
LAO	LASA Array	4.14	55	Pn	Pn	12 33 57.2	+2.5
BMO	Blue Mountains	4.42	278	Pn	Pn	12 34 01.4	+2.8
F10A	Beach Ranch, E	4.58	292		Pn	12 34 03.9	+3.2
O20A	White River Ci	4.77	152		Pn	12 34 07.2	+3.8
P18A	Preston Nutter	4.81	172		Pn	12 34 07.0	+2.9
NEW	Newport	5.67	315		Pn	12 34 18.5	+2.9
PV22	Blue Mesa, Par	6.12	162	Pn	Pn	12 34 25.2	+3.2
PV10	Paradox Valley	6.22	165	Pn	Pn	12 34 28.4	+5.0
PV04	Paradox Valley	6.23	164	Pn	Pn	12 34 28.3	+4.8

IDC 15 12:33:58.3±1.2, 6°.51N×125°.17E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=27.4km s-min=10.2km az=121.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.69	36	Pg	Pb	12 34 12.8	-0.4
	279nm,0.3s,baz=250,slow=5.0,SNR=16						
DAV				Lg	Lg	12 34 20.0	
	643nm,0.3s,baz=244,slow=3.9,SNR=11						
WRA	Warramunga Arr	27.80	161	P	P	12 39 49.2	-0.1
	0.2nm,0.8s,baz=339,slow=9.6,SNR=4.6						
	0.2nm,0.8s						
ASAR	Alice Springs	31.18	164	P	P	12 40 19.0	-0.4
	0.1nm,0.5s,baz=339,slow=8.4,SNR=7.0						
	0.1nm,0.5s						
MKAR	Makanchi Array	54.40	325	P	P	12 43 27.0	-0.2
	0.3nm,0.8s,baz=127,slow=9.3,SNR=2.4						
	0.3nm,0.8s						
KURBB	Kurchatov Arra	58.57	327	P	P	12 43 56.6	-0.2
	0.3nm,0.7s,baz=128,slow=5.2,SNR=4.8						
	0.3nm,0.7s						

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*IDC **15** 12:36:26.3±0.8, 6°.58N×125°.05E, h0km, mb3.7/12, mbtmp3.7/12, Error ellipse: s-maj=16.4km s-min=9.5km az=135.0*

ISC 15 12:36:28.3±0.9, 6°.6N±0°.1×125°.2E±0°.2, h10km, n13, σ0ˢ98/10, mb3.8/12, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.60	35	Pg	Pg	12 36 40.4	+0.5
	746nm,0.3s,baz=228,slow=3.1,SNR=10.0						
DAV				Lg	Lg	12 36 50.3	
	893nm,0.3s,baz=83,slow=22,SNR=11						
WRA	Warramunga Arr	27.83	161	P	P	12 42 18.3	+0.1
	0.7nm,0.7s,baz=340,slow=8.9,SNR=7.0						
	0.7nm,0.7s						
CMAR	Chiang Mai Arr	28.20	297	P	P	12 42 19.6	-1.9
	0.6nm,0.3s,baz=118,slow=8.0,SNR=7.0						
	0.6nm,0.3s						
ASAR	Alice Springs	31.23	165	P	P	12 42 48.2	0.0
	0.5nm,0.5s,baz=351,slow=8.2,SNR=14						
	0.5nm,0.5s						
MJAR	Matsushiro Arr	32.10	20	P	P	12 42 54.2	-1.6
	0.9nm,0.8s,baz=195,slow=8.7,SNR=2.0						
	0.9nm,0.8s						
STKA	Stephens Creek	41.30	159	P	P	12 44 14.5	+0.3
	0.9nm,0.5s,baz=331,slow=10,SNR=5.1						
	0.9nm,0.5s						
SONM	Songino Array	44.14	342	P	P	12 44 37.8	+0.5
	0.3nm,0.7s,baz=141,slow=4.8,SNR=3.9						
	0.3nm,0.7s						
PETK	Petropavlovsk-	53.41	24	P	P	12 45 49.5	+1.3
	3.0nm,0.9s,baz=223,slow=7.1,SNR=1.8						
	3.0nm,0.9s						
MKAR	Makanchi Array	54.38	325	P	P	12 45 55.4	-0.2
	0.8nm,0.8s,baz=126,slow=8.3,SNR=6.6						
	0.8nm,0.8s						
ZALV	Zalesovo Beam	57.39	333	P	P	12 46 14.2	-2.7
	0.2nm,0.4s,baz=133,slow=12,SNR=2.3						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	58.55	327	P	P	12 46 22.4	-2.7
	0.3nm,0.6s,baz=123,slow=7.5,SNR=5.6						
	0.3nm,0.6s						
BVAR	Borovoye Array	64.14	327	P	P	12 47 03.4	+0.4
	0.5nm,0.6s,baz=129,slow=4.0,SNR=4.5						
	0.5nm,0.6s						
ILAR	Eielson Array	83.19	26	P	P	12 48 53.3	-1.3
	0.8nm,0.8s,baz=240,slow=4.8,SNR=11						
	0.8nm,0.8s						

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*IDC **15** 12:38:12.3±1.1, 6°.51N×125°.15E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=26.1km s-min=10.9km az=120.0*

ISC 15 12:38:13.6±1.1, 6°.6N±0°.1×125°.3E±0°.2, h10km, n6, σ0ˢ43/6, mb3.7/5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.57	30	Pg	Pb	12 38 25.6	0.0
	278nm,0.3s,baz=91,slow=3.5,SNR=0.9						
DAV				Lg	Lg	12 38 35.7	
	956nm,0.3s,baz=311,slow=23,SNR=5.0						
WRA	Warramunga Arr	27.81	162	P	P	12 44 03.8	+0.6
	0.7nm,0.7s,baz=337,slow=9.1,SNR=2.2						
	0.7nm,0.7s						
ASAR	Alice Springs	31.21	165	P	P	12 44 32.9	-0.4
	0.3nm,0.5s,baz=348,slow=9.2,SNR=1.2						
	0.3nm,0.5s						
STKA	Stephens Creek	41.28	159	P	P	12 45 59.4	+0.1
	1.6nm,0.7s,baz=315,slow=13,SNR=3.1						
	1.6nm,0.7s						
MKAR	Makanchi Array	54.42	325	P	P	12 47 41.0	-0.1
	0.5nm,0.7s,baz=123,slow=7.9,SNR=4.1						
	0.5nm,0.7s						
KURBB	Kurchatov Arra	58.59	327	P	P	12 48 10.7	+0.1
	0.5nm,0.7s,baz=124,slow=6.8,SNR=4.0						
	0.5nm,0.7s						

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*IDC **15** 12:38:50.7±0.5, 6°.47N×125°.14E, h0km, mb4.8/27, mbtmp4.8/27, MS4.2/4, Error ellipse: s-maj=15.8km s-min=10.8km az=92.0*

*MOS **15** 12:38:51.0±0.9, 6°.53N×125°.15E, h11km, mb5.4/69, MS4.4/6, Error ellipse: s-maj=8.8km s-min=4.4km az=113.5*

*BJI **15** 12:38:51.5, 6°.55N×125°.37E, h14km, mB5.2/58, mb4.9/85, Ms4.8/69, Ms7 4.7/58*

*NEIC **15** 12:38:53.6±1.2, 6°.57N±0°.05×125°.22E±0°.07, h10km±1km, mb5.3/82, Error ellipse: s-maj=13.3km s-min=7.4km az=119.0*

*DJA **15** 12:38:58.0±0.2, 7°N±2°×12°5E±°, h46km±2km, M5.2/131, mB5.7/91, mb5.3/131, MLv5.7/7, Mw(mB)5.2/91, MwMwp5.1/11, Mwp5.4/11*

ISC 15 12:38:54.7±0.4, 6°.62N±0°.03×125°.32E±0°.04, h18km±2km, h18km:pP-P, n871, σ1ˢ46/915, mb5.2/193, MS4.5/34, 18C-9D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.52	29	Pg	Pb	12 39 05.5	+0.2
	8µm,0.3s,baz=245,slow=5.0,SNR=30						
DAV	Davao City (W)	0.52	29	P	Pb	12 39 06.0	+0.7
DAV				S	Sb	12 39 14.1	+1.7
DAV	Davao City (W)	0.52	29	Pg	Pb	12 39 05.4	+0.1
DAV	Davao City (W)	0.52	29	P	Pb	12 39 05.6	+0.3
DAV	Davao City (W)	0.52	29	P	Pb	12 39 05.0	-0.3
SGSI	Sangihe	2.92	176	P	Pn	12 39 40.9	+0.6
SGSI				S	Sn	12 40 18.5	+3.5
TNTI	Ternate	6.15	161		Pn	12 40 26.1	+1.3
TNTI	Ternate	6.15	161	P	Pn	12 40 27.2	+2.4
TNTI	Ternate	6.15	161	P	Pn	12 40 27.2	+2.4
	3µm263nm,1.4s						
GTOI	Gorontalo	6.38	201	P	Pn	12 40 26.8	-1.0
MRSI	Marisa	6.97	209	P	Pn	12 40 35.4	-0.6
TOLI2	Tolitoli	7.10	220		Pn	12 40 34.5	-3.4
LUWI	Luwuk	8.02	199	Pn	Pn	12 40 53.4	+3.0
LUWI	Luwuk	8.02	199	P	Pn	12 40 54.2	+3.7
LUWI	Luwuk	8.02	199	P	Pn	12 40 53.5	+3.0
MPSI	Mapaga	8.26	221	P	Pn	12 40 57.3	+3.6
	64nm,0.7s						
APSI	Ampana	8.33	206	P	Pn	12 40 57.6	+2.9
TGY	Tagaytay City	8.60	330	Pn	Pn	12 41 05.3	+6.9
	55nm,0.3s,baz=288,slow=14,SNR=3.9						
TGY				LR	LR	12 44 38.3	
	comp=Z,3µm,19.1s,baz=116,slow=40						
SANI	Sanana	8.63	176	P	Pn	12 40 59.0	+0.1
SANI	Sanana	8.63	176	P	Pn	12 40 57.9	-1.0
	3µm298nm,0.9s						
KKM	Kota Kinabalu	9.07	267		Pn	12 41 05.6	+0.6
KKM	Kota Kinabalu	9.07	267	P	Pn	12 41 07.5	+2.5
KKM	Kota Kinabalu	9.07	267	P	Pn	12 41 07.2	+2.2
I39PW	PALAU INFRASON	9.20	84	I	I	13 32 17.3	
	baz=266,slow=310,SNR=1.8						
PCI	Palu	9.27	216	P	Pn	12 41 10.3	+2.8
	128nm,0.9s						
SWI	Sorong	9.50	141	P	Pn	12 41 13.2	+2.4
	2µm84nm,1.1s						
NLAI	Namlea	9.95	170	P	Pn	12 41 17.1	+0.2
	4µm332nm,0.8s						
KRAI	Karang Ratu	10.34	163	P	Pn	12 41 24.1	+1.9
	2µm202nm,0.8s						
MSAI	Masohi	10.53	160	P	Pn	12 41 26.9	+2.0
	3µm3µm191nm,0.8s						
AAI	Ambon	10.63	164	P	Pn	12 41 28.4	+2.1
	2µm254nm,1.2s						
TTSI	Tana Toraja	11.06	210	P	Pn	12 41 34.6	+2.5
	3µm331nm,1.1s						
MMSI	Mamuju	11.25	215	P	Pn	12 41 37.8	+3.1
	112nm,1.0s						
KKSI	Kolaka, Sulawe	11.33	199	P	Pn	12 41 38.8	+3.0
	2µm77nm,0.7s						
MWPI	Manokwari, Pap	11.48	130	P	Pn	12 41 40.5	+2.5
	336nm,1.3s						
BKB	Balikpapan	11.49	227	P	Pn	12 41 39.8	+1.8
	127nm,0.8s						
FAKI	Fak Fak	11.73	144		Pn	12 41 43.4	+2.1
FAKI	Fak Fak	11.73	144	P	Pn	12 41 44.5	+3.2
FAKI	Fak Fak	11.73	144	P	Pn	12 41 43.6	+2.3
	2µm139nm,1.0s						
SPSI	Sidrap Palu	11.88	208	P	Pn	12 41 46.2	+2.8
	1µm66nm,1.0s						
PMSI	Majene	11.91	213	P	Pn	12 41 47.1	+3.2
	2µm137nm,1.5s						
RKPI	Ransiki, Papua	11.97	132	P	Pn	12 41 55.7	+11
BNDI	Bandanaira	11.97	157	P	Pn	12 41 47.3	+2.7
BNDI	Bandanaira	11.97	157	P	Pn	12 41 47.0	+2.4
	5µm183nm,1.5s						
BNSI	Bone	12.12	206	P	Pn	12 41 49.6	+2.9
	3µm207nm,1.3s						
KAPI	Kappang	12.82	206	Pn	Pn	12 41 59.4	+3.1
	2.3nm,0.3s,baz=10,slow=6.5,SNR=21						
KAPI	Kappang	12.82	206	P	Pn	12 42 01.1	+4.9
KAPI				S	Sn	12 44 33.4	+15
KAPI	Kappang	12.82	206	Pn	Pn	12 41 55.9	-0.4
KAPI	Kappang	12.82	206	P	Pn	12 41 57.9	+1.6
KAPI	Kappang	12.82	206	P	Pn	12 41 59.6	+3.3
KAPI	Kappang	12.82	206	P	Pn	12 41 55.9	-0.4
BKSI	Bulukumba	12.95	204	P	Pn	12 42 01.0	+3.0
	4µm196nm,1.8s						
BAKI	Biak	13.27	125	P	Pn	12 42 04.4	+2.1
	4µm129nm,2.1s						
SBUM	Sibu	13.70	253	P	Pn	12 42 10.4	+2.1
SBUM	Sibu	13.70	253	P	Pn	12 42 10.6	+2.3
SRPI	Serui, Papua	13.78	127	P	P	12 42 25.6	+7.8
BBKI	Banjar Baru	14.48	227	P	Pn	12 42 22.1	+3.1
	6µm164nm,0.9s						
MMRI	Maumere	15.46	192	P	P	12 42 35.2	-1.3
MMRI	Maumere	15.46	192	P	Pn	12 42 34.7	+2.6
	3µm242nm,1.5s						
SAUI	Saumlaki	15.68	158		Pn	12 42 33.1	-1.8
SAUI				IAmb	IAmb	12 42 42.2	
	comp=Z,136nm,0.7s						
SAUI	Saumlaki	15.68	158	P	Pn	12 42 36.6	+1.7
SAUI	Saumlaki	15.68	158	P	Pn	12 42 36.8	+1.9
	comp=Z,5µmcomp=Z,273nm,0.8s						
EDFI	Ende, Flores	15.69	193	P	Pn	12 42 36.3	+1.1
	comp=Z,2µmcomp=Z,63nm,0.9s						
KSM	Kuching	15.82	252	P	Pn	12 42 39.0	+2.2
SMPI	Sarmi	15.86	122	P	Pn	12 42 39.1	+1.8
	comp=Z,119nm,1.1s						
LBFI	Labuhan Bajo,	15.95	200	P	Pn	12 42 40.1	+1.7
	comp=Z,378nm,1.8s						
SOEI	Soe	16.30	184		Pn	12 42 42.8	-0.2
SOEI				IAmb	IAmb	12 42 45.9	
	comp=Z,273nm,1.4s						
SOEI	Soe	16.30	184	P	Pn	12 42 44.6	+1.6
SOEI	Soe	16.30	184	P	Pn	12 42 44.5	+1.6
	comp=Z,4µmcomp=Z,342nm,1.2s						
PBKI	Pangkalan Bun	16.48	236	P	P	12 42 47.8	0.0
DBNI	Kabupaten Domp	16.57	205	P	Pn	12 42 47.8	+1.5
	comp=Z,3µmcomp=Z,119nm,1.3s						
TWG	Pinlang	16.62	346		Pn	12 42 46.9	-0.1
BATI	Baumata	16.80	186	Pn	Pn	12 42 50.1	+1.0
	comp=Z,13nm,0.3s,baz=124,slow=1.4,SNR=27						
BATI	Baumata	16.80	186	P	Pn	12 42 50.2	+1.0
	comp=Z,2µmcomp=Z,230nm,0.9s						
WSI	Waingapu	16.94	197	P	P	12 42 53.1	+0.3
	comp=Z,5µmcomp=Z,7µmcomp=Z,318nm,1.4s						
PLAI	Plampang	17.09	206	P	P	12 42 55.1	+0.5
PLAI	Plampang	17.09	206	P	P	12 42 55.0	+0.5
	comp=Z,4µmcomp=Z,5µmcomp=Z,208nm,0.9s						
YULB	Yu-li	17.12	347	Pn	Pn	12 42 51.7	-1.6
YULB	Yu-li	17.12	347	P	P	12 42 57.0	+2.1
TPUB	Ta-pu	17.19	345	P	P	12 42 58.4	+2.7
WBSI	Waikabubak, Su	17.20	200	P	Pn	12 42 55.0	+0.7
	comp=Z,3µmcomp=Z,6µmcomp=Z,234nm,1.7s						
BASI	Baing, Sumba	17.38	196	P	P	12 42 59.0	+1.2
	comp=Z,3µmcomp=Z,179nm,0.9s						
GENI	Genyem	17.42	121	P	Pn	12 42 56.7	-0.3
GENI	Genyem	17.42	121	P	P	12 42 59.5	+1.3
	comp=Z,131nm,1.1s						
TWSI	Taliwang, Sumb	17.42	209	P	P	12 42 59.3	+1.1
	comp=Z,4µmcomp=Z,5µmcomp=Z,303nm,1.3s						
DLV	Lat	17.43	289	P	P	12 43 00.8	+2.2
KLNI	Mataram	17.55	212	P	P	12 43 00.8	+1.2
KMMI	Kalianget	17.68	220	P	P	12 43 03.0	+1.9
	comp=Z,5µmcomp=Z,223nm,1.3s						
KHKI	Kahang-Kahang	17.76	213	P	P	12 43 03.6	+1.7
	comp=Z,3µmcomp=Z,175nm,1.0s						
JAY	Jayapura	17.83	120	P	P	12 43 05.5	+2.7
	comp=Z,27nm,0.8s,baz=74,slow=7.5,SNR=5.6						
JAY	Jayapura	17.83	120	P	P	12 43 03.6	+0.7
ABJI	Asem Bagus	18.09	218	P	P	12 43 07.6	+2.0
	comp=Z,3µmcomp=Z,149nm,1.2s						
RTBI	Rangdo, Negare	18.21	215	P	P	12 43 08.9	+2.0
	comp=Z,5µmcomp=Z,474nm,1.1s						
DNP	Denpasar	18.23	214	P	P	12 43 09.8	+2.6
	comp=Z,356nm,1.4s						
YHNB	Yeheng	18.34	349	P	P	12 43 13.5	+5.1
IGBI	Denpasar	18.39	214	P	P	12 43 10.4	+1.5
BLJI	Banyuglugur	18.45	220	P	Pn	12 43 11.5	+1.8
	comp=Z,2µmcomp=Z,92nm,1.0s						
GRJI	Gresik	18.57	224	P	Pn	12 43 12.9	+1.7
	comp=Z,4µmcomp=Z,4µmcomp=Z,201nm,1.1s						
JAGI	Jajag, Banyuwa	18.67	217	P	P	12 43 11.9	-0.2
JAGI				IAmb	IAmb	12 43 17.4	
	comp=Z,197nm,0.9s						
JAGI	Jajag, Banyuwa	18.67	217	P	Pn	12 43 14.4	+2.0
JAGI	Jajag, Banyuwa	18.67	217	P	Pn	12 43 13.5	+1.1
	comp=Z,3µmcomp=Z,241nm,1.1s						
TBJI	Tambak Boyo	18.95	225	P	Pn	12 43 17.1	+1.4
	comp=Z,3µmcomp=Z,5µmcomp=Z,343nm,1.4s						
GMJI	Gumukmas	18.95	219	P	Pn	12 43 16.4	+0.6
	comp=Z,3µmcomp=Z,113nm,1.6s						
QZH	Quanzhou	19.33	341	⇓*i*P	P	12 43 19.5	+0.4
QZH				S	S	12 46 59.3	+1.9
QZH				pmax	pmax		
	comp=Z,160nm,1.3s						
QZH				pmax	pmax		
	comp=Z,2µm,7.4s						
QZH				LR	LR		
	comp=Z,1µm,16.8s						
QZH				LR	LR		
	comp=Z,630nm,16.1s						
QZH				LR	LR		
	comp=Z,2µm,15.1s						
QIZ	Qiongzhong	19.47	311	P	P	12 43 21.4	+0.6
QIZ				S	Sn	12 46 59.9	-0.4
QIZ				pmax	pmax		
	comp=Z,32nm,1.2s						
QIZ				pmax	pmax		
	comp=Z,470nm,4.3s						
QIZ				LR	LR		
	comp=Z,650nm,11.8s						
QIZ				LR	LR		
	comp=Z,1µm,17.5s						
QIZ				LR	LR		
	comp=Z,2µm,17.5s						
QIZ	Qiongzhong	19.47	311	P	Pn	12 43 23.6	+1.6
NGJI	Ngawi	19.60	225	P	Pn	12 43 24.4	+0.8
	comp=Z,4µmcomp=Z,207nm,1.3s						
SJI	Sawahan	19.65	224	P	P	12 43 23.9	+1.1
	comp=Z,124nm,1.7s						
SNJI	Sawahan-Nganju	19.69	224	P	Pn	12 43 25.1	+0.3
	comp=Z,3µmcomp=Z,191nm,1.3s						
DRS	Darwin Rock St	19.72	164	P	P	12 43 23.3	-0.2
TPI	Tanjungpandan	19.95	243	P	Pn	12 43 27.6	-0.1
GZH	Guangzhou	20.03	326	P	Pn	12 43 31.3	+2.7
GZH				S	Sn	12 47 17.9	+4.2
GZH				LR	LR		
	comp=Z,1µm,15.1s						
GZH				LR	LR		
	comp=Z,1µm,14.1s						
GZH				LR	LR		
	comp=Z,2µm,16.3s						
SMRI	Semarang	20.12	228	P	P	12 43 26.2	-1.7
SMRI				IAmb	IAmb	12 43 39.6	
	comp=Z,262nm,1.1s						
SMRI	Semarang	20.12	228	P	Pn	12 43 30.4	+0.6
SMRI	Semarang	20.12	228	P	Pn	12 43 29.5	-0.3
	comp=Z,5µmcomp=Z,240nm,1.6s						
MTN	Manton Dam	20.18	163	P	P	12 43 28.2	-0.2
	comp=Z,146nm,1.2s						
MTN	Manton Dam	20.18	163		P	12 43 27.5	-1.0
JOW	Kunigami	20.30	8	P	P	12 43 30.6	+0.9
	comp=Z,55nm,0.9s,baz=180,slow=9.6,SNR=6.6						
	comp=Z,55nm,0.9s						
JOW	Kunigami	20.30	8	P	P	12 43 29.4	-0.3
JOW				IAmb	IAmb	12 43 38.8	
	comp=Z,139nm,1.0s						
JOW	Kunigami	20.30	8	P	P	12 43 31.0	+1.3
PCJI	Pacitan	20.38	224	P	Pn	12 43 32.8	-0.1
	comp=Z,2µmcomp=Z,107nm,1.1s						
KDU	Kakadu	20.45	160	P	P	12 43 30.7	-0.8
	comp=Z,114nm,0.9s						
UGM	Wanagama	20.64	226	P	P	12 43 32.8	-0.8
UGM				IAmb	IAmb	12 43 48.6	
	comp=Z,163nm,1.3s						
UGM	Wanagama	20.64	226	P	Pn	12 43 36.5	+0.5
UGM	Wanagama	20.64	226	P	Pn	12 43 35.7	-0.3
	comp=Z,3µmcomp=Z,170nm,1.4s						
YOGI	Yogyakarta	20.74	227	P	Pn	12 43 36.5	-0.6
	comp=Z,4µmcomp=Z,329nm,1.6s						
CTJI	Waduk Cacaban	21.04	230	P	P	12 43 39.6	+1.8
	comp=Z,3µmcomp=Z,170nm,1.5s						
PPBI	Pangkal Pinang	21.05	246	P	P	12 43 40.2	+2.2
MMPI	Merauke	21.21	135	P	P	12 43 41.0	+1.3
UBPT	Khong Chiam	21.29	295	P	P	12 43 40.8	+0.2
KPJI	Karang Pucung	21.43	230	P	P	12 43 43.5	+1.4
	comp=Z,2µmcomp=Z,212nm,1.3s						
TPRI	Tanjung Pinang	21.50	256	P	P	12 43 43.8	+0.9
	comp=Z,183nm,1.1s						
DSRI	Dabo	21.87	252	P	P	12 43 48.1	+1.3
	comp=Z,103nm,1.8s						
MYKOM	Kota Tinggi	21.94	258	P	P	12 43 49.2	+1.6
MYKOM	Kota Tinggi	21.94	258	P	P	12 43 48.9	+1.3
	comp=Z,59nm,1.1s						
KNRA	Kununurra	22.41	171	P	P	12 43 50.3	-2.2
KNRA	Kununurra	22.41	171		P	12 43 51.4	-1.2
BBJI	Bungbulang	22.50	232	P	P	12 43 54.3	+0.6
BBJI	Bungbulang	22.50	232	P	P	12 43 54.2	+0.6
	comp=Z,2µmcomp=Z,138nm,1.2s						
DBJI	Dramaga	22.69	235	P	P	12 43 57.3	+1.7
	comp=Z,198nm,1.2s						
CNJI	Cibinong	22.82	233	P	P	12 43 57.0	0.0
	comp=Z,1µmcomp=Z,104nm,1.0s						
SBJI	Serang	22.96	237	P	P	12 44 00.0	+1.6
	comp=Z,365nm,1.5s						
SKJI	Sukabumi	23.10	234	P	P	12 44 00.2	+0.3
	comp=Z,314nm,1.2s						
JMBI	JAMBI	23.14	250	P	P	12 44 02.4	+2.1
BLSI	Bandar Lampung	23.31	240	P	P	12 44 03.5	+1.5
	comp=Z,5µmcomp=Z,108nm,0.5s						
KLI	Kotabumi	23.40	241	P	P	12 44 04.0	+1.1
	comp=Z,195nm,1.0s						
KLSI		23.43	242	P	P	12 44 03.3	+0.1
	comp=Z,2µmcomp=Z,102nm,1.0s						
GULI	GuiLin	23.44	324	P	P	12 44 03.3	+0.1
GULI				S	S	12 48 14.9	-1.1
GULI				pmax	pmax		
	comp=Z,38nm,1.4s						
GULI				LR	LR		
	comp=Z,650nm,15.0s						
GULI				LR	LR		
	comp=Z,1µm,17.3s						
GULI				LR	LR		
	comp=Z,1µm,17.1s						
MDSI	Maura Dua	23.82	243	P	P	12 44 06.6	-0.4
	comp=Z,66nm,1.1s						
KASI	Kota Agung	24.03	240	P	P	12 44 08.8	-0.2
	comp=Z,1µmcomp=Z,99nm,1.1s						
LWLI	Liwa	24.17	242	P	P	12 44 10.2	-0.2
IPM	Ipoh	24.28	266	P	P	12 44 10.9	-0.5
IPM				IAmb	IAmb	12 44 16.4	
	comp=Z,178nm,1.4s						
IPM	Ipoh	24.28	266	P	P	12 44 11.6	+0.3
IPM	Ipoh	24.28	266	P	P	12 44 10.8	-0.5
	comp=Z,1µmcomp=Z,61nm,1.2s						
CNSH	ChangSha	24.45	333	P	P	12 44 11.0	-1.7
CNSH				S	S	12 48 29.8	-2.3
CNSH				pmax	pmax		
	comp=Z,26nm,2.0s						
CNSH				LR	LR		
	comp=Z,1µm,15.8s						
CNSH				LR	LR		
	comp=Z,960nm,13.0s						
CNSH				LR	LR		

	comp=Z,2µm,15.6s						
KULM	Kulim	24.58	268	P	P	12 44 13.3	-0.7
KULM	Kulim	24.58	268	P	P	12 44 15.2	+1.2
KULM	Kulim	24.58	268	P	P	12 44 14.7	+0.7
	comp=Z,1µmcomp=Z,90nm,1.7s						
SSE	Sheshan	24.66	351	P	P	12 44 14.8	+0.3
SSE				pP	pP	12 44 17.4	-2.5
SSE				sP	sP	12 44 19.3	-2.8
SSE				S	S	12 48 36.8	+1.5
SSE				pmax	pmax		
	comp=Z,18nm,0.6s						
SSE				pmax	pmax		
	comp=Z,400nm,3.5s						
MNAI	Manna	24.85	245	P	P	12 44 15.4	-1.1
MNAI	Manna	24.85	245	P	P	12 44 16.6	+0.1
	comp=Z,207nm,1.0s						
KSI	Kapahiang	24.88	246	P	P	12 44 17.9	+1.1
	comp=Z,100nm,0.5s						
MASI	Maura Aman, Be	25.00	248	P	P	12 44 18.6	+0.7
	comp=Z,4µmcomp=Z,139nm,0.9s						
BKNI	Bangkinang	25.02	256	P	P	12 44 19.4	+1.4
UBSI	University, Be	25.22	247	P	P	12 44 19.8	0.0
	comp=Z,215nm,1.0s						
KRJI	Kerinci	25.34	251	P	P	12 44 20.7	-0.4
SLVN	Son La	25.36	307	P	P	12 44 23.4	+2.3
PPI	Padang Panjang	25.85	255	P	P	12 44 26.0	+0.5
	comp=Z,53nm,1.1s						
XMI	Christmas Isla	25.88	229	P	P	12 44 26.7	+0.9
EGSI	Enggano, Bengk	25.90	243	P	P	12 44 27.1	+1.1
	comp=Z,85nm,1.3s						
PDSI	Padang	25.92	254	P	P	12 44 25.8	-0.4
	comp=Z,1µmcomp=Z,57nm,1.2s						
WHN	Wuhan	25.94	338	P	P	12 44 26.5	+0.4
WHN				S	S	12 49 02.1	+6.4
WHN				pmax	pmax		
	comp=Z,2µm,11.2s						
WHN				LR	LR		
	comp=Z,2µm,17.5s						
WHN				LR	LR		
	comp=Z,1µm,12.1s						
WHN				LR	LR		
	comp=Z,2µm,15.0s						
NJ2	Nanjing	26.02	347	⇑iP	P	12 44 28.9	+2.1
NJ2				pP	sP	12 44 31.6	-2.8
NJ2				S	S	12 48 59.6	+2.6
NJ2				pmax	pmax		
	comp=Z,34nm,1.2s						
MNSI	Mandailing Nat	26.32	258	P	P	12 44 30.8	+1.0
	comp=Z,39nm,1.0s						
GYA	Guiyang	26.56	320	⇓P	P	12 44 33.4	+1.4
GYA				S	S	12 49 05.8	-0.2
GYA				pmax	pmax		
	comp=Z,14nm,1.4s						
GYA				pmax	pmax		
	comp=Z,460nm,4.7s						
GYA				LR	LR		
	comp=Z,1µm,15.2s						
GYA				LR	LR		
	comp=Z,580nm,18.5s						
GYA				LR	LR		
	comp=Z,1µm,20.5s						
PSI	Prapat	26.58	263	P	P	12 44 32.8	+0.5
	comp=Z,734nmcomp=Z,68nm,1.3s						
TSI	Tuntungan	26.83	265	P	P	12 44 35.1	+0.7
	comp=Z,108nm,1.8s						
JNU	Nakatsue	26.87	10		P	12 44 33.5	-1.1
JNU	Nakatsue	26.87	10	P	P	12 44 36.9	+2.3
PPSI	Pulau Pagai	26.93	251	P	P	12 44 36.2	+0.8
PMG	Port Moresby	26.96	126		P	12 44 34.9	-0.6
PMG				IAmb	IAmb	12 44 40.5	
	comp=Z,78nm,0.9s						
PMG	Port Moresby	26.96	126	P	P	12 44 36.0	+0.5
PMG	Port Moresby	26.96	126	P	P	12 44 35.4	-0.1
	comp=Z,931nmcomp=Z,94nm,1.1s						
PMG	Port Moresby	26.96	126	ceP	P	12 44 36.1	+0.5
PMG				pmax	pmax		
	comp=Z,124nm,1.3s						
COEN	Coen	27.05	139	P	P	12 44 35.4	-1.0
	comp=Z,116nm,1.0s						
COEN	Coen	27.05	139		P	12 44 36.0	-0.4
COEN				IAmb	IAmb	12 44 45.1	
	comp=Z,120nm,1.1s						
COEN	Coen	27.05	139	P	P	12 44 36.7	+0.3
SISI	Saibi	27.35	254	P	P	12 44 38.3	-0.8
	comp=Z,1µmcomp=Z,101nm,1.1s						
KCSI	Kotacane, Aceh	27.61	265	P	P	12 44 40.3	-1.2
	comp=Z,550nmcomp=Z,69nm,1.1s						
WB0	Warramunga Arr	27.70	161		P	12 44 40.1	-2.0
WB0				IAmb	IAmb	12 44 57.2	
	comp=Z,51nm,0.8s						
WRAB	Tennant Creek	27.84	162		P	12 44 42.1	-1.3
WRAB				IAmb	IAmb	12 45 11.7	
	comp=Z,34nm,0.8s						
WRAB	Tennant Creek	27.84	162	P	P	12 44 42.1	-1.3
WRAB	Tennant Creek	27.84	162	P	P	12 44 42.1	-1.3
WRAB				pmax	pmax		
	comp=Z,34nm,0.8s						
ENH	Enshi	27.84	330	P	P	12 44 46.9	+3.5
WRA	Warramunga Arr	27.84	162	P	P	12 44 41.8	-1.7
	comp=Z,21nm,0.9s,baz=341,slow=9.4,SNR=35						
	comp=Z,21nm,0.9s						
WRA	Warramunga Arr	27.84	162	P	P	12 44 41.8	-1.7
WRA	Warramunga Arr	27.84	162	i P	P	12 44 41.7	-1.7
WRA				pmax	pmax		
	comp=Z,22nm,0.9s						
WR8	Warramunga Arr	27.91	161	P	P	12 44 42.6	-1.4
WR8				IAmb	IAmb	12 45 11.0	
	comp=Z,33nm,0.7s						
JMN	Monobe	28.12	15	P	P	12 44 44.8	-1.0
JMN				IAmb	IAmb	12 44 53.0	
	comp=Z,34nm,0.9s						
JMN	Monobe	28.12	15	P	P	12 44 45.9	+0.1
MBWA	Marble Bar	28.14	191	P	P	12 44 44.1	-1.9
MBWA				P	P	12 44 44.1	-1.9
MBWA	Marble Bar	28.14	191	P	P	12 44 44.4	-1.7
MBWA	Marble Bar	28.14	191	P	P	12 44 45.0	-1.1
GSI	Gunungsitoli	28.17	260		P	12 44 45.2	-1.2
GSI	Gunungsitoli	28.17	260	P	P	12 44 46.2	-0.3
GSI	Gunungsitoli	28.17	260	P	P	12 44 45.7	-0.8
	comp=Z,2µmcomp=Z,123nm,0.9s						
TPTI		28.23	265	P	P	12 44 48.1	+1.1
	comp=Z,29nm,1.1s						
LHMI	Lhok Sumawe	28.26	269	P	P	12 44 46.3	-1.0
LHMI	Lhok Sumawe	28.26	269	P	P	12 44 48.5	+1.3
CM31	Chiang Mai Arr	28.26	297	P	P	12 44 47.6	+0.3
	SNR=11						
CMAR	Chiang Mai Arr	28.26	297	P	P	12 44 46.8	-0.4
	comp=Z,12nm,0.9s,baz=113,slow=7.2,SNR=39						
	comp=Z,12nm,0.9s						
CMAR	Chiang Mai Arr	28.26	297		P	12 44 46.7	-0.6
CMAR	Chiang Mai Arr	28.26	297	i P	P	12 44 47.4	+0.2
CMAR				pmax	pmax		
	comp=Z,12nm,0.8s						
KMI	Kunming	28.38	313	⇓P	P	12 44 49.8	+1.3
KMI				S	S	12 49 39.9	+5.0
KMI				pmax	pmax		
	comp=Z,43nm,1.2s						
KMI				LR	LR		
	comp=Z,800nm,15.8s						
KMI				LR	LR		
	comp=Z,930nm,18.5s						
KMI				LR	LR		
	comp=Z,1µm,16.6s						
CHTO	Chiang Mai	28.39	298	P	P	12 44 48.1	-0.3
CHTO				P	P	12 44 48.1	-0.3
CHTO				S	S	12 49 36.9	+2.1
CHTO				S	S	12 49 36.9	+2.1
CHTO	Chiang Mai	28.39	298		P	12 44 47.5	-0.9
CHTO	Chiang Mai	28.39	298	P	P	12 44 48.4	0.0
CHTO	Chiang Mai	28.39	298	P	P	12 44 47.6	-0.8
	comp=Z,25nm,1.2s						
CHTO	Chiang Mai	28.39	298	P	P	12 44 47.5	-0.9
CHTO				pmax	pmax		
	comp=Z,26nm,1.1s						
PSAC2	Pilbara Seismi	28.51	191	P	P	12 44 47.6	-1.7
	comp=Z,40nm,0.9s						
PSA00	Pilbara Seismi	28.53	191	P	P	12 44 46.8	-2.7
PSA00	Pilbara Seismi	28.53	191		P	12 44 46.5	-2.9
PSA00	Pilbara Seismi	28.53	191	P	P	12 44 48.1	-1.4
PSAB3	Pilbara Seismi	28.54	191	P	P	12 44 45.5	-4.2
SNSI	Sinabang, Aceh	29.20	263	P	P	12 44 57.6	+2.0
	comp=Z,133nm,1.1s						
TJN	Taejon	29.68	3	i P	P	12 44 59.8	+0.2
PZH	PanZhiHua	29.93	314	P	P	12 45 02.5	+0.4
PZH				S	S	12 50 00.8	+1.8

PZH				pmax	pmax		
	comp=Z,20nm,1.0s						
PZH				pmax	pmax		
	comp=Z,170nm,4.7s						
PZH				LR	LR		
	comp=Z,590nm,15.7s						
PZH				LR	LR		
	comp=Z,810nm,16.7s						
PZH				LR	LR		
	comp=Z,1µm,16.7s						
LYN	LuoYang	30.23	339	⇑iP	P	12 45 05.3	+0.9
LYN				sP	sP	12 45 19.3	+7.2
LYN				S	S	12 50 00.8	-2.5
LYN				SS	SnSn	12 51 40.8	+3.2
LYN				pmax	pmax		
	comp=Z,51nm,1.0s						
LYN				pmax	pmax		
	comp=Z,360nm,4.6s						
LYN				LR	LR		
	comp=Z,680nm,17.9s						
LYN				LR	LR		
	comp=Z,820nm,18.2s						
TIA	Tai'an	30.40	347	P	P	12 45 03.8	-2.2
TIA				PP	PnPn	12 46 01.3	-3.3
TIA				S	S	12 50 04.8	-1.1
TIA				pmax	pmax		
	comp=Z,26nm,1.4s						
TIA				pmax	pmax		
	comp=Z,300nm,4.0s						
TIA				LR	LR		
	comp=Z,680nm,15.1s						
TIA				LR	LR		
	comp=Z,520nm,18.0s						
TIA				LR	LR		
	comp=Z,690nm,16.1s						
QIS	Mount Isa	30.44	153	P	P	12 45 05.7	-0.7
	comp=Z,58nm,0.8s						
QIS	Mount Isa	30.44	153	P	P	12 45 06.0	-0.5
KSRS	Korea Array	30.79	4	P	P	12 45 09.6	+0.3
	comp=Z,19nm,1.1s,baz=182,slow=10,SNR=33						
	comp=Z,19nm,1.1s						
MTSU	Mount Surprise	30.92	143	P	P	12 45 10.7	-0.1
	comp=Z,16nm,0.9s						
MTSU	Mount Surprise	30.92	143	P	P	12 45 11.8	+1.0
XAN	Xi'an	31.22	333	P	P	12 45 12.9	-0.4
XAN				PP	PnPn	12 46 16.4	+0.9
XAN				S	S	12 50 17.5	-1.5
XAN				pmax	pmax		
	comp=Z,38nm,1.4s						
XAN				LR	LR		
	comp=Z,920nm,14.0s						
XAN				LR	LR		
	comp=Z,1µm,16.7s						
XAN				LR	LR		
	comp=Z,2µm,16.5s						
AS31	Alice Springs	31.24	165		P	12 45 12.1	-1.5
ASAR	Alice Springs	31.24	165	P	P	12 45 12.6	-1.0
	comp=Z,12nm,0.7s,baz=355,slow=8.3,SNR=47						
	comp=Z,12nm,0.7s						
CD2	Chengdu	31.51	323	P	P	12 45 16.0	+0.1
CD2				S	S	12 50 24.0	+0.5
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				pmax	pmax		
	comp=Z,410nm,7.6s						
CD2				LR	LR		
	comp=Z,2µm,16.1s						
CD2				LR	LR		
	comp=Z,1µm,17.5s						
CD2				LR	LR		
	comp=Z,2µm,17.5s						
TNCH	TengChong	31.51	308	P	P	12 45 16.3	+0.2
TNCH				S	S	12 50 27.1	+3.1
TNCH				pmax	pmax		
	comp=Z,200nm,3.3s						
TNCH				LR	LR		
	comp=Z,430nm,14.6s						
TNCH				LR	LR		
	comp=Z,400nm,11.6s						
TNCH				LR	LR		
	comp=Z,700nm,18.5s						
WRKA	Warakurna	31.60	175	P	P	12 45 15.3	-1.4
MJAR	Matsushiro Arr	32.03	20	P	P	12 45 21.4	+1.0
	comp=Z,6.8nm,0.8s,baz=193,slow=9.5,SNR=12						
	comp=Z,6.8nm,0.8s						
MAJO	Matsushiro	32.03	20	P	P	12 45 21.2	+0.8
MAJO	Matsushiro	32.03	20	i P	P	12 45 22.3	+1.9
MAJO				pmax	pmax		
	comp=Z,11nm,1.0s						
HNS	HongShan	32.13	344	⇓P	P	12 45 21.3	+0.1
HNS				S	S	12 50 33.9	+0.9
HNS				pmax	pmax		
	comp=Z,20nm,1.2s						
HNS				LR	LR		
	comp=Z,320nm,13.0s						
HNS				LR	LR		
	comp=Z,580nm,14.5s						
HNS				LR	LR		
	comp=Z,620nm,15.7s						
DL2	Dalian	32.32	355	⇑iP	P	12 45 23.6	+0.8
DL2				S	S	12 50 37.9	+2.1
DL2				pmax	pmax		
	comp=Z,63nm,0.9s						
DL2				pmax	pmax		
	comp=Z,240nm,7.6s						
DL2				LR	LR		
	comp=Z,540nm,23.7s						
DL2				LR	LR		
	comp=Z,690nm,23.7s						
TIY	Taiyuan	33.10	341	eP	P	12 45 30.1	+0.3
TIY				S	S	12 50 53.1	+4.9
TIY				pmax	pmax		
	comp=Z,14nm,0.5s						
TIY				pmax	pmax		
	comp=Z,170nm,3.7s						
TV1H	Townsville Har	33.30	141	P	P	12 45 32.7	+1.1
CTAO	Charters Tower	33.59	143	P	P	12 45 33.6	-0.5
CTAO				IAmb	IAmb	12 45 41.2	
	comp=Z,25nm,0.9s						
CTAO	Charters Tower	33.59	143	P	P	12 45 35.2	+1.0
CTAO	Charters Tower	33.59	143	P	P	12 45 33.7	-0.5
CTAO				pmax	pmax		
	comp=Z,25nm,0.9s						
MEEK	Meekatharra	33.69	191	P	P	12 45 32.5	-2.5
	comp=Z,21nm,0.7s						
MEEK	Meekatharra	33.69	191	P	P	12 45 33.2	-1.8
COCO	West Island	33.93	237	P	P	12 45 46.4	+9.2
COCO	West Island	33.93	237	P	P	12 45 37.8	+0.6
	comp=Z,41nm,1.4s						
BJT	Baijiatuau	34.26	347	P	P	12 45 40.8	+1.1
BJI	Beijing	34.28	347	P	P	12 45 39.8	-0.1
BJI				pP	pP	12 45 44.0	-1.3
BJI				sP	sP	12 45 47.0	-0.5
BJI				PP	PnPn	12 46 53.6	-0.7
BJI				S	S	12 51 05.6	-0.6
BJI				pmax	pmax		
	comp=Z,31nm,1.0s						
BJI				pmax	pmax		
	comp=Z,180nm,6.7s						
LZDM	Lanzhou Array	35.30	329	P	P	12 45 49.5	+0.3
	comp=Z,3.7nm,0.3s,baz=170,slow=12,SNR=5.7						
	comp=Z,3.7nm,0.3s						
LZH	Lanzhou	35.32	329	⇓P	P	12 45 50.3	+1.1
LZH				pP	sP	12 45 54.3	-2.5
LZH				S	S	12 51 26.8	+4.0
LZH				pmax	pmax		
	comp=Z,72nm,1.7s						
LZH				pmax	pmax		
	comp=Z,260nm,4.0s						
LZH				LR	LR		
	comp=Z,900nm,14.6s						
LZH				LR	LR		
	comp=Z,870nm,16.2s						
LZH				LR	LR		
	comp=Z,1µm,16.5s						
PSTR	Posyet	36.21	7	i P	P	12 45 56.2	-0.3
HHC	Hu-ho-hao-te	36.24	342	eP	P	12 45 57.3	+0.4
HHC				pP	sP	12 46 01.4	-3.2
HHC				sP	pP	12 46 04.3	+1.9
HHC				PP	PP	12 47 20.8	+1.3
HHC				pmax	pmax		
	comp=Z,18nm,1.3s						
HHC				pmax	pmax		
	comp=Z,280nm,4.9s						
BTO	Baotou	36.51	340	eP	P	12 46 03.8	+4.5
BTO				S	S	12 51 46.6	+5.8

BTO				pmax	pmax		
	comp=Z,25nm,1.8s						
BTO				pmax	pmax		
	comp=Z,510nm,7.0s						
BTO				LR	LR		
	comp=Z,1µm,21.0s						
BTO				LR	LR		
	comp=Z,2µm,19.0s						
BTO				LR	LR		
	comp=Z,2µm,21.6s						
MORW	Morawa	36.59	194	P	P	12 45 57.3	-2.6
	comp=Z,22nm,1.3s						
MORW	Morawa	36.59	194	P	P	12 45 58.4	-1.5
MORW	Morawa	36.59	194	P	P	12 45 58.4	-1.5
VLA	Vladivostok	36.81	8	i P	P	12 46 02.1	+0.5
VLA				pmax	pmax		
	comp=Z,58nm,1.0s						
CN2	Changchun	37.04	0	eP	P	12 46 03.8	+0.3
CN2				PP	PnPn	12 47 29.1	+0.7
CN2				eS	S	12 51 48.0	-0.5
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,300nm,14.0s						
CN2				LR	LR		
	comp=Z,400nm,14.0s						
SHL	Shillong	37.07	304	P	P	12 46 04.5	+0.1
	SNR=20						
SHL	Shillong	37.07	304		P	12 46 02.7	-1.7
SHL				IAmb	IAmb	12 46 08.8	
	comp=Z,63nm,0.9s						
SHL	Shillong	37.07	304	P	P	12 46 02.7	-1.7
SHL				pmax	pmax		
	comp=Z,63nm,0.9s						
FORT	Forrest	37.28	176	P	P	12 46 04.3	-1.4
	comp=Z,38nm,0.8s						
FORT	Forrest	37.28	176		P	12 46 04.3	-1.4
TATA	Tatamba Isabel	37.47	113	P	P	12 46 09.5	+1.9
QLP	Quilpie	37.76	152	P	P	12 46 08.5	-1.4
	comp=Z,60nm,0.8s						
QLP	Quilpie	37.76	152	P	P	12 46 08.7	-1.2
USRK	Ussuriysk Ar.	37.89	8	P	P	12 46 11.2	+0.4
	comp=Z,39nm,0.9s,baz=193,slow=7.7,SNR=20						
	comp=Z,39nm,0.9s						
KMBL	Kambalda	37.91	185	P	P	12 46 09.3	-1.8
	comp=Z,24nm,0.8s						
BLDU	Ballidu	37.93	192	P	P	12 46 09.0	-2.3
	comp=Z,19nm,0.7s						
BLDU	Ballidu	37.93	192	P	P	12 46 09.8	-1.5
XLT	XiLinHaoTe	38.01	349	eP	P	12 46 12.3	+0.4
XLT				pP	sP	12 46 21.8	+2.2
XLT				PP	PnPn	12 47 41.5	+1.2
XLT				S	S	12 51 58.3	-5.2
XLT				pmax	pmax		
	comp=Z,37nm,1.3s						
XLT				pmax	pmax		
	comp=Z,340nm,4.6s						
MDJ	Mudanjiang	38.03	5	P	P	12 46 12.8	+0.8
MDJ				S	S	12 52 04.0	+0.3
MDJ				pmax	pmax		
	comp=Z,140nm,1.5s						
MDJ				LR	LR		
	comp=Z,310nm,13.0s						
MDJ				LR	LR		
	comp=Z,370nm,19.5s						
MDJ				LR	LR		
	comp=Z,470nm,12.5s						
MDJ	Mudanjiang	38.03	5	P	P	12 46 12.7	+0.8
KLBR	Kellerberrin	38.68	190	P	P	12 46 15.6	-1.9
	comp=Z,60nm,0.6s						
KLBR	Kellerberrin	38.68	190	P	P	12 46 15.8	-1.7
BNX	BinXian	39.02	2	⇓P	P	12 46 19.8	-0.4
BNX				pP	sP	12 46 31.8	+3.9
BNX				PcP	PcP	12 48 30.6	+0.3
BNX				S	S	12 52 17.0	-1.4
BNX				pmax	pmax		
	comp=Z,43nm,1.4s						
BNX				pmax	pmax		
	comp=Z,430nm,3.6s						
BNX				LR	LR		
	comp=Z,390nm,22.2s						
BNX				LR	LR		
	comp=Z,410nm,16.3s						
MUN	Mundaring	39.35	192	P	P	12 46 21.3	-1.9
	comp=Z,23nm,1.3s						
MUN	Mundaring	39.35	192	P	P	12 46 21.3	-1.9
LSA	Lhasa	39.51	310	P	P	12 46 21.8	-3.4
LSA				S	S	12 52 22.9	-4.4
TEY	Ternei	39.51	13	⇑eP	P	12 46 25.4	+1.0
TEY				pmax	pmax		
	comp=N,50nm,0.9s						
TEY				pmax	pmax		
	comp=Z,60nm,0.8s						
GTA	Gaotai	39.92	329	P	P	12 46 29.5	+1.5
GTA				pP	sP	12 46 32.8	-2.9
GTA				PP	PnPn	12 48 08.0	+4.7
GTA				S	S	12 52 37.6	+5.1
GTA				pmax	pmax		
	comp=Z,24nm,1.3s						
GTA				pmax	pmax		
	comp=Z,310nm,5.8s						
GTA				LR	LR		
	comp=Z,640nm,15.6s						
GTA				LR	LR		
	comp=Z,760nm,17.5s						
GTA				LR	LR		
	comp=Z,1µm,15.3s						
NWAO	Narrogin (SRO)	40.07	191	P	P	12 46 26.8	-2.4
	comp=Z,40nm,0.7s						
NWAO	Narrogin (SRO)	40.07	191	P	P	12 46 28.2	-1.0
NWAO	Narrogin (SRO)	40.07	191	P	P	12 46 27.6	-1.6
NWAO	Narrogin (SRO)	40.07	191	P	P	12 46 28.2	-1.0
NWAO	Narrogin (SRO)	40.07	191	P	P	12 46 27.6	-1.6
NWAO				pmax	pmax		
	comp=Z,25nm,0.8s						
EIDS	Eidsvold	40.48	143	P	P	12 46 31.5	-1.2
	comp=Z,30nm,1.1s						
EIDS	Eidsvold	40.48	143		P	12 46 32.1	-0.6
EIDS	Eidsvold	40.48	143	P	P	12 46 32.4	-0.3
BBOO	Buckleboo	40.52	166	P	P	12 46 31.8	-1.2
	comp=Z,125nm,1.0s						
BBOO	Buckleboo	40.52	166		P	12 46 32.4	-0.5
BBOO				IAmb	IAmb	12 46 37.5	
	comp=Z,80nm,0.7s						
BBOO	Buckleboo	40.52	166	P	P	12 46 31.7	-1.2
GOMU	GeErMu	40.57	321	P	P	12 46 33.8	0.0
GOMU				S	S	12 52 42.5	-0.3
GOMU				pmax	pmax		
	comp=Z,27nm,1.4s						
GOMU				LR	LR		
	comp=Z,610nm,15.4s						
GOMU				LR	LR		
	comp=Z,630nm,17.3s						
GOMU				LR	LR		
	comp=Z,1µm,16.9s						
WHYH	Whyalla	41.12	164	P	P	12 46 37.0	-0.8
STKA	Stephens Creek	41.31	159	P	P	12 46 39.1	-0.3
	comp=Z,36nm,0.6s,baz=336,slow=8.1,SNR=50						
	comp=Z,36nm,0.6s						
STKA	Stephens Creek	41.31	159	P	P	12 46 38.7	-0.8
AUJCS	Jamestown Cent	41.56	163	P	P	12 46 41.4	-0.1
RKGY	Rocky Gully	41.76	190	P	P	12 46 42.2	-0.8
	comp=Z,71nm,1.0s						
AUCAS	Cummins Area S	41.83	167	P	P	12 46 43.7	+0.1
HTT	Hallett	41.87	163	P	P	12 46 43.6	-0.5
	comp=Z,21nm,1.2s						
HTT	Hallett	41.87	163	P	P	12 46 44.0	0.0
HTT	Hallett	41.87	163	P	P	12 46 43.5	-0.5
AULRC	Lightning Ridg	41.95	150	P	P	12 46 43.9	-0.8
TW1H	Toowoomba 1 Ha	42.63	144	P	P	12 46 51.9	+1.5
CMSA	Cobar Meteorol	42.64	154	P	P	12 46 48.8	-1.5
	comp=Z,26nm,1.1s						
CMSA	Cobar Meteorol	42.64	154	P	P	12 46 50.1	-0.2
HIA	Hailar	42.76	355	P	P	12 46 53.0	+1.9
YSS	Yuzhno-Sakhali	42.89	18	P	P	12 46 55.4	+3.3
YSS	Yuzhno-Sakhali	42.89	18	eP	P	12 46 47.5	-4.6
YSS				e		12 48 38.3	
YSS				eSS	SS	12 56 16.6	-11
YSS				pmax	pmax		
	comp=Z,40nm,1.3s						
YSS				pmax	pmax		
	comp=Z,300nm,3.7s						
YSS				MLR	MLR		

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       comp=E,400nm,16.0s
YSS                                  MLR    MLR
       comp=Z,400nm,16.0s
YSS                                  MLR    MLR
       comp=N,300nm,15.0s
HILR   Hailar Array B     43.05 355  P      P       12 46 54.4 +0.9
       comp=N,17nm,0.9s,baz=170,slow=11,SNR=11
       comp=N,17nm,0.9s
AUMAR  Marden Senior      43.16 164  P      P       12 46 54.9 +0.5
AUWSH  Wavell State H     43.16 143  P      P       12 46 56.0 +1.5
GHSS   Government Hou     43.17 164  P      P       12 46 55.4 +0.9
HEH    HeiHe              43.53   2 eP      P       12 46 57.4 +0.2
HEH                                  pP     pP      12 47 00.8 -1.9
HEH                                  S      S       12 53 24.9 -0.4
HEH                                  pmax   pmax
       comp=N,42nm,1.6s
HEH                                  LR     LR
       comp=N,360nm,15.4s
HEH                                  LR     LR
       comp=N,130nm,14.7s
HEH                                  LR     LR
       comp=N,470nm,15.1s
AUMBR  Murray Bridge      43.56 163  P      P       12 46 57.7  0.0
ULN    Ulaanbaatar        43.96 342  P      P       12 47 01.6 +0.6
ULN                                  P      P       12 47 01.6 +0.6
ULN    Ulaanbaatar        43.96 342  P      P       12 47 00.4 -0.5
ULN    Ulaanbaatar        43.96 342  P      P       12 47 01.5 +0.6
       comp=N,1µmcomp=N,52nm,1.0s
ULN    Ulaanbaatar        43.96 342 i P     P       12 47 00.7 -0.3
ULN                                  pmax   pmax
       comp=Z,14nm,1.2s
SONM   Songino Array      44.13 342  P      P       12 47 01.7 -0.6
       comp=Z,3.2nm,1.0s,baz=160,slow=6.1,SNR=12
       comp=Z,3.2nm,1.0s
SONM   Songino Array      44.13 342  P      P       12 47 02.4 +0.1
SONM   Songino Array      44.13 342  P      P       12 47 02.4 +0.1
SONM                                 pmax   pmax
       comp=Z,21nm,1.3s
AUDCS  Dubbo College      44.56 151  P      P       12 47 06.2 +0.4
ARMA   Armidale           44.63 147  P      P       12 47 05.4 -1.1
       comp=Z,29nm,0.9s
ARMA   Armidale           44.63 147         P       12 47 06.6 +0.1
ARMA                                 IAmb   IAmb    12 47 23.5
       comp=Z,28nm,0.9s
ARMA   Armidale           44.63 147  P      P       12 47 07.5 +1.0
AUPHS  Peel High Scho     44.77 148  P      P       12 47 07.5  0.0
GRNR   Gornyy             44.97  10⇓iP      P       12 47 09.9 +1.1
GRNR                                 pmax   pmax
       comp=Z,30nm,1.2s
GRNR                                 MLR    MLR
       comp=E,90nm,15.0s
GRNR                                 MLR    MLR
       comp=Z,360nm,16.0s
ARPS   Mount Arapiles     45.85 161  P      P       12 47 14.4 -1.5
       comp=Z,37nm,1.2s
YNG    Young              46.18 153  P      P       12 47 19.3 +0.7
       comp=Z,28nm,1.2s
AUMAG  Moama Anglican     46.24 158  P      P       12 47 19.9 +0.9
TYV    Tymovskoe          46.41  15 eP      P       12 47 21.2 +1.1
TYV                                 eS      S       12 54 04.7 -2.3
TYV                                  pmax   pmax
       comp=Z,21nm,1.0s
TYV                                  pmax   pmax
       comp=Z,100nm,2.4s
TYV                                  smax   smax
       comp=N,300nm,4.5s
TYV                                  smax   smax
       comp=E,300nm,4.5s
HYB    Hyderabad          46.87 288 eP      P       12 47 23.0 -1.4
SANVU  Saraoutou          46.92 118         P       12 47 24.1 -0.6
SANVU  Saraoutou          46.92 118  P      P       12 47 26.2 +1.5
ZEA    Zeya               47.01   2 eP      P       12 47 24.9 +0.1
ZEA                                 e               12 49 15.8
ZEA                                 eS      S       12 54 20.1 +4.6
ZEA                                  pmax   pmax
       comp=Z,100nm,1.9s
ZEA                                  pmax   pmax
       comp=N,10.0nm,1.2s
ZEA                                  pmax   pmax
       comp=Z,30nm,1.3s
ZEA                                  pmax   pmax
       comp=N,100nm,8.5s
ZEA                                  pmax   pmax
       comp=Z,200nm,7.3s
ZEA                                  smax   smax
       comp=E,100nm,15.3s
ZEA                                  MLR    MLR
       comp=Z,300nm,16.0s
BRAT   Ballarat           47.25 160  P      P       12 47 27.9 +1.0
CNB    Canberra Magne     47.46 153  P      P       12 47 25.5 -3.2
CNB    Canberra Magne     47.46 153  P      P       12 47 29.4 +0.7
TOO    Toolangi           47.82 158  P      P       12 47 31.5 +0.1
       comp=Z,13nm,1.6s
TOO    Toolangi           47.82 158  P      P       12 47 29.5 -1.9
TOO    Toolangi           47.82 158  P      P       12 47 29.5 -1.9
TOO                                  pmax   pmax
       comp=Z,10.0nm,0.8s
AUSMG  Snowy Mountain     48.06 155  P      P       12 47 34.3 +0.9
TLY    Talaya             48.37 342 i P     P       12 47 36.3 +0.8
TLY                                  pmax   pmax
       comp=Z,14nm,0.9s
DZM    Mont Dzumac        49.35 126 eP      P       12 47 43.0 -0.5
       comp=Z,99nm,1.1s
DZM    Mont Dzumac        49.35 126 eLR     LR      13 01 44.9
       comp=Z,580nm,30.1s
DZM    Mont Dzumac        49.35 126         P       12 47 43.2 -0.3
DZM                                  IAmb   IAmb    12 47 53.8
       comp=Z,73nm,1.3s
DZM    Mont Dzumac        49.35 126  P      P       12 47 44.1 +0.6
ONTNC  Ouen Toro          49.48 127  P      P       12 47 45.0 +0.6
WMQ    Urumqi             49.57 325 eP      P       12 47 45.3 +0.4
WMQ                                  pmax   pmax
       comp=Z,23nm,1.9s
WMQ                                  pmax   pmax
       comp=Z,280nm,4.9s
WMQ                                  LR     LR
       comp=Z,580nm,16.1s
WMQ                                  LR     LR
       comp=Z,660nm,13.1s
WMQ                                  LR     LR
       comp=Z,410nm,17.1s
KNGR   Kungurtug, Tuv     49.60 337 i P     P       12 47 45.4 +0.4
KNGR                                 pmax   pmax
       comp=Z,19nm,1.1s
YATNC  Mamie plateau,     49.70 126  P      P       12 47 47.1 +1.0
OUENC  Ouen Island, N     49.84 127  P      P       12 47 48.6 +1.4
KAAM   Kaadhehdhoo        52.55 266  P      P       12 48 09.7 +2.0
PEA0B  Petropavlovsk-     53.33  24  P      P       12 48 12.8  0.0
PEA0B  Petropavlovsk-     53.33  24ceP      P       12 48 13.8 +1.0
PETK   Petropavlovsk-     53.33  24  P      P       12 48 13.2 +0.4
       comp=Z,24nm,0.7s,baz=217,slow=3.7,SNR=19
       comp=Z,24nm,0.7s
PETK   Petropavlovsk-     53.33  24  P      P       12 48 13.0 +0.2
ZSN    Zaisan             53.34 327 eP      P       12 48 12.2 -0.8
ZSN    Zaisan             53.34 327 eP      P       12 48 12.2 -0.8
DGZ    Jazzator, Alta     53.41 330 i P     P       12 48 13.2 -0.4
DGZ                                  pmax   pmax
       comp=Z,13nm,1.2s
PET    Petropavlovsk      53.66  24         P       12 48 16.3 +1.1
PET    Petropavlovsk      53.66  24  P      P       12 48 16.5 +1.4
PET    Petropavlovsk      53.66  24 eP      P       12 48 16.5 +1.4
PET                                 eS      S       12 55 44.5 -3.6
PET                                  pmax   pmax
       comp=Z,80nm,1.4s
PET                                  MLR    MLR
       comp=Z,300nm,14.0s
PET                                  MLR    MLR
       comp=Z,300nm,13.0s
PET    Petropavlovsk      53.66  24  P      P       12 48 16.2 +1.1
       comp=Z,78nm,1.5s
SHLS   Shalkode           54.25 320 eP      P       12 48 16.9 -3.0
       comp=Z,25nm,0.9s
SHLS   Shalkode           54.25 320 eP      P       12 48 16.9 -3.0
SHLS                                 pmax   pmax
       comp=Z,25nm,0.9s
MK31   Makanchi Array     54.40 325ceP      P       12 48 21.4 +0.6
MKAR   Makanchi Array     54.40 325  P      P       12 48 20.9 +0.1
       comp=Z,6.9nm,0.5s,baz=120,slow=8.1,SNR=54
       comp=Z,6.9nm,0.5s
MKAR   Makanchi Array     54.40 325  P      P       12 48 19.9 -0.9
UZB    Uzynbulak          54.53 319 eP      P       12 48 20.8 -1.2
       comp=Z,14nm,0.8s
UZB    Uzynbulak          54.53 319 eP      P       12 48 20.7 -1.2
UZB                                  pmax   pmax
       comp=Z,14nm,0.8s
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DGAR   Diego Garcia       54.55 256  P      P       12 48 27.6 +5.3
MAKZ   Makanchi           54.59 325  P      P       12 48 21.0 -1.2
MAKZ                                 IAmb   IAmb    12 48 28.6
       comp=Z,33nm,1.1s
MAKZ   Makanchi           54.59 325  P      P       12 48 21.0 -1.2
MAKZ                                 pmax   pmax
       comp=Z,33nm,1.2s
TARG   Taragay, Kyrgy     54.68 317         P       12 48 23.3 -0.1
TARG                                 IAmb   IAmb    12 48 38.5
       comp=Z,42nm,1.1s
TARG   Taragay, Kyrgy     54.68 317  P      P       12 48 23.3 -0.1
TARG                                 pmax   pmax
       comp=Z,42nm,1.1s
SATY   Saty               54.88 319 eP      P       12 48 23.3 -1.2
       comp=Z,18nm,0.9s
SATY   Saty               54.88 319 eP      P       12 48 23.3 -1.2
SATY                                 pmax   pmax
       comp=Z,18nm,0.9s
KSH    Kashi              55.03 314  P      P       12 48 27.0 +1.4
KSH                                  S      S       12 56 08.3 +0.9
KSH                                  pmax   pmax
       comp=Z,11nm,1.2s
KSH                                  LR     LR
       comp=Z,360nm,14.8s
KSH                                  LR     LR
       comp=Z,650nm,18.5s
KSH                                  LR     LR
       comp=Z,570nm,17.2s
NIL    Nilore             55.08 307  P      P       12 48 26.3 +0.4
YAK    Yakutsk            55.39   2  P      P       12 48 27.4 -0.2
YAK    Yakutsk            55.39   2 eP      P       12 48 27.0 -0.6
YAK                                 e*PP    sP      12 48 35.0 -0.4
YAK                                 e               12 49 26.8
YAK                                 e               12 50 28.0
YAK                                 eS      S       12 56 10.1 -1.1
YAK                                 e*SS    sS      12 56 22.1 +1.7
YAK                                 eSS     SS      12 59 56.3 +0.4
YAK                                  pmax   pmax
       comp=Z,67nm,1.5s
YAK                                  pmax   pmax
       comp=E,15nm,1.3s
YAK                                  pmax   pmax
       comp=N,40nm,1.4s
YAK                                  pmax   pmax
       comp=Z,158nm,4.9s
YAK                                  pmax   pmax
       comp=N,154nm,3.6s
YAK                                  pmax   pmax
       comp=E,92nm,3.7s
YAK                                  smax   smax
       comp=N,442nm,7.9s
YAK                                  smax   smax
       comp=E,231nm,4.6s
YAK                                  MLR    MLR
       comp=N,120nm,14.0s
YAK                                  MLR    MLR
       comp=E,104nm,27.0s
FUNA   Funafuti           55.77 105  P      P       12 48 33.9 +2.7
TDK    Taldyqorghan       55.80 321 eP      P       12 48 30.1 -0.9
       comp=E,24nm,0.8s
TDK    Taldyqorghan       55.80 321 eP      P       12 48 30.0 -0.9
TDK                                  pmax   pmax
       comp=Z,25nm,0.8s
MDOK   Medeo              55.82 319 eP      P       12 48 30.1 -1.2
MDOK   Medeo              55.82 319 eP      P       12 48 30.0 -1.2
TNSS   Tian-Shan          55.83 319 eP      P       12 48 30.1 -1.6
TNSS   Tian-Shan          55.83 319 eP      P       12 48 30.0 -1.6
CHKK   Chushkaly          56.17 319 eP      P       12 48 32.4 -1.2
CHKK   Chushkaly          56.17 319 eP      P       12 48 32.4 -1.2
MA2    Magadan            56.28  15         P       12 48 34.8 +0.7
MA2    Magadan            56.28  15  P      P       12 48 35.1 +1.0
MA2    Magadan            56.28  15ceP      P       12 48 35.4 +1.3
MA2                                  pmax   pmax
       comp=Z,170nm,2.5s
MA2    Magadan            56.28  15  P      P       12 48 34.2 +0.1
       comp=Z,1µmcomp=Z,88nm,1.6s
TKM2   Tokmak 2           56.67 318  P      P       12 48 37.5 +0.1
       SNR=11
KBK    Karagaybulak       57.00 317  P      P       12 48 40.2 +0.4
       SNR=13
UCH    Uchtor             57.12 317  P      P       12 48 41.6 +0.7
       SNR=19
AAK    Ala-Archa          57.30 317  P      P       12 48 42.3 +0.5
       SNR=8.5
AAK    Ala-Archa          57.30 317  P      P       12 48 42.4 +0.6
AAK    Ala-Archa          57.30 317  P      P       12 48 41.2 -0.6
AAK                                  IAmb   IAmb    12 48 57.2
       comp=Z,45nm,1.3s
AAK    Ala-Archa          57.30 317 i P     P       12 48 41.9 +0.1
AAK                                  pmax   pmax
       comp=Z,49nm,1.4s
ZALV   Zalesovo Beam      57.40 333  P      P       12 48 40.7 -1.4
       comp=Z,12nm,1.1s,baz=122,slow=7.2,SNR=10
       comp=Z,12nm,1.1s
MSVF   Nonsavu            57.40 116  P      P       12 48 42.4 -0.4
MSVF   Nonsavu            57.40 116  P      P       12 48 45.2 +2.4
MSVF   Nonsavu            57.40 116  P      P       12 48 42.4 -0.4
MSVF                                 pmax   pmax
       comp=Z,108nm,1.2s
USP    Ospenovka          57.55 318  P      P       12 48 43.7 +0.2
       SNR=18
EKS2   Erkin-Say          57.79 317  P      P       12 48 45.8 +0.6
       SNR=9.7
ARSB   Arslanbob          57.83 315  P      P       12 48 44.8 -0.8
ARSB                                 IAmb   IAmb    12 48 50.1
       comp=Z,42nm,1.1s
ARSB   Arslanbob          57.83 315  P      P       12 48 44.8 -0.8
ARSB                                 pmax   pmax
       comp=Z,42nm,1.1s
KURBB  Kurchatov Arra     58.57 327  P      P       12 48 49.7 -0.7
       comp=Z,12nm,0.7s,baz=129,slow=5.6,SNR=33
KURBB                                LR     LR      13 15 54.7
       comp=Z,176nm,18.7s,baz=175,slow=38
       comp=Z,12nm,0.7s
KURK   Kurchatov          58.57 327  P      P       12 48 50.0 -0.4
KURK   Kurchatov          58.57 327         P       12 48 49.8 -0.6
KURK   Kurchatov          58.57 327ceP      P       12 48 50.1 -0.2
KURK                                 pmax   pmax
       comp=Z,45nm,1.0s
BTLS   Baital             58.58 320 eP      P       12 48 49.3 -1.2
       comp=Z,12nm,0.9s
BTLS   Baital             58.58 320 eP      P       12 48 49.3 -1.2
BTLS                                 pmax   pmax
       comp=Z,12nm,0.9s
KBL    Kabul              58.68 307  P      P       12 48 51.5 -0.2
       SNR=12
KBL    Kabul              58.68 307  P      P       12 48 51.1 -0.6
KBL                                  IAmb   IAmb    12 49 14.3
       comp=Z,79nm,1.9s
KBL    Kabul              58.68 307  P      P       12 48 51.1 -0.6
KBL                                  pmax   pmax
       comp=Z,79nm,1.9s
GAR    Garm               58.96 312  P      P       12 48 52.2 -1.2
DZA    Taraz              59.55 316 eP      P       12 48 56.3 -1.1
       comp=Z,22nm,0.9s
DZA    Taraz              59.55 316 eP      P       12 48 56.2 -1.1
DZA                                  pmax   pmax
       comp=Z,22nm,0.9s
SEY    Seymchan           59.57  14 eP      P       12 48 56.8 -0.2
SEY                                 eS      S       12 57 04.8 -1.2
SEY                                  pmax   pmax
       comp=Z,87nm,1.5s
SEY                                  smax   smax
       comp=E,192nm,11.2s
SEY                                  smax   smax
       comp=N,207nm,10.5s
CHGR   Chuyangaron        59.72 311  P      P       12 48 57.7 -1.0
CHGR   Chuyangaron        59.72 311  P      P       12 48 57.7 -1.0
CHGR                                 pmax   pmax
       comp=Z,84nm,1.3s
KK31   Karatay Array      60.18 316  P      P       12 49 00.6 -1.1
KK31                                 IAmb   IAmb    12 49 06.3
       comp=Z,46nm,1.1s
KK31   Karatay Array      60.18 316  P      P       12 49 00.6 -1.1
KK31                                 pmax   pmax
       comp=Z,46nm,1.1s
KKAR   Karatay Array      60.18 316         P       12 49 00.8 -0.9
KKAR   Karatay Array      60.18 316  P      P       12 49 00.8 -0.9
IUG    Iuzhnay            60.19 315 eP      P       12 49 00.7 -1.1
       comp=Z,17nm,0.8s
IUG    Iuzhnay            60.19 315 eP      P       12 49 00.7 -1.1
IUG                                  pmax   pmax
       comp=Z,17nm,0.8s
CHM    Chimkent           60.54 315 eP      P       12 49 03.0 -1.3
       comp=Z,11nm,0.6s
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CHM    Chimkent           60.54 315 eP      P       12 49 02.9 -1.3
CHM                                  pmax   pmax
       comp=Z,11nm,0.6s
BRLS   Borolday           60.62 316 eP      P       12 49 03.6 -1.1
BRLS   Borolday           60.62 316 eP      P       12 49 03.6 -1.1
BRZS   Berezniki          61.54 324 eP      P       12 49 10.2 -0.7
BRZS   Berezniki          61.54 324 eP      P       12 49 10.1 -0.7
MKAZ   Moumakai           63.67 137  P      P       12 49 26.4 +1.3
QRZ    Quartz Range       64.05 142  P      P       12 49 28.5 +0.9
BVAR   Borovoye Array     64.15 327  P      P       12 49 27.4 -0.7
       comp=Z,22nm,0.9s,baz=126,slow=7.7,SNR=28
       comp=Z,22nm,0.9s
BORK   Borovoye           64.20 327         P       12 49 27.5 -0.9
BORK                                 IAmb   IAmb    12 49 32.6
       comp=Z,27nm,0.9s
BORK   Borovoye           64.20 327ceP      P       12 49 27.8 -0.6
BORK                                 pmax   pmax
       comp=Z,52nm,1.3s
THZ    Tophouse           64.83 142         P       12 49 32.5 -0.2
THZ    Tophouse           64.83 142  P      P       12 49 32.3 -0.5
LBZ    Lake Benmore       64.84 146  P      P       12 49 32.5 -0.3
TIXI   Tiksi              65.00   1ceP      P       12 49 32.5 -0.8
TIXI                                 pmax   pmax
       comp=Z,51nm,1.3s
LTZ    Lake Taylor        65.05 144  P      P       12 49 34.6 +0.4
ETVZ   East Tongariro     65.12 139  P      P       12 49 36.0 +1.2
JLN    Jalan Bani Buh     65.24 291  P      P       12 49 35.4 -0.4
KHZ    Kahutara           65.59 143  P      P       12 49 36.7 -0.9
URZ    Urewera            65.59 137  P      P       12 49 37.1 -0.7
BKZ    Black Stump Fm     65.66 138  P      P       12 49 38.3 +0.1
BKZ    Black Stump Fm     65.66 138  P      P       12 49 38.0 -0.2
AFI    Afiamalu           65.66 108  P      P       12 49 40.7 +2.0
AFI    Afiamalu           65.66 108  P      P       12 49 39.9 +1.2
WBK    Wadi Bani Khal     65.67 292  P      P       12 49 38.4 -0.2
RTZ    Ruatahuna          65.69 138         P       12 49 38.2 -0.2
TSZ    Takapari Road      65.78 139  P      P       12 49 38.9  0.0
HAZ    Te Kaha            65.80 136  P      P       12 49 38.9 -0.1
KRHZ   Kereru             65.83 139  P      P       12 49 39.2 -0.1
MWZ    Matawai            65.92 137  P      P       12 49 39.6 -0.3
RAHZ   Arahi              65.92 138  P      P       12 49 40.3 +0.4
MCHZ   McNeill Hill       65.94 139  P      P       12 49 40.6 +0.7
SNGZ   Shannon Statio     66.02 138  P      P       12 49 40.9 +0.5
KAHZ   Kahuranaki         66.24 139  P      P       12 49 42.3 +0.3
WMGZ   Waiomatatini S     66.26 136  P      P       12 49 42.1 +0.1
BFZ    Birch Farm         66.30 140  P      P       12 49 41.8 -0.5
KNZ    Kokohu             66.36 138  P      P       12 49 41.8 -0.9
JMDO   Jabal Madar        66.46 291  P      P       12 49 43.4 -0.3
BIDO   Bidbid             66.50 293  P      P       12 49 43.9  0.0
BIDO                                 P      P       12 49 47.0 +3.1
       SNR=5.9
MHTO   MHTO               66.54 290  P      P       12 49 43.7 -0.4
SMDO   Samad              66.54 292  P      P       12 49 44.3  0.0
DQM    DQM                66.91 289  P      P       12 49 47.1 +0.6
BILL   Bilibino           67.15  16         P       12 49 47.4 +0.2
BILL                                 IAmb   IAmb    12 49 53.4
       comp=Z,49nm,1.3s
BILL   Bilibino           67.15  16ceP      P       12 49 47.1 -0.1
BILL                                 pmax   pmax
       comp=Z,87nm,2.0s
HOQ    Hoqain             67.25 293  P      P       12 49 48.3 -0.4
NRIK   Noril'sk           67.31 346  P      P       12 49 46.4 -1.7
       comp=Z,17nm,1.1s,baz=140,slow=5.9,SNR=16
       comp=Z,17nm,1.1s
NRIK   Noril'sk           67.31 346 i P     P       12 49 46.9 -1.3
NRIK                                 pmax   pmax
       comp=Z,32nm,1.4s
BSY    Bisya              67.31 292  P      P       12 49 48.8 -0.4
ARQ    Araqi              67.96 292  P      P       12 49 53.1 -0.1
SOHO   SOHO               67.98 293  P      P       12 49 53.0 -0.2
MDH    Madha              68.25 294  P      P       12 49 54.3 -0.7
BANOM  Banah              68.28 295  P      P       12 49 55.1 -0.1
HATD   Hatta, Dubai       68.38 294  P      P       12 49 55.9 +0.1
MASF   Masafi             68.38 295  P      P       12 49 57.2 +1.4
ASHO   Ashiyiah           68.44 294  P      P       12 49 55.8 -0.4
ALNE   Al Ain             68.69 293  P      P       12 49 59.4 +1.6
       SNR=5.6
SHAO   Shalim             68.70 287  P      P       12 49 56.9 -1.1
ABKAR  Akbulak array      69.05 320         P       12 49 58.4 -1.1
ASUD   Al Ashush, Dub     69.10 294  P      P       12 50 00.4 +0.1
DMTO   DMTO               69.35 286  P      P       12 50 01.7 -0.2
DOK    Doka               70.12 287  P      P       12 50 05.5 -1.2
       SNR=5.9
NIKH   Nikolski High      70.29  36  P      P       12 50 06.5 -0.6
       baz=254
MZWR   Madinat Zayed      70.40 293  P      P       12 50 08.2 -0.1
WHFO   Wadi Hawf          70.47 287  P      P       12 50 07.7 -1.1
       SNR=5.2
MSEY   Mahe Island        70.61 263  P      P       12 50 13.4 +3.6
MZR    Muzera             70.75 292  P      P       12 50 11.4 +1.0
       SNR=5.9
SPIA   Saint Paul Isl     70.76  31  P      P       12 50 09.6 -0.2
       baz=252
SVE    Sverdlovsk         70.78 328 eP      P       12 50 08.7 -1.3
SVE                                  pmax   pmax
       comp=Z,34nm,1.3s
ABTO   Aybut              70.93 286  P      P       12 50 11.4 -0.4
P08K   Saint George I     70.95  32  P      P       12 50 10.8 -0.1
       baz=252
JRN    Qarnain Island     71.36 294  P      P       12 50 13.7 -0.4
ARTI   Arti               71.85 327  P      P       12 50 14.5 -1.9
ARTI                                 IAmb   IAmb    12 50 18.4
       comp=Z,36nm,1.4s
ARTI   Arti               71.85 327d iP     P       12 50 14.4 -2.0
ARTI                                 S      S       12 59 34.7 -1.6
ARTI                                 pmax   pmax
       comp=Z,27nm,1.4s
UNV    Unalaska Valle     71.88  35  P      P       12 50 16.7 +0.1
       baz=256
GAMB   Gambell            72.36  25  P      P       12 50 19.6 +0.3
       baz=248
CASY   Casey              73.51 186         P       12 50 25.0 -0.9
FALS   False Pass         73.86  35  P      P       12 50 28.7 +0.3
       baz=258
TNA    Tin City           74.50  23  P      P       12 50 32.2 +0.3
       baz=251
S12K   Black Hills        74.79  34  P      P       12 50 33.5 -0.3
       baz=259
K13K   Kusilvak Mount     74.85  27  P      P       12 50 34.1 +0.2
       baz=255
M13K   Dall Lake          75.09  29  P      P       12 50 35.6 +0.2
       baz=257
F14K   Arctic Creek       75.11  24  P      P       12 50 35.3 -0.2
       baz=253
ANM    Nome               75.23  25  P      P       12 50 36.4 +0.2
       baz=254
LKRN   Lenkeran, Azer     75.39 308  P      P       12 50 39.5 +1.9
J14K   Nanvaranak Lak     75.55  27  P      P       12 50 37.6 -0.4
       baz=256
SDPT   Sand Point         75.61  35  P      P       12 50 38.2 -0.3
       baz=261
L14K   Kuka Creek         75.62  28  P      P       12 50 38.6 +0.2
       baz=257
N14K   Kuskokwak Cree     75.80  30  P      P       12 50 39.6 +0.1
       baz=258
M14K   Bethel             75.84  29  P      P       12 50 39.4 -0.3
       baz=258
F15K   North Star Dit     75.84  24  P      P       12 50 39.8 +0.1
       baz=254
O14K   Tigyukauivet M     75.88  31  P      P       12 50 39.7 -0.2
       baz=259
G15K   Niukluk            75.90  24  P      P       12 50 39.9 -0.1
       baz=255
CHNA   Chernabura Isl     76.04  35  P      P       12 50 40.7 -0.2
       baz=262
L15K   Ungalak Mounta     76.25  28  P      P       12 50 41.9 -0.1
       baz=258
S14K   Fog Glacier        76.28  34  P      P       12 50 42.5 +0.1
       baz=261
C16K   Lisburne Hills     76.30  21         P       12 50 42.7 +0.5
C16K   Lisburne Hills     76.30  21  P      P       12 50 42.3 +0.1
       baz=253
AKT    Akhty              76.36 311 eP      P       12 50 42.0 -1.2
K15K   Wolf Creek Mou     76.36  27  P      P       12 50 42.7  0.0
       baz=258
M15K   Kasigluk River     76.44  29  P      P       12 50 43.4 +0.3
       baz=259
H16K   Elim               76.56  25  P      P       12 50 44.1 +0.4
       baz=257
O15K   Ungalikthiuk R     76.60  31  P      P       12 50 44.7 +0.6
       baz=260
N15K   Kwethluk River     76.63  30  P      P       12 50 45.0 +0.7
       baz=260
G16K   Koyuk River        76.69  24  P      P       12 50 45.3 +0.8
       baz=257
SEKA   Sheki              76.74 311  P      P       12 50 45.9 +0.5
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MNGR	Mingechevir, A	76.81	310	P	P	12 50 47.4	+1.8
D17K	Noatak River	76.97	22	P	P	12 50 46.5	+0.5
	baz=255						
J16K	Anvik River	76.98	26		P	12 50 47.1	+1.0
J16K				IAmb	IAmb	12 51 02.4	
	comp=Z,27nm,1.2s						
J16K	Anvik River	76.98	26	P	P	12 50 46.8	+0.7
	baz=259						
KIRV	Kirov	77.04	329	ceP	P	12 50 45.2	-1.4
I17K	Unalakleet	77.06	26		P	12 50 45.8	-0.8
I17K				IAmb	IAmb	12 50 52.1	
	comp=Z,76nm,1.8s						
I17K	Unalakleet	77.06	26	P	P	12 50 47.0	+0.5
	baz=258						
RDOG	Red Dog Mine	77.12	21	P	P	12 50 47.9	+1.0
	baz=256						
C17K	DeLong Mountai	77.13	21	P	P	12 50 47.6	+0.7
	baz=255						
L16K	Owhat River	77.20	28	P	P	12 50 47.8	+0.4
L16K	Owhat River	77.20	28	P	P	12 50 48.3	+0.9
	baz=260						
BELG	Belogornoye	77.28	322	i P	P	12 50 46.4	-1.6
BELG				pmax	pmax		
	comp=Z,12nm,1.0s						
E17K	Hotham Inlet	77.29	23	P	P	12 50 49.0	+1.2
	baz=257						
M16K	Timber Creek	77.33	29	P	P	12 50 48.6	+0.4
	baz=261						
N16K	Nishlik Lake	77.33	29	P	P	12 50 47.9	-0.3
	baz=261						
F17K	Baldwin Pennin	77.37	23	P	P	12 50 48.6	+0.4
	baz=257						
GANJ	Ganja	77.38	310	P	P	12 50 49.1	+0.2
G17K	Kiwalik Mounta	77.41	24	P	P	12 50 48.0	-0.5
	baz=258						
P16K	Nushagak River	77.51	31	P	P	12 50 49.1	-0.1
	baz=262						
R16K	Pilot Point	77.53	33	P	P	12 50 49.2	-0.1
	baz=263						
O16K	Kokwok River B	77.54	30	P	P	12 50 49.4	0.0
	baz=262						
H17K	Granite Mounta	77.60	25	P	P	12 50 49.5	-0.1
	baz=259						
J17K	VABM Dome	77.67	27	P	P	12 50 49.8	-0.3
	baz=260						
L17K	Donlin	77.82	28	P	P	12 50 50.5	-0.4
	baz=261						
E18K	Tukpahlearik C	77.83	22	P	P	12 50 51.1	+0.2
	baz=258						
B18K	Kokolik River	77.83	20	P	P	12 50 51.0	+0.1
	baz=256						
C18K	Utukok River	77.88	21	P	P	12 50 51.4	+0.3
	baz=257						
K17K	Iditarod	77.91	27	P	P	12 50 51.7	+0.3
	baz=261						
NAX	Nakhchivan	77.97	309	P	P	12 50 53.7	+1.4
F18K	Selawik	78.03	23	P	P	12 50 52.4	+0.5
	baz=259						
O17K	Koliganek Bris	78.06	30	P	P	12 50 52.6	+0.4
	baz=263						
RAYN	Ar Rayn	78.08	293	P	P	12 50 52.8	-0.4
RAYN	Ar Rayn	78.08	293	P	P	12 50 51.3	-1.9
RAYN				IAmb	IAmb	12 50 59.6	
	comp=Z,33nm,1.1s						
RAYN	Ar Rayn	78.08	293	P	P	12 50 51.3	-1.9
RAYN				pmax	pmax		
	comp=Z,33nm,1.1s						
M17K	Holitna River	78.11	29	P	P	12 50 52.8	+0.2
	baz=262						
N17K	Nushagak Hills	78.12	30	P	P	12 50 52.7	+0.1
	baz=262						
Q16K	King Salmon	78.15	31	P	P	12 50 52.7	-0.1
	baz=263						
R17L	Mt. Peulik Vol	78.19	33	P	P	12 50 52.6	-0.4
	baz=264						
A19K	Wainwright	78.28	19	P	P	12 50 52.7	-0.5
	baz=257						
H18K	Honhosa River	78.28	25	P	P	12 50 53.0	-0.4
	baz=260						
G18K	Tagagawik	78.29	24	P	P	12 50 52.8	-0.6
	baz=260						
P17K	Kvichak River	78.32	31	P	P	12 50 53.2	-0.5
	baz=263						
CHIR	Chirikof Islan	78.41	34	P	P	12 50 53.5	-0.7
	baz=265						
Q17K	Contact Creek	78.51	32	P	P	12 50 54.5	-0.4
	baz=264						
C19K	Lookout Ridge	78.55	21		P	12 50 55.5	+0.7
C19K				IAmb	IAmb	12 51 17.1	
	comp=Z,46nm,1.4s						
C19K	Lookout Ridge	78.55	21	P	P	12 50 54.5	-0.3
	baz=258						
L18K	Granite Mounta	78.58	28	P	P	12 50 54.2	-0.9
	baz=262						
J18K	Innoko River	78.73	27	P	P	12 50 55.5	-0.5
	baz=262						
N18K	Kilae Creek	78.77	29	P	P	12 50 55.8	-0.4
	baz=264						
F19K	Shaleruckik Mo	78.80	23	P	P	12 50 56.5	+0.3
	baz=261						
GCSA	Galena City Sc	78.84	25	P	P	12 50 56.5	+0.1
	baz=262						
M18K	Stony River	78.89	29	P	P	12 50 56.7	-0.1
	baz=263						
D19K	Kuna River	78.96	21	P	P	12 50 57.0	-0.1
	baz=260						
P18K	Big Mountain,	78.96	31	P	P	12 50 57.2	-0.1
	baz=264						
G19K	Purcell Mounta	78.96	24	P	P	12 50 57.4	+0.3
	baz=261						
Q18K	Katmai Hardscr	79.00	32	P	P	12 50 57.3	-0.3
	baz=265						
O18K	Koktuh Hills	79.02	30	P	P	12 50 57.0	-0.6
	baz=264						
TRLG	Trialeti	79.08	311	P	P	12 50 52.9	-5.6
E19K	Redstone River	79.11	23		P	12 50 58.4	+0.4
E19K				IAmb	IAmb	12 51 05.8	
	comp=Z,32nm,1.0s						
E19K	Redstone River	79.11	23	P	P	12 50 58.3	+0.4
	baz=261						
H19K	Roundabout Mou	79.13	25	P	P	12 50 58.0	0.0
	baz=262						
R18K	Karluk	79.20	33	P	P	12 50 57.5	-1.0
	baz=265						
SII	Sitkinak Islan	79.27	34	P	P	12 50 58.3	-0.7
	baz=266						
J19K	Poorman	79.29	26	P	P	12 50 58.5	-0.4
	baz=263						
L19K	White Mountain	79.43	28	P	P	12 50 58.9	-0.9
	baz=264						
N19K	Bonanza Creek	79.47	29	P	P	12 50 59.9	-0.3
	baz=265						
NCK	Nalchik	79.48	313	i P	P	12 50 59.8	-0.7
NCK				pmax	pmax		
	comp=Z,16nm,0.9s						
O19K	Port Alsworth	79.50	30	P	P	12 50 59.7	-0.5
	baz=265						
D20K	Etivluk River	79.54	21	P	P	12 51 00.1	-0.2
	baz=261						
B20K	Meade River	79.55	20		P	12 51 01.7	+1.5
B20K				IAmb	IAmb	12 51 06.2	
	comp=Z,25nm,1.0s						
B20K	Meade River	79.55	20	P	P	12 51 00.3	+0.1
	baz=261						
E20K	Nigu River	79.62	22	P	P	12 51 00.6	-0.2
	baz=262						
F20K	Avaraart Lake	79.63	23	P	P	12 51 00.7	0.0
	baz=262						
Q19K	Cape Douglas,	79.73	31	P	P	12 51 01.4	-0.1
	baz=266						
H20K	Anotleneega Mo	79.78	25	P	P	12 51 01.1	-0.5
	baz=264						
OHAK	Old Harbor	79.81	33	P	P	12 51 01.9	+0.1
	baz=266						
I20K	Naaghedeneel	79.87	25	P	P	12 51 02.0	-0.1
	baz=264						
GOF	Gofitskoye	79.90	314	ceP	P	12 51 02.9	+0.2
K20K	Telida	79.90	27	P	P	12 51 02.2	-0.2
	baz=265						
A21K	Barrow	79.94	19	P	P	12 51 02.9	+0.6
	baz=261,SNR=6.5						
J20K	Nowinta River	79.95	26		P	12 51 02.7	+0.1
J20K				IAmb	IAmb	12 51 08.0	
	comp=Z,79nm,1.9s						
J20K	Nowinta River	79.95	26	P	P	12 51 03.0	+0.5
	baz=264						
KBZ	Khabaz	79.99	313	P	P	12 51 01.9	-1.3
	comp=Z,4.0nm,0.8s,baz=32,slow=3.2,SNR=11						
	comp=Z,4.0nm,0.8s						
KBZ	Khabaz	79.99	313	ceP	P	12 51 02.7	-0.5
P19K	Oil Pt	80.00	31	P	P	12 51 03.1	+0.1
	baz=266						
NEUR	Neytrino	80.13	313	i P	P	12 51 03.3	-0.9
KIV	Kislovodsk	80.15	313	eP	P	12 51 02.0	-2.2
KIV				pmax	pmax		
	comp=Z,20nm,1.0s						
SHA1	Shidzhatmaz	80.17	313	i P	P	12 51 04.0	-0.5
M20K	Styx River	80.21	28	P	P	12 51 04.1	-0.1
	baz=266						
KDAK	Kodiak Island	80.22	33	P	P	12 51 03.2	-0.9
	baz=267						
C21K	Knifeblade Rid	80.25	21	P	P	12 51 03.9	-0.2
	baz=263						
O20K	Slope Mountain	80.33	30	P	P	12 51 04.8	+0.1
	baz=266						
B21K	Ikpikpuk River	80.37	20	P	P	12 51 04.9	+0.2
	baz=263						
A22K	Sinclair Lake	80.43	19	P	P	12 51 05.4	+0.4
	baz=262						
G21K	Allakaket	80.44	24	P	P	12 51 04.8	-0.4
	baz=265						
E21K	Killik River	80.46	22	P	P	12 51 05.7	+0.4
	baz=264						
F21K	Alatna River	80.52	23	P	P	12 51 05.5	-0.2
	baz=264						
SPCR	Spurr Chakacha	80.61	29	P	P	12 51 06.2	-0.1
	baz=267						
H21K	Melozitna Rive	80.65	25	P	P	12 51 06.2	-0.2
	baz=265						
PPLA	Purkeypile	80.72	27	P	P	12 51 06.2	-0.7
	baz=266						
CHUM	Lake Minchumin	80.73	26	P	P	12 51 06.2	-0.5
	baz=266,SNR=7.0						
HOM	Homer	80.80	31	P	P	12 51 06.5	-0.7
	baz=267						
B22K	Teshekpuk Lake	80.86	20		P	12 51 07.5	+0.2
B22K				IAmb	IAmb	12 51 13.1	
	comp=Z,24nm,1.1s						
B22K	Teshekpuk Lake	80.86	20	P	P	12 51 06.7	-0.6
	baz=264,SNR=11						
VRH	Novokhopyorsk	80.87	321	eP	P	12 51 04.7	-3.0
VRH				pmax	pmax		
	comp=Z,14nm,0.9s						
I21K	Tanana	80.96	25	P	P	12 51 07.8	-0.1
	baz=266						
SKT	Skwentna	80.97	28	P	P	12 51 07.9	-0.2
	baz=267						
D22K	Ayikyak River	80.98	21	P	P	12 51 08.1	+0.1
	baz=265						
CAPN	Captain Cook N	81.10	30	P	P	12 51 08.8	+0.1
	baz=268						
E22K	Anaktuvuk Pass	81.23	22		P	12 51 09.7	+0.2
E22K	Anaktuvuk Pass	81.23	22	P	P	12 51 08.9	-0.5
	baz=266						
H22K	Ishtalitna Cre	81.26	24		P	12 51 09.7	+0.1
H22K	Ishtalitna Cre	81.26	24	P	P	12 51 08.8	-0.8
	baz=267						
BRSE	Bradley Lake S	81.26	31	P	P	12 51 09.2	-0.5
	baz=268						
G22K	Bettles	81.27	23	P	P	12 51 09.0	-0.6
	baz=266						
SUA	Susitna One	81.32	29	P	P	12 51 09.6	-0.5
	baz=268						
BPAW	Bear Paw Mtn.	81.33	26		P	12 51 10.0	+0.1
BPAW				IAmb	IAmb	12 51 15.6	
	comp=Z,57nm,1.2s						
BPAW	Bear Paw Mtn.	81.33	26	P	P	12 51 09.1	-0.9
	baz=267,SNR=16						
KTH	Kantishna Hill	81.33	27	P	P	12 51 10.1	0.0
KTH				IAmb	IAmb	12 51 28.9	
	comp=Z,43nm,1.4s						
L22K	Petersville	81.35	28		P	12 51 09.8	-0.4
L22K				IAmb	IAmb	12 51 14.1	
	comp=Z,70nm,1.4s						
MLY	Manley	81.48	25	P	P	12 51 10.0	-0.8
	baz=267						
LABN	Labinsk	81.55	314	eP	P	12 51 06.4	-5.1
LABN				pmax	pmax		
	comp=Z,23nm,0.7s						
CUT	Chulitna	81.58	28	P	P	12 51 10.6	-0.7
	baz=268						
TRF	Thorofare Moun	81.61	27	P	P	12 51 11.1	-0.5
	baz=268						
M22K	Willow	81.63	29	P	P	12 51 11.4	-0.2
	baz=268						
D23K	Nanushuk River	81.70	21	P	P	12 51 11.6	-0.3
	baz=267						
ERBR	Yeremizino-Bor	81.70	315	eP	P	12 51 10.0	-2.3
ERBR				pmax	pmax		
	comp=Z,36nm,1.1s						
C23K	Itkillik River	81.78	20	P	P	12 51 11.7	-0.5
	baz=267,SNR=10.0						
O22K	Cooper Landing	81.79	30	P	P	12 51 12.0	-0.4
	baz=269						
COLD	Coldfoot	81.80	23	P	P	12 51 12.5	+0.2
	baz=268,SNR=14						
RC01	Rabbit Creek A	81.80	29	P	P	12 51 12.2	-0.2
	baz=269						
KOPT	Kop Dagi	81.83	309		P	12 51 13.3	-0.2
KOPT				IAmb	IAmb	12 51 18.9	
	comp=Z,36nm,1.1s						
G23K	Bananza Creek	81.84	24	P	P	12 51 12.4	-0.2
	baz=268						
VOI	Vohitsoka	81.90	247	P	P	12 51 17.9	+4.0
SEW	Seward	81.92	30	P	P	12 51 12.6	-0.5
	baz=269						
H23K	Yukon River	82.01	24	P	P	12 51 13.1	-0.5
	baz=268						
E23K	Chandalar	82.05	22	P	P	12 51 13.6	-0.2
	baz=268						
I23K	Minto, Yukon-K	82.06	25	P	P	12 51 13.4	-0.4
	baz=269,SNR=5.4						
VSLR	Vesyoloye	82.08	313	i P	P	12 51 13.2	-1.1
TOLK	Toolik Lake Re	82.09	22	P	P	12 51 13.4	-0.6
	baz=268						
PMR	Palmer	82.10	29	P	P	12 51 13.3	-0.7
PMR				IAmb	IAmb	12 51 19.9	
	comp=Z,25nm,1.0s						
PMR	Palmer	82.10	29	P	P	12 51 17.5	+3.5
PMR	Palmer	82.10	29	P	P	12 51 13.3	-0.7
PMR				pmax	pmax		
	comp=Z,25nm,1.0s						
PMR	Palmer	82.10	29	P	P	12 51 13.7	-0.3
	baz=269						
NEA2	Nenana	82.18	26	P	P	12 51 14.2	-0.2
	baz=269,SNR=5.3						
KLMR	Klimovskoe	82.22	330	eP	P	12 51 11.5	-3.2
KLMR				pmax	pmax		
	comp=Z,43nm,1.3s						
MCK	McKinley	82.22	27		P	12 51 14.3	-0.4
MCK	McKinley	82.22	27	P	P	12 51 14.3	-0.4
MCK				pmax	pmax		
	comp=Z,84nm,1.3s						
MCK	McKinley	82.22	27	P	P	12 51 14.2	-0.5
	baz=269,SNR=14						
D24K	Happy Valley	82.38	21	P	P	12 51 15.2	-0.2
	baz=269,SNR=13						
WAT1	Susitna Watana	82.38	28	P	P	12 51 15.1	-0.5
	baz=270						
VORD	Divnogorie	82.41	320	eP	P	12 51 12.3	-3.5
VORD				pmax	pmax		
	comp=Z,20nm,1.2s						
KNK	Knik Glacier	82.42	29	P	P	12 51 15.3	-0.5
	baz=270						
C24K	Franklin Bluff	82.44	21	P	P	12 51 15.5	-0.1
	baz=269						
VORR	Voronezh	82.44	321	eP	P	12 51 12.8	-3.2
VORR				pmax	pmax		
	comp=Z,30nm,1.0s						
E24K	Your Creek	82.48	22	P	P	12 51 15.2	-0.8
	baz=269						
VSR	Storozhevoye	82.48	321	eP	P	12 51 12.1	-4.1
VSR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PWL	Port Wells	82.48	30	P	P	12 51 15.7	-0.4
	baz=270						
SML	Sawmill	82.48	29	P	P	12 51 17.5	+1.4
SML				pmax	pmax		
	comp=Z,169nm,2.0s						
SML	Sawmill	82.48	29	P	P	12 51 15.6	-0.6
	baz=270						
LPSR	Galich'ya Gora	82.60	322	eP	P	12 51 11.7	-5.1
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
H24K	Noodor Dome	82.69	24	P	P	12 51 16.6	-0.5
	baz=270						
F24K	Squaw Lake	82.70	23		P	12 51 18.2	+1.0
F24K				IAmb	IAmb	12 51 22.8	
	comp=Z,19nm,1.1s						
F24K	Squaw Lake	82.70	23	P	P	12 51 16.9	-0.3
	baz=270						
COLA	College	82.70	25	P	P	12 51 18.0	+0.9
COLA	College	82.70	25	i P	P	12 51 18.3	+1.2
COLA				pmax	pmax		
	comp=Z,11nm,0.9s						
COLA	College	82.70	25	P	P	12 51 16.7	-0.4
	baz=270						
WAT6	Susitna Watana	82.76	28	P	P	12 51 17.5	-0.2
	baz=270,SNR=5.9						
M23K	Glacier View	82.77	29	P	P	12 51 17.6	0.0
	baz=270						
G24K	Hadweenzic Riv	82.86	24	P	P	12 51 18.2	+0.2
	baz=270						
POKR	Poker Plat Res	82.88	25	P	P	12 51 17.9	-0.1
	baz=270						
DHY	Denali Highway	82.92	27	P	P	12 51 18.1	-0.5
	baz=271						
P23K	Montague Islan	82.95	30	P	P	12 51 18.3	-0.2
	baz=271						
SCM	Sheep Creek Mo	82.96	29	P	P	12 51 18.5	-0.2
	baz=271						
GLI	Glacier Island	83.09	29	P	P	12 51 19.0	-0.2
	baz=271						
HDA	Harding Lake	83.09	26	P	P	12 51 19.3	+0.1
	baz=271						
ILAR	Eielson Array	83.12	26	P	P	12 51 19.0	-0.3
	comp=Z,3.4nm,0.9s,baz=236,slow=5.2,SNR=28						
	comp=Z,3.4nm,0.9s						
ILAR	Eielson Array	83.12	26		P	12 51 19.3	0.0
ILAR	Eielson Array	83.12	26	P	P	12 51 19.3	0.0
D25K	Kavik River	83.25	21	P	P	12 51 20.2	+0.2
	baz=271						
MOS	Moscow	83.28	325	eP	P	12 51 20.7	+0.4
MOS				e		12 54 36.7	
MOS				pmax	pmax		
	comp=Z,30nm,0.7s						
G25K	Bearman Lake	83.40	24	P	P	12 51 20.4	-0.3
	baz=271						
M24K	Tolsona, Glenn	83.50	28	P	P	12 51 21.2	-0.2
	baz=272						
Q23K	Middleton Isla	83.50	31	P	P	12 51 20.7	-0.6
	baz=272						
F25K	Christian Rive	83.56	23	P	P	12 51 21.5	-0.1
	baz=272						
E25K	Arctic Village	83.57	22	P	P	12 51 21.4	-0.3
	baz=272						
K24K	Donnelly Dome	83.62	27	P	P	12 51 21.5	-0.4
	baz=272						
KLU	Klutina	83.64	29	P	P	12 51 21.1	-1.1
	baz=272						
C26K	Camden Bay	83.75	20	P	P	12 51 22.3	-0.2
	baz=272						
EYAK	Cordova Ski Ar	83.76	30	P	P	12 51 22.2	-0.4
	baz=272						
J25K	Salcha River,	83.77	26	P	P	12 51 22.2	-0.6
	baz=272						
PAX	Paxson	83.79	27	P	P	12 51 22.6	-0.3
	baz=272						
ANN	Anapa	83.89	314	eP	P	12 51 22.7	-1.0
ANN				eS	SKSac	13 01 39.4	-6.7
ANN				pmax	pmax		
	comp=Z,53nm,0.9s						
OBN	Obninsk	83.91	325⇓	eP	P	12 51 22.0	-1.5
OBN				i		12 51 25.1	
OBN				*SP	PcP	12 51 28.0	+0.5
OBN				PPP	PPP	12 56 26.0	
OBN				e		13 01 52.6	
OBN				PS	PnS	13 02 42.0	+2.1
OBN				ePPS	PPS	13 03 02.9	
OBN				eSS	SS	13 07 09.7	-4.3
OBN				pmax	pmax		
	comp=Z,29nm,1.3s						
HARP	HAARP	83.96	28	P	P	12 51 22.6	-1.1
	baz=273						
RIDG	Independent Ri	84.04	27	P	P	12 51 23.0	-1.2
	baz=273						
F26K	Sheenjek River	84.13	23	P	P	12 51 24.1	-0.4
	baz=273						
C27K	Jago River	84.18	21	P	P	12 51 24.2	-0.5
	baz=273						
N25K	Chitina, Valde	84.27	29	P	P	12 51 24.4	-1.0
	baz=273						
BMRM	Bremner River	84.30	29	P	P	12 51 24.3	-1.2
	baz=273						
G26K	Porcupine Rive	84.31	23	P	P	12 51 24.5	-0.8
	baz=274						
SCRK	Sand Creek	84.41	26	P	P	12 51 25.1	-0.9
	baz=274						
KAIM	Kayak Island	84.45	30	P	P	12 51 25.1	-1.1
	baz=274						
J26L	Joseph Creek	84.56	26	P	P	12 51 25.8	-1.0
	baz=274						
MENT	Mentasta	84.59	27	P	P	12 51 29.5	+2.6
I26K	Coal Creek Min	84.67	25	P	P	12 51 26.2	-1.1
	baz=274						
M26K	Nabesna, AK	84.97	28	P	P	12 51 27.2	-1.7
	baz=275						
MCARA	McCarthy VSAT	85.03	29	P	P	12 51 27.4	-1.7
	baz=275						
CRQE	Cirque	85.05	30	P	P	12 51 28.3	-1.1
	baz=275						
E27K	Coleen River	85.05	22	P	P	12 51 27.7	-1.5
	baz=275						
G27K	Doyon Strip	85.16	23	P	P	12 51 29.6	-0.1
	baz=276						
D27M	Malcolm River	85.18	21	P	P	12 51 29.3	-0.5
	baz=276						
ASF	Jabal al Asfar	85.19	302	LR	LR	13 35 17.2	
	comp=Z,17µm,18.5s,baz=28,slow=40						
K27K	Chicken	85.24	26	P	P	12 51 29.7	-0.5
	baz=275						
H27K	Steamboat Moun	85.27	24	P	P	12 51 29.3	-1.0
	baz=276						
I27K	Kandik River	85.29	25	P	P	12 51 29.7	-0.7
	baz=276						
L27K	Beaver Creek,	85.44	27	P	P	12 51 30.6	-0.6
	baz=276						
M27K	Edge Creek, AK	85.49	28	P	P	12 51 30.6	-1.0
	baz=276						
F28M	Old Crow	85.76	23	P	P	12 51 31.9	-0.8
	baz=277						
E28M	Babbage River	85.77	21	P	P	12 51 32.1	-0.6
	baz=277						
CTG	Chitna Glacier	85.89	29	P	P	12 51 32.9	-0.7
	baz=276						
BVCY	Beaver Creek	85.95	28	P	P	12 51 33.0	-0.8
	baz=276						
D28M	Stokes Point	85.96	21	P	P	12 51 32.7	-0.8
	baz=278						
I28M	Miner Creek	86.00	25	P	P	12 51 33.1	-0.9
	baz=277						
YUK3	Moose Creek	86.22	28	P	P	12 51 33.9	-1.4
	baz=277						
SIM	Simferopol'	86.23	315	eP	P	12 51 34.6	-0.8
SIM				eS	S	13 02 09.7	-0.2
SIM				pmax	pmax		
	comp=Z,29nm,0.9s						
MMAI	Mount Meron Ar	86.38	303	P	P	12 51 35.4	-1.1
	comp=Z,6.7nm,0.7s,baz=85,slow=10,SNR=7.0						
	comp=Z,6.7nm,0.7s						
E29M	Blow River	86.39	22	P	P	12 51 34.7	-1.0
	baz=279						
DAWY	Dawson	86.41	26	P	P	12 51 34.9	-1.1
	baz=278						
VNDA	Vanda	86.45	173	P	P	12 51 33.6	-2.2
	comp=Z,3.0nm,0.9s,baz=314,slow=4.9,SNR=10.0						
	comp=Z,3.0nm,0.9s						
VNDA	Vanda	86.45	173	P	P	12 51 33.7	-2.1
VNDA				IAmb	IAmb	12 51 49.6	
	comp=Z,26nm,1.8s						
VNDA	Vanda	86.45	173	P	P	12 51 33.7	-2.1
VNDA				pmax	pmax		
	comp=Z,26nm,1.8s						
O28M	Mount Upton	86.47	29	P	P	12 51 35.7	-0.9
	baz=277						
PINM	Pinnacle	86.52	30	P	P	12 51 35.4	-1.2
	baz=277						
H29M	Whitestone	86.54	24	P	P	12 51 35.2	-1.3
	baz=278						
G29M	Pine Creek	86.57	23	P	P	12 51 35.8	-0.8
	baz=279						

YUK8	Steele Glacier	86.61	29	P	P	12 51 36.2	-1.1
	baz=278						
I29M	Ogilvie Camp,	86.69	25	P	P	12 51 36.0	-1.3
	baz=279						
J29N	Klondike Camp	86.86	26	P	P	12 51 37.4	-0.8
	baz=279						
M29M	Somme Creek	87.06	28	P	P	12 51 37.9	-1.4
	baz=279						
L29M	L29M	87.11	27	P	P	12 51 37.9	-1.5
	baz=279						
BR131	Keskin Array S	87.11	309	P	P	12 51 38.8	-1.3
BR131	Keskin Array S	87.11	309	*i* P	P	12 51 38.3	-1.8
BRTR	Keskin Array B	87.11	309	P	P	12 51 38.2	-1.8
	comp=Z,2.5nm,0.8s,baz=104,slow=5.0,SNR=14						
	comp=Z,2.5nm,0.8s						
YUK4	Talbot Arm	87.13	29	P	P	12 51 38.2	-1.6
	baz=279						
EPYK	Eagle Plains	87.17	24	P	P	12 51 38.4	-1.2
	baz=280						
G30M	tAoh Zraii Nji	87.26	23	P	P	12 51 38.8	-1.2
	baz=280						
K29M	Barlow Dome	87.26	26	P	P	12 51 39.0	-1.3
	baz=279						
ARCES	ARCESS Array B	87.27	340	P	P	12 51 34.5	-5.5
	comp=Z,5.2nm,1.0s,baz=74,slow=5.0,SNR=7.8						
F30M	Barrier River	87.31	22	P	P	12 51 38.8	-1.4
	baz=281						
O29M	Mount Kennedy	87.32	30	P	P	12 51 39.1	-1.5
	baz=279						
YUK6	Outpost Mounta	87.33	29	P	P	12 51 38.8	-2.0
	baz=279						
PPT2	Papeete2	87.33	108	*e*LR	LR	13 19 18.8	
	comp=Z,183nm,28.8s						
PPT2				*e*LR	LR	13 19 18.8	
	comp=Z,138nm,32.5s						
I30M	Mount Dempster	87.51	25	P	P	12 51 39.9	-1.5
	baz=280						
J30M	Hart River	87.65	25	P	P	12 51 40.4	-1.7
	baz=280						
HYT	Haines Junctio	87.76	29	P	P	12 51 40.2	-2.5
	baz=280						
M30M	Minto, Yukon	87.80	27	P	P	12 51 40.4	-2.3
	baz=280						
P29M	Windy Craggy	87.84	30	P	P	12 51 40.9	-2.1
	baz=279						
N30M	Aishikik Lake	87.86	28	P	P	12 51 41.0	-2.0
	baz=280						
INK	Inuvik	88.00	21	P	P	12 51 41.9	-1.6
	comp=Z,2.9nm,0.9s,baz=279,slow=2.4,SNR=4.5						
	comp=Z,2.9nm,0.9s						
INK	Inuvik	88.00	21	P	P	12 51 42.3	-1.2
	baz=283						
MAYO	Mayo, Yukon	88.02	26	P	P	12 51 42.2	-1.5
	baz=281						
G31M	Satah River	88.02	23	P	P	12 51 42.5	-1.2
	baz=282						
F31M	Tsiigehtchic	88.11	22	P	P	12 51 42.3	-1.7
	baz=283						
P30M	Million Dollar	88.15	30	P	P	12 51 42.8	-1.7
	baz=280						
TBI	Tubuai	88.22	114	*e*LR	LR	13 19 43.5	
	comp=Z,669nm,29.2s						
H31M	Peel River	88.23	24	P	P	12 51 43.1	-1.6
	baz=282						
O30N	Mendenhall	88.45	29	P	P	12 51 44.1	-1.8
	baz=281						
N31M	Braeburn, Yuko	88.47	28	P	P	12 51 44.1	-1.8
	baz=281						
PLBC	Pleasant Camp	88.56	30	P	P	12 51 44.6	-1.8
	baz=281						
FINES	FINESS Array B	88.64	332	P	P	12 51 44.0	-2.6
	comp=Z,3.2nm,0.6s,baz=46,slow=5.5,SNR=16						
	comp=Z,3.2nm,0.6s						
AKASG	Malin Array Be	88.78	321	P	P	12 51 44.8	-2.8
	comp=Z,2.0nm,0.7s,baz=75,slow=3.8,SNR=7.6						
AKASG				PP	PP	12 55 18.9	+2.4
	comp=Z,0.6nm,0.6s,baz=73,slow=6.0,SNR=4.7						
	comp=Z,2.0nm,0.7s						
AKBB	Malin Array Si	88.78	321	*ce*P	P	12 51 43.9	-3.7
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIEV	Kiev	88.80	321	P	P	12 51 45.2	-2.4
KIEV				pmax	pmax		
	comp=Z,11nm,1.2s						
S31K	Pelican	88.91	32	P	P	12 51 46.6	-1.4
	baz=281						
M31M	Drury Creek, Y	88.97	27	P	P	12 51 46.8	-1.5
	baz=282						
MNK	Minsk	88.97	325	*i* P	P	12 51 46.2	-2.2
MNK				*i*		12 55 15.8	
MNK				*i* PPP	PPP	12 57 12.4	
MNK				*i* S	SKSac	13 02 15.4	-1.9
MNK				*i* PS	PnS	13 03 40.0	-0.9
MNK				*i* SS	SS	13 08 26.8	-1.4
MNK				pmax	pmax		
	comp=E,13nm,0.9s						
MNK				pmax	pmax		
	comp=N,6.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,11nm,0.9s						
MNK				MLR	MLR		
	comp=Z,152nm,13.0s						
MNK				MLR	MLR		
	comp=E,182nm,20.0s						
MNK				MLR	MLR		
	comp=N,174nm,15.0s						
WHY	Whitehorse	89.06	29	P	P	12 51 47.1	-1.7
	baz=282						
R31K	City Hall, Gus	89.08	31	P	P	12 51 47.8	-0.9
	baz=281						
SKAG	Skagway	89.08	30	P	P	12 51 47.5	-1.3
	baz=282						
FARO	Faro, Yukon	89.44	27	P	P	12 51 48.9	-1.6
	baz=283						
SIT	Sitka	89.56	33	P	P	12 51 49.3	-1.8
	baz=282						
A36M	Sachs Harbour	89.66	17	P	P	12 51 50.5	-0.7
	baz=291						
ISP	Isparta	89.77	308	*ce*P	P	12 51 52.0	-0.7
ISP				pmax	pmax		
	comp=Z,20nm,1.3s						
N32M	Quiet Lake	89.81	28	P	P	12 51 51.3	-1.0
	baz=283						
P32M	Atlin	89.86	30	P	P	12 51 51.1	-1.4
	baz=283						
S32K	Killisnoo	89.87	32	P	P	12 51 51.4	-1.1
	baz=282						
P33M	Teslin, Yukon	90.16	29	P	P	12 51 52.7	-1.2
	baz=284						
Q32M	Nakina River	90.73	30	P	P	12 51 55.3	-1.4
	baz=284						
RNPP9	Sopachiv	90.73	322	P	P	12 51 55.3	-1.4
RNPP5	Staryi Chortor	90.77	322	P	P	12 51 56.3	-0.6
U33K	Whale Pass	90.95	33	P	P	12 51 56.3	-1.3
	baz=283						
C36M	Paulatuk	90.97	19	P	P	12 51 56.2	-1.3
	baz=292						
CRAG	Craig	91.10	34	P	P	12 51 56.5	-1.7
	baz=283						
R33M	Jennings River	91.27	30	P	P	12 51 57.3	-1.9
	baz=285						
WRAK	Wrangell Islan	91.30	33	P	P	12 51 57.6	-1.6
	baz=284						
S34M	Telegraph Cree	91.57	31	P	P	12 51 59.0	-1.4
	baz=285						
V35K	Ketchikan	91.97	34	P	P	12 52 00.1	-2.2
	baz=285						
DLBC	Dease Lake	91.99	31	P	P	12 52 00.8	-1.7
	baz=286						
WTLY	Watson Lake, Y	92.12	29	P	P	12 52 02.0	-1.0
	baz=287						
T35M	Bob Quinn	92.28	32	P	P	12 52 02.6	-1.2
	baz=286						
U35K	Hyder	92.69	33	P	P	12 52 03.9	-1.7
	baz=286						
WRGLY	Wrigley	93.48	25	P	P	12 52 07.0	-2.1
	baz=292						
LIRD	Liard River Hi	93.64	29	P	P	12 52 08.7	-1.3
	baz=289						
TOAD	Toad River Com	94.25	29	P	P	12 52 10.5	-2.4
	baz=290						
KOTAN	Kotaneelee Air	94.36	28	P	P	12 52 12.2	-1.1
	baz=291						
SYO	Syowa Base	94.60	201⇑	*e*PcP	PcP	12 52 15.4	+1.0
HFS	Hagfors	94.83	332	P	P	12 52 11.9	-3.5
	comp=Z,2.1nm,0.9s,baz=68,slow=3.9,SNR=5.3						
RES	Resolute Bay	95.23	10	PP	PP	12 56 07.0	+0.5
	comp=Z,5.7nm,1.1s,baz=312,slow=8.1,SNR=5.5						
TAOE	Nuku Hiva Isla	95.45	98	*e*LR	LR	13 23 04.9	
	comp=Z,228nm,26.8s						
NB2	NORSAR Subarra	95.59	333	P	P	12 52 15.0	-4.0
	comp=Z,1.9nm,0.8s,baz=66,slow=4.6						
NOA	NORSAR Array B	95.59	333	P	P	12 52 15.7	-3.3
	comp=Z,1.3nm,0.7s,baz=66,slow=4.6,SNR=5.7						
QSPA	South Pole Qui	96.50	180	P	P	12 52 20.3	-2.7
	comp=Z,0.6nm,0.3s,baz=276,slow=8.1,SNR=5.6						
	comp=Z,0.6nm,0.3s						
YKA	Yellowknife Ar	97.45	24	P	P	12 52 26.5	-0.8
	comp=Z,0.9nm,0.8s,baz=300,slow=5.3,SNR=11						
YKA				PP	PP	12 56 27.3	+3.4
	comp=Z,0.5nm,0.9s,baz=292,slow=6.9,SNR=3.6						
YKA				PKKPbc	PKKPbc	13 09 04.2	-2.8
	comp=Z,0.2nm,0.6s,baz=126,slow=2.2,SNR=6.9						
YKA				LR	LR	13 39 52.7	
	comp=Z,49nm,19.2s,baz=202,slow=38						
	comp=Z,0.9nm,0.8s						
GERES	GERESS Array B	98.97	322	LR	LR	13 39 56.9	
	comp=Z,124nm,18.4s,baz=341,slow=37						
RKT	Rikitea	101.47	112	*e*LR	LR	13 25 52.9	
	comp=Z,4µm,40.8s						
TXAR	Lajitas Array	120.89	50	PKP	PKPdf	12 57 45.9	-1.0
	comp=Z,0.4nm,0.7s,baz=342,slow=0.2,SNR=5.0						
M65A	Busby, Falmout	129.87	16	P	PKPdf	12 58 01.5	-2.1
	baz=339						
PLCA	Paso Flores	143.18	160	PKP	PKPab	12 58 24.7	+0.8
	comp=Z,1.4nm,0.6s,baz=228,slow=4.0,SNR=8.4						
AAGR	Agrelo	150.56	155	*i* P	PKPbc	12 58 46.4	+0.1
ARCO	CERRO ARCO	150.73	155	*i* P	PKPbc	12 58 45.3	-1.5
ASAL	Salagasta	150.99	155	*i* P	PKPbc	12 58 46.2	-1.1
AUSP	Uspallata	151.06	154	*i* P	PKPbc	12 58 46.3	-1.4
RTLS	Leoncito	151.47	153	*i* P	PKPbc	12 58 48.5	-0.3
LPAZ	La Paz	163.69	127	PKP	PKPdf	12 58 54.8	-3.8
	comp=Z,1.9nm,0.8s,baz=54,slow=2.9,SNR=4.5						
LPAZ	La Paz	163.69	127	*e*P	PKPdf	12 58 57.4	-1.1
SMTB	Santa Maria do	172.63	252	*e*P	PKPdf	12 59 05.7	+1.8

IDC ***15*** *12:49:40.1±5.4, 2°.83S×132°.59E, h0^{km}, mb3.9/4, mbtmp3.8/5, ML3.5/1, Error ellipse: s-maj=369.4km s-min=25.0km az=75.0*

DJA ***15*** *12:49:48.0±0.2, 3°S±2°×13°1E±°, h10^{km}, M3.8/13, MLv3.8/13*

ISC 15 12:49:49.1±0.9**, 3°.20S**±0°.05×**130°.91E**±0°.04**, h35^{km}, n17, σ3^{s}.32**/22**, mb3.9**/3**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	1.37	79	P	Pn	12 50 12.2	+0.5
FAKI				S	Sn	12 50 32.8	+4.1
BNDI	Bandanaira	1.66	217	P	Pn	12 50 18.4	+2.7
BNDI				S	Sn	12 50 41.1	+5.4
MSAI	Masohi	1.98	266	P	Pn	12 50 22.6	+2.4
SWI	Sorong	2.34	9	P	Pn	12 50 24.8	-0.4
KRAI	Karang Ratu	2.51	267	P	Pn	12 50 27.7	+0.2
AAI	Ambon	2.75	260	P	Pn	12 50 31.9	+1.1
KMPI	Kaimana, Papua	2.83	100	P	Pn	12 50 33.5	+1.6
RKPI	Ransiki, Papua	3.67	63	P	Pn	12 50 44.2	+0.8
NLAI	Namlea	3.80	269	P	Pn	12 50 47.0	+1.8
NLAI				S	Sn	12 51 32.4	+3.7
MWPI	Manokwari, Pap	3.86	54	P	Pn	12 50 49.2	+3.2
MWPI				S	Sn	12 51 34.0	+3.9
SAUI	Saumlaki	4.77	175	P	Pn	12 51 01.2	+2.6
SANI	Sanana	5.04	283	P	Pn	12 51 01.0	-1.3
WRA	Warramunga Arr	16.98	169	P	Pn	12 53 38.6	-5.5
	0.2nm,0.3s,baz=356,slow=13,SNR=10						
WRA				S	Sn	12 56 42.0	-10
	0.3nm,0.4s,baz=353,slow=24,SNR=4.8						
	0.3nm,0.3s						
ASAR	Alice Springs	20.56	172	P	P	12 54 23.5	-1.4
	6.5nm,0.6s,baz=350,slow=10,SNR=96						
ASAR				S	S	12 58 05.2	-7.9
	0.2nm,0.6s,baz=4.0,slow=28,SNR=2.5						
	6.5nm,0.6s						
MKAR	Makanchi Array	65.59	326	P	P	13 00 30.2	+0.7
	0.8nm,0.7s,baz=116,slow=7.8,SNR=8.4						
	0.8nm,0.7s						
KURBB	Kurchatov Arra	69.78	327	P	P	13 00 55.9	+0.1
	0.5nm,0.4s,baz=135,slow=6.1,SNR=5.7						
	0.5nm,0.4s						
BVAR	Borovoye Array	75.36	327	P	P	13 01 28.9	-0.1
	0.5nm,0.7s,baz=111,slow=7.9,SNR=2.8						
	0.5nm,0.7s						

IDC 15 12:59:44.5±1.4**, 6°.39N**×**125°.51E, h0^{km}, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=60.5km s-min=9.6km az=92.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.68	6	Pg	Pg	12 59 57.2	-0.2
	441nm,0.3s,baz=242,slow=23,SNR=7.8						
DAV				Lg	Lg	13 00 07.1	
	703nm,0.3s,baz=159,slow=23,SNR=12						
WRA	Warramunga Arr	27.58	162	P	P	13 05 32.3	-1.2
	0.5nm,0.9s,baz=339,slow=9.2,SNR=6.4						
	0.5nm,0.9s						
ASAR	Alice Springs	30.98	165	P	P	13 06 04.8	+1.0
	0.3nm,0.6s,baz=341,slow=8.9,SNR=9.3						
	0.3nm,0.6s						
MKAR	Makanchi Array	54.69	325	P	P	13 09 15.8	+0.3
	0.1nm,0.4s,baz=107,slow=5.9,SNR=1.9						
	0.1nm,0.4s						

IDC ***15*** *13:04:04.1±14.0, 27°.45N×56°.29E, h0^{km}, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=279.7km s-min=33.3km az=176.0*

TEH ***15*** *13:04:12.6, 28°.18N×56°.30E, h8^{km}±60^{km}*

DSN ***15*** *13:04:14.4±2.3, 27°.94N×55°.26E, h10^{km}, ML2.8/7, Error ellipse: s-maj=66.0km s-min=15.9km az=56.0*

OMAN ***15*** *13:04:16.2±0.1, 27°.82N×56°.16E, h10^{km}, mb4.0/7, ml3.2/12, Error ellipse: s-maj=1.5km s-min=0.9km az=18.0*

ISC 15 13:04:12.5±1.4**, 28°.06N**±0°.04×**56°.23E**±0°.04**, h17^{km}**±10^{km}**, n58, σ1^{s}.81**/74**, mb3.8**/5**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENO	Geno	0.66	185	Pg	Pn	13 04 27.9	+0.7
GENO				Sg	Sn	13 04 39.8	+2.6
IBND	Bandar-abas	0.67	156	Pg	Pn	13 04 28.0	+0.8
KHNJ	Kahnooj	1.31	95	Pg	Pn	13 04 37.0	+0.9
KHNJ				Sg	Sb	13 04 54.7	+1.6
NGRK	Negar Kerman	1.64	15	Pg	Pn	13 04 41.3	+0.4
LAR1	LAR	1.69	257	Pg	Pg	13 04 46.1	+1.0
SHME	Shamm	2.00	182	P	Pb	13 04 48.0	-0.5
SHME				S	Sn	13 05 11.3	+1.1
SHME	Shamm	2.00	182	P	Pg	13 04 50.1	-0.9
BANOM	Banah	2.13	178	P	Pb	13 04 50.3	-0.3
BANOM				S	Sn	13 05 13.8	+0.5
BANOM	Banah	2.13	178	P	Pb	13 04 51.2	+0.5
BANOM				S	Sg	13 05 19.8	-1.3
CHMN	Cheshme madani	2.13	32	Pn	Pn	13 04 49.2	+1.6
KBAM	BAM	2.23	61	Pn	Pn	13 04 50.7	+2.0
KHGB	Koh Gabri	2.32	5	Pn	Pn	13 04 52.1	+2.0
KRM1	Kerman Provinc	2.60	20	Pn	Pn	13 04 55.9	+2.0
MASF	Masafi	2.68	181	P	Pn	13 04 56.7	+1.8
MSFE	Esma-Masafi	2.69	181	P	Pb	13 04 58.4	-1.9
MDH	Madha	2.75	179	P	Pn	13 04 57.9	+2.0
ZRDN	Zarand Kerman	2.91	5	Pn	Pn	13 04 59.7	+1.4
UOSS	Minazif	3.10	180	P	Pn	13 05 02.5	+1.9
UOSS	Minazif	3.10	180	P	Pn	13 05 02.7	+2.0
HATD	Hatta, Dubai	3.22	182	P	Pn	13 05 04.2	+1.9
HATD				S	Sn	13 05 41.4	+1.1
HATD	Hatta, Dubai	3.22	182	P	Pn	13 05 04.9	+2.6
ASHO	Ashiyiah	3.37	183	P	Pn	13 05 07.6	+3.3
	SNR=12						
ASHO	Ashiyiah	3.37	183	P	Pn	13 05 07.4	+3.0
IBAF	Bafgh	3.57	351	Pn	Pn	13 05 08.6	+1.4
IMEH	Mehriz	3.61	337	Pn	Pn	13 05 09.9	+2.1
ICHK	Chekchek	4.46	340	Pn	Pn	13 05 21.2	+1.6
HOQ	Hoqain	4.56	167	P	Pn	13 05 22.9	+2.1
NHDN	Nehbandan	4.70	44	Pn	Pn	13 05 24.8	+2.0
ARQ	Araqi	4.71	177	P	Pn	13 05 25.0	+2.2
	SNR=7.6						
IKOO	Kooshah	4.97	28	Pn	Pn	13 05 28.3	+1.7
TPRV	Parvadeh(Tabas	4.97	4	Pn	Pn	13 05 27.9	+1.5
KLNJ	Kolanjah	5.00	307	Pn	Pn	13 05 29.7	+2.6
IRAM	Ramesheh	5.01	319	Pn	Pn	13 05 29.0	+1.9
SMDO	Samad	5.24	161	P	Pn	13 05 32.5	+2.3
SMDO				S	Sn	13 06 32.3	+1.9
WSAR	Wadi Sarin	5.26	155	P	Pn	13 05 32.0	+1.6
WSAR				S	Sn	13 06 32.2	+1.4
ITEG	Tejag	5.29	24	Pn	Pn	13 05 32.6	+1.7
BSY	Bisya	5.36	170	P	Pn	13 05 33.1	+1.3
BSY				S	Sn	13 06 35.0	+1.8
UMZA	Um Al Zommool	5.41	191	P	Pn	13 05 35.0	+2.6
ANAR	Anarak	5.55	338	Pn	Pn	13 05 35.6	+1.1
TRNA	Turayna	5.59	235	P	Pn	13 05 36.8	+2.0
TRNA				S	Sn	13 06 38.9	+0.3
MZR	Muzera	5.62	207	P	Pn	13 05 37.1	+1.8
MZR				S	Sn	13 06 41.8	+2.4
IBRJ	Brojen	5.77	313	Pn	Pn	13 05 39.9	+2.3
SMRA	Abu-Samra	5.87	237	P	Pn	13 05 41.0	+2.4
SMRA				S	Sn	13 06 45.0	-0.5
WBK	Wadi Bani Khal	5.96	155	P	Pn	13 05 40.8	+0.7
WBK				S	Sn	13 06 48.2	+0.1
ZNGN	Zangian	6.17	312	Pn	Pn	13 05 44.9	+1.8
JLN	Jalan Bani Buh	6.55	153	P	Pn	13 05 49.3	+1.2
ISFB	Sefidab	7.14	332	Pn	Pn	13 05 58.2	+1.9
MHTO	MHTO	7.22	167	P	Pn	13 05 59.6	+2.3
MHTO				S	Sn	13 07 19.3	+0.5
DOK	Doka	9.59	192	P	Pn	13 06 31.5	+1.7
DOK				S	Sn	13 08 16.1	-1.2
SHAO	Shalim	10.01	183	P	Pn	13 06 37.0	+1.5
	SNR=7.0						
WHFO	Wadi Hawf	10.34	193	P	Pn	13 06 40.7	+0.5
DMTO	DMTO	10.36	187	P	Pn	13 06 41.8	+1.4
DMTO				S	Sn	13 08 31.7	-4.5
ABTO	Aybut	10.99	195	P	Pn	13 06 49.3	+0.2
BRTR	Keskin Array B	22.01	308	P	P	13 09 05.4	-0.6
	0.7nm,0.8s,baz=126,slow=14,SNR=8.8						
	0.7nm,0.8s						
BVAR	Borovoye Array	27.06	19	P	P	13 09 53.0	-0.9
	1.5nm,0.6s,baz=207,slow=9.3,SNR=10						
	1.5nm,0.6s						
MKAR	Makanchi Array	27.69	41	P	P	13 09 58.4	-1.3
	0.2nm,0.6s,baz=218,slow=8.8,SNR=2.3						
	0.2nm,0.6s						
ZALV	Zalesovo Beam	33.27	31	P	P	13 10 47.1	-1.7
	0.5nm,0.3s,baz=243,slow=8.6,SNR=5.3						
	0.5nm,0.3s						
HFS	Hagfors	43.03	330	P	P	13 12 08.8	-2.1
	2.7nm,0.9s,baz=120,slow=8.7,SNR=5.2						
	2.7nm,0.9s						

IDC ***15*** *13:05:20.8±3.3, 24°.05N×125°.67E, h72^{km}±30^{km}, mb3.3/12, mbtmp3.6/15, MS3.3/3, Error ellipse: s-maj=22.5km s-min=20.5km az=55.0*

NIED ***15*** *13:05:23.9, 24°.76N×125°.25E, h47^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.01; $M_{\theta\theta}$-0.51; $M_{\phi\phi}$-1.50; $M_{r\theta}$-1.42; $M_{\theta\phi}$-0.81; $M_{\phi r}$-0.17; Fault plane solution: $M_0$2.40000×10^{15} NP1: ϕ_s11.00000°, δ36.00000°, λ54.00000°. NP2: ϕ_s234.00000°, δ61.00000°, λ114.00000°.*

JMA ***15*** *13:05:23.9±0.2, 24°.8N±0°.9×125°.3E±0°.7, h47^{km}±1^{km}, MD4.1/10, MV3.9/10, NEAR MIYAKOJIMA ISLAND*

JMA Felt I J1 at NEAR MIYAKOJIMA ISLAND .

ISC 15 13:05:22.6±0.9**, 24°.7N**±0°.1×**125°.29E**±0°.06**, h48^{km}**±5^{km}**, n43, σ1^{s}.89**/40**, mb3.5**/12**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMJ2	Miyako jima3	0.05	46	*i* P	Pn	13 05 31.0	+1.0
JMJ2				*e*S	Sn	13 05 36.4	+1.2
JMJ2	Miyako jima3	0.05	46	A	A	13 05 31.0	
	comp=N,135nm,1.0s,comp=E,66nm,0.8s						
JMJ	Miyako jima 2	0.11	2	P	Pn	13 05 31.2	+1.0
JOGS	Gusukube	0.12	64	*i* P	Pn	13 05 31.4	+1.2
JOGS				S	Sn	13 05 37.2	+1.6
JOGS	Gusukube	0.12	64	A	A	13 05 31.4	
	comp=N,140nm,2.0s,comp=E,120nm,1.7s						
JIRB	Irabujima	0.16	318	*i* P	Pn	13 05 31.0	+0.6
JIRB				S	Sn	13 05 36.3	+0.3
JIRB	Irabujima	0.16	318	A	A	13 05 31.0	
	comp=N,34nm,1.3s,comp=E,68nm,0.8s						
JIKM	Ikemajima	0.22	350	*i* P	Pn	13 05 31.6	+0.8
JIKM				S	Sn	13 05 37.4	+0.8
JIKM	Ikemajima	0.22	350	A	A	13 05 31.6	
	comp=N,76nm,1.7s,comp=E,35nm,1.2s						
JTJ	Tarama	0.54	263	*i* P	Pn	13 05 35.4	+1.2
JTJ				S	Sn	13 05 43.4	+1.0
JTJ	Tarama	0.54	263	A	A	13 05 35.4	
	comp=N,34nm,0.6s,comp=E,32nm,0.6s						
JISG	Ishigakijimahi	0.90	263	P	Pn	13 05 39.7	+0.8
JISG				*e*S	Sn	13 05 51.5	+0.6
JIJ	Ishigaki jima	1.10	252	*i* P	Pn	13 05 43.1	+1.5
JIJ				*e*S	Sn	13 05 57.3	+1.6
JIJ	Ishigaki jima	1.10	252	A	A	13 05 43.1	
	comp=N,9.0nm,2.4s,comp=E,4.0nm,1.2s						
JKRS	Kuro-shima	1.26	248	*e*P	Pn	13 05 45.7	+1.9
JKRS	Kuro-shima	1.26	248	A	A	13 05 45.7	
	comp=N,13nm,2.6s,comp=E,10.0nm,1.6s						
IRIF	Iriomote-Funau	1.47	256	*e*P	Pn	13 05 47.8	+1.1
HATJ	Hateruma jima	1.50	245	*e*P	Pn	13 05 49.5	+2.4
HATJ	Hateruma jima	1.50	245	A	A	13 05 49.5	
	comp=N,8.0nm,3.1s,comp=E,7.0nm,4.1s						
YOJ	Yonaguni jima	2.09	264	P	Pn	13 05 56.8	+1.6
NACB	Ninganchiao	3.41	262	P	Pn	13 06 15.4	+2.1
JOW	Kunigami	3.42	51	P	Pn	13 06 16.1	+2.7
	comp=E,32nm,0.4s,baz=214,slow=11,SNR=11						
JOW				S	Sn	13 06 57.1	+4.2
	comp=E,40nm,0.4s,baz=278,slow=29,SNR=3.7						
TATO	Taipei	3.46	275	P	Pn	13 06 17.5	+3.5
YHNB	Yeheng	3.56	270	P	Pn	13 06 18.6	+3.1
YULB	Yu-li	3.88	251	P	Pn	13 06 20.2	+0.4
TWGBT	Beinan	4.29	245	P	Pn	13 06 25.3	-0.1
TPUB	Ta-pu	4.49	253	P	Pn	13 06 30.3	+2.2
KSRS	Korea Array	12.90	9	P	P	13 08 28.2	-4.6
	comp=E,0.9nm,0.7s,baz=185,slow=13,SNR=3.1						
JCJ	Chichijima	15.39	77	LR	LR	13 13 54.0	
	comp=E,79nm,20.5s,baz=106,slow=34						
MJAR	Matsushiro Arr	16.19	40	P	P	13 09 07.3	-2.1
	comp=E,0.4nm,0.5s,baz=222,slow=7.0,SNR=11						
HILR	Hailar Array B	25.18	352	LR	LR	13 22 18.8	
	comp=E,141nm,21.7s,baz=225,slow=39						
CMAR	Chiang Mai Arr	25.25	261	P	P	13 10 43.4	-1.1
	comp=E,0.2nm,0.4s,baz=70,slow=11,SNR=1.6						
CMAR				LR	LR	13 21 49.3	
	comp=E,45nm,20.1s,baz=135,slow=39						
	comp=E,0.2nm,0.4s						
SONM	Songino Array	27.51	332	P	P	13 11 06.1	+1.4
	comp=E,0.5nm,0.5s,baz=146,slow=10.0,SNR=4.0						
	comp=E,0.5nm,0.5s						
MKAR	Makanchi Array	40.62	314	P	P	13 12 59.0	+1.1
	comp=E,0.6nm,0.5s,baz=100,slow=10,SNR=6.6						
	comp=E,0.6nm,0.5s						
ZALV	Zalesovo Beam	41.90	325	P	P	13 13 08.5	+0.2
	comp=E,0.4nm,0.4s,baz=126,slow=7.3,SNR=2.5						
	comp=E,0.4nm,0.4s						
KURBB	Kurchatov Arra	44.17	318	P	P	13 13 28.3	+1.7
	comp=E,0.2nm,0.4s,baz=110,slow=8.6,SNR=2.1						
	comp=E,0.2nm,0.4s						
BVAR	Borovoye Array	49.67	320	P	P	13 14 09.2	-0.4
	comp=E,0.2nm,0.4s,baz=98,slow=7.8,SNR=1.8						
	comp=E,0.2nm,0.4s						
STKA	Stephens Creek	58.38	164	P	P	13 15 03.1	-10
	comp=E,3.9nm,0.6s,baz=340,slow=9.2,SNR=10						
	comp=E,3.9nm,0.6s						
ILAR	Eielson Array	67.02	28	P	P	13 16 07.7	-2.7
	comp=E,0.2nm,0.8s,baz=238,slow=5.1,SNR=5.4						
	comp=E,0.2nm,0.8s						
AKASG	Malin Array Be	74.95	319	P	P	13 16 59.5	+0.8
	comp=E,0.7nm,0.5s,baz=70,slow=6.5,SNR=2.2						
	comp=E,0.7nm,0.5s						
BRTR	Keskin Array B	75.85	307	P	P	13 17 05.0	+0.7
	comp=E,0.7nm,0.7s,baz=126,slow=3.2,SNR=4.2						
	comp=E,0.7nm,0.7s						
NOA	NORSAR Array B	79.48	333	P	P	13 17 24.1	+0.1
	comp=E,0.3nm,0.5s,baz=52,slow=5.5,SNR=1.9						
	comp=E,0.3nm,0.5s						
YKA	Yellowknife Ar	81.00	24	P	P	13 17 31.1	-0.9
	comp=E,0.2nm,0.7s,baz=304,slow=5.3,SNR=4.7						
	comp=E,0.2nm,0.7s						

IDC ***15*** *13:07:16.7±0.8, 6°.41N×125°.20E, h0^{km}, mb3.9/12, mbtmp3.9/13, ML4.5/1, MS3.3/3, Error ellipse: s-maj=17.9km s-min=9.4km az=113.0*

NEIC ***15*** *13:07:18.8±1.3, 6°.50N±0°.07×125°.19E±0°.08, h10^{km}±1^{km}, mb4.5/23, Error ellipse: s-maj=17.1km s-min=6.7km az=127.0*

DJA ***15*** *13:07:21.0±0.2, 7°N±2°×12°5E±°, h10^{km}, M4.8/19,* *mb4.7/19, mB5.3/8, MLv4.9/8, Mw(mB)4.7/8*

ISC 15 13:07:18.4±0.5**, 6°.57N**±0°.04×**125°.39E**±0°.07**, h10km, n64, σ1s.70**/64**, mb4.3**/21**, MS3.2**/3**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.53	20	Pg	Pn	13 07 31.7	-0.3
	2µm,0.3s,baz=199,slow=1.6,SNR=51						
DAV				Lg	Lg	13 07 41.1	
	3µm,0.3s,baz=335,slow=24,SNR=11						
DAV	Davao City (W)	0.53	20	P	Pn	13 07 31.6	-0.5
DAV				S	Sn	13 07 40.7	-0.4
DAV	Davao City (W)	0.53	20	P	Pg	13 07 29.0	+0.3
SGSI	Sangihe	2.87	177	P	Pn	13 08 06.5	+2.2
SGSI				S	Sb	13 08 42.6	-2.4
TNTI	Ternate	6.09	161	P	Pn	13 08 50.9	+2.4
	0.3nm30nm,0.5s						
GTOI	Gorontalo	6.36	202	P	Pn	13 08 51.8	-0.4
GTOI				S	Sn	13 10 05.5	+0.6
MRSI	Marisa	6.96	210	P	Pn	13 09 01.4	+0.8
TOLI2	Tolitoli	7.11	220	Pn	Pn	13 08 59.6	-3.0
LUWI	Luwuk	8.00	199	P	Pn	13 09 16.9	+2.1
	2µm146nm,1.3s						
MPSI	Mapaga	8.27	222	P	Pn	13 09 21.4	+2.9
APSI	Ampana	8.32	207	P	Pn	13 09 21.8	+2.6
	1µm137nm,1.2s						
SANI	Sanana	8.58	176	P	Pn	13 09 22.9	+0.1
	33nm,0.8s						
KKM	Kota Kinabalu	9.14	267	P	Pn	13 09 34.0	+3.5
	17nm,1.2s						
NLAI	Namlea	9.89	170	P	Pn	13 09 41.1	+0.3
	28nm,0.7s						
KRAI	Karang Ratu	10.27	163	P	Pn	13 09 48.0	+2.0
	4µm34nm,0.6s						
TTSI	Tana Toraja	11.05	210	P	Pn	13 10 00.0	+3.3
	857nm27nm,1.0s						
SOEI	Soe	16.26	184	P	P	13 11 08.7	-1.6
SOEI				IAmb	IAmb	13 11 38.4	
	comp=Z,49nm,1.1s						
SOEI	Soe	16.26	184	P	P	13 11 08.6	-1.6
	comp=Z,656nmcomp=Z,48nm,1.2s						
BATI	Baumata	16.76	186	Pn	Pn	13 11 10.9	-2.5
	comp=Z,1.6nm,0.3s,baz=339,slow=4.1,SNR=4.5						
	comp=Z,5.9nm,0.3s						
BATI	Baumata	16.76	186	P	P	13 11 15.5	-0.2
	comp=Z,30nm,0.7s						
TPUB	Ta-pu	17.25	345	P	P	13 11 21.7	+0.5
TPUB				IAmb	IAmb	13 11 55.1	
	comp=Z,69nm,1.5s						
JAGI	Jajag, Banyuwa	18.68	217	P	P	13 11 34.1	-2.8
JAGI				IAmb	IAmb	13 11 35.5	
	comp=Z,35nm,1.3s						
QIZ	Qiongzhong	19.55	311	P	P	13 11 45.6	-0.8
QIZ				IAmb	IAmb	13 11 46.1	
	comp=Z,27nm,1.2s						
SNJI	Sawahan-Nganju	19.70	224	P	Pn	13 11 50.9	+1.2
	comp=Z,24nm,1.0s						
MTN	Manton Dam	20.11	164		P	13 11 52.5	-0.1
JOW	Kunigami	20.34	7	LR	LR	13 18 46.2	
	comp=Z,108nm,21.5s,baz=178,slow=34						
KPJI	Karang Pucung	21.46	230	P	P	13 12 11.0	+3.8
	comp=Z,22nm,1.0s						
KNRA	Kununurra	22.36	171		P	13 12 16.0	-0.7
KSI	Kapahiang	24.93	247	P	P	13 12 45.4	+3.3
PMG	Port Moresby	26.88	126	P	P	13 13 00.3	+0.6
	comp=Z,3.0nm,0.6s,baz=329,slow=13,SNR=3.7						
	comp=Z,3.0nm,0.6s						
PMG	Port Moresby	26.88	126		P	13 13 00.8	+1.1
PMG				IAmb	IAmb	13 13 07.7	
	comp=Z,7.9nm,0.8s						
JNU	Nakatsue	26.91	10	LR	LR	13 22 52.1	
	comp=Z,51nm,21.2s,baz=148,slow=34						
COEN	Coen	26.97	139	P	P	13 13 00.7	+0.1
COEN				IAmb	IAmb	13 13 24.3	
	comp=Z,6.0nm,1.0s						
WB0	Warramunga Arr	27.63	161		P	13 13 05.3	-1.1
WB0				IAmb	IAmb	13 13 22.0	
	comp=Z,9.0nm,1.1s						
WRAB	Tennant Creek	27.77	162	P	P	13 13 07.2	-0.5
WRAB				IAmb	IAmb	13 13 22.9	
	comp=Z,6.2nm,0.8s						
WRA	Warramunga Arr	27.78	162	P	P	13 13 06.2	-1.5
	comp=Z,2.0nm,0.8s,baz=342,slow=9.5,SNR=13						
	comp=Z,2.0nm,0.8s						
WR8	Warramunga Arr	27.84	161	P	P	13 13 07.8	-0.5
WR8				IAmb	IAmb	13 13 39.7	
	comp=Z,6.4nm,0.9s						
CM31	Chiang Mai Arr	28.34	297	P	P	13 13 09.8	-3.0
CMAR	Chiang Mai Arr	28.34	297	P	P	13 13 10.5	-2.4
	comp=Z,0.2nm,0.4s,baz=117,slow=8.5,SNR=4.7						
	comp=Z,0.2nm,0.4s						
CMAR	Chiang Mai Arr	28.34	297	P	P	13 13 09.9	-2.9
KSRS	Korea Array	30.83	4	P	P	13 13 36.0	+1.5
	comp=Z,1.0nm,0.8s,baz=189,slow=10,SNR=3.4						
	comp=Z,1.0nm,0.8s						
AS31	Alice Springs	31.18	165		P	13 13 36.9	-1.1
ASAR	Alice Springs	31.18	165	P	P	13 13 37.0	-1.0
	comp=Z,1.1nm,0.6s,baz=352,slow=8.5,SNR=28						
	comp=Z,1.1nm,0.6s						
ASAR	Alice Springs	31.18	165	P	P	13 13 36.6	-1.3
XAN	Xi'an	31.30	333	P	P	13 13 46.1	+7.2
XAN				pP	sP	13 13 51.3	+8.1
XAN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MJAR	Matsushiro Arr	32.05	20	P	P	13 13 47.9	+2.5
	comp=Z,1.5nm,1.0s,baz=193,slow=9.0,SNR=2.6						
MJAR				LR	LR	13 28 10.1	
	comp=Z,45nm,18.1s,baz=222,slow=39						
	comp=Z,1.5nm,1.0s						
INKA	Innaminka	37.20	157		P	13 14 29.9	-0.1
BBOO	Buckleboo	40.46	166		P	13 14 56.9	-0.4
BBOO				IAmb	IAmb	13 14 57.8	
	comp=Z,9.3nm,0.7s						
STKA	Stephens Creek	41.24	159		P	13 15 03.7	-0.1
SONM	Songino Array	44.20	342	P	P	13 15 28.0	+0.2
	comp=Z,0.4nm,0.7s,baz=186,slow=12,SNR=1.3						
	comp=Z,0.4nm,0.7s						
SONM	Songino Array	44.20	342	P	P	13 15 27.8	+0.1
MKAR	Makanchi Array	54.48	325	P	P	13 16 46.8	+0.4
	comp=Z,0.5nm,0.6s,baz=128,slow=7.9,SNR=7.6						
	comp=Z,0.5nm,0.6s						
MKAR	Makanchi Array	54.48	325	P	P	13 16 46.3	0.0
KSH	Kashi	55.11	314	P	P	13 16 50.8	-0.3
KSH				pmax	pmax		
	comp=Z,5.0nm,1.6s						
ZALV	Zalesovo Beam	57.47	333	P	P	13 17 08.1	+0.6
	comp=Z,0.5nm,0.5s,baz=142,slow=5.3,SNR=4.8						
	comp=Z,0.5nm,0.5s						
KURBB	Kurchatov Arra	58.65	327	P	P	13 17 15.9	+0.1
	comp=Z,3.1nm,1.0s,baz=126,slow=6.2,SNR=4.6						
	comp=Z,3.1nm,1.0s						
KURK	Kurchatov	58.65	327	P	P	13 17 15.6	-0.2
KURK				IAmb	IAmb	13 17 23.5	
	comp=Z,4.0nm,0.8s						
SHEM	Shemya Is, Ala	60.73	32	P	P	13 17 31.0	+0.9
SMY	Shemya	60.73	32	P	P	13 17 31.0	+0.9
BVAR	Borovoye Array	64.23	327	P	P	13 17 54.0	+0.4
	comp=Z,2.0nm,0.9s,baz=126,slow=7.7,SNR=8.6						
	comp=Z,2.0nm,0.9s						
BKZ	Black Stump Fm	65.58	138	P	P	13 18 03.0	+0.3
M14K	Bethel	75.84	29	P	P	13 19 07.1	+2.4
ILAR	Eielson Array	83.13	26	P	P	13 19 45.0	+0.6
	comp=Z,0.8nm,1.1s,baz=249,slow=4.9,SNR=5.0						
	comp=Z,0.8nm,1.1s						
BZK	Bozkurt	86.69	312	P	P	13 20 00.4	-2.3

IDC 15 13:12:23.0±8.2**, 5°.40S×154°.02E, h0km, mb3.7**/3**, mbtmp3.7**/3**, MS3.4**/1**, Error ellipse: s-maj=252.3km s-min=40.6km az=108.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.99	231	P	P	13 17 40.7	+1.2
	1.5nm,0.5s,baz=67,slow=11,SNR=27						
	1.5nm,0.5s						
ASAR	Alice Springs	26.56	225	P	P	13 18 02.0	-0.9
	0.3nm,0.4s,baz=57,slow=9.3,SNR=9.7						
	0.3nm,0.4s						
PETK	Petropavlovsk-	58.37	3	LR	LR	13 41 54.9	
	comp=Z,34nm,21.6s,baz=121,slow=30						
MKAR	Makanchi Array	81.57	319	P	P	13 24 42.6	-0.2
	0.4nm,0.7s,baz=107,slow=5.0,SNR=3.8						
	0.4nm,0.7s						

IDC 15 13:13:23.6±1.2**, 6°.41N×125°.22E, h0km, mb3.3**/4**, mbtmp3.3**/4**, Error ellipse: s-maj=31.3km s-min=10.6km az=114.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.74	28	Pg	Pg	13 13 38.0	+0.1
	243nm,0.3s,baz=248,slow=5.9,SNR=9.4						
DAV				Lg	Lg	13 13 48.0	
	380nm,0.3s,baz=72,slow=22,SNR=11						
WRA	Warramunga Arr	27.68	161	P	P	13 19 13.9	+0.3
	0.1nm,0.5s,baz=331,slow=10,SNR=1.1						
	0.1nm,0.5s						
ASAR	Alice Springs	31.07	164	P	P	13 19 43.0	-0.7
	0.2nm,0.5s,baz=342,slow=7.0,SNR=4.8						
	0.2nm,0.5s						
MKAR	Makanchi Array	54.51	325	P	P	13 22 53.2	-0.1
	0.6nm,1.1s,baz=127,slow=7.7,SNR=2.0						
	0.6nm,1.1s						
KURBB	Kurchatov Arra	58.69	327	P	P	13 23 23.4	+0.5
	0.2nm,0.5s,baz=127,slow=5.9,SNR=4.1						
	0.2nm,0.5s						

IDC ***15*** *13:18:04.7±0.7, 29°.79S×178°.93W, h330km±7km, mb3.5/5, mbtmp4.2/6, Error ellipse: s-maj=29.4km s-min=16.5km az=143.0*

NEIC ***15*** *13:18:05.1±1.3, 29°.7S±0°.1×178°.8W±0°.2, h333km±5km, mb4.1/18, Error ellipse: s-maj=24.2km s-min=16.8km az=135.0*

WEL ***15*** *13:18:08.4±1.1, 30°S±8°×17°8W±2°1, h305km±10km, M4.6/6, mB4.9/6, ML4.7/7, MLv4.9/6, Mw(mB)4.2/6, Error ellipse: s-maj=28.5km s-min=6.8km az=107.6, confirmed*

NOU ***15*** *13:18:55.9, 33°.97S×179°.60E, h376km, mb4.1/9, South of Kermadec Islands*

ISC 15 13:18:05.2±0.5**, 29°.84S**±0°.06×**178°.71W**±0°.09**, h350km, n147, σ1s.33**/166**, mb3.9**/12**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	0.89	50	P	Pn	13 18 48.4	-2.2
GLKZ				S	S	13 19 21.9	-5.0
RIZ	Raoul Island	0.90	49	P	Pn	13 18 48.7	-1.9
RAO	Raoul Island	0.90	50	P	Pn	13 18 48.7	-1.8
	2µm,0.2s,baz=94,slow=6.8,SNR=28						
RAO				S	S	13 19 23.5	-3.5
	472nm,0.3s,baz=99,slow=22,SNR=2.5						
RAO	Raoul Island	0.90	50	P	Pn	13 18 48.6	-2.0
MXZ	Matakaoa Point	8.10	197	P	P	13 20 04.4	+1.2
MXZ	Matakaoa Point	8.10	197	P	P	13 20 04.4	+1.2
MXZ				S	S	13 21 34.5	+0.3
WMGZ	Waiomatatini S	8.31	196	P	Pn	13 20 03.1	+0.3
WMGZ				S	S	13 21 39.3	+0.4
HAZ	Te Kaha	8.42	199	P	Pn	13 20 04.3	+0.2
HAZ				S	S	13 21 42.0	+0.8
OUZ	Omahuta	8.43	228	P	P	13 20 17.6	+11
OUZ	Omahuta	8.43	228	P	P	13 20 08.3	+1.3
WCZ	Waipu Caves	8.43	222	P	P	13 20 09.0	+2.0
PKGZ	Pakihiroa	8.44	198	P	Pn	13 20 04.4	0.0
PUZ	Puketiti	8.59	196	P	Pn	13 20 05.6	-0.6
PUZ				S	S	13 21 43.2	-1.9
RUGZ	Raukumara Rang	8.64	199	P	Pn	13 20 06.8	-0.1
TWGZ	Tauwhareparae	8.76	197	P	P	13 20 12.2	+1.5
TWGZ				S	S	13 21 49.9	+1.1
OPRZ	Ohinepanea	8.90	205	P	P	13 20 15.1	+2.9
CNGZ	Carnagh Statio	8.99	196	P	Pn	13 20 10.7	-0.3
MWZ	Matawai	9.03	199	P	Pn	13 20 10.4	-1.0
MWZ				S	S	13 21 54.0	-0.8
TKGZ	Te Karaka	9.04	197	P	Pn	13 20 10.3	-1.2
TKGZ				S	S	13 21 54.0	-0.9
URZ	Urewera	9.09	201	P	Pn	13 20 10.8	-1.2
	3.3nm,0.4s,baz=272,slow=4.8,SNR=16						
URZ				S	S	13 21 55.0	-0.9
	39nm,0.5s,baz=270,slow=13,SNR=13						
URZ	Urewera	9.09	201	P	Pn	13 20 12.5	+0.4
URZ	Urewera	9.09	201	P	Pn	13 20 11.2	-0.9
URZ				S	S	13 21 54.7	-1.2
RAGZ	Rawiri	9.21	199	P	P	13 20 17.5	+1.8
RIGZ	Rimuhau	9.31	197	P	Pn	13 20 13.5	-1.3
RIGZ				S	S	13 22 01.7	+0.7
MUGZ	Murupara	9.39	202	P	P	13 20 16.8	-1.0
MUGZ				S	S	13 22 03.0	+0.3
RTZ	Ruatahuna	9.45	201	P	P	13 20 19.1	+0.7
HRRZ	Handcock Road	9.48	205	P	P	13 20 21.2	+2.4
PRGZ	Paritu Road	9.49	196	P	P	13 20 20.1	+1.3
SNGZ	Shannon Statio	9.50	199	P	Pn	13 20 15.1	-1.9
SNGZ				S	S	13 22 03.5	-1.5
PRRZ	Plateau Road	9.54	204	P	P	13 20 20.6	+1.2
ALRZ	Allen Road	9.62	204	P	P	13 20 21.9	+1.7
KNZ	Kokohu	9.63	197	P	Pn	13 20 16.5	-2.0
RAHZ	Arahi	9.70	200	P	Pn	13 20 17.9	-1.5
RAHZ				S	S	13 22 07.8	-1.6
MHGZ	Mahia Peninsul	9.70	196	P	Pn	13 20 18.9	-0.5
MHGZ				S	S	13 22 07.6	-1.9
MTHZ	Maungataniwha	9.71	201	P	Pn	13 20 18.6	-1.0
MTHZ				S	S	13 22 08.7	-1.1
TLZ	Tolley Road	9.72	208	P	P	13 20 22.3	+0.9
KUTZ	Kaahu Road	9.74	206	P	P	13 20 24.3	+2.6
WHHZ	Waihua	9.80	199	P	P	13 20 24.0	+1.8
WHHZ				S	S	13 22 11.3	-0.4
MRHZ	Matea Rd	9.83	203	P	P	13 20 22.9	+0.2
MRHZ				S	S	13 22 12.0	-0.4
NMHZ	Naumai	9.95	201	P	P	13 20 25.4	+1.4
NMHZ				S	S	13 22 16.5	+1.5
ARHZ	Aropaoanui	10.04	199	P	Pn	13 20 22.3	-1.2
ARHZ				S	S	13 22 15.6	-1.4
RATZ	Rangitukua	10.09	205	P	P	13 20 26.9	+1.4
BKZ	Black Stump Fm	10.11	202	P	P	13 20 24.6	-1.1
BKZ	Black Stump Fm	10.11	202	P	P	13 20 24.8	-0.9
HIZ	Hauiti	10.16	210	P	P	13 20 28.3	+2.1
HIZ	Hauiti	10.16	210	P	P	13 20 30.1	+3.9
KATZ	Kakaramea	10.22	205	P	P	13 20 29.0	+2.0
MCHZ	McNeill Hill	10.30	200	P	P	13 20 28.0	+0.2
NTVZ	North Tongarir	10.33	205	P	P	13 20 29.8	+1.6
TMVZ	Te Maari	10.34	205	P	P	13 20 30.3	+1.9
KRVZ	Karewarewa	10.34	205	P	P	13 20 30.1	+1.7
ETVZ	East Tongariro	10.35	205	P	P	13 20 29.5	+1.0
KWHZ	Kaweka Forest	10.37	201	P	Pn	13 20 26.4	-1.0
WTVZ	West Tongariro	10.38	205	P	P	13 20 29.9	+1.1
NNVZ	North Ngauruho	10.38	205	P	P	13 20 30.5	+1.6
CKHZ	Cape Kidnapper	10.39	198	P	P	13 20 30.0	+1.3
OTVZ	Oturere	10.39	205	P	P	13 20 29.2	+0.2
TWVZ	Taurewa	10.40	206	P	P	13 20 30.3	+1.3
SNVZ	South Ngauruho	10.42	205	P	P	13 20 30.3	+1.0
NGZ	Ngauruhoe	10.43	205	P	P	13 20 30.8	+1.5
FWVZ	Far West T-bar	10.52	205	P	P	13 20 31.4	+1.0
MAVZ	Matarangi	10.52	205	P	P	13 20 31.3	+0.7
WNVZ	Wahianoa	10.56	205	P	P	13 20 30.5	-0.4
KAHZ	Kahuranaki	10.57	199	P	P	13 20 31.1	+0.3
MOVZ	Moawhango	10.58	204	P	P	13 20 31.2	+0.3
KRHZ	Kereru	10.58	201	P	P	13 20 30.3	-0.7
PKVZ	Pokaka	10.62	206	P	P	13 20 32.4	+1.0
PXZ	Pawanui	10.80	198	P	Pn	13 20 32.2	-0.2
PNHZ	Pukenui	10.88	201	P	Pn	13 20 31.2	-2.3
WPHZ	Waipukurau	10.95	200	P	P	13 20 35.3	+0.3
TSZ	Takapari Road	11.09	202	P	P	13 20 36.6	0.0
WAZ	Wanganui	11.16	206	P	P	13 20 38.1	+0.7
DVHZ	Dannevirke	11.25	201	P	P	13 20 38.2	-0.1
ANWZ	Angora Road	11.30	199	P	P	13 20 41.0	+2.1
POWZ	Post Office Ro	11.46	202	P	P	13 20 41.8	+1.2
PRWZ	Pori Road	11.54	201	P	P	13 20 42.2	+0.6
BFZ	Birch Farm	11.57	199	Pn	Pn	13 20 39.7	-2.0
BFZ	Birch Farm	11.57	199	P	Pn	13 20 41.0	-0.7
BFZ	Birch Farm	11.57	199	P	Pn	13 20 39.9	-1.8
MRZ	Mangatainoka R	11.76	202	P	P	13 20 43.5	-0.4
TIWZ	Tintock	11.77	201	P	P	13 20 44.7	+0.6
HOWZ	Holdsworth Sta	11.99	202	P	Pn	13 20 46.6	-0.1
OGWZ	Otaki Gorge	12.04	203	P	P	13 20 45.9	-1.1
TMWZ	Te Maipa	12.07	200	P	Pn	13 20 47.5	-0.1
KIW	Kapiti Island	12.16	204	P	P	13 20 44.5	-4.0
MTW	Mount Morrison	12.24	201	P	P	13 20 48.8	-0.4
CAW	Cannon Point	12.33	203	P	P	13 20 49.9	-0.4
TRWZ	Traveller	12.40	200	P	Pn	13 20 52.2	+0.8
DUWZ	D'Urville Isla	12.48	207	P	Pn	13 20 52.0	-0.4
MSWZ	Moikau Station	12.55	201	P	P	13 20 51.2	-1.5
MSWZ	Moikau Station	12.55	201	P	Pn	13 20 53.1	-0.1
SNZO	South Karori	12.63	203	P	P	13 20 53.2	-0.4
BHW	Baring Head	12.66	203	P	Pn	13 20 54.1	-0.5
TCW	Tory Channel	12.70	205	P	P	13 20 53.5	-0.8
TUWZ	Tuamarina	13.01	205	P	Pn	13 20 58.3	-0.3
TUWZ	Tuamarina	13.01	205	P	P	13 20 56.3	-1.5
NNZ	Nelson	13.05	207	P	P	13 20 57.7	-0.4
TKNZ	Takaka Hill	13.06	209	P	P	13 20 58.0	-0.4
QRZ	Quartz Range	13.08	211	P	Pn	13 20 59.6	+0.1
QRZ	Quartz Range	13.08	211	P	Pn	13 20 58.9	-0.6
BSWZ	Blackbirch Sta	13.28	205	P	Pn	13 21 02.4	+0.5
MRNZ	Matariki Terra	13.45	209	P	P	13 21 02.7	0.0
THZ	Tophouse	13.70	207	P	Pn	13 21 05.7	-1.1
KHZ	Kahutara	14.02	204	P	Pn	13 21 10.5	+0.1
KHZ	Kahutara	14.02	204	P	Pn	13 21 09.2	-1.2
GVZ	Greta Valley S	14.68	205	P	Pn	13 21 18.1	-0.1
LTZ	Lake Taylor	14.81	207	P	Pn	13 21 18.5	-1.2
INZ	Inchbonnie	15.10	209	P	Pn	13 21 22.7	-0.3
OXZ	Oxford	15.36	206	P	Pn	13 21 24.4	-1.6
DZM	Mont Dzumac	15.42	297		Pn	13 21 25.5	-1.6
DZM				IAmb	IAmb	13 21 37.7	
	comp=Z,7.0nm,1.0s						
MHCZ	Mount Hutt	15.72	207	P	Pn	13 21 29.7	-0.5
AFI	Afiamalu	17.10	23	P	P	13 21 41.4	-1.3
AFI				IAmb	IAmb	13 22 13.1	
	comp=Z,53nm,1.4s						
EIDS	Eidsvold	27.10	272	P	P	13 23 17.1	-0.1
EIDS				IAmb	IAmb	13 23 49.3	
	comp=Z,13nm,1.4s						
CTA	Charters Tower	33.10	279	P	P	13 24 09.2	-0.5
	comp=Z,1.7nm,0.5s,baz=101,slow=11,SNR=7.1						
	comp=Z,1.7nm,0.5s						
CTAO	Charters Tower	33.10	279	P	P	13 24 09.6	-0.2
CTAO				IAmb	IAmb	13 24 50.7	
	comp=Z,17nm,1.4s						
STKA	Stephens Creek	34.01	256	P	P	13 24 17.3	0.0
STKA				IAmb	IAmb	13 24 36.6	
	comp=Z,13nm,1.4s						
MGBR	Mount Gambier	34.53	246	P	P	13 24 21.4	-0.3
INKA	Innaminka	35.47	263	P	P	13 24 30.8	+1.0
COEN	Coen	38.53	286	P	P	13 24 55.3	-0.1
COEN				IAmb	IAmb	13 25 01.3	
	comp=Z,11nm,1.4s						
BBOO	Buckleboo	38.53	254	P	P	13 24 55.5	+0.2
BBOO				IAmb	IAmb	13 25 36.3	
	comp=Z,6.6nm,1.4s						
AS31	Alice Springs	42.53	267	P	P	13 25 27.2	-0.6
ASAR	Alice Springs	42.53	267	P	P	13 25 27.6	-0.2
	comp=Z,1.7nm,0.5s,baz=98,slow=6.8,SNR=71						
	comp=Z,1.7nm,0.5s						
ASAR	Alice Springs	42.53	267	P	P	13 25 27.1	-0.7
WR8	Warramunga Arr	43.32	272	P	P	13 25 33.5	-0.5
WR8				IAmb	IAmb	13 26 11.3	
	comp=Z,7.9nm,1.4s						
WRAB	Tennant Creek	43.46	272	P	P	13 25 34.2	-1.0
WRA	Warramunga Arr	43.47	272	P	P	13 25 34.7	-0.5
	comp=Z,3.1nm,0.5s,baz=110,slow=7.8,SNR=55						
	comp=Z,3.1nm,0.5s						
WRA	Warramunga Arr	43.47	272	P	P	13 25 34.6	-0.6
WB0	Warramunga Arr	43.49	272	P	P	13 25 34.6	-0.8
WB0				IAmb	IAmb	13 25 35.6	
	comp=Z,4.4nm,0.5s						
KNRA	Kununurra	50.05	274	P	P	13 26 25.6	-0.2
KNRA				IAmb	IAmb	13 26 27.7	
	comp=Z,24nm,1.4s						
HIL	Hilo	54.27	28	P	P	13 26 56.8	+0.4
HIL				IAmb	IAmb	13 27 28.4	
	comp=Z,161nm,1.4s						
JGF	Kuroka	77.12	325	P	P	13 29 20.8	0.0
PETK	Petropavlovsk-	85.12	346	P	P	13 30 02.6	+0.6
	comp=Z,1.1nm,0.6s,baz=159,slow=6.0,SNR=1.6						
	comp=Z,1.1nm,0.6s						
PETK	Petropavlovsk-	85.12	346	P	P	13 30 02.3	+0.3
MT09	Talagante	86.92	127	P	P	13 30 14.1	+2.4
NVAR	Mina Array Bea	88.25	43	P	P	13 30 20.5	+2.8
	comp=Z,0.5nm,0.6s,baz=178,slow=1.7,SNR=2.3						
	comp=Z,0.5nm,0.6s						
NVAR	Mina Array Bea	88.25	43	P	P	13 30 19.8	+2.2
KURK	Kurchatov	120.22	314		PKiKP	13 36 15.3	+0.7
KURBB	Kurchatov Arra	120.26	314	PKP	PKiKP	13 36 15.3	+0.6
	comp=Z,0.4nm,0.5s,baz=110,slow=2.2,SNR=6.5						
GAR	Garm	123.55	299		PKPpre	13 36 12.9	
BVAR	Borovoye Array	125.58	316	PKP	PKiKP	13 36 26.4	+1.2
	comp=Z,0.5nm,0.4s,baz=126,slow=2.6,SNR=4.1						
ARCES	ARCESS Array B	137.91	348	PKP	PKiKP	13 36 50.6	+1.0
	comp=Z,1.4nm,0.9s,baz=52,slow=2.3,SNR=5.4						
FINES	FINESS Array B	144.41	340	PKP	PKPdf	13 36 59.2	0.0
	comp=Z,3.1nm,0.6s,baz=72,slow=3.8,SNR=36						
NB2	NORSAR Subarra	148.10	351	PKP	PKiKP	13 37 10.6	-0.2
	comp=Z,1.5nm,0.6s,baz=18,slow=4.4						
NOA	NORSAR Array B	148.10	351	PKPbc	PKiKP	13 37 10.7	-0.1
	comp=Z,0.9nm,0.6s,baz=16,slow=4.4,SNR=3.3						
HFS	Hagfors	148.57	348	PKPbc	PKiKP	13 37 11.9	+0.2
	comp=Z,1.3nm,0.5s,baz=52,slow=2.4,SNR=1.8						
AKASG	Malin Array Be	150.48	323	PKPbc	PKiKP	13 37 14.8	-1.2
	comp=Z,0.9nm,0.4s,baz=50,slow=3.0,SNR=4.6						
MMAI	Mount Meron Ar	150.80	285	PKPbc	PKiKP	13 37 19.3	+2.0
	comp=Z,1.2nm,0.3s,baz=90,slow=4.3,SNR=2.6						

IDC 15 13:19:49.9±1.3**, 6°.54N×125°.01E, h0km, mb3.4**/4**, mbtmp3.4**/4**, Error ellipse: s-maj=27.7km s-min=11.5km az=139.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.77	47	Pg	Pg	13 20 04.3	-0.3
	224nm,0.3s,baz=227,slow=5.8,SNR=15						
DAV				Lg	Lg	13 20 15.9	
	298nm,0.3s,baz=72,slow=23,SNR=8.4						
DAV				LR	LR	13 20 30.9	
	comp=Z,719nm,20.3s,baz=282,slow=53						
DAV	Davao City (W)	0.77	47	P	Pn	13 20 10.0	+2.0
ASAR	Alice Springs	31.25	164	P	P	13 26 11.7	+0.2
	0.2nm,0.6s,baz=340,slow=8.6,SNR=6.4						
	0.2nm,0.6s						
MKAR	Makanchi Array	54.29	325	P	P	13 29 18.2	+0.3
	0.5nm,0.7s,baz=127,slow=7.0,SNR=6.2						
	0.5nm,0.7s						
KURBB	Kurchatov Arra	58.47	327	P	P	13 29 47.4	-0.2
	0.4nm,0.8s,baz=124,slow=7.7,SNR=4.7						
	0.4nm,0.8s						
ILAR	Eielson Array	83.32	26	P	P	13 32 18.2	-0.2
	0.4nm,0.9s,baz=247,slow=5.1,SNR=4.1						
	0.4nm,0.9s						

IDC ***15*** *13:27:34.3±0.9, 6°.55N×125°.20E, h0km, mb3.6/7, mbtmp3.6/7, Error ellipse: s-maj=21.2km s-min=9.3km az=119.0*

ISC 15 13:27:39.4±0.9**, 6°.7N**±0°.1×**125°.5E**±0°.3**, h35km, n8, σ1s.30**/8**, mb3.6**/7**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.38	14	Pg	Pn	13 27 47.9	-0.5
	188nm,0.3s,baz=227,slow=8.6,SNR=6.5						
DAV				Lg	Lg	13 27 54.5	
	461nm,0.3s,baz=240,slow=22,SNR=10.0						
WRA	Warramunga Arr	27.87	162	P	P	13 33 24.5	-1.6
	0.7nm,0.7s,baz=330,slow=10,SNR=10.0						
	0.7nm,0.7s						
ASAR	Alice Springs	31.28	165	P	P	13 33 55.4	-0.9
	0.2nm,0.4s,baz=337,slow=6.9,SNR=19						
	0.2nm,0.4s						
STKA	Stephens Creek	41.33	159	P	P	13 35 23.0	+1.1
	0.9nm,0.7s,baz=342,slow=9.6,SNR=3.0						
	0.9nm,0.7s						
MKAR	Makanchi Array	54.43	325	P	P	13 37 02.0	-1.2
	0.3nm,0.6s,baz=124,slow=7.3,SNR=3.7						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	58.59	327	P	P	13 37 32.6	-0.1
	0.4nm,0.7s,baz=122,slow=6.4,SNR=6.1						
	0.4nm,0.7s						
BVAR	Borovoye Array	64.17	327	P	P	13 38 11.8	+1.3
	1.0nm,0.3s,baz=99,slow=7.4,SNR=8.8						
	1.0nm,0.3s						
ILAR	Eielson Array	82.97	26	P	P	13 40 01.3	+0.6
	0.5nm,0.9s,baz=257,slow=5.7,SNR=5.3						
	0.5nm,0.9s						

IDC ***15*** *13:39:49.9±1.0, 6°.55N×125°.17E, h0km, mb3.6/5, mbtmp3.6/5, MS2.7/1, Error ellipse: s-maj=24.6km s-min=9.5km az=123.0*

ISC 15 13:39:54.8±1.2**, 6°.6N**±0°.1×**125°.4E**±0°.3**, h35km, n7, σ1s.19**/6**, mb3.5**/5**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.46	23	Pg	Pn	13 40 04.1	-0.7
	864nm,0.3s,baz=238,slow=3.7,SNR=20						

DAV				Lg	Lg	13 40 10.2	
	5µm,0.3s,baz=229,slow=5.3,SNR=64						
DAV				LR	LR	13 40 37.4	
	comp=Z,593nm,21.9s,baz=146,slow=72						
KAPI	Kappang	12.88	206	LR	LR	13 47 58.6	
	comp=Z,35nm,21.3s,baz=22,slow=38						
WRA	Warramunga Arr	27.84	162	P	P	13 45 40.5	-0.7
	0.8nm,0.8s,baz=330,slow=9.9,SNR=7.5						
	0.8nm,0.8s						
ASAR	Alice Springs	31.25	165	P	P	13 46 11.2	-0.2
	0.4nm,0.5s,baz=343,slow=7.1,SNR=16						
	0.4nm,0.5s						
MKAR	Makanchi Array	54.42	325	P	P	13 49 17.9	-0.7
	0.3nm,0.7s,baz=130,slow=8.2,SNR=3.6						
	0.3nm,0.7s						
KURBB	Kurchatov Arra	58.59	327	P	P	13 49 48.3	+0.2
	0.6nm,0.6s,baz=126,slow=6.0,SNR=11						
	0.6nm,0.6s						
ILAR	Eielson Array	83.06	26	P	P	13 52 18.1	+1.6
	0.3nm,0.6s,baz=234,slow=5.5,SNR=9.4						
	0.3nm,0.6s						

MOS ***15*** *13:47:14.7±1.0, 37°.49N×72°.15E, h195^{km}, mb4.4/5, Error ellipse: s-maj=10.7km s-min=5.0km az=81.2*

IDC ***15*** *13:47:14.7±4.7, 37°.45N×72°.18E, h183^{km}±32^{km}, mb3.2/9, mbtmp3.9/15, Error ellipse: s-maj=41.2km s-min=21.0km az=178.0*

NEIC ***15*** *13:47:15.8±1.5, 37°.51N±0°.07×72°.09E±0°.10, h190^{km}±5^{km}, mb4.2/21, Error ellipse: s-maj=11.0km s-min=10.0km az=93.0*

NNC ***15*** *13:47:19.8±2.9, 37°.81N×71°.94E, h164^{km}±31^{km}, mb3.1, mpv3.8, Error ellipse: s-maj=26.7km s-min=14.8km az=14.0*

ISC 15 13:47:15.5±0.5**, 37°.47N**±0°.05×**72°.18E**±0°.05**, h200**^{km}**, n115, σ1^{s}.59**/123**, mb4.0**/22**, 6C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANEM	Manem	0.41	281		Pn	13 47 42.0	-0.6
MANEM				Sn	Sn	13 48 01.1	-2.4
DRK	Karamyk	2.03	352		Pn	13 47 54.2	-0.4
DRK	Karamyk	2.03	352	PN	Pn	13 47 54.2	-0.4
GAR	Garm	2.12	317		Pn	13 47 54.8	-0.6
CHGR	Chuyangaron	2.67	297		Pn	13 48 00.7	-0.6
CHGR	Chuyangaron	2.67	297	PN	Pn	13 48 00.7	-0.6
SHAA	Shahritus	3.23	273		Pn	13 48 07.1	-0.8
KSH	Kashi	3.61	54	Pn	Pn	13 48 07.0	-5.5
KSH				Sn	Sn	13 48 45.1	-12
KSH				smax	smax		
	comp=N,110nm,0.4s						
KSH				smax	smax		
	comp=E,110nm,0.5s						
KBL	Kabul	3.88	222		Pn	13 48 15.7	-0.3
KBL	Kabul	3.88	222	PN	Pn	13 48 15.7	-0.3
ARSB	Arslanbob	3.90	9		Pn	13 48 14.8	-1.2
ARSB	Arslanbob	3.90	9	PN	Pn	13 48 14.9	-1.2
NIL	Nilore	3.91	167		Pn	13 48 16.5	+0.3
NIL	Nilore	3.91	167	PN	Pn	13 48 16.5	+0.3
UCH	Uchtor	5.08	20	P	Pn	13 48 30.8	-0.5
	SNR=30						
JMU	Jammu	5.16	154	*e*P	Pn	13 48 30.0	-2.9
JMU				*e*S	Sn	13 49 26.1	-7.9
JMU				IAML		13 49 32.0	
	comp=N,264nm,0.3s						
JMU				IAML		13 49 32.8	
	comp=E,285nm,0.6s						
ALCI	Alchi Leh	5.20	127	*e*P	Pn	13 48 30.5	-2.3
ALCI				*e*S	Sn	13 49 27.5	-6.2
ALCI				IAML		13 49 33.3	
	comp=E,299nm,0.6s						
ALCI				IAML		13 49 34.3	
	comp=N,268nm,0.3s						
EKS2	Erkin-Say	5.33	13	P	Pn	13 48 33.9	-0.2
	SNR=6.4						
AAK	Ala-Archa	5.46	18	P	Pn	13 48 35.8	-0.1
	SNR=32						
AAK	Ala-Archa	5.46	18	P	Pn	13 48 35.7	-0.1
	comp=N,26nm,0.4s,baz=182,slow=6.0,SNR=136						
AAK				S	Sn	13 49 36.7	-2.7
	comp=N,17nm,0.5s,baz=328,slow=23,SNR=22						
AAK	Ala-Archa	5.46	18		Pn	13 48 35.4	-0.4
AAK	Ala-Archa	5.46	18	⇑P	Pn	13 48 35.4	-0.4
	comp=N,5.8nm,0.4s						
AAK				⇑S	Sn	13 49 36.2	-3.2
	comp=N,16nm,0.7s						
KBK	Karagaybulak	5.60	21	P	Pn	13 48 37.9	+0.3
	SNR=6.5						
FRU1	Bishkek	5.66	19	Pn	Pn	13 48 37.5	-0.8
FRU1	Bishkek	5.66	19	PN	Pn	13 48 37.5	-0.8
ULHL	Ulahol	5.70	32	P	Pn	13 48 38.0	-1.0
	SNR=8.4						
KK31	Karatay Array	5.77	348		Pn	13 48 38.8	-0.9
KK31	Karatay Array	5.77	348	P	Pn	13 48 39.1	-0.6
	comp=N,2.5nm,0.2s,baz=347,slow=1.4,SNR=180						
KK31				S	Sn	13 49 41.4	-5.1
	comp=N,14nm,0.2s,baz=161,slow=17,SNR=28						
KK31	Karatay Array	5.77	348	PN	Pn	13 48 38.8	-0.9
KKAR	Karatay Array	5.77	348		Pn	13 48 38.9	-0.8
KKAR	Karatay Array	5.77	348	PN	Pn	13 48 38.9	-0.8
BOOM	Boomskoye usch	5.79	29	Pn	Pn	13 48 39.1	-0.9
BOOM	Boomskoye usch	5.79	29	PN	Pn	13 48 39.1	-0.9
CHMS	Chumysh	5.86	19	P	Pn	13 48 40.6	-0.3
	SNR=7.5						
KDJ	Kajisay	6.04	38	Pn	Pn	13 48 42.4	-0.9
KDJ	Kajisay	6.04	38	PN	Pn	13 48 42.4	-0.9
TKM2	Tokmak 2	6.04	25	P	Pn	13 48 42.9	-0.5
	SNR=7.2						
USP	Ospenovka	6.06	16	P	Pn	13 48 42.4	-1.0
	SNR=14						
TARG	Taragay, Kyrgy	6.08	44	Pn	Pn	13 48 42.9	-1.2
TARG	Taragay, Kyrgy	6.08	44	PN	Pn	13 48 42.9	-1.2
DHRM	DHARAMSHALA	6.21	146	*e*P	Pn	13 48 42.9	-2.8
DHRM				*e*S	Sn	13 49 49.8	-7.2
DHRM				IAML		13 49 55.2	
	comp=E,209nm,0.6s						
DHRM				IAML		13 49 56.9	
	comp=N,266nm,0.7s						
BHK	Bhakra	6.98	149	*e*S	Sn	13 50 12.8	-2.0
BHK				IAML		13 50 16.8	
	comp=E,250nm,0.3s						
BHK				IAML		13 50 18.0	
	comp=N,254nm,0.5s						
SMLA	Simla	7.55	145	*e*P	Pn	13 49 01.0	-1.8
SMLA				*e*S	Sn	13 50 20.2	-8.0
SMLA				IAML		13 50 24.1	
	comp=N,195nm,0.6s						
SMLA				IAML		13 50 25.2	
	comp=E,187nm,0.5s						
MAKZ	Makanchi	11.82	35	Pn	Pn	13 49 56.9	-1.1
MAKZ	Makanchi	11.82	35	P	Pn	13 49 56.9	-1.1
MK31	Makanchi Array	11.95	36	P	P	13 50 04.3	-0.1
	comp=E,0.9nm,0.5s,baz=205,slow=11,SNR=17						
MK31	Makanchi Array	11.95	36	*i* P	Pn	13 50 00.3	+0.7
MKAR	Makanchi Array	11.95	36	P	Pn	13 50 00.4	+0.7
	comp=E,0.3nm,0.4s,baz=209,slow=10,SNR=15						
MKAR	Makanchi Array	11.95	36	P	P	13 50 05.3	+0.8
WMQ	Urumqi	13.37	57	*e*P	P	13 50 19.8	-0.5
KURBB	Kurchatov Arra	13.91	17	P	P	13 50 26.1	0.0
	comp=E,1.7nm,0.4s,baz=204,slow=11,SNR=24						
KURBB	Kurchatov Arra	13.91	17	⇑P	P	13 50 26.3	+0.2
	comp=E,7.7nm,1.1s						
KURBB	Kurchatov Arra	13.91	17	P	P	13 50 26.3	+0.2
KURK	Kurchatov	14.02	17	P	P	13 50 27.7	+0.5
KURK	Kurchatov	14.02	17	*ce*P	P	13 50 27.5	+0.2
KURK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
AB31	Akbulak array	14.74	327		Pn	13 50 34.3	0.0
AB31	Akbulak array	14.74	327	P	Pn	13 50 34.4	+0.1
	comp=Z,0.7nm,0.3s,baz=138,slow=10,SNR=30						
AB31				⇑S	S	13 53 12.9	-5.1
	comp=Z,1.3nm,0.4s,baz=146,slow=24,SNR=7.5						
AB31	Akbulak array	14.74	327	P	Pn	13 50 34.4	+0.1
AB31				S	S	13 53 12.9	-5.1
ABKAR	Akbulak array	14.74	327		Pn	13 50 34.4	+0.1
BVA0	Borovoye Array	15.61	356	P	P	13 50 46.7	+1.8
	comp=Z,2.5nm,1.2s,baz=164,slow=11,SNR=9.7						
BVA0	Borovoye Array	15.61	356	P	P	13 50 46.7	+1.8
BVAR	Borovoye Array	15.61	356	P	Pn	13 50 43.8	-1.0
	comp=Z,0.9nm,0.3s,baz=159,slow=8.9,SNR=12						
BORK	Borovoye	15.63	356	P	P	13 50 45.9	+0.8
BORK	Borovoye	15.63	356	P	P	13 50 45.9	+0.8
BORK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
DGZ	Jazzator, Alta	16.44	37	*i* P	P	13 50 54.3	+0.1
AKTO	Aktyubinsk	16.46	326	P	Pn	13 50 54.7	-0.4
	comp=Z,2.3nm,0.3s,baz=112,slow=7.9,SNR=7.9						
AKTO	Aktyubinsk	16.46	326	⇓P	Pn	13 50 56.5	+1.4
	comp=Z,0.8nm,0.3s						
ZAA0	Zalesovo Array	18.64	24	P	P	13 51 18.8	+0.7
ZAA0				IAmb	IAmb	13 51 19.4	
	comp=Z,10nm,0.8s						
ZALV	Zalesovo Beam	18.64	24	P	P	13 51 18.9	+0.9
	comp=Z,5.9nm,0.3s,baz=220,slow=10,SNR=49						
ZALV	Zalesovo Beam	18.64	24	*i* P	P	13 51 18.8	+0.8
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.3s						
AKT	Akhty	19.28	290	*e*P	P	13 51 26.4	+1.3
AKT				pmax	pmax		
	comp=Z,30nm,1.4s						
ARTI	Arti	21.07	338	P	P	13 51 44.7	+0.8
	comp=Z,1.6nm,0.5s,baz=166,slow=4.9,SNR=3.3						
	comp=Z,1.6nm,0.5s						
GTA	Gaotai	21.70	76	*e*P	P	13 51 52.8	+2.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
KNGR	Kungurtug, Tuv	22.32	46	*i* P	P	13 51 58.8	+2.2
KNGR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ZAK	Zakamensk	25.64	50	*e*P	P	13 52 27.0	+0.4
TLY	Talaya	26.29	47	*i* P	P	13 52 33.1	+0.8
TLY				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SONM	Songino Array	27.01	57	P	P	13 52 40.0	+1.0
	comp=Z,0.4nm,0.4s,baz=275,slow=8.9,SNR=4.6						
	comp=Z,0.4nm,0.4s						
SONM	Songino Array	27.01	57	P	P	13 52 40.0	+1.0
PZH	PanZhiHua	27.25	105	P	P	13 52 43.0	+1.7
ULN	Ulaanbaatar	27.45	57	P	P	13 52 44.6	+1.7
ULN				IAmb	IAmb	13 53 27.8	
	comp=Z,3.9nm,1.1s						
ULN	Ulaanbaatar	27.45	57	P	P	13 52 44.6	+1.7
ULN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
HHC	Hu-ho-hao-te	30.55	71	*e*P	P	13 53 11.0	+0.7
BURAR	Bucovina Array	35.57	302	P	P	13 53 53.9	+0.3
FINES	FINESS Array B	37.22	325	P	P	13 54 08.7	+1.4
	comp=Z,1.3nm,0.9s,baz=134,slow=8.2,SNR=4.8						
	comp=Z,1.3nm,0.9s						
FINES	FINESS Array B	37.22	325	*i* P	P	13 54 09.0	+1.7
ARCES	ARCESS Array B	40.62	337	P	P	13 54 36.4	+1.0
	comp=Z,3.1nm,0.9s,baz=119,slow=9.4,SNR=15						
	comp=Z,3.1nm,0.9s						
ARCES	ARCESS Array B	40.62	337	P	P	13 54 36.5	+1.1
ARCES				IAmb	IAmb	13 54 51.9	
	comp=Z,17nm,1.4s						
ARCES	ARCESS Array B	40.62	337	P	P	13 54 36.5	+1.1
ARCES				pmax	pmax		
	comp=Z,17nm,1.5s						
HFS	Hagfors	42.90	321	P	P	13 54 55.0	+1.1
	comp=Z,1.4nm,0.6s,baz=95,slow=12,SNR=4.7						
	comp=Z,1.4nm,0.6s						
CLL	Collm	43.33	308	*e*P	P	13 54 58.0	+0.5
CLL				*e**SP	sP	13 56 00.0	-4.1
CLL	Collm	43.33	308	*e*P	P	13 54 58.0	+0.5
CLL				*e*sP	sP	13 56 00.0	-4.1
KSAR	Wonju Array Be	43.65	72	P	P	13 55 01.8	+1.5
KSAR	Wonju Array Be	43.65	72	P	P	13 55 01.8	+1.5
NORES	NORESS Array B	44.01	322	P	P	13 55 03.7	+0.9
NC303	NORSAR Array S	44.12	323	P	P	13 55 05.4	+1.7
NC303				IAmb	IAmb	13 55 32.9	
	comp=Z,15nm,1.2s						
NOA	NORSAR Array B	44.19	322	P	P	13 55 05.0	+0.8
	comp=Z,0.4nm,0.5s,baz=103,slow=7.3,SNR=1.5						
	comp=Z,0.4nm,0.5s						
NC204	NORSAR Array S	44.42	323	P	P	13 55 07.1	+1.0
TIXI	Tiksi	44.52	22	*ce*P	P	13 55 08.2	+1.5
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.7s						
OSSC	Osservatorio P	45.83	298	P	P	13 55 18.9	+1.5
TORD	Torodi Ar. Bea	66.69	269	P	P	13 57 45.2	+0.1
	comp=Z,0.3nm,0.4s,baz=48,slow=6.8,SNR=3.5						
	comp=Z,0.3nm,0.4s						
F17K	Baldwin Pennin	68.64	20	P	P	13 57 57.9	+1.3
F17K				IAmb	IAmb	13 58 17.6	
	comp=Z,3.4nm,1.1s						
A36M	Sachs Harbour	70.15	6	P	P	13 58 07.3	+1.6
A36M				IAmb	IAmb	13 58 44.6	
	comp=Z,4.0nm,1.2s						
H18K	Honhosa River	70.40	20	P	P	13 58 08.4	+1.0
H18K				IAmb	IAmb	13 58 20.5	
	comp=Z,9.5nm,1.5s						
BMAR	Burnt Mountain	71.78	14	P	P	13 58 17.1	+1.5
H24K	Noodor Dome	72.46	16	P	P	13 58 21.1	+1.4
H24K				IAmb	IAmb	13 58 55.2	
	comp=Z,7.4nm,1.4s						
C36M	Paulatuk	72.82	6	P	P	13 58 22.5	+0.8
F31M	Tsiigehtchic	73.58	10	P	P	13 58 27.2	+1.1
F31M				IAmb	IAmb	13 58 57.3	
	comp=Z,6.5nm,1.5s						
ILAR	Eielson Array	73.59	16	P	P	13 58 26.4	+0.1
	comp=Z,0.4nm,0.9s,baz=312,slow=4.6,SNR=4.2						
	comp=Z,0.4nm,0.9s						
KTH	Kantishna Hill	73.65	19	P	P	13 58 27.5	+0.8
KTH				IAmb	IAmb	13 58 42.1	
	comp=Z,13nm,1.4s						
RED	Redoubt Volcan	75.73	21	P	P	13 58 39.5	+0.8
SML	Sawmill	75.77	19	P	P	13 58 39.6	+0.7
SML	Sawmill	75.77	19	P	P	13 58 39.6	+0.7
SML				pmax	pmax		
	comp=Z,14nm,1.1s						
K29M	Barlow Dome	76.31	13	P	P	13 58 43.3	+1.3
K29M				IAmb	IAmb	13 59 14.3	
	comp=Z,5.0nm,1.4s						
YKA	Yellowknife Ar	80.23	3	P	P	13 59 04.5	+1.2
	comp=Z,0.3nm,0.6s,baz=348,slow=5.7,SNR=10						
	comp=Z,0.3nm,0.6s						
YKA	Yellowknife Ar	80.23	3	P	P	13 59 03.7	+0.4

BJI ***15*** *14:09:08.7, 1°.68N×127°.44E, h113^{km}, mB5.6/62, mb5.6/95*

MOS ***15*** *14:09:09.9±0.9, 1°.75N×127°.36E, h118^{km}, mb5.5/65, Error ellipse: s-maj=8.5km s-min=3.9km az=117.2*

NEIC ***15*** *14:09:11.3±1.7, 1°.74N±0°.05×127°.28E±0°.05, h111^{km}±6^{km}, mb5.5/127, Mww5.4/27, Error ellipse: s-maj=8.8km s-min=5.6km az=137.0*

NEIC ***15*** *14:09:11.2, 1°.75N×127°.28E, h120^{km}*

NEIC ***15*** *14:09:11.2, 1°.75N×127°.28E, h120^{km}, Moment Tensor Solution. Duration: 2^{s}.4 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.68; M$_{\theta\theta}$-0.08; M$_{\phi\phi}$-0.60; M$_{r\theta}$-0.88; M$_{\theta\phi}$-0.78; M$_{\phi r}$-0.27; Fault plane solution: M$_0$1.37000×10^{17} NP1: φ$_s$2.58000°, δ35.78000°, λ32.73000°. NP2: φ$_s$245.04000°, δ71.57000°, λ121.22000°. Principal axes: T 1.2819, Plg53.0000°, Azm192.0000°; N 0.1570, Plg29.0000°, Azm54.0000°; P -1.4389, Plg20.0000°, Azm312.0000°;*

IDC ***15*** *14:09:12.0±0.8, 1°.78N×127°.19E, h119^{km}±6^{km}, mb4.9/26, mbtmp5.3/31, MS4.1/55 Error ellipse: s-maj=13.7km s-min=5.8km az=75.0*

GFZ ***15*** *14:09:11.2, 1°.76N×127°.34E, h113^{km}, MW5.3, Moment Tensor Solution. s140 Moment tensor: M$_{rr}$0.57; M$_{\theta\theta}$0.14; M$_{\phi\phi}$-0.71; M$_{r\theta}$-0.73; M$_{\theta\phi}$-0.35; M$_{\phi r}$-0.39; Fault plane solution: NP1: φ$_s$230.00000°, δ73.00000°, λ117.00000°. NP2: φ$_s$350.00000°, δ32.00000°, λ34.00000°. Principal axes: T 1.1300, Plg54.0000°, Azm174.0000°; N -0.0300, Plg26.0000°, Azm42.0000°; P -1.0900, Plg23.0000°, Azm300.0000°;*

DJA ***15*** *14:09:11.2±0.1, 2°N±1°×12°7E±°, h108^{km}±1^{km}, M5.4/139, mB5.9/116, mb5.7/139, MLv5.9/23, Mw5.4/168, Mw(mB)5.5/116, MwMwp5.1/31, Mwp5.3/31*

GCMT ***15*** *14:09:12.2±0.1, 1°.80N±0°.01×127°.22E±0°.01, h117^{km}±1^{km}, MW5.4/132, Moment Tensor Solution. s112, c190; s132, c257; Duration: 1^{s}.3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.49±.03; M$_{\theta\theta}$0.54±.03; M$_{\phi\phi}$-1.03±.03; M$_{r\theta}$-1.19±.02; M$_{\theta\phi}$-0.44±.03; M$_{\phi r}$-0.82±.02; Best double couple: M$_0$1.75700×10^{17} NP1: φ$_s$337.00000°, δ31.00000°, λ19.00000°. NP2: φ$_s$231.00000°, δ81.00000°, λ120.00000°. Principal axes: T 1.7330, Plg46.0000°, Azm171.0000°; N 0.0470, Plg29.0000°, Azm46.0000°; P -1.7810, Plg29.0000°, Azm297.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 14:09:10.9±0.2**, 1°.75N**±0°.02×**127°.29E**±0°.03**, h113**^{km}±1^{km}**, h113**^{km}**:pP-P, n1205, σ1^{s}.52**/1321**, mb5.5**/245**, 40C-34D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.97	175		Pn	14 09 32.2	+0.2
TNTI				Sn	Sn	14 09 47.2	-0.8
TNTI	Ternate	0.97	175	P	Pn	14 09 32.1	0.0
TNTI	Ternate	0.97	175	S	Sn	14 09 48.3	+0.3
TNTI	Ternate	0.97	175	P	Pn	14 09 32.3	+0.2
TNTI				S	Sn	14 09 47.9	-0.1
SGSI	Sangihe	2.61	318	P	Pn	14 09 50.6	-1.3
SANI	Sanana	3.99	199	P	Pn	14 10 09.1	-1.1
SANI	Sanana	3.99	199	P	Pn	14 10 09.4	-0.8
GTOI	Gorontalo	4.42	256	P	Pn	14 10 17.5	+1.6
SWI	Sorong	4.74	123	P	Pn	14 10 21.4	+1.1
NLAI	Namlea	4.96	182	P	Pn	14 10 23.5	+0.3
	25nm6µm999nm,0.6s						
KRAI	Karang Ratu	5.15	168	P	Pn	14 10 28.1	+2.2
	5.3nm8µm15µm1µm,1.0s						
LUWI	Luwuk	5.30	239		Pn	14 10 27.3	-0.6
LUWI	Luwuk	5.30	239	P	Pn	14 10 29.2	+1.4
LUWI	Luwuk	5.30	239	S	Sn	14 11 28.5	+0.8
LUWI	Luwuk	5.30	239	P	Pn	14 10 27.4	-0.4
	25µm1µm,0.9s						
MSAI	Masohi	5.32	162	P	Pn	14 10 30.8	+2.7
	5.8nm10µm27µm2µm,1.2s						
AAI	Ambon	5.47	170	P	Pn	14 10 31.3	+1.1
	4.0nm8µm11µm1µm,0.8s						
MRSI	Marisa	5.49	257	P	Pn	14 10 30.9	+0.4
DAV	Davao City (W)	5.56	342	P	Pn	14 10 30.9	-0.4
	415nm,0.3s,baz=118,slow=2.7,SNR=17						
DAV				S	Sn	14 11 32.6	-1.4
	2µm,0.4s,baz=174,slow=22,SNR=9.9						
DAV				LR	LR	14 12 14.5	
	comp=Z,3µm,19.2s,baz=123,slow=33						
DAV	Davao City (W)	5.56	342	P	Pn	14 10 31.3	-0.1
DAV				S	Sn	14 11 36.4	+2.4
DAV	Davao City (W)	5.56	342		Pn	14 10 30.6	-0.7
DAV	Davao City (W)	5.56	342	P	Pn	14 10 31.2	-0.1
DAV	Davao City (W)	5.56	342	S	Sn	14 11 34.4	+0.4
DAV	Davao City (W)	5.56	342	P	Pn	14 10 30.9	-0.4
	9µm34µm1µm,0.6s						
APSI	Ampana	6.23	245	P	Pn	14 10 40.0	-0.4
	19µm1µm,0.9s						
TOLI2	Tolitoli	6.54	265		Pn	14 10 44.1	-0.5
TOLI2	Tolitoli	6.54	265	P	Pn	14 10 44.3	-0.3
BNDI	Bandanaira	6.75	157	P	Pn	14 10 48.7	+1.2
BNDI	Bandanaira	6.75	157	P	Pn	14 10 48.9	+1.4
	7.4nm8µm28µm2µm,1.1s						
FAKI	Fak Fak	6.79	133		Pn	14 10 48.1	+0.1
FAKI	Fak Fak	6.79	133	P	Pn	14 10 50.1	+2.1
FAKI	Fak Fak	6.79	133	P	Pn	14 10 49.4	+1.4
	2.5nm9µm7µm719nm,1.2s						
MWPI	Manokwari, Pap	7.25	111	P	Pn	14 10 57.0	+2.7
	3.0nm10µm1µm,0.9s						
KDI	Kendari	7.34	219	P	Pn	14 10 54.5	-1.0
MPSI	Mapaga	7.52	259	P	Pn	14 10 58.1	+0.2
	2.1nm8µm6µm403nm,1.1s						
RKPI	Ransiki, Papua	7.61	115	P	Pn	14 11 01.4	+2.2
	2.5nm7µm6µm835nm,1.0s						
PCI	Palu	7.90	251	P	Pn	14 11 02.6	-0.5
	3.7nm8µm1µm,1.1s						
KKSI	Kolaka, Sulawe	8.14	224	P	Pn	14 11 05.7	-0.7
	4µm507nm,0.8s						
KMPI	Kaimana, Papua	8.37	130	P	Pn	14 11 10.4	+1.0
	6µm8µm661nm,1.4s						
TTSI	Tana Toraja	8.86	238	P	Pn	14 11 15.5	-0.5
	9µm1µm,0.9s						
BAKI	Biak	9.29	108	P	Pn	14 11 25.7	+3.8
SPSI	Sidrap Palu	9.42	233	P	Pn	14 11 23.5	-0.1
	6µm636nm,0.6s						
BNSI	Bone	9.42	230	P	Pn	14 11 23.2	-0.5
	4µm357nm,0.7s						
MMSI	Mamuju	9.46	242	P	Pn	14 11 24.3	0.0
SRPI	Serui, Papua	9.64	112	P	Pn	14 11 29.7	+3.0
	286nm,0.9s						
TARAI	Tarakan	9.84	279	P	Pn	14 11 28.8	-0.5
PMSI	Majene	9.86	238	P	Pn	14 11 29.8	+0.1
	4µm328nm,1.0s						
BKSI	Bulukumba	10.03	226	P	Pn	14 11 31.5	-0.4
	3µm229nm,0.5s						
KAPI	Kappang	10.09	228	P	Pn	14 11 32.8	0.0
	111nm,0.4s,baz=14,slow=3.8,SNR=40						
KAPI				S	Sn	14 13 21.1	-3.0
	212nm,0.5s,baz=300,slow=22,SNR=14						
KAPI	Kappang	10.09	228	P	Pn	14 11 33.2	+0.5
KAPI				S	Sn	14 13 21.4	-2.7
KAPI	Kappang	10.09	228		Pn	14 11 32.6	-0.2
KAPI	Kappang	10.09	228	P	Pn	14 11 33.5	+0.7
KAPI	Kappang	10.09	228	P	Pn	14 11 32.4	-0.4
	105nm,0.5s						
SAUI	Saumlaki	10.46	158		Pn	14 11 37.5	-0.3
SAUI	Saumlaki	10.46	158	P	Pn	14 11 38.0	+0.2
SAUI	Saumlaki	10.46	158	S	Sn	14 13 34.0	+0.9
SAUI	Saumlaki	10.46	158	P	Pn	14 11 37.8	0.0
BKB	Balikpapan	10.81	254		Pn	14 11 41.5	-1.0
BKB	Balikpapan	10.81	254	P	Pn	14 11 42.5	-0.1
BKB	Balikpapan	10.81	254	P	Pn	14 11 41.7	-0.9
MMRI	Maumere	11.48	206		Pn	14 11 51.1	-0.3
MMRI	Maumere	11.48	206	P	Pn	14 11 51.9	+0.4
MMRI	Maumere	11.48	206	P	Pn	14 11 51.4	-0.1
	6µm345nm,1.3s						
SOEI	Soe	11.81	195		Pn	14 11 55.7	-0.3
SOEI	Soe	11.81	195	P	Pn	14 11 57.8	+1.7
SOEI	Soe	11.81	195	P	Pn	14 11 57.8	+1.7
	5µm8µm647nm,0.8s						
EDFI	Ende, Flores	11.83	208	P	Pn	14 11 56.2	0.0
	5µm440nm,1.5s						
KKM	Kota Kinabalu	11.84	291		Pn	14 11 56.0	-0.4
KKM	Kota Kinabalu	11.84	291	P	Pn	14 11 57.1	+0.7
KKM	Kota Kinabalu	11.84	291	S	Sn	14 14 09.2	+2.4
KKM	Kota Kinabalu	11.84	291	P	Pn	14 11 56.1	-0.3
	5µm5µm369nm,1.0s						
SMPI	Sarmi	12.01	108	P	Pn	14 12 01.6	+3.1
	5µm6µm477nm,1.3s						
BATI	Baumata	12.41	197	P	Pn	14 12 04.8	+0.9
	382nm,0.8s,baz=65,slow=0.9,SNR=37						
BATI				S	Sn	14 14 21.1	+0.7
	76nm,0.7s,baz=340,slow=19,SNR=0.8						
BATI	Baumata	12.41	197	P	Pn	14 12 05.5	+1.7
	3µm6µm460nm,0.9s						
LBFI	Labuhan Bajo,	12.55	216	P	Pn	14 12 06.1	+0.4
	5µm545nm,1.0s						
MTKI	Muara Teweh, K	12.68	258	P	Pn	14 12 07.1	-0.2
	247nm,1.3s						
WSI	Waingapu	13.31	211	P	Pn	14 12 16.5	+1.0
BBKI	Banjar Baru	13.47	247	P	Pn	14 12 18.3	+0.6
	9µm347nm,1.7s						
DBNI	Kabupaten Domp	13.55	221	P	Pn	14 12 20.6	+1.9
	4µm362nm,0.9s						
GENI	Genyem	13.58	108	P	Pn	14 12 19.6	+0.6
GENI	Genyem	13.58	108	P	Pn	14 12 20.8	+1.8
BASI	Baing, Sumba	13.63	209	P	Pn	14 12 19.1	-0.6
WBSI	Waikabubak, Su	13.78	215	P	Pn	14 12 22.3	+0.7
	6µm627nm,0.8s						
TGY	Tagaytay City	13.79	333	P	Pn	14 12 21.5	-0.3
	166nm,0.4s,baz=314,slow=11,SNR=6.4						
TGY				LR	LR	14 18 02.3	
	comp=Z,1µm,21.2s,baz=166,slow=39						
JAY	Jayapura	14.06	107	P	Pn	14 12 26.6	+1.2
	359nm,0.8s,baz=262,slow=6.7,SNR=33						
JAY	Jayapura	14.06	107	P	Pn	14 12 26.1	+0.8
	4µm389nm,1.0s						
PLAI	Plampang	14.15	222	P	Pn	14 12 28.1	+1.7
PLAI	Plampang	14.15	222	P	P	14 12 29.0	-1.4
DRS	Darwin Rock St	14.53	166	P	Pn	14 12 30.1	-1.2
TWSI	Taliwang, Sumb	14.70	225	P	P	14 12 35.3	-1.2
MTN	Manton Dam	14.99	165	P	Pn	14 12 34.7	-2.3
MTN	Manton Dam	14.99	165		Pn	14 12 34.7	-2.3
KLNI	Mataram	15.05	228	P	Pn	14 12 39.0	+1.2
	8µm633nm,0.9s						
SBUM	Sibu	15.07	273		Pn	14 12 37.4	-0.7
SBUM	Sibu	15.07	273	P	Pn	14 12 38.4	+0.3
SBUM	Sibu	15.07	273	P	Pn	14 12 38.0	-0.1
	5µm488nm,1.2s						
MTNI	Mataram	15.14	227	P	Pn	14 12 34.5	-4.4
	4µm351nm,0.7s						
KDU	Kakadu	15.23	160	P	Pn	14 12 37.0	-3.1
KHKI	Kahang-Kahang	15.38	229	P	P	14 12 43.7	-0.3
DNP	Denpasar	15.88	229	P	P	14 12 49.6	0.0
KMMI	Kalianget	15.91	237	P	P	14 12 50.6	+0.7
	9µm1µm,1.0s						
RTBI	Rangdo, Negare	15.95	230	P	P	14 12 50.1	-0.3
	7µm888nm,1.0s						
IGBI	Denpasar	16.02	229	P	P	14 12 53.1	+2.0
	9µm538nm,0.5s						

ABJI	Asem Bagus	16.11	234	P	P	14 12 53.2	+1.1
	4µm343nm,1.6s						
JAGI	Jajag, Banyuwa	16.57	232		Pn	14 12 56.7	0.0
JAGI	Jajag, Banyuwa	16.57	232	P	P	14 12 58.7	+1.4
JAGI	Jajag, Banyuwa	16.57	232	P	P	14 12 58.9	+1.6
	6µm490nm,1.1s						
BLJI	Banyuglugur	16.60	235	P	P	14 13 01.3	+3.8
	4µm446nm,0.9s						
GMJI	Gumukmas	17.02	234	P	P	14 13 05.2	+3.0
	4µm351nm,1.4s						
SZP	Santa	17.08	337	P	Pn	14 13 03.9	+1.0
GRJI	Gresik	17.10	240	P	Pn	14 13 04.1	+0.9
KNRA	Kununurra	17.37	175	P	P	14 13 05.0	-1.0
	comp=Z,828nm,1.2s,comp=Z,0.0nm						
KNRA	Kununurra	17.37	175		P	14 13 05.3	-0.8
SJI	Sawahan	18.12	238	P	Pn	14 13 16.2	+0.6
	comp=Z,3µmcomp=Z,441nm,1.0s						
SNJI	Sawahan-Nganju	18.15	238	P	Pn	14 13 17.5	+1.5
	comp=Z,5µmcomp=Z,522nm,1.2s						
NGJI	Ngawi	18.20	240	P	Pn	14 13 17.8	+1.3
	comp=Z,3µmcomp=Z,319nm,1.0s						
PCJI	Pacitan	18.86	238	P	Pn	14 13 24.2	0.0
	comp=Z,6µmcomp=Z,793nm,1.1s						
SMRI	Semarang	18.95	242	P	P	14 13 24.1	+0.7
SMRI	Semarang	18.95	242	P	Pn	14 13 24.4	-0.9
SMRI	Semarang	18.95	242	P	Pn	14 13 24.4	-0.9
	comp=Z,4µmcomp=Z,377nm,1.0s						
UGM	Wanagama	19.28	240	Pn	Pn	14 13 29.1	0.0
UGM	Wanagama	19.28	240	P	Pn	14 13 29.0	-0.2
UGM	Wanagama	19.28	240	P	Pn	14 13 29.2	0.0
	comp=Z,3µmcomp=Z,282nm,1.0s						
YOGI	Yogyakarta	19.43	241	P	Pn	14 13 30.5	-0.5
	comp=Z,7µmcomp=Z,699nm,0.8s						
CTJI	Waduk Cacaban	20.05	244	P	P	14 13 35.6	+0.2
	comp=Z,238nm,0.8s						
TPI	Tanjungpandan	20.13	257	P	P	14 13 36.1	-0.2
	comp=Z,2µmcomp=Z,225nm,1.2s						
KPJI	Karang Pucung	20.42	244	P	P	14 13 39.4	+0.1
	comp=Z,3µmcomp=Z,386nm,1.0s						
MANU	Manus Island	20.42	101	P	P	14 13 39.3	-0.1
DLV	Lat	21.22	299	P	P	14 13 48.2	+0.1
DLV	Lat	21.22	299	P	P	14 13 48.5	+0.4
PPBI	Pangkal Pinang	21.50	260	P	P	14 13 51.6	+0.6
BBJI	Bungbulang	21.62	245	P	P	14 13 52.6	+0.3
BBJI	Bungbulang	21.62	245	P	P	14 13 52.8	+0.5
TWGBT	Beinan	21.80	344	P	P	14 13 52.0	-2.0
TWG	Pinlang	21.80	344	P	P	14 13 50.6	-3.4
CNJI	Cibinong	22.03	246	P	P	14 13 56.8	+0.2
	comp=Z,254nm,1.0s						
DBJI	Dramaga	22.10	248	P	P	14 13 58.7	+1.4
	comp=Z,261nm,1.3s						
COEN	Coen	22.17	135	P	P	14 13 55.7	-2.3
COEN	Coen	22.17	135	P	P	14 13 55.2	-2.7
COEN	Coen	22.17	135	P	P	14 13 56.7	-1.2
YULB	Yu-li	22.29	345	P	P	14 13 56.4	-2.7
YULB	Yu-li	22.29	345	P	P	14 13 57.3	-1.8
TPUB	Ta-pu	22.38	344	P	P	14 13 58.3	-1.8
TPUB	Ta-pu	22.38	344	P	P	14 13 58.5	-1.5
SKJI	Sukabumi	22.44	247	P	P	14 14 02.3	+1.5
	comp=Z,4µmcomp=Z,518nm,0.9s						
WB0	Warramunga Arr	22.49	162	P	P	14 14 00.4	-0.7
SBJI	Serang	22.53	250	P	P	14 14 02.4	+0.8
	comp=Z,412nm,1.2s						
WRAB	Tennant Creek	22.63	163	P	P	14 14 02.0	-0.6
WRAB	Tennant Creek	22.63	163	P	P	14 14 01.8	-0.8
WRAB	Tennant Creek	22.63	163	*ce*P	P	14 14 01.8	-0.8
WRAB				pmax	pmax		
	comp=Z,957nm,0.8s						
WRA	Warramunga Arr	22.64	163	P	P	14 14 02.1	-0.6
	comp=Z,711nm,0.6s,baz=340,slow=11,SNR=493						
WRA				S	S	14 18 02.3	-0.1
	comp=Z,35nm,0.9s,baz=337,slow=20,SNR=5.5						
WRA				ScP	ScP	14 21 19.1	-0.2
	comp=Z,13nm,0.8s,baz=340,slow=3.0,SNR=8.5						
WRA				LR	LR	14 22 60.0	
	comp=Z,1µm,21.8s,baz=339,slow=36						
PMG	Port Moresby	22.68	120	P	P	14 14 01.6	-1.6
PMG	Port Moresby	22.68	120	P	P	14 14 02.0	-1.2
PMG	Port Moresby	22.68	120	P	P	14 14 01.8	-1.4
PMG	Port Moresby	22.68	120	*ce*P	P	14 14 02.4	-0.8
PMG				pmax	pmax		
	comp=Z,261nm,2.5s						
WR8	Warramunga Arr	22.70	162	P	P	14 14 02.4	-0.8
TPRI	Tanjung Pinang	22.77	268	P	P	14 14 03.9	-0.2
DSRI	Dabo	22.82	265	P	P	14 14 04.4	-0.1
YOJ	Yonaguni jima	22.96	350	P	P	14 14 06.4	+0.7
YOJ	Yonaguni jima	22.96	350	P	P	14 14 06.5	+0.8
YOJ	Yonaguni jima	22.96	350	P	P	14 14 06.4	+0.7
NACB	Ninganchiao	22.97	347	P	P	14 14 05.2	-0.6
PMBI	Palembang	22.98	258	P	P	14 14 08.1	+2.0
JMJ	Miyako jima 2	23.02	355	P	P	14 14 08.0	+1.8
BLSI	Bandar Lampung	23.12	252	P	P	14 14 10.0	+2.5
	comp=Z,4µmcomp=Z,344nm,1.0s						
KLI	Kotabumi	23.35	254	P	P	14 14 11.6	+2.0
	comp=Z,4µmcomp=Z,480nm,1.0s						
MYKOM	Kota Tinggi	23.43	270	P	P	14 14 10.7	+0.5
MYKOM	Kota Tinggi	23.43	270	P	P	14 14 10.2	0.0
	comp=Z,4µmcomp=Z,291nm,1.1s						
KLSI		23.43	254	P	P	14 14 09.7	-0.6
	comp=Z,3µmcomp=Z,382nm,1.0s						
YHNB	Yeheng	23.50	346	P	P	14 14 09.9	-0.9
YHNB	Yeheng	23.50	346	P	P	14 14 10.5	-0.3
TATO	Taipei	23.76	347	P	P	14 14 14.6	+1.5
TATO	Taipei	23.76	347	P	P	14 14 14.2	+1.1
JMBI	JAMBI	23.88	262	P	P	14 14 14.1	-0.2
	comp=Z,11µmcomp=Z,783nm,1.6s						
KASI	Kota Agung	23.88	252	P	P	14 14 15.4	+1.1
	comp=Z,3µmcomp=Z,483nm,1.0s						
MDSI	Maura Dua	23.91	255	P	P	14 14 14.2	-0.4
	comp=Z,2µmcomp=Z,198nm,1.3s						
MBWA	Marble Bar	23.94	198	P	P	14 14 14.1	-0.6
	comp=Z,439nm,1.5s						
MBWA	Marble Bar	23.94	198	P	P	14 14 14.6	-0.2
MBWA				S	S	14 18 21.1	-2.1
MBWA	Marble Bar	23.94	198	P	P	14 14 14.2	-0.5
MBWA	Marble Bar	23.94	198	P	P	14 14 13.9	-0.8
HKPS	Hong Kong Po S	24.08	329	P	P	14 14 17.2	+1.2
LWLI	Liwa	24.16	254	P	P	14 14 17.5	+0.5
	comp=Z,8µmcomp=Z,788nm,1.2s						
QIZ	Qiongzhong	24.23	316	P	P	14 14 17.6	+0.2
QIZ				pP	pwP	14 14 42.8	-0.4
QIZ				S	S	14 18 26.8	-1.2
QIZ				pmax	pmax		
	comp=Z,420nm,1.2s						
QIZ				pmax	pmax		
	comp=Z,2µm,4.7s						
QIZ				LR	LR		
	comp=Z,2µm,17.8s						
QIZ				LR	LR		
	comp=Z,2µm,19.3s						
QIZ				LR	LR		
	comp=Z,1µm,20.3s						
QIZ	Qiongzhong	24.23	316	P	P	14 14 17.4	0.0
PSAC1	Pilbara Seismi	24.27	197	P	P	14 14 16.6	-1.1
	comp=Z,733nm,1.3s						
PSA00	Pilbara Seismi	24.29	197	P	P	14 14 16.9	-1.0
PSA00	Pilbara Seismi	24.29	197	P	P	14 14 17.4	-0.5
QZH	Quanzhou	24.54	341	⇓*i*P	P	14 14 21.0	+0.8
QZH				pP	pwP	14 14 47.0	+0.2
QZH				sP	sP	14 14 59.0	+2.2
QZH				S	S	14 18 33.4	+0.6
QZH				sS	sS	14 19 15.5	+0.9
QZH				pmax	pmax		
	comp=Z,340nm,1.1s						
QZH				pmax	pmax		
	comp=Z,1µm,4.9s						
QZH				LR	LR		
	comp=Z,1µm,22.7s						
XMI	Christmas Isla	24.68	240	P	P	14 14 21.9	+0.4
JOW	Kunigami	24.96	2	P	P	14 14 23.4	-0.5
	comp=Z,133nm,0.9s,baz=197,slow=9.1,SNR=15						
	comp=Z,133nm,0.9s						
JOW	Kunigami	24.96	2	P	P	14 14 24.2	+0.2
JOW				IAmb	IAmb	14 14 28.0	
	comp=Z,189nm,1.0s						
JOW	Kunigami	24.96	2	P	P	14 14 25.6	+1.6
MNAI	Manna	25.06	256	P	P	14 14 26.6	+1.5
MNAI	Manna	25.06	256	P	P	14 14 25.8	+0.7
	comp=Z,6µmcomp=Z,736nm,1.2s						
GZH	Guangzhou	25.16	329	P	P	14 14 28.4	+2.6
GZH				pP	pwP	14 14 53.1	+0.4
GZH				S	S	14 18 50.1	+7.4
GZH				pmax	pmax		
	comp=Z,230nm,1.1s						
QIS	Mount Isa	25.24	152	P	P	14 14 26.7	+0.1
	comp=Z,628nm,1.2s,comp=Z,0.0nm						
QIS	Mount Isa	25.24	152	P	P	14 14 26.6	0.0
KSI	Kapahiang	25.26	258	P	P	14 14 27.6	+0.7
	comp=Z,339nm,0.9s						
UBPT	Khong Chiam	25.38	303	P	P	14 14 28.4	+0.5
MASI	Maura Aman, Be	25.51	259	P	P	14 14 31.7	+2.5
RABL	Rabaul	25.55	103	P	P	14 14 29.6	0.0
RABL				IAmb	IAmb	14 15 07.6	
	comp=Z,222nm,1.2s						
UBSI	University, Be	25.60	258	P	P	14 14 33.4	+3.5
	comp=Z,7µmcomp=Z,621nm,1.0s						
MTSU	Mount Surprise	25.91	140	P	P	14 14 32.0	-0.7
	comp=Z,187nm,1.0s						
MTSU	Mount Surprise	25.91	140	P	P	14 14 32.9	+0.2
EGSI	Enggano, Bengk	25.96	254	P	P	14 14 33.0	-0.2
	comp=Z,197nm,1.3s						
AS31	Alice Springs	26.07	166	P	P	14 14 33.4	-0.7
AS31				IAmb	IAmb	14 14 38.8	
	comp=Z,82nm,0.7s						
ASAR	Alice Springs	26.07	166	P	P	14 14 33.6	-0.5
	comp=Z,98nm,0.5s,baz=350,slow=7.1,SNR=1653						
ASAR				S	S	14 19 03.4	+6.2
	comp=Z,29nm,1.0s,baz=343,slow=17,SNR=5.4						
ASAR				ScP	ScP	14 21 28.6	-0.2
	comp=Z,16nm,0.8s,baz=346,slow=2.6,SNR=10						
ASAR				LR	LR	14 26 51.5	
	comp=Z,335nm,18.9s,baz=346,slow=41						
	comp=Z,98nm,0.5s						
ASAR	Alice Springs	26.07	166	P	P	14 14 33.4	-0.7
KRJI	Kerinci	26.10	262	P	P	14 14 35.6	+1.0
BKNI	Bangkinang	26.28	267	P	P	14 14 37.5	+1.4
BKNI	Bangkinang	26.28	267	P	P	14 14 37.1	+1.0
	comp=Z,423nm,1.2s						
IPM	Ipoh	26.36	277	P	P	14 14 36.1	-0.7
IPM				IAmb	IAmb	14 14 42.0	
	comp=Z,128nm,1.1s						
IPM	Ipoh	26.36	277	P	P	14 14 36.6	-0.3
IPM	Ipoh	26.36	277	P	P	14 14 36.7	-0.2
	comp=Z,2µmcomp=Z,114nm,0.9s						
WRKA	Warakurna	26.64	178	P	P	14 14 38.4	-0.8
	comp=Z,210nm,1.1s						
KULM	Kulim	26.82	278	P	P	14 14 40.7	-0.2
KULM				IAmb	IAmb	14 14 43.0	
	comp=Z,134nm,1.3s						
KULM	Kulim	26.82	278	P	P	14 14 41.5	+0.6
KULM	Kulim	26.82	278	P	P	14 14 40.9	0.0
PDSI	Padang	26.95	265	P	P	14 14 42.6	+0.4
	comp=Z,2µmcomp=Z,65nm,0.8s						
PPI	Padang Panjang	26.98	266	P	P	14 14 43.2	+0.8
GIRL	Giralia	27.38	207	P	P	14 14 46.5	+0.7
	comp=Z,241nm,1.1s						
GIRL	Giralia	27.38	207	P	P	14 14 46.6	+0.8
PPSI	Pulau Pagai	27.64	261	P	P	14 14 47.4	-0.8
	comp=Z,2µmcomp=Z,163nm,1.7s						
MNSI	Mandailing Nat	27.72	268	P	P	14 14 49.0	0.0
	comp=Z,94nm,1.2s						
TV1H	Townsville Har	28.34	138	P	P	14 14 55.0	+0.6
SISI	Saibi	28.36	264	P	P	14 14 53.3	-1.4
	comp=Z,65nm,0.7s						
GULI	GuiLin	28.54	327	P	P	14 14 56.3	+0.2
GULI				S	S	14 19 38.3	+2.4
GULI				pmax	pmax		
	comp=Z,44nm,1.3s						
GULI				pmax	pmax		
	comp=Z,200nm,4.9s						
GULI				LR	LR		
	comp=Z,500nm,17.1s						
GULI				LR	LR		
	comp=Z,670nm,17.6s						
GULI				LR	LR		
	comp=Z,690nm,17.9s						
CTA	Charters Tower	28.58	140	LR	LR	14 26 53.0	
	comp=Z,567nm,21.4s,baz=310,slow=37						
CTAO	Charters Tower	28.58	140	P	P	14 14 57.1	+0.6
CTAO				IAmb	IAmb	14 15 02.9	
	comp=Z,102nm,0.9s						
CTAO	Charters Tower	28.58	140	P	P	14 14 57.2	+0.6
CTAO	Charters Tower	28.58	140	P	P	14 14 57.1	+0.6
CTAO				pmax	pmax		
	comp=Z,102nm,1.0s						
JCJ	Chichijima	28.97	28	LR	LR	14 25 26.2	
	comp=Z,265nm,21.0s,baz=196,slow=34						
PBSI	Pulau Batu	29.06	267	P	P	14 15 00.9	0.0
MEEK	Meekatharra	29.43	196	P	P	14 15 02.9	-1.2
	comp=Z,465nm,1.2s						
MEEK	Meekatharra	29.43	196	P	P	14 15 03.4	-0.7
KCSI	Kotacane, Aceh	29.54	274	P	P	14 15 03.8	-1.4
CNSH	ChangSha	29.66	334	P	P	14 15 07.3	+1.4
CNSH				S	S	14 19 55.9	+2.5
CNSH				pmax	pmax		
	comp=Z,29nm,1.3s						
CNSH				LR	LR		
	comp=Z,420nm,9.3s						
CNSH				LR	LR		
	comp=Z,820nm,17.8s						
CNSH				LR	LR		
	comp=Z,880nm,31.6s						
GSI	Gunungsitoli	29.71	270	P	P	14 15 05.2	-1.4
GSI				IAmb	IAmb	14 15 07.5	
	comp=Z,118nm,0.6s						
GSI	Gunungsitoli	29.71	270	P	P	14 15 05.8	-0.8
GSI	Gunungsitoli	29.71	270	P	P	14 15 05.3	-1.4
	comp=Z,2µmcomp=Z,176nm,1.2s						
SSE	Sheshan	29.76	349	P	P	14 15 07.8	+1.0
SSE				S	S	14 19 59.8	+4.9
SSE				SS	ScP	14 21 42.0	+2.1
SSE				PcS	PcS	14 21 51.5	+0.1
SSE				ScS	ScS	14 25 33.6	-1.5
SSE				pmax	pmax		
	comp=Z,21nm,0.8s						
SSE				pmax	pmax		
	comp=Z,170nm,3.6s						
SLVN	Son La	29.97	312	P	P	14 15 09.7	+0.8
TPTI		30.12	273	P	P	14 15 09.0	-1.2
MLSI	Meulaboh, Aceh	30.94	275	P	P	14 15 16.4	-1.1
	comp=Z,196nm,1.2s						
SNSI	Sinabang, Aceh	30.95	272	P	P	14 15 16.6	-1.0
	comp=Z,2µmcomp=Z,151nm,1.8s						
WHN	Wuhan	31.16	338	⇓*i*P	P	14 15 21.0	+1.8
WHN				sP	sP	14 15 56.0	-0.1
WHN				S	S	14 20 19.0	+2.1
WHN				ScP	ScP	14 21 44.9	+0.4
WHN				pmax	pmax		
	comp=Z,690nm,1.3s						
WHN				LR	LR		
	comp=Z,2µm,18.9s						
NJ2	Nanjing	31.18	346	⇑*i*P	P	14 15 21.5	+2.2
NJ2				pP	pwP	14 15 48.4	+1.7
NJ2				S	S	14 20 22.8	+5.7
NJ2				ScP	ScP	14 21 44.9	+0.4
NJ2				ScS	ScS	14 25 42.1	+0.1
NJ2				pmax	pmax		
	comp=Z,24nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,540nm,3.8s						
JNU	Nakatsue	31.39	6	P	P	14 15 21.1	-0.2
	comp=Z,29nm,0.9s,baz=169,slow=4.7,SNR=11						
JNU				LR	LR	14 29 41.5	
	comp=Z,272nm,19.9s,baz=182,slow=39						
	comp=Z,29nm,0.9s						
JNU	Nakatsue	31.39	6	P	P	14 15 20.5	-0.8
JNU	Nakatsue	31.39	6	P	P	14 15 21.9	+0.6
GYA	Guiyang	31.57	323	⇓P	P	14 15 24.0	+1.0
GYA				sP	sP	14 16 01.5	+1.5
GYA				S	S	14 20 24.5	+0.8
GYA				pmax	pmax		
	comp=Z,55nm,1.1s						
GYA				pmax	pmax		
	comp=Z,570nm,3.8s						
GYA				LR	LR		
	comp=Z,250nm,10.8s						
GYA				LR	LR		
	comp=Z,480nm,13.8s						
GYA				LR	LR		
	comp=Z,390nm,13.3s						
INKA	Innaminka	32.05	157	P	P	14 15 27.1	+0.1
FORT	Forrest	32.35	179	P	P	14 15 28.7	-1.0
	comp=Z,212nm,0.9s						
FORT	Forrest	32.35	179	P	P	14 15 28.7	-1.0
FORT				IAmb	IAmb	14 15 30.2	
	comp=Z,144nm,0.8s						
CM31	Chiang Mai Arr	32.38	303	P	P	14 15 31.1	+1.0
	SNR=40						
CMAR	Chiang Mai Arr	32.38	303	P	P	14 15 30.7	+0.6
	comp=Z,34nm,1.0s,baz=119,slow=7.0,SNR=158						
CMAR				ScP	ScP	14 21 50.4	+1.4
	comp=Z,28nm,1.1s,baz=145,slow=2.0,SNR=41						
CMAR				LR	LR	14 30 09.6	
	comp=Z,208nm,18.7s,baz=110,slow=39						
	comp=Z,34nm,1.0s						
CMAR	Chiang Mai Arr	32.38	303	P	P	14 15 30.3	+0.2
JMN	Monobe	32.41	10	P	P	14 15 31.5	+1.3
MORW	Morawa	32.48	199	P	P	14 15 29.5	-1.3
	comp=Z,261nm,1.1s						
MORW	Morawa	32.48	199	P	P	14 15 30.8	0.0
CHTO	Chiang Mai	32.54	303	P	P	14 15 31.5	0.0
CHTO	Chiang Mai	32.54	303	P	P	14 15 31.2	-0.3
CHTO				IAmb	IAmb	14 15 33.5	
	comp=Z,247nm,1.4s						
CHTO	Chiang Mai	32.54	303	P	P	14 15 31.9	+0.4
CHTO	Chiang Mai	32.54	303	P	P	14 15 31.8	+0.3
	comp=Z,2µmcomp=Z,124nm,1.3s						
CHTO	Chiang Mai	32.54	303	P	P	14 15 31.2	-0.3
CHTO				pmax	pmax		
	comp=Z,247nm,1.4s						
CHTO	Chiang Mai	32.54	303	P	P	14 15 32.0	+0.4
QLP	Quilpie	32.57	151	P	P	14 15 30.5	-1.1
	comp=Z,253nm,1.7s						
QLP	Quilpie	32.57	151	P	P	14 15 31.1	-0.5
ENH	Enshi	33.02	331	P	P	14 15 36.1	+0.6
KMI	Kunming	33.18	317	⇑P	P	14 15 38.8	+1.6
KMI				S	S	14 20 54.8	+5.8
KMI				ScP	ScP	14 21 53.4	+1.5
KMI				pmax	pmax		
	comp=Z,140nm,1.5s						
KMI				LR	LR		
	comp=Z,1µm,18.5s						
KMI				LR	LR		
	comp=Z,970nm,22.5s						
KMI				LR	LR		
	comp=Z,820nm,21.8s						
COCO	West Island	33.27	245	P	P	14 15 37.4	-0.5
COCO				IAmb	IAmb	14 15 40.8	
	comp=Z,113nm,1.0s						
COCO	West Island	33.27	245	P	P	14 15 38.4	+0.6
	comp=Z,67nm,0.9s						
COCO	West Island	33.27	245	P	P	14 15 37.4	-0.5
COCO				pmax	pmax		
	comp=Z,113nm,1.0s						
KMBL	Kambalda	33.33	188	P	P	14 15 37.2	-0.9
	comp=Z,112nm,0.9s						
JHJ	Hachijo jima 2	33.34	19	LR	LR	14 28 01.6	
	comp=Z,423nm,19.3s,baz=250,slow=34						
BLDU	Ballidu	33.72	197	P	P	14 15 40.8	-0.8
	comp=Z,365nm,1.2s						
BLDU	Ballidu	33.72	197	P	P	14 15 41.2	-0.4
TATA	Tatamba Isabel	33.94	108	P	P	14 15 42.6	-1.1
KLBR	Kellerberrin	34.37	195	P	P	14 15 46.1	-1.0
	comp=Z,392nm,1.2s						
KLBR	Kellerberrin	34.37	195	P	P	14 15 46.8	-0.4
GD1S	Gladstone Soft	34.44	139	P	P	14 15 49.0	+1.1
TJN	Taejon	34.46	0	P	P	14 15 48.6	+0.7
TJN	Taejon	34.46	0	*i* P	P	14 15 47.0	-0.9
INU	Inuyama	34.64	14	P	P	14 15 49.9	+0.5
INU	Inuyama	34.64	14	P	P	14 15 49.7	+0.3
PZH	PanZhiHua	34.76	317	P	P	14 15 51.1	+0.3
PZH				S	S	14 21 12.9	-0.2
PZH				pmax	pmax		
	comp=Z,80nm,1.2s						
PZH				pmax	pmax		
	comp=Z,420nm,3.7s						
JGF	Kuroka	34.96	14	IAmb	IAmb	14 16 30.1	
	comp=Z,44nm,1.1s						
JGF	Kuroka	34.96	14	P	P	14 15 52.2	-0.1
MUN	Mundaring	35.15	196	P	P	14 15 52.7	-1.2
	comp=Z,200nm,1.0s						
MUN	Mundaring	35.15	196	P	P	14 15 53.6	-0.3
MUN	Mundaring	35.15	196	P	P	14 15 52.7	-1.2
MTKN	Mount Kenneth	35.23	197	P	P	14 15 56.1	+1.5
	comp=Z,342nm,1.0s						
MTKN	Mount Kenneth	35.23	197	P	P	14 15 56.3	+1.7
BBOO	Buckleboo	35.36	167	P	P	14 15 54.3	-1.4
	comp=Z,461nm,1.5s						
BBOO	Buckleboo	35.36	167	P	P	14 15 55.0	-0.6
LYN	LuoYang	35.45	339	⇓*i*P	P	14 15 58.0	+1.6
LYN				pP	pwP	14 16 26.6	+2.5
LYN				sP	sP	14 16 37.8	+4.3
LYN				PP	PP	14 17 19.8	+0.6
LYN				S	S	14 21 25.3	+2.1
LYN				ScP	ScP	14 22 00.8	+1.4
LYN				sS	sS	14 22 05.3	-0.6
LYN				SS	SnSn	14 23 53.9	-1.4
LYN				ScS	ScS	14 26 06.4	+2.2
LYN				pmax	pmax		
	comp=Z,490nm,1.1s						
LYN				pmax	pmax		
	comp=Z,640nm,4.2s						
EIDS	Eidsvold	35.46	141	P	P	14 15 55.8	-0.9
	comp=Z,179nm,1.5s						
EIDS	Eidsvold	35.46	141	P	P	14 15 56.3	-0.3
KSAR	Wonju Array Be	35.53	1	P	P	14 15 57.8	+0.8
KSAR	Wonju Array Be	35.53	1	P	P	14 15 57.8	+0.8
KSRS	Korea Array	35.54	1	P	P	14 15 57.9	+0.7
	comp=Z,42nm,0.9s,baz=179,slow=9.9,SNR=109						
KSRS				PcP	PcP	14 18 25.4	+1.5
	comp=Z,5.9nm,0.9s,baz=186,slow=2.1,SNR=6.5						
KSRS				ScP	ScP	14 21 60.0	+0.3
	comp=Z,11nm,0.9s,baz=186,slow=3.6,SNR=22						
KSRS				LR	LR	14 32 35.7	
	comp=Z,136µm,19.8s,baz=180,slow=40						
	comp=Z,42nm,0.9s						
TIA	Tai'an	35.56	346	P	P	14 15 58.0	+0.6
TIA				pP	pP	14 16 20.8	-1.1
TIA				PP	PP	14 17 19.5	-0.9
TIA				S	S	14 21 21.5	-3.5
TIA				SS	SnSn	14 23 51.8	-6.3
TIA				pmax	pmax		
	comp=Z,54nm,0.8s						
TIA				pmax	pmax		
	comp=Z,490nm,3.8s						
TIA				LR	LR		
	comp=Z,450nm,10.4s						
TIA				LR	LR		
	comp=Z,420nm,12.4s						
TIA				LR	LR		
	comp=Z,470nm,22.8s						
INCN	Inchon	35.57	359	P	P	14 15 57.6	+0.3
INCN				IAmb	IAmb	14 15 59.3	
	comp=Z,40nm,0.8s						
INCN	Inchon	35.57	359	P	P	14 15 58.7	+1.3
INCN	Inchon	35.57	359	P	P	14 15 57.7	+0.3
INCN				pmax	pmax		
	comp=Z,40nm,0.8s						
PBA	Port Blair	35.65	288	P	P	14 15 58.2	-0.2
NWAO	Narrogin (SRO)	35.77	195	P	P	14 15 58.7	-0.5
	comp=Z,189nm,1.7s						
NWAO	Narrogin (SRO)	35.77	195	P	P	14 15 59.5	+0.3
NWAO	Narrogin (SRO)	35.77	195	P	P	14 15 58.8	-0.5
NWAO	Narrogin (SRO)	35.77	195	P	P	14 15 59.3	+0.1
NWAO	Narrogin (SRO)	35.77	195	P	P	14 15 58.8	-0.4
NWAO				pmax	pmax		
	comp=Z,810nm,1.9s						
WHYH	Whyalla	35.93	165	P	P	14 16 00.3	-0.2
MJAR	Matsushiro Arr	36.07	15	P	P	14 16 00.6	-1.1
	comp=Z,22nm,0.8s,baz=189,slow=8.9,SNR=49						
MJAR				PcP	PcP	14 18 25.9	+0.4
	comp=Z,10.0nm,1.0s,baz=180,slow=2.8,SNR=5.4						
MJAR				ScP	ScP	14 22 02.0	+0.3
	comp=Z,13nm,1.2s,baz=211,slow=3.8,SNR=12						
MJAR				LR	LR	14 28 01.7	
	comp=Z,427nm,21.6s,baz=213,slow=31						
	comp=Z,22nm,0.8s						
MJAR	Matsushiro Arr	36.07	15	P	P	14 16 00.7	-1.0
MJAR				IAmb	IAmb	14 16 03.1	
	comp=Z,34nm,0.9s						
MJAR	Matsushiro Arr	36.07	15	P	P	14 16 00.7	-1.0
MJAR				pmax	pmax		
	comp=Z,34nm,0.9s						
MAJO	Matsushiro	36.07	15	P	P	14 16 00.7	-1.0
MAJO				IAmb	IAmb	14 16 03.1	
	comp=Z,48nm,0.9s						
MAJO	Matsushiro	36.07	15	P	P	14 16 01.1	-0.6
MAJO	Matsushiro	36.07	15	P	P	14 16 00.7	-1.0
MAJO				pmax	pmax		
	comp=Z,47nm,0.9s						
MAJO	Matsushiro	36.07	15	P	P	14 16 00.9	-0.8
MJB9	Matsu-Tunnel	36.07	15	IAmb	IAmb	14 16 04.1	
	comp=Z,45nm,0.9s						
STKA	Stephens Creek	36.09	159	P	P	14 16 02.1	+0.2
	comp=Z,833nm,0.7s,baz=333,slow=8.6,SNR=1664						

STKA				PP	**PP**	**14 17 24.3**	**-2.0**
	comp=Z,112nm,0.8s,baz=311,slow=11,SNR=4.1						
STKA				LR	LR	14 32 19.1	
	comp=Z,342nm,20.4s,baz=347,slow=38						
STKA	**Stephens Creek**	**36.09**	**159**	P	**P**	**14 16 02.2**	**+0.3**
STKA	**Stephens Creek**	**36.09**	**159**	P	**P**	**14 16 02.2**	**+0.3**
STKA				pmax	pmax		
	comp=Z,4µm,0.8s						
TNCH	**TengChong**	**36.14**	**312**	P	**P**	**14 16 03.1**	**+0.4**
TNCH				pP	pP	14 16 28.4	+1.1
TNCH				PP	**PnPn**	**14 17 28.5**	**+0.7**
TNCH				S	**S**	**14 21 36.3**	**+1.9**
TNCH				ScP	**ScP**	**14 22 03.5**	**+1.0**
TNCH				ScS	**ScS**	**14 26 08.0**	**-0.8**
TNCH				pmax	pmax		
	comp=Z,200nm,1.4s						
TNCH				pmax	pmax		
	comp=Z,900nm,4.1s						
TNCH				LR	LR		
	comp=Z,680nm,21.1s						
AUHAR	**St Anne's Scho**	**36.28**	**196**	P	**P**	**14 16 04.3**	**+0.8**
AUJCS	**Jamestown Cent**	**36.37**	**164**	P	**P**	**14 16 04.0**	**-0.3**
XAN	**Xi'an**	**36.43**	**334**	⇓P	**P**	**14 16 05.3**	**+0.4**
XAN				pP	pP	14 16 30.9	+1.5
XAN				S	**S**	**14 21 39.3**	**+1.0**
XAN				ScP	**ScP**	**14 22 03.8**	**+0.7**
XAN				SS	**SnSn**	**14 24 09.4**	**-10**
XAN				pmax	pmax		
	comp=Z,370nm,1.2s						
XAN				pmax	pmax		
	comp=Z,1µm,4.0s						
XAN				LR	LR		
	comp=Z,380nm,19.9s						
XAN				LR	LR		
	comp=Z,430nm,19.2s						
XAN				LR	LR		
	comp=Z,470nm,19.2s						
CD2	**Chengdu**	**36.57**	**325**	⇓P	**P**	**14 16 06.5**	**+0.4**
CD2				S	**S**	**14 21 40.4**	**-0.2**
CD2				ScP	**ScP**	**14 22 04.0**	**+0.3**
CD2				pmax	pmax		
	comp=Z,200nm,1.2s						
CD2				pmax	pmax		
	comp=Z,1µm,3.6s						
CD2				LR	LR		
	comp=Z,680nm,19.7s						
CD2				LR	LR		
	comp=Z,520nm,14.0s						
CD2				LR	LR		
	comp=Z,440nm,13.3s						
HTT	**Hallett**	**36.67**	**164**	P	**P**	**14 16 06.2**	**-0.8**
	comp=Z,59nm,1.3s						
HTT	**Hallett**	**36.67**	**164**	P	**P**	**14 16 07.1**	**+0.2**
HTT	**Hallett**	**36.67**	**164**	P	**P**	**14 16 06.1**	**-0.8**
AUCAS	**Cummins Area S**	**36.68**	**168**	P	**P**	**14 16 07.1**	**+0.2**
AULRC	**Lightning Ridg**	**36.78**	**149**	P	**P**	**14 16 07.3**	**-0.5**
AUBUS	**Georgiana Moll**	**36.96**	**197**	P	**P**	**14 16 10.4**	**+1.1**
HNS	**HongShan**	**37.33**	**343**	⇓P	**P**	**14 16 13.3**	**+1.0**
HNS				pP	**pwP**	**14 16 42.3**	**+2.1**
HNS				PcP	**PcP**	**14 18 30.0**	**+0.7**
HNS				S	**S**	**14 21 52.0**	**+0.3**
HNS				ScP	**ScP**	**14 22 06.9**	**+0.6**
HNS				pmax	pmax		
	comp=Z,78nm,1.1s						
HNS				pmax	pmax		
	comp=Z,550nm,4.3s						
HNS				LR	LR		
	comp=Z,290nm,15.1s						
HNS				LR	LR		
	comp=Z,340nm,16.2s						
HNS				LR	LR		
	comp=Z,400nm,18.4s						
DL2	**Dalian**	**37.34**	**353**	⇑*i*P	**P**	**14 16 13.5**	**+1.1**
DL2				pP	**pwP**	**14 16 40.8**	**+0.5**
DL2				sP	**sP**	**14 16 48.6**	**-1.1**
DL2				S	**S**	**14 21 59.3**	**+7.4**
DL2				pmax	pmax		
	comp=Z,93nm,0.9s						
DL2				pmax	pmax		
	comp=Z,210nm,5.2s						
CMSA	**Cobar Meteorol**	**37.43**	**154**	P	**P**	**14 16 12.8**	**-0.5**
	comp=Z,283nm,1.3s						
CMSA	**Cobar Meteorol**	**37.43**	**154**	P	**P**	**14 16 13.7**	**+0.4**
RKGY	**Rocky Gully**	**37.44**	**194**	P	**P**	**14 16 14.1**	**+0.8**
	comp=Z,612nm,1.2s						
JSD	**Sado**	**37.50**	**14**	P	**P**	**14 16 13.6**	**-0.1**
TW1H	**Toowoomba 1 Ha**	**37.58**	**143**	P	**P**	**14 16 15.0**	**+0.3**
AUALB	**St Joseph's Co**	**37.60**	**193**	P	**P**	**14 16 15.4**	**+0.8**
AUMAR	**Marden Senior**	**37.97**	**165**	P	**P**	**14 16 18.0**	**+0.3**
GHSS	**Government Hou**	**37.98**	**165**	P	**P**	**14 16 18.9**	**+1.0**
AUWSH	**Wavell State H**	**38.13**	**141**	P	**P**	**14 16 19.4**	**+0.1**
TIY	**Taiyuan**	**38.31**	**341**	*e*P	**P**	**14 16 21.9**	**+1.2**
TIY				sP	**sP**	**14 16 55.8**	**-2.2**
TIY				PP	**PP**	**14 17 49.8**	**-0.9**
TIY				S	**S**	**14 22 08.3**	**+1.5**
TIY				pmax	pmax		
	comp=Z,130nm,0.9s						
TIY				pmax	pmax		
	comp=Z,450nm,3.9s						
TIY				LR	LR		
	comp=Z,240nm,22.7s						
TIY				LR	LR		
	comp=Z,360nm,20.6s						
TIY				LR	LR		
	comp=Z,430nm,23.4s						
AUMBR	**Murray Bridge**	**38.37**	**164**	P	**P**	**14 16 21.4**	**+0.3**
H01W3	**Cape Leeuwin H**	**38.47**	**198**	P	**P**	**14 16 23.8**	**+2.1**
	baz=30,slow=7.6,SNR=12						
H01W1	**Cape Leeuwin H**	**38.47**	**197**	P	**P**	**14 16 23.6**	**+1.8**
	baz=30,slow=7.6,SNR=11						
H01W2	**Cape Leeuwin H**	**38.48**	**197**	P	**P**	**14 16 23.6**	**+1.8**
	baz=30,slow=7.6,SNR=9.0						
GC1S	**Gold Coast 1 S**	**38.97**	**142**	P	**P**	**14 16 26.5**	**+0.3**
SAIH	**SAIHA**	**39.18**	**304**	*e*P	**P**	**14 16 28.1**	**-0.1**
SAIH				IAmb	IAmb	14 16 30.1	
	comp=Z,60nm,0.8s						
AUDCS	**Dubbo College**	**39.38**	**151**	P	**P**	**14 16 29.8**	**+0.2**
BJT	**Baijiatuau**	**39.41**	**347**	P	**P**	**14 16 30.5**	**+0.7**
BJT	**Baijiatuau**	**39.41**	**347**	P	**P**	**14 16 30.5**	**+0.7**
BJI	**Beijing**	**39.43**	**347**	P	**P**	**14 16 30.6**	**+0.7**
BJI				pP	**pP**	**14 16 56.0**	**+1.3**
BJI				sP	**sP**	**14 17 09.5**	**+2.2**
BJI				PP	**PnPn**	**14 18 07.0**	**+0.3**
BJI				PcP	**PcP**	**14 18 37.5**	**+1.7**
BJI				S	**S**	**14 22 24.5**	**+1.1**
BJI				sS	**sS**	**14 23 08.3**	**+1.7**
BJI				SS	**SS**	**14 25 15.9**	**-6.3**
BJI				ScS	**ScS**	**14 26 28.3**	**+1.7**
BJI				pmax	pmax		
	comp=Z,68nm,1.0s						
BJI				pmax	pmax		
	comp=Z,270nm,5.5s						
BJI				LR	LR		
	comp=Z,120nm,15.9s						
BJI				LR	LR		
	comp=Z,140nm,13.9s						
BJI				LR	LR		
	comp=Z,180nm,14.7s						
ARMA	**Armidale**	**39.52**	**146**	P	**P**	**14 16 31.7**	**+0.7**
	comp=Z,352nm,1.1s						
ARMA	**Armidale**	**39.52**	**146**	P	**P**	**14 16 31.6**	**+0.7**
AUPHS	**Peel High Scho**	**39.63**	**147**	P	**P**	**14 16 32.4**	**+0.6**
KOHI	**KOHIMA**	**39.85**	**310**	IAmb	IAmb	14 16 35.2	
	comp=Z,43nm,2.0s						
MOKO	**MOKOCHONG**	**39.86**	**311**	*e*P	**P**	**14 16 33.9**	**0.0**
MOKO				IAmb	IAmb	14 16 35.4	
	comp=Z,68nm,0.1s						
PASG	**PASIGHAT**	**40.22**	**314**	*e*P	**P**	**14 16 36.6**	**-0.1**
PASG				IAmb	IAmb	14 16 38.5	
	comp=Z,47nm,0.3s						
BRDH	**Bariadhala**	**40.38**	**304**	LR	LR	14 35 08.3	
	comp=Z,219nm,20.2s,baz=162,slow=39						
SILR	**SILCHAR**	**40.40**	**307**	*e*P	**P**	**14 16 38.3**	**+0.1**
SILR				IAmb	IAmb	14 16 41.1	
	comp=Z,88nm,1.0s						
LZDM	**Lanzhou Array**	**40.46**	**330**	P	**P**	**14 16 40.5**	**+1.6**
	comp=Z,99nm,1.0s,baz=155,slow=11,SNR=48						
LZDM				ScP	**ScP**	**14 22 19.8**	**+0.9**
	comp=Z,3.8nm,0.4s,baz=131,slow=6.5,SNR=4.2						
LZDM				LR	LR	14 34 13.5	
	comp=Z,447nm,21.5s,baz=35,slow=37						
	comp=Z,99nm,1.0s						
LZH	**Lanzhou**	**40.49**	**330**	⇓P	**P**	**14 16 40.8**	**+1.9**
LZH				pP	pwP	14 17 08.6	+1.5
LZH				sP	sP	14 17 18.5	+2.1
LZH				ScP	**ScP**	**14 22 19.4**	**+0.6**
LZH				S	**S**	**14 22 42.6**	**+3.0**
LZH				SS	**SS**	**14 25 37.8**	**-5.9**
LZH				ScS	**ScS**	**14 26 34.0**	**+0.6**
LZH				pmax	pmax		
	comp=Z,510nm,1.8s						
LZH				pmax	pmax		
	comp=Z,1µm,4.3s						
LZH				LR	LR		
	comp=Z,930nm,16.5s						
LZH				LR	LR		
	comp=Z,720nm,15.2s						
LZH				LR	LR		
	comp=Z,800nm,21.6s						
ARPS	**Mount Arapiles**	**40.64**	**162**	P	**P**	**14 16 39.9**	**-0.1**
	comp=Z,450nm,1.1s						
BELO	**BELONIA**	**40.79**	**304**	*e*P	**P**	**14 16 41.5**	**+0.1**
BELO				IAmb	IAmb	14 16 43.7	
	comp=Z,97nm,1.4s						
PSTR	**Posyet**	**40.85**	**4**	*i* P	**P**	**14 16 41.7**	**+0.2**
ITAN	**ITANAGAR**	**40.90**	**311**	*e*P	**P**	**14 16 42.2**	**0.0**
ITAN				IAmb	IAmb	14 16 44.5	
	comp=Z,67nm,0.8s						
YNG	**Young**	**40.98**	**153**	P	**P**	**14 16 42.8**	**0.0**
	comp=Z,306nm,1.1s						
ZIRO	**ZIRO**	**41.01**	**312**	*e*P	**P**	**14 16 43.2**	**-0.1**
ZIRO				IAmb	IAmb	14 16 45.6	
	comp=Z,64nm,1.2s						
AUMAG	**Moama Anglican**	**41.02**	**158**	P	**P**	**14 16 44.1**	**+1.0**
MGBR	**Mount Gambier**	**41.16**	**164**	P	**P**	**14 16 44.7**	**+0.6**
AGT	**Agartala**	**41.23**	**305**	*e*P	**P**	**14 16 45.0**	**0.0**
AGT				IAmb	IAmb	14 16 48.0	
	comp=Z,37nm,0.2s						
TEZP	**TEZPUR**	**41.32**	**310**	*e*P	**P**	**14 16 45.7**	**-0.1**
TEZP				IAmb	IAmb	14 16 47.3	
	comp=Z,50nm,0.8s						
VLA	**Vladivostok**	**41.40**	**5**	*i* P	**P**	**14 16 45.0**	**-1.0**
VLA				pmax	pmax		
	comp=Z,82nm,1.1s						
MGCD	**Mangrove Creek**	**41.40**	**149**	P	**P**	**14 16 47.5**	**+1.2**
	comp=Z,106nm,1.0s						
MGCD	**Mangrove Creek**	**41.40**	**149**	P	**P**	**14 16 47.7**	**+1.4**
HHC	**Hu-ho-hao-te**	**41.45**	**342**	*e*P	**P**	**14 16 48.0**	**+1.4**
HHC				pP	pwP	14 17 13.4	-1.4
HHC				sP	sP	14 17 25.6	+1.4
HHC				PP	**PP**	**14 18 23.3**	**-1.4**
HHC				S	**S**	**14 22 54.8**	**+1.2**
HHC				SS	**SS**	**14 26 03.5**	**+1.2**
HHC				pmax	pmax		
	comp=Z,57nm,0.8s						
HHC				pmax	pmax		
	comp=Z,520nm,4.9s						
HHC				LR	LR		
	comp=Z,290nm,17.9s						
HHC				LR	LR		
	comp=Z,190nm,17.9s						
HHC				LR	LR		
	comp=Z,310nm,17.9s						
SHL	**Shillong**	**41.51**	**308**	P	**P**	**14 16 48.0**	**+0.5**
	SNR=82						
SHL	**Shillong**	**41.51**	**308**	P	**P**	**14 16 47.7**	**+0.2**
SHL	**Shillong**	**41.51**	**308**	*e*P	**P**	**14 16 46.7**	**-0.8**
SHL	**Shillong**	**41.51**	**308**	P	**P**	**14 16 47.7**	**+0.2**
SHL				pmax	pmax		
	comp=Z,409nm,1.1s						
SYDH	**Sydney Hard Ro**	**41.66**	**150**	P	**P**	**14 16 49.6**	**+1.3**
BTO	**Baotou**	**41.73**	**340**	*e*P	**P**	**14 16 50.5**	**+1.6**
BTO				pP	**pP**	**14 17 13.3**	**-0.7**
BTO				sP	**sP**	**14 17 25.1**	**-1.4**
BTO				PP	**PnPn**	**14 18 32.5**	**-1.2**
BTO				S	**S**	**14 23 02.8**	**+5.1**
BTO				sS	**sS**	**14 23 42.3**	**+1.1**
BTO				SS	**SS**	**14 26 08.3**	**+0.4**
BTO				pmax	pmax		
	comp=Z,67nm,2.0s						
BTO				pmax	pmax		
	comp=Z,1µm,7.7s						
AUKHS	**Kincumber High**	**41.74**	**149**	P	**P**	**14 16 49.6**	**+0.6**
CN2	**Changchun**	**41.91**	**358**	*e*P	**P**	**14 16 49.8**	**-0.4**
CN2				PP	**PP**	**14 18 27.1**	**-2.4**
CN2				*e*S	**S**	**14 22 55.6**	**-4.4**
CN2				SS	**SS**	**14 26 08.3**	**-2.8**
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
CN2				pmax	pmax		
	comp=Z,100nm,5.0s						
CN2				LR	LR		
	comp=Z,300nm,15.0s						
CN2				LR	LR		
	comp=Z,400nm,15.0s						
CN2				LR	LR		
	comp=Z,300nm,14.0s						
RIV	**Riverview**	**41.92**	**150**	P	**P**	**14 16 51.0**	**+0.5**
	comp=Z,279nm,1.2s						
RIV	**Riverview**	**41.92**	**150**	P	**P**	**14 16 51.3**	**+0.9**
RIV	**Riverview**	**41.92**	**150**	P	**P**	**14 16 50.9**	**+0.5**
GUWA	**GUWAHATI**	**41.97**	**309**	*e*P	**P**	**14 16 50.8**	**-0.2**
GUWA				IAmb	IAmb	14 16 52.5	
	comp=Z,60nm,0.7s						
BRAT	**Ballarat**	**42.03**	**160**	P	**P**	**14 16 52.0**	**+0.7**
AUMTC	**Mt Clear Colle**	**42.07**	**160**	P	**P**	**14 16 52.1**	**+0.5**
CAN	**Canberra**	**42.10**	**153**	P	**P**	**14 16 53.4**	**+1.4**
AUDAR	**Daramalan Coll**	**42.10**	**153**	P	**P**	**14 16 52.7**	**+0.7**
AUMHS	**Melrose High S**	**42.17**	**153**	P	**P**	**14 16 53.4**	**+0.8**
WOLH	**Wollongong Har**	**42.24**	**151**	P	**P**	**14 16 54.8**	**+1.8**
CNB	**Canberra Magne**	**42.26**	**153**	P	**P**	**14 16 53.3**	**0.0**
	comp=Z,233nm,1.1s						
CNB	**Canberra Magne**	**42.26**	**153**	P	**P**	**14 16 54.0**	**+0.7**
USRK	**Ussuriysk Ar.**	**42.48**	**5**	P	**P**	**14 16 55.5**	**+0.7**
	comp=Z,64nm,0.9s,baz=190,slow=7.7,SNR=42						
	comp=Z,64nm,0.9s						
TOO	**Toolangi**	**42.60**	**158**	P	**P**	**14 16 57.1**	**+1.2**
	comp=Z,101nm,1.2s						
TOO	**Toolangi**	**42.60**	**158**	P	**P**	**14 16 56.6**	**+0.6**
TOO				IAmb	IAmb	14 16 58.6	
	comp=Z,64nm,0.8s						
TOO	**Toolangi**	**42.60**	**158**	P	**P**	**14 16 56.6**	**+0.6**
TOO				pmax	pmax		
	comp=Z,64nm,0.9s						
MLBS	**Spotswood, Mel**	**42.62**	**159**	P	**P**	**14 16 57.5**	**+1.5**
MDJ	**Mudanjiang**	**42.74**	**2**	P	**P**	**14 16 58.0**	**+1.0**
MDJ				pmax	pmax		
	comp=Z,100nm,1.2s						
MDJ	**Mudanjiang**	**42.74**	**2**	P	**P**	**14 16 57.9**	**+1.0**
AUUHS	**Ulladulla High**	**42.81**	**152**	P	**P**	**14 16 58.9**	**+1.2**
AUSMG	**Snowy Mountain**	**42.85**	**154**	P	**P**	**14 16 59.2**	**+1.1**
SANVU	**Saraoutou**	**43.01**	**115**	P	**P**	**14 16 59.6**	**+0.1**
SANVU	**Saraoutou**	**43.01**	**115**	P	**P**	**14 17 00.6**	**+1.1**
SANVU	**Saraoutou**	**43.01**	**115**	P	**P**	**14 17 00.5**	**+1.1**
XLT	**XiLinHaoTe**	**43.14**	**348**	*e*P	**P**	**14 17 00.9**	**+0.6**
XLT				pP	pP	14 17 22.3	-3.2
XLT				ScP	**ScP**	**14 22 29.3**	**+0.2**
XLT				S	**S**	**14 23 15.1**	**-3.2**
XLT				pmax	pmax		
	comp=Z,82nm,1.1s						
XLT				LR	LR		
	comp=Z,37nm,12.9s						
XLT				LR	LR		
	comp=Z,220nm,14.7s						
XLT				LR	LR		
	comp=Z,310nm,17.8s						
MILA	**Mila**	**43.62**	**154**	P	**P**	**14 17 04.9**	**+0.7**
	comp=Z,75nm,1.0s						
BNX	**BinXian**	**43.81**	**0**	⇓P	**P**	**14 17 05.3**	**-0.3**
BNX				pP	**pP**	**14 17 28.9**	**-1.9**
BNX				PP	**PP**	**14 18 49.8**	**0.0**
BNX				S	**S**	**14 23 28.8**	**+0.9**
BNX				sS	**sS**	**14 24 11.4**	**-0.3**
BNX				pmax	pmax		
	comp=Z,31nm,1.1s						
BNX				pmax	pmax		
	comp=Z,160nm,4.9s						
BNX				LR	LR		
	comp=Z,240nm,13.6s						
BNX				LR	LR		
	comp=Z,210nm,11.9s						
BNX				LR	LR		
	comp=Z,360nm,18.4s						
LSA	**Lhasa**	**44.17**	**313**	P	**P**	**14 17 06.5**	**-2.8**
LSA				pmax	pmax		
	comp=Z,130nm,1.1s						
LSA	**Lhasa**	**44.17**	**313**	P	**P**	**14 17 10.6**	**+1.3**
ASAJ	**Asahikawa**	**44.33**	**16**	LR	LR	14 35 29.4	
	comp=Z,304nm,19.9s,baz=185,slow=36						
DVP	**Devils Point**	**44.69**	**117**	P	**P**	**14 17 14.1**	**+1.1**
NOUC	**Port Laguerre**	**44.85**	**124**	P	**P**	**14 17 14.6**	**+0.4**
GTK	**Tadong**	**44.93**	**308**	*e*P	**P**	**14 17 14.6**	**-0.4**
GTK				IAmb	IAmb	14 17 17.6	
	comp=Z,112nm,0.9s						
DZM	**Mont Dzumac**	**44.95**	**124**	*e*P	**P**	**14 17 14.1**	**-1.1**
	comp=Z,308nm,1.2s						
DZM				*e*S	**S**	**14 23 47.9**	**+2.6**
	comp=Z,423nm,23.9s						
DZM				*e*SS	**SS**	**14 27 06.7**	**-3.1**
	comp=Z,643nm,26.4s						
DZM				*e*LR	LR	14 29 57.3	
	comp=Z,1µm,32.4s						
DZM	**Mont Dzumac**	**44.95**	**124**	P	**P**	**14 17 15.6**	**+0.4**
ONTNC	**Ouen Toro**	**45.07**	**124**	P	**P**	**14 17 15.9**	**0.0**
ONTNC				IAmb	IAmb	14 17 17.6	
	comp=Z,95nm,0.9s						
ONTNC	**Ouen Toro**	**45.07**	**124**	P	**P**	**14 17 16.2**	**+0.3**
GTA	**Gaotai**	**45.08**	**330**	P	**P**	**14 17 17.9**	**+2.0**
GTA				pP	pwP	14 17 46.9	+2.6
GTA				ScP	**ScP**	**14 22 38.1**	**+0.9**
GTA				S	**S**	**14 23 48.9**	**+2.2**
GTA				ScS	**ScS**	**14 27 01.6**	**-0.2**
GTA				pmax	pmax		
	comp=Z,220nm,1.2s						
GTA				pmax	pmax		
	comp=Z,720nm,5.2s						
GTA				LR	LR		
	comp=Z,310nm,18.5s						
GTA				LR	LR		
	comp=Z,280nm,20.0s						
GTA				LR	LR		
	comp=Z,510nm,19.3s						
YATNC	**Mamie plateau,**	**45.32**	**124**	P	**P**	**14 17 18.9**	**+1.0**
OUENC	**Ouen Island, N**	**45.44**	**124**	P	**P**	**14 17 19.8**	**+0.9**
GOMU	**GeErMu**	**45.58**	**323**	P	**P**	**14 17 21.3**	**+1.0**
GOMU				pmax	pmax		
	comp=Z,100nm,1.4s						
BOK	**Bokaro**	**45.66**	**302**	*e*P	**P**	**14 17 20.5**	**-0.1**
AUBRN	**Burnie High Sc**	**45.82**	**160**	P	**P**	**14 17 22.3**	**+0.8**
VIS	**Vishakhapatnam**	**45.98**	**293**	*e*P	**P**	**14 17 23.9**	**+0.8**
MARNC	**Mare, Loyalty**	**46.03**	**122**	P	**P**	**14 17 24.6**	**+1.1**
PINNC	**Pines Island,**	**46.03**	**124**	P	**P**	**14 17 24.7**	**+1.3**
PINNC				IAmb	IAmb	14 17 25.9	
	comp=Z,250nm,1.3s						
PINNC	**Pines Island,**	**46.03**	**124**	P	**P**	**14 17 25.1**	**+1.6**
RAGD	**RAYAGADA**	**46.28**	**295**	*e*P	**P**	**14 17 25.5**	**-0.1**
INH	**Isangel**	**46.32**	**119**	P	**P**	**14 17 26.5**	**+0.7**
GLAD	**Gladstone**	**46.53**	**158**	P	**P**	**14 17 27.6**	**+0.5**
GAYA	**Gaya**	**46.60**	**303**	*e*P	**P**	**14 17 28.0**	**+0.1**
CORO	**Coronation Par**	**46.63**	**159**	P	**P**	**14 17 28.7**	**+0.9**
YSS	**Yuzhno-Sakhali**	**47.00**	**14**	*e*P	**P**	**14 17 29.2**	**-1.5**
YSS				*e**PP	**pP**	**14 17 55.8**	**-0.3**
YSS				*e*		14 19 21.1	
YSS				*e*S	**S**	**14 24 12.5**	**-1.2**
YSS				*e*SS	SS	14 27 31.0	-11
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
YSS				pmax	pmax		
	comp=Z,300nm,3.2s						
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
YSS				MLR	MLR		
	comp=E,300nm,16.0s						
MOO	**Moorlands**	**47.52**	**160**	P	**P**	**14 17 34.7**	**-0.1**
	comp=Z,116nm,1.1s						
MOO	**Moorlands**	**47.52**	**160**	P	**P**	**14 17 35.8**	**+1.0**
HIA	**Hailar**	**47.78**	**353**	P	**P**	**14 17 38.1**	**+1.4**
TAU	**Tasmania Unive**	**47.98**	**160**	P	**P**	**14 17 38.7**	**+0.4**
TAU				IAmb	IAmb	14 17 40.2	
	comp=Z,78nm,0.9s						
TAU	**Tasmania Unive**	**47.98**	**160**	P	**P**	**14 17 39.0**	**+0.7**
TAU	**Tasmania Unive**	**47.98**	**160**	P	**P**	**14 17 38.7**	**+0.4**
TAU				pmax	pmax		
	comp=Z,77nm,0.9s						
TAU	**Tasmania Unive**	**47.98**	**160**	P	**P**	**14 17 39.2**	**+1.0**
HILR	**Hailar Array B**	**48.07**	**353**	P	**P**	**14 17 39.8**	**+0.8**
	comp=Z,21nm,0.7s,baz=167,slow=9.6,SNR=21						
HILR				ScP	**ScP**	**14 22 49.5**	**+0.1**
	comp=Z,7.9nm,1.0s,baz=160,slow=9.2,SNR=6.2						
HILR				LR	LR	14 38 35.8	
	comp=Z,105nm,20.7s,baz=175,slow=37						
	comp=Z,21nm,0.7s						
BLSP	**Bilaspur**	**48.33**	**298**	*e*P	**P**	**14 17 41.0**	**-0.4**
HEH	**HeiHe**	**48.33**	**0**	*e*P	**P**	**14 17 41.0**	**+0.1**
HEH				pP	**pP**	**14 18 05.3**	**-1.2**
HEH				ScP	**ScP**	**14 22 49.6**	**-0.7**
HEH				S	**S**	**14 24 31.3**	**-1.1**
HEH				pmax	pmax		
	comp=Z,66nm,1.1s						
ULN	**Ulaanbaatar**	**49.17**	**342**	P	**P**	**14 17 49.1**	**+1.6**
ULN	**Ulaanbaatar**	**49.17**	**342**	P	**P**	**14 17 47.9**	**+0.4**
ULN				IAmb	IAmb	14 17 50.0	
	comp=Z,108nm,0.9s						
ULN	**Ulaanbaatar**	**49.17**	**342**	P	**P**	**14 17 48.5**	**+1.0**
ULN	**Ulaanbaatar**	**49.17**	**342**	*ce*P	**P**	**14 17 48.7**	**+1.2**
ULN				pmax	pmax		
	comp=Z,166nm,1.3s						
SONM	**Songino Array**	**49.34**	**342**	P	**P**	**14 17 49.9**	**+1.0**
	comp=Z,35nm,0.9s,baz=159,slow=7.9,SNR=130						
SONM				ScP	**ScP**	**14 22 54.9**	**-0.1**
	comp=Z,3.3nm,0.9s,baz=170,slow=4.3,SNR=4.7						
SONM				LR	LR	14 41 02.8	
	comp=Z,259nm,20.1s,baz=147,slow=39						
	comp=Z,35nm,0.9s						
SONM	**Songino Array**	**49.34**	**342**	P	**P**	**14 17 49.5**	**+0.7**
SONM				IAmb	IAmb	14 17 51.2	
	comp=Z,50nm,0.9s						
GRNR	**Gornyy**	**49.46**	**8**	⇑*i*P	**P**	**14 17 50.0**	**+0.5**
GRNR				pmax	pmax		
	comp=Z,20nm,0.9s						
GRNR				MLR	MLR		
	comp=E,60nm,14.0s						
GRNR				MLR	MLR		
	comp=N,120nm,15.0s						
GRNR				MLR	MLR		
	comp=Z,170nm,15.0s						
NFK	**Norfolk Island**	**49.50**	**131**	P	**P**	**14 17 50.4**	**+0.2**
	comp=Z,367nm,1.1s						
SALM	**Salem**	**49.66**	**284**	*e*P	**P**	**14 17 51.8**	**+0.2**
ALBI	**Allahabad**	**49.67**	**302**	*e*P	**P**	**14 17 51.7**	**+0.2**
KOD	**Kodaikanal**	**50.20**	**282**	*e*P	**P**	**14 17 55.7**	**-0.4**
HYB	**Hyderabad**	**50.33**	**291**	*e*P	**P**	**14 17 56.9**	**+0.2**
HYB				*e*pP	**pP**	**14 18 22.9**	**+0.3**
HYB				*e*PP	**PP**	**14 19 52.9**	**-0.4**
HYB				*e*S	**S**	**14 25 01.8**	**+0.4**
CIT	**Chita**	**51.41**	**349**	*e*P	**P**	**14 18 05.0**	**+0.8**
CIT				*e*		14 18 28.8	
CIT				*e*		14 20 02.4	
CIT				pmax	pmax		
	comp=Z,170nm,1.5s						
ZEA	**Zeya**	**51.82**	**360**	*e*P	**P**	**14 18 07.0**	**-0.2**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
ZEA				MLR	MLR		
	comp=N,200nm,15.0s						
AKL	**Akola**	**52.50**	**295**	*e*P	**P**	**14 18 12.7**	**-0.2**
ZAK	**Zakamensk**	**52.57**	**341**	*e*P	**P**	**14 18 13.3**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,26nm,1.4s						
LGTI	**Lohaghat**	**52.60**	**306**	*e*P	**P**	**14 18 13.0**	**+0.4**
FUNA	**Funafuti**	**52.74**	**102**	P	**P**	**14 18 14.5**	**-0.1**
FUNA	**Funafuti**	**52.74**	**102**	P	**P**	**14 18 15.5**	**+0.8**
FUNA	**Funafuti**	**52.74**	**102**	P	**P**	**14 18 15.3**	**+0.7**
BHPL	**Bhopal**	**52.81**	**298**	*e*P	**P**	**14 18 14.9**	**-0.2**
NRDN	**NARMADA NAGAR**	**52.89**	**297**	*e*P	**P**	**14 18 15.6**	**-0.1**
GUNA	**GUNA**	**53.29**	**300**	*e*P	**P**	**14 18 18.5**	**-0.2**
JOSI	**Joshimath**	**53.47**	**307**	*e*P	**P**	**14 18 19.8**	**-0.3**
TLY	**Talaya**	**53.58**	**342**	P	**P**	**14 18 22.1**	**+1.9**
TLY	**Talaya**	**53.58**	**342**	P	**P**	**14 18 20.8**	**+0.6**
TLY				IAmb	IAmb	14 18 26.0	
	comp=Z,47nm,1.3s						
TLY	**Talaya**	**53.58**	**342**	*ce*P	**P**	**14 18 21.9**	**+1.7**
TLY				pmax	pmax		
	comp=Z,25nm,1.0s						
MSVF	**Nonsavu**	**53.60**	**113**	P	**P**	**14 18 21.2**	**+0.2**
MSVF	**Nonsavu**	**53.60**	**113**	P	**P**	**14 18 22.4**	**+1.4**
MSVF	**Nonsavu**	**53.60**	**113**	*c i*P	**P**	**14 18 20.8**	**-0.2**
MSVF				pmax	pmax		
	comp=Z,227nm,1.1s						
IRK	**Irkutsk**	**53.88**	**343**	*e*P	**P**	**14 18 22.2**	**-0.2**
IRK				pmax	pmax		
	comp=Z,56nm,1.6s						

KAAM	Kaadhehdhoo	54.30	269	P	P	14 18 26.0	-0.1
KAAM	Kaadhehdhoo	54.30	269	P	P	14 18 26.4	+0.3
	comp=Z,90nm,0.9s						
KAD	Karad	54.40	290	eP	P	14 18 26.7	-0.1
MOY	Mondy	54.42	340	eP	P	14 18 27.6	+1.1
MOY				pmax	pmax		
	comp=Z,80nm,1.8s						
BISR	Bishrakh	54.46	304	eP	P	14 18 27.0	0.0
DDI	Dehra Dun	54.58	307	eP	P	14 18 27.6	-0.4
WMQ	Urumqi	54.66	326	⇓P	P	14 18 30.0	+1.7
WMQ				ScP	ScP	14 23 18.1	+0.1
WMQ				S	S	14 26 02.3	+2.5
WMQ				pmax	pmax		
	comp=Z,130nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,690nm,4.3s						
WMQ				LR	LR		
	comp=Z,700nm,15.9s						
WMQ				LR	LR		
	comp=Z,600nm,18.5s						
WMQ				LR	LR		
	comp=Z,400nm,23.7s						
NPLP	NPLP New Delhi	54.70	304	eP	P	14 18 28.0	-0.8
KNGR	Kungurtug, Tuv	54.82	337	i P	P	14 18 28.4	-1.0
KNGR				pmax	pmax		
	comp=Z,60nm,1.4s						
KLP	Kalpa	54.88	308	eP	P	14 18 30.1	-0.3
POO	Poona	54.94	291	eP	P	14 18 30.4	-0.3
KUDL	Kundal	55.10	303	eP	P	14 18 31.7	+0.1
DGAR	Diego Garcia	55.46	260	P	P	14 18 35.8	+1.4
DGAR	Diego Garcia	55.46	260	P	P	14 18 34.1	-0.3
DGAR	Diego Garcia	55.46	260	ceP	P	14 18 36.5	+2.1
DGAR				pmax	pmax		
	comp=Z,270nm,1.3s						
SMLA	Simla	55.59	307	eP	P	14 18 35.0	0.0
BHK	Bhakra	56.29	307	eP	P	14 18 37.1	-3.0
UDPR	Udaipur	56.44	298	eP	P	14 18 42.0	+0.6
DHRM	DHARAMSHALA	56.69	308	eP	P	14 18 43.8	+0.6
ALCI	Alchi Leh	56.76	311	eP	P	14 18 43.5	-0.3
TLWR	Talawar	56.85	308	eP	P	14 18 44.6	+0.5
PEA0B	Petropavlovsk-	57.05	21	i P	P	14 18 45.2	+0.1
PETK	Petropavlovsk-	57.05	21	P	P	14 18 46.1	+1.0
	comp=Z,14nm,0.9s,baz=186,slow=3.8,SNR=23						
PETK				ScP	ScP	14 23 27.4	-0.8
	comp=Z,4.8nm,0.8s,baz=217,slow=6.9,SNR=4.2						
PETK				LR	LR	14 41 54.4	
	comp=Z,72nm,21.9s,baz=217,slow=34						
	comp=Z,14nm,0.9s						
PETK	Petropavlovsk-	57.05	21	P	P	14 18 45.7	+0.6
PET	Petropavlovsk	57.34	22	eP	P	14 18 47.8	+0.8
PET				e*SP	sP	14 19 26.0	+0.4
PET				eS	S	14 26 35.3	+0.6
PET				pmax	pmax		
	comp=Z,33nm,1.3s						
PET				MLR	MLR		
	comp=Z,100nm,17.0s						
BKNR	BIKANER	57.76	302	eP	P	14 18 50.4	-0.2
JMU	Jammu	58.04	308	eP	P	14 18 52.5	+0.7
WUS	Wushi	58.41	319	P	P	14 18 56.9	+1.9
WUS				PcP	PcP	14 19 44.7	+0.1
ZSN	Zaisan	58.47	328	⇓iP	P	14 18 55.1	0.0
ZSN	Zaisan	58.47	328	d iP	P	14 18 56.0	+0.9
DGZ	Jazzator, Alta	58.59	331	d iP	P	14 18 56.9	+0.8
DGZ				pmax	pmax		
	comp=Z,64nm,1.3s						
JCZ	Jackson Bay	58.76	146	P	P	14 18 57.9	+0.6
KUZ	Kuaotunu	59.02	136	P	P	14 19 00.1	+1.0
MLZ	Mavora Lakes	59.22	148	IAmb	IAmb	14 19 01.1	
	comp=Z,41nm,0.7s						
SHLS	Shalkode	59.22	321	eP	P	14 18 59.6	-1.0
	comp=Z,40nm,0.9s						
SHLS	Shalkode	59.22	321	eP	P	14 18 59.5	-1.0
SHLS				pmax	pmax		
	comp=Z,41nm,0.9s						
PDGK	Podgornoye	59.29	321	P	P	14 19 01.6	+0.5
MK31	Makanchi Array	59.49	326	ceP	P	14 19 03.2	+0.9
MKAR	Makanchi Array	59.49	326	P	P	14 19 03.4	+1.1
	comp=Z,74nm,0.6s,baz=118,slow=7.8,SNR=680						
MKAR				ScP	ScP	14 23 39.1	-0.1
	comp=Z,2.2nm,0.8s,baz=112,slow=4.7,SNR=3.2						
MKAR				S	S	14 27 05.2	+2.1
	comp=Z,6.5nm,1.2s,baz=122,slow=15,SNR=8.9						
MKAR				LR	LR	14 48 02.3	
	comp=Z,161nm,18.3s,baz=114,slow=39						
MKAR				PKPPKP	P'P'df	14 48 19.5	-12
	comp=Z,1.4nm,1.0s,baz=268,slow=4.0,SNR=6.0						
	comp=Z,74nm,0.6s						
UZB	Uzynbulak	59.50	321	eP	P	14 19 03.2	+0.7
	comp=Z,27nm,0.9s						
UZB	Uzynbulak	59.50	321	eP	P	14 19 03.2	+0.7
UZB				pmax	pmax		
	comp=Z,27nm,0.9s						
NIL	Nilore	59.58	308	P	P	14 19 04.3	+1.2
NIL	Nilore	59.58	308	P	P	14 19 03.6	+0.5
NIL	Nilore	59.58	308	P	P	14 19 03.6	+0.5
NIL				pmax	pmax		
	comp=Z,304nm,1.4s						
TARG	Taragay, Kyrgy	59.59	319	P	P	14 19 04.0	+0.5
TARG				IAmb	IAmb	14 19 15.5	
	comp=Z,63nm,0.9s						
TARG	Taragay, Kyrgy	59.59	319	P	P	14 19 04.0	+0.5
TARG				pmax	pmax		
	comp=Z,63nm,0.9s						
MAKZ	Makanchi	59.68	326	P	P	14 19 04.3	+0.8
MAKZ	Makanchi	59.68	326	P	P	14 19 04.3	+0.8
MAKZ				pmax	pmax		
	comp=Z,287nm,1.3s						
MAKZ	Makanchi	59.68	326	P	P	14 19 04.5	+1.0
BHUJ	Bhuj	59.74	296	eP	P	14 19 04.3	0.0
NNZ	Nelson	59.80	141	IAmb	IAmb	14 19 05.3	
	comp=Z,62nm,1.0s						
KSH	Kashi	59.84	316	P	P	14 19 07.3	+2.4
KSH				ScP	ScP	14 23 41.4	+0.3
KSH				S	S	14 27 12.1	+4.2
KSH				pmax	pmax		
	comp=Z,52nm,1.1s						
SATY	Saty	59.84	320	eP	P	14 19 05.8	+0.9
	comp=Z,63nm,1.1s						
SATY	Saty	59.84	320	eP	P	14 19 05.7	+0.9
SATY				pmax	pmax		
	comp=Z,63nm,1.1s						
YAK	Yakutsk	60.16	1	LR	LR	14 46 58.7	
	comp=Z,123nm,20.9s,baz=166,slow=38						
YAK	Yakutsk	60.16	1	P	P	14 19 06.6	+0.2
YAK	Yakutsk	60.16	1	d iP	P	14 19 06.6	+0.2
YAK				e*PP	pwP	14 19 37.7	+1.4
YAK				e		14 19 50.8	
YAK				e		14 21 19.8	
YAK				ePPP	PPP	14 22 44.9	
YAK				eS	S	14 27 10.4	-0.5
YAK				e		14 28 44.2	
YAK				eSS	SS	14 31 06.8	-3.2
YAK				pmax	pmax		
	comp=Z,127nm,1.0s						
YAK				pmax	pmax		
	comp=N,41nm,1.1s						
YAK				pmax	pmax		
	comp=E,19nm,1.2s						
YAK				pmax	pmax		
	comp=N,124nm,4.8s						
YAK				pmax	pmax		
	comp=Z,228nm,4.7s						
YAK				pmax	pmax		
	comp=E,108nm,4.3s						
YAK				smax	smax		
	comp=E,233nm,2.3s						
YAK				smax	smax		
	comp=N,278nm,2.7s						
YAK	Yakutsk	60.16	1	P	P	14 19 06.5	+0.2
OXZ	Oxford	60.18	144	P	P	14 19 06.1	-0.8
OXZ				IAmb	IAmb	14 19 07.0	
	comp=Z,82nm,0.9s						
ODZ	Otahua Downs	60.40	146	P	P	14 19 08.5	0.0
ODZ				IAmb	IAmb	14 19 09.4	
	comp=Z,55nm,1.0s						
MA2	Magadan	60.49	13	LR	LR	14 41 44.1	
	comp=Z,64nm,21.6s,baz=203,slow=32						
MA2	Magadan	60.49	13	P	P	14 19 10.3	+1.6
MA2				IAmb	IAmb	14 19 11.1	
	comp=Z,31nm,0.8s						
MA2	Magadan	60.49	13	P	P	14 19 10.4	+1.7
MA2	Magadan	60.49	13	ceP	P	14 19 10.8	+2.1
MA2				pmax	pmax		
	comp=Z,38nm,1.0s						
MA2	Magadan	60.49	13	P	P	14 19 09.3	+0.6
	comp=Z,47nm,0.8s						
SNZO	South Karori	60.68	140	P	P	14 19 09.8	-0.6
URZ	Urewera	60.73	136	LR	LR	14 47 36.5	
	comp=Z,141nm,18.0s,baz=297,slow=38						
RAO	Raoul Island	60.73	125	LR	LR	14 43 30.4	
	comp=Z,186nm,21.7s,baz=338,slow=34						
BKZ	Black Stump Fm	60.75	138	IAmb	IAmb	14 19 11.6	
	comp=Z,55nm,0.8s						
BKZ	Black Stump Fm	60.75	138	P	P	14 19 10.4	-0.6
MDOK	Medeo	60.77	320	eP	P	14 19 12.0	+0.8
MDOK	Medeo	60.77	320	eP	P	14 19 12.0	+0.8
TNSS	Tian-Shan	60.77	320	eP	P	14 19 12.1	+0.6
TNSS	Tian-Shan	60.77	320	eP	P	14 19 12.1	+0.6
ARXS	Arharly	60.78	321	eP	P	14 19 11.3	+0.2
TDK	Taldyqorghan	60.81	322	eP	P	14 19 12.3	+1.0
	comp=Z,44nm,1.1s						
TDK	Taldyqorghan	60.81	322	eP	P	14 19 12.2	+1.0
TDK				pmax	pmax		
	comp=Z,44nm,1.1s						
BHW	Baring Head	60.84	141	IAmb	IAmb	14 19 10.9	
	comp=Z,50nm,0.8s						
ULHL	Ulahol	60.87	319	P	P	14 19 14.4	+2.5
	SNR=7.3						
AAA	Alma-Ata	60.87	320	eP	P	14 19 12.8	+1.0
AAA	Alma-Ata	60.87	320	eP	P	14 19 12.7	+1.0
MRZ	Mangatainoka R	60.90	139	IAmb	IAmb	14 19 11.7	
	comp=Z,54nm,0.9s						
CHKK	Chushkaly	61.13	321	eP	P	14 19 14.3	+0.8
CHKK	Chushkaly	61.13	321	eP	P	14 19 14.3	+0.8
BFZ	Birch Farm	61.35	139	IAmb	IAmb	14 19 15.0	
	comp=Z,84nm,1.3s						
BFZ	Birch Farm	61.35	139	P	P	14 19 14.9	0.0
KUU	Kurty	61.56	320	eP	P	14 19 17.4	+1.0
	comp=Z,32nm,0.8s						
KUU	Kurty	61.56	320	eP	P	14 19 17.3	+1.0
KUU				pmax	pmax		
	comp=Z,32nm,0.8s						
TKM2	Tokmak 2	61.60	319	P	P	14 19 18.3	+1.4
	SNR=83						
KBK	Karagaybulak	61.91	319	P	P	14 19 20.6	+1.7
	SNR=47						
UCH	Uchtor	62.01	318	P	P	14 19 21.8	+1.9
	SNR=113						
CHMS	Chumysh	62.19	319	P	P	14 19 21.5	+1.0
	SNR=34						
AAK	Ala-Archa	62.20	318	P	P	14 19 22.2	+1.4
	SNR=36						
AAK	Ala-Archa	62.20	318	LR	LR	14 49 07.7	
	comp=Z,134nm,22.0s,baz=106,slow=39						
AAK	Ala-Archa	62.20	318	P	P	14 19 22.3	+1.4
AAK				S	S	14 27 40.5	+2.6
AAK	Ala-Archa	62.20	318	P	P	14 19 21.5	+0.7
AAK				IAmb	IAmb	14 19 25.4	
	comp=Z,96nm,1.4s						
AAK	Ala-Archa	62.20	318	P	P	14 19 22.4	+1.6
AAK	Ala-Archa	62.20	318	ceP	P	14 19 22.8	+2.0
AAK				pmax	pmax		
	comp=Z,58nm,1.0s						
AFI	Afiamalu	62.34	107	P	P	14 19 23.1	+1.0
AFI	Afiamalu	62.34	107	P	P	14 19 21.9	-0.2
USP	Ospenovka	62.47	319	P	P	14 19 23.7	+1.2
	SNR=116						
ZAA0	Zalesovo Array	62.60	333	P	P	14 19 22.2	-0.8
ZAA0				IAmb	IAmb	14 19 27.2	
	comp=Z,78nm,1.2s						
ZALV	Zalesovo Beam	62.60	333	P	P	14 19 22.7	-0.3
	comp=Z,28nm,0.5s,baz=120,slow=5.6,SNR=56						
ZALV				S	S	14 27 35.8	-6.3
	comp=Z,0.8nm,0.5s,baz=132,slow=14,SNR=4.7						
ZALV				PKPPKP	P'P'df	14 48 20.3	-5.4
	comp=Z,1.5nm,1.0s,baz=298,slow=3.2,SNR=6.0						
ZALV				LR	LR	14 48 24.0	
	comp=Z,137nm,19.2s,baz=129,slow=38						
ZALV				PKP2bc	P'P'bc	14 48 30.7	-2.7
	comp=Z,3.7nm,1.0s,baz=298,slow=3.2,SNR=10						
	comp=Z,28nm,0.5s						
ZALV	Zalesovo Beam	62.60	333	P	P	14 19 22.3	-0.7
EKS2	Erkin-Say	62.69	318	P	P	14 19 25.7	+1.7
	SNR=51						
KBL	Kabul	63.17	308	P	P	14 19 28.5	+1.0
	SNR=38						
KBL				S	S	14 27 49.0	-1.4
KBL	Kabul	63.17	308	P	P	14 19 28.1	+0.6
KBL				IAmb	IAmb	14 19 30.1	
	comp=Z,39nm,0.8s						
KBL	Kabul	63.17	308	P	P	14 19 28.1	+0.6
KBL				pmax	pmax		
	comp=Z,39nm,0.8s						
BTLS	Baital	63.55	321	eP	P	14 19 29.2	-0.3
	comp=Z,47nm,0.8s						
BTLS	Baital	63.55	321	eP	P	14 19 29.2	-0.3
BTLS				pmax	pmax		
	comp=Z,47nm,0.8s						
GAR	Garm	63.67	313	P	P	14 19 30.4	-0.3
KURBB	Kurchatov Arra	63.70	328	P	P	14 19 31.1	+0.7
	comp=Z,236nm,0.7s,baz=126,slow=6.2,SNR=383						
KURBB				PP	PP	14 21 44.8	-7.0
	comp=Z,12nm,1.1s,baz=128,slow=8.8,SNR=5.4						
KURBB				S	S	14 27 50.9	-5.1
	comp=Z,0.9nm,0.2s,baz=124,slow=12,SNR=6.9						
KURBB	Kurchatov Arra	63.70	328	P	P	14 19 30.0	-0.4
KURK	Kurchatov	63.70	328	P	P	14 19 31.1	+0.8
KURK				S	S	14 27 55.1	-0.8
KURK	Kurchatov	63.70	328	P	P	14 19 30.9	+0.5
KURK	Kurchatov	63.70	328	ceP	P	14 19 30.8	+0.5
KURK				pmax	pmax		
	comp=Z,473nm,1.0s						
KURK	Kurchatov	63.70	328	P	P	14 19 31.1	+0.8
SEY	Seymchan	63.83	12	LR	LR	14 48 09.0	
	comp=Z,117nm,19.7s,baz=203,slow=37						
SEY	Seymchan	63.83	12	eP	P	14 19 32.1	+1.1
SEY				e		14 21 48.5	
SEY				eS	S	14 27 54.3	-2.8
SEY				pmax	pmax		
	comp=Z,24nm,0.8s						
SHEM	Shemya Is, Ala	63.89	30	LR	LR	14 42 39.5	
	comp=Z,134nm,21.1s,baz=270,slow=31						
CHGR	Chuyangaron	64.40	313	P	P	14 19 36.1	+0.7
DZA	Taraz	64.42	318	eP	P	14 19 36.2	+0.9
	comp=Z,24nm,0.7s						
DZA	Taraz	64.42	318	eP	P	14 19 36.2	+0.9
DZA				pmax	pmax		
	comp=Z,24nm,0.7s						
SHAA	Shahritus	64.82	311	IAmb	IAmb	14 20 19.5	
	comp=Z,54nm,0.8s						
NIUE	Niue	65.01	112	P	P	14 19 39.8	+0.3
	comp=Z,414nm,1.3s						
IUG	Iuzhnay	65.02	316	⇓iP	P	14 19 40.3	+0.9
	comp=Z,53nm,0.8s						
IUG	Iuzhnay	65.02	316	d iP	P	14 19 40.2	+0.9
IUG				pmax	pmax		
	comp=Z,53nm,0.8s						
KK31	Karatay Array	65.06	317	i P	P	14 19 40.2	+0.8
KKAR	Karatay Array	65.06	317	P	P	14 19 39.7	+0.3
KKAR	Karatay Array	65.06	317	P	P	14 19 39.7	+0.3
CHM	Chimkent	65.38	316	eP	P	14 19 42.6	+1.0
	comp=Z,27nm,0.8s						
CHM	Chimkent	65.38	316	eP	P	14 19 42.5	+1.0
CHM				pmax	pmax		
	comp=Z,27nm,0.8s						
BRLS	Borolday	65.49	317	⇓iP	P	14 19 43.2	+1.0
	comp=Z,30nm,0.6s						
BRLS	Borolday	65.49	317	d iP	P	14 19 43.2	+1.0
BRLS				pmax	pmax		
	comp=Z,30nm,0.6s						
CTZ	Chatham Island	67.46	139	P	P	14 19 55.4	+0.7
DRV	Dumont d'Urvil	68.86	175	P	P	14 20 01.6	-1.3
JLN	Jalan Bani Buh	68.88	293	P	P	14 20 05.0	+1.0
	SNR=12						
JLN				S	S	14 28 59.4	-0.3
CASY	Casey	68.93	187	P	P	14 20 03.4	0.0
CASY				IAmb	IAmb	14 20 05.0	
	comp=Z,96nm,1.1s						
CASY	Casey	68.93	187	P	P	14 20 03.8	+0.4
CASY				PcP	PcP	14 20 27.7	+0.8
BVA0	Borovoye Array	69.28	327	i P	P	14 20 05.7	-0.2
BVAR	Borovoye Array	69.28	327	P	P	14 20 06.2	+0.3
	comp=Z,35nm,0.4s,baz=124,slow=7.4,SNR=187						
BVAR				S	S	14 29 00.9	-2.3
	comp=Z,1.0nm,0.9s,baz=148,slow=15,SNR=4.1						
BVAR				LR	LR	14 51 16.7	
	comp=Z,175nm,21.1s,baz=122,slow=36						
	comp=Z,35nm,0.4s						
BORK	Borovoye	69.33	327	P	P	14 20 06.1	0.0
BORK				IAmb	IAmb	14 20 11.0	
	comp=Z,103nm,0.9s						
BORK	Borovoye	69.33	327	ceP	P	14 20 06.4	+0.3
BORK				pmax	pmax		
	comp=Z,122nm,1.0s						
WBK	Wadi Bani Khal	69.34	293	P	P	14 20 08.0	+1.1
	SNR=13						
WSAR	Wadi Sarin	69.73	294	P	P	14 20 10.1	+0.9
	SNR=10						
WSAR				S	S	14 29 06.2	-3.4
TIXI	Tiksi	69.81	1	LR	LR	14 51 28.2	
	comp=Z,157nm,21.1s,baz=197,slow=36						
TIXI	Tiksi	69.81	1	P	P	14 20 08.0	-0.7
TIXI	Tiksi	69.81	1	ceP	P	14 20 09.2	+0.5
TIXI				pmax	pmax		
	comp=Z,21nm,1.3s						
MHTO	MHTO	70.09	292	P	P	14 20 12.3	+0.8
	SNR=20						
MHTO				S	S	14 29 11.8	-1.9
JMDO	Jabal Madar	70.11	293	P	P	14 20 13.0	+1.4
	SNR=16						
BIDO	Bidbid	70.22	294	P	P	14 20 13.1	+0.9
	SNR=13						
SMDO	Samad	70.24	294	P	P	14 20 15.0	+2.5
	SNR=8.4						
DQM	DQM	70.38	290	P	P	14 20 15.0	+1.8
	SNR=9.4						
HOQ	Hoqain	70.97	294	P	P	14 20 18.1	+1.3
	SNR=12						
BSY	Bisya	70.98	293	P	P	14 20 18.0	+1.1
	SNR=12						
BILL	Bilibino	71.32	14	P	P	14 20 18.2	+0.2
BILL	Bilibino	71.32	14	i P	P	14 20 17.8	-0.2
BILL				pmax	pmax		
	comp=Z,25nm,3.2s						
ARQ	Araqi	71.67	294	P	P	14 20 23.0	+2.0
	SNR=13						
SHAO	Shalim	72.03	288	P	P	14 20 26.0	+2.7
	SNR=6.6						
SHAO	Shalim	72.03	288	P	P	14 20 24.0	+0.7
MDH	Madha	72.09	296	P	P	14 20 23.4	0.0
UOSS	Minazif	72.13	296	P	P	14 20 23.4	-0.4
UOSS	Minazif	72.13	296	P	P	14 20 23.8	+0.1
UOSS	Minazif	72.13	296	P	P	14 20 24.3	+0.6
BANOM	Banah	72.16	297	P	P	14 20 24.2	+0.2
HATD	Hatta, Dubai	72.18	295	P	P	14 20 26.0	+1.9
	SNR=17						
HATD	Hatta, Dubai	72.18	295	P	P	14 20 24.6	+0.5
MSFE	Esma-Masafi	72.22	296	P	P	14 20 25.6	+1.3
MASF	Masafi	72.22	296	P	P	14 20 26.6	+2.3
	SNR=14						
ASHO	Ashiyiah	72.23	295	P	P	14 20 26.0	+1.6
	SNR=15						
ASHO	Ashiyiah	72.23	295	P	P	14 20 25.0	+0.6
SHME	Shamm	72.32	297	P	P	14 20 27.4	+2.6
	SNR=6.1						
SHME	Shamm	72.32	297	P	P	14 20 25.5	+0.7
ALNE	Al Ain	72.44	295	P	P	14 20 26.9	+1.3
	SNR=43						
ALNE	Al Ain	72.44	295	P	P	14 20 26.5	+0.9
NRIK	Noril'sk	72.48	346	P	P	14 20 25.2	+0.4
	comp=Z,34nm,0.8s,baz=131,slow=6.0,SNR=56						
NRIK				S	S	14 29 37.3	-2.3
	comp=Z,0.6nm,0.3s,baz=342,slow=22,SNR=14						
NRIK				LR	LR	14 55 57.8	
	comp=Z,198nm,18.7s,baz=148,slow=39						
	comp=Z,34nm,0.8s						
NRIK	Noril'sk	72.48	346	IAmb	IAmb	14 20 26.3	
	comp=Z,44nm,0.9s						
NRIK	Noril'sk	72.48	346	d iP	P	14 20 24.9	0.0
NRIK				pmax	pmax		
	comp=Z,50nm,0.9s						
NAZ	Nazwa, Dubai	72.62	296	P	P	14 20 28.0	+1.3
	SNR=12						
NAZ	Nazwa, Dubai	72.62	296	P	P	14 20 27.3	+0.7
FAQ	Al Faqa, Dubai	72.66	295	P	P	14 20 28.0	+1.1
	SNR=12						
FAQ	Al Faqa, Dubai	72.66	295	P	P	14 20 27.6	+0.7
ASUD	Al Ashush, Dub	72.89	295	P	P	14 20 31.0	+2.8
	SNR=12						
ASUD	Al Ashush, Dub	72.89	295	P	P	14 20 29.7	+1.5
NIKH	Nikolski High	73.11	35	P	P	14 20 29.4	+0.5
	baz=250						
AJN	Ajban	73.19	295	P	P	14 20 31.3	+1.4
	SNR=9.8						
AJN				S	S	14 29 47.0	-2.4
AJN	Ajban	73.19	295	P	P	14 20 30.8	+0.8
RBK	Rabkut	73.35	288	P	P	14 20 34.0	+2.9
	SNR=8.7						
DOK	Doka	73.49	289	P	P	14 20 33.0	+1.1
	SNR=23						
WHFO	Wadi Hawf	73.78	288	P	P	14 20 34.0	+0.3
	SNR=13						
SPIA	Saint Paul Isl	73.92	30	P	P	14 20 34.0	+0.4
	baz=247						
AB31	Akbulak array	74.03	321	i P	P	14 20 34.4	0.0
ABKAR	Akbulak array	74.03	321	P	P	14 20 34.2	-0.2
P08K	Saint George I	74.05	31	P	P	14 20 34.7	+0.4
	baz=248						
ABTO	Aybut	74.20	287	P	P	14 20 38.0	+1.9
	SNR=12						
MZR	Muzera	74.42	293	P	P	14 20 41.3	+4.0
	SNR=6.2						
MZR	Muzera	74.42	293	P	P	14 20 38.4	+1.2
UNV	Unalaska Valle	74.73	34	P	P	14 20 38.5	+0.1
	baz=251						
RAR	Rarotonga	74.77	112	LR	LR	14 51 38.5	
	comp=Z,75nm,20.8s,baz=260,slow=34						
AKTO	Aktyubinsk	75.55	322	LR	LR	14 57 21.7	
	comp=Z,152nm,20.0s,baz=36,slow=38						
AKTO	Aktyubinsk	75.55	322	P	P	14 20 42.5	-0.7
SVE	Sverdlovsk	75.93	329	ceP	P	14 20 45.3	+0.1
SVE				pmax	pmax		
	comp=Z,76nm,0.9s						
GAMB	Gambell	75.97	24	P	P	14 20 46.1	+0.9
	baz=244						
FALS	False Pass	76.76	34	P	P	14 20 50.7	+0.8
	baz=254						
CCD	Concordia, Ant	76.78	181	P	P	14 20 50.7	+0.6
ARTI	Arti	76.98	328	LR	LR	14 57 06.7	
	comp=Z,102nm,19.9s,baz=105,slow=37						
ARTI	Arti	76.98	328	P	P	14 20 50.2	-0.9
ARTI				IAmb	IAmb	14 20 56.2	
	comp=Z,52nm,0.5s						
ARTI	Arti	76.98	328	d iP	P	14 20 50.6	-0.5
ARTI						14 23 42.8	
ARTI				S	S	14 30 28.3	-1.9
ARTI				SS	SS	14 35 24.2	-5.2
ARTI				pmax	pmax		
	comp=Z,41nm,0.9s						
M11K	Mekoryuk	77.05	28	P	P	14 20 52.7	+1.3
	baz=250						
KNHH	Kane Nui o Ham	77.67	71	P	P	14 20 56.6	+0.7
S12K	Black Hills	77.74	33	P	P	14 20 56.2	+0.9
	baz=255						
TNA	Tin City	78.19	23	P	P	14 20 58.9	+1.3
	baz=248						
K13K	Kusilvak Mount	78.27	27	P	P	14 20 59.0	+0.9
	baz=251						
M13K	Dall Lake	78.40	28	P	P	14 20 59.8	+1.0
	baz=253						
SDPT	Sand Point	78.52	34	P	P	14 21 00.4	+0.8
	baz=256						
F14K	Arctic Creek	78.78	23	P	P	14 21 02.2	+1.3
	baz=249						
ANM	Nome	78.84	24	P	P	14 21 02.0	+0.8
	baz=250						
CHNA	Chernabura Isl	78.90	34	P	P	14 21 02.4	+0.7
	baz=257						
L14K	Kuka Creek	78.98	27	P	P	14 21 02.8	+0.8
	baz=253						
J14K	Nanvaranak Lak	79.01	26	P	P	14 21 02.8	+0.6
	baz=252						
N14K	Kuskokwak Cree	79.06	29	P	P	14 21 03.1	+0.7
	baz=254						
O14K	Tigyukauivet M	79.08	30	P	P	14 21 03.3	+0.6
	baz=255						
M14K	Bethel	79.15	28	P	P	14 21 03.8	+0.8
	baz=254						
S14K	Fog Glacier	79.25	33	P	P	14 21 04.5	+0.7
	baz=257						
F15K	North Star Dit	79.51	23	P	P	14 21 05.6	+0.7
	baz=250						
G15K	Niukluk	79.52	24	P	P	14 21 05.5	+0.6
	baz=251						
L15K	Ungalak Mounta	79.63	27	P	P	14 21 06.6	+1.0
	baz=254						
M15K	Kasigluk River	79.74	28	P	P	14 21 06.9	+0.7

	baz=255						
K15K	Wolf Creek Mou	79.78	27	P	P	14 21 07.2	+0.8
	baz=254,SNR=7.4						
O15K	Ungalikthiuk R	79.78	30	P	P	14 21 06.9	+0.4
	baz=256						
N15K	Kwethluk River	79.89	29	P	P	14 21 07.9	+0.9
	baz=256						
C16K	Lisburne Hills	80.14	20	P	P	14 21 09.0	+0.9
	baz=249,SNR=14						
H16K	Elim	80.14	24	P	P	14 21 08.9	+0.7
	baz=253,SNR=9.4						
G16K	Koyuk River	80.32	24	P	P	14 21 09.3	+0.1
	baz=253						
J16K	Anvik River	80.46	26	P	P	14 21 11.5	+1.5
	baz=255,SNR=11						
L16K	Owhat River	80.56	28	P	P	14 21 11.4	+0.8
	baz=256,SNR=6.3						
I17K	Unalakleet	80.58	25	P	P	14 21 11.8	+1.2
	baz=254,SNR=12						
R16K	Pilot Point	80.58	32	P	P	14 21 12.1	+1.4
	baz=258						
N16K	Nishlik Lake	80.61	29	P	P	14 21 11.8	+0.9
	baz=257						
M16K	Timber Creek	80.64	28	P	P	14 21 11.7	+0.6
	baz=256						
P16K	Nushagak River	80.67	30	P	P	14 21 11.3	+0.1
	baz=258						
O16K	Kokwok River B	80.74	30	P	P	14 21 12.1	+0.5
	baz=258						
D17K	Noatak River	80.75	21	P	P	14 21 12.8	+1.4
	baz=252,SNR=21						
RDOG	Red Dog Mine	80.92	21	P	P	14 21 13.6	+1.2
	baz=252,SNR=7.8						
C17K	DeLong Mountai	80.96	20	P	P	14 21 13.6	+0.9
	baz=252						
AKT	Akhty	81.02	312	*e*P	P	14 21 11.4	-2.2
AKT				*e**PP	pP	14 21 39.7	-2.1
AKT				*e*S	S	14 31 12.3	-1.6
AKT				*e**SS	sS	14 31 59.8	-2.9
AKT				pmax	pmax		
	comp=Z,48nm,1.0s						
E17K	Hotham Inlet	81.02	22	P	P	14 21 13.7	+0.7
	baz=253						
G17K	Kiwalik Mounta	81.03	24	P	P	14 21 14.2	+1.2
	baz=254						
F17K	Baldwin Pennin	81.06	23	P	P	14 21 14.7	+1.7
	baz=254						
J17K	VABM Dome	81.15	26	P	P	14 21 14.7	+1.0
	baz=256						
ABPO	Ambohimpanom	81.17	251	P	P	14 21 14.8	-0.2
ABPO	Ambohimpanom	81.17	251	P	P	14 21 14.8	-0.2
ABPO				pmax	pmax		
	comp=Z,12nm,1.0s						
H17K	Granite Mounta	81.18	24	P	P	14 21 15.2	+1.4
	baz=255,SNR=5.6						
L17K	Donlin	81.20	27	P	P	14 21 14.6	+0.6
	baz=257						
R17L	Mt. Peulik Vol	81.23	32	P	P	14 21 14.8	+0.5
	baz=259						
O17K	Koliganek Bris	81.27	30	P	P	14 21 15.5	+1.1
	baz=258,SNR=6.3						
Q16K	King Salmon	81.28	31	P	P	14 21 15.2	+0.8
	baz=259						
CHIR	Chirikof Islan	81.31	34	P	P	14 21 14.9	+0.2
	baz=260						
MAK	Makhachkala	81.33	313	*e*P	P	14 21 16.4	+1.3
MAK				*e*S	S	14 31 19.6	+2.8
MAK				*e**SS	sS	14 32 03.7	-1.7
MAK				*e*SSS	SSS	14 40 04.1	
MAK				pmax	pmax		
	comp=Z,594nm,1.5s						
MAK				MLR	MLR		
	comp=Z,267nm,20.0s						
K17K	Iditarod	81.33	27	P	P	14 21 15.8	+1.1
	baz=257,SNR=12						
N17K	Nushagak Hills	81.38	29	IAmb	IAmb	14 24 11.9	
	comp=Z,116nm,2.0s						
N17K	Nushagak Hills	81.38	29	P	P	14 21 15.7	+0.7
	baz=258						
SEKA	Sheki	81.39	311	P	P	14 21 17.9	+2.3
VNDA	Vanda	81.40	173	P	P	14 21 14.3	-0.4
	comp=Z,42nm,0.8s,baz=318,slow=6.2,SNR=142						
VNDA				LR	LR	14 56 55.9	
	comp=Z,145nm,19.8s,baz=308,slow=35						
	comp=Z,42nm,0.8s						
VNDA	Vanda	81.40	173	P	P	14 21 14.7	0.0
VNDA				IAmb	IAmb	14 21 15.8	
	comp=Z,47nm,0.8s						
VNDA	Vanda	81.40	173	P	P	14 21 14.7	0.0
VNDA				pmax	pmax		
	comp=Z,47nm,0.9s						
VNDA	Vanda	81.40	173	P	P	14 21 14.7	0.0
MNGR	Mingechevir, A	81.44	311	P	P	14 21 17.7	+2.0
M17K	Holitna River	81.44	28	P	P	14 21 15.8	+0.5
	baz=258						
P17K	Kvichak River	81.49	30	P	P	14 21 16.3	+0.8
	baz=259						
E18K	Tukpahlearik C	81.58	22	P	P	14 21 17.2	+1.3
	baz=254,SNR=11						
Q17K	Contact Creek	81.60	31	P	P	14 21 16.5	+0.2
	baz=260						
C18K	Utukok River	81.71	21	P	P	14 21 17.6	+1.0
	baz=253						
B18K	Kokolik River	81.71	20	P	P	14 21 17.7	+1.2
	baz=253						
F18K	Selawik	81.72	23	P	P	14 21 17.6	+1.0
	baz=255,SNR=5.2						
RAYN	Ar Rayn	81.77	293	P	P	14 21 17.9	0.0
RAYN				IAmb	IAmb	14 21 22.6	
	comp=Z,50nm,1.0s						
RAYN	Ar Rayn	81.77	293	P	P	14 21 18.6	+0.7
RAYN	Ar Rayn	81.77	293	⇑P	P	14 21 18.2	+0.3
VOI	Vohitsoka	81.83	248	P	P	14 21 18.0	-0.3
H18K	Honhosa River	81.87	24	P	P	14 21 18.6	+1.1
	baz=256						
G18K	Tagagawik	81.93	24	P	P	14 21 19.2	+1.4
	baz=256,SNR=12						
L18K	Granite Mounta	81.96	27	P	P	14 21 19.3	+1.3
	baz=258,SNR=7.3						
GANJ	Ganja	82.01	311	P	P	14 21 20.7	+1.9
N18K	Kilae Creek	82.04	29	P	P	14 21 19.1	+0.6
	baz=259						
Q18K	Katmai Hardscr	82.12	31	P	P	14 21 19.7	+0.7
	baz=260						
P18K	Big Mountain,	82.13	30	P	P	14 21 19.6	+0.6
	baz=260						
KIRV	Kirov	82.20	329	LR	LR	15 00 37.2	
	comp=Z,159nm,19.4s,baz=98,slow=38						
KIRV	Kirov	82.20	329	*ce*P	P	14 21 19.5	+0.3
A19K	Wainwright	82.20	19	P	P	14 21 20.8	+1.7
	baz=253						
J18K	Innoko River	82.20	26	P	P	14 21 20.3	+1.1
	baz=258						
M18K	Stony River	82.22	28	P	P	14 21 20.5	+1.2
	baz=259						
O18K	Koktuh Hills	82.22	30	P	P	14 21 20.2	+0.8
	baz=260						
SII	Sitkinak Islan	82.22	33	P	P	14 21 20.1	+0.6
	baz=261						
SBA	Scott Base	82.31	172	P	P	14 21 20.2	+0.8
SBA				IAmb	IAmb	14 21 21.2	
	comp=Z,41nm,0.9s						
SBA	Scott Base	82.31	172	P	P	14 21 20.2	+0.8
SBA				pmax	pmax		
	comp=Z,41nm,0.9s						
BELG	Belogornoye	82.31	323	LR	LR	14 59 42.7	
	comp=Z,122nm,21.2s,baz=86,slow=37						
BELG	Belogornoye	82.31	323	*d i*P	P	14 21 19.4	-0.6
BELG				pmax	pmax		
	comp=Z,16nm,1.0s						
C19K	Lookout Ridge	82.39	20	P	P	14 21 21.8	+1.6
	baz=255						
GCSA	Galena City Sc	82.40	25	P	P	14 21 21.7	+1.5
	baz=258						
F19K	Shaleruckik Mo	82.50	23	P	P	14 21 21.8	+1.1
	baz=257						
NAX	Nakhchivan	82.53	309	P	P	14 21 23.5	+1.9
G19K	Purcell Mounta	82.61	23	P	P	14 21 23.0	+1.7
	baz=258						
O19K	Port Alsworth	82.72	30	P	P	14 21 23.3	+1.3
	baz=261						
H19K	Roundabout Mou	82.74	24	P	P	14 21 23.5	+1.6
	baz=258						
N19K	Bonanza Creek	82.74	29	P	P	14 21 23.4	+1.2
	baz=260						
D19K	Kuna River	82.76	21	P	P	14 21 23.8	+1.7
	baz=256						
J19K	Poorman	82.78	26	P	P	14 21 23.5	+1.3
	baz=259,SNR=21						
L19K	White Mountain	82.80	28	P	P	14 21 24.0	+1.6
	baz=260,SNR=12						
OHAK	Old Harbor	82.81	33	P	P	14 21 23.3	+0.8
	baz=262						
E19K	Redstone River	82.84	22	P	P	14 21 24.4	+1.9
	baz=257,SNR=59						
Q19K	Cape Douglas,	82.86	31	P	P	14 21 24.1	+1.3
	baz=262						
P19K	Oil Pt	83.18	30	P	P	14 21 25.3	+0.9
	baz=262						
KDAK	Kodiak Island	83.26	32	LR	LR	14 51 14.9	
	comp=Z,246nm,21.2s,baz=246,slow=30						
KDAK	Kodiak Island	83.26	32	P	P	14 21 25.7	+1.0
	baz=263						
TBLG	Delisi	83.28	312	P	P	14 21 26.8	+1.5
F20K	Avaraart Lake	83.33	23	P	P	14 21 26.5	+1.6
	baz=259						
D20K	Etivluk River	83.35	21	P	P	14 21 26.6	+1.5
	baz=258						
K20K	Telida	83.35	26	P	P	14 21 27.0	+1.8
	baz=261						
H20K	Anotleneega Mo	83.37	24	P	P	14 21 26.7	+1.5
	baz=260						
E20K	Nigu River	83.40	21	P	P	14 21 26.8	+1.3
	baz=258						
I20K	Naaghedeneel	83.42	25	P	P	14 21 26.8	+1.4
	baz=260						
B20K	Meade River	83.44	20	P	P	14 21 27.0	+1.6
	baz=257,SNR=14						
J20K	Nowinta River	83.45	26	P	P	14 21 27.1	+1.4
	baz=260						
Q20K	Shuyak Island	83.47	31	P	P	14 21 26.3	+0.5
	baz=263						
O20K	Slope Mountain	83.54	30	P	P	14 21 26.8	+0.5
	baz=262						
M20K	Styx River	83.55	28	P	P	14 21 27.6	+1.2
	baz=262						
TRLG	Trialeti	83.74	311	P	P	14 21 27.8	-0.1
SPCR	Spurr Chakacha	83.89	29	P	P	14 21 28.9	+0.8
	baz=262						
A21K	Barrow	83.91	18	P	P	14 21 29.2	+1.3
	baz=257,SNR=12						
IMAR	Indian Mountai	83.92	24	P	P	14 21 29.2	+1.2
PPT	Papeete	83.98	108	LR	LR	14 57 46.9	
	comp=Z,55nm,18.0s,baz=254,slow=35						
PPT2	Papeete2	83.98	108	*e*S	S	14 31 48.9	+4.1
	comp=Z,157nm,24.8s						
PPT2				*e*SS	SS	14 37 07.0	-8.7
	comp=Z,117nm,22.5s						
PPT2				*e*SS	SS	14 37 11.0	-4.7
	comp=Z,138nm,26.5s						
PPT2	Papeete2	83.98	108	*e*LR	LR	14 48 00.3	
	comp=Z,306nm,38.2s						
PPT2				*e*LR	LR	14 48 05.3	
	comp=Z,642nm,36.0s						
HOM	Homer	83.98	30	P	P	14 21 29.4	+1.0
	baz=263						
C21K	Knifeblade Rid	84.08	21	P	P	14 21 30.6	+1.8
	baz=259,SNR=11						
G21K	Allakaket	84.10	23	P	P	14 21 30.4	+1.4
	baz=261						
PPLA	Purkeypile	84.13	27	P	P	14 21 30.0	+0.7
	baz=262						
CHUM	Lake Minchumin	84.21	26	P	P	14 21 30.6	+1.1
	baz=262						
ATD	Arta Tunnel	84.21	281	P	P	14 21 35.3	+4.7
NCK	Nalchik	84.22	313	*i* P	P	14 21 28.5	-1.6
NCK				pmax	pmax		
	comp=Z,32nm,0.8s						
F21K	Alatna River	84.22	23	P	P	14 21 30.5	+0.9
	baz=261						
B21K	Ikpikpuk River	84.23	20	P	P	14 21 30.6	+1.1
	baz=259						
E21K	Killik River	84.25	21	P	P	14 21 30.7	+1.0
	baz=260						
H21K	Melozitna Rive	84.25	24	P	P	14 21 30.9	+1.1
	baz=262,SNR=12						
SKT	Skwentna	84.31	28	IAmb	IAmb	14 21 31.1	
	comp=Z,58nm,1.1s						
SKT	Skwentna	84.31	28	P	P	14 21 30.5	+0.4
	baz=263,SNR=11						
CAPN	Captain Cook N	84.35	29	P	P	14 21 31.4	+1.2
	baz=264						
A22K	Sinclair Lake	84.37	19	P	P	14 21 32.0	+1.9
	baz=259,SNR=39						
BRLK	Bradley Lake	84.37	30	IAmb	IAmb	14 22 45.5	
	comp=Z,257nm,1.8s						
BRSE	Bradley Lake S	84.44	30	P	P	14 21 31.7	+0.9
	baz=264						
TBI	Tubuai	84.49	114	*e*S	SKSac	14 31 47.0	+1.2
	comp=Z,687nm,29.0s						
TBI				*e*SS	SS	14 37 14.2	-8.6
	comp=Z,796nm,32.8s						
TBI	Tubuai	84.49	114	*e*LR	LR	14 48 17.1	
	comp=Z,3µm,40.8s						
TBI				*e*LR	LR	14 48 17.5	
	comp=Z,988nm,29.2s						
I21K	Tanana	84.53	25	P	P	14 21 32.3	+1.2
	baz=262						
SUA	Susitna One	84.63	29	P	P	14 21 31.9	+0.1
	baz=264						
GOF	Gofitskoye	84.70	315	*ce*P	P	14 21 33.2	+0.8
L22K	Petersville	84.73	27	IAmb	IAmb	14 21 33.5	
	comp=Z,38nm,0.6s						
KBZ	Khabaz	84.74	314	P	P	14 21 32.5	-0.1
	comp=Z,14nm,1.1s,baz=111,slow=3.4,SNR=13						
KBZ				LR	LR	15 05 41.4	
	comp=Z,86nm,18.2s,baz=70,slow=40						
	comp=Z,14nm,1.1s						
KBZ	Khabaz	84.74	314	*ce*P	P	14 21 32.7	+0.1
KBZ				pmax	pmax		
	comp=Z,15nm,0.9s						
B22K	Teshekpuk Lake	84.76	20	P	P	14 21 32.7	+0.6
	baz=260						
KTH	Kantishna Hill	84.78	26	IAmb	IAmb	14 22 14.5	
	comp=Z,54nm,1.4s						
SLKM	Skilak Lake	84.78	30	IAmb	IAmb	14 21 33.9	
	comp=Z,139nm,1.2s						
D22K	Ayikyak River	84.78	21	P	P	14 21 33.2	+0.9
	baz=261						
BPAW	Bear Paw Mtn.	84.81	26	IAmb	IAmb	14 22 15.8	
	comp=Z,56nm,1.6s						
BPAW	Bear Paw Mtn.	84.81	26	P	P	14 21 33.1	+0.5
	baz=263						
NEUR	Neytrino	84.86	313	*i* P	P	14 21 33.4	-0.1
NEUR				pmax	pmax		
	comp=Z,17nm,1.3s						
H22K	Ishtalitna Cre	84.87	24	P	P	14 21 33.3	+0.5
	baz=263						
KIV	Kislovodsk	84.90	314	⇓P	P	14 21 34.3	+0.8
KIV	Kislovodsk	84.90	314	*e*P	P	14 21 34.4	+0.8
KIV				pmax	pmax		
	comp=Z,20nm,1.1s						
KIV				MLR	MLR		
	comp=Z,88nm,20.0s						
KIV	Kislovodsk	84.90	314	P	P	14 21 34.0	+0.4
	comp=Z,20nm,1.1s						
SHA1	Shidzhatmaz	84.92	314	*ce*P	P	14 21 35.1	+1.3
G22K	Bettles	84.95	23	P	P	14 21 33.7	+0.6
	baz=263						
CUT	Chulitna	84.95	28	P	P	14 21 33.3	0.0
	baz=264						
M22K	Willow	84.95	28	P	P	14 21 33.7	+0.4
	baz=264,SNR=7.0						
E22K	Anaktuvuk Pass	84.99	22	P	P	14 21 34.5	+1.0
	baz=262,SNR=17						
O22K	Cooper Landing	85.03	30	P	P	14 21 34.1	+0.4
	baz=265						
MLY	Manley	85.03	25	P	P	14 21 34.2	+0.5
	baz=263						
TRF	Thorofare Moun	85.05	27	P	P	14 21 34.2	+0.2
	baz=264						
RC01	Rabbit Creek A	85.08	29	IAmb	IAmb	14 21 35.1	
	comp=Z,93nm,1.2s						
RC01	Rabbit Creek A	85.08	29	P	P	14 21 34.2	+0.3
	baz=265						
SEW	Seward	85.13	30	P	P	14 21 34.8	+0.7
	baz=265						
PMR	Palmer	85.41	28	IAmb	IAmb	14 21 36.9	
	comp=Z,30nm,0.9s						
PMR	Palmer	85.41	28	P	P	14 21 36.1	+0.6
	baz=265,SNR=7.5						
COLD	Coldfoot	85.49	23	P	P	14 21 36.3	+0.4
	baz=264						
G23K	Bananza Creek	85.51	23	P	P	14 21 36.5	+0.5
	baz=264						
D23K	Nanushuk River	85.51	21	P	P	14 21 36.8	+0.9
	baz=263						
H23K	Yukon River	85.61	24	P	P	14 21 37.3	+0.8
	baz=264						
I23K	Minto, Yukon-K	85.62	25	P	P	14 21 37.4	+0.9
	baz=265						
C23K	Itkillik River	85.64	20	P	P	14 21 37.4	+0.8
	baz=263						
MCK	McKinley	85.68	26	IAmb	IAmb	14 22 19.7	
	comp=Z,53nm,1.4s						
MCK	McKinley	85.68	26	P	P	14 21 37.6	+0.6
	baz=265						
RND	Reindeer	85.69	27	IAmb	IAmb	14 21 38.0	
	comp=Z,19nm,0.6s						
NEA2	Nenana	85.70	25	P	P	14 21 37.8	+0.8
	baz=265						
KNK	Knik Glacier	85.72	29	P	P	14 21 37.9	+0.8
	baz=266,SNR=7.4						
PWL	Port Wells	85.74	29	P	P	14 21 37.7	+0.5
	baz=266						
WAT1	Susitna Watana	85.78	27	P	P	14 21 38.3	+0.8
	baz=266						
E23K	Chandalar	85.80	22	P	P	14 21 38.4	+0.9
	baz=264,SNR=18						
SML	Sawmill	85.81	28	P	P	14 21 38.2	+0.6
	baz=266,SNR=5.5						
VRH	Novokhopyorsk	85.86	321	*e*P	P	14 21 37.4	-0.6
VRH				pmax	pmax		
	comp=Z,44nm,0.8s						
TOLK	Toolik Lake Re	85.88	21	P	P	14 21 38.8	+1.0
	baz=264,SNR=7.0						
M23K	Glacier View	86.09	28	P	P	14 21 39.8	+0.8
	baz=266						
WAT6	Susitna Watana	86.14	28	P	P	14 21 40.2	+0.8
	baz=266,SNR=7.9						
P23K	Montague Islan	86.14	30	P	P	14 21 40.1	+0.8
	baz=267						
D24K	Happy Valley	86.19	21	P	P	14 21 40.2	+0.9
	baz=265						
E24K	Your Creek	86.23	22	P	P	14 21 40.6	+1.0
	baz=265						
COLA	College	86.24	25	*i* P	P	14 21 38.2	-1.4
COLA				pmax	pmax		
	comp=Z,18nm,2.3s						
COLA	College	86.24	25	P	P	14 21 40.3	+0.8
	baz=266						
SCM	Sheep Creek Mo	86.28	28	P	P	14 21 41.0	+1.0
	baz=267						
C24K	Franklin Bluff	86.29	20	P	P	14 21 41.0	+1.3
	baz=265						
H24K	Noodor Dome	86.29	24	P	P	14 21 41.1	+1.2
	baz=266						
DHY	Denali Highway	86.33	27	P	P	14 21 40.3	0.0
	baz=267						
LABN	Labinsk	86.33	314	*e*P	P	14 21 40.4	-0.1
LABN				pmax	pmax		
	comp=Z,28nm,0.7s						
GLI	Glacier Island	86.34	29	P	P	14 21 39.7	-0.6
	baz=267						
F24K	Squaw Lake	86.41	23	P	P	14 21 39.6	-0.8
	baz=266						
POKR	Poker Plat Res	86.43	25	P	P	14 21 39.5	-1.1
	baz=266						
G24K	Hadweenzic Riv	86.52	23	P	P	14 21 40.3	-0.6
	baz=266						
ERBR	Yeremizino-Bor	86.53	316	*e*P	P	14 21 41.3	-0.1
ERBR				pmax	pmax		
	comp=Z,65nm,1.1s						
HDA	Harding Lake	86.60	26	P	P	14 21 41.2	-0.1
	baz=267						
ILAR	Eielson Array	86.64	25	P	P	14 21 40.0	-1.6
	comp=Z,1.5nm,0.5s,baz=256,slow=4.3,SNR=38						
ILAR				PKKP	PKKPbc	14 39 35.8	-3.6
	comp=Z,1.6nm,0.9s,baz=28,slow=1.8,SNR=9.2						
ILAR				PKPPKP	P'P'df	14 47 41.1	-2.2
	comp=Z,1.5nm,1.1s,baz=81,slow=2.5,SNR=4.3						
ILAR				LR	LR	14 56 24.2	
	comp=Z,62nm,20.5s,baz=246,slow=33						
	comp=Z,1.5nm,0.5s						
Q23K	Middleton Isla	86.65	31	P	P	14 21 41.6	-0.1
	baz=268						
VSLR	Vesyoloye	86.81	313	*i* P	P	14 21 42.0	-0.9
VSLR				pmax	pmax		
	comp=Z,89nm,0.9s						
M24K	Tolsona, Glenn	86.84	28	P	P	14 21 42.3	-0.4
	baz=268						
KLU	Klutina	86.94	29	P	P	14 21 42.7	-0.6
	baz=268						
EYAK	Cordova Ski Ar	86.99	30	P	P	14 21 43.1	-0.2
	baz=268						
SOC	Sochi	87.05	313	*e*P	P	14 21 47.1	+3.1
SOC				pmax	pmax		
	comp=Z,14nm,0.7s						
G25K	Bearman Lake	87.06	23	P	P	14 21 43.5	-0.1
	baz=268						
D25K	Kavik River	87.08	21	P	P	14 21 43.7	0.0
	baz=267						
K24K	Donnelly Dome	87.08	26	P	P	14 21 43.7	-0.1
	baz=268						
PAX	Paxson	87.20	27	P	P	14 21 44.5	0.0
	baz=268						
F25K	Christian Rive	87.28	23	P	P	14 21 45.1	+0.4
	baz=268						
J25K	Salcha River,	87.29	26	P	P	14 21 45.1	+0.3
	baz=268						
E25K	Arctic Village	87.32	22	P	P	14 21 45.2	+0.4
	baz=268,SNR=9.5						
HARP	HAARP	87.33	28	P	P	14 21 44.8	-0.1
	baz=269						
VORD	Divnogorie	87.39	321	*e*P	P	14 21 44.8	-0.7
VORD				pmax	pmax		
	comp=Z,40nm,1.0s						
KLMR	Klimovskoe	87.40	331	*e*P	P	14 21 44.1	-1.2
KLMR				*e*		14 25 09.8	
KLMR				pmax	pmax		
	comp=Z,65nm,1.5s						
VORR	Voronezh	87.45	321	*e*P	P	14 21 45.7	0.0
VORR				pmax	pmax		
	comp=Z,31nm,0.7s						
VSR	Storozhevoye	87.47	321	*e*P	P	14 21 44.8	-1.1
VSR				pmax	pmax		
	comp=Z,30nm,0.9s						
RIDG	Independent Ri	87.50	26	P	P	14 21 45.8	0.0
	baz=269						
BMRM	Bremner River	87.56	29	P	P	14 21 46.3	+0.1
	baz=269						
N25K	Chitina, Valde	87.58	29	P	P	14 21 46.0	-0.2
	baz=269						
C26K	Camden Bay	87.61	20	P	P	14 21 46.2	+0.1
	baz=268						
LPSR	Galich'ya Gora	87.63	322	*e*P	P	14 21 45.3	-1.2
LPSR				pmax	pmax		
	comp=Z,50nm,1.0s						
KAIM	Kayak Island	87.64	30	P	P	14 21 46.5	0.0
	baz=269						
BMAR	Burnt Mountain	87.68	23	P	P	14 21 47.4	+0.8
F26K	Sheenjek River	87.85	22	P	P	14 21 47.0	-0.4
	baz=269						
SCRK	Sand Creek	87.88	26	P	P	14 21 47.6	-0.2
	baz=270						
G26K	Porcupine Rive	87.98	23	P	P	14 21 48.1	+0.1
	baz=270						
C27K	Jago River	88.03	21	P	P	14 21 48.4	+0.2
	baz=270						
J26L	Joseph Creek	88.07	26	P	P	14 21 48.6	0.0
	baz=270						
L26K	Log Cabin Wild	88.17	27	P	P	14 21 48.7	-0.3
	baz=270						
I26K	Coal Creek Min	88.24	25	P	P	14 21 49.3	0.0
	baz=270						
CRQE	Cirque	88.30	29	P	P	14 21 50.2	+0.5
	baz=270						
MCARA	McCarthy VSAT	88.33	29	P	P	14 21 50.4	+0.7
	baz=271						
M26K	Nabesna, AK	88.33	28	P	P	14 21 50.0	+0.2
	baz=271						
MOS	Moscow	88.38	326	*e*P	P	14 21 49.2	-0.8
MOS				*e**PP	pwP	14 22 22.3	+0.9
MOS				*e*		14 25 17.4	
MOS				*e*S	SKSac	14 32 06.7	-1.8
MOS				*e*		14 32 16.0	
MOS				pmax	pmax		
	comp=Z,32nm,0.7s						
ANN	Anapa	88.68	315	*e*P	P	14 21 50.7	-1.0
ANN				pmax	pmax		
	comp=Z,38nm,0.8s						
K27K	Chicken	88.72	26	P	P	14 21 52.7	+1.2

	baz=271						
E27K	Coleen River	88.81	22	P	P	14 21 52.3	+0.4
	baz=272						
G27K	Doyon Strip	88.83	23	P	P	14 21 52.5	+0.4
	baz=272						
M27K	Edge Creek, AK	88.85	28	P	P	14 21 52.8	+0.4
	baz=272						
L27K	Beaver Creek,	88.86	27	P	P	14 21 52.2	-0.1
	baz=272						
BCAR	Beaver Creek A	88.88	27	P	P	14 21 53.1	+0.8
I27K	Kandik River	88.88	25	P	P	14 21 52.6	+0.3
	baz=272						
H27K	Steamboat Moun	88.89	24	P	P	14 21 52.2	-0.2
	baz=272						
OBN	Obninsk	88.99	325	LR	LR	15 04 08.0	
	comp=Z,193nm,21.4s,baz=28,slow=37						
OBN	Obninsk	88.99	325	⇑iP	P	14 21 52.6	-0.3
OBN				e*PP	pwP	14 22 23.1	-1.2
OBN				i *SP	sP	14 22 34.9	+1.6
OBN				i S	SKSac	14 32 10.7	-1.5
OBN				i		14 33 48.6	
OBN				pmax	pmax		
	comp=Z,42nm,1.7s						
OBN				MLR	MLR		
	comp=Z,194nm,18.0s						
OBN	Obninsk	88.99	325	P	P	14 21 52.7	-0.2
	comp=Z,37nm,0.6s						
D27M	Malcolm River	89.00	21	P	P	14 21 52.9	+0.1
	baz=272						
CTG	Chitna Glacier	89.16	29	P	P	14 21 53.6	-0.1
	baz=272						
KIBK	Kibwezi	89.31	268	P	P	14 21 57.4	+1.9
	SNR=8.4						
KIBK	Kibwezi	89.31	268	P	P	14 21 55.0	-0.5
BVCY	Beaver Creek	89.33	28	P	P	14 21 54.6	+0.1
	baz=272						
ASF	Jabal al Asfar	89.41	302	LR	LR	15 10 01.0	
	comp=Z,11µm,18.3s,baz=65,slow=41						
F28M	Old Crow	89.48	22	P	P	14 21 55.0	-0.1
	baz=273,SNR=7.1						
YUK3	Moose Creek	89.54	28	P	P	14 21 54.7	-1.0
	baz=273						
E28M	Babbage River	89.55	21	P	P	14 21 54.9	-0.4
	baz=274						
I28M	Miner Creek	89.58	25	IAmb	IAmb	14 21 57.0	
	comp=Z,13nm,0.6s						
I28M	Miner Creek	89.58	25	P	P	14 21 55.8	+0.1
	baz=273						
O28M	Mount Upton	89.72	29	P	P	14 21 56.1	-0.6
	baz=273						
PINM	Pinnacle	89.73	30	P	P	14 21 56.2	-0.2
	baz=273						
D28M	Stokes Point	89.79	21	P	P	14 21 56.0	-0.3
	baz=274						
DAWY	Dawson	89.90	26	P	P	14 21 57.4	+0.3
	baz=274,SNR=8.7						
YUK8	Steele Glacier	89.90	29	P	P	14 21 57.0	-0.4
	baz=273						
E29M	Blow River	90.17	22	P	P	14 21 58.2	0.0
	baz=275						
H29M	Whitestone	90.17	24	P	P	14 21 58.3	0.0
	baz=275						
G29M	Pine Creek	90.25	23	P	P	14 21 58.7	+0.1
	baz=275						
I29M	Ogilvie Camp,	90.27	25	P	P	14 21 58.5	-0.2
	baz=275,SNR=6.4						
J29N	Klondike Camp	90.38	26	P	P	14 21 59.1	-0.3
	baz=275						
M29M	Somme Creek	90.44	28	P	P	14 21 59.1	-0.6
	baz=275						
YUK4	Talbot Arm	90.44	29	P	P	14 21 59.6	-0.2
	baz=274						
L29M	L29M	90.54	27	P	P	14 21 59.8	-0.3
	baz=275						
O29M	Mount Kennedy	90.55	30	P	P	14 21 59.9	-0.4
	baz=274						
YUK6	Outpost Mounta	90.61	29	P	P	14 22 00.1	-0.5
	baz=275						
MMAI	Mount Meron Ar	90.64	303	P	P	14 22 01.7	+0.4
	comp=Z,4.8nm,0.8s,baz=57,slow=9.2,SNR=6.3						
MMAI				LR	LR	15 05 54.2	
	comp=Z,54nm,21.9s,baz=86,slow=38						
	comp=Z,4.8nm,0.8s						
K29M	Barlow Dome	90.74	26	P	P	14 22 01.5	+0.4
	baz=275,SNR=6.1						
SYO	Syowa Base	90.79	201	⇑iP	P	14 22 01.5	+0.5
SYO	Syowa Base	90.79	201	⇑iPcP	PcP	14 22 04.0	+2.0
SYO	Syowa Base	90.79	201	⇑epP	pP	14 22 31.0	+1.5
EPYK	Eagle Plains	90.82	24	IAmb	IAmb	14 22 02.6	
	comp=Z,23nm,1.3s						
EPYK	Eagle Plains	90.82	24	P	P	14 22 02.3	+1.0
	baz=276						
G30M	tAoh Zraii Nji	90.95	23	P	P	14 22 02.9	+1.0
	baz=277						
P29M	Windy Craggy	91.03	30	P	P	14 22 02.7	+0.2
	baz=275						
SIM	Simferopol'	91.03	315	eP	P	14 22 07.1	+4.4
SIM				eS	S	14 32 54.4	+3.4
SIM				pmax	pmax		
	comp=Z,25nm,0.9s						
SIM				smax	smax		
	comp=E,43nm,11.7s						
HYT	Haines Junctio	91.03	29	P	P	14 22 03.3	+0.8
	baz=275						
F30M	Barrier River	91.04	22	P	P	14 22 02.7	+0.4
	baz=277						
I30M	Mount Dempster	91.09	25	P	P	14 22 03.1	+0.3
	baz=276						
N30M	Aishikik Lake	91.17	29	P	P	14 22 03.8	+0.7
	baz=276						
EIL	Elat	91.18	300	LR	LR	15 08 47.3	
	comp=E,86nm,18.9s,baz=186,slow=39						
J30M	Hart River	91.18	25	P	P	14 22 03.0	-0.1
	baz=276						
M30M	Minto, Yukon	91.20	27	P	P	14 22 03.4	+0.2
	baz=276,SNR=7.7						
P30M	Million Dollar	91.37	30	P	P	14 22 03.1	-1.0
	baz=276						
MAYO	Mayo, Yukon	91.49	26	P	P	14 22 03.5	-1.0
	baz=277						
QSPA	South Pole Qui	91.67	180	P	P	14 22 04.7	-0.6
	comp=E,22nm,1.0s,baz=309,slow=1.3,SNR=81						
QSPA				S	SKSac	14 32 22.6	-4.8
	comp=E,1.9nm,1.1s,baz=122,slow=3.5,SNR=3.2						
	comp=E,22nm,1.0s						
QSPA	South Pole Qui	91.67	180	P	P	14 22 04.9	-0.4
BR104	Keskin Array S	91.71	310	P	P	14 22 05.6	-0.6
	comp=E,5.9nm,1.1s						
BR131	Keskin Array S	91.71	310	i P	P	14 22 04.9	-1.3
BRTR	Keskin Array B	91.71	310	P	P	14 22 05.5	-0.6
	comp=E,5.9nm,1.1s,baz=131,slow=6.2,SNR=12						
BRTR				PP	PP	14 25 37.4	-8.9
	comp=E,2.5nm,0.9s,baz=101,slow=10,SNR=5.2						
BRTR				LR	LR	15 08 30.9	
	comp=E,73nm,20.6s,baz=80,slow=39						
	comp=E,5.9nm,1.1s						
BRTR	Keskin Array B	91.71	310	P	P	14 22 05.3	-0.8
BRTR	Keskin Array B	91.71	310	i P	P	14 22 06.5	+0.3
BRTR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
G31M	Satah River	91.72	23	P	P	14 22 04.5	-0.9
	baz=278						
BR106	Keskin Array S	91.72	310	P	P	14 22 05.8	-0.4
	comp=Z,5.2nm,1.1s						
BR105	Keskin Array S	91.72	310	P	P	14 22 05.5	-0.8
	comp=Z,5.4nm,1.2s						
O30N	Mendenhall	91.73	29	P	P	14 22 05.1	-0.6
	baz=277						
PLBC	Pleasant Camp	91.74	31	P	P	14 22 04.7	-1.0
	baz=276						
INK	Inuvik	91.79	22	IAmb	IAmb	14 22 06.8	
	comp=Z,23nm,1.5s						
INK	Inuvik	91.79	22	P	P	14 22 04.9	-0.8
	baz=279						
N31M	Braeburn, Yuko	91.80	28	P	P	14 22 04.9	-1.0
	baz=277						
F31M	Tsiigehtchic	91.85	22	P	P	14 22 05.0	-1.0
	baz=279,SNR=5.4						
H31M	Peel River	91.86	24	P	P	14 22 05.5	-0.6
	baz=278						
S31K	Pelican	91.98	32	P	P	14 22 06.5	-0.3
	baz=276						
R31K	City Hall, Gus	92.19	32	P	P	14 22 07.0	-0.7
	baz=277						
SKAG	Skagway	92.27	30	P	P	14 22 07.3	-0.7
	baz=277						
WHY	Whitehorse	92.33	29	P	P	14 22 07.9	-0.7
	baz=278						
M31M	Drury Creek, Y	92.35	28	P	P	14 22 08.1	-0.4
	baz=278						
ARCES	ARCESS Array B	92.49	340	P	P	14 22 08.0	-0.9
	comp=Z,9.2nm,0.7s,baz=77,slow=5.4,SNR=17						
ARCES				PKiKP	PKiKP	14 26 55.9	-1.2
	comp=Z,2.2nm,0.9s,baz=51,slow=1.9,SNR=4.0						
ARCES				LR	LR	15 07 42.5	
	comp=Z,102nm,18.6s,baz=114,slow=38						
	comp=Z,9.2nm,0.7s						
ARCES	ARCESS Array B	92.49	340	P	P	14 22 08.2	-0.7
ARCES				IAmb	IAmb	14 22 09.3	
	comp=Z,21nm,1.0s						
ARCES	ARCESS Array B	92.49	340	P	P	14 22 08.2	-0.7
ARCES				pmax	pmax		
	comp=Z,21nm,1.0s						
SPITS	Spitsbergen Ar	92.52	349	P	P	14 22 07.7	-1.3
	comp=Z,6.8nm,0.6s,baz=91,slow=9.2,SNR=8.0						
SPITS				LR	LR	15 10 58.8	
	comp=Z,100nm,18.3s,baz=64,slow=40						
	comp=Z,6.8nm,0.6s						
SIT	Sitka	92.57	33	P	P	14 22 08.7	-0.8
	baz=277						
TAOE	Nuku Hiva Isla	92.80	99	eP	P	14 22 10.7	-0.9
	comp=Z,138nm,26.3s						
TAOE	Nuku Hiva Isla	92.80	99	eLR	LR	14 52 11.7	
	comp=Z,324nm,30.9s						
FARO	Faro, Yukon	92.83	28	P	P	14 22 10.0	-0.7
	baz=279						
S32K	Killisnoo	92.92	32	P	P	14 22 10.9	-0.2
	baz=278						
P32M	Atlin	93.06	30	P	P	14 22 11.5	-0.3
	baz=279						
N32M	Quiet Lake	93.13	29	P	P	14 22 11.6	-0.5
	baz=279						
P33M	Teslin, Yukon	93.41	30	P	P	14 22 13.4	-0.1
	baz=280						
A36M	Sachs Harbour	93.70	17	IAmb	IAmb	14 22 21.8	
	comp=Z,25nm,1.8s						
A36M	Sachs Harbour	93.70	17	P	P	14 22 14.3	-0.1
	baz=287						
AK10	Malin Array Si	93.77	321	P	P	14 22 14.2	-1.0
AKASG	Malin Array Be	93.77	321	P	P	14 22 14.0	-1.2
	comp=Z,1.7nm,0.7s,baz=78,slow=3.5,SNR=4.8						
AKASG				PP	PP	14 25 55.6	-6.2
	comp=Z,0.9nm,0.8s,baz=76,slow=7.8,SNR=1.4						
AKASG				LR	LR	15 08 26.5	
	comp=Z,100nm,18.2s,baz=82,slow=38						
	comp=Z,1.7nm,0.7s						
AKBB	Malin Array Si	93.77	321	i P	P	14 22 14.7	-0.5
AKBB				pmax	pmax		
	comp=Z,36nm,4.0s						
AK06	Malin Array Si	93.81	321	P	P	14 22 14.3	-1.1
AK07	Malin Array Si	93.81	321	P	P	14 22 14.1	-1.3
FINES	FINESS Array B	93.83	332	P	P	14 22 14.8	-0.5
	comp=Z,1.1nm,0.5s,baz=53,slow=5.1,SNR=17						
FINES				LR	LR	15 09 04.1	
	comp=Z,127nm,18.2s,baz=58,slow=38						
	comp=Z,1.1nm,0.5s						
FINES	FINESS Array B	93.83	332	i P	P	14 22 16.3	+1.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PURM	Purcari	93.85	317	⇑P	P	14 22 14.9	-0.7
AK22	Malin Array Si	93.86	321	P	P	14 22 15.0	-0.6
T33K	Petersburg	93.89	33	P	P	14 22 15.3	-0.3
	baz=279						
Q32M	Nakina River	93.90	31	P	P	14 22 14.2	-1.7
	baz=280						
U33K	Whale Pass	93.91	34	P	P	14 22 15.3	-0.4
	baz=279						
CRAG	Craig	94.01	34	P	P	14 22 16.0	-0.2
	baz=279						
MNK	Minsk	94.05	325	i P	P	14 22 16.1	-0.3
MNK				i *PP	pP	14 22 45.3	+0.1
MNK				i *SP	sP	14 22 57.1	+0.2
MNK				i		14 26 04.0	
MNK				i PPP	PPP	14 28 04.8	
MNK				i S	SKSac	14 32 40.3	-0.6
MNK				i SS	SS	14 39 41.6	+1.9
MNK				i SSS	SSS	14 43 25.8	
MNK				pmax	pmax		
	comp=N,11nm,1.0s						
MNK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MNK				pmax	pmax		
	comp=E,11nm,0.9s						
WRAK	Wrangell Islan	94.29	33	P	P	14 22 16.9	-0.6
	baz=280						
R33M	Jennings River	94.48	30	P	P	14 22 18.1	-0.4
	baz=281						
S34M	Telegraph Cree	94.67	32	P	P	14 22 18.9	-0.3
	baz=281						
SORM	Soroca	94.68	318	⇑P	P	14 22 12.4	-7.0
C36M	Paulatuk	94.88	20	IAmb	IAmb	14 22 20.9	
	comp=Z,20nm,1.1s						
C36M	Paulatuk	94.88	20	P	P	14 22 19.3	-0.6
	baz=288						
V35K	Ketchikan	94.88	34	P	P	14 22 19.8	-0.4
	baz=280						
DLBC	Dease Lake	95.15	31	LR	LR	15 00 11.4	
	comp=Z,118nm,21.7s,baz=260,slow=32						
DLBC	Dease Lake	95.15	31	P	P	14 22 21.0	-0.5
	baz=282						
CFR	Carcaliu	95.22	315	⇑P	P	14 22 21.9	-0.1
CFR	Carcaliu	95.22	315	P	P	14 22 21.9	-0.1
T35M	Bob Quinn	95.32	32	P	P	14 22 22.0	-0.2
	baz=281						
U35K	Hyder	95.66	34	P	P	14 22 23.8	+0.1
	baz=282						
RNPP9	Sopachiv	95.75	322	P	P	14 22 23.7	-0.5
ELIB	Princess Elisa	95.96	198	dP	P	14 22 26.3	+1.3
	comp=Z,34nm,1.0s						
TESR	Tescani	96.06	317	⇓P	P	14 22 25.4	-0.4
VRI	Vrincioaia	96.11	316	⇑P	P	14 22 26.4	+0.3
VRI	Vrincioaia	96.11	316	⇑P	P	14 22 26.4	+0.3
VRI	Vrincioaia	96.11	316	P	P	14 22 26.1	+0.1
PLOR	Plostina	96.16	316	⇓P	P	14 22 26.4	+0.1
PLOR	Plostina	96.16	316	⇓P	P	14 22 26.4	+0.1
NEHR	Nehoiu	96.47	316	⇑P	P	14 22 27.4	-0.4
MBAR	Mbarara	96.57	270	LR	LR	15 03 17.5	
	comp=Z,42nm,18.7s,baz=72,slow=34						
TURR	Turia	96.57	317	⇑P	P	14 22 27.6	-0.6
MLR	Muntele Rosu	96.71	316	LR	LR	15 12 04.6	
	comp=Z,122nm,20.2s,baz=58,slow=39						
MLR	Muntele Rosu	96.71	316	IAmb	IAmb	14 22 37.5	
	comp=Z,17nm,1.2s						
MLR	Muntele Rosu	96.71	316	⇓P	P	14 22 28.9	0.0
MLR	Muntele Rosu	96.71	316	⇓P	P	14 22 28.9	0.0
BURAR	Bucovina Array	96.84	318	P	P	14 22 29.2	-0.3
BURAR				IAmb	IAmb	14 23 02.7	
	comp=Z,6.3nm,0.7s						
BURAR	Bucovina Array	96.84	318	⇑P	P	14 22 29.6	+0.2
BURAR	Bucovina Array	96.84	318	⇑P	P	14 22 29.6	+0.2
BUR08	Bucovina Ar. S	96.85	318	IAmb	IAmb	14 22 41.5	
	comp=Z,18nm,1.3s						
LIRD	Liard River Hi	96.90	30	P	P	14 22 28.6	-0.7
	baz=285						
WRGLY	Wrigley	97.02	26	IAmb	IAmb	14 23 23.1	
	comp=Z,26nm,1.5s						
WRGLY	Wrigley	97.02	26	P	P	14 22 29.0	-0.7
	baz=288						
ELND	Elena	97.17	313	⇑P	P	14 22 30.7	-0.2
TOAD	Toad River Com	97.48	30	P	P	14 22 31.2	-0.8
	baz=286						
BBB	Bella Bella	97.54	37	LR	LR	14 58 42.5	
	comp=Z,84nm,21.4s,baz=243,slow=30						
ARR	Arges	97.64	316	⇓P	P	14 22 29.9	-3.1
KOTAN	Kotaneelee Air	97.69	29	P	P	14 22 32.0	-0.9
	baz=287						
RKT	Rikitea	97.80	113	eLR	LR	14 54 28.1	
	comp=Z,4µm,36.2s						
MARR	Marisel-Cluj	98.43	318	⇑P	Pdif	14 22 36.7	+0.1
DRGR		98.68	318	⇑P	P	14 22 37.5	-0.2
DRGR		98.68	318	⇑P	P	14 22 37.5	-0.2
MATP	Matopo	98.84	250	LR	LR	15 06 12.6	
	comp=Z,90nm,18.3s,baz=78,slow=35						
GZR	Gura Zlata	98.92	316	⇓P	P	14 22 29.6	-9.2
STHS	Stebnicka Huta	99.06	321	ePP	PP	14 26 44.2	+1.6
LSZ	Lusaka	99.24	255	LR	LR	15 04 22.6	
	comp=Z,80nm,18.8s,baz=103,slow=33						
HERR	Herculane	99.27	316	⇑P	Pdif	14 22 40.5	+0.3
RES	Resolute Bay	99.65	10	LR	LR	15 11 60.0	
	comp=Z,29nm,18.9s,baz=11,slow=38						
HFS	Hagfors	100.02	332	P	Pdif	14 22 44.9	+1.6
	comp=Z,2.3nm,0.9s,baz=83,slow=6.0,SNR=5.9						
HFS				LR	LR	15 11 30.2	
	comp=Z,158nm,19.9s,baz=50,slow=37						
	comp=Z,2.3nm,0.9s						
NB2	NORSAR Subarra	100.80	334	P	Pdif	14 22 45.4	-1.4
	comp=Z,5.5nm,1.0s,baz=68,slow=4.6						
NB2	NORSAR Subarra	100.80	334	P	Pdif	14 22 45.4	-1.4
	baz=68,slow=4.6						
NOA	NORSAR Array B	100.80	334	P	Pdif	14 22 45.6	-1.1
	comp=Z,2.0nm,0.8s,baz=67,slow=4.5,SNR=6.9						
NOA				PP	PP	14 26 43.8	-12
	comp=Z,1.9nm,0.9s,baz=65,slow=7.5,SNR=3.7						
YKA	Yellowknife Ar	101.06	25	P	Pdif	14 22 48.0	+0.2
	comp=Z,0.8nm,0.7s,baz=297,slow=4.8,SNR=11						
YKA				PKiKP	PKiKP	14 27 12.4	+0.1
	comp=Z,0.7nm,0.8s,baz=296,slow=2.3,SNR=8.3						
YKA				PKKPbc	PKKPbc	14 38 57.9	-3.4
	comp=Z,1.6nm,0.8s,baz=111,slow=1.7,SNR=19						
YKA				PKKPab	PKKPdf	14 39 21.9	+16
	comp=Z,0.9nm,0.9s,baz=110,slow=3.6,SNR=5.9						
MORC	Moravsky Berou	101.30	322	ePP	PP	14 27 01.8	+2.3
MODS	Modra-Piesok	101.86	320	ePP	PKiKP	14 27 08.8	-5.4
TROLL	Troll, Antarti	101.88	195	⇓P	Pdif	14 22 51.9	+0.4
	comp=Z,164nm,0.8s						
VRAC	Vranov	102.02	321	ePP	PKiKP	14 27 03.7	-11
RONA	Rosalia, Austr	102.68	320		PP	14 27 11.6	+1.6
RONA	Rosalia, Austr	102.68	320	ePP	PP	14 27 11.6	+1.6
	comp=Z,3.5nm,1.0s						
CONA	Conrad Observa	102.90	320	ePP	PP	14 27 09.8	-1.8
	comp=Z,17nm,1.6s						
ARSA	Arzberg	103.32	319		PKiKP	14 27 21.3	+4.4
ARSA	Arzberg	103.32	319	ePKiKP	PKiKP	14 27 21.3	+4.4
	comp=Z,2.6nm,1.3s						
SNAA	Sanae	103.44	194	⇓P	Pdif	14 22 59.4	+1.1
	comp=Z,77nm,0.8s						
SNAA	Sanae	103.44	194	Pdiff	Pdif	14 22 58.6	+0.2
	comp=Z,1.3nm,0.8s,baz=127,slow=3.6,SNR=7.7						
SNAA				PKiKP	PKiKP	14 27 16.6	+0.1
	comp=Z,5.6nm,1.1s,baz=100,slow=4.6,SNR=3.2						
SOKA	Soboth	103.81	319		PKiKP	14 27 18.9	+0.9
SOKA	Soboth	103.81	319	i PP	PKiKP	14 27 18.8	+0.9
	comp=Z,11nm,1.4s						
MOA	Molln	103.94	320		PKiKP	14 27 25.5	+7.5
MOA	Molln	103.94	320	ePP	PKiKP	14 27 25.5	+7.5
	comp=Z,1.4nm,0.8s						
GERES	GERESS Array B	103.97	321	PKiKP	PKiKP	14 27 18.8	+0.6
	comp=Z,2.3nm,0.9s,baz=76,slow=4.7,SNR=4.9						
OBKA	Obir	104.18	319		PKiKP	14 27 25.1	+6.5
OBKA	Obir	104.18	319	i PP	PKiKP	14 27 25.1	+6.5
	comp=Z,12nm,1.4s						
BIOA	Bad Ischl, Aus	104.39	320		PKiKP	14 27 15.9	-3.0
BIOA	Bad Ischl, Aus	104.39	320	ePKiKP	PKiKP	14 27 15.9	-3.0
	comp=Z,10nm,1.6s						
MYKA	Terra Mystica	104.74	319		PKiKP	14 27 25.6	+6.0
MYKA	Terra Mystica	104.74	319	ePP	PKiKP	14 27 25.7	+6.0
	comp=Z,7.5nm,1.1s						
KBA	Koelnbreinsper	104.78	320		PKiKP	14 27 14.4	-5.4
KBA	Koelnbreinsper	104.78	320	i PKiKP	PKiKP	14 27 14.5	-5.4
	comp=Z,6.0nm,1.1s						
VNA2	Neumayer--Watz	105.05	194	⇓P	Pdif	14 23 10.1	+4.7
	comp=Z,2.5nm,0.7s,baz=89,slow=5.8						
LESA	Schwarzleotal	105.10	320		PP	14 27 28.7	+0.8
LESA	Schwarzleotal	105.10	320	PP	PP	14 27 28.7	+0.8
	comp=Z,11nm,1.1s						
WTTA	Wattenberg	105.82	320		PP	14 27 37.1	+3.7
WTTA	Wattenberg	105.82	320	ePP	PP	14 27 37.1	+3.7
	comp=Z,27nm,1.4s						
WATA	Walderalm	105.83	320		PP	14 27 36.1	+2.7
WATA	Walderalm	105.83	320	i PP	PP	14 27 36.1	+2.7
	comp=Z,20nm,1.4s						
SQTA	Sankt Quirin	106.10	320		PP	14 27 37.3	+1.9
SQTA	Sankt Quirin	106.10	320	ePP	PP	14 27 37.3	+1.9
	comp=Z,17nm,1.4s						
RETA	Reutte	106.29	321		PP	14 27 40.3	+3.5
RETA	Reutte	106.29	321	ePP	PP	14 27 40.3	+3.5
	comp=Z,32nm,1.4s						
FETA	Feichten	106.48	320		PP	14 27 40.6	+2.3
FETA	Feichten	106.48	320	ePP	PP	14 27 40.6	+2.3
	comp=Z,20nm,1.2s						
DAVA	Damuels	106.92	321		PP	14 27 41.2	-0.2
DAVA	Damuels	106.92	321	ePP	PP	14 27 41.3	-0.2
	comp=Z,13nm,1.3s						
NVAR	Mina Array Bea	107.80	49	PKiKP	PKiKP	14 27 26.8	+1.0
	comp=Z,0.7nm,0.7s,baz=226,slow=1.9,SNR=5.5						
NVAR				PKKPbc	PKKPbc	14 38 40.8	+0.3
	comp=Z,0.8nm,0.6s,baz=150,slow=3.2,SNR=5.8						
NVAR				PKKPab	PKKPab	14 38 54.2	-0.1
	comp=Z,0.7nm,0.7s,baz=191,slow=7.2,SNR=3.6						
BGES	Gesves	108.53	325	dPKiKP	PKiKP	14 27 25.8	-0.6
PDAR	Pinedale Array	112.46	42	PKiKP	PKiKP	14 27 34.3	-0.1
	comp=Z,0.4nm,0.5s,baz=154,slow=1.9,SNR=5.9						
PDAR				PKKPbc	PKKPbc	14 38 23.7	-1.9
	comp=Z,2.2nm,0.8s,baz=121,slow=5.1,SNR=16						
PDAR				PKKPab	PKKPab	14 38 32.4	-1.3
	comp=Z,3.1nm,0.8s,baz=111,slow=5.7,SNR=15						
ULM	Lac du Bonnet	116.41	29	PKP	PKPdf	14 27 40.7	-0.8
	comp=Z,6.0nm,0.7s,baz=314,slow=2.8,SNR=9.6						
ULM				PKKPbc	PKKPbc	14 38 09.6	-2.5
	comp=Z,6.5nm,0.8s,baz=122,slow=3.3,SNR=3.1						
ESDC	Sonseca Array	119.30	318	PKP	PKiKP	14 27 47.7	+0.2
	comp=Z,0.9nm,1.0s,baz=27,slow=4.2,SNR=2.6						
ESDC				PP	PP	14 29 05.1	-4.2
	comp=Z,2.5nm,1.0s,baz=48,slow=7.5,SNR=4.7						
ESDC				PKKPbc	PKKPbc	14 38 01.8	+0.3
	comp=Z,1.6nm,1.0s,baz=35,slow=31,SNR=4.7						
TXAR	Lajitas Array	122.35	53	PKP	PKiKP	14 27 54.2	+0.4
	comp=Z,4.1nm,0.7s,baz=239,slow=1.0,SNR=54						
TXAR				PKKPbc	PKKPab	14 37 51.1	+1.0
	comp=Z,2.0nm,0.9s,baz=122,slow=7.1,SNR=14						
SCHQ	Schefferville	122.42	10	PKP	PKiKP	14 27 53.0	-0.1
	comp=Z,8.2nm,0.8s,baz=25,slow=3.3,SNR=21						
MDT	Midelt	123.08	312	PKP	PKiKP	14 27 55.4	+0.2
	comp=Z,0.9nm,0.3s,baz=136,slow=2.9,SNR=4.1						
TORD	Torodi Ar. Bea	124.05	287	PKP	PKPdf	14 27 57.1	-0.1
	comp=Z,11nm,0.9s,baz=48,slow=3.2,SNR=44						
DBIC	Dimbokro	131.51	280	PKP	PKPdf	14 28 11.7	+0.3
	comp=Z,8.4nm,1.0s,baz=124,slow=4.0,SNR=5.0						
DBIC				SKPbc	SKPbc	14 31 26.8	+0.2
	comp=Z,51nm,0.9s,baz=109,slow=4.7,SNR=32						
PLCA	Paso Flores	137.96	160	PKP	PKPdf	14 28 23.8	+0.9
	comp=Z,11nm,0.9s,baz=189,slow=2.9,SNR=19						
PLCA				SKPbc	SKPbc	14 31 47.0	+0.3
	comp=Z,7.0nm,0.9s,baz=197,slow=3.2,SNR=8.9						
SOR	Soroa	141.70	49	eP	PKiKP	14 28 33.5	+0.6
MGV	Manicaragua	144.35	47	eP	PKPdf	14 28 34.2	-0.5
CAIB	Caibarien	144.48	46	eP	PKPbc	14 28 34.1	+0.4
ROC1	El Roble	144.49	153	i P	PKPbc	14 28 33.7	-0.1
PEL	Peldehue	144.50	154	i P	PKPbc	14 28 33.8	+0.2
VA03	San Esteban	144.88	153	i P	PKPbc	14 28 35.0	+0.2
FSCY	Frank Sound, G	145.07	52	eP	PKiKP	14 28 42.3	+2.4
AAGR	Agrelo	145.35	156	i P	PKPab	14 28 36.9	+0.4
ARCO	CERRO ARCO	145.51	155	i P	PKPab	14 28 37.3	+0.1
ASAL	Salagasta	145.77	155	i P	PKPbc	14 28 37.7	+0.1
AUSP	Uspallata	145.85	154	i P	PKPab	14 28 39.1	+0.4
RTLS	Leoncito	146.26	154	i P	PKPab	14 28 39.9	-0.4
ACAN	Cantantal	146.71	157	i P	PKPdf	14 28 39.1	+0.5
CFA	Coronel Fontan	146.88	155	PKPbc	PKPdf	14 28 39.5	+0.7
	comp=Z,15nm,0.8s,baz=244,slow=3.7,SNR=32						
RTLL	Cerro Villicun	147.02	155	i P	PKPbc	14 28 40.4	-0.8
MRA	San Martin	147.12	159	i P	PKPdf	14 28 39.6	+0.3
ACCO	Cerro Coronel	147.39	153	i P	PKPdf	14 28 40.9	+0.7
AROD	Rodeo	147.56	152	i P	PKPbc	14 28 42.0	-1.2
ACHE	Chepes	147.90	157	i P	PKPdf	14 28 41.4	+0.7
HLGC	Holguin	147.93	44	eP	PKPbc	14 28 44.4	+0.5
AVFE	Valle Fertil	148.03	156	i P	PKPdf	14 28 42.1	+1.3
YAR	Yar	148.06	45	eP	PKPbc	14 28 44.4	+0.2
CHIV	Chivirico	148.27	46		PKPbc	14 28 44.7	-0.2
CHIV	Chivirico	148.27	46	eP	PKPdf	14 28 39.0	-2.3
PINC	Pinares de May	148.38	45	eP	PKPbc	14 28 44.4	-0.7
PIL	Pilar	148.42	162	i P	PKPbc	14 28 44.9	0.0
TCA	Tanti	148.50	160	i P	PKPdf	14 28 42.1	+0.5
MTDJ	Mount Denham	148.52	50	eP	PKPdf	14 28 43.6	+1.7
AGUA	GUANDACOL	148.59	153	i P	PKPdf	14 28 43.0	+1.2
MARVS	Santiago de Cu	148.62	45	eP	PKPdf	14 28 43.1	+1.1
APLL	PUNTA DE LOS L	148.64	157	i P	PKPdf	14 28 42.5	+0.7
RCC	Rio Carpintero	148.77	45	eP	PKPbc	14 28 46.2	+0.1
MOAC	Moa	148.84	43	eP	PKPbc	14 28 46.2	-0.1
NMDO	Nuevo Mundo	148.89	43	eP	PKPbc	14 28 45.8	-0.6
GTBY	Guantanamo Bay	149.23	44	eP	PKPbc	14 28 47.4	+0.1
QMBU	Quimbuelo	149.25	44	eP	PKPbc	14 28 47.6	+0.2
GO03	Copiapo	149.31	148	i P	PKPdf	14 28 43.7	+0.8
ACLC	CERRO LA CRUZ	149.32	155	i P	PKPdf	14 28 43.6	+0.5
VCA	Vinchina	149.36	153	i P	PKPdf	14 28 43.8	+0.7
MASC	Masc	149.67	43	eP	PKPbc	14 28 47.2	-1.1
AANI	Anillaco	149.86	155	i P	PKPdf	14 28 44.7	+0.8
TINO	Tinogasta	150.22	153	i P	PKPdf	14 28 45.5	+1.0
PSAL	Palomas, Salto	150.46	171	eP	PKPdf	14 28 45.2	+0.6
AC02	Maricunga	150.49	149	i P	PKPdf	14 28 45.2	-0.2

CYA	**Choya**	**150.66**	**156**	*i* P	**PKPdf**	**14 28 45.9**	**+0.9**
CPSB	**Cacapava Do Su**	**151.49**	**179**	*e*P	**PKPdf**	**14 28 47.6**	**+1.4**
AHML	**Horco Molle**	**152.31**	**155**	*i* P	**PKPdf**	**14 28 41.7**	**-5.9**
CNLB	**Canela**	**152.53**	**184**	*e*P	**PKPdf**	**14 28 45.2**	**-2.6**
FSA	**Cafayete**	**152.62**	**153**	*i* P	**PKPdf**	**14 28 48.8**	**+0.5**
OTAV	**Otavalo**	**154.19**	**86**	*e*P	**PKPdf**	**14 28 48.5**	**-2.7**
CPUP	**Villa Florida**	**155.16**	**170**	PKP	**PKPdf**	**14 28 52.0**	**+0.5**
	comp=Z,1.6nm,1.0s,baz=103,slow=2.9,SNR=4.9						
CPUP				PKPab	**PKPab**	**14 29 17.5**	**+1.0**
	comp=Z,7.3nm,0.9s,baz=188,slow=3.1,SNR=14						
ROSC	**El Rosal**	**157.44**	**73**	PKP	**PKPdf**	**14 28 55.8**	**+0.4**
	comp=Z,8.4nm,0.5s,baz=350,slow=20,SNR=5.4						
ROSC				PKPab	**PKPab**	**14 29 29.2**	**+1.8**
	comp=Z,26nm,0.9s,baz=129,slow=4.8,SNR=7.2						
LPAZ	**La Paz**	**159.04**	**134**	PKP	**PKPdf**	**14 28 58.3**	**+0.8**
	comp=Z,7.8nm,1.0s,baz=20,slow=1.9,SNR=18						
LPAZ				PKPab	**PKPab**	**14 29 35.6**	**+1.2**
	comp=Z,19nm,0.9s,baz=250,slow=1.6,SNR=17						
LPAZ				PP	**PP**	**14 33 14.4**	**-0.5**
	comp=Z,3.7nm,1.1s,baz=225,slow=5.6,SNR=4.6						
LPAZ	**La Paz**	**159.04**	**134**	*e*P	**PKPdf**	**14 28 56.4**	**-1.1**
SDV	**Santo Domingo**	**159.25**	**59**	*e*P	**PKPdf**	**14 28 55.5**	**-1.8**
SIV	**San Ignacio**	**163.62**	**150**	PKP	**PKPdf**	**14 29 01.7**	**+0.1**
	comp=Z,6.4nm,0.9s,baz=175,slow=2.7,SNR=25						
SIV				PKPab	**PKPab**	**14 29 53.8**	**+0.2**
	comp=Z,17nm,0.8s,baz=219,slow=3.5,SNR=30						
BDFB	**Brasilia**	**165.44**	**198**	PKP	**PKPdf**	**14 29 03.8**	**+0.5**
	comp=Z,11nm,1.0s,baz=143,slow=0.6,SNR=9.6						
BDFB				PKPab	**PKPab**	**14 30 02.2**	**+0.5**
	comp=Z,17nm,0.9s,baz=174,slow=3.9,SNR=12						

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*IDC **15** 14:24:06.0±1.0, 27°.97S×176°.25W, h0^{km}, mb4.2/5, mbtmp4.1/6, ML3.4/1, Error ellipse: s-maj=27.4km s-min=24.0km az=111.0*

*NEIC **15** 14:24:07.0±0.8, 27°.9S±0°.1×176°.2W±0°.1, h10^{km}±1^{km}, mb4.4/14, Error ellipse: s-maj=23.8km s-min=13.8km az=131.0*

ISC 15 14:24:11.3±0.8,**27°.9S**±0°.1×**176°.4W**±0°.1,**h37**^{km}**,n31,** σ**1^{s}.13**/34,**mb4.4**/14,**4C,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.96**	**224**	Pn	**Pn**	**14 24 41.4**	**-0.6**
	112nm,0.3s,baz=286,slow=20,SNR=2.8						
RAO				Sn	**Sn**	**14 25 07.6**	**+2.2**
	357nm,0.3s,baz=82,slow=24,SNR=14						
RAO	**Raoul Island**	**1.96**	**224**		**Pn**	**14 24 41.1**	**-0.9**
RAO				Sn	**Sn**	**14 25 07.2**	**+1.8**
DZM	**Mont Dzumac**	**16.62**	**286**	Pn	**P**	**14 28 03.5**	**-0.2**
	0.1nm,0.3s,baz=141,slow=14,SNR=4.4						
	2.2nm,0.8s						
TARA	**Tarawa**	**30.81**	**339**	P	**P**	**14 30 22.3**	**-1.5**
TARA				IAmb	IAmb	14 30 22.9	
	comp=Z,8.5nm,0.8s						
STKA	**Stephens Creek**	**36.53**	**253**	P	**P**	**14 31 13.3**	**-0.1**
STKA				IAmb	IAmb	14 31 22.7	
	comp=Z,14nm,1.1s						
COEN	**Coen**	**40.06**	**282**	P	**P**	**14 31 42.9**	**-0.4**
COEN				IAmb	IAmb	14 32 13.1	
	comp=Z,5.3nm,1.1s						
BBOO	**Buckleboo**	**41.10**	**251**	P	**P**	**14 31 50.9**	**-0.9**
BBOO				IAmb	IAmb	14 32 30.3	
	comp=Z,11nm,1.4s						
AS31	**Alice Springs**	**44.76**	**264**		**P**	**14 32 20.5**	**-0.9**
ASAR	**Alice Springs**	**44.76**	**264**	P	**P**	**14 32 21.4**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=99,slow=7.2,SNR=40						
ASAR				PcP	**PP**	**14 34 04.8**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=109,slow=3.7,SNR=1.7						
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**44.76**	**264**	P	**P**	**14 32 20.0**	**-1.4**
WR8	**Warramunga Arr**	**45.37**	**269**	P	**P**	**14 32 26.1**	**-0.3**
WR8				IAmb	IAmb	14 32 50.1	
	comp=Z,3.5nm,1.0s						
WRA	**Warramunga Arr**	**45.52**	**269**	P	**P**	**14 32 27.2**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=109,slow=8.0,SNR=23						
	comp=Z,1.4nm,0.5s						
WRA	**Warramunga Arr**	**45.52**	**269**	P	**P**	**14 32 27.5**	**0.0**
WB0	**Warramunga Arr**	**45.53**	**269**		**P**	**14 32 27.5**	**-0.1**
WB0				IAmb	IAmb	14 32 29.7	
	comp=Z,10nm,1.4s						
KNRA	**Kununurra**	**52.02**	**271**	P	**P**	**14 33 18.4**	**+1.0**
MBWA	**Marble Bar**	**57.98**	**261**	P	**P**	**14 34 00.7**	**+0.2**
QSPA	**South Pole Qui**	**62.26**	**180**	P	**P**	**14 34 28.9**	**-0.4**
	comp=Z,5.8nm,0.9s,baz=42,slow=2.2,SNR=14						
	comp=Z,5.8nm,0.9s						
QSPA	**South Pole Qui**	**62.26**	**180**	P	**P**	**14 34 29.4**	**+0.2**
MJAR	**Matsushiro Arr**	**77.00**	**324**	P	**P**	**14 36 01.5**	**+1.3**
	comp=Z,1.2nm,0.8s,baz=154,slow=5.1,SNR=4.6						
	comp=Z,1.2nm,0.8s						
MJAR	**Matsushiro Arr**	**77.00**	**324**	P	**P**	**14 36 00.0**	**-0.2**
MJAR				IAmb	IAmb	14 36 16.0	
	comp=Z,3.5nm,1.2s						
TROLL	**Troll, Antarti**	**80.41**	**180**	⇑P	**P**	**14 36 17.7**	**-1.1**
	comp=Z,111nm,0.7s						
SNAA	**Sanae**	**80.65**	**178**	⇑P	**P**	**14 36 19.5**	**-0.5**
	comp=Z,45nm,0.9s						
SNAA	**Sanae**	**80.65**	**178**	P	**P**	**14 36 19.0**	**-0.9**
	comp=Z,2.3nm,0.9s,baz=185,slow=14,SNR=5.1						
	comp=Z,2.3nm,0.9s						
SNAA	**Sanae**	**80.65**	**178**	P	**P**	**14 36 19.4**	**-0.5**
SNAA				IAmb	IAmb	14 36 22.5	
	comp=Z,3.3nm,1.0s						
VNA3	**Neumayer Olymp**	**80.74**	**176**	⇑P	**P**	**14 36 19.4**	**-0.9**
	comp=Z,4.3nm,0.7s						
VNA2	**Neumayer--Watz**	**81.19**	**176**	⇑P	**P**	**14 36 22.6**	**-0.2**
	comp=Z,4.3nm,0.8s,baz=144,slow=3.6						
PET	**Petropavlovsk**	**83.43**	**345**	P	**P**	**14 36 38.0**	**+3.6**
	comp=Z,24nm,1.9s						
FINES	**FINESS Array B**	**143.21**	**342**	PKP	**PKPdf**	**14 43 39.5**	**-1.3**
	comp=Z,2.1nm,1.0s,baz=87,slow=2.9,SNR=4.1						
NOA	**NORSAR Array B**	**146.42**	**353**	PKPbc	**PKPdf**	**14 43 46.6**	**+0.2**
	comp=Z,2.0nm,0.9s,baz=14,slow=4.5,SNR=3.4						
HFS	**Hagfors**	**147.00**	**351**	PKPbc	**PKPab**	**14 43 51.0**	**0.0**
	comp=Z,3.7nm,0.8s,baz=243,slow=1.7,SNR=4.5						
AKASG	**Malin Array Be**	**150.06**	**327**	PKPbc	**PKiKP**	**14 43 59.4**	**+0.9**
	comp=Z,0.9nm,0.5s,baz=45,slow=3.3,SNR=6.0						

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*IDC **15** 14:29:37.2±1.1, 6°.45N×125°.12E, h0^{km}, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=23.3km s-min=9.7km az=119.0*

*DJA **15** 14:29:40.9±0.3, 7°N±2°×12°5E±°, h10^{km}, M4.7/10, mb4.8/10, mB5.2/7, MLv4.8/7, Mw(mB)4.6/7*

ISC 15 14:29:39.0±0.8,**6°.53N**±0°.05×**125°.5E**±0°.1,**h10**^{km}**,n15,** σ**1^{s}.87**/16,**mb3.4**/5,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.55**	**9**	Pg	**Pb**	**14 29 51.9**	**+1.2**
	849nm,0.3s,baz=260,slow=6.7,SNR=11						
DAV				Lg	Lg	14 30 02.6	
	849nm,0.3s,baz=112,slow=24,SNR=14						
DAV	**Davao City (W)**	**0.55**	**9**	P	**Pg**	**14 29 49.0**	**-0.7**
DAV				S	**Sb**	**14 29 59.3**	**+0.7**
SGSI	**Sangihe**	**2.82**	**179**	P	**Pb**	**14 30 28.8**	**-0.7**
GTOI	**Gorontalo**	**6.36**	**203**	P	**Pn**	**14 31 14.1**	**+1.3**
	1.3nm1µm125nm,0.6s						
MRSI	**Marisa**	**6.98**	**211**	P	**Pn**	**14 31 21.7**	**+0.3**
	1.1nm48nm,0.8s						
LUWI	**Luwuk**	**7.99**	**200**	P	**Pn**	**14 31 38.1**	**+2.8**
MPSI	**Mapaga**	**8.30**	**222**	P	**Pn**	**14 31 43.0**	**+3.4**
	2µm15nm,0.8s						
APSI	**Ampana**	**8.33**	**208**	P	**Pn**	**14 31 42.8**	**+2.9**
	1µm99nm,0.7s						
SANI	**Sanana**	**8.53**	**177**	P	**Pn**	**14 31 44.6**	**+1.9**
	13nm,0.9s						
KKM	**Kota Kinabalu**	**9.24**	**268**	P	**Pn**	**14 31 53.7**	**+1.2**
WRA	**Warramunga Arr**	**27.70**	**162**	P	**P**	**14 35 27.3**	**-0.4**
	0.4nm,0.6s,baz=330,slow=11,SNR=7.2						
	0.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**28.46**	**297**	P	**P**	**14 35 32.7**	**-1.8**
	0.2nm,0.3s,baz=116,slow=8.9,SNR=5.2						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**31.11**	**165**	P	**P**	**14 35 58.1**	**+0.2**
	0.2nm,0.6s,baz=346,slow=6.9,SNR=6.7						
	0.2nm,0.6s						
STKA	**Stephens Creek**	**41.16**	**159**	P	**P**	**14 37 24.1**	**+0.4**
	1.0nm,0.8s,baz=338,slow=5.4,SNR=4.7						
	1.0nm,0.8s						
MKAR	**Makanchi Array**	**54.57**	**325**	P	**P**	**14 39 05.4**	**-2.2**
	0.2nm,0.5s,baz=126,slow=7.4,SNR=4.0						
	0.2nm,0.5s						

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*IDC **15** 14:36:38.5±0.9, 6°.47N×125°.21E, h0^{km}, mb3.9/7, mbtmp3.9/7, Error ellipse: s-maj=21.4km s-min=9.1km az=116.0*

*NEIC **15** 14:36:40.6±1.4, 6°.63N±0°.07×125°.23E±0°.08, h13^{km}±5^{km}, mb4.7/16, Error ellipse: s-maj=14.0km s-min=5.4km az=127.0*

ISC 15 14:36:39.4±0.5,**6°.56N**±0°.06×**125°.20E**±0°.08,**h10**^{km}**,n34,** σ**0^{s}.93**/34,**mb4.4**/15,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.63**	**36**	Pg	**Pg**	**14 36 51.5**	**-0.2**
	698nm,0.3s,baz=262,slow=3.5,SNR=18						
DAV				Lg	Lg	14 37 02.1	
	736nm,0.3s,baz=258,slow=22,SNR=29						
DAV	**Davao City (W)**	**0.63**	**36**		**Pg**	**14 36 51.6**	**-0.2**
DAV					**Sg**	**14 36 58.8**	**-1.2**
TNTI	**Ternate**	**6.14**	**159**	Pn	**Pn**	**14 38 10.6**	**+0.3**
TOLI2	**Tolitoli**	**6.98**	**219**	Pn	**Pn**	**14 38 21.7**	**-0.2**
I39PW	**PALAU INFRASON**	**9.33**	**83**	I	I	15 33 10.0	
	baz=267,slow=306,SNR=0.5						
BKB	**Balikpapan**	**11.36**	**227**	Pn	**Pn**	**14 39 20.2**	**-1.8**
TPUB	**Ta-pu**	**17.22**	**346**	P	**P**	**14 40 42.5**	**+0.7**
KNRA	**Kununurra**	**22.37**	**171**	P	**P**	**14 41 38.6**	**+0.6**
KNRA				IAmb	IAmb	14 41 50.9	
	comp=Z,11nm,0.8s						
MNAI	**Manna**	**24.72**	**245**	P	**P**	**14 41 58.8**	**-2.4**
COEN	**Coen**	**27.09**	**139**	P	**P**	**14 42 22.6**	**0.0**
COEN				IAmb	IAmb	14 42 37.3	
	comp=Z,15nm,1.3s						
WB0	**Warramunga Arr**	**27.68**	**161**	P	**P**	**14 42 27.9**	**0.0**
WRA	**Warramunga Arr**	**27.83**	**161**	P	**P**	**14 42 28.4**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=330,slow=9.7,SNR=6.8						
	comp=Z,0.6nm,0.7s						
WR8	**Warramunga Arr**	**27.89**	**161**	P	**P**	**14 42 30.4**	**+0.6**
GSI	**Gunungsitoli**	**28.04**	**260**	P	**P**	**14 42 31.5**	**+0.3**
GSI				IAmb	IAmb	14 43 00.1	
	comp=Z,19nm,1.0s						
CMAR	**Chiang Mai Arr**	**28.18**	**297**	P	**P**	**14 42 32.8**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=126,slow=7.4,SNR=6.1						
	comp=Z,0.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**28.18**	**297**	P	**P**	**14 42 32.5**	**+0.1**
AS31	**Alice Springs**	**31.22**	**164**	P	**P**	**14 42 59.3**	**0.0**
ASAR	**Alice Springs**	**31.22**	**164**	P	**P**	**14 42 59.7**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=348,slow=9.1,SNR=20						
	comp=Z,0.8nm,0.6s						
NWAO	**Narrogin (SRO)**	**39.99**	**190**	P	**P**	**14 44 14.9**	**+0.5**
NWAO				IAmb	IAmb	14 45 31.1	
	comp=Z,47nm,1.6s						
BBOO	**Buckleboo**	**40.49**	**166**	P	**P**	**14 44 19.5**	**+0.9**
BBOO				IAmb	IAmb	14 44 23.5	
	comp=Z,5.2nm,0.7s						
STKA	**Stephens Creek**	**41.30**	**159**	P	**P**	**14 44 25.2**	**0.0**
	comp=Z,2.3nm,1.0s,baz=343,slow=4.5,SNR=4.7						
	comp=Z,2.3nm,1.0s						
STKA	**Stephens Creek**	**41.30**	**159**	P	**P**	**14 44 25.3**	**0.0**
STKA				IAmb	IAmb	14 45 32.7	
	comp=Z,93nm,1.8s						
ARMA	**Armidale**	**44.65**	**147**	P	**P**	**14 44 52.8**	**+0.2**
ARMA				IAmb	IAmb	14 46 14.9	
	comp=Z,36nm,1.8s						
MKAR	**Makanchi Array**	**54.38**	**325**	P	**P**	**14 46 07.3**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=121,slow=8.5,SNR=6.4						
	comp=Z,0.8nm,0.8s						
MKAR	**Makanchi Array**	**54.38**	**325**	P	**P**	**14 46 06.9**	**+0.3**
KURBB	**Kurchatov Arra**	**58.55**	**327**	P	**P**	**14 46 39.0**	**+2.8**
	comp=Z,1.4nm,0.2s,baz=122,slow=7.0,SNR=2.1						
	comp=Z,1.4nm,0.2s						
KK31	**Karatay Array**	**60.14**	**316**	P	**P**	**14 46 46.4**	**-1.0**
KK31				IAmb	IAmb	14 46 50.2	
	comp=Z,2.8nm,0.9s						
KKAR	**Karatay Array**	**60.14**	**316**	P	**P**	**14 46 46.3**	**-1.1**
F17K	**Baldwin Pennin**	**77.47**	**23**	P	**P**	**14 48 35.4**	**+0.6**
F17K				IAmb	IAmb	14 48 43.6	
	comp=Z,14nm,1.2s						
P16K	**Nushagak River**	**77.62**	**31**	P	**P**	**14 48 35.8**	**-0.1**
RND	**Reindeer**	**82.36**	**27**	P	**P**	**14 49 01.0**	**-0.5**
ILAR	**Eielson Array**	**83.22**	**26**	P	**P**	**14 49 06.5**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=238,slow=5.1,SNR=11						
	comp=Z,0.6nm,0.8s						
BMAR	**Burnt Mountain**	**84.08**	**23**	P	**P**	**14 49 10.9**	**+0.7**
BERG	**Berg Lake**	**84.89**	**30**	P	**P**	**14 49 13.7**	**-0.8**

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*NOU **15** 14:40:20.8, 21°.75S×175°.63W, h218^{km}, mb4.7/24, Tonga Islands*

*IDC **15** 14:40:26.0±2.7, 21°.88S×176°.55W, h226^{km}±24^{km}, mb3.9/19, mbtmp4.5/20, Error ellipse: s-maj=14.5km s-min=11.2km az=136.0*

*NEIC **15** 14:40:34.1±1.0, 22°.2S±0°.1×177°.7W±0°.2, h216^{km}±15^{km}, mb4.6/20, Error ellipse: s-maj=31.9km s-min=15.3km az=76.0*

ISC 15 14:40:21.9±0.5,**22°.04S**±0°.05×**176°.32W**±0°.09,**h200**^{km}**, n194,** σ**2^{s}.20**/215,**mb4.3**/28,**8C-9D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.81**	**308**	Pn	**Pn**	**14 42 00.8**	**+1.1**
MSVF	**Nonsavu**	**6.81**	**308**	P	Pn	14 42 03.1	+3.4
RIZ	**Raoul Island**	**7.32**	**191**	P	**Pn**	**14 42 08.5**	**+2.2**
RIZ				S	**Sn**	**14 43 31.7**	**+2.4**
RAO	**Raoul Island**	**7.33**	**191**	S	**Sn**	**14 43 32.7**	**+3.3**
	858nm,0.5s,baz=273,slow=23,SNR=8.6						
RAO	**Raoul Island**	**7.33**	**191**	Pn	Pn	14 42 14.2	+7.9
RAO				Sn	**Sn**	**14 43 33.0**	**+3.6**
GLKZ	**Green Lake**	**7.34**	**191**	P	**Pn**	**14 42 07.9**	**+1.4**
GLKZ				S	**Sn**	**14 43 31.1**	**+1.5**
AFI	**Afiamalu**	**9.16**	**29**	P	Pn	14 42 22.4	-8.0
MARNC	**Mare, Loyalty**	**14.55**	**269**	P	P	14 43 43.0	+3.2
RTV	**Rentapao**	**14.95**	**284**	P	P	14 43 48.8	+4.5
PINNC	**Pines Island,**	**15.03**	**265**	P	P	14 43 50.4	+5.2
DVP	**Devils Point**	**15.19**	**284**	P	P	14 43 52.6	+5.7
YATNC	**Mamie plateau,**	**15.57**	**267**	P	P	14 43 56.3	+5.2
OUZ	**Omahuta**	**15.82**	**212**	P	**Pn**	**14 43 58.3**	**+4.3**
OUZ	**Omahuta**	**15.82**	**212**	P	**Pn**	**14 43 58.4**	**+4.3**
DZM	**Mont Dzumac**	**15.98**	**267**	P	**Pn**	**14 43 59.1**	**+3.0**
	5.3nm,0.6s,baz=349,slow=23,SNR=9.4						
DZM	**Mont Dzumac**	**15.98**	**267**	P	Pn	14 44 02.2	+6.1
WCZ	**Waipu Caves**	**16.07**	**208**	P	**Pn**	**14 44 00.6**	**+3.7**
KUZ	**Kuaotunu**	**16.20**	**203**	P	**Pn**	**14 44 01.9**	**+3.3**
KUZ	**Kuaotunu**	**16.20**	**203**	P	**Pn**	**14 44 01.2**	**+2.6**
RUGZ	**Raukumara Rang**	**16.70**	**197**	P	**Pn**	**14 44 05.6**	**+1.0**
TWGZ	**Tauwhareparae**	**16.82**	**196**	P	**Pn**	**14 44 08.5**	**+2.5**
TWGZ				S	**S**	**14 47 02.0**	**-8.1**
MWZ	**Matawai**	**17.09**	**197**	P	**Pn**	**14 44 09.7**	**+0.6**
MWZ				S	**S**	**14 47 07.9**	**-7.4**
TKGZ	**Te Karaka**	**17.10**	**196**	P	**Pn**	**14 44 11.5**	**+2.3**
TKGZ				S	**S**	**14 47 07.1**	**-8.4**
URZ	**Urewera**	**17.13**	**198**	P	**Pn**	**14 44 09.6**	**+0.1**
	49nm,0.7s,baz=6.1,slow=2.5,SNR=27						
URZ				S	**S**	**14 47 14.3**	**-1.8**
	8.0nm,0.4s,baz=247,slow=22,SNR=7.9						
URZ	**Urewera**	**17.13**	**198**	P	**Pn**	**14 44 10.0**	**+0.4**
URZ	**Urewera**	**17.13**	**198**	P	**Pn**	**14 44 09.9**	**+0.3**
URZ				S	**S**	**14 47 08.9**	**-7.2**
TOZ	**Tahuroa Road**	**17.16**	**202**		**Pn**	**14 44 11.9**	**+2.0**
TOZ				IAmb	IAmb	14 44 13.7	
	comp=Z,27nm,0.8s						
TOZ	**Tahuroa Road**	**17.16**	**202**	P	**Pn**	**14 44 13.1**	**+3.1**
RAGZ	**Rawiri**	**17.27**	**197**	P	**Pn**	**14 44 12.8**	**+1.5**
RAGZ				S	**S**	**14 47 09.2**	**-10**
RIGZ	**Rimuhau**	**17.38**	**196**	P	**Pn**	**14 44 14.7**	**+2.2**
MUGZ	**Murupara**	**17.43**	**198**	P	**Pn**	**14 44 13.2**	**+0.1**
MUGZ				S	**S**	**14 47 15.5**	**-6.7**
PRGZ	**Paritu Road**	**17.55**	**195**	P	**Pn**	**14 44 18.1**	**+3.6**
PRGZ				S	**S**	**14 47 20.1**	**-4.5**
SNGZ	**Shannon Statio**	**17.55**	**197**	P	**Pn**	**14 44 15.4**	**+0.8**
SNGZ				S	**S**	**14 47 19.0**	**-5.7**
MHGZ	**Mahia Peninsul**	**17.76**	**195**	P	**Pn**	**14 44 17.3**	**+0.2**
MHGZ				S	**S**	**14 47 23.0**	**-5.8**
WHTZ	**Whakaora**	**17.85**	**200**	P	**Pn**	**14 44 18.8**	**+0.6**
MRHZ	**Matea Rd**	**17.86**	**199**	P	**Pn**	**14 44 18.1**	**-0.2**
MRHZ				S	**S**	**14 47 29.1**	**-1.8**
HIZ	**Hauiti**	**18.09**	**203**	P	**Pn**	**14 44 22.1**	**+1.3**
HIZ	**Hauiti**	**18.09**	**203**	P	**Pn**	**14 44 22.7**	**+1.9**
ARHZ	**Aropaoanui**	**18.10**	**197**	P	**Pn**	**14 44 21.2**	**+0.3**
ARHZ				S	**S**	**14 47 30.9**	**-4.6**
BKZ	**Black Stump Fm**	**18.15**	**198**	P	**Pn**	**14 44 20.0**	**-1.6**
BKZ	**Black Stump Fm**	**18.15**	**198**	P	**Pn**	**14 44 20.7**	**-0.8**
BKZ				S	**S**	**14 47 31.8**	**-4.8**
NTVZ	**North Tongarir**	**18.34**	**200**	P	**Pn**	**14 44 24.1**	**+0.2**
KRVZ	**Karewarewa**	**18.34**	**200**	P	**Pn**	**14 44 23.5**	**-0.4**
WTVZ	**West Tongariro**	**18.38**	**200**	P	**Pn**	**14 44 24.2**	**-0.2**
SNVZ	**South Ngauruho**	**18.43**	**200**	P	**Pn**	**14 44 24.1**	**-0.9**
BFZ	**Birch Farm**	**19.63**	**197**	P	**Pn**	**14 44 37.6**	**-1.4**
MRZ	**Mangatainoka R**	**19.80**	**198**		**P**	**14 44 37.2**	**+0.2**
MRZ				IAmb	IAmb	14 44 46.3	
	comp=Z,18nm,0.9s						
MSWZ	**Moikau Station**	**20.59**	**198**	P	**P**	**14 44 45.7**	**+0.3**
SNZO	**South Karori**	**20.66**	**199**	P	Pn	14 44 48.9	-2.8
QRZ	**Quartz Range**	**20.98**	**204**	P	**P**	**14 44 50.0**	**+0.5**
QRZ	**Quartz Range**	**20.98**	**204**	P	**P**	**14 44 51.7**	**+2.2**
TKNZ	**Takaka Hill**	**21.00**	**203**	P	**P**	**14 44 50.4**	**+0.6**
THZ	**Tophouse**	**21.66**	**202**		**P**	**14 44 56.9**	**+0.2**
THZ				IAmb	IAmb	14 45 06.4	
	comp=Z,31nm,0.8s						
KHZ	**Kahutara**	**22.02**	**200**	P	**P**	**14 45 02.4**	**+2.3**
LTZ	**Lake Taylor**	**22.78**	**202**		**P**	**14 45 07.3**	**+0.2**
OXZ	**Oxford**	**23.34**	**202**		**P**	**14 45 12.7**	**+0.5**
RPZ	**Rata Peaks**	**24.02**	**203**	P	**P**	**14 45 20.3**	**+1.9**
RPZ	**Rata Peaks**	**24.02**	**203**	P	**P**	**14 45 20.8**	**+2.4**
JCZ	**Jackson Bay**	**25.20**	**206**	P	**P**	**14 45 31.8**	**+2.7**
ODZ	**Otahua Downs**	**25.32**	**202**	P	**P**	**14 45 33.0**	**+2.9**
TATA	**Tatamba Isabel**	**26.68**	**297**	P	**P**	**14 45 42.1**	**-0.5**
WHZ	**Wether Hill Ro**	**27.04**	**205**		**P**	**14 45 48.6**	**+3.1**
PMG	**Port Moresby**	**37.22**	**284**		**P**	**14 47 14.6**	**+0.3**
PMG				IAmb	IAmb	14 47 15.4	
	comp=Z,16nm,0.8s						
STKA	**Stephens Creek**	**38.57**	**246**	P	**P**	**14 47 26.3**	**+0.8**
	comp=Z,1.3nm,0.7s,baz=95,slow=12,SNR=2.8						
	comp=Z,1.3nm,0.7s						
COEN	**Coen**	**39.26**	**275**		**P**	**14 47 32.0**	**+0.7**
COEN				IAmb	IAmb	14 47 33.2	
	comp=Z,14nm,0.8s						
BBOO	**Buckleboo**	**43.30**	**245**	P	**P**	**14 48 03.0**	**-1.0**
BBOO				IAmb	IAmb	14 48 05.6	
	comp=Z,8.1nm,1.1s						
AS31	**Alice Springs**	**45.71**	**258**		**P**	**14 48 23.0**	**-0.3**
ASAR	**Alice Springs**	**45.71**	**258**	P	**P**	**14 48 23.5**	**+0.2**
	comp=Z,7.3nm,0.7s,baz=98,slow=7.8,SNR=106						
ASAR				PcP	**PcP**	**14 49 59.0**	**+1.2**
	comp=Z,1.5nm,0.7s,baz=107,slow=3.4,SNR=6.3						
ASAR				S	**S**	**14 54 47.7**	**-3.7**
	comp=Z,0.7nm,0.9s,baz=95,slow=16,SNR=6.6						
	comp=Z,7.3nm,0.7s						
ASAR	**Alice Springs**	**45.71**	**258**		**P**	**14 48 22.6**	**-0.7**
WR8	**Warramunga Arr**	**45.80**	**263**	P	**P**	**14 48 23.3**	**-0.8**
WB0	**Warramunga Arr**	**45.94**	**263**		**P**	**14 48 24.6**	**-0.6**
WRA	**Warramunga Arr**	**45.96**	**263**	P	**P**	**14 48 25.0**	**-0.3**
	comp=Z,1.8nm,0.4s,baz=97,slow=7.1,SNR=50						
WRA				PcP	**PcP**	**14 49 59.5**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=96,slow=4.0,SNR=7.0						
	comp=Z,1.8nm,0.4s						
WRA	**Warramunga Arr**	**45.96**	**263**		**P**	**14 48 24.9**	**-0.3**
JAY	**Jayapura**	**46.02**	**289**	P	**P**	**14 48 25.6**	**-0.2**
	comp=Z,22nm,0.5s,baz=156,slow=4.9,SNR=15						
	comp=Z,22nm,0.5s						
FORT	**Forrest**	**50.14**	**248**	P	**P**	**14 48 56.1**	**-1.0**
MTN	**Manton Dam**	**50.75**	**271**	P	**P**	**14 49 01.2**	**-0.6**
MTN				IAmb	IAmb	14 49 06.0	
	comp=Z,13nm,1.4s						
KNRA	**Kununurra**	**52.13**	**267**	P	**P**	**14 49 12.0**	**0.0**
KNRA				IAmb	IAmb	14 49 13.7	
	comp=Z,11nm,0.7s						
SOEI	**Soe**	**58.12**	**272**	P	**P**	**14 49 56.5**	**+1.4**
SOEI				IAmb	IAmb	14 50 06.6	
	comp=Z,22nm,0.7s						
BATI	**Baumata**	**58.52**	**271**	P	**P**	**14 49 58.5**	**+0.7**
	comp=Z,22nm,0.6s,baz=117,slow=2.3,SNR=8.3						
	comp=Z,22nm,0.6s						
MBWA	**Marble Bar**	**59.05**	**258**	P	**P**	**14 50 01.3**	**0.0**
MBWA				IAmb	IAmb	14 50 05.9	
	comp=Z,30nm,1.4s						
QSPA	**South Pole Qui**	**68.04**	**180**	P	P	14 51 03.1	+3.5
	comp=Z,3.0nm,0.6s,baz=350,slow=0.4,SNR=34						
	comp=Z,3.0nm,0.6s						
MJAR	**Matsushiro Arr**	**72.37**	**323**	P	**P**	**14 51 25.3**	**-0.7**
	comp=Z,4.6nm,0.7s,baz=158,slow=5.6,SNR=21						
	comp=Z,4.6nm,0.7s						
ASAJ	**Asahikawa**	**75.82**	**331**	P	**P**	**14 51 45.9**	**+0.1**
	comp=Z,14nm,0.8s,baz=221,slow=8.1,SNR=5.4						
	comp=Z,14nm,0.8s						
PETK	**Petropavlovsk-**	**78.16**	**344**	P	**P**	**14 51 58.4**	**-0.3**
	comp=Z,9.7nm,1.0s,baz=119,slow=8.4,SNR=14						
	comp=Z,9.7nm,1.0s						
KSRS	**Korea Array**	**79.07**	**318**	P	**P**	**14 52 03.7**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=126,slow=6.2,SNR=3.4						
	comp=Z,0.7nm,0.6s						
NVAR	**Mina Array Bea**	**81.08**	**42**	P	**P**	**14 52 16.2**	**+1.3**
	comp=Z,0.7nm,0.5s,baz=216,slow=7.7,SNR=5.1						
	comp=Z,0.7nm,0.5s						
USRK	**Ussuriysk Ar.**	**81.11**	**325**	P	**P**	**14 52 14.4**	**-0.3**
	comp=Z,3.1nm,0.7s,baz=111,slow=8.0,SNR=3.1						
	comp=Z,3.1nm,0.7s						
NJ2	**Nanjing**	**82.06**	**309**	*e*P	P	14 52 28.6	+8.6
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
H03S2	**Juan Fernandez**	**83.84**	**124**	T	T	16 25 37.2	
	baz=248,slow=75,SNR=8.8						
H03S1	**Juan Fernandez**	**83.85**	**124**	T	T	16 25 34.1	
	baz=248,slow=75,SNR=18						
H03S3	**Juan Fernandez**	**83.86**	**124**	T	T	16 25 24.5	
	baz=248,slow=75,SNR=20						
ELIB	**Princess Elisa**	**85.30**	**186**	*d*P	**P**	**14 52 38.1**	**+2.2**
ELIB				*d*pP	**pP**	**14 53 27.6**	**+3.1**
TXAR	**Lajitas Array**	**86.58**	**57**	P	**P**	**14 52 44.2**	**+1.3**
	comp=Z,2.0nm,0.9s,baz=216,slow=8.2,SNR=16						
	comp=Z,2.0nm,0.9s						
PLCA	**Paso Flores**	**87.09**	**133**	P	P	14 52 48.2	+3.0
	comp=Z,1.6nm,1.0s,baz=286,slow=7.4,SNR=3.1						
	comp=Z,1.6nm,1.0s						
PDAR	**Pinedale Array**	**89.02**	**43**	P	**P**	**14 52 54.5**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=208,slow=3.7,SNR=5.9						
	comp=Z,0.6nm,0.7s						
ILAR	**Eielson Array**	**89.47**	**12**	P	**P**	**14 52 55.0**	**-0.6**
	comp=Z,2.2nm,0.8s,baz=221,slow=5.1,SNR=49						
	comp=Z,2.2nm,0.8s						
HILR	**Hailar Array B**	**91.00**	**324**	P	**P**	**14 53 02.8**	**-0.4**
	comp=Z,3.6nm,0.8s,baz=134,slow=6.4,SNR=3.8						
	comp=Z,3.6nm,0.8s						
HHC	**Hu-ho-hao-te**	**91.54**	**314**	*e*P	P	14 53 15.5	+10
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,5.6s						
CMAR	**Chiang Mai Arr**	**92.10**	**289**	P	**P**	**14 53 09.9**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=116,slow=3.0,SNR=12						
	comp=Z,1.4nm,0.7s						
PZH	**PanZhiHua**	**92.81**	**297**	P	P	14 53 19.5	+7.4
YKA	**Yellowknife Ar**	**97.25**	**24**	P	Pdif	14 53 31.9	+0.5
	comp=Z,0.6nm,0.8s,baz=248,slow=4.8,SNR=8.5						
	comp=Z,0.6nm,0.8s						
MKAR	**Makanchi Array**	**113.39**	**313**	PKiKP	**PKiKP**	**14 58 35.4**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=167,slow=0.8,SNR=11						
KURBB	**Kurchatov Arra**	**116.23**	**317**	PKP	**PKiKP**	**14 58 40.4**	**-0.7**
	comp=Z,0.8nm,0.2s,baz=97,slow=1.6,SNR=6.2						
BVAR	**Borovoye Array**	**121.26**	**320**	PKP	**PKiKP**	**14 58 50.4**	**-0.4**
	comp=Z,1.5nm,0.4s,baz=124,slow=1.4,SNR=9.8						
ARCES	**ARCESS Array B**	**130.70**	**350**	PKP	**PKiKP**	**14 59 08.2**	**-1.1**
	comp=Z,2.3nm,0.7s,baz=26,slow=1.8,SNR=11						
FINES	**FINESS Array B**	**137.67**	**344**	PKhKP	PKPpre	14 59 13.4	
	comp=Z,2.9nm,0.9s,baz=101,slow=3.9,SNR=4.1						
FINES				PKP	**PKiKP**	**14 59 22.9**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=73,slow=2.6,SNR=8.6						
HFS	**Hagfors**	**141.28**	**352**	PKhKP	PKPpre	14 59 21.5	
	comp=Z,3.2nm,0.8s,baz=48,slow=2.2,SNR=8.3						
ONAU	**Onsala**	**144.17**	**352**	*e*P	**PKPdf**	**14 59 31.7**	**-1.7**
DEL	**Delary**	**144.79**	**350**	*i* P	**PKPdf**	**14 59 33.9**	**-0.6**
AKASG	**Malin Array Be**	**145.11**	**331**	PKP	**PKiKP**	**14 59 35.1**	**-4.0**
	comp=Z,24nm,0.6s,baz=42,slow=4.2,SNR=105						
BJUU	**Bjuv**	**145.31**	**351**	*i* P	**PKiKP**	**14 59 35.6**	**-3.7**
BSD	**Bornholm Skovb**	**145.91**	**348**	*e*P	**PKiKP**	**14 59 38.3**	**-2.3**
EKA	**Eskdalemuir Ar**	**146.36**	**7**	PKPbc	**PKiKP**	**14 59 39.5**	**-2.0**
	comp=Z,1.0nm,0.4s,baz=320,slow=2.6,SNR=8.4						
SORM	**Soroca**	**147.32**	**329**	⇑P	**PKPab**	**14 59 41.9**	**-2.1**
BEL	**Belsk**	**147.43**	**340**	*e*PKP	PKPdf	14 59 29.3	-10
KWP	**Kalwaria Pacla**	**148.62**	**336**	*e*PKP	**PKPab**	**14 59 50.0**	**+0.8**
BRTR	**Keskin Array B**	**149.03**	**312**	PKPbc	**PKiKP**	**14 59 47.1**	**-0.7**
	comp=Z,3.6nm,0.8s,baz=140,slow=4.3,SNR=14						
OJC	**Ojcow**	**149.14**	**340**	*e*PKP	**PKPab**	**14 59 52.0**	**+0.7**
BURAR	**Bucovina Array**	**149.16**	**331**	⇓P	**PKPab**	**14 59 48.0**	**-3.6**
STHS	**Stebnicka Huta**	**149.34**	**337**	*e*PKP	**PKPab**	**14 59 47.9**	**-4.3**
CFR	**Carcaliu**	**149.43**	**325**	⇓P	**PKiKP**	**14 59 47.6**	**-0.6**
TPGR	**Topolog**	**149.49**	**324**	⇑P	**PKiKP**	**14 59 46.9**	**-1.5**
BRIU	**Brid**	**149.54**	**334**	PKP	**PKPab**	**14 59 53.2**	**+0.2**
MUKU	**Mukachevo**	**149.58**	**335**	PKP	**PKPab**	**14 59 53.3**	**+0.2**
KSP	**Ksiaz**	**149.60**	**344**	*e*PKP	**PKPab**	**14 59 54.6**	**+1.5**
NIE	**Niedzica**	**149.66**	**338**	*e*PKP	**PKPab**	**14 59 54.9**	**+1.3**

```
NIE   Niedzica          149.66 338  PKP      PKPab   14 59 53.4 -0.1
BERU  Beregovo          149.77 334  PKP      PKPab   14 59 53.5 -0.4
OSTC  Ostas             149.88 344 ePKP      PKPab   14 59 49.4 -5.0
CLL   Collm             149.89 348 i PKPbc   PKiKP   14 59 49.0  0.0
      comp=Z,11nm,0.8s
TURR  Turia             149.92 328 ⇑P        PKiKP   14 59 49.3  0.0
MMAI  Mount Meron Ar    149.92 298  PKPbc    PKPab   14 59 50.3 -4.9
      comp=Z,3.7nm,0.5s,baz=80,slow=4.6,SNR=10
UPC   Upice             149.98 344 ePKP      PKPab   14 59 55.2 +0.5
STEB  Steborice         150.02 342 ePKP      PKiKP   14 59 49.5 +0.2
STEB                               ex        x       14 59 55.6
DPC   Dobruska-Polom    150.04 344 ePKP      PKiKP   14 59 49.4  0.0
DPC                                ex        x       14 59 56.3
DPC   Dobruska-Polom    150.04 344  PKP      PKPab   14 59 54.4 -0.7
KRLC  Kraliky           150.17 343 ePKP      PKiKP   14 59 50.1 +0.4
KRLC                               ex        x       14 59 56.5
MORC  Moravsky Berou    150.23 342 ePKP      PKiKP   14 59 50.1 +0.3
DOPR  Dopca             150.29 329 ⇓P        PKiKP   14 59 50.7 +0.6
MLR   Muntele Rosu      150.36 327 ⇑P        PKiKP   14 59 49.0 -1.3
HSKC  Hora Svate Kat    150.47 347 ePKP      PKiKP   14 59 50.9 +0.7
MAUC  Maruska           150.51 341 ePKP      PKiKP   14 59 50.7 +0.3
MARR  Marisel-Cluj      150.80 332 ⇑P        PKiKP   14 59 51.3 +0.2
PRU   Pruhonice         150.82 346 ePKP      PKiKP   14 59 51.0 +0.1
DRGR                    150.89 333 ⇑P        PKiKP   14 59 51.5 +0.2
VRAC  Vranov            150.92 342 ePKP      PKiKP   14 59 51.5 +0.3
JAVC  Velka Javorina    151.01 341 ePKP      PKiKP   14 59 52.7 +1.3
ARR   Arges             151.09 329 ⇓P        PKiKP   14 59 52.7 +1.0
KRUC  Moravsky          151.20 343 ePKP      PKiKP   14 59 51.8 +0.1
ZVC   Zvikov            151.41 346 ePKP      PKiKP   14 59 52.7 +0.5
ZVC                                ex        x       15 00 01.5
LOT   Lotru             151.44 330 ⇓P        PKPbc   14 59 47.3 -4.8
MODS  Modra-Piesok      151.56 341 ePKP      PKiKP   14 59 53.5 +1.0
KHC   Kasperske Hory    151.84 346 ePKP      PKiKP   14 59 54.0 +0.9
KHC                                ex        x       15 00 03.1
GZR   Gura Zlata        151.94 331 ⇓P        PKiKP   14 59 53.9 +0.4
CKRC  Cesky Krumlov     151.96 345 ePKP      PKiKP   14 59 54.0 +0.6
GERES GERESS Array B    152.08 346  PKPbc    PKiKP   14 59 54.2 +0.5
      comp=Z,2.7nm,0.9s,baz=333,slow=1.5,SNR=6.6
GERES                               PKPab    PKPab   15 00 03.4 -0.3
      comp=Z,1.1nm,0.7s,baz=55,slow=5.1,SNR=3.9
BZS   Buzias            152.28 332 ⇑P        PKiKP   14 59 54.0 -0.1
CONA  Conrad Observa    152.38 342 i PKP     PKiKP   14 59 55.0 +0.6
      comp=Z,3.2nm,0.6s,SNR=5.3
CONA                               i PKiKP   PKPab   15 00 06.1 +1.2
      comp=Z,7.9nm,0.7s
RONA  Rosalia, Austr    152.46 341           PKiKP   14 59 55.0 +0.6
RONA                                         PKPab   15 00 06.4 +1.2
RONA  Rosalia, Austr    152.46 341 i PKP     PKiKP   14 59 55.0 +0.6
      comp=Z,4.0nm,0.5s,SNR=7.9
RONA                               i PKiKP   PKPab   15 00 06.4 +1.2
      comp=Z,13nm,0.9s
HERR  Herculane         152.50 330 ⇓P        PKiKP   14 59 55.2 +0.7
MOA   Molln             152.88 344           PKPab   15 00 07.5 +0.6
MOA   Molln             152.88 344 i PKiKP   PKPab   15 00 07.5 +0.6
      comp=Z,3.2nm,0.8s
MORH  Mrgy, Hungar      152.98 337 ⇑P        PKiKP   14 59 54.4 -1.1
ARSA  Arzberg           153.09 342           PKiKP   14 59 56.0 +0.3
ARSA                                         PKPab   15 00 08.2 +0.4
ARSA  Arzberg           153.09 342 ePKP      PKiKP   14 59 56.1 +0.3
      comp=Z,2.5nm,1.4s
ARSA                               i PKiKP   PKPab   15 00 08.2 +0.4
      comp=Z,4.1nm,0.7s
BIOA  Bad Ischl, Aus    153.18 345           PKiKP   14 59 55.9  0.0
BIOA                                         PKPab   15 00 08.5 +0.2
BIOA  Bad Ischl, Aus    153.18 345 ePKP      PKiKP   14 59 55.9  0.0
      comp=Z,2.8nm,0.7s
BIOA                               ePKiKP    PKPab   15 00 08.5 +0.2
      comp=Z,8.4nm,0.7s,SNR=4.3
LESA  Schwarzleotal     153.65 346           PKPab   15 00 11.4 +1.1
LESA  Schwarzleotal     153.65 346 i PKiKP   PKPab   15 00 11.4 +1.1
      comp=Z,11nm,1.5s
SOKA  Soboth            153.75 342           PKiKP   15 00 00.1 +2.9
SOKA                                         PKPab   15 00 10.9 +0.2
SOKA  Soboth            153.75 342 ePKP      PKiKP   15 00 00.1 +2.9
      comp=Z,3.3nm,1.1s
SOKA                               i PKiKP   PKPab   15 00 10.9 +0.2
      comp=Z,5.7nm,0.8s
KBA   Koelnbreinsper    153.82 345           PKPab   15 00 11.9 +0.8
KBA   Koelnbreinsper    153.82 345 i PKiKP   PKPab   15 00 11.9 +0.8
      comp=Z,5.6nm,0.8s,SNR=4.3
WATA  Walderalm         153.97 348           PKiKP   14 59 59.7 +2.0
WATA                                         PKPab   15 00 12.9 +1.2
WATA  Walderalm         153.97 348 ePKP      PKiKP   14 59 59.7 +2.0
      comp=Z,5.4nm,0.8s
WATA                               i PKiKP   PKPab   15 00 12.9 +1.2
      comp=Z,9.4nm,1.4s
RETA  Reutte            153.97 349           PKiKP   14 59 58.1 +0.5
RETA                                         PKPab   15 00 12.5 +0.8
RETA  Reutte            153.97 349 i PKP     PKiKP   14 59 58.1 +0.5
      comp=Z,10.0nm,1.8s
RETA                               ePKiKP    PKPab   15 00 12.5 +0.8
      comp=Z,1.4nm,0.5s
WTTA  Wattenberg        154.02 348           PKiKP   14 59 58.5 +0.6
WTTA                                         PKPab   15 00 13.0 +1.0
WTTA  Wattenberg        154.02 348 i PKP     PKiKP   14 59 58.5 +0.6
      comp=Z,3.9nm,0.8s
WTTA                               ePKiKP    PKPab   15 00 13.0 +1.0
      comp=Z,3.6nm,0.6s
OBKA  Obir              154.04 343           PKPab   15 00 11.8 -0.2
OBKA  Obir              154.04 343 i PKiKP   PKPab   15 00 11.8 -0.2
      comp=Z,5.7nm,0.8s
SQTA  Sankt Quirin      154.15 348           PKiKP   14 59 58.9 +0.8
SQTA  Sankt Quirin      154.15 348 i PKP     PKiKP   14 59 58.9 +0.8
      comp=Z,3.2nm,0.8s
MYKA  Terra Mystica     154.17 344           PKiKP   15 00 00.8 +2.8
MYKA                                         PKPab   15 00 12.7 +0.2
MYKA  Terra Mystica     154.17 344 ePKP      PKiKP   15 00 00.8 +2.8
      comp=Z,2.3nm,0.5s
MYKA                               i PKiKP   PKPab   15 00 12.7 +0.2
      comp=Z,4.7nm,0.6s
DAVA  Damuels           154.31 350           PKiKP   14 59 59.9 +1.4
DAVA                                         PKPab   15 00 13.6 +0.4
DAVA  Damuels           154.31 350 ePKP      PKiKP   14 59 59.9 +1.4
      comp=Z,4.0nm,1.0s
DAVA                               ePKiKP    PKPab   15 00 13.6 +0.4
      comp=Z,9.0nm,1.1s
ABTA  Abfaltersbach     154.33 346           PKiKP   14 59 58.4  0.0
ABTA                                         PKPab   15 00 13.3 +0.1
ABTA  Abfaltersbach     154.33 346 i PKP     PKiKP   14 59 58.4  0.0
      comp=Z,2.8nm,0.6s
ABTA                               i PKiKP   PKPab   15 00 13.3 +0.1
      comp=Z,7.4nm,1.2s
FETA  Feichten          154.43 349           PKPab   15 00 14.4 +0.6
FETA  Feichten          154.43 349 ePKiKP    PKPab   15 00 14.4 +0.6
      comp=Z,5.2nm,1.0s
ESDC  Sonseca Array     161.25  19  PKPab    PKPab   15 00 44.2 +0.9
      comp=Z,1.5nm,0.7s,baz=329,slow=3.9,SNR=7.8
KEST  Kesra             165.48 341  PKPab    PKPab   15 01 02.5 +0.4
      comp=Z,4.2nm,0.6s,baz=41,slow=3.4,SNR=6.5
```

IDC 15 14:51:35.8±1.4**, 6°.47N**×**125°.12E, h0^{km}, mb3.6**/4**, mbtmp3.6**/4**, Error ellipse: s-maj=33.8km s-min=9.8km az=117.0, Mindanao**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op       ISC      h  m  s   ISC
DAV   Davao City (W)     0.75  38   Pg       Pg      14 51 50.3 +0.1
      304nm,0.3s,baz=230,slow=3.5,SNR=6.3
DAV                                 Lg       Lg      14 52 00.8
      366nm,0.3s,baz=148,slow=23,SNR=13
WRA   Warramunga Arr    27.77 161   P        P       14 57 26.0 -0.5
      0.3nm,0.5s,baz=340,slow=8.9,SNR=6.7
      0.3nm,0.5s
ASAR  Alice Springs     31.16 164   P        P       14 57 56.8 +0.2
      0.5nm,0.5s,baz=346,slow=9.1,SNR=19
      0.5nm,0.5s
STKA  Stephens Creek    41.25 159   P        P       14 59 22.9 +0.1
      1.1nm,0.5s,baz=342,slow=11,SNR=4.3
      1.1nm,0.5s
MKAR  Makanchi Array    54.40 325   P        P       15 01 04.7  0.0
      0.2nm,0.5s,baz=128,slow=8.2,SNR=1.9
      0.2nm,0.5s
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*GUC **15** 14:53:41.9±0.6, 38°.16S×68°.79W, h5^{km}, ML3.4*

*SJA **15** 14:53:45.3±0.5, 38°.25S×68°.70W, h5^{km}±4^{km}, ML3.7, MW3.6*

ISC 15 14:53:42.7±1.4**, 38°.21S**±0°.04×**68°.72W**±0°.07**, h10^{km}, n18, σ1ˢ.88**/29**, Southern Argentina**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op       ISC      h  m  s   ISC
CANA  Caviahue           1.88 279  eP        Pb      14 54 16.1 -1.1
CANA                               eS        Sg      14 54 42.7 -0.4
EDS3  Malargue           2.50 347  eP        Pb      14 54 26.9 -0.9
EDS3                               eS        Sb      14 55 00.4 +1.7
GO06  Curarrehue         2.55 237  eP        Pb      14 54 26.7 -1.9
GO06                               eS        Sb      14 55 00.7 +0.7
GO06                                IAML             14 55 11.4
      comp=E,269nm,0.4s
GO06  Curarrehue         2.55 237  eP        Pb      14 54 28.1 -0.5
GO06                               eS        Sb      14 55 00.9 +0.9
GO06                                IAML             14 55 10.8
      comp=N,229nm,0.3s
GO06  Curarrehue         2.55 237  eP        Pb      14 54 28.1 -0.5
GO06                                AMPN             14 54 28.5
      comp=Z,86nm,0.3s
GO06                               eS        Sb      14 55 01.9 +1.9
GO06                                AMSN             14 55 02.4
      comp=Z,924nm,0.5s
GO06                                AMSN             14 55 02.5
      comp=Z,1000nm,0.3s
GO06                                IAML             14 55 08.6
      comp=Z,229nm,0.6s
BI02  San Fabin de       2.55 307  eP        Pn      14 54 26.1 +1.8
BI02                                IAML             14 55 04.7
      comp=E,340nm,0.4s
BI02  San Fabin de       2.55 307  eP        Pb      14 54 27.2 -1.5
BI02                                IAML             14 55 06.8
      comp=N,168nm,0.5s
BI02  San Fabin de       2.55 307  eP        Pn      14 54 25.4 +1.1
BI02                               i S       Sb      14 55 01.1 +0.9
LC01  Cunco              2.57 254  eP        Pb      14 54 27.3 -1.6
LC01                               eS        Sb      14 55 00.7 +0.2
LC01                                IAML             14 55 06.8
      comp=E,225nm,0.8s
LC01  Cunco              2.57 254  eP        Pb      14 54 27.3 -1.6
LC01                                IAML             14 55 06.8
      comp=E,215nm,0.8s
PLCA  Paso Flores        2.89 209  eP        Pn      14 54 28.9  0.0
PLCA                               eS        Sb      14 55 11.6 +1.8
PLCA                                IAML             14 55 24.5
      comp=Z,206nm,0.4s
PLCA                                IAML             14 55 24.6
      comp=Z,466nm,0.5s
ML02  Panimavida         3.26 318  eP        Pb      14 54 38.2 -2.6
ML02  Panimavida         3.26 318  eP        Pg      14 54 45.4 +0.2
ML02                               eS        Sb      14 55 24.0 +3.4
RFA   San Rafael         3.44   3  eP        Pn      14 54 36.1 -0.4
RFA                                eS        Sb      14 55 28.3 +2.5
RFA                                 IAML             14 55 41.5
      comp=Z,84nm,0.6s
BO02  Sierra Bellavi     3.80 333  eP        Pb      14 54 49.3 -0.6
BO02                                IAML             14 55 51.3
      comp=N,52nm,0.5s
BO02  Sierra Bellavi     3.80 333  eP        Pb      14 54 49.8 -0.1
GO05  Hualane            4.11 320  eP        Pb      14 54 50.7 -4.5
GO05                               eS        Sb      14 55 46.1 +1.1
BO01  Tunca              4.27 333  eP        Pb      14 54 53.9 -4.0
```

DJA 15 14:59:41.1±0.6**, 1°S**±4°×**9°7E**±°**, h10^{km}, M4.1**/11**, mb5.2**/1**, MLv3.6**/11**, Southwest of Sumatera**

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Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op       ISC      h  m  s   ISC
PBSI  Pulau Batu         1.40  66   P        Pb      15 00 07.5 +0.1
PBSI                                S        Sn      15 00 24.2 -1.1
GSI   Gunungsitoli       2.00  17   P        Pn      15 00 14.3 -0.8
SISI  Saibi              2.20 108   P        Pn      15 00 17.9 +0.2
MNSI  Mandailing Nat     2.94  61   P        Pn      15 00 28.6 +0.7
SNSI  Sinabang, Aceh     3.09 347   P        Pn      15 00 28.9 -1.1
PDSI  Padang             3.47  95   P        Pn      15 00 34.8 -0.5
PPSI  Pulau Pagai        3.68 125   P        Pn      15 00 38.0 -0.1
TPTI                     3.87   3   P        Pn      15 00 40.2 -0.5
KCSI  Kotacane, Aceh     4.20  11   P        Pn      15 00 45.5 +0.3
MNAI  Manna              7.01 122   P        Pn      15 01 24.1 +0.2
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*DJA **15** 15:02:00.3±0.6, 7°N±19°×12°5E±°, h12^{km}±19^{km}, M4.6/6, mB4.9/3, mb4.6/6, MLv4.6/6, Mw(mB)4.2/3*

*IDC **15** 15:02:00.6±0.7, 6°.56N×125°.05E, h0^{km}, mb3.8/11, mbtmp3.8/11, MS3.1/1, Error ellipse: s-maj=15.9km s-min=9.5km az=130.0*

*NEIC **15** 15:02:02.8±2.0, 6°.71N±0°.07×125°.08E±0°.06, h10^{km}±3^{km}, mb4.5/32, Error ellipse: s-maj=11.2km s-min=6.9km az=144.0*

ISC 15 15:02:02.9±0.4**, 6°.77N**±0°.05×**125°.09E**±0°.06**, h13^{km}, n61, σ1ˢ.30**/65**, mb4.3**/25**, Mindanao**

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Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op       ISC      h  m  s   ISC
DAV   Davao City (W)     0.57  59   Pg       Pg      15 02 14.6 +0.6
      821nm,0.3s,baz=250,slow=2.8,SNR=46
DAV                                 Lg       Lg      15 02 25.2
      524nm,0.3s,baz=268,slow=23,SNR=8.3
DAV   Davao City (W)     0.57  59            Pg      15 02 14.5 +0.4
DAV   Davao City (W)     0.57  59   P        Pg      15 02 14.7 +0.6
DAV                                 S        Sn      15 02 25.1 -0.9
DAV   Davao City (W)     0.57  59   P        Pg      15 02 13.0 -1.1
SGSI  Sangihe            3.10 172   P        Pn      15 02 50.8 -0.7
SGSI                                S        Sn      15 03 32.4 +4.0
TNTI  Ternate            6.38 159   Pn       Pn      15 03 37.1 +0.4
GTOI  Gorontalo          6.44 199   P        Pn      15 03 36.9 -0.6
      0.2nm637nm57nm,0.8s
GTOI                                S        Sn      15 04 49.6 -1.3
      0.2nm637nm57nm,0.8s
MRSI  Marisa             7.00 207   P        Pn      15 03 44.7 -0.5
      0.2nm475nm35nm,0.6s
MRSI                                S        Sn      15 05 03.6 -1.1
      0.2nm475nm35nm,0.6s
TOLI2 Tolitoli           7.08 218   Pn       Pn      15 03 44.2 -2.0
LUWI  Luwuk              8.10 197   Pn       Pn      15 04 00.3  0.0
SANI  Sanana             8.81 174   P        Pn      15 04 09.4 -0.6
      11nm,0.7s
KRAI  Karang Ratu       10.55 162   P        Pn      15 04 34.7 +0.7
BATI  Baumata           16.93 185   Pn       P       15 06 04.5 +2.8
      1.9nm,0.3s,baz=304,slow=3.5,SNR=4.2
MTN   Manton Dam        20.39 163   P        P       15 06 39.0 -0.7
KNRA  Kununurra         22.60 171   P        P       15 07 03.0 -0.4
KNRA                                IAmb     IAmb    15 07 09.5
      comp=Z,26nm,1.4s
JCJ   Chichijima        25.93  37   LR       LR      15 15 39.8
      comp=Z,50nm,22.0s,baz=126,slow=31
PMG   Port Moresby      27.24 126   P        P       15 07 45.9 -1.1
      comp=Z,11nm,1.0s,baz=350,slow=6.2,SNR=4.9
      comp=Z,11nm,1.0s
PMG   Port Moresby      27.24 126   P        P       15 07 46.3 -0.6
PMG                                 IAmb     IAmb    15 07 47.5
      comp=Z,8.2nm,0.9s
COEN  Coen              27.32 139   P        P       15 07 46.3 -1.4
COEN                                IAmb     IAmb    15 07 52.0
      comp=Z,6.0nm,0.8s
WB0   Warramunga Arr    27.92 161   P        P       15 07 50.8 -2.2
CMAR  Chiang Mai Arr    27.99 297   P        P       15 07 55.3 +1.6
      comp=Z,0.3nm,0.6s,baz=114,slow=9.0,SNR=1.6
      comp=Z,0.3nm,0.6s
WRA   Warramunga Arr    28.06 161   P        P       15 07 52.0 -2.3
      comp=Z,0.6nm,0.6s,baz=329,slow=11,SNR=9.6
      comp=Z,0.6nm,0.6s
WRA   Warramunga Arr    28.06 161   P        P       15 07 51.2 -3.1
WR8   Warramunga Arr    28.13 161   P        P       15 07 52.4 -2.4
WR8                                 IAmb     IAmb    15 08 21.9
      comp=Z,8.0nm,1.5s
JHJ2  Mitsune           29.57  26   P        P       15 08 06.5 -1.0
KSAR  Wonju Array Be    30.64   4   P        P       15 08 17.5 +0.6
AS31  Alice Springs     31.45 164   P        P       15 08 22.7 -1.6
ASAR  Alice Springs     31.45 164   P        P       15 08 22.1 -2.2
      comp=Z,0.4nm,0.4s,baz=341,slow=7.1,SNR=24
ASAR                                PcP      PcP     15 11 16.4 -1.3
      comp=Z,0.2nm,0.6s,baz=349,slow=2.6,SNR=1.6
      comp=Z,0.4nm,0.4s
ASAR  Alice Springs     31.45 164   P        P       15 08 22.8 -1.5
MJB9  Matsu-Tunnel      31.97  20   P        P       15 08 26.8 -2.0
MJB9                                IAmb     IAmb    15 08 41.0
      comp=Z,8.0nm,1.2s
PBA   Port Blair        32.28 281   P        P       15 08 31.8 +0.1
JYT   Yasato            32.42  23   P        P       15 08 31.5 -1.1
MORW  Morawa            36.68 193   P        P       15 09 10.5 +0.8
MORW                                IAmb     IAmb    15 09 29.1
      comp=Z,18nm,1.4s
SHL   Shillong          36.79 304   P        P       15 09 11.9 +1.0
SHL                                 IAmb     IAmb    15 09 17.0
      comp=Z,5.3nm,1.1s
FORT  Forrest           37.45 176   P        P       15 09 16.2 +0.1
FORT                                IAmb     IAmb    15 10 00.6
      comp=Z,4.9nm,1.0s
INKA  Innaminka         37.50 157   P        P       15 09 15.6 -1.0
BBOO  Buckleboo         40.72 166            P       15 09 42.5 -1.0
BBOO                                IAmb     IAmb    15 09 48.0
      comp=Z,5.8nm,0.9s
STKA  Stephens Creek    41.54 159   P        P       15 09 48.8 -1.5
      comp=Z,1.8nm,0.8s,baz=336,slow=8.6,SNR=5.1
      comp=Z,1.8nm,0.8s
STKA  Stephens Creek    41.54 159            P       15 09 49.4 -0.8
STKA                                IAmb     IAmb    15 09 55.8
      comp=Z,20nm,0.9s
DZM   Mont Dzumac       49.63 126   P        P       15 10 55.0 +0.4
DZM                                 IAmb     IAmb    15 11 12.4
      comp=Z,13nm,1.5s
PETK  Petropavlovsk-    53.29  24   P        P       15 11 22.5 +1.0
MKAR  Makanchi Array    54.14 325   P        P       15 11 28.5 +0.6
      comp=Z,0.9nm,0.6s,baz=124,slow=8.5,SNR=7.5
      comp=Z,0.9nm,0.6s
ZALV  Zalesovo Beam     57.15 333   P        P       15 11 50.6 +1.3
      comp=Z,0.2nm,0.3s,baz=113,slow=13,SNR=1.9
      comp=Z,0.2nm,0.3s
KURBB Kurchatov Arra    58.31 327   P        P       15 11 57.8 +0.2
      comp=Z,1.4nm,0.7s,baz=128,slow=6.0,SNR=4.0
      comp=Z,1.4nm,0.7s
KURK  Kurchatov         58.31 327   P        P       15 11 57.4 -0.1
KURK                                IAmb     IAmb    15 12 02.2
      comp=Z,2.5nm,0.8s
GAR   Garm              58.68 312   P        P       15 12 01.0 +0.5
KK31  Karatay Array     59.91 316            P       15 12 08.9 +0.1
KK31                                IAmb     IAmb    15 12 13.8
      comp=Z,3.6nm,0.9s
KKAR  Karatay Array     59.91 316            P       15 12 09.1 +0.3
BVAR  Borovoye Array    63.90 327   P        P       15 12 35.3 -0.2
      comp=Z,1.2nm,0.9s,baz=99,slow=7.8,SNR=4.8
      comp=Z,1.2nm,0.9s
BKZ   Black Stump Fm    65.92 138   P        P       15 12 49.1 +0.2
M14K  Bethel            75.82  29   P        P       15 13 48.5  0.0
G16K  Koyuk River       76.64  24   P        P       15 13 53.5 +0.3
G16K                                IAmb     IAmb    15 14 06.6
      comp=Z,7.6nm,1.3s
M16K  Timber Creek      77.31  29   P        P       15 13 57.2 +0.2
C18K  Utukok River      77.82  21   P        P       15 14 00.1 +0.3
C18K                                IAmb     IAmb    15 14 15.2
      comp=Z,5.5nm,1.5s
D19K  Kuna River        78.90  21   P        P       15 14 06.3 +0.5
D19K                                IAmb     IAmb    15 14 07.6
      comp=Z,7.4nm,1.4s
D20K  Etivluk River     79.48  21   P        P       15 14 09.6 +0.6
H23K  Yukon River       81.97  24   P        P       15 14 23.6 +1.3
ILAR  Eielson Array     83.08  26   P        P       15 14 30.2 +2.1
      comp=Z,0.3nm,0.6s,baz=272,slow=6.0,SNR=5.9
      comp=Z,0.3nm,0.6s
I27K  Kandik River      85.25  25   P        P       15 14 40.0 +0.8
AKAS  Kas               90.45 306   P        P       15 15 04.4 -0.5
YKA   Yellowknife Ar    97.41  24   P        P       15 15 35.7 -0.3
      comp=Z,0.1nm,0.5s,baz=304,slow=6.4,SNR=1.4
      comp=Z,0.1nm,0.5s
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*IDC **15** 15:07:36.9±5.7, 0°.03N×98°.60E, h0^{km}, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=311.4km s-min=25.0km az=53.0*

*DJA **15** 15:07:56.6±0.3, 1°N±3°×10°0E±°, h131^{km}±3^{km}, M4.1/19, mB5.1/2, mb4.5/5, MLv3.9/19, Mw(mB)4.5/2*

ISC 15 15:07:56.0±0.9**, 0°.75N**±0°.06×**99°.50E**±0°.06**, h143^{km}**±8^{km}**, n28, σ0ˢ.82**/24**, mb3.1**/4**, Northern Sumatera**

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Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op       ISC      h  m  s   ISC
MNSI  Mandailing Nat     0.09  61   P        Pn      15 08 15.3  0.0
MNSI                                S        Sn      15 08 28.7 -1.1
PBSI  Pulau Batu         1.46 237   P        Pn      15 08 25.7 +1.0
PBSI                                S        Sn      15 08 46.7 +0.2
PPI   Padang Panjang     1.50 143   P        Pn      15 08 26.9 +1.9
BKNI  Bangkinang         1.59 105   P        Pn      15 08 26.7 +0.6
PDSI  Padang             1.91 150   P        Pn      15 08 31.1 +1.4
GSI   Gunungsitoli       2.00 286   P        Pn      15 08 31.8 +1.0
SISI  Saibi              2.11 191   P        Pn      15 08 32.2 +0.2
KCSI  Kotacane, Aceh     3.25 328   P        Pn      15 08 45.8 -0.6
TPTI                     3.41 317   P        Pn      15 08 48.3 -0.1
PPSI  Pulau Pagai        3.53 172   P        Pn      15 08 49.2 -0.8
SNSI  Sinabang, Aceh     3.58 297   P        Pn      15 08 49.7 -0.9
MYKOM Kota Tinggi        4.46  77   P        Pn      15 09 02.7 +0.5
KULM  Kulim              4.65  14   P        Pn      15 09 04.7  0.0
MLSI  Meulaboh, Aceh     4.67 318   P        Pn      15 09 05.2 +0.3
LHMI  Lhok Sumawe        5.13 330   P        Pn      15 09 10.8 -0.2
      62nm,1.0s
UBSI  University, Be     5.27 148   P        Pn      15 09 13.3 +0.4
MNAI  Manna              6.14 146   P        Pn      15 09 24.3 -0.3
      143nm,1.1s
MDSI  Maura Dua          6.99 138   P        Pn      15 09 36.5 +0.5
H08S2 Diego Garcia H    28.20 252   T        T       15 41 12.6
      baz=74
H08S3 Diego Garcia H    28.20 252   T        T       15 41 20.9
      baz=74
H08S1 Diego Carcia H    28.22 252   T        T       15 41 23.8
      baz=74
WRA   Warramunga Arr    39.85 123   P        P       15 15 15.5 -0.4
      0.4nm,0.8s,baz=298,slow=8.0,SNR=4.1
      0.4nm,0.8s
ASAR  Alice Springs     41.30 128   P        P       15 15 26.9 -0.9
      0.2nm,0.7s,baz=301,slow=7.7,SNR=4.4
      0.2nm,0.7s
MKAR  Makanchi Array    48.26 344   P        P       15 16 23.3 +0.8
      0.1nm,0.3s,baz=162,slow=8.1,SNR=6.7
      0.1nm,0.3s
BVAR  Borovoye Array    57.45 340   P        P       15 17 29.7  0.0
      0.2nm,0.4s,baz=143,slow=8.1,SNR=2.1
      0.2nm,0.4s
H04N2 CROZET ISLANDS    62.72 215   T        T       16 24 49.7
      baz=57
H04N1 CROZET ISLANDS    62.73 215   T        T       16 24 48.2
      baz=57
H04N3 CROZET ISLANDS    62.74 215   T        T       16 24 50.7
      baz=57
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*IDC **15** 15:10:59.8±0.6, 55°.08S×129°.37W, h0^{km}, mb4.0/11, mbtmp4.0/11, MS4.3/34, Error ellipse: s-maj=24.8km s-min=17.1km az=167.0*

*NEIC **15** 15:11:03.1±1.6, 54°.09S±0°.06×129°.9W±0°.2, h10^{km}±1^{km}, mb5.3/28, Error ellipse: s-maj=18.7km s-min=10.3km az=267.0*

*GCMT **15** 15:11:05.1±0.2, 55°.29S±0°.01×129°.15W±0°.02, h12^{km}±1^{km}, MW5.1/116, Moment Tensor Solution. s46,c54; s116,c175; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.67±.14; $M_{\theta\theta}$3.65±.15; $M_{\phi\phi}$-2.98±.13; $M_{r\theta}$0.35±.35; $M_{\theta\phi}$4.10±.12; $M_{\phi r}$1.42±.39; Best double couple: $M_0$5.48400×10^{16} NP1:ϕ_s109.00000°, δ74.00000°, λ-4.00000°. NP2:ϕ_s200.00000°, δ86.00000°, λ-164.00000°. Principal axes: T 5.7440, Plg8.0000°, Azm334.0000°; N -0.5240, Plg73.0000°, Azm214.0000°; P -5.2240, Plg14.0000°, Azm66.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 15:11:00.7±0.4**, 54°.82S**±0°.09×**129°.41W**±0°.09**, h10^{km}, n122, σ2ˢ.58**/71**, mb5.0**/26**, MS4.3**/34**, 1C-6D, Pacific-Antarctic Ridge**

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Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op       ISC      h  m  s   ISC
PTCN  Pitcairn Islan    29.72 359   P        P       15 17 03.6 -3.3
RPN   Rapa Nui          31.32  36   LR       LR      15 26 55.5
      comp=Z,358nm,21.9s,baz=67,slow=30
RPN   Rapa Nui          31.32  36   P        P       15 17 19.8 -1.2
RPN                                 IAmb     IAmb    15 17 52.9
      comp=Z,48nm,0.8s
RKT   Rikitea           31.93 350  eLR       LR      15 25 54.5
      comp=Z,5µm,26.8s
CTZ   Chatham Island    32.13 270   P        P       15 17 27.6 -0.4
VNDA  Vanda             32.69 202   P        P       15 17 32.8 +0.3
      comp=Z,1.1nm,0.8s,baz=109,slow=7.0,SNR=4.3
VNDA                                LR       LR      15 26 32.4
      comp=Z,262nm,21.4s,baz=83,slow=29
      comp=Z,1.1nm,0.8s
VNDA  Vanda             32.69 202   P        P       15 17 40.9 +8.4
PMSA  Palmer Station    32.84 134   LR       LR      15 27 02.7
      comp=Z,743nm,20.0s,baz=261,slow=30
MG01  Puerto William    34.52 116   P        P       15 17 57.2 +8.6
TBI   Tubuai            34.81 326  eLR       LR      15 27 04.3
      comp=Z,6µm,26.0s
TBI                                eLR       LR      15 27 21.6
      comp=Z,1µm,23.8s
QSPA  South Pole Qui    35.35 180   P        P       15 17 54.8 -1.2
      comp=Z,5.8nm,1.1s,baz=102,slow=4.6,SNR=10
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QSPA                                LR      LR      15 30 55.3
      comp=Z,1μm,18.3s,baz=85,slow=34
      comp=Z,5.8nm,1.1s
MRZ   Mangatainoka R    38.58 268   P       P       15 18 23.0 -0.4
MRZ                                 IAmb    IAmb    15 18 58.2
      comp=Z,89nm,2.0s
BKZ   Black Stump Fm    39.03 271   P       P       15 18 26.4 -0.9
URZ   Urewera           39.28 272   LR      LR      15 31 21.2
      comp=Z,671nm,19.6s,baz=128,slow=31
WKZ   Wanaka            39.73 258   P       P       15 18 33.9 +0.8
WKZ                                 IAmb    IAmb    15 19 56.5
      comp=Z,143nm,1.7s
QRZ   Quartz Range      40.23 266   P       P       15 18 37.2  0.0
QRZ                                 IAmb    IAmb    15 19 29.4
      comp=Z,167nm,1.6s
PPT2  Papeete2          40.26 329  eP       P       15 18 32.8 -4.9
      comp=Z,108nm,22.2s
PPT2                               eS       S       15 24 46.3 +1.3
      comp=Z,220nm,28.8s
PPT2                               eLR      LR      15 29 35.6
      comp=Z,2μm,26.0s
PPT2                               eLR      LR      15 29 43.5
      comp=Z,1μm,24.8s
PPT   Papeete           40.28 329   LR      LR      15 31 43.3
      comp=Z,643nm,18.0s,baz=213,slow=31
RAR   Rarotonga         40.60 314   LR      LR      15 32 39.1
      comp=Z,261nm,18.9s,baz=116,slow=32
H03S2 Juan Fernandez    40.67  80   T       T       16 01 58.0
      baz=221,slow=74,SNR=46
H03S1 Juan Fernandez    40.67  80   T       T       16 01 54.9
      baz=221,slow=74,SNR=50
H03S3 Juan Fernandez    40.69  80   T       T       16 01 54.1
      baz=221,slow=74,SNR=45
PLCA  Paso Flores       40.75  95   P       P       15 18 42.1 +0.4
      comp=Z,3.6nm,1.1s,baz=235,slow=6.4,SNR=4.3
PLCA                                LR      LR      15 31 45.3
      comp=Z,345nm,18.7s,baz=224,slow=31
      comp=Z,3.6nm,1.1s
H03N3 Juan Fernandez    40.95  80   T       T       16 01 56.4
      baz=228,slow=74
H03N2 Juan Fernandez    40.95  80   T       T       16 01 54.6
      baz=228
H03N1 Juan Fernandez    40.96  80   T       T       16 01 58.6
      baz=228,slow=74
RAO   Raoul Island      42.99 286   LR      LR      15 31 58.7
      comp=Z,174nm,21.6s,baz=146,slow=29
MT16  CCHEN             45.79  87   P       P       15 19 28.0 +5.5
MT16                                IAmb    IAmb    15 19 49.3
      comp=Z,21nm,0.8s
TAOE  Nuku Hiva Isla    46.64 345  eS       S       15 26 17.9 -0.5
      comp=Z,199nm,25.9s
TAOE                               eLR      LR      15 32 57.3
      comp=Z,1μm,25.0s
VNA3  Neumayer Olymp    47.25 158 ⇓P        P       15 19 30.6 -2.8
      comp=Z,6.8nm,0.8s
TRQA  Tornquist         47.47  98   P       P       15 19 41.7 +6.2
TRQA                                IAmb    IAmb    15 19 45.7
      comp=Z,24nm,1.4s
CO03  El Pedregal       47.59  85   P       P       15 19 40.7 +4.1
CO03                                IAmb    IAmb    15 19 45.6
      comp=Z,21nm,1.1s
VNA2  Neumayer--Watz    47.99 158 ⇓P        P       15 19 36.6 -2.4
      comp=Z,8.7nm,0.8s,baz=216,slow=8.9
VNA1  Neumayer--Stat    48.00 157 ⇓P        P       15 19 36.9 -2.2
      comp=Z,15nm,0.8s
SNAA  Sanae             48.35 160 ⇓P        P       15 19 38.4 -3.5
      comp=Z,67nm,1.0s
SNAA  Sanae             48.35 160   P       P       15 19 39.0 -2.9
      comp=Z,1.6nm,0.7s,baz=215,slow=7.7,SNR=9.3
SNAA                                LR      LR      15 38 49.4
      comp=Z,872nm,20.1s,baz=272,slow=35
      comp=Z,1.6nm,0.7s
CFA   Coronel Fontan    48.44  87   LR      LR      15 36 53.1
      comp=Z,122nm,19.0s,baz=347,slow=32
LCO   Las Campanas      48.95  83   P       P       15 19 50.9 +3.6
LCO                                 IAmb    IAmb    15 20 09.7
      comp=Z,83nm,1.9s
TROLL Troll, Antarti    49.08 162 ⇓P        P       15 19 45.5 -2.1
      comp=Z,159nm,0.9s
ELIB  Princess Elisa    52.09 170  dP       P       15 20 07.9 -2.4
PB14  IPOC Station P    52.47  80   P       P       15 20 16.2 +2.3
PB14                                IAmb    IAmb    15 20 52.6
      comp=Z,37nm,1.6s
PB05  IPOC Station P    53.97  78   P       P       15 20 26.6 +1.8
PB07  IPOC Station P    55.04  78   P       P       15 20 35.0 +2.3
SYO   Syowa Base        56.22 175⇑eP        P       15 20 46.0 +5.8
DZM   Mont Dzumac       57.40 278  eLR      LR      15 37 34.9
      comp=Z,450nm,29.1s
PB18  Visviri           58.56  75   P       P       15 21 00.8 +2.6
CPUP  Villa Florida     58.70  92   P       P       15 20 57.8 -0.5
      comp=Z,0.4nm,0.8s,baz=206,slow=8.5,SNR=2.1
CPUP                                LR      LR      15 42 41.2
      comp=Z,142nm,18.9s,baz=232,slow=32
      comp=Z,0.4nm,0.8s
NNA   Nana              59.17  65   LR      LR      15 41 03.7
      comp=Z,90nm,21.5s,baz=205,slow=30
LPAZ  La Paz            60.37  76   P       P       15 21 11.1 +0.4
      comp=Z,2.4nm,0.8s,baz=207,slow=4.9,SNR=7.2
LPAZ                                LR      LR      15 41 06.4
      comp=Z,122nm,18.9s,baz=212,slow=30
      comp=Z,2.4nm,0.8s
LPAZ  La Paz            60.37  76   P       P       15 21 11.4 +0.7
LPAZ                                IAmb    IAmb    15 21 23.2
      comp=Z,12nm,1.0s
ATAH  Atahualpa         62.49  60   LR      LR      15 41 53.5
      comp=Z,575nm,21.8s,baz=212,slow=30
STKA  Stephens Creek    64.07 251   LR      LR      15 43 42.5
      comp=Z,403nm,21.6s,baz=178,slow=31
SIV   San Ignacio       64.61  82   LR      LR      15 45 49.5
      comp=Z,96nm,20.2s,baz=295,slow=32
INKA  Innaminka         67.73 253   P       P       15 21 57.8 -0.4
CTA   Charters Tower    70.60 263   P       P       15 22 17.0 +0.9
      comp=Z,1.4nm,0.7s,baz=125,slow=4.1,SNR=1.3
CTA                                 LR      LR      15 50 27.2
      comp=Z,157nm,18.1s,baz=120,slow=34
      comp=Z,1.4nm,0.7s
BDFB  Brasilia          72.43  92   P       P       15 22 28.8 +1.5
      comp=Z,0.7nm,0.3s,baz=214,slow=5.3,SNR=5.0
BDFB                                LR      LR      15 51 49.1
      comp=Z,305nm,18.4s,baz=217,slow=34
      comp=Z,0.7nm,0.3s
AS31  Alice Springs     74.71 251   P       P       15 22 42.7 +2.1
ASAR  Alice Springs     74.71 251   P       P       15 22 40.4 -0.2
      comp=Z,1.8nm,1.0s,baz=138,slow=5.4,SNR=10.0
ASAR                                LR      LR      15 51 38.8
      comp=Z,436nm,19.0s,baz=144,slow=33
      comp=Z,1.8nm,1.0s
ASAR  Alice Springs     74.71 251           P       15 22 42.8 +2.2
ROSC  El Rosal          74.83  58   LR      LR      15 49 49.6
      comp=Z,258nm,20.0s,baz=258,slow=31
H01W1 Cape Leeuwin H    75.37 230   T       T       16 46 10.8
      baz=147,slow=76,SNR=127
H01W2 Cape Leeuwin H    75.37 230   T       T       16 46 13.5
      baz=147,slow=76,SNR=95
H01W3 Cape Leeuwin H    75.38 230   T       T       16 46 11.6
      baz=147,slow=76,SNR=92
BYL   Byron's Ledge     77.17 335   P       P       15 22 51.7 -2.8
WRA   Warramunga Arr    77.45 253   P       P       15 22 56.2  0.0
      comp=Z,1.6nm,0.7s,baz=143,slow=5.0,SNR=9.0
      comp=Z,1.6nm,0.7s
HON   Honolulu          79.69 333   P       P       15 23 05.0 -3.2
SDV   Santo Domingo     80.14  59   LR      LR      15 53 56.2
      comp=Z,174nm,20.1s,baz=178,slow=32
LPIG  La Paz            80.30  18   LR      LR      15 50 57.4
      comp=Z,119nm,18.9s,baz=200,slow=30
PSA00 Pilbara Seismi    83.84 241   P       P       15 23 32.3 +1.9
PSA00                               IAmb    IAmb    15 24 59.9
      comp=Z,22nm,1.4s
KNRA  Kununurra         83.99 251   P       P       15 23 32.9 +1.7
KNRA                                IAmb    IAmb    15 26 03.3
      comp=Z,30nm,1.4s
MDP   Montagnes des     86.56  76   LR      LR      15 56 59.5
      comp=Z,102nm,18.2s,baz=154,slow=32
TXAR  Lajitas Array     86.69  22   P       P       15 23 46.9 +2.5
      comp=Z,0.4nm,0.8s,baz=188,slow=7.6,SNR=5.3
      comp=Z,0.4nm,0.8s
RCBR  Riachuelo         87.31  96   P       P       15 23 52.0 +4.2
RCBR                                IAmb    IAmb    15 24 58.6
      comp=Z,37nm,1.3s
JAY   Jayapura          87.90 269   LR      LR      16 02 49.6
      comp=Z,51nm,18.4s,baz=141,slow=35
PFO   Pinyon Flats O    88.78  11   LR      LR      15 54 08.8
      comp=Z,203nm,21.1s,baz=200,slow=29
MWC   Mount Wilson      89.22   9   P       P       15 23 55.7 -0.8
SJG   San Juan          90.25  58   LR      LR      15 59 17.0
      comp=Z,99nm,19.9s,baz=214,slow=32
H11S2 WAKE ISLAND Hy    90.88 302   T       T       17 05 11.2
      baz=148,slow=75,SNR=11
H11S3 WAKE ISLAND Hy    90.89 302   T       T       17 05 12.1
      baz=148,slow=75,SNR=10
H11S1 WAKE ISLAND Hy    90.90 302   T       T       17 05 08.7
      baz=148,slow=75,SNR=8.2
BATI  Baumata           91.28 250   LR      LR      16 01 23.6
      comp=Z,401nm,20.4s,baz=198,slow=33
ANMO  Albuquerque       91.56  19   LR      LR      15 57 38.6
      comp=Z,58nm,18.8s,baz=190,slow=30
H11N3 WAKE ISLAND Hy    91.82 302   T       T       17 06 15.6
      baz=158,slow=80,SNR=6.9
H11N1 WAKE ISLAND Hy    91.83 302   T       T       17 06 17.7
      baz=158,slow=80,SNR=8.0
H11N2 WAKE ISLAND Hy    91.84 302   T       T       17 06 18.1
      baz=158,slow=80,SNR=8.5
BOSA  Boshof            94.09 158   LR      LR      16 03 52.2
      comp=Z,289nm,18.8s,baz=203,slow=34
YBH   Yreka Blue Hor    96.35   5   LR      LR      15 59 20.4
      comp=Z,20nm,19.2s,baz=190,slow=30
LBTB  Lobatse           97.64 157   LR      LR      16 04 41.3
      comp=Z,271nm,19.4s,baz=148,slow=33
KAPI  Kappang           97.72 250   LR      LR      16 05 30.4
      comp=Z,210nm,20.4s,baz=168,slow=34
TKL   Tuckaleechee C    98.27  36   LR      LR      16 02 39.5
      comp=Z,64nm,19.9s,baz=170,slow=32
H02S2 DAWSON INLET T107.69 358      T       T       17 25 59.5
ILAR  Eielson Array    120.02 351   PKP     PKiKP   15 29 50.7 +0.7
      comp=Z,0.6nm,0.7s,baz=197,slow=0.9,SNR=7.7
PETK  Petropavlovsk-   123.23 316   PKP     PKiKP   15 29 58.1 +1.4
      comp=Z,5.0nm,1.1s,baz=103,slow=4.6,SNR=2.6
TORD  Torodi Ar. Bea   123.71 118   PKP     PKiKP   15 29 58.5 -0.3
      comp=Z,0.3nm,0.5s,baz=190,slow=0.1,SNR=1.8
ESDC  Sonseca Array    141.04  90   PKP     PKiKP   15 30 31.3 -1.9
      comp=Z,1.0nm,0.8s,baz=234,slow=1.7,SNR=5.3
ULN   Ulaanbaatar      144.91 283           PKPdf   15 30 37.6 +0.4
SONM  Songino Array    145.26 282   PKPbc   PKPab   15 30 37.9 +0.2
      comp=Z,1.9nm,0.7s,baz=133,slow=2.9,SNR=3.8
KEST  Kesra            145.91 107   PKPbc   PKiKP   15 30 41.3 -2.1
      comp=Z,15nm,0.9s,baz=306,slow=2.6,SNR=13
RAYN  Ar Rayn          148.51 171   PKPdf   PKiKP   15 30 47.9 -1.2
EKA   Eskdalemuir Ar   149.86  67   PKPbc   PKiKP   15 30 50.3 -0.4
      comp=Z,1.9nm,0.7s,baz=273,slow=3.3,SNR=3.5
DAVA  Damuels          153.64  90           PKPbc   15 30 56.4 -2.5
DAVA  Damuels          153.64  90  ePKP     PKPbc   15 30 56.4 -2.5
      comp=Z,15nm,1.8s
FETA  Feichten         153.99  91           PKiKP   15 31 04.2 +4.4
FETA  Feichten         153.99  91  ePKP     PKiKP   15 31 04.2 +4.4
      comp=Z,5.0nm,1.3s
RETA  Reutte           154.25  90           PKPbc   15 30 55.9 -4.2
RETA  Reutte           154.25  90  ePKP     PKPbc   15 30 55.9 -4.2
      comp=Z,9.5nm,1.8s
SQTA  Sankt Quirin     154.37  91           PKPdf   15 30 54.9 +2.7
SQTA  Sankt Quirin     154.37  91  i PKP    PKPdf   15 30 54.8 +2.7
      comp=Z,5.5nm,1.1s
WATA  Walderalm        154.65  91           PKPbc   15 30 59.2 -1.8
WATA  Walderalm        154.65  91  ePKP     PKPbc   15 30 59.2 -1.8
      comp=Z,7.3nm,1.2s
ABTA  Abfaltersbach    154.87  93           PKPbc   15 30 56.6 -4.8
ABTA  Abfaltersbach    154.87  93  i PKP    PKPbc   15 30 56.6 -4.8
      comp=Z,5.9nm,1.0s
LESA  Schwarzleotal    155.33  92           PKPdf   15 30 56.8 +3.5
LESA  Schwarzleotal    155.33  92  ePKP     PKPdf   15 30 56.8 +3.5
      comp=Z,6.3nm,1.3s
BIOA  Bad Ischl, Aus   156.02  92           PKPdf   15 30 59.7 +5.4
BIOA  Bad Ischl, Aus   156.02  92  ePKP     PKPdf   15 30 59.7 +5.4
      comp=Z,0.1nm,0.3s
MOA   Molln            156.47  92           PKPdf   15 30 59.4 +4.6
MOA   Molln            156.47  92  ePKP     PKPdf   15 30 59.4 +4.6
      comp=Z,2.4nm,1.5s
CONA  Conrad Observa   157.43  93  ePKP     PKPdf   15 30 59.4 +3.3
      comp=Z,3.2nm,1.3s
MKAR  Makanchi Array   158.57 261   PKPab   PKPab   15 31 33.0 +0.2
      comp=Z,0.4nm,0.6s,baz=122,slow=4.3,SNR=7.1
ZALV  Zalesovo Beam    160.16 282   PKPab   PKPab   15 31 39.7 +0.3
      comp=Z,0.4nm,0.3s,baz=104,slow=6.1,SNR=2.1
AKASG Malin Array Be   166.44  99   PKPab   PKPab   15 32 05.4 -1.7
      comp=Z,0.5nm,0.4s,baz=260,slow=4.3,SNR=2.9
```

IDC 15 15:11:03.5±1.3**, 6°.78N×125°.00E, h0km, mb3.7**/4**, mbtmp3.7**/4**, Error ellipse: s-maj=28.1km s-min=10.7km az=148.0, Mindanao**

```
Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                    Op      ISC     h  m  s    ISC
DAV   Davao City (W)     0.65  63   Pg      Pg      15 11 15.4 -0.5
      448nm,0.3s,baz=258,slow=14,SNR=19
DAV                                 Lg      Lg      15 11 25.3
      778nm,0.3s,baz=321,slow=20,SNR=15
DAV   Davao City (W)     0.65  63   P       Pb      15 11 17.0 -0.7
ASAR  Alice Springs     31.48 164   P       P       15 17 26.5 -0.7
      1.1nm,0.6s,baz=343,slow=7.2,SNR=7.0
      1.1nm,0.6s
STKA  Stephens Creek    41.58 159   P       P       15 18 53.8 +0.6
      1.8nm,0.8s,baz=339,slow=8.6,SNR=2.2
      1.8nm,0.8s
KURBB Kurchatov Arra    58.26 327   P       P       15 20 59.0 -0.8
      0.1nm,0.3s,baz=128,slow=6.9,SNR=1.8
      0.1nm,0.3s
ILAR  Eielson Array     83.11  26   P       P       15 23 32.4 +1.4
      0.3nm,0.6s,baz=261,slow=5.9,SNR=2.5
      0.3nm,0.6s
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*IDC **15** 15:11:14.3±0.7, 5°.50S×153°.09E, h0km, mb4.3/19, mbtmp4.3/21, ML2.8/2, MS3.6/5, Error ellipse: s-maj=24.2km s-min=14.1km az=97.0*

*NEIC **15** 15:11:16.8±1.0, 5°.49S±0°.07×153°.08E±0°.08, h10km±1km, mb4.7/51, Error ellipse: s-maj=13.4km s-min=11.6km az=94.0*

ISC 15 15:11:20.1±0.4**, 5°.54S**±0°.06×**153°.08E**±0°.08**, h37km, n106, σ1s.03**/96**, mb4.5**/48**, MS3.4**/4**, 1C-1D, New Ireland region**

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Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                    Op      ISC     h  m  s    ISC
RABL  Rabaul             1.62 326           Pn      15 11 44.9 -1.2
BULU  Kimbe              2.75 270   P       Pn      15 12 05.6 +3.9
MANU  Manus Island       6.67 301   Pn      Pn      15 12 54.7 -1.0
PMG   Port Moresby       7.02 236   Pn      Pn      15 13 00.1 -0.2
      1.3nm,0.3s,baz=47,slow=8.0,SNR=38
PMG                                 Sn      Sn      15 14 17.9 -1.1
      4.4nm,0.3s,baz=39,slow=19,SNR=14
      48nm,0.8s
PMG   Port Moresby       7.02 236           Pn      15 12 59.9 -0.4
PMG   Port Moresby       7.02 236   P       Pn      15 13 02.0 +1.6
PMG   Port Moresby       7.02 236   P       Pn      15 13 01.4 +1.0
TATA  Tatamba Isabel     7.25 113   P       Pn      15 13 14.0  +10
COEN  Coen              12.85 229   Pn      Pn      15 14 18.9 -1.5
PATS  Pohnpei           13.36  23   Pn      Pn      15 14 25.6 -1.6
MTSU  Mount Surprise    15.17 214   P       P       15 14 55.3 -1.1
CTA   Charters Tower    15.91 204   Pn      Pn      15 15 01.9 +0.5
      0.2nm,0.3s,baz=3.3,slow=12,SNR=8.2
CTA                                 LR      LR      15 20 18.1
      comp=Z,227nm,19.9s,baz=33,slow=34
      2.8nm,0.8s
CTAO  Charters Tower    15.91 204   P       P       15 15 05.1 +0.5
EIDS  Eidsvold          19.81 185   P       P       15 15 49.0 +1.4
EIDS  Eidsvold          19.81 185   P       Pn      15 15 49.8 +0.5
QIS   Mount Isa         19.86 220   P       P       15 15 48.8 +0.7
GUMO  Guam              20.68 337   LR      LR      15 24 35.1
      comp=Z,135nm,18.7s,baz=96,slow=39
DZM   Mont Dzumac       20.91 143   P       P       15 15 59.3 -0.4
      1.9nm,0.3s,baz=313,slow=19,SNR=2.1
DZM                                 LR      LR      15 22 59.9
      comp=Z,154nm,21.2s,baz=358,slow=34
      1.9nm,0.3s
FAKI  Fak Fak           20.93 276   P       P       15 15 59.4 -0.5
QLP   Quilpie           22.57 201   P       P       15 16 19.4 +2.1
MTN   Manton Dam        22.84 250   P       P       15 16 20.5 +0.3
WB0   Warramunga Arr    23.04 230           P       15 16 22.0 -0.2
WR8   Warramunga Arr    23.06 230   P       P       15 16 22.2 -0.4
WR8                                 IAmb    IAmb    15 16 57.4
      comp=Z,20nm,1.3s
WRAB  Tennant Creek     23.16 230           P       15 16 23.6  0.0
WRAB                                IAmb    IAmb    15 16 32.0
      comp=Z,9.7nm,0.7s
WRA   Warramunga Arr    23.18 230   P       P       15 16 22.5 -1.2
      comp=Z,5.3nm,0.7s,baz=55,slow=10,SNR=32
      comp=Z,5.3nm,0.7s
WRA   Warramunga Arr    23.18 230           P       15 16 23.9 +0.2
INKA  Innaminka         25.00 207   P       P       15 16 41.5 +0.9
AS31  Alice Springs     25.80 224           P       15 16 48.2 +0.2
ASAR  Alice Springs     25.80 224   P       P       15 16 47.2 -0.8
      comp=Z,3.4nm,0.8s,baz=57,slow=8.9,SNR=35
      comp=Z,3.4nm,0.8s
ASAR  Alice Springs     25.80 224   P       P       15 16 48.3 +0.3
STKA  Stephens Creek    28.32 201   P       P       15 17 10.3 -0.2
      comp=Z,3.0nm,0.7s,baz=14,slow=11,SNR=11
STKA                                LR      LR      15 29 12.2
      comp=Z,158nm,18.1s,baz=28,slow=38
      comp=Z,3.0nm,0.7s
STKA  Stephens Creek    28.32 201           P       15 17 10.1 -0.4
STKA                                IAmb    IAmb    15 17 34.2
      comp=Z,28nm,1.2s
FORT  Forrest           34.40 220   P       P       15 18 03.7 -0.3
FORT                                IAmb    IAmb    15 18 15.2
      comp=Z,5.1nm,0.8s
JGF   Kuroka            43.51 341   P       P       15 19 19.1 -1.0
JGF                                 IAmb    IAmb    15 19 25.3
      comp=Z,20nm,1.3s
JNU   Nakatsue          43.84 333   P       P       15 19 21.6 -1.2
JNU                                 IAmb    IAmb    15 19 23.6
      comp=Z,18nm,0.9s
MJAR  Matsushiro Arr    44.11 343   P       P       15 19 22.3 -2.6
      comp=Z,2.1nm,0.9s,baz=172,slow=8.5,SNR=5.6
      comp=Z,2.1nm,0.9s
MJAR  Matsushiro Arr    44.11 343   P       P       15 19 23.9 -1.1
MAJO  Matsushiro        44.12 343   P       P       15 19 24.4 -0.6
MAJO                                IAmb    IAmb    15 19 55.5
      comp=Z,9.6nm,1.2s
KSRS  Korea Array       48.78 333   P       P       15 20 00.5 -1.0
      comp=Z,1.7nm,0.9s,baz=148,slow=8.2,SNR=4.1
      comp=Z,1.7nm,0.9s
NJ2   Nanjing           49.59 321  eP       P       15 20 09.6 +1.8
NJ2                                 pmax    pmax
      comp=Z,7.0nm,0.5s
JKA   Kamikawa-asahi    50.32 350   P       P       15 20 13.4 +0.3
USRK  Ussuriysk Ar.     53.03 341   P       P       15 20 34.3 +0.9
      comp=Z,2.8nm,0.7s,baz=134,slow=10,SNR=3.4
      comp=Z,2.8nm,0.7s
ENH   Enshi             54.86 313           P       15 20 46.4 -0.7
ENH                                 IAmb    IAmb    15 20 48.5
      comp=Z,8.7nm,0.9s
HNS   HongShan          55.70 323 ⇓P        P       15 20 52.9  0.0
HNS                                 pmax    pmax
      comp=Z,4.0nm,1.1s
BNX   BinXian           55.95 339 ⇑P        P       15 20 53.4 -1.2
BNX                                 pmax    pmax
      comp=Z,8.0nm,1.2s
CM31  Chiang Mai Arr    58.44 295   P       P       15 21 11.9 -0.8
CM31                                IAmb    IAmb    15 21 13.8
      comp=Z,4.5nm,0.9s
CMAR  Chiang Mai Arr    58.44 295   P       P       15 21 13.1 +0.4
      comp=Z,2.5nm,0.9s,baz=110,slow=5.5,SNR=17
      comp=Z,2.5nm,0.9s
CMAR  Chiang Mai Arr    58.44 295           P       15 21 12.1 -0.6
PEA0B Petropavlovsk-    58.55   3   P       P       15 21 12.7 -0.1
PETK  Petropavlovsk-    58.55   3   P       P       15 21 13.1 +0.3
      comp=Z,11nm,0.6s,baz=190,slow=7.0,SNR=4.3
PETK                                LR      LR      15 42 18.8
      comp=Z,40nm,20.6s,baz=178,slow=32
      comp=Z,11nm,0.6s
PETK  Petropavlovsk-    58.55   3           P       15 21 12.7 -0.1
PZH   PanZhiHua         59.02 305   P       P       15 21 19.3 +2.5
CD2   Chengdu           59.43 311   P       P       15 21 19.0 -0.4
CD2                                 pmax    pmax
      comp=Z,10.0nm,0.6s
HHC   Hu-ho-hao-te      59.80 324  eP       P       15 21 24.4 +2.5
HHC                                 pmax    pmax
      comp=Z,10.0nm,0.7s
HHC                                 pmax    pmax
      comp=Z,86nm,5.7s
HEH   HeiHe             59.84 341  eP       P       15 21 23.3 +1.6
MA2   Magadan           64.93 359           P       15 21 55.6 -0.1
GTA   Gaotai            66.38 317  eP       P       15 22 06.4 +0.8
GTA                                 sP      pP      15 22 17.4 +1.7
GTA                                 pmax    pmax
      comp=Z,4.0nm,1.5s
SONM  Songino Array     67.09 328   P       P       15 22 10.4 +0.4
      comp=Z,1.7nm,0.6s,baz=148,slow=5.8,SNR=8.1
      comp=Z,1.7nm,0.6s
SONM  Songino Array     67.09 328   P       P       15 22 10.1 +0.1
LSA   Lhasa             68.88 305   IAmb    IAmb    15 22 24.5
      comp=Z,4.0nm,0.8s
BILL  Bilibino          74.00   5           P       15 22 52.1 +0.6
ACHA  Angle Creek He    75.76  25   P       P       15 23 02.0 +0.1
ANM   Nome              76.39  17   P       P       15 23 06.1 +0.8
ANM                                 IAmb    IAmb    15 23 08.7
      comp=Z,6.3nm,1.0s
CNPM  China Poot        78.25  25   P       P       15 23 16.4 +0.5
TIXI  Tiksi             78.66 352           P       15 23 18.3 +0.4
C16K  Lisburne Hills    79.15  15   P       P       15 23 21.4 +0.9
C16K                                IAmb    IAmb    15 23 22.8
      comp=Z,7.4nm,1.0s
PMR   Palmer            80.24  24   P       P       15 23 27.1 +0.5
PMR                                 IAmb    IAmb    15 23 45.2
      comp=Z,15nm,1.2s
E19K  Redstone River    80.80  17   IAmb    IAmb    15 23 32.2
      comp=Z,7.0nm,0.8s
IMAR  Indian Mountai    80.98  19   P       P       15 23 31.3 +0.7
MKAR  Makanchi Array    81.06 319   P       P       15 23 31.2 -0.3
      comp=Z,2.4nm,0.9s,baz=98,slow=6.2,SNR=11
      comp=Z,2.4nm,0.9s
C19K  Lookout Ridge     81.22  15   IAmb    IAmb    15 23 34.7
      comp=Z,6.3nm,0.8s
MAKZ  Makanchi          81.27 319           P       15 23 32.8 +0.2
MCK   McKinley          81.43  22   P       P       15 23 33.1 +0.1
MCK                                 IAmb    IAmb    15 23 35.3
      comp=Z,11nm,1.0s
ZAA0  Zalesovo Array    81.92 326   IAmb    IAmb    15 23 46.9
      comp=Z,3.5nm,0.7s
ZALV  Zalesovo Beam     81.92 326   P       P       15 23 35.2 -0.6
      comp=Z,3.4nm,0.7s,baz=112,slow=5.6,SNR=17
      comp=Z,3.4nm,0.7s
ZALV  Zalesovo Beam     81.92 326   P       P       15 23 35.1 -0.7
ILAR  Eielson Array     82.73  22   P       P       15 23 39.2 -0.6
      comp=Z,1.8nm,0.8s,baz=240,slow=5.2,SNR=7.0
      comp=Z,1.8nm,0.8s
KSH   Kashi             83.62 311   P       P       15 23 47.1 +2.0
KSH                                 pmax    pmax
      comp=Z,4.0nm,0.7s
TOLK  Toolik Lake Re    83.83  18   P       P       15 23 45.8 +0.4
TOLK                                IAmb    IAmb    15 23 58.1
      comp=Z,8.0nm,1.1s
QSPA  South Pole Qui    84.43 180   P       P       15 23 48.3 -0.4
      comp=Z,0.8nm,0.7s,baz=277,slow=1.5,SNR=8.3
      comp=Z,0.8nm,0.7s
QSPA  South Pole Qui    84.43 180   IAmb    IAmb    15 24 07.1
      comp=Z,4.2nm,1.0s
KURK  Kurchatov         84.52 322           P       15 23 48.9 -0.3
KURK                                IAmb    IAmb    15 23 51.5
      comp=Z,2.6nm,0.8s
KURBB Kurchatov Arra    84.55 322   P       P       15 23 48.6 -0.7
      comp=Z,1.4nm,0.8s,baz=104,slow=4.0,SNR=9.9
      comp=Z,1.4nm,0.8s
C24K  Franklin Bluff    84.67  17   P       P       15 23 50.6 +1.0
AAK   Ala-Archa         85.37 313   P       P       15 23 53.8 -0.2
      comp=Z,3.7nm,0.8s,baz=134,slow=4.0,SNR=8.1
      comp=Z,3.7nm,0.8s
AAK   Ala-Archa         85.37 313   IAmb    IAmb    15 23 55.3
      comp=Z,5.4nm,0.9s
E27K  Coleen River      86.19  20   IAmb    IAmb    15 24 01.8
      comp=Z,10.0nm,1.5s
ARSB  Arslanbob         86.22 312   P       P       15 23 58.1 -0.1
NRIK  Noril'sk          86.75 341   P       P       15 23 59.6 -0.3
      comp=Z,3.8nm,0.5s,baz=99,slow=4.9,SNR=8.9
      comp=Z,3.8nm,0.5s
NRIK  Noril'sk          86.75 341   P       P       15 24 00.3 +0.3
NRIK                                IAmb    IAmb    15 24 01.6
      comp=Z,4.4nm,0.6s
J30M  Hart River        86.77  24   IAmb    IAmb    15 24 04.0
      comp=Z,5.3nm,1.1s
G31M  Satah River       88.34  22   P       P       15 24 08.4 +0.8
G31M                                IAmb    IAmb    15 24 11.0
      comp=Z,4.0nm,0.9s
BVAR  Borovoye Array    89.99 323   P       P       15 24 15.0 -0.7
      comp=Z,3.7nm,0.6s,baz=107,slow=5.7,SNR=22
      comp=Z,3.7nm,0.6s
BORK  Borovoye          90.04 323   P       P       15 24 15.6 -0.3
BORK                                IAmb    IAmb    15 24 16.1
      comp=Z,3.0nm,0.8s
C36M  Paulatuk          92.62  21   P       P       15 24 27.8 +0.4
A36M  Sachs Harbour     92.65  18   P       P       15 24 28.5 +0.9
A36M                                IAmb    IAmb    15 24 29.3
      comp=Z,4.6nm,0.8s
SALN  Salton City       93.78  57   P       P       15 24 33.8 +0.1
YKA   Yellowknife Ar    95.94  28   P       P       15 24 42.2 -0.7
      comp=Z,0.4nm,0.8s,baz=272,slow=5.2,SNR=5.5
      comp=Z,0.4nm,0.8s
ALPN  Alpine           104.23  60           Pdif    15 25 19.1 -1.9
GERES GERESS Array B   124.82 328   PKP     PKiKP   15 30 16.7 +0.1
      comp=Z,0.6nm,0.6s,baz=64,slow=3.4,SNR=2.7
LPAZ  La Paz           133.82 119   PKP     PKiKP   15 30 36.5 +0.3
      comp=Z,1.0nm,0.8s,baz=235,slow=1.1,SNR=4.1
```

RUSC	La Rusia	134.07	87		PKPdf	15 30 31.5	-3.9
SDV	Santo Domingo	136.52	83		PKiKP	15 30 41.9	+0.6
BDFB	Brasilia	150.35	136	PKPbc	PKPbc	15 31 08.7	0.0
	comp=Z,2.3nm,0.6s,baz=236,slow=3.6,SNR=3.8						
TORD	Torodi Ar. Bea	150.79	287	PKPbc	PKPbc	15 31 09.8	+0.1
	comp=Z,4.2nm,0.7s,baz=64,slow=4.0,SNR=12						
MAL2	Monte Alegre,	151.76	105		PKiKP	15 31 14.8	+2.5

*IDC **15** 15:14:43.9±1.2, 6°.47N×125°.16E, h0^{km}, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=33.2km s-min=9.4km az=115.0*

*NEIC **15** 15:14:46.2±0.8, 6°.55N±0°.05×125°.24E±0°.07, h10^{km}±1^{km}, mb4.7/23, Error ellipse: s-maj=12.6km s-min=7.7km az=104.0*

ISC 15 15:14:45.5±0.5**, 6°.53N**±0°.06×**125°.19E**±0°.10**, h10^{km}, n36, σ0^s.87**/37**, mb4.4**/16**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.66	36	Pg	Pg	15 14 57.9	-0.3
	363nm,0.3s,baz=214,slow=7.3,SNR=8.8						
DAV				Lg	Lg	15 15 07.8	
	1μm,0.3s,baz=295,slow=22,SNR=14						
DAV	Davao City (W)	0.66	36		Pg	15 14 57.6	-0.7
TNTI	Ternate	6.12	159	Pn	Pn	15 16 15.8	-0.2
TOLI2	Tolitoli	6.95	219	Pn	Pn	15 16 27.1	-0.4
YULB	Yu-li	17.18	348	P	P	15 18 47.9	+0.5
YOJ	Yonaguni jima	17.95	354		Pn	15 18 55.8	+0.5
YOJ				IAmb	IAmb	15 19 38.9	
	comp=Z,78nm,1.2s						
QIZ	Qiongzhong	19.43	311	P	P	15 19 12.1	-0.1
QIZ				IAmb	IAmb	15 19 13.3	
	comp=Z,47nm,1.5s						
MTN	Manton Dam	20.13	163	P	P	15 19 19.9	0.0
KNRA	Kununurra	22.35	171	P	P	15 19 43.9	+0.1
KNRA				IAmb	IAmb	15 19 46.0	
	comp=Z,17nm,1.0s						
JCJ	Chichijima	26.07	36	P	P	15 20 19.4	+0.1
PMG	Port Moresby	27.02	126	P	P	15 20 27.8	-0.2
PMG				IAmb	IAmb	15 20 29.4	
	comp=Z,20nm,1.4s						
COEN	Coen	27.07	139	P	P	15 20 27.3	-1.2
COEN				IAmb	IAmb	15 20 40.1	
	comp=Z,13nm,1.4s						
WB0	Warramunga Arr	27.66	161	P	P	15 20 32.2	-1.5
WB0				IAmb	IAmb	15 21 10.9	
	comp=Z,8.0nm,1.3s						
WRA	Warramunga Arr	27.80	161	P	P	15 20 33.6	-1.4
	comp=Z,0.8nm,0.6s,baz=339,slow=10,SNR=6.3						
	comp=Z,0.8nm,0.6s						
WRA	Warramunga Arr	27.80	161	P	P	15 20 32.1	-2.9
WR8	Warramunga Arr	27.87	161	P	P	15 20 35.2	-0.4
WR8				IAmb	IAmb	15 21 06.7	
	comp=Z,6.9nm,1.1s						
JMN	Monobe	28.24	15	P	P	15 20 38.3	-0.5
JMN				IAmb	IAmb	15 21 02.5	
	comp=Z,34nm,1.2s						
AS31	Alice Springs	31.20	164	P	P	15 21 04.8	-0.3
ASAR	Alice Springs	31.20	164	P	P	15 21 04.9	-0.2
	comp=Z,0.7nm,0.5s,baz=351,slow=8.7,SNR=10						
ASAR				PcP	PcP	15 23 59.7	-0.4
	comp=Z,0.3nm,0.9s,baz=354,slow=2.9,SNR=1.2						
	comp=Z,0.7nm,0.5s						
ASAR	Alice Springs	31.20	164	P	P	15 21 05.0	-0.1
XAN	Xi'an	31.24	333	P	P	15 21 04.0	-1.5
XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BBOO	Buckleboo	40.47	166	P	P	15 22 24.6	+0.2
BBOO				IAmb	IAmb	15 22 25.4	
	comp=Z,5.6nm,0.7s						
STKA	Stephens Creek	41.28	159	P	P	15 22 30.8	-0.4
	comp=Z,2.3nm,0.6s,baz=344,slow=7.8,SNR=5.9						
	comp=Z,2.3nm,0.6s						
STKA	Stephens Creek	41.28	159	P	P	15 22 30.9	-0.2
STKA				IAmb	IAmb	15 22 32.2	
	comp=Z,11nm,0.7s						
TAU	Tasmania Unive	53.16	160	P	P	15 24 03.9	+0.2
PEA0B	Petropavlovsk-	53.47	24	P	P	15 24 07.1	+1.3
PEA0B				IAmb	IAmb	15 24 10.1	
	comp=Z,25nm,1.1s						
DRK	Karamyk	57.98	313	P	P	15 24 39.2	+0.3
DRK				IAmb	IAmb	15 24 44.9	
	comp=Z,26nm,1.1s						
KURBB	Kurchatov Arra	58.57	327	P	P	15 24 41.8	-0.6
	comp=Z,0.8nm,0.8s,baz=124,slow=7.1,SNR=2.8						
	comp=Z,0.8nm,0.8s						
KURK	Kurchatov	58.57	327	P	P	15 24 42.8	+0.4
QRZ	Quartz Range	64.06	142	P	P	15 25 19.9	+0.2
BKZ	Black Stump Fm	65.68	138	P	P	15 25 30.2	-0.2
BKZ				IAmb	IAmb	15 25 52.0	
	comp=Z,18nm,1.4s						
RTZ	Ruatahuna	65.72	138	P	P	15 25 30.5	-0.2
R16K	Pilot Point	77.67	33	P	P	15 26 42.9	+0.7
ILAR	Eielson Array	83.25	26	P	P	15 27 14.0	+1.9
	comp=Z,0.2nm,0.6s,baz=247,slow=4.8,SNR=4.2						
	comp=Z,0.2nm,0.6s						
ILAR	Eielson Array	83.25	26	P	P	15 27 12.4	+0.3
M24K	Tolsona, Glenn	83.64	28	P	P	15 27 14.7	+0.6

IDC 15 15:19:38.3±1.2**, 6°.44N**×**125°.24E, h0^{km}, mb3.4**/4**, mbtmp3.4**/4**, MS3.6**/1**, Error ellipse: s-maj=28.1km s-min=10.2km az=113.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.71	28	Pg	Pg	15 19 51.5	-0.4
	126nm,0.3s,baz=256,slow=4.7,SNR=2.7						
DAV				Lg	Lg	15 20 02.1	
	377nm,0.3s,baz=243,slow=4.1,SNR=12						
BATI	Baumata	16.61	185	LR	LR	15 30 56.4	
	comp=Z,199nm,19.3s,baz=82,slow=41						
WRA	Warramunga Arr	27.70	161	P	P	15 25 28.1	-0.3
	0.3nm,0.6s,baz=330,slow=11,SNR=5.0						
	0.3nm,0.6s						
CMAR	Chiang Mai Arr	28.27	297	P	P	15 25 34.5	+0.8
	0.3nm,0.5s,baz=107,slow=12,SNR=1.4						
	0.3nm,0.5s						
ASAR	Alice Springs	31.09	164	P	P	15 25 58.8	+0.2
	0.2nm,0.4s,baz=339,slow=6.9,SNR=12						
	0.2nm,0.4s						
MKAR	Makanchi Array	54.50	325	P	P	15 29 07.6	-0.4
	0.4nm,0.8s,baz=126,slow=7.4,SNR=2.5						
	0.4nm,0.8s						

*RSNC **15** 15:28:02.1±1.3, 9°N±4°×8°3W±°, h8^{km}±9^{km}, M3.2, mB4.9, mb4.2, ML3.2, Mw(mB)4.1*

*UCR **15** 15:28:03.8±0.8, 8°.57N×82°.98W, h41^{km}±2^{km}, MW4.2*

*UPA **15** 15:28:04.2±1.3, 8°.59N×83°.00W, h20^{km}±13^{km}, ML4.0, MW3.9*

*CATAC **15** 15:28:04.5±0.3, 9°N±3°×8°3W±°, h20^{km}±2^{km}, M4.3/15, MLv4.3/15, Error ellipse: s-maj=5.8km s-min=3.6km az=170.8, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-3.50; $M_{\theta\theta}$6.42; $M_{\phi\phi}$-2.92; $M_{r\theta}$-0.15; $M_{\theta\phi}$-0.20; $M_{\phi r}$4.50; Fault plane solution: $M_0$7.15838×10^{14} NP1:ϕ_s125.89604°, δ60.44195°, λ-38.20660°. NP2: ϕ_s237.11648°, δ57.45205°, λ-144.18156°. Principal axes: T 6.4288, Plg1.8113°, Azm182.1225°; N 1.2851, Plg43.1194°, Azm273.8194°; P -7.7139, Plg46.8233°, Azm90.1911°; confirmed*

ISC 15 15:28:04.5±0.9**, 8°.60N**±0°.02×**82°.97W**±0°.02**, h33^{km}**±2^{km}**, n87, σ1^s.11**/110**, 18C-8D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NELY	Ciudad Neily	0.05	24	⇓eP	Pb	15 28 10.5	+0.4
NELY				eS	Sb	15 28 15.9	+2.0
CDITO	Canoas	0.10	107	P	Pb	15 28 10.5	+0.2
CDITO	Canoas	0.10	107	S	Sb	15 28 15.8	+1.5
LPPC	Paso Canoas	0.14	118	⇑eP	Pb	15 28 10.7	+0.1
LPPC				eS	Sb	15 28 16.1	+1.3
FITO	Golfito	0.19	277	⇓eP	Pn	15 28 10.3	+0.3
FITO				eS	Sb	15 28 15.6	+0.2
EDAD	Golfito	0.20	284	⇓eP	Pn	15 28 10.6	+0.1
VITO	San Vito	0.22	359	eP	Pb	15 28 11.9	+0.5
RSRNO	Rio Sereno	0.24	26	eP	Pb	15 28 12.2	+0.5
LESP3	La Esperanza,	0.26	138	eP	Pn	15 28 11.5	-0.3
LESP3				eS	Sn	15 28 15.0	-0.8
SCLRA	Santa Clara, W	0.29	39	⇑eP	Pb	15 28 12.6	+0.2
BRU2	Volcan	0.33	55	eP	Pb	15 28 12.9	0.0
BRU2				AMP		15 28 13.1	
	comp=Z,14μm,0.2s						
BRU2				eS	Sb	15 28 20.3	+1.7
BRU2	Volcan	0.33	55	P	Pb	15 28 12.9	0.0
BRU2	Volcan	0.33	55	⇑eP	Pb	15 28 12.9	0.0
ARIEL	Armuelles	0.33	160	⇑eP	Pn	15 28 16.3	+3.3
PTJ1	Puerto Jimnez	0.34	259	S	Sb	15 28 19.5	+1.2
PTJ1	Puerto Jimnez	0.34	259	P	Pb	15 28 12.3	-0.5
PTJ1	Puerto Jimnez	0.34	259	⇓eP	Pb	15 28 12.3	-0.5
TBS2		0.36	58	⇑eP	Pn	15 28 14.0	+0.4
ALCO	Alturas Coton,	0.37	21	⇑eP	Pb	15 28 13.1	-0.3
CLLRA	Cordillera,	0.38	68	eP	Pb	15 28 13.5	0.0
PTPM	Petroterminale	0.41	167	eP	Pb	15 28 13.3	-0.3
PTPM				eS	Sb	15 28 19.8	-0.2
PTPA	Petro Terminal	0.41	166	⇑eP	Pb	15 28 13.4	-0.4
PIRO	Carate, Puerto	0.41	242	eP	Pb	15 28 12.9	-1.0
PIRO				eS	Sb	15 28 17.0	-3.2
PIRO	Carate, Puerto	0.41	242	P	Pb	15 28 12.8	-1.0
PIRO	Carate, Puerto	0.41	242	S	Sb	15 28 20.5	+0.3
PIRO	Carate, Puerto	0.41	242	⇓eP	Pb	15 28 12.8	-1.0
JEFFS	S de V. Baru	0.43	81	⇑eP	Pb	15 28 14.2	0.0
EDP2	Potrero Grande	0.46	333	eP	Pb	15 28 14.2	-0.3
PTAR3	Potrerillos Ar	0.47	79	eP	Pb	15 28 14.5	-0.3
PTAR3				eS	Sn	15 28 22.7	+0.4
LMNES	Limones	0.51	168	⇑eP	Pb	15 28 14.8	-0.5
BQTLY	Boquete Panama	0.52	73	⇑eP	Pb	15 28 15.2	-0.4
DVD	David	0.54	108	eP	Pb	15 28 15.0	-0.7
DVD				AMP		15 28 16.1	
	comp=Z,9μm,0.1s						
DVD				eS	Sn	15 28 24.0	+0.3
FIMO	Fila Mora	0.54	315	⇓eP	Pb	15 28 15.2	-0.7
BQSF3	Alto Boquete,	0.55	75	eP	Pb	15 28 15.5	-0.4
BQSF3				AMP		15 28 15.9	
	comp=Z,8μm,0.1s						
BQSF3				eS	Sn	15 28 24.7	+0.6
LNBQ3	Los Naranjos,	0.55	70	eP	Pb	15 28 15.3	-0.8
LNBQ3				eS	Sn	15 28 24.6	+0.3
LOMA3	Las Lomas, Chi	0.59	107	eP	Pn	15 28 16.0	-0.6
LOMA3				eS	Sb	15 28 24.8	-0.2
PANP	Palmar Norte	0.60	306	⇓eP	Pn	15 28 15.6	-1.1
PSOM3	Paja de Sombre	0.64	83	eP	Pn	15 28 16.8	-0.5
PSOM3				eS	Sn	15 28 26.9	+0.5
BURE	Buenos Aires	0.68	327	eP	Pn	15 28 16.6	-1.1
DRK0	Durika	0.71	337	eP	Pn	15 28 17.1	-1.2
DRK0				eS	Sn	15 28 27.8	-0.5
DRK0	Durika	0.71	337	P	Pn	15 28 17.0	-1.4
DRK0	Durika	0.71	337	S	Sn	15 28 26.4	-1.9
DRK0	Durika	0.71	337	⇑eP	Pn	15 28 17.0	-1.4
EDPE	Pejibaye, P	0.81	313	eP	Pn	15 28 18.6	-1.1
PBNVO	Pueblo Nuevo,	0.82	69	eP	Pn	15 28 18.6	-1.1
OCHAL	Ojochal	0.83	306	P	Pn	15 28 18.7	-1.2
OCHAL	Ojochal	0.83	306	S	Sn	15 28 29.9	-1.1
RBALA	Bur	0.85	71	⇑eP	Pn	15 28 19.3	-0.9
CHGR2	Aguacate	0.88	68	eP	Pn	15 28 20.0	-0.5
CHGR2				eS	Sn	15 28 32.8	+0.6
CNI2	El Empalme, Bo	0.95	31	eP	Pn	15 28 21.3	-0.2
CNI2				eS	Sn	15 28 34.4	+0.4
CEUA	Cerro Uatsi, L	1.01	2	⇑eP	Pb	15 28 23.6	0.0
BRIBI	Bribri	1.02	8	⇑eP	Pn	15 28 23.4	+0.9
KKNTU	Kakintº	1.17	78	⇓eP	Pn	15 28 24.0	-0.5
BUS1	Rivas	1.22	321	⇑eP	Pn	15 28 24.6	-1.0
PIEC	Cerro El Cedra	1.41	316	eP	Pn	15 28 27.2	-0.9
QUEP	Quepos	1.44	305	P	Pn	15 28 28.7	+0.5
QUEP	Quepos	1.44	305	S	Sn	15 28 47.1	+1.1
TURIB	Turrialba	1.48	331	eP	Pn	15 28 28.6	-0.3
VERB	Verbena	1.52	332	eP	Pn	15 28 29.4	0.0
LCR2	La Lucha 2	1.53	318	P	Pn	15 28 29.0	-0.7
LCR2	La Lucha 2	1.53	318	S	Sn	15 28 49.4	+0.9
VTCV	VTCV, Calle Va	1.56	331	⇑eP	Pn	15 28 30.1	0.0
ABRB	Las Abras (San	1.58	332	eP	Pn	15 28 30.6	+0.2
CVTV	Tajo	1.59	331	eP	Pn	15 28 30.7	0.0
CVTQ	Turrialba Volc	1.60	331	⇑eP	Pn	15 28 30.9	+0.1
VTR0	Volcan Turrial	1.61	331	eP	Pn	15 28 30.9	0.0
CVTR	Volcan Turrial	1.61	331	⇑eP	Pn	15 28 30.9	0.0
RVLA	Villa Bonita	1.62	338	eP	Pn	15 28 31.1	+0.4
VICA	Volcano Irazu	1.62	328	eP	Pn	15 28 30.8	-0.4
EGUB	Earth Gu¡pi	1.71	339	eP	Pn	15 28 32.4	+0.3
CARI	Cariari	1.91	337	eP	Pn	15 28 35.2	+0.5
SOCE	Pocosol	2.41	318	S	Sb	15 29 14.5	-1.9
SOCE	Pocosol	2.41	318	P	Pn	15 28 42.4	+0.9
COVE	Coope Vega, Sa	2.54	326	P	Pn	15 28 44.7	+1.4
COVE	Coope Vega, Sa	2.54	326	S	Sn	15 29 13.7	+0.6
JTS	Las Juntas de	2.58	311	eP	Pn	15 28 44.9	+0.9
JTS				eS	Sn	15 29 14.5	+0.3
JTS	Las Juntas de	2.58	311	P	Pn	15 28 44.5	+0.5
JTS				S	Sn	15 29 14.6	+0.3
JTS	Las Juntas de	2.58	311	P	Pn	15 28 44.7	+0.7
JTS				S	Sn	15 29 17.8	+3.6
CMARA	Lajas Hojancha	2.80	300	S	Sn	15 29 20.3	+0.5
UPAL	Upala	3.04	319	P	Pn	15 28 52.7	+2.4
UPAL	Upala	3.04	319	S	Sn	15 29 29.7	+4.0
BCIP	Isla Barro Col	3.14	79	P	Pn	15 28 52.3	+0.6
BCIP	Isla Barro Col	3.14	79	P	Pn	15 28 51.8	+0.1
BCIP				S	Sb	15 29 38.4	+0.8
SAIC	Isla e San And	4.10	17	P	Pn	15 29 04.4	-0.5
SAIC				S	Sn	15 29 49.9	-1.8
BOAB	BOACO BROADBAN	4.65	325	P	Pn	15 29 12.8	+0.3
PRVC	Isla de Provid	5.00	18	P	Pn	15 29 16.6	-0.6
PRVC				S	Sn	15 30 12.6	-1.3
PTAC	Punta Ardita,	5.31	105	P	Pn	15 29 20.1	-1.4
PTAC				S	Sn	15 30 18.3	-3.3

IDC 15 15:28:17.2±1.4**, 6°.45N**×**125°.34E, h0^{km}, mb3.3**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=44.2km s-min=9.9km az=105.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.66	21	Pg	Pg	15 28 29.6	-0.4
	411nm,0.3s,baz=259,slow=7.4,SNR=22						
DAV				Lg	Lg	15 28 39.5	
	345nm,0.3s,baz=92,slow=22,SNR=16						
WRA	Warramunga Arr	27.68	162	P	P	15 34 07.8	+0.6
	0.2nm,0.6s,baz=340,slow=9.6,SNR=1.8						
	0.2nm,0.6s						
ASAR	Alice Springs	31.08	165	P	P	15 34 37.0	-0.4
	0.2nm,0.5s,baz=344,slow=8.2,SNR=8.0						
	0.2nm,0.5s						
MKAR	Makanchi Array	54.55	325	P	P	15 37 47.4	+0.2
	0.7nm,1.1s,baz=111,slow=7.9,SNR=2.4						
	0.7nm,1.1s						

IDC 15 15:28:43.0±3.6**, 2°.13N**×**128°.16E, h0^{km}, mb3.2**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=310.6km s-min=26.3km az=68.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.75	165	P	P	15 33 47.4	+0.4
	0.4nm,0.4s,baz=343,slow=9.6,SNR=9.2						
	0.4nm,0.4s						
ASAR	Alice Springs	26.24	168	P	P	15 34 19.3	-0.7
	0.2nm,0.5s,baz=345,slow=8.1,SNR=6.5						
	0.2nm,0.5s						
MKAR	Makanchi Array	59.68	325	P	P	15 38 49.6	+0.3
	0.4nm,0.8s,baz=125,slow=7.1,SNR=5.2						
	0.4nm,0.8s						

*IDC **15** 15:34:37.8±0.9, 6°.46N×125°.30E, h0^{km}, mb3.7/6, mbtmp3.8/7, ML4.3/1, MS4.0/2, Error ellipse: s-maj=28.5km s-min=8.5km az=106.0*

*NEIC **15** 15:34:39.7±0.5, 6°.53N±0°.05×125°.33E±0°.09, h6^{km}±4^{km}, mb4.6/24, Error ellipse: s-maj=13.5km s-min=6.7km az=111.0*

*DJA **15** 15:34:40.9±0.6, 7°N±18°×12°5E±°, h27^{km}±26^{km}, M4.7/7, mB5.2/4, mb4.7/7, MLv4.7/7, Mw(mB)4.5/4*

ISC 15 15:34:39.7±0.5**, 6°.51N**±0°.04×**125°.35E**±0°.09**, h10^{km}, n44, σ0^s.87**/45**, mb4.4**/17**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.60	22	Pg	Pb	15 34 51.8	-0.6
	436nm,0.3s,baz=246,slow=7.1,SNR=17						
DAV				Lg	Lg	15 34 59.0	
	2μm,0.3s,baz=148,slow=23,SNR=16						
DAV				LR	LR	15 35 04.2	
	comp=Z,156nm,19.4s,baz=22,slow=40						
DAV	Davao City (W)	0.60	22		Pg	15 34 51.0	-0.4
DAV	Davao City (W)	0.60	22	P	Pb	15 34 51.9	-0.5
DAV				S	Sg	15 34 59.8	+0.4
SGSI	Sangihe	2.81	176	P	Pb	15 35 28.1	-1.9
SGSI				S	Sb	15 36 03.9	-0.5
TNTI	Ternate	6.04	160	Pn	Pn	15 36 09.6	+0.4
GTOI	Gorontalo	6.28	202	P	Pn	15 36 13.9	+1.4
GTOI				S	Sn	15 37 26.5	+2.1
MRSI	Marisa	6.89	210	P	Pn	15 36 23.0	+2.2
	0.4nm1μm85nm,0.6s						
TOLI2	Tolitoli	7.04	221	Pn	Pn	15 36 21.7	-1.2
LUWI	Luwuk	7.93	199	P	Pn	15 36 37.4	+2.3
	739nm66nm,1.1s						
SANI	Sanana	8.52	176	P	Pn	15 36 44.8	+1.5
	19nm,0.7s						
BATI	Baumata	16.69	186	Pn	Pn	15 38 34.0	+0.1
	1.2nm,0.3s,baz=168,slow=0.5,SNR=4.3						
	4.2nm,0.4s						
MTN	Manton Dam	20.06	163	P	P	15 39 13.5	+0.2
KNRA	Kununurra	22.30	171	P	P	15 39 37.5	+0.1
KNRA				IAmb	IAmb	15 39 39.8	
	comp=Z,13nm,0.7s						
COEN	Coen	26.95	139	P	P	15 40 21.7	0.0
COEN				IAmb	IAmb	15 40 47.6	
	comp=Z,9.4nm,1.1s						
WB0	Warramunga Arr	27.58	161	P	P	15 40 26.6	-0.7
WRAB	Tennant Creek	27.72	162	P	P	15 40 28.5	-0.1
WRAB				IAmb	IAmb	15 41 04.1	
	comp=Z,9.5nm,1.5s						
WRA	Warramunga Arr	27.73	162	P	P	15 40 27.7	-0.9
	comp=Z,0.9nm,0.6s,baz=344,slow=8.9,SNR=13						
	comp=Z,0.9nm,0.6s						
WR8	Warramunga Arr	27.79	161	P	P	15 40 28.9	-0.3
WR8				IAmb	IAmb	15 40 55.9	
	comp=Z,7.6nm,1.4s						
GSI	Gunungsitoli	28.18	261	P	P	15 40 32.1	-0.6
RABL	Rabaul	28.80	111	P	P	15 40 38.4	+0.2
INU	Inuyama	30.65	19	P	P	15 40 55.0	+0.6
INU				IAmb	IAmb	15 41 04.2	
	comp=Z,24nm,1.4s						
GIRL	Giralia	30.95	200	P	P	15 40 57.5	+0.4
AS31	Alice Springs	31.13	165	P	P	15 40 58.3	-0.5
ASAR	Alice Springs	31.13	165	P	P	15 40 58.2	-0.6
	comp=Z,1.1nm,0.5s,baz=347,slow=7.6,SNR=49						
	comp=Z,1.1nm,0.5s						
ASAR	Alice Springs	31.13	165	P	P	15 40 58.5	-0.3
INKA	Innaminka	37.15	157	P	P	15 41 51.0	+0.1
FORT	Forrest	37.16	176	P	P	15 41 51.1	+0.1
BBOO	Buckleboo	40.40	166	P	P	15 42 18.2	+0.1
STKA	Stephens Creek	41.19	159	P	P	15 42 24.0	-0.7
	comp=Z,2.4nm,0.7s,baz=335,slow=7.8,SNR=7.2						
	comp=Z,2.4nm,0.7s						
STKA	Stephens Creek	41.19	159	P	P	15 42 24.5	-0.2
STKA				IAmb	IAmb	15 42 53.5	
	comp=Z,25nm,1.3s						
MKAR	Makanchi Array	54.51	325	P	P	15 44 07.0	-0.9
	comp=Z,0.2nm,0.5s,baz=122,slow=7.8,SNR=4.3						
	comp=Z,0.2nm,0.5s						
TARG	Taragay, Kyrgy	54.78	317	P	P	15 44 10.2	-0.1
TARG				IAmb	IAmb	15 44 25.8	
	comp=Z,26nm,1.5s						
KURBB	Kurchatov Arra	58.68	327	P	P	15 44 37.0	-0.4
	comp=Z,0.3nm,0.7s,baz=119,slow=7.7,SNR=4.7						
	comp=Z,0.3nm,0.7s						
KURK	Kurchatov	58.68	327	P	P	15 44 36.3	-1.0
KURK				IAmb	IAmb	15 44 43.8	
	comp=Z,3.8nm,1.2s						
SHEM	Shemya Is, Ala	60.80	32	LR	LR	16 07 57.9	
	comp=Z,76nm,21.0s,baz=135,slow=33						
BKZ	Black Stump Fm	65.55	138	P	P	15 45 23.6	-0.1
RTZ	Ruatahuna	65.59	138	P	P	15 45 24.0	-0.1
D19K	Kuna River	79.05	21	P	P	15 46 44.3	+0.4
D19K				IAmb	IAmb	15 47 01.4	
	comp=Z,7.4nm,1.4s						
B22K	Teshekpuk Lake	80.95	20	P	P	15 46 54.4	+0.3
B22K				IAmb	IAmb	15 46 56.3	
	comp=Z,4.8nm,1.4s						
SLKM	Skilak Lake	81.63	30	P	P	15 46 58.7	+0.8
ILAR	Eielson Array	83.20	26	P	P	15 47 05.4	-0.6
	comp=Z,0.5nm,1.0s,baz=258,slow=4.6,SNR=4.8						
	comp=Z,0.5nm,1.0s						
H29M	Whitestone	86.63	24	P	P	15 47 23.4	+0.2
H29M				IAmb	IAmb	15 47 34.4	
	comp=Z,5.1nm,1.4s						
N30M	Aishikik Lake	87.94	28	P	P	15 47 30.1	+0.3
N30M				IAmb	IAmb	15 47 38.7	
	comp=Z,5.5nm,1.2s						
VRAC	Vranov	97.13	321	LR	LR	16 34 59.4	
	comp=Z,99nm,19.7s,baz=330,slow=37						

*IDC **15** 15:41:37.6±0.5, 55°.23S×129°.22W, h0^{km}, mb4.1/12, mbtmp4.1/12, MS4.1/23, Error ellipse: s-maj=22.0km s-min=15.9km az=169.0*

*NEIC **15** 15:41:39.9±1.6, 55°.6S±0°.1×129°.1W±0°.2, h10^{km}±1^{km}, mb5.0/45, Error ellipse: s-maj=23.0km s-min=18.2km az=160.0*

*GCMT **15** 15:41:40.9±0.2, 55°.26S±0°.02×129°.06W±0°.02, h19^{km}±1^{km}, MW5.0/92, Moment Tensor Solution. s33,c35; s92,c134; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.12±.18; $M_{\theta\theta}$2.44±.18; $M_{\phi\phi}$-2.56±.16; $M_{r\theta}$-0.50±.33; $M_{\theta\phi}$3.21±.12; $M_{\phi r}$0.63±.30; Best double couple: $M_0$4.14300×10^{16} NP1:ϕ_s199.00000°, δ81.00000°, λ-175.00000°. NP2: ϕ_s109.00000°, δ85.00000°, λ-9.00000°. Principal axes: T 4.0170, Plg3.0000°, Azm154.0000°; N 0.2480, Plg80.0000°, Azm258.0000°; P -4.2690, Plg10.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 15:41:39.8±0.4**, 55°.30S**±0°.08×**129°.29W**±0°.08**, h10^{km}, n145, σ2^s.66**/103**, mb4.9**/31**, MS4.2**/23**, 6C-1D, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTCN	Pitcairn Islan	30.20	359	P	P	15 47 53.9	+3.7
RPN	Rapa Nui	31.66	35	LR	LR	15 57 32.9	
	comp=Z,227nm,20.6s,baz=49,slow=30						
VNDA	Vanda	32.27	202	P	P	15 48 09.2	+1.3
	0.8nm,0.8s,baz=93,slow=8.7,SNR=1.6						
VNDA				LR	LR	15 57 08.8	
	comp=Z,178nm,21.1s,baz=84,slow=29						
	0.8nm,0.8s						
VNDA	Vanda	32.27	202	P	P	15 48 06.6	-1.3
RKT	Rikitea	32.41	350	eLR	LR	15 56 34.0	
	2μm,23.2s						
PMSA	Palmer Station	32.46	134	LR	LR	15 57 28.5	
	comp=Z,632nm,21.2s,baz=265,slow=29						
QSPA	South Pole Qui	34.88	180	P	P	15 48 31.5	+0.5
	3.9nm,0.8s,baz=98,slow=3.3,SNR=19						
QSPA				LR	LR	16 01 32.1	
	comp=Z,811nm,18.4s,baz=88,slow=34						
	3.9nm,0.8s						
QSPA	South Pole Qui	34.88	180		P	15 48 30.0	-1.0
QSPA				IAmb	IAmb	15 48 41.7	
	comp=Z,31nm,1.2s						
TBI	Tubuai	35.24	327	eS	S	15 54 07.5	-0.2
	comp=Z,859nm,34.2s						
TBI				eLR	LR	15 57 45.8	
	comp=Z,854nm,22.8s						
TBI				eLR	LR	15 57 56.8	
	comp=Z,3μm,23.5s						
TUWZ	Tuamarina	39.06	266	P	P	15 49 07.3	+0.8
URZ	Urewera	39.37	273	LR	LR	16 01 59.1	
	comp=Z,420nm,19.5s,baz=131,slow=31						
DSZ	Denniston Nort	40.08	264	P	P	15 49 15.8	+0.7
PLCA	Paso Flores	40.65	94	P	P	15 49 19.6	-0.3
	comp=Z,4.3nm,1.2s,baz=257,slow=9.3,SNR=3.0						
PLCA				LR	LR	16 02 02.5	
	comp=Z,248nm,19.3s,baz=225,slow=30						
	comp=Z,4.3nm,1.2s						
PLCA	Paso Flores	40.65	94		P	15 49 18.3	-1.6
H03S2	Juan Fernandez	40.69	80	T	T	16 32 18.7	
	baz=221,slow=74						
H03S1	Juan Fernandez	40.69	80	T	T	16 32 19.5	
	baz=221,slow=74						
H03S3	Juan Fernandez	40.70	80	T	T	16 32 18.6	
	baz=221						
PPT2	Papeete2	40.70	330	eS	S	15 55 29.6	-1.1
	comp=Z,101nm,28.0s						
PPT2				eLR	LR	16 00 27.9	
	comp=Z,1μm,25.8s						
PPT2				eLR	LR	16 00 36.2	
	comp=Z,657nm,22.2s						
PPT	Papeete	40.72	330	LR	LR	16 02 12.3	
	comp=Z,423nm,19.3s,baz=162,slow=30						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
H03N3	**Juan Fernandez**	**40.97**	**79**	T	T	16 32 39.4	
	baz=224,slow=72,SNR=289						
H03N2	**Juan Fernandez**	**40.98**	**79**	T	T	16 32 43.8	
	baz=224,slow=72,SNR=513						
RAR	**Rarotonga**	**40.98**	**314**	LR	LR	16 03 51.8	
	comp=Z,200nm,18.1s,baz=116,slow=33						
H03N1	**Juan Fernandez**	**40.98**	**79**	T	T	16 32 38.7	
	baz=224,slow=72,SNR=290						
BO02	**Sierra Bellavi**	**44.62**	**88**	P	**P**	**15 49 52.5**	**+0.3**
BO02				IAmb	IAmb	15 49 59.6	
	comp=Z,44nm,1.5s						
BO01	**Tunca**	**44.73**	**87**	P	**P**	**15 49 51.5**	**-1.5**
BO01				IAmb	IAmb	15 49 54.3	
	comp=Z,42nm,1.6s						
MT09	**Talagante**	**45.23**	**87**	P	**P**	**15 49 56.9**	**-0.3**
MT09				IAmb	IAmb	15 51 01.3	
	comp=Z,48nm,1.6s						
LMEL	**Las Melosas**	**45.63**	**87**	P	**P**	**15 50 00.8**	**+0.4**
LMEL				IAmb	IAmb	15 50 08.1	
	comp=Z,26nm,1.1s						
MT13	**San Alfonso**	**45.66**	**87**	P	**P**	**15 49 59.3**	**-1.2**
VA03	**San Esteban**	**46.22**	**86**	P	**P**	**15 50 03.0**	**-1.9**
VNA3	**Neumayer Olymp**	**46.79**	**157**	⇑P	**P**	**15 50 07.8**	**-1.0**
	comp=Z,7.7nm,0.8s						
TAOE	**Nuku Hiva Isla**	**47.11**	**345**	*e*S	**S**	**15 56 58.4**	**-5.8**
	comp=Z,102nm,23.1s						
TAOE				*e*LR	LR	16 03 35.1	
	comp=Z,905nm,25.1s						
TRQA	**Tornquist**	**47.34**	**98**		**P**	**15 50 11.8**	**-1.7**
VNA2	**Neumayer--Watz**	**47.52**	**158**	⇑P	**P**	**15 50 13.8**	**-0.7**
	comp=Z,12nm,0.6s,baz=216,slow=8.5						
VNA1	**Neumayer--Stat**	**47.54**	**157**	⇑P	**P**	**15 50 14.1**	**-0.5**
	comp=Z,22nm,1.0s						
SNAA	**Sanae**	**47.88**	**160**	⇑P	**P**	**15 50 16.5**	**-0.9**
	comp=Z,83nm,0.8s						
SNAA	**Sanae**	**47.88**	**160**	P	**P**	**15 50 16.6**	**-0.8**
	comp=Z,4.9nm,1.1s,baz=219,slow=11,SNR=12						
	comp=Z,4.9nm,1.1s						
SNAA	**Sanae**	**47.88**	**160**		**P**	**15 50 15.7**	**-1.7**
SNAA				IAmb	IAmb	15 50 39.5	
	comp=Z,20nm,1.4s						
TROLL	**Troll, Antarti**	**48.61**	**162**	⇑P	**P**	**15 50 21.9**	**-1.2**
	comp=Z,463nm,1.3s						
AC05	**El Transito**	**49.32**	**83**		**P**	**15 50 28.2**	**-0.8**
AC02	**Maricunga**	**51.50**	**82**		**P**	**15 50 44.2**	**-1.8**
ELIB	**Princess Elisa**	**51.61**	**169**	*d*P	**P**	**15 50 45.5**	**-0.3**
	comp=Z,5.2nm,1.1s						
PB05	**IPOC Station P**	**54.00**	**78**	P	**P**	**15 51 03.2**	**-0.8**
PB05				IAmb	IAmb	15 51 11.0	
	comp=Z,26nm,1.1s						
PB06	**IPOC Station P**	**54.47**	**78**	P	**P**	**15 51 06.6**	**-0.9**
SYO	**Syowa Base**	**55.74**	**175**	⇑*e*pP	**P**	**15 51 15.8**	**-0.1**
PB01	**IPOC Station P**	**55.84**	**77**	P	**P**	**15 51 16.1**	**-1.2**
PB01				IAmb	IAmb	15 51 24.3	
	comp=Z,13nm,1.0s						
PB11	**IPOC Station P**	**56.77**	**76**		**P**	**15 51 22.1**	**-2.0**
DZM	**Mont Dzumac**	**57.53**	**278**	*e*LR	LR	16 08 20.2	
	comp=Z,289nm,30.7s						
CPUP	**Villa Florida**	**58.62**	**92**	P	**P**	**15 51 34.2**	**-2.6**
	comp=Z,0.4nm,0.6s,baz=233,slow=4.9,SNR=5.1						
CPUP				LR	LR	16 13 26.2	
	comp=Z,87nm,18.2s,baz=239,slow=33						
	comp=Z,0.4nm,0.6s						
PB18	**Visviri**	**58.62**	**75**	P	**P**	**15 51 36.8**	**-0.8**
LPAZ	**La Paz**	**60.42**	**75**	P	**P**	**15 51 48.3**	**-1.9**
	comp=Z,3.2nm,0.8s,baz=208,slow=6.9,SNR=10						
LPAZ				LR	LR	16 11 54.1	
	comp=Z,101nm,20.9s,baz=216,slow=30						
	comp=Z,3.2nm,0.8s						
LPAZ	**La Paz**	**60.42**	**75**		**P**	**15 51 48.1**	**-2.0**
ATAH	**Atahualpa**	**62.67**	**60**	LR	LR	16 12 29.8	
	comp=Z,399nm,21.3s,baz=227,slow=30						
STKA	**Stephens Creek**	**63.98**	**251**	P	**P**	**15 52 12.0**	**-1.1**
	comp=Z,0.9nm,0.5s,baz=135,slow=13,SNR=3.2						
	comp=Z,0.9nm,0.5s						
INKA	**Innaminka**	**67.66**	**253**		**P**	**15 52 37.2**	**+0.4**
OTAV	**Otavalo**	**69.04**	**56**	P	**P**	**15 52 46.2**	**+0.1**
OTAV				IAmb	IAmb	15 52 53.5	
	comp=Z,9.8nm,1.2s						
CTAO	**Charters Tower**	**70.61**	**263**		**P**	**15 52 55.3**	**+0.1**
CTAO				IAmb	IAmb	15 52 57.1	
	comp=Z,15nm,1.2s						
BDFB	**Brasilia**	**72.34**	**92**	P	**P**	**15 53 04.4**	**-1.5**
	comp=Z,0.9nm,0.5s,baz=232,slow=5.1,SNR=4.7						
BDFB				LR	LR	16 22 25.2	
	comp=Z,219nm,18.1s,baz=181,slow=34						
	comp=Z,0.9nm,0.5s						
AS31	**Alice Springs**	**74.61**	**251**		**P**	**15 53 17.3**	**-1.8**
ASAR	**Alice Springs**	**74.61**	**251**	P	**P**	**15 53 17.7**	**-1.4**
	comp=Z,6.1nm,1.0s,baz=139,slow=5.6,SNR=39						
	comp=Z,6.1nm,1.0s						
ASAR	**Alice Springs**	**74.61**	**251**		**P**	**15 53 17.1**	**-2.0**
ROSC	**El Rosal**	**75.03**	**58**	LR	LR	16 20 26.3	
	comp=Z,156nm,19.6s,baz=253,slow=31						
H01W1	**Cape Leeuwin H**	**75.11**	**230**	T	T	17 16 47.1	
	baz=147,slow=76,SNR=29						
JTS	**Las Juntas de**	**75.11**	**45**	LR	LR	16 18 58.9	
	comp=Z,182nm,18.4s,baz=202,slow=30						
H01W2	**Cape Leeuwin H**	**75.11**	**230**	T	T	17 16 45.7	
	baz=147,slow=76,SNR=28						
H01W3	**Cape Leeuwin H**	**75.13**	**230**	T	T	17 16 48.8	
	baz=147,slow=76,SNR=23						
WR8	**Warramunga Arr**	**77.28**	**253**	P	**P**	**15 53 33.0**	**-1.4**
WRA	**Warramunga Arr**	**77.38**	**253**	P	**P**	**15 53 33.6**	**-1.3**
	comp=Z,6.2nm,1.0s,baz=144,slow=5.2,SNR=20						
	comp=Z,6.2nm,1.0s						
WRAB	**Tennant Creek**	**77.38**	**253**	P	**P**	**15 53 34.2**	**-0.7**
WB0	**Warramunga Arr**	**77.49**	**254**		**P**	**15 53 34.3**	**-1.2**
PMG	**Port Moresby**	**78.66**	**270**	P	**P**	**15 53 42.3**	**+0.3**
PMG				IAmb	IAmb	15 53 51.6	
	comp=Z,12nm,1.1s						
MAL2	**Monte Alegre,**	**79.89**	**79**	P	**P**	**15 53 47.2**	**-1.5**
MAL2				IAmb	IAmb	15 53 56.1	
	comp=Z,24nm,0.9s						
BOAV	**Boa Vista**	**80.05**	**71**		**P**	**15 53 48.7**	**-0.8**
BOAV				IAmb	IAmb	15 53 55.9	
	comp=Z,16nm,0.9s						
SDV	**Santo Domingo**	**80.33**	**59**	LR	LR	16 24 32.5	
	comp=Z,110nm,19.1s,baz=209,slow=32						
SMRC	**Santa Marta, M**	**80.59**	**55**	P	**P**	**15 53 51.1**	**-1.2**
SMRC				IAmb	IAmb	15 53 57.8	
	comp=Z,16nm,0.8s						
LPIG	**La Paz**	**80.73**	**18**	LR	LR	16 20 37.3	
	comp=Z,94nm,19.2s,baz=242,slow=29						
TEIG	**Tepich**	**82.92**	**38**	P	**P**	**15 54 05.8**	**+1.4**
MDP	**Montagnes des**	**86.61**	**76**	LR	LR	16 29 27.4	
	comp=Z,66nm,19.6s,baz=166,slow=33						
TXAR	**Lajitas Array**	**87.11**	**22**	P	**P**	**15 54 25.7**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=197,slow=7.8,SNR=4.5						
	comp=Z,0.4nm,0.8s						
SAND	**Sanderson**	**88.05**	**23**	P	**P**	**15 54 30.7**	**+0.8**
SAND				IAmb	IAmb	15 54 37.7	
	comp=Z,11nm,1.0s						
HNDO	**Hondo**	**88.32**	**26**	P	**P**	**15 54 32.9**	**+1.8**
MNTX	**Cornudas Mount**	**89.04**	**20**		**P**	**15 54 35.8**	**+1.3**
PFO	**Pinyon Flats O**	**89.23**	**11**	LR	LR	16 25 54.4	
	comp=Z,120nm,18.3s,baz=210,slow=30						
SJG	**San Juan**	**90.44**	**58**	LR	LR	16 29 54.4	
	comp=Z,72nm,19.0s,baz=214,slow=32						
H11S2	**WAKE ISLAND Hy**	**91.18**	**301**	T	T	17 35 57.3	
	baz=147,slow=75,SNR=15						
H11S3	**WAKE ISLAND Hy**	**91.20**	**301**	T	T	17 35 55.1	
	baz=147,slow=75,SNR=9.4						
H11S1	**WAKE ISLAND Hy**	**91.20**	**301**	T	T	17 35 50.7	
	baz=147,slow=75,SNR=14						
ABQ	**Albuquerque**	**91.99**	**19**	IAmb	IAmb	15 54 56.7	
	comp=Z,6.7nm,1.0s						
TASM	**ASL Pad, Albuq**	**91.99**	**19**	IAmb	IAmb	15 54 56.7	
	comp=Z,7.1nm,1.0s						
TASM	**ASL Pad, Albuq**	**91.99**	**19**	IAmb	IAmb	15 54 56.7	
	comp=Z,7.4nm,1.0s						
TASM	**ASL Pad, Albuq**	**91.99**	**19**	IAmb	IAmb	15 54 56.7	
	comp=Z,7.3nm,1.0s						
TASM	**ASL Pad, Albuq**	**91.99**	**19**	IAmb	IAmb	15 54 56.7	
	comp=Z,7.7nm,1.0s						
ANMO	**Albuquerque**	**91.99**	**19**	P	**P**	**15 54 47.6**	**-0.8**
ANMO				IAmb	IAmb	15 54 56.6	
	comp=Z,6.8nm,0.9s						
H11N3	**WAKE ISLAND Hy**	**92.13**	**302**	T	T	17 36 56.0	
	baz=149,slow=76,SNR=9.7						
H11N1	**WAKE ISLAND Hy**	**92.14**	**302**	T	T	17 36 58.0	
	baz=149,slow=76,SNR=11						
H11N2	**WAKE ISLAND Hy**	**92.15**	**302**	T	T	17 36 59.2	
	baz=149,slow=76,SNR=10						
NVAR	**Mina Array Bea**	**93.83**	**9**	LR	LR	16 29 15.0	
	comp=Z,165nm,18.1s,baz=142,slow=30						
ELK	**Elko**	**96.42**	**11**	LR	LR	16 29 25.5	
	comp=Z,89nm,20.9s,baz=192,slow=30						
YBH	**Yreka Blue Hor**	**96.82**	**5**	LR	LR	16 28 49.2	
	comp=Z,13nm,20.4s,baz=174,slow=29						
PDAR	**Pinedale Array**	**99.12**	**15**	P	**Pdif**	**15 55 20.6**	**-0.2**
	comp=Z,0.1nm,0.5s,baz=243,slow=5.2,SNR=3.7						
PDAR				LR	LR	16 32 13.5	
	comp=Z,91nm,18.2s,baz=174,slow=31						
	comp=Z,0.1nm,0.5s						
H02S2	**DAWSON INLET T**	**108.16**	**358**	T	T	17 56 48.0	
	SNR=4.9						
YKA	**Yellowknife Ar**	**118.01**	**8**	PKP	**PKPdf**	**16 00 24.6**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=206,slow=2.8,SNR=5.5						
IL31		**120.50**	**351**		**PKiKP**	**16 00 30.9**	**+1.0**
ILAR	**Eielson Array**	**120.50**	**351**	PKP	**PKPdf**	**16 00 27.9**	**-2.0**
	comp=Z,0.9nm,0.6s,baz=197,slow=2.0,SNR=9.9						
ILAR	**Eielson Array**	**120.50**	**351**		**PKiKP**	**16 00 31.1**	**+1.1**
PETK	**Petropavlovsk-**	**123.62**	**316**	PKP	**PKPdf**	**16 00 35.9**	**-0.4**
	comp=Z,5.6nm,0.8s,baz=119,slow=5.2,SNR=5.6						
CMAR	**Chiang Mai Arr**	**128.30**	**244**	PKP	**PKPdf**	**16 00 46.7**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=200,slow=2.2,SNR=5.5						
ESDC	**Sonseca Array**	**140.98**	**90**	PKP	**PKPdf**	**16 01 10.2**	**+0.7**
	comp=Z,1.5nm,0.9s,baz=244,slow=0.6,SNR=6.4						
ULN	**Ulaanbaatar**	**145.07**	**282**		**PKPbc**	**16 01 16.5**	**+0.4**
SONM	**Songino Array**	**145.42**	**281**	PKPbc	**PKPdf**	**16 01 16.7**	**-0.4**
	comp=Z,2.2nm,0.7s,baz=119,slow=4.4,SNR=9.7						
KEST	**Kesra**	**145.71**	**107**	PKPbc	**PKPdf**	**16 01 17.9**	**0.0**
	comp=Z,8.6nm,1.0s,baz=214,slow=3.6,SNR=7.5						
EKA	**Eskdalemuir Ar**	**149.99**	**67**	PKPbc	**PKPdf**	**16 01 27.3**	**+3.1**
	comp=Z,7.6nm,0.8s,baz=236,slow=5.9,SNR=3.9						
DAVA	**Damuels**	**153.57**	**90**		**PKPbc**	**16 01 34.8**	**-3.0**
DAVA	**Damuels**	**153.57**	**90**	*e*pPKP	**PKPbc**	**16 01 34.8**	**-3.0**
	comp=Z,5.2nm,0.9s						
FETA	**Feichten**	**153.91**	**92**	*i* pPKiKP	**PKiKP**	**16 01 45.7**	**+7.0**
	comp=Z,7.7nm,1.0s						
RETA	**Reutte**	**154.18**	**91**		**PKPbc**	**16 01 38.2**	**-0.9**
RETA	**Reutte**	**154.18**	**91**	*e*PKP	**PKPbc**	**16 01 38.2**	**-0.9**
	comp=Z,12nm,1.8s						
SQTA	**Sankt Quirin**	**154.29**	**92**		**PKPab**	**16 01 58.9**	**+5.4**
SQTA	**Sankt Quirin**	**154.29**	**92**	*e*pPKP	**PKPab**	**16 01 58.9**	**+5.4**
	comp=Z,11nm,1.0s						
WTTA	**Wattenberg**	**154.56**	**92**		**PKPab**	**16 01 55.6**	**+0.9**
WTTA	**Wattenberg**	**154.56**	**92**	*e*PKP	**PKPab**	**16 01 55.6**	**+0.9**
	comp=Z,8.0nm,1.1s						
WATA	**Walderalm**	**154.57**	**92**		pPKPab	16 01 57.8	+1.1
WATA	**Walderalm**	**154.57**	**92**	*e*pPKP	pPKPab	16 01 57.8	+1.1
	comp=Z,7.2nm,1.5s						
ABTA	**Abfaltersbach**	**154.78**	**94**		**PKPab**	**16 02 01.6**	**+6.1**
ABTA	**Abfaltersbach**	**154.78**	**94**	*e*pPKP	**PKPab**	**16 02 01.6**	**+6.1**
	comp=Z,5.9nm,0.8s						
LESA	**Schwarzleotal**	**155.25**	**93**		**PKPab**	**16 02 01.7**	**+4.2**
LESA	**Schwarzleotal**	**155.25**	**93**	*i* pPKP	**PKPab**	**16 02 01.7**	**+4.2**
	comp=Z,7.6nm,1.8s						
MYKA	**Terra Mystica**	**155.36**	**95**		**PKPab**	**16 02 03.6**	**+5.6**
MYKA	**Terra Mystica**	**155.36**	**95**	*i* pPKP	**PKPab**	**16 02 03.6**	**+5.6**
	comp=Z,12nm,1.9s						
BIOA	**Bad Ischl, Aus**	**155.94**	**93**		**PKPab**	**16 02 06.3**	**+5.9**
BIOA	**Bad Ischl, Aus**	**155.94**	**93**	*e*pPKP	**PKPab**	**16 02 06.3**	**+5.9**
	comp=Z,4.8nm,1.1s						
MOA	**Molln**	**156.38**	**93**		**PKPab**	**16 02 09.5**	**+7.2**
MOA	**Molln**	**156.38**	**93**	*i* pPKP	**PKPab**	**16 02 09.5**	**+7.2**
	comp=Z,8.9nm,1.3s						
GERES	**GERESS Array B**	**156.57**	**90**	PKP	**PKPdf**	**16 01 33.6**	**-0.5**
	comp=Z,2.3nm,0.8s,baz=250,slow=2.8,SNR=7.3						
ARSA	**Arzberg**	**156.77**	**96**		pPKPab	16 02 06.5	+0.4
ARSA	**Arzberg**	**156.77**	**96**	*e*pPKP	pPKPab	16 02 06.5	+0.4
	comp=Z,1.1nm,0.7s						
CONA	**Conrad Observa**	**157.33**	**94**	*e*PKP	**PKPab**	**16 02 07.4**	**+0.9**
	comp=Z,4.1nm,1.3s						
RONA	**Rosalia, Austr**	**157.46**	**95**		**PKPab**	**16 02 13.2**	**+6.2**
RONA	**Rosalia, Austr**	**157.46**	**95**	*i* pPKP	**PKPab**	**16 02 13.2**	**+6.2**
	comp=Z,5.6nm,1.0s						
NRIK	**Noril'sk**	**158.33**	**325**	PKPab	**PKPab**	**16 02 10.1**	**0.0**
	comp=Z,2.2nm,0.7s,baz=56,slow=10.0,SNR=4.5						
MKAR	**Makanchi Array**	**158.56**	**260**	PKPab	**PKPab**	**16 02 11.6**	**-0.1**
	comp=Z,2.1nm,1.0s,baz=121,slow=5.6,SNR=8.8						
MKAR	**Makanchi Array**	**158.56**	**260**		**PKPab**	**16 02 11.2**	**-0.5**
ZALV	**Zalesovo Beam**	**160.31**	**280**	PKPab	**PKPab**	**16 02 18.9**	**-0.2**
	comp=Z,1.9nm,0.9s,baz=123,slow=5.5,SNR=6.1						
BRTR	**Keskin Array B**	**160.71**	**137**	PKP	**PKPdf**	**16 01 39.5**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=189,slow=7.2,SNR=2.2						
BRTR				PKPab	**PKPab**	**16 02 21.4**	**0.0**
	comp=Z,1.3nm,0.7s,baz=188,slow=7.3,SNR=5.5						
AKASG	**Malin Array Be**	**166.29**	**101**	PKPab	**PKPab**	**16 02 44.2**	**-1.3**
	comp=Z,0.5nm,0.6s,baz=254,slow=5.4,SNR=2.2						
BVAR	**Borovoye Array**	**168.25**	**267**	PKPab	**PKPab**	**16 02 53.5**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=130,slow=5.8,SNR=5.7						

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*IDC **15** 15:45:01.7±1.3, 30°.16N×142°.16E, h0^{km}, mb3.6/8, mbtmp3.6/9, ML3.1/1, Error ellipse: s-maj=39.1km s-min=27.9km az=63.0*

*JMA **15** 15:45:09.3±0.3, 31°N±1°×14°2E±°, h93^{km}, MV3.4/26, NEAR TORISHIMA IS*

ISC 15 15:45:11.9±1.3, **31°.1N**±0°.1×**142°.4E**±0°.1, **h37^{km}, n19, σ1^{s}.21**/20, **mb3.6**/8, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.01**	**313**	*e*S	**Sn**	**15 46 31.4**	**-0.4**
BSO1	**Boso 1**	**3.78**	**342**	*e*P	**Pn**	**15 46 09.1**	**+2.0**
JCJ	**Chichijima**	**3.96**	**183**	Pn	Pn	15 45 42.4	-28
	3.6nm,0.3s,baz=100,slow=23,SNR=1.8						
JCJ				Sn	Sn	15 46 32.6	-23
	9.6nm,0.3s,baz=111,slow=24,SNR=2.4						
BSO4	**Boso 4**	**4.29**	**336**	*e*P	**Pn**	**15 46 16.5**	**+2.0**
JOD2	**Odawara 2**	**5.04**	**327**	*e*P	**Pn**	**15 46 26.0**	**+1.1**
JHO	**Hitachi**	**5.74**	**345**	*e*P	**Pn**	**15 46 34.8**	**+0.3**
JHO				*e*S	**Sn**	**15 47 38.4**	**-0.7**
JRY	**Ryogami san**	**5.75**	**330**	*e*P	**Pn**	**15 46 35.6**	**+1.0**
JAG	**Ashikaga**	**5.89**	**336**	*e*P	**Pn**	**15 46 37.3**	**+0.7**
JFK	**Kawauchi**	**6.42**	**349**	*e*P	**Pn**	**15 46 44.3**	**+0.5**
JFK				*e*S	**Sn**	**15 47 53.9**	**-1.9**
MJAR	**Matsushiro Arr**	**6.49**	**328**	Pn	**Pn**	**15 46 45.5**	**+0.6**
	0.3nm,0.3s,baz=160,slow=11,SNR=32						
MJAR				Sn	**Sn**	**15 47 58.1**	**+0.4**
	baz=184,slow=5.3,SNR=1.5						
	4.8nm,0.7s						
KSRS	**Korea Array**	**13.58**	**302**	Pn	**Pn**	**15 48 23.1**	**+1.2**
	0.1nm,0.3s,baz=198,slow=33,SNR=2.0						
HILR	**Hailar Array B**	**25.14**	**324**	P	**P**	**15 50 34.0**	**+0.6**
	0.8nm,0.4s,baz=138,slow=8.9,SNR=2.1						
	0.8nm,0.4s						
SONM	**Songino Array**	**32.12**	**312**	P	**P**	**15 51 35.1**	**-0.6**
	0.4nm,0.4s,baz=95,slow=1.6,SNR=1.7						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**48.19**	**307**	P	**P**	**15 53 47.4**	**-1.3**
	0.3nm,0.6s,baz=94,slow=9.2,SNR=3.6						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**50.48**	**312**	P	**P**	**15 54 04.6**	**-1.4**
	0.5nm,0.7s,baz=78,slow=7.7,SNR=5.0						
	0.5nm,0.7s						
ILAR	**Eielson Array**	**54.16**	**30**	P	**P**	**15 54 34.7**	**+1.6**
	0.7nm,1.0s,baz=264,slow=7.1,SNR=2.7						
	0.7nm,1.0s						
ASAR	**Alice Springs**	**55.03**	**190**	P	P	15 54 27.8	-12
	0.3nm,1.0s,baz=354,slow=5.4,SNR=1.0						
	0.3nm,1.0s						
FINES	**FINESS Array B**	**74.50**	**333**	P	**P**	**15 56 45.3**	**-0.9**
	1.8nm,1.0s,baz=89,slow=8.6,SNR=1.3						
	1.8nm,1.0s						
TXAR	**Lajitas Array**	**93.06**	**53**	P	**P**	**15 58 21.9**	**-0.3**
	0.3nm,0.9s,baz=322,slow=3.6,SNR=2.3						
	0.3nm,0.9s						

IDC 15 15:49:07.0±2.9, **28°.38S×175°.97W, h0^{km}, mb3.4**/3, **mbtmp3.5**/4, **ML3.0**/1, **Error ellipse: s-maj=81.7km s-min=42.1km az=130.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**11.42**	**209**	Pn	Pn	15 51 51.2	-0.2
	0.1nm,0.3s,baz=12,slow=17,SNR=0.9						
URZ				Sn	Sn	15 53 56.7	-3.1
	0.4nm,0.3s,baz=224,slow=16,SNR=1.4						
	2.8nm,0.7s						
ASAR	**Alice Springs**	**45.03**	**264**	P	P	15 57 26.1	+1.3
	0.2nm,0.6s,baz=100,slow=7.4,SNR=6.4						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**45.85**	**269**	P	P	15 57 29.3	-1.9
	0.2nm,0.5s,baz=110,slow=8.1,SNR=1.8						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**95.58**	**12**	P	P	16 02 33.4	-0.1
	0.1nm,0.4s,baz=198,slow=5.7,SNR=1.4						
	0.1nm,0.4s						

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*IDC **15** 15:59:19.3±1.0, 6°.43N×125°.58E, h0^{km}, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=48.0km s-min=9.0km az=87.0*

ISC 15 15:59:20.1±1.9, **6°.6N**±0°.5×**126°.0E**±0°.7, **h10^{km}, n7, σ1^{s}.04**/7, **mb3.6**/6, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.58**	**317**	Pg	**Pg**	**15 59 30.8**	**-0.5**
	642nm,0.3s,baz=253,slow=6.8,SNR=18						
DAV				Lg	Lg	15 59 41.4	
	314nm,0.3s,baz=243,slow=21,SNR=7.6						
WRA	**Warramunga Arr**	**27.67**	**163**	P	**P**	**16 05 09.4**	**+0.9**
	0.6nm,0.9s,baz=340,slow=10,SNR=6.1						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**31.10**	**166**	P	**P**	**16 05 38.8**	**-0.1**
	0.2nm,0.5s,baz=344,slow=6.8,SNR=5.9						
	0.2nm,0.5s						
STKA	**Stephens Creek**	**41.10**	**160**	P	**P**	**16 07 03.4**	**-1.0**
	0.9nm,0.5s,baz=339,slow=8.6,SNR=2.8						
	0.9nm,0.5s						
MKAR	**Makanchi Array**	**54.76**	**324**	P	**P**	**16 08 49.9**	**-0.1**
	0.3nm,0.7s,baz=131,slow=7.9,SNR=2.5						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**58.90**	**327**	P	**P**	**16 09 19.0**	**-0.3**
	0.4nm,0.7s,baz=124,slow=7.8,SNR=2.3						
	0.4nm,0.7s						
MMAI	**Mount Meron Ar**	**86.91**	**303**	P	**P**	**16 12 07.3**	**+1.5**
	0.5nm,0.3s,baz=91,slow=6.1,SNR=1.5						
	0.5nm,0.3s						

IDC 15 16:04:00.9±1.5, **6°.48N×125°.19E, h0^{km}, mb3.2**/3, **mbtmp3.2**/3, **Error ellipse: s-maj=36.7km s-min=10.2km az=114.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.70**	**33**	Pg	Pg	16 04 14.9	+0.5
	735nm,0.3s,baz=266,slow=5.8,SNR=34						
DAV				Lg	Lg	16 04 23.7	
	850nm,0.3s,baz=280,slow=23,SNR=8.5						
WRA	**Warramunga Arr**	**27.75**	**161**	P	P	16 09 51.0	-0.6
	0.5nm,0.8s,baz=333,slow=10,SNR=6.3						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**31.14**	**164**	P	P	16 10 21.8	+0.2
	0.2nm,0.6s,baz=345,slow=7.1,SNR=12						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**54.44**	**325**	P	P	16 13 30.2	+0.1
	0.1nm,0.5s,baz=124,slow=8.3,SNR=1.8						
	0.1nm,0.5s						

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*IDC **15** 16:06:10.2±0.8, 6°.93N×126°.36E, h0^{km}, mb3.7/12, mbtmp3.7/12, MS3.8/1, Error ellipse: s-maj=17.4km s-min=9.8km az=18.0*

*NEIC **15** 16:06:12.1±1.8, 6°.86N±0°.09×126°.27E±0°.06, h10^{km}±1^{km}, mb4.4/23, Error ellipse: s-maj=15.7km s-min=8.7km az=23.0*

*DJA **15** 16:06:15.3±0.3, 7°N±2°×12°5E±°, h10^{km}, M4.8/11, mb4.8/11, mB5.3/5, MLv4.9/8, Mw(mB)4.8/5*

ISC 15 16:06:12.0±0.5, **6°.72N**±0°.05×**125°.96E**±0°.09, **h10^{km}, n59, σ1^{s}.82**/53, **mb4.1**/23, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.52**	**312**	Pg	**Pn**	**16 06 26.5**	**+1.1**
	1µm,0.3s,baz=228,slow=5.4,SNR=14						
DAV				Lg	Lg	16 06 35.9	
	2µm,0.3s,baz=256,slow=21,SNR=14						
DAV	**Davao City (W)**	**0.52**	**312**		**Pn**	**16 06 26.2**	**+0.8**
DAV	**Davao City (W)**	**0.52**	**312**	P	**Pn**	**16 06 26.7**	**+1.2**
DAV				S	**Sb**	**16 06 36.4**	**+5.6**
SGSI	**Sangihe**	**3.04**	**188**	P	**Pn**	**16 07 01.3**	**+1.1**
SGSI				S	**Sn**	**16 07 37.1**	**+0.3**
TNTI	**Ternate**	**6.07**	**167**	Pn	**Pn**	**16 07 42.5**	**+0.6**
TNTI	**Ternate**	**6.07**	**167**	P	Pn	16 07 47.5	+5.6
	34nm,1.0s						
TNTI				S	**Sn**	**16 08 56.8**	**+5.3**
	34nm,1.0s						
GTOI	**Gorontalo**	**6.72**	**206**	P	Pn	16 07 47.1	-3.7
GTOI				S	Sn	16 08 59.6	-7.9
MRSI	**Marisa**	**7.39**	**213**	P	Pn	16 07 56.1	-3.9
	0.5nm2µm103nm,0.6s						
MRSI				S	Sn	16 09 14.4	-9.5
	0.5nm2µm103nm,0.6s						
TOLI2	**Tolitoli**	**7.60**	**223**		Pn	16 07 55.5	-7.4
LUWI	**Luwuk**	**8.34**	**203**		**Pn**	**16 08 15.1**	**+2.0**
LUWI	**Luwuk**	**8.34**	**203**	P	**Pn**	**16 08 13.2**	**+0.1**
	2µm169nm,0.8s						
LUWI				S	**Sn**	**16 09 42.7**	**-4.7**
	2µm169nm,0.8s						
SANI	**Sanana**	**8.71**	**180**	P	**Pn**	**16 08 17.8**	**-0.3**
	26nm,0.8s						
APSI	**Ampana**	**8.72**	**210**	P	**Pn**	**16 08 15.5**	**-2.7**
	96nm,0.8s						
KKSI	**Kolaka, Sulawe**	**11.64**	**202**	P	**Pn**	**16 08 56.6**	**-1.8**
	22nm,0.9s						
BNSI	**Bone**	**12.50**	**208**	P	Pn	16 09 06.6	-3.4
SOEI	**Soe**	**16.45**	**186**	Pn	**Pn**	**16 10 05.3**	**+2.0**
SOEI				IAmb	IAmb	16 10 32.4	
	comp=Z,27nm,1.0s						
MTN	**Manton Dam**	**20.10**	**165**	P	Pn	16 10 47.3	-0.5
MTN				IAmb	IAmb	16 11 06.7	
	comp=Z,9.8nm,0.9s						
KNRA	**Kununurra**	**22.42**	**173**	P	**P**	**16 11 10.8**	**-0.3**
PMG	**Port Moresby**	**26.51**	**127**	P	**P**	**16 11 53.7**	**+3.8**
	comp=Z,7.9nm,0.8s,baz=288,slow=9.6,SNR=5.3						
PMG	**Port Moresby**	**26.51**	**127**	P	**P**	**16 11 49.0**	**-0.9**
PMG				IAmb	IAmb	16 12 02.7	
	comp=Z,7.9nm,0.8s						
PMG	**Port Moresby**	**26.51**	**127**	P	P	16 11 59.5	+10
JNU	**Nakatsue**	**26.66**	**9**	P	**P**	**16 11 48.9**	**-2.3**
JNU				IAmb	IAmb	16 12 06.1	
	comp=Z,17nm,1.2s						
COEN	**Coen**	**26.72**	**140**	P	**P**	**16 11 51.4**	**-0.4**
COEN				IAmb	IAmb	16 12 18.4	
	comp=Z,16nm,1.4s						
WB0	**Warramunga Arr**	**27.60**	**163**	P	**P**	**16 12 00.3**	**+0.6**
WB0				IAmb	IAmb	16 12 38.7	
	comp=Z,4.6nm,0.8s						
WRA	**Warramunga Arr**	**27.75**	**163**	P	**P**	**16 12 01.4**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=333,slow=11,SNR=6.2						
	comp=Z,1.1nm,0.7s						
WRA	**Warramunga Arr**	**27.75**	**163**	P	**P**	**16 11 60.0**	**-1.0**
WR8	**Warramunga Arr**	**27.81**	**163**	P	**P**	**16 12 02.0**	**+0.4**
PSA00	**Pilbara Seismi**	**28.75**	**192**	P	**P**	**16 12 11.2**	**+1.2**
PSA00				IAmb	IAmb	16 12 16.1	
	comp=Z,18nm,1.3s						
CMAR	**Chiang Mai Arr**	**28.79**	**296**	P	**P**	**16 12 11.8**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=105,slow=9.5,SNR=2.3						
	comp=Z,0.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**28.79**	**296**	P	**P**	**16 12 11.0**	**+0.6**
INU	**Inuyama**	**30.25**	**18**	P	**P**	**16 12 21.4**	**-1.7**
INU				IAmb	IAmb	16 12 30.6	
	comp=Z,13nm,1.2s						
KSRS	**Korea Array**	**30.65**	**3**	P	**P**	**16 12 25.0**	**-1.6**
	comp=Z,0.4nm,0.7s,baz=189,slow=10,SNR=2.8						
	comp=Z,0.4nm,0.7s						
AS31	**Alice Springs**	**31.18**	**166**	P	**P**	**16 12 31.0**	**-0.5**
ASAR	**Alice Springs**	**31.18**	**166**	P	**P**	**16 12 31.9**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=344,slow=7.1,SNR=13						
	comp=Z,0.8nm,0.7s						
ASAR	**Alice Springs**	**31.18**	**166**	P	**P**	**16 12 31.5**	**0.0**
INKA	**Innaminka**	**37.12**	**158**	P	**P**	**16 13 24.6**	**+1.7**
FORT	**Forrest**	**37.34**	**177**	P	**P**	**16 13 24.3**	**-0.4**
FORT				IAmb	IAmb	16 13 36.6	
	comp=Z,3.0nm,0.7s						
BBOO	**Buckleboo**	**40.47**	**167**		**P**	**16 13 51.7**	**+0.8**
STKA	**Stephens Creek**	**41.18**	**160**	P	**P**	**16 13 57.3**	**+0.4**
	comp=Z,3.0nm,0.8s,baz=342,slow=12,SNR=7.1						
	comp=Z,3.0nm,0.8s						
STKA	**Stephens Creek**	**41.18**	**160**	P	**P**	**16 13 58.0**	**+1.1**
HILR	**Hailar Array B**	**43.01**	**354**	P	**P**	**16 14 10.2**	**-1.5**
	comp=Z,0.3nm,0.4s,baz=162,slow=11,SNR=1.9						
	comp=Z,0.3nm,0.4s						
ULN	**Ulaanbaatar**	**44.06**	**342**	P	**P**	**16 14 17.3**	**-2.9**
ULN				IAmb	IAmb	16 14 27.8	
	comp=Z,6.7nm,1.5s						
SONM	**Songino Array**	**44.24**	**341**	P	**P**	**16 14 20.7**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=155,slow=7.9,SNR=2.5						
	comp=Z,0.2nm,0.4s						
SONM	**Songino Array**	**44.24**	**341**	IAmb	IAmb	16 14 29.4	
	comp=Z,2.4nm,1.4s						
MGBR	**Mount Gambier**	**46.27**	**164**	P	**P**	**16 14 37.4**	**-0.3**
TOO	**Toolangi**	**47.68**	**159**	P	**P**	**16 14 48.6**	**-0.2**

TOO				IAmb	IAmb	16 14 57.4	
	comp=Z,5.7nm,1.2s						
MKAR	**Makanchi Array**	**54.69**	**324**	P	**P**	**16 15 41.1**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=126,slow=7.7,SNR=7.1						
	comp=Z,0.5nm,0.8s						
MKAR	**Makanchi Array**	**54.69**	**324**	P	**P**	**16 15 40.6**	**-0.8**
ZALV	**Zalesovo Beam**	**57.60**	**333**	P	**P**	**16 16 03.5**	**+1.5**
	comp=Z,0.6nm,0.4s,baz=116,slow=6.6,SNR=1.2						
	comp=Z,0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**57.60**	**333**	P	**P**	**16 16 01.6**	**-0.4**
KURK	**Kurchatov**	**58.83**	**327**	P	**P**	**16 16 09.6**	**-1.1**
KURK	**Kurchatov**	**58.83**	**327**	IAmb	IAmb	16 16 16.1	
	comp=Z,3.2nm,0.8s						
KURBB	**Kurchatov Arra**	**58.83**	**327**	P	**P**	**16 16 09.6**	**-1.1**
	comp=Z,0.7nm,0.9s,baz=125,slow=5.8,SNR=18						
	comp=Z,0.7nm,0.9s						
GAR	**Garm**	**59.37**	**312**	P	**P**	**16 16 14.6**	**-0.2**
SHEM	**Shemya Is, Ala**	**60.30**	**31**	LR	LR	16 37 35.9	
	comp=Z,81nm,21.1s,baz=148,slow=32						
BVAR	**Borovoye Array**	**64.42**	**326**	P	**P**	**16 16 48.0**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=134,slow=6.2,SNR=5.4						
	comp=Z,0.2nm,0.3s						
TCW	**Tory Channel**	**65.03**	**142**	P	**P**	**16 16 52.3**	**-0.3**
ILAR	**Eielson Array**	**82.75**	**26**	P	**P**	**16 18 33.9**	**-2.0**
	comp=Z,0.9nm,1.1s,baz=254,slow=5.2,SNR=5.0						
	comp=Z,0.9nm,1.1s						
VNDA	**Vanda**	**86.47**	**173**	P	**P**	**16 18 54.6**	**+0.2**
VNDA				IAmb	IAmb	16 18 57.8	
	comp=Z,3.8nm,1.2s						

*IDC **15** 16:09:04.3±1.0, 36°.03N×96°.74W, h0^{km}, mbtmp3.3/5, ML3.1/5, Error ellipse: s-maj=13.5km s-min=9.4km az=151.0*

*NEIC **15** 16:09:05.5±0.4, 35°.793N±0°.009×96°.66W±0°.01, h6^{km}±5^{km}, mb_Lg3.5/135, ML3.6/23, ML3.7/60, Mwr3.3/10(SLM), Error ellipse: s-maj=1.6km s-min=1.0km az=133.0*

*NEIC **15** 16:09:05.7±0.5, 35°.799N±0°.010×96°.66W±0°.01, h7^{km}±5^{km}, Error ellipse: s-maj=1.6km s-min=1.3km az=126.0*

*NEIC **15** 16:09:05, 35°.80N×96°.65W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.23; M$_{\theta\theta}$0.64; M$_{\phi\phi}$-0.41; M$_{r\theta}$-0.10; M$_{\theta\phi}$-0.80; M$_{\phi r}$-0.46; Fault plane solution: M$_0$1.08000×10^{14} NP1:φ$_s$340.00000°, δ75.00000°, λ-25.00000°. NP2:φ$_s$77.00000°, δ66.00000°, λ-164.00000°. Principal axes: T 1.0845, Plg6.0000°, Azm30.0000°; N -0.0001, Plg61.0000°, Azm131.0000°; P -1.0845, Plg28.0000°, Azm297.0000°;*

ISC 15 16:09:05.6±0.9**, 35°.83N**±0°.04×**96°.68W**±0°.03**, h16**^{km}±7^{km}**, n81, σ1^s.02**/29**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEOK	**Depew**	**0.15**	**85**		**Pg**	**16 09 08.8**	**-0.8**
DEOK				IAML		16 09 11.5	
	comp=N,29µm,0.5s						
OK052	**Battle Ridge R**	**0.19**	**328**		**Pg**	**16 09 10.5**	**+0.3**
OK052				IAML		16 09 14.3	
	comp=N,20µm,0.4s						
OK052				IAML		16 09 14.3	
	comp=N,20µm,0.3s						
QUOK	**Quay**	**0.34**	**356**		**Pb**	**16 09 13.2**	**-0.1**
QUOK					**Sb**	**16 09 18.7**	**+0.2**
QUOK				IAML		16 09 18.9	
	comp=E,10µm,0.4s						
ADOK	**Arcadia Dam**	**0.59**	**253**		**Pg**	**16 09 17.1**	**-0.2**
OK048	**Pawnee Station**	**0.62**	**340**		**Pn**	**16 09 18.4**	**-1.4**
OK048				IAML		16 09 30.9	
	comp=E,3µm,0.7s						
OK048	**Pawnee Station**	**0.62**	**340**		**Pn**	**16 09 18.3**	**-1.5**
OK048					**Sb**	**16 09 27.0**	**+0.3**
OK051	**E0350 and S346**	**0.69**	**349**		**Pn**	**16 09 19.5**	**-1.2**
OK051				IAML		16 09 30.1	
	comp=E,6µm,0.2s						
OK051				IAML		16 09 30.8	
	comp=E,5µm,0.2s						
W35A	**Tecumseh**	**0.70**	**193**		**Pg**	**16 09 18.6**	**-0.6**
W35A				IAmb_Lg		16 09 27.2	
	comp=Z,390nm,0.7s						
W35A					**Sg**	**16 09 27.9**	**-0.5**
W35A				IAML		16 09 28.3	
	comp=E,3µm,0.4s						
W35A				IAML		16 09 39.5	
	comp=N,3µm,0.7s						
OK004	**Okla Sci Mus**	**0.72**	**245**		**Pb**	**16 09 19.9**	**+0.2**
OK004					**Sg**	**16 09 29.8**	**+0.6**
TUL3	**Leonard**	**0.72**	**83**		**Pg**	**16 09 19.3**	**-0.4**
TUL3					**Sg**	**16 09 28.9**	**-0.4**
OKCSW	**OKLAHOMA CITY**	**0.75**	**236**		**Pg**	**16 09 19.5**	**-0.8**
OKCSW				IAML		16 09 34.2	
	comp=N,3µm,0.2s						
FNO	**Franklin**	**0.82**	**226**		**Pg**	**16 09 20.9**	**-0.7**
FNO				IAmb_Lg		16 09 32.0	
	comp=Z,429nm,0.8s						
FNO				IAML		16 09 32.8	
	comp=E,4µm,0.5s						
RLO	**Rose Lookout**	**1.38**	**76**		**Pn**	**16 09 30.9**	**+0.6**
GC02	**Grant County #**	**1.40**	**317**		**Pb**	**16 09 31.8**	**+0.5**
X34A	**Smith Ranch, M**	**1.55**	**218**		**Pn**	**16 09 33.9**	**+1.4**
X34A				IAmb_Lg		16 09 55.3	
	comp=Z,244nm,1.0s						
LOOK	**Love County**	**1.88**	**193**		**Pn**	**16 09 38.8**	**+1.7**
U38A	**Gravette**	**1.95**	**71**		**Pn**	**16 09 39.8**	**+1.7**
U38A				IAmb_Lg		16 10 10.4	
	comp=Z,276nm,0.8s						
NOKA	**Waynoka**	**1.99**	**294**		**Pb**	**16 09 41.2**	**-0.3**
WMOK	**Wichita Mounta**	**2.04**	**238**	IAmb_Lg		16 10 12.7	
	comp=Z,372nm,0.8s						
HHAR	**Hobbs**	**2.26**	**78**	IAmb_Lg		16 10 17.7	
	comp=Z,371nm,0.8s						
Z38A	**Mt. Pleasant**	**2.92**	**151**	IAmb_Lg		16 10 42.4	
	comp=Z,174nm,0.7s						
KSU1	**Kansas State U**	**3.27**	**1**	IAmb_Lg		16 10 56.8	
	comp=Z,145nm,0.9s						
X40A	**Basin Creek Fa**	**3.42**	**112**	IAmb_Lg		16 10 59.5	
	comp=Z,103nm,0.9s						
WHAR	**Wooly Hollow**	**3.62**	**97**	IAmb_Lg		16 11 03.6	
	comp=Z,95nm,0.8s						
WLAR	**White Oak Lake**	**3.63**	**125**	IAmb_Lg		16 11 07.9	
	comp=Z,85nm,1.1s						
UALR	**University of**	**3.70**	**105**	IAmb_Lg		16 11 08.0	
	comp=Z,183nm,0.9s						
APMT	**Aspermont**	**3.79**	**230**	IAmb_Lg		16 11 09.0	
	comp=Z,70nm,0.8s						
MGMO	**Mountain Grove**	**3.79**	**68**	IAmb_Lg		16 11 10.4	
	comp=Z,230nm,0.8s						
CBKS	**Cedar Bluff**	**3.85**	**322**	IAmb_Lg		16 11 19.3	
	comp=Z,118nm,0.8s						
237A	**Washetta, Mont**	**3.89**	**169**	IAmb_Lg		16 11 17.1	
	comp=Z,85nm,1.0s						
ABTX	**Abilene, Hawle**	**4.03**	**218**	IAmb_Lg		16 11 15.0	
	comp=Z,68nm,0.8s						
AMTX	**Amarillo**	**4.20**	**258**	IAmb_Lg		16 11 24.5	
	comp=Z,200nm,0.8s						
R40A	**Maddies Statio**	**4.30**	**54**	IAmb_Lg		16 11 20.7	
	comp=Z,188nm,0.9s						
PH02	**Texas Public H**	**4.32**	**266**	IAmb_Lg		16 11 21.1	
	comp=Z,66nm,0.9s						
NATX	**Nacogdoches**	**4.39**	**157**	IAmb_Lg		16 11 34.4	
	comp=Z,97nm,0.9s						
SN07	**Snyder 07**	**4.43**	**233**	IAmb_Lg		16 11 28.9	
	comp=Z,110nm,0.9s						
CCAR	**Cane Creek**	**4.46**	**114**	IAmb_Lg		16 11 35.4	
	comp=Z,63nm,0.8s						
LCAR	**Lake Charles**	**4.49**	**85**	IAmb_Lg		16 11 33.9	
	comp=Z,105nm,0.8s						
P38A	**Dawn**	**4.53**	**32**	IAmb_Lg		16 11 37.8	
	comp=Z,96nm,0.7s						
POST	**Post**	**4.85**	**237**	IAmb_Lg		16 11 51.1	
	comp=Z,75nm,1.0s						
CCM	**Cathedral Cave**	**4.88**	**61**	IAmb_Lg		16 11 41.8	
	comp=Z,146nm,0.9s						
BRDY	**Brady**	**4.93**	**204**	IAmb_Lg		16 11 50.2	
	comp=Z,70nm,0.9s						
RTBA	**Rita Blanca**	**4.94**	**279**	IAmb_Lg		16 11 54.7	
	comp=Z,57nm,1.0s						
435B	**Jarrell**	**5.09**	**189**	IAmb_Lg		16 11 48.9	
	comp=Z,92nm,0.9s						
P40A	**Paris**	**5.21**	**43**	IAmb_Lg		16 11 54.3	
	comp=Z,130nm,0.7s						
MSTX	**Muleshoe**	**5.34**	**251**	IAmb_Lg		16 12 07.6	
	comp=Z,61nm,0.9s						
SGCY	**Sterling City**	**5.38**	**225**	IAmb_Lg		16 12 10.4	
	comp=Z,71nm,0.8s						
MET	**Memphis--Engin**	**5.55**	**95**	IAmb_Lg		16 12 06.9	
	comp=Z,132nm,0.8s						
KSCO	**Kaye Shedlock'**	**5.70**	**306**	IAmb_Lg		16 12 16.1	
	comp=Z,52nm,0.7s						
JCT	**Junction City**	**5.95**	**207**	IAmb_Lg		16 12 23.2	
	comp=Z,82nm,0.8s						
OXF	**Oxford**	**6.10**	**100**	IAmb_Lg		16 12 26.2	
	comp=Z,64nm,0.7s						
ODSA	**Odessa**	**6.12**	**234**	IAmb_Lg		16 12 29.6	
	comp=Z,38nm,1.0s						
OZNA	**Ozona**	**6.15**	**218**	IAmb_Lg		16 12 36.6	
	comp=Z,40nm,0.8s						
T25A	**Trinidad**	**6.37**	**284**	IAmb_Lg		16 12 31.6	
	comp=Z,71nm,0.8s						
OGNE	**Ogallala**	**6.62**	**322**	IAmb_Lg		16 12 39.1	
	comp=Z,91nm,0.8s						
HNDO	**Hondo**	**6.66**	**200**	IAmb_Lg		16 12 37.3	
	comp=Z,103nm,1.1s						
EF04	**Eagle Ford 04**	**6.67**	**188**	IAmb_Lg		16 12 44.2	
	comp=Z,38nm,1.0s						
MNHN	**Monahans**	**6.77**	**230**	IAmb_Lg		16 12 38.7	
	comp=Z,39nm,0.7s						
PLAL	**Pickwick Lake**	**7.08**	**94**	IAmb_Lg		16 12 58.2	
	comp=Z,41nm,0.8s						
WVT	**Waverly**	**7.18**	**85**	IAmb_Lg		16 13 05.6	
	comp=Z,46nm,0.7s						
K30B	**Basset**	**7.20**	**342**	IAmb_Lg		16 13 06.5	
	comp=Z,100nm,0.8s						
EF02	**Christine**	**7.21**	**193**	IAmb_Lg		16 13 07.8	
	comp=Z,37nm,0.7s						
SAND	**Sanderson**	**7.44**	**220**	IAmb_Lg		16 13 02.5	
	comp=Z,33nm,0.8s						
L40A	**Anamosa**	**7.53**	**33**	IAmb_Lg		16 13 11.7	
	comp=Z,52nm,1.0s						
X48A	**Hartselle**	**8.01**	**97**	IAmb_Lg		16 13 22.2	
	comp=Z,27nm,0.8s						
V48A	**Smith Brothers**	**8.01**	**88**	IAmb_Lg		16 13 25.8	
	comp=Z,50nm,0.9s						
ANMO	**Albuquerque**	**8.04**	**267**	Pn	**Pn**	**16 11 02.9**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=82,slow=14,SNR=1.9						
ANMO				Pg	Pb	16 11 29.5	+4.9
	comp=Z,0.5nm,0.3s,baz=81,slow=16,SNR=7.0						
ANMO				Lg	Lg	16 13 13.9	
	comp=Z,2.4nm,0.3s,baz=18,slow=20,SNR=7.1						
	comp=Z,0.4nm,0.6s						
TASM	**ASL Pad, Albuq**	**8.04**	**267**	IAmb_Lg		16 13 38.0	
	comp=Z,11nm,0.8s						
TASM	**ASL Pad, Albuq**	**8.04**	**267**	IAmb_Lg		16 13 38.0	
	comp=Z,10nm,0.8s						
TASM	**ASL Pad, Albuq**	**8.04**	**267**	IAmb_Lg		16 13 38.1	
	comp=Z,10nm,0.8s						
ISCO	**Idaho Springs**	**8.11**	**302**	IAmb_Lg		16 13 39.8	
	comp=Z,31nm,1.0s						
L42A	**Oliver, Polo**	**8.23**	**39**	IAmb_Lg		16 13 33.1	
	comp=Z,85nm,1.2s						
MNTX	**Cornudas Mount**	**8.34**	**243**	IAmb_Lg		16 13 36.2	
	comp=Z,24nm,0.8s						
JFWS	**Jewell Farm**	**8.65**	**33**	IAmb_Lg		16 13 40.3	
	comp=Z,47nm,0.8s						
TXAR	**Lajitas Array**	**8.76**	**224**	Pn	**Pn**	**16 11 12.8**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=48,slow=14,SNR=31						
TXAR				Pg		16 11 38.2	
	comp=Z,1.7nm,0.3s,baz=50,slow=15,SNR=14						
TXAR				Sn	**Sn**	**16 12 48.0**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=46,slow=13,SNR=1.5						
TXAR				Lg	Lg	16 13 36.2	
	comp=Z,2.5nm,0.3s,baz=43,slow=31,SNR=7.0						
	comp=Z,1.1nm,0.5s						
SUSD	**Miller**	**8.78**	**349**	IAmb_Lg		16 14 01.8	
	comp=Z,54nm,0.8s						
I40A	**Norwalk**	**9.30**	**28**	IAmb_Lg		16 14 06.8	
	comp=Z,38nm,1.0s						
SPMN	**Marine on St.**	**9.83**	**16**	IAmb_Lg		16 14 29.0	
	comp=Z,20nm,0.8s						
TKL	**Tuckaleechee C**	**10.49**	**87**	Pn	**Pn**	**16 11 35.8**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=253,slow=12,SNR=1.1						
TKL				Sn	**Sn**	**16 13 31.9**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=297,slow=9.0,SNR=1.7						
TKL				Lg	Lg	16 14 29.7	
	comp=Z,2.3nm,0.3s,baz=206,slow=16,SNR=12						
	comp=Z,0.9nm,0.4s						
PDAR	**Pinedale Array**	**12.14**	**309**	Pn	**Pn**	**16 11 57.0**	**-1.0**
	baz=119,slow=13,SNR=1.7						
PDAR				Lg	Lg	16 15 15.2	
	comp=Z,0.5nm,0.3s,baz=102,slow=32,SNR=5.4						
	comp=Z,0.1nm,0.3s						
ULM	**Lac du Bonnet**	**14.42**	**2**	Pn	Pn	16 12 21.5	-7.5
	comp=Z,0.3nm,0.3s,baz=180,slow=10,SNR=2.3						
ULM				Sn	Sn	16 14 54.2	-14
	comp=Z,0.1nm,0.3s,baz=231,slow=13,SNR=1.2						
ULM				Lg	Lg	16 16 27.6	
	comp=Z,0.3nm,0.3s,baz=57,slow=8.5,SNR=1.8						
	comp=Z,1.6nm,0.6s						

*IDC **15** 16:11:41.5±0.6, 6°.43N×125°.23E, h0^{km}, mb4.2/19, mbtmp4.3/21, ML4.4/2, MS3.7/14, Error ellipse: s-maj=15.0km s-min=8.2km az=104.0*

*NEIC **15** 16:11:44.9±2.6, 6°.57N±0°.04×125°.32E±0°.06, h10^{km}±1^{km}, mb4.6/52, Error ellipse: s-maj=9.9km s-min=6.4km az=263.0*

*DJA **15** 16:11:47.5±0.4, 7°N±3°×12°6E±°, h23^{km}±4^{km}, M4.7/29, mb4.7/29, mB5.2/7, MLv4.8/6, Mw(mB)4.5/7*

ISC 15 16:11:44.5±0.3**, 6°.49N**±0°.04×**125°.34E**±0°.06**, h10**^{km}**, n137, σ1^s.68**/119**, mb4.6**/55**, MS3.8**/17**, 2C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.62**	**23**	Pg	**Pg**	**16 11 55.7**	**-0.8**
	778nm,0.3s,baz=247,slow=6.3,SNR=32						
DAV				Lg	Lg	16 12 06.0	
	2µm,0.3s,baz=67,slow=22,SNR=10						
DAV	**Davao City (W)**	**0.62**	**23**		**Pg**	**16 11 55.5**	**-1.1**
DAV	**Davao City (W)**	**0.62**	**23**	P	**Pg**	**16 11 55.7**	**-0.8**
DAV				S	**Sg**	**16 12 06.2**	**+1.5**
DAV	**Davao City (W)**	**0.62**	**23**	P	**Pg**	**16 11 56.0**	**-0.6**
SGSI	**Sangihe**	**2.79**	**176**	P	**Pb**	**16 12 33.2**	**-1.3**
TNTI	**Ternate**	**6.03**	**160**	Pn	**Pn**	**16 13 14.9**	**+1.1**
TNTI	**Ternate**	**6.03**	**160**	P	Pn	16 13 18.1	+4.3
	0.2nm59nm,0.8s						
GTOI	**Gorontalo**	**6.26**	**202**	P	**Pn**	**16 13 18.6**	**+1.6**
TOLI2	**Tolitoli**	**7.02**	**221**		**Pn**	**16 13 25.0**	**-2.4**
LUWI	**Luwuk**	**7.91**	**199**	P	Pn	16 13 44.6	+4.9
MPSI	**Mapaga**	**8.18**	**222**	P	Pn	16 13 48.4	+5.1
APSI	**Ampana**	**8.22**	**207**	P	Pn	16 13 48.7	+4.7
	1µm77nm,0.9s						
KKM	**Kota Kinabalu**	**9.08**	**268**	P	**Pn**	**16 13 59.1**	**+3.3**
	26nm,1.0s						
PCI	**Palu**	**9.17**	**217**	P	Pn	16 14 02.7	+5.7
	43nm,1.0s						
I39PW	**PALAU INFRASON**	**9.20**	**83**	I	I	17 05 57.0	
	baz=266,slow=307,SNR=1.9						
SWI	**Sorong**	**9.40**	**141**	P	**Pn**	**16 14 01.1**	**+1.0**
	17nm,1.0s						
NLAI	**Namlea**	**9.82**	**170**	P	**Pn**	**16 14 08.5**	**+2.6**
	49nm,0.8s						
KRAI	**Karang Ratu**	**10.21**	**163**	P	**Pn**	**16 14 14.2**	**+2.9**
	21nm,0.6s						
TTSI	**Tana Toraja**	**10.96**	**210**	P	Pn	16 14 27.1	+5.6
	20nm,1.2s						
BKB	**Balikpapan**	**11.42**	**228**	Pn	**Pn**	**16 14 25.1**	**-2.6**
FAKI	**Fak Fak**	**11.62**	**143**	Pn	**Pn**	**16 14 28.9**	**-1.7**
BNSI	**Bone**	**12.02**	**206**	P	Pn	16 14 40.8	+4.9
KAPI	**Kappang**	**12.72**	**206**	Pn	**Pn**	**16 14 44.1**	**-1.4**
	0.9nm,0.3s,baz=30,slow=9.9,SNR=4.8						
KAPI				LR	LR	16 20 03.5	
	comp=Z,232nm,19.9s,baz=45,slow=40						
	2.5nm,0.2s						
KAPI	**Kappang**	**12.72**	**206**		**Pn**	**16 14 44.2**	**-1.3**
KAPI	**Kappang**	**12.72**	**206**	P	Pn	16 14 51.1	+5.5
SBUM	**Sibu**	**13.68**	**254**	Pn	**Pn**	**16 14 57.3**	**-1.4**
SBUM	**Sibu**	**13.68**	**254**	P	**P**	**16 15 04.5**	**-3.0**
SOEI	**Soe**	**16.18**	**184**	Pn	**Pn**	**16 15 31.0**	**-1.2**
SOEI				IAmb	IAmb	16 16 05.9	
	comp=Z,43nm,1.1s						
DBNI	**Kabupaten Domp**	**16.46**	**205**	P	**P**	**16 15 40.4**	**+1.9**
BATI	**Baumata**	**16.67**	**186**	Pn	**Pn**	**16 15 37.6**	**-0.8**
	comp=Z,3.0nm,0.3s,baz=62,slow=3.2,SNR=5.3						
BATI				LR	LR	16 23 53.6	
	comp=Z,182nm,19.4s,baz=110,slow=44						
	comp=Z,28nm,1.2s						
BATI	**Baumata**	**16.67**	**186**	P	**P**	**16 15 40.1**	**-0.7**
	comp=Z,28nm,0.6s						
TPUB	**Ta-pu**	**17.32**	**345**		**Pn**	**16 15 46.8**	**+0.3**
TPUB				IAmb	IAmb	16 15 55.1	
	comp=Z,48nm,1.3s						
KLNI	**Mataram**	**17.45**	**212**	P	**P**	**16 15 51.3**	**+1.9**
	comp=Z,34nm,0.8s						
KMMI	**Kalianget**	**17.60**	**220**	P	**P**	**16 15 54.1**	**+3.1**
	comp=Z,35nm,1.0s						
JAGI	**Jajag, Banyuwa**	**18.58**	**217**		**Pn**	**16 16 01.7**	**-0.5**
JAGI	**Jajag, Banyuwa**	**18.58**	**217**	P	**Pn**	**16 16 05.1**	**+2.9**
	comp=Z,27nm,1.3s						
QIZ	**Qiongzhong**	**19.56**	**311**	P	**P**	**16 16 11.1**	**-1.6**
QIZ				S	**S**	**16 19 52.6**	**-1.1**
QIZ				LR	LR		
	comp=N,320nm,13.5s						
QIZ				LR	LR		
	comp=E,250nm,13.3s						
QIZ				LR	LR		
	comp=Z,350nm,14.2s						
SNJI	**Sawahan-Nganju**	**19.61**	**224**	P	**Pn**	**16 16 17.7**	**+3.0**
	comp=Z,20nm,1.5s						
MTN	**Manton Dam**	**20.05**	**163**	P	**P**	**16 16 17.4**	**-0.6**
JOW	**Kunigami**	**20.42**	**8**	LR	LR	16 23 35.0	
	comp=Z,185nm,21.8s,baz=172,slow=35						
KPJI	**Karang Pucung**	**21.37**	**230**	P	**P**	**16 16 36.5**	**+4.2**
	comp=Z,25nm,1.2s						
KNRA	**Kununurra**	**22.29**	**171**		**P**	**16 16 41.0**	**-1.1**
IPM	**Ipoh**	**24.28**	**267**	P	**P**	**16 17 02.3**	**0.0**
IPM				IAmb	IAmb	16 17 12.3	
	comp=Z,39nm,1.5s						
NJ2	**Nanjing**	**26.14**	**347**	*e*P	**P**	**16 17 19.4**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PMG	**Port Moresby**	**26.87**	**126**	P	**P**	**16 17 24.1**	**-1.7**
	comp=Z,5.6nm,0.5s,baz=319,slow=11,SNR=7.2						
	comp=Z,5.6nm,0.5s						
PMG	**Port Moresby**	**26.87**	**126**	P	**P**	**16 17 24.9**	**-0.9**
PMG				IAmb	IAmb	16 17 32.1	
	comp=Z,13nm,1.1s						
PMG	**Port Moresby**	**26.87**	**126**	P	**P**	**16 17 25.7**	**0.0**
	comp=Z,11nm,1.0s						
COEN	**Coen**	**26.95**	**139**	P	**P**	**16 17 26.0**	**-0.4**
COEN				IAmb	IAmb	16 17 49.5	
	comp=Z,16nm,1.2s						
JNU	**Nakatsue**	**26.99**	**10**	LR	LR	16 27 19.7	
	comp=Z,103nm,21.5s,baz=196,slow=35						
WB0	**Warramunga Arr**	**27.57**	**161**		**P**	**16 17 31.2**	**-0.7**
WB0				IAmb	IAmb	16 18 15.9	
	comp=Z,24nm,1.5s						
WRAB	**Tennant Creek**	**27.72**	**162**		**P**	**16 17 32.7**	**-0.5**
WRA	**Warramunga Arr**	**27.72**	**162**	P	**P**	**16 17 32.1**	**-1.1**
	comp=Z,1.2nm,0.5s,baz=333,slow=11,SNR=10						
	comp=Z,1.2nm,0.5s						
WR8	**Warramunga Arr**	**27.79**	**161**	P	**P**	**16 17 33.6**	**-0.2**
CMAR	**Chiang Mai Arr**	**28.33**	**297**	P	**P**	**16 17 35.6**	**-3.2**
	comp=Z,0.2nm,0.5s,baz=115,slow=7.1,SNR=9.3						
CMAR				LR	LR	16 28 46.3	
	comp=Z,75nm,20.5s,baz=130,slow=36						
	comp=Z,0.2nm,0.5s						
JHJ	**Hachijo jima 2**	**29.70**	**25**	LR	LR	16 30 31.6	
	comp=Z,59nm,18.1s,baz=292,slow=38						
PZH	**PanZhiHua**	**30.02**	**314**	P	**P**	**16 17 55.3**	**+1.4**
LYN	**LuoYang**	**30.35**	**339**	P	**P**	**16 17 59.5**	**+3.0**
LYN				pmax	pmax		
	comp=Z,11nm,0.9s						
LYN				pmax	pmax		
	comp=Z,220nm,4.9s						
LYN				LR	LR		
	comp=N,240nm,23.4s						
LYN				LR	LR		
	comp=E,280nm,22.3s						
LYN				LR	LR		
	comp=Z,220nm,19.6s						
KSRS	**Korea Array**	**30.91**	**4**	P	**P**	**16 17 58.8**	**-2.6**
	comp=Z,2.0nm,0.8s,baz=186,slow=9.5,SNR=8.7						
	comp=Z,2.0nm,0.8s						
AS31	**Alice Springs**	**31.12**	**165**	P	**P**	**16 18 01.3**	**-2.2**
ASAR	**Alice Springs**	**31.12**	**165**	P	**P**	**16 18 00.2**	**-3.3**
	comp=Z,0.6nm,0.5s,baz=339,slow=6.8,SNR=15						
	comp=Z,0.6nm,0.5s						
ASAR	**Alice Springs**	**31.12**	**165**	P	**P**	**16 18 04.7**	**+1.2**
XAN	**Xi'an**	**31.34**	**333**	P	**P**	**16 18 07.1**	**+1.8**
XAN				pmax	pmax		
	comp=Z,14nm,1.0s						
MJAR	**Matsushiro Arr**	**32.14**	**20**	P	**P**	**16 18 10.3**	**-2.0**
	comp=Z,2.3nm,0.9s,baz=194,slow=10.0,SNR=5.9						
MJAR				LR	LR	16 30 31.4	
	comp=Z,65nm,21.4s,baz=186,slow=35						
	comp=Z,2.3nm,0.9s						
MJAR	**Matsushiro Arr**	**32.14**	**20**	IAmb	IAmb	16 18 46.9	
	comp=Z,8.8nm,1.5s						
HNS	**HongShan**	**32.25**	**344**	⇑P	**P**	**16 18 14.8**	**+1.6**
HNS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CTA	**Charters Tower**	**33.48**	**143**	P	**P**	**16 18 24.0**	**-0.2**
	comp=Z,3.7nm,0.9s,baz=326,slow=10,SNR=7.0						
	comp=Z,3.7nm,0.9s						
CTAO	**Charters Tower**	**33.48**	**143**	P	**P**	**16 18 25.5**	**+1.3**
CTAO				IAmb	IAmb	16 18 26.8	
	comp=Z,8.8nm,1.1s						
BJT	**Baijiatuau**	**34.38**	**347**		**P**	**16 18 31.8**	**0.0**
BJI	**Beijing**	**34.40**	**348**	P	**P**	**16 18 33.5**	**+1.6**
BJI				pP	**sP**	**16 18 38.3**	**+2.0**
BJI				sP	**pP**	**16 18 40.3**	**+5.2**
BJI				S	**S**	**16 24 00.4**	**+0.5**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BJI				LR	LR		
	comp=N,50nm,22.9s						
BJI				LR	LR		
	comp=E,100nm,22.4s						
BJI				LR	LR		
	comp=Z,58nm,19.9s						
LZH	**Lanzhou**	**35.44**	**329**	*e*P	**P**	**16 18 44.3**	**+3.1**
LZH				pP	sP	16 18 50.0	+4.4
LZH				pmax	pmax		
	comp=Z,28nm,1.7s						
LZH				LR	LR		
	comp=N,150nm,19.6s						
LZH				LR	LR		
	comp=E,180nm,18.9s						
LZH				LR	LR		
	comp=Z,190nm,20.5s						
BRDH	**Bariadhala**	**36.23**	**300**	LR	LR	16 36 25.8	
	comp=Z,156nm,18.0s,baz=222,slow=41						
HHC	**Hu-ho-hao-te**	**36.36**	**342**	*e*P	**P**	**16 18 49.8**	**+0.8**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,4.0s						
HHC				LR	LR		
	comp=N,120nm,16.2s						
HHC				LR	LR		
	comp=E,160nm,17.0s						
HHC				LR	LR		
	comp=Z,250nm,19.6s						
INKA	**Innaminka**	**37.15**	**157**		**P**	**16 18 54.2**	**-1.4**
FORT	**Forrest**	**37.15**	**176**		**P**	**16 18 54.5**	**-1.1**
SHL	**Shillong**	**37.16**	**304**		**P**	**16 18 55.2**	**-0.9**
SHL				IAmb	IAmb	16 19 01.1	
	comp=Z,7.6nm,0.7s						
USRK	**Ussuriysk Ar.**	**38.01**	**8**	P	**P**	**16 19 01.9**	**-0.9**
	comp=Z,5.8nm,0.7s,baz=177,slow=5.4,SNR=11						
	comp=Z,5.8nm,0.7s						
XLT	**XiLinHaoTe**	**38.13**	**349**	*e*P	**P**	**16 19 05.0**	**+1.1**
XLT				pmax	pmax		
	comp=Z,13nm,0.8s						
XLT				pmax	pmax		
	comp=Z,85nm,4.0s						
MDJ	**Mudanjiang**	**38.16**	**5**	P	**P**	**16 19 01.9**	**-2.1**
BNX	**BinXian**	**39.14**	**2**	⇑P	**P**	**16 19 13.1**	**+0.9**
BNX				pmax	pmax		
	comp=Z,11nm,0.9s						
NWAO	**Narrogin (SRO)**	**39.95**	**191**	P	**P**	**16 19 20.3**	**+1.1**
NWAO				IAmb	IAmb	16 19 48.8	
	comp=Z,18nm,1.2s						
GTA	**Gaotai**	**40.03**	**329**	P	**P**	**16 19 22.9**	**+2.9**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.5s						
GTA				LR	LR		
	comp=N,170nm,16.7s						
GTA				LR	LR		
	comp=E,180nm,16.4s						
GTA				LR	LR		
	comp=Z,120nm,17.8s						
BBOO	**Buckleboo**	**40.39**	**166**		**P**	**16 19 22.0**	**-0.9**
BBOO				IAmb	IAmb	16 19 27.9	
	comp=Z,11nm,0.6s						
ASAJ	**Asahikawa**	**40.41**	**19**	LR	LR	16 37 56.9	
	comp=Z,53nm,18.1s,baz=141,slow=39						
GOMU	**GeErMu**	**40.68**	**321**	P	**P**	**16 19 26.9**	**+1.3**
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.8s						

STKA	Stephens Creek	41.19	159	P	P	16 19 28.1	-1.3
	comp=Z,6.7nm,0.7s,baz=334,slow=7.3,SNR=16						
	comp=Z,6.7nm,0.7s						
STKA	Stephens Creek	41.19	159		P	16 19 28.4	-1.0
HILR	Hailar Array B	43.17	355	P	P	16 19 44.3	-1.2
	comp=Z,6.3nm,0.7s,baz=163,slow=11,SNR=13						
	comp=Z,6.3nm,0.7s						
HEH	HeiHe	43.65	2	*e*P	P	16 19 48.1	-1.1
HEH				pmax	pmax		
	comp=Z,24nm,0.8s						
ULN	Ulaanbaatar	44.08	342		P	16 19 52.2	-0.7
ULN	Ulaanbaatar	44.08	342	P	P	16 19 54.0	+1.1
	comp=Z,28nm,1.0s						
SONM	Songino Array	44.26	342	P	P	16 19 54.0	-0.3
	comp=Z,1.8nm,0.9s,baz=158,slow=7.0,SNR=6.7						
SONM				LR	LR	16 38 55.0	
	comp=Z,149nm,20.6s,baz=152,slow=37						
	comp=Z,1.8nm,0.9s						
SONM	Songino Array	44.26	342	P	P	16 19 55.0	+0.7
ARMA	Armidale	44.52	147	P	P	16 19 57.7	+1.1
ARMA				IAmb	IAmb	16 20 36.3	
	comp=Z,17nm,1.5s						
PETK	Petropavlovsk-	53.44	24	P	P	16 21 04.8	+0.2
	comp=Z,4.0nm,0.8s,baz=227,slow=8.7,SNR=5.4						
PETK				LR	LR	16 43 25.4	
	comp=Z,59nm,20.5s,baz=146,slow=36						
	comp=Z,4.0nm,0.8s						
MKAR	Makanchi Array	54.51	325	P	P	16 21 11.8	-0.8
	comp=Z,2.5nm,0.6s,baz=122,slow=8.3,SNR=22						
	comp=Z,2.5nm,0.6s						
MKAR	Makanchi Array	54.51	325		P	16 21 11.3	-1.3
MAKZ	Makanchi	54.70	325		P	16 21 13.1	-0.8
MAKZ				IAmb	IAmb	16 21 22.1	
	comp=Z,4.2nm,0.9s						
KSH	Kashi	55.13	314	P	P	16 21 19.6	+2.3
KSH				pmax	pmax		
	comp=Z,5.0nm,1.8s						
NIL	Nilore	55.16	307		P	16 21 17.8	+0.2
YAK	Yakutsk	55.52	2	P	P	16 21 20.7	+1.2
MA2	Magadan	56.40	15		P	16 21 26.8	+0.9
ZALV	Zalesovo Beam	57.51	333	P	P	16 21 32.6	-1.2
	comp=Z,1.4nm,0.6s,baz=115,slow=7.0,SNR=6.5						
	comp=Z,1.4nm,0.6s						
ZALV	Zalesovo Beam	57.51	333	P	P	16 21 31.7	-2.2
KURBB	Kurchatov Arra	58.68	327	P	P	16 21 41.0	-1.2
	comp=Z,5.7nm,0.7s,baz=124,slow=5.7,SNR=4.7						
	comp=Z,5.7nm,0.7s						
KURK	Kurchatov	58.68	327		P	16 21 40.4	-1.7
GAR	Garm	59.05	312	P	P	16 21 44.8	-0.3
KK31	Karatay Array	60.28	316		P	16 21 52.6	-0.8
KK31				IAmb	IAmb	16 21 56.5	
	comp=Z,3.9nm,0.8s						
KKAR	Karatay Array	60.28	316		P	16 21 52.5	-0.9
BVAR	Borovoye Array	64.26	327	P	P	16 22 18.9	-1.0
	comp=Z,4.2nm,1.0s,baz=131,slow=8.1,SNR=13						
	comp=Z,4.2nm,1.0s						
BORK	Borovoye	64.31	327		P	16 22 19.9	-0.3
BORK				IAmb	IAmb	16 22 23.2	
	comp=Z,4.8nm,0.9s						
TIXI	Tiksi	65.12	1		P	16 22 24.2	-0.9
TIXI				IAmb	IAmb	16 22 27.8	
	comp=Z,4.5nm,0.8s						
BKZ	Black Stump Fm	65.55	138	P	P	16 22 28.9	+0.3
NRIK	Noril'sk	67.44	346	P	P	16 22 39.8	-0.2
	comp=Z,1.4nm,0.6s,baz=136,slow=6.4,SNR=4.8						
	comp=Z,1.4nm,0.6s						
NRIK	Noril'sk	67.44	346		P	16 22 39.9	-0.1
ABKAR	Akbulak array	69.15	320	P	P	16 22 48.8	-2.3
C18K	Utukok River	77.99	21	P	P	16 23 43.9	+1.1
C18K				IAmb	IAmb	16 24 01.6	
	comp=Z,9.5nm,1.4s						
RAYN	Ar Rayn	78.14	293		P	16 23 44.6	0.0
RAYN				IAmb	IAmb	16 23 47.4	
	comp=Z,4.4nm,0.8s						
C19K	Lookout Ridge	78.66	21	P	P	16 23 47.3	+0.8
C19K				IAmb	IAmb	16 23 50.5	
	comp=Z,4.2nm,0.8s						
D19K	Kuna River	79.07	21	P	P	16 23 49.0	+0.2
B21K	Ikpikpuk River	80.48	20	IAmb	IAmb	16 24 16.5	
	comp=Z,8.4nm,1.3s						
H21K	Melozitna Rive	80.76	25	P	P	16 23 58.0	0.0
H21K				IAmb	IAmb	16 24 23.4	
	comp=Z,9.3nm,1.4s						
B22K	Teshekpuk Lake	80.97	20	IAmb	IAmb	16 24 17.4	
	comp=Z,8.6nm,1.0s						
H24K	Noodor Dome	82.80	24	P	P	16 24 08.8	0.0
H24K				IAmb	IAmb	16 24 22.8	
	comp=Z,5.3nm,1.1s						
CCB	Clear Creek Bu	82.83	26	P	P	16 24 09.0	+0.1
CCB				IAmb	IAmb	16 24 28.3	
	comp=Z,8.8nm,1.5s						
ILAR	Eielson Array	83.22	26	P	P	16 24 09.3	-1.6
	comp=Z,1.4nm,0.9s,baz=266,slow=5.4,SNR=18						
	comp=Z,1.4nm,0.9s						
BMAR	Burnt Mountain	84.08	23	P	P	16 24 15.7	+0.3
E27K	Coleen River	85.16	22		P	16 24 25.2	+4.4
E27K				IAmb	IAmb	16 24 26.4	
	comp=Z,5.1nm,1.0s						
I27K	Kandik River	85.40	25		P	16 24 22.1	+0.1
F28M	Old Crow	85.87	23		P	16 24 24.7	+0.4
F28M				IAmb	IAmb	16 24 29.6	
	comp=Z,4.3nm,0.8s						
I28M	Miner Creek	86.11	25	P	P	16 24 25.7	0.0
MMAI	Mount Meron Ar	86.45	303	LR	LR	17 10 48.4	
	comp=Z,120nm,18.1s,baz=195,slow=41						
EIL	Elat	87.16	299	LR	LR	17 09 04.3	
	comp=Z,109nm,18.6s,baz=180,slow=40						
FINES	FINESS Array B	88.76	332	P	P	16 24 35.9	-2.3
	comp=Z,3.3nm,0.9s,baz=53,slow=5.4,SNR=3.7						
	comp=Z,3.3nm,0.9s						
IDI	Anoyia	94.75	306	LR	LR	17 13 24.3	
	comp=Z,68nm,19.4s,baz=305,slow=39						
PV22	Blue Mesa, Par	112.77	44		PKKPab	16 41 17.3	-2.0
PV16	Nyswonger Mesa	112.79	44		PKKPdf	16 41 23.2	-8.2
PV18	Skein Mesa, Pa	112.82	44		PKKPdf	16 41 28.0	-3.3

IDC ***15*** *16:16:26.3±0.6, 48°.91S×105°.11E, h0^{km}, mb4.6/14, mbtmp4.6/15, ML2.7/1, MS4.2/28, Error ellipse: s-maj=25.9km s-min=14.6km az=110.0*

NEIC ***15*** *16:16:27.4±1.2, 48°.97S±0°.10×105°.1E±0°.2, h10^{km}±1^{km}, mb5.0/42, Error ellipse: s-maj=22.0km s-min=16.3km az=280.0*

GCMT ***15*** *16:16:31.4±0.2, 49°.00S±0°.01×105°.13E±0°.02, h14^{km}±1^{km}, MW5.0/102, Moment Tensor Solution. s28,c37; s102,c158; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.03±.14; $M_{\theta\theta}$-2.65±.11; $M_{\phi\phi}$3.68±.15; $M_{r\theta}$0.08±.28; $M_{\theta\phi}$-2.36±.09; $M_{\phi r}$0.06±.24; Best double couple: $M_0$3.95000×10^{16} NP1:ϕ_s297.00000°, δ88.00000°, λ-179.00000°. NP2:ϕ_s207.00000°, δ89.00000°, λ-2.00000°. Principal axes: T 4.4630, Plg0.0000°, Azm252.0000°; N -1.0270, Plg88.0000°, Azm350.0000°; P -3.4360, Plg2.0000°, Azm162.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 16:16:28.0±0.4, **48°.99S**±0°.06×**105°.17E**±0°.09, **h10^{km}, n216, σ1^{s}83**/189, **mb4.9**/65, **MS4.3**/30, **7C-3D, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	15.56	29	T	T	16 35 55.4	
	baz=202,slow=74,SNR=3429						
H01W1	Cape Leeuwin H	15.57	29	T	T	16 35 48.9	
	baz=202,slow=74,SNR=3514						
H01W3	Cape Leeuwin H	15.58	29	T	T	16 35 56.5	
	baz=202,slow=74,SNR=3835						
RKGY	Rocky Gully	16.82	36	P	P	16 20 24.9	-0.7
	comp=Z,104nm,1.5s						
AUALB	St Joseph's Co	16.85	39	P	P	16 20 27.1	+1.2
CASY	Casey	17.56	173	Pn	Pn	16 20 30.6	-1.9
NWAO	Narrogin (SRO)	18.41	34	P	P	16 20 43.1	-0.2
	comp=Z,39nm,1.4s						
NWAO	Narrogin (SRO)	18.41	34	P	Pn	16 20 43.5	+0.2
	comp=Z,1.1nm,0.3s,baz=205,slow=5.2,SNR=3.7						
NWAO				LR	LR	16 26 14.2	
	comp=Z,309nm,19.3s,baz=225,slow=32						
	comp=Z,19nm,1.1s						
NWAO	Narrogin (SRO)	18.41	34	P	P	16 20 42.5	-0.8
NWAO	Narrogin (SRO)	18.41	34	P	Pn	16 20 44.4	+1.1
MUN	Mundaring	18.92	30	P	P	16 20 48.7	0.0
	comp=Z,24nm,1.2s						
MUN	Mundaring	18.92	30	P	Pn	16 20 49.8	+0.4
KLBR	Kellerberrin	19.81	33	P	P	16 20 58.0	-0.5
	comp=Z,38nm,0.8s						
KLBR	Kellerberrin	19.81	33	P	P	16 20 58.7	+0.2
BLDU	Ballidu	20.34	30	P	P	16 21 03.8	-0.5
	comp=Z,56nm,1.4s						
BLDU	Ballidu	20.34	30	P	P	16 21 04.8	+0.5
MORW	Morawa	21.57	27	P	P	16 21 16.9	-0.7
	comp=Z,72nm,1.3s						
MORW	Morawa	21.57	27	P	P	16 21 17.0	-0.7
MORW				IAmb	IAmb	16 21 20.1	
	comp=Z,52nm,0.9s						
MORW	Morawa	21.57	27	P	P	16 21 18.1	+0.5
KMBL	Kambalda	21.66	42	P	P	16 21 16.8	-1.8
MEEK	Meekatharra	24.64	30	P	P	16 21 46.6	-2.1
	comp=Z,25nm,1.4s						
MEEK	Meekatharra	24.64	30	P	P	16 21 48.6	-0.1
FORT	Forrest	25.12	52	P	P	16 21 55.0	+2.1
FORT	Forrest	25.12	52		P	16 21 51.5	-1.4
FORT				IAmb	IAmb	16 21 58.1	
	comp=Z,25nm,1.1s						
AUCAS	Cummins Area S	26.94	68	P	P	16 22 11.6	+2.2
BBOO	Buckleboo	28.14	66	P	P	16 22 19.6	-0.6
	comp=Z,47nm,1.0s						
BBOO	Buckleboo	28.14	66		P	16 22 19.3	-0.9
BBOO				IAmb	IAmb	16 22 22.4	
	comp=Z,31nm,0.9s						
BBOO	Buckleboo	28.14	66	P	P	16 22 20.3	+0.1
AUMAR	Marden Senior	28.34	73	P	P	16 22 23.5	+1.6
AUMBR	Murray Bridge	28.59	74	P	P	16 22 26.5	+2.4
WHYH	Whyalla	28.91	69	P	P	16 22 28.9	+1.9
ARPS	Mount Arapiles	29.23	79	P	P	16 22 31.3	+1.5
	comp=Z,13nm,1.3s						
AUJCS	Jamestown Cent	29.44	70	P	P	16 22 33.3	+1.6
HTT	Hallett	29.48	71	P	P	16 22 31.3	-0.8
	comp=Z,8.4nm,2.4s						
HTT	Hallett	29.48	71	P	P	16 22 34.0	+1.9
PSA00	Pilbara Seismi	29.76	28	P	P	16 22 33.0	-1.6
WRKA	Warakurna	29.98	45	P	P	16 22 35.7	-1.0
	comp=Z,9.3nm,1.6s						
STKA	Stephens Creek	32.19	72	P	P	16 22 55.5	-0.4
	comp=Z,13nm,0.9s,baz=213,slow=8.7,SNR=13						
STKA				PcP	PcP	16 25 43.5	-1.0
	comp=Z,1.5nm,0.6s,baz=43,slow=6.2,SNR=3.4						
STKA				LR	LR	16 33 30.6	
	comp=Z,1μm,21.2s,baz=213,slow=32						
	comp=Z,13nm,0.9s						
STKA	Stephens Creek	32.19	72		P	16 22 54.3	-1.7
ASAR	Alice Springs	33.91	52	P	P	16 23 10.4	-0.7
	comp=Z,11nm,1.0s,baz=211,slow=8.1,SNR=77						
ASAR				PcP	PcP	16 25 47.9	-1.7
	comp=Z,2.2nm,1.0s,baz=228,slow=2.6,SNR=4.1						
ASAR				LR	LR	16 35 02.6	
	comp=Z,818nm,21.0s,baz=212,slow=33						
	comp=Z,11nm,1.0s						
ASAR	Alice Springs	33.91	52		P	16 23 10.2	-1.0
AS31	Alice Springs	33.91	52		P	16 23 10.1	-1.1
INKA	Innaminka	34.59	65		P	16 23 16.8	-0.1
INKA				IAmb	IAmb	16 23 20.4	
	comp=Z,12nm,0.9s						
CMSA	Cobar Meteorol	35.00	75	P	P	16 23 20.1	-0.3
	comp=Z,15nm,1.6s						
CMSA	Cobar Meteorol	35.00	75	P	P	16 23 21.2	+0.8
VNDA	Vanda	35.60	162	P	P	16 23 25.5	+0.4
	comp=Z,4.5nm,0.9s,baz=284,slow=11,SNR=7.3						
VNDA				LR	LR	16 36 44.8	
	comp=Z,768nm,20.4s,baz=296,slow=34						
	comp=Z,4.5nm,0.9s						
VNDA	Vanda	35.60	162	P	P	16 23 25.6	+0.5
VNDA				IAmb	IAmb	16 23 34.1	
	comp=Z,12nm,0.9s						
SYO	Syowa Base	36.87	213	⇑*i*P	P	16 23 36.2	+0.2
SYO	Syowa Base	36.87	213	⇑*e*pP	pP	16 23 39.2	+1.1
SYO	Syowa Base	36.87	213	⇓*e*sP	sP	16 23 41.0	+2.1
WRA	Warramunga Arr	37.23	49	P	P	16 23 38.8	-0.9
	comp=Z,17nm,0.9s,baz=210,slow=8.8,SNR=40						
WRA				PcP	PcP	16 25 59.8	+0.5
	comp=Z,1.8nm,1.1s,baz=212,slow=2.8,SNR=2.2						
	comp=Z,17nm,0.9s						
WRA	Warramunga Arr	37.23	49		P	16 23 37.9	-1.8
WRAB	Tennant Creek	37.24	49		P	16 23 38.3	-1.4
WRAB				IAmb	IAmb	16 23 41.9	
	comp=Z,33nm,1.1s						
WRAB	Tennant Creek	37.24	49	P	P	16 23 39.6	-0.1
WR8	Warramunga Arr	37.30	50	P	P	16 23 39.0	-1.2
WR8				IAmb	IAmb	16 23 43.0	
	comp=Z,43nm,1.2s						
WB0	Warramunga Arr	37.41	49		P	16 23 39.9	-1.2
WB0				IAmb	IAmb	16 23 43.1	
	comp=Z,30nm,1.1s						
QLP	Quilpie	37.55	68	P	P	16 23 42.4	+0.2
	comp=Z,79nm,1.3s						
QLP	Quilpie	37.55	68	P	P	16 23 43.5	+1.3
AULRC	Lightning Ridg	37.87	75	P	P	16 23 46.5	+1.5
AUPHS	Peel High Scho	38.63	80	P	P	16 23 53.1	+1.7
QIS	Mount Isa	39.49	56	P	P	16 23 58.1	-0.5
	comp=Z,24nm,1.7s						
QIS	Mount Isa	39.49	56	P	P	16 23 59.2	+0.6
ARMA	Armidale	39.55	80	P	P	16 23 58.1	-1.1
	comp=Z,14nm,1.1s						
ARMA	Armidale	39.55	80		P	16 23 58.3	-0.9
ARMA	Armidale	39.55	80	P	P	16 24 00.4	+1.2
PCJI	Pacitan	40.97	9	P	P	16 24 11.1	+0.2
	comp=Z,836nmcomp=Z,32nm,1.7s						
JAGI	Jajag, Banyuwa	41.09	14	P	P	16 24 10.2	-1.6
JAGI				IAmb	IAmb	16 24 36.5	
	comp=Z,25nm,1.2s						
QSPA	South Pole Qui	41.15	180	P	P	16 24 12.6	+0.6
	comp=Z,7.8nm,0.8s,baz=324,slow=2.6,SNR=66						
QSPA				LR	LR	16 40 15.2	
	comp=Z,404nm,19.0s,baz=320,slow=35						
	comp=Z,7.8nm,0.8s						
QSPA	South Pole Qui	41.15	180	P	P	16 24 12.2	+0.1
GMJI	Gumukmas	41.17	12	P	P	16 24 12.1	-0.4
	comp=Z,31nm,1.0s						
UGM	Wanagama	41.19	8	P	P	16 24 11.8	-0.9
UGM	Wanagama	41.19	8	P	P	16 24 13.9	+1.2
UGM	Wanagama	41.19	8	P	P	16 24 12.6	-0.1
	comp=Z,63nm,1.9s						
TWSI	Taliwang, Sumb	41.31	18	P	P	16 24 13.5	-0.2
	comp=Z,40nm,1.1s						
SNJI	Sawahan-Nganju	41.45	10	P	P	16 24 15.8	+0.8
SJI	Sawahan	41.49	10	P	P	16 24 16.0	+0.7
BATI	Baumata	41.64	28	P	P	16 24 16.8	+0.4
	comp=Z,19nm,0.8s,baz=211,slow=5.9,SNR=6.8						
BATI				LR	LR	16 40 10.5	
	comp=Z,322nm,19.9s,baz=208,slow=34						
	comp=Z,19nm,0.8s						
BATI	Baumata	41.64	28	P	P	16 24 17.2	+0.8
	comp=Z,24nm,0.9s						
KPJI	Karang Pucung	41.64	6	P	P	16 24 16.9	+0.6
	comp=Z,30nm,1.2s						
ELIB	Princess Elisa	41.92	208	*d*P	P	16 24 18.9	+0.6
	comp=Z,7.9nm,1.0s						
MTN	Manton Dam	41.95	40	P	P	16 24 18.5	-0.4
	comp=Z,42nm,1.2s						
MTN	Manton Dam	41.95	40	P	P	16 24 18.3	-0.6
MTN				IAmb	IAmb	16 24 21.8	
	comp=Z,39nm,1.1s						
SOEI	Soe	42.25	29	P	P	16 24 21.0	-0.5
SOEI				IAmb	IAmb	16 24 30.4	
	comp=Z,24nm,1.0s						
SOEI	Soe	42.25	29	P	P	16 24 21.7	+0.2
	comp=Z,22nm,1.1s						
EDFI	Ende, Flores	42.44	25	P	P	16 24 21.8	-1.3
	comp=Z,40nm,0.9s						
AUWSH	Wavell State H	42.50	77	P	P	16 24 26.4	+3.0
KDU	Kakadu	42.66	41	P	P	16 24 24.0	-0.7
	comp=Z,11nm,1.1s						
EIDS	Eidsvold	42.67	73	P	P	16 24 25.4	+0.6
MMRI	Maumere	42.70	25	P	P	16 24 24.0	-1.1
MMRI				IAmb	IAmb	16 24 34.0	
	comp=Z,23nm,1.0s						
CTA	Charters Tower	43.65	63	P	P	16 24 32.4	-0.4
	comp=Z,12nm,0.9s,baz=203,slow=11,SNR=11						
CTA				LR	LR	16 41 46.7	
	comp=Z,768nm,19.1s,baz=211,slow=35						
	comp=Z,12nm,0.9s						
CTAO	Charters Tower	43.65	63		P	16 24 32.4	-0.4
CTAO				IAmb	IAmb	16 24 35.7	
	comp=Z,21nm,1.0s						
CTAO	Charters Tower	43.65	63	P	P	16 24 33.9	+1.1
MTSU	Mount Surprise	44.07	60	P	P	16 24 35.3	-0.9
	comp=Z,8.6nm,1.1s						
MTSU	Mount Surprise	44.07	60	P	P	16 24 36.7	+0.6
MDSI	Maura Dua	44.35	359	P	P	16 24 38.6	+0.3
	comp=Z,24nm,1.0s						
KAPI	Kappang	45.54	21	P	P	16 24 47.8	0.0
	comp=Z,4.7nm,0.7s,baz=215,slow=17,SNR=4.0						
	comp=Z,4.7nm,0.7s						
SPSI	Sidrap Palu	46.56	20	P	P	16 24 55.8	0.0
	comp=Z,14nm,1.2s						
COEN	Coen	46.83	55	P	P	16 24 53.2	-4.8
COEN	Coen	46.83	55	P	P	16 24 54.9	-3.1
COEN				IAmb	IAmb	16 25 06.2	
	comp=Z,16nm,1.2s						
TUWZ	Tuamarina	47.52	108	P	P	16 25 02.9	-0.3
TROLL	Troll, Antarti	47.91	204	⇑P	P	16 25 06.4	+0.5
	comp=Z,226nm,0.7s						
BFZ	Birch Farm	49.38	109	P	P	16 25 17.1	-0.4
SNAA	Sanae	49.51	203	⇑P	P	16 25 18.9	+0.7
	comp=Z,426nm,0.8s						
SNAA	Sanae	49.51	203	P	P	16 25 18.9	+0.7
	comp=Z,12nm,0.9s,baz=135,slow=9.1,SNR=39						
	comp=Z,12nm,0.9s						
SNAA	Sanae	49.51	203	P	P	16 25 18.0	-0.1
H08S2	Diego Garcia H	49.53	315	T	T	17 18 18.8	
	baz=152,slow=76,SNR=21						
H08S1	Diego Carcia H	49.54	315	T	T	17 18 20.0	
	baz=152,slow=76,SNR=38						
H08S3	Diego Garcia H	49.55	315	T	T	17 18 15.1	
	baz=152,slow=76,SNR=59						
SANI	Sanana	50.06	28	P	P	16 25 21.7	-1.1
SANI	Sanana	50.06	28	P	P	16 25 21.4	-1.4
	comp=Z,14nm,0.7s						
BKZ	Black Stump Fm	50.41	107	P	P	16 25 25.3	-0.1
BKZ				IAmb	IAmb	16 25 32.2	
	comp=Z,34nm,1.4s						
BKZ	Black Stump Fm	50.41	107	P	P	16 25 26.3	+0.9
BELA	Belgrano 2	51.02	190	P	P	16 25 28.5	-0.9
BELA				IAmb	IAmb	16 25 37.6	
	comp=Z,14nm,0.8s						
VNA2	Neumayer--Watz	51.13	203	⇑P	P	16 25 30.2	-0.2
	comp=Z,12nm,0.8s,baz=119,slow=7.6						
URZ	Urewera	51.34	107	LR	LR	16 44 17.4	
	comp=Z,228nm,18.2s,baz=242,slow=32						
URZ	Urewera	51.34	107	P	P	16 25 33.3	+1.0
VNA3	Neumayer Olymp	51.51	202	⇑P	P	16 25 33.5	+0.3
	comp=Z,5.9nm,0.8s						
VNA1	Neumayer--Stat	51.53	203	⇑P	P	16 25 33.9	+0.6
	comp=Z,17nm,0.9s						
SBUM	Sibu	51.60	9	P	P	16 25 32.7	-1.7
SBUM	Sibu	51.60	9	P	P	16 25 33.9	-0.5
PMG	Port Moresby	52.75	56	LR	LR	16 46 35.8	
	comp=Z,168nm,18.6s,baz=202,slow=34						
PMG	Port Moresby	52.75	56	P	P	16 25 42.0	-1.1
PMG	Port Moresby	52.75	56	P	P	16 25 44.3	+1.2
PMG	Port Moresby	52.75	56	P	P	16 25 44.0	+0.9
	comp=Z,25nm,1.1s						
DZM	Mont Dzumac	54.92	84	*e*LR	LR	16 41 50.1	
	comp=Z,748nm,29.6s						
JAY	Jayapura	55.37	45	LR	LR	16 48 34.2	
	comp=Z,382nm,21.5s,baz=178,slow=35						
DAV	Davao City (W)	58.62	24	LR	LR	16 52 10.1	
	comp=Z,88nm,18.2s,baz=294,slow=37						
SAVO	Savo Central	60.32	68	P	P	16 26 38.1	+1.1
BOSA	Boshof	62.62	257	LR	LR	16 47 43.4	
	comp=Z,335nm,20.7s,baz=171,slow=30						
LBTB	Lobatse	64.88	260	LR	LR	16 49 37.2	
	comp=Z,274nm,20.2s,baz=156,slow=31						
MATP	Matopo	66.20	266	LR	LR	16 50 10.8	
	comp=Z,367nm,21.3s,baz=142,slow=31						
PMSA	Palmer Station	66.26	185	LR	LR	16 56 27.0	
	comp=Z,143nm,19.3s,baz=200,slow=36						
CM31	Chiang Mai Arr	67.37	354	P	P	16 27 22.2	-1.0
CM31				IAmb	IAmb	16 27 23.6	
	comp=Z,10nm,0.8s						
CMAR	Chiang Mai Arr	67.37	354	P	P	16 27 22.6	-0.6
	comp=Z,6.1nm,0.7s,baz=192,slow=5.8,SNR=77						
CMAR				LR	LR	16 53 27.3	
	comp=Z,40nm,21.9s,baz=175,slow=33						
	comp=Z,6.1nm,0.7s						
CMAR	Chiang Mai Arr	67.37	354	P	P	16 27 22.0	-1.2
CHTO	Chiang Mai	67.72	354	P	P	16 27 24.5	-1.0
CHTO	Chiang Mai	67.72	354	P	P	16 27 25.2	-0.2
CHTO	Chiang Mai	67.72	354	P	P	16 27 24.9	-0.5
QIZ	Qiongzhong	67.84	5	P	P	16 27 27.8	+1.6
QIZ				S	S	16 36 27.3	+3.0
QIZ				LR	LR		
	comp=N,170nm,15.9s						
QIZ				LR	LR		
	comp=E,220nm,14.5s						
LSZ	Lusaka	70.11	269	LR	LR	16 53 15.0	
	comp=E,243nm,20.6s,baz=143,slow=32						
LSZ	Lusaka	70.11	269	P	P	16 27 40.5	-0.2
LSZ				IAmb	IAmb	16 27 48.3	
	comp=Z,20nm,1.4s						
HYB	Hyderabad	70.22	333	*e*P	P	16 27 40.2	-0.8
HYB				*e*S	S	16 36 52.6	0.0
KSANE	Kasane	70.28	265	P	P	16 27 41.3	-0.4
BRDH	Bariadhala	72.36	347	LR	LR	16 53 43.1	
	comp=Z,104nm,20.1s,baz=184,slow=31						
KMI	Kunming	73.81	358	P	P	16 28 03.8	+1.2
KMI				pmax	pmax		
	comp=Z,19nm,1.3s						
TSUM	Tsumeb	74.20	259	LR	LR	16 56 15.0	
	comp=Z,192nm,18.6s,baz=148,slow=32						
SHL	Shillong	75.16	348	P	P	16 28 09.3	-1.2
SHL				IAmb	IAmb	16 28 17.7	
	comp=Z,26nm,1.5s						
PZH	PanZhiHua	75.21	357	P	P	16 28 13.0	+2.4
JOW	Kunigami	78.25	21	LR	LR	16 59 54.5	
	comp=Z,84nm,21.9s,baz=90,slow=33						
LSA	Lhasa	79.33	348	IAmb	IAmb	16 28 34.3	
	comp=Z,12nm,0.9s						
MBAR	Mbarara	79.36	281	LR	LR	16 58 16.8	
	comp=Z,296nm,20.1s,baz=156,slow=32						
CD2	Chengdu	79.55	359	P	P	16 28 34.9	+0.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
NJ2	Nanjing	81.60	12	*e*P	P	16 28 46.9	+1.3
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
TBI	Tubuai	82.18	117	*e*LR	LR	16 54 29.4	
	comp=Z,581nm,25.2s						
JCJ	Chichijima	82.65	33	LR	LR	17 06 47.7	
	comp=Z,27nm,18.1s,baz=120,slow=37						
XAN	Xi'an	82.73	3	P	P	16 28 51.3	-0.3
XAN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LYN	LuoYang	83.42	6	P	P	16 28 55.3	+0.2
LYN				pmax	pmax		
	comp=Z,11nm,0.7s						
LZDM	Lanzhou Array	84.58	359	P	P	16 29 02.1	+0.7
	comp=Z,3.7nm,0.4s,baz=187,slow=8.4,SNR=2.2						
	comp=Z,3.7nm,0.4s						
HNS	HongShan	86.43	8	⇓P	P	16 29 10.0	-0.1
HNS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PPT2	Papeete2	86.52	113	*e*LR	LR	16 56 39.5	
	comp=Z,61nm,21.2s						
NIL	Nilore	87.05	334		P	16 29 11.8	-1.5
JHJ	Hachijo jima 2	87.38	29	LR	LR	17 09 45.5	
	comp=Z,38nm,18.9s,baz=307,slow=37						
GTA	Gaotai	88.15	356	P	P	16 29 18.0	-0.6
GTA				pP	sP	16 29 23.0	+1.3
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GTA				LR	LR		
	comp=N,130nm,19.3s						
GTA				LR	LR		
	comp=E,130nm,17.8s						
GTA				LR	LR		
	comp=Z,210nm,20.7s						
KSRS	Korea Array	88.41	18	P	P	16 29 19.6	-0.1
	comp=Z,1.4nm,0.6s,baz=199,slow=4.6,SNR=8.3						
KSRS				LR	LR	17 09 51.5	
	comp=Z,10μm,21.3s,baz=345,slow=36						
	comp=Z,1.4nm,0.6s						
KBL	Kabul	89.17	331	P	P	16 29 21.2	-2.4
HHC	Hu-ho-hao-te	89.64	5	*e*P	P	16 29 26.0	+0.5
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,5.3s						
MJAR	Matsushiro Arr	90.08	26	P	P	16 29 26.2	-1.4
	comp=Z,1.3nm,0.9s,baz=187,slow=5.8,SNR=3.0						
	comp=Z,1.3nm,0.9s						
PLCA	Paso Flores	90.58	183	LR	LR	17 10 38.5	
	comp=Z,112nm,18.1s,baz=165,slow=36						
KSH	Kashi	91.84	338	P	P	16 29 39.8	+4.0
KSH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WMQ	Urumqi	93.69	347	*e*P	P	16 29 45.3	+1.1

AAK	Ala-Archa	95.15	338	LR	LR	17 08 49.7	
	comp=Z,90nm,18.9s,baz=243,slow=33						
SONM	Songino Array	96.45	1	P	P	16 29 55.1	-1.7
	comp=Z,0.5nm,0.7s,baz=184,slow=5.9,SNR=5.3						
SONM				LR	LR	17 11 41.1	
	comp=Z,58nm,21.9s,baz=210,slow=34						
	comp=Z,0.5nm,0.7s						
RPN	Rapa Nui	98.20	149	LR	LR	17 08 04.8	
	comp=Z,38nm,19.7s,baz=22,slow=32						
ASAJ	Asahikawa	98.35	26	LR	LR	17 12 35.3	
	comp=Z,55nm,21.1s,baz=130,slow=34						
TAOE	Nuku Hiva Isla	99.02	115	*e*LR	LR	17 02 18.2	
	comp=Z,228nm,24.8s						
HEH	HeiHe	100.69	14	*e*P	Pdif	16 30 16.8	+1.2
RONA	Rosalia, Austr	123.10	306		PKiKP	16 35 29.6	+5.5
RONA	Rosalia, Austr	123.10	306	*i* pPKiKP	PKiKP	16 35 29.6	+5.5
	comp=Z,5.4nm,1.2s						
SOKA	Soboth	123.14	305		PKiKP	16 35 25.1	+0.7
SOKA	Soboth	123.14	305	*e*PKiKP	PKiKP	16 35 25.0	+0.7
	comp=Z,4.0nm,0.9s						
ARSA	Arzberg	123.23	305		PKiKP	16 35 29.6	+5.2
ARSA	Arzberg	123.23	305	*i* pPKiKP	PKiKP	16 35 29.6	+5.2
	comp=Z,7.4nm,1.1s						
MOA	Molln	124.27	305		PKiKP	16 35 26.9	+0.4
MOA	Molln	124.27	305	*e*PKiKP	PKiKP	16 35 26.9	+0.4
	comp=Z,5.6nm,1.2s						
KBA	Koelnbreinsper	124.30	304		PKiKP	16 35 29.5	+2.8
KBA	Koelnbreinsper	124.30	304	*i* pPKP	PKiKP	16 35 29.5	+2.8
	comp=Z,6.6nm,1.6s						
BIOA	Bad Ischl, Aus	124.51	305		PKiKP	16 35 31.9	+5.0
BIOA	Bad Ischl, Aus	124.51	305	*i* pPKiKP	PKiKP	16 35 31.9	+5.0
	comp=Z,6.0nm,1.1s						
ABTA	Abfaltersbach	124.56	303		PKiKP	16 35 31.2	+4.1
ABTA	Abfaltersbach	124.56	303	*e*pPKiKP	PKiKP	16 35 31.3	+4.1
	comp=Z,9.3nm,1.8s						
LESA	Schwarzleotal	124.88	304		PKiKP	16 35 32.7	+5.0
LESA	Schwarzleotal	124.88	304	*i* pPKiKP	PKiKP	16 35 32.7	+5.0
	comp=Z,10nm,1.6s						
GERES	GERESS Array B	125.17	306	PKP	PKPdf	16 35 26.6	-1.3
	comp=Z,2.2nm,0.8s,baz=122,slow=1.7,SNR=7.8						
WTTA	Wattenberg	125.35	304		PKiKP	16 35 34.5	+5.7
WTTA	Wattenberg	125.35	304	*i* pPKiKP	PKiKP	16 35 34.5	+5.7
	comp=Z,8.0nm,1.0s						
WATA	Walderalm	125.42	304		PKiKP	16 35 30.1	+1.2
WATA	Walderalm	125.42	304	*e*PKiKP	PKiKP	16 35 30.1	+1.2
	comp=Z,7.2nm,1.2s						
SQTA	Sankt Quirin	125.56	303		PKiKP	16 35 30.4	+1.2
SQTA	Sankt Quirin	125.56	303	*i* PKiKP	PKiKP	16 35 30.4	+1.2
	comp=Z,11nm,1.3s						
FETA	Feichten	125.71	303		PKiKP	16 35 30.0	+0.5
FETA	Feichten	125.71	303	*i* PKiKP	PKiKP	16 35 30.0	+0.5
	comp=Z,7.4nm,1.1s						
DAVA	Damuels	126.33	303		PKiKP	16 35 36.4	+5.7
DAVA	Damuels	126.33	303	*i* pPKiKP	PKiKP	16 35 36.4	+5.7
	comp=Z,12nm,1.3s						
FINES	FINESS Array B	126.87	324	PKP	PKPdf	16 35 30.4	-0.2
	comp=Z,2.8nm,0.8s,baz=112,slow=8.1,SNR=4.0						
ARCES	ARCESS Array B	131.51	332	PKP	PKPdf	16 35 37.9	-1.4
	comp=Z,4.9nm,1.1s,baz=121,slow=1.6,SNR=4.4						
ILAR	Eielson Array	140.06	39	PKP	PKPdf	16 35 55.1	-0.2
	comp=Z,0.3nm,0.6s,baz=282,slow=3.3,SNR=5.8						
K29M	Barlow Dome	143.94	42		PKPbc	16 36 01.2	+0.9
EPYK	Eagle Plains	144.46	38		PKPab	16 36 01.1	-0.4
MAYO	Mayo, Yukon	144.64	43		PKPbc	16 36 02.6	+0.3
G31M	Satah River	145.44	37	PKPbc	PKPdf	16 36 03.5	-1.1
F31M	Tsiigehtchic	145.63	36		PKPdf	16 36 03.5	-1.5
NVAR	Mina Array Bea	147.26	92	PKPbc	PKPbc	16 36 11.9	+0.5
	comp=Z,5.2nm,0.7s,baz=224,slow=5.1,SNR=19						
NVAR	Mina Array Bea	147.26	92	PKPbc	PKPbc	16 36 11.6	+0.2
TXAR	Lajitas Array	150.53	121	PKPbc	PKPbc	16 36 19.8	0.0
	comp=Z,5.9nm,0.9s,baz=191,slow=5.2,SNR=30						
YKA	Yellowknife Ar	154.35	43	PKP	PKPdf	16 36 19.0	+0.1
	comp=Z,1.6nm,0.9s,baz=284,slow=2.7,SNR=12						
YKA				PKPbc	PKPbc	16 36 26.4	-0.8
	comp=Z,2.8nm,1.0s,baz=287,slow=2.7,SNR=11						
PDAR	Pinedale Array	155.19	91	PKP	PKPdf	16 36 21.0	-0.1
	comp=Z,1.7nm,1.1s,baz=209,slow=2.7,SNR=5.6						
PDAR				PKPab	PKPab	16 36 46.4	+0.3
	comp=Z,0.8nm,0.8s,baz=247,slow=3.9,SNR=3.5						

IDC 15 16:23:25.8±58.0, 19°.49S×178°.80W, $h0^{km}$, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=1055.0km s-min=152.7km az=81.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.56	243	P	P	16 30 42.1	+0.2
	0.9nm,0.5s,baz=90,slow=9.1,SNR=5.0						
	0.9nm,0.5s						
WRA	Warramunga Arr	44.00	261	P	P	16 31 35.1	-0.3
	0.8nm,0.3s,baz=97,slow=7.5,SNR=39						
	0.8nm,0.3s						
ASAR	Alice Springs	44.02	256	P	P	16 31 35.3	-0.2
	2.5nm,0.7s,baz=99,slow=8.0,SNR=35						
	2.5nm,0.7s						

SJA 15 16:24:29.9±0.6, 22°.21S×65°.83W, $h288^{km}$±3^{km}, ML4.1, MW3.7

NEIC 15 16:24:33.6±1.0, 22°.39S±0°.09×66°.1W±0°.2, $h262^{km}$±4^{km}, mb4.3/5, Error ellipse: s-maj=23.9km s-min=11.9km az=75.0

ISC 15 16:24:32.9±0.9, 22°.37S±0°.05×66°.06W±0°.06, $h251^{km}$, n51, $\sigma 1^{s}51$/66, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	0.55	69	*e*P	Pn	16 25 07.8	+1.2
YJA				*e*S	S	16 25 35.5	+2.5
HJA	Humahuaca	1.03	144	*e*P	Pn	16 25 10.6	+1.9
SALTA		1.86	188	*e*P	Pn	16 25 17.2	+2.4
SALTA				*e*P		16 25 17.2	
AF01	San Pedro de A	2.04	253	Pn	Pn	16 25 17.4	+1.3
AF01	San Pedro de A	2.04	253	*e*P	Pn	16 25 21.7	+5.6
AZAP	Zapla	2.06	154	*e*P	Pn	16 25 17.2	+0.9
SLA	San Lorenzo	2.39	168	*e*P	Pn	16 25 20.9	+1.6
PB09	IPOC Station P	3.00	280		Pn	16 25 26.9	+1.3
PB09	IPOC Station P	3.00	280	*e*P	Pn	16 25 27.4	+1.8
PB09				*e*S	S	16 26 11.7	+4.3
PB06	IPOC Station P	3.26	263		Pn	16 25 30.0	+1.6
PB06	IPOC Station P	3.26	263	*e*P	Pn	16 25 30.6	+2.1
PB06				*e*S	S	16 26 16.2	+3.7
PB06				IAML		16 26 20.8	
	comp=Z,90nm,0.1s						
PB03	IPOC Station P	3.44	275		Pn	16 25 31.8	+1.4
PB03	IPOC Station P	3.44	275	*e*P	Pn	16 25 31.4	+1.0
PB03				*e*S	S	16 26 17.4	+1.5
PB03				IAML		16 26 19.8	
	comp=Z,271nm,0.2s						
PB01	IPOC Station P	3.45	292		Pn	16 25 31.5	+1.0
PB01	IPOC Station P	3.45	292	*e*P	Pn	16 25 31.7	+1.2
PB01				*e*S	S	16 26 17.9	+1.7
PB01				IAML		16 26 19.6	
	comp=Z,192nm,0.2s						
PB07	IPOC Station P	3.60	280		Pn	16 25 33.3	+0.9
PB07	IPOC Station P	3.60	280	*e*P	Pn	16 25 33.7	+1.3
PB07				*e*S	S	16 26 21.0	+1.5
PB07				IAML		16 26 22.4	
	comp=Z,169nm,0.2s						
PB02	IPOC Station P	3.71	286		Pn	16 25 34.4	+0.8
PB02	IPOC Station P	3.71	286	*e*P	Pn	16 25 34.6	+1.1
PB02				*e*S	S	16 26 22.4	+0.8
PB02				IAML		16 26 25.4	
	comp=Z,415nm,0.3s						
FSA	Cafayete	3.72	179	*e*P	Pn	16 25 34.4	+0.7
PB05	IPOC Station P	3.85	262		Pn	16 25 36.1	+1.0
PB05	IPOC Station P	3.85	262	*e*P	Pn	16 25 36.5	+1.3
PB05				*e*S	S	16 26 26.7	+2.1
PB05				IAML		16 26 29.7	
	comp=Z,70nm,0.3s						
GO01	Chusmiza	3.97	312		Pn	16 25 37.6	+0.7
GO01	Chusmiza	3.97	312	*e*P	Pn	16 25 37.8	+0.8
GO01				*e*S	S	16 26 33.1	+5.3
PATCX	Punta Patache	4.11	291		Pn	16 25 38.7	+0.6
PATCX	Punta Patache	4.11	291	*e*P	Pn	16 25 38.8	+0.7
PATCX				*e*S	S	16 26 30.2	+0.3
PATCX				IAML		16 26 32.2	
	comp=Z,190nm,0.2s						
HMBC	Humberstone	4.13	300		Pn	16 25 38.5	+0.1
HMBC	Humberstone	4.13	300	*e*P	Pn	16 25 38.1	-0.3
HMBC				*e*S	S	16 26 29.9	-0.6
HMBC				IAML		16 26 32.4	
	comp=Z,272nm,0.4s						
TA01	Diego Aracena	4.24	294		Pn	16 25 39.6	0.0
TA01	Diego Aracena	4.24	294	*e*P	Pn	16 25 39.9	+0.3
TA01				*e*S	S	16 26 32.2	-0.3
TA01				IAML		16 26 33.0	
	comp=Z,79nm,0.2s						
PB11	IPOC Station P	4.24	307		Pn	16 25 39.9	+0.1
PB11	IPOC Station P	4.24	307	*e*P	Pn	16 25 40.0	+0.2
PB11				*e*S	S	16 26 32.6	-0.4
PB11				IAML		16 26 34.0	
	comp=Z,114nm,0.2s						
GO02	Mina Guanaco	4.26	229		Pn	16 25 40.9	+0.8
GO02	Mina Guanaco	4.26	229	*e*P	Pn	16 25 40.9	+0.8
GO02				*e*S	S	16 26 35.8	+2.3
GO02				IAML		16 26 36.8	
	comp=Z,172nm,0.1s						
PB10	IPOC Station P	4.29	254		Pn	16 25 41.0	+0.9
PB10	IPOC Station P	4.29	254	*e*P	Pn	16 25 41.1	+0.9
PB10				*e*S	S	16 26 34.7	+1.0
PB10				IAML		16 26 35.8	
	comp=Z,44nm,0.3s						
PB14	IPOC Station P	4.57	240		Pn	16 25 44.4	+0.6
PB14	IPOC Station P	4.57	240	*e*P	Pn	16 25 44.6	+0.7
PB14				*e*S	S	16 26 40.5	+0.2
PB14				IAML		16 26 42.6	
	comp=Z,90nm,0.1s						
AC02	Maricunga	5.25	212		Pn	16 25 52.7	+0.5
AC01	Pan de Azucar	5.59	227		Pn	16 25 55.4	-0.5
AC06	Mina Casimiro	6.31	217		Pn	16 26 03.8	-1.1
GO03	Copiapo	6.43	215	Pn	Pn	16 26 05.5	-1.0
AC05	El Transito	7.47	210	Pn	Pn	16 26 18.8	-0.8
LCO	Las Campanas	7.82	211	Pn	Pn	16 26 22.7	-1.5
VA03	San Esteban	11.09	200	P	P	16 27 09.6	+0.3
MT02	Curacav	11.73	201	P	P	16 27 16.0	-0.4
BO01	Tunca	12.76	199		Pn	16 27 26.2	+0.4
P46A	Rosedale	64.76	342	P	P	16 34 44.2	-0.4
P46A				IAmb	IAmb	16 34 59.8	
	comp=Z,10.0nm,0.9s						
QSPA	South Pole Qui	67.83	180	P	P	16 35 02.1	-1.8
QSPA				IAmb	IAmb	16 35 10.9	
	comp=Z,4.8nm,1.5s						
CMB	Columbia Colle	78.81	319		P	16 36 07.1	-1.0
PNTR	Pine Nut	79.02	320		P	16 36 08.5	-1.0

IDC 15 16:25:12.2±1.3, 6°.69N×124°.93E, $h0^{km}$, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=25.4km s-min=11.3km az=148.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.75	60	Pg	Pg	16 25 26.6	0.0
	242nm,0.3s,baz=257,slow=6.3,SNR=9.7						
DAV				Lg	Lg	16 25 37.2	
	374nm,0.3s,baz=10,slow=2.3,SNR=9.4						
DAV				LR	LR	16 25 48.7	
	comp=Z,1µm,19.3s,baz=354,slow=49						
DAV	Davao City (W)	0.75	60	P	Pb	16 25 29.0	+0.9
WRA	Warramunga Arr	28.04	161	P	P	16 31 05.1	-0.3
	0.3nm,0.5s,baz=343,slow=9.2,SNR=2.0						
	0.3nm,0.5s						
STKA	Stephens Creek	41.52	158	P	P	16 33 01.6	+0.1
	0.9nm,0.6s,baz=350,slow=11,SNR=3.3						
	0.9nm,0.6s						
MKAR	Makanchi Array	54.12	325	P	P	16 34 40.8	+1.7
	0.6nm,0.9s,baz=116,slow=7.6,SNR=3.1						
	0.6nm,0.9s						
KURBB	Kurchatov Arra	58.30	327	P	P	16 35 07.0	-1.9
	0.4nm,0.8s,baz=125,slow=7.0,SNR=2.2						
	0.4nm,0.8s						

IDC 15 16:32:26.3±2.0, 15°.32S×167°.62E, $h106^{km}$±17^{km}, mb4.3/25, mbtmp4.6/25, MS3.6/1, Error ellipse: s-maj=17.7km s-min=10.3km az=86.0

NEIC 15 16:32:28.1±1.5, 15°.38S±0°.10×167°.5E±0°.1, $h113^{km}$±5^{km}, mb4.9/48, Error ellipse: s-maj=15.4km s-min=13.3km az=59.0

NOU 15 16:32:28.0, 15°.26S×167°.52E, $h112^{km}$, mb4.7/30, Vanuatu Islands

ISC 15 16:32:28.6±0.4, 15°.34S±0°.05×167°.44E±0°.06, $h124^{km}$, n194, $\sigma 1^{s}15$/185, mb4.8/54, 7C-2D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.25	245		Pn	16 32 44.6	-1.2
SANVU	Saraoutou	0.25	245	P	Pn	16 32 45.1	-0.8
SANVU	Saraoutou	0.25	245	S	Sn	16 32 57.7	-1.2
KOUNC	Koumac, New Ca	5.99	210	P	Pn	16 33 55.7	+0.8
MARNC	Mare, Loyalty	6.13	175	Pn	Pn	16 33 55.9	-1.0
DZM	Mont Dzumac	6.76	188	P	Pn	16 34 05.4	-0.1
	15nm,0.3s,baz=18,slow=20,SNR=7.4						
DZM				S	Sn	16 35 21.0	-0.1
	89nm,0.5s,baz=316,slow=21,SNR=7.7						
DZM	Mont Dzumac	6.76	188		Pn	16 34 04.6	-0.8
ONTNC	Ouen Toro	6.99	188		Pn	16 34 07.2	-1.3
OUENC	Ouen Island, N	7.06	185	P	Pn	16 34 10.3	+0.9
OUENC	Ouen Island, N	7.06	185	S	Sn	16 35 30.4	+2.1
HURO	Huro Makira	7.25	311	P	Pn	16 34 12.4	+0.3
HURO	Huro Makira	7.25	311	S	Sn	16 35 33.4	+0.4
MSVF	Nonsavu	10.45	105	Pn	Pn	16 34 57.6	+2.5
EIDS	Eidsvold	18.28	234		Pn	16 36 34.4	+0.1
EIDS	Eidsvold	18.28	234	P	Pn	16 36 35.6	+1.3
PMG	Port Moresby	20.66	284	P	P	16 36 59.9	+1.1
	19nm,1.0s,baz=101,slow=7.3,SNR=8.6						
	19nm,1.0s						
PMG	Port Moresby	20.66	284		P	16 37 00.5	+1.7
PMG	Port Moresby	20.66	284	P	P	16 37 00.4	+1.6
	31nm,1.0s						
CTA	Charters Tower	20.72	254	P	P	16 37 00.6	+1.2
	7.6nm,0.9s,baz=79,slow=11,SNR=11						
	7.6nm,0.9s						
CTAO	Charters Tower	20.72	254		P	16 37 00.9	+1.5
CTAO	Charters Tower	20.72	254	P	P	16 37 00.9	+1.5
ARMA	Armidale	20.88	221	P	P	16 36 59.9	-1.2
WCZ	Waipu Caves	21.42	165	P	P	16 37 08.1	+1.4
MTSU	Mount Surprise	22.32	260	P	P	16 37 18.1	+1.8
TOZ	Tahuroa Road	23.42	164		P	16 37 27.2	+0.7
TOZ	Tahuroa Road	23.42	164	P	P	16 37 27.3	+0.8
COEN	Coen	23.52	270	P	P	16 37 28.6	+0.9
TLZ	Tolley Road	23.99	164	P	P	16 37 32.1	+0.3
HIZ	Hauiti	23.99	166	P	P	16 37 31.8	+0.1
HIZ	Hauiti	23.99	166	P	P	16 37 33.5	+1.8
HAZ	Te Kaha	24.13	160	P	P	16 37 34.3	+1.3
MXZ	Matakaoa Point	24.14	159	P	P	16 37 33.0	0.0
MXZ	Matakaoa Point	24.14	159	P	P	16 37 33.5	+0.4
QLP	Quilpie	24.34	239	P	P	16 37 36.1	+1.0
URZ	Urewera	24.37	161	P	P	16 37 34.7	-0.4
	27nm,0.8s,baz=332,slow=6.5,SNR=9.9						
	27nm,0.8s						
URZ	Urewera	24.37	161	P	P	16 37 36.1	+0.9
URZ	Urewera	24.37	161	P	P	16 37 35.5	+0.4
MUGZ	Murupara	24.47	162	P	P	16 37 37.2	+1.1
MWZ	Matawai	24.57	161	P	P	16 37 36.9	-0.1
RTZ	Ruatahuna	24.66	162		P	16 37 35.0	-2.9
TMVZ	Te Maari	24.77	165	P	P	16 37 40.2	+1.2
ETVZ	East Tongariro	24.79	165	P	P	16 37 40.6	+1.4
MTHZ	Maungataniwha	24.84	162	P	P	16 37 39.6	+0.1
RIGZ	Rimuhau	24.99	161	P	P	16 37 41.3	+0.5
BKZ	Black Stump Fm	25.03	163		P	16 37 41.0	-0.2
BKZ				IAmb	IAmb	16 37 44.6	
	comp=Z,32nm,1.0s						
BKZ	Black Stump Fm	25.03	163	P	P	16 37 41.9	+0.7
BKZ	Black Stump Fm	25.03	163	P	P	16 37 41.3	+0.1
NMHZ	Naumai	25.06	163	P	P	16 37 42.3	+0.8
KWHZ	Kaweka Forest	25.25	164	P	P	16 37 43.7	+0.4
KRHZ	Kereru	25.44	164	P	P	16 37 45.0	0.0
CMSA	Cobar Meteorol	25.58	227	P	P	16 37 47.7	+1.5
KAHZ	Kahuranaki	25.72	163	P	P	16 37 47.3	-0.2
PXZ	Pawanui	25.94	163	P	P	16 37 48.9	-0.5
MRZ	Mangatainoka R	26.20	166	P	P	16 37 50.7	-1.1
BFZ	Birch Farm	26.39	165	P	P	16 37 52.2	-1.1
BFZ				IAmb	IAmb	16 37 55.6	
	comp=Z,28nm,0.8s						
BFZ	Birch Farm	26.39	165	P	P	16 37 54.1	+0.7
BFZ	Birch Farm	26.39	165	P	P	16 37 52.3	-1.1
TCW	Tory Channel	26.45	168	P	P	16 37 54.0	+0.1
MSWZ	Moikau Station	26.85	167	P	P	16 37 56.2	-1.3
MSWZ	Moikau Station	26.85	167	P	P	16 37 56.2	-1.3
QIS	Mount Isa	26.96	255	P	P	16 37 59.5	+0.6
INKA	Innaminka	27.66	239	P	P	16 38 06.0	+1.1
LTZ	Lake Taylor	27.66	172	P	P	16 38 04.5	-0.3
RPZ	Rata Peaks	28.45	174	P	P	16 38 11.7	-0.1
STKA	Stephens Creek	28.73	230	P	P	16 38 15.5	+1.1
	comp=Z,2.7nm,0.5s,baz=54,slow=9.3,SNR=11						
STKA				PcP	PcP	16 41 21.9	+0.1
	comp=Z,4.8nm,0.8s,baz=72,slow=3.6,SNR=5.7						
	comp=Z,2.7nm,0.5s						
STKA	Stephens Creek	28.73	230	P	P	16 38 15.3	+0.9
STKA				IAmb	IAmb	16 38 23.0	
	comp=Z,21nm,0.9s						
LBZ	Lake Benmore	29.04	176	P	P	16 38 16.8	-0.3
LBZ				IAmb	IAmb	16 39 01.6	
	comp=Z,70nm,1.9s						
HTT	Hallett	31.45	230	P	P	16 38 39.5	+1.0
WR8	Warramunga Arr	31.69	257	P	P	16 38 40.2	-0.5
WB0	Warramunga Arr	31.78	257	P	P	16 38 41.0	-0.5
WRAB	Tennant Creek	31.83	257	P	P	16 38 43.3	+1.4
WRA	Warramunga Arr	31.84	257	P	P	16 38 41.2	-0.8
	comp=Z,1.8nm,0.7s,baz=83,slow=7.8,SNR=18						
WRA				PcP	PcP	16 41 29.6	-0.6
	comp=Z,0.8nm,0.9s,baz=103,slow=3.3,SNR=1.8						
WRA				S	S	16 43 38.1	-5.6
	comp=Z,0.2nm,0.6s,baz=149,slow=32,SNR=2.5						
WRA				ScP	ScP	16 45 05.0	+2.8
	comp=Z,0.7nm,0.8s,baz=146,slow=6.4,SNR=4.8						
	comp=Z,1.8nm,0.7s						
WRA	Warramunga Arr	31.84	257	P	P	16 38 41.5	-0.6
TAU	Tasmania Unive	32.44	208	P	P	16 38 47.1	+0.2
MGBR	Mount Gambier	32.58	222	P	P	16 38 47.6	-0.6
AS31	Alice Springs	32.62	250	P	P	16 38 48.6	-0.2
ASAR	Alice Springs	32.62	250	P	P	16 38 48.7	-0.1
	comp=Z,9.7nm,0.8s,baz=76,slow=9.0,SNR=128						
ASAR				PcP	PcP	16 41 31.4	-0.9
	comp=Z,0.7nm,0.7s,baz=68,slow=3.2,SNR=3.3						
ASAR				S	S	16 43 52.9	-2.9
	comp=Z,0.1nm,0.7s,baz=88,slow=36,SNR=4.7						
ASAR				ScP	ScP	16 45 07.6	+2.7
	comp=Z,2.1nm,0.8s,baz=78,slow=3.3,SNR=15						
ASAR				LR	LR	16 51 31.1	
	comp=Z,92nm,18.5s,baz=19,slow=35						
	comp=Z,9.7nm,0.8s						
ASAR	Alice Springs	32.62	250	P	P	16 38 48.5	-0.3
BBOO	Buckleboo	33.34	233	P	P	16 38 55.7	+0.7
BBOO	Buckleboo	33.34	233	P	P	16 38 56.0	+1.1
KNRA	Kununurra	37.24	264	P	P	16 39 28.2	-0.2
SWI	Sorong	38.50	289	P	P	16 39 40.3	+1.2
	comp=Z,22nm,1.2s						
FORT	Forrest	39.13	240	P	P	16 39 44.8	+0.5
FORT				IAmb	IAmb	16 39 45.6	
	comp=Z,11nm,0.7s						
SANI	Sanana	42.95	284	P	P	16 40 16.3	+0.7
	comp=Z,8.9nm,0.9s						
PSA00	Pilbara Seismi	45.44	255	P	P	16 40 36.2	+0.8
MBWA	Marble Bar	45.55	255	P	P	16 40 36.8	+0.5
MBWA				IAmb	IAmb	16 40 38.5	
	comp=Z,18nm,1.1s						
MBWA	Marble Bar	45.55	255	P	P	16 40 36.6	+0.3
MEEK	Meekatharra	46.70	248	P	P	16 40 46.7	+1.3
KLBR	Kellerberrin	47.95	241	P	P	16 40 56.1	+1.2
DBNI	Kabupaten Domp	48.46	272	P	P	16 40 59.4	+0.3
	comp=Z,16nm,0.9s						
NWAO	Narrogin (SRO)	48.58	240	P	P	16 40 59.8	+0.1
NWAO				IAmb	IAmb	16 41 00.9	
	comp=Z,17nm,1.1s						
MORW	Morawa	49.16	245	P	P	16 41 04.4	+0.2
MORW				IAmb	IAmb	16 41 05.1	
	comp=Z,11nm,0.8s						
MORW	Morawa	49.16	245	P	P	16 41 04.8	+0.6
MJAR	Matsushiro Arr	58.52	333	P	P	16 42 11.4	-0.7
	comp=Z,4.0nm,0.9s,baz=163,slow=8.9,SNR=16						
	comp=Z,4.0nm,0.9s						
MJAR	Matsushiro Arr	58.52	333		P	16 42 11.5	-0.6
MAJO	Matsushiro	58.52	333	P	P	16 42 11.7	-0.4
MAJO				IAmb	IAmb	16 42 12.2	
	comp=Z,7.5nm,0.6s						
MJB9	Matsu-Tunnel	58.53	333	P	P	16 42 12.5	+0.4
MJB9				IAmb	IAmb	16 42 13.2	
	comp=Z,7.1nm,0.6s						
JNU	Nakatsue	59.51	325	P	P	16 42 18.6	-0.3
	comp=Z,12nm,0.8s,baz=155,slow=4.6,SNR=8.0						
	comp=Z,12nm,0.8s						
JNU	Nakatsue	59.51	325	P	P	16 42 19.2	+0.2
JNU				IAmb	IAmb	16 42 20.0	
	comp=Z,16nm,0.9s						
TPUB	Ta-pu	59.76	309	P	P	16 42 20.5	-0.3
VNDA	Vanda	62.26	181	P	P	16 42 36.2	-0.6
	comp=Z,4.9nm,0.8s,baz=359,slow=5.9,SNR=15						
	comp=Z,4.9nm,0.8s						
VNDA	Vanda	62.26	181	P	P	16 42 36.8	-0.1
VNDA				IAmb	IAmb	16 42 38.9	
	comp=Z,8.8nm,0.9s						
SBA	Scott Base	62.53	180	P	P	16 42 39.6	+0.9
MDSI	Maura Dua	63.05	273	P	P	16 42 41.9	-1.3
	comp=Z,14nm,1.2s						
JKA	Kamikawa-asahi	63.37	340	P	P	16 42 45.6	+0.9
ASAJ	Asahikawa	63.37	340	P	P	16 42 45.0	+0.3
	comp=Z,9.8nm,0.7s,baz=161,slow=10,SNR=5.4						
	comp=Z,9.8nm,0.7s						
KSRS	Korea Array	64.33	326	P	P	16 42 51.4	+0.3
	comp=Z,2.0nm,0.8s,baz=136,slow=7.0,SNR=9.7						
	comp=Z,2.0nm,0.8s						
CCD	Concordia, Ant	64.34	192	P	P	16 42 51.0	-0.1
NJ2	Nanjing	66.23	316	*e*P	P	16 43 06.4	+3.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
USRK	Ussuriysk Ar.	67.50	333	P	P	16 43 11.8	+0.6
	comp=Z,5.7nm,0.7s,baz=162,slow=6.1,SNR=14						
	comp=Z,5.7nm,0.7s						
PETK	Petropavlovsk-	68.68	354	P	P	16 43 18.8	+0.3
	comp=Z,7.2nm,0.8s,baz=140,slow=5.3,SNR=7.6						
	comp=Z,7.2nm,0.8s						
MDJ	Mudanjiang	68.89	332		P	16 43 20.4	+0.5
MDJ				IAmb	IAmb	16 43 21.8	
	comp=Z,20nm,1.0s						
MDJ	Mudanjiang	68.89	332	P	P	16 43 21.2	+1.2
MDJ				pP	pP	16 43 48.6	-1.6
ENH	Enshi	71.88	310		P	16 43 38.5	0.0
ENH				IAmb	IAmb	16 43 39.5	
	comp=Z,15nm,1.0s						
LYN	LuoYang	72.02	315	P	P	16 43 40.3	+1.1
LYN				pmax	pmax		
	comp=Z,30nm,0.7s						
HNS	HongShan	72.17	318	⇑P	P	16 43 41.1	+1.2
HNS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
QSPA	South Pole Qui	74.69	180	P	P	16 43 54.3	-0.2
	comp=Z,22nm,0.8s,baz=4.2,slow=3.6,SNR=74						
	comp=Z,22nm,0.8s						
QSPA	South Pole Qui	74.69	180		P	16 43 54.3	-0.2
QSPA				IAmb	IAmb	16 43 55.4	
	comp=Z,32nm,1.0s						
QSPA	South Pole Qui	74.69	180	P	P	16 43 54.4	-0.1
KMI	Kunming	74.77	302	P	P	16 43 57.4	+1.6
KMI				pmax	pmax		
	comp=Z,13nm,1.0s						
CRAI	Chiangrai	74.77	296	P	P	16 43 55.0	-0.6
CMAR	Chiang Mai Arr	75.35	294	P	P	16 44 00.3	+1.3
	comp=Z,2.2nm,0.8s,baz=129,slow=4.4,SNR=19						
	comp=Z,2.2nm,0.8s						
CMAR	Chiang Mai Arr	75.35	294		P	16 43 59.4	+0.5
CHTO	Chiang Mai	75.48	294		P	16 44 00.3	+0.6
CHTO	Chiang Mai	75.48	294	P	P	16 44 00.7	+1.0
	comp=Z,5.9nm,1.0s						
MA2	Magadan	75.87	351	P	P	16 44 00.6	-0.4
	comp=Z,5.3nm,0.8s,baz=170,slow=6.1,SNR=5.3						
	comp=Z,5.3nm,0.8s						
HILR	Hailar Array B	77.09	330	P	P	16 44 08.3	+0.2
	comp=Z,3.6nm,0.7s,baz=134,slow=8.5,SNR=3.9						
	comp=Z,3.6nm,0.7s						
SEY	Seymchan	78.91	353	P	P	16 44 17.7	-0.1
	comp=Z,3.2nm,0.7s,baz=160,slow=5.7,SNR=18						
	comp=Z,3.2nm,0.7s						
RED	Redoubt Volcan	81.97	19	P	P	16 44 35.3	+0.9
YAK	Yakutsk	82.66	343	P	P	16 44 37.8	0.0
	comp=Z,28nm,0.7s,baz=153,slow=1.4,SNR=20						
	comp=Z,28nm,0.7s						
YAK	Yakutsk	82.66	343	P	P	16 44 37.5	-0.3
ULN	Ulaanbaatar	82.72	324	P	P	16 44 39.3	+0.6
ULN	Ulaanbaatar	82.72	324	P	P	16 44 39.4	+0.7
ULN				sP	sP	16 45 19.4	-3.6
SONM	Songino Array	83.08	324	P	P	16 44 40.9	+0.3
	comp=Z,5.2nm,0.8s,baz=153,slow=8.1,SNR=29						
	comp=Z,5.2nm,0.8s						
SONM	Songino Array	83.08	324	P	P	16 44 40.8	+0.3
SONM				IAmb	IAmb	16 44 42.2	
	comp=Z,8.8nm,1.0s						
SHL	Shillong	84.00	298	P	P	16 44 46.1	+0.3
SHL				IAmb	IAmb	16 44 47.0	

	comp=Z,15nm,0.8s						
G19K	Purcell Mounta	85.44	14		P	16 44 52.0	+0.1
BELA	Belgrano 2	86.10	175		P	16 44 53.4	-1.7
BELA				IAmb	IAmb	16 44 54.8	
	comp=Z,16nm,0.8s						
IMAR	Indian Mountai	86.11	15	P	P	16 44 55.0	-0.1
L04D	Klamath Falls	86.21	44	P	P	16 44 56.3	-0.1
LOGN	Logan Glacier	86.29	23	P	P	16 44 57.5	+1.1
I23K	Minto, Yukon-K	86.62	17	P	P	16 44 58.5	+0.9
I23K				IAmb	IAmb	16 45 54.5	
	comp=Z,32nm,1.8s						
IL31		87.05	18	P	P	16 44 57.9	-1.8
IL31				IAmb	IAmb	16 48 22.7	
	comp=Z,34nm,1.9s						
ILAR	Eielson Array	87.05	18	P	P	16 44 57.8	-2.0
	comp=Z,2.0nm,0.7s,baz=236,slow=4.6,SNR=30						
	comp=Z,2.0nm,0.7s						
K05A	Summer Lake	87.37	44	P	P	16 45 02.0	0.0
SYO	Syowa Base	88.17	197	⇓eP	P	16 45 05.5	+0.3
SYO	Syowa Base	88.17	197	⇑epP	pP	16 45 35.2	-1.9
ELIB	Princess Elisa	89.65	191	dP	P	16 45 11.7	-0.6
	comp=Z,6.2nm,1.0s						
F10A	Beach Ranch, E	91.03	42	P	P	16 45 19.1	+0.1
F10A				IAmb	IAmb	16 46 22.0	
	comp=Z,14nm,1.7s						
TROLL	Troll, Antarti	92.27	185	⇑P	P	16 45 23.8	-0.7
	comp=Z,1µm,0.7s						
SNAA	Sanae	92.95	183	⇑P	P	16 45 26.4	-1.1
	comp=Z,193nm,0.6s						
SNAA	Sanae	92.95	183	P	P	16 45 26.4	-1.1
	comp=Z,6.7nm,0.6s,baz=190,slow=7.1,SNR=63						
	comp=Z,6.7nm,0.6s						
SNAA	Sanae	92.95	183	P	P	16 45 26.4	-1.1
WMQ	Urumqi	93.27	314	eP	P	16 45 31.5	+2.1
VNA3	Neumayer Olymp	93.61	181	⇑P	P	16 45 29.1	-1.4
	comp=Z,18nm,0.6s						
VNA2	Neumayer--Watz	93.88	182	⇑P	P	16 45 30.6	-1.1
	comp=Z,20nm,0.6s,baz=178,slow=4.8						
VNA1	Neumayer--Stat	94.18	181	⇑P	P	16 45 31.6	-1.4
	comp=Z,5.3nm,0.4s						
LOHW	Long Hollow	94.74	46	P	P	16 45 36.1	-0.3
A36M	Sachs Harbour	97.70	17	P	Pdif	16 45 49.7	+0.8
A36M				IAmb	IAmb	16 47 50.9	
	comp=Z,4.2nm,1.1s						
MKAR	Makanchi Array	97.76	316	P	Pdif	16 45 50.0	+0.2
	comp=Z,1.7nm,0.7s,baz=93,slow=5.8,SNR=18						
	comp=Z,1.7nm,0.7s						
MKAR	Makanchi Array	97.76	316	P	P	16 45 49.6	-0.1
MAKZ	Makanchi	97.97	316	P	Pdif	16 45 51.8	+1.1
MAKZ				IAmb	IAmb	16 47 20.5	
	comp=Z,6.7nm,1.7s						
ZAA0	Zalesovo Array	97.98	324	P	P	16 45 49.9	-0.6
ZAA0				IAmb	IAmb	16 45 50.6	
	comp=Z,3.6nm,0.8s						
ZALV	Zalesovo Beam	97.98	324	P	P	16 45 49.5	-0.9
	comp=Z,2.6nm,0.6s,baz=120,slow=4.5,SNR=16						
	comp=Z,2.6nm,0.6s						
ZALV	Zalesovo Beam	97.98	324	P	P	16 45 49.8	-0.7
YKA	Yellowknife Ar	98.01	27	P	P	16 45 49.0	-1.4
	comp=Z,0.4nm,0.7s,baz=262,slow=5.4,SNR=8.9						
	comp=Z,0.4nm,0.7s						
YKA	Yellowknife Ar	98.01	27	P	P	16 45 49.1	-1.3
NRIK	Noril'sk	100.70	339	P	Pdif	16 46 01.6	-0.7
	comp=Z,2.5nm,0.8s,baz=94,slow=2.9,SNR=7.3						
KURBB	Kurchatov Arra	101.01	320	P	Pdif	16 46 03.5	-0.6
	comp=Z,0.4nm,0.8s,baz=95,slow=4.6,SNR=3.0						
ARCES	ARCESS Array B	120.88	345	PKP	PKPdf	16 51 04.7	-1.0
	comp=Z,2.9nm,0.5s,baz=62,slow=1.9,SNR=42						
RAYN	Ar Rayn	124.95	288		PKPdf	16 51 14.6	-0.3
FINES	FINESS Array B	126.35	338	PKP	PKPdf	16 51 15.8	-0.6
	comp=Z,5.8nm,1.1s,baz=72,slow=9.1,SNR=5.9						
NOA	NORSAR Array B	131.25	345	PKP	PKPdf	16 51 25.6	-0.1
	comp=Z,0.7nm,0.8s,baz=52,slow=2.3,SNR=3.6						
CONA	Conrad Observa	139.93	330	ePKP	PKPdf	16 51 42.8	+0.4
	comp=Z,5.0nm,1.5s						
GERES	GERESS Array B	140.26	333	PKP	PKPdf	16 51 42.4	-0.6
	comp=Z,0.8nm,0.7s,baz=40,slow=3.2,SNR=5.5						
SOKA	Soboth	141.21	329		PKPpre	16 51 38.6	
SOKA	Soboth	141.21	329	ePKP	PKPpre	16 51 38.6	
	comp=Z,6.8nm,1.9s						
LESA	Schwarzleotal	141.78	332		PKPpre	16 51 41.4	
LESA	Schwarzleotal	141.78	332	ePKP	PKPpre	16 51 41.4	
	comp=Z,4.7nm,1.0s						
ABTA	Abfaltersbach	142.36	332		PKPpre	16 51 42.4	
ABTA	Abfaltersbach	142.36	332	i PKP	PKPpre	16 51 42.4	
	comp=Z,7.8nm,1.6s						
RETA	Reutte	142.57	334		PKPpre	16 51 41.6	
RETA	Reutte	142.57	334	ePKP	PKPpre	16 51 41.6	
	comp=Z,6.7nm,1.7s						
SQTA	Sankt Quirin	142.58	333		PKPpre	16 51 42.9	
SQTA	Sankt Quirin	142.58	333	i PKP	PKPpre	16 51 42.9	
	comp=Z,8.5nm,1.7s						
FETA	Feichten	142.95	333		PKPdf	16 51 45.1	-2.8
FETA	Feichten	142.95	333	i PKP	PKPdf	16 51 45.1	-2.8
	comp=Z,5.5nm,0.7s						
DAVA	Damuels	143.10	334		PKPbc	16 51 45.1	-0.3
DAVA	Damuels	143.10	334	ePKP	PKPbc	16 51 45.1	-0.3
	comp=Z,6.9nm,0.7s						
TUE	Stuetta	143.97	334		PKPbc	16 51 48.1	+0.2
FDMO	Fiordimonte	144.74	327		PKPbc	16 51 50.1	-0.1
SENIN	Lac Senin/Sane	144.89	336		PKPbc	16 51 51.0	+0.1
KEST	Kesra	151.78	320	PKPbc	PKiKP	16 52 09.5	-0.1
	comp=Z,5.4nm,0.7s,baz=63,slow=4.5,SNR=9.8						
ESDC	Sonseca Array	154.62	344	PKPab	PKPab	16 52 30.7	+0.4
	comp=Z,2.5nm,1.0s,baz=15,slow=3.6,SNR=6.5						

DJA 15 16:54:33.3±1.2**,3°S**±5°×**14°0E**±°**,h21**^{km}±15^{km}**,M3.7**/6**,**
mb4.0/2**,MLv3.6**/6**,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	Genyem	0.74	7	P	Pb	16 54 47.8	+0.3
GENI				S	Sn	16 54 58.7	-0.4
JAY	Jayapura	1.02	38	P	Pb	16 54 52.1	-0.2
WAMI	Wamena	1.47	248	P	Pn	16 54 57.1	-1.5
SMPI	Sarmi	1.91	314	P	Pn	16 55 04.9	+0.3
SRPI	Serui, Papua	4.10	291	P	Pn	16 55 34.7	-0.1
FAKI	Fak Fak	7.83	273	P	Pn	16 56 25.7	-0.4
	10nm,0.8s						

UCR ***15*** *16:57:56.1±1.1, 7°.35N×82°.60W, h10^{km}±9^{km}, MW3.9*
UPA ***15*** *16:57:57.3±1.4, 7°.33N×82°.58W, h27^{km}±12^{km}, ML4.0,*
MW3.9
RSNC ***15*** *16:58:02.7±0.6, 7°N±3°×8°2W±°, h123^{km}±18^{km}, M6.3,*
mb3.8, mB6.5, ML3.2, Mw(mB)6.3
ISC 15 16:57:55.2±1.4**,7°.22N**±0°.05×**82°.64W**±0°.04**,h31**^{km}±13^{km}**,**
n93,σ**1^s.90**/133**,South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMNES	Limones	0.90	346	eP	Pb	16 58 11.8	-0.6
PTPA	Petro Terminal	1.00	347	eP	Pn	16 58 13.8	+0.6
PTPM	Petroterminale	1.00	346	eP	Pn	16 58 13.1	-0.1
PTPM				eS	Sb	16 58 25.3	-1.7
ARIEL	Armuelles	1.08	349	eP	Pb	16 58 18.9	+3.5
LESP3	La Esperanza,	1.19	353	eP	Pn	16 58 15.7	0.0
LESP3				eS	Sn	16 58 28.6	-2.2
CHIR3	Chiriqui UPA,	1.20	15	eP	Pn	16 58 15.9	-0.2
CHIR3				eS	Sn	16 58 30.0	-1.4
DVD	David	1.22	9	eP	Pn	16 58 16.2	-0.1
DVD				eS	Sn	16 58 31.2	-0.5
LOMA3	Las Lomas, Chi	1.23	11	eP	Pn	16 58 16.3	0.0
LOMA3				eS	Sn	16 58 29.9	-2.0
LPPC	Paso Canoas	1.32	351	eP	Pn	16 58 17.2	-0.4
LPPC				eS	Sn	16 58 33.0	-1.2
PIRO	Carate, Puerto	1.36	330	eP	Pn	16 58 18.2	0.0
PIRO				eS	Sn	16 58 35.0	-0.2
PIRO	Carate, Puerto	1.36	330	eP	Pn	16 58 18.1	-0.1
PIRO				eS	Sn	16 58 34.6	-0.7
JEFFS	S de V. Baru	1.44	4	eP	Pn	16 58 19.8	+0.4
NELY	Ciudad Neily	1.45	348	eP	Pn	16 58 19.9	+0.5
NELY				eS	Sn	16 58 37.1	-0.3
PSOM3	Paja de Sombre	1.49	12	eP	Pn	16 58 20.0	+0.1
PSOM3				eS	Sn	16 58 37.5	-0.9
GMAL	Guarumal, Vera	1.49	69	eP	Pn	16 58 20.7	+0.7
GMAL				eS	Sn	16 58 37.2	-1.2
GMAL	Guarumal, Vera	1.49	69	eP	Pn	16 58 20.1	+0.1
CLLRA	Cordillera,	1.51	1	eP	Pn	16 58 20.7	+0.2
EDAD	Golfito	1.51	340	eP	Pn	16 58 20.2	-0.1
EDAD				eS	Sn	16 58 37.9	-1.1
BQTLY	Boquete Panama	1.54	7	eP	Pn	16 58 20.1	-0.6
TBS2		1.56	359	eP	Pn	16 58 22.1	+1.0
BRU2	Volcan	1.56	358	eP	Pn	16 58 21.5	+0.4
BRU2				AMP		16 58 21.8	
	comp=Z,3µm,0.2s						
BRU2				eS	Sn	16 58 40.6	+0.2
BRU2	Volcan	1.56	358	eP	Pn	16 58 21.4	+0.3
BRU2				eS	Sn	16 58 40.5	+0.1
SCLRA	Santa Clara, W	1.61	355	eP	Pn	16 58 22.5	+0.8
VITO	San Vito	1.62	348	eP	Pn	16 58 23.2	+1.4
VITO				eS	Sb	16 58 43.1	-1.6
RSUS3	Rio de Jesus,	1.65	63	eP	Pn	16 58 23.0	+0.9
RSUS3				eS	Sn	16 58 42.0	-0.3
MARI3	Mariato, Verag	1.69	75	eP	Pn	16 58 23.7	+1.0
MARI3				eS	Sn	16 58 43.9	+0.7
MESA3	La Mesa, Verag	1.71	57	eP	Pn	16 58 23.8	+0.8
MESA3				eS	Sn	16 58 44.3	+0.5
RBALA	Bur	1.71	16	eP	Pn	16 58 23.5	+0.4
PBNVO	Pueblo Nuevo,	1.72	15	eP	Pn	16 58 23.1	0.0
ALCO	Alturas Coton,	1.73	354	eP	Pn	16 58 23.8	+0.4
CACAO	El Cacao, Vera	1.77	86	eP	Pn	16 58 24.3	+0.6
CACAO				eS	Sn	16 58 45.1	-0.1
CHGR2	Aguacate	1.77	16	eP	Pn	16 58 24.2	+0.4
CHGR2				eS	Sn	16 58 42.9	-2.5
KKNTU	Kakintº	1.81	27	eP	Pn	16 58 24.9	+0.6
EDP2	Potrero Grande	1.86	343	eP	Pn	16 58 26.4	+1.4
FIMO	Fila Mora	1.89	338	eP	Pn	16 58 26.9	+1.3
BURE	Buenos Aires	2.06	340	eP	Pn	16 58 29.2	+1.4
DRK0	Durika	2.12	344	eP	Pn	16 58 29.6	+0.8
DRK0				eS	Sn	16 58 54.7	+0.6
DRK0	Durika	2.12	344	eP	Pn	16 58 29.6	+0.8
EDPE	Pejibaye, P	2.13	334	eP	Pn	16 58 30.1	+1.2
CRIS3	El Cristo, Coc	2.25	63	eP	Pn	16 58 31.3	+0.9
CHIT3	Chitre	2.32	72	eP	Pn	16 58 32.9	+1.5
CHIT3				AMP		16 58 33.9	
	comp=Z,382nm,0.1s						
CHIT3				eS	Sn	16 58 58.8	0.0
ZEDO	Perez Zeledon	2.36	334	eP	Pn	16 58 34.3	+2.3
BRIBI	Bribri	2.39	356	eP	Pb	16 58 35.4	-2.2
CEUA	Cerro Uatsi, L	2.40	353	eP	Pb	16 58 36.3	-1.6
AZU	Azuero	2.41	76	eP	Pn	16 58 34.0	+1.4
AZU				AMP		16 58 35.5	
	comp=Z,1µm,0.2s						
AZU				eS	Sn	16 59 01.1	0.0
AZU	Azuero	2.41	76	eP	Pn	16 58 34.1	+1.5
ACHO3	Achotines, Los	2.45	85	eP	Pn	16 58 34.3	+1.1
ACHO3				eS	Sn	16 59 02.2	+0.1
BUS1	Rivas	2.56	335	eP	Pn	16 58 36.5	+1.3
PNME	Penonome	2.61	61	eP	Pn	16 58 36.6	+1.2
PNME				eS	Sn	16 59 05.9	-0.2
PIEC	Cerro El Cedra	2.72	331	eP	Pn	16 58 39.0	+1.9
PICV	PH. Pirrs	2.84	327	eP	Pn	16 58 40.1	+1.5
TURIB	Turrialba	2.86	339	eP	Pn	16 58 42.8	+3.9
PCAYA	Pacayas	2.92	337	eP	Pn	16 58 42.2	+2.3
VTCV	VTCV, Calle Va	2.95	339	eP	Pn	16 58 42.1	+1.9
RAFA	San Farael, Vo	2.96	337	eP	Pn	16 58 42.6	+2.1
RESJ	San Isidro (Tu	2.96	340	eP	Pn	16 58 43.1	+2.8
ABRB	Las Abras (San	2.96	339	eP	Pn	16 58 42.9	+2.4
CVTV	Tajo	2.98	338	eP	Pn	16 58 42.9	+2.2
CVTQ	Turrialba Volc	2.98	338	eP	Pn	16 58 42.9	+2.1
VTR0	Volcan Turrial	2.99	338	eP	Pn	16 58 43.0	+2.0
CVTR	Volcan Turrial	2.99	338	eP	Pn	16 58 43.1	+2.1
VICA	Volcano Irazu	2.99	337	eP	Pn	16 58 44.3	+3.3
RVLA	Villa Bonita	3.02	342	eP	Pn	16 58 44.0	+3.0
EGUB	Earth Gu¡pi	3.12	342	eP	Pn	16 58 45.2	+2.9
EGUB				i P	Pn	16 58 45.2	+2.9
BCIP	Isla Barro Col	3.38	55	eP	Pn	16 58 46.6	+0.6
BCIP				eS	Sn	16 59 24.4	-0.6
BCIP	Isla Barro Col	3.38	55	eP	Pn	16 58 48.3	+2.4
UPA	Univ. de Panam	3.54	60	eP	Pn	16 58 48.4	+0.3
UPA				eS	Sn	16 59 25.8	-3.1
JCR1	Jicaral	3.58	317	eP	Pn	16 58 51.0	+2.2
JTS	Las Juntas de	3.81	323	eP	Pn	16 58 54.5	+2.6
JTS				eS	Sn	16 59 36.8	+1.0
JTS	Las Juntas de	3.81	323	eP	Pn	16 58 53.6	+1.7
ARE1	Arenal 1	3.82	328	eP	Pn	16 58 56.5	+4.5
VARE2	V. Arenal	3.82	328	eP	Pn	16 58 56.5	+4.4
CMARA	Lajas Hojancha	3.91	315	eP	Pn	16 58 54.9	+1.5
JUD3	Juan Diaz 3	4.10	316	eP	Pn	16 58 57.3	+1.4
TENO	El Achiote	4.16	326	eP	Pn	16 58 59.6	+2.8
CUI	Cuipilapa	4.23	324	eP	Pn	16 59 00.9	+3.2
MESS	Mesas	4.31	324	eP	Pn	16 59 01.5	+2.6
LAPC	Finca la Perla	4.48	322	eP	Pn	16 59 03.9	+2.9
PTAC	Punta Ardita,	4.79	91	P	Pn	16 59 05.1	-0.3
PTAC				S	Sn	16 59 54.5	-5.4
PIZC	Pizarro, Choco	5.71	113	P	Pn	16 59 17.3	-0.7
PIZC				S	Sn	17 00 17.6	-4.9
GR1C	Gorgona, Isla	6.11	133	P	Pn	16 59 25.5	+1.9
GR1C				S	Sn	17 00 31.8	-0.8
DBBC	Dabeiba	6.38	91	P	Pn	16 59 28.1	+0.8
DBBC				S	Sn	17 00 38.7	-0.6
CBOC	Ciudad Bolivar	6.72	101	P	Pn	16 59 33.1	+1.0
	comp=Z,5.8nm,0.8s						
CBOC				S	Sn	17 00 45.0	-2.7
	comp=Z,5.8nm,0.8s						
YOTC	Yotoco, Valle	7.04	117	P	Pn	16 59 38.2	+1.8
	comp=Z,3.5nm,0.5s						
YOTC				S	Sn	17 00 53.3	-2.3
	comp=Z,3.5nm,0.5s						
HELC	Santa Helena	7.13	98	P	Pn	16 59 40.1	+2.2
	comp=Z,9.1nm,0.8s						
HELC				S	Sn	17 01 00.3	+2.1
	comp=Z,9.1nm,0.8s						
JAMC	Jamundi, Valle	7.15	124	P	Pn	16 59 39.2	+1.2
	comp=Z,4.6nm,0.7s						
JAMC				S	Sn	17 00 58.7	+0.3
	comp=Z,4.6nm,0.7s						
BBAC	Balboa, Cauca	7.45	134	P	Pn	16 59 46.5	+4.3
	comp=Z,664nmcomp=Z,5.1nm,0.7s						
BBAC				S	Sn	17 01 04.8	-1.0
	comp=Z,664nmcomp=Z,5.1nm,0.7s						
GUY2C	Guyana, Caldas	7.50	105	P	Pn	16 59 45.6	+2.6
	comp=Z,11nm,0.7s						
GUY2C				S	Sn	17 01 00.7	-6.6
	comp=Z,11nm,0.7s						
POPC	Popayan, Colom	7.54	128	P	Pn	16 59 46.8	+3.4
	comp=Z,5.2nm,0.7s						
POPC				S	Sn	17 01 06.7	-1.4
	comp=Z,5.2nm,0.7s						
CMBC	Cumbal	7.87	142	P	Pn	16 59 48.9	+0.8
NORC	Norcasia	7.89	102	P	Pn	16 59 51.2	+3.1
NORC				S	Sn	17 01 18.5	+2.0
GCUF	Volcan Galeras	7.96	138	P	Pn	16 59 53.9	+4.5
GCUF				S	Sn	17 01 18.6	0.0
ORTC	Ortega, Tolima	8.06	114	P	Pn	16 59 54.6	+4.3
	comp=Z,10nm,0.6s						
ORTC				S	Sn	17 01 23.6	+3.1
	comp=Z,10nm,0.6s						

IDC 15 17:19:42.0±1.4**,15°.02S**×**174°.36W,h0**^{km}**,mb3.8**/4**,**
mbtmp3.8/4**,Error ellipse: s-maj=47.4km s-min=35.5km**
az=130.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	49.03	257	P	P	17 28 31.5	+0.4
	0.4nm,0.7s,baz=95,slow=8.2,SNR=7.4						
	0.4nm,0.7s						
ASAR	Alice Springs	49.35	252	P	P	17 28 33.6	+0.1
	2.4nm,0.5s,baz=89,slow=7.6,SNR=120						
ASAR				PcP	PcP	17 29 55.3	-1.0
	0.4nm,1.0s,baz=84,slow=3.4,SNR=2.0						
	2.4nm,0.5s						
QSPA	South Pole Qui	75.02	180	P	P	17 31 25.6	+0.3
	0.4nm,0.6s,baz=14,slow=12,SNR=5.8						
	0.4nm,0.6s						
ILAR	Eielson Array	82.25	12	P	P	17 32 05.8	+1.0
	0.3nm,0.6s,baz=207,slow=5.8,SNR=4.2						
	0.3nm,0.6s						
BRTR	Keskin Array B	145.28	321	PKPbc	PKPbc	17 39 19.3	-2.7
	0.5nm,0.4s,baz=1.9,slow=4.3,SNR=5.1						

IDC ***15*** *17:30:02.5±1.4, 4°.59S×153°.15E, h0^{km}, mb3.7/6,*
mbtmp3.7/7, ML1.4/1, Error ellipse: s-maj=45.2km
s-min=23.5km az=113.0
ISC 15 17:30:06.8±1.4**,4°.6S**±0°.2×**153°.4E**±0°.2**,h35**^{km}**,n7,**σ**0^s.91**/8**,**
mb3.6/6**,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	7.78	232	Pn	Pn	17 31 56.3	-1.4
	0.3nm,0.3s,baz=328,slow=19,SNR=1.6						
PMG				Sn	Sn	17 33 25.5	+1.0
	1.2nm,0.3s,baz=154,slow=20,SNR=11						
	2.1nm,0.7s						
WRA	Warramunga Arr	23.98	229	P	P	17 35 18.8	+0.4
	1.1nm,0.5s,baz=53,slow=10,SNR=16						
	1.1nm,0.5s						
ASAR	Alice Springs	26.66	223	P	P	17 35 43.1	+0.5
	0.4nm,0.6s,baz=56,slow=9.2,SNR=11						
	0.4nm,0.6s						
MKAR	Makanchi Array	80.59	319	P	P	17 42 16.7	+0.8
	0.2nm,0.5s,baz=99,slow=7.0,SNR=4.5						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	81.34	326	P	P	17 42 19.2	-0.5
	0.2nm,0.3s,baz=99,slow=7.4,SNR=2.4						
	0.2nm,0.3s						
QSPA	South Pole Qui	85.32	180	P	P	17 42 40.3	+0.2
	0.8nm,0.5s,baz=190,slow=1.4,SNR=18						
	0.8nm,0.5s						
BVAR	Borovoye Array	89.46	323	P	P	17 43 00.2	0.0
	0.7nm,0.6s,baz=98,slow=4.4,SNR=4.8						
	0.7nm,0.6s						

IDC ***15*** *17:42:19.8±15.0, 33°.39N×69°.93E, h0^{km}, mb3.3/2,*
mbtmp3.3/4, ML3.0/2, MS3.4/1, Error ellipse:
s-maj=246.9km s-min=95.5km az=62.0
ISC 15 17:42:16.9±7.0**,32°.5N**±0°.4×**69°.6E**±0°.7**,h35**^{km}**,n10,**
σ**2^s.20**/9**,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UCH	Uchtor	10.42	21	P	Pn	17 44 45.3	+1.2
	SNR=21						
EKS2	Erkin-Say	10.62	17	P	Pn	17 44 47.9	+1.3
	SNR=7.7						
AAK	Ala-Archa	10.79	20	P	Pn	17 44 50.1	+1.2
	SNR=5.0						
ULHL	Ulahol	11.02	27	P	Pn	17 44 52.9	+0.8
	SNR=7.8						
TKM2	Tokmak 2	11.38	23	P	Pn	17 44 57.5	+0.4
	SNR=7.3						
MKAR	Makanchi Array	17.22	31	Pn	Pn	17 46 11.8	-2.8
	0.1nm,0.3s,baz=213,slow=14,SNR=7.1						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	19.23	17	P	P	17 46 34.0	-3.8
	baz=205,slow=12,SNR=4.2						
	0.5nm,0.5s						
ZALV	Zalesovo Beam	23.99	22	P	P	17 47 28.0	+0.1
	0.4nm,0.5s,baz=221,slow=12,SNR=1.7						
	0.4nm,0.5s						
SONM	Songino Array	31.63	50	P	P	17 48 37.9	+1.3
	0.3nm,0.5s,baz=264,slow=5.6,SNR=2.1						
	0.3nm,0.5s						
OPO	Ambohidratompo	55.18	206	LR	LR	18 14 46.3	
	comp=Z,29nm,18.1s,baz=211,slow=35						

IDC 15 17:54:46.1±1.3**,7°.04N**×**126°.39E,h0**^{km}**,mb3.4**/4**,**
mbtmp3.4/4**,Error ellipse: s-maj=27.6km s-min=11.9km**
az=13.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.80	272	Pg	Pb	17 55 02.2	-0.7
	139nm,0.3s,baz=236,slow=4.9,SNR=2.9						
DAV				Lg	Lg	17 55 12.6	
	297nm,0.3s,baz=348,slow=24,SNR=9.4						
WRA	Warramunga Arr	27.93	164	P	P	18 00 38.2	-0.1
	0.7nm,0.9s,baz=340,slow=10,SNR=10						
	0.7nm,0.9s						
ASAR	Alice Springs	31.39	167	P	P	18 01 08.9	0.0
	0.1nm,0.5s,baz=342,slow=8.7,SNR=4.4						
	0.1nm,0.5s						
MKAR	Makanchi Array	54.68	324	P	P	18 04 16.3	-0.7
	0.3nm,0.7s,baz=117,slow=8.9,SNR=2.5						
	0.3nm,0.7s						
KURBB	Kurchatov Arra	58.80	326	P	P	18 04 46.3	+0.2
	0.2nm,0.3s,baz=127,slow=5.8,SNR=4.6						
	0.2nm,0.3s						

IDC ***15*** *17:57:01.4±0.5, 26°.80S×65°.50W, h0^{km}, mb4.4/15,*
mbtmp4.3/20, ML3.9/5, MS3.6/11, Error ellipse:
s-maj=16.5km s-min=12.0km az=100.0
SJA ***15*** *17:57:02.5±1.2, 26°.86S×65°.31W, h20^{km}±17^{km}, ML4.8,*
MW4.6
NEIC ***15*** *17:57:06.9±1.2, 26°.89S±0°.07×65°.37W±0°.07, h37^{km}±6^{km},*
mb5.0/217, Error ellipse: s-maj=9.8km s-min=9.5km
az=174.0
VAO ***15*** *17:57:09.4±0.6, 26°.79S×65°.26W, h47^{km}±7^{km}, mb4.5,*
Presumed earthquake
ISC 15 17:57:05.8±0.6**,26°.83S**±0°.03×**65°.51W**±0°.05**,h30**^{km}±4^{km}**,**
n232,σ**1^s.52**/152**,mb4.9**/107**,MS3.6**/10**,4C-3D,Tucuman**
Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSA	Cafayete	0.82	330	i P	Pn	17 57 18.1	-3.5
FSA				i S	Sb	17 57 28.2	-4.5
CYA	Choya	1.63	189	i P	Pn	17 57 33.1	+0.5
CYA				eS	Sb	17 57 54.0	-1.4
CYA				IAML		17 57 55.6	
	comp=Z,11µm,0.6s						
SLA	San Lorenzo	2.10	0	i P	Pn	17 57 40.8	+1.7
SLA				i S	Sb	17 58 11.0	+2.0
TINO	Tinogasta	2.20	236	i P	Pn	17 57 42.5	+2.0
TINO				eS	Sb	17 58 12.6	+0.6
AZAP	Zapla	2.62	9	i P	Pn	17 57 47.0	+0.6
AZAP				eS	Sb	17 58 25.8	+1.6
AZAP				IAML		17 58 29.1	
	comp=Z,10µm,0.4s						
SALTA		2.70	344	i P	Pn	17 57 50.9	+3.3
SALTA				i S	Sb	17 58 27.7	+1.2
SALTA				IAML		17 58 35.9	
	comp=Z,3µm,0.6s						
ACLC	CERRO LA CRUZ	2.88	206	i P	Pn	17 57 50.5	+0.6
ACLC				IAML		17 58 41.4	
	comp=Z,832nm,0.4s						
VCA	Vinchina	3.05	231	i P	Pn	17 57 54.0	+1.9
VCA				eS	Sb	17 58 35.6	-0.8
VCA				IAML		17 58 41.4	
	comp=Z,5µm,0.6s						
AC02	Maricunga	3.23	269		Pn	17 57 57.7	+2.8
APLL	PUNTA DE LOS L	3.67	194	i P	Pn	17 58 00.3	-0.2
APLL				i S	Sn	17 58 42.8	0.0
APLL				IAML		17 58 59.0	
	comp=Z,2µm,0.6s						
GO02	Mina Guanaco	4.03	293		Pn	17 58 08.6	+2.9
AVFE	Valle Fertil	4.18	204	i P	Pn	17 58 07.6	-0.1
AVFE				IAML		17 59 31.7	
	comp=Z,507nm,0.7s						
GO03	Copiapo	4.27	259		Pn	17 58 10.9	+2.0
AC06	Mina Casimiro	4.35	262		Pn	17 58 11.8	+1.9
ACHE	Chepes	4.43	193	i P	Pn	17 58 10.9	-0.3
AF01	San Pedro de A	4.55	327		Pn	17 58 14.3	+1.4
TCA	Tanti	4.57	170	i P	Pn	17 58 13.0	+0.1
TCA				i S	Sn	17 59 04.2	-0.9
TCA				IAML		17 59 36.1	
	comp=Z,1µm,0.4s						
AC01	Pan de Azucar	4.61	277		Pn	17 58 15.4	+1.9
YJA	Yavi	4.63	0	i P	Pn	17 58 16.7	+2.5
AC05	El Transito	4.67	243		Pn	17 58 16.3	+1.9
AC05	El Transito	4.67	243	i P	Pn	17 58 17.1	+2.7
AROD	Rodeo	4.82	225	i P	Pn	17 58 19.3	+2.6
ACCO	Cerro Coronel	4.88	219	i P	Pn	17 58 18.9	+1.4
PB14	IPOC Station P	4.92	295		Pn	17 58 19.4	+1.4
LCO	Las Campanas	5.08	243		Pn	17 58 21.6	+1.4
LCO	Las Campanas	5.08	243	i P	Pn	17 58 21.9	+1.7
LCO				IAML		17 59 53.5	
	comp=Z,189nm,2.1s						
CO01	Juntas del Tor	5.11	231		Pn	17 58 22.5	+1.9
CO01	Juntas del Tor	5.11	231	i P	Pn	17 58 23.3	+2.7
CO01				IAML		17 59 51.2	
	comp=Z,183nm,1.2s						
AC04	Llanos de Chal	5.12	253		Pn	17 58 21.7	+1.1
RTLL	Cerro Villicun	5.18	209	i P	Pn	17 58 22.9	+1.5
RTLL				IAML		18 00 02.6	
	comp=Z,955nm,0.9s						
CFA	Coronel Fontan	5.32	206	Pn	Pn	17 58 23.4	0.0
	comp=Z,3.9nm,0.3s,baz=26,slow=14,SNR=50						
CFA				Sn	Sn	17 59 27.6	+3.9
	comp=Z,28nm,0.3s,baz=185,slow=23,SNR=5.9						
CFA				Lg	Lg	17 59 49.0	
	comp=Z,29nm,0.3s,baz=297,slow=19,SNR=6.3						
	comp=Z,14nm,0.4s						
CFA	Coronel Fontan	5.32	206	i P	Pn	17 58 23.7	+0.4

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CFA                                   IAML             18 00 07.7
      comp=Z,349nm,0.5s
PB06  IPOC Station P      5.52 317           Pn        17 58 28.2 +2.1
PB10  IPOC Station P      5.63 305           Pn        17 58 29.9 +2.4
GO04  Tololo Observa      5.72 233           Pn        17 58 30.7 +1.8
PB05  IPOC Station P      5.81 312           Pn        17 58 32.3 +2.2
CO03  El Pedregal         6.05 227           Pn        17 58 34.5 +1.1
PB09  IPOC Station P      6.05 325           Pn        17 58 36.0 +2.6
PB07  IPOC Station P      6.46 321           Pn        17 58 41.1 +2.0
CO06  Fray Jorge          6.60 233           Pn        17 58 40.7 -0.1
CPUP  Villa Florida       7.34  88   Pn      Pn        17 58 50.2 -0.9
      comp=Z,0.3nm,0.3s,baz=262,slow=12,SNR=19
CPUP                                 Lg      Lg        18 00 55.0
      comp=Z,5.6nm,0.3s,baz=345,slow=18,SNR=5.5
      comp=Z,1.5nm,0.4s
CPUP  Villa Florida       7.34  88           Pn        17 58 49.6 -1.4
CPUP  Villa Florida       7.34  88   eP      Pn        17 58 49.8 -1.2
MT16  CCHEN               7.88 212           Pn        17 58 59.0 +0.6
MT02  Curacav             8.05 216           Pn        17 58 59.3 -1.5
PSAL  Palomas, Salto      8.12 123   eP      Pn        17 59 01.5 -0.2
BDQN  Bodoquena, MS      10.24  54   eP      Pn        17 59 32.0 +1.3
AMBA  Amambai (Brazi     10.31  70   eP      Pn        17 59 31.3 -0.5
LPAZ  La Paz             10.77 346   Pn      Pn        17 59 40.3 +1.8
      comp=Z,0.3nm,0.3s,baz=155,slow=11,SNR=25
LPAZ  La Paz             10.77 346           Pn        17 59 39.5 +1.0
LPAZ  La Paz             10.77 346   eP      Pn        17 59 40.5 +2.0
BI02  San Fabin de       10.96 205           Pn        17 59 40.8 +0.1
AQDB  Aquidauana         10.99  57           Pn        17 59 39.4 -1.6
AQDB  Aquidauana         10.99  57   eP      Pn        17 59 40.2 -0.9
CPSB  Cacapava Do Su     11.19 111   eP      Pn        17 59 42.5 -1.3
SIV   San Ignacio        11.55  22   Pn      Pn        17 59 48.8 +0.1
      comp=Z,0.1nm,0.3s,baz=196,slow=10,SNR=13
SIV                                  Sn      Sn        18 02 02.5 +5.7
      comp=Z,0.1nm,0.3s,baz=289,slow=19,SNR=3.0
SIV                                  Lg      Lg        18 03 07.6
      comp=Z,0.1nm,0.3s,baz=276,slow=20,SNR=1.4
      comp=Z,2.8nm,0.4s
TRQA  Tornquist          11.59 166           Pn        17 59 47.4 -1.8
ITAB  Concordia          11.94  95   eP      Pn        17 59 54.9 +0.9
PTGB  Pitanga            12.30  83   eP      Pn        17 59 59.0 -0.1
SALV  Santo Antonio      14.20  42   eP      Pn        18 00 26.0 +1.1
PLCA  Paso Flores        14.48 195   Pn      Pn        18 00 28.1 -0.7
      comp=Z,0.1nm,0.3s,baz=17,slow=14,SNR=6.2
PLCA                                 Lg      Lg        18 04 40.7
      comp=Z,0.3nm,0.3s,baz=295,slow=15,SNR=3.1
PLCA                                 LR      LR        18 06 09.2
      comp=Z,177nm,20.4s,baz=16,slow=38
      comp=Z,1.0nm,0.8s
PLCA  Paso Flores        14.48 195   Pn      Pn        18 00 28.3 -0.5
PLCA  Paso Flores        14.48 195   eP      P         18 00 36.7 +1.5
VILB  Vilhena            14.68  21           P         18 00 37.6 +0.3
VILB  Vilhena            14.68  21   eP      P         18 00 35.1 -2.2
PDRB  Porto dos Gac      17.25  30   eP      P         18 01 07.0 +1.2
GO07  Milladeo Hill,     17.55 200           P         18 01 09.4 +0.3
IPMB  Ipameri, GO        18.24  65   eP      P         18 01 19.9 +3.0
CLDB  Colider            18.32  32   eP      P         18 01 18.6 +0.9
COYC  Coyhaique          19.43 194   P       P         18 01 29.6  0.0
BDFB  Brasilia           19.72  59   P       Pn        18 01 33.8 -1.0
      comp=Z,0.2nm,0.3s,baz=228,slow=15,SNR=6.6
BDFB                                 Lg      Lg        18 07 27.3
      comp=Z,0.4nm,0.3s,baz=338,slow=19,SNR=1.5
      comp=Z,5.1nm,0.8s
SNDB  Serra Nova Dou     19.93  45   eP      Pn        18 01 36.5 -0.6
NPGB  Novo Progresso     21.92  28   eP      P         18 01 55.4 -1.4
SDBA  SAO DESIDERIO      24.08  57   eP      P         18 02 20.6 +1.7
SMTB  Santa Maria do     24.65  47   eP      P         18 02 24.2 +0.2
ROSC  El Rosal           32.61 344   LR      LR        18 18 45.8
      comp=Z,88nm,20.6s,baz=220,slow=40
MDP   Montagnes des      34.10  23   LR      LR        18 18 55.8
      comp=Z,98nm,19.5s,baz=124,slow=39
SDV   Santo Domingo      35.84 351   LR      LR        18 20 54.8
      comp=Z,83nm,18.4s,baz=242,slow=40
SDV   Santo Domingo      35.84 351           P         18 04 01.8 -1.4
SDV   Santo Domingo      35.84 351   eP      P         18 04 00.7 -2.5
JTS   Las Juntas de      41.44 330   LR      LR        18 21 18.1
      comp=Z,45nm,19.9s,baz=107,slow=35
SJG   San Juan           44.67 359   LR      LR        18 25 53.2
      comp=Z,53nm,20.9s,baz=168,slow=39
MTO3  Montecristo        47.08 328   P       P         18 05 35.9 +0.6
MTO3                                 IAmb    IAmb      18 05 36.8
      comp=Z,17nm,0.8s
CCIG  Comitan            50.05 326   P       P         18 05 57.9 -0.2
CCIG                                 IAmb    IAmb      18 05 59.2
      comp=Z,9.2nm,0.8s
BELA  Belgrano 2         53.07 172           P         18 06 20.3 +0.5
BELA                                 IAmb    IAmb      18 06 24.7
      comp=Z,16nm,0.8s
VNA3  Neumayer Olymp     54.05 161  ⇑P       P         18 06 25.9 -1.2
      comp=Z,2.5nm,0.8s
TLIG  Tlapa              54.56 320   P       P         18 06 32.2 +0.7
TLIG                                 IAmb    IAmb      18 06 34.0
      comp=Z,7.7nm,0.8s
VNA2  Neumayer--Watz     54.61 160  ⇑P       P         18 06 32.9 +1.7
      comp=Z,3.1nm,0.6s,baz=279,slow=7.0
SNAA  Sanae              56.25 160  ⇑P       P         18 06 41.9 -1.1
      comp=Z,41nm,0.6s
SNAA  Sanae              56.25 160   P       P         18 06 43.8 +0.8
      comp=Z,3.4nm,1.1s,baz=288,slow=13,SNR=8.5
      comp=Z,3.4nm,1.1s
SNAA  Sanae              56.25 160   P       P         18 06 42.5 -0.4
TROLL Troll, Antarti     57.96 160  ⇑P       P         18 06 55.6 +0.4
      comp=Z,168nm,0.7s
ZAIG  Zacatecas          60.95 320   IAmb    IAmb      18 07 19.5
      comp=Z,13nm,1.2s
QSPA  South Pole Qui     63.39 180   P       P         18 07 33.0 +0.7
      comp=Z,5.1nm,0.8s,baz=163,slow=2.1,SNR=17
QSPA                                 LR      LR        18 38 05.2
      comp=Z,59nm,18.9s,baz=196,slow=39
      comp=Z,5.1nm,0.8s
QSPA  South Pole Qui     63.39 180   P       P         18 07 32.2 -0.1
X48A  Hartselle          64.27 340   P       P         18 07 38.0 -0.2
X48A                                 IAmb    IAmb      18 07 38.8
      comp=Z,18nm,0.9s
ELIB  Princess Elisa     64.40 160   dP      P         18 07 39.1 +0.2
      comp=Z,2.9nm,0.7s
TKL   Tuckaleechee C     64.50 344   P       P         18 07 39.2 -0.5
      comp=Z,4.1nm,0.8s,baz=161,slow=18,SNR=3.8
      comp=Z,4.1nm,0.8s
SWET  Sewanee            64.66 342   IAmb    IAmb      18 07 41.3
      comp=Z,15nm,0.9s
HNDO  Hondo              64.70 328   IAmb    IAmb      18 07 43.2
      comp=Z,16nm,1.1s
DRIO  Del Rio            65.27 326           P         18 07 45.0 +0.2
DRIO                                 IAmb    IAmb      18 07 46.0
      comp=Z,12nm,1.3s
V48A  Smith Brothers     65.40 341   P       P         18 07 45.1 -0.4
JCT   Junction City      65.74 328   IAmb    IAmb      18 07 49.2
      comp=Z,14nm,0.9s
BRDY  Brady              66.04 329   IAmb    IAmb      18 07 50.8
      comp=Z,9.2nm,0.9s
WVT   Waverly            66.06 340           P         18 07 48.7 -1.1
WVT   Waverly            66.06 340   P       P         18 07 49.1 -0.7
WVT                                  pP      sP        18 08 01.5 -2.0
MIAR  Mount Ida          66.58 335   IAmb    IAmb      18 07 54.2
      comp=Z,19nm,1.1s
OZNA  Ozona              66.75 327   IAmb    IAmb      18 07 55.6
      comp=Z,14nm,1.2s
TXAR  Lajitas Array      66.75 324   P       P         18 07 55.2 +0.7
      comp=Z,2.4nm,0.9s,baz=146,slow=8.3,SNR=17
      comp=Z,2.4nm,0.9s
TXAR  Lajitas Array      66.75 324   P       P         18 07 55.1 +0.6
WHAR  Wooly Hollow       66.77 336   IAmb    IAmb      18 07 55.2
      comp=Z,9.7nm,0.9s
PLPT  Palo Pinto         67.02 330   IAmb    IAmb      18 07 57.2
      comp=Z,13nm,0.9s
LCAR  Lake Charles       67.07 338   IAmb    IAmb      18 07 56.8
      comp=Z,9.0nm,1.0s
FCAR  Ozark Folk Cen     67.25 337   IAmb    IAmb      18 07 57.7
      comp=Z,8.5nm,0.8s
DBIC  Dimbokro           67.47  70   P       P         18 07 58.6 -0.6
      comp=Z,2.1nm,0.5s,baz=254,slow=5.8,SNR=4.8
DBIC                                 LR      LR        18 36 56.4
      comp=Z,66nm,18.8s,baz=326,slow=36
      comp=Z,2.1nm,0.5s
DBIC  Dimbokro           67.47  70   P       P         18 07 58.3 -0.9
DBIC                                 IAmb    IAmb      18 08 19.1
      comp=Z,32nm,1.6s
WCI   Wyandotte Cave     67.58 342   P       P         18 07 58.3 -1.1
WCI                                  IAmb    IAmb      18 07 59.5
      comp=Z,15nm,0.9s
WCI   Wyandotte Cave     67.58 342   P       P         18 07 58.5 -0.9
WCI                                  sP      sP        18 08 15.2 +2.0
P53A  Whipple            67.61 347   IAmb    IAmb      18 08 00.9
      comp=Z,19nm,0.9s
MNHN  Monahans           67.89 326   IAmb    IAmb      18 08 03.2
      comp=Z,18nm,0.9s
WTFS  Witchita Falls     67.89 331   IAmb    IAmb      18 08 02.8
      comp=Z,18nm,0.9s
HHAR  Hobbs              68.25 336   IAmb    IAmb      18 08 04.7
      comp=Z,22nm,1.1s
APMT  Aspermont          68.26 329   IAmb    IAmb      18 08 05.2
      comp=Z,18nm,0.9s
X34A  Smith Ranch, M     68.33 332   IAmb    IAmb      18 08 05.7
      comp=Z,23nm,1.1s
U38A  Gravette           68.56 335   IAmb    IAmb      18 08 06.5
      comp=Z,11nm,0.8s
FVM   French Village     68.57 339   IAmb    IAmb      18 08 06.1
      comp=Z,15nm,0.7s
VHRN  Van Horn           68.59 324   IAmb    IAmb      18 08 07.4
      comp=Z,17nm,1.6s
WMOK  Wichita Mounta     68.86 331   IAmb    IAmb      18 08 09.1
      comp=Z,16nm,1.4s
CCM   Cathedral Cave     68.90 338           P         18 08 07.4 -0.3
CCM   Cathedral Cave     68.90 338   P       P         18 08 07.6 -0.1
CCM                                  sP      sP        18 08 24.0 +2.5
DKNS  Dickens            68.92 329   IAmb    IAmb      18 08 09.0
      comp=Z,12nm,1.1s
T35A  Sooner Cattle      69.79 334   IAmb    IAmb      18 08 15.1
      comp=Z,21nm,1.1s
CROK  Carrier            70.03 333   IAmb    IAmb      18 08 15.4
      comp=Z,15nm,0.8s
MSTX  Muleshoe           70.04 328   IAmb    IAmb      18 08 16.2
      comp=Z,21nm,1.0s
ELIS  Ellis County       70.26 331   IAmb    IAmb      18 08 17.9
      comp=Z,17nm,0.9s
AMTX  Amarillo           70.27 329   IAmb    IAmb      18 08 18.1
      comp=Z,15nm,1.0s
SYO   Syowa Base         70.44 158⇓eP      P         18 08 13.0 -3.8
SYO   Syowa Base         70.44 158⇓epP     pP        18 08 24.9 -1.5
P40A  Paris              70.50 338   IAmb    IAmb      18 08 18.2
      comp=Z,20nm,1.0s
HSIG                     70.58 319           P         18 08 18.4 +0.2
HSIG                                 IAmb    IAmb      18 08 20.4
      comp=Z,18nm,1.2s
PH02  Texas Public H     70.82 329   IAmb    IAmb      18 08 56.1
      comp=Z,37nm,0.4s
P38A  Dawn               71.09 337   IAmb    IAmb      18 08 21.7
      comp=Z,30nm,1.5s
121A  Cookes Peak, D     71.44 323   IAmb    IAmb      18 08 26.2
      comp=Z,11nm,0.8s
KSU1  Kansas State U     71.73 335   IAmb    IAmb      18 08 25.9
      comp=Z,22nm,1.0s
VNDA  Vanda              72.15 190   P       P         18 08 28.4 +1.3
      comp=Z,2.1nm,0.8s,baz=160,slow=7.3,SNR=6.0
VNDA                                 LR      LR        18 38 51.3
      comp=Z,35nm,18.4s,baz=140,slow=35
      comp=Z,2.1nm,0.8s
VNDA  Vanda              72.15 190   P       P         18 08 26.5 -0.5
VNDA                                 IAmb    IAmb      18 10 25.4
      comp=Z,22nm,1.8s
ABQ   Albuquerque        72.63 326   IAmb    IAmb      18 08 33.0
      comp=Z,11nm,1.0s
ANMO  Albuquerque        72.63 326   P       P         18 08 31.4 +0.7
      comp=Z,6.3nm,0.9s,baz=139,slow=6.5,SNR=18
      comp=Z,6.3nm,0.9s
ANMO  Albuquerque        72.63 326           P         18 08 31.3 +0.6
ANMO                                 IAmb    IAmb      18 08 32.9
      comp=Z,12nm,1.1s
ANMO  Albuquerque        72.63 326   P       P         18 08 31.5 +0.8
ANMO                                 sP      PcP       18 08 48.2 +0.1
TASM  ASL Pad, Albuq     72.63 326   IAmb    IAmb      18 08 33.0
      comp=Z,13nm,1.1s
TASM  ASL Pad, Albuq     72.63 326   IAmb    IAmb      18 08 33.0
      comp=Z,12nm,1.0s
TASM  ASL Pad, Albuq     72.63 326   IAmb    IAmb      18 08 33.0
      comp=Z,13nm,1.1s
TASM  ASL Pad, Albuq     72.63 326   IAmb    IAmb      18 08 33.0
      comp=Z,13nm,1.1s
N35A  Tabor              72.92 337   IAmb    IAmb      18 08 32.3
      comp=Z,14nm,0.7s
JFWS  Jewell Farm        73.04 341   IAmb    IAmb      18 08 33.5
      comp=Z,21nm,0.8s
T25A  Trinidad           73.39 328   IAmb    IAmb      18 08 37.5
      comp=Z,10nm,0.8s
214A  Organ Pipe Nat     73.82 319   P       P         18 08 38.1 +0.5
KSCO  Kaye Shedlock'     74.11 331   IAmb    IAmb      18 08 42.2
      comp=Z,17nm,0.8s
W18A  Petrified Fore     74.46 324   IAmb    IAmb      18 08 43.8
      comp=Z,14nm,1.0s
I37A  Lemond, Waseca     74.99 340   IAmb    IAmb      18 08 44.9
      comp=Z,19nm,0.8s
S22A  4UR Ranch, Cre     75.02 327   IAmb    IAmb      18 08 59.7
      comp=Z,20nm,1.8s
WUAZ  Wupatki            75.64 323   IAmb    IAmb      18 08 51.0
      comp=Z,11nm,0.9s
ECSD  EROS Data Cent     75.79 337   IAmb    IAmb      18 08 50.2
      comp=Z,19nm,0.9s
SPMN  Marine on St.      75.90 340   IAmb    IAmb      18 08 50.2
      comp=Z,22nm,1.1s
PV15  Paradox Valley     76.30 327   IAmb    IAmb      18 08 54.8
      comp=Z,11nm,1.0s
PV02  Paradox Valley     76.32 326   IAmb    IAmb      18 08 58.4
      comp=Z,44nm,1.9s
TORD  Torodi Ar. Bea     76.36  68   P       P         18 08 52.0 -0.6
      comp=Z,1.3nm,0.8s,baz=290,slow=3.0,SNR=4.3
      comp=Z,1.3nm,0.8s
PV18  Skein Mesa, Pa     76.44 326   IAmb    IAmb      18 09 45.5
      comp=Z,30nm,1.8s
PV12  Saucer Basin,      76.44 326   IAmb    IAmb      18 08 55.1
      comp=Z,8.1nm,0.8s
PV07  Paradox Valley     76.45 326   IAmb    IAmb      18 08 55.3
      comp=Z,12nm,1.0s
PV19  Morning Glory      76.52 326   IAmb    IAmb      18 08 55.6
      comp=Z,19nm,1.4s
PV22  Blue Mesa, Par     76.60 326   IAmb    IAmb      18 08 56.0
      comp=Z,17nm,1.2s
PV10  Paradox Valley     76.60 326   IAmb    IAmb      18 08 55.5
      comp=Z,9.4nm,0.8s
U15A  North Rim          76.81 323   IAmb    IAmb      18 08 57.9
      comp=Z,10.0nm,0.8s
O20A  White River Ci     77.58 328   IAmb    IAmb      18 09 01.6
      comp=Z,17nm,0.9s
SRU   San Rafael Swe     77.91 326   IAmb    IAmb      18 09 03.0
      comp=Z,11nm,0.8s
MTPU  Mount Pierson      77.95 324   IAmb    IAmb      18 09 03.7
      comp=Z,8.4nm,0.8s
CCD   Concordia, Ant     78.16 182   P       P         18 09 02.6 +0.4
P18A  Preston Nutter     78.16 326   IAmb    IAmb      18 09 05.0
      comp=Z,13nm,0.9s
CCUT  Cedar City         78.22 323   IAmb    IAmb      18 09 05.9
      comp=Z,13nm,0.9s
BOSA  Boshof             78.27 116   LR      LR        18 41 08.5
      comp=Z,40nm,20.8s,baz=320,slow=34
P17A  Butcher Ranch,     78.29 326   IAmb    IAmb      18 09 05.3
      comp=Z,11nm,1.0s
RDMU  Red Mountain       78.56 327   IAmb    IAmb      18 09 06.6
      comp=Z,14nm,0.7s
RSSD  Black Hills        78.92 333           P         18 09 06.9 +0.4
RSSD  Black Hills        78.92 333   P       P         18 09 06.6 +0.1
RSSD                                 pP      sP        18 09 18.7 -1.6
PRN   Pahroc Range       79.03 322   IAmb    IAmb      18 09 10.0
      comp=Z,12nm,1.1s
GWY   Greenwater Val     79.07 320           P         18 09 08.2 +0.8
BSUT  Blindstream Ca     79.11 327   IAmb    IAmb      18 09 10.3
      comp=Z,13nm,0.8s
PSUT  Pine Spring        79.20 323   IAmb    IAmb      18 09 10.7
      comp=Z,10nm,0.9s
AGMN  Agassiz Nation     79.58 340   IAmb    IAmb      18 09 10.8
      comp=Z,12nm,0.9s
TCUT  Toone Canyon       79.87 327   IAmb    IAmb      18 09 15.5
      comp=Z,33nm,1.7s
LBTB  Lobatse            80.04 113   LR      LR        18 41 59.7
      comp=Z,54nm,18.3s,baz=278,slow=34
EPLO  Experimental L     80.19 342   IAmb    IAmb      18 09 13.9
      comp=Z,13nm,1.0s
PDAR  Pinedale Array     80.25 329   P       P         18 09 14.6 +0.8
      comp=Z,4.0nm,0.8s,baz=116,slow=6.5,SNR=25
      comp=Z,4.0nm,0.8s
PDAR  Pinedale Array     80.25 329           P         18 09 14.1 +0.3
HWUT  Hardware Ranch     80.32 327   IAmb    IAmb      18 09 16.0
      comp=Z,11nm,0.9s
ULM   Lac du Bonnet      81.33 341   P       P         18 09 18.6 -0.4
      comp=Z,7.7nm,0.8s,baz=152,slow=5.6,SNR=10
      comp=Z,7.7nm,0.8s
ULM   Lac du Bonnet      81.33 341   IAmb    IAmb      18 09 20.0
      comp=Z,20nm,1.3s
ELK   Elko               81.54 324   P       P         18 09 21.5 +0.7
      comp=Z,4.7nm,0.8s,baz=154,slow=4.7,SNR=18
      comp=Z,4.7nm,0.8s
MOOW  Moose Ponds        81.56 329   IAmb    IAmb      18 09 26.6
      comp=Z,31nm,2.0s
NVAR  Mina Array Bea     81.57 321   P       P         18 09 21.3 +0.4
      comp=Z,1.9nm,0.9s,baz=156,slow=2.1,SNR=6.0
      comp=Z,1.9nm,0.9s
YNE   Yellowstone No     82.19 330   IAmb    IAmb      18 09 25.9
      comp=Z,14nm,1.1s
YMR   Madison River      82.37 329   IAmb    IAmb      18 09 27.6
      comp=Z,12nm,0.9s
YHL   Hebgen Lake        82.61 329   IAmb    IAmb      18 09 28.8
      comp=Z,18nm,1.5s
PNTR  Pine Nut           82.76 321   IAmb    IAmb      18 09 29.4
      comp=Z,9.8nm,0.8s
HLID  Hailey             83.18 327   IAmb    IAmb      18 09 31.6
      comp=Z,6.9nm,0.8s
DLMT  Dillon             83.65 329   IAmb    IAmb      18 09 33.6
      comp=Z,6.9nm,0.9s
ORV   Oroville           84.16 320   IAmb    IAmb      18 12 20.7
      comp=Z,20nm,1.8s
PLID  Pearl Lake         85.07 327   IAmb    IAmb      18 09 40.6
      comp=Z,6.7nm,0.8s
J08A  Circle Bar Ran     85.09 324   IAmb    IAmb      18 09 40.4
      comp=Z,8.0nm,0.8s
F10A  Beach Ranch, E     86.31 327   IAmb    IAmb      18 09 56.0
      comp=Z,6.6nm,0.8s
PINE  Pine Mountain      86.69 323   IAmb    IAmb      18 09 49.4
      comp=Z,12nm,0.9s
ESDC  Sonseca Array      87.53  43   P       P         18 09 50.1 -0.7
      comp=Z,1.6nm,1.1s,baz=256,slow=5.2,SNR=4.5
      comp=Z,1.6nm,1.1s
HAWA  Hanford            87.74 326   IAmb    IAmb      18 09 53.3
      comp=Z,9.6nm,0.9s
NEW   Newport            87.89 328   P       P         18 09 51.6 -0.7
      comp=Z,2.9nm,1.0s,baz=131,slow=7.7,SNR=4.8
      comp=Z,2.9nm,1.0s
NEW   Newport            87.89 328   IAmb    IAmb      18 10 43.4
      comp=Z,13nm,1.8s
D08A  Wollman Farm,      87.90 327   IAmb    IAmb      18 09 53.9
      comp=Z,5.4nm,0.9s
WAH2  Wahluke Slope      88.01 326   IAmb    IAmb      18 09 57.5
      comp=Z,6.9nm,1.0s
YKAW1 Yellowknife Wh     97.18 339   IAmb    IAmb      18 10 39.5
      comp=Z,5.5nm,1.2s
YKA   Yellowknife Ar     97.23 339   P       P         18 10 34.8 -0.2
      comp=Z,1.3nm,0.8s,baz=139,slow=3.7,SNR=20
      comp=Z,1.3nm,0.8s
YKA   Yellowknife Ar     97.23 339   P       P         18 10 34.7 -0.3
ASAR  Alice Springs     126.41 202   PKP     PKPdf     18 16 06.0 -0.5
      comp=Z,2.3nm,0.7s,baz=134,slow=1.6,SNR=20
ASAR  Alice Springs     126.41 202           PKPdf     18 16 06.0 -0.5
WRA   Warramunga Arr    129.68 205   PKP     PKPdf     18 16 11.8 -1.0
      comp=Z,2.6nm,0.9s,baz=149,slow=1.7,SNR=9.0
KURBB Kurchatov Arra    143.78  39   PKP     PKPdf     18 16 37.9 +0.2
      comp=Z,0.3nm,0.3s,baz=296,slow=3.0,SNR=5.4
ZALV  Zalesovo Beam     145.19  31   PKPbc   PKPdf     18 16 39.9 -0.1
      comp=Z,10nm,0.9s,baz=298,slow=4.4,SNR=40
ZALV  Zalesovo Beam     145.19  31           PKPdf     18 16 40.8 +0.8
HYB   Hyderabad         145.52  98   ePKiKP  PKiKP     18 16 44.7 -1.1
MKAR  Makanchi Array    147.75  43   PKPbc   PKPbc     18 16 47.1 -0.4
      comp=Z,3.9nm,0.9s,baz=289,slow=3.3,SNR=17
MKAR  Makanchi Array    147.75  43           PKiKP     18 16 48.6 -0.9
KAPI  Kappang           147.94 190   PKPbc   PKPbc     18 16 49.1 +0.2
      comp=Z,2.7nm,0.3s,baz=154,slow=5.0,SNR=4.3
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DJA ***15*** *17:57:18.7±0.7, 7°N±4°×12°5E±°, h10^{km}, M4.7/7, mb4.8/7, mB5.1/5, MLv4.8/6, Mw(mB)4.4/5*

IDC ***15*** *17:57:20.6±0.8, 6°.65N×124°.94E, h0^{km}, mb3.8/9, mbtmp3.8/9, MS3.3/12, Error ellipse: s-maj=17.5km s-min=10.3km az=141.0*

NEIC ***15*** *17:57:21.1±2.2, 6°.62N±0°.08×124°.98E±0°.07, h10^{km}±1^{km}, mb4.4/19, Error ellipse: s-maj=15.7km s-min=6.5km az=320.0*

ISC 15 17:57:20.8±0.5**, 6°.67N**±0°.04×**124°.99E**±0°.07**, h10^{km}, n56, σ1^{s}.84**/51**, mb4.2**/17**, MS3.2**/11**, Mindanao**

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Code  Station Name         Δ°   AZ°   Phase ID            Time     Res
                                     Op      ISC       h  m  s     ISC
DAV   Davao City (W)      0.71  56   Pg      Pg        17 57 35.1 +0.6
      1μm,0.3s,baz=262,slow=7.8,SNR=46
DAV                                  Lg      Lg        17 57 46.1
      635nm,0.3s,baz=78,slow=8.5,SNR=8.1
DAV                                  LR      LR        17 58 03.4
      comp=Z,4μm,20.4s,baz=352,slow=56
DAV   Davao City (W)      0.71  56   P       Pg        17 57 35.2 +0.6
DAV                                  S       Sb        17 57 46.6 +1.5
SGSI  Sangihe             3.01 170   P       Pb        17 58 12.3 -2.3
SGSI                                 S       Sg        17 58 56.0 -1.7
GTOI  Gorontalo           6.31 198   P       Pn        17 58 57.0 +3.0
      0.3nm74nm,0.7s
GTOI                                 S       Sn        18 00 11.8 +5.6
      0.3nm74nm,0.7s
TNTI  Ternate             6.32 158   Pn      Pn        17 58 52.7 -1.5
MRSI  Marisa              6.86 206   P       Pn        17 59 02.9 +1.3
      0.3nm906nm49nm,0.6s
MRSI                                 S       Sn        18 00 25.0 +5.2
      0.3nm906nm49nm,0.6s
TOLI2 Tolitoli            6.93 217   Pn      Pn        17 59 01.8 -0.8
TOLI2                                Sn      Sn        18 00 21.3 -0.3
LUWI  Luwuk               7.97 196   Pn      Pn        17 59 15.8 -1.0
APSI  Ampana              8.23 204   P       Pn        17 59 21.6 +1.2
      34nm,1.1s
SANI  Sanana              8.72 173   P       Pn        17 59 30.3 +3.2
      14nm,0.8s
I39PW PALAU INFRASON      9.53  84   I       I         18 53 50.0
      baz=267,slow=292,SNR=0.6
KAPI  Kappang            12.73 204   LR      LR        18 05 43.8
      comp=Z,140nm,18.4s,baz=38,slow=40
MMRI  Maumere            15.45 190   Pn      Pn        18 00 58.1 -0.9
MMRI                                 IAmb    IAmb      18 01 22.2
      comp=Z,26nm,1.1s
SOEI  Soe                16.33 183   Pn      Pn        18 01 08.9 -1.6
SOEI                                 IAmb    IAmb      18 01 45.0
      comp=Z,26nm,1.1s
BATI  Baumata            16.82 185   Pn      P         18 01 20.0 +1.3
      comp=Z,3.5nm,0.3s,baz=31,slow=1.0,SNR=9.3
YULB  Yu-li              17.00 348   Pn      Pn        18 01 17.3 -1.6
JOW   Kunigami           20.30   8   LR      LR        18 10 48.3
      comp=Z,104nm,18.4s,baz=150,slow=40
MTN   Manton Dam         20.32 163   P       P         18 01 55.5 -1.8
MTN                                  IAmb    IAmb      18 02 02.2
      comp=Z,16nm,1.3s
GUMO  Guam               20.73  69   LR      LR        18 10 40.1
      comp=Z,35nm,18.4s,baz=76,slow=38
KNRA  Kununurra          22.52 170   P       P         18 02 19.8 -1.0
KNRA                                 IAmb    IAmb      18 02 26.7
      comp=Z,43nm,1.5s
JNU   Nakatsue           26.88  11   LR      LR        18 13 29.1
      comp=Z,67nm,20.1s,baz=222,slow=36
PMG   Port Moresby       27.26 126   LR      LR        18 14 24.2
      comp=Z,49nm,20.7s,baz=344,slow=38
COEN  Coen               27.31 139   P       P         18 03 04.7 -1.3
COEN                                 IAmb    IAmb      18 03 25.6
      comp=Z,15nm,1.2s
WB0   Warramunga Arr     27.86 161   P       P         18 03 10.8 -0.1
WB0                                  IAmb    IAmb      18 03 36.4
      comp=Z,4.4nm,1.0s
LHMI  Lhok Sumawe        27.92 269   P       P         18 03 10.6 -0.9
CMAR  Chiang Mai Arr     27.94 297   LR      LR        18 14 23.4
      comp=Z,23nm,18.1s,baz=105,slow=37
WRA   Warramunga Arr     28.00 161   P       P         18 03 13.3 +1.2
      comp=Z,0.4nm,0.5s,baz=334,slow=11,SNR=6.6
      comp=Z,0.4nm,0.5s
WRA   Warramunga Arr     28.00 161   P       P         18 03 11.3 -0.8
WR8   Warramunga Arr     28.07 161   P       P         18 03 11.9 -0.8
WR8                                  IAmb    IAmb      18 03 29.8
      comp=Z,7.8nm,1.4s
JHJ   Hachijo jima 2     29.69  26   LR      LR        18 14 57.5
      comp=Z,76nm,20.4s,baz=318,slow=36
KSAR  Wonju Array Be     30.74   5   P       P         18 03 34.7 -1.5
AS31  Alice Springs      31.38 164   P       P         18 03 39.7 -2.4
ASAR  Alice Springs      31.38 164   P       P         18 03 43.7 +1.6
      comp=Z,0.6nm,0.5s,baz=340,slow=6.8,SNR=32
ASAR                                 LR      LR        18 16 14.6
      comp=Z,33nm,18.6s,baz=332,slow=36
      comp=Z,0.6nm,0.5s
ASAR  Alice Springs      31.38 164   P       P         18 03 41.1 -1.0
MJAR  Matsushiro Arr     32.10  20   LR      LR        18 16 32.2
      comp=Z,73nm,19.3s,baz=228,slow=36
USRK  Ussuriysk Ar.      37.88   8   P       P         18 04 40.2 +2.2
      comp=Z,2.7nm,0.7s,baz=195,slow=8.5,SNR=4.4
      comp=Z,2.7nm,0.7s
BBOO  Buckleboo          40.65 166   P       P         18 05 02.8 +1.5
BBOO                                 IAmb    IAmb      18 05 26.4
      comp=Z,4.5nm,0.9s
STKA  Stephens Creek     41.48 158   P       P         18 05 09.2 +1.1
      comp=Z,1.1nm,0.6s,baz=354,slow=7.4,SNR=3.8
STKA                                 LR      LR        18 23 26.8
      comp=Z,43nm,18.1s,baz=22,slow=38
      comp=Z,1.1nm,0.6s
STKA  Stephens Creek     41.48 158   P       P         18 05 07.7 -0.4
```

SONM	Songino Array	43.98	342	P	P	18 05 28.9	+0.5
	comp=Z,0.2nm,0.4s,baz=153,slow=13,SNR=1.4						
SONM				LR	LR	18 26 47.4	
	comp=Z,85nm,19.0s,baz=172,slow=40						
	comp=Z,0.2nm,0.4s						
PETK	Petropavlovsk-	53.42	24	P	P	18 06 43.0	+2.2
	comp=Z,2.0nm,0.7s,baz=222,slow=7.0,SNR=2.1						
	comp=Z,2.0nm,0.7s						
PETK	Petropavlovsk-	53.42	24	P	P	18 06 42.0	+1.2
MKAR	Makanchi Array	54.17	325	P	P	18 06 48.3	+1.9
	comp=Z,0.6nm,0.6s,baz=122,slow=7.8,SNR=7.4						
	comp=Z,0.6nm,0.6s						
MKAR	Makanchi Array	54.17	325	P	P	18 06 46.4	0.0
KURBB	Kurchatov Arra	58.34	327	P	P	18 07 17.5	+1.4
	comp=Z,1.0nm,0.8s,baz=124,slow=6.4,SNR=7.0						
	comp=Z,1.0nm,0.8s						
SIMJ	Simiganj	59.54	311	P	P	18 07 22.7	-2.2
SIMJ				IAmb	IAmb	18 07 24.8	
	comp=Z,4.5nm,1.1s						
KKAR	Karatay Array	59.91	316	P	P	18 07 27.0	-0.2
BKZ	Black Stump Fm	65.92	138	P	P	18 08 05.7	-1.5
ABKAR	Akbulak array	68.79	320	P	P	18 08 22.7	-2.5
AKTO	Aktyubinsk	70.29	321	LR	LR	18 39 39.1	
	comp=Z,81nm,19.0s,baz=210,slow=36						
D19K	Kuna River	79.03	21	P	P	18 09 25.6	+0.7
D19K				IAmb	IAmb	18 09 32.6	
	comp=Z,5.3nm,1.4s						
D20K	Etivluk River	79.61	21	P	P	18 09 29.2	+1.1
IMAR	Indian Mountai	80.39	24	P	P	18 09 31.8	-0.4
L22K	Petersville	81.46	28	P	P	18 09 38.8	+0.6
L22K				IAmb	IAmb	18 09 45.8	
	comp=Z,9.6nm,1.4s						
G24K	Hadweenzic Riv	82.94	24	P	P	18 09 46.8	+1.0
ILAR	Eielson Array	83.21	26	P	P	18 09 47.2	0.0
	comp=Z,0.3nm,0.7s,baz=254,slow=4.4,SNR=4.1						
	comp=Z,0.3nm,0.7s						

CUPWA 15 18:01:08.9±4.7, 32°.42S×118°.93E, h2^{km}±41^{km}, ML3.1,
Region: WESTERN AUSTRALIA, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CORI2	Corrigin	1.05	288	P	Pg	18 01 27.5	-1.4
CORI2				S	Sg	18 01 41.4	-1.1
KLBR	Kellerberrin	1.29	309	P	Pg	18 01 32.0	-1.6
KLBR	Kellerberrin	1.29	309	S	Sg	18 01 49.0	-1.5
PING	Pingelly	1.64	266	P	Pn	18 01 37.0	-1.7
PING	Pingelly	1.64	266	S	Sn	18 01 58.6	-1.8
MEKS	Meckering Sout	1.76	293	P	Pn	18 01 39.5	-0.9
MEKS	Meckering Sout	1.76	293	S	Sn	18 02 03.1	-0.3
BR4	Bonnie Rock 4	1.84	344	P	Pn	18 01 40.5	-1.0
BR4	Bonnie Rock 4	1.84	344	S	Sb	18 02 06.1	-0.6
MUN	Mundaring	2.35	280	P	Pn	18 01 46.2	-2.2
BLDU	Ballidu	2.61	313	P	Pn	18 01 49.7	-2.4
KMBL	Kambalda	2.72	68	P	Pn	18 01 52.0	-1.7
RKGY	Rocky Gully	2.72	216	P	Pn	18 01 52.2	-1.5
MORW	Morawa	4.16	323	P	Pn	18 02 10.8	-2.7

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*IPEC **15** 18:05:28.3±0.1, 50°.16N×19°.15E, h1^{km}, ML2.5/6, Error ellipse: s-maj=2.0km s-min=0.8km az=177.0*
*VIE **15** 18:05:28.4±0.3, 50°.15N×19°.16E, h0^{km}, mb2.5/5, ml2.3/8, Error ellipse: s-maj=4.5km s-min=2.2km az=162.0 14 km SSE of Sosnowice Suspected Mining induced.*
*PRU **15** 18:05:29.4, 50°.20N×19°.13E, h0^{km}*
ISC 15 18:05:28.5±0.8, **50°.12N**±0°.04×**19°.13E**±0°.02, **h0^{km}, n32,**
σ**0^{s}95**/60, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.44	76	*e*Pg	Pg	18 05 36.8	-0.2
OJC				*e*Sg	Sg	18 05 42.7	0.0
OKC	Ostrava-Krasne	0.69	247	*e*PG	Pb	18 05 42.6	-0.8
OKC				*e*SG	Sb	18 05 53.2	-0.3
STEB	Steborice	0.89	259	*e*PG	Pb	18 05 46.4	-0.4
	96nm,0.8s						
STEB				*e*SG	Sb	18 05 59.3	0.0
NIE	Niedzica	1.03	132	*e*Pg	Pg	18 05 48.3	0.0
NIE				*e*Sg	Sb	18 06 02.9	-0.4
MORC	Moravsky Berou	1.08	252	*e*Pg	Pb	18 05 49.5	-0.5
	baz=69						
MORC				*e*Sg	Sg	18 06 03.2	+0.1
	69nm,0.5s,baz=69						
ANAC	Anensky vrch	1.13	269	*e*Pg	Pg	18 05 50.2	+0.1
	baz=85						
ANAC				*e*Sg	Sg	18 06 04.1	-0.6
	70nm,0.4s,baz=85						
MAUC	Maruska	1.13	229	*e*PG	Pb	18 05 50.9	0.0
	97nm,0.5s						
MAUC				*e*SG	Sn	18 06 07.7	-0.1
LOSC	Losov	1.24	247	*e*Pg	Pg	18 05 52.3	+0.1
	baz=64						
LOSC				*e*Sg	Sg	18 06 08.3	0.0
	43nm,0.5s,baz=64						
KRLC	Kraliky	1.51	269	*e*PG	Pn	18 05 55.5	-1.3
	31nm,0.4s						
KRLC				*e*SG	Sg	18 06 16.8	-0.2
STHS	Stebnicka Huta	1.54	116	*e*PG	Pn	18 05 57.5	+0.3
STHS				*e*SG	Sg	18 06 18.9	+1.0
STHS				*e*LG	Lg	18 06 28.2	
JAVC	Velka Javorina	1.58	218	*e*PN	Pn	18 05 58.1	+0.3
JAVC	Velka Javorina	1.58	218	*e*Pn	Pn	18 05 58.0	+0.3
	baz=36						
DPC	Dobruska-Polom	1.82	278	*e*PG	Pn	18 06 00.7	-0.3
	28nm,0.5s						
DPC				*e*SG	Sb	18 06 26.0	+0.1
VRAC	Vranov	1.83	245	*e*Pn	Pn	18 06 01.5	+0.3
	baz=62						
VRAC				*e*Sg	Sb	18 06 26.5	+0.1
	27nm,0.8s,baz=62						
KECS	Kecovo	1.86	151	*e*PN	Pn	18 06 00.8	-0.8
KECS				*e*SN	Sn	18 06 24.0	-1.8
KECS				*e*LG	Lg	18 06 30.3	
OSTC	Ostas	1.92	284	*e*PG	Pb	18 06 04.0	-0.3
OSTC				*e*SG	Sg	18 06 30.2	+0.2
KSP	Ksiaz	1.95	293	*e*Pg	Pg	18 06 05.4	-0.5
KSP				*e*Sg	Sg	18 06 31.3	+0.1
CHVC	Chvalec	2.02	285	*e*PG	Pn	18 06 04.5	+0.6
UPC	Upice	2.04	282	*e*PG	Pb	18 06 06.0	-0.3
UPC				*e*SG	Sg	18 06 34.4	+0.6
KRUC	Moravsky	2.07	240	*e*Pn	Pn	18 06 04.5	+0.1
	baz=57						
KRUC				*e*Sg	Sg	18 06 34.4	-0.5
	22nm,0.7s,baz=57						
MODS	Modra-Piesok	2.12	216	*e*PN	Pn	18 06 04.6	-0.6
MODS				*e*SG	Sb	18 06 35.2	+0.5
TREC	Trest	2.50	252	*e*PG	Pg	18 06 15.7	-0.7
RONA	Rosalia, Austr	3.06	219	*i* Pn	Pn	18 06 17.4	-0.6
	0.5nm,0.3s						
RONA				*e*Sn	Sn	18 06 54.3	-1.1
	0.5nm,0.3s						
CONA	Conrad Observa	3.07	226	*i* Pn	Pn	18 06 18.5	+0.3
	0.3nm,0.3s						
CONA				*e*Sn	Sn	18 06 54.8	-0.9
	3.7nm,0.6s						
ZVC	Zvikov	3.27	260	*e*PG	Pb	18 06 27.4	+0.1
ZVC				*e*SG	Sg	18 07 13.0	-0.5
CKRC	Cesky Krumlov	3.40	249	*e*PG	Pg	18 06 31.8	-1.8
ARSA	Arzberg	3.73	221	*e*Pn	Pn	18 06 27.8	+0.4
	0.2nm,0.2s						
ARSA				*e*Sn	Sn	18 07 15.7	+3.7
	0.6nm,0.4s						
KHC	Kasperske Hory	3.74	257	*e*PN	Pn	18 06 27.0	-0.5
KHC				*e*PG	Pb	18 06 36.5	+1.1
KHC				*e*SG	Sg	18 07 27.8	-0.8
MOA	Molln	3.92	237	*e*Pn	Pn	18 06 29.8	-0.2
	0.6nm,0.2s						
MOA				*e*Sn	Sn	18 07 18.8	+2.0
	5.3nm,0.7s						
BIOA	Bad Ischl, Aus	4.36	238	*e*Pn	Pn	18 06 35.8	-0.1
	0.7nm,0.3s						
BIOA				*e*Sn	Sn	18 07 30.5	+3.0
	4.8nm,0.4s						
KBA	Koelnbreinsper	4.89	234	*i* Pn	Pn	18 06 44.7	+1.3
	0.4nm,0.3s						
KBA				*e*Sn	Sn	18 07 41.0	+0.2
	3.4nm,0.8s						
LESA	Schwarzleotal	5.04	240	*e*Pn	Pn	18 06 45.4	0.0
	0.4nm,0.3s						
LESA				*e*Sn	Sn	18 07 46.3	+1.9
	2.8nm,0.5s						

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*IDC **15** 18:16:43.8±0.7, 6°.48N×125°.15E, h0^{km}, mb4.0/11, mbtmp4.1/13, ML4.6/2, Error ellipse: s-maj=16.4km s-min=8.5km az=117.0*
*NEIC **15** 18:16:44.3±2.1, 6°.45N±0°.05×125°.4E±0°.1, h10^{km}±1^{km}, mb4.6/17, Error ellipse: s-maj=20.3km s-min=6.5km az=104.0*
*DJA **15** 18:16:45.4±0.5, 7°N±4°×12°5E±°, h54^{km}±7^{km}, M4.8/19, mb4.9/19, mB5.2/13, MLv5.2/8, Mw(mB)4.6/13*
ISC 15 18:16:48.4±0.5, **6°.63N**±0°.04×**125°.37E**±0°.08, **h35^{km}, n81,**
σ**2^{s}48**/82, **mb4.5**/24, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.49	26	Pg	Pn	18 16 58.0	-0.9
	2µm,0.3s,baz=273,slow=0.3,SNR=60						
DAV				Lg	Lg	18 17 07.9	
	3µm,0.3s,baz=130,slow=22,SNR=15						
DAV	Davao City (W)	0.49	26		Pn	18 16 57.7	-1.2
DAV					Sn	18 17 05.1	-1.0
DAV	Davao City (W)	0.49	26	P	Pn	18 16 57.9	-0.9
DAV	Davao City (W)	0.49	26	P	Pn	18 16 57.9	-0.9
DAV				S	Sn	18 17 07.6	+1.5
DAV	Davao City (W)	0.49	26	P	Pn	18 16 55.0	-3.9
SGSI	Sangihe	2.93	177	P	Pn	18 17 34.1	+1.6
SGSI				S	Sn	18 18 13.8	+7.4
TNTI	Ternate	6.15	161		Pn	18 18 13.3	-3.4
TNTI	Ternate	6.15	161	P	Pn	18 18 19.9	+3.1
TNTI	Ternate	6.15	161	P	Pn	18 18 18.9	+2.1
	0.3nm83nm,0.9s						
TNTI				S	Sn	18 19 31.5	+5.6
	0.3nm83nm,0.9s						
GTOI	Gorontalo	6.40	202	P	Pn	18 18 19.8	-0.4
MRSI	Marisa	7.00	209	P	Pn	18 18 28.4	-0.1
TOLI2	Tolitoli	7.14	220	Pn	Pn	18 18 27.9	-2.5
TOLI2	Tolitoli	7.14	220	P	Pn	18 18 28.1	-2.3
LUWI	Luwuk	8.05	199		Pn	18 18 36.3	-6.5
LUWI	Luwuk	8.05	199	P	Pn	18 18 46.2	+3.4
LUWI	Luwuk	8.05	199	P	Pn	18 18 43.5	+0.7
	2µm213nm,0.8s						
MPSI	Mapaga	8.30	221	P	Pn	18 18 45.9	-0.4
TARAI	Tarakan	8.43	247	P	Pn	18 18 43.8	-4.3
	4µm64nm,1.0s						
SANI	Sanana	8.64	176	P	Pn	18 18 51.3	+0.3
	676nm35nm,0.6s						
I39PW	PALAU INFRASON	9.15	84	I	I	19 14 10.0	
	baz=266,slow=302,SNR=0.9						
SWI	Sorong	9.48	141	P	Pn	18 19 05.6	+3.0
	20nm,0.8s						
NLAI	Namlea	9.95	170	P	Pn	18 19 09.9	+0.9
	704nm56nm,0.6s						
KRAI	Karang Ratu	10.33	163	P	Pn	18 19 15.5	+1.3
	646nm32nm,0.5s						
AAI	Ambon	10.63	165	P	Pn	18 19 18.9	+0.6
	656nm38nm,0.5s						
TTSI	Tana Toraja	11.09	210	P	Pn	18 19 23.9	-0.7
	2µm27nm,0.5s						
FAKI	Fak Fak	11.71	144	P	Pn	18 19 36.7	+3.6
BNSI	Bone	12.15	206	P	Pn	18 19 40.4	+1.3
KAPI	Kappang	12.85	206	Pn	Pn	18 19 45.9	-2.8
	1.5nm,0.3s,baz=125,slow=2.1,SNR=6.0						
	3.6nm,0.3s						
SAUI	Saumlaki	15.67	158	Pn	Pn	18 20 19.5	-7.2
SAUI	Saumlaki	15.67	158	P	P	18 20 28.4	-2.0
	111nm,0.6s						
SOEI	Soe	16.31	184	P	P	18 20 36.8	-0.8
	37nm,1.4s						
BATI	Baumata	16.81	186	Pn	Pn	18 20 39.8	-1.4
	4.2nm,0.3s,baz=14,slow=0.8,SNR=8.3						
BATI				Sn	Sn	18 23 43.9	-3.2
	0.4nm,0.3s,baz=104,slow=22,SNR=1.6						
	13nm,0.9s						
BATI	Baumata	16.81	186	P	P	18 20 42.5	-0.6
DRS	Darwin Rock St	19.72	164	P	Pn	18 21 16.3	-0.4
MTN	Manton Dam	20.18	163		Pn	18 21 21.0	-1.1
MTN				IAmb	IAmb	18 21 32.3	
	comp=Z,15nm,0.6s						
KNRA	Kununurra	22.41	171		P	18 21 41.6	-2.5
NJ2	Nanjing	26.02	347	*e*P	P	18 22 20.8	+2.6
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
PMG	Port Moresby	26.93	126	P	P	18 22 23.8	-2.8
PMG				IAmb	IAmb	18 22 32.9	
	comp=Z,13nm,0.9s						
COEN	Coen	27.03	139	P	P	18 22 26.0	-1.6
COEN				IAmb	IAmb	18 22 40.8	
	comp=Z,15nm,1.2s						
COEN	Coen	27.03	139	P	P	18 22 27.6	+0.1
WB0	Warramunga Arr	27.69	161		P	18 22 30.8	-2.6
WB0				IAmb	IAmb	18 22 45.2	
	comp=Z,14nm,1.0s						
WRAB	Tennant Creek	27.84	162	P	P	18 22 33.5	-1.2
WRA	Warramunga Arr	27.84	162	P	P	18 22 34.0	-0.7
	comp=Z,3.2nm,0.6s,baz=341,slow=9.3,SNR=22						
	comp=Z,3.2nm,0.6s						
WRA	Warramunga Arr	27.84	162	P	P	18 22 30.5	-4.3
WB2	Warramunga Arr	27.84	162	P	P	18 22 31.9	-2.8
WB2				IAmb	IAmb	18 23 12.9	
	comp=Z,11nm,1.1s						
WR8	Warramunga Arr	27.90	161	P	P	18 22 34.2	-1.1
WR8				IAmb	IAmb	18 22 47.4	
	comp=Z,9.0nm,1.0s						
CMAR	Chiang Mai Arr	28.30	297	P	P	18 22 38.8	-0.1
	comp=Z,0.5nm,0.7s,baz=117,slow=7.5,SNR=6.7						
	comp=Z,0.5nm,0.7s						
PZH	PanZhiHua	29.95	314	P	P	18 22 55.8	+2.2
QIS	Mount Isa	30.43	153	P	P	18 22 57.9	+0.2
XAN	Xi'an	31.23	333	P	P	18 22 56.3	-8.5
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
AS31	Alice Springs	31.24	165		P	18 23 02.4	-2.5
ASAR	Alice Springs	31.24	165	P	P	18 23 04.3	-0.6
	comp=Z,3.6nm,0.5s,baz=344,slow=7.0,SNR=160						
	comp=Z,3.6nm,0.5s						
ASAR	Alice Springs	31.24	165	P	P	18 23 01.1	-3.8
MJAR	Matsushiro Arr	32.01	20	P	P	18 23 12.9	+1.4
	comp=Z,0.7nm,0.7s,baz=199,slow=10,SNR=4.5						
	comp=Z,0.7nm,0.7s						
MEEK	Meekatharra	33.71	191	P	P	18 23 25.0	-1.5
BJI	Beijing	34.28	347	P	P	18 23 33.3	+2.1
BJI				pP	pP	18 23 37.6	-3.8
BJI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HHC	Hu-ho-hao-te	36.24	342	*e*P	P	18 23 52.0	+3.7
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,86nm,6.9s						
MORW	Morawa	36.61	194	P	P	18 23 48.2	-3.1
MORW				IAmb	IAmb	18 24 18.2	
	comp=Z,24nm,1.4s						
INKA	Innaminka	37.26	157	P	P	18 23 53.5	-3.4
FORT	Forrest	37.28	176	P	P	18 23 53.1	-4.0
BLDU	Ballidu	37.95	192	P	P	18 24 00.6	-2.1
KLBR	Kellerberrin	38.69	190	P	P	18 24 07.9	-1.1
GTA	Gaotai	39.93	329	*e*P	P	18 24 21.9	+2.5
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
NWAO	Narrogin (SRO)	40.09	191	P	P	18 24 16.3	-4.3
NWAO				IAmb	IAmb	18 24 40.9	
	comp=Z,18nm,1.1s						
NWAO	Narrogin (SRO)	40.09	191	P	P	18 24 20.1	-0.5
BBOO	Buckleboo	40.52	166	P	P	18 24 21.1	-3.1
BBOO	Buckleboo	40.52	166	P	P	18 24 23.8	-0.4
STKA	Stephens Creek	41.30	159	P	P	18 24 31.1	+0.4
	comp=Z,8.1nm,0.7s,baz=335,slow=9.1,SNR=21						
	comp=Z,8.1nm,0.7s						
STKA	Stephens Creek	41.30	159	P	P	18 24 26.6	-4.1
HTT	Hallett	41.87	163	P	P	18 24 35.7	+0.4
CMSA	Cobar Meteorol	42.63	154	P	P	18 24 42.3	+0.8
HILR	Hailar Array B	43.04	355	P	P	18 24 47.0	+2.3
	comp=Z,1.6nm,0.5s,baz=166,slow=13,SNR=1.7						
	comp=Z,1.6nm,0.5s						
HEH	HeiHe	43.51	2	*e*P	P	18 24 51.5	+3.1
TOO	Toolangi	47.81	158	P	P	18 25 18.3	-4.3
TOO				IAmb	IAmb	18 25 23.3	
	comp=Z,6.9nm,1.4s						
WMQ	Urumqi	49.59	324	*e*P	P	18 25 37.8	+1.5
WMQ				LR	LR		
	comp=Z,100nm,17.9s						
MKAR	Makanchi Array	54.42	325	P	P	18 26 12.9	+0.8
	comp=Z,0.5nm,0.5s,baz=122,slow=8.7,SNR=12						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	54.42	325	P	P	18 26 11.5	-0.6
ZALV	Zalesovo Beam	57.41	333	P	P	18 26 33.6	+0.3
	comp=Z,0.2nm,0.3s,baz=107,slow=8.1,SNR=4.1						
	comp=Z,0.2nm,0.3s						
KURBB	Kurchatov Arra	58.58	327	P	P	18 26 42.3	+0.6
	comp=Z,0.4nm,0.3s,baz=126,slow=6.1,SNR=9.5						
	comp=Z,0.4nm,0.3s						
BVAR	Borovoye Array	64.17	327	P	P	18 27 20.3	+0.9
	comp=Z,0.5nm,0.7s,baz=110,slow=8.2,SNR=5.6						
	comp=Z,0.5nm,0.7s						
AKTO	Aktyubinsk	70.56	321	P	P	18 27 60.0	+0.1
	comp=Z,0.6nm,0.3s,baz=144,slow=6.1,SNR=3.5						
	comp=Z,0.6nm,0.3s						

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*IDC **15** 18:24:04.1±0.5, 6°.50N×125°.24E, h0^{km}, mb4.2/20, mbtmp4.2/20, MS3.7/21, Error ellipse: s-maj=13.6km s-min=8.0km az=109.0*
*NEIC **15** 18:24:05.1±2.5, 6°.59N±0°.06×125°.22E±0°.07, h10^{km}±1^{km}, mb4.9/49, Error ellipse: s-maj=12.9km s-min=7.7km az=124.0*
*DJA **15** 18:24:08.1±0.2, 7°N±2°×12°5E±°, h10^{km}, M4.8/38, mb4.9/38, mB5.2/19, MLv5.3/7, Mw(mB)4.6/19*
ISC 15 18:24:05.8±0.4, **6°.63N**±0°.04×**125°.42E**±0°.07, **h10^{km}, n167,**
σ**2^{s}04**/140, **mb4.6**/60, **MS3.7**/26, **1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.47	20	Pg	Pn	18 24 17.1	-1.5
	843nm,0.3s,baz=223,slow=1.8,SNR=65						
DAV				Lg	Lg	18 24 26.2	
	2µm,0.3s,baz=322,slow=23,SNR=17						
DAV				LR	LR	18 24 50.3	
	comp=Z,7µm,18.3s,baz=286,slow=70						
DAV	Davao City (W)	0.47	20		Pn	18 24 16.9	-1.7
DAV	Davao City (W)	0.47	20	P	Pn	18 24 17.2	-1.4
DAV	Davao City (W)	0.47	20	P	Pn	18 24 17.1	-1.5
DAV				S	Sb	18 24 26.6	+3.4
DAV	Davao City (W)	0.47	20	P	Pb	18 24 16.0	-0.2
SGSI	Sangihe	2.92	178	P	Pn	18 24 54.6	+2.2
SGSI				S	Sn	18 25 31.4	+3.8
TNTI	Ternate	6.13	161		Pn	18 25 35.9	-0.6
TNTI	Ternate	6.13	161	P	Pn	18 25 40.7	+4.1
TNTI	Ternate	6.13	161	P	Pn	18 25 39.3	+2.7
	1µm135nm,0.9s						
GTOI	Gorontalo	6.42	202	P	Pn	18 25 40.0	-0.5
MRSI	Marisa	7.03	210	P	Pn	18 25 48.2	-0.7
TOLI2	Tolitoli	7.17	220	Pn	Pn	18 25 47.6	-3.2
LUWI	Luwuk	8.06	199		Pn	18 26 01.9	-1.2
LUWI	Luwuk	8.06	199	P	Pn	18 26 07.1	+4.0
LUWI	Luwuk	8.06	199	P	Pn	18 26 06.1	+3.0
APSI	Ampana	8.38	207	P	Pn	18 26 10.1	+2.6
SANI	Sanana	8.64	176	P	Pn	18 26 11.7	+0.7
	1µm114nm,0.7s						
TGY	Tagaytay City	8.64	330	LR	LR	18 30 23.8	
	comp=Z,486nm,18.6s,baz=113,slow=44						
KKM	Kota Kinabalu	9.17	267	Pn	Pn	18 26 15.6	-2.7
PCI	Palu	9.33	217	P	Pn	18 26 23.7	+3.2
	46nm,0.9s						
SWI	Sorong	9.45	142	P	Pn	18 26 25.5	+3.3
NLAI	Namlea	9.94	170	P	Pn	18 26 29.8	+0.9
	1µm98nm,0.6s						
KRAI	Karang Ratu	10.32	163	P	Pn	18 26 36.2	+2.2
	1µm39nm,0.6s						
AAI	Ambon	10.61	165	P	Pn	18 26 39.0	+0.9
	777nm56nm,0.8s						
TTSI	Tana Toraja	11.12	210	P	Pn	18 26 46.8	+1.8
	767nm103nm,1.0s						
FAKI	Fak Fak	11.68	144		Pn	18 26 51.6	-1.1
FAKI	Fak Fak	11.68	144	P	Pn	18 26 57.0	+4.3
FAKI	Fak Fak	11.68	144	P	Pn	18 26 57.1	+4.4
	33nm,1.0s						
SPSI	Sidrap Palu	11.94	208	P	Pn	18 26 59.4	+3.2
	16nm,0.6s						
BNSI	Bone	12.17	206	P	Pn	18 27 02.9	+3.5
	40nm,1.1s						
KAPI	Kappang	12.87	206	Pn	Pn	18 27 12.7	+3.6
	2.9nm,0.3s,baz=22,slow=9.5,SNR=13						
BKSI	Bulukumba	12.99	204	P	Pn	18 27 13.4	+2.7
	602nm40nm,1.3s						
SBUM	Sibu	13.79	253		Pn	18 27 14.4	-7.3
MMRI	Maumere	15.49	192	P	Pn	18 27 46.3	+1.7
	710nm27nm,0.8s						
SAUI	Saumlaki	15.65	158		Pn	18 27 45.4	-1.3
SAUI	Saumlaki	15.65	158	P	P	18 27 51.6	+0.8
SAUI	Saumlaki	15.65	158	P	P	18 27 49.6	-1.2
	98nm,0.6s						
EDFI	Ende, Flores	15.72	194	P	Pn	18 27 50.0	+2.3
LBFI	Labuhan Bajo,	15.99	200	P	Pn	18 27 52.0	+1.0
	878nm44nm,0.8s						
SOEI	Soe	16.32	184		Pn	18 27 52.9	-2.4
SOEI				IAmb	IAmb	18 27 58.5	
	comp=Z,100nm,1.5s						
SOEI	Soe	16.32	184	P	Pn	18 27 57.6	+2.3
	comp=Z,1µmcomp=Z,101nm,1.1s						
DBNI	Kabupaten Domp	16.62	205	P	Pn	18 28 00.5	+1.4
BATI	Baumata	16.81	186	Pn	Pn	18 28 02.6	+1.0
	comp=Z,5.1nm,0.3s,baz=303,slow=1.3,SNR=18						
BATI				LR	LR	18 36 19.0	
	comp=Z,195nm,20.0s,baz=1.5,slow=44						
BATI	Baumata	16.81	186	P	Pn	18 28 02.6	+1.0
	comp=Z,53nm,0.7s						
PLAI	Plampang	17.14	206	P	P	18 28 08.9	+1.6
PLAI	Plampang	17.14	206	P	Pn	18 28 07.6	+1.9
	comp=Z,61nm,0.9s						
WBSI	Waikabubak, Su	17.24	200	P	Pn	18 28 08.8	+1.8
	comp=Z,700nmcomp=Z,57nm,1.4s						
KLNI	Mataram	17.61	212	P	Pn	18 28 13.8	+2.3
	comp=Z,801nmcomp=Z,81nm,0.6s						
KMMI	Kalianget	17.75	220	P	P	18 28 17.1	+3.0
	comp=Z,37nm,0.8s						
JAY	Jayapura	17.76	120	LR	LR	18 34 50.0	
	comp=Z,110nm,18.7s,baz=164,slow=36						
KHKI	Kahang-Kahang	17.82	213	P	P	18 28 17.0	+2.2
	comp=Z,51nm,0.9s						
RTBI	Rangdo, Negare	18.27	215	P	P	18 28 21.7	+1.9
	comp=Z,1µmcomp=Z,152nm,1.0s						
IGBI	Denpasar	18.45	214	P	P	18 28 23.8	+2.0
	comp=Z,2µmcomp=Z,195nm,1.1s						
JAGI	Jajag, Banyuwa	18.74	217		P	18 28 22.6	-2.4
JAGI	Jajag, Banyuwa	18.74	217	P	Pn	18 28 30.0	+4.6
JAGI	Jajag, Banyuwa	18.74	217	P	P	18 28 26.0	+1.0
	comp=Z,54nm,1.2s						
GMJI	Gumukmas	19.02	219	P	P	18 28 29.5	+1.5
QZH	Quanzhou	19.35	341	P	Pn	18 28 35.1	+2.4
QZH				pmax	pmax		
	comp=Z,290nm,5.7s						
QIZ	Qiongzhong	19.54	311	P	P	18 28 33.3	-0.4
QIZ				S	S	18 32 13.1	-1.5
QIZ				pmax	pmax		
	comp=Z,30nm,1.4s						
QIZ				LR	LR		
	comp=N,310nm,12.5s						
QIZ				LR	LR		
	comp=E,220nm,13.0s						
QIZ				LR	LR		
	comp=Z,340nm,16.8s						
SJI	Sawahan	19.72	224	P	P	18 28 36.4	+0.5
	comp=Z,37nm,1.2s						
SNJI	Sawahan-Nganju	19.76	224	P	P	18 28 37.9	+1.5
	comp=Z,56nm,1.3s						
MTN	Manton Dam	20.16	164		P	18 28 40.9	+0.4
MTN				IAmb	IAmb	18 28 43.2	
	comp=Z,22nm,0.6s						
JOW	Kunigami	20.28	7	LR	LR	18 36 36.1	
	comp=Z,158nm,21.2s,baz=171,slow=37						
GUMO	Guam	20.35	69	LR	LR	18 35 19.5	
	comp=Z,72nm,21.5s,baz=139,slow=33						
PCJI	Pacitan	20.46	224	P	P	18 28 47.2	+3.4
CTJI	Waduk Cacaban	21.11	230	P	P	18 28 52.8	+1.9
	comp=Z,31nm,0.9s						
KPJI	Karang Pucung	21.51	230	P	P	18 28 58.1	+2.9
KNRA	Kununurra	22.41	172		P	18 29 04.1	-0.7
KULM	Kulim	24.67	268		P	18 29 27.2	0.0
KULM				IAmb	IAmb	18 29 31.4	
	comp=Z,40nm,1.2s						
SLVN	Son La	25.43	307	P	P	18 29 31.2	-2.9
NJ2	Nanjing	26.03	347	*e*P	P	18 29 40.8	+1.6
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
JNU	Nakatsue	26.85	10	LR	LR	18 40 21.3	
	comp=Z,108nm,21.4s,baz=204,slow=36						
PMG	Port Moresby	26.89	126	P	P	18 29 47.6	+0.4
	comp=Z,38nm,1.0s,baz=334,slow=4.7,SNR=20						
PMG	Port Moresby	26.89	126		P	18 29 45.9	-1.3
COEN	Coen	27.00	139	P	P	18 29 48.0	-0.2
COEN				IAmb	IAmb	18 29 54.6	
	comp=Z,34nm,1.0s						

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WB0   Warramunga Arr   27.68 162  IAmb   IAmb     18 30 09.2
      comp=Z,16nm,0.8s
WRAB  Tennant Creek    27.82 162  P      P        18 29 54.5 -1.0
WRAB                              IAmb   IAmb     18 30 29.1
      comp=Z,14nm,0.8s
WRA   Warramunga Arr   27.82 162  P      P        18 29 54.6 -0.9
      comp=Z,6.3nm,1.0s,baz=330,slow=11,SNR=17
      comp=Z,6.3nm,1.0s
WRA   Warramunga Arr   27.82 162  P      P        18 29 54.1 -1.5
WR8   Warramunga Arr   27.89 161  IAmb   IAmb     18 30 16.1
      comp=Z,11nm,0.8s
CMAR  Chiang Mai Arr   28.34 297  P      P        18 29 59.8 -0.5
      comp=Z,3.3nm,0.9s,baz=116,slow=6.8,SNR=24
CMAR                              LR     LR       18 41 13.1
      comp=Z,111nm,18.9s,baz=100,slow=36
      comp=Z,3.3nm,0.9s
CMAR  Chiang Mai Arr   28.34 297  P      P        18 29 58.3 -2.0
KMI   Kunming          28.44 313  P      P        18 29 59.5 -1.9
KMI                               pmax   pmax
      comp=Z,14nm,1.2s
KMI                               LR     LR
      comp=N,150nm,17.4s
KMI                               LR     LR
      comp=E,270nm,13.3s
KMI                               LR     LR
      comp=Z,280nm,18.6s
CHTO  Chiang Mai       28.47 298  P      P        18 29 58.2 -3.2
CHTO                              IAmb   IAmb     18 30 05.5
      comp=Z,32nm,1.9s
PZH   PanZhiHua        29.99 314  P      P        18 30 17.3 +2.4
PZH                               pmax   pmax
      comp=Z,10.0nm,1.1s
KSRS  Korea Array      30.77   4  P      P        18 30 22.4 +0.9
      comp=Z,1.5nm,0.9s,baz=179,slow=9.0,SNR=6.1
      comp=Z,1.5nm,0.9s
AS31  Alice Springs    31.23 165  P      P        18 30 24.8 -0.9
ASAR  Alice Springs    31.23 165  P      P        18 30 25.0 -0.8
      comp=Z,2.9nm,0.6s,baz=345,slow=6.8,SNR=44
ASAR                              LR     LR       18 43 27.8
      comp=Z,60nm,18.4s,baz=328,slow=37
      comp=Z,2.9nm,0.6s
ASAR  Alice Springs    31.23 165  P      P        18 30 24.4 -1.4
XAN   Xi'an            31.26 333  P      P        18 30 27.3 +1.3
XAN                               pmax   pmax
      comp=Z,10.0nm,1.3s
XAN                               LR     LR
      comp=N,220nm,18.6s
XAN                               LR     LR
      comp=E,220nm,18.5s
XAN                               LR     LR
      comp=Z,250nm,17.2s
CD2   Chengdu          31.56 323  P      P        18 30 29.9 +1.3
CD2                               pmax   pmax
      comp=Z,10.0nm,0.9s
TNCH  TengChong        31.58 308  P      P        18 30 31.3 +2.2
TNCH                              pP     sP       18 30 36.6 +3.2
TNCH                              pmax   pmax
      comp=Z,10.0nm,1.3s
MJAR  Matsushiro Arr   31.99  20  P      P        18 30 34.1 +1.7
      comp=Z,1.8nm,0.8s,baz=185,slow=8.8,SNR=6.3
MJAR                              LR     LR       18 43 46.7
      comp=Z,102nm,18.2s,baz=214,slow=37
      comp=Z,1.8nm,0.8s
HNS   HongShan         32.15 344 ⇓P      P        18 30 35.8 +2.2
HNS                               pmax   pmax
      comp=Z,6.0nm,1.0s
HNS                               LR     LR
      comp=E,250nm,21.6s
HNS                               LR     LR
      comp=Z,220nm,17.8s
CTA   Charters Tower   33.54 143  P      P        18 30 46.2 +0.1
      comp=Z,3.5nm,0.9s,baz=322,slow=14,SNR=6.5
CTA                               LR     LR       18 46 18.8
      comp=Z,142nm,19.1s,baz=302,slow=40
      comp=Z,3.5nm,0.9s
BJI   Beijing          34.29 347  P      P        18 30 53.8 +1.5
BJI                               pP     sP       18 30 58.1 +1.5
BJI                               sP     pP       18 31 01.3 +5.9
BJI                               S      S        18 36 21.1 +1.6
BJI                               pmax   pmax
      comp=Z,5.0nm,1.0s
BJI                               pmax   pmax
      comp=Z,43nm,7.8s
BJI                               LR     LR
      comp=N,64nm,13.1s
BJI                               LR     LR
      comp=E,89nm,16.2s
BJI                               LR     LR
      comp=Z,65nm,17.2s
LZH   Lanzhou          35.36 329 eP      P        18 31 05.3 +3.4
LZH                               sP     sP       18 31 12.8 +6.5
LZH                               pmax   pmax
      comp=Z,40nm,1.7s
LZH                               LR     LR
      comp=N,270nm,17.2s
LZH                               LR     LR
      comp=E,200nm,19.6s
LZH                               LR     LR
      comp=Z,290nm,17.2s
BRDH  Bariadhala       36.24 300  LR     LR       18 47 10.9
      comp=Z,103nm,18.7s,baz=178,slow=38
HHC   Hu-ho-hao-te     36.26 342 eP      P        18 31 11.3 +1.9
HHC                               pmax   pmax
      comp=Z,5.0nm,0.7s
HHC                               pmax   pmax
      comp=Z,91nm,5.3s
BTO   Baotou           36.53 340 eP      P        18 31 12.3 +0.5
BTO                               S      S        18 36 56.1 +1.9
BTO                               pmax   pmax
      comp=Z,11nm,0.7s
BTO                               pmax   pmax
      comp=Z,250nm,6.1s
BTO                               LR     LR
      comp=N,410nm,22.3s
BTO                               LR     LR
      comp=E,450nm,23.7s
BTO                               LR     LR
      comp=Z,410nm,17.9s
SHL   Shillong         37.15 304  IAmb   IAmb     18 31 19.7
      comp=Z,19nm,0.9s
INKA  Innaminka        37.24 157  P      P        18 31 16.4 -1.4
USRK  Ussuriysk Ar.    37.87   8  P      P        18 31 24.1 +1.3
      comp=Z,2.4nm,0.6s,baz=89,slow=6.1,SNR=5.9
      comp=Z,2.4nm,0.6s
XLT   XiLinHaoTe       38.02 349 eP      P        18 31 28.1 +3.8
XLT                               pmax   pmax
      comp=Z,10.0nm,1.2s
XLT                               pmax   pmax
      comp=Z,110nm,4.6s
BNX   BinXian          39.00   2 ⇑P      P        18 31 34.8 +2.4
BNX                               pmax   pmax
      comp=Z,6.0nm,1.3s
LSA   Lhasa            39.58 310  P      P        18 31 33.5 -4.6
GTA   Gaotai           39.96 329 eP      P        18 31 42.0 +1.3
GTA                               pP     sP       18 31 45.4 +0.3
GTA                               pmax   pmax
      comp=Z,6.0nm,1.4s
GTA                               LR     LR
      comp=Z,140nm,17.8s
NWAO  Narrogin (SRO)   40.10 191  P      P        18 31 39.0 -2.7
NWAO                              IAmb   IAmb     18 31 43.8
      comp=Z,33nm,1.4s
ASAJ  Asahikawa        40.26  19  LR     LR       18 49 40.2
      comp=Z,64nm,18.6s,baz=71,slow=38
BBOO  Buckleboo        40.50 166  P      P        18 31 43.3 -1.8
GOMU  GeErMu           40.62 321  P      P        18 31 47.8 +1.2
GOMU                              pmax   pmax
      comp=Z,6.0nm,1.1s
STKA  Stephens Creek   41.28 159  P      P        18 31 51.7 +0.1
      comp=Z,10nm,0.8s,baz=333,slow=7.8,SNR=21
      comp=Z,10nm,0.8s
STKA  Stephens Creek   41.28 159  P      P        18 31 51.0 -0.6
HEH   HeiHe            43.51   2 eP      P        18 32 11.4 +1.9
HEH                               pmax   pmax
      comp=Z,9.0nm,1.2s
SONM  Songino Array    44.16 342  P      P        18 32 16.2 +1.3
      comp=Z,0.8nm,0.8s,baz=177,slow=7.4,SNR=5.3
      comp=Z,0.8nm,0.8s
SONM  Songino Array    44.16 342  P      P        18 32 11.8 -3.1
DZM   Mont Dzumac      49.28 127  LR     LR       18 55 05.7
      comp=Z,62nm,18.6s,baz=336,slow=38
DZM   Mont Dzumac      49.28 127 eLR     LR       18 47 03.2
      comp=Z,188nm,24.9s
WMQ   Urumqi           49.62 324 eP      P        18 32 57.8 +0.2
WMQ                               LR     LR
      comp=Z,120nm,21.5s
PETK  Petropavlovsk-   53.29  24  P      P        18 33 25.4 +0.6
      comp=Z,10nm,0.9s,baz=226,slow=4.2,SNR=4.4
      comp=Z,10nm,0.9s
PETK  Petropavlovsk-   53.29  24  P      P        18 33 22.6 -2.2
PET   Petropavlovsk    53.61  24  P      P        18 33 25.6 -1.6
MKAR  Makanchi Array   54.45 325  P      P        18 33 33.4 -0.1
      comp=Z,1.5nm,0.6s,baz=120,slow=7.5,SNR=25
      comp=Z,1.5nm,0.6s
MKAR  Makanchi Array   54.45 325  P      P        18 33 33.0 -0.5
MAKZ  Makanchi         54.64 325  P      P        18 33 32.8 -2.1
KSH   Kashi            55.09 314  P      P        18 33 40.0 +1.6
KSH                               sP     sP       18 33 49.3 +6.4
KSH                               pmax   pmax
      comp=Z,7.0nm,1.3s
NIL   Nilore           55.15 307  P      P        18 33 35.5 -3.4
NIL                               IAmb   IAmb     18 33 47.3
      comp=Z,20nm,1.1s
YAK   Yakutsk          55.38   2  LR     LR       18 57 48.1
      comp=Z,61nm,21.3s,baz=190,slow=36
YAK   Yakutsk          55.38   2  P      P        18 33 37.7 -2.2
YAK                               IAmb   IAmb     18 33 46.2
      comp=Z,12nm,1.1s
AAK   Ala-Archa        57.35 317  P      P        18 33 54.9 +0.3
      comp=Z,0.9nm,0.6s,baz=141,slow=6.5,SNR=3.6
AAK                               LR     LR       19 00 56.5
      comp=Z,103nm,21.3s,baz=94,slow=39
      comp=Z,0.9nm,0.6s
ZALV  Zalesovo Beam    57.43 333  P      P        18 33 54.9 +0.2
      comp=Z,1.5nm,0.7s,baz=121,slow=5.7,SNR=6.7
      comp=Z,1.5nm,0.7s
ZALV  Zalesovo Beam    57.43 333  P      P        18 33 50.6 -4.1
MANEM Manem            57.55 311  P      P        18 33 52.7 -3.5
MANEM                             IAmb   IAmb     18 34 14.4
      comp=Z,25nm,1.4s
DRK   Karamyk          58.09 313  P      P        18 33 57.8 -2.2
KURBB Kurchatov Arra   58.61 327  P      P        18 34 01.9 -1.1
      comp=Z,2.4nm,0.7s,baz=124,slow=6.4,SNR=15
      comp=Z,2.4nm,0.7s
KURK  Kurchatov        58.61 327  P      P        18 34 00.7 -2.3
KURK                              IAmb   IAmb     18 34 10.8
      comp=Z,19nm,1.4s
GAR   Garm             59.02 312  P      P        18 34 04.7 -1.6
KK31  Karatay Array    60.24 316  P      P        18 34 10.3 -4.2
KK31                              IAmb   IAmb     18 34 19.8
      comp=Z,11nm,1.2s
KKAR  Karatay Array    60.24 316  P      P        18 34 10.2 -4.3
BVAR  Borovoye Array   64.20 327  P      P        18 34 40.0 -0.8
      comp=Z,1.2nm,0.8s,baz=130,slow=11,SNR=5.5
      comp=Z,1.2nm,0.8s
NRIK  Noril'sk         67.32 346  P      P        18 35 01.4 +0.8
      comp=Z,2.3nm,0.7s,baz=133,slow=5.1,SNR=5.2
NRIK                              LR     LR       19 06 55.2
      comp=Z,100nm,18.9s,baz=178,slow=38
      comp=Z,2.3nm,0.7s
AB31  Akbulak array    69.10 320  P      P        18 35 11.1 -1.1
ABKAR Akbulak array    69.10 320  P      P        18 35 08.8 -3.4
RAYN  Ar Rayn          78.16 293  P      P        18 36 03.8 -2.2
C19K  Lookout Ridge    78.50  21  IAmb   IAmb     18 36 13.3
      comp=Z,11nm,1.0s
B20K  Meade River      79.51  20  IAmb   IAmb     18 36 17.9
      comp=Z,14nm,1.1s
KDAK  Kodiak Island    80.16  33  LR     LR       19 07 15.4
      comp=Z,45nm,21.6s,baz=227,slow=32
B21K  Ikpikpuk River   80.33  20  IAmb   IAmb     18 36 22.8
      comp=Z,12nm,0.9s
GURO  Guroymak-BITLI   80.74 308  P      P        18 36 16.0 -4.0
B22K  Teshekpuk Lake   80.82  20  IAmb   IAmb     18 36 24.7
      comp=Z,14nm,1.2s
C23K  Itkillik River   81.74  20  IAmb   IAmb     18 36 30.9
      comp=Z,12nm,1.0s
E23K  Chandalar        82.01  22  IAmb   IAmb     18 36 32.3
      comp=Z,8.4nm,1.0s
H24K  Noodor Dome      82.65  24         P        18 36 28.1 -1.2
H24K                              IAmb   IAmb     18 36 37.5
      comp=Z,7.9nm,0.9s
ILAR  Eielson Array    83.07  26  P      P        18 36 31.1 -0.3
      comp=Z,1.0nm,0.9s,baz=244,slow=4.2,SNR=29
      comp=Z,1.0nm,0.9s
ILAR  Eielson Array    83.07  26  P      P        18 36 32.5 +1.0
BMAR  Burnt Mountain   83.93  23  P      P        18 36 36.6 +0.6
I27K  Kandik River     85.24  25         P        18 36 42.2 -0.4
F28M  Old Crow         85.72  23         P        18 36 44.8 -0.1
F28M                              IAmb   IAmb     18 36 52.5
      comp=Z,11nm,0.9s
VNDA  Vanda            86.45 173  P      P        18 36 46.6 -1.6
      comp=Z,1.1nm,0.8s,baz=279,slow=4.0,SNR=3.6
VNDA                              LR     LR       19 14 20.0
      comp=Z,33nm,21.9s,baz=145,slow=35
      comp=Z,1.1nm,0.8s
VNDA  Vanda            86.45 173  P      P        18 36 46.6 -1.6
VNDA                              IAmb   IAmb     18 38 36.8
      comp=Z,18nm,1.7s
MMAI  Mount Meron Ar   86.45 303  P      P        18 36 48.4 -0.9
      comp=Z,0.6nm,0.3s,baz=160,slow=15,SNR=12
MMAI                              LR     LR       19 20 18.0
      comp=Z,34nm,20.4s,baz=173,slow=39
      comp=Z,0.6nm,0.3s
BRTR  Keskin Array B   87.18 309  P      P        18 36 53.4 +0.5
      comp=Z,1.1nm,0.9s,baz=128,slow=3.8,SNR=5.5
      comp=Z,1.1nm,0.9s
PPT2  Papeete2         87.24 108 eLR     LR       19 04 30.3
      comp=Z,100nm,25.2s
SPITS Spitsbergen Ar   87.40 349  LR     LR       19 21 03.0
      comp=Z,61nm,18.3s,baz=168,slow=39
AKASG Malin Array Be   88.84 321  LR     LR       19 18 57.5
      comp=Z,98nm,18.1s,baz=316,slow=37
QSPA  South Pole Qui   96.51 180  P      P        18 37 34.7 -0.8
CLL   Collm            98.54 324 ePdif   Pdif     18 37 48.0 +3.1
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*NEIC **15** 18:26:20.4±1.3,68.°57N±0.°02×147.°86W±0.°06,h10^{km}±2^{km}, Error ellipse: s-maj=3.6km s-min=3.0km az=293.0*

*NEIC **15** 18:26:20,68.°58N×147.°98W,h13^{km},Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.77; M$_{\theta\theta}$-2.04; M$_{\phi\phi}$1.27; M$_{r\theta}$0.33; M$_{\theta\phi}$-0.10; M$_{\phi r}$1.04; Fault plane solution: M$_0$2.09000×10^{14} NP1:φ$_s$50.00000°, δ70.00000°,λ35.00000°. NP2:φ$_s$307.00000°,δ57.00000°, λ156.00000°. Principal axes: T 2.0934, Plg38.0000°, Azm272.0000°; N 0.0000, Plg50.0000°, Azm76.0000°; P -2.0934, Plg8.0000°, Azm176.0000°;*

AEIC 15 18:26:19.5±1.7,**68.°56N**±0.°02×**147.°91W**±0.°03,**h18**^{km}±6^{km}, **ML3.3,ML3.4**/158(NEIC),**Mwr3.5**/20(SLM) **Error ellipse: s-maj=3.2km s-min=1.6km az=178.0,Northern Alaska**

```
Code  Station Name      Δ°   AZ°   Phase ID             Time    Res
                                   Op     ISC         h  m  s   ISC
E24K  Your Creek        0.53 204          Pg          18 26 29.9 -0.3
E24K                                      Sb          18 26 37.7  0.0
TOLK  Toolik Lake Re    0.62 279          Pg          18 26 31.8  0.0
TOLK                                      Sb          18 26 40.3 +0.1
D24K  Happy Valley      0.69 331          Pg          18 26 33.2 +0.2
D24K                                      Sg          18 26 42.9 +0.7
D24K  Happy Valley      0.69 331   IAML               18 26 45.0
      comp=N,2μm,0.5s
E23K  Chandalar         0.81 233          Pb          18 26 34.9 -0.3
E23K                                      Sg          18 26 45.9 -0.2
E23K  Chandalar         0.81 233   IAML               18 26 47.4
      comp=E,1μm,0.5s
D25K  Kavik River       0.95  35          Pb          18 26 36.9 -0.5
D25K                                      Sb          18 26 49.0 -0.7
D25K  Kavik River       0.95  35   IAML               18 26 52.0
      comp=N,808nm,0.4s
D25K                               IAML               18 26 52.0
      comp=E,848nm,0.3s
E25K  Arctic Village    0.97 116          Pg          18 26 38.5 +0.1
E25K                               IAML               18 26 55.8
      comp=E,878nm,0.8s
E25K  Arctic Village    0.97 116          Sn          18 26 51.5 -0.1
E25K                                      Sg          18 26 51.7 +0.5
F24K  Squaw Lake        1.04 180          Pg          18 26 39.5 -0.2
F24K                                      Sg          18 26 53.4  0.0
F24K  Squaw Lake        1.04 180   IAML               18 26 59.5
      comp=E,786nm,0.2s
F24K                               IAML               18 26 59.7
      comp=N,665nm,0.2s
D23K  Nanushuk River    1.09 293          Pg          18 26 40.8 +0.2
D23K                               IAML               18 27 03.8
      comp=N,660nm,1.0s
D23K  Nanushuk River    1.09 293          Sg          18 26 55.4 +0.4
C24K  Franklin Bluff    1.20 347          Pg          18 26 42.7  0.0
C24K                                      Sg          18 26 59.1 +0.7
C24K  Franklin Bluff    1.20 347   IAML               18 26 59.6
      comp=E,825nm,0.6s
C24K                               IAML               18 27 01.6
      comp=N,920nm,0.7s
F25K  Christian Rive    1.29 138          Pg          18 26 44.5 +0.1
F25K                               IAML               18 27 05.1
      comp=E,598nm,0.8s
F25K                               IAML               18 27 05.8
      comp=N,612nm,0.7s
F25K  Christian Rive    1.29 138          Sg          18 27 01.6 +0.4
E22K  Anaktuvuk Pass    1.51 256          Pb          18 26 47.6 +0.6
E22K                               IAML               18 27 13.1
      comp=N,390nm,0.7s
E22K  Anaktuvuk Pass    1.51 256          Sg          18 27 09.5 +1.3
COLD  Coldfoot          1.59 214          Pb          18 26 48.4  0.0
COLD                               IAML               18 27 11.9
      comp=E,342nm,0.8s
COLD  Coldfoot          1.59 214          Sg          18 27 11.0 +0.1
C23K  Itkillik River    1.61 324          Pb          18 26 48.8 +0.1
C23K  Itkillik River    1.61 324          Sg          18 27 11.6 +0.2
F26K  Sheenjek River    1.65 120          Pb          18 26 49.8 +0.4
F26K                               IAML               18 27 14.7
      comp=N,506nm,0.7s
F26K                               IAML               18 27 14.7
      comp=E,425nm,0.6s
BM01  Burnt Mountain    1.69 130          Pg          18 26 51.1 -0.9
BMAR  Burnt Mountain    1.69 131          Pb          18 26 50.4 +0.3
C26K  Camden Bay        1.73  37          Pb          18 26 51.4 +0.6
C26K  Camden Bay        1.73  37   IAML               18 27 18.4
      comp=N,430nm,0.7s
D22K  Ayikyak River     1.77 283          Pb          18 26 51.6 +0.1
D22K                               IAML               18 27 22.1
      comp=E,406nm,0.6s
C27K  Jago River        1.85  53          Pb          18 26 53.1 +0.3
C27K                               IAML               18 27 19.9
      comp=N,283nm,0.7s
C27K                               IAML               18 27 21.5
      comp=E,416nm,0.5s
G24K  Hadweenzic Riv    1.87 175          Pb          18 26 52.5 -0.6
G24K                               IAML               18 27 24.6
      comp=E,372nm,0.8s
F22K  John River        1.92 239          Pb          18 26 54.2 +0.2
F22K                                      Pg          18 26 54.8 -1.6
G25K  Bearman Lake      1.93 158          Pb          18 26 53.7 -0.4
G23K  Bananza Creek     2.02 205          Pb          18 26 54.5 -1.2
G23K                               IAML               18 27 29.5
      comp=E,263nm,0.5s
G23K                               IAML               18 27 30.2
      comp=N,220nm,0.8s
G22K  Bettles           2.14 222          Pb          18 26 56.5 -1.2
E21K  Killik River      2.24 270          Pn          18 26 57.3 +1.6
E21K  Killik River      2.24 270   IAML               18 27 35.1
      comp=E,294nm,0.5s
E21K                               IAML               18 27 37.2
      comp=N,209nm,0.6s
G26K  Porcupine Rive    2.25 134          Pb          18 26 57.8 -1.8
G26K                               IAML               18 27 35.2
      comp=N,263nm,0.9s
E27K  Coleen River      2.37  96          Pn          18 26 58.9 +1.4
F21K  Alatna River      2.50 240          Pb          18 27 02.1 -1.8
C21K  Knifeblade Rid    2.57 287          Pn          18 27 02.4 +2.2
C21K                                      Pb          18 27 03.5 -1.4
D27M  Malcolm River     2.60  71          Pb          18 27 04.0 -1.7
D27M  Malcolm River     2.60  71   IAML               18 27 40.8
      comp=N,151nm,0.6s
B21K  Ikpikpuk River    2.63 297          Pn          18 27 03.0 +1.9
B21K  Ikpikpuk River    2.63 297   IAML               18 27 57.1
      comp=E,117nm,1.1s
B21K                               IAML               18 28 03.1
      comp=N,137nm,0.8s
B22K  Teshekpuk Lake    2.65 315          Pn          18 27 02.7 +1.5
H24K  Noodor Dome       2.73 180          Pn          18 27 04.3 +1.8
H23K  Yukon River       2.82 194   IAML               18 27 54.4
      comp=E,124nm,0.6s
G27K  Doyon Strip       2.96 123          Pn          18 27 07.6 +2.0
G27K                               IAML               18 28 00.4
      comp=E,86nm,1.1s
G21K  Allakaket         2.97 229          Pn          18 27 08.0 +2.2
H22K  Ishtalitna Cre    3.00 208          Pn          18 27 08.2 +2.0
E28M  Babbage River     3.07  85          Pn          18 27 08.8 +1.7
E20K  Nigu River        3.08 268          Pn          18 27 09.1 +1.8
F28M  Old Crow          3.16 104          Pn          18 27 10.1 +1.8
F28M                               IAML               18 28 08.3
      comp=N,89nm,1.1s
F28M                               IAML               18 28 13.2
      comp=E,79nm,0.7s
D20K  Etivluk River     3.19 277          Pn          18 27 11.7 +2.9
D20K                               IAML               18 28 10.3
      comp=N,95nm,0.7s
D20K                               IAML               18 28 21.8
      comp=E,69nm,0.7s
F20K  Avaraart Lake     3.33 247          Pn          18 27 13.1 +2.4
F20K  Avaraart Lake     3.33 247   IAML               18 28 09.2
      comp=N,82nm,0.8s
F20K                               IAML               18 28 11.5
      comp=E,72nm,1.0s
H27K  Steamboat Moun    3.40 130          Pn          18 27 14.2 +2.5
H27K                               IAML               18 28 07.2
      comp=N,62nm,0.7s
H27K                               IAML               18 28 14.0
      comp=E,96nm,1.1s
IM01  Indian Mountai    3.42 224          Pn          18 27 13.2 +1.3
IMAR  Indian Mountai    3.44 224          Pn          18 27 13.7 +1.5
POKR  Poker Plat Res    3.46 177          Pn          18 27 15.2 +2.7
POKR                               IAML               18 28 12.9
      comp=E,56nm,0.7s
A22K  Sinclair Lake     3.47 318          Pn          18 27 13.8 +1.2
I23K  Minto, Yukon-K    3.47 190          Pn          18 27 14.5 +1.9
I23K                               IAML               18 28 13.3
      comp=E,72nm,0.8s
I23K                               IAML               18 28 20.6
      comp=N,90nm,1.1s
H21K  Melozitna Rive    3.48 216          Pn          18 27 15.2 +2.4
H21K                               IAML               18 28 22.5
      comp=E,67nm,1.1s
B20K  Meade River       3.60 298          Pn          18 27 16.1 +1.8
B20K  Meade River       3.60 298   IAML               18 28 39.7
      comp=E,60nm,1.2s
B20K                               IAML               18 28 43.5
      comp=N,74nm,1.1s
E19K  Redstone River    3.68 257          Pn          18 27 17.8 +2.4
E29M  Blow River        3.69  88          Pn          18 27 18.1 +2.5
E29M                               IAML               18 28 24.0
      comp=E,64nm,0.7s
E29M                               IAML               18 28 27.9
      comp=N,54nm,1.1s
COLA  College           3.70 180          Pn          18 27 18.1 +2.3
MLY   Manley            3.71 199   Pn     Pn          18 27 18.4 +2.3
D19K  Kuna River        3.76 274          Pn          18 27 18.7 +2.1
D19K                               IAML               18 28 25.2
      comp=N,68nm,1.1s
D19K                               IAML               18 28 26.2
      comp=E,68nm,0.8s
I26K  Coal Creek Min    3.76 148          Pn          18 27 18.8 +2.2
IL01                    3.82 173          Pn          18 27 19.9 +2.5
IL31                    3.82 173          Pn          18 27 19.8 +2.3
ILAR  Eielson Array     3.82 173          Pn          18 27 19.4 +1.9
I27K  Kandik River      3.85 137   IAML               18 28 30.9
      comp=N,74nm,0.9s
CCB   Clear Creek Bu    3.93 179          Pn          18 27 21.5 +2.6
NEA2  Nenana            4.01 187          Pn          18 27 22.0 +2.0
A21K  Barrow            4.09 317          Pn          18 27 22.3 +1.2
J25K  Salcha River,     4.09 164          Pn          18 27 23.6 +2.5
J25K  Salcha River,     4.09 164   IAML               18 28 37.2
      comp=E,43nm,0.9s
J25K                               IAML               18 28 39.1
      comp=N,39nm,0.7s
WRH   Wood River Hil    4.11 181          Pn          18 27 23.6 +2.3
H20K  Anotleneega Mo    4.12 225          Pn          18 27 23.0 +1.5
F19K  Shaleruckik Mo    4.14 250          Pn          18 27 23.2 +1.4
F19K  Shaleruckik Mo    4.14 250   IAML               18 28 34.2
      comp=N,46nm,1.2s
F19K                               IAML               18 28 42.2
      comp=E,50nm,0.9s
HDA   Harding Lake      4.18 174          Pn          18 27 24.6 +2.2
HDA   Harding Lake      4.18 174   IAML               18 28 37.3
      comp=N,40nm,0.6s
HDA                                IAML               18 28 38.2
      comp=E,56nm,1.1s
C19K  Lookout Ridge     4.27 283          Pn          18 27 25.5 +1.9
C19K  Lookout Ridge     4.27 283   IAML               18 28 55.5
      comp=N,38nm,1.1s
G19K  Purcell Mounta    4.30 240          Pn          18 27 25.6 +1.6
I28M  Miner Creek       4.42 131          Pn          18 27 28.3 +2.6
I28M  Miner Creek       4.42 131   IAML               18 28 23.8
      comp=E,30nm,0.4s
I28M                               IAML               18 28 24.2
      comp=N,32nm,0.5s
J26L  Joseph Creek      4.43 155          Pn          18 27 28.4 +2.5
J26L  Joseph Creek      4.43 155   IAML               18 28 39.5
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	comp=E,40nm,0.9s						
J26L				IAML		18 28 46.1	
	comp=N,33nm,0.5s						
H19K	Roundabout Mou	4.52	232	IAML		18 28 53.5	
	comp=N,41nm,0.9s						
F30M	Barrier River	4.64	96		Pn	18 27 31.7	+3.0
F30M	Barrier River	4.64	96	IAML		18 28 54.6	
	comp=N,30nm,1.1s						
F30M				IAML		18 29 04.5	
	comp=E,26nm,0.8s						
BPAW	Bear Paw Mtn.	4.65	197		Pn	18 27 30.6	+1.9
BPAW	Bear Paw Mtn.	4.65	197	IAML		18 28 49.3	
	comp=E,23nm,1.1s						
G30M	tAoh Zraii Nji	4.71	104		Pn	18 27 31.6	+1.9
G30M	tAoh Zraii Nji	4.71	104	IAML		18 29 13.9	
	comp=N,29nm,1.2s						
EPYK	Eagle Plains	4.83	112		Pn	18 27 33.5	+2.2
MCK	McKinley	4.86	185		Pn	18 27 34.1	+2.4
SCRK	Sand Creek	4.86	159	IAML		18 28 59.2	
	comp=E,32nm,1.0s						
SCRK				IAML		18 29 01.7	
	comp=N,20nm,0.8s						
C18K	Utukok River	4.87	277		Pn	18 27 33.4	+1.6
C18K	Utukok River	4.87	277	IAML		18 29 15.2	
	comp=N,26nm,0.9s						
F18K	Selawik	4.91	252		Pn	18 27 34.4	+2.2
E18K	Tukpahlearik C	4.91	263	IAML		18 29 04.7	
	comp=E,27nm,0.8s						
E18K				IAML		18 29 06.0	
	comp=N,27nm,0.7s						
A19K	Wainwright	4.94	296		Pn	18 27 33.6	+0.9
I29M	Ogilvie Camp,	4.95	126	IAML		18 29 02.9	
	comp=N,31nm,1.1s						
G18K	Tagagawik	4.96	242		Pn	18 27 34.7	+1.7
G18K	Tagagawik	4.96	242	IAML		18 28 58.1	
	comp=N,32nm,1.2s						
G18K				IAML		18 28 58.1	
	comp=E,23nm,0.9s						
RIDG	Independent Ri	5.00	164		Pn	18 27 36.3	+2.7
CHUM	Lake Minchumin	5.02	203		Pn	18 27 35.8	+1.9
J20K	Nowinta River	5.06	213		Pn	18 27 36.3	+1.9
J20K	Nowinta River	5.06	213	IAML		18 29 06.6	
	comp=N,18nm,0.6s						
J20K				IAML		18 29 11.2	
	comp=E,22nm,1.1s						
B18K	Kokolik River	5.07	286		Pn	18 27 35.9	+1.4
K27K	Chicken	5.12	150	IAML		18 28 42.7	
	comp=N,28nm,0.3s						
K27K				IAML		18 29 07.4	
	comp=E,26nm,1.2s						
KTH	Kantishna Hill	5.17	195		Pn	18 27 38.2	+2.1
TRF	Thorofare Moun	5.22	192		Pn	18 27 38.8	+2.0
INK	Inuvik	5.31	86		Pn	18 27 39.9	+2.1
H18K	Honhosa River	5.35	235		Pn	18 27 40.6	+2.2
H18K	Honhosa River	5.35	235	IAML		18 29 23.8	
	comp=N,25nm,1.2s						
H18K				IAML		18 29 30.2	
	comp=E,19nm,1.1s						
G31M	Satah River	5.43	101		Pn	18 27 41.3	+1.8
F31M	Tsiigehtchic	5.44	95		Pn	18 27 41.9	+2.3
E17K	Hotham Inlet	5.48	261		Pn	18 27 42.1	+2.0
DHY	Denali Highway	5.51	177		Pn	18 27 43.8	+3.1
J19K	Poorman	5.54	218		Pn	18 27 42.8	+1.8
RDOG	Red Dog Mine	5.59	272		Pn	18 27 43.3	+1.6
C17K	DeLong Mountai	5.61	276		Pn	18 27 43.1	+1.1
I30M	Mount Dempster	5.64	121		Pn	18 27 44.1	+1.7
DAWY	Dawson	5.66	139		Pn	18 27 45.2	+2.4
PAX	Paxson	5.70	169		Pn	18 27 46.0	+2.8
D17K	Noatak River	5.74	268		Pn	18 27 44.6	+0.9
G17K	Kiwalik Mounta	5.85	244		Pn	18 27 46.5	+1.2
L26K	Log Cabin Wild	5.86	159		Pn	18 27 47.3	+1.8
H31M	Peel River	5.95	111		Pn	18 27 47.6	+0.9
PPLA	Purkeypile	5.95	199		Pn	18 27 48.6	+1.8
BC01	Beaver Creek A	6.05	153		Pn	18 27 50.4	+2.3
L27K	Beaver Creek,	6.05	153		Pn	18 27 50.5	+2.4
J30M	Hart River	6.10	125		Pn	18 27 50.9	+2.0
L22K	Petersville	6.17	192		Pn	18 27 52.7	+3.0
C16K	Lisburne Hills	6.44	276		Pn	18 27 54.3	+1.1
M26K	Nabesna, AK	6.51	159		Pn	18 27 57.4	+3.1
M27K	Edge Creek, AK	6.71	155		Pn	18 27 59.8	+2.6
SKT	Skwentna	6.78	195		Pn	18 28 00.7	+2.7
L19K	White Mountain	7.02	208	Pn	Pn	18 28 03.0	+1.6
M29M	Somme Creek	7.28	143		Pn	18 28 08.0	+3.0
L18K	Granite Mounta	7.34	214	Pn	Pn	18 28 08.3	+2.7
YUK2	White River	7.41	153		Pn	18 28 10.0	+3.2
YUK3	Moose Creek	7.49	152		Pn	18 28 10.8	+2.9
L17K	Donlin	7.76	219		Pn	18 28 13.5	+2.1
YUK8	Steele Glacier	8.07	151		Pn	18 28 19.2	+3.3
CTGM	Chitina Glacie	8.12	157		Pn	18 28 19.9	+3.4
M17K	Holitna River	8.23	214		Pn	18 28 20.1	+2.2
A36M	Sachs Harbour	8.37	55	Pn	Pn	18 28 20.8	+1.1
C36M	Paulatuk	8.59	74	Pn	Pn	18 28 23.4	+0.6
YUK6	Outpost Mounta	8.65	147		Pn	18 28 27.2	+3.4
N17K	Nushagak Hills	8.98	211	Pn	Pn	18 28 27.2	-1.0
YKAW3	Yellowknife Wh	14.87	98	Pn	Pn	18 29 47.5	-1.0
YKA	Yellowknife Ar	14.91	98	Pn	Pn	18 29 47.9	-1.2

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*JMA **15** 18:30:58.0±0.2, 24°.8N±0°.9×122°.1E±0°.5, h101^{km}±2^{km}, MV2.4/16, TAIWAN REGION*

*TAP **15** 18:30:58.0, 24°.84N×122°.12E, h102^{km}, ML3.4, C*

ISC 15 18:30:58.5±1.3**, 24°.85N**±0°.03×**122°.09E**±0°.02**, h102**^{km}±6^{km}**, n134, σ0^{s}.72**/202**, 13C-2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		0.14	267	P	Pn	18 31 12.8	+0.1
TWB1	Santiao Chiao	0.18	329	⇑iP	Pn	18 31 12.7	-0.1
TWB1				iS	Sn	18 31 23.1	-0.4
TIPB	Shuangxi	0.27	296	⇑iP	Pn	18 31 13.1	-0.1
TIPB				S	Sn	18 31 23.8	-0.4
SXI1	Grass Mountain	0.31	321	⇑iP	Pn	18 31 13.1	-0.4
SXI1				S	Sn	18 31 24.9	+0.3
ILA	Ilan	0.32	255	P	Pn	18 31 13.0	-0.4
ILA				eS	Sn	18 31 24.2	-0.3
TWC	Suao	0.33	222	⇑iP	Pn	18 31 13.2	-0.2
TWC				iS	Sn	18 31 23.6	-0.9
ESAO	Su ao	0.35	219	P	Pn	18 31 13.6	+0.1
ESAO				S	Sn	18 31 24.3	-0.5
NWF	Wu-fen Shan	0.35	308	⇑iP	Pn	18 31 13.6	-0.1
NWF				S	Sn	18 31 25.3	+0.3
WFSB	Wu-fen Shan	0.35	308	⇑iP	Pn	18 31 13.6	0.0
NDS	Dongshan	0.40	238	P	Pn	18 31 14.1	+0.3
NDS				iS	Sn	18 31 26.5	+1.2
TWE	Neicheng	0.41	251	P	Pn	18 31 13.7	-0.1
TWE				eS	Sn	18 31 26.2	+0.9
TNOU	National Taiwa	0.41	316	⇑iP	Pn	18 31 13.7	-0.2
EOS2	EOS2	0.45	163	P	Pn	18 31 14.8	+0.8
FUSB	Fushanzhiwuyua	0.47	259	⇑iP	Pn	18 31 14.2	-0.1
FUSB				iS	Sn	18 31 26.5	+0.3
TWA	Mucha	0.48	286	⇑iP	Pn	18 31 14.0	-0.3
TWA				S	Sn	18 31 26.0	-0.1
EWUT	Wuta	0.49	215	P	Pn	18 31 14.8	+0.4
EWUT				iS	Sn	18 31 26.5	+0.2
NHY	Taipei	0.51	292	eP	Pn	18 31 14.2	-0.3
ENTT	Nioudou	0.52	246	iP	Pn	18 31 14.9	+0.3
ENTT				iS	Sn	18 31 27.9	+1.2
NHDH	Xindian Distri	0.53	282	P	Pn	18 31 14.5	-0.1
ENA	Nanau	0.53	217	iP	Pn	18 31 15.1	+0.4
ENA				iS	Sn	18 31 26.9	+0.1
NWLT	Wulai	0.54	262	⇑P	Pn	18 31 14.5	-0.3
NWLT				iS	Sn	18 31 26.7	-0.3
YM01	YM01	0.56	302	⇑P	Pn	18 31 14.7	-0.2
YM01				iS	Sn	18 31 26.6	-0.6
TATO	Taipei	0.56	283	P	Pn	18 31 14.6	-0.3
TATO	Taipei	0.56	283	S	Sn	18 31 25.9	-1.3
YM08	YM08	0.56	306	⇓P	Pn	18 31 14.6	-0.3
ZUZH	Zhuzihu	0.58	302	P	Pn	18 31 14.9	-0.2
ZUZH				eS	Sn	18 31 27.0	-0.6
LATG	Datong	0.60	239	P	Pn	18 31 16.1	+0.7
LATG				S	Sn	18 31 29.1	+1.1
EAHA	Aohua	0.61	212	eP	Pn	18 31 15.7	+0.3
EAHA				eS	Sn	18 31 28.4	+0.5
TWY	Chenhua	0.61	314	iP	Pn	18 31 15.4	+0.1
ANP	Anpu	0.61	303	eP	Pn	18 31 15.2	-0.3
TWS1	Kuangyinshan	0.66	292	iP	Pn	18 31 15.7	0.0
TWS1				iS	Sn	18 31 29.1	+0.5
NTST	Danshui	0.66	298	eP	Pn	18 31 15.7	0.0
YHNB	Yeheng	0.67	255	P	Pn	18 31 15.9	0.0
YHNB	Yeheng	0.67	255	S	Sn	18 31 28.6	-0.4
YHNB	Yeheng	0.67	255	⇑P	Pn	18 31 16.1	+0.2
YHNB				iS	Sn	18 31 28.8	-0.2
NSK	Sanguang	0.69	255	⇑iP	Pn	18 31 16.1	+0.1
NSK				iS	Sn	18 31 28.6	-0.6
NNSB	Datong	0.77	237	P	Pn	18 31 17.3	+0.5
NNSB				iS	Sn	18 31 31.0	+0.4
NNS	Nan Shan	0.77	238	P	Pn	18 31 17.3	+0.5
NNS				iS	Sn	18 31 31.0	+0.3
PCYT	Pengchaiyu	0.77	359	eP	Pn	18 31 16.9	+0.1
PCYT				S	Sn	18 31 31.2	+0.7
ETL	Fush Village	0.81	212	eP	Pn	18 31 17.0	-0.1
ETL				S	Sn	18 31 30.9	-0.2
NACB	Ninganchiao	0.81	214	P	Pn	18 31 16.8	-0.4
NACB	Ninganchiao	0.81	214	P	Sn	18 31 30.5	-0.6
NACB	Ninganchiao	0.81	214	P	Pn	18 31 16.7	-0.4
NACB				iS	Sn	18 31 30.5	-0.6
NCU	National Centr	0.83	278	P	Pn	18 31 16.2	-1.0
NCU				S	Sn	18 31 31.0	-0.4
NCUH	Zhongli	0.83	278	P	Pn	18 31 17.7	+0.4
NCUH				iS	Sn	18 31 32.1	+0.7
KSHI	Guanxi Townshi	0.83	265	iP	Pn	18 31 17.8	+0.5
KSHI				iS	Sn	18 31 32.5	+1.0
ETLH	Xiulin Townshi	0.85	221	P	Pn	18 31 17.6	0.0
ETLH				eS	Sn	18 31 30.5	-1.4
JYNG	Yonagunijimaku	0.87	117	P	Pn	18 31 17.6	-0.1
JYNG				eS	Sn	18 31 32.1	-0.1
TWD	Chiawan	0.89	210	eP	Pn	18 31 17.6	-0.3
TWD				iS	Sn	18 31 31.6	-0.9
NFF	Wufeng Townshi	0.91	256	P	Pn	18 31 18.2	+0.1
NFF				S	Sn	18 31 32.7	-0.3
YOJ	Yonaguni jima	0.92	115	P	Pn	18 31 18.0	-0.2
YOJ	Yonaguni jima	0.92	115	S	Sn	18 31 33.2	+0.1
YOJ	Yonaguni jima	0.92	115	⇓P	Pn	18 31 18.1	-0.2
YOJ				S	Sn	18 31 33.3	+0.1
YOJ	Yonaguni jima	0.92	115	eP	Pn	18 31 18.1	-0.2
YOJ				eS	Sn	18 31 33.1	+0.1
HWA	Hwalien	0.98	207	P	Pn	18 31 19.8	+1.0
HWA				S	Sn	18 31 34.5	+0.5
FUSS	Fushou	0.98	232	eP	Pn	18 31 19.7	+0.6
FUSS				iS	Sn	18 31 34.9	+0.3
LIOB	Emei	1.00	258	iP	Pn	18 31 19.3	+0.3
LIOB				iS	Sn	18 31 34.6	+0.1
SBCB	Hsinchu	1.01	267	P	Pn	18 31 19.7	+0.6
SBCB				S	Sn	18 31 35.2	+0.6
NSTT	Nanjuang	1.01	258	iP	Pn	18 31 19.3	+0.1
NSTT				S	Sn	18 31 35.0	+0.2
HSN	Hsinchu	1.02	267	eP	Pn	18 31 19.2	0.0
HSN				S	Sn	18 31 34.4	-0.4
TWT	Tachien	1.02	235	eP	Pn	18 31 20.6	+1.1
TWT				iS	Sn	18 31 35.6	+0.3
LXIB	Xiulin Townshi	1.03	217	P	Pn	18 31 19.1	-0.5
LXIB				S	Sn	18 31 33.9	-1.5
ETM	Tongmen	1.04	212	eP	Pn	18 31 18.9	-0.6
ETM				eS	Sn	18 31 34.3	-0.9
TDCB	Techi	1.04	235	eP	Pn	18 31 20.6	+1.0
TDCB				iS	Sn	18 31 36.1	+0.6
TEYL	Yanliau Villag	1.08	205	eP	Pn	18 31 20.1	+0.2
TEYL				eS	Sn	18 31 35.9	-0.1
SHUL	Shoufeng	1.16	205	eP	Pn	18 31 21.8	+0.9
SHUL				iS	Sn	18 31 38.5	+0.8
WHP	Taichung City	1.19	241	iP	Pn	18 31 22.0	+0.7
WHP				iS	Sn	18 31 38.7	+0.3
ESL	Shilin	1.20	210	eP	Pn	18 31 20.3	-0.9
ESL				eS	Sn	18 31 37.0	-1.4
OWD	Renai	1.22	223	eP	Pn	18 31 22.3	+0.7
OWD				iS	Sn	18 31 38.8	-0.4
NMLH	Miaoli	1.22	255	eP	Pn	18 31 21.9	+0.4
NMLH				S	Sn	18 31 38.9	-0.1
WUSB	Renai	1.23	226	iP	Pn	18 31 22.6	+0.9
WUSB				iS	Sn	18 31 40.1	+0.7
TEGC	Jichi Village	1.24	204	eP	Pn	18 31 20.9	-0.8
NSY	Sanyi	1.28	251	eP	Pn	18 31 23.4	+1.1
NSY				iS	Sn	18 31 41.6	+1.4
WARBT	Fenglin Townsh	1.30	210	eP	Pn	18 31 21.5	-0.9
WARBT				eS	Sn	18 31 38.6	-2.0
TWQ1	Liyutan	1.30	248	eP	Pn	18 31 22.8	+0.4
TWQ1				eS	Sn	18 31 40.3	-0.3
EGFH	Guangfu	1.32	207	eP	Pn	18 31 22.4	-0.3
WCS	Beigang Elemen	1.33	234	eP	Pn	18 31 24.3	+1.5
VWDT	VWDT	1.40	219	eP	Pn	18 31 24.4	+0.9
SMLT	Sun Moon Lake	1.45	229	eP	Pn	18 31 25.8	+1.4
TYC	Yuchr	1.47	230	eP	Pn	18 31 25.1	+0.7
HGSD	Ruisui	1.48	204	eP	Pn	18 31 24.6	0.0
EHY	Hungye	1.51	208	eP	Pn	18 31 24.0	-1.0
IRIF	Iriomote-Funau	1.58	109	P	Pn	18 31 25.4	-0.4
IRIF				S	Sn	18 31 45.8	-0.7
WNT	Mingjian	1.61	233	eP	Pn	18 31 27.0	+0.9
WJS	Zhushan	1.61	231	eP	Pn	18 31 27.9	+1.7
WHYT	Xinyi Township	1.61	225	iP	Pn	18 31 27.6	+1.3
YULB	Yu-li	1.62	207	P	Pn	18 31 26.4	0.0
YULB	Yu-li	1.62	207	S	Sn	18 31 46.4	-1.2
TWF1	Yuli	1.66	206	eP	Pn	18 31 26.4	-0.5
HATJ	Hateruma jima	1.75	117	eS	Sn	18 31 50.5	+0.2
ALS	Alishan	1.78	222	P	Pn	18 31 29.7	+1.1
CHN5	Tsauling	1.79	226	eP	Pn	18 31 29.8	+1.2
FULB	Fuli	1.80	204	eP	Pn	18 31 28.2	-0.4
WGK	Gukeng	1.81	231	eP	Pn	18 31 29.7	+0.9
WDLH	Douliu	1.83	231	eP	Pn	18 31 29.8	+0.8
WDLH				iS	Sn	18 31 53.1	+1.0
JKRS	Kuro-shima	1.85	109	P	Pn	18 31 29.2	0.0
JKRS				eS	Sn	18 31 52.2	-0.4
CHKT	Chengkung	1.87	201	eP	Pn	18 31 28.6	-0.8
EHD	Haiduan	1.88	206	eP	Pn	18 31 28.0	-1.6
ELDTW	Lidau	1.93	211	eP	Pn	18 31 30.5	+0.2
JIJ	Ishigaki jima	1.93	104	P	Pn	18 31 30.1	-0.1
JIJ				S	Sn	18 31 53.3	-1.2
WCKO	Fanlu	1.96	224	eP	Pn	18 31 31.2	+0.6
CHY	Chiayi	2.03	229	P	Pn	18 31 32.1	+0.6
CHY				iS	Sn	18 31 57.1	+0.4
JISG	Ishigakijimahi	2.04	97	P	Pn	18 31 31.8	+0.3
JISG				eS	Sn	18 31 56.5	-0.4
TPUB	Ta-pu	2.04	221	P	Pn	18 31 32.4	+0.7
TPUB	Ta-pu	2.04	221	S	Sn	18 31 56.6	-0.5
TPUB	Ta-pu	2.04	221	eP	Pn	18 31 32.4	+0.7
STYH	Taoyuan	2.06	216	iP	Pn	18 31 33.2	+1.3
WTP	Ta-pu	2.09	220	eP	Pn	18 31 33.3	+0.9
LONT	Longtian	2.13	205	eS	Sn	18 31 58.5	-0.5
TWK	Hsinying	2.15	223	eP	Pn	18 31 33.5	+0.4
WSL	Shuilin Townsh	2.15	232	eP	Pn	18 31 33.5	+0.4
SNST	Tainan City	2.18	222	eP	Pn	18 31 34.5	+1.0
SNST				iS	Sn	18 32 00.8	+0.5
CHN1	Nanshi	2.19	221	eP	Pn	18 31 34.2	+0.6
TWGBT	Beinan	2.23	205	P	Pn	18 31 33.3	-0.8
TWGBT	Beinan	2.23	205	eP	Pn	18 31 33.5	-0.6
TWG	Pinlang	2.23	205	eP	Pn	18 31 33.5	-0.6
SGST	Jiashian	2.24	218	eP	Pn	18 31 34.8	+0.6
MATB	Ma-tsu	2.33	304	eP	Pn	18 31 34.9	-0.5
JTJ	Tarama	2.38	95	eP	Pn	18 31 36.8	+0.7
JTJ				eS	Sn	18 32 05.5	+0.6
ECL	Taimali	2.47	205	eP	Pn	18 31 37.9	+0.5
SSD	Sandimen	2.49	213	eP	Pn	18 31 39.2	+1.7
TSCK	Chigu Township	2.50	228	eP	Pn	18 31 37.9	+0.3
TSCK				S	Sn	18 32 07.6	0.0
MASBT	Mashibuluo	2.60	211	eP	Pn	18 31 40.1	+1.1
PNG	Penghu	2.65	242	eP	Pn	18 31 38.6	-0.9
PHUB	P'eng-hu	2.66	240	eP	Pn	18 31 39.0	-0.7
PHUB				iS	Sn	18 32 09.8	-1.7
XPSS	Dashiqiu	2.69	321	eP	Pn	18 31 39.3	-0.8
LYJJ	Jianjiangzhen	2.70	309	eP	Pn	18 31 39.3	-0.9
PTMZ	Houxiangcun	2.70	275	iP	Pn	18 31 40.1	-0.2
EAST	Anshuo	2.71	205	eP	Pn	18 31 41.1	+0.6
WDGT	Dungji	2.73	235	eP	Pn	18 31 40.9	+0.2
JIRB	Irabujima	2.80	90	eP	Pn	18 31 42.4	+0.8
JIRB				eS	Sn	18 32 14.3	-0.5
SCZT	Fangliau	2.81	209	eP	Pn	18 31 43.5	+1.7
LYUB	Lan-yu	2.88	189	P	Pn	18 31 41.2	-1.5
JMJ2	Miyako jima3	2.94	91	eP	Pn	18 31 44.6	+1.1
JMJ2				eS	Sn	18 32 20.0	+1.7

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*MEX **15** 18:31:25.3±0.7, 14°.56N×92°.53W, h61^{km}±16^{km}, MD3.7*

*GCG **15** 18:31:26.8±1.3, 14°.65N×92°.40W, h54^{km}±22^{km}, MD3.8, ML3.0*

ISC 15 18:31:21.3±1.9**, 14°.4N**±0°.1×**92°.51W**±0°.09**, h63**^{km}±20^{km}**, n13, σ1^{s}.32**/24**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.59	24	eP	Pn	18 31 35.4	+1.0
THIG				eS	Sn	18 31 44.4	+0.5
SMCA	Catarina	0.64	41	eP	Pn	18 31 37.4	+2.3
PATR	El Naranjo	0.79	20	eP	Pn	18 31 37.1	+0.1
PATR				eS	Sn	18 31 46.9	-1.7
CHUJ	Union Juarez	0.82	29	eP	Pn	18 31 37.9	+0.5
CHUJ				eS	Sn	18 31 48.1	-1.1
PAVE	Pavencul	0.88	22	eP	Pn	18 31 38.8	+0.7
PAVE				eS	Sn	18 31 49.0	-1.5
STG2	El Palmar, Qui	1.10	86	eP	Pn	18 31 41.8	+0.9
STG2				eS	Sn	18 31 54.0	-1.5
STG5	El Palmar, Qui	1.13	88	eP	Pn	18 31 42.0	+0.8
STG5				eS	Sn	18 31 54.9	-1.1
STG8	El Palmar, Qui	1.13	86	eP	Pn	18 31 41.8	+0.5
STG8				eS	Sn	18 31 54.9	-1.4
STG8				IAML		18 31 57.0	
	comp=N,428nm,0.1s						
PCIG		1.49	333	eP	Pn	18 31 46.1	+0.2
PCIG				eS	Sn	18 32 02.1	-2.4
CCIG	Comitan	1.94	11	eP	Pn	18 31 52.7	+0.6
CCIG				eS	Sn	18 32 14.9	-0.6
CCIG	Comitan	1.94	11	eP	Pn	18 31 54.3	+2.2
UXUV	UXUV	3.33	332	eP	Pn	18 32 12.4	+1.5
UXUV				eS	Sn	18 32 48.6	-0.6
CMIG	Matias Romero	3.54	320	eP	Pn	18 32 14.4	+0.6
CMIG				eS	Sn	18 32 54.1	-0.4

IDC 15 18:33:00.1±1.4**, 6°.41N×125°.38E, h0**^{km}**, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=46.9km s-min=10.5km az=101.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.68	17	Pg	Pg	18 33 12.3	-0.8
	390nm,0.3s,baz=234,slow=8.2,SNR=14						
DAV				Lg	Lg	18 33 23.4	
	204nm,0.3s,baz=52,slow=21,SNR=8.5						
WRA	Warramunga Arr	27.63	162	P	P	18 38 49.7	+0.1
	0.5nm,1.0s,baz=329,slow=11,SNR=2.0						
	0.5nm,1.0s						
ASAR	Alice Springs	31.03	165	P	P	18 39 19.7	-0.1
	0.2nm,0.6s,baz=342,slow=7.0,SNR=4.2						
	0.2nm,0.6s						
MKAR	Makanchi Array	54.60	325	P	P	18 42 31.1	+0.6
	0.4nm,0.8s,baz=106,slow=7.9,SNR=3.9						
	0.4nm,0.8s						

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*VAO **15** 18:42:05.9±0.7, 24°.08S×67°.17W, h158^{km}±5^{km}, mb5.2, Presumed earthquake*

*NEIC **15** 18:42:06.6±2.4, 24°.18S±0°.06×67°.0W±0°.1, h155^{km}±4^{km}, mb4.9/256, Mww5.0/29, Mwr5.0(GUC), Error ellipse: s-maj=13.4km s-min=8.4km az=92.0*

*SJA **15** 18:42:06.4±0.7, 24°.16S×67°.23W, h198^{km}±4^{km}, ML5.1, MW4.8*

*NEIC **15** 18:42:07.1, 24°.18S×67°.08W, h150^{km}*

*IDC **15** 18:42:07.7±1.1, 24°.14S×66°.96W, h166^{km}±8^{km}, mb4.4/16, mbtmp4.9/23, MS3.6/5, Error ellipse: s-maj=12.6km s-min=9.1km az=70.0*

*NEIC **15** 18:42:07.1, 24°.18S×67°.08W, h150^{km}, Moment Tensor Solution. Duration: 1^{s}.6 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.22; $M_{\theta\theta}$-1.24; $M_{\phi\phi}$3.46; $M_{r\theta}$1.37; $M_{\theta\phi}$-0.26; $M_{\phi r}$-1.81; Fault plane solution: $M_0$3.80000×10^{16} NP1: ϕ_s206.67000°, δ36.11000°, λ-40.79000°. NP2: ϕ_s331.56000°, δ67.35000°, λ-118.91000°. Principal axes: T 4.0681, Plg17.0000°, Azm83.0000°; N -0.6070, Plg26.0000°, Azm344.0000°; P -3.4610, Plg58.0000°, Azm202.0000°;*

*GUC **15** 18:42:09.6±0.8, 24°.19S×67°.26W, h173^{km}±6^{km}, ML5.1*

*GCMT **15** 18:42:13.0±0.3, 24°.21S±0°.02×67°.18W±0°.02, h196^{km}±2^{km}, MW5.1/97, Moment Tensor Solution. s28,c29; s97,c131; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.87±.16; $M_{\theta\theta}$-1.03±.17; $M_{\phi\phi}$3.90±.21; $M_{r\theta}$1.85±.11; $M_{\theta\phi}$0.64±.16; $M_{\phi r}$-3.33±.15; Best double couple: $M_0$5.21200×10^{16} NP1: ϕ_s215.00000°, δ30.00000°, λ-40.00000°. NP2: ϕ_s341.00000°, δ71.00000°, λ-114.00000°. Principal axes: T 5.2650, Plg22.0000°, Azm89.0000°; N -0.1060, Plg23.0000°, Azm349.0000°; P -5.1590, Plg57.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 18:42:06.3±0.4**, 24°.15S**±0°.03×**67°.27W**±0°.03**, h161**^{km}±3^{km}**, h161**^{km}**:pP-P, n372, σ2^{s}.13**/310**, mb4.8**/130**, 19C-4D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALTA		0.85	95	⇓eP	Pn	18 42 35.2	+3.5
SALTA				eS	Sn	18 42 56.2	+5.3
SALTA		0.85	95	eP	Pn	18 42 35.0	+3.4
SALTA				eP		18 42 35.1	
SALTA				eP		18 42 35.4	
AF01	San Pedro de A	1.46	325		Pn	18 42 41.6	+4.9
AF01	San Pedro de A	1.46	325	eP	Pn	18 42 41.4	+4.7
AF01				eS	Sn	18 43 06.6	+6.6
AF01				IAML		18 43 08.3	
	comp=N,18µm,0.7s						
AF01	San Pedro de A	1.46	325	eP	Pn	18 42 41.8	+5.1
AF01				eS	Sn	18 43 05.8	+5.8
AF01				IAML		18 43 21.6	
	comp=Z,8µm,0.9s						
SLA	San Lorenzo	1.70	110	⇓eP	Pn	18 42 42.5	+3.5
SLA	San Lorenzo	1.70	110	eP	Pn	18 42 42.6	+3.5
SLA				eS	Sn	18 43 09.4	+5.1
HJA	Humahuaca	1.94	62	eP	Pn	18 42 45.2	+3.3
AZAP	Zapla	2.01	93	eP	Pn	18 42 45.5	+2.9
AZAP				eS	Sn	18 43 15.7	+5.3
AZAP				IAML		18 43 17.9	
	comp=Z,4µm,2.3s						
FSA	Cafayete	2.28	149	eP	Pn	18 42 48.5	+3.0
GO02	Mina Guanaco	2.34	244		Pn	18 42 49.7	+3.3
GO02				Sn	Sn	18 43 21.8	+4.3
GO02	Mina Guanaco	2.34	244	⇑eP	Pn	18 42 49.7	+3.3
GO02				eS	Sn	18 43 20.8	+3.3
GO02	Mina Guanaco	2.34	244	eP	Pn	18 42 49.0	+2.6
GO02				eS	Sn	18 43 21.6	+4.2
GO02				IAML		18 43 22.6	
	comp=Z,11µm,0.4s						
YJA	Yavi	2.54	40	⇑eP	Pn	18 42 52.3	+3.3
YJA				eS	Sn	18 43 25.5	+3.6
YJA	Yavi	2.54	40	eP	Pn	18 42 52.3	+3.3
YJA				eS	Sn	18 43 28.1	+6.3
PB06	IPOC Station P	2.56	304		Pn	18 42 52.5	+3.6
PB06				Sn	Sn	18 43 25.7	+3.9
PB06	IPOC Station P	2.56	304	⇑eP	Pn	18 42 52.5	+3.6
PB06				eS	Sn	18 43 25.3	+3.5
PB06	IPOC Station P	2.56	304	eP	Pn	18 42 52.5	+3.6
PB06				eS	Sn	18 43 25.4	+3.6
PB06				IAML		18 43 28.5	
	comp=Z,11µm,0.4s						
PB14	IPOC Station P	2.90	260		Pn	18 42 55.6	+2.4
PB14	IPOC Station P	2.90	260	⇑iP	Pn	18 42 55.7	+2.5
PB14				IAML		18 43 33.5	
	comp=E,2µm,0.3s						
PB14	IPOC Station P	2.90	260	eP	Pn	18 42 55.8	+2.5
PB14				eS	Sn	18 43 33.6	+4.1
PB14				IAML		18 43 35.1	
	comp=Z,3µm,0.4s						
PB09	IPOC Station P	2.97	322		Pn	18 42 57.8	+3.8
PB09	IPOC Station P	2.97	322	⇑iP	Pn	18 42 57.7	+3.8
PB09				eS	Sn	18 43 34.5	+3.7
PB09	IPOC Station P	2.97	322	eP	Pn	18 42 57.9	+3.8
PB09				eS	Sn	18 43 34.1	+3.3
PB09				IAML		18 43 35.6	
	comp=Z,11µm,0.5s						
PB05	IPOC Station P	2.99	295		Pn	18 42 57.2	+3.0
PB05	IPOC Station P	2.99	295	⇑eP	Pn	18 42 57.0	+2.8
PB05				IAML		18 43 37.3	
	comp=E,5µm,0.4s						
PB05	IPOC Station P	2.99	295	eP	Pn	18 42 56.9	+2.7
PB05				eS	Sn	18 43 35.5	+4.3
PB05				IAML		18 43 41.1	
	comp=Z,2µm,0.5s						
PB10	IPOC Station P	3.08	281		Pn	18 42 58.0	+2.9
PB10	IPOC Station P	3.08	281	⇑eP	Pn	18 42 58.1	+2.9
PB10				eS	Sn	18 43 35.7	+2.8
PB10				IAML		18 43 40.6	
	comp=E,3µm,0.3s						
PB10	IPOC Station P	3.08	281	eP	Pn	18 42 58.0	+2.9
PB10				eS	Sn	18 43 36.8	+3.9
PB10				IAML		18 43 40.3	

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         comp=Z,3µm,0.4s
PB03  IPOC Station P   3.10 312          Pn     18 42 58.8 +3.2
PB03  IPOC Station P   3.10 312⇑eP       Pn     18 42 58.6 +3.0
PB03  IPOC Station P   3.10 312 eP       Pn     18 42 58.6 +3.0
PB03                            eS       Sn     18 43 37.0 +3.2
PB03                             IAML           18 43 39.4
         comp=Z,7µm,0.6s
AHML  Horco Molle      3.15 147 eP       Pn     18 42 45.6  -11
AHML                            eS       Sn     18 43 23.6  -11
AC02  Maricunga        3.16 212          Pn     18 42 59.4 +2.8
AC02  Maricunga        3.16 212⇑eP       Pn     18 42 59.5 +2.8
AC02                            eS       Sn     18 43 38.6 +2.9
AC02  Maricunga        3.16 212 eP       Pn     18 42 59.1 +2.4
AC02                            eS       Sn     18 43 40.2 +4.5
PB07  IPOC Station P   3.41 314          Pn     18 43 02.3 +2.7
PB07  IPOC Station P   3.41 314⇑iP       Pn     18 43 02.3 +2.7
PB07  IPOC Station P   3.41 314 eP       Pn     18 43 02.3 +2.7
PB07                            eS       Sn     18 43 42.9 +2.0
AC01  Pan de Azucar    3.62 236          Pn     18 43 03.3 +1.3
AC01  Pan de Azucar    3.62 236 eP       Pn     18 43 02.8 +0.8
AC01                            eS       Sn     18 43 45.3  0.0
AC01                             IAML           18 43 47.9
         comp=Z,2µm,0.9s
PB01  IPOC Station P   3.71 326          Pn     18 43 05.7 +2.4
PB01  IPOC Station P   3.71 326 eP       Pn     18 43 05.6 +2.3
PB01  IPOC Station P   3.71 326 eP       Pn     18 43 05.6 +2.3
PB01                            eS       Sn     18 43 50.0 +2.4
PB01                             IAML           18 43 51.9
         comp=Z,4µm,0.4s
PB02  IPOC Station P   3.72 319          Pn     18 43 05.5 +2.1
PB02  IPOC Station P   3.72 319 eP       Pn     18 43 05.7 +2.3
PB02  IPOC Station P   3.72 319 eP       Pn     18 43 05.7 +2.3
PB02                            eS       Sn     18 43 49.1 +1.3
TINO  Tinogasta        3.91 184 eP       Pn     18 43 08.4 +2.6
AC06  Mina Casimiro    4.24 220          Pn     18 43 10.6 +0.6
PATCX Punta Patache    4.25 321  Pn      Pn     18 43 10.9 +0.6
PATCX Punta Patache    4.25 321 eP       Pn     18 43 12.1 +1.8
PATCX                           eS       Sn     18 43 57.3 -2.9
PATCX                            IAML           18 44 09.1
         comp=Z,2µm,0.4s
GO03  Copiapo          4.35 217          Pn     18 43 12.1 +0.6
GO03  Copiapo          4.35 217 eP       Pn     18 43 11.8 +0.3
GO03                             IAML           18 44 05.9
         comp=Z,1µm,0.2s
TA01  Diego Aracena    4.47 322          Pn     18 43 14.2 +1.1
TA01  Diego Aracena    4.47 322 eP       Pn     18 43 14.9 +1.8
CYA   Choya            4.47 163 eP       Pn     18 43 14.8 +1.7
HMBC  Humberstone      4.55 327 eP       Pn     18 43 15.4 +1.1
HMBC                             IAML           18 44 11.8
         comp=Z,2µm,0.5s
VCA   Vinchina         4.65 190 eP       Pn     18 43 18.4 +2.9
TA02  Huaiquique       4.68 325 eP       Pn     18 43 16.6 +0.8
GO01  Chusmiza         4.80 338          Pn     18 43 20.2 +2.3
GO01  Chusmiza         4.80 338 eP       Pn     18 43 20.8 +2.9
GO01                             IAML           18 44 19.7
         comp=Z,893nm,0.4s
AC04  Llanos de Chal   5.29 219          Pn     18 43 23.4 -0.4
AC05  El Transito      5.39 209          Pn     18 43 25.4 +0.2
LCO   Las Campanas     5.74 212          Pn     18 43 29.3 -0.6
CFA   Coronel Fontan   7.48 186  P       Pn     18 43 52.7 -0.1
         comp=Z,24nm,0.9s,baz=32,slow=22,SNR=89
CFA                              S       Sn     18 45 11.1 -5.5
         comp=Z,15nm,0.3s,baz=290,slow=24,SNR=9.0
CFA                              LR      LR     18 47 16.2
         comp=Z,219nm,19.6s,baz=48,slow=41
CO06  Fray Jorge       7.57 210  Pn      Pn     18 43 52.5 -1.5
LPAZ  La Paz           7.86 354  P       Pn     18 44 00.6 +2.1
         comp=Z,73nm,0.4s,baz=162,slow=7.1,SNR=329
LPAZ                             S       Sn     18 45 26.1 -0.7
         comp=Z,126nm,0.9s,baz=212,slow=19,SNR=6.0
VA03  San Esteban      9.06 198  Pn      Pn     18 44 13.6 -0.2
VA06  Catapilco        9.10 202          Pn     18 44 11.8 -2.4
CPUP  Villa Florida    9.26 106  P       Pn     18 44 14.7 -1.7
         comp=Z,8.0nm,0.9s,baz=290,slow=12,SNR=51
CPUP  Villa Florida    9.26 106          Pn     18 44 14.0 -2.3
CPUP  Villa Florida    9.26 106 eP       Pn     18 44 15.5 -0.9
MT02  Curacav          9.69 200          Pn     18 44 19.5 -2.5
MT13  San Alfonso      9.92 195  Pn      Pn     18 44 26.1 +1.0
SIV   San Ignacio      9.98  37  P       Pn     18 44 25.0 -1.1
         comp=Z,45nm,0.4s,baz=214,slow=11,SNR=192
SIV                              S       Sn     18 46 02.9  -14
         comp=Z,43nm,0.9s,baz=220,slow=17,SNR=9.7
MT09  Talagante       10.13 198          Pn     18 44 25.8 -2.2
BO04  La Punta        10.23 196          Pn     18 44 27.5 -1.7
MT01  Popeta          10.29 199          Pn     18 44 27.8 -2.2
BDQN  Bodoquena, MS   10.41  71 eP       Pn     18 44 29.7 -1.9
BO01  Tunca           10.74 197          Pn     18 44 33.2 -2.6
PSAL  Palomas, Salto  11.00 131 eP       Pn     18 44 38.7 -0.6
AQDB  Aquidauana      11.31  73 eP       Pn     18 44 41.5 -1.9
AMBA  Amambai (Brazi  11.33  86 eP       Pn     18 44 41.8 -1.9
PTLB  Pontes e Lacer  11.55  43  Pn      Pn     18 44 44.6 -1.9
PTLB  Pontes e Lacer  11.55  43 eP       Pn     18 44 44.3 -2.2
BI02  San Fabin de    12.94 195  P       Pn     18 45 05.4 +1.0
VILB  Vilhena         12.99  32  P       Pn     18 45 06.8 +1.7
VILB  Vilhena         12.99  32 eP       Pn     18 45 02.5 -2.7
RPRD  Ribas do Rio P  13.07  76 eP       Pn     18 45 05.5 -0.7
PP1B  Ponte de Pedra  13.28  63 eP       Pn     18 45 07.0 -1.9
BI05  Punta Hualpn    13.55 201  Pn      Pn     18 45 07.3 -4.8
SALV  Santo Antonio   13.62  55 eP       Pn     18 45 11.4 -1.6
CPSB  Cacapava Do Su  13.78 120 eP       Pn     18 45 13.8 -1.2
PTGB  Pitanga         13.86  95 eP       Pn     18 45 14.7 -1.4
ITAB  Concordia       13.99 106 eP       Pn     18 45 15.8 -1.9
C2SB  Chapadao do Su  14.46  71 eP       Pn     18 45 23.6  0.0
LDASE Londrina, Braz  14.80  90 eP       Pn     18 45 26.6 -1.3
NNA   Nana            15.13 321  P       P      18 45 35.1 +1.8
         comp=Z,31nm,1.1s,baz=156,slow=11,SNR=6.1
NNA                              S       Sn     18 48 16.3 -4.3
         comp=Z,3.8nm,0.4s,baz=0.1,slow=12,SNR=1.4
CNLB  Canela          15.54 113 eP       Pn     18 45 34.8 -2.1
PDRB  Porto dos Gac   15.99  41 eP       Pn     18 45 40.5 -2.0
ITRB  Iturama         16.30  78 eP       P      18 45 45.4 -0.9
PLCA  Paso Flores     16.77 189  P       Pn     18 45 52.1 +0.3
         comp=Z,50nm,0.9s,baz=11,slow=12,SNR=80
PLCA                             PcP     PcP    18 50 30.9 +0.7
         comp=Z,7.4nm,0.9s,baz=350,slow=1.5,SNR=7.1
PLCA                             LR      LR     18 52 29.6
         comp=Z,457nm,19.4s,baz=328,slow=37
PLCA  Paso Flores     16.77 189  P       P      18 45 51.4 +0.1
PLCA  Paso Flores     16.77 189 eP       Pn     18 45 52.2 +0.4
ARAG  Araguaiana, MT  16.77  63 eP       P      18 45 50.8 -0.7
CLDB  Colider         17.13  42 eP       P      18 45 54.4 -1.0
LL03  Petrohue        17.48 193  P       Pn     18 45 59.9 -0.4
BB19B Bebedouro       17.57  84 eP       P      18 45 59.6 -0.7
LL05  Los Muermos     17.97 195  P       P      18 46 04.2 -0.2
SPB   Sao Paulo       18.15  92  P       P      18 46 05.6 -0.9
SPB   Sao Paulo       18.15  92 eP       P      18 46 05.9 -0.6
RCLB  Rio Claro- Sao  18.21  89 eP       P      18 46 06.3 -0.9
PET01 Itanhaem-SP     18.24  95 eP       P      18 46 06.7 -0.7
VAO   Valinhos        18.64  91  P       P      18 46 10.6 -1.4
VAO   Valinhos        18.64  91 eP       P      18 46 11.1 -0.9
LL01  San Ignacio de  18.68 192  P       Pn     18 46 13.5 -0.8
IPMB  Ipameri, GO     18.80  75 eP       P      18 46 13.2 -0.5
LL07  Hotel Espejo d  19.33 194  P       P      18 46 18.9 -0.2
LL02  Futaleuf        19.37 190  P       P      18 46 19.8 +0.2
SNDB  Serra Nova Dou  19.40  54 eP       P      18 46 18.8 -1.3
GO07  Milladeo Hill,  19.64 194  P       P      18 46 22.3 -0.2
PARB  Paraibuna       19.83  92 eP       P      18 46 23.5 -1.3
BDFB  Brasilia        19.97  68  P       P      18 46 25.6 -0.8
         comp=Z,374nm,0.8s,baz=241,slow=12,SNR=346
BDFB  Brasilia        19.97  68  P       P      18 46 24.7 -1.6
ATAH  Atahualpa       20.00 326  P       Pn     18 46 30.8 +0.2
         comp=Z,4.8nm,0.8s,baz=173,slow=9.7,SNR=5.0
PMNB  Patos De Minas  20.18  78 eP       P      18 46 27.1 -1.5
SLP01 Ubatuba-SP      20.26  92 eP       P      18 46 28.3 -1.1
NPGB  Novo Progresso  20.48  36 eP       P      18 46 29.2 -2.5
TEFE  Tefe            20.68   7 eP       P      18 46 33.7 -0.1
AY01  Puyuhuapi       20.70 191  P       P      18 46 33.4 -0.4
BSCB  Bom Sucesso     21.00  86 eP       P      18 46 35.8 -1.5
COYC  Coyhaique       21.73 189  P       P      18 46 43.1 -1.7
MACA  Manacapuru-AM   21.81  18 eP       P      18 46 44.1 -1.8
VAS01 Vassouras-RJ    21.97  90 eP       P      18 46 46.1 -1.4
ITTB  Itaituba        22.59  31 eP       P      18 46 51.3 -2.1
DIAM  Diamantina, MG  22.74  80 eP       P      18 46 53.3 -1.6
DUB01 Friburgo-RJ     22.98  90 eP       P      18 46 56.1 -1.0
JANB  Januaria        23.41  72 eP       P      18 46 59.1 -2.0
CAM01 Campos-RJ       23.68  90 eP       P      18 47 02.0 -1.3
SMTB  Santa Maria do  24.18  54 eP       P      18 47 06.2 -1.8
SDBA  SAO DESIDERIO   24.19  65 eP       P      18 47 06.3 -1.8
PRPB  Parauapebas     24.50  46 eP       P      18 47 09.0 -1.9
SJMB  Sao Joao De Ma  24.86  82 eP       P      18 47 12.7 -1.4
BSFB  Barra de Sao F  25.13  83 eP       P      18 47 14.4 -2.1
MAL2  Monte Alegre,   25.38  32  P       P      18 47 17.6 -1.3
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RIB01 Linhares ES     25.40  84 eP       P      18 47 17.3 -1.7
GUA01 Guaratinga, BA  26.79  79 eP       P      18 47 30.2 -1.3
BOAV  Boa Vista       27.19  15  P       P      18 47 33.5 -1.5
BOAV                             IAmb    IAmb   18 47 36.7
         comp=Z,68nm,1.7s
BOAV  Boa Vista       27.19  15 eP       P      18 47 33.5 -1.5
CMC01 Camacan, BA     27.50  77 eP       P      18 47 36.2 -1.6
NBIT  Itapeh - BA     27.74  76 eP       P      18 47 39.0 -1.0
MG05  Puerto Natales  27.78 187  P       P      18 47 39.5 -0.5
MG02  Cerro Sombrero  28.63 182  P       P      18 47 47.7 +0.2
ROSC  El Rosal        29.62 346  LR      LR     19 00 42.2
         comp=Z,104nm,18.4s,baz=82,slow=38
RUSC  La Rusia        30.39 349  P       P      18 48 03.7 -0.3
RUSC                             IAmb    IAmb   18 48 07.9
         comp=Z,15nm,0.9s
NBTA  Tacaratu-PE     31.62  67 eP       P      18 48 12.6 -1.7
NBPS  Pedro II - PI   31.69  56 eP       P      18 48 12.7 -2.3
MPGF  Montagnes des   32.38  28  P       P      18 48 19.4 -1.5
SDV   Santo Domingo   33.00 354  LR      LR     19 03 13.4
         comp=Z,55nm,18.3s,baz=234,slow=38
SDV   Santo Domingo   33.00 354 eP       P      18 48 27.0 +0.6
NBMO  Morrinhos-CE    33.45  56 eP       P      18 48 28.2 -2.1
NBPA  Parau_RN        34.26  63 eP       P      18 48 36.4 -0.8
RCBR  Riachuelo       35.21  64  P       P      18 48 42.6 -2.8
RCBR  Riachuelo       35.21  64 eP       P      18 48 45.2 -0.2
RCBR  Riachuelo       35.21  64  P       P      18 48 44.4 -1.0
NBPV  Pedro Velho     35.38  65 eP       P      18 48 46.1 -0.8
PMSA  Palmer Station  40.67 178  LR      LR     19 07 24.2
         comp=Z,82nm,18.5s,baz=348,slow=37
PMSA  Palmer Station  40.67 178  P       P      18 49 30.9 +0.5
PMSA                             IAmb    IAmb   18 49 32.2
         comp=Z,25nm,0.9s
PMSA  Palmer Station  40.67 178  P       P      18 49 30.6 +0.2
SIUN  Universidad Ur  41.34 334  IAmb    IAmb   18 51 01.1
         comp=Z,7.3nm,0.8s
TEIG  Tepich          48.62 333  P       P      18 50 34.0 +0.1
TEIG  Tepich          48.62 333  P       P      18 50 34.6 +0.7
VNA3  Neumayer Olymp  57.09 161 ⇑P       P      18 51 35.6 +0.2
         comp=Z,20nm,0.9s
VNA1  Neumayer--Stat  57.29 160 ⇑P       P      18 51 37.6 +0.9
         comp=Z,19nm,1.0s
VNA2  Neumayer--Watz  57.66 160 ⇑P       P      18 51 39.5 +0.1
         comp=Z,15nm,0.5s,baz=286,slow=6.8
RGRS  Roger Stewart   58.06 347  P       P      18 51 42.7 +0.2
RGRS                             IAmb    IAmb   18 53 22.8
         comp=Z,188nm,1.6s
SNAA  Sanae           59.29 161 ⇑P       P      18 51 50.9 +0.2
         comp=Z,230nm,0.6s
SNAA  Sanae           59.29 161  P       P      18 51 51.0 +0.3
         comp=Z,16nm,0.9s,baz=282,slow=7.9,SNR=58
SNAA                             PcP     PcP    18 52 36.9 -0.2
         comp=Z,4.4nm,0.5s,baz=261,slow=6.6,SNR=10
         comp=Z,16nm,0.9s
SNAA  Sanae           59.29 161  P       P      18 51 50.7  0.0
SNAA                                     PcP    18 52 37.3 +0.2
Y52A  Lilburn         59.86 344  IAmb    IAmb   18 51 56.2
         comp=Z,18nm,1.2s
KMSC  Kings Mountain  60.46 347  IAmb    IAmb   18 52 01.9
         comp=Z,22nm,1.3s
833A  Chaparral WMA,  60.66 327  P       P      18 51 59.9 -0.6
TROLL Troll, Antarti  61.01 161 ⇑P       P      18 52 02.8 +0.4
         comp=Z,661nm,0.5s
V55A  Taylorsville    61.12 347  IAmb    IAmb   18 52 05.1
         comp=Z,14nm,0.7s
X48A  Hartselle       61.23 341  IAmb    IAmb   18 52 05.6
         comp=Z,26nm,1.1s
W50A  Signal Mountai  61.45 343  IAmb    IAmb   18 52 07.2
         comp=Z,14nm,1.0s
TKL   Tuckaleechee C  61.50 345  P       P      18 52 02.7 -3.3
V48A  Smith Brothers  62.37 342  IAmb    IAmb   18 52 12.7
         comp=Z,11nm,0.8s
WHTX  Lake Whitney,   62.84 331  IAmb    IAmb   18 52 16.6
         comp=Z,10nm,0.7s
HPIG                  62.88 321  IAmb    IAmb   18 52 18.2
         comp=Z,8.0nm,0.6s
S54A  Dingess, Beckl  63.02 348  IAmb    IAmb   18 52 17.6
         comp=Z,17nm,0.8s
WVT   Waverly         63.02 341  P       P      18 52 14.7 -1.4
WVT   Waverly         63.02 341  P       P      18 52 15.8 -0.3
SAND  Sanderson       63.36 326  IAmb    IAmb   18 52 21.3
         comp=Z,24nm,1.0s
MIAR  Mount Ida       63.49 336  IAmb    IAmb   18 52 21.0
         comp=Z,18nm,1.1s
T47A  Sharon Grove    63.62 342  IAmb    IAmb   18 52 20.9
         comp=Z,17nm,0.9s
OZNA  Ozona           63.65 328  IAmb    IAmb   18 52 22.5
         comp=Z,17nm,1.1s
TXAR  Lajitas Array   63.66 325  P       P      18 52 22.0 +1.4
         comp=Z,3.4nm,0.8s,baz=150,slow=8.6,SNR=36
         comp=Z,3.4nm,0.8s
TXAR  Lajitas Array   63.66 325  P       P      18 52 21.7 +1.2
PLPT  Palo Pinto      63.92 331  IAmb    IAmb   18 52 24.1
         comp=Z,16nm,0.8s
FCAR  Ozark Folk Cen  64.17 338  IAmb    IAmb   18 52 24.8
         comp=Z,17nm,1.3s
ABTX  Abilene, Hawle  64.36 330  IAmb    IAmb   18 52 27.7
         comp=Z,21nm,1.1s
PBMO  Poplar Bluff    64.42 340  IAmb    IAmb   18 52 26.6
         comp=Z,20nm,1.0s
ALPN  Alpine          64.47 325  IAmb    IAmb   18 52 27.8
         comp=Z,8.0nm,0.7s
WCI   Wyandotte Cave  64.57 343  P       P      18 52 26.0 -0.2
WCI                              PcP     PcP    18 52 59.1 +0.3
WCI                              sP      sP     18 53 20.0 -3.9
HHAR  Hobbs           65.17 336  IAmb    IAmb   18 52 31.8
         comp=Z,15nm,0.9s
SN07  Snyder 07       65.32 329  IAmb    IAmb   18 52 33.1
         comp=Z,18nm,0.8s
MGMO  Mountain Grove  65.37 338  IAmb    IAmb   18 52 33.0
         comp=Z,14nm,1.1s
PECS  Pecos           65.38 326  IAmb    IAmb   18 52 34.0
         comp=Z,9.8nm,0.7s
RLO   Rose Lookout    65.47 336  IAmb    IAmb   18 52 33.5
         comp=Z,13nm,0.6s
U38A  Gravette        65.48 336  IAmb    IAmb   18 52 33.6
         comp=Z,11nm,0.7s
VHRN  Van Horn        65.50 325  IAmb    IAmb   18 52 35.1
         comp=Z,19nm,0.9s
FVM   French Village  65.52 340  IAmb    IAmb   18 52 34.2
         comp=Z,21nm,1.1s
TUL3  Leonard         65.54 335  IAmb    IAmb   18 52 34.8
         comp=Z,14nm,0.7s
POST  Post            65.59 329  IAmb    IAmb   18 52 36.0
         comp=Z,12nm,0.8s
WMOK  Wichita Mounta  65.76 332  IAmb    IAmb   18 52 35.7
         comp=Z,39nm,1.9s
DKNS  Dickens         65.82 330  IAmb    IAmb   18 52 36.2
         comp=Z,12nm,0.7s
CCM   Cathedral Cave  65.85 339          P      18 52 33.2 -1.2
CCM                              IAmb    IAmb   18 52 35.7
         comp=Z,26nm,1.1s
QSPA  South Pole Qui  66.06 180  P       P      18 52 36.7 +1.1
         comp=Z,21nm,0.5s,baz=200,slow=0.5,SNR=229
         comp=Z,21nm,0.5s
QSPA  South Pole Qui  66.06 180          P      18 52 36.7 +1.1
QSPA  South Pole Qui  66.06 180  P       P      18 52 36.8 +1.1
R40A  Maddies Statio  66.39 339  IAmb    IAmb   18 52 40.0
         comp=Z,22nm,1.3s
MNTX  Cornudas Mount  66.43 325  IAmb    IAmb   18 52 40.1
         comp=Z,13nm,0.9s
T35A  Sooner Cattle   66.70 335  IAmb    IAmb   18 52 42.4
         comp=Z,22nm,1.1s
CROK  Carrier         66.93 333  IAmb    IAmb   18 52 43.1
         comp=Z,28nm,0.9s
AMTX  Amarillo        67.17 330  IAmb    IAmb   18 52 45.0
         comp=Z,15nm,1.2s
P40A  Paris           67.45 339  IAmb    IAmb   18 52 45.9
         comp=Z,16nm,0.8s
ELIB  Princess Elisa  67.45 160 dP       P      18 52 41.6 -2.7
ELIB                            dx       x      18 52 45.1
DBIC  Dimbokro        68.08  72  P       P      18 52 47.8 -1.3
         comp=Z,4.5nm,0.4s,baz=264,slow=5.7,SNR=11
         comp=Z,4.5nm,0.4s
N41A  Harden Midland  68.15 341  IAmb    IAmb   18 52 49.7
         comp=Z,17nm,0.8s
319A  Douglas         68.30 322  IAmb    IAmb   18 52 53.6
         comp=Z,21nm,0.8s
121A  Cookes Peak, D  68.35 324  IAmb    IAmb   18 52 54.3
         comp=Z,27nm,1.1s
RTBA  Rita Blanca     68.94 330  IAmb    IAmb   18 52 57.9
         comp=Z,13nm,0.9s
L40A  Anamosa         69.51 341  IAmb    IAmb   18 52 58.4
         comp=Z,17nm,0.7s
ABQ   Albuquerque     69.53 326  IAmb    IAmb   18 53 01.1
         comp=Z,20nm,1.0s
ANMO  Albuquerque     69.53 326          P      18 52 58.4 +0.6
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ANMO                             IAmb    IAmb   18 53 01.1
         comp=Z,20nm,1.0s
ANMO  Albuquerque     69.53 326  P       P      18 52 59.9 +2.0
ANMO                             PcP     PcP    18 53 21.0 +1.1
ANMO                             pP      pP     18 53 36.5 -1.6
ANMO                             sP      sP     18 53 53.1 -2.8
TASM  ASL Pad, Albuq  69.53 326  IAmb    IAmb   18 53 01.1
         comp=Z,20nm,1.0s
TASM  ASL Pad, Albuq  69.53 326  IAmb    IAmb   18 53 01.1
         comp=Z,20nm,1.0s
TASM  ASL Pad, Albuq  69.53 326  IAmb    IAmb   18 53 01.1
         comp=Z,20nm,1.0s
KSCO  Kaye Shedlock'  71.01 332  IAmb    IAmb   18 53 09.5
         comp=Z,28nm,1.0s
L34A  Svendsen Farm,  71.08 337  IAmb    IAmb   18 53 08.2
         comp=Z,29nm,0.9s
SDCO  Great Sand Dun  71.29 329  IAmb    IAmb   18 53 11.7
         comp=Z,13nm,0.9s
X16A  Lo Mia Camp, P  71.78 323  IAmb    IAmb   18 53 15.1
         comp=Z,18nm,1.2s
S22A  4UR Ranch, Cre  71.92 328  IAmb    IAmb   18 54 22.0
         comp=Z,11nm,0.4s
I37A  Lemond, Waseca  71.94 340  IAmb    IAmb   18 53 13.2
         comp=Z,24nm,1.0s
Y14A  Wickenburg      72.30 321  IAmb    IAmb   18 53 17.8
         comp=Z,27nm,1.5s
ECSD  EROS Data Cent  72.72 338  IAmb    IAmb   18 53 18.2
         comp=Z,23nm,1.3s
SPMN  Marine on St.   72.86 341  IAmb    IAmb   18 53 18.5
         comp=Z,20nm,1.1s
K30B  Basset          72.88 336  IAmb    IAmb   18 53 20.4
         comp=Z,34nm,1.0s
BLYC  Blythe          73.05 320  IAmb    IAmb   18 53 22.4
         comp=Z,22nm,1.1s
PV15  Paradox Valley  73.20 327  IAmb    IAmb   18 53 23.5
         comp=Z,17nm,1.0s
PV02  Paradox Valley  73.22 327  IAmb    IAmb   18 53 23.4
         comp=Z,32nm,1.3s
PV13  Radium Mtn., P  73.23 327  IAmb    IAmb   18 53 23.2
         comp=Z,15nm,1.0s
PV18  Skein Mesa, Pa  73.34 327  IAmb    IAmb   18 53 23.7
         comp=Z,23nm,1.0s
PV12  Saucer Basin,   73.34 327  IAmb    IAmb   18 53 23.4
         comp=Z,14nm,0.9s
PV19  Morning Glory   73.42 327  IAmb    IAmb   18 53 24.2
         comp=Z,20nm,1.2s
PV20  West Nyswonger  73.44 327  IAmb    IAmb   18 53 24.3
         comp=Z,24nm,1.2s
SYO   Syowa Base      73.50 159⇑iP       P      18 53 19.4 -1.5
SYO   Syowa Base      73.50 159⇑ePcP     PcP    18 53 34.3 -1.8
PV22  Blue Mesa, Par  73.50 327  IAmb    IAmb   18 53 24.8
         comp=Z,19nm,1.0s
PV10  Paradox Valley  73.50 327  IAmb    IAmb   18 53 24.3
         comp=Z,20nm,0.9s
U15A  North Rim       73.73 324  IAmb    IAmb   18 53 26.9
         comp=Z,20nm,1.0s
O20A  White River Ci  74.48 329  IAmb    IAmb   18 53 30.5
         comp=Z,23nm,0.9s
VNDA  Vanda           74.51 190  P       P      18 53 29.0 +2.3
         comp=Z,12nm,0.9s,baz=144,slow=4.6,SNR=22
         comp=Z,12nm,0.9s
VNDA  Vanda           74.51 190          P      18 53 28.5 +1.8
VNDA                             IAmb    IAmb   18 53 30.0
         comp=Z,16nm,1.0s
VNDA  Vanda           74.51 190  P       P      18 53 28.6 +2.0
VNDA                             PcP     PcP    18 53 40.7 +0.3
VNDA                             pP      pP     18 54 06.6 -0.6
VNDA                             sP      sP     18 54 22.8 -2.1
V12A  Nelson          74.64 321          P      18 53 30.3 +2.2
SRU   San Rafael Swe  74.81 326  IAmb    IAmb   18 53 32.1
         comp=Z,19nm,0.7s
P18A  Preston Nutter  75.07 327  IAmb    IAmb   18 53 34.1
         comp=Z,16nm,0.8s
CCUT  Cedar City      75.13 324  IAmb    IAmb   18 53 35.1
         comp=Z,27nm,0.9s
P17A  Butcher Ranch,  75.19 327  IAmb    IAmb   18 53 34.5
         comp=Z,16nm,0.9s
RDMU  Red Mountain    75.46 328  IAmb    IAmb   18 53 35.7
         comp=Z,13nm,0.8s
GSC   Goldstone, Bar  75.47 320  IAmb    IAmb   18 53 36.5
         comp=Z,21nm,1.3s
RSSD  Black Hills     75.83 334          P      18 53 36.3 +1.4
PRN   Pahroc Range    75.95 323  IAmb    IAmb   18 53 39.6
         comp=Z,17nm,1.1s
CCCA  Chr Cany lake   75.96 320  IAmb    IAmb   18 53 39.2
         comp=Z,28nm,1.1s
GWY   Greenwater Val  76.01 321  IAmb    IAmb   18 53 39.2
         comp=Z,16nm,0.9s
BSUT  Blindstream Ca  76.01 327  IAmb    IAmb   18 53 39.6
         comp=Z,15nm,0.8s
MPU   Maple Canyon    76.06 326  IAmb    IAmb   18 53 39.5
         comp=Z,16nm,1.1s
LRMC  Laurel Mtn Rad  76.11 320  P       P      18 53 39.3 +2.7
PSUT  Pine Spring     76.11 324  IAmb    IAmb   18 53 40.1
         comp=Z,16nm,0.8s
TPNV  Topopah Spring  76.30 322  IAmb    IAmb   18 53 41.5
         comp=Z,22nm,1.1s
FURC  Furnace Creek,  76.32 321  IAmb    IAmb   18 53 41.2
         comp=Z,26nm,1.1s
MPMC  Manual Prospec  76.40 320  P       P      18 53 40.6 +2.4
WCT   Wildcat Mounta  76.41 321  IAmb    IAmb   18 53 42.0
         comp=Z,18nm,1.0s
AGMN  Agassiz Nation  76.54 341  IAmb    IAmb   18 53 40.1
         comp=Z,22nm,1.1s
TORD  Torodi Ar. Bea  76.85  69  P       P      18 53 40.1 -0.8
         comp=Z,27nm,0.9s,baz=275,slow=4.0,SNR=42
         comp=Z,27nm,0.9s
TORD  Torodi Ar. Bea  76.85  69  P       P      18 53 40.3 -0.6
TORD                             IAmb    IAmb   18 53 41.4
         comp=Z,15nm,0.8s
R11B  Troy Canyon, C  76.92 323  IAmb    IAmb   18 53 44.9
         comp=Z,22nm,1.4s
PDAR  Pinedale Array  77.15 329  P       P      18 53 43.7 +1.4
         comp=Z,2.0nm,0.6s,baz=135,slow=7.9,SNR=25
         comp=Z,2.0nm,0.6s
PDAR  Pinedale Array  77.15 329          P      18 53 43.3 +1.0
EPLO  Experimental L  77.17 343  IAmb    IAmb   18 53 43.0
         comp=Z,14nm,0.8s
TSUM  Tsumeb          77.85 106  P       P      18 53 45.6 -1.1
         comp=Z,7.4nm,0.7s,baz=222,slow=6.2,SNR=9.1
         comp=Z,7.4nm,0.7s
TSUM  Tsumeb          77.85 106  P       P      18 53 45.4 -1.3
TSUM  Tsumeb          77.85 106  P       P      18 53 46.4 -0.3
LOHW  Long Hollow     78.29 329  IAmb    IAmb   18 53 51.5
         comp=Z,36nm,1.7s
ULM   Lac du Bonnet   78.29 342  P       P      18 53 48.7 +0.6
         comp=Z,11nm,0.8s,baz=134,slow=6.2,SNR=15
         comp=Z,11nm,0.8s
ULM   Lac du Bonnet   78.29 342  IAmb    IAmb   18 53 49.5
         comp=Z,18nm,1.0s
NVAR  Mina Array Bea  78.50 321  P       P      18 53 52.4 +2.5
         comp=Z,6.2nm,1.0s,baz=157,slow=7.2,SNR=14
         comp=Z,6.2nm,1.0s
SCHQ  Schefferville   78.66   0  P       P      18 53 50.8 +0.8
         comp=Z,3.2nm,0.5s,baz=210,slow=5.0,SNR=7.0
         comp=Z,3.2nm,0.5s
KOOLE Kule            78.74 110  P       P      18 53 50.9 -0.7
KOOLE                            IAmb    IAmb   18 53 52.0
         comp=Z,16nm,0.8s
YNE   Yellowstone No  79.09 331  IAmb    IAmb   18 53 55.9
         comp=Z,18nm,1.0s
YMR   Madison River   79.27 330  IAmb    IAmb   18 53 57.6
         comp=Z,20nm,0.9s
DGMT  Dagmar          79.50 336  P       P      18 53 55.5 +0.7
YHL   Hebgen Lake     79.51 330  IAmb    IAmb   18 53 58.8
         comp=Z,39nm,1.6s
PNTR  Pine Nut        79.69 321  IAmb    IAmb   18 53 59.8
         comp=Z,22nm,0.8s
PAHR  Pah Rah Range   79.99 322  IAmb    IAmb   18 54 01.3
         comp=Z,26nm,0.9s
HLID  Hailey          80.08 327  IAmb    IAmb   18 54 01.9
         comp=Z,21nm,0.9s
DLMT  Dillon          80.55 329  IAmb    IAmb   18 54 03.9
         comp=Z,28nm,1.4s
MFID  Camas Ranch     80.68 326  IAmb    IAmb   18 54 04.7
         comp=Z,37nm,1.8s
CCD   Concordia, Ant  80.75 183  P       P      18 54 02.8 +1.0
BOSA  Boshof          80.88 117  P       P      18 54 02.5 -0.5
         comp=Z,6.4nm,0.5s,baz=258,slow=3.7,SNR=28
         comp=Z,6.4nm,0.5s
BOSA  Boshof          80.88 117  P       P      18 54 02.5 -0.5
ORV   Oroville        81.10 321  IAmb    IAmb   18 54 06.8
         comp=Z,17nm,1.1s
EGMT  Eagleton        81.33 333  IAmb    IAmb   18 54 06.8
         comp=Z,21nm,1.1s
PLID  Pearl Lake      81.97 327  IAmb    IAmb   18 54 11.1
         comp=Z,21nm,0.9s
MD01  Midelt array s  82.23  49          P      18 54 09.6 -0.2
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BMO	**Blue Mountains**	**82.45**	**327**	IAmb	IAmb	18 54 13.3	
	comp=Z,26nm,1.8s						
LBTB	**Lobatse**	**82.55**	**114**	P	**P**	**18 54 11.0**	**-0.7**
	comp=Z,8.2nm,0.6s,baz=246,slow=6.9,SNR=23						
	comp=Z,8.2nm,0.6s						
K05A	**Summer Lake**	**82.87**	**323**	IAmb	IAmb	18 54 16.2	
	comp=Z,27nm,1.0s						
PINE	**Pine Mountain**	**83.61**	**324**	IAmb	IAmb	18 54 19.9	
	comp=Z,22nm,1.0s						
I05D	**Terrebonne, OR**	**84.19**	**324**	IAmb	IAmb	18 54 22.1	
	comp=Z,11nm,0.8s						
TAM	**Tamanrasset**	**84.68**	**62**	IAmb	IAmb	18 54 24.6	
	comp=Z,30nm,1.1s						
TAM	**Tamanrasset**	**84.68**	**62**	P	**P**	**18 54 23.3**	**+0.7**
D08A	**Wollman Farm,**	**84.80**	**327**	IAmb	IAmb	18 54 25.0	
	comp=Z,15nm,1.2s						
C09A	**Chrisman Ranch**	**85.01**	**328**	IAmb	IAmb	18 54 25.9	
	comp=Z,24nm,0.9s						
HOOD	**Mount Hood Mea**	**85.01**	**325**	IAmb	IAmb	18 54 28.4	
	comp=Z,22nm,1.1s						
EPH	**Ephrata**	**85.34**	**327**	IAmb	IAmb	18 57 08.9	
	comp=Z,29nm,1.9s						
FCC	**Fort Churchill**	**85.55**	**346**	IAmb	IAmb	18 54 27.7	
	comp=Z,19nm,0.7s						
ESDC	**Sonseca Array**	**86.67**	**44**	P	**P**	**18 54 33.2**	**+1.3**
	comp=Z,4.5nm,0.9s,baz=236,slow=4.9,SNR=12						
	comp=Z,4.5nm,0.9s						
DRV	**Dumont d’Urvil**	**87.15**	**191**	P	**P**	**18 54 34.1**	**+0.4**
CASY	**Casey**	**89.84**	**179**	P	**P**	**18 54 46.7**	**+0.3**
CASY	**Casey**	**89.84**	**179**	P	**P**	**18 54 47.6**	**+1.2**
KEST	**Kesra**	**93.69**	**52**	P	**P**	**18 55 04.3**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=64,slow=7.7,SNR=4.1						
	comp=Z,1.8nm,0.7s						
KEST	**Kesra**	**93.69**	**52**	P	**P**	**18 55 02.7**	**-2.1**
YKA	**Yellowknife Ar**	**94.18**	**340**	P	**P**	**18 55 07.1**	**+0.8**
	comp=Z,4.5nm,0.9s,baz=140,slow=3.7,SNR=28						
	comp=Z,4.5nm,0.9s						
YKA	**Yellowknife Ar**	**94.18**	**340**	P	**P**	**18 55 06.3**	**0.0**
KBZ	**Khabaz**	**120.56**	**52**	PKP	**PKPdf**	**19 00 38.2**	**-0.5**
	comp=Z,2.7nm,0.8s,baz=194,slow=4.4,SNR=5.4						
ASAR	**Alice Springs**	**128.22**	**205**	PKP	**PKPdf**	**19 00 54.2**	**0.0**
	comp=Z,9.5nm,0.8s,baz=135,slow=1.6,SNR=58						
ASAR				PP	**PP**	**19 03 02.8**	**+4.2**
	comp=Z,1.7nm,1.2s,baz=145,slow=4.9,SNR=4.1						
ASAR	**Alice Springs**	**128.22**	**205**		**PKPdf**	**19 00 54.0**	**-0.2**
AS31	**Alice Springs**	**128.22**	**205**		**PKPdf**	**19 00 54.3**	**+0.1**
ARTI	**Arti**	**129.36**	**36**	PKP	**PKiKP**	**19 00 56.2**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=299,slow=2.2,SNR=6.8						
AKTO	**Aktyubinsk**	**130.56**	**43**	PKP	**PKPdf**	**19 00 57.7**	**0.0**
	comp=Z,2.4nm,0.6s,baz=269,slow=1.8,SNR=9.4						
AKTO				SKPbc	**SKPbc**	**19 04 06.0**	**-0.5**
	comp=Z,4.4nm,0.8s,baz=287,slow=4.0,SNR=13						
WRA	**Warramunga Arr**	**131.38**	**207**	PKP	**PKPdf**	**19 01 00.7**	**+0.4**
	comp=Z,8.3nm,0.9s,baz=157,slow=1.7,SNR=44						
WRA				SKPbc	**SKPbc**	**19 04 09.2**	**-1.3**
	comp=Z,1.5nm,0.4s,baz=153,slow=3.5,SNR=20						
WB0	**Warramunga Arr**	**131.52**	**208**		**PKiKP**	**19 01 01.1**	**-0.4**
ABKAR	**Akbulak array**	**132.01**	**45**		**PKiKP**	**19 01 01.9**	**+0.4**
PETK	**Petropavlovsk-**	**135.58**	**323**	PKP	**PKiKP**	**19 01 08.6**	**-0.1**
	comp=Z,8.2nm,1.0s,baz=76,slow=2.1,SNR=9.1						
BVAR	**Borovoye Array**	**137.06**	**37**	PKP	**PKPdf**	**19 01 10.3**	**+0.5**
	comp=Z,2.0nm,0.7s,baz=282,slow=2.9,SNR=12						
BVAR				SKPbc	**SKPbc**	**19 04 28.2**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=293,slow=4.2,SNR=4.5						
KURBB	**Kurchatov Arra**	**142.64**	**36**	PKP	**PKPdf**	**19 01 17.5**	**-2.5**
	comp=Z,1.5nm,0.7s,baz=314,slow=3.2,SNR=11						
KURBB				SKPbc	**SKPbc**	**19 04 40.2**	**-2.7**
	comp=Z,0.6nm,0.2s,baz=312,slow=3.3,SNR=4.9						
AAK	**Ala-Archa**	**143.51**	**50**	PKP	**PKPdf**	**19 01 21.0**	**-1.1**
	comp=Z,2.2nm,0.5s,baz=180,slow=3.0,SNR=8.9						
ZALV	**Zalesovo Beam**	**143.64**	**28**	PKP	PKPbc	19 01 20.2	+0.7
	comp=Z,11nm,0.5s,baz=309,slow=4.3,SNR=63						
ZALV				SKPbc	**SKPbc**	**19 04 45.1**	**-0.1**
	comp=Z,4.9nm,0.9s,baz=296,slow=4.4,SNR=7.6						
KSH	**Kashi**	**145.48**	**55**	PKPbc	**PKPab**	**19 01 26.3**	**0.0**
KSH				pPKP	pPKPdf	19 02 13.3	+4.0
TARG	**Taragay, Kyrgy**	**146.14**	**50**		**PKPab**	**19 01 28.9**	**-0.2**
MAKZ	**Makanchi**	**146.60**	**40**		**PKPbc**	**19 01 29.5**	**+0.7**
MKAR	**Makanchi Array**	**146.79**	**39**	PKPbc	**PKPdf**	**19 01 28.1**	**+0.8**
	comp=Z,14nm,0.6s,baz=292,slow=1.6,SNR=82						
KAPI	**Kappang**	**150.22**	**194**	PKPbc	**PKiKP**	**19 01 40.3**	**+0.4**
	comp=Z,9.3nm,0.3s,baz=232,slow=3.6,SNR=18						
KAPI				PKPab	**PKPab**	**19 01 46.6**	**+1.1**
	comp=Z,13nm,0.2s,baz=233,slow=4.5,SNR=14						
HEH	**HeiHe**	**151.55**	**340**	PKPbc	**PKPbc**	**19 01 40.9**	**-0.2**
WMQ	**Urumqi**	**151.62**	**40**	*e*PKPbc	**PKPdf**	**19 01 31.1**	**-4.1**
WMQ				PKPab	**PKPab**	**19 01 52.5**	**+1.7**
WMQ				sPKP	sPKPbc	19 02 40.3	-1.8
HILR	**Hailar Array B**	**154.05**	**350**	PKP	**PKPdf**	**19 01 38.9**	**+0.3**
	comp=Z,2.0nm,0.6s,baz=133,slow=39,SNR=2.9						
HILR				PKPbc	**PKiKP**	**19 01 47.3**	**+0.5**
	comp=Z,3.6nm,0.5s,baz=56,slow=2.7,SNR=5.6						
HILR				PKPab	**PKPab**	**19 02 02.1**	**+1.3**
	comp=Z,5.9nm,0.6s,baz=29,slow=3.4,SNR=7.4						
MJAR	**Matsushiro Arr**	**154.87**	**305**	PKP	**PKPdf**	**19 01 41.0**	**+1.0**
	comp=Z,1.5nm,1.0s,baz=270,slow=0.5,SNR=4.4						
MJAR				PKPab	**PKPab**	**19 02 06.2**	**+1.4**
	comp=Z,12nm,1.0s,baz=74,slow=1.8,SNR=18						
BNX	**BinXian**	**155.41**	**335**	⇑P	**PKPdf**	**19 01 40.5**	**+0.1**
BNX				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONM	**Songino Array**	**155.83**	**10**	PKP	**PKPdf**	**19 01 41.6**	**+0.5**
	comp=Z,1.7nm,0.8s,baz=321,slow=3.8,SNR=5.5						
SONM				PKPab	**PKPab**	**19 02 08.2**	**-0.3**
	comp=Z,2.1nm,0.8s,baz=333,slow=3.4,SNR=3.7						
GTA	**Gaotai**	**161.27**	**33**	PKP	**PKPdf**	**19 01 48.4**	**+0.5**
GTA				pPKP	PKPab	19 02 32.4	-0.1
KSRS	**Korea Array**	**161.43**	**319**	PKP	**PKPdf**	**19 01 48.4**	**+0.5**
	comp=Z,2.2nm,0.9s,baz=60,slow=3.0,SNR=7.0						
KSRS				PKPab	**PKPab**	**19 02 35.5**	**+2.5**
	comp=Z,2.0nm,0.9s,baz=43,slow=5.0,SNR=7.4						
HHC	**Hu-ho-hao-te**	**163.32**	**3**	*e*P	**PKPdf**	**19 01 48.4**	**-1.5**
CMAR	**Chiang Mai Arr**	**165.96**	**111**	PKP	**PKPdf**	**19 01 53.6**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=221,slow=0.3,SNR=9.3						
CMAR				PKPab	**sPKPdf**	**19 02 53.8**	**0.0**
	comp=Z,0.8nm,0.3s,baz=243,slow=3.6,SNR=5.4						
HNS	**HongShan**	**166.68**	**353**	⇑PKP	**PKPdf**	**19 01 54.4**	**+1.7**
XAN	**Xi'an**	**169.60**	**18**	PKP	**PKPdf**	**19 01 55.8**	**+1.0**
PZH	**PanZhiHua**	**169.78**	**74**	PKP	**PKPdf**	**19 01 54.6**	**-0.7**
NJ2	**Nanjing**	**170.45**	**327**	*e*P	**PKPdf**	**19 01 54.3**	**-1.0**
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						

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*SOME **15** 18:56:21.4, 42°.22N×81°.60E, h15^{km}*

*NNC **15** 18:56:21.2±2.5, 42°.11N×81°.54E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=18.6km s-min=13.4km az=172.0*

ISC 15 18:56:24.2±2.2**, 42°.23N**±0°.10×**81°.34E**±0°.07**, h10**^{km}**, n26, σ2^{s}.27**/38**, 7C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.42**	**330**	P	**Pb**	**18 56 51.1**	**+0.3**
	5.0nm,0.1s						
KTMS				S	**Sg**	**18 57 12.4**	**+2.7**
	5.9nm,0.2s						
KTMS	**Ketmen**	**1.42**	**330**	*e*P	**Pb**	**18 56 51.1**	**+0.3**
	5.0nm,0.1s						
KTMS				*e*S	**Sg**	**18 57 12.4**	**+2.7**
	5.9nm,0.2s						
SHLS	**Shalkode**	**1.67**	**305**	P	**Pn**	**18 56 50.7**	**-2.9**
	16nm,0.1s						
SHLS				S	**Sn**	**18 57 11.8**	**-3.2**
	64nm,0.3s						
SHLS	**Shalkode**	**1.67**	**305**	*e*P	**Pn**	**18 56 50.7**	**-2.9**
	16nm,0.1s						
SHLS				*e*S	**Sn**	**18 57 11.8**	**-3.2**
	64nm,0.3s						
PDGK	**Podgornoye**	**1.75**	**310**	⇑Pn	**Pn**	**18 56 54.7**	**0.0**
	4.0nm,0.2s						
PDGK				⇑Sn	**Sg**	**18 57 26.6**	**+6.2**
	19nm,0.6s						
UZB	**Uzynbulak**	**1.94**	**299**	Pg	**Pg**	**18 57 02.0**	**+0.7**
	8.0nm,0.3s						
UZB				Lg	Lg	18 57 31.3	
	39nm,0.4s						
UZB	**Uzynbulak**	**1.94**	**299**	*e*P	**Pg**	**18 57 02.0**	**+0.7**
	8.0nm,0.3s						
UZB				*e*S	**Sg**	**18 57 31.2**	**+4.8**
	39nm,0.4s						
KPKS	**Kokpek**	**2.31**	**303**	Pg	**Pb**	**18 57 06.1**	**+0.1**
	0.2nm,0.1s						
KPKS				Lg	Lg	18 57 38.3	
	9.0nm,0.5s						
SATY	**Saty**	**2.32**	**292**	Pg	**Pg**	**18 57 08.0**	**-0.6**
	11nm,0.4s						
SATY				Lg	Lg	18 57 41.8	
	17nm,0.3s						
KURS	**Kuram**	**2.65**	**299**	Pg	**Pb**	**18 57 13.6**	**+1.9**
	3.1nm,0.5s						
KURS				Lg	Lg	18 57 51.0	
	5.9nm,0.7s						
KNOS	**Konyrlen**	**2.65**	**324**	Pg	**Pb**	**18 57 11.5**	**-0.3**
	4.8nm,0.2s						
KNOS				Lg	Lg	18 57 47.2	
	8.5nm,0.5s						
ARXS	**Arharly**	**3.24**	**309**	Pg	**Pb**	**18 57 23.1**	**+1.2**
	2.3nm,0.3s						
ARXS				Lg	Lg	18 58 06.9	
	5.6nm,0.3s						
ARXS	**Arharly**	**3.24**	**309**	*e*P	**Pb**	**18 57 23.1**	**+1.2**
	2.3nm,0.3s						
ARXS				*e*S	**Sg**	**18 58 07.0**	**-1.3**
	5.6nm,0.3s						
KOTS	**Kotyrbulak**	**3.27**	**289**	Pg	**Pb**	**18 57 24.8**	**+2.4**
	5.1nm,0.3s						
KOTS				Lg	Lg	18 58 10.2	
	8.4nm,0.3s						
KOTS	**Kotyrbulak**	**3.27**	**289**	*e*P	**Pb**	**18 57 24.8**	**+2.4**
	5.1nm,0.3s						
KOTS				*e*S	**Sg**	**18 58 10.2**	**+1.0**
	8.4nm,0.3s						
MDOK	**Medeo**	**3.30**	**288**	Pg	**Pb**	**18 57 24.1**	**+1.3**
	2.5nm,0.6s						
MDOK				Lg	Lg	18 58 09.1	
	4.2nm,0.7s						
KAPS	**Kapalarasan**	**3.38**	**336**	Pg	**Pb**	**18 57 21.1**	**-3.0**
	2.3nm,0.1s						
KAPS				Lg	Lg	18 58 03.7	
	7.0nm,0.3s						
IZV	**Izvestkoviy**	**3.58**	**285**	Pg	**Pb**	**18 57 28.6**	**+1.0**
	3.3nm,0.2s						
IZV				Lg	Lg	18 58 16.0	
	4.6nm,0.2s						
IZV	**Izvestkoviy**	**3.58**	**285**	*e*P	**Pb**	**18 57 28.6**	**+1.0**
	3.3nm,0.2s						
IZV				*e*S	**Sg**	**18 58 17.0**	**-2.1**
	4.6nm,0.2s						
KTBS	**Karatobe**	**3.72**	**295**	Pg	**Pb**	**18 57 31.3**	**+1.2**
	1.8nm,0.4s						
KTBS				Lg	Lg	18 58 21.3	
	0.3nm,0.2s						
KST	**Kastek**	**4.05**	**283**	Pg	**Pb**	**18 57 38.0**	**+2.4**
	4.2nm,0.4s						
KST				Lg	Lg	18 58 32.7	
	3.1nm,0.4s						
KST	**Kastek**	**4.05**	**283**	*e*P	**Pb**	**18 57 38.0**	**+2.4**
	4.2nm,0.4s						
KST				*e*S	**Sg**	**18 58 32.7**	**-1.4**
	3.1nm,0.4s						
DGS	**Degeres**	**4.22**	**286**	Pg	**Pb**	**18 57 40.9**	**+2.3**
	1.9nm,0.2s						
DGS				Lg	Lg	18 58 37.8	
	5.0nm,0.7s						
KRBS	**Karabastau**	**4.41**	**291**	Pg	**Pb**	**18 57 44.0**	**+2.3**
	0.7nm,0.4s						
KRBS				Lg	Lg	18 58 43.2	
	0.6nm,0.4s						
MAKZ	**Makanchi**	**4.60**	**5**	⇑Pn	**Pn**	**18 57 33.5**	**-0.3**
	0.8nm,0.4s						
MAKZ				⇓Pg	**Pb**	**18 57 46.0**	**+1.0**
	2.3nm,1.1s						
MAKZ				⇑Lg	Lg	18 58 50.7	
	1.7nm,0.7s						
MK31	**Makanchi Array**	**4.62**	**8**	⇑Pn	**Pn**	**18 57 33.8**	**-0.2**
	0.2nm,0.2s,baz=193,slow=13,SNR=35						
MK31				⇑Pg	**Pb**	**18 57 46.8**	**+1.6**
	0.5nm,0.3s,baz=185,slow=13,SNR=7.9						
MK31				⇑Lg	Lg	18 58 50.7	
	2.6nm,0.7s,baz=184,slow=30,SNR=4.1						

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*IDC **15** 19:01:59.9±0.6, 6°.57N×125°.07E, h0^{km}, mb4.3/22, mbtmp4.3/23, ML4.8/1, MS3.8/21, Error ellipse: s-maj=13.8km s-min=8.5km az=127.0*

*BJI **15** 19:02:00.4, 6°.56N×125°.51E, h12^{km}, mB5.0/14, mb4.4/52, Ms4.3/22, Ms7 4.1/18*

*NEIC **15** 19:02:02.5±1.7, 6°.60N±0°.06×125°.18E±0°.07, h10^{km}±1^{km}, mb4.9/43, Error ellipse: s-maj=14.8km s-min=3.9km az=127.0*

*DJA **15** 19:02:03.5±0.6, 7°N±13°×12°5E±°, h18^{km}±18^{km}, M5.0/14, mb5.1/14, mB5.3/12, MLv5.4/8, Mw(mB)4.7/12, MwMwp4.6/1, Mwp4.9/1*

*GCMT **15** 19:02:06.5±0.3, 6°.73N±0°.02×125°.23E±0°.03, h23^{km}±2^{km}, MW4.8/72, Moment Tensor Solution. s12,c14; s72,c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.16±.20; M$_{\theta\theta}$1.97±.13; M$_{\phi\phi}$-1.81±.14; M$_{r\theta}$-0.49±.17; M$_{\theta\phi}$-1.18±.09; M$_{\phi r}$0.58±.21; Best double couple: M$_0$2.35100×10^{16} NP1:ϕ_s241.00000°, δ72.00000°, λ179.00000°. NP2: ϕ_s331.00000°, δ89.00000°, λ18.00000°. Principal axes: T 2.4630, Plg14.0000°, Azm197.0000°; N -0.2220, Plg72.0000°, Azm334.0000°; P -2.2390, Plg12.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 19:02:03.6±0.3**, 6°.64N**±0°.03×**125°.27E**±0°.05**, h10**^{km}**, n167, σ1^{s}.89**/128**, mb4.6**/60**, MS4.0**/28**, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.53**	**36**	Pg	**Pg**	**19 02 14.5**	**+0.6**
	3µm,0.3s,baz=230,slow=1.9,SNR=433						
DAV				Lg	Lg	19 02 23.5	
	6µm,0.3s,baz=321,slow=22,SNR=26						
DAV	**Davao City (W)**	**0.53**	**36**	P	**Pg**	**19 02 14.4**	**+0.5**
DAV	**Davao City (W)**	**0.53**	**36**	S	**Sb**	**19 02 24.1**	**+1.4**
DAV	**Davao City (W)**	**0.53**	**36**	P	**Pg**	**19 02 14.5**	**+0.6**
DAV				S	**Sb**	**19 02 24.1**	**+1.4**
DAV	**Davao City (W)**	**0.53**	**36**	P	Pg	19 02 09.0	-4.9
SGSI	**Sangihe**	**2.94**	**175**	P	**Pn**	**19 02 52.1**	**+1.7**
SGSI				S	**Sn**	**19 03 27.6**	**+1.8**
TNTI	**Ternate**	**6.19**	**160**		**Pn**	**19 03 36.9**	**+1.8**
TNTI	**Ternate**	**6.19**	**160**	P	**Pn**	**19 03 37.8**	**+2.7**
TNTI	**Ternate**	**6.19**	**160**	P	**Pn**	**19 03 37.3**	**+2.2**
	0.6nm1µm144nm,0.9s						
TNTI				S	**Sn**	**19 04 48.5**	**+2.5**
	0.6nm1µm144nm,0.9s						
GTOI	**Gorontalo**	**6.37**	**201**	P	**Pn**	**19 03 36.7**	**-0.9**
GTOI				S	**Sn**	**19 04 48.1**	**-2.4**
MRSI	**Marisa**	**6.96**	**209**	P	**Pn**	**19 03 45.4**	**-0.3**
	2.0nm4µm621nm,0.8s						
MRSI				S	**Sn**	**19 05 04.5**	**-0.5**
	2.0nm4µm621nm,0.8s						
TOLI2	**Tolitoli**	**7.08**	**219**		Pn	19 03 44.3	-3.1
LUWI	**Luwuk**	**8.02**	**198**		**Pn**	**19 04 01.6**	**+1.3**
LUWI	**Luwuk**	**8.02**	**198**	P	**Pn**	**19 04 04.5**	**+4.2**
LUWI	**Luwuk**	**8.02**	**198**	P	**Pn**	**19 04 02.3**	**+2.0**
	3µm244nm,0.9s						
SANI	**Sanana**	**8.66**	**175**	P	**Pn**	**19 04 09.0**	**0.0**
SANI	**Sanana**	**8.66**	**175**	P	**Pn**	**19 04 07.9**	**-1.1**
	1µm99nm,0.8s						
PCI	**Palu**	**9.25**	**216**	P	**Pn**	**19 04 16.5**	**-0.6**
	47nm,0.9s						
I39PW	**PALAU INFRASON**	**9.25**	**84**	I	I	19 54 10.9	
	baz=269,slow=302,SNR=0.6						
SWI	**Sorong**	**9.55**	**141**	P	**Pn**	**19 04 22.3**	**+1.0**
NLAI	**Namlea**	**9.98**	**169**	P	**Pn**	**19 04 27.3**	**+0.2**
	1µm120nm,0.8s						
KRAI	**Karang Ratu**	**10.37**	**162**	P	**Pn**	**19 04 33.4**	**+0.9**
	1µm40nm,0.6s						
AAI	**Ambon**	**10.66**	**164**	P	**Pn**	**19 04 36.7**	**+0.2**
	49nm,1.0s						
TTSI	**Tana Toraja**	**11.05**	**210**	P	**Pn**	**19 04 41.4**	**-0.4**
FAKI	**Fak Fak**	**11.78**	**144**		**Pn**	**19 04 54.0**	**+2.2**
FAKI	**Fak Fak**	**11.78**	**144**	P	**Pn**	**19 04 51.7**	**-0.1**
KAPI	**Kappang**	**12.82**	**206**	Pn	**Pn**	**19 05 07.3**	**+1.4**
	2.1nm,0.3s,baz=26,slow=9.6,SNR=9.3						
KAPI				LR	LR	19 10 27.1	
	comp=Z,407nm,19.2s,baz=44,slow=40						
KAPI	**Kappang**	**12.82**	**206**	P	Pn	19 05 11.4	+5.4
SBUM	**Sibu**	**13.65**	**253**		**Pn**	**19 05 21.1**	**+3.7**
SBUM	**Sibu**	**13.65**	**253**	P	Pn	19 05 23.7	+6.3
MMRI	**Maumere**	**15.47**	**191**	P	**Pn**	**19 05 44.7**	**+2.7**
SOEI	**Soe**	**16.31**	**184**		**P**	**19 05 57.5**	**+1.5**
SOEI	**Soe**	**16.31**	**184**	P	**Pn**	**19 05 56.4**	**+3.4**
BATI	**Baumata**	**16.81**	**185**	Pn	**Pn**	**19 05 56.2**	**-3.1**
	3.4nm,0.3s,baz=330,slow=0.3,SNR=13						
BATI				Sn	**Sn**	**19 09 03.4**	**-2.7**
	1.2nm,0.3s,baz=97,slow=22,SNR=1.6						
BATI				LR	LR	19 13 29.4	
	comp=Z,318nm,18.7s,baz=356,slow=41						
	6.2nm,0.7s						
PLAI	**Plampang**	**17.08**	**206**	P	**Pn**	**19 06 05.2**	**+2.5**
JAGI	**Jajag, Banyuwa**	**18.66**	**217**		**P**	**19 06 24.8**	**+3.0**
JAGI				IAmb	IAmb	19 06 26.7	
	comp=Z,46nm,0.9s						
JAGI	**Jajag, Banyuwa**	**18.66**	**217**	P	**P**	**19 06 24.0**	**+2.2**
QIZ	**Qiongzhong**	**19.42**	**311**	P	**P**	**19 06 32.1**	**+1.9**
QIZ				S	**Sn**	**19 10 09.6**	**+0.3**
QIZ				pmax	pmax		
	comp=Z,37nm,1.5s						
QIZ				LR	LR		
	comp=Z,310nm,11.9s						
QIZ				LR	LR		
	comp=Z,320nm,13.5s						
QIZ	**Qiongzhong**	**19.42**	**311**	P	**Pn**	**19 06 35.4**	**+4.1**
DRS	**Darwin Rock St**	**19.75**	**164**	P	**P**	**19 06 33.3**	**-0.5**
MTN	**Manton Dam**	**20.21**	**163**		**P**	**19 06 35.8**	**-3.0**
JOW	**Kunigami**	**20.29**	**8**	P	**P**	**19 06 39.4**	**-0.2**
	comp=Z,44nm,0.9s,baz=224,slow=9.5,SNR=5.0						
JOW				LR	LR	19 14 11.0	
	comp=Z,179nm,21.9s,baz=153,slow=36						
	comp=Z,44nm,0.9s						
JOW	**Kunigami**	**20.29**	**8**	P	**P**	**19 06 42.3**	**+2.7**
GUMO	**Guam**	**20.48**	**69**	LR	LR	19 14 12.2	
	comp=Z,53nm,19.2s,baz=202,slow=35						
UGM	**Wanagama**	**20.62**	**226**	P	Pn	19 06 47.6	+2.0
UBPT	**Khong Chiam**	**21.23**	**296**	P	**P**	**19 06 53.3**	**+3.4**
KNRA	**Kununurra**	**22.44**	**171**	P	**P**	**19 07 01.4**	**-1.4**
KNRA				IAmb	IAmb	19 07 03.5	
	comp=Z,44nm,0.6s						
BBJI	**Bungbulang**	**22.47**	**232**	P	**P**	**19 07 04.9**	**+1.6**
SLVN	**Son La**	**25.31**	**307**	P	**P**	**19 07 36.1**	**+5.4**
NJ2	**Nanjing**	**25.99**	**347**	*e*P	**P**	**19 07 37.8**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
JNU	**Nakatsue**	**26.86**	**10**	LR	LR	19 17 56.9	
	comp=Z,111nm,21.5s,baz=190,slow=36						
PMG	**Port Moresby**	**27.01**	**126**	P	**P**	**19 07 44.3**	**-1.8**
PMG	**Port Moresby**	**27.01**	**126**	P	**P**	**19 07 45.2**	**-0.9**
COEN	**Coen**	**27.10**	**139**	P	**P**	**19 07 45.1**	**-1.7**
COEN				IAmb	IAmb	19 07 57.3	
	comp=Z,33nm,1.1s						
COEN	**Coen**	**27.10**	**139**	P	**P**	**19 07 48.4**	**+1.5**
WB0	**Warramunga Arr**	**27.73**	**161**	P	**P**	**19 07 50.2**	**-2.2**
WB0				IAmb	IAmb	19 08 04.1	
	comp=Z,19nm,0.6s						
ENH	**Enshi**	**27.80**	**330**	P	**P**	**19 07 57.2**	**+4.2**
WRAB	**Tennant Creek**	**27.87**	**161**	P	**P**	**19 07 53.8**	**+0.1**
WRA	**Warramunga Arr**	**27.88**	**162**	P	**P**	**19 07 51.0**	**-2.8**
	comp=Z,1.8nm,0.5s,baz=339,slow=10,SNR=17						
	comp=Z,1.8nm,0.5s						
WRA	**Warramunga Arr**	**27.88**	**162**	P	**P**	**19 07 51.7**	**-2.1**
WR8	**Warramunga Arr**	**27.94**	**161**	P	**P**	**19 07 52.1**	**-2.2**
WR8				IAmb	IAmb	19 08 13.0	
	comp=Z,18nm,0.8s						
MBWA	**Marble Bar**	**28.15**	**191**	P	P	19 07 53.3	-2.8
MBWA				IAmb	IAmb	19 08 31.3	
	comp=Z,17nm,1.0s						
CMAR	**Chiang Mai Arr**	**28.21**	**297**	P	P	19 07 54.5	-2.3
	comp=Z,0.4nm,0.3s,baz=127,slow=8.3,SNR=6.8						
CMAR				LR	LR	19 20 03.6	
	comp=Z,149nm,18.1s,baz=100,slow=39						
	comp=Z,0.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**28.21**	**297**	P	P	19 07 52.9	-3.8
KMI	**Kunming**	**28.33**	**313**	P	**P**	**19 07 55.9**	**-2.1**
KMI				pmax	pmax		
	comp=Z,17nm,1.3s						
KMI				LR	LR		
	comp=Z,310nm,15.6s						
KMI				LR	LR		
	comp=Z,230nm,20.0s						
KMI				LR	LR		
	comp=Z,370nm,19.5s						
CHTO	**Chiang Mai**	**28.34**	**298**	P	P	19 08 03.1	+5.2
PSA00	**Pilbara Seismi**	**28.53**	**191**	P	**P**	**19 07 58.1**	**-1.5**
JHJ	**Hachijo jima 2**	**29.60**	**25**	LR	LR	19 20 28.4	
	comp=Z,136nm,19.0s,baz=278,slow=37						
PZH	**PanZhiHua**	**29.87**	**314**	P	**P**	**19 08 11.8**	**+0.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PZH				pmax	pmax		
	comp=Z,110nm,4.9s						
QIS	**Mount Isa**	**30.48**	**153**	P	**P**	**19 08 17.6**	**+0.7**
KSRS	**Korea Array**	**30.77**	**4**	P	**P**	**19 08 17.2**	**-2.0**
	comp=Z,8.4nm,1.2s,baz=182,slow=9.9,SNR=10.0						
	comp=Z,8.4nm,1.2s						
MTSU	**Mount Surprise**	**30.97**	**143**	P	**P**	**19 08 22.4**	**+1.1**
XAN	**Xi'an**	**31.18**	**333**	P	**P**	**19 08 23.9**	**+0.9**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
XAN				LR	LR		
	comp=Z,330nm,16.5s						
XAN				LR	LR		
	comp=Z,360nm,18.6s						
XAN				LR	LR		
	comp=Z,270nm,17.9s						
AS31	**Alice Springs**	**31.27**	**165**	P	**P**	**19 08 22.0**	**-1.9**
ASAR	**Alice Springs**	**31.28**	**165**	P	**P**	**19 08 22.0**	**-1.9**
	comp=Z,2.0nm,0.7s,baz=339,slow=7.0,SNR=68						
	comp=Z,2.0nm,0.7s						
ASAR	**Alice Springs**	**31.28**	**165**	P	**P**	**19 08 22.4**	**-1.5**
CD2	**Chengdu**	**31.46**	**323**	P	**P**	**19 08 24.6**	**-0.9**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				LR	LR		
	comp=Z,270nm,10.8s						
CD2				LR	LR		
	comp=Z,470nm,15.2s						
CD2				LR	LR		
	comp=Z,490nm,15.9s						
MJAR	**Matsushiro Arr**	**32.03**	**20**	P	P	19 08 27.7	-2.7
	comp=Z,2.3nm,0.9s,baz=197,slow=9.9,SNR=6.6						
	comp=Z,2.3nm,0.9s						
MJAR	**Matsushiro Arr**	**32.03**	**20**	P	P	19 08 27.7	-2.8
HNS	**HongShan**	**32.10**	**344**	⇓P	**P**	**19 08 29.8**	**-1.1**
HNS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HNS				LR	LR		
	comp=Z,500nm,24.5s						
TV1H	**Townsville Har**	**33.35**	**141**	P	**P**	**19 08 42.9**	**+0.8**
CTA	**Charters Tower**	**33.64**	**143**	LR	LR	19 24 25.7	
	comp=Z,148nm,19.7s,baz=306,slow=40						
CTAO	**Charters Tower**	**33.64**	**143**	P	**P**	**19 08 43.8**	**-0.8**
CTAO				IAmb	IAmb	19 08 46.7	
	comp=Z,14nm,1.2s						
CTAO	**Charters Tower**	**33.64**	**143**	P	**P**	**19 08 46.8**	**+2.2**
BJT	**Baijiatuau**	**34.23**	**348**	P	**P**	**19 08 53.4**	**+3.9**
BJI	**Beijing**	**34.25**	**348**	P	**P**	**19 08 48.1**	**-1.6**
BJI				pP	**pP**	**19 08 52.3**	**-0.5**
BJI				sP	**sP**	**19 08 54.9**	**+0.9**
BJI				S	**S**	**19 14 14.6**	**-2.0**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LZH	**Lanzhou**	**35.28**	**329**	*e*P	P	19 09 05.6	+6.7
LZH				sP	sP	19 09 16.4	+13
LZH				pmax	pmax		
	comp=Z,23nm,1.4s						
LZH				LR	LR		
	comp=N,380nm,18.2s						
LZH				LR	LR		
	comp=E,320nm,18.9s						
LZH				LR	LR		
	comp=Z,330nm,19.2s						
HHC	**Hu-ho-hao-te**	**36.20**	**342**	*e*P	**P**	**19 09 07.4**	**+0.7**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,6.5s						
HHC				LR	LR		
	comp=Z,140nm,17.0s						
HHC				LR	LR		
	comp=Z,160nm,19.6s						
CN2	**Changchun**	**37.02**	**0**	*e*P	**P**	**19 09 13.9**	**+0.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FORT	**Forrest**	**37.30**	**176**	P	P	19 09 14.0	-2.0
FORT				IAmb	IAmb	19 09 17.6	
	comp=Z,11nm,0.7s						
QLP	**Quilpie**	**37.80**	**152**	P	**P**	**19 09 22.0**	**+1.7**
USRK	**Ussuriysk Ar.**	**37.88**	**8**	P	**P**	**19 09 18.7**	**-2.0**
	comp=Z,12nm,0.9s,baz=182,slow=7.1,SNR=8.0						
	comp=Z,12nm,0.9s						
MDJ	**Mudanjiang**	**38.02**	**5**	P	**P**	**19 09 20.8**	**-1.1**
MDJ				pmax	pmax		
	comp=Z,30nm,1.8s						

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BNX    BinXian          39.00    2 ⇑P      P       19 09 29.1 -1.0
BNX                               pmax     pmax
       comp=Z,7.0nm,1.2s
LSA    Lhasa            39.45 310  P       P       19 09 34.4 -0.4
LSA                                IAmb    IAmb    19 09 41.9
       comp=Z,43nm,1.9s
LSA    Lhasa            39.45 310  P       P       19 09 31.1 -3.7
GTA    Gaotai           39.87 329 eP       P       19 09 38.3 +0.6
GTA                                pP      pP      19 09 42.8 +1.9
GTA                                pmax    pmax
       comp=Z,4.0nm,1.2s
GTA                                LR      LR
       comp=Z,130nm,17.1s
GTA                                LR      LR
       comp=Z,310nm,18.9s
GTA                                LR      LR
       comp=Z,390nm,18.2s
NWAO   Narrogin (SRO)   40.08 191  P       P       19 09 40.0 +0.7
ASAJ   Asahikawa        40.30  19  LR      LR      19 27 27.4
       comp=Z,67nm,18.3s,baz=7.5,slow=38
GOMU   GeErMu           40.52 321  P       P       19 09 41.0 -2.4
GOMU                               pmax    pmax
       comp=Z,5.0nm,1.4s
GOMU                               LR      LR
       comp=Z,250nm,18.0s
GOMU                               LR      LR
       comp=Z,220nm,19.3s
GOMU                               LR      LR
       comp=Z,450nm,18.5s
BBOO   Buckleboo        40.55 166  P       P       19 09 41.7 -1.5
BBOO                               IAmb    IAmb    19 09 46.9
       comp=Z,20nm,0.8s
BBOO   Buckleboo        40.55 166  P       P       19 09 42.3 -0.9
WHYH   Whyalla          41.15 164  P       P       19 09 50.5 +2.4
STKA   Stephens Creek   41.35 159  P       P       19 09 48.9 -0.9
       comp=Z,7.1nm,0.6s,baz=336,slow=8.1,SNR=26
       comp=Z,7.1nm,0.6s
STKA   Stephens Creek   41.35 159  P       P       19 09 46.1 -3.7
AUJCS  Jamestown Cent   41.59 163  P       P       19 09 54.2 +2.4
AUCAS  Cummins Area S   41.86 167  P       P       19 09 55.8 +1.9
HTT    Hallett          41.90 163  P       P       19 09 56.2 +1.8
CMSA   Cobar Meteorol   42.68 154  P       P       19 10 02.7 +2.0
HILR   Hailar Array B   43.03 355  P       P       19 10 02.2 -1.1
       comp=Z,1.2nm,0.4s,baz=183,slow=10,SNR=5.9
       comp=Z,1.2nm,0.4s
AUMAR  Marden Senior    43.19 164  P       P       19 10 05.0 +0.3
HEH    HeiHe            43.51    2 eP      P       19 10 05.5 -1.7
HEH                                pmax    pmax
       comp=Z,8.0nm,1.3s
AUMBR  Murray Bridge    43.60 163  P       P       19 10 10.4 +2.4
SONM   Songino Array    44.10 342  P       P       19 10 14.9 +2.8
       comp=Z,3.6nm,1.0s,baz=166,slow=8.6,SNR=4.7
SONM                               LR      LR      19 29 43.2
       comp=Z,172nm,20.4s,baz=163,slow=38
SONM   Songino Array    44.10 342  P       P       19 10 09.3 -2.8
SANVU  Saraoutou        46.98 118  P       P       19 10 32.8 -2.4
DZM    Mont Dzumac      49.41 126  LR      LR      19 32 30.4
       comp=Z,50nm,19.1s,baz=236,slow=37
DZM    Mont Dzumac      49.41 126 eLR      LR      19 24 58.7
       comp=Z,201nm,33.5s
DZM    Mont Dzumac      49.41 126  P       P       19 10 50.9 -3.1
DZM                                IAmb    IAmb    19 10 55.2
       comp=Z,17nm,0.9s
DZM    Mont Dzumac      49.41 126  P       P       19 10 54.0  0.0
WMQ    Urumqi           49.53 325 eP       P       19 10 53.3 -1.3
WMQ                                ScP     ScP     19 16 09.9 -2.3
WMQ                                pmax    pmax
       comp=Z,14nm,0.7s
WMQ                                LR      LR
       comp=Z,170nm,17.3s
ONTNC  Ouen Toro        49.53 127  P       P       19 10 51.5 -3.4
ONTNC  Ouen Toro        49.53 127  P       P       19 10 54.9  0.0
PETK   Petropavlovsk-   53.34  24  P       P       19 11 22.0 -1.0
       comp=Z,3.7nm,0.8s,baz=212,slow=6.0,SNR=8.3
       comp=Z,3.7nm,0.8s
PETK   Petropavlovsk-   53.34  24  P       P       19 11 21.4 -1.5
MKAR   Makanchi Array   54.36 325  P       P       19 11 29.1 -1.5
       comp=Z,1.6nm,0.5s,baz=118,slow=7.9,SNR=43
MKAR                               LR      LR      19 35 41.3
       comp=Z,118nm,19.3s,baz=114,slow=37
       comp=Z,1.6nm,0.5s
KSH    Kashi            54.98 314  P       P       19 11 35.8 +0.5
KSH                                pP      pP      19 11 40.3 +1.7
KSH                                pmax    pmax
       comp=Z,4.0nm,1.2s
NIL    Nilore           55.02 307          P       19 11 36.6 +1.0
NIL                                IAmb    IAmb    19 12 09.6
       comp=Z,16nm,1.1s
YAK    Yakutsk          55.38    3 LR      LR      19 37 38.0
       comp=Z,53nm,19.8s,baz=144,slow=39
AAK    Ala-Archa        57.25 317  LR      LR      19 39 05.1
       comp=Z,88nm,21.3s,baz=109,slow=39
AAK    Ala-Archa        57.25 317          P       19 11 58.2 +6.7
ZALV   Zalesovo Beam    57.35 333  P       P       19 11 49.1 -2.7
       comp=Z,1.4nm,0.7s,baz=116,slow=6.8,SNR=6.8
ZALV                               LR      LR      19 37 03.8
       comp=Z,88nm,19.2s,baz=116,slow=37
       comp=Z,1.4nm,0.7s
ARSB   Arslanbob        57.78 315  IAmb    IAmb    19 12 02.5
       comp=Z,11nm,1.1s
KURBB  Kurchatov Arra   58.52 327  P       P       19 11 58.4 -1.7
       comp=Z,2.7nm,0.6s,baz=126,slow=6.5,SNR=12
       comp=Z,2.7nm,0.6s
KURK   Kurchatov        58.52 327  P       P       19 11 58.4 -1.8
KURK                               IAmb    IAmb    19 12 13.4
       comp=Z,8.8nm,0.9s
GAR    Garm             58.91 312  P       P       19 12 01.3 -1.9
CHGR   Chuyangaron      59.66 311  IAmb    IAmb    19 12 15.3
       comp=Z,12nm,0.8s
KKAR   Karatay Array    60.13 316  P       P       19 12 09.3 -2.2
BVAR   Borovoye Array   64.11 327  P       P       19 12 35.9 -2.0
       comp=Z,3.1nm,0.9s,baz=120,slow=8.8,SNR=7.5
BVAR                               LR      LR      19 41 55.5
       comp=Z,82nm,18.9s,baz=270,slow=37
       comp=Z,3.1nm,0.9s
BORK   Borovoye         64.16 327  P       P       19 12 38.5 +0.2
BORK                               IAmb    IAmb    19 13 07.6
       comp=Z,12nm,1.1s
TIXI   Tiksi            64.98    1 LR      LR      19 40 50.8
       comp=Z,107nm,22.0s,baz=199,slow=36
BKZ    Black Stump Fm   65.70 138  P       P       19 12 47.8 -0.8
RTZ    Ruatahuna        65.74 138  P       P       19 12 47.0 -1.9
NRIK   Noril'sk         67.28 346  LR      LR      19 44 11.1
       comp=Z,117nm,18.5s,baz=197,slow=38
ABKAR  Akbulak array    69.00 320  P       P       19 13 06.1 -3.1
AKTO   Aktyubinsk       70.50 321  LR      LR      19 45 28.5
       comp=Z,150nm,18.5s,baz=276,slow=37
SPIA   Saint Paul Isl   70.77  31  P       P       19 13 22.5 +2.5
ARTI   Arti             71.80 327  P       P       19 13 24.1 -2.2
       comp=Z,1.4nm,0.8s,baz=266,slow=5.2,SNR=3.5
       comp=Z,1.4nm,0.8s
RAYN   Ar Rayn          78.02 293  P       P       19 14 01.1 -1.9
RAYN                               IAmb    IAmb    19 14 10.0
       comp=Z,5.2nm,0.8s
KBZ    Khabaz           79.94 313  P       P       19 14 10.6 -2.4
       comp=Z,2.0nm,1.0s,baz=90,slow=4.0,SNR=3.7
       comp=Z,2.0nm,1.0s
KDAK   Kodiak Island    80.23  33  LR      LR      19 43 22.1
       comp=Z,112nm,22.0s,baz=245,slow=31
D23K   Nanushuk River   81.71  21  IAmb    IAmb    19 14 28.4
       comp=Z,9.4nm,1.1s
COLD   Coldfoot         81.80  23          P       19 14 22.3 -0.2
G23K   Bananza Creek    81.85  24          P       19 14 22.0 -0.8
G23K                               IAmb    IAmb    19 14 29.5
       comp=Z,8.6nm,1.1s
ILAR   Eielson Array    83.12  26  P       P       19 14 28.9 -0.5
       comp=Z,1.0nm,0.7s,baz=239,slow=4.8,SNR=20
       comp=Z,1.0nm,0.7s
ILAR   Eielson Array    83.12  26  P       P       19 14 26.8 -2.7
J26L   Joseph Creek     84.56  26  IAmb    IAmb    19 14 56.4
       comp=Z,9.7nm,1.2s
E27K   Coleen River     85.06  22  IAmb    IAmb    19 14 47.8
       comp=Z,16nm,1.4s
F28M   Old Crow         85.77  23          P       19 14 42.5 -0.4
F28M                               IAmb    IAmb    19 14 53.6
       comp=Z,17nm,1.4s
VNDA   Vanda            86.47 173  P       P       19 14 43.2 -2.8
       comp=Z,1.9nm,1.0s,baz=329,slow=6.1,SNR=2.8
VNDA                               LR      LR      19 51 48.9
       comp=Z,25nm,21.4s,baz=352,slow=35
       comp=Z,1.9nm,1.0s
PPT2   Papeete2         87.39 108 eLR      LR      19 42 31.2
       comp=Z,90nm,22.5s
INK    Inuvik           88.01  21  P       P       19 14 50.8 -2.9
       comp=Z,1.2nm,0.7s,baz=246,slow=8.1,SNR=3.3
       comp=Z,1.2nm,0.7s
TBI    Tubuai           88.28 114 eLR      LR      19 42 53.9
       comp=Z,884nm,40.0s
FINES  FINESS Array B   88.60 332  P       P       19 14 52.6 -4.0
       comp=Z,3.1nm,1.0s,baz=163,slow=2.0,SNR=4.6
       comp=Z,3.1nm,1.0s
AKASG  Malin Array Be   88.73 321  P       P       19 14 53.7 -3.8
       comp=Z,0.2nm,0.3s,baz=75,slow=3.9,SNR=1.9
       comp=Z,0.2nm,0.3s
YKA    Yellowknife Ar   97.46  24  P       P       19 15 35.4 -2.1
       comp=Z,0.4nm,0.7s,baz=300,slow=5.4,SNR=6.3
       comp=Z,0.4nm,0.7s
TXAR   Lajitas Array   120.92  50  PKP     PKPdf   19 20 54.9 -2.2
       comp=Z,0.1nm,0.6s,baz=334,slow=2.9,SNR=1.8
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*IDC **15** 19:10:24.4±0.8, 6°.40N×125°.45E, h0^{km}, mb3.9/8, mbtmp3.9/9, ML4.4/1, MS3.2/2, Error ellipse: s-maj=26.4km s-min=8.6km az=96.0*

ISC 15 19:10:26.2±0.9**, 6°.51N**±0°.08×**125°.7E**±0°.2**, h10^{km}, n14, σ1^{s}62**/13**, mb3.9**/9**, Mindanao**

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Code   Station Name       Δ°   AZ°    Phase ID          Time     Res
                                   Op      ISC       h  m  s    ISC
DAV    Davao City (W)    0.58 344  Pg      Pg      19 10 37.4 -0.1
       277nm,0.3s,baz=234,slow=7.4,SNR=22
DAV                                Lg      Lg      19 10 46.9
       639nm,0.3s,baz=131,slow=23,SNR=10
DAV                                LR      LR      19 11 06.7
       comp=Z,3µm,21.2s,baz=153,slow=63
DAV    Davao City (W)    0.58 344  P       Pn      19 10 41.0 +0.5
KAPI   Kappang          12.91 208  Pn      Pn      19 13 32.1 +2.2
       1.7nm,0.3s,baz=359,slow=4.8,SNR=3.9
BATI   Baumata          16.73 187  Pn      Pn      19 14 18.1 -2.8
       1.4nm,0.3s,baz=245,slow=8.9,SNR=4.3
BATI                               LR      LR      19 21 55.8
       comp=Z,82nm,19.3s,baz=3.5,slow=42
       3.1nm,0.3s
JOW    Kunigami         20.36    7 LR      LR      19 23 20.2
       comp=Z,76nm,19.5s,baz=216,slow=38
WRA    Warramunga Arr   27.61 162  P       P       19 16 13.0 -1.0
       0.8nm,0.8s,baz=337,slow=9.1,SNR=7.6
       0.8nm,0.8s
CMAR   Chiang Mai Arr   28.68 297  P       P       19 16 21.9 -1.7
       0.4nm,0.3s,baz=110,slow=7.0,SNR=2.3
       0.4nm,0.3s
ASAR   Alice Springs    31.03 165  P       P       19 16 43.9 -0.5
       0.8nm,0.5s,baz=348,slow=7.4,SNR=20
       0.8nm,0.5s
STKA   Stephens Creek   41.06 159  P       P       19 18 11.0 +1.0
       1.6nm,0.7s,baz=335,slow=13,SNR=4.1
       1.6nm,0.7s
HEH    HeiHe            43.62    2 eP      P       19 18 32.8 +2.1
HEH                                pmax    pmax
       comp=Z,6.0nm,0.7s
MKAR   Makanchi Array   54.73 325  P       P       19 19 55.8 -0.1
       comp=Z,0.8nm,0.6s,baz=121,slow=8.7,SNR=8.9
       comp=Z,0.8nm,0.6s
ZALV   Zalesovo Beam    57.68 333  P       P       19 20 15.2 -1.5
       comp=Z,0.7nm,0.6s,baz=95,slow=11,SNR=3.5
       comp=Z,0.7nm,0.6s
KURBB  Kurchatov Arra   58.88 327  P       P       19 20 24.4 -0.8
       comp=Z,0.9nm,0.3s,baz=128,slow=6.0,SNR=8.1
       comp=Z,0.9nm,0.3s
BVAR   Borovoye Array   64.47 327  P       P       19 21 02.2 -0.7
       comp=Z,1.2nm,0.9s,baz=123,slow=7.4,SNR=5.6
       comp=Z,1.2nm,0.9s
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*MOS **15** 19:13:48.9±1.5, 35°.16N×140°.86E, h50^{km}, mb4.6/12, Error ellipse: s-maj=10.7km s-min=6.0km az=101.2*

*NEIC **15** 19:13:50.5±1.2, 35°.12N±0°.06×140°.83E±0°.05, h50^{km}±8^{km}, mb4.7/15, Error ellipse: s-maj=8.8km s-min=5.8km az=171.0*

*NIED **15** 19:13:51.5, 35°.15N×140°.57E, h59^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.57; $M_{\theta\theta}$1.27; $M_{\phi\phi}$-1.85; $M_{r\theta}$-0.77; $M_{\theta\phi}$-0.65; $M_{\phi r}$1.10; Fault plane solution: $M_0$2.21000×10^{15} NP1: ϕ_s233.00000°, δ50.00000°, λ166.00000°. NP2: ϕ_s332.00000°, δ80.00000°, λ41.00000°.*

*JMA **15** 19:13:51.5±0.2, 35°.2N±0°.6×14 °1E± °, h59^{km}±1^{km}, MD4.3/37, MV4.2/37, E OFF BOSO PENINSULA*

JMA Felt III J1 at E OFF BOSO PENINSULA .

*IDC **15** 19:13:52.6±1.6, 34°.99N×140°.44E, h59^{km}±13^{km}, mb3.8/27, mbtmp4.1/30, Error ellipse: s-maj=17.9km s-min=6.9km az=76.0*

ISC 15 19:13:49.7±0.5**, 35°.15N**±0°.04×**140°.78E**±0°.05**, h39**^{km}±2^{km}**, n153, σ1^{s}80**/136**, mb4.3**/44**, 1C-16D, Near east coast of eastern Honshu**

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Code   Station Name       Δ°   AZ°    Phase ID          Time     Res
                                   Op      ISC       h  m  s    ISC
KTR    Katsuura          0.38 271⇓iP      Pn      19 14 00.9 +2.1
KTR                               ⇓S      Sn      19 14 07.8 +2.4
BSO4   Boso 4            0.40 247⇓iP      Pn      19 14 01.4 +2.6
BSO3   Boso 3            0.41 213 i P     Pn      19 14 01.9 +3.1
JKUC   kamogawauchiur    0.48 272⇓iP      Pn      19 14 01.6 +1.5
JKUC                              ⇓S      Sn      19 14 09.1 +1.7
JKUC   kamogawauchiur    0.48 272  A       A       19 14 01.6
       comp=N,86nm,0.5s,comp=E,95nm,0.8s
JCCN   Chibachonan       0.51 298  P       Pn      19 14 02.6 +2.1
JCCN   Chibachonan       0.51 298  A       A       19 14 02.6
       comp=N,162nm,0.5s,comp=E,149nm,0.8s
BSO1   Boso 1            0.52 162⇓iP      Pn      19 14 04.3 +4.2
JSMT   Sammumatsuo       0.57 331  P       Pn      19 14 03.8 +2.5
JSMT   Sammumatsuo       0.57 331  A       A       19 14 03.8
       comp=N,64nm,0.7s,comp=E,85nm,0.4s
JCAJ   Choshiashikaji    0.58    6 A       A       19 14 04.7
       comp=N,29nm,0.5s,comp=E,16nm,0.3s
TATJ   Tateyama 2        0.74 261  A       A       19 14 04.2
       comp=N,31nm,1.1s,comp=E,44nm,0.8s
JIHU   Itakohorinouch    0.84 346  A       A       19 14 07.2
       comp=N,25nm,1.2s,comp=E,32nm,2.2s
JYO    Yokosk            0.92 275  A       A       19 14 06.3
       comp=N,28nm,0.9s,comp=E,24nm,0.6s
TOK    Tokyo             1.00 303  A       A       19 14 07.7
       comp=N,31nm,0.4s,comp=E,44nm,3.0s
JYT    Yasato            1.18 336  A       A       19 14 11.3
       comp=N,12nm,0.4s,comp=E,16nm,0.4s
JIM2   Oshima 3          1.19 249⇓iP      Pn      19 14 09.4 -0.5
JIM2   Oshima 3          1.19 249  A       A       19 14 09.4
       comp=N,37nm,0.4s,comp=E,33nm,0.3s
JHYU   Hitachinakayam    1.20 352  A       A       19 14 12.2
       comp=N,6.0nm,1.7s,comp=E,6.0nm,0.8s
JSGW   Sagamiharawaka    1.36 290  A       A       19 14 12.4
       comp=N,4.0nm,0.6s,comp=E,6.0nm,1.3s
JTHY   Toshimahigashi    1.38 244  A       A       19 14 12.8
       comp=N,22nm,1.7s,comp=E,19nm,1.4s
JOD2   Odawara 2         1.39 275⇓iP      Pn      19 14 12.3 -0.4
JOD2                              ⇓S      Sn      19 14 27.3 -2.5
JOD2   Odawara 2         1.39 275  A       A       19 14 12.3
       comp=N,15nm,0.3s,comp=E,10.0nm,0.4s
JHTM   Izuhatsuma        1.47 263  A       A       19 14 13.7
       comp=N,29nm,0.4s,comp=E,31nm,0.5s
JMYK   Miyake Tsubota    1.49 224 i P      Pn      19 14 14.4 +0.5
JMYK   Miyake Tsubota    1.49 224  A       A       19 14 14.4
       comp=N,39nm,0.7s,comp=E,23nm,0.4s
JSKK   Shikinejimakit    1.53 238  A       A       19 14 15.0
       comp=N,8.0nm,0.5s,comp=E,11nm,2.0s
JMKN   Mikurajimanish    1.59 219⇓iP      Pn      19 14 16.0 +0.6
JMKN                             ⇓eS      Sn      19 14 34.5 -0.2
JMKN   Mikurajimanish    1.59 219  A       A       19 14 16.0
       comp=N,10.0nm,1.0s,comp=E,11nm,0.7s
JIZS   Izushimoda        1.62 255⇓iP      Pn      19 14 15.3 -0.4
JIZS                             ⇓eS      Sn      19 14 33.4 -2.0
JIZS   Izushimoda        1.62 255  A       A       19 14 15.3
       comp=N,6.0nm,1.6s,comp=E,5.0nm,1.5s
JAG    Ashikaga          1.67 320  A       A       19 14 17.5
       comp=N,4.0nm,1.1s,comp=E,3.0nm,1.9s
JFNN   Fujinakano        1.72 272  A       A       19 14 17.2
       comp=N,7.0nm,0.4s,comp=E,6.0nm,2.0s
SHZ3   Shizuoka 3        2.11 269  A       A       19 14 22.8
       comp=N,4.0nm,1.1s,comp=E,3.0nm,1.0s
JHJ2   Mitsune           2.18 202          Pn      19 14 24.6 +1.2
JHJ2   Mitsune           2.18 202  P       Pn      19 14 24.7 +1.2
JHJ    Hachijo jima 2    2.18 203  P       Pn      19 14 24.6 +1.1
       comp=E,2µm,0.3s,baz=325,slow=13,SNR=305
JHJ                                S       Sn      19 14 46.7 -2.6
       comp=E,2µm,0.3s,baz=65,slow=22,SNR=8.6
JSG    Sagara            2.19 258          Pn      19 14 24.2 +0.7
JSG                                Sn      Sn      19 14 51.5 +2.1
JSG    Sagara            2.19 258  P       Pn      19 14 24.4 +0.9
MJAR   Matsushiro Arr    2.51 304  P       Pn      19 14 28.1 +0.1
       comp=E,59nm,0.3s,baz=56,slow=7.4,SNR=414
MJAR                               S       Sn      19 14 57.8 +0.4
       comp=E,60nm,0.3s,baz=279,slow=22,SNR=3.0
MJAR   Matsushiro Arr    2.51 304  Pn      Pn      19 14 29.2 +1.1
MJAR   Matsushiro Arr    2.51 304  P       Pn      19 14 29.2 +1.1
MAJO   Matsushiro        2.52 304          Pn      19 14 28.8 +0.8
MAJO   Matsushiro        2.52 304  P       Pn      19 14 29.7 +1.6
MAJO   Matsushiro        2.52 304 i P      Pn      19 14 28.7 +0.6
MJB9   Matsu-Tunnel      2.52 304          Pn      19 14 29.7 +1.6
JGF    Kuroka            2.84 280          Pn      19 14 33.0 +0.4
JGF    Kuroka            2.84 280  P       Pn      19 14 34.1 +1.6
INU    Inuyama           3.09 275          Pn      19 14 36.5 +0.6
INU    Inuyama           3.09 275  P       Pn      19 14 36.8 +0.9
JSD    Sado              3.53 326          Pn      19 14 43.6 +1.7
JSD    Sado              3.53 326  P       Pn      19 14 43.8 +1.8
JMN    Monobe            5.88 258  Pn      Pn      19 15 15.7 +1.4
JMN    Monobe            5.88 258  P       Pn      19 15 15.3 +1.0
ERM    Erimo             7.11  14  Pn      Pn      19 15 31.6 +0.6
ERM    Erimo             7.11  14  P       Pn      19 15 31.5 +0.4
ERM    Erimo             7.11  14  P       Pn      19 15 31.6 +0.6
JEM    Erimo             7.11  14  P       Pn      19 15 31.9 +0.8
JCJ    Chichijima        8.11 171  P       Pn      19 15 34.2  -11
       comp=E,259nm,0.3s,baz=280,slow=23,SNR=101
JCJ                                S       Sn      19 16 58.9  -17
       comp=E,64nm,0.4s,baz=293,slow=23,SNR=2.3
JCJ    Chichijima        8.11 171          Pn      19 15 44.7 -0.3
JCJ    Chichijima        8.11 171  P       Pn      19 15 45.0  0.0
JNU    Nakatsue          8.46 259  P       Pn      19 15 51.1 +1.5
       comp=E,5.1nm,0.4s,baz=61,slow=4.6,SNR=12
JNU    Nakatsue          8.46 259  P       Pn      19 15 51.5 +1.8
NMR    Nemuro--Hokkai    9.06  24⇓iP      Pn      19 15 56.7 -1.2
NMR                               i S     Sn      19 17 30.6 -7.9
ASAJ   Asahikawa         9.07    8 P       Pn      19 15 58.0  0.0
       comp=E,11nm,0.3s,baz=210,slow=14,SNR=32
ASAJ                               S       Sn      19 17 28.7  -10
       comp=E,3.7nm,0.3s,baz=149,slow=23,SNR=1.2
ASAJ   Asahikawa         9.07    8 P       Pn      19 15 57.2 -0.8
JKA    Kamikawa-asahi    9.07    8 Pn      Pn      19 15 57.2 -0.8
GLVR   Golovnino         9.33   22 eP      Pn      19 16 01.5  0.0
GLVR                               eS      Sn      19 17 39.4 -5.7
GLVR                               pmax    pmax
       comp=Z,28nm,0.2s
RUSJ   Misakicho         9.59   20 eP      Pn      19 16 06.0 +1.0
RUSJ                               eS      Sn      19 17 48.2 -3.2
YUK    Yuzh-Kuril'sk     9.70   22 eP      Pn      19 16 06.4 -0.2
YUK                                eS      Sn      19 17 49.1 -5.1
YUK                                pmax    pmax
       comp=N,34nm,0.2s
YUK                                pmax    pmax
       comp=E,34nm,0.2s
YUK                                pmax    pmax
       comp=Z,85nm,0.2s
KSRS   Korea Array      10.63 286  P       Pn      19 16 20.3 +0.9
       comp=Z,4.5nm,0.9s,baz=101,slow=14,SNR=26
USRK   Ussuriysk Ar.    11.29 326  P       Pn      19 16 30.4 +2.0
       comp=Z,2.3nm,0.7s,baz=151,slow=18,SNR=2.2
CN2    Changchun        14.64 311 eP       Pn      19 17 14.4 +0.3
CN2                                pmax    pmax
       comp=Z,10.0nm,0.8s
BNX    BinXian          14.67 320 ⇑P       Pn      19 17 15.9 +1.5
BNX                                pmax    pmax
       comp=Z,6.0nm,1.1s
DL2    Dalian           15.75 289  P       Pn      19 17 25.4 -3.2
DL2                                pmax    pmax
       comp=Z,21nm,0.7s
HEH    HeiHe            17.97 331 eP       Pn      19 17 56.6 +0.3
NJ2    Nanjing          18.52 267 eP       P       19 18 02.8  0.0
NJ2                                pmax    pmax
       comp=Z,10.0nm,0.5s
NACB   Ninganchiao      19.90 242  P       P       19 18 15.4 -2.5
ZEA    Zeya             20.88 337 eP       P       19 18 28.9 +0.6
ZEA                                pmax    pmax
       comp=N,10.0nm,0.9s
ZEA                                pmax    pmax
       comp=Z,10.0nm,0.6s
HILR   Hailar Array B   21.09 319  P       P       19 18 29.6 -1.1
       comp=Z,2.2nm,0.3s,baz=111,slow=12,SNR=13
       comp=Z,2.2nm,0.3s
HNS    HongShan         21.12 284 ⇓P       P       19 18 34.8 +3.8
HNS                                pmax    pmax
       comp=Z,7.0nm,0.7s
HHC    Hu-ho-hao-te     23.66 293 eP       P       19 18 55.5 -2.1
HHC                                pmax    pmax
       comp=Z,6.0nm,0.8s
HHC                                pmax    pmax
       comp=Z,100nm,5.9s
MA2    Magadan          25.30   12 i P     P       19 19 13.6 +1.3
MA2                                pmax    pmax
       comp=Z,15nm,0.9s
XAN    Xi'an            26.20 277  P       P       19 19 20.5 -0.3
XAN                                pmax    pmax
       comp=Z,12nm,0.8s
ENH    Enshi            26.72 268          P       19 19 23.3 -2.1
ENH                                IAmb    IAmb    19 19 25.3
       comp=Z,10nm,0.9s
H11N2  WAKE ISLAND Hy   27.69 117  T       T       19 48 59.6
       baz=309,slow=75,SNR=182
H11N1  WAKE ISLAND Hy   27.69 117  T       T       19 48 58.8
       baz=309,slow=75,SNR=163
H11N3  WAKE ISLAND Hy   27.70 117  T       T       19 48 59.4
       baz=309,slow=75,SNR=144
YAK    Yakutsk          27.81 349 eP       P       19 19 34.9 +0.1
YAK                                pmax    pmax
       comp=N,5.0nm,1.6s
YAK                                pmax    pmax
       comp=Z,6.0nm,0.9s
YAK                                pmax    pmax
       comp=E,2.0nm,1.3s
H11S1  WAKE ISLAND Hy   28.33 119  T       T       19 49 38.9
       baz=311,slow=75,SNR=113
H11S3  WAKE ISLAND Hy   28.33 119  T       T       19 49 42.1
       baz=311,slow=75,SNR=122
H11S2  WAKE ISLAND Hy   28.34 119  T       T       19 49 40.1
       baz=311,slow=75,SNR=136
SONM   Songino Array    28.46 307  P       P       19 19 39.2 -1.9
       comp=E,0.6nm,0.4s,baz=122,slow=10,SNR=2.2
       comp=E,0.6nm,0.4s
PZH    PanZhiHua        34.44 266  P       P       19 20 33.9 +0.1
GOMU   GeErMu           37.09 285  P       P       19 20 56.1 -0.6
GOMU                               pmax    pmax
       comp=Z,6.0nm,1.1s
TIXI   Tiksi            37.10 354 i P      P       19 20 54.3 -1.6
TIXI                               pmax    pmax
       comp=Z,8.0nm,1.8s
FAKI   Fak Fak          38.70 194  P       P       19 21 08.4 -1.5
FAKI                               IAmb    IAmb    19 21 44.1
       comp=Z,8.6nm,0.8s
CMAR   Chiang Mai Arr   40.55 257  P       P       19 21 22.2 -3.2
       comp=Z,0.9nm,0.7s,baz=53,slow=8.4,SNR=11
       comp=Z,0.9nm,0.7s
CMAR   Chiang Mai Arr   40.55 257 i P      P       19 21 25.0 -0.4
CMAR                               pmax    pmax
       comp=Z,1.0nm,0.4s
WMQ    Urumqi           41.27 299 eP       P       19 21 33.8 +2.7
WMQ                                pmax    pmax
       comp=Z,14nm,1.3s
ZALV   Zalesovo Beam    42.83 314  P       P       19 21 43.5 -0.1
       comp=Z,1.6nm,0.4s,baz=100,slow=7.7,SNR=14
ZALV                               PcP     PcP     19 23 35.0 +0.9
       comp=Z,0.7nm,0.3s,baz=103,slow=3.4,SNR=1.9
       comp=Z,1.6nm,0.4s
ZALV   Zalesovo Beam    42.83 314          P       19 21 44.6 +1.0
ZALV   Zalesovo Beam    42.83 314 i P      P       19 21 46.2 +2.6
ZALV                               pmax    pmax
       comp=Z,1.0nm,0.3s
MK31   Makanchi Array   44.71 304 i P      P       19 21 59.1 +0.2
MKAR   Makanchi Array   44.71 304  P       P       19 21 58.8 -0.1
       comp=Z,2.8nm,0.7s,baz=82,slow=13,SNR=17
       comp=Z,2.8nm,0.7s
MKAR   Makanchi Array   44.71 304          P       19 21 58.4 -0.5
NRIK   Noril'sk         44.77 336  P       P       19 22 00.5 +1.5
       comp=Z,1.5nm,0.5s,baz=94,slow=8.3,SNR=2.5
       comp=Z,1.5nm,0.5s
NRIK   Noril'sk         44.77 336 i P      P       19 22 00.8 +1.8
NRIK                               pmax    pmax
       comp=Z,11nm,2.3s
MAKZ   Makanchi         44.92 304          P       19 22 01.4 +0.8
MAKZ   Makanchi         44.92 304  P       P       19 22 01.4 +0.8
MAKZ                               pmax    pmax
       comp=Z,6.0nm,1.3s
KURK   Kurchatov        46.71 309          P       19 22 14.2 -0.4
KURK                               IAmb    IAmb    19 22 17.3
       comp=Z,9.0nm,0.6s
KURK   Kurchatov        46.71 309 i P      P       19 22 14.1 -0.5
KURK                               pmax    pmax
       comp=Z,6.0nm,0.5s
KURBB  Kurchatov Arra   46.78 309  P       P       19 22 14.7 -0.4
       comp=Z,4.1nm,0.3s,baz=85,slow=7.4,SNR=31
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	comp=Z,4.1nm,0.3s						
AAK	Ala-Archa	50.95	300	P	P	19 22 48.5	+1.0
	comp=Z,1.9nm,0.6s,baz=83,slow=8.1,SNR=4.0						
	comp=Z,1.9nm,0.6s						
ILAR	Eielson Array	51.36	32	P	P	19 22 52.4	+2.4
	comp=Z,1.3nm,0.8s,baz=272,slow=6.5,SNR=8.8						
	comp=Z,1.3nm,0.8s						
BVAR	Borovoye Array	51.48	313	P	P	19 22 52.1	+1.1
	comp=Z,2.2nm,0.5s,baz=81,slow=7.9,SNR=18						
	comp=Z,2.2nm,0.5s						
FITZ	Fitzroy Crossi	54.87	198	P	P	19 23 14.9	-1.3
	comp=Z,2.4nm,0.6s,baz=13,slow=9.9,SNR=8.7						
	comp=Z,2.4nm,0.6s						
FITZ	Fitzroy Crossi	54.87	198	P	P	19 23 16.2	0.0
WB0	Warramunga Arr	54.95	187		P	19 23 16.1	-0.7
WRAB	Tennant Creek	55.11	187		P	19 23 17.1	-0.9
WRAB				IAmb	IAmb	19 23 22.9	
	comp=Z,6.7nm,0.8s						
WRAB	Tennant Creek	55.11	187	P	P	19 23 17.1	-0.9
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WRA	Warramunga Arr	55.12	187	P	P	19 23 17.6	-0.5
	comp=Z,2.7nm,0.3s,baz=2.0,slow=7.5,SNR=39						
	comp=Z,2.7nm,0.3s						
I30M	Mount Dempster	55.76	30		P	19 23 24.1	+1.8
I30M				IAmb	IAmb	19 23 40.8	
	comp=Z,6.6nm,1.3s						
CHGR	Chuyangaron	56.03	296		P	19 23 24.3	-0.4
CHGR				IAmb	IAmb	19 23 26.8	
	comp=Z,10nm,0.6s						
CHGR	Chuyangaron	56.03	296	P	P	19 23 24.3	-0.4
CHGR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
INK	Inuvik	56.30	26	P	P	19 23 28.2	+2.3
	comp=Z,1.0nm,0.7s,baz=293,slow=7.7,SNR=2.0						
	comp=Z,1.0nm,0.7s						
ARTI	Arti	57.55	319	P	P	19 23 33.7	-1.3
	comp=Z,3.7nm,0.4s,baz=93,slow=6.4,SNR=12						
	comp=Z,3.7nm,0.4s						
ARTI	Arti	57.55	319		P	19 23 33.5	-1.5
ARTI				IAmb	IAmb	19 23 43.0	
	comp=Z,8.4nm,0.6s						
ARTI	Arti	57.55	319	d iP	P	19 23 36.6	+1.6
ARTI				*PP	sP	19 23 52.4	+1.3
ARTI						19 24 33.3	
ARTI						19 25 40.2	
ARTI				S	S	19 31 31.9	+2.1
ARTI				SS	SS	19 35 20.6	+1.0
ARTI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AB31	Akbulak array	58.77	311		P	19 23 43.6	-0.1
AB31				IAmb	IAmb	19 23 51.3	
	comp=Z,2.5nm,0.5s						
ABKAR	Akbulak array	58.77	311		P	19 23 40.8	-2.9
AS31	Alice Springs	58.85	187		P	19 23 43.6	-0.8
AS31				IAmb	IAmb	19 23 51.6	
	comp=Z,1.6nm,0.5s						
ASAR	Alice Springs	58.85	187	P	P	19 23 44.1	-0.3
	comp=Z,1.8nm,0.6s,baz=355,slow=5.5,SNR=35						
	comp=Z,1.8nm,0.6s						
KIRV	Kirov	61.45	323	iP	P	19 24 00.6	-1.2
BELG	Belogornoye	64.84	317	P	P	19 24 23.8	-0.6
	comp=Z,2.8nm,0.5s,baz=45,slow=1.6,SNR=5.0						
	comp=Z,2.8nm,0.5s						
ARCES	ARCESS Array B	65.58	340	P	P	19 24 30.3	+1.3
	comp=Z,1.6nm,0.7s,baz=58,slow=5.5,SNR=1.4						
	comp=Z,1.6nm,0.7s						
YKA	Yellowknife Ar	65.70	30	P	P	19 24 31.3	+1.5
	comp=Z,0.3nm,0.7s,baz=299,slow=7.3,SNR=4.8						
	comp=Z,0.3nm,0.7s						
STKA	Stephens Creek	66.67	179	P	P	19 24 35.8	-0.6
	comp=Z,1.2nm,0.5s,baz=354,slow=9.2,SNR=3.8						
	comp=Z,1.2nm,0.5s						
FINES	FINESS Array B	70.25	332	P	P	19 24 58.5	+0.1
	comp=Z,1.7nm,0.6s,baz=69,slow=6.9,SNR=10						
	comp=Z,1.7nm,0.6s						
FINES	FINESS Array B	70.25	332	P	P	19 24 58.2	-0.2
FINES	FINESS Array B	70.25	332	iP	P	19 24 59.5	+1.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KBZ	Khabaz	71.75	311	P	P	19 25 08.4	+0.6
	comp=Z,2.5nm,1.0s,baz=56,slow=3.6,SNR=3.1						
	comp=Z,2.5nm,1.0s						
AKASG	Malin Array Be	75.48	322	P	P	19 25 29.5	-0.1
	comp=Z,0.6nm,0.4s,baz=51,slow=5.6,SNR=3.2						
	comp=Z,0.6nm,0.4s						
HFS	Hagfors	75.59	336	P	P	19 25 32.2	+2.1
	comp=Z,2.1nm,0.7s,baz=260,slow=4.4,SNR=5.1						
	comp=Z,2.1nm,0.7s						
NB2	NORSAR Subarra	75.73	337	P	P	19 25 34.3	+3.4
NOA	NORSAR Array B	75.73	337	P	P	19 25 33.1	+2.2
	comp=Z,0.9nm,0.7s,baz=47,slow=5.3,SNR=3.9						
	comp=Z,0.9nm,0.7s						
PDAR	Pinedale Array	79.36	45	P	P	19 25 54.5	+2.8
	comp=Z,0.3nm,0.5s,baz=301,slow=4.7,SNR=4.1						
	comp=Z,0.3nm,0.5s						
BRTR	Keskin Array B	79.72	311	P	P	19 25 55.5	+1.8
	comp=Z,0.6nm,0.8s,baz=42,slow=4.5,SNR=3.8						
	comp=Z,0.6nm,0.8s						
TXAR	Lajitas Array	91.68	52	P	P	19 26 55.8	+2.5
	comp=Z,0.3nm,0.8s,baz=315,slow=4.2,SNR=1.5						
	comp=Z,0.3nm,0.8s						
LOOK	Love County	92.42	45	P	P	19 26 53.1	-3.4
H03N2	Juan Fernandez	147.29	99	T	T	22 18 20.3	
	baz=289,slow=76,SNR=15						
H03N3	Juan Fernandez	147.30	99	T	T	22 18 18.3	
	baz=289,slow=76,SNR=18						
H03N1	Juan Fernandez	147.31	99	T	T	22 18 21.5	
	baz=289,slow=76,SNR=17						

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*VAO **15** 19:23:30.9±0.8, 14°.42S×72°.39W, h47km±6km, mb4.9, Presumed earthquake*

*NEIC **15** 19:23:37.5±2.4, 14°.5S±0°.1×72°.4W±0°.1, h104km±10km, mb4.9/271, Error ellipse: s-maj=19.5km s-min=9.2km az=225.0*

*IDC **15** 19:23:39.1±0.5, 14°.30S×72°.04W, h92km±4km, mb4.1/13, mbtmp4.4/18, MS3.6/10, Error ellipse: s-maj=16.7km s-min=9.6km az=51.0*

*GCMT **15** 19:23:42.5±0.3, 14°.32S±0°.02×72°.01W±0°.02, h104km±3km, MW5.0/79, Moment Tensor Solution. s28,c32; s79,c102; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.09±.15; $M_{\theta\theta}$-3.00±.16; $M_{\phi\phi}$4.09±.21; $M_{r\theta}$-1.54±.09; $M_{\theta\phi}$2.18±.17; $M_{\phi r}$0.18±.14; Best double couple: $M_0$4.52900×10^{16} NP1:ϕ_s154.00000°, δ71.00000°, λ-163.00000°. NP2: ϕ_s58.00000°, δ74.00000°, λ-20.00000°. Principal axes: T 4.7170, Plg2.0000°, Azm106.0000°; N -0.3770, Plg65.0000°, Azm202.0000°; P -4.3400, Plg25.0000°, Azm15.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*RSNC **15** 19:24:05.0±2.3, 12°S±20°×7°2W±°, h194km±12km, M4.2, mB4.9, mb4.5, Mw(mB)4.2*

ISC 15 19:23:38.0±0.4, **14°.29S**±0°.04×**72°.09W**±0°.06, **h94**km±3km, **h94km:pP-P, n296,** σ1^{s}.**82**/203, **mb4.9**/135, **6C, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB18	Visviri	4.14	143	Pn	Pn	19 24 40.9	+1.4
PB18	Visviri	4.14	143	⇑eP	Pn	19 24 42.5	+3.0
PB18				eS	Sn	19 25 29.5	+2.5
LPAZ	La Paz	4.31	118	P	Pn	19 24 44.0	+2.0
	135nm,0.5s,baz=292,slow=9.5,SNR=378						
LPAZ				S	Sn	19 25 34.2	+2.8
	47nm,0.6s,baz=25,slow=23,SNR=1.0						
LPAZ	La Paz	4.31	118	eP	Pn	19 24 35.9	-6.0
AP01	Chacalluta	4.40	158		Pn	19 24 42.2	-0.3
AP01				Sn	Sn	19 25 32.0	-0.5
AP01	Chacalluta	4.40	158	eP	Pn	19 24 42.0	-0.6
PB12	IPOC Station P	4.62	159		Pn	19 24 44.4	-1.4
PB12	IPOC Station P	4.62	159	eP	Pn	19 24 44.2	-1.5
PB16	IPOC Station P	4.73	149	Pn	Pn	19 24 48.5	+0.9
NNA	Nana	5.16	296	P	Pn	19 24 51.7	-1.3
	179nm,0.3s,baz=125,slow=10,SNR=50						
NNA				S	Sn	19 25 48.0	-3.3
	330nm,0.6s,baz=246,slow=17,SNR=3.6						
NNA	Nana	5.16	296		Pn	19 24 51.1	-1.8
PB11	IPOC Station P	5.92	157		Pn	19 25 01.2	-2.3
GO01	Chusmiza	6.03	153	Pn	Pn	19 25 04.8	-0.4
HMBC	Humberstone	6.32	161		Pn	19 25 05.5	-3.4
PB08	IPOC Station P	6.46	155	Pn	Pn	19 25 09.3	-1.7
TA01	Diego Aracena	6.51	164		Pn	19 25 08.2	-3.0
PATCX	Punta Patache	6.76	164	Pn	Pn	19 25 12.1	-2.6
PB01	IPOC Station P	7.17	160		Pn	19 25 17.2	-3.0
PB02	IPOC Station P	7.30	164		Pn	19 25 18.6	-3.6
PB07	IPOC Station P	7.69	164		Pn	19 25 24.5	-3.1
PB09	IPOC Station P	7.95	160		Pn	19 25 28.4	-2.6
PB03	IPOC Station P	8.04	164		Pn	19 25 27.9	-4.3
PB05	IPOC Station P	8.71	168		Pn	19 25 36.2	-5.2
ATAH	Atahualpa	9.42	318	P	Pn	19 25 49.4	-2.0
	42nm,0.8s,baz=134,slow=9.9,SNR=16						
ATAH				S	Sn	19 27 35.0	-0.8
	67nm,1.0s,baz=72,slow=12,SNR=3.8						
SIV	San Ignacio	10.78	100	P	Pn	19 26 07.9	-1.5
	20nm,0.5s,baz=285,slow=9.8,SNR=93						
SIV				S	Sn	19 27 57.8	-10
	15nm,0.9s,baz=232,slow=7.2,SNR=5.7						
SIV				LR	LR	19 30 40.0	
	comp=Z,404nm,21.8s,baz=290,slow=39						
VILB	Vilhena	11.64	85		Pn	19 26 19.0	-2.1
VILB	Vilhena	11.64	85	eP	Pn	19 26 18.8	-2.3
PTLB	Pontes e Lacer	12.58	97		Pn	19 26 30.5	-3.1
PTLB	Pontes e Lacer	12.58	97	eP	Pn	19 26 31.1	-2.5
TEFE	Tefe	12.99	35	eP	Pn	19 26 36.9	-2.3
COHC	Cochancay	13.71	328	P	P	19 26 55.7	+1.7
	34nm0.5nm,0.8s						
TINO	Tinogasta	14.34	164	iP	P	19 27 02.2	+1.2
PTLC	Puerto Leguiza	14.61	349	P	Pn	19 26 53.0	-7.2
	897nm74nm,1.7s						
VCA	Vinchina	14.83	167	iP	P	19 27 08.2	+1.7
SGC2	Sao Gabriel da	14.93	20	P	Pn	19 27 00.1	-4.1
	744nm65nm,1.1s						
PDRB	Porto dos Gac	15.21	82	eP	Pn	19 27 04.7	-3.1
CYA	Choya	15.25	158	iP	Pn	19 27 06.6	-1.7
OTAV	Otavalo	15.74	336	eP	Pn	19 27 11.0	-4.0
OTAV	Otavalo	15.74	336	P	P	19 27 17.5	+0.5
	9.4nm,1.4s						
MACA	Manacapuru-AM	15.78	47	eP	Pn	19 27 06.4	-8.5
ACLC	CERRO LA CRUZ	15.80	163	iP	Pn	19 27 13.8	-1.5
FLF1	Flavio Alfaro-	15.82	330	P	P	19 27 19.0	+1.5
BDQN	Bodoquena, MS	15.87	115	eP	Pn	19 27 14.6	-1.5
SALV	Santo Antonio	15.92	98	eP	Pn	19 27 14.2	-2.5
TULM	Tulcn-Chalpat	15.94	339	P	P	19 27 22.6	+3.4
	1µm40nm,1.6s						
FLOC	Florencia	16.16	347		Pn	19 27 19.0	-0.7
FLOC				IAmb	IAmb	19 27 23.2	
	comp=Z,98nm,1.0s						
FLOC	Florencia	16.16	347	P	P	19 27 21.3	+0.1
	comp=Z,1µmcomp=Z,121nm,1.2s						
CLDB	Colider	16.26	80	eP	Pn	19 27 18.1	-2.9
GCUF	Volcan Galeras	16.27	341	P	P	19 27 23.1	+0.2
	comp=Z,2µmcomp=Z,92nm,1.3s						
CRUC	La Cruz	16.47	343	P	P	19 27 29.2	+4.2
GARC	Garzon, Huila	16.71	348	P	Pn	19 27 27.1	+0.3
	comp=Z,1µmcomp=Z,143nm,1.0s						
AQDB	Aquidauana	16.81	114		Pn	19 27 27.4	-0.3
AQDB				IAmb	IAmb	19 27 29.2	
	comp=Z,32nm,0.9s						
APLL	PUNTA DE LOS L	16.83	163	iP	Pn	19 27 26.1	-1.9
AVFE	Valle Fertil	16.85	166	iP	Pn	19 27 25.8	-2.4
PP1B	Ponte de Pedra	16.88	104	eP	Pn	19 27 27.9	-0.7
BBAC	Balboa, Cauca	16.99	342	P	P	19 27 32.2	+1.6
	comp=Z,2µmcomp=Z,44nm,1.1s						
POPC	Popayan, Colom	17.32	344	P	Pn	19 27 34.4	+0.1
	comp=Z,492nmcomp=Z,25nm,1.6s						
URMC	La Uribe, Meta	17.57	352	P	P	19 27 36.2	-0.6
	comp=Z,600nmcomp=Z,26nm,1.0s						
CFA	Coronel Fontan	17.60	169	P	P	19 27 36.7	-0.3
	comp=Z,2.3nm,0.7s,baz=340,slow=13,SNR=8.4						
CFA				S	Sn	19 30 52.6	-0.7
	comp=Z,0.7nm,0.6s,baz=27,slow=20,SNR=2.0						
NPGB	Novo Progresso	17.94	68	eP	P	19 27 40.6	-0.3
JAMC	Jamundi, Valle	17.97	345	P	P	19 27 41.1	-0.3
	comp=Z,38nm,0.9s						
PRAC	Prado	18.09	351	P	Pn	19 27 43.7	+0.3
	comp=Z,1µmcomp=Z,46nm,1.2s						
CPUP	Villa Florida	18.29	133	P	P	19 27 44.4	-0.2
	comp=Z,11nm,1.0s,baz=311,slow=11,SNR=31						
CPUP	Villa Florida	18.29	133		P	19 27 42.1	-2.5
AMBA	Amambai (Brazi	18.33	120	eP	P	19 27 44.2	-1.0
ORTC	Ortega, Tolima	18.34	350	P	P	19 27 44.9	-0.4
	comp=Z,2µmcomp=Z,87nm,1.3s						
VILC	Villavicencio,	18.35	355	P	Pn	19 27 47.8	+1.3
	comp=Z,577nmcomp=Z,37nm,0.7s						
RPRD	Ribas do Rio P	18.59	112	eP	P	19 27 47.9	-0.2
YOTC	Yotoco, Valle	18.63	347	P	P	19 27 47.8	-0.8
	comp=Z,327nmcomp=Z,20nm,1.3s						
CHIC	Chingaza	18.86	355	P	Pn	19 27 52.5	-0.4
	comp=Z,30nm,1.3s						
ITTB	Itaituba	18.89	60	eP	Pn	19 27 52.3	-0.6
C2SB	Chapadao do Su	18.99	106	eP	P	19 27 52.7	+0.4
ROSC	El Rosal	19.13	353	P	Pn	19 27 56.1	0.0
	comp=Z,7.3nm,0.5s,baz=140,slow=5.4,SNR=4.4						
ROSC				S	S	19 31 18.8	-7.8
	comp=Z,3.0nm,0.4s,baz=320,slow=23,SNR=1.0						
MT09	Talagante	19.43	177	P	P	19 27 55.2	-2.0
MT09				IAmb	IAmb	19 28 22.3	
	comp=Z,35nm,1.1s						
ARAG	Araguaiana, MT	19.64	97	eP	P	19 27 59.7	+0.3
GUY2C	Guyana, Caldas	19.65	350	P	P	19 28 00.5	+0.5
	comp=Z,2µmcomp=Z,242nm,1.2s						
PIZC	Pizarro, Choco	19.83	344	P	P	19 28 00.5	-0.9
	comp=Z,2µmcomp=Z,211nm,1.3s						
SPBC	San Pablo de B	19.91	354	P	P	19 28 00.7	-1.7
	comp=Z,1µmcomp=Z,22nm,1.1s						
NORC	Norcasia	19.91	352	P	P	19 28 01.4	-1.0
	comp=Z,23nm,1.1s						
BO01	Tunca	20.04	178		P	19 28 02.2	-1.4
RUSC	La Rusia	20.07	357		P	19 28 03.6	-0.9
RUSC				IAmb	IAmb	19 28 11.9	
	comp=Z,18nm,0.8s						
RUSC	La Rusia	20.07	357	P	P	19 28 01.4	-3.2
	comp=Z,671nmcomp=Z,34nm,1.3s						
BOAV	Boa Vista	20.15	36		P	19 28 02.0	-3.0
BOAV				IAmb	IAmb	19 28 08.2	
	comp=Z,134nm,1.0s						
BOAV	Boa Vista	20.15	36	eP	P	19 28 06.1	+1.2
BOAV	Boa Vista	20.15	36	P	P	19 28 06.0	+1.0
	comp=Z,2µmcomp=Z,157nm,1.1s						
SNDB	Serra Nova Dou	20.38	86	eP	P	19 28 08.7	+1.2
CBOC	Ciudad Bolivar	20.39	349	P	P	19 28 07.8	+0.1
	comp=Z,2µmcomp=Z,168nm,1.1s						
HELC	Santa Helena	20.63	350	P	P	19 28 09.4	-1.1
	comp=Z,385nmcomp=Z,33nm,1.6s						
PTBC	PUERTO BERRIO,	20.82	353	P	P	19 28 08.7	-3.5
	comp=Z,417nmcomp=Z,12nm,0.8s						
PSAL	Palomas, Salto	21.36	144	eP	P	19 28 14.7	-3.1
ITRB	Iturama	21.46	108	eP	P	19 28 18.5	-0.6
PAMC	Pamplona, Colo	21.49	358	P	P	19 28 18.7	-1.1
	comp=Z,104nmcomp=Z,8.9nm,0.9s						
PTGB	Pitanga	21.51	122	eP	P	19 28 18.6	-1.0
DBBC	Dabeiba	21.55	349	P	P	19 28 21.1	+1.0
PTAC	Punta Ardita,	22.04	345	P	P	19 28 27.0	+1.9
	comp=Z,1µmcomp=Z,96nm,0.9s						
UREC	San Jos de Ur	22.16	351	P	P	19 28 26.9	+0.5
	comp=Z,26nm,0.9s						
BI02	San Fabin de	22.30	178		P	19 28 27.5	-0.3
APAC	Apartado, Choc	22.49	348	P	P	19 28 30.9	+1.0
	comp=Z,1µmcomp=Z,71nm,1.3s						
ITAB	Concordia	22.64	128		P	19 28 29.9	-1.4
ITAB				IAmb	IAmb	19 28 34.0	
	comp=Z,57nm,0.6s						
ITAB	Concordia	22.64	128	eP	P	19 28 29.1	-2.3
SDV	Santo Domingo	23.07	4		P	19 28 34.8	-1.1
SDV				IAmb	IAmb	19 28 36.8	
	comp=Z,37nm,0.9s						
SDV	Santo Domingo	23.07	4	eP	P	19 28 33.6	-2.3
SDV	Santo Domingo	23.07	4	P	P	19 28 33.6	-2.3
	comp=Z,726nmcomp=Z,41nm,0.9s						
IPMB	Ipameri, GO	23.23	102	eP	P	19 28 34.7	-2.6
BDFB	Brasilia	23.30	96	P	P	19 28 37.2	-0.8
	comp=Z,7.7nm,0.8s,baz=267,slow=11,SNR=8.7						
BDFB				LR	LR	19 37 29.1	
	comp=Z,149nm,20.6s,baz=263,slow=36						
	comp=Z,7.7nm,0.8s						
BDFB	Brasilia	23.30	96		P	19 28 36.5	-1.6
CAPC	Capurgana	23.36	347	P	P	19 28 41.0	+2.6
	comp=Z,4µmcomp=Z,198nm,2.0s						
BB19B	Bebedouro	23.43	110	eP	P	19 28 37.9	-1.3
CPSB	Cacapava Do Su	23.50	136	eP	P	19 28 37.5	-2.2
SJCC	San Jacinto, C	24.22	353	P	P	19 28 43.2	-3.0
SMTB	Santa Maria do	24.59	80	eP	P	19 28 51.3	+1.6
RCLB	Rio Claro- Sao	24.65	113	eP	P	19 28 49.2	-0.9
PMNB	Patos De Minas	24.96	103	eP	P	19 28 51.9	-1.2
SPB	Sao Paulo	25.06	115	P	P	19 28 53.0	-0.8
SPB	Sao Paulo	25.06	115	eP	P	19 28 53.0	-0.8
VAO	Valinhos	25.30	114		P	19 28 56.0	-0.2
VAO				IAmb	IAmb	19 28 57.7	
	comp=Z,15nm,0.9s						
VAO	Valinhos	25.30	114	eP	P	19 28 55.2	-1.0
TRQA	Tornquist	25.32	161	P	P	19 28 55.5	-0.5
PLCA	Paso Flores	26.38	177	P	P	19 29 05.5	-0.1
	comp=Z,2.9nm,0.7s,baz=356,slow=10.0,SNR=13						
PLCA				pP	pP	19 29 26.8	-1.3
	comp=Z,8.5nm,1.0s,baz=350,slow=12,SNR=2.2						
PLCA				LR	LR	19 40 17.4	
	comp=Z,88nm,20.3s,baz=352,slow=38						
	comp=Z,2.9nm,0.7s						
PLCA	Paso Flores	26.38	177		P	19 29 06.0	+0.3
PLCA	Paso Flores	26.38	177	eP	P	19 29 01.3	-4.4
PARB	Paraibuna	26.59	114	eP	P	19 29 07.4	-0.3
JANB	Januaria	26.88	95	eP	P	19 29 08.6	-1.8
MDP	Montagnes des	27.26	46	LR	LR	19 41 05.5	
	comp=Z,156nm,20.3s,baz=205,slow=38						
GUA01	Guaratinga, BA	31.19	98	eP	P	19 29 47.9	-0.7
NBPS	Pedro II - PI	31.75	75	eP	P	19 29 55.1	+1.4
SJG	San Juan	32.72	10	LR	LR	19 45 33.9	
	comp=Z,38nm,18.4s,baz=296,slow=40						
CAIB	Caibarien	37.26	349	P	P	19 30 42.4	+1.6
CAIB				IAmb	IAmb	19 30 43.5	
	comp=Z,73nm,0.8s						
TEIG	Tepich	37.81	335		P	19 30 46.5	+1.0
TEIG				IAmb	IAmb	19 30 47.9	
	comp=Z,23nm,0.8s						
TEIG	Tepich	37.81	335	P	P	19 30 46.7	+1.2
TEIG				pP	pP	19 31 10.3	+2.1
TEIG				sP	sP	19 31 21.5	+2.2
CMIG	Matias Romero	38.45	323	LR	LR	19 46 40.5	
	comp=Z,66nm,18.4s,baz=168,slow=36						
DWPF	Disney Wildern	43.10	348	P	P	19 31 30.8	+1.7
152A	Waverly Hall	48.23	346	IAmb	IAmb	19 32 11.2	
	comp=Z,30nm,0.9s						
HBVL	Hebbronville	48.53	328	IAmb	IAmb	19 32 14.9	
	comp=Z,14nm,0.8s						
GOGA	Godfrey	48.66	347	IAmb	IAmb	19 32 14.6	
	comp=Z,20nm,1.0s						
JSC	Jenkinsville	49.08	350	IAmb	IAmb	19 32 19.1	
	comp=Z,20nm,1.0s						
LRAL	Lakeview Retre	49.16	343	IAmb	IAmb	19 32 18.2	
	comp=Z,9.8nm,0.9s						
HODGE	Hodges	49.21	349	IAmb	IAmb	19 32 20.5	
	comp=Z,22nm,1.0s						
Y52A	Lilburn	49.22	347	IAmb	IAmb	19 32 18.7	
	comp=Z,18nm,1.0s						
146A	Union	49.40	341	IAmb	IAmb	19 32 21.7	
	comp=Z,26nm,0.9s						
PAULI	Pauline	49.70	350	IAmb	IAmb	19 32 22.6	
	comp=Z,23nm,1.0s						
Y49A	Blount Mountai	49.78	344	IAmb	IAmb	19 32 22.6	
	comp=Z,9.2nm,0.9s						
X51A	Calhoun	50.07	346	IAmb	IAmb	19 32 33.3	
	comp=Z,8.0nm,0.9s						
BG3	Lake Jocassee	50.08	348	IAmb	IAmb	19 32 29.9	
	comp=Z,6.9nm,0.9s						
FPAL	Fort Paine	50.23	345	IAmb	IAmb	19 32 27.1	
	comp=Z,8.5nm,0.9s						
W52A	Murphy	50.38	347	IAmb	IAmb	19 32 27.7	
	comp=Z,15nm,1.0s						
X48A	Hartselle	50.51	344	IAmb	IAmb	19 32 28.2	
	comp=Z,28nm,1.0s						
V53A	Saluda	50.71	349	IAmb	IAmb	19 32 30.2	
	comp=Z,9.8nm,0.9s						
PMSA	Palmer Station	50.74	176	LR	LR	19 55 50.7	
	comp=Z,42nm,18.4s,baz=272,slow=38						
W50A	Signal Mountai	50.79	346	IAmb	IAmb	19 32 29.9	
	comp=Z,13nm,1.0s						
TKL	Tuckaleechee C	50.89	348	IAmb	IAmb	19 32 30.6	
	comp=Z,7.1nm,0.9s						
SWET	Sewanee	50.95	345	IAmb	IAmb	19 32 35.0	
	comp=Z,6.7nm,1.0s						
T59A	Double "B" Far	51.24	354	IAmb	IAmb	19 32 33.6	
	comp=Z,20nm,0.9s						
Z41A	Richland Creek	51.24	338	IAmb	IAmb	19 32 34.6	
	comp=Z,26nm,0.9s						
PLAL	Pickwick Lake	51.29	343	IAmb	IAmb	19 32 33.5	
	comp=Z,23nm,0.8s						
U54A	Nelsons Funny	51.36	350	IAmb	IAmb	19 32 34.7	
	comp=Z,12nm,0.7s						
DRIO	Del Rio	51.45	328	IAmb	IAmb	19 32 35.9	
	comp=Z,18nm,0.9s						
V48A	Smith Brothers	51.67	345	IAmb	IAmb	19 32 36.2	
	comp=Z,18nm,1.0s						
WHTX	Lake Whitney,	52.04	333	IAmb	IAmb	19 32 40.7	
	comp=Z,20nm,0.7s						
U49A	Red Boiling Sp	52.15	346	IAmb	IAmb	19 32 40.9	
	comp=Z,4.8nm,0.8s						
R58B	Mineral	52.25	354	IAmb	IAmb	19 32 43.9	
	comp=Z,15nm,0.9s						
WVT	Waverly	52.30	344	P	P	19 32 39.6	-0.4
WVT				IAmb	IAmb	19 32 40.6	
	comp=Z,16nm,0.9s						
WVT	Waverly	52.30	344	P	P	19 32 39.8	-0.2
WVT				pP	pP	19 33 03.3	-0.7
WVT				sP	sP	19 33 15.3	+0.4
HPIG		52.37	321	IAmb	IAmb	19 32 43.7	
	comp=Z,11nm,0.9s						
T50A	Nancy	52.42	347	IAmb	IAmb	19 32 42.3	
	comp=Z,12nm,0.9s						
S54A	Dingess, Beckl	52.53	351	IAmb	IAmb	19 32 45.7	
	comp=Z,21nm,0.8s						
S51A	Beattyville	52.77	349	IAmb	IAmb	19 32 44.9	
	comp=Z,9.7nm,0.9s						
R55A	Marlinton	52.83	352	IAmb	IAmb	19 32 54.4	
	comp=Z,16nm,1.0s						
WHAR	Wooly Hollow	52.89	339	IAmb	IAmb	19 32 46.0	
	comp=Z,22nm,0.8s						
OZNA	Ozona	52.91	328	IAmb	IAmb	19 32 46.8	
	comp=Z,12nm,0.9s						
TX31	Lajitas Ar. Si	53.01	325	IAmb	IAmb	19 32 47.9	
	comp=Z,8.8nm,0.9s						
TXAR	Lajitas Array	53.01	325	P	P	19 32 47.1	+1.6
	comp=Z,5.9nm,0.8s,baz=148,slow=8.8,SNR=58						
	comp=Z,5.9nm,0.8s						
TXAR	Lajitas Array	53.01	325	P	P	19 32 46.6	+1.1
PLPT	Palo Pinto	53.12	332	IAmb	IAmb	19 32 48.6	
	comp=Z,10nm,0.7s						
LCAR	Lake Charles	53.23	341	IAmb	IAmb	19 32 48.0	
	comp=Z,22nm,1.0s						
R50A	Paris	53.53	348	IAmb	IAmb	19 32 50.5	
	comp=Z,12nm,1.0s						
Q54A	Coxs Mills	53.62	352	IAmb	IAmb	19 32 53.4	
	comp=Z,22nm,0.9s						
P57A	Homestead Farm	53.77	354	IAmb	IAmb	19 32 53.3	
	comp=Z,12nm,1.0s						
CGM3	Cape Girardeau	53.91	343	IAmb	IAmb	19 32 53.1	
	comp=Z,24nm,1.0s						
WCI	Wyandotte Cave	53.91	346	P	P	19 32 50.3	-1.5
WCI				IAmb	IAmb	19 32 52.3	
	comp=Z,18nm,0.8s						
WCI	Wyandotte Cave	53.91	346	P	P	19 32 50.8	-1.0
WCI				pP	pP	19 33 15.2	-0.7
WCI				sP	sP	19 33 27.0	+0.3
MNHN	Monahans	54.09	327	IAmb	IAmb	19 32 57.0	
	comp=Z,4.5nm,0.8s						
P53A	Whipple	54.19	351	IAmb	IAmb	19 32 57.3	
	comp=Z,23nm,0.9s						
HHAR	Hobbs	54.37	338	IAmb	IAmb	19 32 56.9	
	comp=Z,26nm,1.0s						
P52A	Corning	54.45	350	IAmb	IAmb	19 32 59.0	
	comp=Z,26nm,0.9s						
ODSA	Odessa	54.59	328	IAmb	IAmb	19 32 59.5	
	comp=Z,26nm,0.9s						
U38A	Gravette	54.67	338	IAmb	IAmb	19 32 58.4	
	comp=Z,7.3nm,0.8s						
PECS	Pecos	54.69	326	IAmb	IAmb	19 33 00.2	
	comp=Z,6.0nm,0.7s						
TUL3	Leonard	54.73	336	IAmb	IAmb	19 33 28.2	
	comp=Z,7.7nm,0.9s						
POST	Post	54.83	330	IAmb	IAmb	19 33 02.0	
	comp=Z,14nm,0.8s						
VHRN	Van Horn	54.85	325	IAmb	IAmb	19 33 01.9	
	comp=Z,8.7nm,0.9s						
BLO	Bloomington	54.86	346	IAmb	IAmb	19 32 59.2	
	comp=Z,14nm,0.8s						
O52A	Adamsville	54.87	351	IAmb	IAmb	19 33 02.4	
	comp=Z,11nm,0.9s						
CCM	Cathedral Cave	55.08	342	P	P	19 32 59.8	-0.5
CCM				IAmb	IAmb	19 33 01.5	
	comp=Z,18nm,1.0s						
CCM	Cathedral Cave	55.08	342	P	P	19 32 60.0	-0.3
CCM				pP	pP	19 33 23.6	-0.7
CCM				PcP	PcP	19 33 58.5	-2.2
ACSO	Alum Creek Sta	55.17	350	IAmb	IAmb	19 33 03.9	
	comp=Z,17nm,0.8s						
N53A	Lisbon	55.41	352	IAmb	IAmb	19 33 05.9	

	comp=Z,19nm,0.9s						
PAMR	Moraine State	55.44	353	IAmb	IAmb	19 33 19.5	
	comp=Z,6.8nm,0.8s						
O48B	Farmland	55.60	348	IAmb	IAmb	19 33 05.0	
	comp=Z,24nm,1.0s						
R40A	Maddies Statio	55.62	341	IAmb	IAmb	19 33 04.8	
	comp=Z,12nm,0.7s						
OK048	Pawnee Station	55.62	336	IAmb	IAmb	19 33 07.8	
	comp=Z,14nm,0.9s						
T35A	Sooner Cattle	55.89	336	IAmb	IAmb	19 33 17.7	
	comp=Z,9.2nm,0.9s						
SFIN	Lafayette	56.14	346	IAmb	IAmb	19 33 08.0	
	comp=Z,10.0nm,0.6s						
MSTX	Muleshoe	56.18	329	IAmb	IAmb	19 33 10.3	
	comp=Z,17nm,1.0s						
N47A	Urbana	56.31	348	IAmb	IAmb	19 33 12.0	
	comp=Z,14nm,0.8s						
P40A	Paris	56.68	342	IAmb	IAmb	19 33 12.3	
	comp=Z,13nm,0.8s						
P38A	Dawn	57.23	340	IAmb	IAmb	19 33 16.3	
	comp=Z,11nm,0.9s						
J59A	Piesco	57.51	358	IAmb	IAmb	19 33 39.5	
	comp=Z,6.1nm,0.8s						
121A	Cookes Peak, D	57.73	324	IAmb	IAmb	19 33 23.3	
	comp=Z,8.7nm,0.8s						
KSU1	Kansas State U	57.84	338	IAmb	IAmb	19 33 20.9	
	comp=Z,13nm,0.6s						
R32A	Long Quarter,	58.06	335	IAmb	IAmb	19 33 23.6	
	comp=Z,22nm,0.9s						
L40A	Anamosa	58.77	343	IAmb	IAmb	19 33 32.5	
	comp=Z,7.9nm,0.9s						
CBKS	Cedar Bluff	58.81	335	IAmb	IAmb	19 33 29.7	
	comp=Z,20nm,0.9s						
ANMO	Albuquerque	58.83	327	P	P	19 33 28.5	+1.4
TASM	ASL Pad, Albuq	58.83	327	IAmb	IAmb	19 33 31.5	
	comp=Z,2.2nm,0.8s						
TASM	ASL Pad, Albuq	58.83	327	IAmb	IAmb	19 33 31.5	
	comp=Z,2.6nm,0.8s						
I40A	Norwalk	60.32	345	IAmb	IAmb	19 33 50.6	
	comp=Z,8.4nm,0.8s						
SDCO	Great Sand Dun	60.52	330	IAmb	IAmb	19 33 42.3	
	comp=Z,9.6nm,1.0s						
X16A	Lo Mia Camp, P	61.20	323	IAmb	IAmb	19 33 46.0	
	comp=Z,5.5nm,0.9s						
ECSD	EROS Data Cent	61.94	340	P	P	19 33 47.5	-0.3
ECSD				IAmb	IAmb	19 33 48.9	
	comp=Z,8.7nm,1.0s						
PV01	Paradox Valley	62.36	328	IAmb	IAmb	19 33 53.5	
	comp=Z,5.3nm,0.8s						
PV15	Paradox Valley	62.47	328	IAmb	IAmb	19 33 54.8	
	comp=Z,13nm,0.9s						
PV02	Paradox Valley	62.50	328	IAmb	IAmb	19 33 54.4	
	comp=Z,9.2nm,0.9s						
PV13	Radium Mtn., P	62.51	328	IAmb	IAmb	19 33 54.2	
	comp=Z,5.6nm,0.8s						
F33A	5 Mile Ranch,	63.71	341	IAmb	IAmb	19 34 01.1	
	comp=Z,17nm,0.9s						
O20A	White River Ci	63.72	330	IAmb	IAmb	19 34 03.8	
	comp=Z,10nm,1.0s						
P17A	Butcher Ranch,	64.48	328	IAmb	IAmb	19 34 07.2	
	comp=Z,6.5nm,0.8s						
RDMU	Red Mountain	64.71	329	IAmb	IAmb	19 34 10.0	
	comp=Z,8.1nm,0.8s						
K22A	Casper	64.89	333	IAmb	IAmb	19 34 09.9	
	comp=Z,8.1nm,0.6s						
RSSD	Black Hills	65.02	335	P	P	19 34 08.8	+0.4
RSSD				IAmb	IAmb	19 34 10.6	
	comp=Z,6.5nm,0.9s						
RSSD	Black Hills	65.02	335	P	P	19 34 09.8	+1.4
RSSD				pP	pP	19 34 34.8	+1.3
RSSD				PcP	PcP	19 34 42.4	+1.8
RSSD				sP	sP	19 34 47.1	+2.7
WSHM	Spangler Hills	65.63	320	IAmb	IAmb	19 34 15.4	
	comp=Z,6.3nm,0.9s						
AGMN	Agassiz Nation	65.80	343	IAmb	IAmb	19 34 14.7	
	comp=Z,17nm,0.8s						
FURC	Furnace Creek,	65.81	322	IAmb	IAmb	19 34 16.9	
	comp=Z,11nm,0.9s						
WCT	Wildcat Mounta	65.89	322	IAmb	IAmb	19 34 17.7	
	comp=Z,5.2nm,0.9s						
TCUT	Toone Canyon	66.04	328	IAmb	IAmb	19 34 18.9	
	comp=Z,8.6nm,0.8s						
DUG	Dugway, Tooele	66.10	327	IAmb	IAmb	19 34 18.6	
	comp=Z,9.1nm,1.0s						
PDAR	Pinedale Array	66.37	331	P	P	19 34 18.4	+1.2
	comp=Z,1.6nm,0.7s,baz=120,slow=8.1,SNR=15						
PDAR				pP	pP	19 34 41.9	-0.5
	comp=Z,2.2nm,1.1s,baz=123,slow=3.9,SNR=2.4						
	comp=Z,1.6nm,0.7s						
PDAR	Pinedale Array	66.37	331	P	P	19 34 16.3	-0.9
ULM	Lac du Bonnet	67.57	344	P	P	19 34 24.9	+0.6
	comp=Z,5.3nm,0.6s,baz=146,slow=5.0,SNR=10						
	comp=Z,5.3nm,0.6s						
ULM	Lac du Bonnet	67.57	344	P	P	19 34 23.0	-1.3
ULM				IAmb	IAmb	19 34 25.2	
	comp=Z,6.7nm,0.7s						
VNA3	Neumayer Olymp	67.84	162	⇑P	P	19 34 26.8	+1.0
	comp=Z,6.1nm,0.8s						
NVAR	Mina Array Bea	67.97	322	P	P	19 34 29.4	+2.0
	comp=Z,0.3nm,0.3s,baz=177,slow=8.5,SNR=4.6						
	comp=Z,0.3nm,0.3s						
VNA1	Neumayer--Stat	68.06	161	⇑P	P	19 34 28.6	+1.5
	comp=Z,12nm,0.9s						
YNR	Norris Junctio	68.39	331	IAmb	IAmb	19 34 33.1	
	comp=Z,7.4nm,0.6s						
VNA2	Neumayer--Watz	68.42	161	⇑P	P	19 34 31.0	+1.6
	comp=Z,5.6nm,0.7s,baz=290,slow=6.0						
YHB	Horse Butte	68.65	331	IAmb	IAmb	19 34 35.2	
	comp=Z,15nm,0.8s						
DGMT	Dagmar	68.68	338	IAmb	IAmb	19 34 34.0	
	comp=Z,18nm,0.8s						
YHL	Hebgen Lake	68.72	331	IAmb	IAmb	19 34 35.7	
	comp=Z,15nm,0.9s						
PNTR	Pine Nut	69.17	322	IAmb	IAmb	19 34 38.4	
	comp=Z,6.7nm,0.9s						
PAHR	Pah Rah Range	69.44	323	IAmb	IAmb	19 34 39.9	
	comp=Z,9.0nm,0.9s						
BOZ	Bozeman (W)	69.49	331	IAmb	IAmb	19 34 39.3	
	comp=Z,7.4nm,0.8s						
DBIC	Dimbokro	69.86	77	P	P	19 34 41.3	+2.0
	comp=Z,1.1nm,0.5s,baz=340,slow=10,SNR=1.5						
	comp=Z,1.1nm,0.5s						
SNAA	Sanae	70.05	162	⇑P	P	19 34 40.4	+0.9
	comp=Z,172nm,0.7s						
SNAA	Sanae	70.05	162	P	P	19 34 40.4	+0.9
	comp=Z,8.4nm,0.8s,baz=284,slow=4.8,SNR=29						
SNAA				pP	pP	19 35 04.0	-0.9
	comp=Z,3.1nm,1.0s,baz=263,slow=7.7,SNR=2.8						
	comp=Z,8.4nm,0.8s						
SNAA	Sanae	70.05	162	P	P	19 34 40.6	+1.1
SNAA				IAmb	IAmb	19 34 41.8	
	comp=Z,14nm,1.0s						
EGMT	Eagleton	70.52	334	IAmb	IAmb	19 34 45.2	
	comp=Z,15nm,0.9s						
TROLL	Troll, Antarti	71.76	162	⇑P	P	19 34 51.2	+1.1
	comp=Z,201nm,0.8s						
FFC	Flin Flon	73.27	342	P	P	19 34 59.8	+0.9
FFC	Flin Flon	73.27	342	P	P	19 34 60.0	+1.1
EPH	Ephrata	74.60	329	IAmb	IAmb	19 35 17.2	
	comp=Z,1.5nm,0.9s						
QSPA	South Pole Qui	75.86	180	P	P	19 35 16.0	+1.9
	comp=Z,11nm,0.9s,baz=153,slow=2.8,SNR=22						
QSPA				pP	pP	19 35 38.6	-1.1
	comp=Z,1.3nm,0.3s,baz=133,slow=2.8,SNR=2.5						
	comp=Z,11nm,0.9s						
QSPA	South Pole Qui	75.86	180	P	P	19 35 16.3	+2.2
QSPA				IAmb	IAmb	19 35 16.9	
	comp=Z,13nm,1.1s						
QSPA	South Pole Qui	75.86	180	P	P	19 35 15.8	+1.7
QSPA				PcP	PcP	19 35 27.2	+1.0
QSPA				pP	pP	19 35 42.0	+2.3
EDM	Edmonton	75.98	336	IAmb	IAmb	19 35 16.5	
	comp=Z,32nm,1.0s						
NLWA	Neilton Lookou	76.84	327	IAmb	IAmb	19 35 23.7	
	comp=Z,13nm,1.0s						
TORD	Torodi Ar. Bea	77.98	73	P	P	19 35 26.0	-0.6
	comp=Z,2.0nm,0.8s,baz=292,slow=4.3,SNR=13						
TORD				pP	pP	19 35 51.6	-0.8
	comp=Z,0.9nm,0.8s,baz=289,slow=4.4,SNR=2.2						
	comp=Z,2.0nm,0.8s						
TORD	Torodi Ar. Bea	77.98	73	P	P	19 35 25.9	-0.8
MDT	Midelt	79.61	52	LR	LR	20 08 49.0	
	comp=Z,71nm,18.4s,baz=356,slow=34						
ESDC	Sonseca Array	82.94	46	P	P	19 35 54.0	+1.2
	comp=Z,2.0nm,0.8s,baz=244,slow=5.2,SNR=9.1						
	comp=Z,2.0nm,0.8s						
YKAW1	Yellowknife Wh	83.37	342	IAmb	IAmb	19 35 56.4	
	comp=Z,10nm,0.8s						
YKA	Yellowknife Ar	83.42	342	P	P	19 35 55.6	+1.0
	comp=Z,7.6nm,0.8s,baz=142,slow=4.6,SNR=116						
YKA				PP	PP	19 39 11.2	+3.2
	comp=Z,0.7nm,1.0s,baz=129,slow=7.6,SNR=5.1						
	comp=Z,7.6nm,0.8s						
YKA	Yellowknife Ar	83.42	342	P	P	19 35 55.4	+0.8
YKAW3	Yellowknife Wh	83.47	342	IAmb	IAmb	19 35 57.0	
	comp=Z,15nm,0.8s						
ILON	Igloolik, Nuna	83.72	357	IAmb	IAmb	19 35 58.6	
	comp=Z,5.5nm,0.8s						
POIN	Pond Inlet	86.87	358	IAmb	IAmb	19 36 14.9	
	comp=Z,5.7nm,1.0s						
P33M	Teslin, Yukon	88.61	334	IAmb	IAmb	19 36 23.3	
	comp=Z,7.4nm,0.9s						
SUMG	Summit	89.46	10	P	P	19 36 24.4	-0.1
BOSA	Boshof	89.55	119	LR	LR	20 14 51.3	
	comp=Z,50nm,18.1s,baz=250,slow=34						
RES	Resolute Bay	89.94	354	IAmb	IAmb	19 36 28.9	
	comp=Z,4.4nm,0.8s						
KPA	Kalaupapa	90.43	292	P	P	19 36 28.9	-0.7
TULEG	Thule	90.66	1	P	P	19 36 31.4	+2.0
LBTB	Lobatse	90.83	116	LR	LR	20 15 11.0	
	comp=Z,42nm,18.3s,baz=317,slow=34						
A36M	Sachs Harbour	92.99	346	P	P	19 36 41.5	+1.2
ILAR	Eielson Array	96.46	335	P	P	19 36 57.0	+0.6
	comp=Z,0.5nm,0.7s,baz=149,slow=2.5,SNR=8.1						
ILAR				PP	PP	19 40 48.0	-3.6
	comp=Z,0.5nm,0.8s,baz=122,slow=6.0,SNR=4.9						
	comp=Z,0.5nm,0.7s						
BVAR	Borovoye Array	131.29	29	PKP	PKiKP	19 42 42.0	+1.9
	comp=Z,1.2nm,0.8s,baz=318,slow=2.0,SNR=7.0						
ASAR	Alice Springs	134.51	214	PKP	PKiKP	19 42 48.3	+0.6
	comp=Z,0.1nm,0.3s,baz=180,slow=1.8,SNR=5.0						
ZALV	Zalesovo Beam	136.46	20	PKP	PKiKP	19 42 50.9	+0.4
	comp=Z,5.2nm,0.7s,baz=236,slow=1.6,SNR=5.3						
KURBB	Kurchatov Arra	136.65	27	PKP	PKiKP	19 42 51.6	+0.6
	comp=Z,1.8nm,0.8s,baz=299,slow=2.7,SNR=9.1						
MKAR	Makanchi Array	141.15	28	PKhKP	PKPpre	19 42 44.4	
	comp=Z,0.8nm,0.8s,baz=3.8,slow=3.6,SNR=5.4						
HILR	Hailar Array B	143.51	347	PKP	PKPdf	19 43 00.5	-1.4
	comp=Z,1.3nm,0.4s,baz=43,slow=2.4,SNR=2.5						
MJAR	Matsushiro Arr	145.03	315	PKPbc	PKPdf	19 43 05.3	+0.4
	comp=Z,7.5nm,1.1s,baz=62,slow=1.0,SNR=14						
MJAR				pPKPbc	pPKPab	19 43 30.8	-0.4
	comp=Z,2.8nm,1.0s,baz=96,slow=1.3,SNR=3.2						
ULN	Ulaanbaatar	146.51	1		PKiKP	19 43 11.4	-0.2
SONM	Songino Array	146.53	2	PKPbc	PKPab	19 43 10.1	+0.2
	comp=Z,7.6nm,0.7s,baz=338,slow=2.3,SNR=17						
SONM	Songino Array	146.53	2		PKiKP	19 43 10.3	-1.2
KSRS	Korea Array	150.85	326	PKPbc	PKiKP	19 43 21.9	+1.3
	comp=Z,8.4nm,0.8s,baz=15,slow=2.2,SNR=31						
KSRS				pPKPbc	pPKPbc	19 43 47.1	-0.2
	comp=Z,2.4nm,1.0s,baz=25,slow=1.6,SNR=2.5						

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*IDC **15** 19:26:04.9±7.8, 23°.77S×179°.86W, h464^{km}±88^{km}, mb3.3/6, mbtmp4.2/7, Error ellipse: s-maj=81.8km s-min=29.9km az=6.0*

ISC 15 19:26:08.9±1.2**, 24°.1S**±0°.1×**179°.8W**±0°.2**, h518**^{km}**, n9,** σ**0ˢ.60**/10**, mb3.7**/6**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	14.36	190	P	P	19 29 12.4	+0.5
	2.6nm,0.3s,baz=260,slow=3.2,SNR=9.0						
URZ				S	S	19 31 42.3	-0.6
	3.8nm,0.7s,baz=173,slow=23,SNR=7.1						
CTA	Charters Tower	31.62	271	P	P	19 31 49.4	+0.1
	4.1nm,0.4s,baz=100,slow=9.5,SNR=7.2						
	4.1nm,0.4s						
STKA	Stephens Creek	34.78	248	P	P	19 32 16.5	+0.6
	0.9nm,0.5s,baz=107,slow=11,SNR=2.2						
	0.9nm,0.5s						
ASAR	Alice Springs	42.15	261	P	P	19 33 15.5	-0.4
	2.7nm,0.7s,baz=97,slow=7.3,SNR=48						
	2.7nm,0.7s						
WRA	Warramunga Arr	42.54	266	P	P	19 33 17.9	-1.1
	2.7nm,0.5s,baz=96,slow=8.4,SNR=53						
	2.7nm,0.5s						
CMAR	Chiang Mai Arr	89.73	290	P	P	19 38 12.4	+0.2
	0.2nm,0.3s,baz=127,slow=4.7,SNR=4.8						
	0.2nm,0.3s						
TXAR	Lajitas Array	90.41	58	P	P	19 38 15.0	-0.2
	0.5nm,0.8s,baz=235,slow=4.1,SNR=4.3						
	0.5nm,0.8s						
BRTR	Keskin Array B	147.81	307	PKPbc	PKiKP	19 44 57.2	0.0
	0.6nm,0.6s,baz=104,slow=3.0,SNR=3.9						
MMAI	Mount Meron Ar	147.91	294	PKPbc	PKPbc	19 44 56.4	+0.3
	0.9nm,0.4s,baz=69,slow=5.2,SNR=5.1						

IDC 15 19:31:38.1±1.6**, 6°.59N**×**124°.92E, h0**^{km}**, mb3.3**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=31.1km s-min=11.7km az=135.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.81	54	Pg	Pg	19 31 53.7	+0.1
	231nm,0.3s,baz=284,slow=5.6,SNR=14						
DAV				Lg	Lg	19 32 04.6	
	292nm,0.3s,baz=127,slow=20,SNR=6.9						
DAV				LR	LR	19 32 22.3	
	comp=Z,485nm,19.5s,baz=122,slow=55						
WRA	Warramunga Arr	27.95	161	P	P	19 37 31.5	+1.0
	0.2nm,0.5s,baz=331,slow=10,SNR=0.5						
	0.2nm,0.5s						
ASAR	Alice Springs	31.33	164	P	P	19 37 59.6	-0.8
	0.1nm,0.5s,baz=342,slow=6.8,SNR=8.8						
	0.1nm,0.5s						
MKAR	Makanchi Array	54.20	325	P	P	19 41 05.7	+0.2
	0.4nm,1.0s,baz=113,slow=9.3,SNR=2.6						
	0.4nm,1.0s						

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*NEIC **15** 19:42:55.4±1.5, 12°.55N±0°.06×86°.87W±0°.09, h167^{km}±6^{km}, mb4.6/34, Error ellipse: s-maj=14.7km s-min=5.9km az=63.0*

*SNET **15** 19:42:55.7±1.9, 12°.38N×86°.98W, h144^{km}, ML4.4*

*IDC **15** 19:42:55.4±0.8, 12°.63N×86°.82W, h176^{km}±7^{km}, mb3.6/11, mbtmp4.2/14, Error ellipse: s-maj=18.9km s-min=9.7km az=58.0*

*CATAC **15** 19:42:55.7±0.2, 12°N±2°×8°7W±°, h158^{km}±1^{km}, M4.5/63, mb4.9/1, mB4.8/1, MLv4.3/63, Mw(mB)4.0/1, Error ellipse: s-maj=4.7km s-min=1.9km az=35.0, confirmed*

*GCG **15** 19:42:59.7±1.8, 12°.59N×87°.19W, h152^{km}±42^{km}, MD4.6, ML5.0*

ISC 15 19:42:54.9±0.5**, 12°.53N**±0°.04×**86°.89W**±0°.04**, h173**^{km}±4^{km}**, n182,** σ**1ˢ.37**/196**, mb4.4**/25**, 26C-14D, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEL3	Telica 3	0.06	47	⇑P	Pn	19 43 16.5	-1.4
ALEN	Leon	0.07	163	P	Pn	19 43 16.9	-1.0
ALEN	Leon	0.07	163	S	Sn	19 43 35.6	+0.1
QUEN	Al S del Volca	0.07	32	⇑P	Pn	19 43 17.5	-0.4
HERN	Volcan Telica	0.10	37	Pn	Pn	19 43 17.0	-1.0
POLN	Al Sur del Vol	0.14	33	⇑P	Pn	19 43 17.4	-0.6
PKGN	Cerro Pekin	0.16	329	⇑P	Pn	19 43 17.6	-0.4
CNGA	Al SSO del Vol	0.19	101	⇑P	Pn	19 43 17.4	-0.7
CNGN	Cerro Negro	0.19	99		Pn	19 43 17.3	-0.7
CNGN	Cerro Negro	0.19	99	⇑P	Pn	19 43 17.3	-0.7
ILCN	San Idelfonso	0.19	76	⇑P	Pn	19 43 16.4	-1.6
CRIN	San Cristobal	0.23	318		Pn	19 43 17.7	-0.5
CRIN	San Cristobal	0.23	318	⇑P	Pn	19 43 17.8	-0.4
MOM2	El Cardon	0.41	103	⇑P	Pn	19 43 18.3	-0.3
MOM2				S	Sn	19 43 37.0	+0.4
COPN	Copaltepe	0.46	140	⇑P	Pn	19 43 17.9	-0.9
AESN	El Sauce Leon	0.49	44	⇑P	Pn	19 43 18.4	-0.5
AESN	El Sauce Leon	0.49	44	S	Sn	19 43 36.1	-1.3
AMTN	Mateare	0.54	123	P	Pn	19 43 18.9	-0.2
APYN	Apoyeque	0.61	119	⇑P	Pn	19 43 18.9	-0.5
APQ2	Apoyeque	0.65	121	⇑P	Pn	19 43 19.1	-0.5
ABCN	Banco Central	0.70	125	P	Pn	19 43 19.6	-0.4
ABCN	Banco Central	0.70	125	S	Sn	19 43 38.5	-0.7
ALLN	Telcor Managua	0.71	122	P	Pn	19 43 19.6	-0.4
MGAN	Managua	0.74	121		Pn	19 43 19.4	-0.8
MGAN	Managua	0.74	121	P	Pn	19 43 19.8	-0.3
MGAN	Managua	0.74	121	S	Sn	19 43 39.0	-0.5
LIMN	Finca el Limon	0.74	44	⇓P	Pn	19 43 20.0	-0.3
LIMN				S	Sn	19 43 39.1	-0.7
POTN	Potosi Cosigui	0.76	308	⇑P	Pn	19 43 20.2	-0.1
POTN				S	Sn	19 43 39.1	-0.7
CSGN	Cosiguina Volc	0.79	304	⇑P	Pn	19 43 20.2	-0.3
AERN	Aeropuerto Man	0.81	118	P	Pn	19 43 19.8	-0.8
AERN	Aeropuerto Man	0.81	118	S	Sn	19 43 39.1	-1.1
MAS3	Al N del Volca	0.86	126	⇑P	Pn	19 43 20.4	-0.6
MASN	Masaya	0.90	127	P	Pn	19 43 20.9	-0.3
MASN				S	Sn	19 43 42.2	+0.6
SABN	Sabanita	0.91	128	⇑P	Pn	19 43 20.8	-0.6
NANN	Nandasmo	0.95	128	S	Sn	19 43 42.9	+0.7
NANN	Nandasmo	0.95	128	⇑P	Pn	19 43 22.1	+0.5
MATN	Matagalpa	1.02	67	⇓P	Pn	19 43 21.0	-1.2
MATN	Matagalpa	1.02	67	S	Sn	19 43 41.2	-2.0
NADN	Granada	1.14	133	⇑P	Pn	19 43 23.1	0.0
NADN				S	Sn	19 43 44.5	-0.3
OCON	Estacion meteo	1.17	20	P	Pn	19 43 23.3	-0.1
CNCH	Conchagua	1.18	309	⇑*i*P	Pn	19 43 23.3	-0.3
CNCH	Conchagua	1.18	309	S	Sn	19 43 47.4	+1.8
CNCH	Conchagua	1.18	309	⇑P	Pn	19 43 23.3	-0.3
RCON	San Juan de Ri	1.19	37	⇓P	Pn	19 43 23.6	0.0
BOAB	BOACO BROADBAN	1.20	94		Pn	19 43 23.4	-0.1
BOAB	BOACO BROADBAN	1.20	94	⇓P	Pn	19 43 23.5	-0.1
BOAB	BOACO BROADBAN	1.20	94	S	Sn	19 43 45.4	-0.2
LCND	La Caada	1.24	309	*i*P	Pn	19 43 23.6	-0.3
LCND	La Caada	1.24	309	⇑P	Pn	19 43 23.7	-0.3
RCVN	Varillal2	1.25	33	⇓P	Pn	19 43 24.2	0.0
RCVN	Varillal2	1.25	33	S	Sn	19 43 46.1	-0.7
RCPN	Sur Rio San Ju	1.26	38	⇓P	Pn	19 43 24.2	0.0
YUSH	Yuscaran	1.42	2	⇑P	Pn	19 43 25.7	+0.1
ARIN	Rivas	1.49	136	P	Pn	19 43 23.7	-2.5
ARIN	Rivas	1.49	136	S	Sn	19 43 46.0	-4.3
MORN	Al O del Volca	1.56	129	P	Pn	19 43 26.9	0.0
TGUH	Tegucigalpa,Un	1.56	346		Pn	19 43 27.4	+0.4
TGUH	Tegucigalpa,Un	1.56	346	⇑P	Pn	19 43 27.5	+0.4
VSM	San Miguel	1.62	304	*e*P	Pn	19 43 27.9	+0.2
LCY	Lacayo	1.63	303	⇑*i*P	Pn	19 43 28.0	+0.3
RANC	El Ranchito	1.63	304	*i*P	Pn	19 43 27.7	-0.1
RANC				*e*S	Sn	19 43 52.8	-0.3
PACA	Pacayal	1.68	304	*e*P	Pn	19 43 28.5	+0.3
PACA	Pacayal	1.68	304	P	Pn	19 43 28.5	+0.3
PACA	Pacayal	1.68	304	S	Sn	19 43 53.9	-0.1
TECA	Tecapa	1.84	302	*e*P	Pn	19 43 30.1	+0.1
CARN	Rivas	1.89	135	⇓P	Pn	19 43 30.1	-0.2
SCLA	Alcaldia de Sa	2.13	303	*e*P	Pn	19 43 33.4	+0.3
SCLA				*e*S	Sn	19 44 02.0	-0.6
SCLA	Alcaldia de Sa	2.13	303	⇑P	Pn	19 43 33.6	+0.5
UESV	Universidad de	2.15	301	P	Pn	19 43 33.7	+0.5
UESV	Universidad de	2.15	301	S	Sn	19 44 02.8	-0.1
SIUN	Universidad Ur	2.38	60	Pn	Pn	19 43 35.3	-0.5
SIUN	Universidad Ur	2.38	60	⇓P	Pn	19 43 35.3	-0.5
IGN	Direccin Gen	2.51	298	P	Pn	19 43 37.4	0.0
LALI	Alcalda de L	2.55	292	*e*P	Pn	19 43 37.9	0.0
LALI				*e*S	Sn	19 44 08.1	-3.0
LALI	Alcalda de L	2.55	292	P	Pn	19 43 37.8	0.0
LALI	Alcalda de L	2.55	292	S	Sn	19 44 09.4	-1.7
UEES	Universidad Ev	2.57	298	P	Pn	19 43 38.4	+0.2
UEES	Universidad Ev	2.57	298	S	Sn	19 44 10.9	-0.9
PIC2	El Picacho	2.60	298	*e*P	Pn	19 43 39.3	+0.7
BOQS	Boqueron	2.62	298	*e*P	Pn	19 43 39.3	+0.5
PMON	Piamonte	2.64	297	*e*P	Pn	19 43 39.3	+0.4
PMON	Piamonte	2.64	297	P	Pn	19 43 39.2	+0.2
PMON	Piamonte	2.64	297	S	Sn	19 44 12.0	-1.2
JUD3	Juan Diaz 3	2.70	150		Pn	19 43 40.1	+0.4
JAYA	Jayaque - finc	2.73	294	*i*P	Pn	19 43 40.3	+0.1
JAYA				*e*S	Sn	19 44 13.4	-1.8
JAYA	Jayaque - finc	2.73	294	⇓P	Pn	19 43 40.3	+0.1
CMARA	Lajas Hojancha	2.88	150	P	Pn	19 43 42.4	+0.5
CMARA	Lajas Hojancha	2.88	150	S	Sn	19 44 14.9	-3.5
JTS	Las Juntas de	2.93	139	P	Pn	19 43 42.9	+0.5
	119nm,0.3s,baz=110,slow=23,SNR=243						
JTS				S	Sn	19 44 16.1	-3.3
	507nm,0.3s,baz=304,slow=18,SNR=5.1						
JTS	Las Juntas de	2.93	139		Pn	19 43 42.5	+0.1
JTS	Las Juntas de	2.93	139	⇓P	Pn	19 43 42.2	-0.2
JTS				S	Sn	19 44 17.5	-1.9
CEVE	Cerro Verde	2.96	296	*e*P	Pn	19 43 43.6	+0.6
CEVE				*e*S	Sn	19 44 19.9	-0.5
CEVE	Cerro Verde	2.96	296	P	Pn	19 43 43.3	+0.3
SNJE	San Jose	2.96	297	*e*P	Pn	19 43 43.5	+0.5
SBLS	San Blas	2.96	296	*i*P	Pn	19 43 44.2	+1.2
SBLS				*e*S	Sn	19 44 19.5	-0.9
UNIC	Universidad Ca	2.96	299	P	Pn	19 43 43.4	+0.6
COVE	Coope Vega, Sa	3.03	126	⇓P	Pn	19 43 43.5	-0.2
MTO3	Montecristo	3.04	308	*e*P	Pn	19 43 44.6	+0.7
MTO3	Montecristo	3.04	308	P	Pn	19 43 43.2	-0.7
SOCE	Pocosol	3.08	134		Pn	19 43 44.3	-0.1
SOCE	Pocosol	3.08	134	P	Pn	19 43 45.0	+0.7
NUBE	Las Nubes	3.13	296	*e*P	Pn	19 43 45.2	+0.2
NUBE				*e*S	Sn	19 44 21.7	-2.2
RBDL	Robledal	3.14	300	*i*P	Pn	19 43 45.6	+0.4
RBDL				*e*S	Sn	19 44 23.1	-1.3
FAME	Alcaldia de Sa	3.31	294	⇓P	Pn	19 43 47.2	+0.1
TCS1	Tacares	3.55	134	P	Pn	19 43 51.7	+1.5
TRT2	Tortugero	3.66	122	⇓P	Pn	19 43 51.7	+0.2
BILN	Bilwi Airport	3.74	66	⇓P	Pn	19 43 52.2	-0.3
FG16	Alotenango, Sa	3.92	297	*e*P	Pn	19 44 01.6	+6.5
LCR2	La Lucha 2	3.96	134	P	Pn	19 43 56.9	+1.3
EGUB	Earth Gu¡pi	3.97	125		Pn	19 43 55.1	-0.4
QUEP	Quepos	4.08	139	P	Pn	19 43 59.5	+2.6
ESSG	Sabana Grande	4.25	296	*e*P	Pn	19 44 00.1	+1.0
APG	El Apazote	4.25	306	P	Pn	19 44 00.7	+1.4
	8.0nm,0.8s,baz=132,slow=10,SNR=78						
APG				S	Sn	19 44 42.9	-6.8
	2.7nm,0.7s,baz=119,slow=11,SNR=4.4						
APG	El Apazote	4.25	306	*e*P	Pn	19 44 00.6	+1.4
OCHAL	Ojochal	4.67	137	P	Pn	19 44 05.7	+1.2
OCHAL	Ojochal	4.67	137	S	Sn	19 44 58.3	-0.6
STG5	El Palmar, Qui	4.72	294	*e*P	Pn	19 44 09.7	+4.5
STG5				*e*S	Sn	19 45 05.3	+5.0
STG8	El Palmar, Qui	4.74	294	*e*P	Pn	19 44 10.7	+5.1
STG2	El Palmar, Qui	4.75	294	*e*S	Sn	19 45 05.7	+4.5
DRK0	Durika	4.83	132	P	Pn	19 44 07.8	+1.0
DRK0	Durika	4.83	132	S	Sn	19 45 01.3	-1.8
SOKI	Kika Raxquin	4.94	298	*e*P	Pn	19 44 10.0	+1.6
SOKI				*e*S	Sn	19 45 06.8	+0.9
PIRO	Carate, Puerto	5.39	139		Pn	19 44 14.7	+0.9
PRVC	Isla de Provid	5.46	81		Pn	19 44 13.0	-1.7
SMCA	Catarina	5.54	295	*e*P	Pn	19 44 17.1	+1.2
BRU2	Volcan	5.55	132		Pn	19 44 16.5	+0.3
THIG		5.73	295	*e*P	Pn	19 44 20.1	+1.7
THIG				*e*S	Sn	19 45 22.0	-1.9
THIG				IAML		19 45 27.9	
	comp=N,584nm,0.7s						
CCIG	Comitan	6.30	307		Pn	19 44 26.8	+0.8
CCIG	Comitan	6.30	307	*e*P	Pn	19 44 27.5	+1.5
TGIG		7.36	306	*e*P	Pn	19 44 40.3	+0.4
CMIG	Matias Romero	8.96	301	P	Pn	19 45 00.7	-0.2
	comp=N,8.0nm,0.3s,baz=123,slow=12,SNR=27						
CMIG				S	Sn	19 46 33.9	-7.0
	comp=N,3.1nm,0.4s,baz=283,slow=23,SNR=2.1						
HUIG	Huatulco	9.50	291	*e*P	Pn	19 45 07.0	-1.1
TLIG	Tlapa	12.33	295		Pn	19 45 45.6	+0.6
RUSC	La Rusia	15.14	115		P	19 46 23.1	+1.4
SDV	Santo Domingo	16.38	101	P	Pn	19 46 35.8	+0.4
	comp=N,15nm,0.6s,baz=271,slow=4.5,SNR=26						
SDV	Santo Domingo	16.38	101		Pn	19 46 35.3	-0.2
SDV				IAmb	IAmb	19 46 37.4	
	comp=Z,23nm,0.8s						
TIGA	Tifton	19.07	9	P	Pn	19 47 04.7	-2.1
SJG	San Juan	20.75	72	P	P	19 47 23.1	+0.8
	comp=Z,16nm,0.5s,baz=264,slow=1.7,SNR=6.8						
	comp=Z,16nm,0.5s						
GOGA	Godfrey	21.02	8	P	P	19 47 26.2	+1.2
GOGA				IAmb	IAmb	19 47 28.4	
	comp=Z,26nm,0.8s						
Y49A	Blount Mountai	21.24	1		P	19 47 27.8	+0.4
Y49A				IAmb	IAmb	19 47 29.5	
	comp=Z,14nm,0.7s						
ATAH	Atahualpa	21.28	156	P	P	19 47 30.7	+2.2
	comp=Z,6.8nm,0.7s,baz=338,slow=5.4,SNR=6.0						
	comp=Z,6.8nm,0.7s						
Y52A	Lilburn	21.39	6	P	P	19 47 29.7	+0.7
BRDY	Brady	21.75	331		P	19 47 32.8	-0.1
FPAL	Fort Paine	21.94	3		P	19 47 34.7	0.0
SWET	Sewanee	22.60	2	P	P	19 47 41.0	0.0
SWET				IAmb	IAmb	19 47 43.6	
	comp=Z,34nm,1.3s						
W50A	Signal Mountai	22.62	3	IAmb	IAmb	19 47 43.3	
	comp=Z,18nm,0.6s						
BG3	Lake Jocassee	22.65	8	P	P	19 47 42.4	+1.0
PLPT	Palo Pinto	22.74	334		P	19 47 41.9	-0.4
PLPT				IAmb	IAmb	19 47 44.2	
	comp=Z,18nm,0.8s						
MIAR	Mount Ida	22.74	346	P	P	19 47 41.1	-1.2
TXAR	Lajitas Array	22.86	320	P	P	19 47 44.2	+0.6

	comp=Z,2.4nm,0.7s,baz=140,slow=10.0,SNR=19						
TXAR				pP	pP	19 48 17.6	+2.1
	comp=Z,1.6nm,0.8s,baz=138,slow=10,SNR=4.0						
	comp=Z,2.4nm,0.7s						
TXAR	Lajitas Array	22.86	320	P	P	19 47 43.3	-0.2
TX31	Lajitas Ar. Si	22.86	320	P	P	19 47 43.0	-0.5
CPCT	Cooper Cave	22.92	5	IAmb	IAmb	19 47 46.7	
	comp=Z,25nm,0.7s						
X58A	Rowland	22.98	16	IAmb	IAmb	19 47 45.9	
	comp=Z,23nm,0.6s						
KMSC	Kings Mountain	23.07	12	IAmb	IAmb	19 47 47.7	
	comp=Z,21nm,0.8s						
V53A	Saluda	23.33	8	IAmb	IAmb	19 47 51.1	
	comp=Z,14nm,0.8s						
MNHN	Monahans	23.76	324	IAmb	IAmb	19 47 54.0	
	comp=Z,5.9nm,0.7s						
V58A	Windy Hill, Pi	24.20	16	P	P	19 47 56.2	+0.6
WMOK	Wichita Mounta	24.60	336	P	P	19 47 58.1	-1.1
WMOK				IAmb	IAmb	19 48 02.1	
	comp=Z,9.1nm,0.8s						
R55A	Marlinton	26.35	12	P	P	19 48 15.8	+0.9
R55A				IAmb	IAmb	19 48 17.1	
	comp=Z,10nm,0.7s						
PAOC	Oil Creek Stat	29.56	11	P	P	19 48 43.0	-0.4
BRNJ	Basking Ridge	30.06	19	P	P	19 48 48.4	+0.6
LPAZ	La Paz	34.12	147	P	P	19 49 23.6	-0.5
	comp=Z,1.5nm,0.5s,baz=332,slow=9.0,SNR=7.2						
	comp=Z,1.5nm,0.5s						
LPAZ	La Paz	34.12	147	P	P	19 49 23.3	-0.8
F33A	5 Mile Ranch,	34.15	348	IAmb	IAmb	19 49 22.8	
	comp=Z,9.9nm,0.6s						
PDAR	Pinedale Array	35.97	331	P	P	19 49 39.3	0.0
	comp=Z,0.7nm,0.6s,baz=127,slow=10,SNR=8.3						
	comp=Z,0.7nm,0.6s						
NVAR	Mina Array Bea	38.00	318	P	P	19 49 57.2	+0.7
	comp=Z,0.4nm,0.5s,baz=104,slow=8.3,SNR=1.9						
	comp=Z,0.4nm,0.5s						
ULM	Lac du Bonnet	38.33	351	P	P	19 49 57.0	-1.8
	comp=Z,4.0nm,0.5s,baz=163,slow=10,SNR=6.1						
	comp=Z,4.0nm,0.5s						
SCHQ	Schefferville	45.05	16	P	P	19 50 51.9	-1.4
	comp=Z,4.0nm,0.5s,baz=217,slow=5.9,SNR=12						
	comp=Z,4.0nm,0.5s						
YKA	Yellowknife Ar	53.68	344	P	P	19 51 57.5	-1.0
	comp=Z,0.9nm,0.8s,baz=145,slow=6.8,SNR=9.0						
YKA				pP	pP	19 52 37.6	-0.3
	comp=Z,0.4nm,0.8s,baz=144,slow=6.9,SNR=2.8						
	comp=Z,0.9nm,0.8s						
PLCA	Paso Flores	55.11	165	P	P	19 52 09.6	+0.4
	comp=Z,3.4nm,0.5s,baz=335,slow=7.5,SNR=21						
PLCA				PcP	PcP	19 53 08.7	+0.4
	comp=Z,1.2nm,0.6s,baz=315,slow=5.7,SNR=4.0						
	comp=Z,3.4nm,0.5s						
PLCA	Paso Flores	55.11	165	P	P	19 52 09.9	+0.7
PLCA				IAmb	IAmb	19 52 10.9	
	comp=Z,6.6nm,1.1s						
TRQA	Tornquist	55.47	156	P	P	19 52 10.5	-1.2
TRQA				IAmb	IAmb	19 52 12.4	
	comp=Z,5.9nm,1.1s						
ILAR	Eielson Array	66.17	336	pP	pP	19 54 03.1	-1.4
	comp=Z,0.4nm,0.7s,baz=155,slow=3.9,SNR=3.3						
ESDC	Sonseca Array	76.71	52	P	P	19 54 28.4	+1.1
	comp=Z,0.8nm,0.9s,baz=277,slow=5.2,SNR=2.5						
ESDC				pP	pP	19 55 08.5	-1.2
	comp=Z,1.7nm,1.0s,baz=277,slow=7.5,SNR=4.0						
	comp=Z,0.8nm,0.9s						
HHC	Hu-ho-hao-te	124.21	343	eP	PKiKP	20 01 35.1	+1.3
NJ2	Nanjing	129.28	332	eP	PKiKP	20 01 44.5	+0.5
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
STKA	Stephens Creek	131.60	238	PKP	PKPdf	20 01 47.5	-0.2
	comp=Z,2.4nm,0.6s,baz=99,slow=2.8,SNR=11						
ASAR	Alice Springs	139.80	248	PKhKP	PKPpre	20 01 55.0	
	comp=Z,0.6nm,0.6s,baz=110,slow=3.9,SNR=12						
ASAR				PKP	PKPdf	20 02 03.5	+0.4
	comp=Z,2.4nm,0.7s,baz=103,slow=2.0,SNR=23						
WRA	Warramunga Arr	139.81	254	PKhKP	PKPpre	20 01 54.2	
	comp=Z,0.5nm,0.8s,baz=89,slow=3.6,SNR=5.1						
WRA				PKP	PKPdf	20 02 03.9	+0.7
	comp=Z,3.4nm,0.6s,baz=91,slow=2.6,SNR=31						
PZH	PanZhiHua	140.30	348	PKP	PKPdf	20 02 03.5	-0.7
CMAR	Chiang Mai Arr	148.68	349	PKPbc	PKPdf	20 02 20.5	+1.9
	comp=Z,0.3nm,0.3s,baz=32,slow=3.8,SNR=4.5						

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*HLW **15** 19:46:35.1,27°.38N×34°.53E,h19^{km}±1^{km},Md3.0,Ml3.0*
*SGS **15** 19:46:36.5,27°.49N×34°.68E,h8^{km},Ml2.9*
ISC 15 19:46:32.6±0.9,**27°.41N**±0°.03×**34°.60E**±0°.03,**h12**^{km}**,n28,**
σ**0^s.62**/30,**Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TR1	Tor 1	0.83	316	P	Pn	19 46 50.5	+0.4
MWLHS	Almuwaylih	0.88	67	P	Pn	19 46 51.3	+0.5
MWLHS	Almuwaylih	0.88	67	S	Sb	19 47 01.6	+0.2
KRABS	KRABS	0.90	40	S	Sb	19 47 02.3	+0.3
KRABS	KRABS	0.90	40	P	Pn	19 46 51.4	+0.3
RSHS		0.90	11	S	Sb	19 47 02.2	+0.1
RSHS		0.90	11	P	Pn	19 46 51.3	+0.2
HHRG	Al Ghardaqah	0.94	258	P	Pn	19 46 51.8	+0.1
HHRG				S	Sb	19 47 03.4	0.0
AYUS	`Aynunah	0.97	37	P	Pn	19 46 52.7	+0.6
AYUS	`Aynunah	0.97	37	S	Sn	19 47 04.8	-1.1
BDAS	Al Bad`	1.10	23	P	Pn	19 46 54.5	+0.6
HKAT	Jabal Katrina	1.23	334	P	Pg	19 46 56.7	+0.3
HKAT				S	Sn	19 47 12.7	+0.1
TR2	Tor 2	1.24	321	P	Pg	19 46 56.7	+0.1
WTBKS	WTBKS	1.34	60	S	Sn	19 47 14.9	-0.2
WTBKS	WTBKS	1.34	60	P	Pg	19 46 58.6	+0.3
DESA	DESA	1.39	86	P	Pg	19 46 59.6	+0.2
JLOS		1.53	31	P	Pb	19 47 01.3	+0.2
NUB	Nuweibaa	1.61	1	P	Pb	19 47 01.7	-0.6
WJHS		1.73	113	P	Pb	19 47 03.6	-0.8
HBST	Basata	1.80	4	P	Pb	19 47 04.8	-0.7
GRB	Gharib	1.82	298	P	Pn	19 47 04.2	+0.4
HQLS		1.92	12	P	Pb	19 47 06.9	-0.8
NADB	Abo Dabab	2.06	183	P	Pn	19 47 07.5	+0.4
BIDS	Bi'r al Bayda'	2.17	104	P	Pb	19 47 10.4	-1.4
EWJHS	Al Wajh	2.22	124	P	Pn	19 47 10.3	+1.0
ZAF	Zafarana	2.60	316	P	Pn	19 47 15.3	+0.8
HAGS	Hagol	3.04	173	P	Pn	19 47 21.4	+0.9
BRNS	Bernies	3.57	187	P	Pn	19 47 28.6	+0.8

REY 15 19:48:12.8,63°.88N×22°.23W,h6^{km},Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKRI	Krysuvik	0.07	93	P	Pg	19 48 14.6	+0.1
IKRI				S	Sg	19 48 16.2	+0.6
IGRV	Grindav??k	0.10	256	P	Pg	19 48 15.1	+0.1
IGRV				S	Sg	19 48 17.2	+0.7
IVOG	Vogar	0.11	321	P	Pg	19 48 15.5	+0.2
IKAS	Kald??rsel	0.22	49	P	Pg	19 48 17.3	+0.1
IKAS				S	Sg	19 48 21.3	+1.2
IRNE	Reykjanes	0.22	253	P	Pg	19 48 17.3	+0.1
IVOS	Vogsosar	0.23	97	P	Pg	19 48 17.6	+0.2
IVOS				S	Sg	19 48 20.9	+0.4
INYL	Nylenda	0.24	293	P	Pg	19 48 17.6	0.0
INYL				S	Sg	19 48 21.3	+0.5
ISAN	Sandskeio	0.34	59	P	Pg	19 48 19.3	-0.1
ISAN				S	Sg	19 48 24.7	+0.8
IBJA	Bjarnastaoir	0.42	81	P	Pg	19 48 20.6	-0.2
IBJA				S	Sg	19 48 26.4	+0.1
IEDA	Engidalur	0.42	61	P	Pg	19 48 20.6	-0.4
IEDA				S	Sg	19 48 27.1	+0.6
IMOR	Morastadir	0.47	26	P	Pg	19 48 21.2	-0.8
IMOR				S	Sg	19 48 27.6	-0.5
IKRO	Krokur	0.54	66	P	Pg	19 48 22.5	-0.7
IHEI	Heioarbar	0.54	53	P	Pg	19 48 22.5	-0.8
IHEI				S	Sg	19 48 29.6	-0.7
ISOL	Solvholt	0.57	85	P	Pg	19 48 23.1	-0.8
ISOL				S	Sg	19 48 31.3	+0.1
IASM	Asmuli	0.72	93	P	Pg	19 48 25.5	-1.1
IASM				S	Sg	19 48 35.4	-0.5
ISAU	Saurbar	0.81	81	P	Pg	19 48 27.1	-1.3
ISAU				S	Sg	19 48 38.7	-0.1
IASB	sbjarnarstai	0.96	24	P	Pg	19 48 29.1	-2.0
IASB				S	Sg	19 48 41.9	-1.7
IVES	Vestmannaeyjar	0.97	116	P	Pg	19 48 29.5	-2.0
IVES				S	Sg	19 48 42.9	-1.2
IGYG	Gygjarholskot	0.97	65	P	Pg	19 48 29.6	-1.8
IGYG				S	Sg	19 48 43.5	-0.6
IVEY	Vestmannaeyjar	0.99	117	P	Pg	19 48 30.0	-1.8
IVEY				S	Sg	19 48 43.6	-0.9
IHAU	Haukadalur	1.00	84	P	Pg	19 48 30.4	-1.7
IHAU				S	Sg	19 48 44.3	-0.8
IMID	Miomork	1.07	101	P	Pg	19 48 31.0	-2.2
IMID				S	Sg	19 48 45.8	-1.3
IMJO	Mjoaskard	1.13	86	P	Pg	19 48 32.3	-2.2
IMJO				S	Sg	19 48 48.1	-1.1
IHES	Hestalda	1.19	81	P	Pg	19 48 33.5	-2.1
IHES				S	Sg	19 48 49.8	-1.3
IESK	Eystri-Skogar	1.29	105	P	Pn	19 48 33.9	-3.5
IESK				S	Sg	19 48 51.0	-3.2
IGOD	Go??abunga	1.31	98	P	Pn	19 48 34.9	-2.8
IGOD				S	Sg	19 48 52.3	-2.7
ISLY	Slysaalda	1.38	91	P	Pn	19 48 36.1	-2.5
ISLY				S	Sb	19 48 54.1	-2.9
IAUS	Austmannsbunga	1.42	97	P	Pn	19 48 36.8	-2.4
ISTE	Stelbrattur	1.50	48	P	Pn	19 48 38.0	-2.2
ISTE				S	Sn	19 48 57.7	-2.4
IHVO	Lagu-Hvolar	1.55	102	P	Pn	19 48 38.6	-2.3
IHVO				S	Sn	19 48 58.0	-3.3
IRJU	Rjupnafell	1.60	98	P	Pn	19 48 38.6	-3.1
IRJU				S	Sn	19 48 59.6	-3.0

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*IDC **15** 19:58:34.6±0.6,33°.00N×141°.87E,h0^{km},mb4.1/21, mbtmp4.1/23,ML3.7/2,MS3.2/6,Error ellipse: s-maj=16.7km s-min=15.3km az=60.0*
*MOS **15** 19:58:35.8±1.0,32°.95N×141°.88E,h22^{km},mb4.6/17,Error ellipse: s-maj=15.4km s-min=7.5km az=114.8*
*NEIC **15** 19:58:36.2±2.1,32°.96N±0°.08×141°.82E±0°.08,h10^{km}±1^{km}, mb4.6/28,Error ellipse: s-maj=14.5km s-min=11.0km az=206.0*
*NIED **15** 19:58:37.7,33°.09N×141°.83E,h27^{km},MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.85; M$_{\theta\theta}$0.03; M$_{\phi\phi}$-0.87; M$_{r\theta}$-0.40; M$_{\theta\phi}$0.36; M$_{\phi r}$0.09; Fault plane solution: M$_0$1.02000×10^{15} NP1: φ$_s$181.00000°,δ42.00000°,λ123.00000°. NP2: φ$_s$320.00000°,δ55.00000°,λ64.00000°.*
*JMA **15** 19:58:37.7±0.3,33°.1N±0°.7×14°2E±°,h27^{km},MV3.8/27,E OFF HACHIJOJIMA ISLAND*
ISC 15 19:58:39.4±0.5,**33°.01N**±0°.06×**141°.86E**±0°.06,**h35**^{km}**,n147,**
σ**1^s.63**/143,**mb4.4**/55,**MS3.2**/5,**10C,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.72	274	Pn	Pn	19 59 06.6	-0.2
JHJ2				Sn	Sn	19 59 25.0	-2.6
JHJ2	Mitsune	1.72	274	P	Pn	19 59 06.4	-0.4
JHCJ	Hachijojimakas	1.73	273	P	Pn	19 59 06.3	-0.8
JHCJ				eS	Sn	19 59 27.6	-0.3
JHJ	Hachijo jima 2	1.75	274	Pn	Pn	19 59 06.5	-0.8
	52nm,0.3s,baz=129,slow=22,SNR=15						
JHJ				LR	LR	19 59 17.2	
	comp=Z,124nm,20.2s,baz=16,slow=25						
JHJ				Sn	Sn	19 59 23.7	-4.6
	117nm,0.3s,baz=77,slow=21,SNR=6.9						
BSO1	Boso 1	1.80	336	P	Pn	19 59 06.7	-0.7
JAOM	Aogashimamukai	1.85	253	eP	Pn	19 59 08.7	0.0
BSO3	Boso 3	2.11	328	eP	Pn	19 59 11.5	-0.5
BSO4	Boso 4	2.34	328	eP	Pn	19 59 15.5	+0.1
JIM2	Oshima 3	2.64	311	P	Pn	19 59 19.2	-0.4
JIZS	Izushimoda	3.01	305	eP	Pn	19 59 24.5	-0.1
JOD2	Odawara 2	3.21	315	eP	Pn	19 59 26.8	-0.6
JOD2				eS	Sn	20 00 03.3	-1.2
JYN	Shimob	3.70	313	P	Pn	19 59 34.1	-0.1
JRY	Ryogami san	3.87	322	P	Pn	19 59 35.9	-0.6
JAG	Ashikaga	3.94	330	P	Pn	19 59 36.4	-1.0
JAG				S	Sn	20 00 21.1	-1.4
JGF	Kuroka	4.54	306		Pn	19 59 44.9	-0.8
JGF	Kuroka	4.54	306	P	Pn	19 59 47.7	+2.1
MJAR	Matsushiro Arr	4.63	321	Pn	Pn	19 59 47.0	+0.1
	0.8nm,0.3s,baz=148,slow=11,SNR=49						
MJAR				Sn	Sn	20 00 37.6	-1.8
	0.6nm,0.3s,baz=148,slow=17,SNR=6.0						
	16nm,0.8s						
MJAR	Matsushiro Arr	4.63	321		Pn	19 59 46.8	-0.2
MAJO	Matsushiro	4.63	321		Pn	19 59 45.2	-1.8
MAJO	Matsushiro	4.63	321	P	Pn	19 59 46.8	-0.1
MAJO	Matsushiro	4.63	321	iP	Pn	19 59 47.0	+0.1
MAT	Matsushiro	4.63	321	eP	Pn	19 59 47.6	+0.7
INU	Inuyama	4.64	301		Pn	19 59 46.3	-0.8
INU	Inuyama	4.64	301	P	Pn	19 59 49.3	+2.2
JOTO	OTAMA OYAMA	4.71	345	P	Pn	19 59 47.3	-0.7
JOTO				eS	Sn	20 00 38.3	-3.0
JNS	Sasagawa	5.23	337	eP	Pn	19 59 54.7	-0.4
JSD	Sado	5.81	331		Pn	20 00 02.3	-0.9
JSD	Sado	5.81	331	P	Pn	20 00 02.2	-0.9
JCJ	Chichijima	5.90	177	Pn	Pn	19 59 52.2	-12
	18nm,0.3s,baz=264,slow=21,SNR=24						
JCJ				Sn	Sn	20 00 56.0	-15
	17nm,0.3s,baz=293,slow=21,SNR=2.1						
JCJ				LR	LR	20 02 03.5	
	comp=Z,134nm,19.8s,baz=59,slow=36						
JCJ	Chichijima	5.90	177	Pn	Pn	20 00 02.5	-1.9
JCJ	Chichijima	5.90	177	P	Pn	20 00 02.3	-2.1
JMN	Monobe	6.72	278	P	Pn	20 00 19.6	+4.0
ERM	Erimo	9.05	6	Pn	Pn	20 00 43.5	-4.0
ERM	Erimo	9.05	6	P	Pn	20 00 43.4	-4.0
ERM	Erimo	9.05	6	P	Pn	20 00 43.5	-4.0
JEM	Erimo	9.05	6	P	Pn	20 00 43.6	-3.9
JNU	Nakatsue	9.22	274	LR	LR	20 04 33.9	
	comp=Z,142nm,18.1s,baz=48,slow=39						
ASAJ	Asahikawa	11.10	3	Pn	Pn	20 01 12.6	-3.1
	1.3nm,0.3s,baz=225,slow=10,SNR=11						
ASAJ				Sn	Sn	20 03 05.2	-13
	0.2nm,0.3s,baz=88,slow=33,SNR=2.8						
	10.0nm,0.7s						
JKA	Kamikawa-asahi	11.10	3	Pn	Pn	20 01 12.1	-3.6
KSRS	Korea Array	12.23	295	Pn	Pn	20 01 33.6	+2.6
	0.2nm,0.3s,baz=106,slow=14,SNR=6.6						
JOW	Kunigami	13.29	246	LR	LR	20 06 57.8	
	comp=Z,115nm,18.2s,baz=2.5,slow=38						
NJ2	Nanjing	19.42	273	eP	P	20 03 01.8	-0.9
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HEH	HeiHe	20.27	332	eP	P	20 03 10.1	-1.7
HNS	HongShan	22.58	289	⇑P	P	20 03 35.4	-1.4
HNS				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HNS				LR	LR		
	comp=N,160nm,15.1s						
HNS				LR	LR		
	comp=E,240nm,15.1s						
HNS				LR	LR		
	comp=Z,240nm,14.9s						
XLT	XiLinHaoTe	22.84	306	eP	P	20 03 41.0	+1.5
XLT				pmax	pmax		
	comp=Z,19nm,0.9s						
XLT				pmax	pmax		
	comp=Z,71nm,4.2s						
PETK	Petropavlovsk-	23.08	25	LR	LR	20 16 00.1	
	comp=Z,40nm,18.3s,baz=130,slow=45						
ZEA	Zeya	23.19	338	eP	P	20 03 44.4	+1.5
ZEA				pmax	pmax		
	comp=E,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=N,20nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,60nm,0.7s						
ZEA				MLR	MLR		
	comp=Z,100nm,16.0s						
HILR	Hailar Array B	23.30	322	P	P	20 03 43.4	-0.7
	comp=Z,1.6nm,0.5s,baz=128,slow=12,SNR=1.4						
	comp=Z,1.6nm,0.5s						
HHC	Hu-ho-hao-te	25.36	297	eP	P	20 04 01.5	-1.8
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
H11N2	WAKE ISLAND Hy	25.96	114	T	T	20 31 25.0	
	baz=306,slow=74,SNR=4.7						
H11N1	WAKE ISLAND Hy	25.96	114	T	T	20 31 24.7	
	baz=306,slow=74,SNR=4.8						
H11N3	WAKE ISLAND Hy	25.98	114	T	T	20 31 37.3	
	baz=306,slow=74,SNR=4.4						
XAN	Xi'an	27.42	281	P	P	20 04 17.0	-4.9
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
DAV	Davao City (W)	29.91	214	LR	LR	20 15 44.6	
	comp=Z,36nm,20.9s,baz=42,slow=34						
ULN	Ulaanbaatar	30.07	310	ceP	P	20 04 46.5	+1.0
ULN				pmax	pmax		
	comp=Z,8.0nm,1.7s						
YAK	Yakutsk	30.07	349	eP	P	20 04 45.3	+0.2
YAK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.5s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.6s						
SONM	Songino Array	30.49	310	P	P	20 04 50.8	+1.7
	comp=N,2.0nm,0.8s,baz=116,slow=9.5,SNR=4.1						
	comp=N,2.0nm,0.8s						
SONM	Songino Array	30.49	310	P	P	20 04 51.0	+1.9
SONM	Songino Array	30.49	310	P	P	20 04 51.0	+1.9
SONM				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SEY	Seymchan	30.68	9	iP	P	20 04 51.6	+1.2
SEY				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GTA	Gaotai	34.28	293	eP	P	20 05 22.8	+0.3
GTA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PZH	PanZhiHua	35.27	270	P	P	20 05 32.4	+1.3
BILL	Bilibino	37.80	15	iP	P	20 05 52.9	+0.9
BILL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GOMU	GeErMu	38.56	288	P	P	20 05 57.9	-1.4
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TIXI	Tiksi	39.32	354	iP	P	20 06 04.7	0.0
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR	Chiang Mai Arr	41.00	260	P	P	20 06 18.8	-0.6
	comp=Z,0.3nm,0.3s,baz=44,slow=9.2,SNR=4.1						
CMAR				LR	LR	20 24 35.7	
	comp=Z,34nm,18.2s,baz=290,slow=38						
	comp=Z,0.3nm,0.3s						
CMAR	Chiang Mai Arr	41.00	260	ceP	P	20 06 20.7	+1.4
WMQ	Urumqi	43.10	301	eP	P	20 06 40.8	+4.6
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ZALV	Zalesovo Beam	44.96	315	P	P	20 06 50.5	-0.5
	comp=Z,1.0nm,0.8s,baz=107,slow=5.0,SNR=5.2						
	comp=Z,1.0nm,0.8s						
ZALV	Zalesovo Beam	44.96	315	iP	P	20 06 52.4	+1.5
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MK31	Makanchi Array	46.66	305	ceP	P	20 07 05.6	+1.1
MKAR	Makanchi Array	46.66	305	P	P	20 07 04.9	+0.5
	comp=Z,1.5nm,0.6s,baz=89,slow=9.4,SNR=17						
	comp=Z,1.5nm,0.6s						
MKAR	Makanchi Array	46.66	305		P	20 07 04.6	+0.2
MAKZ	Makanchi	46.87	305		P	20 07 05.9	-0.2
MAKZ				IAmb	IAmb	20 07 36.7	
	comp=Z,5.9nm,1.4s						
MAKZ	Makanchi	46.87	305	P	P	20 07 05.9	-0.2
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.4s						
C19K	Lookout Ridge	48.44	24	P	P	20 07 19.5	+1.5
C19K				IAmb	IAmb	20 07 21.1	
	comp=Z,9.0nm,1.1s						
KURK	Kurchatov	48.77	311		P	20 07 19.8	-1.0
KURK				IAmb	IAmb	20 07 22.4	
	comp=Z,4.5nm,0.8s						
KURK	Kurchatov	48.77	311	iP	P	20 07 21.0	+0.3
KURK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KURBB	Kurchatov Arra	48.84	311	P	P	20 07 21.5	+0.3
	comp=Z,2.7nm,0.8s,baz=85,slow=7.9,SNR=26						
	comp=Z,2.7nm,0.8s						
B20K	Meade River	49.51	23	P	P	20 07 27.7	+1.6
ILSW	Iliamna Southw	49.66	37	P	P	20 07 27.3	-0.3
IMAR	Indian Mountai	49.96	29	P	P	20 07 29.8	+0.2
B21K	Ikpikpuk River	50.28	24	IAmb	IAmb	20 07 34.7	
	comp=Z,6.2nm,0.8s						
D22K	Ayikyak River	50.81	25	IAmb	IAmb	20 07 38.9	
	comp=Z,4.6nm,0.8s						
E22K	Anaktuvuk Pass	51.02	26		P	20 07 38.7	+1.1
E22K				IAmb	IAmb	20 07 40.3	
	comp=Z,5.3nm,0.8s						
C23K	Itkillik River	51.69	24	IAmb	IAmb	20 07 45.2	
	comp=Z,12nm,1.1s						
D24K	Happy Valley	52.23	25	IAmb	IAmb	20 07 49.8	
	comp=Z,8.7nm,1.1s						
KSH	Kashi	52.47	297	P	P	20 07 53.3	+4.3
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SCM	Sheep Creek Mo	52.53	34	P	P	20 07 47.8	-1.2
SCM	Sheep Creek Mo	52.53	34	P	P	20 07 47.8	-1.2
SCM				pmax	pmax		
	comp=Z,34nm,1.4s						
IL31		52.73	31		P	20 07 49.6	-0.6
ILAR	Eielson Array	52.73	31	P	P	20 07 51.0	+0.7
	comp=Z,2.9nm,1.0s,baz=265,slow=6.1,SNR=19						
	comp=Z,2.9nm,1.0s						
ILAR	Eielson Array	52.73	31	P	P	20 07 49.5	-0.8
WB0	Warramunga Arr	52.96	189		P	20 07 51.4	-1.1
WB0				IAmb	IAmb	20 07 53.5	
	comp=Z,5.4nm,0.7s						
WRAB	Tennant Creek	53.13	189	P	P	20 07 53.1	-0.7
WRAB				IAmb	IAmb	20 07 54.8	
	comp=Z,5.6nm,0.9s						
WRAB	Tennant Creek	53.13	189	ceP	P	20 07 53.4	-0.4
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WR8	Warramunga Arr	53.13	189	P	P	20 07 52.5	-1.3
WR8				IAmb	IAmb	20 07 54.8	
	comp=Z,5.1nm,0.7s						
WRA	Warramunga Arr	53.14	189	P	P	20 07 54.1	+0.2
	comp=Z,5.3nm,0.7s,baz=7.1,slow=7.6,SNR=21						
	comp=Z,5.3nm,0.7s						
E25K	Arctic Village	53.34	26	P	P	20 07 55.9	+1.1
BVAR	Borovoye Array	53.60	315	P	P	20 07 57.9	+0.9
	comp=Z,1.9nm,0.9s,baz=90,slow=7.4,SNR=7.6						
	comp=Z,1.9nm,0.9s						
BORK	Borovoye	53.64	315	ceP	P	20 07 57.3	+0.1
BORK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BMAR	Burnt Mountain	53.70	27	P	P	20 07 56.6	-0.9
KKAR	Karatay Array	55.53	303	P	P	20 08 12.0	+0.9
KKAR	Karatay Array	55.53	303	P	P	20 08 12.0	+0.9
EPYK	Eagle Plains	56.86	28		P	20 08 21.8	+1.6
AS31	Alice Springs	56.87	189		P	20 08 20.4	-0.3
ASAR	Alice Springs	56.87	189	P	P	20 08 20.9	+0.2
	comp=Z,0.9nm,0.5s,baz=20,slow=13,SNR=6.1						
	comp=Z,0.9nm,0.5s						
ASAR	Alice Springs	56.87	189	P	P	20 08 18.5	-2.3
ASAR	Alice Springs	56.87	189	P	P	20 08 21.0	+0.2
G30M	tAoh Zraii Nji	56.98	28	P	P	20 08 22.5	+1.4
G30M				IAmb	IAmb	20 08 23.5	
	comp=Z,10.0nm,1.3s						
I30M	Mount Dempster	57.15	30	IAmb	IAmb	20 08 25.7	
	comp=Z,4.5nm,0.9s						
CHGR	Chuyangaron	57.80	298	P	P	20 08 26.2	-1.2
CHGR	Chuyangaron	57.80	298	P	P	20 08 26.2	-1.2
CHGR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ARTI	Arti	59.75	320		P	20 08 39.9	-0.7
ARTI	Arti	59.75	320	c iP	P	20 08 40.9	+0.3
ARTI				S	S	20 16 52.8	+3.8
ARTI				SS	SS	20 20 41.7	-3.0
ARTI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AB31	Akbulak array	60.85	312	P	P	20 08 46.9	-1.3
C36M	Paulatuk	60.94	24	P	P	20 08 48.9	+0.5
STKA	Stephens Creek	64.54	180	P	P	20 09 13.0	+0.2
	comp=Z,1.2nm,0.7s,baz=321,slow=12,SNR=3.6						
	comp=Z,1.2nm,0.7s						
STKA	Stephens Creek	64.54	180	P	P	20 09 13.0	+0.2
YKA	Yellowknife Ar	67.11	29	P	P	20 09 28.9	-0.1
	comp=Z,1.0nm,0.8s,baz=297,slow=7.0,SNR=8.7						
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	67.11	29	ceP	P	20 09 30.0	+0.9
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FINES	FINESS Array B	72.55	333	P	P	20 10 02.5	0.0
	comp=Z,3.0nm,0.9s,baz=33,slow=7.3,SNR=6.0						
	comp=Z,3.0nm,0.9s						
FINES	FINESS Array B	72.55	333	iP	P	20 10 04.5	+2.0
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KBZ	Khabaz	73.82	312	P	P	20 10 10.5	+0.2
	comp=Z,3.7nm,0.8s,baz=119,slow=2.7,SNR=7.6						
	comp=Z,3.7nm,0.8s						
KBZ	Khabaz	73.82	312	ceP	P	20 10 11.3	+0.9
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIV	Kislovodsk	73.84	312	eP	P	20 10 09.4	-1.2
KIV				pmax	pmax		

	comp=Z,8.0nm,1.0s						
GUZR	Guzeripl'	75.41	313	iP	P	20 10 20.7	+1.0
LRM	Limekiln Ridge	76.78	44	P	P	20 10 28.8	+1.1
NVAR	Mina Array Bea	77.12	53	P	P	20 10 30.1	+0.4
	comp=Z,0.9nm,0.7s,baz=308,slow=8.4,SNR=3.9						
	comp=Z,0.9nm,0.7s						
AKASG	Malin Array Be	77.71	323	P	P	20 10 32.4	-0.1
	comp=Z,0.6nm,0.5s,baz=45,slow=5.7,SNR=2.5						
	comp=Z,0.6nm,0.5s						
HFS	Hagfors	77.90	336	P	P	20 10 34.6	+1.3
	comp=Z,5.2nm,1.0s,baz=51,slow=11,SNR=1.9						
	comp=Z,5.2nm,1.0s						
NB2	NORSAR Subarra	78.04	338	P	P	20 10 34.6	+0.4
	comp=Z,3.5nm,0.9s,baz=41,slow=5.6						
NOA	NORSAR Array B	78.04	338	P	P	20 10 35.0	+0.8
	comp=Z,1.8nm,0.8s,baz=39,slow=5.6,SNR=6.4						
	comp=Z,1.8nm,0.8s						
NOA	NORSAR Array B	78.04	338	P	P	20 10 35.0	+0.8
DUG	Dugway, Tooele	79.72	49		P	20 10 44.3	+0.4
DUG				IAmb	IAmb	20 10 47.6	
	comp=Z,6.3nm,1.2s						
DUG	Dugway, Tooele	79.72	49	P	P	20 10 44.3	+0.4
DUG				pmax	pmax		
	comp=Z,6.0nm,1.3s						
PDAR	Pinedale Array	80.23	45	P	P	20 10 48.1	+1.3
	comp=Z,0.5nm,0.8s,baz=243,slow=6.5,SNR=3.9						
	comp=Z,0.5nm,0.8s						
BRTR	Keskin Array B	81.81	312	P	P	20 10 56.4	+1.3
	comp=Z,1.8nm,0.8s,baz=86,slow=4.6,SNR=11						
	comp=Z,1.8nm,0.8s						
BRTR	Keskin Array B	81.81	312	P	P	20 10 55.4	+0.3
BRTR	Keskin Array B	81.81	312	ceP	P	20 10 56.7	+1.6
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CLL	Collm	84.77	331	iP	P	20 11 09.9	0.0
CLL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CLL	Collm	84.77	331	iP	P	20 11 09.9	0.0
	comp=Z,5.0nm,1.0s						
TXAR	Lajitas Array	92.27	53	P	P	20 11 47.5	+1.3
	comp=Z,0.6nm,0.7s,baz=298,slow=1.9,SNR=7.7						
	comp=Z,0.6nm,0.7s						
KMBO	Kilima Mbogo	102.85	277	iP	Pdif	20 12 31.2	-3.3
KMBO				pmax	pmax		
	comp=Z,39nm,0.4s						
LPAZ	La Paz	148.21	66	PKPbc	PKPbc	20 18 23.9	+0.9
	comp=Z,2.2nm,0.6s,baz=20,slow=5.0,SNR=11						
LPAZ	La Paz	148.21	66		PKiKP	20 18 24.9	+0.2
LPAZ	La Paz	148.21	66	PKP2	PKiKP	20 18 24.9	+0.2

*IDC **15** 20:07:45.0±6.7, 24°.00S×179°.57W, h460^{km}±62^{km}, mb3.1/5, mbtmp4.1/7, Error ellipse: s-maj=58.0km s-min=22.3km az=48.0*

ISC 15 20:07:49.1±1.6, **24°.2S**±0°.1×**179°.8W**±0°.2, **h500**^{km}**, n9,** σ**1^{s}.10**/10**, mb3.7**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.83	277	P	P	20 10 36.0	-0.7
	3.8nm,0.7s,baz=87,slow=17,SNR=2.9						
URZ	Urewera	14.23	190	P	P	20 10 50.3	-0.7
	3.2nm,0.3s,baz=18,slow=19,SNR=8.3						
URZ				S	S	20 13 20.2	-0.9
	7.0nm,1.0s,baz=235,slow=9.4,SNR=1.7						
STKA	Stephens Creek	34.77	249	P	P	20 13 57.9	+0.8
	1.4nm,0.6s,baz=99,slow=9.6,SNR=5.6						
	1.4nm,0.6s						
ASAR	Alice Springs	42.16	261	P	P	20 14 58.0	+0.5
	0.4nm,0.4s,baz=95,slow=6.7,SNR=16						
	0.4nm,0.4s						
WRA	Warramunga Arr	42.56	266	P	P	20 15 00.7	0.0
	1.5nm,0.5s,baz=98,slow=8.3,SNR=46						
	1.5nm,0.5s						
VNDA	Vanda	54.07	185	P	P	20 16 27.3	+1.7
	1.0nm,1.0s,baz=39,slow=7.9,SNR=1.4						
	1.0nm,1.0s						
QSPA	South Pole Qui	65.86	180	P	P	20 17 44.4	0.0
	0.9nm,0.2s,baz=45,slow=2.1,SNR=4.9						
	0.9nm,0.2s						
HFS	Hagfors	142.90	349	PKP	PKPdf	20 26 23.1	-1.7
	4.0nm,1.0s,baz=50,slow=2.5,SNR=1.8						
BRTR	Keskin Array B	147.91	307	PKPbc	PKPbc	20 26 38.3	+0.3
	0.4nm,0.8s,baz=110,slow=6.2,SNR=1.8						

*NNC **15** 20:17:46.4±0.5, 44°.17N×78°.56E, h13^{km}±4^{km}, mb4.4, mpv4.2, Error ellipse: s-maj=3.8km s-min=3.2km az=176.0*

*SOME **15** 20:17:47.9, 44°.17N×78°.45E, h20^{km}, MS2.5*

ISC 15 20:17:47.3±1.0, **44°.21N**±0°.02×**78°.56E**±0°.02, **h19**^{km}±3^{km}, **n69,** σ**1^{s}.77**/106**, 12C-12D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLB	Baldybastay	0.13	208	P	Pg	20 17 52.0	+0.5
	12μm,0.1s						
BLB				S	Sg	20 17 55.1	+0.8
	27μm,0.1s						
KNOS	Konyrlen	0.47	71	P	Pg	20 17 57.5	+0.6
	590nm,0.3s						
KNOS				S	Sg	20 18 04.4	+1.0
	3.1nm,0.1s						
ARXS	Arharly	0.53	271	P	Pg	20 17 57.7	-0.3
	2μm,0.2s						
ARXS				S	Sg	20 18 04.9	-0.2
	5μm,0.2s						
ARXS	Arharly	0.53	271	eP	Pg	20 17 57.6	-0.3
	2μm,0.1s						
ARXS				eS	Sg	20 18 04.8	-0.3
	5μm,0.1s						
KPKS	Kokpek	0.75	173	P	Pb	20 18 01.2	-0.5
	0.9nm,0.2s						
KPKS				S	Sb	20 18 11.0	-0.7
	2μm,0.2s						
KURS	Kuram	0.77	201	P	Pb	20 18 01.9	-0.3
	277nm,0.2s						
KURS				S	Sb	20 18 12.0	-0.4
	674nm,0.5s						
TDK	Taldyqorghan	0.80	352	P	Pb	20 18 02.9	+0.3
	2μm,0.2s						
TDK				S	Sb	20 18 13.9	+0.7
	3.2nm,0.3s						
TDK	Taldyqorghan	0.80	352	eP	Pb	20 18 03.0	+0.3
	2μm,0.2s						
TDK				eS	Sb	20 18 13.8	+0.7
	896nm,0.2s						
PDGK	Podgornoye	1.11	142	⇑P	Pn	20 18 07.6	-0.4
	169nm,0.3s						
PDGK				⇓S	Sb	20 18 22.0	0.0
	590nm,0.5s						
UZB	Uzynbulak	1.11	162	P	Pb	20 18 07.7	-0.3
	538nm,0.2s						
UZB				S	Sb	20 18 22.1	-0.1
	451nm,0.3s						
UZB	Uzynbulak	1.11	162	eP	Pb	20 18 07.7	-0.3
	538nm,0.2s						
UZB				eS	Sb	20 18 21.9	-0.3
	451nm,0.3s						
SATY	Saty	1.15	186	P	Pn	20 18 08.3	-0.3
	482nm,0.1s						
SATY				S	Sb	20 18 22.9	-0.5
	1μm,0.1s						
CHKK	Chushkaly	1.19	253	P	Pn	20 18 08.4	-0.6
	187nm,0.3s						
CHKK				S	Sb	20 18 23.1	-1.1
	906nm,0.2s						
CHKK	Chushkaly	1.19	253	eP	Pn	20 18 08.3	-0.6
	185nm,0.3s						
CHKK				eS	Sb	20 18 23.1	-1.1
	906nm,0.2s						
KAPS	Kapalarasan	1.22	28	P	Pn	20 18 10.6	+1.2
	69nm,0.1s						
KAPS				S	Sn	20 18 27.1	+1.6
	2μm,0.1s						
SHLS	Shalkode	1.24	148	P	Pg	20 18 13.0	+1.7
	194nm,0.1s						
SHLS				S	Sg	20 18 30.9	+3.4
	1μm,0.3s						
SHLS	Shalkode	1.24	148	eP	Pg	20 18 13.0	+1.7
	194nm,0.1s						
SHLS				eS	Sg	20 18 30.9	+3.4
	1μm,0.3s						
KOTS	Kotyrbulak	1.43	228	P	Pn	20 18 12.8	+0.3
	92nm,0.3s						
KOTS				S	Sn	20 18 30.7	-0.1
	1μm,0.3s						
KOTS	Kotyrbulak	1.43	228	eP	Pn	20 18 12.7	+0.3
	90nm,0.3s						
KOTS				eS	Sn	20 18 30.4	-0.4
	2μm,0.5s						
KTBS	Karatobe	1.44	251	P	Pn	20 18 12.7	+0.2
	195nm,0.4s						
KTBS				S	Sn	20 18 30.7	-0.3
	0.5nm,0.2s						
KTMS	Ketmen	1.50	120	P	Pn	20 18 10.4	-3.0
	11nm,0.1s						
KTMS				S	Sn	20 18 26.7	-5.9
	2μm,0.3s						
KTMS	Ketmen	1.50	120	eP	Pn	20 18 13.0	-0.5
	32nm,0.2s						
KTMS				eS	Sn	20 18 30.8	-1.9
	2μm,0.2s						
MDOK	Medeo	1.51	227	Pg	Pn	20 18 14.1	+0.5
	90nm,0.3s						
MDOK				Lg	Lg	20 18 32.8	
	390nm,0.1s						
KNDC	Almaty	1.52	230	⇑P	Pn	20 18 14.1	+0.5
	134nm,0.5s						
KNDC				⇓S	Sb	20 18 34.9	+1.0
	484nm,0.7s						
AAA	Alma-Ata	1.56	231	P	Pn	20 18 15.0	+1.0
	150nm,0.1s						
AAA				S	Sb	20 18 34.5	-0.4
	59nm,0.2s						
AAA	Alma-Ata	1.56	231	eP	Pn	20 18 15.1	+1.0
	150nm,0.2s						
AAA				eS	Sb	20 18 34.5	-0.4
	63nm,0.2s						
KUU	Kurty	1.63	260	P	Pn	20 18 15.6	+0.6
	84nm,0.2s						
KUU				S	Sn	20 18 35.5	-0.1
	543nm,0.3s						
KUU	Kurty	1.63	260	eP	Pn	20 18 15.7	+0.6
	85nm,0.2s						
KUU				eS	Sn	20 18 35.5	-0.1
	543nm,0.3s						
TNSS	Tian-Shan	1.66	226	P	Pn	20 18 16.4	+0.7
	42nm,0.4s						
TNSS				S	Sn	20 18 36.9	+0.2
	146nm,0.3s						
TNSS	Tian-Shan	1.66	226	eP	Pn	20 18 16.5	+0.7
	18nm,0.2s						
TNSS				eS	Sn	20 18 36.9	+0.2
	146nm,0.2s						
IZV	Izvestkoviy	1.84	231	P	Pn	20 18 15.7	-2.3
	88nm,0.5s						
IZV				S	Sn	20 18 35.6	-5.2
	637nm,0.5s						
IZV	Izvestkoviy	1.84	231	eP	Pn	20 18 18.5	+0.4
	143nm,0.4s						
IZV				eS	Sn	20 18 40.2	-0.6
	658nm,0.4s						
MTBS	Maitube	1.88	236	P	Pn	20 18 20.2	+1.5
	254nm,0.3s						
MTBS				S	Sb	20 18 43.2	-1.2
	2μm,0.4s						
MTBS	Maitube	1.88	236	eP	Pn	20 18 20.1	+1.5
	252nm,0.3s						
MTBS				eS	Sb	20 18 43.2	-1.2
	2μm,0.3s						
KRBS	Karabastau	2.15	257	P	Pn	20 18 24.1	+1.9
	104nm,0.4s						
KRBS				S	Sn	20 18 49.9	+1.6
	63nm,0.2s						
KST	Kastek	2.22	239	Pg	Pb	20 18 25.4	-1.4
	44nm,0.3s						
KST				Lg	Lg	20 18 52.2	
	424nm,0.4s						
KST	Kastek	2.22	239	eP	Pb	20 18 25.4	-1.4
	44nm,0.3s						
KST				eS	Sb	20 18 52.3	-1.7
	424nm,0.5s						
DGS	Degeres	2.24	245	Pg	Pb	20 18 25.9	-1.4
	47nm,0.3s						
DGS				Lg	Lg	20 18 53.0	
	444nm,0.3s						
TKM2	Tokmak 2	2.51	240	P	Pb	20 18 30.4	-1.4
	SNR=68						
ULHL	Ulahol	2.59	222	P	Pn	20 18 31.0	+2.5
	SNR=75						
SGDS	Sogindy	2.94	256	Pg	Pb	20 18 39.3	+0.1
	50nm,0.4s						
SGDS				Lg	Lg	20 19 16.0	
	80nm,0.3s						
CHMS	Chumysh	3.02	248	P	Pn	20 18 35.4	+1.2
	SNR=6.5						
KBK	Karagaybulak	3.05	241	P	Pn	20 18 36.6	+1.8
	SNR=40						
USP	Ospenovka	3.09	254	P	Pn	20 18 36.1	+0.9
	SNR=26						
BTLS	Baital	3.33	286	Pg	Pb	20 18 45.1	-0.6
	20nm,0.3s						
BTLS				Lg	Lg	20 19 26.1	
	43nm,0.4s						
BTLS	Baital	3.33	286	eP	Pb	20 18 45.0	-0.6
	20nm,0.2s						
BTLS				eS	Sb	20 19 25.8	0.0
	60nm,0.3s						
AAK	Ala-Archa	3.35	243	P	Pn	20 18 40.6	+1.8
	SNR=6.5						
AAK	Ala-Archa	3.35	243	⇓Pg	Pb	20 18 47.1	+0.8
	130nm,0.4s						
AAK				⇓Lg	Lg	20 19 31.8	
	265nm,0.5s						
MAKZ	Makanchi	3.54	42	⇓Pn	Pn	20 18 42.4	+1.1
	2.0nm,0.3s						
MAKZ				⇓Pg	Pb	20 18 51.5	+2.1
	6.7nm,0.5s						
MAKZ				⇑Lg	Lg	20 19 36.4	
	46nm,0.5s						
UCH	Uchtor	3.56	238	P	Pn	20 18 44.5	+2.6
	SNR=5.4						
MK31	Makanchi Array	3.68	44	Pn	Pn	20 18 45.1	+1.8
	1.6nm,0.4s,baz=217,slow=16,SNR=467						
MK31				⇑Pg	Pb	20 18 53.6	+1.8
	3.2nm,0.2s,baz=219,slow=15,SNR=8.8						
MK31				⇓Lg	Lg	20 19 42.4	
	53nm,0.5s,baz=222,slow=26,SNR=16						
EKS2	Erkin-Say	3.81	248	P	Pb	20 18 56.0	+2.0
	SNR=15						
MRKS	Merke	4.15	251	Pg	Pb	20 19 02.4	+2.6
	17nm,0.5s						
MRKS				Lg	Lg	20 19 55.7	
	58nm,0.4s						
MRKS	Merke	4.15	251	eP	Pb	20 19 02.0	+2.3
	16nm,0.5s						
MRKS				eS	Sb	20 19 54.9	+5.3
	58nm,0.4s						
KSH	Kashi	5.07	203	Pn	Pb	20 19 15.3	-0.2
KSH				Sn	Sb	20 20 22.8	+6.7
KSH				smax	smax		
	comp=N,25nm,0.8s						
KSH				smax	smax		
	comp=E,34nm,0.8s						
ZSN	Zaisan	5.47	51	Pg	Pb	20 19 28.3	+6.0
	comp=E,3.1nm,0.4s						
ZSN				Lg	Lg	20 20 39.8	
	comp=E,26nm,0.8s						
ZSN	Zaisan	5.47	51	eP	Pb	20 19 28.3	+6.0
	comp=E,6.9nm,0.4s						
ZSN				eS	Sg	20 20 39.8	-3.0
	comp=E,41nm,0.7s						
KK31	Karatay Array	5.94	262	⇑Pn	Pn	20 19 14.1	-0.2
	comp=E,0.3nm,0.2s,baz=0.0,slow=0.1,SNR=6.8						
KK31				⇓Pg	Pb	20 19 34.9	+4.6
	comp=E,6.9nm,0.5s,baz=72,slow=14,SNR=24						
KK31				⇑Lg	Lg	20 20 54.9	
	comp=E,10nm,0.4s,baz=76,slow=28,SNR=13						
SEM	Semipalatinsk	6.31	10	Pg	Pg	20 19 44.6	-3.4
	comp=E,2.2nm,0.1s						
SEM				Lg	Lg	20 21 08.0	
	comp=E,29nm,0.4s						
SEM	Semipalatinsk	6.31	10	eP	Pg	20 19 45.5	-2.5
	comp=E,2.0nm,0.2s						
SEM				eS	Sg	20 21 09.3	-0.3
	comp=E,30nm,0.6s						
KURBB	Kurchatov Arra	6.42	360	⇑Pn	Pn	20 19 22.7	+1.9
	comp=E,0.9nm,0.3s						
KURBB				⇓Pg	Pb	20 19 44.1	+5.8
	comp=E,4.3nm,0.6s						
KURBB				⇑Lg	Lg	20 21 09.5	
	comp=E,98nm,0.7s						
BRLS	Borolday	6.44	262	Pg	Pg	20 19 45.6	-4.9
	comp=E,3.9nm,0.5s						
BRLS				Lg	Lg	20 21 09.8	
	comp=E,13nm,0.8s						
BRLS	Borolday	6.44	262	eP	Pg	20 19 47.9	-2.7
	comp=E,3.9nm,0.5s						
BRLS				eS	Sg	20 21 13.6	-0.3
	comp=E,12nm,0.7s						
KURK	Kurchatov	6.51	0	⇑Pn	Pn	20 19 22.9	+0.8
	comp=E,0.3nm,0.4s						
KURK				⇓Pg	Pb	20 19 45.1	+5.2
	comp=E,1.6nm,0.7s						
KURK				⇓Lg	Lg	20 21 13.7	
	comp=E,32nm,0.7s						
IUG	Iuzhnay	6.57	255	Pg	Pb	20 19 45.9	+5.0
	comp=E,7.0nm,0.4s						
IUG				Lg	Lg	20 21 10.3	
	comp=E,45nm,0.6s						
WMQ	Urumqi	6.60	90	ePn	Pn	20 19 28.5	+5.1
WMQ				smax	smax		
	comp=N,28nm,0.9s						
WMQ				smax	smax		
	comp=E,17nm,1.3s						
BRZS	Berezniki	7.03	327	Pg	Pg	20 19 57.5	-4.3
	comp=E,0.9nm,0.2s						
BRZS				Lg	Lg	20 21 30.1	
	comp=E,19nm,0.7s						
BVA0	Borovoye Array	10.34	331	⇑Pn	Pn	20 20 13.6	-1.0
	comp=E,2.2nm,1.1s,baz=143,slow=13,SNR=9.4						
BVA0				⇓Lg	Lg	20 23 15.1	
	comp=E,16nm,1.4s,baz=144,slow=28,SNR=6.2						
BRVK	Borovoye	10.40	331	⇑Pn	Pn	20 20 14.4	-1.0
	comp=E,0.9nm,0.7s						
BRVK				⇑Lg	Lg	20 23 17.5	

*IDC **15** 20:26:42.3±1.5, 44°.50N×105°.74W, h0^{km}, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=63.6km s-min=9.7km az=144.0*

*NEIC **15** 20:26:44.4±0.7, 44°.43N±0°.06×105°.47W±0°.03, h0^{km}±2^{km}, ML2.7/18, Error ellipse: s-maj=10.0km s-min=3.1km az=12.0*

ISC 15 20:26:42.9±1.1, **44°.48N**±0°.06×**105°.53W**±0°.06, **h0**^{km}**, n13,** σ**1^{s}.85**/13**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.13	108		Pb	20 27 04.8	-0.7
K22A	Casper	1.96	202		Pb	20 27 18.4	-1.2
K22A				IAML		20 27 49.6	
	75nm,0.3s						
LAO	LASA Array	2.26	348		Pb	20 27 23.9	-0.8
LAO				IAML		20 28 22.6	
	59nm,4.3s						
RLMT	Red Lodge	2.73	285		Pn	20 27 30.1	+1.8
RLMT				IAML		20 28 17.9	
	20nm,2.2s						
YNE	Yellowstone No	3.23	281		Pn	20 27 37.1	+1.9
YNE				IAML		20 28 32.9	
	comp=E,20nm,0.5s						
YNE				IAML		20 28 37.2	
	comp=N,17nm,0.9s						
YMP	Mirror Lake Pl	3.31	276		Pn	20 27 38.3	+2.0
BW06	Boulder Array	3.39	241		Pn	20 27 39.5	+2.3
BW06				IAML		20 28 42.2	
	comp=N,12nm,3.1s						
PD31	Pinedale Array	3.39	241		Pn	20 27 39.2	+1.9
PDAR	Pinedale Array	3.39	241	Pn	Pn	20 27 38.9	+1.6
	comp=N,0.4nm,0.3s,baz=61,slow=14,SNR=17						
PDAR				Pg	Pb	20 27 43.5	-0.4
	comp=N,1.3nm,0.3s,baz=62,slow=19,SNR=17						
PDAR				Lg	Lg	20 28 25.4	
	comp=N,2.7nm,0.3s,baz=60,slow=30,SNR=7.4						
	comp=N,0.9nm,0.5s						
PDAR	Pinedale Array	3.39	241	Pn	Pn	20 27 38.1	+0.9
LOHW	Long Hollow	3.76	258		Pb	20 27 47.6	-2.7
LOHW				IAML		20 28 44.2	
	comp=N,13nm,4.6s						
LOHW				IAML		20 30 04.8	
	comp=N,16nm,4.9s						
I10CA	LAC DU BONNET	8.62	45	I	I	21 19 40.0	
	baz=227,slow=284,SNR=1.7						
ULM	Lac du Bonnet	8.73	45	Pn	Pn	20 28 49.4	-1.0
	comp=N,0.3nm,0.3s,baz=221,slow=11,SNR=1.9						
ULM				Lg	Lg	20 31 14.5	
	comp=N,0.2nm,0.3s,baz=15,slow=21,SNR=1.3						
	comp=N,1.2nm,0.5s						

*DJA **15** 20:38:00.4±0.5, 3°N±3°×12°8E±°, h10^{km}, M4.5/12, mb4.7/9, mB5.0/6, MLv4.4/12, Mw(mB)4.3/6*

*IDC **15** 20:38:05.3±2.6, 2°.96N×128°.37E, h74^{km}±24^{km}, mb3.8/14, mbtmp4.1/16, MS3.0/5, Error ellipse: s-maj=25.2km s-min=11.5km az=79.0*

*NEIC **15** 20:38:06.6±1.5, 2°.8N±0°.1×128°.2E±0°.1, h83^{km}±11^{km}, mb4.3/13, Error ellipse: s-maj=20.7km s-min=16.2km az=86.0*

ISC 15 20:38:01.6±0.5, **3°.13N**±0°.05×**128°.43E**±0°.07, **h35**^{km}**, n69,** σ**2^{s}.11**/65**, mb4.2**/23**, MS3.0**/3**, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.57	204		Pn	20 38 41.3	+0.6
TNTI	Ternate	2.57	204	P	Pn	20 38 42.1	+1.3
TNTI	Ternate	2.57	204	P	Pn	20 38 41.8	+1.0
SGSI	Sangihe	2.94	281	P	Pn	20 38 46.6	+0.7
SGSI				S	Sn	20 39 21.2	+1.1
DAV	Davao City (W)	4.83	324	LR	LR	20 40 43.4	
	comp=Z,58nm,19.1s,baz=160,slow=32						
SWI	Sorong	4.87	144	P	Pn	20 39 14.6	+2.1
SANI	Sanana	5.69	205	P	Pn	20 39 24.2	+0.5
SANI	Sanana	5.69	205	P	Pn	20 39 23.9	+0.2
	0.1nm29nm,0.6s						
SANI				S	Sn	20 40 32.9	+5.0
	0.1nm29nm,0.6s						
GTOI	Gorontalo	5.95	246	P	Pn	20 39 28.3	+1.0
	0.3nm904nm49nm,0.6s						
NLAI	Namlea	6.46	192	P	Pn	20 39 37.6	+3.3
	0.1nm24nm,0.8s						
NLAI				S	Sn	20 40 52.6	+5.7
	0.1nm24nm,0.8s						
MRSI	Marisa	7.00	248	P	Pn	20 39 42.5	+0.9
LUWI	Luwuk	7.01	234		Pn	20 39 43.2	+1.4
LUWI	Luwuk	7.01	234	P	Pn	20 39 44.0	+2.2
LUWI	Luwuk	7.01	234	P	Pn	20 39 43.2	+1.4
	0.3nm1μm57nm,0.4s						
LUWI				S	Sn	20 41 04.5	+4.2
	0.3nm1μm57nm,0.4s						
FAKI	Fak Fak	7.12	147	P	Pn	20 39 45.8	+2.4
APSI	Ampana	7.87	239	P	Pn	20 39 54.7	+1.0
	0.2nm924nm57nm,0.7s						
TOLI2	Tolitoli	7.90	255		Pn	20 39 53.3	-0.7
TOLI2	Tolitoli	7.90	255	P	Pn	20 39 53.5	-0.5
MPSI	Mapaga	8.96	252	P	Pn	20 40 09.5	+0.9
	27nm,0.8s						
TTSI	Tana Toraja	10.56	235	P	Pn	20 40 29.8	-0.8
	24nm,0.6s						
SPSI	Sidrap Palu	11.16	231	P	Pn	20 40 39.0	+0.3
KAPI	Kappang	11.85	227	P	Pn	20 40 48.9	+0.6
	5.6nm,0.4s,baz=43,slow=4.9,SNR=4.1						
BATI	Baumata	14.07	200	P	Pn	20 41 19.0	+0.4
	3.9nm,0.4s,baz=333,slow=4.5,SNR=1.5						
BATI				LR	LR	20 47 42.9	
	comp=Z,58nm,18.2s,baz=6.0,slow=42						
PLAI	Plampang	15.93	222	P	P	20 41 45.7	-0.8
SBUM	Sibu	16.20	268		P	20 41 49.3	-0.2
JAGI	Jajag, Banyuwa	18.31	231		P	20 42 07.0	-5.9
JAGI				IAmb	IAmb	20 42 13.9	
	comp=Z,19nm,0.9s						
FITZ	Fitzroy Crossi	21.27	187	P	P	20 42 43.9	-1.2
	comp=Z,1.7nm,0.7s,baz=13,slow=5.3,SNR=5.1						
	comp=Z,1.7nm,0.7s						
PMG	Port Moresby	22.44	124	LR	LR	20 51 25.3	
	comp=Z,55nm,21.6s,baz=340,slow=36						
WB0	Warramunga Arr	23.50	166		P	20 43 06.4	-2.1
WB0				IAmb	IAmb	20 43 08.2	
	comp=Z,7.4nm,0.8s						
WRAB	Tennant Creek	23.65	166		P	20 43 07.3	-2.5
WRAB				IAmb	IAmb	20 43 09.4	
	comp=Z,5.8nm,0.5s						
WRAB	Tennant Creek	23.65	166	P	P	20 43 09.3	-0.6
WRA	Warramunga Arr	23.65	166	P	P	20 43 09.1	-0.9
	comp=Z,4.4nm,0.7s,baz=344,slow=10,SNR=66						
	comp=Z,4.4nm,0.7s						
WRA	Warramunga Arr	23.65	166		P	20 43 07.7	-2.2
WR8	Warramunga Arr	23.70	166	P	P	20 43 08.6	-1.9
WR8				IAmb	IAmb	20 43 10.4	
	comp=Z,5.2nm,0.8s						
QIS	Mount Isa	25.97	155	P	P	20 43 30.8	-0.4

AS31	Alice Springs	27.16	169	P	P	20 43 39.4	-2.5
ASAR	Alice Springs	27.16	169	P	P	20 43 40.5	-1.4
	comp=Z,0.7nm,0.5s,baz=352,slow=7.9,SNR=16						
ASAR				PcP	PcP	20 47 01.2	-0.8
	comp=Z,0.6nm,0.6s,baz=346,slow=2.4,SNR=9.4						
ASAR				ScP	ScP	20 50 33.8	-6.1
	comp=Z,0.2nm,0.6s,baz=346,slow=3.9,SNR=2.1						
	comp=Z,0.7nm,0.5s						
CTA	Charters Tower	28.96	144	LR	LR	20 57 55.9	
	comp=Z,38nm,19.4s,baz=34,slow=41						
MEEK	Meekatharra	31.07	197	P	P	20 44 15.7	-0.9
CM31	Chiang Mai Arr	32.63	300	P	P	20 44 28.5	-2.0
CM31				IAmb	IAmb	20 44 32.3	
	comp=Z,3.7nm,0.7s						
CMAR	Chiang Mai Arr	32.63	300	P	P	20 44 31.6	+1.1
	comp=Z,2.3nm,0.7s,baz=116,slow=7.0,SNR=22						
	comp=Z,2.3nm,0.7s						
CHTO	Chiang Mai	32.78	301		P	20 44 31.8	0.0
KSRS	Korea Array	34.16	359	P	P	20 44 44.7	+1.3
	comp=Z,0.6nm,0.5s,baz=181,slow=9.9,SNR=2.7						
	comp=Z,0.6nm,0.5s						
MJAR	Matsushiro Arr	34.45	14	P	P	20 44 46.5	+0.4
	comp=Z,2.3nm,0.7s,baz=183,slow=9.6,SNR=9.8						
	comp=Z,2.3nm,0.7s						
PZH	PanZhiHua	34.56	315	P	P	20 44 49.3	+2.1
XAN	Xi'an	35.73	332	*e*P	P	20 45 00.5	+3.4
XAN				pP	sP	20 45 19.8	+9.3
XAN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
STKA	Stephens Creek	37.00	161	P	P	20 45 07.0	-0.9
	comp=Z,2.6nm,0.3s,baz=331,slow=8.2,SNR=14						
	comp=Z,2.6nm,0.3s						
STKA	Stephens Creek	37.00	161		P	20 45 05.0	-2.9
NWAO	Narrogin (SRO)	37.39	196	LR	LR	21 01 02.2	
	comp=Z,24nm,21.5s,baz=293,slow=37						
H11S3	WAKE ISLAND Hy	40.44	65	T	T	21 29 04.2	
	baz=253,slow=74						
H11S2	WAKE ISLAND Hy	40.45	65	T	T	21 29 01.7	
	baz=253,slow=74						
H11S1	WAKE ISLAND Hy	40.45	65	T	T	21 29 08.3	
	baz=253						
HHC	Hu-ho-hao-te	40.51	340	*e*P	P	20 45 39.3	+1.9
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,75nm,6.6s						
H11N1	WAKE ISLAND Hy	41.00	63	T	T	21 29 40.7	
	baz=251						
H11N2	WAKE ISLAND Hy	41.01	63	T	T	21 29 42.8	
	baz=251						
H11N3	WAKE ISLAND Hy	41.02	63	T	T	21 29 49.0	
	baz=251						
USRK	Ussuriysk Ar.	41.02	4	P	P	20 45 43.1	+1.7
	comp=Z,4.3nm,0.7s,baz=176,slow=4.3,SNR=4.8						
	comp=Z,4.3nm,0.7s						
GTA	Gaotai	44.49	328	*e*P	P	20 46 11.4	+1.6
GTA				pP	pwP	20 46 28.3	+5.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PETK	Petropavlovsk-	55.36	21	P	P	20 47 33.9	+1.8
	comp=Z,4.6nm,0.9s,baz=151,slow=3.4,SNR=6.6						
	comp=Z,4.6nm,0.9s						
MKAR	Makanchi Array	59.02	325	P	P	20 47 58.2	+0.2
	comp=Z,2.3nm,0.5s,baz=114,slow=8.2,SNR=21						
	comp=Z,2.3nm,0.5s						
MKAR	Makanchi Array	59.02	325		P	20 47 57.4	-0.6
MAKZ	Makanchi	59.20	325		P	20 47 59.7	+0.4
MAKZ				IAmb	IAmb	20 48 02.8	
	comp=Z,2.7nm,0.7s						
KURBB	Kurchatov Arra	63.16	327	P	P	20 48 25.8	-0.2
	comp=Z,1.7nm,0.6s,baz=128,slow=6.2,SNR=18						
	comp=Z,1.7nm,0.6s						
GAR	Garm	63.57	312	P	P	20 48 28.4	-0.7
BVAR	Borovoye Array	68.75	327	P	P	20 49 01.9	0.0
	comp=Z,1.4nm,0.6s,baz=130,slow=8.3,SNR=10						
	comp=Z,1.4nm,0.6s						
BORK	Borovoye	68.79	327		P	20 49 01.6	-0.6
BORK				IAmb	IAmb	20 49 05.4	
	comp=Z,2.1nm,0.7s						
VNDA	Vanda	82.62	173	P	P	20 50 17.9	-2.9
	comp=Z,1.4nm,0.9s,baz=18,slow=4.0,SNR=2.3						
	comp=Z,1.4nm,0.9s						
ILAR	Eielson Array	84.92	25	P	P	20 50 32.6	-0.2
	comp=Z,0.3nm,0.7s,baz=234,slow=7.1,SNR=5.4						
	comp=Z,0.3nm,0.7s						
TORD	Torodi Ar. Bea	124.71	288	PKP	PKPdf	20 56 57.7	-0.9
	comp=Z,0.5nm,0.6s,baz=31,slow=5.6,SNR=3.4						

SOME ***15*** *20:37:58.7, 40°.90N×78°.50E, h15^{km}*
NNC ***15*** *20:38:02.1±2.4, 40°.85N×78°.05E, h0^{km}, mb4.7, mpv4.5, Error ellipse: s-maj=18.6km s-min=11.5km az=5.0*
KRNET ***15*** *20:38:02.9±0.1, 41°.04N×78°.23E, h30^{km}, mb3.7*
IDC ***15*** *20:38:03.9±2.8, 41°.03N×78°.19E, h0^{km}, mb3.4/1, mbtmp3.4/6, ML2.8/5, Error ellipse: s-maj=31.0km s-min=15.2km az=176.0*
ISC 15 20:38:05.8±1.3**, 41°.18N**±0°.04×**78°.18E**±0°.03**, h15**^{km}±9^{km}**, n67,** σ1^{s}.**61**/107**, 31C-25D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	0.61	333	⇓*e*P	Pb	20 38 17.4	-1.1
TARG				⇓*e*S	Sg	20 38 28.1	+1.9
KDJ	Kajisay	1.20	322	⇑*e*P	Pn	20 38 27.3	-1.0
KDJ				⇑*e*S	Sn	20 38 45.0	+0.5
PRZ	Przheval'sk	1.31	7	⇓*e*P	Pn	20 38 29.5	-0.2
PRZ				⇓*e*S	Sg	20 38 48.8	+0.7
ULHL	Ulahol	1.79	307	P	Pn	20 38 37.4	+1.0
	SNR=74						
ULHL	Ulahol	1.79	307	⇑*e*P	Pn	20 38 36.3	-0.1
ULHL				⇑*e*S	Sb	20 39 00.8	-0.1
JNKS	Jany-Kuch	1.91	267	⇑*e*P	Pn	20 38 36.9	-1.1
JNKS				⇑*e*S	Sn	20 39 01.7	-0.2
UZB	Uzynbulak	2.06	17	*e*P	Pb	20 38 41.9	-1.1
	95nm,0.3s						
UZB				*e*S	Sg	20 39 12.8	+0.7
	129nm,0.3s						
TNSS	Tian-Shan	2.06	334	Pg	Pb	20 38 43.6	+0.4
	39nm,0.2s						
TNSS				Lg	Lg	20 39 16.2	
	82nm,0.6s						
TNSS	Tian-Shan	2.06	334	*e*P	Pb	20 38 43.6	+0.4
	39nm,0.2s						
TNSS				*e*S	Sg	20 39 16.2	+3.9
	82nm,0.6s						
BOOM	Boomskoye usch	2.12	309	⇓*e*P	Pn	20 38 40.9	0.0
BOOM				⇓*e*S	Sb	20 39 08.7	-1.5
MDOK	Medeo	2.15	337	Pg	Pb	20 38 44.7	+0.2
	114nm,0.5s						
IZV	Izvestkoviy	2.19	328	Pg	Pb	20 38 44.9	-0.2
	55nm,0.5s						
IZV				Lg	Lg	20 39 17.7	
	153nm,0.3s						
IZV	Izvestkoviy	2.19	328	*e*P	Pb	20 38 44.9	-0.2
	55nm,0.5s						
IZV				*e*S	Sg	20 39 17.7	+1.6
	153nm,0.3s						
SHLS	Shalkode	2.19	25	*e*P	Pb	20 38 44.5	-0.8
	92nm,0.2s						
SHLS				*e*S	Sg	20 39 17.7	+1.4
	142nm,0.3s						
KOTS	Kotyrbulak	2.20	339	Pg	Pb	20 38 46.0	+0.7
	141nm,0.2s						
KOTS	Kotyrbulak	2.20	339	*e*P	Pb	20 38 46.0	+0.7
	141nm,0.2s						
KOTS				*e*S	Sg	20 39 20.5	+4.0
	241nm,0.4s						
KNDC	Almaty	2.22	337	⇑Pn	Pb	20 38 45.4	-0.3
	116nm,0.5s						
KNDC				⇑Sn	Sg	20 39 18.8	+1.5
	584nm,0.5s						
AAA	Alma-Ata	2.23	336	Pg	Pb	20 38 46.4	+0.6
	321nm,0.4s						
AAA	Alma-Ata	2.23	336	*e*P	Pb	20 38 46.4	+0.6
	321nm,0.4s						
AAA				*e*S	Sg	20 39 20.9	+3.4
	18nm,0.2s						
MTBS	Maitube	2.34	327	Pg	Pb	20 38 47.3	-0.4
	42nm,0.2s						
MTBS				Lg	Lg	20 39 22.3	
	189nm,0.6s						
MTBS	Maitube	2.34	327	*e*P	Pb	20 38 47.3	-0.4
	42nm,0.2s						
MTBS				*e*S	Sg	20 39 22.4	+1.4
	189nm,0.6s						
PDGK	Podgornoye	2.35	24	⇑Pn	Pn	20 38 45.3	+1.3
	105nm,0.4s						
PDGK				⇑Sn	Sg	20 39 20.8	-0.7
	96nm,0.6s						
KSH	Kashi	2.37	226	Pn	Pg	20 38 50.1	-1.1
KSH				Sn	Sg	20 39 26.6	+4.6
KSH				smax	smax		
	comp=N,77nm,0.9s						
KSH				smax	smax		
	comp=E,130nm,0.9s						
KST	Kastek	2.48	319	Pg	Pb	20 38 50.0	-0.2
	comp=E,91nm,0.5s						
KST				Lg	Lg	20 39 26.9	
	comp=E,131nm,0.6s						
KST	Kastek	2.48	319	*e*P	Pb	20 38 50.0	-0.2
	comp=E,91nm,0.5s						
KST				*e*S	Sg	20 39 26.9	+1.3
	comp=E,131nm,0.6s						
TKM2	Tokmak 2	2.59	313	P	Pb	20 38 50.8	-1.2
	SNR=14						
TKM2	Tokmak 2	2.59	313	⇓*e*P	Pn	20 38 47.5	+0.2
TKM2				⇓*e*S	Sn	20 39 20.0	+1.4
DGS	Degeres	2.72	320	Pg	Pb	20 38 54.5	+0.3
	comp=E,38nm,0.3s						
DGS				Lg	Lg	20 39 35.0	
	comp=E,152nm,0.4s						
KTMS	Ketmen	2.78	35	*e*P	Pn	20 38 50.7	+0.8
	comp=E,16nm,0.3s						
KTMS				*e*S	Sb	20 39 27.9	-1.2
	comp=E,69nm,0.5s						
CHKK	Chushkaly	2.81	342	*e*P	Pb	20 38 55.8	+0.1
	comp=E,53nm,0.4s						
CHKK				*e*S	Sg	20 39 37.0	+0.9
	comp=E,215nm,0.3s						
KBK	Karagaybulak	2.82	302	P	Pb	20 38 53.9	-2.1
	SNR=8.6						
KBK	Karagaybulak	2.82	302	⇓*e*P	Pn	20 38 50.6	+0.1
KBK				⇓*e*S	Sn	20 39 25.3	+0.9
UCH	Uchtor	2.93	292	P	Pn	20 38 53.9	+1.6
	SNR=19						
UCH	Uchtor	2.93	292	⇑*e*P	Pn	20 38 52.1	-0.2
UCH				⇑*e*S	Sn	20 39 27.9	+0.4
ARLS	Aral	2.97	284	⇑*e*P	Pn	20 38 52.1	-0.5
ARLS				⇑*e*S	Sn	20 39 27.9	-0.1
ARXS	Arharly	3.04	355	*e*P	Pb	20 38 59.0	-0.6
	comp=E,31nm,0.3s						
ARXS				*e*S	Sg	20 39 42.6	-0.8
	comp=E,64nm,0.7s						
FRU1	Bishkek	3.10	303	⇑*e*P	Pn	20 38 54.6	+0.3
FRU1				⇑*e*S	Sn	20 39 32.3	+1.2
AAK	Ala-Archa	3.11	299	P	Pb	20 39 01.8	+0.9
	SNR=7.2						
AAK	Ala-Archa	3.11	299	Pn	Pb	20 38 57.9	-2.9
	comp=E,1.0nm,0.3s,baz=122,slow=10,SNR=16						
AAK				Pg	Pg	20 39 01.9	-3.4
	comp=E,5.1nm,0.3s,baz=150,slow=10,SNR=20						
AAK				Lg	Lg	20 39 44.2	
	comp=E,4.3nm,0.3s,baz=299,slow=15,SNR=9.5						
	comp=E,4.7nm,0.3s						
AAK	Ala-Archa	3.11	299	⇑*e*P	Pn	20 38 54.5	+0.1
AAK				⇑*e*S	Sn	20 39 31.9	+0.5
AAK	Ala-Archa	3.11	299	⇓Pg	Pb	20 39 02.4	+1.5
	comp=E,104nm,0.8s						
AAK				⇑Lg	Lg	20 39 45.2	
	comp=E,326nm,1.1s						
KRBS	Karabastau	3.12	324	Pg	Pb	20 39 00.6	-0.4
	comp=E,16nm,0.2s						
KRBS				Lg	Lg	20 39 28.6	
	comp=E,6.5nm,0.2s						
CHMS	Chumysh	3.13	307	P	Pb	20 39 01.4	+0.3
	SNR=19						
CHMS	Chumysh	3.13	307	⇓*e*P	Pn	20 38 54.7	+0.1
CHMS				⇓*e*S	Sn	20 39 32.5	+0.8
SALK	Salom-Alik	3.31	266	⇓*e*P	Pn	20 38 56.0	-1.2
SALK				⇓*e*S	Sn	20 39 34.9	-1.4
USP	Ospenovka	3.43	309	P	Pb	20 39 05.4	-0.9
	SNR=8.1						
USP	Ospenovka	3.43	309	⇓*e*P	Pn	20 38 59.1	+0.3
USP				⇓*e*S	Sn	20 39 39.9	+0.7
EKS2	Erkin-Say	3.60	296	P	Pb	20 39 10.3	+1.1
	SNR=16						
EKS2	Erkin-Say	3.60	296	⇑*e*P	Pn	20 39 01.1	0.0
EKS2				⇑*e*S	Sn	20 39 43.6	+0.2
SFK	Sufi-Kurgan	3.75	253	⇑*e*P	Pn	20 39 01.8	-1.5
SFK				⇑*e*S	Sn	20 39 44.8	-2.4
TDK	Taldyqorghan	3.82	2	*e*P	Pb	20 39 13.5	+0.6
	comp=E,101nm,0.5s						
TDK				*e*S	Sg	20 40 07.5	-0.9
	comp=E,148nm,0.5s						
ARSB	Arslanbob	3.92	274	⇓*e*P	Pn	20 39 04.9	-0.7
ARSB				⇓*e*S	Sn	20 39 50.1	-1.2
MRKS	Merke	4.01	295	*e*P	Pb	20 39 17.8	+1.6
	comp=E,9.4nm,0.3s						
MRKS				*e*S	Sg	20 40 14.7	+0.3
	comp=E,17nm,0.7s						
OHH	Osh	4.14	263	⇑*e*P	Pn	20 39 07.5	-1.1
OHH				⇑*e*S	Sn	20 39 54.6	-2.2
MNAS	Manas	4.43	289	⇓*e*P	Pn	20 39 12.4	-0.2
MNAS				⇓*e*S	Sn	20 40 03.3	-0.7
ARK	Arkit	4.71	280	⇑*e*P	Pn	20 39 16.0	-0.4
ARK				⇑*e*S	Sn	20 40 09.2	-1.5
BTLS	Baital	4.90	323	*e*P	Pg	20 39 36.7	-2.9
	comp=E,7.5nm,0.6s						
BTLS				*e*S	Sg	20 40 47.5	+4.5
	comp=E,10.0nm,0.8s						
TRKS	Terek-Say	5.31	276	⇑*e*P	Pn	20 39 23.8	-0.8
TRKS				⇑*e*S	Sn	20 40 22.6	-3.0
KK31	Karatay Array	6.01	291	⇑Pg	Pb	20 39 53.9	+3.6
	comp=E,3.7nm,0.7s,baz=111,slow=15,SNR=9.4						
KK31				⇑Lg	Lg	20 41 17.7	
	comp=E,6.1nm,0.7s,baz=106,slow=28,SNR=5.0						
MK31	Makanchi Array	6.34	26	⇓Lg	Lg	20 41 33.7	
	comp=E,5.6nm,0.6s						
MKAR	Makanchi Array	6.34	26	Pn	Pn	20 39 41.3	+2.5
	comp=E,0.5nm,0.3s,baz=212,slow=15,SNR=7.1						
MKAR				Sn	Sn	20 40 53.9	+3.0
	comp=E,0.8nm,0.3s,baz=201,slow=19,SNR=4.5						
MKAR				Lg	Lg	20 41 23.6	
	comp=E,0.8nm,0.3s,baz=214,slow=27,SNR=3.8						
	comp=E,0.7nm,0.3s						
GAR	Garm	6.41	253	⇓*e*P	Pn	20 39 38.4	-1.4
GAR				⇓*e*S	Sn	20 40 48.0	-4.7
KURBB	Kurchatov Arra	9.44	1	Pn	Pn	20 40 22.9	+1.7
	comp=E,0.1nm,0.3s,baz=188,slow=12,SNR=4.3						
KURBB				Lg	Lg	20 43 08.9	
	comp=E,0.2nm,0.3s,baz=44,slow=11,SNR=6.3						
	comp=E,0.8nm,0.3s						
KURK	Kurchatov	9.54	2	⇓Lg	Lg	20 43 17.9	
	comp=E,4.5nm,0.8s						
BVAR	Borovoye Array	12.97	339	Pn	Pn	20 41 10.5	+1.1
	baz=159,slow=15,SNR=7.9						
BVAR				Lg	Lg	20 45 00.7	
	baz=154,slow=31,SNR=5.4						
	comp=E,0.3nm,0.3s						
ZALV	Zalesovo Beam	13.53	17	Pn	Pn	20 41 19.4	+2.5
	comp=E,0.1nm,0.3s,baz=203,slow=9.0,SNR=4.1						
	comp=E,0.3nm,0.4s						
SONM	Songino Array	21.12	62	P	P	20 42 50.5	+0.5
	comp=E,1.6nm,0.8s,baz=263,slow=11,SNR=4.1						
	comp=E,1.6nm,0.8s						

SOME 15 20:38:26.3, 44°.17N×78°.52E, h25^{km}**, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLB	Baldybastay	0.07	202	S	Sb	20 38 31.9	-2.2
	748nm,0.2s						
BLB	Baldybastay	0.07	202	P	Pb	20 38 29.1	-1.9
	483nm,0.1s						
ARXS	Arharly	0.50	276	S	Sb	20 38 41.2	-2.3
	256nm,0.1s						
ARXS	Arharly	0.50	276	*e*P	Pb	20 38 34.8	-1.8
	200nm,0.1s						
ARXS				*e*S	Sb	20 38 41.2	-2.3
	256nm,0.1s						
ARXS	Arharly	0.50	276	P	Pb	20 38 34.8	-1.8
	200nm,0.1s						
KNOS	Konyrlen	0.51	68	S	Sb	20 38 41.1	-3.0
	77nm,0.2s						
KNOS	Konyrlen	0.51	68	P	Pb	20 38 34.6	-2.2
	28nm,0.1s						
KPKS	Kokpek	0.71	170	S	Sb	20 38 47.5	-2.1
	56nm,0.3s						
KPKS	Kokpek	0.71	170	P	Pb	20 38 38.5	-1.6
	46nm,0.1s						
KURS	Kuram	0.72	200	S	Sb	20 38 48.3	-1.6
	89nm,0.5s						
KURS	Kuram	0.72	200	P	Pb	20 38 39.1	-1.2
	27nm,0.2s						
TDK	Taldyqorghan	0.84	355	S	Sb	20 38 50.2	-2.9
	69nm,0.2s						
TDK	Taldyqorghan	0.84	355	*e*P	Pb	20 38 40.1	-2.2
	99nm,0.1s						
TDK				*e*S	Sb	20 38 50.2	-2.9
	69nm,0.2s						
TDK	Taldyqorghan	0.84	355	P	Pb	20 38 40.1	-2.2
	99nm,0.1s						
UZB	Uzynbulak	1.08	160	S	Sb	20 38 57.9	-2.3
	38nm,0.2s						
UZB	Uzynbulak	1.08	160	*e*P	Pn	20 38 44.7	-1.3
	94nm,0.3s						
UZB				*e*S	Sb	20 38 57.9	-2.3
	38nm,0.2s						
UZB	Uzynbulak	1.08	160	P	Pn	20 38 44.7	-1.3
	94nm,0.3s						
CHKK	Chushkaly	1.15	255	*e*P	Pn	20 38 43.9	-2.9
	18nm,0.3s						
CHKK				*e*S	Sn	20 38 56.6	-5.1
	79nm,0.3s						
SHLS	Shalkode	1.22	145	S	Sb	20 39 08.2	+4.0
	119nm,0.2s						
SHLS	Shalkode	1.22	145	*e*P	Pb	20 38 50.8	+2.0
	101nm,0.3s						
SHLS				*e*S	Sb	20 39 08.2	+4.0
	119nm,0.2s						
SHLS	Shalkode	1.22	145	P	Pb	20 38 50.8	+2.0
	101nm,0.3s						
KAPS	Kapalarasan	1.27	28	S	Sn	20 39 03.4	-1.4
	236nm,0.1s						
KAPS	Kapalarasan	1.27	28	P	Pn	20 38 47.7	-0.8
	9.9nm,0.1s						
KTBS	Karatobe	1.40	252	S	Sn	20 39 06.6	-1.4
	0.3nm,0.2s						
KTBS	Karatobe	1.40	252	P	Pn	20 38 49.9	-0.4
	9.1nm,0.2s						
KTMS	Ketmen	1.51	118	S	Sn	20 39 10.8	-0.1
	19nm,0.1s						
KTMS	Ketmen	1.51	118	*e*P	Pn	20 38 52.3	+0.4
	16nm,0.4s						
KTMS				*e*S	Sn	20 39 10.8	-0.1
	19nm,0.1s						
KTMS	Ketmen	1.51	118	P	Pn	20 38 52.3	+0.4
	16nm,0.4s						
SGDS	Sogindy	2.90	257	Pg	Pn	20 39 07.8	-3.1
	5.2nm,0.2s						

DJA ***15*** *20:46:49.6±2.2, 8°N±17°×12°5E±°, h120^{km}±22^{km}, M4.8/7, mb4.7/7, mB5.2/4, MLv4.9/6, Mw(mB)4.6/4*
IDC ***15*** *20:46:59.5±0.9, 6°.50N×125°.62E, h0^{km}, mb3.3/6, mbtmp3.5/7, ML4.5/1, MS3.4/13, Error ellipse: s-maj=39.1km s-min=8.2km az=85.0*
ISC 15 20:47:01.4±0.7**, 6°.55N**±0°.07×**125°.5E**±0°.2**, h10**^{km}**, n25,** σ1^{s}.**61**/15**, mb3.4**/7**, MS3.2**/11**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.53	12	Pg	Pg	20 47 11.2	-0.6
	192nm,0.3s,baz=259,slow=10,SNR=8.3						
DAV				Lg	Lg	20 47 17.8	
	827nm,0.3s,baz=214,slow=3.1,SNR=36						
DAV	Davao City (W)	0.53	12	P	Pg	20 47 11.1	-0.8
DAV	Davao City (W)	0.53	12	P	Pn	20 47 16.0	+0.9
GTOI	Gorontalo	6.36	203	P	Pn	20 48 33.8	-1.5
	0.5nm1µm151nm,0.6s						
MRSI	Marisa	6.98	210	P	Pn	20 48 41.9	-1.9
	0.2nm656nm56nm,0.6s						
LUWI	Luwuk	8.00	200	P	Pn	20 48 56.5	-1.4
	3µm56nm,0.8s						
SANI	Sanana	8.55	176	P	Pn	20 49 06.6	+1.2
KAPI	Kappang	12.82	207	LR	LR	20 55 28.5	
	comp=Z,181nm,19.5s,baz=54,slow=40						
BATI	Baumata	16.74	186	Pn	Pn	20 50 57.3	+1.1
	1.6nm,0.3s,baz=271,slow=14,SNR=1.9						
BATI				LR	LR	20 57 14.4	
	comp=Z,163nm,20.6s,baz=1.0,slow=37						
	5.3nm,0.4s						
JOW	Kunigami	20.35	7	LR	LR	20 59 06.4	
	comp=Z,77nm,21.2s,baz=163,slow=36						
FITZ	Fitzroy Crossi	24.49	180	P	P	20 52 18.6	-2.4
	0.8nm,0.6s,baz=356,slow=14,SNR=9.3						
FITZ				LR	LR	21 03 31.5	
	comp=Z,46nm,18.4s,baz=5.0,slow=41						
	0.8nm,0.6s						
JCJ	Chichijima	25.89	36	LR	LR	21 02 34.7	
	comp=Z,46nm,21.2s,baz=134,slow=36						
PMG	Port Moresby	26.80	126	LR	LR	21 03 31.6	
	comp=Z,33nm,22.0s,baz=340,slow=37						
JNU	Nakatsue	26.92	10	LR	LR	21 05 07.9	
	comp=Z,59nm,19.1s,baz=211,slow=40						
WRA	Warramunga Arr	27.73	162	P	P	20 52 49.1	-1.3
	0.2nm,0.7s,baz=342,slow=8.1,SNR=5.5						
	0.2nm,0.7s						
CMAR	Chiang Mai Arr	28.42	297	P	P	20 52 56.1	-0.4
	0.1nm,0.3s,baz=114,slow=8.9,SNR=5.7						
	0.1nm,0.3s						
ASAR	Alice Springs	31.14	165	P	P	20 53 20.5	-0.1
	0.1nm,0.4s,baz=349,slow=8.1,SNR=8.1						
	0.1nm,0.4s						
MJAR	Matsushiro Arr	32.05	20	LR	LR	21 06 23.8	
	comp=Z,42nm,19.9s,baz=209,slow=36						
LZDM	Lanzhou Array	35.43	329	LR	LR	21 10 18.7	
	comp=Z,84nm,18.4s,baz=345,slow=39						
ASAJ	Asahikawa	40.32	19	LR	LR	21 09 01.3	
	comp=Z,38nm,20.2s,baz=44,slow=33						
STKA	Stephens Creek	41.19	159	P	P	20 54 48.5	+2.1
	2.8nm,0.7s,baz=352,slow=8.1,SNR=8.6						
PETK	Petropavlovsk-	53.34	24	LR	LR	21 20 36.6	
	comp=Z,32nm,18.7s,baz=138,slow=38						
MKAR	Makanchi Array	54.54	325	P	P	20 56 32.2	+2.4
	0.2nm,0.6s,baz=118,slow=7.7,SNR=6.6						
MKAR				LR	LR	21 20 46.3	
	comp=Z,78nm,18.4s,baz=312,slow=37						
	0.2nm,0.6s						
AAK	Ala-Archa	57.45	317	LR	LR	21 23 09.3	
	comp=Z,78nm,18.0s,baz=109,slow=38						
ILAR	Eielson Array	83.12	26	P	P	20 59 26.0	-1.3
	0.4nm,1.0s,baz=256,slow=6.4,SNR=8.3						
	0.4nm,1.0s						

IDC ***15*** *20:49:23.8±1.0, 6°.45N×125°.33E, h0^{km}, mb3.6/6, mbtmp3.6/6, MS3.3/2, Error ellipse: s-maj=29.9km s-min=9.5km az=106.0*
ISC 15 20:49:23.7±1.6**, 6°.7N**±0°.2×**126°.1E**±0°.3**, h10**^{km}**, n9,** σ1^{s}.**12**/7**, mb3.6**/6**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.65	301	Pg	Pb	20 49 37.3	+0.1
	316nm,0.3s,baz=265,slow=5.8,SNR=6.9						
DAV				Lg	Lg	20 49 45.1	
	552nm,0.3s,baz=165,slow=8.6,SNR=6.3						
FITZ	Fitzroy Crossi	24.68	181	P	P	20 54 45.7	+0.7
	1.3nm,0.4s,baz=358,slow=11,SNR=6.0						
	1.3nm,0.4s						
WRA	Warramunga Arr	27.71	163	P	P	20 55 14.3	+1.9
	0.5nm,0.5s,baz=341,slow=9.2,SNR=2.9						
	0.5nm,0.5s						
ASAR	Alice Springs	31.15	166	P	P	20 55 42.1	-0.9
	0.4nm,0.6s,baz=348,slow=9.1,SNR=7.2						
	0.4nm,0.6s						
MKAR	Makanchi Array	54.78	324	P	P	20 58 53.7	-0.1
	0.4nm,0.7s,baz=119,slow=6.2,SNR=4.3						
	0.4nm,0.7s						
MA2	Magadan	55.96	15	LR	LR	21 21 17.1	
	comp=Z,21nm,21.9s,baz=198,slow=34						
KURBB	Kurchatov Arra	58.92	327	P	P	20 59 23.1	0.0
	0.4nm,0.8s,baz=129,slow=5.9,SNR=2.0						
	0.4nm,0.8s						
BVAR	Borovoye Array	64.51	326	P	P	21 00 00.5	-0.2
	0.3nm,0.6s,baz=134,slow=8.3,SNR=2.6						
	0.3nm,0.6s						
TIXI	Tiksi	64.87	1	LR	LR	21 29 19.7	
	comp=Z,28nm,19.0s,baz=204,slow=37						

IDC ***15*** *20:49:56.1±5.8, 22°.13S×178°.74E, h619^{km}±63^{km}, mb3.1/6, mbtmp4.1/7, Error ellipse: s-maj=107.4km s-min=31.4km az=154.0*
ISC 15 20:49:55.5±2.1**, 21°.8S**±0°.8×**178°.7E**±0°.3**, h600**^{km}**, n9,** σ1^{s}.**18**/9**, mb3.7**/6**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.42**	**266**	P	**P**	**20 52 29.2**	**+0.7**
	5.4nm,0.7s,baz=104,slow=17,SNR=5.2						
CTA	**Charters Tower**	**30.36**	**267**	P	**P**	**20 55 20.7**	**+0.2**
	3.1nm,0.4s,baz=112,slow=5.4,SNR=6.0						
	3.1nm,0.4s						
ASAR	**Alice Springs**	**41.27**	**259**	P	**P**	**20 56 48.6**	**-1.6**
	0.5nm,0.3s,baz=93,slow=7.0,SNR=17						
	0.5nm,0.3s						
WRA	**Warramunga Arr**	**41.42**	**264**	P	**P**	**20 56 49.8**	**-1.7**
	1.4nm,0.3s,baz=103,slow=8.1,SNR=22						
	1.4nm,0.3s						
FITZ	**Fitzroy Crossi**	**49.85**	**264**	P	**P**	**20 57 56.2**	**+0.8**
	1.6nm,0.7s,baz=99,slow=9.6,SNR=2.1						
	1.6nm,0.7s						
ILAR	**Eielson Array**	**90.28**	**14**	P	**P**	**21 01 52.5**	**-0.4**
	0.7nm,0.7s,baz=235,slow=6.4,SNR=9.3						
	0.7nm,0.7s						
TXAR	**Lajitas Array**	**90.32**	**59**	P	**P**	**21 01 54.1**	**+0.1**
	0.4nm,0.7s,baz=243,slow=5.3,SNR=5.3						
	0.4nm,0.7s						
NOA	**NORSAR Array B**	**139.83**	**351**	PKP	**PKPdf**	**21 08 15.5**	**-0.3**
	0.3nm,0.6s,baz=32,slow=4.6,SNR=1.6						
HFS	**Hagfors**	**140.27**	**348**	PKP	**PKPdf**	**21 08 17.8**	**+1.2**
	3.6nm,0.8s,baz=58,slow=3.9,SNR=11						

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*DJA **15** 20:59:15.0±0.4, 0°N±3°×9°6E±°, h10^{km}, M4.9/19, mb4.8/16,*
mB5.4/5, MLv5.0/19, Mw(mB)4.9/5
*IDC **15** 20:59:16.1±0.5, 0°.40N×96°.31E, h0^{km}, mb4.4/30,*
mbtmp4.4/31, ML4.2/1, MS3.6/12, Error ellipse:
s-maj=18.9km s-min=11.8km az=49.0
*NEIC **15** 20:59:17.2±2.5, 0°.45N±0°.06×96°.40E±0°.07, h10^{km}±1^{km},*
mb4.7/35, Error ellipse: s-maj=12.9km s-min=8.1km
az=122.0
ISC 15 20:59:18.8±0.9, **0°.42N**±0°.06×**96°.34E**±0°.07, **h21**^{km}±11^{km},
n194, σ1^{s}.**29**/180, **mb4.6**/79, **MS3.7**/13, **1C-1D, Off west**
coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.52**	**55**		**Pn**	**20 59 44.2**	**-0.6**
GSI	**Gunungsitoli**	**1.52**	**55**	P	**Pn**	**20 59 44.8**	**0.0**
GSI	**Gunungsitoli**	**1.52**	**55**	P	**Pn**	**20 59 44.8**	**0.0**
SNSI	**Sinabang, Aceh**	**1.97**	**360**	P	**Pn**	**20 59 50.4**	**-0.7**
PBSI	**Pulau Batu**	**2.00**	**104**	P	**Pn**	**20 59 51.4**	**0.0**
TPTI		**2.94**	**17**	P	**Pn**	**21 00 02.4**	**-2.0**
SISI	**Saibi**	**3.25**	**122**	P	**Pn**	**21 00 08.1**	**-0.6**
MNSI	**Mandailing Nat**	**3.26**	**83**	P	**Pn**	**21 00 08.9**	**+0.1**
KCSI	**Kotacane, Aceh**	**3.40**	**25**	P	**Pn**	**21 00 10.2**	**-0.5**
PSI	**Prapat**	**3.50**	**48**	LR	LR	21 01 52.2	
	comp=Z,792nm,20.3s,baz=248,slow=45						
TSI	**Tuntungan**	**3.78**	**36**	P	**Pn**	**21 00 16.6**	**+0.6**
MLSI	**Meulaboh, Aceh**	**3.82**	**1**	P	**Pn**	**21 00 16.0**	**-0.5**
PPI	**Padang Panjang**	**4.15**	**102**	P	**Pn**	**21 00 21.1**	**0.0**
PDSI	**Padang**	**4.33**	**108**	P	**Pn**	**21 00 23.7**	**+0.1**
BKNI	**Bangkinang**	**4.70**	**91**	P	**Pn**	**21 00 29.3**	**+0.6**
LHMI	**Lhok Sumawe**	**4.81**	**7**	Pn	**Pn**	**21 00 30.9**	**+0.7**
LHMI	**Lhok Sumawe**	**4.81**	**7**	P	**Pn**	**21 00 30.7**	**+0.5**
LHMI	**Lhok Sumawe**	**4.81**	**7**	P	**Pn**	**21 00 29.6**	**-0.6**
PPSI	**Pulau Pagai**	**4.85**	**131**	P	**Pn**	**21 00 29.4**	**-1.2**
KRJI	**Kerinci**	**5.70**	**116**	P	**Pn**	**21 00 43.8**	**+1.3**
IPM	**Ipoh**	**6.18**	**49**		**Pn**	**21 00 49.5**	**+0.5**
IPM	**Ipoh**	**6.18**	**49**	P	**Pn**	**21 00 49.7**	**+0.7**
IPM	**Ipoh**	**6.18**	**49**	P	**Pn**	**21 00 49.5**	**+0.5**
	0.4nm98nm,0.7s						
KULM	**Kulim**	**6.47**	**42**		**Pn**	**21 00 52.6**	**-0.4**
KULM	**Kulim**	**6.47**	**42**	P	**Pn**	**21 00 52.7**	**-0.3**
KULM	**Kulim**	**6.47**	**42**	P	**Pn**	**21 00 52.4**	**-0.6**
	0.3nm81nm,0.8s						
MASI	**Maura Aman, Be**	**6.88**	**121**	P	**Pn**	**21 00 58.8**	**+0.2**
	0.9nm1µm143nm,0.7s						
CMBY	**CAMPBELL BAY**	**6.97**	**340**	IAML		21 00 31.4	
	comp=N,373nm,1.1s						
CMBY				IAML		21 00 35.2	
	comp=E,427nm,0.7s						
CMBY				*e*P	Pb	21 01 12.8	-6.5
CMBY				*e*S	Sn	21 02 29.8	+11
UBSI	**University, Be**	**7.24**	**125**	P	**Pn**	**21 01 03.8**	**+0.2**
	comp=E,227nm,0.8s						
KSI	**Kapahiang**	**7.45**	**123**	P	**Pn**	**21 01 06.4**	**-0.1**
	comp=E,0.6nmcomp=E,172nm,0.8s						
MYKOM	**Kota Tinggi**	**7.63**	**80**	Pn	**Pn**	**21 01 08.7**	**-0.2**
MYKOM	**Kota Tinggi**	**7.63**	**80**	P	**Pn**	**21 01 09.2**	**+0.3**
	comp=E,0.2nmcomp=E,17nm,0.8s						
MNAI	**Manna**	**8.14**	**126**	Pn	**Pn**	**21 01 15.3**	**-0.6**
MNAI	**Manna**	**8.14**	**126**	P	**Pn**	**21 01 15.3**	**-0.6**
MNAI	**Manna**	**8.14**	**126**	P	**Pn**	**21 01 15.5**	**-0.5**
	comp=E,159nm,1.0s						
EGSI	**Enggano, Bengk**	**8.25**	**134**	P	**Pn**	**21 01 16.2**	**-1.2**
MDSI	**Maura Dua**	**9.23**	**122**	P	**Pn**	**21 01 30.2**	**-0.6**
	comp=E,48nm,0.7s						
LWLI	**Liwa**	**9.42**	**125**	P	**Pn**	**21 01 32.9**	**-0.7**
	comp=E,3µmcomp=E,121nm,0.8s						
KLSI		**9.80**	**121**	P	**Pn**	**21 01 38.2**	**-0.5**
	comp=E,50nm,0.7s						
KASI	**Kota Agung**	**10.06**	**126**	P	**Pn**	**21 01 40.8**	**-1.5**
	comp=E,22nm,0.8s						
PBA	**Port Blair**	**11.72**	**342**	*e*P	Pn	21 02 13.5	+8.6
PBA				*e*S	**Sn**	**21 04 16.5**	**+1.3**
PBA				*e*S		21 04 35.7	
PBA				IAML		21 04 36.4	
	comp=N,153nm,1.1s						
PBA				IAML		21 04 37.8	
	comp=E,176nm,0.4s						
TPI	**Tanjungpandan**	**11.74**	**106**	P	**Pn**	**21 02 05.9**	**+0.6**
	comp=E,14nm,1.3s						
DGPR	**DIGLIPUR**	**13.11**	**345**	*e*P	**P**	**21 02 34.0**	**-0.1**
DGPR				IAML		21 04 40.6	
	comp=N,123nm,0.6s						
DGPR				*e*S	**Sn**	**21 04 50.8**	**+1.4**
DGPR				IAML		21 04 59.0	
	comp=E,124nm,0.6s						
BBJI	**Bungbulang**	**13.73**	**125**	P	**Pn**	**21 02 31.2**	**-1.4**
BBJI	**Bungbulang**	**13.73**	**125**	P	**Pn**	**21 02 29.0**	**-3.6**
	comp=E,6.7nm,0.7s						
SBUM	**Sibu**	**16.00**	**83**		**Pn**	**21 03 03.5**	**+0.6**
SBUM	**Sibu**	**16.00**	**83**	P	**P**	**21 03 07.3**	**+1.0**
	comp=E,11nm,0.8s						
PCJI	**Pacitan**	**17.09**	**120**	P	**Pn**	**21 03 14.8**	**-1.9**
SNJI	**Sawahan-Nganju**	**17.40**	**118**	P	**Pn**	**21 03 20.0**	**-0.8**
CMAR	**Chiang Mai Arr**	**18.10**	**8**	P	**P**	**21 03 31.4**	**+1.9**
	comp=E,0.3nm,0.3s,baz=196,slow=11,SNR=47						
CMAR				LR	LR	21 10 28.3	
	comp=E,90nm,20.4s,baz=195,slow=37						
	comp=E,7.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.10**	**8**		**Pn**	**21 03 27.1**	**-2.1**
CHTO	**Chiang Mai**	**18.45**	**8**		**Pn**	**21 03 33.5**	**0.0**
SLVN	**Son La**	**22.06**	**19**		**P**	**21 04 11.0**	**-1.6**
SLVN				IAmb	IAmb	21 04 45.9	
	comp=Z,23nm,0.9s						
QIZ	**Qiongzhong**	**22.75**	**35**	P	**P**	**21 04 19.3**	**-0.6**
QIZ				S	**S**	**21 08 25.1**	**-2.7**
QIZ				pmax	pmax		
	comp=Z,28nm,1.8s						
QIZ				LR	LR		
	comp=N,280nm,12.0s						
QIZ				LR	LR		
	comp=E,170nm,10.8s						
QIZ				LR	LR		
	comp=Z,220nm,13.7s						
PLAI	**Plampang**	**23.25**	**114**	P	**P**	**21 04 24.1**	**-1.1**
AGT	**Agartala**	**23.84**	**348**	IAmb	IAmb	21 03 55.5	
	comp=Z,7.7nm,0.4s						
AGT				*e*P	P	21 04 41.5	+11
AGT				*e*S	Sn	21 08 58.5	-10
KAPI	**Kappang**	**24.00**	**103**	P	**P**	**21 04 33.5**	**+1.1**
	comp=Z,13nm,0.9s,baz=241,slow=11,SNR=6.4						
KAPI				LR	LR	21 13 55.1	
	comp=Z,91nm,18.0s,baz=300,slow=37						
	comp=Z,13nm,0.9s						
TOLI2	**Tolitoli**	**24.45**	**88**	P	**P**	**21 04 37.1**	**+0.5**
TNCH	**TengChong**	**24.55**	**5**	*e*P	**P**	**21 04 39.3**	**+1.7**
TNCH				pmax	pmax		
	comp=Z,18nm,0.7s						
H08S2	**Diego Garcia H**	**25.09**	**251**	T	T	21 32 04.6	
	baz=71,slow=76,SNR=6.6						
H08S3	**Diego Garcia H**	**25.10**	**251**	T	T	21 31 57.2	
	baz=71,slow=76,SNR=14						
H08S1	**Diego Carcia H**	**25.11**	**251**	T	T	21 32 01.7	
	baz=71,slow=76,SNR=9.4						
KOHI	**KOHIMA**	**25.24**	**355**	*e*P	P	21 04 55.8	+12
KOHI				IAmb	IAmb	21 04 57.3	
	comp=Z,8.5nm,0.5s						
KOHI				*e*S	S	21 09 22.2	+14
KMI	**Kunming**	**25.32**	**14**	P	**P**	**21 04 46.3**	**+1.7**
KMI				pmax	pmax		
	comp=Z,21nm,0.9s						
KMI				LR	LR		
	comp=N,200nm,13.3s						
KMI				LR	LR		
	comp=E,140nm,12.7s						
KMI				LR	LR		
	comp=Z,210nm,15.3s						
SHL	**Shillong**	**25.36**	**351**		**P**	**21 04 43.6**	**-1.3**
SHL	**Shillong**	**25.36**	**351**	*e*P	P	21 04 55.1	+10
SHL				IAmb	IAmb	21 04 57.8	
	comp=Z,7.5nm,0.5s						
SHL				*e*S	S	21 09 22.2	+12
PZH	**PanZhiHua**	**26.45**	**11**	P	**P**	**21 04 54.8**	**+0.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LSA	**Lhasa**	**29.53**	**351**	P	**P**	**21 05 20.4**	**-2.2**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
XAN	**Xi'an**	**35.46**	**18**	P	**P**	**21 06 14.3**	**+0.3**
XAN				pP	pwP	21 06 27.1	+1.7
XAN				pmax	pmax		
	comp=Z,12nm,1.0s						
XAN				LR	LR		
	comp=N,230nm,13.7s						
XAN				LR	LR		
	comp=E,180nm,14.5s						
XAN				LR	LR		
	comp=Z,200nm,15.8s						
LZH	**Lanzhou**	**36.16**	**10**	*e*P	**P**	**21 06 23.1**	**+3.0**
LZH				sP	pwP	21 06 41.0	+9.5
LZH				pmax	pmax		
	comp=Z,12nm,1.4s						
NJ2	**Nanjing**	**37.97**	**32**	*e*P	**P**	**21 06 35.5**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
H01W3	**Cape Leeuwin H**	**38.87**	**156**	T	T	21 48 54.0	
	baz=334,slow=76,SNR=24						
H01W2	**Cape Leeuwin H**	**38.88**	**156**	T	T	21 48 55.0	
	baz=334,slow=76,SNR=26						
H01W1	**Cape Leeuwin H**	**38.89**	**156**	T	T	21 49 08.5	
	baz=334,slow=76,SNR=30						
GTA	**Gaotai**	**38.93**	**4**	*e*P	**P**	**21 06 45.0**	**+1.5**
GTA				pP	pwP	21 06 54.3	-0.6
GTA				PcP	**PcP**	**21 08 55.4**	**+1.4**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
HNS	**HongShan**	**40.52**	**23**	⇑P	**P**	**21 06 58.8**	**+2.3**
HNS				pmax	pmax		
	comp=Z,11nm,0.7s						
WB0	**Warramunga Arr**	**42.35**	**120**		**P**	**21 07 11.7**	**-0.2**
WB0				IAmb	IAmb	21 07 22.3	
	comp=Z,7.1nm,0.6s						
WRA	**Warramunga Arr**	**42.37**	**121**	P	**P**	**21 07 12.5**	**+0.4**
	comp=Z,2.8nm,0.7s,baz=299,slow=8.9,SNR=17						
WRA				PcP	**PcP**	**21 09 05.6**	**+0.2**
	comp=Z,1.3nm,0.9s,baz=312,slow=2.6,SNR=6.2						
	comp=Z,2.8nm,0.7s						
HHC	**Hu-ho-hao-te**	**42.55**	**17**	*e*P	**P**	**21 07 15.3**	**+2.0**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,58nm,6.5s						
KSH	**Kashi**	**43.13**	**337**	P	**P**	**21 07 17.9**	**-0.2**
KSH				pP	pwP	21 07 30.3	+0.9
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BJI	**Beijing**	**43.38**	**22**	P	**P**	**21 07 21.8**	**+1.9**
BJI				pP	**pwP**	**21 07 34.3**	**+2.9**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MANEM	**Manem**	**43.38**	**331**		**P**	**21 07 20.4**	**+0.1**
MANEM				IAmb	IAmb	21 07 23.2	
	comp=Z,15nm,0.8s						
WUS	**Wushi**	**43.45**	**341**		**P**	**21 07 21.9**	**+1.2**
WUS				IAmb	IAmb	21 07 23.4	
	comp=Z,8.6nm,0.8s						
AS31	**Alice Springs**	**43.63**	**126**		**P**	**21 07 20.1**	**-2.2**
ASAR	**Alice Springs**	**43.63**	**126**	P	**P**	**21 07 23.1**	**+0.9**
	comp=Z,3.3nm,0.7s,baz=299,slow=7.9,SNR=38						
ASAR				PcP	**PcP**	**21 09 09.7**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=306,slow=3.2,SNR=7.3						
	comp=Z,3.3nm,0.7s						
TARG	**Taragay, Kyrgy**	**44.39**	**340**		**P**	**21 07 27.7**	**-0.8**
TARG				IAmb	IAmb	21 07 31.9	
	comp=Z,8.2nm,0.8s						
GAR	**Garm**	**45.19**	**331**	P	**P**	**21 07 33.1**	**-1.4**
GAR				IAmb	IAmb	21 07 36.4	
	comp=Z,12nm,1.0s						
SHAA	**Shahritus**	**45.20**	**328**		**P**	**21 07 33.0**	**-1.6**
SHAA				IAmb	IAmb	21 07 35.6	
	comp=Z,12nm,0.9s						
CHGR	**Chuyangaron**	**45.49**	**330**	IAmb	IAmb	21 07 37.8	
	comp=Z,7.6nm,0.7s						
ARSB	**Arslanbob**	**45.87**	**335**	P	**P**	**21 07 41.0**	**+1.0**
JNU	**Nakatsue**	**45.95**	**41**	LR	LR	21 28 22.9	
	comp=Z,35nm,18.8s,baz=272,slow=38						
AAK	**Ala-Archa**	**46.38**	**338**		**P**	**21 07 43.5**	**-0.5**
KSRS	**Korea Array**	**46.97**	**35**	P	**P**	**21 07 49.1**	**+0.7**
	comp=Z,3.9nm,1.1s,baz=220,slow=8.8,SNR=9.9						
	comp=Z,3.9nm,1.1s						
MKAR	**Makanchi Array**	**47.79**	**347**	P	**P**	**21 07 56.2**	**+1.5**
	comp=Z,6.2nm,0.6s,baz=158,slow=7.9,SNR=80						
	comp=Z,6.2nm,0.6s						
MKAR	**Makanchi Array**	**47.79**	**347**		**P**	**21 07 54.1**	**-0.7**
SONM	**Songino Array**	**48.02**	**9**	P	**P**	**21 07 58.2**	**+1.5**
	comp=Z,3.2nm,0.8s,baz=191,slow=9.2,SNR=12						
SONM				PcP	**PcP**	**21 09 23.3**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=177,slow=5.8,SNR=2.2						
	comp=Z,3.2nm,0.8s						
SONM	**Songino Array**	**48.02**	**9**	P	**P**	**21 07 55.0**	**-1.7**
KK31	**Karatay Array**	**48.38**	**335**		**P**	**21 07 58.0**	**-1.4**
KK31				IAmb	IAmb	21 08 01.6	
	comp=Z,5.1nm,0.8s						
KKAR	**Karatay Array**	**48.38**	**335**		**P**	**21 07 58.8**	**-0.6**
PMG	**Port Moresby**	**51.53**	**102**		**P**	**21 08 21.2**	**-2.5**
KURBB	**Kurchatov Arra**	**52.26**	**346**	P	**P**	**21 08 29.9**	**+1.3**
	comp=Z,2.7nm,0.6s,baz=176,slow=6.4,SNR=36						
KURBB				PcP	**PcP**	**21 09 40.6**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=164,slow=4.4,SNR=5.9						
KURBB				LR	LR	21 36 11.4	
	comp=Z,52nm,18.8s,baz=166,slow=42						
	comp=Z,2.7nm,0.6s						
KURK	**Kurchatov**	**52.32**	**346**		**P**	**21 08 29.4**	**+0.4**
KURK				IAmb	IAmb	21 08 31.2	
	comp=Z,10nm,1.2s						
BNX	**BinXian**	**52.76**	**27**	⇓P	**P**	**21 08 28.8**	**-3.6**
BNX				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MJAR	**Matsushiro Arr**	**52.84**	**42**	P	**P**	**21 08 33.1**	**-0.1**
	comp=Z,2.0nm,0.9s,baz=223,slow=5.1,SNR=5.0						
MJAR				LR	LR	21 35 43.0	
	comp=Z,28nm,18.5s,baz=240,slow=41						
	comp=Z,2.0nm,0.9s						
HILR	**Hailar Array B**	**52.90**	**19**	P	**P**	**21 08 34.0**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=218,slow=9.0,SNR=3.6						
HILR				PcP	**PcP**	**21 09 42.3**	**0.0**
	comp=Z,1.9nm,0.7s,baz=177,slow=7.2,SNR=2.1						
	comp=Z,1.5nm,0.6s						
CTAO	**Charters Tower**	**52.94**	**116**	P	**P**	**21 08 34.5**	**+0.3**
CTAO				IAmb	IAmb	21 08 36.3	
	comp=Z,8.2nm,1.1s						
STKA	**Stephens Creek**	**53.49**	**131**	P	**P**	**21 08 39.1**	**+1.1**
	comp=Z,6.2nm,0.6s,baz=307,slow=7.3,SNR=22						
	comp=Z,6.2nm,0.6s						
STKA	**Stephens Creek**	**53.49**	**131**		**P**	**21 08 39.3**	**+1.3**
USRK	**Ussuriysk Ar.**	**53.88**	**31**	P	**P**	**21 08 40.9**	**+0.3**
	comp=Z,6.5nm,0.7s,baz=252,slow=12,SNR=6.8						
	comp=Z,6.5nm,0.7s						
ZALV	**Zalesovo Beam**	**54.19**	**352**	P	**P**	**21 08 44.1**	**+1.4**
	comp=Z,12nm,0.4s,baz=181,slow=6.5,SNR=72						
	comp=Z,12nm,0.4s						
ZALV	**Zalesovo Beam**	**54.19**	**352**		**P**	**21 08 42.6**	**-0.1**
RAYN	**Ar Rayn**	**54.37**	**299**		**P**	**21 08 43.5**	**-1.1**
HEH	**HeiHe**	**56.26**	**23**	*e*P	**P**	**21 08 59.5**	**+1.8**
BVAR	**Borovoye Array**	**56.70**	**342**	P	**P**	**21 09 01.1**	**+0.2**
	comp=Z,3.7nm,0.6s,baz=144,slow=8.7,SNR=29						
	comp=Z,3.7nm,0.6s						
BORK	**Borovoye**	**56.74**	**342**		**P**	**21 09 00.2**	**-0.9**
BORK				IAmb	IAmb	21 09 02.1	
	comp=Z,4.4nm,0.6s						
AB31	**Akbulak array**	**57.80**	**333**		**P**	**21 09 07.7**	**-1.0**
AB31				IAmb	IAmb	21 09 09.7	
	comp=Z,5.0nm,0.7s						
ABKAR	**Akbulak array**	**57.80**	**333**		**P**	**21 09 08.1**	**-0.6**
KIBK	**Kibwezi**	**58.34**	**267**		**P**	**21 09 13.3**	**+0.1**
H04N2	**CROZET ISLANDS**	**60.65**	**214**	T	T	22 16 22.6	
	baz=54,slow=75,SNR=58						
H04N1	**CROZET ISLANDS**	**60.66**	**214**	T	T	22 16 52.9	
	baz=54,slow=75,SNR=67						
H04N3	**CROZET ISLANDS**	**60.67**	**214**	T	T	22 16 51.5	
	baz=54,slow=75,SNR=38						
H04S1	**CROZET ISLANDS**	**60.99**	**213**	T	T	22 18 21.3	
	baz=57,slow=75						
H04S3	**CROZET ISLANDS**	**61.01**	**213**	T	T	22 18 23.3	
	baz=57,slow=75						
H04S2	**CROZET ISLANDS**	**61.01**	**213**	T	T	22 18 16.7	
	baz=57,slow=75						
MARD	**Mardin**	**62.91**	**312**	P	**P**	**21 09 44.0**	**-0.1**
MARD				IAmb	IAmb	21 09 46.3	
	comp=Z,7.9nm,0.8s						
ARTI	**Arti**	**63.60**	**338**		**P**	**21 09 47.8**	**-0.2**
KBZ	**Khabaz**	**64.10**	**320**	P	**P**	**21 09 52.5**	**+0.9**
	comp=Z,1.9nm,0.8s,baz=93,slow=10,SNR=5.5						
	comp=Z,1.9nm,0.8s						
MBAR	**Mbarara**	**65.61**	**269**	LR	LR	21 37 46.7	
	comp=Z,38nm,18.4s,baz=5.5,slow=35						
MMAI	**Mount Meron Ar**	**65.66**	**306**	P	**P**	**21 10 04.0**	**+1.9**
	comp=Z,1.3nm,0.6s,baz=167,slow=7.2,SNR=2.8						
	comp=Z,1.3nm,0.6s						
YAK	**Yakutsk**	**66.40**	**16**	LR	LR	21 39 54.7	
	comp=Z,58nm,19.2s,baz=275,slow=37						
YAK	**Yakutsk**	**66.40**	**16**		**P**	**21 10 04.0**	**-2.1**
BR131	**Keskin Array S**	**69.00**	**313**	P	**P**	**21 10 20.9**	**-2.3**
BRTR	**Keskin Array B**	**69.00**	**313**	P	**P**	**21 10 23.4**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=130,slow=7.7,SNR=11						
	comp=Z,1.5nm,0.7s						
BRTR	**Keskin Array B**	**69.00**	**313**	P	**P**	**21 10 22.4**	**-0.8**
NRIK	**Noril'sk**	**69.05**	**357**	P	**P**	**21 10 23.4**	**+0.6**
	comp=Z,2.9nm,0.6s,baz=170,slow=6.1,SNR=6.7						
NRIK				LR	LR	21 44 03.0	
	comp=Z,76nm,18.1s,baz=316,slow=39						
	comp=Z,2.9nm,0.6s						
NRIK	**Noril'sk**	**69.05**	**357**		**P**	**21 10 21.6**	**-1.2**
NRIK				IAmb	IAmb	21 10 33.7	
	comp=Z,9.0nm,1.1s						
MATP	**Matopo**	**69.44**	**248**	LR	LR	21 37 04.3	
	comp=Z,44nm,18.2s,baz=24,slow=33						
DZM	**Mont Dzumac**	**71.77**	**113**	P	**P**	**21 10 41.7**	**+1.3**
	comp=Z,2.9nm,0.7s,baz=275,slow=21,SNR=2.6						
	comp=Z,2.9nm,0.7s						
LBTB	**Lobatse**	**72.77**	**244**	LR	LR	21 37 52.6	
	comp=Z,33nm,19.6s,baz=14,slow=32						
PETK	**Petropavlovsk-**	**72.85**	**34**	P	**P**	**21 10 46.2**	**0.0**
	comp=Z,3.9nm,0.9s,baz=242,slow=3.1,SNR=2.4						
	comp=Z,3.9nm,0.9s						
PETK	**Petropavlovsk-**	**72.85**	**34**	P	**P**	**21 10 44.7**	**-1.5**
BOSA	**Boshof**	**73.65**	**240**	P	**P**	**21 10 52.0**	**+0.5**
	comp=Z,3.9nm,0.9s,baz=44,slow=9.0,SNR=3.8						
BOSA				LR	LR	21 37 37.4	
	comp=Z,59nm,20.4s,baz=18,slow=31						
	comp=Z,3.9nm,0.9s						
TIXI	**Tiksi**	**74.10**	**10**		**P**	**21 10 52.0**	**-1.1**
TIXI				IAmb	IAmb	21 11 03.5	
	comp=Z,12nm,0.8s						
AKASG	**Malin Array Be**	**75.35**	**323**	P	**P**	**21 11 00.6**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=90,slow=5.1,SNR=10						
	comp=Z,0.6nm,0.4s						
AKBB	**Malin Array Si**	**75.35**	**323**	P	**P**	**21 10 57.6**	**-3.2**
KIEV	**Kiev**	**75.35**	**323**	P	**P**	**21 10 58.0**	**-2.8**
	comp=Z,34nm,1.5s						
AK13	**Malin Array Si**	**75.42**	**323**	P	**P**	**21 10 59.1**	**-2.1**
AK18	**Malin Array Si**	**75.45**	**323**	P	**P**	**21 10 59.9**	**-1.4**
AK22	**Malin Array Si**	**75.46**	**323**	P	**P**	**21 10 58.5**	**-2.9**
LUBAR	**Lubar, Ukraine**	**76.02**	**322**	P	**P**	**21 11 02.4**	**-2.2**
MLR	**Muntele Rosu**	**76.04**	**317**	P	**P**	**21 11 02.6**	**-2.4**
BUR08	**Bucovina Ar. S**	**77.06**	**319**	P	**P**	**21 11 08.7**	**-2.1**
BUR08				IAmb	IAmb	21 11 15.1	
	comp=Z,8.4nm,1.1s						
RNPP9	**Sopachiv**	**77.57**	**323**	P	**P**	**21 11 12.3**	**-1.0**
FINES	**FINESS Array B**	**80.29**	**333**	P	**P**	**21 11 28.1**	**0.0**
	comp=Z,3.3nm,1.0s,baz=114,slow=4.6,SNR=7.9						
	comp=Z,3.3nm,1.0s						
FINES	**FINESS Array B**	**80.29**	**333**	P	**P**	**21 11 27.8**	**-0.2**
STEB	**Steborice**	**82.32**	**320**	*e*P	**P**	**21 11 40.6**	**+1.5**
MODS	**Modra-Piesok**	**82.41**	**319**	*e*P	**P**	**21 11 41.0**	**+1.3**
KRLC	**Kraliky**	**82.97**	**320**	*e*P	**P**	**21 11 43.9**	**+1.3**
ARCES	**ARCESS Array B**	**82.97**	**340**	P	**P**	**21 11 42.8**	**+0.6**
	comp=Z,3.5nm,0.7s,baz=96,slow=4.9,SNR=32						
	comp=Z,3.5nm,0.7s						
ARCES	**ARCESS Array B**	**82.97**	**340**	P	**P**	**21 11 42.1**	**0.0**
RONA	**Rosalia, Austr**	**82.98**	**318**	*e*P	**P**	**21 11 43.0**	**+0.3**
	comp=Z,7.0nm,1.6s						
CONA	**Conrad Observa**	**83.30**	**318**	*e*P	**P**	**21 11 45.0**	**+0.6**
	comp=Z,5.9nm,1.8s						
DPC	**Dobruska-Polom**	**83.30**	**321**	*e*P	**P**	**21 11 46.0**	**+1.7**
OSTC	**Ostas**	**83.39**	**321**	*e*P	**P**	**21 11 46.2**	**+1.5**
ARSA	**Arzberg**	**83.45**	**317**	*i* P	**P**	**21 11 46.4**	**+1.3**
	comp=Z,5.4nm,1.2s						
CHVC	**Chvalec**	**83.50**	**321**	*e*P	**P**	**21 11 45.7**	**+0.4**
SOKA	**Soboth**	**83.72**	**317**	*i* P	**P**	**21 11 47.3**	**+0.7**
	comp=Z,6.1nm,1.1s						
OBKA	**Obir**	**84.03**	**317**	*e*P	**P**	**21 11 49.5**	**+1.3**
	comp=Z,11nm,1.5s						
CKRC	**Cesky Krumlov**	**84.42**	**319**	*e*P	**P**	**21 11 51.0**	**+1.0**
MYKA	**Terra Mystica**	**84.67**	**317**	*e*PcP	**P**	**21 11 53.3**	**+1.9**
	comp=Z,1.8nm,0.5s						
BIOA	**Bad Ischl, Aus**	**84.76**	**318**	*e*P	**P**	**21 11 51.9**	**+0.2**
	comp=Z,1.8nm,0.6s						
GERES	**GERESS Array B**	**84.83**	**319**	P	**P**	**21 11 53.0**	**+0.8**
	comp=Z,2.3nm,0.9s,baz=104,slow=4.3,SNR=13						
	comp=Z,2.3nm,0.9s						
KHC	**Kasperske Hory**	**84.93**	**319**	*e*P	**P**	**21 11 53.5**	**+0.9**
HSKC	**Hora Svate Kat**	**85.16**	**321**	*e*P	**P**	**21 11 56.9**	**+3.2**
LESA	**Schwarzleotal**	**85.39**	**317**	*e*P	**P**	**21 11 55.3**	**+0.3**
	comp=Z,1.9nm,0.7s						
CLL	**Collm**	**85.49**	**321**	*e*P	**P**	**21 11 56.0**	**+0.7**
	comp=Z,5.0nm,0.7s						
CLL				*e*PP	**PP**	**21 15 11.0**	**-2.8**
HFS	**Hagfors**	**85.96**	**330**	P	**P**	**21 11 58.1**	**+0.6**
	comp=Z,4.4nm,0.7s,baz=145,slow=3.5,SNR=16						
	comp=Z,4.4nm,0.7s						
WTTA	**Wattenberg**	**86.08**	**317**	*i* P	**P**	**21 11 59.0**	**+0.4**
	comp=Z,4.8nm,0.8s						
WATA	**Walderalm**	**86.13**	**317**	*i* P	**P**	**21 11 58.4**	**-0.3**
	comp=Z,7.7nm,1.4s						
SQTA	**Sankt Quirin**	**86.37**	**317**	*i* P	**P**	**21 11 59.6**	**-0.3**
	comp=Z,2.6nm,0.7s						
FETA	**Feichten**	**86.69**	**317**	*i* P	**P**	**21 12 02.6**	**+1.1**
	comp=Z,6.6nm,1.2s						
RETA	**Reutte**	**86.69**	**317**	*i* P	**P**	**21 12 02.0**	**+0.6**
	comp=Z,12nm,1.5s						
NB2	**NORSAR Subarra**	**87.26**	**331**	P	**P**	**21 12 04.5**	**+0.7**
	comp=Z,1.7nm,0.7s,baz=93,slow=5.3						
NOA	**NORSAR Array B**	**87.26**	**331**	P	**P**	**21 12 04.3**	**+0.4**
	comp=Z,3.4nm,0.8s,baz=96,slow=4.9,SNR=8.8						
	comp=Z,3.4nm,0.8s						
DAVA	**Damuels**	**87.28**	**317**	*i* PcP	**P**	**21 12 05.4**	**+1.0**
	comp=Z,6.4nm,1.0s						
KEST	**Kesra**	**87.31**	**306**	P	**P**	**21 12 06.5**	**+1.8**
	comp=Z,5.7nm,0.8s,baz=110,slow=2.0,SNR=7.6						
	comp=Z,5.7nm,0.8s						
SPITS	**Spitsbergen Ar**	**87.53**	**348**	P	**P**	**21 12 04.9**	**+0.1**
	comp=Z,2.3nm,0.6s,baz=129,slow=7.6,SNR=5.2						
	comp=Z,2.3nm,0.6s						
QSPA	**South Pole Qui**	**90.37**	**180**	P	**P**	**21 12 19.1**	**+0.6**
	comp=Z,0.9nm,0.4s,baz=290,slow=3.0,SNR=3.5						
	comp=Z,0.9nm,0.4s						
C18K	**Utukok River**	**94.14**	**21**	P	**P**	**21 12 36.2**	**+0.4**
C18K				IAmb	IAmb	21 12 37.7	
	comp=Z,4.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**94.43**	**283**	P	**P**	**21 12 39.2**	**+1.0**
	comp=Z,1.5nm,1.0s,baz=52,slow=6.4,SNR=5.1						
	comp=Z,1.5nm,1.0s						
NVAR	**Mina Array Bea**	**129.91**	**36**	PKP	**PKiKP**	**21 18 29.4**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=308,slow=3.3,SNR=2.4						
PDAR	**Pinedale Array**	**131.11**	**25**	PKP	**PKPdf**	**21 18 30.5**	**+0.6**
	comp=Z,0.2nm,0.7s,baz=49,slow=4.1,SNR=2.6						
CPUP	**Villa Florida**	**143.85**	**222**	PKP	PKPbc	21 18 51.8	+0.6
	comp=Z,1.8nm,0.8s,baz=116,slow=3.4,SNR=12						
TXAR	**Lajitas Array**	**144.78**	**31**	PKP	**PKPdf**	**21 18 55.1**	**0.0**
	comp=Z,2.3nm,0.7s,baz=290,slow=1.3,SNR=22						

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*OSPL **15** 21:14:48.9±1.0, 20°.67N×71°.49W, h5^{km}±6^{km}, ML2.1,*
Presumed earthquake
*SSNC **15** 21:14:49.7±1.9, 20°.68N×71°.52W, h5^{km}, MD3.1, ML2.1*
*SDD **15** 21:14:49.3±1.4, 20°.71N×71°.50W, h71^{km}±17^{km}, MD3.2,*
ML3.3, MW2.8, Presumed earthquake
ISC 15 21:14:48.7±1.3, **20°.70N**±0°.04×**71°.46W**±0°.04, **h34**^{km}±3^{km},
n14, σ1^{s}.**05**/27, **Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCDR	**Montecristi**	**0.82**	**193**	*e*Pg	**Pb**	**21 15 04.1**	**-0.5**
MCDR				*e*Sg	**Sn**	**21 15 17.1**	**+2.3**
MCDR				IAML		21 15 17.8	
	comp=N,673nm,0.2s						
GRTK	**Grand Turk**	**0.86**	**21**	*e*P	**Pb**	**21 15 04.9**	**-0.3**
GRTK				*e*S	**Sb**	**21 15 17.0**	**+0.4**
GRTK				IAML		21 15 18.8	
	comp=N,55nm,0.0s						
GRTK				IAML		21 15 22.2	
	comp=N,54nm,0.2s						
GRTK	**Grand Turk**	**0.86**	**21**	*e*Pg	**Pb**	**21 15 05.0**	**-0.3**
GRTK				*e*Sg	**Sb**	**21 15 17.6**	**+1.0**
GRTK				IAML		21 15 21.7	
	comp=N,2µm,0.3s						
GRTK	**Grand Turk**	**0.86**	**21**	*i* P	**Pb**	**21 15 04.9**	**-0.3**
GRTK				*e*S	**Sb**	**21 15 17.6**	**+1.0**
GRTK				IAML		21 15 18.1	
	comp=Z,90nm,1.5s						
LOPP1	**Punta Rusia, P**	**0.88**	**164**	*i* P	**Pn**	**21 15 03.8**	**-0.8**
LOPP1				*e*S	**Sn**	**21 15 16.1**	**-0.1**
LOPP1				IAML		21 15 22.1	
	comp=Z,69nm,3.4s						
LUDR	**Luperon**	**0.93**	**149**	*e*Pg	**Pb**	**21 15 06.5**	**0.0**
LUDR				*e*Sg	**Sb**	**21 15 18.3**	**-0.3**
SDDR	**Presa de Saban**	**1.72**	**175**	*e*P	**Pn**	**21 15 16.6**	**+0.4**
SDDR				*e*S	**Sn**	**21 15 37.5**	**+0.5**
SDDR				IAML		21 15 41.8	
	comp=Z,24nm,0.3s						
SDDR				IAML		21 15 43.1	
	comp=Z,18nm,0.5s						
SDDR	**Presa de Saban**	**1.72**	**175**	*i* P	**Pn**	**21 15 16.7**	**+0.4**
SDDR				*e*S	**Sn**	**21 15 38.1**	**+1.1**
SDDR				IAML		21 15 43.1	
	comp=Z,17nm,0.7s						
MASC	**Masc**	**2.65**	**259**	*e*P	**Pn**	**21 15 29.5**	**+0.5**
MASC				*e*S	**Sn**	**21 16 01.4**	**+1.4**
MASC				IAML		21 16 02.1	
	comp=N,4.3nm,0.1s						
MASC				IAML		21 16 02.1	
	comp=E,3.1nm,0.2s						
MASC	**Masc**	**2.65**	**259**	*i* P	**Pn**	**21 15 29.6**	**+0.6**
MASC				*e*S	**Sn**	**21 16 00.7**	**+0.8**
MASC				IAML		21 16 00.9	
	comp=Z,7.2nm,1.1s						
HATOM	**Hato Mayor del**	**2.73**	**134**	*e*Pg	**Pn**	**21 15 30.3**	**+0.1**
HATOM				*e*Sg	**Sn**	**21 16 00.5**	**-1.6**
HATOM				IAML		21 16 16.1	
	comp=N,48nm,0.3s						
QMBU	**Quimbuelo**	**3.18**	**262**	*e*P	**Pn**	**21 15 35.5**	**-0.9**
QMBU				*e*S	**Sn**	**21 16 13.2**	**+0.1**
QMBU				IAML		21 16 14.6	
	comp=N,7.6nm,0.4s						
QMBU				IAML		21 16 15.3	
	comp=E,6.5nm,0.5s						
GTBY	**Guantanamo Bay**	**3.51**	**258**	*e*S	**Sn**	**21 16 18.4**	**-2.8**
PINC	**Pinares de May**	**4.06**	**268**	*e*P	**Pn**	**21 15 48.4**	**0.0**
PINC				*e*S	**Sn**	**21 16 34.0**	**-0.8**
PINC				IAML		21 16 37.2	
	comp=N,3.1nm,0.0s						
PINC				IAML		21 16 37.8	
	comp=E,2.2nm,0.1s						

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*IDC **15** 21:21:51.9±0.9, 6°.54N×125°.16E, h0^{km}, mb3.8/6, mbtmp3.8/6, MS3.0/5, Error ellipse: s-maj=20.3km s-min=9.1km az=122.0*

*DJA **15** 21:21:53.4±0.7, 7°N±16°×12°5E±°, h23^{km}±23^{km}, M4.6/9, mb4.7/9, mB5.0/4, MLv4.7/7, Mw(mB)4.4/4*

*NEIC **15** 21:21:54.3±1.5, 6°.60N±0°.07×125°.22E±0°.07, h10^{km}±1^{km}, mb4.4/18, Error ellipse: s-maj=17.0km s-min=4.1km az=134.0*

ISC 15 21:21:54.1±0.5**, 6°.64N**±0°.05×**125°.21E**±0°.08**, h10^{km}, n46, σ1^{s}36**/43**, mb4.2**/16**, MS3.0**/3**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.56**	**40**	Pg	**Pg**	**21 22 05.9**	**+0.9**
	498nm,0.3s,baz=235,slow=3.1,SNR=38						
DAV				Lg	Lg	21 22 12.8	
	1µm,0.3s,baz=247,slow=6.2,SNR=20						
DAV				LR	LR	21 22 39.5	
	comp=Z,1µm,19.8s,baz=190,slow=71						
DAV	**Davao City (W)**	**0.56**	**40**		**Pg**	**21 22 05.9**	**+0.9**
DAV				Sg	**Sg**	**21 22 13.6**	**+1.2**
DAV	**Davao City (W)**	**0.56**	**40**	P	**Pg**	**21 22 06.0**	**+0.9**
DAV				S	**Sg**	**21 22 13.8**	**+1.4**
DAV	**Davao City (W)**	**0.56**	**40**	P	**Pg**	**21 22 05.0**	**0.0**
SGSI	**Sangihe**	**2.95**	**174**	P	**Pn**	**21 22 41.2**	**+0.1**
SGSI				S	**Sn**	**21 23 18.8**	**+2.2**
GTOI	**Gorontalo**	**6.36**	**200**	P	**Pn**	**21 23 27.1**	**-0.8**
	0.6nm2µm182nm,0.7s						
GTOI				S	**Sn**	**21 24 39.3**	**-1.4**
	0.6nm2µm182nm,0.7s						
MRSI	**Marisa**	**6.94**	**208**	P	**Pn**	**21 23 35.4**	**-0.5**
	0.4nm844nm69nm,0.6s						
MRSI				S	**Sn**	**21 24 55.3**	**+0.3**
	0.4nm844nm69nm,0.6s						
TOLI2	**Tolitoli**	**7.05**	**219**	Pn	Pn	21 23 35.7	-1.8
LUWI	**Luwuk**	**8.01**	**198**	Pn	**Pn**	**21 23 55.0**	**+4.3**
LUWI	**Luwuk**	**8.01**	**198**	P	**Pn**	**21 23 50.1**	**-0.6**
	671nm65nm,0.7s						
MPSI	**Mapaga**	**8.21**	**220**	P	Pn	21 23 50.9	-2.4
APSI	**Ampana**	**8.30**	**205**	P	Pn	21 23 52.5	-2.2
	42nm,0.7s						
SANI	**Sanana**	**8.67**	**175**	P	**Pn**	**21 23 59.2**	**-0.5**
	17nm,0.8s						
KAPI	**Kappang**	**12.80**	**205**	LR	LR	21 30 14.6	
	comp=Z,45nm,20.8s,baz=60,slow=40						
BATI	**Baumata**	**16.81**	**185**	Pn	**Pn**	**21 25 53.5**	**+3.7**
	2.1nm,0.3s,baz=284,slow=8.9,SNR=3.6						
BATI				LR	LR	21 32 18.0	
	comp=Z,88nm,20.5s,baz=2.0,slow=38						
JAGI	**Jajag, Banyuwa**	**18.63**	**216**	P	**P**	**21 26 12.8**	**+0.8**
JOW	**Kunigami**	**20.29**	**8**	LR	LR	21 33 53.8	
	comp=Z,60nm,19.5s,baz=190,slow=35						
KNRA	**Kununurra**	**22.45**	**171**	P	**P**	**21 26 52.6**	**-0.9**
KNRA				IAmb	IAmb	21 27 03.6	
	comp=Z,9.4nm,0.7s						
FITZ	**Fitzroy Crossi**	**24.59**	**179**	P	**P**	**21 27 13.2**	**-1.4**
JNU	**Nakatsue**	**26.87**	**11**	LR	LR	21 37 37.8	
	comp=Z,40nm,20.1s,baz=278,slow=35						
WB0	**Warramunga Arr**	**27.75**	**161**	P	**P**	**21 27 42.8**	**-0.5**
WB0				IAmb	IAmb	21 28 19.6	
	comp=Z,4.8nm,1.0s						
WRA	**Warramunga Arr**	**27.90**	**161**	P	**P**	**21 27 42.4**	**-2.2**
	comp=Z,0.9nm,0.8s,baz=333,slow=11,SNR=6.4						
	comp=Z,0.9nm,0.8s						
WRA	**Warramunga Arr**	**27.90**	**161**	P	**P**	**21 27 43.1**	**-1.4**
WR8	**Warramunga Arr**	**27.96**	**161**	P	P	21 27 43.0	-2.1
CMAR	**Chiang Mai Arr**	**28.16**	**297**	LR	LR	21 39 04.3	
	comp=Z,23nm,18.9s,baz=85,slow=37						
ASAR	**Alice Springs**	**31.30**	**165**	P	**P**	**21 28 13.2**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=352,slow=8.3,SNR=19						
	comp=Z,0.6nm,0.6s						
ASAR	**Alice Springs**	**31.30**	**165**	P	**P**	**21 28 13.0**	**-1.6**
SHL	**Shillong**	**36.97**	**304**	P	**P**	**21 29 05.2**	**+1.2**
SHL				IAmb	IAmb	21 29 20.3	
	comp=Z,4.6nm,1.0s						
FORT	**Forrest**	**37.31**	**176**	P	**P**	**21 29 05.4**	**-1.2**
FORT				IAmb	IAmb	21 29 21.3	
	comp=Z,4.2nm,0.8s						
NWAO	**Narrogin (SRO)**	**40.08**	**190**	P	**P**	**21 29 30.0**	**+0.2**
NWAO				IAmb	IAmb	21 29 31.4	
	comp=Z,9.6nm,1.0s						
BBOO	**Buckleboo**	**40.57**	**166**	P	**P**	**21 29 32.9**	**-1.0**
BBOO				IAmb	IAmb	21 29 37.5	
	comp=Z,5.2nm,0.5s						
STKA	**Stephens Creek**	**41.37**	**159**	P	**P**	**21 29 39.4**	**-1.1**
	comp=Z,1.6nm,0.6s,baz=350,slow=8.8,SNR=6.3						
	comp=Z,1.6nm,0.6s						
STKA	**Stephens Creek**	**41.37**	**159**	P	**P**	**21 29 39.5**	**-1.1**
SONM	**Songino Array**	**44.08**	**342**	P	**P**	**21 30 01.0**	**-1.5**
MKAR	**Makanchi Array**	**54.32**	**325**	P	**P**	**21 31 20.0**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=126,slow=9.1,SNR=7.9						
	comp=Z,0.7nm,0.7s						
PRZ	**Przheval'sk**	**54.53**	**319**	P	**P**	**21 31 23.2**	**+0.5**
MIDW	**Midway**	**58.26**	**61**	P	**P**	**21 31 48.1**	**-1.1**
KURBB	**Kurchatov Arra**	**58.49**	**327**	P	**P**	**21 31 50.2**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=124,slow=5.9,SNR=12						
	comp=Z,1.6nm,0.8s						
KURK	**Kurchatov**	**58.49**	**327**	P	**P**	**21 31 50.3**	**-0.1**
KURK				IAmb	IAmb	21 31 54.2	
	comp=Z,2.0nm,0.8s						
BVAR	**Borovoye Array**	**64.07**	**327**	P	**P**	**21 32 28.4**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=97,slow=12,SNR=3.3						
	comp=Z,0.7nm,0.5s						
ABKAR	**Akbulak array**	**68.96**	**320**	P	**P**	**21 32 59.4**	**-0.1**
B21K	**Ikpikpuk River**	**80.39**	**20**	P	**P**	**21 34 04.9**	**-0.5**
B21K				IAmb	IAmb	21 34 14.0	
	comp=Z,4.8nm,0.8s						
F21K	**Alatna River**	**80.54**	**23**	P	**P**	**21 34 05.4**	**-1.0**
F21K				IAmb	IAmb	21 34 08.6	
	comp=Z,3.0nm,0.6s						
B22K	**Teshekpuk Lake**	**80.88**	**20**	P	**P**	**21 34 08.8**	**+0.8**
B22K				IAmb	IAmb	21 34 15.1	
	comp=Z,11nm,1.4s						
IL31		**83.14**	**26**	P	**P**	**21 34 19.9**	**-0.2**
ILAR	**Eielson Array**	**83.14**	**26**	P	**P**	**21 34 20.0**	**-0.1**

IDC 15 21:34:19.9±3.4**, 7°.08N×126°.40E, h0^{km}, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=290.1km s-min=28.4km az=66.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.82**	**270**	P	Pn	21 34 40.0	+1.2
WRA	**Warramunga Arr**	**27.96**	**164**	P	P	21 40 12.4	0.0
	0.4nm,0.8s,baz=344,slow=9.4,SNR=1.6						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**31.42**	**167**	P	P	21 40 43.0	0.0
	0.4nm,0.5s,baz=349,slow=9.0,SNR=6.6						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**54.66**	**324**	P	P	21 43 50.6	-0.1
	0.2nm,0.6s,baz=128,slow=8.0,SNR=4.6						
	0.2nm,0.6s						

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*SKHL **15** 21:52:01.5±0.2, 42°.70N×141°.90E, h47^{km}±3^{km}, mb5.1/3*

*NIED **15** 21:52:01.4, 42°.76N×141°.90E, h31^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}3.74; $M_{\theta\theta}$-0.09; $M_{\phi\phi}$-3.65; $M_{r\theta}$0.80; $M_{\theta\phi}$-0.95; $M_{\phi r}$3.01; Fault plane solution: $M_0$4.92000×10^{15} NP1: ϕ_s193.00000°, δ25.00000°, λ89.00000°. NP2: ϕ_s15.00000°, δ65.00000°, λ91.00000°.*

*MOS **15** 21:52:01.9±0.8, 42°.74N×141°.90E, h51^{km}, mb4.7/21 Error ellipse: s-maj=7.1km s-min=5.4km az=95.6*

*JMA **15** 21:52:01.4±0.1, 42°.8N±0°.3×141°.9E±0°.4, h31^{km}±1^{km}, MD4.4/38, MW4.5/38, ISHIKARI DEPRESSION*

JMA Felt III J1 at ISHIKARI DEPRESSION .

*NEIC **15** 21:52:03.3±0.9, 42°.78N±0°.06×141°.9E±0°.1, h45^{km}±7^{km}, mb4.6/182, Error ellipse: s-maj=12.6km s-min=8.2km az=83.0*

*IDC **15** 21:52:04.2±1.2, 42°.82N×141°.84E, h55^{km}±10^{km}, mb4.0/25, mbtmp4.3/32, MS3.7/31, Error ellipse: s-maj=12.7km s-min=8.8km az=129.0*

ISC 15 21:52:02.3±0.4**, 42°.72N**±0°.03×**141°.88E**±0°.03**, h36^{km}**±1^{km}**, h37^{km}:pP-P, n380, σ1^{s}40**/334**, mb4.6**/144**, MS3.8**/32**, 20C-21D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIAM	**Iburiatsuma**	**0.10**	**163**	P	Pn	21 52 06.7	-8.2
JIAM				S	Sn	21 52 11.7	-15
JIAM	**Iburiatsuma**	**0.10**	**163**	A	A	21 52 06.7	
	comp=N,193nm,1.2s,comp=E,437nm,0.7s						
JEW	**Eniwo**	**0.34**	**291**	Pn	**Pn**	**21 52 10.9**	**+0.3**
JEW	**Eniwo**	**0.34**	**291**	⇓P	**Pn**	**21 52 09.6**	**-1.0**
JEW				⇓*e*S	**Sn**	**21 52 15.8**	**-1.5**
JEW	**Eniwo**	**0.34**	**291**	A	A	21 52 09.6	
	comp=N,29nm,2.9s,comp=E,76nm,3.8s						
JBT2	**Biratori 2**	**0.36**	**81**	⇓P	**Pn**	**21 52 09.1**	**-1.7**
JBT2				⇓S	**Sn**	**21 52 15.3**	**-2.2**
JBT2	**Biratori 2**	**0.36**	**81**	A	A	21 52 09.1	
	comp=N,39nm,1.8s,comp=E,114nm,1.2s						
JSHD	**Hidakashinhida**	**0.54**	**125**	⇓P	**Pn**	**21 52 13.1**	**-0.4**
JSHD	**Hidakashinhida**	**0.54**	**125**	A	A	21 52 13.1	
	comp=N,102nm,1.2s,comp=E,112nm,2.4s						
JISS	**Ishikarishitsu**	**0.65**	**329**	⇓P	**Pn**	**21 52 13.8**	**-1.2**
JISS				⇓S	**Sn**	**21 52 23.7**	**-0.3**
JISS	**Ishikarishitsu**	**0.65**	**329**	A	A	21 52 13.8	
	comp=N,153nm,0.9s,comp=E,128nm,0.4s						
JNB	**Noboribetsu**	**0.67**	**248**	⇓P	**Pn**	**21 52 14.1**	**-1.2**
JNB				⇓*e*S	**Sn**	**21 52 23.8**	**-0.8**
JFR	**Furan**	**0.69**	**50**	⇓P	**Pn**	**21 52 13.8**	**-1.7**
JFR	**Furan**	**0.69**	**50**	A	A	21 52 13.8	
	comp=N,19nm,0.9s,comp=E,21nm,2.4s						
JNBK	**Urakawa-nobuka**	**0.78**	**124**	⇓P	**Pn**	**21 52 16.2**	**-0.6**
JNBK	**Urakawa-nobuka**	**0.78**	**124**	A	A	21 52 16.2	
	comp=N,28nm,1.8s,comp=E,27nm,0.7s						
JAB	**Ashibetsu**	**0.82**	**18**	⇓P	**Pn**	**21 52 16.7**	**-0.6**
JAB				⇓*e*S	**Sn**	**21 52 28.9**	**+0.6**
JAB	**Ashibetsu**	**0.82**	**18**	A	A	21 52 16.7	
	comp=N,69nm,1.9s,comp=E,71nm,0.9s						
JHR	**Hokuryu**	**1.03**	**354**	P	**Pn**	**21 52 19.5**	**-0.7**
JHR				*e*S	**Sn**	**21 52 34.1**	**+0.8**
JHR	**Hokuryu**	**1.03**	**354**	A	A	21 52 19.5	
	comp=N,24nm,1.5s,comp=E,23nm,1.1s						
JKB	**Kayabe**	**1.04**	**217**	⇓P	**Pn**	**21 52 19.9**	**-0.4**
JKB				⇓*e*S	**Sn**	**21 52 34.1**	**+0.5**
JKB	**Kayabe**	**1.04**	**217**	A	A	21 52 19.9	
	comp=N,16nm,1.6s,comp=E,16nm,1.7s						
JCH	**Churui**	**1.10**	**95**	⇓P	**Pn**	**21 52 20.1**	**-1.0**
JCH	**Churui**	**1.10**	**95**	A	A	21 52 20.1	
	comp=N,8.0nm,2.1s,comp=E,13nm,2.2s						
JEM	**Erimo**	**1.18**	**126**	P	**Pn**	**21 52 22.3**	**+0.1**
ERM	**Erimo**	**1.18**	**126**	Pn	**Pn**	**21 52 22.8**	**+0.6**
ERM				Sn	**Sn**	**21 52 38.4**	**+1.4**
ERM	**Erimo**	**1.18**	**126**	PN	**Pn**	**21 52 22.8**	**+0.6**
ERM						21 52 38.4	
JSK	**Shakotan**	**1.21**	**302**	A	A	21 52 22.5	
	comp=N,16nm,1.1s,comp=E,19nm,1.3s						
JYM2	**Yakumo 2**	**1.27**	**242**	A	A	21 52 24.0	
	comp=N,16nm,1.5s,comp=E,12nm,0.6s						
JSH	**Shimam**	**1.35**	**267**	A	A	21 52 25.0	
	comp=N,6.0nm,0.8s,comp=E,8.0nm,0.8s						
JOB	**Onbets**	**1.45**	**82**	A	A	21 52 25.9	
	comp=N,13nm,3.2s,comp=E,9.0nm,1.9s						
JOT	**Ohata**	**1.48**	**205**	A	A	21 52 27.1	
	comp=N,2.0nm,0.9s,comp=E,3.0nm,4.3s						
ASAJ	**Asahikawa**	**1.49**	**20**	P	**Pn**	**21 52 27.1**	**+0.6**
	comp=E,380nm,0.5s,baz=232,slow=12,SNR=278						
ASAJ				S	**Sn**	**21 52 45.0**	**+0.3**
	comp=E,528nm,0.4s,baz=351,slow=26,SNR=6.5						
JKA	**Kamikawa-asahi**	**1.49**	**20**	Sn	**Sn**	**21 52 44.8**	**+0.1**
JKA	**Kamikawa-asahi**	**1.49**	**20**	*e*P	**Pn**	**21 52 27.1**	**+0.6**
JAR	**Ashorobuto**	**1.50**	**67**	A	A	21 52 26.5	
	comp=N,8.0nm,1.1s,comp=E,7.0nm,1.7s						
JHST	**Hiyamasetana**	**1.51**	**259**	A	A	21 52 27.4	
	comp=N,7.0nm,5.6s,comp=E,11nm,1.4s						
JAHD	**Aomorihigashid**	**1.51**	**196**	A	A	21 52 27.7	
	comp=N,11nm,0.8s,comp=E,13nm,0.8s						
JSR	**Shiriuchi**	**1.61**	**223**	A	A	21 52 29.1	
	comp=N,4.0nm,3.4s,comp=E,4.0nm,6.7s						
JSS	**Shosan**	**1.68**	**359**	A	A	21 52 29.0	
	comp=N,7.0nm,2.6s,comp=E,6.0nm,3.3s						
JMP	**Maruseppu**	**1.68**	**40**	A	A	21 52 29.0	
	comp=N,6.0nm,4.3s,comp=E,4.0nm,4.6s						
JTKR	**Abashiri--Toko**	**1.94**	**49**	A	A	21 52 32.8	
	comp=N,3.0nm,7.1s,comp=E,3.0nm,1.6s						
JAK	**Akkeshi**	**2.09**	**82**	A	A	21 52 35.2	
	comp=N,5.0nm,3.4s,comp=E,5.0nm,2.7s						
AKK	**Akkeshi**	**2.20**	**81**	*e*P	**Pn**	**21 52 35.0**	**-1.2**
JHHS	**Hirosakihyakuz**	**2.36**	**209**	A	A	21 52 40.0	
	comp=N,8.0nm,4.4s,comp=E,6.0nm,2.3s						
JNSB	**Nemuroshibetsu**	**2.52**	**64**	A	A	21 52 41.2	
	comp=N,13nm,4.1s,comp=E,6.0nm,2.9s						
RUSJ	**Misakicho**	**2.82**	**59**	*e*PN	**Pn**	**21 52 47.2**	**+2.5**
RUSJ				*e*S	**Sn**	**21 53 22.3**	**+4.9**
GLVR	**Golovnino**	**2.85**	**68**	*e*PN	**Pn**	**21 52 45.6**	**+0.5**
GLVR				*e*S	**Sn**	**21 53 19.9**	**+1.7**
GLVR				pmax	pmax		
	comp=Z,128nm,0.3s						
GLVR				pmax	pmax		
	comp=E,111nm,0.2s						
GLVR				smax	smax		
	comp=N,2µm,0.4s						
GLVR				smax	smax		
	comp=E,1µm,0.4s						
GLVR	**Golovnino**	**2.85**	**68**	*e*P	**Pn**	**21 52 45.6**	**+0.5**
GLVR				AMB	AMB	21 52 49.1	
	comp=E,130nm,0.3s						
GLVR				*e*S	**Sn**	**21 53 19.9**	**+1.7**
GLVR				A	A	21 53 22.2	
	comp=E,2µm,0.4s						
GLVR				A	A	21 53 22.2	
	comp=E,1µm,0.4s						
NMR	**Nemuro--Hokkai**	**2.90**	**76**	⇑*i*PN	**Pn**	**21 52 44.3**	**-1.5**
NMR				*i* S	**Sn**	**21 53 16.6**	**-2.7**
NMR	**Nemuro--Hokkai**	**2.90**	**76**	*i* P	**Pn**	**21 52 44.3**	**-1.5**
NMR				*i* S	**Sn**	**21 53 16.6**	**-2.7**
YUK	**Yuzh-Kuril'sk**	**3.19**	**64**	*e*PN	**Pn**	**21 52 51.1**	**+1.3**
YUK				*e*S	**Sn**	**21 53 29.0**	**+2.5**
YUK				pmax	pmax		
	comp=Z,278nm,0.4s						
YUK				pmax	pmax		
	comp=N,162nm,0.2s						
YUK				pmax	pmax		
	comp=E,126nm,0.4s						
YUK				smax	smax		
	comp=E,956nm,0.5s						
YUK				smax	smax		
	comp=N,1µm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.19**	**64**	*e*P	**Pn**	**21 52 50.7**	**+0.9**
YUK				AMB	AMB	21 52 54.8	
	comp=N,280nm,0.3s						
YUK				*e*S	**Sn**	**21 53 26.0**	**-0.5**
YUK				A	A	21 53 36.0	
	comp=N,1µm,0.4s						
YUK				A	A	21 53 36.0	
	comp=N,960nm,0.4s						
YSS	**Yuzhno-Sakhali**	**4.28**	**8**	*e*PN	**Pn**	**21 53 06.0**	**+1.2**
YSS				*e*S	**Sn**	**21 53 55.0**	**+1.6**
YSS				pmax	pmax		
	comp=Z,40nm,0.8s						
YSS				smax	smax		
	comp=N,40nm,0.7s						
YSS				smax	smax		
	comp=E,50nm,0.7s						
YSS				MLR	MLR		
	comp=Z,800nm,10.0s						
YSS	**Yuzhno-Sakhali**	**4.28**	**8**	*e*P	**Pn**	**21 53 06.0**	**+1.2**
YSS				*e*S	**Sn**	**21 53 53.0**	**-0.4**
TEY	**Ternei**	**4.46**	**303**	*e*PN	**Pn**	**21 53 07.4**	**+0.1**
TEY	**Ternei**	**4.46**	**303**	*e*P	**Pn**	**21 53 07.4**	**+0.1**
KUR	**Kuril'sk**	**5.00**	**58**	*e*PN	**Pn**	**21 53 16.4**	**+1.7**
KUR				*e*S	**Sn**	**21 54 16.8**	**+5.7**
KUR				pmax	pmax		
	comp=Z,148nm,0.9s						
KUR				pmax	pmax		
	comp=E,88nm,0.3s						
KUR				pmax	pmax		
	comp=N,80nm,0.5s						
KUR				smax	smax		
	comp=N,154nm,0.5s						
KUR				smax	smax		
	comp=E,151nm,0.5s						
KUR	**Kuril'sk**	**5.00**	**58**	*e*P	**Pn**	**21 53 15.8**	**+1.1**
KUR				AMB	AMB	21 53 25.1	
	comp=E,150nm,0.5s						
KUR				*e*S	**Sn**	**21 54 11.4**	**+0.3**
KUR				A	A	21 54 32.6	
	comp=E,150nm,0.5s						
KUR				A	A	21 54 32.6	
	comp=E,150nm,0.5s						
JSD	**Sado**	**5.43**	**212**		**Pn**	**21 53 22.7**	**+2.0**
MJB9	**Matsu-Tunnel**	**6.79**	**206**		**Pn**	**21 53 42.2**	**+2.9**
MAJO	**Matsushiro**	**6.79**	**206**		**Pn**	**21 53 42.2**	**+2.8**
MAJO	**Matsushiro**	**6.79**	**206**	*i* PN	**Pn**	**21 53 41.6**	**+2.2**
MJAR	**Matsushiro Arr**	**6.79**	**206**	P	**Pn**	**21 53 43.7**	**+4.4**
	comp=E,2.9nm,0.9s,baz=16,slow=16,SNR=8.9						
MJAR				LR	LR	21 56 35.4	
	comp=E,431nm,20.0s,baz=17,slow=40						
MJAR	**Matsushiro Arr**	**6.79**	**206**		**Pn**	**21 53 43.1**	**+3.7**
MJAR	**Matsushiro Arr**	**6.79**	**206**	PN	**Pn**	**21 53 43.1**	**+3.7**
USRK	**Ussuriysk Ar.**	**7.35**	**285**	P	**Pn**	**21 53 49.4**	**+2.4**
	comp=E,2.1nm,0.5s,baz=94,slow=15,SNR=2.1						
TYV	**Tymovskoe**	**8.16**	**3**	*e*PN	**Pn**	**21 54 01.1**	**+3.0**
TYV				*e*S	**Sn**	**21 55 36.0**	**+7.0**
TYV				pmax	pmax		
	comp=Z,16nm,1.1s						
TYV				pmax	pmax		
	comp=Z,100nm,2.3s						
TYV				smax	smax		
	comp=N,20nm,1.0s						
TYV				smax	smax		
	comp=E,20nm,1.0s						
TYV				smax	smax		
	comp=N,400nm,3.2s						
TYV				smax	smax		
	comp=E,300nm,3.2s						
TYV				MLR	MLR		
	comp=Z,800nm,15.0s						
TYV	**Tymovskoe**	**8.16**	**3**	*e*P	**Pn**	**21 53 58.9**	**+0.8**
TYV				*e*S	**Sn**	**21 55 28.0**	**-1.0**
JHJ	**Hachijo jima 2**	**9.73**	**190**	P	**Pn**	**21 54 22.4**	**+2.8**
	comp=Z,232nm,0.9s,baz=66,slow=20,SNR=2.0						
BNX	**BinXian**	**10.82**	**291**	⇑P	Pn	21 54 40.4	+5.9
BNX				pmax	pmax		
	comp=Z,9.0nm,0.9s						
OKH	**Okha**	**10.86**	**3**	*e*P	**Pn**	**21 54 35.9**	**+0.9**
KSRS	**Korea Array**	**11.91**	**248**	P	**Pn**	**21 54 52.2**	**+2.8**
	comp=Z,1.7nm,0.9s,baz=64,slow=12,SNR=6.3						
CN2	**Changchun**	**12.03**	**281**	*e*P	**Pn**	**21 54 51.3**	**+0.2**
CN2				*e*S	**Sn**	**21 57 05.3**	**+1.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,100nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,15.0s						
CN2				LR	LR		
	comp=E,700nm,15.0s						
CN2				LR	LR		
	comp=Z,1µm,16.6s						
HEH	**HeiHe**	**12.48**	**312**	*e*P	**Pn**	**21 55 01.1**	**+3.9**
HEH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HEH				LR	LR		
	comp=N,450nm,18.0s						
HEH				LR	LR		
	comp=E,350nm,17.6s						
HEH				LR	LR		
	comp=Z,560nm,17.1s						
ZEA	**Zeya**	**14.68**	**324**	*e*P	**Pn**	**21 55 29.2**	**+2.1**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,300nm,13.0s						
ZEA	**Zeya**	**14.68**	**324**	*e*P	**Pn**	**21 55 25.2**	**-1.9**
PETK	**Petropavlovsk-**	**14.81**	**40**	P	**Pn**	**21 55 30.4**	**+1.5**
	comp=Z,3.6nm,0.6s,baz=194,slow=8.5,SNR=6.3						
PETK				LR	LR	22 01 03.9	
	comp=Z,385nm,20.4s,baz=216,slow=37						
JCJ	**Chichijima**	**15.59**	**179**	LR	LR	22 02 42.6	
	comp=Z,41nm,21.4s,baz=1.5,slow=41						
HILR	**Hailar Array B**	**16.75**	**302**	P	**Pn**	**21 55 54.6**	**+0.6**
	comp=Z,6.2nm,0.7s,baz=111,slow=8.1,SNR=6.9						
HILR				LR	LR	22 02 40.0	
	comp=Z,322nm,18.9s,baz=65,slow=38						
MA2	**Magadan**	**17.74**	**15**	P	**P**	**21 56 06.6**	**-0.2**
	comp=Z,22nm,0.8s,baz=205,slow=11,SNR=15						
MA2				LR	LR	22 03 21.6	
	comp=Z,153nm,18.2s,baz=192,slow=38						
MA2	**Magadan**	**17.74**	**15**		**Pn**	**21 56 05.7**	**-0.5**
MA2	**Magadan**	**17.74**	**15**	*ce*P	**Pn**	**21 56 05.1**	**-1.1**
MA2				pmax	pmax		
	comp=Z,20nm,1.0s						
MA2	**Magadan**	**17.74**	**15**	*e*P	**Pn**	**21 56 05.1**	**-1.1**
MA2	**Magadan**	**17.74**	**15**	P	**Pn**	**21 56 05.2**	**-1.0**
	comp=Z,33nm,0.9s						
JOW	**Kunigami**	**19.35**	**219**	LR	LR	22 03 43.8	
	comp=Z,98nm,19.7s,baz=346,slow=36						
BJI	**Beijing**	**19.45**	**271**	P	**P**	**21 56 25.9**	**+0.3**
BJI				pP	**pP**	**21 56 36.0**	**+0.8**
BJI				sP	**sP**	**21 56 42.8**	**+3.1**
BJI				PP	**PnPn**	**21 56 44.5**	**+4.0**
BJI				S	**S**	**21 59 57.6**	**-5.8**
BJI				PcP	**PcP**	**22 00 46.3**	**+0.7**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BJI				pmax	pmax		
	comp=Z,67nm,5.7s						
BJI				LR	LR		
	comp=N,91nm,16.0s						
BJI				LR	LR		
	comp=E,100nm,17.0s						
BJI				LR	LR		
	comp=Z,140nm,19.1s						
BJT	**Baijiatuau**	**19.46**	**271**		**P**	**21 56 26.1**	**+0.3**
BJT	**Baijiatuau**	**19.46**	**271**	P	**P**	**21 56 26.1**	**+0.3**

BJT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
YAK	**Yakutsk**	**20.66**	**344**	P	**P**	**21 56 38.0**	**-0.5**
	comp=Z,14nm,0.7s,baz=160,slow=1.4,SNR=11						
YAK				LR	LR	22 05 00.5	
	comp=Z,223nm,19.0s,baz=120,slow=38						
	comp=Z,14nm,0.7s						
YAK	**Yakutsk**	**20.66**	**344**		**P**	**21 56 38.2**	**-0.3**
YAK				IAmb	IAmb	21 56 42.6	
	comp=Z,19nm,0.8s						
YAK	**Yakutsk**	**20.66**	**344**	*e*P	**P**	**21 56 38.1**	**-0.4**
YAK				*e*		21 56 55.5	
YAK				*e*S	**S**	**22 00 26.8**	**-0.2**
YAK				e*SS	**sS**	**22 00 45.0**	**+3.4**
YAK				pmax	pmax		
	comp=Z,30nm,1.4s						
YAK				pmax	pmax		
	comp=N,27nm,1.4s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,94nm,3.4s						
YAK				pmax	pmax		
	comp=N,45nm,2.8s						
YAK				pmax	pmax		
	comp=E,38nm,2.8s						
YAK				smax	smax		
	comp=N,72nm,4.3s						
YAK				smax	smax		
	comp=E,31nm,3.9s						
YAK	**Yakutsk**	**20.66**	**344**	*e*P	**P**	**21 56 38.1**	**-0.4**
NJ2	**Nanjing**	**21.11**	**247**	⇓P	**P**	**21 56 45.4**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
SEY	**Seymchan**	**21.16**	**13**	P	**P**	**21 56 42.7**	**-1.3**
	comp=Z,17nm,0.9s,baz=204,slow=8.2,SNR=40						
SEY				LR	LR	22 05 33.0	
	comp=Z,143nm,19.2s,baz=211,slow=38						
	comp=Z,17nm,0.9s						
SEY	**Seymchan**	**21.16**	**13**	*e*P	**P**	**21 56 41.4**	**-2.6**
SEY				pmax	pmax		
	comp=Z,25nm,1.2s						
HNS	**HongShan**	**21.42**	**265**	⇓P	**P**	**21 56 51.3**	**+4.4**
HNS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HNS				LR	LR		
	comp=N,140nm,13.9s						
HNS				LR	LR		
	comp=E,310nm,14.5s						
HNS				LR	LR		
	comp=Z,240nm,14.5s						
HHC	**Hu-ho-hao-te**	**22.63**	**276**	*e*P	**P**	**21 57 00.5**	**+0.5**
HHC				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,81nm,5.7s						
SHEM	**Shemya Is, Ala**	**23.69**	**54**	LR	LR	22 06 49.6	
	comp=Z,66nm,20.6s,baz=308,slow=37						
LYN	**LuoYang**	**24.29**	**260**	*e*P	**P**	**21 57 14.6**	**-1.5**
LYN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ULN	**Ulaanbaatar**	**24.89**	**294**	*ce*P	**P**	**21 57 21.7**	**0.0**
ULN				pmax	pmax		
	comp=Z,9.0nm,2.5s						
SONM	**Songino Array**	**25.34**	**294**	P	**P**	**21 57 24.6**	**-1.1**
	comp=Z,3.4nm,0.7s,baz=82,slow=8.8,SNR=13						
SONM				LR	LR	22 08 07.0	
	comp=Z,260nm,20.5s,baz=106,slow=38						
	comp=Z,3.4nm,0.7s						
XAN	**Xi'an**	**27.11**	**262**	P	**P**	**21 57 41.4**	**-0.4**
XAN				pP	pP	21 57 53.3	+1.2
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GUMO	**Guam**	**29.14**	**174**	LR	LR	22 09 08.3	
	comp=Z,115nm,21.7s,baz=20,slow=35						
TIXI	**Tiksi**	**29.70**	**352**	LR	LR	22 09 44.7	
	comp=Z,58nm,20.4s,baz=196,slow=36						
GTA	**Gaotai**	**31.65**	**278**	*e*P	**P**	**21 58 22.4**	**+0.3**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
GTA				LR	LR		
	comp=N,180nm,16.7s						
GTA				LR	LR		
	comp=E,180nm,18.9s						
GTA				LR	LR		
	comp=Z,230nm,18.2s						
QIZ	**Qiongzhong**	**35.90**	**239**	P	**P**	**21 58 59.3**	**+0.3**
QIZ				sP	**sP**	**21 59 15.8**	**+2.1**
QIZ				S	**S**	**22 04 36.3**	**+1.7**
QIZ				LR	LR		
	comp=N,200nm,12.3s						
QIZ				LR	LR		
	comp=E,260nm,10.5s						
QIZ				LR	LR		
	comp=Z,230nm,14.4s						
PZH	**PanZhiHua**	**36.40**	**257**	P	**P**	**21 59 04.0**	**+0.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GOMU	**GeErMu**	**36.53**	**276**	P	**P**	**21 59 04.0**	**-0.7**
GOMU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GOMU				LR	LR		
	comp=N,190nm,15.9s						
GOMU				LR	LR		
	comp=E,170nm,15.1s						
GOMU				LR	LR		
	comp=Z,240nm,18.4s						
C16K	**Lisburne Hills**	**37.50**	**29**	P	**P**	**21 59 10.8**	**-1.3**
DGZ	**Jazzator, Alta**	**37.60**	**300**	*i* P	**P**	**21 59 13.3**	**-0.1**
DGZ				pmax	pmax		
	comp=Z,13nm,1.8s						
SLVN	**Son La**	**38.18**	**248**		**P**	**21 59 19.1**	**+0.7**
DAV	**Davao City (W)**	**38.31**	**207**	LR	LR	22 13 31.5	
	comp=Z,65nm,20.3s,baz=29,slow=34						
NRIK	**Noril'sk**	**38.33**	**332**	LR	LR	22 15 59.9	
	comp=Z,238nm,19.4s,baz=106,slow=38						
ZAA0	**Zalesovo Array**	**38.55**	**307**		**P**	**21 59 20.5**	**-0.6**
ZAA0				IAmb	IAmb	21 59 21.6	
	comp=Z,11nm,1.4s						
ZALV	**Zalesovo Beam**	**38.55**	**307**	P	**P**	**21 59 20.3**	**-0.8**
	comp=Z,1.9nm,0.6s,baz=82,slow=8.6,SNR=12						
ZALV				PcP	**PcP**	**22 01 31.3**	**-1.8**
	comp=Z,0.9nm,0.7s,baz=108,slow=2.6,SNR=2.8						
ZALV				ScP	**S**	**22 05 16.2**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=56,slow=5.4,SNR=1.7						
ZALV				LR	LR	22 16 12.9	
	comp=Z,99nm,19.2s,baz=38,slow=38						
	comp=Z,1.9nm,0.6s						
ZALV	**Zalesovo Beam**	**38.55**	**307**		**P**	**21 59 20.0**	**-1.1**
ZALV	**Zalesovo Beam**	**38.55**	**307**	*i* P	**P**	**21 59 20.7**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WMQ	**Urumqi**	**38.87**	**291**	*e*P	**P**	**21 59 25.5**	**+1.5**
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				LR	LR		
	comp=Z,210nm,14.7s						
E18K	**Tukpahlearik C**	**39.07**	**31**		**P**	**21 59 24.7**	**-0.6**
G18K	**Tagagawik**	**39.64**	**34**		**P**	**21 59 29.1**	**-1.0**
G18K				IAmb	IAmb	21 59 30.3	
	comp=Z,6.9nm,0.8s						
F19K	**Shaleruckik Mo**	**40.09**	**32**		**P**	**21 59 33.1**	**-0.6**
E19K	**Redstone River**	**40.37**	**31**		**P**	**21 59 35.4**	**-0.7**
E19K				IAmb	IAmb	21 59 36.3	
	comp=Z,9.1nm,0.8s						
H19K	**Roundabout Mou**	**40.52**	**34**	P	**P**	**21 59 37.1**	**-0.2**
H19K				IAmb	IAmb	21 59 37.5	
	comp=Z,10nm,0.8s						
J20K	**Nowinta River**	**41.47**	**36**		**P**	**21 59 45.0**	**-0.2**
J20K				IAmb	IAmb	21 59 45.7	
	comp=Z,8.8nm,0.8s						
B21K	**Ikpikpuk River**	**41.56**	**28**	P	**P**	**21 59 45.0**	**-0.8**
B21K				IAmb	IAmb	21 59 45.6	
	comp=Z,10nm,0.8s						
MK31	**Makanchi Array**	**41.63**	**297**	*ce*P	**P**	**21 59 46.7**	**-0.1**
MKAR	**Makanchi Array**	**41.63**	**297**	P	**P**	**21 59 46.5**	**-0.3**
	comp=Z,4.2nm,0.8s,baz=80,slow=9.1,SNR=40						
MKAR				PcP	**PcP**	**22 01 42.3**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=88,slow=4.1,SNR=5.1						
MKAR				LR	LR	22 18 35.4	
	comp=Z,93nm,18.9s,baz=16,slow=38						
	comp=Z,4.2nm,0.8s						
G21K	**Allakaket**	**41.76**	**33**		**P**	**21 59 47.1**	**-0.5**
G21K				IAmb	IAmb	21 59 49.2	
	comp=Z,8.1nm,0.8s						
MAKZ	**Makanchi**	**41.83**	**297**		**P**	**21 59 48.2**	**-0.2**
MAKZ	**Makanchi**	**41.83**	**297**	P	**P**	**21 59 48.2**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
D22K	**Ayikyak River**	**42.18**	**29**	P	**P**	**21 59 50.1**	**-0.8**
E22K	**Anaktuvuk Pass**	**42.47**	**31**		**P**	**21 59 52.4**	**-0.9**
E22K				IAmb	IAmb	21 59 53.0	
	comp=Z,7.0nm,0.7s						
H22K	**Ishtalitna Cre**	**42.62**	**34**	P	**P**	**21 59 54.5**	**-0.1**
KDAK	**Kodiak Island**	**42.75**	**46**	LR	LR	22 19 34.3	
	comp=Z,72nm,18.2s,baz=261,slow=39						
KURK	**Kurchatov**	**42.90**	**303**		**P**	**21 59 56.4**	**-0.6**
KURK				IAmb	IAmb	21 59 58.2	
	comp=Z,8.8nm,0.8s						
KURK	**Kurchatov**	**42.90**	**303**	*ce*P	**P**	**21 59 56.7**	**-0.3**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KURK	**Kurchatov**	**42.90**	**303**	*e*P	**P**	**21 59 56.7**	**-0.3**
KTH	**Kantishna Hill**	**42.92**	**37**	P	**P**	**21 59 57.3**	**+0.1**
KTH				IAmb	IAmb	21 59 58.0	
	comp=Z,13nm,0.8s						
KURBB	**Kurchatov Arra**	**42.97**	**303**	P	**P**	**21 59 57.2**	**-0.4**
	comp=Z,8.4nm,0.6s,baz=76,slow=8.8,SNR=47						
KURBB				PcP	**PcP**	**22 01 44.9**	**-2.6**
	comp=Z,0.8nm,0.8s,baz=68,slow=3.2,SNR=3.1						
	comp=Z,8.4nm,0.6s						
COLD	**Coldfoot**	**43.07**	**32**	P	**P**	**21 59 57.5**	**-0.7**
G23K	**Bananza Creek**	**43.15**	**33**		**P**	**21 59 58.0**	**-0.9**
E23K	**Chandalar**	**43.29**	**31**		**P**	**21 59 59.0**	**-1.0**
E23K				IAmb	IAmb	22 00 00.3	
	comp=Z,15nm,1.4s						
CHTO	**Chiang Mai**	**43.30**	**250**	P	**P**	**22 00 01.2**	**+0.5**
CHTO	**Chiang Mai**	**43.30**	**250**	P	**P**	**22 00 01.2**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TOLK	**Toolik Lake Re**	**43.30**	**30**	P	**P**	**21 59 59.3**	**-0.8**
H23K	**Yukon River**	**43.38**	**34**	P	**P**	**22 00 00.1**	**-0.6**
H23K				IAmb	IAmb	22 00 01.4	
	comp=Z,6.1nm,0.7s						
CM31	**Chiang Mai Arr**	**43.55**	**250**	P	**P**	**22 00 02.2**	**-0.4**
CM31				IAmb	IAmb	22 00 18.4	
	comp=Z,6.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**43.55**	**250**	P	**P**	**22 00 02.2**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=43,slow=7.8,SNR=11						
CMAR				LR	LR	22 19 33.5	
	comp=Z,151nm,18.1s,baz=60,slow=38						
	comp=Z,1.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**43.55**	**250**	*i* P	**P**	**22 00 04.0**	**+1.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
C24K	**Franklin Bluff**	**43.62**	**28**	P	**P**	**22 00 01.5**	**-1.1**
C24K				IAmb	IAmb	22 00 02.0	
	comp=Z,8.8nm,0.9s						
NEA2	**Nenana**	**43.66**	**36**	P	**P**	**22 00 02.7**	**-0.3**
NEA2				IAmb	IAmb	22 00 03.7	
	comp=Z,10nm,0.8s						
E24K	**Your Creek**	**43.71**	**31**	P	**P**	**22 00 02.5**	**-0.9**
F24K	**Squaw Lake**	**43.96**	**31**		**P**	**22 00 04.5**	**-0.9**
SHL	**Shillong**	**44.11**	**264**		**P**	**22 00 07.1**	**-0.2**
COLA	**College**	**44.15**	**35**	P	**P**	**22 00 06.3**	**-0.6**
COLA	**College**	**44.15**	**35**	P	**P**	**22 00 07.0**	**+0.1**
DHY	**Denali Highway**	**44.56**	**38**	P	**P**	**22 00 10.0**	**-0.4**
DHY				IAmb	IAmb	22 00 10.4	
	comp=Z,9.8nm,0.7s						
ILAR	**Eielson Array**	**44.57**	**35**	P	**P**	**22 00 09.3**	**-1.0**
	comp=Z,5.5nm,0.8s,baz=274,slow=7.4,SNR=50						
ILAR				LR	LR	22 19 23.2	
	comp=Z,61nm,19.0s,baz=212,slow=37						
	comp=Z,5.5nm,0.8s						
E25K	**Arctic Village**	**44.80**	**30**		**P**	**22 00 11.9**	**-0.2**
F25K	**Christian Rive**	**44.81**	**31**	P	**P**	**22 00 12.1**	**-0.2**
C27K	**Jago River**	**45.37**	**28**	P	**P**	**22 00 15.9**	**-0.7**
C27K				IAmb	IAmb	22 00 16.5	
	comp=Z,6.2nm,0.8s						
F26K	**Sheenjek River**	**45.38**	**31**		**P**	**22 00 16.3**	**-0.4**
F26K				IAmb	IAmb	22 00 17.7	
	comp=Z,6.7nm,0.9s						
G26K	**Porcupine Rive**	**45.60**	**32**		**P**	**22 00 18.3**	**-0.1**
G26K				IAmb	IAmb	22 00 19.0	
	comp=Z,7.8nm,0.8s						
WUS	**Wushi**	**45.66**	**290**	IAmb	IAmb	22 00 20.2	
	comp=Z,8.3nm,0.7s						
SCRK	**Sand Creek**	**45.93**	**36**		**P**	**22 00 20.2**	**-1.0**
SCRK				IAmb	IAmb	22 00 20.8	
	comp=Z,8.7nm,0.7s						
M26K	**Nabesna, AK**	**46.66**	**38**	P	**P**	**22 00 27.0**	**+0.1**
K27K	**Chicken**	**46.75**	**36**	P	**P**	**22 00 27.2**	**-0.3**
K27K				IAmb	IAmb	22 00 28.1	
	comp=Z,5.8nm,0.7s						
E28M	**Babbage River**	**46.97**	**29**	P	**P**	**22 00 28.4**	**-0.8**
E28M				IAmb	IAmb	22 00 29.2	
	comp=Z,4.8nm,0.9s						
L27K	**Beaver Creek,**	**47.05**	**37**	P	**P**	**22 00 30.4**	**+0.5**
L27K				IAmb	IAmb	22 00 31.1	
	comp=Z,6.6nm,0.8s						
BVAR	**Borovoye Array**	**47.15**	**309**	P	**P**	**22 00 30.6**	**-0.2**
	comp=Z,3.4nm,0.6s,baz=78,slow=9.5,SNR=14						
	comp=Z,3.4nm,0.6s						
BORK	**Borovoye**	**47.19**	**309**	*i* P	**P**	**22 00 30.7**	**-0.4**
BORK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
I28M	**Miner Creek**	**47.38**	**34**		**P**	**22 00 32.4**	**-0.1**
I28M				IAmb	IAmb	22 00 33.4	
	comp=Z,6.8nm,0.8s						
E29M	**Blow River**	**47.60**	**30**		**P**	**22 00 33.9**	**-0.2**
E29M				IAmb	IAmb	22 00 37.5	
	comp=Z,5.3nm,1.1s						
AAK	**Ala-Archa**	**48.29**	**294**	LR	LR	22 23 04.3	
	comp=Z,152nm,19.4s,baz=34,slow=39						
EPYK	**Eagle Plains**	**48.47**	**32**	P	**P**	**22 00 40.7**	**-0.1**
G30M	**tAoh Zraii Nji**	**48.52**	**31**	P	**P**	**22 00 40.7**	**-0.5**
G30M				IAmb	IAmb	22 00 43.3	
	comp=Z,5.3nm,0.8s						
F30M	**Barrier River**	**48.54**	**30**		**P**	**22 00 41.3**	**0.0**
KSH	**Kashi**	**48.62**	**290**	P	**P**	**22 00 43.3**	**+0.8**
KSH				pmax	pmax		
	comp=Z,3.0nm,1.5s						
L29M	**L29M**	**48.68**	**37**		**P**	**22 00 42.7**	**+0.2**
K29M	**Barlow Dome**	**48.75**	**36**	P	**P**	**22 00 43.1**	**-0.1**
K29M				IAmb	IAmb	22 00 44.2	
	comp=Z,4.4nm,0.7s						
I30M	**Mount Dempster**	**48.88**	**34**		**P**	**22 00 44.0**	**-0.1**
INK	**Inuvik**	**49.21**	**29**	IAmb	IAmb	22 00 47.7	
	comp=Z,15nm,1.5s						
H31M	**Peel River**	**49.55**	**33**		**P**	**22 00 49.1**	**0.0**
H31M				IAmb	IAmb	22 00 49.7	
	comp=Z,6.7nm,0.7s						
HYT	**Haines Junctio**	**49.60**	**39**		**P**	**22 00 49.9**	**+0.2**
ARSB	**Arslanbob**	**49.87**	**293**		**P**	**22 00 52.1**	**0.0**
ARSB	**Arslanbob**	**49.87**	**293**	P	**P**	**22 00 52.1**	**0.0**
ARSB				pmax	pmax		
	comp=Z,11nm,0.6s						
KK31	**Karatay Array**	**50.75**	**296**	IAmb	IAmb	22 00 58.7	
	comp=Z,3.6nm,0.7s						
KKAR	**Karatay Array**	**50.75**	**296**		**P**	**22 00 58.1**	**-0.4**
KKAR	**Karatay Array**	**50.75**	**296**	P	**P**	**22 00 58.1**	**-0.4**
A36M	**Sachs Harbour**	**50.88**	**24**		**P**	**22 00 58.6**	**-0.4**
SVE	**Sverdlovsk**	**51.22**	**316**	*e*P	**P**	**22 01 01.9**	**+0.1**
PMG	**Port Moresby**	**52.10**	**173**	LR	LR	22 20 11.3	
	comp=Z,22nm,21.8s,baz=340,slow=32						
C36M	**Paulatuk**	**52.16**	**27**		**P**	**22 01 07.7**	**-0.9**
C36M				IAmb	IAmb	22 01 08.2	
	comp=Z,6.2nm,0.8s						
MANEM	**Manem**	**52.51**	**290**		**P**	**22 01 12.0**	**-0.1**
MANEM				IAmb	IAmb	22 01 13.6	
	comp=Z,5.4nm,0.8s						
ARTI	**Arti**	**52.54**	**316**	LR	LR	22 26 30.9	
	comp=Z,180nm,18.4s,baz=41,slow=39						
ARTI	**Arti**	**52.54**	**316**	*c i*P	**P**	**22 01 12.0**	**+0.4**
ARTI						22 02 20.5	
ARTI						22 03 08.0	
ARTI				S	**S**	**22 08 36.8**	**+1.2**
ARTI				SS	**SS**	**22 12 06.9**	**-6.5**
ARTI				pmax	pmax		
	comp=Z,11nm,1.9s						
GAR	**Garm**	**52.75**	**292**	P	**P**	**22 01 13.0**	**-0.6**
GAR				IAmb	IAmb	22 01 32.6	
	comp=Z,7.7nm,1.1s						
CHGR	**Chuyangaron**	**53.71**	**292**		**P**	**22 01 20.2**	**-0.4**
CHGR	**Chuyangaron**	**53.71**	**292**	P	**P**	**22 01 20.2**	**-0.4**
CHGR				pmax	pmax		
	comp=Z,17nm,0.7s						
DLBC	**Dease Lake**	**54.00**	**41**	LR	LR	22 25 08.6	
	comp=Z,56nm,19.3s,baz=291,slow=37						
AB31	**Akbulak array**	**54.66**	**307**		**P**	**22 01 26.7**	**-0.6**
ABKAR	**Akbulak array**	**54.66**	**307**		**P**	**22 01 26.8**	**-0.5**
SHAA	**Shahritus**	**54.96**	**291**		**P**	**22 01 29.2**	**-0.5**
SHAA				IAmb	IAmb	22 01 30.0	
	comp=Z,9.1nm,0.6s						
KIRV	**Kirov**	**56.00**	**321**	*ce*P	**P**	**22 01 37.3**	**+0.6**
YKA	**Yellowknife Ar**	**58.75**	**32**	P	**P**	**22 01 55.7**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=305,slow=7.3,SNR=28						
	comp=Z,2.4nm,0.8s						
ARCES	**ARCESS Array B**	**58.83**	**338**	LR	LR	22 30 10.6	
	comp=Z,130nm,18.5s,baz=272,slow=39						
KLMR	**Klimovskoe**	**59.19**	**326**	*e*P	**P**	**22 01 56.3**	**-2.8**
KLMR				e*PP	**pP**	**22 02 11.3**	**+1.2**
KLMR				pmax	pmax		
	comp=Z,17nm,1.8s						
BELG	**Belogornoye**	**59.95**	**315**	LR	LR	22 30 51.7	
	comp=Z,138nm,19.9s,baz=342,slow=39						
BELG	**Belogornoye**	**59.95**	**315**	*i* P	**P**	**22 02 03.0**	**-1.5**
BELG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WB0	**Warramunga Arr**	**62.56**	**188**	P	**P**	**22 02 22.2**	**-0.2**
WB0				IAmb	IAmb	22 02 22.4	
	comp=Z,3.7nm,0.7s						
CTA	**Charters Tower**	**62.62**	**175**	LR	LR	22 27 02.5	
	comp=Z,26nm,21.6s,baz=38,slow=34						
WRA	**Warramunga Arr**	**62.74**	**188**	P	**P**	**22 02 23.0**	**-0.6**
	comp=Z,1.7nm,0.5s,baz=5.2,slow=6.9,SNR=8.7						
	comp=Z,1.7nm,0.5s						
OBN	**Obninsk**	**63.80**	**322**	⇑*e*P	**P**	**22 02 31.0**	**+0.7**
OBN				e*PP	**sP**	**22 02 43.9**	**-1.7**
OBN				*SP	pP	22 02 50.0	+8.6
OBN				*e*		22 03 00.8	
OBN						22 04 53.0	
OBN				S	S	22 11 14.0	+12
OBN				pmax	pmax		
	comp=Z,23nm,1.9s						
OBN				MLR	MLR		
	comp=Z,175nm,14.0s						
OBN	**Obninsk**	**63.80**	**322**	*e*P	**P**	**22 02 31.0**	**+0.7**
FINES	**FINESS Array B**	**63.98**	**331**	P	**P**	**22 02 30.1**	**-1.3**
	comp=Z,2.3nm,0.7s,baz=49,slow=7.9,SNR=13						
FINES				LR	LR	22 31 55.9	
	comp=Z,250nm,18.6s,baz=305,slow=37						
	comp=Z,2.3nm,0.7s						
BLKN	**Baker Lake**	**64.04**	**24**	P	**P**	**22 02 31.1**	**-0.7**
BLKN				IAmb	IAmb	22 02 31.7	
	comp=Z,7.0nm,0.9s						
LON	**Longmire**	**64.21**	**49**	P	**P**	**22 02 33.0**	**-0.3**
LON				IAmb	IAmb	22 02 45.8	
	comp=Z,9.0nm,1.2s						
LON	**Longmire**	**64.21**	**49**	P	**P**	**22 02 33.0**	**-0.3**
LON				pmax	pmax		
	comp=Z,9.0nm,1.2s						
B08A	**Colville Reser**	**64.62**	**47**		**P**	**22 02 34.9**	**-1.0**
SUMG	**Summit**	**65.00**	**0**	IAmb	IAmb	22 02 40.0	
	comp=Z,7.2nm,0.8s						
EPH	**Ephrata**	**65.08**	**48**	P	**P**	**22 02 38.4**	**-0.5**
EPH				IAmb	IAmb	22 02 39.3	
	comp=Z,6.0nm,0.9s						
HOOD	**Mount Hood Mea**	**65.14**	**51**	P	**P**	**22 02 39.0**	**-0.5**
MXC	**Moxie City**	**65.16**	**49**	P	**P**	**22 02 39.2**	**-0.2**
MXC				IAmb	IAmb	22 02 40.6	
	comp=Z,9.0nm,1.0s						
H04A	**Detroit Lake**	**65.20**	**51**	P	**P**	**22 02 39.4**	**-0.4**
E07A	**Sunnyside**	**65.41**	**49**	P	**P**	**22 02 40.2**	**-0.9**
C09A	**Chrisman Ranch**	**65.53**	**47**		**P**	**22 02 41.1**	**-0.6**
C09A				IAmb	IAmb	22 02 42.5	
	comp=Z,8.2nm,0.8s						
D08A	**Wollman Farm,**	**65.62**	**48**	P	**P**	**22 02 42.1**	**-0.3**
HAWA	**Hanford**	**65.69**	**49**	P	**P**	**22 02 42.6**	**-0.2**
HAWA				IAmb	IAmb	22 02 43.9	
	comp=Z,7.7nm,0.8s						
F07A	**Phinny Hill Vi**	**65.77**	**49**	P	**P**	**22 02 42.7**	**-0.6**
NEW	**Newport**	**65.86**	**46**		**P**	**22 02 43.5**	**-0.5**
NEW				IAmb	IAmb	22 02 45.2	
	comp=Z,5.5nm,0.9s						
NEW	**Newport**	**65.86**	**46**	P	**P**	**22 02 43.5**	**-0.5**
NEW				pmax	pmax		
	comp=Z,6.0nm,1.0s						
J04A	**Umpqua Nationa**	**66.11**	**53**	P	**P**	**22 02 45.1**	**-0.8**
YPT	**Yellepit**	**66.21**	**49**	P	**P**	**22 02 45.9**	**-0.3**
E09A	**Wood Farm, Sta**	**66.38**	**48**		**P**	**22 02 47.0**	**-0.2**
PINE	**Pine Mountain**	**66.46**	**52**		**P**	**22 02 47.2**	**-0.8**
AS31	**Alice Springs**	**66.46**	**188**		**P**	**22 02 48.2**	**+0.3**
ASAR	**Alice Springs**	**66.46**	**188**	P	**P**	**22 02 48.0**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=11,slow=5.8,SNR=16						
	comp=Z,1.5nm,0.8s						
LNOR	**Lincton Mounta**	**66.69**	**49**	P	**P**	**22 02 48.7**	**-0.6**
LNOR				IAmb	IAmb	22 02 50.5	
	comp=Z,2.6nm,0.7s						
K05A	**Summer Lake**	**67.13**	**53**	P	**P**	**22 02 52.5**	**+0.1**
KIV	**Kislovodsk**	**67.51**	**310**		**P**	**22 02 54.4**	**-0.2**
KIV	**Kislovodsk**	**67.51**	**310**	⇓P	**P**	**22 02 54.8**	**+0.2**
KIV	**Kislovodsk**	**67.51**	**310**	*e*P	**P**	**22 02 54.0**	**-0.6**
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
KIV	**Kislovodsk**	**67.51**	**310**	*e*P	**P**	**22 02 54.0**	**-0.6**
KBZ	**Khabaz**	**67.53**	**309**	P	**P**	**22 02 54.1**	**-0.4**
	comp=Z,4.0nm,0.8s,baz=50,slow=5.0,SNR=9.5						
	comp=Z,4.0nm,0.8s						
KBZ	**Khabaz**	**67.53**	**309**	*ce*P	**P**	**22 02 55.8**	**+1.2**
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BMO	**Blue Mountains**	**67.86**	**49**	IAmb	IAmb	22 02 57.8	
	comp=Z,3.5nm,0.7s						
MNK	**Minsk**	**68.02**	**325**	*i* P	**P**	**22 02 57.3**	**-0.2**
MNK				i *PP	**pP**	**22 03 10.3**	**+1.7**
MNK				i *SP	**sP**	**22 03 17.2**	**+4.4**
MNK				*i*		22 05 28.2	
MNK				*i* PPP	PPP	22 07 07.4	
MNK				*i* S	**S**	**22 11 54.1**	**+0.2**
MNK				i *SS	sS	22 12 19.9	+8.0
MNK				*i* SS	**SS**	**22 16 18.3**	**+2.8**
MNK				pmax	pmax		
	comp=Z,17nm,0.8s						
MNK				pmax	pmax		
	comp=E,18nm,1.2s						
MNK				pmax	pmax		
	comp=N,9.0nm,0.8s						
MNK				MLR	MLR		
	comp=E,115nm,14.0s						
MNK				MLR	MLR		
	comp=Z,163nm,12.0s						
MNK				MLR	MLR		
	comp=N,193nm,19.0s						
J08A	**Circle Bar Ran**	**68.14**	**51**	IAmb	IAmb	22 03 00.3	
	comp=Z,4.8nm,0.8s						
DZM	**Mont Dzumac**	**68.34**	**155**	*e*LR	LR	22 23 48.4	
	comp=Z,449nm,30.4s						
PLID	**Pearl Lake**	**68.44**	**48**	IAmb	IAmb	22 03 01.1	
	comp=Z,3.5nm,0.8s						
WVOR	**Wild Horse Val**	**68.62**	**52**	IAmb	IAmb	22 03 02.7	
	comp=Z,6.2nm,1.2s						
ORV	**Oroville**	**68.71**	**56**	IAmb	IAmb	22 03 02.2	
	comp=Z,4.0nm,0.7s						
FFC	**Flin Flon**	**68.76**	**34**	P	**P**	**22 03 01.4**	**-0.8**
FFC	**Flin Flon**	**68.76**	**34**	P	**P**	**22 03 01.4**	**-0.8**
FFC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HFS	**Hagfors**	**69.07**	**335**	P	**P**	**22 03 02.9**	**-1.1**
	comp=Z,3.6nm,0.6s,baz=60,slow=5.8,SNR=15						
	comp=Z,3.6nm,0.6s						
NB2	**NORSAR Subarra**	**69.10**	**337**	P	**P**	**22 03 02.9**	**-1.3**
	comp=Z,7.8nm,1.0s,baz=37,slow=6.5						
NB2	**NORSAR Subarra**	**69.10**	**337**	P	**P**	**22 03 03.5**	**-0.7**
NOA	**NORSAR Array B**	**69.10**	**337**	P	**P**	**22 03 03.2**	**-1.0**
	comp=Z,2.8nm,0.7s,baz=36,slow=6.1,SNR=13						
NOA				LR	LR	22 36 30.3	
	comp=Z,64nm,20.4s,baz=45,slow=39						
	comp=Z,2.8nm,0.7s						
BEKR	**Beckworth**	**69.21**	**55**	IAmb	IAmb	22 03 05.9	
	comp=Z,4.4nm,0.8s						
PAHR	**Pah Rah Range**	**69.89**	**54**	IAmb	IAmb	22 03 10.0	
	comp=Z,5.3nm,1.1s						
AK03	**Malin Array Si**	**70.03**	**321**	P	**P**	**22 03 08.2**	**-1.9**
AKASG	**Malin Array Be**	**70.05**	**321**	P	**P**	**22 03 09.3**	**-0.8**
	comp=Z,1.2nm,0.4s,baz=45,slow=6.6,SNR=9.5						
	comp=Z,1.2nm,0.4s						
AKBB	**Malin Array Si**	**70.05**	**321**	P	**P**	**22 03 08.4**	**-1.8**
AK01	**Malin Array Si**	**70.06**	**321**	P	**P**	**22 03 09.1**	**-1.1**
KIEV	**Kiev**	**70.06**	**321**	P	**P**	**22 03 08.4**	**-1.8**
	comp=Z,17nm,1.3s						
AK02	**Malin Array Si**	**70.09**	**321**	P	**P**	**22 03 09.4**	**-1.0**
AK11	**Malin Array Si**	**70.09**	**321**	P	**P**	**22 03 09.3**	**-1.1**
DLMT	**Dillon**	**70.10**	**46**	IAmb	IAmb	22 03 11.7	
	comp=Z,9.1nm,0.8s						
SFJD	**Kangerlussuaq**	**70.19**	**5**	LR	LR	22 35 00.1	
	comp=Z,82nm,18.3s,baz=78,slow=37						
BOZ	**Bozeman (W)**	**70.46**	**46**	IAmb	IAmb	22 03 13.8	

	comp=Z,6.4nm,0.8s						
RNPP9	Sopachiv	71.05	323	P	P	22 03 14.7	-1.5
YHL	Hebgen Lake	71.19	46	IAmb	IAmb	22 03 18.6	
	comp=Z,6.0nm,0.9s						
YHB	Horse Butte	71.25	46	IAmb	IAmb	22 03 19.4	
	comp=Z,9.7nm,0.9s						
LUBAR	Lubar, Ukraine	71.27	321	P	P	22 03 16.1	-1.5
NVAR	Mina Array Bea	71.35	55	P	P	22 03 19.1	+0.5
	comp=Z,3.2nm,0.6s,baz=296,slow=5.9,SNR=19						
	comp=Z,3.2nm,0.6s						
SORM	Soroca	72.25	320	⇑P	P	22 03 22.8	-0.8
SORM	Soroca	72.25	320	P	P	22 03 22.7	-0.8
HVU	Hansel Valley	72.37	49	IAmb	IAmb	22 03 25.8	
	comp=Z,6.7nm,1.2s						
HORU	Horodok	72.38	322	P	P	22 03 23.0	-1.3
KMPD	K-Podol'skiy	72.83	321	P	P	22 03 25.5	-1.5
KMPD				P	P	22 03 25.4	-1.5
DUG	Dugway, Tooele	73.41	50	IAmb	IAmb	22 03 31.9	
	comp=Z,5.8nm,0.8s						
PD31	Pinedale Array	73.47	47	IAmb	IAmb	22 03 32.3	
	comp=Z,16nm,1.5s						
PDAR	Pinedale Array	73.47	47	P	P	22 03 30.8	-0.4
	comp=Z,2.5nm,0.7s,baz=259,slow=2.4,SNR=31						
	comp=Z,2.5nm,0.7s						
CLC	China Lake	73.47	56	IAmb	IAmb	22 03 31.7	
	comp=Z,4.6nm,0.9s						
TPNV	Topopah Spring	73.55	55	IAmb	IAmb	22 03 32.6	
	comp=Z,7.4nm,0.8s						
TCUT	Toone Canyon	73.58	49	IAmb	IAmb	22 03 32.9	
	comp=Z,7.7nm,0.9s						
GWY	Greenwater Val	73.80	56	IAmb	IAmb	22 03 33.8	
	comp=Z,7.2nm,0.6s						
QSM	Queen of Sheba	73.82	56	IAmb	IAmb	22 03 33.9	
	comp=Z,7.3nm,0.7s						
PSUT	Pine Spring	73.92	52	IAmb	IAmb	22 03 34.7	
	comp=Z,5.2nm,0.9s						
BUR08	Bucovina Ar. S	74.08	321		P	22 03 34.4	-0.1
BUR08				IAmb	IAmb	22 03 35.1	
	comp=Z,5.5nm,0.8s						
BURAR	Bucovina Array	74.09	321		P	22 03 34.3	-0.3
BURAR				IAmb	IAmb	22 03 35.4	
	comp=Z,4.7nm,0.8s						
BURAR	Bucovina Array	74.09	321	⇑P	P	22 03 34.5	-0.2
BURAR	Bucovina Array	74.09	321	P	P	22 03 34.4	-0.2
MPU	Maple Canyon	74.20	50	IAmb	IAmb	22 03 36.4	
	comp=Z,5.3nm,0.7s						
TESR	Tescani	74.22	320	⇑P	P	22 03 34.8	-0.4
TESR	Tescani	74.22	320	P	P	22 03 34.5	-0.7
	comp=Z,16nm,2.1s						
BSUT	Blindstream Ca	74.33	49	IAmb	IAmb	22 03 39.6	
	comp=Z,5.7nm,1.1s						
CFR	Carcaliu	74.45	318	⇓P	P	22 03 36.3	-0.2
CFR	Carcaliu	74.45	318	P	P	22 03 36.3	-0.2
STHS	Stebnicka Huta	74.53	324	*e*P	P	22 03 37.2	+0.2
STHS	Stebnicka Huta	74.53	324	*e*P	P	22 03 37.2	+0.2
OJC	Ojcow	74.54	326	P	P	22 03 36.4	-0.6
	comp=Z,15nm,1.0s						
ULM	Lac du Bonnet	74.58	34	P	P	22 03 36.3	-1.0
	comp=Z,2.3nm,0.7s,baz=291,slow=4.9,SNR=3.2						
	comp=Z,2.3nm,0.7s						
VRI	Vrincioaia	74.65	319	⇑P	P	22 03 38.3	+0.5
VRI	Vrincioaia	74.65	319	P	P	22 03 38.2	+0.5
TURR	Turia	74.86	320	⇓P	P	22 03 39.8	+0.9
NIE	Niedzica	74.94	325	P	P	22 03 37.6	-1.7
	comp=Z,3.6nm,1.6s						
RDMU	Red Mountain	74.97	48	IAmb	IAmb	22 03 40.9	
	comp=Z,8.1nm,0.9s						
P17A	Butcher Ranch,	75.07	50	IAmb	IAmb	22 03 41.5	
	comp=Z,7.5nm,0.7s						
DOPR	Dopca	75.22	320	⇑P	P	22 03 41.9	+0.9
MTPU	Mount Pierson	75.22	52	IAmb	IAmb	22 03 43.1	
	comp=Z,5.4nm,0.6s						
P18A	Preston Nutter	75.24	49	IAmb	IAmb	22 03 49.1	
	comp=Z,6.0nm,1.0s						
BRTR	Keskin Array B	75.38	311	P	P	22 03 41.5	-0.7
	comp=Z,1.3nm,0.7s,baz=79,slow=3.7,SNR=6.8						
BRTR				LR	LR	22 43 31.0	
	comp=Z,48nm,18.4s,baz=317,slow=41						
	comp=Z,1.3nm,0.7s						
BRTR	Keskin Array B	75.38	311	*i* P	P	22 03 42.0	-0.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ICOR	Ion Corvin	75.38	317	⇑P	P	22 03 42.7	+0.8
SRU	San Rafael Swe	75.44	50	IAmb	IAmb	22 03 43.8	
	comp=Z,11nm,0.9s						
STEB	Steborice	75.59	326	*e*P	P	22 03 42.7	-0.4
OSTC	Ostas	75.73	328	*e*P	P	22 03 44.3	+0.4
OSTC	Ostas	75.73	328	*e*P	P	22 03 44.3	+0.4
CHVC	Chvalec	75.77	328	*e*P	P	22 03 44.2	+0.1
CHVC	Chvalec	75.77	328	*e*P	P	22 03 44.2	+0.1
MORC	Moravsky Berou	75.81	326		P	22 03 44.3	0.0
MORC	Moravsky Berou	75.81	326	⇑P	P	22 03 44.1	-0.2
MORC	Moravsky Berou	75.81	326	P	P	22 03 44.1	-0.2
DPC	Dobruska-Polom	75.85	327	*e*P	P	22 03 44.8	+0.2
DPC	Dobruska-Polom	75.85	327	*e*P	P	22 03 44.8	+0.2
KRLC	Kraliky	75.88	327	*e*P	P	22 03 44.5	-0.3
KRLC	Kraliky	75.88	327	*e*P	P	22 03 44.5	-0.3
ARR	Arges	76.02	320	⇑P	P	22 03 46.3	+0.6
PSZ	Piszkesteto	76.25	324	⇑P	P	22 03 46.9	-0.1
PSZ	Piszkesteto	76.25	324	P	P	22 03 46.8	-0.1
U15A	North Rim	76.26	53	IAmb	IAmb	22 03 48.8	
	comp=Z,3.8nm,0.7s						
CLL	Collm	76.36	330	*i* P	P	22 03 46.9	-0.5
CLL				*e**PP	sP	22 04 01.0	-1.8
CLL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CLL	Collm	76.36	330	*i* P	P	22 03 46.9	-0.5
	comp=Z,6.0nm,0.9s						
CLL				*e*pP	sP	22 04 01.0	-1.8
PV04	Paradox Valley	76.85	50	IAmb	IAmb	22 03 51.6	
	comp=Z,8.3nm,0.9s						
PV16	Nyswonger Mesa	76.90	50	IAmb	IAmb	22 03 51.8	
	comp=Z,7.3nm,0.8s						
PV11	David Mesa, Pa	76.94	50	IAmb	IAmb	22 03 52.1	
	comp=Z,8.3nm,0.9s						
PV03	Paradox Valley	76.98	50	IAmb	IAmb	22 03 52.2	
	comp=Z,8.3nm,1.1s						
SRO	Srobarova	77.01	325	*e*P	P	22 03 51.9	+0.8
SRO	Srobarova	77.01	325	*e*P	P	22 03 51.9	+0.8
PV13	Radium Mtn., P	77.06	50	IAmb	IAmb	22 03 53.3	
	comp=Z,8.1nm,0.8s						
PV02	Paradox Valley	77.08	50	IAmb	IAmb	22 03 58.1	
	comp=Z,6.4nm,0.8s						
PV01	Paradox Valley	77.22	50	IAmb	IAmb	22 03 53.8	
	comp=Z,3.3nm,0.7s						
Y14A	Wickenburg	77.53	55	IAmb	IAmb	22 03 55.3	
	comp=Z,5.0nm,0.8s						
KHC	Kasperske Hory	77.89	328	*e*P	P	22 03 55.9	-0.2
KHC	Kasperske Hory	77.89	328	*e*P	P	22 03 55.9	-0.2
EKA	Eskdalemuir Ar	77.90	340	P	P	22 03 54.8	-1.1
	comp=Z,1.3nm,0.5s,baz=19,slow=4.3,SNR=4.9						
	comp=Z,1.3nm,0.5s						
RONA	Rosalia, Austr	77.95	326	P	P	22 03 56.5	0.0
RONA	Rosalia, Austr	77.95	326	*e*P	P	22 03 56.5	0.0
	comp=Z,7.1nm,1.4s						
GERES	GERESS Array B	78.08	328	P	P	22 03 56.1	-1.1
	comp=Z,0.9nm,0.8s,baz=36,slow=8.5,SNR=4.2						
	comp=Z,0.9nm,0.8s						
X16A	Lo Mia Camp, P	78.14	54	IAmb	IAmb	22 03 59.3	
	comp=Z,4.0nm,0.8s						
RDO	Rodhopi	78.69	316	P	P	22 04 00.0	-0.5
RAYN	Ar Rayn	78.86	292		P	22 04 01.5	-0.4
RAYN	Ar Rayn	78.86	292	P	P	22 04 01.3	-0.6
MMAI	Mount Meron Ar	78.99	305	P	P	22 04 02.7	+0.2
	comp=Z,1.2nm,0.5s,baz=32,slow=8.5,SNR=2.0						
	comp=Z,1.2nm,0.5s						
BIOA	Bad Ischl, Aus	79.03	327	P	P	22 04 00.5	-1.9
BIOA	Bad Ischl, Aus	79.03	327	*e*P	P	22 04 00.5	-1.9
	comp=Z,4.4nm,1.2s						
LESA	Schwarzleotal	79.63	328	P	P	22 04 05.8	+0.1
LESA	Schwarzleotal	79.63	328	*i* P	P	22 04 05.8	+0.1
	comp=Z,4.2nm,1.0s						
KBA	Koelnbreinsper	79.65	327	P	P	22 04 05.6	-0.4
KBA	Koelnbreinsper	79.65	327	*e*P	P	22 04 05.6	-0.4
	comp=Z,4.1nm,1.0s						
KBA	Koelnbreinsper	79.65	327	P	P	22 04 05.6	-0.4
WATA	Walderalm	80.14	328	P	P	22 04 07.5	-1.0
WATA	Walderalm	80.14	328	*e*P	P	22 04 07.5	-1.0
	comp=Z,11nm,1.5s						
WATA	Walderalm	80.14	328	P	P	22 04 07.5	-1.0
T25A	Trinidad	80.24	48	IAmb	IAmb	22 04 10.4	
	comp=Z,7.4nm,1.1s						
TASM	ASL Pad, Albuq	80.68	51	IAmb	IAmb	22 04 13.1	
	comp=Z,2.4nm,0.9s						
ANMO	Albuquerque	80.68	51		P	22 04 11.8	0.0
ANMO	Albuquerque	80.68	51	*ce*P	P	22 04 11.1	-0.7
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.7s						
VHRN	Van Horn	84.54	53	IAmb	IAmb	22 04 32.7	
	comp=Z,4.7nm,0.9s						
CCM	Cathedral Cave	86.22	39		P	22 04 39.3	-0.6
CCM	Cathedral Cave	86.22	39	P	P	22 04 39.3	-0.6
CCM				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TX31	Lajitas Ar. Si	86.38	53	IAmb	IAmb	22 04 42.3	
	comp=Z,4.2nm,1.2s						
TXAR	Lajitas Array	86.38	53	P	P	22 04 40.9	-0.1
	comp=Z,1.9nm,0.7s,baz=292,slow=4.1,SNR=25						
	comp=Z,1.9nm,0.7s						
PPT	Papeete	86.89	117	LR	LR	22 37 47.1	
	comp=Z,51nm,21.1s,baz=312,slow=32						
PPT2	Papeete2	86.90	117	*e*LR	LR	22 32 15.1	
	comp=Z,108nm,23.0s						
TAOE	Nuku Hiva Isla	87.23	105	*e*LR	LR	22 32 22.0	
	comp=Z,250nm,24.3s						
SNAA	Sanae	146.26	199	PKPbc	PKPbc	22 11 37.2	-0.5
	comp=Z,7.1nm,0.9s,baz=196,slow=6.0,SNR=16						
PLCA	Paso Flores	155.79	96	PKPab	PKPab	22 12 19.1	+0.2
	comp=Z,2.3nm,0.8s,baz=294,slow=5.0,SNR=6.7						

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*DMN **15** 22:20:35.8±0.0, 27°.66N×86°.07E, h2^{km}, Ml4.1/6, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*IDC **15** 22:20:36.7±5.6, 28°.18N×87°.55E, h0^{km}, mb3.2/4, mbtmp3.2/5, ML3.2/1, Error ellipse: s-maj=316.3km s-min=23.4km az=66.0*

ISC 15 22:20:33.4±2.4**, 27°.60N**±0°.08×**86°.18E**±0°.08**, h2**^{km}±14^{km}**, n13, σ0^{s}.83**/19**, mb3.4**/4**, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUN	Gumba	0.41	319	Pg	Pg	22 20 41.4	+0.1
	baz=326,slow=0.0						
GUN				Sg	Sg	22 20 47.1	+0.4
	4µm,0.4s,baz=326,slow=0.0						
PKIN	Phulchoki	0.70	268	Pg	Pg	22 20 46.7	-0.1
	baz=262,slow=0.0						
PKIN				Sg	Sg	22 20 55.5	-0.3
	559nm,0.2s,baz=262,slow=0.0						
KKN	Kakani	0.82	283	Pg	Pg	22 20 49.1	-0.1
	baz=282,slow=0.0						
KKN				Sg	Sg	22 20 59.9	+0.1
	758nm,0.2s,baz=282,slow=0.0						
DMN	Daman	0.95	271	Pg	Pg	22 20 51.4	-0.3
	baz=267,slow=0.0						
GKN	Gorkha	1.43	287	Pg	Pn	22 20 59.7	-0.8
	baz=285,slow=0.0						
GKN				Sg	Sb	22 21 18.2	-1.3
	619nm,0.3s,baz=285,slow=0.0						
DANN	Dangsing	2.27	290	Pn	Pn	22 21 13.2	+1.0
	baz=289,slow=0.0						
DANN				Sg	Sb	22 21 44.6	+0.7
	434nm,0.4s,baz=289,slow=0.0						
KOLN	Koldanda	2.29	275	Pn	Pn	22 21 13.1	+0.6
	baz=273,slow=0.0						
KOLN				Sg	Sb	22 21 45.3	+0.7
	304nm,0.3s,baz=273,slow=0.0						
PYUN	Piuthan	2.87	281	Pn	Pn	22 21 21.1	+0.7
	baz=280,slow=0.0						
MKAR	Makanchi Array	19.40	352	P	Pn	22 25 01.3	-0.6
	0.1nm,0.3s,baz=176,slow=11,SNR=4.7						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	23.72	348	P	P	22 25 47.4	+0.8
	0.3nm,0.8s,baz=152,slow=8.4,SNR=2.7						
	0.3nm,0.8s						
ZALV	Zalesovo Beam	26.34	358	P	P	22 26 08.8	-1.8
	0.3nm,0.3s,baz=178,slow=7.2,SNR=2.0						
	0.3nm,0.3s						
WRA	Warramunga Arr	66.38	130	P	P	22 31 24.0	-0.2
	0.3nm,0.5s,baz=322,slow=6.4,SNR=4.7						
	0.3nm,0.5s						
ASAR	Alice Springs	68.69	133	P	P	22 31 39.6	+0.9
	0.1nm,0.4s,baz=305,slow=7.2,SNR=1.3						
	0.1nm,0.4s						

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*NNC **15** 22:47:13.9±2.5, 41°.64N×78°.87E, h0^{km}, mb3.4, mpv3.2, Error ellipse: s-maj=16.8km s-min=9.7km az=162.0*

*KRNET **15** 22:47:13.1±0.1, 41°.55N×78°.79E, h19^{km}, mb2.9*

*SOME **15** 22:47:13.3, 41°.62N×78°.83E, h10^{km}*

ISC 15 22:47:11.0±1.8**, 41°.38N**±0°.07×**78°.89E**±0°.05**, h8**^{km}±11^{km}**, n48, σ1^{s}.29**/77**, 16C-6D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	0.88	294	⇑*e*P	Pb	22 47 27.6	-1.2
TARG				⇑*e*S	Sg	22 47 38.3	-1.2
PRZ	Przheval'sk	1.16	342	⇓*e*P	Pn	22 47 31.8	-1.9
PRZ				⇓*e*S	Sb	22 47 45.3	-3.4
KDJ	Kajisay	1.48	301	⇑*e*P	Pn	22 47 37.6	-0.5
KDJ				⇑*e*S	Sn	22 47 55.4	-2.3
SATY	Saty	1.71	348	P	Pb	22 47 42.1	-0.7
	4.7nm,0.2s						
SATY				S	Sb	22 48 03.1	-1.5
	24nm,0.2s						
UZB	Uzynbulak	1.77	3	P	Pb	22 47 42.9	-0.8
	3.7nm,0.1s						
UZB				S	Sb	22 48 04.4	-1.8
	17nm,0.3s						
UZB	Uzynbulak	1.77	3	*e*P	Pb	22 47 42.9	-0.8
	3.7nm,0.1s						
UZB				*e*S	Sb	22 48 04.4	-1.8
	17nm,0.3s						
SHLS	Shalkode	1.82	13	P	Pg	22 47 46.9	+0.9
	3.8nm,0.2s						
SHLS				S	Sg	22 48 11.2	+1.5
	84nm,0.6s						
SHLS	Shalkode	1.82	13	*e*P	Pg	22 47 46.9	+0.9
	3.8nm,0.2s						
SHLS				*e*S	Sg	22 48 11.2	+1.5
	84nm,0.6s						
KPKS	Kokpek	2.09	356	Pg	Pb	22 47 48.8	-0.4
	0.4nm,0.1s						
KPKS				Lg	Lg	22 48 14.5	
	22nm,0.4s						
KPKS	Kokpek	2.09	356	*e*P	Pb	22 47 48.8	-0.4
	0.4nm,0.1s						
KPKS				*e*S	Sb	22 48 14.4	-0.9
	22nm,0.4s						
ULHL	Ulahol	2.16	294	⇑*e*P	Pb	22 47 49.3	-1.1
ULHL				⇑*e*S	Sb	22 48 15.7	-1.7
KURS	Kuram	2.17	346	Pg	Pb	22 47 50.5	0.0
	8.9nm,0.4s						
KURS				Lg	Lg	22 48 17.3	
	18nm,0.5s						
TNSS	Tian-Shan	2.19	320	Pg	Pb	22 47 51.1	0.0
	1.9nm,0.3s						
TNSS				Lg	Lg	22 48 18.1	
	6.5nm,0.3s						
TNSS	Tian-Shan	2.19	320	*e*P	Pb	22 47 51.1	0.0
	1.9nm,0.3s						
TNSS				*e*S	Sb	22 48 18.1	-0.5
	6.5nm,0.3s						
MDOK	Medeo	2.24	323	Pg	Pb	22 47 51.3	-0.6
	2.8nm,0.3s						
MDOK				Lg	Lg	22 48 18.4	
	18nm,0.6s						
KOTS	Kotyrbulak	2.27	325	Pg	Pb	22 47 51.8	-0.5
	6.1nm,0.2s						
KOTS				Lg	Lg	22 48 19.7	
	28nm,0.3s						
KOTS	Kotyrbulak	2.27	325	*e*P	Pb	22 47 51.8	-0.5
	6.1nm,0.2s						
KOTS				*e*S	Sb	22 48 19.7	-0.9
	28nm,0.3s						
KTMS	Ketmen	2.33	27	Pg	Pb	22 47 51.2	-2.1
	1.0nm,0.3s						
KTMS				Lg	Lg	22 48 18.3	
	4.5nm,0.2s						
KTMS	Ketmen	2.33	27	*e*P	Pb	22 47 51.2	-2.1
	1.0nm,0.3s						
KTMS				*e*S	Sn	22 48 18.3	-0.4
	4.5nm,0.2s						
AAA	Alma-Ata	2.34	322	Pg	Pg	22 47 54.5	-1.3
	10.0nm,0.1s						
AAA				Lg	Lg	22 48 24.1	
	2.3nm,0.1s						
AAA	Alma-Ata	2.34	322	*e*P	Pg	22 47 54.5	-1.3
	10.0nm,0.1s						
AAA				*e*S	Sb	22 48 24.1	+1.6
	2.3nm,0.1s						
IZV	Izvestkoviy	2.36	315	Pg	Pb	22 47 51.8	-2.1
	5.2nm,0.4s						
IZV				Lg	Lg	22 48 19.2	
	12nm,0.4s						
IZV	Izvestkoviy	2.36	315	*e*P	Pb	22 47 51.8	-2.1
	5.2nm,0.4s						
IZV				*e*S	Sn	22 48 19.2	-0.3
	12nm,0.4s						
JNKS	Jany-Kuch	2.46	264	⇓*e*P	Pb	22 47 54.6	-1.0
JNKS				⇓*e*S	Sb	22 48 25.1	-1.0
BOOM	Boomskoye usch	2.46	298	⇑*e*P	Pb	22 47 53.3	-2.2
BOOM				⇑*e*S	Sn	22 48 22.8	+0.9
MTBS	Maitube	2.52	315	Pg	Pb	22 47 56.0	-0.6
	4.0nm,0.3s						
MTBS				Lg	Lg	22 48 26.6	
	8.9nm,0.2s						
MTBS	Maitube	2.52	315	*e*P	Pb	22 47 56.0	-0.6
	4.0nm,0.3s						
MTBS				*e*S	Sb	22 48 26.6	-1.3
	8.9nm,0.2s						
BLB	Baldybastay	2.73	354	Pg	Pb	22 47 59.6	-0.6
	24nm,0.3s						
BLB				Lg	Lg	22 48 32.7	
	27nm,0.4s						
KST	Kastek	2.73	308	Pg	Pb	22 48 00.4	+0.2
	1.3nm,0.2s						
KST				Lg	Lg	22 48 34.1	
	22nm,0.5s						
KST	Kastek	2.73	308	*e*P	Pb	22 48 00.4	+0.2
	1.3nm,0.2s						
KST				*e*S	Sb	22 48 34.1	+0.2
	22nm,0.5s						
CHKK	Chushkaly	2.84	331	Pg	Pb	22 48 00.9	-1.0
	9.6nm,0.2s						
CHKK				Lg	Lg	22 48 35.3	
	32nm,0.5s						
CHKK	Chushkaly	2.84	331	*e*P	Pb	22 48 00.9	-1.0
	9.6nm,0.2s						
CHKK				*e*S	Sb	22 48 35.3	-1.5
	32nm,0.5s						
KTBS	Karatobe	2.84	326	Pg	Pb	22 48 01.5	-0.5
	2.7nm,0.2s						
KTBS				Lg	Lg	22 48 36.0	
	0.4nm,0.2s						
TKM2	Tokmak 2	2.89	303	⇑*e*P	Pn	22 47 59.2	+1.7
TKM2				⇑*e*S	Sn	22 48 32.7	+0.2
ARXS	Arharly	2.94	345	Pg	Pb	22 48 03.9	+0.3
	3.0nm,0.3s						
ARXS				Lg	Lg	22 48 40.3	
	20nm,0.3s						
ARXS	Arharly	2.94	345	*e*P	Pb	22 48 03.9	+0.3
	3.0nm,0.3s						
ARXS				*e*S	Sb	22 48 40.3	+0.7
	20nm,0.3s						
DGS	Degeres	2.96	310	Pg	Pb	22 48 03.6	-0.5
	1.5nm,0.3s						
DGS				Lg	Lg	22 48 39.9	
	7.2nm,0.4s						
DGS	Degeres	2.96	310	*e*P	Pb	22 48 03.6	-0.5
	1.5nm,0.3s						
DGS				*e*S	Sb	22 48 39.9	-0.6
	7.2nm,0.4s						
KNOS	Konyrlen	2.98	4	Pg	Pb	22 48 04.2	-0.2
	1.2nm,0.2s						
KNOS				Lg	Lg	22 48 40.9	
	17nm,0.5s						
KBK	Karagaybulak	3.20	295	⇑*e*P	Pn	22 48 03.7	+2.0
KBK				⇑*e*S	Sn	22 48 40.6	+0.5
KRBS	Karabastau	3.31	315	Pg	Pb	22 48 10.9	+0.9
	1.2nm,0.2s						
KRBS				Lg	Lg	22 48 52.1	
	2.1nm,0.4s						
KRBS	Karabastau	3.31	315	*e*P	Pb	22 48 10.9	+0.9
	1.2nm,0.2s						
KRBS				*e*S	Sb	22 48 52.1	+1.6
	2.1nm,0.4s						
UCH	Uchtor	3.38	286	⇑*e*P	Pn	22 48 06.7	+2.3
UCH				⇑*i*S	Sn	22 48 45.8	+0.9
ARLS	Aral	3.45	279	⇑*e*P	Pn	22 48 07.4	+2.2
ARLS				⇑*e*S	Sn	22 48 47.1	+0.7
TDK	Taldyqorghan	3.64	355	Pg	Pb	22 48 16.6	+1.1
	6.9nm,0.1s						
TDK				Lg	Lg	22 49 01.8	
	16nm,0.5s						
TDK	Taldyqorghan	3.64	355	*e*P	Pb	22 48 16.6	+1.1
	6.9nm,0.1s						
TDK				*e*S	Sb	22 49 01.9	+2.1
	16nm,0.5s						
USP	Ospenovka	3.76	302	⇓*e*P	Pn	22 48 11.1	+1.8
USP				⇓*e*S	Sn	22 48 53.6	-0.1
SGDS	Sogindy	3.77	305	Pg	Pb	22 48 19.2	+1.4
	0.5nm,0.1s						
SGDS				Lg	Lg	22 49 06.2	
	2.2nm,0.3s						

IDC 15 22:47:24.1±6.8**, 16°.82S**×**177°.17W, h0**^{km}**, mb3.8**/2**, mbtmp3.8**/2**, Error ellipse: s-maj=333.6km s-min=55.8km az=145.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.00	258	P	P	22 55 49.6	0.0
	0.3nm,0.6s,baz=91,slow=8.2,SNR=4.6						
	0.3nm,0.6s						
ASAR	Alice Springs	46.23	253	P	P	22 55 51.2	-0.2
	2.6nm,0.6s,baz=88,slow=8.2,SNR=39						
	2.6nm,0.6s						
GERES	GERESS Array B	146.85	347	PKPbc	PKPbc	23 07 07.7	-0.8
	0.3nm,0.5s,baz=8.4,slow=3.5,SNR=2.2						

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*NDI **15** 22:59:41.9±0.6, 33°.66N×71°.27E, h150^{km}, ML4.0, MW4.0*

*NNC **15** 22:59:42.8±5.4, 33°.56N×71°.10E, h19^{km}±66^{km}, mb3.7, Error ellipse: s-maj=56.4km s-min=27.2km az=156.0*

*IDC **15** 22:59:48.7±5.5, 33°.76N×71°.55E, h75^{km}±47^{km}, mb3.4/12, mbtmp3.8/17, ML3.5/5, Error ellipse: s-maj=32.5km s-min=20.2km az=15.0*

ISC 15 22:59:42.2±0.7**, 33°.50N**±0°.08×**71°.45E**±0°.06**, h23**^{km}**, n31, σ1^{s}.63**/39**, mb3.8**/12**, 3C-2D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRNI	Srinagar	2.85	78	*e*P	Pn	23 00 28.6	+1.8
SRNI				*e*S	Sn	23 01 02.8	+1.9
SRNI				IAML		23 01 09.1	
	comp=N,635nm,0.3s						
SRNI				IAML		23 01 09.2	
	comp=E,783nm,0.8s						
JMU	Jammu	2.92	103	*e*P	Pn	23 00 31.0	+2.7
JMU				*e*S	Sn	23 01 06.0	+2.5
JMU				IAML		23 01 10.5	
	comp=E,535nm,0.5s						
JMU				IAML		23 01 12.0	
	comp=N,295nm,0.2s						
DHRM	DHARAMSHALA	4.27	106	*e*P	Pn	23 00 48.1	+2.2
DHRM				*e*S	Sn	23 01 36.5	+1.3
DHRM				IAML		23 01 58.5	
	comp=N,256nm,0.5s						
DHRM				IAML		23 02 00.7	
	comp=E,352nm,0.5s						
BHK	Bhakra	4.67	115	*e*P	Pb	23 00 59.0	-4.6
BHK				*e*S	Sb	23 01 55.1	-4.4
ALCI	Alchi Leh	4.82	80	*e*P	Pn	23 00 54.3	+0.5
ALCI				*e*S	Sn	23 01 47.1	-2.0
ALCI				IAML		23 02 16.3	
	comp=E,345nm,0.3s						
ALCI				IAML		23 02 21.3	
	comp=N,341nm,1.5s						
SMLA	Simla	5.38	114	*e*P	Pn	23 01 02.2	+1.1
SMLA				*e*S	Sn	23 02 01.9	-0.5
SMLA				IAML		23 02 03.5	
	comp=E,383nm,0.6s						
SMLA				IAML		23 02 05.5	
	comp=N,378nm,0.5s						
AAK	Ala-Archa	9.43	14	P	Pn	23 01 58.3	+1.6
	comp=N,0.7nm,0.3s,baz=199,slow=9.7,SNR=9.7						
AAK				S	Sn	23 03 40.2	-1.9
	comp=N,1.0nm,0.3s,baz=356,slow=21,SNR=1.7						
	comp=N,1.5nm,0.3s						
AAK	Ala-Archa	9.43	14	⇑P	Pn	23 01 58.5	+1.8
	comp=N,2.4nm,0.8s						
AAK				⇓S	Sn	23 03 45.0	+2.9
	comp=N,5.2nm,1.2s						
KK31	Karatay Array	9.62	356	P	Pn	23 01 59.5	+0.4
	comp=N,1.1nm,0.2s,baz=183,slow=13,SNR=48						
KK31				⇑S	Sn	23 03 46.5	0.0

	comp=N,0.6nm,0.3s,baz=185,slow=12,SNR=5.2						
MK31	Makanchi Array	15.63	29	P	P	23 03 23.8	-1.1
	comp=N,0.7nm,0.6s,baz=211,slow=11,SNR=12						
MKAR	Makanchi Array	15.63	29	P	Pn	23 03 22.4	+1.4
	comp=N,0.2nm,0.3s,baz=204,slow=11,SNR=9.0						
	comp=N,0.3nm,0.5s						
KURBB	Kurchatov Arra	17.88	15	P	Pn	23 03 49.2	0.0
	comp=N,0.1nm,0.3s,baz=204,slow=11,SNR=14						
	comp=N,3.3nm,0.8s						
KURBB	Kurchatov Arra	17.88	15	⇑P	Pn	23 03 49.3	0.0
	comp=N,3.3nm,0.6s						
AB31	Akbulak array	17.92	335	P	Pn	23 03 47.3	-2.5
	comp=N,0.7nm,0.5s,baz=150,slow=12,SNR=14						
BVA0	Borovoye Array	19.53	358	P	P	23 04 07.5	-0.4
	comp=N,2.7nm,0.8s,baz=164,slow=11,SNR=8.4						
BVAR	Borovoye Array	19.53	358	P	P	23 04 07.4	-0.5
	comp=N,0.1nm,0.3s,baz=154,slow=11,SNR=11						
	comp=N,2.1nm,0.6s						
AKTO	Aktyubinsk	19.60	334	P	Pn	23 04 09.0	-1.0
	comp=N,0.3nm,0.3s,baz=144,slow=10,SNR=6.3						
	comp=N,2.4nm,0.7s						
AKTO	Aktyubinsk	19.60	334	⇓P	Pn	23 04 09.0	-1.0
	comp=N,2.6nm,0.9s						
ZALV	Zalesovo Beam	22.54	21	P	P	23 04 38.6	-1.7
	comp=N,1.8nm,0.4s,baz=218,slow=10,SNR=11						
	comp=N,1.8nm,0.4s						
KBZ	Khabaz	24.43	303	P	P	23 04 58.5	-0.5
	comp=N,0.5nm,0.5s,baz=95,slow=12,SNR=1.5						
	comp=N,0.5nm,0.5s						
BRTR	Keskin Array B	30.82	293	P	P	23 05 57.6	+1.2
	comp=N,0.6nm,0.6s,baz=114,slow=11,SNR=5.5						
	comp=N,0.6nm,0.6s						
FINES	FINESS Array B	40.20	328	P	P	23 07 16.0	-0.4
	comp=N,1.4nm,0.7s,baz=126,slow=9.8,SNR=4.4						
	comp=N,1.4nm,0.7s						
ARCES	ARCESS Array B	44.06	339	P	P	23 07 47.6	-0.3
	comp=N,2.0nm,0.6s,baz=111,slow=6.6,SNR=10						
	comp=N,2.0nm,0.6s						
HFS	Hagfors	45.68	324	P	P	23 08 00.6	-0.2
	comp=N,2.6nm,0.7s,baz=106,slow=11,SNR=7.7						
	comp=N,2.6nm,0.7s						
NB2	NORSAR Subarra	47.02	325	P	P	23 08 10.6	-0.8
	comp=Z,0.5nm,0.5s,baz=100,slow=7.9						
NOA	NORSAR Array B	47.02	325	P	P	23 08 09.6	-1.8
	comp=Z,0.6nm,0.6s,baz=98,slow=8.0,SNR=2.4						
	comp=Z,0.6nm,0.6s						
KEST	Kesra	50.40	291	P	P	23 08 39.0	+1.2
	comp=Z,2.2nm,0.9s,baz=98,slow=6.9,SNR=4.3						
	comp=Z,2.2nm,0.9s						
ESDC	Sonseca Array	59.22	300	P	P	23 09 41.4	-0.3
	comp=Z,0.4nm,0.7s,baz=79,slow=7.7,SNR=2.1						
	comp=Z,0.4nm,0.7s						
WRA	Warramunga Arr	80.10	122	P	P	23 11 50.1	-0.3
	comp=Z,0.4nm,0.9s,baz=315,slow=5.3,SNR=1.7						
	comp=Z,0.4nm,0.9s						
ASAR	Alice Springs	82.24	125	P	P	23 12 03.4	+1.6
	comp=Z,0.2nm,0.4s,baz=314,slow=5.2,SNR=2.1						
	comp=Z,0.2nm,0.4s						
YKA	Yellowknife Ar	84.22	3	P	P	23 12 10.4	-1.0
	comp=Z,0.4nm,0.6s,baz=346,slow=5.3,SNR=5.7						
	comp=Z,0.4nm,0.6s						

UCR 15 23:53:28.7±1.9, 6°.20N×82°.70W, h0^{km}±58^{km}, MW3.5, 1D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PIRO	Carate, Puerto	2.28	344	*e*P	Pn	23 54 07.2	-0.4
JEFFS	S de V. Baru	2.46	4	*e*P	Pn	23 54 10.3	+0.1
BQTLY	Boquete Panama	2.55	5	*e*P	Pn	23 54 11.5	0.0
BQTLY				*e*S	Sb	23 54 46.9	-0.7
BRU2	Volcan	2.58	0	*e*P	Pn	23 54 12.1	+0.2
BRU2				*e*S	Sn	23 54 43.7	-0.3
RBALA	Bur	2.72	12	*e*P	Pn	23 54 14.4	+0.7
RBALA				*e*S	Sn	23 54 48.9	+1.6
PBNVO	Pueblo Nuevo,	2.72	11	*e*P	Pn	23 54 12.3	-1.4
ALCO	Alturas Coton,	2.73	357	*e*P	Pn	23 54 13.3	-0.8
DRK0	Durika	3.09	350	*e*P	Pn	23 54 18.9	-0.1
SAJE	San Jernim	3.23	346	*e*P	Pn	23 54 21.4	+0.6
BUS1	Rivas	3.49	343	⇓*i*P	Pn	23 54 25.4	+0.7
BUS1				*e*S	Sn	23 55 09.1	+2.2
PIEC	Cerro El Cedra	3.62	340	*e*P	Pn	23 54 26.3	0.0
PICV	PH. Pirrs	3.71	337	*e*P	Pn	23 54 27.4	0.0
VTCV	VTCV, Calle Va	3.89	345	*e*P	Pn	23 54 31.2	+1.2
CVTV	Tajo	3.92	345	*e*P	Pn	23 54 31.4	+0.9
VICA	Volcano Irazu	3.92	343	*e*P	Pn	23 54 31.4	+0.7
VTR0	Volcan Turrial	3.93	345	*e*P	Pn	23 54 30.9	+0.1
CVTR	Volcan Turrial	3.94	345	*e*P	Pn	23 54 31.8	+1.0
JTS	Las Juntas de	4.63	331	*e*P	Pn	23 54 40.2	+0.1
JUD3	Juan Diaz 3	4.84	325	*e*P	Pn	23 54 43.0	+0.2

IDC 15 23:56:04.0±1.2, 6°.56N×125°.33E, h0^{km}, mb3.3/4, mbtmp3.3/4, MS3.4/1, Error ellipse: s-maj=32.6km s-min=9.7km az=111.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.57	26	Pg	Pg	23 56 15.0	0.0
	138nm,0.3s,baz=96,slow=1.4,SNR=7.5						
DAV				Lg	Lg	23 56 22.8	
	246nm,0.3s,baz=265,slow=10,SNR=13						
WRA	Warramunga Arr	27.78	162	P	P	00 01 56.7	+1.7
	0.4nm,0.7s,baz=342,slow=8.9,SNR=4.7						
	0.4nm,0.7s						
ASAR	Alice Springs	31.18	165	P	P	00 02 23.4	-1.8
	0.2nm,0.5s,baz=339,slow=8.6,SNR=5.8						
	0.2nm,0.5s						
HILR	Hailar Array B	43.11	355	LR	LR	00 23 12.6	
	comp=Z,42nm,19.6s,baz=95,slow=38						
MKAR	Makanchi Array	54.46	325	P	P	00 05 31.8	-1.6
	0.1nm,0.5s,baz=112,slow=8.9,SNR=2.0						
	0.1nm,0.5s						
KURBB	Kurchatov Arra	58.62	327	P	P	00 06 04.4	+1.5
	0.1nm,0.3s,baz=114,slow=6.2,SNR=1.0						
	0.1nm,0.3s						

IDC 16 00:07:04.8±3.0, 6°.53N×124°.99E, h0^{km}, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=292.2km s-min=29.4km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.79	47	LR	LR	00 07 54.8	
	comp=Z,166nm,19.0s,baz=127,slow=63						
WRA	Warramunga Arr	27.87	161	P	P	00 12 55.9	-0.5
	0.4nm,0.8s,baz=340,slow=10.0,SNR=1.6						
	0.4nm,0.8s						
ASAR	Alice Springs	31.25	164	P	P	00 13 27.0	+0.5
	0.2nm,0.6s,baz=346,slow=9.3,SNR=2.2						
	0.2nm,0.6s						
MKAR	Makanchi Array	54.28	325	P	P	00 16 32.7	-0.1
	0.1nm,0.5s,baz=125,slow=6.2,SNR=4.2						
	0.1nm,0.5s						

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*IDC **16** 00:19:40.6±15.0, 21°.33N×145°.33E, h107^{km}±119^{km}, mb3.4/7, mbtmp3.7/7, MS4.0/1, Error ellipse: s-maj=168.5km s-min=20.9km az=78.0*

ISC 16 00:19:30.0±2.6, 21°.5N±0°.2×146°.0E±0°.7, h29^{km}, n8, σ0^{s}.78/8, mb3.7/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	Korea Array	22.37	319	P	P	00 24 26.9	+1.0
	1.8nm,0.8s,baz=142,slow=8.3,SNR=7.0						
	1.8nm,0.8s						
CTA	Charters Tower	41.28	180	LR	LR	00 44 48.2	
	comp=Z,194nm,19.0s,baz=48,slow=37						
WRA	Warramunga Arr	42.70	196	P	P	00 27 24.9	+0.4
	0.3nm,0.6s,baz=13,slow=8.2,SNR=3.2						
	0.3nm,0.6s						
ASAR	Alice Springs	46.38	195	P	P	00 27 53.8	-0.1
	0.2nm,0.8s,baz=9.0,slow=7.4,SNR=2.1						
	0.2nm,0.8s						
ZALV	Zalesovo Beam	56.06	321	P	P	00 29 05.4	-0.8
	0.3nm,0.4s,baz=119,slow=6.4,SNR=2.7						
	0.3nm,0.4s						
MKAR	Makanchi Array	56.82	313	P	P	00 29 11.1	-0.7
	0.5nm,0.5s,baz=90,slow=8.5,SNR=12						
MKAR				PcP	PcP	00 30 07.0	-0.4
	0.2nm,0.5s,baz=85,slow=4.0,SNR=4.6						
	0.5nm,0.5s						
BVAR	Borovoye Array	64.59	320	P	P	00 30 04.3	-0.3
	0.9nm,0.4s,baz=89,slow=7.2,SNR=10						
	0.9nm,0.4s						
FINES	FINESS Array B	84.53	335	P	P	00 32 00.8	+0.7
	3.3nm,1.0s,baz=59,slow=4.9,SNR=5.4						
	3.3nm,1.0s						

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*NOU **16** 00:32:23.6, 18°.86S×168°.25E, h0^{km}, MLv5.4/32, Vanuatu Islands*

*NEIC **16** 00:32:25.8±1.7, 18°.94S±0°.03×168°.13E±0°.09, h10^{km}±1^{km}, mb4.6/32, Mwr4.4/14, Error ellipse: s-maj=15.1km s-min=5.8km az=88.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.85; M$_{\theta\theta}$-5.32; M$_{\phi\phi}$3.46; M$_{r\theta}$1.65; M$_{\theta\phi}$-0.56; M$_{\phi r}$-1.52; Fault plane solution: M$_{0}$5.21000×10^{15} NP1:ϕ_s125.64000°, δ76.18000°, λ146.62000°. NP2:ϕ_s224.59000°, δ57.70000°, λ16.41000°. Principal axes: T 4.5627, Plg33.0000°, Azm80.0000°; N 1.1210, Plg54.0000°, Azm286.0000°; P -5.6837, Plg12.0000°, Azm179.0000°;*

*NEIC **16** 00:32:26.2, 19°.01S×168°.09E, h10^{km}*

*IDC **16** 00:32:27.0±5.1, 18°.77S×168°.35E, h41^{km}±41^{km}, mb4.1/12, mbtmp4.4/13, ML4.5/1, MS3.7/23, Error ellipse: s-maj=33.6km s-min=18.5km az=49.0*

ISC 16 00:32:25.2±0.4, 18°.85S±0°.04×168°.23E±0°.05, h20^{km}, n150, σ1^{s}.34/138, mb4.6/29, MS3.8/23, 6D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTV	Rentapao	1.06	10	P	Pb	00 32 44.4	-0.5
DVP	Devils Point	1.11	358	P	Pn	00 32 45.3	-0.4
INH	Isangel	1.21	125	P	Pn	00 32 47.0	0.0
MARNC	Mare, Loyalty	2.63	184		Pn	00 33 05.8	-0.7
MARNC				Sn	Sn	00 33 35.0	-2.8
MARNC	Mare, Loyalty	2.63	184	P	Pn	00 33 05.8	-0.7
YATNC	Mamie plateau,	3.43	201	P	Pn	00 33 17.7	+0.1
SANVU	Saraoutou	3.52	344	Pn	Pn	00 33 17.2	-1.5
SANVU	Saraoutou	3.52	344	P	Pn	00 33 17.6	-1.2
DZM	Mont Dzumac	3.62	207	P	Pn	00 33 20.8	+0.5
	37nm,0.3s,baz=66,slow=20,SNR=213						
DZM				S	Sn	00 34 01.3	-1.1
	354nm,0.4s,baz=333,slow=22,SNR=20						
	113nm,0.4s						
DZM	Mont Dzumac	3.62	207	*e*Pn	Pn	00 33 20.5	+0.3
	141nm,0.9s						
DZM				*e*Sn	Sn	00 34 00.2	-2.2
	2μm,0.9s						
DZM	Mont Dzumac	3.62	207		Pn	00 33 20.4	+0.2
DZM				Sn	Sn	00 34 01.3	-1.1
DZM	Mont Dzumac	3.62	207	P	Pn	00 33 20.9	+0.7
OUENC	Ouen Island, N	3.78	200	P	Pn	00 33 23.4	+1.0
PINNC	Pines Island,	3.82	191		Pn	00 33 23.3	+0.4
PINNC	Pines Island,	3.82	191	P	Pn	00 33 23.7	+0.8
ONTNC	Ouen Toro	3.82	205		Pn	00 33 23.5	+0.5
ONTNC				Sn	Sn	00 34 04.9	-2.4
ONTNC	Ouen Toro	3.82	205	P	Pn	00 33 24.2	+1.3
KOUNC	Koumac, New Ca	4.08	245	P	Pn	00 33 28.8	+2.3
MSVF	Nonsavu	9.40	85		Pn	00 34 42.7	+3.1
HURO	Huro Makira	10.34	323	P	Pn	00 34 53.1	+0.7
SAVO	Savo Central	12.63	319	P	Pn	00 35 25.3	+1.5
OUZ	Omahuta	16.99	165	P	Pn	00 36 22.4	+0.7
ARMA	Armidale	18.96	229	P	P	00 36 44.6	-0.8
RMQ	Roma	19.49	244	P	Pn	00 36 53.2	+0.7
TV1H	Townsville Har	20.26	265	P	P	00 37 00.9	+1.3
CTA	Charters Tower	20.75	263	P	Pn	00 37 07.2	-0.1
	6.5nm,0.7s,baz=80,slow=11,SNR=14						
	6.5nm,0.7s						
CTAO	Charters Tower	20.75	263		P	00 37 05.7	+0.8
CTAO				IAmb	IAmb	00 37 12.8	
	comp=Z,19nm,1.0s						
CTAO	Charters Tower	20.75	263	P	P	00 37 06.5	+1.6
URZ	Urewera	20.84	160	P	P	00 37 06.9	+1.3
	comp=Z,9.9nm,0.6s,baz=347,slow=14,SNR=11						
URZ				LR	LR	00 44 03.0	
	comp=Z,289nm,20.7s,baz=348,slow=33						
	comp=Z,9.9nm,0.6s						
RTZ	Ruatahuna	21.12	161		P	00 37 09.7	+1.0
BKZ	Black Stump Fm	21.48	162		P	00 37 13.7	+1.1
BKZ				IAmb	IAmb	00 37 15.1	
	comp=Z,16nm,0.7s						
BKZ	Black Stump Fm	21.48	162	P	P	00 37 13.4	+0.8
PNHZ	Pukenui	22.09	164	P	P	00 37 21.2	+2.0
QRZ	Quartz Range	22.21	171	P	P	00 37 21.9	+1.5
QRZ				IAmb	IAmb	00 37 37.3	
	comp=Z,25nm,1.1s						
PMG	Port Moresby	22.46	292	P	P	00 37 23.8	+0.6
	comp=Z,23nm,0.7s,baz=113,slow=4.7,SNR=11						
PMG				LR	LR	00 45 02.7	
	comp=Z,200nm,20.3s,baz=152,slow=34						
	comp=Z,23nm,0.7s						
PMG	Port Moresby	22.46	292	P	P	00 37 24.9	+1.6
PMG				IAmb	IAmb	00 37 26.1	
	comp=Z,22nm,0.8s						
PMG	Port Moresby	22.46	292	P	P	00 37 24.8	+1.6
PMG	Port Moresby	22.46	292	P	P	00 37 25.5	+2.2
	comp=Z,32nm,0.9s						
MRZ	Mangatainoka R	22.64	165		P	00 37 24.3	-0.7
MRZ				IAmb	IAmb	00 37 26.2	
	comp=Z,24nm,0.9s						
MRZ	Mangatainoka R	22.64	165	P	P	00 37 25.8	+0.8
MTSU	Mount Surprise	22.69	268	P	P	00 37 27.2	+1.5
OGWZ	Otaki Gorge	22.69	166	P	P	00 37 25.9	+0.3
NNZ	Nelson	22.73	170	P	P	00 37 27.0	+1.1
MRNZ	Matariki Terra	22.81	171	P	P	00 37 28.1	+1.4
BFZ	Birch Farm	22.83	164	P	P	00 37 26.1	-0.8
BFZ				IAmb	IAmb	00 37 28.7	
	comp=Z,30nm,1.2s						
BFZ	Birch Farm	22.83	164	P	P	00 37 25.0	-1.9
TCW	Tory Channel	22.88	168	P	P	00 37 28.2	+0.6
TCW	Tory Channel	22.88	168	P	P	00 37 28.8	+1.3
CAW	Cannon Point	22.95	167	P	P	00 37 31.1	+2.9
TUWZ	Tuamarina	23.03	169	P	P	00 37 30.6	+1.6
SNZO	South Karori	23.07	167	P	P	00 37 30.0	+0.7
MTW	Mount Morrison	23.09	166	P	P	00 37 30.9	+1.2
THZ	Tophouse	23.19	171	P	P	00 37 31.8	+1.0
BHW	Baring Head	23.20	167	P	P	00 37 31.8	+1.1
BHW				IAmb	IAmb	00 37 34.1	
	comp=Z,20nm,1.0s						
MSWZ	Moikau Station	23.28	167	P	P	00 37 31.5	-0.1
MSWZ	Moikau Station	23.28	167	P	P	00 37 31.3	-0.3
PAWZ	Paruwai Farm	23.29	166	P	P	00 37 31.4	-0.3
BSWZ	Blackbirch Sta	23.30	169	P	P	00 37 33.9	+2.1
TRWZ	Traveller	23.37	166	P	P	00 37 33.3	+0.9
QLP	Quilpie	23.41	246	P	P	00 37 34.5	+1.5
KHZ	Kahutara	23.93	170	P	P	00 37 37.3	-0.4
KHZ				IAmb	IAmb	00 37 39.4	
	comp=Z,23nm,0.9s						
CMSA	Cobar Meteorol	23.93	234	P	P	00 37 39.5	+1.5
LTZ	Lake Taylor	24.11	173	P	P	00 37 40.1	+0.6
LTZ				IAmb	IAmb	00 37 43.8	
	comp=Z,24nm,1.1s						
GVZ	Greta Valley S	24.39	171	P	P	00 37 42.6	+0.5
COEN	Coen	24.51	278		P	00 37 44.2	+0.7
COEN				IAmb	IAmb	00 37 46.1	
	comp=Z,11nm,0.8s						
COEN	Coen	24.51	278	P	P	00 37 45.0	+1.5
OXZ	Oxford	24.62	173	P	P	00 37 44.5	+0.3
FOZ	Fox Glacier	24.65	177	P	P	00 37 44.5	+0.1
RPZ	Rata Peaks	24.91	175	P	P	00 37 47.7	+0.8
JCZ	Jackson Bay	25.16	179	P	P	00 37 50.1	+0.9
LBZ	Lake Benmore	25.52	177	P	P	00 37 53.4	+1.0
STKA	Stephens Creek	27.25	236	P	P	00 38 09.2	+1.0
	comp=Z,2.8nm,0.4s,baz=84,slow=11,SNR=13						
STKA				LR	LR	00 48 37.9	
	comp=Z,123nm,19.4s,baz=62,slow=35						
	comp=Z,2.8nm,0.4s						
STKA	Stephens Creek	27.25	236		P	00 38 09.5	+1.4
STKA	Stephens Creek	27.25	236	P	P	00 38 09.6	+1.4
WR8	Warramunga Arr	31.80	262	P	P	00 38 47.8	-0.9
WB0	Warramunga Arr	31.92	263	P	P	00 38 49.2	-0.5
WRA	Warramunga Arr	31.95	262	P	P	00 38 48.9	-1.1
	comp=Z,1.1nm,0.7s,baz=97,slow=8.6,SNR=12						
	comp=Z,1.1nm,0.7s						
WRA	Warramunga Arr	31.95	262	P	P	00 38 48.7	-1.3
BBOO	Buckleboo	31.98	238	P	P	00 38 50.7	+0.7
AS31	Alice Springs	32.30	255		P	00 38 53.1	+0.1
AS31				IAmb	IAmb	00 38 53.8	
	comp=Z,2.5nm,0.5s						
ASAR	Alice Springs	32.30	255	P	P	00 38 53.0	0.0
	comp=Z,4.8nm,0.5s,baz=84,slow=8.7,SNR=81						
ASAR				S	S	00 44 01.5	-4.4
	comp=Z,0.2nm,0.4s,baz=89,slow=12,SNR=5.2						
ASAR				LR	LR	00 52 00.2	
	comp=Z,195nm,18.9s,baz=93,slow=36						
	comp=Z,4.8nm,0.5s						
MTN	Manton Dam	36.13	274	P	P	00 39 26.6	+0.3
MTN				IAmb	IAmb	00 39 40.2	
	comp=Z,6.9nm,1.1s						
KNRA	Kununurra	37.77	269	P	P	00 39 40.5	+0.2
KNRA				IAmb	IAmb	00 39 50.5	
	comp=Z,14nm,1.1s						
FORT	Forrest	38.16	244	P	P	00 39 43.4	0.0
GUMO	Guam	39.61	323	LR	LR	00 56 15.7	
	comp=Z,36nm,18.0s,baz=94,slow=36						
TBI	Tubuai	39.63	104	*e*LR	LR	00 50 46.7	
	comp=Z,555nm,33.5s						
PPT2	Papeete2	40.03	95	*e*S	S	00 46 08.2	+3.8
	comp=Z,57nm,27.0s						
PPT2				*e*SS	SS	00 49 01.5	-0.4
	comp=Z,81nm,26.2s						
PPT2				*e*LR	LR	00 50 57.4	
	comp=Z,138nm,26.2s						
PPT2				*e*LR	LR	00 51 02.7	
	comp=Z,140nm,26.5s						
PSA00	Pilbara Seismi	45.34	258	P	P	00 40 42.9	+0.6
MBWA	Marble Bar	45.49	259	P	P	00 40 43.7	+0.2
MBWA				IAmb	IAmb	00 40 56.6	
	comp=Z,6.6nm,1.0s						
NWAO	Narrogin (SRO)	47.54	242	P	P	00 40 58.4	-1.0
DAV	Davao City (W)	49.30	298	P	P	00 41 11.6	-1.6
RKT	Rikitea	52.93	105	*e*LR	LR	00 56 58.5	
	comp=Z,8μm,31.5s						
VNDA	Vanda	58.79	182	P	P	00 42 21.2	-0.4
	comp=Z,2.0nm,0.9s,baz=16,slow=7.4,SNR=2.4						
VNDA				LR	LR	01 04 08.8	
	comp=Z,49nm,21.9s,baz=354,slow=32						
	comp=Z,2.0nm,0.9s						
JOW	Kunigami	59.70	318	LR	LR	01 08 23.7	
	comp=Z,34nm,19.0s,baz=306,slow=36						
MJAR	Matsushiro Arr	61.96	333	LR	LR	01 07 37.9	
	comp=Z,23nm,20.9s,baz=123,slow=34						
JNU	Nakatsue	62.80	325	LR	LR	01 07 17.7	
	comp=Z,46nm,20.2s,baz=110,slow=33						
ASAJ	Asahikawa	66.91	340	LR	LR	01 07 37.0	
	comp=Z,96nm,20.5s,baz=172,slow=32						
QSPA	South Pole Qui	71.20	180	P	P	00 43 42.2	-0.5
	comp=Z,11nm,1.0s,baz=355,slow=1.0,SNR=21						
QSPA				LR	LR	01 11 01.5	
	comp=Z,67nm,19.2s,baz=28,slow=32						
	comp=Z,11nm,1.0s						
PSI	Prapat	71.41	280	LR	LR	01 17 10.3	
	comp=Z,40nm,18.9s,baz=154,slow=38						
PETK	Petropavlovsk-	72.23	353	LR	LR	01 12 06.2	
	comp=Z,62nm,19.4s,baz=143,slow=33						
CN2	Changchun	73.63	329	P	P	00 43 58.8	+1.7
CMAR	Chiang Mai Arr	77.47	295	P	P	00 44 20.3	+0.6
	comp=Z,1.3nm,0.3s,baz=120,slow=3.5,SNR=4.6						
	comp=Z,1.3nm,0.3s						
HHC	Hu-ho-hao-te	79.30	320	*e*P	P	00 44 33.3	+3.8
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MA2	Magadan	79.43	351	LR	LR	01 13 18.0	
	comp=Z,60nm,20.7s,baz=148,slow=31						
SEY	Seymchan	82.46	353	LR	LR	01 18 11.4	
	comp=Z,113nm,19.4s,baz=151,slow=33						
BELA	Belgrano 2	82.57	175	P	P	00 44 45.2	-1.1
BELA				IAmb	IAmb	00 44 46.5	
	comp=Z,4.5nm,0.8s						
KDAK	Kodiak Island	82.99	20	LR	LR	01 17 13.2	
	comp=Z,80nm,18.3s,baz=223,slow=32						
GTA	Gaotai	86.16	314	*e*P	P	00 45 07.0	+1.7
GTA				pP	pP	00 45 11.1	-0.2
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YAK	Yakutsk	86.21	343	LR	LR	01 18 44.0	
	comp=Z,70nm,20.8s,baz=100,slow=32						
SONM	Songino Array	86.33	323	P	P	00 45 05.9	0.0
	comp=Z,0.7nm,0.9s,baz=116,slow=3.4,SNR=2.1						
	comp=Z,0.7nm,0.9s						
ELIB	Princess Elisa	86.36	190	*d*P	P	00 45 04.8	-0.9
	comp=Z,3.1nm,1.1s						
PMSA	Palmer Station	87.61	160	LR	LR	01 19 08.2	
	comp=Z,69nm,19.3s,baz=182,slow=32						
PFO	Pinyon Flats O	88.66	54	LR	LR	01 19 07.4	
	comp=Z,27nm,18.7s,baz=72,slow=32						
TROLL	Troll, Antarti	88.85	184	⇓P	P	00 45 16.8	-1.0
	comp=Z,811nm,0.6s						
SNAA	Sanae	89.51	183	⇓P	P	00 45 19.4	-1.3
	comp=Z,90nm,0.7s						
SNAA	Sanae	89.51	183	P	P	00 45 19.5	-1.3
	comp=Z,5.5nm,1.0s,baz=202,slow=6.9,SNR=27						
	comp=Z,5.5nm,1.0s						
SNAA	Sanae	89.51	183	P	P	00 45 19.7	-1.1
SNAA				IAmb	IAmb	00 45 20.0	
	comp=Z,3.9nm,0.8s						
BBB	Bella Bella	89.67	33	LR	LR	01 26 42.8	
	comp=Z,44nm,18.1s,baz=94,slow=36						
LPIG	La Paz	90.11	65	LR	LR	01 18 09.3	
	comp=Z,58nm,19.4s,baz=203,slow=30						
VNA3	Neumayer Olymp	90.13	181	⇓P	P	00 45 21.7	-1.9
	comp=Z,12nm,0.8s						
ILAR	Eielson Array	90.14	18	P	P	00 45 21.0	-2.5
	comp=Z,0.3nm,0.8s,baz=220,slow=6.1,SNR=1.6						
ILAR				LR	LR	01 23 03.5	
	comp=Z,52nm,18.2s,baz=232,slow=34						
	comp=Z,0.3nm,0.8s						
VNA2	Neumayer--Watz	90.41	181	⇓P	P	00 45 23.7	-1.2
	comp=Z,9.6nm,0.8s,baz=164,slow=5.4						
VNA1	Neumayer--Stat	90.71	181	⇓P	P	00 45 24.1	-2.1
	comp=Z,8.0nm,1.0s						
PDAR	Pinedale Array	97.05	47	LR	LR	01 23 37.3	
	comp=Z,28nm,18.8s,baz=357,slow=32						
SPITS	Spitsbergen Ar	119.10	354	PKP	PKPdf	00 51 09.6	-2.3
	comp=Z,12nm,1.0s,baz=98,slow=6.0,SNR=5.1						
ARCES	ARCESS Array B	124.44	345	PKP	PKPdf	00 51 20.4	-1.9
	comp=Z,1.4nm,0.6s,baz=5.7,slow=1.2,SNR=9.8						
BIOA	Bad Ischl, Aus	144.55	330		PKPdf	00 52 01.9	+1.6
BIOA	Bad Ischl, Aus	144.55	330	*e*PKP	PKPdf	00 52 01.9	+1.6
	comp=Z,0.7nm,0.4s						
SOKA	Soboth	144.57	328		PKPdf	00 52 01.2	+0.7
SOKA	Soboth	144.57	328	*i* PKP	PKPdf	00 52 01.2	+0.7
	comp=Z,1.1nm,0.5s						
KBA	Koelnbreinsper	145.13	330		PKPbc	00 52 00.6	-0.5
KBA	Koelnbreinsper	145.13	330	*e*PKP	PKPbc	00 52 00.6	-0.5
	comp=Z,1.1nm,0.5s						
LESA	Schwarzleotal	145.20	331		PKPbc	00 51 59.7	-1.4
LESA	Schwarzleotal	145.20	331	*i* PKP	PKPbc	00 51 59.7	-1.4
	comp=Z,1.9nm,0.4s						
MYKA	Terra Mystica	145.30	329		PKPbc	00 52 00.2	-1.2
MYKA	Terra Mystica	145.30	329	*i* PKP	PKPbc	00 52 00.2	-1.2
	comp=Z,1.3nm,0.4s						
ABTA	Abfaltersbach	145.76	330		PKPdf	00 52 01.0	-1.5
ABTA	Abfaltersbach	145.76	330	*i* PKP	PKPdf	00 52 01.0	-1.5
	comp=Z,1.2nm,0.6s						
WATA	Walderalm	145.77	331		PKPdf	00 52 01.4	-1.1
WATA	Walderalm	145.77	331	*i* PKP	PKPdf	00 52 01.5	-1.1
	comp=Z,0.8nm,0.3s						
WTTA	Wattenberg	145.79	331		PKPdf	00 52 01.9	-0.8
WTTA	Wattenberg	145.79	331	*i* PKP	PKPdf	00 52 01.9	-0.8
	comp=Z,1.3nm,0.5s						
RETA	Reutte	146.02	332		PKPdf	00 52 02.3	-0.6
RETA	Reutte	146.02	332	*i* PKP	PKPdf	00 52 02.3	-0.6
	comp=Z,1.0nm,0.4s						
SQTA	Sankt Quirin	146.02	332		PKPdf	00 52 02.0	-0.9
SQTA	Sankt Quirin	146.02	332	*i* PKP	PKPdf	00 52 02.0	-0.9
	comp=Z,1.6nm,0.4s						
FETA	Feichten	146.39	332		PKPdf	00 52 03.7	+0.1
FETA	Feichten	146.39	332	*i* PKP	PKPdf	00 52 03.7	+0.1
	comp=Z,0.9nm,0.4s						
DAVA	Damuels	146.56	333		PKPdf	00 52 03.7	-0.2
DAVA	Damuels	146.56	333	*i* PKP	PKPdf	00 52 03.7	-0.2
	comp=Z,0.5nm,0.2s						

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*IDC **16** 01:09:19.5±1.1, 6°.56N×125°.07E, h0^{km}, mb3.6/5, mbtmp3.6/5, MS2.7/2, Error ellipse: s-maj=22.8km s-min=10.1km az=127.0*

ISC 16 01:09:24.3±1.1, 6°.7N±0°.1×125°.4E±0°.3, h35^{km}, n8, σ0^{s}.88/6, mb3.5/5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.37	22	Pg	Pn	01 09 33.1	-0.1
	299nm,0.3s,baz=57,slow=12,SNR=11						
DAV				Lg	Lg	01 09 43.1	
	491nm,0.3s,baz=87,slow=23,SNR=7.5						
JAY	Jayapura	17.79	121	LR	LR	01 20 13.3	
	comp=Z,25nm,21.3s,baz=1.0,slow=36						
JCJ	Chichijima	25.76	36	LR	LR	01 28 15.7	
	comp=Z,15nm,18.1s,baz=110,slow=44						
WRA	Warramunga Arr	27.91	162	P	P	01 15 10.5	-0.8
	0.6nm,0.7s,baz=330,slow=11,SNR=4.6						
	0.6nm,0.7s						

ASAR	**Alice Springs**	**31.32**	**165**	P	**P**	**01 15 40.8**	**-0.8**
	0.3nm,0.4s,baz=344,slow=6.8,SNR=7.1						
	0.3nm,0.4s						
STKA	**Stephens Creek**	**41.37**	**159**	P	**P**	**01 17 08.2**	**+1.0**
	0.9nm,0.4s,baz=331,slow=15,SNR=3.1						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**54.38**	**325**	P	**P**	**01 18 48.0**	**+0.2**
	0.4nm,0.5s,baz=110,slow=7.8,SNR=5.5						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**58.54**	**327**	P	**P**	**01 19 17.2**	**-0.1**
	0.3nm,0.7s,baz=128,slow=6.5,SNR=5.3						
	0.3nm,0.7s						

IDC 16 01:19:08.1±1.9**, 5°.59S×130°.43E, h0^{km}, mb3.5**/2**, mbtmp3.5**/4**, ML3.6**/2**, Error ellipse: s-maj=113.2km s-min=28.9km az=71.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.77**	**165**	Pn	Pn	01 22 38.2	-0.1
	0.2nm,0.3s,baz=345,slow=11,SNR=7.2						
WRA				Sn	Sn	01 25 07.5	-15
	0.5nm,0.3s,baz=340,slow=22,SNR=9.0						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**18.29**	**170**	P	Pn	01 23 23.2	-0.1
	0.3nm,0.3s,baz=350,slow=10,SNR=16						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**67.29**	**326**	P	P	01 30 05.4	+0.7
	0.2nm,0.4s,baz=116,slow=6.6,SNR=8.8						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**71.54**	**328**	P	P	01 30 29.8	-1.1
	0.2nm,0.5s,baz=106,slow=6.5,SNR=1.6						
	0.2nm,0.5s						

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*IDC **16** 01:29:24.1±1.0, 5°.98S×150°.72E, h0^{km}, mb3.8/7, mbtmp3.9/9, ML3.1/2, MS3.5/16, Error ellipse: s-maj=44.2km s-min=18.4km az=108.0*

*NEIC **16** 01:29:28.4±2.3, 6°.2S±0°.1×150°.5E±0°.1, h10^{km}±1^{km}, mb4.5/15, Error ellipse: s-maj=26.4km s-min=13.3km az=123.0*

ISC 16 01:29:31.2±0.6**, 6°.10S**±0°.09×**150°.5E**±0°.1**, h48^{km}, n46,** σ**1^{s}.00**/36**, mb3.9**/8**, MS3.6**/14**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**2.53**	**41**		**Pn**	**01 30 12.1**	**+2.3**
PMG	**Port Moresby**	**4.65**	**225**	Pn	**Pn**	**01 30 40.6**	**+1.7**
	13nm,0.3s,baz=21,slow=11,SNR=26						
PMG				Sn	**Sn**	**01 31 32.5**	**+0.8**
	22nm,0.3s,baz=86,slow=19,SNR=12						
PMG				LR	LR	01 32 22.3	
	comp=Z,347nm,19.9s,baz=4.0,slow=36						
	40nm,0.4s						
PMG	**Port Moresby**	**4.65**	**225**	Pn	**Pn**	**01 30 39.6**	**+0.6**
MANU	**Manus Island**	**5.10**	**322**	Pn	Pn	01 30 51.6	+6.5
COEN	**Coen**	**10.62**	**222**	Pn	**Pn**	**01 32 00.4**	**-0.4**
CTA	**Charters Tower**	**14.50**	**196**	Pn	**Pn**	**01 32 53.3**	**-0.3**
	0.3nm,0.3s,baz=14,slow=15,SNR=5.4						
CTA				LR	LR	01 38 14.2	
	comp=Z,119nm,18.4s,baz=36,slow=36						
	1.6nm,0.4s						
CTAO	**Charters Tower**	**14.50**	**196**	Pn	**Pn**	**01 32 52.9**	**-0.7**
EIDS	**Eidsvold**	**19.17**	**178**	P	**P**	**01 33 49.6**	**-1.2**
MTN	**Manton Dam**	**20.22**	**249**	P	**P**	**01 34 02.6**	**+0.2**
MTN				IAmb	IAmb	01 34 10.8	
	comp=Z,9.4nm,0.8s						
GUMO	**Guam**	**20.34**	**344**	LR	LR	01 41 52.2	
	comp=Z,26nm,18.5s,baz=111,slow=37						
WB0	**Warramunga Arr**	**20.72**	**228**	P	**P**	**01 34 08.9**	**+1.1**
WB0				IAmb	IAmb	01 34 16.8	
	comp=Z,26nm,0.8s						
WR0	**Warramunga Arr**	**20.73**	**227**	P	**P**	**01 34 08.4**	**+0.5**
WR0				IAmb	IAmb	01 34 17.0	
	comp=Z,28nm,0.9s						
WR8	**Warramunga Arr**	**20.76**	**227**	P	**P**	**01 34 07.2**	**-1.0**
WR8				IAmb	IAmb	01 34 17.2	
	comp=Z,22nm,0.9s						
WRAB	**Tennant Creek**	**20.86**	**227**	P	**P**	**01 34 09.2**	**-0.1**
WRAB				IAmb	IAmb	01 34 18.2	
	comp=Z,22nm,0.8s						
WB2	**Warramunga Arr**	**20.86**	**227**	P	**P**	**01 34 09.7**	**+0.4**
WB2				IAmb	IAmb	01 34 17.9	
	comp=Z,19nm,0.8s						
WRA	**Warramunga Arr**	**20.87**	**227**	P	**P**	**01 34 10.2**	**+0.9**
	comp=Z,4.5nm,0.7s,baz=52,slow=11,SNR=23						
WRA				PcP	**PcP**	**01 38 17.7**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=54,slow=2.3,SNR=4.7						
	comp=Z,4.5nm,0.7s						
WRA	**Warramunga Arr**	**20.87**	**227**	P	**P**	**01 34 07.5**	**-1.9**
DZM	**Mont Dzumac**	**22.13**	**137**	LR	LR	01 42 06.8	
	comp=Z,204nm,18.2s,baz=230,slow=35						
AS31	**Alice Springs**	**23.65**	**221**	P	**P**	**01 34 37.9**	**-0.5**
ASAR	**Alice Springs**	**23.66**	**221**	P	**P**	**01 34 39.0**	**+0.6**
	comp=Z,1.0nm,0.4s,baz=54,slow=9.5,SNR=17						
ASAR				PcP	**PcP**	**01 38 22.6**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=46,slow=5.3,SNR=3.7						
ASAR				LR	LR	01 44 09.5	
	comp=Z,68nm,19.0s,baz=98,slow=37						
	comp=Z,1.0nm,0.4s						
ASAR	**Alice Springs**	**23.66**	**221**	P	**P**	**01 34 38.6**	**+0.1**
STKA	**Stephens Creek**	**26.96**	**197**	P	**P**	**01 35 08.6**	**+0.3**
	comp=Z,3.0nm,0.9s,baz=13,slow=13,SNR=7.9						
STKA				LR	LR	01 46 08.0	
	comp=Z,74nm,19.1s,baz=28,slow=37						
	comp=Z,3.0nm,0.9s						
STKA	**Stephens Creek**	**26.96**	**197**	P	**P**	**01 35 07.8**	**-0.5**
STKA				IAmb	IAmb	01 35 13.5	
	comp=Z,17nm,0.9s						
DAV	**Davao City (W)**	**28.09**	**297**	P	**P**	**01 35 19.0**	**+0.4**
BBOO	**Buckleboo**	**29.78**	**205**	P	**P**	**01 35 33.0**	**-0.4**
BBOO				IAmb	IAmb	01 35 43.6	
	comp=Z,17nm,1.5s						
KAPI	**Kappang**	**30.61**	**270**	LR	LR	01 49 29.1	
	comp=Z,45nm,21.4s,baz=75,slow=39						
FORT	**Forrest**	**32.34**	**218**	P	**P**	**01 35 57.2**	**+1.2**
FORT				IAmb	IAmb	01 36 07.1	
	comp=Z,4.6nm,0.9s						
JOW	**Kunigami**	**39.18**	**328**	LR	LR	01 51 30.7	
	comp=Z,95nm,20.2s,baz=14,slow=34						
URZ	**Urewera**	**40.10**	**147**	LR	LR	01 50 52.8	
	comp=Z,94nm,21.1s,baz=293,slow=32						
MJAR	**Matsushiro Arr**	**43.95**	**346**	P	**P**	**01 37 32.1**	**-1.5**
	comp=Z,1.0nm,0.3s,baz=96,slow=7.8,SNR=6.4						
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**59.30**	**5**	LR	LR	02 01 46.7	
	comp=Z,43nm,19.0s,baz=166,slow=33						
MA2	**Magadan**	**65.47**	**0**	LR	LR	02 04 43.4	
	comp=Z,29nm,22.0s,baz=125,slow=32						
VNDA	**Vanda**	**71.63**	**177**		**P**	**01 40 46.3**	**-0.9**
KDAK	**Kodiak Island**	**78.38**	**27**	LR	LR	02 10 58.1	
	comp=Z,75nm,21.3s,baz=75,slow=32						
MKAR	**Makanchi Array**	**79.81**	**320**	P	**P**	**01 41 35.4**	**+0.8**
	comp=Z,0.4nm,0.8s,baz=109,slow=6.6,SNR=4.5						
	comp=Z,0.4nm,0.8s						
MKAR	**Makanchi Array**	**79.81**	**320**	P	**P**	**01 41 34.6**	**+0.1**
ZALV	**Zalesovo Beam**	**80.97**	**327**	LR	LR	02 16 29.9	
	comp=Z,37nm,20.6s,baz=349,slow=35						
KURBB	**Kurchatov Arra**	**83.41**	**322**	P	**P**	**01 41 52.8**	**-0.6**
	comp=Z,0.4nm,0.9s,baz=118,slow=4.1,SNR=4.3						
	comp=Z,0.4nm,0.9s						
QSPA	**South Pole Qui**	**83.86**	**180**	P	**P**	**01 41 57.1**	**+1.4**
ILAR	**Eielson Array**	**84.23**	**22**	P	**P**	**01 41 55.3**	**-2.0**
	comp=Z,0.6nm,0.8s,baz=253,slow=5.9,SNR=4.9						
	comp=Z,0.6nm,0.8s						
NVAR	**Mina Array Bea**	**94.69**	**52**	LR	LR	02 17 42.3	
	comp=Z,53nm,20.9s,baz=274,slow=31						
PFO	**Pinyon Flats O**	**95.88**	**57**	LR	LR	02 20 17.9	
	comp=Z,45nm,18.6s,baz=278,slow=32						
ELK	**Elko**	**97.18**	**50**	LR	LR	02 20 36.7	
	comp=Z,37nm,19.1s,baz=326,slow=32						
GERES	**GERESS Array B**	**123.92**	**327**	PKP	**PKiKP**	**01 48 24.6**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=64,slow=3.1,SNR=5.9						
TORD	**Torodi Ar. Bea**	**148.47**	**285**	PKPbc	**PKiKP**	**01 49 14.9**	**-0.4**
	comp=Z,4.8nm,0.7s,baz=55,slow=4.5,SNR=6.2						
BDFB	**Brasilia**	**151.67**	**140**	PKPbc	**PKiKP**	**01 49 22.1**	**+0.2**
	comp=Z,2.8nm,0.7s,baz=180,slow=4.0,SNR=4.2						

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*NNC **16** 01:44:49.1±8.3, 38°.51N×68°.72E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=66.5km s-min=50.6km az=159.0*

*ISU **16** 01:44:57, 38°.73N×68°.48E, h5^{km}*

ISC 16 01:44:52.1±1.7**, 38°.63N**±0°.06×**68°.40E**±0°.03**, h6^{km}**±11^{km}**, n25,** σ**1^{s}.72**/35**, 5C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BAYS	**Baysun**	**1.03**	**246**	P	**Pn**	**01 45 14.0**	**+0.8**
BAYS				S	**Sn**	**01 45 30.3**	**+2.3**
BXML	**Bakhmal**	**1.09**	**345**	P	**Pn**	**01 45 15.0**	**+0.9**
BXML				S	**Sn**	**01 45 31.5**	**+1.8**
AGL	**Agalyk**	**1.48**	**307**	P	**Pb**	**01 45 20.0**	**-0.1**
AGL				S	**Sg**	**01 45 40.3**	**+0.6**
SAM	**Samarkand**	**1.53**	**313**	P	**Pg**	**01 45 21.5**	**+0.1**
SAM				S	**Sg**	**01 45 41.9**	**+0.7**
DZI	**Dzhizak**	**1.55**	**343**	P	**Pn**	**01 45 20.5**	**+0.2**
DZI				S	**Sb**	**01 45 40.7**	**-0.4**
KRSA	**Karasay**	**1.57**	**341**	P	**Pb**	**01 45 21.1**	**-0.5**
KRSA				S	**Sb**	**01 45 41.6**	**-0.2**
ZRB	**Zarabog**	**1.75**	**253**	P	**Pn**	**01 45 23.6**	**+0.6**
NZBK	**Nazarbek**	**2.65**	**12**	S	**Sg**	**01 46 18.7**	**+1.6**
MINT	**Mingtut**	**2.70**	**47**	S	**Sn**	**01 46 10.0**	**+0.8**
CHMI	**Chimion**	**2.92**	**55**	P	**Pg**	**01 45 47.0**	**-1.0**
CHMI				S	**Sb**	**01 46 20.1**	**-0.4**
TGS	**TashGRES**	**2.92**	**17**	S	**Sb**	**01 46 20.9**	**+0.4**
CHDK	**Chadak**	**2.96**	**37**	S	**Sb**	**01 46 20.5**	**-1.2**
TVKS	**Tavaksay**	**3.09**	**18**	S	**Sb**	**01 46 26.7**	**+1.1**
FRG	**Fergana**	**3.14**	**55**	S	**Sb**	**01 46 24.3**	**-2.7**
CHMG	**Chimgan**	**3.17**	**22**	P	**Pg**	**01 45 52.8**	**0.0**
CHMG				S	**Sb**	**01 46 28.1**	**+0.3**
CHRV	**Charvak**	**3.23**	**21**	P	**Pb**	**01 45 49.5**	**-0.4**
CHRV				S	**Sb**	**01 46 25.8**	**-3.8**
KSNS	**Kasansay**	**3.48**	**43**	S	**Sb**	**01 46 38.2**	**+1.4**
PSK	**Pskem**	**3.62**	**24**	S	**Sb**	**01 46 43.7**	**+2.9**
TSTA	**Tashata**	**3.70**	**57**	S	**Sn**	**01 46 35.2**	**+1.4**
IUG	**Iuzhnay**	**3.73**	**19**	Pg	**Pb**	**01 46 00.4**	**+2.0**
	20nm,0.6s						
IUG				Lg	Lg	01 46 46.8	
	48nm,0.7s						
BRLS	**Borolday**	**4.53**	**13**	Pg	**Pb**	**01 46 10.6**	**-1.4**
	1.9nm,0.3s						
BRLS				Lg	Lg	01 47 04.1	
	17nm,0.2s						
KK31	**Karatay Array**	**4.75**	**19**	⇑Pn	**Pn**	**01 46 02.9**	**-1.3**
	0.6nm,0.2s,baz=211,slow=14,SNR=34						
KK31				⇑Pg	**Pb**	**01 46 17.9**	**+2.2**
	0.7nm,0.2s,baz=204,slow=18,SNR=10						
KK31				Lg	Lg	01 47 18.6	
	6.7nm,0.5s,baz=201,slow=29,SNR=10						
MRKS	**Merke**	**5.51**	**40**	Pg	**Pn**	**01 46 18.3**	**+3.6**
	1.7nm,0.7s						
MRKS				Lg	Lg	01 47 17.9	
	6.0nm,0.6s						
AAK	**Ala-Archa**	**6.12**	**47**	⇑Pg	Pn	01 46 30.0	+6.8
	0.4nm,0.5s						
AAK				⇑Sn	**Sn**	**01 47 33.0**	**-0.7**
	1.1nm,0.6s						
AAK				⇓Lg	Lg	01 47 56.4	
	2.1nm,0.7s						
AB31	**Akbulak array**	**12.24**	**333**	⇑P	**Pn**	**01 47 43.3**	**-3.6**
	0.6nm,0.6s,baz=48,slow=9.5,SNR=11						

ROM 16 01:50:19.3±0.1**, 39°.140N**±0°.004×**15°.99E**±0°.01**, h24^{km}**±1^{km}**, ML2.4**/90**, 4D, Error ellipse: s-maj=0.8km s-min=0.6km az=95.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAR1	**CAROLEI**	**0.21**	**57**	P	Pb	01 50 25.7	+0.7
CAR1				S	Sb	01 50 29.3	+0.4
CAR1				AML	AML		
	comp=N,2830µm,0.4s						
CAR1				AML	AML		
	comp=N,2830µm,0.4s						
CAR1				AML	AML		
	comp=E,3235µm,0.9s						
CAR1				AML	AML		
	comp=E,2815µm,0.5s						
CAR1				AML	AML		
	comp=E,3235µm,1.1s						
CAR1				AML	AML		
	comp=N,2250µm,0.2s						
CAR1				AML	AML		
	comp=N,2335µm,0.2s						
CAR1				AML	AML		
	comp=E,2768µm,0.2s						
CAR1				AML	AML		
	comp=E,2604µm,0.1s						
CAR1				AML	AML		
	comp=N,2900µm,0.4s						
SPS2	**Spezzano della**	**0.31**	**61**	⇓P	Pb	01 50 27.0	+0.5
SPS2				S	Sb	01 50 31.6	+0.2
SPS2				AML	AML		
	comp=N,670µm,1.2s						
SPS2				AML	AML		
	comp=E,727µm,0.2s						
SPS2				AML	AML		
	comp=N,670µm,0.8s						
SPS2				AML	AML		
	comp=E,727µm,0.2s						
SPS2				AML	AML		
	comp=N,517µm,0.2s						
CET2	**Cetraro**	**0.39**	**356**	P	Pn	01 50 28.7	-0.8
CET2				S	Sb	01 50 34.2	+0.8
CET2				AML	AML		
	comp=E,2245µm,0.3s						
CET2				AML	AML		
	comp=N,2870µm,0.9s						
CET2				AML	AML		
	comp=E,2245µm,1.7s						
CET2				AML	AML		
	comp=E,2037µm,0.1s						
CET2				AML	AML		
	comp=N,2612µm,0.2s						
CET2				AML	AML		
	comp=N,2870µm,1.1s						
GRI	**Girifalco**	**0.46**	**133**	⇓P	Pb	01 50 29.1	+0.2
GRI				S	Sb	01 50 35.1	-0.3
GRI				AML	AML		
	comp=E,1595µm,0.2s						
GRI				AML	AML		
	comp=N,1558µm,0.2s						
GRI				AML	AML		
	comp=E,1595µm,0.2s						
GRI				AML	AML		
	comp=N,1557µm,0.2s						
CELI	**Celico**	**0.48**	**57**	⇓P	Pb	01 50 29.5	+0.2
CELI				S	Sb	01 50 36.0	-0.1
CELI				AML	AML		
	comp=E,1361µm,0.3s						
CELI				AML	AML		
	comp=E,536µm,0.3s						
CELI				AML	AML		
	comp=N,2390µm,0.4s						
CELI				AML	AML		
	comp=E,536µm,0.3s						
CELI				AML	AML		
	comp=E,1359µm,0.3s						
CELI				AML	AML		
	comp=N,861µm,0.2s						
CELI				AML	AML		
	comp=N,2121µm,0.2s						
CELI				AML	AML		
	comp=N,980µm,0.4s						
JOPP	**Joppolo**	**0.54**	**188**	P	Pn	01 50 30.9	-0.6
JOPP				S	Sb	01 50 38.5	+1.0
JOPP				AML	AML		
	comp=E,673µm,0.7s						
JOPP				AML	AML		
	comp=N,868µm,0.1s						
JOPP				AML	AML		
	comp=N,867µm,0.1s						
JOPP				AML	AML		
	comp=E,620µm,0.2s						
TDS	**Terranova Siba**	**0.58**	**28**	P	Pb	01 50 30.9	0.0
TDS				S	Sb	01 50 38.9	+0.1
TDS				AML	AML		
	comp=E,145µm,1.4s						
TDS				AML	AML		
	comp=N,180µm,0.2s						
TDS				AML	AML		
	comp=N,179µm,0.2s						
TDS				AML	AML		
	comp=E,142µm,0.2s						
TIP	**Timpagrande**	**0.60**	**86**	⇓P	Pb	01 50 31.4	+0.2
TIP				S	Sb	01 50 39.5	+0.1
TIP				AML	AML		
	comp=N,106µm,0.3s						
TIP				AML	AML		
	comp=E,158µm,0.3s						
TIP				AML	AML		
	comp=E,158µm,0.3s						
TIP				AML	AML		
	comp=E,187µm,0.4s						
TIP				AML	AML		
	comp=N,106µm,0.3s						
TIP				AML	AML		
	comp=N,93µm,0.4s						
IST3	**Stromboli F**	**0.68**	**240**	P	Pn	01 50 33.8	+0.3
IST3				AML	AML		
	comp=E,984µm,0.5s						
IST3				AML	AML		
	comp=N,1340µm,0.4s						
MMN	**Mormanno**	**0.75**	**0**	P	Pn	01 50 34.0	-0.3
MMN				S	Sn	01 50 44.4	-0.6
MMN				AML	AML		
	comp=N,730µm,0.9s						
MMN				AML	AML		
	comp=E,536µm,0.3s						
MMN				AML	AML		
	comp=N,730µm,1.1s						
MMN				AML	AML		
	comp=N,726µm,0.2s						
MMN				AML	AML		
	comp=E,535µm,0.2s						
PLAC	**Placanica**	**0.78**	**153**	P	Pb	01 50 34.1	0.0
PLAC				S	Sb	01 50 44.8	+0.5
PLAC				AML	AML		
	comp=E,144µm,0.7s						
PLAC				AML	AML		
	comp=E,172µm,0.4s						
PLAC				AML	AML		
	comp=N,166µm,0.2s						
PLAC				AML	AML		
	comp=E,171µm,0.4s						
PLAC				AML	AML		
	comp=N,150µm,0.6s						
PLAC				AML	AML		
	comp=E,140µm,0.6s						
PLAC				AML	AML		
	comp=N,149µm,0.6s						
PLAC				AML	AML		
	comp=N,166µm,0.2s						
LADO	**San Nicola del**	**0.79**	**79**	P	Pb	01 50 34.2	-0.1
SALB	**San Lorenzo Be**	**0.79**	**21**	P	Pb	01 50 34.5	+0.1
SALB				S	Sn	01 50 46.4	+0.3
SALB				AML	AML		
	comp=N,99µm,1.6s						
SALB				AML	AML		
	comp=E,150µm,0.3s						
SALB				AML	AML		
	comp=N,99µm,0.4s						
SALB				AML	AML		
	comp=N,97µm,0.2s						
SALB				AML	AML		
	comp=E,150µm,1.7s						
CUC	**Castrocucco**	**0.86**	**351**	P	Pb	01 50 35.0	-0.6
CUC				AML	AML		
	comp=E,186µm,0.2s						
CUC				AML	AML		
	comp=N,106µm,1.0s						
CUC				AML	AML		
	comp=N,94µm,0.2s						
CUC				AML	AML		
	comp=E,185µm,0.2s						
CUC				AML	AML		
	comp=E,163µm,0.2s						
CUC				AML	AML		
	comp=N,129µm,0.4s						
SICLA	**Scilla**	**0.91**	**194**	P	Pn	01 50 36.5	-0.1
SICLA				S	Sb	01 50 47.8	-0.2
SICLA				AML	AML		
	comp=E,226µm,0.4s						
SICLA				AML	AML		
	comp=N,390µm,0.3s						
SICLA				AML	AML		
	comp=N,389µm,0.3s						
SICLA				AML	AML		
	comp=E,226µm,0.4s						
SICLA				AML	AML		
	comp=E,226µm,0.4s						
MSRU	**Castanea**	**0.95**	**203**	P	Pb	01 50 37.1	-0.1
MSRU				S	Sb	01 50 49.3	0.0
MSRU				AML	AML		
	comp=E,528µm,1.0s						
MSRU				AML	AML		
	comp=N,359µm,0.3s						
MSRU				AML	AML		
	comp=N,408µm,0.5s						
MSRU				AML	AML		
	comp=E,513µm,0.2s						
ORI	**Oriolo Calabro**	**0.99**	**21**	P	Pb	01 50 38.4	+0.6
ORI				AML	AML		
	comp=E,225µm,0.4s						
ORI				AML	AML		
	comp=N,213µm,0.3s						
ORI				AML	AML		
	comp=E,225µm,0.4s						
ORI				AML	AML		
	comp=N,213µm,0.3s						
SIRI	**Monte Sirino -**	**1.04**	**355**	P	Pn	01 50 37.9	-0.6
SIRI				AML	AML		
	comp=E,152µm,0.3s						
SIRI				AML	AML		
	comp=N,138µm,0.2s						
SIRI				AML	AML		
	comp=E,144µm,0.3s						
SIRI				AML	AML		
	comp=N,146µm,0.2s						
SIRI				AML	AML		
	comp=E,153µm,0.3s						
BULG	**Bulgheria - Ca**	**1.05**	**334**	P	Pb	01 50 39.0	+0.2
BULG				AML	AML		
	comp=N,254µm,1.0s						
BULG				AML	AML		
	comp=E,102µm,0.4s						
BULG				AML	AML		
	comp=N,207µm,0.2s						
BULG				AML	AML		
	comp=N,213µm,0.2s						
BULG				AML	AML		
	comp=N,254µm,1.0s						
BULG				AML	AML		
	comp=E,97µm,0.2s						
BULG				AML	AML		
	comp=E,97µm,0.3s						
MGR	**Morigerati**	**1.05**	**342**	P	Pn	01 50 38.1	-0.4
MGR				S	Sn	01 50 52.6	+0.1
MGR				AML	AML		
	comp=E,173µm,0.2s						
MGR				AML	AML		
	comp=E,173µm,1.8s						
MGR				AML	AML		
	comp=E,173µm,0.2s						
MGR				AML	AML		
	comp=E,266µm,0.2s						
MGR				AML	AML		
	comp=N,231µm,0.2s						
MGR				AML	AML		
	comp=N,232µm,0.2s						
MGR				AML	AML		
	comp=N,255µm,0.3s						
SCHR	**S. Chirico Rap**	**1.06**	**4**	P	Pn	01 50 38.3	-0.5
SCHR				AML	AML		
	comp=E,45µm,1.5s						
SCHR				AML	AML		
	comp=N,46µm,1.6s						
SCHR				AML	AML		
	comp=N,46µm,0.4s						
SCHR				AML	AML		
	comp=N,36µm,0.3s						
SCHR				AML	AML		
	comp=E,45µm,0.5s						
SCHR				AML	AML		
	comp=E,42µm,0.6s						
SOI	**Samo**	**1.07**	**177**	P	Pn	01 50 38.5	-0.3
SOI				S	Sb	01 50 52.7	+0.1
SOI				AML	AML		
	comp=E,63µm,1.4s						
SOI				AML	AML		
	comp=N,83µm,1.6s						
SOI				AML	AML		
	comp=N,83µm,0.4s						
SOI				AML	AML		
	comp=N,73µm,0.5s						
SOI				AML	AML		
	comp=E,59µm,0.3s						

IVGP	Vulcano Grotta	1.09	228	P	Pb	01 50 40.6	+1.1
VPL	Vulcano Piano	1.09	226	P	Pb	01 50 39.5	0.0
VPL				AML	AML		
	comp=N,236µm,0.3s						
VPL				AML	AML		
	comp=E,200µm,1.2s						
VPL				AML	AML		
	comp=E,200µm,0.8s						
VPL				AML	AML		
	comp=N,236µm,1.7s						
VPL				AML	AML		
	comp=N,237µm,0.3s						
VPL				AML	AML		
	comp=E,185µm,0.6s						
MPNC	Port Mandanici	1.11	207	P	Pn	01 50 39.2	-0.1
MPNC				S	Sb	01 50 52.8	-1.1
MPNC				AML	AML		
	comp=E,387µm,0.3s						
MPNC				AML	AML		
	comp=N,443µm,1.1s						
MPNC				AML	AML		
	comp=E,387µm,0.3s						
MPNC				AML	AML		
	comp=E,387µm,1.7s						
MPNC				AML	AML		
	comp=N,388µm,0.2s						
MPNC				AML	AML		
	comp=N,443µm,0.9s						
MCEL	Monticello	1.19	353	P	Pn	01 50 39.9	-0.6
MCEL				AML	AML		
	comp=N,37µm,0.2s						
MCEL				AML	AML		
	comp=E,60µm,0.4s						
MCEL				AML	AML		
	comp=E,60µm,0.4s						
IFIL	Filicudi I Eol	1.25	243	P	Pn	01 50 41.6	+0.3
IFIL				S	Sn	01 50 56.9	-0.5
IFIL				AML	AML		
	comp=N,174µm,1.6s						
IFIL				AML	AML		
	comp=E,478µm,1.1s						
IFIL				AML	AML		
	comp=E,335µm,0.2s						
IFIL				AML	AML		
	comp=N,172µm,0.4s						
CRAC	Craco	1.27	16	P	Pb	01 50 43.9	+1.3
SLCN	Sala Consilina	1.28	348	P	Pn	01 50 41.4	-0.3
SLCN				AML	AML		
	comp=E,122µm,0.9s						
SLCN				AML	AML		
	comp=N,100µm,0.5s						
SLCN				AML	AML		
	comp=E,122µm,1.1s						
SLCN				AML	AML		
	comp=E,120µm,0.4s						
SLCN				AML	AML		
	comp=N,100µm,0.5s						
CMPR	Campora	1.29	336	P	Pn	01 50 42.1	+0.2
CMPR				S	Sb	01 50 59.0	-0.1
CMPR				AML	AML		
	comp=E,84µm,0.2s						
CMPR				AML	AML		
	comp=N,56µm,0.5s						
AIO	Antillo	1.31	207	P	Pn	01 50 42.4	+0.3
AIO				S	Sn	01 50 59.1	+0.2
AIO				AML	AML		
	comp=E,108µm,0.7s						
AIO				AML	AML		
	comp=E,103µm,0.2s						
AIO				AML	AML		
	comp=N,136µm,0.4s						
AIO				AML	AML		
	comp=N,136µm,0.4s						
PTRP	Pietrapertosa	1.38	2	P	Pn	01 50 43.7	+0.5
MUCR	Ucria	1.40	219	P	Pn	01 50 43.7	+0.3
MUCR				AML	AML		
	comp=E,72µm,1.2s						
MUCR				AML	AML		
	comp=N,104µm,0.4s						
MUCR				AML	AML		
	comp=E,72µm,0.8s						
MUCR				AML	AML		
	comp=N,105µm,0.4s						
MUCR				AML	AML		
	comp=N,104µm,1.6s						
MUCR				AML	AML		
	comp=E,67µm,0.4s						
STN3	Satriano di Lu	1.41	350	AML	AML		
	comp=E,3590µm,1.5s						
STN3				AML	AML		
	comp=E,3585µm,1.5s						
STN3				AML	AML		
	comp=N,2705µm,1.6s						
STN3				AML	AML		
	comp=E,3096µm,0.6s						
STN3				AML	AML		
	comp=N,2398µm,0.6s						
ECTS	Castiglione	1.43	209	P	Pb	01 50 44.9	-0.4
CDRU	Civita di Ruta	1.45	339	P	Pn	01 50 44.3	+0.2
CDRU				S	Sb	01 51 03.8	+0.2
CDRU				AML	AML		
	comp=E,72µm,0.2s						
CDRU				AML	AML		
	comp=N,39µm,0.5s						
MIGL	Miglionico	1.50	13	P	Pb	01 50 45.8	-0.7
EPIT	Pozzo Pitarron	1.51	209	P	Pb	01 50 47.3	+0.5
LTRZ	Laterza	1.60	23	P	Pn	01 50 46.9	+0.9
LTRZ				AML	AML		
	comp=E,51µm,0.6s						
MATE	Matera	1.61	20	P	Pn	01 50 47.1	+0.9
ACER	Acerenza	1.65	359	P	Pb	01 50 48.7	-0.3
ACER				AML	AML		
	comp=N,65µm,1.0s						
ACER				AML	AML		
	comp=E,74µm,1.6s						
ACER				AML	AML		
	comp=N,55µm,0.3s						
ACER				AML	AML		
	comp=E,61µm,0.4s						
MRLC	Muro Lucano	1.66	347	P	Pb	01 50 48.3	-0.9
TAR1	Taranto	1.71	35	P	Pn	01 50 48.5	+1.0
TAR1				AML	AML		
	comp=E,94µm,0.7s						
TAR1				AML	AML		
	comp=N,90µm,0.4s						
TAR1				AML	AML		
	comp=N,90µm,1.6s						
TAR1				AML	AML		
	comp=N,73µm,0.4s						
TAR1				AML	AML		
	comp=E,83µm,0.6s						
ESML	S. M. di Licod	1.75	210	P	Pb	01 50 50.8	0.0
MCRV	Calabrutti - M	1.76	339	P	Pn	01 50 49.3	+0.9
AMUR	Altamura	1.83	15	P	Pn	01 50 49.9	+0.6
AMUR				AML	AML		
	comp=E,89µm,0.4s						
AMUR				AML	AML		
	comp=E,89µm,0.4s						
AMUR				AML	AML		
	comp=N,56µm,0.6s						
AMUR				AML	AML		
	comp=N,56µm,0.6s						
NOCI	Noci	1.84	26	P	Pn	01 50 50.0	+0.6
NOCI				AML	AML		
	comp=N,120µm,0.3s						
NOCI				AML	AML		
	comp=E,130µm,0.4s						
NOCI				AML	AML		
	comp=N,116µm,0.3s						
MRVN	Minervino Murg	1.93	5	P	Pn	01 50 51.2	+0.6
MTMR	Montemarano	1.93	337	P	Pn	01 50 52.2	+1.5
HAGA	Augusta	1.96	200	P	Pn	01 50 52.4	+1.3
HAGA				S	Sn	01 51 16.0	+1.0
HAGA				AML	AML		
	comp=N,69µm,0.4s						
HAGA				AML	AML		
	comp=E,53µm,0.4s						
HLNI	Lentini	1.99	206	P	Pn	01 50 52.9	+1.4
HLNI				S	Sb	01 51 17.8	-1.4
HLNI				AML	AML		
	comp=N,37µm,0.2s						
HLNI				AML	AML		
	comp=E,47µm,0.2s						

PDG ***16*** *01:50:53.2±0.2, 41°.59N×19°.49E, h10^{km}, MD3.3/3, ML3.2/13, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
SKO ***16*** *01:50:53.2, 41°.59N×19°.32E, h0^{km}, ML3.0*
BEO ***16*** *01:50:54.1±0.6, 41°.53N×19°.47E, h9^{km}±3^{km}, ML2.9/22*
TIR ***16*** *01:50:54.1, 41°.63N×19°.53E, h32^{km}±1^{km}, Ml3.0/5*
IDC ***16*** *01:50:58.8±7.5, 42°.27N×20°.53E, h0^{km}, mb3.6/2, mbtmp3.6/5, ML2.5/3, Error ellipse: s-maj=142.0km s-min=26.9km az=28.0*
ISC 16 01:50:53.2±1.0**, 41°.56N**±0°.02×**19°.40E**±0°.02**, h12**^{km}±8^{km}**, n108, σ1^{s}37**/128**, 15C-12D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.41	121	⇓*e*Pg	Pg	01 51 01.0	-0.4
TIR				Sg	Sg	01 51 07.2	+0.5
TIR				AML	AML	01 51 08.7	
	6.3nm,0.3s						
TIR	Tirane	0.41	121	*i* Pg	Pg	01 51 00.9	-0.4
TIR				*i* Sg	Sb	01 51 08.1	-0.4
ULC	Ulcinj	0.42	344	⇑*i*Pg	Pg	01 51 01.2	-0.3
ULC				*e*Sg	Sg	01 51 07.9	+0.7
SDA	Shkodra	0.50	9	⇑*i*Pg	Pg	01 51 02.6	-0.4
SDA				Sg	Sb	01 51 10.6	-0.5
SDA				AML	AML	01 51 13.6	
	3.6nm,0.4s						
DRME	Dracevica, Mon	0.65	346	*e*Pg	Pn	01 51 07.9	-0.3
DRME	Dracevica, Mon	0.65	346	⇑*i*Pg	Pg	01 51 05.1	-0.7
DRME				*e*Sg	Sg	01 51 14.8	+0.5
PHP	Peshkopia	0.79	80	Pg	Pg	01 51 07.4	-1.1
PHP				Sg	Sg	01 51 17.6	-1.3
PHP				AML	AML	01 51 27.5	
	2.7nm,0.4s						
BUM	Brajici-Budva	0.83	333	⇑*i*Pg	Pg	01 51 08.8	-0.5
BUM				*e*Sg	Sb	01 51 22.1	+1.4
PDG	Podgorica	0.88	353	Pg	Pg	01 51 09.8	-0.3
PDG				Sg	Sb	01 51 22.4	+0.4
PDG	Podgorica	0.88	353	⇑P	Pg	01 51 09.0	-1.1
PDG	Podgorica	0.88	353	*e*Pg	Pn	01 51 11.1	-0.2
PDG				*e*Sg	Sn	01 51 24.6	+0.6
PDG	Podgorica	0.88	353	*e*Pg	Pg	01 51 09.0	-1.1
PDG				*e*Sg	Sb	01 51 22.4	+0.4
CEME	Cevo	1.05	340	⇑*i*Pg	Pg	01 51 12.5	-0.9
CEME				*e*Sg	Sn	01 51 28.7	+0.3
VLO	Vlora	1.09	176	Pn	Pn	01 51 15.3	+1.1
VLO				Sn	Sn	01 51 30.9	+1.7
VLO				AML	AML	01 51 44.2	
	3.9nm,0.4s						
HCY	Herceg Novi	1.11	323	⇓*i*Pg	Pb	01 51 14.2	-0.2
HCY				*e*Sg	Sn	01 51 32.1	+2.2
PVY	Plav	1.12	22	*e*Pg	Pn	01 51 15.4	+0.7
PVY	Plav	1.12	22	*e*Pg	Pb	01 51 12.9	-1.6
PVY				*i* Sg	Sn	01 51 29.6	-0.5
OHR	Ohrid	1.15	112	*i* Pg	Pb	01 51 14.1	-0.9
OHR				*i* Sg	Sn	01 51 33.1	+2.4
OHR				*e*Lg	Lg	01 51 34.1	
	comp=N,226nm,0.5s						
OHR				*e*Lg	Lg	01 51 36.8	
	comp=E,223nm,0.6s						
NKME	Niksic	1.25	345	⇑*i*Pg	Pn	01 51 16.1	-0.4
NKME				*e*Sg	Sn	01 51 35.9	+2.6
KOME	Kolasin	1.29	4	⇑*i*Pg	Pn	01 51 16.7	-0.4
KOME				*e*Sg	Sg	01 51 36.4	+1.5
BEY	Berane	1.36	16	*e*Pg	Pn	01 51 18.4	+0.3
IVA	Berane	1.36	16	⇑*i*Pg	Pn	01 51 17.5	-0.6
IVA				*i* Sg	Sg	01 51 38.2	+1.1
TREB	Trebinje	1.40	326	*e*Pn	Pb	01 51 19.1	0.0
TREB	Trebinje	1.40	326	*e*Pg	Pb	01 51 19.2	+0.1
TREB				*e*Sg	Sg	01 51 39.5	+1.4
BRY	Bratogost	1.49	335	⇑*i*Pg	Pn	01 51 20.3	+0.5
BRY				*e*Sg	Sg	01 51 43.1	+2.1
SKO	Skopje	1.58	74	*i* Pg	Pg	01 51 23.0	-0.5
SKO				*i* Sg	Sg	01 51 44.9	+0.8
UPM	Unac-Piva	1.68	348	⇑*i*Pn	Pb	01 51 24.4	+0.2
UPM				*e*Sn	Sg	01 51 48.1	+0.7
KLINJ	Klinje	1.72	340	*e*Pn	Pb	01 51 24.9	+0.2
SJES	Sjenica	1.75	14	*e*Pg	Pb	01 51 25.4	+0.1
SJES				*e*Sg	Sg	01 51 49.6	0.0
PLE	Pljevlja	1.77	360	*e*Pg	Pb	01 51 25.8	+0.2
PLE	Pljevlja	1.77	360	*e*Pn	Pb	01 51 25.3	-0.3
PLE				*i* Sn	Sg	01 51 50.1	0.0
STON	Ston	1.82	317	*e*Pn	Pb	01 51 26.6	+0.2
STON				*e*Sn	Sg	01 51 51.2	-0.5
NOCI	Noci	1.92	247	P	Pb	01 51 27.7	-0.4
NOCI				Sn	Sg	01 51 56.1	+1.2
RUDO	Rudo	2.06	359	*e*Pn	Pn	01 51 28.8	+1.2
RUDO	Rudo	2.06	359	*e*Pn	Pb	01 51 29.9	-0.6
IVAS	Ivanjica	2.09	15	*e*Pn	Pn	01 51 28.6	+0.5
SELS	Selova	2.09	37	*e*Pn	Pn	01 51 29.1	+1.0
IGT	Igoumenitsa	2.15	160	*e*Pn	Pn	01 51 28.7	0.0
BARS	Barje	2.19	54	*i* Pn	Pn	01 51 30.3	+0.9
BARS	Barje	2.19	54	*e*Pn	Pn	01 51 30.0	+0.6
GOCS	Kraljevo Serbi	2.28	28	*e*Pn	Pb	01 51 33.2	-1.1
BBLS	Lazi&#263i	2.31	0	*e*Pn	Pb	01 51 34.9	+0.2
GRG	Griva	2.34	104	*i* Pn	Pn	01 51 32.5	+1.0
BOSS	Bosilegrad	2.48	67	*e*Pn	Pn	01 51 34.3	+0.9
GRUS	Gruza	2.52	22	*e*Pn	Pn	01 51 35.7	+1.8
DIVS	Divibare	2.58	10	*e*Pn	Pn	01 51 35.2	+0.4
BOVS	Bovan	2.69	39	⇓P	Pn	01 51 37.3	+1.1
BOVS	Bovan	2.69	39	*e*Pn	Pn	01 51 37.3	+1.1
TRAN	Tran	2.73	61	*i* P	Pn	01 51 38.1	+1.2
TRUS	Trudelj	2.77	15	*e*Pn	Pb	01 51 40.8	-1.7
KKB	Krupnik	2.81	83	*i* P	Pn	01 51 39.6	+1.7
KKB	Krupnik	2.81	83	*i* Pn	Pn	01 51 39.5	+1.7
THE	Thessaloniki	2.85	108	*i* Pn	Pn	01 51 38.8	+0.4
ZAPS	Zavoj	2.95	53	*e*Pn	Pn	01 51 41.8	+2.0
TEKS	Tekeris	2.99	2	*e*Pn	Pn	01 51 40.9	+0.5
VTS	Vitosha	3.05	68	*i* P	Pn	01 51 42.6	+1.3
VTS	Vitosha	3.05	68	*e*Pn	Pn	01 51 42.0	+0.7
ZAGS	Zajecar	3.07	42	*e*Pn	Pn	01 51 42.5	+1.0
TIP	Timpagrande	3.12	221	⇓P	Pn	01 51 41.1	-1.0
PLNA	Plana	3.14	72	*i* P	Pn	01 51 44.1	+1.6
BLSH	Balsha	3.16	64	*i* P	Pn	01 51 45.8	+3.0
BLKB	Belogradchik	3.18	48	*e*Pn	Pn	01 51 45.3	+2.3
BORS2	Bor- Borsko je	3.18	36	*e*Pn	Pn	01 51 42.4	-0.6
SRS	Serrai	3.19	97	*i* Pn	Pn	01 51 43.9	+0.8
AVAS	Avala Beograd	3.24	14	*e*Pn	Pn	01 51 44.2	+0.4
MMB	Musomishta	3.27	89	*i* Pn	Pn	01 51 45.8	+1.6
KUBS	Kucevo	3.31	30	*e*Pn	Pn	01 51 43.9	-0.8
BLY	Banja Luka	3.58	334	*e*Pn	Pn	01 51 49.7	+1.3
FRGS	Fruska Gora	3.61	5	*e*Pn	Pn	01 51 49.1	+0.2
MDVR	Moldovita	3.64	27	⇓P	Pn	01 51 49.9	+0.5
MPEP	Malo Peshtene	3.68	59	*i* P	Pb	01 52 00.0	+1.9
HERR	Herculane	3.99	33	⇓P	Pn	01 51 55.0	+1.0
KNYS	Krupa na Uni	4.02	327	*e*Pn	Pn	01 51 56.9	+2.4
PLD	Plovdiv	4.04	80	*e*Pn	Pn	01 51 56.8	+2.0
BZS	Buzias	4.37	21	⇓P	Pn	01 51 59.4	+0.1
AQU	L'Aquila	4.54	282	*e*Pn	Pn	01 52 01.8	+0.1
GZR	Gura Zlata	4.55	32	⇓P	Pn	01 52 03.2	+1.3
GZR	Gura Zlata	4.55	32	*e*Pn	Pn	01 52 03.2	+1.3
MORH	Mrgy, Hungar	4.69	354	*e*Pn	Pn	01 52 04.2	+0.6
ELND	Elena	5.00	72	⇑P	Pn	01 52 09.8	+1.8
HUMR	Humele	5.05	52	⇑P	Pn	01 52 10.6	+1.9
LOZB	Loznitsa	5.62	69	⇑P	Pn	01 52 18.4	+1.8
SULR		5.91	56	⇑P	Pn	01 52 22.8	+2.4
SOKA	Soboth	6.00	330	*e*Pn	Pn	01 52 23.0	+1.1
	comp=E,0.2nm,0.2s						
OBKA	Obir	6.06	326	*e*Sn	Sn	01 53 31.4	-0.4
	comp=E,2.6nm,0.5s						
OBKA	Obir	6.06	326	*e*Pn	Pn	01 52 23.5	+0.9
	comp=E,0.6nm,0.4s						
MLR	Muntele Rosu	6.17	48	⇓P	Pn	01 52 26.7	+2.5
ARSA	Arzberg	6.33	335	*e*Sn	Sn	01 53 48.1	+10
	comp=E,0.1nm,0.1s						
ARSA	Arzberg	6.33	335	*e*Pn	Pn	01 52 33.1	+6.8
	comp=E,0.1nm,0.1s						
NEHR	Nehoiu	6.33	50	⇓P	Pn	01 52 29.5	+3.1
VRI	Vrincioaia	6.84	49	⇓P	Pn	01 52 35.8	+2.6
KBA	Koelnbreinsper	7.02	324	*e*Sn	Sn	01 53 51.4	-4.2
	comp=E,0.2nm,0.3s						
KBA	Koelnbreinsper	7.02	324	*e*Pn	Pn	01 52 33.2	-2.6
	comp=E,0.3nm,0.3s						
ABTA	Abfaltersbach	7.17	319	*e*Sn	Sn	01 53 47.5	-12
	comp=E,0.6nm,0.4s						
ABTA	Abfaltersbach	7.17	319	*e*Pn	Pn	01 52 33.7	-4.1
	comp=E,0.4nm,0.2s						
MOA	Molln	7.27	332	*e*Sn	Sn	01 54 03.8	+2.1
	comp=E,0.1nm,0.1s						
BIOA	Bad Ischl, Aus	7.38	328	*e*Pn	Pn	01 52 41.6	+0.9
	comp=E,0.4nm,0.1s						
TLCR		7.76	59	⇓P	Pn	01 52 48.5	+2.7
WTTA	Wattenberg	7.96	318	Pn	Pn	01 52 45.7	-3.1
	comp=E,0.3nm,0.2s						
WATA	Walderalm	8.04	319	*e*Sn	Sn	01 54 05.0	-16
	comp=E,0.1nm,0.1s						
WATA	Walderalm	8.04	319	*e*Pn	Pn	01 52 49.5	-0.3
	comp=E,0.4nm,0.2s						
SQTA	Sankt Quirin	8.15	317	*e*Sn	Sn	01 54 05.2	-18
	comp=E,0.1nm,0.1s						
SQTA	Sankt Quirin	8.15	317	*e*Pn	Pn	01 52 51.2	0.0
	comp=E,0.7nm,0.3s						
GERES	GERESS Array B	8.32	333	Pn	Pn	01 52 59.6	+6.0
	baz=149,slow=14,SNR=2.0						
	comp=E,0.2nm,0.4s						
HFS	Hagfors	18.93	351	P	P	01 55 13.5	-0.1
	comp=E,0.1nm,0.3s,baz=167,slow=15,SNR=1.9						
	comp=E,4.4nm,1.0s						
FINES	FINESS Array B	20.32	9	P	P	01 55 27.6	-1.2
	comp=E,0.1nm,0.3s,baz=177,slow=8.4,SNR=3.7						
	comp=E,3.8nm,1.1s						
ZALV	Zalesovo Beam	44.15	51	P	P	01 58 59.7	-1.5
	comp=E,0.4nm,0.3s,baz=292,slow=9.0,SNR=3.7						
	comp=E,0.4nm,0.3s						
MKAR	Makanchi Array	44.35	61	P	P	01 59 01.9	-1.1
	comp=E,0.2nm,0.4s,baz=279,slow=7.2,SNR=4.4						
	comp=E,0.2nm,0.4s						

IDC ***16*** *02:01:51.5±1.0, 20°.14S×179°.31W, h0^{km}, mb4.0/7, mbtmp4.1/8, ML4.5/1, Error ellipse: s-maj=49.3km s-min=20.3km az=147.0*
ISC 16 02:01:56.7±0.9**, 20°.2S**±0°.2×**179°.3W**±0°.2**, h35**^{km}**, n8, σ0^{s}95**/8**, mb4.0**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	18.28	189	P	Pn	02 06 07.9	+0.5
	1.6nm,0.3s,baz=272,slow=3.1,SNR=9.2						
	12nm,0.8s						
STKA	Stephens Creek	36.80	244	P	P	02 09 00.9	-0.5
	2.3nm,0.5s,baz=93,slow=11,SNR=7.8						
	2.3nm,0.5s						
ASAR	Alice Springs	43.37	257	P	P	02 09 56.0	-0.1
	3.3nm,0.6s,baz=92,slow=8.1,SNR=42						
	3.3nm,0.6s						
WRA	Warramunga Arr	43.40	262	P	P	02 09 56.8	+0.5
	1.1nm,0.3s,baz=95,slow=7.8,SNR=37						
	1.1nm,0.3s						
NVAR	Mina Array Bea	81.66	44	P	P	02 14 13.2	+1.4
	0.7nm,0.8s,baz=253,slow=4.7,SNR=3.7						
	0.7nm,0.8s						
TXAR	Lajitas Array	87.95	58	P	P	02 14 42.5	-0.9
	0.6nm,0.8s,baz=213,slow=6.7,SNR=5.5						
	0.6nm,0.8s						
ILAR	Eielson Array	88.29	13	P	P	02 14 44.5	+0.4
	0.2nm,0.6s,baz=199,slow=4.6,SNR=3.6						
	0.2nm,0.6s						
PDAR	Pinedale Array	89.60	44	P	P	02 14 50.2	-0.8
	0.8nm,1.0s,baz=129,slow=2.1,SNR=4.3						
	0.8nm,1.0s						

IDC 16 02:15:02.2±2.6**, 2°.96S**×**127°.78E, h0**^{km}**, mb3.7**/3**, mbtmp3.6**/4**, ML3.3**/1**, Error ellipse: s-maj=310.1km s-min=23.8km az=67.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.06	160	P	Pn	02 19 14.4	-0.3
	0.1nm,0.3s,baz=342,slow=12,SNR=2.1						
	0.7nm,0.8s						
ASAR	Alice Springs	21.42	164	P	P	02 19 52.1	+0.2
	1.9nm,0.7s,baz=348,slow=10.0,SNR=27						
	1.9nm,0.7s						
MKAR	Makanchi Array	63.65	327	P	P	02 25 34.7	-0.6
	0.5nm,0.4s,baz=127,slow=8.0,SNR=12						
	0.5nm,0.4s						
KURBB	Kurchatov Arra	67.93	329	P	P	02 26 03.5	+0.7
	0.3nm,0.4s,baz=132,slow=7.2,SNR=5.8						
	0.3nm,0.4s						

SJA ***16*** *02:16:14.0±0.8, 23°.80S×66°.76W, h225^{km}±5^{km}, ML3.8, MW3.7*
NEIC ***16*** *02:16:15.5±1.6, 23°.89S±0°.07×66°.9W±0°.1, h220^{km}±12^{km}, mb4.2/3, ML4.0(GUC), Error ellipse: s-maj=18.2km s-min=8.8km az=75.0*
GUC ***16*** *02:16:16.0±0.7, 23°.79S×66°.87W, h191^{km}±6^{km}, ML4.0*
IDC ***16*** *02:16:17.5±2.4, 23°.75S×66°.45W, h204^{km}±25^{km}, mb3.3/2, mbtmp3.7/6, Error ellipse: s-maj=28.5km s-min=19.8km az=113.0*
ISC 16 02:16:15.4±0.7**, 23°.81S**±0°.04×**66°.79W**±0°.04**, h209**^{km}±7^{km}**, n84, σ1^{s}46**/108**, 7C-2D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALTA		0.58	135	⇓*i*P	Pn	02 16 44.8	+0.3
SALTA				*e*S	S	02 17 05.8	-1.3
SALTA		0.58	135	*e*P	Pn	02 16 44.8	+0.3
HJA	Humahuaca	1.41	65	*e*P	Pn	02 16 49.9	+0.3
HJA				*e*S	S	02 17 16.8	+1.1
SLA	San Lorenzo	1.48	128	*e*P	Pn	02 16 50.6	+0.7
SLA	San Lorenzo	1.48	128	*e*P	Pn	02 16 50.5	+0.7
SLA				*e*S	S	02 17 17.2	+0.7
AF01	San Pedro de A	1.53	304		Pn	02 16 51.5	+1.0
AF01	San Pedro de A	1.53	304	*e*P	Pn	02 16 52.1	+1.6
AF01	San Pedro de A	1.53	304	*e*P	Pn	02 16 51.8	+1.3
AF01				*e*S	S	02 17 29.0	+11
YJA	Yavi	2.01	36	*e*P	Pn	02 16 56.1	+1.0
YJA	Yavi	2.01	36	*e*P	Pn	02 16 56.2	+1.0
YJA				*e*S	S	02 17 22.0	-3.7
FSA	Cafayete	2.41	162	*e*P	Pn	02 16 59.6	+0.6
FSA				*e*S	S	02 17 26.0	-6.7
PB06	IPOC Station P	2.78	293	Pn	Pn	02 17 03.6	+0.5
PB06	IPOC Station P	2.78	293	⇑*i*P	Pn	02 17 03.9	+0.8
PB06				*e*S	S	02 17 39.3	-0.7
PB06				IAML		02 17 42.2	
	comp=N,373nm,0.2s						
PB06	IPOC Station P	2.78	293	*e*P	Pn	02 17 03.3	+0.2
PB06				*e*S	S	02 17 40.0	0.0
PB06				IAML		02 17 43.1	
	comp=Z,238nm,0.3s						
GO02	Mina Guanaco	2.88	242	Pn	Pn	02 17 04.4	0.0
GO02	Mina Guanaco	2.88	242	⇑*i*P	Pn	02 17 04.8	+0.4
GO02				IAML		02 17 44.7	
	comp=N,328nm,0.2s						
GO02	Mina Guanaco	2.88	242	*e*P	Pn	02 17 05.0	+0.5
GO02				*e*S	S	02 17 42.8	+0.5
GO02				IAML		02 17 46.0	
	comp=Z,223nm,0.3s						
PB09	IPOC Station P	3.02	311	Pn	Pn	02 17 07.2	+1.2
PB09	IPOC Station P	3.02	311	⇑*i*P	Pn	02 17 07.1	+1.2
PB09				IAML		02 17 51.7	
	comp=E,117nm,0.4s						
PB09	IPOC Station P	3.02	311	*e*P	Pn	02 17 06.6	+0.7
PB09				*e*S	S	02 17 46.7	+1.7
PB09				IAML		02 17 47.6	
	comp=Z,125nm,0.3s						
PB03	IPOC Station P	3.24	302	Pn	Pn	02 17 08.7	+0.2
PB03	IPOC Station P	3.24	302	⇑*i*P	Pn	02 17 09.0	+0.5
PB03				IAML		02 17 49.1	
	comp=E,445nm,0.2s						
PB03	IPOC Station P	3.24	302	*e*P	Pn	02 17 09.1	+0.5
PB03				*e*S	S	02 17 48.8	-0.9
PB03				IAML		02 17 49.8	
	comp=Z,316nm,0.2s						
PB05	IPOC Station P	3.27	286	Pn	Pn	02 17 09.0	+0.1
PB05	IPOC Station P	3.27	286	*e*P	Pn	02 17 09.2	+0.4
PB05				IAML		02 17 51.9	
	comp=E,102nm,0.2s						
PB05	IPOC Station P	3.27	286	*e*P	Pn	02 17 09.2	+0.4
PB05				*e*S	S	02 17 49.2	-1.1
PB05				IAML		02 17 52.2	
	comp=Z,84nm,0.2s						
PB14	IPOC Station P	3.40	255	Pn	Pn	02 17 10.3	-0.1
PB14	IPOC Station P	3.40	255	⇑*e*P	Pn	02 17 10.4	0.0
PB14	IPOC Station P	3.40	255	*e*P	Pn	02 17 10.5	0.0
PB14				*e*S	S	02 17 52.7	-0.4
PB14				IAML		02 17 55.3	
	comp=Z,89nm,0.2s						
PB10	IPOC Station P	3.46	274	Pn	Pn	02 17 11.0	0.0
PB10	IPOC Station P	3.46	274	⇑*e*P	Pn	02 17 11.4	+0.4
PB10	IPOC Station P	3.46	274	*e*P	Pn	02 17 11.3	+0.4
PB10				*e*S	S	02 17 54.1	0.0
PB07	IPOC Station P	3.53	305	Pn	Pn	02 17 12.0	+0.1
PB07	IPOC Station P	3.53	305	⇑*e*P	Pn	02 17 12.2	+0.3
PB07	IPOC Station P	3.53	305	*e*P	Pn	02 17 12.1	+0.1
PB07				*e*S	S	02 17 55.1	-0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PB07				IAML		02 17 55.9	
	comp=Z,148nm,0.1s						
AC02	Maricunga	3.68	215	Pn	Pn	02 17 14.2	+0.1
AC02	Maricunga	3.68	215	*e*P	Pn	02 17 14.6	+0.6
AC02				*e*S	S	02 18 04.3	+4.6
PB01	IPOC Station P	3.71	317	Pn	Pn	02 17 14.0	-0.1
PB01	IPOC Station P	3.71	317	⇓*e*P	Pn	02 17 14.6	+0.5
PB01	IPOC Station P	3.71	317	*e*P	Pn	02 17 13.9	-0.2
PB01				*e*S	S	02 17 59.4	-0.4
PB01				IAML		02 18 01.1	
	comp=Z,153nm,0.2s						
PB02	IPOC Station P	3.79	310	Pn	Pn	02 17 14.8	-0.3
PB02	IPOC Station P	3.79	310	*e*P	Pn	02 17 14.7	-0.3
PB02	IPOC Station P	3.79	310	*e*P	Pn	02 17 15.1	0.0
PB02				*e*S	S	02 18 00.1	-1.4
PB02				IAML		02 18 00.8	
	comp=Z,260nm,0.2s						
AC01	Pan de Azucar	4.16	235	Pn	Pn	02 17 18.4	-1.1
AC01	Pan de Azucar	4.16	235	*e*P	Pn	02 17 18.5	-1.0
AC01				*e*S	S	02 18 07.2	-2.4
AC01				IAML		02 18 07.6	
	comp=Z,58nm,0.6s						
PB08	IPOC Station P	4.26	329	Pn	Pn	02 17 21.8	+0.7
PB08	IPOC Station P	4.26	329	*e*P	Pn	02 17 22.2	+1.1
PB08	IPOC Station P	4.26	329	*e*P	Pn	02 17 21.8	+0.7
PB08				*e*S	S	02 18 12.7	+0.3
PB08				IAML		02 18 16.2	
	comp=Z,50nm,0.9s						
TINO	Tinogasta	4.29	189	*e*P	Pn	02 17 22.3	+1.1
PATCX	Punta Patache	4.30	313	*e*P	Pn	02 17 20.7	-0.7
PATCX	Punta Patache	4.30	313	*e*P	Pn	02 17 21.0	-0.4
PATCX				*e*S	S	02 18 11.6	-1.3
PATCX				IAML		02 18 16.6	
	comp=Z,58nm,0.2s						
TA01	Diego Aracena	4.50	315	Pn	Pn	02 17 23.4	-0.4
TA01	Diego Aracena	4.50	315	*e*P	Pn	02 17 23.4	-0.4
TA01	Diego Aracena	4.50	315	*e*P	Pn	02 17 23.3	-0.4
TA01				*e*S	S	02 18 15.8	-1.5
TA01				IAML		02 18 16.5	
	comp=Z,44nm,0.2s						
GO01	Chusmiza	4.69	331	Pn	Pn	02 17 27.3	+0.7
GO01	Chusmiza	4.69	331	*e*P	Pn	02 17 27.9	+1.3
AC06	Mina Casimiro	4.78	222	Pn	Pn	02 17 25.9	-1.3
PB11	IPOC Station P	4.83	326	Pn	Pn	02 17 27.4	-0.7
PB11	IPOC Station P	4.83	326	*e*P	Pn	02 17 27.3	-0.7
PB11	IPOC Station P	4.83	326	*e*P	Pn	02 17 23.5	-4.6
PB11				*e*P		02 17 27.4	
PB11				*e*S	S	02 18 22.2	-2.8
PB11				IAML		02 18 24.6	
	comp=Z,57nm,0.2s						
GO03	Copiapo	4.88	219	Pn	Pn	02 17 26.8	-1.8
GO03	Copiapo	4.88	219	*e*P	Pn	02 17 27.1	-1.4
GO03	Copiapo	4.88	219	*e*P	Pn	02 17 27.4	-1.1
GO03				*e*P		02 17 27.5	
GO03				*e*S	S	02 18 23.5	-2.5
GO03				IAML		02 18 28.3	
	comp=Z,43nm,0.3s						
VCA	Vinchina	5.07	194	*e*P	Pn	02 17 32.1	+1.1
VCA				*e*S	S	02 18 32.6	+2.2
AC04	Llanos de Chal	5.83	220	Pn	Pn	02 17 38.5	-2.1
AC05	El Transito	5.90	211	Pn	Pn	02 17 40.0	-1.5
PB12	IPOC Station P	6.13	327	Pn	Pn	02 17 43.8	-0.9
LCO	Las Campanas	6.25	213	Pn	Pn	02 17 44.1	-2.1
CO01	Juntas del Tor	6.81	205	Pn	Pn	02 17 53.0	-0.4
LPAZ	La Paz	7.59	350	P	Pn	02 18 05.7	+1.7
	comp=Z,0.4nm,0.3s,baz=188,slow=10,SNR=7.1						
LPAZ	La Paz	7.59	350	Pn	Pn	02 18 04.7	+0.7
CO03	El Pedregal	7.81	205	Pn	Pn	02 18 03.4	-2.8
CO02	Combarbal	8.26	206	Pn	Pn	02 18 09.5	-2.5
CPUP	Villa Florida	8.94	108	P	Pn	02 18 19.6	-1.1
	comp=Z,0.7nm,1.0s,baz=297,slow=14,SNR=3.7						
ITAB	Concordia	13.67	108	P	P	02 19 22.5	-0.4
TRQA	Tornquist	14.79	165		P	02 19 34.5	-0.7
PLCA	Paso Flores	17.17	190	P	Pn	02 20 05.6	+2.5
	comp=Z,0.9nm,0.4s,baz=0.7,slow=12,SNR=7.0						
VAO	Valinhos	18.22	91	P	P	02 20 11.8	-1.3
VAO				IAmb	IAmb	02 20 13.4	
	comp=Z,6.6nm,0.8s						
BDFB	Brasilia	19.44	69	P	P	02 20 25.6	-0.8
	comp=Z,5.6nm,0.8s,baz=236,slow=12,SNR=6.7						
BDFB	Brasilia	19.44	69	P	P	02 20 26.4	0.0
BDFB				IAmb	IAmb	02 20 28.0	
	comp=Z,7.1nm,0.9s						
BOAV	Boa Vista	26.75	14	P	P	02 21 35.5	-0.5
BOAV				IAmb	IAmb	02 21 45.5	
	comp=Z,5.2nm,1.2s						
QSPA	South Pole Qui	66.39	180	P	P	02 26 44.1	+2.4
	comp=Z,0.6nm,0.5s,baz=269,slow=0.7,SNR=2.5						
	comp=Z,0.6nm,0.5s						
TORD	Torodi Ar. Bea	76.32	69	P	P	02 27 41.8	+0.1
	comp=Z,0.6nm,0.7s,baz=257,slow=4.2,SNR=1.9						
	comp=Z,0.6nm,0.7s						
MKAR	Makanchi Array	146.26	39	PKPbc	PKiKP	02 35 33.6	-0.5
	comp=Z,0.3nm,0.7s,baz=316,slow=4.0,SNR=2.7						

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*UCR **16** 02:23:06.7±1.2, 11°.43N×86°.46W, h32^{km}±3^{km}, MW4.0*

*CATAC **16** 02:23:07.3±0.2, 11°N±2°×8°6W±°, h39^{km}±3^{km}, M3.8/52, mb3.4/1, MLv4.0/52, Error ellipse: s-maj=4.5km s-min=2.1km az=47.5, confirmed*

*GCG **16** 02:23:08.9±0.9, 11°.74N×87°.31W, h269^{km}±63^{km}, MD4.2, ML4.0*

ISC 16 02:23:07.3±1.2**, 11°.46N**±0°.04×**86°.45W**±0°.04**, h57**^{km}±10^{km}**, n128, σ0^{s}73**/171**, 19C-35D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NADN	Granada	0.50	55	P	Pn	02 23 18.9	-0.1
NADN				S	Sn	02 23 28.1	+0.5
NADN	Granada	0.50	55	⇑*i*P	Pn	02 23 18.9	-0.1
NADN				*e*S	Sn	02 23 28.4	+0.9
SABN	Sabanita	0.56	30	⇑P	Pn	02 23 19.8	-0.1
SABN				S	Sn	02 23 29.7	+0.8
NANN	Nandasmo	0.57	34	S	Sn	02 23 30.1	+1.0
NANN	Nandasmo	0.57	34	⇑P	Pn	02 23 20.7	+0.8
MASN	Masaya	0.60	29	⇑P	Pn	02 23 19.7	-0.5
MASN				S	Sn	02 23 30.4	+0.7
ARIN	Rivas	0.60	91	⇓*i*P	Pn	02 23 17.0	-3.2
ARIN				*e*S	Sn	02 23 26.7	-2.9
MAS3	Al N del Volca	0.62	25	⇑P	Pn	02 23 20.0	-0.5
MAS3				S	Sn	02 23 30.0	0.0
ABCN	Banco Central	0.67	12	P	Pn	02 23 21.0	0.0
ABCN	Banco Central	0.67	12	S	Sn	02 23 31.8	+0.7
MGAN	Managua	0.71	16	⇑P	Pn	02 23 21.2	-0.3
MGAN	Managua	0.71	16	⇑*i*P	Pn	02 23 21.1	-0.3
MGAN				*e*S	Sn	02 23 32.4	+0.5
ALLN	Telcor Managua	0.71	14	P	Pn	02 23 21.7	+0.2
COPN	Copaltepe	0.73	349	⇑P	Pn	02 23 21.2	-0.6
COPN	Copaltepe	0.73	349	⇑*i*P	Pn	02 23 21.2	-0.6
COPN				*e*S	Sn	02 23 32.2	-0.1
APQ2	Apoyeque	0.74	9	P	Pn	02 23 21.3	-0.6
APQ2				S	Sn	02 23 32.7	+0.1
JAPN	Al SSO del Vol	0.76	85	P	Pn	02 23 21.8	-0.3
JAPN				S	Sn	02 23 33.5	+0.6
JAPN	Al SSO del Vol	0.76	85	⇑*e*P	Pn	02 23 21.7	-0.4
AMTN	Mateare	0.77	1	S	Sn	02 23 33.9	+0.6
AMTN	Mateare	0.77	1	P	Pn	02 23 22.3	0.0
APYN	Apoyeque	0.77	7	P	Pn	02 23 21.7	-0.7
APYN				S	Sn	02 23 34.1	+0.7
MORN	Al O del Volca	0.79	84	P	Pn	02 23 22.0	-0.5
LCRUZ	La Cruz	0.89	115	⇓*e*P	Pn	02 23 23.4	-0.4
LCRUZ				*e*S	Sn	02 23 36.4	+0.5
CARN	Rivas	0.95	107	⇓P	Pn	02 23 24.2	-0.3
CARN				S	Sn	02 23 37.3	0.0
CARN	Rivas	0.95	107	⇓*i*P	Pn	02 23 24.2	-0.3
CARN				*e*S	Sn	02 23 37.4	+0.1
MOM2	El Cardon	0.97	358	⇑P	Pn	02 23 24.5	-0.4
MOM2				S	Sn	02 23 37.9	+0.1
CNGA	Al SSO del Vol	1.06	346	⇑P	Pn	02 23 25.7	-0.4
CNGN	Cerro Negro	1.06	347	⇑P	Pn	02 23 25.6	-0.5
CNGN	Cerro Negro	1.06	347	*e*P	Pn	02 23 25.6	-0.5
CNGN				*e*S	Sn	02 23 39.4	-0.6
ALEN	Leon	1.07	337	P	Pn	02 23 25.9	-0.3
ELI1	Hacienda Flor	1.20	133	P	Pn	02 23 28.7	+0.8
ELI1	Hacienda Flor	1.20	133	*e*P	Pn	02 23 28.5	+0.6
ELI1				*e*S	Sn	02 23 45.0	+1.9
LAPC	Finca la Perla	1.21	125	⇓*e*P	Pn	02 23 27.3	-0.8
POLN	Al Sur del Vol	1.23	343	P	Pn	02 23 28.1	-0.3
ALIBA	Liberia Airpor	1.24	134	⇓*i*P	Pn	02 23 29.1	+0.7
ALIBA				*e*S	Sn	02 23 45.5	+1.4
BUAI	Buenos Aires	1.24	118	⇓*i*P	Pn	02 23 28.1	-0.4
BUAI				*e*S	Sn	02 23 44.0	-0.3
BOAB	BOACO BROADBAN	1.24	38	S	Sn	02 23 44.8	+0.5
BOAB	BOACO BROADBAN	1.24	38	⇑P	Pn	02 23 27.6	-0.9
PEJA	Penjamo Buenos	1.25	117	*e*P	Pn	02 23 28.0	-0.6
VORI	VORI	1.25	121	*e*P	Pn	02 23 29.2	+0.4
VRLE	La Escondida,	1.25	122	*e*P	Pn	02 23 28.2	-0.5
GPS3	Bodega del ICE	1.27	123	⇓*e*P	Pn	02 23 29.0	0.0
GPS3				*e*S	Sn	02 23 46.4	+1.3
GPS1	Guardaparques	1.27	122	*e*P	Pn	02 23 28.8	-0.3
GPS2	Hotel Rincn d	1.28	123	*e*P	Pn	02 23 28.8	-0.4
PKGN	Cerro Pekin	1.31	337	P	Pn	02 23 29.3	-0.1
PKGN				S	Sn	02 23 46.0	+0.1
DELF	Filadelfia	1.34	139	*e*P	Pn	02 23 30.1	+0.3
CRIN	San Cristobal	1.36	334	P	Pn	02 23 30.1	-0.1
CRIN	San Cristobal	1.36	334	S	Sn	02 23 47.0	-0.3
CRIN	San Cristobal	1.36	334	*e*P	Pn	02 23 30.2	0.0
CLARA	Aguas Claras	1.42	118	*e*P	Pn	02 23 30.7	-0.2
CLARA				*e*S	Sn	02 23 49.3	+0.7
MESS	Mesas	1.42	120	⇓*i*P	Pn	02 23 30.6	-0.4
MESS				*e*S	Sn	02 23 49.7	+0.9
VMAR	Armenia, Volca	1.46	116	⇓*i*P	Pn	02 23 30.8	-0.6
VMAR				*e*S	Sn	02 23 49.6	0.0
BAGA	Bagaces	1.49	128	⇓*i*P	Pn	02 23 31.9	+0.1
BAGA				*e*S	Sn	02 23 51.5	+1.3
CUI	Cuipilapa	1.49	122	⇓*i*P	Pn	02 23 31.7	-0.2
CUI				*e*S	Sn	02 23 50.7	+0.3
UPAL	Upala	1.52	112	P	Pn	02 23 31.1	-1.0
UPAL	Upala	1.52	112	⇓*i*P	Pn	02 23 31.0	-1.1
UPAL				*e*S	Sn	02 23 50.8	-0.1
PLVR	Palo Verde	1.54	136	*e*P	Pn	02 23 32.8	0.0
PLVR				*e*S	Sn	02 23 53.2	+1.4
MATN	Matagalpa	1.55	19	⇑P	Pn	02 23 31.0	-1.7
MOTZ	Rio Naranjo	1.55	120	⇓*i*P	Pn	02 23 32.5	-0.3
MOTZ				*e*S	Sn	02 23 52.6	+0.7
SAJU	San Juanillo,	1.56	152	⇓*i*P	Pn	02 23 32.2	-0.6
JUD3	Juan Diaz 3	1.57	145	⇓*i*P	Pn	02 23 32.6	-0.4
JUD3				*e*S	Sn	02 23 51.0	-1.2
LIMN	Finca el Limon	1.59	3	P	Pn	02 23 32.7	-0.6
TENO	El Achiote	1.63	117	⇓*i*P	Pn	02 23 33.2	-0.5
NICO	Nicoya	1.64	143	⇓*i*P	Pn	02 23 33.6	-0.4
NICO				*e*S	Sn	02 23 52.7	-1.3
TIMP	Tierras Morena	1.65	122	⇓*i*P	Pn	02 23 33.6	-0.5
INVE	Universidad In	1.68	126	⇓*i*P	Pn	02 23 34.2	-0.2
INVE				*e*S	Sn	02 23 54.1	-0.7
CNAS	Canas	1.68	127	*e*P	Pn	02 23 35.3	+0.9
QUEB	Quebradon, Cot	1.74	119	⇓*i*P	Pn	02 23 34.7	-0.5
CMARA	Lajas Hojancha	1.75	145	P	Pn	02 23 35.1	-0.4
CMARA	Lajas Hojancha	1.75	145	⇓*i*P	Pn	02 23 35.0	-0.4
CMARA				*e*S	Sn	02 23 55.5	-1.2
TILA	Tilaran	1.75	124	⇓*i*P	Pn	02 23 35.2	-0.3
TILA				*e*S	Sn	02 23 57.3	+0.5
INDI	Punta indio, G	1.84	150	*e*P	Pn	02 23 36.1	-0.5
INDI				*e*S	Sn	02 23 56.4	-2.3
POTN	Potosi Cosigui	1.85	326	⇓P	Pn	02 23 36.4	-0.3
POTN				S	Sn	02 23 59.0	+0.1
POTN	Potosi Cosigui	1.85	326	⇓*i*P	Pn	02 23 36.4	-0.3
POTN				*e*S	Sn	02 23 58.1	-0.8
CSGN	Cosiguina Volc	1.86	324	⇓P	Pn	02 23 36.6	-0.3
CSGN	Cosiguina Volc	1.86	324	⇓*e*P	Pn	02 23 36.6	-0.3
CSGN				*e*S	Sn	02 23 59.0	-0.3
JTS	Las Juntas de	1.87	128	⇓P	Pn	02 23 36.5	-0.6
JTS	Las Juntas de	1.87	128	*e*P	Pn	02 23 36.4	-0.7
VARE2	V. Arenal	1.97	120	⇓*i*P	Pn	02 23 38.2	-0.2
VARE2				*e*S	Sn	02 24 01.0	-1.0
ARE1	Arenal 1	1.97	120	*e*P	Pn	02 23 38.0	-0.3
CEDE	Laguna Cedeo	1.97	119	*e*P	Pn	02 23 38.8	+0.4
CASO	Castillo	1.97	121	⇑*i*P	Pn	02 23 38.4	0.0
VACR	Volcan Arenal	2.00	119	*e*P	Pn	02 23 37.7	-1.1
FORC	Fortuna	2.01	119	*e*P	Pn	02 23 38.4	-0.4
RCON	San Juan de Ri	2.03	8	P	Pn	02 23 39.3	-0.1
JCR1	Jicaral	2.07	141	⇓*e*P	Pn	02 23 39.6	-0.2
JCR1				*e*S	Sn	02 24 03.1	-1.4
RCPN	Sur Rio San Ju	2.08	9	⇑P	Pn	02 23 39.9	-0.1
SOCE	Pocosol	2.09	121	P	Pn	02 23 39.8	-0.3
RCVN	Varillal2	2.12	7	P	Pn	02 23 40.5	-0.1
COVE	Coope Vega, Sa	2.14	110	P	Pn	02 23 40.0	-0.6
OCON	Estacion meteo	2.16	359	P	Pn	02 23 40.8	-0.1
CNCH	Conchagua	2.26	323	⇓P	Pn	02 23 42.0	-0.4
LCND	La Caada	2.31	323	⇓P	Pn	02 23 42.6	-0.5
VPL1	V. Platanar	2.37	120	*e*P	Pn	02 23 43.5	-0.5
YUSH	Yuscaran	2.51	351	⇑P	Pn	02 23 46.0	+0.2
BELE	Belen	2.67	123	*e*P	Pn	02 23 47.8	-0.1
VBV1	V. Barva	2.67	120	⇓*e*P	Pn	02 23 47.1	-1.1
TGUH	Tegucigalpa,Un	2.70	343	P	Pn	02 23 48.0	-0.5
PACA	Pacayal	2.71	318	⇓P	Pn	02 23 48.8	+0.3
SIUN	Universidad Ur	2.77	36	P	Pn	02 23 49.2	-0.1
PICV	PH. Pirrs	2.87	129	*e*P	Pn	02 23 51.0	+0.3
LCR2	La Lucha 2	2.95	125	P	Pn	02 23 51.5	-0.4
VICA	Volcano Irazu	2.95	120	*e*P	Pn	02 23 51.9	-0.2
CVTR	Volcan Turrial	3.00	118	*e*P	Pn	02 23 52.9	+0.1
CVTQ	Turrialba Volc	3.00	119	*e*P	Pn	02 23 51.9	-0.9
CVTV	Tajo	3.02	118	*e*P	Pn	02 23 53.3	+0.2
ABRB	Las Abras (San	3.05	118	⇑*e*P	Pn	02 23 53.2	-0.2
VTCV	VTCV, Calle Va	3.05	119	*e*P	Pn	02 23 53.4	0.0
PIEC	Cerro El Cedra	3.05	127	*e*P	Pn	02 23 53.0	-0.4
SCLA	Alcaldia de Sa	3.15	315	P	Pn	02 23 54.6	+0.1
BUS1	Rivas	3.26	125	*e*P	Pn	02 23 56.5	0.0
BUS1				*e*S	Sn	02 24 35.4	+1.1
LOMA	Loma Larga	3.43	309	P	Pn	02 23 58.3	-0.2
PMON	Piamonte	3.58	309	P	Pn	02 24 01.4	+0.9
OCHAL	Ojochal	3.62	130	P	Pn	02 24 01.4	+0.4
EDPE	Pejibaye, P	3.64	129	*e*P	Pn	02 24 03.0	+1.8
JAYA	Jayaque - finc	3.65	307	*i* P	Pn	02 24 01.5	0.0
JAYA				*i* S	Sn	02 24 43.7	+0.2
JAYA				IAML		02 24 46.9	
	comp=N,329nm,0.2s						
JAYA	Jayaque - finc	3.65	307	P	Pn	02 24 01.5	0.0
DRK0	Durika	3.83	124	P	Pn	02 24 04.3	+0.2
DRK0	Durika	3.83	124	S	Sn	02 24 48.2	+0.3
DRK0	Durika	3.83	124	*e*P	Pn	02 24 04.2	+0.2
NUBE	Las Nubes	4.06	307	*i* P	Pn	02 24 07.5	+0.5
NUBE				*i* S	Sn	02 24 52.1	-1.4
NUBE				IAML		02 24 55.9	
	comp=E,182nm,0.4s						
NUBE	Las Nubes	4.06	307	P	Pn	02 24 07.6	+0.5
MTO3	Montecristo	4.07	316	*i* P	Pn	02 24 08.2	+0.9
MTO3	Montecristo	4.07	316	P	Pn	02 24 07.2	-0.1
FAME	Alcaldia de Sa	4.21	305	P	Pn	02 24 09.7	+0.6
PIRO	Carate, Puerto	4.32	134	⇓P	Pn	02 24 11.6	+1.1
PIRO	Carate, Puerto	4.32	134	*e*P	Pn	02 24 11.1	+0.7
CDITO	Canoas	4.54	129	P	Pn	02 24 13.6	0.0

IDC 16 02:33:39.4±18.0**, 6°.65S**×**118°.95E, h0**^{km}**, mb3.5**/2**, mbtmp3.3**/3**, ML3.2**/1**, Error ellipse: s-maj=298.9km s-min=208.6km az=1.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.95	133	P	P	02 38 12.1	-1.1
	0.1nm,0.3s,baz=303,slow=14,SNR=0.8						
	0.1nm,0.4s						
ASAR	Alice Springs	22.20	141	P	P	02 38 38.4	+0.8
	0.3nm,0.4s,baz=319,slow=9.4,SNR=13						
	0.3nm,0.4s						
STKA	Stephens Creek	32.81	143	P	P	02 40 14.6	-0.1
	0.7nm,0.3s,baz=321,slow=11,SNR=4.8						
	0.7nm,0.3s						

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*SGS **16** 02:33:50.8, 31°.19N×35°.05E, h12^{km}, Ml2.9*

*GII **16** 02:33:51.1±0.0, 30°.912N±0°.001×35°.483E±0°.001, h1^{km}, Mws2.7, confirmed*

*JSO **16** 02:33:53.5±0.0, 31°N±4°×3°5E±°, h0^{km}±3^{km}, M3.0/12, Md3.3/12, ML2.8/12, MLv2.9/12, MLv2.9/12*

ISC 16 02:33:52.2±0.9**, 30°.94N**±0°.02×**35°.38E**±0°.05**, h15**^{km}±7^{km}**, n55, σ0^{s}78**/57**, 2C, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDAN	Idan	0.14	221	P	Pb	02 33 55.8	-0.7
IDAN	Idan	0.14	221	S	Sg	02 33 59.3	+0.9
MSBI	Mazada	0.38	357	P	Pb	02 34 00.1	-0.5
MSBI	Mazada	0.38	357	⇑P	Pb	02 34 00.1	-0.5
MSBI	Mazada	0.38	357	S	Sb	02 34 06.6	+0.4
GHAJ	Ghor Haditha	0.40	24	P	Pg	02 33 59.2	-1.1
ZFRI	Zfri	0.42	204	P	Pg	02 34 00.5	-0.1
ZFRI	Zfri	0.42	204	S	Sb	02 34 07.8	+0.4
YTIR	Yattir	0.48	332	P	Pb	02 34 02.6	+0.2
YTIR	Yattir	0.48	332	P	Pb	02 34 02.3	-0.1
DSI	Dead Sea	0.63	0	P	Pn	02 34 05.6	-1.0
DSI	Dead Sea	0.63	0	⇑P	Pb	02 34 05.0	0.0
DSI	Dead Sea	0.63	0	S	Sn	02 34 15.3	-1.1
RMNI	Mount Ramon	0.63	238	P	Pb	02 34 04.9	-0.1
PRNI	Paran	0.67	209	P	Pb	02 34 05.4	-0.1
PRNI	Paran	0.67	209	S	Sn	02 34 16.2	-1.2
AMAZ	Amatzia	0.71	326	P	Pn	02 34 07.0	-0.8
AMAZ	Amatzia	0.71	326	P	Pn	02 34 07.1	-0.8
AMAZ	Amatzia	0.71	326	S	Sn	02 34 19.5	+0.9
KZIT	Kziot	0.84	268	P	Pn	02 34 09.5	-0.1
KZIT	Kziot	0.84	268	S	Sn	02 34 22.6	+0.9
JER	Jerusalem	0.85	349	P	Pb	02 34 08.5	-0.1
HRFI	Mount Harif	0.94	198	P	Pg	02 34 09.9	-0.6
HRFI	Mount Harif	0.94	198	S	Sn	02 34 24.1	-0.1
KRMI	Paran Flat	0.99	215	P	Pb	02 34 11.2	0.0
KRMI	Paran Flat	0.99	215	S	Sn	02 34 25.3	-0.1
YITV	Yitav	1.01	2	P	Pn	02 34 11.5	-0.3
UJAP	Al Uja	1.01	4	P	Pn	02 34 11.6	-0.3
UJAP	Al Uja	1.01	4	P	Pg	02 34 11.4	-0.5
SALP	Salfit	1.14	352	P	Pg	02 34 13.7	-0.5
SALP	Salfit	1.14	352	S	Sn	02 34 31.0	+1.9
MBRI	Mt Berech	1.21	200	P	Pn	02 34 14.4	-0.3
EIL	Elat	1.32	196	P	Pb	02 34 16.5	-0.2
EIL	Elat	1.32	196	S	Sg	02 34 35.3	+0.6
HMDT	Nahal Hemdat	1.32	5	P	Pg	02 34 17.2	-0.4
HMDT	Nahal Hemdat	1.32	5	P	Pg	02 34 16.7	-0.9
HMDT	Nahal Hemdat	1.32	5	S	Sg	02 34 36.0	+1.2
SLTI	Sal'it	1.33	348	P	Pg	02 34 17.1	-0.8
SLTI				S	Sg	02 34 37.0	+1.8
SLTI	Sal'it	1.33	348	P	Pg	02 34 16.9	-0.9
QRNJ	Al-Qirein	1.40	7	P	Pb	02 34 18.1	0.0
MMLI	Mount Malkishu	1.50	1	P	Pg	02 34 20.1	-0.9
MMLI				S	Sg	02 34 41.5	+1.0
MMLI	Mount Malkishu	1.50	1	P	Pb	02 34 19.6	-0.1
HQLS		1.65	190	S	Sg	02 34 44.2	-1.3
HQLS		1.65	190	P	Pn	02 34 20.3	-0.5
OFRI	\`Ofer	1.71	349	P	Pb	02 34 23.6	+0.2
OFRI	\`Ofer	1.71	349	P	Pb	02 34 22.7	-0.7
OFRI	\`Ofer	1.71	349	S	Sg	02 34 46.8	-0.6
JMOS	Jabal al Moall	1.78	188	S	Sb	02 34 47.8	+1.2
JMOS	Jabal al Moall	1.78	188	P	Pn	02 34 23.3	+0.9
BLGI	Bet Lehem HaGe	1.80	355	P	Pb	02 34 23.6	-1.2
SHMJ	Saham	1.81	10	P	Pb	02 34 24.9	-0.2
QREAT	Al Qurrayyat	1.96	73	P	Pn	02 34 25.4	+0.5
JLOS		2.20	177	P	Pn	02 34 27.8	-0.5
NATI	Neve Ativ	2.34	7	P	Pn	02 34 30.6	+0.5
WTBKS	WTBKS	2.88	171	P	Pn	02 34 38.2	+0.5

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*IDC **16** 02:34:33.6±0.6, 6°.58N×125°.12E, h0^{km}, mb4.1/15, mbtmp4.1/15, MS3.5/15, Error ellipse: s-maj=14.8km s-min=8.3km az=128.0*

*DJA **16** 02:34:35.5±0.5, 7°N±12°×12°5E±°, h25^{km}±14^{km}, M5.0/13, mb5.0/13, mB5.3/8, MLv5.2/9, Mw(mB)4.7/8*

*NEIC **16** 02:34:36.0±1.9, 6°.66N±0°.07×125°.12E±0°.06, h10^{km}±1^{km}, mb4.7/39, Error ellipse: s-maj=14.4km s-min=3.4km az=318.0*

ISC 16 02:34:39.1±0.4**, 6°.75N**±0°.04×**125°.22E**±0°.06**, h35**^{km}**, n101, σ1^{s}59**/93**, mb4.5**/41**, MS3.5**/16**, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.48	49	Pg	Pn	02 34 48.1	-1.4
	867nm,0.3s,baz=75,slow=0.5,SNR=45						
DAV				Lg	Lg	02 34 55.0	
	1μm,0.3s,baz=307,slow=20,SNR=20						
DAV	Davao City (W)	0.48	49		Pn	02 34 48.1	-1.4
DAV				Sg	Sn	02 34 56.5	-0.2
DAV	Davao City (W)	0.48	49	P	Pn	02 34 48.1	-1.4
DAV				S	Sn	02 34 55.3	-1.4
SGSI	Sangihe	3.06	174	P	Pn	02 35 25.8	+0.8
GAMI	Galela, Maluku	5.51	152	P	Pn	02 36 01.3	+2.5
	1.4nm189nm,0.6s						
TNTI	Ternate	6.32	160	Pn	Pn	02 36 07.5	-2.3
TNTI	Ternate	6.32	160	P	Pn	02 36 12.7	+2.9
	0.3nm83nm,1.4s						
TNTI				S	Sn	02 37 27.6	+6.8
	0.3nm83nm,1.4s						
GTOI	Gorontalo	6.46	200	P	Pn	02 36 10.2	-1.6
MRSI	Marisa	7.04	208	P	Pn	02 36 18.9	-0.8
	2.3nm2μm259nm,0.7s						
TOLI2	Tolitoli	7.14	218	Pn	Pn	02 36 18.0	-3.1
LUWI	Luwuk	8.12	198	Pn	Pn	02 36 32.3	-2.2
LUWI	Luwuk	8.12	198	P	Pn	02 36 35.2	+0.7
	2μm187nm,0.8s						
APSI	Ampana	8.40	205	P	Pn	02 36 40.1	+1.7
	1μm104nm,0.6s						
SANI	Sanana	8.78	175	P	Pn	02 36 42.2	-1.4
	704nm58nm,0.8s						
KRAI	Karang Ratu	10.49	162	P	Pn	02 37 06.6	-0.6
	27nm,0.5s						
KAPI	Kappang	12.90	205	Pn	Pn	02 37 38.7	-1.4
KAPI	Kappang	12.90	205	P	Pn	02 37 39.1	-0.9
EDFI	Ende, Flores	15.79	193	P	Pn	02 38 18.6	-0.5
SAUI	Saumlaki	15.84	157	Pn	Pn	02 38 18.4	-1.3
SOEI	Soe	16.43	183	Pn	Pn	02 38 25.9	-1.2
SOEI				IAmb	IAmb	02 38 57.4	
	comp=Z,42nm,0.9s						
SOEI	Soe	16.43	183	P	Pn	02 38 26.7	-0.5
BATI	Baumata	16.92	185	LR	LR	02 46 26.0	
	comp=Z,154nm,19.9s,baz=12,slow=43						
QIZ	Qiongzhong	19.30	311	P	P	02 39 01.3	+0.1
QIZ				S	Sn	02 42 38.8	+0.8
QIZ				LR	LR		
	comp=N,140nm,9.3s						
QIZ				LR	LR		
	comp=E,190nm,9.9s						
MTN	Manton Dam	20.34	163	P	P	02 39 11.2	-1.3
KNRA	Kununurra	22.56	171	P	P	02 39 35.9	-0.5
FITZ	Fitzroy Crossi	24.70	179	P	P	02 39 55.4	-1.7
	comp=E,4.4nm,0.5s,baz=3.5,slow=6.2,SNR=20						
	comp=E,4.4nm,0.5s						
FITZ	Fitzroy Crossi	24.70	179	P	P	02 39 55.9	-1.2
NJ2	Nanjing	25.86	348	*e*P	P	02 40 10.6	+3.1
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
PSI	Prapat	26.49	263	P	P	02 40 13.6	0.0
	comp=Z,1.6nm,0.3s,baz=140,slow=7.9,SNR=2.3						
PSI				LR	LR	02 53 49.8	
	comp=Z,49nm,19.4s,baz=115,slow=44						
	comp=Z,1.6nm,0.3s						
RPSI	Rantau Prapat	26.50	263	P	P	02 40 13.6	0.0
PMG	Port Moresby	27.12	126	P	P	02 40 17.9	-1.2
PMG				IAmb	IAmb	02 40 19.8	
	comp=Z,17nm,0.9s						
COEN	Coen	27.22	139	P	P	02 40 18.7	-1.3
COEN				IAmb	IAmb	02 40 33.9	
	comp=Z,21nm,1.3s						
WB0	Warramunga Arr	27.86	161	P	P	02 40 24.5	-1.1
WB0				IAmb	IAmb	02 40 38.0	
	comp=Z,12nm,0.9s						
WRAB	Tennant Creek	28.00	161	P	P	02 40 26.1	-0.8
WRAB				IAmb	IAmb	02 40 40.0	
	comp=Z,7.5nm,0.8s						
WRA	Warramunga Arr	28.00	161	P	P	02 40 25.2	-1.8
	comp=Z,2.0nm,0.7s,baz=341,slow=9.5,SNR=12						
	comp=Z,2.0nm,0.7s						
WRA	Warramunga Arr	28.00	161	P	P	02 40 26.6	-0.4
WR8	Warramunga Arr	28.07	161	P	P	02 40 25.4	-2.1
WR8				IAmb	IAmb	02 40 40.6	
	comp=Z,6.9nm,0.7s						
CMAR	Chiang Mai Arr	28.11	297	P	P	02 40 27.2	-0.7
	comp=Z,0.8nm,0.3s,baz=124,slow=8.9,SNR=4.6						
CMAR				LR	LR	02 52 28.2	
	comp=Z,54nm,18.2s,baz=110,slow=38						
	comp=Z,0.8nm,0.3s						
CMAR	Chiang Mai Arr	28.11	297	P	P	02 40 28.2	+0.2
MBWA	Marble Bar	28.25	191	P	P	02 40 29.7	+0.6
MBWA				IAmb	IAmb	02 41 13.0	
	comp=Z,18nm,1.2s						
PSA00	Pilbara Seismi	28.64	190	P	P	02 40 31.1	-1.4
PSA00				IAmb	IAmb	02 40 41.5	
	comp=Z,15nm,1.1s						
JHJ	Hachijo jima 2	29.52	25	LR	LR	02 53 09.0	
	comp=Z,68nm,18.8s,baz=302,slow=38						
PZH	PanZhiHua	29.75	314	P	P	02 40 45.3	+2.7
AS31	Alice Springs	31.40	165	P	P	02 40 56.5	-0.6
ASAR	Alice Springs	31.40	165	P	P	02 40 55.6	-1.4
	comp=Z,1.9nm,0.5s,baz=343,slow=7.1,SNR=22						
	comp=Z,1.9nm,0.5s						
ASAR	Alice Springs	31.40	165	P	P	02 40 56.5	-0.5
HNS	HongShan	31.97	344	⇑P	P	02 41 04.4	+2.6
HNS				pmax	pmax		

	comp=Z,9.0nm,1.0s						
HNS				LR	LR		
	comp=E,280nm,19.1s						
BJI	Beijing	34.12	348	P	P	02 41 21.3	+0.7
BJI				S	S	02 46 47.6	+3.2
BJI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BJI				LR	LR		
	comp=N,66nm,19.8s						
BJI				LR	LR		
	comp=E,89nm,19.9s						
BJI				LR	LR		
	comp=Z,66nm,21.0s						
LZDM	Lanzhou Array	35.13	329	LR	LR	02 56 46.8	
	comp=Z,72nm,18.5s,baz=210,slow=38						
LZH	Lanzhou	35.15	329	*e*P	P	02 41 36.3	+6.5
LZH				pP	sP	02 41 43.8	-0.5
LZH				pmax	pmax		
	comp=Z,19nm,1.5s						
BRDH	Bariadhala	36.00	300	LR	LR	02 56 46.0	
	comp=Z,81nm,20.8s,baz=166,slow=37						
SHL	Shillong	36.91	304	P	P	02 41 44.4	-0.6
SHL				IAmb	IAmb	02 41 53.4	
	comp=Z,23nm,1.2s						
FORT	Forrest	37.42	176	P	P	02 41 47.4	-1.6
USRK	Ussuriysk Ar.	37.77	8	P	P	02 41 52.0	+0.3
	comp=Z,3.2nm,0.7s,baz=209,slow=5.5,SNR=6.1						
	comp=Z,3.2nm,0.7s						
NWAO	Narrogin (SRO)	40.18	190	P	P	02 42 12.6	+0.4
NWAO				IAmb	IAmb	02 42 52.3	
	comp=Z,45nm,1.5s						
ASAJ	Asahikawa	40.21	19	LR	LR	02 58 41.6	
	comp=Z,54nm,20.8s,baz=176,slow=36						
BBOO	Buckleboo	40.67	166	P	P	02 42 14.9	-1.3
BBOO				IAmb	IAmb	02 42 25.7	
	comp=Z,13nm,0.7s						
STKA	Stephens Creek	41.47	159	P	P	02 42 21.1	-1.7
	comp=Z,5.4nm,0.8s,baz=334,slow=7.7,SNR=15						
	comp=Z,5.4nm,0.8s						
STKA	Stephens Creek	41.47	159	P	P	02 42 20.9	-1.9
SONM	Songino Array	43.97	342	P	P	02 42 44.8	+1.8
	comp=Z,0.6nm,0.7s,baz=140,slow=7.6,SNR=2.3						
SONM				LR	LR	03 02 28.1	
	comp=Z,88nm,18.5s,baz=162,slow=38						
	comp=Z,0.6nm,0.7s						
SONM	Songino Array	43.97	342	P	P	02 42 44.3	+1.2
ARMA	Armidale	44.80	147	P	P	02 42 50.1	+0.2
ARMA				IAmb	IAmb	02 43 01.1	
	comp=Z,16nm,1.3s						
WMQ	Urumqi	49.40	325	*e*P	P	02 43 31.3	+5.7
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
PETK	Petropavlovsk-	53.26	24	P	P	02 43 55.8	+1.6
	comp=Z,4.9nm,0.9s,baz=204,slow=10,SNR=3.7						
	comp=Z,4.9nm,0.9s						
PETK	Petropavlovsk-	53.26	24	P	P	02 43 55.9	+1.7
MKAR	Makanchi Array	54.23	325	P	P	02 44 03.5	+2.0
	comp=Z,0.6nm,0.5s,baz=116,slow=6.8,SNR=13						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	54.23	325	P	P	02 44 03.3	+1.8
MAKZ	Makanchi	54.42	325	P	P	02 44 04.0	+1.2
KSH	Kashi	54.86	314	P	P	02 44 09.0	+2.7
KSH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YAK	Yakutsk	55.26	3	LR	LR	03 08 30.1	
	comp=Z,53nm,20.2s,baz=271,slow=37						
AAK	Ala-Archa	57.13	317	LR	LR	03 11 48.3	
	comp=Z,73nm,20.1s,baz=90,slow=39						
ZALV	Zalesovo Beam	57.23	333	P	P	02 44 22.1	-0.6
	comp=Z,1.4nm,0.9s,baz=90,slow=8.9,SNR=3.9						
ZALV				LR	LR	03 10 45.0	
	comp=Z,42nm,18.9s,baz=294,slow=38						
	comp=Z,1.4nm,0.9s						
ZALV	Zalesovo Beam	57.23	333	P	P	02 44 21.5	-1.3
ARSB	Arslanbob	57.66	315	P	P	02 44 25.2	-1.0
ARSB				IAmb	IAmb	02 44 35.4	
	comp=Z,15nm,1.4s						
KURBB	Kurchatov Arra	58.40	327	P	P	02 44 30.9	-0.2
	comp=Z,1.9nm,0.7s,baz=126,slow=5.9,SNR=5.9						
	comp=Z,1.9nm,0.7s						
KURK	Kurchatov	58.40	327	P	P	02 44 31.1	0.0
KURK				IAmb	IAmb	02 44 46.1	
	comp=Z,4.1nm,0.8s						
GAR	Garm	58.79	312	P	P	02 44 34.2	0.0
KK31	Karatay Array	60.01	316	P	P	02 44 42.1	-0.3
KKAR	Karatay Array	60.01	316	P	P	02 44 41.8	-0.7
BVAR	Borovoye Array	63.98	327	P	P	02 45 09.0	+0.1
	comp=Z,1.6nm,0.8s,baz=114,slow=7.2,SNR=5.4						
	comp=Z,1.6nm,0.8s						
BORK	Borovoye	64.03	327	P	P	02 45 08.7	-0.5
BORK				IAmb	IAmb	02 45 25.0	
	comp=Z,5.6nm,0.9s						
THZ	Tophouse	65.00	142	P	P	02 45 15.0	-0.8
BKZ	Black Stump Fm	65.83	138	P	P	02 45 19.8	-1.4
RTZ	Ruatahuna	65.86	138	P	P	02 45 21.3	-0.2
NRIK	Noril'sk	67.16	346	LR	LR	03 19 15.2	
	comp=Z,42nm,18.8s,baz=275,slow=40						
AB31	Akbulak array	68.87	320	P	P	02 45 39.7	-0.6
AKTO	Aktyubinsk	70.37	321	LR	LR	03 17 50.8	
	comp=Z,70nm,20.4s,baz=276,slow=37						
RAYN	Ar Rayn	77.93	293	P	P	02 46 33.5	-0.7
RAYN				IAmb	IAmb	02 46 43.9	
	comp=Z,3.4nm,0.8s						
IMAR	Indian Mountai	80.22	24	P	P	02 46 45.9	+0.1
L22K	Petersville	81.29	28	P	P	02 46 51.7	0.0
I23K	Minto, Yukon-K	81.99	25	P	P	02 46 57.0	+1.8
I23K				IAmb	IAmb	02 47 15.7	
	comp=Z,4.2nm,0.9s						
TOLK	Toolik Lake Re	82.01	22	P	P	02 46 54.9	-0.5
TOLK				IAmb	IAmb	02 47 20.7	
	comp=Z,4.6nm,0.5s						
RND	Reindeer	82.18	27	P	P	02 46 59.1	+2.8
RND				IAmb	IAmb	02 47 11.7	
	comp=Z,12nm,1.2s						
ILAR	Eielson Array	83.04	26	P	P	02 47 00.6	-0.2
	comp=Z,0.4nm,0.7s,baz=236,slow=5.2,SNR=5.9						
	comp=Z,0.4nm,0.7s						
D25K	Kavik River	83.17	21	P	P	02 47 01.1	-0.3
D25K				IAmb	IAmb	02 47 23.9	
	comp=Z,4.4nm,1.1s						
BMAR	Burnt Mountain	83.89	23	P	P	02 47 06.2	+1.1
I27K	Kandik River	85.21	25	P	P	02 47 13.5	+1.7
F28M	Old Crow	85.68	23	P	P	02 47 15.3	+1.3
F28M				IAmb	IAmb	02 47 44.7	
	comp=Z,4.9nm,1.1s						
VNDA	Vanda	86.60	173	LR	LR	03 24 56.0	
	comp=Z,21nm,20.5s,baz=228,slow=35						
BRTR	Keskin Array B	86.95	309	P	P	02 47 19.7	-1.4
	comp=Z,0.5nm,0.8s,baz=64,slow=8.2,SNR=2.1						
	comp=Z,0.5nm,0.8s						
NOA	NORSAR Array B	95.43	333	LR	LR	03 34 22.5	
	comp=Z,47nm,18.9s,baz=260,slow=38						

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*SOF **16** 03:00:22.6, 39°.36N±0°.03×25°.81E±0°.01, h2^{km}±2^{km}, MD3.7/8*

*ISK **16** 03:00:25.5, 39°.43N×25°.66E, h7^{km}, ML3.6/33*

*THE **16** 03:00:26.5, 39°.4N±0°.8×2°6E±°, h13^{km}±1^{km}, M3.1/29, MLh3.1/29*

*ATH **16** 03:00:26.0, 39°.40N×25°.70E, h16^{km}±2^{km}, ML3.3/17, Manual Solution by F.Xalaris First location: 2019/12/16 03:01:37, This location: 2019/12/16 10:04:33 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*

*AFAD **16** 03:00:27.2, 39°.43N×25°.73E, h7^{km}±1^{km}, MW3.6*

ISC 16 03:00:26.3±0.8, **39°.41N**±0°.01×**25°.69E**±0°.02, **h15**^{km}±6^{km}, **n176,** σ**0^{s}80**/219, **10C-16D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIGR	SIGRI	0.23	146	P	Pg	03 00 31.5	+0.1
SIGR				S	Sg	03 00 35.6	+0.6
SIGR	SIGRI	0.23	146	Pg	Pg	03 00 31.2	-0.3
SIGR				Sg	Sg	03 00 35.6	+0.6
SIGR	SIGRI	0.23	146	P	Pg	03 00 31.1	-0.3
SIGR				S	Sg	03 00 33.8	-1.1
GPNR	Gulpinar-Canak	0.35	82	Pg	Pg	03 00 33.3	-0.1
GPNR				Sg	Sb	03 00 38.8	-0.7
KOCA	Canakkale, Ayv	0.36	74	P	Pg	03 00 33.6	0.0
KOCA				S	Sg	03 00 38.4	-0.3
PRK	Paraskevi	0.48	109	P	Pb	03 00 36.0	-0.4
PRK				S	Sb	03 00 43.2	-0.1
BOZC	Bozcaada	0.52	33	P	Pg	03 00 36.3	-0.3
BOZC				S	Sg	03 00 42.6	-0.9
BOZC	Bozcaada	0.52	33	Pg	Pg	03 00 35.8	-0.8
EFSA	Agios Efstrati	0.56	284	P	Pg	03 00 37.2	-0.1
EFSA				S	Sb	03 00 45.7	+0.2
LIA	Limnos Island	0.63	322	P	Pg	03 00 38.6	0.0
LIA				S	Sg	03 00 46.8	-0.1
LIA	Limnos Island	0.63	322	P	Pg	03 00 38.4	-0.2
LIA				S	Sg	03 00 46.6	-0.3
EZNE	Ezine-Canakkal	0.63	56	Pg	Pg	03 00 38.1	-0.5
EZN	Ezine	0.65	49	P	Pg	03 00 38.4	-0.6
EZN				S	Sb	03 00 47.7	-0.3
EZN	Ezine	0.65	49	Pg	Pg	03 00 38.5	-0.4
LMN1	MIRINA LIMNOU	0.68	314	P	Pg	03 00 39.4	-0.1
LMN1				S	Sb	03 00 49.0	+0.1
ECEA	Canakkale, Ece	0.74	30	P	Pg	03 00 40.1	-0.6
ECEA				S	Sb	03 00 51.4	+0.7
BAYC	CANAKKALE_Bayr	0.74	63	P	Pg	03 00 40.2	-0.5
BAYC				S	Sg	03 00 49.2	-1.4
GOAD	anakkale-G¶	0.77	13	P	Pg	03 00 40.5	-0.8
GOAD				S	Sg	03 00 51.0	-0.5
AYVA	Ayvalik	0.78	97	P	Pb	03 00 41.3	-0.2
AYVA				S	Sg	03 00 51.1	-0.7
GADA	Gvkgeada	0.80	12	P	Pg	03 00 40.8	-1.0
GADA				S	Sb	03 00 53.2	+0.7
GADA	Gvkgeada	0.80	12	Pg	Pg	03 00 40.9	-1.0
CNKL	anakkale-Mer	0.85	39	P	Pg	03 00 41.8	-1.0
CNKL				S	Sg	03 00 52.6	-1.4
COMU	Canakkale	0.92	41	Pg	Pg	03 00 43.7	-0.4
EAG2	Marmaro, Chios	0.92	159	P	Pg	03 00 43.9	-0.2
KARB	zmir-Karabur	0.93	143	P	Pb	03 00 44.2	+0.1
KARB				S	Sb	03 00 57.0	+0.7
DKL	Dikili	1.00	109	Pg	Pb	03 00 45.8	+0.5
SKY1	Skyros Island	1.01	241	P	Pg	03 00 45.4	-0.4
SKY1				S	Sg	03 00 58.9	0.0
SKY	Skiros Island	1.03	240	P	Pg	03 00 45.7	-0.5
SKY				S	Sb	03 01 00.5	+1.4
SKY	Skiros Island	1.03	240	P	Pg	03 00 45.6	-0.5
IZMD	zmir-Dikili-	1.05	113	P	Pb	03 00 46.8	+0.5
CHOS	Chios island	1.06	164	P	Pg	03 00 46.2	-0.5
CHOS				S	Sb	03 01 01.0	+1.0
CHOS	Chios island	1.06	164	Pn	Pg	03 00 46.5	-0.2
CHOS	Chios island	1.06	164	P	Pg	03 00 46.2	-0.5
CHOS				S	Sg	03 00 59.8	-0.7
SMTH	Samothraki Isl	1.07	354	P	Pg	03 00 45.9	-1.1
SMTH				S	Sb	03 01 00.9	+0.6
SMTH	Samothraki Isl	1.07	354	P	Pg	03 00 45.8	-1.1
BUHA	Balikesir, Bur	1.08	85	P	Pg	03 00 46.6	-0.5
BUHA				S	Sb	03 01 00.8	+0.3
YAYO	Edremit-Balk	1.09	79	Pn	Pb	03 00 47.0	+0.2
GELI	Tayfur-Gelibol	1.16	31	Pn	Pg	03 00 47.8	-0.9
ZEDA	zmir-Bergama	1.17	112	P	Pg	03 00 47.8	-0.9
ZEDA				S	Sb	03 01 03.5	+0.5
CANM	Can-anakkale	1.21	60	Pn	Pg	03 00 48.8	-0.9
LAPS	Lapseki, ANA	1.22	46	P	Pb	03 00 49.2	0.0
LAPS				S	Sg	03 01 04.4	-1.4
URLA	Izmir	1.26	146	P	Pn	03 00 48.7	-0.7
URLA				S	Sb	03 01 04.9	-1.0
URLA	Izmir	1.26	146	Pn	Pb	03 00 50.1	+0.3
LPK	Lapseki	1.27	40	Pn	Pg	03 00 50.1	-0.6
ZEYE	Izmir, Urla-Ze	1.33	151	P	Pn	03 00 50.1	-0.2
ZEYE				S	Sb	03 01 06.7	-1.0
CAVK	Edirne/Enez-Ca	1.33	16	P	Pn	03 00 50.4	0.0
ENEZ	Enez	1.38	15	P	Pn	03 00 50.8	-0.2
ENEZ				S	Sb	03 01 09.4	+0.4
ENEZ	Enez	1.38	15	Pn	Pn	03 00 51.3	+0.4
THAS	Thassos island	1.41	328	P	Pn	03 00 50.9	-0.6
THAS				S	Sb	03 01 10.6	+0.5
THAS	Thassos island	1.41	328	P	Pn	03 00 50.7	-0.7
ERIK	Erikli-Kesan	1.41	26	Pn	Pn	03 00 51.6	+0.2
AOS	Alonnisos	1.42	261	P	Pn	03 00 51.7	+0.2
AOS				S	Sn	03 01 11.0	+0.9
BIGA	Biga-Canakkale	1.43	52	Pn	Pn	03 00 52.3	+0.7
GOKT	Kean, EDRN	1.45	30	P	Pn	03 00 52.2	+0.3
GOKT				S	Sn	03 01 11.1	+0.5
SOMA	Soma-Manisa	1.45	99	Pn	Pb	03 00 53.0	0.0
AOS2	Alonissos-2	1.46	260	P	Pn	03 00 51.6	-0.4
ALEX	Alexandroupoli	1.46	6	P	Pn	03 00 51.9	-0.1
KYMI	Kymi, Euboea I	1.46	239	P	Pn	03 00 51.3	-0.8
KYMI				S	Sn	03 01 12.0	+1.1
KYMI	Kymi, Euboea I	1.46	239	P	Pn	03 00 51.2	-0.9
BLCB	Balcova	1.47	134	P	Pn	03 00 52.4	+0.2
BLCB				S	Sn	03 01 11.2	+0.1
BLCB	Balcova	1.47	134	Pn	Pb	03 00 53.4	+0.1
ALN	Alexandroupoli	1.51	10	P	Pn	03 00 52.4	-0.4
ALN				S	Sn	03 01 12.6	+0.4
ALN	Alexandroupoli	1.51	10	Pn	Pn	03 00 53.0	+0.2
ALN	Alexandroupoli	1.51	10	P	Pn	03 00 52.4	-0.4
STEP	BALIKESIR_Sava	1.57	90	P	Pn	03 00 54.1	+0.4
THS1	Thassos, Thass	1.58	328	P	Pn	03 00 54.7	+0.9
KRBG	Karabiga-Canak	1.58	51	Pn	Pn	03 00 54.2	+0.4
OUR	Ouranopolis	1.61	306	P	Pn	03 00 54.0	-0.1
OUR				S	Sn	03 01 14.4	-0.2
OUR	Ouranopolis	1.61	306	Pn	Pn	03 00 54.7	+0.6
OUR	Ouranopolis	1.61	306	P	Pn	03 00 53.9	-0.1
KESN	Edirne-Kesan	1.61	28	P	Pn	03 00 54.3	-0.2
KESN				S	Sn	03 01 15.2	+0.1
GONE	Gonen-Balikesi	1.67	67	Pn	Pn	03 00 56.1	+1.2
XANC	Avdira	1.67	341	P	Pn	03 00 54.7	-0.3
KARY	Karystos	1.69	216	P	Pn	03 00 54.1	-1.1
KARY	Karystos	1.69	216	P	Pn	03 00 54.0	-1.1
BALB	Balikesir	1.71	81	Pn	Pn	03 00 56.5	+1.0
RKY	Sarkoy-Tekirda	1.72	41	Pn	Pn	03 00 56.6	+0.9
SART	Tekirdag	1.72	41	P	Pn	03 00 56.4	+0.7
SART				S	Sn	03 01 17.9	+0.5
AKHS	Akhisar	1.73	107	P	Pn	03 00 55.9	+0.1
PLN1	Chaniotis	1.74	291	P	Pb	03 00 57.8	0.0
RDO	Rodhopi	1.74	356	P	Pn	03 00 55.7	-0.3
RDO				S	Sn	03 01 18.3	+0.4
RDO	Rodhopi	1.74	356	Pn	Pn	03 00 55.8	-0.2
RDO	Rodhopi	1.74	356	P	Pn	03 00 55.6	-0.3
BKES	Balkesir-Mer	1.76	79	P	Pn	03 00 56.4	+0.1
BLKS	Balkesir-Sus	1.82	74	P	Pn	03 00 57.3	+0.2
KAVA	Kavala	1.83	331	P	Pn	03 00 56.8	-0.3
KAVA				S	Sn	03 01 20.3	+0.3
KAVA	Kavala	1.83	331	P	Pn	03 00 56.8	-0.3
SFL1	Soufli	1.84	15	P	Pn	03 00 57.5	+0.1
MADA	Marmara adas	1.86	50	P	Pn	03 00 59.0	+1.5
MADA				S	Sn	03 01 21.4	+0.6
UKOP	Uzunkopru-Edir	1.87	22	Pn	Pn	03 00 58.5	+0.8
MRMT	Marmara Adasi	1.89	50	Pn	Pn	03 00 58.5	+0.4
DION	Dionisos Attik	1.91	227	P	Pn	03 00 57.4	-0.9
DION	Dionisos Attik	1.91	227	P	Pn	03 00 57.4	-0.9
TNSA	Tinos	1.91	193	P	Pn	03 00 57.3	-0.9
EDC	Edincik	1.92	60	Pn	Pn	03 00 59.5	+1.1
SUSR	Susurluk-Balik	1.93	73	Pn	Pn	03 00 59.1	+0.5
PTL	Penteli	1.97	227	P	Pn	03 00 58.4	-0.7
PTL	Penteli	1.97	227	P	Pn	03 00 58.3	-0.8
PLG	Polygyros	1.98	300	P	Pn	03 00 59.4	+0.1
GORD	Gordes-Manisa	2.00	104	Pn	Pn	03 01 00.6	+1.1
ATHU	Athens Univers	2.07	227	P	Pn	03 00 59.8	-0.8
BAND	Balkesir-Ban	2.08	62	P	Pn	03 01 00.9	+0.2
TKR	Tekirdag	2.12	41	Pn	Pn	03 01 02.0	+0.8
VLY	Voula,Athens	2.15	224	P	Pn	03 01 00.8	-0.8
VLY	Voula,Athens	2.15	224	P	Pn	03 01 00.7	-0.8
DURS	Dursunbey	2.16	84	P	Pn	03 01 01.9	+0.1
ODEM	Odemis-Izmir	2.18	120	Pn	Pn	03 01 02.7	+0.7
ATAL	Atalanti	2.20	252	P	Pn	03 01 02.0	-0.2
MURA	Muratl, TEK	2.22	38	P	Pn	03 01 03.4	+0.9
LKR	Lokris	2.23	251	P	Pn	03 01 02.8	+0.2
VILL	Villia	2.23	237	P	Pn	03 01 02.3	-0.5
VIL2	Platees	2.24	239	P	Pn	03 01 02.5	-0.3
KDZ	Kurdzhali	2.24	353	P	Pn	03 01 02.8	0.0
KDZ	Kurdzhali	2.24	353	Pn	Pn	03 01 03.1	+0.3
CRLT	Corlu	2.33	42	Pn	Pn	03 01 04.9	+0.9
APE	Apeiranthos	2.34	183	P	Pn	03 01 03.0	-1.2
APE	Apeiranthos	2.34	183	⇓P	Pn	03 01 02.9	-1.4
APE	Apeiranthos	2.34	183	P	Pn	03 01 02.8	-1.4
SRS	Serrai	2.34	317	P	Pn	03 01 04.5	+0.3
RZN	Rozhen	2.40	343	P	Pn	03 01 05.5	+0.3
RZN	Rozhen	2.40	343	P	Pn	03 01 05.7	+0.5
AXAR	Agios Charalam	2.44	256	P	Pn	03 01 07.1	+1.5
MET4	Agioi Theodoro	2.53	226	P	Pn	03 01 06.1	-0.7
LTK	Loutraki	2.54	238	P	Pn	03 01 06.6	-0.4
ORLT	Orhaneli	2.55	74	Pn	Pn	03 01 08.6	+1.4
EDRB	Edirne	2.57	18	Pn	Pn	03 01 08.6	+1.3
YYLC	Yaylacik	2.57	69	P	Pn	03 01 07.7	+0.4
MMB	Musomishta	2.60	326	P	Pn	03 01 08.4	+0.6
MMB	Musomishta	2.60	326	P	Pn	03 01 08.4	+0.6
KIRK	Kırklareli	2.60	24	P	Pn	03 01 06.8	-1.0
AGG	Agios Georgios	2.64	263	P	Pn	03 01 08.5	+0.2
MDNY	Mudanya-Bursa	2.64	68	Pn	Pn	03 01 09.9	+1.6
SLVT	Silivri	2.65	46	Pn	Pn	03 01 09.7	+1.2
VIZE	Kirklareli, Vi	2.72	36	P	Pn	03 01 09.2	-0.3
ARMN	Kirklareli, Me	2.79	28	P	Pn	03 01 09.9	-0.5
CATL	atalca, ST	2.81	46	P	Pn	03 01 10.3	-0.3
PLD	Plovdiv	2.83	346	P	Pn	03 01 11.7	+0.8
PLD	Plovdiv	2.83	346	*i* P	Pn	03 01 11.6	+0.7
THL	Klokotos Trika	2.85	274	P	Pn	03 01 11.8	+0.6
THERA	Ancient Thera,	3.04	183	P	Pn	03 01 12.7	-1.2
ANX	Ano Chora	3.05	256	P	Pn	03 01 14.6	+0.7
YER	Yerkesik	3.05	137	P	Pn	03 01 14.6	+0.5
KKB	Krupnik	3.12	322	P	Pg	03 01 25.2	-0.8
KKB				S	Sg	03 02 04.1	-2.3
JMB	Yambol	3.15	11	*i* P	Pn	03 01 15.1	-0.2
PGB	Panagyurishte	3.31	340	*e*P	Pn	03 01 18.7	+1.1
PLNA	Plana	3.51	332	*e*P	Pn	03 01 21.6	+1.2
ELND	Elena	3.52	2	⇑P	Pn	03 01 20.7	+0.3
VTS	Vitosha	3.71	331	P	Pn	03 01 24.1	+1.0
PRD	Provadia	3.97	19	*e*P	Pn	03 01 27.9	+1.3
LOZB	Loznitsa	4.02	9	⇑P	Pn	03 01 27.4	+0.2
NEF	NEVSHA	4.04	17	*e*P	Pn	03 01 27.9	+0.4
PLVB	Pleven	4.06	349	⇑P	Pn	03 01 28.5	+0.7
TRAN	Tran	4.12	327	*e*P	Pn	03 01 31.0	+2.3
MPEP	Malo Peshtene	4.21	340	*e*P	Pn	03 01 31.1	+1.2
SAHE	Sakarya_HENDEK	4.21	68	⇓P	Pn	03 01 30.9	+1.0
ICOR	Ion Corvin	4.96	18	⇓P	Pn	03 01 41.1	+0.9
BOVS	Bovan	5.17	326	⇓P	Pn	03 01 44.4	+1.2
TLBR	Topalu	5.43	18	⇑P	Pn	03 01 47.4	+0.8
TIRR	Tirgusor	5.44	21	⇓P	Pn	03 01 47.2	+0.4
HERR	Herculane	5.99	337	⇓P	Pn	03 01 54.3	0.0
ARR	Arges	6.01	353	⇓P	Pn	03 01 55.3	+0.6
NEHR	Nehoiu	6.03	4	⇓P	Pn	03 01 56.0	+1.0
CFR	Carcaliu	6.05	17	⇑P	Pn	03 01 55.1	0.0
MLR	Muntele Rosu	6.08	2	⇓P	Pn	03 01 57.6	+1.8
MDVR	Moldovita	6.13	332	⇓P	Pn	03 01 57.0	+0.6
GZR	Gura Zlata	6.36	341	⇓P	Pn	03 01 59.5	+0.1
COVR	Voineasa-Covas	6.45	3	⇓P	Pn	03 02 02.7	+2.1
PLOR	Plostina	6.48	6	⇑P	Pn	03 02 02.9	+1.8
VRI	Vrincioaia	6.50	6	⇓P	Pn	03 02 03.5	+2.2
DOPR	Dopca	6.56	358	⇑P	Pn	03 02 03.3	+1.1
TURR	Turia	6.65	2	⇓P	Pn	03 02 05.7	+2.3
VLDR	Vladesti	6.67	15	⇓P	Pn	03 02 04.9	+1.2
OZUR		6.69	1	⇓P	Pn	03 02 05.0	+1.1
BZS	Buzias	6.90	335	⇑P	Pn	03 02 06.4	-0.4
ONER	Baraj Valea Uz	6.94	4	⇑P	Pn	03 02 08.4	+0.9
TESR	Tescani	7.14	5	⇑P	Pn	03 02 11.7	+1.6

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*NDI **16** 03:10:28.3±1.1, 24°.19N×93°.80E, h12^{km}±7^{km}, ML4.1, MW4.0, mb4.4(NEIC)*

*NEIC **16** 03:10:30.2±1.2, 24°.09N±0°.07×93°.88E±0°.06, h55^{km}±7^{km}, mb4.4/10, Error ellipse: s-maj=9.9km s-min=7.9km az=186.0*

*IDC **16** 03:10:30.4±2.9, 23°.93N×93°.92E, h68^{km}±28^{km}, mb3.6/4, mbtmp3.9/6, Error ellipse: s-maj=25.0km s-min=19.2km az=18.0*

ISC 16 03:10:29.6±0.8, **24°.17N**±0°.04×**93°.82E**±0°.05, **h56**^{km}±8^{km}, **n45,** σ**1^{s}83**/61, **mb4.1**/11, **Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MORE	Moreh	0.44	81		Pn	03 10 40.6	0.0
MORE				Sn	Sn	03 10 48.5	-0.1
KOHI	KOHIMA	1.57	9	*e*P	Pn	03 10 56.3	+0.9
KOHI				*e*S	Sn	03 11 17.4	+2.7
KOHI				IAML		03 11 19.6	
	comp=N,3µm,0.5s						
KOHI				IAML		03 11 19.6	
	comp=E,3µm,0.5s						
SAIH	SAIHA	1.84	205	*e*P	Pn	03 11 00.3	+1.3
SAIH				*e*S	Sn	03 11 23.5	+2.4
SAIH				IAML		03 11 25.3	
	comp=N,2µm,0.3s						
SAIH				IAML		03 11 25.8	
	comp=E,2µm,0.5s						
MOKO	MOKOCHONG	2.24	16	*e*P	Pn	03 11 05.2	+0.8
MOKO				*e*S	Sn	03 11 32.4	+1.4
MOKO				IAML		03 11 35.0	
	comp=N,2µm,0.3s						
MOKO				IAML		03 11 35.3	
	comp=E,2µm,0.4s						
SHL	Shillong	2.25	309		Pn	03 11 05.4	+0.8
SHL				Sn	Sn	03 11 31.6	+0.4
SHL	Shillong	2.25	309	*e*P	Pn	03 11 04.4	-0.2
SHL				*e*S	Sn	03 11 30.9	-0.4
SHL				IAML		03 11 34.5	
	comp=N,2µm,0.1s						
SHL				IAML		03 11 35.1	
	comp=E,2µm,0.1s						
AGT	Agartala	2.37	264	*e*S	Sn	03 11 35.9	+1.9
AGT				IAML		03 11 38.5	
	comp=E,1µm,0.1s						
AGT				IAML		03 11 39.8	
	comp=N,1µm,0.3s						
BRDH	Bariadhala	2.49	234	P	Pn	03 11 08.4	+0.7
	comp=N,102nm,0.3s,baz=240,slow=19,SNR=3.6						
BRDH				S	Sn	03 11 37.0	+0.1
	comp=N,146nm,0.3s,baz=228,slow=21,SNR=16						
TEZP	TEZPUR	2.61	339	*e*P	Pn	03 11 10.0	+0.7
TEZP				*e*S	Sn	03 11 39.7	-0.2
TEZP				IAML		03 11 41.1	
	comp=N,1µm,0.2s						
TEZP				IAML		03 11 41.3	
	comp=E,1µm,0.1s						
GUWA	GUWAHATI	2.79	317	*e*P	Pn	03 11 12.4	+0.5
GUWA				*e*S	Sn	03 11 44.4	0.0
GUWA				IAML		03 11 44.8	
	comp=N,2µm,0.1s						
GUWA				IAML		03 11 46.8	
	comp=E,2µm,0.1s						
ITAN	ITANAGAR	2.97	358	*e*S	Sn	03 11 48.9	+0.2
ITAN				IAML		03 11 50.7	
	comp=N,2µm,0.3s						
ITAN				IAML		03 11 53.1	
	comp=E,2µm,0.4s						
DHUB	DHUBRI	3.93	299	*e*P	Pn	03 11 28.1	+0.6
DHUB				*e*S	Sn	03 12 11.8	-0.5
DHUB				IAML		03 12 14.0	
	comp=E,2µm,0.2s						
DHUB				IAML		03 12 15.1	
	comp=N,2µm,0.1s						
LSA	Lhasa	6.01	337	Pn	Pn	03 11 55.6	-0.8
LSA				Sn	Sn	03 12 59.0	-5.0
LSA				smax	smax		
	comp=N,14nm,0.8s						
LSA				smax	smax		
	comp=E,18nm,0.5s						
CMAR	Chiang Mai Arr	7.42	139	P	Pn	03 12 13.8	-1.5
	comp=E,1.7nm,0.4s,baz=317,slow=14,SNR=7.9						
PZH	PanZhiHua	7.54	70	P	Pn	03 12 18.6	+1.6
GUN	Gumba	8.06	299	Pn	Pn	03 12 25.3	+0.9
	baz=306,slow=0.0						
GUN				Sn	Sn	03 13 52.5	-1.7
	comp=E,41nm,0.4s,baz=306,slow=0.0						
PKIN	Phulchoki	8.31	296	Pn	Pn	03 12 27.5	-0.3
	baz=303,slow=0.0						
PKIN				Sn	Sn	03 13 57.7	-2.7
	comp=E,40nm,0.5s,baz=303,slow=0.0						
KKN	Kakani	8.49	297	Pn	Pn	03 12 30.9	+0.7
	baz=304,slow=0.0						
KKN				Sn	Sn	03 14 02.2	-2.5
	comp=E,15nm,0.3s,baz=304,slow=0.0						
DMN	Daman	8.56	295	Pn	Pn	03 12 31.1	-0.1
	baz=302,slow=0.0						
GKN	Gorkha	9.10	297	Pn	Pn	03 12 38.5	+0.1
	baz=303,slow=0.0						
GKN				Sn	Sn	03 14 15.8	-3.7
	comp=E,51nm,0.3s,baz=303,slow=0.0						
KOLN	Koldanda	9.87	293	Pn	Pn	03 12 48.2	-0.9
	baz=299,slow=0.0						
KOLN				Sn	Sn	03 14 33.8	-4.7
	comp=E,35nm,0.5s,baz=299,slow=0.0						
DANN	Dangsing	9.95	297	Pn	Pn	03 12 49.9	-0.2
	baz=302,slow=0.0						
DANN				Sn	Sn	03 14 36.2	-4.2
	comp=E,15nm,0.4s,baz=302,slow=0.0						
PYUN	Piuthan	10.49	294	Pn	Pn	03 12 56.4	-1.1
	baz=300,slow=0.0						
HYB	Hyderabad	15.77	248	*e*P	P	03 14 12.9	+1.7
HYB				*e*pP	pP	03 14 24.0	+0.3
WMQ	Urumqi	20.24	347	*e*P	Pn	03 15 04.8	+2.2
WUS	Wushi	20.92	328	P	P	03 15 09.2	+1.5

WUS				IAmb	IAmb	03 15 09.8	
	comp=Z,8.0nm,0.8s						
KSH	Kashi	21.48	320	P	P	03 15 17.8	+4.0
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TARG	Taragay, Kyrgy	22.01	327	P	P	03 15 20.8	+1.1
TARG				IAmb	IAmb	03 15 55.1	
	comp=Z,7.6nm,1.2s						
HHC	Hu-ho-hao-te	22.30	38	*e*P	P	03 15 23.4	+0.9
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MANEM	Manem	23.15	310	P	P	03 15 33.0	+1.4
MANEM				IAmb	IAmb	03 15 33.9	
	comp=Z,10nm,0.6s						
BOOM	Boomskoye usch	23.52	325	P	P	03 15 36.3	+1.4
BOOM				IAmb	IAmb	03 16 04.1	
	comp=Z,30nm,1.4s						
MKAR	Makanchi Array	24.40	341	P	P	03 15 44.5	+1.8
	comp=Z,0.7nm,0.4s,baz=150,slow=11,SNR=19						
	comp=Z,0.7nm,0.4s						
MKAR	Makanchi Array	24.40	341	P	P	03 15 43.6	+0.9
MAKZ	Makanchi	24.51	340	P	P	03 15 46.8	+3.0
GAR	Garm	24.80	312	P	P	03 15 47.5	+0.9
GAR				IAmb	IAmb	03 15 48.5	
	comp=Z,9.2nm,0.5s						
SHAA	Shahritus	25.69	307	P	P	03 15 55.2	+0.6
SHAA				IAmb	IAmb	03 15 57.7	
	comp=Z,12nm,0.6s						
AB31	Akbulak array	36.45	322	P	P	03 17 30.2	+1.2
ABKAR	Akbulak array	36.45	322	P	P	03 17 29.8	+0.8
WB0	Warramunga Arr	58.90	134	P	P	03 20 20.3	-2.9
WB0				IAmb	IAmb	03 20 23.3	
	comp=Z,3.2nm,1.1s						
WRA	Warramunga Arr	58.99	135	P	P	03 20 21.2	-2.6
	comp=Z,0.5nm,0.6s,baz=321,slow=6.8,SNR=6.3						
	comp=Z,0.5nm,0.6s						
ASAR	Alice Springs	61.43	138	P	P	03 20 37.7	-2.8
	comp=Z,0.2nm,0.5s,baz=317,slow=7.5,SNR=4.7						
	comp=Z,0.2nm,0.5s						
VOI	Vohitsoka	64.71	229	P	P	03 21 01.4	-1.0
CLL	Collm	65.90	317	*e*P	P	03 21 10.0	+0.4
BMAR	Burnt Mountain	79.00	20	P	P	03 22 28.4	+1.1
BOSA	Boshof	84.29	235	P	P	03 22 55.6	-0.3
	comp=Z,7.9nm,1.2s,baz=45,slow=4.3,SNR=5.6						
	comp=Z,7.9nm,1.2s						

DJA ***16*** *03:18:14.0±0.2, 7°S±2°×13°0E±°, h132^{km}±4^{km}, M4.5/18, mb4.2/18, mB5.1/6, MLv4.6/14, Mw(mB)4.5/6*

IDC ***16*** *03:18:14.6±11.0, 7°.14S×129°.61E, h129^{km}±112^{km}, mb3.5/4, mbtmp4.2/7, ML4.7/3, Error ellipse: s-maj=119.6km s-min=31.2km az=53.0*

ISC 16 03:18:13.6±0.7**, 6°.89S**±0°.06×**129°.98E**±0°.07**, h132^{km}, n32,** σ**2^{s}51**/33**, mb3.7**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.70	130	P	Pn	03 18 46.4	+2.3
SAUI	Saumlaki	1.70	130	P	Pn	03 18 45.8	+1.7
SAUI				S	Sn	03 19 08.2	+0.8
BNDI	Bandanaira	2.35	358	P	Pn	03 18 51.8	-0.3
MSAI	Masohi	3.67	343	P	Pn	03 19 10.1	+0.9
KRAI	Karang Ratu	3.88	336	P	Pn	03 19 13.3	+1.4
FAKI	Fak Fak	4.55	30	P	Pn	03 19 20.0	-0.7
KMPI	Kaimana, Papua	4.90	49	P	Pn	03 19 26.1	+0.6
SWI	Sorong	6.12	12	P	Pn	03 19 41.2	-0.6
SANI	Sanana	6.24	320	P	Pn	03 19 44.8	+1.4
	11nm,0.7s						
SOEI	Soe	6.33	243	P	Pn	03 19 45.7	+1.0
SOEI	Soe	6.33	243	P	Pn	03 19 44.8	+0.1
	0.7nm42nm,0.6s						
RKPI	Ransiki, Papua	6.79	38	P	Pn	03 19 51.3	+0.5
BATI	Baumata	7.06	242	P	Pn	03 19 52.9	-1.6
	0.4nm52nm,0.5s						
EDFI	Ende, Flores	8.42	257	P	Pn	03 20 13.3	+0.5
	13nm,0.9s						
WSI	Waingapu	9.97	253	P	Pn	03 20 32.2	-1.4
FITZ	Fitzroy Crossi	11.92	200	P	Pn	03 20 56.1	-3.2
	5.2nm,0.3s,baz=20,slow=11,SNR=25						
FITZ				S	Sn	03 22 57.3	-13
	8.8nm,0.3s,baz=30,slow=8.1,SNR=5.1						
	9.0nm,0.2s						
PLAI	Plampang	12.24	260	P	Pn	03 21 01.3	-2.4
	11nm,0.9s						
WRAB	Tennant Creek	13.64	162	P	Pn	03 21 19.3	-2.4
WRA	Warramunga Arr	13.65	162	P	Pn	03 21 19.6	-2.3
	3.8nm,0.3s,baz=331,slow=14,SNR=49						
WRA				S	Sn	03 23 42.8	-10
	5.6nm,0.4s,baz=330,slow=24,SNR=7.9						
	4.2nm,0.3s						
QIS	Mount Isa	16.48	146	P	P	03 21 58.1	+0.6
ASAR	Alice Springs	17.10	168	P	Pn	03 22 05.5	+0.8
	1.9nm,0.3s,baz=342,slow=9.9,SNR=77						
ASAR				S	Sn	03 25 07.0	-8.7
	2.7nm,0.7s,baz=354,slow=27,SNR=7.8						
	4.8nm,0.5s						
PMG	Port Moresby	17.19	100	P	P	03 22 04.2	-1.2
	8.8nm,1.1s						
MBWA	Marble Bar	17.31	214	P	Pn	03 22 08.9	+1.7
PSA00	Pilbara Seismi	17.58	213	P	Pn	03 22 11.0	+0.5
PCJI	Pacitan	18.69	265	P	P	03 22 20.2	-1.6
	11nm,1.4s						
BBJI	Bungbulang	22.16	267	P	P	03 22 57.8	-1.4
MEEK	Meekatharra	22.42	208	P	P	03 23 08.6	+7.0
BBOO	Buckleboo	26.40	168	P	P	03 23 46.1	+8.2
STKA	Stephens Creek	27.12	158	P	P	03 23 44.5	+0.2
	1.0nm,0.5s,baz=329,slow=12,SNR=3.5						
	1.0nm,0.5s						
MKAR	Makanchi Array	68.12	327	P	P	03 29 01.0	+1.6
	0.7nm,0.5s,baz=119,slow=7.3,SNR=11						
	0.7nm,0.5s						
KURBB	Kurchatov Arra	72.41	328	P	P	03 29 26.7	+1.4
	1.4nm,0.6s,baz=128,slow=4.8,SNR=13						
	1.4nm,0.6s						
BVAR	Borovoye Array	77.96	328	P	P	03 29 58.3	+1.2
	0.3nm,0.5s,baz=116,slow=9.8,SNR=1.6						
	0.3nm,0.5s						

CRAAG ***16*** *03:26:00.1, 36°.81N×3°.46E, Ml2.9, Algerie 06km NW Boumerdes*

MDD ***16*** *03:26:03.8±1.4, 36°.87N×3°.40E, h23^{km}±36^{km}, Mb3.1/10, M_mb2.2/9, Error ellipse: s-maj=38.6km s-min=8.2km az=139.0*

ISC 16 03:26:00.2±1.0**, 36°.88N**±0°.06×**3°.42E**±0°.04**, h12^{km}, n17,** σ**1^{s}54**/26**, 6C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADOR	Douera	0.46	241	P	Pb	03 26 10.7	+0.3
ATKB	Taksebt	0.60	110	P	Pg	03 26 12.1	+0.2
ATKJ	Tikjda	0.71	128	P	Pg	03 26 13.6	-0.5
AKET	Djebel Ketaf	0.91	156	P	Pg	03 26 17.5	-0.4
ABKD	Sidi Amar	0.96	249	P	Pg	03 26 18.3	-0.4
CTCHA	Tamokra	1.09	114	P	Pn	03 26 21.9	+0.6
EIBI	Ibiza	2.70	323	Pn	Pn	03 26 44.9	+1.5
EIBI				Sn	Sn	03 27 14.3	-1.7
EIBI	Ibiza	2.70	323	Pn	Pn	03 26 44.6	+1.2
EIBI				⇑*i*IVmb_VC		03 26 45.2	
	54nm,SNR=12						
EIBI				Sn	Sn	03 27 14.6	-1.4
ETOS	Mallorca	2.92	351	Pn	Pn	03 26 48.0	+1.5
ETOS				Sn	Sn	03 27 19.8	-1.7
ETOS	Mallorca	2.92	351	Pn	Pn	03 26 48.3	+1.8
ETOS				⇑*i*IVmb_VC		03 26 49.3	
	39nm,SNR=7.6						
ETOS				Sn	Sn	03 27 19.6	-1.9
EBEN2	Beniarda presa	3.38	303	Pn	Pn	03 26 53.5	+0.8
EBEN2				Sn	Sn	03 27 30.5	-2.2
EVIV	Cofrentes, Val	4.30	305	Pn	Pn	03 27 06.7	+1.2
EVIV				⇑*i*IVmb_VC		03 27 08.9	
	26nm,SNR=3.6						
EVIV				Sn	Sn	03 27 52.5	-3.0
ETOB	Tobarra	4.31	296	Pn	Pn	03 27 07.1	+1.4
ETOB				Sn	Sn	03 27 56.7	+0.8
ETOB	Tobarra	4.31	296	Pn	Pn	03 27 07.0	+1.4
ETOB				⇑*i*IVmb_VC		03 27 07.8	
	12nm,SNR=3.7						
ETOB				Sn	Sn	03 27 54.8	-1.1
ECHE	Chera	4.39	309	Pn	Pn	03 27 08.4	+1.8
ECHE	Chera	4.39	309	Pn	Pn	03 27 08.9	+2.3
ECHE				⇑*i*IVmb_VC		03 27 09.9	
	16nm,SNR=8.3						
EMOS	Mosqueruela	4.62	320	Pn	Pn	03 27 11.0	+1.0
EMOS				⇑*i*IVmb_VC		03 27 12.7	
	15nm,SNR=4.5						
EMOS				Sn	Sn	03 28 02.4	-1.4

IDC 16 03:26:06.1±2.2**, 0°.56N**×**127°.74E, h0^{km}, mb3.4**/4**, mbtmp3.5**/4**, Error ellipse: s-maj=200.6km s-min=24.2km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.38	163	P	P	03 30 54.7	-0.7
	0.3nm,0.4s,baz=341,slow=11,SNR=1.6						
	0.3nm,0.4s						
ASAR	Alice Springs	24.82	166	P	P	03 31 30.6	+0.4
	0.8nm,0.9s,baz=347,slow=8.5,SNR=6.2						
	0.8nm,0.9s						
MKAR	Makanchi Array	60.72	326	P	P	03 36 20.1	+0.5
	0.7nm,1.0s,baz=120,slow=7.5,SNR=4.7						
	0.7nm,1.0s						
KURBB	Kurchatov Arra	64.94	328	P	P	03 36 46.9	-0.6
	0.3nm,0.2s,baz=127,slow=6.4,SNR=2.7						
	0.3nm,0.2s						

IDC ***16*** *03:30:25.0±2.0, 61°.58N×150°.64W, h48^{km}±20^{km}, mb4.0/25, mbtmp4.3/29, ML3.8/4, MS3.3/20, Error ellipse: s-maj=14.7km s-min=11.6km az=38.0*

ANF ***16*** *03:30:26.8±0.1, 61°.40N×150°.43W, h63^{km}±2^{km}, ML4.5/108, Error ellipse: s-maj=0.9km s-min=0.8km az=179.0*

NEIC ***16*** *03:30:26.9±2.0, 61°.42N±0°.03×150°.47W±0°.02, h66^{km}±4^{km}, Error ellipse: s-maj=4.0km s-min=1.0km az=168.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.88; $M_{\theta\theta}$-0.30; $M_{\phi\phi}$1.18; $M_{r\theta}$-0.45; $M_{\theta\phi}$1.64; $M_{\phi r}$2.68; Fault plane solution: $M_0$3.35000×10^{15} NP1: ϕ_s175.49000°, δ80.97000°, λ-121.59000°. NP2: ϕ_s71.18000°, δ32.73000°, λ-16.87000°. Principal axes: T 3.3755, Plg29.0000°, Azm291.0000°; N -0.0612, Plg31.0000°, Azm181.0000°; P -3.3144, Plg45.0000°, Azm54.0000°;*

NEIC ***16*** *03:30:27.2, 61°.40N×150°.44W, h54^{km}*

AEIC ***16*** *03:30:27.5±1.9, 61°.41N±0°.02×150°.44W±0°.05, h62^{km}±4^{km}, ML4.1, mb4.5/132(NEIC), ML4.3/240(NEIC), Mwr4.3/65(NEIC), Error ellipse: s-maj=3.7km s-min=3.4km az=151.0*

PMR ***16*** *03:30:27.0, 61°.41N×150°.40W, h63^{km}*

ISC 16 03:30:26.6±0.5**, 61°.43N**±0°.02×**150°.47W**±0°.02**, h69^{km}**±4^{km}**, n737,** σ**1^{s}00**/784**, mb4.5**/89**, 3C-4D, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUA	Susitna One	0.14	285		Pn	03 30 36.6	-0.4
SUA				Sn	Sn	03 30 43.9	-0.6
SUA				IAML		03 30 45.5	
	comp=E,22µm,1.0s						
SUA				IAML		03 30 46.9	
	comp=N,20µm,0.6s						
SUA	Susitna One	0.14	285	P	Pn	03 30 36.7	-0.2
	baz=107,SNR=1000						
SUA				S	Sn	03 30 44.2	-0.2
	baz=107						
M22K	Willow	0.37	27	Pn	Pn	03 30 37.8	-0.2
M22K				Sn	Sn	03 30 46.7	+0.3
M22K	Willow	0.37	27	P	Pn	03 30 37.9	-0.2
	baz=201,SNR=695						
M22K				S	Sn	03 30 46.7	+0.3
	baz=201						
RC01	Rabbit Creek A	0.49	134	Pn	Pn	03 30 39.0	-0.2
RC01				Sn	Sn	03 30 48.2	-0.2
RC01				IAML		03 30 49.0	
	comp=N,19µm,0.4s						
RC01				IAML		03 30 49.2	
	comp=E,15µm,0.6s						
RC01	Rabbit Creek A	0.49	134	P	Pn	03 30 39.0	-0.2
	baz=316,SNR=293						
RC01				S	Sn	03 30 48.5	+0.1
	baz=316						
STLK	Strandline Lak	0.66	277	Pn	Pn	03 30 41.1	+0.1
STLK				Sn	Sn	03 30 51.6	+0.1
PMR	Palmer	0.66	75	Pn	Pn	03 30 40.4	-0.5
PMR				Sn	Sn	03 30 50.7	-0.8
PMR				IAML		03 30 52.4	
	comp=E,8µm,0.5s						
PMR				IAML		03 30 52.5	
	comp=N,11µm,0.5s						
PMR	Palmer	0.66	75	P	Pn	03 30 40.6	-0.3
	baz=254,SNR=760						
PMR				S	Sn	03 30 51.0	-0.5
	baz=254						
CAPN	Captain Cook N	0.74	207		Pn	03 30 42.9	+1.1
CAPN	Captain Cook N	0.74	207	P	Pn	03 30 43.1	+1.4
	baz=29,SNR=18						
CAPN				S	Sn	03 30 56.3	+3.3
	baz=29						
SKT	Skwentna	0.75	318	Pn	Pn	03 30 41.6	-0.3
SKT				Sn	Sn	03 30 53.1	-0.2
SKT	Skwentna	0.75	318	P	Pn	03 30 41.7	-0.2
	baz=136,SNR=502						
SKT				S	Sn	03 30 53.1	-0.2
	baz=136						
SPCG	Spurr Capps Gl	0.76	260		Pn	03 30 42.1	-0.1
SPU	Mount Spurr	0.80	253	Pn	Pn	03 30 42.3	-0.3
GHO	Glory Hole Cre	0.82	64	Pn	Pn	03 30 42.6	-0.1
GHO				Sn	Sn	03 30 54.7	-0.1
SPCN	Chakachatna No	0.85	257		Pn	03 30 43.2	+0.1
SPCR	Spurr Chakacha	0.87	255		Pn	03 30 43.2	-0.2
SPCR	Spurr Chakacha	0.87	255	P	Pn	03 30 43.2	-0.2
	baz=76,SNR=844						
SPCR				S	Sn	03 30 55.6	-0.3
	baz=76						
SPBG	Spurr Blockage	0.93	260		Sn	03 30 57.4	+0.1
SLKM	Skilak Lake	0.93	172	Pn	Pn	03 30 43.7	-0.5
SLKM				Sn	Sn	03 30 56.1	-1.1
SLKM				IAML		03 30 58.1	
	comp=E,9µm,0.7s						
SLKM				IAML		03 30 58.3	
	comp=N,6µm,0.3s						
KNK	Knik Glacier	0.97	90		Pn	03 30 44.7	+0.1
KNK					Sn	03 30 58.7	+0.7
KNK	Knik Glacier	0.97	90	P	Pn	03 30 44.7	+0.1
	baz=271,SNR=433						
KNK				S	Sn	03 30 58.3	+0.4
	baz=271						
CUT	Chulitna	0.98	5	Pn	Pn	03 30 44.7	-0.1
CUT				IAML		03 31 01.0	
	comp=E,8µm,0.4s						
CUT	Chulitna	0.98	5		Sn	03 30 58.9	+0.6
CUT	Chulitna	0.98	5	P	Pn	03 30 44.9	+0.1
	baz=184,SNR=151						
CUT				S	Sn	03 30 58.8	+0.5
	baz=184						
O22K	Cooper Landing	1.02	159	Pn	Pn	03 30 44.8	-0.3
O22K	Cooper Landing	1.02	159		Sn	03 30 59.0	0.0
O22K	Cooper Landing	1.02	159	P	Pn	03 30 45.0	-0.1
	baz=341,SNR=69						
O22K				S	Sn	03 30 58.7	-0.3
	baz=341						
SML	Sawmill	1.09	69	Pn	Pn	03 30 45.9	-0.3
SML				IAML		03 31 02.1	
	comp=E,8µm,1.1s						
SML	Sawmill	1.09	69	P	Pn	03 30 46.1	-0.1
	baz=249,SNR=239						
SML				S	Sn	03 31 00.5	-0.3
	baz=249						
L22K	Petersville	1.11	353	Pn	Pn	03 30 46.7	+0.3
L22K				IAML		03 31 02.7	
	comp=E,7µm,0.3s						
L22K				IAML		03 31 03.9	
	comp=N,5µm,0.5s						
PWL	Port Wells	1.18	118	Pn	Pn	03 30 46.9	-0.4
PWL				IAML		03 31 03.9	
	comp=N,7µm,0.6s						
PWL	Port Wells	1.18	118		Sn	03 31 02.9	+0.1
PWL	Port Wells	1.18	118	P	Pn	03 30 47.1	-0.3
	baz=300,SNR=278						
PWL				S	Sn	03 31 03.0	+0.1
	baz=300						
RDT	Redoubt	1.27	229		Sn	03 31 05.6	+0.6
M20K	Styx River	1.35	291		Pn	03 30 50.1	+0.5
M20K	Styx River	1.35	291	IAML		03 31 09.7	
	comp=N,6µm,0.6s						
M20K				IAML		03 31 10.4	
	comp=E,4µm,0.8s						
M20K	Styx River	1.35	291	P	Pn	03 30 50.0	+0.5
	baz=109						
M20K				S	Sn	03 31 07.4	+0.6
	baz=109						
M20K				S	Sn	03 31 07.4	+0.6
	baz=109						
M23K	Glacier View	1.36	73		Sn	03 31 07.6	+0.6
M23K	Glacier View	1.36	73	P	Pn	03 30 49.6	-0.1
	baz=254,SNR=183						
M23K				S	Sn	03 31 07.0	+0.1
	baz=254						
M23K				S	Sn	03 31 07.0	+0.1
	baz=254						
DFR	Drift River	1.37	233		Sn	03 31 07.9	+0.7
RDJH	Redoubt Jeurge	1.41	235		Sn	03 31 08.8	+0.5
SEW	Seward	1.42	159	Pn	Pn	03 30 49.8	-0.6
SEW	Seward	1.42	159		Sn	03 31 07.6	-0.6
SEW	Seward	1.42	159	P	Pn	03 30 49.9	-0.4
	baz=341,SNR=43						
SEW				S	Sn	03 31 07.7	-0.6
	baz=341						
RDWB	Redoubt West	1.49	232		Sn	03 31 10.7	+0.4
SCM	Sheep Creek Mo	1.56	73	Pn	Pn	03 30 52.1	-0.2
SCM	Sheep Creek Mo	1.56	73		Sn	03 31 11.8	+0.1
SCM	Sheep Creek Mo	1.56	73	P	Pn	03 30 52.2	0.0
	baz=255,SNR=136						
SCM				S	Sn	03 31 11.8	+0.1
	baz=255						
WAT1	Susitna Watana	1.67	32	P	Pn	03 30 54.0	+0.3
	baz=212						
WAT1				S	Sn	03 31 14.9	+0.6
	baz=212						
PPLA	Purkeypile	1.68	332	Pn	Pn	03 30 53.9	-0.1
PPLA				IAML		03 31 16.6	
	comp=E,3µm,0.7s						
PPLA				IAML		03 31 17.0	
	comp=N,2µm,0.9s						
PPLA	Purkeypile	1.68	332	P	Pn	03 30 54.2	+0.2
	baz=150,SNR=72						
PPLA				S	Sn	03 31 14.7	0.0
	baz=150						
BRLK	Bradley Lake	1.68	187	Pn	Pn	03 30 53.6	-0.4
BRSE	Bradley Lake S	1.70	185	P	Pn	03 30 53.5	-0.6
	baz=5.6,SNR=14						
BRSE				S	Sn	03 31 14.5	-0.5
	baz=5.6						
O20K	Slope Mountain	1.72	219	P	Pn	03 30 55.1	+0.7
	baz=38,SNR=32						
O20K				S	Sn	03 31 16.1	+0.7
	baz=38						
O20K				S	Sn	03 31 16.1	+0.7
	baz=38						
GLI	Glacier Island	1.73	107	Pn	Pn	03 30 53.4	-1.1
GLI				IAML		03 31 15.7	
	comp=E,3µm,0.7s						
GLI				IAML		03 31 21.2	
	comp=N,3µm,0.6s						
GLI	Glacier Island	1.73	107	P	Pn	03 30 53.5	-0.9
	baz=290,SNR=28						
GLI				S	Sn	03 31 14.8	-0.8
	baz=290						
WAT6	Susitna Watana	1.73	47	P	Pn	03 30 54.9	+0.2
	baz=228,SNR=92						
WAT6				S	Sn	03 31 15.7	-0.2
	baz=228						
HOM	Homer	1.87	199	Pn	Pn	03 30 56.5	+0.1
HOM				IAML		03 31 21.5	
	comp=N,3µm,0.8s						
HOM	Homer	1.87	199	P	Pn	03 30 56.6	+0.3
	baz=19,SNR=5.8						
HOM				S	Sn	03 31 18.9	-0.1
	baz=19						
CNPM	China Poot	1.95	192	Pn	Pn	03 30 57.2	-0.3
ILSW	Iliamna Southw	1.96	223	Pn	Pn	03 30 58.1	+0.4
ILSW				IAML		03 31 24.5	
	comp=E,1µm,0.8s						
TRF	Thorofare Moun	2.03	2	Pn	Pn	03 30 59.0	+0.3
TRF				IAML		03 31 24.7	
	comp=E,2µm,0.6s						
TRF				IAML		03 31 25.4	
	comp=N,2µm,0.5s						
TRF	Thorofare Moun	2.03	2	P	Pn	03 30 59.1	+0.4
	baz=181,SNR=227						
TRF				S	Sn	03 31 22.3	-0.8
	baz=181						
N19K	Bonanza Creek	2.04	254		Pn	03 30 59.1	+0.4
N19K	Bonanza Creek	2.04	254	IAML		03 31 24.7	
	comp=N,2µm,0.8s						
N19K				IAML		03 31 28.2	
	comp=E,2µm,1.0s						
N19K	Bonanza Creek	2.04	254	P	Pn	03 30 59.2	+0.4
	baz=71,SNR=50						
N19K				S	Sn	03 31 23.0	-0.4
	baz=71						
N19K				S	Sn	03 31 23.0	-0.4
	baz=71						
FID	Port Fidalgo	2.06	108	Pn	Pn	03 30 57.2	-1.7
P23K	Montague Islan	2.08	132	Pn	Pn	03 30 57.5	-1.7
P23K				IAML		03 31 24.0	
	comp=N,1µm,1.0s						
P23K				IAML		03 31 36.8	
	comp=E,2µm,0.6s						
P23K	Montague Islan	2.08	132	P	Pn	03 30 58.0	-1.2
	baz=315,SNR=8.9						
P23K				S	Sn	03 31 23.0	-1.1
	baz=315						
P23K				S	Sn	03 31 23.0	-1.1
	baz=315						
RND	Reindeer	2.12	20	Pn	Pn	03 31 00.2	+0.3
KTH	Kantishna Hill	2.14	355	Pn	Pn	03 31 00.9	+0.8
KTH				IAML		03 31 27.3	
	comp=N,2µm,1.1s						
KTH				IAML		03 31 33.5	
	comp=E,1µm,0.6s						
M24K	Tolsona, Glenn	2.15	70	Pn	Pn	03 31 01.0	+0.8
M24K	Tolsona, Glenn	2.15	70	P	Pn	03 31 01.2	+1.0
	baz=253,SNR=163						
M24K				S	Sn	03 31 27.2	+1.2
	baz=253						
KLU	Klutina	2.19	86	Pn	Pn	03 31 00.1	-0.6
KLU				IAML		03 31 27.0	
	comp=E,1µm,0.5s						
KLU	Klutina	2.19	86	P	Pn	03 31 00.2	-0.5
	baz=270,SNR=59						
KLU				S	Sn	03 31 26.2	-0.5
	baz=270						
DHY	Denali Highway	2.20	40	Pn	Pn	03 31 01.3	+0.4
DHY				IAML		03 31 30.4	
	comp=N,3µm,0.4s						
DHY	Denali Highway	2.20	40	P	Pn	03 31 01.4	+0.4
	baz=222,SNR=64						
DHY				S	Sn	03 31 27.7	+0.6
	baz=222						
HIN	Hinchinbrook I	2.20	116	Pn	Pn	03 30 59.9	-0.9
HIN				IAML		03 31 43.7	
	comp=E,2µm,0.8s						
HIN				IAML		03 31 48.3	
	comp=N,1µm,0.8s						
L19K	White Mountain	2.21	292		Pn	03 31 01.6	+0.5
L19K	White Mountain	2.21	292	IAML		03 31 44.7	
	comp=N,1µm,0.8s						
L19K	White Mountain	2.21	292	P	Pn	03 31 01.6	+0.5
	baz=108,SNR=690						
L19K				S	Sn	03 31 28.1	+0.7
	baz=108						
L19K				S	Sn	03 31 28.1	+0.7
	baz=108						
P19K	Oil Pt	2.25	219	Pn	Pn	03 31 02.4	+0.9
P19K				IAML		03 31 52.4	
	comp=E,2µm,0.6s						
P19K				IAML		03 31 52.7	
	comp=N,2µm,1.0s						
P19K	Oil Pt	2.25	219	P	Pn	03 31 02.1	+0.6
	baz=37,SNR=7.7						
O19K	Port Alsworth	2.26	238	Pn	Pn	03 31 01.4	-0.2
O19K	Port Alsworth	2.26	238	P	Pn	03 31 01.5	0.0
	baz=56,SNR=32						
DIV	Divide	2.29	95	Pn	Pn	03 31 01.3	-0.8
DIV				IAML		03 31 30.6	
	comp=E,1µm,0.8s						
DIV				IAML		03 31 31.4	
	comp=N,3µm,0.5s						
MCK	McKinley	2.42	16	Pn	Pn	03 31 04.5	+0.7
MCK	McKinley	2.42	16	P	Pn	03 31 04.6	+0.8
	baz=197,SNR=68						
MCK				S	Sn	03 31 33.3	+1.0
	baz=197						

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EYAK  Cordova Ski Ar    2.46 109  Pn    Pn    03 31 03.2 -1.2
EYAK  Cordova Ski Ar    2.46 109  P     Pn    03 31 03.2 -1.2
      baz=293,SNR=13
EYAK                              S     Sn    03 31 32.7 -0.6
      baz=293
K20K  Telida            2.56 321        Pn    03 31 06.1 +0.4
K20K  Telida            2.56 321  IAML        03 31 41.9
      comp=E,1µm,0.6s
K20K  Telida            2.56 321  P     Pn    03 31 06.2 +0.4
      baz=137,SNR=279
K20K                              S     Sn    03 31 35.4 -0.3
      baz=137
K20K                              S     Sn    03 31 35.4 -0.3
      baz=137
M18K  Stony River       2.57 274        Pn    03 31 06.1 +0.3
M18K  Stony River       2.57 274  P     Pn    03 31 06.2 +0.3
      baz=89,SNR=177
M18K                              S     Sn    03 31 36.2 +0.2
      baz=89
CHUM  Lake Minchumin    2.61 342        Pn    03 31 06.5 +0.2
CHUM  Lake Minchumin    2.61 342  P     Pn    03 31 06.5 +0.2
      baz=160,SNR=229
CHUM                              S     Sn    03 31 36.4 -0.4
      baz=160
BPAW  Bear Paw Mtn.     2.69 355  Pn    Pn    03 31 07.9 +0.4
BPAW                              IAML        03 31 38.8
      comp=E,1µm,0.6s
BPAW                              IAML        03 31 39.1
      comp=N,1µm,0.5s
BPAW  Bear Paw Mtn.     2.69 355  P     Pn    03 31 07.8 +0.2
      baz=174,SNR=38
BPAW                              S     Sn    03 31 37.7 -1.3
      baz=174
HARP  HAARP             2.70  67  P     Pn    03 31 08.4 +0.8
      baz=250,SNR=54
HARP                              S     Sn    03 31 39.8 +0.7
      baz=250
HARP                              S     Sn    03 31 39.8 +0.7
      baz=250
N18K  Kilae Creek       2.74 256        Pn    03 31 08.2  0.0
N18K  Kilae Creek       2.74 256  P     Pn    03 31 08.2  0.0
      baz=72,SNR=66
N18K                              S     Sn    03 31 39.2 -0.9
      baz=72
N18K                              S     Sn    03 31 39.2 -0.9
      baz=72
PAX   Paxson            2.81  54  Pn    Pn    03 31 09.6 +0.5
PAX                               IAML        03 31 47.7
      comp=N,1µm,0.7s
PAX                               IAML        03 31 54.5
      comp=E,658nm,0.8s
PAX   Paxson            2.81  54  P     Pn    03 31 10.0 +0.9
      baz=238,SNR=77
PAX                               S     Sn    03 31 41.8 -0.1
      baz=238
O18K  Koktuh Hills      2.82 238  Pn    Pn    03 31 09.0 -0.2
O18K                              IAML        03 31 52.1
      comp=N,807nm,1.0s
O18K                              IAML        03 31 56.8
      comp=E,769nm,1.5s
O18K  Koktuh Hills      2.82 238  P     Pn    03 31 09.1 -0.2
      baz=54,SNR=21
O18K                              S     Sn    03 31 41.8 -0.2
      baz=54
O18K                              S     Sn    03 31 41.8 -0.2
      baz=54
N25K  Chitina, Valde    2.82  84  Pn    Pn    03 31 08.6 -0.6
N25K                              IAML        03 31 51.3
      comp=E,815nm,0.7s
N25K                              IAML        03 31 57.2
      comp=N,825nm,0.9s
N25K  Chitina, Valde    2.82  84  P     Pn    03 31 08.7 -0.6
      baz=268,SNR=33
N25K                              S     Sn    03 31 41.8 -0.4
      baz=268
N25K                              S     Sn    03 31 41.8 -0.4
      baz=268
Q23K  Middleton Isla    2.86 133  P     Pn    03 31 09.3 -0.5
      baz=316
MID   Middleton Isla    2.87 133  Pn    Pn    03 31 09.4 -0.5
MID                               IAML        03 31 54.5
      comp=E,785nm,1.9s
BMRM  Bremner River     2.88  97  IAML        03 31 56.1
      comp=N,1µm,0.6s
BMRM                              IAML        03 32 01.1
      comp=E,760nm,0.7s
BMRM  Bremner River     2.88  97  P     Pn    03 31 08.8 -1.3
      baz=282,SNR=24
BMRM                              S     Sn    03 31 42.6 -0.9
      baz=282
Q19K  Cape Douglas,     2.97 214  Pn    Pn    03 31 11.8 +0.5
Q19K                              IAML        03 32 25.6
      comp=N,1µm,1.0s
Q19K  Cape Douglas,     2.97 214  P     Pn    03 31 11.5 +0.2
      baz=32
WACK  Wrangell Chich    2.98  76        Pn    03 31 11.7  0.0
SYI   Shuyak Island     2.99 200  Pn    Pn    03 31 11.2 -0.3
Q20K  Shuyak Island     2.99 200  P     Pn    03 31 11.5 -0.1
      baz=19
Q20K                              S     Sn    03 31 45.5 -0.6
      baz=19
Q20K                              S     Sn    03 31 45.5 -0.6
      baz=19
RAGM  Ragged Mountai    3.02 108  Pn    Pn    03 31 10.6 -1.4
WASW  Wrangell South    3.04  78        Pn    03 31 12.5  0.0
L18K  Granite Mounta    3.06 288        Pn    03 31 12.6 +0.2
L18K  Granite Mounta    3.06 288  IAML        03 32 09.3
      comp=N,931nm,0.8s
L18K                              IAML        03 32 11.7
      comp=E,650nm,0.9s
L18K  Granite Mounta    3.06 288  P     Pn    03 31 12.8 +0.3
      baz=102,SNR=105
P18K  Big Mountain,     3.12 231  Pn    Pn    03 31 13.1 -0.3
P18K  Big Mountain,     3.12 231  P     Pn    03 31 13.2 -0.2
      baz=48
GLB   Gilahina Butte    3.20  87  Pn    Pn    03 31 13.8 -0.6
GLB                               IAML        03 32 01.9
      comp=E,575nm,0.8s
GLB                               IAML        03 32 14.4
      comp=N,701nm,0.8s
K24K  Donnelly Dome     3.22  40  Pn    Pn    03 31 17.5 +2.7
K24K  Donnelly Dome     3.22  40  P     Pn    03 31 17.3 +2.5
      baz=224,SNR=94
J20K  Nowinta River     3.23 330  P     Pn    03 31 14.9 +0.1
      baz=146,SNR=178
NEA2  Nenana            3.24  11        Pn    03 31 14.8 -0.1
NEA2  Nenana            3.24  11  P     Pn    03 31 14.8 -0.1
      baz=191,SNR=29
WRH   Wood River Hil    3.24  19  Pn    Pn    03 31 15.5 +0.5
KAIM  Kayak Island      3.34 114  Pn    Pn    03 31 17.5 +1.2
KAIM                              IAML        03 31 59.7
      comp=N,466nm,2.8s
M17K  Holitna River     3.35 273        Pn    03 31 16.8 +0.3
M17K  Holitna River     3.35 273  P     Pn    03 31 16.8 +0.3
      baz=87,SNR=154
M17K                              S     Sn    03 31 54.5 -0.5
      baz=87
VRDI  Verde Repeater    3.39  90  Pn    Pn    03 31 16.1 -1.1
VRDI                              IAML        03 32 13.6
      comp=N,417nm,1.1s
N17K  Nushagak Hills    3.40 257        Pn    03 31 17.2 +0.1
N17K  Nushagak Hills    3.40 257  IAML        03 32 15.4
      comp=N,434nm,0.9s
N17K                              IAML        03 32 23.8
      comp=E,538nm,0.8s
N17K  Nushagak Hills    3.40 257  P     Pn    03 31 17.2 +0.1
      baz=72,SNR=58
N17K                              S     Sn    03 31 54.8 -1.3
      baz=72
HDA   Harding Lake      3.40  27  Pn    Pn    03 31 18.3 +1.2
HDA                               IAML        03 32 17.0
      comp=E,584nm,0.7s
HDA                               IAML        03 32 18.8
      comp=N,590nm,0.7s
HDA   Harding Lake      3.40  27  P     Pn    03 31 17.9 +0.8
      baz=209,SNR=43
HDA                               S     Sn    03 31 56.1  0.0
      baz=209
KAPH  Katmai Pasha      3.44 216        Pn    03 31 18.4 +0.6
CCB   Clear Creek Bu    3.45  19  Pn    Pn    03 31 18.0 +0.2
BERG  Berg Lake         3.46 104  IAML        03 32 00.9
      comp=N,872nm,0.8s
RIDG  Independent Ri    3.48  46  Pn    Pn    03 31 19.7 +1.4
RIDG                              IAML        03 32 18.6
      comp=N,750nm,0.8s
RIDG  Independent Ri    3.48  46  P     Pn    03 31 19.7 +1.4
      baz=230,SNR=21
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RIDG                              S     Sn    03 31 58.1 -0.2
      baz=230
J19K  Poorman           3.50 320  IAML        03 32 18.4
      comp=N,524nm,1.0s
J19K                              IAML        03 32 18.5
      comp=E,486nm,0.8s
J19K  Poorman           3.50 320  P     Pn    03 31 18.6 +0.1
      baz=135,SNR=94
J19K                              S     Sn    03 31 56.8 -1.8
      baz=135
J19K                              S     Sn    03 31 56.8 -1.8
      baz=135
MENT  Mentasta          3.51  61  Pn    Pn    03 31 19.1 +0.5
J18K  Innoko River      3.55 308        Pn    03 31 19.7 +0.5
J18K  Innoko River      3.55 308  P     Pn    03 31 19.6 +0.5
      baz=122,SNR=324
J18K                              S     Sn    03 31 59.3 -0.5
      baz=122
MCARA McCarthy VSAT     3.58  87  Pn    Pn    03 31 19.0 -0.6
MCARA McCarthy VSAT     3.58  87  P     Pn    03 31 19.0 -0.6
      baz=274,SNR=18
KAHC  Katmai Hardscr    3.60 221        Pn    03 31 19.6 -0.4
Q18K  Katmai Hardscr    3.60 221  P     Pn    03 31 20.0  0.0
      baz=38,SNR=5.2
MLY   Manley            3.62 358  Pn    Pn    03 31 20.9 +0.8
MLY   Manley            3.62 358  P     Pn    03 31 20.6 +0.5
      baz=177,SNR=52
MLY                               S     Sn    03 31 59.7 -1.9
      baz=177
CRQM  Cirque            3.62  98  Pn    Pn    03 31 19.9 -0.5
CRQM                              IAML        03 32 17.4
      comp=N,738nm,0.9s
CRQM                              IAML        03 32 20.9
      comp=E,739nm,1.0s
KARR  Katmai Rainbow    3.63 218        Pn    03 31 20.5 +0.2
CRQE  Cirque            3.65  97  P     Pn    03 31 19.8 -0.8
      baz=284,SNR=16
COLA  College           3.66  18  Pn    Pn    03 31 21.2 +0.6
COLA  College           3.66  18  P     Pn    03 31 21.2 +0.6
      baz=199
COLA                              S     Sn    03 32 03.4 +1.0
      baz=199
O17K  Koliganek Bris    3.66 246  P     Pn    03 31 21.1 +0.3
      baz=61,SNR=41
O17K                              S     Sn    03 32 01.4 -1.2
      baz=61
M26K  Nabesna, AK       3.67  71        Pn    03 31 20.9  0.0
M26K  Nabesna, AK       3.67  71  IAML        03 32 20.5
      comp=N,809nm,0.5s
M26K                              IAML        03 32 23.1
      comp=E,594nm,0.5s
M26K  Nabesna, AK       3.67  71  P     Pn    03 31 20.8  0.0
      baz=257,SNR=19
L26K  Log Cabin Wild    3.70  61  Pn    Pn    03 31 22.2 +1.0
L26K  Log Cabin Wild    3.70  61  P     Pn    03 31 21.9 +0.7
      baz=247,SNR=49
DOT   Dot Lake          3.71  50  Pn    Pn    03 31 22.0 +0.6
P17K  Kvichak River     3.72 236  Pn    Pn    03 31 22.1 +0.7
P17K  Kvichak River     3.72 236  P     Pn    03 31 21.9 +0.5
      baz=51,SNR=17
IL31                    3.73  24  Pn    Pn    03 31 22.3 +0.7
ILAR  Eielson Array     3.73  24  P     Pn    03 31 21.7 +0.1
      comp=E,40nm,0.4s,baz=209,slow=14,SNR=347
ILAR                              S     Sn    03 32 02.4 -1.8
      comp=E,55nm,0.6s,baz=205,slow=15,SNR=6.5
ILAR                              LR    LR    03 32 29.3
      comp=E,323nm,19.2s,baz=181,slow=34
ILAR  Eielson Array     3.73  24  Pn    Pn    03 31 22.4 +0.8
I23K  Minto, Yukon-K    3.77   7  Pn    Pn    03 31 22.7 +0.6
I23K                              IAML        03 32 05.0
      comp=N,320nm,0.9s
I23K  Minto, Yukon-K    3.77   7  P     Pn    03 31 22.5 +0.4
      baz=188,SNR=94
I23K                              S     Sn    03 32 03.1 -2.0
      baz=188
I23K                              S     Sn    03 32 03.1 -2.0
      baz=188
TGL   Tana Glacier      3.77  97  Pn    Pn    03 31 21.8 -0.5
TGL                               IAML        03 32 28.4
      comp=E,472nm,0.6s
TGL                               IAML        03 32 30.3
      comp=N,448nm,0.8s
L17K  Donlin            3.78 284        Pn    03 31 22.7 +0.3
L17K  Donlin            3.78 284  P     Pn    03 31 22.7 +0.3
      baz=97,SNR=130
KDAK  Kodiak Island     3.81 197  P     Pn    03 31 20.9 -1.8
      comp=N,2.1nm,0.3s,baz=17,slow=5.0,SNR=17
KDAK                              S     Sn    03 32 02.4 -3.9
      comp=N,65nm,0.4s,baz=184,slow=6.0,SNR=7.0
      comp=N,11nm,0.4s
KDAK  Kodiak Island     3.81 197  Pn    Pn    03 31 21.4 -1.3
I21K  Tanana            3.83 350  Pn    Pn    03 31 23.7 +0.8
I21K                              IAML        03 32 06.9
      comp=N,478nm,0.8s
I21K                              IAML        03 32 26.7
      comp=E,432nm,0.8s
I21K  Tanana            3.83 350  P     Pn    03 31 23.7 +0.8
      baz=169,SNR=39
I21K                              S     Sn    03 32 04.1 -2.5
      baz=169
I21K                              S     Sn    03 32 04.1 -2.5
      baz=169
I20K  Naaghedeneel      3.84 333        Pn    03 31 23.7 +0.7
I20K  Naaghedeneel      3.84 333  P     Pn    03 31 23.5 +0.5
      baz=150,SNR=38
I20K                              S     Sn    03 32 05.8 -1.0
      baz=150
PTPK  Patty Peak        3.87  90        Pn    03 31 23.2 -0.5
KAKN  Katmai Knife C    3.90 218        Pn    03 31 24.1 +0.1
K17K  Iditarod          3.90 293        Pn    03 31 24.3 +0.3
K17K  Iditarod          3.90 293  IAML        03 32 35.4
      comp=E,581nm,0.9s
K17K                              IAML        03 32 36.0
      comp=N,658nm,1.2s
K17K  Iditarod          3.90 293  P     Pn    03 31 24.4 +0.5
      baz=106,SNR=348
SCRK  Sand Creek        3.93  47  IAML        03 32 25.1
      comp=N,499nm,0.7s
SCRK                              IAML        03 32 26.3
      comp=E,303nm,0.9s
SCRK  Sand Creek        3.93  47  P     Pn    03 31 24.9 +0.4
      baz=232,SNR=47
SNH   Sunshine Point    3.94 105  Pn    Pn    03 31 23.2 -1.4
SNH                               IAML        03 32 11.3
      comp=N,327nm,1.8s
SNH                               IAML        03 32 12.6
      comp=E,289nm,0.6s
POKR  Poker Plat Res    3.95  19  Pn    Pn    03 31 25.2 +0.6
POKR                              IAML        03 32 38.4
      comp=N,268nm,0.7s
POKR  Poker Plat Res    3.95  19  P     Pn    03 31 25.2 +0.6
      baz=201,SNR=28
J25K  Salcha River,     3.95  34        Pn    03 31 26.1 +1.4
J25K  Salcha River,     3.95  34  IAML        03 32 14.5
      comp=E,332nm,0.5s
J25K                              IAML        03 32 20.1
      comp=N,309nm,0.9s
J25K  Salcha River,     3.95  34  P     Pn    03 31 25.6 +0.9
      baz=218,SNR=102
J25K                              S     Sn    03 32 09.8  0.0
      baz=218
J25K                              S     Sn    03 32 09.8  0.0
      baz=218
KIAG  Kiagna River      3.96  94        Pn    03 31 23.8 -1.1
ACHA  Angle Creek He    4.05 219        Pn    03 31 26.4 +0.3
ANCK  Angle Creek       4.11 220        Pn    03 31 27.2 +0.3
M16K  Timber Creek      4.12 268        Pn    03 31 27.4 +0.4
M16K  Timber Creek      4.12 268  IAML        03 32 45.9
      comp=N,314nm,1.2s
M16K  Timber Creek      4.12 268  P     Pn    03 31 27.4 +0.4
      baz=81,SNR=45
Q16K  King Salmon       4.15 231        Pn    03 31 28.0 +0.7
Q16K  King Salmon       4.15 231  P     Pn    03 31 28.1 +0.7
      baz=46,SNR=6.6
N16K  Nishlik Lake      4.16 260        Pn    03 31 27.9 +0.4
N16K  Nishlik Lake      4.16 260  P     Pn    03 31 27.9 +0.4
      baz=73,SNR=65
M27K  Edge Creek, AK    4.17  73        Pn    03 31 28.4 +0.6
M27K  Edge Creek, AK    4.17  73  IAML        03 32 42.4
      comp=N,250nm,1.2s
M27K  Edge Creek, AK    4.17  73  P     Pn    03 31 28.4 +0.6
      baz=260,SNR=13
CAHL  Cahill            4.18 218        Pn    03 31 28.2 +0.4
CNTC  Contact Creek     4.19 223        Pn    03 31 28.1 +0.2
Q17K  Contact Creek     4.19 223  P     Pn    03 31 28.1 +0.1
      baz=39
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O16K  Kokwok River B    4.19 247        Pn    03 31 27.9  0.0
O16K                              IAML        03 32 44.1
      comp=E,240nm,1.4s
O16K                              IAML        03 32 45.2
      comp=N,260nm,1.9s
O16K  Kokwok River B    4.19 247  P     Pn    03 31 28.3 +0.3
      baz=61,SNR=57
BARN  Barnard Glacie    4.27  91  Pn    Pn    03 31 29.0 -0.3
BARN                              IAML        03 32 37.0
      comp=N,293nm,1.0s
BARN                              IAML        03 32 39.1
      comp=E,288nm,0.6s
GRNC  Granite Creek     4.29  96  Pn    Pn    03 31 28.5 -1.0
GRNC                              IAML        03 32 18.7
      comp=N,343nm,0.8s
GRNC                              IAML        03 32 21.3
      comp=E,296nm,0.8s
L16K  Owhat River       4.32 278  Pn    Pn    03 31 29.6  0.0
L16K                              IAML        03 32 49.3
      comp=N,312nm,0.9s
L16K                              IAML        03 32 52.9
      comp=E,234nm,1.4s
L16K  Owhat River       4.32 278  P     Pn    03 31 29.8 +0.2
      baz=90,SNR=73
L27K  Beaver Creek,     4.36  64        Pn    03 31 30.7 +0.4
L27K  Beaver Creek,     4.36  64  P     Pn    03 31 30.6 +0.4
      baz=251,SNR=31
H21K  Melozitna Rive    4.37 347        Pn    03 31 30.8 +0.4
H21K  Melozitna Rive    4.37 347  IAML        03 32 19.9
      comp=N,224nm,0.7s
H21K                              IAML        03 32 37.0
      comp=E,197nm,0.7s
H21K  Melozitna Rive    4.37 347  P     Pn    03 31 30.9 +0.5
      baz=165,SNR=54
R18K  Karluk            4.37 209  P     Pn    03 31 30.7 +0.3
      baz=26
BCAR  Beaver Creek A    4.38  64  Pn    Pn    03 31 30.5  0.0
YAH   Yahtse            4.39 100  Pn    Pn    03 31 30.0 -0.9
YAH                               IAML        03 32 22.7
      comp=N,281nm,0.6s
YAH                               IAML        03 32 46.0
      comp=E,220nm,0.9s
J26L  Joseph Creek      4.41  43  IAML        03 32 33.3
      comp=N,319nm,0.6s
J26L                              IAML        03 32 42.9
      comp=E,323nm,0.7s
J26L  Joseph Creek      4.41  43  P     Pn    03 31 31.5 +0.6
      baz=228,SNR=97
GCSA  Galena City Sc    4.42 322        Pn    03 31 31.4 +0.4
GCSA  Galena City Sc    4.42 322  P     Pn    03 31 31.4 +0.4
      baz=136,SNR=40
H23K  Yukon River       4.43   5        Pn    03 31 31.6 +0.3
H23K  Yukon River       4.43   5  P     Pn    03 31 31.5 +0.2
      baz=185
CTG   Chitna Glacier    4.44  92  P     Pn    03 31 31.3 -0.2
      baz=280
CTGM  Chitina Glacie    4.45  92  Pn    Pn    03 31 31.1 -0.5
CTGM                              IAML        03 32 47.7
      comp=N,217nm,0.7s
P16K  Nushagak River    4.45 241  Pn    Pn    03 31 32.5 +1.0
P16K  Nushagak River    4.45 241  P     Pn    03 31 32.3 +0.9
      baz=54,SNR=20
OHAK  Old Harbor        4.46 200  Pn    Pn    03 31 30.2 -1.3
OHAK  Old Harbor        4.46 200  P     Pn    03 31 32.2 +0.6
      baz=18
J17K  VABM Dome         4.46 300  Pn    Pn    03 31 31.6  0.0
J17K                              IAML        03 32 54.1
      comp=N,178nm,1.1s
J17K                              IAML        03 33 05.2
      comp=E,209nm,0.7s
J17K  VABM Dome         4.46 300  P     Pn    03 31 31.6  0.0
      baz=112,SNR=76
H22K  Ishtalitna Cre    4.50 355  P     Pn    03 31 32.9 +0.7
      baz=174,SNR=88
H20K  Anotleneega Mo    4.53 336        Pn    03 31 32.4 -0.2
H20K  Anotleneega Mo    4.53 336  P     Pn    03 31 32.9 +0.3
      baz=152,SNR=28
H24K  Noodor Dome       4.57  14        Pn    03 31 33.8 +0.6
H24K  Noodor Dome       4.57  14  IAML        03 33 02.4
      comp=E,178nm,1.0s
H24K  Noodor Dome       4.57  14  P     Pn    03 31 34.0 +0.9
      baz=195,SNR=46
YUK2  White River       4.61  81        Pn    03 31 33.0 -0.8
LOGN  Logan Glacier     4.63  93  Pn    Pn    03 31 33.3 -0.8
LOGN                              IAML        03 32 27.6
      comp=N,167nm,1.1s
LOGN                              IAML        03 32 57.7
      comp=E,167nm,1.3s
BVCY  Beaver Creek      4.65  74        Pn    03 31 34.7 +0.5
BVCY  Beaver Creek      4.65  74  P     Pn    03 31 35.2 +1.0
      baz=262,SNR=12
K27K  Chicken           4.66  52        Pn    03 31 34.7 +0.4
K27K  Chicken           4.66  52  P     Pn    03 31 34.6 +0.3
      baz=239
YUK3  Moose Creek       4.79  81        Pn    03 31 36.0 -0.4
YUK3  Moose Creek       4.79  81  P     Pn    03 31 36.2 -0.2
      baz=270,SNR=7.2
IMAR  Indian Mountai    4.80 344  Pn    Pn    03 31 37.1 +0.9
N15K  Kwethluk River    4.88 259        Pn    03 31 37.7 +0.4
N15K  Kwethluk River    4.88 259  IAML        03 33 06.4
      comp=N,284nm,1.0s
N15K                              IAML        03 33 18.7
      comp=E,304nm,1.1s
N15K  Kwethluk River    4.88 259  P     Pn    03 31 37.9 +0.6
      baz=71,SNR=31
H19K  Roundabout Mou    4.91 330        Pn    03 31 37.8 +0.2
H19K  Roundabout Mou    4.91 330  IAML        03 32 47.1
      comp=E,151nm,0.7s
H19K                              IAML        03 32 47.5
      comp=N,161nm,0.8s
H19K  Roundabout Mou    4.91 330  P     Pn    03 31 37.9 +0.2
      baz=144,SNR=56
M15K  Kasigluk River    5.02 266        Pn    03 31 39.2  0.0
M15K  Kasigluk River    5.02 266  P     Pn    03 31 39.4 +0.2
      baz=77,SNR=20
O28M  Mount Upton       5.03  93  Pn    Pn    03 31 39.5 -0.1
O28M                              IAML        03 32 38.4
      comp=N,196nm,0.7s
O28M  Mount Upton       5.03  93  P     Pn    03 31 39.8 +0.2
      baz=282,SNR=20
J16K  Anvik River       5.07 296        Pn    03 31 40.1 +0.2
J16K  Anvik River       5.07 296  IAML        03 33 13.0
      comp=E,130nm,0.8s
J16K                              IAML        03 33 18.1
      comp=N,133nm,1.0s
J16K  Anvik River       5.07 296  P     Pn    03 31 40.1 +0.2
      baz=107,SNR=124
I26K  Coal Creek Min    5.09  37  Pn    Pn    03 31 40.7 +0.5
I26K                              IAML        03 33 13.9
      comp=N,255nm,1.1s
I26K                              IAML        03 33 26.6
      comp=E,255nm,1.0s
I26K  Coal Creek Min    5.09  37  P     Pn    03 31 41.0 +0.8
      baz=223,SNR=89
YUK8  Steele Glacier    5.16  87        Pn    03 31 41.3  0.0
YUK8  Steele Glacier    5.16  87  P     Pn    03 31 42.1 +0.8
      baz=276
H18K  Honhosa River     5.16 320        Pn    03 31 41.6 +0.5
H18K  Honhosa River     5.16 320  IAML        03 32 40.8
      comp=E,112nm,0.6s
H18K  Honhosa River     5.16 320  P     Pn    03 31 41.7 +0.5
      baz=133
O15K  Ungalikthiuk R    5.17 248        Pn    03 31 41.9 +0.6
O15K  Ungalikthiuk R    5.17 248  IAML        03 33 18.8
      comp=N,220nm,1.0s
O15K                              IAML        03 33 26.2
      comp=E,169nm,1.0s
O15K  Ungalikthiuk R    5.17 248  P     Pn    03 31 41.8 +0.6
      baz=60,SNR=27
PCA   Pinnacle          5.18 100  Pn    Pn    03 31 41.0 -0.5
PINM  Pinnacle          5.19 100  P     Pn    03 31 40.4 -1.2
      baz=289
L15K  Ungalak Mounta    5.27 278        Pn    03 31 42.7  0.0
L15K  Ungalak Mounta    5.27 278  P     Pn    03 31 42.9 +0.2
      baz=88,SNR=26
G21K  Allakaket         5.28 347  Pn    Pn    03 31 42.5 -0.2
G21K                              IAML        03 32 44.3
      comp=E,240nm,0.8s
G21K  Allakaket         5.28 347  P     Pn    03 31 43.2 +0.5
      baz=164
G23K  Bananza Creek     5.31   2        Pn    03 31 43.7 +0.5
G23K  Bananza Creek     5.31   2  P     Pn    03 31 43.6 +0.4
      baz=182,SNR=43
K15K  Wolf Creek Mou    5.31 284        Pn    03 31 43.7 +0.5
K15K  Wolf Creek Mou    5.31 284  IAML        03 33 20.9
      comp=N,131nm,2.1s
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K15K  Wolf Creek Mou    5.31 284  P     Pn    03 31 43.7 +0.5
      baz=95,SNR=94
I17K  Unalakleet        5.32 302  Pn    Pn    03 31 43.6 +0.4
I17K                              IAML        03 33 24.9
      comp=N,103nm,1.2s
I17K  Unalakleet        5.32 302  P     Pn    03 31 43.9 +0.6
      baz=113,SNR=56
G24K  Hadweenzic Riv    5.45  13  P     Pn    03 31 46.5 +1.3
      baz=195,SNR=87
BCPM  Bancas Point      5.53 101  Pn    Pn    03 31 45.8  -0.3
G22K  Bettles           5.53 356  P     Pn    03 31 46.9 +0.7
      baz=174,SNR=18
H17K  Granite Mounta    5.54 314        Pn    03 31 46.6 +0.3
H17K  Granite Mounta    5.54 314  P     Pn    03 31 46.8 +0.6
      baz=125,SNR=68
G19K  Purcell Mounta    5.56 331        Pn    03 31 46.4  -0.2
G19K  Purcell Mounta    5.56 331  P     Pn    03 31 46.4  -0.2
      baz=145,SNR=16
M14K  Bethel            5.62 268  Pn    Pn    03 31 47.8 +0.4
M14K  Bethel            5.62 268  P     Pn    03 31 47.9 +0.6
      baz=78,SNR=31
YUK4  Talbot Arm        5.69  86  P     Pn    03 31 49.0 +0.5
      baz=275
G25K  Bearman Lake      5.69  18        Pn    03 31 49.6 +1.3
G25K  Bearman Lake      5.69  18  P     Pn    03 31 49.8 +1.4
      baz=201,SNR=79
N14K  Kuskokwak Cree    5.71 260        Pn    03 31 49.3 +0.7
N14K  Kuskokwak Cree    5.71 260  P     Pn    03 31 49.4 +0.7
      baz=70,SNR=17
DAWY  Dawson            5.74  58  Pn    Pn    03 31 49.7 +0.6
DAWY  Dawson            5.74  58  P     Pn    03 31 49.5 +0.5
      baz=247,SNR=52
M29M  Somme Creek       5.76  75  P     Pn    03 31 49.7 +0.3
      baz=265,SNR=22
I27K  Kandik River      5.76  40  P     Pn    03 31 50.0 +0.6
      baz=227,SNR=58
G18K  Tagagawik         5.77 324        Pn    03 31 50.0 +0.5
G18K  Tagagawik         5.77 324  P     Pn    03 31 49.9 +0.4
      baz=137,SNR=31
O14K  Tigyukauivet M    5.79 253  Pn    Pn    03 31 50.3 +0.6
O14K  Tigyukauivet M    5.79 253  P     Pn    03 31 50.0 +0.3
      baz=64
COLD  Coldfoot          5.82   1  Pn    Pn    03 31 50.5 +0.3
COLD  Coldfoot          5.82   1  P     Pn    03 31 50.9 +0.7
      baz=181,SNR=29
L14K  Kuka Creek        5.87 275  Pn    Pn    03 31 51.9 +1.1
L14K  Kuka Creek        5.87 275  P     Pn    03 31 51.7 +0.9
      baz=84,SNR=124
YUK6  Outpost Mounta    5.88  89        Pn    03 31 50.7  -0.5
YUK6  Outpost Mounta    5.88  89  P     Pn    03 31 51.3 +0.1
      baz=280
O29M  Mount Kennedy     5.92  96  Pn    Pn    03 31 51.1  -0.6
O29M  Mount Kennedy     5.92  96  P     Pn    03 31 51.5  -0.2
      baz=286
F21K  Alatna River      5.96 349        Pn    03 31 53.0 +0.8
F21K  Alatna River      5.96 349  P     Pn    03 31 52.9 +0.8
      baz=166,SNR=32
L29M  L29M              6.00  68  P     Pn    03 31 53.1 +0.4
      baz=259,SNR=8.1
YUK7  Dusty Glacier     6.07  93        Pn    03 31 53.6  -0.2
F20K  Avaraart Lake     6.09 340        Pn    03 31 54.3 +0.5
F20K  Avaraart Lake     6.09 340  P     Pn    03 31 54.3 +0.5
      baz=155,SNR=45
YUK5  Granite Creek     6.09  87        Pn    03 31 53.1  -0.8
G17K  Kiwalik Mounta    6.12 316        Pn    03 31 54.6 +0.4
G17K  Kiwalik Mounta    6.12 316  P     Pn    03 31 54.8 +0.6
      baz=127,SNR=29
F22K  John River        6.15 354        Pn    03 31 55.7 +1.0
F22K  John River        6.15 354  P     Pn    03 31 55.6 +1.0
      baz=172
I28M  Miner Creek       6.21  45        Pn    03 31 56.3 +0.7
I28M  Miner Creek       6.21  45  P     Pn    03 31 56.1 +0.6
      baz=234,SNR=77
F24K  Squaw Lake        6.22   9        Pn    03 31 56.1 +0.5
F24K  Squaw Lake        6.22   9  P     Pn    03 31 56.3 +0.7
      baz=191,SNR=24
H27K  Steamboat Moun    6.23  35  P     Pn    03 31 56.0 +0.2
      baz=223,SNR=73
CHIR  Chirikof Islan    6.23 208  Pn    Pn    03 31 55.1  -0.7
CHIR  Chirikof Islan    6.23 208  P     Pn    03 31 55.8   0.0
      baz=24
H16K  Elim              6.24 306  P     Pn    03 31 56.5 +0.6
      baz=116,SNR=21
G26K  Porcupine Rive    6.26  25  Pn    Pn    03 31 56.7 +0.5
G26K  Porcupine Rive    6.26  25  P     Pn    03 31 57.1 +0.9
      baz=210,SNR=92
J14K  Nanvaranak Lak    6.29 288        Pn    03 31 57.0 +0.6
J14K  Nanvaranak Lak    6.29 288  P     Pn    03 31 57.1 +0.6
      baz=96
HYT   Haines Junctio    6.31  90  Pn    Pn    03 31 56.6  -0.4
HYT   Haines Junctio    6.31  90  P     Pn    03 31 56.8  -0.2
      baz=281
J29N  Klondike Camp     6.36  56  Pn    Pn    03 31 58.3 +0.7
J29N  Klondike Camp     6.36  56  P     Pn    03 31 58.2 +0.7
      baz=247,SNR=88
M13K  Dall Lake         6.36 266        Pn    03 31 58.5 +0.9
M13K  Dall Lake         6.36 266  P     Pn    03 31 58.6 +1.1
      baz=75,SNR=7.3
N30M  Aishikik Lake     6.42  84  P     Pn    03 31 58.0  -0.4
      baz=275,SNR=6.5
K29M  Barlow Dome       6.44  62        Pn    03 31 59.3 +0.5
K29M  Barlow Dome       6.44  62  P     Pn    03 31 59.2 +0.5
      baz=254,SNR=12
F25K  Christian Rive    6.53  16  P     Pn    03 32 01.0 +1.2
      baz=200,SNR=70
BMAR  Burnt Mountain    6.54  20  Pn    Pn    03 32 01.2 +1.2
P29M  Windy Craggy      6.54 100        Pn    03 31 59.8  -0.3
P29M  Windy Craggy      6.54 100  P     Pn    03 31 60.0   0.0
      baz=291
M30M  Minto, Yukon      6.54  74        Pn    03 32 00.4 +0.3
M30M  Minto, Yukon      6.54  74  P     Pn    03 32 00.3 +0.3
      baz=266
F18K  Selawik           6.57 326  P     Pn    03 32 01.1 +0.8
      baz=138,SNR=14
G27K  Doyon Strip       6.63  32  Pn    Pn    03 32 01.8 +0.5
G27K  Doyon Strip       6.63  32  P     Pn    03 32 01.7 +0.5
      baz=219
E23K  Chandalar         6.67   3  P     Pn    03 32 02.6 +0.8
      baz=183
E19K  Redstone River    6.72 337        Pn    03 32 03.0 +0.6
E19K  Redstone River    6.72 337  P     Pn    03 32 03.0 +0.6
      baz=151
E24K  Your Creek        6.73   6        Pn    03 32 03.3 +0.8
E24K  Your Creek        6.73   6  P     Pn    03 32 03.4 +0.8
      baz=188,SNR=33
I29M  Ogilvie Camp,     6.73  49  Pn    Pn    03 32 02.8 +0.2
I29M  Ogilvie Camp,     6.73  49  P     Pn    03 32 02.9 +0.3
      baz=239,SNR=29
P30M  Million Dollar    6.75  95        Pn    03 32 02.4  -0.4
P30M  Million Dollar    6.75  95  P     Pn    03 32 02.5  -0.4
      baz=287
E22K  Anaktuvuk Pass    6.76 356  Pn    Pn    03 32 04.0 +1.1
E22K  Anaktuvuk Pass    6.76 356  P     Pn    03 32 03.6 +0.7
      baz=174,SNR=14
K13K  Kusilvak Mount    6.77 280        Pn    03 32 03.6 +0.5
K13K  Kusilvak Mount    6.77 280  P     Pn    03 32 03.7 +0.6
      baz=88,SNR=16
F26K  Sheenjek River    6.85  21  Pn    Pn    03 32 04.6 +0.3
F26K  Sheenjek River    6.85  21  P     Pn    03 32 05.2 +0.9
      baz=206,SNR=99
S14K  Fog Glacier       6.98 226  P     Pn    03 32 06.1   0.0
      baz=39
O30N  Mendenhall        7.00  89  Pn    Pn    03 32 05.3  -1.1
O30N  Mendenhall        7.00  89  P     Pn    03 32 05.9  -0.4
      baz=282
E25K  Arctic Village    7.04  15  Pn    Pn    03 32 07.8 +1.1
E25K  Arctic Village    7.04  15  P     Pn    03 32 07.8 +1.1
      baz=199,SNR=70
N31M  Braeburn, Yuko    7.04  83  Pn    Pn    03 32 06.3  -0.5
N31M  Braeburn, Yuko    7.04  83  P     Pn    03 32 06.7  -0.2
      baz=276
MAYO  Mayo, Yukon       7.09  66  Pn    Pn    03 32 08.5 +1.0
MAYO  Mayo, Yukon       7.09  66  P     Pn    03 32 07.8 +0.3
      baz=258,SNR=8.2
G15K  Niukluk           7.09 306        Pn    03 32 08.1 +0.6
G15K  Niukluk           7.09 306  P     Pn    03 32 08.5 +1.0
      baz=114
J30M  Hart River        7.16  58        Pn    03 32 09.5 +0.9
J30M  Hart River        7.16  58  P     Pn    03 32 08.8 +0.2
      baz=250
H29M  Whitestone        7.18  43        Pn    03 32 09.0 +0.2
H29M  Whitestone        7.18  43  P     Pn    03 32 09.2 +0.4
      baz=233
E21K  Killik River      7.20 350  Pn    Pn    03 32 11.0 +2.1
E21K  Killik River      7.20 350  P     Pn    03 32 09.4 +0.4
      baz=166
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PLBC  Pleasant Camp     7.25 100  P     Pn    03 32 09.4  -0.3
      baz=292
TOLK  Toolik Lake Re    7.25   3  Pn    Pn    03 32 11.4 +1.7
TOLK  Toolik Lake Re    7.25   3  P     Pn    03 32 10.4 +0.7
      baz=183,SNR=48
E20K  Nigu River        7.27 343  P     Pn    03 32 10.3 +0.3
      baz=158
I30M  Mount Dempster    7.39  53        Pn    03 32 11.8 +0.1
I30M  Mount Dempster    7.39  53  P     Pn    03 32 11.7   0.0
      baz=245,SNR=15
E18K  Tukpahlearik C    7.43 328        Pn    03 32 12.2   0.0
E18K  Tukpahlearik C    7.43 328  P     Pn    03 32 12.8 +0.6
      baz=139
ANM   Nome              7.47 301  Pn    Pn    03 32 13.6 +0.9
ANM   Nome              7.47 301  P     Pn    03 32 13.1 +0.4
      baz=108,SNR=10
E17K  Hotham Inlet      7.51 324        Pn    03 32 14.0 +0.7
E17K  Hotham Inlet      7.51 324  P     Pn    03 32 14.5 +1.2
      baz=134,SNR=40
D22K  Ayikyak River     7.54 354  Pn    Pn    03 32 15.5 +1.9
D22K  Ayikyak River     7.54 354  P     Pn    03 32 15.7 +2.0
      baz=172,SNR=15
D23K  Nanushuk River    7.57 359  P     Pn    03 32 14.5 +0.5
      baz=179
WHY   Whitehorse        7.61  89  Pn    Pn    03 32 13.6  -1.1
WHY   Whitehorse        7.61  89  P     Pn    03 32 14.7   0.0
      baz=282
F15K  North Star Dit    7.64 310        Pn    03 32 15.6 +0.6
F15K  North Star Dit    7.64 310  P     Pn    03 32 16.0 +1.1
      baz=118,SNR=20
M31M  Drury Creek, Y    7.65  77  Pn    Pn    03 32 15.4 +0.2
M31M  Drury Creek, Y    7.65  77  P     Pn    03 32 15.0  -0.2
      baz=271
F28M  Old Crow          7.70  32  Pn    Pn    03 32 16.2 +0.4
F28M  Old Crow          7.70  32  P     Pn    03 32 16.4 +0.6
      baz=221,SNR=62
G29M  Pine Creek        7.72  39        Pn    03 32 16.7 +0.6
G29M  Pine Creek        7.72  39  P     Pn    03 32 16.9 +0.8
      baz=230,SNR=12
M11K  Mekoryuk          7.74 269  Pn    Pn    03 32 17.4 +1.1
M11K  Mekoryuk          7.74 269  P     Pn    03 32 16.3  -0.1
      baz=76
SKAG  Skagway           7.74  98  Pn    Pn    03 32 16.8 +0.4
SKAG  Skagway           7.74  98  P     Pn    03 32 15.6  -0.8
      baz=291
D20K  Etivluk River     7.76 343        Pn    03 32 17.9 +1.3
D20K  Etivluk River     7.76 343  P     Pn    03 32 17.6 +1.0
      baz=157
E27K  Coleen River      7.76  25  P     Pn    03 32 17.4 +0.8
      baz=213,SNR=84
D24K  Happy Valley      7.79   4  Pn    Pn    03 32 19.0 +2.0
D24K  Happy Valley      7.79   4  P     Pn    03 32 19.2 +2.3
      baz=186,SNR=16
D19K  Kuna River        7.79 339        Pn    03 32 18.1 +1.0
D19K  Kuna River        7.79 339  P     Pn    03 32 18.2 +1.0
      baz=152
EPYK  Eagle Plains      7.82  45  Pn    Pn    03 32 17.4  -0.1
EPYK  Eagle Plains      7.82  45  P     Pn    03 32 16.4  -1.1
      baz=237
C21K  Knifeblade Rid    7.96 349        Pn    03 32 20.2 +0.8
C21K  Knifeblade Rid    7.96 349  P     Pn    03 32 20.2 +0.8
      baz=165,SNR=14
R31K  City Hall, Gus    7.99 106  P     Pn    03 32 18.6  -1.2
      baz=298
S31K  Pelican           7.99 109  P     Pn    03 32 18.0  -1.8
      baz=302
SDPT  Sand Point        8.04 225  P     Pn    03 32 20.9 +0.4
      baz=37
D25K  Kavik River       8.11  10        Pn    03 32 22.9 +1.5
D25K  Kavik River       8.11  10  P     Pn    03 32 22.8 +1.5
      baz=194,SNR=86
FARO  Faro, Yukon       8.14  77  Pn    Pn    03 32 21.8  -0.1
FARO  Faro, Yukon       8.14  77  P     Pn    03 32 21.4  -0.4
      baz=272
CHNA  Chernabura Isl    8.18 220  P     Pn    03 32 22.4   0.0
      baz=33
D17K  Noatak River      8.29 325        Pn    03 32 24.7 +0.8
D17K  Noatak River      8.29 325  P     Pn    03 32 23.1  -0.8
      baz=133
BESE  Bessie Mountai    8.33 103  Pn    Pn    03 32 23.9  -0.5
G30M  tAoh Zraii Nji    8.33  42        Pn    03 32 24.0  -0.4
G30M  tAoh Zraii Nji    8.33  42  P     Pn    03 32 23.4  -1.1
      baz=234,SNR=14
S12K  Black Hills       8.34 232  P     Pn    03 32 23.8  -0.7
      baz=42
C24K  Franklin Bluff    8.36   4        Pn    03 32 26.2 +1.4
C24K  Franklin Bluff    8.36   4  P     Pn    03 32 26.0 +1.2
      baz=186
N32M  Quiet Lake        8.38  84        Pn    03 32 24.3  -0.9
N32M  Quiet Lake        8.38  84  P     Pn    03 32 24.6  -0.5
      baz=279
B21K  Ikpikpuk River    8.40 350  P     Pn    03 32 25.3   0.0
      baz=166,SNR=10
H31M  Peel River        8.40  52        Pn    03 32 25.2  -0.3
H31M  Peel River        8.40  52  P     Pn    03 32 25.4   0.0
      baz=246,SNR=12
C23K  Itkillik River    8.44 360        Pn    03 32 27.4 +1.5
C23K  Itkillik River    8.44 360  P     Pn    03 32 26.9 +1.0
      baz=179,SNR=11
P32M  Atlin             8.47  95  Pn    Pn    03 32 25.7  -0.7
P32M  Atlin             8.47  95  P     Pn    03 32 26.1  -0.3
      baz=290
RDOG  Red Dog Mine      8.50 327  Pn    Pn    03 32 28.3 +1.6
RDOG  Red Dog Mine      8.50 327  P     Pn    03 32 27.2 +0.5
      baz=135,SNR=5.1
C18K  Utukok River      8.53 333        Pn    03 32 26.9  -0.3
C18K  Utukok River      8.53 333  P     Pn    03 32 27.9 +0.7
      baz=143,SNR=6.4
E28M  Babbage River     8.55  28        Pn    03 32 27.1  -0.2
E28M  Babbage River     8.55  28  P     Pn    03 32 27.6 +0.2
      baz=218
C19K  Lookout Ridge     8.59 338  P     Pn    03 32 28.6 +0.6
      baz=149
JIS   Juneau Island     8.69 104        Pn    03 32 28.3  -0.9
C27K  Jago River        8.69  16  Pn    Pn    03 32 31.0 +1.8
C27K  Jago River        8.69  16  P     Pn    03 32 30.3 +1.0
      baz=202,SNR=67
P33M  Teslin, Yukon     8.71  90  Pn    Pn    03 32 28.9  -0.8
P33M  Teslin, Yukon     8.71  90  P     Pn    03 32 28.5  -1.2
      baz=286
E29M  Blow River        8.77  32        Pn    03 32 31.0 +0.5
E29M  Blow River        8.77  32  P     Pn    03 32 31.0 +0.5
      baz=223,SNR=46
D27M  Malcolm River     8.78  23  Pn    Pn    03 32 31.4 +0.8
D27M  Malcolm River     8.78  23  P     Pn    03 32 30.9 +0.3
      baz=211,SNR=35
TNA   Tin City          8.82 306  Pn    Pn    03 32 32.1 +1.1
TNA   Tin City          8.82 306  P     Pn    03 32 31.7 +0.6
      baz=110,SNR=15
C26K  Camden Bay        8.82  13        Pn    03 32 32.2 +1.2
C26K  Camden Bay        8.82  13  P     Pn    03 32 31.7 +0.6
      baz=197,SNR=38
F30M  Barrier River     8.84  39        Pn    03 32 31.8 +0.5
F30M  Barrier River     8.84  39  P     Pn    03 32 32.0 +0.7
      baz=232,SNR=11
C17K  DeLong Mountai    8.87 328        Pn    03 32 32.8 +1.0
C17K  DeLong Mountai    8.87 328  P     Pn    03 32 32.4 +0.6
      baz=137,SNR=7.0
SIT   Sitka             8.90 113  Pn    Pn    03 32 31.0  -1.3
SIT   Sitka             8.90 113  P     Pn    03 32 32.2  -0.1
      baz=306
G31M  Satah River       8.94  45  Pn    Pn    03 32 31.9  -0.8
G31M  Satah River       8.94  45  P     Pn    03 32 32.6  -0.1
      baz=239,SNR=16
S32K  Killisnoo         9.01 109  Pn    Pn    03 32 32.8  -0.8
S32K  Killisnoo         9.01 109  P     Pn    03 32 32.8  -0.8
      baz=303
B22K  Teshekpuk Lake    9.03 354        Pn    03 32 34.0 +0.2
B22K  Teshekpuk Lake    9.03 354  P     Pn    03 32 34.2 +0.3
      baz=171
B20K  Meade River       9.04 345  P     Pn    03 32 34.0   0.0
      baz=159
B18K  Kokolik River     9.24 334  P     Pn    03 32 36.3  -0.5
      baz=144
D28M  Stokes Point      9.30  27  P     Pn    03 32 38.3 +0.7
      baz=217,SNR=29
C16K  Lisburne Hills    9.31 324  P     Pn    03 32 38.3 +0.5
      baz=130,SNR=5.8
F31M  Tsiigehtchic      9.39  43  Pn    Pn    03 32 38.3  -0.5
F31M  Tsiigehtchic      9.39  43  P     Pn    03 32 38.5  -0.3
      baz=238,SNR=8.6
Q32M  Nakina River      9.39  97        Pn    03 32 38.2  -0.9
Q32M  Nakina River      9.39  97  P     Pn    03 32 36.6  -2.5
      baz=293
FALS  False Pass        9.49 232  P     Pn    03 32 39.3  -0.9
      baz=41
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A22K  Sinclair Lake     9.78 351        Pn    03 32 43.6  -0.5
A22K  Sinclair Lake     9.78 351  P     Pn    03 32 43.9  -0.3
      baz=167
A19K  Wainwright        9.80 338  P     Pn    03 32 45.3 +0.9
      baz=149
R33M  Jennings River    9.85  93        Pn    03 32 44.4  -1.0
R33M  Jennings River    9.85  93  P     Pn    03 32 45.0  -0.4
      baz=290
INK   Inuvik            9.94  39  P     Pn    03 32 45.6  -0.7
      comp=N,2.0nm,0.3s,baz=240,slow=15,SNR=39
INK                               S     Sn    03 34 32.7  -3.4
      comp=N,4.5nm,0.7s,baz=161,slow=14,SNR=1.4
INK                               LR    LR    03 36 48.4
      comp=N,143nm,20.2s,baz=9.0,slow=39
      comp=N,11nm,0.5s
INK   Inuvik            9.94  39  Pn    Pn    03 32 45.8  -0.5
INK   Inuvik            9.94  39  P     Pn    03 32 46.0  -0.3
      baz=234,SNR=18
GAMB  Gambell          10.05 293  Pn    Pn    03 32 48.9 +1.1
GAMB  Gambell          10.05 293  P     Pn    03 32 47.5  -0.3
      baz=94
T33K  Petersburg       10.11 109  P     Pn    03 32 46.0  -2.7
      baz=304
A21K  Barrow           10.23 349        Pn    03 32 49.8  -0.4
A21K  Barrow           10.23 349  P     Pn    03 32 50.3 +0.1
      baz=163
S34M  Telegraph Cree   10.38 101  Pn    Pn    03 32 51.9  -0.5
S34M  Telegraph Cree   10.38 101  P     Pn    03 32 50.7  -1.7
      baz=298
U33K  Whale Pass       10.45 113  Pn    Pn    03 32 53.0  -0.3
U33K  Whale Pass       10.45 113  P     Pn    03 32 51.5  -1.8
      baz=308
WRAK  Wrangell Islan   10.61 110  P     Pn    03 32 53.9  -1.6
      baz=306
DLBC  Dease Lake       10.67  97  P     Pn    03 32 55.4  -1.0
      comp=N,0.4nm,0.3s,baz=322,slow=14,SNR=7.8
DLBC                              S     Sn    03 34 48.8  -5.4
      comp=N,3.7nm,0.7s,baz=216,slow=19,SNR=2.4
DLBC                              LR    LR    03 37 18.6
      comp=N,130nm,21.0s,baz=274,slow=38
      comp=N,1.3nm,0.4s
DLBC  Dease Lake       10.67  97  P     Pn    03 32 53.4  -3.1
      baz=295
CRAG  Craig            10.85 116  P     Pn    03 32 55.8  -3.0
      baz=310
P08K  Saint George I   10.94 252  P     Pn    03 32 57.0  -3.0
      baz=56
SPIA  Saint Paul Isl   10.95 256  P     Pn    03 32 57.4  -2.7
      baz=59
T35M  Bob Quinn        11.26 104  Pn    Pn    03 33 04.3  -0.1
T35M  Bob Quinn        11.26 104  P     Pn    03 33 01.3  -3.2
      baz=302
UNV   Unalaska Valle   11.44 236  Pn    Pn    03 33 08.0 +1.1
UNV   Unalaska Valle   11.44 236  P     Pn    03 33 05.1  -1.7
      baz=42
V35K  Ketchikan        11.61 113  P     Pn    03 33 07.0  -2.1
      baz=310
U35K  Hyder            11.96 108  P     Pn    03 33 12.0  -1.9
      baz=306
LIRD  Liard River Hi   12.19  89  P     Pn    03 33 14.8  -2.3
      baz=290
WRGLY Wrigley          12.64  70  Pn    Pn    03 33 20.9  -2.3
WRGLY Wrigley          12.64  70  P     Pn    03 33 20.9  -2.3
      baz=274
TOAD  Toad River Com   12.81  90  P     Pn    03 33 24.5  -1.0
      baz=292
KOTAN Kotaneelee Air   12.94  84  P     Pn    03 33 25.5  -1.7
      baz=287
NIKH  Nikolski High    13.04 238  P     Pn    03 33 26.9  -1.7
      baz=42
C36M  Paulatuk         13.45  43  Pn    Pn    03 33 30.7  -3.2
C36M  Paulatuk         13.45  43  P     Pn    03 33 30.6  -3.3
      baz=247,SNR=24
A36M  Sachs Harbour    14.38  32  Pn    Pn    03 33 44.6  -1.6
A36M  Sachs Harbour    14.38  32  P     Pn    03 33 44.2  -2.0
      baz=235,SNR=14
ATKA  Atka Island      15.85 245        P     03 34 07.3  -0.3
ATKA                              IAmb  IAmb  03 34 46.0
      comp=Z,75nm,1.2s
YKAW3 Yellowknife Wh   16.75  70  Pn    Pn    03 34 15.8  -0.6
YKA   Yellowknife Ar   16.76  71  P     Pn    03 34 15.5  -1.0
      comp=Z,0.3nm,0.3s,baz=284,slow=11,SNR=21
      comp=Z,2.0nm,0.8s
YKA   Yellowknife Ar   16.76  71  Pn    Pn    03 34 15.4  -1.2
YKAW1 Yellowknife Wh   16.82  71  Pn    Pn    03 34 15.8  -1.5
EDM   Edmonton         21.39  96  P     P     03 35 08.8 +0.6
EDM                               IAmb  IAmb  03 35 10.1
      comp=Z,19nm,0.9s
LTY   Liberty          22.16 116  P     P     03 35 17.2 +0.6
MXC   Moxie City       22.85 117  P     P     03 35 25.6 +1.7
NEW   Newport          22.97 110  LR    LR    03 45 54.5
      comp=Z,55nm,19.6s,baz=328,slow=40
NEW   Newport          22.97 110  P     P     03 35 26.5 +1.4
E07A  Sunnyside        23.05 116  P     P     03 35 28.4 +2.5
D08A  Wollman Farm,    23.07 114  P     P     03 35 27.3 +1.2
HOOD  Mount Hood Mea   23.28 121  P     P     03 35 30.0 +1.8
HOOD                              IAmb  IAmb  03 35 47.3
      comp=Z,9.1nm,0.8s
RES   Resolute Bay     23.43  33  P     P     03 35 28.4  -0.7
RES                               IAmb  IAmb  03 35 54.4
      comp=Z,14nm,1.4s
G05A  Wamic            23.48 120  P     P     03 35 31.4 +1.5
G05A                              IAmb  IAmb  03 35 58.2
      comp=Z,28nm,1.3s
H04A  Detroit Lake     23.58 122  P     P     03 35 32.9 +2.0
I05D  Terrebonne, OR   24.21 122  P     P     03 35 38.2 +1.6
WIFE  Three Sisters-   24.25 123  P     P     03 35 38.9 +1.9
WIFE                              IAmb  IAmb  03 35 40.5
      comp=Z,11nm,0.9s
BLKN  Baker Lake       24.36  59  IAmb  IAmb  03 35 40.8
      comp=Z,14nm,0.9s
G08A  Pilot Rock       24.44 117  P     P     03 35 40.3 +1.6
F10A  Beach Ranch, E   24.66 114  P     P     03 35 40.9 +0.2
K02D  Willamette Mer   24.66 127  P     P     03 35 43.1 +2.4
K02D                              IAmb  IAmb  03 36 17.0
      comp=Z,38nm,1.5s
J05D  Fort Rock, OR    25.12 123  P     P     03 35 45.8 +0.8
J05D                              IAmb  IAmb  03 35 49.2
      comp=Z,20nm,1.4s
I07A  Izee             25.18 119  P     P     03 35 48.1 +2.7
BMO   Blue Mountains   25.50 115  P     P     03 35 49.8 +1.5
K05A  Summer Lake      25.73 123  P     P     03 35 53.0 +2.5
K05A                              IAmb  IAmb  03 36 10.4
      comp=Z,10.0nm,1.0s
FFC   Flin Flon        25.96  83  P     P     03 35 53.0 +0.7
SEY   Seymchan         25.97 299  LR    LR    03 46 32.0
      comp=Z,49nm,20.2s,baz=347,slow=37
M02C  Callahan         26.09 128  P     P     03 35 56.4 +2.7
N02D  Trinity Center   26.51 128  P     P     03 36 00.9 +3.5
N02D                              IAmb  IAmb  03 36 01.6
      comp=Z,8.0nm,0.7s
EGMT  Eagleton         26.55 102  P     P     03 35 58.0 +0.2
EGMT                              IAmb  IAmb  03 35 59.7
      comp=Z,13nm,0.9s
WVOR  Wild Horse Val   26.89 120  P     P     03 36 02.6 +1.7
WVOR                              IAmb  IAmb  03 36 22.1
      comp=Z,14nm,1.5s
HATC  Hat Creek Radi   27.12 126  P     P     03 36 05.7 +2.7
HATC                              IAmb  IAmb  03 36 46.9
      comp=Z,27nm,1.4s
O03E  Paynes Creek     27.44 127  P     P     03 36 07.3 +1.6
O03E                              IAmb  IAmb  03 36 09.1
      comp=Z,14nm,1.1s
BOZ   Bozeman (W)      27.46 107  P     P     03 36 07.8 +1.8
FCC   Fort Churchill   27.49  70  P     P     03 36 07.0 +1.1
FCC                               IAmb  IAmb  03 36 07.8
      comp=Z,21nm,1.2s
ILON  Igloolik, Nuna   28.12  44  P     P     03 36 12.8 +1.4
ILON                              IAmb  IAmb  03 36 13.6
      comp=Z,17nm,1.1s
MA2   Magadan          28.15 293  LR    LR    03 47 55.8
      comp=Z,31nm,20.2s,baz=22,slow=38
YHL   Hebgen Lake      28.24 108  P     P     03 36 15.1 +2.0
POIN  Pond Inlet       28.37  37  P     P     03 36 14.0 +0.4
POIN                              IAmb  IAmb  03 36 22.0
      comp=Z,9.5nm,1.2s
BEKR  Beckworth        28.37 126  P     P     03 36 14.9 +0.8
YHH   Holmes Hill      28.44 108  P     P     03 36 16.8 +1.9
PETK  Petropavlovsk-   28.51 277  LR    LR    03 47 13.6
      comp=Z,35nm,20.4s,baz=63,slow=36
ELK   Elko             29.72 118  LR    LR    03 47 55.9
      comp=Z,44nm,18.6s,baz=214,slow=35
ELK   Elko             29.72 118  P     P     03 36 28.4 +2.2
HVU   Hansel Valley    29.94 114  P     P     03 36 30.8 +2.7
NVAR  Mina Array Bea   30.41 124  P     P     03 36 34.9 +2.6
      comp=Z,2.4nm,0.8s,baz=313,slow=9.5,SNR=17
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NVAR				PcP	PcP	03 39 31.3	+1.0
	comp=Z,0.8nm,0.6s,baz=307,slow=2.2,SNR=7.6						
	comp=Z,2.4nm,0.8s						
NV11	Mina Array Sit	30.47	124	P	P	03 36 34.6	+1.9
BW06	Boulder Array	30.60	109	P	P	03 36 33.5	-0.4
PD31	Pinedale Array	30.60	109	P	P	03 36 35.2	+1.3
PDAR	Pinedale Array	30.60	109	P	P	03 36 35.7	+1.8
	comp=Z,0.8nm,0.5s,baz=328,slow=4.4,SNR=19						
	comp=Z,0.8nm,0.5s						
PDAR	Pinedale Array	30.60	109	P	P	03 36 35.3	+1.3
SPR3	Spring Creek 3	31.56	119	P	P	03 36 44.8	+2.3
R11B	Troy Canyon, C	31.59	121	P	P	03 36 44.2	+1.6
ULM	Lac du Bonnet	31.67	85	P	P	03 36 43.9	+0.9
	comp=Z,5.1nm,0.7s,baz=309,slow=8.2,SNR=8.6						
ULM				LR	LR	03 49 52.8	
	comp=Z,72nm,20.0s,baz=331,slow=37						
	comp=Z,5.1nm,0.7s						
ULM	Lac du Bonnet	31.67	85	P	P	03 36 44.2	+1.2
ULM				IAmb	IAmb	03 36 54.2	
	comp=Z,7.4nm,1.1s						
RSSD	Black Hills	32.12	101	P	P	03 36 48.6	+1.4
RSSD				IAmb	IAmb	03 36 49.7	
	comp=Z,16nm,1.4s						
TPNV	Topopah Spring	32.51	123	P	P	03 36 52.6	+1.9
TPNV				IAmb	IAmb	03 36 54.1	
	comp=Z,4.5nm,1.0s						
P18A	Preston Nutter	32.81	113	P	P	03 36 55.3	+1.9
P18A				IAmb	IAmb	03 37 07.2	
	comp=Z,11nm,1.5s						
EPLO	Experimental L	33.08	84	P	P	03 36 56.3	+1.0
EPLO				IAmb	IAmb	03 36 56.7	
	comp=Z,3.7nm,0.5s						
SRU	San Rafael Swe	33.11	114	P	P	03 36 56.6	+0.6
SRU				IAmb	IAmb	03 36 59.4	
	comp=Z,5.9nm,0.8s						
CCUT	Cedar City	33.19	119	P	P	03 36 59.1	+2.4
CCUT				IAmb	IAmb	03 36 59.8	
	comp=Z,4.2nm,0.8s						
KNB	Kanab	33.87	119	P	P	03 37 04.8	+2.2
KNB				IAmb	IAmb	03 37 06.0	
	comp=Z,6.1nm,0.8s						
PV10	Paradox Valley	34.37	113	P	P	03 37 09.0	+2.0
PV10				IAmb	IAmb	03 37 14.5	
	comp=Z,9.3nm,1.0s						
W13A	Hualapai Mount	35.07	122	P	P	03 37 15.0	+2.0
W13A				IAmb	IAmb	03 37 16.9	
	comp=Z,6.2nm,1.4s						
EYMN	Ely	35.34	85	P	P	03 37 15.6	+0.6
EYMN				IAmb	IAmb	03 37 16.9	
	comp=Z,10nm,0.9s						
FRB	Frobisher Bay	35.37	50	LR	LR	03 53 45.9	
	comp=Z,106nm,18.2s,baz=150,slow=40						
YAK	Yakutsk	35.59	307	LR	LR	03 53 03.5	
	comp=Z,36nm,18.2s,baz=128,slow=38						
WUAZ	Wupatki	35.76	118	P	P	03 37 21.2	+2.4
WUAZ				IAmb	IAmb	03 37 22.0	
	comp=Z,9.1nm,0.8s						
TBO	Thunder Bay	35.85	82	P	P	03 37 19.8	+0.5
S22A	4UR Ranch, Cre	35.87	111	P	P	03 37 21.8	+1.9
ECSD	EROS Data Cent	35.94	94	P	P	03 37 20.8	+0.6
ECSD				IAmb	IAmb	03 37 42.0	
	comp=Z,9.4nm,1.4s						
X16A	Lo Mia Camp, P	36.67	119	P	P	03 37 29.2	+2.6
I37A	Lemond, Waseca	37.28	91	P	P	03 37 32.8	+1.4
G40A	Rib Lake	37.89	87	P	P	03 37 37.2	+0.6
G40A				IAmb	IAmb	03 37 38.2	
	comp=Z,8.4nm,0.8s						
SUMG	Summit	38.57	27	P	P	03 37 43.1	+0.6
SFJD	Kangerlussuaq	39.29	38	P	P	03 37 48.9	+0.9
KSU1	Kansas State U	39.52	99	P	P	03 37 51.0	+0.7
JFWS	Jewell Farm	39.62	89	P	P	03 37 51.1	0.0
L40A	Anamosa	39.80	91	P	P	03 37 53.0	+0.5
E46A	Sault Ste Mari	39.90	81	P	P	03 37 54.1	+0.7
SPITS	Spitsbergen Ar	40.40	4	P	P	03 37 56.7	-0.4
	comp=Z,1.3nm,0.4s,baz=17,slow=6.1,SNR=15						
	comp=Z,1.3nm,0.4s						
SPB2	Spitsbergen Ar	40.41	4	P	P	03 37 56.5	-0.7
K43A	Burlington	40.70	88	P	P	03 38 00.3	+0.3
P40A	Paris	41.36	94	P	P	03 38 05.2	-0.2
P40A				IAmb	IAmb	03 38 06.2	
	comp=Z,4.9nm,0.6s						
SCHQ	Schefferville	41.75	60	P	P	03 38 08.8	+0.3
	comp=Z,4.5nm,0.7s,baz=32,slow=16,SNR=1.9						
SCHQ				LR	LR	03 58 07.1	
	comp=Z,79nm,19.4s,baz=76,slow=40						
	comp=Z,4.5nm,0.7s						
VLDQ	Val d'Or	41.85	74	P	P	03 38 08.2	-1.2
VLDQ				IAmb	IAmb	03 38 09.1	
	comp=Z,13nm,1.1s						
HDIL	Hopedale	41.88	91	P	P	03 38 09.6	-0.1
ASAJ	Asahikawa	41.93	277	LR	LR	03 55 27.2	
	comp=Z,30nm,20.1s,baz=120,slow=36						
WMOK	Wichita Mounta	42.03	105	P	P	03 38 12.2	+1.3
WMOK				IAmb	IAmb	03 38 12.4	
	comp=Z,6.8nm,1.1s						
R40A	Maddies Statio	42.23	96	P	P	03 38 12.2	-0.4
VHRN	Van Horn	42.55	115	P	P	03 38 17.5	+2.1
VHRN				IAmb	IAmb	03 38 18.8	
	comp=Z,8.1nm,0.9s						
RLO	Rose Lookout	42.62	100	P	P	03 38 15.7	-0.1
RLO				IAmb	IAmb	03 38 16.4	
	comp=Z,7.0nm,0.6s						
U38A	Gravette	42.70	99	P	P	03 38 15.9	-0.5
U38A				IAmb	IAmb	03 38 17.0	
	comp=Z,9.3nm,1.0s						
BUKO	Buck Lake	42.90	78	P	P	03 38 18.4	+0.5
NRIK	Noril'sk	43.16	334	P	P	03 38 19.3	-0.4
	comp=Z,4.0nm,0.5s,baz=30,slow=4.4,SNR=7.8						
	comp=Z,4.0nm,0.5s						
NRIK	Noril'sk	43.16	334	P	P	03 38 19.5	-0.2
NRIK				IAmb	IAmb	03 38 23.1	
	comp=Z,4.5nm,0.6s						
N47A	Urbana	43.36	87	P	P	03 38 21.5	-0.2
N47A				IAmb	IAmb	03 38 22.6	
	comp=Z,12nm,0.8s						
SADO	Sadowa	43.52	78	LR	LR	03 56 37.2	
	comp=Z,92nm,18.2s,baz=230,slow=36						
O48B	Farmland	44.10	88	P	P	03 38 27.2	-0.5
PBMO	Poplar Bluff	44.32	95	P	P	03 38 29.3	-0.1
PBMO				IAmb	IAmb	03 38 30.2	
	comp=Z,17nm,0.9s						
TXAR	Lajitas Array	44.38	114	P	P	03 38 32.0	+2.0
	comp=Z,2.4nm,0.8s,baz=331,slow=6.5,SNR=28						
TXAR				PcP	PcP	03 40 12.8	0.0
	comp=Z,0.3nm,0.5s,baz=44,slow=2.3,SNR=5.3						
	comp=Z,2.4nm,0.8s						
TXAR	Lajitas Array	44.38	114	P	P	03 38 31.9	+1.8
JCT	Junction City	45.12	110	IAmb	IAmb	03 38 38.9	
	comp=Z,7.7nm,0.7s						
DRIO	Del Rio	45.65	111	IAmb	IAmb	03 38 42.8	
	comp=Z,4.2nm,0.9s						
LPIG	La Paz	46.23	125	LR	LR	03 56 02.6	
	comp=Z,52nm,18.3s,baz=20,slow=33						
U49A	Red Boiling Sp	46.76	91	IAmb	IAmb	03 38 50.4	
	comp=Z,13nm,1.2s						
S51A	Beattyville	46.91	89	IAmb	IAmb	03 38 51.3	
	comp=Z,9.9nm,0.8s						
HILR	Hailar Array B	48.19	299	P	P	03 38 59.4	-0.2
	comp=Z,6.0nm,0.7s,baz=60,slow=8.8,SNR=12						
	comp=Z,6.0nm,0.7s						
TKL	Tuckaleechee C	48.41	90	LR	LR	04 00 09.3	
	comp=Z,88nm,21.1s,baz=0.5,slow=37						
TKL	Tuckaleechee C	48.41	90	P	P	03 39 01.9	+0.5
ARCES	ARCESS Array B	49.29	2	P	P	03 39 07.0	-0.7
	comp=Z,2.5nm,0.7s,baz=0.6,slow=7.4,SNR=9.3						
	comp=Z,2.5nm,0.7s						
ARCES	ARCESS Array B	49.29	2	P	P	03 39 06.7	-1.1
ARCES				IAmb	IAmb	03 39 48.8	
	comp=Z,13nm,1.3s						
KSRS	Korea Array	54.07	284	P	P	03 39 44.6	+0.9
	comp=Z,4.5nm,0.8s,baz=29,slow=7.1,SNR=13						
KSRS				LR	LR	04 05 11.0	
	comp=Z,4µm,18.2s,baz=15,slow=39						
	comp=Z,4.5nm,0.8s						
ULN	Ulaanbaatar	54.66	306	P	P	03 39 47.7	-0.5
ULN				IAmb	IAmb	03 39 49.2	
	comp=Z,4.4nm,0.9s						
SONM	Songino Array	54.94	307	P	P	03 39 50.7	+0.5
	comp=Z,5.1nm,0.8s,baz=39,slow=7.7,SNR=21						
SONM				LR	LR	04 07 13.0	
	comp=Z,60nm,18.8s,baz=302,slow=40						
	comp=Z,5.1nm,0.8s						
SONM	Songino Array	54.94	307	P	P	03 39 51.0	+0.9
SONM				IAmb	IAmb	03 39 51.7	
	comp=Z,6.2nm,0.9s						
ZALV	Zalesovo Beam	56.94	325	P	P	03 40 03.6	-0.5
	comp=Z,0.8nm,0.4s,baz=29,slow=7.6,SNR=4.4						
	comp=Z,0.8nm,0.4s						
NC405	NORSAR Array S	57.02	10	P	P	03 40 03.1	-1.5
NB2	NORSAR Subarra	57.05	11	P	P	03 40 04.1	-0.8
	comp=Z,0.9nm,0.7s,baz=351,slow=7.4						
NOA	NORSAR Array B	57.05	11	P	P	03 40 04.4	-0.4
	comp=Z,1.0nm,0.6s,baz=350,slow=7.1,SNR=6.2						
	comp=Z,1.0nm,0.6s						
FINES	FINESS Array B	57.42	2	P	P	03 40 06.5	-0.9
	comp=Z,2.3nm,0.6s,baz=350,slow=8.7,SNR=14						
	comp=Z,2.3nm,0.6s						
HFS	Hagfors	58.15	9	P	P	03 40 11.3	-1.3
	comp=Z,3.3nm,0.8s,baz=23,slow=5.5,SNR=12						
	comp=Z,3.3nm,0.8s						
HHC	Hu-ho-hao-te	58.61	298	eP	P	03 40 18.8	+2.6
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ARTI	Arti	60.36	342	P	P	03 40 27.2	-0.6
EKA	Eskdalemuir Ar	60.76	21	P	P	03 40 30.7	+0.1
	comp=Z,4.5nm,0.6s,baz=331,slow=5.6,SNR=18						
	comp=Z,4.5nm,0.6s						
BVAR	Borovoye Array	61.37	333	P	P	03 40 34.2	-0.5
	comp=Z,1.1nm,0.5s,baz=38,slow=8.2,SNR=6.6						
BVAR				LR	LR	04 09 14.1	
	comp=Z,14nm,20.0s,baz=303,slow=38						
	comp=Z,1.1nm,0.5s						
KURBB	Kurchatov Arra	61.63	327	P	P	03 40 35.2	-1.3
	comp=Z,1.9nm,0.2s,baz=28,slow=6.4,SNR=5.0						
	comp=Z,1.9nm,0.2s						
LYN	LuoYang	63.50	294	P	P	03 40 49.4	+0.2
LYN				pmax	pmax		
	comp=Z,16nm,0.6s						
MTO3	Montecristo	63.79	109	P	P	03 40 51.2	-0.3
MTO3				IAmb	IAmb	03 41 01.9	
	comp=Z,7.4nm,1.3s						
MKAR	Makanchi Array	64.07	323	P	P	03 40 51.0	-1.8
	comp=Z,0.5nm,0.5s,baz=26,slow=5.6,SNR=7.0						
	comp=Z,0.5nm,0.5s						
GTA	Gaotai	64.61	306	eP	P	03 40 56.3	-0.2
GTA				pP	pP	03 41 12.8	-1.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
MTDJ	Mount Denham	66.00	96	P	P	03 41 05.9	+0.1
CLL	Collm	66.84	11	i P	P	03 41 10.7	+0.2
CLL				epP	pP	03 41 29.0	+0.3
AB31	Akbulak array	67.00	339	P	P	03 41 11.1	-0.5
ABKAR	Akbulak array	67.00	339	P	P	03 41 11.0	-0.6
HSKC	Hora Svate Kat	67.57	11	eP	P	03 41 16.0	+0.8
PVCC	Panska Ves	67.75	10	eP	P	03 41 16.8	+0.5
CHVC	Chvalec	67.81	9	eP	P	03 41 17.5	+0.8
OSTC	Ostas	67.86	9	eP	P	03 41 17.7	+0.7
DPC	Dobruska-Polom	68.07	9	eP	P	03 41 19.4	+1.0
AKASG	Malin Array Be	68.22	0	P	P	03 41 18.6	-0.6
	comp=Z,3.0nm,0.4s,baz=4.5,slow=6.3,SNR=22						
	comp=Z,3.0nm,0.4s						
AKBB	Malin Array Si	68.22	0	P	P	03 41 18.3	-0.9
KIEV	Kiev	68.23	0	P	P	03 41 18.2	-1.1
KIEV				IAmb	IAmb	03 41 19.3	
	comp=Z,6.7nm,0.7s						
KIEV	Kiev	68.23	0	⇑P	P	03 41 18.4	-0.9
PRU	Pruhonice	68.28	10	eP	P	03 41 20.6	+0.9
KRLC	Kraliky	68.38	9	eP	P	03 41 21.1	+0.8
MORC	Moravsky Berou	68.73	8	eP	P	03 41 22.5	0.0
ZVC	Zvikov	68.80	11	eP	P	03 41 23.7	+0.8
KHC	Kasperske Hory	69.05	11	P	P	03 41 25.1	+0.6
KHC				IAmb	IAmb	03 41 26.3	
	comp=Z,4.2nm,0.9s						
KHC	Kasperske Hory	69.05	11	eP	P	03 41 25.6	+1.1
VRAC	Vranov	69.13	9	eP	P	03 41 25.4	+0.5
ECH	Echery	69.23	16	P	P	03 41 26.0	+0.3
ECH				IAmb	IAmb	03 41 26.9	
	comp=Z,5.6nm,0.8s						
GERES	GERESS Array B	69.34	11	P	P	03 41 26.1	-0.3
	comp=Z,1.1nm,0.6s,baz=344,slow=4.3,SNR=9.3						
	comp=Z,1.1nm,0.6s						
KRUC	Moravsky	69.36	9	eP	P	03 41 26.7	+0.4
CKRC	Cesky Krumlov	69.42	11	eP	P	03 41 27.2	+0.4
CONA	Conrad Observa	70.44	10	i P	P	03 41 33.1	0.0
	comp=Z,2.8nm,0.7s						
WATA	Walderalm	70.62	13	P	P	03 41 34.8	+0.4
WATA	Walderalm	70.62	13	i P	P	03 41 34.8	+0.4
	comp=Z,1.8nm,0.5s						
LESA	Schwarzleotal	70.65	12	P	P	03 41 35.0	+0.6
LESA	Schwarzleotal	70.65	12	i P	P	03 41 35.0	+0.6
	comp=Z,0.7nm,0.3s						
SQTA	Sankt Quirin	70.70	13	P	P	03 41 35.5	+0.8
SQTA	Sankt Quirin	70.70	13	i P	P	03 41 35.5	+0.8
	comp=Z,2.8nm,0.6s						
WTTA	Wattenberg	70.70	13	P	P	03 41 35.7	+0.8
WTTA	Wattenberg	70.70	13	i P	P	03 41 35.7	+0.8
	comp=Z,2.7nm,0.5s						
SORM	Soroca	70.78	1	⇓P	P	03 41 34.3	-0.8
FETA	Feichten	70.84	13	P	P	03 41 36.5	+0.8
FETA	Feichten	70.84	13	i P	P	03 41 36.5	+0.8
	comp=Z,0.8nm,0.4s						
KBA	Koelnbreinsper	71.06	12	P	P	03 41 37.7	+0.7
KBA	Koelnbreinsper	71.06	12	eP	P	03 41 37.7	+0.7
	comp=Z,5.5nm,0.7s						
SENIN	Lac Senin/Sane	71.07	16	P	P	03 41 38.1	+1.0
SENIN				IAmb	IAmb	03 41 38.5	
	comp=Z,6.1nm,0.8s						
FUORN	Ofenpass-Fuorn	71.19	14	P	P	03 41 38.5	+0.6
FUORN				IAmb	IAmb	03 41 49.5	
	comp=Z,6.6nm,1.1s						
TUE	Stuetta	71.22	15	P	P	03 41 38.9	+0.9
TUE				IAmb	IAmb	03 41 39.7	
	comp=Z,4.7nm,0.7s						
BUR08	Bucovina Ar. S	71.22	3	P	P	03 41 38.1	+0.2
BURAR	Bucovina Array	71.25	3	P	P	03 41 38.0	-0.1
BURAR	Bucovina Array	71.25	3	⇑P	P	03 41 37.8	-0.3
SOKA	Soboth	71.61	10	P	P	03 41 41.2	+0.9
SOKA	Soboth	71.61	10	eP	P	03 41 41.2	+0.9
	comp=Z,1.2nm,0.5s						
OBKA	Obir	71.74	11	P	P	03 41 41.2	+0.3
OBKA	Obir	71.74	11	eP	P	03 41 41.2	+0.3
	comp=Z,12nm,0.8s						
BNI	Bardonecchia	72.27	17	P	P	03 41 45.7	+1.4
BNI				IAmb	IAmb	03 41 56.6	
	comp=Z,18nm,1.4s						
VRI	Vrincioaia	73.04	2	⇓P	P	03 41 49.1	+0.4
GZR	Gura Zlata	73.39	5	⇓P	P	03 41 51.0	+0.2
CFR	Carcaliu	73.74	1	⇓P	P	03 41 51.3	-1.5
FDMO	Fiordimonte	75.03	12	P	P	03 42 00.6	+0.3
FDMO				IAmb	IAmb	03 42 04.5	
	comp=Z,13nm,1.2s						
PZH	PanZhiHua	75.07	298	P	P	03 42 03.8	+2.9
BOVS	Bovan	75.10	6	⇑P	P	03 42 00.3	-0.3
ESDC	Sonseca Array	75.63	26	P	P	03 42 04.7	+0.8
	comp=Z,4.5nm,0.8s,baz=339,slow=6.0,SNR=21						
	comp=Z,4.5nm,0.8s						
RUSC	La Rusia	78.82	98	P	P	03 42 22.0	-0.5
BRTR	Keskin Array B	79.14	357	P	P	03 42 23.6	0.0
	comp=Z,0.6nm,0.7s,baz=23,slow=1.7,SNR=3.1						
	comp=Z,0.6nm,0.7s						
KEST	Kesra	81.80	16	P	P	03 42 38.1	+0.3
	comp=Z,4.5nm,1.0s,baz=276,slow=3.5,SNR=5.1						
	comp=Z,4.5nm,1.0s						
CMAR	Chiang Mai Arr	83.37	297	P	P	03 42 45.2	-0.8
	comp=Z,1.9nm,0.3s,baz=32,slow=5.2,SNR=4.6						
CMAR				LR	LR	04 23 42.1	
	comp=Z,13nm,20.6s,baz=15,slow=38						
	comp=Z,1.9nm,0.3s						
BATI	Baumata	96.91	261	LR	LR	04 26 17.8	
	comp=Z,19nm,21.1s,baz=326,slow=35						
BOSA	Boshof	147.06	7	PKPbc	PKPdf	03 50 00.8	+1.8
	comp=Z,2.6nm,0.6s,baz=13,slow=3.1,SNR=7.9						
QSPA	South Pole Qui	151.24	180	PKPbc	PKPbc	03 50 10.5	+0.2
	comp=Z,3.7nm,0.7s,baz=99,slow=1.1,SNR=13						

DJA 16 03:30:55.5±0.2, 9°S±3°×11°9E±°, h56km±6km, M4.1/20, mB4.1/1, mb4.0/8, MLv4.1/20, Mw(mB)3.2/1, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.44	126	P	Pn	03 31 07.5	+0.9
WBSI				S	Sn	03 31 16.7	+2.1
DBNI	Kabupaten Domp	1.12	321	P	Pn	03 31 15.8	+0.7
DBNI				S	Sn	03 31 31.0	+1.4
LBFI	Labuhan Bajo,	1.23	44	P	Pn	03 31 16.2	-0.3
WSI	Waingapu	1.28	103	P	Pn	03 31 17.4	+0.2
PLAI	Plampang	1.35	294	P	Pn	03 31 18.6	+0.4
BASI	Baing, Sumba	1.74	119	P	Pn	03 31 23.9	+0.5
TWSI	Taliwang, Sumb	2.21	287	P	Pn	03 31 31.2	+1.3
EDFI	Ende, Flores	2.70	77	P	Pn	03 31 36.5	-0.1
KLNI	Mataram	3.05	288	P	Pn	03 31 41.9	+0.6
MMRI	Maumere	3.25	77	P	Pn	03 31 44.5	+0.4
KHKI	Kahang-Kahang	3.53	286	P	Pn	03 31 48.5	+0.7
DNP	Denpasar	3.84	280	P	Pn	03 31 52.6	+0.5
IGBI	Denpasar	3.88	278	P	Pn	03 31 52.5	-0.1
SRBI	Singaraja	3.99	289	P	Pn	03 31 54.3	+0.2
RTBI	Rangdo, Negare	4.14	282	P	Pn	03 31 55.5	-0.8
MKS	Makassar	4.16	6	P	Pn	03 31 56.5	0.0
KAPI	Kappang	4.40	9	P	Pn	03 31 59.6	-0.2
BATI	Baumata	4.64	101	P	Pn	03 32 03.2	+0.1
JAGI	Jajag, Banyuwa	4.90	280	P	Pn	03 32 05.4	-1.3
ABJI	Asem Bagus	5.00	288	P	Pn	03 32 08.2	+0.2
	0.2nm20nm,0.8s						
BNSI	Bone	5.06	12	P	Pn	03 32 08.3	-0.6
	0.2nm17nm,0.7s						
SOEI	Soe	5.18	95	P	Pn	03 32 10.7	+0.1
	0.1nm16nm,0.9s						
GMJI	Gumukmas	5.63	281	P	Pn	03 32 15.1	-1.6
	0.2nm20nm,0.5s						
PMSI	Majene	5.84	359	P	Pn	03 32 19.6	0.0
PCJI	Pacitan	7.85	278	P	Pn	03 32 47.1	0.0
	14nm,1.1s						
TARAI	Tarakan	12.71	353	P	Pn	03 33 51.6	-2.0

IDC ***16*** *03:51:14.4±1.1, 36°.38N×71°.36E, h0km, mb3.9/9, mbtmp4.0/13, ML4.0/4, MS3.1/1, Error ellipse: s-maj=24.7km s-min=19.0km az=39.0*

MOS ***16*** *03:51:25.6±1.2, 36°.82N×71°.14E, h101km, mb4.2/6, Error ellipse: s-maj=10.7km s-min=5.4km az=83.1*

NEIC ***16*** *03:51:26.7±1.5, 36°.82N±0°.06×71°.09E±0°.07, h100km±6km, mb4.1/6, Error ellipse: s-maj=9.2km s-min=8.0km az=195.0*

NNC ***16*** *03:51:29.5±2.1, 37°.05N×71°.09E, h134km±27km, mb3.6, mpv4.3, Error ellipse: s-maj=19.8km s-min=14.1km az=167.0*

ISC 16 03:51:26.2±0.5, 36°.72N±0°.05×71°.24E±0°.05, h100km, n99, σ1°.86/113, mb3.9/14, 5C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANEM	Manem	0.89	23	Pn	Pn	03 51 46.0	+0.2
MANEM				Sn	Sn	03 51 59.7	-0.8
GAR	Garm	2.39	342	Pn	Pn	03 52 02.8	-1.2
GAR				Sn	Sn	03 52 30.7	-2.2
CHGR	Chuyangaron	2.54	320	Pn	Pn	03 52 04.1	-1.9
CHGR				Sn	Sn	03 52 32.4	-4.1
CHGR	Chuyangaron	2.54	320	PN	Pn	03 52 04.1	-1.9
SHAA	Shahritus	2.63	290	Pn	Pn	03 52 05.2	-1.9
DRK	Karamyk	2.79	9	Pn	Pn	03 52 09.6	+0.2
DRK	Karamyk	2.79	9	PN	Pn	03 52 09.6	+0.2
KBL	Kabul	2.82	220	Pn	Pn	03 52 11.3	+1.6
KBL	Kabul	2.82	220	PN	Pn	03 52 11.4	+1.6
NIL	Nilore	3.48	151	Pn	Pn	03 52 21.1	+2.7
NIL	Nilore	3.48	151	PN	Pn	03 52 21.1	+2.7
KSH	Kashi	4.66	52	Pn	Pn	03 52 31.1	-3.3
KSH				Sn	Sn	03 53 19.0	-8.3
KSH				smax	smax		
	comp=N,430nm,0.5s						
KSH				smax	smax		
	comp=E,230nm,0.5s						
ARSB	Arslanbob	4.79	16	Pn	Pn	03 52 34.4	-1.8
ARSB	Arslanbob	4.79	16	PN	Pn	03 52 34.4	-1.8
JMU	Jammu	4.92	142	eP	Pn	03 52 39.2	+1.4
JMU				eS	Sn	03 53 32.4	-1.1
JMU				IAML		03 53 37.3	
	comp=E,384nm,0.6s						
JMU				IAML		03 53 38.5	
	comp=N,1µm,0.5s						
ALCI	Alchi Leh	5.46	116	eP	Pn	03 52 46.0	+0.6
ALCI				eS	Sn	03 53 45.5	-1.6
ALCI				IAML		03 53 48.5	
	comp=N,180nm,0.5s						
ALCI				IAML		03 53 48.8	
	comp=E,268nm,0.5s						
UCH	Uchtor	6.05	24	P	Pn	03 52 54.1	+0.5
	SNR=13						
DHRM	DHARAMSHALA	6.11	135	eP	Pn	03 52 55.1	+0.9
DHRM				eS	Sn	03 54 00.6	-2.2
DHRM				IAML		03 54 04.1	
	comp=E,458nm,0.4s						
DHRM				IAML		03 54 04.1	
	comp=N,412nm,0.3s						
EKS2	Erkin-Say	6.25	17	P	Pn	03 52 56.6	+0.7
	SNR=22						
KK31	Karatay Array	6.40	355	Pn	Pn	03 52 56.5	-1.4
KK31	Karatay Array	6.40	355	⇓P	Pn	03 52 56.9	-1.0
	comp=N,32nm,0.6s,baz=174,slow=12,SNR=260						
KK31				⇑S	Sn	03 54 05.4	-4.1
	comp=N,11nm,0.4s,baz=180,slow=19,SNR=3.8						
KK31	Karatay Array	6.40	355	PN	Pn	03 52 56.5	-1.4
KKAR	Karatay Array	6.40	355	Pn	Pn	03 52 56.8	-1.1
KKAR	Karatay Array	6.40	355	PN	Pn	03 52 56.8	-1.1
AAK	Ala-Archa	6.42	22	P	Pn	03 52 58.8	+0.6
	SNR=37						
AAK	Ala-Archa	6.42	22	Pn	Pn	03 52 58.8	+0.6
	comp=N,6.1nm,0.3s,baz=190,slow=6.3,SNR=73						
AAK				Sn	Sn	03 54 08.6	-1.5
	comp=N,1.4nm,0.3s,baz=30,slow=21,SNR=3.5						
	comp=N,19nm,0.4s						
AAK	Ala-Archa	6.42	22	Pn	Pn	03 52 58.0	-0.3
AAK	Ala-Archa	6.42	22	⇓P	Pn	03 52 58.3	0.0
	comp=N,9.4nm,0.6s						
AAK				⇑S	Sn	03 54 08.3	-1.9
	comp=N,30nm,0.8s						
AAK	Ala-Archa	6.42	22	i PN	Pn	03 52 58.5	+0.2
KBK	Karagaybulak	6.58	25	P	Pn	03 53 01.6	+1.1
	SNR=8.2						
BOOM	Boomskoye usch	6.81	31	Pn	Pn	03 53 04.2	+0.6
BOOM	Boomskoye usch	6.81	31	PN	Pn	03 53 04.2	+0.6
CHMS	Chumysh	6.82	22	P	Pn	03 53 03.9	+0.2
	SNR=20						
USP	Ospenovka	7.00	20	P	Pn	03 53 05.7	-0.3
	SNR=13						
TKM2	Tokmak 2	7.04	27	P	Pn	03 53 09.2	+2.5
	SNR=7.5						
KDJ	Kajisay	7.09	39	Pn	Pn	03 53 07.6	+0.2
KDJ	Kajisay	7.09	39	PN	Pn	03 53 07.6	+0.2
TARG	Taragay, Kyrgy	7.14	44	Pn	Pn	03 53 08.7	+0.4
TARG	Taragay, Kyrgy	7.14	44	PN	Pn	03 53 08.7	+0.4
SMLA	Simla	7.44	137	eP	Pn	03 53 12.2	+0.1
SMLA				eS	Sn	03 54 31.0	-3.8
SMLA				IAML		03 54 37.5	
	comp=E,151nm,0.4s						
SMLA				IAML		03 54 39.2	
	comp=N,151nm,0.5s						
HNLY	HANLEY	7.48	119	eP	Pn	03 53 12.8	-0.3
HNLY				eS	Sn	03 54 32.7	-3.9
HNLY				IAML		03 54 36.6	
	comp=N,28nm,1.6s						
HNLY				IAML		03 54 36.9	
	comp=E,39nm,1.2s						
WUS	Wushi	7.65	52	Pn	Pn	03 53 16.2	+1.2
KLP	Kalpa	7.78	130	eP	Pn	03 53 17.3	+0.3
KLP				eS	Sn	03 54 39.0	-4.5
KLP				IAML		03 54 41.1	
	comp=E,217nm,0.4s						
KLP				IAML		03 54 46.9	
	comp=N,204nm,0.6s						
MAKZ	Makanchi	12.86	35	Pn	Pn	03 54 24.5	-0.7
MAKZ	Makanchi	12.86	35	P	Pn	03 54 24.5	-0.7
MK31	Makanchi Array	13.00	36	⇓P	Pn	03 54 26.5	-0.5
	comp=N,1.3nm,0.6s,baz=223,slow=14,SNR=13						
MK31	Makanchi Array	13.00	36	i P	Pn	03 54 25.9	-1.1
MKAR	Makanchi Array	13.00	36	Pn	Pn	03 54 26.2	-0.8
	comp=N,0.3nm,0.3s,baz=224,slow=14,SNR=12						
	comp=N,0.9nm,0.5s						
MKAR	Makanchi Array	13.00	36	Pn	Pn	03 54 27.4	+0.4
MKAR	Makanchi Array	13.00	36	i P	Pn	03 54 27.2	+0.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURBB	Kurchatov Arra	14.85	18	Pn	P	03 54 53.1	-1.0
	comp=Z,0.1nm,0.3s,baz=206,slow=10,SNR=9.6						
KURK	Kurchatov	14.96	18	Pn	Pn	03 54 51.5	-0.7
KURK	Kurchatov	14.96	18	i P	P	03 54 54.3	-1.0
KURK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
AB31	Akbulak array	14.99	330	Pn	Pn	03 54 49.1	-3.5
AB31	Akbulak array	14.99	330	⇑P	Pn	03 54 49.1	-3.5
	comp=Z,3.5nm,0.5s,baz=136,slow=12,SNR=160						
AB31	Akbulak array	14.99	330	P	Pn	03 54 49.1	-3.5
ABKAR	Akbulak array	14.99	330	Pn	Pn	03 54 49.5	-3.1

BVAR	Borovoye Array	16.31	358	Pn	Pn	03 55 07.3	-1.8
	comp=Z,0.1nm,0.3s,baz=168,slow=14,SNR=14						
BORK	Borovoye	16.34	358	Pn	Pn	03 55 07.7	-1.7
BORK	Borovoye	16.34	358	*i* P	Pn	03 55 09.1	-0.3
AKTO	Aktyubinsk	16.69	329	P	Pn	03 55 12.1	-1.7
	comp=Z,1.4nm,0.3s,baz=128,slow=14,SNR=15						
	comp=Z,8.9nm,0.5s						
AKTO	Aktyubinsk	16.69	329	⇑P	Pn	03 55 11.9	-1.9
	comp=Z,4.9nm,0.5s						
DGZ	Jazzator, Alta	17.49	37	*i* P	P	03 55 22.5	-0.9
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZAA0	Zalesovo Array	19.63	24	P	P	03 55 46.3	-0.3
ZAA0				IAmb	IAmb	03 55 58.6	
	comp=Z,5.3nm,0.5s						
ZALV	Zalesovo Beam	19.63	24	P	P	03 55 46.6	-0.1
	comp=Z,1.0nm,0.3s,baz=228,slow=11,SNR=14						
	comp=Z,2.2nm,0.3s						
ZALV	Zalesovo Beam	19.63	24	P	P	03 55 46.0	-0.7
ZALV	Zalesovo Beam	19.63	24	*i* P	P	03 55 46.7	0.0
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
SHL	Shillong	20.83	116		P	03 56 01.2	+1.2
SHL				IAmb	IAmb	03 56 01.8	
	comp=Z,12nm,1.0s						
SHL	Shillong	20.83	116	P	P	03 56 01.2	+1.2
SHL				pmax	pmax		
	comp=Z,12nm,1.0s						
ARTI	Arti	21.50	340	P	P	03 56 07.1	+0.4
	comp=Z,2.9nm,0.4s,baz=177,slow=9.5,SNR=3.2						
	comp=Z,2.9nm,0.4s						
ARTI	Arti	21.50	340	P	P	03 56 06.4	-0.3
ARTI	Arti	21.50	340*c*	*i*P	P	03 56 06.6	-0.1
ARTI						03 56 36.9	
ARTI				S	S	04 00 00.6	+1.4
ARTI				SS	SnSn	04 00 40.0	+8.3
ARTI				pmax	pmax		
	comp=Z,19nm,2.7s						
GTA	Gaotai	22.62	74	*e*P	P	03 56 21.3	+2.5
GTA				pP	pP	03 56 25.4	-14
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KBZ	Khabaz	22.68	297	LR	LR	04 06 30.7	
	comp=Z,46nm,18.5s,baz=316,slow=40						
KNGR	Kungurtug, Tuv	23.38	45	*i* P	P	03 56 28.4	+2.4
KNGR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
PZH	PanZhiHua	27.80	103	P	P	03 57 08.5	+2.5
SONM	Songino Array	28.05	56	P	P	03 57 09.9	+1.8
	comp=Z,0.6nm,0.6s,baz=270,slow=8.6,SNR=3.9						
	comp=Z,0.6nm,0.6s						
BR131	Keskin Array S	29.55	287	P	P	03 57 21.3	-0.2
BR131				IAmb	IAmb	03 57 47.3	
	comp=Z,3.4nm,0.9s						
BR131	Keskin Array S	29.55	287	*i* P	P	03 57 21.5	-0.1
BRTR	Keskin Array B	29.55	287	P	P	03 57 24.3	+2.7
	comp=Z,0.4nm,0.7s,baz=92,slow=12,SNR=2.5						
	comp=Z,0.4nm,0.7s						
BRTR	Keskin Array B	29.55	287	P	P	03 57 22.3	+0.7
BRTR	Keskin Array B	29.55	287	P	P	03 57 22.3	+0.7
OBN	Obninsk	29.90	319	*e*P	P	03 57 24.3	+0.1
OBN				*e**PP	pP	03 57 45.9	-1.4
OBN				*e**SP	sP	03 57 58.4	-0.8
OBN				*e*		03 58 24.0	
OBN				*e*		04 00 25.8	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
HHC	Hu-ho-hao-te	31.50	70	*e*P	P	03 57 40.4	+1.7
HHC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FINES	FINESS Array B	37.41	326	P	P	03 58 30.0	+0.9
	comp=Z,2.4nm,0.9s,baz=125,slow=9.6,SNR=4.6						
	comp=Z,2.4nm,0.9s						
FINES	FINESS Array B	37.41	326	P	P	03 58 29.3	+0.1
FINES	FINESS Array B	37.41	326	*i* P	P	03 58 30.2	+1.0
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARCES	ARCESS Array B	41.02	337	P	P	03 59 00.5	+1.4
	comp=Z,0.6nm,0.5s,baz=120,slow=8.7,SNR=8.7						
	comp=Z,0.6nm,0.5s						
HFS	Hagfors	43.01	322	P	P	03 59 19.2	+3.8
	comp=Z,1.7nm,0.5s,baz=104,slow=11,SNR=13						
	comp=Z,1.7nm,0.5s						
NORES	NORESS Array B	44.14	322	P	P	03 59 28.5	+4.1
NB2	NORSAR Subarra	44.32	323	P	P	03 59 26.7	+0.7
	comp=Z,2.7nm,0.7s,baz=98,slow=7.9						
NOA	NORSAR Array B	44.32	323	P	P	03 59 29.4	+3.5
	comp=Z,0.9nm,0.6s,baz=97,slow=7.7,SNR=6.0						
	comp=Z,0.9nm,0.6s						
KMBO	Kilima Mbogo	49.12	228	*i* P	P	04 00 04.5	+0.3
WRA	Warramunga Arr	81.94	122	P	P	04 03 34.5	-0.5
	comp=Z,0.5nm,0.5s,baz=324,slow=4.9,SNR=7.1						
	comp=Z,0.5nm,0.5s						
WRA	Warramunga Arr	81.94	122	*i* P	P	04 03 34.9	-0.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WR8	Warramunga Arr	82.06	122	P	P	04 03 35.0	-0.7
WR8				IAmb	IAmb	04 03 41.8	
	comp=Z,2.0nm,1.1s						
ASAR	Alice Springs	84.22	125	P	P	04 03 46.0	-0.7
	comp=Z,0.9nm,0.7s,baz=315,slow=4.9,SNR=8.2						
	comp=Z,0.9nm,0.7s						
ASAR	Alice Springs	84.22	125	P	P	04 03 46.6	-0.1
ASAR	Alice Springs	84.22	125	P	P	04 03 46.6	-0.1

*IDC **16** 03:54:03.4±1.2, 6°.58N×125°.22E, h0^{km}, mb3.7/5, mbtmp3.7/5, MS2.8/1, Error ellipse: s-maj=31.8km s-min=8.9km az=117.0*

ISC 16 03:54:08.5±1.1**, 6°.7N**±0°.1×**125°.6E**±0°.4**, h35**^{km}**, n7,** σ1^s.**08**/6**,**
mb3.5/5**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.34	4	Pg	Pn	03 54 16.3	-0.7
	813nm,0.3s,baz=234,slow=8.7,SNR=13						
DAV				Lg	Lg	03 54 22.3	
	2µm,0.3s,baz=73,slow=19,SNR=20						
DAV				LR	LR	03 54 48.8	
	comp=Z,852nm,19.9s,baz=212,slow=75						
KAPI	Kappang	13.03	207	LR	LR	04 02 19.3	
	comp=Z,40nm,19.2s,baz=24,slow=39						
WRA	Warramunga Arr	27.88	162	P	P	03 59 54.1	-1.1
	0.7nm,0.7s,baz=336,slow=10,SNR=7.1						
	0.7nm,0.7s						
ASAR	Alice Springs	31.29	165	P	P	04 00 24.8	-0.7
	0.6nm,0.5s,baz=341,slow=6.9,SNR=14						
	0.6nm,0.5s						
STKA	Stephens Creek	41.33	159	P	P	04 01 51.7	+0.7
	1.2nm,0.5s,baz=331,slow=10,SNR=4.9						
	1.2nm,0.5s						
MKAR	Makanchi Array	54.44	325	P	P	04 03 32.6	+0.2
	0.2nm,0.4s,baz=108,slow=8.2,SNR=2.3						
	0.2nm,0.4s						
ILAR	Eielson Array	82.92	26	P	P	04 06 30.4	+0.9
	0.3nm,0.6s,baz=249,slow=5.7,SNR=8.4						
	0.3nm,0.6s						

*IDC **16** 04:02:39.1±2.1, 5°.62S×129°.08E, h0^{km}, mb3.5/1, mbtmp4.1/3, ML4.5/2, Error ellipse: s-maj=115.2km s-min=31.3km az=68.0*

*NEIC **16** 04:02:57.4±2.2, 5°.96S±0°.10×129°.9E±0°.1, h180^{km}±12^{km}, mb4.0/7, Error ellipse: s-maj=18.7km s-min=14.2km az=93.0*

*DJA **16** 04:03:01.6±0.4, 5°S±4°×13°0E±°, h167^{km}±5^{km}, M4.4/14, mb4.6/7, mB5.6/3, MLv4.3/14, Mw(mB)5.1/3*

ISC 16 04:02:54.7±0.7**, 5°.97S**±0°.06×**129°.84E**±0°.08**, h150**^{km}**, n41,**
σ**2**^{s}.**24**/42**, mb3.9**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.44	2	P	Pn	04 03 28.7	+5.1
BNDI	Bandanaira	1.44	2	P	Pn	04 03 27.6	+4.0
BNDI				S	Sn	04 03 47.2	+1.4
SAUI	Saumlaki	2.47	144	Pn	Pn	04 03 38.1	+2.6
SAUI	Saumlaki	2.47	144	P	Pn	04 03 48.3	+13
MSAI	Masohi	2.76	341	P	Pn	04 03 40.5	+1.4
KRAI	Karang Ratu	3.00	331	P	Pn	04 03 45.6	+3.5
FAKI	Fak Fak	3.86	38	Pn	Pn	04 03 53.8	+0.6
FAKI	Fak Fak	3.86	38	P	Pn	04 03 54.0	+0.8
FAKI	Fak Fak	3.86	38	P	Pn	04 03 53.8	+0.6
KMPI	Kaimana, Papua	4.48	59	P	Pn	04 04 03.3	+2.1
SWI	Sorong	5.26	16	P	Pn	04 04 11.4	-0.2
SANI	Sanana	5.47	315	P	Pn	04 04 17.1	+2.7
RKPI	Ransiki, Papua	6.19	44	P	Pn	04 04 24.8	+0.8
	19µm118nm,0.6s						
DRS	Darwin Rock St	6.51	171	P	Pn	04 04 32.8	+4.6
SOEI	Soe	6.69	235	Pn	Pn	04 04 34.4	+3.7
MTN	Manton Dam	6.95	170	Pn	Pn	04 04 37.3	+3.1
TNTI	Ternate	7.13	340	P	Pn	04 04 36.8	+0.2
	0.2nm18nm,0.6s						
BAKI	Biak	7.84	53	P	Pn	04 04 49.8	+3.7
	0.4nm61nm,1.0s						
KNRA	Kununurra	9.71	186	Pn	Pn	04 05 12.9	+2.0
FITZ	Fitzroy Crossi	12.74	198	Pn	Pn	04 05 50.3	-0.3
DAV	Davao City (W)	13.63	342	Pn	Pn	04 05 59.8	-2.3
DAV	Davao City (W)	13.63	342	P	Pn	04 05 59.9	-2.2
DAV	Davao City (W)	13.63	342	P	Pn	04 05 59.8	-2.3
WB0	Warramunga Arr	14.41	163	Pn	Pn	04 06 13.0	+1.1
WRAB	Tennant Creek	14.56	163	P	Pn	04 06 15.4	+1.7
WRA	Warramunga Arr	14.56	163	Pn	Pn	04 06 14.5	+0.7
	1.6nm,0.3s,baz=339,slow=13,SNR=50						
WRA				Sn	Sn	04 08 49.3	-6.2
	0.3nm,0.3s,baz=334,slow=22,SNR=4.9						
	2.0nm,0.3s						
WRA	Warramunga Arr	14.56	163	Pn	Pn	04 06 14.0	+0.2
WR8	Warramunga Arr	14.62	162	Pn	Pn	04 06 15.1	+0.5
COEN	Coen	15.34	122		P	04 06 25.8	+1.0
COEN	Coen	15.34	122	P	P	04 06 27.0	+2.2
QIS	Mount Isa	17.32	148	P	Pn	04 06 49.4	+1.8
MBWA	Marble Bar	18.00	212	P	P	04 06 54.0	-0.1
MBWA				IAmb	IAmb	04 07 01.1	
	comp=Z,4.4nm,0.9s						
AS31	Alice Springs	18.03	168	Pn	Pn	04 06 56.5	+0.6
ASAR	Alice Springs	18.03	168	P	Pn	04 06 57.1	+1.2
	comp=Z,3.5nm,0.3s,baz=350,slow=11,SNR=164						
ASAR				S	S	04 10 12.0	-1.5
	comp=Z,1.6nm,0.8s,baz=352,slow=21,SNR=13						
	comp=Z,8.1nm,0.4s						
ASAR	Alice Springs	18.03	168	P	Pn	04 06 56.9	+1.0
PSA00	Pilbara Seismi	18.29	211	P	P	04 06 57.9	+0.7
PSA00				IAmb	IAmb	04 07 02.6	
	comp=Z,12nm,1.1s						
PSA00	Pilbara Seismi	18.29	211	P	P	04 06 58.5	+1.3
FORT	Forrest	24.74	184	P	P	04 08 02.7	+0.4
FORT				IAmb	IAmb	04 08 03.5	
	comp=Z,3.2nm,0.9s						
MORW	Morawa	26.43	208	P	P	04 08 15.9	-1.7
MORW				IAmb	IAmb	04 08 32.4	
	comp=Z,5.6nm,1.1s						
BBOO	Buckleboo	27.33	169	P	P	04 08 25.9	+0.3
BBOO				IAmb	IAmb	04 08 30.7	
	comp=Z,3.5nm,1.1s						
MKAR	Makanchi Array	67.28	327	P	P	04 13 31.3	-1.9
	comp=Z,0.4nm,0.7s,baz=134,slow=6.9,SNR=4.1						
	comp=Z,0.4nm,0.7s						

*MDD **16** 04:13:11.9±1.0, 36°.14N×10°.30W, h34^{km}, mb_Lg3.0/6, Error ellipse: s-maj=9.4km s-min=4.1km az=95.0*

*INMG **16** 04:13:13.3±1.4, 36°.18N×10°.30W, h31^{km}±11^{km}, ML2.3, Error ellipse: s-maj=7.6km s-min=4.8km az=78.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*

*IGIL **16** 04:13:13.0, 36°.17N×10°.32W, h34^{km}, ML2.3*

*CNRM **16** 04:13:13.7, 35°.95N×9°.91W, h47^{km}, ML3.2*

ISC 16 04:13:10.1±1.8**, 36°.09N**±0°.03×**10°.03W**±0°.08**, h25**^{km}±14^{km}**,**
n60, σ**1**^{s}.**71**/80**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	1.42	42	*e*P	Pb	04 13 36.9	+1.0
PFVI				*e*S	Sb	04 13 54.5	+1.0
PFVI				*i* IAML		04 13 55.0	
PFVI				*i* IAML		04 13 55.1	
PFVI				*i* IAML		04 13 55.5	
PFVI	Vila Bisbo	1.42	42	P	Pb	04 13 38.6	+2.7
PFVI	Vila Bisbo	1.42	42	S	Sb	04 13 55.8	+2.3
MORF	Marmelete	1.64	42	*e*P	Pb	04 13 39.9	+0.3
MORF				*e*S	Sb	04 13 59.7	-0.2
MORF				IAML		04 14 01.3	
	comp=E,34nm,0.1s						
MORF	Marmelete	1.64	42	*e*P	Pb	04 13 40.5	+0.9
MORF				*e*S	Sb	04 14 00.0	+0.1
MORF				*i* IAML		04 14 00.5	
MORF				*i* IAML		04 14 01.2	
MORF				*i* IAML		04 14 01.3	
PTEO	Sao Teotonio	1.79	35	*e*S	Sb	04 14 02.7	-1.5
PTEO				*i* IAML		04 14 03.5	
PTEO				*i* IAML		04 14 03.7	
PBDV	Barranco-do-Ve	2.04	55	*e*P	Pb	04 13 46.3	-0.2
PBDV				*e*S	Sb	04 14 10.3	-1.1
PBDV				*i* IAML		04 14 12.9	
PBDV				*i* IAML		04 14 12.9	
PBDV				*i* IAML		04 14 13.0	
PCVE	Castro Verde	2.22	45	*e*S	Sb	04 14 14.4	-2.0
PCVE				*i* IAML		04 14 15.1	
PCVE				*i* IAML		04 14 15.3	
PCVE				*i* IAML		04 14 15.7	
MESJ	Messejana	2.27	39	*e*S	Sn	04 14 14.3	+1.1
MESJ				IAML		04 14 15.9	
	comp=N,9.9nm,0.3s						
MESJ	Messejana	2.27	39	*e*P	Pb	04 13 49.1	-1.2
MESJ				*e*S	Sn	04 14 14.5	+1.4
MESJ				*i* IAML		04 14 16.4	
MESJ				*i* IAML		04 14 16.7	
MESJ				*i* IAML		04 14 17.1	
PVAQ	Vaqueiros	2.27	54	*e*P	Pb	04 13 49.3	-1.1
PVAQ				*e*S	Sb	04 14 15.6	-2.4
PVAQ				*i* IAML		04 14 16.9	
PVAQ				*i* IAML		04 14 17.3	
PVAQ				*i* IAML		04 14 18.1	
PVAQ	Vaqueiros	2.27	54	P	Pb	04 13 49.3	-1.1
PVAQ	Vaqueiros	2.27	54	S	Sb	04 14 16.1	-2.0
EGRO	El Granado	2.50	54	Pn	Pb	04 13 52.6	-1.7
EGRO				Sn	Sn	04 14 21.2	+2.4
EGRO				*i* IVmb_Lg		04 14 24.0	
PBEJ	Beja	2.59	41	*e*S	Sn	04 14 21.8	+0.6
PBEJ				*i* IAML		04 14 23.3	
PBEJ				*i* IAML		04 14 23.8	
PBEJ				*i* IAML		04 14 25.1	
MOE	Montemor	2.77	28	*e*P	Pn	04 13 54.5	+1.6
MOE				*e*S	Sn	04 14 25.9	+0.3
MOE				*i* IAML		04 14 26.8	
MOE				*i* IAML		04 14 27.2	
MOE				*i* IAML		04 14 28.6	
EVO	Evora	2.92	33	*e*P	Pn	04 13 56.2	+1.3
EVO				*e*S	Sn	04 14 29.1	-0.1
EVO				*i* IAML		04 14 29.4	
EVO				*i* IAML		04 14 29.6	
EVO				*i* IAML		04 14 29.7	
PMAFR	Mafra	2.92	11	*e*S	Sn	04 14 27.4	-1.9
PARRA	Arraiolos	3.15	30	*e*P	Pn	04 13 59.5	+1.5
PARRA				*e*S	Sn	04 14 34.1	-0.7
PARRA				*i* IAML		04 14 34.7	
PARRA				*i* IAML		04 14 35.0	
PARRA				*i* IAML		04 14 35.1	
EMIN	Mina Concepcio	3.17	57	Sn	Sn	04 14 36.6	+1.3
EMIN				*i* IVmb_Lg		04 14 40.2	
PBAR	Barrancos	3.17	48	*e*S	Sn	04 14 37.0	+1.7
PBAR				*i* IAML		04 14 38.0	
PBAR				*i* IAML		04 14 38.1	
PBAR				*i* IAML		04 14 43.8	
PMTG	Montargil	3.30	25	*e*P	Pn	04 14 00.9	+0.7
PMTG				*e*S	Sn	04 14 37.4	-1.3
PMTG				*i* IAML		04 14 38.0	
PMTG				*i* IAML		04 14 38.6	
PMTG				*i* IAML		04 14 39.3	
AVE	Averroes	3.52	142	P	Pn	04 14 03.3	+0.1
AVE	Averroes	3.52	142	S	Sn	04 14 43.7	-0.4
PSBE	So Bento	3.56	16	*e*S	Sn	04 14 42.1	-2.9
EBAD	Badajoz	3.58	41	Pn	Pn	04 14 05.6	+1.6
EBAD				Sn	Sn	04 14 45.4	-0.2
EBAD				*i* IVmb_Lg		04 14 47.2	
PSARD	Sardoal	3.80	22	*e*P	Pn	04 14 08.0	+0.9
PSARD				*e*S	Sn	04 14 48.8	-2.3
PSARD				*i* IAML		04 14 50.8	
PSARD				*i* IAML		04 14 51.5	
PSARD				*i* IAML		04 14 51.6	
PMRV	Marv??o	3.93	31	*e*P	Pn	04 14 10.6	+1.7
PMRV				*e*S	Sn	04 14 52.9	-1.4
PMRV				*i* IAML		04 14 53.4	
PMRV				*i* IAML		04 14 54.0	
PMRV				*i* IAML		04 14 54.0	
SRHM	Skhour des Reh	4.02	153	P	Pn	04 14 12.6	+2.5
SRHM	Skhour des Reh	4.02	153	S	Sn	04 14 59.5	+3.1
PCAS	Casmilo, Conde	4.14	16	*e*P	Pn	04 14 12.6	+0.9
PCAS				*e*S	Sn	04 14 57.2	-2.0
ECAB	El Cabril	4.18	60	Pn	Pn	04 14 15.4	+3.0
ECAB				Sn	Sn	04 15 01.3	+0.8
ECAB				*i* IVmb_Lg		04 15 02.5	
PCBR	Castelo Branco	4.25	28	*e*P	Pn	04 14 14.7	+1.4
PCBR				*e*S	Sn	04 15 00.4	-1.7
PCBR				*i* IAML		04 15 01.3	
PCBR				*i* IAML		04 15 02.0	
PCBR				*i* IAML		04 15 02.9	
EADA	Adamuz	4.82	63	Pn	Pn	04 14 24.4	+3.2
EADA				Sn	Sn	04 15 18.4	+2.1
EADA				*i* IVmb_Lg		04 15 21.4	
LCRM	LCR	4.88	118	P	Pn	04 14 22.5	+0.5
LCRM	LCR	4.88	118	S	Sn	04 15 17.4	-0.4
PVIS	Viseu	4.91	19	*e*S	Sn	04 15 15.2	-3.3
OUK	Oukaimeden	5.19	159	P	Pn	04 14 27.1	+0.5
OUK	Oukaimeden	5.19	159	S	Sn	04 15 24.9	-0.9
TISM	Timmit	5.28	145	P	Pn	04 14 27.0	-0.4
TISM	Timmit	5.28	145	S	Sn	04 15 25.7	-1.8
AKLM	AKL	5.28	106	P	Pn	04 14 26.3	-1.2
AKLM	AKL	5.28	106	S	Sn	04 15 24.5	-3.1
MD31	MD31	5.41	125	P	Pn	04 14 30.2	+1.0
MD31	MD31	5.41	125	S	Sn	04 15 29.5	-1.3
PVRL	Vila Real	5.48	19	*e*P	Pn	04 14 30.5	+0.2
MDT	Midelt	5.54	125	P	Pn	04 14 31.8	+0.7
MDT	Midelt	5.54	125	S	Sn	04 15 32.6	-1.5
POLO	Lamas de Olo	5.56	18	*e*S	Sn	04 15 29.5	-4.8
MVO	Moncorvo	5.58	24	*e*P	Pn	04 14 32.2	+0.6
MVO				*e*S	Sn	04 15 31.2	-3.9
TIO	Tiouine	5.64	155	P	Pn	04 14 33.4	+0.8
TIO	Tiouine	5.64	155	S	Sn	04 15 36.6	0.0
PAB	San Pablo	5.67	51	Pn	Pn	04 14 34.9	+2.2
PAB				Sn	Sn	04 15 36.1	-1.0
EQES	Quesada	5.83	71	Sn	Sn	04 15 42.7	+1.6
OUZM	OUZ	5.84	151	P	Pn	04 14 36.4	+1.1
OUZM	OUZ	5.84	151	S	Sn	04 15 40.9	-0.7
GOLM	Goulmima	6.08	135	P	Pn	04 14 39.7	+1.2
GOLM	Goulmima	6.08	135	S	Sn	04 15 48.3	+1.0
TZRR	Tazzarine	6.47	144	P	Pn	04 14 44.4	+0.5
TZRR	Tazzarine	6.47	144	S	Sn	04 15 55.6	-1.3

*NEIC **16** 04:13:23.2±2.1, 0°.05N±0°.05×123°.93E±0°.07, h116^{km}±6^{km}, mb4.5/49, Error ellipse: s-maj=10.4km s-min=8.0km az=86.0*

*DJA **16** 04:13:24.8±0.2, 0°S±2°×12°4E±°, h102^{km}±3^{km}, M4.5/27, mb4.7/21, mB5.0/11, MLv4.7/27, Mw(mB)4.3/11*

*IDC **16** 04:13:27.0±2.5, 0°.03S×123°.64E, h163^{km}±25^{km}, mb4.2/24, mbtmp4.7/26, MS2.9/3, Error ellipse: s-maj=19.2km s-min=11.1km az=73.0*

ISC 16 04:13:22.2±0.3**, 0°.02N**±0°.04×**124°.03E**±0°.05**, h110**^{km}**, n157,**
σ**1**^{s}.**80**/161**, mb4.5**/54**, 2D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	0.55	355	P	Pn	04 13 43.0	+3.5
KMSI				S	Sn	04 13 57.5	+5.1
LUWI	Luwuk	1.64	230	Pn	Pn	04 13 51.4	+0.7
LUWI	Luwuk	1.64	230	P	Pn	04 13 55.8	+5.0
LUWI	Luwuk	1.64	230	P	Pn	04 13 51.3	+0.5
LUWI				S	Sn	04 14 11.1	-1.4
MRSI	Marisa	2.14	282	P	Pn	04 13 57.2	+0.2
APSI	Ampana	2.56	249	P	Pn	04 14 03.3	+0.9
SANI	Sanana	2.84	136	P	Pn	04 14 06.4	+0.4
SANI	Sanana	2.84	136	P	Pn	04 14 06.5	+0.4
TNTI	Ternate	3.42	77	Pn	Pn	04 14 16.1	+2.3
TNTI	Ternate	3.42	77	P	Pn	04 14 16.4	+2.6
TNTI	Ternate	3.42	77	P	Pn	04 14 16.1	+2.3
TOLI2	Tolitoli	3.43	288	Pn	Pn	04 14 14.6	+0.7
TOLI2	Tolitoli	3.43	288	P	Pn	04 14 15.5	+1.6
MPSI	Mapaga	4.15	274	P	Pn	04 14 25.6	+2.1
GAMI	Galela, Maluku	4.17	64	P	Pn	04 14 26.8	+3.0
KDI	Kendari	4.20	200	P	Pn	04 14 25.5	+1.3
PCI	Palu	4.29	258	P	Pn	04 14 26.8	+1.2
NLAI	Namlea	4.46	137	P	Pn	04 14 29.9	+2.1
KKSI	Kolaka, Sulawe	4.79	210	P	Pn	04 14 33.5	+1.2
TTSI	Tana Toraja	5.20	234	P	Pn	04 14 39.4	+1.7
KRAI	Karang Ratu	5.48	127	P	Pn	04 14 43.8	+2.3
	0.8nm43nm,0.7s						
AAI	Ambon	5.55	132	P	Pn	04 14 44.8	+2.2
	0.8nm2µm64nm,0.8s						
BBSI	Bau Bau	5.66	195	P	Pn	04 14 47.1	+3.1
	0.5nm90nm,0.8s						
MMSI	Mamuju	5.78	242	P	Pn	04 14 47.1	+1.4
	0.3nm563nm45nm,0.7s						
SPSI	Sidrap Palu	5.81	227	P	Pn	04 14 48.1	+2.0
	0.8nm2µm66nm,0.7s						
BNSI	Bone	5.89	222	P	Pn	04 14 49.7	+2.6
	0.5nm1µm56nm,0.4s						
MSAI	Masohi	5.93	124	P	Pn	04 14 50.3	+2.7
PMSI	Majene	6.20	236	P	Pn	04 14 53.6	+2.3
	0.4nm811nm60nm,0.7s						
KAPI	Kappang	6.58	220	P	Pn	04 14 59.3	+2.9
	31nm,0.3s,baz=20,slow=4.1,SNR=28						
KAPI				S	Sn	04 16 07.9	-2.1
	72nm,0.6s,baz=39,slow=23,SNR=20						
KAPI				LR	LR	04 17 51.7	
	comp=Z,76nm,20.0s,baz=46,slow=42						
KAPI	Kappang	6.58	220	Pn	Pn	04 14 58.0	+1.6
KAPI	Kappang	6.58	220	P	Pn	04 14 59.6	+3.1
KAPI	Kappang	6.58	220	P	Pn	04 14 58.8	+2.3
BKSI	Bulukumba	6.59	216	P	Pn	04 14 59.3	+2.7
	0.3nm29nm,0.5s						
SWI	Sorong	7.28	97	P	Pn	04 15 10.1	+4.1
	0.2nm52nm,0.7s						
BNDI	Bandanaira	7.40	128	P	Pn	04 15 10.0	+2.4
	137nm,0.8s						
FAKI	Fak Fak	8.72	110	Pn	Pn	04 15 25.8	+0.3
FAKI	Fak Fak	8.72	110	P	Pn	04 15 26.6	+1.1
FAKI	Fak Fak	8.72	110	P	Pn	04 15 26.5	+1.1
SOEI	Soe	9.71	179	Pn	Pn	04 15 42.9	+3.8
SOEI	Soe	9.71	179	P	Pn	04 15 42.3	+3.2
KKM	Kota Kinabalu	9.83	308	Pn	Pn	04 15 45.1	+4.4
KKM	Kota Kinabalu	9.83	308	P	Pn	04 15 45.5	+4.8
	39nm,0.5s						
MTN	Manton Dam	14.59	151	Pn	Pn	04 16 43.2	-0.2
PCJI	Pacitan	15.19	237	P	P	04 16 55.8	+2.4
	21nm,0.7s						
KNRA	Kununurra	16.28	164		Pn	04 17 06.1	+1.5
KNRA				IAmb	IAmb	04 17 10.8	
	comp=Z,29nm,0.7s						
BBJI	Bungbulang	17.95	245	P	Pn	04 17 25.8	+0.9
BBJI	Bungbulang	17.95	245	P	Pn	04 17 26.0	+1.1
	comp=Z,22nm,0.9s						
FITZ	Fitzroy Crossi	18.07	175	P	P	04 17 26.4	+1.1
	comp=Z,23nm,0.6s,baz=3.0,slow=7.4,SNR=72						
FITZ	Fitzroy Crossi	18.07	175		P	04 17 26.0	+0.8
SKJI	Sukabumi	18.78	248	P	Pn	04 17 38.1	+3.3
	comp=Z,78nm,0.7s						
MBWA	Marble Bar	21.46	191	P	P	04 18 02.1	+0.1
MBWA				IAmb	IAmb	04 18 03.0	
	comp=Z,20nm,0.8s						
MBWA	Marble Bar	21.46	191	P	P	04 18 02.5	+0.5
PSA00	Pilbara Seismi	21.85	191	P	P	04 18 05.2	-0.8
PSA00	Pilbara Seismi	21.85	191	P	P	04 18 05.5	-0.6
PSA00				IAmb	IAmb	04 18 07.0	
	comp=Z,13nm,0.7s						
MASI	Maura Aman, Be	22.01	262	P	P	04 18 07.5	-0.4
	comp=Z,54nm,1.2s						
WB0	Warramunga Arr	22.13	153	P	P	04 18 08.9	-0.2
WB0				IAmb	IAmb	04 18 11.1	
	comp=Z,22nm,0.6s						
WRAB	Tennant Creek	22.26	154	P	P	04 18 10.5	+0.1
WRAB				IAmb	IAmb	04 18 13.9	
	comp=Z,22nm,1.0s						
WRAB	Tennant Creek	22.26	154	P	P	04 18 10.8	+0.4
WRA	Warramunga Arr	22.26	154	P	P	04 18 10.4	0.0
	comp=Z,17nm,0.7s,baz=333,slow=9.8,SNR=60						
	comp=Z,17nm,0.7s						
WRA	Warramunga Arr	22.26	154	P	P	04 18 09.3	-1.1
WR8	Warramunga Arr	22.34	153	P	P	04 18 11.0	-0.3
WR8				IAmb	IAmb	04 18 14.7	
	comp=Z,18nm,0.6s						
TPUB	Ta-pu	23.38	352	P	P	04 18 20.2	-1.1
TPUB				IAmb	IAmb	04 18 21.9	
	comp=Z,20nm,0.8s						
COEN	Coen	23.50	127	P	P	04 18 23.2	+0.8
COEN				IAmb	IAmb	04 18 25.7	
	comp=Z,9.8nm,0.6s						
COEN	Coen	23.50	127	P	P	04 18 23.6	+1.2

AS31	Alice Springs	25.42	159	P	P	04 18 40.5	+0.7
AS31				IAmb	IAmb	04 18 43.7	
	comp=Z,7.6nm,0.5s						
ASAR	Alice Springs	25.42	159	P	P	04 18 40.9	+1.1
	comp=Z,6.2nm,0.4s,baz=335,slow=8.4,SNR=57						
	comp=Z,6.2nm,0.4s						
ASAR	Alice Springs	25.42	159	P	P	04 18 40.3	+0.5
QIS	Mount Isa	25.50	144	P	P	04 18 42.3	+1.7
MORW	Morawa	29.92	194	P	P	04 19 18.8	-1.0
MORW				IAmb	IAmb	04 19 45.2	
	comp=Z,6.4nm,1.1s						
CMAR	Chiang Mai Arr	30.71	308	P	P	04 19 27.5	+0.5
	comp=Z,1.9nm,0.3s,baz=137,slow=9.4,SNR=4.6						
CMAR				LR	LR	04 32 39.9	
	comp=Z,9.0nm,20.3s,baz=345,slow=38						
FORT	Forrest	30.87	173	P	P	04 19 28.6	+0.4
CHTO	Chiang Mai	30.91	309	P	P	04 19 28.4	-0.4
INKA	Innaminka	31.93	151	P	P	04 19 39.2	+1.7
INKA				IAmb	IAmb	04 19 40.4	
	comp=Z,6.6nm,0.7s						
JCJ	Chichijima	32.08	32	P	P	04 19 38.5	-0.4
NJ2	Nanjing	32.23	352	*e*P	P	04 19 41.9	+1.8
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NWAO	Narrogin (SRO)	33.39	190	P	P	04 19 50.1	-0.1
NWAO				IAmb	IAmb	04 20 01.0	
	comp=Z,13nm,1.1s						
PZH	PanZhiHua	33.97	323	P	P	04 19 55.9	+0.3
BBOO	Buckleboo	34.57	162	P	P	04 19 59.7	-0.8
BBOO				IAmb	IAmb	04 20 02.6	
	comp=Z,3.8nm,0.9s						
JMN	Monobe	34.78	14	P	P	04 20 03.7	+1.3
JMN	Monobe	34.78	14	P	P	04 20 03.8	+1.5
STKA	Stephens Creek	35.81	154	P	P	04 20 12.6	+1.5
	comp=Z,10nm,0.5s,baz=330,slow=8.8,SNR=37						
	comp=Z,10nm,0.5s						
STKA	Stephens Creek	35.81	154	P	P	04 20 12.0	+0.9
STKA	Stephens Creek	35.81	154	P	P	04 20 12.7	+1.5
LYN	LuoYang	36.02	344	P	P	04 20 14.1	+1.3
LYN				pmax	pmax		
	comp=Z,28nm,0.6s						
HTT	Hallett	36.10	159	P	P	04 20 15.2	+1.6
KSRS	Korea Array	37.42	5	P	P	04 20 24.8	+0.1
	comp=Z,1.8nm,0.7s,baz=183,slow=10.0,SNR=7.8						
	comp=Z,1.8nm,0.7s						
CMSA	Cobar Meteorol	37.50	149	P	P	04 20 27.0	+1.6
JGF	Kuroka	37.52	18	P	P	04 20 25.8	+0.2
HNS	HongShan	38.18	348	⇓P	P	04 20 32.0	+0.9
HNS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MJAR	Matsushiro Arr	38.65	18	P	P	04 20 34.8	-0.3
	comp=Z,10nm,0.7s,baz=190,slow=9.0,SNR=24						
	comp=Z,10nm,0.7s						
MJAR	Matsushiro Arr	38.65	18	P	P	04 20 33.4	-1.6
MAJO	Matsushiro	38.65	18	P	P	04 20 34.0	-1.0
MAJO	Matsushiro	38.65	18	P	P	04 20 35.5	+0.5
MJB9	Matsu-Tunnel	38.65	18	P	P	04 20 34.8	-0.3
BJI	Beijing	40.47	351	P	P	04 20 51.4	+1.3
BJI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HHC	Hu-ho-hao-te	42.19	346	*e*P	P	04 21 07.1	+2.8
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
USRK	Ussuriysk Ar.	44.56	8	P	P	04 21 23.7	+0.6
	comp=Z,9.0nm,0.5s,baz=200,slow=7.2,SNR=14						
	comp=Z,9.0nm,0.5s						
MDJ	Mudanjiang	44.68	6	P	P	04 21 24.2	+0.2
MDJ				IAmb	IAmb	04 21 25.8	
	comp=Z,8.0nm,0.5s						
GTA	Gaotai	45.03	333	*e*P	P	04 21 27.8	+0.7
GTA				pP	pP	04 21 54.0	+1.1
GTA				pmax	pmax		
	comp=Z,14nm,0.7s						
BNX	BinXian	45.62	3	⇓P	P	04 21 32.4	+0.9
BNX				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ASAJ	Asahikawa	46.92	18	P	P	04 21 42.4	+0.7
	comp=Z,20nm,0.8s,baz=194,slow=8.5,SNR=5.2						
	comp=Z,20nm,0.8s						
JKA	Kamikawa-asahi	46.92	18	P	P	04 21 42.6	+1.0
HILR	Hailar Array B	49.48	356	P	P	04 22 01.5	+0.1
	comp=Z,6.0nm,0.4s,baz=173,slow=10,SNR=12						
HILR				LR	LR	04 42 21.5	
	comp=Z,63nm,22.0s,baz=355,slow=35						
	comp=Z,6.0nm,0.4s						
ULN	Ulaanbaatar	49.89	345	P	P	04 22 03.8	-0.9
ULN				IAmb	IAmb	04 22 06.2	
	comp=Z,2.6nm,0.7s						
SONM	Songino Array	50.03	345	P	P	04 22 04.6	-1.0
	comp=Z,2.3nm,0.6s,baz=161,slow=8.3,SNR=12						
	comp=Z,2.3nm,0.6s						
SONM	Songino Array	50.03	345	P	P	04 22 04.9	-0.8
HEH	HeiHe	50.13	3	*e*P	P	04 22 06.0	-0.1
TARG	Taragay, Kyrgy	58.80	321	P	P	04 23 08.5	-1.1
TARG				IAmb	IAmb	04 23 28.3	
	comp=Z,5.1nm,1.1s						
MKAR	Makanchi Array	59.14	328	P	P	04 23 10.0	-1.4
	comp=Z,4.4nm,0.5s,baz=121,slow=8.3,SNR=50						
MKAR				PcP	PcP	04 23 57.0	-1.9
	comp=Z,1.2nm,0.5s,baz=137,slow=4.2,SNR=5.4						
	comp=Z,4.4nm,0.5s						
MKAR	Makanchi Array	59.14	328	P	P	04 23 09.8	-1.6
MKAR					PcP	04 23 56.5	-2.3
MAKZ	Makanchi	59.32	328	P	P	04 23 10.9	-1.7
PETK	Petropavlovsk-	59.87	23	P	P	04 23 17.4	+1.2
	comp=Z,2.7nm,0.7s,baz=235,slow=6.8,SNR=4.4						
	comp=Z,2.7nm,0.7s						
PETK	Petropavlovsk-	59.87	23	P	P	04 23 16.6	+0.4
YAK	Yakutsk	62.00	3	P	P	04 23 29.4	-1.0
	comp=Z,27nm,0.5s,baz=67,slow=0.6,SNR=8.8						
	comp=Z,27nm,0.5s						
ZALV	Zalesovo Beam	62.73	335	P	P	04 23 32.2	-3.2
	comp=Z,0.9nm,0.3s,baz=121,slow=5.7,SNR=7.0						
	comp=Z,0.9nm,0.3s						
ZALV	Zalesovo Beam	62.73	335	P	P	04 23 34.4	-1.0
MA2	Magadan	62.95	15	P	P	04 23 37.8	+1.0
	comp=Z,11nm,0.4s,baz=215,slow=5.7,SNR=11						
	comp=Z,11nm,0.4s						
KURBB	Kurchatov Arra	63.47	329	P	P	04 23 38.6	-1.8
	comp=Z,4.6nm,0.6s,baz=130,slow=6.1,SNR=27						
	comp=Z,4.6nm,0.6s						
KURK	Kurchatov	63.48	330	P	P	04 23 38.7	-1.8
KKAR	Karatay Array	64.17	319	P	P	04 23 43.3	-1.9
BVAR	Borovoye Array	69.00	329	P	P	04 24 13.5	-2.2
	comp=Z,1.3nm,0.6s,baz=126,slow=7.7,SNR=6.2						
	comp=Z,1.3nm,0.6s						
BORK	Borovoye	69.05	329	P	P	04 24 13.3	-2.7
BORK				IAmb	IAmb	04 24 16.4	
	comp=Z,3.9nm,1.1s						
TIXI	Tiksi	71.58	2	P	P	04 24 30.1	-1.0
	comp=Z,7.1nm,0.3s,baz=231,slow=3.0,SNR=8.8						
	comp=Z,7.1nm,0.3s						
TIXI	Tiksi	71.58	2	P	P	04 24 30.4	-0.7
TIXI				IAmb	IAmb	04 24 30.7	
	comp=Z,10nm,0.8s						
AB31	Akbulak array	73.35	322	P	P	04 24 39.8	-2.3
ABKAR	Akbulak array	73.35	322	P	P	04 24 39.3	-2.7
NRIK	Noril'sk	73.40	347	P	P	04 24 40.8	-1.1
	comp=Z,5.2nm,0.7s,baz=122,slow=7.0,SNR=7.4						
	comp=Z,5.2nm,0.7s						
NRIK	Noril'sk	73.40	347	P	P	04 24 40.5	-1.4
NRIK				IAmb	IAmb	04 24 41.6	
	comp=Z,4.6nm,0.8s						
ANM	Nome	81.73	24	P	P	04 25 29.4	+1.0
F15K	North Star Dit	82.37	23	P	P	04 25 32.0	+0.3
F15K				IAmb	IAmb	04 25 38.0	
	comp=Z,4.7nm,1.1s						
M16K	Timber Creek	83.70	29	P	P	04 25 40.0	+1.4
M16K				IAmb	IAmb	04 25 49.8	
	comp=Z,5.8nm,1.1s						
C18K	Utukok River	84.46	21	P	P	04 25 43.2	+0.8
C19K	Lookout Ridge	85.14	20	P	P	04 25 47.1	+1.4
C19K				IAmb	IAmb	04 25 48.1	
	comp=Z,3.0nm,0.5s						
G19K	Purcell Mounta	85.48	24	P	P	04 25 48.5	+1.0
IMAR	Indian Mountai	86.81	24	P	P	04 25 54.0	0.0
B22K	Teshekpuk Lake	87.47	20	P	P	04 25 57.4	+0.3
B22K				IAmb	IAmb	04 26 15.2	
	comp=Z,5.5nm,1.1s						
CCB	Clear Creek Bu	89.19	25	P	P	04 26 04.1	-1.2
ILAR	Eielson Array	89.59	25	P	P	04 26 05.7	-1.5
	comp=Z,0.3nm,0.6s,baz=255,slow=4.5,SNR=6.9						
	comp=Z,0.3nm,0.6s						
QSPA	South Pole Qui	89.95	180	P	P	04 26 09.9	+0.9
	comp=Z,0.9nm,1.0s,baz=316,slow=1.0,SNR=5.0						
QSPA	South Pole Qui	89.95	180	P	P	04 26 09.7	+0.7
F25K	Christian Rive	90.11	23	P	P	04 26 10.0	+0.4
BRTR	Keskin Array B	90.29	310	P	P	04 26 08.7	-2.5
	comp=Z,0.7nm,0.9s,baz=146,slow=6.9,SNR=3.7						
	comp=Z,0.7nm,0.9s						
BRTR	Keskin Array B	90.29	310	P	P	04 26 08.4	-2.8
BMAR	Burnt Mountain	90.52	23	P	P	04 26 12.5	+1.0
J26L	Joseph Creek	91.02	26	P	P	04 26 14.7	+0.7
J26L				IAmb	IAmb	04 26 29.5	
	comp=Z,2.1nm,1.2s						
BCAR	Beaver Creek A	91.89	27	P	P	04 26 18.9	+0.9
ARCES	ARCESS Array B	92.97	340	P	P	04 26 20.6	-2.2
	comp=Z,0.9nm,0.4s,baz=86,slow=4.5,SNR=10						
	comp=Z,0.9nm,0.4s						
ARCES	ARCESS Array B	92.97	340	P	P	04 26 20.0	-2.8
ARCES				IAmb	IAmb	04 26 42.9	
	comp=Z,4.5nm,1.1s						
SPITS	Spitsbergen Ar	93.57	349	P	P	04 26 23.9	-1.5
	comp=Z,15nm,1.0s,baz=94,slow=8.7,SNR=6.6						
	comp=Z,15nm,1.0s						
FINES	FINESS Array B	93.80	332	P	P	04 26 23.8	-2.9
	comp=Z,1.2nm,0.6s,baz=73,slow=2.6,SNR=6.8						
	comp=Z,1.2nm,0.6s						
FARO	Faro, Yukon	95.86	27	P	P	04 26 37.1	+0.9
HFS	Hagfors	100.00	332	P	Pdif	04 26 51.7	-3.1
	comp=Z,2.3nm,0.9s,baz=83,slow=4.5,SNR=4.3						
	comp=Z,2.3nm,0.9s						
SCHQ	Schefferville	124.61	8	PKPdf	PKPdf	04 32 08.7	0.0
TXAR	Lajitas Array	125.98	53	PKPdf	PKPdf	04 32 06.5	-5.8
R40A	Maddies Statio	129.34	37	PKPdf	PKPdf	04 32 18.5	+0.2
MTO3	Montecristo	143.99	65	PKPdf	PKPab	04 32 44.5	+0.8
CHIV	Chivirico	151.79	44	PKPbc	PKPbc	04 33 05.0	0.0

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*IDC **16** 04:20:00.9±1.9, 46°.94N×151°.39E, h0km, mb3.6/7, mbtmp3.6/7, Error ellipse: s-maj=61.9km s-min=22.8km az=165.0*

ISC 16 04:20:13.1±1.8**, 47°.0N**±0°.4×**151°.4E**±0°.2**, h100**km**, n7, σ1s.91**/7**, mb3.6**/7**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILAR	Eielson Array	37.09	39	P	P	04 27 11.9	-1.4
	0.5nm,0.7s,baz=270,slow=6.0,SNR=6.8						
	0.5nm,0.7s						
MKAR	Makanchi Array	45.75	296	P	P	04 28 25.7	+1.5
	0.3nm,0.8s,baz=77,slow=7.8,SNR=2.8						
	0.3nm,0.8s						
KURBB	Kurchatov Arra	46.30	303	P	P	04 28 29.2	+0.7
	0.8nm,0.8s,baz=68,slow=8.1,SNR=4.4						
	0.8nm,0.8s						
BVAR	Borovoye Array	49.76	309	P	P	04 28 54.4	-0.6
	0.4nm,0.4s,baz=64,slow=9.8,SNR=2.9						
	0.4nm,0.4s						
CMAR	Chiang Mai Arr	51.27	255	P	P	04 29 05.2	-1.6
	1.0nm,0.3s,baz=59,slow=7.5,SNR=4.6						
	1.0nm,0.3s						
YKA	Yellowknife Ar	51.43	36	P	P	04 29 06.5	-1.0
	0.4nm,0.7s,baz=303,slow=7.5,SNR=5.2						
	0.4nm,0.7s						
TXAR	Lajitas Array	78.40	59	P	P	04 32 05.3	+2.4
	0.2nm,0.5s,baz=300,slow=6.2,SNR=5.3						
	0.2nm,0.5s						

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*AUST **16** 04:27:39.9±0.2, 32°S±1°×15°1E±°, h10km, ML3.8/20, Error ellipse: s-maj=4.4km s-min=2.5km az=73.3*

*NEIC **16** 04:27:40.0±1.9, 32°.36S±0°.07×150°.75E±0°.09, h10km±2km, mb3.7/6, Error ellipse: s-maj=15.9km s-min=9.3km az=130.0*

*IDC **16** 04:27:39.5±5.8, 32°.54S×150°.56E, h0km, mbtmp3.9/4, ML3.9/4, Error ellipse: s-maj=127.6km s-min=26.1km az=171.0*

*NOU **16** 04:27:39.6, 32°.35S×150°.72E, h0km, MLv4.3/16, New South Wales, Australia*

ISC 16 04:27:38.2±1.3**, 32°.32S**±0°.02×**150°.84E**±0°.05**, h3**km±11km**, n59, σ1s.25**/67**, 4C, New South Wales**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGCD	Mangrove Creek	0.92	166	⇑P	Pb	04 27 56.4	-0.5
MGCD	Mangrove Creek	0.92	166	S	Sb	04 28 09.0	-0.5
MGCD	Mangrove Creek	0.92	166	P	Pb	04 27 56.3	-0.5
MGCD	Mangrove Creek	0.92	166	S	Sb	04 28 09.3	-0.2
NTLS	Newcastle Soft	0.99	128	P	Pb	04 27 57.6	-0.4
NTLS				S	Sn	04 28 11.4	-2.2
AUPHS	Peel High Scho	1.21	2	P	Pg	04 28 01.7	+0.2
AUPHS	Peel High Scho	1.21	2	S	Sg	04 28 17.7	+0.5
AUKHS	Kincumber High	1.23	158	P	Pn	04 28 01.9	-0.5
AUKHS	Kincumber High	1.23	158	S	Sn	04 28 18.5	-0.9
CATI	Cattai, Sydney	1.24	177	⇑P	Pb	04 28 01.8	-0.5
CATI				S	Sb	04 28 18.5	-0.2
YARR	Yarramundi, NS	1.30	185	P	Pn	04 28 02.8	-0.5
YARR				S	Sn	04 28 20.8	-0.4
SYDH	Sydney Hard Ro	1.45	183	⇑P	Pn	04 28 05.2	-0.1
SYDH	Sydney Hard Ro	1.45	183	P	Pn	04 28 05.2	-0.1
SYDH	Sydney Hard Ro	1.45	183	S	Sg	04 28 25.3	+0.6
RIV	Riverview	1.53	170	⇑P	Pb	04 28 06.7	-0.6
RIV	Riverview	1.53	170	S	Sg	04 28 26.9	-0.7
RIV	Riverview	1.53	170	P	Pb	04 28 06.7	-0.6
RIV	Riverview	1.53	170	S	Sg	04 28 27.5	-0.1
SYDS	Sydney Soft Ro	1.64	169	P	Pb	04 28 08.7	-0.4
MABG	Mt Annan Botan	1.75	182	P	Pn	04 28 10.0	+0.5
MABG				S	Sb	04 28 33.7	+0.2
OKDL	Oakdale	1.78	190	P	Pn	04 28 10.1	+0.2
OKDL				S	Sb	04 28 34.2	0.0
WTPK	Wilton Park	1.91	185	P	Pn	04 28 12.5	+0.9
WTPK				S	Sb	04 28 38.0	+0.1
ARMA	Armidale	2.01	20	P	Pb	04 28 15.2	-0.3
ARMA	Armidale	2.01	20	S	Sg	04 28 41.9	-0.9
ARMA	Armidale	2.01	20	Pn	Pb	04 28 14.8	-0.7
ARMA	Armidale	2.01	20	P	Pg	04 28 16.4	-0.3
ARMA	Armidale	2.01	20	S	Sg	04 28 42.6	-0.2
WOLH	Wollongong Har	2.09	179	P	Pb	04 28 15.6	-1.1
WOLH	Wollongong Har	2.09	179	P	Pb	04 28 15.7	-1.1
YNG	Young	2.84	225	P	Pn	04 28 25.5	+1.0
YNG				S	Sn	04 29 02.7	+3.4
CNB	Canberra Magne	3.23	202	P	Pn	04 28 30.4	+0.4
CNB	Canberra Magne	3.23	202	P	Pn	04 28 30.9	+0.9
CAN	Canberra	3.37	207	Pn	Pn	04 28 32.1	+0.3
CAN	Canberra	3.37	207	P	Pn	04 28 32.7	+0.9
CMSA	Cobar Meteorol	4.44	279	P	Pn	04 28 47.5	+1.0
CMSA	Cobar Meteorol	4.44	279	P	Pn	04 28 47.5	+1.0
MILA	Mila	4.93	196	P	Pn	04 28 54.5	+1.3
TOO	Toolangi	6.84	218	P	Pn	04 29 21.1	+1.6
	comp=Z,4.7nm,0.5s,comp=Z,0.1nm						
TOO	Toolangi	6.84	218	Pn	Pn	04 29 20.1	+0.6
EIDS	Eidsvold	6.92	2	Pn	Pn	04 29 22.0	+1.4
LHI	Lord Howe Isla	7.04	86	Pn	Pn	04 29 23.4	+1.2
STKA	Stephens Creek	7.85	271	Pn	Pn	04 29 32.5	-0.9
	comp=Z,1.3nm,0.3s,baz=98,slow=18,SNR=13						
STKA				Sn	Sn	04 30 57.5	-5.3
	comp=Z,4.0nm,0.3s,baz=49,slow=18,SNR=6.9						
STKA				Lg	Lg	04 31 42.3	
	comp=Z,2.6nm,0.3s,baz=193,slow=6.0,SNR=3.5						
	comp=Z,2.7nm,0.3s						
STKA	Stephens Creek	7.85	271	P	Pn	04 29 33.0	-0.4
QLP	Quilpie	8.11	313	P	Pn	04 29 37.7	+0.8
	comp=Z,23nm,0.8s,comp=Z,0.1nm						
QLP	Quilpie	8.11	313	P	Pn	04 29 37.8	+0.9
ARPS	Mount Arapiles	8.65	237	P	Pn	04 29 44.5	+0.2
	comp=Z,12nm,0.8s,comp=Z,0.0nm						
HTT	Hallett	10.08	260	P	Pn	04 30 04.0	0.0
BBOO	Buckleboo	12.48	264	Pn	Pn	04 30 35.9	-0.9
BBOO	Buckleboo	12.48	264	P	Pn	04 30 36.6	-0.1
DZM	Mont Dzumac	17.21	58	P	P	04 31 45.4	+3.9
	comp=Z,0.8nm,0.3s,baz=175,slow=12,SNR=7.2						
	comp=Z,2.0nm,0.4s						
DZM	Mont Dzumac	17.21	58		P	04 31 41.9	+0.5
DZM				IAmb	IAmb	04 32 16.4	
	comp=Z,14nm,1.4s						
AS31	Alice Springs	17.24	296		P	04 31 42.1	+0.3
ASAR	Alice Springs	17.24	296	P	Pn	04 31 40.7	+0.5
	comp=Z,0.3nm,0.3s,baz=121,slow=12,SNR=27						
	comp=Z,1.2nm,0.5s						
ASAR	Alice Springs	17.24	296	Pn	Pn	04 31 37.3	-2.9
WR8	Warramunga Arr	19.12	306		P	04 32 03.1	+0.7
WR8				IAmb	IAmb	04 32 05.6	
	comp=Z,6.8nm,1.4s						
WRA	Warramunga Arr	19.24	306	P	P	04 32 04.6	+0.9
	comp=Z,0.2nm,0.3s,baz=134,slow=10,SNR=8.8						
	comp=Z,1.5nm,0.7s						
WB0	Warramunga Arr	19.32	306		P	04 32 05.0	+0.4
WB0				IAmb	IAmb	04 32 07.8	
	comp=Z,5.4nm,1.2s						
FORT	Forrest	19.47	268	Pn	P	04 32 07.3	+1.1
FORT				IAmb	IAmb	04 32 31.0	
	comp=Z,2.8nm,1.1s						
KNRA	Kununurra	26.01	304	P	P	04 33 11.3	-1.2

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*IDC **16** 04:27:45.0±0.8, 6°.74N×72°.92W, h161km±10km, mb3.1/3, mbtmp3.7/5, Error ellipse: s-maj=34.7km s-min=7.5km az=131.0*

*RSNC **16** 04:27:46.2±0.0, 7°N±1°×7°3W±°, h150km±1km, M3.6, mB4.4, mb4.0, ML3.3, Mw(mB)3.5*

ISC 16 04:27:45.0±0.8**, 6°.86N**±0°.03×**73°.15W**±0°.04**, h154**km±6km**, n43, σ1s.35**/72**, mb3.3**/3**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.27	187	P	Pn	04 28 06.3	+0.1
BARC				S	Sn	04 28 22.6	+0.2
BRJC	Barrancabermej	0.60	281	P	Pn	04 28 07.9	+0.6
BRJC				S	Sn	04 28 25.1	+0.8
PAMC	Pamplona, Colo	0.65	43	P	Pn	04 28 09.1	+0.9
PAMC				S	Sn	04 28 26.2	+0.3
RUSC	La Rusia	0.96	176	P	Pn	04 28 10.1	-0.3
RUSC				S	Sn	04 28 29.0	-0.9
PTBC	PUERTO BERRIO,	1.34	256	P	Pn	04 28 12.6	-0.6
PTBC				S	Sn	04 28 34.1	-0.7
OCAC	Ocana	1.38	353	P	Pn	04 28 14.4	+0.6
OCAC				S	Sn	04 28 37.0	+1.1
SPBC	San Pablo de B	1.51	217	P	Pn	04 28 15.1	0.0
SPBC				S	Sn	04 28 37.5	-0.7
CHIC	Chingaza	2.29	195	P	Pn	04 28 24.0	-0.2
CHIC				S	Sn	04 28 53.9	-0.5
ROSC	El Rosal	2.32	210	P	Pn	04 28 26.4	+1.9
	284nm,0.5s,baz=90,slow=20,SNR=125						
ROSC				S	Sn	04 28 56.6	+1.6
	673nm,0.5s,baz=69,slow=19,SNR=19						
ROSC	El Rosal	2.32	210	P	Pn	04 28 25.8	+1.2
ROSC				S	Sn	04 28 56.1	+1.1
CVER	Cruz Verde, Cu	2.50	202	P	Pn	04 28 27.6	+0.8
CVER				S	Sn	04 28 59.2	+0.2
UREC	San Jos de Ur	2.52	291	P	Pn	04 28 26.1	-0.5
UREC				S	Sn	04 28 57.3	-1.4
GUY2C	Guyana, Caldas	2.74	234	P	Pn	04 28 31.1	+1.4
GUY2C				S	Sn	04 29 04.8	+0.6
VILC	Villavicencio,	2.78	191	P	Pn	04 28 29.5	-0.5
VILC				S	Sn	04 29 04.0	-0.8
NIZA	Niza - Manizal	2.92	232	P	Pn	04 28 32.5	+0.7
CBOC	Ciudad Bolivar	3.01	251	P	Pn	04 28 33.7	+0.8
CBOC				S	Sn	04 29 10.5	+0.6
DBBC	Dabeiba	3.04	273	P	Pn	04 28 33.7	+0.6
DBBC				S	Sn	04 29 10.4	0.0
ARGC	Ariguani, Magd	3.17	340	P	Pn	04 28 36.3	+1.6
SDV	Santo Domingo	3.20	51	P	Pn	04 28 36.2	+0.9
	35nm,0.3s,baz=203,slow=3.0,SNR=63						
SDV				S	Sn	04 29 12.4	-1.8
	46nm,0.4s,baz=66,slow=20,SNR=16						
SDV	Santo Domingo	3.20	51	P	Pn	04 28 35.7	+0.4
APAC	Apartado, Choc	3.56	287	P	Pn	04 28 39.8	+0.2
PRAC	Prado	3.57	209	P	Pn	04 28 40.0	+0.1
ORTC	Ortega, Tolima	3.60	216	P	Pn	04 28 40.7	+0.5
SJCC	San Jacinto, C	3.62	326	P	Pn	04 28 39.7	-0.8
SJCC				S	Sn	04 29 21.2	-2.5
PLMC	San Jos del P	3.67	238	P	Pn	04 28 41.5	+0.3
PLMC				S	Sn	04 29 25.1	+0.3
LCBC	Los crdobas,	3.75	302	P	Pn	04 28 42.8	+0.6
URMC	La Uribe, Meta	3.79	199	P	Pn	04 28 43.1	+0.3
URMC				S	Sn	04 29 26.2	-1.5
YOTC	Yotoco, Valle	4.28	228	P	Pn	04 28 48.8	-0.3
YOTC				S	Sn	04 29 39.3	+0.3
SMRC	Santa Marta, M	4.41	346	P	Pn	04 28 51.4	+0.7
SMRC				S	Sn	04 29 39.9	-2.0
CAPC	Capurgana	4.52	293	P	Pn	04 28 52.4	+0.2
CAPC				S	Sn	04 29 42.8	-1.8
PIZC	Pizarro, Choco	4.59	246	P	Pn	04 28 55.0	+1.9
PIZC				S	Sn	04 29 50.4	+4.2
PTAC	Punta Ardita,	4.63	274	P	Pn	04 28 53.2	-0.5
MACC	Macarena, Meta	4.74	188	P	Pn	04 28 53.0	-2.1
MACC				S	Sn	04 29 44.6	-5.1
URIC	Uribia, Colomb	4.94	13	P	Pn	04 28 57.0	-0.7
URIC				S	Sn	04 29 52.6	-2.0
JAMC	Jamundi, Valle	5.04	224	P	Pn	04 28 59.7	+0.4
	608nm14nm,0.5s						
JAMC				S	Sn	04 29 56.8	-0.5
	608nm14nm,0.5s						
POPC	Popayan, Colom	5.55	219	P	Pn	04 29 05.7	-0.3
	9.8nm,0.6s						
FLOC	Florencia	5.81	206	P	Pn	04 29 08.8	-0.5
	364nm27nm,1.2s						
FLOC				S	Sn	04 30 14.9	-0.3
	364nm27nm,1.2s						
BCIP	Isla Barro Col	7.01	290	P	Pn	04 29 23.9	-1.3
BCIP				S	Sn	04 30 41.5	-2.3
TXAR	Lajitas Array	36.41	312	P	P	04 34 36.2	+1.2
	0.3nm,0.5s,baz=122,slow=8.7,SNR=6.0						
	0.3nm,0.5s						
PDAR	Pinedale Array	48.03	324	P	P	04 36 09.8	+0.8
	0.4nm,0.7s,baz=119,slow=9.1,SNR=4.1						
	0.4nm,0.7s						
YKA	Yellowknife Ar	63.22	340	P	P	04 37 57.1	+0.5
	0.9nm,0.8s,baz=137,slow=6.1,SNR=12						
	0.9nm,0.8s						
ASAR	Alice Springs	149.11	234	PKPbc	PKiKP	04 47 14.6	-2.6
	0.5nm,0.8s,baz=121,slow=3.6,SNR=3.4						
WRA	Warramunga Arr	150.33	241	PKPbc	PKiKP	04 47 18.2	-1.6
	0.5nm,0.5s,baz=109,slow=2.7,SNR=4.5						

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*NEIC **16** 04:29:07.8±1.8, 3°.6S±0°.1×151°.0E±0°.1, h403km±9km, mb4.0/29, Error ellipse: s-maj=21.3km s-min=16.0km az=108.0*

*IDC **16** 04:29:08.7±2.0, 3°.64S×150°.96E, h419km±23km, mb3.3/10, mbtmp4.1/12, Error ellipse: s-maj=22.0km s-min=15.5km az=103.0*

ISC 16 04:29:07.4±0.6**, 3°.64S**±0°.08×**151°.1E**±0°.1**, h400**km**, n51, σ1s.13**/52**, mb3.9**/24**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.21	117		Pn	04 30 00.2	+0.9
MANU	Manus Island	4.04	293		Pn	04 30 23.1	+3.2
PMG	Port Moresby	6.93	214	P	P	04 30 51.4	+0.6
	10nm,0.4s,baz=27,slow=9.2,SNR=4.8						
PMG	Port Moresby	6.93	214		P	04 30 51.7	+0.8
CTA	Charters Tower	17.01	196	P	P	04 32 43.1	+1.6
	8.1nm,0.5s,baz=16,slow=9.0,SNR=13						
CTAO	Charters Tower	17.01	196	P	P	04 32 42.9	+1.4
WB0	Warramunga Arr	22.85	224	P	P	04 33 37.8	-0.1
WB0				IAmb	IAmb	04 33 47.6	
	comp=Z,3.1nm,1.1s						
WR8	Warramunga Arr	22.90	224	P	P	04 33 37.9	-0.5
WR8				IAmb	IAmb	04 33 49.8	
	comp=Z,2.1nm,0.9s						
WRA	Warramunga Arr	23.01	224	P	P	04 33 38.0	-1.4
	comp=Z,0.6nm,0.3s,baz=54,slow=10,SNR=8.5						
	comp=Z,0.6nm,0.3s						
WRA	Warramunga Arr	23.01	224	P	P	04 33 38.3	-1.0
DZM	Mont Dzumac	23.61	142	P	P	04 33 46.0	+1.2
	comp=Z,3.9nm,0.4s,baz=278,slow=7.1,SNR=8.4						
	comp=Z,3.9nm,0.4s						
DZM	Mont Dzumac	23.61	142	P	P	04 33 45.5	+0.7
DZM				IAmb	IAmb	04 33 46.8	
	comp=Z,6.5nm,0.6s						
ASAR	Alice Springs	25.92	218	P	P	04 34 04.5	-0.9
	comp=Z,1.4nm,0.6s,baz=58,slow=8.5,SNR=15						
ASAR				ScP	ScP	04 40 20.9	-2.2
	comp=Z,1.1nm,1.0s,baz=52,slow=4.5,SNR=5.5						
	comp=Z,1.4nm,0.6s						
FITZ	Fitzroy Crossi	28.76	238	P	P	04 34 27.9	-2.5
FORT	Forrest	34.65	216	P	P	04 35 19.4	-1.8
TAU	Tasmania Unive	39.24	184	P	P	04 36 00.1	+1.1
MORW	Morawa	41.77	229	P	P	04 36 18.9	-0.9
RTZ	Ruatahuna	42.05	149	P	P	04 36 23.1	+1.2
RTZ				IAmb	IAmb	04 36 23.8	
	comp=Z,7.3nm,0.7s						
BKZ	Black Stump Fm	42.23	150	P	P	04 36 23.0	-0.3
BKZ				IAmb	IAmb	04 36 23.2	
	comp=Z,2.8nm,1.0s						
TCW	Tory Channel	42.81	154	P	P	04 36 28.0	+0.1
BHW	Baring Head	43.23	154	P	P	04 36 30.7	-0.5
PEA0B	Petropavlovsk-	56.82	5	P	P	04 38 11.5	-0.1
PETK	Petropavlovsk-	56.82	5	P	P	04 38 11.4	-0.2
	comp=Z,2.7nm,0.5s,baz=164,slow=6.2,SNR=9.4						

	comp=Z,2.7nm,0.5s						
PETK	Petropavlovsk-	56.82	5	P	P	04 38 11.8	+0.1
SONM	Songino Array	64.45	328	P	P	04 39 03.9	+1.2
	comp=Z,0.8nm,0.5s,baz=121,slow=9.7,SNR=4.1						
	comp=Z,0.8nm,0.5s						
SONM	Songino Array	64.45	328	P	P	04 39 03.2	+0.4
O14K	Tigyukauivet M	73.07	23	P	P	04 39 55.4	+0.5
L14K	Kuka Creek	73.89	21	P	P	04 40 00.1	+0.5
ACHA	Angle Creek He	74.93	26	P	P	04 40 05.9	+0.2
L16K	Owhat River	75.31	22	P	P	04 40 08.0	+0.4
L16K				IAmb	IAmb	04 40 29.8	
	comp=Z,3.1nm,1.1s						
L18K	Granite Mounta	76.66	22	P	P	04 40 16.4	+1.2
L18K				IAmb	IAmb	04 40 35.6	
	comp=Z,1.3nm,1.0s						
MKAR	Makanchi Array	78.34	319	P	P	04 40 24.2	-0.5
	comp=Z,0.3nm,0.6s,baz=111,slow=6.0,SNR=4.1						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	78.34	319	P	P	04 40 24.1	-0.7
H19K	Roundabout Mou	78.70	20	P	P	04 40 27.0	+0.8
G19K	Purcell Mounta	78.86	19	P	P	04 40 27.5	+0.4
G19K				IAmb	IAmb	04 40 29.2	
	comp=Z,3.7nm,0.9s						
C18K	Utukok River	79.21	16	P	P	04 40 28.9	-0.2
ZALV	Zalesovo Beam	79.25	327	P	P	04 40 28.1	-1.4
	comp=Z,0.7nm,0.4s,baz=114,slow=6.1,SNR=4.5						
	comp=Z,0.7nm,0.4s						
ZALV	Zalesovo Beam	79.25	327	P	P	04 40 28.2	-1.2
E19K	Redstone River	79.61	18	P	P	04 40 31.4	+0.4
E19K				IAmb	IAmb	04 40 32.6	
	comp=Z,3.6nm,0.8s						
TRF	Thorofare Moun	79.80	23	P	P	04 40 31.1	-1.3
TRF				IAmb	IAmb	04 40 38.9	
	comp=Z,5.0nm,1.2s						
CCB	Clear Creek Bu	81.34	22	P	P	04 40 38.4	-1.8
IL31		81.74	22	P	P	04 40 40.7	-1.6
IL31				IAmb	IAmb	04 40 41.5	
	comp=Z,4.1nm,0.8s						
ILAR	Eielson Array	81.74	22	P	P	04 40 41.0	-1.3
	comp=Z,2.2nm,0.7s,baz=248,slow=5.4,SNR=34						
	comp=Z,2.2nm,0.7s						
H24K	Noodor Dome	81.87	21	P	P	04 40 42.8	-0.2
H24K				IAmb	IAmb	04 40 44.1	
	comp=Z,2.1nm,0.8s						
F24K	Squaw Lake	82.67	20	P	P	04 40 47.7	+0.6
F24K				IAmb	IAmb	04 40 48.6	
	comp=Z,2.8nm,0.8s						
I27K	Kandik River	84.11	23	P	P	04 40 54.4	0.0
I27K				IAmb	IAmb	04 40 55.2	
	comp=Z,5.4nm,1.0s						
C27K	Jago River	84.98	19	P	P	04 40 58.1	-0.5
E28M	Babbage River	85.97	20	P	P	04 41 02.9	-0.5
E28M				IAmb	IAmb	04 41 04.8	
	comp=Z,1.3nm,0.8s						
F30M	Barrier River	86.98	22	P	P	04 41 08.1	-0.1
BVAR	Borovoye Array	87.30	323	P	P	04 41 08.2	-1.8
	comp=Z,1.2nm,0.8s,baz=91,slow=7.2,SNR=5.2						
	comp=Z,1.2nm,0.8s						
NVAR	Mina Array Bea	92.72	52	P	P	04 41 36.4	+0.6
	comp=Z,0.3nm,0.6s,baz=257,slow=5.1,SNR=2.2						
	comp=Z,0.3nm,0.6s						

IDC 16 04:37:08.1±1.5,**3°.71S**×**136°.08E,h0^{km},mb3.7**/3,
mbtmp3.8/5,**ML3.7**/2,**Error ellipse: s-maj=70.1km**
s-min=28.4km az=87.0,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.22	186	Pn	P	04 40 59.4	-1.5
	0.2nm,0.3s,baz=6.6,slow=12,SNR=4.6						
WRA				Sn	Sn	04 43 44.5	-14
	0.1nm,0.3s,baz=14,slow=22,SNR=1.6						
	1.6nm,0.7s						
ASAR	Alice Springs	19.95	186	P	P	04 41 41.2	-0.8
	0.4nm,0.3s,baz=11,slow=10,SNR=31						
	5.7nm,0.8s						
MKAR	Makanchi Array	69.00	324	P	P	04 48 15.3	-0.3
	0.4nm,0.8s,baz=108,slow=7.3,SNR=3.9						
	0.4nm,0.8s						
BVAR	Borovoye Array	78.64	326	P	P	04 49 12.8	+0.8
	0.5nm,0.5s,baz=113,slow=9.7,SNR=3.6						
	0.5nm,0.5s						
ILAR	Eielson Array	87.83	25	P	P	04 49 58.6	-0.5
	0.5nm,0.8s,baz=271,slow=4.3,SNR=4.9						
	0.5nm,0.8s						

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*TAP **16** 04:37:20.8,23°.96N×122°.86E,h8^{km}±1^{km},ML2.9,D*
*JMA **16** 04:37:21.2±0.2,24°.0N±0°.6×122°.9E±0°.4,h17^{km}±2^{km},*
MV2.8/13,NEAR ISHIGAKIJIMA ISLAND
ISC 16 04:37:20.4±1.1,**23°.95N**±0°.04×**122°.86E**±0°.02,**h13**^{km}±9^{km},
n45,σ**0^{s}.61**/84,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.51	9	P	Pg	04 37 30.6	+0.2
JYNG				*e*S	Sg	04 37 37.1	-0.1
EOS4	EOS4	0.52	289	*i* P	Pg	04 37 30.6	0.0
EOS4				S	Sg	04 37 37.6	+0.1
YOJ	Yonaguni jima	0.53	15	*i* P	Pg	04 37 31.0	+0.2
YOJ				*i* S	Sg	04 37 37.9	0.0
YOJ	Yonaguni jima	0.53	15	P	Pg	04 37 31.0	+0.2
YOJ				S	Sg	04 37 37.8	-0.2
EOS3	EOS3	0.60	305	*i* P	Pg	04 37 32.1	+0.1
EOS3				S	Sb	04 37 40.7	-0.3
EOS2	EOS2	0.74	310	P	Pg	04 37 35.1	+0.4
EOS2				*e*S	Sb	04 37 46.0	+0.9
HATJ	Hateruma jima	0.88	83	P	Pg	04 37 37.1	-0.2
HATJ				*e*S	Sg	04 37 49.2	+0.4
IRIF	Iriomote-Funau	0.89	64	P	Pg	04 37 37.5	-0.1
IRIF				S	Sb	04 37 49.8	+0.3
JKRS	Kuro-shima	1.09	74	P	Pb	04 37 41.3	+0.1
JKRS				*e*S	Sb	04 37 55.5	0.0
EWUT	Wuta	1.10	297	*e*P	Pb	04 37 40.5	-0.9
EWUT				*e*S	Sb	04 37 55.8	+0.1
ENA	Nanau	1.12	295	*e*P	Pb	04 37 40.8	-1.0
ENA				*e*S	Sb	04 37 55.9	-0.5
TWC	Suao	1.13	306	*e*P	Pb	04 37 40.9	-1.0
TWC				*e*S	Sb	04 37 55.9	-0.6
NACB	Ninganchiao	1.18	281	*e*P	Pn	04 37 41.9	-0.7
NACB				*e*S	Sg	04 37 58.8	+0.5
SHUL	Shoufeng	1.20	263	*e*P	Pn	04 37 42.2	-0.7
SHUL				*e*S	Sb	04 37 58.7	+0.4
EGS		1.23	317	*e*P	Pn	04 37 43.3	0.0
NDS	Dongshan	1.24	304	*e*P	Pn	04 37 43.5	-0.1
NDS				*e*S	Sb	04 37 59.4	-0.4
JIJ	Ishigaki jima	1.25	70	P	Pn	04 37 43.5	-0.1
JIJ				S	Sb	04 37 59.9	0.0
ETM	Tongmen	1.25	271	*e*P	Pn	04 37 42.7	-1.0
ETM				*e*S	Sb	04 37 59.7	-0.2
ETLH	Xiulin Townshi	1.28	282	*e*P	Pn	04 37 44.0	-0.1
TWB1	Santiao Chiao	1.32	323	*e*S	Sb	04 38 01.1	-0.9
LXIB	Xiulin Townshi	1.32	273	*e*P	Pn	04 37 44.3	-0.5
LXIB				*e*S	Sb	04 38 02.0	-0.2
TWE	Neicheng	1.33	306	*i* P	Pn	04 37 45.3	+0.6
TWE				*i* S	Sb	04 38 01.9	-0.4
LATG	Datong	1.35	296	*e*P	Pn	04 37 45.1	0.0
LATG				*e*S	Sn	04 38 03.4	+0.4
ENTT	Nioudou	1.36	301	*e*P	Pn	04 37 45.7	+0.4
ENTT				*e*S	Sb	04 38 03.4	+0.1
WARBT	Fenglin Townsh	1.36	261	*e*P	Pn	04 37 43.8	-1.5
WARBT				*e*S	Sn	04 38 02.5	-0.8
TIPB	Shuangxi	1.39	318	*e*P	Pn	04 37 45.7	+0.1
TIPB				*e*S	Sn	04 38 02.9	-1.0
HGSD	Ruisui	1.39	251	*e*P	Pn	04 37 44.0	-1.5
HGSD				*e*S	Sn	04 38 03.9	+0.1
FUSB	Fushanzhiwuyua	1.41	305	*e*P	Pn	04 37 46.6	+0.6
FUSB				*e*S	Sb	04 38 05.4	+0.7
NNSB	Datong	1.43	290	*e*P	Pn	04 37 46.6	+0.4
NNSB				*e*S	Sn	04 38 05.5	+0.5
NNSH	Datong	1.43	290	*e*P	Pn	04 37 46.6	+0.3
NNS	Nan Shan	1.44	290	*e*P	Pn	04 37 46.4	0.0
NNS				*e*S	Sb	04 38 05.9	+0.4
SXI1	Grass Mountain	1.45	322	P	Pn	04 37 46.5	0.0
SXI1				*e*S	Sb	04 38 05.8	0.0
EHYH	Wanrong	1.46	252	*e*P	Pn	04 37 46.0	-0.5
EHYH				*e*S	Sn	04 38 05.5	0.0
JISG	Ishigakijimahi	1.47	64	P	Pn	04 37 46.2	-0.5
JISG				*e*S	Sn	04 38 05.3	-0.6
NWLT	Wulai	1.48	304	*e*P	Pn	04 37 47.4	+0.5
NWLT				*e*S	Sn	04 38 06.8	+0.5
NWF	Wu-fen Shan	1.49	319	*e*P	Pn	04 37 46.3	-0.7
NWF				*e*S	Sn	04 38 06.0	-0.3
WFSB	Wu-fen Shan	1.49	319	*e*P	Pn	04 37 46.4	-0.5
WFSB				*e*S	Sn	04 38 06.0	-0.2
YHNB	Yeheng	1.53	298	P	Pn	04 37 48.4	+0.8
YHNB				*i* S	Sb	04 38 08.2	+0.1
NSK	Sanguang	1.55	298	*e*P	Pn	04 37 48.4	+0.5
NSK				*e*S	Sn	04 38 08.5	+0.7
TATO	Taipei	1.61	310	*e*P	Pb	04 37 50.3	+0.2
TATO				*e*S	Sb	04 38 10.3	0.0
NFF	Wufeng Townshi	1.73	294	*e*P	Pn	04 37 51.1	+0.9
NFF				*e*S	Sb	04 38 13.5	-0.2
TWY	Chenhua	1.75	319	*e*P	Pn	04 37 51.4	+0.9
WHP	Taichung City	1.78	281	*e*P	Pn	04 37 52.1	+1.2
WHP				*e*S	Sn	04 38 14.7	+1.2
JTJ	Tarama	1.82	67	P	Pb	04 37 53.8	+0.2
MASBT	Mashibuluo	2.44	237	*e*P	Pn	04 38 00.9	+0.9
MASBT				*e*S	Sn	04 38 31.8	+2.0

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*DJA **16** 04:48:44.2±1.4,7°N±35°×12°5E±°,h19^{km}±37^{km},M4.6/6,*
mB5.0/3,mb4.8/5,MLv4.6/6,Mw(mB)4.3/3
*IDC **16** 04:48:45.1±1.0,6°.63N×125°.06E,h0^{km},mb3.7/6,*
mbtmp3.7/6,MS2.7/1,Error ellipse: s-maj=22.4km
s-min=9.9km az=134.0
ISC 16 04:48:47.2±0.8,**6°.74N**±0°.09×**125°.2E**±0°.1,**h10**^{km}**,n16,**
σ**1^{s}.97**/15,**mb3.6**/6,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.53	52	Pg	Pg	04 48 58.5	+1.0
	641nm,0.3s,baz=253,slow=6.7,SNR=21						
DAV				Lg	Lg	04 49 07.3	
	695nm,0.3s,baz=285,slow=20,SNR=9.2						
DAV				LR	LR	04 49 27.4	
	comp=Z,1µm,20.9s,baz=336,slow=63						
DAV	Davao City (W)	0.53	52	P	Pg	04 48 58.0	+0.5
DAV	Davao City (W)	0.53	52	P	Pn	04 49 01.0	+0.2
SGSI	Sangihe	3.06	173	P	Pn	04 49 35.3	-0.3
GTOI	Gorontalo	6.43	200	P	Pn	04 50 19.9	-2.2
	0.2nm495nm47nm,0.6s						
MRSI	Marisa	7.00	207	P	Pn	04 50 27.5	-2.4
SANI	Sanana	8.77	175	P	Pn	04 50 54.0	-0.2
KRAI	Karang Ratu	10.50	162	P	Pn	04 51 18.9	+1.0
SNJI	Sawahan-Nganju	19.66	223	P	Pn	04 53 23.3	+5.2
WRA	Warramunga Arr	28.01	161	P	P	04 54 36.9	-1.7
	0.9nm,0.9s,baz=342,slow=9.0,SNR=1.8						
	0.9nm,0.9s						
CMAR	Chiang Mai Arr	28.06	297	LR	LR	05 06 19.3	
	comp=Z,15nm,19.0s,baz=350,slow=38						
ASAR	Alice Springs	31.41	164	P	P	04 55 07.0	-1.7
	0.4nm,0.5s,baz=344,slow=7.2,SNR=7.2						
	0.4nm,0.5s						
STKA	Stephens Creek	41.48	159	P	P	04 56 34.5	-0.1
	1.2nm,0.5s,baz=339,slow=4.2,SNR=3.8						
	1.2nm,0.5s						
MKAR	Makanchi Array	54.21	325	P	P	04 58 12.6	-0.6
	0.4nm,0.6s,baz=126,slow=8.2,SNR=5.5						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	58.38	327	P	P	04 58 43.1	+0.3
	0.2nm,0.3s,baz=125,slow=8.0,SNR=1.6						
	0.2nm,0.3s						
ILAR	Eielson Array	83.08	26	P	P	05 01 12.2	-0.6
	0.5nm,1.0s,baz=249,slow=4.4,SNR=4.3						
	0.5nm,1.0s						

IDC 16 04:50:12.3±1.2,**6°.61N**×**125°.11E,h0**^{km}**,mb3.6**/4,
mbtmp3.6/4,**Error ellipse: s-maj=24.4km s-min=10.2km**
az=132.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.65	45	Pg	Pb	04 50 26.3	-0.3
	789nm,0.3s,baz=254,slow=3.9,SNR=11						
DAV				Lg	Lg	04 50 32.6	
	689nm,0.3s,baz=239,slow=5.6,SNR=10						
WRA	Warramunga Arr	27.90	161	P	P	04 56 03.8	-0.5
	0.5nm,0.7s,baz=329,slow=10.0,SNR=3.4						
	0.5nm,0.7s						
ASAR	Alice Springs	31.29	164	P	P	04 56 34.1	-0.2
	0.3nm,0.5s,baz=345,slow=8.6,SNR=2.6						
	0.3nm,0.5s						
MKAR	Makanchi Array	54.29	325	P	P	04 59 40.6	+0.2
	0.3nm,0.5s,baz=115,slow=8.6,SNR=4.6						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	58.46	327	P	P	05 00 09.7	-0.4
	0.9nm,0.7s,baz=126,slow=6.2,SNR=7.1						
	0.9nm,0.7s						

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*NEIC **16** 04:50:33.3±1.7,18°.41S±0°.08×172°.14W±0°.09,h10^{km}±1^{km},*
mb4.6/18,Error ellipse: s-maj=18.0km s-min=6.4km
az=228.0
*IDC **16** 04:50:34.9±1.9,18°.49S×172°.64W,h0^{km},mb4.4/6,*
mbtmp4.4/7,ML3.9/1,MS3.7/26,Error ellipse:
s-maj=118.8km s-min=19.3km az=153.0
ISC 16 04:50:33.4±0.5,**18°.54S**±0°.09×**172°.18W**±0°.07,**h10**^{km}**,n72,**
σ**1^{s}.82**/39,**mb4.6**/17,**MS3.9**/25,**Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	2.20	104	Pn	Pn	04 51 09.5	-0.5
NIUE				Sn	Sn	04 51 33.3	-4.0
AFI	Afiamalu	4.62	5	Pn	Pn	04 51 41.2	-2.2
RAR	Rarotonga	11.97	105	LR	LR	04 56 55.5	
	comp=Z,316nm,19.4s,baz=266,slow=31						
PINNC	Pines Island,	19.50	255	P	P	04 54 60.0	-0.8
DZM	Mont Dzumac	20.35	256	P	P	04 55 10.2	0.0
	0.3nm,0.3s,baz=81,slow=18,SNR=7.2						
DZM				LR	LR	05 01 34.7	
	comp=Z,291nm,21.9s,baz=146,slow=33						
	11nm,0.9s						
DZM	Mont Dzumac	20.35	256	*e*P	P	04 55 06.1	-4.1
	45nm,1.4s						
DZM				*e*LR	LR	04 59 50.8	
	450nm,24.4s						
DZM	Mont Dzumac	20.35	256	P	P	04 55 10.3	0.0
DZM				IAmb	IAmb	04 55 22.0	
	comp=Z,25nm,1.3s						
PPT2	Papeete2	21.51	91	*e*LR	LR	05 00 24.5	
	comp=Z,333nm,24.5s						
PPT2				*e*LR	LR	05 00 28.5	
	comp=Z,588nm,25.8s						
PPT	Papeete	21.51	91	LR	LR	05 01 20.3	
	comp=Z,180nm,21.0s,baz=255,slow=29						
TBI	Tubuai	21.74	107	*e*LR	LR	05 00 37.5	
	comp=Z,1µm,31.0s						
TBI				*e*LR	LR	05 00 38.9	
	comp=Z,2µm,29.2s						
URZ	Urewera	21.76	203	LR	LR	05 05 57.3	
	comp=Z,22nm,18.5s,baz=358,slow=43						
BKZ	Black Stump Fm	22.79	203		P	04 55 37.0	+0.8
BFZ	Birch Farm	24.21	202	P	P	04 55 50.0	-0.2
BFZ				IAmb	IAmb	04 56 01.8	
	comp=Z,19nm,1.0s						
TUWZ	Tuamarina	25.72	205	P	P	04 56 04.1	+0.2
TAOE	Nuku Hiva Isla	32.52	77	*e*LR	LR	05 05 31.5	
	comp=Z,244nm,24.8s						
CTA	Charters Tower	39.19	261	LR	LR	05 12 08.6	
	comp=Z,125nm,21.9s,baz=44,slow=33						
CTAO	Charters Tower	39.19	261	P	P	04 58 00.8	-1.1
CTAO				IAmb	IAmb	04 58 03.8	
	comp=Z,14nm,1.4s						
PMG	Port Moresby	40.41	277	LR	LR	05 12 44.7	
	comp=Z,148nm,18.9s,baz=160,slow=33						
COEN	Coen	43.02	269	P	P	04 58 32.8	-0.8
COEN				IAmb	IAmb	04 59 14.4	
	comp=Z,9.8nm,1.3s						
STKA	Stephens Creek	43.57	243	LR	LR	05 13 37.1	
	comp=Z,74nm,21.6s,baz=25,slow=32						
BBOO	Buckleboo	48.32	242	P	P	04 59 15.3	0.0
BBOO				IAmb	IAmb	04 59 17.5	
	comp=Z,6.8nm,1.1s						
WR8	Warramunga Arr	50.19	259	P	P	04 59 28.4	-1.3
WB0	Warramunga Arr	50.31	259	P	P	04 59 29.2	-1.4
WB0				IAmb	IAmb	04 59 34.3	
	comp=Z,14nm,1.4s						
AS31	Alice Springs	50.32	254	P	P	04 59 30.8	0.0
ASAR	Alice Springs	50.32	254	P	P	04 59 30.4	-0.4
	comp=Z,7.3nm,0.7s,baz=87,slow=8.3,SNR=40						
ASAR				LR	LR	05 19 44.2	
	comp=Z,60nm,19.7s,baz=100,slow=35						
	comp=Z,7.3nm,0.7s						
ASAR	Alice Springs	50.32	254	P	P	04 59 29.9	-0.9
WRAB	Tennant Creek	50.33	259	P	P	04 59 30.3	-0.5
WRA	Warramunga Arr	50.34	259	P	P	04 59 29.9	-0.9
	comp=Z,2.3nm,0.5s,baz=98,slow=7.0,SNR=18						
	comp=Z,2.3nm,0.5s						
WRA	Warramunga Arr	50.34	259	P	P	04 59 29.2	-1.7
RPN	Rapa Nui	58.05	111	LR	LR	05 20 01.9	
	comp=Z,91nm,20.8s,baz=352,slow=30						
FITZ	Fitzroy Crossi	58.76	260	P	P	05 00 31.6	-0.5
BATI	Baumata	62.44	268	LR	LR	05 28 21.2	
	comp=Z,88nm,18.0s,baz=146,slow=37						
MJAR	Matsushiro Arr	72.08	320	LR	LR	05 27 45.6	
	comp=Z,29nm,19.7s,baz=152,slow=31						
LPIG	La Paz	73.71	57	LR	LR	05 28 23.5	
	comp=Z,69nm,18.3s,baz=252,slow=31						
PFO	Pinyon Flats O	74.23	46	LR	LR	05 29 12.3	
	comp=Z,49nm,20.6s,baz=55,slow=31						
JNU	Nakatsue	74.78	313	LR	LR	05 29 25.9	
	comp=Z,30nm,21.7s,baz=63,slow=31						
ASAJ	Asahikawa	74.81	328	LR	LR	05 29 18.2	
	comp=Z,31nm,19.8s,baz=152,slow=31						
YBH	Yreka Blue Hor	75.41	36	LR	LR	05 28 40.2	
	comp=Z,5.1nm,18.9s,baz=314,slow=30						
NVAR	Mina Array Bea	75.89	41	P	P	05 02 25.4	+4.9
	comp=Z,4.1nm,1.0s,baz=222,slow=10.0,SNR=14						
NVAR				LR	LR	05 30 27.8	
	comp=Z,77nm,18.9s,baz=335,slow=31						
	comp=Z,4.1nm,1.0s						
NVAR	Mina Array Bea	75.89	41	P	P	05 02 17.1	-3.4
G08A	Pilot Rock	79.80	35	P	P	05 02 42.5	+0.5
G08A				IAmb	IAmb	05 02 47.3	
	comp=Z,8.1nm,1.2s						
EPH	Ephrata	80.78	33	P	P	05 02 49.5	+2.4
EPH				IAmb	IAmb	05 02 54.1	
	comp=Z,10nm,1.3s						
PMSA	Palmer Station	80.85	156	LR	LR	05 33 16.9	
	comp=Z,45nm,18.5s,baz=275,slow=32						
TXAR	Lajitas Array	81.41	55	P	P	05 02 56.2	+5.3
	comp=Z,2.6nm,1.1s,baz=222,slow=8.5,SNR=15						
	comp=Z,2.6nm,1.1s						
TXAR	Lajitas Array	81.41	55	P	P	05 02 53.2	+2.3
H03S2	Juan Fernandez	82.51	123	T	T	06 33 52.6	
	baz=250,slow=75,SNR=50						
H03S1	Juan Fernandez	82.53	123	T	T	06 33 53.6	
	baz=250,slow=75,SNR=45						
H03S3	Juan Fernandez	82.53	123	T	T	06 33 53.4	
	baz=250,slow=75,SNR=67						
H03N2	Juan Fernandez	82.62	123	T	T	06 33 56.9	
	baz=257,slow=72,SNR=59						
H03N3	Juan Fernandez	82.62	123	T	T	06 33 56.5	
	baz=257,slow=72,SNR=41						
H03N1	Juan Fernandez	82.64	123	T	T	06 33 56.1	
	baz=257,slow=72,SNR=20						
NEW	Newport	82.65	34	LR	LR	05 36 52.2	
	comp=Z,72nm,18.2s,baz=45,slow=34						
NJ2	Nanjing	82.98	307	*e*P	P	05 02 59.6	+0.6
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
PDAR	Pinedale Array	83.83	41	P	P	05 03 07.3	+3.9
	comp=Z,2.8nm,0.8s,baz=217,slow=3.2,SNR=23						
	comp=Z,2.8nm,0.8s						
PDAR	Pinedale Array	83.83	41	P	P	05 03 04.9	+1.5
CMIG	Matias Romero	83.84	70	LR	LR	05 34 32.4	
	comp=Z,71nm,18.3s,baz=230,slow=31						
CCB	Clear Creek Bu	85.02	10	P	P	05 03 10.2	+1.6
CCB				IAmb	IAmb	05 03 19.2	
	comp=Z,3.2nm,1.0s						
ILAR	Eielson Array	85.29	11	P	P	05 03 13.2	+3.2
	comp=Z,0.7nm,0.6s,baz=225,slow=6.0,SNR=20						
	comp=Z,0.7nm,0.6s						
ILAR	Eielson Array	85.29	11	P	P	05 03 09.9	-0.1
IMAR	Indian Mountai	85.41	7	P	P	05 03 13.0	+2.4
PLCA	Paso Flores	86.56	132	LR	LR	05 35 08.6	
	comp=Z,45nm,19.6s,baz=10,slow=31						
SNAA	Sanae	89.73	177		P	05 03 32.9	+1.2
SNAA				IAmb	IAmb	05 04 11.1	
	comp=Z,6.5nm,1.5s						
F31M	Tsiigehtchic	90.28	14	P	P	05 03 34.9	+1.0
JTS	Las Juntas de	90.62	79	LR	LR	05 34 33.4	
	comp=Z,43nm,21.1s,baz=351,slow=29						
ATAH	Atahualpa	91.33	98	LR	LR	05 36 41.8	
	comp=Z,48nm,18.6s,baz=275,slow=30						
HHC	Hu-ho-hao-te	92.00	312	*e*P	P	05 03 43.5	+0.8
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
PZH	PanZhiHua	94.71	296	P	P	05 03 56.3	+0.7
ULM	Lac du Bonnet	95.63	39	LR	LR	05 43 28.8	
	comp=Z,52nm,19.2s,baz=60,slow=33						
LPAZ	La Paz	97.65	110	LR	LR	05 39 28.8	
	comp=Z,58nm,19.0s,baz=282,slow=30						
TIXI	Tiksi	98.32	344	LR	LR	05 45 07.1	
	comp=Z,33nm,20.2s,baz=188,slow=33						
BRTR	Keskin Array B	149.30	319	PKPbc	PKPab	05 10 25.6	-1.8
	comp=Z,1.3nm,0.8s,baz=48,slow=2.1,SNR=6.9						
BRTR	Keskin Array B	149.30	319		PKPab	05 10 25.9	-1.5

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*RSNC **16** 05:07:35.5±0.4,6°S±3°×7°6W±°,h0^{km},M4.2,mb4.7,mB5.1,*
ML3.5,Mw(mB)4.5
*NEIC **16** 05:07:37.2±1.5,6°.17S±0°.06×75°.8W±0°.1,h27^{km}±4^{km},*
mb4.4/18,Error ellipse: s-maj=15.0km s-min=8.1km
az=86.0
*IDC **16** 05:07:38.0±0.6,6°.16S×75°.82W,h44^{km}±5^{km},mb3.6/11,*
mbtmp4.0/17,ML3.6/6,MS3.1/6,Error ellipse:
s-maj=11.4km s-min=9.5km az=122.0
*VAO **16** 05:07:38.6±1.1,6°.12S×75°.84W,h74^{km}±8^{km},mb4.4,*
Presumed earthquake
ISC 16 05:07:37.0±0.4,**6°.11S**±0°.04×**75°.73W**±0°.06,**h35**^{km}**,n81,**
σ**1^{s}.71**/96,**mb4.2**/16,**MS3.1**/3,**Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	Atahualpa	2.84	249	P	Pn	05 08 20.5	+0.4
	22nm,0.3s,baz=76,slow=7.4,SNR=166						
ATAH				S	Sn	05 08 52.6	-0.7
	232nm,0.5s,baz=330,slow=20,SNR=7.4						
ATAH				LR	LR	05 09 41.0	
	comp=Z,312nm,21.0s,baz=106,slow=45						
	144nm,0.6s						
MCRA	Macar, Loja	4.55	292	P	Pn	05 08 41.8	-1.6
MCRA				S	Sn	05 09 30.8	-4.3
COHC	Cochancay	5.05	316	Pn	Pn	05 08 51.2	+1.1
COHC	Cochancay	5.05	316	P	Pn	05 08 51.8	+1.6
COHC				S	Sn	05 09 46.0	-1.3
PIAT	Ana Tenorio	5.67	333	P	Pn	05 08 58.5	-0.7
	616nm22nm,0.4s						
PIAT				S	Sn	05 10 00.5	-2.8
	616nm22nm,0.4s						
NNA	Nana	5.94	191	P	Pn	05 09 02.9	+0.3
	16nm,0.3s,baz=37,slow=12,SNR=30						
NNA				S	Sn	05 10 07.6	-1.9
	99nm,0.4s,baz=260,slow=18,SNR=13						
	40nm,0.3s						
NNA	Nana	5.94	191	Pn	Pn	05 09 03.1	+0.6
NNA	Nana	5.94	191	P	Pn	05 09 02.6	0.0
	1µm56nm,0.5s						
NNA				S	Sn	05 10 05.0	-4.5
	1µm56nm,0.5s						
SLOR	San Lorenzo -	6.02	333	Pn	Pn	05 09 04.0	+0.1
PTLC	Puerto Leguiza	6.31	9	P	Pn	05 09 04.9	-2.7
	3µm222nm,0.7s						
PTLC				S	Sn	05 10 07.5	-11
	3µm222nm,0.7s						
CASC	Dorado de Casc	6.41	345	P	Pn	05 09 10.7	+1.6
	1µm19nm,0.6s						
CASC				S	Sn	05 10 17.1	-4.0
	1µm19nm,0.6s						
BONI	La Bonita	6.76	345	P	Pn	05 09 14.0	0.0
	1µm22nm,0.7s						
BONI				S	Sn	05 10 26.1	-3.9
	1µm22nm,0.7s						
OTAV	Otavalo	6.87	337	Pn	Pn	05 09 18.4	+2.7
OTAV	Otavalo	6.87	337	P	Pn	05 09 17.5	+1.9
	4.6nm,0.6s						
GCUF	Volcan Galeras	7.46	347	P	Pn	05 09 25.3	+1.4
	576nm18nm,0.6s						
FLOC	Florencia	7.64	1	Pn	Pn	05 09 27.1	+1.1
FLOC	Florencia	7.64	1	P	Pn	05 09 26.9	+1.0
	1µm23nm,0.5s						
BBAC	Balboa, Cauca	8.22	349	P	Pn	05 09 35.4	+1.4
	832nm13nm,0.9s						
GARC	Garzon, Huila	8.25	2	P	Pn	05 09 35.7	+1.3
MACC	Macarena, Meta	8.41	13	P	Pn	05 09 38.3	+1.8
	649nm42nm,0.6s						
POPC	Popayan, Colom	8.64	354	P	Pn	05 09 41.1	+1.2
	8.0nm,0.6s						
URMC	La Uribe, Meta	9.39	8	P	Pn	05 09 51.6	+1.6
	37nm,0.5s						
URMC				S	Sn	05 11 31.0	-3.5

	37nm,0.5s						
VILC	Villavicencio,	10.36	11	P	Pn	05 10 05.0	+1.8
	1µm104nm,0.5s						
SGC2	Sao Gabriel da	10.55	56	P	Pn	05 10 07.2	+1.4
ROSC	El Rosal	10.97	7	P	Pn	05 10 15.1	+3.2
	1.1nm,0.3s,baz=28,slow=23,SNR=2.0						
ROSC				LR	LR	05 15 14.9	
	comp=Z,165nm,21.6s,baz=240,slow=41						
	5.5nm,0.4s						
TEFE	Tefe	11.35	77	*e*P	Pn	05 10 18.3	+1.5
RUSC	La Rusia	12.21	13	Pn	Pn	05 10 31.5	+2.5
LPAZ	La Paz	12.56	144	P	Pn	05 10 36.0	+2.1
	0.2nm,0.3s,baz=21,slow=13,SNR=7.2						
LPAZ				LR	LR	05 16 25.8	
	comp=Z,71nm,21.9s,baz=36,slow=42						
	0.9nm,0.4s						
LPAZ	La Paz	12.56	144		Pn	05 10 33.8	0.0
MACA	Manacapuru-AM	15.28	80		Pn	05 11 11.2	+1.0
MACA	Manacapuru-AM	15.28	80	*e*P	Pn	05 11 10.1	-0.1
SDV	Santo Domingo	15.74	19	P	Pn	05 11 16.2	-0.2
	2.4nm,0.3s,baz=175,slow=9.7,SNR=8.2						
SDV				LR	LR	05 18 44.9	
	comp=Z,72nm,18.9s,baz=134,slow=42						
	4.8nm,0.4s						
SDV	Santo Domingo	15.74	19		Pn	05 11 16.3	-0.1
SDV				IAmb	IAmb	05 11 47.0	
	comp=Z,9.0nm,0.8s						
SDV	Santo Domingo	15.74	19	*e*P	Pn	05 11 15.9	-0.5
SDV	Santo Domingo	15.74	19	P	Pn	05 11 14.1	-2.3
BOAV	Boa Vista	17.38	61	P	P	05 11 38.7	+0.8
BOAV	Boa Vista	17.38	61	*e*P	P	05 11 38.9	+1.0
SIV	San Ignacio	17.40	126	P	Pn	05 11 36.9	-0.4
	baz=292,slow=10.0,SNR=6.9						
SIV				S	Sn	05 14 42.5	-7.5
	comp=Z,1.0nm,0.5s,baz=66,slow=16,SNR=3.1						
	comp=Z,0.9nm,0.5s						
PTLB	Pontes e Lacer	18.74	121	P	P	05 11 53.0	+0.1
ITTB	Itaituba	19.99	86	*e*P	P	05 12 07.7	+1.1
NPGB	Novo Progresso	20.26	94	*e*P	P	05 12 08.9	-0.7
DR12	Loma Pena Alta	25.52	14	P	P	05 13 03.6	+1.1
MDP	Montagnes des	25.60	65	LR	LR	05 23 34.1	
	comp=Z,61nm,19.0s,baz=282,slow=37						
SJG	San Juan	25.86	21	LR	LR	05 24 21.0	
	comp=Z,41nm,18.3s,baz=125,slow=39						
CPUP	Villa Florida	26.69	141	P	P	05 13 12.5	-0.5
	comp=Z,0.2nm,0.6s,baz=324,slow=11,SNR=5.0						
	comp=Z,0.2nm,0.6s						
CPUP	Villa Florida	26.69	141	P	P	05 13 13.1	+0.1
ITAB	Concordia	30.74	136	P	P	05 13 48.5	-0.5
PLCA	Paso Flores	34.78	173	P	P	05 14 24.2	-0.1
	comp=Z,1.3nm,0.5s,baz=344,slow=10,SNR=12						
	comp=Z,1.3nm,0.5s						
PLCA	Paso Flores	34.78	173	P	P	05 14 24.8	+0.5
PLCA				IAmb	IAmb	05 14 25.7	
	comp=Z,7.3nm,1.4s						
BRDY	Brady	43.33	330	P	P	05 15 37.1	+1.3
HALT	Halls	43.71	344	P	P	05 15 39.6	+0.9
TXAR	Lajitas Array	44.31	324	P	P	05 15 44.1	+0.3
	comp=Z,0.6nm,0.8s,baz=144,slow=8.2,SNR=4.7						
TXAR				PcP	PP	05 17 26.4	-1.2
	comp=Z,0.3nm,0.7s,baz=149,slow=2.9,SNR=3.5						
	comp=Z,0.6nm,0.8s						
TXAR	Lajitas Array	44.31	324	P	P	05 15 44.5	+0.7
TX31	Lajitas Ar. Si	44.31	324	P	P	05 15 44.5	+0.7
TX31				IAmb	IAmb	05 15 45.7	
	comp=Z,4.0nm,1.4s						
SMWD	Samnorwood	47.05	332	P	P	05 16 06.8	+1.4
PDAR	Pinedale Array	57.54	331	P	P	05 17 23.4	+0.1
	comp=Z,0.1nm,0.5s,baz=124,slow=10,SNR=2.3						
PDAR				pP	pP	05 17 35.5	+1.6
	comp=Z,0.3nm,0.5s,baz=128,slow=7.4,SNR=4.9						
PDAR				PcP	PcP	05 18 16.9	+0.4
	comp=Z,0.7nm,1.0s,baz=115,slow=4.4,SNR=3.0						
	comp=Z,0.1nm,0.5s						
NVAR	Mina Array Bea	59.36	322	P	P	05 17 35.0	-1.1
	comp=Z,0.8nm,0.8s,baz=96,slow=12,SNR=4.8						
NVAR				pP	pP	05 17 47.6	+0.8
	comp=Z,0.5nm,0.7s,baz=114,slow=6.6,SNR=3.1						
	comp=Z,0.8nm,0.8s						
SCHQ	Schefferville	61.17	6	P	P	05 17 47.4	-0.5
	comp=Z,9.0nm,1.1s,baz=167,slow=14,SNR=2.4						
SCHQ				pP	sP	05 18 01.8	-1.0
	comp=Z,3.3nm,0.7s,baz=245,slow=8.1,SNR=1.3						
	comp=Z,9.0nm,1.1s						
DBIC	Dimbokro	71.85	81	P	P	05 18 57.6	+0.7
	comp=Z,2.5nm,0.7s,baz=278,slow=3.8,SNR=4.8						
DBIC				pP	sP	05 19 11.1	-0.9
	comp=Z,4.3nm,0.7s,baz=284,slow=5.0,SNR=4.4						
	comp=Z,2.5nm,0.7s						
DBIC	Dimbokro	71.85	81	P	P	05 18 57.9	+0.9
DBIC				IAmb	IAmb	05 19 19.1	
	comp=Z,11nm,1.2s						
YKA	Yellowknife Ar	74.59	342	P	P	05 19 11.6	-0.5
	comp=Z,0.3nm,0.5s,baz=146,slow=4.9,SNR=6.8						
YKA				pP	PcP	05 19 25.5	-0.8
	comp=Z,0.4nm,0.6s,baz=149,slow=5.0,SNR=5.1						
	comp=Z,0.3nm,0.5s						
YKA	Yellowknife Ar	74.59	342	P	P	05 19 12.7	+0.6
YKAW3	Yellowknife Wh	74.64	342	P	P	05 19 12.6	+0.2
YKAW3				IAmb	IAmb	05 19 31.1	
	comp=Z,2.1nm,1.0s						
BELA	Belgrano 2	74.83	172	P	P	05 19 14.2	+0.9
BELA				IAmb	IAmb	05 19 33.6	
	comp=Z,3.5nm,1.1s						
SNAA	Sanae	78.88	162	P	P	05 19 36.7	+0.3
	comp=Z,1.8nm,0.5s,baz=271,slow=7.5,SNR=26						
	comp=Z,1.8nm,0.5s						
SNAA	Sanae	78.88	162	P	P	05 19 36.9	+0.5
SNAA				IAmb	IAmb	05 19 37.5	
	comp=Z,2.1nm,0.7s						
M29M	Somme Creek	83.21	335	P	P	05 20 00.7	+1.1
M29M				IAmb	IAmb	05 20 15.7	
	comp=Z,4.9nm,0.9s						
L29M	L29M	83.38	336	P	P	05 20 01.4	+1.1
L29M				IAmb	IAmb	05 20 02.2	
	comp=Z,6.5nm,1.0s						
QSPA	South Pole Qui	83.98	180	P	P	05 20 04.0	+0.5
	comp=Z,1.4nm,0.4s,baz=153,slow=4.2,SNR=5.1						
	comp=Z,1.4nm,0.4s						
QSPA	South Pole Qui	83.98	180	P	P	05 20 04.3	+0.7
QSPA				IAmb	IAmb	05 20 05.6	
	comp=Z,9.0nm,1.4s						
BCAR	Beaver Creek A	84.86	335	P	P	05 20 08.8	+0.9
ILAR	Eielson Array	87.59	336	P	P	05 20 20.9	-0.3
	comp=Z,0.3nm,0.7s,baz=143,slow=3.2,SNR=6.1						
ILAR				pP	pP	05 20 34.1	+1.8
	comp=Z,0.5nm,0.7s,baz=120,slow=3.1,SNR=5.6						
	comp=Z,0.3nm,0.7s						
BMAR	Burnt Mountain	87.65	339	P	P	05 20 22.4	+0.9
JMIC	Jan Mayen	88.50	18	LR	LR	05 56 56.1	
	comp=Z,203nm,21.5s,baz=276,slow=33						
ABKAR	Akbulak array	123.09	33	PKPdf	PKiKP	05 26 31.1	+1.0
ZALV	Zalesovo Beam	129.76	15	PKP	PKiKP	05 26 43.2	-0.1
	comp=Z,0.4nm,0.4s,baz=208,slow=2.9,SNR=4.9						
ASAR	Alice Springs	138.61	223	PKhKP	PKPpre	05 26 51.4	
	comp=Z,0.5nm,0.7s,baz=148,slow=2.0,SNR=4.7						
ASAR				PKP	PKPdf	05 26 58.0	-2.1
	comp=Z,0.4nm,0.6s,baz=124,slow=1.7,SNR=5.7						
WRA	Warramunga Arr	140.69	228	PKhKP	PKPpre	05 26 52.6	
	comp=Z,0.4nm,0.8s,baz=126,slow=3.3,SNR=1.8						
WRA				PKP	PKPdf	05 27 01.8	-2.1
	comp=Z,0.8nm,0.8s,baz=122,slow=2.3,SNR=5.1						
KNRA	Kununurra	147.49	228	PKPbc	PKPbc	05 27 18.3	0.0
FITZ	Fitzroy Crossi	148.01	221	PKPbc	PKPbc	05 27 19.4	-0.3
PSA00	Pilbara Seismi	148.53	209	PKPbc	PKPbc	05 27 20.8	-0.2

*CRAAG **16** 05:09:53.7, 36°.30N×3°.41E, Ml3.4, Algerie 08km SW Mihoub*

*MDD **16** 05:09:54.9±1.1, 36°.32N×3°.59E, h0^{km}, Mb4.1/19, M_mb3.4/15, Error ellipse: s-maj=10.6km s-min=5.9km az=150.0*

ISC 16 05:09:54.5±1.4**, 36°.36N**±0°.04×**3°.49E**±0°.04**, h6**^{km}±12^{km}**, n27, σ1^{s}.47**/34**, 10C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADJB	Djebel Djouab	0.20	191	P	Pg	05 09 57.9	-0.7
AKET	Djebel Ketaf	0.45	134	P	Pb	05 10 03.4	-1.4
ADOR	Douera	0.55	303	P	Pg	05 10 04.9	-0.2
ATKB	Taksebt	0.60	58	P	Pb	05 10 07.8	+0.5
ABRIN	Birine	0.79	202	P	Pb	05 10 10.6	0.0
CTCHA	Tamokra	0.94	85	P	Pb	05 10 14.0	+0.8
ABKD	Sidi Amar	0.97	281	P	Pg	05 10 12.5	-0.5
ABSD	Ouled Sidi Bra	1.09	148	P	Pn	05 10 15.8	-0.5
EDDR	Deurdeur	1.09	251	P	Pg	05 10 15.3	-0.1
EHRZ	Djelida	1.13	262	P	Pg	05 10 15.3	-0.8
EARB	Arib	1.20	268	P	Pg	05 10 16.4	-1.0
AFDJ	Sidi Ladjel	1.21	218	P	Pb	05 10 17.5	-0.3
CAZD	Ain Tagrout	1.36	97	P	Pb	05 10 23.0	+2.6
ADCK	Dar Chioukh	1.45	181	P	Pb	05 10 23.2	+1.4
EBGR	Bougara	1.49	238	P	Pb	05 10 22.6	+0.1
EZEK	Zmalet El Emir	1.77	213	P	Pg	05 10 28.8	+0.3
EIBI	Ibiza	3.16	328	Pn	Pn	05 10 44.6	-0.1
EIBI				⇑*i*IVmb_VC		05 10 49.4	
	229nm,SNR=1.2						
EIBI				Sn	Sn	05 11 18.9	-3.8
ETOS	Mallorca	3.44	351	Pn	Pn	05 10 48.8	+0.2
ETOS				⇑*i*IVmb_VC		05 10 51.9	
	208nm,SNR=1.1						
ETOS				Sn	Sn	05 11 27.2	-2.6
EBEN2	Beniarda presa	3.73	309	Pn	Pn	05 10 54.7	+2.2
EBEN2				⇑*i*IVmb_VC		05 11 01.7	
	289nm,SNR=1.4						
EMUR	La Murta	4.06	293	Pn	Pn	05 10 56.5	-0.6
EMUR				⇑*i*IVmb_VC		05 11 01.6	
	97nm,SNR=1.2						
ECOL	Islas Columbre	4.17	329	Pn	Pn	05 10 58.0	-0.5
ETOB	Tobarra	4.61	301	Pn	Pn	05 11 04.6	-0.1
ETOB				⇑*i*IVmb_VC		05 11 10.9	
	189nm,SNR=1.1						
ETOB				Sn	Sn	05 11 59.5	+1.0
EVIV	Cofrentes, Val	4.66	310	Pn	Pn	05 11 07.3	+1.9
EVIV				⇑*i*IVmb_VC		05 11 14.2	
	137nm,SNR=0.8						
EVIV				Sn	Sn	05 12 00.6	+0.8
ECHE	Chera	4.77	314	Pn	Pn	05 11 07.5	+0.5
ECHE				⇑*i*IVmb_VC		05 11 08.7	
	226nm,SNR=1.4						
ECHE				Sn	Sn	05 12 05.1	+2.5
EMOS	Mosqueruela	5.07	323	Pn	Pn	05 11 11.0	-0.1
EMOS				⇑*i*IVmb_VC		05 11 16.6	
	200nm,SNR=1.5						
EMOS				Sn	Sn	05 12 07.7	-2.2
EQES	Quesada	5.44	287	Pn	Pn	05 11 18.6	+2.4
EQES				⇑*i*IVmb_VC		05 11 20.1	
	112nm,SNR=0.9						
EQES				Sn	Sn	05 12 18.4	-0.6
ELGU	Los Guajares,	5.74	277	Pn	Pn	05 11 21.4	+1.1
ELGU				⇑*i*IVmb_VC		05 11 21.8	
	66nm,SNR=0.9						

*AUST **16** 05:29:41.7±0.2, 32°S±1°×15°1E±°, h0^{km}, mb4.4/17, ML4.3/39, Error ellipse: s-maj=4.3km s-min=2.5km az=71.7, confirmed*

*IDC **16** 05:29:42.0±0.8, 32°.46S×150°.62E, h0^{km}, mb4.3/4, mbtmp4.3/8, ML4.1/4, MS3.5/10, Error ellipse: s-maj=25.4km s-min=17.4km az=30.0*

*NOU **16** 05:29:41.6, 32°.34S×150°.72E, h0^{km}, MLv4.9/22, New South Wales, Australia*

*NEIC **16** 05:29:42.6±1.7, 32°.35S±0°.05×150°.81E±0°.09, h10^{km}±1^{km}, mb4.2/15, Error ellipse: s-maj=13.6km s-min=7.3km az=114.0*

ISC 16 05:29:41.1±1.4**, 32°.34S**±0°.03×**150°.76E**±0°.05**, h1**^{km}±9^{km}**, n122, σ1^{s}.12**/124**, mb4.5**/6**, MS3.4**/8**, New South Wales**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MGCD	Mangrove Creek	0.92	162	P	Pg	05 29 58.5	-0.2
MGCD	Mangrove Creek	0.92	162	S	Sg	05 30 11.2	+0.5
MGCD	Mangrove Creek	0.92	162	P	Pg	05 29 58.7	0.0
MGCD	Mangrove Creek	0.92	162	S	Sg	05 30 11.4	+0.7
NTLS	Newcastle Soft	1.03	126	P	Pg	05 30 00.6	-0.3
NTLS				S	Sg	05 30 13.6	-0.7
CATI	Cattai, Sydney	1.23	174	P	Pn	05 30 04.2	-1.3
CATI				S	Sb	05 30 20.7	-0.7
AUKHS	Kincumber High	1.24	155	P	Pn	05 30 03.8	-1.8
AUPHS	Peel High Scho	1.24	5	P	Pn	05 30 03.9	-1.7
YARR	Yarramundi, NS	1.28	183	P	Pn	05 30 05.0	-1.2
YARR				S	Sb	05 30 22.6	-0.4
SYDH	Sydney Hard Ro	1.42	181	P	Pn	05 30 07.4	-0.7
SYDH	Sydney Hard Ro	1.42	181	P	Pn	05 30 07.6	-0.5
SYDH	Sydney Hard Ro	1.42	181	S	Sg	05 30 27.7	+0.8
RIV	Riverview	1.53	168	P	Pn	05 30 08.8	-0.8
RIV	Riverview	1.53	168	S	Sn	05 30 29.4	-0.6
RIV	Riverview	1.53	168	P	Pn	05 30 09.0	-0.6
RIV	Riverview	1.53	168	S	Sn	05 30 29.5	-0.6
SYDS	Sydney Soft Ro	1.64	166	P	Pn	05 30 10.8	-0.3
MABG	Mt Annan Botan	1.73	180	P	Pn	05 30 12.0	-0.4
MABG				S	Sb	05 30 36.1	0.0
OKDL	Oakdale	1.75	188	P	Pn	05 30 12.8	+0.2
OKDL				S	Sb	05 30 36.5	-0.1
WTPK	Wilton Park	1.89	183	P	Pn	05 30 14.5	0.0
WTPK				S	Sb	05 30 40.5	+0.1
ARMA	Armidale	2.05	21	P	Pb	05 30 18.9	-0.3
ARMA	Armidale	2.05	21	S	Sb	05 30 45.6	+0.3
ARMA	Armidale	2.05	21		Pn	05 30 17.0	+0.1
ARMA				Sn	Sn	05 30 42.8	-0.3
ARMA	Armidale	2.05	21	P	Pn	05 30 17.5	+0.6
ARMA	Armidale	2.05	21	S	Sb	05 30 45.0	-0.3
WOLH	Wollongong Har	2.07	177	P	Pn	05 30 17.4	+0.3
WOLH	Wollongong Har	2.07	177	P	Pn	05 30 17.5	+0.5
WOLH	Wollongong Har	2.07	177	S	Sb	05 30 44.9	-0.8
YNG	Young	2.79	225	P	Pn	05 30 27.9	+1.0
CNB	Canberra Magne	3.19	201	P	Pn	05 30 32.7	+0.1
CNB	Canberra Magne	3.19	201	P	Pn	05 30 32.5	-0.1
CNB	Canberra Magne	3.19	201	S	Sn	05 31 12.4	+1.1
PHB	Parliment Hous	3.26	204	P	Pn	05 30 34.2	+0.7
CAN	Canberra	3.32	206	P	Pn	05 30 34.5	+0.1
CAN	Canberra	3.32	206	Pn	Pn	05 30 34.8	+0.5
CAN	Canberra	3.32	206	P	Pn	05 30 34.0	-0.3
CMSA	Cobar Meteorol	4.38	279	P	Pn	05 30 49.8	+0.9
CMSA	Cobar Meteorol	4.38	279	P	Pn	05 30 49.5	+0.6
TW1H	Toowoomba 1 Ha	4.89	13	P	Pn	05 30 59.3	+3.4
MILA	Mila	4.89	195	P	Pn	05 30 56.9	+1.0
TOO	Toolangi	6.78	218	P	Pn	05 31 23.4	+1.5
	comp=Z,16nm,0.5s,comp=Z,0.3nm						
TOO	Toolangi	6.78	218	Pn	Pn	05 31 22.5	+0.7
TOO				Sn	Sn	05 32 38.4	-1.4
EIDS	Eidsvold	6.95	2	P	Pn	05 31 25.7	+1.6
	comp=Z,14nm,0.7s,comp=Z,0.5nm						
EIDS	Eidsvold	6.95	2	Pn	Pn	05 31 24.5	+0.4
EIDS	Eidsvold	6.95	2	P	Pn	05 31 24.4	+0.4
LHI	Lord Howe Isla	7.10	86	Pn	Pn	05 31 24.2	-2.0
BRAT	Ballarat	7.65	225	P	Pn	05 31 34.9	+1.2
	comp=Z,11nm,0.6s,comp=Z,0.3nm						
AUMTC	Mt Clear Colle	7.72	225	P	Pn	05 31 38.8	+4.2
	comp=Z,28nm,0.6s,comp=Z,0.7nm						
STKA	Stephens Creek	7.79	271	P	Pn	05 31 35.4	-0.3
	comp=Z,75nm,0.5s,comp=Z,1.7nm						
STKA	Stephens Creek	7.79	271	Pn	Pn	05 31 35.4	-0.3
	comp=Z,1.7nm,0.3s,baz=100,slow=14,SNR=25						
STKA				Sn	Sn	05 33 02.1	-2.5
	comp=Z,6.9nm,0.3s,baz=160,slow=18,SNR=7.9						
STKA				Lg	Lg	05 33 48.1	
	comp=Z,8.1nm,0.3s,baz=356,slow=20,SNR=4.2						
STKA				LR	LR	05 34 58.7	
	comp=Z,346nm,19.7s,baz=52,slow=41						
	comp=Z,5.6nm,0.4s						
STKA	Stephens Creek	7.79	271		Pn	05 31 35.3	-0.3
STKA	Stephens Creek	7.79	271	P	Pn	05 31 35.0	-0.7
QLP	Quilpie	8.08	314	P	Pn	05 31 39.7	+0.2
	comp=Z,89nm,0.5s,comp=Z,0.4nm						
QLP	Quilpie	8.08	314	P	Pn	05 31 39.8	+0.2
ARPS	Mount Arapiles	8.59	237	P	Pn	05 31 47.4	+0.8
	comp=Z,32nm,0.7s,comp=Z,0.3nm						
GLAD	Gladstone	8.91	194	P	Pn	05 31 51.8	+0.8
	comp=Z,17nm,0.9s,comp=Z,0.0nm						
GLAD	Gladstone	8.91	194	P	Pn	05 31 51.6	+0.6
SDAN	Sedan	9.79	254	P	Pn	05 32 02.2	-0.9
	comp=Z,3.6nm,1.0s,comp=Z,0.0nm						
INKA	Innaminka	9.81	295	Pn	Pn	05 32 03.1	-0.3
MGBR	Mount Gambier	9.93	234	Pn	Pn	05 32 06.0	+0.9
HTT	Hallett	10.02	261	P	Pn	05 32 05.2	-1.1
	comp=Z,16nm,0.6s						
HTT	Hallett	10.02	261	P	Pn	05 32 06.6	+0.3
	comp=Z,6.5nm,0.7s,comp=Z,0.0nm						
HTT	Hallett	10.02	261	P	Pn	05 32 05.2	-1.1
MOO	Moorlands	10.48	195	P	Pn	05 32 13.6	+1.1
MOO	Moorlands	10.48	195	P	Pn	05 32 13.8	+1.3
YAPP	Yappala Statio	10.57	269	P	Pn	05 32 13.2	-0.6
LCRK	Leigh Creek	10.89	277	P	Pn	05 32 17.8	-0.3
	comp=Z,12nm,0.5s,comp=Z,0.0nm						
TAU	Tasmania Unive	10.90	193	Pn	Pn	05 32 18.0	-0.3
TAU	Tasmania Unive	10.90	193	P	Pn	05 32 18.4	+0.1
BBOO	Buckleboo	12.41	264	P	Pn	05 32 39.1	0.0
	comp=Z,12nm,0.6s						
BBOO	Buckleboo	12.41	264	Pn	Pn	05 32 38.1	-0.9
BBOO	Buckleboo	12.41	264	P	Pn	05 32 38.8	-0.2
CTA	Charters Tower	12.85	341	Lg	Lg	05 36 27.3	
	comp=Z,0.1nm,0.3s,baz=46,slow=19,SNR=3.6						
OOD	Oodnadatta	13.81	285	P	Pn	05 32 56.0	-2.1
	comp=Z,4.2nm,0.6s						
QIS	Mount Isa	15.39	317	P	Pn	05 33 17.3	-2.3
	comp=Z,6.7nm,1.6s						
ONTNC	Ouen Toro	17.13	58		P	05 33 42.8	-0.9
ONTNC				IAmb	IAmb	05 33 46.7	
	comp=Z,16nm,0.5s						
AS31	Alice Springs	17.20	296	Pn	Pn	05 33 41.7	-1.0
ASAR	Alice Springs	17.20	296	P	Pn	05 33 42.5	-0.2
	comp=Z,0.8nm,0.3s,baz=119,slow=12,SNR=69						
ASAR				S	Sn	05 36 53.9	-0.8
	comp=Z,1.9nm,0.9s,baz=120,slow=22,SNR=3.8						
ASAR				LR	LR	05 41 01.5	
	comp=Z,370nm,18.0s,baz=122,slow=40						
	comp=Z,4.0nm,0.5s						
ASAR	Alice Springs	17.20	296	Pn	Pn	05 33 41.1	-1.7
DZM	Mont Dzumac	17.27	58	P	P	05 33 47.4	+2.0
	comp=Z,1.5nm,0.3s,baz=230,slow=11,SNR=18						
	comp=Z,8.9nm,0.6s						
DZM	Mont Dzumac	17.27	58		P	05 33 46.6	+1.2
DZM				IAmb	IAmb	05 33 50.6	
	comp=Z,9.1nm,0.7s						
PINNC	Pines Island,	17.67	61	P	Pn	05 33 48.7	+0.1
PINNC				IAmb	IAmb	05 33 51.4	
	comp=Z,45nm,1.2s						
WR8	Warramunga Arr	19.08	306	P	P	05 34 05.2	0.0
WR8				IAmb	IAmb	05 34 08.1	
	comp=Z,18nm,1.4s						
WRA	Warramunga Arr	19.20	306	P	P	05 34 06.9	+0.4
	comp=Z,0.4nm,0.3s,baz=137,slow=11,SNR=18						
WRA				S	Sn	05 37 41.6	-1.5
	comp=Z,1.4nm,0.8s,baz=132,slow=24,SNR=4.7						
WRA				Lg	Lg	05 39 56.4	
	baz=148,slow=27						
	comp=Z,3.5nm,0.7s						
WRA	Warramunga Arr	19.20	306	P	P	05 34 05.2	-1.4
WB0	Warramunga Arr	19.28	306	P	P	05 34 06.8	-0.6
WB0				IAmb	IAmb	05 34 10.0	
	comp=Z,18nm,1.4s						
FORT	Forrest	19.41	269	P	Pn	05 34 10.3	+0.5
	comp=Z,12nm,1.1s						
FORT	Forrest	19.41	269	P	P	05 34 09.3	+0.6
FORT				IAmb	IAmb	05 34 11.6	
	comp=Z,6.1nm,0.7s						
COEN	Coen	19.57	337	P	P	05 34 11.3	+0.8
COEN				IAmb	IAmb	05 34 14.4	
	comp=Z,24nm,1.3s						
WRKA	Warakurna	20.98	285	P	P	05 34 26.5	+0.5
	comp=Z,6.6nm,1.6s						
KNRA	Kununurra	25.97	305	P	P	05 35 16.5	+1.0
MTN	Manton Dam	26.46	313	P	P	05 35 19.0	-0.9
MTN				IAmb	IAmb	05 35 20.0	
	comp=Z,10nm,1.4s						
FITZ	Fitzroy Crossi	26.70	296	LR	LR	05 45 59.7	
	comp=Z,87nm,19.9s,baz=154,slow=37						
FITZ	Fitzroy Crossi	26.70	296	P	P	05 35 22.0	0.0
NWAO	Narrogin (SRO)	28.18	260	LR	LR	05 47 53.8	
	comp=Z,112nm,19.0s,baz=130,slow=39						
BATI	Baumata	33.33	305	LR	LR	05 50 47.8	
	comp=Z,87nm,19.2s,baz=210,slow=38						
KAPI	Kappang	39.73	307	LR	LR	05 55 42.1	
	comp=Z,48nm,18.3s,baz=106,slow=39						
RAR	Rarotonga	45.18	89	LR	LR	05 55 03.5	
	comp=Z,30nm,18.3s,baz=232,slow=34						
PPT2	Papeete2	55.41	90	*e*LR	LR	05 55 17.0	
	comp=Z,65nm,22.8s						
PPT2				*e*LR	LR	05 55 24.8	
	comp=Z,88nm,23.0s						
PPT	Papeete	55.42	90	LR	LR	06 00 41.4	
	comp=Z,23nm,18.0s,baz=220,slow=34						
QSPA	South Pole Qui	57.77	180	P	P	05 39 34.1	+0.5
	comp=Z,1.7nm,0.3s,baz=327,slow=3.7,SNR=7.8						
	comp=Z,1.7nm,0.3s						
QSPA	South Pole Qui	57.77	180	P	P	05 39 33.6	-0.1
MAW	Mawson	59.76	206	LR	LR	06 02 25.1	
	comp=Z,38nm,18.7s,baz=80,slow=33						
BELA	Belgrano 2	70.00	179	P	P	05 40 53.9	0.0
CMAR	Chiang Mai Arr	70.78	308	P	P	05 41 01.3	+1.8
	comp=Z,0.6nm,0.3s,baz=149,slow=4.3,SNR=8.5						
CMAR				LR	LR	06 16 40.9	
	comp=Z,28nm,18.1s,baz=255,slow=40						
	comp=Z,0.6nm,0.3s						
CMAR	Chiang Mai Arr	70.78	308	P	P	05 40 59.8	+0.3
SNAA	Sanae	74.63	188	P	P	05 41 21.0	-0.7
	comp=Z,0.6nm,0.5s,baz=189,slow=8.1,SNR=13						
	comp=Z,0.6nm,0.5s						
SNAA	Sanae	74.63	188	P	P	05 41 21.6	-0.1
SNAA				IAmb	IAmb	05 41 28.3	
	comp=Z,3.8nm,1.4s						
PZH	PanZhiHua	74.86	316	P	P	05 41 27.3	+3.6
USRK	Ussuriysk Ar.	78.07	346	P	P	05 41 42.2	+0.9
	comp=Z,3.0nm,0.6s,baz=116,slow=8.2,SNR=3.9						
	comp=Z,3.0nm,0.6s						
HHC	Hu-ho-hao-te	81.32	331	*e*P	P	05 42 00.8	+1.6
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
YKA	Yellowknife Ar	120.21	32	PKP	PKiKP	05 48 33.2	0.0
	comp=Z,0.2nm,0.6s,baz=266,slow=2.5,SNR=3.0						
FINES	FINESS Array B	134.29	326	PKP	PKiKP	05 49 01.6	+0.3
	comp=Z,1.6nm,0.8s,baz=40,slow=3.2,SNR=5.3						
KBA	Koelnbreinsper	144.55	307	*e*PKP	PKPab	05 49 17.3	-0.5
	comp=Z,2.2nm,0.7s						
LESA	Schwarzleotal	144.94	308	*e*PKP	PKPab	05 49 18.7	-0.4
	comp=Z,2.9nm,0.5s						
ABTA	Abfaltersbach	145.16	307	*e*PKP	PKPbc	05 49 19.1	-0.8
	comp=Z,4.1nm,1.1s						
WTTA	Wattenberg	145.66	308	*e*PKP	PKPbc	05 49 21.6	0.0
	comp=Z,9.1nm,0.7s						
WATA	Walderalm	145.69	308	*e*PKP	PKPdf	05 49 17.9	-3.3
	comp=Z,12nm,1.2s						
DBIC	Dimbokro	145.83	227	PKPbc	PKPab	05 49 23.2	0.0
	comp=Z,9.7nm,1.3s,baz=144,slow=3.3,SNR=3.0						
SQTA	Sankt Quirin	145.96	308	*e*PKP	PKPdf	05 49 19.0	-2.8
	comp=Z,0.7nm,0.4s						
KEST	Kesra	147.98	287	PKPbc	PKPbc	05 49 29.4	+0.8
	comp=Z,2.3nm,0.6s,baz=70,slow=4.7,SNR=5.3						
EKA	Eskdalemuir Ar	150.61	329	PKPbc	PKiKP	05 49 34.9	-0.1
	comp=Z,1.4nm,0.5s,baz=22,slow=3.2,SNR=7.3						

*MDD **16** 05:37:26.7±1.4, 36°.83N×1°.52E, h0^{km}, Mb3.7/11, M_mb2.9/7, Error ellipse: s-maj=11.2km s-min=6.4km az=151.0*

*CRAAG **16** 05:37:26.3, 36°.50N×1°.52E, Ml2.7, Algerie 06km SW Beni-Haoua*

ISC 16 05:37:24.2±1.1**, 36°.72N**±0°.06×**1°.51E**±0°.06**, h14**^{km}**, n13, σ1^{s}.51**/21**, 9C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EBNH	Beni Haoua	0.20	169	P	Pg	05 37 28.3	-0.5
EBNR	Beni Rached	0.43	178	P	Pg	05 37 31.5	-1.3
EARB	Arib	0.58	136	P	Pg	05 37 36.2	+0.6
EANR	'Ain N'Sour	0.84	203	P	Pg	05 37 39.2	-1.3
EIBI	Ibiza	2.30	357	Pn	Pn	05 38 03.2	+1.4
EIBI				⇑*i*IVmb_VC		05 38 05.3	
	374nm,SNR=1.9						
EIBI				Sn	Sn	05 38 29.6	-0.3
EBEN2	Beniarda presa	2.37	326	Pn	Pn	05 38 03.5	+0.8
EBEN2				⇑*i*IVmb_VC		05 38 05.1	
	241nm,SNR=1.3						
EBEN2				Sn	Sn	05 38 30.9	-0.7
AFON	Font Roja	2.53	321	Pn	Pb	05 38 07.2	-2.3
AFON				⇑*i*IVmb_VC		05 38 07.9	
	148nm,SNR=1.4						
ETOB	Tobarra	3.09	309	Pn	Pn	05 38 14.9	+2.2
ETOB				⇑*i*IVmb_VC		05 38 20.5	
	179nm,SNR=0.9						
ETOB				Sn	Sn	05 38 51.5	+2.0
ETOS	Mallorca	3.21	18	Pn	Pn	05 38 15.1	+0.8
ETOS				⇑*i*IVmb_VC		05 38 18.9	
	262nm,SNR=1.0						
ETOS				Sn	Sn	05 38 52.8	+0.5
EVIV	Cofrentes, Val	3.28	322	Pn	Pn	05 38 16.9	+1.6
EVIV				⇑*i*IVmb_VC		05 38 21.4	
	140nm,SNR=0.8						
EVIV				Sn	Sn	05 38 54.2	+0.2
ECHE	Chera	3.47	326	Pn	Pn	05 38 19.2	+1.4
ECHE				⇑*i*IVmb_VC		05 38 23.3	
	209nm,SNR=1.6						
ECHE				Sn	Sn	05 38 58.6	0.0
EQES	Quesada	3.81	288	Pn	Pn	05 38 24.8	+2.3

EQES				⇑*i*IVmb_VC		05 38 32.3	
	136nm,SNR=1.2						
EQES				Sn	**Sn**	**05 39 09.1**	**+1.8**
EMOS	**Mosqueruela**	**3.95**	**337**	Pn	**Pn**	**05 38 26.7**	**+2.1**
EMOS				⇑*i*IVmb_VC		05 38 27.6	
	118nm,SNR=0.9						
EMOS				Sn	**Sn**	**05 39 09.9**	**-1.0**

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*SJA **16** 05:55:03.9±0.6, 23°.91S×66°.83W, h230^{km}±5^{km}, ML3.6, MW3.5*

*GUC **16** 05:55:06.9±0.7, 23°.85S×67°.16W, h222^{km}±10^{km}, ML3.7*

*IDC **16** 05:55:11.2±10.0, 23°.45S×66°.54W, h232^{km}±75^{km}, mb3.1/1, mbtmp3.5/3, Error ellipse: s-maj=118.3km s-min=35.9km az=25.0*

ISC 16 05:55:05.8±0.9, **23°.88S**±0°.04×**66°.90W**±0°.05, **h212**^{km}±8^{km}, **n52**, σ**1**^{s}**31**/78, **10C-1D**, **Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALTA		**0.62**	**124**	⇓*e*P	**Pn**	**05 55 35.3**	**0.0**
SALTA		**0.62**	**124**	*e*P	**Pn**	**05 55 32.4**	**-2.9**
SALTA				*e*P	**Pn**	**05 55 35.3**	**0.0**
SALTA				*e*P	**Pn**	**05 55 35.3**	**0.0**
AF01	**San Pedro de A**	**1.50**	**308**	⇑*e*P	**Pn**	**05 55 42.3**	**+1.4**
AF01	**San Pedro de A**	**1.50**	**308**	*e*P	**Pn**	**05 55 42.5**	**+1.7**
HJA	**Humahuaca**	**1.52**	**64**	*e*P	**Pn**	**05 55 41.3**	**+0.1**
SLA	**San Lorenzo**	**1.52**	**124**	*e*P	**Pn**	**05 55 41.0**	**+0.1**
SLA	**San Lorenzo**	**1.52**	**124**	*e*P	**Pn**	**05 55 41.2**	**+0.3**
YJA	**Yavi**	**2.12**	**37**	*e*P	**Pn**	**05 55 48.0**	**+1.0**
FSA	**Cafayete**	**2.37**	**160**	*e*P	**Pn**	**05 55 48.8**	**-0.4**
PB06	**IPOC Station P**	**2.72**	**295**	⇑*e*P	**Pn**	**05 55 53.9**	**+0.9**
PB06				*e*S	**S**	**05 56 29.3**	**-0.2**
PB06				IAML		05 56 32.5	
	comp=E,226nm,0.2s						
PB06	**IPOC Station P**	**2.72**	**295**	*e*P	**Pn**	**05 55 53.9**	**+0.9**
PB06				*e*S	**S**	**05 56 30.0**	**+0.5**
PB06				IAML		05 56 31.6	
	comp=Z,131nm,0.2s						
GO02	**Mina Guanaco**	**2.76**	**242**	⇑*e*P	**Pn**	**05 55 54.2**	**+0.6**
GO02				*e*S	**S**	**05 56 31.2**	**+0.5**
GO02	**Mina Guanaco**	**2.76**	**242**	*e*P	**Pn**	**05 55 53.8**	**+0.2**
GO02				*e*S	**S**	**05 56 31.3**	**+0.7**
GO02				IAML		05 56 32.0	
	comp=Z,403nm,0.1s						
PB09	**IPOC Station P**	**3.00**	**313**	⇑*e*P	**Pn**	**05 55 57.2**	**+1.1**
PB09				*e*S	**S**	**05 56 35.3**	**+0.1**
PB09				IAML		05 56 36.7	
	comp=E,49nm,0.5s						
PB09				IAML		05 56 41.0	
	comp=N,42nm,0.6s						
PB09	**IPOC Station P**	**3.00**	**313**	*e*P	**Pn**	**05 55 56.8**	**+0.6**
PB09				*e*S	**S**	**05 56 36.4**	**+1.1**
PB09				IAML		05 56 38.3	
	comp=Z,69nm,0.5s						
PB03	**IPOC Station P**	**3.20**	**304**	⇑*e*P	**Pn**	**05 55 59.0**	**+0.5**
PB03				*e*S	**S**	**05 56 38.6**	**-0.9**
PB03				IAML		05 56 39.8	
	comp=E,130nm,0.2s						
PB03	**IPOC Station P**	**3.20**	**304**	*e*P	**Pn**	**05 55 59.0**	**+0.5**
PB03				*e*S	**S**	**05 56 39.5**	**+0.1**
PB03				IAML		05 56 43.9	
	comp=Z,97nm,0.1s						
PB05	**IPOC Station P**	**3.20**	**288**	⇑*e*P	**Pn**	**05 55 58.8**	**+0.3**
PB05				*e*S	**S**	**05 56 38.2**	**-1.2**
PB05				IAML		05 56 41.6	
	comp=N,82nm,0.3s						
PB05	**IPOC Station P**	**3.20**	**288**	*e*P	**Pn**	**05 55 59.0**	**+0.5**
PB05				*e*S	**S**	**05 56 40.7**	**+1.3**
PB05				IAML		05 56 44.3	
	comp=Z,39nm,0.3s						
AHML	**Horco Molle**	**3.22**	**154**	*e*P	Pn	05 55 47.6	-11
AHML				*e*S	S	05 56 25.2	-15
PB14	**IPOC Station P**	**3.28**	**256**	⇑*e*P	**Pn**	**05 55 59.9**	**+0.3**
PB14	**IPOC Station P**	**3.28**	**256**	*e*P	**Pn**	**05 56 00.1**	**+0.4**
PB14				*e*S	**S**	**05 56 40.8**	**-0.7**
PB14				IAML		05 56 42.9	
	comp=Z,179nm,0.2s						
PB10	**IPOC Station P**	**3.37**	**275**	⇑*e*P	**Pn**	**05 56 00.8**	**+0.5**
PB10				*e*S	**S**	**05 56 41.4**	**-1.4**
PB10	**IPOC Station P**	**3.37**	**275**	*e*P	**Pn**	**05 56 00.9**	**+0.6**
PB10				*e*S	**S**	**05 56 42.7**	**0.0**
PB10				IAML		05 56 43.8	
	comp=Z,53nm,0.4s						
PB07	**IPOC Station P**	**3.49**	**307**	⇑*e*P	**Pn**	**05 56 02.3**	**+0.3**
PB07	**IPOC Station P**	**3.49**	**307**	*e*P	**Pn**	**05 56 02.3**	**+0.3**
PB07				*e*S	**S**	**05 56 45.3**	**-0.4**
PB07				IAML		05 56 47.1	
	comp=Z,52nm,0.1s						
AC02	**Maricunga**	**3.57**	**214**	*e*P	**Pn**	**05 56 03.8**	**+0.6**
AC02				*e*S	**S**	**05 56 47.0**	**-1.0**
PB01	**IPOC Station P**	**3.70**	**319**	*e*P	**Pn**	**05 56 04.7**	**+0.2**
PB01	**IPOC Station P**	**3.70**	**319**	*e*P	**Pn**	**05 56 04.8**	**+0.2**
PB01				*e*S	**S**	**05 56 49.4**	**-0.8**
PB01				IAML		05 56 52.8	
	comp=Z,64nm,0.3s						
PB02	**IPOC Station P**	**3.76**	**312**	⇑*e*P	**Pn**	**05 56 05.1**	**-0.1**
PB02	**IPOC Station P**	**3.76**	**312**	*e*P	**Pn**	**05 56 05.5**	**+0.3**
PB02				*e*S	**S**	**05 56 51.0**	**-0.6**
PB02				IAML		05 56 52.7	
	comp=Z,134nm,0.2s						
AC01	**Pan de Azucar**	**4.04**	**235**	*e*P	**Pn**	**05 56 07.7**	**-0.8**
AC01				*e*S	**S**	**05 56 55.3**	**-2.3**
AC01				IAML		05 56 59.9	
	comp=Z,48nm,0.3s						
TINO	**Tinogasta**	**4.21**	**188**	*e*P	**Pn**	**05 56 11.4**	**+0.8**
PB08	**IPOC Station P**	**4.27**	**330**	*e*P	**Pn**	**05 56 12.6**	**+0.9**
PB08				*e*S	**S**	**05 57 03.3**	**0.0**
PB08	**IPOC Station P**	**4.27**	**330**	*e*P	**Pn**	**05 56 12.6**	**+0.9**
PB08				*e*S	**S**	**05 57 03.5**	**+0.3**
PB08				IAML		05 57 05.7	
	comp=Z,31nm,0.3s						
PATCX	**Punta Patache**	**4.28**	**315**	*e*P	**Pn**	**05 56 10.8**	**-0.8**
PATCX	**Punta Patache**	**4.28**	**315**	*e*P	**Pn**	**05 56 11.2**	**-0.4**
PATCX				*e*S	**S**	**05 57 02.1**	**-1.0**
PATCX				IAML		05 57 08.7	
	comp=Z,30nm,0.4s						
TA01	**Diego Aracena**	**4.49**	**317**	*e*P	**Pn**	**05 56 13.7**	**-0.3**
TA01	**Diego Aracena**	**4.49**	**317**	*e*P	**Pn**	**05 56 12.8**	**-1.2**
TA01				*e*S	**S**	**05 57 06.9**	**-0.6**
TA01				IAML		05 57 11.7	
	comp=Z,29nm,0.5s						
CYA	**Choya**	**4.65**	**168**	*e*P	Pn	05 56 11.1	-4.9
GO01	**Chusmiza**	**4.70**	**333**	*e*P	**Pn**	**05 56 17.6**	**+0.3**
GO01	**Chusmiza**	**4.70**	**333**	*e*P	**Pn**	**05 56 17.5**	**+0.3**
GO01				*e*S	**S**	**05 57 13.4**	**+0.2**
GO01				IAML		05 57 16.5	
	comp=Z,29nm,0.4s						
GO03	**Copiapo**	**4.77**	**218**	*e*P	**Pn**	**05 56 16.6**	**-0.9**
GO03	**Copiapo**	**4.77**	**218**	*e*P	**Pn**	**05 56 16.9**	**-0.7**
GO03				*e*S	**S**	**05 57 10.8**	**-3.1**
GO03				IAML		05 57 15.2	
	comp=Z,22nm,0.1s						
PB11	**IPOC Station P**	**4.83**	**327**	*e*P	**Pn**	**05 56 17.6**	**-1.0**
PB11	**IPOC Station P**	**4.83**	**327**	*e*P	**Pn**	**05 56 17.5**	**-1.1**
PB11				*e*S	**S**	**05 57 08.4**	**-7.3**
PB11				IAML		05 57 17.0	
	comp=Z,52nm,0.4s						
VCA	**Vinchina**	**4.98**	**193**	*e*P	**Pn**	**05 56 22.2**	**+1.9**
VCA				IAML		05 58 02.1	
	comp=Z,14nm,3.5s						
PB12	**IPOC Station P**	**6.14**	**328**	*e*P	**Pn**	**05 56 33.2**	**-1.9**
LPAZ	**La Paz**	**7.64**	**351**	P	**Pn**	**05 56 56.1**	**+1.1**
	comp=Z,0.6nm,0.4s,baz=173,slow=11,SNR=4.6						
LPAZ				S	**S**	**05 58 20.1**	**-1.9**
	comp=Z,0.8nm,0.6s,baz=360,slow=19,SNR=2.0						
BDFB	**Brasilia**	**19.56**	**69**	P	**P**	**05 59 16.5**	**-1.3**
	comp=Z,1.0nm,0.6s,baz=225,slow=13,SNR=3.4						
TORD	**Torodi Ar. Bea**	**76.44**	**69**	P	**P**	**06 06 34.4**	**+1.9**
	comp=Z,0.5nm,0.8s,baz=233,slow=7.0,SNR=2.1						
	comp=Z,0.5nm,0.8s						
MKAR	**Makanchi Array**	**146.37**	**39**	PKPbc	**PKPbc**	**06 14 21.5**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=320,slow=2.9,SNR=4.5						

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*CNRM **16** 06:01:17.2, 35°.99N×2°.85W, h2^{km}, ML1.8*

*MDD **16** 06:01:19.2±0.4, 36°.06N×2°.76W, h0^{km}, mb_Lg2.1/10, Error ellipse: s-maj=4.3km s-min=2.6km az=99.0*

*SFS **16** 06:01:20.0, 35°.91N×3°.44W, h10^{km}, ML2.5/5, ML2.3/5, MLv2.2/5*

ISC 16 06:01:19.8±1.1, **36°.03N**±0°.02×**2°.80W**±0°.07, **h31**^{km}±7^{km}, **n23**, σ**1**^{s}**29**/33, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EALB	**Alboran**	**0.21**	**246**	Sg	**Sb**	**06 01 31.1**	**+0.6**
EALB				Pg	**Pb**	**06 01 25.8**	**-0.5**
EALB	**Alboran**	**0.21**	**246**	Pg	**Pb**	**06 01 25.7**	**-0.5**
EALB				Sg	**Sb**	**06 01 31.2**	**+0.6**
WMELI	**Melilla**	**0.72**	**190**	Pg	**Pb**	**06 01 32.7**	**-1.1**
WMELI				Sg	**Sb**	**06 01 43.1**	**-0.4**
EMLI	**Melilla**	**0.73**	**190**	Pg	**Pb**	**06 01 33.6**	**-0.6**
EMEL	**Melilla**	**0.74**	**190**	Pg	**Pb**	**06 01 33.0**	**-1.1**
EMEL				Sg	**Sb**	**06 01 43.8**	**-0.1**
EXEJI	**El Ejido**	**0.75**	**359**	Pg	**Pb**	**06 01 33.5**	**-0.8**
EXEJI				Sg	**Sb**	**06 01 43.9**	**-0.4**
ELGU	**Los Guajares,**	**1.07**	**322**	Pg	**Pn**	**06 01 38.0**	**-0.7**
ELGU	**Los Guajares,**	**1.07**	**322**	Pg	**Pn**	**06 01 38.1**	**-0.7**
ELGU				Sg	**Sb**	**06 01 51.6**	**-2.0**
ELGU				*i* IVmb_Lg		06 01 57.4	
PALE	**Palemas**	**1.23**	**229**	P	**Pn**	**06 01 39.6**	**-1.3**
PALE	**Palemas**	**1.23**	**229**	S	**Sn**	**06 01 56.0**	**-0.4**
TAF	**Taforalt**	**1.25**	**165**	P	**Pn**	**06 01 40.9**	**-0.2**
TAF	**Taforalt**	**1.25**	**165**	S	**Sb**	**06 01 58.1**	**-0.4**
EQUE	**Quentar**	**1.28**	**336**	Pg	**Pb**	**06 01 43.0**	**-0.5**
EQUE				Sg	**Sb**	**06 01 59.7**	**+0.1**
EQUE				*i* IVmb_Lg		06 02 01.0	
EQTA	**Presa de Quent**	**1.29**	**336**	Pn	**Pn**	**06 01 42.5**	**+0.8**
EQTA				Sn	**Sb**	**06 02 00.1**	**+0.4**
EMIJ	**Mijas**	**1.68**	**289**	Sn	**Sn**	**06 02 09.4**	**+1.8**
EMIJ				*i* IVmb_Lg		06 02 10.7	
AKLM	**AKL**	**1.75**	**210**	P	**Pn**	**06 01 47.2**	**-0.8**
AKLM	**AKL**	**1.75**	**210**	S	**Sn**	**06 02 10.9**	**+1.7**
EQES	**Quesada**	**1.79**	**353**	Pg	**Pb**	**06 01 50.4**	**-1.6**
EQES				Sn	**Sn**	**06 02 11.9**	**+1.6**
EQES				*i* IVmb_Lg		06 02 15.3	
EADA	**Adamuz**	**2.57**	**327**	Pg	**Pb**	**06 02 03.2**	**-1.9**
EADA				Sn	**Sn**	**06 02 32.9**	**+3.5**
EADA				*i* IVmb_Lg		06 02 36.7	
MDT	**Midelt**	**3.54**	**206**	P	**Pn**	**06 02 13.2**	**+0.5**
MDT	**Midelt**	**3.54**	**206**	S	**Sn**	**06 02 55.4**	**+2.0**
MD31	**MD31**	**3.54**	**208**	P	**Pn**	**06 02 12.6**	**-0.1**
MD31	**MD31**	**3.54**	**208**	S	**Sn**	**06 02 55.7**	**+2.0**

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*NDI **16** 06:08:20.8±1.1, 8°.33N×91°.80E, h10^{km}, mb4.2, ML4.0, MW4.0*

*NEIC **16** 06:08:42.6±1.0, 8°.55N±0°.05×91°.9E±0°.2, h10^{km}±2^{km}, mb4.2/11, Error ellipse: s-maj=36.8km s-min=9.4km az=267.0*

*IDC **16** 06:08:45.5±1.7, 8°.50N×91°.96E, h30^{km}±6^{km}, mb3.4/5, mbtmp3.6/6, ML4.5/1, Error ellipse: s-maj=61.2km s-min=16.8km az=62.0*

ISC 16 06:08:41.8±1.2, **8°.4N**±0°.1×**91°.7E**±0°.2, **h10**^{km}, **n29**, σ**1**^{s}**27**/26, **mb4.0**/13, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**12.19**	**34**	Pn	**Pn**	**06 11 36.2**	**+0.5**
	0.8nm,0.3s,baz=204,slow=13,SNR=1.7						
	1.0nm,0.3s						
SLVN	**Son La**	**17.40**	**41**	P	**Pn**	**06 12 44.0**	**-0.9**
H08S3	**Diego Garcia H**	**24.94**	**231**	T	T	06 40 39.5	
	baz=51,slow=76,SNR=449						
H08S2	**Diego Garcia H**	**24.94**	**231**	T	T	06 40 39.8	
	baz=51,slow=76,SNR=46						
H08S1	**Diego Carcia H**	**24.95**	**231**	T	T	06 40 40.9	
	baz=51,slow=76,SNR=48						
WUS	**Wushi**	**34.46**	**343**	P	**P**	**06 15 30.5**	**+0.5**
MKAR	**Makanchi Array**	**39.06**	**350**	P	**P**	**06 16 09.7**	**+0.7**
	0.5nm,0.5s,baz=168,slow=8.7,SNR=10						
MKAR				pP	**pwP**	**06 16 18.4**	**+2.5**
	1.1nm,0.4s,baz=170,slow=7.4,SNR=13						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**39.06**	**350**	P	**P**	**06 16 09.1**	**+0.1**
MAKZ	**Makanchi**	**39.13**	**349**	P	**P**	**06 16 10.1**	**+0.5**
MAKZ				IAmb	IAmb	06 16 22.2	
	comp=Z,1.5nm,0.6s						
KK31	**Karatay Array**	**39.22**	**335**	P	**P**	**06 16 08.3**	**-2.0**
KK31				IAmb	IAmb	06 16 13.1	
	comp=Z,6.6nm,1.5s						
KKAR	**Karatay Array**	**39.22**	**335**	P	**P**	**06 16 08.7**	**-1.6**
SONM	**Songino Array**	**41.20**	**15**	P	**P**	**06 16 26.0**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=197,slow=9.9,SNR=5.8						
SONM				pP	**pwP**	**06 16 34.2**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=199,slow=8.7,SNR=6.0						
	comp=Z,1.0nm,0.7s						
SONM	**Songino Array**	**41.20**	**15**	P	**P**	**06 16 25.6**	**-1.2**
KURBB	**Kurchatov Arra**	**43.46**	**348**	P	**P**	**06 16 45.9**	**+0.9**
	comp=Z,0.8nm,0.9s,baz=166,slow=7.1,SNR=4.4						
KURBB				pP	**pwP**	**06 16 54.6**	**+2.7**
	comp=Z,1.8nm,0.6s,baz=168,slow=7.0,SNR=7.1						
	comp=Z,0.8nm,0.9s						
ZALV	**Zalesovo Beam**	**45.73**	**354**	pP	pP	06 17 13.6	+8.6
	comp=Z,1.1nm,0.6s,baz=171,slow=11,SNR=3.3						
ZALV	**Zalesovo Beam**	**45.73**	**354**	P	**P**	**06 17 03.6**	**+0.5**
AB31	**Akbulak array**	**48.61**	**333**	P	**P**	**06 17 25.1**	**-0.5**
AB31				IAmb	IAmb	06 17 52.5	
	comp=Z,4.2nm,1.5s						
ABKAR	**Akbulak array**	**48.61**	**333**	P	**P**	**06 17 25.6**	**-0.1**
WB0	**Warramunga Arr**	**50.51**	**124**	P	**P**	**06 17 39.9**	**-0.7**
WB0				IAmb	IAmb	06 17 51.1	
	comp=Z,5.8nm,1.4s						
WRA	**Warramunga Arr**	**50.55**	**124**	P	**P**	**06 17 40.0**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=301,slow=9.4,SNR=9.8						
WRA				pP	**pwP**	**06 17 50.4**	**+2.6**
	comp=Z,0.9nm,0.7s,baz=302,slow=9.1,SNR=7.0						
	comp=Z,0.2nm,0.4s						
WB2	**Warramunga Arr**	**50.56**	**124**	P	**P**	**06 17 40.3**	**-0.7**
WB2				IAmb	IAmb	06 17 52.2	
	comp=Z,3.3nm,0.9s						
WR8	**Warramunga Arr**	**50.69**	**124**	P	**P**	**06 17 41.3**	**-0.6**
WR8				IAmb	IAmb	06 17 47.2	
	comp=Z,5.3nm,1.2s						
WR0	**Warramunga Arr**	**50.72**	**124**	P	**P**	**06 17 41.7**	**-0.5**
WR0				IAmb	IAmb	06 17 55.4	
	comp=Z,2.9nm,1.1s						
ASAR	**Alice Springs**	**52.13**	**129**	P	**P**	**06 17 52.0**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=307,slow=7.4,SNR=5.3						
	comp=Z,0.2nm,0.4s						
H04N2	**CROZET ISLANDS**	**65.00**	**209**	T	T	07 30 35.4	
	baz=43,slow=75,SNR=123						
H04N1	**CROZET ISLANDS**	**65.00**	**209**	T	T	07 30 36.2	
	baz=43,slow=75,SNR=142						
H04N3	**CROZET ISLANDS**	**65.02**	**209**	T	T	07 30 34.8	
	baz=43,slow=75,SNR=131						
TIXI	**Tiksi**	**67.17**	**12**	P	**P**	**06 19 34.6**	**-1.0**
IMAR	**Indian Mountai**	**92.02**	**22**	P	**P**	**06 21 50.3**	**-0.5**

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*IDC **16** 06:18:32.9±0.7, 52°.80S×10°.73E, h0^{km}, mb4.2/10, mbtmp4.2/11, ML3.4/1, MS3.9/15, Error ellipse: s-maj=29.7km s-min=18.6km az=57.0*

*NEIC **16** 06:18:35.0±1.1, 52°.84S±0°.07×10°.8E±0°.3, h10^{km}±1^{km}, mb4.6/13, Error ellipse: s-maj=27.1km s-min=11.3km az=98.0*

ISC 16 06:18:34.6±0.6, **52°.81S**±0°.10×**10°.7E**±0°.1, **h10**^{km}, **n55**, σ**0**^{s}**61**/36, **mb4.5**/11, **MS4.0**/15, **4C-1D**, **Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TROLL	**Troll, Antarti**	**19.60**	**188**	⇑P	**P**	**06 23 02.7**	**0.0**
	comp=Z,806nm,1.0s						
VNA1	**Neumayer--Stat**	**19.85**	**199**	⇑P	**Pn**	**06 23 07.9**	**+1.0**
	comp=Z,9.8nm,0.8s						
SNAA	**Sanae**	**19.85**	**193**	⇑P	**P**	**06 23 05.7**	**+0.3**
	comp=Z,322nm,0.7s						
SNAA	**Sanae**	**19.85**	**193**	P	**P**	**06 23 05.7**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=13,slow=12,SNR=15						
	comp=Z,13nm,0.9s						
SNAA	**Sanae**	**19.85**	**193**	P	**Pn**	**06 23 06.1**	**-0.9**
SNAA				IAmb	IAmb	06 23 13.0	
	comp=Z,26nm,1.0s						
VNA2	**Neumayer--Watz**	**19.91**	**197**	⇑P	**P**	**06 23 06.1**	**+0.1**
	comp=Z,6.3nm,0.7s,baz=23,slow=13						
VNA3	**Neumayer Olymp**	**20.60**	**199**	⇓P	**P**	**06 23 13.7**	**+0.2**
	comp=Z,19nm,0.7s						
BOSA	**Boshof**	**26.47**	**30**	LR	LR	06 32 33.8	
	comp=Z,212nm,21.1s,baz=204,slow=32						
H04S2	**CROZET ISLANDS**	**26.93**	**94**	T	T	06 52 28.0	
	baz=243,slow=76,SNR=44						
H04S3	**CROZET ISLANDS**	**26.94**	**94**	T	T	06 52 32.1	
	baz=243,slow=76,SNR=41						
H04S1	**CROZET ISLANDS**	**26.95**	**94**	T	T	06 52 29.6	
	baz=243,slow=76,SNR=48						
MAW	**Mawson**	**28.75**	**141**	P	**P**	**06 24 32.5**	**+0.7**
	comp=Z,1.0nm,0.3s,baz=286,slow=13,SNR=4.9						
MAW				LR	LR	06 33 35.5	
	comp=Z,162nm,21.6s,baz=288,slow=31						
	comp=Z,1.0nm,0.3s						
BELA	**Belgrano 2**	**29.89**	**198**	P	**P**	**06 24 42.3**	**+0.4**
LBTB	**Lobatse**	**29.95**	**28**	LR	LR	06 34 48.8	
	comp=Z,179nm,20.1s,baz=184,slow=33						
TSUM	**Tsumeb**	**33.97**	**12**	LR	LR	06 36 59.3	
	comp=Z,351nm,20.5s,baz=154,slow=33						
MATP	**Matopo**	**35.14**	**30**	LR	LR	06 38 15.4	
	comp=Z,150nm,21.6s,baz=216,slow=34						
QSPA	**South Pole Qui**	**37.42**	**180**	P	**P**	**06 25 47.6**	**0.0**
	comp=Z,1.5nm,0.5s,baz=234,slow=8.2,SNR=4.5						
QSPA				LR	LR	06 40 23.6	
	comp=Z,308nm,19.7s,baz=224,slow=35						
	comp=Z,1.5nm,0.5s						
QSPA	**South Pole Qui**	**37.42**	**180**	P	**P**	**06 25 47.2**	**-0.4**
QSPA				IAmb	IAmb	06 25 54.5	
	comp=Z,9.9nm,1.1s						
PMSA	**Palmer Station**	**38.15**	**222**	LR	LR	06 37 13.0	
	comp=Z,118nm,19.3s,baz=90,slow=29						
VNDA	**Vanda**	**48.70**	**172**	LR	LR	06 46 54.1	
	comp=Z,193nm,20.3s,baz=190,slow=35						
TRQA	**Tornquist**	**50.92**	**256**	P	**P**	**06 27 35.7**	**-0.1**
TRQA				IAmb	IAmb	06 27 47.3	
	comp=Z,8.9nm,1.2s						
MBAR	**Mbarara**	**54.65**	**25**	LR	LR	06 49 56.8	
	comp=Z,197nm,19.6s,baz=196,slow=34						
CPUP	**Villa Florida**	**56.34**	**270**	P	**P**	**06 28 14.9**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=157,slow=9.5,SNR=4.2						
	comp=Z,0.5nm,0.8s						
CPUP	**Villa Florida**	**56.34**	**270**	P	**P**	**06 28 15.5**	**-0.1**
BDFB	**Brasilia**	**58.90**	**286**	P	**P**	**06 28 33.7**	**-0.2**
	comp=Z,5.3nm,0.9s,baz=132,slow=3.0,SNR=6.6						
	comp=Z,5.3nm,0.9s						
BDFB	**Brasilia**	**58.90**	**286**	P	**P**	**06 28 34.1**	**+0.1**
BDFB				IAmb	IAmb	06 28 36.0	
	comp=Z,8.3nm,1.0s						
PEL	**Peldehue**	**59.43**	**254**	P	**P**	**06 28 37.9**	**+0.6**
DBIC	**Dimbokro**	**60.72**	**342**	P	**P**	**06 28 45.4**	**-0.8**
	comp=Z,3.4nm,0.9s,baz=185,slow=11,SNR=3.6						
	comp=Z,3.4nm,0.9s						
DBIC	**Dimbokro**	**60.72**	**342**	P	**P**	**06 28 46.8**	**+0.7**
TORD	**Torodi Ar. Bea**	**66.15**	**350**	P	**P**	**06 29 23.0**	**+0.9**
	comp=Z,1.1nm,1.1s,baz=164,slow=5.9,SNR=2.2						
	comp=Z,1.1nm,1.1s						
H01W2	**Cape Leeuwin H**	**70.32**	**122**	T	T	07 47 14.6	
	baz=219,slow=75,SNR=7.5						
H01W3	**Cape Leeuwin H**	**70.33**	**122**	T	T	07 47 20.9	
	baz=219,slow=75,SNR=7.8						
H01W1	**Cape Leeuwin H**	**70.33**	**122**	T	T	07 47 21.7	
	baz=219,slow=75,SNR=7.4						
LPAZ	**La Paz**	**70.47**	**269**	P	**P**	**06 29 50.4**	**+0.4**
	comp=Z,3.4nm,0.8s,baz=133,slow=6.1,SNR=16						
	comp=Z,3.4nm,0.8s						
LPAZ	**La Paz**	**70.47**	**269**	P	**P**	**06 29 49.9**	**-0.1**
LPAZ				IAmb	IAmb	06 29 51.1	
	comp=Z,4.2nm,0.8s						
MDP	**Montagnes des**	**78.41**	**295**	LR	LR	07 01 15.5	
	comp=Z,68nm,18.1s,baz=123,slow=33						
EIL	**Elat**	**84.82**	**21**	LR	LR	07 07 14.8	
	comp=Z,128nm,20.6s,baz=180,slow=34						
STKA	**Stephens Creek**	**85.43**	**140**	P	**P**	**06 31 11.6**	**-0.7**
	comp=Z,3.6nm,0.9s,baz=173,slow=3.5,SNR=7.1						
	comp=Z,3.6nm,0.9s						
STKA	**Stephens Creek**	**85.43**	**140**	P	**P**	**06 31 11.8**	**-0.5**
MMAI	**Mount Meron Ar**	**88.14**	**21**	LR	LR	07 10 47.1	
	comp=Z,82nm,18.2s,baz=207,slow=36						
URZ	**Urewera**	**88.53**	**169**	LR	LR	07 07 27.9	
	comp=Z,59nm,22.0s,baz=205,slow=33						
INKA	**Innaminka**	**88.75**	**137**	P	**P**	**06 31 28.1**	**-0.3**
INKA				IAmb	IAmb	06 31 29.4	
	comp=Z,2.9nm,1.0s						
ASAR	**Alice Springs**	**89.28**	**130**	P	**P**	**06 31 30.5**	**-0.6**
	comp=Z,2.4nm,1.0s,baz=207,slow=4.9,SNR=14						
ASAR				LR	LR	07 05 34.1	
	comp=Z,35nm,18.9s,baz=218,slow=32						
	comp=Z,2.4nm,1.0s						
ASAR	**Alice Springs**	**89.28**	**130**	P	**P**	**06 31 30.7**	**-0.4**
AS31	**Alice Springs**	**89.28**	**130**	P	**P**	**06 31 31.0**	**-0.1**
ESDC	**Sonseca Array**	**92.99**	**349**	P	**P**	**06 31 48.1**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=164,slow=5.9,SNR=4.7						
	comp=Z,1.1nm,0.8s						
ESDC	**Sonseca Array**	**92.99**	**349**	IAmb	IAmb	06 31 57.4	
	comp=Z,6.0nm,1.5s						
MLR	**Muntele Rosu**	**98.80**	**11**	LR	LR	07 17 35.6	
	comp=Z,64nm,19.3s,baz=262,slow=36						
TXAR	**Lajitas Array**	**127.31**	**271**	PKP	**PKiKP**	**06 37 39.9**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=149,slow=2.6,SNR=3.9						
PDAR	**Pinedale Array**	**139.73**	**280**	PKP	**PKPdf**	**06 38 00.6**	**-1.7**
	comp=Z,0.6nm,0.9s,baz=116,slow=2.8,SNR=3.6						
WVOR	**Wild Horse Val**	**145.00**	**274**	PKPbc	**PKPdf**	**06 38 11.4**	**-0.1**
J08A	**Circle Bar Ran**	**145.43**	**275**	PKPdf	**PKPab**	**06 38 12.7**	**+0.3**
O03E	**Paynes Creek**	**145.66**	**268**	PKPdf	**PKPdf**	**06 38 12.5**	**-0.1**
YKA	**Yellowknife Ar**	**150.09**	**311**	PKPbc	**PKPbc**	**06 38 22.8**	**-1.2**
	comp=Z,3.5nm,1.0s,baz=88,slow=1.4,SNR=16						
YKA	**Yellowknife Ar**	**150.09**	**311**		**PKPbc**	**06 38 23.5**	**-0.6**

RSNC 16 06:36:16.2±0.0, **7°N**±1°×**7°3W**±°, **h135**^{km}±2^{km}, **M2.8**, **mb4.5**, **ML2.5**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	**Pamplona, Colo**	**0.46**	**105**	P	Pn	06 36 36.1	-0.1
PAMC				S	Sn	06 36 51.5	+0.2
BRJC	**Barrancabermej**	**0.76**	**231**	P	Pn	06 36 36.7	-0.9
BRJC				S	Sn	06 36 52.7	-1.1
OCAC	**Ocana**	**0.79**	**348**	P	Pn	06 36 37.2	-0.8
OCAC				S	Sn	06 36 54.1	-0.4
BARC	**Barichara**	**0.86**	**182**	P	Pn	06 36 38.0	-0.7
BARC				S	Sn	06 36 55.0	-0.7
RUSC	**La Rusia**	**1.56**	**178**	P	Pn	06 36 44.4	-1.4
RUSC				S	Sn	06 37 08.0	-0.4
PTBC	**PUERTO BERRIO,**	**1.59**	**235**	P	Pn	06 36 44.4	-1.3
PTBC				S	Sn	06 37 07.2	-0.9
SPBC	**San Pablo de B**	**2.02**	**207**	P	Pn	06 36 50.2	-0.6
SPBC				S	Sn	06 37 17.0	-0.2
UREC	**San Jos de Ur**	**2.38**	**277**	P	Pn	06 36 53.0	-2.1
UREC				S	Sn	06 37 21.4	-3.6
ARGC	**Ariguani, Magd**	**2.62**	**336**	P	Pn	06 36 58.6	+0.5
ARGC				S	Sn	06 37 30.8	+0.4
ROSC	**El Rosal**	**2.85**	**204**	P	Pn	06 37 02.7	+1.2
ROSC				S	Sn	06 37 38.9	+2.6
SDV	**Santo Domingo**	**2.87**	**60**	P	Pn	06 37 01.2	-0.3
SDV				S	Sn	06 37 35.3	-1.1
CHIC	**Chingaza**	**2.87**	**192**	P	Pn	06 37 01.1	-0.7
CHIC				S	Sn	06 37 38.8	+2.0
CVER	**Cruz Verde, Cu**	**3.06**	**198**	P	Pn	06 37 05.2	+0.9
CVER				S	Sn	06 37 41.9	+0.6
DBBC	**Dabeiba**	**3.07**	**262**	P	Pn	06 37 02.7	-1.3
DBBC				S	Sn	06 37 37.6	-3.2
GUY2C	**Guyana, Caldas**	**3.13**	**225**	P	Pn	06 37 05.7	+0.6
SJCC	**San Jacinto, C**	**3.14**	**320**	P	Pn	06 37 03.3	-1.6
SJCC				S	Sn	06 37 39.7	-2.9
CBOC	**Ciudad Bolivar**	**3.25**	**241**	P	Pn	06 37 05.8	-0.7
VILC	**Villavicencio,**	**3.37**	**189**	P	Pn	06 37 08.0	0.0
APAC	**Apartado, Choc**	**3.43**	**278**	P	Pn	06 37 07.4	-1.2
LCBC	**Los crdobas,**	**3.48**	**294**	P	Pn	06 37 08.0	-1.2
PLMC	**San Jos del P**	**4.02**	**231**	P	Pn	06 37 15.7	-0.7
ORTC	**Ortega, Tolima**	**4.10**	**211**	P	Pn	06 37 16.2	-1.3
ORTC				S	Sn	06 38 07.7	+2.7
PRAC	**Prado**	**4.10**	**205**	P	Pn	06 37 16.7	-0.8
PRAC				S	Sn	06 38 06.4	+1.3
URMC	**La Uribe, Meta**	**4.36**	**196**	P	Pn	06 37 20.7	-0.3
URMC				S	Sn	06 38 11.3	0.0
URIC	**Uribia, Colomb**	**4.37**	**15**	P	Pn	06 37 18.4	-2.6
URIC				S	Sn	06 38 07.9	-3.4
PTAC	**Punta Ardita,**	**4.63**	**266**	P	Pn	06 37 23.7	-0.8
YOTC	**Yotoco, Valle**	**4.69**	**223**	P	Pn	06 37 24.1	-1.3
MACC	**Macarena, Meta**	**5.33**	**188**	P	Pn	06 37 32.0	-1.8
JAMC	**Jamundi, Valle**	**5.49**	**220**	P	Pn	06 37 34.2	-1.9
	2.7nm,0.7s						
POPC	**Popayan, Colom**	**6.02**	**216**	P	Pn	06 37 42.2	-1.1
	2.6nm,0.6s						
FLOC	**Florencia**	**6.35**	**203**	P	Pn	06 37 46.1	-1.4
	2.9nm,0.7s						
BBAC	**Balboa, Cauca**	**6.77**	**217**	P	Pn	06 37 52.2	-1.2

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*UCR **16** 06:36:50.4±2.1, 12°.28N×87°.65W, h38^{km}±229^{km}, MW3.5*

*SNET **16** 06:36:51.0±0.6, 12°.41N×87°.63W, h49^{km}±6^{km}, ML3.2*

*CATAC **16** 06:36:51.2±0.2, 12°N±2°×8°8W±°, h38^{km}±2^{km}, M3.6/39,* *MLv3.6/39, Error ellipse: s-maj=3.9km s-min=1.5km az=28.1, confirmed*

ISC 16 06:36:50.7±1.2**, 12°.36N**±0°.04×**87°.62W**±0°.03**, h59**^{km}±11^{km}**, n88,** σ**0**^{s}**60**/114**, 2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	0.61	6	P	Pn	06 37 03.7	-0.4
CSGN				S	Sn	06 37 13.5	-0.3
CSGN	Cosiguina Volc	0.61	6	⇓iP	Pn	06 37 03.7	-0.4
CSGN				eS	Sn	06 37 13.4	-0.3
POTN	Potosi Cosigui	0.65	10	P	Pn	06 37 04.1	-0.2
POTN				S	Sn	06 37 14.1	0.0
POTN	Potosi Cosigui	0.65	10	eP	Pn	06 37 03.9	-0.4
POTN				eS	Sn	06 37 14.2	0.0
CRIN	San Cristobal	0.65	59	P	Pn	06 37 05.1	+0.6
CRIN	San Cristobal	0.65	59	eP	Pn	06 37 04.9	+0.4
CRIN				eS	Sn	06 37 15.9	+1.5
PKGN	Cerro Pekin	0.70	64	P	Pn	06 37 05.0	+0.1
PKGN				S	Sn	06 37 15.9	+0.5
QUEN	Al S del Volca	0.79	73	P	Pn	06 37 06.2	+0.2
QUEN				S	Sn	06 37 17.2	-0.1
TEL3	Telica 3	0.79	74	P	Pn	06 37 06.2	+0.1
TELN	Telica	0.81	73	P	Pn	06 37 06.4	0.0
TELN				S	Sn	06 37 17.3	-0.6
POLN	Al Sur del Vol	0.84	70	P	Pn	06 37 06.5	-0.2
POLN				S	Sn	06 37 18.9	+0.4
CNGA	Al SSO del Vol	0.91	82	P	Pn	06 37 07.6	0.0
CNGA				S	Sn	06 37 20.2	+0.1
CNGN	Cerro Negro	0.91	81	P	Pn	06 37 07.5	-0.2
CNGN	Cerro Negro	0.91	81	eP	Pn	06 37 07.5	-0.2
CNGN				eS	Sn	06 37 20.7	+0.5
CNCH	Conchagua	0.93	347	⇓iP	Pn	06 37 07.6	-0.4
CNCH				eS	Sn	06 37 20.4	-0.3
CNCH	Conchagua	0.93	347	P	Pn	06 37 07.6	-0.4
LCND	La Caada	0.98	345	eP	Pn	06 37 08.0	-0.5
LCND	La Caada	0.98	345	P	Pn	06 37 08.3	-0.2
LCND	La Caada	0.98	345	S	Sn	06 37 21.1	-0.5
COPN	Copaltepe	1.02	100	P	Pn	06 37 08.7	-0.4
COPN	Copaltepe	1.02	100	eP	Pn	06 37 08.6	-0.4
COPN				eS	Sn	06 37 22.0	-0.7
MOMN	Momotombo	1.06	87	P	Pn	06 37 08.6	-0.9
MOMN				S	Sn	06 37 22.5	-1.1
MOM2	El Cardon	1.11	86	P	Pn	06 37 10.1	-0.1
MOM2				S	Sn	06 37 24.6	-0.1
AMTN	Mateare	1.17	96	S	Sn	06 37 26.3	+0.2
AMTN	Mateare	1.17	96	P	Pn	06 37 11.3	+0.3
CNRM	Centro Naciona	1.23	334	P	Pn	06 37 11.8	-0.1
CNRM	Centro Naciona	1.23	334	S	Sn	06 37 27.4	-0.1
LCY	Lacayo	1.24	328	eP	Pn	06 37 11.9	-0.2
RANC	El Ranchito	1.25	329	eP	Pn	06 37 11.9	-0.3
APYN	Apoyeque	1.25	96	S	Sn	06 37 28.1	+0.1
APQ2	Apoyeque	1.28	97	P	Pn	06 37 12.7	+0.2
APQ2				S	Sn	06 37 28.8	+0.2
PACA	Pacayal	1.30	328	eP	Pn	06 37 12.6	-0.2
PACA	Pacayal	1.30	328	P	Pn	06 37 12.9	0.0
PACA	Pacayal	1.30	328	S	Sn	06 37 29.3	0.0
ABCN	Banco Central	1.30	100	S	Sn	06 37 29.2	-0.1
ALLN	Telcor Managua	1.33	99	S	Sn	06 37 30.0	0.0
ALLN	Telcor Managua	1.33	99	P	Pn	06 37 13.4	+0.2
MGAN	Managua	1.36	99	S	Sn	06 37 30.9	+0.2
MGAN	Managua	1.36	99	eS	Sn	06 37 31.1	+0.5
MGAN				eP	Pn	06 37 13.5	0.0
LIMN	Finca el Limon	1.41	60	P	Pn	06 37 13.9	-0.4
LIMN				S	Sn	06 37 31.1	-0.9
TECA	Tecapa	1.42	323	eP	Pn	06 37 14.6	+0.1
MAS3	Al N del Volca	1.45	103	P	Pn	06 37 15.1	+0.3
MAS3				S	Sn	06 37 32.9	0.0
MASN	Masaya	1.49	104	S	Sn	06 37 33.8	+0.1
NANN	Nandasmo	1.53	106	P	Pn	06 37 17.0	+1.2
NANN	Nandasmo	1.53	106	S	Sn	06 37 36.0	+1.3
TECO	Alcaldia de Te	1.62	316	S	Sn	06 37 36.4	-0.7
TECO	Alcaldia de Te	1.62	316	P	Pn	06 37 17.1	-0.1
NADN	Granada	1.67	111	S	Sn	06 37 38.5	+0.4
OCON	Estacion meteo	1.69	41	P	Pn	06 37 18.1	+0.1
OCON				S	Sn	06 37 38.8	+0.2
UESV	Universidad de	1.70	318	P	Pn	06 37 18.2	0.0
UESV	Universidad de	1.70	318	S	Sn	06 37 39.1	+0.2
SCLA	Alcaldia de Sa	1.71	321	eP	Pn	06 37 18.5	+0.1
SCLA				eS	Sn	06 37 40.3	+1.0
SCLA	Alcaldia de Sa	1.71	321	S	Sn	06 37 39.9	+0.6
SCLA	Alcaldia de Sa	1.71	321	P	Pn	06 37 18.9	+0.6
TGUH	Tegucigalpa,Un	1.72	11	P	Pn	06 37 18.9	+0.3
TGUH				S	Sn	06 37 39.4	-0.2
MATN	Matagalpa	1.75	71	P	Pn	06 37 17.9	-1.0
MATN	Matagalpa	1.75	71	S	Sn	06 37 39.5	-0.8
YUSH	Yuscaran	1.76	26	P	Pn	06 37 19.2	+0.1
YUSH	Yuscaran	1.76	26	S	Sn	06 37 40.1	-0.3
RCFN	Al S de San Ju	1.80	50	P	Pn	06 37 19.1	-0.5
RCFN				S	Sn	06 37 40.8	-0.8
RCON	San Juan de Ri	1.81	52	P	Pn	06 37 20.3	+0.5
RCON	San Juan de Ri	1.81	52	S	Sn	06 37 41.9	+0.1
RCVN	Varillal2	1.85	49	S	Sn	06 37 43.1	+0.4
RCVN	Varillal2	1.85	49	P	Pn	06 37 20.6	+0.3
PAVA	Las Pavas	1.86	317	eP	Pn	06 37 19.8	-0.6
PAVA	Las Pavas	1.86	317	S	Sn	06 37 43.3	+0.4
PAVA	Las Pavas	1.86	317	P	Pn	06 37 20.4	+0.1
BOAB	BOACO BROADBAN	.91	87	P	Pn	06 37 21.0	0.0
BOAB	BOACO BROADBAN	.91	87	S	Sn	06 37 43.6	-0.4
LOMA	Loma Larga	1.98	310	S	Sn	06 37 45.1	-0.7
LOMA	Loma Larga	1.98	310	P	Pn	06 37 21.9	-0.1
UDBS	Universidad Do	2.01	312	S	Sn	06 37 46.3	-0.2
PMON	Piamonte	2.13	309	eP	Pn	06 37 24.2	+0.2
PMON	Piamonte	2.13	309	S	Sn	06 37 49.9	+0.5
PMON	Piamonte	2.13	309	P	Pn	06 37 24.5	+0.5
JAYA	Jayaque - finc	2.20	306	eP	Pn	06 37 24.4	-0.6
LCRUZ	La Cruz	2.33	123	eP	Pn	06 37 25.8	-1.0
UNIC	Universidad Ca	2.47	311	P	Pn	06 37 29.6	+0.9
UNIC	Universidad Ca	2.47	311	S	Sn	06 37 58.6	+0.8
NUBE	Las Nubes	2.60	306	S	Sn	06 38 00.8	-0.2
NUBE	Las Nubes	2.60	306	P	Pn	06 37 30.8	+0.3
MTO3	Montecristo	2.64	320	P	Pn	06 37 31.2	+0.1
FAME	Alcaldia de Sa	2.76	303	S	Sn	06 38 04.3	-0.4
SAJU	San Juanillo,	2.95	140	ePn	Pn	06 37 35.5	+0.2
SAJU				eSn	Sn	06 38 07.0	-2.5
JUD3	Juan Diaz 3	2.99	137	ePn	Pn	06 37 36.4	+0.6
JUD3				eSn	Sn	06 38 08.2	-2.3
CMARA	Lajas Hojancha	3.17	137	P	Pn	06 37 39.0	+0.7
CMARA	Lajas Hojancha	3.17	137	ePn	Pn	06 37 38.9	+0.5
JTS	Las Juntas de	3.33	128	P	Pn	06 37 41.3	+0.9
JTS				S	Sn	06 38 20.2	+1.4

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*NIED **16** 06:38:40.9, 32°.39N×137°.54E, h408^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.26; M$_{\theta\theta}$-0.40; M$_{\phi\phi}$0.13; M$_{r\theta}$-1.73; M$_{\theta\phi}$-0.37; M$_{\phi r}$-3.76; Fault plane solution: M$_{0}$4.17000×10^{15} NP1:φ$_{s}$99.00000°, δ6.00000°, λ164.00000°. NP2:φ$_{s}$205.00000°, δ88.00000°, λ84.00000°.*

*JMA **16** 06:38:40.9±0.3, 32°N±1°×13°8E±°, h408^{km}±2^{km}, MV4.1/37, FAR S OFF TOKAI DISTRICT*

*MOS **16** 06:38:41.1±0.9, 32°.37N×137°.48E, h403^{km}, mb4.3/36, Error ellipse: s-maj=9.3km s-min=5.1km az=117.7*

*IDC **16** 06:38:41.4±0.5, 32°.41N×137°.50E, h388^{km}±5^{km}, mb3.8/29, mbtmp4.5/36, Error ellipse: s-maj=9.9km s-min=7.2km az=71.0*

*NEIC **16** 06:38:42.8±1.4, 32°.43N±0°.08×137°.44E±0°.08, h398^{km}±7^{km}, mb4.3/82, Error ellipse: s-maj=11.4km s-min=9.9km az=210.0*

ISC 16 06:38:42.2±0.5**, 32°.41N**±0°.05×**137°.52E**±0°.05**, h398**^{km}±4^{km}**, n275,** σ**1**^{s}**05**/283**, mb4.3**/100**, 9C-14D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTO1	TONANKAI O.B.S	1.36	333	P	Pn	06 39 34.8	+0.7
TTO2	TONANKAI O.B.S	1.39	343	P	Pn	06 39 35.1	+0.9
TTO2				S	S	06 40 18.6	+2.4
TTO3	TONANKAI O.B.S	1.46	356	P	Pn	06 39 35.5	+0.9
TTO3				S	S	06 40 19.3	+2.1
TK02	Tokai 2	1.55	7	P	Pn	06 39 35.8	+0.8
TK02				S	S	06 40 19.8	+2.0
JAOM	Aogashimamukai	1.90	88	P	Pn	06 39 37.2	-0.1
JHJ	Hachijo jima 2	2.03	69	P	Pn	06 39 37.9	-0.2
	210nm,0.3s,baz=114,slow=22,SNR=30						
JHJ				S	S	06 40 20.7	-2.6
	319nm,0.5s,baz=78,slow=21,SNR=8.2						
JHJ2	Mitsune	2.06	69		Pn	06 39 38.1	-0.2
JHJ2				Sn	S	06 40 23.8	+0.3
JHJ2	Mitsune	2.06	69	P	Pn	06 39 38.0	-0.3
JIE	Ise	2.09	341	P	Pn	06 39 38.5	+0.1
JIE				eS	S	06 40 23.4	-0.6
JTNC	Tanabenakahech	2.13	312	P	Pn	06 39 38.5	-0.3
JSG	Sagara	2.33	14	Pn	Pn	06 39 41.1	+1.1
JWY	Kouya	2.42	319	P	Pn	06 39 41.0	+0.2
JWY				eS	S	06 40 27.3	-1.0
JAI	Aioi	2.92	299	P	Pn	06 39 44.5	0.0
INU	Inuyama	2.96	352		Pn	06 39 45.0	+0.2
INU	Inuyama	2.96	352	P	Pn	06 39 45.0	+0.2
JOD2	Odawara 2	3.13	24	P	Pn	06 39 45.7	-0.5
JOD2				eS	S	06 40 35.4	-2.8
JGF	Kuroka	3.19	358		Pn	06 39 46.9	+0.2
JGF	Kuroka	3.19	358	P	Pn	06 39 46.7	0.0
JYN	Shimob	3.20	15	P	Pn	06 39 47.4	+0.5
JYTA	Yamagatataniai	3.24	349	P	Pn	06 39 47.3	+0.1
JYTA				eS	S	06 40 38.9	-1.0
JMN	Monobe	3.33	294	Pn	Pn	06 39 48.3	+0.2
JMN	Monobe	3.33	294	P	Pn	06 39 48.2	+0.2
JMN	Monobe	3.33	294	i P	Pn	06 39 48.2	+0.2
JWT	Wachi	3.37	329	i P	Pn	06 39 48.3	0.0
BSO1	Boso 1	3.65	51	P	Pn	06 39 47.8	-2.4
BSO1				S	S	06 40 40.8	-4.7
JRY	Ryogami san	3.78	17	i P	Pn	06 39 51.9	-0.1
JRY				eS	S	06 40 45.6	-3.0
JKG	Kaga	3.98	346	P	Pn	06 39 53.8	0.0
JTO	Tosashimizu	4.01	278	i P	Pn	06 39 54.2	0.0
MJAR	Matsushiro Arr	4.16	8	P	Pn	06 39 54.9	-0.8
	97nm,0.6s,baz=186,slow=10.0,SNR=160						
MJAR				S	S	06 40 52.5	-2.8
	6.0nm,0.3s,baz=202,slow=18,SNR=2.3						
MJAR	Matsushiro Arr	4.16	8		Pn	06 39 55.8	+0.2
MJAR	Matsushiro Arr	4.16	8	P	Pn	06 39 55.8	+0.2
MAJO	Matsushiro	4.16	8		Pn	06 39 55.5	-0.1
MAJO	Matsushiro	4.16	8	P	Pn	06 39 55.5	-0.1
MAJO	Matsushiro	4.16	8	c iP	Pn	06 39 55.1	-0.5
MAT	Matsushiro	4.16	8	P	Pn	06 39 55.6	0.0
MJB9	Matsu-Tunnel	4.17	8		Pn	06 39 56.5	+0.9
JNA	Nagahama	4.39	286	i P	Pn	06 39 58.2	+0.3
JHS	Saijyo	4.49	306	P	Pn	06 39 58.9	0.0
JNU	Nakatsue	5.64	279	P	Pn	06 40 11.0	+0.1
	110nm,0.8s,baz=93,slow=5.0,SNR=55						
JNU	Nakatsue	5.64	279	P	Pn	06 40 11.1	+0.2
JSD	Sado	5.65	6		Pn	06 40 10.1	-0.6
JSD	Sado	5.65	6	P	Pn	06 40 10.2	-0.6
JCJ	Chichijima	6.67	141	P	Pn	06 40 07.6	-15
	101nm,0.4s,baz=295,slow=4.7,SNR=23						
JCJ				S	S	06 41 21.9	-22
	288nm,0.3s,baz=296,slow=23,SNR=25						
TJN	Taejon	9.28	298		Pn	06 40 53.2	+1.4
TJN	Taejon	9.28	298	P	Pn	06 40 53.2	+1.4
TJN	Taejon	9.28	298	d iP	Pn	06 40 53.4	+1.6
TJN				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KSRS	Korea Array	9.35	305	P	Pn	06 40 53.6	+1.1
	comp=Z,11nm,0.6s,baz=120,slow=10,SNR=46						
KSRS				ScP	ScP	06 49 23.6	+0.9
	comp=Z,1.6nm,0.7s,baz=187,slow=1.0,SNR=7.4						
KSAR	Wonju Array Be	9.37	305		Pn	06 40 54.5	+1.7
KSAR	Wonju Array Be	9.37	305	P	Pn	06 40 54.5	+1.7
KS19	Wonju Array Si	9.41	305	P	Pn	06 40 53.6	+0.3
JOW	Kunigami	9.78	238	P	Pn	06 40 58.2	+0.5
	comp=Z,14nm,0.6s,baz=103,slow=23,SNR=6.2						
JOW	Kunigami	9.78	238	P	P	06 40 57.1	-0.4
INCN	Inchon	10.27	303		P	06 41 03.1	+0.4
INCN	Inchon	10.27	303	P	Pn	06 41 03.3	0.0
INCN	Inchon	10.27	303	P	P	06 41 03.1	+0.4
ERM	Erimo	10.59	23		Pn	06 41 07.7	+0.9
ERM	Erimo	10.59	23	P	Pn	06 41 07.7	+0.9
VLA	Vladivostok	11.58	339	⇑iP	Pn	06 41 18.4	+0.1
VLA				pmax	pmax		
	comp=Z,20nm,0.9s						
ASAJ	Asahikawa	12.35	17	P	Pn	06 41 27.1	-0.1
	comp=Z,8.2nm,0.5s,baz=240,slow=13,SNR=5.0						
JKA	Kamikawa-asahi	12.35	17	P	P	06 41 25.4	-0.2
USRK	Ussuriysk Ar.	12.54	341	P	P	06 41 27.1	-0.6
	comp=Z,4.6nm,0.5s,baz=139,slow=11,SNR=8.9						
YOJ	Yonaguni jima	15.01	242	P	P	06 41 53.7	-1.2
YOJ	Yonaguni jima	15.01	242	P	P	06 41 53.7	-1.2
YSS	Yuzhno-Sakhali	15.07	14	eP	Pn	06 41 56.8	-1.3
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
BNX	BinXian	15.44	332	⇓P	P	06 41 58.9	-0.4
BNX				pmax	pmax		
	comp=Z,38nm,0.7s						
YHNB	Yeheng	16.14	246	P	P	06 42 05.6	-1.5
NACB	Ninganchiao	16.24	244	P	P	06 42 05.5	-2.6
NACB				IAmb	IAmb	06 42 11.0	
	comp=Z,16nm,0.8s						
TIA	Tai'an	17.27	288	P	P	06 42 17.6	-1.4
TIA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TPUB	Ta-pu	17.46	243	P	P	06 42 18.6	-2.6
TPUB				IAmb	IAmb	06 42 47.4	
	comp=Z,27nm,1.0s						
BJT	Baijiatuau	18.80	300		P	06 42 33.9	-1.3
BJT				IAmb	IAmb	06 42 36.8	
	comp=Z,19nm,1.1s						
BJT	Baijiatuau	18.80	300	P	P	06 42 33.9	-1.3
BJT				pmax	pmax		
	comp=Z,19nm,1.1s						
HEH	HeiHe	19.35	340	eP	P	06 42 40.8	+0.4
HEH				pmax	pmax		
	comp=Z,34nm,0.8s						
HNS	HongShan	19.35	291	⇓P	P	06 42 39.0	-1.6
HNS				pmax	pmax		
	comp=Z,16nm,0.8s						
WHN	Wuhan	19.85	271	⇑P	P	06 42 44.9	-0.4
WHN				pmax	pmax		
	comp=Z,110nm,0.6s						
XLT	XiLinHaoTe	20.33	310	eP	P	06 42 48.9	-0.8
XLT				pmax	pmax		
	comp=Z,16nm,0.8s						
LYN	LuoYang	21.00	283	P	P	06 42 54.6	-1.2
LYN				pmax	pmax		
	comp=Z,59nm,0.8s						
HIA	Hailar	21.47	327		P	06 43 00.2	+0.3
HIA				IAmb	IAmb	06 43 02.3	
	comp=Z,10nm,0.6s						
HIA	Hailar	21.47	327	P	P	06 43 00.2	+0.3
HIA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HILR	Hailar Array B	21.67	327	P	P	06 43 01.9	+0.2
	comp=Z,16nm,0.5s,baz=133,slow=10,SNR=36						
	comp=Z,16nm,0.5s						
HHC	Hu-ho-hao-te	22.41	299	⇓iP	P	06 43 08.3	-0.4
HHC				pmax	pmax		
	comp=Z,21nm,0.8s						
ZEA	Zeya	22.56	344	eP	P	06 43 10.5	+0.8
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
XAN	Xi'an	23.95	282	⇓P	P	06 43 21.5	-1.1
XAN				pmax	pmax		
	comp=Z,130nm,0.7s						
ENH	Enshi	24.02	272	P	P	06 43 22.0	-1.2
ULN	Ulaanbaatar	27.72	313	P	P	06 43 56.5	+0.5
ULN				IAmb	IAmb	06 43 57.4	
	comp=Z,18nm,1.0s						
ULN	Ulaanbaatar	27.72	313	P	P	06 43 56.2	+0.2
ULN	Ulaanbaatar	27.72	313	⇓iP	P	06 43 55.5	-0.5
ULN				pmax	pmax		
	comp=Z,13nm,1.0s						
SONM	Songino Array	28.12	312	P	P	06 43 59.9	+0.4
	comp=Z,6.4nm,0.6s,baz=112,slow=7.6,SNR=37						
SONM				PcP	PcP	06 47 02.4	+0.6
	comp=Z,0.6nm,0.6s,baz=102,slow=3.4,SNR=3.0						
SONM				ScP	ScP	06 50 04.7	+0.5
	comp=Z,1.5nm,0.9s,baz=116,slow=3.4,SNR=5.1						
	comp=Z,6.4nm,0.6s						
SONM	Songino Array	28.12	312	P	P	06 43 59.5	0.0
SONM				IAmb	IAmb	06 44 00.9	
	comp=Z,14nm,1.1s						
LZDM	Lanzhou Array	28.13	287	P	P	06 43 59.0	-0.9
	comp=Z,5.5nm,0.5s,baz=132,slow=6.2,SNR=10						
	comp=Z,5.5nm,0.5s						
CD2	Chengdu	28.71	276	P	P	06 44 03.9	-1.0
CD2				pmax	pmax		
	comp=Z,20nm,0.4s						
ZAK	Zakamensk	30.97	316	eP	P	06 44 23.3	-1.1
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GTA	Gaotai	31.16	294	P	P	06 44 25.8	-0.5
GTA				pP	pP	06 45 39.3	-0.1
GTA				pmax	pmax		
	comp=Z,21nm,0.9s						
KMI	Kunming	31.24	266	P	P	06 44 28.9	+1.7
KMI				pmax	pmax		
	comp=Z,13nm,0.9s						
TLY	Talaya	31.28	318	P	P	06 44 28.1	+1.2
TLY	Talaya	31.28	318	ceP	P	06 44 28.6	+1.6
TLY				pmax	pmax		
	comp=Z,9.0nm,1.3s						
PZH	PanZhiHua	31.61	269	P	P	06 44 28.8	-1.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KNGR	Kungurtug, Tuv	34.52	314	⇓iP	P	06 44 55.3	+0.5
KNGR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GOMU	GeErMu	35.28	288	P	P	06 45 01.1	-0.6
GOMU				pmax	pmax		
	comp=Z,41nm,0.8s						
FAKI	Fak Fak	35.49	189	P	P	06 45 03.2	-0.1
FAKI				IAmb	IAmb	06 45 04.3	
	comp=Z,15nm,0.9s						
SANI	Sanana	35.97	200	P	P	06 45 05.2	-2.1
	comp=Z,1µmcomp=Z,21nm,0.6s						
KRAI	Karang Ratu	36.57	195	P	P	06 45 13.2	+0.9
	comp=Z,27nm,0.8s						
CHTO	Chiang Mai	37.12	258		P	06 45 16.2	-0.7
CHTO	Chiang Mai	37.12	258	P	P	06 45 15.7	-1.2
	comp=Z,13nm,1.2s						
CHTO	Chiang Mai	37.12	258	P	P	06 45 16.2	-0.7
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CMAR	Chiang Mai Arr	37.30	258	P	P	06 45 17.9	-0.5
	comp=Z,1.7nm,0.3s,baz=69,slow=8.8,SNR=4.5						
	comp=Z,1.7nm,0.3s						
CMAR	Chiang Mai Arr	37.30	258	P	P	06 45 18.3	-0.1
CMAR	Chiang Mai Arr	37.30	258	P	P	06 45 18.3	-0.1
KIWB	Kanaga Island	38.07	46	P	P	06 45 25.2	+0.9
BILL	Bilibino	39.36	17	⇑iP	P	06 45 35.6	+1.0
BILL				pmax	pmax		
	comp=Z,11nm,2.3s						
TIXI	Tiksi	39.58	356	P	P	06 45 36.0	-0.2
TIXI	Tiksi	39.58	356	⇑iP	P	06 45 36.2	-0.1
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
LSA	Lhasa	39.58	279		P	06 45 37.9	+0.3
LSA				IAmb	IAmb	06 45 38.6	
	comp=Z,9.3nm,0.7s						
LSA	Lhasa	39.58	279	P	P	06 45 37.9	+0.3
LSA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ	Urumqi	40.27	301	eP	P	06 45 43.8	+1.3
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
DGZ	Jazzator, Alta	40.71	310	⇓iP	P	06 45 46.3	+0.3
DGZ				pmax	pmax		
	comp=Z,15nm,0.9s						
PMG	Port Moresby	42.59	166	P	P	06 46 01.0	-0.2
PMG				IAmb	IAmb	06 46 01.4	
	comp=Z,20nm,1.3s						
PMG	Port Moresby	42.59	166	P	P	06 46 01.0	-0.2
PMG				pmax	pmax		
	comp=Z,20nm,1.3s						
ZALV	Zalesovo Beam	42.85	316	P	P	06 46 02.6	-0.2
	comp=Z,6.0nm,0.4s,baz=93,slow=8.2,SNR=10						
ZALV				PcP	PcP	06 47 45.0	-0.3
	comp=Z,3.0nm,0.6s,baz=100,slow=3.3,SNR=7.8						
ZALV				ScP	ScP	06 50 57.4	-0.3
	comp=Z,1.5nm,0.7s,baz=111,slow=3.4,SNR=5.9						
	comp=Z,6.0nm,0.4s						
IPM	Ipoh	44.00	239	P	P	06 46 11.8	-0.7
IPM				IAmb	IAmb	06 46 12.3	
	comp=Z,15nm,0.7s						
MK31	Makanchi Array	44.03	306	i P	P	06 46 11.9	-0.4
MK31				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MKAR	Makanchi Array	44.03	306	P	P	06 46 12.1	-0.2
	comp=Z,9.8nm,0.5s,baz=87,slow=9.4,SNR=73						
MKAR				ScP	ScP	06 51 01.5	-1.2
	comp=Z,0.8nm,0.6s,baz=79,slow=5.5,SNR=5.8						
	comp=Z,9.8nm,0.5s						
MAKZ	Makanchi	44.25	306	P	P	06 46 14.1	+0.1
MAKZ	Makanchi	44.25	306	P	P	06 46 14.1	+0.1
MAKZ				pmax	pmax		
	comp=Z,17nm,0.5s						
MTN	Manton Dam	45.41	189	IAmb	IAmb	06 46 22.9	
	comp=Z,12nm,0.6s						
NRIK	Noril'sk	46.23	338	P	P	06 46 29.3	+0.4
	comp=Z,3.1nm,0.4s,baz=104,slow=12,SNR=6.7						
	comp=Z,3.1nm,0.4s						
NRIK	Noril'sk	46.23	338	P	P	06 46 29.0	0.0
KURK	Kurchatov	46.41	311		P	06 46 29.9	-0.7
KURK				IAmb	IAmb	06 46 31.3	
	comp=Z,17nm,0.8s						
KURK	Kurchatov	46.41	311	i P	P	06 46 29.4	-1.2
KURK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
COEN	Coen	46.42	172		P	06 46 31.6	+0.5
COEN				IAmb	IAmb	06 46 32.3	
	comp=Z,12nm,0.8s						
KURBB	Kurchatov Arra	46.47	311	P	P	06 46 30.4	-0.6
	comp=Z,9.5nm,0.5s,baz=91,slow=9.2,SNR=145						
KURBB				PcP	PcP	06 47 57.6	-0.5
	comp=Z,1.1nm,0.6s,baz=94,slow=3.7,SNR=4.7						
	comp=Z,9.5nm,0.5s						
WUS	Wushi	46.74	298	IAmb	IAmb	06 46 35.3	
	comp=Z,9.7nm,0.7s						
TARG	Taragay, Kyrgy	47.70	299	IAmb	IAmb	06 46 42.4	
	comp=Z,10nm,0.8s						
TARG	Taragay, Kyrgy	47.70	299	P	P	06 46 41.6	+0.4
TARG				pmax	pmax		
	comp=Z,14nm,0.9s						
F15K	North Star Dit	47.78	28	P	P	06 46 43.1	+2.2
M14K	Bethel	48.00	35	P	P	06 46 44.9	+2.3
M14K				IAmb	IAmb	06 47 08.9	
	comp=Z,35nm,1.4s						
KDJ	Kajisay	48.10	300	P	P	06 46 44.2	+0.3
KDJ				IAmb	IAmb	06 46 59.4	
	comp=Z,41nm,1.4s						
KDJ	Kajisay	48.10	300	P	P	06 46 44.2	+0.3
KDJ				pmax	pmax		
	comp=Z,41nm,1.4s						
KLSI		48.29	226	P	P	06 46 44.5	-0.8
	comp=Z,25nm,0.6s						
MDSI	Maura Dua	48.47	227	P	P	06 46 45.9	-0.8
	comp=Z,28nm,0.8s						
KNRA	Kununurra	48.54	191	P	P	06 46 47.0	-0.2
KNRA				IAmb	IAmb	06 46 47.5	
	comp=Z,6.4nm,0.6s						
GSI	Gunungsitoli	48.67	239		P	06 46 48.2	-0.1
GSI	Gunungsitoli	48.67	239	P	P	06 46 47.3	-1.0
BOOM	Boomskoye usch	48.95	300	P	P	06 46 50.5	+0.3
BOOM				IAmb	IAmb	06 47 27.6	
	comp=Z,30nm,1.3s						
BOOM	Boomskoye usch	48.95	300	P	P	06 46 50.5	+0.3
BOOM				pmax	pmax		
	comp=Z,30nm,1.3s						
KSH	Kashi	49.48	297	P	P	06 46 57.4	+3.2
KSH				pmax	pmax		
	comp=Z,11nm,0.7s						
AAK	Ala-Archa	49.98	301		P	06 46 57.8	-0.1
AAK	Ala-Archa	49.98	301	d iP	P	06 46 57.6	-0.3
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARSB	Arslanbob	51.34	299	IAmb	IAmb	06 47 09.8	
	comp=Z,31nm,1.5s						
BVAR	Borovoye Array	51.42	315	P	P	06 47 07.9	-0.2
	comp=Z,7.5nm,0.6s,baz=94,slow=7.2,SNR=29						
BVAR				PcP	PcP	06 48 16.4	+0.2
	comp=Z,3.5nm,0.6s,baz=91,slow=3.3,SNR=8.0						
BVAR				ScP	ScP	06 51 33.6	-0.3
	comp=Z,1.3nm,0.8s,baz=48,slow=2.2,SNR=4.9						
	comp=Z,7.5nm,0.6s						
BORK	Borovoye	51.46	315		P	06 47 08.3	-0.1
BORK				IAmb	IAmb	06 47 09.7	
	comp=Z,6.7nm,0.6s						
BORK	Borovoye	51.46	315	d iP	P	06 47 07.9	-0.5
BORK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
FITZ	Fitzroy Crossi	51.49	194	P	P	06 47 09.1	+0.1
	comp=Z,3.2nm,0.6s,baz=33,slow=4.5,SNR=4.0						
	comp=Z,3.2nm,0.6s						
FITZ	Fitzroy Crossi	51.49	194	P	P	06 47 07.8	-1.2
WB0	Warramunga Arr	51.97	184	IAmb	IAmb	06 47 12.6	
	comp=Z,9.4nm,0.7s						
WRAB	Tennant Creek	52.13	184	c iP	P	06 47 13.1	-0.6

WRAB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WRA	Warramunga Arr	52.14	184	P	P	06 47 13.1	-0.6
	comp=Z,4.2nm,0.4s,baz=1.7,slow=7.6,SNR=40						
	comp=Z,4.2nm,0.4s						
WRA	Warramunga Arr	52.14	184		P	06 47 12.5	-1.3
WR8	Warramunga Arr	52.15	184	IAmb	IAmb	06 47 14.0	
	comp=Z,13nm,0.6s						
WR0	Warramunga Arr	52.15	184	P	P	06 47 13.4	-0.4
WR0				IAmb	IAmb	06 47 14.0	
	comp=Z,12nm,0.5s						
IMAR	Indian Mountai	52.25	29	P	P	06 47 15.3	+1.4
KDAK	Kodiak Island	52.69	39	P	P	06 47 18.0	+0.8
KDAK	Kodiak Island	52.69	39	P	P	06 47 18.0	+0.8
KDAK				pmax	pmax		
	comp=Z,86nm,1.4s						
KK31	Karatay Array	52.76	302	IAmb	IAmb	06 47 18.7	
	comp=Z,16nm,0.7s						
KK31	Karatay Array	52.76	302	P	P	06 47 17.4	-0.7
KKAR	Karatay Array	52.76	302		P	06 47 18.2	+0.1
KKAR	Karatay Array	52.76	302	P	P	06 47 18.2	+0.1
CTA	Charters Tower	52.86	170	P	P	06 47 19.2	+0.3
	comp=Z,4.0nm,0.6s,baz=340,slow=8.8,SNR=10						
	comp=Z,4.0nm,0.6s						
CTAO	Charters Tower	52.86	170	P	P	06 47 18.9	0.0
CTAO	Charters Tower	52.86	170	P	P	06 47 18.9	0.0
CTAO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NIL	Nilore	53.10	290	P	P	06 47 20.9	+0.2
NIL	Nilore	53.10	290	P	P	06 47 20.9	+0.2
NIL				pmax	pmax		
	comp=Z,22nm,0.7s						
MANEM	Manem	53.22	295	IAmb	IAmb	06 47 23.1	
	comp=Z,28nm,0.9s						
GAR	Garm	53.87	297	IAmb	IAmb	06 47 26.8	
	comp=Z,18nm,0.6s						
CHGR	Chuyangaron	54.83	297	P	P	06 47 32.9	-0.1
CHGR				pmax	pmax		
	comp=Z,94nm,0.7s						
IL31		55.10	30	P	P	06 47 34.7	+0.4
ILAR	Eielson Array	55.10	30	P	P	06 47 34.6	+0.2
	comp=Z,0.7nm,0.5s,baz=254,slow=5.9,SNR=20						
	comp=Z,0.7nm,0.5s						
ILAR	Eielson Array	55.10	30	P	P	06 47 35.0	+0.6
ILAR	Eielson Array	55.10	30	P	P	06 47 35.0	+0.6
AS31	Alice Springs	55.87	184		P	06 47 39.6	-0.7
ASAR	Alice Springs	55.87	184	P	P	06 47 40.1	-0.1
	comp=Z,3.2nm,0.8s,baz=14,slow=12,SNR=30						
ASAR				PcP	PcP	06 48 34.2	+0.6
	comp=Z,0.6nm,0.7s,baz=28,slow=3.5,SNR=2.8						
ASAR				ScP	ScP	06 51 54.0	+0.4
	comp=Z,0.4nm,0.6s,baz=356,slow=5.4,SNR=4.3						
	comp=Z,3.2nm,0.8s						
ASAR	Alice Springs	55.87	184	P	P	06 47 40.3	0.0
ASAR	Alice Springs	55.87	184	P	P	06 47 40.3	0.0
SHAA	Shahritus	55.92	296	IAmb	IAmb	06 47 41.8	
	comp=Z,24nm,0.7s						
ARTI	Arti	57.86	320	P	P	06 47 53.2	-0.5
ARTI	Arti	57.86	320	d iP	P	06 47 53.1	-0.6
ARTI						06 48 36.2	
ARTI				*PP	pP	06 49 14.7	-2.2
ARTI						06 50 02.0	
ARTI				S	S	06 55 22.8	+1.4
ARTI				SS	SS	06 59 20.8	+1.6
ARTI				pmax	pmax		
	comp=Z,5.0nm,0.4s						
AB31	Akbulak array	58.52	311	P	P	06 47 58.3	0.0
AB31	Akbulak array	58.52	311	P	P	06 47 57.8	-0.5
ABKAR	Akbulak array	58.52	311	P	P	06 47 58.2	-0.2
AKTO	Aktyubinsk	59.43	313	P	P	06 48 03.8	-0.7
KIRV	Kirov	62.03	324	d iP	P	06 48 21.6	0.0
STKA	Stephens Creek	64.06	176	P	P	06 48 35.3	+0.3
	comp=Z,4.0nm,0.7s,baz=340,slow=6.8,SNR=14						
	comp=Z,4.0nm,0.7s						
STKA	Stephens Creek	64.06	176		P	06 48 35.2	+0.1
STKA	Stephens Creek	64.06	176	⇓iP	P	06 48 35.6	+0.6
SPITS	Spitsbergen Ar	64.42	349	P	P	06 48 37.2	+0.3
	comp=Z,6.7nm,0.9s,baz=93,slow=7.2,SNR=8.4						
	comp=Z,6.7nm,0.9s						
KEV	Kevo	66.62	339	P	P	06 48 51.0	+0.3
KEV	Kevo	66.62	339	P	P	06 48 51.1	+0.3
KEV				pmax	pmax		
	comp=Z,16nm,1.1s						
ARCES	ARCESS Array B	67.18	339	P	P	06 48 54.9	+0.5
	comp=Z,3.1nm,0.5s,baz=64,slow=8.6,SNR=41						
	comp=Z,3.1nm,0.5s						
ARCES	ARCESS Array B	67.18	339	P	P	06 48 55.0	+0.6
ARCES				IAmb	IAmb	06 49 16.3	
	comp=Z,11nm,1.4s						
ARCES	ARCESS Array B	67.18	339	P	P	06 48 55.0	+0.6
ARCES				pmax	pmax		
	comp=Z,11nm,1.4s						
VRH	Novokhopyorsk	68.85	318	eP	P	06 49 02.7	-2.2
VRH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
YKA	Yellowknife Ar	69.40	28	P	P	06 49 08.9	+0.9
	comp=Z,0.6nm,0.6s,baz=299,slow=6.8,SNR=8.3						
	comp=Z,0.6nm,0.6s						
YKA	Yellowknife Ar	69.40	28	P	P	06 49 08.6	+0.6
YKA	Yellowknife Ar	69.40	28	i P	P	06 49 08.6	+0.6
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
LPSR	Galich'ya Gora	69.78	320	eP	P	06 49 04.5	-6.0
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
OBN	Obninsk	69.87	323	eP	P	06 49 10.5	-0.4
OBN				e		06 49 30.2	
OBN				e*PP	pP	06 50 39.9	+2.0
OBN				e*SP	sP	06 51 22.5	+1.9
OBN				e		06 51 51.8	
OBN				pmax	pmax		
	comp=Z,12nm,1.1s						
VSR	Storozhevoye	70.28	319	eP	P	06 49 10.6	-3.0
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VORD	Divnogorie	70.33	318	eP	P	06 49 10.8	-3.0
VORD				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FIA1	FINESS Array S	71.39	332	P	P	06 49 20.0	+0.1
FINES	FINESS Array B	71.39	332	P	P	06 49 19.8	-0.2
	comp=Z,8.4nm,0.5s,baz=62,slow=5.7,SNR=105						
	comp=Z,8.4nm,0.5s						
FINES	FINESS Array B	71.39	332	P	P	06 49 19.9	0.0
KBZ	Khabaz	71.46	310	P	P	06 49 21.3	+0.6
	comp=Z,13nm,0.8s,baz=73,slow=4.0,SNR=23						
	comp=Z,13nm,0.8s						
KBZ	Khabaz	71.46	310	c iP	P	06 49 21.1	+0.4
SHA1	Shidzhatmaz	71.61	310	⇑iP	P	06 49 22.5	+0.6
AK03	Malin Array Si	75.94	322	P	P	06 49 45.8	-0.5
AKASG	Malin Array Be	75.95	322	P	P	06 49 46.0	-0.3
	comp=Z,4.2nm,0.4s,baz=52,slow=5.9,SNR=22						
	comp=Z,4.2nm,0.4s						
AKASG	Malin Array Be	75.95	322	P	P	06 49 46.0	-0.3
AKASG	Malin Array Be	75.95	322	i P	P	06 49 46.0	-0.3
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.4s						
AKBB	Malin Array Si	75.95	322	P	P	06 49 45.8	-0.5
AK01	Malin Array Si	75.96	322	P	P	06 49 45.9	-0.5
KIEV	Kiev	75.96	322		P	06 49 45.9	-0.5
KIEV	Kiev	75.96	322	P	P	06 49 45.9	-0.5
KIEV				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KIEV	Kiev	75.96	322	P	P	06 49 45.8	-0.5
AK09	Malin Array Si	75.97	321	P	P	06 49 45.9	-0.5
AK04	Malin Array Si	75.97	322	P	P	06 49 45.9	-0.5
AK08	Malin Array Si	75.97	321	P	P	06 49 46.0	-0.4
AK02	Malin Array Si	75.99	321	P	P	06 49 46.0	-0.5
AK10	Malin Array Si	75.99	321	P	P	06 49 46.1	-0.5
AK11	Malin Array Si	75.99	322	P	P	06 49 46.1	-0.5
AK22	Malin Array Si	76.00	322	P	P	06 49 46.1	-0.5
HFS	Hagfors	76.93	335	P	P	06 49 51.2	-0.4
	comp=Z,3.6nm,0.5s,baz=66,slow=3.6,SNR=17						
	comp=Z,3.6nm,0.5s						
NB2	NORSAR Subarra	77.16	336	P	P	06 49 52.3	-0.7
	comp=Z,4.1nm,0.8s,baz=43,slow=5.3						
NB2	NORSAR Subarra	77.16	336	P	P	06 49 52.2	-0.7
NB2				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	NORSAR Array B	77.16	336	P	P	06 49 52.6	-0.3
	comp=Z,2.5nm,0.5s,baz=45,slow=5.5,SNR=17						
	comp=Z,2.5nm,0.5s						
LUBAR	Lubar, Ukraine	77.17	321	P	P	06 49 52.8	-0.3
RNPP9	Sopachiv	77.26	323	P	P	06 49 53.2	-0.4
NORES	NORESS Array B	77.27	336	P	P	06 49 53.2	-0.3
J08A	Circle Bar Ran	77.55	46	IAmb	IAmb	06 49 57.9	
	comp=Z,5.3nm,0.6s						
RAYN	Ar Rayn	79.38	291		P	06 50 05.8	+0.1
RAYN	Ar Rayn	79.38	291	P	P	06 50 05.8	+0.1
RAYN				pmax	pmax		
	comp=Z,13nm,0.6s						
BR131	Keskin Array S	79.46	310		P	06 50 06.2	+0.3
BR131				IAmb	IAmb	06 50 06.8	
	comp=Z,5.8nm,0.8s						
BR131	Keskin Array S	79.46	310	P	P	06 50 06.2	+0.3
BR131				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRTR	Keskin Array B	79.46	310	P	P	06 50 06.0	+0.1
	comp=Z,4.7nm,0.9s,baz=116,slow=4.4,SNR=16						
	comp=Z,4.7nm,0.9s						
BRTR	Keskin Array B	79.46	310		P	06 50 05.9	0.0
BRTR	Keskin Array B	79.46	310	i P	P	06 50 06.3	+0.4
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BUR08	Bucovina Ar. S	79.88	321		P	06 50 08.5	+0.5
BUR08				IAmb	IAmb	06 50 09.3	
	comp=Z,8.8nm,1.1s						
BURAR	Bucovina Array	79.89	321		P	06 50 08.6	+0.6
BURAR				IAmb	IAmb	06 50 10.0	
	comp=Z,4.4nm,0.8s						
BURAR	Bucovina Array	79.89	321	P	P	06 50 08.6	+0.6
BURAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DLMT	Dillon	79.89	42	IAmb	IAmb	06 50 15.1	
	comp=Z,11nm,1.5s						
NVAR	Mina Array Bea	80.36	51	P	P	06 50 11.9	+1.1
	comp=Z,1.3nm,0.6s,baz=290,slow=5.8,SNR=11						
	comp=Z,1.3nm,0.6s						
CLC	China Lake	82.29	52	IAmb	IAmb	06 50 20.7	
	comp=Z,5.0nm,0.5s						
MORC	Moravsky Berou	82.41	325	eP	P	06 50 21.3	+0.3
TPNV	Topopah Spring	82.54	51	IAmb	IAmb	06 50 23.9	
	comp=Z,5.2nm,0.8s						
DUG	Dugway, Tooele	82.83	47	P	P	06 50 24.7	+1.3
DUG				IAmb	IAmb	06 50 25.9	
	comp=Z,3.3nm,0.8s						
DUG	Dugway, Tooele	82.83	47	P	P	06 50 24.7	+1.3
DUG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
JAVC	Velka Javorina	82.97	325	eP	P	06 50 25.4	+1.6
PSUT	Pine Spring	83.16	48	IAmb	IAmb	06 50 29.5	
	comp=Z,5.7nm,1.3s						
VRAC	Vranov	83.18	326	eP	P	06 50 25.1	+0.2
PDAR	Pinedale Array	83.21	43	P	P	06 50 26.6	+1.1
	comp=Z,1.1nm,0.7s,baz=292,slow=2.3,SNR=10						
	comp=Z,1.1nm,0.7s						
CLL	Collm	83.44	329	i P	P	06 50 25.9	-0.2
KRUC	Moravsky	83.45	325	eP	P	06 50 26.4	+0.2
MODS	Modra-Piesok	83.49	325	eP	P	06 50 27.2	+0.8
MODS	Modra-Piesok	83.49	325	eP	P	06 50 27.2	+0.8
P17A	Butcher Ranch,	84.53	46	IAmb	IAmb	06 50 34.4	
	comp=Z,5.6nm,0.9s						
KNB	Kanab	84.72	49	P	P	06 50 33.3	+0.3
KNB				IAmb	IAmb	06 50 35.5	
	comp=Z,4.7nm,0.9s						
KNB	Kanab	84.72	49	P	P	06 50 33.3	+0.3
KNB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
P18A	Preston Nutter	84.74	46	IAmb	IAmb	06 50 36.3	
	comp=Z,3.5nm,0.9s						
GERES	GERESS Array B	84.87	327	P	P	06 50 33.0	-0.4
	comp=Z,0.7nm,0.5s,baz=41,slow=5.8,SNR=4.8						
	comp=Z,0.7nm,0.5s						
SRU	San Rafael Swe	84.89	46	IAmb	IAmb	06 50 35.7	
	comp=Z,4.8nm,0.9s						
EKA	Eskdalemuir Ar	86.34	339	P	P	06 50 39.6	-0.7
	comp=Z,0.9nm,0.5s,baz=36,slow=5.4,SNR=6.2						
	comp=Z,0.9nm,0.5s						
IDI	Anoyia	87.68	311	P	P	06 50 46.4	-0.7
TXAR	Lajitas Array	95.51	50	P	P	06 51 24.6	+1.3
	comp=Z,1.0nm,0.7s,baz=306,slow=2.2,SNR=15						
	comp=Z,1.0nm,0.7s						
TXAR	Lajitas Array	95.51	50		P	06 51 24.9	+1.5
TXAR	Lajitas Array	95.51	50	P	P	06 51 24.9	+1.5
VNA2	Neumayer--Watz	137.00	196	⇓P	Pdif	06 54 32.9	+6.2
	comp=Z,2.8nm,0.8s,baz=24,slow=13						
LPAZ	La Paz	151.76	61	PKPbc	PKPbc	06 57 51.1	-0.6
	comp=Z,0.5nm,0.3s,baz=306,slow=6.5,SNR=7.3						

IDC ***16*** *06:39:29.8±1.4, 1°.62S×150°.05E, h0^{km}, mb3.9/7, mbtmp3.9/8, ML3.5/1, MS3.1/3, Error ellipse: s-maj=61.9km s-min=19.6km az=108.0*

NEIC ***16*** *06:39:32.4±0.7, 1°.5S±0°.1×149°.88E±0°.07, h10^{km}±2^{km}, mb4.2/12, Error ellipse: s-maj=23.7km s-min=11.8km az=183.0*

ISC 16 06:39:35.5±0.9**, 1°.6S**±0°.1×**149°.9E**±0°.2**, h36^{km}, n34, σ0ˢ.43**/25**, mb4.1**/13**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	2.54	260	Pn	Pn	06 40 14.2	-0.1
PMG	Port Moresby	8.19	199	LR	LR	06 43 50.0	
	comp=Z,80nm,18.6s,baz=54,slow=32						
JAY	Jayapura	9.21	264	LR	LR	06 45 03.1	
	comp=Z,186nm,20.1s,baz=352,slow=36						
CTA	Charters Tower	18.69	191	P	P	06 43 50.5	-0.3
	0.1nm,0.3s,baz=33,slow=11,SNR=4.2						
	2.1nm,0.8s						
CTAO	Charters Tower	18.69	191	P	Pn	06 43 51.4	0.0
WB0	Warramunga Arr	23.55	219	P	P	06 44 43.2	+0.5
WB0				IAmb	IAmb	06 44 44.2	
	comp=Z,7.2nm,1.1s						
WR8	Warramunga Arr	23.62	218	P	P	06 44 44.0	+0.5
WR8				IAmb	IAmb	06 44 54.1	
	comp=Z,3.9nm,1.0s						
WRA	Warramunga Arr	23.71	219	P	P	06 44 44.8	+0.4
	comp=Z,1.2nm,0.4s,baz=44,slow=9.7,SNR=14						
	comp=Z,1.2nm,0.4s						
WRA	Warramunga Arr	23.71	219	P	P	06 44 43.8	-0.6
H11S3	WAKE ISLAND Hy	25.95	39	T	T	07 12 02.3	
	baz=221,slow=76,SNR=3305						
H11S2	WAKE ISLAND Hy	25.95	39	T	T	07 12 04.0	
	baz=221,slow=76,SNR=838						
H11S1	WAKE ISLAND Hy	25.96	39	T	T	07 12 04.0	
	baz=221,slow=76,SNR=992						
AS31	Alice Springs	26.83	214	P	P	06 45 13.2	+0.4
ASAR	Alice Springs	26.83	214	P	P	06 45 13.1	+0.4
	comp=Z,1.4nm,0.6s,baz=53,slow=8.4,SNR=13						
	comp=Z,1.4nm,0.6s						
ASAR	Alice Springs	26.83	214	P	P	06 45 12.7	0.0
H11N1	WAKE ISLAND Hy	26.99	37	T	T	07 13 24.9	
	baz=220,slow=76,SNR=218						
H11N3	WAKE ISLAND Hy	27.00	37	T	T	07 13 23.2	
	baz=220,slow=76,SNR=542						
H11N2	WAKE ISLAND Hy	27.01	37	T	T	07 13 21.2	
	baz=220,slow=76,SNR=443						
JCJ	Chichijima	29.50	346	LR	LR	06 57 13.5	
	comp=Z,23nm,18.7s,baz=116,slow=36						
PEA0B	Petropavlovsk-	54.93	6	P	P	06 49 02.2	-0.4
PETK	Petropavlovsk-	54.93	6	P	P	06 49 03.3	+0.7
	comp=Z,3.4nm,0.9s,baz=190,slow=7.3,SNR=4.2						
	comp=Z,3.4nm,0.9s						
PETK	Petropavlovsk-	54.93	6	P	P	06 49 02.4	-0.2
MAKZ	Makanchi	76.24	319	P	P	06 51 19.7	-0.7
MAKZ				IAmb	IAmb	06 51 22.0	
	comp=Z,1.6nm,0.7s						
ZAA0	Zalesovo Array	76.91	327	P	P	06 51 23.9	-0.1
ZAA0				IAmb	IAmb	06 51 24.7	
	comp=Z,1.9nm,0.8s						
ZALV	Zalesovo Beam	76.91	327	P	P	06 51 24.3	+0.3
	comp=Z,1.1nm,0.7s,baz=104,slow=6.3,SNR=5.0						
	comp=Z,1.1nm,0.7s						
PWL	Port Wells	78.07	26	P	P	06 51 30.6	+0.3
IMAR	Indian Mountai	78.41	20	P	P	06 51 31.6	-0.5
KURK	Kurchatov	79.48	322	P	P	06 51 38.3	-0.1
KURK				IAmb	IAmb	06 51 39.5	
	comp=Z,2.2nm,0.9s						
KURBB	Kurchatov Arra	79.52	322	P	P	06 51 38.7	+0.2
	comp=Z,1.3nm,0.8s,baz=108,slow=4.9,SNR=8.5						
	comp=Z,1.3nm,0.8s						
D22K	Ayikyak River	80.28	18	P	P	06 51 42.7	+0.4
D22K				IAmb	IAmb	06 52 05.9	
	comp=Z,4.1nm,1.2s						
ILAR	Eielson Array	80.36	23	P	P	06 51 42.0	-0.8
	comp=Z,0.3nm,0.8s,baz=253,slow=5.1,SNR=4.2						
	comp=Z,0.3nm,0.8s						
J25K	Salcha River,	80.89	23	P	P	06 51 46.0	+0.3
BMAR	Burnt Mountain	82.31	21	P	P	06 51 53.0	-0.1
BVAR	Borovoye Array	84.97	323	P	P	06 52 07.3	+0.3
	comp=Z,1.1nm,0.8s,baz=109,slow=7.9,SNR=3.9						
	comp=Z,1.1nm,0.8s						

IDC ***16*** *06:45:51.3±1.1, 6°.51N×125°.14E, h0^{km}, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=30.9km s-min=9.6km az=117.0*

ISC 16 06:45:56.7±1.1**, 6°.4N**±0°.1×**125°.0E**±0°.2**, h35^{km}, n8, σ0ˢ.71**/7**, mb3.6**/6**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.87	41	Pg	Pn	06 46 04.6	-8.0
	255nm,0.3s,baz=238,slow=9.0,SNR=9.9						
DAV				Lg	Lg	06 46 14.8	
	313nm,0.3s,baz=127,slow=20,SNR=5.7						
DAV	Davao City (W)	0.87	41	P	Pn	06 46 13.0	+0.5
FITZ	Fitzroy Crossi	24.36	179	P	P	06 51 12.4	+0.8
	1.4nm,0.5s,baz=9.3,slow=6.1,SNR=9.5						
	1.4nm,0.5s						
WRA	Warramunga Arr	27.75	161	P	P	06 51 42.0	-0.3
	0.7nm,1.0s,baz=331,slow=10,SNR=2.8						
	0.7nm,1.0s						
ASAR	Alice Springs	31.13	164	P	P	06 52 12.7	+0.4
	0.2nm,0.5s,baz=342,slow=6.8,SNR=5.0						
	0.2nm,0.5s						
STKA	Stephens Creek	41.23	158	P	P	06 53 37.7	-0.7
	1.6nm,0.8s,baz=333,slow=11,SNR=3.0						
	1.6nm,0.8s						
KURBB	Kurchatov Arra	58.57	327	P	P	06 55 50.0	+0.1
	0.7nm,0.8s,baz=121,slow=7.5,SNR=4.5						
	0.7nm,0.8s						
ILAR	Eielson Array	83.44	26	P	P	06 58 19.8	-0.7
	0.3nm,0.7s,baz=251,slow=5.5,SNR=6.1						
	0.3nm,0.7s						

IDC 16 06:46:06.4±0.7**, 6°.37N**×**125°.52E, h0^{km}, mb4.0**/11**, mbtmp4.0**/11**, Error ellipse: s-maj=39.1km s-min=11.5km az=83.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.70	5	Pg	Pg	06 46 19.2	-0.5
	1µm,0.3s,baz=0.0,slow=20,SNR=9.5						
I39PW	PALAU INFRASON	9.04	82	I	I	07 43 30.0	
	baz=266,slow=300,SNR=0.5						
FITZ	Fitzroy Crossi	24.31	180	P	P	06 51 26.3	+0.4
	2.1nm,0.4s,baz=19,slow=6.6,SNR=4.7						
	2.1nm,0.4s						
WRA	Warramunga Arr	27.55	162	P	P	06 51 54.2	-0.9
	1.0nm,0.7s,baz=344,slow=10,SNR=6.2						
	1.0nm,0.7s						
ASAR	Alice Springs	30.96	165	P	P	06 52 26.1	+0.7
	0.7nm,0.5s,baz=347,slow=7.2,SNR=15						
	0.7nm,0.5s						
KSRS	Korea Array	31.02	4	P	P	06 52 26.9	+1.2
	1.1nm,0.7s,baz=187,slow=8.6,SNR=4.4						
	1.1nm,0.7s						
STKA	Stephens Creek	41.01	159	P	P	06 53 50.3	-1.1
	2.0nm,0.8s,baz=324,slow=7.6,SNR=4.8						
	2.0nm,0.8s						
HILR	Hailar Array B	43.31	355	P	P	06 54 11.2	+1.1
	1.4nm,0.4s,baz=168,slow=9.1,SNR=6.8						
	1.4nm,0.4s						
SONM	Songino Array	44.43	342	P	P	06 54 20.0	+0.8
	0.7nm,0.8s,baz=154,slow=7.9,SNR=3.8						
	0.7nm,0.8s						
MKAR	Makanchi Array	54.71	325	P	P	06 55 36.9	-0.7
	1.1nm,0.7s,baz=110,slow=10,SNR=3.7						
	1.1nm,0.7s						
KURBB	Kurchatov Arra	58.88	327	P	P	06 56 06.5	-0.5
	3.8nm,1.0s,baz=126,slow=5.8,SNR=22						
	3.8nm,1.0s						
BVAR	Borovoye Array	64.46	327	P	P	06 56 44.1	-0.6
	2.3nm,0.9s,baz=122,slow=7.9,SNR=8.1						
	2.3nm,0.9s						
ILAR	Eielson Array	83.25	26	P	P	06 58 32.9	-1.8
	0.5nm,1.0s,baz=228,slow=4.8,SNR=4.8						
	0.5nm,1.0s						
TXAR	Lajitas Array	120.90	50	PKP	PKiKP	07 05 03.9	+2.2
	0.1nm,0.6s,baz=278,slow=2.3,SNR=3.6						

SOME ***16*** *06:53:23.9, 42°.27N×83°.52E, h10^{km}*

NNC ***16*** *06:53:29.9±6.3, 42°.27N×83°.28E, h0^{km}, mb3.4, mpv3.1, Error ellipse: s-maj=56.5km s-min=31.9km az=166.0*

ISC 16 06:53:21.3±3.3**, 42°.2N**±0°.1×**83°.61E**±0°.10**, h10^{km}, n13, σ1ˢ.95**/21**, 1C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	2.69	298	eP	Pg	06 54 12.9	+0.1
	2.1nm,0.1s						
KTMS				eS	Sg	06 54 49.2	+1.5
	13nm,0.3s						
SHLS	Shalkode	3.20	289	Pg	Pb	06 54 17.9	-0.3
	12nm,0.6s						
SHLS				Lg	Lg	06 54 55.8	
	54nm,1.0s						
SHLS	Shalkode	3.20	289	eP	Pb	06 54 16.9	-1.2
	0.6nm,0.1s						
SHLS				eS	Sb	06 54 56.1	-1.1
	31nm,0.5s						
PDGK	Podgornoye	3.23	292	⇑Pn	Pg	06 54 22.3	-0.8
	2.6nm,0.5s						
PDGK				⇓Sn	Sb	06 55 00.1	+2.0
	17nm,0.7s						
UZB	Uzynbulak	3.50	287	Pg	Pg	06 54 27.6	-0.8
	2.1nm,0.3s						
UZB				Lg	Lg	06 55 12.7	
	6.1nm,0.6s						
UZB	Uzynbulak	3.50	287	eP	Pb	06 54 26.3	+2.8
	1.2nm,0.1s						
UZB				eS	Sg	06 55 11.8	-2.0
	12nm,0.5s						
KPKS	Kokpek	3.83	291	Pg	Pb	06 54 31.0	+2.0
	0.4nm,0.4s						
KPKS				Lg	Lg	06 55 18.6	
	5.6nm,0.7s						
KPKS	Kokpek	3.83	291	eP	Pb	06 54 31.7	+2.8
	0.2nm,0.1s						
KPKS				eS	Sg	06 55 21.2	-3.0
	5.8nm,0.3s						
KNOS	Konyrlen	3.88	305	Pg	Pg	06 54 34.7	-0.8
	2.4nm,0.4s						
KNOS				Lg	Lg	06 55 24.8	
	3.2nm,0.3s						
SATY	Saty	3.93	284	Pg	Pb	06 54 33.1	+2.4
	2.1nm,0.3s						
SATY				Lg	Lg	06 55 22.2	
	3.6nm,0.3s						
MK31	Makanchi Array	4.67	349	⇓Pn	Pb	06 54 40.4	-2.9
	baz=88,slow=2.6,SNR=8.2						
MK31				Pg	Pg	06 54 52.9	+2.1
	1.8nm,0.5s,baz=168,slow=15,SNR=12						
MK31				⇓Lg	Lg	06 55 53.7	
	1.9nm,0.5s,baz=164,slow=26,SNR=9.9						
KOTS	Kotyrbulak	4.89	284	eP	Pg	06 54 53.3	-1.7
	2.6nm,0.3s						
KOTS				eS	Sg	06 55 58.4	+0.1
	15nm,0.5s						
ZSN	Zaisan	5.31	9	eP	Pg	06 55 01.9	-1.0
	1.5nm,0.2s						
ZSN				eS	Sg	06 56 13.2	+1.5
	5.8nm,0.6s						

IDC 16 06:56:11.8±4.3**, 18°.12S**×**172°.77W, h0^{km}, mb3.8**/5**, mbtmp3.8**/5**, Error ellipse: s-maj=306.7km s-min=24.6km az=153.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	38.70	260	P	P	07 03 38.2	+0.3
	0.9nm,0.4s,baz=85,slow=12,SNR=5.1						
	0.9nm,0.4s						
WRA	Warramunga Arr	49.86	259	P	P	07 05 06.7	-0.7
	0.3nm,0.4s,baz=98,slow=8.2,SNR=5.0						
	0.3nm,0.4s						
ASAR	Alice Springs	49.89	254	P	P	07 05 07.6	+0.1
	0.9nm,0.7s,baz=85,slow=8.8,SNR=11						
	0.9nm,0.7s						
NVAR	Mina Array Bea	75.95	41	P	P	07 08 02.6	+1.6
	0.8nm,0.9s,baz=217,slow=11,SNR=4.2						
	0.8nm,0.9s						
PDAR	Pinedale Array	83.89	41	P	P	07 08 42.2	-1.7
	0.7nm,0.7s,baz=235,slow=5.9,SNR=5.6						
	0.7nm,0.7s						

IDC 16 06:56:31.7±2.0**, 5°.65N**×**124°.07E, h0^{km}, mb3.5**/5,

mbtmp3.5/5, Error ellipse: s-maj=282.8km s-min=20.2km az=64.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	27.37	159	P	P	07 02 19.0	+0.1
	0.2nm,0.5s,baz=331,slow=10.0,SNR=4.6						
	0.2nm,0.5s						
ASAR	Alice Springs	30.68	162	P	P	07 02 48.8	+0.4
	0.2nm,0.4s,baz=347,slow=7.5,SNR=9.9						
	0.2nm,0.4s						
STKA	Stephens Creek	40.89	157	P	P	07 04 15.0	-0.8
	0.7nm,0.6s,baz=335,slow=14,SNR=2.9						
	0.7nm,0.6s						
MKAR	Makanchi Array	54.48	326	P	P	07 06 01.9	+0.7
	0.4nm,0.6s,baz=116,slow=8.6,SNR=4.8						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	58.71	328	P	P	07 06 30.6	-0.6
	0.8nm,0.7s,baz=123,slow=7.0,SNR=9.5						
	0.8nm,0.7s						

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*BEO **16** 07:05:14.8±0.3, 43°.21N×18°.06E, h6km±2km, ML2.0/17*

*RHSSO **16** 07:05:14.5±0.4, 43°.19N×18°.07E, h8km, ML2.7/5*

*PDG **16** 07:05:14.6±0.2, 43°.17N×18°.06E, h14km, MD2.8/3, ML2.7/12, Error ellipse: s-maj=0.4km s-min=0.4km az=90.0*

ISC 16 07:05:14.5±1.0, 43°.20N±0°.02×18°.06E±0°.01, h7km±9km, n52, σ0ˢ.78/103, 7C-6D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLINJ	Klinje	0.38	94	ePg	Pg	07 05 21.7	-0.3
KLINJ				eSg	Sg	07 05 28.1	+1.1
STON	Ston	0.42	219	ePg	Pg	07 05 22.4	-0.2
STON				Sg	Sb	07 05 29.4	-1.3
STON	Ston	0.42	219	ePg	Pg	07 05 22.4	-0.2
STON				eSg	Sg	07 05 29.2	+1.1
BRY	Bratogost	0.46	130	⇓iPg	Pg	07 05 22.9	-0.5
BRY				i Sg	Sg	07 05 30.3	+0.9
TREB	Trebinje	0.53	156	⇑iPg	Pg	07 05 23.9	-0.6
TREB				eSg	Sg	07 05 32.2	+0.8
TREB	Trebinje	0.53	156	ePg	Pg	07 05 24.0	-0.6
TREB				eSg	Sg	07 05 32.3	+0.8
DBRK	Dubrovnik	0.53	173	ePg	Pg	07 05 24.5	-0.2
DBRK				Sg	Sb	07 05 32.8	-1.1
UPM	Unac-Piva	0.62	89	⇓iPg	Pg	07 05 26.1	-0.3
UPM				i Sg	Sb	07 05 36.0	-0.6
RICI	Ricice	0.74	294	ePg	Pg	07 05 28.1	-0.6
RICI				Sg	Sg	07 05 38.6	+0.3
MAKA	Makarska	0.77	277	ePg	Pg	07 05 28.6	-0.6
MAKA				Sg	Sg	07 05 38.9	-0.3
NKME	Niksic	0.78	123	⇓iPg	Pg	07 05 28.6	-0.9
NKME				eSg	Sb	07 05 40.9	-0.3
HCY	Herceg Novi	0.81	157	⇑iPg	Pg	07 05 29.5	-0.6
HCY				i Sg	Sb	07 05 41.8	-0.3
CEME	Cevo	0.91	136	⇓iPg	Pg	07 05 30.7	-1.1
CEME				eSg	Sb	07 05 45.5	+0.8
LSTV	Lastovo	0.96	244	ePg	Pg	07 05 31.5	-1.4
LSTV				Sg	Sb	07 05 45.9	-0.4
PLE	Pljevlja	0.98	82	ePg	Pg	07 05 32.9	-0.3
PLE				eSg	Sg	07 05 46.5	+0.6
PLE	Pljevlja	0.98	82	⇓iPg	Pg	07 05 33.2	0.0
PLE				i Sg	Sn	07 05 48.2	-0.6
RUDO	Rudo	1.04	66	ePg	Pg	07 05 33.0	-1.4
RUDO				eSg	Sg	07 05 47.3	-0.7
RUDO	Rudo	1.04	66	ePg	Pg	07 05 33.5	-0.9
RUDO				eSg	Sg	07 05 47.4	-0.6
BUM	Brajici-Budva	1.09	145	⇓iPg	Pg	07 05 34.5	-0.8
BUM				eSg	Sn	07 05 51.4	0.0
KOME	Kolasin	1.12	108	ePg	Pg	07 05 35.2	-0.7
KOME				eSg	Sb	07 05 51.0	0.0
KOME	Kolasin	1.12	108	⇑iPg	Pg	07 05 35.3	-0.7
KOME				eSg	Sn	07 05 53.0	+0.7
PDG	Podgorica	1.17	131	ePg	Pg	07 05 35.4	-1.4
PDG				eSg	Sn	07 05 52.7	-0.5
HVAR	Hvar	1.18	270	ePg	Pb	07 05 35.7	-1.5
HVAR				Sg	Sg	07 05 52.3	-0.1
BBLS	Lazi&#263i	1.18	55	ePg	Pg	07 05 36.6	-0.6
BBLS				eSg	Sb	07 05 53.1	+0.3
DRME	Dracevica, Mon	1.31	140	ePg	Pn	07 05 38.5	-0.6
DRME				eSg	Sn	07 05 56.7	0.0
DRME	Dracevica, Mon	1.31	140	⇑iPg	Pn	07 05 38.5	-0.6
DRME				eSg	Sn	07 05 59.0	+2.3
BEY	Berane	1.38	103	ePg	Pn	07 05 39.8	-0.4
BEY				eSg	Sg	07 05 59.0	+0.1
IVA	Berane	1.38	103	⇑iPg	Pn	07 05 40.1	-0.1
IVA				eSg	Sg	07 06 00.9	+2.0
SJES	Sjenica	1.40	87	ePg	Pn	07 05 40.6	+0.1
SJES				eSg	Sb	07 05 59.1	+0.1
KIJV	Kijevo	1.45	304	ePg	Pb	07 05 41.8	+0.1
KIJV				Sg	Sg	07 06 01.2	+0.1
ULC	Ulcinj	1.51	144	⇑iPg	Pn	07 05 41.8	-0.1
ULC				eSg	Sg	07 06 03.9	+0.9
PVY	Plav	1.52	113	ePg	Pg	07 05 43.7	+0.1
PVY				eSg	Sg	07 06 04.2	+0.9
PVY	Plav	1.52	113	ePg	Pn	07 05 42.3	+0.2
PVY				eSg	Sg	07 06 04.2	+0.9
IVAS	Ivanjica	1.57	75	ePg	Pn	07 05 42.0	-0.8
IVAS				eSg	Sn	07 06 02.7	-0.7
DIVS	Divibare	1.67	57	ePn	Pn	07 05 43.2	-0.9
DIVS				eSn	Sn	07 06 05.7	0.0
BLY	Banja Luka	1.68	338	ePn	Pn	07 05 43.4	-0.8
BLY				eSn	Sn	07 06 06.0	+0.1
BLY	Banja Luka	1.68	338	ePg	Pb	07 05 46.1	+0.5
BLY				eSg	Sb	07 06 07.7	+0.8
TEKS	Tekeris	1.72	38	ePn	Pb	07 05 46.1	-0.2
TEKS				eSn	Sb	07 06 07.7	-0.4
ZIRJ	Zirje	1.82	285	ePn	Pn	07 05 46.4	+0.2
ZIRJ				Sn	Sb	07 06 11.0	0.0
MORI	Morici	1.84	292	ePn	Pn	07 05 47.2	+0.8
MORI				Sn	Sb	07 06 11.9	+0.4
TRUS	Trudelj	1.98	58	ePn	Pn	07 05 48.9	+0.5
TRUS				eSn	Sn	07 06 13.8	+0.3
GRUS	Gruza	2.05	69	ePn	Pn	07 05 49.0	-0.3
GRUS				eSn	Sn	07 06 14.4	-0.7
GOCS	Kraljevo Serbi	2.08	79	ePn	Pn	07 05 51.1	+1.3
GOCS				eSn	Sn	07 06 16.9	+0.9
KNYS	Krupa na Uni	2.11	324	⇑iPn	Pn	07 05 50.6	+0.5
KNYS				eSn	Sn	07 06 16.5	-0.1
DUGI	Dugi Otok	2.32	291	ePn	Pn	07 05 54.3	+1.2
DUGI				Sn	Sn	07 06 23.6	+1.8
VIRC	Vir	2.44	298	ePn	Pn	07 05 55.1	+0.5
VIRC				Sn	Sn	07 06 26.0	+1.3
BOVS	Bovan	2.69	79	ePn	Pn	07 05 59.6	+1.5
BOVS				eSn	Sn	07 06 31.5	+0.6
BARS	Barje	2.78	97	ePn	Pn	07 05 59.8	+0.5
BARS				eSn	Sn	07 06 34.0	+0.9
MORH	Mrgy, Hungar	3.04	8	ePn	Pn	07 06 03.3	+0.3
MORH				eSn	Sn	07 06 39.5	-0.1
ZAGS	Zajecar	3.10	77	ePn	Pn	07 06 03.4	-0.3
ZAGS				eSn	Sn	07 06 40.3	-0.6
BOSS	Bosilegrad	3.32	101	ePn	Pn	07 06 07.1	+0.3
ZAPS	Zavoj	3.34	87	ePn	Pn	07 06 08.3	+1.2
ZAPS				eSn	Sn	07 06 46.1	-0.9

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*MDD **16** 07:12:53.5±0.7, 35°.44N×1°.90W, h4km±6km, mb_Lg2.7/20, Error ellipse: s-maj=9.2km s-min=3.7km az=164.0*

*CNRM **16** 07:12:54.1, 35°.58N×2°.08W, h23km, ML2.5*

*CRAAG **16** 07:13:00.6, 35°.22N×1°.42W, Ml2.5, Algerie 10km SW Beni-Saf*

ISC 16 07:12:54.5±1.3, 35°.46N±0°.03×1°.96W±0°.03, h21km±4km, n56, σ1ˢ.44/72, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OLHC	Oulhaca	0.49	115	P	Pb	07 13 02.0	-2.4
TAF	Taforalt	0.74	210	P	Pb	07 13 09.3	+0.5
TAF	Taforalt	0.74	210	S	Sn	07 13 20.9	+0.3
WMELI	Melilla	0.82	260	Pg	Pb	07 13 09.7	-0.5
WMELI				Sg	Sb	07 13 21.3	+0.6
EMLI	Melilla	0.82	259	Sg	Sn	07 13 21.7	-0.7
EMEL	Melilla	0.83	259	Pg	Pb	07 13 09.8	-0.5
EMEL				Sg	Sn	07 13 22.8	+0.3
OBBL	Beni Bahdel	0.84	153	P	Pb	07 13 10.1	-0.3
EALB	Alboran	1.00	299	Pg	Pb	07 13 12.7	-0.4
EALB	Alboran	1.00	299	Pg	Pb	07 13 12.8	-0.4
EALB				Sg	Sn	07 13 26.7	0.0
EALB				i IVmb_Lg		07 13 31.2	
ODJA	Bouhanifia	1.48	94	P	Pb	07 13 24.9	+3.5
OFRG	Douar Fergoug	1.63	87	P	Pn	07 13 13.2	-8.8
PALE	Palemas	1.64	262	P	Pn	07 13 20.4	-1.7
PALE	Palemas	1.64	262	S	Sn	07 13 40.8	-1.8
AKLM	AKL	1.83	239	P	Pn	07 13 24.5	-0.2
AKLM	AKL	1.83	239	S	Sn	07 13 46.7	-0.6
ELGU	Los Guajares,	1.95	317	Pn	Pn	07 13 25.4	-1.1
ELGU				Sn	Sn	07 13 48.8	-1.5
ELGU	Los Guajares,	1.95	317	Pn	Pn	07 13 25.4	-1.1
ELGU				Sn	Sn	07 13 48.4	-2.0
ELGU				i IVmb_Lg		07 13 50.7	
EQUE	Quentar	2.12	326	Pn	Pn	07 13 29.1	+0.3
EQUE				Sn	Sb	07 13 56.8	-1.2
EQUE				i IVmb_Lg		07 13 57.2	
EQTA	Presa de Quent	2.12	326	Pn	Pn	07 13 29.3	+0.5
CART	Cartagena	2.26	20	Pn	Pn	07 13 28.9	-1.7
CART				Sn	Sn	07 13 53.9	-4.0
CART	Cartagena	2.26	20	P	Pn	07 13 29.2	-1.4
CART	Cartagena	2.26	20	S	Sn	07 13 55.6	-2.3
EGOR	Sierra Gorda,	2.40	314	Pn	Pn	07 13 32.3	-0.3
EGOR				Sn	Sn	07 14 03.4	+2.0
EGOR				i IVmb_Lg		07 14 09.6	
EMUR	La Murta	2.45	13	Pn	Pn	07 13 33.2	-0.1
EMUR	La Murta	2.45	13	Pn	Pn	07 13 32.9	-0.4
EMUR				Sn	Sn	07 14 01.0	-1.6
EMUR				i IVmb_Lg		07 14 01.5	
EQES	Quesada	2.51	339	Pn	Pn	07 13 34.2	0.0
EQES				Sn	Sn	07 14 05.7	+1.6
EQES				i IVmb_Lg		07 14 07.4	
EMIJ	Mijas	2.54	297	Pn	Pn	07 13 33.3	-1.2
EMIJ	Mijas	2.54	297	Pn	Pn	07 13 32.9	-1.5
EMIJ				Sn	Sn	07 14 00.9	-3.8
EMIJ				i IVmb_Lg		07 14 06.9	
EJIF	Jimena Fronter	3.02	290	Pn	Pn	07 13 41.5	+0.5
ETOB	Tobarra	3.20	6	Pn	Pn	07 13 45.6	+2.0
ETOB				Sn	Sn	07 14 20.7	-0.5
ETOB				i IVmb_Lg		07 14 26.9	
EADA	Adamuz	3.42	323	Pn	Pn	07 13 47.6	+0.9
EADA				Sn	Sn	07 14 31.0	+4.4
EADA				i IVmb_Lg		07 14 36.0	
MDT	Midelt	3.43	221	P	Pn	07 13 46.9	0.0
ESPR	Espera	3.45	295	Pn	Pn	07 13 49.0	+2.0
MD31	MD31	3.47	223	P	Pn	07 13 47.9	+0.4
ECAB	El Cabril	3.81	314	Pn	Pn	07 13 52.8	+0.8
ECAB				Sn	Sn	07 14 36.5	+0.2
ECAB				i IVmb_Lg		07 14 45.9	
ECHE	Chera	4.20	11	Sn	Sn	07 14 47.8	+2.0
ECHE				i IVmb_Lg		07 14 50.9	
EIBI	Ibiza	4.43	36	Pn	Pn	07 14 00.4	-0.1
EIBI				Sn	Sn	07 14 50.2	-1.2
EIBI				i IVmb_Lg		07 14 58.0	
EMIN	Mina Concepcio	4.44	303	Pn	Pn	07 13 59.9	-0.7
PAB	San Pablo	4.50	336	Pn	Pn	07 14 00.9	-0.6
PAB				Sg	Sb	07 15 07.9	+1.2
PBAR	Barrancos	4.89	305	eP	Pn	07 14 07.3	+0.5
PVAQ	Vaqueiros	5.03	294	eP	Pn	07 14 08.8	+0.1
PVAQ				eS	Sn	07 15 04.9	-1.4
PVAQ	Vaqueiros	5.03	294	P	Pn	07 14 06.1	-2.7
EMOS	Mosqueruela	5.04	13	Pn	Pn	07 14 10.6	+1.6
EMOS				Sn	Sn	07 15 07.5	+0.8
PBDV	Barranco-do-Ve	5.14	292	eP	Pn	07 14 10.4	+0.2
EBAD	Badajoz	5.21	311	Pn	Pn	07 14 11.0	-0.1
EBAD				i IVmb_Lg		07 15 08.6	
EBAD				Sn	Sn	07 15 08.9	-1.7
PCVE	Castro Verde	5.35	296	eP	Pn	07 14 12.9	-0.3
MESJ	Messejana	5.57	297	eP	Pn	07 14 16.6	+0.5
EVO	Evora	5.74	304	eP	Pn	07 14 18.8	+0.4
PTEO	Sao Teotonio	5.83	293	eP	Pn	07 14 20.7	+0.9
PMRV	Marv??o	5.86	314	eP	Pn	07 14 22.2	+2.0
PARRA	Arraiolos	5.90	306	eP	Pn	07 14 21.1	+0.4
ZGR	Zagora	6.15	211	P	Pn	07 14 24.6	+0.4
PMTG	Montargil	6.16	308	eP	Pn	07 14 25.0	+0.7
PCBR	Castelo Branco	6.19	317	eP	Pn	07 14 26.1	+1.5
PSARD	Sardoal	6.43	312	eP	Pn	07 14 28.8	+0.8
PSBE	So Bento	6.78	309	eP	Pn	07 14 33.6	+0.8

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*DJA **16** 07:20:27.1±4.0, 8°N±34°×12°5E±°, h141km±30km, M4.8/7, mb4.8/7, mB5.0/6, MLv5.0/7, Mw(mB)4.4/6*

*IDC **16** 07:20:36.8±0.9, 6°.53N×125°.22E, h0km, mb3.7/7, mbtmp3.7/7, MS3.2/7, Error ellipse: s-maj=24.3km s-min=8.5km az=115.0*

ISC 16 07:20:38.4±0.8, 6°.58N±0°.09×125°.3E±0°.2, h10km, n21, σ0ˢ.60/14, mb3.6/7, MS3.1/5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.55	28	Pg	Pb	07 20 50.6	+0.4
	3μm,0.3s,baz=260,slow=5.7,SNR=100						
DAV				Lg	Lg	07 20 56.9	
	4μm,0.3s,baz=262,slow=18,SNR=23						
DAV	Davao City (W)	0.55	28	P	Pb	07 20 50.4	+0.2
DAV	Davao City (W)	0.55	28	P	Pg	07 20 44.0	-5.2
KMSI	Cibinong	6.12	193	P	Pn	07 22 10.2	+1.3
GTOI	Gorontalo	6.34	201	P	Pn	07 22 12.1	+0.1
	0.6nm2μm153nm,0.8s						
MRSI	Marisa	6.94	209	P	Pn	07 22 21.0	+0.8
	0.4nm1μm96nm,0.7s						
APSI	Ampana	8.29	206	P	Pn	07 22 38.9	0.0
	1μm40nm,0.9s						
SANI	Sanana	8.60	176	P	Pn	07 22 43.5	+0.4
KAPI	Kappang	12.79	206	LR	LR	07 29 02.1	
	comp=Z,75nm,20.3s,baz=38,slow=40						
BATI	Baumata	16.76	186	LR	LR	07 30 47.5	
	comp=Z,102nm,22.0s,baz=254,slow=37						
JOW	Kunigami	20.34	8	LR	LR	07 32 04.4	
	comp=Z,54nm,20.7s,baz=186,slow=34						
FITZ	Fitzroy Crossi	24.52	179	P	P	07 25 57.9	-0.5
	1.4nm,0.4s,baz=7.0,slow=6.9,SNR=10						
	1.4nm,0.4s						
WRA	Warramunga Arr	27.81	162	P	P	07 26 27.4	-0.7
	1.1nm,1.0s,baz=338,slow=9.0,SNR=4.9						
	1.1nm,1.0s						
CMAR	Chiang Mai Arr	28.27	297	LR	LR	07 39 28.8	
	comp=Z,35nm,18.1s,baz=105,slow=40						
ASAR	Alice Springs	31.21	165	P	P	07 26 57.7	-0.5
	0.3nm,0.6s,baz=345,slow=7.0,SNR=9.4						
	0.3nm,0.6s						
CTA	Charters Tower	33.56	143	LR	LR	07 40 38.1	
	comp=Z,37nm,21.2s,baz=22,slow=36						
STKA	Stephens Creek	41.28	159	P	P	07 28 24.1	0.0
	1.8nm,0.8s,baz=332,slow=9.5,SNR=6.5						
	1.8nm,0.8s						
DZM	Mont Dzumac	49.34	126	LR	LR	07 50 11.7	
	comp=Z,34nm,19.5s,baz=51,slow=36						
MKAR	Makanchi Array	54.43	325	P	P	07 30 06.2	+0.3
	0.3nm,0.6s,baz=123,slow=8.8,SNR=5.4						
MKAR				LR	LR	07 54 59.8	
	comp=Z,52nm,18.6s,baz=311,slow=38						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	58.59	327	P	P	07 30 35.0	-0.4
	0.9nm,0.7s,baz=125,slow=6.0,SNR=6.3						
	0.9nm,0.7s						
ILAR	Eielson Array	83.15	26	P	P	07 33 04.3	-0.2
	0.3nm,0.7s,baz=255,slow=4.5,SNR=6.6						
	0.3nm,0.7s						

TRN 16 07:23:35.3, 18°.81N×61°.11W, h48km, MD4.0, Far North-east of Anguilla., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANWB	Willy Bob	1.31	210	eP	Pn	07 23 59.2	+2.0
ANWB				eS	Sn	07 24 15.8	+2.4
SKI	Saint Kitts	2.14	227	eP	Pn	07 24 12.1	+3.5
SKI				eS	Sn	07 24 34.0	+0.1
DSDZ	La Diserade, G	2.48	179	eP	Pn	07 24 14.6	+1.2
DSDZ				eS	Sn	07 24 43.3	+0.8
ATGZ	Broadband at L	2.76	192	eP	Pn	07 24 18.4	+1.3
ATGZ				eS	Sn	07 24 52.8	+3.5
DSLB	Salisbury	3.37	185	eP	Pn	07 24 26.4	+0.9
DSLB				eS	Sn	07 25 05.8	+1.6

IDC 16 07:32:49.8±383.0, 28°.36N×103°.76E, h0km, Error ellipse: s-maj=201.1km s-min=177.3km az=172.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I34MN	SONGINO INFRAS	19.52	5	I	I	09 26 30.0	
	baz=187,slow=345,SNR=0.6						
I30JP	ISUMI INFRASON	31.69	68	I	I	10 53 55.6	
	0.1nm,11.8s,baz=266,slow=331,SNR=1.4						
I39PW	PALAU INFRASON	35.68	120	I	I	11 12 20.0	
	baz=306,slow=318,SNR=1.6						
I52GB	DIEGO GARCIA I	46.62	225	I	I	12 18 12.1	
	baz=46,slow=310,SNR=1.2						

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*DJA **16** 07:41:50.7±0.2, 4°N±3°×12°3E±°, h557km±2km, M4.5/46, mb4.5/46, mB5.0/18, MLv4.8/13, Mw(mB)4.3/18, MwMwp5.2/1, Mwp5.4/1*

*NEIC **16** 07:41:51.6±1.7, 4°.43N±0°.08×123°.0E±0°.1, h574km±8km, mb4.5/42, Error ellipse: s-maj=17.1km s-min=10.4km az=74.0*

*IDC **16** 07:41:52.2±0.9, 4°.37N×123°.01E, h587km±11km, mb3.6/24, mbtmp4.6/26, Error ellipse: s-maj=17.7km s-min=6.1km az=64.0*

ISC 16 07:41:51.7±0.3, 4°.35N±0°.05×123°.01E±0°.06, h582km, n135, σ1ˢ.26/145, mb4.4/54, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	2.60	105	P	P	07 43 05.0	-2.2
SGSI				S	S	07 44 03.6	-5.0
GTOI	Gorontalo	3.69	180	P	P	07 43 11.2	-2.6
GTOI				S	S	07 44 15.9	-4.6
DAV	Davao City (W)	3.72	43	P	P	07 43 14.0	0.0
	211nm,0.5s,baz=275,slow=1.1,SNR=6.2						
DAV	Davao City (W)	3.72	43	P	P	07 43 12.5	-1.4
DAV	Davao City (W)	3.72	43	P	P	07 43 10.5	-3.5
TOLI2	Tolitoli	3.91	215		P	07 43 14.0	-1.4
TOLI2	Tolitoli	3.91	215	P	P	07 43 13.9	-1.4
MRSI	Marisa	3.99	195	P	P	07 43 14.8	-1.1
MPSI	Mapaga	5.05	218	P	P	07 43 23.0	-0.9
	0.1nm28nm,0.5s						
LUWI	Luwuk	5.36	183	P	P	07 43 25.9	-0.6
LUWI	Luwuk	5.36	183	P	P	07 43 24.4	-2.1
	1.4nm6μm76nm,0.9s						
GAMI	Galela, Maluku	5.39	117	P	P	07 43 24.2	-2.5
APSI	Ampana	5.40	195	P	P	07 43 25.3	-1.5
TNTI	Ternate	5.62	129		P	07 43 27.2	-1.5
TNTI	Ternate	5.62	129	P	P	07 43 26.7	-2.0
	1.0nm73nm,0.4s						
KKM	Kota Kinabalu	6.97	284		P	07 43 39.6	-1.3
KKM	Kota Kinabalu	6.97	284	P	P	07 43 39.9	-0.9
KKM	Kota Kinabalu	6.97	284	P	P	07 43 39.5	-1.3
SANI	Sanana	7.02	155	P	P	07 43 39.3	-1.9
SANI	Sanana	7.02	155	P	P	07 43 38.6	-2.6
	1.0nm1μm37nm,0.7s						
NLAI	Namlea	8.58	151	P	P	07 43 56.5	+0.4
	120nm,0.7s						
SPSI	Sidrap Palu	8.87	201	P	P	07 43 59.3	+0.3
	35nm,0.8s						
BNSI	Bone	9.16	198	P	P	07 44 03.2	+1.4
	69nm,0.8s						
KRAI	Karang Ratu	9.33	145	P	P	07 44 04.7	+1.2
	8μm77nm,0.8s						
SBUM	Sibu	10.93	260		P	07 44 20.4	+0.8
SBUM	Sibu	10.93	260	P	P	07 44 20.1	+0.5
FAKI	Fak Fak	11.72	128		P	07 44 27.4	-0.3
FAKI	Fak Fak	11.72	128	P	P	07 44 27.3	-0.4
FAKI	Fak Fak	11.72	128	S	S	07 46 35.8	-0.1
FAKI	Fak Fak	11.72	128	P	P	07 44 27.1	-0.6
	54nm,0.8s						
EDFI	Ende, Flores	13.08	186	P	P	07 44 42.9	+1.3
	11nm,0.6s						
SOEI	Soe	14.07	175		P	07 44 51.8	+0.1
SOEI	Soe	14.07	175	P	P	07 44 51.6	-0.1
	55nm,0.8s						
PLAI	Plampang	14.09	202	P	P	07 44 52.9	+1.1
	27nm,0.6s						
KLNI	Mataram	14.44	209	P	P	07 44 56.6	+1.4
	23nm,0.6s						
BATI	Baumata	14.47	177	P	P	07 44 55.6	+0.1
	269nm,0.6s,baz=14,slow=0.8,SNR=17						
BATI	Baumata	14.47	177	P	P	07 44 55.5	0.0
KMMI	Kalianget	14.48	219	P	P	07 44 54.9	-0.7
	2μm29nm,0.8s						
IGBI	Denpasar	15.25	211	P	P	07 45 04.2	+1.3
JAGI	Jajag, Banyuwa	15.50	215		P	07 45 06.6	+1.3
JAGI	Jajag, Banyuwa	15.50	215	P	P	07 45 05.1	-0.2
JAGI	Jajag, Banyuwa	15.50	215	P	P	07 45 06.4	+1.1
	1μm94nm,0.8s						
GMJI	Gumukmas	15.75	217	P	P	07 45 08.8	+1.1
	1μm51nm,0.9s						
SNJI	Sawahan-Nganju	16.46	223	P	P	07 45 16.0	+1.5
	23nm,0.8s						
TPI	Tanjungpandan	16.89	246	P	P	07 45 19.0	+0.9
	28nm,1.1s						
SMPI	Sarmi	16.91	112	P	P	07 45 19.2	+0.9
	85nm,1.0s						
PCJI	Pacitan	17.16	223	P	P	07 45 20.9	+0.3
KPJI	Karang Pucung	18.22	230	P	P	07 45 31.3	+1.1
	21nm,0.7s						
DRS	Darwin Rock St	18.43	155	P	P	07 45 32.6	+0.5
MTN	Manton Dam	18.89	155		P	07 45 36.4	+0.1
JAY	Jayapura	18.95	111	P	P	07 45 36.8	-0.2
	26nm,0.5s,baz=224,slow=8.6,SNR=12						
JAY	Jayapura	18.95	111	P	P	07 45 38.4	+1.4
	29nm,0.5s						
BBJI	Bungbulang	19.30	233	P	P	07 45 39.7	-0.5
KNRA	Kununurra	20.70	164		P	07 45 53.1	+0.5
KNRA				IAmb	IAmb	07 45 54.2	
	comp=Z,15nm,0.9s						
FITZ	Fitzroy Crossi	22.46	173	P	P	07 46 08.6	+0.3
	comp=Z,3.9nm,0.4s,baz=6.2,slow=9.3,SNR=25						
	comp=Z,3.9nm,0.4s						
XMI	Christmas Isla	22.66	229	P	P	07 46 10.0	-0.3
KCSI	Kotacane, Aceh	25.19	269	P	P	07 46 32.1	-0.6
	comp=Z,18nm,0.8s						
GSI	Gunungsitoli	25.58	264		P	07 46 35.3	-0.8
GSI	Gunungsitoli	25.58	264	P	P	07 46 35.4	-0.7
	comp=Z,37nm,0.7s						
WB0	Warramunga Arr	26.45	155		P	07 46 43.4	-0.3
WRAB	Tennant Creek	26.58	156	P	P	07 46 44.8	-0.1
WRA	Warramunga Arr	26.59	156	P	P	07 46 44.6	-0.3
	comp=Z,22nm,0.5s,baz=336,slow=9.6,SNR=243						
WRA				S	S	07 50 36.2	-3.5
	comp=Z,2.1nm,0.6s,baz=337,slow=15,SNR=5.8						
WRA				ScP	ScP	07 52 35.1	+0.1
	comp=Z,1.2nm,0.6s,baz=343,slow=3.1,SNR=6.8						
	comp=Z,22nm,0.5s						
WRA	Warramunga Arr	26.59	156	P	P	07 46 43.7	-1.2
WR8	Warramunga Arr	26.66	155		P	07 46 45.3	-0.2
WR8				IAmb	IAmb	07 46 46.0	
	comp=Z,21nm,1.1s						
COEN	Coen	27.04	133		P	07 46 48.1	-0.8
COEN				IAmb	IAmb	07 46 48.4	
	comp=Z,7.4nm,0.7s						
CMAR	Chiang Mai Arr	27.38	303	P	P	07 46 52.9	+1.0
	comp=Z,1.7nm,0.3s,baz=117,slow=6.7,SNR=17						
	comp=Z,1.7nm,0.3s						
CHTO	Chiang Mai	27.55	303	P	P	07 46 53.9	+0.5
	comp=Z,12nm,0.9s						
PMG	Port Moresby	27.68	120	P	P	07 46 54.0	-0.5
	comp=Z,7.3nm,0.4s,baz=217,slow=20,SNR=4.1						
	comp=Z,7.3nm,0.4s						
PMG	Port Moresby	27.68	120	P	P	07 46 54.3	-0.3
PMG				IAmb	IAmb	07 46 54.9	
	comp=Z,17nm,1.0s						
NJ2	Nanjing	27.83	352	eP	P	07 46 56.4	+0.8
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
AS31	Alice Springs	29.80	160	IAmb	IAmb	07 47 14.0	
	comp=Z,6.3nm,0.6s						
ASAR	Alice Springs	29.81	160	P	P	07 47 13.5	+0.6
	comp=Z,13nm,0.4s,baz=339,slow=7.1,SNR=358						
ASAR				S	S	07 51 28.8	-0.9
	comp=Z,7.1nm,0.9s,baz=350,slow=21,SNR=36						
ASAR				ScP	ScP	07 52 45.4	+0.3
	comp=Z,4.2nm,0.5s,baz=340,slow=2.9,SNR=28						
	comp=Z,13nm,0.4s						
ASAR	Alice Springs	29.81	160	P	P	07 47 13.6	+0.8
PZH	PanZhiHua	29.98	319	P	P	07 47 15.4	+0.9
KSRS	Korea Array	33.25	7	P	P	07 47 43.4	+1.5
	comp=Z,0.9nm,0.5s,baz=187,slow=9.2,SNR=2.5						
	comp=Z,0.9nm,0.5s						
CTA	Charters Tower	33.34	138	ScP	ScP	07 52 58.3	+1.0
	comp=Z,2.2nm,0.4s,baz=341,slow=4.5,SNR=6.5						
CTAO	Charters Tower	33.34	138		P	07 47 44.5	+1.5
CTAO				IAmb	IAmb	07 47 45.1	
	comp=Z,10nm,0.8s						
FORT	Forrest	35.26	172		P	07 47 59.8	+1.0
FORT				IAmb	IAmb	07 48 00.3	
	comp=Z,13nm,0.6s						
INKA	Innaminka	36.20	153		P	07 48 08.5	+1.9
SHL	Shillong	36.55	308		P	07 48 09.7	-0.1

```
SHL                                 IAmb     IAmb       07 48 10.5
           comp=Z,16nm,0.7s
HHC    Hu-ho-hao-te       37.77 346 eP       P          07 48 22.3 +3.0
HHC                                 pmax     pmax
           comp=Z,8.0nm,0.7s
BBOO   Buckleboo          38.98 162          P          07 48 29.9 +0.8
BBOO                                IAmb     IAmb       07 48 30.7
           comp=Z,18nm,1.1s
LSA    Lhasa              39.28 314 P        P          07 48 29.4 -2.8
LSA                                 pmax     pmax
           comp=Z,16nm,0.6s
XLT    XiLinHaoTe         39.86 352 eP       P          07 48 36.1  0.0
XLT                                 pmax     pmax
           comp=Z,5.0nm,0.5s
STKA   Stephens Creek     40.14 155 P        P          07 48 39.6 +1.2
           comp=Z,8.1nm,0.4s,baz=330,slow=8.3,SNR=47
STKA                                ScP      ScP        07 53 22.5 -0.1
           comp=Z,1.2nm,0.5s,baz=270,slow=2.0,SNR=3.7
STKA                                S        S          07 54 05.0 +1.0
           comp=Z,2.0nm,0.7s,baz=68,slow=24,SNR=8.6
           comp=Z,8.1nm,0.4s
STKA   Stephens Creek     40.14 155          P          07 48 39.6 +1.2
GTA    Gaotai             40.74 332 P        P          07 48 44.6 +1.4
GTA                                 pP       pP         07 50 26.8 +3.2
GTA                                 PcP      PcP        07 50 31.4 +1.2
GTA                                 pmax     pmax
           comp=Z,11nm,1.0s
HILR   Hailar Array B     45.13 357 P        P          07 49 17.5 +0.4
           comp=Z,6.4nm,0.5s,baz=175,slow=9.7,SNR=11
           comp=Z,6.4nm,0.5s
ULN    Ulaanbaatar        45.47 345 P        P          07 49 19.7 -0.2
           comp=Z,15nm,1.1s
SONM   Songino Array      45.62 344 P        P          07 49 21.1 +0.1
           comp=Z,2.8nm,0.7s,baz=159,slow=8.8,SNR=16
SONM                                PcP      PcP        07 50 46.6 -0.2
           comp=Z,1.1nm,0.6s,baz=188,slow=2.8,SNR=4.9
           comp=Z,2.8nm,0.7s
SONM   Songino Array      45.62 344 P        P          07 49 21.0 +0.1
HEH    HeiHe              45.90   4 eP       P          07 49 22.8  0.0
CAN    Canberra           46.40 150 P        P          07 49 29.3 +2.3
DZM    Mont Dzumac        49.95 124 P        P          07 49 54.5 +0.9
           comp=Z,3.8nm,0.7s,baz=245,slow=12,SNR=5.9
           comp=Z,3.8nm,0.7s
WMQ    Urumqi             50.14 327 eP       P          07 49 55.8 +1.2
WMQ                                 pmax     pmax
           comp=Z,9.0nm,0.7s
NIL    Nilore             54.62 309 P        P          07 50 27.2 +0.4
NIL                                 IAmb     IAmb       07 50 29.1
           comp=Z,8.9nm,0.4s
MKAR   Makanchi Array     54.97 327 P        P          07 50 29.3 +0.4
           comp=Z,9.8nm,0.3s,baz=122,slow=7.5,SNR=295
MKAR                                PcP      PcP        07 51 21.4 -0.3
           comp=Z,3.7nm,0.6s,baz=124,slow=4.3,SNR=13
MKAR                                ScP      ScP        07 54 25.1  0.0
           comp=Z,0.6nm,0.6s,baz=127,slow=4.7,SNR=4.0
           comp=Z,9.8nm,0.3s
MAKZ   Makanchi           55.15 327          P          07 50 30.5 +0.3
MAKZ                                IAmb     IAmb       07 50 30.8
           comp=Z,13nm,0.5s
DRK    Karamyk            57.91 315 IAmb     IAmb       07 50 57.4
           comp=Z,24nm,0.4s
KBL    Kabul              58.21 308          P          07 50 51.7 +0.1
ZAA0   Zalesovo Array     58.40 335          P          07 50 51.2 -0.9
ZALV   Zalesovo Beam      58.40 335 P        P          07 50 51.5 -0.6
           comp=Z,2.8nm,0.4s,baz=139,slow=6.9,SNR=12
           comp=Z,2.8nm,0.4s
ZALV   Zalesovo Beam      58.40 335 P        P          07 50 51.2 -0.9
GAR    Garm               58.79 314 P        P          07 50 55.5 +0.2
GAR                                 IAmb     IAmb       07 50 56.3
           comp=Z,16nm,0.8s
KURBB  Kurchatov Arra     59.25 329 P        P          07 50 58.2 +0.3
           comp=Z,11nm,0.6s,baz=128,slow=6.2,SNR=122
KURBB                               PcP      PcP        07 51 38.9 +0.3
           comp=Z,1.5nm,0.7s,baz=123,slow=5.9,SNR=4.5
           comp=Z,11nm,0.6s
KURK   Kurchatov          59.26 329          P          07 50 58.0  0.0
KURK                                IAmb     IAmb       07 50 58.6
           comp=Z,25nm,0.6s
CHGR   Chuyangaron        59.51 313 P        P          07 50 59.8 -0.2
CHGR                                IAmb     IAmb       07 51 01.0
           comp=Z,10nm,0.7s
KK31   Karatay Array      60.27 318          P          07 51 04.9  0.0
KKAR   Karatay Array      60.27 318 P        P          07 51 04.8  0.0
BVAR   Borovoye Array     64.80 328 P        P          07 51 34.0 +0.1
           comp=Z,4.0nm,0.6s,baz=134,slow=8.5,SNR=21
           comp=Z,4.0nm,0.6s
BORK   Borovoye           64.85 328          P          07 51 34.0 -0.1
BORK                                IAmb     IAmb       07 51 34.7
           comp=Z,10nm,0.9s
BKZ    Black Stump Fm     65.55 137 P        P          07 51 39.7 +0.8
BKZ                                 IAmb     IAmb       07 51 40.8
           comp=Z,13nm,1.0s
URZ    Urewera            65.56 136 P        P          07 51 39.2 +0.4
           comp=Z,4.4nm,0.5s,baz=239,slow=4.3,SNR=5.9
           comp=Z,4.4nm,0.5s
TIXI   Tiksi              67.32   2 P        P          07 51 48.1 -0.9
NRIK   Noril'sk           68.98 347 P        P          07 51 59.1  0.0
           comp=Z,5.3nm,0.6s,baz=140,slow=6.2,SNR=10
           comp=Z,5.3nm,0.6s
AB31   Akbulak array      69.34 321 IAmb     IAmb       07 52 02.2
           comp=Z,5.7nm,0.7s
ABKAR  Akbulak array      69.34 321 P        P          07 52 01.4 -0.3
ARTI   Arti               72.52 328          P          07 52 19.5 -0.8
ARTI                                IAmb     IAmb       07 52 19.9
           comp=Z,7.5nm,0.6s
RAYN   Ar Rayn            76.82 293          P          07 52 45.0 -0.1
OPO    Ambohidratompo     78.00 250 P        P          07 52 51.7 +0.1
           comp=Z,2.7nm,0.6s,baz=105,slow=5.0,SNR=6.1
           comp=Z,2.7nm,0.6s
VOI    Vohitsoka          78.89 247 P        P          07 52 56.2 -0.1
VOI                                 IAmb     IAmb       07 52 56.6
           comp=Z,8.3nm,0.6s
KIBK   Kibwezi            85.15 267 P        P          07 53 28.8 +0.6
ILAR   Eielson Array      86.14  25 P        P          07 53 30.6 -1.0
           comp=Z,0.3nm,0.8s,baz=235,slow=5.9,SNR=6.1
           comp=Z,0.3nm,0.8s
BR131  Keskin Array S     86.76 309 P        P          07 53 34.2 -1.1
BRTR   Keskin Array B     86.76 309 P        P          07 53 34.2 -1.1
           comp=Z,0.9nm,0.7s,baz=146,slow=6.8,SNR=5.5
           comp=Z,0.9nm,0.7s
BRTR   Keskin Array B     86.76 309 P        P          07 53 34.4 -0.9
BMAR   Burnt Mountain     86.95  23          P          07 53 36.7 +1.2
ARCES  ARCESS Array B     88.58 340 P        P          07 53 41.7 -1.3
           comp=Z,1.6nm,0.6s,baz=80,slow=6.7,SNR=9.5
           comp=Z,1.6nm,0.6s
AKASG  Malin Array Be     89.06 321 P        P          07 53 44.2 -1.4
           comp=Z,1.0nm,0.6s,baz=70,slow=4.6,SNR=4.5
           comp=Z,1.0nm,0.6s
SPITS  Spitsbergen Ar     89.15 349 P        P          07 53 44.9 -0.6
           comp=Z,1.7nm,0.4s,baz=96,slow=7.7,SNR=16
           comp=Z,1.7nm,0.4s
FIA1   FINESS Array S     89.53 332 P        P          07 53 46.0 -1.4
FINES  FINESS Array B     89.53 332 P        P          07 53 46.1 -1.3
           comp=Z,3.2nm,0.6s,baz=44,slow=5.6,SNR=22
           comp=Z,3.2nm,0.6s
BURAR  Bucovina Array     92.06 318 P        P          07 53 59.6  0.0
BURAR                               IAmb     IAmb       07 54 00.5
           comp=Z,3.4nm,0.8s
QSPA   South Pole Qui     94.25 180 P        P          07 54 10.7 +1.5
QSPA                                IAmb     IAmb       07 54 21.5
           comp=Z,3.0nm,1.3s
HFS    Hagfors            95.73 332 P        P          07 54 14.1 -1.8
           comp=Z,0.6nm,0.4s,baz=107,slow=4.8,SNR=5.8
           comp=Z,0.6nm,0.4s
```

SFS ***16*** *07:42:27.0, 38°.36N×1°.31W, h4^{km}, ML3.6/13, ML3.6/16, MLv3.6/16*

INMG ***16*** *07:42:27.4±1.8, 38°.34N×1°.28W, h14^{km}±5^{km}, ML2.8, Error ellipse: s-maj=2.4km s-min=2.1km az=77.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NW Murcia (ESP)*

MDD ***16*** *07:42:27.0±0.2, 38°.37N×1°.32W, h0^{km}±2^{km}, mb_Lg3.3/33, Error ellipse: s-maj=1.5km s-min=1.2km az=100.0*

ISC 16 07:42:25.6±1.0**, 38°.39N**±0°.02×**1°.29W**±0°.02**, h14**^{km}±8^{km}**, n70, σ1^{s}10**/124**, 1D, Spain**

```
Code   Station Name        Δ°  AZ°   Phase ID              Time      Res
                                     Op       ISC        h  m  s    ISC
ETOB   Tobarra            0.33 323  Pg       Pb         07 42 33.8 +0.5
ETOB                                Sg       Sb         07 42 39.3 +0.8
ETOB   Tobarra            0.33 323  Pg       Pb         07 42 33.4 +0.1
ETOB                                Sg       Sb         07 42 39.3 +0.8
ETOB                              i IVmb_Lg             07 42 40.1
EXBUL  Bullas, Murcia     0.45 221  Pg       Pg         07 42 35.1 +0.6
EXBUL                               Sg       Sb         07 42 43.5 +1.6
EMUR   La Murta           0.54 176  Pg       Pg         07 42 36.1 -0.2
EMUR                                Sg       Sg         07 42 43.5 -0.1
EMUR   La Murta           0.54 176  Pg       Pg         07 42 36.1 -0.2
EMUR                                Sg       Sg         07 42 42.2 -1.4
EMUR                              i IVmb_Lg             07 42 48.1
EXAHM  Alhama Murcia,     0.55 192  Pg       Pg         07 42 36.5  0.0
EXAHM                               Sg       Sb         07 42 45.0 +0.1
ETRV   Los Montesinos     0.56 131  Pg       Pb         07 42 37.2 +0.1
ETRV                                Sg       Sb         07 42 44.9  0.0
ETRV                              i IVmb_Lg             07 42 50.2
AFON   Font Roja          0.65  64  Pg       Pn         07 42 40.2 -0.4
AFON                                Sg       Sb         07 42 48.4 +0.5
AFON                              i IVmb_Lg             07 42 53.0
EXPDH  Pilar de la Ho     0.66 142  Pg       Pg         07 42 38.3 -0.2
EXPDH                               Sg       Sg         07 42 47.1  0.0
EXTPC  Torre Pacheco      0.69 157  Pg       Pb         07 42 39.4 -0.1
EXTPC                               Sg       Sb         07 42 49.6 +0.7
EXMAZ  Mazarron           0.79 181  Pg       Pb         07 42 41.0 -0.1
EXMAZ                               Sg       Sn         07 42 52.6 -1.2
TLOR   Lorca, Murcia      0.79 203  Sg       Sn         07 42 54.0  0.0
TLOR   Lorca, Murcia      0.79 203  Sg       Sn         07 42 52.9 -1.2
ELOR   Lorca, Murcia      0.82 206  Pg       Pb         07 42 41.4 -0.3
ELOR                                Sg       Sn         07 42 54.0 -0.8
ELOR                              i IVmb_Lg             07 42 59.0
CART   Cartagena          0.83 164  Pg       Pb         07 42 41.5 -0.4
CART                                Sg       Sg         07 42 53.0 +0.4
EVIV   Cofrentes, Val     0.89   9  Pg       Pn         07 42 43.6 -0.3
EVIV                                Sg       Sn         07 42 57.0 +0.4
EVIV                              i IVmb_Lg             07 42 59.7
EBEN2  Beniarda presa     0.91  71  Pg       Pn         07 42 44.8 +0.7
EBEN2                               Sg       Sn         07 42 58.3 +1.2
EBEN2                             i IVmb_Lg             07 43 03.5
ECHE   Chera              1.23  12  Pn       Pg         07 42 49.3  0.0
ECHE                                Sn       Sg         07 43 05.8 +0.4
ECHE   Chera              1.23  12  Pg       Pg         07 42 49.3  0.0
ECHE                                Sg       Sg         07 43 07.0 +1.6
ECHE                              i IVmb_Lg             07 43 14.9
EQES   Quesada            1.52 248  Pg       Pb         07 42 54.4 +0.8
EQES                                Sg       Sg         07 43 14.6 +0.1
EQES                              i IVmb_Lg             07 43 19.7
E0802  Ubeda,Jaen         1.68 258  Pn       Pb         07 42 55.7 -0.6
E0802                               Sn       Sb         07 43 17.9 +0.5
PSIM   Granatula de C     1.98 283  Pn       Pn         07 42 59.8 +1.0
PSIM                                Sn       Sn         07 43 23.9 +0.5
PSIM                                Sg       Sg         07 43 28.4 -0.9
EQTA   Presa de Quent     2.07 236  Sg       Sg         07 43 33.0 +0.8
EQTA                                Pg       Pg         07 43 05.3  0.0
EQTA   Presa de Quent     2.07 236  P        Pg         07 43 04.4 -0.9
EQUE   Quentar            2.07 236  Pn       Pn         07 43 01.2 +1.1
EQUE                                Pg       Pg         07 43 04.8 -0.5
EQUE                                Sg       Sg         07 43 32.8 +0.7
EQUE                              i IVmb_Lg             07 43 38.0
EMOS   Mosqueruela        2.08  18  Pn       Pn         07 43 01.2 +1.0
EMOS                                Sg       Sg         07 43 32.0 -0.4
E0901  Celadas (Terue     2.10   3  Sn       Sb         07 43 29.0 -0.5
E0901                               Sg       Sg         07 43 34.0 +0.9
E0901                             i IVmb_Lg             07 43 42.1
ECOL   Islas Columbre     2.16  45  Pn       Pn         07 43 02.0 +0.8
ECOL                                Sn       Sb         07 43 29.1 -1.9
ECOL                                Sg       Sg         07 43 34.6 -0.4
EIBI   Ibiza              2.16  72  Pn       Pb         07 43 02.9 -1.6
EIBI                                Sn       Sb         07 43 30.0 -1.2
EIBI   Ibiza              2.16  72  Pn       Pb         07 43 03.0 -1.6
EIBI                                Sn       Sb         07 43 30.9 -0.3
ELGU   Los Guajares,      2.39 231  Pg       Pb         07 43 08.9 +0.4
ELGU   Los Guajares,      2.39 231  P        Pb         07 43 08.9 +0.4
ELGU   Los Guajares,      2.39 231  Pg       Pb         07 43 09.9 +1.3
ELGU                                Sg       Sg         07 43 41.0 -1.5
ELGU                              i IVmb_Lg             07 43 49.1
UCM    Universidad Co     2.44 322  Pg       Pg         07 43 12.7 +0.2
UCM                                 Sg       Sg         07 43 44.3 +0.1
UCM    Universidad Co     2.44 322  P        Pg         07 43 13.3 +0.9
ESBB   Sonseca Array      2.44 303  Pn       Pn         07 43 06.3 +1.1
ESBB                                Sg       Sg         07 43 44.2  0.0
ESDC   Sonseca Array      2.44 303  Pn       Pn         07 43 06.4 +1.2
ESDC                                Sg       Sg         07 43 44.3 +0.1
ESDC                              i IVmb_Lg             07 43 47.4
YEBES  Yebes (Guadala     2.55 328  Pg       Pg         07 43 14.7 +0.2
YEBES                               Sg       Sg         07 43 48.4 +0.9
EGOR   Sierra Gorda,      2.57 241  P        Pb         07 43 10.2 -1.3
EGOR   Sierra Gorda,      2.57 241  Pn       Pb         07 43 09.8 -1.7
EGOR                                Sn       Sn         07 43 39.7 +1.6
EGOR                              i IVmb_Lg             07 43 57.2
EADA   Adamuz             2.59 266  Pn       Pn         07 43 07.9 +0.7
EADA   Adamuz             2.59 266  P        Pn         07 43 07.5 +0.3
EADA   Adamuz             2.59 266  Pn       Pn         07 43 07.6 +0.4
EADA                                Sn       Sn         07 43 39.2 +0.7
EADA                                Sg       Sg         07 43 48.1 -0.8
EADA                              i IVmb_Lg             07 43 53.3
PAB    San Pablo          2.65 297  Pn       Pn         07 43 08.9 +0.9
PAB                                 Sg       Sg         07 43 50.2 -0.5
PAB                               i IVmb_Lg             07 43 54.7
ECAB   El Cabril          3.26 266  Pn       Pn         07 43 16.9 +0.5
ECAB   El Cabril          3.26 266  P        Pn         07 43 16.7 +0.3
ETOS   Mallorca           3.48  65  Pn       Pn         07 43 22.0 +2.6
ETOS                                Sn       Sn         07 44 01.1 +0.7
ESPR   Espera             3.92 249  Pn       Pn         07 43 27.1 +1.7
EMIN   Mina Concepcio     4.29 263  Pn       Pn         07 43 30.8 +0.3
EMIN                                Sn       Sn         07 44 20.2 -0.1
EBAD   Badajoz            4.50 276  Pn       Pn         07 43 33.7 +0.4
EBAD   Badajoz            4.50 276  P        Pn         07 43 33.6 +0.3
PBAR   Barrancos          4.53 269  Pn       Pn         07 43 34.1 +0.4
PBAR                                Sn       Sn         07 44 25.9 -0.2
PBAR   Barrancos          4.53 269  P        Pn         07 43 34.3 +0.6
PBAR   Barrancos          4.53 269 ePn       Pn         07 43 34.2 +0.5
PBAR                               eSn       Sn         07 44 26.4 +0.3
PBAR                              i IAML                07 44 55.7
PBAR                              i IAML                07 44 56.7
PBAR                              i IAML                07 45 01.6
PMRV   Marv??o            4.87 284 eSg       Sg         07 44 58.8 -3.1
PMRV                              i IAML                07 45 08.0
PMRV                              i IAML                07 45 09.2
PMRV                              i IAML                07 45 17.4
EGRO   El Granado         4.96 262  Pn       Pn         07 43 40.3 +0.6
PCBR   Castelo Branco     5.02 289 ePn       Pn         07 43 42.6 +2.0
PCBR                               eSn       Sn         07 44 36.8 -1.7
PCBR                              i IAML                07 45 10.2
PCBR                              i IAML                07 45 22.4
PCBR                              i IAML                07 45 22.6
PVAQ   Vaqueiros          5.17 261⇓ePn       Pn         07 43 43.4 +0.8
PVAQ                               eSn       Sn         07 44 42.4 +0.3
PVAQ                              i IAML                07 45 17.0
PVAQ                              i IAML                07 45 20.1
PVAQ                              i IAML                07 45 21.5
MVO    Moncorvo           5.22 304 ePn       Pn         07 43 44.9 +1.6
MVO                                eSn       Sn         07 44 42.4 -0.9
MVO                                eSg       Sg         07 45 09.1 -4.0
MVO                               i IAML                07 45 20.4
MVO                               i IAML                07 45 20.6
MVO                               i IAML                07 45 27.8
MTE    Manteigas          5.24 295 eSg       Sg         07 45 10.2 -3.7
MTE                               i IAML                07 45 21.6
MTE                               i IAML                07 45 24.4
MTE                               i IAML                07 45 27.8
PARRA  Arraiolos          5.30 277 ePn       Pn         07 43 45.3 +0.9
PARRA                              eSn       Sn         07 44 45.6 +0.4
PARRA                              eSg       Sg         07 45 13.8 -2.0
PARRA                             i IAML                07 45 33.2
PARRA                             i IAML                07 45 34.4
PARRA                             i IAML                07 45 37.0
PBDV   Barranco-do-Ve     5.38 260 ePn       Pn         07 43 46.3 +0.9
PBDV                               eSn       Sn         07 44 48.2 +1.0
PCVE   Castro Verde       5.38 264 ePn       Pn         07 43 46.4 +1.0
PBRG   Braganca           5.39 311 ePn       Pn         07 43 47.2 +1.5
PBRG                               eSg       Sg         07 45 17.8 -1.0
PBRG                              i IAML                07 45 20.0
PBRG                              i IAML                07 45 28.3
PBRG                              i IAML                07 45 28.6
PMTG   Montargil          5.46 279 ePn       Pn         07 43 47.3 +0.7
PSARD  Sardoal            5.49 285 ePn       Pn         07 43 48.2 +1.3
PSARD                              eSn       Sn         07 44 49.4 -0.5
PSARD                             i IAML                07 45 27.2
PSARD                             i IAML                07 45 32.9
PSARD                             i IAML                07 45 33.2
PVIS   Viseu              5.61 297 ePn       Pn         07 43 49.7 +1.1
PVIS                               eSn       Sn         07 44 50.6 -2.3
POLO   Lamas de Olo       5.82 303 ePn       Pn         07 43 52.7 +1.1
PCAS   Casmilo, Conde     5.84 289 ePn       Pn         07 43 53.3 +1.5
PCAS                               eSn       Sn         07 44 57.5 -1.0
PCAS                              i IAML                07 45 38.6
PCAS                              i IAML                07 45 53.6
PCAS                              i IAML                07 45 56.6
PGAV   Gavieira, Arco     6.43 306 ePn       Pn         07 44 01.3 +1.4
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GCG 16 07:56:44.2±0.4**, 12°.98N×89°.18W, h76**^{km}±7^{km}**, MD3.5, Off coast of central America**

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Code   Station Name        Δ°  AZ°   Phase ID              Time      Res
                                     Op       ISC        h  m  s    ISC
JAYA   Jayaque - finc     0.72 339 i P        Pn         07 56 59.6 -0.4
JAYA                               i S        Sn         07 57 11.9 +0.2
NUBE   Las Nubes          1.08 328 i P        Pn         07 57 04.7 +0.5
NUBE                               i S        Sn         07 57 20.5 +1.3
MTO3   Montecristo        1.42 353 i P        Pn         07 57 09.2 +0.6
```

IDC ***16*** *08:02:30.8±1.2, 2°.77N×126°.06E, h0^{km}, mb3.6/6, mbtmp3.6/6, MS4.1/1, Error ellipse: s-maj=100.0km s-min=18.5km az=72.0*

ISC 16 08:02:43.6±1.3**, 2°.6N**±0°.2×**125°.9E**±0°.7**, h105**^{km}**, n7, σ0^{s}90**/7**, mb3.4**/5**, Talaud Islands**

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Code   Station Name        Δ°  AZ°   Phase ID              Time      Res
                                     Op       ISC        h  m  s    ISC
FITZ   Fitzroy Crossi    20.55 181  P        P          08 07 14.4 +0.5
       1.4nm,0.8s,baz=21,slow=4.7,SNR=5.6
       1.4nm,0.8s
WRA    Warramunga Arr    23.88 160  P        P          08 07 47.5 -0.1
       0.5nm,0.5s,baz=339,slow=10,SNR=6.9
       0.5nm,0.5s
ASAR   Alice Springs     27.24 164  P        P          08 08 17.3 -0.7
       0.1nm,0.4s,baz=342,slow=13,SNR=3.6
       0.1nm,0.4s
DZM    Mont Dzumac       46.60 124  LR       LR         08 31 35.7
       comp=Z,245nm,21.3s,baz=2.5,slow=38
MKAR   Makanchi Array    58.01 326  P        P          08 12 24.6 -0.8
       0.2nm,0.5s,baz=120,slow=8.6,SNR=4.9
MKAR                                PcP      PcP        08 13 17.5 +1.2
       0.3nm,0.6s,baz=116,slow=3.4,SNR=3.6
       0.2nm,0.5s
KURBB  Kurchatov Arra    62.24 328  P        P          08 12 53.6 -0.5
       0.4nm,0.4s,baz=130,slow=6.5,SNR=4.6
       0.4nm,0.4s
NRIK   Noril'sk          71.33 347  P        P          08 13 51.9 +0.3
       2.0nm,0.6s,baz=102,slow=6.7,SNR=5.1
       2.0nm,0.6s
```

ROM ***16*** *08:06:33.9±0.1, 41°.069N±0°.003×14°.739E±0°.004, h11^{km}, ML3.4/171, Mw3.6, Error ellipse: s-maj=0.3km s-min=0.2km az=216.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.10; M$_{\theta\theta}$-2.00; M$_{\phi\phi}$2.10; M$_{r\theta}$-1.32; M$_{\theta\phi}$-2.69; M$_{\phi r}$0.22; Fault plane solution: M$_0$3.64148×10^{14} NP1:φ$_s$109.00000°, δ87.00000°, λ-159.00000°. NP2:φ$_s$18.00000°, δ69.00000°, λ-4.00000°.*

IDC ***16*** *08:06:34.8±2.0, 41°.27N×14°.79E, h0^{km}, mb3.3/2, mbtmp3.6/5, ML3.3/3 Error ellipse: s-maj=36.0km s-min=19.9km az=84.0*

ISC 16 08:06:34.7±0.8**, 41°.09N**±0°.02×**14°.75E**±0°.02**, h12**^{km}±4^{km}**, n59, σ1^{s}10**/94**, 12C-12D, Southern Italy**

```
Code   Station Name        Δ°  AZ°   Phase ID              Time      Res
                                     Op       ISC        h  m  s    ISC
BENI   Universita' De     0.04  24  P        Pg         08 06 36.6 -0.4
BENI                                S        Sg         08 06 39.1 +0.3
VITU   Vitulano (BN)      0.13 316 ⇓P        Pg         08 06 37.3 -0.7
VITU                                S        Sg         08 06 40.2 -0.3
VITU                                AML      AML
           comp=E,94450μm,0.3s
VITU                                AML      AML
VITU                                AML      AML
VITU                                AML      AML
VITU                                AML      AML
VITU                                AML      AML
           comp=E,40800μm,0.9s
VITU                                AML      AML
           comp=E,94221μm,0.3s
VITU                                AML      AML
VITU                                AML      AML
           comp=E,35616μm,0.5s
VITU                                AML      AML
PAOL   Paolisi            0.15 247 ⇑P        Pg         08 06 37.6 -0.7
PAOL                                S        Sg         08 06 40.7 -0.2
PAOL                                AML      AML
           comp=E,50050μm,0.4s
PAOL                                AML      AML
           comp=N,61500μm,0.5s
PAOL                                AML      AML
           comp=N,61450μm,0.5s
PAOL                                AML      AML
           comp=E,52200μm,0.4s
PAOL                                AML      AML
           comp=N,64050μm,0.5s
PAOL                                AML      AML
           comp=E,50050μm,0.4s
PAOL                                AML      AML
           comp=E,52207μm,0.4s
PAOL                                AML      AML
           comp=N,64029μm,0.5s
PAOL                                AML      AML
           comp=N,61461μm,0.5s
PAOL                                AML      AML
           comp=E,50042μm,0.4s
AVL    Avellino           0.17 170  P        Pg         08 06 37.9 -0.7
AVL                                 S        Sg         08 06 41.3  0.0
MRB1   Monte Rocchett     0.17  78 ⇑P        Pg         08 06 38.7  0.0
MRB1                                S        Sg         08 06 42.2 +0.7
MRB1                                AML      AML
           comp=E,42400μm,0.7s
MRB1                                AML      AML
           comp=N,37500μm,1.2s
MRB1                                AML      AML
           comp=E,41800μm,0.7s
MRB1                                AML      AML
           comp=N,36450μm,1.2s
MRB1                                AML      AML
           comp=E,42423μm,0.7s
MRB1                                AML      AML
           comp=E,41789μm,0.7s
MRB1                                AML      AML
           comp=N,34333μm,0.6s
MRB1                                AML      AML
           comp=N,33578μm,0.6s
LGS3   Luogosano          0.21 119 ⇓P        Pg         08 06 38.8 -0.5
LGS3                                S        Sg         08 06 42.7 +0.3
NL9    Nola               0.23 222 ⇑P        Pg         08 06 38.7 -0.9
MTMR   Montemarano        0.26 132 ⇓P        Pg         08 06 39.1 -1.1
MTMR                                S        Sg         08 06 43.5 -0.3
MTMR                                AML      AML
           comp=E,9270μm,1.2s
MTMR                                AML      AML
           comp=N,9520μm,0.5s
MTMR                                AML      AML
           comp=E,8290μm,0.4s
MTMR                                AML      AML
           comp=N,9035μm,0.3s
MTMR                                AML      AML
           comp=N,9475μm,0.5s
MTMR                                AML      AML
           comp=N,9060μm,0.3s
MTMR                                AML      AML
           comp=E,9270μm,1.2s
MTMR                                AML      AML
           comp=N,9515μm,0.5s
MTMR                                AML      AML
           comp=N,9045μm,0.3s
MTMR                                AML      AML
           comp=E,9270μm,0.8s
MTMR                                AML      AML
           comp=N,9049μm,0.3s
MTMR                                AML      AML
           comp=E,7999μm,0.4s
MTMR                                AML      AML
           comp=N,9358μm,0.4s
MTMR                                AML      AML
           comp=E,7981μm,0.4s
SACR   S. Croce Del S     0.31 354 ⇓P        Pg         08 06 40.9 -0.1
SACR                                S        Sg         08 06 46.4 +1.1
SACR                                AML      AML
           comp=N,9555μm,0.6s
SACR                                AML      AML
           comp=E,9210μm,1.0s
SACR                                AML      AML
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           comp=N,9550µm,0.6s
SACR                              AML    AML
           comp=E,9210µm,1.0s
SACR                              AML    AML
           comp=N,9090µm,0.6s
SACR                              AML    AML
           comp=N,9090µm,1.4s
SACR                              AML    AML
           comp=N,9550µm,1.4s
SACR                              AML    AML
           comp=E,9210µm,1.0s
SACR                              AML    AML
           comp=E,9210µm,1.0s
SACR                              AML    AML
           comp=E,9216µm,1.0s
SACR                              AML    AML
           comp=N,9568µm,0.6s
SACR                              AML    AML
           comp=N,9081µm,0.6s
SACR                              AML    AML
           comp=E,9187µm,1.0s
BIOG  Biogem            0.31  69 ⇑P      Pb      08 06 41.9  -0.3
PTRJ  Pietraroja        0.32 329 ⇓P      Pg      08 06 40.4  -0.9
PTRJ                              S      Sb      08 06 46.3  -1.3
PTRJ                              AML    AML
           comp=N,11550µm,0.4s
PTRJ                              AML    AML
           comp=N,14800µm,0.4s
PTRJ                              AML    AML
           comp=E,34µm,0.3s
PTRJ                              AML    AML
           comp=E,14100µm,0.6s
PTRJ                              AML    AML
           comp=E,14138µm,0.6s
PTRJ                              AML    AML
           comp=N,14802µm,0.4s
PTRJ                              AML    AML
           comp=N,11562µm,0.4s
PTRJ                              AML    AML
           comp=E,34µm,0.3s
VVDG  Vesuvio Valle     0.35 224 ⇑P      Pg      08 06 41.2  -0.7
VVDG                              S      Sg      08 06 46.5  -0.2
VBKN  Vesuvio Bunker    0.35 223 ⇑P      Pg      08 06 41.3  -0.6
VBKN                              S      Sg      08 06 47.1  +0.4
VBKN                              AML    AML
           comp=E,32550µm,0.3s
VBKN                              AML    AML
           comp=N,41600µm,1.2s
VBKN                              AML    AML
           comp=N,41600µm,0.8s
VBKN                              AML    AML
           comp=E,32573µm,0.3s
VBKN                              AML    AML
           comp=N,41539µm,0.5s
VCRE  Vesuvio Crater    0.36 222 ⇑P      Pg      08 06 41.4  -0.6
VCRE                              AML    AML
           comp=N,33150µm,0.8s
VCRE                              AML    AML
           comp=N,32700µm,0.8s
VCRE                              AML    AML
           comp=E,48200µm,0.7s
VCRE                              AML    AML
           comp=E,48200µm,1.3s
VCRE                              AML    AML
           comp=E,48216µm,0.7s
VCRE                              AML    AML
           comp=N,33143µm,0.8s
SSB3  San Sossio Bar    0.36  92 ⇑P      Pg      08 06 41.9  -0.2
SSB3                              S      Sb      08 06 48.2  -0.5
NSC3  Nusco             0.37 130 ⇓P      Pg      08 06 41.1  -1.1
NSC3                              S      Sg      08 06 46.8  -0.5
CAFE  Carife            0.38  99 ⇑P      Pg      08 06 41.8  -0.5
CAFE                              S      Sg      08 06 47.8  +0.5
CAFE                              AML    AML
           comp=E,4640µm,1.0s
CAFE                              AML    AML
           comp=N,4240µm,1.6s
CAFE                              AML    AML
           comp=E,4830µm,1.2s
CAFE                              AML    AML
           comp=N,4380µm,1.6s
CAFE                              AML    AML
           comp=N,4240µm,0.4s
CAFE                              AML    AML
           comp=N,4380µm,0.4s
CAFE                              AML    AML
           comp=E,4830µm,0.8s
CAFE                              AML    AML
           comp=N,3333µm,1.0s
CAFE                              AML    AML
           comp=E,4537µm,0.5s
CAFE                              AML    AML
           comp=E,4677µm,0.5s
CAFE                              AML    AML
           comp=N,3162µm,0.4s
VTIR  Vesuvio Tirone    0.38 221 ⇑P      Pg      08 06 41.5  -0.7
VTIR                              S      Sg      08 06 47.6  +0.3
VTIR                              AML    AML
           comp=N,9655µm,0.5s
VTIR                              AML    AML
           comp=E,9395µm,0.5s
VTIR                              AML    AML
           comp=N,8785µm,0.8s
VTIR                              AML    AML
           comp=E,7993µm,0.3s
LIO3  Lioni             0.38 120 ⇓P      Pg      08 06 41.4  -0.9
LIO3                              S      Sg      08 06 47.2  -0.2
GATE  Gambatesa         0.44  16 ⇓P      Pb      08 06 43.8  -0.6
GATE                              S      Sb      08 06 50.3  -0.6
GATE                              AML    AML
           comp=E,4520µm,0.5s
GATE                              AML    AML
           comp=N,3575µm,0.6s
GATE                              AML    AML
           comp=E,4520µm,0.5s
GATE                              AML    AML
           comp=N,3700µm,0.5s
GATE                              AML    AML
           comp=N,3698µm,0.5s
GATE                              AML    AML
           comp=N,3572µm,0.6s
GATE                              AML    AML
           comp=E,4500µm,0.5s
MCRV  Calabrutti - M    0.44 134 ⇓P      Pg      08 06 42.1  -1.4
MCRV                              S      Sg      08 06 48.6  -0.8
MCRV                              AML    AML
           comp=E,7630µm,0.3s
MCRV                              AML    AML
           comp=N,9685µm,0.3s
MCRV                              AML    AML
           comp=E,7629µm,0.3s
MCRV                              AML    AML
           comp=N,9661µm,0.3s
PIGN  Pignataro Magg    0.44 285 ⇓P      Pg      08 06 42.4  -1.1
PIGN                              S      Sg      08 06 49.0  -0.3
PIGN                              AML    AML
           comp=E,11750µm,0.6s
PIGN                              AML    AML
           comp=N,9680µm,0.5s
PIGN                              AML    AML
           comp=N,10660µm,0.5s
PIGN                              AML    AML
           comp=E,11800µm,0.6s
PIGN                              AML    AML
           comp=E,11800µm,0.6s
PIGN                              AML    AML
           comp=N,10671µm,0.5s
PIGN                              AML    AML
           comp=N,9672µm,0.5s
PIGN                              AML    AML
           comp=E,11752µm,0.6s
SGTA  Sant Agata di     0.47  84 ⇑P      Pg      08 06 43.8  -0.1
SGTA                              S      Sg      08 06 50.1  -0.1
SGTA                              AML    AML
           comp=N,1705µm,1.0s
SGTA                              AML    AML
           comp=E,2395µm,1.0s
SGTA                              AML    AML
           comp=E,2375µm,1.0s
SGTA                              AML    AML
           comp=N,1645µm,0.7s
SGTA                              AML    AML
           comp=E,2375µm,1.0s
SGTA                              AML    AML
           comp=E,2395µm,1.0s
SGTA                              AML    AML
           comp=N,1385µm,0.4s
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SGTA                              AML    AML
           comp=E,2376µm,1.0s
SGTA                              AML    AML
           comp=E,2398µm,1.0s
SGTA                              AML    AML
           comp=N,1470µm,0.4s
BSSO  Busso             0.47 346 ⇓P      Pb      08 06 43.7  -1.3
BSSO                              S      Sb      08 06 51.1  -0.8
BSSO                              AML    AML
           comp=E,2580µm,0.5s
BSSO                              AML    AML
           comp=N,1960µm,0.7s
BSSO                              AML    AML
           comp=N,1960µm,1.3s
BSSO                              AML    AML
           comp=N,1958µm,0.7s
BSSO                              AML    AML
           comp=E,2584µm,0.5s
AND3  Andretta          0.47 110  P      Pg      08 06 43.2  -0.8
SNR3  Senerchia         0.49 136  P      Pg      08 06 43.1  -1.3
SNR3                              S      Sg      08 06 51.0  +0.2
CMSN  Campi Flegrei     0.50 240  P      Pg      08 06 44.3  -0.2
VAGA  Valle Agricola    0.51 310 ⇓P      Pg      08 06 43.7  -0.9
VAGA                              S      Sb      08 06 52.1  -0.7
VAGA                              AML    AML
           comp=E,8895µm,0.6s
VAGA                              AML    AML
           comp=E,9185µm,0.6s
VAGA                              AML    AML
           comp=N,13450µm,0.4s
VAGA                              AML    AML
           comp=N,13800µm,0.4s
VAGA                              AML    AML
           comp=E,8877µm,0.6s
VAGA                              AML    AML
           comp=N,13419µm,0.4s
VAGA                              AML    AML
           comp=E,9162µm,0.6s
VAGA                              AML    AML
           comp=N,13801µm,0.4s
CSOB  Campi Flegrei     0.53 240 ⇑P      Pg      08 06 44.6  -0.5
CSFT  Campi Flegrei     0.53 241  P      Pg      08 06 44.4  -0.6
CLT3  Calitri           0.53 110  P      Pg      08 06 44.6  -0.5
CLT3                              AML    AML
           comp=E,6275µm,0.8s
CLT3                              AML    AML
           comp=N,7575µm,0.3s
CLT3                              AML    AML
           comp=E,6270µm,0.8s
CLT3                              AML    AML
           comp=N,7576µm,0.3s
CLT3                              AML    AML
           comp=E,5101µm,0.4s
CLT3  Calitri           0.53 110  AML    AML
           comp=E,5596µm,0.8s
CLT3                              AML    AML
           comp=E,6665µm,0.7s
CLT3                              AML    AML
           comp=N,7130µm,0.3s
CLT3                              AML    AML
           comp=E,6660µm,0.8s
CLT3                              AML    AML
           comp=N,7125µm,0.3s
CLT3                              AML    AML
           comp=N,7126µm,0.3s
COLB  Campi Flegrei     0.53 240  P      Pg      08 06 44.3  -0.8
CAAM  Accademia Aero    0.53 240  P      Pg      08 06 44.5  -0.6
CPOZ  Campi Flegrei,    0.55 241  P      Pg      08 06 44.5  -0.9
CFMN  Campi Flegrei     0.56 243  P      Pg      08 06 44.4  -1.3
CIGN  Sant’Elia a Pi    0.58  12  P      Pb      08 06 46.1  -0.6
CIGN                              S      Sb      08 06 55.2  +0.3
CIGN                              AML    AML
           comp=N,2230µm,1.5s
CIGN                              AML    AML
           comp=E,2475µm,0.7s
CIGN                              AML    AML
           comp=N,2230µm,0.5s
CIGN                              AML    AML
           comp=E,2472µm,0.7s
CIGN                              AML    AML
           comp=N,2277µm,0.6s
MSC   Monte Massico     0.59 280  P      Pg      08 06 45.5  -0.8
COL3  Colliano          0.60 132  P      Pg      08 06 44.6  -1.7
CSG3  Toppo Di Caste    0.61 116  P      Pg      08 06 46.5   0.0
SRES  S.Oreste - Sor    2.03 305  AML    AML
           comp=N,233µm,1.1s
SRES                              AML    AML
           comp=E,123µm,0.7s
BOJS  Bojanci           4.43   5  AML    AML
           comp=E,411µm,0.5s
BOJS                              AML    AML
           comp=N,472µm,0.6s
BOJS                              AML    AML
           comp=N,472µm,0.6s
BOJS                              AML    AML
           comp=E,411µm,0.5s
OBKA  Obir              5.42 359  Pn     Pn      08 07 55.0  -0.3
           comp=E,8.0nm,0.4s,SNR=6.3
OBKA                             i Sn    Sn      08 08 55.4  -2.2
           comp=E,19nm,0.7s
SOKA  Soboth            5.59   2 i Pn    Pn      08 07 57.1  -0.6
           comp=E,0.5nm,0.2s
SOKA                             i Sn    Sn      08 09 00.5  -1.3
           comp=E,0.2nm,0.1s
ABTA  Abfaltersbach     5.88 345 i Pn    Pn      08 08 02.6  +1.0
           comp=E,0.9nm,0.2s
ABTA                             eSn     Sn      08 09 08.3  -0.7
           comp=E,0.1nm,0.1s
KBA   Koelnbreinsper    6.07 351 i Pn    Pn      08 08 04.3   0.0
           comp=E,2.5nm,0.4s
KBA                              eSn     Sn      08 09 13.7  -0.1
           comp=E,9.9nm,0.6s
ARSA  Arzberg           6.18   5 i Pn    Pn      08 08 04.8  -1.0
           comp=E,1.1nm,0.4s
ARSA                             i Sn    Sn      08 09 13.1  -3.3
           comp=E,4.6nm,0.5s
WTTA  Wattenberg        6.56 341 i Pn    Pn      08 08 13.4  +2.2
           comp=E,0.1nm,0.1s
WTTA                             i Sn    Sn      08 09 27.5  +1.6
           comp=E,12nm,0.5s
FETA  Feichten          6.60 335 ePn     Pn      08 08 13.2  +1.6
           comp=E,0.3nm,0.2s
FETA                             eSn     Sn      08 09 25.2  -1.5
           comp=E,1.1nm,0.3s
SQTA  Sankt Quirin      6.64 339 i Pn    Pn      08 08 12.2  +0.1
           comp=E,2.1nm,0.4s
SQTA                             eSn     Sn      08 09 28.1  +0.5
           comp=E,11nm,0.5s
BIOA  Bad Ischl, Aus    6.65 354 i Pn    Pn      08 08 12.5  +0.4
           comp=E,3.7nm,0.3s
BIOA                             i Sn    Sn      08 09 27.4  -0.4
           comp=E,5.9nm,0.5s
DAVOX Davos/Dischmat    6.69 330  Pn     Pn      08 08 14.4  +1.6
           comp=E,0.6nm,0.3s,baz=153,slow=18,SNR=7.8
DAVOX                             Sn     Sn      08 09 30.7  +1.7
           comp=E,0.4nm,0.3s,baz=316,slow=23,SNR=3.5
           comp=E,5.1nm,0.8s
RONA  Rosalia, Austr    6.70   9 ePn     Pn      08 08 14.6  +1.7
           comp=E,1.5nm,0.3s
RONA                             eSn     Sn      08 09 26.7  -2.4
           comp=E,1.7nm,0.4s
MOA   Molln             6.77 357  Pn     Pn      08 08 13.8   0.0
           comp=E,0.1nm,0.1s,SNR=14
MOA                              eSn     Sn      08 09 29.4  -1.3
           comp=E,12nm,0.5s
KEST  Kesra             6.83 220  Pn     Pn      08 08 16.9  +2.2
           comp=E,0.5nm,0.3s,baz=30,slow=1.4,SNR=4.4
           comp=E,4.1nm,0.6s
CONA  Conrad Observa    6.88   6 i Pn    Pn      08 08 14.3  -1.1
           comp=E,1.8nm,0.3s
CONA                             eSn     Sn      08 09 31.5  -2.1
           comp=E,1.0nm,0.2s
GERES GERESS Array B    7.79 355  Pn     Pn      08 08 27.5  -0.4
           comp=E,0.2nm,0.3s,baz=166,slow=13,SNR=29
GERES                             Sn     Sn      08 09 53.0  -3.0
           comp=E,0.2nm,0.3s,baz=168,slow=23,SNR=22
           comp=E,2.9nm,0.4s
FINES FINESS Array B   21.52  15  P      P       08 11 22.1  -1.1
           comp=E,1.9nm,0.7s,baz=190,slow=6.9,SNR=6.0
           comp=E,1.9nm,0.7s
MKAR  Makanchi Array   47.62  59  P      P       08 15 12.7  +2.3
           comp=E,0.2nm,0.6s,baz=286,slow=6.2,SNR=2.2
           comp=E,0.2nm,0.6s
```

ROM 16 08:07:45.0±0.1**, 41.°065N**±0.°006×**14.°750E**±0.°006**, h10**km**, ML2.4**/16**, 1D, Error ellipse: s-maj=0.7km s-min=0.3km az=24.0, Southern Italy**

```
Code  Station Name       Δ°  AZ°   Phase ID              Time     Res
                                  Op     ISC          h  m  s    ISC
BENI  Universita’ De    0.07  14  P      Pg      08 07 47.7  +0.5
BENI                              S      Sg      08 07 49.9  +1.1
PAOL  Paolisi           0.14 256  P      Pg      08 07 48.6  +0.3
PAOL                              S      Sg      08 07 52.5  +1.9
PAOL                              AML    AML
           comp=E,2025µm,0.2s
PAOL                              AML    AML
           comp=N,2910µm,1.0s
PAOL                              AML    AML
           comp=E,2110µm,0.2s
PAOL                              AML    AML
           comp=E,2110µm,1.8s
PAOL                              AML    AML
           comp=E,2025µm,1.8s
PAOL                              AML    AML
           comp=N,3000µm,0.5s
VITU  Vitulano (BN)     0.15 323 ⇓P      Pg      08 07 48.3  -0.1
VITU                              S      Sg      08 07 51.2  +0.4
VITU                              AML    AML
           comp=N,6110µm,1.0s
VITU                              AML    AML
           comp=N,6100µm,1.0s
VITU                              AML    AML
           comp=E,2205µm,0.3s
VITU                              AML    AML
           comp=N,6100µm,1.0s
VITU                              AML    AML
           comp=N,6110µm,1.0s
VITU                              AML    AML
           comp=E,3970µm,0.2s
VITU                              AML    AML
           comp=E,3969µm,0.2s
MRB1  Monte Rocchett    0.18  70  P      Pb      08 07 49.7  -0.7
LGS3  Luogosano         0.20 113  P      Pg      08 07 49.5  +0.3
LGS3                              S      Sg      08 07 53.5  +1.5
NL9   Nola              0.21 227  P      Pg      08 07 49.8  +0.4
MTMR  Montemarano       0.24 127  P      Pg      08 07 50.3  +0.3
MTMR                              S      Sg      08 07 54.5  +1.2
MTMR                              AML    AML
           comp=N,773µm,0.2s
MTMR                              AML    AML
           comp=E,669µm,0.1s
MTMR                              AML    AML
           comp=E,594µm,0.2s
BIOG  Biogem            0.32  65  P      Pb      08 07 53.2  +0.4
SACR  S. Croce Del S    0.33 354  P      Pg      08 07 52.1  +0.4
VBKN  Vesuvio Bunker    0.34 226  P      Pb      08 07 52.7  -0.5
VVDG  Vesuvio Valle     0.34 227  P      Pb      08 07 52.5  -0.6
PTRJ  Pietraroja        0.34 331  P      Pg      08 07 51.6  -0.2
PTRJ                              S      Sb      08 07 58.2  -0.6
PTRJ                              AML    AML
           comp=N,648µm,0.3s
PTRJ                              AML    AML
           comp=N,630µm,0.4s
VCRE  Vesuvio Crater    0.34 225  P      Pg      08 07 52.6  +0.7
NSC3  Nusco             0.36 128  P      Pg      08 07 52.4  +0.3
NSC3                              S      Sb      08 07 58.5  -0.7
VTIR  Vesuvio Tirone    0.36 224  P      Pb      08 07 52.9  -0.6
LIO3  Lioni             0.37 117  P      Pg      08 07 52.5  +0.2
LIO3                              S      Sb      08 07 58.3  -1.1
CAFE  Carife            0.37  96  P      Pg      08 07 53.0  +0.6
MCRV  Calabrutti - M    0.42 132  P      Pg      08 07 53.4   0.0
MCRV                              S      Sg      08 07 59.8  +0.8
MCRV                              AML    AML
           comp=E,569µm,0.8s
MCRV                              AML    AML
           comp=N,764µm,0.2s
PIGN  Pignataro Magg    0.45 288  P      Pg      08 07 54.0  +0.2
SGTA  Sant Agata di     0.47  81  P      Pb      08 07 55.6  +0.2
BSSO  Busso             0.49 346  P      Pg      08 07 54.7   0.0
VAGA  Valle Agricola    0.52 312  P      Pg      08 07 55.3  +0.1
VAGA                              S      Sb      08 08 03.4  -0.5
VAGA                              AML    AML
           comp=N,530µm,0.3s
MODR  Mondragone        0.66 277  P      Pb      08 07 58.4  -0.3
MSAG  Monte S. Angel    1.09  53  P      Pn      08 08 06.7  +0.4
```

ROM ***16*** *08:08:13.6±0.1, 41.°060N±0.°004×14.°743E±0.°005, h10km, ML3.2/140, Error ellipse: s-maj=0.4km s-min=0.3km az=17.0*

IDC ***16*** *08:08:14.8±5.2, 41.°28N×13.°92E, h0km, mb3.6/2, mbtmp3.7/3, ML3.4/1, MS3.5/1, Error ellipse: s-maj=108.2km s-min=27.3km az=68.0*

ISC 16 08:08:13.5±0.8**, 41.°08N**±0.°02×**14.°74E**±0.°02**, h15**km±5km**, n69, σ0.ˢ73**/89**, 11C-8D, Southern Italy**

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Code  Station Name       Δ°  AZ°   Phase ID              Time     Res
                                  Op     ISC          h  m  s    ISC
BENI  Universita’ De    0.05  27 ⇑P      Pg      08 08 16.2  -0.2
BENI                              S      Sg      08 08 18.4  +0.1
VITU  Vitulano (BN)     0.13 320 ⇓P      Pg      08 08 16.9  -0.3
VITU                              S      Sb      08 08 19.6  -0.9
VITU                              AML    AML
           comp=E,52550µm,0.4s
VITU                              AML    AML
           comp=N,55800µm,0.4s
VITU                              AML    AML
           comp=N,57950µm,0.4s
VITU                              AML    AML
           comp=E,20600µm,0.3s
PAOL  Paolisi           0.14 248 ⇑P      Pg      08 08 17.2  -0.2
PAOL                              S      Sg      08 08 20.4  +0.5
PAOL                              AML    AML
           comp=E,25600µm,0.4s
PAOL                              AML    AML
           comp=N,38850µm,1.1s
PAOL                              AML    AML
           comp=N,41050µm,1.1s
PAOL                              AML    AML
           comp=N,41050µm,0.9s
PAOL                              AML    AML
           comp=E,25600µm,0.4s
PAOL                              AML    AML
           comp=E,26900µm,0.4s
PAOL                              AML    AML
           comp=N,38850µm,0.9s
AVL   Avellino          0.17 168  P      Pg      08 08 17.7   0.0
AVL                               S      Sg      08 08 20.4  -0.1
MRB1  Monte Rocchett    0.18  76 ⇑P      Pb      08 08 18.3  -0.2
MRB1                              S      Sg      08 08 21.1  +0.2
MRB1                              AML    AML
           comp=E,30750µm,0.4s
MRB1                              AML    AML
           comp=E,31700µm,0.4s
MRB1                              AML    AML
           comp=N,31650µm,1.3s
MRB1                              AML    AML
           comp=N,32350µm,1.3s
LGS3  Luogosano         0.21 117 ⇑P      Pg      08 08 18.5  +0.1
LGS3                              S      Sg      08 08 21.9  +0.2
NL9   Nola              0.22 222 ⇑P      Pg      08 08 18.3  -0.2
MTMR  Montemarano       0.26 130 ⇓P      Pg      08 08 18.8  -0.4
MTMR                              S      Sg      08 08 23.1  +0.1
MTMR                              AML    AML
           comp=N,8085µm,0.4s
MTMR                              AML    AML
           comp=E,7795µm,0.4s
MTMR                              AML    AML
           comp=E,8400µm,0.4s
MTMR                              AML    AML
           comp=E,7790µm,0.4s
MTMR                              AML    AML
           comp=N,7815µm,0.4s
MTMR                              AML    AML
           comp=E,8405µm,0.4s
MTMR                              AML    AML
           comp=E,8405µm,1.6s
MTMR                              AML    AML
           comp=N,8080µm,0.4s
MTMR                              AML    AML
           comp=E,7795µm,1.6s
SACR  S. Croce Del S    0.31 355 ⇓P      Pb      08 08 20.6  -0.3
SACR                              S      Sb      08 08 26.0  +0.2
SACR                              AML    AML
           comp=E,4870µm,0.9s
SACR                              AML    AML
           comp=N,4395µm,0.7s
SACR                              AML    AML
           comp=N,4335µm,0.7s
SACR                              AML    AML
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```
        comp=N,4335µm,1.3s
SACR                                   AML    AML
        comp=E,4800µm,1.0s
BIOG    Biogem           0.32  69 ⇑P   Pb     08 08 21.6 +0.7
PTRJ    Pietraroja       0.32 330 ⇓P   Pg     08 08 20.0 -0.3
PTRJ                               S   Sb     08 08 26.4 +0.4
PTRJ                               AML AML
        comp=E,7355µm,0.4s
PTRJ                               AML AML
        comp=E,7355µm,0.4s
PTRJ                               AML AML
        comp=N,6090µm,0.4s
PTRJ                               AML AML
        comp=N,6090µm,1.6s
PTRJ                               AML AML
        comp=E,7355µm,1.6s
VVDG    Vesuvio Valle    0.34 224 ⇑P   Pg     08 08 20.8 +0.1
VVDG                               S   Sg     08 08 26.5 +0.9
VBKN    Vesuvio Bunker   0.35 223 ⇑P   Pg     08 08 20.8 +0.1
VBKN                               S   Sg     08 08 26.7 +1.1
VBKN                               AML AML
        comp=E,23800µm,0.9s
VBKN                               AML AML
        comp=N,23950µm,0.5s
VCRE    Vesuvio Crater   0.35 222  P   Pg     08 08 21.1 +0.2
VCRE                               S   Sg     08 08 26.7 +0.9
VCRE                               AML AML
        comp=E,28500µm,0.6s
VCRE                               AML AML
        comp=N,26000µm,0.7s
VCRE                               AML AML
        comp=N,26000µm,1.3s
VTIR    Vesuvio Tirone   0.37 221  P   Pg     08 08 21.0  0.0
VTIR                               S   Sg     08 08 27.3 +1.1
VTIR                               AML AML
        comp=E,7080µm,0.8s
VTIR                               AML AML
        comp=N,5960µm,1.1s
VTIR                               AML AML
        comp=E,7080µm,1.2s
SSB3    San Sossio Bar   0.37  91  P   Pb     08 08 21.4 -0.4
SSB3                               S   Sb     08 08 27.1 -0.3
NSC3    Nusco            0.37 129 ⇓P   Pg     08 08 20.7 -0.5
NSC3                               S   Sg     08 08 26.5 +0.1
CAFE    Carife           0.38  98 ⇑P   Pg     08 08 21.4 +0.1
CAFE                               S   Sb     08 08 27.6 -0.1
CAFE                               AML AML
        comp=E,4405µm,0.4s
CAFE                               AML AML
        comp=N,2730µm,1.3s
CAFE                               AML AML
        comp=E,4550µm,0.4s
CAFE                               AML AML
        comp=N,2655µm,0.7s
CAFE                               AML AML
        comp=E,4405µm,1.6s
CAFE                               AML AML
        comp=E,4550µm,1.6s
CAFE                               AML AML
        comp=N,2730µm,0.7s
LIO3    Lioni            0.38 119 ⇑P   Pg     08 08 21.1 -0.2
LIO3                               S   Sg     08 08 27.1 +0.5
MOCO    Biccari - m.te   0.42  48 ⇑P   Pb     08 08 23.2 +0.4
MOCO                               AML AML
        comp=E,4355µm,0.5s
MOCO                               AML AML
        comp=N,1580µm,0.6s
PIGN    Pignataro Magg   0.44 285 ⇓P   Pg     08 08 22.1 -0.3
PIGN                               S   Sb     08 08 29.1 -0.3
PIGN                               AML AML
        comp=E,5220µm,0.7s
PIGN                               AML AML
        comp=N,4740µm,0.6s
PIGN                               AML AML
        comp=E,5220µm,0.7s
PIGN                               AML AML
        comp=N,5100µm,0.5s
PIGN                               AML AML
        comp=E,5120µm,0.7s
PIGN                               AML AML
        comp=N,4740µm,0.6s
MCRV    Calabrutti - M   0.44 133 ⇓P   Pg     08 08 21.7 -0.7
MCRV                               S   Sg     08 08 28.1 -0.3
MCRV                               AML AML
        comp=E,6185µm,0.4s
MCRV                               AML AML
        comp=N,7865µm,0.4s
MCRV                               AML AML
        comp=N,7865µm,1.6s
GATE    Gambatesa        0.45  17  P   Pb     08 08 23.4 +0.3
AND3    Andretta         0.47 109  P   Pb     08 08 23.4 -0.2
AND3                               S   Sb     08 08 30.7 +0.3
BSSO    Busso            0.47 347 ⇓P   Pb     08 08 23.3 -0.4
BSSO                               AML AML
BSSO                               AML AML
BSSO                               AML AML
        comp=E,1380µm,0.4s
BSSO                               AML AML
BSSO                               AML AML
        comp=N,968µm,0.9s
BSSO                               AML AML
        comp=N,968µm,1.1s
BSSO                               AML AML
BSSO                               AML AML
BSSO                               AML AML
        comp=E,1380µm,1.6s
SGTA    Sant Agata di    0.47  84  P   Pb     08 08 23.4 -0.2
SGTA                               AML AML
        comp=E,1765µm,1.4s
SGTA                               AML AML
        comp=E,1750µm,1.4s
SGTA                               AML AML
        comp=N,1860µm,0.4s
SGTA                               AML AML
        comp=N,1850µm,0.4s
SNR3    Senerchia        0.49 135  P   Pg     08 08 22.7 -0.5
VAGA    Valle Agricola   0.51 311  P   Pg     08 08 23.4 -0.1
VAGA                               S   Sb     08 08 31.3  0.0
VAGA                               AML AML
        comp=E,4050µm,0.5s
VAGA                               AML AML
        comp=N,6640µm,0.4s
VAGA                               AML AML
        comp=E,4160µm,0.5s
VAGA                               AML AML
        comp=N,6455µm,0.4s
CLT3    Calitri          0.53 110  P   Pb     08 08 24.6  0.0
CIGN    Sant’Elia a Pi   0.58  12  P   Pn     08 08 26.3 -1.0
CIGN                               AML AML
        comp=E,1170µm,1.0s
CIGN                               AML AML
        comp=N,1310µm,0.6s
COL3    Colliano         0.60 131  P   Pg     08 08 24.4 -0.9
PST3    Postiglione      0.65 144  P   Pg     08 08 25.1 -1.2
MODR    Mondragone       0.66 276  P   Pb     08 08 26.9 +0.3
MODR                               AML AML
        comp=E,2110µm,0.6s
MODR                               AML AML
        comp=E,2110µm,1.4s
MODR                               AML AML
        comp=N,2200µm,0.5s
MRLC    Muro Lucano      0.66 120  P   Pg     08 08 26.0 -0.4
MRLC                               AML AML
        comp=N,3965µm,0.4s
MRLC                               AML AML
        comp=E,4015µm,0.3s
MRLC                               AML AML
        comp=N,1655µm,0.4s
MRLC                               AML AML
        comp=E,2130µm,0.4s
MIDA    Miranda          0.67 327  P   Pg     08 08 26.3 -0.3
MIDA                               AML AML
        comp=N,2015µm,0.8s
MIDA                               AML AML
        comp=N,2415µm,0.6s
MIDA                               AML AML
        comp=E,2475µm,0.7s
MIDA                               AML AML
        comp=E,2095µm,0.6s
MELA    Melanico ??? S   0.69  25  P   Pb     08 08 27.2  0.0
MELA                               AML AML
        comp=E,4170µm,0.3s
MELA                               AML AML
        comp=N,3280µm,0.6s
MELA                               AML AML
        comp=N,3295µm,0.6s
MELA                               AML AML
        comp=N,3295µm,1.4s
MELA                               AML AML
        comp=N,3280µm,1.4s
MELA                               AML AML
        comp=E,4400µm,0.3s
IOCA    Ischia Osserva   0.72 242  P   Pb     08 08 27.6 -0.1
IOCA                               AML AML
        comp=N,4680µm,0.8s
IOCA                               AML AML
        comp=E,6335µm,0.5s
CDRU    Civita di Ruta   0.73 144  P   Pb     08 08 26.2 -1.8
CDRU                               AML AML
        comp=N,3610µm,0.6s
CDRU                               AML AML
        comp=E,2930µm,0.7s
CERA    Filignano        0.75 314  P   Pb     08 08 27.8 -0.5
CERA                               AML AML
        comp=E,1635µm,0.4s
CERA                               AML AML
        comp=E,1670µm,0.4s
CERA                               AML AML
        comp=N,2035µm,0.7s
CERA                               AML AML
        comp=N,1985µm,1.0s
CERA                               AML AML
        comp=E,1670µm,1.6s
CERA                               AML AML
        comp=E,1635µm,1.6s
RNI2    Rionero Sannit   0.76 325  P   Pb     08 08 27.8 -0.7
RNI2                               AML AML
        comp=E,2735µm,0.6s
RNI2                               AML AML
        comp=N,2260µm,0.5s
RNI2                               AML AML
        comp=N,2300µm,0.5s
RNI2                               AML AML
        comp=E,2815µm,0.5s
IFOR    Ischia Forio P   0.77 241  P   Pb     08 08 28.5  0.0
IFOR                               AML AML
        comp=E,8425µm,0.5s
IFOR                               AML AML
        comp=N,13450µm,0.5s
MCI     Monte Cassino    0.80 300  P   Pn     08 08 30.5 +0.2
MCI                                AML AML
        comp=E,2070µm,0.4s
MCI                                AML AML
        comp=N,1640µm,0.3s
MCI                                AML AML
        comp=N,1640µm,1.7s
CAPA    Cerignola FG     0.82  84  P   Pn     08 08 30.4  0.0
CAPA                               AML AML
        comp=N,976µm,0.8s
CAPA                               AML AML
        comp=E,1040µm,1.2s
CMPR    Campora          0.88 151  P   Pb     08 08 28.7 -1.8
CMPR                               AML AML
        comp=E,1745µm,0.5s
CMPR                               AML AML
        comp=N,1205µm,0.4s
PALZ    Palazzo San Ge   0.93  98  P   Pn     08 08 32.3 +0.2
PALZ                               AML AML
        comp=E,2415µm,0.6s
PALZ                               AML AML
        comp=N,7935µm,0.6s
PALZ                               AML AML
        comp=E,2415µm,1.4s
ACER    Acerenza         0.96 108  P   Pg     08 08 32.1  0.0
ACER                               AML AML
        comp=E,3665µm,0.6s
ACER                               AML AML
        comp=N,3155µm,0.7s
ACER                               AML AML
        comp=E,3810µm,0.6s
ACER                               AML AML
        comp=N,3345µm,0.7s
ACER                               AML AML
        comp=N,3345µm,1.3s
ACER                               AML AML
        comp=E,3810µm,1.4s
ACER                               AML AML
        comp=E,3665µm,1.4s
ACER                               AML AML
        comp=N,3155µm,1.3s
SLCN    Sala Consilina   0.97 135  P   Pg     08 08 33.3 +1.0
SLCN                               AML AML
        comp=E,3770µm,0.5s
SLCN                               AML AML
        comp=N,2705µm,0.7s
SLCN                               AML AML
        comp=N,2865µm,0.7s
SLCN                               AML AML
        comp=E,3960µm,0.5s
POFI    Posta Fibreno    1.00 310  P   Pg     08 08 32.9  0.0
POFI                               AML AML
        comp=N,400µm,0.6s
POFI                               AML AML
        comp=E,674µm,0.5s
POFI                               AML AML
        comp=E,536µm,0.5s
POFI                               AML AML
        comp=N,488µm,0.6s
SGRT    San Giovanni R   1.01  48  P   Pg     08 08 33.8 +0.7
SGRT                               AML AML
        comp=N,2240µm,1.0s
SGRT                               AML AML
        comp=E,3935µm,1.2s
LRP     Arpino           1.03 303  P   Pg     08 08 33.4 -0.1
LRP                                AML AML
        comp=N,236µm,1.6s
LRP                                AML AML
        comp=E,666µm,1.1s
LRP                                AML AML
        comp=N,236µm,0.4s
LPEL    Lama dei Pelig   1.05 337  P   Pg     08 08 34.2 +0.4
LPEL                               AML AML
        comp=E,752µm,0.4s
LPEL                               AML AML
        comp=N,521µm,1.2s
LPEL                               AML AML
        comp=N,521µm,0.8s
MSAG    Monte S. Angel   1.08  54  P   Pg     08 08 34.5 +0.1
MSAG                               AML AML
        comp=E,1980µm,1.1s
MSAG                               AML AML
        comp=E,818µm,1.1s
MSAG                               AML AML
        comp=N,1730µm,0.4s
MSAG                               AML AML
        comp=N,4155µm,0.4s
MRVN    Minervino Murg   1.10  91  P   Pn     08 08 34.4  0.0
MRVN                               AML AML
        comp=E,763µm,0.4s
MRVN                               AML AML
        comp=N,945µm,0.6s
MRVN                               AML AML
        comp=E,763µm,1.6s
BULG    Bulgheria - Ca   1.12 154  P   Pn     08 08 34.6  0.0
BULG                               AML AML
        comp=N,1470µm,0.4s
BULG                               AML AML
        comp=N,1510µm,0.4s
BULG                               AML AML
        comp=E,827µm,0.5s
BULG                               AML AML
        comp=E,812µm,0.5s
BULG                               AML AML
        comp=N,1510µm,1.6s
BULG                               AML AML
        comp=N,1470µm,1.6s
INTR    Introdacqua      1.12 326  P   Pg     08 08 35.2 +0.1
INTR                               AML AML
        comp=E,1280µm,0.7s
INTR                               AML AML
        comp=N,1630µm,0.7s
VVLD    Villa Vallelon   1.15 313  P   Pg     08 08 35.5 -0.2
VVLD                               AML AML
        comp=E,479µm,1.3s
VVLD                               AML AML
        comp=N,574µm,0.7s
VVLD                               AML AML
        comp=E,534µm,1.3s
VVLD                               AML AML
        comp=N,619µm,0.7s
VVLD                               AML AML
        comp=E,534µm,0.7s
VVLD                               AML AML
        comp=E,479µm,0.7s
VVLD                               AML AML
        comp=N,574µm,1.3s
VVLD                               AML AML
        comp=N,619µm,1.3s
SIRI    Monte Sirino -   1.24 136  P   Pb     08 08 36.7 -0.1
SIRI                               AML AML
        comp=E,806µm,0.4s
SIRI                               AML AML
        comp=N,767µm,0.5s
SIRI                               AML AML
        comp=N,760µm,0.5s
SIRI                               AML AML
        comp=E,824µm,0.4s
SCHR    S. Chirico Rap   1.35 131  P   Pg     08 08 39.3 -0.2
SCHR                               AML AML
        comp=N,382µm,0.6s
SCHR                               AML AML
        comp=E,572µm,0.5s
T0110   Collepietro      1.35 328  P   Pg     08 08 39.0 -0.5
T0110                              AML AML
        comp=E,964µm,0.6s
T0110                              AML AML
        comp=N,823µm,1.3s
T0110                              AML AML
        comp=N,823µm,0.7s
FAGN    Fagnano          1.46 324  P   Pg     08 08 41.0 -0.7
FAGN                               AML AML
        comp=N,740µm,0.6s
FAGN                               AML AML
        comp=E,1073µm,0.5s
LTRZ    Laterza          1.65 106  P   Pb     08 08 42.8 -0.8
LTRZ                               AML AML
        comp=E,438µm,0.4s
LTRZ                               AML AML
        comp=N,526µm,0.4s
SALB    San Lorenzo Be   1.72 134  P   Pb     08 08 44.6 -0.2
SALB                               AML AML
        comp=E,364µm,0.7s
SALB                               AML AML
        comp=N,300µm,0.5s
CET2    Cetraro          1.81 149  P   Pn     08 08 44.7 +0.5
CET2                               AML AML
        comp=N,684µm,0.6s
CET2                               AML AML
        comp=E,601µm,0.9s
MF5     Montefalcone A   2.13 334  P   Pb     08 08 51.4 -0.4
EL6     Elcito           2.55 332  P   Pb     08 08 56.5 -2.5
GERES   GERESS Array B   7.79 355  Pn  Pn     08 10 06.9 +0.5
        comp=E,0.3nm,0.3s,baz=183,slow=14,SNR=14
GERES                              Sn  Sn     08 11 31.8 -2.6
        comp=E,0.1nm,0.3s,baz=164,slow=24,SNR=5.5
        comp=E,3.5nm,0.3s
MDT     Midelt          17.50 248  LR  LR     08 19 19.0
        comp=E,167nm,18.7s,baz=269,slow=39
FINES   FINESS Array B  21.52  15  P   P      08 13 04.7 +3.0
        comp=E,6.1nm,1.0s,baz=195,slow=8.6,SNR=4.8
        comp=E,6.1nm,1.0s
MKAR    Makanchi Array  47.62  59  P   P      08 16 55.6 +6.8
        comp=E,0.2nm,0.7s,baz=293,slow=7.7,SNR=2.3
        comp=E,0.2nm,0.7s
```

SJA ***16*** *08:13:36.2±0.6, 23°.71S×66°.75W, $h227^{km}\pm5^{km}$, ML3.8, MW3.7*

IDC ***16*** *08:13:38.0±2.5, 23°.67S×66°.60W, $h197^{km}\pm24^{km}$, mb3.4/1, mbtmp3.5/5, Error ellipse: s-maj=33.3km s-min=21.3km az=68.0*

GUC ***16*** *08:13:38.7±0.7, 23°.73S×66°.84W, $h206^{km}\pm5^{km}$, ML4.1*

NEIC ***16*** *08:13:38.2±1.3, 23°.75S±0°.08×67°.0W±0°.2, $h235^{km}\pm13^{km}$, mb4.0/4, ML4.1(GUC), Error ellipse: s-maj=23.9km s-min=11.8km az=99.0*

ISC 16 08:13:37.4±0.7**, 23°.73S**±0°.04×**66°.83W**±0°.04**, h221**$^{km}\pm7^{km}$**, n81,**σ**1**§**.10**/105**, 14C-2D, Jujuy Province**

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Code    Station Name      Δ°   AZ°     Phase ID         Time      Res
                                      Op      ISC      h  m  s    ISC
SALTA                     0.67  138⇓iP     Pn       08 14 07.7 -0.6
SALTA                               eS     S        08 14 30.2 -2.2
SALTA                     0.67  138 eP     Pn       08 13 52.0  -16
SALTA                               eP     Pn       08 14 02.9 -5.4
SALTA                               eP     Pn       08 14 07.7 -0.6
SALTA                                IAML           08 14 08.0
        comp=Z,487nm,0.6s
HJA     Humahuaca         1.41   69 eP     Pn       08 14 11.9 -0.8
AF01    San Pedro de A    1.46  302        Pn       08 14 14.0 +0.9
AF01                                 Sn    S        08 14 42.0 +1.2
AF01    San Pedro de A    1.46  302⇑iP     Pn       08 14 14.0 +0.9
AF01    San Pedro de A    1.46  302 eP     Pn       08 14 14.1 +0.9
AF01                                eS     S        08 14 44.7 +4.0
SLA     San Lorenzo       1.56  130⇓iP     Pn       08 14 13.8  0.0
SLA     San Lorenzo       1.56  130 eP     Pn       08 14 08.4 -5.4
YJA     Yavi              1.96   38 eP     Pn       08 14 17.7 -0.1
YJA                                 eS     S        08 14 47.0 -2.0
YJA     Yavi              1.96   38 eP     Pn       08 14 17.9 +0.2
YJA                                 eS     S        08 14 48.0 -1.0
FSA     Cafayete          2.50  162 eP     Pn       08 14 22.7 -0.2
PB06    IPOC Station P    2.72  291        Pn       08 14 25.9 +0.6
PB06    IPOC Station P    2.72  291⇑iP     Pn       08 14 25.9 +0.6
PB06                                eS     S        08 15 01.0 -1.4
PB06                                 IAML           08 15 04.8
        comp=N,360nm,0.3s
PB06    IPOC Station P    2.72  291 eP     Pn       08 14 25.9 +0.6
PB06                                eS     S        08 15 02.0 -0.5
PB06                                 IAML           08 15 04.6
        comp=Z,315nm,0.3s
GO02    Mina Guanaco      2.89  240        Pn       08 14 27.9 +0.6
GO02    Mina Guanaco      2.89  240⇑iP     Pn       08 14 27.9 +0.6
GO02                                eS     S        08 15 05.4 -0.8
GO02                                 IAML           08 15 08.3
        comp=N,509nm,0.3s
GO02    Mina Guanaco      2.89  240 eP     Pn       08 14 27.9 +0.6
GO02                                eS     S        08 15 08.8 +2.6
GO02                                 IAML           08 15 10.4
        comp=Z,226nm,0.3s
PB09    IPOC Station P    2.94  310        Pn       08 14 28.7 +0.9
PB09    IPOC Station P    2.94  310⇑iP     Pn       08 14 28.6 +0.8
PB09                                eS     S        08 15 06.7 -0.2
PB09                                 IAML           08 15 12.2
        comp=N,158nm,0.2s
PB09    IPOC Station P    2.94  310 eP     Pn       08 14 28.6 +0.9
PB09                                eS     S        08 15 07.2 +0.3
PB09                                 IAML           08 15 13.0
        comp=Z,133nm,0.4s
PB03    IPOC Station P    3.17  301        Pn       08 14 30.8 +0.4
PB03    IPOC Station P    3.17  301⇑iP     Pn       08 14 30.8 +0.4
PB03    IPOC Station P    3.17  301 eP     Pn       08 14 30.7 +0.4
PB03                                eS     S        08 15 10.0 -1.7
PB03                                 IAML           08 15 12.5
        comp=Z,318nm,0.2s
PB05    IPOC Station P    3.22  285        Pn       08 14 31.0 +0.1
PB05    IPOC Station P    3.22  285⇑iP     Pn       08 14 31.1 +0.1
PB05    IPOC Station P    3.22  285 eP     Pn       08 14 31.2 +0.3
PB05                                eS     S        08 15 12.9 +0.3
PB05                                 IAML           08 15 13.8
        comp=Z,71nm,0.4s
AHML    Horco Molle       3.33  156 eP     Pn       08 14 20.2  -12
PB14    IPOC Station P    3.38  254        Pn       08 14 32.5 -0.5
PB14    IPOC Station P    3.38  254⇑eP     Pn       08 14 33.2 +0.2
PB14    IPOC Station P    3.38  254 eP     Pn       08 14 32.5 -0.5
PB14                                eS     S        08 15 15.0 -1.3
PB14                                 IAML           08 15 16.8
        comp=Z,68nm,0.1s
PB10    IPOC Station P    3.42  273        Pn       08 14 33.5 +0.4
PB10    IPOC Station P    3.42  273⇑eP     Pn       08 14 33.7 +0.6
PB10    IPOC Station P    3.42  273 eP     Pn       08 14 33.7 +0.6
PB10                                eS     S        08 15 16.7 +0.1
PB10                                 IAML           08 15 18.4
        comp=Z,54nm,0.4s
PB07    IPOC Station P    3.45  305        Pn       08 14 33.9 +0.2
PB07    IPOC Station P    3.45  305⇑iP     Pn       08 14 33.9 +0.2
PB07    IPOC Station P    3.45  305 eP     Pn       08 14 33.8 +0.1
PB07                                eS     S        08 15 16.7 -0.9
PB07                                 IAML           08 15 19.4
        comp=Z,229nm,0.3s
PB01    IPOC Station P    3.63  317        Pn       08 14 35.8  0.0
PB01    IPOC Station P    3.63  317⇑eP     Pn       08 14 35.6 -0.1
PB01    IPOC Station P    3.63  317 eP     Pn       08 14 35.9 +0.2
PB01                                eS     S        08 15 19.9 -1.4
PB01                                 IAML           08 15 22.7
        comp=Z,220nm,0.2s
PB02    IPOC Station P    3.71  310        Pn       08 14 36.6 -0.1
PB02    IPOC Station P    3.71  310⇑eP     Pn       08 14 36.5 -0.1
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PB02	IPOC Station P	3.71	310	eP	Pn	08 14 36.7	0.0
PB02				eS	S	08 15 21.0	-2.1
PB02				IAML		08 15 26.3	
	comp=Z,329nm,0.2s						
AC02	Maricunga	3.73	213		Pn	08 14 37.9	+0.7
AC02	Maricunga	3.73	213	eP	Pn	08 14 38.0	+0.8
AC02				eS	S	08 15 22.4	-1.8
PB08	IPOC Station P	4.17	328		Pn	08 14 43.6	+1.1
PB08	IPOC Station P	4.17	328	⇑eP	Pn	08 14 43.3	+0.8
PB08	IPOC Station P	4.17	328	eP	Pn	08 14 43.6	+1.1
PB08				eS	S	08 15 33.1	-0.5
PB08				IAML		08 15 36.1	
	comp=Z,73nm,1.1s						
AC01	Pan de Azucar	4.18	234		Pn	08 14 41.6	-0.6
AC01	Pan de Azucar	4.18	234	⇑eP	Pn	08 14 41.7	-0.6
AC01	Pan de Azucar	4.18	234	eP	Pn	08 14 41.7	-0.6
AC01				eS	S	08 15 30.8	-2.4
AC01				IAML		08 15 32.8	
	comp=Z,36nm,0.1s						
PATCX	Punta Patache	4.22	313		Pn	08 14 42.2	-0.7
PATCX	Punta Patache	4.22	313	⇑eP	Pn	08 14 42.2	-0.7
PATCX	Punta Patache	4.22	313	eP	Pn	08 14 42.4	-0.5
PATCX				eS	S	08 15 32.6	-1.7
PATCX				IAML		08 15 37.2	
	comp=Z,52nm,0.3s						
TINO	Tinogasta	4.37	189	eP	Pn	08 14 46.0	+1.4
TA01	Diego Aracena	4.42	315		Pn	08 14 45.0	-0.2
GO01	Chusmiza	4.60	331	eP	Pn	08 14 48.2	+0.3
GO01	Chusmiza	4.60	331	eP	Pn	08 14 48.5	+0.6
GO01				eS	S	08 15 42.1	-1.2
GO01				IAML		08 15 45.0	
	comp=Z,78nm,0.2s						
PB11	IPOC Station P	4.74	326		Pn	08 14 48.6	-0.8
PB11	IPOC Station P	4.74	326	eP	Pn	08 14 48.6	-0.8
PB11	IPOC Station P	4.74	326	eP	Pn	08 14 48.6	-0.8
PB11				eS	S	08 15 43.0	-3.0
PB11				IAML		08 15 44.5	
	comp=Z,88nm,0.2s						
AC06	Mina Casimiro	4.82	221		Pn	08 14 49.3	-0.8
GO03	Copiapo	4.92	218	Pn	Pn	08 14 50.6	-0.8
GO03	Copiapo	4.92	218	eP	Pn	08 14 51.2	-0.3
GO03				eS	S	08 15 47.4	-2.6
GO03				IAML		08 15 48.9	
	comp=Z,50nm,0.2s						
AC04	Llanos de Chal	5.87	220	Pn	Pn	08 15 02.1	-1.2
PB16	IPOC Station P	5.92	335		Pn	08 15 04.9	+0.3
AC05	El Transito	5.95	211	Pn	Pn	08 15 04.3	-0.3
PB12	IPOC Station P	6.04	327		Pn	08 15 04.6	-1.2
LCO	Las Campanas	6.30	213	Pn	Pn	08 15 08.0	-1.1
LPAZ	La Paz	7.50	350	P	Pn	08 15 26.1	+1.1
	comp=Z,1.0nm,0.3s,baz=168,slow=5.1,SNR=12						
LPAZ				S	S	08 16 49.2	-1.4
	comp=Z,0.5nm,0.5s,baz=281,slow=18,SNR=1.3						
LPAZ	La Paz	7.50	350		Pn	08 15 25.9	+1.0
CO03	El Pedregal	7.87	205	Pn	Pn	08 15 27.8	-1.3
CO02	Combarbal	8.32	206	Pn	Pn	08 15 34.6	-0.2
CPUP	Villa Florida	9.00	109	P	Pn	08 15 41.5	-2.1
	comp=Z,0.5nm,1.0s,baz=290,slow=17,SNR=3.1						
PLCA	Paso Flores	17.24	190	P	Pn	08 17 26.8	+1.3
	comp=Z,0.3nm,0.4s,baz=1.0,slow=10,SNR=6.6						
PLCA	Paso Flores	17.24	190	P	P	08 17 22.3	-1.3
VAO	Valinhos	18.26	92	P	P	08 17 35.5	+0.7
BDFB	Brasilia	19.44	69	P	P	08 17 48.2	+0.5
	comp=Z,2.2nm,0.4s,baz=235,slow=10,SNR=4.8						
BDFB	Brasilia	19.44	69	P	P	08 17 48.5	+0.8
BDFB				IAmb	IAmb	08 17 56.5	
	comp=Z,12nm,1.5s						
SNAA	Sanae	59.56	161	P	P	08 23 17.9	+0.5
SNAA				IAmb	IAmb	08 23 36.6	
	comp=Z,2.7nm,1.2s						
TORD	Torodi Ar. Bea	76.33	69	P	P	08 25 04.0	+1.5
	comp=Z,0.5nm,0.5s,baz=260,slow=5.2,SNR=3.1						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	146.22	39	PKPbc	PKiKP	08 32 54.0	-0.6
	comp=Z,0.5nm,0.6s,baz=317,slow=3.7,SNR=4.6						

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*JMA **16** 08:18:38.3±0.2, 43°.1N±0°.6×145°.8E±0°.8, h52^{km}±1^{km}, MV2.7/32, OFF NEMURO PENINSULA*

*SKHL **16** 08:18:40.6±0.1, 43°.20N×145°.70E, h38^{km}±5^{km}, mb4.2/2*

ISC 16 08:18:39.8±1.8**, 43°.14N**±0°.08×**145°.71E**±0°.07**, h42**^{km}±10^{km}**, n12, σ0^{s}.62**/23**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.23	5	i P	Pn	08 18 47.3	-0.2
NEM2				S	Sn	08 18 53.5	+0.7
NMR	Nemuro--Hokkai	0.23	3	eP	Pn	08 18 47.3	-0.2
NMR				eS	Sn	08 18 52.4	-0.5
JKHN	Kushirohamanak	0.41	263	eP	Pn	08 18 49.6	+0.2
AKK	Akkeshi	0.65	260	eP	Pn	08 18 51.9	-0.6
AKK				eS	Sn	08 19 01.8	+0.1
JAK	Akkeshi	0.76	260	P	Pn	08 18 53.4	-0.6
JAK				S	Sn	08 19 04.6	+0.3
JNSB	Nemuroshibetsu	0.82	321	P	Pn	08 18 54.5	-0.4
JNSB				S	Sn	08 19 06.9	+1.1
JNK	Nakash	0.85	302	i P	Pn	08 18 54.8	-0.6
JNK				S	Sn	08 19 06.6	0.0
YUK	Yuzh-Kuril'sk	0.91	7	eP	Pn	08 18 55.6	-0.4
YUK				AMB	AMB	08 18 56.0	
	110nm,0.3s						
YUK				eS	Sn	08 19 06.8	-1.1
YUK				A	A	08 19 08.1	
	160nm,0.2s						
YUK				A	A	08 19 08.1	
	210nm,0.2s						
JRA	Rausu	0.91	332	eP	Pn	08 18 55.9	-0.2
JRA				S	Sn	08 19 08.8	+0.8
JOB	Onbets	1.40	261	eP	Pn	08 19 02.3	-0.5
JOB				eS	Sn	08 19 20.2	+0.3
JAR	Ashorobuto	1.43	277	i P	Pn	08 19 03.3	+0.1
JAR				eS	Sn	08 19 21.5	+0.7
KUR	Kuril'sk	2.61	36	eP	Pn	08 19 20.3	+0.9
KUR				AMB	AMB	08 19 22.2	
	90nm,0.7s						
KUR				eS	Sn	08 19 49.3	-0.5
KUR				A	A	08 19 55.5	
	50nm,0.4s						
KUR				A	A	08 19 55.5	
	40nm,0.4s						

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*NAO **16** 08:24:53.6, 35°.05N×23°.24E, h10^{km}, MB4.4*

*IDC **16** 08:25:23.1±0.8, 38°.11N×20°.50E, h0^{km}, mb4.2/18, mbtmp4.1/26, ML3.7/8, MS3.5/13, Error ellipse: s-maj=16.5km s-min=13.5km az=154.0*

*MOS **16** 08:25:24.7±1.5, 38°.14N×20°.32E, h21^{km}, mb4.6/20, Error ellipse: s-maj=6.7km s-min=3.2km az=72.5*

*PDG **16** 08:25:24.8±0.4, 38°.11N×20°.34E, h19^{km}±1^{km}, ML4.0/11, Error ellipse: s-maj=0.6km s-min=0.6km az=0.0*

*BEO **16** 08:25:25.8±0.5, 38°.03N×20°.29E, h18^{km}±4^{km}, ML3.6/13*

*THE **16** 08:25:26.6, 38°N±1°×2°0E±°, h17^{km}, M3.9/27, MLh3.9/27*

*ATH **16** 08:25:26.9, 38°.11N×20°.47E, h14^{km}±1^{km}, ML3.9/38, Manual Solution by E.Daskalaki First location: 2019/12/16 08:26:21, This location: 2019/12/16 08:42:43 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 3 km*

*NEIC **16** 08:25:27.2±1.5, 38°.05N±0°.06×20°.36E±0°.06, h26^{km}±6^{km}, mb4.7/15, Error ellipse: s-maj=8.7km s-min=6.7km az=177.0*

*MCSM **16** 08:25:30.4±1.6, 38°N±15°×2°0E±°, h15^{km}±3^{km}, mb4.6, MLv4.3*

ISC 16 08:25:26.0±0.5**, 38°.07N**±0°.02×**20°.32E**±0°.02**, h20**^{km}±1^{km}**, n413, σ1^{s}.75**/489**, mb4.4**/41**, MS3.5**/11**, 32C-21D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.16	37	P	Pg	08 25 30.1	-0.4
LXR1				S	Sg	08 25 33.2	-0.5
DMLN	Damoulianata-K	0.17	16	P	Pg	08 25 30.6	-0.2
DMLN				S	Sg	08 25 34.1	+0.2
DMLN	Damoulianata-K	0.17	16	P	Pg	08 25 30.4	-0.3
DMLN				S	Sg	08 25 33.6	-0.3
ARG2	Argostoli	0.17	52	P	Pb	08 25 29.8	-0.2
ARG2				S	Sb	08 25 32.6	+0.1
ARG2	Argostoli	0.17	52	P	Pb	08 25 29.7	-0.2
ARG2				S	Sb	08 25 32.3	-0.2
KFL1	Kefalonia,Entr	0.17	57	P	Pb	08 25 29.8	-0.1
KFL1				S	Sb	08 25 32.6	+0.2
VLS	Valsamata	0.24	64	P	Pb	08 25 30.5	-1.1
VLS				S	Sb	08 25 33.8	-1.4
VLS	Valsamata	0.24	64	P	Pb	08 25 30.4	-1.1
VLS				S	Sb	08 25 33.8	-1.4
VLS	Valsamata	0.24	64	P	Pb	08 25 30.5	-1.1
VLS				S	Sb	08 25 33.7	-1.6
SMHA	Samh	0.32	56	P	Pg	08 25 30.1	-2.8
SMHA				S	Sg	08 25 34.5	-3.1
RTZL	Ratzakli, Kefa	0.36	89	P	Pg	08 25 32.4	-1.3
RTZL				S	Sg	08 25 37.4	-1.5
RTZL	Ratzakli, Kefa	0.36	89	P	Pg	08 25 32.3	-1.3
RTZL				S	Sg	08 25 36.3	-2.6
ORTH	Orthonies,Zaky	0.38	126	P	Pg	08 25 33.7	-0.3
ORTH				S	Sg	08 25 39.4	+0.1
ORTH	Orthonies,Zaky	0.38	126	P	Pg	08 25 33.6	-0.3
ORTH				S	Sg	08 25 37.8	-1.5
VSK1	VASILIKIADES	0.39	30	P	Pg	08 25 33.3	-0.9
FSK	Fiskardo	0.43	27	P	Pg	08 25 34.1	-0.9
FSK				S	Sg	08 25 40.4	-0.6
FSK	Fiskardo	0.43	27	P	Pg	08 25 33.9	-1.1
FSK				S	Sg	08 25 39.4	-1.6
KYPS	Kipseli, Zakin	0.48	122	P	Pg	08 25 34.8	-0.9
LTHK	Lithakia	0.55	131	P	Pg	08 25 35.8	-1.3
LTHK				S	Sn	08 25 48.1	+0.8
LTHK	Lithakia	0.55	131	P	Pg	08 25 35.7	-1.3
EVGI	Lefkada island	0.61	26	P	Pb	08 25 37.0	-1.0
EVGI				S	Sb	08 25 46.1	0.0
EVGI	Lefkada island	0.61	26	P	Pb	08 25 36.9	-1.1
DRAG	Dragano-Lefkad	0.64	18	P	Pb	08 25 37.8	-0.8
DRAG				S	Sg	08 25 48.0	+0.6
DRAG	Dragano-Lefkad	0.64	18	P	Pb	08 25 37.5	-1.0
CLEM	Kyllini,Ilia,G	0.67	106	P	Pb	08 25 37.8	-1.2
NYDR	Nydri-Lefkada	0.71	25	P	Pb	08 25 38.7	-0.9
NYDR	Nydri-Lefkada	0.71	25	P	Pb	08 25 38.5	-1.1
LKD2	Lefkada island	0.76	21	P	Pb	08 25 39.8	-0.9
LKD2				S	Sn	08 25 56.1	+3.4
LKD2	Lefkada island	0.76	21	P	Pb	08 25 39.8	-0.9
AST1	Astakos	0.77	52	P	Pb	08 25 39.5	-1.2
AST1				S	Sn	08 25 55.9	+3.2
AXS	Araxos	0.85	81	P	Pb	08 25 40.5	-1.5
AXS	Araxos	0.85	81	P	Pb	08 25 40.3	-1.7
RLS	Riolos of Patr	0.91	91	P	Pb	08 25 41.6	-1.5
RLS				S	Sn	08 25 58.4	+2.2
RLS	Riolos of Patr	0.91	91	P	Pb	08 25 41.5	-1.6
MSL1	Messolongi	0.92	71	P	Pb	08 25 42.8	-0.5
PVO	Paravola	1.10	60	P	Pb	08 25 45.5	-0.8
PVO				S	Sg	08 26 06.8	+5.1
PVO	Paravola	1.10	60	P	Pb	08 25 45.3	-1.0
AMPL	Ampelaki	1.10	39	P	Pb	08 25 45.1	-1.3
AMPL				S	Sg	08 26 05.4	+3.5
DRO	Drossia	1.11	96	P	Pb	08 25 45.4	-1.1
DRO				S	Sg	08 26 05.8	+3.7
DRO	Drossia	1.11	96	P	Pb	08 25 45.1	-1.4
AGRP	Agrapidokambos	1.16	73	P	Pn	08 25 45.5	-1.5
UPR	University Cam	1.18	79	P	Pn	08 25 46.9	-0.5
ART2	Arta	1.20	26	P	Pb	08 25 48.1	0.0
PRGA	Parga	1.21	3	P	Pg	08 25 49.6	+0.1
AMT	Artemida-Makis	1.23	116	P	Pb	08 25 49.2	+0.7
MALA	Malamata, Dori	1.27	75	P	Pn	08 25 48.0	-0.6
EFP	Efpalio	1.30	74	P	Pn	08 25 48.3	-0.8
EFP				S	Sg	08 26 11.3	+3.1
EFP	Efpalio	1.30	74	P	Pn	08 25 48.1	-0.9
ZIRI	Ziria, Aigiali	1.31	79	P	Pn	08 25 48.6	-0.6
MG00	Magoula, Dorid	1.33	75	P	Pn	08 25 48.9	-0.6
ANX	Ano Chora	1.37	67	P	Pn	08 25 49.5	-0.5
ANX				S	Sg	08 26 21.4	+11
ANX	Ano Chora	1.37	67	P	Pn	08 25 49.8	-0.3
LFKM	Lefkimmi	1.39	352	P	Pg	08 25 52.1	-0.7
AGEO	AgiosGiorgios,	1.39	82	P	Pn	08 25 49.8	-0.5
SERG	Sergoula	1.41	76	P	Pn	08 25 50.0	-0.6
SERG	Sergoula	1.41	76	P	Pn	08 25 50.1	-0.6
TRIZ	Trizonia	1.42	78	P	Pn	08 25 50.1	-0.5
EVR	Evrytania	1.44	54	P	Pb	08 25 52.9	+0.6
EVR	Evrytania	1.44	54	P	Pn	08 25 51.4	+0.3
KLV	Kalavryta, Ach	1.45	91	P	Pn	08 25 50.9	-0.3
KLV	Kalavryta, Ach	1.45	91	P	Pn	08 25 50.6	-0.5
IGT	Igoumenitsa	1.46	1	P	Pn	08 25 51.9	+0.7
IGT	Igoumenitsa	1.46	1	ePg	Pn	08 25 51.9	+0.7
IGT				eSg	Sg	08 26 14.7	+1.5
IGT	Igoumenitsa	1.46	1	P	Pn	08 25 51.0	-0.2
IGT	Igoumenitsa	1.46	1	P	Pn	08 25 51.9	+0.7
KALE	Kalithea	1.47	77	P	Pn	08 25 51.2	-0.3
KALE	Kalithea	1.47	77	P	Pn	08 25 50.9	-0.6
TETR	Tetrakomo, Epi	1.48	30	P	Pn	08 25 52.2	+0.6
TETR	Tetrakomo, Epi	1.48	30	P	Pn	08 25 52.1	+0.6
ITM	Ithomi	1.56	124	P	Pn	08 25 53.5	+0.8
ITM	Ithomi	1.56	124		Pn	08 25 53.3	+0.7
ITM	Ithomi	1.56	124	P	Pn	08 25 53.4	+0.7
GUR	Goura	1.61	94	P	Pn	08 25 53.7	+0.3
GUR	Goura	1.61	94	P	Pn	08 25 53.6	+0.3
JAN	Janina	1.64	15	P	Pn	08 25 54.0	+0.3
JAN	Janina	1.64	15	P	Pb	08 25 54.9	-0.6
PYL	PYLOS	1.64	136	P	Pn	08 25 53.9	+0.3
PYL	PYLOS	1.64	136	P	Pn	08 25 53.8	+0.2
KEK	Kerkira	1.69	346		Pg	08 26 00.2	+1.8
MAKR	Makrakomi, Fth	1.71	56	P	Pb	08 25 56.6	-0.1
MAKR	Makrakomi, Fth	1.71	56	P	Pb	08 25 56.3	-0.4
AGG	Agios Georgios	1.84	58	P	Pb	08 25 58.0	-1.0
AGG	Agios Georgios	1.84	58	P	Pb	08 25 58.2	-0.8
AXAR	Agios Charalam	1.97	69	P	Pn	08 25 58.2	0.0
THL	Klokotos Trika	2.00	41	P	Pn	08 25 59.6	+1.0
KPRO	Kipourio	2.05	23	P	Pn	08 26 00.5	+1.1
LTK	Loutraki	2.10	91	P	Pn	08 26 00.3	+0.3
LKR	Lokris	2.19	74	P	Pn	08 26 02.0	+0.8
PENT	Pentalofos	2.21	17	P	Pb	08 26 03.8	-1.6
ATAL	Atalanti	2.21	73	P	Pn	08 26 02.3	+0.7
VIL2	Platees	2.33	86	P	Pn	08 26 03.3	0.0
NEST	Nestorio	2.41	13	P	Pn	08 26 06.4	+2.0
MET2	Kameni Chora,	2.43	100	P	Pn	08 26 05.4	+0.8
MET5	Makryloggos,Me	2.45	100	P	Pn	08 26 05.5	+0.6
MET1	Methana Town,	2.48	101	P	Pn	08 26 06.3	+1.0
VLI	Veliai	2.49	122	P	Pn	08 26 07.4	+2.0
KZN	Kozani	2.50	26	P	Pn	08 26 07.0	+1.4
KZN	Kozani	2.50	26	P	Pn	08 26 07.5	+1.8
KBN	Korca	2.57	8	P	Pb	08 26 09.2	-2.3
NEO	Neokhori	2.59	61	P	Pn	08 26 07.5	+0.7
LIT	Litokhoron	2.64	39		Pn	08 26 08.4	+0.9
LIT	Litokhoron	2.64	39	P	Pn	08 26 08.4	+0.9
ATH	Athens Observa	2.69	91	P	Pn	08 26 07.8	-0.3
VLY	Voula,Athens	2.76	94	P	Pn	08 26 08.6	-0.5
DION	Dionisos Attik	2.86	89	P	Pn	08 26 10.7	+0.2
AOS2	Alonissos-2	2.96	68	P	Pn	08 26 12.5	+0.5
TIP	Timpagrande	3.00	293		Pn	08 26 13.6	+1.1
TIP	Timpagrande	3.00	293	⇑P	Pn	08 26 11.6	-0.8
TIP	Timpagrande	3.00	293	P	Pn	08 26 14.2	+1.8
TIP	Timpagrande	3.00	293	P	Pn	08 26 13.9	+1.5
KYMI	Kymi, Euboea I	3.03	78	P	Pn	08 26 13.2	+0.4
OHR	Ohrid	3.06	7	i Pn	Pn	08 26 15.7	+2.4
MESG	Mesagne	3.16	324	P	Pn	08 26 15.3	+0.7
ANKY	Antikythira Is	3.25	132	P	Pn	08 26 17.4	+1.6
THE	Thessaloniki	3.28	38	P	Pn	08 26 17.6	+1.4
GRG	Griva	3.30	29	P	Pn	08 26 17.4	+0.8
HORT	Hortiatis	3.32	40	P	Pn	08 26 17.5	+0.6
PLG	Polygyros	3.34	46	P	Pn	08 26 17.0	-0.2
PLG	Polygyros	3.34	46	P	Pn	08 26 17.5	+0.3
SKY	Skiros Island	3.42	75	P	Pn	08 26 18.7	+0.5
PHP	Peshkopia	3.61	2	P	Pn	08 26 22.3	+1.5
OUR	Ouranopolis	3.63	50	P	Pn	08 26 21.0	-0.1
OUR	Ouranopolis	3.63	50	P	Pn	08 26 21.6	+0.5
VAY	Valandovo	3.68	28	i Pn	Pn	08 26 22.8	+1.1
LTRZ	Laterza	3.71	314	P	Pn	08 26 22.7	+0.6
MATE	Matera	3.80	314	⇓P	Pn	08 26 22.7	-0.7
SRS	Serrai	3.96	39	ePn	Pn	08 26 26.2	+0.6
SRS	Serrai	3.96	39	P	Pn	08 26 26.0	+0.4
SRS	Serrai	3.96	39	P	Pn	08 26 26.2	+0.6
ULC	Ulcinj	3.97	348	⇑i Pn	Pn	08 26 25.5	-0.3
SKO	Skopje	3.99	12	i Pn	Pn	08 26 27.0	+1.0
CUC	Castrocucco	3.99	300		Pn	08 26 28.7	+2.5
CUC	Castrocucco	3.99	300	P	Pn	08 26 29.4	+3.2
DRME	Dracevica, Mon	4.20	348	ePn	Pn	08 26 29.3	+0.4
DRME				eSn	Sn	08 27 17.9	+0.5
DRME	Dracevica, Mon	4.20	348	⇓i Pn	Pn	08 26 29.3	+0.4
DRME				eSn	Sn	08 27 16.7	-0.7
LIA	Limnos Island	4.21	63	P	Pn	08 26 29.7	+0.7
APE	Apeiranthos	4.26	102	⇑P	Pn	08 26 27.9	-1.9
APE	Apeiranthos	4.26	102	⇓eP	Pn	08 26 32.1	+2.3
ACER	Acerenza	4.34	310		Pn	08 26 31.9	+1.0
KKB	Krupnik	4.34	29	i P	Pn	08 26 32.0	+1.1
KKB	Krupnik	4.34	29	P	Pn	08 26 31.1	+0.2
KKB				S	Sn	08 27 23.0	+2.1
BUM	Brajici-Budva	4.36	346	⇓i Pn	Pn	08 26 31.1	-0.1
BUM				eSn	Sn	08 27 20.6	-0.9
MMB	Musomishta	4.36	36	i P	Pn	08 26 32.7	+1.5
MMB	Musomishta	4.36	36	P	Pn	08 26 34.8	+3.6
PDG	Podgorica	4.43	350		Pn	08 26 32.3	+0.3
PDG	Podgorica	4.43	350	⇑P	Pn	08 26 30.4	-1.6
PDG	Podgorica	4.43	350	ePn	Pn	08 26 32.5	+0.5
PDG				eSn	Sn	08 27 21.6	-1.4
PDG	Podgorica	4.43	350	⇑i Pn	Pn	08 26 32.1	+0.1
PDG				eSn	Sn	08 27 22.3	-0.7
PVY	Plav	4.52	357	ePn	Pn	08 26 32.9	-0.6
PVY				eSn	Sn	08 27 25.6	0.0
PVY	Plav	4.52	357	ePn	Pn	08 26 33.5	0.0
PVY				eSn	Sn	08 27 24.9	-0.7
HCY	Herceg Novi	4.58	343	⇓i Pn	Pn	08 26 34.1	-0.1
HCY				eSn	Sn	08 27 26.0	-0.9
CEME	Cevo	4.59	347	⇑i Pn	Pn	08 26 34.2	-0.2
CEME				eSn	Sn	08 27 26.1	-1.1
IDI	Anoyia	4.61	126	Pn	Pn	08 26 36.7	+2.1
	2.4nm,0.3s,baz=315,slow=21,SNR=11						
IDI				Sn	Sn	08 27 26.5	-1.1
	6.9nm,0.3s,baz=292,slow=22,SNR=9.1						
IDI	Anoyia	4.61	126	Pn	Pn	08 26 33.4	-1.2
VAE	Valguarnera	4.71	265	Pn	Pb	08 26 42.4	-5.6
	4.7nm,0.3s,baz=185,slow=14,SNR=4.0						
VAE				Sn	Sn	08 27 28.5	-1.7
	11nm,0.3s,baz=63,slow=6.8,SNR=2.9						
BOSS	Bosilegrad	4.72	20	ePn	Pn	08 26 36.9	+0.8
RAFF	Raffo Rosso	4.80	262		Pn	08 26 37.6	+0.4
NKME	Niksic	4.80	348	⇑i Pn	Pn	08 26 37.5	+0.3
NKME				eSn	Sn	08 27 31.3	-1.0
BEY	Berane	4.80	356	ePn	Pn	08 26 38.3	+1.0
IVA	Berane	4.80	356	ePn	Pn	08 26 38.1	+0.8
IVA				eSn	Sn	08 27 31.3	-1.1
KOME	Kolasin	4.81	353	ePn	Pn	08 26 38.2	+0.8
KOME	Kolasin	4.81	353	ePn	Pn	08 26 37.6	+0.2
KOME				eSn	Sn	08 27 31.9	-0.7
BARS	Barje	4.87	13	ePn	Pn	08 26 38.3	+0.1
BARS				eSn	Sn	08 27 33.1	-0.9
TREB	Trebinje	4.88	343	ePn	Pn	08 26 37.4	-0.8
RZN	Rozhen	4.96	42	i P	Pn	08 26 40.8	+1.2
RZN	Rozhen	4.96	42	P	Pn	08 26 41.2	+1.6
EZN	Ezine	5.00	68	P	Pn	08 26 39.7	-0.2
BRY	Bratogost	5.01	345	⇓i Pn	Pn	08 26 39.4	-0.8
BRY				i Sn	Sn	08 27 36.1	-1.5
VTS	Vitosha	5.06	25	i P	Pn	08 26 41.9	+1.0
VTS	Vitosha	5.06	25	ePn	Pn	08 26 41.1	+0.2
VTS				eSn	Sn	08 27 37.5	-1.3
VTS	Vitosha	5.06	25	P	Pn	08 26 40.9	0.0
VTS				S	Sn	08 27 37.7	-1.1
RDO	Rodhopi	5.07	51		Pn	08 26 41.4	+0.5
SGRT	San Giovanni R	5.08	318		Pn	08 26 42.4	+1.2
WDD	Wied Dalam	5.15	246		Pn	08 26 43.2	+1.3
SELS	Selova	5.18	7	ePn	Pn	08 26 42.0	-0.4
SELS				eSn	Sn	08 27 40.4	-1.1
SJES	Sjenica	5.19	357	ePn	Pn	08 26 43.5	+0.9
SJES				eSn	Sn	08 27 42.7	+0.8
STON	Ston	5.19	338	ePn	Pn	08 26 42.2	-0.3
ALN	Alexandroupoli	5.25	56		Pn	08 26 44.4	+1.0
ALN	Alexandroupoli	5.25	56	P	Pn	08 26 44.4	+1.0
BLSH	Balsha	5.29	24	i P	Pn	08 26 45.3	+1.4
PLE	Pljevlja	5.30	353	ePn	Pn	08 26 44.1	0.0
PLE				eSn	Sn	08 27 43.1	-1.5
PLE	Pljevlja	5.30	353	ePn	Pn	08 26 44.3	+0.2
PLE				eSn	Sn	08 27 43.3	-1.3
PLD	Plovdiv	5.30	38	ePn	Pn	08 26 44.4	+0.4
PAOL	Paolisi	5.33	305		Pn	08 26 46.3	+1.8
ZAPS	Zavoj	5.49	18	ePn	Pn	08 26 47.3	+0.7
IVAS	Ivanjica	5.50	359	ePn	Pn	08 26 46.0	-0.8
IVAS				eSn	Sn	08 27 48.1	-1.4
GOCS	Kraljevo Serbi	5.50	4	ePn	Pn	08 26 46.8	-0.1
GOCS				eSn	Sn	08 27 48.4	-1.2
RUDO	Rudo	5.58	353	ePn	Pn	08 26 48.1	+0.1
BOVS	Bovan	5.66	10	⇓P	Pn	08 26 47.6	-1.3
BOVS	Bovan	5.66	10	ePn	Pn	08 26 48.5	-0.4
BOVS				eSn	Sn	08 27 50.9	-2.4
GRUS	Gruza	5.82	3	ePn	Pn	08 26 50.7	-0.4
GRUS				eSn	Sn	08 27 55.5	-1.8
BLKB	Belogradchik	5.83	17	ePn	Pn	08 26 52.0	+0.7
BBLS	Lazi&#263i	5.83	354	ePn	Pn	08 26 51.3	0.0
BBLS				eSn	Sn	08 27 56.5	-1.1
MPEP	Malo Peshtene	5.88	25	i P	Pn	08 26 53.1	+1.1
ZAGS	Zajecar	5.91	14	ePn	Pn	08 26 52.4	-0.1
ZAGS				eSn	Sn	08 27 59.1	-0.5
DIVS	Divibare	6.02	358	ePn	Pn	08 26 52.7	-1.4
DIVS				eSn	Sn	08 27 59.7	-2.8
BALB	Balikesir	6.11	73		Pn	08 26 55.6	+0.5
TRUS	Trudelj	6.14	1	ePn	Pn	08 26 55.7	+0.1
TRUS				eSn	Sn	08 28 03.3	-2.0
BORS2	Bor- Borsko je	6.15	12	ePn	Pn	08 26 54.9	-0.8
PLVB	Pleven	6.23	30	⇑P	Pn	08 26 55.3	-1.6
INTR	Introdacqua	6.30	311		Pn	08 26 60.0	+2.2
KUBS	Kucevo	6.42	9	ePn	Pn	08 26 58.0	-1.4
ELND	Elena	6.44	39	⇓P	Pn	08 26 57.9	-1.8
TEKS	Tekeris	6.50	355	ePn	Pn	08 26 59.3	-1.2
AVAS	Avala Beograd	6.62	1	ePn	Pn	08 27 01.4	-0.8
MDVR	Moldovita	6.78	8	⇑P	Pn	08 27 03.3	-1.2
MDVR	Moldovita	6.78	8	ePn	Pn	08 27 04.0	-0.5
AQU	L'Aquila	6.80	311	P	Pn	08 27 05.7	+1.0
	0.3nm42nm,0.9s						
HERR	Herculane	6.98	12	⇑P	Pn	08 27 05.6	-1.6
BLY	Banja Luka	7.07	342	⇓P	Pn	08 27 06.9	-1.5
BLY	Banja Luka	7.07	342	ePn	Pn	08 27 08.5	+0.2
FRGS	Fruska Gora	7.09	357	ePn	Pn	08 27 07.6	-1.0
LOZB	Loznitsa	7.12	40	⇑P	Pn	08 27 07.0	-2.1
NRCA	Norcia	7.26	313		Pn	08 27 12.4	+1.4
GZR	Gura Zlata	7.54	13	⇑P	Pn	08 27 13.4	-1.5
GZR	Gura Zlata	7.54	13	ePn	Pn	08 27 15.0	+0.1
GZR	Gura Zlata	7.54	13	P	Pn	08 27 13.4	-1.5
BZS	Buzias	7.60	7	⇑P	Pn	08 27 14.5	-1.0
BZS	Buzias	7.60	7	ePn	Pn	08 27 14.6	-1.0
BZS	Buzias	7.60	7	P	Pn	08 27 14.5	-1.0
ARR	Arges	7.97	23	⇑P	Pn	08 27 18.3	-2.4
MTUR	Matau	7.98	25	⇑P	Pn	08 27 19.1	-1.9
MTUR	Matau	7.98	25	P	Pn	08 27 19.0	-1.9
MORH	Mrgy, Hungar	8.23	352	⇓P	Pn	08 27 23.2	-1.1
MORH	Mrgy, Hungar	8.23	352	ePn	Pn	08 27 23.0	-1.2
MORH	Mrgy, Hungar	8.23	352	P	Pn	08 27 22.7	-1.5
	0.1nm8.4nm,0.6s						
SIRR	Siria	8.25	7	ePn	Pn	08 27 24.6	+0.1
BOJS	Bojanci	8.33	335	ePn	Pn	08 27 26.0	+0.4
BOJS	Bojanci	8.33	335	i Pn	Pn	08 27 25.9	+0.3
ISR	Istrita	8.44	32	⇑P	Pn	08 27 24.8	-2.4
ISR	Istrita	8.44	32	P	Pn	08 27 24.8	-2.4
ISR	Istrita	8.44	32	P	Pn	08 27 29.1	+1.9
	38nm,1.5s						
RIY	Rijeka	8.46	331	ePn	Pn	08 27 27.9	+0.6
PTJ	Puntijarka	8.47	339	P	Pn	08 27 27.3	-0.3
GBRS	Gornja Briga	8.51	333	i Pn	Pn	08 27 28.6	+0.6
MLR	Muntele Rosu	8.52	28	Pn	Pn	08 27 28.4	+0.1
	0.5nm,0.3s,baz=220,slow=7.1,SNR=19						
MLR				LR	LR	08 31 32.4	
	comp=Z,467nm,19.0s,baz=184,slow=44						
	13nm,0.8s						
MLR	Muntele Rosu	8.52	28		Pn	08 27 29.3	+0.9
MLR	Muntele Rosu	8.52	28	⇓P	Pn	08 27 26.7	-1.6
MLR	Muntele Rosu	8.52	28	ePn	Pn	08 27 31.3	+3.0
MLR	Muntele Rosu	8.52	28	P	Pn	08 27 29.3	+0.9
MLR	Muntele Rosu	8.52	28	P	Pn	08 27 28.8	+0.5
	34nm,1.1s						
NEHR	Nehoiu	8.60	29	⇑P	Pn	08 27 27.0	-2.3
DOPR	Dopca	8.74	24	⇑P	Pn	08 27 29.6	-1.7
SKDS	Skadanscina	8.82	330	ePn	Pn	08 27 32.0	-0.4
CEY	Cerknica	8.82	332	ePn	Pn	08 27 32.7	+0.3
MARR	Marisel-Cluj	8.84	13	⇓P	Pn	08 27 32.0	-0.7
BISRR	Bisoca	8.86	31	⇑P	Pn	08 27 30.9	-2.1
BISRR	Bisoca	8.86	31	P	Pn	08 27 33.8	+0.8
	68nm,0.8s						
DRGR		8.89	11	⇓P	Pn	08 27 31.6	-1.8
DRGR		8.89	11	P	Pn	08 27 31.5	-1.8
COVR	Voineasa-Covas	8.92	28	⇑P	Pn	08 27 32.0	-1.7
BOSR	Bodos	8.93	25	⇑P	Pn	08 27 32.9	-1.0
GBAS	Gorenja Brezov	8.99	333	i Pn	Pn	08 27 35.0	+0.4
OZUR		8.99	25	⇓P	Pn	08 27 32.9	-1.8
LJU	Ljubljana	9.05	333	ePn	Pn	08 27 36.3	+0.8
LJU	Ljubljana	9.05	333	P	Pn	08 27 36.0	+0.5
LJU				pmax	pmax		
	comp=Z,192nm,1.1s						
TRI	Trieste	9.05	329		Pn	08 27 34.8	-0.8
TRI	Trieste	9.05	329	P	Pn	08 27 34.8	-0.8

PLOR	Plostina	9.09	29	⇑P	Pn	08 27 34.1	-1.9
PLOR	Plostina	9.09	29	P	Pn	08 27 34.1	-1.9
KEST	Kesra	9.09	258	Pn	Pn	08 27 38.1	+2.0
	comp=Z,0.6nm,0.3s,baz=180,slow=6.5,SNR=4.5						
KEST				Sn	Sn	08 29 18.0	0.0
	comp=Z,0.6nm,0.3s,baz=316,slow=22,SNR=7.8						
	comp=Z,3.9nm,0.6s						
TPGR	Topolog	9.10	39	⇑P	Pn	08 27 34.4	-1.9
VRI	Vrincioaia	9.13	29	⇓P	Pn	08 27 34.3	-2.4
VRI	Vrincioaia	9.13	29	P	Pn	08 27 34.2	-2.4
VRI	Vrincioaia	9.13	29	P	Pn	08 27 37.5	+0.9
	comp=Z,21nm,0.8s						
MPLH	Magyarpolny	9.32	348	P	Pn	08 27 37.9	-1.2
	comp=Z,34nm,0.6s						
SOKA	Soboth	9.44	337	Pn	Pn	08 27 39.9	-1.1
	comp=Z,1.9nm,0.2s,SNR=10.0						
SOKA				eSn	Sn	08 29 19.1	-7.4
	comp=Z,8.1nm,0.6s						
OBKA	Obir	9.45	335	Pn	Pn	08 27 41.3	+0.3
	comp=Z,8.3nm,0.4s,SNR=6.0						
OBKA				eSn	Sn	08 29 23.0	-3.7
	comp=Z,6.0nm,0.5s						
TEOL	Teolo	9.73	321	Pn	Pn	08 27 44.3	-0.5
ARSA	Arzberg	9.82	341	Pn	Pn	08 27 45.7	-0.4
	comp=Z,2.9nm,0.5s,SNR=6.9						
ARSA				eSn	Sn	08 29 29.4	-6.4
	comp=Z,3.9nm,0.6s						
ARSA	Arzberg	9.82	341	ePn	Pn	08 27 45.7	-0.4
RONA	Rosalia, Austr	10.06	344	ePn	Pn	08 27 47.8	-1.6
	comp=Z,2.0nm,0.4s						
CIMO	Cimolais	10.09	327		Pn	08 27 50.1	+0.3
BURAR	Bucovina Array	10.19	19	Pn	Pn	08 27 51.9	+0.6
BURAR	Bucovina Array	10.19	19	P	Pn	08 27 51.8	+0.6
BUR08	Bucovina Ar. S	10.21	19	Pn	Pn	08 27 52.4	+0.9
CTI	Castel Tesino	10.24	324		Pn	08 27 51.7	-0.2
CTI	Castel Tesino	10.24	324	P	Pn	08 27 51.7	-0.2
KBA	Koelnbreinsper	10.36	333	Pn	Pn	08 27 53.5	0.0
	comp=Z,2.5nm,0.4s,SNR=7.7						
KBA				eSn	Sn	08 29 41.8	-7.4
	comp=Z,1.2nm,0.3s						
KBA	Koelnbreinsper	10.36	333	P	Pn	08 27 54.5	+0.9
CONA	Conrad Observa	10.37	343	Pn	Pn	08 27 54.8	+1.1
	comp=Z,0.1nm,0.1s						
ABTA	Abfaltersbach	10.41	329	ePn	Pn	08 27 54.2	0.0
	comp=Z,3.2nm,0.3s						
ABTA				eSn	Sn	08 29 40.3	-10
	comp=Z,1.2nm,0.3s						
KECS	Kecovo	10.41	1	eP	Pn	08 27 54.0	0.0
KECS	Kecovo	10.41	1	ePN	Pn	08 27 54.0	0.0
BRTR	Keskin Array B	10.52	77	Pn	Pn	08 27 57.4	+1.6
	comp=Z,0.1nm,0.3s,baz=270,slow=7.4,SNR=3.8						
BRTR				LR	LR	08 32 50.8	
	comp=Z,261nm,18.5s,baz=258,slow=43						
	comp=Z,0.7nm,0.7s						
BRTR	Keskin Array B	10.52	77	iP	Pn	08 27 57.5	+1.8
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MODS	Modra-Piesok	10.53	349	eSN	Sn	08 29 47.2	-5.9
MOA	Molln	10.72	338	Pn	Pn	08 27 59.3	+0.8
	comp=Z,5.9nm,0.4s,SNR=6.1						
MOA				eSn	Sn	08 29 50.9	-6.9
	comp=Z,0.1nm,0.1s						
BIOA	Bad Ischl, Aus	10.78	335	Pn	Pn	08 27 58.7	-0.6
	comp=Z,0.2nm,0.2s,SNR=7.2						
BIOA				eSn	Sn	08 29 52.4	-6.9
	comp=Z,0.3nm,0.1s						
LESA	Schwarzleotal	10.90	331	Pn	Pn	08 28 00.6	-0.3
	comp=Z,8.9nm,0.4s,SNR=17						
LESA				eSn	Sn	08 29 52.4	-10
	comp=Z,0.5nm,0.3s						
WTTA	Wattenberg	11.18	328	iPn	Pn	08 28 05.2	+0.4
	comp=Z,4.7nm,0.3s,SNR=6.4						
WTTA				eSn	Sn	08 30 05.7	-3.6
	comp=Z,0.3nm,0.2s						
WTTA	Wattenberg	11.18	328	P	Pn	08 28 06.6	+1.8
WATA	Walderalm	11.26	328	ePn	Pn	08 28 06.8	+0.9
	comp=Z,0.3nm,0.1s						
WATA				eSn	Sn	08 30 05.7	-5.5
	comp=Z,1.7nm,0.2s						
FUORN	Ofenpass-Fuorn	11.32	322	Pn	Pn	08 28 08.2	+1.5
SQTA	Sankt Quirin	11.33	327	ePn	Pn	08 28 08.0	+1.3
	comp=Z,5.3nm,0.4s						
STHS	Stebnicka Huta	11.36	3	eP	Pn	08 28 04.1	-3.0
STHS	Stebnicka Huta	11.36	3	ePN	Pn	08 28 04.1	-3.0
FETA	Feichten	11.39	325	ePn	Pn	08 28 06.1	-1.5
	comp=Z,0.4nm,0.3s						
FETA				eSn	Sn	08 30 05.7	-8.7
	comp=Z,0.7nm,0.3s						
VRAC	Vranov	11.55	348	LR	LR	08 34 08.0	
	comp=Z,177nm,20.3s,baz=197,slow=46						
CKRC	Cesky Krumlov	11.59	340	eP	Pn	08 28 09.3	-1.0
CKRC				e		08 30 13.6	
CKRC	Cesky Krumlov	11.59	340	ePN	Pn	08 28 09.3	-1.0
CKRC				eSN	Sn	08 30 13.6	-5.4
DAVOX	Davos/Dischmat	11.62	322	Pn	Pn	08 28 12.6	+1.8
	comp=Z,1.1nm,0.3s,baz=312,slow=20,SNR=6.6						
DAVOX				Sn	Sn	08 30 17.7	-2.3
	comp=Z,1.1nm,0.3s,baz=294,slow=18,SNR=4.2						
	comp=Z,3.0nm,0.6s						
TUE	Stuetta	11.67	319		Pn	08 28 12.3	+0.7
TUE	Stuetta	11.67	319	P	Pn	08 28 12.1	+0.6
	comp=Z,82nm,0.9s						
GERES	GERESS Array B	11.78	338	Pn	Pn	08 28 12.3	-0.6
	comp=Z,0.1nm,0.3s,baz=158,slow=14,SNR=13						
GERES				Sn	Sn	08 30 18.4	-5.6
	comp=Z,0.1nm,0.3s,baz=149,slow=24,SNR=3.9						
	comp=Z,1.3nm,0.4s						
DAVA	Damuels	11.98	324	eSn	Sn	08 30 23.6	-5.2
	comp=Z,0.2nm,0.1s						
KHC	Kasperske Hory	12.08	338	⇓iP	Pn	08 28 17.5	+0.6
KHC	Kasperske Hory	12.08	338	ePN	Pn	08 28 15.3	-1.6
KHC				eSN	Sn	08 30 25.5	-5.5
SENIN	Lac Senin/Sane	12.70	315		Pn	08 28 26.3	+0.7
LUBAR	Lubar, Ukraine	12.99	22	P	Pn	08 28 30.2	+0.9
AK13	Malin Array Si	14.00	24	P	Pn	08 28 43.1	0.0
AK06	Malin Array Si	14.02	24	P	Pn	08 28 43.3	-0.1
AK14	Malin Array Si	14.03	24	P	Pn	08 28 43.5	0.0
AK10	Malin Array Si	14.05	24	P	Pn	08 28 43.0	-0.7
AK17	Malin Array Si	14.06	23	P	Pn	08 28 44.3	+0.4
AK09	Malin Array Si	14.07	24	P	Pn	08 28 43.8	-0.3
AK08	Malin Array Si	14.08	24	P	Pn	08 28 43.4	-0.8
AK19	Malin Array Si	14.08	23	P	Pn	08 28 43.2	-1.0
AK18	Malin Array Si	14.09	23	P	Pn	08 28 43.9	-0.5
AK04	Malin Array Si	14.13	24	P	Pn	08 28 44.9	+0.1
AKASG	Malin Array Be	14.13	24	Pn	Pn	08 28 43.2	-1.6
	comp=Z,0.4nm,0.3s,baz=216,slow=12,SNR=7.1						
AKASG				LR	LR	08 35 38.8	
	comp=Z,166nm,21.7s,baz=218,slow=44						
	comp=Z,0.6nm,0.5s						
AKASG	Malin Array Be	14.13	24	iP	Pn	08 28 43.2	-1.6
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKBB	Malin Array Si	14.13	24	Pn	Pn	08 28 45.5	+0.6
AKBB	Malin Array Si	14.13	24	P	Pn	08 28 45.5	+0.6
ANN	Anapa	14.48	57	eP	Pn	08 28 46.0	-3.7
ANN				eS	Sn	08 31 26.3	-3.3
ANN				pmax	pmax		
	comp=Z,28nm,1.0s						
SUW	Suwalki	16.06	6	Pn	Pn	08 29 10.7	+0.2
SUW	Suwalki	16.06	6	P	Pn	08 29 10.7	+0.2
MNK	Minsk	17.23	15	iP	Pn	08 29 21.5	-3.8
	comp=E,25nm,0.9s						
MNK				iP	Pn	08 29 21.5	-3.8
	comp=N,35nm,0.9s						
MNK				iP	Pn	08 29 21.5	-3.8
	comp=Z,22nm,0.8s,baz=201						
MNK				iPP	pP	08 29 31.7	-0.5
MNK				iS	Sn	08 32 30.3	-6.0
MNK				iSS	S	08 32 46.0	+0.9
MNK				iLQ	LQ	08 34 25.0	
MNK				iLR	LR	08 35 47.1	
MNK				iLRM	MLR	08 37 11.4	
	comp=Z,122nm,16.0s						
MNK				iLRM	MLR	08 37 23.9	
	comp=N,613nm,17.5s						
MNK				iLRM	MLR	08 37 29.3	
	comp=E,284nm,16.1s						
MNK	Minsk	17.23	15	iP	Pn	08 29 21.4	-3.8
MNK				iS	Sn	08 32 30.2	-6.0
MNK				pmax	pmax		
	comp=Z,22nm,0.8s						
MNK				pmax	pmax		
	comp=E,25nm,0.9s						
MNK				pmax	pmax		
	comp=N,35nm,0.9s						
MNK				MLR	MLR		
	comp=Z,122nm,16.0s						
MNK				MLR	MLR		
	comp=N,613nm,17.0s						
MNK				MLR	MLR		
	comp=E,284nm,16.0s						
NACGM	Naroch	17.40	13	eP	P	08 29 32.5	+3.9
	comp=Z,35nm,0.8s,baz=197						
SHA1	Shidzhatmaz	17.79	64	⇓eP	P	08 29 34.4	+1.1
KIV	Kislovodsk	17.85	64	eP	P	08 29 34.2	+0.4
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KBZ	Khabaz	17.96	65	P	Pn	08 29 34.1	-0.3
	comp=Z,0.1nm,0.3s,baz=287,slow=12,SNR=5.8						
	comp=Z,3.3nm,0.8s						
KBZ	Khabaz	17.96	65	⇓eP	P	08 29 35.2	+0.3
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ESDC	Sonseca Array	18.96	282	P	Pn	08 29 48.4	+1.7
	comp=Z,0.2nm,0.3s,baz=82,slow=12,SNR=6.5						
	comp=Z,1.1nm,0.7s						
VORR	Voronezh	19.00	38	eP	Pn	08 29 51.0	+3.9
VORR				pmax	pmax		
	comp=Z,97nm,0.4s						
LPSR	Galich'ya Gora	19.46	36	eP	P	08 29 50.6	-0.7
LPSR				pmax	pmax		
	comp=Z,20nm,0.7s						
VRH	Novokhopyorsk	20.01	42	eP	P	08 29 57.7	+0.4
VRH				pmax	pmax		
	comp=Z,17nm,0.9s						
OBN	Obninsk	20.29	28	⇓iP	P	08 29 59.4	-0.9
OBN				e		08 30 09.8	
OBN				pmax	pmax		
	comp=Z,11nm,0.5s						
OBN				MLR	MLR		
	comp=Z,200nm,17.0s						
VSU	Vasula	20.83	10	ceP	P	08 30 04.8	-1.3
VSU				pmax	pmax		
	comp=Z,75nm,0.7s						
MDT	Midelt	20.95	263	P	Pn	08 30 11.7	+1.4
	comp=Z,1.9nm,0.5s,baz=61,slow=5.3,SNR=4.4						
MOS	Moscow	21.16	28	eP	P	08 30 04.7	-5.0
MOS				pmax	pmax		
	comp=Z,30nm,0.7s						
MAK	Makhachkala	21.20	68	eP	P	08 30 04.7	-5.5
MAK				eS	S	08 33 56.1	-8.9
MAK				pmax	pmax		
	comp=Z,395nm,1.4s						
MAK				MLR	MLR		
	comp=Z,92nm,14.0s						
AKT	Akhty	21.31	72	eP	P	08 30 08.9	-2.7
AKT				e		08 30 29.2	
AKT				pmax	pmax		
	comp=Z,31nm,1.3s						
AKT				MLR	MLR		
	comp=Z,49nm,5.0s						
HFS	Hagfors	22.48	351	P	P	08 30 23.3	-0.5
	comp=Z,11nm,0.5s,baz=156,slow=11,SNR=63						
	comp=Z,11nm,0.5s						
NORES	NORESS Array B	23.35	349	P	P	08 30 35.2	+2.4
EKA	Eskdalemuir Ar	23.42	325	P	P	08 30 34.2	+0.6
	comp=Z,6.7nm,0.8s,baz=131,slow=7.2,SNR=8.4						
	comp=Z,6.7nm,0.8s						
NAO01	NORSAR Array S	23.55	348	P	P	08 30 34.7	-0.1
NAO01				IAmb	IAmb	08 30 36.4	
	comp=Z,34nm,1.4s						
FINES	FINESS Array B	23.67	7	P	P	08 30 35.0	-0.9
	comp=Z,7.0nm,0.5s,baz=174,slow=8.8,SNR=34						
FINES				LR	LR	08 40 52.4	
	comp=Z,181nm,18.9s,baz=232,slow=39						
	comp=Z,7.0nm,0.5s						
FINES	FINESS Array B	23.67	7	P	P	08 30 35.0	-0.9
FINES	FINESS Array B	23.67	7	iP	P	08 30 35.7	-0.2
FINES				pmax	pmax		
	comp=Z,7.0nm,0.5s						
FIA1	FINESS Array S	23.67	7	P	P	08 30 35.3	-0.7
NC405	NORSAR Array S	23.68	350	P	P	08 30 35.9	-0.2
NC405				IAmb	IAmb	08 30 47.3	
	comp=Z,40nm,1.4s						
NB201	NORSAR Array S	23.69	349	P	P	08 30 36.1	0.0
NB201				IAmb	IAmb	08 30 37.7	
	comp=Z,34nm,1.3s						
NB2	NORSAR Subarra	23.69	349	P	P	08 30 36.0	-0.2
	comp=Z,3.7nm,0.6s,baz=158,slow=9.3						
NOA	NORSAR Array B	23.69	349	P	P	08 30 35.6	-0.6
	comp=Z,4.3nm,0.9s,baz=158,slow=9.1,SNR=15						
NOA				LR	LR	08 40 26.4	
	comp=Z,35nm,19.7s,baz=255,slow=38						
	comp=Z,4.3nm,0.9s						
NBO00	NORSAR Array S	23.75	348	P	P	08 30 37.2	+0.5
NBO00				IAmb	IAmb	08 30 37.7	
	comp=Z,14nm,0.7s						
BELG	Belogornoye	23.79	44	ceP	P	08 30 36.2	-1.0
BELG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KLMR	Klimovskoe	25.80	22	eP	P	08 30 52.9	-2.5
KLMR				pmax	pmax		
	comp=Z,20nm,1.2s						
AKTO	Aktyubinsk	29.37	53	LR	LR	08 44 05.2	
	comp=Z,70nm,19.3s,baz=32,slow=38						
TORD	Torodi Ar. Bea	29.85	219	P	P	08 31 32.7	+0.6
	comp=Z,2.8nm,0.9s,baz=34,slow=12,SNR=2.2						
TORD				LR	LR	08 44 06.6	
	comp=Z,83nm,18.0s,baz=353,slow=38						
	comp=Z,2.8nm,0.9s						
ARTI	Arti	31.14	42	LR	LR	08 45 20.7	
	comp=Z,68nm,20.3s,baz=274,slow=39						
ARTI	Arti	31.14	42	P	P	08 31 41.7	-1.4
ARTI				IAmb	IAmb	08 31 42.5	
	comp=Z,22nm,1.3s						
ARTI	Arti	31.14	42	c iP	P	08 31 41.3	-1.8
ARTI						08 32 40.0	
ARTI				S	S	08 36 47.3	-0.4
ARTI				SS	SnSn	08 38 29.0	-0.6
ARTI				pmax	pmax		
	comp=Z,18nm,1.9s						
ARCES	ARCESS Array B	31.65	3	P	P	08 31 45.7	-1.8
	comp=Z,2.6nm,0.9s,baz=16,slow=6.3,SNR=7.7						
	comp=Z,2.6nm,0.9s						
MACI	Morro de la Ar	32.17	263	P	P	08 31 51.9	-0.8
KK31	Karatay Array	37.99	66	P	P	08 32 41.9	-0.6
KK31	Karatay Array	37.99	66	P	P	08 32 41.9	-0.6
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KKAR	Karatay Array	37.99	66	P	P	08 32 42.0	-0.5
KKAR	Karatay Array	37.99	66	P	P	08 32 42.0	-0.5
DBIC	Dimbokro	38.70	223	P	P	08 32 49.8	+1.1
	comp=Z,4.6nm,0.8s,baz=44,slow=9.7,SNR=5.8						
DBIC				LR	LR	08 50 44.0	
	comp=Z,86nm,18.5s,baz=35,slow=39						
	comp=Z,4.6nm,0.8s						
DBIC	Dimbokro	38.70	223	P	P	08 32 48.6	-0.1
DBIC				IAmb	IAmb	08 33 20.5	
	comp=Z,11nm,1.2s						
AAK	Ala-Archa	40.95	66	⇑eP	P	08 33 09.5	+2.1
AAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KURBB	Kurchatov Arra	42.42	53	P	P	08 33 18.0	-1.1
	comp=Z,1.3nm,0.6s,baz=281,slow=8.9,SNR=12						
	comp=Z,1.3nm,0.6s						
KURK	Kurchatov	42.47	53	iP	P	08 33 18.2	-1.3
KURK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MK31	Makanchi Array	45.49	58	ceP	P	08 33 42.5	-1.4
MKAR	Makanchi Array	45.49	58	P	P	08 33 42.7	-1.2
	comp=Z,1.6nm,0.4s,baz=274,slow=7.3,SNR=28						
	comp=Z,1.6nm,0.4s						
MKAR	Makanchi Array	45.49	58	P	P	08 33 42.5	-1.4
ZAA0	Zalesovo Array	45.88	48		P	08 33 45.7	-1.1
ZAA0				IAmb	IAmb	08 33 46.3	
	comp=Z,8.8nm,0.7s						
ZALV	Zalesovo Beam	45.88	48	P	P	08 33 45.8	-1.0
	comp=Z,9.7nm,0.5s,baz=274,slow=8.5,SNR=42						
	comp=Z,9.7nm,0.5s						
ZALV	Zalesovo Beam	45.88	48		P	08 33 45.5	-1.3
NRIK	Noril'sk	46.96	27	LR	LR	08 56 04.3	
	comp=Z,94nm,18.4s,baz=307,slow=39						
NRIK	Noril'sk	46.96	27	⇓eP	P	08 33 57.2	+2.1
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
DGZ	Jazzator, Alta	48.22	53	⇓eP	P	08 34 04.5	-0.8
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TSUM	Tsumeb	57.03	183	LR	LR	09 00 35.6	
	comp=Z,61nm,18.0s,baz=1.5,slow=37						
TLY	Talaya	57.48	47	⇑eP	P	08 35 14.0	+0.5
TLY				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TIXI	Tiksi	59.80	20	⇑eP	P	08 35 30.6	+1.3
TIXI				pmax	pmax		
	comp=Z,9.0nm,2.2s						
SONM	Songino Array	60.65	50	P	P	08 35 34.9	-0.7
	comp=Z,1.3nm,0.6s,baz=291,slow=8.7,SNR=5.9						
	comp=Z,1.3nm,0.6s						
SONM	Songino Array	60.65	50	P	P	08 35 35.0	-0.7
SONM	Songino Array	60.65	50	P	P	08 35 35.0	-0.7
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ULN	Ulaanbaatar	61.04	50	⇑eP	P	08 35 37.5	-0.8
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YAK	Yakutsk	65.28	29	eP	P	08 36 06.2	+0.2
YAK				e*PP	sP	08 36 15.1	+0.7
YAK				e		08 36 38.4	
YAK				e		08 38 25.6	
YAK				ePPP	PPP	08 40 02.0	
YAK				eS	S	08 44 47.8	-0.4
YAK				e*SS	sS	08 45 03.4	+5.4
YAK				e		08 45 58.1	
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,1.0nm,0.6s						
YAK				pmax	pmax		
	comp=Z,74nm,3.4s						
YAK				pmax	pmax		
	comp=N,77nm,4.0s						
YAK				pmax	pmax		
	comp=E,68nm,3.0s						
YAK				smax	smax		
	comp=E,179nm,7.1s						
YAK				smax	smax		
	comp=N,161nm,6.3s						
BOSA	Boshof	66.50	175	LR	LR	09 07 18.3	
	comp=N,62nm,18.4s,baz=16,slow=38						
HHC	Hu-ho-hao-te	67.23	55	eP	P	08 36 20.0	+1.0
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PZH	PanZhiHua	67.79	73	P	P	08 36 23.5	+0.7
CMAR	Chiang Mai Arr	70.06	82	P	P	08 36 34.9	-2.1
	comp=Z,1.3nm,0.3s,baz=303,slow=8.2,SNR=5.4						
	comp=Z,1.3nm,0.3s						
CMAR	Chiang Mai Arr	70.06	82	iP	P	08 36 35.0	-1.9
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BILL	Bilibino	71.15	13	⇑eP	P	08 36 43.5	+0.7
BILL				pmax	pmax		
	comp=Z,7.0nm,1.6s						
HEH	HeiHe	71.22	40	eP	P	08 36 43.5	0.0
INK	Inuvik	72.14	350	P	P	08 36 49.4	+0.8
INK				IAmb	IAmb	08 36 50.2	
	comp=Z,6.6nm,1.5s						
INK	Inuvik	72.14	350	P	P	08 36 49.4	+0.8
INK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
SEY	Seymchan	72.29	21	P	P	08 36 50.3	+0.7
	comp=Z,0.8nm,0.5s,baz=264,slow=7.4,SNR=3.8						
	comp=Z,0.8nm,0.5s						
YKA	Yellowknife Ar	73.43	340	P	P	08 36 57.6	+1.1
	comp=Z,0.4nm,0.7s,baz=27,slow=5.2,SNR=4.3						
	comp=Z,0.4nm,0.7s						
YKA	Yellowknife Ar	73.43	340	iP	P	08 36 58.9	+2.5
BMAR	Burnt Mountain	74.19	354	P	P	08 37 02.1	+1.2
ULM	Lac du Bonnet	75.69	324	P	P	08 37 10.8	+1.0
	comp=Z,2.5nm,0.6s,baz=81,slow=4.6,SNR=3.8						
	comp=Z,2.5nm,0.6s						
IMAR	Indian Mountai	76.17	358	P	P	08 37 13.3	+1.1
ILAR	Eielson Array	77.00	354	P	P	08 37 18.4	+1.4
	comp=Z,0.4nm,0.6s,baz=0.0,slow=3.7,SNR=7.2						
	comp=Z,0.4nm,0.6s						
NJ2	Nanjing	77.01	60	eP	P	08 37 16.5	-1.1
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BCAR	Beaver Creek A	78.19	352	P	P	08 37 24.6	+0.9
PPLA	Purkeypile	79.19	357	P	P	08 37 29.9	+0.6
KSRS	Korea Array	79.52	50	P	P	08 37 31.1	-0.3
	comp=Z,1.4nm,0.6s,baz=326,slow=4.9,SNR=5.8						
	comp=Z,1.4nm,0.6s						
PDAR	Pinedale Array	87.54	326	P	P	08 38 13.5	+0.7
	comp=Z,0.4nm,0.8s,baz=86,slow=7.6,SNR=3.6						
	comp=Z,0.4nm,0.8s						

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*NEIC **16** 08:38:16.7±0.8, 5°.06S±0°.08×153°.9E±0°.1, h96^{km}±8^{km}, mb4.4/17, Error ellipse: s-maj=17.2km s-min=10.3km az=68.0*

*IDC **16** 08:38:17.6±1.0, 5°.13S×153°.90E, h113^{km}±6^{km}, mb3.9/15, mbtmp4.3/17, Error ellipse: s-maj=20.9km s-min=12.2km az=88.0*

ISC 16 08:38:16.8±0.6, **5°.04S**±0°.06×**153°.84E**±0°.09, **h105**^{km}**, n42,** σ**0**^{s}**.73**/49, **mb4.4**/20, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.87	297	Pn	Pn	08 38 48.1	0.0
RABL				Sn	Sn	08 39 10.5	-1.4
PMG	Port Moresby	7.92	236	P	Pn	08 40 10.2	+0.9
	10nm,0.5s,baz=49,slow=7.2,SNR=6.2						
PMG				S	Sn	08 41 37.5	+0.2
	19nm,0.5s,baz=167,slow=13,SNR=8.8						
PMG	Port Moresby	7.92	236		Pn	08 40 08.9	-0.4
CTA	Charters Tower	16.68	206	P	Pn	08 42 03.9	-0.5
	3.6nm,0.8s,baz=16,slow=12,SNR=4.7						
EIDS	Eidsvold	20.38	187	P	P	08 42 46.5	+1.1
EIDS				IAmb	IAmb	08 42 49.6	
	comp=Z,11nm,0.8s						
DZM	Mont Dzumac	20.87	145	P	P	08 42 50.5	-0.2
	comp=Z,3.1nm,0.5s,baz=323,slow=14,SNR=8.6						
	comp=Z,3.1nm,0.5s						
DZM	Mont Dzumac	20.87	145	P	P	08 42 50.3	-0.4
DZM				IAmb	IAmb	08 43 15.7	
	comp=Z,11nm,1.0s						
MTN	Manton Dam	23.72	249	P	P	08 43 19.8	+0.3
MTN				IAmb	IAmb	08 43 44.5	
	comp=Z,8.6nm,1.1s						
WB0	Warramunga Arr	23.93	231		P	08 43 21.3	-0.1
WB0				IAmb	IAmb	08 43 22.7	
	comp=Z,4.7nm,0.8s						
WR8	Warramunga Arr	23.96	230	P	P	08 43 21.4	-0.2
WB2	Warramunga Arr	24.07	230	P	P	08 43 23.1	+0.5
WRA	Warramunga Arr	24.07	230	P	P	08 43 23.1	+0.4
	comp=Z,3.2nm,0.7s,baz=56,slow=10,SNR=21						
	comp=Z,3.2nm,0.7s						
ASAR	Alice Springs	26.68	224	P	P	08 43 46.2	-0.1
	comp=Z,2.0nm,1.0s,baz=57,slow=9.1,SNR=17						
ASAR				pP	pP	08 44 10.9	+2.7
	comp=Z,0.7nm,0.7s,baz=60,slow=12,SNR=5.4						
ASAR				ScP	ScP	08 50 38.0	-0.3
	comp=Z,0.5nm,0.8s,baz=63,slow=3.3,SNR=5.6						
	comp=Z,2.0nm,1.0s						
ASAR	Alice Springs	26.68	224	P	P	08 43 45.9	-0.4
STKA	Stephens Creek	29.06	202	P	P	08 44 06.6	-0.7
	comp=Z,4.6nm,0.7s,baz=40,slow=15,SNR=17						
	comp=Z,4.6nm,0.7s						
STKA	Stephens Creek	29.06	202	P	P	08 44 06.4	-0.9
BBOO	Buckleboo	32.23	209	P	P	08 44 34.7	-0.6
BBOO				IAmb	IAmb	08 44 36.0	
	comp=Z,9.3nm,1.1s						
FORT	Forrest	35.27	220	P	P	08 45 01.4	-0.2
JOW	Kunigami	40.20	323	P	P	08 45 43.2	0.0
	comp=Z,6.3nm,0.4s,baz=140,slow=14,SNR=7.1						
	comp=Z,6.3nm,0.4s						
JOW	Kunigami	40.20	323	P	P	08 45 43.2	0.0
TUWZ	Tuamarina	40.45	157	P	P	08 45 45.2	+0.2
MSWZ	Moikau Station	40.97	155	P	P	08 45 48.8	-0.6
MORW	Morawa	43.01	232	P	P	08 46 05.8	-0.3
MORW				IAmb	IAmb	08 46 32.8	
	comp=Z,14nm,1.2s						
JNU	Nakatsue	43.76	332	P	P	08 46 11.7	-0.4
	comp=Z,8.1nm,0.8s,baz=194,slow=5.4,SNR=4.1						
	comp=Z,8.1nm,0.8s						
JNU	Nakatsue	43.76	332	P	P	08 46 12.3	+0.2
CMAR	Chiang Mai Arr	58.92	295	P	P	08 48 06.0	+0.5
	comp=Z,1.7nm,0.3s,baz=110,slow=7.6,SNR=8.5						
CMAR				pP	pwP	08 48 35.0	-0.9
	comp=Z,1.0nm,0.3s,baz=105,slow=6.8,SNR=1.5						
	comp=Z,1.7nm,0.3s						
CMAR	Chiang Mai Arr	58.92	295	P	P	08 48 05.6	+0.1
LZDM	Lanzhou Array	62.17	315	P	P	08 48 28.8	+1.2
	comp=Z,3.2nm,0.5s,baz=132,slow=6.2,SNR=6.4						
	comp=Z,3.2nm,0.5s						

SONM	**Songino Array**	**67.08**	**327**	P	**P**	**08 48 59.5**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=142,slow=6.2,SNR=5.6						
	comp=Z,0.6nm,0.5s						
SONM	**Songino Array**	**67.08**	**327**	P	**P**	**08 48 59.7**	**+0.5**
MK31	**Makanchi Array**	**81.19**	**319**	P	**P**	**08 50 20.9**	**-0.2**
MKAR	**Makanchi Array**	**81.19**	**319**	P	**P**	**08 50 21.3**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=94,slow=7.9,SNR=6.8						
MKAR				pP	**pwP**	**08 50 51.2**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=104,slow=6.9,SNR=3.0						
	comp=Z,0.6nm,0.8s						
MKAR	**Makanchi Array**	**81.19**	**319**	P	**P**	**08 50 21.1**	**+0.1**
GLB	**Gilahina Butte**	**81.63**	**25**	P	**P**	**08 50 23.7**	**+0.6**
GLB				IAmb	IAmb	08 50 32.3	
	comp=Z,21nm,1.4s						
BOOM	**Boomskoye usch**	**84.51**	**313**	P	**P**	**08 50 39.3**	**+0.7**
BOOM				IAmb	IAmb	08 51 11.1	
	comp=Z,14nm,1.3s						
KURBB	**Kurchatov Arra**	**84.63**	**322**	P	**P**	**08 50 38.3**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=110,slow=4.1,SNR=4.1						
	comp=Z,0.4nm,0.6s						
QSPA	**South Pole Qui**	**84.92**	**180**	P	**P**	**08 50 39.1**	**-1.0**
	comp=Z,2.3nm,0.6s,baz=300,slow=0.8,SNR=13						
QSPA				pP	**pP**	**08 51 06.8**	**0.0**
	comp=Z,2.1nm,0.7s,baz=292,slow=0.5,SNR=3.6						
	comp=Z,2.3nm,0.6s						
QSPA	**South Pole Qui**	**84.92**	**180**	P	**P**	**08 50 39.9**	**-0.1**
QSPA				IAmb	IAmb	08 50 42.0	
	comp=Z,5.9nm,1.2s						
MAW	**Mawson**	**85.75**	**203**	P	**P**	**08 50 43.0**	**-0.9**
	comp=Z,4.5nm,0.6s,baz=113,slow=4.3,SNR=6.8						
	comp=Z,4.5nm,0.6s						
NRIK	**Noril'sk**	**86.53**	**341**	P	**P**	**08 50 48.5**	**+0.8**
	comp=Z,2.0nm,0.4s,baz=101,slow=3.8,SNR=6.5						
	comp=Z,2.0nm,0.4s						
BVAR	**Borovoye Array**	**90.06**	**323**	P	**P**	**08 51 03.6**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=87,slow=7.4,SNR=2.8						
	comp=Z,0.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**151.37**	**288**	PKPbc	**PKiKP**	**08 58 00.6**	**+0.7**
	comp=Z,1.4nm,0.3s,baz=47,slow=5.0,SNR=2.4						

IDC 16 08:49:14.0±5.8, 5°.31S×152°.95E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=189.5km s-min=33.0km az=110.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.23**	**230**	P	P	08 54 23.6	+0.6
	1.7nm,1.1s,baz=52,slow=9.4,SNR=5.3						
	1.7nm,1.1s						
ASAR	**Alice Springs**	**25.88**	**223**	P	P	08 54 47.2	-0.5
	0.6nm,0.8s,baz=56,slow=9.0,SNR=9.0						
	0.6nm,0.8s						
MKAR	**Makanchi Array**	**80.80**	**319**	P	P	09 01 30.6	+0.9
	0.3nm,0.5s,baz=98,slow=6.5,SNR=4.5						
	0.3nm,0.5s						
BVAR	**Borovoye Array**	**89.73**	**323**	P	P	09 02 13.2	-1.0
	0.7nm,0.5s,baz=116,slow=6.6,SNR=3.7						
	0.7nm,0.5s						

ROM 16 08:52:48.0±0.1, 41°.072N±0°.004×14°.730E±0°.005, h16km, ML2.4/14, Error ellipse: s-maj=0.4km s-min=0.1km az=19.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BENI	**Universita' De**	**0.07**	**29**	P	Pg	08 52 51.3	+0.1
BENI				S	Sg	08 52 53.5	+0.2
PAOL	**Paolisi**	**0.13**	**252**	P	Pb	08 52 52.3	+0.1
PAOL				S	Sb	08 52 55.1	+0.2
PAOL				AML	AML		
	comp=E,12550µm,1.1s						
PAOL				AML	AML		
	comp=E,13100µm,1.1s						
PAOL				AML	AML		
	comp=N,13400µm,0.9s						
PAOL				AML	AML		
	comp=N,12650µm,0.9s						
PAOL				AML	AML		
	comp=N,3527µm,0.5s						
PAOL				AML	AML		
	comp=N,2698µm,0.5s						
PAOL				AML	AML		
	comp=E,1971µm,1.0s						
PAOL				AML	AML		
	comp=N,2805µm,0.5s						
PAOL				AML	AML		
	comp=N,2310µm,0.4s						
PAOL				AML	AML		
	comp=E,1941µm,1.0s						
VITU	**Vitulano (BN)**	**0.13**	**326**	P	Pg	08 52 52.0	0.0
VITU				S	Sg	08 52 54.8	+0.2
VITU				AML	AML		
	comp=E,10330µm,0.7s						
VITU				AML	AML		
	comp=N,24800µm,0.3s						
VITU				AML	AML		
	comp=E,10335µm,0.7s						
VITU				AML	AML		
	comp=N,23300µm,0.3s						
VITU				AML	AML		
	comp=E,22900µm,0.4s						
VITU				AML	AML		
	comp=E,3337µm,0.6s						
VITU				AML	AML		
	comp=E,1515µm,0.4s						
VITU				AML	AML		
	comp=N,4375µm,0.3s						
VITU				AML	AML		
	comp=E,2451µm,1.2s						
VITU				AML	AML		
	comp=N,4477µm,0.3s						
AVL	**Avellino**	**0.15**	**164**	P	Pb	08 52 52.6	0.0
AVL				S	Sb	08 52 55.9	+0.3
MRB1	**Monte Rocchett**	**0.19**	**73**	P	Pb	08 52 53.1	-0.1
MRB1				AML	AML		
	comp=E,11055µm,0.4s						
MRB1				AML	AML		
	comp=E,11265µm,0.3s						
MRB1				AML	AML		
	comp=E,15395µm,0.8s						
MRB1				AML	AML		
	comp=N,21150µm,0.5s						
MRB1				AML	AML		
	comp=E,15690µm,0.8s						
MRB1				AML	AML		
	comp=E,15245µm,0.8s						
MRB1				AML	AML		
	comp=E,15690µm,0.8s						
MRB1				AML	AML		
	comp=N,21600µm,0.5s						
NL9	**Nola**	**0.21**	**223**	P	Pb	08 52 53.4	0.0
LGS3	**Luogosano**	**0.21**	**113**	P	Pg	08 52 53.1	0.0
LGS3				S	Sb	08 52 57.3	0.0
MTMR	**Montemarano**	**0.26**	**127**	P	Pg	08 52 53.8	0.0
MTMR				S	Sg	08 52 57.9	+0.2
MTMR				AML	AML		
	comp=E,6715µm,0.3s						
MTMR				AML	AML		
	comp=N,8375µm,1.2s						
MTMR				AML	AML		
	comp=N,8375µm,1.2s						
MTMR				AML	AML		
	comp=E,6090µm,1.3s						
MTMR				AML	AML		
	comp=N,8265µm,1.2s						
MTMR				AML	AML		
	comp=E,6715µm,0.3s						
MTMR				AML	AML		
	comp=N,8370µm,1.2s						
MTMR				AML	AML		
	comp=E,6085µm,1.3s						
MTMR				AML	AML		
	comp=N,602µm,0.4s						
MTMR				AML	AML		
	comp=E,971µm,0.4s						
MTMR				AML	AML		
	comp=N,1163µm,1.5s						
MTMR				AML	AML		
	comp=E,742µm,0.9s						
MTMR				AML	AML		
	comp=N,776µm,0.1s						
MTMR				AML	AML		
	comp=N,1497µm,0.5s						
SACR	**S. Croce Del S**	**0.33**	**357**	P	Pb	08 52 55.4	-0.2
PTRJ	**Pietraroja**	**0.33**	**333**	P	Pg	08 52 55.0	0.0
BIOG	**Biogem**	**0.33**	**67**	P	Pg	08 52 55.0	0.0
VBKN	**Vesuvio Bunker**	**0.33**	**223**	P	Pg	08 52 55.2	+0.1
VCRE	**Vesuvio Crater**	**0.34**	**222**	P	Pb	08 52 55.6	-0.2
VTIR	**Vesuvio Tirone**	**0.35**	**221**	P	Pg	08 52 55.4	0.0
VTIR				AML	AML		
	comp=E,2615µm,1.2s						
VTIR				AML	AML		
	comp=N,2255µm,1.3s						
NSC3	**Nusco**	**0.37**	**127**	P	Pg	08 52 55.8	0.0
SSB3	**San Sossio Bar**	**0.38**	**89**	P	Pb	08 52 56.2	-0.2
LIO3	**Lioni**	**0.38**	**117**	P	Pg	08 52 56.0	+0.1
CAFE	**Carife**	**0.39**	**96**	P	Pb	08 52 56.4	-0.1
PIGN	**Pignataro Magg**	**0.43**	**287**	P	Pg	08 52 57.0	+0.1
PIGN				S	Sb	08 53 03.6	0.0
PIGN				AML	AML		
	comp=E,704µm,0.5s						
PIGN				AML	AML		
	comp=N,1004µm,0.7s						
PIGN				AML	AML		
	comp=E,589µm,0.4s						
PIGN				AML	AML		
	comp=N,1110µm,0.7s						
PIGN				AML	AML		
	comp=E,702µm,0.5s						
PIGN				AML	AML		
	comp=N,799µm,0.6s						
PIGN				AML	AML		
	comp=N,876µm,0.5s						
PIGN				AML	AML		
	comp=E,142µm,0.6s						
PIGN				AML	AML		
	comp=N,141µm,0.6s						
PIGN				AML	AML		
	comp=E,172µm,1.2s						
MOCO	**Biccari - m.te**	**0.44**	**47**	P	Pb	08 52 57.4	-0.1
MCRV	**Calabrutti - M**	**0.44**	**131**	P	Pg	08 52 56.8	-0.2
MCRV				AML	AML		
	comp=E,6170µm,0.2s						
MCRV				AML	AML		
	comp=N,8480µm,0.9s						
BSSO	**Busso**	**0.48**	**348**	P	Pg	08 52 58.0	+0.2
BSSO				AML	AML		
	comp=E,198µm,0.7s						
BSSO				AML	AML		
	comp=N,138µm,1.3s						
CDRU	**Civita di Ruta**	**0.73**	**143**	AML	AML		
	comp=N,1450µm,0.8s						
CDRU				AML	AML		
	comp=E,971µm,1.1s						
CDRU				AML	AML		
	comp=N,1450µm,1.2s						
CDRU				AML	AML		
	comp=E,971µm,0.9s						
CMPR	**Campora**	**0.87**	**150**	AML	AML		
	comp=E,688µm,0.4s						
CMPR				AML	AML		
	comp=N,370µm,0.5s						
BULG	**Bulgheria - Ca**	**1.11**	**153**	AML	AML		
	comp=E,253µm,1.2s						
BULG				AML	AML		
	comp=E,244µm,0.3s						
BULG				AML	AML		
	comp=E,244µm,0.3s						
BULG				AML	AML		
	comp=N,438µm,0.7s						
BULG				AML	AML		
	comp=N,429µm,0.8s						

ROM 16 08:52:59.1±0.1, 41°.071N±0°.005×14°.706E±0°.007, h11km, ML3.0/65, Error ellipse: s-maj=0.7km s-min=0.3km az=228.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BENI	**Universita' De**	**0.08**	**40**	P	Pg	08 53 01.5	0.0
BENI				S	Sg	08 53 03.7	+0.5
PAOL	**Paolisi**	**0.11**	**249**	P	Pg	08 53 02.4	+0.4
PAOL				S	Sg	08 53 05.0	+0.9
PAOL				AML	AML		
	comp=E,12550µm,1.1s						
PAOL				AML	AML		
	comp=N,12650µm,0.9s						
PAOL				AML	AML		
	comp=E,13100µm,1.1s						
PAOL				AML	AML		
	comp=N,13400µm,0.9s						
PAOL				AML	AML		
	comp=E,13100µm,0.9s						
PAOL				AML	AML		
	comp=E,12550µm,0.9s						
VITU	**Vitulano (BN)**	**0.13**	**333**	P	Pg	08 53 02.2	0.0
VITU				S	Sg	08 53 04.9	+0.4
VITU				AML	AML		
	comp=E,10330µm,0.7s						
VITU				AML	AML		
	comp=N,23300µm,0.3s						
VITU				AML	AML		
	comp=E,22900µm,0.4s						
VITU				AML	AML		
	comp=N,24800µm,0.3s						
VITU				AML	AML		
	comp=E,10335µm,0.7s						
VITU				AML	AML		
	comp=E,22900µm,1.6s						
AVL	**Avellino**	**0.16**	**157**	P	Pb	08 53 03.6	-0.5
AVL				S	Sg	08 53 06.7	+1.4
NL9	**Nola**	**0.19**	**219**	P	Pg	08 53 03.6	+0.5
MRB1	**Monte Rocchett**	**0.21**	**75**	P	Pg	08 53 03.6	0.0
MRB1				S	Sg	08 53 07.3	+0.7
MRB1				AML	AML		
	comp=E,18200µm,0.5s						
MRB1				AML	AML		
	comp=E,18600µm,0.5s						
MRB1				AML	AML		
	comp=N,21600µm,0.5s						
MRB1				AML	AML		
	comp=N,21150µm,0.5s						
MRB1				AML	AML		
	comp=N,21600µm,1.5s						
MRB1				AML	AML		
	comp=N,21150µm,1.5s						
MRB1				AML	AML		
	comp=E,18600µm,1.5s						
MRB1				AML	AML		
	comp=E,18200µm,1.5s						
LGS3	**Luogosano**	**0.23**	**111**	P	Pg	08 53 04.5	+0.6
LGS3				S	Sg	08 53 08.0	+0.8
MTMR	**Montemarano**	**0.27**	**124**	P	Pg	08 53 04.8	+0.1
MTMR				S	Sg	08 53 09.1	+0.7
MTMR				AML	AML		
	comp=N,8375µm,1.2s						
MTMR				AML	AML		
	comp=E,6090µm,1.3s						
MTMR				AML	AML		
	comp=E,6715µm,0.3s						
MTMR				AML	AML		
	comp=N,8370µm,1.2s						
MTMR				AML	AML		
	comp=E,6085µm,1.3s						
MTMR				AML	AML		
	comp=N,8265µm,1.2s						
MTMR				AML	AML		
	comp=E,6085µm,0.7s						
MTMR				AML	AML		
	comp=E,6715µm,1.7s						
MTMR				AML	AML		
	comp=N,8370µm,0.8s						
MTMR				AML	AML		
	comp=N,8265µm,0.8s						
PTRJ	**Pietraroja**	**0.32**	**336**	P	Pg	08 53 05.5	-0.1
PTRJ				S	Sg	08 53 10.7	+0.8
PTRJ				AML	AML		
	comp=N,1820µm,0.5s						
PTRJ				AML	AML		
	comp=N,1825µm,0.5s						
PTRJ				AML	AML		
	comp=E,23µm,1.4s						
PTRJ				AML	AML		
	comp=N,2215µm,0.3s						
PTRJ				AML	AML		
	comp=E,2215µm,1.3s						
PTRJ				AML	AML		
	comp=E,23µm,0.6s						
PTRJ				AML	AML		
	comp=N,1825µm,0.5s						
SACR	**S. Croce Del S**	**0.33**	**360**	P	Pg	08 53 05.6	-0.1
BIOG	**Biogem**	**0.35**	**68**	P	Pg	08 53 06.4	+0.4
NSC3	**Nusco**	**0.39**	**125**	P	Pg	08 53 07.1	+0.3
NSC3				S	Sg	08 53 12.3	+0.4
SSB3	**San Sossio Bar**	**0.40**	**89**	P	Pg	08 53 07.1	+0.2
SSB3				S	Sg	08 53 13.2	+1.0
LIO3	**Lioni**	**0.40**	**116**	P	Pg	08 53 07.1	+0.1
LIO3				S	Sg	08 53 12.9	+0.6
CAFE	**Carife**	**0.40**	**96**	P	Pg	08 53 07.3	+0.3
CAFE				S	Sg	08 53 13.0	+0.6
CAFE				AML	AML		
	comp=E,2200µm,1.4s						
CAFE				AML	AML		
	comp=E,2155µm,1.4s						
CAFE				AML	AML		
	comp=E,2200µm,1.4s						
CAFE				AML	AML		
	comp=N,2125µm,0.4s						
CAFE				AML	AML		
	comp=N,2125µm,0.4s						
CAFE				AML	AML		
	comp=N,2125µm,1.6s						
CAFE				AML	AML		
	comp=E,2200µm,0.6s						
CAFE				AML	AML		
	comp=E,1489µm,0.2s						
CAFE				AML	AML		
	comp=N,2125µm,1.6s						
CAFE				AML	AML		
	comp=E,2155µm,0.6s						
CAFE				AML	AML		
	comp=E,2200µm,0.6s						
PIGN	**Pignataro Magg**	**0.42**	**288**	P	Pg	08 53 07.5	+0.2
PIGN				S	Sg	08 53 13.6	+0.7
PIGN				AML	AML		
	comp=E,1330µm,1.3s						
PIGN				AML	AML		
	comp=N,1440µm,0.5s						
PIGN				AML	AML		
	comp=E,1335µm,1.3s						
PIGN				AML	AML		
	comp=E,1335µm,1.3s						
PIGN				AML	AML		
	comp=N,1440µm,0.4s						
PIGN				AML	AML		
	comp=E,1270µm,1.4s						
PIGN				AML	AML		
	comp=E,1335µm,0.7s						
PIGN				AML	AML		
	comp=E,1270µm,0.6s						
PIGN				AML	AML		
	comp=N,1375µm,0.4s						
MCRV	**Calabrutti - M**	**0.45**	**129**	P	Pg	08 53 08.5	+0.5
MCRV				S	Sg	08 53 14.5	+0.5
MCRV				AML	AML		
	comp=E,6170µm,0.2s						
MCRV				AML	AML		
	comp=N,8480µm,0.9s						
MOCO	**Biccari - m.te**	**0.45**	**49**	P	Pg	08 53 08.1	+0.1
GATE	**Gambatesa**	**0.47**	**19**	P	Pg	08 53 07.8	-0.4
GATE				AML	AML		
	comp=N,1123µm,0.5s						
GATE				AML	AML		
	comp=N,1145µm,0.5s						
GATE				AML	AML		
	comp=E,961µm,0.5s						
GATE				AML	AML		
	comp=N,1145µm,0.5s						
GATE				AML	AML		
	comp=E,961µm,1.5s						
GATE				AML	AML		
	comp=N,1145µm,1.5s						
GATE				AML	AML		
	comp=E,939µm,0.8s						
GATE				AML	AML		
	comp=N,1145µm,1.5s						
GATE				AML	AML		
	comp=N,1123µm,1.5s						
BSSO	**Busso**	**0.48**	**350**	P	Pg	08 53 08.6	0.0
BSSO				S	Sg	08 53 15.6	+0.7
BSSO				AML	AML		
	comp=E,558µm,0.9s						
BSSO				AML	AML		
	comp=N,534µm,1.2s						
BSSO				AML	AML		
	comp=N,534µm,0.8s						
VAGA	**Valle Agricola**	**0.49**	**314**	P	Pg	08 53 08.9	+0.2
VAGA				S	Sg	08 53 16.0	+0.7
VAGA				AML	AML		
	comp=E,1525µm,1.1s						
VAGA				AML	AML		
	comp=N,2495µm,1.2s						
VAGA				AML	AML		
	comp=E,1580µm,1.1s						
VAGA				AML	AML		
	comp=N,2565µm,1.2s						
VAGA				AML	AML		
	comp=E,1530µm,1.1s						
VAGA				AML	AML		
	comp=E,1530µm,0.9s						
VAGA				AML	AML		
	comp=N,2495µm,0.8s						
VAGA				AML	AML		
	comp=E,1580µm,0.9s						
VAGA				AML	AML		
	comp=N,2565µm,0.8s						
SNR3	**Senerchia**	**0.50**	**132**	P	Pg	08 53 09.0	+0.2
SNR3				S	Sg	08 53 16.2	+0.7
SGTA	**Sant Agata di**	**0.50**	**82**	P	Pg	08 53 09.1	+0.2
CLT3	**Calitri**	**0.56**	**107**	P	Pg	08 53 09.8	-0.1
CIGN	**Sant'Elia a Pi**	**0.60**	**14**	P	Pb	08 53 11.4	-0.2
CIGN				AML	AML		
	comp=N,451µm,1.3s						
CIGN				AML	AML		
	comp=E,441µm,1.2s						
CIGN				AML	AML		
	comp=E,441µm,0.8s						
COL3	**Colliano**	**0.61**	**129**	P	Pg	08 53 10.8	-0.1
COL3				S	Sg	08 53 19.5	+0.5
MODR	**Mondragone**	**0.63**	**277**	P	Pb	08 53 12.2	+0.1
MODR				AML	AML		
	comp=E,588µm,1.3s						
MODR				AML	AML		
	comp=N,698µm,0.7s						
MODR				AML	AML		
	comp=E,588µm,0.7s						
MELA	**Melanico ??? S**	**0.71**	**26**	P	Pb	08 53 13.7	+0.2
CDRU	**Civita di Ruta**	**0.74**	**142**	P	Pg	08 53 12.6	-0.7
CDRU				S	Sg	08 53 22.5	-0.5
CDRU				AML	AML		
	comp=E,2660µm,0.3s						
CDRU				AML	AML		
	comp=N,1560µm,0.8s						
RNI2	**Rionero Sannit**	**0.76**	**327**	AML	AML		
	comp=E,938µm,1.2s						
RNI2				AML	AML		
	comp=N,992µm,1.2s						
RNI2				AML	AML		
	comp=E,928µm,1.2s						
RNI2				AML	AML		
	comp=N,996µm,1.2s						
CAGG	**Caggiano**	**0.80**	**130**	P	Pg	08 53 13.9	-0.6
CAGG				S	Sg	08 53 25.1	+0.1
CMPR	**Campora**	**0.88**	**149**	P	Pb	08 53 16.6	+0.3
CMPR				AML	AML		
	comp=E,802µm,0.6s						
CMPR				AML	AML		
	comp=N,1050µm,0.4s						
APRC	**Apricena**	**0.93**	**42**	P	Pb	08 53 17.7	+0.4
APRC				AML	AML		
	comp=E,1940µm,0.3s						
APRC				AML	AML		
	comp=N,2675µm,0.6s						
PALZ	**Palazzo San Ge**	**0.96**	**97**	P	Pb	08 53 17.7	0.0
PALZ				AML	AML		
	comp=E,1730µm,1.1s						
PALZ				AML	AML		
	comp=N,3535µm,0.6s						
SLCN	**Sala Consilina**	**0.98**	**134**	P	Pb	08 53 18.1	0.0
SLCN				AML	AML		
	comp=E,1490µm,0.4s						
SLCN				AML	AML		
	comp=N,1190µm,0.4s						
SLCN				AML	AML		
	comp=E,1660µm,0.3s						
SLCN				AML	AML		
	comp=N,1190µm,0.4s						
SLCN				AML	AML		

	comp=N,1400µm,0.4s						
SGRT	San Giovanni R	1.04	48	P	Pb	08 53 19.1	0.0
SGRT				S	Sn	08 53 34.2	0.0
SGRT				AML	AML		
	comp=E,1410µm,0.4s						
SGRT				AML	AML		
	comp=N,1155µm,1.2s						
SGRT				AML	AML		
	comp=N,1155µm,0.8s						
SGRT				AML	AML		
	comp=E,1410µm,1.6s						
MRVN	Minervino Murg	1.13	90	P	Pb	08 53 20.6	0.0
MRVN				S	Sn	08 53 36.0	-0.4
MRVN				AML	AML		
	comp=E,498µm,0.3s						
MRVN				AML	AML		
	comp=N,658µm,0.5s						
MRVN				AML	AML		
	comp=E,498µm,1.7s						
MGR	Morigerati	1.13	145	P	Pn	08 53 21.1	+0.2
MGR				AML	AML		
	comp=E,584µm,0.5s						
MGR				AML	AML		
	comp=N,562µm,0.5s						
MGR				AML	AML		
	comp=E,488µm,0.6s						
MGR				AML	AML		
	comp=N,548µm,0.5s						
MGR				AML	AML		
	comp=N,548µm,1.5s						
MGR				AML	AML		
	comp=N,562µm,1.5s						
MGR				AML	AML		
	comp=E,583µm,0.5s						
SIRI	Monte Sirino -	1.25	135	P	Pg	08 53 23.3	+0.2
SIRI				AML	AML		
	comp=E,508µm,0.4s						
SIRI				AML	AML		
	comp=N,530µm,1.0s						
SIRI				AML	AML		
	comp=E,518µm,1.0s						
SIRI				AML	AML		
	comp=E,518µm,1.0s						
SIRI				AML	AML		
	comp=E,508µm,1.6s						
SIRI				AML	AML		
	comp=N,524µm,1.0s						

MOS ***16*** *08:53:27.0±1.2, 6°.60N×125°.47E, h14^{km}, mb5.0/44, MS4.3/5, Error ellipse: s-maj=10.4km s-min=5.1km az=114.3*

BJI ***16*** *08:53:27.5, 6°.29N×125°.88E, h33^{km}, mB5.3/36, mb4.8/69, Ms4.5/71, Ms7 4.3/68*

IDC ***16*** *08:53:29.4±1.9, 6°.51N×125°.49E, h19^{km}±11^{km}, mb4.5/32, mbtmp4.6/32, MS4.1/47, Error ellipse: s-maj=17.7km s-min=9.2km az=70.0*

NEIC ***16*** *08:53:30.5, 6°.52N×125°.50E, h20^{km}, Moment Tensor Solution. Duration: 1^{s}5 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.38; M$_{\theta\theta}$2.19; M$_{\phi\phi}$-1.81; M$_{r\theta}$-0.80; M$_{\theta\phi}$-1.67; M$_{\phi r}$0.19; Fault plane solution: M$_0$2.75000×10^{16} NP1: ϕ_s335.78000°, δ78.46000°, λ7.83000°. NP2: ϕ_s244.21000°, δ82.33000°, λ168.36000°. Principal axes: T 2.9964, Plg14.0000°, Azm200.0000°; N -0.5745, Plg76.0000°, Azm31.0000°; P -2.4219, Plg3.0000°, Azm290.0000°;*

DJA ***16*** *08:53:30.1±0.4, 7°N±3°×12°5E±°, h10^{km}, M4.9/28, mb4.9/28, mB5.4/25, MLv5.4/6, Mw(mB)4.8/25, MwMwp4.6/3, Mwp5.0/3*

GCMT ***16*** *08:53:30.5±0.2, 6°.56N±0°.01×125°.34E±0°.02, h12^{km}±1^{km}, MW4.9/87, Moment Tensor Solution. s17,c20; s87,c133; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.90±.14; M$_{\theta\theta}$2.29±.10; M$_{\phi\phi}$-1.39±.10; M$_{r\theta}$-1.58±.35; M$_{\theta\phi}$-1.10±.08; M$_{\phi r}$1.41±.40; Best double couple: M$_0$3.02000×10^{16} NP1: ϕ_s242.00000°, δ40.00000°, λ-164.00000°. NP2: ϕ_s139.00000°, δ80.00000°, λ-51.00000°. Principal axes: T 3.4550, Plg24.0000°, Azm200.0000°; N -0.8710, Plg38.0000°, Azm311.0000°; P -2.5860, Plg42.0000°, Azm86.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***16*** *08:53:30.5, 6°.62N×125°.40E, h20^{km}*

NEIC ***16*** *08:53:31.3±1.5, 6°.63N±0°.06×125°.41E±0°.09, h25^{km}±4^{km}, mb5.1/103, Mww4.9/12, Error ellipse: s-maj=13.3km s-min=9.2km az=89.0*

ISC 16 08:53:31.5±0.4, **6°.57N**±0°.03×**125°.57E**±0°.05, **h28**^{km}±2^{km}, **h28**^{km}**:pP-P, n386,** σ**1^{s}73**/366, **mb5.0**/132, **MS4.2**/74, **19C-8D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.50	1	Pg	Pb	08 53 40.5	-1.4
	2µm,0.3s,baz=213,slow=2.0,SNR=117						
DAV				Lg	Lg	08 53 47.1	
	7µm,0.3s,baz=253,slow=19,SNR=42						
DAV	Davao City (W)	0.50	1		Pb	08 53 40.3	-1.6
DAV	Davao City (W)	0.50	1	P	Pb	08 53 40.7	-1.2
DAV	Davao City (W)	0.50	1	P	Pb	08 53 40.0	-1.9
DAV	Davao City (W)	0.50	1	P	Pb	08 53 32.0	-10
SGSI	Sangihe	2.86	181	P	Pn	08 54 14.7	-0.7
GAMI	Galela, Maluku	5.19	155	P	Pn	08 54 50.1	+2.6
TNTI	Ternate	6.03	163		Pn	08 55 01.6	+2.6
TNTI	Ternate	6.03	163	P	Pn	08 55 01.3	+2.3
TNTI	Ternate	6.03	163	P	Pn	08 55 01.2	+2.3
	130nm,1.0s						
TOLI2	Tolitoli	7.23	222	Pn	Pn	08 55 10.4	-5.0
LUWI	Luwuk	8.06	200		Pn	08 55 26.7	-0.1
LUWI	Luwuk	8.06	200	P	Pn	08 55 28.1	+1.2
LUWI	Luwuk	8.06	200	P	Pn	08 55 27.3	+0.4
MPSI	Mapaga	8.39	223	P	Pn	08 55 29.8	-1.6
APSI	Ampana	8.40	208	P	Pn	08 55 31.8	+0.3
SANI	Sanana	8.57	177	P	Pn	08 55 32.9	-1.0
I39PW	PALAU INFRASON	8.96	83	I	I	09 47 40.0	
	baz=266,slow=306,SNR=1.1						
KKM	Kota Kinabalu	9.32	267		Pn	08 55 43.5	-0.7
KKM	Kota Kinabalu	9.32	267	P	Pn	08 55 45.8	+1.6
KKM	Kota Kinabalu	9.32	267	P	Pn	08 55 44.1	-0.1
	40nm,1.1s						
NLAI	Namlea	9.86	171	P	Pn	08 55 50.9	-0.7
	1µm102nm,0.6s						
TTSI	Tana Toraja	11.14	211	P	Pn	08 56 09.9	+0.7
	1µm141nm,1.2s						
FAKI	Fak Fak	11.54	145		Pn	08 56 15.8	+1.1
FAKI	Fak Fak	11.54	145	P	Pn	08 56 17.4	+2.8
FAKI	Fak Fak	11.54	145	P	Pn	08 56 16.4	+1.8
	944nm46nm,1.8s						
SPSI	Sidrap Palu	11.96	209	P	Pn	08 56 20.4	+0.1
BNSI	Bone	12.19	207	P	Pn	08 56 24.5	+1.1
	2µm99nm,1.3s						
KAPI	Kappang	12.89	207	Pn	Pn	08 56 35.1	+2.0
	0.2nm,0.3s,baz=21,slow=5.8,SNR=18						
KAPI				LR	LR	09 01 49.6	
	comp=Z,934nm,20.0s,baz=40,slow=39						
KAPI	Kappang	12.89	207		Pn	08 56 34.4	+1.4
KAPI	Kappang	12.89	207	P	Pn	08 56 35.4	+2.4
KAPI	Kappang	12.89	207	P	Pn	08 56 34.2	+1.2
	642nm43nm,1.5s						
KAPI	Kappang	12.89	207	P	Pn	08 56 34.4	+1.4
BKSI	Bulukumba	13.01	205	P	Pn	08 56 35.6	+1.0
	2µm57nm,1.5s						
SBUM	Sibu	13.92	254		Pn	08 56 41.4	-5.8
SBUM	Sibu	13.92	254	P	Pn	08 56 49.8	+2.6
SBUM	Sibu	13.92	254	P	Pn	08 56 45.6	-1.6
	21nm,0.9s						
MMRI	Maumere	15.47	192	Pn	Pn	08 57 07.5	-0.4
MMRI				IAmb	IAmb	08 57 13.8	
	comp=Z,188nm,1.7s						
MMRI	Maumere	15.47	192	P	Pn	08 57 09.4	+1.5
EDFI	Ende, Flores	15.70	194	P	Pn	08 57 10.2	-0.9
LBFI	Labuhan Bajo,	15.99	201	P	Pn	08 57 14.0	-0.7
	comp=Z,3µmcomp=Z,169nm,1.7s						
SOEI	Soe	16.27	185		Pn	08 57 18.6	+0.2
SOEI	Soe	16.27	185	P	Pn	08 57 19.3	+0.9
SOEI	Soe	16.27	185	P	Pn	08 57 17.9	-0.5
	comp=Z,2µmcomp=Z,143nm,2.2s						
DBNI	Kabupaten Domp	16.63	206	P	Pn	08 57 22.3	-0.5
	comp=Z,1µmcomp=Z,52nm,1.4s						
TWG	Pinlang	16.73	345	Pn	Pn	08 57 22.0	-2.0
BATI	Baumata	16.77	187	Pn	P	08 57 27.7	+1.0
	comp=Z,9.7nm,0.3s,baz=48,slow=8.4,SNR=9.9						
BATI				LR	LR	09 04 40.3	
	comp=Z,697nm,20.1s,baz=350,slow=40						
PLAI	Plampang	17.16	207	P	P	08 57 31.3	+0.4
PLAI	Plampang	17.16	207	P	Pn	08 57 29.1	-0.4
	comp=Z,2µmcomp=Z,79nm,1.0s						
TPUB	Ta-pu	17.30	345	P	P	08 57 32.5	0.0
TWSI	Taliwang, Sumb	17.50	210	P	Pn	08 57 32.8	-0.9
	comp=Z,3µmcomp=Z,124nm,1.2s						
JAY	Jayapura	17.60	120	LR	LR	09 04 39.0	
	comp=Z,342nm,19.6s,baz=180,slow=38						
KLNI	Mataram	17.64	213	P	Pn	08 57 33.7	-1.7
	comp=Z,108nm,2.2s						
KMMI	Kalianget	17.81	221	P	P	08 57 37.9	-0.2
	comp=Z,4µmcomp=Z,114nm,1.6s						
KHKI	Kahang-Kahang	17.85	214	P	P	08 57 38.9	+0.3
	comp=Z,1µmcomp=Z,46nm,1.0s						
JAGI	Jajag, Banyuwa	18.78	217		P	08 57 47.6	-1.3
JAGI				IAmb	IAmb	08 57 57.2	
	comp=Z,156nm,1.2s						
JAGI	Jajag, Banyuwa	18.78	217	P	Pn	08 57 49.4	0.0
JAGI	Jajag, Banyuwa	18.78	217	P	Pn	08 57 49.5	0.0
	comp=Z,1µmcomp=Z,114nm,1.4s						
GMJI	Gumukmas	19.07	220	P	Pn	08 57 53.4	+0.5
QZH	Quanzhou	19.46	341	P	Pn	08 57 57.3	-0.2
QZH				S	Sn	09 01 38.3	+3.2
QZH				LR	LR		
	comp=Z,640nm,24.1s						
QZH				LR	LR		
	comp=Z,1µm,20.7s						
QZH				LR	LR		
	comp=Z,1µm,22.5s						
DRS	Darwin Rock St	19.61	164	P	Pn	08 57 58.6	-0.7
QIZ	Qiongzhong	19.69	310	P	Pn	08 57 59.6	-0.7
QIZ				S	S	09 01 39.9	+0.4
QIZ				pmax	pmax		
	comp=Z,28nm,1.3s						
QIZ				LR	LR		
	comp=Z,930nm,13.7s						
QIZ				LR	LR		
	comp=Z,530nm,11.5s						
QIZ				LR	LR		
	comp=Z,1µm,19.5s						
SJI	Sawahan	19.79	224	P	P	08 58 00.2	+0.3
SNJI	Sawahan-Nganju	19.82	224	P	P	08 58 00.5	+0.1
	comp=Z,1µmcomp=Z,95nm,1.3s						
MTN	Manton Dam	20.06	164		P	08 58 02.4	-0.4
GUMO	Guam	20.23	68	LR	LR	09 07 11.8	
	comp=Z,95nm,18.1s,baz=240,slow=40						
SMRI	Semarang	20.27	228	P	P	08 58 03.6	-1.6
SMRI				IAmb	IAmb	08 58 10.5	
	comp=Z,119nm,0.9s						
SMRI	Semarang	20.27	228	P	Pn	08 58 08.1	+0.9
JOW	Kunigami	20.32	7	P	P	08 58 05.1	-0.4
	comp=Z,18nm,0.9s,baz=132,slow=9.8,SNR=5.4						
JOW				LR	LR	09 05 19.5	
	comp=Z,705nm,21.8s,baz=174,slow=35						
	comp=Z,18nm,0.9s						
JOW	Kunigami	20.32	7	P	P	08 58 04.7	-0.9
JOW	Kunigami	20.32	7	P	P	08 58 05.4	-0.1
UGM	Wanagama	20.79	226	P	P	08 58 08.7	-2.1
UGM				IAmb	IAmb	08 58 24.4	
	comp=Z,156nm,1.6s						
UGM	Wanagama	20.79	226	P	Pn	08 58 13.7	+0.4
CTJI	Waduk Cacaban	21.20	231	P	P	08 58 15.1	0.0
UBPT	Khong Chiam	21.54	295	P	P	08 58 19.4	+0.6
MYKOM	Kota Tinggi	22.17	259	P	P	08 58 24.8	-0.8
MYKOM	Kota Tinggi	22.17	259	P	P	08 58 26.0	+0.3
KNRA	Kununurra	22.33	172		P	08 58 25.5	-1.7
KNRA				IAmb	IAmb	08 58 46.6	
	comp=Z,70nm,1.1s						
BTDF	Bukit Timah Da	22.35	258	P	P	08 58 30.9	+3.4
BBJI	Bungbulang	22.67	232	P	P	08 58 30.0	-1.0
FITZ	Fitzroy Crossi	24.51	180	P	P	08 58 47.1	-1.7
	comp=Z,23nm,0.8s,baz=3.6,slow=10,SNR=24						
FITZ				LR	LR	09 10 38.1	
	comp=Z,138nm,19.1s,baz=12,slow=42						
	comp=Z,23nm,0.8s						
FITZ	Fitzroy Crossi	24.51	180		P	08 58 47.0	-1.7
IPM	Ipoh	24.52	266	P	P	08 58 50.6	+1.6
CNSH	ChangSha	24.61	332	P	P	08 58 48.4	-1.2
CNSH				S	S	09 03 12.1	+2.9
CNSH				pmax	pmax		
	comp=Z,12nm,2.2s						
CNSH				LR	LR		
	comp=Z,420nm,19.1s						
CNSH				LR	LR		
	comp=Z,730nm,16.9s						
CNSH				LR	LR		
	comp=Z,470nm,17.9s						
SSE	Sheshan	24.74	351	P	P	08 58 49.1	-1.7
SSE				S	S	09 03 11.4	+0.1
SSE				pmax	pmax		
	comp=Z,12nm,0.5s						
SSE				LR	LR		
	comp=Z,260nm,18.6s						
SSE				LR	LR		
	comp=Z,170nm,18.9s						
KULM	Kulim	24.82	268	P	P	08 58 49.6	-2.1
KULM				IAmb	IAmb	08 58 56.8	
	comp=Z,46nm,1.2s						
KULM	Kulim	24.82	268	P	P	08 58 52.9	+1.2
MNAI	Manna	25.05	245	P	P	08 58 51.3	-2.5
MNAI	Manna	25.05	245	P	P	08 58 57.0	+3.2
BKNI	Bangkinang	25.25	257	P	P	08 58 53.1	-2.5
SLVN	Son La	25.59	307	P	P	08 58 57.2	-1.4
SLVN	Son La	25.59	307	P	P	08 59 01.8	+3.1
	comp=Z,12nm,1.2s						
XMI	Christmas Isla	26.04	230	P	P	08 59 05.8	+3.1
WHN	Wuhan	26.07	338	P	P	08 59 05.1	+2.2
WHN				sP	sP	08 59 14.6	+0.4
WHN				LR	LR		
	comp=Z,540nm,10.6s						
WHN				LR	LR		
	comp=Z,1µm,14.1s						
WHN				LR	LR		
	comp=Z,1µm,21.8s						
NJ2	Nanjing	26.12	347	*e*P	P	08 59 05.3	+2.1
NJ2				pP	pP	08 59 08.6	-2.5
NJ2				pmax	pmax		
	comp=Z,25nm,0.5s						
PMG	Port Moresby	26.73	126	LR	LR	09 11 53.0	
	comp=Z,161nm,18.4s,baz=320,slow=41						
PMG	Port Moresby	26.73	126		P	08 59 09.2	+0.3
PMG				IAmb	IAmb	08 59 17.0	
	comp=Z,45nm,1.1s						
PMG	Port Moresby	26.73	126	P	P	08 59 09.7	+0.7
PMG	Port Moresby	26.73	126	P	P	08 59 09.2	+0.3
PMG				pmax	pmax		
	comp=Z,45nm,1.1s						
GYA	Guiyang	26.76	320	⇓P	P	08 59 11.3	+2.1
GYA				S	S	09 03 41.4	-2.2
GYA				pmax	pmax		
	comp=Z,15nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,3.4s						
GYA				LR	LR		
	comp=Z,820nm,22.6s						
GYA				LR	LR		
	comp=Z,820nm,15.6s						
GYA				LR	LR		
	comp=Z,840nm,19.5s						
COEN	Coen	26.85	139	P	P	08 59 10.1	0.0
COEN				IAmb	IAmb	08 59 15.4	
	comp=Z,33nm,1.0s						
COEN	Coen	26.85	139	P	P	08 59 10.3	+0.2
JNU	Nakatsue	26.88	10	LR	LR	09 09 15.0	
	comp=Z,302nm,22.0s,baz=182,slow=35						
WRAB	Tennant Creek	27.72	162	P	P	08 59 16.4	-1.4
WRAB	Tennant Creek	27.72	162	P	P	08 59 16.7	-1.0
WRAB	Tennant Creek	27.72	162	*d i*P	P	08 59 16.3	-1.4
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.1s						
WRA	Warramunga Arr	27.72	162	P	P	08 59 16.3	-1.4
	comp=Z,4.0nm,0.6s,baz=330,slow=11,SNR=17						
WRA				S	S	09 03 55.9	-2.8
	comp=Z,4.5nm,1.2s,baz=336,slow=15,SNR=4.9						
WRA				LR	LR	09 12 06.1	
	comp=Z,460nm,19.7s,baz=28,slow=40						
	comp=Z,4.0nm,0.6s						
WRA	Warramunga Arr	27.72	162	P	P	08 59 16.4	-1.4
WRA	Warramunga Arr	27.72	162	P	P	08 59 16.4	-1.4
WRA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
ENH	Enshi	28.01	329	P	P	08 59 23.6	+3.3
JMN	Monobe	28.10	15	P	P	08 59 20.4	-0.7
JMN				IAmb	IAmb	08 59 29.9	
	comp=Z,36nm,1.3s						
JMN	Monobe	28.10	15	P	P	08 59 23.9	+2.8
GSI	Gunungsitoli	28.41	261	P	P	08 59 20.6	-3.4
GSI				IAmb	IAmb	08 59 25.7	
	comp=Z,30nm,0.9s						
GSI	Gunungsitoli	28.41	261	P	P	08 59 25.4	+1.4
CM31	Chiang Mai Arr	28.51	297	P	P	08 59 23.2	-1.7
CMAR	Chiang Mai Arr	28.51	297	P	P	08 59 24.6	-0.3
	comp=Z,1.6nm,0.3s,baz=120,slow=7.4,SNR=14						
	comp=Z,1.6nm,0.3s						
CMAR	Chiang Mai Arr	28.51	297	P	P	08 59 21.5	-3.3
CMAR	Chiang Mai Arr	28.51	297	*ce*P	P	08 59 25.3	+0.4
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
PSA00	Pilbara Seismi	28.52	191	P	P	08 59 21.8	-3.1
PSA00	Pilbara Seismi	28.52	191	P	P	08 59 22.3	-2.7
PSA00				IAmb	IAmb	08 59 29.9	
	comp=Z,11nm,1.1s						
PSA00	Pilbara Seismi	28.52	191	P	P	08 59 28.9	+4.0
KMI	Kunming	28.59	313	P	P	08 59 30.0	+4.2
KMI				S	S	09 04 19.0	+6.1
KMI				LR	LR		
	comp=Z,380nm,15.2s						
KMI				LR	LR		
	comp=Z,450nm,18.5s						
KMI				LR	LR		
	comp=Z,730nm,17.9s						
CHTO	Chiang Mai	28.63	298	P	P	08 59 24.8	-1.2
CHTO	Chiang Mai	28.63	298	P	P	08 59 26.8	+0.8
CHTO	Chiang Mai	28.63	298	P	P	08 59 24.8	-1.2
CHTO				pmax	pmax		
	comp=Z,31nm,1.5s						
TJN	Taejon	29.71	3	*e*P	P	08 59 31.7	-3.6
PZH	PanZhiHua	30.14	314	P	P	08 59 40.3	+0.9
PZH				S	S	09 04 38.1	+1.2
PZH				LR	LR		
	comp=Z,300nm,16.9s						
PZH				LR	LR		
	comp=Z,440nm,17.1s						
PZH				LR	LR		
	comp=Z,550nm,17.1s						
QIS	Mount Isa	30.28	153	P	P	08 59 41.5	+0.9
LYN	LuoYang	30.36	338	P	P	08 59 42.9	+1.8
LYN				S	S	09 04 44.6	+4.7
LYN				pmax	pmax		
	comp=Z,33nm,0.9s						
LYN				LR	LR		
	comp=Z,760nm,22.0s						
LYN				LR	LR		
	comp=Z,950nm,17.5s						
LYN				LR	LR		
	comp=Z,700nm,25.5s						
TIA	Tai'an	30.50	346	P	P	08 59 43.8	+1.5
TIA				S	S	09 04 50.8	+8.7
TIA				pmax	pmax		
	comp=Z,21nm,1.9s						
TIA				pmax	pmax		
	comp=Z,180nm,3.5s						
TIA				LR	LR		
	comp=Z,360nm,18.0s						
TIA				LR	LR		
	comp=Z,260nm,20.5s						
TIA				LR	LR		
	comp=Z,410nm,16.7s						
MTSU	Mount Surprise	30.74	143	P	P	08 59 46.1	+1.5
KSAR	Wonju Array Be	30.80	4	P	P	08 59 43.3	-1.6
KSAR	Wonju Array Be	30.80	4	P	P	08 59 43.3	-1.6
KSRS	Korea Array	30.82	4	P	P	08 59 44.7	-0.4
	comp=Z,7.4nm,1.1s,baz=185,slow=9.9,SNR=16						
	comp=Z,7.4nm,1.1s						
KS19	Wonju Array Si	30.86	4	P	P	08 59 43.5	-1.9
ASAR	Alice Springs	31.13	165	P	P	08 59 46.6	-1.4
	comp=Z,3.1nm,0.5s,baz=344,slow=7.2,SNR=29						
ASAR				S	S	09 04 51.5	-0.7
	comp=Z,2.5nm,0.9s,baz=349,slow=18,SNR=7.5						
ASAR				ScP	ScP	09 06 22.7	-1.6
	comp=Z,0.9nm,0.9s,baz=340,slow=4.1,SNR=4.4						
ASAR				LR	LR	09 15 23.2	
	comp=Z,134nm,18.1s,baz=334,slow=42						
	comp=Z,3.1nm,0.5s						
XAN	Xi'an	31.38	333	⇑P	P	08 59 51.3	+1.1
XAN				pP	pP	08 59 57.1	-0.9
XAN				S	S	09 04 56.0	0.0
XAN				pmax	pmax		
	comp=Z,24nm,1.2s						
XAN				pmax	pmax		
	comp=Z,130nm,4.3s						
XAN				LR	LR		
	comp=Z,640nm,19.9s						
XAN				LR	LR		
	comp=Z,800nm,18.1s						
XAN				LR	LR		
	comp=Z,690nm,20.6s						
CD2	Chengdu	31.70	323	P	P	08 59 52.8	-0.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,870nm,17.1s						
CD2				LR	LR		
	comp=Z,850nm,15.9s						
CD2				LR	LR		
	comp=Z,910nm,19.7s						
MAJO	Matsushiro	31.99	19	⇑*i*P	P	08 59 57.5	+2.0
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MJAR	Matsushiro Arr	31.99	19	P	P	08 59 53.4	-2.1
	comp=Z,1.3nm,0.6s,baz=190,slow=9.9,SNR=2.7						
MJAR				LR	LR	09 11 31.1	
	comp=Z,352nm,21.4s,baz=212,slow=34						
	comp=Z,1.3nm,0.6s						
MJAR	Matsushiro Arr	31.99	19	P	P	08 59 53.6	-1.9
MJAR	Matsushiro Arr	31.99	19	P	P	08 59 53.6	-1.9
MJAR				pmax	pmax		
	comp=Z,5.0nm,1.3s						
HNS	HongShan	32.24	344	⇑P	P	08 59 58.1	+0.5
HNS				S	S	09 05 11.1	+1.8
HNS				pmax	pmax		
	comp=Z,15nm,0.8s						
HNS				LR	LR		
	comp=Z,300nm,20.2s						
HNS				LR	LR		
	comp=Z,510nm,20.2s						
HNS				LR	LR		
	comp=Z,390nm,17.2s						
DL2	Dalian	32.39	354	P	P	08 59 59.3	+0.4
DL2				S	S	09 05 13.4	+1.9
DL2				pmax	pmax		
	comp=Z,61nm,0.9s						
DL2				pmax	pmax		
	comp=Z,250nm,3.5s						
DL2				LR	LR		
	comp=Z,610nm,19.9s						
DL2				LR	LR		
	comp=Z,510nm,19.3s						
DL2				LR	LR		
	comp=Z,650nm,19.0s						
TV1H	Townsville Har	33.10	141	P	P	09 00 07.2	+1.8
CTA	Charters Tower	33.40	143	P	P	09 00 12.4	+4.4
	comp=Z,9.3nm,0.9s,baz=318,slow=9.5,SNR=11						
CTA				LR	LR	09 15 35.4	
	comp=Z,255nm,18.4s,baz=264,slow=40						
CTAO	Charters Tower	33.40	143	P	P	09 00 09.7	+1.7
CTAO				IAmb	IAmb	09 00 15.8	
	comp=Z,32nm,1.4s						
CTAO	Charters Tower	33.40	143	P	P	09 00 11.7	+3.7
CTAO	Charters Tower	33.40	143	P	P	09 00 09.7	+1.7
CTAO				pmax	pmax		
	comp=Z,32nm,1.4s						
MEEK	Meekatharra	33.69	191	P	P	09 00 09.4	-1.1
BJT	Baijiatuau	34.36	347	P	P	09 00 16.5	+0.4
BJI	Beijing	34.38	347	P	P	09 00 16.9	+0.7
BJI				pP	pP	09 00 24.1	0.0
BJI				sP	sP	09 00 27.3	-0.4
BJI				S	S	09 05 43.5	+1.2
BJI				pmax	pmax		
	comp=Z,22nm,1.2s						
BJI				pmax	pmax		
	comp=Z,110nm,3.6s						
BJI				LR	LR		
	comp=Z,130nm,16.7s						
BJI				LR	LR		
	comp=Z,120nm,14.5s						
BJI				LR	LR		
	comp=Z,170nm,19.8s						
LZDM	Lanzhou Array	35.47	329	P	P	09 00 26.6	+0.6
	comp=Z,11nm,0.8s,baz=163,slow=11,SNR=11						

	comp=Z,11nm,0.8s						
LZH	**Lanzhou**	**35.49**	**329**	*e*P	**P**	**09 00 26.8**	**+0.7**
LZH				pP	sP	09 00 35.5	-2.0
LZH				S	**S**	**09 06 00.6**	**+0.6**
LZH				SS	**SnSn**	**09 08 21.1**	**+0.2**
LZH				pmax	pmax		
	comp=Z,82nm,1.6s						
LZH				pmax	pmax		
	comp=Z,320nm,4.4s						
LZH				LR	LR		
	comp=Z,490nm,14.0s						
LZH				LR	LR		
	comp=Z,550nm,14.6s						
LZH				LR	LR		
	comp=Z,620nm,15.9s						
HHC	**Hu-ho-hao-te**	**36.36**	**342**	⇓*i*P	**P**	**09 00 35.1**	**+1.7**
HHC				S	**S**	**09 06 14.8**	**+1.8**
HHC				pmax	pmax		
	comp=Z,20nm,1.3s						
HHC				pmax	pmax		
	comp=Z,170nm,4.5s						
HHC				LR	LR		
	comp=Z,260nm,18.0s						
HHC				LR	LR		
	comp=Z,230nm,16.1s						
HHC				LR	LR		
	comp=Z,410nm,19.2s						
VLA	**Vladivostok**	**36.83**	**8**	⇑*i*P	**P**	**09 00 37.8**	**+0.6**
VLA				pmax	pmax		
	comp=Z,36nm,1.1s						
CN2	**Changchun**	**37.08**	**360**	P	**P**	**09 00 38.6**	**-0.8**
CN2				pP	pP	09 00 48.4	+1.0
CN2				S	**S**	**09 06 22.5**	**-1.3**
CN2				sS	sS	09 06 37.6	+0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,1.9s						
CN2				LR	LR		
	comp=Z,320nm,19.0s						
CN2				LR	LR		
	comp=Z,310nm,19.0s						
CN2				LR	LR		
	comp=Z,280nm,22.0s						
INKA	**Innaminka**	**37.13**	**157**	IAmb	IAmb	09 00 46.3	
	comp=Z,38nm,2.0s						
FORT	**Forrest**	**37.21**	**176**	IAmb	IAmb	09 00 45.8	
	comp=Z,15nm,0.7s						
SHL	**Shillong**	**37.30**	**304**	P	**P**	**09 00 42.5**	**+0.7**
SHL				pmax	pmax		
	comp=Z,13nm,0.8s						
QLP	**Quilpie**	**37.60**	**152**	P	**P**	**09 00 46.0**	**+2.1**
USRK	**Ussuriysk Ar.**	**37.90**	**8**	P	**P**	**09 00 46.3**	**0.0**
	comp=Z,20nm,0.9s,baz=174,slow=7.0,SNR=12						
	comp=Z,20nm,0.9s						
MDJ	**Mudanjiang**	**38.06**	**5**	P	**P**	**09 00 46.8**	**-0.9**
MDJ	**Mudanjiang**	**38.06**	**5**	P	**P**	**09 00 47.0**	**-0.7**
MDJ				S	**S**	**09 06 42.3**	**+3.7**
MDJ				sS	sS	09 06 51.8	+0.2
MDJ				pmax	pmax		
	comp=Z,32nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,590nm,3.9s						
MDJ				LR	LR		
	comp=Z,350nm,19.2s						
MDJ				LR	LR		
	comp=Z,290nm,24.0s						
MDJ				LR	LR		
	comp=Z,650nm,24.7s						
MDJ	**Mudanjiang**	**38.06**	**5**	P	**P**	**09 00 49.0**	**+1.3**
XLT	**XiLinHaoTe**	**38.10**	**349**	*e*P	**P**	**09 00 47.9**	**-0.3**
XLT				pmax	pmax		
	comp=Z,6.0nm,0.6s						
XLT				pmax	pmax		
	comp=Z,200nm,3.6s						
XLT				LR	LR		
	comp=Z,300nm,16.3s						
XLT				LR	LR		
	comp=Z,220nm,20.7s						
KLBR	**Kellerberrin**	**38.67**	**191**	P	**P**	**09 00 53.6**	**+0.6**
BNX	**BinXian**	**39.05**	**2**	⇑P	**P**	**09 00 55.3**	**-0.7**
BNX				pP	**pP**	**09 01 04.5**	**+0.5**
BNX				sP	**sP**	**09 01 08.3**	**+0.7**
BNX				S	**S**	**09 06 53.8**	**+0.3**
BNX				sS	**sS**	**09 07 07.6**	**+0.7**
BNX				pmax	pmax		
	comp=Z,40nm,1.0s						
BNX				pmax	pmax		
	comp=Z,160nm,4.9s						
BNX				LR	LR		
	comp=Z,260nm,13.6s						
BNX				LR	LR		
	comp=Z,250nm,12.4s						
BNX				LR	LR		
	comp=Z,350nm,20.6s						
TEY	**Ternei**	**39.51**	**12**	⇑*e*P	**P**	**09 01 00.0**	**+0.3**
TEY				pmax	pmax		
	comp=N,10.0nm,1.6s						
TEY				pmax	pmax		
	comp=Z,20nm,1.0s						
LSA	**Lhasa**	**39.73**	**310**	P	**P**	**09 01 01.3**	**-1.2**
LSA				S	**S**	**09 07 01.8**	**-3.3**
LSA				LR	LR		
	comp=Z,200nm,21.6s						
LSA				LR	LR		
	comp=Z,220nm,21.6s						
LSA				LR	LR		
	comp=Z,230nm,18.5s						
GTA	**Gaotai**	**40.09**	**328**	*e*P	**P**	**09 01 06.5**	**+1.6**
GTA				sP	sP	09 01 15.8	-0.5
GTA				S	**S**	**09 07 10.5**	**+1.0**
GTA				pmax	pmax		
	comp=Z,21nm,1.7s						
GTA				LR	LR		
	comp=Z,420nm,18.3s						
GTA				LR	LR		
	comp=Z,310nm,17.1s						
GTA				LR	LR		
	comp=Z,490nm,20.3s						
ASAJ	**Asahikawa**	**40.26**	**19**	P	**P**	**09 01 06.8**	**+0.7**
	comp=Z,25nm,1.1s,baz=264,slow=7.8,SNR=4.8						
	comp=Z,25nm,1.1s						
BBOO	**Buckleboo**	**40.41**	**166**		**P**	**09 01 06.4**	**-1.1**
BBOO				IAmb	IAmb	09 01 19.5	
	comp=Z,67nm,1.3s						
BBOO	**Buckleboo**	**40.41**	**166**	P	**P**	**09 01 06.5**	**-0.9**
GOMU	**GeErMu**	**40.77**	**321**	P	**P**	**09 01 11.1**	**+0.3**
GOMU				S	**S**	**09 07 21.3**	**+1.1**
GOMU				pmax	pmax		
	comp=Z,13nm,1.6s						
GOMU				LR	LR		
	comp=Z,310nm,15.4s						
GOMU				LR	LR		
	comp=Z,320nm,15.0s						
GOMU				LR	LR		
	comp=Z,750nm,17.4s						
WHYH	**Whyalla**	**41.00**	**165**	P	**P**	**09 01 15.2**	**+2.9**
STKA	**Stephens Creek**	**41.17**	**159**	P	**P**	**09 01 13.6**	**-0.2**
	comp=Z,4.6nm,0.5s,baz=338,slow=9.0,SNR=7.9						
STKA				S	**S**	**09 07 26.1**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=73,slow=19,SNR=1.7						
STKA				LR	LR	09 19 46.4	
	comp=Z,169nm,21.9s,baz=341,slow=38						
	comp=Z,4.6nm,0.5s						
STKA	**Stephens Creek**	**41.17**	**159**		**P**	**09 01 13.5**	**-0.2**
STKA	**Stephens Creek**	**41.17**	**159**	P	**P**	**09 01 13.3**	**-0.5**
AUJCS	**Jamestown Cent**	**41.44**	**163**	P	**P**	**09 01 19.1**	**+3.1**
AUCAS	**Cummins Area S**	**41.73**	**167**	P	**P**	**09 01 21.5**	**+3.3**
HTT	**Hallett**	**41.75**	**163**	P	**P**	**09 01 18.5**	**0.0**
AULRC	**Lightning Ridg**	**41.78**	**150**	P	**P**	**09 01 21.6**	**+2.9**
CMSA	**Cobar Meteorol**	**42.49**	**154**	P	**P**	**09 01 27.5**	**+3.0**
HIA	**Hailar**	**42.84**	**354**	P	**P**	**09 01 29.2**	**+2.1**
YSS	**Yuzhno-Sakhali**	**42.86**	**17**	*e*P	**P**	**09 01 25.5**	**-1.8**
YSS				*e*		09 03 01.9	
YSS				*e*S	**S**	**09 07 44.4**	**-5.7**
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
AUMAR	**Marden Senior**	**43.04**	**164**	P	**P**	**09 01 31.8**	**+2.9**
HILR	**Hailar Array B**	**43.12**	**354**	P	**P**	**09 01 29.5**	**+0.1**
	comp=Z,55nm,1.1s,baz=171,slow=10,SNR=21						
	comp=Z,55nm,1.1s						
AUMBR	**Murray Bridge**	**43.45**	**164**	P	**P**	**09 01 35.4**	**+3.2**
HEH	**HeiHe**	**43.57**	**2**	*e*P	**P**	**09 01 32.5**	**-0.5**
HEH				S	**S**	**09 08 04.8**	**+4.4**
HEH				pmax	pmax		
	comp=Z,36nm,1.5s						
HEH				LR	LR		
	comp=Z,230nm,18.1s						
HEH				LR	LR		
	comp=Z,280nm,16.6s						
HEH				LR	LR		
	comp=Z,500nm,18.0s						
ULN	**Ulaanbaatar**	**44.08**	**342**	P	**P**	**09 01 36.3**	**-1.1**
ULN	**Ulaanbaatar**	**44.08**	**342**	⇑*i*P	**P**	**09 01 36.6**	**-0.8**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SONM	**Songino Array**	**44.26**	**342**	P	**P**	**09 01 37.3**	**-1.5**
	comp=Z,3.0nm,1.0s,baz=172,slow=7.2,SNR=10						
SONM				LR	LR	09 21 02.2	
	comp=Z,396nm,21.1s,baz=154,slow=37						
	comp=Z,3.0nm,1.0s						
SONM	**Songino Array**	**44.26**	**342**	P	**P**	**09 01 38.0**	**-0.8**
SONM	**Songino Array**	**44.26**	**342**	P	**P**	**09 01 38.0**	**-0.8**
SONM				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GRNR	**Gornyy**	**44.98**	**10**	⇓*i*P	**P**	**09 01 44.6**	**+0.3**
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GRNR				MLR	MLR		
	comp=E,170nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,260nm,14.0s						
ZEA	**Zeya**	**47.05**	**1**	*e*P	**P**	**09 02 00.2**	**-0.3**
ZEA				pmax	pmax		
	comp=N,20nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,200nm,3.6s						
ZEA				MLR	MLR		
	comp=E,100nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,15.0s						
HYB	**Hyderabad**	**47.12**	**288**	*e*P	**P**	**09 02 01.7**	**0.0**
HYB				*e*PcP	**PcP**	**09 03 32.3**	**-1.1**
TOO	**Toolangi**	**47.69**	**159**	P	**P**	**09 02 06.0**	**+0.2**
TOO				IAmb	IAmb	09 02 13.3	
	comp=Z,21nm,1.6s						
TOO	**Toolangi**	**47.69**	**159**	P	**P**	**09 02 06.0**	**+0.2**
TOO				pmax	pmax		
	comp=Z,21nm,1.7s						
DZM	**Mont Dzumac**	**49.12**	**127**	P	**P**	**09 02 17.8**	**+0.6**
	comp=Z,9.9nm,1.0s,baz=264,slow=6.6,SNR=5.8						
	comp=Z,9.9nm,1.0s						
DZM	**Mont Dzumac**	**49.12**	**127**	*e*P	**P**	**09 02 17.2**	**0.0**
	comp=Z,47nm,1.2s						
DZM	**Mont Dzumac**	**49.12**	**127**	*e*SS	SS	09 12 54.4	+1.7
	comp=Z,286nm,40.6s						
DZM				*e*LR	LR	09 16 19.1	
	comp=Z,324nm,30.1s						
DZM	**Mont Dzumac**	**49.12**	**127**	P	**P**	**09 02 16.8**	**-0.4**
DZM				IAmb	IAmb	09 02 24.9	
	comp=Z,30nm,1.2s						
DZM	**Mont Dzumac**	**49.12**	**127**	P	**P**	**09 02 18.0**	**+0.8**
KNGR	**Kungurtug, Tuv**	**49.74**	**337**	⇑*i*P	**P**	**09 02 22.0**	**+0.5**
KNGR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WMQ	**Urumqi**	**49.76**	**324**	*e*P	**P**	**09 02 21.0**	**-0.7**
WMQ				LR	LR		
	comp=Z,450nm,13.1s						
WMQ				LR	LR		
	comp=Z,360nm,17.1s						
WMQ				LR	LR		
	comp=Z,210nm,19.1s						
PETK	**Petropavlovsk-**	**53.28**	**24**	P	**P**	**09 02 48.1**	**+0.3**
	comp=Z,6.8nm,1.0s,baz=193,slow=6.1,SNR=5.5						
PETK				LR	LR	09 25 16.0	
	comp=Z,130nm,20.5s,baz=218,slow=36						
	comp=Z,6.8nm,1.0s						
ZSN	**Zaisan**	**53.52**	**327**	*e*P	**P**	**09 02 48.8**	**-0.9**
ZSN	**Zaisan**	**53.52**	**327**	*e*P	**P**	**09 02 48.8**	**-0.9**
DGZ	**Jazzator, Alta**	**53.57**	**330**	⇑*i*P	**P**	**09 02 49.0**	**-1.2**
DGZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PET	**Petropavlovsk**	**53.60**	**24**	P	**P**	**09 02 49.7**	**-0.4**
	comp=Z,25nm,2.0s						
SHLS	**Shalkode**	**54.45**	**320**	*e*P	**P**	**09 02 53.9**	**-2.9**
	comp=Z,12nm,1.1s						
SHLS	**Shalkode**	**54.45**	**320**	*e*P	**P**	**09 02 53.8**	**-2.9**
SHLS				pmax	pmax		
	comp=Z,12nm,1.1s						
MK31	**Makanchi Array**	**54.58**	**325**	*i* P	**P**	**09 02 55.8**	**-1.7**
MK31				pmax	pmax		
	comp=Z,14nm,1.0s						
MKAR	**Makanchi Array**	**54.58**	**325**	P	**P**	**09 02 55.9**	**-1.6**
	comp=Z,5.8nm,0.7s,baz=132,slow=7.7,SNR=29						
	comp=Z,5.8nm,0.7s						
MKAR	**Makanchi Array**	**54.58**	**325**	P	**P**	**09 02 56.0**	**-1.6**
UZB	**Uzynbulak**	**54.73**	**319**	*e*P	**P**	**09 02 57.9**	**-0.9**
	comp=Z,12nm,1.3s						
UZB	**Uzynbulak**	**54.73**	**319**	*e*P	**P**	**09 02 57.8**	**-0.9**
UZB				pmax	pmax		
	comp=Z,12nm,1.3s						
MAKZ	**Makanchi**	**54.77**	**325**		**P**	**09 02 58.6**	**-0.3**
MAKZ				IAmb	IAmb	09 03 01.0	
	comp=Z,15nm,1.1s						
MAKZ	**Makanchi**	**54.77**	**325**	P	**P**	**09 02 58.6**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,15nm,1.1s						
TARG	**Taragay, Kyrgy**	**54.89**	**317**	P	**P**	**09 02 59.0**	**-1.3**
TARG	**Taragay, Kyrgy**	**54.89**	**317**	P	**P**	**09 02 59.0**	**-1.3**
TARG				pmax	pmax		
	comp=Z,21nm,0.4s						
SATY	**Saty**	**55.08**	**319**	*e*P	**P**	**09 03 00.5**	**-0.9**
	comp=Z,14nm,1.2s						
SATY	**Saty**	**55.08**	**319**	*e*P	**P**	**09 03 00.4**	**-0.9**
SATY				pmax	pmax		
	comp=Z,14nm,1.2s						
KSH	**Kashi**	**55.24**	**314**	P	**P**	**09 03 03.9**	**+1.4**
KSH				sP	sP	09 03 15.3	+1.2
KSH				S	**S**	**09 10 51.3**	**+6.6**
KSH				pmax	pmax		
	comp=Z,22nm,1.2s						
KSH				LR	LR		
	comp=Z,460nm,19.6s						
KSH				LR	LR		
	comp=Z,370nm,19.2s						
KSH				LR	LR		
	comp=Z,320nm,18.2s						
NIL	**Nilore**	**55.30**	**307**		**P**	**09 03 01.2**	**-1.7**
NIL	**Nilore**	**55.30**	**307**	P	**P**	**09 03 01.2**	**-1.7**
NIL				pmax	pmax		
	comp=Z,48nm,1.0s						
YAK	**Yakutsk**	**55.43**	**2**	P	**P**	**09 03 02.7**	**-0.5**
	comp=Z,33nm,0.7s,baz=181,slow=9.1,SNR=18						
	comp=Z,33nm,0.7s						
YAK	**Yakutsk**	**55.43**	**2**	P	**P**	**09 03 03.0**	**-0.2**
YAK	**Yakutsk**	**55.43**	**2**	*e*P	**P**	**09 03 02.0**	**-1.2**
YAK				*e**PP	**pP**	**09 03 11.2**	**-0.3**
YAK				*e*		09 04 02.2	
YAK				*e*		09 05 04.4	
YAK				*e*PPP	PPP	09 06 16.1	
YAK				*e*S	**S**	**09 10 45.2**	**-0.9**
YAK				*e**SS	**sS**	**09 11 02.3**	**+2.5**
YAK				*e*		09 12 47.7	
YAK				*e*SS	**SS**	**09 14 31.1**	**+0.1**
YAK				*e*SSS	SSS	09 16 40.8	
YAK				pmax	pmax		
	comp=Z,24nm,0.9s						
YAK				pmax	pmax		
	comp=N,22nm,1.9s						
YAK				pmax	pmax		
	comp=E,6.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,184nm,5.6s						
YAK				pmax	pmax		
	comp=N,107nm,4.5s						
YAK				pmax	pmax		
	comp=E,99nm,4.2s						
YAK				smax	smax		
	comp=E,253nm,6.4s						
YAK				smax	smax		
	comp=N,150nm,5.8s						
YAK				MLR	MLR		
	comp=Z,246nm,22.0s						
YAK				MLR	MLR		
	comp=N,95nm,15.0s						
YAK				MLR	MLR		
	comp=E,112nm,21.0s						
KDJ	**Kajisay**	**55.48**	**318**	IAmb	IAmb	09 03 07.9	
	comp=Z,34nm,1.2s						
TDK	**Taldyqorghan**	**55.99**	**321**	*e*P	**P**	**09 03 06.8**	**-0.9**
	comp=Z,13nm,0.9s						
TDK	**Taldyqorghan**	**55.99**	**321**	*e*P	**P**	**09 03 06.8**	**-0.9**
TDK				pmax	pmax		
	comp=Z,13nm,0.9s						
MDOK	**Medeo**	**56.02**	**319**	*e*P	**P**	**09 03 07.1**	**-1.0**
MDOK	**Medeo**	**56.02**	**319**	*e*P	**P**	**09 03 07.1**	**-1.0**
TNSS	**Tian-Shan**	**56.03**	**318**	*e*P	**P**	**09 03 07.3**	**-1.2**
TNSS	**Tian-Shan**	**56.03**	**318**	*e*P	**P**	**09 03 07.3**	**-1.2**
MA2	**Magadan**	**56.27**	**15**	P	**P**	**09 03 08.2**	**-1.1**
	comp=Z,12nm,0.8s,baz=208,slow=9.4,SNR=8.0						
	comp=Z,12nm,0.8s						
MA2	**Magadan**	**56.27**	**15**	P	**P**	**09 03 09.2**	**-0.1**
MA2	**Magadan**	**56.27**	**15**	P	**P**	**09 03 09.8**	**+0.5**
MA2	**Magadan**	**56.27**	**15**	⇑*i*P	**P**	**09 03 09.8**	**+0.5**
MA2				pmax	pmax		
	comp=Z,17nm,1.0s						
MA2	**Magadan**	**56.27**	**15**	P	**P**	**09 03 09.4**	**+0.1**
	comp=Z,38nm,1.8s						
MSVF	**Nonsavu**	**57.16**	**116**	P	**P**	**09 03 16.6**	**+0.1**
MSVF				IAmb	IAmb	09 03 25.6	
	comp=Z,36nm,1.3s						
MSVF	**Nonsavu**	**57.16**	**116**	P	**P**	**09 03 16.6**	**+0.1**
MSVF				pmax	pmax		
	comp=Z,36nm,1.3s						
AAK	**Ala-Archa**	**57.50**	**317**	P	**P**	**09 03 18.4**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=123,slow=7.7,SNR=14						
	comp=Z,1.7nm,0.6s						
AAK	**Ala-Archa**	**57.50**	**317**	P	**P**	**09 03 17.4**	**-1.2**
AAK				IAmb	IAmb	09 03 22.3	
	comp=Z,42nm,1.6s						
AAK	**Ala-Archa**	**57.50**	**317**	⇑*i*P	**P**	**09 03 19.8**	**+1.2**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ZAA0	**Zalesovo Array**	**57.55**	**333**	P	**P**	**09 03 15.9**	**-2.6**
ZAA0				IAmb	IAmb	09 03 20.0	
	comp=Z,21nm,1.4s						
ZALV	**Zalesovo Beam**	**57.55**	**333**	P	**P**	**09 03 16.0**	**-2.5**
	comp=Z,5.3nm,0.7s,baz=116,slow=6.8,SNR=7.3						
ZALV				LR	LR	09 29 36.2	
	comp=Z,93nm,20.2s,baz=130,slow=38						
	comp=Z,5.3nm,0.7s						
ZALV	**Zalesovo Beam**	**57.55**	**333**	P	**P**	**09 03 16.1**	**-2.4**
ZALV	**Zalesovo Beam**	**57.55**	**333**	P	**P**	**09 03 16.2**	**-2.4**
MANEM	**Manem**	**57.70**	**311**	IAmb	IAmb	09 03 24.1	
	comp=Z,80nm,1.2s						
KURBB	**Kurchatov Arra**	**58.74**	**327**	P	**P**	**09 03 24.7**	**-2.3**
	comp=Z,16nm,0.8s,baz=127,slow=5.8,SNR=30						
KURBB				LR	LR	09 30 28.1	
	comp=Z,119nm,19.4s,baz=172,slow=38						
	comp=Z,16nm,0.8s						
KURK	**Kurchatov**	**58.74**	**327**		**P**	**09 03 25.1**	**-1.9**
KURK	**Kurchatov**	**58.74**	**327**	*i* P	**P**	**09 03 24.4**	**-2.5**
KURK				pmax	pmax		
	comp=Z,11nm,0.8s						
BTLS	**Baital**	**58.78**	**320**	*e*P	**P**	**09 03 26.6**	**-0.7**
BTLS	**Baital**	**58.78**	**320**	*e*P	**P**	**09 03 26.6**	**-0.7**
KBL	**Kabul**	**58.91**	**306**	P	**P**	**09 03 26.8**	**-1.8**
KBL				IAmb	IAmb	09 03 31.4	
	comp=Z,23nm,1.1s						
KBL	**Kabul**	**58.91**	**306**	P	**P**	**09 03 26.8**	**-1.8**
KBL				pmax	pmax		
	comp=Z,23nm,1.2s						
SEY	**Seymchan**	**59.56**	**14**	P	**P**	**09 03 33.5**	**+1.2**
	comp=Z,10nm,1.0s,baz=207,slow=7.6,SNR=14						
SEY				LR	LR	09 28 04.5	
	comp=Z,138nm,21.8s,baz=186,slow=35						
	comp=Z,10nm,1.0s						
SEY	**Seymchan**	**59.56**	**14**	*e*P	**P**	**09 03 30.8**	**-1.5**
SEY				pmax	pmax		
	comp=Z,28nm,1.4s						
DZA	**Taraz**	**59.75**	**316**	*e*P	**P**	**09 03 33.4**	**-0.8**
	comp=Z,5.7nm,0.5s						
DZA	**Taraz**	**59.75**	**316**	*e*P	**P**	**09 03 33.3**	**-0.8**
DZA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KK31	**Karatay Array**	**60.39**	**316**		**P**	**09 03 37.0**	**-1.5**
KK31				IAmb	IAmb	09 03 41.2	
	comp=Z,34nm,1.4s						
KK31	**Karatay Array**	**60.39**	**316**	P	**P**	**09 03 37.0**	**-1.5**
KK31				pmax	pmax		
	comp=Z,35nm,1.4s						
KKAR	**Karatay Array**	**60.39**	**316**		**P**	**09 03 36.9**	**-1.6**
KKAR	**Karatay Array**	**60.39**	**316**	P	**P**	**09 03 36.9**	**-1.6**
IUG	**Iuzhnay**	**60.40**	**315**	*e*P	**P**	**09 03 37.9**	**-0.8**
	comp=Z,9.6nm,1.1s						
IUG	**Iuzhnay**	**60.40**	**315**	*e*P	**P**	**09 03 37.8**	**-0.8**
IUG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BRLS	**Borolday**	**60.83**	**316**	*e*P	**P**	**09 03 40.6**	**-0.9**
	comp=Z,12nm,1.3s						
BRLS	**Borolday**	**60.83**	**316**	*e*P	**P**	**09 03 40.6**	**-0.9**
BRLS				pmax	pmax		
	comp=Z,12nm,1.3s						
BVA0	**Borovoye Array**	**64.33**	**327**	*i* P	**P**	**09 04 04.8**	**+0.2**
BVAR	**Borovoye Array**	**64.33**	**327**	P	**P**	**09 04 04.6**	**-0.1**
	comp=Z,12nm,1.0s,baz=122,slow=7.2,SNR=26						
	comp=Z,12nm,1.0s						
BORK	**Borovoye**	**64.38**	**327**	P	**P**	**09 04 04.1**	**-0.9**
BORK				IAmb	IAmb	09 04 06.8	
	comp=Z,16nm,0.9s						
BORK	**Borovoye**	**64.38**	**327**	⇑*i*P	**P**	**09 04 04.4**	**-0.5**
BORK				pmax	pmax		
	comp=Z,18nm,1.0s						
RAO	**Raoul Island**	**64.92**	**126**	LR	LR	09 32 05.6	
	comp=Z,198nm,19.1s,baz=81,slow=36						
TIXI	**Tiksi**	**65.04**	**1**		**P**	**09 04 07.3**	**-1.7**
TIXI	**Tiksi**	**65.04**	**1**	⇑*i*P	**P**	**09 04 07.2**	**-1.7**
TIXI				pmax	pmax		
	comp=Z,27nm,1.1s						
URZ	**Urewera**	**65.39**	**137**	LR	LR	09 34 01.0	
	comp=Z,116nm,18.6s,baz=303,slow=37						
BKZ	**Black Stump Fm**	**65.45**	**138**	P	**P**	**09 04 12.8**	**+0.6**
BKZ				IAmb	IAmb	09 04 18.1	
	comp=Z,13nm,0.9s						
BKZ	**Black Stump Fm**	**65.45**	**138**	P	**P**	**09 04 12.2**	**0.0**
BILL	**Bilibino**	**67.13**	**15**	⇓*i*P	**P**	**09 04 23.0**	**+0.6**
BILL				pmax	pmax		
	comp=Z,36nm,2.6s						
NRIK	**Noril'sk**	**67.42**	**346**	P	**P**	**09 04 22.2**	**-1.9**
	comp=Z,4.7nm,0.8s,baz=126,slow=8.7,SNR=5.8						
NRIK				LR	LR	09 36 00.0	
	comp=Z,322nm,19.8s,baz=148,slow=38						
	comp=Z,4.7nm,0.8s						
AB31	**Akbulak array**	**69.24**	**320**	P	**P**	**09 04 33.9**	**-2.1**
AB31				IAmb	IAmb	09 04 44.4	
	comp=Z,27nm,1.6s						
AB31	**Akbulak array**	**69.24**	**320**	*i* P	**P**	**09 04 33.7**	**-2.3**
ABKAR	**Akbulak array**	**69.24**	**320**	P	**P**	**09 04 34.8**	**-1.2**
AKTO	**Aktyubinsk**	**70.74**	**321**	P	**P**	**09 04 43.5**	**-1.7**
	comp=Z,4.4nm,0.7s,baz=107,slow=5.5,SNR=11						
AKTO				LR	LR	09 39 08.9	
	comp=Z,217nm,18.8s,baz=76,slow=39						
	comp=Z,4.4nm,0.7s						
ARTI	**Arti**	**72.02**	**327**	P	**P**	**09 04 51.5**	**-1.3**
	comp=Z,1.7nm,0.5s,baz=110,slow=3.1,SNR=3.9						
ARTI				LR	LR	09 39 47.3	
	comp=Z,213nm,18.6s,baz=100,slow=39						
	comp=Z,1.7nm,0.5s						
ARTI	**Arti**	**72.02**	**327**	P	**P**	**09 04 51.7**	**-1.1**
ARTI	**Arti**	**72.02**	**327**	*c i*P	**P**	**09 04 53.0**	**+0.2**
ARTI						09 07 27.7	
ARTI				S	**S**	**09 14 15.6**	**+3.0**
ARTI				pmax	pmax		
	comp=Z,9.0nm,1.2s						
CASY	**Casey**	**73.49**	**186**	P	**P**	**09 05 01.5**	**+0.3**
CASY				IAmb	IAmb	09 05 20.3	
	comp=Z,18nm,1.1s						
C16K	**Lisburne Hills**	**76.26**	**21**	IAmb	IAmb	09 05 23.4	
	comp=Z,20nm,1.1s						
AKT	**Akhty**	**76.57**	**311**	*e*P	**P**	**09 05 17.8**	**-2.0**
AKT				*e*		09 08 09.7	
AKT				*e*S	**S**	**09 15 02.3**	**-2.2**
AKT				pmax	pmax		
	comp=Z,52nm,2.0s						
MAK	**Makhachkala**	**76.82**	**312**	*e*P	**P**	**09 05 18.9**	**-2.1**
MAK				*e*S	**S**	**09 15 05.5**	**-1.4**
MAK				pmax	pmax		
	comp=Z,171nm,1.1s						
MAK				MLR	MLR		
	comp=Z,145nm,15.0s						
RDOG	**Red Dog Mine**	**77.07**	**21**	IAmb	IAmb	09 05 26.2	
	comp=Z,25nm,1.4s						
KIRV	**Kirov**	**77.21**	**329**	LR	LR	09 42 28.9	
	comp=Z,165nm,19.2s,baz=91,slow=38						
BELG	**Belogornoye**	**77.47**	**322**	*d i*P	**P**	**09 05 24.9**	**+0.5**
BELG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
RAYN	**Ar Rayn**	**78.33**	**293**	P	**P**	**09 05 28.1**	**-1.8**

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RAYN                                   IAmb    IAmb    09 05 31.7
       comp=Z,18nm,1.1s
RAYN   Ar Rayn           78.33 293     P       P       09 05 28.1 -1.8
RAYN                                   pmax    pmax
       comp=Z,18nm,1.1s
C19K   Lookout Ridge     78.50  21     IAmb    IAmb    09 05 37.0
       comp=Z,29nm,1.4s
G19K   Purcell Mounta    78.91  24     IAmb    IAmb    09 05 36.0
       comp=Z,47nm,1.9s
E19K   Redstone River    79.06  23     IAmb    IAmb    09 05 35.8
       comp=Z,32nm,1.5s
D20K   Etivluk River     79.49  21     IAmb    IAmb    09 05 41.7
       comp=Z,36nm,1.6s
KDAK   Kodiak Island     80.13  33     LR      LR      09 33 55.8
       comp=Z,145nm,21.8s,baz=238,slow=30
KBZ    Khabaz            80.21 313     P       P       09 05 39.0 -0.7
       comp=Z,2.8nm,1.0s,baz=201,slow=2.7,SNR=3.6
KBZ                                    LR      LR      09 46 54.9
       comp=Z,103nm,18.3s,baz=64,slow=40
       comp=Z,2.8nm,1.0s
KBZ    Khabaz            80.21 313⇓iP          P       09 05 40.2 +0.6
IMAR   Indian Mountai    80.24  24     P       P       09 05 38.8 -0.6
B21K   Ikpikpuk River    80.33  20     IAmb    IAmb    09 05 53.4
       comp=Z,12nm,0.8s
KIV    Kislovodsk        80.36 313    eP       P       09 05 37.2 -3.4
KIV                                    pmax    pmax
       comp=Z,7.0nm,1.1s
B22K   Teshekpuk Lake    80.82  20     IAmb    IAmb    09 05 46.7
       comp=Z,17nm,1.1s
GURO   Guroymak-BITLI    80.90 308     IAmb    IAmb    09 05 46.8
       comp=Z,13nm,0.9s
E22K   Anaktuvuk Pass    81.19  22     IAmb    IAmb    09 06 03.1
       comp=Z,41nm,1.9s
H22K   Ishtalitna Cre    81.20  24     IAmb    IAmb    09 05 47.8
       comp=Z,20nm,1.4s
BPAW   Bear Paw Mtn.     81.26  26     IAmb    IAmb    09 05 50.1
       comp=Z,26nm,1.2s
KTH    Kantishna Hill    81.26  27     IAmb    IAmb    09 05 47.7
       comp=Z,35nm,1.4s
L22K   Petersville       81.28  28     IAmb    IAmb    09 05 48.9
       comp=Z,19nm,1.0s
MLY    Manley            81.42  25     IAmb    IAmb    09 05 53.6
       comp=Z,19nm,1.3s
C23K   Itkillik River    81.74  20     IAmb    IAmb    09 05 51.6
       comp=Z,23nm,1.3s
COLD   Coldfoot          81.74  23     IAmb    IAmb    09 05 53.6
       comp=Z,16nm,1.2s
I23K   Minto, Yukon-K    82.00  25     IAmb    IAmb    09 05 51.7
       comp=Z,34nm,1.5s
E23K   Chandalar         82.00  22     IAmb    IAmb    09 05 54.3
       comp=Z,16nm,1.1s
TOLK   Toolik Lake Re    82.05  22     IAmb    IAmb    09 05 56.5
       comp=Z,54nm,2.0s
KLMR   Klimovskoe        82.38 330    eP       P       09 05 48.5 -2.3
KLMR                                   pmax    pmax
       comp=Z,45nm,1.7s
F24K   Squaw Lake        82.65  23     IAmb    IAmb    09 06 50.5
       comp=Z,23nm,1.8s
ILAR   Eielson Array     83.05  26     P       P       09 05 53.6 -0.6
       comp=Z,2.7nm,0.9s,baz=247,slow=4.7,SNR=20
ILAR                                   LR      LR      09 41 30.3
       comp=Z,55nm,21.9s,baz=294,slow=35
       comp=Z,2.7nm,0.9s
ILAR   Eielson Array     83.05  26     P       P       09 05 53.2 -1.1
MOS    Moscow            83.46 325    eP       P       09 05 54.6 -1.9
BMAR   Burnt Mountain    83.92  23     P       P       09 05 58.8  0.0
OBN    Obninsk           84.09 325    eP       P       09 05 59.5 -0.3
OBN                                   e                09 09 12.4
OBN                                   ePPP     PPP     09 11 04.3
OBN                                    pmax    pmax
       comp=Z,3.0nm,0.9s
OBN                                    MLR     MLR
       comp=Z,59nm,11.0s
SCRK   Sand Creek        84.34  26     P       P       09 06 00.5 -0.6
SCRK                                   IAmb    IAmb    09 06 44.9
       comp=Z,30nm,1.8s
BCAR   Beaver Creek A    85.39  27     P       P       09 06 04.8 -1.5
BNN    Bunyan            85.72 308     IAmb    IAmb    09 06 10.8
       comp=Z,18nm,1.2s
I28M   Miner Creek       85.94  25     IAmb    IAmb    09 06 16.8
       comp=Z,12nm,0.9s
MAW    Mawson            86.01 200     LR      LR      09 39 30.6
       comp=Z,75nm,22.0s,baz=48,slow=32
VNDA   Vanda             86.37 173     LR      LR      09 45 27.5
       comp=Z,59nm,19.3s,baz=348,slow=36
MMAI   Mount Meron Ar    86.61 303     LR      LR      09 50 05.6
       comp=Z,55nm,20.0s,baz=62,slow=39
PPT    Papeete           87.08 108     LR      LR      09 41 09.8
       comp=Z,51nm,18.0s,baz=283,slow=33
PPT2   Papeete2          87.08 108    eLR      LR      09 33 50.7
       comp=Z,116nm,27.2s
PPT2                                  eLR      LR      09 33 54.1
       comp=Z,107nm,32.8s
EIL    Elat              87.33 299     LR      LR      09 52 17.1
       comp=Z,84nm,18.3s,baz=179,slow=40
BR131  Keskin Array S    87.34 310c iP         P       09 06 14.2 -2.3
BRTR   Keskin Array B    87.34 310     P       P       09 06 13.8 -2.7
       comp=Z,1.0nm,0.8s,baz=93,slow=6.2,SNR=4.6
BRTR                                   LR      LR      09 51 42.2
       comp=Z,68nm,19.4s,baz=27,slow=40
       comp=Z,1.0nm,0.8s
BR106  Keskin Array S    87.35 310     P       P       09 06 15.5 -1.0
ARCES  ARCESS Array B    87.40 340     LR      LR      09 48 04.2
       comp=Z,79nm,20.3s,baz=43,slow=38
SPITS  Spitsbergen Ar    87.49 349     LR      LR      09 51 39.6
       comp=Z,137nm,18.2s,baz=66,slow=40
INK    Inuvik            87.96  21     LR      LR      09 48 59.9
       comp=Z,64nm,19.3s,baz=18,slow=38
TBI    Tubuai            87.97 114    eLR      LR      09 34 16.1
       comp=Z,574nm,28.8s
TBI                                   eLR      LR      09 34 21.5
       comp=Z,825nm,26.5s
FIA1   FINESS Array S    88.80 332     P       P       09 06 21.4 -1.3
FINES  FINESS Array B    88.80 332     P       P       09 06 22.4 -0.3
       comp=Z,1.6nm,0.8s,baz=61,slow=9.0,SNR=4.0
FINES                                  LR      LR      09 49 06.5
       comp=Z,194nm,18.4s,baz=73,slow=38
       comp=Z,1.6nm,0.8s
FINES  FINESS Array B    88.80 332     P       P       09 06 21.8 -0.9
AK10   Malin Array Si    88.98 321     P       P       09 06 23.1 -0.7
AKASG  Malin Array Be    88.98 321     P       P       09 06 22.9 -0.9
       comp=Z,1.5nm,0.8s,baz=77,slow=3.6,SNR=4.6
AKASG                                  LR      LR      09 50 46.4
       comp=Z,127nm,18.5s,baz=62,slow=39
       comp=Z,1.5nm,0.8s
AKASG  Malin Array Be    88.98 321     IAmb    IAmb    09 06 31.8
       comp=Z,3.0nm,1.0s
AKASG  Malin Array Be    88.98 321ceP          P       09 06 25.6 +1.8
AKASG                                  pmax    pmax
       comp=Z,1.0nm,0.6s
AKBB   Malin Array Si    88.98 321⇑iP          P       09 06 24.4 +0.6
AKBB                                   pmax    pmax
       comp=Z,5.0nm,1.1s
AKBB   Malin Array Si    88.98 321     P       P       09 06 24.0 +0.2
AK04   Malin Array Si    89.01 321     P       P       09 06 23.5 -0.4
AK07   Malin Array Si    89.01 321     P       P       09 06 23.5 -0.5
AK21   Malin Array Si    89.08 321     P       P       09 06 23.4 -0.9
AK20   Malin Array Si    89.11 321     P       P       09 06 23.8 -0.6
LUBAR  Lubar, Ukraine    90.03 320     P       P       09 06 28.3 -0.5
DLBC   Dease Lake        91.91  31     LR      LR      09 40 42.7
       comp=Z,98nm,21.9s,baz=280,slow=31
MLR    Muntele Rosu      92.07 316     LR      LR      09 53 22.9
       comp=Z,139nm,18.9s,baz=12,slow=39
SYO    Syowa Base        94.64 201⇓eP          P       09 06 52.2 +2.7
MBAR   Mbarara           94.87 270     LR      LR      09 46 49.5
       comp=Z,77nm,20.9s,baz=82,slow=34
HFS    Hagfors           94.99 332     LR      LR      09 52 11.8
       comp=Z,211nm,18.5s,baz=58,slow=37
TAOE   Nuku Hiva Isla    95.20  98    eLR      LR      09 37 42.4
       comp=Z,139nm,26.2s
NOA    NORSAR Array B    95.75 334     LR      LR      09 53 00.4
       comp=Z,114nm,21.6s,baz=50,slow=37
QSPA   South Pole Qui    96.46 180     P       P       09 06 59.8 +1.7
       comp=Z,0.7nm,0.4s,baz=264,slow=2.5,SNR=3.9
QSPA                                   LR      LR      09 51 37.2
       comp=Z,54nm,19.6s,baz=352,slow=36
QSPA   South Pole Qui    96.46 180     P       P       09 06 58.1  0.0
VRAC   Vranov            97.21 321     LR      LR      09 53 19.9
       comp=Z,87nm,18.8s,baz=36,slow=37
YKA    Yellowknife Ar    97.40  24     P       Pdif    09 07 03.3 +0.9
       comp=Z,1.2nm,1.0s,baz=296,slow=5.4,SNR=6.2
       comp=Z,1.2nm,1.0s
YKA    Yellowknife Ar    97.40  24ceP          Pdif    09 07 03.7 +1.3
YKA                                    pmax    pmax
       comp=Z,1.0nm,0.9s
MATP   Matopo            98.87 250     LR      LR      09 49 34.3
       comp=Z,88nm,18.7s,baz=66,slow=34
GERES  GERESS Array B    99.16 322     LR      LR      09 55 38.0
       comp=Z,114nm,20.0s,baz=53,slow=38
TXAR   Lajitas Array    120.73  50     PKP     PKiKP   09 12 23.4 +1.4
       comp=Z,1.1nm,1.2s,baz=113,slow=2.9,SNR=3.8
PLCA   Paso Flores      143.05 159     PKP     PKPdf   09 13 02.5 -0.8
       comp=Z,2.1nm,0.9s,baz=120,slow=2.1,SNR=5.3
JTS    Las Juntas de    145.29  61             PKPbc   09 13 07.1 -0.6
JTS    Las Juntas de    145.29  61     PKIKP   PKPbc   09 13 07.1 -0.6
TRQA   Tornquist        147.91 169             PKPbc   09 13 15.5 +0.9
TRQA   Tornquist        147.91 169     PKP2    PKPbc   09 13 15.5 +0.9
BO01   Tunca            148.32 153             PKiKP   09 13 17.4 -0.1
PEL    Peldehue         149.55 152             PKiKP   09 13 21.3 +1.2
LPAZ   La Paz           163.47 127     PKP     PKPdf   09 13 34.2 +0.6
       comp=Z,4.7nm,1.0s,baz=320,slow=0.5,SNR=8.7
LPAZ   La Paz           163.47 127             PKPdf   09 13 31.4 -2.1
LPAZ   La Paz           163.47 127     PKIKP   PKPdf   09 13 31.5 -2.1
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ROM ***16*** *08:53:59.5±0.1, 41°.057N±0°.004×14°.740E±0°.005, h11km, ML3.4/158, Error ellipse: s-maj=0.4km s-min=0.4km az=8.0*

IDC ***16*** *08:53:59.6±2.0, 41°.24N×14°.23E, h0km, mb3.3/2, mbtmp3.5/4, ML3.5/2, Error ellipse: s-maj=45.2km s-min=19.9km az=90.0*

ISC 16 08:53:59.4±0.8**, 41°.08N**±0°.02×**14°.77E**±0°.02**, h17**km±4km**, n102,** σ1ˢ.33/117**, 20C-10D, Southern Italy**

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Code   Station Name       Δ°   AZ°     Phase ID         Time      Res
                                       Op      ISC      h  m  s   ISC
BENI   Universita' De     0.05 359     P       Pg      08 54 02.1 -0.4
BENI                                   S       Sg      08 54 04.4 -0.3
AVL    Avellino           0.15 176     P       Pg      08 54 03.6  0.0
AVL                                    S       Sg      08 54 06.4  0.0
VITU   Vitulano (BN)      0.15 315    ⇓P       Pg      08 54 02.7 -1.0
VITU                                   S       Sg      08 54 05.8 -0.7
VITU                                   AML     AML
       comp=E,56600µm,0.9s
VITU                                   AML     AML
       comp=N,80350µm,0.5s
VITU                                   AML     AML
       comp=N,78650µm,0.5s
VITU                                   AML     AML
       comp=E,25250µm,0.6s
VITU                                   AML     AML
       comp=E,56600µm,1.1s
MRB1   Monte Rocchett     0.16  71    ⇑P       Pg      08 54 04.1 +0.4
MRB1                                   S       Sg      08 54 07.4 +0.8
MRB1                                   AML     AML
       comp=E,40650µm,1.2s
MRB1                                   AML     AML
       comp=N,34750µm,0.6s
MRB1                                   AML     AML
       comp=E,40800µm,0.8s
MRB1                                   AML     AML
       comp=N,35250µm,0.6s
MRB1                                   AML     AML
       comp=N,32600µm,1.0s
MRB1                                   AML     AML
       comp=N,33650µm,1.0s
MRB1                                   AML     AML
       comp=E,31300µm,0.7s
MRB1                                   AML     AML
       comp=E,31900µm,0.7s
MRB1                                   AML     AML
       comp=E,31900µm,1.3s
MRB1                                   AML     AML
       comp=E,31300µm,1.3s
MRB1                                   AML     AML
       comp=N,33650µm,1.0s
MRB1                                   AML     AML
       comp=N,32600µm,1.0s
PAOL   Paolisi            0.16 254    ⇑P       Pg      08 54 03.0 -0.7
PAOL                                   S       Sg      08 54 06.4 -0.3
PAOL                                   AML     AML
       comp=N,52050µm,0.8s
PAOL                                   AML     AML
       comp=N,54850µm,0.8s
PAOL                                   AML     AML
       comp=N,52050µm,0.8s
PAOL                                   AML     AML
       comp=E,41750µm,0.6s
PAOL                                   AML     AML
       comp=E,41750µm,1.4s
PAOL                                   AML     AML
       comp=E,39900µm,0.6s
LGS3   Luogosano          0.19 118    ⇑P       Pg      08 54 04.3 +0.2
LGS3                                   S       Sg      08 54 07.8 +0.5
NL9    Nola               0.23 228    ⇑P       Pg      08 54 04.2 -0.5
MTMR   Montemarano        0.23 132    ⇓P       Pg      08 54 04.7 -0.2
MTMR                                   S       Sg      08 54 09.2 +0.6
MTMR                                   AML     AML
       comp=E,10580µm,0.9s
MTMR                                   AML     AML
       comp=N,10865µm,0.4s
MTMR                                   AML     AML
       comp=E,10000µm,0.9s
MTMR                                   AML     AML
       comp=N,10850µm,0.4s
MTMR                                   AML     AML
       comp=N,10655µm,0.4s
MTMR                                   AML     AML
       comp=N,10665µm,0.4s
MTMR                                   AML     AML
       comp=N,10855µm,0.4s
MTMR                                   AML     AML
       comp=E,10580µm,0.9s
MTMR                                   AML     AML
       comp=E,9995µm,0.9s
BIOG   Biogem             0.30  65    ⇑P       Pg      08 54 07.3 +1.4
SACR   S. Croce Del S     0.33 351    ⇓P       Pb      08 54 06.4 -0.4
SACR                                   S       Sb      08 54 11.5 -0.3
SACR                                   AML     AML
       comp=E,7495µm,0.8s
SACR                                   AML     AML
       comp=E,7820µm,0.8s
SACR                                   AML     AML
       comp=E,7500µm,0.8s
SACR                                   AML     AML
       comp=N,7650µm,0.8s
SACR                                   AML     AML
       comp=E,7820µm,1.2s
SACR                                   AML     AML
       comp=E,7500µm,1.2s
SACR                                   AML     AML
       comp=N,7615µm,0.8s
PTRJ   Pietraroja         0.34 327    ⇑P       Pg      08 54 05.8 -0.8
PTRJ                                   AML     AML
       comp=E,9195µm,0.5s
PTRJ                                   AML     AML
       comp=E,27µm,0.6s
PTRJ                                   AML     AML
       comp=N,8500µm,0.7s
PTRJ                                   AML     AML
       comp=N,7340µm,0.7s
PTRJ                                   AML     AML
       comp=E,27µm,1.4s
SSB3   San Sossio Bar     0.34  89    ⇑P       Pg      08 54 07.4 +0.8
NSC3   Nusco              0.35 131    ⇓P       Pb      08 54 06.7 -0.5
NSC3                                   S       Sb      08 54 12.4  0.0
CAFE   Carife             0.35  98     P       Pg      08 54 07.0 +0.2
CAFE                                   S       Sg      08 54 13.3 +1.4
CAFE                                   AML     AML
       comp=E,5025µm,1.1s
CAFE                                   AML     AML
       comp=N,4610µm,1.6s
CAFE                                   AML     AML
       comp=E,5105µm,1.1s
CAFE                                   AML     AML
       comp=E,5025µm,1.2s
CAFE                                   AML     AML
       comp=N,4720µm,1.6s
CAFE                                   AML     AML
       comp=N,4610µm,0.4s
CAFE                                   AML     AML
       comp=N,4720µm,0.4s
CAFE                                   AML     AML
       comp=E,5025µm,0.8s
CAFE                                   AML     AML
       comp=E,5105µm,0.9s
LIO3   Lioni              0.36 120    ⇑P       Pb      08 54 06.9 -0.4
LIO3                                   S       Sb      08 54 12.8 +0.2
VVDG   Vesuvio Valle      0.36 228    ⇑P       Pg      08 54 06.5 -0.3
VVDG                                   S       Sg      08 54 12.0  0.0
VBKN   Vesuvio Bunker     0.36 227    ⇑P       Pg      08 54 06.7 -0.2
VBKN                                   S       Sg      08 54 12.0  0.0
VBKN                                   AML     AML
       comp=E,39050µm,0.8s
VBKN                                   AML     AML
       comp=N,37100µm,0.5s
VCRE   Vesuvio Crater     0.36 225    ⇑P       Pg      08 54 06.9 -0.1
VCRE                                   S       Sg      08 54 12.0 -0.2
VCRE                                   AML     AML
       comp=E,46500µm,0.6s
VCRE                                   AML     AML
       comp=N,36400µm,0.7s
VCRE                                   AML     AML
       comp=N,36400µm,1.3s
VTIR   Vesuvio Tirone     0.38 225    ⇑P       Pg      08 54 07.0 -0.2
VTIR                                   S       Sg      08 54 12.6  0.0
VTIR                                   AML     AML
       comp=E,10740µm,0.8s
VTIR                                   AML     AML
       comp=N,9665µm,0.6s
VTIR                                   AML     AML
       comp=E,10740µm,1.2s
VTIR                                   AML     AML
       comp=N,9665µm,1.4s
MOCO   Biccari - m.te     0.41  44    ⇑P       Pn      08 54 09.1 -1.5
MOCO                                   AML     AML
       comp=N,2515µm,0.7s
MOCO                                   AML     AML
       comp=N,2595µm,0.7s
MOCO                                   AML     AML
       comp=E,3800µm,0.5s
MOCO                                   AML     AML
       comp=E,3835µm,0.5s
MCRV   Calabrutti - M     0.42 134    ⇓P       Pb      08 54 07.6 -0.7
MCRV                                   S       Sb      08 54 14.2 -0.2
MCRV                                   AML     AML
       comp=E,7460µm,1.0s
MCRV                                   AML     AML
       comp=N,8810µm,0.3s
MCRV                                   AML     AML
       comp=E,7460µm,1.0s
GATE   Gambatesa          0.45  13     P       Pn      08 54 09.3 -1.8
GATE                                   AML     AML
       comp=E,4885µm,0.5s
GATE                                   AML     AML
       comp=N,3475µm,0.6s
GATE                                   AML     AML
       comp=N,3470µm,0.6s
GATE                                   AML     AML
       comp=N,3475µm,1.4s
GATE                                   AML     AML
       comp=E,4885µm,0.5s
GATE                                   AML     AML
       comp=N,3470µm,1.4s
GATE                                   AML     AML
       comp=E,4815µm,0.5s
SGTA   Sant Agata di      0.45  82    ⇑P       Pn      08 54 09.1 -2.0
SGTA                                   AML     AML
       comp=E,2600µm,0.6s
SGTA                                   AML     AML
       comp=N,2020µm,1.6s
SGTA                                   AML     AML
       comp=N,2040µm,1.6s
SGTA                                   AML     AML
       comp=E,2595µm,0.6s
SGTA                                   AML     AML
       comp=N,2020µm,0.4s
SGTA                                   AML     AML
       comp=N,2040µm,0.4s
SGTA                                   AML     AML
       comp=E,2705µm,1.3s
PIGN   Pignataro Magg     0.47 286    ⇓P       Pg      08 54 07.9 -0.8
PIGN                                   S       Sg      08 54 14.5 -0.6
PIGN                                   AML     AML
       comp=E,8915µm,0.7s
PIGN                                   AML     AML
       comp=E,9260µm,0.7s
PIGN                                   AML     AML
       comp=N,8825µm,0.6s
PIGN                                   AML     AML
       comp=E,8915µm,1.3s
PIGN                                   AML     AML
       comp=E,9260µm,1.3s
PIGN                                   AML     AML
       comp=N,8100µm,0.6s
SNR3   Senerchia          0.47 137     P       Pb      08 54 08.6 -0.5
SNR3                                   S       Sb      08 54 15.6 -0.2
BSSO   Busso              0.49 344    ⇓P       Pb      08 54 09.1 -0.5
BSSO                                   AML     AML
       comp=E,2190µm,0.4s
BSSO                                   AML     AML
       comp=E,2190µm,1.6s
BSSO                                   AML     AML
       comp=N,1605µm,0.6s
CLT3   Calitri            0.51 110     P       Pn      08 54 10.4 -1.4
CLT3                                   AML     AML
       comp=E,12400µm,0.7s
CLT3                                   AML     AML
       comp=N,13000µm,0.6s
CLT3                                   AML     AML
       comp=E,12400µm,0.7s
CLT3   Calitri            0.51 110     AML     AML
       comp=N,12100µm,0.7s
CLT3                                   AML     AML
       comp=E,12800µm,0.7s
CLT3                                   AML     AML
       comp=E,12800µm,0.7s
VAGA   Valle Agricola     0.53 310    ⇓P       Pg      08 54 09.3 -0.7
VAGA                                   AML     AML
       comp=N,10320µm,1.2s
VAGA                                   AML     AML
       comp=N,10655µm,1.2s
VAGA                                   AML     AML
       comp=E,6705µm,0.6s
VAGA                                   AML     AML
       comp=E,6910µm,0.6s
VAGA                                   AML     AML
       comp=E,6910µm,1.4s
VAGA                                   AML     AML
       comp=E,6705µm,1.4s
VAGA                                   AML     AML
       comp=N,10320µm,0.8s
VAGA                                   AML     AML
       comp=N,10655µm,0.8s
CSFT   Campi Flegrei      0.54 243     AML     AML
       comp=N,26350µm,0.2s
CSFT                                   AML     AML
       comp=E,19500µm,0.7s
CPOZ   Campi Flegrei,     0.56 243     P       Pg      08 54 10.1 -0.3
CPOZ                                   AML     AML
       comp=E,14900µm,0.7s
CPOZ                                   AML     AML
       comp=N,5595µm,1.0s
COL3   Colliano           0.57 132     P       Pb      08 54 10.4 -0.6
CIGN   Sant'Elia a Pi     0.59  10     P       Pn      08 54 11.8 -1.1
CIGN                                   AML     AML
       comp=E,2300µm,0.6s
CIGN                                   AML     AML
       comp=N,2530µm,1.5s
CIGN                                   AML     AML
       comp=N,2530µm,0.5s
MRLC   Muro Lucano        0.63 120     AML     AML
       comp=E,2235µm,0.7s
MRLC                                   AML     AML
       comp=E,4165µm,0.7s
MRLC                                   AML     AML
       comp=N,1520µm,0.5s
MRLC                                   AML     AML
       comp=E,4165µm,1.3s
MRLC                                   AML     AML
       comp=E,2235µm,1.3s
MRLC                                   AML     AML
       comp=N,3495µm,0.5s
VULT   Monte Vulture      0.65 100     P       Pn      08 54 12.8 -1.0
VULT                                   AML     AML
       comp=E,3765µm,0.7s
VULT                                   AML     AML
       comp=N,6945µm,0.9s
VULT                                   AML     AML
       comp=E,3895µm,1.5s
VULT                                   AML     AML
       comp=N,7090µm,0.9s
VULT                                   AML     AML
       comp=E,3895µm,0.5s
VULT                                   AML     AML
       comp=E,3765µm,0.7s
SCL3   Muro Lucano (S     0.68 124     P       Pn      08 54 13.6 -0.6
MODR   Mondragone         0.68 276     P       Pg      08 54 12.6 -0.1
MODR                                   AML     AML
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      comp=E,3870µm,0.7s
MODR                                AML    AML
      comp=E,3870µm,1.3s
MODR                                AML    AML
      comp=N,4290µm,0.9s
MELA  Melanico ??? S    0.68  23    P      Pn        08 54 12.7  -1.6
MELA                                AML    AML
      comp=N,5835µm,0.6s
MELA                                AML    AML
      comp=E,4755µm,0.9s
MELA                                AML    AML
      comp=E,4990µm,0.9s
MELA                                AML    AML
      comp=N,5675µm,0.6s
MIDA  Miranda           0.69 326    P      Pg        08 54 11.9  -1.1
MIDA                                AML    AML
      comp=E,4885µm,0.7s
MIDA                                AML    AML
      comp=E,3760µm,0.9s
MIDA                                AML    AML
      comp=E,3760µm,1.1s
MIDA                                AML    AML
      comp=N,4805µm,0.7s
MIDA                                AML    AML
      comp=N,3395µm,0.7s
CDRU  Civita di Ruta    0.71 145    P      Pb        08 54 12.2  -1.1
CDRU                                AML    AML
      comp=E,4960µm,0.6s
CDRU                                AML    AML
      comp=N,7200µm,0.7s
IOCA  Ischia Osserva    0.74 244    P      Pg        08 54 13.4  -0.4
IOCA                                AML    AML
      comp=N,6905µm,0.4s
IOCA                                AML    AML
      comp=E,9780µm,0.5s
IOCA                                AML    AML
      comp=E,9780µm,1.5s
CAGG  Caggiano          0.76 133    P      Pn        08 54 15.3  -0.1
CERA  Filignano         0.77 313    AML    AML
      comp=N,4015µm,0.8s
CERA                                AML    AML
      comp=E,3130µm,0.5s
CERA                                AML    AML
      comp=N,3905µm,0.8s
CERA                                AML    AML
      comp=E,3185µm,0.5s
CERA                                AML    AML
      comp=E,3185µm,1.5s
CERA                                AML    AML
      comp=E,3130µm,1.5s
RNI2  Rionero Sannit    0.78 323   ⇑P      Pg        08 54 13.8  -0.8
RNI2                                AML    AML
      comp=E,3940µm,1.6s
RNI2                                AML    AML
      comp=E,4045µm,1.6s
RNI2                                AML    AML
      comp=N,3645µm,0.6s
RNI2                                AML    AML
      comp=N,3765µm,0.6s
RNI2                                AML    AML
      comp=E,4045µm,0.4s
RNI2                                AML    AML
      comp=E,3940µm,0.4s
MCI   Monte Cassino     0.83 300    AML    AML
      comp=E,4085µm,0.4s
MCI                                 AML    AML
      comp=N,2915µm,0.7s
MCI                                 AML    AML
      comp=E,4085µm,1.6s
CMPR  Campora           0.86 152   ⇑P      Pb        08 54 15.4  -0.4
CMPR                                AML    AML
      comp=N,1295µm,0.4s
CMPR                                AML    AML
      comp=N,1295µm,1.6s
CMPR                                AML    AML
      comp=E,3350µm,0.4s
STN3  Satriano di Lu    0.86 129    AML    AML
STN3                                AML    AML
APRC  Apricena          0.89  40   ⇑P      Pn        08 54 16.9  -0.3
APRC                                AML    AML
      comp=E,6380µm,0.5s
APRC                                AML    AML
      comp=N,8530µm,0.6s
APRC                                AML    AML
      comp=E,6380µm,1.5s
FRES  Fresagrandinar    0.90 355    AML    AML
      comp=E,3765µm,0.4s
FRES                                AML    AML
      comp=N,3755µm,0.5s
PALZ  Palazzo San Ge    0.91  98    AML    AML
      comp=E,4445µm,0.4s
PALZ                                AML    AML
      comp=E,4445µm,1.6s
PALZ                                AML    AML
      comp=N,7725µm,0.8s
PALZ                                AML    AML
      comp=N,7725µm,1.2s
ACER  Acerenza          0.93 108    AML    AML
      comp=E,6160µm,1.4s
ACER                                AML    AML
      comp=E,6160µm,0.6s
ACER                                AML    AML
      comp=E,6465µm,0.6s
ACER                                AML    AML
      comp=E,6465µm,1.4s
ACER                                AML    AML
      comp=N,5840µm,0.5s
ACER                                AML    AML
      comp=N,5585µm,0.5s
SLCN  Sala Consilina    0.95 136    AML    AML
      comp=N,3690µm,0.9s
SLCN                                AML    AML
      comp=E,5125µm,0.6s
SLCN                                AML    AML
      comp=N,3190µm,0.6s
SLCN                                AML    AML
      comp=N,3690µm,1.1s
SLCN                                AML    AML
      comp=E,5125µm,1.4s
SLCN                                AML    AML
      comp=E,5270µm,0.7s
SGRT  San Giovanni R    1.00  47    P      Pn        08 54 19.3  +0.7
SGRT                                AML    AML
      comp=E,5575µm,1.1s
SGRT                                AML    AML
      comp=N,4215µm,0.8s
SGRT                                AML    AML
      comp=E,5575µm,0.9s
POFI  Posta Fibreno     1.02 309   ⇓P      Pg        08 54 19.0  -0.2
POFI                                AML    AML
      comp=N,929µm,0.4s
POFI                                AML    AML
      comp=N,708µm,0.4s
POFI                                AML    AML
      comp=E,1255µm,0.4s
POFI                                AML    AML
      comp=E,1014µm,0.4s
LRP   Arpino            1.06 303   ⇑P      Pg        08 54 19.6  -0.3
LRP                                 AML    AML
      comp=N,496µm,1.6s
LRP                                 AML    AML
      comp=N,496µm,0.4s
LRP                                 AML    AML
      comp=E,1460µm,1.1s
MSAG  Monte S. Angel    1.06  53   ⇑P      Pn        08 54 20.6  +1.0
MSAG                                AML    AML
      comp=E,3320µm,0.9s
MSAG                                AML    AML
      comp=N,5475µm,0.7s
MSAG                                AML    AML
      comp=E,1355µm,0.9s
MSAG                                AML    AML
      comp=N,2290µm,0.7s
MSAG                                AML    AML
      comp=E,3320µm,1.1s
MSAG                                AML    AML
      comp=N,2290µm,1.3s
MSAG                                AML    AML
      comp=N,5475µm,1.3s
MSAG                                AML    AML
      comp=E,1355µm,1.1s
LPEL  Lama dei Pelig    1.07 336    P      Pn        08 54 20.1  +0.5
LPEL                                AML    AML
      comp=E,1245µm,0.4s
LPEL                                AML    AML
      comp=N,1073µm,1.1s
LPEL                                AML    AML
      comp=N,1073µm,0.9s
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MRVN  Minervino Murg    1.08  90   ⇑P      Pn        08 54 20.6  +1.0
MRVN                                AML    AML
      comp=E,1024µm,0.8s
MRVN                                AML    AML
      comp=N,1375µm,0.9s
MCEL  Monticello        1.08 133    AML    AML
      comp=N,2390µm,0.6s
MCEL                                AML    AML
      comp=E,2620µm,1.6s
MCEL                                AML    AML
      comp=N,2360µm,0.6s
MCEL                                AML    AML
      comp=E,2630µm,1.6s
MCEL                                AML    AML
      comp=N,2360µm,1.4s
MCEL                                AML    AML
      comp=N,2390µm,1.4s
MCEL                                AML    AML
      comp=E,2630µm,0.4s
MCEL                                AML    AML
      comp=E,2620µm,0.4s
BULG  Bulgheria - Ca    1.10 155    P      Pn        08 54 19.8  -0.1
BULG                                AML    AML
      comp=E,1450µm,0.9s
BULG                                AML    AML
      comp=N,1960µm,1.1s
BULG                                AML    AML
      comp=E,1490µm,0.9s
BULG                                AML    AML
      comp=N,2000µm,1.1s
BULG                                AML    AML
      comp=N,2000µm,0.9s
BULG                                AML    AML
      comp=E,1490µm,1.1s
BULG                                AML    AML
      comp=E,1450µm,1.1s
BULG                                AML    AML
      comp=N,1960µm,0.9s
MGR   Morigerati        1.11 147    P      Pb        08 54 19.4  -0.6
MGR                                 AML    AML
      comp=N,1280µm,0.5s
MGR                                 AML    AML
      comp=N,1205µm,0.5s
MGR                                 AML    AML
      comp=E,924µm,0.4s
MGR                                 AML    AML
      comp=N,1280µm,1.5s
MGR                                 AML    AML
      comp=E,1038µm,0.5s
INTR  Introdacqua       1.14 325   ⇓P      Pn        08 54 21.3  +0.7
INTR                                AML    AML
      comp=E,2425µm,1.3s
INTR                                AML    AML
      comp=N,2980µm,0.7s
INTR                                AML    AML
      comp=E,2425µm,0.7s
VVLD  Villa Vallelon    1.18 313    P      Pg        08 54 20.6  -1.5
VVLD                                AML    AML
      comp=N,1260µm,0.6s
VVLD                                AML    AML
      comp=E,864µm,1.1s
VVLD                                AML    AML
      comp=N,1295µm,0.6s
VVLD                                AML    AML
      comp=E,864µm,0.9s
VVLD                                AML    AML
      comp=E,829µm,0.5s
SIRI  Monte Sirino -    1.22 137    AML    AML
      comp=E,1129µm,0.4s
SIRI                                AML    AML
      comp=E,1129µm,1.6s
SIRI                                AML    AML
      comp=N,1328µm,1.4s
SIRI                                AML    AML
      comp=E,1131µm,1.6s
SIRI                                AML    AML
      comp=N,1330µm,1.4s
SIRI                                AML    AML
      comp=E,1131µm,0.4s
SIRI                                AML    AML
      comp=N,1330µm,0.6s
SIRI                                AML    AML
      comp=N,1328µm,0.6s
GIUL  Giuliano Di Ro    1.24 293    P      Pn        08 54 20.9  -1.1
GIUL                                AML    AML
      comp=N,673µm,0.7s
GIUL                                AML    AML
      comp=N,673µm,1.3s
GIUL                                AML    AML
      comp=E,514µm,0.6s
SCHR  S. Chirico Rap    1.32 131    AML    AML
      comp=E,872µm,1.1s
SCHR                                AML    AML
      comp=E,872µm,0.9s
SCHR                                AML    AML
      comp=N,675µm,0.9s
MIGL  Miglionico        1.35 110    P      Pg        08 54 25.5  +0.1
MIGL                                AML    AML
      comp=E,2780µm,1.2s
MIGL                                AML    AML
      comp=N,3005µm,0.9s
MIGL                                AML    AML
      comp=E,2780µm,0.8s
T0110 Collepietro       1.37 327    P      Pb        08 54 24.5  -0.1
T0110                               AML    AML
      comp=E,1605µm,0.5s
T0110                               AML    AML
      comp=N,1575µm,0.5s
AMUR  Altamura          1.40  96    P      Pg        08 54 26.0  -0.3
AMUR                                AML    AML
      comp=E,880µm,1.0s
AMUR                                AML    AML
      comp=N,792µm,1.3s
AMUR                                AML    AML
      comp=N,792µm,0.7s
AMUR                                AML    AML
      comp=E,880µm,1.0s
LATB  Latina            1.43 288    P      Pn        08 54 23.1  -1.3
LATB                                AML    AML
      comp=E,336µm,1.3s
LATB                                AML    AML
      comp=N,171µm,1.6s
LATB                                AML    AML
      comp=N,171µm,0.4s
LATB                                AML    AML
      comp=E,336µm,0.7s
FAGN  Fagnano           1.49 324    P      Pn        08 54 25.3   0.0
FAGN                                AML    AML
      comp=N,1335µm,1.4s
FAGN                                AML    AML
      comp=N,1335µm,0.6s
FAGN                                AML    AML
      comp=E,1935µm,0.5s
VCEL  Villa Celiera     1.49 332    P      Pg        08 54 27.7  -0.4
VCEL                                AML    AML
      comp=E,1545µm,0.6s
VCEL                                AML    AML
      comp=N,1080µm,0.7s
CERT  Cerreto           1.60 304    P      Pn        08 54 27.0  +0.1
CERT                                AML    AML
      comp=E,470µm,0.8s
CERT                                AML    AML
      comp=N,320µm,1.1s
CERT                                AML    AML
      comp=E,470µm,1.2s
CERT                                AML    AML
      comp=N,320µm,0.9s
LTRZ  Laterza           1.62 106    P      Pg        08 54 28.9  -1.7
LTRZ                                AML    AML
      comp=E,572µm,0.6s
LTRZ                                AML    AML
      comp=N,705µm,1.1s
LTRZ                                AML    AML
      comp=N,27µm,0.4s
LTRZ                                AML    AML
      comp=N,705µm,0.9s
LTRZ                                AML    AML
      comp=E,650µm,0.6s
SALB  San Lorenzo Be    1.69 134    P      Pg        08 54 31.3  -0.7
SALB                                AML    AML
      comp=N,420µm,0.5s
SALB                                AML    AML
      comp=E,572µm,0.5s
CET2  Cetraro           1.79 149    P      Pb        08 54 30.9  -0.8
CET2                                AML    AML
      comp=E,1106µm,0.9s
CET2                                AML    AML
      comp=N,1595µm,0.6s
```

```
CET2                                AML    AML
      comp=E,1106µm,1.1s
CAR1  CAROLEI           2.13 148    P      Pb        08 54 36.2  -1.2
CAR1                                AML    AML
      comp=N,466µm,0.6s
CAR1                                AML    AML
      comp=E,522µm,0.6s
CAR1                                AML    AML
      comp=N,416µm,0.6s
CAR1                                AML    AML
      comp=E,550µm,0.7s
CAR1                                AML    AML
      comp=N,416µm,1.4s
MF5   Montefalcone A    2.15 333    P      Pb        08 54 37.9  +0.1
MF5                                 AML    AML
      comp=E,366µm,0.5s
MF5                                 AML    AML
      comp=N,494µm,0.7s
MNTT  Montottone        2.17 337    P      Pb        08 54 38.1  -0.1
SNTG  Esanatoglia       2.57 329    P      Pn        08 54 42.7  +2.5
SNTG                                AML    AML
      comp=E,136µm,0.8s
SNTG                                AML    AML
      comp=N,160µm,0.7s
SNTG                                AML    AML
      comp=N,160µm,1.3s
EL6   Elcito            2.57 332    P      Pb        08 54 43.1  -2.0
EL6                                 AML    AML
      comp=E,299µm,1.0s
EL6                                 AML    AML
      comp=N,486µm,0.8s
EL6                                 AML    AML
      comp=E,299µm,1.0s
NARO  Abbazia di Nar    3.01 328    AML    AML
      comp=E,98µm,0.5s
NARO                                AML    AML
      comp=E,98µm,1.5s
NARO                                AML    AML
      comp=N,92µm,0.7s
BOJS  Bojanci           4.44   4    AML    AML
      comp=N,430µm,0.5s
BOJS                                AML    AML
      comp=E,458µm,0.5s
OBKA  Obir              5.43 358  i Pn     Pn        08 55 20.9  +1.3
      comp=E,5.1nm,0.3s,SNR=5.9
OBKA                              i Sn     Sn        08 56 16.8  -5.0
      comp=E,0.1nm,0.1s
SOKA  Soboth            5.60   2  i Pn     Pn        08 55 22.6  +0.7
      comp=E,0.5nm,0.2s
SOKA                              i Sn     Sn        08 56 26.3  +0.4
      comp=E,9.8nm,0.6s
MYKA  Terra Mystica     5.61 352  i Pn     Pn        08 55 24.4  +2.4
      comp=E,1.1nm,0.2s
MYKA                              i Sn     Sn        08 56 25.8  -0.2
      comp=E,12nm,0.5s
ABTA  Abfaltersbach     5.90 345  i Pn     Pn        08 55 27.8  +1.8
      comp=E,1.1nm,0.2s
ABTA                              i Sn     Sn        08 56 34.3  +1.1
      comp=E,2.6nm,0.3s
KBA   Koelnbreinsper    6.09 351  i Pn     Pn        08 55 30.7  +2.1
      comp=E,0.6nm,0.3s
KBA                               eSn      Sn        08 56 36.7  -1.3
      comp=E,2.7nm,0.4s
ARSA  Arzberg           6.20   5  ePn      Pn        08 55 32.7  +2.7
      comp=E,1.2nm,0.4s
ARSA                              eSn      Sn        08 56 37.7  -2.7
      comp=E,0.4nm,0.2s
LESA  Schwarzleotal     6.52 347  i Pn     Pn        08 55 37.1  +2.5
      comp=E,7.9nm,0.5s,SNR=6.3
LESA                              i Sn     Sn        08 56 49.8  +1.3
      comp=E,12nm,0.5s
WTTA  Wattenberg        6.58 341  i Pn     Pn        08 55 40.6  +5.2
      comp=E,0.5nm,0.2s
WTTA                              eSn      Sn        08 56 52.6  +2.4
      comp=E,1.9nm,0.3s
FETA  Feichten          6.62 335  i Pn     Pn        08 55 39.8  +3.9
      comp=E,1.4nm,0.3s
FETA                              eSn      Sn        08 56 52.4  +1.4
      comp=E,0.6nm,0.4s
SQTA  Sankt Quirin      6.66 339  i Pn     Pn        08 55 38.0  +1.6
      comp=E,0.4nm,0.2s
SQTA                              i Sn     Sn        08 56 53.4  +1.5
      comp=E,6.9nm,0.4s
BIOA  Bad Ischl, Aus    6.66 353  ePn      Pn        08 55 38.7  +2.3
      comp=E,10nm,0.3s,SNR=5.9
BIOA                              i Sn     Sn        08 56 50.8  -1.1
      comp=E,0.5nm,0.2s
WATA  Walderalm         6.67 341  i Pn     Pn        08 55 39.7  +3.1
      comp=E,4.3nm,0.4s
WATA                              i Sn     Sn        08 56 55.2  +3.0
      comp=E,1.2nm,0.2s
RONA  Rosalia, Austr    6.71   9  i Pn     Pn        08 55 39.5  +2.4
      comp=E,0.5nm,0.2s
RONA                              eSn      Sn        08 56 51.0  -2.1
      comp=E,2.4nm,0.3s
MOA   Molln             6.78 357  i Pn     Pn        08 55 39.8  +1.8
      comp=E,0.5nm,0.1s,SNR=13
MOA                               eSn      Sn        08 56 55.0  +0.2
      comp=E,13nm,0.5s
KEST  Kesra             6.83 220    Pn     Pn        08 55 39.7  +1.0
      comp=E,0.8nm,0.3s,baz=149,slow=6.3,SNR=5.0
      comp=E,2.3nm,0.4s
CONA  Conrad Observa    6.90   6  i Pn     Pn        08 55 40.8  +1.1
      comp=E,3.1nm,0.4s
CONA                              i Sn     Sn        08 56 55.8  -1.9
      comp=E,4.3nm,0.5s
GERES GERESS Array B    7.81 355    Pn     Pn        08 55 52.5  +0.4
      comp=E,0.3nm,0.3s,baz=172,slow=13,SNR=24
GERES                               Sn     Sn        08 57 18.2  -1.9
      comp=E,0.3nm,0.3s,baz=167,slow=24,SNR=24
      comp=E,3.6nm,0.4s
FINES FINESS Array B   21.52  15    P      P         08 58 48.6  +1.4
      comp=E,1.7nm,0.7s,baz=195,slow=9.9,SNR=4.6
      comp=E,1.7nm,0.7s
MKAR  Makanchi Array   47.61  59    P      P         09 02 39.2  +5.1
      comp=E,0.1nm,0.4s,baz=282,slow=7.2,SNR=1.6
      comp=E,0.1nm,0.4s
```

IDC 16 09:07:09.2±3.7, 18.68N×146.05E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=157.2km s-min=25.7km az=83.0, Mariana Islands

```
Code  Station Name       Δ°   AZ°    Phase ID          Time       Res
                                     Op     ISC        h  m  s    ISC
WRA   Warramunga Arr   40.06 197     P      P          09 14 46.1 -0.4
      0.3nm,0.7s,baz=18,slow=7.8,SNR=3.7
      0.3nm,0.7s
ASAR  Alice Springs    43.73 196     P      P          09 15 16.4  0.0
      0.3nm,1.0s,baz=15,slow=12,SNR=3.8
      0.3nm,1.0s
MKAR  Makanchi Array   58.72 314     P      P          09 17 09.6 +0.7
      0.4nm,0.7s,baz=90,slow=8.2,SNR=5.0
      0.4nm,0.7s
BVAR  Borovoye Array   66.70 320     P      P          09 18 01.6 -0.5
      0.4nm,0.3s,baz=77,slow=7.7,SNR=3.6
      0.4nm,0.3s
FINES FINESS Array B   87.04 335     P      P          09 19 56.2 -0.3
      2.8nm,1.0s,baz=46,slow=4.0,SNR=3.7
      2.8nm,1.0s
```

IDC 16 09:11:39.3±1.4, 6.60N×125.15E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=33.6km s-min=9.5km az=123.0, Mindanao

```
Code  Station Name       Δ°   AZ°    Phase ID          Time       Res
                                     Op     ISC        h  m  s    ISC
DAV   Davao City (W)    0.63  42     Pg     Pb         09 11 52.7 -0.5
      153nm,0.3s,baz=114,slow=4.3,SNR=7.5
DAV                                  Lg     Lg         09 11 59.1
      464nm,0.3s,baz=58,slow=20,SNR=13
FITZ  Fitzroy Crossi   24.55 179     P      P          09 17 00.6 -0.3
      0.6nm,0.4s,baz=330,slow=8.1,SNR=9.1
      0.6nm,0.4s
WRA   Warramunga Arr   27.88 161     P      P          09 17 31.4 +0.3
      0.5nm,0.8s,baz=330,slow=10.0,SNR=2.0
      0.5nm,0.8s
ASAR  Alice Springs    31.27 164     P      P          09 18 00.6 -0.5
      0.1nm,0.4s,baz=347,slow=8.9,SNR=5.0
      0.1nm,0.4s
MKAR  Makanchi Array   54.32 325     P      P          09 21 07.3 -0.3
      0.1nm,0.5s,baz=123,slow=7.1,SNR=2.1
      0.1nm,0.5s
```

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*IDC **16** 09:15:25.5±1.0, 6.48N×125.36E, h0km, mb3.8/6, mbtmp3.8/6, MS3.1/1, Error ellipse: s-maj=31.5km*

s-min=8.1km az=103.0

*DJA **16** 09:15:27.7±0.6, 7°N±5°×12°5E±°, h10^{km}, M4.8/6, mb5.0/6, mB5.4/4, MLv4.7/6, Mw(mB)4.8/4*

*NEIC **16** 09:15:27.6±1.1, 6°.51N±0°.06×125°.35E±0°.05, h10^{km}±2^{km}, mb4.2/12, Error ellipse: s-maj=10.1km s-min=7.9km az=148.0*

ISC 16 09:15:27.0±0.8**, 6°.55N**±0°.06×**125°.3E**±0°.1**, h10**^{km}**, n33,** σ1^{s}**32**/31**, mb4.1**/11**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.60	31	Pg	Pg	09 15 39.0	+0.3
	1μm,0.3s,baz=26,slow=4.1,SNR=29						
DAV				Lg	Lg	09 15 44.8	
	2μm,0.3s,baz=65,slow=21,SNR=20						
DAV				LR	LR	09 16 12.0	
	comp=Z,659nm,18.9s,baz=250,slow=74						
DAV	Davao City (W)	0.60	31	P	Pg	09 15 38.7	0.0
DAV	Davao City (W)	0.60	31	P	Pg	09 15 39.2	+0.5
DAV				S	Sg	09 15 45.6	-1.0
SGSI	Sangihe	2.86	175	P	Pn	09 16 15.0	+2.4
SGSI	Sangihe	2.86	175	P	Pb	09 16 18.0	-0.1
GTOI	Gorontalo	6.29	201	P	Pn	09 17 00.9	+1.0
GTOI	Gorontalo	6.29	201	P	Pn	09 17 01.1	+1.2
	3μm289nm,0.7s						
MRSI	Marisa	6.88	209	P	Pn	09 17 09.7	+1.7
	0.4nm1μm82nm,0.5s						
MRSI	Marisa	6.88	209	P	Pn	09 17 07.3	-0.7
	0.4nm1μm83nm,0.6s						
TOLI2	Tolitoli	7.01	220	Pn	Pn	09 17 09.6	-0.2
LUWI	Luwuk	7.94	198	Pn	Pn	09 17 19.2	-3.3
LUWI	Luwuk	7.94	198	P	Pn	09 17 21.0	-1.6
APSI	Ampana	8.24	206	P	Pn	09 17 28.9	+2.2
SANI	Sanana	8.57	175	P	Pn	09 17 32.1	+0.9
SANI	Sanana	8.57	175	P	Pn	09 17 32.3	+1.1
MTN	Manton Dam	20.13	163		P	09 20 01.5	+0.2
MTN				IAmb	IAmb	09 20 13.8	
	comp=Z,11nm,1.1s						
KNRA	Kununurra	22.35	171	P	P	09 20 25.4	+0.1
FITZ	Fitzroy Crossi	24.50	179	P	P	09 20 45.9	-0.7
	comp=Z,1.7nm,0.4s,baz=1.8,slow=11,SNR=8.2						
	comp=Z,1.7nm,0.4s						
COEN	Coen	27.04	139	P	P	09 21 08.7	-1.0
WB0	Warramunga Arr	27.65	161	P	P	09 21 14.1	-1.1
WB0				IAmb	IAmb	09 21 31.0	
	comp=Z,7.4nm,1.2s						
WRAB	Tennant Creek	27.80	161	P	P	09 21 14.4	-2.0
WRAB				IAmb	IAmb	09 21 54.0	
	comp=Z,3.5nm,1.1s						
WRA	Warramunga Arr	27.80	161	P	P	09 21 15.2	-1.3
	comp=Z,0.8nm,0.6s,baz=329,slow=11,SNR=7.9						
	comp=Z,0.8nm,0.6s						
WR8	Warramunga Arr	27.86	161	P	P	09 21 16.5	-0.5
WR8				IAmb	IAmb	09 21 32.0	
	comp=Z,5.5nm,1.3s						
JHJ	Hachijo jima 2	29.68	25	LR	LR	09 34 29.8	
	comp=Z,35nm,18.2s,baz=317,slow=38						
AS31	Alice Springs	31.20	165	P	P	09 21 45.6	-1.0
ASAR	Alice Springs	31.20	165	P	P	09 21 45.5	-1.0
	comp=Z,0.9nm,0.5s,baz=346,slow=7.4,SNR=30						
	comp=Z,0.9nm,0.5s						
BBOO	Buckleboo	40.47	166	P	P	09 23 05.7	-0.2
BBOO				IAmb	IAmb	09 23 06.1	
	comp=Z,4.7nm,0.6s						
STKA	Stephens Creek	41.27	159	P	P	09 23 11.9	-0.6
	comp=Z,1.3nm,0.5s,baz=320,slow=6.9,SNR=5.0						
	comp=Z,1.3nm,0.5s						
STKA	Stephens Creek	41.27	159	IAmb	IAmb	09 23 19.6	
	comp=Z,34nm,1.4s						
MKAR	Makanchi Array	54.42	325	P	P	09 24 54.8	+0.4
	comp=Z,0.1nm,0.3s,baz=115,slow=9.7,SNR=2.1						
	comp=Z,0.1nm,0.3s						
KURBB	Kurchatov Arra	58.59	327	P	P	09 25 25.4	+1.4
	comp=Z,0.5nm,0.3s,baz=125,slow=6.7,SNR=4.9						
	comp=Z,0.5nm,0.3s						
KURK	Kurchatov	58.59	327	P	P	09 25 25.4	+1.4
KURK	Kurchatov	58.59	327	IAmb	IAmb	09 25 34.6	
	comp=Z,2.3nm,0.8s						

IDC 16 09:39:16.1±2.9**, 1°.11N**×**127°.71E, h0**^{km}**, mb3.3**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=245.4km s-min=28.4km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.91	163	P	P	09 44 09.8	-1.4
	0.8nm,0.9s,baz=342,slow=10,SNR=5.4						
	0.8nm,0.9s						
ASAR	Alice Springs	25.36	167	P	P	09 44 46.0	+0.9
	0.8nm,0.7s,baz=343,slow=11,SNR=13						
	0.8nm,0.7s						
MKAR	Makanchi Array	60.25	326	P	P	09 49 26.2	-0.2
	0.1nm,0.4s,baz=117,slow=7.2,SNR=2.8						
	0.1nm,0.4s						

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*CATAC **16** 09:47:11.9±0.6, 12°N±3°×9°0W±°, h11^{km}±7^{km}, M3.5/18, MLv3.5/18, Error ellipse: s-maj=11.3km s-min=4.0km az=54.8, confirmed*

*SNET **16** 09:47:12.0±0.9, 12°.03N×89°.65W, h64^{km}±999^{km}, ML3.4*

*GCG **16** 09:47:15.0±0.9, 12°.22N×89°.83W, h36^{km}±17^{km}, MD4.6, ML3.6, MW2.6*

ISC 16 09:47:15.8±2.1**, 12°.16N**±0°.09×**89°.59W**±0°.07**, h35**^{km}**, n70,** σ1^{s}**43**/70**, 1C, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	Alcalda de L	1.35	11	S	Sn	09 47 55.8	+1.0
LALI	Alcalda de L	1.35	11	P	Pn	09 47 37.1	-1.0
JAYA	Jayaque - finc	1.49	5	*e*P	Pn	09 47 38.5	-1.8
JAYA				*e*S	Sn	09 47 58.5	-0.2
JAYA	Jayaque - finc	1.49	5	*i* P	Pn	09 47 38.8	-1.6
JAYA	Jayaque - finc	1.49	5	P	Pn	09 47 38.5	-1.8
JAYA	Jayaque - finc	1.49	5	S	Sn	09 47 59.6	+0.9
PANCS	Alcalda de	1.50	16	S	Sn	09 47 59.3	+0.6
LOMA	Loma Larga	1.53	15	P	Pn	09 47 39.1	-1.8
LOMA	Loma Larga	1.53	15	S	Sn	09 47 59.8	+0.1
PMON	Piamonte	1.57	10	P	Pn	09 47 40.1	-1.3
PMON	Piamonte	1.57	10	S	Sn	09 48 00.9	+0.4
UTEC	Universidad Te	1.58	14	S	Sn	09 48 01.3	+0.6
UTEC	Universidad Te	1.58	14	P	Pn	09 47 40.1	-1.3
TECO	Alcaldia de Te	1.58	30	S	Sn	09 48 02.3	+1.6
TECO	Alcaldia de Te	1.58	30	P	Pn	09 47 40.1	-1.3
UEES	Universidad Ev	1.59	12	P	Pn	09 47 40.3	-1.2
UEES	Universidad Ev	1.59	12	S	Sn	09 48 01.3	+0.4
BOQS	Boqueron	1.60	11	*e*P	Pn	09 47 40.8	-1.0
UDBS	Universidad Do	1.60	15	P	Pn	09 47 40.6	-1.2
UDBS	Universidad Do	1.60	15	S	Sn	09 48 02.6	+1.3
CEDA	San Andres	1.65	7	S	Sn	09 48 03.4	+1.1
CEDA	San Andres	1.65	7	P	Pn	09 47 40.7	-1.6
CEVE	Cerro Verde	1.66	359	*e*P	Pn	09 47 41.2	-1.5
CEVE	Cerro Verde	1.66	359	P	Pn	09 47 41.4	-1.3
CEVE	Cerro Verde	1.66	359	S	Sn	09 48 03.9	+1.0
UESV	Universidad de	1.67	28	S	Sn	09 48 04.5	+1.7
UESV	Universidad de	1.67	28	P	Pn	09 47 41.5	-1.1
SBLS	San Blas	1.67	359	*e*P	Pn	09 47 41.2	-1.7
PAVA	Las Pavas	1.67	22	*e*P	Pn	09 47 41.4	-1.3
PAVA	Las Pavas	1.67	22	P	Pn	09 47 41.7	-1.1
PAVA	Las Pavas	1.67	22	S	Sn	09 48 05.0	+2.0
TECA	Tecapa	1.70	39	*e*P	Pn	09 47 41.4	-1.8
FAME	Alcaldia de Sa	1.72	346	P	Pn	09 47 41.3	-2.1
RTR	El Retiro	1.73	358	*e*P	Pn	09 47 42.2	-1.4
NUBE	Las Nubes	1.74	354	*e*P	Pn	09 47 42.0	-1.8
NUBE	Las Nubes	1.74	354	*i* P	Pn	09 47 42.0	-1.8
NUBE				*e*S	Sn	09 48 04.1	-0.7
NUBE	Las Nubes	1.74	354	P	Pn	09 47 42.1	-1.6
SCLA	Alcaldia de Sa	1.75	29	*e*P	Pn	09 47 42.4	-1.4
SCLA	Alcaldia de Sa	1.75	29	P	Pn	09 47 42.7	-1.1
SCLA	Alcaldia de Sa	1.75	29	S	Sn	09 48 07.1	+2.2
PACA	Pacayal	1.80	43	*e*P	Pn	09 47 43.4	-1.1
PACA	Pacayal	1.80	43	S	Sn	09 48 07.8	+1.6
PACA	Pacayal	1.80	43	P	Pn	09 47 43.5	-1.0
UNIC	Universidad Ca	1.81	1	P	Pn	09 47 43.6	-1.1
UNIC	Universidad Ca	1.81	1	S	Sn	09 48 07.4	+0.9
CNRM	Centro Naciona	1.91	47	S	Sn	09 48 10.7	+2.0
RBDL	Robledal	1.94	357	⇑*e*P	Pn	09 47 45.3	-1.3
LCND	La Caada	2.02	55	*e*P	Pn	09 47 45.8	-1.6
CNCH	Conchagua	2.04	57	*e*P	Pn	09 47 46.5	-1.3
CNCH	Conchagua	2.04	57	S	Sn	09 48 13.5	+1.3
CNCH	Conchagua	2.04	57	P	Pn	09 47 46.2	-1.7
LLGN	La Laguna	2.09	17	P	Pn	09 47 48.1	-0.4
LLGN	La Laguna	2.09	17	S	Sn	09 48 15.4	+2.1
PCG5	San Vicente Pa	2.18	340	*i* P	Pn	09 47 51.8	+2.0
MTO3	Montecristo	2.24	6	*e*P	Pn	09 47 49.8	-0.9
MTO3	Montecristo	2.24	6	*i* P	Pn	09 47 49.7	-1.0
MTO3	Montecristo	2.24	6	P	Pn	09 47 49.8	-0.9
MTO3	Montecristo	2.24	6	S	Sn	09 48 18.5	+1.3
FG16	Alotenango, Sa	2.28	337	*e*P	Pn	09 47 53.2	+1.9
ZAFR2	Estanzuela, Za	2.42	6	*i* P	Pn	09 47 57.6	+4.7
TELN	Telica	2.73	80	S	Sn	09 48 29.8	+0.6
POLN	Al Sur del Vol	2.76	80	P	Pn	09 47 57.1	-0.5
STG5	El Palmar, Qui	2.81	323	*i* P	Pn	09 48 00.9	+2.5
CNGA	Al SSO del Vol	2.84	83	S	Sn	09 48 32.5	+0.6
CNGN	Cerro Negro	2.85	83	S	Sn	09 48 32.8	+0.8
CNGN	Cerro Negro	2.85	83	P	Pn	09 47 58.0	-0.8
STG8	El Palmar, Qui	2.85	323	*i* P	Pn	09 48 01.6	+2.5
STG8				*e*S	Sn	09 48 37.0	+4.7
STG8				IAML		09 48 43.3	
	comp=E,168nm,0.2s						
APG	El Apazote	2.95	343	*i* P	Pn	09 47 59.5	-1.0
MOM2	El Cardon	3.05	84	P	Pn	09 48 01.0	-0.6
MOM2				S	Sn	09 48 37.8	+0.9
LIMN	Finca el Limon	3.27	74	P	Pn	09 48 04.1	-0.7
LIMN				S	Sn	09 48 43.4	+0.8

IDC 16 09:53:44.6±588.0**, 58°.03N**×**62°.86E, h0**^{km}**, Error ellipse: s-maj=311.2km s-min=152.9km az=51.0, Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	12.93	99	I	I	11 13 30.0	
	0.1nm,1.4s,baz=296,slow=317,SNR=0.3						
I34MN	SONGINO INFRAS	27.71	93	I	I	12 42 30.0	
	baz=307,slow=334,SNR=0.7						
I18DK	QAANAAQ INFRAS	41.55	346	I	I	14 07 00.0	
	baz=33,slow=342,SNR=0.9						
I53US	FAIRBANKS INFR	55.22	15	I	I	15 43 00.0	
	baz=339,slow=334,SNR=1.0						

IDC 16 10:14:07.6±3.8**, 6°.39N**×**125°.35E, h0**^{km}**, mb3.1**/3**, mbtmp3.1**/3**, Error ellipse: s-maj=388.3km s-min=30.2km az=65.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.62	162	P	P	10 19 55.5	-1.5
	0.2nm,0.7s,baz=340,slow=9.1,SNR=1.7						
	0.2nm,0.7s						
ASAR	Alice Springs	31.02	165	P	P	10 20 28.5	+1.3
	0.2nm,0.6s,baz=342,slow=8.1,SNR=4.9						
	0.2nm,0.6s						
MKAR	Makanchi Array	54.60	325	P	P	10 23 37.9	-0.1
	0.1nm,0.6s,baz=134,slow=6.2,SNR=1.4						
	0.1nm,0.6s						

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*PRE **16** 10:36:06.2±1.3, 26°.04S×29°.35E, h0^{km}, ML2.6, Suspected explosion*

*IDC **16** 10:36:07.3±8.8, 26°.01S×29°.21E, h0^{km}, mbtmp2.8/1, ML2.2/1, Error ellipse: s-maj=94.7km s-min=57.1km az=143.0*

ISC 16 10:36:06.8±1.0**, 26°.04S**±0°.05×**29°.36E**±0°.05**, h0**^{km}**, n9,** σ**0**^{s}**67**/13**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRLN	Carolina, Mapu	0.60	86	*e*P	Pg	10 36 18.4	+0.1
CRLN				*e*S	Sg	10 36 25.3	-0.9
CRLN				IAML		10 36 33.4	
	comp=Z,197nm,0.7s						
HRAO	HartRAO	1.51	275	*e*P	Pn	10 36 35.5	+0.3
HRAO				*e*S	Sn	10 36 56.7	+1.0
HRAO				IAML		10 36 59.2	
	comp=Z,64nm,0.2s						
PILG	Pilgrimsrest,	1.65	48	*e*P	Pb	10 36 38.1	0.0
PILG				*e*S	Sg	10 37 00.6	+0.9
PILG				IAML		10 37 04.9	
	comp=Z,192nm,0.5s						
NWCL	Newcastle	1.76	164	*e*P	Pn	10 36 38.6	0.0
NWCL				*e*S	Sn	10 37 02.1	+0.3
NWCL				IAML		10 37 07.6	
	comp=Z,97nm,0.6s						
LEPH	Lephalale, Lim	2.59	327	*e*P	Pn	10 36 50.2	+0.2
LEPH				*e*S	Sn	10 37 21.4	-0.8
LEPH				IAML		10 37 33.1	
	comp=Z,25nm,0.5s						
LBTB	Lobatse	3.54	286	*e*P	Pn	10 37 03.1	0.0
LBTB				*e*S	Sn	10 37 44.9	-1.0
LBTB				IAML		10 38 02.9	
	comp=Z,23nm,0.5s						
BOSA	Boshof	4.46	234	Pn	Pn	10 37 15.7	-0.1
	comp=Z,0.1nm,0.3s,baz=56,slow=14,SNR=1.4						
BOSA				Lg	Lg	10 38 25.5	
	comp=Z,2.7nm,0.3s,baz=155,slow=20,SNR=11						
	comp=Z,1.5nm,0.7s						
I47ZA	BOSHOF INFRASO	4.48	234	I	I	11 05 50.0	
	baz=55,slow=308,SNR=2.1						
I35NA	TSUMEB INFRASO	12.83	300	I	I	11 53 20.0	
	baz=120,slow=311,SNR=2.9						

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*PRU **16** 10:36:13.4, 42°.89N×10°.80E, h327^{km}*

*RISSC **16** 10:36:15.4, 41°.02N×14°.72E, h6^{km}, ML2.2/24*

*ROM **16** 10:36:15.5±0.1, 41°.082N±0°.004×14°.736E±0°.005, h11^{km}, ML3.8/249, Mw3.9, Error ellipse: s-maj=0.4km s-min=0.3km az=347.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.00; $M_{\theta\theta}$-7.14; $M_{\phi\phi}$8.13; $M_{r\theta}$-2.46; $M_{\theta\phi}$-5.75; $M_{\phi r}$0.52; Fault plane solution: M_{0}9.90689×10^{14} NP1:ϕ_{s}117.00000°, δ85.00000°, λ-165.00000°. NP2:ϕ_{s}26.00000°, δ75.00000°, λ-5.00000°.*

*IDC **16** 10:36:15.3±1.7, 41°.21N×14°.60E, h0^{km}, mb3.7/3, mbtmp3.8/8, ML3.7/4, MS3.3/12 Error ellipse: s-maj=25.2km s-min=14.7km az=60.0*

*PDG **16** 10:36:15.6±0.5, 41°.04N×14°.81E, h14^{km}, ML3.8/11, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*

*BEO **16** 10:36:17.4±0.5, 41°.06N×14°.70E, h16^{km}±3^{km}, ML3.4/22*

ISC 16 10:36:16.1±0.7**, 41°.07N**±0°.02×**14°.73E**±0°.02**, h14**^{km}±4^{km}**, n145,** σ1^{s}**64**/220**, mb3.6**/3**, MS3.5**/7**, 28C-16D, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BENI	Universita' De	0.07	30	⇓*i*P	Pg	10 36 18.6	-0.3
BENI				*i* S	Sg	10 36 21.5	+0.6
PAOL	Paolisi	0.13	252	⇑P	Pg	10 36 19.1	-0.6
PAOL				S	Sg	10 36 22.2	+0.1
PAOL				AML	AML		
	comp=N,46100μm,1.2s						
PAOL				AML	AML		
	comp=N,48100μm,0.6s						
PAOL				AML	AML		
	comp=N,46150μm,1.1s						
PAOL				AML	AML		
	comp=E,36850μm,0.6s						
PAOL				AML	AML		
	comp=E,36721μm,0.7s						
PAOL				AML	AML		
	comp=E,35248μm,0.7s						
PAOL				AML	AML		
	comp=N,48061μm,0.6s						
PAOL				AML	AML		
	comp=N,46150μm,0.9s						
PAOL				AML	AML		
	comp=N,45994μm,0.6s						
PAOL				AML	AML		
	comp=E,35350μm,0.6s						
VITU	Vitulano (BN)	0.13	327	⇓P	Pg	10 36 18.7	-1.1
VITU				S	Sg	10 36 22.1	-0.2
VITU				AML	AML		
	comp=E,67100μm,0.8s						
VITU				AML	AML		
	comp=N,86550μm,1.5s						
VITU				AML	AML		
	comp=E,30550μm,0.2s						
VITU				AML	AML		
	comp=N,84550μm,1.5s						
VITU				AML	AML		
	comp=N,86500μm,1.5s						
VITU				AML	AML		
	comp=N,84550μm,0.5s						
VITU				AML	AML		
	comp=E,64577μm,0.5s						
VITU				AML	AML		
	comp=N,82076μm,0.3s						
VITU				AML	AML		
	comp=N,80258μm,0.3s						
VITU				AML	AML		
	comp=N,86500μm,0.5s						
VITU				AML	AML		
	comp=E,30600μm,0.2s						
VITU				AML	AML		
	comp=E,30595μm,0.2s						
MRB1	Monte Rocchett	0.19	73	⇑P	Pg	10 36 20.2	-0.4
MRB1				S	Sg	10 36 23.8	+0.1
MRB1				AML	AML		
MRB1				AML	AML		
MRB1				AML	AML		
MRB1				AML	AML		
MRB1				AML	AML		
MRB1				AML	AML		
MRB1				AML	AML		
MRB1				AML	AML		
MRB1				AML	AML		
MRB1				AML	AML		
MRB1				AML	AML		
LGS3	Luogosano	0.22	113	*i* P	Pg	10 36 20.4	-0.6
LGS3				*i* S	Sg	10 36 24.7	+0.5
MTMR	Montemarano	0.26	126	⇓P	Pg	10 36 20.8	-0.9
MTMR				S	Sg	10 36 25.1	-0.4
MTMR				AML	AML		
	comp=N,46150μm,0.5s						
MTMR				AML	AML		
	comp=E,37950μm,0.3s						
MTMR				AML	AML		
	comp=N,44850μm,0.5s						
MTMR				AML	AML		
	comp=E,37800μm,0.3s						
MTMR				AML	AML		
	comp=N,46200μm,0.5s						
MTMR				AML	AML		
	comp=N,44900μm,0.5s						
MTMR				AML	AML		
	comp=N,46200μm,1.5s						
MTMR				AML	AML		
	comp=N,44900μm,1.5s						
MTMR				AML	AML		
	comp=E,37775μm,0.3s						
MTMR				AML	AML		
	comp=E,37934μm,0.3s						
MTMR				AML	AML		
	comp=N,42632μm,0.4s						
MTMR				AML	AML		
	comp=N,44059μm,0.4s						
MNT3	Montella	0.32	138	⇓*i*P	Pg	10 36 21.7	-1.0
MNT3				*i* S	Sg	10 36 27.3	+0.2
MNT3	Montella	0.32	138	AML	AML		
MNT3				AML	AML		
	comp=E,96300μm,0.5s						
MNT3				AML	AML		
	comp=E,96283μm,0.5s						
MNT3				AML	AML		
SACR	S. Croce Del S	0.33	357	⇓P	Pg	10 36 22.5	-0.4
SACR				AML	AML		
	comp=E,9250μm,1.0s						
SACR				AML	AML		
	comp=N,9330μm,0.8s						
SACR				AML	AML		
	comp=E,9755μm,0.7s						
SACR				AML	AML		
	comp=N,10015μm,0.7s						
SACR				AML	AML		
	comp=E,11250μm,1.6s						
SACR				AML	AML		
	comp=N,9335μm,0.8s						
SACR				AML	AML		
	comp=E,10520μm,1.6s						
SACR				AML	AML		
	comp=E,9764μm,0.7s						
SACR				AML	AML		
	comp=N,10015μm,1.3s						
SACR				AML	AML		
	comp=N,10032μm,0.7s						
SACR				AML	AML		
	comp=N,9335μm,1.2s						
SACR				AML	AML		
	comp=E,9245μm,1.0s						
PTRJ	Pietraroja	0.33	333	⇓P	Pg	10 36 22.0	-1.0
PTRJ				S	Sg	10 36 27.4	-0.2
PTRJ				AML	AML		
	comp=N,9880μm,0.7s						
PTRJ				AML	AML		
	comp=E,12250μm,1.5s						
PTRJ				AML	AML		
	comp=E,46μm,1.6s						
PTRJ				AML	AML		
	comp=N,12050μm,0.7s						
PTRJ				AML	AML		
	comp=E,12250μm,0.5s						
PTRJ				AML	AML		
	comp=N,12050μm,1.3s						
PTRJ				AML	AML		
	comp=N,10627μm,0.3s						
PTRJ				AML	AML		
	comp=E,38μm,0.5s						
PTRJ				AML	AML		
	comp=N,9880μm,1.3s						
PTRJ				AML	AML		
	comp=N,8455μm,0.4s						
PTRJ				AML	AML		
	comp=E,11285μm,0.5s						
VVDG	Vesuvio Valle	0.33	224	⇑P	Pg	10 36 22.7	-0.2
VVDG				S	Sb	10 36 29.2	+0.2
VBKN	Vesuvio Bunker	0.33	223	⇑P	Pg	10 36 22.8	-0.1
VBKN				S	Sg	10 36 28.1	+0.5
VBKN				AML	AML		
	comp=E,50800μm,1.4s						
VBKN				AML	AML		
	comp=N,57500μm,0.9s						
VBKN				AML	AML		
	comp=N,57500μm,1.1s						
VBKN				AML	AML		
	comp=E,50800μm,0.6s						
VBKN				AML	AML		
	comp=N,43479μm,0.7s						
VBKN				AML	AML		
	comp=E,39261μm,0.5s						
BIOG	Biogem	0.33	67	⇑P	Pb	10 36 23.5	-0.4
BIOG				AML	AML		
	comp=N,35700μm,1.5s						
BIOG				AML	AML		
	comp=N,43200μm,1.4s						
BIOG				AML	AML		
	comp=E,40500μm,0.7s						
BIOG				AML	AML		
	comp=N,42100μm,1.4s						
BIOG				AML	AML		
	comp=N,43200μm,0.6s						
BIOG				AML	AML		
	comp=E,33900μm,1.2s						
BIOG				AML	AML		
	comp=N,42100μm,0.6s						
BIOG				AML	AML		
	comp=E,40500μm,1.3s						
BIOG				AML	AML		
	comp=E,40522μm,0.7s						
BIOG				AML	AML		
	comp=N,54137μm,1.4s						
BIOG				AML	AML		
	comp=E,50711μm,0.8s						
BIOG				AML	AML		
	comp=N,53561μm,0.9s						
VCRE	Vesuvio Crater	0.34	222	⇑P	Pg	10 36 23.0	-0.1
VCRE				S	Sb	10 36 28.9	-0.4
VCRE				AML	AML		
	comp=N,59900μm,0.6s						
VCRE				AML	AML		
	comp=E,56300μm,0.5s						
VCRE				AML	AML		
	comp=N,59900μm,1.4s						
VCRE				AML	AML		
	comp=E,56272μm,0.5s						
VCRE				AML	AML		
	comp=N,59877μm,0.6s						
VTIR	Vesuvio Tirone	0.35	221	⇑P	Pg	10 36 23.1	-0.2
VTIR				S	Sb	10 36 30.7	+1.1
VTIR				AML	AML		
	comp=E,13950μm,0.5s						
VTIR				AML	AML		
	comp=N,15150μm,0.5s						

VTIR				AML	AML		
	comp=N,15169µm,0.5s						
VTIR				AML	AML		
	comp=E,12884µm,0.3s						
SALI3	**CIMA - Sant'An**	**0.37**	**112**	*i* P	**Pg**	**10 36 23.0**	**-0.7**
SALI3				*i* S	**Sg**	**10 36 29.7**	**+0.9**
NSC3	**Nusco**	**0.37**	**127**	⇓*i*P	**Pg**	**10 36 22.7**	**-1.0**
NSC3				*i* S	**Sg**	**10 36 29.0**	**+0.1**
SSB3	**San Sossio Bar**	**0.38**	**89**	⇑*i*P	**Pg**	**10 36 23.5**	**-0.3**
SSB3				*i* S	**Sb**	**10 36 30.2**	**-0.2**
LIO3	**Lioni**	**0.39**	**117**	⇑*i*P	**Pg**	**10 36 23.0**	**-0.9**
LIO3				*i* S	**Sg**	**10 36 29.6**	**+0.4**
CAFE	**Carife**	**0.39**	**96**	⇑P	**Pg**	**10 36 23.3**	**-0.6**
CAFE				S	**Sg**	**10 36 30.0**	**+0.7**
CAFE				AML	AML		
	comp=N,18050µm,1.6s						
CAFE				AML	AML		
	comp=E,25300µm,0.4s						
CAFE				AML	AML		
	comp=N,18300µm,1.6s						
CAFE				AML	AML		
	comp=E,24750µm,0.4s						
CAFE				AML	AML		
	comp=E,25300µm,1.6s						
CAFE				AML	AML		
	comp=N,18050µm,0.4s						
CAFE				AML	AML		
	comp=N,18300µm,0.4s						
CAFE				AML	AML		
	comp=N,14671µm,0.5s						
CAFE				AML	AML		
	comp=N,14287µm,0.5s						
CAFE				AML	AML		
	comp=E,24778µm,0.4s						
CAFE				AML	AML		
	comp=E,24750µm,1.6s						
CAFE				AML	AML		
	comp=E,25310µm,0.4s						
CAFE				AML	AML		
	comp=N,18050µm,0.4s						
PIGN	**Pignataro Magg**	**0.43**	**288**	⇑P	**Pg**	**10 36 24.0**	**-0.7**
PIGN				S	**Sb**	**10 36 31.1**	**-0.8**
PIGN				AML	AML		
	comp=N,9055µm,0.6s						
PIGN				AML	AML		
	comp=E,12450µm,0.5s						
PIGN				AML	AML		
	comp=N,9485µm,0.5s						
PIGN				AML	AML		
	comp=N,9055µm,0.6s						
PIGN				AML	AML		
	comp=N,9476µm,0.5s						
PIGN				AML	AML		
	comp=N,9050µm,0.6s						
PIGN				AML	AML		
	comp=E,12648µm,0.5s						
PIGN				AML	AML		
	comp=E,12650µm,0.5s						
PIGN				AML	AML		
	comp=E,12425µm,0.5s						
MCRV	**Calabrutti - M**	**0.44**	**131**	⇓P	**Pg**	**10 36 23.7**	**-1.3**
MCRV				S	**Sg**	**10 36 30.4**	**-0.5**
MCRV				AML	AML		
	comp=N,45700µm,0.2s						
MCRV				AML	AML		
	comp=E,36450µm,1.4s						
MCRV				AML	AML		
	comp=N,45700µm,1.8s						
MCRV				AML	AML		
	comp=E,36018µm,0.4s						
MCRV				AML	AML		
	comp=N,45720µm,0.2s						
GATE	**Gambatesa**	**0.46**	**17**	⇓P	**Pg**	**10 36 25.4**	**+0.1**
GATE				AML	AML		
	comp=E,9210µm,1.5s						
GATE				AML	AML		
	comp=E,9110µm,1.5s						
GATE				AML	AML		
	comp=N,7125µm,0.6s						
GATE				AML	AML		
	comp=N,7230µm,0.6s						
GATE				AML	AML		
	comp=N,7125µm,1.4s						
GATE				AML	AML		
	comp=N,7123µm,0.6s						
GATE				AML	AML		
	comp=N,7228µm,0.6s						
GATE				AML	AML		
	comp=N,7230µm,1.4s						
GATE				AML	AML		
	comp=E,9210µm,0.5s						
GATE				AML	AML		
	comp=E,9110µm,0.5s						
GATE				AML	AML		
	comp=E,9159µm,0.4s						
GATE				AML	AML		
	comp=E,9000µm,0.4s						
CMSN	**Campi Flegrei**	**0.47**	**241**	⇑P	**Pb**	**10 36 25.8**	**-0.5**
AND3	**Andretta**	**0.48**	**107**	*i* P	**Pg**	**10 36 25.6**	**-0.1**
AND3				*i* S	**Sn**	**10 36 38.5**	**+1.6**
BSSO	**Busso**	**0.48**	**348**	⇓P	**Pg**	**10 36 25.1**	**-0.7**
BSSO				AML	AML		
	comp=N,2450µm,1.6s						
BSSO				AML	AML		
	comp=N,2450µm,0.4s						
BSSO				AML	AML		
	comp=N,2255µm,0.8s						
BSSO				AML	AML		
	comp=E,2928µm,0.9s						
BSSO				AML	AML		
	comp=E,2930µm,0.9s						
SGTA	**Sant Agata di**	**0.49**	**82**	⇑P	**Pg**	**10 36 25.4**	**-0.3**
SGTA				AML	AML		
	comp=E,9015µm,0.5s						
SGTA				AML	AML		
	comp=N,8285µm,0.3s						
SGTA				AML	AML		
	comp=N,8410µm,0.3s						
SGTA				AML	AML		
	comp=E,9230µm,0.5s						
SGTA				AML	AML		
	comp=E,9010µm,0.5s						
SGTA				AML	AML		
	comp=E,9230µm,0.5s						
SGTA				AML	AML		
	comp=E,9012µm,0.5s						
SGTA				AML	AML		
	comp=N,8410µm,0.3s						
SGTA				AML	AML		
	comp=N,8284µm,0.3s						
SNR3	**Senerchia**	**0.49**	**133**	*i* P	**Pg**	**10 36 24.7**	**-1.1**
SNR3				*i* S	**Sb**	**10 36 33.6**	**+0.1**
VAGA	**Valle Agricola**	**0.51**	**313**	⇓P	**Pg**	**10 36 25.4**	**-0.8**
VAGA				AML	AML		
	comp=E,9675µm,0.5s						
VAGA				AML	AML		
	comp=N,16650µm,1.6s						
VAGA				AML	AML		
	comp=N,17200µm,1.6s						
VAGA				AML	AML		
	comp=E,10050µm,0.5s						
VAGA				AML	AML		
	comp=N,13134µm,0.4s						
VAGA				AML	AML		
	comp=N,13425µm,0.4s						
VAGA				AML	AML		
	comp=E,9697µm,0.5s						
VAGA				AML	AML		
	comp=E,10057µm,0.5s						
CLT3	**Calitri**	**0.54**	**108**	*i* P	**Pg**	**10 36 26.4**	**-0.4**
CLT3				*i* S	**Sn**	**10 36 41.7**	**+3.4**
CLT3	**Calitri**	**0.54**	**108**	AML	AML		
	comp=E,54300µm,0.3s						
CLT3				AML	AML		
	comp=E,54300µm,0.2s						
CLT3				AML	AML		
	comp=N,58400µm,0.3s						
CLT3				AML	AML		
	comp=N,58400µm,0.3s						
CLT3				AML	AML		
	comp=E,54282µm,0.3s						
COL3	**Colliano**	**0.60**	**130**	*i* P	**Pg**	**10 36 26.2**	**-1.7**
COL3				*i* S	**Sn**	**10 36 40.4**	**+0.5**
CSG3	**Toppo Di Caste**	**0.61**	**114**	*i* P	**Pb**	**10 36 29.2**	**+0.5**
VDS3	**Muro Lucano (V**	**0.62**	**122**	*i* P	**Pg**	**10 36 28.0**	**-0.4**
VDS3				*i* S	**Sn**	**10 36 42.5**	**+2.0**
PST3	**Postiglione**	**0.64**	**142**	*i* P	**Pg**	**10 36 27.2**	**-1.5**
PST3				*i* S	**Sn**	**10 36 42.0**	**+1.1**
SCL3	**Muro Lucano (S**	**0.70**	**122**	*i* P	**Pg**	**10 36 29.5**	**-0.3**
SCL3				*i* S	**Sn**	**10 36 43.6**	**+1.2**
SFL3	**San Fele**	**0.70**	**113**	*i* P	**Pn**	**10 36 31.5**	**-0.2**
BEL3	**Bella**	**0.78**	**117**	*i* P	**Pn**	**10 36 33.4**	**+0.7**
BEL3				*i* S	**Sn**	**10 36 48.6**	**+4.4**
VDP3	**Vietri Di Pote**	**0.79**	**126**	*i* P	**Pg**	**10 36 30.7**	**-0.8**
CGG3	**Caggiano**	**0.80**	**131**	*i* P	**Pn**	**10 36 33.0**	**-0.1**
CGG3				*i* S	**Sn**	**10 36 47.2**	**+2.4**
SRN3	**Sant'Arsenio**	**0.81**	**136**	*i* P	**Pg**	**10 36 30.7**	**-1.1**
SRN3				*i* S	**Sn**	**10 36 47.2**	**+2.2**
STN3	**Satriano di Lu**	**0.89**	**127**	*i* P	**Pb**	**10 36 33.0**	**-0.4**
STN3				*i* S	**Sn**	**10 36 51.7**	**+4.8**
STN3	**Satriano di Lu**	**0.89**	**127**	AML	AML		
PGN3	**Pignola, Italy**	**0.95**	**121**	*i* P	**Pn**	**10 36 35.9**	**+0.8**
PGN3				*i* S	**Sn**	**10 36 52.4**	**+3.8**
MRN3	**Marsico Nuovo**	**1.00**	**130**	*i* P	**Pn**	**10 36 36.3**	**+0.6**
MRN3				*i* S	**Sn**	**10 36 56.7**	**+7.0**
MATE	**Matera**	**1.56**	**105**	⇑P	**Pn**	**10 36 43.1**	**-0.3**
AQU	**L'Aquila**	**1.62**	**323**	*e*Pn	**Pb**	**10 36 45.7**	**-0.1**
TIP	**Timpagrande**	**2.45**	**140**	⇑P	**Pn**	**10 36 56.8**	**+1.0**
FOSV	**Fossato di Vic**	**2.66**	**327**	AML	AML		
	comp=E,174µm,0.8s						
FOSV				AML	AML		
	comp=N,211µm,0.7s						
STON	**Ston**	**2.85**	**50**	*e*Pn	**Pn**	**10 37 01.8**	**+0.6**
STON				*e*Sn	**Sn**	**10 37 36.0**	**+0.7**
HCY	**Herceg Novi**	**3.13**	**63**	*e*Pn	**Pn**	**10 37 05.9**	**+0.8**
HCY				*i* Sn	**Sn**	**10 37 42.4**	**+0.1**
TREB	**Trebinje**	**3.17**	**58**	*e*Pn	**Pn**	**10 37 05.8**	**+0.3**
TREB	**Trebinje**	**3.17**	**58**	*e*Pn	**Pn**	**10 37 06.5**	**+1.0**
TREB				*e*Sn	**Sn**	**10 37 43.7**	**+0.6**
BUM	**Brajici-Budva**	**3.35**	**67**	*e*Pn	**Pn**	**10 37 08.8**	**+0.6**
BUM				*i* Sn	**Sn**	**10 37 47.8**	**0.0**
BRY	**Bratogost**	**3.38**	**56**	⇑*i*Pn	**Pn**	**10 37 09.2**	**+0.6**
BRY				*i* Sn	**Sn**	**10 37 48.4**	**-0.1**
ULC	**Ulcinj**	**3.51**	**74**	⇑*i*Pn	**Pn**	**10 37 10.9**	**+0.7**
ULC				*i* Sn	**Sn**	**10 37 51.3**	**-0.2**
DRME	**Dracevica, Mon**	**3.52**	**70**	*e*Pn	**Pn**	**10 37 11.4**	**+1.0**
DRME	**Dracevica, Mon**	**3.52**	**70**	⇓*i*Pn	**Pn**	**10 37 11.1**	**+0.7**
DRME				*e*Sn	**Sn**	**10 37 51.7**	**-0.2**
KLINJ	**Klinje**	**3.55**	**53**	*e*Pn	**Pn**	**10 37 11.4**	**+0.5**
NKME	**Niksic**	**3.58**	**60**	*e*Pn	**Pn**	**10 37 11.9**	**+0.7**
NKME				*e*Sn	**Sn**	**10 37 53.1**	**-0.2**
PDG	**Podgorica**	**3.65**	**67**	⇓P	**Pn**	**10 37 11.8**	**-0.4**
PDG	**Podgorica**	**3.65**	**67**	*e*Pn	**Pn**	**10 37 13.5**	**+1.4**
PDG				*e*Sn	**Sn**	**10 37 55.4**	**+0.4**
PDG	**Podgorica**	**3.65**	**67**	*e*Pn	**Pn**	**10 37 12.9**	**+0.8**
PDG				*i* Sn	**Sn**	**10 37 54.7**	**-0.3**
UPM	**Unac-Piva**	**3.77**	**54**	*e*Pn	**Pn**	**10 37 14.6**	**+0.6**
UPM				*i* Sn	**Sn**	**10 37 57.6**	**-0.6**
KOME	**Kolasin**	**3.99**	**62**	*e*Pn	**Pn**	**10 37 19.3**	**+2.4**
KOME				*e*Sn	**Sn**	**10 38 03.4**	**-0.1**
KOME	**Kolasin**	**3.99**	**62**	⇓*i*Pn	**Pn**	**10 37 17.6**	**+0.7**
KOME				*e*Sn	**Sn**	**10 38 02.9**	**-0.6**
KNYS	**Krupa na Uni**	**3.99**	**16**	*e*Pn	**Pn**	**10 37 18.6**	**+1.7**
BLY	**Banja Luka**	**4.09**	**25**	*e*Pn	**Pn**	**10 37 19.7**	**+1.4**
BLY	**Banja Luka**	**4.09**	**25**	⇑P	**Pn**	**10 37 20.0**	**+1.7**
BLY	**Banja Luka**	**4.09**	**25**	*e*Pn	**Pn**	**10 37 20.5**	**+2.2**
BLY				*e*Sn	**Sn**	**10 38 07.4**	**+1.4**
PLE	**Pljevlja**	**4.13**	**55**	*e*Pn	**Pn**	**10 37 19.6**	**+0.7**
PLE				*i* Sn	**Sn**	**10 38 06.5**	**-0.6**
BEY	**Berane**	**4.25**	**63**	*e*Pn	**Pn**	**10 37 23.3**	**+2.8**
IVA	**Berane**	**4.25**	**63**	*e*Pn	**Pn**	**10 37 21.2**	**+0.7**
IVA				*i* Sn	**Sn**	**10 38 09.2**	**-0.8**
RUDO	**Rudo**	**4.28**	**52**	*e*Pn	**Pn**	**10 37 21.8**	**+1.0**
RUDO	**Rudo**	**4.28**	**52**	*e*Pn	**Pn**	**10 37 22.5**	**+1.7**
RUDO				*e*Sn	**Sn**	**10 38 11.2**	**+0.6**
BBLS	**Lazi&#263i**	**4.45**	**50**	*e*Pn	**Pn**	**10 37 24.5**	**+1.3**
BBLS				*e*Sn	**Sn**	**10 38 15.2**	**+0.5**
SJES	**Sjenica**	**4.47**	**59**	*e*Pn	**Pn**	**10 37 25.7**	**+2.1**
SJES				*e*Sn	**Sn**	**10 38 16.0**	**+0.6**
IGT	**Igoumenitsa**	**4.55**	**108**	*e*Pn	**Pn**	**10 37 26.1**	**+1.5**
IGT				*e*Sn	**Sn**	**10 38 16.5**	**-0.8**
OHR	**Ohrid**	**4.59**	**88**	*i* Pn	**Pn**	**10 37 27.8**	**+2.7**
OHR				*i* Sn	**Sn**	**10 38 19.8**	**+1.5**
IVAS	**Ivanjica**	**4.74**	**56**	*e*Pn	**Pn**	**10 37 28.1**	**+0.9**
IVAS				*e*Sn	**Sn**	**10 38 21.7**	**-0.2**
DIVS	**Divibare**	**4.92**	**50**	*e*Pn	**Pn**	**10 37 30.7**	**+0.9**
DIVS				*e*Sn	**Sn**	**10 38 25.9**	**-0.7**
TEKS	**Tekeris**	**4.96**	**44**	*e*Pn	**Pn**	**10 37 30.4**	**+0.3**
TEKS				*e*Sn	**Sn**	**10 38 26.1**	**-1.1**
GOCS	**Kraljevo Serbi**	**5.19**	**59**	*e*Pn	**Pn**	**10 37 34.4**	**+1.0**
GOCS				*e*Sn	**Sn**	**10 38 32.4**	**-0.8**
SELS	**Selova**	**5.21**	**64**	*e*Pn	**Pn**	**10 37 34.8**	**+1.1**
SELS				*e*Sn	**Sn**	**10 38 33.5**	**-0.1**
GRUS	**Gruza**	**5.25**	**56**	*e*Pn	**Pn**	**10 37 35.0**	**+0.9**
GRUS				*e*Sn	**Sn**	**10 38 34.3**	**-0.1**
OBKA	**Obir**	**5.44**	**359**	*e*Pn	**Pn**	**10 37 37.2**	**+0.4**
	comp=N,1.3nm,0.2s,SNR=13						
OBKA				*i* Sn	**Sn**	**10 38 39.1**	**-0.1**
	comp=N,9.5nm,0.5s						
FRGS	**Fruska Gora**	**5.52**	**41**	*e*Pn	**Pn**	**10 37 37.8**	**-0.1**
FRGS				*e*Sn	**Sn**	**10 38 41.2**	**0.0**
BARS	**Barje**	**5.57**	**69**	*e*Pn	**Pn**	**10 37 39.8**	**+1.3**
BARS				*e*Sn	**Sn**	**10 38 41.9**	**-0.4**
AVAS	**Avala Beograd**	**5.58**	**48**	*e*Pn	**Pn**	**10 37 38.8**	**0.0**
AVAS				*e*Sn	**Sn**	**10 38 40.5**	**-2.2**
BEHE	**Becsehely**	**5.60**	**15**	*e*Pn	**Pb**	**10 37 55.1**	**+1.5**
SOKA	**Soboth**	**5.61**	**2**	*i* Pn	**Pn**	**10 37 38.8**	**-0.4**
	comp=N,1.8nm,0.2s						
SOKA				*i* Sn	**Sn**	**10 38 42.7**	**-0.7**
	comp=N,12nm,0.6s						
BOVS	**Bovan**	**5.77**	**61**	⇓P	**Pn**	**10 37 40.6**	**-0.7**
BOVS	**Bovan**	**5.77**	**61**	*e*Pn	**Pn**	**10 37 42.1**	**+0.8**
BOVS				*e*Sn	**Sn**	**10 38 46.2**	**-1.0**
MORH	**Mrgy, Hungar**	**5.87**	**28**	*e*Pn	**Pn**	**10 37 42.3**	**-0.4**
MORH	**Mrgy, Hungar**	**5.87**	**28**	⇑P	**Pn**	**10 37 43.4**	**+0.7**
ABTA	**Abfaltersbach**	**5.89**	**345**	*e*Pn	**Pn**	**10 37 42.8**	**-0.3**
	comp=N,2.1nm,0.2s						
ABTA				*i* Sn	**Sn**	**10 38 50.2**	**-0.3**
	comp=N,19nm,0.5s						
VAY	**Valandovo**	**5.92**	**85**	*i* Pn	**Pn**	**10 37 46.6**	**+3.2**
BOSS	**Bosilegrad**	**5.97**	**74**	*e*Pn	**Pn**	**10 37 45.1**	**+1.1**
BOSS				*e*Sn	**Sn**	**10 38 49.7**	**-2.5**
KBA	**Koelnbreinsper**	**6.09**	**351**	*i* Pn	**Pn**	**10 37 46.7**	**+0.8**
	comp=N,0.4nm,0.2s,SNR=5.4						
KBA				*e*Sn	**Sn**	**10 38 53.1**	**-2.3**
	comp=N,4.7nm,0.4s						
BORS2	**Bor- Borsko je**	**6.17**	**58**	*e*Pn	**Pn**	**10 37 46.3**	**-0.5**
BORS2				*e*Sn	**Sn**	**10 38 54.2**	**-2.9**
ZAGS	**Zajecar**	**6.19**	**61**	*e*Pn	**Pn**	**10 37 48.1**	**+1.0**
ZAGS				*e*Sn	**Sn**	**10 38 55.8**	**-1.8**
ARSA	**Arzberg**	**6.20**	**5**	*i* Pn	**Pn**	**10 37 47.0**	**-0.2**
	comp=N,3.1nm,0.3s,SNR=4.2						
ARSA				*i* Sn	**Sn**	**10 38 55.5**	**-2.5**
	comp=N,2.6nm,0.4s						
ZAPS	**Zavoj**	**6.27**	**67**	*e*Pn	**Pn**	**10 37 49.4**	**+1.2**
ZAPS				*e*Sn	**Sn**	**10 38 58.3**	**-1.4**
VRSS	**Vrsac**	**6.30**	**48**	*e*Pn	**Pn**	**10 37 48.7**	**+0.1**
MDVR	**Moldovita**	**6.33**	**52**	⇑P	**Pn**	**10 37 48.4**	**-0.6**
LESA	**Schwarzleotal**	**6.52**	**348**	*e*Pn	**Pn**	**10 37 52.9**	**+1.2**
	comp=N,6.8nm,0.5s,SNR=11						
LESA				*i* Sn	**Sn**	**10 39 05.7**	**-0.1**
	comp=N,6.6nm,0.3s						
WTTA	**Wattenberg**	**6.58**	**341**	*e*Pn	**Pn**	**10 37 55.8**	**+3.2**
	comp=N,1.3nm,0.3s						
WTTA				*i* Sn	**Sn**	**10 39 09.7**	**+2.3**
	comp=N,24nm,0.7s						
FETA	**Feichten**	**6.61**	**336**	*i* Pn	**Pn**	**10 37 54.6**	**+1.6**
	comp=N,1.0nm,0.3s						
FETA				*i* Sn	**Sn**	**10 39 06.6**	**-1.5**
	comp=N,0.1nm,0.2s						
SQTA	**Sankt Quirin**	**6.65**	**339**	*i* Pn	**Pn**	**10 37 55.6**	**+2.1**
	comp=N,0.5nm,0.2s						
SQTA				*i* Sn	**Sn**	**10 39 08.1**	**-0.9**
	comp=N,1.2nm,0.2s						
WATA	**Walderalm**	**6.66**	**341**	*i* Pn	**Pn**	**10 37 54.7**	**+1.1**
	comp=N,0.7nm,0.2s						
WATA				*i* Sn	**Sn**	**10 39 07.0**	**-2.3**
	comp=N,5.3nm,0.4s						
BIOA	**Bad Ischl, Aus**	**6.67**	**354**	*i* Pn	**Pn**	**10 37 55.2**	**+1.6**
	comp=N,7.6nm,0.3s						
BIOA				*i* Sn	**Sn**	**10 39 08.7**	**-0.6**
	comp=N,22nm,0.8s						
DAVOX	**Davos/Dischmat**	**6.69**	**330**	Pn	**Pn**	**10 37 55.6**	**+1.5**
	comp=N,1.1nm,0.3s,baz=155,slow=17,SNR=8.9						
DAVOX				Sn	**Sn**	**10 39 12.0**	**+1.7**
	comp=N,0.6nm,0.3s,baz=318,slow=18,SNR=1.9						
SRS	**Serrai**	**6.70**	**87**	*e*Pn	**Pn**	**10 37 53.8**	**-0.2**
RONA	**Rosalia, Austr**	**6.72**	**9**	*e*Pn	**Pn**	**10 37 55.9**	**+1.5**
	comp=N,6.3nm,0.5s						
RONA				*e*Sn	**Sn**	**10 39 09.1**	**-1.6**
	comp=N,0.4nm,0.2s						
BZS	**Buzias**	**6.77**	**46**	⇑P	**Pn**	**10 37 55.0**	**0.0**
MOA	**Molln**	**6.79**	**357**	*e*Pn	**Pn**	**10 37 56.1**	**+0.8**
	comp=N,19nm,0.5s,SNR=15						
MOA				*i* Sn	**Sn**	**10 39 09.5**	**-2.8**
	comp=N,29nm,0.6s						
KEST	**Kesra**	**6.80**	**220**	Pn	**Pn**	**10 37 58.0**	**+2.4**
	comp=N,0.8nm,0.3s,baz=221,slow=2.3,SNR=6.8						
KEST				LR	LR	10 40 42.6	
	comp=N,194nm,20.2s,baz=349,slow=39						
	comp=N,6.9nm,0.6s						
HERR	**Herculane**	**6.80**	**53**	⇑P	**Pn**	**10 37 55.5**	**0.0**
CONA	**Conrad Observa**	**6.90**	**6**	*e*Pn	**Pn**	**10 37 56.9**	**-0.1**
	comp=N,7.4nm,0.5s						
CONA				*e*Sn	**Sn**	**10 39 12.4**	**-2.9**
	comp=N,0.5nm,0.2s						
GZR	**Gura Zlata**	**7.29**	**51**	⇑P	**Pn**	**10 38 02.0**	**-0.3**
MODS	**Modra-Piesok**	**7.52**	**13**	*e*PN	**Pn**	**10 38 05.1**	**-0.3**
MODS				*e*SN	**Sn**	**10 39 25.8**	**-4.6**
GERES	**GERESS Array B**	**7.81**	**355**	Pn	**Pn**	**10 38 09.0**	**-0.3**
	comp=N,0.4nm,0.3s,baz=184,slow=14,SNR=40						
GERES				Sn	**Sn**	**10 39 34.5**	**-3.1**
	comp=N,0.4nm,0.3s,baz=174,slow=24,SNR=30						
	comp=N,4.0nm,0.3s						
LOT	**Lotru**	**7.92**	**53**	⇑P	**Pn**	**10 38 11.4**	**+0.6**
KHC	**Kasperske Hory**	**8.10**	**355**	*e*PG	**Pn**	**10 38 12.6**	**-0.7**
KHC				*e*SN	**Sn**	**10 39 40.6**	**-4.0**
	comp=N,17nm,0.8s						
DRGR		**8.12**	**43**	⇑P	**Pn**	**10 38 12.8**	**-0.7**
MARR	**Marisel-Cluj**	**8.25**	**44**	⇑P	**Pn**	**10 38 15.7**	**+0.3**
VRAC	**Vranov**	**8.34**	**8**	LR	LR	10 42 05.4	
	comp=N,90nm,18.8s,baz=252,slow=43						
ZVC	**Zvikov**	**8.38**	**358**	*e*PG	**Pn**	**10 38 20.9**	**+3.9**
ZVC				*e*SG	**Sn**	**10 39 55.2**	**+3.8**
	comp=N,76nm,2.2s						
ARR	**Arges**	**8.41**	**56**	⇑P	**Pn**	**10 38 16.5**	**-1.1**
PRU	**Pruhonice**	**8.92**	**359**	*e*SN	**Sn**	**10 40 12.9**	**+8.2**
	comp=N,42nm,1.8s						
DOPR	**Dopca**	**9.16**	**54**	⇑P	**Pn**	**10 38 27.7**	**-0.1**
MLR	**Muntele Rosu**	**9.30**	**58**	Pn	**Pn**	**10 38 32.6**	**+2.9**
	comp=N,0.6nm,0.3s,baz=176,slow=6.0,SNR=5.1						
MLR				LR	LR	10 43 32.9	
	comp=N,231nm,19.1s,baz=252,slow=47						
	comp=N,3.3nm,0.7s						
IDI	**Anoyia**	**9.86**	**123**	Pn	**Pn**	**10 38 38.8**	**+1.3**
	comp=N,3.1nm,0.8s,baz=248,slow=11,SNR=6.5						
IDI				Sn	**Sn**	**10 40 21.6**	**-6.4**
	comp=N,2.0nm,0.3s,baz=188,slow=23,SNR=8.0						
IDI				LR	LR	10 43 14.2	
	comp=N,107nm,21.9s,baz=285,slow=42						
VRI	**Vrincioaia**	**9.95**	**57**	⇓P	**Pn**	**10 38 39.1**	**+0.5**
BRTR	**Keskin Array B**	**14.48**	**89**	Pn	**P**	**10 39 44.3**	**-3.1**
	comp=N,0.1nm,0.3s,baz=302,slow=3.2,SNR=1.5						
BRTR				LR	LR	10 46 26.5	
	comp=N,132nm,18.0s,baz=282,slow=42						
	comp=N,0.3nm,0.3s						
NOA	**NORSAR Array B**	**20.11**	**355**	LR	LR	10 49 41.1	
	comp=N,25nm,21.5s,baz=355,slow=40						
FINES	**FINESS Array B**	**21.54**	**15**	P	**P**	**10 41 05.0**	**+0.4**
	comp=N,4.8nm,0.8s,baz=190,slow=7.1,SNR=10.0						
	comp=N,4.8nm,0.8s						
KIRV	**Kirov**	**27.98**	**39**	LR	LR	10 53 42.5	
	comp=N,97nm,21.6s,baz=265,slow=38						
BORG	**Borgarnes**	**31.41**	**331**	LR	LR	10 55 01.7	
	comp=N,106nm,20.7s,baz=133,slow=36						
BVAR	**Borovoye Array**	**38.81**	**53**	P	**P**	**10 43 41.9**	**+1.7**
	comp=N,0.7nm,0.6s,baz=273,slow=5.8,SNR=3.9						
	comp=N,0.7nm,0.6s						
AAK	**Ala-Archa**	**43.73**	**67**	LR	LR	11 05 55.9	
	comp=N,44nm,18.0s,baz=304,slow=41						
MKAR	**Makanchi Array**	**47.64**	**59**	P	**P**	**10 44 51.6**	**-0.1**
	comp=N,0.3nm,0.6s,baz=285,slow=6.1,SNR=3.6						
	comp=N,0.3nm,0.6s						
SEY	**Seymchan**	**70.95**	**19**	LR	LR	11 24 28.4	
	comp=N,32nm,18.1s,baz=334,slow=41						
MA2	**Magadan**	**73.36**	**22**	LR	LR	11 21 56.5	
	comp=N,29nm,19.5s,baz=334,slow=37						
NVAR	**Mina Array Bea**	**90.01**	**325**	LR	LR	11 33 30.4	
	comp=N,38nm,18.4s,baz=354,slow=38						

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*IDC **16** 10:37:12.6±0.8, 6°.50N×125°.30E, h0^{km}, mb4.0/9, mbtmp4.0/9, MS3.2/7, Error ellipse: s-maj=20.6km s-min=9.4km az=108.0*

*NEIC **16** 10:37:14.5±1.3, 6°.58N±0°.06×125°.28E±0°.09, h10^{km}±1^{km}, mb4.4/15, Error ellipse: s-maj=16.5km s-min=8.0km az=298.0*

*DJA **16** 10:37:14.4±0.7, 7°N±6°×12°5E±°, h21^{km}±9^{km}, M4.8/19, mb4.7/19, mB5.2/6, MLv4.9/8, Mw(mB)4.6/6*

ISC 16 10:37:14.7±0.5**, 6°.52N**±0°.05**×125°.27E**±0°.08**, h10^{km}, n58, σ1^{s}.47**/49**, mb4.2**/18**, MS3.1**/6**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.63**	**30**	Pg	**Pg**	**10 37 25.3**	**-1.6**
	584nm,0.3s,baz=236,slow=5.0,SNR=5.9						
DAV				Lg	Lg	10 37 32.7	
	1µm,0.3s,baz=72,slow=22,SNR=5.2						
DAV	**Davao City (W)**	**0.63**	**30**	P	**Pg**	**10 37 24.6**	**-2.3**
DAV	**Davao City (W)**	**0.63**	**30**	P	**Pn**	**10 37 28.0**	**-1.7**
SGSI	**Sangihe**	**2.83**	**175**	P	**Pn**	**10 38 02.5**	**+2.4**
TNTI	**Ternate**	**6.08**	**160**	Pn	**Pn**	**10 38 45.8**	**+0.9**
TNTI	**Ternate**	**6.08**	**160**	P	**Pn**	**10 38 45.8**	**+0.9**
	0.2nm56nm,0.9s						
GTOI	**Gorontalo**	**6.27**	**201**	P	**Pn**	**10 38 46.6**	**-0.7**
MRSI	**Marisa**	**6.86**	**209**	P	**Pn**	**10 38 55.4**	**-0.1**
TOLI2	**Tolitoli**	**6.99**	**220**		**Pn**	**10 38 54.5**	**-2.8**
LUWI	**Luwuk**	**7.92**	**198**	Pn	**Pn**	**10 39 10.6**	**+0.6**
LUWI	**Luwuk**	**7.92**	**198**	P	**Pn**	**10 39 12.5**	**+2.5**
	100nm,0.7s						
APSI	**Ampana**	**8.22**	**206**	P	**Pn**	**10 39 16.5**	**+2.3**
	697nm67nm,1.1s						
SANI	**Sanana**	**8.55**	**175**	P	**Pn**	**10 39 18.0**	**-0.7**
	45nm,0.8s						
I39PW	**PALAU INFRASON**	**9.27**	**83**	I	I	11 29 25.0	
	baz=269,slow=306,SNR=0.8						
NLAI	**Namlea**	**9.87**	**169**	P	**Pn**	**10 39 36.1**	**-0.7**
	658nm44nm,0.8s						
KRAI	**Karang Ratu**	**10.26**	**162**	P	**Pn**	**10 39 43.1**	**+0.9**
	23nm,0.6s						
TTSI	**Tana Toraja**	**10.95**	**210**	P	**Pn**	**10 39 53.5**	**+1.9**
	32nm,0.9s						
DBNI	**Kabupaten Domp**	**16.46**	**205**	P	**P**	**10 41 08.1**	**-0.6**
YULB	**Yu-li**	**17.20**	**348**		**Pn**	**10 41 15.0**	**-0.4**
YULB				IAmb	IAmb	10 41 44.3	
	comp=Z,24nm,1.3s						
KLNI	**Mataram**	**17.44**	**212**	P	**P**	**10 41 19.7**	**+0.2**
	comp=Z,5µmcomp=Z,35nm,0.7s						
JAY	**Jayapura**	**17.84**	**120**	LR	LR	10 47 45.8	
	comp=Z,49nm,19.6s,baz=344,slow=36						
SNJI	**Sawahan-Nganju**	**19.58**	**224**	P	**P**	**10 41 43.5**	**+0.2**
	comp=Z,15nm,1.1s						
MTN	**Manton Dam**	**20.10**	**163**		**P**	**10 41 48.4**	**-0.4**
MTN				IAmb	IAmb	10 42 00.3	
	comp=Z,17nm,1.1s						
JOW	**Kunigami**	**20.40**	**8**	LR	LR	10 49 44.5	
	comp=Z,63nm,20.6s,baz=160,slow=37						
GUMO	**Guam**	**20.53**	**68**	LR	LR	10 48 13.6	
	comp=Z,48nm,21.0s,baz=98,slow=32						
KNRA	**Kununurra**	**22.33**	**171**	P	**P**	**10 42 12.5**	**-0.3**
FITZ	**Fitzroy Crossi**	**24.47**	**179**	P	**P**	**10 42 33.3**	**-0.8**
JNU	**Nakatsue**	**26.98**	**10**	LR	LR	10 52 44.9	
	comp=Z,43nm,20.9s,baz=214,slow=34						
WB0	**Warramunga Arr**	**27.63**	**161**	P	**P**	**10 43 01.3**	**-1.4**
WB0				IAmb	IAmb	10 43 39.9	
	comp=Z,7.9nm,0.9s						
WRAB	**Tennant Creek**	**27.77**	**161**	P	**P**	**10 43 02.8**	**-1.2**
WRAB				IAmb	IAmb	10 43 27.8	
	comp=Z,8.3nm,1.0s						
WRA	**Warramunga Arr**	**27.77**	**161**	P	**P**	**10 43 02.3**	**-1.7**
	comp=Z,1.3nm,0.7s,baz=330,slow=11,SNR=8.8						
	comp=Z,1.3nm,0.7s						
WR8	**Warramunga Arr**	**27.84**	**161**		**P**	**10 43 03.6**	**-1.0**
WR8				IAmb	IAmb	10 43 23.1	
	comp=Z,5.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**28.25**	**297**	P	**P**	**10 43 07.2**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=110,slow=7.9,SNR=5.0						
	comp=Z,0.5nm,0.3s						
AS31	**Alice Springs**	**31.17**	**165**		**P**	**10 43 33.1**	**-1.1**
ASAR	**Alice Springs**	**31.17**	**165**	P	**P**	**10 43 32.9**	**-1.3**
	comp=Z,1.1nm,0.6s,baz=344,slow=7.1,SNR=26						
	comp=Z,1.1nm,0.6s						
BRDH	**Bariadhala**	**36.15**	**300**	LR	LR	10 59 24.7	
	comp=Z,45nm,20.6s,baz=196,slow=37						
FORT	**Forrest**	**37.19**	**176**	P	**P**	**10 44 24.9**	**-1.3**

FORT				IAmb	IAmb	10 44 44.2	
	comp=Z,4.0nm,0.8s						
INKA	Innaminka	37.20	157	P	P	10 44 25.9	-0.5
XLT	XiLinHaoTe	38.09	349	eP	P	10 44 37.0	+3.1
XLT				pP	sP	10 44 40.5	+2.2
XLT				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA	Gaotai	39.97	329	eP	P	10 44 53.1	+3.4
GTA				sP	sP	10 45 00.0	+5.7
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BBOO	Buckleboo	40.44	166		P	10 44 52.8	-0.8
STKA	Stephens Creek	41.24	159	P	P	10 44 59.6	-0.5
	comp=Z,5.2nm,1.0s,baz=318,slow=4.6,SNR=9.3						
	comp=Z,5.2nm,1.0s						
STKA	Stephens Creek	41.24	159		P	10 44 59.6	-0.5
HEH	HeiHe	43.62	2	eP	P	10 45 21.8	+2.6
SONM	Songino Array	44.20	342	LR	LR	11 04 51.3	
	comp=Z,96nm,19.2s,baz=77,slow=38						
TOO	Toolangi	47.76	158	P	P	10 45 52.0	-0.1
TOO				IAmb	IAmb	10 46 10.0	
	comp=Z,6.1nm,1.4s						
DZM	Mont Dzumac	49.34	126	LR	LR	11 07 22.5	
	comp=Z,21nm,18.5s,baz=29,slow=37						
PETK	Petropavlovsk-	53.44	24	P	P	10 46 36.3	+1.4
	comp=Z,6.0nm,0.9s,baz=230,slow=8.4,SNR=4.6						
	comp=Z,6.0nm,0.9s						
PETK	Petropavlovsk-	53.44	24	P	P	10 46 34.8	-0.1
MKAR	Makanchi Array	54.45	325	P	P	10 46 41.0	-1.4
	comp=Z,0.7nm,0.5s,baz=124,slow=7.9,SNR=9.8						
	comp=Z,0.7nm,0.5s						
KURBB	Kurchatov Arra	58.62	327	P	P	10 47 11.8	-0.1
	comp=Z,1.6nm,0.7s,baz=125,slow=5.9,SNR=14						
	comp=Z,1.6nm,0.7s						
KURK	Kurchatov	58.62	327	P	P	10 47 11.8	-0.1
KURK	Kurchatov	58.62	327	IAmb	IAmb	10 47 44.8	
	comp=Z,2.5nm,0.8s						
KKAR	Karatay Array	60.21	316	P	P	10 47 21.7	-1.5
BVAR	Borovoye Array	64.20	327	P	P	10 47 51.2	+1.5
	comp=Z,0.3nm,0.4s,baz=120,slow=8.9,SNR=3.7						
	comp=Z,0.3nm,0.4s						
AB31	Akbulak array	69.08	320		P	10 48 21.4	+0.4
AB31				IAmb	IAmb	10 48 26.9	
	comp=Z,2.9nm,1.0s						
ABKAR	Akbulak array	69.08	320	P	P	10 48 20.1	-0.8
ILAR	Eielson Array	83.23	26	P	P	10 49 40.0	-1.3
	comp=Z,0.5nm,0.7s,baz=234,slow=5.1,SNR=6.5						
	comp=Z,0.5nm,0.7s						

MDD ***16*** *10:40:43.6±0.9, 35°.38N×1°.86W, h27^{km}±12^{km}, mb_Lg2.6/16, Error ellipse: s-maj=10.0km s-min=3.3km az=145.0*

CNRM ***16*** *10:40:45.8, 35°.53N×2°.35W, h15^{km}, ML2.0*

ISC 16 10:40:43.5±1.6**, 35°.46N**±0°.04×**1°.90W**±0°.05**, h26**^{km}±14^{km}**, n36, σ1^{s}43**/57**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAF	Taforalt	0.77	213	P	Pn	10 40 59.2	+0.5
TAF	Taforalt	0.77	213	S	Sn	10 41 10.7	+1.2
WMELI	Melilla	0.87	261	Pn	Pb	10 40 59.6	-0.4
WMELI				Sn	Sn	10 41 12.2	+0.3
EMLI	Melilla	0.87	260	Pn	Pb	10 40 59.9	0.0
EMLI				Sn	Sn	10 41 13.9	+2.1
EMEL	Melilla	0.88	260	P	Pb	10 40 59.3	-0.7
EMEL				P	Pb	10 40 59.3	-0.7
EMEL				S	Sn	10 41 11.8	-0.2
EMEL				S	Sn	10 41 11.9	-0.2
EALB	Alboran	1.04	298	Pn	Pb	10 41 03.2	+0.4
EALB				Sn	Sn	10 41 16.6	+0.5
EALB	Alboran	1.04	298	P	Pb	10 41 03.1	+0.3
EALB				P	Pb	10 41 03.2	+0.4
EALB				S	Sb	10 41 15.5	-0.5
EALB				S	Sn	10 41 16.0	-0.1
ENIJ	Nijar	1.53	351	Sn	Sn	10 41 27.8	-0.5
ENIJ	Nijar	1.53	351	P	Pn	10 41 09.7	+0.5
ENIJ				S	Sn	10 41 27.1	-1.2
ENIJ				i IVmb_Lg		10 41 29.4	
PALE	Palemas	1.68	262	P	Pn	10 41 09.2	-2.1
PALE	Palemas	1.68	262	S	Sn	10 41 28.8	-3.2
AKLM	AKL	1.87	240	P	Pn	10 41 14.3	+0.4
AKLM	AKL	1.87	240	S	Sn	10 41 35.2	-1.4
ELGU	Los Guajares,	1.98	316	Pn	Pn	10 41 16.0	+0.5
ELGU				Sn	Sn	10 41 38.0	-1.5
ELGU	Los Guajares,	1.98	316	P	Pn	10 41 15.9	+0.5
ELGU				S	Sn	10 41 38.2	-1.3
ELGU				i IVmb_Lg		10 41 42.5	
EQUE	Quentar	2.14	325	P	Pn	10 41 18.0	+0.4
EQUE				S	Sn	10 41 42.8	-0.6
EQUE				i IVmb_Lg		10 41 47.8	
CART	Cartagena	2.24	19	Sn	Sn	10 41 44.1	-1.7
CART				Pn	Pn	10 41 19.9	+0.9
EMUR	La Murta	2.44	12	P	Pn	10 41 22.0	+0.4
EMUR				S	Sn	10 41 50.2	-0.5
EMUR				i IVmb_Lg		10 41 54.2	
EQES	Quesada	2.52	338	P	Pn	10 41 22.9	0.0
EQES				S	Sn	10 41 54.3	+1.4
EQES				i IVmb_Lg		10 41 59.0	
EMIJ	Mijas	2.58	296	Pn	Pn	10 41 23.1	-0.4
EMIJ				Sn	Sn	10 41 51.1	-2.9
EMIJ	Mijas	2.58	296	P	Pn	10 41 22.9	-0.7
EMIJ				S	Sn	10 41 51.5	-2.5
EMIJ				i IVmb_Lg		10 41 56.1	
ETOB	Tobarra	3.19	5	P	Pn	10 41 31.2	-0.9
ETOB				S	Sn	10 42 09.4	+0.1
ETOB				i IVmb_Lg		10 42 11.5	
EADA	Adamuz	3.45	322	P	Pn	10 41 34.6	-1.0
EADA				S	Sn	10 42 16.0	+0.3
EADA				i IVmb_Lg		10 42 29.2	
EIBI	Ibiza	4.40	35	Pn	Pn	10 41 50.8	+2.2
EIBI	Ibiza	4.40	35	P	Pn	10 41 48.3	-0.3
EIBI				S	Sn	10 42 36.5	-2.5
EIBI				i IVmb_Lg		10 42 42.1	
EMIN	Mina Concepcio	4.48	302	Pn	Pn	10 41 50.7	+1.0
EMIN	Mina Concepcio	4.48	302	P	Pn	10 41 49.0	-0.7
EMIN				i IVmb_Lg		10 42 40.4	
PBAR	Barrancos	4.93	305	eP	Pn	10 41 57.9	+2.0
PVAQ	Vaqueiros	5.08	294	eP	Pn	10 41 59.3	+1.4
PCVE	Castro Verde	5.40	295	eP	Pn	10 42 04.3	+2.1
MESJ	Messejana	5.61	297	eP	Pn	10 42 07.5	+2.3
MORF	Marmelete	5.75	291	eP	Pn	10 42 09.6	+2.5
PARRA	Arraiolos	5.94	306	eP	Pn	10 42 11.8	+2.1
PMTG	Montargil	6.20	307	eP	Pn	10 42 15.4	+2.1
PCBR	Castelo Branco	6.22	316	eP	Pn	10 42 16.3	+2.7
PSARD	Sardoal	6.47	312	eP	Pn	10 42 18.7	+1.7

SDD ***16*** *10:50:52.4±1.7, 19°.20N×67°.17W, h21^{km}±51^{km}, MD3.1, ML2.9, MW2.7, Presumed earthquake*

OSPL ***16*** *10:50:52.3±0.8, 19°.16N×67°.31W, h4^{km}±6^{km}, ML2.3, Presumed earthquake*

RSPR ***16*** *10:50:53.0, 19°.21N×67°.35W, h40^{km}±11^{km}, MD2.8/14*

NEIC ***16*** *10:50:54.0±1.3, 19°.02N±0°.04×67°.18W±0°.01, h10^{km}±2^{km}, ML2.4/18, Md2.8/14(RSPR), Error ellipse: s-maj=6.3km s-min=3.0km az=358.0*

ISC 16 10:50:49.8±1.5**, 19°.20N**±0°.05×**67°.21W**±0°.03**, h8**^{km}±10^{km}**, n55, σ0^{s}51**/70**, 23C-4D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.73	173		Pn	10 51 05.9	-0.5
AGPR				IAML		10 51 17.4	
	250nm,0.3s						
AGPR				IAML		10 51 21.7	
	240nm,0.5s						
AGPR	Aguadilla, PR	0.73	173	⇑eP	Pn	10 51 05.7	-0.7
AGPR	Aguadilla, PR	0.73	173	eS	Sb	10 51 15.8	+0.8
AGPR	Aguadilla, PR	0.73	173	⇓ePg	Pb	10 51 05.5	+0.7
AGPR				⇓eSg	Sb	10 51 15.4	+0.4
AGPR				IAML		10 51 17.7	
	comp=N,3µm,0.2s						
AGPR	Aguadilla, PR	0.73	173	i P	Pb	10 51 05.5	+0.7
AGPR				eS	Sb	10 51 14.6	-0.4
AGPR				IAML		10 51 19.2	
	comp=Z,143nm,0.2s						
IDE	Isla Desecheo	0.84	197		Pb	10 51 07.2	+0.5
IDE					Sg	10 51 16.9	0.0
IDE	Isla Desecheo	0.84	197	⇓eP	Pb	10 51 07.2	+0.5
IDE	Isla Desecheo	0.84	197	eS	Sg	10 51 16.9	0.0
AOPR	Arecibo Observ	0.95	153		Pn	10 51 09.1	-0.5
AOPR					Sn	10 51 22.8	-0.4
AOPR	Arecibo Observ	0.95	153	IAML		10 51 33.1	
	comp=N,207nm,1.9s						
AOPR	Arecibo Observ	0.95	153	⇓eP	Pn	10 51 09.1	-0.5
AOPR	Arecibo Observ	0.95	153	eS	Sn	10 51 22.8	-0.4
AOPR	Arecibo Observ	0.95	153	⇑ePg	Pn	10 51 09.0	-0.5
EMPR	Esperanza - Ma	0.96	138		Pn	10 51 10.8	+1.2
EMPR					Sn	10 51 23.6	+0.1
EMPR	Esperanza - Ma	0.96	138	IAML		10 51 29.6	
	comp=N,177nm,0.5s						
EMPR				IAML		10 51 31.7	
	comp=N,126nm,0.5s						
EMPR	Esperanza - Ma	0.96	138	⇑eP	Pn	10 51 10.8	+1.2
EMPR	Esperanza - Ma	0.96	138	eS	Sn	10 51 23.6	+0.1
LSP	Las Mesas	1.02	173		Pn	10 51 10.5	0.0
LSP					Sg	10 51 23.2	+0.5
LSP	Las Mesas	1.02	173	⇑eP	Pn	10 51 10.5	0.0
LSP	Las Mesas	1.02	173	eS	Sg	10 51 23.2	+0.5
UUPR	Utuado, UPR, P	1.05	154		Pb	10 51 10.4	+0.2
UUPR					Sn	10 51 25.1	-0.5
UUPR	Utuado, UPR, P	1.05	154	⇑eP	Pb	10 51 10.4	+0.2
UUPR	Utuado, UPR, P	1.05	154	eS	Sn	10 51 25.1	-0.5
CRPR	Cabo Rojo, PR	1.19	175		Pg	10 51 12.2	-0.4
CRPR					Sg	10 51 27.9	-0.1
CRPR	Cabo Rojo, PR	1.19	175	⇑eP	Pg	10 51 12.2	-0.4
CRPR	Cabo Rojo, PR	1.19	175	eS	Sg	10 51 27.9	-0.1
CRPR	Cabo Rojo, PR	1.19	175	⇑ePg	Pg	10 51 12.4	-0.2
CRPR				⇑eSg	Sg	10 51 27.4	-0.7
CRPR				IAML		10 51 31.8	
	comp=N,632nm,0.3s						
CRPR	Cabo Rojo, PR	1.19	175	i P	Pg	10 51 12.6	0.0
CRPR				eS	Sb	10 51 28.7	+0.6
CRPR				IAML		10 51 29.0	
	comp=Z,88nm,0.3s						
ECPR	Experimental S	1.19	137	⇑eP	Pn	10 51 13.1	+0.3
ECPR				eS	Sn	10 51 28.8	-0.3
MLPR	Magueyes Islan	1.23	173	⇑eP	Pb	10 51 13.1	-0.2
MLPR	Magueyes Islan	1.23	173	eS	Sg	10 51 29.0	-0.4
MLPR	Magueyes Islan	1.23	173	⇑ePg	Pb	10 51 13.1	-0.2
MLPR				⇑eSg	Sg	10 51 29.0	-0.4
MLPR				IAML		10 51 39.7	
	comp=N,22nm,0.2s						
GBPR	Guanica, Bosqu	1.25	165		Pg	10 51 14.6	+0.7
GBPR					Sg	10 51 29.0	-1.2
GBPR	Guanica, Bosqu	1.25	165	⇑eP	Pg	10 51 14.6	+0.7
GBPR	Guanica, Bosqu	1.25	165	eS	Sg	10 51 29.0	-1.2
OBIP	Obispado Ponce	1.28	153		Pg	10 51 14.4	0.0
OBIP					Sb	10 51 31.1	+0.2
OBIP	Obispado Ponce	1.28	153	IAML		10 51 31.2	
	comp=E,88nm,0.4s						
OBIP				IAML		10 51 31.6	
	comp=N,80nm,0.5s						
OBIP	Obispado Ponce	1.28	153	⇑eP	Pg	10 51 14.4	0.0
OBIP	Obispado Ponce	1.28	153	eS	Sb	10 51 31.1	+0.2
PCDR	Punta Cana, DR	1.30	239	⇑ePg	Pg	10 51 14.9	+0.2
PCDR				⇑eSg	Sn	10 51 32.1	+0.3
PCDR				IAML		10 51 38.5	
	comp=N,203nm,1.6s						
GCPR	Guaynabo City	1.39	129		Pg	10 51 16.4	0.0
GCPR					Sn	10 51 34.0	0.0
GCPR	Guaynabo City	1.39	129	⇑eP	Pg	10 51 16.4	0.0
GCPR	Guaynabo City	1.39	129	eS	Sn	10 51 34.0	0.0
SJG	San Juan	1.47	137		Pb	10 51 17.2	-0.3
SJG	San Juan	1.47	137	IAML		10 51 41.5	
	comp=N,70nm,0.3s						
SJG				IAML		10 51 47.2	
	comp=N,65nm,0.3s						
SJG	San Juan	1.47	137	⇑eP	Pb	10 51 17.2	-0.3
SJG	San Juan	1.47	137	eS	Sn	10 51 36.1	-0.1
SJG	San Juan	1.47	137	i P	Pg	10 51 18.5	+0.4
SJG				eS	Sg	10 51 37.5	+0.3
SJG				IAML		10 51 40.4	
	comp=Z,34nm,0.8s						
HUMP	Col San Antoni	1.66	129		Pb	10 51 20.2	-0.5
HUMP					Sb	10 51 42.0	+0.1
HUMP	Col San Antoni	1.66	129	IAML		10 51 48.6	
	comp=Z,41nm,0.2s						
HUMP	Col San Antoni	1.66	129	⇑eP	Pb	10 51 20.2	-0.5
HUMP	Col San Antoni	1.66	129	eS	Sb	10 51 42.0	+0.1
MIDR	Miches	1.75	263	⇑ePg	Pb	10 51 22.3	+0.1
MIDR				⇑eSg	Sg	10 51 46.9	+0.7
MIDR				IAML		10 51 47.2	
	comp=N,37nm,0.9s						
DR12	Loma Pena Alta	2.09	259	Pn	Pb	10 51 26.9	-1.2
HATOM	Hato Mayor del	2.09	259	⇑ePg	Pb	10 51 27.6	-0.5
HATOM				⇑eSg	Sb	10 51 54.5	+0.2
HATOM				IAML		10 52 05.0	
	comp=N,193nm,0.3s						

DJA 16 10:56:52.9±0.6**, 8°S**±4°×**10°7E**±°**, h20**^{km}±5^{km}**, M4.1**/20**, mB5.1**/1**, mb4.3**/6**, MLv4.0**/20**, Mw(mB)4.4**/1**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBJI	Bungbulang	0.54	43	P	Pn	10 57 05.0	-0.5
BBJI				S	Sn	10 57 12.6	-1.4
CNJI	Cibinong	0.57	345	P	Pn	10 57 05.6	-0.3
CNJI				S	Sn	10 57 13.9	-0.7
LEM	Lembang	1.08	18	P	Pb	10 57 12.1	-0.9
SKJI	Sukabumi	1.11	320	P	Pn	10 57 13.0	-0.4
DBJI	Dramaga	1.40	338	P	Pn	10 57 16.8	-0.5
KPJI	Karang Pucung	1.72	72	P	Pn	10 57 21.2	-0.5
TNG	Tangerang	1.79	339	P	Pn	10 57 22.8	+0.1
CTJI	Waduk Cacaban	2.07	66	P	Pn	10 57 26.3	-0.2
SBJI	Serang	2.07	326	P	Pn	10 57 26.1	-0.5
YOGI	Yogyakarta	2.99	89	P	Pn	10 57 39.0	-0.2
UGM	Wanagama	3.21	91	P	Pn	10 57 41.6	-0.7
SMRI	Semarang	3.24	76	P	Pn	10 57 42.9	+0.3
KASI	Kota Agung	3.61	310	P	Pn	10 57 48.3	+0.6
KLI	Kotabumi	3.83	321	P	Pn	10 57 51.3	+0.5
PCJI	Pacitan	3.87	95	P	Pn	10 57 51.2	-0.2
KLSI		4.04	321	P	Pn	10 57 54.4	+0.7
SNJI	Sawahan-Nganju	4.44	89	P	Pn	10 57 59.4	+0.1
SJI	Sawahan	4.45	89	P	Pn	10 57 59.9	+0.6
MDSI	Maura Dua	4.55	317	P	Pn	10 58 00.4	-0.3
TPI	Tanjungpandan	5.08	4	P	Pn	10 58 09.3	+1.3
	0.1nm2µm21nm,1.2s						
MNAI	Manna	5.53	309	P	Pn	10 58 14.2	0.0
EGSI	Enggano, Bengk	5.56	296	P	Pn	10 58 14.3	-0.3
	27nm,0.5s						
GMJI	Gumukmas	6.12	94	P	Pn	10 58 22.7	+0.5
JAGI	Jajag, Banyuwa	6.83	96	P	Pn	10 58 32.5	+0.5
	0.1nm21nm,0.9s						
TWSI	Taliwang, Sumb	9.54	96	P	Pn	10 59 09.8	+0.5

ROM 16 11:04:50.6±0.1**, 41°.606N**±0°.007×**15°.638E**±0°.005**, h7**^{km}**, ML1.6**/6**, 1C, Error ellipse: s-maj=0.8km s-min=0.3km az=12.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APRC	Apricena	0.17	335	P	Pg	11 04 54.5	+0.4
APRC				S	Sg	11 04 57.1	+0.7
SGRT	San Giovanni R	0.17	28	⇑P	Pg	11 04 54.9	+0.8
SGRT				S	Sg	11 04 57.6	+1.2
SGRT				AML	AML		
	comp=E,204µm,1.5s						
SGRT				AML	AML		
	comp=N,448µm,0.2s						
SGRT				AML	AML		
	comp=E,204µm,0.5s						
MSAG	Monte S. Angel	0.23	62	P	Pg	11 04 56.1	+0.9
MSAG				S	Sg	11 04 59.6	+1.3
MSAG				AML	AML		
	comp=E,250µm,0.8s						
MSAG				AML	AML		
	comp=E,93µm,1.6s						
MSAG				AML	AML		
	comp=E,93µm,0.4s						
MSAG				AML	AML		
	comp=N,239µm,0.3s						
MSAG				AML	AML		
	comp=N,564µm,0.3s						
PE3	Peglio	3.12	313	AML	AML		
	comp=E,444µm,0.4s						
PE3				AML	AML		
	comp=E,444µm,1.6s						
PE3				AML	AML		
	comp=N,388µm,1.6s						
PE3				AML	AML		
	comp=N,388µm,0.4s						

ROM 16 11:05:11.1±0.1**, 41°.065N**±0°.007×**14°.726E**±0°.009**, h14**^{km}±1^{km}**, ML2.1**/38**, 4C-2D, Error ellipse: s-maj=0.9km s-min=0.4km az=31.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BENI	Universita' De	0.07	28	P	Pg	11 05 14.1	+0.1
BENI				S	Sg	11 05 16.4	+0.5
PAOL	Paolisi	0.12	254	⇑P	Pg	11 05 14.9	+0.3
PAOL				S	Sb	11 05 18.4	+0.3
PAOL				AML	AML		
	comp=N,2140µm,0.2s						
PAOL				AML	AML		
	comp=N,2295µm,1.2s						
PAOL				AML	AML		
	comp=N,2140µm,0.2s						
PAOL				AML	AML		
	comp=E,1520µm,0.2s						
PAOL				AML	AML		
	comp=E,1445µm,0.2s						
PAOL				AML	AML		
	comp=E,1520µm,0.2s						
PAOL				AML	AML		
	comp=N,2258µm,0.2s						
PAOL				AML	AML		
	comp=N,2140µm,0.2s						
PAOL				AML	AML		
	comp=E,1445µm,0.2s						
VITU	Vitulano (BN)	0.14	329	⇓P	Pg	11 05 14.6	-0.3
VITU				S	Sg	11 05 17.8	+0.4
VITU				AML	AML		
	comp=N,2670µm,0.5s						
VITU				AML	AML		
	comp=E,1905µm,0.9s						
VITU				AML	AML		
	comp=N,2795µm,0.4s						
VITU				AML	AML		
	comp=N,2670µm,1.5s						
VITU				AML	AML		
	comp=E,998µm,0.8s						
VITU				AML	AML		
	comp=E,1775µm,0.2s						
VITU				AML	AML		
	comp=N,2793µm,0.4s						
VITU				AML	AML		
	comp=E,986µm,0.2s						
VITU				AML	AML		
	comp=N,2565µm,0.4s						
AVL	Avellino	0.15	162	P	Pg	11 05 15.0	0.0
AVL				S	Sg	11 05 17.9	+0.4
MRB1	Monte Rocchett	0.20	72	⇑P	Pb	11 05 16.1	-0.4
MRB1				S	Sb	11 05 20.3	+0.2
MRB1				AML	AML		
	comp=N,1435µm,0.5s						
MRB1				AML	AML		
	comp=N,1495µm,0.5s						
MRB1				AML	AML		
	comp=E,1225µm,1.2s						
MRB1				AML	AML		
	comp=E,1205µm,1.2s						
MRB1				AML	AML		
	comp=N,1435µm,0.5s						
MRB1				AML	AML		
	comp=E,1176µm,0.4s						
MRB1				AML	AML		
	comp=E,1172µm,0.4s						
MRB1				AML	AML		
	comp=N,1499µm,0.5s						
MRB1				AML	AML		
	comp=N,1433µm,0.5s						
NL9	Nola	0.20	224	P	Pb	11 05 16.2	-0.3
LGS3	Luogosano	0.21	111	P	Pb	11 05 16.6	-0.3
LGS3				S	Sb	11 05 20.7	0.0
MTMR	Montemarano	0.26	125	⇓P	Pg	11 05 16.6	0.0
MTMR				AML	AML		
	comp=E,410µm,0.7s						
MTMR				AML	AML		
	comp=N,354µm,0.4s						
MTMR				AML	AML		
	comp=N,353µm,0.4s						
MTMR				AML	AML		
	comp=E,410µm,1.3s						
MTMR				AML	AML		
	comp=E,438µm,0.1s						
MTMR				AML	AML		
	comp=N,328µm,0.1s						
MTMR				AML	AML		
	comp=E,438µm,0.1s						
MTMR				AML	AML		
	comp=N,354µm,0.1s						
MTMR				AML	AML		
	comp=E,353µm,0.2s						
MNT3	Montella	0.31	137	⇑P	Pg	11 05 17.6	0.0
MNT3				AML	AML		
	comp=E,825µm,0.1s						
MNT3				AML	AML		
	comp=N,1325µm,1.5s						
MNT3				AML	AML		
	comp=N,1325µm,1.5s						
MNT3				AML	AML		
	comp=N,1112µm,0.1s						
MNT3				AML	AML		
	comp=E,825µm,0.1s						
MNT3	Montella	0.31	137	AML	AML		
	comp=E,736µm,0.3s						
MNT3				AML	AML		
	comp=N,1152µm,0.8s						
MNT3				AML	AML		
	comp=N,1151µm,0.8s						
MNT3				AML	AML		
	comp=E,716µm,0.1s						
MNT3				AML	AML		
	comp=N,1002µm,0.1s						
SACR	S. Croce Del S	0.33	357	P	Pg	11 05 18.4	+0.4
VTIR	Vesuvio Tirone	0.34	222	⇑P	Pb	11 05 18.9	-0.1
VTIR				AML	AML		
	comp=E,357µm,1.6s						
VTIR				AML	AML		
	comp=N,273µm,0.3s						
VTIR				AML	AML		
	comp=N,274µm,0.3s						
VTIR				AML	AML		
	comp=N,274µm,1.7s						
VTIR				AML	AML		
	comp=E,357µm,0.4s						
VTIR				AML	AML		
	comp=E,342µm,0.1s						
VTIR				AML	AML		
	comp=N,251µm,0.2s						
PIGN	Pignataro Magg	0.43	288	P	Pg	11 05 20.0	+0.2
PIGN				AML	AML		
	comp=N,162µm,1.0s						
PIGN				AML	AML		
	comp=E,198µm,0.7s						
PIGN				AML	AML		
	comp=E,227µm,0.5s						
PIGN				AML	AML		
	comp=N,200µm,0.8s						
PIGN				AML	AML		
	comp=E,166µm,0.5s						
PIGN				AML	AML		
	comp=N,146µm,0.3s						
MCRV	Calabrutti - M	0.44	130	P	Pg	11 05 20.0	+0.1
MCRV				AML	AML		
	comp=E,318µm,1.2s						
MCRV				AML	AML		
	comp=E,318µm,0.8s						
MCRV				AML	AML		
	comp=N,427µm,0.6s						
MCRV				AML	AML		
	comp=E,289µm,0.3s						
MCRV				AML	AML		
	comp=N,399µm,0.4s						
BSSO	Busso	0.49	348	P	Pg	11 05 20.9	0.0
BSSO				AML	AML		
	comp=N,36µm,0.4s						
BSSO				AML	AML		
	comp=E,50µm,0.4s						
BSSO				AML	AML		
	comp=N,36µm,0.4s						
BSSO				AML	AML		
	comp=E,50µm,0.4s						
MRLC	Muro Lucano	0.66	118	P	Pg	11 05 23.7	-0.3
MRLC				AML	AML		
	comp=E,106µm,0.4s						
MRLC				AML	AML		

	comp=N,104µm,0.5s						
MRLC				AML	AML		
	comp=E,106µm,1.6s						
MRLC				AML	AML		
	comp=E,106µm,0.4s						
MRLC				AML	AML		
	comp=N,67µm,0.6s						
MRLC				AML	AML		
	comp=E,63µm,0.4s						
MRLC				AML	AML		
	comp=N,103µm,0.5s						
CDRU	**Civita di Ruta**	0.72	142	P	Pg	11 05 24.3	-0.9
CDRU				AML	AML		
	comp=N,131µm,0.6s						
CDRU				AML	AML		
	comp=N,131µm,1.4s						
CDRU				AML	AML		
	comp=E,103µm,0.3s						
CDRU				AML	AML		
	comp=N,131µm,0.6s						
CDRU				AML	AML		
	comp=E,103µm,0.3s						
CMPR	**Campora**	0.86	149	P	Pg	11 05 26.6	-1.3
SGRT	**San Giovanni R**	1.03	48	P	Pb	11 05 30.8	0.0
SGRT				AML	AML		
	comp=E,174µm,1.2s						
SGRT				AML	AML		
	comp=N,117µm,1.2s						
SGRT				AML	AML		
	comp=N,117µm,0.8s						
SGRT				AML	AML		
	comp=E,174µm,0.8s						
SGRT				AML	AML		
	comp=E,103µm,0.3s						
SGRT				AML	AML		
	comp=N,113µm,0.4s						

DJA 16 11:07:47.6±0.3, 8°S±5°×11°9E±°, h174km±3km, M3.8/17, mb3.9/8, MLv3.8/17, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBNI	**Kabupaten Domp**	0.29	223	P	Pn	11 08 12.2	+1.2
DBNI				S	Sn	11 08 30.8	+1.8
PLAI	**Plampang**	0.90	234	P	Pn	11 08 15.1	+1.1
PLAI				S	Sn	11 08 35.5	+1.2
LBFI	**Labuhan Bajo,**	1.38	98	P	Pn	11 08 18.4	+0.5
LBFI				S	Sn	11 08 41.3	0.0
WBSI	**Waikabubak, Su**	1.60	147	P	Pn	11 08 20.0	-0.1
WBSI				S	Sn	11 08 45.8	+0.5
TWSI	**Taliwang, Sumb**	1.67	254	P	Pn	11 08 21.3	+0.5
TWSI				S	Sn	11 08 47.1	+0.7
WSI	**Waingapu**	2.23	128	P	Pn	11 08 26.7	-0.2
KLNI	**Mataram**	2.39	267	P	Pn	11 08 29.0	+0.3
BASI	**Baing, Sumba**	2.80	133	P	Pn	11 08 33.7	+0.2
KHKI	**Kahang-Kahang**	2.87	268	P	Pn	11 08 35.1	+0.7
EDFI	**Ende, Flores**	3.18	98	P	Pn	11 08 38.2	-0.1
BKSI	**Bulukumba**	3.35	29	P	Pn	11 08 41.1	+0.7
IGBI	**Denpasar**	3.37	261	P	Pn	11 08 41.0	+0.5
RTBI	**Rangdo, Negare**	3.53	267	P	Pn	11 08 42.5	-0.2
JAGI	**Jajag, Banyuwa**	4.32	267	P	Pn	11 08 51.1	-1.5
GMJI	**Gumukmas**	5.01	270	P	Pn	11 09 00.6	-1.0
	0.1nm16nm,1.0s						
SOEI	**Soe**	5.87	105	P	Pn	11 09 12.7	-0.3
	20nm,0.5s						
SNJI	**Sawahan-Nganju**	6.71	274	P	Pn	11 09 24.4	+0.4
	0.1nm10.0nm,0.7s						
PCJI	**Pacitan**	7.26	270	P	Pn	11 09 30.9	-0.3
	12nm,0.7s						

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*IDC **16** 11:08:14.1±3.2, 7°10S×102°33E, h0km, mb3.7/5, mbtmp3.7/5, MS3.8/1, Error ellipse: s-maj=135.3km s-min=22.7km az=55.0*

*DJA **16** 11:08:26.1±1.0, 6°S±8°×10°4E±°, h10km, M3.9/6, mb4.6/1, MLv3.6/6*

ISC 16 11:08:23.5±1.2, 6°45S±0°08×103°74E±0°07, h10km, n18, $\sigma 1^{s}05$/14, mb3.8/5, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	1.19	39	P	Pb	11 08 46.3	0.0
KASI				S	Sb	11 09 02.1	+0.3
LWLI	**Liwa**	1.46	13	P	Pn	11 08 50.8	+0.7
LWLI				S	Sb	11 09 08.1	-1.6
EGSI	**Enggano, Bengk**	1.82	307	P	Pn	11 08 56.1	+1.2
KLI	**Kotabumi**	1.93	35	P	Pn	11 08 57.9	+1.4
MDSI	**Maura Dua**	2.00	13	P	Pn	11 08 58.6	+1.1
KLSI		2.01	29	P	Pn	11 08 58.9	+1.3
MNAI	**Manna**	2.22	339	P	Pn	11 09 01.0	+0.5
BBJI	**Bungbulang**	4.01	105	P	Pn	11 09 25.6	+0.5
PPSI	**Pulau Pagai**	5.22	314	P	Pn	11 09 42.7	+1.0
WRA	**Warramunga Arr**	32.59	117	P	P	11 14 55.6	+0.1
	0.6nm,0.6s,baz=287,slow=12,SNR=5.6						
	0.6nm,0.6s						
ASAR	**Alice Springs**	33.66	124	P	P	11 15 04.8	-0.1
	0.5nm,0.8s,baz=301,slow=8.4,SNR=5.8						
	0.5nm,0.8s						
JOW	**Kunigami**	40.74	35	LR	LR	11 32 38.3	
	comp=Z,145nm,21.4s,baz=291,slow=35						
STKA	**Stephens Creek**	43.43	131	P	P	11 16 23.7	-3.2
	1.3nm,0.4s,baz=333,slow=11,SNR=5.3						
	1.3nm,0.4s						
SONM	**Songino Array**	54.11	2	P	P	11 17 47.6	-1.1
	0.6nm,0.7s,baz=184,slow=12,SNR=3.8						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	56.33	342	P	P	11 17 57.1	-7.6
	0.6nm,0.5s,baz=140,slow=6.5,SNR=7.9						
	0.6nm,0.5s						
H04N2	**CROZET ISLANDS**	59.59	219	T	T	12 22 56.1	
	baz=66,slow=75,SNR=24						
H04N1	**CROZET ISLANDS**	59.61	219	T	T	12 22 56.4	
	baz=66,slow=75,SNR=25						
H04N3	**CROZET ISLANDS**	59.61	219	T	T	12 22 55.0	
	baz=66,slow=75,SNR=19						

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*DJA **16** 11:20:42.2±1.8, 8°N±16°×12°5E±°, h56km±26km, M5.1/14, mb4.8/14, mB5.7/7, MLv5.1/8, Mw(mB)5.2/7*

*IDC **16** 11:20:53.0±0.8, 6°57N×125°06E, h0km, mb4.0/7, mbtmp4.0/7, Error ellipse: s-maj=19.9km s-min=9.5km az=128.0*

*NEIC **16** 11:20:56.1±1.3, 6°76N±0°08×125°18E±0°07, h10km±1km, mb4.4/17, Error ellipse: s-maj=16.0km s-min=7.5km az=321.0*

ISC 16 11:20:55.7±0.6, 6°78N±0°07×125°14E±0°08, h13km, n49, $\sigma 1^{s}45$/43, mb4.2/15, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	0.52	56	Pg	Pb	11 21 06.0	-0.8
	686nm,0.3s,baz=240,slow=2.4,SNR=68						
DAV				Lg	Lg	11 21 17.1	
	1µm,0.3s,baz=143,slow=20,SNR=11						
DAV	**Davao City (W)**	0.52	56		Pb	11 21 05.8	-1.0
DAV	**Davao City (W)**	0.52	56	P	Pg	11 21 04.9	-1.1
DAV	**Davao City (W)**	0.52	56	P	Pg	11 21 05.0	-1.1
SGSI	**Sangihe**	3.10	173	P	Pn	11 21 45.3	+0.9
TNTI	**Ternate**	6.37	159	Pn	Pn	11 22 30.5	+1.2
TNTI	**Ternate**	6.37	159	P	Pn	11 22 32.1	+2.8
	0.2nm31nm,0.9s						
GTOI	**Gorontalo**	6.46	199	P	Pn	11 22 28.4	-2.2
	0.3nm689nm95nm,0.7s						
MRSI	**Marisa**	7.03	207	P	Pn	11 22 35.5	-2.9
	0.3nm63nm,1.1s						
TOLI2	**Tolitoli**	7.11	218	Pn	Pn	11 22 40.7	+1.1
LUWI	**Luwuk**	8.12	197	Pn	Pn	11 22 53.5	+0.1
LUWI	**Luwuk**	8.12	197	P	Pn	11 22 52.0	-1.4
	9µm56nm,1.0s						
APSI	**Ampana**	8.40	205	P	Pn	11 22 57.3	+0.1
	40nm,1.2s						
SANI	**Sanana**	8.81	174	P	Pn	11 23 03.8	+0.9
	27nm,0.8s						
I39PW	**PALAU INFRASON**	9.36	85	I	I	12 20 40.0	
	baz=267,slow=293,SNR=0.8						
NLAI	**Namlea**	10.14	169	P	Pn	11 23 22.5	+1.3
	34nm,0.7s						
KRAI	**Karang Ratu**	10.54	162	P	Pn	11 23 28.4	+1.7
TTSI	**Tana Toraja**	11.11	209	P	Pn	11 23 31.6	-2.8
	16nm,0.8s						
FAKI	**Fak Fak**	11.96	143	Pn	Pn	11 23 45.8	-0.4
RKPI	**Ransiki, Papua**	12.21	132	P	Pn	11 23 50.7	+1.1
MTKI	**Muara Teweh, K**	12.78	233	P	Pn	11 23 45.9	-11
KLNI	**Mataram**	17.59	211	P	P	11 25 13.0	+11
SNJI	**Sawahan-Nganju**	19.68	223	P	Pn	11 25 36.0	+10
MTN	**Manton Dam**	20.38	163	P	P	11 25 32.2	-0.3
MTN				IAmb	IAmb	11 26 03.1	
	comp=Z,14nm,1.0s						
KNRA	**Kununurra**	22.60	171		P	11 25 55.6	-0.6
KNRA				IAmb	IAmb	11 26 00.6	
	comp=Z,14nm,0.8s						
FITZ	**Fitzroy Crossi**	24.72	179	P	P	11 26 17.1	+0.2
COEN	**Coen**	27.29	139	P	P	11 26 41.3	+1.0
WB0	**Warramunga Arr**	27.91	161	P	P	11 26 44.3	-1.5
WB0				IAmb	IAmb	11 27 23.0	
	comp=Z,7.2nm,0.9s						
CMAR	**Chiang Mai Arr**	28.03	297	P	P	11 26 49.5	+2.5
	comp=Z,0.7nm,0.3s,baz=121,slow=7.8,SNR=4.4						
WRAB	**Tennant Creek**	28.05	161	P	P	11 26 45.1	-1.9
WRAB				IAmb	IAmb	11 26 58.0	
	comp=Z,5.8nm,1.1s						
WRA	**Warramunga Arr**	28.05	161	P	P	11 26 45.0	-2.1
	comp=Z,0.5nm,0.5s,baz=330,slow=11,SNR=6.9						
	comp=Z,0.5nm,0.5s						
WR8	**Warramunga Arr**	28.12	161	P	P	11 26 46.8	-0.8
WR8				IAmb	IAmb	11 27 26.4	
	comp=Z,4.4nm,0.9s						
AS31	**Alice Springs**	31.45	164		P	11 27 16.5	-0.6
ASAR	**Alice Springs**	31.45	164	P	P	11 27 15.1	-2.1
	comp=Z,0.9nm,0.5s,baz=344,slow=7.3,SNR=17						
	comp=Z,0.9nm,0.5s						
FORT	**Forrest**	37.45	176	P	P	11 28 08.9	0.0
FORT				IAmb	IAmb	11 28 25.5	
	comp=Z,5.1nm,0.9s						
INKA	**Innaminka**	37.49	157	P	P	11 28 09.8	+0.5
BBOO	**Buckleboo**	40.72	166		P	11 28 34.7	-1.6
BBOO				IAmb	IAmb	11 28 54.2	
	comp=Z,14nm,1.2s						
STKA	**Stephens Creek**	41.52	159	P	P	11 28 40.2	-2.7
	comp=Z,2.1nm,1.0s,baz=335,slow=7.6,SNR=12						
	comp=Z,2.1nm,1.0s						
STKA	**Stephens Creek**	41.52	159		P	11 28 42.6	-0.3
SANVU	**Saraoutou**	47.16	118	P	P	11 29 28.2	-0.1
CAN	**Canberra**	47.53	153	P	P	11 29 31.1	+0.1
MKAR	**Makanchi Array**	54.17	325	P	P	11 30 21.1	+0.2
	comp=Z,1.2nm,0.8s,baz=135,slow=7.7,SNR=13						
	comp=Z,1.2nm,0.8s						
KURBB	**Kurchatov Arra**	58.34	327	P	P	11 30 50.0	-0.6
	comp=Z,1.1nm,0.7s,baz=125,slow=6.2,SNR=8.5						
	comp=Z,1.1nm,0.7s						
KURK	**Kurchatov**	58.34	327	P	P	11 30 50.0	-0.6
KURK	**Kurchatov**	58.34	327	IAmb	IAmb	11 30 54.8	
	comp=Z,2.1nm,0.8s						
KK31	**Karatay Array**	59.94	316		P	11 31 02.2	+0.3
KK31				IAmb	IAmb	11 31 04.2	
	comp=Z,3.0nm,0.9s						
KKAR	**Karatay Array**	59.94	316		P	11 31 02.0	+0.1
ILAR	**Eielson Array**	83.05	26	P	P	11 33 22.6	+1.8
	comp=Z,1.1nm,0.8s,baz=234,slow=5.3,SNR=14						
	comp=Z,1.1nm,0.8s						
YKA	**Yellowknife Ar**	97.38	24	P	Pdif	11 34 29.5	+0.7
	comp=Z,0.6nm,0.9s,baz=300,slow=5.7,SNR=5.5						
	comp=Z,0.6nm,0.9s						

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*BJI **16** 11:25:55.9, 24°54N×121°79E, h45km, mB4.8/29, mb4.7/76, ML4.8/11, Ms4.3/55, Ms7 4.0/60*

*NEIC **16** 11:25:56.6±2.7, 24°50N±0°04×121°80E±0°02, h35km±1km, mb5.0/151, Error ellipse: s-maj=7.8km s-min=3.2km az=193.0*

*ASIES **16** 11:25:57.7, 24°54N×121°77E, h49km, Mw4.5, Fault plane solution: NP1:ϕ_s322.00000°, δ17.00000°, λ169.00000°. NP2:ϕ_s63.00000°, δ87.00000°, λ73.00000°.*

*IDC **16** 11:25:57.8±0.5, 24°53N×121°89E, h58km±4km, mb4.3/25, mbtmp4.5/28, MS3.9/32, Error ellipse: s-maj=13.0km s-min=9.7km az=63.0*

*NIED **16** 11:25:57.1, 24°46N×121°74E, h61km, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.58; $M_{\theta\theta}$-1.11; $M_{\phi\phi}$0.53; $M_{r\theta}$0.89; $M_{\theta\phi}$-0.11; $M_{\phi r}$0.66; Fault plane solution: $M_0$1.46000×10^{16} NP1: ϕ_s302.00000°, δ32.00000°, λ152.00000°. NP2: ϕ_s56.00000°, δ76.00000°, λ61.00000°.*

*TAP **16** 11:25:57.7, 24°54N×121°76E, h50km, ML5.2, B*

*JMA **16** 11:25:57.1±0.1, 24°5N±0°4×121°7E±0°5, h61km±1km, MD4.7/17, MW4.7/17, TAIWAN REGION*

*MOS **16** 11:25:58.6±0.9, 24°54N×121°90E, h51km, mb4.8/57, Error ellipse: s-maj=8.1km s-min=4.5km az=122.7*

ISC 16 11:25:57.6±0.3, 24°55N±0°02×121°77E±0°02, h50km±2km, h50km:pP-P, n592, $\sigma 1^{s}68$/690, mb4.9/181, MS4.0/38, 33C-47D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESAO	**Su ao**	0.07	70	⇑*i*P	Pn	11 26 05.8	+0.5
ESAO				*i*S	Sn	11 26 11.8	+1.1
TWC	**Suao**	0.09	51	⇑*i*P	Pn	11 26 06.0	+0.7
TWC				*i*S	Sn	11 26 11.9	+1.1
NDS	**Dongshan**	0.10	328	⇓*i*P	Pn	11 26 06.1	+0.7
NDS				*i*S	Sn	11 26 12.1	+1.2
EWUT	**Wuta**	0.11	177	*i*P	Pn	11 26 05.8	+0.5
EWUT				*i*S	Sn	11 26 11.9	+1.0
ENA	**Nanau**	0.13	193	⇑*i*P	Pn	11 26 06.0	+0.5
ENA				*i*S	Sn	11 26 12.1	+1.0
TWE	**Neicheng**	0.19	331	⇓*i*P	Pn	11 26 06.6	+0.8
TWE				S	Sn	11 26 12.6	+0.9
ENTT	**Nioudou**	0.21	295	⇓*i*P	Pn	11 26 06.6	+0.7
ENTT				S	Sn	11 26 12.6	+0.6
EAHA	**Aohua**	0.22	188	*i*P	Pn	11 26 06.3	+0.3
EAHA				*i*S	Sn	11 26 13.1	+1.0
LATG	**Datong**	0.22	266	⇑*i*P	Pn	11 26 06.7	+0.5
LATG				*i*S	Sn	11 26 13.2	+0.9
EHP	**Heping Village**	0.24	187	⇑*i*P	Pn	11 26 06.7	+0.5
EHP				*i*S	Sn	11 26 13.8	+1.5
FUSB	**Fushanzhiwuyua**	0.27	321	⇓*i*P	Pn	11 26 07.2	+0.7
FUSB				S	Sn	11 26 13.6	+0.7
NTC	**Toucheng**	0.31	10	*i*P	Pn	11 26 08.0	+1.2
NTC				*i*S	Sn	11 26 15.3	+2.1
EGS		0.33	27	*i*P	Pn	11 26 08.2	+1.3
NWLT	**Wulai**	0.33	313	P	Pn	11 26 07.6	+0.6
NWLT				*i*S	Sn	11 26 14.4	+0.7
NNSB	**Datong**	0.38	251	⇑*i*P	Pn	11 26 08.2	+0.6
NNSB				*i*S	Sn	11 26 15.3	+0.7
YHNB	**Yeheng**	0.38	288		Pn	11 26 07.8	+0.3
YHNB	**Yeheng**	0.38	288	P	Pn	11 26 08.3	+0.8
YHNB	**Yeheng**	0.38	288	⇓*i*P	Pn	11 26 08.1	+0.6
YHNB				S	Sn	11 26 14.6	-0.1
NNS	**Nan Shan**	0.38	253	⇑*i*P	Pn	11 26 08.2	+0.6
NNS				*i*S	Sn	11 26 15.3	+0.6
NSK	**Sanguang**	0.40	288	*i*P	Pn	11 26 08.2	+0.5
NSK				S	Sn	11 26 15.2	+0.3
NACB	**Ninganchiao**	0.41	203		Pn	11 26 08.1	+0.4
NACB	**Ninganchiao**	0.41	203	P	Pn	11 26 08.3	+0.5
NACB	**Ninganchiao**	0.41	203	⇑*i*P	Pn	11 26 07.5	-0.3
NACB				*i*S	Sn	11 26 15.1	0.0
ETL	**Fush Village**	0.41	199	*e*P	Pn	11 26 08.2	+0.3
ETL				S	Sn	11 26 16.4	+1.2
TIPB	**Shuangxi**	0.42	7	P	Pn	11 26 09.0	+1.0
TIPB				*e*S	Sn	11 26 17.1	+1.7
ETLH	**Xiulin Townshi**	0.43	218	*i*P	Pn	11 26 08.3	+0.1
ETLH				S	Sn	11 26 15.9	+0.2
EOS2	**EOS2**	0.44	107	*i*P	Pn	11 26 09.7	+1.7
TWA	**Mucha**	0.46	338	⇓*i*P	Pn	11 26 09.1	+0.7
TWA				*i*S	Sn	11 26 16.6	+0.5
NHDH	**Xindian Distri**	0.47	331	⇓*i*P	Pn	11 26 09.1	+0.7
NHDH				S	Sn	11 26 17.2	+1.0
TATO	**Taipei**	0.49	329		Pn	11 26 09.2	+0.5
TATO	**Taipei**	0.49	329	P	Pn	11 26 09.3	+0.5
TATO	**Taipei**	0.49	329	S	Sn	11 26 17.7	+1.0
TWB1	**Santiao Chiao**	0.50	23	⇓*i*P	Pn	11 26 09.8	+1.0
TWB1				*i*S	Sn	11 26 18.3	+1.5
TWD	**Chiawan**	0.50	199	⇑*i*P	Pn	11 26 08.5	-0.2
TWD				*i*S	Sn	11 26 17.0	+0.3
NWF	**Wu-fen Shan**	0.52	1	⇓*i*P	Pn	11 26 10.0	+0.9
NWF				*i*S	Sn	11 26 18.6	+1.2
WFSB	**Wu-fen Shan**	0.52	1	⇓*i*P	Pn	11 26 10.1	+1.0
WFSB				*i*S	Sn	11 26 18.6	+1.3
NHY	**Taipei**	0.52	339	P	Pn	11 26 09.8	+0.8
NHY				*i*S	Sn	11 26 18.6	+1.3
TAP	**Taipei**	0.54	334	⇓*i*P	Pn	11 26 09.9	+0.6
TAP				*i*S	Sn	11 26 18.8	+1.0
SXI1	**Grass Mountain**	0.55	10	⇓*i*P	Pn	11 26 10.3	+0.8
SXI1				*i*S	Sn	11 26 19.3	+1.3
EOS3	**EOS3**	0.56	118	*i*P	Pn	11 26 11.0	+1.6
KSHI	**Guanxi Townshi**	0.59	293	*i*P	Pn	11 26 10.9	+1.0
KSHI				S	Sn	11 26 20.6	+1.9
HWA	**Hwalien**	0.59	195	*i*P	Pn	11 26 10.4	+0.5
HWA				S	Sn	11 26 20.6	+1.8
TNOU	**National Taiwa**	0.60	0	*i*P	Pn	11 26 10.5	+0.5
TNOU				*i*S	Sn	11 26 19.7	+0.8
NFF	**Wufeng Townshi**	0.60	278	⇓*i*P	Pn	11 26 10.9	+0.8
NFF				*i*S	Sn	11 26 20.7	+1.6
TWT	**Tachien**	0.62	241	*i*P	Pn	11 26 11.6	+1.2
TWT				*i*S	Sn	11 26 21.0	+1.3
YM01	**YM01**	0.62	343	⇓*i*P	Pn	11 26 10.8	+0.5
YM01				*i*S	Sn	11 26 20.5	+1.0
LXIB	**Xiulin Townshi**	0.62	212	*e*P	Pn	11 26 10.3	-0.1
LXIB				*e*S	Sn	11 26 19.9	+0.2
TDCB	**Techi**	0.63	242	⇑*i*P	Pn	11 26 11.6	+1.0
TDCB				*i*S	Sn	11 26 20.5	+0.5
TWS1	**Kuangyinshan**	0.63	330	⇓*i*P	Pn	11 26 11.1	+0.7
TWS1				*i*S	Sn	11 26 21.6	+1.8
ETM	**Tongmen**	0.64	204	P	Pn	11 26 10.2	-0.3
ETM				S	Sn	11 26 19.4	-0.5
ZUZH	**Zhuzihu**	0.64	341	⇓*i*P	Pn	11 26 11.0	+0.4
ZUZH				*i*S	Sn	11 26 20.7	+0.7
YM08	**YM08**	0.66	345	⇓*i*P	Pn	11 26 10.9	+0.1
EOS4	**EOS4**	0.66	131	*e*P	Pn	11 26 11.3	+1.0
EOS4				*e*S	Sn	11 26 21.7	+2.0
ANP	**Anpu**	0.67	340	⇓*i*P	Pn	11 26 11.2	+0.2
ANP				*i*S	Sn	11 26 21.1	+0.3
NCU	**National Centr**	0.68	308	⇓*e*P	Pn	11 26 09.9	-1.1
NCU				*e*S	Sn	11 26 20.5	-0.2
NCUH	**Zhongli**	0.68	308	⇓*i*P	Pn	11 26 11.7	+0.7
NCUH				*i*S	Sn	11 26 22.0	+1.2
NTST	**Danshui**	0.68	334	⇓*i*P	Pn	11 26 11.7	+0.6
NTST				*i*S	Sn	11 26 22.4	+1.7
LIOB	**Emei**	0.69	278	*i*P	Pn	11 26 12.4	+1.1
LIOB				S	Sn	11 26 23.4	+2.2
TEYL	**Yanliau Villag**	0.70	193	P	Pn	11 26 11.3	0.0
TEYL				*e*S	Sn	11 26 23.2	+2.0
NSTT	**Nanjuang**	0.71	277	P	Pn	11 26 12.4	+1.0
NSTT				S	Sn	11 26 23.3	+1.9
TWY	**Chenhua**	0.74	348	⇓P	Pn	11 26 12.6	+0.8
TWY				S	Sn	11 26 23.4	+1.2
SBCB	**Hsinchu**	0.75	289	P	Pn	11 26 12.9	+0.9
SBCB				S	Sn	11 26 24.1	+1.6
HSN	**Hsinchu**	0.77	289	*i*P	Pn	11 26 12.6	+0.4
HSN				*i*S	Sn	11 26 23.3	+0.4
SHUL	**Shoufeng**	0.78	194	*i*P	Pn	11 26 12.8	+0.4
SHUL				S	Sn	11 26 24.4	+1.2
ESL	**Shilin**	0.80	203	*e*P	Pn	11 26 11.8	-0.8
ESL				*e*S	Sn	11 26 22.3	-1.2
WHP	**Taichung City**	0.80	250	*i*P	Pn	11 26 14.7	+2.0
WHP				S	Sn	11 26 25.6	+1.8
OWD	**Renai**	0.81	223	⇓*i*P	Pn	11 26 13.4	+0.6
OWD				*i*S	Sn	11 26 24.1	+0.1
WUSB	**Renai**	0.82	227	⇓*i*P	Pn	11 26 14.0	+1.0
WUSB				*i*S	Sn	11 26 25.3	+1.1
TEGC	**Jichi Village**	0.86	194	P	Pn	11 26 13.8	+0.3
TEGC				*e*S	Sn	11 26 28.7	+3.6
NMLH	**Miaoli**	0.89	269	*e*P	Pn	11 26 15.2	+1.3
NMLH				S	Sn	11 26 27.3	+1.5
WARBT	**Fenglin Townsh**	0.90	203	*e*P	Pn	11 26 12.9	-1.1
WARBT				*e*S	Sn	11 26 24.4	-1.6
WCS	**Beigang Elemen**	0.93	238	*i*P	Pn	11 26 16.0	+1.7
WCS				S	Sn	11 26 28.5	+1.9
NSY	**Sanyi**	0.93	262	⇑*i*P	Pn	11 26 16.2	+1.8
NSY				S	Sn	11 26 29.1	+2.4
TWQ1	**Liyutan**	0.93	258	⇑P	Pn	11 26 15.6	+1.2
TWQ1				S	Sn	11 26 28.4	+1.7
EGFH	**Guangfu**	0.93	200	*e*P	Pn	11 26 13.5	-0.9
VWDT	**VWDT**	0.98	216	⇓*i*P	Pn	11 26 15.7	+0.7
VWDT				S	Sn	11 26 28.5	+0.6
SMLT	**Sun Moon Lake**	1.04	230	P	Pn	11 26 17.4	+1.5
SMLT				S	Sn	11 26 32.0	+2.6
TYC	**Yuchr**	1.05	233	P	Pn	11 26 17.5	+1.5
TYC				S	Sn	11 26 31.8	+2.2
JYNG	**Yonagunijimaku**	1.07	95	P	Pn	11 26 16.9	+0.6
JYNG				S	Sn	11 26 31.5	+1.4
JYNG	**Yonagunijimaku**	1.07	95	A	A	11 26 16.9	
	comp=N,30nm,1.0s,comp=E,28nm,1.6s						
TCU	**Taichung**	1.08	248	*e*P	Pn	11 26 18.2	+1.9
TCU				*e*S	Sn	11 26 31.6	+1.4
HGSD	**Ruisui**	1.10	197	*e*P	Pn	11 26 16.4	-0.2
HGSD				*e*S	Sn	11 26 33.5	+2.7
PCYT	**Pengchaiyu**	1.11	14	⇓*i*P	Pn	11 26 17.6	+0.8
PCYT				S	Sn	11 26 32.0	+1.1
EHY	**Hungye**	1.12	202	*e*P	Pn	11 26 15.6	-1.3
EHYH	**Wanrong**	1.12	200	P	Pn	11 26 15.9	-1.0
YOJ	**Yonaguni jima**	1.13	94		Pn	11 26 17.5	+0.5
YOJ	**Yonaguni jima**	1.13	94	P	Pn	11 26 17.7	+0.6
YOJ	**Yonaguni jima**	1.13	94	P	Pn	11 26 17.5	+0.5
YOJ	**Yonaguni jima**	1.13	94	⇓*i*P	Pn	11 26 17.6	+0.5
YOJ				S	Sn	11 26 32.6	+1.1
YOJ	**Yonaguni jima**	1.13	94	P	Pn	11 26 17.6	+0.5
YOJ				*e*S	Sn	11 26 32.4	+0.8
YOJ	**Yonaguni jima**	1.13	94	A	A	11 26 17.6	
	comp=N,28nm,1.1s,comp=E,24nm,3.6s						
WHYT	**Xinyi Township**	1.20	225	P	Pn	11 26 19.6	+1.6
WHYT				*i*S	Sn	11 26 36.1	+3.0
WJS	**Zhushan**	1.20	233	P	Pn	11 26 19.6	+1.6
WJS				S	Sn	11 26 36.5	+3.4
WNT	**Mingjian**	1.20	236	P	Pn	11 26 19.5	+1.6
WNT				S	Sn	11 26 36.0	+2.8
WCHH	**Zhanghua**	1.20	247	P	Pn	11 26 19.1	+1.1
WCHH				*e*S	Sn	11 26 35.0	+1.8
WCH1	**Changhua City**	1.22	247	*e*P	Pn	11 26 19.4	+1.2
WCH1				*e*S	Sn	11 26 35.7	+2.2
YULB	**Yu-li**	1.23	201		Pn	11 26 17.5	-1.0
YULB	**Yu-li**	1.23	201	P	Pn	11 26 17.2	-1.3
YULB	**Yu-li**	1.23	201	S	Sn	11 26 33.7	-0.3
YULB	**Yu-li**	1.23	201	P	Pn	11 26 16.9	-1.6
ECBN	**Changbin**	1.26	193	*i*P	Pn	11 26 19.1	+0.2
ECBN				S	Sn	11 26 35.8	+1.1
EYUL	**Yuli**	1.27	199	*e*P	Pn	11 26 18.9	-0.1
TWF1	**Yuli**	1.27	200	P	Pn	11 26 17.7	-1.3
ALS	**Alishan**	1.36	221	*i*P	Pn	11 26 21.9	+1.5
ALS				S	Sn	11 26 40.3	+2.7
CHKH	**Chenggong**	1.40	194	P	Pn	11 26 20.4	-0.3
CHKH				*e*S	Sn	11 26 38.3	+0.3
WDL	**Douliou City**	1.40	234	P	Pn	11 26 22.5	+1.8
WDL				S	Sn	11 26 41.2	+3.2
WGK	**Gukeng**	1.40	232	P	Pn	11 26 22.5	+1.8
WGK				S	Sn	11 26 41.4	+3.3
FULB	**Fuli**	1.42	198	P	Pn	11 26 20.9	-0.1
WDLH	**Douliu**	1.42	233	P	Pn	11 26 22.4	+1.5
WDLH				S	Sn	11 26 40.9	+2.4
EHD	**Haiduan**	1.49	200	*e*P	Pn	11 26 22.0	+0.1
EHD				*e*S	Sn	11 26 40.8	+0.5
CHKT	**Chengkung**	1.49	195	P	Pn	11 26 21.6	-0.3
CHKT				S	Sn	11 26 40.5	+0.2
ELDTW	**Lidau**	1.52	207	*e*P	Pn	11 26 22.4	-0.1
ELDTW				*e*S	Sn	11 26 42.2	+1.0
WTCT	**Ta-ch'eng**	1.52	244	P	Pn	11 26 23.4	+1.0
WTCT				S	Sn	11 26 42.0	+1.0
ECS	**Chishang**	1.54	199	*e*P	Pn	11 26 21.9	-0.7
WCKO	**Fanlu**	1.54	224	*i*P	Pn	11 26 24.3	+1.7
WCKO				S	Sn	11 26 44.8	+3.3
CHN2	**Minshiung**	1.56	230	P	Pn	11 26 24.9	+2.0
CHN2				S	Sn	11 26 45.5	+3.6
CHY	**Chiayi**	1.62	230	P	Pn	11 26 25.3	+1.7
CHY				S	Sn	11 26 46.0	+2.6
TPUB	**Ta-pu**	1.63	220		Pn	11 26 25.4	+1.7
TPUB	**Ta-pu**	1.63	220	P	Pn	11 26 24.9	+1.1
TPUB	**Ta-pu**	1.63	220	*e*P	Pn	11 26 25.6	+1.7
TPUB				S	Sn	11 26 47.2	+3.6
STYH	**Taoyuan**	1.65	214	*e*P	Pn	11 26 26.3	+2.2
STYH				*e*S	Sn	11 26 47.7	+3.5
WTP	**Ta-pu**	1.68	219	*i*P	Pn	11 26 26.2	+1.6
WTP				S	Sn	11 26 48.6	+3.7
WSF	**Szhu**	1.68	238	*e*P	Pn	11 26 25.7	+1.2
WSF				*e*S	Sn	11 26 46.2	+1.3
TWK	**Hsinying**	1.74	223	*e*P	Pn	11 26 27.2	+1.8
TWK				*e*S	Sn	11 26 50.2	+3.8
WSL	**Shuilin Townsh**	1.74	234	P	Pn	11 26 26.7	+1.3
WSL				S	Sn	11 26 48.5	+2.0
SNST	**Tainan City**	1.77	222	P	Pn	11 26 27.1	+1.3
SNST				S	Sn	11 26 50.3	+3.3
CHN1	**Nanshi**	1.77	220	*i*P	Pn	11 26 27.4	+1.5
CHN1				S	Sn	11 26 50.7	+3.4
IRIF	**Iriomote-Funau**	1.80	96	P	Pn	11 26 26.3	+0.1
IRIF				*e*S	Sn	11 26 47.8	0.0

IRIF	**Iriomote-Funau**	**1.80**	**96**	A	A	11 26 26.3	
	comp=N,18nm,1.6s,comp=E,13nm,3.6s						
SGST	**Jiashian**	**1.82**	**217**	eP	**Pn**	**11 26 27.4**	**+0.9**
SGST				eS	**Sn**	**11 26 50.8**	**+2.3**
TWG	**Pinlang**	**1.84**	**201**		**Pn**	**11 26 25.3**	**-1.5**
TWG	**Pinlang**	**1.84**	**201**	eP	**Pn**	**11 26 25.5**	**-1.3**
TWG				eS	**Sn**	**11 26 46.2**	**-2.6**
TWGBT	**Beinan**	**1.84**	**200**	P	**Pn**	**11 26 25.6**	**-1.1**
TWGBT	**Beinan**	**1.84**	**200**	eP	**Pn**	**11 26 24.9**	**-1.9**
TWGBT				eS	**Sn**	**11 26 46.4**	**-2.4**
CHN8	**Yiju**	**1.86**	**230**	eP	**Pn**	**11 26 28.5**	**+1.4**
CHN8				eS	**Sn**	**11 26 52.1**	**+2.7**
TTN	**Taitung**	**1.88**	**198**	eP	**Pn**	**11 26 27.1**	**-0.1**
TTN				eS	**Sn**	**11 26 51.6**	**+1.8**
HATJ	**Hateruma jima**	**1.92**	**104**	eP	**Pn**	**11 26 29.4**	**+1.6**
HATJ				eS	**Sn**	**11 26 52.6**	**+1.8**
HATJ	**Hateruma jima**	**1.92**	**104**	A	A	11 26 29.4	
	comp=N,21nm,2.9s,comp=E,27nm,2.3s						
CHN3	**Shinhua**	**1.95**	**222**	P	**Pn**	**11 26 30.6**	**+2.4**
CHN3				eS	**Sn**	**11 26 56.4**	**+4.8**
SSHA	**Shanhua**	**1.96**	**224**	eP	**Pn**	**11 26 30.5**	**+2.1**
SSHA				S	**Sn**	**11 26 54.8**	**+3.1**
SCLT	**Jiali**	**1.99**	**227**	eP	**Pn**	**11 26 30.0**	**+1.2**
SCLT				eS	**Sn**	**11 26 54.8**	**+2.3**
SHHT	**Tainan City**	**2.00**	**221**	eP	**Pn**	**11 26 31.8**	**+2.8**
SHHT				eS	**Sn**	**11 26 59.0**	**+6.1**
JKRS	**Kuro-shima**	**2.06**	**98**	P	**Pn**	**11 26 30.4**	**+0.7**
JKRS				S	**Sn**	**11 26 55.5**	**+1.2**
JKRS	**Kuro-shima**	**2.06**	**98**	A	A	11 26 30.4	
	comp=N,28nm,2.8s,comp=E,29nm,4.4s						
TAI1	**Yung-k'ang**	**2.06**	**224**	eP	**Pn**	**11 26 31.7**	**+1.9**
TAI1				eS	**Sn**	**11 26 57.6**	**+3.3**
SSD	**Sandimen**	**2.08**	**210**	P	**Pn**	**11 26 32.0**	**+2.0**
SSD				eS	**Sn**	**11 26 58.1**	**+3.4**
TSCK	**Chigu Township**	**2.08**	**228**	eP	**Pn**	**11 26 31.0**	**+1.0**
TSCK				eS	**Sn**	**11 26 56.2**	**+1.4**
ECL	**Taimali**	**2.08**	**201**	eP	**Pn**	**11 26 29.9**	**-0.2**
TWM1	**Shoushan**	**2.12**	**216**	P	**Pn**	**11 26 33.5**	**+3.0**
TWM1				eS	**Sn**	**11 27 02.3**	**+6.6**
SGLT	**Jiouru**	**2.16**	**213**	eP	**Pn**	**11 26 34.6**	**+3.5**
SGLT				eS	**Sn**	**11 27 03.7**	**+6.9**
JIJ	**Ishigaki jima**	**2.17**	**94**	P	**Pn**	**11 26 31.3**	**0.0**
JIJ				S	**Sn**	**11 26 57.1**	**+0.2**
JIJ	**Ishigaki jima**	**2.17**	**94**	A	A	11 26 31.3	
	comp=N,5.0nm,1.2s,comp=E,4.0nm,1.6s						
MASBT	**Mashibuluo**	**2.19**	**209**	eP	**Pn**	**11 26 33.1**	**+1.5**
MASBT				eS	**Sn**	**11 27 01.3**	**+3.7**
PNG	**Penghu**	**2.25**	**245**	eP	**Pn**	**11 26 32.1**	**-0.2**
PNG				eS	**Sn**	**11 26 57.8**	**-1.1**
MATB	**Ma-tsu**	**2.29**	**314**	eP	**Pn**	**11 26 32.5**	**-0.4**
JISG	**Ishigakijimahi**	**2.31**	**89**	P	**Pn**	**11 26 33.4**	**+0.2**
EAST	**Anshuo**	**2.32**	**202**	eP	**Pn**	**11 26 33.0**	**-0.4**
WDGT	**Dungji**	**2.32**	**237**	eP	**Pn**	**11 26 34.0**	**+0.7**
WDGT				eS	**Sn**	**11 27 00.9**	**+0.3**
TAW	**Tawu**	**2.33**	**200**	eP	**Pn**	**11 26 33.6**	**+0.2**
TAW				eS	**Sn**	**11 27 01.4**	**+0.7**
TAWH	**Dawu Township**	**2.35**	**200**	eP	**Pn**	**11 26 33.3**	**-0.4**
WSSB	**Gushan**	**2.35**	**216**	eP	**Pn**	**11 26 36.0**	**+2.2**
WSSB				eS	**Sn**	**11 27 06.3**	**+4.9**
SCZT	**Fangliau**	**2.41**	**206**	eP	**Pn**	**11 26 36.4**	**+1.8**
SCZT				eS	**Sn**	**11 27 05.2**	**+2.3**
PTMZ	**Houxiangcun**	**2.46**	**282**	i P	**Pn**	**11 26 35.1**	**-0.1**
LAY	**Lan-yu**	**2.51**	**185**	P	**Pn**	**11 26 34.9**	**-1.0**
LAY				eS	**Sn**	**11 27 02.6**	**-2.8**
VCHM	**Qimei**	**2.53**	**239**	eP	**Pn**	**11 26 36.0**	**-0.1**
VCHM				eS	**Sn**	**11 27 05.1**	**-0.6**
WLCH	**Liuqiu**	**2.54**	**211**	eP	**Pn**	**11 26 39.6**	**+3.3**
LYUB	**Lan-yu**	**2.54**	**184**	P	**Pn**	**11 26 34.5**	**-1.8**
TWP	**Hsiaoliuchiu**	**2.55**	**211**	eP	**Pn**	**11 26 38.9**	**+2.4**
TWP				eS	**Sn**	**11 27 11.9**	**+5.6**
SMST	**Manzhou Townsh**	**2.66**	**199**	eP	**Pn**	**11 26 39.7**	**+1.7**
SMST				eS	**Sn**	**11 27 09.8**	**+0.7**
JTJ	**Tarama**	**2.67**	**87**	P	**Pn**	**11 26 39.0**	**+1.0**
JTJ	**Tarama**	**2.67**	**87**	A	A	11 26 39.0	
	comp=N,7.0nm,3.8s,comp=E,9.0nm,1.6s						
LYJJ	**Jianjiangzhen**	**2.69**	**318**	eP	**Pn**	**11 26 37.9**	**-0.5**
HEN	**Hengchun**	**2.71**	**201**	eP	**Pn**	**11 26 40.8**	**+2.2**
TWK1	**Hengchun**	**2.74**	**199**	eP	**Pn**	**11 26 40.4**	**+1.3**
TWKBT	**Hengchun**	**2.74**	**199**	eP	**Pn**	**11 26 39.4**	**+0.3**
TWKBT				eS	**Sn**	**11 27 12.4**	**+1.4**
TSEB	**Hengchuen, Pin**	**2.76**	**197**	eP	**Pn**	**11 26 40.0**	**+0.7**
TSEB				eS	**Sn**	**11 27 12.1**	**+0.7**
XPSS	**Dashiqiu**	**2.77**	**329**	eP	**Pn**	**11 26 38.8**	**-0.6**
QZH	**Quanzhou**	**2.92**	**278**	⇑iP	**Pn**	**11 26 41.1**	**-0.4**
QZH				S	**Sn**	**11 27 12.3**	**-3.0**
QZH				smax	smax		
	comp=E,4µm,0.7s						
QZH				smax	smax		
	comp=E,2µm,0.7s						
MHZQ	**Yeshan**	**2.92**	**302**	eP	**Pn**	**11 26 41.4**	**-0.2**
KNM	**Kinmen**	**3.04**	**268**	eP	**Pn**	**11 26 44.8**	**+1.6**
KNMB	**Chin-men Tao**	**3.08**	**269**		**Pn**	**11 26 43.4**	**-0.3**
KNMB	**Chin-men Tao**	**3.08**	**269**	eP	**Pn**	**11 26 43.5**	**-0.3**
JIRB	**Irabujima**	**3.11**	**84**	eP	**Pn**	**11 26 45.3**	**+1.3**
JIKM	**Ikemajima**	**3.18**	**83**	eP	**Pn**	**11 26 47.2**	**+2.1**
JMJ	**Miyako jima 2**	**3.21**	**85**	P	**Pn**	**11 26 48.1**	**+2.5**
JMJ2	**Miyako jima3**	**3.24**	**86**	eP	**Pn**	**11 26 47.8**	**+1.9**
JMJ2				eS	**Sn**	**11 27 26.0**	**+2.7**
JOGS	**Gusukube**	**3.31**	**86**	P	**Pn**	**11 26 48.9**	**+1.9**
JOGS	**Gusukube**	**3.31**	**86**	A	A	11 26 48.9	
	comp=N,10.0nm,4.0s,comp=E,8.0nm,4.3s						
AXDP	**Jialang**	**3.47**	**277**	eP	**Pn**	**11 26 49.1**	**0.0**
ZPLA	**Ao Xicun**	**3.72**	**261**	eP	**Pn**	**11 26 52.2**	**-0.3**
DSXP	**Dongshan**	**4.06**	**259**	eP	**Pn**	**11 26 56.8**	**-0.3**
SXFK	**Yanhouchang**	**4.16**	**297**	eP	**Pn**	**11 26 58.0**	**-0.5**
JOW	**Kunigami**	**6.29**	**67**	P	**Pn**	**11 27 28.4**	**+0.7**
	comp=E,13nm,0.3s,baz=158,slow=11,SNR=28						
JOW				S	**Sn**	**11 28 36.8**	**-1.6**
	comp=E,32nm,0.8s,baz=312,slow=16,SNR=1.1						
JOW	**Kunigami**	**6.29**	**67**	P	**Pn**	**11 27 28.5**	**+0.7**
SSE	**Sheshan**	**6.54**	**356**	P	**Pn**	**11 27 31.3**	**+0.1**
SSE				S	**Sn**	**11 28 45.8**	**+1.4**
SSE				smax	smax		
	comp=E,140nm,0.9s						
SSE				smax	smax		
	comp=E,250nm,0.8s						
SSE				LR	LR		
	comp=E,430nm,17.5s						
SSE				LR	LR		
	comp=E,870nm,17.5s						
NJ2	**Nanjing**	**7.90**	**342**	⇑P	**Pn**	**11 27 49.3**	**-0.5**
NJ2				pP		11 27 57.1	
NJ2				S	**Sn**	**11 29 15.6**	**-2.3**
NJ2				pmax	pmax		
	comp=E,130nm,0.6s						
NJ2				smax	smax		
	comp=E,560nm,0.8s						
NJ2				smax	smax		
	comp=E,420nm,0.6s						
CNSH	**ChangSha**	**8.71**	**296**	P	**Pn**	**11 27 58.3**	**-2.7**
CNSH				S	**Sn**	**11 29 33.1**	**-4.7**
CNSH				smax	smax		
	comp=E,540nm,1.3s						
CNSH				smax	smax		
	comp=E,640nm,0.9s						
WHN	**Wuhan**	**8.89**	**314**	P	**Pn**	**11 28 04.5**	**+1.2**
WHN				sP		11 28 18.1	
WHN				S	**Sn**	**11 29 41.4**	**-0.7**
GULI	**GuiLin**	**10.38**	**276**	P	**Pn**	**11 28 21.3**	**-2.5**
GULI				S	**Sn**	**11 30 15.0**	**-3.7**
GULI				pmax	pmax		
	comp=E,17nm,0.8s						
GULI				LR	LR		
	comp=E,750nm,7.1s						
GULI				LR	LR		
	comp=E,430nm,7.8s						
GULI				LR	LR		
	comp=E,520nm,9.3s						
TGY	**Tagaytay City**	**10.43**	**184**	LR	LR	11 32 35.1	
	comp=E,272nm,18.9s,baz=118,slow=38						
JNU	**Nakatsue**	**11.68**	**41**	P	Pn	11 28 46.6	+5.0
	comp=E,15nm,0.9s,baz=188,slow=7.0,SNR=7.3						
JNU				LR	LR	11 34 21.8	
	comp=E,233nm,19.0s,baz=220,slow=43						
JNU	**Nakatsue**	**11.68**	**41**		**Pn**	**11 28 41.2**	**-0.4**
TIA	**Tai'an**	**12.29**	**342**	P	**Pn**	**11 28 49.4**	**-0.5**
TIA				pmax	pmax		
	comp=E,11nm,0.6s						
TIA				pmax	pmax		
	comp=E,76nm,3.9s						
TIA				LR	LR		
	comp=E,430nm,4.0s						
TIA				LR	LR		
	comp=E,410nm,4.5s						
TIA				LR	LR		
	comp=E,790nm,20.2s						
ENH	**Enshi**	**12.31**	**300**		**Pn**	**11 28 49.9**	**-0.3**
QIZ	**Qiongzhong**	**12.37**	**246**	P	**Pn**	**11 28 52.3**	**+1.3**
QIZ				S	**Sn**	**11 31 09.0**	**+1.6**
QIZ				LR	LR		
	comp=E,310nm,13.6s						
QIZ				LR	LR		
	comp=E,300nm,12.5s						
QIZ				LR	LR		
	comp=E,290nm,14.7s						
TJN	**Taejon**	**12.73**	**21**	⇑eP	**Pn**	**11 28 58.6**	**+2.7**
TJN				pmax	pmax		
	comp=Z,2.0nm,1.3s						
LYN	**LuoYang**	**12.83**	**323**	P	**Pn**	**11 29 00.0**	**+2.7**
LYN				pP	P	11 29 09.0	+2.2
LYN				S	**Sn**	**11 31 26.0**	**+7.4**
LYN				SS	**S**	**11 31 40.8**	**-1.7**
LYN				pmax	pmax		
	comp=Z,17nm,0.6s						
LYN				LR	LR		
	comp=Z,1µm,5.2s						
LYN				LR	LR		
	comp=Z,1µm,19.2s						
GYA	**Guiyang**	**13.78**	**281**	⇓P	**Pn**	**11 29 11.3**	**+1.0**
GYA				pP	P	11 29 21.4	+3.9
GYA				S	**Sn**	**11 31 44.6**	**+2.7**
GYA				pmax	pmax		
	comp=Z,18nm,1.0s						
GYA				pmax	pmax		
	comp=Z,74nm,3.1s						
GYA				LR	LR		
	comp=Z,610nm,3.8s						
GYA				LR	LR		
	comp=Z,190nm,3.8s						
KSAR	**Wonju Array Be**	**13.87**	**21**		**P**	**11 29 16.9**	**-1.4**
KSAR	**Wonju Array Be**	**13.87**	**21**	P	**P**	**11 29 16.9**	**-1.4**
KSRS	**Korea Array**	**13.89**	**21**	P	**Pn**	**11 29 13.9**	**+2.2**
	comp=Z,24nm,0.7s,baz=202,slow=12,SNR=31						
KSRS	**Korea Array**	**13.89**	**21**	P	**Pn**	**11 29 14.0**	**+2.2**
KS19	**Wonju Array Si**	**13.92**	**21**	Pn	**Pn**	**11 29 14.1**	**+1.9**
JMN	**Monobe**	**13.97**	**46**	Pn	**Pn**	**11 29 12.1**	**-0.8**
HNS	**HongShan**	**14.16**	**336**	⇓P	**Pn**	**11 29 15.3**	**0.0**
HNS				S	**Sn**	**11 31 57.4**	**+6.5**
HNS				pmax	pmax		
	comp=Z,11nm,1.0s						
HNS				LR	LR		
	comp=Z,630nm,19.6s						
HNS				LR	LR		
	comp=Z,560nm,17.7s						
HNS				LR	LR		
	comp=Z,740nm,18.5s						
DL2	**Dalian**	**14.31**	**360**	P	**P**	**11 29 24.3**	**+1.1**
DL2				S	**S**	**11 32 07.8**	**-4.9**
DL2				pmax	pmax		
	comp=Z,170nm,0.9s						
DL2				pmax	pmax		
	comp=Z,400nm,3.5s						
DL2				LR	LR		
	comp=N,620nm,18.6s						
DL2				LR	LR		
	comp=E,620nm,17.9s						
DL2				LR	LR		
	comp=Z,640nm,19.6s						
XAN	**Xi'an**	**14.65**	**313**	⇓P	**Pn**	**11 29 23.3**	**+1.4**
XAN				pP	P	11 29 29.6	+2.5
XAN				S	**Sn**	**11 31 56.8**	**-6.2**
XAN				pmax	pmax		
	comp=Z,38nm,1.0s						
XAN				pmax	pmax		
	comp=Z,190nm,5.3s						
XAN				LR	LR		
	comp=Z,1µm,5.8s						
XAN				LR	LR		
	comp=Z,570nm,4.1s						
XAN				LR	LR		
	comp=Z,80nm,4.4s						
TIY	**Taiyuan**	**15.35**	**331**	P	**P**	**11 29 35.4**	**+0.5**
TIY				PP	**PnPn**	**11 29 41.8**	**+1.8**
TIY				LR	LR		
	comp=Z,420nm,19.2s						
TIY				LR	LR		
	comp=Z,290nm,7.7s						
TIY				LR	LR		
	comp=Z,750nm,22.8s						
BJT	**Baijiatuau**	**16.13**	**344**		**P**	**11 29 42.6**	**-0.8**
BJT	**Baijiatuau**	**16.13**	**344**	P	**P**	**11 29 42.6**	**-0.8**
BJT				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BJI	**Beijing**	**16.15**	**344**	P	**P**	**11 29 42.4**	**-1.2**
BJI				S	**Sn**	**11 32 40.4**	**+1.3**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SLVN	**Son La**	**16.77**	**263**		**P**	**11 29 50.5**	**-0.2**
CD2	**Chengdu**	**17.15**	**296**	P	**P**	**11 29 54.4**	**-0.5**
CD2				pmax	pmax		
	comp=Z,40nm,0.8s						
CD2				LR	LR		
	comp=Z,610nm,4.2s						
CD2				LR	LR		
	comp=Z,710nm,4.2s						
CD2				LR	LR		
	comp=Z,550nm,8.3s						
KMI	**Kunming**	**17.29**	**276**	P	**P**	**11 29 58.8**	**+2.2**
KMI				pmax	pmax		
	comp=Z,15nm,1.7s						
KMI				pmax	pmax		
	comp=Z,150nm,4.3s						
KMI				LR	LR		
	comp=Z,390nm,7.9s						
KMI				LR	LR		
	comp=Z,390nm,24.4s						
KMI				LR	LR		
	comp=Z,520nm,24.2s						
DAV	**Davao City (W)**	**17.76**	**168**	LR	LR	11 36 51.1	
	comp=Z,180nm,18.9s,baz=350,slow=37						
PZH	**PanZhiHua**	**18.18**	**280**	P	**Pn**	**11 30 08.9**	**+2.3**
PZH				pmax	pmax		
	comp=Z,20nm,1.1s						
HHC	**Hu-ho-hao-te**	**18.36**	**335**	⇓iP	**Pn**	**11 30 12.5**	**+3.9**
HHC				sP	sP	11 30 24.5	-1.4
HHC				S	**Sn**	**11 33 32.8**	**0.0**
HHC				pmax	pmax		
	comp=Z,28nm,1.1s						
HHC				LR	LR		
	comp=Z,330nm,16.0s						
HHC				LR	LR		
	comp=Z,250nm,14.7s						
HHC				LR	LR		
	comp=Z,420nm,19.0s						
MAJO	**Matsushiro**	**18.50**	**46**	⇓eP	**Pn**	**11 30 10.5**	**+0.3**
MAJO				pmax	pmax		
	comp=Z,12nm,1.8s						
MJAR	**Matsushiro Arr**	**18.50**	**46**	P	**P**	**11 30 08.4**	**-1.2**
	comp=Z,1.2nm,0.7s,baz=223,slow=9.3,SNR=2.3						
MJAR	**Matsushiro Arr**	**18.50**	**46**	IAmb	IAmb	11 30 13.8	
	comp=Z,3.7nm,1.2s						
MJAR	**Matsushiro Arr**	**18.50**	**46**	P	**P**	**11 30 08.4**	**-1.2**
MJAR				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BTO	**Baotou**	**18.79**	**331**	eP	**Pn**	**11 30 17.1**	**+3.3**
BTO				pP	**pP**	**11 30 26.8**	**+2.5**
BTO				sP	**sP**	**11 30 33.3**	**+2.7**
BTO				PP	**PnPn**	**11 30 34.5**	**+7.4**
BTO				S	**S**	**11 33 46.4**	**+2.2**
BTO				sS	**sS**	**11 33 59.3**	**-3.3**
BTO				pmax	pmax		
	comp=Z,20nm,1.4s						
BTO				pmax	pmax		
	comp=Z,540nm,5.7s						
BTO				LR	LR		
	comp=Z,840nm,16.6s						
BTO				LR	LR		
	comp=Z,630nm,18.3s						
BTO				LR	LR		
	comp=Z,1µm,21.4s						
KKM	**Kota Kinabalu**	**19.16**	**197**	P	**P**	**11 30 17.0**	**-0.1**
KKM				IAmb	IAmb	11 30 21.4	
	comp=Z,80nm,0.9s						
KKM	**Kota Kinabalu**	**19.16**	**197**	P	**P**	**11 30 17.2**	**+0.1**
	comp=Z,894nmcomp=Z,102nm,1.1s						
LZH	**Lanzhou**	**19.25**	**311**	eP	**Pn**	**11 30 20.8**	**+1.5**
LZH				sP	sP	11 30 34.9	-1.2
LZH				pmax	pmax		
	comp=Z,46nm,1.5s						
LZH				pmax	pmax		
	comp=Z,240nm,5.2s						
LZH				LR	LR		
	comp=Z,580nm,11.1s						
LZH				LR	LR		
	comp=Z,530nm,15.9s						
LZH				LR	LR		
	comp=Z,640nm,15.5s						
LZDM	**Lanzhou Array**	**19.28**	**310**	P	**Pn**	**11 30 21.1**	**+1.1**
	comp=Z,9.2nm,0.6s,baz=148,slow=12,SNR=15						
LZDM				LR	LR	11 38 16.9	
	comp=Z,383nm,21.1s,baz=175,slow=38						
CN2	**Changchun**	**19.44**	**8**	P	**Pn**	**11 30 21.4**	**0.0**
CN2				PP	**sP**	**11 30 40.3**	**+2.7**
CN2				S	**S**	**11 33 54.6**	**-2.3**
CN2				pmax	pmax		
	comp=Z,30nm,0.8s						
CN2				LR	LR		
	comp=Z,240nm,20.0s						
CN2				LR	LR		
	comp=Z,390nm,20.0s						
CN2				LR	LR		
	comp=Z,360nm,21.0s						
PSTR	**Posyet**	**19.54**	**20**	⇑eP	**Pn**	**11 30 24.9**	**+2.4**
XLT	**XiLinHaoTe**	**19.86**	**348**	eP	**Pn**	**11 30 26.0**	**-0.4**
XLT				pP	pP	11 30 36.3	+0.2
XLT				sP	sP	11 30 42.3	-0.1
XLT				PP	**PnPn**	**11 30 45.9**	**+4.2**
XLT				pmax	pmax		
	comp=Z,27nm,1.5s						
VLA	**Vladivostok**	**20.31**	**22**	⇓eP	Pn	11 30 33.6	+2.0
VLA				pmax	pmax		
	comp=Z,58nm,0.9s						
MDJ	**Mudanjiang**	**21.01**	**16**		**P**	**11 30 37.7**	**+0.9**
MDJ				IAmb	IAmb	11 30 52.9	
	comp=Z,87nm,1.0s						
MDJ	**Mudanjiang**	**21.01**	**16**	P	**P**	**11 30 38.3**	**+1.5**
MDJ				pP	pP	11 30 50.6	+2.2
MDJ				S	Sn	11 34 33.8	-2.5
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MDJ				LR	LR		
	comp=Z,340nm,17.2s						
MDJ				LR	LR		
	comp=Z,370nm,19.9s						
MDJ				LR	LR		
	comp=Z,360nm,22.0s						
TNCH	**TengChong**	**21.11**	**276**	P	**P**	**11 30 40.8**	**+2.4**
TNCH				pmax	pmax		
	comp=Z,220nm,4.0s						
TNCH				LR	LR		
	comp=Z,400nm,6.3s						
TNCH				LR	LR		
	comp=Z,530nm,10.7s						
TNCH				LR	LR		
	comp=Z,470nm,14.9s						
USRK	**Ussuriysk Ar.**	**21.30**	**21**	P	**P**	**11 30 40.6**	**+0.6**
	comp=Z,1.9nm,0.5s,baz=214,slow=10.0,SNR=6.3						
	comp=Z,1.9nm,0.5s						
BNX	**BinXian**	**21.62**	**11**	⇑P	**P**	**11 30 44.5**	**+1.1**
BNX				pmax	pmax		
	comp=Z,23nm,1.1s						
CHTO	**Chiang Mai**	**21.95**	**259**		**P**	**11 30 48.7**	**+1.4**
CHTO	**Chiang Mai**	**21.95**	**259**	P	**P**	**11 30 47.9**	**+0.7**
	comp=Z,22nm,0.9s						
CHTO	**Chiang Mai**	**21.95**	**259**	P	**P**	**11 30 48.7**	**+1.4**
CHTO				pmax	pmax		
	comp=Z,16nm,0.9s						
CM31	**Chiang Mai Arr**	**22.07**	**259**	P	**P**	**11 30 49.4**	**+0.9**
CMAR	**Chiang Mai Arr**	**22.07**	**259**	P	**P**	**11 30 50.1**	**+1.6**
	comp=Z,13nm,1.1s,baz=62,slow=8.3,SNR=37						
CMAR				PcP	**PcP**	**11 34 45.9**	**+0.9**
	comp=Z,1.5nm,0.6s,baz=64,slow=2.5,SNR=11						
CMAR				LR	LR	11 39 14.2	
	comp=Z,102nm,20.2s,baz=75,slow=36						
	comp=Z,13nm,1.1s						
CMAR	**Chiang Mai Arr**	**22.07**	**259**	P	**P**	**11 30 48.3**	**-0.2**
CMAR					**PcP**	**11 34 45.7**	**+0.8**
CMAR	**Chiang Mai Arr**	**22.07**	**259**	P	**P**	**11 30 48.3**	**-0.2**
CMAR						11 34 45.7	
GTA	**Gaotai**	**23.71**	**314**	⇑P	**P**	**11 31 06.3**	**+1.2**
GTA				pP	pP	11 31 13.5	-4.3
GTA				pmax	pmax		
	comp=Z,26nm,1.0s						
GTA				LR	LR		
	comp=Z,180nm,9.2s						
GTA				LR	LR		
	comp=Z,210nm,11.6s						
GTA				LR	LR		
	comp=Z,290nm,11.6s						
SBUM	**Sibu**	**23.83**	**204**	P	**P**	**11 31 04.1**	**-2.1**
SBUM				IAmb	IAmb	11 31 07.0	
	comp=Z,25nm,0.7s						
SBUM	**Sibu**	**23.83**	**204**	P	**P**	**11 31 04.6**	**-1.6**
	comp=Z,306nmcomp=Z,39nm,0.8s						
GUMO	**Guam**	**24.36**	**112**	LR	LR	11 39 05.3	
	comp=Z,191nm,21.4s,baz=346,slow=32						
HIA	**Hailar**	**24.72**	**357**		**P**	**11 31 14.8**	**+0.7**
HIA				IAmb	IAmb	11 31 30.0	
	comp=Z,51nm,1.1s						
HIA	**Hailar**	**24.72**	**357**	P	**P**	**11 31 14.8**	**+0.7**
HIA				pmax	pmax		
	comp=Z,51nm,1.1s						
HILR	**Hailar Array B**	**25.01**	**357**	P	**P**	**11 31 17.4**	**+0.6**
	comp=Z,16nm,0.6s,baz=172,slow=12,SNR=19						
	comp=Z,16nm,0.6s						
APSI	**Ampana**	**25.31**	**180**	P	**P**	**11 31 18.9**	**-0.8**
	comp=Z,66nm,1.1s						
GOMU	**GeErMu**	**25.91**	**303**	P	**P**	**11 31 26.8**	**+1.4**
GOMU				pmax	pmax		
	comp=Z,16nm,1.0s						
HEH	**HeiHe**	**26.03**	**8**	eP	**P**	**11 31 28.3**	**+2.4**
HEH				pP	**sP**	**11 31 42.8**	**-2.0**
HEH				pmax	pmax		
	comp=Z,20nm,1.0s						
HEH				LR	LR		
	comp=Z,280nm,9.3s						
HEH				LR	LR		
	comp=Z,170nm,9.7s						
HEH				LR	LR		
	comp=Z,380nm,10.6s						
ULN	**Ulaanbaatar**	**26.03**	**337**		**P**	**11 31 26.9**	**+0.7**
ULN				IAmb	IAmb	11 31 27.8	
	comp=Z,23nm,0.7s						
ULN	**Ulaanbaatar**	**26.03**	**337**	P	**P**	**11 31 26.8**	**+0.7**
ULN	**Ulaanbaatar**	**26.03**	**337**	c iP	**P**	**11 31 26.9**	**+0.7**
ULN				pmax	pmax		
	comp=Z,22nm,0.7s						
SONM	**Songino Array**	**26.24**	**336**	P	**P**	**11 31 28.6**	**+0.6**
	comp=Z,17nm,1.0s,baz=154,slow=9.3,SNR=48						
SONM				pP	**pP**	**11 31 42.2**	**+1.1**
	comp=Z,39nm,1.0s,baz=154,slow=6.3,SNR=20						
	comp=Z,17nm,1.0s						
SONM	**Songino Array**	**26.24**	**336**	P	**P**	**11 31 28.3**	**+0.2**
SONM				IAmb	IAmb	11 31 44.1	
	comp=Z,49nm,1.0s						
SONM	**Songino Array**	**26.24**	**336**	P	**P**	**11 31 28.3**	**+0.2**
SONM				pmax	pmax		
	comp=Z,49nm,1.0s						
SANI	**Sanana**	**26.76**	**171**	P	**P**	**11 31 34.2**	**+1.4**
	comp=Z,13nm,0.7s						
SHL	**Shillong**	**27.07**	**279**	IAmb	IAmb	11 31 40.7	
	comp=Z,53nm,1.0s						
SHL	**Shillong**	**27.07**	**279**	P	**P**	**11 31 36.8**	**+1.0**
SHL				pmax	pmax		
	comp=Z,48nm,1.2s						
MMSI	**Mamuju**	**27.22**	**186**	P	**P**	**11 31 36.5**	**-0.5**
	comp=Z,36nm,0.9s						
TTSI	**Tana Toraja**	**27.50**	**184**	P	**P**	**11 31 40.3**	**+0.9**
	comp=Z,11nm,1.1s						
LSA	**Lhasa**	**27.68**	**287**		**P**	**11 31 43.1**	**+1.5**
LSA	**Lhasa**	**27.68**	**287**	P	**P**	**11 31 38.6**	**-3.0**
LSA	**Lhasa**	**27.68**	**287**	P	**P**	**11 31 43.1**	**+1.5**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
YSS	**Yuzhno-Sakhali**	**27.94**	**32**	eP	**P**	**11 31 49.0**	**+5.9**
YSS				e*SP	**sP**	**11 32 07.1**	**+5.4**
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
NLAI	**Namlea**	**28.11**	**169**	P	**P**	**11 31 45.5**	**+0.7**
	comp=Z,32nm,0.9s						
IPM	**Ipoh**	**28.23**	**228**	P	**P**	**11 31 45.9**	**-0.1**
IPM	**Ipoh**	**28.23**	**228**	P	**P**	**11 31 46.5**	**+0.5**

	comp=Z,22nm,1.0s						
ZEA	**Zeya**	**29.44**	**7**	*e*P	**P**	**11 31 56.6**	**+0.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA				MLR	MLR		
	comp=Z,200nm,16.0s						
KAPI	**Kappang**	**29.45**	**184**	LR	LR	11 43 37.1	
	comp=Z,85nm,21.0s,baz=9.0,slow=36						
ZAK	**Zakamensk**	**29.50**	**336**	*e*P	**P**	**11 31 56.1**	**-1.0**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TLY	**Talaya**	**30.44**	**338**	*c i*P	**P**	**11 32 05.8**	**+0.5**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PSI	**Prapat**	**30.88**	**229**	LR	LR	11 44 12.0	
	comp=Z,54nm,20.9s,baz=48,slow=35						
PSI	**Prapat**	**30.88**	**229**	P	**P**	**11 32 11.3**	**+1.7**
	comp=Z,15nm,0.9s						
MNSI	**Mandailing Nat**	**31.92**	**226**	P	**P**	**11 32 19.1**	**+0.5**
	comp=Z,62nm,0.9s						
KNGR	**Kungurtug, Tuv**	**32.06**	**330**	⇓*e*P	**P**	**11 32 20.9**	**+1.2**
KNGR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PPI	**Padang Panjang**	**32.36**	**223**	P	**P**	**11 32 23.0**	**+0.5**
	comp=Z,29nm,1.2s						
JAY	**Jayapura**	**32.59**	**143**	LR	LR	11 42 52.6	
	comp=Z,187nm,21.9s,baz=353,slow=31						
BLJI	**Banyuglugur**	**33.08**	**195**	P	**P**	**11 32 28.5**	**-0.2**
EDFI	**Ende, Flores**	**33.10**	**180**	P	**P**	**11 32 26.3**	**-2.7**
	comp=Z,21nm,0.7s						
KLNI	**Mataram**	**33.24**	**190**	P	**P**	**11 32 29.3**	**-0.8**
	comp=Z,33nm,1.1s						
KHKI	**Kahang-Kahang**	**33.26**	**191**	P	**P**	**11 32 30.9**	**+0.6**
	comp=Z,650nmcomp=Z,67nm,1.1s						
TWSI	**Taliwang, Sumb**	**33.43**	**189**	P	**P**	**11 32 29.7**	**-2.1**
	comp=Z,525nmcomp=Z,33nm,1.1s						
KLSI		**33.47**	**212**	P	**P**	**11 32 32.9**	**+0.8**
	comp=Z,50nm,1.1s						
SJI	**Sawahan**	**33.54**	**198**	P	**P**	**11 32 32.0**	**-0.9**
	comp=Z,47nm,0.9s						
MDSI	**Maura Dua**	**33.56**	**213**	P	**P**	**11 32 33.3**	**+0.4**
	comp=Z,55nm,1.0s						
SNJI	**Sawahan-Nganju**	**33.59**	**198**	P	**P**	**11 32 34.4**	**+1.0**
	comp=Z,60nm,1.2s						
WMQ	**Urumqi**	**33.79**	**313**	*e*P	**P**	**11 32 36.5**	**+1.7**
WMQ				pP	pP	11 32 44.4	-3.6
WMQ				pmax	pmax		
	comp=Z,19nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,200nm,5.7s						
WMQ				LR	LR		
	comp=Z,140nm,23.9s						
WMQ	**Urumqi**	**33.79**	**313**	P	**P**	**11 32 36.4**	**+1.5**
BATI	**Baumata**	**34.59**	**177**	LR	LR	11 46 46.5	
	comp=Z,48nm,20.9s,baz=16,slow=36						
DGZ	**Jazzator, Alta**	**36.63**	**322**	⇑*i*P	**P**	**11 32 59.4**	**+0.1**
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ZSN	**Zaisan**	**37.09**	**317**	*e*P	**P**	**11 33 03.2**	**+0.1**
ZSN	**Zaisan**	**37.09**	**317**	*e*P	**P**	**11 33 03.2**	**+0.1**
YAK	**Yakutsk**	**37.85**	**6**	LR	LR	11 50 09.4	
	comp=Z,152nm,18.8s,baz=150,slow=38						
YAK	**Yakutsk**	**37.85**	**6**	*e*P	**P**	**11 33 07.7**	**-1.5**
YAK				*e*		11 35 23.1	
YAK				*e*S	**S**	**11 38 56.1**	**-0.6**
YAK				*e*SS	**SnSn**	**11 41 39.4**	**-1.6**
YAK				*e*SSS	SSS	11 42 03.5	
YAK				*e*		11 43 16.3	
YAK				pmax	pmax		
	comp=Z,28nm,1.7s						
YAK				pmax	pmax		
	comp=N,15nm,1.8s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.4s						
YAK				smax	smax		
	comp=N,168nm,6.9s						
YAK				smax	smax		
	comp=E,92nm,7.1s						
MK31	**Makanchi Array**	**38.45**	**315**	*c i*P	**P**	**11 33 14.9**	**+0.3**
MKAR	**Makanchi Array**	**38.45**	**315**	P	**P**	**11 33 15.0**	**+0.4**
	comp=E,12nm,0.7s,baz=105,slow=10,SNR=75						
MKAR				pP	**pP**	**11 33 29.6**	**+1.6**
	comp=E,16nm,0.9s,baz=108,slow=10,SNR=13						
MKAR				ScP	**S**	**11 39 07.0**	**+0.7**
	comp=E,1.6nm,0.9s,baz=108,slow=4.7,SNR=7.7						
MKAR				LR	LR	11 50 33.6	
	comp=E,178nm,19.5s,baz=85,slow=38						
	comp=E,12nm,0.7s						
MKAR	**Makanchi Array**	**38.45**	**315**	P	**P**	**11 33 14.7**	**+0.1**
MKAR	**Makanchi Array**	**38.45**	**315**	P	**P**	**11 33 14.7**	**+0.1**
MAKZ	**Makanchi**	**38.66**	**315**	P	**P**	**11 33 16.6**	**+0.3**
MAKZ				IAmb	IAmb	11 33 31.9	
	comp=Z,30nm,1.1s						
MAKZ	**Makanchi**	**38.66**	**315**	P	**P**	**11 33 16.6**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,30nm,1.1s						
MAKZ	**Makanchi**	**38.66**	**315**	P	**P**	**11 33 16.6**	**+0.3**
MAKZ				sP	**pP**	**11 33 31.1**	**+1.4**
MAKZ				PcP	**PcP**	**11 35 25.2**	**-2.4**
SHLS	**Shalkode**	**39.25**	**309**	*e*P	**P**	**11 33 19.4**	**-2.0**
	comp=Z,12nm,0.8s						
SHLS	**Shalkode**	**39.25**	**309**	*e*P	**P**	**11 33 19.4**	**-2.0**
SHLS				pmax	pmax		
	comp=Z,12nm,0.8s						
PDGK	**Podgornoye**	**39.27**	**309**	P	**P**	**11 33 21.6**	**0.0**
UZB	**Uzynbulak**	**39.56**	**309**	*e*P	**P**	**11 33 24.4**	**+0.4**
	comp=Z,9.5nm,0.9s						
UZB	**Uzynbulak**	**39.56**	**309**	*e*P	**P**	**11 33 24.4**	**+0.4**
UZB				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SATY	**Saty**	**39.98**	**308**	*e*P	**P**	**11 33 28.0**	**+0.5**
	comp=Z,8.9nm,0.9s						
SATY	**Saty**	**39.98**	**308**	*e*P	**P**	**11 33 27.9**	**+0.5**
SATY				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TARG	**Taragay, Kyrgy**	**40.13**	**306**	P	**P**	**11 33 31.3**	**+2.2**
TARG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ZAA0	**Zalesovo Array**	**40.23**	**327**	P	**P**	**11 33 28.6**	**-0.6**
ZAA0				IAmb	IAmb	11 33 44.2	
	comp=Z,23nm,0.9s						
ZALV	**Zalesovo Beam**	**40.23**	**327**	P	**P**	**11 33 28.4**	**-0.8**
	comp=Z,10nm,0.6s,baz=113,slow=8.1,SNR=53						
ZALV				pP	**pP**	**11 33 43.0**	**+0.4**
	comp=Z,21nm,0.8s,baz=114,slow=8.0,SNR=14						
	comp=Z,10nm,0.6s						
TDK	**Taldyqorghan**	**40.46**	**311**	*e*P	**P**	**11 33 31.9**	**+0.6**
	comp=Z,16nm,0.6s						
TDK	**Taldyqorghan**	**40.46**	**311**	*e*P	**P**	**11 33 31.9**	**+0.6**
TDK				pmax	pmax		
	comp=Z,16nm,0.6s						
HYB	**Hyderabad**	**40.84**	**269**	*e*P	P	11 33 45.2	+10
MDOK	**Medeo**	**40.97**	**308**	*e*P	**P**	**11 33 36.1**	**+0.4**
MDOK	**Medeo**	**40.97**	**308**	*e*P	**P**	**11 33 36.1**	**+0.4**
TNSS	**Tian-Shan**	**41.01**	**308**	*e*P	**P**	**11 33 36.6**	**+0.2**
TNSS	**Tian-Shan**	**41.01**	**308**	*e*P	**P**	**11 33 36.6**	**+0.2**
AAA	**Alma-Ata**	**41.07**	**308**	*e*P	**P**	**11 33 37.0**	**+0.5**
	comp=Z,8.1nm,0.6s						
AAA	**Alma-Ata**	**41.07**	**308**	*e*P	**P**	**11 33 36.9**	**+0.5**
AAA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
RABL	**Rabaul**	**41.11**	**130**	P	**P**	**11 33 38.0**	**+1.0**
KSH	**Kashi**	**41.15**	**303**	P	**P**	**11 33 41.3**	**+4.1**
KSH				pP	sP	11 33 55.4	-1.2
KSH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ULHL	**Ulahol**	**41.37**	**307**	P	**P**	**11 33 40.7**	**+1.6**
	SNR=7.6						
PMG	**Port Moresby**	**41.87**	**141**	LR	LR	11 48 46.5	
	comp=Z,90nm,21.3s,baz=324,slow=33						
PMG	**Port Moresby**	**41.87**	**141**	P	**P**	**11 33 43.1**	**0.0**
PMG				IAmb	IAmb	11 33 45.2	
	comp=Z,24nm,0.9s						
PMG	**Port Moresby**	**41.87**	**141**	P	**P**	**11 33 43.3**	**+0.2**
	comp=Z,28nm,1.0s						
PMG	**Port Moresby**	**41.87**	**141**	*ce*P	**P**	**11 33 43.1**	**0.0**
PMG				pmax	pmax		
	comp=Z,29nm,0.9s						
TKM2	**Tokmak 2**	**41.96**	**308**	P	**P**	**11 33 45.0**	**+1.1**
	SNR=31						
KURK	**Kurchatov**	**42.16**	**320**	P	**P**	**11 33 44.6**	**-0.5**
KURK	**Kurchatov**	**42.16**	**320**	*c i*P	**P**	**11 33 45.0**	**-0.1**
KURK				pmax	pmax		
	comp=Z,14nm,1.1s						
KURK	**Kurchatov**	**42.16**	**320**	P	**P**	**11 33 45.0**	**-0.1**
KURK				pP	**pP**	**11 33 55.1**	**-3.3**
KURK				sP	**sP**	**11 33 60.0**	**-4.3**
KURBB	**Kurchatov Arra**	**42.18**	**319**	P	**P**	**11 33 45.2**	**-0.1**
	comp=Z,5.4nm,0.6s,baz=111,slow=9.1,SNR=45						
KURBB				ScP	**ScP**	**11 39 20.9**	**-4.3**
	comp=Z,1.5nm,1.1s,baz=99,slow=3.7,SNR=4.9						
	comp=Z,5.4nm,0.6s						
KBK	**Karagaybulak**	**42.38**	**307**	P	**P**	**11 33 49.0**	**+1.7**
	SNR=7.7						
FITZ	**Fitzroy Crossi**	**42.56**	**175**	P	**P**	**11 33 45.8**	**-2.8**
CHMS	**Chumysh**	**42.59**	**308**	P	**P**	**11 33 50.4**	**+1.6**
	SNR=5.1						
UCH	**Uchtor**	**42.63**	**306**	P	**P**	**11 33 51.6**	**+1.9**
	SNR=19						
AAK	**Ala-Archa**	**42.71**	**307**	P	**P**	**11 33 51.4**	**+1.4**
	SNR=5.6						
AAK	**Ala-Archa**	**42.71**	**307**	LR	LR	11 54 10.5	
	comp=Z,171nm,18.5s,baz=82,slow=40						
AAK	**Ala-Archa**	**42.71**	**307**	P	**P**	**11 33 50.2**	**+0.3**
AAK	**Ala-Archa**	**42.71**	**307**	*ce*P	**P**	**11 33 51.1**	**+1.1**
AAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
USP	**Ospenovka**	**42.82**	**308**	P	**P**	**11 33 48.7**	**-2.0**
	SNR=6.6						
NIL	**Nilore**	**43.03**	**294**		**P**	**11 33 53.4**	**+0.9**
NIL				IAmb	IAmb	11 33 54.0	
	comp=Z,14nm,0.8s						
NIL	**Nilore**	**43.03**	**294**	P	**P**	**11 33 53.4**	**+0.9**
NIL				pmax	pmax		
	comp=Z,14nm,0.8s						
EKS2	**Erkin-Say**	**43.24**	**307**	P	**P**	**11 33 55.6**	**+1.4**
	SNR=5.3						
SEY	**Seymchan**	**43.45**	**20**	LR	LR	11 54 46.7	
	comp=Z,40nm,18.7s,baz=260,slow=40						
SEY	**Seymchan**	**43.45**	**20**	⇑*e*P	**P**	**11 33 55.5**	**+0.1**
SEY				pmax	pmax		
	comp=Z,9.0nm,1.8s						
COEN	**Coen**	**43.61**	**149**	P	**P**	**11 33 57.4**	**+0.2**
	comp=Z,59nm,1.1s						
COEN	**Coen**	**43.61**	**149**	P	**P**	**11 33 57.1**	**-0.1**
MANEM	**Manem**	**44.35**	**299**	IAmb	IAmb	11 34 11.3	
	comp=Z,17nm,0.9s						
DZA	**Taraz**	**45.05**	**307**	*e*P	**P**	**11 34 09.1**	**+0.4**
DZA	**Taraz**	**45.05**	**307**	*e*P	**P**	**11 34 09.0**	**+0.4**
MBWA	**Marble Bar**	**45.48**	**183**	P	**P**	**11 34 09.6**	**-2.5**
KKAR	**Karatay Array**	**45.68**	**307**	P	**P**	**11 34 13.8**	**+0.3**
KKAR	**Karatay Array**	**45.68**	**307**	P	**P**	**11 34 13.8**	**+0.3**
WB0	**Warramunga Arr**	**45.73**	**163**	IAmb	IAmb	11 34 41.1	
	comp=Z,15nm,0.6s						
PSAC1	**Pilbara Seismi**	**45.85**	**183**	P	**P**	**11 34 12.4**	**-2.5**
PSAC2	**Pilbara Seismi**	**45.87**	**182**	P	**P**	**11 34 12.6**	**-2.5**
WRAB	**Tennant Creek**	**45.88**	**163**	P	**P**	**11 34 13.2**	**-2.0**
WRAB	**Tennant Creek**	**45.88**	**163**	*d i*P	**P**	**11 34 13.5**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WRAB	**Tennant Creek**	**45.88**	**163**	P	**P**	**11 34 13.6**	**-1.6**
WRAB				PcP	**PcP**	**11 35 48.4**	**-3.4**
PSA00	**Pilbara Seismi**	**45.89**	**182**	P	**P**	**11 34 12.9**	**-2.3**
	comp=Z,29nm,0.8s						
PSA00	**Pilbara Seismi**	**45.89**	**182**	P	**P**	**11 34 12.4**	**-2.8**
PSA00				IAmb	IAmb	11 34 13.8	
	comp=Z,10nm,0.8s						
PSA00	**Pilbara Seismi**	**45.89**	**182**	IAmb	IAmb	11 34 13.8	
	comp=Z,22nm,0.8s						
WRA	**Warramunga Arr**	**45.89**	**163**	P	**P**	**11 34 13.6**	**-1.7**
	comp=Z,5.0nm,0.7s,baz=346,slow=8.4,SNR=25						
WRA				pP	**pwP**	**11 34 29.7**	**-1.8**
	comp=Z,7.6nm,0.8s,baz=347,slow=8.4,SNR=8.6						
	comp=Z,5.0nm,0.7s						
WRA	**Warramunga Arr**	**45.89**	**163**		**P**	**11 34 13.7**	**-1.6**
WRA	**Warramunga Arr**	**45.89**	**163**	P	**P**	**11 34 13.7**	**-1.6**
PSAB3	**Pilbara Seismi**	**45.91**	**182**	P	**P**	**11 34 13.0**	**-2.4**
IUG	**Iuzhnay**	**45.92**	**306**	*e*P	**P**	**11 34 16.1**	**+0.4**
	comp=Z,9.7nm,0.6s						
IUG	**Iuzhnay**	**45.92**	**306**	*e*P	**P**	**11 34 16.0**	**+0.4**
IUG				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BRLS	**Borolday**	**46.16**	**307**	*e*P	**P**	**11 34 18.4**	**+1.1**
BRLS	**Borolday**	**46.16**	**307**	*e*P	**P**	**11 34 18.4**	**+1.1**
CHGR	**Chuyangaron**	**46.37**	**301**	IAmb	IAmb	11 34 20.7	
	comp=Z,19nm,0.8s						
CHGR	**Chuyangaron**	**46.37**	**301**	⇓*i*P	**P**	**11 34 20.2**	**+1.1**
KBL	**Kabul**	**46.49**	**295**	P	**P**	**11 34 21.2**	**+0.9**
KBL	**Kabul**	**46.49**	**295**	P	**P**	**11 34 21.2**	**+0.9**
KBL				pmax	pmax		
	comp=Z,31nm,0.9s						
SHAA	**Shahritus**	**47.17**	**299**		**P**	**11 34 27.0**	**+1.6**
SHAA				IAmb	IAmb	11 34 27.9	
	comp=Z,45nm,1.0s						
TIXI	**Tiksi**	**47.30**	**3**	LR	LR	11 56 34.0	
	comp=Z,183nm,18.6s,baz=197,slow=39						
TIXI	**Tiksi**	**47.30**	**3**	P	**P**	**11 34 24.8**	**-1.0**
TIXI				IAmb	IAmb	11 34 25.8	
	comp=Z,21nm,0.9s						
TIXI	**Tiksi**	**47.30**	**3**	⇑*e*P	**P**	**11 34 24.4**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,26nm,1.0s						
BVA0	**Borovoye Array**	**47.73**	**320**	*i* P	**P**	**11 34 28.7**	**-0.7**
BVAR	**Borovoye Array**	**47.73**	**320**	P	**P**	**11 34 29.4**	**+0.1**
	comp=Z,7.3nm,0.6s,baz=98,slow=7.6,SNR=28						
BVAR				pP	**pP**	**11 34 43.9**	**+1.0**
	comp=Z,4.9nm,0.7s,baz=76,slow=7.9,SNR=5.1						
BVAR				PcP	**PcP**	**11 35 56.8**	**-1.2**
	comp=Z,2.6nm,0.8s,baz=104,slow=6.3,SNR=3.9						
BVAR				ScP	**ScP**	**11 39 46.4**	**-1.7**
	comp=Z,1.2nm,0.8s,baz=164,slow=5.8,SNR=5.2						
	comp=Z,7.3nm,0.6s						
BORK	**Borovoye**	**47.78**	**320**	P	**P**	**11 34 30.1**	**+0.3**
BORK				IAmb	IAmb	11 34 45.3	
	comp=Z,10nm,0.8s						
BORK	**Borovoye**	**47.78**	**320**	*c i*P	**P**	**11 34 29.8**	**+0.1**
BORK				pmax	pmax		
	comp=Z,16nm,1.3s						
BORK	**Borovoye**	**47.78**	**320**	P	**P**	**11 34 29.9**	**+0.2**
BORK				sP	**pP**	**11 34 44.7**	**+1.4**
BORK				PcP	**PcP**	**11 35 57.3**	**-0.8**
MTSU	**Mount Surprise**	**47.78**	**151**	P	**P**	**11 34 30.8**	**+0.7**
	comp=Z,26nm,0.9s						
QIS	**Mount Isa**	**48.08**	**157**	P	**P**	**11 34 31.5**	**-0.9**
	comp=Z,18nm,1.1s						
NRIK	**Noril'sk**	**49.19**	**345**	P	**P**	**11 34 39.2**	**-1.2**
	comp=Z,12nm,1.0s,baz=129,slow=8.7,SNR=11						
NRIK				pP	**pP**	**11 34 54.5**	**+0.5**
	comp=Z,12nm,0.8s,baz=137,slow=6.1,SNR=8.6						
	comp=Z,12nm,1.0s						
NRIK	**Noril'sk**	**49.19**	**345**	IAmb	IAmb	11 34 55.7	
	comp=Z,13nm,0.8s						
NRIK	**Noril'sk**	**49.19**	**345**	*d i*P	**P**	**11 34 39.6**	**-0.7**
NRIK				pmax	pmax		
	comp=Z,16nm,1.0s						
ASAR	**Alice Springs**	**49.35**	**165**	P	**P**	**11 34 40.9**	**-1.3**
	comp=Z,3.7nm,0.7s,baz=340,slow=6.6,SNR=40						
ASAR				pP	**pP**	**11 34 55.9**	**+1.2**
	comp=Z,4.0nm,0.8s,baz=349,slow=7.2,SNR=7.6						
	comp=Z,3.7nm,0.7s						
ASAR	**Alice Springs**	**49.35**	**165**	P	**P**	**11 34 40.5**	**-1.7**
ASAR	**Alice Springs**	**49.35**	**165**	P	**P**	**11 34 40.5**	**-1.7**
WRKA	**Warakurna**	**49.70**	**172**	P	**P**	**11 34 43.3**	**-1.5**
	comp=Z,2.9nm,0.7s						
CTA	**Charters Tower**	**50.37**	**150**	P	**P**	**11 34 50.3**	**+0.4**
	comp=Z,11nm,1.2s						
CTA	**Charters Tower**	**50.37**	**150**	LR	LR	11 54 14.6	
	comp=Z,106nm,21.9s,baz=25,slow=34						
CTA	**Charters Tower**	**50.37**	**150**	P	**P**	**11 34 50.7**	**+0.8**
CTAO	**Charters Tower**	**50.37**	**150**	P	**P**	**11 34 50.3**	**+0.4**
CTAO	**Charters Tower**	**50.37**	**150**	P	**P**	**11 34 50.3**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,37nm,1.2s						
CTAO	**Charters Tower**	**50.37**	**150**	P	**P**	**11 34 50.5**	**+0.6**
CTAO				sP	**pP**	**11 35 04.9**	**+1.8**
CTAO				PcP	**PcP**	**11 36 07.8**	**-0.2**
BILL	**Bilibino**	**51.16**	**20**	⇓*i*P	**P**	**11 34 55.0**	**-0.3**
BILL				pmax	pmax		
	comp=Z,8.0nm,1.2s						
AB31	**Akbulak array**	**53.57**	**314**	IAmb	IAmb	11 35 16.5	
	comp=Z,12nm,0.8s						
AB31	**Akbulak array**	**53.57**	**314**	*i* P	**P**	**11 35 13.4**	**0.0**
ABKAR	**Akbulak array**	**53.57**	**314**	P	**P**	**11 35 13.5**	**+0.1**
AKTO	**Aktyubinsk**	**54.89**	**315**	P	**P**	**11 35 23.3**	**+0.3**
	comp=Z,7.9nm,0.9s,baz=86,slow=6.7,SNR=12						
AKTO				LR	LR	12 00 14.9	
	comp=Z,156nm,18.6s,baz=34,slow=37						
	comp=Z,7.9nm,0.9s						
ARTI	**Arti**	**55.23**	**323**	LR	LR	12 01 28.6	
	comp=Z,99nm,21.0s,baz=86,slow=38						
ARTI	**Arti**	**55.23**	**323**	P	**P**	**11 35 24.8**	**-0.6**
ARTI	**Arti**	**55.23**	**323**	*c i*P	**P**	**11 35 24.8**	**-0.6**
ARTI						11 36 21.7	
ARTI				S	**S**	**11 43 05.8**	**+0.6**
ARTI				SS	**SS**	**11 46 47.9**	**-1.7**
ARTI				pmax	pmax		
	comp=Z,14nm,1.1s						
ARTI	**Arti**	**55.23**	**323**	P	**P**	**11 35 23.8**	**-1.5**
FORT	**Forrest**	**55.34**	**173**	P	**P**	**11 35 25.1**	**-1.3**
	comp=Z,8.6nm,0.7s						
FORT	**Forrest**	**55.34**	**173**		**P**	**11 35 25.3**	**-1.1**
FORT				IAmb	IAmb	11 35 27.9	
	comp=Z,6.1nm,0.7s						
STKA	**Stephens Creek**	**59.22**	**160**	P	**P**	**11 35 52.7**	**-1.1**
	comp=Z,38nm,0.9s						
STKA	**Stephens Creek**	**59.22**	**160**	P	**P**	**11 35 52.6**	**-1.1**
	comp=Z,4.4nm,0.7s,baz=330,slow=6.1,SNR=12						
	comp=Z,4.4nm,0.7s						
STKA	**Stephens Creek**	**59.22**	**160**	⇑*i*P	**P**	**11 35 53.1**	**-0.7**
HTT	**Hallett**	**59.93**	**163**	P	**P**	**11 35 57.7**	**-0.9**
	comp=Z,3.5nm,0.9s						
HTT	**Hallett**	**59.93**	**163**	P	**P**	**11 35 58.3**	**-0.4**
KIRV	**Kirov**	**60.23**	**325**	LR	LR	12 05 16.6	
	comp=Z,108nm,21.4s,baz=85,slow=39						
KIRV	**Kirov**	**60.23**	**325**	⇓*i*P	**P**	**11 36 00.3**	**-0.1**
BELG	**Belogornoye**	**61.38**	**318**	LR	LR	12 05 11.7	
	comp=Z,110nm,18.4s,baz=89,slow=38						
BELG	**Belogornoye**	**61.38**	**318**	*c i*P	**P**	**11 36 07.7**	**-0.6**
BELG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AKT	**Akhty**	**62.56**	**306**	*e*P	**P**	**11 36 17.0**	**+0.4**
AKT				*e*		11 36 55.6	
AKT				*e*		11 38 36.5	
AKT				pmax	pmax		
	comp=Z,34nm,1.3s						
AKT				MLR	MLR		
	comp=Z,139nm,15.0s						
C19K	**Lookout Ridge**	**63.25**	**23**	IAmb	IAmb	11 37 34.6	
	comp=Z,30nm,1.9s						
DZM	**Mont Dzumac**	**63.49**	**133**	*e*LR	LR	11 55 16.4	
	comp=Z,281nm,25.5s						
D19K	**Kuna River**	**63.78**	**24**	IAmb	IAmb	11 36 27.1	
	comp=Z,10nm,0.8s						
B20K	**Meade River**	**64.11**	**22**	IAmb	IAmb	11 36 27.6	
	comp=Z,6.1nm,0.6s						
D20K	**Etivluk River**	**64.33**	**24**	P	**P**	**11 36 27.9**	**+0.1**
D20K				IAmb	IAmb	11 36 29.5	
	comp=Z,6.9nm,0.7s						
H19K	**Roundabout Mou**	**64.54**	**27**	IAmb	IAmb	11 36 48.5	
	comp=Z,25nm,1.6s						
KLMR	**Klimovskoe**	**65.14**	**328**	*e*P	**P**	**11 36 31.3**	**-1.8**
KLMR				pmax	pmax		
	comp=Z,29nm,1.1s						
VRH	**Novokhopyorsk**	**65.15**	**317**	*e*P	**P**	**11 36 32.5**	**-0.8**
VRH				pmax	pmax		
	comp=Z,34nm,0.8s						
E21K	**Killik River**	**65.31**	**24**	IAmb	IAmb	11 36 35.5	
	comp=Z,8.9nm,0.7s						
J20K	**Nowinta River**	**65.63**	**29**	IAmb	IAmb	11 37 16.8	
	comp=Z,11nm,1.2s						
G21K	**Allakaket**	**65.66**	**26**	IAmb	IAmb	11 36 56.9	
	comp=Z,16nm,1.3s						
KBZ	**Khabaz**	**65.67**	**309**	*c i*P	**P**	**11 36 37.2**	**+0.4**
KBZ				pmax	pmax		
	comp=Z,15nm,1.1s						
TOO	**Toolangi**	**65.70**	**159**	P	**P**	**11 36 36.6**	**-0.4**
	comp=Z,4.2nm,1.0s						
TOO	**Toolangi**	**65.70**	**159**		**P**	**11 36 36.5**	**-0.4**
TOO	**Toolangi**	**65.70**	**159**	P	**P**	**11 36 36.6**	**-0.4**
TOO				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KIV	**Kislovodsk**	**65.77**	**309**	*e*P	**P**	**11 36 38.2**	**+0.6**
KIV				pmax	pmax		
	comp=Z,28nm,1.1s						
KIV				MLR	MLR		
	comp=Z,56nm,17.0s						
KIV	**Kislovodsk**	**65.77**	**309**	P	**P**	**11 36 38.5**	**+0.9**
	comp=Z,24nm,1.0s						
SHA1	**Shidzhatmaz**	**65.84**	**309**	*d i*P	**P**	**11 36 39.0**	**+0.8**
NEUR	**Neytrino**	**65.90**	**308**	⇓*e*P	**P**	**11 36 37.8**	**-0.8**
NEUR				pmax	pmax		
	comp=Z,6.0nm,1.2s						
E22K	**Anaktuvuk Pass**	**66.14**	**24**	IAmb	IAmb	11 36 44.0	
	comp=Z,6.7nm,0.8s						
C23K	**Itkillik River**	**66.38**	**22**	IAmb	IAmb	11 37 02.3	
	comp=Z,21nm,1.6s						
LVZ	**Lovozero**	**66.44**	**336**	P	**P**	**11 36 41.9**	**+0.5**
	comp=Z,23nm,2.6s						
H22K	**Ishtalitna Cre**	**66.59**	**27**	IAmb	IAmb	11 36 44.3	
	comp=Z,6.5nm,0.8s						
VORR	**Voronezh**	**66.63**	**318**	*e*P	**P**	**11 36 41.9**	**-0.9**
VORR				pmax	pmax		
	comp=Z,90nm,0.4s						
LPSR	**Galich'ya Gora**	**66.63**	**319**	*e*P	**P**	**11 36 42.2**	**-0.6**
LPSR				pmax	pmax		
	comp=Z,37nm,0.9s						
VORD	**Divnogorie**	**66.70**	**317**	*e*P	**P**	**11 36 40.2**	**-3.1**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR	**Storozhevoye**	**66.74**	**317**	*e*P	**P**	**11 36 41.3**	**-2.2**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TOLK	**Toolik Lake Re**	**66.90**	**23**	IAmb	IAmb	11 36 45.5	
	comp=Z,5.8nm,0.7s						
ERBR	**Yeremizino-Bor**	**66.95**	**311**	*e*P	**P**	**11 36 44.3**	**-0.7**
ERBR				*e*S	**S**	**11 45 34.8**	**+0.2**
ERBR				pmax	pmax		
	comp=Z,23nm,0.8s						
E23K	**Chandalar**	**66.97**	**24**	IAmb	IAmb	11 37 08.2	
	comp=Z,9.8nm,0.9s						
LABN	**Labinsk**	**67.01**	**310**	*e*P	**P**	**11 36 44.8**	**-0.6**
LABN				*e*S	**S**	**11 45 36.8**	**+1.4**
LABN				pmax	pmax		
	comp=Z,32nm,0.7s						
D24K	**Happy Valley**	**67.09**	**23**	IAmb	IAmb	11 36 47.1	
	comp=Z,11nm,0.6s						
H23K	**Yukon River**	**67.35**	**26**	IAmb	IAmb	11 36 51.0	
	comp=Z,23nm,1.5s						
E24K	**Your Creek**	**67.39**	**24**	IAmb	IAmb	11 36 48.8	
	comp=Z,6.6nm,0.6s						
OBN	**Obninsk**	**67.55**	**322**	LR	LR	12 09 49.8	
	comp=Z,103nm,20.1s,baz=140,slow=39						
OBN	**Obninsk**	**67.55**	**322**	⇓*e*P	**P**	**11 36 48.3**	**-0.2**
OBN				*e**SP	**sP**	**11 37 08.9**	**+0.5**
OBN				*e*		11 37 14.8	
OBN				*e*PPP	PPP	11 40 54.5	
OBN				pmax	pmax		
	comp=Z,14nm,0.6s						
OBN				MLR	MLR		
	comp=Z,167nm,22.0s						
F24K	**Squaw Lake**	**67.71**	**25**	IAmb	IAmb	11 36 50.9	
	comp=Z,8.5nm,0.6s						
NEA2	**Nenana**	**67.76**	**28**	IAmb	IAmb	11 36 57.9	
	comp=Z,23nm,1.4s						
VSLR	**Vesyoloye**	**67.76**	**309**	*d i*P	**P**	**11 36 50.6**	**+0.4**
VSLR				pmax	pmax		
	comp=Z,65nm,1.1s						
D25K	**Kavik River**	**67.93**	**23**	IAmb	IAmb	11 36 51.9	
	comp=Z,5.3nm,0.6s						
G24K	**Hadweenzic Riv**	**68.02**	**25**	IAmb	IAmb	11 37 33.1	
	comp=Z,18nm,1.5s						
RND	**Reindeer**	**68.07**	**29**	IAmb	IAmb	11 36 54.0	
	comp=Z,12nm,0.8s						
COLA	**College**	**68.22**	**27**	⇑*e*P	**P**	**11 36 52.7**	**+0.1**
COLA				pmax	pmax		
	comp=Z,34nm,3.0s						
KOPT	**Kop Dagi**	**68.24**	**305**	IAmb	IAmb	11 37 04.3	
	comp=Z,13nm,0.8s						
F25K	**Christian Rive**	**68.54**	**24**	IAmb	IAmb	11 36 56.4	
	comp=Z,6.2nm,0.6s						
ILAR	**Eielson Array**	**68.64**	**27**	P	**P**	**11 36 54.2**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=296,slow=7.3,SNR=17						
	comp=Z,1.0nm,0.7s						
RAYN	**Ar Rayn**	**68.75**	**287**		**P**	**11 36 56.8**	**0.0**
RAYN				IAmb	IAmb	11 36 59.0	
	comp=Z,8.9nm,1.0s						
RAYN	**Ar Rayn**	**68.75**	**287**	P	**P**	**11 36 56.8**	**0.0**
RAYN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
RAYN	**Ar Rayn**	**68.75**	**287**	P	**P**	**11 36 57.0**	**+0.2**
RAYN				pP	**pP**	**11 37 06.8**	**-4.4**
RAYN				sP	**sP**	**11 37 11.7**	**-5.3**
DHY	**Denali Highway**	**68.79**	**29**	P	**P**	**11 36 55.2**	**-1.2**
SPITS	**Spitsbergen Ar**	**69.24**	**348**	P	**P**	**11 36 58.4**	**-0.4**
	comp=Z,12nm,0.9s,baz=85,slow=9.4,SNR=7.6						
	comp=Z,12nm,0.9s						
ANN	**Anapa**	**69.26**	**311**	*e*P	**P**	**11 36 58.5**	**-1.0**
ANN				*e*S	**S**	**11 46 02.3**	**+0.2**

ANN				pmax	pmax		
	comp=Z,29nm,0.9s						
G26K	Porcupine Rive	69.39	25	IAmb	IAmb	11 37 01.5	
	comp=Z,6.5nm,0.6s						
ARCES	ARCESS Array B	69.40	338	P	P	11 36 59.5	-0.4
	comp=Z,4.3nm,0.9s,baz=63,slow=8.4,SNR=7.7						
ARCES				LR	LR	12 13 57.4	
	comp=Z,105nm,20.1s,baz=120,slow=42						
	comp=Z,4.3nm,0.9s						
ARCES	ARCESS Array B	69.40	338	P	P	11 36 59.5	-0.4
ARCES				pmax	pmax		
	comp=Z,83nm,2.0s						
D27M	Malcolm River	69.82	22	IAmb	IAmb	11 37 20.1	
	comp=Z,17nm,1.4s						
PUL	Pulkovo	69.83	327	⇓eP	P	11 37 00.8	-1.9
H27K	Steamboat Moun	70.45	25	IAmb	IAmb	11 38 46.7	
	comp=Z,31nm,1.9s						
M26K	Nabesna, AK	70.91	29	IAmb	IAmb	11 37 13.3	
	comp=Z,20nm,1.2s						
FINES	FINESS Array B	71.40	330	P	P	11 37 11.4	-0.8
	comp=Z,11nm,0.9s,baz=57,slow=7.0,SNR=12						
FINES				LR	LR	12 11 15.7	
	comp=Z,203nm,18.0s,baz=72,slow=38						
	comp=Z,11nm,0.9s						
DAWY	Dawson	71.97	27	IAmb	IAmb	11 37 39.0	
	comp=Z,22nm,1.6s						
BNN	Bunyan	72.02	305	IAmb	IAmb	11 37 18.1	
	comp=Z,12nm,1.0s						
F30M	Barrier River	72.15	23	IAmb	IAmb	11 37 17.8	
	comp=Z,34nm,1.5s						
G30M	tAoh Zraii Nji	72.22	24	IAmb	IAmb	11 37 23.6	
	comp=Z,15nm,1.2s						
J29N	Klondike Camp	72.32	27	IAmb	IAmb	11 37 19.5	
	comp=Z,9.1nm,0.6s						
MNK	Minsk	72.56	322	i P	P	11 37 16.9	-2.4
MNK				i *PP	pP	11 37 31.7	-2.0
MNK				i		11 39 56.4	
MNK				i PPP	PPP	11 41 43.1	
MNK				i S	S	11 46 38.9	-1.2
MNK				i SS	SS	11 51 19.3	+0.1
MNK				pmax	pmax		
	comp=N,13nm,1.1s						
MNK				pmax	pmax		
	comp=Z,20nm,0.9s						
MNK				pmax	pmax		
	comp=E,18nm,0.9s						
MNK				MLR	MLR		
	comp=N,515nm,23.0s						
MNK				MLR	MLR		
	comp=E,354nm,23.0s						
MNK				MLR	MLR		
	comp=Z,57nm,12.0s						
INK	Inuvik	72.68	22		P	11 37 19.5	-0.3
INK				IAmb	IAmb	11 37 24.7	
	comp=Z,26nm,1.8s						
INK	Inuvik	72.68	22	P	P	11 37 19.5	-0.3
INK				pmax	pmax		
	comp=Z,26nm,1.8s						
L29M	L29M	72.82	28	IAmb	IAmb	11 38 37.6	
	comp=Z,26nm,1.6s						
AK09	Malin Array Si	72.94	318	P	P	11 37 21.0	-0.7
AK03	Malin Array Si	72.95	318	P	P	11 37 20.9	-0.8
AKASG	Malin Array Be	72.95	318	P	P	11 37 21.2	-0.5
	comp=Z,3.0nm,0.6s,baz=59,slow=6.2,SNR=18						
	comp=Z,3.0nm,0.6s						
AKASG	Malin Array Be	72.95	318	IAmb	IAmb	11 37 22.2	
	comp=Z,5.3nm,1.1s						
AKASG	Malin Array Be	72.95	318	P	P	11 37 21.2	-0.5
AKASG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
AKBB	Malin Array Si	72.95	318	IAmb	IAmb	11 37 21.9	
	comp=Z,17nm,1.1s						
AKBB	Malin Array Si	72.95	318	d iP	P	11 37 21.2	-0.5
AKBB				pmax	pmax		
	comp=Z,17nm,1.1s						
AKBB	Malin Array Si	72.95	318	P	P	11 37 21.0	-0.7
G31M	Satah River	72.95	24	IAmb	IAmb	11 37 24.5	
	comp=Z,40nm,2.0s						
AK08	Malin Array Si	72.95	318	P	P	11 37 21.1	-0.6
KIEV	Kiev	72.96	318	P	P	11 37 20.6	-1.2
KIEV				IAmb	IAmb	11 37 21.9	
	comp=Z,16nm,1.1s						
KIEV	Kiev	72.96	318	P	P	11 37 20.6	-1.2
KIEV				pmax	pmax		
	comp=Z,16nm,1.2s						
KIEV	Kiev	72.96	318	P	P	11 37 20.9	-0.9
	comp=Z,53nm,1.0s						
BR131	Keskin Array S	73.39	306	IAmb	IAmb	11 37 28.0	
	comp=Z,16nm,1.0s						
BR131	Keskin Array S	73.39	306	⇓iP	P	11 37 24.0	-0.7
BRTR	Keskin Array B	73.39	306	P	P	11 37 24.4	-0.3
	comp=Z,10nm,0.9s,baz=104,slow=5.2,SNR=34						
BRTR				LR	LR	12 12 40.7	
	comp=Z,53nm,18.8s,baz=7.5,slow=38						
	comp=Z,10nm,0.9s						
BR104	Keskin Array S	73.39	306	P	P	11 37 25.0	+0.3
	comp=Z,79nmcomp=Z,10nm,1.0s						
BR106	Keskin Array S	73.40	306	P	P	11 37 25.1	+0.3
	comp=Z,94nmcomp=Z,13nm,1.1s						
BR105	Keskin Array S	73.40	306	P	P	11 37 25.1	+0.3
	comp=Z,115nmcomp=Z,16nm,1.1s						
A36M	Sachs Harbour	73.61	17	IAmb	IAmb	11 37 25.2	
	comp=Z,16nm,1.6s						
ANTO	Ankara	73.96	307	P	P	11 37 27.8	-0.2
	comp=Z,11nm,0.8s						
LUBAR	Lubar, Ukraine	74.09	318	P	P	11 37 28.0	-0.4
RNPP9	Sopachiv	74.71	320	P	P	11 37 31.6	-0.4
RNPP8	Varash	74.76	320	P	P	11 37 32.1	-0.2
RNPP5	Staryi Chortor	74.78	320	P	P	11 37 31.9	-0.5
CSS	Mathiatis	75.16	302	IAmb	IAmb	11 37 36.0	
	comp=Z,17nm,0.8s						
C36M	Paulatuk	75.28	20	IAmb	IAmb	11 38 49.1	
	comp=Z,25nm,1.7s						
SUW	Suwalki	75.33	323		P	11 37 35.2	-0.3
SUW	Suwalki	75.33	323	P	P	11 37 35.2	-0.3
KMPD	K-Podol'skiy	75.35	317	P	P	11 37 35.4	-0.3
BORA	Eskisehir	75.65	307	IAmb	IAmb	11 37 39.0	
	comp=Z,17nm,1.0s						
TESR	Tescani	75.95	315	P	P	11 37 39.2	-0.1
	comp=Z,12nm,1.3s						
VRI	Vrincioaia	76.13	314	P	P	11 37 41.6	+1.3
VRI	Vrincioaia	76.13	314	P	P	11 37 40.7	+0.4
	comp=Z,19nm,1.1s						
BURAR	Bucovina Array	76.47	316		P	11 37 42.2	-0.1
BURAR	Bucovina Array	76.47	316	P	P	11 37 42.5	+0.2
BURAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MLR	Muntele Rosu	76.78	314	LR	LR	12 13 32.4	
	comp=Z,191nm,18.2s,baz=34,slow=37						
MLR	Muntele Rosu	76.78	314	P	P	11 37 44.2	+0.1
	comp=Z,7.2nm,1.3s						
KWP	Kalwaria Pacla	77.25	319	P	P	11 37 46.4	-0.1
	comp=Z,24nm,1.0s						
HFS	Hagfors	77.51	331	P	P	11 37 47.6	-0.1
	comp=Z,3.1nm,0.8s,baz=32,slow=8.5,SNR=2.9						
HFS				LR	LR	12 15 06.6	
	comp=Z,224nm,19.3s,baz=66,slow=38						
	comp=Z,3.1nm,0.8s						
MANT	Manisa	77.52	307	IAmb	IAmb	11 37 49.8	
	comp=Z,17nm,1.3s						
NB2	NORSAR Subarra	78.15	332	P	P	11 37 51.0	-0.3
	comp=Z,11nm,1.0s,baz=60,slow=5.6						
NB2	NORSAR Subarra	78.15	332	P	P	11 37 51.1	-0.3
NOA	NORSAR Array B	78.15	332	P	P	11 37 51.1	-0.3
	comp=Z,6.1nm,0.9s,baz=58,slow=5.7,SNR=13						
NOA				LR	LR	12 15 58.9	
	comp=Z,134nm,18.2s,baz=60,slow=38						
	comp=Z,6.1nm,0.9s						
STHS	Stebnicka Huta	78.21	319	eP	P	11 37 53.0	+1.1
STHS	Stebnicka Huta	78.21	319	eP	P	11 37 53.0	+1.1
OJC	Ojcow	78.74	320	P	P	11 37 54.5	-0.3
OJC	Ojcow	78.74	320	P	P	11 37 54.5	-0.3
OJC	Ojcow	78.74	320	P	P	11 37 55.3	+0.5
	comp=Z,15nm,1.0s						
NIE	Niedzica	78.78	319	P	P	11 37 55.5	+0.5
	comp=Z,4.7nm,1.0s						
PSZ	Piszkesteto	79.65	318	P	P	11 38 03.2	+3.3
MORC	Moravsky Berou	80.24	320		P	11 38 03.2	+0.2
MORC	Moravsky Berou	80.24	320	eP	P	11 38 02.8	-0.2
MORC	Moravsky Berou	80.24	320	P	P	11 38 03.2	+0.2
MORC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
JAVC	Velka Javorina	80.58	320	eP	P	11 38 06.8	+2.0
DPC	Dobruska-Polom	80.68	321	P	P	11 38 05.7	+0.3
VRAC	Vranov	81.00	320	eP	P	11 38 06.8	-0.3
MODS	Modra-Piesok	81.03	319	eP	P	11 38 10.6	+3.4
MODS	Modra-Piesok	81.03	319	eP	P	11 38 10.6	+3.4
URZ	Urewera	81.20	139	LR	LR	12 11 46.8	
	comp=Z,34nm,20.7s,baz=318,slow=34						
CLL	Collm	82.08	323	eP	P	11 38 13.0	+0.3
CLL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CLL	Collm	82.08	323	eP	P	11 38 13.0	+0.3
	comp=Z,10.0nm,1.2s						
CLL				esP	pP	11 38 28.0	+0.9
BFZ	Birch Farm	82.29	141		P	11 38 12.8	-0.9
YKA	Yellowknife Ar	82.42	23	P	P	11 38 13.7	-0.5
	comp=Z,1.0nm,0.6s,baz=313,slow=5.5,SNR=15						
	comp=Z,1.0nm,0.6s						
GERES	GERESS Array B	82.90	321	P	P	11 38 16.7	-0.4
	comp=Z,1.4nm,0.7s,baz=74,slow=4.7,SNR=8.8						
GERES				pP	pP	11 38 33.9	+2.4
	comp=Z,1.1nm,0.7s,baz=57,slow=4.9,SNR=3.1						
	comp=Z,1.4nm,0.7s						
OPO	Ambohidratompo	84.33	247	P	P	11 38 24.9	-0.1
	comp=Z,3.0nm,0.8s,baz=97,slow=3.1,SNR=3.5						
	comp=Z,3.0nm,0.8s						
KIBK	Kibwezi	85.26	265		P	11 38 30.4	+0.7
DAVOX	Davos/Dischmat	86.17	320	LR	LR	12 18 17.9	
	comp=Z,124nm,18.8s,baz=263,slow=36						
BORG	Borgarnes	86.51	345	LR	LR	12 20 25.2	
	comp=Z,113nm,19.3s,baz=354,slow=38						
EKA	Eskdalemuir Ar	87.64	332	LR	LR	12 22 50.9	
	comp=Z,185nm,18.4s,baz=12,slow=39						
LON	Longmire	88.77	38	IAmb	IAmb	11 38 48.0	
	comp=Z,11nm,1.2s						
E07A	Sunnyside	89.97	37	IAmb	IAmb	11 38 54.2	
	comp=Z,11nm,0.9s						
D08A	Wollman Farm,	90.19	37	IAmb	IAmb	11 39 15.5	
	comp=Z,11nm,1.2s						
HAWA	Hanford	90.25	37	IAmb	IAmb	11 38 55.9	
	comp=Z,11nm,1.2s						
NEW	Newport	90.40	35	IAmb	IAmb	11 38 56.9	
	comp=Z,7.1nm,1.0s						
PINE	Pine Mountain	91.00	40		P	11 38 56.7	-0.1
L04D	Klamath Falls	91.09	42		P	11 38 58.2	+1.0
J05D	Fort Rock, OR	91.12	41	P	P	11 38 57.8	+0.5
K05A	Summer Lake	91.65	41		P	11 39 01.0	+1.1
I07A	Izee	91.66	39	IAmb	IAmb	11 39 22.9	
	comp=Z,7.8nm,1.2s						
J08A	Circle Bar Ran	92.69	39	IAmb	IAmb	11 39 06.9	
	comp=Z,8.1nm,1.2s						
MSO	Missoula	92.97	35	IAmb	IAmb	11 39 28.4	
	comp=Z,9.6nm,1.3s						
BEKR	Beckworth	93.66	43	IAmb	IAmb	11 39 10.7	
	comp=Z,5.0nm,0.9s						
PAHR	Pah Rah Range	94.36	43	IAmb	IAmb	11 39 14.1	
	comp=Z,5.8nm,1.2s						
CMB	Columbia Colle	94.72	44	IAmb	IAmb	11 39 15.3	
	comp=Z,4.0nm,0.9s						
NVAR	Mina Array Bea	95.80	43	P	P	11 39 18.9	-0.1
	comp=Z,1.2nm,0.8s,baz=274,slow=6.4,SNR=8.8						
	comp=Z,1.2nm,0.8s						
PPT2	Papeete2	95.95	107	eLR	LR	12 10 19.1	
	comp=Z,116nm,24.2s						
PPT2				eLR	LR	12 10 22.1	
	comp=Z,117nm,26.2s						
SYO	Syowa Base	109.93	202	⇓ePdiff	Pdif	11 40 24.2	+3.4
TXAR	Lajitas Array	110.89	42	PKiKP	PKiKP	11 44 24.1	-1.8
	comp=Z,0.3nm,0.7s,baz=344,slow=4.1,SNR=4.5						
NVL	N'lazarevskaya	119.52	201	ePKIKP	PKiKP	11 44 43.5	+2.6
NVL				e		11 46 02.8	
NVL				ePPP	PPP	11 48 37.1	
NVL				eSS	SS	12 02 26.9	+3.9
NVL				eSSS	SSS	12 06 52.4	
NVL				pmax	pmax		
	comp=Z,6.0nm,0.6s						

DJA 16 11:29:12.6±0.7**, 8°S**±4°×**10°7E**±°**, h20**^{km}±6^{km}**, M4.1**/19**, mB5.1**/1**, mb4.3**/7**, MLv4.0**/19**, Mw(mB)4.5**/1**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNJI	Cibinong	0.55	60	P	Pn	11 29 24.6	-0.7
SKJI	Sukabumi	0.59	351	P	Pn	11 29 25.5	-0.4
BBJI	Bungbulang	1.00	83	P	Pb	11 29 30.1	-1.2
DBJI	Dramaga	1.03	5	P	Pb	11 29 31.2	-0.7
LEM	Lembang	1.22	52	P	Pn	11 29 34.5	-0.2
TNG	Tangerang	1.41	360	P	Pn	11 29 36.7	-0.4
SBJI	Serang	1.55	340	P	Pn	11 29 39.3	+0.2
KPJI	Karang Pucung	2.28	84	P	Pn	11 29 49.1	0.0
CTJI	Waduk Cacaban	2.58	77	P	Pn	11 29 54.3	+1.0
KASI	Kota Agung	2.96	314	P	Pn	11 29 59.0	+0.4
KLSI		3.46	326	P	Pn	11 30 06.4	+1.1
LWLI	Liwa	3.63	315	P	Pn	11 30 07.7	-0.1
UGM	Wanagama	3.85	95	P	Pn	11 30 09.9	-0.9
MDSI	Maura Dua	3.94	321	P	Pn	11 30 12.6	+0.6
PCJI	Pacitan	4.53	98	P	Pn	11 30 19.3	-0.7
MNAI	Manna	4.88	311	P	Pn	11 30 25.0	+0.1
EGSI	Enggano, Bengk	4.88	297	P	Pn	11 30 25.5	+0.6
TPI	Tanjungpandan	4.91	12	P	Pn	11 30 24.3	-1.0
SNJI	Sawahan-Nganju	5.07	92	P	Pn	11 30 28.5	+0.9
GMJI	Gumukmas	6.76	96	P	Pn	11 30 54.2	+3.4
	0.2nm1µm19nm,1.0s						
JAGI	Jajag, Banyuwa	7.48	97	P	Pn	11 31 02.2	+1.5
RTBI	Rangdo, Negare	8.26	97	P	Pn	11 31 13.2	+1.8
	20nm,0.9s						
KHKI	Kahang-Kahang	8.91	96	P	Pn	11 31 21.2	+1.0
	11nm,1.2s						
TWSI	Taliwang, Sumb	10.19	97	P	Pn	11 31 37.1	-0.8
	13nm,1.0s						
PLAI	Plampang	11.08	97	P	Pn	11 31 50.0	-0.1
DBNI	Kabupaten Domp	11.58	95	P	Pn	11 31 56.0	-1.0

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*ISK **16** 11:29:16.5, 34°.69N×34°.38E, h17^{km}, ML2.9/13*

*GII **16** 11:29:19.0±0.0, 34°.686N±0°.003×34°.254E±0°.001, h30^{km}, Mws2.4, confirmed*

*NIC **16** 11:29:19.1, 34°.80N×34°.21E, h27^{km}, Ml2.2/10*

*GRAL **16** 11:29:23.2±0.3, 34°.27N×34°.81E, h130^{km}±10^{km}, MD3.0*

ISC 16 11:29:17.0±1.4**, 34°.71N**±0°.03×**34°.32E**±0°.02**, h18**^{km}±7^{km}**, n68,** σ**0^{s}.90**/85**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PARAL	Paralimni	0.36	321	P	Pb	11 29 25.2	+0.3
PARAL				S	Sb	11 29 31.1	+0.8
PARAL				AML	AML	11 29 35.2	
	1.4nm,0.4s						
PARAL				AML	AML	11 29 37.9	
	1.5nm,0.4s						
LAR1C	Larnaka City C	0.62	290	P	Pg	11 29 29.5	+0.3
LAR1C				S	Sb	11 29 38.3	+0.8
MVOU	Mavrovouni	0.64	298	P	Pg	11 29 29.8	+0.2
MVOU				S	Sb	11 29 38.4	+0.2
MVOU				AML	AML	11 29 41.7	
	0.5nm,0.2s						
MVOU				AML	AML	11 29 41.8	
	0.7nm,0.3s						
CSS	Mathiatis	0.85	287	P	Pg	11 29 33.6	0.0
CSS	Mathiatis	0.85	287	P	Pg	11 29 33.5	-0.1
CSS				S	Sb	11 29 44.8	+0.5
CSS	Mathiatis	0.85	287	P	Pg	11 29 33.5	-0.1
CSS				S	Sb	11 29 44.7	+0.4
CSS				AML	AML	11 29 54.4	
	0.2nm,0.6s						
CSS				AML	AML	11 29 56.8	
	0.2nm,0.4s						
LFK	Lefkose	0.86	311	Pg	Pn	11 29 34.6	+0.3
LFK				Sg	Sn	11 29 47.8	+1.4
ATHAL	Athalassa	0.87	300	S	Sb	11 29 45.1	+0.2
ATHAL				AML	AML	11 29 53.1	
	0.5nm,0.5s						
ATHAL				AML	AML	11 30 08.8	
	0.7nm,0.7s						
ASGA	Asgata	0.89	275	P	Pb	11 29 33.2	-0.6
ASGA				S	Sb	11 29 45.5	+0.1
ASGA				AML	AML	11 29 49.0	
	0.2nm,0.4s						
ASGA				AML	AML	11 29 57.7	
	0.2nm,0.6s						
XYLS	Xyliatos	1.09	286	P	Pb	11 29 37.0	-0.3
XYLS				S	Sb	11 29 50.2	-1.0
XYLS				AML	AML	11 29 52.8	
	0.1nm,0.2s						
XYLS				AML	AML	11 29 56.3	
	0.1nm,0.2s						
APOL	The Sanctuary	1.20	268	P	Pn	11 29 38.8	-0.1
APOL				S	Sb	11 29 54.0	-0.4
APOL				AML	AML	11 29 55.8	
	0.2nm,0.3s						
APOL				AML	AML	11 29 59.7	
	0.2nm,0.2s						
TROD	Troodos	1.22	281	P	Pn	11 29 38.9	-0.4
TROD				S	Sb	11 29 54.5	-0.7
TROD				AML	AML	11 30 04.0	
	0.1nm,0.5s						
TROD				AML	AML	11 30 06.6	
	0.2nm,0.5s						
HWQ	Hawqa	1.41	107	eP	Pg	11 29 45.0	+0.7
HWQ				eS	Sb	11 30 00.6	0.0
NATA	Nata	1.44	273	P	Pn	11 29 42.6	+0.4
NATA				S	Sn	11 30 00.2	-0.6
NATA				AML	AML	11 30 05.8	
	0.3nm,0.4s						
NATA				AML	AML	11 30 07.3	
	0.3nm,0.2s						
ALFC	Alefka	1.48	288	P	Pn	11 29 42.5	-0.3
ALFC				AML	AML	11 30 09.2	
	0.1nm,0.3s						
ALFC				AML	AML	11 30 12.9	
	0.1nm,0.4s						
TISA	Tisan-Mersin	1.54	340	Pn	Pb	11 29 44.5	-0.5
BEIL	Beino	1.55	96	eP	Pg	11 29 46.8	0.0
BEIL				eS	Sb	11 30 04.4	-0.1
KARG	Kargicak-Mersi	1.57	342	Pn	Pb	11 29 44.8	-0.7
YESI	Yesilovacik-Me	1.58	340	Pn	Pb	11 29 45.1	-0.6
IKL	Isikli	1.61	341	Pn	Pb	11 29 45.4	-0.8
IKL				Sn	Sb	11 30 06.5	+0.4
QRWL	Qaraoun	1.62	135	eP	Pb	11 29 45.4	-1.0
AKMS	Akamas	1.66	281	P	Pb	11 29 46.4	-0.7
AKMS				S	Sn	11 30 05.3	-0.8
TEKE	Tekeli-Mersin	1.73	326	Pn	Pb	11 29 47.2	-1.1
RCY	Rachaya	1.75	134	eP	Pn	11 29 46.7	+0.1
RCY				eS	Sn	11 30 04.2	-4.3
KIZK	Mersin	1.77	355	Pn	Pb	11 29 47.6	-1.3
FKH	Fakeheh	1.79	105	eP	Pb	11 29 48.5	-0.9
KEBE	Keben-Mersin	1.80	344	Pn	Pb	11 29 48.2	-1.3
SHBL	Chebaa	1.80	139	eP	Pn	11 29 47.3	-0.1
BERE	Bereket-Mersin	1.86	332	Pn	Pb	11 29 49.1	-1.5
TEVE	Tevekalti-Mers	1.86	338	Pn	Pb	11 29 49.1	-1.4
NATI	Neve Ativ	1.87	140	P	Pn	11 29 49.0	+1.0
NATI	Neve Ativ	1.87	140	P	Pn	11 29 49.0	+1.0
NATI	Neve Ativ	1.87	140	S	Sn	11 30 11.1	0.0
GEM	Giv'at Ha'Em	1.87	143	P	Pn	11 29 49.0	+0.9
GEM	Giv'at Ha'Em	1.87	143	P	Pn	11 29 49.0	+0.9
GEM	Giv'at Ha'Em	1.87	143	S	Sn	11 30 11.6	+0.3
MMA0B	Mount Meron ar	1.92	152	P	Pn	11 29 49.6	+0.7
MMA0B	Mount Meron ar	1.92	152	S	Sn	11 30 12.5	-0.1
BLGI	Bet Lehem HaGe	2.10	160	P	Pn	11 29 51.8	+0.4
BLGI	Bet Lehem HaGe	2.10	160	S	Sn	11 30 17.4	+0.3
MERS	Mersin	2.16	4	Pn	Pn	11 29 53.1	+1.0
OFRI	\`Ofer	2.16	165	P	Pn	11 29 52.6	+0.5
OFRI	\`Ofer	2.16	165	S	Sn	11 30 17.6	-0.9
MMLI	Mount Malkishu	2.45	158	Pn	Pn	11 29 56.4	+0.3
MMLI	Mount Malkishu	2.45	158	P	Pn	11 29 56.8	+0.7
MMLI	Mount Malkishu	2.45	158	S	Sn	11 30 25.9	+0.2
SLTI	Sal'it	2.54	166	P	Pn	11 29 58.0	+0.6
SLTI	Sal'it	2.54	166	S	Sn	11 30 27.9	+0.1
HMDT	Nahal Hemdat	2.65	157	P	Pn	11 30 00.5	+1.6
HMDT	Nahal Hemdat	2.65	157	S	Sn	11 30 30.6	0.0
HDMB	Hadim	2.69	327	Pn	Pn	11 30 01.1	+1.4
SALP	Salfit	2.74	164	P	Pn	11 30 00.6	+0.5
SALP	Salfit	2.74	164	S	Sn	11 30 33.1	+0.4
DSI	Dead Sea	3.26	164	P	Pn	11 30 08.8	+1.6
DSI	Dead Sea	3.26	164	P	Pn	11 30 08.4	+1.2
DSI	Dead Sea	3.26	164	S	Sn	11 30 45.9	+0.3
YTIR	Yattir	3.41	168	P	Pn	11 30 10.5	+1.1
YTIR	Yattir	3.41	168	P	Pn	11 30 10.0	+0.6
YTIR	Yattir	3.41	168	S	Sn	11 30 50.1	+0.8
PRNI	Paran	4.39	172	P	Pn	11 30 24.2	+1.4
PRNI				S	Sn	11 31 13.5	0.0
PRNI	Paran	4.39	172	P	Pn	11 30 24.1	+1.3
KRMI	Paran Flat	4.60	176	P	Pn	11 30 25.9	+0.3
KRMI	Paran Flat	4.60	176	P	Pn	11 30 26.4	+0.7
KRMI	Paran Flat	4.60	176	S	Sn	11 31 17.9	-0.7
HRFI	Mount Harif	4.70	172	P	Pn	11 30 28.6	+1.5
HRFI	Mount Harif	4.70	172	S	Sn	11 31 21.2	-0.1
MBRI	Mt Berech	4.93	174	P	Pn	11 30 31.3	+1.0
MBRI	Mt Berech	4.93	174	S	Sn	11 31 26.9	0.0

IDC 16 11:31:33.2±7.0**, 8°.30S**×**128°.11E, h69**^{km}±58^{km}**, mb3.7**/1**, mbtmp4.1**/4**, ML3.9**/3**, Error ellipse: s-maj=67.4km s-min=24.6km az=17.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	4.78	246	P	Pn	11 32 43.5	+0.7
	2.5nm,0.3s,baz=67,slow=7.7,SNR=1.9						
BATI				S	Sn	11 33 37.1	+0.3
	51nm,0.7s,baz=240,slow=23,SNR=7.9						
	10nm,0.4s						
WRA	Warramunga Arr	13.05	153	P	Pn	11 34 35.7	-0.1
	0.7nm,0.3s,baz=345,slow=7.8,SNR=4.5						
WRA				S	Sn	11 36 59.2	0.0
	8.6nm,0.9s,baz=326,slow=23,SNR=11						
	5.7nm,0.8s						
ASAR	Alice Springs	16.25	161	P	P	11 35 18.4	-0.9
	0.5nm,0.3s,baz=339,slow=11,SNR=4.6						
ASAR				S	Sn	11 38 17.6	+0.6
	0.5nm,0.5s,baz=348,slow=25,SNR=4.9						
	5.0nm,0.6s						
STKA	Stephens Creek	26.60	154	P	P	11 37 05.1	-0.1
	1.4nm,0.6s,baz=343,slow=11,SNR=6.4						
	1.4nm,0.6s						

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*HEL **16** 11:34:18.8±0.4, 61°.46N×30°.29E, h0^{km}, ML1.6, Explosion*

*IDC **16** 11:34:22.5±2.9, 61°.74N×29°.72E, h0^{km}, mbtmp3.6/1, ML2.4/1, Error ellipse: s-maj=25.6km s-min=10.0km az=138.0*

ISC 16 11:34:17.0±1.2**, 61°.52N**±0°.04×**30°.11E**±0°.06**, h0**^{km}**, n20,** σ**1^{s}.76**/31**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUF	Ruokolahti	0.56	260	PG	Pb	11 34 29.8	0.0
RUF				SG	Sb	11 34 37.4	-1.0
RUF				MSG		11 34 39.3	
	comp=Z,5.0nm,0.2s						
JOF	Joensuu	1.51	21	PG	Pg	11 34 46.0	0.0
JOF				SG	Sn	11 35 05.6	-0.1
VJF	Virojoki	1.59	233	PG	Pb	11 34 47.6	+0.4
	baz=50						
VJF				MSG		11 35 07.3	
	comp=Z,6.1nm,0.2s						
VJF				SG	Sg	11 35 09.2	+1.2
FIA0	FINESS Array S	1.94	269	PB	Pb	11 34 53.9	+0.8
	baz=88						
FIA0				SN	Sg	11 35 18.9	-0.2
FIA0				MSG		11 35 18.9	
	comp=Z,4.7nm,0.2s						
FINES	FINESS Array B	1.94	269	Pg	Pb	11 34 53.8	+0.6
	comp=Z,0.7nm,0.3s,baz=80,slow=18,SNR=24						
FINES				Lg	Lg	11 35 18.1	
	comp=Z,1.4nm,0.3s,baz=76,slow=30,SNR=16						
NIF	Nilsia	2.16	331	PN	Pb	11 34 57.0	+0.1
	baz=147						
NIF				MSG		11 35 25.7	
	comp=Z,3.3nm,0.2s						
NIF				SN	Sg	11 35 26.3	+0.1
SUF	Sumiainen	2.21	305	PN	Pb	11 34 58.3	+0.5
	baz=122						
SUF				MSG		11 35 27.5	
	comp=Z,3.1nm,0.2s						
SUF				SN	Sg	11 35 28.3	+0.3
PVF	Pernaja	2.29	246	PB	Pb	11 34 58.5	-0.6
	baz=68						
PVF				MSG		11 35 28.2	
	comp=Z,2.4nm,0.2s						
PVF				SB	Sb	11 35 28.9	+1.0
KEF	Keuruu	2.57	287	PN	Pb	11 35 04.0	+0.1
KEF				SN	Sb	11 35 37.2	+1.3
KEF				MSG		11 35 37.6	
	comp=Z,1.7nm,0.2s						
RMF	Romuvaara	2.71	358	PN	Pb	11 35 04.6	-1.6
	baz=174						
RMF				SB	Sb	11 35 39.4	-0.5
RMF				MSG		11 35 40.4	
	comp=Z,1.8nm,0.2s						
NUR	Nurmijarvi	2.85	251	PN	Pb	11 35 06.8	-1.8
	baz=67						
NUR				MSG		11 35 44.3	

	comp=Z,1.4nm,0.2s						
ARBE	Arbavere	2.92	226	PG	Pb	11 35 10.6	+0.6
OUF	Merijarvi	3.77	322	PB	Pb	11 35 26.6	+2.3
OUF				SB	Sg	11 36 17.1	-0.8
VAF	Ylistaro	3.79	297	PG	Pg	11 35 28.3	-1.3
VAF				SG	Sg	11 36 22.1	+3.4
RAF	Rauma	4.06	267	SG	Sg	11 36 27.8	+0.5
KU1	Kurvinen	4.06	357	PN	Pn	11 35 21.6	+1.2
MSF	Maaselka	4.43	354	SB	Sb	11 36 33.2	+3.7
KU6	Riekki	4.52	359	SN	Sn	11 36 19.6	-0.2
I43RU	DUBNA INFRASON	6.05	140	I	I	12 10 10.0	
	comp=Z,0.1nm,0.8s,baz=332,slow=324,SNR=1.5						
ARCES	ARCESS Array B	8.27	349	Pn	Pn	11 36 18.2	+0.2
	baz=162,slow=12,SNR=2.1						
ARCES				Sn	Sn	11 37 45.7	-6.3
	baz=169,slow=24,SNR=1.4						
	comp=Z,4.4nm,1.2s						

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*GCG **16** 11:35:24.5±1.1, 16°.38N×94°.06W, h123^{km}±16^{km}, MD4.1, ML3.8*

*MEX **16** 11:35:26.0±0.5, 16°.77N×94°.13W, h133^{km}±4^{km}, MD4.3*

ISC 16 11:35:22.2±0.9, **16°.81N**±0°.03×**94°.15W**±0°.03, **h146**^{km}±7^{km}, **n48**, σ**2^{s}.22**/84, **Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UXUV	UXUV	0.51	0	i P	Pn	11 35 44.5	+1.4
UXUV				eS	Sn	11 35 58.3	-0.8
CMIG	Matias Romero	0.76	292	i P	Pn	11 35 46.2	+1.5
CMIG				i S	Sn	11 36 01.9	+0.2
TGIG		0.98	91	eP	Pn	11 35 47.5	+1.1
TGIG				eS	Sn	11 36 04.0	-0.9
TGIG		0.98	91	eP	Pn	11 35 47.4	+0.9
TGIG				eS	Sn	11 36 04.0	-0.9
TGIG				IAML		11 36 05.1	
	comp=E,1µm,0.4s						
TGBT	Tuxtla Gutierr	1.01	91	eP	Pn	11 35 47.5	+0.9
TGBT				i S	Sn	11 36 04.8	-0.5
MIHL	Minatitlan	1.24	342	eP	Pn	11 35 50.6	+1.9
MIHL				eS	Sn	11 36 09.6	+0.5
TUIG	Tuzandepetl	1.25	348	i P	Pn	11 35 50.7	+1.8
TUIG				eS	Sn	11 36 10.4	+1.0
PCIG		1.41	141	eP	Pn	11 35 51.8	+1.3
PCIG				eS	Sn	11 36 11.8	-0.4
VHSA	Villahermosa	1.65	44	i S	Sn	11 36 16.0	-0.6
NEUV	Arroyo Zacate	1.82	300	eP	Pn	11 35 57.0	+2.0
NEUV				eS	Sn	11 36 20.3	+0.2
PMUV	Sontecomapan	1.96	332	eP	Pn	11 35 58.1	+1.3
PMUV				eS	Sn	11 36 22.0	-1.3
CCIG	Comitan	2.00	105	eP	Pn	11 35 58.8	+1.5
CCIG				eS	Sn	11 36 23.4	-0.7
CCIG	Comitan	2.00	105	i P	Pn	11 35 58.8	+1.5
CCIG				eS	Sn	11 36 23.0	-1.1
HUIG	Huatulco	2.15	242	eP	Pn	11 35 58.5	-0.3
HUIG				eS	Sn	11 36 27.3	+0.4
HUIG	Huatulco	2.15	242	i P	Pn	11 35 58.5	-0.3
HUIG				eS	Sn	11 36 26.7	-0.2
HUIG				IAML		11 36 30.0	
	comp=N,424nm,0.2s						
OXBJ	Oaxaca	2.48	276	eP	Pn	11 36 08.9	+5.8
OXBJ				eS	Sn	11 36 40.3	+5.8
PAVE	Pavencul	2.48	130	eP	Pn	11 36 04.8	+1.7
PAVE				eS	Sn	11 36 34.1	-0.6
VHO	Vista Hermosa	2.49	276	eP	Pn	11 36 06.4	+3.2
VHO				eS	Sn	11 36 36.2	+1.5
PATR	El Naranjo	2.49	132	eP	Pn	11 36 04.7	+1.4
PATR				eS	Sn	11 36 34.4	-0.5
PANG	Puerto Angel	2.50	243	i P	Pn	11 36 03.4	+0.2
PANG				eS	Sn	11 36 34.3	-0.4
CHUJ	Union Juarez	2.60	131	eP	Pn	11 36 06.0	+1.4
CHUJ				eS	Sn	11 36 36.4	-0.9
PEIG	Puerto Escondi	2.99	255	eP	Pn	11 36 09.5	+0.2
PEIG				eS	Sn	11 36 45.6	-0.1
TOIG	Toxpalan	3.06	295	eP	Pn	11 36 12.8	+2.5
TOIG				eS	Sn	11 36 46.0	-1.5
YOIG	Yosondua	3.25	271	eP	Pn	11 36 15.4	+2.5
YOIG				eS	Sn	11 36 47.9	-4.2
TPIG	Tehuac#an	3.46	298	eP	Pn	11 36 17.5	+2.0
TPIG				eS	Sn	11 36 54.7	-2.0
TXIG	Tlaxiaco	3.49	278	eP	Pn	11 36 19.1	+3.1
TXIG				eS	Sn	11 36 53.2	-4.4
SCIG	Sabancuy	3.55	52	eP	Pn	11 36 17.3	+0.9
SCIG				eS	Sn	11 36 55.9	-2.6
JAUV	Jalcomulco	3.59	316	eP	Pn	11 36 18.5	+1.5
JAUV				eS	Sn	11 36 58.3	-1.2
LVIG	Laguna Verde	3.62	324	eP	Pn	11 36 15.7	-1.7
LVIG				eS	Sn	11 36 57.6	-2.5
HLIG	Huajuapan de L	3.64	287	i P	Pn	11 36 21.4	+3.6
HLIG				eS	Sn	11 36 59.0	-1.9
PNIG	Pinotepa	3.84	264	eP	Pn	11 36 21.3	+1.0
PNIG				eS	Sn	11 37 01.1	-4.2
FTIG	Fresnillo de T	3.96	287	eP	Pn	11 36 25.8	+3.8
FTIG				eS	Sn	11 37 07.9	-0.4
APG	El Apazote	3.97	116	i P	Pn	11 36 22.5	+0.3
APG				i S	Sn	11 37 06.2	-2.6
TLIG	Tlapa	4.29	281	eP	Pn	11 36 29.6	+3.3
TLIG				eS	Sn	11 37 12.8	-3.3
MGIG	Malinaltepec	4.31	276	eP	Pn	11 36 29.6	+3.0
MGIG				eS	Sn	11 37 16.1	-0.6
CXUV	Coxquihui	4.68	316	eP	Pn	11 36 33.7	+2.4
CXUV				eS	Sn	11 37 21.7	-3.4
PPSX	Xalitzintla	4.73	299	eP	Pn	11 36 37.8	+5.4
PPSX				eS	Sn	11 37 27.5	+0.6
PPCL	Tochimilco	4.74	297	eP	Pn	11 36 37.4	+4.9
PPCL				eS	Sn	11 37 20.4	-6.7
CRIG	Cruz Grande	4.77	270	eP	Pn	11 36 33.9	+1.3
CRIG				eS	Sn	11 37 21.2	-6.2
PPPT	Popocatepetl	4.78	298	eP	Pn	11 36 37.9	+4.8
PPPT				eS	Sn	11 37 22.6	-5.6
PPM	Popocatepetl	4.82	298	eP	Pn	11 36 39.2	+5.6
PPM				eS	Sn	11 37 27.8	-1.4
YAIG	Yautepec	5.11	294	eP	Pn	11 36 41.5	+4.3
YAIG				eS	Sn	11 37 31.2	-4.5
MTO3	Montecristo	5.20	117	i P	Pn	11 36 38.4	0.0
DAIG	Los Arroyos	5.27	273	eP	Pn	11 36 41.2	+2.0
DAIG				eS	Sn	11 37 35.4	-3.8
MEIG	Mezcala	5.34	283	eP	Pn	11 36 44.0	+3.8
MEIG				eS	Sn	11 37 39.5	-1.6
MAVM	Malinalco, Edo	5.52	294	i P	Pn	11 36 47.7	+5.0
MAVM				eS	Sn	11 37 45.3	-0.2
TEIG	Tepich	6.53	58	eP	Pn	11 36 56.1	+0.2
TEIG				eS	Sn	11 38 08.3	-1.0
MMIG	Aquila	8.90	281	eP	Pn	11 37 32.1	+4.5

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*KRNET **16** 11:39:37.6±0.1, 41°.53N×78°.79E, h13^{km}, mb3.4*

*SOME **16** 11:39:37.0, 41°.55N×78°.82E, h15^{km}*

*NNC **16** 11:39:39.0±1.8, 41°.62N×78°.84E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=12.4km s-min=7.3km az=157.0*

ISC 16 11:39:39.0±1.7, **41°.59N**±0°.06×**78°.77E**±0°.04, **h1**^{km}±10^{km}, **n54**, σ**1^{s}.47**/87, **19C-21D**, **Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	Taragay, Kyrgy	0.73	281	⇓iP	Pg	11 39 52.5	-0.5
TARG				⇓iS	Sg	11 40 03.1	+0.6
PRZ	Przheval'sk	0.93	343	⇓eP	Pg	11 39 56.8	0.0
PRZ				⇓eS	Sn	11 40 11.2	-2.2
KDJ	Kajisay	1.30	295	⇓iP	Pn	11 40 02.7	-1.7
KDJ				⇓iS	Sb	11 40 21.0	-0.6
SATY	Saty	1.49	350	P	Pb	11 40 06.7	-0.8
	46nm,0.2s						
SATY				S	Sg	11 40 28.3	+1.5
	114nm,0.3s						
UZB	Uzynbulak	1.56	7	P	Pb	11 40 07.7	-1.1
	36nm,0.3s						
UZB				S	Sg	11 40 29.7	+0.4
	109nm,0.4s						
UZB	Uzynbulak	1.56	7	eP	Pb	11 40 07.7	-1.1
	36nm,0.2s						
UZB				eS	Sg	11 40 29.7	+0.4
	163nm,0.3s						
SHLS	Shalkode	1.65	18	P	Pg	11 40 11.6	+1.0
	94nm,0.5s						
SHLS				S	Sg	11 40 36.3	+4.4
	339nm,0.5s						
SHLS	Shalkode	1.65	18	eP	Pg	11 40 11.6	+1.0
	34nm,0.1s						
SHLS				eS	Sg	11 40 36.3	+4.4
	710nm,0.5s						
PDGK	Podgornoye	1.82	17	⇓Pn	Pb	11 40 11.9	-1.2
	16nm,0.3s						
PDGK				⇓Sn	Sg	11 40 37.5	+0.2
	205nm,0.6s						
KPKS	Kokpek	1.87	358	Pg	Pb	11 40 13.3	-0.8
	0.4nm,0.3s						
KPKS				Lg	Lg	11 40 39.7	
	354nm,0.5s						
KPKS	Kokpek	1.87	358	eP	Pb	11 40 13.3	-0.8
	33nm,0.2s						
KPKS				eS	Sg	11 40 39.7	+0.5
	221nm,0.3s						
KURS	Kuram	1.94	347	Pg	Pb	11 40 15.0	-0.2
	66nm,0.5s						
KURS				Lg	Lg	11 40 42.2	
	170nm,0.7s						
TNSS	Tian-Shan	1.98	318	Pg	Pb	11 40 15.3	-0.6
	13nm,0.2s						
TNSS				Lg	Lg	11 40 43.1	
	56nm,0.4s						
TNSS	Tian-Shan	1.98	318	eP	Pb	11 40 15.3	-0.6
	13nm,0.2s						
TNSS				eS	Sg	11 40 43.1	+0.6
	56nm,0.4s						
ULHL	Ulahol	1.99	290	⇓iP	Pb	11 40 14.9	-1.2
ULHL				⇓iS	Sg	11 40 42.4	-0.6
KOTS	Kotyrbulak	2.05	324	Pg	Pb	11 40 16.6	-0.4
	72nm,0.2s						
KOTS				Lg	Lg	11 40 45.3	
	181nm,0.4s						
KOTS	Kotyrbulak	2.05	324	eP	Pb	11 40 16.6	-0.4
	72nm,0.2s						
KOTS				eS	Sg	11 40 45.3	+0.6
	181nm,0.4s						
KNDC	Almaty	2.10	321	⇑Pg	Pb	11 40 17.5	-0.4
	30nm,0.3s						
KNDC				⇑Lg	Lg	11 40 47.8	
	81nm,0.5s						
AAA	Alma-Ata	2.12	320	eP	Pb	11 40 18.0	-0.2
	20nm,0.1s						
AAA				eS	Sg	11 40 47.3	+0.3
	5.8nm,0.0s						
IZV	Izvestkoviy	2.15	313	eP	Pn	11 40 15.6	-0.5
	30nm,0.1s						
IZV				eS	Sn	11 40 43.1	-0.4
	169nm,0.2s						
KTMS	Ketmen	2.19	32	Pg	Pn	11 40 15.1	-1.6
	16nm,0.3s						
KTMS				Lg	Lg	11 40 42.4	
	48nm,0.2s						
KTMS	Ketmen	2.19	32	eP	Pn	11 40 15.1	-1.6
	16nm,0.3s						
KTMS				eS	Sn	11 40 42.4	-2.1
	48nm,0.2s						
BOOM	Boomskoye usch	2.29	294	⇑eP	Pb	11 40 19.2	-1.9
BOOM				⇑iS	Sb	11 40 49.3	-0.7
MTBS	Maitube	2.31	312	Pg	Pb	11 40 20.6	-0.9
	43nm,0.4s						
MTBS				Lg	Lg	11 40 52.1	
	79nm,0.6s						
MTBS	Maitube	2.31	312	eP	Pb	11 40 20.6	-0.9
	43nm,0.4s						
MTBS				eS	Sg	11 40 52.1	-1.2
	79nm,0.6s						
JNKS	Jany-Kuch	2.40	258	⇑iP	Pn	11 40 20.0	+0.3
JNKS				⇑iS	Sb	11 40 51.3	-2.1
BLB	Baldybastay	2.51	355	Pg	Pb	11 40 23.7	-1.2
	60nm,0.2s						
BLB				Lg	Lg	11 40 57.6	
	259nm,0.5s						
CHKK	Chushkaly	2.61	330	eP	Pb	11 40 25.6	-1.0
	2.2nm,0.1s						
CHKK				eS	Sb	11 41 00.3	+1.2
	272nm,0.5s						
KTBS	Karatobe	2.62	325	Pg	Pb	11 40 26.1	-0.5
	26nm,0.4s						
KTBS				Lg	Lg	11 41 01.5	
	28nm,1.3s						
TKM2	Tokmak 2	2.70	300	⇓iP	Pn	11 40 25.0	+1.3
TKM2				⇓iS	Sb	11 40 59.3	-2.6
ARXS	Arharly	2.71	346	Pg	Pb	11 40 26.4	-1.8
	25nm,0.4s						
ARXS				Lg	Lg	11 41 02.3	
	205nm,0.7s						
ARXS	Arharly	2.71	346	eP	Pb	11 40 26.4	-1.8
	25nm,0.4s						
ARXS				eS	Sb	11 41 02.3	+0.4
	205nm,0.7s						
DGS	Degeres	2.76	308	Pg	Pb	11 40 28.1	-1.1
	17nm,0.7s						
DGS				Lg	Lg	11 41 04.7	
	52nm,0.8s						
DGS	Degeres	2.76	308	eP	Pb	11 40 28.1	-1.1
	17nm,0.7s						
DGS				eS	Sb	11 41 04.7	+1.2
	52nm,0.8s						
KNOS	Konyrlen	2.78	6	Pg	Pb	11 40 29.1	-0.4
	10nm,0.2s						
KNOS				Lg	Lg	11 41 06.7	
	149nm,0.5s						
KUU	Kurty	2.91	323	Pg	Pb	11 40 31.6	-0.1
	4.0nm,0.1s						
KUU				Lg	Lg	11 41 10.8	
	51nm,0.6s						
KUU	Kurty	2.91	323	eP	Pb	11 40 31.6	-0.1
	4.0nm,0.1s						
KUU				eS	Sg	11 41 10.8	-1.7
	51nm,0.6s						
KBK	Karagaybulak	3.03	292	⇓eP	Pn	11 40 29.5	+1.3
KBK				⇓iS	Sn	11 41 07.3	+2.1
UCH	Uchtor	3.24	283	⇓eP	Pn	11 40 32.5	+1.2
UCH				⇓iS	Sn	11 41 12.4	+1.7
CHMS	Chumysh	3.29	297	⇓iP	Pn	11 40 33.1	+1.4
CHMS				⇓iS	Sn	11 41 13.4	+1.9
ARLS	Aral	3.34	276	⇑iP	Pn	11 40 33.4	+1.0
ARLS				⇑iS	Sn	11 41 14.2	+1.5
AAK	Ala-Archa	3.34	290	⇑iP	Pn	11 40 33.9	+1.4
AAK				⇑iS	Sn	11 41 14.8	+1.9
AAK	Ala-Archa	3.34	290	⇑Pn	Pb	11 40 37.5	-1.6
	0.9nm,0.5s						
AAK				⇑Pg	Pg	11 40 44.9	+1.9
	1.2nm,0.4s						
AAK				⇑Lg	Lg	11 41 24.5	
	16nm,0.7s						
TDK	Taldyqorghan	3.42	356	eP	Pb	11 40 40.7	+0.4
	9.5nm,0.1s						
TDK				eS	Sg	11 41 26.2	-2.5
	147nm,0.4s						
USP	Ospenovka	3.57	299	⇑iP	Pn	11 40 36.9	+1.4
USP				⇑iS	Sn	11 41 20.0	+1.6
SGDS	Sogindy	3.58	303	Pg	Pb	11 40 42.6	-0.5
	2.5nm,0.1s						
SGDS				Lg	Lg	11 41 29.7	
	30nm,1.3s						
KAPS	Kapalarasan	3.72	6	Pg	Pb	11 40 45.9	+0.5
	11nm,0.4s						
KAPS				Lg	Lg	11 41 35.4	
	34nm,0.3s						
EKS2	Erkin-Say	3.86	288	⇑eP	Pn	11 40 41.1	+1.5
EKS2				⇑iS	Sn	11 41 27.2	+1.6
MRKS	Merke	4.28	287	Pg	Pb	11 40 57.4	+2.4
	4.4nm,0.7s						
MRKS				Lg	Lg	11 41 54.8	
	9.9nm,0.7s						
MRKS	Merke	4.28	287	eP	Pb	11 40 57.4	+2.4
	2.3nm,0.2s						
MRKS				eS	Sg	11 41 54.8	-1.5
	9.3nm,0.2s						
MK31	Makanchi Array	5.78	25	⇓Pn	Pn	11 41 05.7	-0.2
	0.5nm,0.3s,baz=204,slow=13,SNR=42						
MK31				⇑Sn	Sn	11 42 12.3	-0.5
	2.0nm,0.5s						
MK31				⇑Lg	Lg	11 42 35.4	
	1.7nm,0.5s,baz=202,slow=31,SNR=4.3						
KK31	Karatay Array	6.30	287	Pg	Pg	11 41 36.7	-2.9
	0.4nm,0.3s,baz=93,slow=15,SNR=9.2						
KK31				Lg	Lg	11 42 57.1	
	2.1nm,0.5s,baz=104,slow=27,SNR=8.6						
KURBB	Kurchatov Arra	9.03	359	⇓Lg	Lg	11 44 25.7	
	11nm,0.7s						
KURK	Kurchatov	9.12	359	⇓Lg	Lg	11 44 25.7	
	2.1nm,0.7s						

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*IDC **16** 11:46:19.6±1.5, 35°.13N×27°.00E, h0^{km}, mb3.6/5, mbtmp3.5/9, ML3.1/3, MS2.7/1, Error ellipse: s-maj=35.1km s-min=18.0km az=4.0*

*AFAD **16** 11:46:21.1, 35°.21N×26°.77E, h13^{km}±2^{km}, ML3.3*

*HLW **16** 11:46:22.9, 35°.12N×26°.93E, h16^{km}±4^{km}, Ml3.6*

*ISK **16** 11:46:22.9, 35°.33N×26°.90E, h5^{km}, ML3.4/22*

*THE **16** 11:46:24.9, 35°N±3°×2°7E±°, h0^{km}±5^{km}, M3.4/20, MLh3.4/20*

*ATH **16** 11:46:25.1, 35°.31N×26°.80E, h11^{km}±1^{km}, ML3.6/11, Manual Solution by F.Xalaris First location: 2019/12/16 11:46:58, This location: 2019/12/16 11:57:18 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

ISC 16 11:46:22.7±1.1, **35°.09N**±0°.04×**26°.94E**±0°.03, **h31**^{km}±9^{km}, **n98**, σ**1^{s}.64**/124, **mb3.4**/5, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	Zakros	0.60	273	P	Pn	11 46 35.0	-0.1
ZKR	Zakros	0.60	273	Pg	Pn	11 46 34.9	-0.3
ZKR				Sg	Sn	11 46 43.8	0.0
ZKR	Zakros	0.60	273	P	Pn	11 46 34.8	-0.3
ZKR				S	Sb	11 46 42.0	-1.0
SIT2	Siteia	0.70	280	P	Pn	11 46 36.5	0.0
SIT2				S	Sb	11 46 44.4	-1.3
NPS	Neapolis	1.10	280	P	Pb	11 46 43.9	+0.7
NPS				S	Sn	11 46 58.7	+2.4
NPS	Neapolis	1.10	280	P	Pb	11 46 43.7	+0.4
NPS				S	Sb	11 46 57.0	-0.4
ARG	Arkhangelos	1.48	40	P	Pb	11 46 50.9	+1.3
ARG				S	Sb	11 47 10.6	+2.5
ARG	Arkhangelos	1.48	40	Pn	Pb	11 46 48.9	-0.8
ARG				Sn	Sb	11 47 07.7	-0.4
ARG	Arkhangelos	1.48	40	P	Pb	11 46 50.9	+1.3
ARG				S	Sb	11 47 09.2	+1.0
NISR	Nisiros	1.53	6	P	Pb	11 46 49.5	-0.9
NISR				S	Sb	11 47 08.8	-0.7
NISR	Nisiros	1.53	6	P	Pb	11 46 49.4	-1.1
NISR				S	Sb	11 47 08.3	-1.2
ASTA	Astypalaia	1.53	342	P	Pn	11 46 48.8	+0.8
IACM	Heraklion	1.55	279	P	Pb	11 46 51.5	+0.7
IACM				S	Sb	11 47 11.9	+1.9
IACM	Heraklion	1.55	279	P	Pb	11 46 50.9	+0.1
YAZI	Mula-Dat§a-	1.65	14	P	Pb	11 46 50.8	-1.6
IDI	Anoyia	1.69	277	Pn	Pb	11 46 53.2	-0.2
	66nm,0.3s,baz=79,slow=16,SNR=250						
IDI				Sn	Sb	11 47 19.3	+5.1
	64nm,0.3s,baz=9.8,slow=19,SNR=7.8						
IDI	Anoyia	1.69	277	P	Pb	11 46 53.1	-0.2
IDI				S	Sb	11 47 15.9	+1.6
IDI	Anoyia	1.69	277	P	Pb	11 46 53.1	-0.2
IDI				S	Sb	11 47 13.2	-1.0
DAT	Datca	1.72	17	Pn	Pn	11 46 51.5	+0.8
THERA	Ancient Thera,	1.75	317	P	Pn	11 46 52.0	+1.0
THERA				S	Sn	11 47 13.7	+1.4
THERA	Ancient Thera,	1.75	317	P	Pn	11 46 52.1	+1.1
THERA				S	Sn	11 47 11.6	-0.7
THR8	Santorini-Mono	1.78	318	P	Pn	11 46 52.6	+1.3
THR6	Thira Island,	1.79	316	P	Pn	11 46 52.9	+1.5
THR9	Santorini-Faro	1.81	315	P	Pn	11 46 53.2	+1.4
SNT5	Nea Kammeni, S	1.82	317	P	Pn	11 46 53.1	+1.1
SNT5	Nea Kammeni, S	1.82	317	P	Pn	11 46 53.1	+1.1
THR3	Thira Island,	1.82	317	P	Pn	11 46 53.2	+1.3
THR5	Thira Island,	1.86	316	P	Pn	11 46 53.7	+1.2
SAP3	Santorini-Thir	1.87	316	P	Pn	11 46 54.1	+1.4
TURN	Turunc	1.99	32	P	Pb	11 46 56.7	-1.6
TURN				S	Sb	11 47 23.2	+0.7
TURN				i IAML		11 47 36.0	
	comp=E,280nm,0.7s						
TURN				i IAML		11 47 38.0	
	comp=N,211nm,0.4s						
TURN	Turunc	1.99	32	Pn	Pn	11 46 55.7	+1.5
BODT	Bodrum	2.00	8	P	Pb	11 46 56.3	-2.0
BODT				S	Sn	11 47 18.2	-0.1
BODT	Bodrum	2.00	8	P	Pb	11 46 56.6	-1.7
BODT	Bodrum	2.00	8	Pn	Pn	11 46 55.1	+0.7
BDRM	Kayabasi	2.02	11	P	Pn	11 46 56.2	+1.5
YKAV	Yalikavak-Bodr	2.05	8	Pn	Pn	11 46 55.4	+0.3
DALY	Dalyan (Mula)	2.22	38	Pn	Pn	11 46 59.0	+1.6
VAM	Vamos	2.27	279	S	Sb	11 47 30.1	-0.5
VAM	Vamos	2.27	279	P	Pb	11 47 00.6	-2.4
APE	Apeiranthos	2.29	330	P	Pn	11 46 59.3	+0.8
APE				S	Sn	11 47 25.7	+0.1
APE	Apeiranthos	2.29	330	P	Pn	11 46 59.2	+0.8
APE				S	Sn	11 47 26.4	+0.9
APE	Apeiranthos	2.29	330	Pn	Pn	11 46 59.0	+0.6
APE				Sn	Sn	11 47 25.9	+0.3
APE	Apeiranthos	2.29	330	P	Pn	11 46 59.2	+0.8
IZZE	Mula-Seydike	2.29	53	P	Pn	11 47 00.2	+1.7
IZZE				i IAML		11 47 34.0	
	comp=E,158nm,0.4s						
IZZE				i IAML		11 47 51.0	
	comp=N,280nm,0.5s						
MLSB	Milas	2.31	17	P	Pn	11 47 00.5	+1.9
MLSB				i IAML		11 47 45.0	
	comp=E,285nm,0.6s						
MLSB	Milas	2.31	17	Pn	Pn	11 46 59.6	+0.9
YER	Yerkesik	2.31	28	P	Pb	11 47 01.1	-2.8
YER				S	Sb	11 47 32.3	+0.3
YER	Yerkesik	2.31	28	P	Pb	11 47 01.3	-2.5
YER				S	Sn	11 47 28.7	+2.5
YER	Yerkesik	2.31	28	Pn	Pn	11 47 00.2	+1.4
FETY	Fethiye	2.33	48	P	Pn	11 46 44.1	-15
FETY				S	Sn	11 47 22.5	-4.0
GVD	Gavdhos	2.36	265	P	Pb	11 47 02.5	-2.1
GVD	Gavdhos	2.36	265	P	Pb	11 47 02.4	-2.1
DDIM	Aydin, Didim	2.38	6	P	Pn	11 47 01.7	+2.0
DDIM				i IAML		11 47 52.0	
	comp=E,188nm,0.8s						
DDIM				i IAML		11 48 02.0	
	comp=N,168nm,0.8s						
NAX1	Naxos Island	2.38	328	P	Pn	11 47 00.4	+0.8
CHAN	Chania	2.41	281	P	Pn	11 47 02.1	+2.0
CHAN				S	Sb	11 47 32.4	-2.3
MULA	Mugla, Merkez-	2.44	27	P	Pb	11 47 02.9	-3.0
MULA				i IAML		11 47 53.0	
	comp=E,145nm,0.8s						
AKAS	Kas	2.45	61	Pn	Pn	11 47 02.8	+2.1
IMMV	Iera Moni Meta	2.45	280	P	Pb	11 47 03.8	-2.4
IMMV	Iera Moni Meta	2.45	280	P	Pn	11 47 03.2	+2.5
GCAM	G?zelcaml?	2.62	5	Pn	Pn	11 47 01.3	-1.6
CAME	Cameli-Denizli	2.66	45	Pn	Pn	11 47 05.8	+2.1
KNIK	Mula-Seydike	2.76	50	P	Pn	11 47 07.1	+2.1
ELL	Elmali	2.92	55	Pn	Pn	11 47 09.9	+2.7
ESEN	Aydn-Nazilli	2.93	22	P	Pn	11 47 09.2	+2.0
AYDB	Zeytinkoy-Aydi	2.96	15	Pn	Pn	11 47 08.7	+1.0
DNIZ	Denizli-Tavas-	3.05	33	P	Pn	11 47 10.7	+1.8
DNIZ				i IAML		11 47 59.0	
	comp=N,178nm,0.5s						
APMY	Acipayam-Deniz	3.05	38	Pn	Pn	11 47 10.8	+1.9
ANKY	Antikythira Is	3.07	286	P	Pn	11 47 10.6	+1.4
ANKY	Antikythira Is	3.07	286	P	Pn	11 47 10.7	+1.5
ZEYE	Izmir, Urla-Ze	3.17	354	P	Pn	11 47 11.0	+0.6
ZEYE				i IAML		11 48 07.0	
	comp=E,70nm,0.6s						
ZEYE				i IAML		11 48 16.0	
	comp=N,95nm,0.8s						
URLA	Izmir	3.28	355	Pn	Pn	11 47 12.9	+0.9
BLCB	Balcova	3.29	1	Pn	Pn	11 47 13.2	+1.0
ODEM	Odemis-Izmir	3.31	16	Pn	Pn	11 47 13.9	+1.4
KIRA	zmir-Kiraz	3.32	20	P	Pn	11 47 15.0	+2.3
KTHA	Kythira Island	3.37	291	P	Pn	11 47 14.6	+1.3
CHOS	Chios island	3.37	348	P	Pn	11 47 14.1	+0.8
CHOS	Chios island	3.37	348	Pn	Pn	11 47 14.3	+1.0
KARY	Karystos	3.57	326	P	Pn	11 47 17.7	+1.8
KARY	Karystos	3.57	326	P	Pn	11 47 17.4	+1.4
VLI	Veliai	3.64	298	P	Pn	11 47 18.1	+1.1
VLI	Veliai	3.64	298	P	Pn	11 47 18.4	+1.5
KULA	Kula-Manisa	3.69	21	Pn	Pn	11 47 19.2	+1.5
VLY	Voula,Athens	3.75	318	P	Pn	11 47 20.8	+2.3
DION	Dionisos Attik	3.85	322	P	Pn	11 47 22.5	+2.7
SLUM	Salum	3.87	203	P	Pn	11 47 21.7	+1.6
SLUM				S	Sn	11 48 04.3	-0.2
GORD	Gordes-Manisa	3.94	14	Pn	Pn	11 47 22.7	+1.5
SWA2		5.96	193	P	Pn	11 47 50.5	+1.6
RYAN	Fayoum	6.62	154	S	Sn	11 49 11.2	-1.1
BRTR	Keskin Array B	7.06	47	Pn	Pn	11 48 07.2	+3.1
	0.1nm,0.3s,baz=223,slow=16,SNR=2.4						
	0.3nm,0.3s						
MMAI	Mount Meron Ar	7.32	104	Pn	Pn	11 48 05.6	-2.0
	1.5nm,0.4s,baz=309,slow=9.1,SNR=1.3						

MMAI				LR	LR	11 52 44.7	
	comp=Z,57nm,18.4s,baz=254,slow=53						
EIL	Elat	8.66	126	Pn	Pn	11 48 26.2	+0.3
	1.3nm,0.3s,baz=237,slow=2.7,SNR=7.8						
EIL				Sn	Sn	11 49 57.5	-5.0
	5.7nm,0.3s,baz=26,slow=19,SNR=14						
	4.0nm,0.5s						
AKASG	Malin Array Be	15.70	5	Pn	P	11 50 05.2	0.0
	1.4nm,0.3s,baz=197,slow=11,SNR=7.2						
GERES	GERESS Array B	16.88	329	Pn	P	11 50 18.1	-0.3
	baz=160,slow=12,SNR=2.6						
	0.3nm,0.5s						
ESDC	Sonseca Array	24.92	290	P	P	11 51 42.6	-0.4
	0.5nm,0.6s,baz=91,slow=10,SNR=2.1						
	0.5nm,0.6s						
ARCES	ARCESS Array B	34.51	359	P	P	11 53 07.3	-0.5
	1.4nm,0.9s,baz=170,slow=12,SNR=1.1						
	1.4nm,0.9s						
KURBB	Kurchatov Arra	40.03	51	P	P	11 53 55.7	+1.0
	0.5nm,0.8s,baz=279,slow=8.9,SNR=5.9						
	0.5nm,0.8s						
MKAR	Makanchi Array	42.59	57	P	P	11 54 17.4	+1.5
	0.4nm,0.5s,baz=268,slow=8.4,SNR=9.5						
	0.4nm,0.5s						
ZALV	Zalesovo Beam	44.00	46	P	P	11 54 27.9	+0.8
	0.5nm,0.3s,baz=266,slow=7.8,SNR=3.6						
	0.5nm,0.3s						

*KRNET **16** 11:51:32.9±0.1, 42.°33N×76.°27E, h18^{km}, mb2.6*
*KNET **16** 11:51:33.2±0.3, 42.°31N×76.°14E, h8^{km}±3^{km}, ml1.5, Error ellipse: s-maj=3.9km s-min=1.6km az=53.0*
*NNC **16** 11:51:33.3±1.0, 42.°34N×76.°24E, h0^{km}, mb3.0, mpv2.8, Error ellipse: s-maj=7.9km s-min=4.5km az=171.0*
*SOME **16** 11:51:33.2, 42.°32N×76.°22E, h10^{km}*
ISC 16 11:51:33.1±0.8**, 42.°32N**±0.°03×**76.°25E**±0.°02**, h13**^{km}±5^{km}**, n34, σ0^{s}63**/64**, 25C-8D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	Ulahol	0.07	185	⇑P	Pg	11 51 35.7	-0.2
	170nm,0.1s						
ULHL				⇑S	Sg	11 51 37.8	-0.3
	831nm,0.2s						
ULHL	Ulahol	0.07	185	⇑iP	Pg	11 51 35.8	-0.2
ULHL				⇑iS	Sg	11 51 37.7	-0.3
BOOM	Boomskoye usch	0.29	307	⇑iP	Pg	11 51 39.1	-0.1
BOOM				⇑iS	Sg	11 51 43.5	+0.2
KDJ	Kajisay	0.71	105	⇑iP	Pg	11 51 46.4	-0.7
KDJ				⇑iS	Sg	11 51 56.3	-0.2
TKM2	Tokmak 2	0.77	322	⇓P	Pg	11 51 48.0	-0.2
	1.9nm,0.1s						
TKM2				⇑S	Sg	11 51 58.4	0.0
	12nm,0.1s						
TKM2	Tokmak 2	0.77	322	⇑iP	Pg	11 51 47.8	-0.4
TKM2				⇑iS	Sg	11 51 58.4	0.0
MTBS	Maitube	0.82	9	P	Pg	11 51 49.0	-0.1
	8.7nm,0.1s						
MTBS				S	Sb	11 52 00.5	0.0
	29nm,0.2s						
MTBS	Maitube	0.82	9	eP	Pg	11 51 49.1	-0.1
	8.6nm,0.1s						
MTBS				eS	Sb	11 52 00.5	0.0
	27nm,0.1s						
TNSS	Tian-Shan	0.89	35	P	Pg	11 51 50.2	-0.1
	2.6nm,0.2s						
TNSS				S	Sb	11 52 02.3	-0.3
	2.4nm,0.2s						
TNSS	Tian-Shan	0.89	35	eP	Pg	11 51 50.2	-0.1
	2.4nm,0.1s						
TNSS				eS	Sb	11 52 02.3	-0.3
	2.4nm,0.2s						
DGS	Degeres	0.99	339	P	Pg	11 51 52.1	-0.2
	2.3nm,0.1s						
DGS				S	Sb	11 52 05.1	-0.2
	5.8nm,0.1s						
DGS	Degeres	0.99	339	eP	Pg	11 51 52.1	-0.2
	2.3nm,0.1s						
DGS				eS	Sb	11 52 05.4	0.0
	5.8nm,0.1s						
KBK	Karagaybulak	1.02	290	⇓P	Pg	11 51 52.1	-0.8
	2.2nm,0.1s						
KBK				⇓S	Sg	11 52 05.5	-0.7
	12nm,0.2s						
KOTS	Kotyrbulak	1.12	34	P	Pn	11 51 54.8	+0.1
	1.8nm,0.2s						
KOTS				S	Sn	11 52 10.0	-0.1
	11nm,0.3s						
KOTS	Kotyrbulak	1.12	34	eP	Pn	11 51 54.8	+0.1
	1.3nm,0.2s						
KOTS				eS	Sn	11 52 10.0	-0.1
	16nm,0.2s						
UCH	Uchtor	1.29	267	⇑iP	Pn	11 51 56.9	-0.5
UCH				⇑iS	Sb	11 52 14.5	+0.2
TARG	Taragay, Kyrgy	1.30	116	⇑iP	Pn	11 51 56.8	-0.6
TARG				⇑iS	Sb	11 52 13.9	-0.5
JNKS	Jany-Kuch	1.33	200	⇑eP	Pn	11 51 57.9	+0.2
JNKS				⇑eS	Sn	11 52 16.2	+0.7
AAK	Ala-Archa	1.34	285	⇓P	Pn	11 51 57.9	+0.1
	0.8nm,0.1s						
AAK				⇑S	Sn	11 52 15.9	+0.4
	3.7nm,0.2s						
AAK	Ala-Archa	1.34	285	⇑iP	Pn	11 51 57.6	-0.1
AAK				⇑iS	Sb	11 52 15.7	+0.3
AAK	Ala-Archa	1.34	285	⇑P	Pn	11 51 58.0	+0.3
AAK				⇓S	Sn	11 52 15.9	+0.4
	0.5nm,0.4s						
KTBS	Karatobe	1.43	13	P	Pb	11 52 00.0	+0.3
	3.0nm,0.1s						
KTBS				S	Sg	11 52 18.8	-0.4
	3.2nm,0.1s						
USP	Ospenovka	1.60	307	⇑P	Pb	11 52 02.5	-0.1
	1.8nm,0.2s						
USP				⇓S	Sg	11 52 24.0	-0.7
	5.1nm,0.2s						
USP	Ospenovka	1.60	307	⇓iP	Pb	11 52 02.2	-0.5
USP				⇓iS	Sg	11 52 23.7	-1.0
SATY	Saty	1.75	64	P	Pg	11 52 06.3	-0.5
	0.9nm,0.1s						
SATY				S	Sg	11 52 29.7	+0.1
	13nm,0.1s						
KPKS	Kokpek	2.13	56	Pg	Pb	11 52 12.7	+1.0
	0.3nm,0.1s						
KPKS				Lg	Lg	11 52 40.6	
	2.6nm,0.2s						
KPKS	Kokpek	2.13	56	eP	Pb	11 52 12.7	+1.0
	0.3nm,0.1s						
KPKS				eS	Sg	11 52 40.7	-0.8
	2.6nm,0.2s						
UZB	Uzynbulak	2.21	67	Pg	Pb	11 52 13.8	+0.8
	3.6nm,0.3s						
UZB				Lg	Lg	11 52 42.8	
	2.1nm,0.1s						
UZB	Uzynbulak	2.21	67	eP	Pb	11 52 13.8	+0.8
	2.9nm,0.1s						
UZB				eS	Sg	11 52 42.8	-1.3
	1.4nm,0.3s						
ARXS	Arharly	2.22	31	Pg	Pb	11 52 14.1	+0.9
	2.4nm,0.3s						
ARXS				Lg	Lg	11 52 43.4	
	9.3nm,0.2s						
ARXS	Arharly	2.22	31	eP	Pb	11 52 14.1	+0.9
	2.4nm,0.3s						
ARXS				eS	Sg	11 52 43.4	-1.1
	9.3nm,0.2s						
MRKS	Merke	2.28	282	Pg	Pb	11 52 15.3	+1.1
	1.0nm,0.2s						
MRKS				Lg	Lg	11 52 45.8	
	6.1nm,0.2s						
MRKS	Merke	2.28	282	eP	Pb	11 52 15.3	+1.1
	0.4nm,0.1s						
MRKS				eS	Sg	11 52 45.5	-0.8
	9.0nm,0.4s						
PDGK	Podgornoye	2.59	66	⇑Pn	Pn	11 52 16.7	+1.8
	0.2nm,0.5s						
PDGK				⇑Sn	Sn	11 52 45.0	-1.3
	0.3nm,0.4s						
PDGK				⇑Lg	Lg	11 52 54.2	
	1.5nm,0.5s						

*FUNV **16** 11:51:41.2, 7.°87N×72.°15W, h3^{km}, MW3.5*
*RSNC **16** 11:51:42.0±0.0, 8°N±3°×7°2W±°, h3^{km}±6^{km}, M3.1, ML2.8*
ISC 16 11:51:39.5±1.3**, 7.°82N**±0.°03×**72.°08W**±0.°03**, h2**^{km}±10^{km}**, n27, σ1^{s}87**/43**, 1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	Capacho	0.23	281	⇓iP	Pg	11 51 43.8	-0.3
CAPV				eS	Sg	11 51 47.1	0.0
PAMC	Pamplona, Colo	0.78	232	P	Pg	11 51 54.0	-0.5
PAMC				S	Sg	11 52 04.6	0.0
OCAC	Ocana	1.29	289	P	Pn	11 52 02.9	-1.9
OCAC				S	Sb	11 52 19.6	-2.2
SOCV	Socops	1.30	69	eS	Sg	11 52 24.4	+3.1
BARC	Barichara	1.64	222	P	Pb	11 52 10.3	-0.3
BARC				S	Sg	11 52 32.2	0.0
SDV	Santo Domingo	1.78	53	P	Pb	11 52 12.3	-0.7
SDV				S	Sb	11 52 35.0	-0.9
BRJC	Barrancabermej	1.85	243	P	Pb	11 52 13.7	-0.4
BRJC				S	Sb	11 52 38.1	+0.4
RUSC	La Rusia	2.16	207	P	Pb	11 52 19.3	-0.3
RUSC				S	Sb	11 52 46.8	-0.3
PTBC	PUERTO BERRIO,	2.68	242	P	Pn	11 52 23.6	-0.1
PTBC				S	Sb	11 53 01.7	+0.1
SPBC	San Pablo de B	2.92	223	P	Pn	11 52 28.6	+1.4
SPBC				S	Sb	11 53 07.7	-1.0
ARGC	Ariguani, Magd	2.94	314	P	Pn	11 52 28.3	+1.0
ARGC				S	Sn	11 53 04.9	+1.6
UREC	San Jos de Ur	3.42	269	P	Pn	11 52 35.8	+1.9
UREC				S	Sb	11 53 18.8	-4.1
TEPV	Terepaima	3.56	53	eP	Pn	11 52 36.9	+1.0
TEPV				eS	Sn	11 53 18.6	0.0
NORC	Norcasia	3.56	231	P	Pn	11 52 38.9	+3.0
CHIC	Chingaza	3.57	207	P	Pn	11 52 38.0	+1.7
CHIC				P	Pb	11 52 38.1	-5.6
CHIC				P	Pg	11 52 38.3	-10
SJCC	San Jacinto, C	3.69	304	P	Pn	11 52 39.3	+1.6
SJCC				S	Sn	11 53 25.2	+3.4
VILC	Villavicencio,	4.02	204	P	Pb	11 52 48.7	-2.5
MAPV	Macapo	4.10	61	eP	Pn	11 52 44.1	+0.8
MAPV				eS	Sn	11 53 29.6	-2.3
GUY2C	Guyana, Caldas	4.16	232	P	Pn	11 52 47.0	+2.5
CBOC	Ciudad Bolivar	4.36	244	P	Pn	11 52 49.2	+2.2
APAC	Apartado, Choc	4.46	271	P	Pn	11 52 49.1	+0.9
APAC				S	Sn	11 53 43.0	+2.4
BENV	Beln	4.91	64	eP	Pn	11 52 55.1	+0.6
BENV				eS	Sn	11 53 49.6	-2.5
TURV	Turiamo	4.94	58	eP	Pn	11 52 55.6	+0.9
ORTC	Ortega, Tolima	5.00	219	P	Pn	11 52 59.3	+3.6
PLMC	San Jos del P	5.08	235	P	Pn	11 52 59.2	+2.4
URMC	La Uribe, Meta	5.09	207	P	Pn	11 52 59.2	+2.3
URMC				S	Sn	11 53 55.2	-1.1
CACV	CAICARA DEL OR	5.50	92	eP	Pb	11 53 10.3	-6.0

IDC 16 12:10:12.9±2.3**, 5.°92N×124.°22E, h0**^{km}**, mb3.3**/4**, mbtmp3.3**/4**, Error ellipse: s-maj=176.1km s-min=26.4km az=67.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	23.91	177	P	P	12 15 29.9	+1.3
	1.1nm,0.8s,baz=8.7,slow=13,SNR=1.7						
	1.1nm,0.8s						
WRA	Warramunga Arr	27.56	159	P	P	12 16 00.6	-1.2
	0.5nm,0.8s,baz=331,slow=10,SNR=2.5						
	0.5nm,0.8s						
ASAR	Alice Springs	30.89	163	P	P	12 16 31.4	0.0
	0.1nm,0.5s,baz=350,slow=8.1,SNR=6.9						
	0.1nm,0.5s						
MKAR	Makanchi Array	54.35	326	P	P	12 19 41.3	-0.1
	0.2nm,0.6s,baz=134,slow=10,SNR=4.8						
	0.2nm,0.6s						

*NEIC **16** 12:17:42.9, 69.°62N×144.°75W, h12^{km}*
*AEIC **16** 12:17:43.6±2.2, 69.°56N±0.°04×144.°86W±0.°09, h11^{km}±4^{km}, ML4.4, mb4.5/106(NEIC), ML4.4/132(NEIC), Mwr4.2/51(NEIC), Error ellipse: s-maj=6.4km s-min=4.2km az=206.0*
*NEIC **16** 12:17:44.9±1.8, 69.°64N±0.°04×144.°80W±0.°10, h10^{km}±1^{km}, Error ellipse: s-maj=7.4km s-min=5.2km az=23.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.51; $M_{\theta\theta}$-1.57; $M_{\phi\phi}$2.08; $M_{r\theta}$0.32; $M_{\theta\phi}$-1.47; $M_{\phi r}$-0.68; Fault plane solution: $M_0$2.50000×10^{15} NP1: ϕ_s115.04000°, δ83.06000°, λ168.77000°. NP2: ϕ_s206.41000°, δ78.86000°, λ7.08000°. Principal axes: T 2.7620, Plg13.0000°, Azm70.0000°; N -0.6707, Plg77.0000°, Azm264.0000°; P -2.0914, Plg3.0000°, Azm161.0000°;*
*ANF **16** 12:17:44.1±0.3, 69.°63N×144.°95W, h2^{km}±2^{km}, ML4.8/63 Error ellipse: s-maj=1.9km s-min=1.0km az=5.0*
*IDC **16** 12:17:44.9±0.6, 69.°70N×144.°82W, h0^{km}, mb4.1/17, mbtmp4.2/21, ML4.2/4, MS3.6/27, Error ellipse: s-maj=20.0km s-min=10.9km az=59.0*
ISC 16 12:17:44.9±0.3**, 69.°61N**±0.°02×**144.°83W**±0.°02**, h10**^{km}**, n533, σ1^{s}07**/501**, mb4.5**/69**, MS3.6**/23**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
C26K	Camden Bay	0.31	354		Pg	12 17 51.1	0.0
C26K					Sb	12 17 55.8	-1.8
C26K	Camden Bay	0.31	354	IAML		12 17 57.3	
	comp=N,15µm,0.8s						
C26K				IAML		12 18 03.4	
	comp=E,22µm,0.8s						
C26K	Camden Bay	0.31	354	P	Pg	12 17 51.1	0.0
	baz=177						
C26K				S	Sb	12 17 56.6	-1.0
	baz=177						
C26K				S	Sb	12 17 56.6	-1.0
	baz=177						
C27K	Jago River	0.39	88		Pg	12 17 51.8	-0.8
C27K					Sg	12 17 57.3	-0.4
C27K	Jago River	0.39	88	IAML		12 17 59.4	
	comp=N,24µm,0.6s						
C27K				IAML		12 17 59.6	
	comp=E,22µm,0.8s						
C27K	Jago River	0.39	88	P	Pg	12 17 51.6	-1.0
	baz=261,SNR=1000						
C27K				S	Sg	12 17 57.1	-0.7
	baz=261						
C27K				S	Sg	12 17 57.1	-0.7
	baz=261						
D25K	Kavik River	0.62	242		Pg	12 17 54.7	-2.2
D25K					Sg	12 18 03.3	-1.6
D25K	Kavik River	0.62	242	P	Pg	12 17 54.7	-2.2
	baz=65,SNR=1000						
D25K				S	Sg	12 18 03.4	-1.6
	baz=65						
D25K				S	Sg	12 18 03.4	-1.6
	baz=65						
C24K	Franklin Bluff	1.36	276		Pn	12 18 09.5	-0.4
C24K				IAML		12 18 30.6	
	comp=N,7µm,0.9s						
C24K	Franklin Bluff	1.36	276		Sg	12 18 29.1	+0.6
C24K					Sn	12 18 29.4	+1.6
C24K	Franklin Bluff	1.36	276	P	Pn	12 18 09.5	-0.4
	baz=95,SNR=1000						
C24K				S	Sn	12 18 28.4	+0.5
	baz=95						
D27M	Malcolm River	1.41	103		Pn	12 18 09.8	-0.9
D27M	Malcolm River	1.41	103	IAML		12 18 36.0	
	comp=N,7µm,0.6s						
D27M				IAML		12 18 36.6	
	comp=E,5µm,0.8s						
D27M	Malcolm River	1.41	103	P	Pn	12 18 09.5	-1.2
	baz=285,SNR=968						
D27M				S	Sg	12 18 30.1	-0.2
	baz=285						
D24K	Happy Valley	1.49	254		Pn	12 18 11.6	-0.1
D24K					Pb	12 18 12.0	-0.6
D24K					Sb	12 18 32.2	+0.6
D24K	Happy Valley	1.49	254	IAML		12 18 40.1	
	comp=E,7µm,0.8s						
D24K				IAML		12 18 44.5	
	comp=N,7µm,1.1s						
D24K	Happy Valley	1.49	254	P	Pn	12 18 11.5	-0.1
	baz=72						
D24K				S	Sn	12 18 31.5	+0.4
	baz=72						
D24K				S	Sn	12 18 31.5	+0.4
	baz=72						
E25K	Arctic Village	1.52	191		Pn	12 18 11.5	-0.7
E25K				IAML		12 18 35.5	
	comp=N,7µm,0.9s						
E25K				IAML		12 18 38.1	
	comp=E,5µm,1.0s						
E25K	Arctic Village	1.52	191		Sb	12 18 33.2	+0.7
E25K	Arctic Village	1.52	191	P	Pn	12 18 11.2	-1.0
	baz=9.8,SNR=1000						
E25K				S	Sn	12 18 31.9	-0.2
	baz=9.8						
E25K				S	Sn	12 18 31.9	-0.2
	baz=9.8						
E27K	Coleen River	1.85	139		Pn	12 18 16.9	+0.3
E27K					Sb	12 18 41.8	-0.2
E27K	Coleen River	1.85	139	IAML		12 18 50.2	
	comp=N,3µm,1.2s						
E27K	Coleen River	1.85	139	P	Pn	12 18 17.1	+0.4
	baz=321,SNR=1000						
E27K				S	Sb	12 18 42.0	+0.1
	baz=321						
E27K				S	Sb	12 18 42.0	+0.1
	baz=321						
F26K	Sheenjek River	1.94	172		Pn	12 18 18.5	+0.5
F26K	Sheenjek River	1.94	172	P	Pn	12 18 18.6	+0.6
	baz=352,SNR=1000						
F26K				S	Sb	12 18 45.0	+0.3
	baz=352						
TOLK	Toolik Lake Re	1.96	242		Pn	12 18 18.2	-0.1
TOLK				IAML		12 18 48.9	
	comp=E,4µm,0.7s						
TOLK	Toolik Lake Re	1.96	242		Sb	12 18 45.3	+0.2
TOLK					Sg	12 18 46.9	-0.9
TOLK	Toolik Lake Re	1.96	242	P	Pn	12 18 18.0	-0.2
	baz=59,SNR=546						
TOLK				S	Sn	12 18 43.2	+0.3
	baz=59						
TOLK				S	Sn	12 18 43.2	+0.3
	baz=59						
C23K	Itkillik River	2.03	279		Pn	12 18 19.0	0.0
C23K					Pb	12 18 19.8	-2.0
C23K	Itkillik River	2.03	279	IAML		12 18 54.0	
	comp=E,4µm,0.9s						
C23K				IAML		12 18 56.8	
	comp=N,3µm,1.0s						
C23K	Itkillik River	2.03	279	P	Pn	12 18 18.9	-0.2
	baz=95,SNR=760						
E24K	Your Creek	2.04	222		Pn	12 18 19.9	+0.6
E24K					Pb	12 18 20.4	-1.6
E24K	Your Creek	2.04	222	P	Pn	12 18 19.9	+0.6
	baz=40						
E24K				S	Sn	12 18 46.4	+1.6
	baz=40						
E24K				S	Sn	12 18 46.4	+1.6
	baz=40						
F25K	Christian Rive	2.05	189		Pn	12 18 19.7	+0.2
F25K	Christian Rive	2.05	189	IAML		12 18 52.4	
	comp=N,3µm,0.9s						
F25K	Christian Rive	2.05	189	P	Pn	12 18 19.9	+0.4
	baz=7.9,SNR=1000						
F25K				S	Sn	12 18 46.0	+0.9
	baz=7.9						
E28M	Babbage River	2.15	116		Pn	12 18 21.4	+0.6
E28M					Pb	12 18 21.5	-2.4
E28M	Babbage River	2.15	116	IAML		12 19 03.1	
	comp=N,3µm,1.4s						
E28M	Babbage River	2.15	116	P	Pn	12 18 21.4	+0.6
	baz=299,SNR=510						
E28M				S	Sb	12 18 50.2	-0.4
	baz=299						
D28M	Stokes Point	2.17	95		Pn	12 18 21.9	+1.0
D28M					Pb	12 18 22.4	-1.7
D28M	Stokes Point	2.17	95	P	Pn	12 18 21.7	+0.8
	baz=279						
D28M				Sb	Sg	12 18 53.7	-0.6
	baz=279						
BM01	Burnt Mountain	2.18	177		Pn	12 18 21.6	+0.4
D23K	Nanushuk River	2.18	255		Pn	12 18 21.1	-0.1
D23K	Nanushuk River	2.18	255	IAML		12 19 05.6	
	comp=E,2µm,1.0s						
D23K				IAML		12 19 08.6	
	comp=N,2µm,1.2s						
D23K	Nanushuk River	2.18	255	P	Pn	12 18 21.1	-0.1
	baz=71,SNR=646						
BMAR	Burnt Mountain	2.20	178		Pn	12 18 21.9	+0.4
BM02	Burnt Mountain	2.20	177		Pn	12 18 22.0	+0.6
E23K	Chandalar	2.34	230		Pn	12 18 23.6	+0.2
E23K					Pb	12 18 24.0	-3.1
E23K					Sb	12 18 55.4	-0.7
E23K	Chandalar	2.34	230	P	Pn	12 18 23.5	+0.1
	baz=47,SNR=369						
E23K				Sb	Sb	12 18 56.7	+0.7
	baz=47						
F24K	Squaw Lake	2.39	210		Pn	12 18 24.3	+0.2
F24K					Pb	12 18 24.8	-3.2
F24K					Sn	12 18 55.6	+2.2
F24K	Squaw Lake	2.39	210	P	Pn	12 18 24.3	+0.2
	baz=27,SNR=393						
F24K				S	Sn	12 18 54.9	+1.6
	baz=27						
G26K	Porcupine Rive	2.71	171		Pn	12 18 28.5	+0.2
G26K	Porcupine Rive	2.71	171	IAML		12 19 15.7	
	comp=N,2µm,0.8s						
G26K				IAML		12 19 22.7	
	comp=E,1µm,0.9s						
G26K	Porcupine Rive	2.71	171	P	Pn	12 18 28.4	+0.1
	baz=352,SNR=243						
G26K				S	Sn	12 19 02.8	+1.7
	baz=352						
F28M	Old Crow	2.71	136		Pn	12 18 28.6	+0.1
F28M				IAML		12 19 17.7	
	comp=N,1µm,0.9s						
F28M				IAML		12 19 18.2	
	comp=E,2µm,1.0s						
F28M	Old Crow	2.71	136		Sn	12 19 02.7	+1.4
F28M	Old Crow	2.71	136	P	Pn	12 18 28.6	+0.1
	baz=319,SNR=391						
F28M				S	Sn	12 19 02.6	+1.4
	baz=319						
E29M	Blow River	2.78	113		Pn	12 18 29.5	+0.1
E29M	Blow River	2.78	113	IAML		12 19 20.9	
	comp=E,2µm,0.7s						
E29M	Blow River	2.78	113	P	Pn	12 18 29.6	+0.1
	baz=298						
E29M				S	Sb	12 19 06.3	-2.4
	baz=298						
D22K	Ayikyak River	2.89	259		Pn	12 18 30.9	0.0
D22K	Ayikyak River	2.89	259	IAML		12 19 25.3	
	comp=E,2µm,0.8s						
D22K				IAML		12 19 25.7	
	comp=N,2µm,1.4s						
D22K	Ayikyak River	2.89	259	P	Pn	12 18 30.7	-0.3
	baz=73,SNR=129						
G25K	Bearman Lake	2.90	190		Pn	12 18 31.2	+0.1
G25K	Bearman Lake	2.90	190	P	Pn	12 18 31.2	+0.1
	baz=8.8,SNR=81						
G25K				S	Sn	12 19 07.1	+1.2
	baz=8.8						
E22K	Anaktuvuk Pass	2.94	243		Pn	12 18 31.1	-0.5
E22K	Anaktuvuk Pass	2.94	243		Sn	12 19 08.2	+1.3
E22K	Anaktuvuk Pass	2.94	243	P	Pn	12 18 31.0	-0.5
	baz=57,SNR=165						
B22K	Teshekpuk Lake	3.05	288		Pn	12 18 33.0	0.0
B22K					Pb	12 18 33.9	-5.2
B22K	Teshekpuk Lake	3.05	288	P	Pn	12 18 32.5	-0.5
	baz=101						
G27K	Doyon Strip	3.06	156		Pn	12 18 32.9	-0.4
G27K	Doyon Strip	3.06	156	P	Pn	12 18 32.9	-0.4
	baz=338,SNR=113						
G27K				S	Sn	12 19 11.3	+1.4
	baz=338						
G27K				S	Sn	12 19 11.3	+1.4
	baz=338						
G24K	Hadweenzic Riv	3.09	200		Pn	12 18 33.6	-0.1
G24K	Hadweenzic Riv	3.09	200	IAML		12 19 33.2	
	comp=E,2µm,1.5s						
G24K	Hadweenzic Riv	3.09	200	P	Pn	12 18 33.4	-0.3
	baz=18,SNR=113						
G24K				S	Sn	12 19 11.4	+0.7
	baz=18						
G24K				S	Sn	12 19 11.4	+0.7
	baz=18						
COLD	Coldfoot	3.11	222		Pn	12 18 34.5	+0.5
COLD				IAML		12 19 27.4	
	comp=E,872nm,1.0s						
COLD	Coldfoot	3.11	222	P	Pn	12 18 33.8	-0.1
	baz=38,SNR=40						
B21K	Ikpikpuk River	3.42	275		Pn	12 18 38.7	+0.5
B21K	Ikpikpuk River	3.42	275	IAML		12 19 53.1	
	comp=E,1µm,1.4s						
B21K	Ikpikpuk River	3.42	275	P	Pn	12 18 37.7	-0.6

	baz=86,SNR=122						
B21K				S	Sn	12 19 18.9	+0.1
	baz=86						
F22K	John River	3.43	235		Pn	12 18 38.4	0.0
F22K					Pb	12 18 39.0	-6.7
F22K	John River	3.43	235	P	Pn	12 18 37.6	-0.7
	baz=49,SNR=42						
F22K				Sb	Sb	12 19 29.8	+2.4
	baz=49						
E21K	Killik River	3.49	255		Pn	12 18 38.8	-0.5
E21K	Killik River	3.49	255	IAML		12 19 46.1	
	comp=E,994nm,1.1s						
E21K	Killik River	3.49	255	P	Pn	12 18 38.2	-1.0
	baz=67						
G23K	Bananza Creek	3.50	216		Pn	12 18 39.3	-0.1
G23K					Pn	12 18 39.7	+0.3
G23K	Bananza Creek	3.50	216	IAML		12 19 40.2	
	comp=E,1µm,1.6s						
G23K				IAML		12 19 40.7	
	comp=N,720nm,1.4s						
G23K	Bananza Creek	3.50	216	P	Pn	12 18 39.2	-0.1
	baz=32,SNR=12						
C21K	Knifeblade Rid	3.55	267		Pn	12 18 40.1	+0.1
C21K	Knifeblade Rid	3.55	267	P	Pn	12 18 39.4	-0.6
	baz=79,SNR=62						
H27K	Steamboat Moun	3.62	158		Pn	12 18 41.2	+0.2
H27K	Steamboat Moun	3.62	158	IAML		12 19 47.4	
	comp=E,602nm,0.9s						
H27K	Steamboat Moun	3.62	158	P	Pn	12 18 41.1	+0.1
	baz=341,SNR=123						
G22K	Bettles	3.67	226		Pn	12 18 41.8	+0.1
G22K	Bettles	3.67	226	P	Pn	12 18 41.5	-0.2
	baz=40						
A22K	Sinclair Lake	3.71	297		Pn	12 18 41.9	-0.2
A22K	Sinclair Lake	3.71	297	P	Pn	12 18 41.7	-0.4
	baz=108,SNR=61						
G29M	Pine Creek	3.71	134		Pn	12 18 42.7	+0.5
G29M	Pine Creek	3.71	134	P	Pn	12 18 42.7	+0.5
	baz=319,SNR=208						
G29M				S	Sn	12 19 27.5	+1.6
	baz=319						
F30M	Barrier River	3.87	117		Pn	12 18 45.7	+1.3
F30M	Barrier River	3.87	117	P	Pn	12 18 45.4	+1.0
	baz=305						
F30M				S	Sn	12 19 31.7	+1.8
	baz=305						
H24K	Noodor Dome	3.97	198		Pn	12 18 45.5	-0.3
H24K	Noodor Dome	3.97	198	IAML		12 19 56.3	
	comp=E,566nm,1.4s						
H24K				IAML		12 20 02.4	
	comp=N,576nm,1.0s						
H24K	Noodor Dome	3.97	198	P	Pn	12 18 45.4	-0.3
	baz=16,SNR=61						
H24K				Sb	Sb	12 19 46.6	+3.7
	baz=16						
H24K				Sb	Sb	12 19 46.6	+3.7
	baz=16						
F21K	Alatna River	4.00	237		Pn	12 18 46.6	+0.5
F21K	Alatna River	4.00	237	IAML		12 19 56.5	
	comp=N,610nm,1.0s						
F21K				IAML		12 19 58.4	
	comp=E,590nm,1.4s						
F21K	Alatna River	4.00	237	P	Pn	12 18 46.0	-0.1
	baz=50,SNR=33						
F21K				S	Sn	12 19 33.5	+0.5
	baz=50						
F21K				S	Sn	12 19 33.5	+0.5
	baz=50						
G30M	tAoh Zraii Nji	4.15	126		Pn	12 18 48.7	+0.5
G30M	tAoh Zraii Nji	4.15	126	IAML		12 20 03.3	
	comp=N,470nm,1.1s						
G30M				IAML		12 20 08.1	
	comp=E,486nm,0.9s						
G30M	tAoh Zraii Nji	4.15	126	P	Pn	12 18 48.3	+0.1
	baz=313,SNR=89						
G30M				S	Sn	12 19 37.6	+0.9
	baz=313						
H29M	Whitestone	4.19	141		Pn	12 18 49.4	+0.6
H29M	Whitestone	4.19	141	P	Pn	12 18 49.4	+0.6
	baz=327,SNR=186						
H29M				S	Sn	12 19 39.3	+1.6
	baz=327						
H23K	Yukon River	4.21	207		Pn	12 18 49.2	+0.2
H23K				IAML		12 20 07.6	
	comp=E,630nm,1.0s						
H23K				IAML		12 20 12.3	
	comp=N,538nm,1.0s						
H23K	Yukon River	4.21	207	P	Pn	12 18 49.0	-0.1
	baz=23,SNR=51						
I27K	Kandik River	4.21	162	IAML		12 20 06.4	
	comp=E,548nm,1.2s						
I27K				IAML		12 20 15.9	
	comp=N,542nm,1.5s						
I27K	Kandik River	4.21	162	P	Pn	12 18 49.5	+0.4
	baz=344,SNR=166						
INK	Inuvik	4.28	103	Pn	Pn	12 18 50.6	+0.7
	comp=N,4.7nm,0.3s,baz=315,slow=9.7,SNR=54						
INK				Sn	Sn	12 19 39.3	-0.5
	comp=N,8.9nm,0.3s,baz=38,slow=30,SNR=8.8						
	comp=N,26nm,0.6s						
INK	Inuvik	4.28	103		Pn	12 18 50.0	0.0
INK	Inuvik	4.28	103	P	Pn	12 18 50.1	+0.2
	baz=292,SNR=28						
B20K	Meade River	4.29	281		Pn	12 18 50.5	+0.4
B20K	Meade River	4.29	281	P	Pn	12 18 49.1	-1.0
	baz=90,SNR=38						
D20K	Etivluk River	4.31	263		Pn	12 18 50.2	-0.2
D20K	Etivluk River	4.31	263	IAML		12 20 24.6	
	comp=E,606nm,1.3s						
D20K	Etivluk River	4.31	263	P	Pn	12 18 49.9	-0.5
	baz=73,SNR=282						
A21K	Barrow	4.31	299		Pn	12 18 50.5	+0.1
A21K	Barrow	4.31	299	P	Pn	12 18 49.8	-0.6
	baz=108,SNR=67						
E20K	Nigu River	4.32	257		Pn	12 18 50.6	-0.1
E20K	Nigu River	4.32	257	P	Pn	12 18 49.9	-0.7
	baz=67						
E20K				S	Sn	12 19 39.1	-1.9
	baz=67						
I26K	Coal Creek Min	4.38	171		Pn	12 18 51.5	+0.2
I26K	Coal Creek Min	4.38	171	IAML		12 20 04.1	
	comp=N,507nm,0.8s						
I26K	Coal Creek Min	4.38	171	P	Pn	12 18 51.6	+0.3
	baz=352						
I26K				S	Sn	12 19 44.2	+1.9
	baz=352						
I26K				S	Sn	12 19 44.2	+1.9
	baz=352						
EPYK	Eagle Plains	4.46	133		Pn	12 18 52.6	+0.1
EPYK	Eagle Plains	4.46	133	P	Pn	12 18 52.6	+0.1
	baz=320,SNR=162						
EPYK				S	Sn	12 19 44.4	0.0
	baz=320						
H22K	Ishtalitna Cre	4.49	217		Pn	12 18 53.7	+0.8
H22K				IAML		12 20 19.7	
	comp=N,378nm,1.2s						
H22K	Ishtalitna Cre	4.49	217	P	Pn	12 18 52.7	-0.2
	baz=31,SNR=12						
G21K	Allakaket	4.50	230		Pn	12 18 52.6	-0.5
G21K	Allakaket	4.50	230	IAML		12 20 13.7	
	comp=N,510nm,1.2s						
G21K	Allakaket	4.50	230	P	Pn	12 18 52.6	-0.5
	baz=43,SNR=18						
I28M	Miner Creek	4.58	154	IAML		12 20 17.1	
	comp=N,354nm,1.2s						
I28M	Miner Creek	4.58	154	P	Pn	12 18 54.7	+0.4
	baz=338,SNR=241						
I28M				S	Sn	12 19 48.8	+1.3
	baz=338						
F31M	Tsiigehtchic	4.62	113		Pn	12 18 54.6	-0.1
F31M				IAML		12 20 17.7	
	comp=E,366nm,0.8s						
F31M				IAML		12 20 24.6	
	comp=N,355nm,1.6s						
F31M	Tsiigehtchic	4.62	113	P	Pn	12 18 54.5	-0.1
	baz=303,SNR=33						
POKR	Poker Plat Res	4.63	194		Pn	12 18 55.0	+0.2
POKR				IAML		12 20 17.9	
	comp=E,433nm,1.2s						
POKR				IAML		12 20 21.2	
	comp=N,352nm,1.0s						
POKR	Poker Plat Res	4.63	194	P	Pn	12 18 54.7	-0.1
	baz=11,SNR=28						
POKR				S	Sn	12 19 48.6	+0.1
	baz=11						
POKR				S	Sn	12 19 48.6	+0.1
	baz=11						
G31M	Satah River	4.76	120		Pn	12 18 56.8	+0.2
G31M	Satah River	4.76	120	P	Pn	12 18 56.4	-0.2
	baz=309,SNR=82						
G31M				S	Sn	12 19 53.2	+1.5
	baz=309						
F20K	Avaraart Lake	4.79	243		Pn	12 18 57.4	+0.4
F20K	Avaraart Lake	4.79	243	IAML		12 20 20.6	
	comp=N,298nm,1.0s						
F20K	Avaraart Lake	4.79	243	P	Pn	12 18 56.9	0.0
	baz=53,SNR=146						
I23K	Minto, Yukon-K	4.81	203		Pn	12 18 57.5	+0.1
I23K				IAML		12 20 22.6	
	comp=E,373nm,1.5s						
I23K	Minto, Yukon-K	4.81	203	P	Pn	12 18 57.2	-0.1
	baz=19,SNR=32						
D19K	Kuna River	4.90	263		Pn	12 18 58.9	+0.4
D19K	Kuna River	4.90	263	P	Pn	12 18 58.3	-0.3
	baz=71,SNR=381						
D19K				S	Sn	12 19 53.5	-1.7
	baz=71						
COLA	College	4.90	195		Pn	12 18 58.8	+0.3
COLA	College	4.90	195	P	Pn	12 18 58.6	+0.1
	baz=13						
IL01		4.93	190		Pn	12 18 59.1	+0.2
ILAR	Eielson Array	4.93	190	Pn	Pn	12 18 59.0	+0.1
	comp=E,5.8nm,0.3s,baz=2.8,slow=12,SNR=246						
ILAR				Sn	Sn	12 19 55.4	-0.6
	comp=E,5.7nm,0.3s,baz=6.0,slow=18,SNR=5.4						
ILAR				Lg	Lg	12 20 18.4	
	comp=E,12nm,0.3s,baz=5.8,slow=31,SNR=5.4						
	comp=E,32nm,0.6s						
I29M	Ogilvie Camp,	4.95	147		Pn	12 18 59.3	+0.1
I29M	Ogilvie Camp,	4.95	147	IAML		12 20 22.4	
	comp=E,368nm,1.0s						
I29M				IAML		12 20 27.9	
	comp=N,256nm,1.3s						
I29M	Ogilvie Camp,	4.95	147	P	Pn	12 18 59.4	+0.1
	baz=332,SNR=271						
H21K	Melozitna Rive	5.00	221	IAML		12 20 30.2	
	comp=E,334nm,1.1s						
H21K				IAML		12 20 38.0	
	comp=N,277nm,1.3s						
H21K	Melozitna Rive	5.00	221	P	Pn	12 19 00.3	+0.3
	baz=34,SNR=18						
J25K	Salcha River,	5.03	183		Pn	12 19 00.7	+0.3
J25K	Salcha River,	5.03	183	IAML		12 20 30.9	
	comp=E,222nm,1.4s						
J25K	Salcha River,	5.03	183	P	Pn	12 19 00.6	+0.3
	baz=2.1,SNR=45						
E19K	Redstone River	5.04	250		Pn	12 19 00.1	-0.4
E19K	Redstone River	5.04	250	IAML		12 20 37.4	
	comp=E,297nm,0.9s						
E19K				IAML		12 20 47.0	
	comp=N,366nm,0.8s						
E19K	Redstone River	5.04	250	P	Pn	12 18 59.6	-0.9
	baz=60,SNR=58						
CCB	Clear Creek Bu	5.12	195		Pn	12 19 01.4	-0.2
CCB				IAML		12 20 34.9	
	comp=E,203nm,1.1s						
MLY	Manley	5.14	209		Pn	12 19 02.1	+0.3
MLY				IAML		12 20 39.5	
	comp=E,252nm,1.6s						
MLY	Manley	5.14	209	P	Pn	12 19 02.0	+0.1
	baz=24,SNR=16						
J26L	Joseph Creek	5.16	174	IAML		12 20 31.7	
	comp=E,248nm,1.4s						
J26L	Joseph Creek	5.16	174	P	Pn	12 19 02.6	+0.4
	baz=355,SNR=98						
I21K	Tanana	5.24	215		Pn	12 19 03.5	+0.4
I21K	Tanana	5.24	215	P	Pn	12 19 03.3	+0.2
	baz=29,SNR=21						
C19K	Lookout Ridge	5.25	271		Pn	12 19 03.3	0.0
C19K	Lookout Ridge	5.25	271	IAML		12 21 00.3	
	comp=N,310nm,1.5s						
C19K				IAML		12 21 11.1	
	comp=E,274nm,1.4s						
C19K	Lookout Ridge	5.25	271	P	Pn	12 19 02.9	-0.4
	baz=78,SNR=62						
HDA	Harding Lake	5.29	190		Pn	12 19 04.2	+0.3
HDA				IAML		12 20 33.5	
	comp=E,264nm,0.9s						
HDA				IAML		12 20 34.1	
	comp=N,214nm,1.2s						
HDA	Harding Lake	5.29	190	P	Pn	12 19 03.9	-0.1
	baz=8.1,SNR=41						
NEA2	Nenana	5.31	200		Pn	12 19 03.9	-0.2
NEA2	Nenana	5.31	200	P	Pn	12 19 03.9	-0.2
	baz=16,SNR=24						
WRH	Wood River Hil	5.32	195		Pn	12 19 04.3	0.0
WRH	Wood River Hil	5.32	195	IAML		12 20 34.5	
	comp=N,215nm,1.2s						
WRH				IAML		12 20 41.6	
	comp=E,214nm,1.1s						
I30M	Mount Dempster	5.48	140		Pn	12 19 06.7	+0.2
I30M	Mount Dempster	5.48	140	P	Pn	12 19 06.5	-0.1
	baz=327,SNR=253						
H31M	Peel River	5.52	129		Pn	12 19 06.7	-0.3
H31M	Peel River	5.52	129	P	Pn	12 19 06.6	-0.5
	baz=318,SNR=24						
A19K	Wainwright	5.63	284		Pn	12 19 08.7	+0.2
A19K	Wainwright	5.63	284	P	Pn	12 19 08.1	-0.4
	baz=89						
H20K	Anotleneega Mo	5.65	228		Pn	12 19 08.5	-0.3
H20K	Anotleneega Mo	5.65	228	P	Pn	12 19 08.0	-0.8
	baz=39,SNR=17						
SCRK	Sand Creek	5.67	176		Pn	12 19 09.6	+0.3
SCRK	Sand Creek	5.67	176	P	Pn	12 19 10.1	+0.9
	baz=357,SNR=67						
K27K	Chicken	5.71	168		Pn	12 19 10.2	+0.5
K27K	Chicken	5.71	168	P	Pn	12 19 10.3	+0.6
	baz=350						
G19K	Purcell Mounta	5.79	239		Pn	12 19 10.1	-0.6
G19K	Purcell Mounta	5.79	239	P	Pn	12 19 10.1	-0.6
	baz=48						
J29N	Klondike Camp	5.79	150		Pn	12 19 11.2	+0.4
J29N	Klondike Camp	5.79	150	P	Pn	12 19 11.3	+0.5
	baz=336,SNR=131						
K24K	Donnelly Dome	5.85	184		Pn	12 19 12.1	+0.5
K24K	Donnelly Dome	5.85	184	P	Pn	12 19 12.1	+0.5
	baz=3.2,SNR=60						
RIDG	Independent Ri	5.90	180	P	Pn	12 19 13.1	+0.7
	baz=360						
C18K	Utukok River	5.93	268		Pn	12 19 12.3	-0.4
C18K	Utukok River	5.93	268	P	Pn	12 19 12.0	-0.6
	baz=74,SNR=129						
B18K	Kokolik River	5.97	276		Pn	12 19 12.4	-0.8
B18K	Kokolik River	5.97	276	P	Pn	12 19 12.1	-1.1
	baz=80,SNR=14						
DAWY	Dawson	5.97	156		Pn	12 19 13.3	+0.1
DAWY	Dawson	5.97	156	P	Pn	12 19 13.8	+0.6
	baz=341,SNR=178						
DOT	Dot Lake	6.00	177		Pn	12 19 14.1	+0.5
BPAW	Bear Paw Mtn.	6.04	207		Pn	12 19 14.4	+0.2
BPAW	Bear Paw Mtn.	6.04	207	P	Pn	12 19 14.0	-0.2
	baz=21,SNR=12						
H19K	Roundabout Mou	6.04	233		Pn	12 19 14.1	-0.1
H19K	Roundabout Mou	6.04	233	P	Pn	12 19 14.1	-0.1
	baz=42						
J30M	Hart River	6.04	143		Pn	12 19 14.7	+0.4
J30M	Hart River	6.04	143	P	Pn	12 19 14.5	+0.1
	baz=330,SNR=174						
I20K	Naaghedeneel	6.12	222	P	Pn	12 19 14.5	-0.6
	baz=34						
MCK	McKinley	6.13	197	P	Pn	12 19 15.5	+0.1
	baz=14,SNR=27						
E18K	Tukpahlearik C	6.19	257	P	Pn	12 19 16.2	0.0
	baz=62,SNR=215						
F18K	Selawik	6.31	248		Pn	12 19 17.7	-0.1
F18K	Selawik	6.31	248	P	Pn	12 19 17.4	-0.4
	baz=55,SNR=134						
G18K	Tagagawik	6.43	241		Pn	12 19 19.6	+0.1
G18K	Tagagawik	6.43	241	P	Pn	12 19 19.6	+0.1
	baz=49						
RND	Reindeer	6.44	196		Pn	12 19 19.9	+0.2
CHUM	Lake Minchumin	6.47	211		Pn	12 19 20.1	+0.1
CHUM	Lake Minchumin	6.47	211	P	Pn	12 19 20.3	+0.2
	baz=24,SNR=19						
K29M	Barlow Dome	6.47	150	P	Pn	12 19 20.9	+0.6
	baz=336,SNR=137						
TRF	Thorofare Moun	6.56	202		Pn	12 19 21.5	0.0
TRF	Thorofare Moun	6.56	202	P	Pn	12 19 21.8	+0.3
	baz=17,SNR=12						
J20K	Nowinta River	6.57	218	P	Pn	12 19 21.4	0.0
	baz=30,SNR=7.7						
L26K	Log Cabin Wild	6.64	174	P	Pn	12 19 23.2	+0.7
	baz=355,SNR=105						
DHY	Denali Highway	6.65	190	P	Pn	12 19 23.2	+0.6
	baz=7.7,SNR=29						
C17K	DeLong Mountai	6.67	269		Pn	12 19 21.5	-1.4
C17K	DeLong Mountai	6.67	269	P	Pn	12 19 21.4	-1.4
	baz=72						
PAX	Paxson	6.68	183	P	Pn	12 19 23.8	+0.7
	baz=1.9,SNR=42						
BCAR	Beaver Creek A	6.69	168		Pn	12 19 23.4	+0.3
L27K	Beaver Creek,	6.69	168	P	Pn	12 19 23.5	+0.4
	baz=351,SNR=56						
MENT	Mentasta	6.72	176		Pn	12 19 24.2	+0.7
RDOG	Red Dog Mine	6.72	265		Pn	12 19 22.4	-1.2
RDOG	Red Dog Mine	6.72	265	P	Pn	12 19 22.5	-1.1
	baz=69,SNR=96						
GCSA	Galena City Sc	6.76	230	P	Pn	12 19 23.6	-0.4
	baz=39						
E17K	Hotham Inlet	6.78	256		Pn	12 19 23.5	-0.7
E17K	Hotham Inlet	6.78	256	P	Pn	12 19 23.3	-0.9
	baz=61,SNR=108						
A36M	Sachs Harbour	6.87	61		Pn	12 19 24.7	-0.7
A36M	Sachs Harbour	6.87	61	P	Pn	12 19 24.7	-0.7
	baz=259,SNR=144						
H18K	Honhosa River	6.87	236		Pn	12 19 25.0	-0.5
H18K	Honhosa River	6.87	236	P	Pn	12 19 24.7	-0.8
	baz=44						
D17K	Noatak River	6.93	263		Pn	12 19 25.1	-1.2
D17K	Noatak River	6.93	263	P	Pn	12 19 24.7	-1.6
	baz=66,SNR=79						
WAT1	Susitna Watana	6.98	194		Pn	12 19 27.9	+0.8
WAT1	Susitna Watana	6.98	194	P	Pn	12 19 27.0	-0.1
	baz=11						
WAT7	Susitna Watana	7.00	195		Pn	12 19 28.4	+0.9
MAYO	Mayo, Yukon	7.00	145		Pn	12 19 28.6	+1.2
MAYO	Mayo, Yukon	7.00	145	P	Pn	12 19 27.8	+0.4
	baz=333,SNR=84						
L29M	L29M	7.06	154		Pn	12 19 28.5	+0.3
L29M	L29M	7.06	154	P	Pn	12 19 28.8	+0.5
	baz=340,SNR=46						
J19K	Poorman	7.06	222	P	Pn	12 19 28.0	-0.1
	baz=32						
WAT6	Susitna Watana	7.16	191		Pn	12 19 30.5	+0.8
WAT6	Susitna Watana	7.16	191	P	Pn	12 19 30.4	+0.8
	baz=8.2,SNR=12						
HARP	HAARP	7.25	181		Pn	12 19 31.2	+0.5
HARP	HAARP	7.25	181	P	Pn	12 19 30.9	+0.2
	baz=0.8,SNR=7.7						
M26K	Nabesna, AK	7.28	173	P	Pn	12 19 32.0	+0.7
	baz=355,SNR=26						
C36M	Paulatuk	7.29	82		Pn	12 19 30.1	-1.1
G17K	Kiwalik Mounta	7.32	243		Pn	12 19 31.4	-0.2
G17K	Kiwalik Mounta	7.32	243	P	Pn	12 19 31.2	-0.4
	baz=49,SNR=55						
PPLA	Purkeypile	7.37	207		Pn	12 19 32.8	+0.4
PPLA	Purkeypile	7.37	207	P	Pn	12 19 33.0	+0.6
	baz=21,SNR=10						
M27K	Edge Creek, AK	7.39	169		Pn	12 19 33.3	+0.6
M27K	Edge Creek, AK	7.39	169	P	Pn	12 19 33.6	+0.8
	baz=352						
BVCY	Beaver Creek	7.41	166	P	Pn	12 19 34.1	+1.1
	baz=349,SNR=82						
H17K	Granite Mounta	7.48	238		Pn	12 19 34.5	+0.6
H17K	Granite Mounta	7.48	238	P	Pn	12 19 33.8	-0.1
	baz=45						
C16K	Lisburne Hills	7.50	269		Pn	12 19 32.6	-1.5
C16K	Lisburne Hills	7.50	269	P	Pn	12 19 33.0	-1.1
	baz=71,SNR=48						
M24K	Tolsona, Glenn	7.56	185	P	Pn	12 19 35.5	+0.4
	baz=3.5						
M29M	Somme Creek	7.65	157		Pn	12 19 36.8	+0.5
M29M	Somme Creek	7.65	157	P	Pn	12 19 37.0	+0.7
	baz=343,SNR=146						
WACK	Wrangell Chich	7.66	178		Pn	12 19 37.3	+0.6
WASW	Wrangell South	7.72	178		Pn	12 19 38.6	+1.1
J18K	Innoko River	7.77	223	P	Pn	12 19 38.6	+0.7
	baz=32						
M30M	Minto, Yukon	7.78	151		Pn	12 19 38.0	0.0
M30M	Minto, Yukon	7.78	151	P	Pn	12 19 38.0	0.0
	baz=338,SNR=20						
SCM	Sheep Creek Mo	7.88	189		Pn	12 19 39.1	-0.4
SCM	Sheep Creek Mo	7.88	189	P	Pn	12 19 39.4	-0.1
	baz=6.4						
G16K	Koyuk River	7.92	246		Pn	12 19 39.3	-0.7
G16K	Koyuk River	7.92	246	P	Pn	12 19 38.8	-1.1
	baz=50						
M23K	Glacier View	7.95	190	P	Pn	12 19 41.1	+0.9
	baz=7.3,SNR=8.5						
N25K	Chitina, Valde	8.04	179	P	Pn	12 19 42.5	+0.8
	baz=359						
YUK3	Moose Creek	8.07	165	P	Pn	12 19 43.2	+0.9
	baz=349,SNR=34						
GLB	Gilahina Butte	8.22	177		Pn	12 19 45.9	+1.8
MCARA	McCarthy VSAT	8.30	174		Pn	12 19 47.2	+2.0
MCARA	McCarthy VSAT	8.30	174	P	Pn	12 19 45.0	-0.2
	baz=356						
KNK	Knik Glacier	8.37	192	P	Pn	12 19 45.2	-1.0
	baz=8.8,SNR=7.3						
H16K	Elim	8.40	242		Pn	12 19 46.0	-0.5
H16K	Elim	8.40	242	P	Pn	12 19 45.4	-1.1
	baz=46,SNR=12						
J17K	VABM Dome	8.43	229		Pn	12 19 46.1	-0.8
J17K	VABM Dome	8.43	229	P	Pn	12 19 46.0	-0.8
	baz=36						
M20K	Styx River	8.47	208	P	Pn	12 19 46.7	-0.9
	baz=20						
F15K	North Star Dit	8.48	252		Pn	12 19 45.9	-1.7
F15K	North Star Dit	8.48	252	P	Pn	12 19 45.7	-1.9
	baz=54,SNR=11						
I17K	Unalakleet	8.49	235		Pn	12 19 47.5	-0.1
I17K	Unalakleet	8.49	235	P	Pn	12 19 46.9	-0.8
	baz=41,SNR=6.6						
L19K	White Mountain	8.50	214	P	Pn	12 19 47.5	-0.5
	baz=24						
PTPK	Patty Peak	8.52	172		Pn	12 19 48.6	+0.3
SUA	Susitna One	8.54	199	P	Pn	12 19 47.9	-0.6
	baz=14						
M31M	Drury Creek, Y	8.56	145	P	Pn	12 19 48.5	-0.2
	baz=334,SNR=13						
YUK8	Steele Glacier	8.62	163		Pn	12 19 51.1	+1.3
YUK8	Steele Glacier	8.62	163	P	Pn	12 19 50.0	+0.2
	baz=348,SNR=16						
BMRM	Bremner River	8.68	179		Pn	12 19 52.4	+1.9
BMRM	Bremner River	8.68	179	P	Pn	12 19 51.4	+0.9
	baz=359						
YUK4	Talbot Arm	8.69	160	P	Pn	12 19 50.1	-0.5
	baz=345,SNR=35						
BARN	Barnard Glacie	8.69	170		Pn	12 19 52.4	+1.7
FARO	Faro, Yukon	8.75	142	P	Pn	12 19 51.3	-0.1
	baz=332,SNR=30						
N30M	Aishikik Lake	8.79	155		Pn	12 19 52.4	+0.6
N30M	Aishikik Lake	8.79	155	P	Pn	12 19 52.3	+0.5
	baz=342,SNR=76						
KIAG	Kiagna River	8.79	172		Pn	12 19 54.1	+2.1
K17K	Iditarod	8.79	225		Pn	12 19 52.5	+0.7
K17K	Iditarod	8.79	225	P	Pn	12 19 50.0	-1.9
	baz=32						
RC01	Rabbit Creek A	8.80	196	P	Pn	12 19 52.6	+0.6
	baz=11						
CTG	Chitna Glacier	8.81	169	P	Pn	12 19 52.6	+0.4
	baz=352,SNR=25						
CTGM	Chitina Glacie	8.81	169		Pn	12 19 53.9	+1.7
L18K	Granite Mounta	8.85	219		Pn	12 19 54.0	+1.4
L18K	Granite Mounta	8.85	219	P	Pn	12 19 52.5	-0.1
	baz=28						
SPNN	North Nagishla	8.89	205		Pn	12 19 54.1	+0.7
CRQM	Cirque	8.92	175		Pn	12 19 55.7	+1.8
CRQE	Cirque	8.93	175	P	Pn	12 19 54.3	+0.4
	baz=356,SNR=10						
J16K	Anvik River	8.93	232		Pn	12 19 53.9	+0.2
J16K	Anvik River	8.93	232	P	Pn	12 19 53.7	0.0
	baz=38,SNR=11						
TGL	Tana Glacier	8.94	174		Pn	12 19 56.6	+2.6
N31M	Braeburn, Yuko	8.97	151	P	Pn	12 19 55.4	+1.1
	baz=339,SNR=27						
LOGN	Logan Glacier	8.97	168		Pn	12 19 57.0	+2.5
SPCR	Spurr Chakacha	8.98	203	P	Pn	12 19 55.4	+0.9
	baz=17						
N20K	Mount Spurr	8.98	203	P	Pn	12 19 54.4	-0.2
	baz=17						
YUK5	Granite Creek	8.99	158		Pn	12 19 56.0	+1.2
GRNC	Granite Creek	9.01	170		Pn	12 19 57.5	+2.4
O28M	Mount Upton	9.09	165		Pn	12 19 58.3	+2.1
O28M	Mount Upton	9.09	165	P	Pn	12 19 55.9	-0.2
	baz=350						
YUK6	Outpost Mounta	9.11	160	P	Pn	12 19 57.9	+1.5
	baz=345,SNR=16						
EYAK	Cordova Ski Ar	9.11	183	P	Pn	12 19 56.6	+0.4

	baz=2.0						
CAPN	Captain Cook N	9.27	200	P	Pn	12 19 58.3	0.0
	baz=14						
L17K	Donlin	9.29	223		Pn	12 19 58.9	+0.2
L17K	Donlin	9.29	223	P	Pn	12 19 59.0	+0.2
	baz=30						
M18K	Stony River	9.32	214	P	Pn	12 19 59.2	+0.1
	baz=24						
HYT	Haines Junctio	9.34	157		Pn	12 20 00.8	+1.4
HYT	Haines Junctio	9.34	157	P	Pn	12 19 59.0	-0.5
	baz=344,SNR=30						
TABL	Table Mountain	9.34	169		Pn	12 20 02.5	+2.9
YAH	Yahtse	9.38	171		Pn	12 20 02.7	+2.6
O22K	Cooper Landing	9.40	195	P	Pn	12 19 60.0	-0.1
	baz=11						
ANM	Nome	9.44	248		Pn	12 20 00.7	-0.1
ANM	Nome	9.44	248	P	Pn	12 20 00.1	-0.7
	baz=49						
O30N	Mendenhall	9.59	153		Pn	12 20 03.1	+0.2
O30N	Mendenhall	9.59	153	P	Pn	12 20 02.9	0.0
	baz=341,SNR=14						
SAMH	Samovar Hills	9.68	168		Pn	12 20 04.8	+0.8
N19K	Bonanza Creek	9.71	209	P	Pn	12 20 03.7	-0.7
	baz=20						
O29M	Mount Kennedy	9.71	161		Pn	12 20 07.1	+2.5
O29M	Mount Kennedy	9.71	161	P	Pn	12 20 05.0	+0.5
	baz=347,SNR=11						
CHX	Chaix Hills	9.72	169		Pn	12 20 06.8	+2.2
M17K	Holitna River	9.74	218		Pn	12 20 05.3	+0.4
M17K	Holitna River	9.74	218	P	Pn	12 20 04.5	-0.4
	baz=27						
PCA	Pinnacle	9.75	166		Pn	12 20 07.0	+2.0
PINM	Pinnacle	9.75	166	P	Pn	12 20 05.6	+0.5
	baz=350,SNR=10						
N32M	Quiet Lake	9.78	144	P	Pn	12 20 06.0	+0.5
	baz=335						
WHY	Whitehorse	9.90	150	P	Pn	12 20 07.6	+0.4
	baz=339,SNR=6.5						
L16K	Owhat River	9.94	224	P	Pn	12 20 07.4	-0.1
	baz=31						
K15K	Wolf Creek Mou	9.98	231	P	Pn	12 20 08.4	+0.3
	baz=36						
N18K	Kilae Creek	10.08	213	P	Pn	12 20 09.1	-0.4
	baz=23						
P30M	Million Dollar	10.09	157	P	Pn	12 20 10.4	+0.7
	baz=344,SNR=8.7						
O20K	Slope Mountain	10.12	203	P	Pn	12 20 09.5	-0.6
	baz=16						
J14K	Nanvaranak Lak	10.19	237		Pn	12 20 11.1	+0.2
J14K	Nanvaranak Lak	10.19	237	P	Pn	12 20 09.9	-1.0
	baz=40,SNR=14						
BRSE	Bradley Lake S	10.22	197	P	Pn	12 20 11.8	+0.3
	baz=12						
O19K	Port Alsworth	10.26	208	P	Pn	12 20 11.5	-0.4
	baz=19						
HOM	Homer	10.40	199	P	Pn	12 20 13.9	0.0
	baz=13						
M16K	Timber Creek	10.42	221	P	Pn	12 20 12.2	-1.9
	baz=28						
P29M	Windy Craggy	10.46	160		Pn	12 20 17.3	+2.5
P29M	Windy Craggy	10.46	160	P	Pn	12 20 15.5	+0.7
	baz=346						
N17K	Nushagak Hills	10.48	216	P	Pn	12 20 15.2	+0.2
	baz=24						
L15K	Ungalak Mounta	10.48	229	P	Pn	12 20 13.4	-1.6
	baz=34						
P19K	Oil Pt	10.62	204	P	Pn	12 20 16.7	-0.2
	baz=16						
WRGLY	Wrigley	10.63	117	P	Pn	12 20 16.4	-0.6
	baz=316,SNR=30						
P33M	Teslin, Yukon	10.70	146		Pn	12 20 18.1	+0.1
P33M	Teslin, Yukon	10.70	146	P	Pn	12 20 17.4	-0.6
	baz=337						
O18K	Koktuh Hills	10.73	209	P	Pn	12 20 17.2	-1.2
	baz=20						
PLBC	Pleasant Camp	10.81	156	P	Pn	12 20 19.2	-0.3
	baz=344,SNR=12						
N16K	Nishlik Lake	10.86	219	P	Pn	12 20 19.3	-1.0
	baz=27						
SKAG	Skagway	10.96	154		Pn	12 20 23.1	+1.6
SKAG	Skagway	10.96	154	P	Pn	12 20 21.2	-0.3
	baz=342						
P32M	Atlin	11.11	149	P	Pn	12 20 22.5	-1.1
	baz=339						
K13K	Kusilvak Mount	11.15	236		Pn	12 20 24.5	+0.4
K13K	Kusilvak Mount	11.15	236	P	Pn	12 20 21.9	-2.2
	baz=38						
P18K	Big Mountain,	11.17	208	P	Pn	12 20 22.5	-2.0
	baz=19						
M14K	Bethel	11.39	227	P	Pn	12 20 26.0	-1.3
	baz=32						
P17K	Kvichak River	11.57	211	P	Pn	12 20 27.6	-2.2
	baz=21						
WTLY	Watson Lake, Y	11.67	137	P	Pn	12 20 31.6	+0.4
	baz=331						
R33M	Jennings River	11.82	143	P	Pn	12 20 33.8	+0.3
	baz=336						
Q18K	Katmai Hardscr	11.85	207	P	Pn	12 20 33.2	-0.6
	baz=18						
BESE	Bessie Mountai	11.88	154		Pn	12 20 35.9	+1.8
Q32M	Nakina River	11.96	147	P	Pn	12 20 35.4	-0.1
	baz=338,SNR=9.3						
GAMB	Gambell	12.05	254	P	Pn	12 20 34.2	-2.2
	baz=50						
Q16K	King Salmon	12.10	211	P	Pn	12 20 36.7	-0.4
	baz=20						
S31K	Pelican	12.28	158	P	Pn	12 20 39.1	-0.4
	baz=346						
KDAK	Kodiak Island	12.35	200	LR	LR	12 26 07.3	
	comp=E,217nm,18.2s,baz=25,slow=40						
M11K	Mekoryuk	12.85	235	P	Pn	12 20 47.1	-0.2
	baz=35						
KOTAN	Kotaneelee Air	12.89	127	P	Pn	12 20 48.4	+0.6
	baz=326						
DLBC	Dease Lake	12.90	143	Pn	Pn	12 20 48.3	+0.2
	comp=E,1.1nm,0.3s,baz=343,slow=11,SNR=18						
DLBC				LR	LR	12 26 06.3	
	comp=E,297nm,20.5s,baz=286,slow=39						
	comp=E,11nm,1.0s						
DLBC	Dease Lake	12.90	143	P	Pn	12 20 48.8	+0.7
	baz=336						
LIRD	Liard River Hi	12.95	133	P	Pn	12 20 49.3	+0.6
	baz=330						
S34M	Telegraph Cree	13.16	146	P	Pn	12 20 52.8	+1.2
	baz=338,SNR=7.7						
SIT	Sitka	13.28	157	P	Pn	12 20 55.0	+1.8
	baz=345						
YKAW3	Yellowknife Wh	14.00	105		Pn	12 20 59.2	-3.7
YKA	Yellowknife Ar	14.04	106	Pn	Pn	12 20 59.9	-3.7
	comp=E,1.2nm,0.3s,baz=314,slow=14,SNR=27						
YKA				Sn	Sn	12 23 24.9	-14
	comp=E,1.6nm,0.3s,baz=316,slow=22,SNR=8.7						
YKA				LR	LR	12 26 35.4	
	comp=E,175nm,19.3s,baz=344,slow=38						
	comp=E,6.5nm,0.7s						
YKA	Yellowknife Ar	14.04	106		Pn	12 21 00.1	-3.5
YKAW1	Yellowknife Wh	14.09	106		Pn	12 21 00.3	-4.0
T35M	Bob Quinn	14.21	146	P	Pn	12 21 05.5	-0.3
	baz=339						
RES	Resolute Bay	15.66	49	Pn	Pn	12 21 22.1	-3.1
	comp=E,1.0nm,0.3s,baz=245,slow=7.8,SNR=14						
RES				Sn	Sn	12 24 04.9	-14
	comp=E,0.5nm,0.3s,baz=162,slow=20,SNR=2.8						
RES				LR	LR	12 30 18.1	
	comp=E,150nm,18.6s,baz=0.5,slow=48						
RES	Resolute Bay	15.66	49		Pn	12 21 23.1	-2.2
SDPT	Sand Point	15.95	214	P	Pn	12 21 28.7	-0.3
	baz=20						
CHNA	Chernabura Isl	16.27	212	P	Pn	12 21 32.7	-0.4
	baz=19						
SPIA	Saint Paul Isl	16.69	234	P	Pn	12 21 37.2	-1.3
	baz=32						
P08K	Saint George I	16.99	232	P	Pn	12 21 40.1	-2.1
	baz=30						
FALS	False Pass	17.02	219	P	Pn	12 21 41.0	-1.7
	baz=22						
BILL	Bilibino	17.36	288		Pn	12 21 45.6	-1.2
UNV	Unalaska Valle	18.66	223	P	P	12 22 01.0	-1.6
	baz=24						
BBB	Bella Bella	19.15	147	LR	LR	12 28 56.1	
	comp=E,116nm,21.5s,baz=346,slow=35						
BLKN	Baker Lake	19.35	82		P	12 22 07.4	-2.6
NIKH	Nikolski High	20.04	226	P	P	12 22 16.4	-1.3
	baz=25						
POIN	Pond Inlet	20.79	51		P	12 22 25.4	-0.2
POIN				IAmb	IAmb	12 22 40.2	
	comp=Z,46nm,1.5s						
ILON	Igloolik, Nuna	21.22	61	P	P	12 22 29.4	-1.0
TULEG	Thule	21.50	38		P	12 22 33.5	+0.2
TULEG				IAmb	IAmb	12 22 54.5	
	comp=Z,29nm,1.5s						
FCC	Fort Churchill	23.80	91	IAmb	IAmb	12 23 07.5	
	comp=Z,17nm,1.2s						
FFC	Flin Flon	24.23	106	P	P	12 23 01.8	+0.4
B08A	Colville Reser	24.66	137	IAmb	IAmb	12 23 07.9	
	comp=Z,10nm,0.9s						
NEW	Newport	25.30	133	LR	LR	12 33 28.8	
	comp=Z,187nm,19.4s,baz=334,slow=37						
NEW	Newport	25.30	133	IAmb	IAmb	12 23 14.0	
	comp=Z,8.9nm,1.1s						
LTY	Liberty	25.38	139	IAmb	IAmb	12 23 14.2	
	comp=Z,10.0nm,0.8s						
D08A	Wollman Farm,	25.98	137	IAmb	IAmb	12 23 19.2	
	comp=Z,7.7nm,0.9s						
MXC	Moxie City	26.11	139	P	P	12 23 17.4	-1.2
MXC				IAmb	IAmb	12 23 20.9	
	comp=Z,9.5nm,0.7s						
E07A	Sunnyside	26.22	139	IAmb	IAmb	12 23 22.2	
	comp=Z,10.0nm,0.8s						
TIXI	Tiksi	26.43	315		P	12 23 21.9	+0.8
E09A	Wood Farm, Sta	26.67	136	IAmb	IAmb	12 23 25.8	
	comp=Z,8.1nm,0.9s						
MSO	Missoula	27.45	130	IAmb	IAmb	12 23 33.1	
	comp=Z,15nm,1.1s						
EGMT	Eagleton	27.54	123	IAmb	IAmb	12 23 34.0	
	comp=Z,11nm,0.8s						
G08A	Pilot Rock	27.63	138	IAmb	IAmb	12 23 38.4	
	comp=Z,12nm,1.3s						
MA2	Magadan	27.96	282	LR	LR	12 36 10.6	
	comp=Z,94nm,19.5s,baz=59,slow=40						
I07A	Izee	28.65	140	IAmb	IAmb	12 23 44.5	
	comp=Z,5.6nm,0.9s						
FRB	Frobisher Bay	28.86	64	LR	LR	12 35 40.4	
	comp=Z,278nm,18.3s,baz=299,slow=37						
J04A	Umpqua Nationa	28.89	144	IAmb	IAmb	12 23 47.4	
	comp=Z,8.1nm,0.7s						
BCYI	Bear Canyon	29.93	131	IAmb	IAmb	12 23 55.6	
	comp=Z,5.1nm,0.7s						
YNE	Yellowstone No	30.21	126	IAmb	IAmb	12 24 01.6	
	comp=Z,4.4nm,0.7s						
YBH	Yreka Blue Hor	30.22	146	LR	LR	12 36 32.9	
	comp=Z,6.9nm,18.5s,baz=311,slow=37						
PETK	Petropavlovsk-	30.59	267	LR	LR	12 36 45.0	
	comp=Z,102nm,21.0s,baz=38,slow=37						
LOHW	Long Hollow	31.33	128	IAmb	IAmb	12 24 08.7	
	comp=Z,5.4nm,0.7s						
SFJD	Kangerlussuaq	31.66	48	LR	LR	12 39 28.5	
	comp=Z,95nm,18.3s,baz=44,slow=41						
SPITS	Spitsbergen Ar	32.00	7	P	P	12 24 11.6	+1.0
	comp=Z,16nm,1.1s,baz=350,slow=7.5,SNR=2.6						
	comp=Z,16nm,1.1s						
PDAR	Pinedale Array	32.40	127	P	P	12 24 16.6	+1.9
	comp=Z,4.9nm,0.6s,baz=7.7,slow=5.2,SNR=63						
PDAR				LR	LR	12 38 53.6	
	comp=Z,96nm,19.6s,baz=344,slow=39						
	comp=Z,4.9nm,0.6s						
PDAR	Pinedale Array	32.40	127		P	12 24 15.9	+1.2
BEKR	Beckworth	32.49	144	IAmb	IAmb	12 24 18.4	
	comp=Z,4.4nm,0.7s						
ELK	Elko	32.81	136	LR	LR	12 37 16.6	
	comp=Z,83nm,20.8s,baz=3.0,slow=36						
PAHR	Pah Rah Range	32.85	142	IAmb	IAmb	12 24 21.4	
	comp=Z,3.8nm,0.7s						
HWUT	Hardware Ranch	32.93	131	IAmb	IAmb	12 24 22.3	
	comp=Z,6.9nm,0.8s						
YAK	Yakutsk	32.97	300	LR	LR	12 40 59.6	
	comp=Z,72nm,18.2s,baz=67,slow=42						
DUG	Dugway, Tooele	33.93	133	IAmb	IAmb	12 24 31.5	
	comp=Z,6.2nm,0.9s						
BSUT	Blindstream Ca	34.15	130		P	12 24 30.9	+0.7
BSUT				IAmb	IAmb	12 24 33.2	
	comp=Z,8.4nm,1.0s						
NVAR	Mina Array Bea	34.31	142	P	P	12 24 34.1	+2.8
	comp=Z,3.0nm,0.6s,baz=340,slow=7.4,SNR=31						
NVAR				LR	LR	12 39 52.4	
	comp=Z,112nm,20.9s,baz=354,slow=39						
	comp=Z,3.0nm,0.6s						
NVAR	Mina Array Bea	34.31	142	P	P	12 24 32.6	+1.2
NV11	Mina Array Sit	34.34	141	IAmb	IAmb	12 24 34.5	
	comp=Z,2.8nm,0.7s						
RDMU	Red Mountain	34.44	129	IAmb	IAmb	12 24 37.6	
	comp=Z,5.5nm,0.8s						
ECSD	EROS Data Cent	35.47	111	P	P	12 24 42.1	+1.1
ECSD				IAmb	IAmb	12 25 22.9	
	comp=Z,8.4nm,1.2s						
SRU	San Rafael Swe	35.55	131	IAmb	IAmb	12 25 01.7	
	comp=Z,4.5nm,0.6s						
SCHQ	Schefferville	36.28	73	LR	LR	12 40 04.0	
	comp=Z,266nm,18.4s,baz=58,slow=37						
CCUT	Cedar City	36.30	136	IAmb	IAmb	12 24 51.8	
	comp=Z,4.3nm,0.7s						
PV23	Carpenter Ridg	36.57	130	IAmb	IAmb	12 24 53.3	
	comp=Z,7.8nm,0.9s						
PV20	West Nyswonger	36.69	130	IAmb	IAmb	12 24 56.9	
	comp=Z,11nm,1.0s						
PV16	Nyswonger Mesa	36.73	130	IAmb	IAmb	12 24 54.6	
	comp=Z,6.4nm,1.0s						
PV18	Skein Mesa, Pa	36.79	130	IAmb	IAmb	12 24 55.1	
	comp=Z,12nm,1.0s						
PV02	Paradox Valley	36.87	129	IAmb	IAmb	12 24 57.1	
	comp=Z,5.4nm,0.8s						
NRIK	Noril'sk	36.90	332	P	P	12 24 55.1	+2.1
	comp=Z,2.1nm,0.4s,baz=38,slow=7.7,SNR=8.6						
NRIK				LR	LR	12 41 59.9	
	comp=Z,87nm,19.1s,baz=356,slow=40						
	comp=Z,2.1nm,0.4s						
PV05	Paradox Valley	36.90	130	IAmb	IAmb	12 24 56.0	
	comp=Z,8.8nm,1.0s						
ISA	Isabella, Lake	36.94	143	IAmb	IAmb	12 24 56.7	
	comp=Z,5.0nm,0.8s						
KSCO	Kaye Shedlock'	37.87	122	IAmb	IAmb	12 25 04.3	
	comp=Z,8.4nm,0.9s						
JFWS	Jewell Farm	38.31	105	P	P	12 25 06.2	+1.0
L40A	Anamosa	38.74	107	IAmb	IAmb	12 25 10.4	
	comp=Z,10.0nm,0.9s						
PFO	Pinyon Flats O	39.34	141	LR	LR	12 42 49.6	
	comp=Z,131nm,20.0s,baz=358,slow=38						
N41A	Harden Midland	40.08	107	IAmb	IAmb	12 25 21.3	
	comp=Z,12nm,1.0s						
P38A	Dawn	40.17	111	IAmb	IAmb	12 25 25.3	
	comp=Z,5.9nm,0.7s						
SADO	Sadowa	40.52	93	LR	LR	12 42 23.3	
	comp=Z,178nm,18.9s,baz=44,slow=36						
ANMO	Albuquerque	40.56	128	LR	LR	12 45 07.9	
	comp=Z,80nm,19.3s,baz=328,slow=40						
ANMO	Albuquerque	40.56	128		P	12 25 24.3	0.0
TASM	ASL Pad, Albuq	40.56	128	IAmb	IAmb	12 25 27.6	
	comp=Z,7.3nm,1.1s						
TASM	ASL Pad, Albuq	40.56	128	IAmb	IAmb	12 25 27.6	
	comp=Z,7.0nm,1.0s						
TASM	ASL Pad, Albuq	40.56	128	IAmb	IAmb	12 25 27.6	
	comp=Z,7.6nm,1.1s						
TASM	ASL Pad, Albuq	40.56	128	IAmb	IAmb	12 25 27.6	
	comp=Z,6.8nm,1.0s						
ABQ	Albuquerque	40.56	128	IAmb	IAmb	12 25 27.6	
	comp=Z,7.7nm,1.1s						
ARCES	ARCESS Array B	40.95	5	P	P	12 25 27.2	+0.3
	comp=Z,1.4nm,0.6s,baz=356,slow=8.5,SNR=6.0						
	comp=Z,1.4nm,0.6s						
ARCES	ARCESS Array B	40.95	5	IAmb	IAmb	12 25 58.9	
	comp=Z,19nm,1.5s						
R40A	Maddies Statio	41.79	110	IAmb	IAmb	12 25 35.4	
	comp=Z,5.8nm,0.8s						
U38A	Gravette	42.79	114		P	12 25 41.8	-0.5
MGMO	Mountain Grove	42.82	111	IAmb	IAmb	12 25 44.9	
	comp=Z,10.0nm,0.8s						
HEH	HeiHe	43.37	291	*e*P	P	12 25 50.9	+4.1
PBMO	Poplar Bluff	43.77	109	IAmb	IAmb	12 25 51.0	
	comp=Z,7.0nm,0.8s						
FCAR	Ozark Folk Cen	44.02	112	IAmb	IAmb	12 25 54.6	
	comp=Z,7.8nm,1.1s						
LCAR	Lake Charles	44.18	111	IAmb	IAmb	12 25 55.1	
	comp=Z,9.1nm,0.9s						
MIAR	Mount Ida	44.79	114		P	12 25 59.1	+0.7
WVT	Waverly	45.22	107		P	12 26 02.2	+0.4
CLTN	Cedars of Leba	45.76	105	IAmb	IAmb	12 26 12.3	
	comp=Z,3.8nm,0.9s						
M65A	Busby, Falmout	46.31	87	P	P	12 26 08.2	-2.1
	baz=332						
TXAR	Lajitas Array	46.62	128	P	P	12 26 14.6	+1.6
	comp=Z,1.0nm,0.7s,baz=340,slow=5.0,SNR=13						
TXAR				LR	LR	12 45 22.9	
	comp=Z,134nm,18.7s,baz=340,slow=36						
	comp=Z,1.0nm,0.7s						
JCT	Junction City	46.65	123	P	P	12 26 14.0	+0.9
JCT				IAmb	IAmb	12 26 15.9	
	comp=Z,4.8nm,0.8s						
FINES	FINESS Array B	49.07	6	P	P	12 26 31.4	0.0
	comp=Z,1.5nm,0.6s,baz=350,slow=7.7,SNR=9.8						
	comp=Z,1.5nm,0.6s						
HFS	Hagfors	49.63	14	P	P	12 26 36.1	+0.3
	comp=Z,2.8nm,0.5s,baz=20,slow=4.7,SNR=13						
	comp=Z,2.8nm,0.5s						
LPIG	La Paz	49.90	137	LR	LR	12 47 42.0	
	comp=Z,128nm,20.4s,baz=34,slow=36						
ZALV	Zalesovo Beam	51.59	325	P	P	12 26 51.5	+0.9
	comp=Z,1.3nm,0.7s,baz=16,slow=6.8,SNR=7.0						
ZALV				LR	LR	12 51 51.2	
	comp=Z,64nm,19.1s,baz=357,slow=40						
	comp=Z,1.3nm,0.7s						
ZALV	Zalesovo Beam	51.59	325		P	12 26 51.1	+0.5
SONM	Songino Array	51.97	306	P	P	12 26 55.9	+2.1
	comp=Z,1.4nm,0.8s,baz=23,slow=8.0,SNR=7.3						
	comp=Z,1.4nm,0.8s						
SONM	Songino Array	51.97	306	IAmb	IAmb	12 26 57.1	
	comp=Z,1.9nm,1.0s						
EKA	Eskdalemuir Ar	52.30	27	P	P	12 26 58.2	+2.4
	comp=Z,1.8nm,0.7s,baz=328,slow=6.8,SNR=4.4						
	comp=Z,1.8nm,0.7s						
ARTI	Arti	53.18	344	LR	LR	12 52 58.1	
	comp=Z,42nm,18.4s,baz=342,slow=40						
BVAR	Borovoye Array	55.01	335	P	P	12 27 17.3	+1.5
	comp=Z,1.0nm,0.5s,baz=15,slow=6.2,SNR=5.8						
	comp=Z,1.0nm,0.5s						
KURK	Kurchatov	55.86	328	P	P	12 27 21.2	-0.7
KURK				IAmb	IAmb	12 27 26.6	
	comp=Z,4.8nm,1.1s						
KURBB	Kurchatov Arra	55.96	328	P	P	12 27 23.2	+0.5
	comp=Z,2.2nm,0.8s,baz=13,slow=7.2,SNR=14						
	comp=Z,2.2nm,0.8s						
HHC	Hu-ho-hao-te	56.79	298	*e*P	P	12 27 26.6	-2.3
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
JNU	Nakatsue	57.41	278	LR	LR	12 52 31.6	
	comp=Z,44nm,20.6s,baz=16,slow=36						
MKAR	Makanchi Array	58.89	324	P	P	12 27 43.7	+0.3
	comp=Z,0.6nm,0.7s,baz=46,slow=5.6,SNR=6.3						
MKAR				LR	LR	12 56 34.2	
	comp=Z,50nm,18.3s,baz=9.0,slow=40						
	comp=Z,0.6nm,0.7s						
AKTO	Aktyubinsk	59.10	343	LR	LR	12 54 08.7	
	comp=Z,32nm,20.1s,baz=185,slow=37						
AKASG	Malin Array Be	59.92	4	P	P	12 27 51.0	+0.5
	comp=Z,1.8nm,0.6s,baz=358,slow=6.8,SNR=10						
	comp=Z,1.8nm,0.6s						
AKASG	Malin Array Be	59.92	4	IAmb	IAmb	12 27 54.1	
	comp=Z,2.7nm,1.1s						
GERES	GERESS Array B	60.81	16	P	P	12 27 57.9	+1.2
	comp=Z,0.5nm,0.6s,baz=350,slow=7.0,SNR=4.2						
	comp=Z,0.5nm,0.6s						
GTA	Gaotai	61.58	307	*e*P	P	12 28 03.6	+1.5
GTA				pP	sP	12 28 06.8	0.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LZH	Lanzhou	63.51	303	*e*P	P	12 28 20.4	+5.3
LZH				sP	sP	12 28 21.8	+2.0
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
KSH	Kashi	67.15	327	P	P	12 28 43.9	+5.4
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
PZH	PanZhiHua	73.09	301	P	P	12 29 12.9	-2.2
CMAR	Chiang Mai Arr	81.50	301	P	P	12 30 03.0	+0.7
	comp=Z,1.0nm,0.6s,baz=3.1,slow=6.4,SNR=8.7						
	comp=Z,1.0nm,0.6s						
MDP	Montagnes des	86.02	86	LR	LR	13 07 05.7	
	comp=Z,47nm,21.6s,baz=34,slow=34						

MEX 16 12:20:46.0±0.6**, 13°.91N**×**92°.67W, h10**^{km}**, MD3.9, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.07	21	*e*S	Sg	12 21 16.9	-3.6
PATR	El Naranjo	1.27	19	*e*P	Pn	12 21 06.0	-4.1
PATR				*e*S	Sb	12 21 21.1	-5.7
CHUJ	Union Juarez	1.30	25	*e*P	Pn	12 21 06.7	-3.7
CHUJ				*e*S	Sb	12 21 23.9	-3.6
PAVE	Pavencul	1.36	20	*e*P	Pn	12 21 07.6	-3.7
PAVE				*e*S	Sb	12 21 25.2	-4.2
PCIG		1.86	343	*e*P	Pn	12 21 14.3	-3.7
PCIG				*e*S	Sn	12 21 36.6	-5.0
CCIG	Comitan	2.42	12	*e*S	Sn	12 21 56.6	+1.1
TGIG		2.89	351	*e*P	Pn	12 21 29.5	-2.7
TGIG				*e*S	Sn	12 22 04.8	-2.2
UXUV	UXUV	3.68	337	*e*P	Pn	12 21 42.0	-1.0
UXUV				*e*S	Sn	12 22 13.7	-13
HUIG	Huatulco	3.81	300	*e*P	Pn	12 21 47.9	+3.2
CMIG	Matias Romero	3.82	326	*e*S	Sn	12 22 29.9	0.0

SFS ***16*** *12:31:47.4, 36°.59N×7°.71W, h26*^{km}*, ML2.7/7, ML2.2/8, MLv1.9/8*
MDD ***16*** *12:31:47.5±0.7, 36°.63N×7°.73W, h30*^{km}*, mb_Lg2.5/8, Error ellipse: s-maj=6.7km s-min=3.6km az=13.0*
INMG ***16*** *12:31:48.0±1.9, 36°.63N×7°.72W, h23*^{km}*±15*^{km}*, ML1.8, Error ellipse: s-maj=6.6km s-min=6.4km az=18.0, #DIST_RANGE: LOCAL #IPMA_REGION: Golfo de Cadiz*
IGIL ***16*** *12:31:48.4, 36°.61N×7°.73W, h34*^{km}*, ML1.4*
ISC 16 12:31:46.4±1.5**, 36°.61N**±0°.06×**7°.64W**±0°.03**, h31**^{km}±11^{km}**, n36,** σ**0**^{s}**.98**/63**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EXAYA	Ayamonte	0.64	17	P	Pn	12 32 00.1	+0.8
EXAYA				S	Sn	12 32 08.8	+0.4
PBDV	Barranco-do-Ve	0.68	340	Pg	Pb	12 32 00.6	+0.8
PBDV				Sg	Sb	12 32 08.9	-0.1
PBDV	Barranco-do-Ve	0.68	340	*e*P	Pb	12 32 00.6	+0.8
PBDV				*e*S	Sb	12 32 09.0	0.0
PBDV				*i* IAML		12 32 10.7	
PBDV				*i* IAML		12 32 11.7	
PBDV				*i* IAML		12 32 11.9	
PVAQ	Vaqueiros	0.80	356	*e*P	Pb	12 32 02.0	+0.2
PVAQ				*e*S	Sn	12 32 12.3	+0.1
PVAQ				*i* IAML		12 32 13.2	
PVAQ				*i* IAML		12 32 13.2	
PVAQ				*i* IAML		12 32 13.3	
EGRO	El Granado	0.94	8	Pn	Pn	12 32 04.2	+0.8
EGRO				Sn	Sn	12 32 16.4	+0.8
EGRO	El Granado	0.94	8	P	Pb	12 32 03.6	-0.5
EGRO				P	Pn	12 32 03.8	+0.5
EGRO				S	Sb	12 32 15.3	-0.9
EGRO				S	Sn	12 32 15.5	-0.1
EGRO				*i* IVmb_Lg		12 32 17.1	
MORF	Marmelete	1.07	311	*e*S	Sn	12 32 17.9	-1.1
MORF				*i* IAML		12 32 23.6	
MORF				*i* IAML		12 32 26.6	
MORF				*i* IAML		12 32 28.9	
PCVE	Castro Verde	1.07	343	Pn	Pn	12 32 05.8	+0.6
PCVE				Sn	Sn	12 32 18.9	-0.2
PCVE	Castro Verde	1.07	343	*e*P	Pn	12 32 05.8	+0.6
PCVE				*e*S	Sn	12 32 18.9	-0.2
PCVE				*i* IAML		12 32 19.6	
PCVE				*i* IAML		12 32 19.9	
PCVE				*i* IAML		12 32 19.9	
PFVI	Vila Bisbo	1.09	299	Pn	Pn	12 32 04.9	-0.5
PFVI	Vila Bisbo	1.09	299	*e*S	Sn	12 32 18.0	-1.4
PTEO	Sao Teotonio	1.28	318	*e*S	Sn	12 32 23.2	-0.9
PTEO				*i* IAML		12 32 25.3	
PTEO				*i* IAML		12 32 25.7	
MESJ	Messejana	1.31	340	*e*P	Pn	12 32 09.0	+0.4
MESJ				*e*S	Sn	12 32 23.9	-1.2
MESJ				IAML		12 32 25.9	
	comp=E,5.3nm,0.1s						
MESJ	Messejana	1.31	340	*e*P	Pn	12 32 09.4	+0.9
MESJ				*e*S	Sn	12 32 25.3	+0.3
MESJ				*i* IAML		12 32 25.7	
MESJ				*i* IAML		12 32 25.9	
MESJ				*i* IAML		12 32 29.9	
EMIN	Mina Concepcio	1.39	33	Pn	Pn	12 32 10.7	+1.1
EMIN	Mina Concepcio	1.39	33	P	Pn	12 32 10.2	+0.5
EMIN				S	Sn	12 32 26.9	-0.1
EMIN				*i* IVmb_Lg		12 32 28.7	
ESPR	Espera	1.46	79	Pn	Pn	12 32 11.7	+1.2
ESPR				Sn	Sb	12 32 29.8	-1.2
ESPR	Espera	1.46	79	P	Pn	12 32 11.7	+1.2
ESPR				S	Sb	12 32 30.2	-0.8

ESPR				i IVmb_Lg		12 32 31.2	
PBAR	Barrancos	1.64	17	Pn	Pn	12 32 13.9	+0.9
PBAR				Sn	Sb	12 32 34.0	-2.2
PBAR	Barrancos	1.64	17	eS	Sn	12 32 33.3	+0.3
PBAR				i IAML		12 32 45.3	
PBAR				i IAML		12 32 45.6	
PBAR				i IAML		12 32 47.2	
EVO	Evora	1.94	351	Sn	Sn	12 32 41.2	+0.6
EVO	Evora	1.94	351	eS	Sn	12 32 39.4	-1.2
MOE	Montemor	2.00	344	eP	Pn	12 32 19.7	+1.8
MOE				eS	Sn	12 32 41.0	-0.8
MOE				i IAML		12 32 43.9	
MOE				i IAML		12 32 44.3	
MOE				i IAML		12 32 44.4	
EBAD	Badajoz	2.20	13	P	Pn	12 32 21.7	+1.0
EBAD				i IVmb_Lg		12 32 45.4	
EBAD				S	Sn	12 32 45.8	-1.1
PARRA	Arraiolos	2.23	352	eP	Pn	12 32 22.8	+1.7
PARRA				eS	Sn	12 32 46.9	-0.7
PARRA				i IAML		12 32 49.1	
PARRA				i IAML		12 32 49.6	
PARRA				i IAML		12 32 50.0	
ECAB	El Cabril	2.30	50	P	Pn	12 32 23.1	+1.0
ECAB				S	Sn	12 32 47.8	-1.5
ECAB				i IVmb_Lg		12 32 53.9	
PMTG	Montargil	2.50	350	eP	Pn	12 32 25.7	+0.9
PMTG				eS	Sn	12 32 53.7	-0.6
PMTG				i IAML		12 32 55.2	
PMTG				i IAML		12 32 55.9	
PMTG				i IAML		12 32 56.2	
PMAFR	Mafra	2.68	331	eS	Sn	12 32 58.8	0.0
PMRV	Marv??o	2.83	4	eP	Pn	12 32 30.1	+0.8
PMRV				eS	Sn	12 33 02.4	+0.1
PMRV				i IAML		12 33 03.0	
PMRV				i IAML		12 33 03.6	
PMRV				i IAML		12 33 08.1	
EADA	Adamuz	2.90	57	P	Pn	12 32 31.0	+0.7
EADA				S	Sn	12 33 03.4	-0.6
EADA				i IVmb_Lg		12 33 07.0	
PSARD	Sardoal	3.02	352	eP	Pn	12 32 33.3	+1.4
PSARD				eS	Sn	12 33 06.8	-0.3
PSARD				i IAML		12 33 08.7	
PSARD				i IAML		12 33 09.6	
PSARD				i IAML		12 33 15.4	
PSBE	So Bento	3.04	343	eP	Pn	12 32 33.8	+1.4
PSBE				eS	Sn	12 33 07.2	-0.5
PCBR	Castelo Branco	3.23	2	eS	Sn	12 33 12.1	-0.2
PCBR				i IAML		12 33 12.8	
PCBR				i IAML		12 33 13.0	
PCBR				i IAML		12 33 14.1	
ELGU	Los Guajares,	3.23	84	P	Pn	12 32 36.6	+1.5
ELGU				S	Sn	12 33 12.5	0.0
ELGU				i IVmb_Lg		12 33 13.4	
PSIM	Granatula de C	3.79	53	P	Pn	12 32 42.9	+0.2
PSIM				S	Sn	12 33 25.9	-0.3
PAB	San Pablo	3.92	41	S	Sn	12 33 26.5	-2.9
PAB				i IVmb_Lg		12 33 30.3	

WEL 16 12:31:58.9±0.9**,32°S**±19°×**18°0E**±5°2**,h363**^{km}±25^{km}**,**
mB4.5/6**,ML4.1**/9**,MLv4.4**/8**,Mw(mB)3.7**/6**,Error ellipse:**
s-maj=71.5km s-min=5.2km az=109.9,confirmed,
Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.37	38	P	Pn	12 33 02.1	-0.5
GLKZ				S	S	12 33 53.4	-0.5
MXZ	Matakaoa Point	5.73	191	P	Pn	12 33 27.0	0.0
MXZ				S	S	12 34 39.9	+1.4
WMGZ	Waiomatatini S	5.96	190	P	Pn	12 33 30.7	+1.1
WMGZ				S	S	12 34 45.5	+2.2
HAZ	Te Kaha	6.02	195	P	Pn	12 33 31.5	+1.3
HAZ				S	S	12 34 48.3	+4.0
PKGZ	Pakihiroa	6.06	192	P	Pn	12 33 33.1	+2.3
PUZ	Puketiti	6.24	190	P	Pn	12 33 33.6	+0.9
PUZ				S	S	12 34 47.7	-1.3
RUGZ	Raukumara Rang	6.24	195	P	Pn	12 33 33.7	+0.9
RUGZ				S	S	12 34 51.8	+2.5
TWGZ	Tauwhareparae	6.38	192	P	Pn	12 33 34.5	+0.1
TWGZ				S	S	12 34 53.8	+1.7
MWZ	Matawai	6.63	195	P	Pn	12 33 37.0	-0.2
MWZ				S	S	12 34 56.2	-1.0
CNGZ	Carnagh Statio	6.65	190	P	P	12 33 38.8	+0.2
URZ	Urewera	6.66	198	P	Pn	12 33 37.4	-0.1
TKGZ	Te Karaka	6.66	193	P	Pn	12 33 37.5	0.0
TKGZ				S	S	12 34 56.8	-1.1
RIGZ	Rimuhau	6.94	193	P	Pn	12 33 40.6	-0.2
RIGZ				S	S	12 35 02.6	-1.2
MUGZ	Murupara	6.95	199	P	Pn	12 33 41.3	+0.4
RTZ	Ruatahuna	7.02	198	P	Pn	12 33 42.3	+0.5
KNZ	Kokohu	7.26	193	P	Pn	12 33 43.9	-0.5
KNZ				S	S	12 35 08.8	-1.7
BKZ	Black Stump Fm	7.67	199	P	Pn	12 33 47.5	-1.8
BKZ				S	S	12 35 15.7	-3.7
PXZ	Pawanui	8.40	195	P	Pn	12 33 55.8	-1.9
PXZ				S	S	12 35 31.7	-3.2
BFZ	Birch Farm	9.16	197	P	Pn	12 34 04.4	-2.4
BFZ				S	S	12 35 46.1	-5.5
MRZ	Mangatainoka R	9.32	200	P	Pn	12 34 04.5	-4.1
MRZ				S	S	12 35 47.9	-7.1

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*IDC **16** 12:34:00.2±0.7,6°.60N×125°.11E,h0^{km},mb4.1/15,*
mbtmp4.1/15,MS3.7/18,Error ellipse: s-maj=15.0km
s-min=8.6km az=127.0
*NEIC **16** 12:34:02.9±1.6,6°.72N±0°.07×125°.14E±0°.07,h10^{km}±1^{km},*
mb4.6/39,Error ellipse: s-maj=15.4km s-min=6.9km
az=133.0
*DJA **16** 12:34:02.9±0.5,7°N±4°×12°5E±°,h10^{km},M4.9/12,*
mb5.0/12,mB5.2/7,MLv5.0/8,Mw(mB)4.6/7
ISC 16 12:34:02.6±0.4**,6°.64N**±0°.05×**125°.18E**±0°.06**,h10**^{km}**,n98,**
σ1^{s}35/76**,mb4.5**/40**,MS3.8**/16**,1C-1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.58	43	Pg	Pg	12 34 13.8	+0.1
	955nm,0.3s,baz=244,slow=1.9,SNR=111						
DAV				Lg	Lg	12 34 20.8	
	2µm,0.3s,baz=90,slow=20,SNR=11						
DAV				LR	LR	12 34 43.4	
	comp=Z,9µm,21.2s,baz=332,slow=66						
DAV	Davao City (W)	0.58	43		Pg	12 34 13.7	-0.1
DAV	Davao City (W)	0.58	43	P	Pg	12 34 13.1	-0.7
DAV				S	Sb	12 34 24.2	+1.1
DAV	Davao City (W)	0.58	43	P	Pg	12 34 12.0	-1.8
SGSI	Sangihe	2.96	173	P	Pn	12 34 49.0	-0.6
TNTI	Ternate	6.23	159	P	Pn	12 35 36.3	+1.7
	0.3nm93nm,0.9s						
GTOI	Gorontalo	6.35	200	P	Pn	12 35 35.9	-0.4
MRSI	Marisa	6.93	208	P	Pn	12 35 44.4	+0.2
	0.6nm1µm117nm,0.5s						
TOLI2	Tolitoli	7.03	219	Pn	Pn	12 35 43.4	-2.3
LUWI	Luwuk	8.01	198		Pn	12 36 02.1	+3.1
LUWI	Luwuk	8.01	198	P	Pn	12 36 00.7	+1.7
	2µm180nm,1.0s						
MPSI	Mapaga	8.19	220	P	Pn	12 36 04.6	+3.1
APSI	Ampana	8.29	205	P	Pn	12 36 06.1	+3.1
	73nm,1.2s						
SANI	Sanana	8.67	175	P	Pn	12 36 07.3	-0.9
	51nm,0.8s						
I39PW	PALAU INFRASON	9.33	84	I	I	13 31 50.0	
	baz=268,slow=302,SNR=0.6						
NLAI	Namlea	10.00	169	P	Pn	12 36 21.6	-4.8
FAKI	Fak Fak	11.83	143	Pn	Pn	12 36 52.5	+0.9
FAKI	Fak Fak	11.83	143	P	Pn	12 36 52.6	+1.1
KAPI	Kappang	12.79	205	LR	LR	12 42 53.8	
	comp=Z,204nm,18.7s,baz=23,slow=42						
SOEI	Soe	16.32	183	Pn	Pn	12 37 52.3	+0.2
SOEI				IAmb	IAmb	12 38 17.1	
	comp=Z,52nm,1.1s						
BATI	Baumata	16.81	185	Pn	P	12 38 00.9	+0.5
	comp=Z,5.1nm,0.3s,baz=239,slow=0.5,SNR=8.9						
BATI				LR	LR	12 44 42.9	
	comp=Z,177nm,20.1s,baz=350,slow=38						
JAY	Jayapura	17.97	120	LR	LR	12 43 35.1	
	comp=Z,110nm,21.3s,baz=350,slow=32						
QIZ	Qiongzhong	19.35	311	P	P	12 38 27.6	-0.8
QIZ				S	Sn	12 42 04.5	-2.2
QIZ				LR	LR		
	comp=N,260nm,12.2s						
QIZ				LR	LR		
	comp=E,250nm,8.8s						
QIZ				LR	LR		
	comp=Z,250nm,12.7s						
MTN	Manton Dam	20.24	163	P	P	12 38 38.0	-0.1
JOW	Kunigami	20.29	8	P	P	12 38 38.1	-0.5
	comp=Z,13nm,0.8s,baz=154,slow=6.4,SNR=3.9						
JOW				LR	LR	12 47 53.1	
	comp=Z,145nm,18.6s,baz=156,slow=41						
	comp=Z,13nm,0.8s						
GUMO	Guam	20.56	69	LR	LR	12 45 27.3	
	comp=Z,62nm,20.8s,baz=48,slow=33						
KNRA	Kununurra	22.46	171		P	12 39 01.1	-0.9
KNRA				IAmb	IAmb	12 39 08.3	
	comp=Z,25nm,1.0s						
FITZ	Fitzroy Crossi	24.59	179	P	P	12 39 22.1	-0.9
	comp=Z,7.3nm,0.6s,baz=2.8,slow=4.4,SNR=29						
	comp=Z,7.3nm,0.6s						
NJ2	Nanjing	25.96	348	eP	P	12 39 35.3	-0.1
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
JCJ	Chichijima	25.98	37	LR	LR	12 47 39.4	
	comp=Z,112nm,21.9s,baz=159,slow=31						
PMG	Port Moresby	27.09	126		P	12 39 45.5	-0.2
PMG				IAmb	IAmb	12 39 49.7	
	comp=Z,18nm,0.9s						
COEN	Coen	27.16	139	P	P	12 39 45.2	-1.2
COEN				IAmb	IAmb	12 39 50.8	
	comp=Z,12nm,1.0s						
WB0	Warramunga Arr	27.77	161		P	12 39 50.3	-1.4
WB0				IAmb	IAmb	12 40 08.2	
	comp=Z,12nm,0.9s						
WRAB	Tennant Creek	27.91	161	P	P	12 39 52.2	-0.9
WRAB				IAmb	IAmb	12 40 29.6	
	comp=Z,10nm,1.1s						
WRA	Warramunga Arr	27.91	161	P	P	12 39 51.6	-1.5
	comp=Z,2.2nm,0.6s,baz=337,slow=10,SNR=17						
	comp=Z,2.2nm,0.6s						
WR8	Warramunga Arr	27.98	161		P	12 39 52.5	-1.2
WR8				IAmb	IAmb	12 40 30.4	
	comp=Z,9.8nm,1.1s						
CMAR	Chiang Mai Arr	28.13	297	P	P	12 39 54.0	-1.1
	comp=Z,0.4nm,0.3s,baz=115,slow=6.2,SNR=5.0						
	comp=Z,0.4nm,0.3s						
PSA00	Pilbara Seismi	28.53	190		P	12 39 57.3	-1.2
PZH	PanZhiHua	29.81	314	P	P	12 40 10.8	+0.8
AS31	Alice Springs	31.30	164	P	P	12 40 22.6	-0.6
ASAR	Alice Springs	31.31	164	P	P	12 40 21.5	-1.7
	comp=Z,0.5nm,0.5s,baz=22,slow=11,SNR=23						
	comp=Z,0.5nm,0.5s						
ASAR	Alice Springs	31.31	164	P	P	12 40 22.5	-0.7
MJAR	Matsushiro Arr	32.05	20	LR	LR	12 51 08.0	
	comp=Z,100nm,21.8s,baz=172,slow=32						
HNS	HongShan	32.07	344	⇓P	P	12 40 37.3	+7.6
HNS				pmax	pmax		
	comp=Z,7.0nm,1.3s						
CTA	Charters Tower	33.69	142	LR	LR	12 54 15.1	
	comp=Z,86nm,19.1s,baz=32,slow=36						
LZH	Lanzhou	35.23	329	eP	P	12 41 05.9	+8.5
LZH				pP	sP	12 41 11.8	+10
LZH				pmax	pmax		
	comp=Z,22nm,1.5s						
HHC	Hu-ho-hao-te	36.17	342	eP	P	12 41 06.3	+0.9
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MORW	Morawa	36.58	193	P	P	12 41 08.3	-0.6
MORW				IAmb	IAmb	12 41 16.1	
	comp=Z,25nm,1.5s						
FORT	Forrest	37.31	176		P	12 41 15.2	+0.2
USRK	Ussuriysk Ar.	37.88	8	P	P	12 41 20.0	+0.3
	comp=Z,5.9nm,0.8s,baz=179,slow=7.3,SNR=7.6						
	comp=Z,5.9nm,0.8s						
MDJ	Mudanjiang	38.02	5		P	12 41 20.7	-0.3
MDJ				IAmb	IAmb	12 41 25.9	
	comp=Z,13nm,1.0s						
MDJ	Mudanjiang	38.02	5	P	P	12 41 20.0	-0.9
MDJ				pmax	pmax		
	comp=Z,11nm,1.1s						
BNX	BinXian	38.99	2	⇑P	P	12 41 27.8	-1.3
BNX				pmax	pmax		
	comp=Z,5.0nm,1.1s						
LSA	Lhasa	39.38	310	P	P	12 41 37.3	+4.1
GTA	Gaotai	39.82	329	eP	P	12 41 36.8	+0.5
GTA				pP	pP	12 41 39.8	+0.2
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NWAO	Narrogin (SRO)	40.07	190	P	P	12 41 38.2	0.0
NWAO				IAmb	IAmb	12 41 43.1	
	comp=Z,18nm,1.1s						
BBOO	Buckleboo	40.58	166		P	12 41 41.8	-0.7
BBOO				IAmb	IAmb	12 41 56.3	
	comp=Z,11nm,0.8s						
STKA	Stephens Creek	41.38	159	P	P	12 41 48.5	-0.6
	comp=Z,2.1nm,0.5s,baz=334,slow=11,SNR=5.7						
	comp=Z,2.1nm,0.5s						
STKA	Stephens Creek	41.38	159		P	12 41 48.7	-0.4
HEH	HeiHe	43.51	2	eP	P	12 42 08.3	+2.2
HEH				LR	LR		
	comp=N,290nm,18.2s						
HEH				LR	LR		
	comp=E,130nm,19.2s						
HEH				LR	LR		
	comp=Z,160nm,18.4s						
SONM	Songino Array	44.06	342	P	P	12 42 10.2	-0.7
	comp=Z,0.4nm,0.4s,baz=152,slow=6.7,SNR=4.8						
SONM				LR	LR	13 00 44.2	
	comp=Z,124nm,20.4s,baz=76,slow=36						
	comp=Z,0.4nm,0.4s						
CAN	Canberra	47.39	153	P	P	12 42 38.8	+1.6
TOO	Toolangi	47.90	158	P	P	12 42 41.4	+0.3
TOO				IAmb	IAmb	12 42 48.2	
	comp=Z,7.6nm,1.5s						
PETK	Petropavlovsk-	53.37	24	P	P	12 43 22.5	+0.3
	comp=Z,6.4nm,0.8s,baz=202,slow=7.8,SNR=6.7						
	comp=Z,6.4nm,0.8s						
PETK	Petropavlovsk-	53.37	24	P	P	12 43 22.1	0.0
MKAR	Makanchi Array	54.30	325	P	P	12 43 28.1	-1.1
	comp=Z,0.7nm,0.6s,baz=116,slow=7.9,SNR=7.9						
MKAR				LR	LR	13 06 38.6	
	comp=Z,78nm,21.0s,baz=34,slow=36						
	comp=Z,0.7nm,0.6s						
MKAR	Makanchi Array	54.30	325	P	P	12 43 28.9	-0.3
KSH	Kashi	54.91	314	P	P	12 43 37.9	+4.0
KSH				pmax	pmax		
	comp=Z,3.0nm,1.2s						
YAK	Yakutsk	55.37	3	LR	LR	13 07 53.8	
	comp=Z,56nm,20.2s,baz=71,slow=37						
MA2	Magadan	56.29	15	LR	LR	13 05 27.6	
	comp=Z,25nm,22.0s,baz=209,slow=34						
ZALV	Zalesovo Beam	57.31	333	P	P	12 43 49.4	-1.1
	comp=Z,0.2nm,0.3s,baz=79,slow=7.5,SNR=1.4						
ZALV				LR	LR	13 09 58.6	
	comp=Z,72nm,18.9s,baz=203,slow=38						
	comp=Z,0.2nm,0.3s						
KURBB	Kurchatov Arra	58.47	327	P	P	12 43 57.8	-0.9
	comp=Z,1.8nm,0.9s,baz=128,slow=5.7,SNR=11						
	comp=Z,1.8nm,0.9s						
KURK	Kurchatov	58.47	327	P	P	12 43 57.8	-0.9
KURK	Kurchatov	58.47	327	IAmb	IAmb	12 44 10.5	
	comp=Z,12nm,1.4s						
KK31	Karatay Array	60.07	316	P	P	12 44 09.4	-0.6
KKAR	Karatay Array	60.07	316		P	12 44 09.1	-0.9
BVAR	Borovoye Array	64.05	327	P	P	12 44 34.3	-2.3
	comp=Z,1.7nm,1.0s,baz=106,slow=3.2,SNR=5.3						
	comp=Z,1.7nm,1.0s						
BORK	Borovoye	64.10	327		P	12 44 36.2	-0.7
BORK				IAmb	IAmb	12 44 48.4	
	comp=Z,3.2nm,1.0s						
AB31	Akbulak array	68.94	320		P	12 45 07.0	-0.9
ABKAR	Akbulak array	68.94	320		P	12 45 07.4	-0.4
C18K	Utukok River	77.91	21	IAmb	IAmb	12 46 05.2	
	comp=Z,6.0nm,1.1s						
C19K	Lookout Ridge	78.57	21	IAmb	IAmb	12 46 10.3	
	comp=Z,5.1nm,0.8s						
D19K	Kuna River	78.98	21	IAmb	IAmb	12 46 26.5	
	comp=Z,11nm,1.4s						
D20K	Etivluk River	79.56	21	P	P	12 46 08.9	-0.6
D20K				IAmb	IAmb	12 46 29.6	
	comp=Z,12nm,1.4s						
KDAK	Kodiak Island	80.27	33	LR	LR	13 17 00.3	
	comp=Z,82nm,20.7s,baz=226,slow=32						
B21K	Ikpikpuk River	80.39	20	IAmb	IAmb	12 46 21.6	
	comp=Z,8.0nm,0.9s						
D24K	Happy Valley	82.41	21	IAmb	IAmb	12 46 29.3	
	comp=Z,7.5nm,1.1s						
ILAR	Eielson Array	83.15	26	P	P	12 46 28.9	+0.2
	comp=Z,2.1nm,1.0s,baz=248,slow=5.4,SNR=12						
	comp=Z,2.1nm,1.0s						
ILAR	Eielson Array	83.15	26	P	P	12 46 28.5	-0.1
BMAR	Burnt Mountain	84.00	23	P	P	12 46 34.3	+1.3
I28M	Miner Creek	86.04	25		P	12 46 44.7	+1.4
H29M	Whitestone	86.57	24	P	P	12 46 46.2	+0.4
G29M	Pine Creek	86.60	23	P	P	12 46 47.1	+1.1
G29M				IAmb	IAmb	12 46 54.1	
	comp=Z,6.4nm,1.1s						
AKASG	Malin Array Be	88.68	321	LR	LR	13 28 27.3	
	comp=Z,52nm,19.4s,baz=318,slow=37						
MLR	Muntele Rosu	91.75	316	LR	LR	13 32 12.1	
	comp=Z,146nm,18.4s,baz=258,slow=38						
DLBC	Dease Lake	92.04	31	LR	LR	13 22 04.8	
	comp=Z,76nm,21.4s,baz=68,slow=31						
NOA	NORSAR Array B	95.51	333	LR	LR	13 33 11.6	
	comp=Z,47nm,18.4s,baz=345,slow=37						
YKA	Yellowknife Ar	97.49	24	P	Pdif	12 47 37.2	+0.5
	comp=Z,0.6nm,0.8s,baz=301,slow=5.5,SNR=5.9						
	comp=Z,0.6nm,0.8s						

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*SJA **16** 12:43:11.4±0.9,23°.89S×69°.76W,h57^{km}±9^{km},ML3.8,*
MW3.8
*GUC **16** 12:43:13.1±0.7,23°.85S×69°.77W,h69^{km}±4^{km},ML3.7*
ISC 16 12:43:13.1±1.4**,23°.87S**±0°.03×**69°.90W**±0°.06**,h72**^{km}±16^{km}**,**
n37,σ1^{s}00/47**,4C,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB10	IPOC Station P	0.70	300	i P	Pn	12 43 28.1	0.0
PB10				eS	Sn	12 43 40.1	+0.9
PB10				IAML		12 43 41.3	
	comp=N,3µm,0.3s						
PB10	IPOC Station P	0.70	300	i P	Pn	12 43 28.3	+0.1
PB10				i S	Sn	12 43 40.3	+1.1
PB10				IAML		12 43 43.9	
	comp=Z,1µm,0.2s						
PB14	IPOC Station P	0.89	211	i P	Pn	12 43 30.2	-0.5
PB14				i S	Sn	12 43 43.9	+0.2
PB14				IAML		12 43 45.6	
	comp=Z,4µm,0.3s						
PB05	IPOC Station P	1.05	344	i P	Pn	12 43 32.2	-0.3
PB05				eS	Sn	12 43 46.9	+0.1
PB05				IAML		12 43 49.2	
	comp=E,3µm,0.4s						
PB05	IPOC Station P	1.05	344	i P	Pn	12 43 32.0	-0.5
PB05				i S	Sn	12 43 47.2	+0.4
PB05				IAML		12 43 49.4	
	comp=Z,1µm,0.5s						
PB06	IPOC Station P	1.19	15	⇑iP	Pn	12 43 33.3	-1.1
PB06				eS	Sn	12 43 49.3	-0.9
PB06				IAML		12 43 51.9	
	comp=N,3µm,0.1s						
PB06	IPOC Station P	1.19	15	i P	Pn	12 43 33.1	-1.3
PB06				i S	Sn	12 43 49.3	-0.9
PB06				IAML		12 43 50.5	
	comp=Z,2µm,0.2s						
GO02	Mina Guanaco	1.32	168	⇑iP	Pn	12 43 35.6	-0.5
GO02				eS	Sn	12 43 53.4	+0.1
GO02				IAML		12 43 57.8	
	comp=N,3µm,0.1s						
GO02	Mina Guanaco	1.32	168	i P	Pn	12 43 34.7	-1.4
GO02				IAML		12 43 57.1	
	comp=Z,1µm,0.2s						
PB03	IPOC Station P	1.81	4	⇑iP	Pn	12 43 41.6	-1.0
PB03				eS	Sn	12 44 04.2	-0.6
PB03				IAML		12 44 09.4	
	comp=E,858nm,0.2s						
PB03	IPOC Station P	1.81	4	i P	Pn	12 43 42.3	-0.2
PB03				i S	Sn	12 44 05.4	+0.6
PB03				IAML		12 44 11.6	
	comp=Z,582nm,0.1s						
AF01	San Pedro de A	1.82	60	eP	Pn	12 43 42.9	+0.2
AF01				eS	Sn	12 44 06.2	+1.1
AF01	San Pedro de A	1.82	60	IAML		12 44 09.3	
	comp=Z,1µm,0.3s						
PB07	IPOC Station P	2.13	0	i P	Pn	12 43 45.9	-0.9
PB07	IPOC Station P	2.13	0	i P	Pn	12 43 46.2	-0.6
PB07				i S	Sn	12 44 13.6	+1.2
PB07				IAML		12 44 20.6	
	comp=Z,409nm,0.2s						
PB09	IPOC Station P	2.15	16	eP	Pn	12 43 47.3	+0.3
PB09				eS	Sn	12 44 14.6	+1.8
PB09				IAML		12 44 17.7	
	comp=E,551nm,0.2s						
PB09	IPOC Station P	2.15	16	i P	Pn	12 43 46.7	-0.3
PB09				i S	Sn	12 44 13.1	+0.3
PB09				IAML		12 44 20.7	
	comp=Z,429nm,0.4s						
AC01	Pan de Azucar	2.36	196	eP	Pn	12 43 48.3	-1.4
AC01	Pan de Azucar	2.36	196	i P	Pn	12 43 51.4	+1.7
AC01				IAML		12 44 25.7	
	comp=Z,335nm,0.4s						
PB02	IPOC Station P	2.54	0	eP	Pn	12 43 51.1	-1.1
PB02	IPOC Station P	2.54	0	i P	Pn	12 43 52.0	-0.2
PB02				IAML		12 44 30.1	
	comp=Z,1µm,0.2s						
PB01	IPOC Station P	2.84	8	⇑iP	Pn	12 43 55.4	-0.9
PB01	IPOC Station P	2.84	8	i P	Pn	12 43 56.0	-0.2
PB01				IAML		12 44 37.9	
	comp=Z,421nm,0.4s						
AC02	Maricunga	3.04	167	eP	Pn	12 44 00.4	+1.0
AC02	Maricunga	3.04	167	i P	Pn	12 43 59.6	+0.3
AC02				IAML		12 45 01.7	
	comp=Z,173nm,0.8s						
PATCX	Punta Patache	3.04	355	eP	Pn	12 43 57.2	-1.8
PATCX	Punta Patache	3.04	355	i P	Pn	12 43 57.2	-1.8
PATCX				IAML		12 44 50.6	
	comp=Z,207nm,0.5s						
TA01	Diego Aracena	3.30	355	i P	Pn	12 44 01.7	-0.7
TA01				i S	Sn	12 44 42.1	+1.7
TA01				IAML		12 44 57.1	
	comp=Z,161nm,0.6s						
TA02	Huaiquique	3.59	356	IAML		12 45 12.8	
	comp=Z,160nm,0.5s						
GO03	Copiapo	3.72	185	i P	Pn	12 44 06.9	-1.4
GO03	Copiapo	3.72	185	i P	Pn	12 44 06.9	-1.4
GO03				IAML		12 45 12.4	
	comp=Z,174nm,0.3s						
PB08	IPOC Station P	3.77	11	eP	Pn	12 44 08.3	-1.0
PB08	IPOC Station P	3.77	11	i P	Pn	12 44 09.6	+0.4
PB08				i S	Sn	12 44 53.9	+1.3
PB08				IAML		12 45 13.5	
	comp=Z,110nm,0.6s						
GO01	Chusmiza	4.23	9	IAML		12 45 30.7	
	comp=Z,85nm,0.5s						
AC04	Llanos de Chal	4.45	194	IAML		12 45 37.5	
	comp=Z,86nm,0.6s						
AC05	El Transito	4.96	184	IAML		12 45 57.7	
	comp=Z,63nm,1.1s						
LCO	Las Campanas	5.17	188	IAML		12 45 46.1	
	comp=Z,124nm,0.4s						

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*IDC **16** 12:47:09.8±10.0,41°.35N×19°.00E,h0^{km},mb3.6/4,*
mbtmp3.5/5,ML2.3/1,MS3.4/3,Error ellipse:
s-maj=196.6km s-min=26.7km az=34.0
*SKO **16** 12:47:15.4,41°.60N×19°.31E,h6^{km},ML3.6*
*BEO **16** 12:47:16.0±0.4,41°.51N×19°.42E,h13^{km}±2^{km},ML3.4/11*
*TIR **16** 12:47:16.3,41°.62N×19°.45E,h27^{km}±3^{km},Ml3.6/3*
*THE **16** 12:47:17.0,42°N±43°×1°9E±4°0,h2^{km}±20^{km},M3.2/5,*
MLh3.2/5
*PDG **16** 12:47:17.0±0.3,41°.64N×19°.47E,h8^{km}±1^{km},MD3.5/9,*
ML3.4/12,Error ellipse: s-maj=1.3km s-min=1.5km az=0.0
ISC 16 12:47:16.1±1.0**,41°.59N**±0°.02×**19°.42E**±0°.02**,h11**^{km}±7^{km}**,**
n112,σ1^{s}25/154**,mb3.9**/3**,20C-12D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULC	Ulcinj	0.39	340	⇑iPg	Pg	12 47 23.5	-0.4
ULC				i Sg	Sg	12 47 29.9	+0.8
TIR	Tirane	0.41	126	Pg	Pg	12 47 23.1	-1.2
TIR				Sg	Sg	12 47 29.0	-0.7
TIR				AML	AML	12 47 30.7	
	12nm,0.8s						
TIR	Tirane	0.41	126	i Sg	Sg	12 47 30.6	+0.9
SDA	Shkodra	0.46	7	Pg	Pg	12 47 25.1	0.0
SDA				S	Sb	12 47 33.0	-0.1
DRME	Dracevica, Mon	0.62	343	ePg	Pg	12 47 27.8	-0.4
DRME				eSg	Sn	12 47 41.0	+0.2
DRME	Dracevica, Mon	0.62	343	⇓iPg	Pg	12 47 27.7	-0.4
DRME				eSg	Sb	12 47 37.7	+0.1
PHP	Peshkopia	0.77	83	Pg	Pg	12 47 29.6	-1.4

PHP				Sg	Sg	12 47 41.4	+0.4
PHP				AML	AML	12 47 47.1	
	10.0nm,0.5s						
BUM	Brajici-Budva	0.81	331	⇑iPg	Pg	12 47 31.4	-0.3
BUM				iSg	Sb	12 47 44.6	+1.4
PDG	Podgorica	0.84	352	⇑P	Pg	12 47 31.5	-0.9
PDG				⇑S	Sg	12 47 43.7	+0.2
PDG	Podgorica	0.84	352	ePg	Pb	12 47 33.2	+0.4
PDG				eSg	Sn	12 47 47.2	+0.9
PDG	Podgorica	0.84	352	⇓iPg	Pg	12 47 31.1	-1.3
PDG				iSg	Sb	12 47 44.7	+0.6
PVY	Plav	1.08	22	ePg	Pn	12 47 37.7	+0.5
PVY	Plav	1.08	22	⇓iPg	Pg	12 47 35.4	-1.4
PVY				iSg	Sb	12 47 51.8	+0.9
HCY	Herceg Novi	1.10	321	⇑iPg	Pg	12 47 37.2	0.0
HCY				iSg	Sn	12 47 53.7	+1.1
VLO	Vlora	1.12	177	Pg	Pn	12 47 38.4	+0.7
VLO				Sg	Sn	12 47 54.9	+1.7
VLO				AML	AML	12 48 02.8	
	4.7nm,0.3s						
VLO	Vlora	1.12	177	P	Pg	12 47 37.7	0.0
VLO				S	Sb	12 47 53.2	+1.1
OHR	Ohrid	1.14	114	iPg	Pg	12 47 37.3	-0.8
OHR				iSg	Sn	12 47 55.7	+2.0
OHR				eLg	Lg	12 47 56.1	
	comp=N,901nm,0.8s						
OHR				eLg	Lg	12 47 56.9	
	comp=E,949nm,0.7s						
NKME	Niksic	1.22	344	⇑iPg	Pb	12 47 39.4	+0.1
NKME				eSg	Sn	12 47 57.3	+1.6
KOME	Kolasin	1.26	3	ePg	Pn	12 47 40.1	+0.4
KOME				eSg	Sn	12 47 59.1	+2.4
KOME	Kolasin	1.26	3	⇓iPg	Pn	12 47 39.9	+0.2
KOME				eSg	Sn	12 47 58.3	+1.6
BEY	Berane	1.32	15	ePg	Pn	12 47 40.7	+0.1
IVA	Berane	1.32	15	⇓iPg	Pn	12 47 40.1	-0.5
IVA				iSg	Sn	12 48 00.3	+2.0
TREB	Trebinje	1.38	325	ePn	Pn	12 47 41.5	+0.3
TREB	Trebinje	1.38	325	ePg	Pn	12 47 41.8	+0.6
KBN	Korca	1.42	133	Pn	Pn	12 47 42.1	+0.2
KBN				Sn	Sg	12 48 02.3	+0.7
KBN	Korca	1.42	133	P	Pn	12 47 42.4	+0.5
KBN				S	Sg	12 48 03.5	+1.8
BRY	Bratogost	1.46	334	⇓iPg	Pn	12 47 43.2	+0.6
BRY				iSg	Sg	12 48 05.6	+2.4
SKO	Skopje	1.56	75	iPg	Pb	12 47 45.1	+0.2
SKO				iSg	Sg	12 48 07.0	+0.9
UPM	Unac-Piva	1.65	347	ePn	Pg	12 47 48.2	+0.4
UPM				iSn	Sg	12 48 10.0	+0.7
KLINJ	Klinje	1.69	339	ePn	Pb	12 47 47.1	-0.2
NEST	Nestorio	1.70	133	P	Pn	12 47 46.8	+1.0
SJES	Sjenica	1.72	14	ePg	Pb	12 47 47.5	-0.2
SJES				eSg	Sg	12 48 12.4	+1.1
PLE	Pljevlja	1.73	359	ePg	Pb	12 47 48.8	+0.8
PLE	Pljevlja	1.73	359	⇑iPn	Pb	12 47 48.0	0.0
PLE				iSn	Sg	12 48 12.2	+0.3
STON	Ston	1.81	316	ePn	Pb	12 47 49.1	-0.1
STON				eSg	Sg	12 48 13.6	-0.6
NOCI	Noci	1.95	246	Pn	Pn	12 47 50.8	+1.7
RUDO	Rudo	2.02	359	ePn	Pn	12 47 51.0	+0.9
RUDO	Rudo	2.02	359	ePn	Pb	12 47 52.4	-0.5
IVAS	Ivanjica	2.05	15	ePn	Pn	12 47 51.1	+0.5
IVAS				eSn	Sb	12 48 20.0	+1.0
SELS	Selova	2.05	37	ePn	Pn	12 47 51.3	+0.7
SELS				eSn	Sn	12 48 17.8	+1.6
BARS	Barje	2.16	55	iPn	Pn	12 47 52.4	+0.5
BARS	Barje	2.16	55	ePn	Pn	12 47 52.5	+0.5
IGT	Igoumenitsa	2.17	161	Pn	Pn	12 47 51.6	-0.6
IGT				Sn	Sb	12 48 22.9	+0.6
IGT	Igoumenitsa	2.17	161	ePn	Pn	12 47 51.2	-1.0
KPRO	Kipourio	2.20	137	P	Pn	12 47 53.6	+0.9
JAN	Janina	2.22	150	P	Pn	12 47 54.1	+1.2
GOCS	Kraljevo Serbi	2.24	28	ePn	Pn	12 47 54.5	+1.3
GOCS				eSn	Sn	12 48 21.9	+1.0
MATE	Matera	2.26	246	⇑P	Pn	12 47 51.0	-2.3
BBLS	Lazi&#263i	2.27	360	ePn	Pn	12 47 54.9	+1.3
BBLS				eSn	Sb	12 48 24.8	-0.4
GRG	Griva	2.33	105	iPn	Pn	12 47 54.9	+0.4
VAY	Valandovo	2.38	96	iPn	Pn	12 47 56.0	+1.0
VAY				iSn	Sn	12 48 26.2	+2.0
VAY				eLg	Lg	12 48 30.3	
	comp=E,256nm,0.9s						
VAY				eLg	Lg	12 48 32.1	
	comp=N,318nm,0.8s						
BOSS	Bosilegrad	2.45	67	ePn	Pn	12 47 56.7	+0.7
BOSS				eSn	Sn	12 48 25.3	-0.6
GRUS	Gruza	2.48	22	ePn	Pn	12 47 57.1	+0.7
DIVS	Divibare	2.54	9	ePn	Pn	12 47 57.7	+0.4
DIVS				eSn	Sn	12 48 28.1	-0.1
BOVS	Bovan	2.65	39	⇓P	Pn	12 47 58.4	-0.3
BOVS	Bovan	2.65	39	ePn	Pn	12 47 59.1	+0.4
BOVS				eSn	Sn	12 48 32.0	+1.3
KKB	Krupnik	2.79	84	iP	Pn	12 48 02.0	+1.4
KKB	Krupnik	2.79	84	iPn	Pn	12 48 02.0	+1.4
ZAPS	Zavoj	2.91	54	ePn	Pn	12 48 03.5	+1.2
ZAPS				eSn	Sn	12 48 39.2	+1.9
TEKS	Tekeris	2.96	1	ePn	Pn	12 48 03.0	0.0
VTS	Vitosha	3.02	69	iP	Pn	12 48 04.0	+0.1
VTS	Vitosha	3.02	69	ePn	Pn	12 48 04.7	+0.8
ZAGS	Zajecar	3.03	42	ePn	Pn	12 48 04.8	+0.8
PLNA	Plana	3.11	72	iP	Pn	12 48 06.3	+1.1
PLNA				iS	Sn	12 48 46.4	+4.1
BORS2	Bor- Borsko je	3.14	37	ePn	Pn	12 48 04.7	-0.8
BORS2				eSn	Sn	12 48 43.5	+0.5
TIP	Timpagrande	3.16	221	⇑P	Pn	12 48 03.4	-2.4
SRS	Serrai	3.17	97	iPn	Pn	12 48 04.8	-1.1
SRS	Serrai	3.17	97	ePn	Pn	12 48 05.9	-0.1
MMB	Musomishta	3.25	89	iP	Pn	12 48 08.1	+1.1
KUBS	Kucevo	3.27	30	ePn	Pn	12 48 06.2	-1.0
KUBS				eSn	Sn	12 48 46.0	0.0
BLY	Banja Luka	3.55	333	ePn	Pn	12 48 13.3	+2.2
BLY	Banja Luka	3.55	333	⇑P	Pn	12 48 09.7	-1.5
MDVR	Moldovita	3.60	27	⇓P	Pn	12 48 10.7	-1.2
MDVR	Moldovita	3.60	27	ePn	Pn	12 48 12.1	+0.3
MPEP	Malo Peshtene	3.65	60	iP	Pn	12 48 14.3	+1.9
PGB	Panagyurishte	3.66	74	iP	Pn	12 48 14.2	+1.6
HERR	Herculane	3.95	33	⇑P	Pn	12 48 15.5	-1.1
KNYS	Krupa na Uni	4.00	327	ePn	Pn	12 48 17.5	+0.2
PLVB	Pleven	4.24	63	⇑P	Pn	12 48 19.6	-1.0
BZS	Buzias	4.33	21	⇑P	Pn	12 48 21.5	-0.3
BZS	Buzias	4.33	21	ePn	Pn	12 48 21.6	-0.1
GZR	Gura Zlata	4.51	32	⇑P	Pn	12 48 24.0	-0.4
GZR	Gura Zlata	4.51	32	ePn	Pn	12 48 24.6	+0.2
MORH	Mrgy, Hungar	4.65	353	ePn	Pn	12 48 19.7	-6.5
SIRR	Siria	4.94	18	ePn	Pn	12 48 31.9	+1.6
ELND	Elena	4.97	72	⇓P	Pn	12 48 30.3	-0.3
LOT	Lotru	4.98	38	⇓P	Pn	12 48 30.5	-0.4
HUMR	Humele	5.02	52	⇓P	Pn	12 48 31.0	-0.3
ARR	Arges	5.35	43	⇑P	Pn	12 48 34.6	-1.3
CEY	Cerknica	5.50	321	ePn	Pn	12 48 37.6	-0.4
SOKA	Soboth	5.98	330	ePn	Pn	12 48 44.4	-0.2
	comp=N,3.3nm,0.4s						
SOKA				eSn	Sn	12 49 49.3	-3.8
	comp=N,7.7nm,0.8s						
OBKA	Obir	6.04	326	iPn	Pn	12 48 47.7	+2.4
	comp=N,2.7nm,0.5s						
OBKA				iSn	Sn	12 49 56.8	+2.2
	comp=N,14nm,0.8s						
MLR	Muntele Rosu	6.13	48	LR	LR	12 51 38.4	
	comp=N,109nm,19.2s,baz=243,slow=41						
MLR	Muntele Rosu	6.13	48	⇓P	Pn	12 48 45.2	-1.6
DOPR	Dopca	6.14	43	⇑P	Pn	12 48 46.0	-0.8
ICOR	Ion Corvin	6.65	65	⇑P	Pn	12 48 52.7	-1.0
PLOR	Plostina	6.75	48	⇑P	Pn	12 48 54.9	-0.1
VRI	Vrincioaia	6.80	49	⇑P	Pn	12 48 55.2	-0.5
KECS	Kecovo	6.93	6	ePN	Pn	12 49 01.1	+3.6
KECS				eSN	Sn	12 50 14.2	-2.1
TLBR	Topalu	6.97	62	⇑P	Pn	12 48 57.1	-0.9
KBA	Koelnbreinsper	7.00	324	iPn	Pn	12 48 58.8	+0.1
	comp=N,1.3nm,0.3s						
ABTA	Abfaltersbach	7.16	318	iSn	Sn	12 50 23.0	+1.1
	comp=N,1.7nm,0.3s						
LESA	Schwarzleotal	7.56	323	ePn	Pn	12 49 07.0	+0.8
	comp=N,1.5nm,0.4s						
LESA				iSn	Sn	12 50 30.8	-1.2
	comp=N,4.1nm,0.6s						
STHS	Stebnicka Huta	7.93	9	ePN	Pn	12 49 13.5	+2.3
STHS				eSN	Sn	12 50 41.7	+0.8
FETA	Feichten	8.26	314	iPn	Pn	12 49 19.9	+3.9
	comp=N,1.9nm,0.4s						
FETA				eSn	Sn	12 50 47.8	-1.5
	comp=N,0.8nm,0.4s						
GERES	GERESS Array B	8.30	333	Pn	Pn	12 49 14.0	-2.4
	baz=170,slow=12,SNR=1.4						
	comp=N,0.2nm,0.4s						
BRTR	Keskin Array B	10.96	95	LR	LR	12 54 50.5	
	comp=N,90nm,18.7s,baz=276,slow=41						
FINES	FINESS Array B	20.28	9	P	P	12 51 50.0	-1.5
	comp=N,1.0nm,0.6s,baz=190,slow=9.6,SNR=5.1						
	comp=N,1.0nm,0.6s						
KURBB	Kurchatov Arra	40.96	56	P	P	12 54 57.5	-1.0
	comp=N,0.2nm,0.5s,baz=290,slow=9.6,SNR=2.5						
	comp=N,0.2nm,0.5s						
ZALV	Zalesovo Beam	44.11	51	P	P	12 55 22.6	-1.5
	comp=N,1.4nm,0.6s,baz=277,slow=8.4,SNR=8.9						
	comp=N,1.4nm,0.6s						
MKAR	Makanchi Array	44.31	61	P	P	12 55 24.3	-1.6
	comp=N,1.3nm,0.7s,baz=282,slow=7.0,SNR=14						
	comp=N,1.3nm,0.7s						
SONM	Songino Array	58.98	52	LR	LR	13 26 53.6	
	comp=N,121nm,19.1s,baz=189,slow=40						

IDC 16 12:47:30.9±1.3**,6°.47N**×**125°.30E,h0**^{km}**,mb3.3**/4**,**
mbtmp3.4/4**,Error ellipse: s-maj=41.9km s-min=9.2km**
az=107.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.66	25	Pg	Pb	12 47 44.8	-0.4
	138nm,0.3s,baz=292,slow=1.8,SNR=5.0						
DAV				Lg	Lg	12 47 51.8	
	420nm,0.3s,baz=302,slow=22,SNR=25						
FITZ	Fitzroy Crossi	24.41	179	P	P	12 52 50.4	-0.9
	2.3nm,1.0s,baz=346,slow=8.3,SNR=6.0						
	2.3nm,1.0s						
WRA	Warramunga Arr	27.71	161	P	P	12 53 21.6	+0.5
	0.3nm,0.7s,baz=337,slow=8.3,SNR=5.1						
	0.3nm,0.7s						
ASAR	Alice Springs	31.11	165	P	P	12 53 51.0	-0.3
	0.2nm,0.5s,baz=351,slow=8.8,SNR=5.3						
	0.2nm,0.5s						
MKAR	Makanchi Array	54.51	325	P	P	12 57 00.5	-0.1
	0.2nm,0.7s,baz=111,slow=7.9,SNR=1.4						
	0.2nm,0.7s						

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*IDC **16** 12:52:25.6±0.5,7°.10S×106°.03E,h0^{km},mb4.5/22,*
mbtmp4.5/23,ML5.3/1,MS3.7/8,Error ellipse:
s-maj=20.4km s-min=10.7km az=47.0

*DJA **16** 12:52:29.6±0.3,8°S±3°×10°6E±°,h10^{km},M4.7/25,mB5.2/9,*
mb5.0/16,MLv4.7/25,Mw(mB)4.6/9

*NEIC **16** 12:52:34.0±1.4,7°.2S±0°.1×106°.00E±0°.08,h61^{km}±6^{km},*
mb4.8/49,Error ellipse: s-maj=16.3km s-min=8.6km
az=209.0

ISC 16 12:52:33.0±1.2**,7°.33S**±0°.07×**105°.96E**±0°.07**,h58**^{km}±10^{km}**,**
n168,σ1^{s}.**15**/155**,mb4.7**/50**,MS3.8**/9**,1C,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKJI	Sukabumi	0.67	61	P	Pn	12 52 45.0	-1.8
DBJI	Dramaga	1.10	45	P	Pn	12 52 52.3	0.0
CNJI	Cibinong	1.16	89	P	Pn	12 52 50.7	-2.3
SBJI	Serang	1.22	8	P	Pn	12 52 54.4	+0.5
TNG	Tangerang	1.34	30	P	Pn	12 52 56.3	+0.8
BBJI	Bungbulang	1.68	94	P	Pn	12 52 59.0	-1.1
BBJI	Bungbulang	1.68	94	P	Pn	12 52 58.5	-1.6
KASI	Kota Agung	2.31	321	P	Pn	12 53 09.3	+0.6
KLI	Kotabumi	2.69	336	P	Pn	12 53 15.1	+1.2
KLSI		2.90	335	P	Pn	12 53 18.8	+2.1
KPJI	Karang Pucung	2.94	90	P	Pn	12 53 18.6	+1.3
LWLI	Liwa	2.98	320	P	Pn	12 53 19.1	+1.1
XMI	Christmas Isla	3.11	185	P	Pn	12 53 14.7	-4.9
CTJI	Waduk Cacaban	3.21	84	P	Pn	12 53 21.4	+0.4
MDSI	Maura Dua	3.34	328	P	Pn	12 53 24.2	+1.4
EGSI	Enggano, Bengk	4.16	298	P	Pn	12 53 34.2	+0.2
MNAI	Manna	4.20	314		Pn	12 53 34.6	0.0
MNAI	Manna	4.20	314	P	Pn	12 53 35.3	+0.7
MNAI	Manna	4.20	314	P	Pn	12 53 34.8	+0.2
SMRI	Semarang	4.45	87	Pn	Pn	12 53 39.1	+1.1
SMRI	Semarang	4.45	87	P	Pn	12 53 35.8	-2.2
UGM	Wanagama	4.56	98		Pn	12 53 39.2	-0.2
UGM	Wanagama	4.56	98	P	Pn	12 53 38.8	-0.7
UGM	Wanagama	4.56	98	P	Pn	12 53 38.8	-0.7
TPI	Tanjungpandan	4.85	20	P	Pn	12 53 44.1	+0.6
	0.4nm1µm88nm,0.5s						
KSI	Kapahiang	4.96	317	P	Pn	12 53 45.8	+0.7
	0.8nm119nm,0.5s						
PPBI	Pangkal Pinang	5.14	2	P	Pn	12 53 49.4	+1.9
PCJI	Pacitan	5.24	100	P	Pn	12 53 47.9	-0.9
MASI	Maura Aman, Be	5.58	318	P	Pn	12 53 53.7	+0.2
	2µm132nm,0.8s						
SNJI	Sawahan-Nganju	5.76	95	P	Pn	12 53 57.0	+0.9
	0.8nm2µm116nm,0.7s						
SJI	Sawahan	5.77	94	P	Pn	12 53 56.6	+0.5
	0.7nm2µm46nm,0.7s						
DSRI	Dabo	6.95	348	P	Pn	12 54 14.1	+1.9
	0.2nm1µm42nm,0.5s						
PPSI	Pulau Pagai	7.47	307	P	Pn	12 54 17.8	-1.6
	2µm124nm,0.7s						
GMJI	Gumukmas	7.47	98	P	Pn	12 54 19.7	+0.3
	0.2nm35nm,0.6s						
KMMI	Kalianget	7.95	88	P	Pn	12 54 28.3	+2.4
JAGI	Jajag, Banyuwa	8.19	98		Pn	12 54 30.8	+1.6
JAGI	Jajag, Banyuwa	8.19	98	P	Pn	12 54 30.3	+1.0
	2µm53nm,0.4s						
ABJI	Asem Bagus	8.21	94	P	Pn	12 54 33.3	+3.8
RTBI	Rangdo, Negare	8.96	98	P	Pn	12 54 41.9	+2.0
SISI	Saibi	9.09	311	P	Pn	12 54 41.7	+0.2
	55nm,0.6s						
IGBI	Denpasar	9.21	100	P	Pn	12 54 43.2	0.0
	96nm,0.8s						
MYKOM	Kota Tinggi	9.30	347	P	Pn	12 54 47.3	+2.8
KHKI	Kahang-Kahang	9.61	97	P	Pn	12 54 49.2	+0.5
	35nm,0.7s						
KLNI	Mataram	10.09	97	P	Pn	12 54 55.7	+0.4
	783nm25nm,1.0s						
COCO	West Island	10.21	241	P	Pn	12 54 53.8	-3.0
PBSI	Pulau Batu	10.54	313	P	Pn	12 55 01.4	0.0
	32nm,0.9s						
TWSI	Taliwang, Sumb	10.90	98	P	Pn	12 55 05.7	-0.7
	32nm,0.5s						
SBUM	Sibu	11.55	33		Pn	12 55 14.2	-1.0
PLAI	Plampang	11.79	98	P	Pn	12 55 17.9	-0.6
PLAI	Plampang	11.79	98	P	Pn	12 55 17.5	-1.0
GSI	Gunungsitoli	11.99	315		Pn	12 55 18.0	-3.2
KAPI	Kappang	13.90	81	LR	LR	13 01 16.5	
	comp=Z,108nm,20.6s,baz=258,slow=38						
MMRI	Maumere	16.17	96		Pn	12 56 15.7	-0.9
MMRI				IAmb	IAmb	12 56 19.4	
	comp=Z,67nm,0.8s						
KKM	Kota Kinabalu	16.77	38		P	12 56 24.5	-1.1
BATI	Baumata	17.72	101	P	P	12 56 35.0	-1.1
	comp=Z,11nm,0.3s,baz=262,slow=3.1,SNR=6.0						
BATI				S	Sn	12 59 53.1	+0.3
	comp=Z,8.4nm,0.3s,baz=94,slow=16,SNR=2.4						
	comp=Z,47nm,0.6s						
SOEI	Soe	18.26	99		P	12 56 41.8	-0.4
SOEI				IAmb	IAmb	12 56 52.3	
	comp=Z,48nm,0.5s						
MBWA	Marble Bar	19.13	137	P	P	12 56 52.3	+0.8
PSA00	Pilbara Seismi	19.50	138	P	P	12 56 56.7	+1.2
FITZ	Fitzroy Crossi	21.95	121	P	P	12 57 22.8	+0.9
	comp=Z,4.3nm,0.7s,baz=263,slow=4.8,SNR=8.1						
FITZ				S	S	13 01 19.1	-2.1
	comp=Z,1.7nm,0.7s,baz=158,slow=19,SNR=2.4						
	comp=Z,4.3nm,0.7s						
FITZ	Fitzroy Crossi	21.95	121	P	P	12 57 23.0	+1.0
KNRA	Kununurra	23.81	112	P	P	12 57 40.9	+0.2
KNRA				IAmb	IAmb	12 57 41.6	
	comp=Z,22nm,1.2s						
MTN	Manton Dam	25.37	104		P	12 57 55.7	+0.7
MTN				IAmb	IAmb	12 58 08.8	
	comp=Z,25nm,1.3s						
QIZ	Qiongzhong	26.47	8	P	P	12 58 04.8	-0.1
QIZ				S	S	13 02 35.5	+0.7
QIZ				LR	LR		
	comp=N,210nm,14.0s						
QIZ				LR	LR		
	comp=E,240nm,10.6s						
QIZ				LR	LR		
	comp=Z,290nm,15.4s						
FAKI	Fak Fak	26.54	82	P	P	12 58 05.0	-0.6
FAKI				IAmb	IAmb	12 58 16.6	
	comp=Z,15nm,1.0s						
CMAR	Chiang Mai Arr	26.55	345	P	P	12 58 05.0	-0.6
	comp=Z,2.4nm,0.7s,baz=179,slow=8.6,SNR=15						
CMAR				PcP	PcP	13 01 29.4	+0.3
	comp=Z,0.8nm,0.6s,baz=187,slow=1.7,SNR=5.5						
	comp=Z,2.4nm,0.7s						
H01W3	Cape Leeuwin H	28.43	166	T	T	13 28 05.5	
	baz=346,slow=76,SNR=170						
H01W1	Cape Leeuwin H	28.45	166	T	T	13 28 06.6	
	baz=346,slow=76,SNR=146						
H01W2	Cape Leeuwin H	28.45	166	T	T	13 28 06.1	
	baz=346,slow=76,SNR=183						
WB0	Warramunga Arr	30.21	117	P	P	12 58 38.8	+0.5
WRA	Warramunga Arr	30.23	117	P	P	12 58 38.6	+0.2
	comp=Z,0.8nm,0.5s,baz=294,slow=10,SNR=15						
WRA				PcP	PcP	13 01 38.3	0.0
	comp=Z,0.9nm,0.4s,baz=308,slow=2.0,SNR=7.9						
	comp=Z,0.8nm,0.5s						
WRA	Warramunga Arr	30.23	117	P	P	12 58 38.5	0.0
WRAB	Tennant Creek	30.23	117	P	P	12 58 38.7	+0.3
WRAB	Tennant Creek	30.23	117	P	P	12 58 38.2	-0.3
WR8	Warramunga Arr	30.37	117		P	12 58 40.0	+0.3
ASAR	Alice Springs	31.34	124	P	P	12 58 48.4	+0.1
	comp=Z,0.7nm,0.4s,baz=302,slow=8.2,SNR=14						
ASAR				PcP	PcP	13 01 42.1	+0.9
	comp=Z,0.8nm,0.4s,baz=326,slow=2.3,SNR=8.4						
	comp=Z,0.7nm,0.4s						
ASAR	Alice Springs	31.34	124	P	P	12 58 48.6	+0.3
AS31	Alice Springs	31.34	124	P	P	12 58 48.7	+0.5
H08S2	Diego Garcia H	33.18	267	T	T	13 34 31.2	
	baz=92,slow=76,SNR=28						
H08S3	Diego Garcia H	33.19	267	T	T	13 34 29.6	
	baz=92,slow=76,SNR=32						
H08S1	Diego Carcia H	33.20	267	T	T	13 34 29.2	
	baz=92,slow=76,SNR=23						
PZH	PanZhiHua	33.88	353	P	P	12 59 12.9	+2.4
COEN	Coen	37.12	103	P	P	12 59 37.8	-0.6
COEN				IAmb	IAmb	12 59 44.6	
	comp=Z,34nm,1.7s						
PMG	Port Moresby	40.79	96		P	13 00 09.7	+0.6
PMG				IAmb	IAmb	13 00 12.9	
	comp=Z,12nm,0.8s						
NJ2	Nanjing	41.05	17	eP	P	13 00 11.3	+0.5
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
STKA	Stephens Creek	41.19	131	P	P	13 00 13.2	+1.1
	comp=Z,3.3nm,0.5s,baz=298,slow=11,SNR=9.2						
STKA				PcP	PcP	13 02 11.6	+1.2
	comp=Z,2.3nm,0.5s,baz=304,slow=4.9,SNR=3.4						
	comp=Z,3.3nm,0.5s						
STKA	Stephens Creek	41.19	131	P	P	13 00 12.7	+0.6
STKA				IAmb	IAmb	13 00 36.9	
	comp=Z,24nm,0.8s						
LYN	LuoYang	42.11	8	eP	P	13 00 19.0	-0.5
LYN				pmax	pmax		
	comp=Z,12nm,0.7s						
GTA	Gaotai	46.85	353	P	P	13 00 57.3	-0.1
GTA				sP	pP	13 01 04.8	-7.4
GTA				PcP	PcP	13 02 30.9	+1.3
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC	Hu-ho-hao-te	48.22	6	eP	P	13 01 09.4	+1.4
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KSRS	Korea Array	49.06	23	P	P	13 01 13.4	-0.8
	comp=Z,1.9nm,0.7s,baz=219,slow=7.8,SNR=8.3						
KSRS				LR	LR	13 23 02.0	
	comp=Z,7µm,18.5s,baz=340,slow=38						
	comp=Z,1.9nm,0.7s						
NIL	Nilore	51.23	325		P	13 01 29.2	-1.7
WMQ	Urumqi	53.54	344	eP	P	13 01 50.8	+2.9
WMQ				PP	PP	13 03 48.9	-0.2
WMQ				S	S	13 09 17.9	+1.2
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
WUS	Wushi	54.18	335	IAmb	IAmb	13 01 52.7	
	comp=Z,6.3nm,0.7s						
KSH	Kashi	54.25	332	P	P	13 01 51.0	-2.3
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KBL	Kabul	54.33	322	P	P	13 01 53.0	-1.1
KBL				IAmb	IAmb	13 01 54.3	
	comp=Z,8.9nm,1.0s						
SONM	Songino Array	54.93	0	P	P	13 01 57.0	-1.0
	comp=Z,2.2nm,0.6s,baz=177,slow=6.9,SNR=13						
SONM				PcP	PcP	13 02 59.2	-0.1
	comp=Z,1.8nm,0.4s,baz=179,slow=3.2,SNR=11						
	comp=Z,2.2nm,0.6s						
SONM	Songino Array	54.93	0	P	P	13 01 57.0	-1.0
MANEM	Manem	54.93	327	P	P	13 01 58.2	-0.2
MANEM				IAmb	IAmb	13 01 59.2	
	comp=Z,64nm,0.7s						
ULN	Ulaanbaatar	54.97	1		P	13 01 56.9	-1.4
ULN				IAmb	IAmb	13 01 59.2	
	comp=Z,3.1nm,0.7s						
KDJ	Kajisay	55.81	334	P	P	13 02 04.6	+0.1
KDJ				IAmb	IAmb	13 02 05.2	
	comp=Z,8.3nm,0.7s						
BNX	BinXian	56.22	18	⇑P	P	13 02 06.8	-0.3
BNX				pmax	pmax		
	comp=Z,8.0nm,0.7s						
USRK	Ussuriysk Ar.	56.43	22	P	P	13 02 07.5	-1.1
	comp=Z,2.2nm,0.5s,baz=194,slow=5.2,SNR=8.6						
	comp=Z,2.2nm,0.5s						
SHAA	Shahritus	56.94	324		P	13 02 10.2	-2.3
SHAA				IAmb	IAmb	13 02 11.3	
	comp=Z,24nm,0.7s						
ARSB	Arslanbob	57.09	331	IAmb	IAmb	13 02 13.9	
	comp=Z,11nm,0.6s						
AAK	Ala-Archa	57.40	333	LR	LR	13 30 24.0	
	comp=Z,63nm,18.2s,baz=228,slow=40						
MKAR	Makanchi Array	57.86	341	P	P	13 02 17.4	-1.4
	comp=Z,4.0nm,0.4s,baz=154,slow=8.2,SNR=121						
MKAR				LR	LR	13 30 09.0	
	comp=Z,68nm,19.2s,baz=208,slow=39						
	comp=Z,4.0nm,0.4s						
MKAR	Makanchi Array	57.86	341		P	13 02 17.2	-1.5
HILR	Hailar Array B	57.92	11	P	P	13 02 17.3	-1.8
	comp=Z,12nm,0.6s,baz=192,slow=9.1,SNR=13						
	comp=Z,12nm,0.6s						
MAKZ	Makanchi	57.97	341	P	P	13 02 18.1	-1.4
MAKZ				IAmb	IAmb	13 02 19.6	
	comp=Z,6.3nm,1.6s						
KK31	Karatay Array	59.64	331		P	13 02 29.9	-1.3
KKAR	Karatay Array	59.64	331		P	13 02 30.0	-1.2
HEH	HeiHe	60.30	16	eP	P	13 02 34.3	-1.2
H04N2	CROZET ISLANDS	60.34	220	T	T	14 08 20.3	
	baz=68,slow=75,SNR=171						
H04N1	CROZET ISLANDS	60.36	220	T	T	14 08 20.5	
	baz=68,slow=75,SNR=177						
H04N3	CROZET ISLANDS	60.36	220	T	T	14 08 19.2	
	baz=68,slow=75,SNR=199						
H04S1	CROZET ISLANDS	60.53	220	T	T	14 08 34.7	
	baz=67,slow=76,SNR=8.3						
H04S3	CROZET ISLANDS	60.55	220	T	T	14 08 36.1	
	baz=67,slow=76,SNR=4.4						
H04S2	CROZET ISLANDS	60.55	220	T	T	14 08 38.1	
	baz=67,slow=76,SNR=4.6						
KURBB	Kurchatov Arra	62.42	341	P	P	13 02 48.8	-1.0
	comp=Z,4.4nm,0.7s,baz=159,slow=6.1,SNR=46						
KURBB				PcP	PcP	13 03 29.8	+1.0
	comp=Z,0.8nm,0.5s,baz=152,slow=3.2,SNR=5.0						
	comp=Z,4.4nm,0.7s						
KURK	Kurchatov	62.47	341		P	13 02 49.2	-0.9
KURK				IAmb	IAmb	13 02 50.5	
	comp=Z,5.5nm,0.5s						
ZAA0	Zalesovo Array	63.60	346		P	13 02 56.1	-1.5
ZAA0				IAmb	IAmb	13 02 57.5	
	comp=Z,3.6nm,0.8s						
ZALV	Zalesovo Beam	63.60	346	P	P	13 02 55.4	-2.2
	comp=Z,5.2nm,0.3s,baz=154,slow=6.7,SNR=49						
ZALV				LR	LR	13 32 54.8	
	comp=Z,66nm,21.7s,baz=105,slow=38						
	comp=Z,5.2nm,0.3s						
ZALV	Zalesovo Beam	63.60	346		P	13 02 56.1	-1.5
BVAR	Borovoye Array	67.28	338	P	P	13 03 20.7	-0.7
	comp=Z,14nm,0.5s,baz=144,slow=8.9,SNR=88						
BVAR				LR	LR	13 38 51.5	
	comp=Z,46nm,21.1s,baz=331,slow=42						
	comp=Z,14nm,0.5s						
BORK	Borovoye	67.32	338		P	13 03 21.1	-0.6
BORK				IAmb	IAmb	13 03 21.9	
	comp=Z,13nm,0.6s						
BORK	Borovoye	67.32	338	P	P	13 03 21.0	-0.6
AB31	Akbulak array	69.18	330		P	13 03 33.0	-0.4
AB31				IAmb	IAmb	13 03 34.0	
	comp=Z,21nm,0.8s						
ABKAR	Akbulak array	69.18	330		P	13 03 33.2	-0.1
BKZ	Black Stump Fm	70.32	129	P	P	13 03 41.8	+1.0

BKZ				IAmb	IAmb	13 03 41.9	
	comp=Z,45nm,1.5s						
PETK	Petropavlovsk-	74.38	29	P	P	13 04 02.5	-2.1
	comp=Z,4.7nm,0.9s,baz=266,slow=5.8,SNR=9.9						
	comp=Z,4.7nm,0.9s						
PETK	Petropavlovsk-	74.38	29	P	P	13 04 02.7	-1.8
ARTI	Arti	74.53	335	LR	LR	13 43 16.0	
	comp=Z,49nm,20.0s,baz=260,slow=41						
ARTI	Arti	74.53	335		P	13 04 05.5	+0.2
ARTI	Arti	74.53	335	P	P	13 04 05.3	0.0
PET	Petropavlovsk	74.80	30	P	P	13 04 06.1	-0.8
PET				IAmb	IAmb	13 04 08.6	
	comp=Z,26nm,1.1s						
VNDA	Vanda	75.83	169	P	P	13 04 13.6	+1.1
	comp=Z,1.8nm,1.1s,baz=292,slow=5.4,SNR=2.2						
	comp=Z,1.8nm,1.1s						
VNDA	Vanda	75.83	169	IAmb	IAmb	13 04 45.1	
	comp=Z,38nm,1.9s						
NRIK	Noril'sk	77.56	353	P	P	13 04 21.6	-0.6
	comp=Z,6.1nm,0.3s,baz=132,slow=3.0,SNR=14						
NRIK				LR	LR	13 43 40.8	
	comp=Z,68nm,19.4s,baz=268,slow=40						
	comp=Z,6.1nm,0.3s						
NRIK	Noril'sk	77.56	353	IAmb	IAmb	13 04 23.0	
	comp=Z,12nm,1.0s						
MMAI	Mount Meron Ar	77.96	306	P	P	13 04 27.6	+2.2
	comp=Z,3.7nm,0.5s,baz=114,slow=7.0,SNR=5.5						
	comp=Z,3.7nm,0.5s						
TIXI	Tiksi	80.26	7		P	13 04 35.9	-1.1
TIXI				IAmb	IAmb	13 04 36.6	
	comp=Z,4.8nm,0.7s						
BR104	Keskin Array S	81.28	312	P	P	13 04 43.3	0.0
	comp=Z,71nmcomp=Z,8.0nm,0.8s						
BR131	Keskin Array S	81.28	312	IAmb	IAmb	13 04 44.5	
	comp=Z,8.3nm,0.8s						
BRTR	Keskin Array B	81.28	312	P	P	13 04 43.6	+0.3
	comp=Z,5.6nm,0.7s,baz=137,slow=6.9,SNR=30						
	comp=Z,5.6nm,0.7s						
BRTR	Keskin Array B	81.28	312		P	13 04 43.8	+0.4
BR105	Keskin Array S	81.30	312	P	P	13 04 43.4	-0.1
	comp=Z,71nmcomp=Z,7.9nm,0.9s						
BR106	Keskin Array S	81.30	312	P	P	13 04 43.4	-0.1
	comp=Z,64nmcomp=Z,8.8nm,0.8s						
QSPA	South Pole Qui	82.66	180	P	P	13 04 51.7	+1.7
	comp=Z,1.4nm,0.3s,baz=269,slow=2.7,SNR=4.7						
	comp=Z,1.4nm,0.3s						
QSPA	South Pole Qui	82.66	180	IAmb	IAmb	13 05 15.7	
	comp=Z,5.5nm,1.1s						
TSUM	Tsumeb	86.10	251	LR	LR	13 40 12.8	
	comp=Z,78nm,18.8s,baz=143,slow=33						
TIRR	Tirgusor	86.30	316	P	P	13 05 08.8	+0.2
AK09	Malin Array Si	87.26	322	P	P	13 05 12.0	-1.2
AK10	Malin Array Si	87.27	322	P	P	13 05 12.6	-0.7
AK08	Malin Array Si	87.28	322	P	P	13 05 12.7	-0.6
AKASG	Malin Array Be	87.32	322	P	P	13 05 12.4	-1.0
	comp=Z,0.6nm,0.3s,baz=91,slow=5.1,SNR=4.9						
	comp=Z,0.6nm,0.3s						
AK01	Malin Array Si	87.32	322	P	P	13 05 12.8	-0.7
AK11	Malin Array Si	87.34	322	P	P	13 05 13.3	-0.3
AK04	Malin Array Si	87.36	322	P	P	13 05 13.1	-0.6
AK17	Malin Array Si	87.42	322	P	P	13 05 13.7	-0.3
LUBAR	Lubar, Ukraine	88.03	321	P	P	13 05 16.3	-0.6
MLR	Muntele Rosu	88.23	316		P	13 05 18.1	-0.1
BUR08	Bucovina Ar. S	89.18	318		P	13 05 23.5	+1.0
RNPP5	Staryi Chortor	89.49	322	P	P	13 05 23.5	-0.3
FINES	FINESS Array B	91.58	332	P	P	13 05 33.0	-0.2
	comp=Z,1.7nm,0.6s,baz=105,slow=3.3,SNR=7.6						
	comp=Z,1.7nm,0.6s						
ARCES	ARCESS Array B	93.49	340	P	P	13 05 41.5	-0.4
	comp=Z,5.7nm,1.1s,baz=109,slow=6.4,SNR=9.0						
	comp=Z,5.7nm,1.1s						
PDAR	Pinedale Array	132.87	36	PKP	PKiKP	13 11 43.1	-0.3
	comp=Z,0.3nm,0.4s,baz=337,slow=3.7,SNR=4.1						
TXAR	Lajitas Array	144.56	48	PKP	PKPdf	13 12 03.9	+0.1
	comp=Z,1.8nm,0.4s,baz=329,slow=3.5,SNR=31						
BDFB	Brasilia	145.57	228	PKPbc	PKiKP	13 12 08.3	-1.6
	comp=Z,1.3nm,0.3s,baz=198,slow=3.2,SNR=3.6						

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*CRAAG **16** 12:57:26.0, 36°.50N×5°.19E, Ml3.2, Algerie 05km NE Tala-Ifacene*

*MDD **16** 12:57:30.5±1.7, 36°.70N×4°.72E, h1^{km}, Mb4.3/6, M_mb3.7/6, Error ellipse: s-maj=17.1km s-min=13.1km az=70.0*

ISC 16 12:57:26.9±0.9**, 36°.66N**±0°.05×**5°.16E**±0°.03**, h13**^{km}**, n21, σ2^s.38**/24**, 1C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTCHA	Tamokra	0.47	241	P	Pg	12 57 36.2	-0.1
CAZD	Ain Tagrout	0.49	180	P	Pg	12 57 34.1	-2.5
SET	Setif	0.50	157	P	Pg	12 57 39.0	+2.2
DFRA	Djebel Bou Aff	0.59	101	P	Pg	12 57 38.1	-0.4
ATKB	Taksebt	0.83	271	P	Pn	12 57 45.9	+1.5
CBHR	Beni Haroun da	0.90	96	P	Pb	12 57 44.6	+0.2
CBOS	Bilal Ibnou Ra	0.94	82	P	Pb	12 57 45.9	+0.8
COAT	Oued Athmania	1.00	115	P	Pb	12 57 46.6	+0.4
CJSR	Ain Djasser	1.02	141	P	Pb	12 57 46.4	-0.2
CASM	Ain Smara	1.15	110	P	Pn	12 57 48.9	+0.2
CTEI	Djebel Teioual	1.17	120	P	Pn	12 57 49.0	-0.2
AKET	Djebel Ketaf	1.20	240	P	Pg	12 57 51.1	+1.0
CSGS	Sigus	1.36	112	P	Pn	12 57 53.9	+2.2
AKED	El Kharrouba	1.40	270	P	Pg	12 57 57.8	+3.9
ABSD	Ouled Sidi Bra	1.45	213	P	Pb	12 57 54.6	+0.7
CKTS	El Kantara	1.50	163	P	Pn	12 57 54.7	+1.1
CTGD	Timgad	1.58	135	P	Pg	12 58 00.6	+3.2
ABRIN	Birine	1.95	238	P	Pg	12 58 04.3	0.0
ETOS	Mallorca	3.61	330	P	Pn	12 58 25.8	+3.2
ETOS				S	Sn	12 59 01.7	-3.4
EIBI	Ibiza	3.83	309	P	Pn	12 58 26.6	+0.9
EIBI				S	Sn	12 59 06.2	-4.4
EPOB	Poblet	5.66	327⇑	*i*IVmb_VC		12 58 51.0	
	140nm,SNR=1.3						
EPOB				P	Pn	12 58 51.1	+0.3
EPOB				S	Sn	12 59 50.3	-5.4

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*NEIC **16** 13:01:56.4±2.1, 12°.68S±0°.08×166°.30E±0°.06, h10^{km}±1^{km}, mb4.6/25, Error ellipse: s-maj=14.4km s-min=7.9km az=152.0*

*IDC **16** 13:02:01.8±5.3, 12°.72S×166°.19E, h56^{km}±47^{km}, mb3.7/12, mbtmp3.9/13, ML3.4/1, MS3.4/4, Error ellipse: s-maj=29.6km s-min=26.2km az=108.0*

*NOU **16** 13:02:01.4, 12°.81S×165°.71E, h0^{km}, ML5.1/9, Santa Cruz Islands*

ISC 16 13:01:59.4±0.5**, 12°.75S**±0°.06×**166°.23E**±0°.07**, h35**^{km}**, n49, σ1^s.28**/45**, mb4.2**/19**, MS3.4**/3**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	2.84	161		Pn	13 02 43.5	+1.1
DVP	Devils Point	5.30	159	P	Pn	13 03 24.6	+8.6
NGOA	Tingoa Renbel	6.15	280	P	Pn	13 03 25.6	-2.1
NGOA	Tingoa Renbel	6.15	280	S	Sn	13 04 33.3	-3.5
SAVO	Savo Central	7.24	299	P	Pn	13 03 43.1	+0.3
TATA	Tatamba Isabel	7.66	304	P	Pn	13 03 49.0	+0.5
TATA	Tatamba Isabel	7.66	304	S	Sn	13 05 13.5	-0.6
DZM	Mont Dzumac	9.27	179	P	Pn	13 04 13.9	+3.2
	0.4nm,0.3s,baz=296,slow=20,SNR=7.3						
DZM				S	Sn	13 05 50.2	-3.7
	1.7nm,0.5s,baz=234,slow=19,SNR=0.8						
DZM				LR	LR	13 07 37.0	
	comp=Z,106nm,20.1s,baz=40,slow=36						
	2.9nm,0.8s						
DZM	Mont Dzumac	9.27	179		Pn	13 04 11.3	+0.6
FUNA	Funafuti	13.42	73	Pn	Pn	13 05 06.0	-1.4
RABL	Rabaul	16.29	300	P	P	13 05 49.3	+0.9
RABL				IAmb	IAmb	13 06 23.5	
	comp=Z,47nm,1.5s						
EIDS	Eidsvold	19.02	227		Pn	13 06 20.9	+1.6
EIDS				IAmb	IAmb	13 06 22.6	
	comp=Z,44nm,1.5s						
CTA	Charters Tower	20.49	247	P	Pn	13 06 36.2	-0.6
	comp=Z,3.2nm,1.0s,baz=73,slow=14,SNR=4.3						
CTA				LR	LR	13 14 00.9	
	comp=Z,90nm,18.8s,baz=33,slow=35						
	comp=Z,3.2nm,1.0s						
PATS	Pohnpei	20.99	338	P	P	13 06 40.8	+1.0
ARMA	Armidale	22.17	215	P	P	13 06 53.1	+0.5
ARMA				IAmb	IAmb	13 07 02.7	
	comp=Z,28nm,1.2s						
BKZ	Black Stump Fm	27.84	163	P	P	13 07 45.0	-0.6
BKZ				IAmb	IAmb	13 08 09.7	
	comp=Z,15nm,1.3s						
INKA	Innaminka	28.09	234	P	P	13 07 47.5	-0.5
DSZ	Denniston Nort	29.30	171	P	P	13 07 58.9	+0.4
DSZ				IAmb	IAmb	13 08 38.2	
	comp=Z,47nm,1.1s						
STKA	Stephens Creek	29.57	226	P	P	13 08 01.9	+0.9
	comp=Z,1.0nm,0.6s,baz=25,slow=9.6,SNR=3.7						
	comp=Z,1.0nm,0.6s						
STKA	Stephens Creek	29.57	226	P	P	13 08 01.7	+0.6
STKA				IAmb	IAmb	13 08 04.4	
	comp=Z,14nm,1.0s						
WB0	Warramunga Arr	31.31	253	P	P	13 08 16.6	+0.1
WB0				IAmb	IAmb	13 08 52.0	
	comp=Z,5.5nm,1.4s						
WRAB	Tennant Creek	31.38	253	P	P	13 08 17.1	-0.1
WRA	Warramunga Arr	31.39	253	P	P	13 08 16.4	-0.9
	comp=Z,0.7nm,0.9s,baz=81,slow=8.7,SNR=4.7						
	comp=Z,0.7nm,0.9s						
WRA	Warramunga Arr	31.39	253	IAmb	IAmb	13 08 17.6	
	comp=Z,0.2nm,1.1s						
AS31	Alice Springs	32.49	246	P	P	13 08 25.9	-1.1
ASAR	Alice Springs	32.49	246	P	P	13 08 26.6	-0.3
	comp=Z,0.8nm,0.8s,baz=70,slow=9.6,SNR=8.5						
ASAR				LR	LR	13 21 11.0	
	comp=Z,77nm,19.0s,baz=72,slow=35						
	comp=Z,0.8nm,0.8s						
ASAR	Alice Springs	32.49	246	P	P	13 08 25.7	-1.3
PYZ	Puysegur Point	33.31	179	P	P	13 08 33.6	-0.2
BBOO	Buckleboo	34.05	229	P	P	13 08 41.9	+1.5
BBOO				IAmb	IAmb	13 08 53.9	
	comp=Z,8.4nm,1.0s						
KNRA	Kununurra	36.41	261	P	P	13 09 01.3	+0.4
KNRA				IAmb	IAmb	13 09 27.3	
	comp=Z,20nm,1.3s						
JOHN	Johnston Islan	37.84	40	P	P	13 09 12.1	-0.9
FITZ	Fitzroy Crossi	39.43	257	P	P	13 09 25.0	-1.4
	comp=Z,1.7nm,0.7s,baz=86,slow=13,SNR=2.9						
	comp=Z,1.7nm,0.7s						
FITZ	Fitzroy Crossi	39.43	257	P	P	13 09 25.3	-1.0
MJAR	Matsushiro Arr	55.69	333	P	P	13 11 31.9	-0.4
	comp=Z,2.7nm,0.9s,baz=181,slow=9.2,SNR=4.9						
	comp=Z,2.7nm,0.9s						
MJAR	Matsushiro Arr	55.69	333	IAmb	IAmb	13 11 52.8	
	comp=Z,5.9nm,1.5s						
JKA	Kamikawa-asahi	60.55	341	P	P	13 12 06.9	+0.8
VNDA	Vanda	64.81	181	P	P	13 12 34.5	+0.4
VNDA				IAmb	IAmb	13 12 37.4	
	comp=Z,5.8nm,1.4s						
CMAR	Chiang Mai Arr	73.23	294	P	P	13 13 28.7	+1.3
	comp=Z,0.3nm,0.3s,baz=132,slow=4.9,SNR=5.2						
	comp=Z,0.3nm,0.3s						
QSPA	South Pole Qui	77.27	180	P	P	13 13 50.6	+0.7
	comp=Z,1.7nm,0.3s,baz=350,slow=0.9,SNR=7.4						
	comp=Z,1.7nm,0.3s						
QSPA	South Pole Qui	77.27	180	P	P	13 13 50.4	+0.4
QSPA				IAmb	IAmb	13 14 06.6	
	comp=Z,6.7nm,1.1s						
SONM	Songino Array	80.31	324	P	P	13 14 07.5	+0.5
	comp=Z,0.6nm,0.6s,baz=140,slow=7.2,SNR=3.5						
	comp=Z,0.6nm,0.6s						
I17K	Unalakleet	80.49	14	P	P	13 14 07.3	0.0
I17K				IAmb	IAmb	13 14 16.5	
	comp=Z,10nm,1.0s						
HIN	Hinchinbrook I	82.05	22	P	P	13 14 16.4	+0.7
ILAR	Eielson Array	84.97	18	P	P	13 14 29.7	-0.9
	comp=Z,0.4nm,0.8s,baz=208,slow=5.1,SNR=4.2						
	comp=Z,0.4nm,0.8s						
U33K	Whale Pass	85.05	29	P	P	13 14 30.7	-0.5
ANMO	Albuquerque	95.02	55	LR	LR	13 53 11.4	
	comp=Z,32nm,18.5s,baz=40,slow=32						
MKAR	Makanchi Array	95.08	317	P	P	13 15 19.5	+0.7
	comp=Z,0.4nm,0.6s,baz=79,slow=7.7,SNR=5.1						
	comp=Z,0.4nm,0.6s						
ZALV	Zalesovo Beam	95.20	324	P	P	13 15 18.5	-0.7
	comp=Z,0.4nm,0.4s,baz=126,slow=4.0,SNR=4.4						
	comp=Z,0.4nm,0.4s						
KEST	Kesra	149.04	322	PKPbc	PKPbc	13 21 43.1	-1.2
	comp=Z,3.8nm,0.7s,baz=143,slow=5.1,SNR=3.9						

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*IDC **16** 13:17:43.2±1.3, 37°.99S×49°.32E, h0^{km}, mb4.1/5, mbtmp4.1/6, ML3.8/1, MS3.8/15, Error ellipse: s-maj=49.7km s-min=25.7km az=34.0*

*NEIC **16** 13:17:45.2±1.8, 38°.03S±0°.08×49°.4E±0°.2, h10^{km}±1^{km}, mb4.6/20, Error ellipse: s-maj=20.4km s-min=13.4km az=263.0*

ISC 16 13:17:44.4±0.5**, 37°.98S**±0°.08×**49°.4E**±0°.1**, h9**^{km}**, n51, σ0^s.84**/29**, mb4.4**/13**, MS3.9**/14**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H04N1	CROZET ISLANDS	8.38	168	T	T	13 28 06.5	
	baz=348,slow=75,SNR=1518						
H04N2	CROZET ISLANDS	8.38	168	T	T	13 28 05.2	
	baz=348,slow=75,SNR=1838						
H04N3	CROZET ISLANDS	8.39	168	T	T	13 28 12.7	
	baz=348,slow=75,SNR=1421						
CRZF	Crozet Islands	8.65	168	Pn	Pn	13 19 48.9	-0.8
FOMA	Nahampoana Res	13.12	350	Pn	Pn	13 20 49.7	-1.2
VOI	Vohitsoka	16.17	351	Pn	Pn	13 21 32.6	+0.6
PAF	Port-aux-Franc	18.82	134	P	Pn	13 22 05.1	+0.4
PAF				IAmb	IAmb	13 22 44.8	
	comp=Z,130nm,1.3s						
ABPO	Ambohimpanom	18.98	354	P	P	13 22 06.1	-0.3
OPO	Ambohidratompo	19.43	354	P	P	13 22 11.9	+0.6
	baz=144,slow=18,SNR=3.6						
OPO				LR	LR	13 28 00.4	
	comp=Z,122nm,19.0s,baz=8.0,slow=32						
	comp=Z,1.3nm,0.3s						
BOSA	Boshof	22.16	288	P	P	13 22 41.3	+0.5
	comp=Z,8.9nm,1.1s,baz=152,slow=9.3,SNR=3.9						
BOSA				LR	LR	13 30 31.2	
	comp=Z,106nm,18.3s,baz=130,slow=35						
	comp=Z,8.9nm,1.1s						
BOSA	Boshof	22.16	288	P	P	13 22 41.0	+0.3
BOSA				IAmb	IAmb	13 22 50.5	
	comp=Z,32nm,1.4s						
SUR	Sutherland	23.94	275	P	P	13 22 59.5	+0.3
SUR				IAmb	IAmb	13 23 43.0	
	comp=Z,20nm,1.2s						
LPHEP	Lephephe	24.82	299	P	P	13 23 07.2	+0.1
LPHEP				IAmb	IAmb	13 23 14.1	
	comp=Z,33nm,1.3s						
KHWEE	KHWEE	26.05	301	P	P	13 23 18.1	-0.2
LSZ	Lusaka	29.35	315	LR	LR	13 34 37.0	
	comp=Z,272nm,18.2s,baz=149,slow=35						
MAW	Mawson	30.64	170	LR	LR	13 33 16.9	
	comp=Z,256nm,21.1s,baz=350,slow=30						
TSUM	Tsumeb	33.36	295	P	P	13 24 24.5	+1.3
TSUM				IAmb	IAmb	13 24 28.4	
	comp=Z,15nm,1.4s						
H08S1	Diego Carcia H	36.73	41	T	T	14 03 23.4	
	baz=212,slow=74,SNR=44						
H08S2	Diego Garcia H	36.74	41	T	T	14 03 23.4	
	baz=212,slow=74,SNR=35						
H08S3	Diego Garcia H	36.75	41	T	T	14 03 25.0	
	baz=212,SNR=100						
MBAR	Mbarara	40.95	331	LR	LR	13 41 20.7	
	comp=Z,58nm,18.3s,baz=80,slow=35						
SNAA	Sanae	42.73	202	LR	LR	13 39 15.4	
	comp=Z,100nm,21.1s,baz=60,slow=30						
SNAA	Sanae	42.73	202	P	P	13 25 42.2	+0.6
KAAM	Kaadhehdhoo	44.05	35	P	P	13 25 52.6	-0.1
H01W2	Cape Leeuwin H	51.26	108	T	T	14 21 54.6	
	baz=246,slow=75,SNR=44						
H01W3	Cape Leeuwin H	51.26	108	T	T	14 21 56.4	
	baz=246,slow=75,SNR=43						
H01W1	Cape Leeuwin H	51.27	108	T	T	14 21 57.2	
	baz=246,slow=75,SNR=51						
BELA	Belgrano 2	51.95	195	P	P	13 26 53.9	+0.7
BELA				IAmb	IAmb	13 27 05.4	
	comp=Z,7.1nm,1.4s						
QSPA	South Pole Qui	52.22	180	LR	LR	13 46 37.4	
	comp=Z,163nm,21.6s,baz=246,slow=33						
VNDA	Vanda	57.84	166	LR	LR	13 49 47.8	
	comp=Z,128nm,21.5s,baz=222,slow=33						
HOPE	Hope Point	58.00	224	P	P	13 27 35.7	-1.5
SBA	Scott Base	58.55	167	P	P	13 27 40.0	-0.7
SBA				IAmb	IAmb	13 28 23.4	
	comp=Z,11nm,1.2s						
FORT	Forrest	63.56	110	P	P	13 28 15.6	+0.1
FORT				IAmb	IAmb	13 28 32.9	
	comp=Z,4.1nm,1.0s						
EIL	Elat	68.63	347	LR	LR	13 55 17.9	
	comp=Z,60nm,20.9s,baz=194,slow=33						
ASAR	Alice Springs	71.73	106	P	P	13 29 07.7	+0.4
	comp=Z,1.1nm,0.8s,baz=234,slow=5.9,SNR=15						
	comp=Z,1.1nm,0.8s						
ASAR	Alice Springs	71.73	106	P	P	13 29 05.9	-1.4
AS31	Alice Springs	71.73	106	P	P	13 29 05.9	-1.4
MMAI	Mount Meron Ar	71.81	348	LR	LR	13 58 48.2	
	comp=Z,58nm,18.6s,baz=179,slow=34						
STKA	Stephens Creek	72.79	117	P	P	13 29 14.2	+0.8
	comp=Z,1.1nm,0.5s,baz=220,slow=8.9,SNR=4.4						
	comp=Z,1.1nm,0.5s						
STKA	Stephens Creek	72.79	117	IAmb	IAmb	13 29 20.4	
	comp=Z,25nm,1.1s						
CMAR	Chiang Mai Arr	72.93	49	P	P	13 29 15.1	+0.9
	comp=Z,0.8nm,0.6s,baz=219,slow=7.2,SNR=6.9						
CMAR				LR	LR	13 57 04.7	
	comp=Z,13nm,18.9s,baz=270,slow=32						
	comp=Z,0.8nm,0.6s						
WRA	Warramunga Arr	74.17	103	P	P	13 29 22.2	+0.5
	comp=Z,2.4nm,1.0s,baz=229,slow=5.1,SNR=9.1						
	comp=Z,2.4nm,1.0s						
WRA	Warramunga Arr	74.17	103	P	P	13 29 22.4	+0.7
INKA	Innaminka	74.53	113	P	P	13 29 24.0	+0.3
INKA				IAmb	IAmb	13 29 33.7	
	comp=Z,3.8nm,1.3s						
BRTR	Keskin Array B	78.66	348	LR	LR	14 04 51.9	
	comp=Z,19nm,18.1s,baz=237,slow=36						
TARG	Taragay, Kyrgy	83.47	21	P	P	13 30 12.0	-0.6
TARG				IAmb	IAmb	13 30 54.0	
	comp=Z,5.0nm,1.5s						
DSZ	Denniston Nort	84.88	141	P	P	13 30 20.2	+0.5
MLR	Muntele Rosu	85.72	344	LR	LR	14 12 18.1	
	comp=Z,51nm,18.2s,baz=274,slow=38						
MDT	Midelt	86.50	317	LR	LR	14 09 57.1	
	comp=Z,232nm,18.1s,baz=238,slow=36						
ARTI	Arti	94.31	5	LR	LR	14 15 18.2	
	comp=Z,53nm,18.1s,baz=275,slow=37						
ILAR	Eielson Array	151.50	15	PKPbc	PKPbc	13 37 36.2	-1.7
	comp=Z,0.6nm,0.8s,baz=323,slow=3.7,SNR=5.0						

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*IDC **16** 13:27:08.3±3.0, 25°.37N×127°.47E, h0^{km}, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=145.6km s-min=27.1km az=61.0*

*JMA **16** 13:27:11.3±0.4, 25°N±2°×12°8E±°, h64^{km}±4^{km}, MV3.0/13, NEAR OKINAWAJIMA ISLAND*

ISC 16 13:27:11.3±2.2**, 25°.31N**±0°.08×**127°.67E**±0°.06**, h28**^{km}±16^{km}**, n16, σ0^s.87**/22**, mb3.6**/5**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT3	Tamagusuku3	0.83	7	P	Pb	13 27 27.4	+0.1
JJT3				*e*S	Sn	13 27 39.4	+0.9
JNTH	Nagotoyohara	1.24	15	P	Pn	13 27 32.6	-0.2
JNTH				*e*S	Sn	13 27 48.8	+0.2
JKE	Kume jima 2	1.28	322	P	Pn	13 27 32.7	-0.6
JKE				*e*S	Sn	13 27 48.7	-0.9
JAGN	Aguni-jima	1.33	343	P	Pn	13 27 33.7	-0.2
JAGN				*e*S	Sn	13 27 49.9	-0.8
JOW	Kunigami	1.61	20	P	Pn	13 27 38.0	+0.2
JIH	Iheya	1.73	9	*e*P	Pn	13 27 39.8	+0.3
JYRO	Yoronjima	1.84	22	*e*P	Pn	13 27 41.2	+0.1
JYRO				*e*S	Sn	13 28 02.4	-1.0
JOKE	Okinoerabujima	2.19	21	*e*P	Pn	13 27 45.6	-0.3
JTK	Tokunoshima	2.72	25	*e*P	Pn	13 27 53.5	+0.5
JAMN	Amaminishikomi	3.21	24	*e*P	Pn	13 28 00.5	+0.6
JKDJ	Kitadaitoujima	3.33	78	P	Pn	13 28 00.9	-0.6
JKDJ				*e*S	Sn	13 28 38.2	-2.0
LZDM	Lanzhou Array	23.14	303	P	P	13 32 14.8	-0.8
	1.2nm,0.3s,baz=116,slow=10,SNR=4.7						
	1.2nm,0.3s						
MKAR	Makanchi Array	41.78	313	P	P	13 34 57.7	-0.5
	0.8nm,0.5s,baz=98,slow=10,SNR=20						
	0.8nm,0.5s						
ZALV	Zalesovo Beam	42.68	324	P	P	13 35 05.6	+0.3
	0.6nm,0.5s,baz=101,slow=7.5,SNR=2.0						
	0.6nm,0.5s						
KURBB	Kurchatov Arra	45.17	317	P	P	13 35 25.1	-0.4
	0.2nm,0.4s,baz=107,slow=8.8,SNR=5.5						
	0.2nm,0.4s						
ASAR	Alice Springs	49.06	172	P	P	13 35 57.9	+1.8
	0.2nm,0.6s,baz=352,slow=9.1,SNR=4.4						
	0.2nm,0.6s						

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*MEX **16** 13:46:10.6±0.6, 14°.57N×92°.04W, h94^{km}±16^{km}, MD3.8*

*GCG **16** 13:46:10.5±0.5, 14°.88N×91°.99W, h95^{km}±5^{km}, MD3.6*

ISC 16 13:46:09.2±2.7**, 14°.7N**±0°.3×**91°.9W**±0°.2**, h99**^{km}±17^{km}**, n8, σ0^s.59**/15**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMCA	Catarina	0.23	302	*i* P	Pn	13 46 24.0	+0.5
SMCA				*i* S	Sn	13 46 34.3	+0.3
THIG		0.42	295	*e*S	Sn	13 46 35.4	-0.2
CHUJ	Union Juarez	0.42	328	*e*P	Pn	13 46 25.0	+0.2
CHUJ				*e*S	Sn	13 46 36.1	-0.2
PATR	El Naranjo	0.52	318	*e*P	Pn	13 46 25.1	-0.3
PATR				*e*S	Sn	13 46 36.2	-1.1
PAVE	Pavencul	0.54	327	*e*P	Pn	13 46 26.1	+0.5
PAVE				*e*S	Sn	13 46 38.0	+0.3
STG8	El Palmar, Qui	0.58	119	*i* P	Pn	13 46 25.8	0.0
STG8				*i* S	Sn	13 46 38.4	+0.2
STG5	El Palmar, Qui	0.60	123	*i* P	Pn	13 46 26.0	+0.2
STG5				*i* S	Sn	13 46 37.6	-0.7
PCIG		1.62	307	*e*P	Pn	13 46 37.5	+0.6
PCIG				*e*S	Sn	13 46 57.0	-0.9

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*IDC **16** 13:47:58.5±0.6, 6°.59N×125°.03E, h0^{km}, mb4.1/19, mbtmp4.1/19, MS3.4/13, Error ellipse: s-maj=13.1km s-min=8.8km az=129.0*

*NEIC **16** 13:48:00.6±1.5, 6°.68N±0°.07×125°.15E±0°.07, h10^{km}±1^{km}, mb4.5/26, Error ellipse: s-maj=15.1km s-min=7.7km az=312.0*

*DJA **16** 13:48:00.2±0.7, 7°N±6°×12°5E±°, h42^{km}±12^{km}, M4.9/13, mb4.9/13, mB5.2/7, MLv5.0/8, Mw(mB)4.6/7*

ISC 16 13:48:03.9±0.4**, 6°.72N**±0°.04×**125°.19E**±0°.07**, h35**^{km}**, n88, σ1^s.57**/76**, mb4.4**/38**, MS3.3**/13**, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.52	48	Pg	Pn	13 48 12.1	-2.7
	847nm,0.3s,baz=248,slow=1.8,SNR=80						
DAV				Lg	Lg	13 48 22.9	
	1µm,0.3s,baz=308,slow=20,SNR=10						
DAV				LR	LR	13 48 41.5	
	comp=Z,5µm,21.3s,baz=328,slow=60						
DAV	Davao City (W)	0.52	48		Pn	13 48 11.6	-3.2
DAV	Davao City (W)	0.52	48	P	Pn	13 48 11.9	-2.9
DAV				S	Sn	13 48 22.6	+0.1
DAV	Davao City (W)	0.52	48	P	Pn	13 48 08.0	-6.8
SGSI	Sangihe	3.03	174	P	Pn	13 48 49.5	+0.1
SGSI				S	Sn	13 49 29.1	+4.5
TNTI	Ternate	6.29	160	Pn	Pn	13 49 31.8	-2.5
TNTI	Ternate	6.29	160	P	Pn	13 49 33.9	-0.4
	0.3nm80nm,0.9s						
GTOI	Gorontalo	6.42	200	P	Pn	13 49 34.5	-1.6
MRSI	Marisa	7.00	208	P	Pn	13 49 42.0	-2.0
	0.5nm1µm120nm,0.6s						
TOLI2	Tolitoli	7.10	218	Pn	Pn	13 49 41.8	-3.6
LUWI	Luwuk	8.08	197		Pn	13 49 57.4	-1.4
LUWI	Luwuk	8.08	197	P	Pn	13 49 58.6	-0.2
	3µm107nm,0.8s						
MPSI	Mapaga	8.25	220	P	Pn	13 50 02.2	+1.0
SANI	Sanana	8.75	175	P	Pn	13 50 06.0	-2.0
	61nm,0.9s						
I39PW	PALAU INFRASON	9.32	84	I	I	14 47 54.1	
	baz=268,slow=298,SNR=0.7						
NLAI	Namlea	10.07	169	P	Pn	13 50 28.6	+2.4
	53nm,0.7s						
TTSI	Tana Toraja	11.08	209	P	Pn	13 50 39.7	-0.3
	34nm,0.8s						
MMSI	Mamuju	11.26	214	P	Pn	13 50 40.4	-2.0
KAPI	Kappang	12.86	205	LR	LR	13 56 52.5	
	comp=Z,114nm,18.4s,baz=30,slow=42						
SOEI	Soe	16.39	183		P	13 51 52.3	-1.8
SOEI				IAmb	IAmb	13 52 30.4	
	comp=Z,19nm,0.8s						
BATI	Baumata	16.88	185	Pn	P	13 51 59.4	0.0
	comp=Z,2.7nm,0.3s,baz=339,slow=0.7,SNR=8.7						
BATI				LR	LR	13 58 40.6	
	comp=Z,132nm,20.0s,baz=315,slow=38						
TWSI	Taliwang, Sumb	17.45	208	P	Pn	13 52 02.8	-1.9
QIZ	Qiongzhong	19.30	311	P	P	13 52 23.8	-2.3
QIZ				S	S	13 56 03.4	+0.6
QIZ				pmax	pmax		

	comp=Z,26nm,1.7s						
QIZ				LR	LR		
	comp=N,170nm,13.7s						
QIZ				LR	LR		
	comp=E,170nm,11.7s						
QIZ				LR	LR		
	comp=Z,290nm,16.3s						
JOW	Kunigami	20.22	8	P	P	13 52 37.2	+1.2
	comp=Z,18nm,1.0s,baz=200,slow=8.5,SNR=5.0						
JOW				LR	LR	14 00 58.6	
	comp=Z,86nm,19.7s,baz=157,slow=38						
	comp=Z,18nm,1.0s						
JOW	Kunigami	20.22	8	IAmb	IAmb	13 52 37.6	
	comp=Z,27nm,1.0s						
MTN	Manton Dam	20.31	163		P	13 52 36.7	-0.3
MTN				IAmb	IAmb	13 52 49.1	
	comp=Z,21nm,1.1s						
GUMO	Guam	20.53	69	LR	LR	13 59 26.4	
	comp=Z,32nm,19.7s,baz=22,slow=33						
KNRA	Kununurra	22.53	171		P	13 52 59.9	-1.0
FITZ	Fitzroy Crossi	24.66	179	P	P	13 53 20.7	-0.9
	comp=Z,9.5nm,0.8s,baz=6.5,slow=7.8,SNR=31						
	comp=Z,9.5nm,0.8s						
FITZ	Fitzroy Crossi	24.66	179		P	13 53 20.5	-1.1
NJ2	Nanjing	25.89	348	*e*P	P	13 53 33.3	+0.7
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
JCJ	Chichijima	25.91	37	LR	LR	14 03 00.5	
	comp=Z,65nm,21.1s,baz=122,slow=34						
PSI	Prapat	26.46	263	LR	LR	14 06 35.8	
	comp=Z,38nm,19.8s,baz=60,slow=42						
PMG	Port Moresby	27.13	126	P	P	13 53 44.5	+0.6
	comp=Z,11nm,0.6s,baz=329,slow=4.2,SNR=6.4						
	comp=Z,11nm,0.6s						
PMG	Port Moresby	27.13	126	IAmb	IAmb	13 53 46.2	
	comp=Z,14nm,0.8s						
WB0	Warramunga Arr	27.84	161		P	13 53 48.6	-1.6
WB0				IAmb	IAmb	13 54 04.8	
	comp=Z,7.9nm,0.8s						
WRAB	Tennant Creek	27.98	161	P	P	13 53 50.1	-1.4
WRAB				IAmb	IAmb	13 54 27.7	
	comp=Z,11nm,1.1s						
WRA	Warramunga Arr	27.98	161	P	P	13 53 50.0	-1.5
	comp=Z,1.0nm,0.6s,baz=337,slow=10,SNR=7.8						
	comp=Z,1.0nm,0.6s						
WR8	Warramunga Arr	28.05	161		P	13 53 50.6	-1.5
WR8				IAmb	IAmb	13 54 32.3	
	comp=Z,7.7nm,0.8s						
CMAR	Chiang Mai Arr	28.10	297	P	P	13 53 51.5	-1.2
	comp=Z,0.4nm,0.3s,baz=139,slow=7.6,SNR=4.3						
	comp=Z,0.4nm,0.3s						
PZH	PanZhiHua	29.76	314	P	P	13 54 09.3	+1.8
KSRS	Korea Array	30.69	4	P	P	13 54 15.2	-0.1
	comp=Z,2.5nm,0.9s,baz=183,slow=8.9,SNR=6.1						
	comp=Z,2.5nm,0.9s						
AS31	Alice Springs	31.38	165		P	13 54 20.3	-1.4
ASAR	Alice Springs	31.38	165	P	P	13 54 20.4	-1.3
	comp=Z,0.7nm,0.5s,baz=340,slow=6.8,SNR=27						
	comp=Z,0.7nm,0.5s						
ASAR	Alice Springs	31.38	165	P	P	13 54 20.6	-1.0
MJAR	Matsushiro Arr	31.98	20	P	P	13 54 27.1	+0.3
	comp=Z,1.4nm,0.8s,baz=196,slow=9.2,SNR=2.9						
MJAR				LR	LR	14 07 38.2	
	comp=Z,50nm,18.5s,baz=192,slow=37						
	comp=Z,1.4nm,0.8s						
HNS	HongShan	32.00	344	⇑P	P	13 54 28.8	+1.9
HNS				pmax	pmax		
	comp=Z,6.0nm,1.8s						
CTA	Charters Tower	33.75	143	LR	LR	14 09 08.9	
	comp=Z,49nm,18.1s,baz=50,slow=38						
BJI	Beijing	34.15	348	P	P	13 54 45.3	-0.3
BJI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LZH	Lanzhou	35.17	329	*e*P	P	13 55 04.3	+10
LZH				sP	sP	13 55 11.0	+1.7
LZH				pmax	pmax		
	comp=Z,13nm,1.3s						
LZH				LR	LR		
	comp=N,120nm,16.7s						
LZH				LR	LR		
	comp=E,160nm,17.4s						
LZH				LR	LR		
	comp=Z,180nm,18.4s						
HHC	Hu-ho-hao-te	36.10	342	*e*P	P	13 55 04.1	+1.5
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BTO	Baotou	36.37	340	*e*P	P	13 55 10.5	+5.6
BTO				pP	pP	13 55 15.0	-0.2
BTO				sP	sP	13 55 17.5	-2.0
BTO				pmax	pmax		
	comp=Z,13nm,0.9s						
BTO				pmax	pmax		
	comp=Z,190nm,5.1s						
FORT	Forrest	37.39	176		P	13 55 13.8	+0.3
FORT				IAmb	IAmb	13 55 27.0	
	comp=Z,4.6nm,0.7s						
INKA	Innaminka	37.41	157		P	13 55 12.9	-0.9
USRK	Ussuriysk Ar.	37.80	8	P	P	13 55 16.7	-0.2
	comp=Z,7.9nm,1.0s,baz=166,slow=8.6,SNR=7.2						
	comp=Z,7.9nm,1.0s						
XLT	XiLinHaoTe	37.88	349	*e*P	P	13 55 21.8	+4.1
XLT				sP	pP	13 55 30.0	+2.0
XLT				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MDJ	Mudanjiang	37.94	5	P	P	13 55 19.0	+0.9
MDJ				pmax	pmax		
	comp=Z,16nm,1.2s						
BNX	BinXian	38.92	2	⇓P	P	13 55 28.0	+1.8
BNX				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LSA	Lhasa	39.34	310	P	P	13 55 28.3	-2.3
GTA	Gaotai	39.76	329	P	P	13 55 35.4	+1.8
GTA				pP	pP	13 55 39.6	-4.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				LR	LR		
	comp=N,140nm,12.7s						
GTA				LR	LR		
	comp=E,170nm,12.0s						
GTA				LR	LR		
	comp=Z,140nm,15.1s						
ASAJ	Asahikawa	40.25	19	LR	LR	14 13 31.0	
	comp=Z,58nm,19.0s,baz=253,slow=38						
BBOO	Buckleboo	40.65	166		P	13 55 40.1	-0.6
BBOO				IAmb	IAmb	13 55 52.4	
	comp=Z,17nm,1.2s						
STKA	Stephens Creek	41.45	159	P	P	13 55 45.9	-1.5
	comp=Z,4.5nm,0.8s,baz=342,slow=8.2,SNR=11						
	comp=Z,4.5nm,0.8s						
STKA	Stephens Creek	41.45	159		P	13 55 46.2	-1.2
HEH	HeiHe	43.43	2	*e*P	P	13 56 04.9	+1.7
SONM	Songino Array	44.00	342	P	P	13 56 07.9	-0.1
	comp=Z,0.7nm,0.9s,baz=141,slow=9.6,SNR=3.6						
	comp=Z,0.7nm,0.9s						
TOO	Toolangi	47.97	158	P	P	13 56 40.0	+0.7
TOO				IAmb	IAmb	13 57 03.2	
	comp=Z,8.0nm,1.5s						
WMQ	Urumqi	49.41	325	*e*P	P	13 56 50.6	+0.1
WMQ				pP	pP	13 56 54.3	-6.8
WMQ				pmax	pmax		
	comp=Z,34nm,0.9s						
PETK	Petropavlovsk-	53.29	24	P	P	13 57 20.6	+1.3
	comp=Z,5.2nm,0.9s,baz=207,slow=5.1,SNR=5.6						
	comp=Z,5.2nm,0.9s						
MKAR	Makanchi Array	54.24	325	P	P	13 57 26.6	+0.2
	comp=Z,0.8nm,0.6s,baz=114,slow=8.3,SNR=7.1						
MKAR				LR	LR	14 20 48.5	
	comp=Z,51nm,21.2s,baz=356,slow=36						
	comp=Z,0.8nm,0.6s						
MKAR	Makanchi Array	54.24	325	P	P	13 57 26.0	-0.4
MA2	Magadan	56.22	15	LR	LR	14 20 30.0	
	comp=Z,25nm,20.6s,baz=55,slow=35						
AAK	Ala-Archa	57.13	317	P	P	13 57 48.5	+1.1
	comp=Z,0.7nm,0.6s,baz=125,slow=6.8,SNR=3.8						
AAK				LR	LR	14 23 53.1	
	comp=Z,58nm,20.7s,baz=90,slow=38						
	comp=Z,0.7nm,0.6s						
AAK	Ala-Archa	57.13	317	IAmb	IAmb	13 57 53.4	
	comp=Z,5.9nm,1.4s						
KURBB	Kurchatov Arra	58.41	327	P	P	13 57 55.6	-0.4
	comp=Z,1.2nm,0.9s,baz=126,slow=5.8,SNR=9.7						
	comp=Z,1.2nm,0.9s						
KURK	Kurchatov	58.41	327		P	13 57 56.2	+0.2
KURK				IAmb	IAmb	13 58 05.1	
	comp=Z,5.3nm,0.9s						
KKAR	Karatay Array	60.02	316		P	13 58 07.6	+0.3
BVAR	Borovoye Array	63.99	327	P	P	13 58 34.6	+0.9
	comp=Z,1.5nm,0.9s,baz=127,slow=6.3,SNR=6.4						
	comp=Z,1.5nm,0.9s						
ODZ	Otahua Downs	65.67	146	P	P	13 58 44.4	-0.3
RTZ	Ruatahuna	65.86	138	P	P	13 58 45.1	-1.1
AB31	Akbulak array	68.88	320	P	P	13 59 04.9	-0.2
AB31				IAmb	IAmb	13 59 32.0	
	comp=Z,3.2nm,1.1s						
ABKAR	Akbulak array	68.88	320	P	P	13 59 04.8	-0.3
AKTO	Aktyubinsk	70.38	321	P	P	13 59 13.6	-0.7
	comp=Z,1.2nm,0.6s,baz=118,slow=5.1,SNR=4.7						
AKTO				LR	LR	14 33 37.8	
	comp=Z,64nm,18.0s,baz=158,slow=39						
	comp=Z,1.2nm,0.6s						
C18K	Utukok River	77.83	21	P	P	13 59 56.6	-1.0
C18K				IAmb	IAmb	14 00 16.0	
	comp=Z,6.6nm,1.2s						
C19K	Lookout Ridge	78.50	21	P	P	14 00 00.6	-0.6
C19K				IAmb	IAmb	14 00 07.3	
	comp=Z,6.5nm,0.9s						
B21K	Ikpikpuk River	80.32	20	P	P	14 00 12.5	+1.5
ILAR	Eielson Array	83.08	26	P	P	14 00 27.1	+1.3
	comp=Z,0.9nm,0.7s,baz=250,slow=4.8,SNR=14						
	comp=Z,0.9nm,0.7s						
YKA	Yellowknife Ar	97.41	24	P	Pdif	14 01 35.6	+1.9
	comp=Z,0.6nm,0.7s,baz=302,slow=5.5,SNR=7.4						
	comp=Z,0.6nm,0.7s						

*IDC **16** 13:52:20.4±2.8, 6°.09S×129°.86E, h196^{km}±29^{km}, mb3.5/8, mbtmp4.4/13, Error ellipse: s-maj=23.5km s-min=13.7km az=47.0*

*NEIC **16** 13:52:21.4±1.5, 5°.97S±0°.08×130°.00E±0°.10, h205^{km}±9^{km}, mb4.6/22, Error ellipse: s-maj=14.3km s-min=11.5km az=96.0*

*DJA **16** 13:52:21.4±0.1, 6°S±2°×13°0E±°, h205^{km}±3^{km}, M4.5/31, mb4.4/31, mB5.0/13, MLv4.9/18, Mw(mB)4.3/13*

ISC 16 13:52:20.9±0.4**, 6°.10S**±0°.05×**129°.98E**±0°.05**, h200^{km}, n102, σ1^{s}.20**/103**, mb4.4**/16**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.57	357	P	Pn	13 52 56.9	+1.6
BNDI	Bandanaira	1.57	357	P	Pn	13 52 56.3	+1.0
BNDI				S	Sn	13 53 23.4	+1.3
SAUI	Saumlaki	2.28	145		Pn	13 53 04.4	+1.9
SAUI	Saumlaki	2.28	145	P	Pn	13 53 04.9	+2.5
SAUI	Saumlaki	2.28	145	P	Pn	13 53 04.5	+2.1
SAUI				S	Sn	13 53 36.4	+1.5
MSAI	Masohi	2.93	339	P	Pn	13 53 09.8	0.0
AAI	Ambon	2.99	323	P	Pn	13 53 10.3	-0.2
KRAI	Karang Ratu	3.19	330	P	Pn	13 53 11.4	-1.4
FAKI	Fak Fak	3.88	36		Pn	13 53 19.9	-1.4
FAKI	Fak Fak	3.88	36	P	Pn	13 53 20.4	-0.9
FAKI	Fak Fak	3.88	36	P	Pn	13 53 19.9	-1.4
NLAI	Namlea	4.04	315	P	Pn	13 53 28.8	+5.5
KMPI	Kaimana, Papua	4.43	57	P	Pn	13 53 27.4	-0.7
SWI	Sorong	5.36	14	P	Pn	13 53 38.0	-2.0
SANI	Sanana	5.66	315	P	Pn	13 53 45.0	+1.1
SANI	Sanana	5.66	315	P	Pn	13 53 44.5	+0.6
	0.3nm1μm92nm,0.8s						
RKPI	Ransiki, Papua	6.19	43	P	Pn	13 53 49.8	-0.9
DRS	Darwin Rock St	6.36	172	P	Pn	13 53 53.7	+0.9
MWPI	Manokwari, Pap	6.54	38	P	Pn	13 53 55.4	+0.1
SOEI	Soe	6.72	237		Pn	13 53 59.6	+1.9
SOEI	Soe	6.72	237	P	Pn	13 54 00.3	+2.5
SOEI	Soe	6.72	237	P	Pn	13 53 59.7	+1.9
	0.9nm1μm77nm,0.7s						
MTN	Manton Dam	6.79	170		Pn	13 53 58.9	+0.4
BATI	Baumata	7.47	236	P	Pn	13 54 06.9	-0.4
	59nm,0.5s,baz=150,slow=1.2,SNR=25						
BATI				S	Sn	13 55 28.6	-3.3
	119nm,0.5s,baz=138,slow=15,SNR=9.8						
BATI	Baumata	7.47	236	P	Pn	13 54 08.9	+1.6
	0.5nm1μm78nm,0.7s						
BAKI	Biak	7.82	52	P	Pn	13 54 13.5	+1.6
	0.5nm146nm,0.9s						
EDFI	Ende, Flores	8.63	252	P	Pn	13 54 24.7	+2.1
	20nm,0.6s						
KNRA	Kununurra	9.59	187		Pn	13 54 34.8	-0.1
GTOI	Gorontalo	9.66	314	P	Pn	13 54 39.2	+3.4
	730nm33nm,0.7s						
BASI	Baing, Sumba	10.17	246	P	Pn	13 54 43.0	+0.6
	1μm75nm,0.6s						
WSI	Waingapu	10.23	249	P	Pn	13 54 43.4	+0.2
LBFI	Labuhan Bajo,	10.29	256	P	Pn	13 54 45.1	+1.1
	21nm,0.9s						
WBSI	Waikabubak, Su	11.07	251	P	Pn	13 54 54.7	+0.7
	34nm,0.9s						
DBNI	Kabupaten Domp	11.82	258	P	Pn	13 55 05.1	+1.5
	9.6nm,0.9s						
PLAI	Plampang	12.40	257	P	Pn	13 55 11.0	0.0
PLAI	Plampang	12.40	257	P	Pn	13 55 10.3	-0.7
	31nm,1.3s						
FITZ	Fitzroy Crossi	12.66	199	P	Pn	13 55 13.8	-0.3
	31nm,0.3s,baz=32,slow=11,SNR=70						
FITZ				S	Sn	13 57 29.6	-5.8
	14nm,0.3s,baz=62,slow=13,SNR=4.7						
FITZ	Fitzroy Crossi	12.66	199	P	Pn	13 55 14.0	-0.2
TWSI	Taliwang, Sumb	13.25	258	P	Pn	13 55 20.7	-1.0
	15nm,0.9s						
WB0	Warramunga Arr	14.24	163	Pn	Pn	13 55 32.7	-1.3
WRAB	Tennant Creek	14.39	163	Pn	Pn	13 55 34.4	-1.4
WRAB	Tennant Creek	14.39	163	P	Pn	13 55 35.6	-0.2
WRA	Warramunga Arr	14.40	163	P	Pn	13 55 34.8	-1.1
	5.0nm,0.7s,baz=338,slow=13,SNR=23						
WRA				S	S	13 58 08.4	-7.6
	4.9nm,0.5s,baz=330,slow=23,SNR=8.8						
WR8	Warramunga Arr	14.46	163	Pn	Pn	13 55 35.5	-1.0
COEN	Coen	15.15	122		Pn	13 55 44.8	-0.3
COEN				IAmb	IAmb	13 55 46.7	
	comp=Z,14nm,0.5s						
COEN	Coen	15.15	122	P	Pn	13 55 45.2	+0.1
JAGI	Jajag, Banyuwa	15.88	261	P	P	13 55 52.5	-1.1
JAGI				IAmb	IAmb	13 56 05.8	
	comp=Z,22nm,1.2s						
GMJI	Gumukmas	16.55	262	P	P	13 56 00.7	-0.4
	comp=Z,17nm,1.4s						
QIS	Mount Isa	17.14	148	P	P	13 56 08.7	+1.2
PMG	Port Moresby	17.33	102	P	Pn	13 56 11.6	+0.3
	comp=Z,26nm,0.7s,baz=283,slow=5.1,SNR=13						
PMG	Port Moresby	17.33	102	P	P	13 56 08.6	-1.1
PMG	Port Moresby	17.33	102	P	Pn	13 56 11.6	+0.3
	comp=Z,44nm,0.9s						
AS31	Alice Springs	17.87	168		P	13 56 16.5	+1.1
AS31				IAmb	IAmb	13 56 20.5	
	comp=Z,14nm,0.8s						
ASAR	Alice Springs	17.87	168	P	P	13 56 17.0	+1.5
	comp=Z,37nm,0.7s,baz=349,slow=11,SNR=53						
ASAR				S	S	13 59 28.5	-1.9
	comp=Z,12nm,0.7s,baz=351,slow=20,SNR=22						
ASAR	Alice Springs	17.87	168		P	13 56 16.9	+1.5
MBWA	Marble Bar	17.96	213	P	P	13 56 17.4	+0.9
MBWA				IAmb	IAmb	13 56 18.1	
	comp=Z,13nm,0.6s						
MBWA	Marble Bar	17.96	213	P	P	13 56 17.6	+1.1
SNJI	Sawahan-Nganju	18.17	264	P	P	13 56 20.6	+1.7
	comp=Z,8.4nm,0.5s						
PSA00	Pilbara Seismi	18.24	212		P	13 56 20.4	+0.9
PSA00	Pilbara Seismi	18.24	212		P	13 56 19.9	+0.4
PSA00				IAmb	IAmb	13 56 21.6	
	comp=Z,12nm,0.8s						
PSA00	Pilbara Seismi	18.24	212	P	P	13 56 20.7	+1.2
MTSU	Mount Surprise	18.40	132	P	P	13 56 22.2	+0.9
PCJI	Pacitan	18.77	263	P	P	13 56 25.0	-0.3
	comp=Z,18nm,1.3s						
UGM	Wanagama	19.40	264	P	P	13 56 31.8	-0.3
SBUM	Sibu	19.67	295	P	P	13 56 36.4	+1.5
CTA	Charters Tower	21.05	133	P	P	13 56 50.2	+0.5
	comp=Z,4.7nm,0.7s,baz=300,slow=10,SNR=8.7						
	comp=Z,4.7nm,0.7s						
CTA	Charters Tower	21.05	133	P	P	13 56 50.6	+0.9
CTAO	Charters Tower	21.05	133	P	P	13 56 49.8	+0.2
CTAO	Charters Tower	21.05	133	P	P	13 56 50.5	+0.9
GIRL	Giralia	22.39	221	P	P	13 57 03.1	+0.2
MEEK	Meekatharra	23.12	207	P	P	13 57 11.2	+1.7
FORT	Forrest	24.62	184	P	P	13 57 23.7	+0.7
FORT				IAmb	IAmb	13 57 41.1	
	comp=Z,15nm,1.4s						
MORW	Morawa	26.37	208	P	P	13 57 39.1	+0.2
MORW				IAmb	IAmb	13 58 06.2	
	comp=Z,10nm,1.1s						
MORW	Morawa	26.37	208	P	P	13 57 39.6	+0.7
BBOO	Buckleboo	27.17	169	P	P	13 57 46.1	+0.2
BLDU	Ballidu	27.39	205	P	P	13 57 48.4	+0.5
KLBR	Kellerberrin	27.82	203	P	P	13 57 52.3	+0.6
STKA	Stephens Creek	27.85	158	P	P	13 57 52.2	+0.2
	comp=Z,2.9nm,1.0s,baz=338,slow=14,SNR=4.7						
	comp=Z,2.9nm,1.0s						
STKA	Stephens Creek	27.85	158	P	P	13 57 52.6	+0.7
STKA				IAmb	IAmb	13 57 52.8	
	comp=Z,17nm,1.0s						
MUN	Mundaring	28.79	205	P	P	13 58 00.8	+0.5
NWAO	Narrogin (SRO)	29.21	202	P	P	13 58 04.4	+0.4
NWAO				IAmb	IAmb	13 58 10.2	
	comp=Z,19nm,1.4s						
JOW	Kunigami	32.78	357	P	P	13 58 34.2	-1.1
	comp=Z,9.8nm,0.8s,baz=117,slow=9.0,SNR=3.9						
	comp=Z,9.8nm,0.8s						
JOW	Kunigami	32.78	357	IAmb	IAmb	13 58 35.2	
	comp=Z,22nm,1.2s						
SANVU	Saraoutou	37.67	107	P	P	13 59 16.3	-0.9
SANVU	Saraoutou	37.67	107	P	P	13 59 17.4	+0.2
DZM	Mont Dzumac	38.62	118	P	P	13 59 24.4	-0.9
NJ2	Nanjing	39.40	345	*e*P	P	13 59 31.3	0.0
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MARNC	Mare, Loyalty	39.84	116	P	P	13 59 35.1	-0.1
PZH	PanZhiHua	42.42	321	P	P	13 59 56.0	-0.3
HHC	Hu-ho-hao-te	49.69	342	*e*P	P	14 00 54.8	+2.1
HHC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WHZ	Wether Hill Ro	51.46	147	P	P	14 01 05.8	0.0
WHZ				IAmb	IAmb	14 01 10.9	
	comp=Z,36nm,1.5s						
WMQ	Urumqi	62.64	327	*e*P	P	14 02 25.1	+0.8
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
MKAR	Makanchi Array	67.47	327	P	P	14 02 55.4	+0.2
	comp=Z,1.0nm,0.6s,baz=128,slow=7.5,SNR=7.8						
	comp=Z,1.0nm,0.6s						
ZALV	Zalesovo Beam	70.78	334	P	P	14 03 13.5	-1.9
	comp=Z,0.5nm,0.5s,baz=124,slow=4.2,SNR=1.9						
	comp=Z,0.5nm,0.5s						
KURBB	Kurchatov Arra	71.74	328	P	P	14 03 21.0	-0.2
	comp=Z,0.7nm,0.6s,baz=127,slow=4.8,SNR=9.1						
	comp=Z,0.7nm,0.6s						
KURK	Kurchatov	71.75	328	P	P	14 03 21.0	-0.3
KURK	Kurchatov	71.75	328	IAmb	IAmb	14 03 25.1	
	comp=Z,4.5nm,1.4s						
BVAR	Borovoye Array	77.30	328	P	P	14 03 52.8	-0.4
	comp=Z,0.4nm,0.5s,baz=128,slow=9.3,SNR=3.2						
	comp=Z,0.4nm,0.5s						
QSPA	South Pole Qui	83.87	180	P	P	14 04 27.4	-0.6
	comp=Z,0.6nm,0.6s,baz=326,slow=1.2,SNR=6.4						
	comp=Z,0.6nm,0.6s						
QSPA	South Pole Qui	83.87	180	P	P	14 04 27.2	-0.9
D19K	Kuna River	89.10	21	P	P	14 04 51.4	-1.8
I21K	Tanana	90.50	24	P	P	14 04 57.8	-1.9
I21K				IAmb	IAmb	14 05 11.1	
	comp=Z,11nm,1.4s						

IDC 16 14:00:49.5±3.2**, 38°.15S**×**49°.30E, h0^{km}, mb3.5**/3**, mbtmp3.5**/3**, MS3.0**/1**, Error ellipse: s-maj=115.0km s-min=58.6km az=49.0, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H04N1	CROZET ISLANDS	8.22	168	T	T	14 11 27.9	
	baz=347,slow=76,SNR=10						
H04N2	CROZET ISLANDS	8.22	168	T	T	14 11 26.6	
	baz=347,slow=76,SNR=9.9						
H04N3	CROZET ISLANDS	8.23	168	T	T	14 11 27.6	
	baz=347,slow=76,SNR=11						
MAW	Mawson	30.48	170	LR	LR	14 17 12.6	
	comp=Z,26nm,18.5s,baz=336,slow=32						
H01W2	Cape Leeuwin H	51.25	107	T	T	15 04 58.9	
	baz=246,slow=75,SNR=9.4						
H01W3	Cape Leeuwin H	51.26	107	T	T	15 04 54.9	
	baz=246,slow=75,SNR=7.3						
H01W1	Cape Leeuwin H	51.27	107	T	T	15 04 59.9	
	baz=246,slow=75,SNR=9.5						
ASAR	Alice Springs	71.73	106	P	P	14 12 15.2	+1.4
	0.2nm,0.6s,baz=236,slow=5.7,SNR=4.9						
	0.2nm,0.6s						
CMAR	Chiang Mai Arr	73.08	49	P	P	14 12 21.9	+0.3
	0.4nm,0.6s,baz=232,slow=4.3,SNR=4.2						
	0.4nm,0.6s						
WRA	Warramunga Arr	74.18	103	P	P	14 12 26.4	-1.8
	0.7nm,0.9s,baz=231,slow=5.8,SNR=2.0						
	0.7nm,0.9s						
ILAR	Eielson Array	151.68	15	PKPbc	PKPbc	14 20 44.5	-0.3
	0.3nm,0.8s,baz=328,slow=3.2,SNR=3.9						

*TAP **16** 14:04:53.3, 23°.98N×122°.51E, h28^{km}, ML2.6, C*

*JMA **16** 14:04:53.2±0.2, 24°N±1°×122°.5E±0°.7, h22^{km}, MV1.9/11, NW OFF ISHIGAKIJIMA IS*

ISC 16 14:04:52.4±1.0**, 23°.86N**±0°.02×**122°.53E**±0°.02**, h24^{km}**±10^{km}**, n87, σ0^{s}.77**/150**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	EOS4	0.32	324	*i* P	Pb	14 04 59.4	0.0
EOS4				*i* S	Sb	14 05 04.2	0.0
EOS3	EOS3	0.47	336	*e*P	Pb	14 05 02.0	+0.1
EOS3				*i* S	Sb	14 05 08.3	-0.2
EOS2	EOS2	0.62	334	*i* P	Pb	14 05 04.9	+0.3
EOS2				*i* S	Sb	14 05 13.5	+0.7
JYNG	Yonagunijimaku	0.70	33	*e*P	Pb	14 05 05.6	-0.4
JYNG				*e*S	Sb	14 05 13.9	-1.4
YOJ	Yonaguni jima	0.75	36	*i* P	Pn	14 05 06.4	-1.1
YOJ				S	Sb	14 05 14.9	-1.6
YOJ	Yonaguni jima	0.75	36	*e*P	Pn	14 05 06.3	-1.1
YOJ				*e*S	Sb	14 05 15.2	-1.3
TEYL	Yanliau Villag	0.85	271	P	Pn	14 05 08.5	-0.3
TEYL				S	Sb	14 05 21.0	+1.5
ETL	Fush Village	0.88	290	*e*P	Pb	14 05 10.0	+1.0
TWD	Chiawan	0.88	285	*e*P	Pb	14 05 09.7	+0.7
TWD				*e*S	Sn	14 05 20.6	-0.7
SHUL	Shoufeng	0.88	266	P	Pn	14 05 08.9	-0.4
SHUL				S	Sn	14 05 21.2	-0.2
NACB	Ninganchiao	0.91	290	P	Pn	14 05 08.6	-1.0
ENA	Nanau	0.91	309	P	Pn	14 05 09.5	-0.2
ENA				S	Sn	14 05 21.0	-1.2
ESAO	Su ao	0.95	319	*e*P	Pn	14 05 09.4	-0.8
ESAO				*e*S	Sn	14 05 21.1	-1.9
TWC	Suao	0.97	321	P	Pn	14 05 09.6	-0.9
TWC				S	Sn	14 05 21.6	-1.9
ESL	Shilin	1.00	268	*e*P	Pn	14 05 09.9	-1.1
ESL				*e*S	Sn	14 05 23.3	-1.1
ETLH	Xiulin Townshi	1.01	290	P	Pn	14 05 10.6	-0.7
EGFH	Guangfu	1.02	260	*e*P	Pn	14 05 10.7	-0.5
EGFH				*e*S	Sn	14 05 24.7	-0.2
LXIB	Xiulin Townshi	1.03	279	*e*P	Pn	14 05 10.8	-0.7
LXIB				*e*S	Sn	14 05 24.6	-0.7
WARBT	Fenglin Townsh	1.05	263	*e*P	Pn	14 05 10.8	-0.9
WARBT				S	Sn	14 05 24.4	-1.2
NDS	Dongshan	1.07	316	*e*P	Pn	14 05 11.8	-0.1
HGSD	Ruisui	1.07	250	*e*P	Pn	14 05 11.3	-0.7
HGSD				*e*S	Sn	14 05 25.3	-0.8
EGS		1.12	331	*e*P	Pn	14 05 12.7	+0.1
EGS				*e*S	Sn	14 05 27.1	-0.2
LATG	Datong	1.13	307	*e*P	Pn	14 05 12.8	-0.1
LATG				*e*S	Sn	14 05 27.4	-0.4
EHYH	Wanrong	1.14	252	*e*P	Pn	14 05 12.7	-0.2
EHYH				*e*S	Sn	14 05 27.7	0.0
EHY	Hungye	1.16	253	*e*P	Pn	14 05 12.8	-0.3
EHY				*e*S	Sn	14 05 27.8	-0.4
TWE	Neicheng	1.16	318	*e*P	Pn	14 05 13.5	+0.3
TWE				*e*S	Sn	14 05 27.4	-0.9
ENTT	Nioudou	1.17	312	*e*P	Pn	14 05 13.6	+0.2
ENTT				*e*S	Sn	14 05 28.2	-0.4
HATJ	Hateruma jima	1.19	80	*e*S	Sb	14 05 29.8	+0.6
NNSB	Datong	1.19	299	P	Pn	14 05 13.6	-0.1
NNSB				S	Sn	14 05 28.8	-0.3
IRIF	Iriomote-Funau	1.20	66	*e*P	Pb	14 05 14.9	+0.4
IRIF				*e*S	Sb	14 05 30.1	+0.6
NNS	Nan Shan	1.20	299	P	Pn	14 05 13.7	-0.2
NNS				*e*S	Sn	14 05 29.1	-0.3
YULB	Yu-li	1.22	248	*e*P	Pn	14 05 13.9	0.0
YULB				*e*S	Sn	14 05 29.5	-0.2
CHKH	Chenggong	1.23	238	*e*P	Pn	14 05 13.3	-0.8
CHKH				*e*S	Sn	14 05 28.9	-1.1
TWF1	Yuli	1.23	246	*e*P	Pn	14 05 14.0	-0.2
TWF1				*e*S	Sn	14 05 30.3	+0.2
OWD	Renai	1.24	275	P	Pn	14 05 14.1	-0.2
OWD				*e*S	Sn	14 05 30.0	-0.4

FUSB	**Fushanzhiwuyua**	1.24	317	P	Pn	14 05 14.7	+0.3
FUSB				*e*S	Sn	14 05 30.1	-0.2
TWB1	**Santiao Chiao**	1.25	337	*e*P	Pn	14 05 14.4	+0.1
VWDT	**VWDT**	1.27	266	P	Pn	14 05 14.7	+0.1
VWDT				S	Sn	14 05 31.0	0.0
TIPB	**Shuangxi**	1.28	330	*e*P	Pn	14 05 15.6	+0.7
TIPB				*e*S	Sn	14 05 31.2	0.0
TWT	**Tachien**	1.29	288	*e*P	Pn	14 05 15.7	+0.5
WUSB	**Renai**	1.29	276	*e*P	Pn	14 05 15.1	0.0
WUSB				S	Sn	14 05 31.9	+0.1
CHKT	**Chengkung**	1.31	235	*e*P	Pn	14 05 15.0	-0.1
CHKT				*e*S	Sn	14 05 30.3	-1.5
FULB	**Fuli**	1.31	240	*e*P	Pn	14 05 15.0	-0.2
NWLT	**Wulai**	1.31	315	*e*P	Pn	14 05 15.6	+0.4
NWLT				*e*S	Sn	14 05 31.9	-0.1
TDCB	**Techi**	1.31	288	*e*P	Pn	14 05 15.2	-0.2
YHNB	**Yeheng**	1.32	308	P	Pn	14 05 15.8	+0.3
YHNB				*e*S	Sn	14 05 32.8	+0.4
NSK	**Sanguang**	1.34	308	P	Pn	14 05 15.8	+0.1
SXI1	**Grass Mountain**	1.37	334	P	Pn	14 05 16.2	+0.1
SXI1				S	Sn	14 05 32.9	-0.6
NWF	**Wu-fen Shan**	1.39	331	*e*P	Pn	14 05 15.7	-0.6
WFSB	**Wu-fen Shan**	1.39	331	*e*P	Pn	14 05 15.6	-0.6
EHD	**Haiduan**	1.40	240	*e*P	Pb	14 05 17.9	0.0
EHD				*e*S	Sb	14 05 35.9	+0.5
JKRS	**Kuro-shima**	1.41	74	*e*P	Pb	14 05 19.3	+1.3
JKRS				*e*S	Sb	14 05 36.7	+1.2
ECS	**Chishang**	1.42	238	*e*P	Pb	14 05 18.8	+0.5
ECS				*e*S	Sb	14 05 35.9	0.0
SMLT	**Sun Moon Lake**	1.49	271	*e*P	Pn	14 05 18.1	+0.3
SMLT				*e*S	Sb	14 05 38.1	+0.1
YUS	**Yu-Shan**	1.49	256	*e*P	Pn	14 05 18.0	-0.1
YUS				*e*S	Sn	14 05 37.3	+0.2
WCS	**Beigang Elemen**	1.49	278	*e*P	Pn	14 05 18.3	+0.6
NFF	**Wufeng Townshi**	1.50	301	*e*P	Pn	14 05 19.0	+1.1
NFF				*e*S	Sn	14 05 38.2	+1.5
WHP	**Taichung City**	1.50	286	*e*P	Pb	14 05 20.7	+1.0
TYC	**Yuchr**	1.53	272	*e*P	Pn	14 05 18.7	+0.5
KSHI	**Guanxi Townshi**	1.53	307	*e*P	Pn	14 05 18.9	+0.7
ELDTW	**Lidau**	1.54	245	*e*P	Pn	14 05 18.4	0.0
ELDTW				S	Sn	14 05 37.2	-0.5
WHYT	**Xinyi Township**	1.54	264	*e*P	Pn	14 05 19.5	+1.1
WHYT				*e*S	Sb	14 05 39.5	0.0
YM01	**YM01**	1.55	326	*e*P	Pn	14 05 20.0	+1.4
JIJ	**Ishigaki jima**	1.56	71	*e*S	Sb	14 05 40.1	+0.1
ZUZH	**Zhuzihu**	1.58	326	*e*P	Pn	14 05 19.0	+0.1
ZUZH				*e*S	Sn	14 05 39.0	+0.5
LIOB	**Emei**	1.58	300	*e*P	Pn	14 05 20.0	+0.9
LIOB				*e*S	Sb	14 05 40.9	+0.3
NSTT	**Nanjuang**	1.59	299	*e*P	Pn	14 05 20.4	+1.3
NSTT				*e*S	Sn	14 05 40.1	+1.3
ALS	**Alishan**	1.61	258	*i* P	Pn	14 05 20.8	+1.2
ALS				*i* S	Sn	14 05 40.6	+0.7
WJS	**Zhushan**	1.65	269	*e*P	Pn	14 05 20.3	+0.5
TWQ1	**Liyutan**	1.67	287	*e*P	Pn	14 05 21.6	+1.4
TWGBT	**Beinan**	1.68	232	*e*P	Pn	14 05 21.0	+0.6
TWGBT				*e*S	Sn	14 05 41.0	-0.2
WNT	**Mingjian**	1.69	271	*e*P	Pn	14 05 22.0	+1.6
WNT				*e*S	Sb	14 05 43.2	-0.4
TWG	**Pinlang**	1.69	233	*e*P	Pn	14 05 20.9	+0.5
TWG				*e*S	Sn	14 05 40.5	-0.8
STYH	**Taoyuan**	1.75	247	*e*P	Pn	14 05 22.0	+0.8
STYH				*e*S	Sn	14 05 43.2	+0.5
JISG	**Ishigakijimahi**	1.78	66	*e*P	Pn	14 05 22.6	+0.8
JISG				*e*S	Sn	14 05 44.1	+0.4
WCKO	**Fanlu**	1.81	257	*e*P	Pn	14 05 23.8	+1.7
WCKO				S	Sb	14 05 48.0	+0.8
TPUB	**Ta-pu**	1.83	253	*e*P	Pn	14 05 23.9	+1.6
TPUB				*e*S	Sb	14 05 46.8	-0.8
WTP	**Ta-pu**	1.86	251	*e*P	Pb	14 05 24.9	-0.8
WTP				*e*S	Sb	14 05 48.2	-0.3
ECL	**Taimali**	1.91	229	*e*P	Pn	14 05 23.7	+0.2
SGST	**Jiashian**	1.94	247	*e*P	Pb	14 05 26.1	-1.0
SGST				*e*S	Sb	14 05 50.7	-0.3
CHN1	**Nanshi**	1.95	250	*e*P	Pb	14 05 26.3	-1.0
CHN1				*e*S	Sb	14 05 51.7	+0.5
TWK	**Hsinying**	1.96	253	*e*P	Pb	14 05 26.3	-1.1
TWK				*e*S	Sb	14 05 51.5	0.0
SSD	**Sandimen**	2.06	238	*e*P	Pn	14 05 27.5	+1.9
SSD				*e*S	Sn	14 05 50.7	+0.1
EAST	**Anshuo**	2.13	227	*e*P	Pn	14 05 26.5	0.0
MASBT	**Mashibuluo**	2.14	235	*e*P	Pn	14 05 27.1	+0.5
SCZT	**Fangliau**	2.29	230	*e*P	Pb	14 05 31.9	-1.3
SCZT				*e*S	Sb	14 06 00.3	-0.8
PTMZ	**Houxiangcun**	3.32	291	*e*P	Pn	14 05 42.5	-0.3

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*NEIC **16** 14:06:49.4±1.0, 35°.611N±0°.008×117°.45W±0°.01, h5^{km}±1^{km}, Error ellipse: s-maj=2.3km s-min=1.5km az=256.0*

PAS 16 14:06:50.1±0.6**, 35°.617N**±0°.008×**117°.47W**±0°.01**, h7**^{km}±2^{km}**, ML3.5**/122**, ML3.2**/172(NEIC)**, Error ellipse: s-maj=1.5km s-min=1.1km az=71.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSHM	**Spangler Hills**	0.02	224		Pg	14 06 51.4	-0.1
CCCA	**Chr Cany lake**	0.13	136		Pg	14 06 53.1	+0.3
GPO	**China Lake**	0.16	282		Pg	14 06 53.6	+0.2
GPO					Sg	14 06 56.5	+0.8
LRMC	**Laurel Mtn Rad**	0.22	231		Pg	14 06 54.4	-0.1
LRMC				IAML		14 06 58.8	
	comp=E,8μm,0.2s						
CLC	**China Lake**	0.22	333		Pg	14 06 54.4	-0.1
CLC				IAML		14 06 58.1	
	comp=N,8μm,0.4s						
CLC				IAML		14 06 58.9	
	comp=E,4μm,0.3s						
SRTC	**Snort**	0.24	288		Pg	14 06 55.2	+0.3
SRTC					Sg	14 06 59.6	+1.5
TOW	**Tower One**	0.30	309		Pg	14 06 56.4	+0.3
TOW					Sg	14 07 01.4	+1.2
RCWM	**Renegade Canyo**	0.36	337		Pg	14 06 57.1	-0.1
RCWM					Sg	14 07 02.5	+0.5
WVPM	**Volcano Peak E**	0.43	320		Pg	14 06 58.4	-0.2
JRC2	**Joshua Ridge**	0.46	323		Sg	14 07 05.3	+0.3
DTP	**Desert Tortois**	0.46	221		Pg	14 06 58.7	-0.4
DTP					Sg	14 07 05.0	-0.1
WCSM	**Coso Springs S**	0.47	330		Pg	14 06 59.0	-0.3
WCSM					Sg	14 07 05.7	+0.2
WRVM	**Rose V. Centra**	0.52	319		Pg	14 06 59.8	-0.3
WRVM					Sg	14 07 07.0	+0.1
WBSM	**Bird Springs**	0.55	262		Sg	14 07 08.0	+0.1
MFS	**McCloud Flat S**	0.59	328		Pg	14 07 01.2	-0.3
MFS					Sg	14 07 09.3	+0.1
QSM	**Queen of Sheba**	0.60	55		Pg	14 07 01.5	-0.3
QSM	**Queen of Sheba**	0.60	55		Sg	14 07 09.6	0.0
GSC	**Goldstone, Bar**	0.63	120		Pg	14 07 01.9	-0.4
GSC	**Goldstone, Bar**	0.63	120		Sg	14 07 10.4	0.0
WORM	**Onyx Ranch**	0.63	277		Pg	14 07 01.8	-0.5
WORM					Sg	14 07 10.2	-0.4
CCAC	**Calif City Air**	0.64	224		Pg	14 07 02.2	-0.3
CCAC					Sg	14 07 11.4	+0.5
WHFM	**Hanning Flat**	0.72	277		Pg	14 07 03.4	-0.5
WHFM					Sg	14 07 12.9	-0.4
HYS	**Haystack Butte**	0.76	186		Pg	14 07 04.0	-0.6
HYS					Sg	14 07 14.2	-0.3
ISA	**Isabella, Lake**	0.82	274		Pg	14 07 05.2	-0.6
ISA				IAML		14 07 18.1	
	comp=E,851nm,0.3s						
ISA				IAML		14 07 19.3	
	comp=N,882nm,0.4s						
ISA	**Isabella, Lake**	0.82	274		Sg	14 07 15.6	-0.8
EDW2	**Edwards Air Fo**	0.85	210		Pg	14 07 05.6	-0.8
GWY	**Greenwater Val**	0.86	49		Pg	14 07 06.2	-0.5
GWY				IAML		14 07 20.6	
	comp=N,1μm,0.3s						
GWY				IAML		14 07 20.7	
	comp=E,1μm,0.3s						
GWY	**Greenwater Val**	0.86	49		Sg	14 07 17.9	-0.1
ALV	**Alvord Mountai**	0.88	129		Pg	14 07 06.5	-0.6
ALV					Sg	14 07 18.1	-0.5
CWC	**Cottonwood Cre**	0.96	329		Pg	14 07 07.9	-0.6
CWC				IAML		14 07 24.1	
	comp=N,346nm,0.2s						
CWC	**Cottonwood Cre**	0.96	329		Sg	14 07 20.8	-0.2
TPO	**Tropico Hills**	0.96	220		Pg	14 07 08.1	-0.4
TPO				IAML		14 07 27.4	
	comp=E,885nm,0.7s						
TPO				IAML		14 07 27.4	
	comp=N,776nm,0.5s						
FURC	**Furnace Creek,**	0.98	30		Pg	14 07 08.6	-0.4
FURC				IAML		14 07 28.2	
	comp=E,910nm,0.7s						
FURC				IAML		14 07 30.5	
	comp=N,647nm,0.6s						
SHOC	**Shoshone, Teco**	1.01	73		Pg	14 07 09.0	-0.6
VES	**Vestal, Richgr**	1.33	280		Pn	14 07 14.1	-1.0
VES				IAML		14 07 36.4	
	comp=E,473nm,0.6s						
WCT	**Wildcat Mounta**	1.36	30		Pn	14 07 14.3	-1.3
WCT				IAML		14 07 36.3	
	comp=E,228nm,0.4s						
GRAC	**Grapevine Rang**	1.38	4		Pn	14 07 15.0	-0.8
GRAC				IAML		14 07 40.5	
	comp=N,483nm,0.9s						
BFSC	**Mount Baldy Ra**	1.38	186		Pn	14 07 14.7	-1.3
BFSC				IAML		14 07 35.2	
	comp=N,416nm,0.2s						
BFSC				IAML		14 07 35.3	
	comp=E,407nm,0.4s						
MWC	**Mount Wilson**	1.47	199		Pn	14 07 16.2	-1.0
MWC				IAML		14 07 38.6	
	comp=E,378nm,0.3s						
MWC				IAML		14 07 43.1	
	comp=N,400nm,0.4s						
TIN	**Tinemaha, Big**	1.56	337		Pn	14 07 17.8	-0.6
TIN				IAML		14 07 42.2	
	comp=N,338nm,0.5s						
TIN				IAML		14 07 44.5	
	comp=E,394nm,0.5s						
TPNV	**Topopah Spring**	1.66	36		Pn	14 07 18.8	-1.0
TPNV				IAML		14 07 47.5	
	comp=E,190nm,0.7s						
TPNV				IAML		14 07 48.9	
	comp=E,170nm,0.4s						
DSP	**Deep Springs**	1.79	347		Pn	14 07 21.0	-0.6
ELS	**Elsinore Mount**	1.96	179		Pn	14 07 23.1	-0.9
ELS				IAML		14 07 54.7	
	comp=E,107nm,0.3s						
ELS				IAML		14 08 00.5	
	comp=N,109nm,0.6s						
DANC	**Danby, Needles**	1.97	119		Pn	14 07 22.0	-2.0
SHPR	**Sheep Range**	2.07	64		Pn	14 07 24.5	-1.0
V12A	**Nelson**	2.14	86	IAML		14 07 58.4	
	comp=N,124nm,0.5s						
V12A				IAML		14 08 01.7	
	comp=E,150nm,0.4s						
PMD	**Palm Desert**	2.16	155	IAML		14 08 00.1	
	comp=N,85nm,0.5s						
PMD				IAML		14 08 00.5	
	comp=E,126nm,0.3s						
PFO	**Pinyon Flats O**	2.17	157	IAML		14 07 59.8	
	comp=E,94nm,0.5s						
S11A	**Rachel**	2.45	34	IAML		14 08 18.1	
	comp=N,94nm,0.8s						
S11A				IAML		14 08 24.9	
	comp=E,108nm,0.8s						
BORC	**Borrego Spring**	2.50	159	IAML		14 08 11.6	
	comp=N,116nm,0.4s						
BORC				IAML		14 08 15.0	
	comp=E,105nm,0.9s						
BC3	**Big Chuckawall**	2.57	139	IAML		14 08 13.9	
	comp=E,147nm,0.6s						
BC3				IAML		14 08 15.7	
	comp=N,166nm,0.5s						
DPP	**Dos Picos Cty**	2.65	170	IAML		14 08 12.7	
	comp=E,138nm,0.3s						
DPP				IAML		14 08 14.6	
	comp=N,89nm,0.2s						
LHV	**Little Huntoon**	2.76	343	IAML		14 08 30.5	
	comp=N,53nm,1.4s						
LHV				IAML		14 08 31.2	
	comp=E,55nm,1.3s						
PMPB	**Monarch Peak**	2.77	283	IAML		14 08 19.7	
	comp=E,142nm,0.9s						
PMPB				IAML		14 08 28.4	
	comp=N,156nm,0.8s						
W13A	**Hualapai Mount**	2.98	99	IAML		14 08 28.6	
	comp=N,79nm,0.6s						
W13A				IAML		14 08 29.8	
	comp=E,56nm,0.8s						
BAR	**Barrett**	3.00	167	IAML		14 08 26.9	
	comp=N,96nm,0.3s						
BLYC	**Blythe**	3.06	127	IAML		14 08 28.6	
	comp=N,117nm,0.5s						
BLYC				IAML		14 08 30.8	
	comp=E,97nm,0.6s						
Q09A	**Carvers**	3.22	4	IAML		14 08 38.9	
	comp=E,84nm,0.7s						
Q09A				IAML		14 08 44.2	
	comp=N,101nm,1.0s						
CMB	**Columbia Colle**	3.36	317	IAML		14 08 37.7	
	comp=N,36nm,0.5s						
CMB				IAML		14 08 39.4	
	comp=E,36nm,0.7s						
ESJX	**Sierra Juarez**	3.82	160	IAML		14 08 50.1	
	comp=E,38nm,0.5s						
ESJX				IAML		14 08 53.3	
	comp=N,24nm,1.4s						
PNTR	**Pine Nut**	3.86	335	IAML		14 09 08.0	
	comp=N,23nm,1.0s						
PNTR				IAML		14 09 14.5	
	comp=E,24nm,1.2s						
KNB	**Kanab**	4.01	68	IAML		14 08 49.7	
	comp=N,16nm,4.3s						
KNB				IAML		14 09 02.3	
	comp=E,19nm,2.9s						
PSUT	**Pine Spring**	4.10	44	IAML		14 09 15.2	
	comp=E,15nm,1.0s						
113A	**Mohawk Valley,**	4.18	132	IAML		14 09 03.2	
	comp=E,19nm,0.5s						
113A				IAML		14 09 03.7	
	comp=N,20nm,0.6s						
MPK	**Martis Peak**	4.20	332	IAML		14 09 14.6	
	comp=N,42nm,0.9s						
MPK				IAML		14 09 21.0	
	comp=E,35nm,0.6s						
PKCU	**Pink Cliffs**	4.54	65	IAML		14 09 06.9	
	comp=N,36nm,4.1s						
PKCU				IAML		14 09 17.0	
	comp=E,36nm,1.1s						
BEKR	**Beckworth**	4.82	333	IAML		14 09 30.7	
	comp=E,21nm,0.6s						
BEKR				IAML		14 09 33.3	
	comp=N,13nm,1.4s						
MTPU	**Mount Pierson**	4.88	59	IAML		14 09 00.8	
	comp=E,9.0nm,4.9s						
MTPU				IAML		14 10 04.2	
	comp=N,9.6nm,4.5s						
WUAZ	**Wupatki**	4.97	89	IAML		14 09 28.0	
	comp=N,26nm,0.4s						
WUAZ				IAML		14 09 35.0	
	comp=N,17nm,0.8s						
TCRU	**Three Creeks R**	5.00	52	IAML		14 09 47.9	
	comp=N,13nm,4.7s						
TCRU				IAML		14 10 38.2	
	comp=E,16nm,4.7s						

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*NEIC **16** 14:07:14.4±1.3, 18°.02N±0°.03×99°.28W±0°.02, h44^{km}±9^{km}, mb4.5/10, Md4.4/140(MEX), Error ellipse: s-maj=3.9km s-min=3.0km az=167.0*

*MEX **16** 14:07:15.7±0.9, 18°.01N×99°.28W, h51^{km}±7^{km}, MD4.4*

ISC 16 14:07:14.3±0.8**, 18°.01N**±0°.02×**99°.24W**±0°.02**, h47**^{km}±8^{km}**, n145, σ2^{s}.16**/252**, mb4.4**/3**, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MEIG	**Mezcala**	0.37	257		Pn	14 07 23.5	-0.5
MEIG					Sn	14 07 30.6	-0.2
MEIG	**Mezcala**	0.37	257	*e*P	Pn	14 07 23.5	-0.5
MEIG				*e*S	Sn	14 07 30.6	-0.2
HMTT	**Tlapaneco**	0.68	108		Pn	14 07 28.1	+0.4
HMTT					Sn	14 07 38.8	+1.3
HMTT	**Tlapaneco**	0.68	108	*e*P	Pn	14 07 28.1	+0.4
HMTT				*e*S	Sn	14 07 38.8	+1.3
TLIG	**Tlapa**	0.78	125		Pn	14 07 29.5	+0.5
TLIG	**Tlapa**	0.78	125		Sn	14 07 40.2	+0.3
TLIG	**Tlapa**	0.78	125	*e*P	Pn	14 07 29.6	+0.5
TLIG				*e*S	Sn	14 07 40.2	+0.3
YAIG	**Yautepec**	0.86	11		Pn	14 07 29.7	-0.5
YAIG					Sn	14 07 41.1	-0.8
YAIG	**Yautepec**	0.86	11	*i* P	Pn	14 07 29.7	-0.5
YAIG				*e*S	Sn	14 07 41.1	-0.8
MGIG	**Malinaltepec**	0.97	143		Pn	14 07 32.2	+0.5
MGIG					Sn	14 07 45.5	+1.1
MGIG	**Malinaltepec**	0.97	143	*e*P	Pn	14 07 32.2	+0.5
MGIG				*e*S	Sn	14 07 45.5	+1.1
MAVM	**Malinalco, Edo**	0.97	346		Pn	14 07 31.2	-0.5
MAVM					Sn	14 07 43.8	-0.8
MAVM	**Malinalco, Edo**	0.97	346	*e*P	Pn	14 07 31.2	-0.5
MAVM				*e*S	Sn	14 07 43.8	-0.8
DAIG	**Los Arroyos**	1.06	202		Pn	14 07 31.9	-0.8
DAIG					Sn	14 07 45.8	-0.6
DAIG	**Los Arroyos**	1.06	202	*e*P	Pn	14 07 31.9	-0.8
DAIG				*e*S	Sn	14 07 45.8	-0.6
FTIG	**Fresnillo de T**	1.06	95		Pn	14 07 33.4	+0.5
FTIG					Sn	14 07 46.7	+0.1
FTIG	**Fresnillo de T**	1.06	95	*i* P	Pn	14 07 33.4	+0.5
FTIG				*e*S	Sn	14 07 46.7	+0.1
PPCL	**Tochimilco**	1.07	33	*e*P	Pn	14 07 32.8	-0.4
PPCL				*e*S	Sn	14 07 46.3	-0.9
ARIG	**Puente Sto Nin**	1.08	285		Pn	14 07 32.6	-0.5
ARIG					Sn	14 07 46.0	-1.0
ARIG	**Puente Sto Nin**	1.08	285	*i* P	Pn	14 07 32.6	-0.5
ARIG				*e*S	Sn	14 07 46.0	-1.0
PPPT	**Popocatepetl**	1.12	31	*e*P	Pn	14 07 33.7	-0.4
PPPT				*e*S	Sn	14 07 47.9	-0.8
PBXN	**Popocatepetl**	1.14	29	*e*P	Pn	14 07 34.1	-0.2
PBXN				*e*S	Sn	14 07 48.3	-0.7
MZVM		1.17	1		Pn	14 07 34.7	+0.4
MZVM					Sn	14 07 50.3	+1.2
MZVM		1.17	1	*e*P	Pn	14 07 34.7	+0.4
MZVM				*e*S	Sn	14 07 50.3	+1.2
TLVM	**San Miguel Top**	1.20	4		Pn	14 07 34.9	-0.1
TLVM					Sn	14 07 50.4	+0.2
TLVM	**San Miguel Top**	1.20	4	*e*P	Pn	14 07 34.9	-0.1
TLVM				*e*S	Sn	14 07 50.4	+0.2
PPIG	**Popocatepetl**	1.20	29		Pn	14 07 34.8	-0.4
PPIG					Sn	14 07 50.6	0.0
PPM	**Popocatepetl**	1.20	29	*e*P	Pn	14 07 34.8	-0.4
PPM				*e*S	Sn	14 07 50.6	0.0
MPVM	**San Francisco**	1.21	10		Pn	14 07 37.1	+2.2
MPVM					Sn	14 07 50.9	+0.6
MPVM	**San Francisco**	1.21	10	*e*P	Pn	14 07 37.1	+2.2
MPVM				*e*S	Sn	14 07 50.9	+0.6
VNTA	**La Mica**	1.22	207		Pn	14 07 36.7	+1.8
VNTA					Sn	14 07 49.5	-0.8
VNTA	**La Mica**	1.22	207	*e*P	Pn	14 07 36.7	+1.8
VNTA				*e*S	Sn	14 07 49.5	-0.8
XCVM	**Xochimilco**	1.24	5		Pn	14 07 35.4	-0.1
XCVM					Sn	14 07 51.6	+0.3
XCVM	**Xochimilco**	1.24	5	*e*P	Pn	14 07 35.4	-0.1
XCVM				*e*S	Sn	14 07 51.6	+0.3
AOVM	**Tlapan**	1.25	357		Pn	14 07 35.7	-0.1
AOVM					Sn	14 07 51.9	+0.1
AOVM	**Tlapan**	1.25	357	*e*P	Pn	14 07 35.7	-0.1
AOVM				*e*S	Sn	14 07 51.9	+0.1
CRIG	**Cruz Grande**	1.27	175		Pn	14 07 34.8	-0.8
CRIG					Sn	14 07 51.4	-0.2
CRIG	**Cruz Grande**	1.27	175	*e*P	Pn	14 07 34.8	-0.8
CRIG				*e*S	Sn	14 07 51.4	-0.2
PPSX	**Xalitzintla**	1.27	33	*e*P	Pn	14 07 35.6	-0.3
PPSX				*e*S	Sn	14 07 51.4	-0.7
INVM	**La Marquesa**	1.28	354		Pn	14 07 36.0	-0.2
INVM					Sn	14 07 51.7	-0.6
INVM	**La Marquesa**	1.28	354	*e*P	Pn	14 07 36.0	-0.2
INVM				*e*S	Sn	14 07 51.7	-0.6
UNM	**Universidad Na**	1.31	3	Pn	Pn	14 07 36.5	+0.1
UNM	**Universidad Na**	1.31	3	*e*P	Pn	14 07 36.5	+0.1
UNM				*e*S	Sn	14 07 52.9	0.0
CUP5	**Mexico City**	1.31	3		Pn	14 07 36.5	0.0
CUP5					Sn	14 07 52.1	-0.9
CUP5	**Mexico City**	1.31	3	*e*P	Pn	14 07 36.5	0.0
CUP5				*e*S	Sn	14 07 52.1	-0.9
THVM	**De Xico**	1.32	11		Pn	14 07 36.4	-0.1
THVM					Sn	14 07 53.5	+0.4
THVM	**De Xico**	1.32	11	*e*P	Pn	14 07 36.4	-0.1
THVM				*e*S	Sn	14 07 53.5	+0.4
TOVM	**TOLUCA**	1.33	342		Pn	14 07 36.7	0.0
TOVM					Sn	14 07 52.1	-1.4
TOVM	**TOLUCA**	1.33	342	*e*P	Pn	14 07 36.7	0.0
TOVM				*e*S	Sn	14 07 52.1	-1.4
BJVM	**Benito Juarez**	1.36	3		Sn	14 07 53.2	-0.9
BJVM	**Benito Juarez**	1.36	3	*e*S	Sn	14 07 53.2	-0.9
CAIG	**El Cayaco**	1.37	226		Pn	14 07 35.5	-1.4
CAIG					Sn	14 07 53.1	-0.8
CAIG	**El Cayaco**	1.37	226	*e*P	Pn	14 07 35.5	-1.4
CAIG				*e*S	Sn	14 07 53.1	-0.8
HLIG	**Huajuapan de L**	1.38	97		Pn	14 07 38.2	+0.8
HLIG					Sn	14 07 54.8	+0.2
HLIG	**Huajuapan de L**	1.38	97	*i* P	Pn	14 07 38.2	+0.8
HLIG				*e*S	Sn	14 07 54.8	+0.2
ATYC	**Atoyac**	1.38	235		Pn	14 07 36.1	-1.0
ATYC					Sn	14 07 54.3	0.0
ATYC	**Atoyac**	1.38	235	*e*P	Pn	14 07 36.1	-1.0
ATYC				*e*S	Sn	14 07 54.3	0.0
MHVM	**Bosque de Chap**	1.39	1		Pn	14 07 37.4	-0.1
MHVM					Sn	14 07 55.5	+0.7
MHVM	**Bosque de Chap**	1.39	1	*e*P	Pn	14 07 37.4	-0.1
MHVM				*e*S	Sn	14 07 55.5	+0.7
PBVM	**Pinon**	1.43	6		Pn	14 07 38.1	+0.3
PBVM					Sn	14 07 55.6	+0.2
PBVM	**Pinon**	1.43	6	*e*P	Pn	14 07 38.1	+0.3
PBVM				*e*S	Sn	14 07 55.6	+0.2
PHPU	**Puebla**	1.45	45		Pn	14 07 37.5	-0.8
PHPU					Sn	14 07 53.2	-3.1
PHPU	**Puebla**	1.45	45	*e*P	Pn	14 07 37.5	-0.8
PHPU				*e*S	Sn	14 07 53.2	-3.1
TXVM	**Universitario**	1.45	12		Pn	14 07 40.2	+1.9
TXVM					Sn	14 07 58.2	+1.9
TXVM	**Universitario**	1.45	12	*e*P	Pn	14 07 40.2	+1.9
TXVM				*e*S	Sn	14 07 58.2	+1.9
APVM	**Azcapotzalco**	1.47	1		Sn	14 07 56.8	0.0
APVM	**Azcapotzalco**	1.47	1	*e*S	Sn	14 07 56.8	0.0
AZVM	**Cuida Lopez Ma**	1.57	359		Pn	14 07 42.2	+2.3
AZVM					Sn	14 08 00.9	+1.7
AZVM	**Cuida Lopez Ma**	1.57	359	*e*P	Pn	14 07 42.2	+2.3
AZVM				*e*S	Sn	14 08 00.9	+1.7
PTVM	**Pico Tres Padr**	1.58	4		Pn	14 07 39.8	-0.3
PTVM					Sn	14 07 55.5	-3.9
PTVM	**Pico Tres Padr**	1.58	4	*e*P	Pn	14 07 39.8	-0.3
PTVM				*e*S	Sn	14 07 55.5	-3.9
TXIG	**Tlaxiaco**	1.59	118		Pn	14 07 41.3	+1.0
TXIG					Sn	14 08 00.2	+0.3
TXIG	**Tlaxiaco**	1.59	118	*e*P	Pn	14 07 41.3	+1.0
TXIG				*e*S	Sn	14 08 00.2	+0.3
ZUVM	**ZUMPANGO**	1.81	5		Pn	14 07 45.6	+2.3
ZUVM					Sn	14 07 59.1	-6.1
ZUVM	**ZUMPANGO**	1.81	5	*e*P	Pn	14 07 45.6	+2.3
ZUVM				*e*S	Sn	14 07 59.1	-6.1
TPIG	**Tehuac#an**	1.83	77		Pn	14 07 43.6	+0.1
TPIG					Sn	14 08 06.1	+0.5
TPIG	**Tehuac#an**	1.83	77	*e*P	Pn	14 07 43.6	+0.1
TPIG				*e*S	Sn	14 08 06.1	+0.5
PNIG	**Pinotepa**	1.93	146		Pn	14 07 45.1	+0.5
PNIG					Sn	14 08 05.9	-1.9
PNIG	**Pinotepa**	1.93	146	*e*P	Pn	14 07 45.1	+0.5
PNIG				*e*S	Sn	14 08 05.9	-1.9
YOIG	**Yosondua**	1.98	125		Pn	14 07 47.0	+1.3
YOIG					Sn	14 08 10.9	+1.4
YOIG	**Yosondua**	1.98	125	*e*P	Pn	14 07 47.0	+1.3
YOIG				*e*S	Sn	14 08 10.9	+1.4
ACIG	**Acambay**	2.05	343		Pn	14 07 46.0	-0.5
ACIG					Sn	14 08 01.4	-10
ACIG	**Acambay**	2.05	343	*e*P	Pn	14 07 46.0	-0.5
ACIG				*e*S	Sn	14 08 01.4	-10
TOIG	**Toxpalan**	2.07	87		Pn	14 07 47.6	+0.9
TOIG					Sn	14 08 04.5	-6.9
TOIG	**Toxpalan**	2.07	87	*e*P	Pn	14 07 47.6	+0.9
TOIG				*e*S	Sn	14 08 04.5	-6.9
ZIIG	**Zihuatanejo**	2.15	260		Pn	14 07 46.4	-1.3
ZIIG					Sn	14 08 17.2	+3.9
ZIIG	**Zihuatanejo**	2.15	260	*e*P	Pn	14 07 46.4	-1.3
ZIIG				*e*S	Sn	14 08 17.2	+3.9
DHIG	**Demacu**	2.29	5		Pn	14 07 48.7	-1.0
DHIG					Sn	14 08 22.5	+5.7
DEIG	**Demacu**	2.29	5	*e*P	Pn	14 07 48.7	-1.0
DEIG				*e*S	Sn	14 08 22.5	+5.7
MOIG	**Morelia**	2.48	312		Pn	14 07 52.5	+0.1
MOIG					Sn	14 08 19.0	-2.6
MOIG	**Morelia**	2.48	312	*e*P	Pn	14 07 52.5	+0.1
MOIG				*e*S	Sn	14 08 19.0	-2.6
VHO	**Vista Hermosa**	2.57	111	*e*P	Pn	14 07 55.3	+1.7

VHO				eS	Sn	14 08 23.5	-0.3
OXIG	Oaxaca	2.57	111		Pn	14 07 55.3	+1.7
OXIG					Sn	14 08 23.5	-0.3
OXBJ	Oaxaca	2.58	111		Pn	14 07 58.9	+5.2
OXBJ					Sn	14 08 28.8	+4.7
OXBJ	Oaxaca	2.58	111	eP	Pn	14 07 58.9	+5.2
OXBJ				eS	Sn	14 08 28.8	+4.7
CXUV	Coxquihui	2.66	36		Pn	14 07 53.9	-0.8
CXUV					Sn	14 08 29.9	+4.2
CXUV	Coxquihui	2.66	36	eP	Pn	14 07 53.9	-0.8
CXUV				eS	Sn	14 08 29.9	+4.2
JAUV	Jalcomulco	2.68	59		Pn	14 07 54.6	-0.3
JAUV					Sn	14 08 34.0	+7.8
JAUV	Jalcomulco	2.68	59	eP	Pn	14 07 54.6	-0.3
JAUV				eS	Sn	14 08 34.0	+7.8
PEIG	Puerto Escondi	2.83	135		Pn	14 07 59.6	+2.5
PEIG					Sn	14 08 38.4	+8.4
PEIG	Puerto Escondi	2.83	135	eP	Pn	14 07 59.6	+2.5
PEIG				eS	Sn	14 08 38.4	+8.4
JRQG	Juriquilla Cam	2.91	337		Pn	14 07 58.1	-0.2
JRQG	Juriquilla Cam	2.91	337		Sn	14 08 36.2	+4.0
JRQG	Juriquilla Cam	2.91	337	eP	Pn	14 08 03.5	+5.2
JRQG				eS	Sn	14 08 36.2	+4.0
LVIG	Laguna Verde	3.17	57		Pn	14 08 07.4	+5.7
LVIG					Sn	14 08 46.5	+8.2
LVIG	Laguna Verde	3.17	57	eP	Pn	14 08 07.4	+5.7
LVIG				eS	Sn	14 08 46.5	+8.2
HUIG	Huatulco	3.74	126		Pn	14 08 10.4	+0.9
HUIG					Sn	14 08 49.5	-2.8
HUIG	Huatulco	3.74	126	eP	Pn	14 08 10.4	+0.9
HUIG				eS	Sn	14 08 49.5	-2.8
MMIG	Aquila	3.91	275		Pn	14 08 10.8	-1.0
MMIG					Sn	14 09 03.3	+6.8
MMIG	Aquila	3.91	275	eP	Pn	14 08 10.8	-1.0
MMIG				eS	Sn	14 09 03.3	+6.8
RPIG	Rio Verde	3.92	350		Sn	14 09 05.6	+8.8
RPIG	Rio Verde	3.92	350	eP	Pn	14 08 21.1	+9.0
RPIG				eS	Sn	14 09 05.6	+8.8
PMUV	Sontecomapan	3.95	82		Pn	14 08 10.4	-2.0
PMUV					Sn	14 08 58.7	+1.1
PMUV	Sontecomapan	3.95	82	eP	Pn	14 08 10.4	-2.0
PMUV				eS	Sn	14 08 58.7	+1.1
CMIG	Matias Romero	4.26	102		Pn	14 08 17.6	+1.0
CMIG					Sn	14 09 01.3	-3.8
CMIG	Matias Romero	4.26	102	eP	Pn	14 08 17.6	+1.0
CMIG				eS	Sn	14 09 01.3	-3.8
EZ5V		4.38	290		Pn	14 08 20.2	+1.7
EZ5V		4.38	290	eP	Pn	14 08 20.2	+1.7
EZ5V				eS	Sn	14 09 11.8	+3.3
MNGA	Volcan de Coli	4.39	290	eP	Pn	14 08 20.4	+1.7
MNGA				eS	Sn	14 09 11.2	+2.4
INCO	Volcan de Coli	4.40	291	eP	Pn	14 08 20.1	+1.2
INCO				eS	Sn	14 09 11.9	+2.8
SOMAC	Volcano de Col	4.42	291	eP	Pn	14 08 20.8	+1.6
SOMAC				eS	Sn	14 09 10.0	+0.4
CDAR	Ciudad de Arme	4.62	282	eP	Pn	14 08 21.5	-0.1
CDAR				eS	Sn	14 09 07.9	-6.0
UXUV	UXUV	4.91	97		Pn	14 08 26.2	+0.7
UXUV					Sn	14 09 14.4	-6.7
UXUV	UXUV	4.91	97	eP	Pn	14 08 26.2	+0.7
UXUV				eS	Sn	14 09 14.4	-6.7
TGIG		5.97	101		Pn	14 08 40.0	-0.2
TGIG					Sn	14 09 42.0	-5.3
TGIG		5.97	101	eP	Pn	14 08 40.0	-0.2
TGIG				eS	Sn	14 09 42.0	-5.3
PCIG		6.21	111		Pn	14 08 45.4	+2.1
PCIG					Sn	14 09 48.7	-4.4
PCIG		6.21	111	eP	Pn	14 08 45.4	+2.1
PCIG				eS	Sn	14 09 48.7	-4.4
CCIG	Comitan	7.01	103		Pn	14 08 54.4	-0.1
CCIG	Comitan	7.01	103		Sn	14 10 07.1	-5.9
CCIG	Comitan	7.01	103	eP	Pn	14 08 55.0	+0.5
CCIG				eS	Sn	14 10 07.1	-5.9
PATR	El Naranjo	7.31	112		Pn	14 09 01.1	+2.4
PATR					Sn	14 10 17.7	-2.9
PATR	El Naranjo	7.31	112	eP	Pn	14 09 01.1	+2.4
PATR				eS	Sn	14 10 17.7	-2.9
PAVE	Pavencul	7.33	111		Pn	14 09 02.0	+3.0
PAVE					Sn	14 10 18.6	-2.4
PAVE	Pavencul	7.33	111	eP	Pn	14 09 02.0	+3.0
PAVE				eS	Sn	14 10 18.6	-2.4
CHUJ	Union Juarez	7.43	112	eP	Pn	14 09 02.2	+1.8
CHUJ				eS	Sn	14 10 19.8	-3.7
JUD3	Juan Diaz 3	15.40	119	P	P	14 10 52.5	0.0
PRVC	Isla de Provid	17.82	102	P	P	14 11 19.2	+0.1
PRVC				IAmb	IAmb	14 11 29.3	
	comp=Z,53nm,1.0s						
W50A	Signal Mountai	21.13	33	P	P	14 11 55.5	+0.3
W50A				IAmb	IAmb	14 11 57.0	
	comp=Z,25nm,1.5s						
PV19	Morning Glory	21.94	339	P	P	14 12 04.4	+0.3
PV19				IAmb	IAmb	14 12 10.8	
	comp=Z,10nm,0.6s						
POKR	Poker Plat Res	56.85	338	P	P	14 16 54.5	+0.7
POKR				IAmb	IAmb	14 18 01.8	
	comp=Z,12nm,1.4s						
H18K	Honhosa River	60.99	336	P	P	14 17 22.1	-0.4
GAMB	Gambell	66.25	332	P	P	14 17 57.5	+0.4
MESJ	Messejana	79.96	54	P	P	14 19 19.3	+0.5
NB201	NORSAR Array S	83.91	27	P	P	14 19 38.3	-0.7

IDC 16 14:09:57.8±1.4, 6°.65N×124°.96E, h0^{km}, mb3.5/4, mbtmp3.5/4, MS3.0/1, Error ellipse: s-maj=27.9km s-min=10.8km az=135.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.74	56	Pg	Pg	14 10 11.6	-0.5
	225nm,0.3s,baz=259,slow=9.1,SNR=15						
DAV				Lg	Lg	14 10 22.9	
	432nm,0.3s,baz=60,slow=20,SNR=6.6						
DAV				LR	LR	14 10 34.6	
	comp=Z,1μm,21.2s,baz=332,slow=49						
DAV	Davao City (W)	0.74	56	P	Pg	14 10 10.0	-2.1
WRA	Warramunga Arr	28.00	161	P	P	14 15 50.3	-0.3
	0.3nm,0.6s,baz=330,slow=10,SNR=1.7 0.3nm,0.6s						
ASAR	Alice Springs	31.38	164	P	P	14 16 19.5	-1.1
	0.2nm,0.5s,baz=340,slow=6.6,SNR=11 0.2nm,0.5s						
MJAR	Matsushiro Arr	32.12	20	LR	LR	14 29 00.5	
	comp=Z,25nm,19.1s,baz=358,slow=36						
STKA	Stephens Creek	41.48	158	P	P	14 17 48.5	+1.8
	1.0nm,0.6s,baz=352,slow=7.1,SNR=3.0 1.0nm,0.6s						
MKAR	Makanchi Array	54.16	325	P	P	14 19 25.2	+0.2
	0.6nm,0.8s,baz=126,slow=7.3,SNR=4.3 0.6nm,0.8s						

WEL 16 14:10:49.1±1.2, 35°S±16°×17°9E±1°8, h305^{km}±20^{km}, M3.3/6, mB3.8/1, ML3.2/9, MLv3.3/6, Mw(mB)2.8/1, Error ellipse: s-maj=23.2km s-min=20.3km az=105.0, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	2.97	195	P	Pn	14 11 44.7	0.0
HAZ	Te Kaha	3.08	204	P	Pn	14 11 44.7	-1.1
HAZ				S	S	14 12 32.2	+0.9
PKGZ	Pakihiroa	3.09	199	P	Pn	14 11 46.4	+0.4
PKGZ				S	S	14 12 32.5	+1.0
PUZ	Puketiti	3.24	196	P	Pn	14 11 47.5	-0.1
PUZ				S	S	14 12 34.5	+0.2
RUGZ	Raukumara Rang	3.30	204	P	Pn	14 11 47.6	-0.7
RUGZ				S	S	14 12 34.9	-0.7
CNGZ	Carnagh Statio	3.65	194	P	Pn	14 11 53.1	+1.4
MWZ	Matawai	3.69	203	P	Pn	14 11 52.4	+0.2
MWZ				S	S	14 12 42.3	-0.4
TKGZ	Te Karaka	3.69	199	P	Pn	14 11 52.1	0.0
TKGZ				S	S	14 12 44.0	+1.4
URZ	Urewera	3.77	208	P	Pn	14 11 52.5	-0.4
URZ				S	S	14 12 44.7	+0.6
OMRZ	Omania	3.97	217	P	Pn	14 11 56.1	+0.9
MUGZ	Murupara	4.09	210	P	Pn	14 11 56.1	-0.4
WCZ	Waipu Caves	4.22	255	P	Pn	14 11 58.2	+0.3
KNZ	Kokohu	4.29	198	P	Pn	14 11 58.7	+0.1
KRHZ	Kereru	5.26	206	P	Pn	14 12 09.6	-0.2
KRHZ				S	S	14 13 15.1	+0.4

IDC 16 14:33:08.0±16.0, 6°.30S×130°.20E, h115^{km}±169^{km}, mb3.2/1, mbtmp3.5/4, ML3.4/3, Error ellipse: s-maj=117.3km s-min=59.4km az=38.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.54	200	P	Pn	14 36 03.2	+0.8
	0.3nm,0.3s,baz=27,slow=12,SNR=16						
FITZ				S	Sn	14 38 16.1	-4.4
	0.5nm,0.4s,baz=0.0,slow=20,SNR=1.9 0.7nm,0.3s						
WRA	Warramunga Arr	14.14	164	P	Pn	14 36 21.4	-1.8
	0.1nm,0.3s,baz=342,slow=10,SNR=9.9						
WRA				S	Sn	14 38 45.9	-14
	0.8nm,1.0s,baz=332,slow=24,SNR=3.1 0.4nm,0.8s						
ASAR	Alice Springs	17.63	169	P	Pn	14 37 06.5	0.0
	0.1nm,0.3s,baz=349,slow=10,SNR=19						
ASAR				S	S	14 40 14.6	-8.7
	0.2nm,0.7s,baz=356,slow=27,SNR=3.2 0.5nm,0.5s						
MKAR	Makanchi Array	67.76	327	P	P	14 43 53.4	0.0
	0.3nm,0.4s,baz=129,slow=7.8,SNR=7.8 0.3nm,0.4s						

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*IDC **16** 14:36:42.2±2.2, 54°.55N×168°.93E, h0^{km}, mb3.1/2, mbtmp3.3/3, ML2.7/1, Error ellipse: s-maj=106.3km s-min=26.3km az=164.0*

*KRSC **16** 14:36:44.5±1.0, 53°.99N×168°.83E, h62^{km}±32^{km}, Ml3.9*

ISC 16 14:36:44.7±1.3, 54°.0N±0°.1×169°.00E±0°.08, h25^{km}, n32, σ1^{s}67/33, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	2.11	305	eP	Pn	14 37 17.9	-0.4
BKI				eS	Sn	14 37 44.0	+0.2
KBTR	Krutoberegovo	4.16	304	eP	Pn	14 37 47.0	+0.6
KZV	Kizimen	5.18	285	eP	Pn	14 38 01.9	+1.3
KMNR	Kamenistaya	5.34	292	eP	Pn	14 38 05.0	+2.2
SPN	Mys Shipunski	5.43	264	eP	Pn	14 38 04.2	+0.2
SPN				eS	Sn	14 39 03.4	-2.2
KII	Karymskiy	5.63	274	eP	Pn	14 38 08.2	+1.5
NLC	Nalytchevo	5.81	265	eS	Sn	14 39 12.1	-2.9
SDLR	Sedlovina	6.06	267	eP	Pn	14 38 14.0	+1.2
UGLR	Uglovaya	6.11	266	eP	Pn	14 38 15.0	+1.6
SMAR	Somma	6.12	267	eP	Pn	14 38 14.9	+1.4
KRER	Koryakskii	6.14	267	eP	Pn	14 38 15.7	+1.8
AVH	Avacha	6.15	267	eP	Pn	14 38 15.6	+1.6
KRX	Arik	6.19	268	eP	Pn	14 38 15.6	+1.1
DALK	Dalny	6.19	265	eP	Pn	14 38 16.0	+1.6
DALK				eS	Sn	14 39 23.7	-0.6
KOK	Koryaka	6.21	267	eP	Pn	14 38 16.3	+1.6
PET	Petropavlovsk	6.25	265	eP	Pn	14 38 16.4	+1.1
PET				eS	Sn	14 39 25.3	-0.5
RUS	Russkaya	6.50	260	eP	Pn	14 38 20.1	+1.5
GNL	Ganaly	6.55	271	eP	Pn	14 38 21.5	+2.1
KRMR	Karymshinskiy	6.61	264	eP	Pn	14 38 21.8	+1.7
KRMR				eS	Sn	14 39 33.4	-1.2
MTVR	Mutnovka	6.68	261	eP	Pn	14 38 22.7	+1.5
GRL	Gorelyy	6.72	262	eP	Pn	14 38 23.7	+2.0
PETK	Petropavlovsk-	6.80	267	Pn	Pn	14 38 24.4	+1.7
	0.8nm,0.3s,baz=75,slow=18,SNR=66						
PETK				Sn	Sn	14 39 40.6	+1.4
	0.6nm,0.3s,baz=94,slow=38,SNR=2.3 2.8nm,0.6s						
ASAK	Asacha	6.87	260	eP	Pn	14 38 25.9	+2.1
KDTR	Khodutka, Kamc	6.97	256	eP	Pn	14 38 26.0	+0.9
KDTR				eS	Sn	14 39 40.2	-3.3
ILAR	Eielson Array	24.34	46	P	P	14 41 58.4	-1.7
	0.3nm,0.9s,baz=267,slow=8.5,SNR=5.6 0.3nm,0.9s						
H11N2	WAKE ISLAND Hy	34.29	184	T	T	15 19 47.7	
	baz=2.8,slow=76,SNR=282						
H11N3	WAKE ISLAND Hy	34.30	183	T	T	15 19 50.4	
	baz=2.8,slow=76,SNR=114						
H11N1	WAKE ISLAND Hy	34.31	184	T	T	15 19 49.0	
	baz=2.8,slow=76,SNR=236						
H11S1	WAKE ISLAND Hy	35.51	184	T	T	15 21 22.5	
	baz=2.6,slow=76,SNR=110						
H11S3	WAKE ISLAND Hy	35.52	184	T	T	15 21 22.6	
	baz=2.6,slow=76,SNR=39						
H11S2	WAKE ISLAND Hy	35.53	184	T	T	15 21 25.0	
	baz=2.6,slow=76,SNR=90						
TXAR	Lajitas Array	65.32	74	P	P	14 47 25.1	+0.6
	0.2nm,0.5s,baz=310,slow=6.2,SNR=4.3 0.2nm,0.5s						

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*BJI **16** 14:49:11.6, 3°.01S×101°.03E, h30^{km}, mB5.3/77, mb5.5/97, Ms5.5/99, Ms7 5.3/98*

*IPGP **16** 14:49:14.0, 3°.01S×100°.88E, h47^{km}, Mw5.5, Fault plane solution: NP1:ϕ_s281.00000°, δ28.00000°, λ80.00000°. NP2:ϕ_s113.00000°, δ62.00000°, λ96.00000°.*

*MOS **16** 14:49:15.4±1.0, 2°.73S×101°.19E, h44^{km}, mb6.0/107, MS5.0/35, Error ellipse: s-maj=7.1km s-min=3.4km az=115.5*

*NEIC **16** 14:49:16.5, 3°.07S×100°.93E, h50^{km}, Moment Tensor Solution. Duration: 36^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}2.19; $M_{\theta\theta}$-1.32; $M_{\phi\phi}$-0.87; $M_{r\theta}$1.99; $M_{\theta\phi}$0.52; $M_{\phi r}$-1.94; Fault plane solution: $M_0$3.40000×10^{17} NP1: ϕ_s301.04000°, δ17.59000°, λ79.42000°. NP2: ϕ_s132.12000°, δ72.72000°, λ93.33000°. Principal axes: T 3.6498, Plg62.0000°, Azm47.0000°; N -0.5590, Plg3.0000°, Azm311.0000°; P -3.0907, Plg28.0000°, Azm219.0000°;*

*NEIC **16** 14:49:16.1±1.5, 2°.97S±0°.06×100°.95E±0°.07, h40^{km}±4^{km}, mb5.8/177, Ms_20 5.3/147, Mwb5.6/95, Mww5.6/25 Error ellipse: s-maj=11.3km s-min=8.2km az=58.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.90; $M_{\theta\theta}$-1.40; $M_{\phi\phi}$-1.50; $M_{r\theta}$1.36; $M_{\theta\phi}$1.31; $M_{\phi r}$-0.42; Fault plane solution: $M_0$3.17000×10^{17} NP1: ϕ_s326.59000°, δ34.05000°, λ108.72000°. NP2: ϕ_s124.34000°, δ57.98000°, λ77.76000°. Principal axes: T 3.2982, Plg74.0000°, Azm2.0000°; N -0.2642, Plg10.0000°, Azm131.0000°; P -3.0340, Plg12.0000°, Azm223.0000°;*

*NEIC **16** 14:49:16.7, 2°.96S×100°.94E, h46^{km}*

*ISC-PP **16** 14:49:16, 2°.97S×100°.95E, h24^{km}±4^{km}, Mwppsm6.0, Moment Tensor Solution. s49 Moment tensor: Scale 10^{18}Nm; M_{rr}0.37±.10; $M_{\theta\theta}$0.34±.28; $M_{\phi\phi}$0.03±.16; $M_{r\theta}$-0.22±.18; $M_{\theta\phi}$-0.17±.17; $M_{\phi r}$0.55±.15; Fault plane solution: $M_0$1.38000×10^{18} NP1:ϕ_s184.40000°, δ71.10000°, λ159.70000°. NP2:ϕ_s281.30000°, δ70.80000°, λ20.10000°.*

*NEIC **16** 14:49:16.5, 2°.97S×100°.93E, h50^{km}*

*GFZ **16** 14:49:17.0, 2°.93S×101°.07E, h49^{km}, MW5.5, Moment Tensor Solution. s65 Moment tensor: M_{rr}1.47; $M_{\theta\theta}$-0.70; $M_{\phi\phi}$-0.77; $M_{r\theta}$1.36; $M_{\theta\phi}$1.02; $M_{\phi r}$-0.81; Fault plane solution: NP1:ϕ_s125.00000°, δ68.00000°, λ80.00000°. NP2:ϕ_s330.00000°, δ25.00000°, λ113.00000°. Principal axes: T 2.1600, Plg66.0000°, Azm17.0000°; N 0.2100, Plg9.0000°, Azm128.0000°; P -2.3700, Plg22.0000°, Azm222.0000°;*

*DJA **16** 14:49:16.9±0.2, 3°S±2°×10°1E±°, h55^{km}±2^{km}, M5.4/109, mB5.8/93, mb5.7/109, MLv6.0/33, Mw5.6/152, Mw(mB)5.4/93, MwMwp5.3/76, Mwp5.5/76*

*IDC **16** 14:49:17.1±1.5, 2°.81S×101°.11E, h46^{km}±13^{km}, mb5.3/35, mbtmp5.5/37, ML5.0/2, MS4.9/66, Error ellipse: s-maj=13.0km s-min=9.4km az=65.0*

*GCMT **16** 14:49:20.1±0.1, 3°.02S±0°.01×100°.85E±0°.01, h46^{km}, MW5.6/135, Moment Tensor Solution. s128,c232; s135,c246; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M_{rr}2.31±.04; $M_{\theta\theta}$-1.25±.03; $M_{\phi\phi}$-1.06±.03; $M_{r\theta}$1.55±.03; $M_{\theta\phi}$1.27±.02; $M_{\phi r}$-1.11±.04; Best double couple: $M_0$3.04100×10^{17} NP1:ϕ_s318.00000°, δ26.00000°, λ99.00000°. NP2:ϕ_s128.00000°, δ64.00000°, λ86.00000°. Principal axes: T 2.9900, Plg70.0000°, Azm29.0000°; N 0.1030, Plg4.0000°, Azm130.0000°; P -3.0930, Plg19.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 14:49:16.1±0.3, 2°.90S±0°.03×101°.05E±0°.03, h42^{km}±1^{km}, h42^{km}:pP-P, n1379, σ1^{s}50/1416, mb5.7/316, MS5.1/188, 109C-13D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRJI	Kerinci	0.90	27	P	Pn	14 49 34.6	+2.1
PPSI	Pulau Pagai	1.05	278	P	Pn	14 49 34.7	+0.3
PPSI				S	Sn	14 49 50.1	+2.2
MASI	Maura Aman, Be	1.21	101	P	Pn	14 49 37.7	+1.1
UBSI	University, Be	1.49	125	P	Pn	14 49 42.1	+1.7
KSI	Kapahiang	1.71	116	P	Pn	14 49 45.8	+2.3
PDSI	Padang	2.06	343	P	Pn	14 49 49.0	+0.7
MNAI	Manna	2.39	127		Pn	14 49 53.7	+0.9
MNAI	Manna	2.39	127	P	Pn	14 49 55.8	+3.0
MNAI	Manna	2.39	127	S	Sn	14 50 23.3	+2.4
MNAI	Manna	2.39	127	P	Pn	14 49 55.3	+2.5
SISI	Saibi	2.51	309	P	Pn	14 49 55.0	+0.6
PPI	Padang Panjang	2.52	345	P	Pn	14 49 56.3	+1.8
EGSI	Enggano, Bengk	2.72	153	P	Pn	14 49 57.1	-0.3
JMBI	JAMBI	2.88	64	P	Pn	14 50 01.1	+1.6
BKNI	Bangkinang	3.21	360		Pn	14 50 05.9	+1.9
BKNI	Bangkinang	3.21	360	P	Pn	14 50 09.2	+5.2
BKNI	Bangkinang	3.21	360	P	Pn	14 50 06.3	+2.3
MDSI	Maura Dua	3.49	117	P	Pn	14 50 10.3	+2.3
LWLI	Liwa	3.66	125	P	Pn	14 50 14.4	+4.0
PMBI	Palembang	3.71	90		Pn	14 50 11.8	+0.8
PMBI	Palembang	3.71	90	P	Pn	14 50 14.2	+3.2
MNSI	Mandailing Nat	3.96	338	P	Pn	14 50 15.6	+1.2
PBSI	Pulau Batu	3.96	316	P	Pn	14 50 13.8	-0.6
KLSI		4.08	116	P	Pn	14 50 19.4	+3.4
KLI	Kotabumi	4.27	117	P	Pn	14 50 21.6	+3.0
DSRI	Dabo	4.27	56	P	Pn	14 50 20.8	+2.2
KASI	Kota Agung	4.31	127	P	Pn	14 50 21.9	+2.7
BLSI	Bandar Lampung	4.85	120	P	Pn	14 50 27.7	+1.1
PPBI	Pangkal Pinang	5.13	82	P	Pn	14 50 34.9	+4.4
TPRI	Tanjung Pinang	5.14	43	P	Pn	14 50 32.9	+2.2
GSI	Gunungsitoli	5.43	320		Pn	14 50 34.2	-0.5
GSI	Gunungsitoli	5.43	320	P	Pn	14 50 33.5	-1.2
	26nm14μm15μm2μm,1.1s						
MYKOM	Kota Tinggi	5.43	31		Pn	14 50 37.3	+2.6
MYKOM	Kota Tinggi	5.43	31	P	Pn	14 50 37.2	+2.5
MYKOM	Kota Tinggi	5.43	31	P	Pn	14 50 37.3	+2.6
	14nm13μm1μm,1.2s						
SBJI	Serang	5.99	122	P	Pn	14 50 42.6	+0.4
	4.3nm11μm9μm748nm,1.1s						
PSI	Prapat	6.05	339	P	Pn	14 50 43.1	-0.1
	12nm,0.3s,baz=166,slow=10,SNR=27						
PSI				S	Sn	14 51 57.3	+6.0
	341nm,0.7s,baz=167,slow=14,SNR=3.9						
PSI				LR	LR	14 53 27.6	
	comp=Z,33μm,20.7s,baz=151,slow=42 68nm,0.6s						
PSI	Prapat	6.05	339	P	Pn	14 50 43.1	-0.1
TPI	Tanjungpandan	6.59	89	P	Pn	14 50 52.9	+2.3
DBJI	Dramaga	6.74	123	P	Pn	14 50 54.0	+1.4
	4.1nm9μm383nm,1.1s						
TSI	Tuntungan	6.83	339	P	Pn	14 50 55.3	+1.5
	9.6nm14μm13μm1μm,0.7s						
SKJI	Sukabumi	6.83	127	P	Pn	14 50 54.4	+0.5
SNSI	Sinabang, Aceh	7.08	318	P	Pn	14 50 58.0	+0.7
	5.6nm12μm10μm956nm,0.8s						
KCSI	Kotacane, Aceh	7.17	333	P	Pn	14 50 59.6	+1.0
	5.7nm4μm315nm,1.0s						
TPTI		7.24	328	P	Pn	14 50 59.4	-0.1
	5.2nm10μm5μm357nm,0.6s						
IPM	Ipoh	7.33	360		Pn	14 51 03.2	+2.5
IPM	Ipoh	7.33	360	P	Pn	14 51 05.1	+4.3
IPM	Ipoh	7.33	360	P	Pn	14 51 04.0	+3.2
	4.0nm19μm12μm1μm,0.9s						
CNJI	Cibinong	7.47	126	P	Pn	14 51 02.0	-0.6
LEM	Lembang	7.62	121	P	Pn	14 51 05.6	+0.8
BBJI	Bungbulang	7.98	125	P	Pn	14 51 09.4	-0.2
BBJI	Bungbulang	7.98	125	P	Pn	14 51 09.5	-0.2
	263nm,0.7s						
KULM	Kulim	8.15	357		Pn	14 51 13.6	+1.7
KULM	Kulim	8.15	357	P	Pn	14 51 16.0	+4.1
KULM	Kulim	8.15	357	P	Pn	14 51 13.8	+1.9
	15μm7μm681nm,1.0s						
MLSI	Meulaboh, Aceh	8.50	327	P	Pn	14 51 16.9	+0.1
XMI	Christmas Isla	8.80	149	P	Pn	14 51 19.8	-1.1
KPJI	Karang Pucung	9.00	120	P	Pn	14 51 25.6	+2.0
	8μm3μm202nm,0.7s						
LHMI	Lhok Sumawe	9.06	333		Pn	14 51 24.6	+0.2
LHMI	Lhok Sumawe	9.06	333	P	Pn	14 51 25.8	+1.4
LHMI	Lhok Sumawe	9.06	333	P	Pn	14 51 24.7	+0.3
	9μm5μm234nm,0.7s						
CTJI	Waduk Cacaban	9.07	117	P	Pn	14 51 26.5	+1.9
	7μm204nm,1.3s						
COCO	West Island	10.13	204	P	Pn	14 51 36.3	-2.7
COCO				P	Pn	14 51 36.3	-2.7
COCO				S	Sn	14 53 36.9	+5.5
COCO				S	Sn	14 53 36.9	+5.5
COCO	West Island	10.13	204		Pn	14 51 34.9	-4.1
COCO	West Island	10.13	204	P	Pn	14 51 36.4	-2.7
COCO	West Island	10.13	204	P	Pn	14 51 35.3	-3.8
	6μm3μm323nm,1.3s						
COCO	West Island	10.13	204	P	Pn	14 51 36.4	-2.7
COCO				pmax	pmax		
	comp=Z,633nm,1.3s						
SMRI	Semarang	10.22	114		Pn	14 51 42.1	+1.7
SMRI	Semarang	10.22	114	P	Pn	14 51 43.6	+3.3
	comp=Z,8μmcomp=Z,5μmcomp=Z,280nm,0.8s						
YOGI	Yogyakarta	10.41	118	P	Pn	14 51 44.1	+1.1
	comp=Z,7μmcomp=Z,5μmcomp=Z,401nm,1.0s						
UGM	Wanagama	10.66	118		Pn	14 51 46.7	+0.3
UGM	Wanagama	10.66	118	P	Pn	14 51 48.1	+1.7
UGM	Wanagama	10.66	118	P	Pn	14 51 46.9	+0.5
	comp=Z,3μmcomp=Z,198nm,0.7s						
NGJI	Ngawi	11.28	114	P	Pn	14 51 57.5	+2.7
	comp=Z,10μmcomp=Z,3μmcomp=Z,267nm,1.2s						
PCJI	Pacitan	11.36	118	P	Pn	14 51 55.5	-0.5
	comp=Z,5μmcomp=Z,2μmcomp=Z,123nm,0.7s						
SJI	Sawahan	11.70	115	P	Pn	14 52 01.7	+1.1
	comp=Z,3μmcomp=Z,290nm,0.7s						
SNJI	Sawahan-Nganju	11.71	115	P	Pn	14 52 02.8	+1.9
	comp=Z,6μmcomp=Z,5μmcomp=Z,396nm,0.6s						
GRJI	Gresik	12.06	110	P	Pn	14 52 08.9	+3.4
	comp=Z,6μmcomp=Z,5μmcomp=Z,322nm,1.2s						
SBUM	Sibu	12.37	65		Pn	14 52 13.5	+3.8
SBUM	Sibu	12.37	65	P	Pn	14 52 14.3	+4.6
SBUM	Sibu	12.37	65	P	Pn	14 52 15.1	+5.4
	comp=Z,6μmcomp=Z,2μmcomp=Z,134nm,1.0s						
PKKI	Palangkaraya	12.92	87	P	Pn	14 52 21.8	+4.5
BLJI	Banyuglugur	13.38	112	P	Pn	14 52 25.8	+2.2
	comp=Z,5μmcomp=Z,4μmcomp=Z,189nm,0.5s						
GMJI	Gumukmas	13.43	114	P	Pn	14 52 25.9	+1.6
KMMI	Kalianget	13.51	108	P	Pn	14 52 28.1	+2.8
	comp=Z,6μmcomp=Z,7μmcomp=Z,232nm,1.1s						
BBKI	Banjar Baru	13.78	93	P	Pn	14 52 32.1	+3.1
	comp=Z,7μmcomp=Z,7μmcomp=Z,567nm,0.9s						
MTKI	Muara Teweh, K	13.97	82	P	Pn	14 52 35.1	+3.4
	comp=Z,8μmcomp=Z,7μmcomp=Z,759nm,1.0s						
ABJI	Asem Bagus	13.99	111	P	Pn	14 52 32.8	+0.9
	comp=Z,5μmcomp=Z,4μmcomp=Z,379nm,1.0s						
JAGI	Jajag, Banyuwa	14.16	114		Pn	14 52 32.5	-1.7
JAGI	Jajag, Banyuwa	14.16	114	P	Pn	14 52 32.6	-1.6
JAGI	Jajag, Banyuwa	14.16	114	P	Pn	14 52 32.3	-1.9
	comp=Z,4μmcomp=Z,177nm,0.5s						
RTBI	Rangdo, Negare	14.88	112	P	Pn	14 52 43.6	-0.3
	comp=Z,4μmcomp=Z,3μmcomp=Z,168nm,0.6s						
IGBI	Denpasar	15.20	113	P	Pn	14 52 47.0	-1.0
	comp=Z,3μmcomp=Z,140nm,0.8s						
KHKI	Kahang-Kahang	15.46	111	P	Pn	14 52 52.4	+0.9
	comp=Z,4μmcomp=Z,120nm,0.7s						
BKB	Balikpapan	15.92	84	P	P	14 53 01.2	+0.8
KLNI	Mataram	15.94	111	P	Pn	14 52 58.8	+1.2
DLV	Lat	16.50	26	P	P	14 53 06.6	-0.4
PBA	Port Blair	16.66	330	P	P	14 53 07.8	-0.8
PBA	Port Blair	16.66	330	P	P	14 53 07.7	-0.9
SGKI	Sangatta, Kali	16.71	82	P	P	14 53 14.5	+5.3
	comp=Z,7μmcomp=Z,554nm,1.1s						
TWSI	Taliwang, Sumb	16.78	111	P	Pn	14 53 06.5	-1.7
	comp=Z,4μmcomp=Z,2μmcomp=Z,143nm,0.6s						
KKM	Kota Kinabalu	17.56	60	P	P	14 53 19.1	+0.4
KKM	Kota Kinabalu	17.56	60	P	P	14 53 21.2	+2.5
KKM	Kota Kinabalu	17.56	60	P	P	14 53 20.5	+1.8
	comp=Z,4μmcomp=Z,186nm,1.0s						
TARAI	Tarakan	17.63	70	P	P	14 53 21.7	+2.3
	comp=Z,725nm,0.9s						
PLAI	Plampang	17.64	110	P	Pn	14 53 17.6	-1.3
PLAI	Plampang	17.64	110	P	Pn	14 53 17.7	-1.2
	comp=Z,4μmcomp=Z,3μmcomp=Z,280nm,1.1s						
MMSI	Mamuju	17.84	90	P	P	14 53 23.5	+1.8
	comp=Z,4μmcomp=Z,262nm,1.0s						
PMSI	Majene	17.84	92	P	P	14 53 23.9	+2.1
	comp=Z,8μmcomp=Z,9μmcomp=Z,894nm,1.0s						
DBNI	Kabupaten Domp	18.05	109	P	Pn	14 53 22.9	-1.0

UBPT	**Khong Chiam**	**18.59**	**13**	P	**P**	**14 53 29.0**	**-0.9**
SPSI	**Sidrap Palu**	**18.71**	**94**	P	**Pn**	**14 53 32.8**	**+0.8**
	comp=Z,7µmcomp=Z,3µmcomp=Z,210nm,1.0s						
TTSI	**Tana Toraja**	**18.74**	**91**	P	**Pn**	**14 53 33.7**	**+1.3**
	comp=Z,6µmcomp=Z,5µmcomp=Z,537nm,0.9s						
KAPI	**Kappang**	**18.77**	**97**	P	**Pn**	**14 53 33.9**	**+1.2**
	comp=Z,14nm,0.3s,baz=269,slow=9.6,SNR=73						
KAPI				LR	LR	15 01 35.3	
	comp=Z,5µm,18.2s,baz=263,slow=39						
	comp=Z,707nm,0.9s						
KAPI	**Kappang**	**18.77**	**97**	P	**Pn**	**14 53 33.4**	**+0.7**
KAPI				P	**Pn**	**14 53 33.4**	**+0.7**
KAPI	**Kappang**	**18.77**	**97**	P	**Pn**	**14 53 32.9**	**+0.1**
KAPI				IAmb	IAmb	14 53 38.9	
	comp=Z,992nm,1.1s						
KAPI	**Kappang**	**18.77**	**97**	P	**Pn**	**14 53 35.8**	**+3.1**
KAPI	**Kappang**	**18.77**	**97**	P	**Pn**	**14 53 32.8**	**+0.1**
	comp=Z,4µmcomp=Z,3µmcomp=Z,449nm,1.0s						
KAPI	**Kappang**	**18.77**	**97***c*	*i*P	**Pn**	**14 53 32.8**	**+0.1**
KAPI				pmax	pmax		
	comp=Z,984nm,1.1s						
PCI	**Palu**	**18.88**	**84**	P	**Pn**	**14 53 35.2**	**+1.2**
	comp=Z,8µmcomp=Z,517nm,1.4s						
BNSI	**Bone**	**19.07**	**95**	P	**Pn**	**14 53 36.9**	**+0.5**
	comp=Z,6µmcomp=Z,5µmcomp=Z,573nm,1.5s						
MPSI	**Mapaga**	**19.11**	**81**	P	**Pn**	**14 53 38.0**	**+1.2**
	comp=Z,8µmcomp=Z,752nm,1.1s						
BKSI	**Bulukumba**	**19.17**	**98**	P	**P**	**14 53 36.9**	**+0.6**
	comp=Z,6µmcomp=Z,7µmcomp=Z,857nm,1.1s						
WBSI	**Waikabubak, Su**	**19.41**	**111**	P	**P**	**14 53 37.7**	**-1.3**
	comp=Z,6µmcomp=Z,702nm,1.0s						
LBFI	**Labuhan Bajo,**	**19.54**	**107**	P	**P**	**14 53 41.0**	**+0.6**
	comp=Z,3µmcomp=Z,3µmcomp=Z,295nm,0.7s						
TOLI2	**Tolitoli**	**20.12**	**79**	P	Pn	14 53 48.3	-0.5
TOLI2				IAmb	IAmb	14 53 54.2	
	comp=Z,673nm,1.0s						
TOLI2	**Tolitoli**	**20.12**	**79**	P	Pn	14 53 48.6	-0.2
WSI	**Waingapu**	**20.27**	**110**	P	**P**	**14 53 47.7**	**-0.6**
	comp=Z,9µmcomp=Z,827nm,0.9s						
KKSI	**Kolaka, Sulawe**	**20.60**	**94**	P	**P**	**14 53 53.0**	**+1.1**
	comp=Z,6µmcomp=Z,5µmcomp=Z,511nm,0.8s						
APSI	**Ampana**	**20.68**	**85**	P	Pn	14 53 54.9	-0.5
BASI	**Baing, Sumba**	**20.70**	**111**	P	**P**	**14 53 53.3**	**+0.3**
MRSI	**Marisa**	**21.15**	**81**	P	**P**	**14 53 58.4**	**+0.6**
	comp=Z,7µmcomp=Z,5µmcomp=Z,556nm,0.9s						
CM31	**Chiang Mai Arr**	**21.33**	**354**	P	**P**	**14 53 57.9**	**-1.8**
	SNR=77						
CM31				S	**S**	**14 57 57.9**	**+3.5**
CMAR	**Chiang Mai Arr**	**21.33**	**354**	P	**P**	**14 53 57.5**	**-2.2**
	comp=Z,98nm,0.9s,baz=184,slow=9.9,SNR=347						
CMAR				PcP	**PcP**	**14 58 04.0**	**+1.0**
	comp=Z,16nm,0.9s,baz=224,slow=2.6,SNR=7.9						
CMAR				ScP	**ScP**	**15 01 36.9**	**0.0**
	comp=Z,7.4nm,0.8s,baz=209,slow=3.3,SNR=16						
CMAR				LR	LR	15 03 06.8	
	comp=Z,4µm,18.2s,baz=180,slow=39						
	comp=Z,98nm,0.9s						
CMAR	**Chiang Mai Arr**	**21.33**	**354**	*i* P	**P**	**14 53 57.5**	**-2.2**
CMAR				pmax	pmax		
	comp=Z,107nm,0.9s						
EDFI	**Ende, Flores**	**21.33**	**107**	P	**P**	**14 53 59.4**	**-0.5**
CHTO	**Chiang Mai**	**21.68**	**355**	P	**P**	**14 54 01.6**	**-1.8**
CHTO				P	**P**	**14 54 01.6**	**-1.8**
CHTO				S	**S**	**14 58 02.7**	**+1.3**
CHTO				S	**S**	**14 58 02.7**	**+1.3**
CHTO	**Chiang Mai**	**21.68**	**355**	P	**P**	**14 54 00.7**	**-2.8**
CHTO	**Chiang Mai**	**21.68**	**355**	P	**P**	**14 54 01.6**	**-1.8**
CHTO	**Chiang Mai**	**21.68**	**355**	P	**P**	**14 54 02.0**	**-1.4**
	comp=Z,5µmcomp=Z,121nm,0.8s						
CHTO	**Chiang Mai**	**21.68**	**355**	P	**P**	**14 54 00.7**	**-2.8**
CHTO				pmax	pmax		
	comp=Z,92nm,0.8s						
CHTO				MLR	MLR		
	comp=Z,4µm,21.0s						
LUWI	**Luwuk**	**21.78**	**86**	P	**P**	**14 54 05.6**	**+0.9**
LUWI				IAmb	IAmb	14 54 10.1	
	comp=Z,700nm,1.1s						
LUWI	**Luwuk**	**21.78**	**86**	P	**P**	**14 54 06.2**	**+1.5**
LUWI	**Luwuk**	**21.78**	**86**	P	**P**	**14 54 05.6**	**+0.9**
MMRI	**Maumere**	**21.83**	**106**	P	**P**	**14 54 03.2**	**-1.9**
MMRI	**Maumere**	**21.83**	**106**	P	**P**	**14 54 04.2**	**-0.9**
	comp=Z,3µmcomp=Z,119nm,0.9s						
GTOI	**Gorontalo**	**22.23**	**81**	P	**P**	**14 54 10.9**	**+1.4**
	comp=Z,6µmcomp=Z,6µmcomp=Z,577nm,1.1s						
QIZ	**Qiongzhong**	**23.45**	**21**	IAMs_20	IAMs_20	15 04 15.4	
	comp=Z,5µm,20.0s						
QIZ	**Qiongzhong**	**23.45**	**21**	P	**P**	**14 54 22.6**	**+0.7**
QIZ				S	**S**	**14 58 37.1**	**+4.6**
QIZ				pmax	pmax		
	comp=Z,89nm,1.2s						
QIZ				pmax	pmax		
	comp=Z,1µm,3.7s						
QIZ				LR	LR		
	comp=Z,4µm,16.9s						
QIZ				LR	LR		
	comp=Z,2µm,19.4s						
QIZ	**Qiongzhong**	**23.45**	**21**	P	**P**	**14 54 22.0**	**+0.1**
BATI	**Baumata**	**23.59**	**109**	S	**S**	**14 58 29.2**	**-5.9**
	comp=Z,52nm,0.7s,baz=96,slow=18,SNR=3.6						
BATI	**Baumata**	**23.59**	**109**	P	**P**	**14 54 22.1**	**-1.3**
	comp=Z,177nm,0.9s						
SOEI	**Soe**	**24.04**	**108**	P	**P**	**14 54 24.2**	**-3.5**
SOEI				IAmb	IAmb	14 54 46.6	
	comp=Z,233nm,1.0s						
SOEI				IAMs_20	IAMs_20	15 05 32.3	
	comp=Z,7µm,21.0s						
SOEI	**Soe**	**24.04**	**108**	P	**P**	**14 54 25.5**	**-2.2**
SOEI	**Soe**	**24.04**	**108**	P	**P**	**14 54 24.3**	**-3.5**
	comp=Z,2µmcomp=Z,240nm,0.8s						
SLVN	**Son La**	**24.25**	**6**	P	**P**	**14 54 28.5**	**-0.9**
SLVN				IAmb	IAmb	14 54 31.1	
	comp=Z,142nm,0.8s						
SLVN				IAMs_20	IAMs_20	15 03 58.5	
	comp=Z,5µm,22.0s						
SLVN	**Son La**	**24.25**	**6**	P	**P**	**14 54 28.7**	**-0.7**
SANI	**Sanana**	**24.93**	**89**	P	**P**	**14 54 35.9**	**+0.2**
SANI	**Sanana**	**24.93**	**89**	P	**P**	**14 54 35.2**	**-0.5**
	comp=Z,4µmcomp=Z,2µmcomp=Z,137nm,0.9s						
SGSI	**Sangihe**	**25.32**	**75**	P	**P**	**14 54 40.8**	**+1.6**
MBWA	**Marble Bar**	**25.69**	**136**	P	**P**	**14 54 42.3**	**-0.2**
MBWA				S	**S**	**14 59 06.9**	**-1.6**
MBWA	**Marble Bar**	**25.69**	**136**	P	**P**	**14 54 42.4**	**-0.1**
MBWA	**Marble Bar**	**25.69**	**136**	P	**P**	**14 54 43.7**	**+1.2**
TGY	**Tagaytay City**	**25.96**	**49**	LR	LR	15 06 22.8	
	comp=Z,3µm,20.0s,baz=250,slow=40						
NLAI	**Namlea**	**26.01**	**91**	P	**P**	**14 54 46.5**	**+1.0**
	comp=Z,4µmcomp=Z,2µmcomp=Z,122nm,0.6s						
PSA00	**Pilbara Seismi**	**26.05**	**137**	P	**P**	**14 54 45.1**	**-0.6**
PSA00	**Pilbara Seismi**	**26.05**	**137**	P	**P**	**14 54 45.8**	**+0.1**
DAV	**Davao City (W)**	**26.41**	**68**	LR	LR	15 06 05.9	
	comp=Z,5µm,21.8s,baz=256,slow=38						
DAV	**Davao City (W)**	**26.41**	**68**	P	**P**	**14 54 47.9**	**-1.2**
DAV	**Davao City (W)**	**26.41**	**68**	P	**P**	**14 54 52.7**	**+3.6**
SAIH	**SAIHA**	**26.44**	**343**	*e*P	**P**	**14 54 49.4**	**0.0**
SAIH				IAmb	IAmb	14 54 55.2	
	comp=Z,400nm,1.2s						
TNTI	**Ternate**	**26.56**	**82**	P	**P**	**14 54 52.4**	**+2.0**
	comp=Z,1µmcomp=Z,92nm,0.9s						
VIS	**Vishakhapatnam**	**26.93**	**320**	*e*P	**P**	**14 54 53.7**	**-0.1**
VIS				IAmb	IAmb	14 55 09.0	
	comp=Z,494nm,1.9s						
BRDH	**Bariadhala**	**27.03**	**341**	LR	LR	15 07 58.2	
	comp=Z,3µm,18.8s,baz=151,slow=42						
KRAI	**Karang Ratu**	**27.30**	**92**	P	**P**	**14 54 57.9**	**+0.7**
BWNR	**Bhubaneshwar**	**27.44**	**328**	*e*P	**P**	**14 54 57.7**	**-0.5**
BWNR				IAmb	IAmb	14 55 04.2	
	comp=Z,316nm,1.2s						
BELO	**BELONIA**	**27.63**	**341**	*e*P	**P**	**14 54 59.6**	**-0.2**
TNCH	**TengChong**	**27.87**	**355**	P	**P**	**14 55 01.8**	**-0.5**
TNCH				S	**S**	**14 59 44.5**	**+1.4**
TNCH				pmax	pmax		
	comp=Z,86nm,0.7s						
TNCH				pmax	pmax		
	comp=Z,480nm,5.9s						
TNCH				LR	LR		
	comp=Z,5µm,16.1s						
TNCH				LR	LR		
	comp=Z,2µm,11.8s						
TNCH				LR	LR		
	comp=Z,9µm,15.3s						
KMI	**Kunming**	**27.91**	**3**	⇑P	**P**	**14 55 03.0**	**+0.4**
KMI				PP	**PnPn**	**14 55 56.3**	**+5.5**
KMI				S	**S**	**14 59 42.4**	**-1.3**
KMI				pmax	pmax		
	comp=Z,65nm,0.8s						
KMI				pmax	pmax		
	comp=Z,370nm,10.9s						
KMI				LR	LR		
	comp=Z,6µm,19.4s						
KMI				LR	LR		
	comp=Z,5µm,17.4s						
KMI				LR	LR		
	comp=Z,7µm,19.1s						
HKPS	**Hong Kong Po S**	**28.11**	**26**	P	**P**	**14 55 05.6**	**+1.4**
HKPS				IAmb	IAmb	14 55 08.0	
	comp=Z,159nm,0.9s						
HKPS				IAMs_20	IAMs_20	15 07 16.0	
	comp=Z,7µm,18.0s						
FITZ	**Fitzroy Crossi**	**28.44**	**124**	P	**P**	**14 55 06.8**	**-0.4**
	comp=Z,64nm,1.0s,baz=307,slow=8.3,SNR=40						
	comp=Z,64nm,1.0s						
FITZ	**Fitzroy Crossi**	**28.44**	**124**	IAmb	IAmb	14 55 14.4	
	comp=Z,18nm,0.9s						
FITZ	**Fitzroy Crossi**	**28.44**	**124**	P	**P**	**14 55 06.6**	**-0.6**
GZH	**Guangzhou**	**28.48**	**24**	P	P	14 55 14.0	+6.5
H08S2	**Diego Garcia H**	**28.82**	**259**	T	T	15 24 30.3	
	baz=82,slow=76,SNR=332						
H08S3	**Diego Garcia H**	**28.82**	**259**	T	T	15 24 30.8	
	baz=82,slow=76,SNR=3148						
DGAR	**Diego Garcia**	**28.83**	**260**	IAMs_20	IAMs_20	15 04 17.0	
	comp=Z,4µm,20.0s						
H08S1	**Diego Carcia H**	**28.84**	**259**	T	T	15 24 26.9	
	baz=82,slow=76,SNR=253						
MEEK	**Meekatharra**	**28.99**	**146**	P	**P**	**14 55 12.6**	**+0.5**
KOHI	**KOHIMA**	**29.24**	**347**	*e*P	**P**	**14 55 12.5**	**-1.9**
KOHI				IAmb	IAmb	14 55 17.3	
	comp=Z,72nm,0.7s						
PZH	**PanZhiHua**	**29.24**	**1**	P	**P**	**14 55 13.4**	**-1.0**
PZH				S	**S**	**15 00 11.5**	**+7.0**
PZH				ScP	**ScP**	**15 01 58.8**	**-0.6**
PZH				PcS	**PcS**	**15 02 04.3**	**+0.3**
PZH				ScS	**ScS**	**15 05 51.6**	**-2.3**
PZH				pmax	pmax		
	comp=Z,30nm,0.9s						
PZH				pmax	pmax		
	comp=Z,310nm,10.2s						
PZH				LR	LR		
	comp=Z,3µm,16.9s						
PZH				LR	LR		
	comp=Z,2µm,19.0s						
PZH				LR	LR		
	comp=Z,3µm,19.1s						
GULI	**GuiLin**	**29.45**	**17**	P	**P**	**14 55 13.8**	**-2.3**
GULI				S	**S**	**15 00 05.0**	**-2.5**
GULI				pmax	pmax		
	comp=Z,54nm,0.9s						
GULI				LR	LR		
	comp=Z,6µm,17.8s						
GULI				LR	LR		
	comp=Z,3µm,13.5s						
GULI				LR	LR		
	comp=Z,9µm,18.5s						
SHL	**Shillong**	**29.66**	**343**	P	**P**	**14 55 18.7**	**+0.5**
	SNR=30						
SHL	**Shillong**	**29.66**	**343**	P	**P**	**14 55 17.4**	**-0.7**
SHL				IAmb	IAmb	14 55 19.7	
	comp=Z,161nm,0.6s						
SHL	**Shillong**	**29.66**	**343**	*e*P	**P**	**14 55 17.5**	**-0.7**
SHL				IAmb	IAmb	14 55 19.5	
	comp=Z,129nm,0.7s						
SHL	**Shillong**	**29.66**	**343**	P	**P**	**14 55 17.4**	**-0.7**
SHL				pmax	pmax		
	comp=Z,161nm,0.6s						
GYA	**Guiyang**	**29.69**	**10**	⇑P	**P**	**14 55 18.3**	**0.0**
GYA				S	**S**	**15 00 09.0**	**-2.5**
GYA				pmax	pmax		
	comp=Z,72nm,0.8s						
GYA				pmax	pmax		
	comp=Z,460nm,3.7s						
GYA				LR	LR		
	comp=Z,3µm,20.0s						
GYA				LR	LR		
	comp=Z,5µm,17.5s						
GYA				LR	LR		
	comp=Z,4µm,27.0s						
MOKO	**MOKOCHONG**	**29.73**	**348**	*e*P	**P**	**14 55 17.9**	**-0.9**
MOKO				IAmb	IAmb	14 55 19.8	
	comp=Z,148nm,0.5s						
HYB	**Hyderabad**	**30.00**	**313**	*e*P	**P**	**14 55 21.4**	**+0.2**
HYB				IVmB_BB		14 55 23.4	
	comp=Z,505nm,2.5s						
HYB				*e*PP	**PP**	**14 56 29.3**	**-0.2**
HYB				*e*PcP	**PcP**	**14 58 24.3**	**+1.5**
HYB				*e*S	**S**	**15 00 17.1**	**+0.6**
HYB				IVMs_BB	IVMs_BB	15 07 17.0	
	comp=Z,567nm,16.5s						
SWI	**Sorong**	**30.26**	**87**	P	**P**	**14 55 23.0**	**-0.4**
	comp=Z,2µmcomp=Z,2µmcomp=Z,190nm,1.1s						
GUWA	**GUWAHATI**	**30.31**	**343**	*e*P	**P**	**14 55 23.0**	**-0.7**
GUWA				IAmb	IAmb	14 55 25.0	
	comp=Z,70nm,0.6s						
BOK	**Bokaro**	**30.37**	**332**	*e*P	**P**	**14 55 24.3**	**0.0**
BOK				IAmb	IAmb	14 55 28.6	
	comp=Z,515nm,1.7s						
TEZP	**TEZPUR**	**30.41**	**345**	*e*P	**P**	**14 55 24.0**	**-0.5**
TEZP				IAML		14 55 25.6	
	comp=Z,105nm,0.8s						
SAUI	**Saumlaki**	**30.52**	**101**	IAMs_20	IAMs_20	15 09 29.8	
	comp=Z,3µm,20.0s						
DHUB	**DHUBRI**	**30.68**	**340**	*e*P	**P**	**14 55 26.9**	**-0.1**
DHUB				IAmb	IAmb	14 55 29.3	
	comp=Z,375nm,1.2s						
BLSP	**Bilaspur**	**30.95**	**324**	*e*P	**P**	**14 55 29.1**	**-0.3**
DRS	**Darwin Rock St**	**31.02**	**109**	P	**P**	**14 55 30.5**	**+0.3**
ZIRO	**ZIRO**	**31.04**	**348**	*e*P	**P**	**14 55 28.8**	**-1.5**
ZIRO				IAmb	IAmb	14 55 31.9	
	comp=Z,273nm,0.4s						
COBR	**COOCHBEHAR**	**31.11**	**340**	*e*P	**P**	**14 55 28.9**	**-1.9**
COBR				IAmb	IAmb	14 55 33.6	
	comp=Z,199nm,0.7s						
FAKI	**Fak Fak**	**31.16**	**91**	P	**P**	**14 55 30.6**	**-0.8**
FAKI	**Fak Fak**	**31.16**	**91**	P	**P**	**14 55 30.7**	**-0.7**
	comp=Z,2µmcomp=Z,1µmcomp=Z,157nm,1.0s						
BLDU	**Ballidu**	**31.29**	**153**	P	**P**	**14 55 32.0**	**-0.3**
GAYA	**Gaya**	**31.54**	**332**	*e*P	**P**	**14 55 31.3**	**-3.2**
TAWA	**Tawang**	**31.59**	**344**	*e*P	**P**	**14 55 35.4**	**+0.1**
TAWA				IAmb	IAmb	14 55 38.2	
	comp=Z,180nm,0.6s						
KNMB	**Chin-men Tao**	**32.00**	**31**	IAmb	IAmb	14 55 41.1	
	comp=Z,158nm,0.8s						
KNMB				IAMs_20	IAMs_20	15 08 51.8	
	comp=Z,3µm,19.0s						
MUN	**Mundaring**	**32.25**	**155**	P	**P**	**14 55 40.2**	**-0.5**
TPUB	**Ta-pu**	**32.29**	**35**	P	**P**	**14 55 42.3**	**+1.1**
GTK	**Tadong**	**32.36**	**339**	*e*P	**P**	**14 55 42.8**	**+0.9**
GTK				IAML		14 55 45.0	
	comp=Z,427nm,1.1s						
QZH	**Quanzhou**	**32.50**	**31**	P	**P**	**14 55 43.8**	**+0.8**
QZH				pP	**pP**	**14 55 56.4**	**+2.0**
QZH				S	**S**	**15 00 57.0**	**+1.7**
QZH				pmax	pmax		
	comp=Z,140nm,1.2s						
QZH				pmax	pmax		
	comp=Z,750nm,4.4s						
QZH				LR	LR		
	comp=Z,2µm,17.2s						
QZH				LR	LR		
	comp=Z,2µm,18.2s						
QZH				LR	LR		
	comp=Z,4µm,27.8s						
KMPI	**Kaimana, Papua**	**32.61**	**92**	P	**P**	**14 55 44.2**	**+0.1**
	comp=Z,2µmcomp=Z,177nm,1.0s						
YULB	**Yu-li**	**32.75**	**36**	IAmb	IAmb	14 56 06.9	
	comp=Z,121nm,1.3s						
YULB	**Yu-li**	**32.75**	**36**	P	**P**	**14 55 47.3**	**+2.1**
CNSH	**ChangSha**	**32.95**	**20**	P	**P**	**14 55 44.9**	**-2.0**
CNSH				S	S	15 00 52.8	-9.4
CNSH				pmax	pmax		
	comp=Z,120nm,0.8s						
CNSH				LR	LR		
	comp=Z,4µm,17.7s						
CNSH				LR	LR		
	comp=Z,3µm,16.6s						
CNSH				LR	LR		
	comp=Z,6µm,14.8s						
RKPI	**Ransiki, Papua**	**33.13**	**88**	P	**P**	**14 55 48.9**	**+0.2**
	comp=Z,2µmcomp=Z,115nm,1.0s						
NWAO	**Narrogin (SRO)**	**33.50**	**155**	P	**P**	**14 55 54.9**	**+3.2**
NWAO				S	**S**	**15 01 12.0**	**+1.3**
NWAO	**Narrogin (SRO)**	**33.50**	**155**	P	**P**	**14 55 51.4**	**-0.3**
NWAO	**Narrogin (SRO)**	**33.50**	**155**	IAMs_20	IAMs_20	15 07 35.0	
	comp=Z,3µm,21.0s						
NWAO	**Narrogin (SRO)**	**33.50**	**155**	P	**P**	**14 55 51.8**	**+0.1**
NWAO	**Narrogin (SRO)**	**33.50**	**155**	P	**P**	**14 55 51.4**	**-0.3**
NWAO				pmax	pmax		
	comp=Z,39nm,1.0s						
NACB	**Ninganchiao**	**33.52**	**35**	IAmb	IAmb	14 55 57.3	
	comp=Z,98nm,0.7s						
NACB	**Ninganchiao**	**33.52**	**35**	P	**P**	**14 55 53.5**	**+1.6**
ALBI	**Allahabad**	**33.69**	**327**	*e*P	**P**	**14 55 53.1**	**-0.2**
CD2	**Chengdu**	**33.72**	**4**	P	**P**	**14 55 52.0**	**-1.7**
CD2				S	**S**	**15 01 10.9**	**-3.4**
CD2				pmax	pmax		
	comp=Z,120nm,0.7s						
CD2				pmax	pmax		
	comp=Z,630nm,3.6s						
CD2				LR	LR		
	comp=Z,7µm,24.1s						
CD2				LR	LR		
	comp=Z,6µm,15.2s						
CD2				LR	LR		
	comp=Z,10µm,20.9s						
LSA	**Lhasa**	**33.77**	**344**	P	**P**	**14 55 55.3**	**+0.7**
LSA	**Lhasa**	**33.77**	**344**	IAmb	IAmb	14 55 57.4	
	comp=Z,107nm,0.9s						
LSA	**Lhasa**	**33.77**	**344**	P	**P**	**14 55 50.8**	**-3.8**
LSA				S	**S**	**15 01 09.9**	**-6.0**
LSA				pmax	pmax		
	comp=Z,54nm,0.8s						
LSA				LR	LR		
	comp=Z,1µm,22.7s						
LSA				LR	LR		
	comp=Z,780nm,23.5s						
LSA				LR	LR		
	comp=Z,2µm,23.8s						
LSA	**Lhasa**	**33.77**	**344**	P	**P**	**14 55 55.4**	**+0.7**
LSA	**Lhasa**	**33.77**	**344**	P	**P**	**14 55 55.0**	**+0.3**
LSA				pP	**pP**	**14 56 06.1**	**+0.2**
YHNB	**Yeheng**	**33.78**	**35**	IAmb	IAmb	14 56 02.6	
	comp=Z,90nm,0.8s						
YHNB	**Yeheng**	**33.78**	**35**	P	**P**	**14 55 55.8**	**+1.5**
ENH	**Enshi**	**33.96**	**13**	IAMs_20	IAMs_20	15 10 44.9	
	comp=Z,4µm,20.0s						
ENH	**Enshi**	**33.96**	**13**	P	**P**	**14 55 55.0**	**-0.7**
H01W3	**Cape Leeuwin H**	**34.07**	**161**	T	T	15 31 44.2	
	baz=336,slow=76,SNR=74						
H01W2	**Cape Leeuwin H**	**34.08**	**161**	T	T	15 31 45.2	
	baz=336,slow=76,SNR=86						
TATO	**Taipei**	**34.08**	**34**	P	**P**	**14 55 57.8**	**+1.0**
TATO	**Taipei**	**34.08**	**34**	P	**P**	**14 55 57.3**	**+0.5**
TATO				IAmb	IAmb	14 56 07.5	
	comp=Z,68nm,1.0s						
H01W1	**Cape Leeuwin H**	**34.08**	**161**	T	T	15 31 45.4	
	baz=336,slow=76,SNR=72						
YOJ	**Yonaguni jima**	**34.57**	**37**	P	**P**	**14 56 04.5**	**+3.4**
YOJ	**Yonaguni jima**	**34.57**	**37**	P	**P**	**14 56 01.3**	**+0.2**
YOJ				pmax	pmax		
	comp=Z,178nm,0.9s						
BHPL	**Bhopal**	**34.72**	**320**	*e*P	**P**	**14 56 01.8**	**-0.7**
BHPL				IAmb	IAmb	14 56 05.0	
	comp=Z,72nm,1.1s						
BAKI	**Biak**	**35.07**	**88**	P	**P**	**14 56 06.2**	**+0.6**
	comp=Z,3µmcomp=Z,226nm,1.0s						
WHN	**Wuhan**	**35.60**	**20**	⇑P	**P**	**14 56 10.4**	**+0.6**
WHN				pP	**pP**	**14 56 19.1**	**-2.2**
WHN				sP	**sP**	**14 56 24.8**	**-1.5**
WHN				S	**S**	**15 01 45.8**	**+2.7**
WHN				pmax	pmax		
	comp=Z,340nm,0.8s						
WHN				pmax	pmax		
	comp=Z,1µm,4.1s						
WHN				LR	LR		
	comp=Z,13µm,15.8s						
WHN				LR	LR		
	comp=Z,3µm,9.8s						
WHN				LR	LR		
	comp=Z,15µm,15.0s						
JHNI	**Jhansi**	**35.61**	**324**	*e*P	**P**	**14 56 09.8**	**-0.1**
BRCI	**Bahraich**	**35.62**	**330**	*e*P	**P**	**14 56 10.9**	**+0.9**
JMJ	**Miyako jima 2**	**36.24**	**39**	P	**P**	**14 56 17.1**	**+1.7**
WB0	**Warramunga Arr**	**36.61**	**120**	IAmb	IAmb	14 56 20.2	
	comp=Z,197nm,1.2s						
WRA	**Warramunga Arr**	**36.63**	**120**	P	**P**	**14 56 18.1**	**-0.8**
	comp=Z,65nm,0.7s,baz=306,slow=9.1,SNR=214						
WRA				PcP	**PcP**	**14 58 40.8**	**-0.7**
	comp=Z,24nm,1.1s,baz=314,slow=2.1,SNR=5.7						
WRA				S	**S**	**15 01 56.3**	**-3.0**
	comp=Z,14nm,0.9s,baz=290,slow=16,SNR=10						
WRA				P3KPbc		15 27 05.6	
	comp=Z,2.0nm,0.8s,baz=107,slow=4.2,SNR=9.6						
	comp=Z,65nm,0.7s						
WRAB	**Tennant Creek**	**36.64**	**120**	P	**P**	**14 56 18.6**	**-0.4**
WRAB				IAmb	IAmb	14 56 20.6	
	comp=Z,97nm,0.8s						
WRAB	**Tennant Creek**	**36.64**	**120**	P	**P**	**14 56 18.4**	**-0.5**
WRAB	**Tennant Creek**	**36.64**	**120***c*	*i*P	**P**	**14 56 18.3**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,108nm,0.8s						
WRAB				MLR	MLR		
	comp=Z,839nm,16.0s						
WRAB	**Tennant Creek**	**36.64**	**120**	P	**P**	**14 56 18.4**	**-0.5**
WR8	**Warramunga Arr**	**36.78**	**120**	P	**P**	**14 56 19.6**	**-0.5**
WR8				IAmb	IAmb	14 56 22.0	
	comp=Z,270nm,1.2s						
XAN	**Xi'an**	**37.48**	**11**	⇑P	**P**	**14 56 25.0**	**-0.9**
XAN				pP	pP	14 56 30.0	-7.5
XAN				S	**S**	**15 02 07.8**	**-4.1**
XAN				pmax	pmax		
	comp=Z,360nm,0.7s						
XAN				pmax	pmax		
	comp=Z,440nm,4.2s						
XAN				LR	LR		
	comp=Z,6µm,21.3s						
XAN				LR	LR		
	comp=Z,4µm,19.2s						
XAN				LR	LR		
	comp=Z,9µm,19.2s						
SMPI	**Sarmi**	**37.63**	**89**	P	**P**	**14 56 26.8**	**-0.6**
	comp=Z,79nm,1.0s						
ASAR	**Alice Springs**	**37.88**	**126**	P	**P**	**14 56 29.3**	**-0.1**
	comp=Z,39nm,0.8s,baz=296,slow=7.8,SNR=190						
ASAR				PcP	**PcP**	**14 58 46.0**	**+0.8**
	comp=Z,29nm,0.9s,baz=311,slow=2.4,SNR=8.1						
ASAR				S	**S**	**15 02 15.2**	**-3.1**
	comp=Z,17nm,0.8s,baz=297,slow=17,SNR=14						
ASAR				LR	LR	15 14 47.1	
	comp=Z,1µm,20.0s,baz=300,slow=40						
ASAR				P3KPbc		15 26 45.1	
	comp=Z,0.2nm,0.8s,baz=106,slow=3.2,SNR=4.2						
	comp=Z,39nm,0.8s						
LGTI	**Lohaghat**	**37.88**	**329**	*e*P	**P**	**14 56 29.1**	**-0.5**
UDPR	**Udaipur**	**38.10**	**317**	*e*P	**P**	**14 56 30.8**	**-0.4**
NJ2	**Nanjing**	**38.65**	**25**	*e*P	**P**	**14 56 37.3**	**+1.6**
NJ2				PP	**PP**	**14 58 03.3**	**-1.6**
NJ2				S	**S**	**15 02 31.6**	**+2.0**
NJ2				ScP	**ScP**	**15 02 31.8**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,32nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,520nm,4.1s						
NJ2				LR	LR		
	comp=Z,4µm,17.7s						
NJ2				LR	LR		
	comp=Z,2µm,13.7s						
NJ2				LR	LR		
	comp=Z,5µm,17.7s						
LZDM	**Lanzhou Array**	**38.73**	**3**	P	**P**	**14 56 35.5**	**-1.3**
	comp=Z,30nm,0.5s,baz=191,slow=12,SNR=58						
LZDM				PcP	**PcP**	**14 58 48.7**	**+0.7**
	comp=Z,25nm,0.7s,baz=193,slow=5.9,SNR=6.9						
LZDM				ScP	**S**	**15 02 32.0**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=270,slow=0.7,SNR=1.7						
LZDM				LR	LR	15 14 27.1	
	comp=Z,5µm,18.7s,baz=165,slow=39						
	comp=Z,30nm,0.5s						
LYN	**LuoYang**	**38.77**	**15**	⇑*i*P	**P**	**14 56 37.1**	**+0.4**
LYN				sP	pP	14 56 49.8	+1.5
LYN				PP	**PnPn**	**14 58 14.4**	**+5.8**
LYN				PcP	**PcP**	**14 58 48.1**	**+0.5**
LYN				S	**S**	**15 02 30.9**	**-0.4**
LYN				pmax	pmax		
	comp=Z,840nm,7.3s						
LYN				LR	LR		
	comp=Z,9µm,17.7s						
LYN				LR	LR		
	comp=Z,4µm,15.8s						
LYN				LR	LR		
	comp=Z,10µm,18.2s						

NPLP	**NPLP New Delhi**	**38.85**	**325**	*e*P	**P**	**14 56 36.6**	**-0.9**
NDI	**New Delhi**	**38.86**	**326**	*e*P	**P**	**14 56 37.6**	**0.0**
NDI				IAmb	IAmb	14 56 42.7	
	comp=Z,61nm,0.4s						
KUDL	**Kundal**	**38.87**	**324**	*e*P	**P**	**14 56 36.7**	**-0.9**
SSE	**Sheshan**	**38.87**	**28**	P	**P**	**14 56 39.3**	**+1.7**
SSE				PP	**PnPn**	**14 58 11.0**	**+1.2**
SSE				S	**S**	**15 02 37.5**	**+4.6**
SSE				pmax	pmax		
	comp=Z,27nm,0.8s						
SSE				pmax	pmax		
	comp=Z,320nm,3.4s						
SSE				LR	LR		
	comp=Z,2µm,19.5s						
LZH	**Lanzhou**	**38.87**	**4**	⇑P	**P**	**14 56 37.8**	**+0.1**
LZH				pP	pP	14 56 47.3	-1.9
LZH				sP	sP	14 56 52.3	-1.8
LZH				PP	**PnPn**	**14 58 16.0**	**+6.0**
LZH				PcP	**PcP**	**14 58 49.3**	**+1.1**
LZH				S	**S**	**15 02 31.1**	**-2.0**
LZH				SS	**SS**	**15 05 19.3**	**-6.4**
LZH				ScS	**ScS**	**15 06 43.1**	**-1.3**
LZH				pmax	pmax		
	comp=Z,100nm,1.7s						
LZH				pmax	pmax		
	comp=Z,600nm,4.1s						
LZH				LR	LR		
	comp=Z,6µm,17.5s						
LZH				LR	LR		
	comp=Z,3µm,15.9s						
LZH				LR	LR		
	comp=Z,9µm,16.8s						
GOMU	**GeErMu**	**39.33**	**352**	P	**P**	**14 56 41.4**	**-0.4**
GOMU				S	**S**	**15 02 42.1**	**+1.7**
GOMU				pmax	pmax		
	comp=Z,29nm,0.8s						
GOMU				LR	LR		
	comp=Z,2µm,16.6s						
GOMU				LR	LR		
	comp=Z,940nm,14.5s						
GOMU				LR	LR		
	comp=Z,3µm,16.9s						
JOW	**Kunigami**	**39.56**	**40**	P	**P**	**14 56 44.5**	**+1.1**
	comp=Z,42nm,0.5s,baz=210,slow=5.7,SNR=29						
JOW				LR	LR	15 12 44.1	
	comp=Z,778nm,20.2s,baz=236,slow=36						
	comp=Z,42nm,0.5s						
JOW	**Kunigami**	**39.56**	**40**	P	**P**	**14 56 44.5**	**+1.1**
JOW	**Kunigami**	**39.56**	**40**	P	**P**	**14 56 43.9**	**+0.5**
RTK	**Rohtak**	**39.58**	**325**	*e*P	**P**	**14 56 44.2**	**+0.7**
RTK				IAmb	IAmb	14 56 49.0	
	comp=Z,94nm,1.1s						
JAY	**Jayapura**	**39.61**	**90**	P	**P**	**14 56 42.6**	**-1.5**
	comp=Z,64nm,0.9s						
DDI	**Dehra Dun**	**39.67**	**328**	*e*P	**P**	**14 56 45.0**	**+0.6**
DDI				IAmb	IAmb	14 56 47.0	
	comp=Z,76nm,0.7s						
KLP	**Kalpa**	**40.54**	**329**	*e*P	**P**	**14 56 52.1**	**+0.3**
KLP				IAmb	IAmb	14 56 57.2	
	comp=Z,16nm,0.2s						
CGRH	**CHANDIGARH**	**40.68**	**327**	*e*P	**P**	**14 56 52.9**	**+0.3**
SMLA	**Simla**	**40.78**	**328**	*e*P	**P**	**14 56 53.1**	**-0.3**
SMLA				IAmb	IAmb	14 56 57.4	
	comp=Z,97nm,0.7s						
AIS	**Amsterdam Isla**	**40.86**	**209**	IAMs_20	IAMs_20	15 09 22.8	
	comp=Z,5µm,22.0s						
BHK	**Bhakra**	**41.41**	**327**	*e*P	**P**	**14 56 55.9**	**-2.7**
QIS	**Mount Isa**	**41.46**	**118**	P	**P**	**14 56 58.8**	**-0.4**
TIA	**Tai'an**	**41.71**	**20**	P	**P**	**14 57 00.5**	**-0.5**
TIA				PP	**PnPn**	**14 58 42.8**	**-0.4**
TIA				S	**S**	**15 03 13.0**	**-2.1**
TIA				pmax	pmax		
	comp=Z,37nm,0.9s						
TIA				pmax	pmax		
	comp=Z,520nm,9.3s						
TIA				LR	LR		
	comp=Z,4µm,15.4s						
TIA				LR	LR		
	comp=Z,3µm,17.0s						
TIA				LR	LR		
	comp=Z,5µm,15.4s						
TIY	**Taiyuan**	**41.77**	**14**	P	**P**	**14 57 01.9**	**+0.4**
TIY				S	**S**	**15 03 15.4**	**-0.7**
TIY				pmax	pmax		
	comp=Z,86nm,0.8s						
TIY				pmax	pmax		
	comp=Z,320nm,8.2s						
TIY				LR	LR		
	comp=Z,3µm,15.8s						
TIY				LR	LR		
	comp=Z,2µm,16.5s						
TIY				LR	LR		
	comp=Z,3µm,19.9s						
HNS	**HongShan**	**42.06**	**16**	⇑P	**P**	**14 57 04.1**	**+0.3**
HNS				PcP	**PcP**	**14 58 59.5**	**+1.4**
HNS				ScP	**ScP**	**15 02 44.0**	**-1.5**
HNS				S	**S**	**15 03 20.5**	**+0.3**
HNS				ScS	**ScS**	**15 07 02.3**	**-0.6**
HNS				pmax	pmax		
	comp=Z,110nm,1.0s						
HNS				pmax	pmax		
	comp=Z,700nm,5.5s						
HNS				LR	LR		
	comp=Z,4µm,19.2s						
HNS				LR	LR		
	comp=Z,3µm,18.8s						
HNS				LR	LR		
	comp=Z,6µm,18.4s						
TLWR	**Talawar**	**42.07**	**327**	*e*P	**P**	**14 57 04.1**	**+0.1**
DHRM	**DHARAMSHALA**	**42.11**	**328**	*e*P	**P**	**14 57 04.8**	**+0.2**
DHRM				IAmb	IAmb	14 57 07.9	
	comp=Z,54nm,0.7s						
GTA	**Gaotai**	**42.12**	**359**	⇑P	**P**	**14 57 04.4**	**-0.1**
GTA				pP	pP	14 57 13.0	-3.0
GTA				PcP	**PcP**	**14 58 59.4**	**+0.9**
GTA				ScP	**ScP**	**15 02 45.3**	**-0.6**
GTA				PcS	**PcS**	**15 02 49.5**	**-0.9**
GTA				S	**S**	**15 03 19.0**	**-2.4**
GTA				ScS	**ScS**	**15 07 00.4**	**-3.2**
GTA				pmax	pmax		
	comp=Z,16nm,0.9s						
GTA				pmax	pmax		
	comp=Z,580nm,9.6s						
GTA				LR	LR		
	comp=Z,3µm,21.1s						
GTA				LR	LR		
	comp=Z,2µm,17.9s						
GTA				LR	LR		
	comp=Z,5µm,21.5s						
COEN	**Coen**	**43.01**	**107**	P	**P**	**14 57 10.3**	**-1.7**
ALCI	**Alchi Leh**	**43.22**	**331**	*e*P	**P**	**14 57 13.1**	**-0.7**
BTO	**Baotou**	**44.07**	**10**	*e*P	**P**	**14 57 21.3**	**+1.1**
BTO				pP	**pP**	**14 57 31.3**	**-0.6**
BTO				sP	**sP**	**14 57 35.0**	**-1.9**
BTO				S	**S**	**15 03 53.4**	**+3.5**
BTO				sS	**sS**	**15 04 08.8**	**-0.3**
BTO				SS	**SS**	**15 07 04.1**	**-4.3**
BTO				pmax	pmax		
	comp=Z,51nm,0.9s						
BTO				pmax	pmax		
	comp=Z,2µm,6.9s						
BTO				LR	LR		
	comp=Z,9µm,22.9s						
BTO				LR	LR		
	comp=Z,7µm,17.9s						
BTO				LR	LR		
	comp=Z,11µm,21.4s						
JSU	**Suzuyama**	**44.19**	**37**	P	**P**	**14 57 23.0**	**+1.8**
BBOO	**Buckleboo**	**44.27**	**136**	P	**P**	**14 57 21.6**	**-0.3**
BBOO	**Buckleboo**	**44.27**	**136**	P	**P**	**14 57 22.0**	**+0.1**
HHC	**Hu-ho-hao-te**	**44.59**	**11**	⇑*i*P	**P**	**14 57 25.3**	**+1.0**
HHC				pP	pP	14 57 35.6	-0.5
HHC				sP	sP	14 57 42.6	+1.6
HHC				PP	**PP**	**14 59 11.3**	**+2.2**
HHC				S	**S**	**15 03 55.4**	**-2.0**
HHC				pmax	pmax		
	comp=Z,67nm,1.1s						
HHC				pmax	pmax		
	comp=Z,280nm,4.7s						
HHC				LR	LR		
	comp=Z,3µm,13.4s						
HHC				LR	LR		
	comp=Z,3µm,16.0s						
HHC				LR	LR		
	comp=Z,2µm,14.0s						

NIL	**Nilore**	**44.83**	**327**	P	**P**	**14 57 26.7**	**+0.4**
NIL	**Nilore**	**44.83**	**327**	P	**P**	**14 57 26.2**	**-0.1**
NIL	**Nilore**	**44.83**	**327**	P	**P**	**14 57 26.2**	**-0.1**
NIL				pmax	pmax		
	comp=Z,527nm,0.8s						
NIL				MLR	MLR		
	comp=Z,1µm,21.0s						
BJT	**Baijiatuau**	**44.91**	**16**	IAmb	IAmb	14 57 29.4	
	comp=Z,123nm,1.4s						
BJT	**Baijiatuau**	**44.91**	**16**	IAMs_20	IAMs_20	15 18 17.8	
	comp=Z,5µm,20.0s						
BJT	**Baijiatuau**	**44.91**	**16**	P	**P**	**14 57 28.1**	**+1.4**
BJT	**Baijiatuau**	**44.91**	**16**	P	**P**	**14 57 27.0**	**+0.3**
BJI	**Beijing**	**44.93**	**16**	P	**P**	**14 57 27.3**	**+0.4**
BJI				pP	**pP**	**14 57 39.5**	**+0.8**
BJI				PP	**PP**	**14 59 15.0**	**+2.5**
BJI				S	**S**	**15 04 03.1**	**+1.0**
BJI				pmax	pmax		
	comp=Z,20nm,0.6s						
BJI				pmax	pmax		
	comp=Z,340nm,7.7s						
BJI				LR	LR		
	comp=Z,2µm,19.2s						
BJI				LR	LR		
	comp=Z,1µm,16.6s						
BJI				LR	LR		
	comp=Z,3µm,19.6s						
INKA	**Innaminka**	**45.22**	**127**	P	**P**	**14 57 29.6**	**+0.2**
INKA				IAmb	IAmb	14 57 51.9	
	comp=Z,162nm,1.1s						
MSEY	**Mahe Island**	**45.50**	**266**	IAMs_20	IAMs_20	15 12 02.1	
	comp=Z,2µm,22.0s						
JNU	**Nakatsue**	**45.59**	**36**	P	**P**	**14 57 32.2**	**-0.2**
	comp=Z,219nm,0.9s,baz=168,slow=3.3,SNR=61						
JNU				LR	LR	15 17 12.6	
	comp=Z,1µm,21.0s,baz=233,slow=37						
	comp=Z,219nm,0.9s						
JNU	**Nakatsue**	**45.59**	**36**	P	**P**	**14 57 33.5**	**+1.1**
DL2	**Dalian**	**45.73**	**23**	P	**P**	**14 57 34.3**	**+1.1**
DL2				S	**S**	**15 04 16.8**	**+3.1**
DL2				pmax	pmax		
	comp=Z,57nm,0.9s						
DL2				pmax	pmax		
	comp=Z,780nm,7.0s						
DL2				LR	LR		
	comp=Z,3µm,19.8s						
DL2				LR	LR		
	comp=Z,2µm,17.5s						
DL2				LR	LR		
	comp=Z,4µm,19.4s						
JTU	**Tsushima**	**45.78**	**33**	P	**P**	**14 57 33.0**	**-0.8**
TJN	**Taejon**	**46.15**	**30**	IAmb	IAmb	14 57 50.4	
	comp=Z,128nm,0.8s						
TJN	**Taejon**	**46.15**	**30**	P	**P**	**14 57 38.3**	**+1.7**
TJN	**Taejon**	**46.15**	**30***c*	*i*P	**P**	**14 57 37.0**	**+0.4**
PMG	**Port Moresby**	**46.26**	**100**	LR	LR	15 21 20.6	
	comp=Z,670nm,18.2s,baz=274,slow=42						
PMG	**Port Moresby**	**46.26**	**100**	P	**P**	**14 57 35.9**	**-2.0**
PMG	**Port Moresby**	**46.26**	**100**	P	**P**	**14 57 38.0**	**+0.1**
PMG	**Port Moresby**	**46.26**	**100**	P	**P**	**14 57 37.1**	**-0.8**
PMG	**Port Moresby**	**46.26**	**100**	P	**P**	**14 57 37.5**	**-0.4**
	comp=Z,44nm,0.9s						
PMG	**Port Moresby**	**46.26**	**100***c*	*i*P	**P**	**14 57 36.4**	**-1.5**
PMG				pmax	pmax		
	comp=Z,40nm,0.9s						
PMG				MLR	MLR		
	comp=Z,2µm,27.0s						
MANU	**Manus Island**	**46.28**	**90**	IAmb	IAmb	14 57 39.3	
	comp=Z,60nm,0.9s						
GUMO	**Guam**	**46.45**	**68**	LR	LR	15 18 35.3	
	comp=Z,331nm,20.0s,baz=222,slow=38						
HTT	**Hallett**	**46.62**	**135**	P	**P**	**14 57 40.4**	**-0.1**
HTT	**Hallett**	**46.62**	**135**	P	**P**	**14 57 41.3**	**+0.8**
INCN	**Inchon**	**46.67**	**28**	P	**P**	**14 57 41.4**	**+0.6**
INCN	**Inchon**	**46.67**	**28**	P	**P**	**14 57 40.6**	**-0.1**
INCN	**Inchon**	**46.67**	**28**	IAMs_20	IAMs_20	15 18 31.2	
	comp=Z,1µm,18.0s						
INCN	**Inchon**	**46.67**	**28**	P	**P**	**14 57 40.7**	**-0.1**
INCN				pmax	pmax		
	comp=Z,51nm,1.0s						
INCN				MLR	MLR		
	comp=Z,1µm,18.0s						
KSAR	**Wonju Array Be**	**47.24**	**29**	P	**P**	**14 57 45.2**	**0.0**
KSAR	**Wonju Array Be**	**47.24**	**29**	P	**P**	**14 57 45.2**	**0.0**
CTA	**Charters Tower**	**47.27**	**115**	LR	LR	15 19 33.1	
	comp=Z,1µm,20.8s,baz=282,slow=38						
CTA	**Charters Tower**	**47.27**	**115**	P	**P**	**14 57 44.5**	**-1.2**
CTA	**Charters Tower**	**47.27**	**115**	P	**P**	**14 57 45.5**	**-0.2**
CTAO	**Charters Tower**	**47.27**	**115**	P	**P**	**14 57 45.0**	**-0.6**
CTAO				IAmb	IAmb	14 57 47.8	
	comp=Z,125nm,0.9s						
CTAO	**Charters Tower**	**47.27**	**115**	P	**P**	**14 57 44.5**	**-1.2**
CTAO	**Charters Tower**	**47.27**	**115**	P	**P**	**14 57 45.1**	**-0.6**
CTAO				pmax	pmax		
	comp=Z,125nm,1.0s						
CTAO				MLR	MLR		
	comp=Z,1µm,21.0s						
CTAO	**Charters Tower**	**47.27**	**115**	P	**P**	**14 57 45.5**	**-0.2**
CTAO				PcP	**PcP**	**14 59 16.9**	**+0.4**
KSRS	**Korea Array**	**47.27**	**29**	P	**P**	**14 57 45.2**	**-0.1**
	comp=Z,77nm,1.1s,baz=225,slow=8.3,SNR=77						
KSRS				ScP	**ScP**	**15 03 06.0**	**-0.9**
	comp=Z,2.0nm,0.9s,baz=219,slow=3.0,SNR=4.2						
KSRS				LR	LR	15 19 58.5	
	comp=Z,678µm,18.3s,baz=220,slow=39						
	comp=Z,77nm,1.1s						
KS19	**Wonju Array Si**	**47.28**	**29**	IAmb	IAmb	14 58 00.6	
	comp=Z,110nm,1.1s						
QLP	**Quilpie**	**47.58**	**124**	P	**P**	**14 57 48.4**	**+0.3**
JLN	**Jalan Bani Buh**	**47.69**	**304**	P	**P**	**14 57 50.2**	**+1.3**
JLN				S	**S**	**15 04 43.9**	**+1.5**
STKA	**Stephens Creek**	**47.77**	**132**	P	**P**	**14 57 50.0**	**+0.6**
	comp=Z,62nm,1.0s,baz=309,slow=7.4,SNR=64						
STKA				S	**S**	**15 04 41.5**	**-1.8**
	comp=Z,3.9nm,0.8s,baz=196,slow=19,SNR=3.6						
STKA				LR	LR	15 18 36.1	
	comp=Z,2µm,21.9s,baz=295,slow=37						
	comp=Z,62nm,1.0s						
STKA	**Stephens Creek**	**47.77**	**132**	P	**P**	**14 57 49.6**	**+0.2**
STKA	**Stephens Creek**	**47.77**	**132***c*	*i*P	**P**	**14 57 49.8**	**+0.4**
JMN	**Monobe**	**47.81**	**38**	P	**P**	**14 57 51.0**	**+1.3**
NGCH	**Negor - Chabah**	**47.81**	**308**	P	**P**	**14 57 52.1**	**+2.4**
NGCH				S	**S**	**15 04 48.1**	**+4.2**
KBL	**Kabul**	**47.88**	**324**	P	**P**	**14 57 50.7**	**+0.3**
	SNR=31						
KBL	**Kabul**	**47.88**	**324**	P	**P**	**14 57 49.6**	**-0.8**
KBL				IAmb	IAmb	14 57 58.1	
	comp=Z,54nm,0.7s						
KBL	**Kabul**	**47.88**	**324**	P	**P**	**14 57 49.6**	**-0.8**
KBL				pmax	pmax		
	comp=Z,54nm,0.7s						
WMQ	**Urumqi**	**48.04**	**347**	⇑P	**P**	**14 57 52.5**	**+1.2**
WMQ				pP	pP	14 57 58.5	-4.6
WMQ				PcP	**PcP**	**14 59 16.6**	**-2.2**
WMQ				PP	**PP**	**14 59 43.1**	**-0.7**
WMQ				ScP	**ScP**	**15 03 10.1**	**0.0**
WMQ				PcS	**PcS**	**15 03 14.9**	**+0.4**
WMQ				S	**S**	**15 04 44.8**	**-1.9**
WMQ				ScS	**ScS**	**15 07 37.9**	**-3.3**
WMQ				pmax	pmax		
	comp=Z,1µm,3.7s						
WMQ				LR	LR		
	comp=Z,930nm,15.7s						
WMQ				LR	LR		
	comp=Z,970nm,18.3s						
WMQ				LR	LR		
	comp=Z,1µm,24.0s						
KSH	**Kashi**	**48.10**	**334**	P	**P**	**14 57 51.4**	**-0.6**
KSH				pP	pP	14 58 01.0	-2.6
KSH				PP	**PP**	**14 59 40.5**	**-4.0**
KSH				S	**S**	**15 04 43.6**	**-4.3**
KSH				pmax	pmax		
	comp=Z,200nm,0.9s						
KSH				LR	LR		
	comp=Z,860nm,23.0s						
KSH				LR	LR		
	comp=Z,510nm,21.3s						
KSH				LR	LR		
	comp=Z,1µm,22.3s						
WBK	**Wadi Bani Khal**	**48.26**	**304**	P	**P**	**14 57 54.9**	**+1.5**
	SNR=6.1						
DQM	**DQM**	**48.36**	**300**	P	**P**	**14 57 56.6**	**+2.4**
MHTO	**MHTO**	**48.42**	**301**	P	**P**	**14 57 55.3**	**+0.7**
	SNR=6.1						
MHTO				S	**S**	**15 04 53.8**	**+1.2**

XLT	**XiLinHaoTe**	**48.51**	**14**	*e*P	**P**	**14 57 55.0**	**0.0**
XLT				pP	pP	14 58 03.8	-3.0
XLT				PcP	**PcP**	**14 59 21.0**	**+0.5**
XLT				PP	**PP**	**14 59 47.8**	**-0.3**
XLT				ScP	**ScP**	**15 03 10.4**	**-1.7**
XLT				S	**S**	**15 04 46.9**	**-6.5**
XLT				pmax	pmax		
	comp=Z,85nm,1.0s						
XLT				pmax	pmax		
	comp=Z,540nm,7.0s						
XLT				LR	LR		
	comp=Z,200nm,16.3s						
XLT				LR	LR		
	comp=Z,1µm,18.3s						
XLT				LR	LR		
	comp=Z,3µm,16.3s						
WSAR	**Wadi Sarin**	**48.82**	**304**	P	**P**	**14 57 59.3**	**+1.7**
WSAR				S	**S**	**15 05 00.8**	**+2.5**
JMDO	**Jabal Madar**	**48.88**	**303**	P	**P**	**14 57 59.5**	**+1.4**
JMDO				S	**S**	**15 05 01.6**	**+2.4**
SNY	**Shenyang**	**49.00**	**22**	⇑P	**P**	**14 57 58.8**	**+0.2**
SNY				S	**S**	**15 04 56.3**	**-3.9**
SNY				pmax	pmax		
	comp=Z,26nm,1.0s						
SNY				pmax	pmax		
	comp=Z,460nm,7.7s						
SNY				LR	LR		
	comp=Z,2µm,15.4s						
SNY				LR	LR		
	comp=Z,1µm,16.4s						
SNY				LR	LR		
	comp=Z,2µm,15.1s						
TARG	**Taragay, Kyrgy**	**49.19**	**337**	P	**P**	**14 58 01.9**	**+1.2**
TARG				pmax	pmax		
	comp=Z,110nm,0.8s						
SMDO	**Samad**	**49.22**	**304**	P	**P**	**14 58 02.1**	**+1.2**
	SNR=7.7						
SHAO	**Shalim**	**49.34**	**297**	P	**P**	**14 58 03.8**	**+2.1**
SHAO	**Shalim**	**49.34**	**297**	*i* P	**P**	**14 58 03.6**	**+1.9**
	SNR=6.3						
BIDO	**Bidbid**	**49.36**	**305**	P	**P**	**14 58 03.5**	**+1.8**
	SNR=8.0						
JCJ	**Chichijima**	**49.62**	**50**	P	P	14 57 51.9	-12
	comp=Z,118nm,0.7s,baz=304,slow=16,SNR=10						
JCJ				LR	LR	15 18 08.2	
	comp=Z,522nm,21.5s,baz=236,slow=35						
JCJ	**Chichijima**	**49.62**	**50**	P	**P**	**14 58 05.0**	**+1.3**
KDJ	**Kajisay**	**49.78**	**337**	P	**P**	**14 58 06.3**	**+1.4**
KDJ				pmax	pmax		
	comp=Z,407nm,0.9s						
BSY	**Bisya**	**49.79**	**303**	P	**P**	**14 58 06.3**	**+1.1**
	SNR=6.1						
BSY				P	**P**	**14 58 06.3**	**+1.1**
	SNR=6.1						
BSY				S	**S**	**15 05 14.7**	**+2.7**
BSY				S	**S**	**15 05 14.7**	**+2.7**
SHLS	**Shalkode**	**49.81**	**339**	*e*P	**P**	**14 58 04.5**	**-0.6**
	comp=Z,40nm,0.7s						
SHLS				*e*S	**S**	**15 05 11.4**	**-0.5**
SHLS	**Shalkode**	**49.81**	**339**	*e*P	**P**	**14 58 04.4**	**-0.6**
SHLS				*e*S	**S**	**15 05 11.3**	**-0.5**
SHLS				pmax	pmax		
	comp=Z,40nm,0.7s						
DMTO	**DMTO**	**49.85**	**296**	P	**P**	**14 58 07.0**	**+1.4**
DMTO				S	**S**	**15 05 14.7**	**+1.8**
PDGK	**Podgornoye**	**49.95**	**339**	P	**P**	**14 58 06.7**	**+0.6**
UZB	**Uzynbulak**	**49.96**	**339**	*e*P	**P**	**14 58 06.7**	**+0.5**
	comp=Z,41nm,0.6s						
UZB	**Uzynbulak**	**49.96**	**339**	*e*P	**P**	**14 58 06.7**	**+0.5**
UZB				pmax	pmax		
	comp=Z,41nm,0.6s						
HOQ	**Hoqain**	**50.06**	**304**	P	**P**	**14 58 08.8**	**+1.7**
	SNR=6.6						
HOQ				S	**S**	**15 05 15.4**	**-0.3**
SATY	**Saty**	**50.11**	**338**	*e*P	**P**	**14 58 07.8**	**+0.5**
	comp=Z,41nm,0.7s						
SATY				*e*S	**S**	**15 05 17.5**	**+1.5**
SATY	**Saty**	**50.11**	**338**	*e*P	**P**	**14 58 07.8**	**+0.5**
SATY				*e*S	**S**	**15 05 17.5**	**+1.5**
SATY				pmax	pmax		
	comp=Z,41nm,0.7s						
ULHL	**Ulahol**	**50.25**	**336**	P	**P**	**14 58 09.6**	**+1.2**
	SNR=20						
OHH	**Osh**	**50.36**	**332**	P	**P**	**14 58 08.5**	**-0.7**
OHH				pmax	pmax		
	comp=Z,412nm,0.9s						
RBK	**Rabkut**	**50.45**	**295**	P	**P**	**14 58 11.9**	**+1.8**
RBK				S	**S**	**15 05 23.1**	**+1.8**
SHAA	**Shahritus**	**50.53**	**326**	IAmb	IAmb	14 58 11.8	
	comp=Z,463nm,0.9s						
ARQ	**Araqi**	**50.61**	**303**	P	**P**	**14 58 15.0**	**+3.7**
	SNR=5.4						
ARQ				S	**S**	**15 05 24.8**	**+1.4**
TNSS	**Tian-Shan**	**50.64**	**337**	*e*P	**P**	**14 58 11.7**	**+0.1**
TNSS	**Tian-Shan**	**50.64**	**337**	*e*P	**P**	**14 58 11.7**	**+0.1**
MDOK	**Medeo**	**50.71**	**337**	*e*P	**P**	**14 58 12.3**	**+0.5**
MDOK				*e*S	**S**	**15 05 25.8**	**+1.5**
MDOK				LR	LR	15 22 22.6	
MDOK	**Medeo**	**50.71**	**337**	*e*P	**P**	**14 58 12.3**	**+0.5**
MDOK				*e*S	**S**	**15 05 25.8**	**+1.5**
CMSA	**Cobar Meteorol**	**50.73**	**129**	P	**P**	**14 58 13.2**	**+1.1**
ARLS	**Aral**	**50.74**	**334**	P	**P**	**14 58 13.4**	**+1.3**
ARLS				pmax	pmax		
	comp=Z,569nm,0.9s						
SONM	**Songino Array**	**50.74**	**5**	P	**P**	**14 58 12.8**	**+0.8**
	comp=Z,364nm,0.8s,baz=186,slow=8.6,SNR=822						
SONM				PcP	**PcP**	**14 59 28.5**	**-0.1**
	comp=Z,24nm,0.6s,baz=191,slow=4.4,SNR=7.2						
SONM				ScP	**ScP**	**15 03 20.0**	**-1.6**
	comp=Z,4.5nm,0.9s,baz=183,slow=4.5,SNR=4.4						
SONM				LR	LR	15 22 20.3	
	comp=Z,2µm,19.4s,baz=186,slow=39						
	comp=Z,364nm,0.8s						
SONM	**Songino Array**	**50.74**	**5**	P	**P**	**14 58 12.7**	**+0.8**
CHGR	**Chuyangaron**	**50.76**	**328***c*	*i*P	**P**	**14 58 11.3**	**-0.9**
CHGR				pmax	pmax		
	comp=Z,491nm,1.0s						
CHGR				MLR	MLR		
	comp=Z,2µm,24.0s						
AAA	**Alma-Ata**	**50.80**	**337**	*e*P	**P**	**14 58 12.9**	**+0.5**
	comp=Z,82nm,0.7s						
AAA				LR	LR	15 22 19.8	
AAA	**Alma-Ata**	**50.80**	**337**	*e*P	**P**	**14 58 12.8**	**+0.4**
AAA				pmax	pmax		
	comp=Z,82nm,0.7s						
INU	**Inuyama**	**50.81**	**38**	P	**P**	**14 58 13.2**	**+0.6**
ULN	**Ulaanbaatar**	**50.83**	**5**	P	**P**	**14 58 13.8**	**+1.1**
ULN				P	**P**	**14 58 13.8**	**+1.1**
ULN				S	**S**	**15 05 27.9**	**+2.1**
ULN				S	**S**	**15 05 27.9**	**+2.1**
ULN	**Ulaanbaatar**	**50.83**	**5**	P	**P**	**14 58 13.1**	**+0.4**
ULN	**Ulaanbaatar**	**50.83**	**5**	IAMs_20	IAMs_20	15 22 37.0	
	comp=Z,2µm,19.0s						
ULN	**Ulaanbaatar**	**50.83**	**5**	P	**P**	**14 58 13.6**	**+0.9**
ULN	**Ulaanbaatar**	**50.83**	**5***c*	*e*P	**P**	**14 58 13.3**	**+0.7**
ULN				pmax	pmax		
	comp=Z,234nm,0.8s						
ULN				MLR	MLR		
	comp=Z,2µm,16.0s						
ULN	**Ulaanbaatar**	**50.83**	**5**	P	**P**	**14 58 13.4**	**+0.7**
ULN				PcP	**PcP**	**14 59 28.8**	**-0.2**
DOK	**Doka**	**50.88**	**297**	P	**P**	**14 58 14.7**	**+1.3**
DOK				S	**S**	**15 05 27.5**	**+0.3**
SOHO	**SOHO**	**50.94**	**304**	P	**P**	**14 58 15.3**	**+1.6**
SOHO				S	**S**	**15 05 29.7**	**+1.8**
SOHO	**SOHO**	**50.94**	**304**	*i* P	**P**	**14 58 15.0**	**+1.3**
	SNR=8.1						
UCH	**Uchtor**	**50.95**	**335**	P	**P**	**14 58 15.0**	**+0.9**
	SNR=154						
WHFO	**Wadi Hawf**	**50.97**	**296**	P	**P**	**14 58 15.0**	**+0.9**
WHFO				S	**S**	**15 05 28.3**	**-0.2**
TKM2	**Tokmak 2**	**51.08**	**336**	P	**P**	**14 58 15.6**	**+0.9**
	SNR=195						
KBK	**Karagaybulak**	**51.12**	**335**	P	**P**	**14 58 16.4**	**+1.4**
	SNR=139						
JGF	**Kuroka**	**51.19**	**38**	P	**P**	**14 58 14.7**	**-0.8**
ABTO	**Aybut**	**51.22**	**295**	P	**P**	**14 58 17.3**	**+1.3**
ABTO				S	**S**	**15 05 32.9**	**+0.9**
AAK	**Ala-Archa**	**51.30**	**335**	P	**P**	**14 58 17.4**	**+1.1**
	SNR=121						
AAK	**Ala-Archa**	**51.30**	**335**	LR	LR	15 23 11.5	
	comp=Z,1µm,20.9s,baz=150,slow=40						
AAK	**Ala-Archa**	**51.30**	**335**	P	**P**	**14 58 17.7**	**+1.4**
AAK				P	**P**	**14 58 17.7**	**+1.4**
AAK				S	**S**	**15 05 34.6**	**+2.0**

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AAK                               S         S          15 05 34.6 +2.0
AAK    Ala-Archa        51.30 335 P         P          14 58 17.0 +0.7
AAK                               IAmb      IAmb       14 58 19.3
       comp=Z,96nm,0.8s
AAK    Ala-Archa        51.30 335 IAMs_20   IAMs_20    15 23 00.4
       comp=Z,2µm,20.0s
AAK    Ala-Archa        51.30 335 i P       P          14 58 17.3 +1.0
       SNR=168
AAK    Ala-Archa        51.30 335c iP       P          14 58 17.3 +1.0
AAK                               pmax      pmax
       comp=Z,111nm,0.9s
AAK                               MLR       MLR
       comp=Z,2µm,22.0s
ARXS   Arharly          51.31 339 eP        P          14 58 16.2  -0.1
CN2    Changchun        51.40  22 P         P          14 58 15.9  -0.9
CN2                               sP        pP         14 58 29.8 +1.1
CN2                               PP        PP         15 00 18.0 +3.7
CN2                               S         S          15 05 39.4 +5.9
CN2                               pmax      pmax
       comp=Z,140nm,0.7s
CN2                               pmax      pmax
       comp=Z,470nm,6.0s
CN2                               LR        LR
       comp=Z,2µm,18.0s
CN2                               LR        LR
       comp=Z,1µm,18.0s
CN2                               LR        LR
       comp=Z,2µm,20.0s
CHMS   Chumysh          51.49 335 P         P          14 58 17.7 +0.1
       SNR=55
UMZA   Um Al Zommool    51.50 302 P         P          14 58 18.9 +1.0
UMZA                              S         S          15 05 36.4 +0.9
ALNE   Al Ain           51.55 304 P         P          14 58 19.5 +1.2
       SNR=12
ALNE                              S         S          15 05 37.6 +1.3
ALNE   Al Ain           51.55 304 i P       P          14 58 19.6 +1.3
       SNR=25
ASHO   Ashiyiah         51.57 305 P         P          14 58 20.7 +2.2
ASHO   Ashiyiah         51.57 305 i P       P          14 58 19.6 +1.2
       SNR=7.8
HATD   Hatta, Dubai     51.57 305 P         P          14 58 19.9 +1.5
HATD                              P         P          14 58 19.9 +1.5
HATD   Hatta, Dubai     51.57 305 i P       P          14 58 19.7 +1.3
       SNR=5.7
KUU    Kurty            51.60 337 eP        P          14 58 18.9 +0.5
       comp=Z,52nm,0.8s
KUU                               LR        LR         15 22 57.6
       comp=Z,175nm,12.6s
KUU    Kurty            51.60 337 eP        P          14 58 18.8 +0.5
KUU                               pmax      pmax
       comp=Z,52nm,0.8s
EKS2   Erkin-Say        51.62 334 P         P          14 58 19.9 +1.2
       SNR=31
ARK    Arkit            51.74 332 P         P          14 58 20.4 +0.8
ARK                               pmax      pmax
       comp=Z,279nm,1.0s
MSFE   Esma-Masafi      51.78 306 P         P          14 58 21.2 +1.2
MASF   Masafi           51.78 306 P         P          14 58 21.9 +1.8
MASF                              S         S          15 05 42.9 +3.3
TDK    Taldyqorghan     51.79 340⇑iP        P          14 58 20.1 +0.3
       comp=Z,85nm,0.7s
TDK                               LR        LR         15 22 57.6
       comp=Z,607nm,19.0s
TDK    Taldyqorghan     51.79 340c iP       P          14 58 20.0 +0.3
TDK                               pmax      pmax
       comp=Z,85nm,0.7s
TDK                               MLR       MLR
       comp=Z,607nm,19.0s
USP    Ospenovka        51.81 335 P         P          14 58 20.5 +0.5
       SNR=13
SGDS   Sogindy          51.91 336 eP        P          14 58 21.1 +0.4
BANOM  Banah            51.91 306 P         P          14 58 23.5 +2.4
FAQ    Al Faqa, Dubai   51.98 305 P         P          14 58 23.0 +1.5
       SNR=8.3
FAQ                               P         P          14 58 23.0 +1.5
       SNR=8.3
FAQ    Al Faqa, Dubai   51.98 305 i P       P          14 58 23.0 +1.5
       SNR=14
HRA    Herat            52.02 319 P         P          14 58 20.9  -1.0
NAZ    Nazwa, Dubai     52.02 305 P         P          14 58 23.3 +1.5
NAZ    Nazwa, Dubai     52.02 305 P         P          14 58 22.1 +0.3
SHME   Shamm            52.10 306 P         P          14 58 25.0 +2.6
SHME   Shamm            52.10 306 P         P          14 58 23.9 +1.5
ZSN    Zaisan           52.12 346⇑iP        P          14 58 22.9 +0.8
       comp=Z,70nm,0.7s
ZSN    Zaisan           52.12 346c iP       P          14 58 22.9 +0.8
ZSN                               pmax      pmax
       comp=Z,70nm,0.7s
ASUD   Al Ashush, Dub   52.14 304 P         P          14 58 24.5 +1.8
ASUD   Al Ashush, Dub   52.14 304 i P       P          14 58 24.0 +1.3
       SNR=8.9
MK31   Makanchi Array   52.18 344 i P       P          14 58 22.7 +0.1
MKAR   Makanchi Array   52.18 344 P         P          14 58 22.7 +0.1
       comp=Z,224nm,0.8s,baz=156,slow=7.1,SNR=609
MKAR                              S         S          15 05 46.6 +2.4
       comp=Z,3.0nm,0.9s,baz=157,slow=16,SNR=3.8
MKAR                              LR        LR         15 25 20.4
       comp=Z,1µm,21.0s,baz=145,slow=42
       comp=Z,224nm,0.8s
MKAR   Makanchi Array   52.18 344 P         P          14 58 22.5  -0.2
MAKZ   Makanchi         52.28 344 P         P          14 58 23.2  -0.1
MAKZ                              IAMs_20   IAMs_20    15 24 39.0
       comp=Z,2µm,22.0s
MAKZ   Makanchi         52.28 344 P         P          14 58 23.3  -0.1
MAKZ                              pmax      pmax
       comp=Z,172nm,1.0s
MAKZ                              MLR       MLR
       comp=Z,2µm,22.0s
MAKZ   Makanchi         52.28 344 P         P          14 58 23.3  -0.1
MAJO   Matsushiro       52.32  38 P         P          14 58 23.6  -0.3
MAJO   Matsushiro       52.32  38 P         P          14 58 23.5  -0.3
MAJO   Matsushiro       52.32  38c iP       P          14 58 23.4  -0.5
MAJO                              pmax      pmax
       comp=Z,54nm,1.0s
MAJO                              MLR       MLR
       comp=Z,440nm,15.0s
MJAR   Matsushiro Arr   52.32  38 P         P          14 58 23.1  -0.8
       comp=Z,39nm,0.8s,baz=210,slow=7.3,SNR=86
MJAR                              PcP       PcP        14 59 34.8 +0.1
       comp=Z,8.9nm,0.9s,baz=207,slow=3.5,SNR=4.6
MJAR                              ScP       ScP        15 03 27.2  -1.4
       comp=Z,7.4nm,1.0s,baz=212,slow=5.5,SNR=7.0
MJAR                              LR        LR         15 21 25.4
       comp=Z,645nm,19.7s,baz=226,slow=37
       comp=Z,39nm,0.8s
MJAR   Matsushiro Arr   52.32  38 P         P          14 58 22.8  -1.1
AJN    Ajban            52.40 304 P         P          14 58 25.7 +1.1
PSTR   Posyet           52.72  27ceP        P          14 58 26.5  -0.1
MSHR   Mys Shultsa      52.83  28⇑eP        P          14 58 28.3 +0.9
MSHR                              pmax      pmax
       comp=Z,50nm,0.8s
DZA    Taraz            52.89 333 eP        P          14 58 28.3 +0.3
       comp=Z,88nm,0.7s
DZA    Taraz            52.89 333 eP        P          14 58 28.2 +0.3
DZA                               pmax      pmax
       comp=Z,88nm,0.7s
IUG    Iuzhnay          52.92 331⇑iP        P          14 58 28.8 +0.4
       comp=Z,81nm,0.8s
IUG    Iuzhnay          52.92 331c iP       P          14 58 28.7 +0.4
IUG                               pmax      pmax
       comp=Z,81nm,0.8s
MZWR   Madinat Zayed    52.99 303 P         P          14 58 30.2 +1.2
MZWR                              P         P          14 58 30.2 +1.2
EIDS   Eidsvold         53.00 120 P         P          14 58 29.6 +0.5
MZR    Muzera           53.04 302 P         P          14 58 30.9 +1.5
       SNR=5.3
MZR    Muzera           53.04 302 i P       P          14 58 30.8 +1.4
       SNR=16
ZAK    Zakamensk        53.11   2 eP        P          14 58 29.4  -0.1
ZAK                               e                    14 59 36.2
ZAK                               pmax      pmax
       comp=Z,90nm,1.1s
JSD    Sado             53.33  37 P         P          14 58 30.1  -1.1
KNGR   Kungurtug, Tuv   53.38 357c iP       P          14 58 33.1 +1.5
KNGR                              pmax      pmax
       comp=Z,254nm,0.9s
KK31   Karatay Array    53.43 332 IAmb      IAmb       14 58 59.9
       comp=Z,57nm,0.8s
KK31   Karatay Array    53.43 332 i P       P          14 58 31.6  -0.4
KKAR   Karatay Array    53.43 332 P         P          14 58 31.6  -0.4
KKAR   Karatay Array    53.43 332 P         P          14 58 31.6  -0.4
VLA    Vladivostok      53.58  28⇓eP        P          14 58 33.7 +0.7
VLA                               pmax      pmax
       comp=Z,70nm,0.9s
VLA                               MLR       MLR
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       comp=Z,929nm,16.0s
BRLS   Borolday         53.69 332 eP        P          14 58 32.9  -1.0
BRLS   Borolday         53.69 332 eP        P          14 58 32.9  -1.0
DGZ    Jazzator, Alta   53.70 349c iP       P          14 58 34.6 +0.6
DGZ                               pmax      pmax
       comp=Z,520nm,0.7s
DGZ                               MLR       MLR
       comp=Z,1µm,17.0s
MDJ    Mudanjiang       53.74  25 IAmb      IAmb       14 58 48.6
       comp=Z,62nm,1.0s
MDJ                               IAMs_20   IAMs_20    15 21 00.7
       comp=Z,3µm,22.0s
MDJ    Mudanjiang       53.74  25 P         P          14 58 34.0  -0.2
MDJ                               S         S          15 06 05.8 +0.2
MDJ                               pmax      pmax
       comp=Z,15nm,0.8s
MDJ                               pmax      pmax
       comp=Z,750nm,6.4s
MDJ                               LR        LR
       comp=Z,1µm,22.7s
MDJ                               LR        LR
       comp=Z,3µm,22.0s
MDJ                               LR        LR
       comp=Z,4µm,24.7s
MDJ    Mudanjiang       53.74  25 P         P          14 58 35.2 +1.0
BNX    BinXian          53.78  23 ⇑P        P          14 58 34.3  -0.1
BNX                               pP        pP         14 58 45.5  -0.9
BNX                               PP        PP         15 00 37.8 +1.9
BNX                               S         S          15 06 08.8 +2.8
BNX                               sS        sS         15 06 25.8  -0.8
BNX                               pmax      pmax
       comp=Z,210nm,0.7s
BNX                               pmax      pmax
       comp=Z,840nm,4.4s
BNX                               LR        LR
       comp=Z,940nm,22.2s
BNX                               LR        LR
       comp=Z,2µm,19.0s
BNX                               LR        LR
       comp=Z,3µm,18.4s
GHWR   Ruwais           53.92 302 P         P          14 58 36.8 +1.0
MOY    Mondy            54.36 360 eP        P          14 58 39.1 +0.4
MOY                               pmax      pmax
       comp=Z,104nm,1.9s
TLY    Talaya           54.42   2 P         P          14 58 40.6 +1.6
TLY                               P         P          14 58 40.6 +1.6
TLY                               S         S          15 06 16.9 +2.4
TLY                               S         S          15 06 16.9 +2.4
TLY    Talaya           54.42   2 P         P          14 58 40.0 +1.0
TLY    Talaya           54.42   2c iP       P          14 58 40.2 +1.2
TLY                               pmax      pmax
       comp=Z,237nm,0.9s
TLY                               MLR       MLR
       comp=Z,4µm,16.0s
TLY    Talaya           54.42   2 P         P          14 58 40.1 +1.0
HIA    Hailar           54.43  15 IAMs_20   IAMs_20    15 25 08.4
       comp=Z,2µm,19.0s
USRK   Ussuriysk Ar.    54.46  27 P         P          14 58 39.6 +0.2
       comp=Z,185nm,0.7s,baz=222,slow=6.4,SNR=174
       comp=Z,185nm,0.7s
HILR   Hailar Array B   54.70  15 P         P          14 58 40.7  -0.3
       comp=Z,23nm,0.6s,baz=189,slow=9.9,SNR=20
HILR                              PcP       PcP        14 59 43.2  -0.2
       comp=Z,4.8nm,0.4s,baz=172,slow=4.4,SNR=4.6
HILR                              LR        LR         15 25 19.4
       comp=Z,2µm,19.5s,baz=125,slow=40
       comp=Z,23nm,0.6s
CAN    Canberra         54.83 132 P         P          14 58 42.8 +0.4
CAN                               IAmb      IAmb       14 59 04.9
       comp=Z,130nm,1.2s
CAN    Canberra         54.83 132 P         P          14 58 43.4 +1.0
CAN    Canberra         54.83 132 P         P          14 58 42.8 +0.4
CAN                               pmax      pmax
       comp=Z,130nm,1.2s
OPO    Ambohidratompo   54.93 249 LR        LR         15 17 49.6
       comp=Z,588nm,20.3s,baz=218,slow=31
ABPO   Ambohimpanom     54.97 249 IAMs_20   IAMs_20    15 17 41.0
       comp=Z,3µm,20.0s
IRK    Irkutsk          55.01   2 eP        P          14 58 42.9  -0.3
IRK                               pmax      pmax
       comp=Z,225nm,1.7s
ARMA   Armidale         55.03 125 IAmb      IAmb       14 59 06.9
       comp=Z,102nm,1.1s
ARMA   Armidale         55.03 125 P         P          14 58 46.3 +2.4
CNB    Canberra Magne   55.10 132 P         P          14 58 44.9 +0.6
TRNA   Turayna          55.61 303 S         S          15 06 30.6  -0.8
CIT    Chita            55.74   9 eP        P          14 58 49.1 +0.6
CIT                               e                    14 58 58.4
CIT                               e                    14 59 06.6
CIT                               e                    14 59 44.6
CIT                               e                    15 02 04.2
CIT                               eS        S          15 06 34.0 +1.8
CIT                               pmax      pmax
       comp=Z,210nm,3.2s
VOI    Vohitsoka        55.91 246 P         P          14 58 52.5 +2.0
VOI    Vohitsoka        55.91 246 IAMs_20   IAMs_20    15 18 49.0
       comp=Z,1µm,20.0s
SMRA   Abu-Samra        55.94 302 P         P          14 58 51.5 +1.1
SHMA   Al-Shehemyia     56.25 304 P         P          14 58 53.4 +0.8
SHMA                              S         S          15 06 39.4  -0.4
FOMA   Nahampoana Res   56.43 242 IAMs_20   IAMs_20    15 18 38.5
       comp=Z,2µm,18.0s
SAKB   Bahrain          56.65 304 P         P          14 58 57.3 +1.8
KURBB  Kurchatov Arra   56.71 343 P         P          14 58 55.2  -0.2
       comp=Z,83nm,0.9s,baz=161,slow=7.1,SNR=345
KURBB                             S         S          15 06 38.8  -6.2
       comp=Z,0.6nm,0.4s,baz=148,slow=13,SNR=5.1
KURBB                             LR        LR         15 26 41.6
       comp=Z,1µm,18.9s,baz=155,slow=40
       comp=Z,83nm,0.9s
KURBB  Kurchatov Arra   56.71 343 P         P          14 58 55.1  -0.3
KURK   Kurchatov        56.77 343 P         P          14 58 56.2 +0.4
KURK   Kurchatov        56.77 343 P         P          14 58 55.6  -0.2
KURK   Kurchatov        56.77 343 IAMs_20   IAMs_20    15 26 30.9
       comp=Z,1µm,18.0s
KURK   Kurchatov        56.77 343c iP       P          14 58 55.7  -0.1
KURK                              pmax      pmax
       comp=Z,165nm,0.9s
KURK                              MLR       MLR
       comp=Z,1µm,18.0s
KURK   Kurchatov        56.77 343 P         P          14 58 55.9   0.0
KURK                              pP        pP         14 59 06.8  -1.0
KURK                              PcP       PcP        14 59 52.2 +0.9
TAU    Tasmania Unive   57.22 141 IAMs_20   IAMs_20    15 19 34.2
       comp=Z,1µm,21.0s
TAU    Tasmania Unive   57.22 141 P         P          14 59 00.4 +1.2
HEH    HeiHe            57.59  20 eP        P          14 59 01.5  -0.2
HEH                               sP        pP         14 59 15.5 +1.7
HEH                               PcP       PcP        14 59 54.3  -0.3
HEH                               S         S          15 06 55.9  -0.8
HEH                               pmax      pmax
       comp=Z,140nm,0.8s
HEH                               pmax      pmax
       comp=Z,900nm,6.0s
HEH                               LR        LR
       comp=Z,2µm,15.3s
HEH                               LR        LR
       comp=Z,2µm,16.0s
HEH                               LR        LR
       comp=Z,4µm,16.1s
BRZS   Berezniki        58.07 339 eP        P          14 59 05.7 +0.6
BRZS   Berezniki        58.07 339 eP        P          14 59 05.6 +0.6
ZALV   Zalesovo Beam    58.25 349 P         P          14 59 06.1  -0.1
       comp=Z,940nm,0.9s,baz=167,slow=5.1,SNR=1252
ZALV                              S         S          15 07 02.2  -2.9
       comp=Z,5.5nm,0.8s,baz=156,slow=15,SNR=8.0
ZALV                              LR        LR         15 27 24.0
       comp=Z,1µm,21.0s,baz=160,slow=39
ZALV                              PKPPKP    P'P'bc     15 28 46.0   -11
       comp=Z,2.1nm,1.0s,baz=296,slow=4.4,SNR=5.4
ZALV   Zalesovo Beam    58.25 349 P         P          14 59 06.0  -0.2
TATA   Tatamba Isabel   58.67  98 P         P          14 59 09.0  -0.9
ERM    Erimo            58.76  36 IAMs_20   IAMs_20    15 21 10.0
       comp=Z,1µm,22.0s
ERM    Erimo            58.76  36 P         P          14 59 10.7 +0.7
JEM    Erimo            58.76  36 P         P          14 59 10.5 +0.5
NGOA   Tingoa Renbel    59.07 102 P         P          14 59 13.2 +0.5
ATD    Arta Tunnel      59.62 285 LR        LR         15 20 12.6
       comp=Z,33nm,21.9s,baz=92,slow=31
ASAJ   Asahikawa        59.77  34 P         P          14 59 17.4 +0.4
       comp=Z,37nm,0.6s,baz=236,slow=8.7,SNR=88
ASAJ                              LR        LR         15 26 26.6
       comp=Z,355nm,19.2s,baz=248,slow=37
       comp=Z,37nm,0.6s
JKA    Kamikawa-asahi   59.77  34 IAmb      IAmb       14 59 32.9
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       comp=Z,82nm,0.9s
RAYN   Ar Rayn          60.09 299 P         P          14 59 20.3 +0.6
RAYN                              S         S          15 07 29.2  -1.0
RAYN   Ar Rayn          60.09 299 P         P          14 59 19.4  -0.2
RAYN   Ar Rayn          60.09 299 i P       P          14 59 20.0 +0.4
       SNR=20
RAYN   Ar Rayn          60.09 299 P         P          14 59 19.6   0.0
RAYN   Ar Rayn          60.09 299 P         P          14 59 19.8 +0.1
RAYN                              pP        pP         14 59 32.4 +0.9
RAYN                              PcP       PcP        15 00 05.1  -0.1
ZEA    Zeya             60.53  18 eP        P          14 59 22.5 +0.5
ZEA                               e                    14 59 41.7
ZEA                               e                    15 00 09.7
ZEA                               e                    15 01 43.0
ZEA                               eS        S          15 07 37.0 +2.4
ZEA                               pmax      pmax
       comp=N,200nm,6.1s
ZEA                               pmax      pmax
       comp=Z,300nm,6.4s
ZEA                               pmax      pmax
       comp=N,20nm,0.7s
ZEA                               pmax      pmax
       comp=E,20nm,0.7s
ZEA                               pmax      pmax
       comp=Z,70nm,0.7s
ZEA                               smax      smax
       comp=N,200nm,7.8s
H04N2  CROZET ISLANDS   60.71 217 T         T          16 04 31.0
       baz=60,slow=74,SNR=1825
H04N1  CROZET ISLANDS   60.72 217 T         T          16 04 31.4
       baz=60,slow=74,SNR=1868
H04N3  CROZET ISLANDS   60.73 217 T         T          16 04 30.1
       baz=60,slow=74,SNR=1743
CRZF   Crozet Islands   60.80 217 IAMs_20   IAMs_20    15 20 28.9
       comp=Z,2µm,20.0s
H04S1  CROZET ISLANDS   60.98 216 T         T          16 04 48.8
       baz=59,slow=76,SNR=615
H04S3  CROZET ISLANDS   60.99 216 T         T          16 04 48.3
       baz=59,slow=76,SNR=1187
H04S2  CROZET ISLANDS   61.00 216 T         T          16 04 47.1
       baz=59,slow=76,SNR=597
BVA0   Borovoye Array   61.39 339 P         P          14 59 26.9  -0.9
BVAR   Borovoye Array   61.39 339 P         P          14 59 27.2  -0.6
       comp=Z,214nm,0.9s,baz=142,slow=7.5,SNR=59
BVAR                              S         S          15 07 42.5  -3.1
       comp=Z,1.1nm,0.8s,baz=94,slow=7.4,SNR=2.3
BVAR                              PKP2bc    P'P'bc     15 28 46.0  -3.3
       comp=Z,0.5nm,0.8s,baz=82,slow=2.2,SNR=3.9
BVAR                              LR        LR         15 30 13.4
       comp=Z,572nm,21.2s,baz=143,slow=40
       comp=Z,214nm,0.9s
BOD    Bodaibo          61.42   8 eP        P          14 59 27.1  -0.8
BOD                               pmax      pmax
       comp=Z,155nm,0.8s
GRNR   Gornyy           61.43  25⇑iP        P          14 59 28.2 +0.1
GRNR                              pmax      pmax
       comp=Z,40nm,0.8s
BORK   Borovoye         61.43 339 P         P          14 59 27.5  -0.5
BORK   Borovoye         61.43 339ceP        P          14 59 27.6  -0.5
BORK                              pmax      pmax
       comp=Z,142nm,0.8s
BORK                              MLR       MLR
       comp=Z,581nm,17.0s
BORK   Borovoye         61.43 339 P         P          14 59 27.5  -0.5
BORK                              PcP       PcP        15 00 09.8   0.0
YSS    Yuzhno-Sakhali   61.70  31 P         P          14 59 30.1 +0.1
YSS    Yuzhno-Sakhali   61.70  31 P         P          14 59 30.6 +0.6
YSS    Yuzhno-Sakhali   61.70  31αiP        P          14 59 30.3 +0.3
YSS                               e*PP      pP         14 59 43.6 +1.5
YSS                               eS        S          15 07 49.7 +0.1
YSS                               eSSS      SSS        15 14 29.6
YSS                               pmax      pmax
       comp=Z,280nm,0.8s
YSS                               pmax      pmax
       comp=Z,500nm,3.2s
YSS                               pmax      pmax
       comp=N,300nm,3.6s
YSS                               pmax      pmax
       comp=E,300nm,3.8s
AB31   Akbulak array    62.93 331 P         P          14 59 37.6  -0.6
ABKAR  Akbulak array    62.93 331 P         P          14 59 37.9  -0.3
KIBK   Kibwezi          62.94 269 P         P          14 59 41.0 +2.0
       SNR=6.1
KIBK   Kibwezi          62.94 269 IAMs_20   IAMs_20    15 25 06.9
       comp=Z,911nm,19.0s
FURI   Furi             63.26 281 LR        LR         15 23 38.4
       comp=Z,1µm,20.1s,baz=102,slow=33
FURI   Furi             63.26 281 IAMs_20   IAMs_20    15 23 26.9
       comp=Z,1µm,20.0s
CASY   Casey            63.61 176 IAMs_20   IAMs_20    15 21 12.0
       comp=Z,1µm,21.0s
KMBO   Kilima Mbogo     63.78 270 LR        LR         15 23 36.3
       comp=Z,1µm,19.6s,baz=112,slow=32
TYV    Tymovskoe        64.25  28 eP        P          14 59 48.9 +2.0
TYV                               eS        S          15 08 23.2 +1.7
TYV                               pmax      pmax
       comp=Z,600nm,4.3s
TYV                               pmax      pmax
       comp=Z,38nm,0.9s
TYV                               smax      smax
       comp=N,800nm,8.0s
TYV                               smax      smax
       comp=E,1µm,8.0s
TYV                               MLR       MLR
       comp=Z,2µm,16.0s
AKTO   Aktyubinsk       64.65 331 LR        LR         15 32 21.7
       comp=Z,527nm,21.0s,baz=119,slow=40
AKTO   Aktyubinsk       64.65 331 P         P          14 59 48.8  -0.7
AKT    Akhty            65.48 319 eP        P          14 59 55.1  -0.1
AKT                               e                    15 02 19.4
AKT                               eS        S          15 08 34.4  -2.8
AKT                               pmax      pmax
       comp=Z,120nm,1.2s
AKT                               MLR       MLR
       comp=Z,512nm,21.0s
LODK   Lodwar           65.96 275 P         P          15 00 01.9 +3.1
NOUC   Port Laguerre    66.01 113 P         P          14 59 58.8  -0.1
DZM    Mont Dzumac      66.14 113 LR        LR         15 32 50.5
       comp=Z,462nm,18.3s,baz=276,slow=40
DZM    Mont Dzumac      66.14 113 eP        P          14 59 59.9 +0.1
       comp=Z,242nm,1.4s
DZM    Mont Dzumac      66.14 113 ePP       PP         15 02 21.9  -4.0
       comp=Z,86nm,29.7s
DZM                               eS        S          15 08 48.0 +2.1
       comp=Z,185nm,25.0s
DZM                               eSS       SS         15 13 02.9 +0.5
       comp=Z,345nm,26.3s
DZM                               eLR       LR         15 19 54.1
       comp=Z,2µm,24.2s
DZM    Mont Dzumac      66.14 113 P         P          15 00 00.2 +0.4
SANVU  Saraoutou        66.25 106 IAmb      IAmb       15 00 02.8
       comp=Z,96nm,0.9s
SANVU  Saraoutou        66.25 106 P         P          15 00 01.7 +1.2
MAK    Makhachkala      66.33 320c iP       P          14 59 56.9  -3.6
MAK                               e                    15 02 22.8
MAK                               eS        S          15 08 43.2  -4.1
MAK                               eSS       SS         15 13 04.1  -0.3
MAK                               pmax      pmax
       comp=Z,187nm,1.1s
MAK                               MLR       MLR
       comp=Z,723nm,19.0s
OUENC  Ouen Island, N   66.54 113 P         P          15 00 03.1 +0.8
YATNC  Mamie plateau,   66.55 113 P         P          15 00 03.4 +1.0
PINNC  Pines Island,    67.12 113 P         P          15 00 05.6  -0.4
PINNC                             IAmb      IAmb       15 00 27.5
       comp=Z,93nm,1.1s
PINNC  Pines Island,    67.12 113 P         P          15 00 07.1 +1.1
MARNC  Mare, Loyalty    67.54 112 P         P          15 00 08.2  -0.5
MARNC  Mare, Loyalty    67.54 112 P         P          15 00 09.6 +1.0
TBLG   Delisi           67.59 318 P         P          15 00 09.5 +0.9
SVE    Sverdlovsk       67.91 337deP        P          15 00 10.5 +0.2
SVE                               pmax      pmax
       comp=Z,315nm,1.0s
TRLG   Trialeti         67.93 317 P         P          15 00 11.2 +0.2
YAK    Yakutsk          68.35  14 LR        LR         15 33 42.6
       comp=Z,4µm,18.2s,baz=212,slow=39
YAK    Yakutsk          68.35  14 P         P          15 00 12.0  -0.9
YAK    Yakutsk          68.35  14c iP       P          15 00 11.9  -0.9
YAK                               e*PP      pP         15 00 21.3  -3.9
YAK                               e                    15 00 37.0
YAK                               e                    15 02 42.8
YAK                               ePPP      PPP        15 04 21.9
YAK                               eS        S          15 09 11.7 +0.9
YAK                               e*SS      pS         15 09 27.2 +1.3
YAK                               e                    15 10 01.2
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YAK                                  eSS      SS        15 13 31.5  -3.4
YAK                                   pmax    pmax
        comp=Z,432nm,0.7s
YAK                                   pmax    pmax
        comp=N,173nm,1.5s
YAK                                   pmax    pmax
        comp=E,62nm,1.5s
YAK                                   pmax    pmax
        comp=Z,176nm,4.7s
YAK                                   pmax    pmax
        comp=N,127nm,5.7s
YAK                                   pmax    pmax
        comp=E,164nm,5.7s
YAK                                   smax    smax
        comp=N,159nm,3.7s
YAK                                   smax    smax
        comp=E,32nm,1.5s
YAK                                   MLR     MLR
        comp=Z,2µm,22.0s
YAK                                   MLR     MLR
        comp=N,1µm,16.0s
YAK                                   MLR     MLR
        comp=E,2µm,24.0s
H11N1 WAKE ISLAND Hy 68.39   68       P       P         15 00 12.6  -1.1
        baz=255,slow=8.0,SNR=7.0
H11N2 WAKE ISLAND Hy 68.40   68       P       P         15 00 13.4  -0.5
        baz=255,slow=8.0,SNR=4.5
H11N3 WAKE ISLAND Hy 68.41   68       P       P         15 00 14.0  +0.1
        baz=255,slow=8.0,SNR=9.2
ARTI  Arti           68.49 336        LR      LR        15 32 37.1
        comp=E,1µm,21.8s,baz=135,slow=38
ARTI  Arti           68.49 336        P       P         15 00 13.3  -0.6
ARTI                                  IAMs_20 IAMs_20   15 32 35.3
        comp=Z,1µm,21.0s
ARTI  Arti           68.49 336c iP            P         15 00 13.5  -0.4
ARTI                                                    15 00 41.2
ARTI                                                    15 02 43.8
ARTI                                  PPP     PPP       15 04 27.3
ARTI                                  S       S         15 09 13.8  +1.0
ARTI                                                    15 10 06.6
ARTI                                  SS      SS        15 13 35.0  -2.4
ARTI                                  pmax    pmax
        comp=Z,185nm,0.8s
ARTI                                  MLR     MLR
        comp=Z,926nm,19.0s
ARTI  Arti           68.49 336        P       P         15 00 13.6  -0.4
INH   Isangel        68.52 110        P       P         15 00 14.7  -0.1
NCK   Nalchik        69.11 319⇓iP             P         15 00 19.1  +1.0
NCK                                   pmax    pmax
        comp=Z,123nm,0.8s
NCK                                   MLR     MLR
        comp=Z,453nm,19.0s
NEUR  Neytrino       69.61 318c iP            P         15 00 22.4  +1.0
NEUR                                  pmax    pmax
        comp=Z,46nm,1.0s
NEUR                                  MLR     MLR
        comp=Z,480nm,19.0s
KBZ   Khabaz         69.67 319        P       P         15 00 22.1  +0.6
        comp=Z,94nm,0.8s,baz=114,slow=4.7,SNR=105
KBZ                                   LR      LR        15 34 51.0
        comp=Z,276nm,20.6s,baz=113,slow=39
        comp=Z,94nm,0.8s
KBZ   Khabaz         69.67 319c iP            P         15 00 22.0  +0.6
KBZ                                   pmax    pmax
        comp=Z,122nm,0.9s
KBZ                                   MLR     MLR
        comp=Z,504nm,23.0s
MAW   Mawson         69.68 195        P       P         15 00 23.0  +1.9
        comp=Z,7.1nm,1.0s,baz=338,slow=10,SNR=3.5
MAW                                   LR      LR        15 24 38.0
        comp=Z,2µm,21.5s,baz=30,slow=30
        comp=Z,7.1nm,1.0s
MAW   Mawson         69.68 195        P       P         15 00 23.0  +1.9
SHA1  Shidzhatmaz    69.83 319c iP            P         15 00 23.3  +0.5
KIV   Kislovodsk     69.91 319        P       P         15 00 23.9  +0.8
KIV                                   S       S         15 09 29.8  -0.4
KIV   Kislovodsk     69.91 319        P       P         15 00 22.3  -0.8
KIV   Kislovodsk     69.91 319 ⇑P             P         15 00 23.1   0.0
KIV   Kislovodsk     69.91 319 i P            P         15 00 23.0  -0.1
        SNR=10
KIV   Kislovodsk     69.91 319 eP             P         15 00 22.3  -0.8
KIV                            e                        15 02 57.7
KIV                            eS             S         15 09 29.1  -1.1
KIV                            eSS            SS        15 14 00.0   0.0
KIV                                   pmax    pmax
        comp=Z,46nm,2.8s
KIV                                   pmax    pmax
        comp=Z,114nm,1.1s
KIV                                   MLR     MLR
        comp=Z,224nm,17.0s
KIV   Kislovodsk     69.91 319        P       P         15 00 22.8  -0.3
        comp=Z,1µmcomp=Z,114nm,1.0s
ASF   Jabal al Asfar 69.97 306        LR      LR        15 31 14.5
        comp=Z,134µm,21.1s,baz=99,slow=36
GOF   Gofitskoye     70.15 320ceP             P         15 00 24.7  +0.3
MBAR  Mbarara        70.31 270        LR      LR        15 27 16.1
        comp=Z,459nm,20.3s,baz=73,slow=32
MBAR  Mbarara        70.31 270⇑iP             P         15 00 28.0  +1.7
MBAR                                  pmax    pmax
        comp=Z,13nm,1.3s
MBAR                                  MLR     MLR
        comp=Z,697nm,17.0s
GHAJ  Ghor Haditha   70.81 304        IAMs_20 IAMs_20   15 29 50.6
        comp=Z,1µm,19.0s
EIL   Elat           70.89 303        LR      LR        15 31 14.7
        comp=Z,1µm,19.3s,baz=157,slow=36
SKR   Severo-Kuril's 71.03  33 eP             P         15 00 29.8  +0.2
SKR                            eS             S         15 09 42.6  -0.2
SKR                                   pmax    pmax
        comp=Z,676nm,0.9s
SKR                                   pmax    pmax
        comp=Z,400nm,4.7s
SKR                                   MLR     MLR
        comp=Z,500nm,21.0s
BELG  Belogornoye    71.04 329        LR      LR        15 36 40.4
        comp=Z,792nm,21.4s,baz=103,slow=40
BELG  Belogornoye    71.04 329c iP            P         15 00 29.0  -0.6
BELG                                  pmax    pmax
        comp=Z,54nm,0.9s
BELG                                  MLR     MLR
        comp=Z,194nm,26.0s
BEIL  Beino          71.23 308 eP             P         15 00 32.1  +0.8
SHBL  Chebaa         71.23 307 eP             P         15 00 32.4  +1.0
HWQ   Hawqa          71.34 308 eP             P         15 00 33.2  +1.1
MMAI  Mount Meron Ar 71.41 306        P       P         15 00 34.0  +1.5
        comp=Z,28nm,0.6s,baz=92,slow=8.3,SNR=31
MMAI                                  LR      LR        15 32 23.1
        comp=Z,609nm,20.3s,baz=98,slow=36
        comp=Z,28nm,0.6s
BHL   Bhannes        71.47 307 eP             P         15 00 33.9  +1.1
VSLR  Vesyoloye      71.47 318d iP            P         15 00 32.8  +0.3
VSLR                                  pmax    pmax
        comp=Z,130nm,0.9s
DQRL  Deir Qamar     71.47 307 eP             P         15 00 34.3  +1.5
LABN  Labinsk        71.47 319 eP             P         15 00 33.3  +0.8
LABN                           e*PP           pP        15 00 43.3  -1.4
LABN                           eS             S         15 09 52.6  +4.4
LABN                                  pmax    pmax
        comp=Z,43nm,0.7s
SOC   Sochi          71.72 318 eP             P         15 00 32.8  -1.2
SOC                            ePPP           PPP       15 04 57.5
SOC                                   pmax    pmax
        comp=Z,95nm,0.8s
ERBR  Yeremizino-Bor 72.06 320 eP             P         15 00 35.3  -0.7
ERBR                           e*PP           pP        15 00 46.0  -2.2
ERBR                           eS             S         15 09 56.7  +1.8
ERBR                                  pmax    pmax
        comp=Z,96nm,0.9s
MATP  Matopo         72.64 250        LR      LR        15 27 54.1
        comp=Z,2µm,21.1s,baz=83,slow=32
NRIK  Noril'sk       72.68 355        P       P         15 00 38.6  -0.6
        comp=Z,170nm,0.9s,baz=162,slow=5.8,SNR=118
NRIK                                  LR      LR        15 36 06.3
        comp=Z,1µm,18.4s,baz=168,slow=39
        comp=Z,170nm,0.9s
NRIK  Noril'sk       72.68 355 i P            P         15 00 38.4  -0.8
NRIK                                  pmax    pmax
        comp=Z,183nm,0.9s
NRIK                                  MLR     MLR
        comp=Z,2µm,17.0s
LSZ   Lusaka         72.71 255        LR      LR        15 27 15.7
        comp=Z,1µm,21.4s,baz=95,slow=31
PEA0B Petropavlovsk- 73.09  32⇓iP             P         15 00 41.1  -0.8
PETK  Petropavlovsk- 73.09  32        P       P         15 00 41.1  -0.8
        comp=Z,63nm,0.8s,baz=322,slow=0.8,SNR=76
        comp=Z,63nm,0.8s
PETK  Petropavlovsk- 73.09  32        P       P         15 00 40.6  -1.3
MA2   Magadan        73.42  24        LR      LR        15 34 42.6
        comp=Z,1µm,19.9s,baz=230,slow=37
MA2   Magadan        73.42  24        P       P         15 00 43.7  -0.1
MA2                                   IAMs_20 IAMs_20   15 34 01.5
        comp=Z,1µm,20.0s
MA2   Magadan        73.42  24        P       P         15 00 43.7  -0.1
MA2   Magadan        73.42  24c iP            P         15 00 44.2  +0.5
MA2                                   pmax    pmax
        comp=Z,181nm,0.8s
MA2   Magadan        73.42  24        P       P         15 00 44.3  +0.5
        comp=Z,2µmcomp=Z,292nm,0.9s
PET   Petropavlovsk  73.55  32        P       P         15 00 44.4  -0.3
PET                                   IAMs_20 IAMs_20   15 35 00.4
        comp=Z,1µm,19.0s
PET   Petropavlovsk  73.55  32        P       P         15 00 43.9  -0.7
PET   Petropavlovsk  73.55  32 eP             P         15 00 43.3  -1.3
PET                            e                        15 03 25.9
PET                            eS             SKiKP     15 10 12.2  +0.5
PET                            e                        15 10 51.8
PET                                   pmax    pmax
        comp=Z,800nm,5.3s
PET                                   pmax    pmax
        comp=Z,291nm,0.8s
PET                                   pmax    pmax
        comp=Z,300nm,8.3s
PET                                   MLR     MLR
        comp=Z,800nm,16.0s
PET                                   MLR     MLR
        comp=Z,800nm,16.0s
PET   Petropavlovsk  73.55  32        P       P         15 00 44.3  -0.3
        comp=Z,2µmcomp=Z,310nm,0.9s
PET   Petropavlovsk  73.55  32        P       P         15 00 44.5  -0.1
PET                                   pP      pP        15 00 57.4  +0.4
CSS   Mathiatis      73.60 308        IAmb    IAmb      15 00 48.2
        comp=Z,121nm,1.1s
CSS   Mathiatis      73.60 308        P       P         15 00 45.1  -0.3
        comp=Z,962nmcomp=Z,112nm,1.0s
RPZ   Rata Peaks     73.60 135        P       P         15 00 46.3  +1.0
KIRV  Kirov          73.63 335c iP            P         15 00 45.0   0.0
VRH   Novokhopyorsk  73.66 326c iP            P         15 00 44.7  -0.6
VRH                                   pmax    pmax
        comp=Z,259nm,0.7s
INZ   Inchbonnie     73.68 134        P       P         15 00 45.7   0.0
INZ                                   IAmb    IAmb      15 01 07.7
        comp=Z,87nm,1.0s
ANN   Anapa          73.70 318 eP             P         15 00 44.3  -1.4
ANN                            e*PP           pP        15 00 54.7  -3.2
ANN                            eS             S         15 10 13.8  +0.2
ANN                                   pmax    pmax
        comp=Z,21nm,1.0s
OXZ   Oxford         74.23 134        P       P         15 00 48.6  -0.3
OXZ                                   IAmb    IAmb      15 01 11.9
        comp=Z,59nm,0.9s
KIRS  Kirsehir-Merke 74.32 312 ⇑P             P         15 00 49.5  -0.1
THZ   Tophouse       74.57 132        P       P         15 00 51.0   0.0
THZ                                   IAmb    IAmb      15 01 16.6
        comp=Z,90nm,1.2s
BR104 Keskin Array S 74.70 312        P       P         15 00 51.0  -0.8
        comp=Z,413nmcomp=Z,60nm,1.0s
BR131 Keskin Array S 74.70 312        P       P         15 00 51.6  -0.3
        SNR=37
BR131 Keskin Array S 74.70 312        IAmb    IAmb      15 00 53.4
        comp=Z,51nm,0.8s
BR131 Keskin Array S 74.70 312c iP            P         15 00 51.3  -0.5
BRTR  Keskin Array B 74.70 312        P       P         15 00 51.4  -0.5
        comp=Z,58nm,1.0s,baz=131,slow=6.0,SNR=147
BRTR                                  LR      LR        15 35 44.9
        comp=Z,208nm,21.1s,baz=100,slow=37
        comp=Z,58nm,1.0s
BRTR  Keskin Array B 74.70 312 i P            P         15 00 51.4  -0.5
BRTR                                  pmax    pmax
        comp=Z,62nm,1.0s
BR105 Keskin Array S 74.72 312        P       P         15 00 51.1  -0.9
        comp=Z,519nmcomp=Z,71nm,0.9s
BR106 Keskin Array S 74.72 312        P       P         15 00 51.1  -0.9
        comp=Z,428nmcomp=Z,61nm,1.0s
VORD  Divnogorie     74.94 325 eP             P         15 00 50.8  -2.0
VORD                                  pmax    pmax
        comp=Z,120nm,1.0s
ILGA  Ilgaz          75.04 314        IAmb    IAmb      15 00 56.2
        comp=Z,97nm,1.0s
BZK   Bozkurt        75.11 315 ⇑P             P         15 00 54.6  +0.6
VSR   Storozhevoye   75.11 325 eP             P         15 00 52.2  -1.6
VSR                                   pmax    pmax
        comp=Z,170nm,1.0s
KHZ   Kahutara       75.15 133        P       P         15 00 54.7  +0.5
VORR  Voronezh       75.28 325 eP             P         15 00 54.5  -0.2
VORR                                  pmax    pmax
        comp=Z,187nm,0.8s
ANTO  Ankara         75.37 312        P       P         15 00 55.8  +0.2
ANTO  Ankara         75.37 312        P       P         15 00 54.9  -0.8
ANTO                                  IAmb    IAmb      15 00 57.6
        comp=Z,64nm,0.9s
ANTO  Ankara         75.37 312 ⇑P             P         15 00 55.6  -0.1
ANTO  Ankara         75.37 312        P       P         15 00 55.5  -0.1
ANTO  Ankara         75.37 312        P       P         15 00 54.9  -0.8
        comp=Z,431nmcomp=Z,35nm,1.1s
ANTO  Ankara         75.37 312        P       P         15 00 55.4  -0.2
ANTO                                  sP      sP        15 01 11.2  -1.4
LBTB  Lobatse        75.60 245        LR      LR        15 30 17.2
        comp=Z,1µm,18.1s,baz=86,slow=32
LPSR  Galich'ya Gora 75.82 326c iP            P         15 00 57.6  -0.2
LPSR                                  pmax    pmax
        comp=Z,202nm,1.0s
SNZO  South Karori   75.83 132        IAMs_20 IAMs_20   15 32 38.8
        comp=Z,2µm,22.0s
TOZ   Tahuroa Road   75.94 128        IAMs_20 IAMs_20   15 31 39.6
        comp=Z,1µm,22.0s
BHW   Baring Head    75.97 132        IAMs_20 IAMs_20   15 32 20.5
        comp=Z,1µm,21.0s
SIM   Simferopol'    75.97 318 eP             P         15 00 59.3  +0.4
SEY   Seymchan       76.07  22        LR      LR        15 39 05.2
        comp=Z,2µm,18.0s,baz=238,slow=39
SEY   Seymchan       76.07  22 eP             P         15 00 56.5  -2.5
SEY                            eS             S         15 10 30.8  -8.4
SEY                                   pmax    pmax
        comp=Z,145nm,1.0s
SEY                                   smax    smax
        comp=N,333nm,16.8s
SEY                                   smax    smax
        comp=E,121nm,9.0s
BOSA  Boshof         76.15 241        P       P         15 01 00.9  +0.6
        comp=E,6.6nm,0.9s,baz=105,slow=5.1,SNR=13
BOSA                                  LR      LR        15 30 42.5
        comp=E,578nm,18.6s,baz=84,slow=33
        comp=E,6.6nm,0.9s
BOSA  Boshof         76.15 241        P       P         15 01 01.0  +0.6
TIXI  Tiksi          76.58   9        LR      LR        15 38 22.1
        comp=E,3µm,19.8s,baz=216,slow=38
TIXI  Tiksi          76.58   9        P       P         15 01 00.4  -1.4
TIXI  Tiksi          76.58   9c iP            P         15 01 00.6  -1.1
TIXI                                  pmax    pmax
        comp=Z,258nm,1.3s
TIXI                                  MLR     MLR
        comp=Z,3µm,17.0s
MSVF  Nonsavu        76.74 107        P       P         15 01 04.1  +0.2
MSVF                                  IAmb    IAmb      15 01 25.8
        comp=Z,119nm,1.2s
MSVF  Nonsavu        76.74 107        P       P         15 01 05.1  +1.2
MSVF  Nonsavu        76.74 107        P       P         15 01 04.1  +0.2
MSVF                                  pmax    pmax
        comp=Z,119nm,1.3s
BKZ   Black Stump Fm 76.89 129        IAMs_20 IAMs_20   15 34 28.7
        comp=Z,891nm,21.0s
SAHE  Sakarya_HENDEK 77.06 313 ⇑P             P         15 01 04.6  -0.5
RTZ   Ruatahuna      77.20 129        IAMs_20 IAMs_20   15 34 12.9
        comp=Z,918nm,19.0s
URZ   Urewera        77.27 128        LR      LR        15 35 23.7
        comp=Z,626nm,21.8s,baz=280,slow=36
URZ   Urewera        77.27 128        P       P         15 01 06.1  -0.2
SYO   Syowa Base     77.36 199⇑eP             P         15 01 05.2  -1.0
MOS   Moscow         77.81 329 eP             P         15 01 07.9  -1.0
MOS                            e                        15 04 05.9
MOS                            eS             S         15 10 55.4  -3.0
MOS                                   pmax    pmax
        comp=Z,300nm,0.9s
MOS                                   pmax    pmax
        comp=Z,211nm,0.9s
MOS                                   MLR     MLR
        comp=Z,1µm,23.0s
ARG   Arkhangelos    78.02 308        P       P         15 01 11.4  +0.8
ARG                                   pmax    pmax
        comp=Z,151nm,1.1s
OBN   Obninsk        78.11 328        LR      LR        15 41 33.4
        comp=Z,213nm,18.6s,baz=53,slow=40
OBN   Obninsk        78.11 328        P       P         15 01 10.6   0.0
OBN   Obninsk        78.11 328 ⇑P             P         15 01 10.7   0.0
OBN   Obninsk        78.11 328c iP            P         15 01 10.7   0.0
OBN                            e                        15 01 22.3
OBN                            e                        15 04 06.4
OBN                            ePPP           PPP       15 05 58.6
OBN                            eS             S         15 11 01.7   0.0
OBN                            eSS            SS        15 16 03.0  -1.1
OBN                            eSSS           SSS       15 19 29.0
OBN                                   pmax    pmax
        comp=Z,244nm,1.0s
OBN                                   MLR     MLR
        comp=Z,738nm,22.0s
OBN   Obninsk        78.11 328        P       P         15 01 10.6   0.0
        comp=Z,2µmcomp=Z,254nm,0.9s
OBN   Obninsk        78.11 328        P       P         15 01 10.6   0.0
OBN                                   pP      pP        15 01 21.9  -1.0
MXZ   Matakaoa Point 78.13 128        IAMs_20 IAMs_20   15 32 51.7
        comp=Z,1µm,22.0s
MANT  Manisa         78.19 310        P       P         15 01 10.2  -1.6
NE56  Odesa          78.64 319        P       P         15 01 13.0  -0.7
BALB  Balikesir      78.97 311        IAmb    IAmb      15 01 18.1
        comp=Z,87nm,0.9s
KLMR  Klimovskoe     79.09 334 eP             P         15 01 14.5  -1.4
KLMR                           e*PP           PcP       15 01 24.5  +0.2
KLMR                           e                        15 04 13.7
KLMR                                  pmax    pmax
        comp=Z,174nm,1.1s
MANR  Mangalia       79.45 315 ⇑P             P         15 01 18.6  +0.4
JURR  Jurilovca      79.48 316 ⇓P             P         15 01 18.0  -0.4
TIRR  Tirgusor       79.73 316        IAmb    IAmb      15 01 22.0
        comp=Z,84nm,0.9s
TIRR  Tirgusor       79.73 316 ⇑P             P         15 01 20.1  +0.3
TIRR  Tirgusor       79.73 316        P       P         15 01 20.0  +0.3
TIRR  Tirgusor       79.73 316        P       P         15 01 19.3  -0.5
        comp=Z,854nmcomp=Z,104nm,1.0s
TPGR  Topolog        79.82 316 ⇑P             P         15 01 20.3  -0.1
CFR   Carcaliu       80.10 317 ⇓P             P         15 01 21.7   0.0
CFR   Carcaliu       80.10 317        P       P         15 01 21.7   0.0
APE   Apeiranthos    80.24 308 ⇑P             P         15 01 23.1  +0.3
APE   Apeiranthos    80.24 308        P       P         15 01 23.0  +0.3
IDI   Anoyia         80.42 306        LR      LR        15 40 33.5
        comp=Z,176nm,21.2s,baz=102,slow=38
CAVK  Edirne/Enez-Ca 80.48 312 ⇑P             P         15 01 24.3  +0.4
ALN   Alexandroupoli 80.61 312        P       P         15 01 24.7  +0.1
ALN                                   pmax    pmax
        comp=Z,60nm,1.1s
VASR  Vaslui         80.69 318 ⇑P             P         15 01 25.6  +0.6
SORM  Soroca         80.70 320 ⇑P             P         15 01 25.0  +0.1
SORM  Soroca         80.70 320        P       P         15 01 25.0  +0.1
RAO   Raoul Island   80.76 119        LR      LR        15 37 51.8
        comp=Z,418nm,20.5s,baz=32,slow=36
AK09  Malin Array Si 80.78 322        P       P         15 01 24.7  -0.6
AK10  Malin Array Si 80.79 322        P       P         15 01 24.8  -0.5
AK08  Malin Array Si 80.80 322        P       P         15 01 24.8  -0.6
AK07  Malin Array Si 80.81 322        P       P         15 01 24.9  -0.5
AK06  Malin Array Si 80.82 322        P       P         15 01 25.0  -0.5
AK05  Malin Array Si 80.83 322        P       P         15 01 25.0  -0.5
AK02  Malin Array Si 80.83 322        P       P         15 01 25.0  -0.6
AKASG Malin Array Be 80.84 322        P       P         15 01 25.1  -0.5
        comp=Z,24nm,0.9s,baz=91,slow=4.7,SNR=45
AKASG                                 PP      PP        15 04 30.1  -0.2
        comp=Z,9.6nm,0.9s,baz=89,slow=6.7,SNR=5.4
AKASG                                 LR      LR        15 40 52.2
        comp=Z,357nm,21.9s,baz=96,slow=38
        comp=Z,24nm,0.9s
AKASG Malin Array Be 80.84 322        P       P         15 01 24.9  -0.7
AKASG Malin Array Be 80.84 322 i P            P         15 01 25.1  -0.5
AKASG                                 pmax    pmax
        comp=Z,37nm,1.0s
AKBB  Malin Array Si 80.84 322ceP             P         15 01 25.0  -0.6
AKBB                                  pmax    pmax
        comp=Z,54nm,1.1s
AKBB                                  MLR     MLR
        comp=Z,471nm,21.0s
AKBB  Malin Array Si 80.84 322        P       P         15 01 25.0  -0.6
AK01  Malin Array Si 80.84 322        P       P         15 01 25.1  -0.5
AK03  Malin Array Si 80.84 322        P       P         15 01 25.1  -0.5
KIEV  Kiev           80.84 322        P       P         15 01 24.8  -0.8
KIEV  Kiev           80.84 322 ⇑P             P         15 01 25.3  -0.3
KIEV  Kiev           80.84 322 i P            P         15 01 25.0  -0.6
        SNR=21
KIEV  Kiev           80.84 322        P       P         15 01 25.3  -0.3
KIEV  Kiev           80.84 322        P       P         15 01 25.0  -0.6
        comp=Z,202nm,1.1s
RAZG  Razgrad        80.86 315 ⇑P             P         15 01 26.2  +0.3
AK12  Malin Array Si 80.86 322        P       P         15 01 25.2  -0.5
AK11  Malin Array Si 80.86 322        P       P         15 01 25.2  -0.5
AK04  Malin Array Si 80.88 322        P       P         15 01 25.3  -0.5
AK14  Malin Array Si 80.89 322        P       P         15 01 25.3  -0.6
AK16  Malin Array Si 80.90 322        P       P         15 01 25.4  -0.5
AK13  Malin Array Si 80.91 322        P       P         15 01 25.4  -0.6
VNDA  Vanda          81.08 169        P       P         15 01 27.5  +1.1
        comp=Z,7.6nm,1.1s,baz=297,slow=5.4,SNR=7.2
VNDA                                  LR      LR        15 32 19.0
        comp=Z,473nm,21.7s,baz=312,slow=32
        comp=Z,7.6nm,1.1s
VNDA  Vanda          81.08 169        P       P         15 01 27.4  +0.9
BISRR Bisoca         81.16 317 ⇑P             P         15 01 28.6  +1.1
ELND  Elena          81.17 314 ⇑P             P         15 01 27.9  +0.3
ISR   Istrita        81.18 316 ⇓P             P         15 01 28.3  +0.7
ISR   Istrita        81.18 316        P       P         15 01 28.3  +0.7
VRI   Vrincioaia     81.22 317 ⇑P             P         15 01 28.8  +0.9
VRI   Vrincioaia     81.22 317        P       P         15 01 28.7  +0.9
PLOR  Plostina       81.27 317 ⇑P             P         15 01 29.2  +1.0
PLOR  Plostina       81.27 317        P       P         15 01 29.1  +1.0
NEHR  Nehoiu         81.42 317 ⇑P             P         15 01 29.8  +0.9
TESR  Tescani        81.43 318 ⇑P             P         15 01 29.6  +0.7
MI30  MI30,Zelenitsa 81.48 322        P       P         15 01 28.1  -0.9
        comp=Z,90nm,1.0s
LUBAR Lubar, Ukraine 81.53 321        P       P         15 01 28.5  -0.8
ONER  Baraj Valea Uz 81.56 318 ⇑P             P         15 01 30.2  +0.6
COVR  Voineasa-Covas 81.58 317 ⇑P             P         15 01 30.4  +0.7
MLR   Muntele Rosu   81.67 317        LR      LR        15 44 44.2
        comp=Z,186nm,18.1s,baz=78,slow=41
MLR   Muntele Rosu   81.67 317        IAmb    IAmb      15 01 33.3
        comp=Z,95nm,1.1s
MLR   Muntele Rosu   81.67 317 ⇑P             P         15 01 31.1  +0.8
MLR   Muntele Rosu   81.67 317        P       P         15 01 31.1  +0.8
MLR   Muntele Rosu   81.67 317        P       P         15 01 30.8  +0.5
        comp=Z,971nmcomp=Z,84nm,1.1s
TURR  Turia          81.75 317 ⇑P             P         15 01 31.1  +0.5
MI28  Mi28,Pidlybu   81.85 322        P       P         15 01 29.6  -1.3
PRAR  RASCA          81.90 318 ⇑P             P         15 01 32.0  +0.6
OUR   Ouranopolis    82.04 311        P       P         15 01 32.4  +0.2
SHEM  Shemya Is, Ala 82.11  36        LR      LR        15 39 27.3
        comp=Z,89nm,20.0s,baz=297,slow=37
DOPR  Dopca          82.16 317 ⇑P             P         15 01 33.0  +0.3
PLVB  Pleven         82.16 314 ⇑P             P         15 01 33.4  +0.6
SRS   Serrai         82.48 312        P       P         15 01 34.2  -0.3
SRS                                   pmax    pmax
        comp=Z,46nm,1.1s
ARR   Arges          82.55 316 ⇑P             P         15 01 35.0  +0.1
BURAR Bucovina Array 82.63 319        P       P         15 01 36.0  +0.8
BURAR                                 IAmb    IAmb      15 01 54.0
        comp=Z,57nm,0.8s
BURAR Bucovina Array 82.63 319 ⇑P             P         15 01 36.5  +1.2
BURAR Bucovina Array 82.63 319        P       P         15 01 36.4  +1.2
MNK   Minsk          82.66 326 i P            P         15 01 35.6  +0.5
        comp=E,17nm,0.9s
MNK                            i P            P         15 01 35.6  +0.5
        comp=N,120nm,1.0s
MNK                            i P            P         15 01 35.6  +0.5
        comp=Z,225nm,1.0s,baz=105
MNK                            i PP           PP        15 04 46.2  +1.0
MNK                            i PPP          PPP       15 06 36.3
MNK                            i S            SKSac     15 11 51.8  -1.2
MNK                            i SS           SS        15 17 13.6  +1.5
MNK                            i SSS          SSS       15 20 45.4
MNK                            i LQ           LQ        15 33 11.2
MNK                            i LRM          MLR       15 40 07.2
        comp=E,353nm,20.3s
MNK                            i LRM          MLR       15 41 25.1
        comp=N,428nm,19.8s
MNK                            i LRM          MLR       15 41 33.9
        comp=Z,305nm,20.9s
MNK   Minsk          82.66 326 i P            P         15 01 35.6  +0.5
MNK                            i                        15 04 46.2
MNK                            i PPP          PPP       15 06 36.2
MNK                            i S            SKSac     15 11 51.8  -1.2
MNK                            i SS           SS        15 17 13.6  +1.5
MNK                                   pmax    pmax
        comp=Z,225nm,1.0s
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MNK				pmax	pmax		
	comp=E,17nm,0.9s						
MNK				pmax	pmax		
	comp=N,120nm,1.0s						
MNK				MLR	MLR		
	comp=E,353nm,20.0s						
MNK				MLR	MLR		
	comp=N,428nm,20.0s						
MNK				MLR	MLR		
	comp=Z,305nm,21.0s						
THE	**Thessaloniki**	**82.86**	**311**	P	**P**	**15 01 36.4**	**-0.1**
THE				pmax	pmax		
	comp=Z,40nm,1.2s						
KSV	**Kosov**	**82.88**	**319**	P	**P**	**15 01 35.6**	**-0.8**
MDB	**Medias**	**82.88**	**317**	⇑P	**P**	**15 01 38.2**	**+1.7**
MDB	**Medias**	**82.88**	**317**	P	**P**	**15 01 38.1**	**+1.7**
TSUM	**Tsumeb**	**82.89**	**251**	LR	LR	15 33 36.1	
	comp=Z,2µm,21.2s,baz=94,slow=32						
TSUM	**Tsumeb**	**82.89**	**251**	IAMs_20	IAMs_20	15 33 02.3	
	comp=Z,2µm,22.0s						
PUL	**Pulkovo**	**82.91**	**331**	c *e*P	**P**	**15 01 37.1**	**+0.8**
PUL				pmax	pmax		
	comp=Z,428nm,0.9s						
RNPP5	**Staryi Chortor**	**83.01**	**322**	P	**P**	**15 01 36.7**	**-0.3**
RNPP9	**Sopachiv**	**83.05**	**322**	P	**P**	**15 01 36.8**	**-0.4**
RNPP8	**Varash**	**83.06**	**322**	P	**P**	**15 01 36.8**	**-0.4**
ITM	**Ithomi**	**83.09**	**308**	IAmb	IAmb	15 01 39.8	
	comp=Z,116nm,1.4s						
LIT	**Litokhoron**	**83.13**	**311**	IAmb	IAmb	15 01 39.4	
	comp=Z,89nm,0.8s						
STNU	**Starunia**	**83.33**	**320**	P	**P**	**15 01 39.0**	**+0.3**
GRG	**Griva**	**83.34**	**312**	P	**P**	**15 01 38.7**	**-0.3**
GRG				pmax	pmax		
	comp=Z,71nm,1.1s						
NACGM	**Naroch**	**83.38**	**326**	*e*P	**P**	**15 01 39.4**	**+0.6**
	comp=E,89nm,1.1s						
RAKU	**Rahkiv**	**83.41**	**319**	P	**P**	**15 01 39.1**	**-0.1**
ELIB	**Princess Elisa**	**83.45**	**198**	*d*P	**P**	**15 01 41.4**	**+2.3**
	comp=Z,28nm,1.2s						
CJR	**Cluj-Napoca**	**83.52**	**317**	⇑P	**P**	**15 01 40.9**	**+1.0**
CJR	**Cluj-Napoca**	**83.52**	**317**	P	**P**	**15 01 40.8**	**+1.0**
BILL	**Bilibino**	**83.63**	**20**	P	**P**	**15 01 39.7**	**-0.2**
BILL				IAmb	IAmb	15 01 43.4	
	comp=Z,45nm,1.0s						
BILL				IAMs_20	IAMs_20	15 41 57.1	
	comp=Z,1µm,20.0s						
BILL	**Bilibino**	**83.63**	**20**	c *i*P	**P**	**15 01 39.2**	**-0.7**
BILL				pmax	pmax		
	comp=Z,45nm,1.0s						
BILL	**Bilibino**	**83.63**	**20**	P	**P**	**15 01 39.4**	**-0.5**
BILL				pP	**pP**	**15 01 53.0**	**+0.5**
BMR	**Baia Mare**	**83.78**	**318**	⇑P	**P**	**15 01 42.4**	**+1.3**
BMR	**Baia Mare**	**83.78**	**318**	P	**P**	**15 01 42.3**	**+1.3**
MORS	**Morshin**	**83.81**	**320**	P	**P**	**15 01 41.5**	**+0.3**
GZR	**Gura Zlata**	**83.84**	**316**	⇑P	**P**	**15 01 42.7**	**+1.1**
GZR	**Gura Zlata**	**83.84**	**316**	P	**P**	**15 01 42.6**	**+1.1**
DEV	**Deva**	**83.84**	**317**	⇑P	**P**	**15 01 42.7**	**+1.3**
DEV	**Deva**	**83.84**	**317**	P	**P**	**15 01 42.7**	**+1.3**
MARR	**Marisel-Cluj**	**83.84**	**317**	⇑P	**P**	**15 01 42.7**	**+1.1**
LVV	**L'vov**	**83.86**	**321**	P	**P**	**15 01 41.7**	**+0.3**
MEZ	**Mezhgor'ye**	**83.93**	**319**	P	**P**	**15 01 42.3**	**+0.5**
LVZ	**Lovozero**	**83.99**	**340**	P	**P**	**15 01 41.5**	**-0.2**
LVZ				IAmb	IAmb	15 01 43.3	
	comp=Z,78nm,0.8s						
LVZ				IAMs_20	IAMs_20	15 43 24.8	
	comp=Z,1µm,22.0s						
LVZ	**Lovozero**	**83.99**	**340**	c *i*P	**P**	**15 01 41.5**	**-0.2**
LVZ				pmax	pmax		
	comp=Z,77nm,0.7s						
LVZ				MLR	MLR		
	comp=Z,1µm,22.0s						
LVZ	**Lovozero**	**83.99**	**340**	P	**P**	**15 01 41.5**	**-0.2**
	comp=Z,133nm,0.9s						
HERR	**Herculane**	**84.00**	**316**	⇑P	**P**	**15 01 42.5**	**+0.2**
KORU	**Korolevo**	**84.11**	**319**	P	**P**	**15 01 42.2**	**-0.5**
DRGR		**84.14**	**317**	⇑P	**P**	**15 01 43.9**	**+0.8**
DRGR		**84.14**	**317**	P	**P**	**15 01 43.8**	**+0.8**
BRIU	**Brid**	**84.22**	**319**	P	**P**	**15 01 43.8**	**+0.5**
BOVS	**Bovan**	**84.29**	**314**	⇑P	**P**	**15 01 43.5**	**-0.2**
APA	**Apatity**	**84.30**	**339**	*i* P	**P**	**15 01 42.3**	**-1.0**
APA				*i* S	**S**	**15 12 05.1**	**-0.4**
APA				*i* SS	**SS**	**15 17 33.0**	**-2.8**
APA				MLR	MLR		
	comp=Z,2µm,24.9s						
VSU	**Vasula**	**84.31**	**329**	c *i*P	**P**	**15 01 42.7**	**-0.8**
VSU				pmax	pmax		
	comp=Z,133nm,0.9s						
MDVR	**Moldovita**	**84.47**	**315**	⇑P	**P**	**15 01 45.0**	**+0.2**
KWP	**Kalwaria Pacla**	**84.66**	**320**	*e*P	**P**	**15 01 46.9**	**+1.3**
BZS	**Buzias**	**84.68**	**316**	⇑P	**P**	**15 01 46.1**	**+0.4**
BZS	**Buzias**	**84.68**	**316**	P	**P**	**15 01 46.1**	**+0.4**
SIRR	**Siria**	**84.76**	**317**	⇑P	**P**	**15 01 47.0**	**+0.9**
PHP	**Peshkopia**	**84.91**	**312**	P	**P**	**15 01 46.7**	**-0.3**
PHP				pmax	pmax		
	comp=Z,46nm,1.1s						
SUW	**Suwalki**	**85.22**	**325**	*e*P	**P**	**15 01 49.0**	**+0.8**
MSF	**Maaselka**	**85.37**	**337**	P	**P**	**15 01 49.2**	**+0.5**
MSF				pmax	pmax		
	comp=Z,202nm,1.0s						
FINES	**FINESS Array B**	**85.39**	**332**	P	**P**	**15 01 49.1**	**+0.3**
	comp=Z,51nm,0.9s,baz=96,slow=5.7,SNR=58						
FINES				PP	**PP**	**15 05 10.3**	**+2.9**
	comp=Z,13nm,0.9s,baz=102,slow=7.4,SNR=4.0						
FINES				LR	LR	15 43 56.6	
	comp=Z,554nm,21.4s,baz=104,slow=38						
	comp=Z,51nm,0.9s						
FINES	**FINESS Array B**	**85.39**	**332**	*i* P	**P**	**15 01 49.0**	**+0.1**
FINES				pmax	pmax		
	comp=Z,51nm,0.9s						
STHS	**Stebnicka Huta**	**85.56**	**320**	*e*P	**P**	**15 01 50.5**	**+0.4**
STHS				pmax	pmax		
	comp=Z,44nm,0.9s						
STHS	**Stebnicka Huta**	**85.56**	**320**	*e*P	**P**	**15 01 50.5**	**+0.4**
STHS				*e*PP	**PP**	**15 05 13.3**	**+4.2**
PDG	**Podgorica**	**85.89**	**313**	IAmb	IAmb	15 01 53.9	
	comp=Z,58nm,1.0s						
KECS	**Kecovo**	**85.91**	**319**	*e*P	**P**	**15 01 52.7**	**+0.9**
KECS				pmax	pmax		
	comp=Z,33nm,0.8s						
KECS	**Kecovo**	**85.91**	**319**	*e*P	**P**	**15 01 52.7**	**+0.9**
NIE	**Niedzica**	**86.17**	**320**	*e*P	**P**	**15 01 54.0**	**+0.9**
PSZ	**Piszkesteto**	**86.21**	**318**	⇑P	**P**	**15 01 53.9**	**+0.5**
PSZ	**Piszkesteto**	**86.21**	**318**	P	**P**	**15 01 53.8**	**+0.5**
BEL	**Belsk**	**86.25**	**322**	*e*P	**P**	**15 01 55.3**	**+2.0**
BEL	**Belsk**	**86.25**	**322**	P	**P**	**15 01 54.3**	**+1.0**
OUL	**Oulu**	**86.40**	**336**	P	**P**	**15 01 54.4**	**+0.6**
OUL				pmax	pmax		
	comp=Z,191nm,1.0s						
VADS	**Vadso**	**86.56**	**341**	*e*P	**P**	**15 01 54.8**	**+0.3**
AFI	**Afiamalu**	**86.57**	**104**	P	**P**	**15 01 57.2**	**+1.4**
AFI				pmax	pmax		
	comp=Z,101nm,1.3s						
OJC	**Ojcow**	**86.62**	**321**	*e*P	**P**	**15 01 56.1**	**+0.9**
OJC	**Ojcow**	**86.62**	**321**	P	**P**	**15 01 55.9**	**+0.7**
OJC				pmax	pmax		
	comp=Z,35nm,1.1s						
SGF	**Sodankyl**	**86.77**	**338**	P	**P**	**15 01 56.0**	**+0.5**
SGF				pmax	pmax		
	comp=Z,104nm,1.0s						
MORH	**Mrgy, Hungar**	**86.82**	**316**	⇑P	**P**	**15 01 56.6**	**+0.3**
NVL	**N'lazarevskaya**	**87.02**	**199**	*e*P	**P**	**15 01 59.0**	**+2.2**
NVL				*e*		15 05 17.7	
NVL				*e*PPP	PPP	15 07 16.6	
NVL				*e*S	**SKSac**	**15 12 23.0**	**+2.7**
NVL				*e*SS	**SS**	**15 18 19.8**	**+4.4**
NVL				*e*SSS	SSS	15 21 52.9	
NVL				pmax	pmax		
	comp=Z,32nm,1.2s						
NVL				MLR	MLR		
	comp=Z,432nm,21.0s						
QSPA	**South Pole Qui**	**87.06**	**180**	P	**P**	**15 01 58.6**	**+1.4**
	comp=Z,3.1nm,0.8s,baz=235,slow=0.9,SNR=20						
QSPA				PKPPKP		15 27 49.7	
	comp=Z,3.0nm,1.0s,baz=138,slow=1.0,SNR=6.8						
QSPA				LR	LR	15 36 09.9	
	comp=Z,951nm,21.1s,baz=316,slow=32						
KEV	**Kevo**	**87.22**	**340**	P	**P**	**15 01 57.9**	**+0.2**
KEV	**Kevo**	**87.22**	**340**	P	**P**	**15 01 57.9**	**+0.2**
KEV				pmax	pmax		
	comp=Z,93nm,0.9s						
KEV	**Kevo**	**87.22**	**340**	P	**P**	**15 01 57.9**	**+0.2**
KEV				pP	**pP**	**15 02 10.6**	**+0.3**
SRO	**Srobarova**	**87.25**	**318**	*e*P	**P**	**15 01 59.2**	**+0.9**
SRO				pmax	pmax		
	comp=Z,52nm,1.2s						
SRO	**Srobarova**	**87.25**	**318**	*e*P	**P**	**15 01 59.2**	**+0.9**
TIP	**Timpagrande**	**87.39**	**309**	⇑P	**P**	**15 02 00.1**	**+0.8**
ADK	**Adak**	**87.49**	**38**	P	**P**	**15 01 59.4**	**0.0**
ADK	**Adak**	**87.49**	**38**	P	**P**	**15 01 59.4**	**0.0**
ADK				pmax	pmax		
	comp=Z,516nm,1.8s						
OKC	**Ostrava-Krasne**	**87.62**	**320**	*e*P	**P**	**15 02 01.3**	**+1.2**
OKC	**Ostrava-Krasne**	**87.62**	**320**	*e*P	**P**	**15 02 01.3**	**+1.2**
ARA0	**ARCESS Array S**	**87.67**	**340**	*e*P	**P**	**15 02 00.0**	**+0.1**
ARCES	**ARCESS Array B**	**87.67**	**340**	P	**P**	**15 02 00.2**	**+0.3**
	comp=Z,99nm,0.9s,baz=104,slow=3.9,SNR=78						
ARCES				PP	**PP**	**15 05 26.4**	**+0.7**
	comp=Z,18nm,1.0s,baz=96,slow=7.4,SNR=5.2						
ARCES				LR	LR	15 44 56.1	
	comp=Z,680nm,21.5s,baz=108,slow=38						
	comp=Z,99nm,0.9s						
ARCES	**ARCESS Array B**	**87.67**	**340**	P	**P**	**15 02 00.0**	**+0.1**
JAVC	**Velka Javorina**	**87.81**	**319**	*e*P	**P**	**15 02 02.4**	**+1.3**
SMOL	**Smolenice**	**87.93**	**319**	*e*P	**P**	**15 02 01.8**	**+0.2**
SMOL				pmax	pmax		
	comp=Z,15nm,1.5s						
MORC	**Moravsky Berou**	**88.00**	**320**	IAmb	IAmb	15 02 05.1	
	comp=Z,53nm,1.1s						
MORC	**Moravsky Berou**	**88.00**	**320**	⇑P	**P**	**15 02 02.8**	**+0.8**
MORC	**Moravsky Berou**	**88.00**	**320**	*e*P	**P**	**15 02 02.7**	**+0.8**
MORC	**Moravsky Berou**	**88.00**	**320**	P	**P**	**15 02 02.7**	**+0.8**
MODS	**Modra-Piesok**	**88.01**	**318**	*e*P	**P**	**15 02 02.9**	**+0.9**
MODS				pmax	pmax		
	comp=Z,96nm,1.1s						
MODS	**Modra-Piesok**	**88.01**	**318**	*e*P	**P**	**15 02 02.8**	**+0.8**
MODS				*e*PP	**PP**	**15 05 32.5**	**+3.6**
CUC	**Castrocucco**	**88.19**	**310**	IAmb	IAmb	15 02 05.4	
	comp=Z,39nm,1.1s						
KTK1	**Kautokeino**	**88.34**	**339**	*e*P	**P**	**15 02 03.4**	**+0.3**
SOP	**Sopron**	**88.41**	**318**	P	**P**	**15 02 04.0**	**+0.1**
SOP				pmax	pmax		
	comp=Z,16nm,0.8s						
KRLC	**Kraliky**	**88.52**	**320**	*e*P	**P**	**15 02 05.8**	**+1.4**
KRLC	**Kraliky**	**88.52**	**320**	*e*P	**P**	**15 02 05.8**	**+1.4**
HAMF	**Hammerfest**	**88.54**	**341**	*e*P	**P**	**15 02 04.6**	**+0.7**
VRAC	**Vranov**	**88.56**	**319**	*e*P	**P**	**15 02 05.1**	**+0.5**
VRAC				*e*pP	**pP**	**15 02 15.0**	**-2.1**
VRAC				*e*sP	**sP**	**15 02 20.0**	**-1.7**
VRAC				*e*PP	**PP**	**15 05 34.7**	**+1.4**
VRAC	**Vranov**	**88.56**	**319**	P	**P**	**15 02 05.4**	**+0.8**
VRAC				pmax	pmax		
	comp=Z,13nm,1.1s						
RONA	**Rosalia, Austr**	**88.59**	**318**	P	**P**	**15 02 05.2**	**+0.5**
RONA					**PP**	**15 05 37.4**	**+3.8**
RONA	**Rosalia, Austr**	**88.59**	**318**	*i* P	**P**	**15 02 05.3**	**+0.5**
	comp=Z,24nm,1.5s,SNR=6.6						
RONA				*i* PP	**PP**	**15 05 37.4**	**+3.8**
	comp=Z,3.6nm,0.8s						
GKP	**Gorka Klasztor**	**88.60**	**323**	*e*P	**P**	**15 02 05.4**	**+0.8**
KRUC	**Moravsky**	**88.67**	**319**	*e*P	**P**	**15 02 05.3**	**+0.2**
DPC	**Dobruska-Polom**	**88.84**	**320**	*e*P	**P**	**15 02 07.5**	**+1.6**
DPC	**Dobruska-Polom**	**88.84**	**320**	*e*P	**P**	**15 02 07.5**	**+1.6**
GCIS	**Gornji Cirnik**	**88.87**	**316**	*i* P	**P**	**15 02 07.0**	**+0.9**
CONA	**Conrad Observa**	**88.91**	**318**	*e*P	**P**	**15 02 06.6**	**+0.3**
	comp=Z,17nm,1.0s,SNR=8.4						
CONA				*e*PP	**PP**	**15 05 37.7**	**+1.5**
	comp=Z,15nm,1.4s						
KSP	**Ksiaz**	**88.91**	**321**	*e*P	**P**	**15 02 07.6**	**+1.4**
OSTC	**Ostas**	**88.93**	**321**	*e*P	**P**	**15 02 08.1**	**+1.8**
OSTC	**Ostas**	**88.93**	**321**	*e*P	**P**	**15 02 08.1**	**+1.8**
CHVC	**Chvalec**	**89.04**	**321**	*e*P	**P**	**15 02 08.3**	**+1.5**
CHVC	**Chvalec**	**89.04**	**321**	*e*P	**P**	**15 02 08.3**	**+1.5**
UPC	**Upice**	**89.06**	**320**	*e*P	**P**	**15 02 08.0**	**+1.1**
UPC	**Upice**	**89.06**	**320**	*e*P	**P**	**15 02 08.0**	**+1.1**
ARSA	**Arzberg**	**89.07**	**317**		PP	15 05 39.1	+1.7
ARSA	**Arzberg**	**89.07**	**317**	P	**P**	**15 02 07.6**	**+0.6**
ARSA	**Arzberg**	**89.07**	**317**	IAmb	IAmb	15 02 10.1	
	comp=Z,36nm,1.1s						
ARSA	**Arzberg**	**89.07**	**317**	*e*P	**P**	**15 02 07.6**	**+0.6**
	comp=Z,26nm,0.9s,SNR=14						
ARSA				*e*PP	**PP**	**15 05 39.1**	**+1.7**
	comp=Z,3.3nm,0.8s						
BOJS	**Bojanci**	**89.10**	**315**	*i* P	**P**	**15 02 07.9**	**+0.7**
TREC	**Trest**	**89.28**	**319**	*e*P	**P**	**15 02 09.0**	**+1.0**
TREC	**Trest**	**89.28**	**319**	*e*P	**P**	**15 02 09.0**	**+1.0**
SOKA	**Soboth**	**89.35**	**317**	P	**P**	**15 02 09.2**	**+0.7**
SOKA	**Soboth**	**89.35**	**317**	*i* PcP	**P**	**15 02 09.2**	**+0.7**
	comp=Z,59nm,1.1s,SNR=22						
JETT	**Jettan, Norway**	**89.43**	**340**	*e*P	**P**	**15 02 08.8**	**+0.5**
OBKA	**Obir**	**89.67**	**316**	P	**P**	**15 02 10.8**	**+0.8**
OBKA	**Obir**	**89.67**	**316**	*i* PcP	**P**	**15 02 10.8**	**+0.8**
	comp=Z,28nm,1.0s,SNR=8.4						
CRNS	**Crni Vrh**	**89.84**	**316**	*i* P	**P**	**15 02 11.2**	**+0.5**
TROLL	**Troll, Antarti**	**89.90**	**198**	⇓P	**P**	**15 02 14.4**	**+3.9**
	comp=Z,570nm,1.1s						
TROLL	**Troll, Antarti**	**89.90**	**198**	⇑sP	sP	15 02 28.2	+0.5
PRU	**Pruhonice**	**89.95**	**320**	*e*P	**P**	**15 02 12.2**	**+1.1**
PRU	**Pruhonice**	**89.95**	**320**	*e*P	**P**	**15 02 12.2**	**+1.1**
TRO	**Tromso**	**89.95**	**340**	*e*P	**P**	**15 02 10.3**	**-0.3**
TRO	**Tromso**	**89.95**	**340**	P	**P**	**15 02 11.0**	**+0.4**
MOA	**Molln**	**89.97**	**318**	P	**P**	**15 02 11.7**	**+0.4**
MOA					**PP**	**15 05 45.9**	**+1.4**
MOA	**Molln**	**89.97**	**318**	*e*P	**P**	**15 02 11.7**	**+0.4**
	comp=Z,14nm,0.9s,SNR=6.9						
MOA				*e*PP	**PP**	**15 05 45.9**	**+1.4**
	comp=Z,6.5nm,0.9s						
PVCC	**Panska Ves**	**89.98**	**320**	*e*P	**P**	**15 02 12.6**	**+1.4**
PVCC	**Panska Ves**	**89.98**	**320**	*e*P	**P**	**15 02 12.6**	**+1.4**
CKRC	**Cesky Krumlov**	**90.01**	**319**	*e*P	**P**	**15 02 12.8**	**+1.4**
CKRC	**Cesky Krumlov**	**90.01**	**319**	*e*P	**P**	**15 02 12.8**	**+1.4**
ZVC	**Zvikov**	**90.14**	**319**	*e*P	**P**	**15 02 13.1**	**+1.2**
BSD	**Bornholm Skovb**	**90.14**	**325**	P	**P**	**15 02 12.6**	**+0.8**
BSD				pmax	pmax		
	comp=Z,106nm,1.0s						
BSD	**Bornholm Skovb**	**90.14**	**325**	*i* P	**P**	**15 02 12.0**	**+0.2**
BSD				IAmb	IAmb	15 02 13.9	
	comp=Z,96nm,1.0s						
TRI	**Trieste**	**90.16**	**316**	IAmb	IAmb	15 02 14.1	
	comp=Z,24nm,0.8s						
AQU	**L'Aquila**	**90.19**	**312**	P	**P**	**15 02 13.5**	**+1.0**
AQU				pmax	pmax		
	comp=Z,92nm,1.0s						
SABO	**M.te Sabotino**	**90.29**	**316**	IAmb	IAmb	15 02 19.5	
	comp=Z,27nm,0.9s						
MYKA	**Terra Mystica**	**90.31**	**316**	P	**P**	**15 02 12.8**	**-0.1**
MYKA	**Terra Mystica**	**90.31**	**316**	*i* P	**P**	**15 02 12.8**	**-0.1**
	comp=Z,10.0nm,0.6s						
BIOA	**Bad Ischl, Aus**	**90.38**	**318**	P	**P**	**15 02 13.4**	**+0.2**
BIOA	**Bad Ischl, Aus**	**90.38**	**318**	*i* P	**P**	**15 02 13.4**	**+0.2**
	comp=Z,23nm,0.9s,SNR=7.7						
BRG	**Berggiesshubel**	**90.40**	**321**	P	**P**	**15 02 13.5**	**+0.4**
BRG				pmax	pmax		
	comp=Z,49nm,1.1s						
BRG	**Berggiesshubel**	**90.40**	**321**	*e*P	**P**	**15 02 14.1**	**+1.0**
	comp=Z,46nm,1.1s,baz=92,slow=4.5						
GEC2	**GERESS Array S**	**90.42**	**319**	P	**P**	**15 02 14.3**	**+0.9**
GEC2				pmax	pmax		
	comp=Z,46nm,1.2s						
GEC2	**GERESS Array S**	**90.42**	**319**	*e*P	**P**	**15 02 14.2**	**+0.8**
	comp=Z,64nm,1.3s,baz=92,slow=4.5						
GERES	**GERESS Array B**	**90.42**	**319**	P	**P**	**15 02 14.2**	**+0.8**
	comp=Z,20nm,1.0s,baz=92,slow=4.0,SNR=65						
	comp=Z,20nm,1.0s						
KHC	**Kasperske Hory**	**90.52**	**319**	⇑*i*P	**P**	**15 02 14.6**	**+0.8**
KHC				pmax	pmax		
	comp=Z,20nm,1.4s						
KHC	**Kasperske Hory**	**90.52**	**319**	*e*P	**P**	**15 02 14.5**	**+0.8**
KBA	**Koelnbreinsper**	**90.54**	**317**	P	**P**	**15 02 14.1**	**0.0**
KBA	**Koelnbreinsper**	**90.54**	**317**	*i* P	**P**	**15 02 14.1**	**0.0**
	comp=Z,30nm,1.2s,SNR=14						
KBA	**Koelnbreinsper**	**90.54**	**317**	P	**P**	**15 02 14.1**	**0.0**
RUE	**Ruedersdorf**	**90.61**	**322**	*e*P	**P**	**15 02 15.2**	**+1.1**
	comp=Z,201nm,1.2s,baz=92,slow=4.5						
HSKC	**Hora Svate Kat**	**90.71**	**320**	*e*P	**P**	**15 02 15.7**	**+1.1**
DEL	**Delary**	**90.83**	**326**	*i* P	**P**	**15 02 16.0**	**+1.0**
WET	**Wettzell**	**90.98**	**319**	P	**P**	**15 02 16.9**	**+1.0**
WET				pmax	pmax		
	comp=Z,54nm,1.1s						
WET	**Wettzell**	**90.98**	**319**	*e*P	**P**	**15 02 16.7**	**+0.8**
	comp=Z,46nm,1.0s,baz=92,slow=4.5						
LESA	**Schwarzleotal**	**91.01**	**317**	P	**P**	**15 02 16.1**	**-0.1**
LESA	**Schwarzleotal**	**91.01**	**317**	*i* P	**P**	**15 02 16.1**	**-0.1**
	comp=Z,22nm,0.7s,SNR=11						
CLL	**Collm**	**91.02**	**321**	IAmb	IAmb	15 02 18.7	
	comp=Z,40nm,1.1s						
CLL	**Collm**	**91.02**	**321**	*i* P	**P**	**15 02 16.4**	**+0.4**
CLL				*e**PP	**pP**	**15 02 26.0**	**-2.5**
CLL				pmax	pmax		
	comp=Z,39nm,1.1s						
CLL	**Collm**	**91.02**	**321**	*e*P	**P**	**15 02 16.5**	**+0.5**
	comp=Z,37nm,1.1s,baz=92,slow=4.5						
CLL	**Collm**	**91.02**	**321**	*i* P	**P**	**15 02 16.4**	**+0.4**
	comp=Z,39nm,1.1s						
CLL				*e*pP	**pP**	**15 02 26.0**	**-2.5**
CLL				*e*PP	**PP**	**15 05 52.0**	**-0.7**
CLL				*e*S	**S**	**15 13 15.0**	**+4.6**
CLL				*e*PS	**PS**	**15 14 24.0**	**+0.2**
CLL				*e*SS	**SS**	**15 19 18.0**	**+3.4**
CLL				*e*SSS	SSS	15 22 54.0	
CLL				*e*SSSS		15 26 00.0	
CLL				AMS	AMS	15 50 00.0	
	comp=N,400nm,19.4s						
CLL				AMS	AMS	15 50 00.0	
	comp=E,500nm,21.8s						
FAUS	**Fauske**	**91.02**	**337**	*e*P	**P**	**15 02 16.0**	**+0.3**
STEI	**Steigen**	**91.09**	**338**	*e*P	**P**	**15 02 16.2**	**+0.3**
ABTA	**Abfaltersbach**	**91.09**	**317**	P	**P**	**15 02 16.6**	**0.0**
ABTA					**PP**	**15 05 52.8**	**-0.7**
ABTA	**Abfaltersbach**	**91.09**	**317**	*i* P	**P**	**15 02 16.6**	**0.0**
	comp=E,30nm,1.0s,SNR=9.4						
ABTA				*e*PP	**PP**	**15 05 52.8**	**-0.7**
	comp=E,8.3nm,1.3s						
HFS	**Hagfors**	**91.17**	**330**	P	**P**	**15 02 16.7**	**+0.2**
	comp=E,63nm,0.9s,baz=116,slow=3.4,SNR=43						
HFS				PP	PP	15 05 45.6	-8.1
	comp=E,7.5nm,0.8s,baz=90,slow=8.6,SNR=3.0						
HFS				LR	LR	15 49 25.6	
	comp=E,348nm,18.8s,baz=81,slow=40						
	comp=E,63nm,0.9s						
MOR8	**Moi Rana**	**91.26**	**336**	*e*P	**P**	**15 02 16.7**	**-0.1**
BJUU	**Bjuv**	**91.28**	**326**	*i* P	**P**	**15 02 16.7**	**-0.4**
TANN	**Tannenbergstha**	**91.31**	**320**	*e*P	**P**	**15 02 18.3**	**+0.8**
	comp=E,24nm,1.1s,baz=92,slow=4.5						
GAMB	**Gambell**	**91.36**	**26**	P	**P**	**15 02 18.1**	**+0.8**
	baz=266						
RAUS	**Rausandaksla**	**91.44**	**336**	*e*P	**P**	**15 02 16.4**	**-1.2**
ROTZ	**Rotzenmuhle**	**91.45**	**320**	*e*P	**P**	**15 02 18.9**	**+0.9**
	comp=E,7.6nm,1.1s,baz=92,slow=4.5						
MANZ	**Manzenberg**	**91.52**	**320**	*e*P	**P**	**15 02 19.4**	**+1.0**
	comp=E,15nm,1.1s,baz=92,slow=4.5						
SNAA	**Sanae**	**91.61**	**198**	⇑P	**P**	**15 02 20.5**	**+2.0**
	comp=Z,235nm,1.2s						
SNAA	**Sanae**	**91.61**	**198**	⇓sP	sP	15 02 33.7	-1.9
SNAA	**Sanae**	**91.61**	**198**	P	**P**	**15 02 20.6**	**+2.2**
	comp=Z,4.3nm,1.1s,baz=119,slow=7.7,SNR=5.6						
SNAA				PKKP	**PKKPdf**	**15 19 35.2**	**-2.2**
	comp=Z,1.5nm,0.9s,baz=322,slow=4.4,SNR=4.1						
SNAA				LR	LR	15 36 05.6	
	comp=Z,502nm,20.9s,baz=88,slow=31						
	comp=Z,4.3nm,1.1s						
SNAA	**Sanae**	**91.61**	**198**	P	**P**	**15 02 20.4**	**+2.0**
SNAA				IAMs_20	IAMs_20	15 34 57.1	
	comp=Z,869nm,22.0s						
SNAA	**Sanae**	**91.61**	**198**	⇓*e*P	**P**	**15 02 19.9**	**+1.4**
SNAA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SNAA				MLR	MLR		
	comp=Z,244nm,8.0s						
SPIA	**Saint Paul Isl**	**91.71**	**33**	P	**P**	**15 02 20.0**	**+1.0**
	baz=267						
WTTA	**Wattenberg**	**91.71**	**317**	P	**P**	**15 02 19.7**	**+0.1**
WTTA	**Wattenberg**	**91.71**	**317**	*i* PcP	**P**	**15 02 19.7**	**+0.1**
	comp=Z,36nm,0.8s,SNR=14						
WTTA	**Wattenberg**	**91.71**	**317**	P	**P**	**15 02 19.7**	**+0.1**
SPB2	**Spitsbergen Ar**	**91.72**	**348**	IAmb	IAmb	15 02 19.4	
	comp=Z,57nm,1.1s						
SPA0	**Spitsbergen Ar**	**91.73**	**348**	*e*P	**P**	**15 02 18.0**	**-0.8**
SPITS	**Spitsbergen Ar**	**91.73**	**348**	P	**P**	**15 02 17.9**	**-0.8**
	comp=Z,48nm,0.9s,baz=102,slow=6.9,SNR=26						
SPITS				LR	LR	15 50 02.0	
	comp=Z,1µm,19.6s,baz=82,slow=40						
	comp=Z,48nm,0.9s						
SPITS	**Spitsbergen Ar**	**91.73**	**348**	P	**P**	**15 02 18.3**	**-0.5**
SPITS				pmax	pmax		
	comp=Z,52nm,1.0s						
LOF	**Lofoten**	**91.74**	**338**	*e*P	**P**	**15 02 18.9**	**0.0**
WATA	**Walderalm**	**91.76**	**317**	P	**P**	**15 02 19.7**	**0.0**
WATA	**Walderalm**	**91.76**	**317**	*i* P	**P**	**15 02 19.7**	**0.0**
	comp=Z,31nm,1.1s,SNR=7.8						
WATA	**Walderalm**	**91.76**	**317**	P	**P**	**15 02 19.7**	**0.0**
VAGH	**Vaagaholmen**	**91.76**	**337**	*e*P	**P**	**15 02 19.3**	**+0.3**
NEUB	**Neuenburg**	**91.79**	**321**	*e*P	**P**	**15 02 20.2**	**+0.7**
	comp=Z,91nm,1.1s,baz=92,slow=4.5						
GRB1	**Grafenberg Arr**	**91.79**	**319**	P	**P**	**15 02 20.9**	**+1.3**
GRB1				pmax	pmax		
	comp=Z,102nm,1.1s						
LEIR	**Leirfjorden**	**91.79**	**336**	*e*P	**P**	**15 02 19.7**	**+0.5**
STOK	**Stokkvaagen**	**91.84**	**336**	*e*P	**P**	**15 02 19.6**	**+0.1**
GRC1	**Grafenberg Arr**	**91.86**	**319**	P	**P**	**15 02 20.8**	**+0.8**
GRC1				pmax	pmax		
	comp=Z,29nm,1.0s						
MOX	**Moxa**	**91.86**	**320**	P	**P**	**15 02 20.9**	**+0.9**
MOX				pmax	pmax		
	comp=Z,30nm,1.1s						
MOX	**Moxa**	**91.86**	**320**	*e*P	**P**	**15 02 20.7**	**+0.7**
	comp=Z,37nm,1.2s,baz=92,slow=4.5						
MOX				*e*L	L	15 50 58.4	
	comp=Z,583nm,21.6s						
SQTA	**Sankt Quirin**	**92.00**	**317**	P	**P**	**15 02 20.9**	**+0.1**
SQTA	**Sankt Quirin**	**92.00**	**317**	*i* PcP	**P**	**15 02 20.9**	**+0.1**
	comp=Z,25nm,0.6s,SNR=9.8						
SQTA	**Sankt Quirin**	**92.00**	**317**	P	**P**	**15 02 20.9**	**+0.1**
P08K	**Saint George I**	**92.07**	**34**	P	**P**	**15 02 21.3**	**+0.7**
	baz=268						
GRF	**Grafenberg Arr**	**92.08**	**319**	P	**P**	**15 02 22.6**	**+1.6**
GRF				pmax	pmax		
	comp=Z,31nm,0.8s						
GRF	**Grafenberg Arr**	**92.08**	**319**	*e*L	L	15 47 40.6	
	comp=Z,378nm,21.8s						
NSS	**Namsos**	**92.20**	**334**	*e*P	**P**	**15 02 21.5**	**+0.4**
NC602	**NORSAR Array S**	**92.27**	**331**	IAmb	IAmb	15 02 23.5	
	comp=Z,32nm,0.8s						
NC602	**NORSAR Array S**	**92.27**	**331**	*e*P	**P**	**15 02 21.6**	**0.0**
NORES	**NORESS Array B**	**92.27**	**331**	P	**P**	**15 02 21.5**	**-0.1**
NORES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
RETA	**Reutte**	**92.31**	**317**	P	**P**	**15 02 22.6**	**+0.4**
RETA	**Reutte**	**92.31**	**317**	*i* PcP	**P**	**15 02 22.6**	**+0.4**
	comp=Z,28nm,0.7s,SNR=5.6						
FETA	**Feichten**	**92.32**	**317**	P	**P**	**15 02 22.9**	**+0.5**
FETA					**PP**	**15 06 03.5**	**+0.1**
FETA	**Feichten**	**92.32**	**317**	*i* PcP	**P**	**15 02 22.9**	**+0.5**
	comp=Z,22nm,0.9s,SNR=7.7						
FETA				*e*PP	**PP**	**15 06 03.5**	**+0.1**
	comp=Z,5.7nm,1.0s						
NIKH	**Nikolski High**	**92.35**	**37**	P	**P**	**15 02 22.3**	**+0.1**
	baz=268,SNR=6.5						
NC303	**NORSAR Array S**	**92.37**	**331**	IAmb	IAmb	15 02 23.1	
	comp=Z,52nm,1.4s						
STRU	**Stroemstad**	**92.40**	**329**	*i* P	**P**	**15 02 22.3**	**+0.1**
NB2	**NORSAR Subarra**	**92.44**	**331**	P	**P**	**15 02 21.9**	**-0.5**
	comp=Z,36nm,0.9s,baz=94,slow=4.6						
NB2	**NORSAR Subarra**	**92.44**	**331**	P	**P**	**15 02 21.9**	**-0.5**
	baz=94,slow=4.6						
NB2	**NORSAR Subarra**	**92.44**	**331**	P	**P**	**15 02 20.0**	**-2.4**
NB2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NOA	**NORSAR Array B**	**92.44**	**331**	P	**P**	**15 02 22.2**	**-0.2**
	comp=Z,22nm,0.9s,baz=95,slow=5.0,SNR=49						
NOA				LR	LR	15 48 30.7	
	comp=Z,613nm,21.1s,baz=110,slow=38						
	comp=Z,22nm,0.9s						
NAO01	**NORSAR Array S**	**92.59**	**331**	IAmb	IAmb	15 02 24.6	
	comp=Z,39nm,1.0s						
NBO00	**NORSAR Array S**	**92.65**	**331**	IAmb	IAmb	15 02 25.5	
	comp=Z,40nm,0.9s						
KBS	**Kingsbay**	**92.66**	**349**	IAMs_20	IAMs_20	15 52 08.6	
	comp=Z,1µm,18.0s						
OSL	**Oslo**	**92.66**	**330**	*e*P	**P**	**15 02 24.1**	**+0.8**
NC204	**NORSAR Array S**	**92.66**	**331**	IAmb	IAmb	15 02 25.6	
	comp=Z,48nm,0.9s						
BSEG	**Bad Segeberg**	**92.76**	**324**	P	**P**	**15 02 24.9**	**+1.0**
BSEG				pmax	pmax		
	comp=Z,27nm,1.1s						
BSEG	**Bad Segeberg**	**92.76**	**324**	*e*P	**P**	**15 02 25.0**	**+1.0**
	comp=Z,26nm,1.0s,baz=92,slow=4.5						
UBR	**Ueberruh**	**92.76**	**317**	*e*P	**P**	**15 02 24.4**	**+0.2**
	comp=Z,22nm,1.0s,baz=92,slow=4.5						
DAVA	**Damuels**	**92.91**	**317**	P	**P**	**15 02 25.5**	**+0.4**
DAVA					**PP**	**15 06 05.9**	**-2.1**
DAVA	**Damuels**	**92.91**	**317**	*i* PcP	**P**	**15 02 25.5**	**+0.4**
	comp=Z,42nm,1.0s,SNR=13						
DAVA				*e*PP	**PP**	**15 06 05.9**	**-2.1**
	comp=Z,14nm,1.2s						

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TNA   Tin City          93.05  25  IAmb     IAmb     15 04 32.1
      comp=Z,76nm,1.7s
TNA   Tin City          93.05  25  P        P        15 02 25.0  0.0
      baz=270
KEST  Kesra             93.06 305  P        P        15 02 27.6 +1.6
      comp=Z,35nm,1.1s,baz=350,slow=4.1,SNR=10
KEST                               LR       LR       15 47 49.4
      comp=Z,256nm,19.8s,baz=42,slow=38
      comp=Z,35nm,1.1s
KEST  Kesra             93.06 305  P        P        15 02 25.3 -0.7
KONO  Kongsberg         93.22 329  P        P        15 02 25.9 -0.1
KONO                               IAmb     IAmb     15 02 28.2
      comp=Z,49nm,0.9s
KONO  Kongsberg         93.22 329 eP        P        15 02 26.5 +0.5
KONO  Kongsberg         93.22 329  P        P        15 02 25.9 -0.1
KONO                               pmax     pmax
      comp=Z,49nm,1.0s
VNA2  Neumayer--Watz    93.23 198 ⇑P        P        15 02 26.5 +0.6
      comp=Z,0.7nm,0.2s,baz=28,slow=7.6
VNA2  Neumayer--Watz    93.23 198 ⇓sP       sP       15 02 41.9 -1.1
      baz=21,slow=32
RETH  Rethem/Aller,     93.32 322 eP        P        15 02 27.2 +0.7
      comp=Z,23nm,1.1s,baz=92,slow=4.5
DOMB  Dombas            93.48 332 eP        P        15 02 27.6 +0.5
UNV   Unalaska Valle    93.77  36  P        P        15 02 27.6 -1.0
      baz=270
HOMB  Homborsund        93.79 328 i P       P        15 02 33.2 +4.6
SKAR  Skarslia          93.86 330 eP        P        15 02 30.0 +1.0
M11K  Mekoryuk          93.86  30  P        P        15 02 28.6 -0.3
      baz=271
TNS   Taunus Mts        93.88 320  P        P        15 02 30.6 +1.3
TNS                                pmax     pmax
      comp=Z,46nm,1.1s
TNS   Taunus Mts        93.88 320 eP        P        15 02 30.2 +0.8
      comp=Z,47nm,1.0s,baz=92,slow=4.5
KASTN Kahler Asten      93.90 321 eP        P        15 02 30.1 +0.7
      comp=Z,19nm,1.1s,baz=92,slow=4.5
BFO   Black Forest      93.96 318  P        P        15 02 29.1 -0.6
BFO                                IAmb     IAmb     15 03 02.5
      comp=Z,60nm,1.9s
BFO   Black Forest      93.96 318  P        P        15 02 29.1 -0.6
BFO                                pmax     pmax
      comp=Z,60nm,1.9s
C16K  Lisburne Hills    94.02  22  IAmb     IAmb     15 02 31.1
      comp=Z,47nm,1.1s
C16K                               IAMs_20  IAMs_20  15 50 01.3
      comp=Z,1µm,18.0s
C16K  Lisburne Hills    94.02  22  P        P        15 02 28.9 -0.5
      baz=272
ANM   Nome              94.14  26  IAmb     IAmb     15 02 32.4
      comp=Z,33nm,1.4s
ANM   Nome              94.14  26  P        P        15 02 30.2 +0.1
      baz=272
MOL   Molde             94.18 332 eP        P        15 02 31.2 +1.0
F15K  North Star Dit    94.40  24  IAMs_20  IAMs_20  15 51 41.7
      comp=Z,996nm,21.0s
F15K  North Star Dit    94.40  24  P        P        15 02 31.2 -0.1
      baz=273
AKN   Aaknes            94.45 332 eP        P        15 02 32.5 +0.9
K13K  Kusilvak Mount    94.57  28  IAmb     IAmb     15 02 35.1
      comp=Z,25nm,1.0s
K13K  Kusilvak Mount    94.57  28  P        P        15 02 32.4 +0.3
      baz=272
ODD1  Odda              94.72 330 eP        P        15 02 33.7 +0.8
C17K  DeLong Mountai    94.81  22  P        P        15 02 33.3 +0.2
      baz=274
BLS5  Blasjo            94.83 329 eP        P        15 02 34.0 +0.6
D17K  Noatak River      94.90  22  P        P        15 02 33.4 -0.1
      baz=274,SNR=36
RDOG  Red Dog Mine      94.94  22  IAmb     IAmb     15 02 35.1
      comp=Z,26nm,0.6s
RDOG                               IAMs_20  IAMs_20  15 50 40.1
      comp=Z,1µm,18.0s
RDOG  Red Dog Mine      94.94  22  P        P        15 02 33.4 -0.3
      baz=275,SNR=9.6
J14K  Nanvaranak Lak    95.04  27  IAmb     IAmb     15 02 37.1
      comp=Z,56nm,1.4s
J14K  Nanvaranak Lak    95.04  27  P        P        15 02 34.5 +0.2
      baz=274
B18K  Kokolik River     95.22  21  P        P        15 02 35.0  0.0
      baz=276,SNR=76
M13K  Dall Lake         95.28  30  P        P        15 02 35.6 +0.3
      baz=274
A19K  Wainwright        95.39  20  P        P        15 02 35.6  0.0
      baz=276
E17K  Hotham Inlet      95.44  23  P        P        15 02 36.1 +0.1
      baz=276,SNR=27
H16K  Elim              95.49  25  P        P        15 02 36.2 -0.1
      baz=275,SNR=32
C18K  Utukok River      95.52  21  IAmb     IAmb     15 02 38.0
      comp=Z,31nm,0.8s
C18K  Utukok River      95.52  21  P        P        15 02 36.2 -0.3
      baz=276
L14K  Kuka Creek        95.54  29  P        P        15 02 36.6  0.0
      baz=274
E18K  Tukpahlearik C    95.88  23  IAmb     IAmb     15 02 39.9
      comp=Z,24nm,1.0s
E18K                               IAMs_20  IAMs_20  15 50 50.5
      comp=Z,975nm,19.0s
E18K  Tukpahlearik C    95.88  23  P        P        15 02 37.6 -0.4
      baz=277,SNR=20
M14K  Bethel            95.94  29  IAmb     IAmb     15 02 54.7
      comp=Z,80nm,1.6s
M14K  Bethel            95.94  29  P        P        15 02 38.6 +0.2
      baz=275
K15K  Wolf Creek Mou    96.01  28  P        P        15 02 39.0 +0.3
      baz=275
C19K  Lookout Ridge     96.04  21  IAmb     IAmb     15 02 41.2
      comp=Z,47nm,1.0s
C19K  Lookout Ridge     96.04  21  P        P        15 02 38.9 +0.1
      baz=278,SNR=38
G17K  Kiwalik Mounta    96.07  25  P        P        15 02 39.1 +0.1
      baz=276
L15K  Ungalak Mounta    96.09  28  P        P        15 02 39.5 +0.4
      baz=275
N14K  Kuskokwak Cree    96.14  30  P        P        15 02 39.8 +0.4
      baz=275
I17K  Unalakleet        96.23  26  IAmb     IAmb     15 02 41.6
      comp=Z,32nm,0.9s
I17K  Unalakleet        96.23  26  P        P        15 02 40.3 +0.6
      baz=276,SNR=11
J16K  Anvik River       96.34  27  P        P        15 02 40.6 +0.4
      baz=276
F18K  Selawik           96.35  23  P        P        15 02 40.1  0.0
      baz=278,SNR=49
O14K  Tigyukauivet M    96.42  31  P        P        15 02 40.9 +0.3
      baz=275
H17K  Granite Mounta    96.45  25  IAmb     IAmb     15 02 42.8
      comp=Z,38nm,0.8s
H17K  Granite Mounta    96.45  25  P        P        15 02 40.8 +0.2
      baz=277
M15K  Kasigluk River    96.57  29  P        P        15 02 41.5 +0.2
      baz=276
D19K  Kuna River        96.66  21  P        P        15 02 41.2 -0.4
      baz=279
A21K  Barrow            96.68  18  P        P        15 02 41.6 +0.1
      baz=281
B20K  Meade River       96.74  20  IAmb     IAmb     15 02 44.0
      comp=Z,39nm,0.8s
B20K                               IAMs_20  IAMs_20  15 51 35.4
      comp=Z,2µm,19.0s
B20K  Meade River       96.74  20  P        P        15 02 42.0 +0.1
      baz=280,SNR=48
NOR   Nord              96.78 352  P        P        15 02 41.3 -0.6
NOR                                pmax     pmax
      comp=Z,21nm,1.1s
NOR   Nord              96.78 352 i P       P        15 02 40.6 -1.3
NOR                                IAmb     IAmb     15 02 42.6
      comp=Z,27nm,1.2s
G18K  Tagagawik         96.84  24  IAmb     IAmb     15 02 43.8
      comp=Z,17nm,0.9s
G18K  Tagagawik         96.84  24  P        P        15 02 42.3 -0.1
      baz=278,SNR=11
N15K  Kwethluk River    96.92  30  IAmb     IAmb     15 02 44.8
      comp=Z,23nm,0.9s
N15K  Kwethluk River    96.92  30  P        P        15 02 43.1 +0.2
      baz=276
J17K  VABM Dome         97.01  27  IAmb     IAmb     15 02 45.4
      comp=Z,23nm,0.9s
J17K  VABM Dome         97.01  27  P        Pdif     15 02 43.7 +0.4
      baz=278,SNR=11
L16K  Owhat River       97.04  28  IAmb     IAmb     15 03 04.1
      comp=Z,24nm,1.2s
L16K  Owhat River       97.04  28  P        Pdif     15 02 43.5  0.0
      baz=277
H18K  Honhosa River     97.07  25  P        P        15 02 43.4 -0.1
      baz=278,SNR=20
E19K  Redstone River    97.16  22  IAMs_20  IAMs_20  15 52 10.4
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      comp=Z,1µm,20.0s
E19K  Redstone River    97.16  22  P        P        15 02 43.7 -0.2
      baz=280
O15K  Ungalikthiuk R    97.16  31  P        Pdif     15 02 44.2 +0.1
      baz=276
D20K  Etivluk River     97.16  21  IAMs_20  IAMs_20  15 54 49.4
      comp=Z,1µm,18.0s
D20K  Etivluk River     97.16  21  P        Pdif     15 02 44.1 +0.2
      baz=281
SDPT  Sand Point        97.20  35  P        Pdif     15 02 44.4 +0.1
      baz=275
A22K  Sinclair Lake     97.27  19  P        Pdif     15 02 44.4 +0.2
      baz=282
M16K  Timber Creek      97.37  29  P        P        15 02 44.7 -0.2
      baz=277
E20K  Nigu River        97.40  21  P        Pdif     15 02 45.2 +0.1
      baz=281
G19K  Purcell Mounta    97.44  24  P        Pdif     15 02 45.1  0.0
      baz=280,SNR=41
K17K  Iditarod          97.45  27  IAmb     IAmb     15 02 47.5
      comp=Z,37nm,1.0s
K17K  Iditarod          97.45  27  P        Pdif     15 02 45.4 +0.1
      baz=278,SNR=9.3
RAR   Rarotonga         97.50 112  LR       LR       15 44 33.3
      comp=Z,143nm,21.6s,baz=267,slow=34
N16K  Nishlik Lake      97.53  29  P        Pdif     15 02 45.9 +0.1
      baz=278
L17K  Donlin            97.53  28  P        Pdif     15 02 45.8 +0.1
      baz=278
S14K  Fog Glacier       97.62  34  P        P        15 02 46.1 -0.2
      baz=276
B21K  Ikpikpuk River    97.68  20  P        Pdif     15 02 46.4 +0.2
      baz=283
C21K  Knifeblade Rid    97.72  20  P        Pdif     15 02 46.5 +0.1
      baz=282
GCSA  Galena City Sc    97.76  25  P        Pdif     15 02 46.8 +0.2
      baz=280,SNR=22
H19K  Roundabout Mou    97.80  24  P        Pdif     15 02 46.9 +0.1
      baz=280,SNR=50
F20K  Avaraart Lake     97.81  23  P        Pdif     15 02 46.7  0.0
      baz=281
B22K  Teshekpuk Lake    97.92  19  P        P        15 02 47.0 -0.1
      baz=284
O16K  Kokwok River B    97.99  30  P        P        15 02 47.5 -0.2
      baz=278
J18K  Innoko River      98.05  26  IAmb     IAmb     15 03 08.2
      comp=Z,17nm,1.0s
J18K  Innoko River      98.05  26  P        Pdif     15 02 48.2 +0.3
      baz=280
M17K  Holitna River     98.05  28  P        Pdif     15 02 48.0  0.0
      baz=279
P16K  Nushagak River    98.12  31  P        Pdif     15 02 48.6 +0.3
      baz=278
E21K  Killik River      98.17  21  IAMs_20  IAMs_20  15 54 00.3
      comp=Z,1µm,19.0s
E21K  Killik River      98.17  21  P        P        15 02 48.2 -0.2
      baz=283
L18K  Granite Mounta    98.27  28  P        Pdif     15 02 49.0 +0.1
      baz=280
N17K  Nushagak Hills    98.30  29  P        Pdif     15 02 49.2 +0.1
      baz=279
J19K  Poorman           98.43  26  IAmb     IAmb     15 02 51.8
      comp=Z,18nm,0.9s
J19K  Poorman           98.43  26  P        Pdif     15 02 49.9 +0.3
      baz=281
H20K  Anotleneega Mo    98.45  24  P        Pdif     15 02 50.0 +0.3
      baz=282
D22K  Ayikyak River     98.53  21  P        Pdif     15 02 50.2 +0.2
      baz=284
R16K  Pilot Point       98.54  32  P        Pdif     15 02 50.5 +0.3
      baz=278
F21K  Alatna River      98.63  22  IAMs_20  IAMs_20  15 55 59.2
      comp=Z,1µm,19.0s
F21K  Alatna River      98.63  22  P        Pdif     15 02 50.7 +0.2
      baz=283
I20K  Naaghedeneel      98.76  25  P        Pdif     15 02 51.3 +0.3
      baz=282
G21K  Allakaket         98.78  23  P        Pdif     15 02 51.3 +0.2
      baz=283
M18K  Stony River       98.80  28  P        Pdif     15 02 51.3  0.0
      baz=280
IMAR  Indian Mountai    98.80  24  P        Pdif     15 02 51.2  0.0
Q16K  King Salmon       98.86  31  P        P        15 02 51.2 -0.3
      baz=279
P17K  Kvichak River     98.88  31  P        Pdif     15 02 51.9 +0.2
      baz=279
N18K  Kilae Creek       98.91  29  P        Pdif     15 02 52.1 +0.3
      baz=280
C23K  Itkillik River    98.98  19  P        Pdif     15 02 52.2 +0.2
      baz=286
E22K  Anaktuvuk Pass    99.02  21  IAmb     IAmb     15 03 14.0
      comp=Z,38nm,1.6s
E22K  Anaktuvuk Pass    99.02  21  P        Pdif     15 02 52.5 +0.2
      baz=285,SNR=9.8
J20K  Nowinta River     99.03  25  IAmb     IAmb     15 02 55.3
      comp=Z,51nm,1.7s
J20K  Nowinta River     99.03  25  P        Pdif     15 02 52.5 +0.3
      baz=282
JMIC  Jan Mayen         99.04 342  LR       LR       15 54 15.9
      comp=Z,574nm,21.2s,baz=62,slow=39
L19K  White Mountain    99.12  27  P        Pdif     15 02 53.2 +0.4
      baz=281
R17L  Mt. Peulik Vol    99.18  32  P        Pdif     15 02 53.2 +0.1
      baz=279
D23K  Nanushuk River    99.20  20  P        Pdif     15 02 53.5 +0.5
      baz=286
K20K  Telida            99.24  26  P        Pdif     15 02 53.5 +0.3
      baz=282
H21K  Melozitna Rive    99.26  24  IAmb     IAmb     15 02 55.5
      comp=Z,32nm,1.2s
H21K  Melozitna Rive    99.26  24  P        Pdif     15 02 53.9 +0.5
      baz=284,SNR=15
Q17K  Contact Creek     99.32  31  P        Pdif     15 02 53.8 -0.1
      baz=280
DAG   Danmarks Havn     99.38 348  P        Pdif     15 02 50.7 -2.9
DAG                                pmax     pmax
      comp=Z,18nm,1.1s
DAG   Danmarks Havn     99.38 348 i P       Pdif     15 02 51.9 -1.7
DAG                                IAmb     IAmb     15 02 53.3
      comp=Z,15nm,1.0s
O18K  Koktuh Hills      99.39  30  P        Pdif     15 02 54.5 +0.5
      baz=281
G22K  Bettles           99.45  22  P        Pdif     15 02 54.4 +0.3
      baz=285
P18K  Big Mountain,     99.46  30  P        Pdif     15 02 55.1 +0.7
      baz=280
N19K  Bonanza Creek     99.56  29  P        Pdif     15 02 54.9 +0.1
      baz=281
C24K  Franklin Bluff    99.65  19  P        Pdif     15 02 55.2 +0.3
      baz=288
TOLK  Toolik Lake Re    99.68  21  IAMs_20  IAMs_20  15 52 55.9
      comp=Z,1µm,19.0s
TOLK  Toolik Lake Re    99.68  21  P        Pdif     15 02 55.2  0.0
      baz=287,SNR=8.3
I21K  Tanana            99.71  24  P        Pdif     15 02 55.8 +0.5
      baz=284
Q18K  Katmai Hardscr    99.71  31  P        Pdif     15 02 55.5 -0.1
      baz=280
O19K  Port Alsworth     99.76  29  P        Pdif     15 02 55.9 +0.3
      baz=281
TORD  Torodi Ar. Bea    99.76 283  P        Pdif     15 02 56.7 +0.1
      comp=Z,2.2nm,0.9s,baz=80,slow=4.9,SNR=1.3
TORD                               LR       LR       15 44 13.6
      comp=Z,544nm,21.6s,baz=54,slow=33
      comp=Z,2.2nm,0.9s
H22K  Ishtalitna Cre    99.77  23  P        Pdif     15 02 56.2 +0.6
      baz=285,SNR=10
D24K  Happy Valley      99.78  20  P        Pdif     15 02 55.8 +0.3
      baz=288
E23K  Chandalar         99.84  21  P        Pdif     15 02 56.2 +0.3
      baz=287
COLD  Coldfoot          99.86  22  IAMs_20  IAMs_20  15 54 36.7
      comp=Z,1µm,20.0s
COLD  Coldfoot          99.86  22  P        Pdif     15 02 56.5 +0.5
      baz=286,SNR=7.3
CHIR  Chirikof Islan    99.87  34  P        Pdif     15 02 56.8 +0.6
      baz=280
CHUM  Lake Minchumin    99.88  25  P        Pdif     15 02 56.4 +0.3
      baz=284
M20K  Styx River        99.98  28  P        Pdif     15 02 57.1 +0.5
      baz=283
G23K  Bananza Creek    100.07  22  P        Pdif     15 02 57.2 +0.2
      baz=286
PPLA  Purkeypile       100.17  26  P        Pdif     15 02 57.8 +0.2
      baz=284
R18K  Karluk           100.20  32  P        Pdif     15 02 57.9 +0.3
      baz=281
E24K  Your Creek       100.24  21  P        Pdif     15 02 57.9 +0.2
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      baz=288
MLY   Manley           100.25  24  P        Pdif     15 02 58.2 +0.4
      baz=286
Q19K  Cape Douglas,    100.35  31  P        Pdif     15 02 58.6 +0.2
      baz=282
BPAW  Bear Paw Mtn.    100.39  25  P        Pdif     15 02 58.9 +0.5
      baz=285
P19K  Oil Pt           100.41  30  P        Pdif     15 02 59.0 +0.4
      baz=282
EKA   Eskdalemuir Ar   100.45 326  P        Pdif     15 02 59.4 +0.6
      comp=Z,2.6nm,0.8s,baz=93,slow=5.9,SNR=3.8
H23K  Yukon River      100.51  23  P        Pdif     15 02 59.4 +0.5
      baz=287
SII   Sitkinak Islan   100.53  33  P        Pdif     15 02 59.3 +0.1
      baz=281
D25K  Kavik River      100.56  19  IAMs_20  IAMs_20  15 53 00.9
      comp=Z,1µm,20.0s
D25K  Kavik River      100.56  19  P        Pdif     15 02 59.4 +0.3
      baz=290
N20K  Mount Spurr      100.56  28  P        Pdif     15 02 59.6 +0.3
      baz=284
SPCR  Spurr Chakacha   100.56  28  P        Pdif     15 02 59.5 +0.2
      baz=284
O20K  Slope Mountain   100.62  29  P        Pdif     15 02 60.0 +0.4
      baz=283
F24K  Squaw Lake       100.63  21  P        Pdif     15 02 59.9 +0.5
      baz=289
SKT   Skwentna         100.69  27  P        Pdif     15 03 00.5 +0.7
      baz=284
I23K  Minto, Yukon-K   100.78  24  P        Pdif     15 03 00.9 +0.9
      baz=287
C26K  Camden Bay       100.82  19  P        Pdif     15 03 00.7 +0.6
      baz=292
TRF   Thorofare Moun   100.87  26  P        Pdif     15 03 01.1 +0.3
      baz=286
OHAK  Old Harbor       100.89  32  P        Pdif     15 03 01.1 +0.5
      baz=282
G24K  Hadweenzic Riv   101.04  22  P        Pdif     15 03 01.9 +0.6
      baz=289
Q20K  Shuyak Island    101.06  31  P        Pdif     15 03 01.8 +0.4
      baz=283
NEA2  Nenana           101.06  24  P        Pdif     15 03 02.0 +0.6
      baz=287
KDAK  Kodiak Island    101.14  32  P        Pdif     15 03 01.8  0.0
      baz=282
CUT   Chulitna         101.15  27  P        Pdif     15 03 02.5 +0.8
      baz=285
CAPN  Captain Cook N   101.16  28  P        Pdif     15 03 02.6 +0.8
      baz=284
H24K  Noodor Dome      101.16  23  P        Pdif     15 03 02.3 +0.5
      baz=288
SUA   Susitna One      101.18  28  P        Pdif     15 03 02.4 +0.3
      baz=285
HOM   Homer            101.19  30  P        Pdif     15 03 02.6 +0.6
      baz=284
KIP   Kipapa           101.23  69  IAMs_20  IAMs_20  15 39 46.1
      comp=Z,1µm,21.0s
E25K  Arctic Village   101.25  21  P        Pdif     15 03 02.7 +0.5
      baz=291
C27K  Jago River       101.32  19  IAMs_20  IAMs_20  15 56 02.9
      comp=Z,1µm,18.0s
C27K  Jago River       101.32  19  P        Pdif     15 03 03.0 +0.7
      baz=293
MCK   McKinley         101.37  25  P        Pdif     15 03 03.3 +0.6
      baz=287
M22K  Willow           101.39  27  P        Pdif     15 03 03.4 +0.6
      baz=285
F25K  Christian Rive   101.42  21  P        Pdif     15 03 03.5 +0.6
      baz=291
COLA  College          101.48  24  P        Pdif     15 03 03.9 +0.8
      baz=288
G25K  Bearman Lake     101.54  22  P        Pdif     15 03 04.0 +0.7
      baz=290
POKR  Poker Plat Res   101.57  24  P        Pdif     15 03 03.9 +0.3
      baz=289
BRSE  Bradley Lake S   101.62  29  P        Pdif     15 03 04.2 +0.3
      baz=284
RC01  Rabbit Creek A   101.75  28  P        Pdif     15 03 04.7 +0.2
      baz=286
WAT1  Susitna Watana   101.80  26  P        Pdif     15 03 04.9 +0.1
      baz=287
BMAR  Burnt Mountain   101.86  21           Pdif     15 03 05.3 +0.5
ILAR  Eielson Array    101.90  24  P        Pdif     15 03 03.3 -1.8
      comp=Z,2.3nm,1.0s,baz=301,slow=5.3,SNR=15
ILAR                               PP       PP       15 06 57.3  -19
      comp=Z,2.2nm,0.9s,baz=284,slow=7.1,SNR=6.3
ILAR                               PKKPbc   PKKPbc   15 19 11.6 -1.1
      comp=Z,1.0nm,0.8s,baz=149,slow=1.9,SNR=6.7
ILAR                               PKKP     PKKPdf   15 19 20.9 +1.9
      comp=Z,1.1nm,0.8s,baz=132,slow=1.9,SNR=6.1
F26K  Sheenjek River   101.91  21  P        Pdif     15 03 05.6 +0.5
      baz=292
O22K  Cooper Landing   101.92  29  P        Pdif     15 03 05.7 +0.5
      baz=286
HDA   Harding Lake     101.99  24  P        Pdif     15 03 06.0 +0.5
      baz=289
SEW   Seward           102.15  29  P        Pdif     15 03 06.9 +0.7
      baz=286
SML   Sawmill          102.20  27  P        Pdif     15 03 07.1 +0.6
      baz=287
WAT6  Susitna Watana   102.23  26  P        Pdif     15 03 07.3 +0.5
      baz=288
DHY   Denali Highway   102.24  26  P        Pdif     15 03 07.5 +0.7
      baz=288
G26K  Porcupine Rive   102.32  21  P        Pdif     15 03 07.6 +0.7
      baz=292
D27M  Malcolm River    102.36  19  P        Pdif     15 03 07.5 +0.4
      baz=296
PWL   Port Wells       102.47  28  P        Pdif     15 03 08.2 +0.5
      baz=287
E27K  Coleen River     102.60  20  P        Pdif     15 03 08.8 +0.7
      baz=295
D28M  Stokes Point     103.03  18  P        Pdif     15 03 10.5 +0.5
      baz=298
GLI   Glacier Island   103.04  28  P        Pdif     15 03 10.7 +0.4
      baz=288
RIDG  Independent Ri   103.09  25  P        Pdif     15 03 11.2 +0.7
      baz=291
E28M  Babbage River    103.11  19  P        Pdif     15 03 11.3 +0.9
      baz=297
G27K  Doyon Strip      103.15  21  P        Pdif     15 03 11.4 +0.7
      baz=294
P23K  Montague Islan   103.17  29  P        Pdif     15 03 11.5 +0.8
      baz=288
I26K  Coal Creek Min   103.19  23  P        Pdif     15 03 11.3 +0.6
      baz=293
J26L  Joseph Creek     103.33  24  P        Pdif     15 03 12.5 +0.9
      baz=292
SCRK  Sand Creek       103.36  24  P        Pdif     15 03 12.6 +0.8
      baz=292
KLU   Klutina          103.39  27  P        Pdif     15 03 12.7 +0.9
      baz=289
ESDC  Sonseca Array    103.40 310  PP       PP       15 07 29.6 +1.2
      comp=Z,4.6nm,1.0s,baz=81,slow=6.7,SNR=8.1
HARP  HAARP            103.42  26  P        Pdif     15 03 12.6 +0.7
      baz=290
F28M  Old Crow         103.44  20  P        Pdif     15 03 12.7 +0.9
      baz=296
H27K  Steamboat Moun   103.44  22  P        Pdif     15 03 12.6 +0.7
      baz=294
I27K  Kandik River     103.66  22  P        Pdif     15 03 13.8 +0.8
      baz=294
E29M  Blow River       103.74  19  P        Pdif     15 03 13.8 +0.6
      baz=298
EYAK  Cordova Ski Ar   103.78  28  P        Pdif     15 03 14.0 +0.6
      baz=289
Q23K  Middleton Isla   103.85  29  P        Pdif     15 03 14.4 +0.7
      baz=288
L26K  Log Cabin Wild   103.98  25  P        Pdif     15 03 14.7 +0.3
      baz=292
NEEM  North Greenlan   104.02 354 i P       Pdif     15 03 14.8 +0.1
NEEM                               IAmb     IAmb     15 03 16.0
      comp=Z,7.2nm,0.8s
K27K  Chicken          104.12  24  P        Pdif     15 03 15.4 +0.5
      baz=293
M26K  Nabesna, AK      104.36  26  P        Pdif     15 03 16.7 +0.5
      baz=292
I28M  Miner Creek      104.36  22  P        Pdif     15 03 16.6 +0.5
      baz=296
G29M  Pine Creek       104.40  20  P        Pdif     15 03 16.6 +0.5
      baz=298
H29M  Whitestone       104.60  21  P        Pdif     15 03 16.9 -0.1
      baz=297
L27K  Beaver Creek,    104.60  25  P        Pdif     15 03 17.2  0.0
      baz=293
KAIM  Kayak Island     104.61  28  P        Pdif     15 03 17.3 +0.1
      baz=290
MCARA McCarthy VSAT    104.73  27  P        Pdif     15 03 18.2 +0.5
```

	baz=292						
F30M	**Barrier River**	**104.82**	**19**	P	**Pdif**	**15 03 18.7**	**+0.7**
	baz=300						
M27K	**Edge Creek, AK**	**104.86**	**25**	P	**Pdif**	**15 03 19.1**	**+0.6**
	baz=293						
G30M	**tAoh Zraii Nji**	**104.98**	**20**	P	**PKiKP**	**15 07 34.0**	**+0.6**
	baz=300						
I29M	**Ogilvie Camp,**	**105.01**	**22**	P	**PKiKP**	**15 07 34.2**	**+0.8**
	baz=297						
EPYK	**Eagle Plains**	**105.11**	**21**	P	**PKiKP**	**15 07 34.2**	**+0.6**
	baz=299						
DAWY	**Dawson**	**105.18**	**23**	P	**PKiKP**	**15 07 34.4**	**+0.6**
	baz=296						
INK	**Inuvik**	**105.18**	**18**	Pdiff	**Pdif**	**15 03 19.6**	**0.0**
	comp=Z,4.0nm,1.0s,baz=308,slow=5.6,SNR=5.9						
INK	**Inuvik**	**105.18**	**18**	P	**PKiKP**	**15 07 34.5**	**+0.9**
	baz=303						
A36M	**Sachs Harbour**	**105.22**	**13**	P	**PKiKP**	**15 07 34.7**	**+1.1**
	baz=312						
BVCY	**Beaver Creek**	**105.27**	**25**	P	**PKiKP**	**15 07 34.5**	**+0.5**
	baz=294						
J29N	**Klondike Camp**	**105.46**	**23**	P	**PKiKP**	**15 07 34.9**	**+0.6**
	baz=297						
F31M	**Tsiigehtchic**	**105.58**	**19**	P	**PKiKP**	**15 07 35.1**	**+0.7**
	baz=302						
CTG	**Chitna Glacier**	**105.64**	**27**	P	**PKiKP**	**15 07 35.2**	**+0.3**
	baz=293						
G31M	**Satah River**	**105.68**	**20**	P	**PKiKP**	**15 07 35.3**	**+0.8**
	baz=302						
YUK3	**Moose Creek**	**105.71**	**26**	P	**PKiKP**	**15 07 35.3**	**+0.2**
	baz=294						
I30M	**Mount Dempster**	**105.79**	**22**	IAMs_20	IAMs_20	15 59 38.6	
	comp=Z,1μm,19.0s						
I30M	**Mount Dempster**	**105.79**	**22**	P	**PKiKP**	**15 07 35.7**	**+0.6**
	baz=299						
K29M	**Barlow Dome**	**106.02**	**23**	P	**PKiKP**	**15 07 35.9**	**+0.4**
	baz=298						
SUMG	**Summit**	**106.07**	**348**	*i* P	**Pdif**	**15 03 25.4**	**+1.4**
L29M	**L29M**	**106.11**	**24**	P	**PKiKP**	**15 07 36.0**	**+0.4**
	baz=297						
J30M	**Hart River**	**106.13**	**22**	IAMs_20	IAMs_20	15 54 40.4	
	comp=Z,1μm,22.0s						
J30M	**Hart River**	**106.13**	**22**	P	**PKiKP**	**15 07 36.3**	**+0.6**
	baz=299						
YUK8	**Steele Glacier**	**106.21**	**26**	P	**PKiKP**	**15 07 36.0**	**-0.1**
	baz=295						
TULEG	**Thule**	**106.22**	**358**	IAMs_20	IAMs_20	15 59 32.9	
	comp=Z,853nm,20.0s						
TULEG	**Thule**	**106.22**	**358**	*i* P	**Pdif**	**15 03 25.2**	**+1.1**
TULEG				IAmb	IAmb	15 03 28.6	
	comp=Z,4.4nm,0.7s						
H31M	**Peel River**	**106.23**	**21**	IAMs_20	IAMs_20	15 50 19.1	
	comp=Z,1μm,22.0s						
H31M	**Peel River**	**106.23**	**21**	P	**PKiKP**	**15 07 36.2**	**+0.5**
	baz=301						
O28M	**Mount Upton**	**106.24**	**27**	P	**PKiKP**	**15 07 36.2**	**0.0**
	baz=294						
M29M	**Somme Creek**	**106.27**	**25**	P	**PKiKP**	**15 07 36.1**	**+0.1**
	baz=296						
PINM	**Pinnacle**	**106.49**	**27**	P	**PKiKP**	**15 07 36.8**	**+0.5**
	baz=294						
TBI	**Tubuai**	**106.64**	**115**	*e*PP	**PP**	**15 07 52.6**	**-0.1**
	comp=Z,274nm,29.8s						
TBI				*e*S	**Sdif**	**15 15 19.1**	**-5.9**
	comp=Z,475nm,31.8s						
TBI				*e*SS	**SS**	**15 22 53.9**	**-0.9**
	comp=Z,1μm,31.2s						
TBI	**Tubuai**	**106.64**	**115**	*e*LQ	LQ	15 34 08.8	
	comp=Z,2μm,35.5s						
TBI				*e*LR	LR	15 38 37.3	
	comp=Z,1μm,23.5s						
TBI				*e*LR	LR	15 38 47.0	
	comp=Z,3μm,29.5s						
YUK4	**Talbot Arm**	**106.68**	**26**	P	**PKiKP**	**15 07 37.0**	**+0.1**
	baz=296						
MAYO	**Mayo, Yukon**	**106.77**	**23**	P	**PKiKP**	**15 07 37.4**	**+0.7**
	baz=299						
M30M	**Minto, Yukon**	**106.90**	**24**	P	**PKiKP**	**15 07 37.3**	**+0.2**
	baz=298						
YUK6	**Outpost Mounta**	**106.97**	**26**	P	**PKiKP**	**15 07 37.5**	**0.0**
	baz=296						
O29M	**Mount Kennedy**	**107.16**	**27**	P	**PKiKP**	**15 07 37.9**	**+0.2**
	baz=296						
C36M	**Paulatuk**	**107.28**	**15**	P	**PKiKP**	**15 07 37.8**	**+0.3**
	baz=312						
N30M	**Aishikik Lake**	**107.30**	**25**	P	**PKiKP**	**15 07 38.2**	**+0.4**
	baz=297						
HYT	**Haines Junctio**	**107.40**	**26**	P	**PKiKP**	**15 07 38.5**	**+0.4**
	baz=297						
PPT2	**Papeete2**	**107.51**	**109**	*e*PP	PP	15 07 51.4	-8.0
	comp=Z,87nm,27.5s						
PPT2				*e*S	**Sdif**	**15 15 21.3**	**-11**
	comp=Z,116nm,33.2s						
PPT2				*e*SS	**SS**	**15 23 13.3**	**+6.2**
	comp=Z,126nm,32.8s						
PPT2	**Papeete2**	**107.51**	**109**	*e*LQ	LQ	15 34 33.7	
	comp=Z,1μm,37.8s						
PPT2				*e*LR	LR	15 38 59.9	
	comp=Z,496nm,23.8s						
PPT2				*e*LR	LR	15 39 03.9	
	comp=Z,358nm,25.5s						
P29M	**Windy Craggy**	**107.83**	**27**	P	**PKiKP**	**15 07 39.2**	**+0.3**
	baz=296						
N31M	**Braeburn, Yuko**	**107.84**	**25**	P	**PKiKP**	**15 07 39.2**	**+0.4**
	baz=299						
P30M	**Million Dollar**	**107.96**	**27**	P	**PKiKP**	**15 07 39.5**	**+0.4**
	baz=297						
O30N	**Mendenhall**	**108.05**	**26**	P	**PKiKP**	**15 07 39.6**	**+0.4**
	baz=298						
M31M	**Drury Creek, Y**	**108.06**	**24**	P	**PKiKP**	**15 07 39.6**	**+0.4**
	baz=300						
FARO	**Faro, Yukon**	**108.47**	**24**	P	**PKiKP**	**15 07 40.6**	**+0.6**
	baz=301						
PLBC	**Pleasant Camp**	**108.54**	**27**	P	**PKiKP**	**15 07 40.5**	**+0.4**
	baz=298						
WHY	**Whitehorse**	**108.62**	**26**	P	**PKiKP**	**15 07 40.6**	**+0.2**
	baz=299						
SKAG	**Skagway**	**109.00**	**27**	P	**PKiKP**	**15 07 41.2**	**+0.2**
	baz=298						
S31K	**Pelican**	**109.29**	**28**	P	**PKiKP**	**15 07 42.1**	**+0.5**
	baz=297						
R31K	**City Hall, Gus**	**109.31**	**28**	P	**PKiKP**	**15 07 41.7**	**+0.1**
	baz=298						
P32M	**Atlin**	**109.66**	**26**	P	**PKiKP**	**15 07 42.6**	**+0.3**
	baz=300						
P33M	**Teslin, Yukon**	**109.73**	**25**	P	**PKiKP**	**15 07 43.1**	**+0.6**
	baz=301						
SIT	**Sitka**	**110.14**	**29**	P	**PKiKP**	**15 07 43.7**	**+0.5**
	baz=298						
S32K	**Killisnoo**	**110.30**	**28**	P	**PKiKP**	**15 07 43.4**	**0.0**
	baz=299						
Q32M	**Nakina River**	**110.62**	**26**	P	**PKiKP**	**15 07 44.3**	**0.0**
	baz=301						
R33M	**Jennings River**	**110.96**	**26**	P	**PKiKP**	**15 07 45.0**	**+0.1**
	baz=303						
T33K	**Petersburg**	**111.39**	**29**	P	**PKiKP**	**15 07 45.6**	**+0.1**
	baz=300						
WTLY	**Watson Lake, Y**	**111.47**	**24**	P	**PKiKP**	**15 07 45.9**	**+0.2**
	baz=305						
WRGLY	**Wrigley**	**111.55**	**20**	P	**PKiKP**	**15 07 46.3**	**+0.6**
	baz=311						
U33K	**Whale Pass**	**111.66**	**29**	P	**PKiKP**	**15 07 46.4**	**+0.4**
	baz=300						
S34M	**Telegraph Cree**	**111.68**	**27**	P	**PKiKP**	**15 07 46.0**	**-0.1**
	baz=302						
WRAK	**Wrangell Islan**	**111.88**	**29**	P	**PKiKP**	**15 07 46.5**	**0.0**
	baz=300						
DLBC	**Dease Lake**	**111.89**	**26**	P	**PKiKP**	**15 07 46.2**	**-0.4**
	baz=303						
CRAG	**Craig**	**111.97**	**30**	P	**PKiKP**	**15 07 46.6**	**-0.1**
	baz=299						
T35M	**Bob Quinn**	**112.58**	**28**	P	**PKiKP**	**15 07 47.9**	**+0.1**
	baz=302						
V35K	**Ketchikan**	**112.79**	**30**	P	**PKiKP**	**15 07 48.8**	**+0.5**
	baz=301						
LIRD	**Liard River Hi**	**112.99**	**24**	P	**PKiKP**	**15 07 48.8**	**+0.2**
	baz=307						
U35K	**Hyder**	**113.25**	**28**	P	**PKiKP**	**15 07 49.4**	**+0.3**
	baz=302						
KOTAN	**Kotaneelee Air**	**113.35**	**23**	P	**PKiKP**	**15 07 49.3**	**0.0**
	baz=310						
TOAD	**Toad River Com**	**113.69**	**24**	P	**PKiKP**	**15 07 50.1**	**+0.2**
	baz=308						
YKA	**Yellowknife Ar**	**114.92**	**17**	PKP	**PKiKP**	**15 07 51.1**	**-1.0**
	comp=Z,3.6nm,0.9s,baz=310,slow=2.8,SNR=15						
RKT	**Rikitea**	**119.62**	**119**	*e*LQ	LQ	15 39 32.0	
	comp=Z,11μm,38.0s						
RKT				*e*LR	LR	15 44 41.3	
	comp=Z,4μm,40.5s						
NEW	**Newport**	**124.20**	**30**	PKP	**PKiKP**	**15 08 10.7**	**-0.1**
	comp=Z,11nm,0.8s,baz=31,slow=1.0,SNR=17						
SCHQ	**Schefferville**	**127.30**	**351**	PKP	**PKiKP**	**15 08 16.6**	**-0.2**
	comp=Z,20nm,0.9s,baz=26,slow=4.1,SNR=7.8						
SCHQ				PP	**PP**	**15 10 14.3**	**-0.7**
	comp=Z,15nm,1.0s,baz=30,slow=7.4,SNR=3.6						
DLMT	**Dillon**	**128.45**	**30**	IAMs_20	IAMs_20	16 04 09.6	
	comp=Z,545nm,19.0s						
NVAR	**Mina Array Bea**	**129.62**	**40**	PKP	**PKiKP**	**15 08 22.7**	**+0.5**
	comp=Z,10nm,0.9s,baz=281,slow=1.9,SNR=25						
NVAR				PP	**PP**	**15 10 26.4**	**-5.1**
	comp=Z,3.3nm,0.9s,baz=274,slow=6.9,SNR=4.9						
NVAR				SKPab	SKPab	15 11 39.5	-0.1
	comp=Z,6.4nm,0.8s,baz=272,slow=4.0,SNR=9.0						
ULM	**Lac du Bonnet**	**130.69**	**14**	PKP	**PKPdf**	**15 08 22.2**	**-0.6**
	comp=Z,21nm,0.7s,baz=356,slow=2.4,SNR=28						
ULM				PP	**PP**	**15 10 30.3**	**-7.0**
	comp=Z,4.9nm,0.8s,baz=327,slow=5.5,SNR=3.4						
ULM				SKPab	**SKPbc**	**15 11 40.3**	**-3.1**
	comp=Z,6.2nm,0.6s,baz=10.0,slow=4.3,SNR=5.7						
PDAR	**Pinedale Array**	**131.84**	**30**	PKhKP	PKPpre	15 08 17.1	
	comp=Z,1.4nm,1.0s,baz=56,slow=0.5,SNR=5.2						
PDAR				PKP	**PKPdf**	**15 08 25.8**	**+0.3**
	comp=Z,3.8nm,0.8s,baz=283,slow=2.7,SNR=16						
PDAR				PP	**PP**	**15 10 44.5**	**-0.9**
	comp=Z,3.1nm,0.9s,baz=318,slow=2.0,SNR=5.3						
PDAR				SKPab	**SKPbc**	**15 11 46.4**	**-1.8**
	comp=Z,4.2nm,0.8s,baz=326,slow=0.8,SNR=8.1						
LL02	**Futaleuf**	**133.67**	**187**	IAMs_20	IAMs_20	16 00 05.5	
	comp=Z,1μm,21.0s						
PLCA	**Paso Flores**	**135.90**	**189**	PKP	**PKiKP**	**15 08 34.8**	**+0.1**
	comp=Z,6.8nm,1.1s,baz=196,slow=2.6,SNR=5.3						
PLCA				SKPab	**SKPbc**	**15 12 01.2**	**-0.3**
	comp=Z,1.8nm,0.8s,baz=188,slow=4.1,SNR=4.1						
RCBR	**Riachuelo**	**136.14**	**259**	IAMs_20	IAMs_20	16 02 40.9	
	comp=Z,803nm,20.0s						
SDCO	**Great Sand Dun**	**137.63**	**32**	IAMs_20	IAMs_20	16 19 42.0	
	comp=Z,640nm,18.0s						
I42A	**Draeger Farm,**	**138.24**	**11**	IAMs_20	IAMs_20	16 15 25.4	
	comp=Z,725nm,20.0s						
VAO	**Valinhos**	**139.56**	**229**	*e*P	**PKPdf**	**15 08 40.2**	**0.0**
BI02	**San Fabin de**	**139.99**	**190**	IAMs_20	IAMs_20	16 05 50.7	
	comp=Z,948nm,22.0s						
BO02	**Sierra Bellavi**	**141.73**	**191**	IAMs_20	IAMs_20	16 06 02.7	
	comp=Z,801nm,21.0s						
CPUP	**Villa Florida**	**144.20**	**214**	PKP	**PKPdf**	**15 08 49.0**	**+0.7**
	comp=Z,3.7nm,0.8s,baz=115,slow=5.3,SNR=13						
WCI	**Wyandotte Cave**	**144.20**	**10**		**PKPab**	**15 08 45.6**	**-0.1**
WCI	**Wyandotte Cave**	**144.20**	**10**	PKIKP	**PKPab**	**15 08 45.6**	**-0.1**
BDFB	**Brasilia**	**144.28**	**238**	PKP	**PKPdf**	**15 08 48.2**	**-0.7**
	comp=Z,10nm,0.7s,baz=148,slow=4.1,SNR=12						
TXAR	**Lajitas Array**	**144.75**	**39**	PKP	**PKPab**	**15 08 48.0**	**-0.1**
	comp=Z,118nm,1.0s,baz=265,slow=1.3,SNR=465						
TXAR				SKP	**SKPbc**	**15 12 25.0**	**-0.5**
	comp=Z,5.3nm,0.8s,baz=312,slow=3.0,SNR=7.5						
TA01	**Diego Aracena**	**155.14**	**200**	IAMs_20	IAMs_20	16 29 00.2	
	comp=Z,696nm,22.0s						
PB08	**IPOC Station P**	**155.16**	**202**	IAMs_20	IAMs_20	16 09 02.9	
	comp=Z,548nm,22.0s						
GO01	**Chusmiza**	**155.61**	**203**	IAMs_20	IAMs_20	16 13 12.7	
	comp=Z,577nm,20.0s						
PB16	**IPOC Station P**	**156.94**	**203**	IAMs_20	IAMs_20	16 23 13.0	
	comp=Z,484nm,19.0s						
PB18	**Visviri**	**157.60**	**204**	IAMs_20	IAMs_20	16 17 43.5	
	comp=Z,585nm,21.0s						
LPAZ	**La Paz**	**158.14**	**209**	PKP	**PKPdf**	**15 09 10.4**	**0.0**
	comp=Z,5.6nm,0.9s,baz=0.7,slow=5.3,SNR=15						
CMIG	**Matias Romero**	**158.93**	**47**	PP	**PP**	**15 13 22.6**	**-4.3**
	comp=Z,4.8nm,1.1s,baz=282,slow=7.5,SNR=3.8						
SDV	**Santo Domingo**	**169.82**	**306**	PKPab	**PKPab**	**15 10 34.8**	**-0.1**
	comp=Z,2.6nm,0.4s,baz=270,slow=2.0,SNR=1.7						
SDV				PP	**PP**	**15 14 24.2**	**-0.4**
	comp=Z,14nm,1.0s,baz=63,slow=2.3,SNR=5.6						
ROSC	**El Rosal**	**175.00**	**293**	PKP	**PKPdf**	**15 09 23.2**	**0.0**
	comp=Z,18nm,0.7s,baz=177,slow=4.7,SNR=4.9						

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*TIR **16** 14:59:10.4, 41°.57N×19°.44E, h25^{km}±2^{km}, Ml2.6/2*
*BEO **16** 14:59:11.5±0.5, 41°.54N×19°.48E, h11^{km}±3^{km}, ML2.5/7*
*PDG **16** 14:59:11.7±0.4, 41°.59N×19°.28E, h8^{km}±2^{km}, ML2.5/10, Error ellipse: s-maj=1.5km s-min=1.9km az=0.0*
ISC 16 14:59:10.0±1.3**, 41°.52N**±0°.04×**19°.40E**±0°.04**, h6**^{km}±10^{km}**, n29, σ0^{s}.81**/48**, 4C-5D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.39**	**117**	Pg	**Pg**	**14 59 18.1**	**+0.5**
TIR				Sg	**Sb**	**14 59 24.7**	**-0.9**
TIR				AML	AML	14 59 25.1	
	3.2nm,0.4s						
ULC	**Ulcinj**	**0.45**	**345**	⇑ *i*Pg	**Pg**	**14 59 18.3**	**-0.5**
ULC				*i* Sg	**Sg**	**14 59 24.7**	**-0.1**
SDA	**Shkodra**	**0.53**	**8**	Pg	**Pg**	**14 59 20.0**	**-0.3**
SDA				Sg	**Sg**	**14 59 27.5**	**+0.3**
DRME	**Dracevica, Mon**	**0.68**	**346**	*e*Pg	**Pg**	**14 59 22.7**	**-0.4**
DRME	**Dracevica, Mon**	**0.68**	**346**	⇓ *i*Pg	**Pg**	**14 59 22.5**	**-0.6**
DRME				*e*Sg	**Sg**	**14 59 32.7**	**+0.7**
PHP	**Peshkopia**	**0.80**	**78**	Pg	**Pg**	**14 59 24.6**	**-0.7**
PHP				Sg	**Sg**	**14 59 35.7**	**0.0**
PHP				AML	AML	14 59 42.7	
	1.0nm,0.4s						
BUM	**Brajici-Budva**	**0.86**	**334**	⇑ *i*Pg	**Pg**	**14 59 26.5**	**-0.1**
BUM				*e*Sg	**Sg**	**14 59 37.9**	**+0.1**
PDG	**Podgorica**	**0.91**	**353**	P	**Pg**	**14 59 27.1**	**-0.4**
PDG				Sg	**Sg**	**14 59 39.6**	**+0.2**
PDG	**Podgorica**	**0.91**	**353**	*e*Pg	**Pg**	**14 59 27.8**	**+0.3**
PDG				*e*Sg	**Sn**	**14 59 42.4**	**-0.4**
PDG	**Podgorica**	**0.91**	**353**	⇑ *i*Pg	**Pg**	**14 59 27.2**	**-0.3**
PDG				*e*Sg	**Sb**	**14 59 40.4**	**-0.2**
HCY	**Herceg Novi**	**1.14**	**324**	*e*Pg	**Pg**	**14 59 31.1**	**-0.9**
HCY				*e*Sg	**Sb**	**14 59 47.6**	**+0.3**
PVY	**Plav**	**1.15**	**21**	*e*Pg	**Pn**	**14 59 33.6**	**+0.9**
PVY	**Plav**	**1.15**	**21**	⇓ *i*Pg	**Pn**	**14 59 32.9**	**+0.2**
PVY				*e*Sg	**Sn**	**14 59 49.8**	**+1.0**
NKME	**Niksic**	**1.29**	**345**	⇑ *i*Pg	**Pg**	**14 59 35.3**	**+0.6**
NKME				*e*Sg	**Sn**	**14 59 52.6**	**+0.5**
KOME	**Kolasin**	**1.33**	**4**	*e*Pg	**Pb**	**14 59 35.4**	**0.0**
KOME	**Kolasin**	**1.33**	**4**	⇓ *i*Pg	**Pn**	**14 59 34.8**	**-0.4**
KOME				*e*Sg	**Sn**	**14 59 54.8**	**+1.6**
IVA	**Berane**	**1.40**	**15**	⇓ *i*Pg	**Pn**	**14 59 34.9**	**-1.2**
IVA				*i* Sg	**Sg**	**14 59 58.1**	**+3.2**
TREB	**Trebinje**	**1.43**	**327**	*e*Pg	**Pn**	**14 59 36.3**	**-0.1**
BRY	**Bratogost**	**1.52**	**335**	⇓ *i*Pg	**Pn**	**14 59 37.3**	**-0.5**
BRY				*i* Sg	**Sg**	**14 59 59.7**	**+0.9**
SJES	**Sjenica**	**1.79**	**14**	*e*Pg	**Pb**	**14 59 42.7**	**-0.5**
SJES				*e*Sg	**Sb**	**15 00 06.2**	**+0.3**
STON	**Ston**	**1.85**	**317**	*e*Pn	**Pb**	**14 59 43.6**	**-0.5**
STON				*e*Sn	**Sb**	**15 00 08.3**	**+0.8**
RUDO	**Rudo**	**2.09**	**359**	*e*Pn	**Pn**	**14 59 46.5**	**+0.9**
IGT	**Igoumenitsa**	**2.11**	**160**	*e*Pn	**Pn**	**14 59 46.5**	**+0.6**
IVAS	**Ivanjica**	**2.12**	**15**	*e*Pn	**Pn**	**14 59 46.1**	**0.0**
IVAS				*e*Sn	**Sn**	**15 00 12.8**	**-0.1**
BARS	**Barje**	**2.21**	**53**	*e*Pn	**Pn**	**14 59 47.4**	**+0.1**
GOCS	**Kraljevo Serbi**	**2.31**	**28**	*e*Pn	**Pb**	**14 59 50.6**	**-1.5**
BBLS	**Lazi&#263i**	**2.34**	**0**	*e*Pn	**Pn**	**14 59 49.4**	**+0.3**
BBLS				*e*Sn	**Sn**	**15 00 17.0**	**-1.2**
DIVS	**Divibare**	**2.61**	**9**	*e*Pn	**Pn**	**14 59 52.3**	**-0.5**
BOVS	**Bovan**	**2.71**	**38**	*e*Pn	**Pn**	**14 59 54.1**	**0.0**

IDC 16 15:02:34.5±1.1**, 6°.53N×125°.25E, h0**^{km}**, mb3.7**/6**, mbtmp3.7**/6**, Error ellipse: s-maj=34.6km s-min=8.5km az=112.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.63**	**31**	Pg	Pb	15 02 48.5	+0.1
	475nm,0.3s,baz=255,slow=10.0,SNR=30						
DAV				Lg	Lg	15 02 54.1	
	1μm,0.3s,baz=255,slow=19,SNR=14						
FITZ	**Fitzroy Crossi**	**24.47**	**179**	P	P	15 07 55.7	+0.2
	1.8nm,0.5s,baz=360,slow=5.5,SNR=9.5						
	1.8nm,0.5s						
WRA	**Warramunga Arr**	**27.78**	**161**	P	P	15 08 25.7	+0.3
	0.7nm,0.7s,baz=338,slow=10,SNR=6.6						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**31.18**	**165**	P	P	15 08 55.5	0.0
	0.5nm,0.5s,baz=343,slow=6.7,SNR=12						
	0.5nm,0.5s						
STKA	**Stephens Creek**	**41.25**	**159**	P	P	15 10 20.9	-0.6
	1.3nm,0.7s,baz=345,slow=8.6,SNR=3.1						
	1.3nm,0.7s						
MKAR	**Makanchi Array**	**54.44**	**325**	P	P	15 12 04.2	+0.5
	0.2nm,0.5s,baz=121,slow=11,SNR=1.8						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**83.23**	**26**	P	P	15 15 00.9	-1.8
	0.2nm,0.6s,baz=270,slow=7.3,SNR=3.7						
	0.2nm,0.6s						

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*IDC **16** 15:05:03.6±8.7, 21°.57S×177°.01W, h194^{km}±77^{km}, mb3.6/9, mbtmp4.2/10, Error ellipse: s-maj=27.7km s-min=20.8km az=53.0*
*NEIC **16** 15:05:05.7±1.5, 21°.65S±0°.05×176°.8W±0°.1, h213^{km}±6^{km}, mb4.6/69, Error ellipse: s-maj=15.1km s-min=3.0km az=116.0*
ISC 16 15:05:04.0±0.4**, 21°.66S**±0°.07×**176°.80W**±0°.06**, h200**^{km}**, n125, σ1^{s}.22**/126**, mb4.5**/40**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.23**	**308**		**Pn**	**15 06 38.3**	**+3.9**
NIUE	**Niue**	**6.94**	**69**	Pn	**Pn**	**15 06 45.1**	**+1.5**
NIUE	**Niue**	**6.94**	**69**	P	**Pn**	**15 06 45.0**	**+1.5**
NIUE				S	**Sn**	**15 08 00.6**	**-1.9**
RAO	**Raoul Island**	**7.63**	**187**	Pn	**Pn**	**15 06 52.0**	**-0.3**
GLKZ	**Green Lake**	**7.64**	**187**	P	**Pn**	**15 06 53.5**	**+1.0**
AFI	**Afiamalu**	**9.07**	**33**	Pn	**Pn**	**15 07 10.2**	**-1.2**
FUNA	**Funafuti**	**13.62**	**343**		**P**	**15 08 12.1**	**+0.4**
MARNC	**Mare, Loyalty**	**14.11**	**268**		**Pn**	**15 08 16.9**	**+1.5**
PINNC	**Pines Island,**	**14.63**	**263**	P	**P**	**15 08 23.9**	**+1.1**
ONTNC	**Ouen Toro**	**15.55**	**265**		**Pn**	**15 08 34.5**	**+1.5**
ONTNC				IAmb	IAmb	15 09 10.9	
	comp=Z,20nm,1.0s						
DZM	**Mont Dzumac**	**15.56**	**265**	P	**P**	**15 08 37.5**	**+4.2**
	comp=Z,2.9nm,0.6s,baz=80,slow=19,SNR=5.2						
DZM	**Mont Dzumac**	**15.56**	**265**	P	**Pn**	**15 08 33.9**	**+0.7**
SANVU	**Saraoutou**	**16.37**	**289**	P	**P**	**15 08 42.3**	**+0.2**
SANVU				IAmb	IAmb	15 08 52.9	
	comp=Z,46nm,1.4s						
HAZ	**Te Kaha**	**16.71**	**195**	P	**P**	**15 08 45.1**	**-0.5**
MWZ	**Matawai**	**17.32**	**195**	P	**P**	**15 08 51.8**	**-0.7**
TOZ	**Tahuroa Road**	**17.34**	**201**	Pn	**P**	**15 08 55.0**	**+2.4**
TOZ				IAmb	IAmb	15 09 33.6	
	comp=Z,28nm,1.4s						
URZ	**Urewera**	**17.36**	**196**	P	**P**	**15 08 52.4**	**-0.4**
	comp=Z,5.0nm,0.3s,baz=239,slow=3.9,SNR=16						
URZ				S	S	15 11 51.3	-11
	comp=Z,3.4nm,0.3s,baz=311,slow=20,SNR=10						
URZ	**Urewera**	**17.36**	**196**	P	**P**	**15 08 51.9**	**-0.9**
BKZ	**Black Stump Fm**	**18.37**	**197**	P	**P**	**15 09 02.6**	**-1.3**
BKZ				IAmb	IAmb	15 09 39.0	
	comp=Z,25nm,1.4s						
PXZ	**Pawanui**	**19.09**	**195**	P	**P**	**15 09 09.7**	**-1.8**
DVHZ	**Dannevirke**	**19.52**	**196**	P	**P**	**15 09 15.1**	**-1.1**
BFZ	**Birch Farm**	**19.86**	**196**	P	**P**	**15 09 19.1**	**-0.7**
MRZ	**Mangatainoka R**	**20.02**	**197**	P	**P**	**15 09 19.9**	**-1.6**
OGWZ	**Otaki Gorge**	**20.27**	**198**	P	**P**	**15 09 22.3**	**-2.0**
CAW	**Cannon Point**	**20.57**	**198**	P	**P**	**15 09 26.8**	**-0.6**
MSWZ	**Moikau Station**	**20.81**	**197**	P	**P**	**15 09 28.1**	**-1.8**
TCW	**Tory Channel**	**20.90**	**199**	P	**P**	**15 09 31.0**	**+0.1**
TCW	**Tory Channel**	**20.90**	**199**	P	**P**	**15 09 30.6**	**-0.2**
BHW	**Baring Head**	**20.91**	**198**	P	**P**	**15 09 30.7**	**-0.3**
NNZ	**Nelson**	**21.19**	**201**	P	**P**	**15 09 33.7**	**-0.2**
TUWZ	**Tuamarina**	**21.20**	**200**	P	**P**	**15 09 32.1**	**-1.9**
CMWZ	**Cape Campbell**	**21.41**	**199**	P	**P**	**15 09 32.7**	**-3.5**
THZ	**Tophouse**	**21.84**	**201**	P	**P**	**15 09 40.2**	**-0.4**
THZ	**Tophouse**	**21.84**	**201**	P	**P**	**15 09 40.1**	**-0.6**
KHZ	**Kahutara**	**22.23**	**199**	P	**P**	**15 09 43.6**	**-0.6**
GVZ	**Greta Valley S**	**22.88**	**199**	P	**P**	**15 09 50.1**	**-0.1**
LTZ	**Lake Taylor**	**22.96**	**201**	P	**P**	**15 09 51.2**	**+0.2**
OXZ	**Oxford**	**23.52**	**201**	P	**P**	**15 09 56.4**	**+0.4**
OXZ				IAmb	IAmb	15 10 30.3	
	comp=Z,24nm,1.2s						
OXZ	**Oxford**	**23.52**	**201**	P	**P**	**15 09 57.7**	**+1.7**
MQZ	**McQueen's Vall**	**23.67**	**199**	P	**P**	**15 09 57.3**	**+0.1**
WVZ	**Waitaha Valley**	**23.75**	**203**	P	**P**	**15 09 57.6**	**-0.4**
RPZ	**Rata Peaks**	**24.20**	**202**	P	**P**	**15 10 03.8**	**+1.6**
FOZ	**Fox Glacier**	**24.49**	**204**	P	**P**	**15 10 04.3**	**-0.4**
JCZ	**Jackson Bay**	**25.34**	**205**	P	**P**	**15 10 12.1**	**-0.5**
WHZ	**Wether Hill Ro**	**27.20**	**204**	P	**P**	**15 10 28.6**	**-0.5**
EIDS	**Eidsvold**	**29.64**	**257**	P	**P**	**15 10 50.0**	**-1.0**
CAN	**Canberra**	**32.82**	**238**	P	**P**	**15 11 18.9**	**+0.1**
CAN				IAmb	IAmb	15 12 02.5	
	comp=Z,32nm,1.4s						
CTAO	**Charters Tower**	**34.50**	**266**	P	**P**	**15 11 33.1**	**-0.4**
CTAO				IAmb	IAmb	15 11 53.0	
	comp=Z,15nm,1.4s						
PMG	**Port Moresby**	**36.70**	**284**	P	**P**	**15 11 51.3**	**-0.8**
PMG				IAmb	IAmb	15 11 53.4	
	comp=Z,7.2nm,0.8s						
PATS	**Pohnpei**	**37.39**	**317**	P	**P**	**15 11 57.2**	**-0.7**
STKA	**Stephens Creek**	**38.31**	**246**	P	**P**	**15 12 02.7**	**-2.8**
	comp=Z,0.8nm,0.5s,baz=117,slow=16,SNR=1.8						
	comp=Z,0.8nm,0.5s						
COEN	**Coen**	**38.78**	**275**	P	**P**	**15 12 08.8**	**-0.7**
COEN				IAmb	IAmb	15 12 36.1	
	comp=Z,19nm,1.4s						
JOHN	**Johnston Islan**	**38.82**	**11**	P	**P**	**15 12 11.2**	**+1.5**
INKA	**Innaminka**	**38.90**	**252**	P	**P**	**15 12 11.1**	**+0.7**
BBOO	**Buckleboo**	**43.05**	**245**	P	**P**	**15 12 43.1**	**-1.2**
AS31	**Alice Springs**	**45.35**	**258**	P	**P**	**15 13 01.5**	**-1.1**
ASAR	**Alice Springs**	**45.35**	**258**	P	**P**	**15 13 02.0**	**-0.6**
	comp=Z,3.9nm,0.8s,baz=91,slow=8.3,SNR=34						
	comp=Z,3.9nm,0.8s						
ASAR	**Alice Springs**	**45.35**	**258**	P	**P**	**15 13 01.2**	**-1.5**
WR8	**Warramunga Arr**	**45.41**	**263**	P	**P**	**15 13 01.8**	**-1.3**
WB0	**Warramunga Arr**	**45.54**	**263**	P	**P**	**15 13 03.0**	**-1.1**
WRA	**Warramunga Arr**	**45.56**	**263**	P	**P**	**15 13 03.1**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=96,slow=8.4,SNR=18						
	comp=Z,0.9nm,0.8s						
FORT	**Forrest**	**49.87**	**247**	P	**P**	**15 13 35.7**	**-1.5**
KNRA	**Kununurra**	**51.70**	**267**	P	**P**	**15 13 50.0**	**-1.1**
KNRA				IAmb	IAmb	15 14 14.8	
	comp=Z,16nm,1.4s						
FITZ	**Fitzroy Crossi**	**53.99**	**263**	P	**P**	**15 14 06.7**	**-1.1**
	comp=Z,3.4nm,0.9s,baz=81,slow=21,SNR=4.8						
	comp=Z,3.4nm,0.9s						
FITZ	**Fitzroy Crossi**	**53.99**	**263**	P	**P**	**15 14 06.8**	**-1.0**
VNDA	**Vanda**	**56.86**	**185**	P	**P**	**15 14 29.1**	**+1.7**
NWAO	**Narrogin (SRO)**	**58.85**	**244**	P	**P**	**15 14 40.8**	**-1.2**
NWAO				IAmb	IAmb	15 15 20.1	
	comp=Z,23nm,1.4s						
CASY	**Casey**	**63.40**	**206**	P	**P**	**15 15 12.6**	**+0.7**
CASY				IAmb	IAmb	15 15 55.9	
	comp=Z,15nm,1.1s						
QSPA	**South Pole Qui**	**68.42**	**180**	P	**P**	**15 15 45.4**	**+1.4**
	comp=Z,3.1nm,0.7s,baz=30,slow=0.9,SNR=19						
	comp=Z,3.1nm,0.7s						
QSPA	**South Pole Qui**	**68.42**	**180**	P	**P**	**15 15 45.2**	**+1.1**
INU	**Inuyama**	**71.63**	**322**	P	**P**	**15 16 02.3**	**-1.5**
INU				IAmb	IAmb	15 16 09.8	
	comp=Z,17nm,1.2s						
MJAR	**Matsushiro Arr**	**71.80**	**323**	P	**P**	**15 16 03.5**	**-1.3**
	comp=Z,1.4nm,0.8s,baz=156,slow=7.0,SNR=4.1						
	comp=Z,1.4nm,0.8s						
MJAR	**Matsushiro Arr**	**71.80**	**323**	P	**P**	**15 16 03.0**	**-1.8**
MAJO	**Matsushiro**	**71.80**	**323**	P	**P**	**15 16 03.0**	**-1.9**
MAJO				IAmb	IAmb	15 16 03.5	
	comp=Z,10nm,1.3s						
YULB	**Yu-li**	**75.07**	**303**	P	**P**	**15 16 22.1**	**-2.1**
YULB				IAmb	IAmb	15 16 34.2	
	comp=Z,20nm,1.4s						
OHAK	**Old Harbor**	**81.02**	**13**	P	**P**	**15 16 56.2**	**+0.1**
NVAR	**Mina Array Bea**	**81.11**	**43**	P	**P**	**15 16 58.9**	**+1.6**
	comp=Z,1.3nm,0.9s,baz=201,slow=7.8,SNR=3.9						
	comp=Z,1.3nm,0.9s						
NVAR	**Mina Array Bea**	**81.11**	**43**	P	**P**	**15 16 57.9**	**+0.6**
ACHA	**Angle Creek He**	**81.55**	**11**	P	**P**	**15 16 59.1**	**+0.2**
N14K	**Kuskokwak Cree**	**82.22**	**8**	P	**P**	**15 17 03.3**	**+1.0**
O16K	**Kokwok River B**	**82.40**	**9**	P	**P**	**15 17 02.7**	**-0.6**
N15K	**Kwethluk River**	**82.67**	**8**	P	**P**	**15 17 05.4**	**+0.8**
N15K				IAmb	IAmb	15 17 43.7	
	comp=Z,24nm,1.4s						
N17K	**Nushagak Hills**	**83.43**	**10**	P	**P**	**15 17 08.8**	**+0.3**
M16K	**Timber Creek**	**83.64**	**9**	P	**P**	**15 17 10.6**	**+1.0**
M16K				IAmb	IAmb	15 17 12.0	
	comp=Z,20nm,1.2s						
N18K	**Kilae Creek**	**83.78**	**10**	P	**P**	**15 17 10.7**	**+0.3**
N18K				IAmb	IAmb	15 17 14.7	
	comp=Z,16nm,1.3s						
BRLK	**Bradley Lake**	**83.86**	**13**	P	**P**	**15 17 11.0**	**+0.2**
N19K	**Bonanza Creek**	**84.15**	**11**	P	**P**	**15 17 12.3**	**0.0**
N19K				IAmb	IAmb	15 17 17.8	
	comp=Z,15nm,1.3s						
L16K	**Owhat River**	**84.24**	**8**	P	**P**	**15 17 13.7**	**+1.1**
K15K	**Wolf Creek Mou**	**84.55**	**7**	P	**P**	**15 17 15.0**	**+0.9**

K15K				IAmb	IAmb	15 17 16.2	
	comp=Z,7.3nm,1.0s						
SLKM	Skilak Lake	84.68	13	P	P	15 17 15.1	+0.2
L18K	Granite Mounta	85.12	9	P	P	15 17 18.1	+1.1
L18K				IAmb	IAmb	15 17 23.0	
	comp=Z,12nm,1.3s						
STLK	Strandline Lak	85.27	12	P	P	15 17 17.2	-0.7
STLK				IAmb	IAmb	15 17 34.2	
	comp=Z,18nm,1.4s						
L19K	White Mountain	85.37	10	P	P	15 17 18.7	+0.4
SUA	Susitna One	85.44	12	P	P	15 17 19.1	+0.3
SKT	Skwentna	85.77	12	P	P	15 17 19.7	-0.6
SKT				IAmb	IAmb	15 17 30.4	
	comp=Z,16nm,1.4s						
PMR	Palmer	85.89	13	P	P	15 17 21.2	+0.4
PMR				IAmb	IAmb	15 17 22.6	
	comp=Z,13nm,1.4s						
GHO	Glory Hole Cre	86.09	13	P	P	15 17 22.4	+0.5
BMRM	Bremner River	86.35	15	P	P	15 17 23.7	+0.6
SCM	Sheep Creek Mo	86.49	14	P	P	15 17 24.4	+0.6
N25K	Chitina, Valde	86.91	15	P	P	15 17 26.5	+0.6
GLB	Gilahina Butte	86.96	15	P	P	15 17 26.5	+0.4
TRF	Thorofare Moun	87.35	12	P	P	15 17 27.5	-0.6
TRF				IAmb	IAmb	15 17 28.8	
	comp=Z,11nm,0.8s						
RND	Reindeer	87.58	12	P	P	15 17 29.4	+0.4
RND				IAmb	IAmb	15 17 30.5	
	comp=Z,13nm,1.0s						
M27K	Edge Creek, AK	88.22	15	P	P	15 17 33.0	+0.8
N30M	Aishikik Lake	88.75	18	P	P	15 17 35.3	+0.7
N30M				IAmb	IAmb	15 18 05.8	
	comp=Z,17nm,1.5s						
CCB	Clear Creek Bu	88.91	12	P	P	15 17 34.9	-0.2
CCB				IAmb	IAmb	15 17 35.5	
	comp=Z,6.1nm,0.6s						
IMAR	Indian Mountai	89.11	9	P	P	15 17 36.5	+0.5
IL31		89.20	12	P	P	15 17 36.5	0.0
IL31				IAmb	IAmb	15 17 36.9	
	comp=Z,9.7nm,1.4s						
ILAR	Eielson Array	89.20	12	P	P	15 17 36.4	-0.2
	comp=Z,1.5nm,0.6s,baz=226,slow=5.9,SNR=34						
	comp=Z,1.5nm,0.6s						
G21K	Allakaket	89.64	9	P	P	15 17 38.9	+0.3
G21K				IAmb	IAmb	15 17 57.2	
	comp=Z,6.6nm,1.3s						
M30M	Minto, Yukon	89.73	17	P	P	15 17 40.0	+0.9
E19K	Redstone River	90.04	7	P	P	15 17 41.0	+0.6
E19K				IAmb	IAmb	15 17 41.5	
	comp=Z,5.8nm,0.9s						
DAWY	Dawson	90.27	15	P	P	15 17 42.4	+0.8
DAWY				IAmb	IAmb	15 17 42.9	
	comp=Z,5.3nm,0.7s						
D19K	Kuna River	90.93	7	P	P	15 17 44.8	+0.3
D19K				IAmb	IAmb	15 17 45.1	
	comp=Z,9.2nm,1.3s						
C19K	Lookout Ridge	91.36	6	P	P	15 17 46.7	+0.2
C19K				IAmb	IAmb	15 17 47.3	
	comp=Z,14nm,1.5s						
E22K	Anaktuvuk Pass	91.40	9	P	P	15 17 47.0	+0.2
CMAR	Chiang Mai Arr	91.55	289	P	P	15 17 49.1	+0.6
	comp=Z,0.3nm,0.4s,baz=97,slow=3.4,SNR=4.6						
	comp=Z,0.3nm,0.4s						
CMAR	Chiang Mai Arr	91.55	289	P	P	15 17 46.7	-1.8
BMAR	Burnt Mountain	91.99	12	P	P	15 17 50.5	+1.0
G30M	tAoh Zraii Nji	93.41	15	P	P	15 17 56.7	+0.6
G30M				IAmb	IAmb	15 17 57.5	
	comp=Z,3.6nm,0.9s						
BVAR	Borovoye Array	120.68	320	PKP	PKPdf	15 23 30.2	-1.6
	comp=Z,0.5nm,0.6s,baz=106,slow=3.1,SNR=3.2						
ARCES	ARCESS Array B	130.25	350	PKP	PKPdf	15 23 49.0	-0.7
	comp=Z,2.1nm,0.9s,baz=343,slow=3.8,SNR=4.9						
AKASG	Malin Array Be	144.56	331	PKP	PKPab	15 24 13.9	-1.6
	comp=Z,0.8nm,0.4s,baz=43,slow=4.0,SNR=5.0						
BRTR	Keskin Array B	148.44	312	PKPbc	PKPdf	15 24 26.1	+2.6
	comp=Z,0.5nm,0.5s,baz=149,slow=3.3,SNR=2.7						
TORD	Torodi Ar. Bea	171.41	170	PKPab	PKPab	15 26 10.1	-0.6
	comp=Z,2.2nm,0.4s,baz=183,slow=2.5,SNR=2.7						

IDC 16 15:07:32.6±5.3**,16°.05S**×**173°.72W,h0km,mb3.7**/4**,**
mbtmp3.7/4**,Error ellipse: s-maj=257.3km**
s-min=30.6km az=138.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.84	42	S	Sn	15 08 43.8	-10
STKA	Stephens Creek	43.45	240	P	P	15 15 37.0	-0.7
	1.0nm,0.6s,baz=103,slow=14,SNR=3.1						
	1.0nm,0.6s						
WRA	Warramunga Arr	49.40	257	P	P	15 16 24.7	+0.1
	0.4nm,0.9s,baz=96,slow=7.5,SNR=1.8						
	0.4nm,0.9s						
ASAR	Alice Springs	49.62	252	P	P	15 16 26.1	-0.2
	1.3nm,0.7s,baz=89,slow=8.5,SNR=16						
	1.3nm,0.7s						
ILAR	Eielson Array	83.14	11	P	P	15 19 59.2	-0.8
	0.6nm,0.8s,baz=229,slow=6.0,SNR=6.4						
	0.6nm,0.8s						
BRTR	Keskin Array B	146.45	320	PKPbc	PKPbc	15 27 15.7	-0.6
	1.1nm,0.9s,baz=141,slow=0.9,SNR=5.1						
GERES	GERESS Array B	146.73	351	PKPbc	PKPbc	15 27 17.1	+0.4
	0.3nm,0.4s,baz=32,slow=5.3,SNR=4.2						

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*TRN **16** 15:17:46.8,10°.83N×62°.29W,h59km,MD2.7,North of the Paria peninsula.*
*FUNV **16** 15:17:51.6,10°.79N×62°.64W,h36km,MW3.0*
ISC 16 15:17:44.7±1.5**,10°.77N**±0°.06×**62°.46W**±0°.03**,h34km**±3km**,**
n15,σ1s.**46**/26**,Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMDM	Guralp CMG5TDE	0.89	95	*e*P	Pb	15 18 01.6	-0.2
DMDM				*e*S	Sn	15 18 12.3	-0.3
PSMG	Mucurapo Girls	0.92	96	*e*P	Pb	15 18 02.0	-0.1
PSMG				*e*S	Sn	15 18 13.2	+0.1
TRN	Trinidad (W)	1.04	97	*e*P	Pb	15 18 04.1	-0.3
TRN				*e*S	Sn	15 18 15.6	-0.7
GRFF	Grenada Fort F	1.46	29	*e*P	Pn	15 18 08.9	+0.3
GRFF				*e*S	Sn	15 18 25.6	-0.9
GRGR	Grenville	1.57	30	*e*P	Pn	15 18 10.9	+0.8
GRGR				*e*S	Sn	15 18 28.8	-0.5
GRW	Mount Saint Ca	1.59	29	*e*P	Pn	15 18 12.0	+1.5
GRW				*e*S	Sn	15 18 29.7	-0.2
GRHS	Sauteurs	1.65	29	*e*P	Pn	15 18 11.4	+0.1
GRHS				*e*S	Sn	15 18 29.7	-1.7
GRSS	Sisters	1.73	29	*e*P	Pn	15 18 13.1	+0.7
GRSS				*e*S	Sn	15 18 33.2	-0.1
GCMP	Grenada, Carri	1.98	31	*e*P	Pn	15 18 16.3	+0.4
PCRV	Puerto La Cruz	2.22	255	*e*P	Pb	15 18 23.3	-1.0
PCRV				*e*S	Sn	15 18 44.8	-0.7
PCRV	Puerto La Cruz	2.22	255	*e*P	Pb	15 18 24.0	-0.3
PCRV				*e*S	Sb	15 18 51.4	-0.1
FUNV	FUNVISIS	4.29	266	*e*P	Pn	15 18 50.7	+3.0
BENV	Beln	5.12	261	*e*P	Pn	15 19 02.1	+3.0
CACV	CAICARA DEL OR	5.14	232	*e*P	Pn	15 18 58.4	-0.8
CACV				*e*S	Sn	15 19 46.4	-11
TURV	Turiamo	5.30	267	*e*P	Pn	15 19 04.1	+2.6
TURV				*e*S	Sn	15 19 58.0	-3.4

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*IDC **16** 15:28:27.6±1.0,3°.56S×141°.80E,h0km,mb3.7/8,*
mbtmp3.7/9,ML3.4/1,Error ellipse: s-maj=27.3km
s-min=14.5km az=61.0
ISC 16 15:28:32.5±1.2**,3°.6S**±0°.1×**141°.8E**±0°.2**,h35km,n11,**
σ**0s.97**/10**,mb3.8**/8**,New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	1.55	314	Pg	Pn	15 28 56.7	-0.9
	44nm,0.3s,baz=159,slow=6.8,SNR=107						
JAY				Lg	Lg	15 29 14.0	
	72nm,0.3s,baz=214,slow=21,SNR=19						
PMG	Port Moresby	7.83	138	Pn	Pn	15 30 30.2	+6.2
	1.1nm,0.3s,baz=149,slow=5.3,SNR=9.7						
WRA	Warramunga Arr	17.80	204	P	P	15 32 37.9	-0.2
	0.1nm,0.3s,baz=17,slow=12,SNR=2.9						
	0.5nm,0.6s						
ASAR	Alice Springs	21.36	200	P	P	15 33 16.0	-1.0
	0.5nm,0.9s,baz=27,slow=12,SNR=7.6						
	0.5nm,0.9s						
FITZ	Fitzroy Crossi	21.41	227	P	P	15 33 19.1	+1.6
	1.1nm,0.5s,baz=47,slow=11,SNR=5.8						
	1.1nm,0.5s						
MKAR	Makanchi Array	72.40	322	P	P	15 39 56.1	+0.9
	1.3nm,0.7s,baz=112,slow=7.3,SNR=13						
	1.3nm,0.7s						
ZALV	Zalesovo Beam	74.28	329	P	P	15 40 06.3	+0.3
	0.6nm,0.5s,baz=127,slow=9.2,SNR=4.0						
	0.6nm,0.5s						
KURBB	Kurchatov Arra	76.25	324	P	P	15 40 18.0	+0.6
	0.3nm,0.3s,baz=105,slow=5.4,SNR=4.1						
	0.3nm,0.3s						
BVAR	Borovoye Array	81.82	325	P	P	15 40 48.6	+0.6
	1.6nm,0.6s,baz=106,slow=7.1,SNR=12						
	1.6nm,0.6s						
ILAR	Eielson Array	85.37	24	P	P	15 41 06.1	+0.2
	0.2nm,0.7s,baz=283,slow=5.8,SNR=2.9						
	0.2nm,0.7s						
QSPA	South Pole Qui	86.35	180	P	P	15 41 10.2	-0.6
	0.7nm,1.0s,baz=273,slow=3.8,SNR=1.5						
	0.7nm,1.0s						

IDC 16 15:57:52.6±7.8**,8°.36S**×**128°.81E,h192km**±86km**,mb2.9**/2**,**
mbtmp3.5/5**,Error ellipse: s-maj=63.3km s-min=37.0km**
az=39.0,Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.16	197	P	Pn	16 00 14.7	+0.7
	2.5nm,0.3s,baz=24,slow=8.4,SNR=44						
FITZ				S	S	16 02 08.7	+0.7
	4.9nm,0.6s,baz=106,slow=15,SNR=7.8						
WRA	Warramunga Arr	12.70	156	P	Pn	16 00 44.9	-1.8
	0.6nm,0.4s,baz=328,slow=14,SNR=24						
WRA				S	Sn	16 03 06.5	-1.6
	1.0nm,0.6s,baz=327,slow=22,SNR=6.5						
ASAR	Alice Springs	15.98	163	P	Pn	16 01 28.0	+0.8
	0.5nm,0.5s,baz=328,slow=9.5,SNR=24						
ASAR				S	Sn	16 04 26.9	+0.4
	0.2nm,0.6s,baz=345,slow=25,SNR=5.2						
MKAR	Makanchi Array	68.72	328	P	P	16 08 35.6	0.0
	0.4nm,0.7s,baz=116,slow=7.2,SNR=5.4						
	0.4nm,0.7s						
KURBB	Kurchatov Arra	73.06	329	P	P	16 09 01.5	0.0
	0.1nm,0.3s,baz=141,slow=6.0,SNR=2.4						
	0.1nm,0.3s						

IDC 16 16:05:25.0±3.5**,3°.21S**×**135°.05E,h0km,mb3.4**/2**,**
mbtmp3.4/3**,ML3.2**/1**,Error ellipse: s-maj=163.0km**
s-min=31.0km az=79.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.64	182	Pn	Pn	16 09 21.1	+1.2
	0.1nm,0.3s,baz=1.3,slow=12,SNR=6.1						
	0.6nm,0.7s						
ASAR	Alice Springs	20.36	183	P	P	16 10 02.9	-0.5
	1.0nm,0.6s,baz=5.3,slow=11,SNR=26						
	1.0nm,0.6s						
MKAR	Makanchi Array	67.99	324	P	P	16 16 26.1	0.0
	0.3nm,0.8s,baz=120,slow=7.4,SNR=4.1						
	0.3nm,0.8s						

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*MOS **16** 16:21:50.9±1.1,6°.50N×125°.17E,h10km,mb5.2/58, MS4.4/9,Error ellipse: s-maj=10.9km s-min=4.8km az=114.0*
*IDC **16** 16:21:50.9±0.4,6°.40N×125°.27E,h0km,mb4.6/24, mbtmp4.6/24,MS4.3/41,Error ellipse: s-maj=14.8km s-min=6.8km az=95.0*
*BJI **16** 16:21:50.1,6°.32N×125°.49E,h14km,mB5.3/38,mb4.9/76, Ms4.7/72,Ms7 4.5/71*
*NEIC **16** 16:21:53.5,6°.55N×125°.31E,h12km*
*NEIC **16** 16:21:53.5,6°.55N×125°.51E,h12km,Moment Tensor Solution. Duration: 1s.7 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.86; M$_{\theta\theta}$3.25; M$_{\phi\phi}$-1.39; M$_{r\theta}$-0.45; M$_{\theta\phi}$-2.18; M$_{\phi r}$0.06; Fault plane solution: M$_0$3.60000×10^{16} NP1: φ$_s$336.12000°,δ76.28000°,λ-7.96000°. NP2:φ$_s$68.02000°, δ82.27000°,λ-166.15000°. Principal axes: T 4.1485, Plg4.0000°, Azm202.0000°; N -1.8635, Plg74.0000°, Azm97.0000°; P -2.2849, Plg15.0000°, Azm293.0000°;*
*NEIC **16** 16:21:53.6±1.3,6°.52N±0°.07×125°.31E±0°.05,h10km±1km, mb5.2/133,Mww5.0/31 Error ellipse: s-maj=14.4km s-min=3.2km az=31.0*
*DJA **16** 16:21:56.1±0.3,7°N±3°×12°5E±°,h10km,M4.9/55, mB5.4/47,mb5.1/55,MLv5.6/7,Mw(mB)4.9/47, MwMwp4.8/12,Mwp5.1/12*
*GCMT **16** 16:21:56.5±0.2,6°.59N±0°.01×125°.37E±0°.01,h12km, MW5.0/102,Moment Tensor Solution. s46,c57; s102,c163; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.63±.13; M$_{\theta\theta}$4.02±.09; M$_{\phi\phi}$-2.40±.13; M$_{r\theta}$-2.08±.30; M$_{\theta\phi}$-2.57±.09; M$_{\phi r}$1.53±.32; Best double couple: M$_0$4.73500×10^{16} NP1:φ$_s$243.00000°,δ56.00000°, λ-172.00000°. NP2:φ$_s$149.00000°,δ84.00000°, λ-34.00000°. Principal axes: T 5.7550, Plg19.0000°, Azm201.0000°; N -2.0500, Plg55.0000°, Azm320.0000°; P -3.7150, Plg28.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 16 16:21:54.2±0.4**,6°.58N**±0°.03×**125°.37E**±0°.04**,h13km**±2km**,**
h14km:pP-P,n464,σ**2s.17**/433**,mb5.1**/169**,MS4.4**/71**,**
9C-25D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.53	24	Pg	Pb	16 22 05.3	0.0
	3µm,0.3s,baz=208,slow=1.6,SNR=307						
DAV				Lg	Lg	16 22 15.2	
	6µm,0.3s,baz=168,slow=20,SNR=14						
DAV				LR	LR	16 22 34.9	
	comp=Z,56µm,21.3s,baz=120,slow=60						
DAV	Davao City (W)	0.53	24		Pg	16 22 04.4	-0.2
DAV	Davao City (W)	0.53	24	P	Pb	16 22 05.0	-0.4
DAV	Davao City (W)	0.53	24	P	Pb	16 22 04.9	-0.4
DAV	Davao City (W)	0.53	24	P	Pg	16 22 04.0	-0.6
SGSI	Sangihe	2.88	177	P	Pn	16 22 40.8	+1.0
SGSI				S	Sn	16 23 16.3	+2.0
TNTI	Ternate	6.11	161		Pn	16 23 24.1	-0.1
TNTI	Ternate	6.11	161	P	Pn	16 23 26.5	+2.3
TNTI	Ternate	6.11	161	P	Pn	16 23 25.0	+0.8
	2µm190nm,1.0s						
GTOI	Gorontalo	6.36	202	P	Pn	16 23 26.3	-1.3
MRSI	Marisa	6.96	210	P	Pn	16 23 35.0	-0.9
TOLI2	Tolitoli	7.10	220	Pn	Pn	16 23 34.5	-3.4
LUWI	Luwuk	8.00	199		Pn	16 23 49.6	-0.6
LUWI	Luwuk	8.00	199	P	Pn	16 23 54.2	+4.0
LUWI	Luwuk	8.00	199	S	Sn	16 25 25.2	+4.5
LUWI	Luwuk	8.00	199	P	Pn	16 23 53.3	+3.1
MPSI	Mapaga	8.26	222	P	Pn	16 23 56.3	+2.5
	3µm51nm,0.8s						
APSI	Ampana	8.32	207	P	Pn	16 23 57.6	+3.1
SANI	Sanana	8.60	176	P	Pn	16 23 57.5	-0.9
SANI	Sanana	8.60	176	P	Pn	16 23 57.4	-0.9
	2µm2µm137nm,1.0s						
KKM	Kota Kinabalu	9.11	267	Pn	Pn	16 24 04.4	-1.1
I39PW	PALAU INFRASON	9.16	84	I	I	17 18 40.0	
	baz=267,slow=309,SNR=2.9						
PCI	Palu	9.26	217	P	Pn	16 24 09.2	+1.7
	2µm108nm,1.0s						
SWI	Sorong	9.45	141	P	Pn	16 24 11.5	+1.4
	61nm,1.2s						
NLAI	Namlea	9.91	170	P	Pn	16 24 18.1	+1.8
KRAI	Karang Ratu	10.29	163	P	Pn	16 24 23.6	+2.0
	110nm,0.9s						
MSAI	Masohi	10.48	160	P	Pn	16 24 26.7	+2.4
	92nm,1.0s						
AAI	Ambon	10.58	164	P	Pn	16 24 28.3	+2.7
	2µm105nm,1.1s						
TTSI	Tana Toraja	11.05	210	P	Pn	16 24 34.7	+2.7
	3µm3µm155nm,1.0s						
MMSI	Mamuju	11.24	215	P	Pn	16 24 36.2	+1.5
	811nm61nm,1.2s						
KKSI	Kolaka, Sulawe	11.31	199	P	Pn	16 24 37.6	+2.1
	2µm67nm,0.8s						
FAKI	Fak Fak	11.67	144		Pn	16 24 39.5	-1.0
FAKI	Fak Fak	11.67	144	P	Pn	16 24 42.9	+2.3
FAKI	Fak Fak	11.67	144	S	Sn	16 26 51.8	+0.9
FAKI	Fak Fak	11.67	144	P	Pn	16 24 42.6	+2.0
	1µm58nm,1.1s						
SPSI	Sidrap Palu	11.87	208	P	Pn	16 24 46.5	+3.2
	821nm35nm,0.8s						
BNDI	Bandanaira	11.93	158	P	Pn	16 24 46.1	+2.1
BNDI	Bandanaira	11.93	158	P	Pn	16 24 46.9	+2.9
	2µm185nm,1.4s						
BNSI	Bone	12.11	206	P	Pn	16 24 51.1	+4.6
	2µm2µm134nm,1.1s						
KAPI	Kappang	12.81	206	Pn	Pn	16 24 59.4	+3.3
	baz=30,slow=12						
KAPI				LR	LR	16 30 14.6	
	comp=Z,2µm,20.0s,baz=44,slow=40						
KAPI	Kappang	12.81	206	P	Pn	16 25 00.6	+4.5
KAPI	Kappang	12.81	206	P	Pn	16 25 00.4	+4.3
	46nm,1.2s						
BKSI	Bulukumba	12.93	204	P	Pn	16 25 04.6	+6.8
SBUM	Sibu	13.73	253		Pn	16 25 07.5	-1.2
SBUM	Sibu	13.73	253	P	P	16 25 14.1	-3.2
SBUM	Sibu	13.73	253	P	Pn	16 25 09.3	+0.6
PKKI	Palangkaraya	14.36	233	P	P	16 25 22.1	-2.2
BBKI	Banjar Baru	14.49	227	P	P	16 25 24.4	-1.4
	173nm,1.2s						
MMRI	Maumere	15.44	192		P	16 25 34.5	-1.8
MMRI	Maumere	15.44	192	P	P	16 25 34.1	-2.2
MMRI	Maumere	15.44	192	P	P	16 25 34.7	-1.6
	2µm106nm,1.6s						
SAUI	Saumlaki	15.63	158	P	Pn	16 25 35.1	+0.8
SAUI	Saumlaki	15.63	158	P	P	16 25 36.6	-1.9
SAUI	Saumlaki	15.63	158	P	P	16 25 36.9	-1.6
	3µm172nm,0.8s						
EDFI	Ende, Flores	15.66	194	P	Pn	16 25 36.4	+1.5
LBFI	Labuhan Bajo,	15.93	200	P	P	16 25 41.3	-0.4
	155nm,1.8s						
SOEI	Soe	16.27	184		Pn	16 25 43.1	+0.5
SOEI	Soe	16.27	184	P	Pn	16 25 43.3	+0.7
SOEI	Soe	16.27	184	P	P	16 25 44.4	-1.2
	2µm3µm176nm,1.2s						
DBNI	Kabupaten Domp	16.55	205	P	P	16 25 48.8	+0.1
	1µm57nm,1.4s						
BATI	Baumata	16.76	186	Pn	Pn	16 25 49.5	+0.6
	6.3nm,0.3s,baz=324,slow=1.6,SNR=19						
BATI				LR	LR	16 32 56.5	
	comp=Z,1µm,19.8s,baz=346,slow=40						
BATI	Baumata	16.76	186	P	Pn	16 25 49.5	+0.6
	2µm119nm,0.9s						
WSI	Waingapu	16.91	197	P	P	16 25 55.9	+3.2
	3µm171nm,2.0s						
PLAI	Plampang	17.07	206	P	P	16 25 54.7	+0.2
PLAI	Plampang	17.07	206	P	P	16 25 56.6	+2.1
	2µm2µm113nm,0.9s						
YULB	Yu-li	17.17	347	P	P	16 25 57.0	+1.5
WBSI	Waikabubak, Su	17.18	200	P	P	16 25 59.5	+3.8
	2µm114nm,1.7s						
TPUB	Ta-pu	17.24	345		Pn	16 25 54.9	+0.2
TPUB	Ta-pu	17.24	345	P	P	16 25 55.7	-0.5
GENI	Genyem	17.36	121	P	Pn	16 25 56.6	+0.3
GENI	Genyem	17.36	121	P	P	16 26 02.9	+5.2
TWSI	Taliwang, Sumb	17.41	209	P	P	16 26 00.0	+1.8
	3µm157nm,1.1s						
DLV	Lat	17.49	289	P	P	16 26 01.7	+2.5
KLNI	Mataram	17.54	212	P	P	16 26 01.5	+1.9
	2µm131nm,1.1s						
KMMI	Kalianget	17.68	220	P	P	16 26 06.1	+4.9
	4µm93nm,1.0s						
KHKI	Kahang-Kahang	17.75	213	P	P	16 26 05.1	+3.2
	1µm74nm,1.3s						
JAY	Jayapura	17.78	120	LR	LR	16 32 54.5	
	comp=Z,378nm,19.6s,baz=298,slow=37						
ABJI	Asem Bagus	18.09	218	P	Pn	16 26 05.0	-0.3
RTBI	Rangdo, Negare	18.20	215	P	P	16 26 11.2	+4.2
	2µm192nm,1.1s						
DNP	Denpasar	18.23	214	P	P	16 26 17.7	+10
BLJI	Banyuglugur	18.45	220	P	Pn	16 26 14.5	+4.8
	1µm45nm,1.0s						
JAGI	Jajag, Banyuwa	18.67	217	P	P	16 26 11.3	-0.8
JAGI				IAmb	IAmb	16 26 20.1	
	comp=Z,111nm,1.0s						
JAGI	Jajag, Banyuwa	18.67	217	P	Pn	16 26 14.5	+2.0
JAGI	Jajag, Banyuwa	18.67	217	P	Pn	16 26 15.6	+3.1
	comp=Z,2µmcomp=Z,118nm,1.2s						
GMJI	Gumukmas	18.95	219	P	Pn	16 26 19.9	+4.1
TBJI	Tambak Boyo	18.95	226	P	Pn	16 26 24.7	+8.9
QZH	Quanzhou	19.38	341	P	Pn	16 26 21.9	+1.0
QZH				S	S	16 30 02.5	+3.7
QZH				pmax	pmax		
	comp=Z,1µm,4.6s						
QZH				LR	LR		
	comp=Z,740nm,20.3s						
QZH				LR	LR		
	comp=Z,2µm,25.7s						
QZH				LR	LR		
	comp=Z,1µm,17.7s						
QIZ	Qiongzhong	19.53	311	P	P	16 26 20.6	-0.9
QIZ				S	S	16 30 03.3	+1.4
QIZ				LR	LR		
	comp=Z,1µm,16.1s						
QIZ				LR	LR		
	comp=Z,820nm,19.6s						
QIZ				LR	LR		
	comp=Z,2µm,16.4s						
NGJI	Ngawi	19.61	225	P	Pn	16 26 29.2	+5.5
SJI	Sawahan	19.65	224	P	Pn	16 26 26.4	+2.0
DRS	Darwin Rock St	19.67	164	P	Pn	16 26 23.5	-1.0
SNJI	Sawahan-Nganju	19.69	224	P	Pn	16 26 27.7	+2.8
	comp=Z,1µmcomp=Z,110nm,1.3s						
SMRI	Semarang	20.13	228	P	P	16 26 26.4	-1.7
SMRI	Semarang	20.13	228	P	Pn	16 26 33.0	+3.1
SMRI	Semarang	20.13	228	P	Pn	16 26 34.5	+4.6
MTN	Manton Dam	20.13	163	P	P	16 26 27.0	-1.1
	comp=Z,49nm,1.0s						
MTN	Manton Dam	20.13	163		P	16 26 26.2	-1.9
JOW	Kunigami	20.33	7	P	P	16 26 30.5	+0.3
	comp=Z,40nm,1.0s,baz=245,slow=5.9,SNR=9.7						
JOW				LR	LR	16 33 44.5	
	comp=Z,863nm,21.5s,baz=178,slow=35						
	comp=Z,40nm,1.0s						
JOW	Kunigami	20.33	7	P	P	16 26 29.7	-0.4
JOW	Kunigami	20.33	7	P	Pn	16 26 31.8	-0.4
PCJI	Pacitan	20.39	224	P	Pn	16 26 31.7	-1.3
	comp=Z,1µmcomp=Z,54nm,1.2s						
KDU	Kakadu	20.40	160	P	P	16 26 29.7	-1.3
	comp=Z,45nm,0.8s						
GUMO	Guam	20.41	69	LR	LR	16 33 37.6	
	comp=Z,264nm,21.3s,baz=260,slow=34						
UGM	Wanagama	20.65	226	P	Pn	16 26 51.6	+16
CTJI	Waduk Cacaban	21.05	230	P	P	16 26 41.0	+3.0
	comp=Z,2µmcomp=Z,121nm,1.0s						
UBPT	Khong Chiam	21.34	296	P	P	16 26 46.3	+5.1
KPJI	Karang Pucung	21.45	230	P	P	16 26 45.0	+2.7
	comp=Z,1µmcomp=Z,62nm,0.8s						
DSRI	Dabo	21.90	252	P	P	16 26 56.8	+10
MYKOM	Kota Tinggi	21.98	258	P	P	16 26 53.1	+5.1
MYKOM	Kota Tinggi	21.98	258	P	P	16 26 53.4	+5.4
KNRA	Kununurra	22.37	171	P	P	16 26 49.9	-2.3
KNRA	Kununurra	22.37	171		P	16 26 50.7	-1.5
KNRA				IAmb	IAmb	16 26 58.2	
	comp=Z,92nm,0.8s						
BBJI	Bungbulang	22.52	232	P	P	16 26 54.7	+0.8
BBJI	Bungbulang	22.52	232	P	P	16 26 55.4	+1.5
DBJI	Dramaga	22.70	235	P	P	16 27 00.0	+4.2
	comp=Z,87nm,1.9s						
CNJI	Cibinong	22.83	233	P	P	16 27 00.6	+3.4
	comp=Z,724nmcomp=Z,72nm,1.2s						
SBJI	Serang	22.97	237	P	P	16 27 03.8	+5.2
	comp=Z,239nm,1.5s						
KASI	Kota Agung	24.05	240	P	P	16 27 12.6	+3.3
	comp=Z,667nmcomp=Z,37nm,0.8s						
LWLI	Liwa	24.19	242	P	P	16 27 12.5	+1.8
IPM	Ipoh	24.32	266	P	P	16 27 10.9	-0.9
IPM				IAmb	IAmb	16 27 19.0	
	comp=Z,73nm,1.3s						
IPM	Ipoh	24.32	266	P	P	16 27 12.3	+0.5
CNSH	ChangSha	24.50	333	P	P	16 27 15.8	+2.5
CNSH				pmax	pmax		
	comp=Z,320nm,4.4s						
CNSH				LR	LR		
	comp=Z,800nm,21.6s						
CNSH				LR	LR		
	comp=Z,970nm,18.4s						
CNSH				LR	LR		
	comp=Z,950nm,16.6s						
FITZ	Fitzroy Crossi	24.52	179	P	P	16 27 12.0	-1.5
	comp=Z,30nm,0.6s,baz=6.4,slow=7.0,SNR=64						
	comp=Z,30nm,0.6s						
FITZ	Fitzroy Crossi	24.52	179	P	P	16 27 12.2	-1.3
KULM	Kulim	24.62	268	P	P	16 27 13.7	-0.8
KULM				IAmb	IAmb	16 27 28.1	
	comp=Z,75nm,1.3s						
KULM	Kulim	24.62	268	P	P	16 27 17.4	+2.9
SSE	Sheshan	24.70	351	P	P	16 27 15.4	+0.4
SSE				S	S	16 31 39.1	+2.6

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SSE                                pmax     pmax
          comp=Z,7.0nm,0.7s
SSE                                LR       LR
          comp=Z,1μm,18.1s
SSE                                LR       LR
          comp=Z,250nm,18.4s
MNAI  Manna              24.87 245  P        P          16 27 21.4 +4.6
MNAI  Manna              24.87 245  P        P          16 27 28.2  +11
SLVN  Son La             25.42 307           P          16 27 21.3 -0.5
SLVN  Son La             25.42 307  P        P          16 27 23.9 +2.1
PPI   Padang Panjang     25.88 255  P        P          16 27 28.0 +2.0
          comp=Z,940nmcomp=Z,37nm,1.0s
EGSI  Enggano, Bengk     25.92 243  P        P          16 27 28.6 +2.3
JCJ   Chichijima         25.92  36  LR       LR         16 37 03.1
          comp=Z,283nm,20.8s,baz=227,slow=35
WHN   Wuhan              25.99 338  P        P          16 27 27.8 +1.1
WHN                                 sP       sP         16 27 33.6 +1.1
WHN                                 pmax     pmax
          comp=Z,82nm,1.1s
WHN                                 LR       LR
          comp=Z,740nm,5.8s
WHN                                 LR       LR
          comp=Z,1μm,12.3s
WHN                                 LR       LR
          comp=Z,1μm,18.6s
NJ2   Nanjing            26.06 347 ⇓P        P          16 27 29.3 +1.9
NJ2                                 sP       sP         16 27 34.5 +1.4
NJ2                                 pmax     pmax
          comp=Z,21nm,0.9s
NJ2                                 LR       LR
          comp=Z,360nm,14.2s
NJ2                                 LR       LR
          comp=Z,620nm,19.9s
NJ2                                 LR       LR
          comp=Z,310nm,15.2s
GYA   Guiyang            26.61 320 ⇑P        P          16 27 35.3 +2.7
GYA                                 pmax     pmax
          comp=Z,18nm,1.0s
PSI   Prapat             26.61 263  LR       LR         16 39 25.0
          comp=Z,494nm,20.5s,baz=90,slow=40
JNU   Nakatsue           26.90  10  LR       LR         16 37 29.3
          comp=Z,498nm,21.8s,baz=182,slow=35
JNU   Nakatsue           26.90  10  P        P          16 27 37.0 +2.0
PMG   Port Moresby       26.90 126  LR       LR         16 40 28.9
          comp=Z,230nm,19.4s,baz=310,slow=42
PMG   Port Moresby       26.90 126  P        P          16 27 34.0 -1.2
PMG                                 IAmb     IAmb       16 27 42.6
          comp=Z,75nm,1.1s
PMG   Port Moresby       26.90 126  P        P          16 27 34.8 -0.4
PMG   Port Moresby       26.90 126deP        P          16 27 33.5 -1.7
PMG                                 pmax     pmax
          comp=Z,84nm,1.2s
COEN  Coen               27.00 139  P        P          16 27 35.1 -0.9
          comp=Z,79nm,0.9s
COEN  Coen               27.00 139  P        P          16 27 35.0 -0.9
COEN                                IAmb     IAmb       16 27 40.8
          comp=Z,48nm,0.8s
COEN  Coen               27.00 139  P        P          16 27 35.9 -0.1
WRAB  Tennant Creek      27.79 162  P        P          16 27 41.0 -2.1
WRAB                                IAmb     IAmb       16 28 28.1
          comp=Z,36nm,1.1s
WRAB  Tennant Creek      27.79 162  P        P          16 27 41.6 -1.5
WRAB  Tennant Creek      27.79 162deP        P          16 27 41.9 -1.2
WRAB                                pmax     pmax
          comp=Z,34nm,1.1s
WRA   Warramunga Arr     27.80 162  P        P          16 27 41.1 -2.1
          comp=Z,16nm,0.9s,baz=334,slow=9.9,SNR=28
WRA                                 S        S          16 32 22.1 -3.7
          comp=Z,3.6nm,1.0s,baz=335,slow=15,SNR=5.9
          comp=Z,16nm,0.9s
WRA   Warramunga Arr     27.80 162  P        P          16 27 41.5 -1.6
WRA   Warramunga Arr     27.80 162 iP        P          16 27 42.4 -0.7
WRA                                 pmax     pmax
          comp=Z,15nm,0.9s
WR8   Warramunga Arr     27.86 161  P        P          16 27 41.9 -1.8
WR8                                 IAmb     IAmb       16 28 28.8
          comp=Z,104nm,1.8s
ENH   Enshi              27.90 330           P          16 27 43.0 -1.0
ENH                                 IAmb     IAmb       16 27 55.8
          comp=Z,29nm,1.1s
ENH   Enshi              27.90 330  P        P          16 27 44.7 +0.7
MBWA  Marble Bar         28.12 191  P        P          16 27 44.5 -1.5
MBWA                                IAmb     IAmb       16 28 06.1
          comp=Z,42nm,1.4s
GSI   Gunungsitoli       28.21 260  P        P          16 27 45.2 -1.8
GSI                                 IAmb     IAmb       16 27 54.9
          comp=Z,55nm,1.0s
GSI   Gunungsitoli       28.21 260  P        P          16 27 51.7 +4.8
CMAR  Chiang Mai Arr     28.32 297  P        P          16 27 48.1 +0.3
          comp=Z,2.2nm,0.8s,baz=118,slow=7.6,SNR=17
CMAR                                LR       LR         16 38 46.1
          comp=Z,440nm,21.3s,baz=95,slow=36
          comp=Z,2.2nm,0.8s
CMAR  Chiang Mai Arr     28.32 297           P          16 27 46.7 -1.2
KMI   Kunming            28.44 313  P        P          16 27 50.4 +1.3
KMI                                 S        S          16 32 42.8 +6.5
KMI                                 pmax     pmax
          comp=Z,24nm,1.3s
KMI                                 pmax     pmax
          comp=Z,140nm,5.1s
KMI                                 LR       LR
          comp=Z,410nm,14.7s
KMI                                 LR       LR
          comp=Z,1μm,18.1s
KMI                                 LR       LR
          comp=Z,1μm,18.1s
CHTO  Chiang Mai         28.45 298  P        P          16 27 48.0 -1.0
CHTO  Chiang Mai         28.45 298  P        P          16 27 49.2 +0.2
CHTO  Chiang Mai         28.45 298  P        P          16 27 48.0 -1.0
CHTO                                pmax     pmax
          comp=Z,13nm,1.0s
PSAC1 Pilbara Seismi     28.47 191  P        P          16 27 49.8 +0.7
          comp=Z,27nm,1.2s
PSAC2 Pilbara Seismi     28.48 191  P        P          16 27 49.7 +0.5
          comp=Z,20nm,1.2s
PSA00 Pilbara Seismi     28.50 191  P        P          16 27 49.8 +0.5
PSA00 Pilbara Seismi     28.50 191  P        P          16 27 47.8 -1.6
PSA00                               IAmb     IAmb       16 27 57.7
          comp=Z,57nm,1.4s
PSA00 Pilbara Seismi     28.50 191  P        P          16 27 50.6 +1.2
PSAB3 Pilbara Seismi     28.52 191  P        P          16 27 47.8 -1.8
JHJ   Hachijo jima 2     29.61  25  LR       LR         16 40 13.7
          comp=Z,530nm,20.0s,baz=272,slow=37
PZH   PanZhiHua          29.98 314  P        P          16 28 05.0 +2.3
PZH                                 S        S          16 33 02.4 +2.0
PZH                                 pmax     pmax
          comp=Z,10.0nm,1.2s
PZH                                 LR       LR
          comp=Z,420nm,17.5s
PZH                                 LR       LR
          comp=Z,520nm,15.5s
PZH                                 LR       LR
          comp=Z,830nm,16.3s
LYN   LuoYang            30.27 339  P        P          16 28 05.5 +0.5
LYN                                 S        S          16 33 09.0 +4.4
LYN                                 pmax     pmax
          comp=Z,33nm,1.0s
LYN                                 pmax     pmax
          comp=Z,300nm,5.6s
LYN                                 LR       LR
          comp=Z,1μm,20.6s
LYN                                 LR       LR
          comp=Z,1μm,23.5s
LYN                                 LR       LR
          comp=Z,830nm,28.2s
QIS   Mount Isa          30.39 153  P        P          16 28 04.3 -1.9
          comp=Z,36nm,1.0s
QIS   Mount Isa          30.39 153  P        P          16 28 08.2 +2.0
TIA   Tai'an             30.44 347  P        P          16 28 06.5  0.0
TIA                                 pmax     pmax
          comp=Z,17nm,1.3s
TIA                                 pmax     pmax
          comp=Z,200nm,5.7s
TIA                                 LR       LR
          comp=Z,520nm,21.0s
TIA                                 LR       LR
          comp=Z,940nm,22.7s
TIA                                 LR       LR
          comp=Z,660nm,23.7s
INU   Inuyama            30.57  19  P        P          16 28 10.3 +2.7
KSAR  Wonju Array Be     30.80   4           P          16 28 10.0 +0.4
KSAR  Wonju Array Be     30.80   4  P        P          16 28 10.0 +0.4
KSRS  Korea Array        30.82   4  P        P          16 28 10.2 +0.5
          comp=Z,17nm,1.0s,baz=183,slow=9.9,SNR=34
          comp=Z,17nm,1.0s
KS19  Wonju Array Si     30.86   4  P        P          16 28 10.2 +0.1
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MTSU  Mount Surprise     30.87 143  P        P          16 28 09.9 -0.6
          comp=Z,14nm,0.8s
MTSU  Mount Surprise     30.87 143  P        P          16 28 11.1 +0.6
AS31  Alice Springs      31.20 165  P        P          16 28 11.6 -1.7
ASAR  Alice Springs      31.20 165  P        P          16 28 11.7 -1.7
          comp=Z,2.8nm,0.5s,baz=343,slow=7.2,SNR=66
ASAR                                S        S          16 33 16.8 -2.5
          comp=Z,1.9nm,0.8s,baz=348,slow=17,SNR=4.1
ASAR                                ScP      ScP        16 34 51.1  0.0
          comp=Z,1.3nm,1.0s,baz=334,slow=2.7,SNR=4.5
ASAR                                LR       LR         16 42 49.8
          comp=Z,183nm,18.1s,baz=333,slow=40
          comp=Z,2.8nm,0.5s
ASAR  Alice Springs      31.20 165  P        P          16 28 11.4 -1.9
XAN   Xi'an              31.27 333 ⇓P        P          16 28 14.0 +0.1
XAN                                 pP       sP         16 28 21.1 +1.4
XAN                                 S        S          16 33 25.6 +5.2
XAN                                 pmax     pmax
          comp=Z,62nm,1.1s
XAN                                 pmax     pmax
          comp=Z,190nm,3.6s
XAN                                 LR       LR
          comp=Z,750nm,16.5s
XAN                                 LR       LR
          comp=Z,1μm,19.2s
XAN                                 LR       LR
          comp=Z,1μm,19.2s
WRKA  Warakurna          31.56 175  P        P          16 28 14.2 -2.3
CD2   Chengdu            31.56 323  P        P          16 28 17.3 +0.8
CD2                                 S        S          16 33 29.4 +4.5
CD2                                 pmax     pmax
          comp=Z,20nm,0.8s
CD2                                 LR       LR
          comp=Z,2μm,17.1s
CD2                                 LR       LR
          comp=Z,2μm,18.4s
CD2                                 LR       LR
          comp=Z,1μm,19.7s
MJAR  Matsushiro Arr     32.05  20  P        P          16 28 21.0 +0.4
          comp=Z,3.8nm,0.8s,baz=186,slow=9.9,SNR=8.8
MJAR                                LR       LR         16 39 34.7
          comp=Z,650nm,21.7s,baz=214,slow=33
          comp=Z,3.8nm,0.8s
MAJO  Matsushiro         32.05  20⇓eP        P          16 28 21.6 +0.9
MAJO                                pmax     pmax
          comp=Z,12nm,1.0s
HNS   HongShan           32.18 344 ⇓P        P          16 28 22.3 +0.6
HNS                                 S        S          16 33 35.9 +1.7
HNS                                 pmax     pmax
          comp=Z,32nm,1.2s
HNS                                 LR       LR
          comp=Z,440nm,20.0s
HNS                                 LR       LR
          comp=Z,830nm,18.2s
HNS                                 LR       LR
          comp=Z,560nm,19.4s
DL2   Dalian             32.36 355  P        P          16 28 24.6 +1.3
DL2                                 S        S          16 33 40.6 +3.6
DL2                                 pmax     pmax
          comp=Z,110nm,1.2s
DL2                                 pmax     pmax
          comp=Z,530nm,4.9s
DL2                                 LR       LR
          comp=Z,730nm,17.3s
DL2                                 LR       LR
          comp=Z,690nm,19.6s
DL2                                 LR       LR
          comp=Z,650nm,19.5s
TIY   Taiyuan            33.15 341  P        P          16 28 29.8 -0.5
TIY                                 S        S          16 33 55.3 +5.8
TIY                                 pmax     pmax
          comp=Z,170nm,4.4s
TIY                                 LR       LR
          comp=Z,750nm,19.9s
TIY                                 LR       LR
          comp=Z,370nm,17.2s
TIY                                 LR       LR
          comp=Z,610nm,24.7s
TV1H  Townsville Har     33.24 141  P        P          16 28 32.4 +1.1
CTA   Charters Tower     33.53 143  P        P          16 28 35.1 +1.3
CTAO  Charters Tower     33.53 143  P        P          16 28 34.4 +0.5
CTAO                                IAmb     IAmb       16 28 37.6
          comp=Z,30nm,1.1s
CTAO  Charters Tower     33.53 143  P        P          16 28 35.1 +1.3
CTAO  Charters Tower     33.53 143  P        P          16 28 34.4 +0.5
CTAO                                pmax     pmax
          comp=Z,30nm,1.1s
MEEK  Meekatharra        33.66 191  P        P          16 28 35.7 +0.8
          comp=Z,17nm,1.1s
MEEK  Meekatharra        33.66 191  P        P          16 28 33.7 -1.2
AUAYR Ayr State High     33.87 141  P        P          16 28 38.7 +2.0
BJT   Baijiatuau         34.30 347           P          16 28 40.0 -0.2
BJT   Baijiatuau         34.30 347  P        P          16 28 41.1 +0.8
BJT   Baijiatuau         34.30 347  P        P          16 28 40.0 -0.2
BJT                                 pmax     pmax
          comp=Z,55nm,1.1s
BJI   Beijing            34.32 347  P        P          16 28 40.1 -0.3
BJI                                 pP       sP         16 28 45.3 -0.9
BJI                                 PP       PnPn       16 29 54.4 -0.5
BJI                                 S        S          16 34 05.8 -1.7
BJI                                 pmax     pmax
          comp=Z,19nm,1.1s
BJI                                 pmax     pmax
          comp=Z,170nm,3.5s
BJI                                 LR       LR
          comp=Z,200nm,17.8s
BJI                                 LR       LR
          comp=Z,200nm,19.0s
BJI                                 LR       LR
          comp=Z,210nm,17.3s
LZDM  Lanzhou Array      35.35 329  P        P          16 28 50.4 +0.7
          comp=Z,4.2nm,0.4s,baz=145,slow=11,SNR=5.2
LZDM                                LR       LR         16 45 08.7
          comp=Z,518nm,18.1s,baz=140,slow=39
          comp=Z,4.2nm,0.4s
LZH   Lanzhou            35.37 329 ⇓P        P          16 28 51.5 +1.7
LZH                                 pP       sP         16 28 56.9 +1.3
LZH                                 S        S          16 34 28.9 +4.7
LZH                                 pmax     pmax
          comp=Z,79nm,1.5s
LZH                                 LR       LR
          comp=Z,800nm,17.8s
LZH                                 LR       LR
          comp=Z,880nm,17.5s
LZH                                 LR       LR
          comp=Z,1μm,16.8s
BRDH  Bariadhala         36.21 300  LR       LR         16 44 32.6
          comp=Z,416nm,21.0s,baz=136,slow=38
HHC   Hu-ho-hao-te       36.28 342⇓iP        P          16 28 58.0 +0.5
HHC                                 pmax     pmax
          comp=Z,17nm,1.0s
HHC                                 pmax     pmax
          comp=Z,260nm,4.7s
HHC                                 LR       LR
          comp=Z,370nm,21.6s
HHC                                 LR       LR
          comp=Z,450nm,18.2s
HHC                                 LR       LR
          comp=Z,620nm,20.0s
BTO   Baotou             36.56 340 eP        P          16 29 01.3 +1.5
BTO                                 pP       sP         16 29 05.8 +0.2
BTO                                 sP       pP         16 29 08.4 +4.5
BTO                                 S        S          16 34 45.8 +3.7
BTO                                 pmax     pmax
          comp=Z,9.0nm,1.0s
BTO                                 pmax     pmax
          comp=Z,420nm,6.8s
BTO                                 LR       LR
          comp=Z,1μm,20.0s
BTO                                 LR       LR
          comp=Z,2μm,21.3s
BTO                                 LR       LR
          comp=Z,1μm,23.7s
MORW  Morawa             36.56 194  P        P          16 28 58.0 -1.8
VLA   Vladivostok        36.84   8diP        P          16 29 03.5 +1.5
VLA                                 pmax     pmax
          comp=Z,47nm,1.0s
CN2   Changchun          37.07   0  P        P          16 29 03.8 -0.2
CN2                                 PP       PnPn       16 30 31.0 +2.1
CN2                                 S        S          16 34 49.4 -0.2
CN2                                 pmax     pmax
          comp=Z,20nm,1.3s
CN2                                 pmax     pmax
          comp=Z,260nm,3.0s
CN2                                 LR       LR
          comp=Z,340nm,17.0s
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CN2                                 LR       LR
          comp=Z,370nm,17.0s
CN2                                 LR       LR
          comp=Z,490nm,17.0s
SHL   Shillong           37.13 304           P          16 29 06.0 +1.0
SHL                                 IAmb     IAmb       16 29 18.3
          comp=Z,35nm,1.0s
INKA  Innaminka          37.22 157  P        P          16 29 04.1 -1.3
FORT  Forrest            37.24 176  P        P          16 29 04.9 -0.7
          comp=Z,26nm,1.2s
FORT  Forrest            37.24 176  P        P          16 29 04.2 -1.3
FORT                                IAmb     IAmb       16 29 10.7
          comp=Z,18nm,0.7s
QLP   Quilpie            37.70 152  P        P          16 29 11.4 +1.8
BLDU  Ballidu            37.90 192  P        P          16 29 14.6 +3.4
USRK  Ussuriysk Ar.      37.92   8  P        P          16 29 11.8 +0.6
          comp=Z,21nm,0.8s,baz=190,slow=7.3,SNR=42
          comp=Z,21nm,0.8s
XLT   XiLinHaoTe         38.05 349 eP        P          16 29 12.3 -0.1
XLT                                 S        S          16 35 10.8 +6.1
XLT                                 pmax     pmax
          comp=Z,18nm,1.2s
XLT                                 pmax     pmax
          comp=Z,420nm,4.5s
XLT                                 LR       LR
          comp=Z,410nm,12.5s
XLT                                 LR       LR
          comp=Z,370nm,15.8s
MDJ   Mudanjiang         38.06   5  P        P          16 29 12.9 +0.5
MDJ                                 S        S          16 35 10.9 +6.2
MDJ                                 pmax     pmax
          comp=Z,83nm,1.5s
MDJ                                 pmax     pmax
          comp=Z,540nm,3.8s
MDJ                                 LR       LR
          comp=Z,510nm,22.7s
MDJ                                 LR       LR
          comp=Z,390nm,17.2s
MDJ                                 LR       LR
          comp=Z,890nm,22.7s
MDJ   Mudanjiang         38.06   5  P        P          16 29 13.7 +1.3
AUNRC North Rockhamp     38.60 141  P        P          16 29 19.2 +2.1
BNX   BinXian            39.05   2 ⇑P        P          16 29 21.0 +0.4
BNX                                 pmax     pmax
          comp=Z,45nm,1.2s
TEY   Ternei             39.54  13⇑eP        P          16 29 25.4 +0.7
TEY                                e                    16 35 20.7
TEY                                e                    16 39 28.1
TEY                                 pmax     pmax
          comp=N,20nm,0.9s
TEY                                 pmax     pmax
          comp=Z,40nm,0.8s
LSA   Lhasa              39.56 310  P        P          16 29 22.4 -3.4
LSA                                 S        S          16 35 27.8 -0.9
LSA                                 LR       LR
          comp=Z,230nm,22.1s
LSA                                 LR       LR
          comp=Z,300nm,19.1s
LSA                                 LR       LR
          comp=Z,390nm,17.9s
GTA   Gaotai             39.97 329 ⇓P        P          16 29 30.3 +1.7
GTA                                 pP       sP         16 29 35.3 +0.9
GTA                                 S        S          16 35 42.4 +8.6
GTA                                 pmax     pmax
          comp=Z,23nm,1.0s
GTA                                 LR       LR
          comp=Z,540nm,16.3s
GTA                                 LR       LR
          comp=Z,720nm,19.1s
GTA                                 LR       LR
          comp=Z,1μm,17.9s
NWAO  Narrogin (SRO)     40.04 191  P        P          16 29 27.5 -1.6
NWAO  Narrogin (SRO)     40.04 191  P        P          16 29 33.0 +3.9
NWAO  Narrogin (SRO)     40.04 191  P        P          16 29 27.5 -1.6
NWAO                                pmax     pmax
          comp=Z,19nm,0.9s
ASAJ  Asahikawa          40.32  19  LR       LR         16 45 08.7
          comp=Z,438nm,21.6s,baz=209,slow=34
JKA   Kamikawa-asahi     40.32  19  IAmb     IAmb       16 29 33.5
          comp=Z,34nm,1.1s
BBOO  Buckleboo          40.47 166           P          16 29 31.3 -1.3
BBOO                                IAmb     IAmb       16 29 36.7
          comp=Z,47nm,0.7s
BBOO  Buckleboo          40.47 166  P        P          16 29 31.5 -1.2
GOMU  GeErMu             40.62 321  P        P          16 29 35.3 +0.9
GOMU                                S        S          16 35 42.8 -1.4
GOMU                                SS       SS         16 38 45.0 +0.6
GOMU                                pmax     pmax
          comp=Z,12nm,1.2s
GOMU                                LR       LR
          comp=Z,510nm,17.2s
GOMU                                LR       LR
          comp=Z,390nm,17.5s
GOMU                                LR       LR
          comp=Z,1μm,16.9s
WHYH  Whyalla            41.07 164  P        P          16 29 37.9 +0.4
STKA  Stephens Creek     41.26 159  P        P          16 29 38.2 -0.9
          comp=Z,19nm,0.8s,baz=337,slow=8.2,SNR=34
          comp=Z,19nm,0.8s
STKA  Stephens Creek     41.26 159  P        P          16 29 38.0 -1.2
STKA  Stephens Creek     41.26 159  P        P          16 29 38.0 -1.2
AUJCS Jamestown Cent     41.52 163  P        P          16 29 42.5 +1.2
AUCAS Cummins Area S     41.78 167  P        P          16 29 43.6 +0.2
HTT   Hallett            41.82 163  P        P          16 29 44.0 +0.2
AULRC Lightning Ridg     41.89 150  P        P          16 29 46.0 +1.6
CMSA  Cobar Meteorol     42.59 154  P        P          16 29 51.9 +1.9
HIA   Hailar             42.80 355  IAmb     IAmb       16 29 58.3
          comp=Z,52nm,1.1s
HIA   Hailar             42.80 355  P        P          16 29 54.6 +3.0
YSS   Yuzhno-Sakhali     42.91  17           P          16 29 52.6 +0.2
YSS                                 IAmb     IAmb       16 29 58.5
          comp=Z,54nm,1.2s
YSS   Yuzhno-Sakhali     42.91  17  P        P          16 29 54.3 +1.9
YSS   Yuzhno-Sakhali     42.91  17 eP        P          16 29 51.3 -1.1
YSS                                eS        S          16 36 12.3 -4.6
YSS                                eSS       SS         16 39 28.2 -0.4
YSS                                 pmax     pmax
          comp=Z,200nm,6.5s
YSS                                 pmax     pmax
          comp=Z,30nm,1.2s
YSS                                 MLR      MLR
          comp=N,300nm,15.0s
AUMAR Marden Senior      43.11 164  P        P          16 29 54.8 +0.6
AUMBR Murray Bridge      43.52 163  P        P          16 29 57.8 +0.3
HEH   HeiHe              43.56   2 eP        P          16 29 57.6  0.0
HEH                                 pP       sP         16 30 02.8 -0.7
HEH                                 PcP      PcP        16 31 43.8 -1.4
HEH                                 pmax     pmax
          comp=N,67nm,1.1s
HEH                                 LR       LR
          comp=N,330nm,21.0s
HEH                                 LR       LR
          comp=N,390nm,19.4s
HEH                                 LR       LR
          comp=N,540nm,19.2s
ULN   Ulaanbaatar        44.01 342           P          16 30 01.1 -0.4
ULN   Ulaanbaatar        44.01 342⇑eP        P          16 30 01.9 +0.4
ULN                                 pmax     pmax
          comp=Z,15nm,1.1s
SONM  Songino Array      44.18 342  P        P          16 30 02.7 -0.1
          comp=Z,4.0nm,0.9s,baz=166,slow=8.2,SNR=18
SONM                                LR       LR         16 49 25.6
          comp=Z,638nm,21.5s,baz=158,slow=37
          comp=Z,4.0nm,0.9s
SONM  Songino Array      44.18 342  P        P          16 30 02.0 -0.9
AUDCS Dubbo College      44.51 151  P        P          16 30 08.3 +2.8
GRNR  Gornyy             45.00  10⇓iP        P          16 30 10.1 +0.9
GRNR                                pmax     pmax
          comp=N,20nm,1.1s
GRNR                                pmax     pmax
          comp=Z,30nm,1.3s
MGBR  Mount Gambier      46.31 163  P        P          16 30 19.5 -0.1
CIT   Chita              46.34 350 eP        P          16 30 18.2 -1.6
CIT                                e                    16 32 02.0
CIT                                e                    16 32 11.6
CIT                                 pmax     pmax
          comp=Z,63nm,2.6s
TYV   Tymovskoe          46.43  15 eP        P          16 30 21.4 +0.9
TYV                                 pmax     pmax
          comp=Z,22nm,1.5s
TYV                                 pmax     pmax
          comp=Z,500nm,3.6s
SANVU Saraoutou          46.87 118  P        P          16 30 24.2 -0.2
SANVU Saraoutou          46.87 118  P        P          16 30 26.1 +1.7
HYB   Hyderabad          46.92 288 eP        P          16 30 24.1 -0.8
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HYB				ePP	PP	16 32 14.2	-1.2
ZEA	Zeya	47.04	2	eP	P	16 30 25.7	+0.5
ZEA				e		16 32 08.4	
ZEA				pmax	pmax		
	comp=Z,100nm,1.5s						
ZEA				pmax	pmax		
	comp=N,20nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,50nm,1.0s						
ZEA				MLR	MLR		
	comp=N,200nm,15.0s						
BRAT	Ballarat	47.20	160	P	P	16 30 28.2	+1.6
CAN	Canberra	47.25	153	P	P	16 30 27.6	+0.4
CAN	Canberra	47.25	153	P	P	16 30 29.8	+2.6
CAN	Canberra	47.25	153	P	P	16 30 27.6	+0.4
CAN				pmax	pmax		
	comp=Z,53nm,1.3s						
AUMHS	Melrose High S	47.33	153	P	P	16 30 30.2	+2.4
CNB	Canberra Magne	47.41	153	P	P	16 30 30.8	+2.3
TOO	Toolangi	47.77	158	P	P	16 30 30.6	-0.6
TOO				IAmb	IAmb	16 30 36.1	
	comp=Z,24nm,1.6s						
TOO	Toolangi	47.77	158	P	P	16 30 30.6	-0.6
TOO				pmax	pmax		
	comp=Z,24nm,1.6s						
AUSMG	Snowy Mountain	48.01	155	P	P	16 30 35.0	+1.9
TLY	Talaya	48.41	342	⇓eP	P	16 30 37.4	+1.4
TLY				pmax	pmax		
	comp=Z,11nm,0.9s						
MOY	Mondy	49.26	340	eP	P	16 30 42.5	0.0
MOY				pmax	pmax		
	comp=Z,31nm,1.8s						
DZM	Mont Dzumac	49.30	126	IAmb	IAmb	16 30 50.5	
	comp=Z,47nm,1.4s						
DZM	Mont Dzumac	49.30	126	P	P	16 30 43.3	0.0
WMQ	Urumqi	49.63	325	eP	P	16 30 46.3	+0.8
WMQ				pP	sP	16 30 51.6	+0.2
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
WMQ				LR	LR		
	comp=Z,860nm,18.3s						
WMQ				LR	LR		
	comp=Z,570nm,15.3s						
WMQ				LR	LR		
	comp=Z,400nm,19.3s						
KNGR	Kungurtug, Tuv	49.65	337	⇑iP	P	16 30 46.9	+1.3
KNGR				pmax	pmax		
	comp=Z,13nm,1.1s						
YATNC	Mamie plateau,	49.65	126	P	P	16 30 46.6	+0.8
PEA0B	Petropavlovsk-	53.35	24	⇓eP	P	16 31 14.7	+1.6
PETK	Petropavlovsk-	53.35	24	P	P	16 31 14.1	+1.0
	comp=Z,14nm,0.9s,baz=194,slow=2.8,SNR=13						
PETK				LR	LR	16 55 41.1	
	comp=Z,168nm,18.5s,baz=219,slow=38						
	comp=Z,14nm,0.9s						
PETK	Petropavlovsk-	53.35	24	P	P	16 31 13.6	+0.5
ZSN	Zaisan	53.39	327	eP	P	16 31 12.8	-0.7
ZSN	Zaisan	53.39	327	eP	P	16 31 12.8	-0.7
DGZ	Jazzator, Alta	53.46	330	⇓eP	P	16 31 14.1	-0.1
DGZ				pmax	pmax		
	comp=Z,11nm,1.1s						
PET	Petropavlovsk	53.67	24	eP	P	16 31 25.7	+10
PET				eS	S	16 38 53.4	+4.5
PET				MLR	MLR		
	comp=Z,200nm,18.0s						
SHLS	Shalkode	54.30	320	eP	P	16 31 17.6	-2.9
	comp=Z,19nm,0.9s						
SHLS	Shalkode	54.30	320	eP	P	16 31 17.5	-2.9
SHLS				pmax	pmax		
	comp=Z,19nm,0.9s						
MK31	Makanchi Array	54.45	325	d iP	P	16 31 20.9	-0.4
MKAR	Makanchi Array	54.45	325	P	P	16 31 21.0	-0.3
	comp=Z,4.2nm,0.6s,baz=123,slow=7.7,SNR=53						
MKAR				LR	LR	16 56 38.9	
	comp=Z,279nm,18.2s,baz=123,slow=38						
	comp=Z,4.2nm,0.6s						
MKAR	Makanchi Array	54.45	325	P	P	16 31 20.9	-0.5
UZB	Uzynbulak	54.58	319	eP	P	16 31 21.3	-1.2
	comp=Z,11nm,0.8s						
UZB	Uzynbulak	54.58	319	eP	P	16 31 21.3	-1.2
UZB				pmax	pmax		
	comp=Z,11nm,0.8s						
MAKZ	Makanchi	54.64	325	P	P	16 31 22.1	-0.5
MAKZ	Makanchi	54.64	325	P	P	16 31 22.2	-0.5
MAKZ				pmax	pmax		
	comp=Z,11nm,0.9s						
TARG	Taragay, Kyrgy	54.74	317	IAmb	IAmb	16 31 35.5	
	comp=Z,30nm,1.1s						
SATY	Saty	54.94	319	eP	P	16 31 24.0	-1.1
	comp=Z,15nm,0.9s						
SATY	Saty	54.94	319	eP	P	16 31 24.0	-1.1
SATY				pmax	pmax		
	comp=Z,15nm,0.9s						
KSH	Kashi	55.09	314	P	P	16 31 27.8	+1.6
KSH				pP	sP	16 31 31.8	-0.3
KSH				pmax	pmax		
	comp=Z,18nm,1.1s						
KSH				LR	LR		
	comp=Z,430nm,16.5s						
KSH				LR	LR		
	comp=Z,650nm,17.2s						
KSH				LR	LR		
	comp=Z,630nm,17.9s						
NIL	Nilore	55.13	307		P	16 31 25.4	-1.1
NIL	Nilore	55.13	307	P	P	16 31 25.4	-1.1
NIL				pmax	pmax		
	comp=Z,52nm,1.0s						
KDJ	Kajisay	55.33	318	IAmb	IAmb	16 31 29.7	
	comp=Z,24nm,0.8s						
YAK	Yakutsk	55.42	2	LR	LR	16 57 14.4	
	comp=Z,243nm,19.2s,baz=180,slow=38						
YAK	Yakutsk	55.42	2	P	P	16 31 27.5	-0.5
YAK	Yakutsk	55.42	2	eP	P	16 31 27.4	-0.6
YAK				e*PP	pP	16 31 31.3	-1.0
YAK				e		16 32 26.8	
YAK				e		16 33 30.8	
YAK				ePPP	PPP	16 34 42.9	
YAK				eS	S	16 39 13.7	+1.5
YAK				e*SS	sS	16 39 22.2	+2.9
YAK				e		16 41 08.6	
YAK				eSS	SS	16 42 54.0	-2.9
YAK				eSSS	SSS	16 45 00.2	
YAK				pmax	pmax		
	comp=Z,30nm,0.7s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,1.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,164nm,7.2s						
YAK				pmax	pmax		
	comp=N,234nm,6.8s						
YAK				pmax	pmax		
	comp=E,102nm,4.9s						
YAK				smax	smax		
	comp=E,60nm,3.2s						
YAK				smax	smax		
	comp=N,54nm,4.2s						
YAK				MLR	MLR		
	comp=Z,235nm,18.0s						
YAK				MLR	MLR		
	comp=N,106nm,13.0s						
YAK				MLR	MLR		
	comp=E,155nm,22.0s						
ARXS	Arharly	55.85	320	eP	P	16 31 31.4	-0.1
TDK	Taldyqorghan	55.85	321	eP	P	16 31 30.6	-1.0
	comp=E,18nm,0.8s						
TDK	Taldyqorghan	55.85	321	eP	P	16 31 30.5	-1.0
TDK				pmax	pmax		
	comp=Z,18nm,0.8s						
MDOK	Medeo	55.87	319	eP	P	16 31 30.6	-1.2
MDOK	Medeo	55.87	319	eP	P	16 31 30.6	-1.2
TNSS	Tian-Shan	55.88	319	eP	P	16 31 30.7	-1.5
TNSS	Tian-Shan	55.88	319	eP	P	16 31 30.7	-1.5
AAA	Alma-Ata	55.98	319	eP	P	16 31 31.4	-1.1
	comp=Z,16nm,1.0s						
AAA	Alma-Ata	55.98	319	eP	P	16 31 31.4	-1.1
AAA				pmax	pmax		
	comp=Z,16nm,1.0s						
MA2	Magadan	56.31	15	LR	LR	16 59 20.4	
	comp=Z,124nm,18.0s,baz=202,slow=40						
MA2	Magadan	56.31	15	P	P	16 31 34.8	+0.4
MA2	Magadan	56.31	15	P	P	16 31 35.7	+1.3
MA2	Magadan	56.31	15	c iP	P	16 31 35.5	+1.1
MA2				pmax	pmax		
	comp=Z,68nm,1.7s						
MA2	Magadan	56.31	15	P	P	16 31 34.1	-0.3
	comp=Z,46nm,1.3s						
TKM2	Tokmak 2	56.73	318	P	P	16 31 38.1	+0.1
	SNR=16						
KBK	Karagaybulak	57.05	317	P	P	16 31 40.6	+0.3
	SNR=9.3						
UCH	Uchtor	57.17	317	P	P	16 31 42.0	+0.5
	SNR=34						
MSVF	Nonsavu	57.35	116	P	P	16 31 44.3	+1.7
AAK	Ala-Archa	57.35	317	P	P	16 31 42.6	+0.3
	SNR=8.5						
AAK	Ala-Archa	57.35	317	LR	LR	17 00 31.2	
	comp=Z,309nm,18.8s,baz=106,slow=40						
AAK	Ala-Archa	57.35	317	P	P	16 31 42.1	-0.2
AAK				IAmb	IAmb	16 31 50.3	
	comp=Z,52nm,1.9s						
AAK	Ala-Archa	57.35	317	d iP	P	16 31 42.5	+0.1
AAK				pmax	pmax		
	comp=Z,27nm,1.8s						
ZALV	Zalesovo Beam	57.45	333	P	P	16 31 41.0	-1.6
	comp=Z,3.7nm,0.7s,baz=116,slow=6.8,SNR=17						
ZALV				LR	LR	16 57 58.3	
	comp=Z,171nm,19.2s,baz=126,slow=38						
	comp=Z,3.7nm,0.7s						
ZALV	Zalesovo Beam	57.45	333	P	P	16 31 40.1	-2.5
MANEM	Manem	57.54	311	IAmb	IAmb	16 31 51.2	
	comp=Z,59nm,1.0s						
USP	Ospenovka	57.60	318	P	P	16 31 43.9	-0.1
	SNR=19						
EKS2	Erkin-Say	57.85	317	P	P	16 31 46.3	+0.5
	SNR=14						
KURBB	Kurchatov Arra	58.62	327	P	P	16 31 50.0	-0.9
	comp=Z,9.4nm,0.8s,baz=125,slow=6.3,SNR=68						
	comp=Z,9.4nm,0.8s						
KURK	Kurchatov	58.62	327	P	P	16 31 49.6	-1.3
KURK				IAmb	IAmb	16 31 56.2	
	comp=Z,19nm,0.8s						
KURK	Kurchatov	58.62	327	d iP	P	16 31 50.0	-0.9
KURK				pmax	pmax		
	comp=Z,23nm,0.9s						
KBL	Kabul	58.73	307	P	P	16 31 51.4	-0.9
KBL				IAmb	IAmb	16 31 58.6	
	comp=Z,21nm,0.8s						
KBL	Kabul	58.73	307	P	P	16 31 51.4	-0.9
KBL				pmax	pmax		
	comp=Z,21nm,0.9s						
GAR	Garm	59.01	312	P	P	16 31 53.2	-0.8
SEY	Seymchan	59.59	14	LR	LR	16 56 40.3	
	comp=Z,189nm,21.7s,baz=209,slow=35						
SEY	Seymchan	59.59	14	eP	P	16 31 57.0	-0.4
SEY				pmax	pmax		
	comp=Z,35nm,1.2s						
DZA	Taraz	59.60	316	eP	P	16 31 56.6	-1.3
	comp=Z,7.2nm,0.8s						
DZA	Taraz	59.60	316	eP	P	16 31 56.5	-1.3
DZA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CHGR	Chuyangaron	59.77	311	⇑eP	P	16 31 58.4	-0.8
KK31	Karatay Array	60.24	316	P	P	16 32 01.6	-0.6
KK31				IAmb	IAmb	16 32 03.0	
	comp=Z,21nm,1.1s						
KK31	Karatay Array	60.24	316	P	P	16 32 01.6	-0.6
KK31				pmax	pmax		
	comp=Z,21nm,1.1s						
KKAR	Karatay Array	60.24	316	P	P	16 32 01.3	-1.0
KKAR	Karatay Array	60.24	316	P	P	16 32 01.3	-1.0
IUG	Iuzhnay	60.24	315	eP	P	16 32 01.2	-1.2
	comp=Z,14nm,1.2s						
IUG	Iuzhnay	60.24	315	eP	P	16 32 01.2	-1.2
IUG				pmax	pmax		
	comp=Z,14nm,1.2s						
SHAA	Shahritus	60.24	310	IAmb	IAmb	16 32 28.0	
	comp=Z,27nm,1.0s						
BRLS	Borolday	60.68	316	eP	P	16 32 04.2	-1.0
BRLS	Borolday	60.68	316	eP	P	16 32 04.2	-1.0
BRZS	Berezniki	61.59	324	eP	P	16 32 10.7	-0.6
BRZS	Berezniki	61.59	324	eP	P	16 32 10.6	-0.7
BVAR	Borovoye Array	64.20	327	P	P	16 32 27.6	-1.0
	comp=Z,6.8nm,0.9s,baz=129,slow=6.3,SNR=17						
BVAR				LR	LR	17 01 37.3	
	comp=Z,264nm,20.6s,baz=118,slow=37						
	comp=Z,6.8nm,0.9s						
BORK	Borovoye	64.25	327	P	P	16 32 27.8	-1.1
BORK				IAmb	IAmb	16 32 34.0	
	comp=Z,14nm,0.9s						
BORK	Borovoye	64.25	327	d iP	P	16 32 27.6	-1.3
BORK				pmax	pmax		
	comp=Z,16nm,1.0s						
TIXI	Tiksi	65.03	1	LR	LR	17 00 46.3	
	comp=Z,516nm,21.8s,baz=198,slow=36						
TIXI	Tiksi	65.03	1	P	P	16 32 32.2	-1.5
TIXI	Tiksi	65.03	1	⇓eP	P	16 32 31.9	-1.8
TIXI				pmax	pmax		
	comp=Z,27nm,1.0s						
BKZ	Black Stump Fm	65.60	138	P	P	16 32 37.4	-0.6
BKZ	Black Stump Fm	65.60	138	P	P	16 32 39.0	+1.0
RTZ	Ruatahuna	65.64	138	P	P	16 32 37.5	-0.7
BILL	Bilibino	67.17	15	⇓eP	P	16 32 48.2	+0.7
BILL				pmax	pmax		
	comp=Z,45nm,2.0s						
NRIK	Noril'sk	67.36	346	P	P	16 32 47.3	-1.3
	comp=Z,4.9nm,0.9s,baz=138,slow=5.0,SNR=8.0						
NRIK				LR	LR	17 04 04.0	
	comp=Z,491nm,18.7s,baz=150,slow=38						
	comp=Z,4.9nm,0.9s						
NRIK	Noril'sk	67.36	346	P	P	16 32 46.8	-1.8
NRIK				IAmb	IAmb	16 32 53.5	
	comp=Z,36nm,1.7s						
NRIK	Noril'sk	67.36	346	d eP	P	16 32 47.0	-1.6
NRIK				pmax	pmax		
	comp=Z,22nm,1.6s						
ABKAR	Akbulak array	69.10	320	P	P	16 32 57.7	-2.2
AKTO	Aktyubinsk	70.60	321	LR	LR	17 06 41.6	
	comp=Z,413nm,18.9s,baz=48,slow=38						
SVE	Sverdlovsk	70.84	328	eP	P	16 33 09.0	-1.5
ARTI	Arti	71.90	327	LR	LR	17 08 11.3	
	comp=Z,247nm,18.4s,baz=106,slow=39						
ARTI	Arti	71.90	327	c iP	P	16 33 14.3	-2.6
ARTI						16 35 53.3	
ARTI				S	S	16 42 33.7	-3.8
ARTI				SS	SS	16 47 07.3	-6.6
ARTI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
CASY	Casey	73.48	186	P	P	16 33 23.9	-2.1
CASY				IAmb	IAmb	16 33 31.6	
	comp=Z,11nm,0.7s						
K13K	Kusilvak Mount	74.86	27	IAmb	IAmb	16 33 41.3	
	comp=Z,48nm,1.6s						
C16K	Lisburne Hills	76.32	21	IAmb	IAmb	16 33 48.5	
	comp=Z,26nm,1.2s						
AKT	Akhty	76.41	311	eP	P	16 33 40.6	-3.1
AKT				e		16 36 34.0	
AKT				ePPP	PPP	16 38 28.3	
AKT				eS	S	16 43 23.4	-5.6
AKT				pmax	pmax		
	comp=Z,67nm,1.7s						
AKT				MLR	MLR		
	comp=Z,255nm,18.0s						
KIRV	Kirov	77.10	329	LR	LR	17 11 04.5	
	comp=Z,264nm,19.4s,baz=84,slow=38						
KIRV	Kirov	77.10	329	⇑iP	P	16 33 45.4	-1.6
RDOG	Red Dog Mine	77.14	21	IAmb	IAmb	16 33 53.4	
	comp=Z,36nm,1.3s						
BELG	Belogornoye	77.33	322	d iP	P	16 33 46.3	-2.2
BELG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
E18K	Tukpahlearik C	77.84	22	IAmb	IAmb	16 33 58.3	
	comp=Z,16nm,1.1s						
K17K	Iditarod	77.92	27	IAmb	IAmb	16 33 58.3	
	comp=Z,26nm,1.2s						
RAYN	Ar Rayn	78.13	293	P	P	16 33 52.4	-1.3
RAYN				IAmb	IAmb	16 33 57.4	
	comp=Z,18nm,0.9s						
RAYN	Ar Rayn	78.13	293	P	P	16 33 52.4	-1.3
RAYN				pmax	pmax		
	comp=Z,18nm,1.0s						
H18K	Honhosa River	78.30	25	IAmb	IAmb	16 33 59.9	
	comp=Z,20nm,1.3s						
E19K	Redstone River	79.13	23	IAmb	IAmb	16 34 05.3	
	comp=Z,33nm,1.3s						
H19K	Roundabout Mou	79.15	25	IAmb	IAmb	16 34 04.7	
	comp=Z,21nm,1.2s						
J19K	Poorman	79.30	26	IAmb	IAmb	16 34 06.2	
	comp=Z,31nm,1.5s						
D20K	Etivluk River	79.55	21	IAmb	IAmb	16 34 03.5	
	comp=Z,23nm,1.4s						
KBZ	Khabaz	80.05	313	LR	LR	17 14 45.6	
	comp=Z,135nm,18.0s,baz=80,slow=40						
KBZ	Khabaz	80.05	313	i P	P	16 34 01.0	-2.6
KBZ				pmax	pmax		
	comp=Z,15nm,2.2s						
KIV	Kislovodsk	80.20	313	eP	P	16 34 04.2	-0.5
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
IMAR	Indian Mountai	80.31	24	P	P	16 34 04.9	+0.3
B21K	Ikpikpuk River	80.39	20	IAmb	IAmb	16 34 10.9	
	comp=Z,24nm,1.1s						
VRH	Novokhopyorsk	80.93	321	eP	P	16 34 04.4	-3.8
VRH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
H22K	Ishtalitna Cre	81.27	24	IAmb	IAmb	16 34 17.4	
	comp=Z,24nm,1.3s						
BPAW	Bear Paw Mtn.	81.34	26	IAmb	IAmb	16 34 16.4	
	comp=Z,30nm,0.9s						
KTH	Kantishna Hill	81.34	27	IAmb	IAmb	16 34 16.8	
	comp=Z,36nm,1.2s						
L22K	Petersville	81.36	28	P	P	16 34 09.8	-0.6
MLY	Manley	81.49	25	IAmb	IAmb	16 34 17.4	
	comp=Z,30nm,1.3s						
LABN	Labinsk	81.61	314	eP	P	16 34 07.6	-4.4
LABN				e*PP	pP	16 34 11.5	-5.0
LABN				eS	S	16 44 19.6	-4.5
LABN				pmax	pmax		
	comp=Z,15nm,0.5s						
TRF	Thorofare Moun	81.62	27	IAmb	IAmb	16 34 17.3	
	comp=Z,27nm,1.3s						
ERBR	Yeremizino-Bor	81.76	315	eP	P	16 34 09.5	-3.3
ERBR				e*PP	pP	16 34 12.1	-5.1
ERBR				eS	S	16 44 23.1	-2.5
ERBR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
C23K	Itkillik River	81.80	20	IAmb	IAmb	16 34 20.4	
	comp=Z,33nm,1.4s						
COLD	Coldfoot	81.81	23	IAmb	IAmb	16 34 19.3	
	comp=Z,27nm,1.4s						
E23K	Chandalar	82.07	22	IAmb	IAmb	16 34 17.6	
	comp=Z,22nm,1.2s						
I23K	Minto, Yukon-K	82.08	25	IAmb	IAmb	16 34 41.0	
	comp=Z,50nm,1.7s						
TOLK	Toolik Lake Re	82.11	22	IAmb	IAmb	16 34 21.7	
	comp=Z,55nm,1.9s						
PMR	Palmer	82.11	29	P	P	16 34 17.5	+3.2
KLMR	Klimovskoe	82.27	330	eP	P	16 34 11.0	-4.1
KLMR				e		16 37 20.1	
KLMR				pmax	pmax		
	comp=Z,22nm,1.3s						
KLMR				MLR	MLR		
	comp=Z,476nm,22.0s						
VORD	Divnogorie	82.46	320	eP	P	16 34 14.0	-2.3
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VORR	Voronezh	82.50	321	eP	P	16 34 12.3	-4.2
VORR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR	Storozhevoye	82.53	321	eP	P	16 34 12.9	-3.8
VSR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LPSR	Galich'ya Gora	82.65	322	eP	P	16 34 14.0	-3.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CCB	Clear Creek Bu	82.74	26	P	P	16 34 17.1	-0.4
CCB				IAmb	IAmb	16 34 23.4	
	comp=Z,22nm,1.4s						
IL31		83.13	26	IAmb	IAmb	16 34 23.0	
	comp=Z,26nm,1.8s						
ILAR	Eielson Array	83.13	26	P	P	16 34 19.1	-0.4
	comp=Z,3.1nm,0.9s,baz=249,slow=5.5,SNR=15						
	comp=Z,3.1nm,0.9s						
E25K	Arctic Village	83.59	22	IAmb	IAmb	16 34 28.9	
	comp=Z,21nm,1.5s						
PAX	Paxson	83.81	27	IAmb	IAmb	16 34 25.9	
	comp=Z,15nm,1.3s						
ANN	Anapa	83.95	314	eP	P	16 34 20.4	-3.7
ANN				e*PP	pP	16 34 23.9	-4.7
ANN				e		16 37 35.4	
ANN				eS	SKSac	16 44 42.7	-4.5
ANN				pmax	pmax		
	comp=Z,18nm,1.0s						
OBN	Obninsk	83.96	325	LR	LR	17 14 20.5	
	comp=Z,166nm,19.5s,baz=50,slow=38						
OBN	Obninsk	83.96	325	⇓eP	P	16 34 24.2	+0.2
OBN				e		16 37 36.7	
OBN				ePPP	PPP	16 39 28.7	
OBN				eSS	SS	16 50 16.2	+0.8
OBN				eSSS	SSS	16 53 37.2	
OBN				pmax	pmax		
	comp=Z,35nm,1.8s						
OBN				MLR	MLR		
	comp=Z,175nm,17.0s						
BMAR	Burnt Mountain	83.99	23	P	P	16 34 24.3	+0.3
SCRK	Sand Creek	84.42	26	IAmb	IAmb	16 34 32.9	
	comp=Z,26nm,1.5s						
J26L	Joseph Creek	84.57	26	IAmb	IAmb	16 34 32.7	
	comp=Z,19nm,1.4s						
MENT	Mentasta	84.61	27	P	P	16 34 29.6	+2.4
L26K	Log Cabin Wild	84.77	27	IAmb	IAmb	16 34 34.2	
	comp=Z,16nm,1.0s						
M26K	Nabesna, AK	84.98	28	IAmb	IAmb	16 34 44.2	
	comp=Z,27nm,1.4s						
G27K	Doyon Strip	85.17	23	IAmb	IAmb	16 34 37.0	
	comp=Z,11nm,1.1s						
ASF	Jabal al Asfar	85.25	302	LR	LR	17 19 30.7	
	comp=Z,20µm,18.2s,baz=39,slow=41						
L27K	Beaver Creek,	85.46	27	IAmb	IAmb	16 34 39.0	
	comp=Z,26nm,1.4s						
BCAR	Beaver Creek A	85.47	27	P	P	16 34 31.5	-0.1
BNN	Bunyan	85.55	308	IAmb	IAmb	16 34 35.4	
	comp=Z,21nm,1.5s						
FURI	Furi	85.74	278	LR	LR	17 14 32.4	
	comp=Z,68nm,18.1s,baz=66,slow=37						
F28M	Old Crow	85.78	23	IAmb	IAmb	16 34 39.5	
	comp=Z,11nm,1.0s						
VNDA	Vanda	86.41	173	P	P	16 34 34.4	-1.3
	comp=Z,1.2nm,0.6s,baz=11,slow=4.3,SNR=5.3						
	comp=Z,1.2nm,0.6s						
MMAI	Mount Meron Ar	86.43	303	LR	LR	17 17 39.1	
	comp=Z,92nm,21.4s,baz=66,slow=39						
I29M	Ogilvie Camp,	86.70	25	IAmb	IAmb	16 34 45.5	
	comp=Z,25nm,1.4s						
EIL	Elat	87.14	299	LR	LR	17 18 16.7	
	comp=Z,117nm,21.2s,baz=0.0,slow=39						
BR131	Keskin Array S	87.17	309	⇓eP	P	16 34 38.5	-2.0
BRTR	Keskin Array B	87.17	309	P	P	16 34 39.1	-1.4
	comp=Z,0.7nm,0.8s,baz=104,slow=5.2,SNR=3.8						
BRTR				LR	LR	17 19 33.6	
	comp=Z,94nm,19.6s,baz=50,slow=40						
	comp=Z,0.7nm,0.8s						
ARCES	ARCESS Array B	87.32	340	P	P	16 34 39.4	-1.1
	comp=Z,2.0nm,0.9s,baz=74,slow=5.0,SNR=4.4						
ARCES				LR	LR	17 16 29.4	
	comp=Z,174nm,21.3s,baz=64,slow=38						
	comp=Z,2.0nm,0.9s						
ARCES	ARCESS Array B	87.32	340	IAmb	IAmb	16 34 43.0	
	comp=Z,88nm,1.9s						
FINES	FINESS Array B	88.69	332	P	P	16 34 45.5	-1.6
	comp=Z,1.5nm,0.6s,baz=72,slow=6.2,SNR=10						
FINES				LR	LR	17 16 34.2	
	comp=Z,255nm,21.0s,baz=66,slow=37						
	comp=Z,1.5nm,0.6s						
AKASG	Malin Array Be	88.84	321	LR	LR	17 17 48.2	
	comp=Z,211nm,19.5s,baz=68,slow=38						
AKBB	Malin Array Si	88.84	321	⇓eP	P	16 34 46.2	-1.8
AKBB				pmax	pmax		
	comp=Z,16nm,2.5s						
M31M	Drury Creek, Y	88.98	27	IAmb	IAmb	16 35 16.4	
	comp=Z,30nm,1.9s						
MNK	Minsk	89.02	325	i P	P	16 34 49.2	+0.4
MNK				i		16 38 18.4	
MNK				i PPP	PPP	16 40 14.4	
MNK				i S	SKSac	16 45 18.4	+0.1
MNK				i SS	SS	16 51 32.5	+2.9
MNK				i SSS	SSS	16 55 10.1	
MNK				pmax	pmax		
	comp=N,16nm,1.0s						
MNK				pmax	pmax		
	comp=E,10.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,12nm,0.9s						
MNK				MLR	MLR		
	comp=Z,213nm,19.0s						
MNK				MLR	MLR		
	comp=N,155nm,19.0s						

LUBAR	**Lubar, Ukraine**	**89.89**	**320**	P	**P**	**16 34 52.6**	**-0.4**
MLR	**Muntele Rosu**	**91.92**	**316**	LR	LR	17 21 03.6	
	comp=N,338nm,20.5s,baz=65,slow=39						
QSPA	**South Pole Qui**	**96.47**	**180**	P	**P**	**16 35 21.7**	**-1.3**
	comp=N,1.8nm,0.8s,baz=317,slow=1.8,SNR=11						
	comp=N,1.8nm,0.8s						
QSPA	**South Pole Qui**	**96.47**	**180**		**P**	**16 35 21.6**	**-1.5**
VRAC	**Vranov**	**97.08**	**321**	LR	LR	17 22 22.2	
	comp=N,146nm,19.3s,baz=47,slow=37						
YKA	**Yellowknife Ar**	**97.47**	**24**	P	Pdif	16 35 28.3	+0.7
	comp=N,0.4nm,0.6s,baz=300,slow=6.4,SNR=5.0						
	comp=N,0.4nm,0.6s						
PDAR	**Pinedale Array**	**110.08**	**40**	PP	**PP**	**16 40 52.7**	**-6.4**
	comp=N,0.7nm,0.9s,baz=297,slow=7.3,SNR=3.9						
TXAR	**Lajitas Array**	**120.88**	**50**	PKP	**PKPdf**	**16 40 46.5**	**-0.6**
	comp=N,0.5nm,0.9s,baz=315,slow=0.4,SNR=4.7						
PLCA	**Paso Flores**	**143.13**	**160**	PKhKP	PKPpre	16 41 24.0	
	comp=N,5.1nm,1.1s,baz=247,slow=4.1,SNR=9.0						
PLCA				PKP	**PKPdf**	**16 41 27.3**	**-1.2**
	comp=N,5.1nm,1.1s,baz=211,slow=2.6,SNR=9.2						
CPUP	**Villa Florida**	**160.19**	**173**	PKPab	**PKPab**	**16 42 33.1**	**-1.0**
	comp=N,0.4nm,0.5s,baz=141,slow=5.4,SNR=5.6						
LPAZ	**La Paz**	**163.64**	**127**	PKP	**PKPdf**	**16 41 56.8**	**-1.9**
	comp=N,5.5nm,1.2s,baz=21,slow=4.4,SNR=8.1						

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*NEIC **16** 16:30:41.1±2.0, 18°.4N±0°.3×68°.97W±0°.09, h112^{km}±19^{km}, ML3.3/14, Md3.6/10(RSPR), Error ellipse: s-maj=51.5km s-min=6.8km az=191.0*
*SDD **16** 16:30:42.7±2.7, 18°.55N×68°.96W, h127^{km}±13^{km}, MD3.7, ML3.5, MW3.7, Presumed earthquake*
*OSPL **16** 16:30:43.0±1.2, 18°.31N×68°.93W, h124^{km}±10^{km}, ML3.2, Presumed earthquake*
*RSPR **16** 16:30:44.4, 18°.24N×68°.54W, h147^{km}±4^{km}, MD3.6/10*
ISC 16 16:30:40.7±1.4, **18°.50N**±0°.07×**68°.92W**±0°.03, **h123**^{km}±9^{km}, **n66**, σ**1s.09**/88, **33C-7D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIDR	**Miches**	**0.50**	**346**	⇑ePg	**Pn**	**16 30 58.9**	**-0.1**
MIDR				⇑eSg	**Sn**	**16 31 12.5**	**-0.3**
MIDR				IAML		16 31 13.6	
	comp=N,1µm,0.2s						
PCDR	**Punta Cana, DR**	**0.51**	**88**	⇑ePg	**Pn**	**16 30 59.4**	**+0.4**
PCDR				⇑eSg	**Sn**	**16 31 14.5**	**+1.7**
PCDR				IAML		16 31 16.8	
	comp=N,2µm,0.6s						
DR12	**Loma Pena Alta**	**0.52**	**304**	Pn	**Pn**	**16 30 58.9**	**-0.3**
HATOM	**Hato Mayor del**	**0.52**	**304**	⇑ePg	**Pn**	**16 30 59.0**	**-0.2**
HATOM				⇑eSg	**Sn**	**16 31 12.8**	**-0.3**
HATOM				IAML		16 31 13.4	
	comp=N,3µm,0.6s						
SMDR	**Samana, DR**	**0.83**	**342**	⇑ePg	**Pn**	**16 31 00.6**	**-0.8**
SMDR				⇑eSg	**Sn**	**16 31 16.0**	**-1.0**
SMDR				IAML		16 31 21.4	
	comp=N,1µm,0.3s						
SDD	**Santo Domingo**	**0.94**	**268**	Pn	**Pn**	**16 31 01.6**	**-0.8**
SDD				IAML		16 31 22.0	
	comp=E,370nm,0.2s						
SDD				IAML		16 31 26.0	
	comp=N,407nm,0.6s						
SDD	**Santo Domingo**	**0.94**	**268**	⇑ePg	**Pn**	**16 31 02.8**	**+0.4**
SDD				⇑eSg	**Sn**	**16 31 19.1**	**+0.3**
SDD				IAML		16 31 25.9	
	comp=N,142nm,0.9s						
SDD	**Santo Domingo**	**0.94**	**268**	*i* P	**Pn**	**16 31 02.8**	**+0.4**
SDD				eS	**Sn**	**16 31 19.4**	**+0.6**
DR08	**Loma La Naviza**	**1.14**	**294**	⇑ePg	**Pn**	**16 31 03.4**	**-1.0**
DR08				⇑eSg	**Sn**	**16 31 21.9**	**-0.6**
DR08				IAML		16 31 23.2	
	comp=N,32µm,0.2s						
NADR	**Nagua**	**1.23**	**314**	⇑ePg	**Pn**	**16 31 04.8**	**-0.5**
NADR				⇑eSg	**Sn**	**16 31 23.1**	**-0.8**
NADR				IAML		16 31 28.9	
	comp=N,3µm,0.3s						
BANI	**BANI**	**1.37**	**266**	Pn	**Pn**	**16 31 06.0**	**-1.0**
BANI	**BANI**	**1.37**	**266**	⇑ePg	**Pn**	**16 31 08.6**	**+1.7**
BANI				IAML		16 31 33.0	
	comp=N,986nm,0.2s						
IDE	**Isla Desecheo**	**1.38**	**94**		**Pn**	**16 31 07.0**	**+0.1**
IDE					**Sn**	**16 31 27.7**	**+0.8**
IDE	**Isla Desecheo**	**1.38**	**94**	⇑eP	**Pn**	**16 31 07.0**	**+0.1**
IDE	**Isla Desecheo**	**1.38**	**94**	eS	**Sn**	**16 31 27.7**	**+0.8**
SFDR	**San Fco. de Ma**	**1.48**	**302**	⇑ePg	**Pn**	**16 31 07.3**	**-0.8**
SFDR				⇑eSg	**Sn**	**16 31 29.1**	**+0.3**
SFDR				IAML		16 31 39.0	
	comp=N,2µm,0.4s						
CADR	**Cabrera**	**1.51**	**321**	⇑eSg	**Sn**	**16 31 28.1**	**-1.5**
CADR				IAML		16 31 28.9	
	comp=N,2µm,0.3s						
ABDR	**Alto Bandera**	**1.65**	**281**	⇑ePg	**Pn**	**16 31 11.3**	**+0.9**
ABDR				IAML		16 31 38.5	
	comp=N,0.2nm,0.7s						
AGPR	**Aguadilla, PR**	**1.72**	**91**		**Pn**	**16 31 12.6**	**+1.8**
AGPR					**Sn**	**16 31 34.0**	**+0.1**
AGPR	**Aguadilla, PR**	**1.72**	**91**	⇓eP	**Pn**	**16 31 12.6**	**+1.8**
AGPR	**Aguadilla, PR**	**1.72**	**91**	eS	**Sn**	**16 31 34.0**	**+0.1**
AGPR	**Aguadilla, PR**	**1.72**	**91**	⇓ePg	**Pn**	**16 31 12.7**	**+1.8**
AGPR				⇑eSg	**Sn**	**16 31 35.5**	**+1.6**
AGPR				IAML		16 31 45.1	
	comp=N,303nm,0.2s						
AGPR	**Aguadilla, PR**	**1.72**	**91**	*i* P	**Pn**	**16 31 12.2**	**+1.3**
AGPR				IAML		16 31 40.4	
	comp=Z,157nm,0.4s						
LSP	**Las Mesas**	**1.77**	**100**		**Pn**	**16 31 13.0**	**+1.4**
LSP	**Las Mesas**	**1.77**	**100**	⇑eP	**Pn**	**16 31 13.0**	**+1.4**
CRPR	**Cabo Rojo, PR**	**1.79**	**106**		**Pn**	**16 31 12.3**	**+0.6**
CRPR					**Sn**	**16 31 33.5**	**-1.8**
CRPR	**Cabo Rojo, PR**	**1.79**	**106**	⇓eP	**Pn**	**16 31 12.3**	**+0.6**
CRPR	**Cabo Rojo, PR**	**1.79**	**106**	eS	**Sn**	**16 31 33.5**	**-1.8**
CRPR	**Cabo Rojo, PR**	**1.79**	**106**	⇑ePg	**Pn**	**16 31 12.3**	**+0.6**
CRPR				⇑eSg	**Sn**	**16 31 36.6**	**+1.2**
CRPR				IAML		16 31 44.0	
	comp=N,143nm,0.9s						
CRPR	**Cabo Rojo, PR**	**1.79**	**106**	*i* P	**Pn**	**16 31 12.6**	**+0.9**
CRPR				eS	**Sn**	**16 31 34.0**	**-1.4**
CRPR				IAML		16 31 44.2	
	comp=Z,94nm,0.5s						
MLPR	**Magueyes Islan**	**1.86**	**106**	⇓eP	**Pn**	**16 31 13.1**	**+0.5**
MLPR	**Magueyes Islan**	**1.86**	**106**	eS	**Sn**	**16 31 35.4**	**-1.5**
MLPR	**Magueyes Islan**	**1.86**	**106**	⇑ePg	**Pn**	**16 31 13.2**	**+0.7**
MLPR				⇑eSg	**Sn**	**16 31 37.6**	**+0.7**
MLPR				IAML		16 31 48.8	
	comp=N,36nm,0.2s						
SC01	**Santiago de lo**	**1.94**	**299**	Pn	**Pn**	**16 31 13.8**	**+0.2**
SC01					**Sn**	**16 31 39.0**	**+0.2**
SC01				IAML		16 31 44.7	
	comp=N,506nm,0.7s						
SC01	**Santiago de lo**	**1.94**	**299**	*i* P	**Pn**	**16 31 16.5**	**+2.9**
SC01				eS	**Sn**	**16 31 40.0**	**+1.2**
AOPR	**Arecibo Observ**	**2.06**	**94**		**Pn**	**16 31 15.4**	**+0.3**
AOPR					**Sn**	**16 31 40.9**	**-0.5**
AOPR	**Arecibo Observ**	**2.06**	**94**	⇑eP	**Pn**	**16 31 15.4**	**+0.3**
AOPR	**Arecibo Observ**	**2.06**	**94**	eS	**Sn**	**16 31 40.9**	**-0.5**
AOPR	**Arecibo Observ**	**2.06**	**94**	⇓ePg	**Pn**	**16 31 15.5**	**+0.3**
AOPR				⇑eSg	**Sn**	**16 31 42.0**	**+0.6**
AOPR				IAML		16 31 49.5	
	comp=N,417nm,0.3s						
UUPR	**Utuado, UPR, P**	**2.10**	**96**		**Pn**	**16 31 16.6**	**+1.0**
UUPR					**Sn**	**16 31 41.7**	**-0.6**
UUPR	**Utuado, UPR, P**	**2.10**	**96**	⇑eP	**Pn**	**16 31 16.6**	**+1.0**
UUPR	**Utuado, UPR, P**	**2.10**	**96**	eS	**Sn**	**16 31 41.7**	**-0.6**
OBIP	**Obispado Ponce**	**2.25**	**101**		**Pn**	**16 31 16.8**	**-0.6**
OBIP				IAML		16 31 54.6	
	comp=E,103nm,0.4s						
OBIP	**Obispado Ponce**	**2.25**	**101**		**Sn**	**16 31 43.9**	**-1.6**
OBIP	**Obispado Ponce**	**2.25**	**101**	⇑eP	**Pn**	**16 31 18.1**	**+0.7**
OBIP	**Obispado Ponce**	**2.25**	**101**	eS	**Sn**	**16 31 43.9**	**-1.6**
EMPR	**Esperanza - Ma**	**2.27**	**90**		**Pn**	**16 31 17.9**	**+0.3**
EMPR					**Sn**	**16 31 45.7**	**-0.3**
EMPR	**Esperanza - Ma**	**2.27**	**90**	⇓eP	**Pn**	**16 31 17.9**	**+0.3**
EMPR	**Esperanza - Ma**	**2.27**	**90**	eS	**Sn**	**16 31 45.7**	**-0.3**
SDDR	**Presa de Saban**	**2.29**	**283**		**Pn**	**16 31 18.4**	**+0.4**
SDDR	**Presa de Saban**	**2.29**	**283**	IAML		16 31 53.0	
	comp=E,131nm,0.6s						
SDDR				IAML		16 31 53.2	
	comp=E,171nm,0.7s						
SDDR	**Presa de Saban**	**2.29**	**283**	⇑ePg	**Pn**	**16 31 19.1**	**+1.1**
SDDR				IAML		16 31 59.5	
	comp=N,108nm,0.6s						
SDDR	**Presa de Saban**	**2.29**	**283**	*i* P	**Pn**	**16 31 19.2**	**+1.1**
SDDR				IAML		16 31 53.1	
	comp=Z,108nm,0.6s						
LUDR	**Luperon**	**2.37**	**306**	⇑eSg	**Sn**	**16 31 47.5**	**-0.8**
LONE3	**El Aguacate, B**	**2.41**	**273**	*i* P	**Pn**	**16 31 20.2**	**+0.6**
LONE3				IAML		16 31 57.9	
	comp=Z,42nm,0.3s						
LODU1	**El Espartillar**	**2.43**	**267**	*i* P	**Pn**	**16 31 19.8**	**+0.2**
LODU1				IAML		16 32 01.9	
	comp=Z,100nm,0.4s						
LOVI	**El Cajuil, Ovi**	**2.43**	**254**	*i* P	**Pn**	**16 31 19.7**	**0.0**
LOVI				eS	**Sn**	**16 31 47.4**	**-2.2**
LOVI				IAML		16 31 49.3	
	comp=Z,142nm,0.4s						
ECPR	**Experimental S**	**2.44**	**94**	⇑eP	**Pn**	**16 31 19.6**	**-0.2**
ECPR	**Experimental S**	**2.44**	**94**	eS	**Sn**	**16 31 47.4**	**-2.3**
LOPP1	**Punta Rusia, P**	**2.54**	**302**	*i* P	**Pn**	**16 31 22.7**	**+1.6**
LOPP1				IAML		16 31 53.0	
	comp=Z,147nm,0.5s						
LOBH	**Bahia de las A**	**2.66**	**257**	*i* P	**Pn**	**16 31 23.1**	**+0.5**
LOBH				IAML		16 32 00.6	
	comp=Z,82nm,0.7s						
SJG	**San Juan**	**2.66**	**98**		**Sn**	**16 31 54.7**	**-0.2**
GCPR	**Guaynabo City**	**2.70**	**94**		**Sn**	**16 31 53.6**	**-2.3**
GCPR	**Guaynabo City**	**2.70**	**94**		**Pn**	**16 31 22.9**	**-0.2**
GCPR				IAML		16 31 59.7	
	comp=N,68nm,0.6s						
GCPR				IAML		16 32 00.4	
	comp=E,94nm,0.6s						
GCPR	**Guaynabo City**	**2.70**	**94**	⇓eP	**Pn**	**16 31 23.7**	**+0.6**
GCPR	**Guaynabo City**	**2.70**	**94**	eS	**Sn**	**16 31 53.6**	**-2.3**

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*DJA **16** 16:31:53.7±2.2, 7°N±20°×12°5E±°, h61^{km}±18^{km}, M4.8/7, mB5.3/1, mb4.8/7, MLv4.8/7, Mw(mB)4.7/1*
*IDC **16** 16:31:56.4±0.7, 6°.51N×125°.30E, h0^{km}, mb3.9/10, mbtmp3.9/10, Error ellipse: s-maj=21.2km s-min=8.0km az=109.0*
*NEIC **16** 16:31:58.4±1.4, 6°.61N±0°.05×125°.31E±0°.08, h11^{km}±5^{km}, mb4.4/28, Error ellipse: s-maj=12.7km s-min=6.4km az=115.0*
ISC 16 16:31:57.5±0.5, **6°.62N**±0°.05×**125°.22E**±0°.08, **h10**^{km}, **n59**, σ**1s.25**/60, **mb4.2**/23, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.57**	**38**	Pg	**Pg**	**16 32 08.9**	**+0.2**
	754nm,0.3s,baz=55,slow=1.0,SNR=32						
DAV				Lg	Lg	16 32 16.2	
	2µm,0.3s,baz=55,slow=22,SNR=19						
DAV	**Davao City (W)**	**0.57**	**38**		**Pg**	**16 32 08.7**	**0.0**
DAV	**Davao City (W)**	**0.57**	**38**	P	**Pg**	**16 32 08.9**	**+0.2**
DAV				S	**Sn**	**16 32 19.4**	**-1.9**
SGSI	**Sangihe**	**2.93**	**174**	P	**Pn**	**16 32 46.7**	**+2.5**
TNTI	**Ternate**	**6.19**	**160**	Pn	**Pn**	**16 33 29.4**	**+0.4**
TNTI	**Ternate**	**6.19**	**160**	P	**Pn**	**16 33 32.7**	**+3.7**
	26nm,0.9s						
GTOI	**Gorontalo**	**6.34**	**200**	P	**Pn**	**16 33 31.3**	**+0.2**
	0.4nm128nm,0.6s						
MRSI	**Marisa**	**6.92**	**208**	P	**Pn**	**16 33 39.8**	**+0.7**
	0.5nm138nm,0.6s						
TOLI2	**Tolitoli**	**7.04**	**219**	Pn	**Pn**	**16 33 39.5**	**-1.2**
LUWI	**Luwuk**	**7.99**	**198**	Pn	**Pn**	**16 33 55.5**	**+1.7**
LUWI	**Luwuk**	**7.99**	**198**	P	**Pn**	**16 33 57.5**	**+3.7**
	2µm54nm,0.7s						
SANI	**Sanana**	**8.64**	**175**	P	**Pn**	**16 34 03.4**	**+0.7**
	17nm,0.7s						
TTSI	**Tana Toraja**	**11.01**	**210**	P	**Pn**	**16 34 31.8**	**-3.4**
BKB	**Balikpapan**	**11.41**	**227**	Pn	**Pn**	**16 34 41.4**	**+0.6**
SOEI	**Soe**	**16.29**	**183**	P	**P**	**16 35 49.8**	**+0.1**
BATI	**Baumata**	**16.78**	**185**	Pn	**P**	**16 35 56.6**	**+1.5**
	2.3nm,0.3s,baz=356,slow=3.1,SNR=6.3						
YOJ	**Yonaguni jima**	**17.87**	**353**		**Pn**	**16 36 06.5**	**+0.1**
TATO	**Taipei**	**18.60**	**349**		**Pn**	**16 36 16.5**	**+1.2**
MTN	**Manton Dam**	**20.20**	**163**	P	**P**	**16 36 33.2**	**+0.5**
MTN				IAmb	IAmb	16 36 35.5	
	comp=Z,30nm,1.3s						
KNRA	**Kununurra**	**22.43**	**171**	P	**P**	**16 36 57.0**	**+0.4**
KNRA				IAmb	IAmb	16 37 01.7	
	comp=Z,15nm,0.8s						
FITZ	**Fitzroy Crossi**	**24.56**	**179**	P	**P**	**16 37 17.3**	**-0.4**
	comp=Z,3.1nm,0.4s,baz=3.0,slow=7.0,SNR=15						
	comp=Z,3.1nm,0.4s						
FITZ	**Fitzroy Crossi**	**24.56**	**179**	P	**P**	**16 37 17.4**	**-0.3**
JNU	**Nakatsue**	**26.89**	**11**	P	**P**	**16 37 38.0**	**-0.8**
PMG	**Port Moresby**	**27.04**	**126**	P	**P**	**16 37 39.0**	**-1.3**
PMG				IAmb	IAmb	16 37 51.7	
	comp=Z,5.1nm,0.8s						
COEN	**Coen**	**27.12**	**139**	P	**P**	**16 37 40.0**	**-0.9**
WB0	**Warramunga Arr**	**27.73**	**161**	P	**P**	**16 37 45.8**	**-0.6**
WB0				IAmb	IAmb	16 38 01.5	
	comp=Z,11nm,1.4s						
WRAB	**Tennant Creek**	**27.87**	**161**	P	**P**	**16 37 47.0**	**-0.6**
WRAB				IAmb	IAmb	16 38 18.1	
	comp=Z,5.1nm,0.9s						
WRA	**Warramunga Arr**	**27.88**	**161**	P	**P**	**16 37 46.4**	**-1.3**
	comp=Z,1.0nm,0.6s,baz=331,slow=11,SNR=9.2						
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**27.88**	**161**	P	**P**	**16 37 46.6**	**-1.0**
WR8	**Warramunga Arr**	**27.94**	**161**	P	**P**	**16 37 47.6**	**-0.7**
WR8				IAmb	IAmb	16 38 03.8	
	comp=Z,9.4nm,1.4s						
GSI	**Gunungsitoli**	**28.07**	**260**	P	**P**	**16 37 49.4**	**-0.2**
CMAR	**Chiang Mai Arr**	**28.18**	**297**	P	**P**	**16 37 51.0**	**+0.6**
	comp=Z,0.8nm,0.9s,baz=114,slow=8.7,SNR=5.8						
	comp=Z,0.8nm,0.9s						
KSAR	**Wonju Array Be**	**30.78**	**4**	P	**P**	**16 38 14.6**	**+1.3**
AS31	**Alice Springs**	**31.27**	**165**	P	**P**	**16 38 17.0**	**-0.8**
ASAR	**Alice Springs**	**31.27**	**165**	P	**P**	**16 38 16.9**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=343,slow=7.2,SNR=21						
	comp=Z,0.7nm,0.5s						
ASAR	**Alice Springs**	**31.27**	**165**	P	**P**	**16 38 17.2**	**-0.6**
SHL	**Shillong**	**36.99**	**304**	P	**P**	**16 39 07.2**	**-0.4**
SHL				IAmb	IAmb	16 39 32.5	
	comp=Z,4.1nm,0.9s						
FORT	**Forrest**	**37.28**	**176**	P	**P**	**16 39 09.5**	**-0.3**
FORT				IAmb	IAmb	16 39 29.9	
	comp=Z,3.6nm,0.8s						
INKA	**Innaminka**	**37.31**	**157**	P	**P**	**16 39 09.5**	**-0.5**
USRK	**Ussuriysk Ar.**	**37.90**	**8**	P	**P**	**16 39 16.8**	**+1.9**
	comp=Z,1.6nm,0.8s,baz=138,slow=4.8,SNR=5.8						
	comp=Z,1.6nm,0.8s						
JEW	**Eniwo**	**38.82**	**19**	P	**P**	**16 39 21.7**	**-0.9**
NWAO	**Narrogin (SRO)**	**40.05**	**190**	P	**P**	**16 39 33.5**	**+0.4**
BBOO	**Buckleboo**	**40.54**	**166**	P	**P**	**16 39 36.4**	**-0.7**
BBOO				IAmb	IAmb	16 39 44.8	
	comp=Z,8.1nm,0.8s						
STKA	**Stephens Creek**	**41.34**	**159**	P	**P**	**16 39 43.2**	**-0.6**
	comp=Z,3.3nm,0.7s,baz=328,slow=7.5,SNR=7.7						
	comp=Z,3.3nm,0.7s						
STKA	**Stephens Creek**	**41.34**	**159**	P	**P**	**16 39 43.0**	**-0.7**
HIA	**Hailar**	**42.76**	**355**	P	**P**	**16 39 54.1**	**-1.0**
HIA				IAmb	IAmb	16 40 16.7	
	comp=Z,8.5nm,1.0s						
DZM	**Mont Dzumac**	**49.43**	**126**	P	**P**	**16 40 46.9**	**-1.3**
PETK	**Petropavlovsk-**	**53.38**	**24**	P	**P**	**16 41 18.2**	**+1.1**
	comp=Z,2.3nm,0.9s,baz=201,slow=3.1,SNR=5.6						
	comp=Z,2.3nm,0.9s						
PETK	**Petropavlovsk-**	**53.38**	**24**	P	**P**	**16 41 17.5**	**+0.4**
MKAR	**Makanchi Array**	**54.35**	**325**	P	**P**	**16 41 25.0**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=130,slow=8.4,SNR=7.1						
	comp=Z,0.8nm,0.6s						
MKAR	**Makanchi Array**	**54.35**	**325**	P	**P**	**16 41 24.8**	**+0.4**
ARSB	**Arslanbob**	**57.76**	**315**	P	**P**	**16 41 49.4**	**+0.2**
ARSB				IAmb	IAmb	16 42 02.9	
	comp=Z,4.0nm,1.0s						
KURBB	**Kurchatov Arra**	**58.52**	**327**	P	**P**	**16 41 56.2**	**+2.2**
	comp=Z,1.2nm,0.8s,baz=127,slow=6.1,SNR=9.3						
	comp=Z,1.2nm,0.8s						
KURK	**Kurchatov**	**58.52**	**327**	P	**P**	**16 41 55.2**	**+1.2**
KURK				IAmb	IAmb	16 42 04.8	
	comp=Z,2.4nm,0.9s						
KKAR	**Karatay Array**	**60.12**	**316**	P	**P**	**16 42 04.7**	**-0.7**
C16K	**Lisburne Hills**	**76.34**	**21**	P	**P**	**16 43 47.1**	**+0.6**
C16K				IAmb	IAmb	16 44 24.7	
	comp=Z,7.1nm,1.5s						
C23K	**Itkillik River**	**81.81**	**20**	P	**P**	**16 44 16.8**	**+0.4**
TOLK	**Toolik Lake Re**	**82.13**	**22**	P	**P**	**16 44 18.8**	**+0.5**
TOLK				IAmb	IAmb	16 44 23.8	
	comp=Z,4.5nm,1.1s						
ILAR	**Eielson Array**	**83.16**	**26**	P	**P**	**16 44 24.2**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=248,slow=5.3,SNR=7.1						
	comp=Z,0.5nm,0.7s						

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*FUNV **16** 16:41:13.6, 8°.19N×71°.85W, h2^{km}, MW3.1*
*RSNC **16** 16:41:13.1±0.0, 8°N±2°×7°2W±°, h4^{km}±6^{km}, M2.4, ML2.1*
ISC 16 16:41:10.7±1.5, **8°.22N**±0°.04×**71°.83W**±0°.03, **h0**^{km}±12^{km}, **n18**, σ**1s.63**/31, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**0.59**	**233**	eP	**Pb**	**16 41 24.5**	**+0.4**
CAPV				eS	**Sb**	**16 41 32.3**	**-0.9**
SOCV	**Socops**	**0.97**	**86**	eS	**Sn**	**16 41 46.5**	**+0.4**
PAMC	**Pamplona, Colo**	**1.23**	**224**	P	**Pg**	**16 41 34.5**	**+0.2**
PAMC				S	**Sg**	**16 41 50.8**	**+0.6**
SDV	**Santo Domingo**	**1.36**	**61**	P	**Pn**	**16 41 38.0**	**+0.9**
SDV				S	**Sg**	**16 41 54.8**	**+0.4**
OCAC	**Ocana**	**1.47**	**271**	P	**Pn**	**16 41 37.1**	**-1.5**
OCAC				S	**Sg**	**16 41 55.6**	**-2.4**
MCQV	**Machiques**	**1.94**	**339**	eP	**Pb**	**16 41 47.5**	**+0.5**
MCQV				eS	**Sb**	**16 42 12.5**	**+0.7**
BARC	**Barichara**	**2.10**	**220**	P	**Pn**	**16 41 48.9**	**+1.5**
BARC				S	**Sn**	**16 42 15.5**	**+1.2**
BRJC	**Barrancabermej**	**2.26**	**237**	P	**Pn**	**16 41 50.0**	**+0.6**
BRJC				S	**Sn**	**16 42 19.6**	**+1.6**
RUSC	**La Rusia**	**2.63**	**208**	P	**Pn**	**16 41 55.1**	**+0.3**
PTBC	**PUERTO BERRIO,**	**3.09**	**237**	P	**Pn**	**16 42 00.1**	**-0.7**
PTBC				S	**Sb**	**16 42 44.1**	**-0.8**
TEPV	**Terepaima**	**3.13**	**56**	eP	**Pn**	**16 42 04.0**	**+2.6**
TEPV				eS	**Sn**	**16 42 40.2**	**+0.7**
MAPV	**Macapo**	**3.70**	**64**	eP	**Pn**	**16 42 11.0**	**+1.9**
MAPV				eS	**Sn**	**16 42 53.8**	**+0.3**
SJCC	**San Jacinto, C**	**3.70**	**297**	P	**Pn**	**16 42 08.9**	**-0.3**
NORC	**Norcasia**	**4.01**	**229**	P	**Pn**	**16 42 14.5**	**+1.1**
NORC				S	**Sn**	**16 43 02.5**	**+1.3**
TURV	**Turiamo**	**4.52**	**60**	eP	**Pn**	**16 42 21.4**	**+1.0**
TURV				eS	**Sn**	**16 43 12.7**	**-1.1**
BENV	**Beln**	**4.53**	**67**	eP	**Pn**	**16 42 22.2**	**+1.6**
BENV				eS	**Sn**	**16 43 12.9**	**-1.1**
TACV	**Tcata**	**5.11**	**68**	eS	**Sn**	**16 43 26.7**	**-1.8**
CACV	**CAICARA DEL OR**	**5.28**	**97**	eP	Pb	16 42 39.8	-4.2
CACV				eS	**Sb**	**16 43 42.6**	**-5.4**

IDC 16 16:44:54.4±1.0, **6°.46N**×**125°.33E, h0**^{km}**, mb3.5**/5, **mbtmp3.5**/5, **Error ellipse: s-maj=35.6km s-min=12.9km az=99.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.66**	**22**	Pg	Pg	16 45 07.0	0.0
	172nm,0.3s,baz=239,slow=1.8,SNR=17						
FITZ	**Fitzroy Crossi**	**24.40**	**179**	P	P	16 50 15.5	+0.9
	1.0nm,0.5s,baz=11,slow=7.3,SNR=10.0						
	1.0nm,0.5s						
COEN	**Coen**	**26.93**	**139**	P	P	16 50 38.6	+1.0
	comp=Z,426nm,1.0s,comp=Z,0.0nm						
COEN	**Coen**	**26.93**	**139**	P	P	16 50 37.0	-0.6
WRA	**Warramunga Arr**	**27.69**	**162**	P	P	16 50 43.4	-1.1
	comp=Z,0.5nm,0.9s,baz=334,slow=9.3,SNR=2.8						
	comp=Z,0.5nm,0.9s						
ASAR	**Alice Springs**	**31.09**	**165**	P	P	16 51 14.5	-0.1
	comp=Z,0.2nm,0.6s,baz=339,slow=7.0,SNR=9.0						
	comp=Z,0.2nm,0.6s						
MKAR	**Makanchi Array**	**54.53**	**325**	P	P	16 54 25.3	+1.1
	comp=Z,0.5nm,0.9s,baz=139,slow=9.4,SNR=2.4						
	comp=Z,0.5nm,0.9s						
KURBB	**Kurchatov Arra**	**58.70**	**327**	P	P	16 54 52.8	-1.0
	comp=Z,0.4nm,0.7s,baz=121,slow=5.4,SNR=4.9						
	comp=Z,0.4nm,0.7s						

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*NEIC **16** 16:46:47.9, 8°.54S×159°.06E, h70^{km}, Moment Tensor Solution. Duration: 2s.7 Moment tensor: Scale 10^{17}Nm; M_{rr}0.87; $M_{\theta\theta}$0.63; $M_{\phi\phi}$-1.50; $M_{r\theta}$-1.07; $M_{\theta\phi}$-0.45; $M_{\phi r}$0.58; Fault plane solution: $M_0$1.84000×10^{17} NP1: ϕ_s224.59000°, δ50.04000°, λ149.19000°. NP2: ϕ_s335.55000°, δ66.88000°, λ44.30000°. Principal axes: T 1.9777, Plg47.0000°, Azm198.0000°; N -0.3188, Plg41.0000°, Azm357.0000°; P -1.6589, Plg10.0000°, Azm96.0000°;*
*BJI **16** 16:46:47.3, 8°.39S×158°.98E, h85^{km}, mB5.3/37, mb5.3/83, Ms4.9/41, Ms7 4.5/47*
*NEIC **16** 16:46:47.9, 8°.44S×158°.96E, h70^{km}*
*NEIC **16** 16:46:47.8±1.8, 8°.44S±0°.09×158°.98E±0°.08, h71^{km}±4^{km}, mb5.5/162, Mwb5.4/19, Mww5.4/33, Error ellipse: s-maj=14.5km s-min=10.4km az=218.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.57; $M_{\theta\theta}$0.39; $M_{\phi\phi}$-0.95; $M_{r\theta}$-1.05; $M_{\theta\phi}$-0.03; $M_{\phi r}$0.33; Fault plane solution: $M_0$1.38000×10^{17} NP1:ϕ_s208.90000°, δ41.20000°, λ153.53000°. NP2:ϕ_s319.44000°, δ72.93000°, λ51.92000°. Principal axes: T 1.5555, Plg48.0000°, Azm189.0000°; N -0.4917, Plg36.0000°, Azm332.0000°; P -1.0638, Plg19.0000°, Azm77.0000°;*
*MOS **16** 16:46:48.6±0.9, 8°.36S×158°.87E, h70^{km}, mb5.4/38 Error ellipse: s-maj=7.8km s-min=5.7km az=111.8*
*NEIC **16** 16:46:49.4, 8°.41S×158°.97E, h86^{km}*
*GCMT **16** 16:46:49.8±0.1, 8°.47S±0°.01×159°.01E±0°.01, h74^{km}±1^{km}, MW5.5/147, Moment Tensor Solution. s125,c220; s147,c281; Duration: 1s.3 Moment tensor: Scale 10^{17} Nm; M_{rr}0.70±.02; $M_{\theta\theta}$0.90±.02; $M_{\phi\phi}$-1.60±.02; $M_{r\theta}$-1.18±.02; $M_{\theta\phi}$0.02±.02; $M_{\phi r}$0.60±.02; Best double couple: $M_0$1.90800×10^{17} NP1:ϕ_s215.00000°, δ46.00000°, λ157.00000°. NP2:ϕ_s321.00000°, δ74.00000°, λ46.00000°. Principal axes: T 2.0270, Plg43.0000°, Azm189.0000°; N -0.2410, Plg42.0000°, Azm336.0000°; P -1.7890, Plg17.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*GFZ **16** 16:46:49.3, 8°.34S×158°.89E, h75^{km}, MW5.4, Moment Tensor Solution. s97 Moment tensor: M_{rr}0.69; $M_{\theta\theta}$0.26; $M_{\phi\phi}$-0.95; $M_{r\theta}$-0.94; $M_{\theta\phi}$0.12; $M_{\phi r}$0.50; Fault plane solution: NP1:ϕ_s201.00000°, δ34.00000°, λ149.00000°. NP2:ϕ_s318.00000°, δ73.00000°, λ60.00000°. Principal axes: T 1.4800, Plg52.0000°, Azm192.0000°; N -0.2700, Plg28.0000°, Azm327.0000°; P -1.2100, Plg23.0000°, Azm70.0000°;*
*IDC **16** 16:46:50.8±1.6, 8°.48S×158°.91E, h101^{km}±13^{km}, mb5.0/28, mbtmp5.4/31, MS4.2/42 Error ellipse: s-maj=10.5km s-min=8.9km az=135.0*
ISC 16 16:46:48.8±0.3, **8°.47S**±0°.03×**158°.98E**±0°.03, **h84**^{km}±1^{km}, **h85**^{km}**:pP-P, n954**, σ**1s.31**/969, **mb5.4**/197, **63C-42D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TATA	**Tatamba Isabel**	**0.82**	**85**	P	**Pn**	**16 47 04.9**	**-1.2**
TATA	**Tatamba Isabel**	**0.82**	**85**	S	**Sn**	**16 47 19.0**	**0.0**
SAVO	**Savo Central**	**1.07**	**129**	P	**Pn**	**16 47 08.1**	**-0.9**
ALEG	**Aligegeo Malai**	**1.72**	**100**	P	**Pn**	**16 47 17.6**	**+0.4**
ALEG	**Aligegeo Malai**	**1.72**	**100**	S	**Sn**	**16 47 40.1**	**+1.3**
NGOA	**Tingoa Renbel**	**3.25**	**161**	P	**Pn**	**16 47 37.3**	**-0.3**
HURO	**Huro Makira**	**3.50**	**125**	P	**Pn**	**16 47 42.4**	**+1.4**
HURO	**Huro Makira**	**3.50**	**125**	S	**Sn**	**16 48 24.4**	**+2.9**
RABL	**Rabaul**	**7.99**	**302**		**Pn**	**16 48 41.5**	**-0.8**
RABL				Sn	**Sn**	**16 50 09.2**	**-1.9**
SANVU	**Saraoutou**	**10.62**	**132**		**Pn**	**16 49 17.3**	**-0.8**
SANVU				Sn	**Sn**	**16 51 10.9**	**-4.4**
SANVU	**Saraoutou**	**10.62**	**132**	P	**Pn**	**16 49 19.8**	**+1.7**
SANVU	**Saraoutou**	**10.62**	**132**	S	**Sn**	**16 51 18.8**	**+3.5**
PMG	**Port Moresby**	**11.71**	**265**	P	**Pn**	**16 49 37.5**	**+4.6**
	62nm,0.9s,baz=79,slow=7.4,SNR=55						
PMG				S	Sn	16 51 53.1	+11
	61nm,0.9s,baz=0.0,slow=2.0,SNR=1.5						
PMG	**Port Moresby**	**11.71**	**265**		**Pn**	**16 49 36.5**	**+3.6**
PMG	**Port Moresby**	**11.71**	**265**	P	**Pn**	**16 49 33.2**	**+0.3**
PMG	**Port Moresby**	**11.71**	**265**	P	**Pn**	**16 49 32.9**	**0.0**
PMG	**Port Moresby**	**11.71**	**265**	P	Pn	16 49 37.8	+4.9
	6µm4µm234nm,1.0s						
PMG	**Port Moresby**	**11.71**	**265**	*d i*P	**Pn**	**16 49 37.4**	**+4.5**
PMG				pmax	pmax		
	comp=Z,299nm,1.7s						
DVP	**Devils Point**	**12.85**	**137**	P	**Pn**	**16 49 50.6**	**+2.4**
RTV	**Rentapao**	**13.05**	**136**	P	**Pn**	**16 49 52.5**	**+1.5**
RTV	**Rentapao**	**13.05**	**136**	S	**Sn**	**16 52 18.2**	**+3.7**
MANU	**Manus Island**	**13.20**	**298**		**Pn**	**16 49 53.1**	**+0.1**
INH	**Isangel**	**14.86**	**139**	P	**Pn**	**16 50 16.1**	**+1.6**
PATS	**Pohnpei**	**15.22**	**357**	P	**Pn**	**16 50 15.5**	**-3.6**
	comp=Z,612nm,0.9s						
PATS	**Pohnpei**	**15.22**	**357**		**Pn**	**16 50 15.0**	**-4.0**
PATS				Sn	Sn	16 52 50.1	-17
PATS	**Pohnpei**	**15.22**	**357**	P	**Pn**	**16 50 15.1**	**-4.0**

DZM	Mont Dzumac	15.32	153	P	Pn	16 50 21.9	+1.5
	comp=Z,126nm,1.1s,baz=2.5,slow=13,SNR=34						
DZM				S	S	16 53 17.1	-3.5
	comp=Z,40nm,0.7s,baz=290,slow=23,SNR=6.3						
DZM				LR	LR	16 55 22.0	
	comp=Z,2µm,21.1s,baz=350,slow=33						
DZM	Mont Dzumac	15.32	153	*e*P	Pn	16 50 20.5	+0.1
	comp=Z,423nm,1.2s						
DZM				*e*S	Sn	16 53 06.9	-2.6
	comp=Z,108nm,0.9s						
DZM				*e*LR	LR	16 53 52.3	
	comp=Z,5µm,28.9s						
DZM	Mont Dzumac	15.32	153	P	Pn	16 50 21.4	+1.0
DZM	Mont Dzumac	15.32	153	P	P	16 50 23.6	+0.3
YATNC	Mamie plateau,	15.51	151	P	P	16 50 24.9	-0.5
ONTNC	Ouen Toro	15.53	153		Pn	16 50 22.9	-0.1
ONTNC	Ouen Toro	15.53	153	P	P	16 50 25.9	+0.3
MARNC	Mare, Loyalty	15.61	147		P	16 50 26.2	-0.2
MARNC	Mare, Loyalty	15.61	147	P	P	16 50 26.9	+0.5
OUENC	Ouen Island, N	15.80	152	P	P	16 50 28.6	0.0
TV1H	Townsville Har	15.96	226	P	P	16 50 30.5	+0.2
PINNC	Pines Island,	16.25	151		Pn	16 50 32.4	+0.4
PINNC	Pines Island,	16.25	151	P	P	16 50 35.4	+1.8
COEN	Coen	16.43	249	P	P	16 50 37.8	+2.2
CTA	Charters Tower	16.88	225	P	P	16 50 42.5	+1.9
	comp=Z,87nm,0.9s,comp=Z,0.0nm						
CTA	Charters Tower	16.88	225	P	P	16 50 42.4	+1.8
	comp=Z,129nm,0.9s,baz=44,slow=13,SNR=86						
CTA				S	Sn	16 53 44.1	-3.1
	comp=Z,20nm,0.9s,baz=135,slow=20,SNR=3.5						
CTA				LR	LR	16 56 39.6	
	comp=Z,1µm,19.9s,baz=47,slow=35						
CTA	Charters Tower	16.88	225	P	P	16 50 42.1	+1.5
CTAO	Charters Tower	16.88	225	P	P	16 50 42.1	+1.5
CTAO	Charters Tower	16.88	225	P	P	16 50 42.1	+1.5
CTAO	Charters Tower	16.88	225	P	P	16 50 42.1	+1.5
TARA	Tarawa	16.98	56	P	Pn	16 50 40.8	-0.4
MTSU	Mount Surprise	17.19	235	P	P	16 50 47.5	+3.5
	comp=Z,405nm,0.9s						
MTSU	Mount Surprise	17.19	235	P	P	16 50 47.1	+3.1
EIDS	Eidsvold	18.41	203	P	Pn	16 51 00.3	+1.8
	comp=Z,806nm,1.2s						
EIDS	Eidsvold	18.41	203	P	Pn	16 51 00.6	+2.1
EIDS	Eidsvold	18.41	203	P	Pn	16 51 00.1	+1.6
JAY	Jayapura	19.12	287	P	P	16 51 05.4	+0.2
	comp=Z,241nm,0.7s,baz=145,slow=4.4,SNR=35						
JAY				S	S	16 54 35.5	-2.3
	comp=Z,47nm,1.0s,baz=47,slow=23,SNR=8.0						
JAY				LR	LR	16 58 36.6	
	comp=Z,834nm,20.6s,baz=63,slow=37						
JAY	Jayapura	19.12	287	P	P	16 51 04.9	-0.4
	comp=Z,4µmcomp=Z,384nm,1.2s						
GENI	Genyem	19.60	286	P	P	16 51 11.4	+0.9
GENI	Genyem	19.60	286	P	P	16 51 11.4	+0.9
	comp=Z,4µmcomp=Z,8µmcomp=Z,524nm,1.1s						
FUNA	Funafuti	20.00	92	P	P	16 51 15.7	+0.9
RMQ	Roma	20.38	207	P	Pn	16 51 22.0	+0.4
	comp=Z,350nm,1.6s						
RMQ	Roma	20.38	207	P	Pn	16 51 20.8	-0.8
MSVF	Nonsavu	20.72	118	P	P	16 51 24.0	+1.4
MSVF	Nonsavu	20.72	118	P	P	16 51 24.3	+1.7
MSVF	Nonsavu	20.72	118	*c i*P	Pn	16 51 24.6	-1.1
MSVF				pmax	pmax		
	comp=Z,178nm,1.4s						
QIS	Mount Isa	22.24	235	P	P	16 51 39.5	+0.7
	comp=Z,463nm,1.0s,comp=Z,0.0nm						
QIS	Mount Isa	22.24	235	P	P	16 51 40.2	+1.3
QLP	Quilpie	22.81	216	P	P	16 51 44.8	+0.1
	comp=Z,1µm,1.2s						
QLP	Quilpie	22.81	216	P	P	16 51 45.6	+0.9
ARMA	Armidale	22.90	196	P	P	16 51 46.3	+0.6
	comp=Z,1µm,0.9s						
ARMA	Armidale	22.90	196	P	P	16 51 46.3	+0.6
ARMA	Armidale	22.90	196	P	P	16 51 46.9	+1.2
LHI	Lord Howe Isla	22.94	180	P	P	16 51 46.2	+0.3
	comp=Z,516nm,1.1s						
LHI	Lord Howe Isla	22.94	180	P	P	16 51 45.5	-0.5
MGCD	Mangrove Creek	25.68	195	P	P	16 52 12.6	+1.7
	comp=Z,298nm,0.8s						
MGCD	Mangrove Creek	25.68	195	P	P	16 52 13.2	+2.3
INKA	Innaminka	25.77	220	P	P	16 52 12.4	+0.5
GUMO	Guam	26.01	327	LR	LR	17 02 36.6	
	comp=Z,180nm,19.4s,baz=148,slow=36						
CMSA	Cobar Meteorol	26.08	207	P	P	16 52 15.2	+0.7
	comp=Z,225nm,0.9s						
CMSA	Cobar Meteorol	26.08	207	P	P	16 52 15.1	+0.5
RIV	Riverview	26.25	195	P	P	16 52 17.6	+1.5
	comp=Z,594nm,1.0s						
RIV	Riverview	26.25	195	P	P	16 52 17.6	+1.5
	comp=Z,594nm,1.0s						
RIV	Riverview	26.25	195	P	P	16 52 18.0	+1.9
RIV				pmax	pmax		
	comp=Z,594nm,1.0s						
WR8	Warramunga Arr	26.29	242	P	P	16 52 16.8	+0.1
WR8				IAmb	IAmb	16 52 18.3	
	comp=Z,237nm,1.1s						
SYDH	Sydney Hard Ro	26.29	196	P	P	16 52 18.4	+1.9
WB0	Warramunga Arr	26.31	242	P	P	16 52 17.0	+0.1
WB0				IAmb	IAmb	16 52 18.5	
	comp=Z,193nm,1.0s						
KDU	Kakadu	26.38	259	P	P	16 52 18.2	+0.7
	comp=Z,64nm,0.7s						
WRAB	Tennant Creek	26.41	242	P	P	16 52 17.5	-0.2
WRAB				IAmb	IAmb	16 52 19.3	
	comp=Z,129nm,0.9s						
WRAB	Tennant Creek	26.41	242	P	P	16 52 17.8	+0.1
WRAB	Tennant Creek	26.41	242	*c i*P	P	16 52 17.9	+0.2
WRAB				pmax	pmax		
	comp=Z,274nm,1.5s						
WRA	Warramunga Arr	26.42	242	P	P	16 52 18.1	+0.3
	comp=Z,135nm,0.9s,baz=66,slow=9.0,SNR=104						
WRA				S	S	16 56 45.0	-0.5
	comp=Z,34nm,1.1s,baz=70,slow=14,SNR=8.4						
	comp=Z,135nm,0.9s						
WRA	Warramunga Arr	26.42	242	P	P	16 52 17.6	-0.3
YNG	Young	27.49	199	P	P	16 52 27.9	+0.7
	comp=Z,75nm,0.9s						
H11S2	WAKE ISLAND Hy	27.85	16	T	T	17 21 15.8	
	baz=195,slow=76,SNR=3755						
H11S3	WAKE ISLAND Hy	27.85	16	T	T	17 21 18.5	
	baz=195,slow=76,SNR=3577						
H11S1	WAKE ISLAND Hy	27.87	16	T	T	17 21 10.7	
	baz=195,slow=76,SNR=2889						
CNB	Canberra Magne	28.14	197	P	P	16 52 34.7	+1.6
CAN	Canberra	28.25	197	P	P	16 52 35.2	+1.2
	comp=Z,186nm,1.0s						
CAN	Canberra	28.25	197	P	P	16 52 35.2	+1.2
CAN				IAmb	IAmb	16 52 41.9	
	comp=Z,214nm,1.1s						
CAN	Canberra	28.25	197	P	P	16 52 35.5	+1.5
CAN	Canberra	28.25	197	P	P	16 52 35.2	+1.2
CAN				pmax	pmax		
	comp=Z,214nm,1.1s						
STKA	Stephens Creek	28.35	212	P	P	16 52 35.5	+0.6
	comp=Z,172nm,0.7s,baz=19,slow=8.4,SNR=184						
STKA				LR	LR	17 03 39.3	
	comp=Z,1µm,21.4s,baz=34,slow=36						
	comp=Z,172nm,0.7s						
STKA	Stephens Creek	28.35	212	P	P	16 52 35.1	+0.2
STKA	Stephens Creek	28.35	212	P	P	16 52 35.8	+0.9
ASAR	Alice Springs	28.36	235	P	P	16 52 34.9	-0.4
	comp=Z,53nm,0.5s,baz=62,slow=9.8,SNR=974						
ASAR				S	S	16 57 14.8	-1.3
	comp=Z,18nm,1.0s,baz=62,slow=15,SNR=6.8						
ASAR				ScP	SS	16 59 17.9	-1.2
	comp=Z,3.5nm,0.8s,baz=47,slow=3.4,SNR=4.5						
ASAR				LR	LR	17 03 06.6	
	comp=Z,2µm,21.5s,baz=62,slow=34						
	comp=Z,53nm,0.5s						
ASAR	Alice Springs	28.36	235	P	P	16 52 35.0	-0.2
ASAR	Alice Springs	28.36	235	P	P	16 52 35.0	-0.2
H11N1	WAKE ISLAND Hy	29.07	15	T	T	17 22 37.9	
	baz=195,slow=76,SNR=219						
H11N3	WAKE ISLAND Hy	29.08	16	T	T	17 22 37.4	
	baz=195,slow=76,SNR=365						
H11N2	WAKE ISLAND Hy	29.09	15	T	T	17 22 40.8	
	baz=195,slow=76,SNR=281						
AFI	Afiamalu	29.18	103	P	P	16 52 41.8	-0.8
AFI				IAmb	IAmb	16 52 50.2	
	comp=Z,116nm,0.9s						
AFI	Afiamalu	29.18	103	P	P	16 52 43.4	+0.8
AFI	Afiamalu	29.18	103	P	P	16 52 41.8	-0.8
AFI				pmax	pmax		
	comp=Z,116nm,0.9s						
OUZ	Omahuta	29.81	155	P	P	16 52 49.9	+2.1
RAO	Raoul Island	29.98	137	LR	LR	17 02 59.1	
	comp=Z,744nm,21.8s,baz=12,slow=32						
KNRA	Kununurra	30.37	253	P	P	16 52 52.2	-0.9
KNRA				IAmb	IAmb	16 53 27.6	
	comp=Z,95nm,0.8s						
HTT	Hallett	30.98	214	P	P	16 52 59.2	+0.9
TOO	Toolangi	31.44	201	P	P	16 53 03.4	+1.2
TOO				IAmb	IAmb	16 53 04.8	
	comp=Z,72nm,0.8s						
TOO	Toolangi	31.44	201	P	P	16 53 03.4	+1.2
TOO				pmax	pmax		
	comp=Z,72nm,0.8s						
BBOO	Buckleboo	32.20	218	P	P	16 53 09.5	+0.6
TOZ	Tahuroa Road	32.74	155	P	P	16 53 14.3	+0.7
HIZ	Hauiti	33.16	157	P	P	16 53 19.8	+2.6
MGBR	Mount Gambier	33.55	207	P	P	16 53 21.7	+1.1
FITZ	Fitzroy Crossi	33.77	250	P	P	16 53 21.8	-1.0
	comp=Z,39nm,0.5s,baz=68,slow=7.6,SNR=69						
FITZ				LR	LR	17 06 44.4	
	comp=Z,2µm,20.9s,baz=76,slow=35						
	comp=Z,39nm,0.5s						
FITZ	Fitzroy Crossi	33.77	250	P	P	16 53 22.1	-0.7
GLAD	Gladstone	33.82	195	P	P	16 53 24.8	+1.9
MXZ	Matakaoa Point	33.84	152	P	P	16 53 24.8	+1.7
URZ	Urewera	33.87	154	LR	LR	17 04 56.5	
	comp=Z,485nm,20.7s,baz=324,slow=32						
URZ	Urewera	33.87	154	P	P	16 53 24.9	+1.5
SOEI	Soe	34.29	265	P	P	16 53 27.7	+0.2
	comp=Z,2µmcomp=Z,142nm,1.1s						
BKZ	Black Stump Fm	34.37	156	P	P	16 53 28.4	+0.6
BKZ	Black Stump Fm	34.37	156	P	P	16 53 28.6	+0.8
BATI	Baumata	34.88	264	P	P	16 53 33.2	+0.8
	comp=Z,79nm,0.8s,baz=199,slow=0.8,SNR=13						
BATI				LR	LR	17 09 19.1	
	comp=Z,1µm,18.8s,baz=114,slow=39						
	comp=Z,79nm,0.8s						
BATI	Baumata	34.88	264	P	P	16 53 32.7	+0.3
	comp=Z,2µmcomp=Z,156nm,0.9s						
MRNZ	Matariki Terra	35.00	162	P	P	16 53 33.6	+0.5
MRZ	Mangatainoka R	35.30	158	P	P	16 53 35.6	-0.1
MRZ				IAmb	IAmb	16 53 40.5	
	comp=Z,54nm,0.7s						
MOO	Moorlands	35.40	195	P	P	16 53 38.9	+2.4
SNZO	South Karori	35.56	159	P	P	16 53 39.8	+1.9
BFZ	Birch Farm	35.57	157	P	P	16 53 37.9	-0.1
TAU	Tasmania Unive	35.80	195	P	P	16 53 41.6	+1.7
TAU	Tasmania Unive	35.80	195	P	P	16 53 42.3	+2.4
TAU	Tasmania Unive	35.80	195	P	P	16 53 41.6	+1.7
TAU				pmax	pmax		
	comp=Z,352nm,1.3s						
TAU	Tasmania Unive	35.80	195	P	P	16 53 42.4	+2.5
KHZ	Kahutara	36.16	162	P	P	16 53 43.1	+0.1
MMRI	Maumere	36.32	267	P	P	16 53 44.6	-0.2
MMRI	Maumere	36.32	267	P	P	16 53 43.8	-1.0
RPZ	Rata Peaks	36.66	165	P	P	16 53 48.7	+1.4
DAV	Davao City (W)	36.70	294	LR	LR	17 09 36.3	
	comp=Z,157nm,18.5s,baz=100,slow=37						
LUWI	Luwuk	36.80	280	P	P	16 53 48.5	-0.3
	comp=Z,2µmcomp=Z,150nm,1.3s						
EDFI	Ende, Flores	36.86	267	P	P	16 53 48.0	-1.5
	comp=Z,1µmcomp=Z,133nm,0.9s						
ODZ	Otahua Downs	37.82	166	P	P	16 53 58.5	+1.5
APSI	Ampana	37.92	279	P	P	16 53 58.0	-0.4
	comp=Z,2µmcomp=Z,171nm,1.3s						
WHZ	Wether Hill Ro	38.08	170	IAmb	IAmb	16 54 00.5	
	comp=Z,50nm,1.1s						
LBFI	Labuhan Bajo,	38.65	267	P	P	16 54 01.7	-2.8
	comp=Z,2µmcomp=Z,194nm,0.8s						
BKSI	Bulukumba	38.69	272	P	P	16 54 04.2	-0.6
BNSI	Bone	38.82	273	P	P	16 54 04.7	-1.2
	comp=Z,1µmcomp=Z,142nm,0.8s						
SYZ	Scrubby Hill	38.92	169	P	P	16 54 07.2	+1.0
KAPI	Kappang	39.09	272	P	P	16 54 07.7	-0.5
	comp=Z,69nm,0.7s,baz=104,slow=6.7,SNR=33						
	comp=Z,69nm,0.7s						
KAPI	Kappang	39.09	272	P	P	16 54 06.8	-1.3
KAPI	Kappang	39.09	272	P	P	16 54 08.8	+0.7
KAPI	Kappang	39.09	272	P	P	16 54 07.8	-0.4
	comp=Z,62nm,0.8s						
KAPI	Kappang	39.09	272	*c i*P	P	16 54 07.8	-0.4
KAPI				pmax	pmax		
	comp=Z,79nm,0.8s						
KAPI	Kappang	39.09	272	P	P	16 54 07.8	-0.4
KAPI				PcP	PcP	16 56 15.7	-0.9
WBSI	Waikabubak, Su	39.09	265	P	P	16 54 07.1	-1.1
	comp=Z,2µmcomp=Z,204nm,0.7s						
SPSI	Sidrap Palu	39.22	274	P	P	16 54 08.2	-1.0
TOLI2	Tolitoli	39.24	282	P	P	16 54 07.0	-2.4
TOLI2				IAmb	IAmb	16 54 39.5	
	comp=Z,56nm,0.9s						
TOLI2	Tolitoli	39.24	282	P	P	16 54 09.1	-0.3
TTSI	Tana Toraja	39.31	276	P	P	16 54 09.7	-0.3
PSA00	Pilbara Seismi	39.85	246	P	P	16 54 13.3	-1.1
PSA00				IAmb	IAmb	16 54 16.8	
	comp=Z,73nm,0.8s						
PSA00	Pilbara Seismi	39.85	246	P	P	16 54 14.5	+0.1
MBWA	Marble Bar	39.86	247	P	P	16 54 13.6	-0.8
MBWA				IAmb	IAmb	16 54 36.2	
	comp=Z,90nm,1.1s						
MBWA	Marble Bar	39.86	247	P	P	16 54 13.7	-0.8
PLAI	Plampang	40.72	266	P	P	16 54 20.0	-1.6
RAR	Rarotonga	41.71	112	LR	LR	17 08 43.0	
	comp=Z,234nm,19.6s,baz=279,slow=31						
MEEK	Meekatharra	42.28	240	P	P	16 54 34.5	+0.2
JAGI	Jajag, Banyuwa	44.32	267	P	P	16 54 48.1	-2.8
JAGI	Jajag, Banyuwa	44.32	267	P	P	16 54 48.6	-2.2
KLBR	Kellerberrin	44.66	233	P	P	16 54 53.1	-0.3
KKM	Kota Kinabalu	45.01	287	P	P	16 54 56.2	-0.2
BLDU	Ballidu	45.15	235	P	P	16 54 57.4	+0.1
MORW	Morawa	45.19	237	P	P	16 54 57.3	-0.3
MORW				IAmb	IAmb	16 54 59.2	
	comp=Z,54nm,0.9s						
MORW	Morawa	45.19	237	P	P	16 54 57.7	+0.1
NWAO	Narrogin (SRO)	45.58	232	P	P	16 55 00.2	-0.4
NWAO	Narrogin (SRO)	45.58	232	P	P	16 55 00.8	+0.2
NWAO	Narrogin (SRO)	45.58	232	P	P	16 55 00.2	-0.4
NWAO				pmax	pmax		
	comp=Z,201nm,1.2s						
NWAO	Narrogin (SRO)	45.58	232	P	P	16 55 00.7	0.0
NWAO				pP	pP	16 55 17.9	-2.7
JOW	Kunigami	46.02	321	LR	LR	17 14 14.2	
	comp=Z,155nm,18.1s,baz=122,slow=36						
JOW	Kunigami	46.02	321	P	P	16 55 03.9	-0.2
MUN	Mundaring	46.03	233	P	P	16 55 04.4	+0.2
UGM	Wanagama	47.94	267	P	P	16 55 17.1	-2.2
UGM	Wanagama	47.94	267	P	P	16 55 18.9	-0.4
YOJ	Yonaguni jima	47.98	314	P	P	16 55 20.3	+0.9
YOJ	Yonaguni jima	47.98	314	P	P	16 55 20.1	+0.7
YOJ	Yonaguni jima	47.98	314	P	P	16 55 20.3	+0.9
YOJ				pmax	pmax		
	comp=Z,173nm,1.1s						
SMRI	Semarang	48.09	268	P	P	16 55 18.4	-2.1
INU	Inuyama	48.26	336	P	P	16 55 19.7	-1.6
INU				IAmb	IAmb	16 55 43.3	
	comp=Z,101nm,1.2s						
JMN	Monobe	48.26	332	P	P	16 55 21.6	+0.2
JGF	Kuroka	48.34	336	IAmb	IAmb	16 55 44.0	
	comp=Z,48nm,1.1s						
JGF	Kuroka	48.34	336	P	P	16 55 22.1	+0.1
TWG	Pinlang	48.41	311	IAmb	IAmb	16 55 59.3	
	comp=Z,30nm,0.9s						
YULB	Yu-li	48.58	312	IAmb	IAmb	16 55 26.4	
	comp=Z,46nm,0.7s						
YULB	Yu-li	48.58	312	P	P	16 55 24.0	0.0
NACB	Ninganchiao	48.82	313	P	P	16 55 26.5	+0.6
MJAR	Matsushiro Arr	48.84	338	P	P	16 55 25.6	-0.1
	comp=Z,5.3nm,0.6s,baz=168,slow=8.3,SNR=21						
MJAR				PcP	PcP	16 56 49.6	+0.3
	comp=Z,6.9nm,0.7s,baz=156,slow=5.1,SNR=2.9						
MJAR				ScP	ScP	17 00 36.2	-0.6
	comp=Z,1.8nm,0.9s,baz=155,slow=3.2,SNR=4.0						
	comp=Z,5.3nm,0.6s						
MJAR	Matsushiro Arr	48.84	338	P	P	16 55 25.2	-0.6
MAJO	Matsushiro	48.84	338	P	P	16 55 25.5	-0.3
MAJO	Matsushiro	48.84	338	P	P	16 55 25.9	+0.1
MAJO	Matsushiro	48.84	338	*c i*P	P	16 55 25.6	-0.2
MAJO				pmax	pmax		
	comp=Z,15nm,0.8s						
TPUB	Ta-pu	49.02	311	P	P	16 55 27.0	-0.4
TPUB				IAmb	IAmb	16 56 11.2	
	comp=Z,50nm,0.9s						
TPUB	Ta-pu	49.02	311	P	P	16 55 27.5	+0.1
YHNB	Yeheng	49.28	313	P	P	16 55 30.5	+1.0
TATO	Taipei	49.38	313	P	P	16 55 30.4	+0.3
TATO	Taipei	49.38	313	P	P	16 55 30.4	+0.3
TATO				pP	pP	16 55 47.7	-2.5
TATO				sP	pwP	16 55 55.6	+2.9
JSD	Sado	50.14	339	P	P	16 55 36.3	+0.6
PPT	Papeete	50.80	106	P	P	16 55 41.0	0.0
	comp=Z,26nm,0.9s,baz=270,slow=19,SNR=1.5						
PPT				LR	LR	17 12 15.2	
	comp=Z,239nm,20.8s,baz=261,slow=30						
	comp=Z,26nm,0.9s						
PPT2	Papeete2	50.80	106	*e*P	P	16 55 39.4	-1.7
	comp=Z,156nm,26.0s						
PPT2				*e*S	S	17 02 45.4	-5.7
	comp=Z,313nm,22.5s						
PPT2				*e*SS	SS	17 06 19.9	-6.9
	comp=Z,298nm,26.8s						
PPT2				*e*LQ	LQ	17 08 09.1	
	comp=Z,459nm,22.2s						
PPT2				*e*LR	LR	17 10 12.8	
	comp=Z,2µm,29.0s						
PPT2				*e*LR	LR	17 10 14.6	
	comp=Z,1µm,30.8s						
BBJI	Bungbulang	50.81	267	P	P	16 55 41.6	+0.3
TBI	Tubuai	51.48	113	*e*P	P	16 55 40.0	-6.0
	comp=Z,450nm,30.8s						
TBI				*e*S	S	17 02 58.3	-1.8
	comp=Z,2µm,26.5s						
TBI				*e*SS	SS	17 06 35.4	-1.8
	comp=Z,914nm,20.2s						
TBI				*e*LQ	LQ	17 08 24.4	
	comp=Z,8µm,34.0s						
TBI				*e*LR	LR	17 10 38.7	
	comp=Z,3µm,33.5s						
TBI				*e*LR	LR	17 10 41.9	
	comp=Z,12µm,36.2s						
QZH	Quanzhou	51.49	311	P	P	16 55 47.3	+1.3
QZH				pP	pP	16 56 05.6	-0.6
QZH				sP	sP	16 56 15.4	-0.1
QZH				S	S	17 03 02.1	+2.0
QZH				sS	sS	17 03 36.8	+2.1
QZH				pmax	pmax		
	comp=Z,92nm,0.8s						
QZH				LR	LR		
	comp=Z,420nm,27.0s						
XMI	Christmas Isla	52.55	263	P	P	16 55 54.1	0.0
SSE	Sheshan	53.45	319	P	P	16 56 01.8	+1.4
SSE				S	S	17 03 28.4	+1.7
SSE				pmax	pmax		
	comp=Z,16nm,0.8s						
SSE				pmax	pmax		
	comp=Z,61nm,5.9s						
SSE				LR	LR		
	comp=Z,160nm,16.8s						
SSE				LR	LR		
	comp=Z,160nm,17.1s						
TJN	Taejon	53.59	328	⇓*e*P	P	16 55 59.9	-1.4
KSRS	Korea Array	54.14	330	P	P	16 56 06.0	+0.7
	comp=Z,24nm,0.9s,baz=145,slow=7.9,SNR=46						
KSRS				PcP	PcP	16 57 09.8	+0.8
	comp=Z,11nm,0.8s,baz=146,slow=4.2,SNR=5.7						
KSRS				LR	LR	17 17 11.5	
	comp=Z,84µm,19.4s,baz=140,slow=34						
	comp=Z,24nm,0.9s						
KSAR	Wonju Array Be	54.15	330	P	P	16 56 05.7	+0.4
KSAR	Wonju Array Be	54.15	330	P	P	16 56 05.7	+0.4
ASAJ	Asahikawa	54.40	346	LR	LR	17 18 40.9	
	comp=Z,574nm,19.9s,baz=172,slow=35						
INCN	Inchon	54.81	329	P	P	16 56 10.1	-0.2
INCN	Inchon	54.81	329	P	P	16 56 10.1	-0.2
INCN				pmax	pmax		
	comp=Z,155nm,1.1s						
NJ2	Nanjing	55.59	318	*e*P	P	16 56 17.6	+1.7
NJ2				pP	pP	16 56 35.3	-1.1
NJ2				S	S	17 03 57.8	+2.4
NJ2				pmax	pmax		
	comp=Z,26nm,1.0s						
QIZ	Qiongzhong	55.60	300	P	P	16 56 16.5	+0.3
QIZ				S	S	17 03 58.8	+2.8
QIZ				sS	sS	17 04 32.8	+1.2
QIZ				SS	SS	17 07 34.8	-7.7
QIZ				pmax	pmax		
	comp=Z,410nm,4.3s						
QIZ				LR	LR		
	comp=Z,340nm,14.6s						
QIZ				LR	LR		
	comp=Z,340nm,13.7s						
QIZ				LR	LR		
	comp=Z,390nm,21.2s						
PSTR	Posyet	57.00	335	*ce*P	P	16 56 27.2	+1.5
YSS	Yuzhno-Sakhali	57.03	347	P	P	16 56 26.1	+0.3
YSS				IAmb	IAmb	16 56 31.1	
	comp=Z,39nm,0.6s						
YSS	Yuzhno-Sakhali	57.03	347	P	P	16 56 25.2	-0.6
YSS	Yuzhno-Sakhali	57.03	347	*e*P	P	16 56 26.5	+0.7
YSS				*e**PP	pP	16 56 47.1	+0.3
YSS				*e*S	S	17 04 10.0	-4.0
YSS				*e*PS	pS	17 04 42.2	+5.6
YSS				pmax	pmax		
	comp=Z,50nm,0.6s						
YSS				MLR	MLR		
	comp=N,400nm,16.0s						
WHN	Wuhan	57.76	314	P	P	16 56 30.1	-1.2
WHN				S	S	17 04 26.5	+2.4
WHN				pmax	pmax		
	comp=N,78nm,0.8s						
WHN				LR	LR		
	comp=N,1µm,25.6s						
USRK	Ussuriysk Ar.	57.83	337	P	P	16 56 32.5	+1.0
	comp=N,25nm,0.9s,baz=145,slow=6.5,SNR=39						
	comp=N,25nm,0.9s						
DL2	Dalian	58.53	326	P	P	16 56 37.3	+0.8
DL2				S	S	17 04 34.6	+0.8
DL2				pmax	pmax		
	comp=N,87nm,0.9s						
DL2				LR	LR		
	comp=N,580nm,15.3s						
DL2				LR	LR		
	comp=N,610nm,16.1s						
DL2				LR	LR		
	comp=N,610nm,15.5s						
MDJ	Mudanjiang	59.12	336	P	P	16 56 41.1	+0.6
MDJ				pmax	pmax		
	comp=N,16nm,1.5s						
MDJ				LR	LR		
	comp=N,440nm,21.3s						
MDJ				LR	LR		
	comp=N,410nm,22.0s						
MDJ				LR	LR		
	comp=N,820nm,22.6s						
IPM	Ipoh	59.20	280	P	P	16 56 42.4	+0.7
TIA	Tai'an	59.34	321	P	P	16 56 42.6	+0.4
TIA				pmax	pmax		
	comp=N,15nm,1.3s						
TIA				pmax	pmax		
	comp=N,170nm,6.2s						
DRV	Dumont d’Urvil	59.55	189	P	P	16 56 43.9	+0.8
DRV				sP	sP	16 57 10.0	-3.3
KULM	Kulim	59.74	281	P	P	16 56 45.8	+0.4
TAOE	Nuku Hiva Isla	60.12	95	*e*S	S	17 04 58.8	+3.3
	comp=N,282nm,26.4s						
TAOE				*e*LR	LR	17 14 35.7	
	comp=N,987nm,28.7s						
CN2	Changchun	60.25	333	P	P	16 56 48.3	0.0
CN2				pP	pP	16 57 07.8	-1.3
CN2				PcP	PcP	16 57 32.3	-0.5
CN2				S	S	17 04 55.0	-0.9
CN2				sS	sS	17 05 28.8	-2.6
CN2				pmax	pmax		
	comp=N,40nm,0.9s						
CN2				LR	LR		
	comp=N,330nm,20.0s						
CN2				LR	LR		
	comp=N,390nm,20.0s						
TYV	Tymovskoe	60.76	348	*e*P	P	16 56 56.3	+4.7
TYV				pmax	pmax		
	comp=Z,22nm,0.6s						
TYV				pmax	pmax		
	comp=Z,400nm,4.8s						
BNX	BinXian	60.93	335	⇓P	P	16 56 52.9	0.0
BNX				pP	pP	16 57 13.9	+0.2
BNX				sP	sP	16 57 22.8	0.0
BNX				S	S	17 05 05.0	+0.5
BNX				sS	sS	17 05 41.9	+1.6
BNX				pmax	pmax		
	comp=Z,27nm,1.2s						
BNX				pmax	pmax		
	comp=Z,290nm,5.7s						

BNX				LR	LR		
	comp=Z,330nm,19.5s						
BNX				LR	LR		
	comp=Z,340nm,15.7s						
BNX				LR	LR		
	comp=Z,450nm,21.7s						
COCO	**West Island**	**61.14**	**261**	P	**P**	**16 56 55.8**	**+0.9**
ENH	**Enshi**	**61.15**	**311**	P	**P**	**16 56 54.9**	**+0.2**
ENH	**Enshi**	**61.15**	**311**	P	**P**	**16 56 54.4**	**-0.3**
PET	**Petropavlovsk**	**61.25**	**360**	P	**P**	**16 56 55.6**	**+0.8**
PET	**Petropavlovsk**	**61.25**	**360**	*e*P	**P**	**16 56 53.0**	**-1.8**
PET				*e*S	**S**	**17 05 12.2**	**+4.0**
PEA0B	**Petropavlovsk-**	**61.34**	**359**	*d i*P	**P**	**16 56 55.7**	**+0.2**
PETK	**Petropavlovsk-**	**61.34**	**359**	P	**P**	**16 56 56.2**	**+0.7**
	comp=Z,14nm,0.4s,baz=270,slow=6.8,SNR=4.1						
PETK				LR	LR	17 20 54.5	
	comp=Z,88nm,21.9s,baz=178,slow=33						
	comp=Z,14nm,0.4s						
LYN	**LuoYang**	**61.35**	**317**	P	**P**	**16 56 55.8**	**-0.2**
LYN				pP	pP	16 57 17.6	+0.8
LYN				S	**S**	**17 05 06.1**	**-4.2**
LYN				sS	sS	17 05 48.3	+1.5
LYN				pmax	pmax		
	comp=Z,42nm,0.8s						
LYN				pmax	pmax		
	comp=Z,240nm,5.7s						
GYA	**Guiyang**	**61.49**	**306**	⇓P	**P**	**16 56 57.9**	**+0.7**
GYA				pP	pP	16 57 15.8	-2.2
GYA				S	**S**	**17 05 13.9**	**+1.4**
GYA				pmax	pmax		
	comp=Z,22nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,4.1s						
GYA				LR	LR		
	comp=Z,89nm,4.3s						
GYA				LR	LR		
	comp=Z,120nm,4.5s						
GYA				LR	LR		
	comp=Z,120nm,4.9s						
HNS	**HongShan**	**61.60**	**321**	⇓P	**P**	**16 56 58.5**	**+1.0**
HNS				pP	**pwP**	**16 57 21.4**	**+0.6**
HNS				sP	**sP**	**16 57 28.9**	**+1.4**
HNS				S	**S**	**17 05 12.4**	**-0.8**
HNS				sS	**sS**	**17 05 51.3**	**+1.6**
HNS				pmax	pmax		
	comp=Z,66nm,1.2s						
HNS				LR	LR		
	comp=Z,320nm,22.7s						
HNS				LR	LR		
	comp=Z,210nm,22.0s						
HNS				LR	LR		
	comp=Z,350nm,21.6s						
SLVN	**Son La**	**61.63**	**300**	P	**P**	**16 56 57.2**	**-0.9**
SLVN				IAmb	IAmb	16 57 28.0	
	comp=Z,67nm,1.8s						
GSI	**Gunungsitoli**	**61.96**	**276**	P	**P**	**16 56 58.1**	**-2.3**
GSI	**Gunungsitoli**	**61.96**	**276**	P	**P**	**16 56 58.2**	**-2.3**
GRNR	**Gornyy**	**62.15**	**344**	⇓*i*P	**P**	**16 57 01.8**	**+0.8**
GRNR				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SHEM	**Shemya Is, Ala**	**62.31**	**10**	LR	LR	17 20 02.6	
	comp=Z,114nm,22.0s,baz=122,slow=32						
BJT	**Baijiatuau**	**62.38**	**324**	P	**P**	**16 57 03.1**	**+0.4**
BJI	**Beijing**	**62.39**	**324**	P	**P**	**16 57 03.3**	**+0.6**
BJI				pP	**pP**	**16 57 22.8**	**-0.9**
BJI				PP	**PP**	**16 59 21.8**	**+0.7**
BJI				S	**S**	**17 05 21.5**	**-1.6**
BJI				sS	**sS**	**17 05 55.1**	**-4.6**
BJI				SS	**SS**	**17 09 30.8**	**+2.4**
BJI				pmax	pmax		
	comp=Z,9.0nm,1.3s						
BJI				LR	LR		
	comp=Z,160nm,21.8s						
BJI				LR	LR		
	comp=Z,130nm,20.8s						
BJI				LR	LR		
	comp=Z,190nm,21.0s						
TIY	**Taiyuan**	**63.22**	**320**	P	**P**	**16 57 12.8**	**+4.3**
TIY				pP	**pP**	**16 57 26.5**	**-2.9**
TIY				S	**S**	**17 05 31.8**	**-2.0**
XAN	**Xi'an**	**63.52**	**315**	⇑P	**P**	**16 57 10.4**	**-0.1**
XAN				S	**S**	**17 05 31.3**	**-6.3**
XAN				pmax	pmax		
	comp=Z,100nm,0.9s						
XAN				pmax	pmax		
	comp=Z,240nm,4.5s						
XAN				LR	LR		
	comp=Z,320nm,20.6s						
XAN				LR	LR		
	comp=Z,280nm,19.2s						
XAN				LR	LR		
	comp=Z,380nm,24.7s						
XAN	**Xi'an**	**63.52**	**315**	P	**P**	**16 57 10.3**	**-0.1**
ADK	**Adak**	**63.65**	**17**	P	**P**	**16 57 10.9**	**+0.1**
KMI	**Kunming**	**64.11**	**303**	⇑P	**P**	**16 57 15.6**	**+0.8**
KMI				pP	pwP	16 57 39.3	+1.2
KMI				S	**S**	**17 05 43.3**	**-2.3**
KMI				pmax	pmax		
	comp=Z,34nm,1.0s						
KMI				LR	LR		
	comp=Z,300nm,20.7s						
KMI				LR	LR		
	comp=Z,210nm,18.8s						
KMI				LR	LR		
	comp=Z,200nm,21.7s						
HEH	**HeiHe**	**64.60**	**338**	*e*P	**P**	**16 57 17.0**	**-0.1**
HEH				pP	**pP**	**16 57 37.3**	**-1.0**
HEH				ScS	SKiKP	17 07 03.1	-19
HEH				pmax	pmax		
	comp=Z,24nm,1.0s						
HEH				LR	LR		
	comp=Z,380nm,19.8s						
HEH				LR	LR		
	comp=Z,250nm,21.4s						
HEH				LR	LR		
	comp=Z,470nm,21.4s						
RKT	**Rikitea**	**64.73**	**112**	*e*LR	LR	17 16 43.1	
	comp=Z,3μm,27.0s						
CMAR	**Chiang Mai Arr**	**64.98**	**295**	P	**P**	**16 57 20.4**	**+0.2**
	comp=Z,13nm,0.7s,baz=121,slow=5.0,SNR=99						
CMAR				LR	LR	17 24 02.2	
	comp=Z,81nm,21.8s,baz=105,slow=34						
CMAR				PKPPKP	**P'P'df**	**17 26 03.5**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=316,slow=3.5,SNR=1.8						
	comp=Z,13nm,0.7s						
CMAR	**Chiang Mai Arr**	**64.98**	**295**	P	**P**	**16 57 19.8**	**-0.5**
XLT	**XiLinHaoTe**	**64.99**	**327**	*e*P	**P**	**16 57 20.3**	**+0.4**
XLT				pP	pP	16 57 41.3	+0.3
XLT				PcP	**sP**	**16 57 50.8**	**+0.7**
XLT				S	**S**	**17 05 59.3**	**+3.8**
XLT				sS	sS	17 06 30.3	-2.0
XLT				SS	**SS**	**17 10 12.3**	**+3.2**
XLT				pmax	pmax		
	comp=Z,64nm,0.7s						
CHTO	**Chiang Mai**	**65.09**	**295**	P	**P**	**16 57 20.4**	**-0.6**
CHTO	**Chiang Mai**	**65.09**	**295**	P	**P**	**16 57 20.7**	**-0.3**
CHTO	**Chiang Mai**	**65.09**	**295**	P	**P**	**16 57 20.4**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,46nm,1.4s						
CHTO	**Chiang Mai**	**65.09**	**295**	P	**P**	**16 57 20.8**	**-0.2**
PZH	**PanZhiHua**	**65.49**	**304**	P	**P**	**16 57 23.5**	**-0.1**
PZH				S	**S**	**17 06 01.3**	**-1.0**
PZH				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC	**Hu-ho-hao-te**	**65.64**	**322**	⇓*i*P	**P**	**16 57 25.3**	**+1.1**
HHC				pP	pP	16 57 46.5	+1.2
HHC				S	**S**	**17 06 06.1**	**+2.6**
HHC				sS	sS	17 06 44.5	+4.1
HHC				pmax	pmax		
	comp=Z,32nm,1.3s						
HHC				pmax	pmax		
	comp=Z,87nm,6.6s						
HHC				LR	LR		
	comp=Z,220nm,16.3s						
HHC				LR	LR		
	comp=Z,270nm,17.8s						
HHC				LR	LR		
	comp=Z,310nm,19.4s						
CD2	**Chengdu**	**65.78**	**309**	⇑P	**P**	**16 57 25.5**	**+0.2**
CD2				pP	pP	16 57 44.5	-1.8
CD2				S	**S**	**17 06 04.6**	**-0.9**
CD2				sS	sS	17 06 44.9	+2.9
CD2				pmax	pmax		
	comp=Z,120nm,0.9s						
CD2				pmax	pmax		
	comp=Z,320nm,3.7s						
CD2				LR	LR		
	comp=Z,510nm,20.3s						
CD2				LR	LR		
	comp=Z,620nm,16.5s						
CD2				LR	LR		
	comp=Z,230nm,16.5s						
BTO	**Baotou**	**66.44**	**321**	*e*P	**P**	**16 57 31.4**	**+2.0**
BTO				pP	**pP**	**16 57 51.1**	**+0.7**
BTO				sP	**sP**	**16 57 59.8**	**+0.3**
BTO				S	**S**	**17 06 16.3**	**+3.0**
BTO				sS	**sS**	**17 06 49.8**	**-0.5**
BTO				SS	**SS**	**17 10 35.4**	**+3.6**
BTO				pmax	pmax		
	comp=Z,50nm,1.4s						
BTO				pmax	pmax		
	comp=Z,440nm,4.0s						
CASY	**Casey**	**66.47**	**199**	P	**P**	**16 57 28.9**	**-0.1**
CASY				IAmb	IAmb	16 57 31.4	
	comp=Z,37nm,1.0s						
NIKH	**Nikolski High**	**67.05**	**20**	P	**P**	**16 57 33.8**	**+1.0**
	baz=215						
HILR	**Hailar Array B**	**67.17**	**333**	P	**P**	**16 57 34.0**	**+0.3**
	comp=Z,15nm,0.5s,baz=125,slow=7.7,SNR=1.5						
	comp=Z,15nm,0.5s						
ZEA	**Zeya**	**67.53**	**340**	*e*P	**P**	**16 57 36.8**	**+1.0**
ZEA				*e*		16 57 57.4	
ZEA				*e*		17 07 05.4	
ZEA				pmax	pmax		
	comp=N,20nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.7s						
TNCH	**TengChong**	**67.61**	**301**	P	**P**	**16 57 37.6**	**+0.4**
TNCH				pP	pwP	16 58 00.9	+0.2
TNCH				S	**S**	**17 06 28.9**	**+0.8**
TNCH				sS	sS	17 07 01.0	-3.4
TNCH				pmax	pmax		
	comp=Z,47nm,0.9s						
TNCH				pmax	pmax		
	comp=Z,170nm,4.0s						
MA2	**Magadan**	**68.14**	**356**	LR	LR	17 23 16.1	
	comp=Z,119nm,21.1s,baz=168,slow=32						
MA2	**Magadan**	**68.14**	**356**	P	**P**	**16 57 39.0**	**-0.5**
MA2				IAmb	IAmb	16 58 00.8	
	comp=Z,55nm,0.9s						
MA2	**Magadan**	**68.14**	**356**	*ce*P	**P**	**16 57 39.6**	**+0.1**
MA2				pmax	pmax		
	comp=Z,20nm,0.9s						
LZH	**Lanzhou**	**68.14**	**314**	⇑P	**P**	**16 57 41.6**	**+1.3**
LZH				sP	sP	16 58 09.8	-0.7
LZH				S	**S**	**17 06 35.5**	**+1.5**
LZH				sS	sS	17 07 14.8	+4.2
LZH				SS	**SS**	**17 10 53.1**	**-5.4**
LZH				pmax	pmax		
	comp=Z,110nm,1.8s						
LZH				LR	LR		
	comp=Z,250nm,16.8s						
LZH				LR	LR		
	comp=Z,270nm,16.5s						
LZH				LR	LR		
	comp=Z,450nm,16.8s						
LZDM	**Lanzhou Array**	**68.18**	**314**	P	**P**	**16 57 41.7**	**+0.9**
	comp=Z,56nm,0.8s,baz=142,slow=7.5,SNR=28						
LZDM				LR	LR	17 26 35.8	
	comp=Z,93nm,19.9s,baz=225,slow=35						
	comp=Z,56nm,0.8s						
UNV	**Unalaska Valle**	**68.58**	**21**	P	**P**	**16 57 43.9**	**+1.5**
	baz=217						
VNDA	**Vanda**	**69.04**	**179**	P	**P**	**16 57 45.6**	**+0.7**
	comp=Z,44nm,0.9s,baz=338,slow=6.5,SNR=80						
VNDA				LR	LR	17 22 36.8	
	comp=Z,598nm,21.5s,baz=4.0,slow=31						
	comp=Z,44nm,0.9s						
VNDA	**Vanda**	**69.04**	**179**	IAmb	IAmb	16 57 47.6	
	comp=Z,47nm,0.8s						
AKUT	**Akutan**	**69.08**	**21**	P	**P**	**16 57 46.1**	**+0.6**
SBA	**Scott Base**	**69.48**	**178**	P	**P**	**16 57 48.9**	**+1.3**
SBA				IAmb	IAmb	16 57 51.5	
	comp=Z,59nm,1.1s						
SBA	**Scott Base**	**69.48**	**178**	P	**P**	**16 57 48.9**	**+1.3**
SBA				pmax	pmax		
	comp=Z,59nm,1.1s						
CCD	**Concordia, Ant**	**69.56**	**189**	P	**P**	**16 57 49.4**	**+0.6**
P08K	**Saint George I**	**69.83**	**18**	P	**P**	**16 57 51.3**	**+1.2**
	baz=213						
SPIA	**Saint Paul Isl**	**70.11**	**17**	P	**P**	**16 57 52.6**	**+0.9**
	baz=212						
FALS	**False Pass**	**70.50**	**22**	P	**P**	**16 57 55.2**	**+1.0**
	baz=220						
SEY	**Seymchan**	**71.37**	**357**	LR	LR	17 24 20.1	
	comp=Z,219nm,21.5s,baz=152,slow=32						
SEY	**Seymchan**	**71.37**	**357**	*e*P	**P**	**16 57 58.3**	**-1.0**
SEY				pmax	pmax		
	comp=Z,44nm,1.1s						
SAIH	**SAIHA**	**71.54**	**297**	*e*P	P	16 58 08.4	+7.0
SAIH				IAML		16 58 30.6	
	comp=Z,190nm,1.6s						
S12K	**Black Hills**	**71.65**	**22**	P	**P**	**16 58 02.0**	**+0.8**
	baz=221						
CIT	**Chita**	**71.70**	**332**	*e*P	**P**	**16 58 01.6**	**0.0**
CIT				*e*		16 58 24.2	
CIT				*e*		16 58 33.4	
CIT				*e*		17 00 42.8	
CIT				pmax	pmax		
	comp=Z,211nm,2.0s						
CHNA	**Chernabura Isl**	**71.95**	**24**	P	**P**	**16 58 04.0**	**+1.0**
	baz=223						
SDPT	**Sand Point**	**71.98**	**23**	P	**P**	**16 58 03.9**	**+0.8**
	baz=222						
ULN	**Ulaanbaatar**	**72.38**	**326**	P	**P**	**16 58 05.8**	**-0.1**
ULN				IAmb	IAmb	16 58 35.7	
	comp=Z,58nm,1.1s						
ULN	**Ulaanbaatar**	**72.38**	**326**	*ce*P	**P**	**16 58 07.1**	**+1.2**
ULN				pmax	pmax		
	comp=Z,62nm,1.5s						
ITAN	**ITANAGAR**	**72.39**	**302**	*e*P	P	16 58 12.8	+6.6
ZIRO	**ZIRO**	**72.41**	**302**	*e*P	P	16 58 13.8	+7.3
ZIRO				IAmb	IAmb	16 58 17.1	
	comp=Z,155nm,0.1s						
GTA	**Gaotai**	**72.52**	**316**	⇑P	**P**	**16 58 08.4**	**+1.5**
GTA				pP	pwP	16 58 29.8	-0.9
GTA				S	**S**	**17 07 27.6**	**+2.7**
GTA				sS	SKKSac	17 08 04.6	-0.1
GTA				pmax	pmax		
	comp=Z,160nm,0.8s						
GTA				pmax	pmax		
	comp=Z,190nm,7.6s						
GTA				LR	LR		
	comp=Z,220nm,13.9s						
GTA				LR	LR		
	comp=Z,200nm,15.5s						
GTA				LR	LR		
	comp=Z,300nm,22.3s						
SONM	**Songino Array**	**72.73**	**326**	P	**P**	**16 58 08.8**	**+0.8**
	comp=Z,38nm,0.6s,baz=142,slow=5.9,SNR=142						
SONM				LR	LR	17 31 31.4	
	comp=Z,128nm,18.0s,baz=98,slow=37						
	comp=Z,38nm,0.6s						
SONM	**Songino Array**	**72.73**	**326**	P	**P**	**16 58 08.0**	**0.0**
SONM				IAmb	IAmb	16 58 12.3	
	comp=Z,44nm,0.6s						
BRDH	**Bariadhala**	**72.78**	**297**	LR	LR	17 29 00.4	
	comp=Z,76nm,21.4s,baz=152,slow=35						
TEZP	**TEZPUR**	**72.99**	**301**	*e*P	P	16 58 17.8	+8.1
TEZP				IAmb	IAmb	16 58 19.6	
	comp=Z,127nm,1.1s						
S14K	**Fog Glacier**	**73.03**	**23**	P	**P**	**16 58 10.1**	**+0.7**
	baz=223						
SHL	**Shillong**	**73.44**	**300**	IAmb	IAmb	16 59 01.2	
	comp=Z,38nm,0.9s						
SHL	**Shillong**	**73.44**	**300**	*e*P	P	16 58 19.2	+6.5
SHL				IAmb	IAmb	16 58 25.8	
	comp=Z,49nm,0.7s						
YAK	**Yakutsk**	**73.88**	**346**	P	**P**	**16 58 14.2**	**+0.1**
YAK	**Yakutsk**	**73.88**	**346**	*e*P	**P**	**16 58 14.2**	**+0.1**
YAK				*e*		16 58 29.0	
YAK				*e**PP	**pP**	**16 58 35.1**	**-0.6**
YAK				*e*		17 00 59.8	
YAK				*e*PPP	PPP	17 02 44.3	
YAK				*e*S	**S**	**17 07 39.4**	**+0.5**
YAK				*e**SS	**ScS**	**17 08 16.3**	**+0.1**
YAK				*e*SS	**SS**	**17 12 25.2**	**+0.2**
YAK				pmax	pmax		
	comp=Z,110nm,1.4s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,116nm,3.9s						
YAK				pmax	pmax		
	comp=N,198nm,7.6s						
YAK				pmax	pmax		
	comp=E,110nm,4.6s						
YAK				smax	smax		
	comp=E,133nm,3.9s						
YAK				smax	smax		
	comp=N,40nm,1.5s						
M11K	**Mekoryuk**	**73.95**	**17**	P	**P**	**16 58 15.8**	**+1.2**
	baz=216						
TAWA	**Tawang**	**74.09**	**302**	*e*P	P	16 58 22.6	+5.9
TAWA				IAmb	IAmb	16 58 46.1	
	comp=Z,86nm,0.2s						
CHIR	**Chirikof Islan**	**74.26**	**25**	P	**P**	**16 58 17.2**	**+0.7**
	baz=227						
O14K	**Tigyukauivet M**	**74.62**	**20**	P	**P**	**16 58 19.3**	**+0.8**
	baz=221						
R16K	**Pilot Point**	**74.70**	**23**	P	**P**	**16 58 19.9**	**+0.8**
	baz=225						
GOMU	**GeErMu**	**74.77**	**311**	P	**P**	**16 58 20.8**	**+0.4**
GOMU				S	**S**	**17 07 52.6**	**+1.8**
GOMU				pmax	pmax		
	comp=Z,15nm,1.1s						
M13K	**Dall Lake**	**74.84**	**18**	P	**P**	**16 58 20.9**	**+1.1**
	baz=219						
N14K	**Kuskokwak Cree**	**74.99**	**19**	P	**P**	**16 58 21.8**	**+1.1**
	baz=220						
O15K	**Ungalikthiuk R**	**75.06**	**21**	P	**P**	**16 58 22.2**	**+1.2**
	baz=222						
DHUB	**DHUBRI**	**75.20**	**300**	*e*P	P	16 58 29.4	+6.8
DHUB				IAmb	IAmb	16 58 55.2	
	comp=Z,50nm,0.7s						
R17L	**Mt. Peulik Vol**	**75.22**	**23**	P	**P**	**16 58 23.0**	**+0.9**
	baz=226						
SII	**Sitkinak Islan**	**75.36**	**25**	P	**P**	**16 58 24.0**	**+1.1**
	baz=228						
GAMB	**Gambell**	**75.39**	**13**	P	**P**	**16 58 23.4**	**+0.5**
	baz=210						
BOD	**Bodaibo**	**75.47**	**337**	*e*P	**P**	**16 58 23.0**	**-0.5**
BOD				pmax	pmax		
	comp=Z,56nm,2.0s						
M14K	**Bethel**	**75.53**	**19**	P	**P**	**16 58 24.5**	**+0.7**
	baz=220						
P16K	**Nushagak River**	**75.60**	**21**	P	**P**	**16 58 24.9**	**+0.7**
	baz=224						
K13K	**Kusilvak Mount**	**75.65**	**17**	P	**P**	**16 58 25.9**	**+1.5**
	baz=217,SNR=7.2						
N15K	**Kwethluk River**	**75.70**	**20**	P	**P**	**16 58 25.9**	**+1.1**
	baz=222						
L14K	**Kuka Creek**	**75.77**	**18**	P	**P**	**16 58 26.1**	**+1.0**
	baz=219						
Q16K	**King Salmon**	**75.84**	**22**	P	**P**	**16 58 26.6**	**+1.0**
	baz=225						
Q17K	**Contact Creek**	**75.84**	**23**	P	**P**	**16 58 26.2**	**+0.5**
	baz=226						
ZAK	**Zakamensk**	**75.84**	**327**	*e*P	**P**	**16 58 25.4**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,33nm,1.5s						
M15K	**Kasigluk River**	**75.90**	**19**	P	**P**	**16 58 26.6**	**+0.8**
	baz=221						
R18K	**Karluk**	**75.92**	**24**	P	**P**	**16 58 26.7**	**+0.7**
	baz=228						
O16K	**Kokwok River B**	**75.97**	**21**	P	**P**	**16 58 27.5**	**+1.2**
	baz=224						
OHAK	**Old Harbor**	**76.16**	**24**	P	**P**	**16 58 28.6**	**+1.2**
OHAK	**Old Harbor**	**76.16**	**24**	P	**P**	**16 58 29.0**	**+1.5**
	baz=229						
P17K	**Kvichak River**	**76.28**	**22**	P	**P**	**16 58 29.4**	**+1.4**
	baz=226						
IRK	**Irkutsk**	**76.34**	**329**	*e*P	**P**	**16 58 26.5**	**-2.1**
IRK				pmax	pmax		
	comp=Z,44nm,1.5s						
TLY	**Talaya**	**76.36**	**328**	*ce*P	**P**	**16 58 28.8**	**+0.1**
TLY				pmax	pmax		
	comp=Z,19nm,0.9s						
N16K	**Nishlik Lake**	**76.37**	**20**	P	**P**	**16 58 29.7**	**+1.1**
	baz=223						
L15K	**Ungalak Mounta**	**76.39**	**18**	P	**P**	**16 58 30.0**	**+1.3**
	baz=220						
Q18K	**Katmai Hardscr**	**76.44**	**23**	P	**P**	**16 58 30.1**	**+0.9**
	baz=227						
O17K	**Koliganek Bris**	**76.45**	**21**	P	**P**	**16 58 30.0**	**+1.0**
	baz=225						
JPG	**JALPAIGURI**	**76.45**	**300**	*e*P	**P**	**16 58 33.6**	**+3.8**
JPG				IAmb	IAmb	16 58 43.5	
	comp=Z,78nm,0.3s						
BILL	**Bilibino**	**76.49**	**3**	P	**P**	**16 58 28.6**	**-0.6**
BILL	**Bilibino**	**76.49**	**3**	*ce*P	**P**	**16 58 29.0**	**-0.1**
BILL				pmax	pmax		
	comp=Z,49nm,1.1s						
BILL	**Bilibino**	**76.49**	**3**	P	**P**	**16 58 29.6**	**+0.4**
BILL				pP	**pP**	**16 58 49.4**	**-1.5**
BILL				sP	**sP**	**16 58 56.7**	**-3.3**
J14K	**Nanvaranak Lak**	**76.61**	**17**	P	**P**	**16 58 31.6**	**+1.8**
	baz=218						
M16K	**Timber Creek**	**76.71**	**20**	P	**P**	**16 58 32.2**	**+1.7**
	baz=223						
GTK	**Tadong**	**76.77**	**301**	*e*P	P	16 58 38.4	+6.6
GTK				IAmb	IAmb	16 58 46.5	
	comp=Z,18nm,0.7s						
KDAK	**Kodiak Island**	**76.82**	**24**	LR	LR	17 26 29.7	
	comp=Z,134nm,19.6s,baz=218,slow=31						
KDAK	**Kodiak Island**	**76.82**	**24**	P	**P**	**16 58 32.3**	**+1.1**
	baz=229						
K15K	**Wolf Creek Mou**	**76.85**	**18**	P	**P**	**16 58 32.5**	**+1.3**
	baz=220						
P18K	**Big Mountain,**	**76.86**	**22**	P	**P**	**16 58 32.6**	**+1.1**
	baz=227						
N17K	**Nushagak Hills**	**76.95**	**21**	P	**P**	**16 58 33.1**	**+1.2**
	baz=225						
L16K	**Owhat River**	**77.05**	**19**	P	**P**	**16 58 33.7**	**+1.3**
	baz=222						
Q19K	**Cape Douglas,**	**77.15**	**23**	P	**P**	**16 58 33.8**	**+0.8**
	baz=228						
O18K	**Koktuh Hills**	**77.19**	**22**	P	**P**	**16 58 34.2**	**+1.0**
	baz=227						
Q20K	**Shuyak Island**	**77.43**	**24**	P	**P**	**16 58 35.1**	**+0.6**
	baz=230						
M17K	**Holitna River**	**77.49**	**20**	P	**P**	**16 58 36.0**	**+1.1**
	baz=224						
N18K	**Kilae Creek**	**77.52**	**21**	P	**P**	**16 58 36.4**	**+1.4**
	baz=226						
ANM	**Nome**	**77.57**	**15**	P	**P**	**16 58 36.6**	**+1.4**
	baz=216						
L17K	**Donlin**	**77.74**	**19**	P	**P**	**16 58 37.5**	**+1.2**
	baz=223						
MOY	**Mondy**	**77.75**	**327**	*e*P	**P**	**16 58 37.0**	**+0.3**
MOY				pmax	pmax		
	comp=Z,24nm,1.6s						
O19K	**Port Alsworth**	**77.75**	**22**	P	**P**	**16 58 37.8**	**+1.6**
	baz=227						
TNA	**Tin City**	**77.78**	**13**	P	**P**	**16 58 37.8**	**+1.5**
	baz=214						
P19K	**Oil Pt**	**77.79**	**23**	P	**P**	**16 58 37.7**	**+1.1**
	baz=228						
J16K	**Anvik River**	**77.88**	**17**	P	**P**	**16 58 38.3**	**+1.3**
	baz=221						
M18K	**Stony River**	**78.11**	**20**	P	**P**	**16 58 39.5**	**+1.2**
	baz=226						
N19K	**Bonanza Creek**	**78.11**	**21**	P	**P**	**16 58 39.4**	**+0.9**
	baz=227						
K17K	**Iditarod**	**78.17**	**19**	P	**P**	**16 58 39.6**	**+1.0**
	baz=223						
BOK	**Bokaro**	**78.18**	**296**	*e*P	P	16 58 46.2	+6.7
BOK				IAmb	IAmb	16 59 05.5	
	comp=Z,24nm,1.1s						
G15K	**Niukluk**	**78.26**	**15**	P	**P**	**16 58 40.3**	**+1.3**
	baz=217						
O20K	**Slope Mountain**	**78.31**	**23**	P	**P**	**16 58 40.4**	**+0.9**
	baz=229						
I17K	**Unalakleet**	**78.31**	**17**	P	**P**	**16 58 40.5**	**+1.2**
	baz=221,SNR=7.3						
L18K	**Granite Mounta**	**78.33**	**20**	P	**P**	**16 58 40.7**	**+1.3**
	baz=225,SNR=12						
HOM	**Homer**	**78.41**	**23**	P	**P**	**16 58 41.2**	**+1.3**
	baz=230						
J17K	**VABM Dome**	**78.42**	**18**	P	**P**	**16 58 41.1**	**+1.1**
	baz=222						
H16K	**Elim**	**78.46**	**16**	P	**P**	**16 58 41.4**	**+1.3**
	baz=219						
F15K	**North Star Dit**	**78.68**	**14**	P	**P**	**16 58 42.2**	**+0.8**
	baz=217,SNR=5.0						
BRSE	**Bradley Lake S**	**78.81**	**23**	P	**P**	**16 58 43.1**	**+0.9**

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      baz=231
L19K  White Mountain   78.92  20  P      P      16 58 44.0 +1.2
      baz=227,SNR=14
GAYA  Gaya             79.01 297 eP      P      16 58 51.5 +7.4
GAYA                                IAmb   IAmb   16 58 59.6
      comp=Z,7.8nm,0.5s
KNGR  Kungurtug, Tuv   79.14 325c iP     P      16 58 45.6 +1.3
KNGR                                pmax   pmax
      comp=Z,33nm,1.2s
N20K  Mount Spurr      79.20  22  P      P      16 58 45.3 +0.9
      baz=229
SPCR  Spurr Chakacha   79.20  22  P      P      16 58 45.1 +0.7
      baz=229
J18K  Innoko River     79.21  19  IAmb   IAmb   16 58 47.9
      comp=Z,100nm,1.9s
J18K  Innoko River     79.21  19  P      P      16 58 45.4 +1.1
      baz=225
CAPN  Captain Cook N   79.31  22  P      P      16 58 46.2 +1.4
      baz=230
M20K  Styx River       79.31  21  P      P      16 58 45.9 +0.9
      baz=228
H17K  Granite Mounta   79.33  17  P      P      16 58 46.6 +1.7
      baz=221
SEW   Seward           79.55  24  P      P      16 58 47.8 +1.6
      baz=232
G17K  Kiwalik Mounta   79.55  16  P      P      16 58 47.2 +1.1
      baz=221,SNR=8.1
O22K  Cooper Landing   79.68  23  P      P      16 58 47.6 +0.8
      baz=232
SUA   Susitna One      79.91  22  P      P      16 58 49.8 +1.5
      baz=231
J19K  Poorman          79.93  19  P      P      16 58 49.8 +1.6
      baz=226
H18K  Honhosa River    79.93  17  P      P      16 58 50.1 +1.9
      baz=223
SKT   Skwentna         79.95  21  P      P      16 58 49.8 +1.4
      baz=230
K20K  Telida           79.99  20  P      P      16 58 50.2 +1.7
      baz=227,SNR=5.4
RC01  Rabbit Creek A   80.05  23  P      P      16 58 50.3 +1.4
      baz=232
GCSA  Galena City Sc   80.07  18  P      P      16 58 50.6 +1.7
      baz=224
P23K  Montague Islan   80.31  24  P      P      16 58 51.2 +0.9
      baz=234
PPLA  Purkeypile       80.32  20  P      P      16 58 51.2 +0.8
      baz=229
M22K  Willow           80.32  22  IAmb   IAmb   16 59 52.8
      comp=Z,98nm,1.3s
M22K  Willow           80.32  22  P      P      16 58 51.1 +0.8
      baz=231
G18K  Tagagawik        80.40  16  P      P      16 58 51.4 +0.7
      baz=222
Q23K  Middleton Isla   80.41  25  P      P      16 58 51.6 +0.8
      baz=235
PWL   Port Wells       80.45  23  P      P      16 58 51.8 +0.8
      baz=233,SNR=10
E17K  Hotham Inlet     80.47  15  P      P      16 58 51.7 +0.7
      baz=219,SNR=33
J20K  Nowinta River    80.52  19  P      P      16 58 52.3 +1.0
      baz=227,SNR=11
L22K  Petersville      80.58  21  IAmb   IAmb   16 58 54.6
      comp=Z,107nm,2.0s
PMR   Palmer           80.59  22  P      P      16 58 52.2 +0.5
      baz=232,SNR=6.4
C16K  Lisburne Hills   80.59  13  P      P      16 58 52.5 +0.8
      baz=216
D17K  Noatak River     80.64  14  P      P      16 58 52.8 +0.9
      baz=218,SNR=9.8
F18K  Selawik          80.65  16  P      P      16 58 52.7 +0.7
      baz=221,SNR=13
CUT   Chulitna         80.68  21  P      P      16 58 53.0 +0.8
      baz=231
KNK   Knik Glacier     80.74  23  P      P      16 58 53.4 +0.8
      baz=233
H19K  Roundabout Mou   80.76  17  P      P      16 58 53.5 +0.9
      baz=225
GHO   Glory Hole Cre   80.78  22  IAmb   IAmb   16 58 56.2
      comp=Z,34nm,0.7s
I20K  Naaghedeneel     80.84  18  P      P      16 58 53.8 +0.8
      baz=227
CHUM  Lake Minchumin   80.92  20  P      P      16 58 54.2 +0.7
      baz=229,SNR=8.7
GLI   Glacier Island   80.95  24  P      P      16 58 54.3 +0.6
      baz=234
RDOG  Red Dog Mine     80.97  14  P      P      16 58 54.4 +0.8
      baz=218,SNR=8.7
G19K  Purcell Mounta   81.02  17  IAmb   IAmb   16 59 34.6
      comp=Z,47nm,1.2s
G19K  Purcell Mounta   81.02  17  P      P      16 58 55.0 +1.0
      baz=224
SML   Sawmill          81.02  22  IAmb   IAmb   16 59 40.2
      comp=Z,66nm,1.0s
SML   Sawmill          81.02  22  P      P      16 58 54.8 +0.6
      baz=233,SNR=7.7
E18K  Tukpahlearik C   81.03  15  P      P      16 58 55.0 +0.9
      baz=220,SNR=12
BLSP  Bilaspur         81.14 294 eP      P      16 59 03.9 +8.2
H20K  Anotleneega Mo   81.20  18  P      P      16 58 55.8 +0.8
      baz=226
C17K  DeLong Mountai   81.24  13  P      P      16 58 56.1 +1.0
      baz=218,SNR=12
M23K  Glacier View     81.25  23  P      P      16 58 56.1 +0.8
      baz=233
EYAK  Cordova Ski Ar   81.30  24  P      P      16 58 56.1 +0.6
      baz=235
TRF   Thorofare Moun   81.33  21  P      P      16 58 56.8 +0.9
      baz=231,SNR=8.5
SCM   Sheep Creek Mo   81.42  23  P      P      16 58 56.6 +0.3
SCM                                 IAmb   IAmb   16 59 31.6
      comp=Z,87nm,1.2s
SCM   Sheep Creek Mo   81.42  23  P      P      16 58 56.6 +0.3
SCM                                 pmax   pmax
      comp=Z,87nm,1.2s
SCM   Sheep Creek Mo   81.42  23  P      P      16 58 56.5 +0.2
      baz=234
BPAW  Bear Paw Mtn.    81.51  20  P      P      16 58 57.5 +0.8
      baz=230
QSPA  South Pole Qui   81.52 180  P      P      16 58 56.5 -0.4
      comp=Z,38nm,0.9s,baz=316,slow=0.6,SNR=80
QSPA                                LR     LR     17 28 54.7
      comp=Z,244nm,22.0s,baz=29,slow=31
      comp=Z,38nm,0.9s
QSPA  South Pole Qui   81.52 180  P      P      16 58 56.6 -0.2
QSPA                                IAmb   IAmb   16 59 26.8
      comp=Z,36nm,0.9s
WAT1  Susitna Watana   81.57  22  P      P      16 58 57.9 +0.9
      baz=232
WAT6  Susitna Watana   81.71  22  P      P      16 58 58.3 +0.3
      baz=233
KLU   Klutina          81.77  23  P      P      16 58 58.7 +0.6
      baz=235
C18K  Utukok River     81.83  14  P      P      16 58 58.9 +0.6
      baz=220
IMAR  Indian Mountai   81.88  18  P      P      16 58 59.0 +0.5
I21K  Tanana           81.89  19  P      P      16 58 59.6 +1.0
      baz=229,SNR=9.3
E19K  Redstone River   81.93  16  P      P      16 58 59.7 +0.9
      baz=224
H21K  Melozitna Rive   81.95  18  P      P      16 58 59.9 +1.0
      baz=228,SNR=7.0
MCK   McKinley         81.98  21  IAmb   IAmb   16 59 01.9
      comp=Z,36nm,0.8s
MCK   McKinley         81.98  21  P      P      16 58 59.0 -0.1
      baz=232,SNR=17
BMRM  Bremner River    82.00  24  P      P      16 58 59.8 +0.5
      baz=236
M24K  Tolsona, Glenn   82.02  23  P      P      16 59 00.1 +0.6
      baz=235
F20K  Avaraart Lake    82.05  16  P      P      16 59 00.6 +1.2
      baz=225
DHY   Denali Highway   82.14  22  P      P      16 59 01.3 +1.1
      baz=234
MLY   Manley           82.19  19  P      P      16 59 01.0 +0.8
      baz=230
B18K  Kokolik River    82.25  13  P      P      16 59 01.9 +1.6
      baz=219
G21K  Allakaket        82.31  17  P      P      16 59 01.6 +0.8
      baz=227,SNR=12
N25K  Chitina, Valde   82.36  24  P      P      16 59 01.8 +0.6
      baz=236
TIXI  Tiksi            82.40 351  P      P      16 59 01.3 +0.2
TIXI  Tiksi            82.40 351⇓eP      P      16 59 00.8 -0.3
TIXI                                pmax   pmax
      comp=Z,8.0nm,0.6s
D19K  Kuna River       82.46  15  P      P      16 59 02.5 +1.0
      baz=223,SNR=24
NEA2  Nenana           82.47  20  P      P      16 59 02.2 +0.6
      baz=232,SNR=8.3
CRQE  Cirque           82.50  25  P      P      16 59 02.9 +0.8
      baz=238
H22K  Ishtalitna Cre   82.55  18  P      P      16 59 03.2 +1.2
      baz=229,SNR=8.4
C19K  Lookout Ridge    82.56  14  P      P      16 59 02.9 +0.8
      baz=221,SNR=16
HARP  HAARP            82.58  23  P      P      16 59 02.8 +0.5
      baz=236
WMQ   Urumqi           82.60 316 eP      P      16 59 03.6 +0.7
WMQ                                 pP     pwP    16 59 26.3 -0.8
WMQ                                 PP     PP     17 02 13.6  0.0
WMQ                                 S      S      17 09 14.3 +0.9
WMQ                                 sS     sS     17 09 54.8 +4.0
WMQ                                 pmax   pmax
      comp=Z,56nm,1.7s
WMQ                                 pmax   pmax
      comp=Z,220nm,4.7s
WMQ                                 LR     LR
      comp=Z,140nm,23.7s
I23K  Minto, Yukon-K   82.72  20  P      P      16 59 03.4 +0.6
      baz=231
WRH   Wood River Hil   82.73  20  IAmb   IAmb   17 00 01.0
      comp=Z,65nm,1.5s
E20K  Nigu River       82.78  15  P      P      16 59 04.1 +0.8
      baz=225
PAX   Paxson           82.79  22  P      P      16 59 04.0 +0.6
      baz=235
F21K  Alatna River     82.80  17  P      P      16 59 04.2 +0.9
      baz=227
PAF   Port-aux-Franc   82.84 221  P      P      16 59 03.7 -0.2
PAF   Port-aux-Franc   82.84 221  P      P      16 59 03.7 -0.2
PAF                                 pmax   pmax
      comp=Z,281nm,1.2s
MCARA McCarthy VSAT    82.87  24  P      P      16 59 04.8 +1.0
      baz=238
D20K  Etivluk River    83.00  15  P      P      16 59 04.9 +0.6
      baz=224
COLA  College          83.06  20  P      P      16 59 04.3 -0.4
COLA                                IAmb   IAmb   16 59 06.6
      comp=Z,44nm,0.7s
COLA  College          83.06  20  P      P      16 59 05.0 +0.4
COLA  College          83.06  20c iP     P      16 59 04.5 -0.1
COLA                                pmax   pmax
      comp=Z,40nm,0.8s
COLA  College          83.06  20  P      P      16 59 04.9 +0.2
      baz=233
COLA  College          83.06  20  P      P      16 59 04.2 -0.4
A19K  Wainwright       83.06  13  P      P      16 59 05.3 +0.8
      baz=220
H23K  Yukon River      83.08  19  P      P      16 59 05.4 +0.6
      baz=231
HDA   Harding Lake     83.09  21  P      P      16 59 05.3 +0.5
      baz=234,SNR=7.3
K24K  Donnelly Dome    83.15  22  P      P      16 59 06.1 +0.9
      baz=235,SNR=5.2
G22K  Bettles          83.18  18  P      P      16 59 06.1 +0.9
      baz=229
LKN   LUCKNOW          83.28 298 eP      P      16 59 13.0 +6.3
LKN                                 IAmb   IAmb   16 59 21.1
      comp=Z,259nm,0.7s
IL31                   83.33  20  IAmb   IAmb   16 59 33.8
      comp=Z,58nm,1.6s
ILAR  Eielson Array    83.33  20  P      P      16 59 05.8 -0.2
      comp=Z,7.1nm,0.4s,baz=252,slow=5.0,SNR=108
ILAR                                PKKPbc PKKPbc 17 17 24.6 -4.2
      comp=Z,0.4nm,0.7s,baz=340,slow=1.2,SNR=5.7
ILAR                                LR     LR     17 30 06.7
      comp=Z,95nm,22.0s,baz=233,slow=31
      comp=Z,7.1nm,0.4s
ILAR  Eielson Array    83.33  20  P      P      16 59 05.3 -0.8
YKU2  Yakutat          83.34  27  P      P      16 59 06.5 +0.3
CTG   Chitna Glacier   83.34  25  P      P      16 59 06.9 +0.5
      baz=239
POKR  Poker Plat Res   83.34  20  P      P      16 59 06.5 +0.4
      baz=233
PINM  Pinnacle         83.37  26  P      P      16 59 07.0 +0.6
      baz=240
M26K  Nabesna, AK      83.42  23  P      P      16 59 07.4 +0.7
      baz=238
RIDG  Independent Ri   83.46  22  P      P      16 59 07.3 +0.5
      baz=236
HYB   Hyderabad        83.48 289 eP      P      16 59 08.8 +0.9
HYB                                 ePP    PP     17 02 20.7 -0.6
HYB                                 eSKSac S      17 09 22.8 -0.5
HYB                                 eScS   ScS    17 09 36.3 +0.1
HYB                                 eSS    SS     17 14 54.1 +3.0
G23K  Bananza Creek    83.49  18  P      P      16 59 07.9 +1.0
      baz=231,SNR=9.0
E21K  Killik River     83.50  16  P      P      16 59 07.8 +0.9
      baz=227
L26K  Log Cabin Wild   83.62  23  P      P      16 59 08.6 +0.9
      baz=237
H24K  Noodor Dome      83.63  19  P      P      16 59 08.7 +1.0
      baz=233,SNR=6.2
DOT   Dot Lake         83.70  22  IAmb   IAmb   16 59 12.6
      comp=Z,29nm,0.8s
O28M  Mount Upton      83.73  26  P      P      16 59 09.1 +0.5
      baz=240
J25K  Salcha River,    83.77  21  IAmb   IAmb   16 59 37.1
      comp=Z,31nm,1.0s
J25K  Salcha River,    83.77  21  P      P      16 59 08.8 +0.4
      baz=235,SNR=16
COLD  Coldfoot         83.77  18  P      P      16 59 09.2 +1.0
      baz=230,SNR=8.3
C21K  Knifeblade Rid   83.78  15  P      P      16 59 09.4 +1.1
      baz=226,SNR=26
B20K  Meade River      83.80  14  P      P      16 59 09.1 +0.7
      baz=224
M27K  Edge Creek, AK   83.84  24  P      P      16 59 09.9 +1.0
      baz=239,SNR=9.1
E22K  Anaktuvuk Pass   83.89  17  P      P      16 59 09.9 +1.0
      baz=229,SNR=12
SCRK  Sand Creek       83.91  22  P      P      16 59 10.1 +0.9
      baz=236,SNR=14
YUK3  Moose Creek      84.12  25  P      P      16 59 11.3 +0.8
      baz=240
D22K  Ayikyak River    84.15  16  IAmb   IAmb   16 59 12.7
      comp=Z,30nm,0.8s
D22K  Ayikyak River    84.15  16  P      P      16 59 11.2 +1.0
      baz=228
B21K  Ikpikpuk River   84.15  15  P      P      16 59 11.4 +1.3
      baz=226
YUK8  Steele Glacier   84.17  25  P      P      16 59 11.4 +0.6
      baz=241
O29M  Mount Kennedy    84.20  26  P      P      16 59 11.5 +0.7
      baz=242
S31K  Pelican          84.21  29  P      P      16 59 11.4 +0.7
      baz=244
L27K  Beaver Creek,    84.23  23  P      P      16 59 11.6 +0.8
      baz=239
BCAR  Beaver Creek A   84.25  23  P      P      16 59 11.5 +0.6
P29M  Windy Craggy     84.26  27  P      P      16 59 11.7 +0.7
      baz=243
SIT   Sitka            84.27  30  P      P      16 59 11.9 +0.9
      baz=245
BVCY  Beaver Creek     84.28  24  P      P      16 59 12.4 +1.4
      baz=240
G24K  Hadweenzic Riv   84.28  19  P      P      16 59 12.0 +1.0
      baz=233,SNR=14
J26L  Joseph Creek     84.35  22  P      P      16 59 12.7 +1.3
      baz=237,SNR=11
E23K  Chandalar        84.47  17  P      P      16 59 13.2 +1.2
      baz=231,SNR=14
LGTI  Lohaghat         84.55 301 eP      P      16 59 20.1 +7.7
LGTI                                IAmb   IAmb   16 59 30.9
      comp=Z,12nm,0.8s
MAW   Mawson           84.56 203  P      P      16 59 12.3  0.0
      comp=Z,43nm,1.1s,baz=95,slow=5.8,SNR=25
      comp=Z,43nm,1.1s
YUK6  Outpost Mounta   84.60  26  P      P      16 59 13.9 +1.0
      baz=242
K27K  Chicken          84.64  22  P      P      16 59 14.7 +1.9
      baz=238,SNR=9.8
R31K  City Hall, Gus   84.64  29  P      P      16 59 14.2 +1.4
      baz=244
F24K  Squaw Lake       84.65  18  P      P      16 59 14.4 +1.6
      baz=233
YUK4  Talbot Arm       84.67  25  P      P      16 59 14.7 +1.4
      baz=242,SNR=6.7
DGZ   Jazzator, Alta   84.72 322c iP     P      16 59 13.5 -0.2
DGZ                                 pmax   pmax
      comp=Z,45nm,0.9s
CRAG  Craig            84.74  32  P      P      16 59 14.4 +1.0
      baz=247
D23K  Nanushuk River   84.75  16  P      P      16 59 14.6 +1.4
      baz=230
G25K  Bearman Lake     84.76  19  P      P      16 59 14.6 +1.3
      baz=234,SNR=11
S32K  Killisnoo        84.81  30  P      P      16 59 14.9 +1.2
      baz=246
PLBC  Pleasant Camp    84.81  28  P      P      16 59 14.9 +1.2
      baz=244
E24K  Your Creek       84.81  17  P      P      16 59 14.3 +0.6
      baz=232
P30M  Million Dollar   84.84  27  P      P      16 59 15.0 +1.1
      baz=243
TOLK  Toolik Lake Re   84.85  17  P      P      16 59 14.7 +0.9
      baz=231,SNR=20
A21K  Barrow           84.88  13  P      P      16 59 14.5 +0.7
      baz=224
HYT   Haines Junctio   84.92  26  P      P      16 59 15.0 +0.6
      baz=243,SNR=7.4
I26K  Coal Creek Min   84.94  21  P      P      16 59 15.2 +1.0
      baz=237
B22K  Teshekpuk Lake   84.95  15  P      P      16 59 14.9 +0.8
      baz=227
U33K  Whale Pass       84.99  31  P      P      16 59 15.5 +0.8
      baz=247
JHNI  Jhansi           85.00 297 eP      P      16 59 22.9 +7.2
JHNI                                IAmb   IAmb   16 59 36.9
      comp=Z,13nm,0.7s
A22K  Sinclair Lake    85.03  14  P      P      16 59 15.0 +0.5
      baz=226
JOSI  Joshimath        85.25 302 eP      P      16 59 23.2 +6.3
JOSI                                IAmb   IAmb   16 59 44.5
      comp=Z,34nm,0.8s
M29M  Somme Creek      85.27  24  P      P      16 59 17.1 +1.1
      baz=242
SKAG  Skagway          85.29  28  P      P      16 59 16.8 +0.8
      baz=245
C23K  Itkillik River   85.33  16  P      P      16 59 17.4 +1.4
      baz=230,SNR=9.0
T33K  Petersburg       85.36  31  P      P      16 59 17.3 +0.8
      baz=247
D24K  Happy Valley     85.39  16  P      P      16 59 17.2 +0.8
      baz=232
N30M  Aishikik Lake    85.39  26  P      P      16 59 17.4 +0.8
      baz=243
F25K  Christian Rive   85.39  18  P      P      16 59 17.4 +0.9
      baz=235,SNR=8.5
V35K  Ketchikan        85.48  32  P      P      16 59 18.0 +0.9
      baz=248
O30N  Mendenhall       85.51  26  P      P      16 59 18.7 +1.4
      baz=244,SNR=8.9
KMPM  Mount Pierce     85.60  48  IAmb   IAmb   16 59 42.7
      comp=Z,39nm,0.9s
ZSN   Zaisan           85.62 319⇑iP      P      16 59 18.0 -0.1
ZSN   Zaisan           85.62 319c iP     P      16 59 17.9 -0.1
G26K  Porcupine Rive   85.62  19  P      P      16 59 19.3 +1.8
      baz=236,SNR=18
BHPL  Bhopal           85.62 294 eP      P      16 59 25.2 +6.6
BHPL                                IAmb   IAmb   16 59 46.5
      comp=Z,89nm,0.2s
BMAR  Burnt Mountain   85.63  19  P      P      16 59 19.0 +1.3
I27K  Kandik River     85.64  21  P      P      16 59 19.2 +1.4
      baz=239,SNR=8.1
DAWY  Dawson           85.68  23  P      P      16 59 19.6 +1.5
      baz=241
L29M  L29M             85.72  24  P      P      16 59 19.6 +1.4
      baz=242,SNR=6.9
E25K  Arctic Village   85.72  18  P      P      16 59 19.5 +1.4
      baz=235,SNR=8.6
C24K  Franklin Bluff   85.77  16  IAmb   IAmb   16 59 20.7
      comp=Z,30nm,0.9s
C24K  Franklin Bluff   85.77  16  P      P      16 59 19.7 +1.4
      baz=232
F26K  Sheenjek River   85.92  19  P      P      16 59 20.4 +1.2
      baz=236
N31M  Braeburn, Yuko   85.96  26  P      P      16 59 21.0 +1.6
      baz=244,SNR=10
GUNA  GUNA             85.98 296 eP      P      16 59 25.9 +5.6
GUNA                                IAmb   IAmb   16 59 44.5
      comp=Z,28nm,0.8s
H27K  Steamboat Moun   86.00  20  P      P      16 59 20.9 +1.4
      baz=239,SNR=9.6
WHY   Whitehorse       86.00  27  P      P      16 59 20.7 +1.0
      baz=245
KHMM  Horse Mountain   86.01  48  IAmb   IAmb   16 59 44.9
      comp=Z,40nm,0.9s
M30M  Minto, Yukon     86.02  25  P      P      16 59 21.1 +1.3
      baz=243,SNR=7.0
P32M  Atlin            86.09  28  P      P      16 59 21.4 +1.3
      baz=246
I28M  Miner Creek      86.16  22  P      P      16 59 21.5 +1.1
      baz=240
D25K  Kavik River      86.18  17  P      P      16 59 21.0 +0.6
      baz=234
G27K  Doyon Strip      86.26  20  P      P      16 59 22.2 +1.4
      baz=238,SNR=7.0
K29M  Barlow Dome      86.30  23  P      P      16 59 22.5 +1.3
      baz=242
J29N  Klondike Camp    86.32  23  P      P      16 59 22.3 +1.1
      baz=242,SNR=9.8
Q32M  Nakina River     86.52  29  P      P      16 59 23.4 +1.0
      baz=247
S34M  Telegraph Cree   86.69  30  P      P      16 59 24.2 +1.2
      baz=248
I29M  Ogilvie Camp,    86.72  22  IAmb   IAmb   16 59 58.7
      comp=Z,24nm,0.9s
I29M  Ogilvie Camp,    86.72  22  P      P      16 59 24.1 +1.0
      baz=242,SNR=13
P33M  Teslin, Yukon    86.75  28  P      P      16 59 24.4 +1.0
      baz=247
N02D  Trinity Center   86.78  48  IAmb   IAmb   16 59 48.5
      comp=Z,24nm,0.8s
T35M  Bob Quinn        86.79  31  P      P      16 59 24.9 +1.3
      baz=249
MAYO  Mayo, Yukon      86.84  24  P      P      16 59 25.1 +1.5
      baz=244
M31M  Drury Creek, Y   86.86  26  IAmb   IAmb   16 59 47.4
      comp=Z,50nm,1.2s
M31M  Drury Creek, Y   86.86  26  P      P      16 59 24.7 +0.8
      baz=245,SNR=6.5
AYAN  Aya Nagar        86.90 299 eP      P      16 59 31.5 +6.8
AYAN                                IAmb   IAmb   16 59 35.0
      comp=Z,20nm,0.9s
C26K  Camden Bay       86.95  17  P      P      16 59 25.4 +1.4
      baz=235
YBH   Yreka Blue Hor   86.96  47  LR     LR     17 31 31.1
      comp=Z,6.1nm,19.5s,baz=270,slow=31
E27K  Coleen River     87.00  19  P      P      16 59 25.7 +1.3
      baz=238,SNR=33
N32M  Quiet Lake       87.00  27  P      P      16 59 25.8 +1.2
      baz=247
J30M  Hart River       87.10  23  P      P      16 59 26.3 +1.2
      baz=244,SNR=9.9
H29M  Whitestone       87.10  21  P      P      16 59 25.8 +0.9
      baz=242
MK31  Makanchi Array   87.12 318c iP     P      16 59 25.1 -0.3
MKAR  Makanchi Array   87.12 318  P      P      16 59 25.2 -0.3
      comp=Z,31nm,0.6s,baz=99,slow=6.0,SNR=269
MKAR                                S      SKSac  17 09 43.4 -1.9
      comp=Z,0.8nm,0.9s,baz=90,slow=7.2,SNR=3.8
MKAR                                LR     LR     17 36 16.6
      comp=Z,113nm,21.5s,baz=98,slow=34
      comp=Z,31nm,0.6s
MKAR  Makanchi Array   87.12 318  P      P      16 59 25.1 -0.4
C27K  Jago River       87.13  17  P      P      16 59 26.1 +1.2
      baz=236
F28M  Old Crow         87.27  20  P      P      16 59 26.5 +0.9
      baz=240,SNR=9.4
R33M  Jennings River   87.31  29  P      P      16 59 27.1 +0.9
      baz=249
FARO  Faro, Yukon      87.32  26  P      P      16 59 26.9 +0.8
      baz=246,SNR=6.8
MAKZ  Makanchi         87.33 318  P      P      16 59 25.9 -0.5
MAKZ                                IAmb   IAmb   16 59 27.2
      comp=Z,32nm,0.8s
MAKZ  Makanchi         87.33 318  P      P      16 59 25.9 -0.5
MAKZ                                pmax   pmax
      comp=Z,32nm,0.8s
MAKZ  Makanchi         87.33 318  P      P      16 59 26.1 -0.4
I30M  Mount Dempster   87.37  22  IAmb   IAmb   17 00 02.8
      comp=Z,38nm,1.3s
I30M  Mount Dempster   87.37  22  P      P      16 59 27.4 +1.0
      baz=244,SNR=17
SMLA  Simla            87.39 302 eP      P      16 59 35.9 +8.9
SMLA                                IAmb   IAmb   16 59 51.8
      comp=Z,30nm,0.4s
DLBC  Dease Lake       87.42  30  LR     LR     17 34 29.5
      comp=Z,66nm,18.6s,baz=258,slow=33
DLBC  Dease Lake       87.42  30  P      P      16 59 27.6 +1.0
      baz=249
G29M  Pine Creek       87.55  21  IAmb   IAmb   16 59 28.9
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	comp=Z,30nm,0.9s						
G29M	**Pine Creek**	**87.55**	**21**	P	**P**	**16 59 28.1**	**+1.1**
	baz=242,SNR=12						
ZALV	**Zalesovo Beam**	**87.61**	**325**	P	**P**	**16 59 25.9**	**-1.6**
	comp=Z,11nm,0.7s,baz=114,slow=5.8,SNR=60						
ZALV				LR	LR	17 41 17.0	
	comp=Z,75nm,18.1s,baz=94,slow=37						
	comp=Z,11nm,0.7s						
ZALV	**Zalesovo Beam**	**87.61**	**325**	P	**P**	**16 59 25.7**	**-1.8**
ZALV	**Zalesovo Beam**	**87.61**	**325**	*i* P	**P**	**16 59 26.2**	**-1.4**
ZALV				pmax	pmax		
	comp=Z,11nm,0.6s						
RTK	**Rohtak**	**87.62**	**300**	*e*P	**P**	**16 59 32.4**	**+4.2**
RTK				IAmb	IAmb	17 00 01.1	
	comp=Z,1µm,0.1s						
RPN	**Rapa Nui**	**87.69**	**117**	LR	LR	17 31 14.7	
	comp=Z,116nm,21.7s,baz=21,slow=30						
D27M	**Malcolm River**	**87.75**	**18**	P	**P**	**16 59 29.4**	**+1.4**
	baz=239						
EPYK	**Eagle Plains**	**87.76**	**21**	IAmb	IAmb	16 59 60.0	
	comp=Z,52nm,1.2s						
EPYK	**Eagle Plains**	**87.76**	**21**	P	**P**	**16 59 29.0**	**+0.9**
	baz=243,SNR=10						
E28M	**Babbage River**	**87.87**	**19**	P	**P**	**16 59 29.3**	**+0.8**
	baz=240						
SHLS	**Shalkode**	**88.16**	**314**	⇑*i*P	**P**	**16 59 28.8**	**-1.9**
SHLS	**Shalkode**	**88.16**	**314**	*c i*P	**P**	**16 59 28.7**	**-1.9**
PDGK	**Podgornoye**	**88.18**	**314**	P	**P**	**16 59 29.5**	**-1.2**
G30M	**tAoh Zraii Nji**	**88.22**	**21**	IAmb	IAmb	17 00 10.9	
	comp=Z,78nm,1.6s						
G30M	**tAoh Zraii Nji**	**88.22**	**21**	P	**P**	**16 59 30.9**	**+0.7**
	baz=244						
E29M	**Blow River**	**88.29**	**19**	IAmb	IAmb	17 00 09.1	
	comp=Z,46nm,1.6s						
E29M	**Blow River**	**88.29**	**19**	P	**P**	**16 59 31.2**	**+0.7**
	baz=242						
DHRM	**DHARAMSHALA**	**88.33**	**303**	*e*P	P	16 59 38.4	+6.6
DHRM				IAmb	IAmb	17 00 01.9	
	comp=Z,44nm,0.6s						
H31M	**Peel River**	**88.39**	**22**	IAmb	IAmb	17 00 27.7	
	comp=Z,28nm,1.2s						
H31M	**Peel River**	**88.39**	**22**	P	**P**	**16 59 31.5**	**+0.5**
	baz=245						
D28M	**Stokes Point**	**88.47**	**18**	P	**P**	**16 59 32.5**	**+1.2**
	baz=241						
UZB	**Uzynbulak**	**88.47**	**314**	⇑*i*P	**P**	**16 59 31.8**	**-0.4**
	comp=Z,16nm,0.9s						
UZB	**Uzynbulak**	**88.47**	**314**	*c i*P	**P**	**16 59 31.7**	**-0.4**
UZB				pmax	pmax		
	comp=Z,16nm,0.9s						
WTLY	**Watson Lake, Y**	**88.59**	**28**	P	**P**	**16 59 32.7**	**+0.6**
	baz=250						
F30M	**Barrier River**	**88.65**	**20**	P	**P**	**16 59 33.0**	**+0.8**
	baz=244						
G31M	**Satah River**	**88.88**	**21**	IAmb	IAmb	17 00 09.8	
	comp=Z,21nm,0.9s						
G31M	**Satah River**	**88.88**	**21**	P	**P**	**16 59 34.2**	**+1.0**
	baz=245						
SATY	**Saty**	**88.89**	**314**	⇑*i*P	**P**	**16 59 33.7**	**-0.4**
	comp=Z,13nm,0.9s						
SATY	**Saty**	**88.89**	**314**	*c i*P	**P**	**16 59 33.7**	**-0.4**
SATY				pmax	pmax		
	comp=Z,13nm,0.9s						
TPO	**Tropico Hills**	**88.93**	**55**	IAmb	IAmb	16 59 59.0	
	comp=Z,51nm,1.4s						
TARG	**Taragay, Kyrgy**	**89.05**	**312**	IAmb	IAmb	16 59 36.5	
	comp=Z,16nm,0.9s						
TARG	**Taragay, Kyrgy**	**89.05**	**312**	P	**P**	**16 59 33.9**	**-1.3**
TARG				pmax	pmax		
	comp=Z,20nm,1.2s						
F31M	**Tsiigehtchic**	**89.29**	**21**	IAmb	IAmb	17 00 04.5	
	comp=Z,38nm,1.3s						
F31M	**Tsiigehtchic**	**89.29**	**21**	P	**P**	**16 59 35.8**	**+0.6**
	baz=246						
TDK	**Taldyqorghan**	**89.32**	**316**	*e*P	**P**	**16 59 35.7**	**-0.2**
TDK	**Taldyqorghan**	**89.32**	**316**	*e*P	**P**	**16 59 35.7**	**-0.2**
RYN	**Ryan**	**89.42**	**51**	IAmb	IAmb	17 00 02.1	
	comp=Z,17nm,0.9s						
NVAR	**Mina Array Bea**	**89.55**	**51**	P	**P**	**16 59 38.3**	**+0.9**
	comp=Z,8.9nm,0.9s,baz=238,slow=5.6,SNR=26						
NVAR				LR	LR	17 30 15.2	
	comp=Z,68nm,21.3s,baz=272,slow=29						
	comp=Z,8.9nm,0.9s						
NVAR	**Mina Array Bea**	**89.55**	**51**	P	**P**	**16 59 37.5**	**+0.1**
KDJ	**Kajisay**	**89.58**	**313**	P	**P**	**16 59 37.6**	**+0.2**
KDJ				pmax	pmax		
	comp=Z,68nm,0.9s						
LIRD	**Liard River Hi**	**89.66**	**30**	P	**P**	**16 59 37.9**	**+0.8**
	baz=253						
INK	**Inuvik**	**89.72**	**20**	P	**P**	**16 59 38.2**	**+1.0**
	baz=246						
MDOK	**Medeo**	**89.89**	**314**	*e*P	**P**	**16 59 38.4**	**-0.4**
MDOK	**Medeo**	**89.89**	**314**	*e*P	**P**	**16 59 38.3**	**-0.4**
SRNI	**Srinagar**	**89.89**	**304**	*e*P	P	16 59 45.2	+6.6
SRNI				IAmb	IAmb	16 59 49.7	
	comp=Z,332nm,0.2s						
TOAD	**Toad River Com**	**89.93**	**30**	P	**P**	**16 59 39.1**	**+0.7**
	baz=254						
TNSS	**Tian-Shan**	**89.94**	**313**	*e*P	**P**	**16 59 38.6**	**-0.7**
TNSS	**Tian-Shan**	**89.94**	**313**	*e*P	**P**	**16 59 38.6**	**-0.7**
KSH	**Kashi**	**89.97**	**310**	P	**P**	**16 59 40.5**	**+1.3**
KSH				pP	pP	17 00 00.8	-0.5
KSH				S	**S**	**17 10 25.1**	**-0.3**
KSH				sS	sS	17 11 06.0	+2.7
KSH				pmax	pmax		
	comp=Z,17nm,1.1s						
AAA	**Alma-Ata**	**89.99**	**314**	*e*P	**P**	**16 59 38.9**	**-0.3**
	comp=Z,16nm,0.6s						
AAA	**Alma-Ata**	**89.99**	**314**	*e*P	**P**	**16 59 38.8**	**-0.3**
AAA				pmax	pmax		
	comp=Z,16nm,0.6s						
WVOR	**Wild Horse Val**	**90.08**	**47**	P	**P**	**16 59 39.3**	**-0.3**
WVOR				pmax	pmax		
	comp=Z,18nm,1.4s						
BORC	**Borrego Spring**	**90.11**	**57**	IAmb	IAmb	17 00 04.3	
	comp=Z,44nm,1.2s						
PFO	**Pinyon Flats O**	**90.14**	**56**	LR	LR	17 32 48.7	
	comp=Z,221nm,20.2s,baz=254,slow=31						
PFO	**Pinyon Flats O**	**90.14**	**56**	P	**P**	**16 59 40.7**	**+0.6**
PFO				IAmb	IAmb	17 00 12.2	
	comp=Z,30nm,1.2s						
PFO	**Pinyon Flats O**	**90.14**	**56**	P	**P**	**16 59 40.7**	**+0.6**
PFO				pmax	pmax		
	comp=Z,30nm,1.3s						
ULHL	**Ulahol**	**90.29**	**313**	P	**P**	**16 59 41.3**	**+0.5**
	SNR=6.2						
FURC	**Furnace Creek,**	**90.31**	**53**	IAmb	IAmb	17 00 12.5	
	comp=Z,39nm,1.0s						
KURK	**Kurchatov**	**90.43**	**321**	P	**P**	**16 59 39.6**	**-1.3**
KURK				IAmb	IAmb	16 59 41.0	
	comp=Z,41nm,1.2s						
KURK	**Kurchatov**	**90.43**	**321**	*c i*P	**P**	**16 59 39.1**	**-1.8**
KURK				pmax	pmax		
	comp=Z,38nm,1.4s						
KURBB	**Kurchatov Arra**	**90.47**	**321**	P	**P**	**16 59 40.0**	**-1.1**
	comp=Z,8.1nm,0.7s,baz=94,slow=5.0,SNR=86						
KURBB				LR	LR	17 41 03.8	
	comp=Z,65nm,20.5s,baz=172,slow=36						
	comp=Z,8.1nm,0.7s						
BOOM	**Boomskoye usch**	**90.56**	**313**	IAmb	IAmb	16 59 43.1	
	comp=Z,33nm,0.8s						
KOTAN	**Kotaneelee Air**	**90.86**	**29**	P	**P**	**16 59 43.3**	**+0.6**
	baz=254						
TKM2	**Tokmak 2**	**90.89**	**313**	P	**P**	**16 59 43.0**	**-0.6**
	SNR=22						
BC3	**Big Chuckawall**	**90.97**	**56**	IAmb	IAmb	17 00 08.7	
	comp=Z,32nm,0.9s						
NIL	**Nilore**	**91.10**	**304**	P	**P**	**16 59 43.6**	**-0.9**
NIL				IAmb	IAmb	17 00 20.7	
	comp=Z,36nm,1.6s						
NIL	**Nilore**	**91.10**	**304**	P	**P**	**16 59 43.6**	**-0.9**
NIL				pmax	pmax		
	comp=Z,36nm,1.6s						
KBK	**Karagaybulak**	**91.31**	**313**	P	**P**	**16 59 45.2**	**-0.2**
	SNR=12						
NRIK	**Noril'sk**	**91.43**	**340**	P	**P**	**16 59 43.7**	**-1.4**
	comp=Z,3.2nm,0.5s,baz=125,slow=4.0,SNR=8.4						
NRIK				LR	LR	17 41 55.0	
	comp=Z,133nm,19.9s,baz=118,slow=36						
	comp=Z,3.2nm,0.5s						
NRIK	**Noril'sk**	**91.43**	**340**	IAmb	IAmb	17 00 18.5	
	comp=Z,13nm,1.0s						
NRIK	**Noril'sk**	**91.43**	**340**	*c i*P	**P**	**16 59 43.7**	**-1.4**
NRIK				pmax	pmax		
	comp=Z,14nm,1.3s						
CHMS	**Chumysh**	**91.51**	**313**	P	**P**	**16 59 46.1**	**-0.1**
	SNR=7.2						
UCH	**Uchtor**	**91.55**	**312**	P	**P**	**16 59 47.4**	**+0.5**
	SNR=14						
ARLS	**Aral**	**91.63**	**312**	P	**P**	**16 59 46.9**	**0.0**
ARLS				pmax	pmax		
	comp=Z,15nm,1.0s						
AAK	**Ala-Archa**	**91.63**	**313**	P	**P**	**16 59 46.6**	**-0.3**
	SNR=15						
AAK	**Ala-Archa**	**91.63**	**313**	P	**P**	**16 59 46.1**	**-0.8**
AAK				IAmb	IAmb	16 59 47.6	
	comp=Z,14nm,0.8s						
AAK	**Ala-Archa**	**91.63**	**313**	*c i*P	**P**	**16 59 46.3**	**-0.6**
AAK				pmax	pmax		
	comp=Z,14nm,0.7s						
USP	**Ospenovka**	**91.74**	**313**	P	**P**	**16 59 46.7**	**-0.5**
	SNR=17						
EKS2	**Erkin-Say**	**92.16**	**313**	P	**P**	**16 59 49.5**	**+0.2**
	SNR=8.2						
SYO	**Syowa Base**	**92.20**	**198**	⇑*e*P	**P**	**16 59 49.2**	**+0.4**
SYO	**Syowa Base**	**92.20**	**198**	⇓*e*PcP	**PcP**	**16 59 49.6**	**+0.1**
NEW	**Newport**	**92.21**	**42**	LR	LR	17 36 59.2	
	comp=Z,88nm,18.3s,baz=264,slow=33						
PLID	**Pearl Lake**	**92.43**	**45**	IAmb	IAmb	17 00 13.5	
	comp=Z,15nm,0.8s						
DRK	**Karamyk**	**93.15**	**309**	IAmb	IAmb	16 59 55.0	
	comp=Z,19nm,1.0s						
C36M	**Paulatuk**	**93.30**	**20**	IAmb	IAmb	16 59 54.6	
	comp=Z,17nm,0.8s						
C36M	**Paulatuk**	**93.30**	**20**	P	**P**	**16 59 54.3**	**+0.6**
	baz=255						
ARK	**Arkit**	**93.36**	**312**	P	**P**	**16 59 54.9**	**+0.1**
ARK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KNB	**Kanab**	**93.60**	**53**	IAmb	IAmb	17 00 21.1	
	comp=Z,28nm,1.0s						
A36M	**Sachs Harbour**	**93.64**	**18**	P	**P**	**16 59 56.0**	**+0.8**
	baz=254						
DUG	**Dugway, Tooele**	**94.04**	**50**	P	**P**	**16 59 57.6**	**-0.4**
DUG				P	**pP**	**17 00 20.6**	**+0.3**
DUG				pmax	pmax		
	comp=Z,11nm,1.1s						
LPIG	**La Paz**	**94.05**	**66**	LR	LR	17 35 48.2	
	comp=Z,163nm,18.7s,baz=234,slow=31						
GAR	**Garm**	**94.22**	**309**	IAmb	IAmb	17 00 39.6	
	comp=Z,30nm,1.2s						
KK31	**Karatay Array**	**94.60**	**313**	IAmb	IAmb	17 00 00.3	
	comp=Z,8.9nm,0.8s						
KK31	**Karatay Array**	**94.60**	**313**	*i* P	**P**	**16 59 58.9**	**-1.5**
KKAR	**Karatay Array**	**94.60**	**313**	P	**P**	**16 59 58.8**	**-1.6**
KKAR	**Karatay Array**	**94.60**	**313**	P	**P**	**16 59 58.8**	**-1.6**
ELIB	**Princess Elisa**	**94.67**	**193**	*d*P	**P**	**16 59 59.4**	**-0.9**
	comp=Z,4.3nm,1.0s						
IUG	**Iuzhnay**	**94.83**	**312**	*e*P	**P**	**17 00 00.9**	**-0.7**
	comp=Z,7.7nm,0.9s						
IUG	**Iuzhnay**	**94.83**	**312**	*e*P	**P**	**17 00 00.9**	**-0.7**
IUG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CHGR	**Chuyangaron**	**95.08**	**308**	IAmb	IAmb	17 00 25.8	
	comp=Z,34nm,1.3s						
CHGR	**Chuyangaron**	**95.08**	**308**	⇓*e*P	**P**	**17 00 02.4**	**-0.4**
CHGR				pmax	pmax		
	comp=Z,16nm,1.0s						
BRLS	**Borolday**	**95.08**	**313**	*e*P	**P**	**17 00 01.8**	**-0.8**
BRLS	**Borolday**	**95.08**	**313**	*e*P	**P**	**17 00 01.8**	**-0.8**
SHAA	**Shahritus**	**95.77**	**307**	IAmb	IAmb	17 00 45.4	
	comp=Z,12nm,0.9s						
YKA	**Yellowknife Ar**	**95.79**	**28**	P	**P**	**17 00 05.5**	**+0.3**
	comp=Z,5.6nm,0.8s,baz=264,slow=5.2,SNR=58						
YKA				LR	LR	17 40 30.2	
	comp=Z,96nm,18.1s,baz=282,slow=34						
	comp=Z,5.6nm,0.8s						
YKA	**Yellowknife Ar**	**95.79**	**28**	P	**P**	**17 00 04.5**	**-0.8**
YKAW3	**Yellowknife Wh**	**95.80**	**28**	IAmb	IAmb	17 00 28.1	
	comp=Z,20nm,0.9s						
YKAW1	**Yellowknife Wh**	**95.84**	**28**	IAmb	IAmb	17 00 28.3	
	comp=Z,19nm,0.8s						
BVA0	**Borovoye Array**	**95.84**	**323**	*i* P	**P**	**17 00 04.2**	**-1.6**
BVAR	**Borovoye Array**	**95.84**	**323**	P	**P**	**17 00 04.5**	**-1.4**
	comp=Z,29nm,0.7s,baz=98,slow=5.3,SNR=82						
BVAR				LR	LR	17 43 25.9	
	comp=Z,74nm,21.2s,baz=87,slow=35						
	comp=Z,29nm,0.7s						
BORK	**Borovoye**	**95.89**	**323**	P	**P**	**17 00 04.3**	**-1.7**
BORK	**Borovoye**	**95.89**	**323**	*c i*P	**P**	**17 00 04.6**	**-1.4**
BORK				pmax	pmax		
	comp=Z,25nm,0.8s						
P18A	**Preston Nutter**	**95.93**	**51**	IAmb	IAmb	17 00 31.3	
	comp=Z,17nm,1.1s						
PDAR	**Pinedale Array**	**96.75**	**48**	P	**P**	**17 00 10.8**	**+0.4**
	comp=Z,3.9nm,0.9s,baz=238,slow=2.1,SNR=21						
PDAR				LR	LR	17 39 38.1	
	comp=Z,57nm,18.6s,baz=278,slow=33						
	comp=Z,3.9nm,0.9s						
PDAR	**Pinedale Array**	**96.75**	**48**	P	**P**	**17 00 10.5**	**0.0**
TROLL	**Troll, Antarti**	**98.21**	**187**	⇑P	Pdif	17 00 19.3	+2.9
	comp=Z,209nm,0.7s						
ANMO	**Albuquerque**	**98.52**	**56**	LR	LR	17 37 13.6	
	comp=Z,171nm,22.0s,baz=278,slow=31						
SNAA	**Sanae**	**99.12**	**186**	⇑P	**Pdif**	**17 00 20.0**	**-0.4**
	comp=Z,77nm,0.8s						
SNAA	**Sanae**	**99.12**	**186**	P	**Pdif**	**17 00 20.2**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=180,slow=3.7,SNR=7.5						
SNAA				LR	LR	17 40 45.5	
	comp=Z,214nm,21.7s,baz=166,slow=33						
	comp=Z,1.2nm,0.7s						
SNAA	**Sanae**	**99.12**	**186**	⇑*e*P	**Pdif**	**17 00 20.6**	**+0.2**
SNAA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
VNA3	**Neumayer Olymp**	**100.10**	**184**	⇑P	**Pdif**	**17 00 25.0**	**+0.3**
	comp=Z,3.0nm,0.6s						
VNA2	**Neumayer--Watz**	**100.25**	**185**	⇑P	**Pdif**	**17 00 26.9**	**+1.6**
	comp=Z,3.0nm,0.5s,baz=154,slow=6.7						
TXAR	**Lajitas Array**	**100.48**	**62**	P	**Pdif**	**17 00 30.4**	**+3.1**
	comp=Z,0.5nm,0.6s,baz=232,slow=4.9,SNR=6.0						
TXAR				PKKPbc	**PKKPbc**	**17 16 42.1**	**-1.0**
	comp=Z,0.5nm,0.7s,baz=112,slow=5.0,SNR=5.1						
AB31	**Akbulak array**	**102.25**	**319**	*i* P	**Pdif**	**17 00 32.6**	**-2.0**
ARTI	**Arti**	**102.87**	**326**	*c i*P	**Pdif**	**17 00 35.2**	**-1.9**
ARTI						17 04 49.1	
ARTI				S	**SKSac**	**17 11 07.3**	**-1.8**
ARTI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
APA	**Apatity**	**110.85**	**340**	*i* PKIKP	**PKiKP**	**17 05 07.5**	**-4.1**
APA				*e*		17 05 43.3	
KLMR	**Klimovskoe**	**111.45**	**333**	*e*P	**Pdif**	**17 01 12.3**	**-2.9**
KLMR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AKT	**Akhty**	**111.46**	**311**	*e*PKIKP	**PKiKP**	**17 05 14.3**	**+0.6**
ARCES	**ARCESS Array B**	**112.10**	**344**	PKiKP	**PKiKP**	**17 05 13.1**	**-0.9**
	comp=Z,4.0nm,0.8s,baz=74,slow=2.1,SNR=17						
ARCES				PKKPbc	**PKKPbc**	**17 16 04.7**	**-3.8**
	comp=Z,4.4nm,1.1s,baz=248,slow=2.4,SNR=5.0						
PLCA	**Paso Flores**	**113.13**	**141**	PKKPbc	PKKPbc	17 16 02.6	-1.7
	comp=Z,2.7nm,0.9s,baz=34,slow=7.3,SNR=4.5						
KIV	**Kislovodsk**	**114.68**	**315**	*i* PKIKP	PKPdf	17 05 17.2	-2.6
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,54nm,22.0s						
OBN	**Obninsk**	**115.11**	**328**	*i* PKIKP	**PKPdf**	**17 05 20.1**	**+0.1**
OBN				*e*		17 06 21.1	
OBN				*e*PPP	PPP	17 08 45.8	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FINES	**FINESS Array B**	**116.86**	**337**	PKP	**PKPdf**	**17 05 22.4**	**-0.8**
	comp=Z,4.2nm,0.7s,baz=121,slow=2.0,SNR=15						
AKASG	**Malin Array Be**	**121.01**	**325**	PKP	**PKPdf**	**17 05 30.2**	**-1.3**
	comp=Z,5.6nm,0.5s,baz=48,slow=2.7,SNR=31						
AK09	**Malin Array Si**	**121.01**	**325**	PKP	**PKPdf**	**17 05 30.1**	**-1.5**
AK01	**Malin Array Si**	**121.02**	**325**	PKP	**PKPdf**	**17 05 30.2**	**-1.4**
KIEV	**Kiev**	**121.02**	**325**	⇓P	**PKPdf**	**17 05 30.8**	**-0.8**
KIEV	**Kiev**	**121.02**	**325**	⇓PKIKP	**PKPdf**	**17 05 30.8**	**-0.8**
KIEV	**Kiev**	**121.02**	**325**	PKP	**PKPdf**	**17 05 30.0**	**-1.6**
AK08	**Malin Array Si**	**121.02**	**325**	PKP	**PKPdf**	**17 05 30.0**	**-1.6**
AK04	**Malin Array Si**	**121.03**	**325**	PKP	**PKPdf**	**17 05 30.0**	**-1.6**
AK02	**Malin Array Si**	**121.04**	**325**	PKP	**PKPdf**	**17 05 30.1**	**-1.5**
AK10	**Malin Array Si**	**121.04**	**325**	PKP	**PKPdf**	**17 05 30.1**	**-1.5**
AK13	**Malin Array Si**	**121.14**	**325**	PKP	**PKPdf**	**17 05 30.7**	**-1.1**
BOSA	**Boshof**	**122.10**	**229**	PKP	**PKPdf**	**17 05 34.0**	**-0.6**
	comp=Z,3.2nm,0.8s,baz=77,slow=3.5,SNR=8.3						
BOSA	**Boshof**	**122.10**	**229**	PKIKP	**PKPdf**	**17 05 34.0**	**-0.6**
LUBAR	**Lubar, Ukraine**	**122.20**	**325**	PKP	**PKPdf**	**17 05 32.7**	**-1.2**
HFS	**Hagfors**	**122.25**	**340**	PKP	**PKPdf**	**17 05 32.4**	**-1.3**
	comp=Z,4.3nm,0.6s,baz=106,slow=2.2,SNR=16						
KIRS	**Kirsehir-Merke**	**122.27**	**311**	⇓P	**PKPdf**	**17 05 33.7**	**-0.8**
BRTR	**Keskin Array B**	**122.30**	**312**	PKP	**PKPdf**	**17 05 33.8**	**-0.9**
	comp=Z,1.9nm,0.9s,baz=78,slow=0.9,SNR=9.9						
BRTR				PP	**PP**	**17 07 08.3**	**-2.8**
	comp=Z,2.2nm,0.9s,baz=112,slow=8.1,SNR=5.1						
NB2	**NORSAR Subarra**	**122.34**	**342**	PKPdf	**PKPdf**	**17 05 33.1**	**-0.8**
	comp=Z,2.9nm,0.6s,baz=39,slow=1.9						
NB2	**NORSAR Subarra**	**122.34**	**342**	PKIKP	**PKPdf**	**17 05 32.2**	**-1.7**
NOA	**NORSAR Array B**	**122.34**	**342**	PKP	**PKPdf**	**17 05 32.6**	**-1.3**
	comp=Z,5.2nm,0.8s,baz=43,slow=1.9,SNR=18						
SUW	**Suwalki**	**122.45**	**331**	*e*PKP	**PKiKP**	**17 05 34.8**	**+0.4**
NORES	**NORESS Array B**	**122.48**	**342**	PKIKP	**PKPdf**	**17 05 33.4**	**-0.7**
RNPP9	**Sopachiv**	**122.50**	**327**	PKP	**PKPdf**	**17 05 33.3**	**-1.1**
RNPP5	**Staryi Chortor**	**122.59**	**327**	PKP	**PKPdf**	**17 05 33.2**	**-1.4**
MMAI	**Mount Meron Ar**	**122.61**	**304**	PKP	**PKPdf**	**17 05 34.7**	**-0.6**
	comp=Z,1.8nm,0.5s,baz=108,slow=2.7,SNR=5.0						
SORM	**Soroca**	**122.69**	**323**	⇑P	**PKPdf**	**17 05 33.9**	**-0.9**
SORM	**Soroca**	**122.69**	**323**	⇑PKIKP	**PKPdf**	**17 05 33.9**	**-0.9**
TLCR		**123.68**	**319**	⇑P	**PKPdf**	**17 05 35.9**	**-1.0**
TLCR		**123.68**	**319**	⇑PKIKP	**PKPdf**	**17 05 35.9**	**-1.0**
JURR	**Jurilovca**	**123.82**	**319**	⇑P	**PKPdf**	**17 05 36.8**	**-0.3**
SCTR	**Scanteiesti**	**124.00**	**320**	⇑P	**PKiKP**	**17 05 37.8**	**0.0**
TPGR	**Topolog**	**124.08**	**319**	⇑P	**PKPdf**	**17 05 37.1**	**-0.6**
CFR	**Carcaliu**	**124.12**	**320**	⇓P	**PKPdf**	**17 05 37.4**	**-0.3**
CFR	**Carcaliu**	**124.12**	**320**	⇓PKIKP	**PKPdf**	**17 05 37.4**	**-0.3**
GHRR		**124.20**	**321**	⇓P	**PKiKP**	**17 05 38.5**	**+0.3**
TIRR	**Tirgusor**	**124.25**	**319**	⇓P	**PKPdf**	**17 05 37.8**	**-0.2**
TIRR	**Tirgusor**	**124.25**	**319**	⇓PKIKP	**PKPdf**	**17 05 37.8**	**-0.2**
TESR	**Tescani**	**124.46**	**322**	⇓P	**PKPdf**	**17 05 37.9**	**-0.4**
BIZ	**Bicaz**	**124.59**	**322**	⇑P	**PKPdf**	**17 05 38.0**	**-0.6**
ONER	**Baraj Valea Uz**	**124.70**	**322**	⇑P	**PKiKP**	**17 05 39.1**	**-0.1**
VRI	**Vrincioaia**	**124.71**	**321**	⇑P	**PKPdf**	**17 05 38.5**	**-0.4**
VRI	**Vrincioaia**	**124.71**	**321**	⇑PKIKP	**PKPdf**	**17 05 38.5**	**-0.4**
BURAR	**Bucovina Array**	**124.79**	**323**	⇓P	**PKPdf**	**17 05 38.8**	**-0.3**
BURAR	**Bucovina Array**	**124.79**	**323**	⇓PKIKP	**PKPdf**	**17 05 38.8**	**-0.3**
BISRR	**Bisoca**	**124.86**	**321**	⇓P	**PKPdf**	**17 05 39.4**	**+0.2**
TURR	**Turia**	**125.06**	**321**	⇑P	**PKPdf**	**17 05 39.3**	**-0.3**
KWP	**Kalwaria Pacla**	**125.16**	**327**	*e*PKP	**PKPdf**	**17 05 39.8**	**+0.2**
MLR	**Muntele Rosu**	**125.37**	**321**	⇓P	**PKPdf**	**17 05 39.7**	**-0.6**
MLR	**Muntele Rosu**	**125.37**	**321**	⇓PKIKP	**PKPdf**	**17 05 39.7**	**-0.6**
DOPR	**Dopca**	**125.49**	**322**	⇑P	**PKiKP**	**17 05 40.8**	**0.0**
STHS	**Stebnicka Huta**	**126.08**	**327**	*e*PKIKP	**PKPdf**	**17 05 41.3**	**-0.1**
STHS	**Stebnicka Huta**	**126.08**	**327**	*e*PKP	**PKPdf**	**17 05 41.3**	**-0.1**
BAND	**Balkesir-Ban**	**126.09**	**314**	⇑P	**PKPdf**	**17 05 41.2**	**-0.5**
ARR	**Arges**	**126.24**	**321**	⇑P	**PKiKP**	**17 05 42.5**	**+0.2**
OJC	**Ojcow**	**126.37**	**329**	*e*PKP	**PKPdf**	**17 05 41.8**	**-0.2**
OJC	**Ojcow**	**126.37**	**329**	PKIKP	**PKPdf**	**17 05 41.4**	**-0.5**
HUMR	**Humele**	**126.42**	**320**	⇑P	**PKPdf**	**17 05 41.8**	**-0.4**
MARR	**Marisel-Cluj**	**126.50**	**323**	⇑P	**PKPdf**	**17 05 42.5**	**+0.1**
ELND	**Elena**	**126.56**	**318**	⇓P	**PKPdf**	**17 05 42.2**	**-0.3**
NIE	**Niedzica**	**126.58**	**328**	*e*PKP	**PKiKP**	**17 05 43.2**	**+0.4**
DRGR		**126.68**	**324**	⇓P	**PKPdf**	**17 05 42.4**	**-0.3**
DRGR		**126.68**	**324**	⇓PKIKP	**PKPdf**	**17 05 42.4**	**-0.3**
ROSC	**El Rosal**	**126.97**	**90**	PKP	**PKPdf**	**17 05 44.1**	**-0.5**
	comp=Z,14nm,0.5s,baz=200,slow=7.3,SNR=5.2						
PLVB	**Pleven**	**127.18**	**319**	⇓P	**PKPdf**	**17 05 43.6**	**-0.1**
LPAZ	**La Paz**	**127.29**	**118**	PKP	**PKPdf**	**17 05 45.2**	**-0.2**
	comp=Z,4.5nm,0.7s,baz=279,slow=1.7,SNR=14						
LPAZ	**La Paz**	**127.29**	**118**	*e*P	**PKiKP**	**17 05 46.1**	**+0.2**
GZR	**Gura Zlata**	**127.36**	**322**	⇓P	**PKPdf**	**17 05 43.8**	**-0.2**
GZR	**Gura Zlata**	**127.36**	**322**	⇓PKIKP	**PKPdf**	**17 05 43.8**	**-0.2**
OKC	**Ostrava-Krasne**	**127.45**	**329**	*e*PKIKP	**PKPdf**	**17 05 40.5**	**-3.5**
OKC	**Ostrava-Krasne**	**127.45**	**329**	*e*PKP	**PKPdf**	**17 05 40.5**	**-3.5**
SIRR	**Siria**	**127.58**	**324**	⇑P	**PKPdf**	**17 05 44.5**	**+0.2**
PSZ	**Piszkesteto**	**127.67**	**326**	⇑P	**PKPdf**	**17 05 43.5**	**-1.1**
PSZ	**Piszkesteto**	**127.67**	**326**	⇑PKIKP	**PKPdf**	**17 05 43.5**	**-1.1**
KSP	**Ksiaz**	**127.73**	**331**	*e*PKP	**PKiKP**	**17 05 45.1**	**0.0**
MORC	**Moravsky Berou**	**127.79**	**329**	⇑P	**PKPdf**	**17 05 44.3**	**-0.4**
MORC	**Moravsky Berou**	**127.79**	**329**	*e*PKIKP	**PKPdf**	**17 05 44.8**	**+0.1**
MORC				*e*pPKIKP		17 06 08.4	
MORC	**Moravsky Berou**	**127.79**	**329**	⇑PKIKP	**PKPdf**	**17 05 44.3**	**-0.4**
HERR	**Herculane**	**127.84**	**322**	⇑P	**PKPdf**	**17 05 44.6**	**-0.3**
BZS	**Buzias**	**127.95**	**323**	⇓P	**PKPdf**	**17 05 45.2**	**+0.1**
BZS	**Buzias**	**127.95**	**323**	⇓PKIKP	**PKPdf**	**17 05 45.2**	**+0.1**
OSTC	**Ostas**	**127.95**	**331**	*e*PKIKP	**PKiKP**	**17 05 45.6**	**+0.1**
OSTC	**Ostas**	**127.95**	**331**	*e*PKP	**PKiKP**	**17 05 45.6**	**+0.1**
DPC	**Dobruska-Polom**	**128.03**	**330**	*e*PKIKP	**PKPdf**	**17 05 44.9**	**-0.2**
DPC	**Dobruska-Polom**	**128.03**	**330**	*e*PKP	**PKPdf**	**17 05 44.9**	**-0.2**
JAVC	**Velka Javorina**	**128.30**	**328**	*e*PKIKP	**PKiKP**	**17 05 47.0**	**+0.7**
MDVR	**Moldovita**	**128.32**	**322**	⇑P	**PKPdf**	**17 05 45.7**	**-0.2**
VRAC	**Vranov**	**128.57**	**329**	⇓P	**PKPdf**	**17 05 46.5**	**+0.3**
VRAC	**Vranov**	**128.57**	**329**	*e*PKIKP	**PKiKP**	**17 05 46.6**	**-0.2**
VRAC	**Vranov**	**128.57**	**329**	⇓PKIKP	**PKPdf**	**17 05 46.5**	**+0.3**
PVCC	**Panska Ves**	**128.76**	**332**	*e*PKIKP	**PKiKP**	**17 05 47.3**	**+0.2**
PVCC	**Panska Ves**	**128.76**	**332**	*e*PKP	**PKiKP**	**17 05 47.3**	**+0.2**
MODS	**Modra-Piesok**	**128.80**	**328**	*e*PKIKP	**PKiKP**	**17 05 47.6**	**+0.3**
MODS				*e*		17 06 12.0	
MODS	**Modra-Piesok**	**128.80**	**328**	*e*PKP	**PKiKP**	**17 05 47.6**	**+0.3**
MODS				*e*		17 06 12.0	
BRG	**Berggiesshubel**	**128.81**	**332**	PKIKP	**PKPdf**	**17 05 46.3**	**-0.2**
KRUC	**Moravsky**	**128.83**	**329**	*e*PKIKP	**PKPdf**	**17 05 46.4**	**-0.2**
KRUC				*e*pPKIKP		17 06 09.8	
BOVS	**Bovan**	**128.92**	**321**	⇑P	**PKPdf**	**17 05 46.7**	**-0.3**
CLL	**Collm**	**128.94**	**333**	*i* PKIKP	**PKPdf**	**17 05 46.5**	**-0.2**
CLL				*i*		17 06 10.0	
CLL				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CLL	**Collm**	**128.94**	**333**	*i* PKPdf	**PKPdf**	**17 05 46.5**	**-0.2**
	comp=Z,10.0nm,0.7s						
CLL				*i* pPKPdf	**pPKPdf**	**17 06 10.0**	**+0.2**
CLL				*i* x	x	17 06 20.0	
CLL				AMS	AMS	17 25 00.0	
	comp=Z,300nm,19.6s						
CLL				AMS	AMS	18 07 00.0	
	comp=Z,200nm,20.5s						
TREC	**Trest**	**129.13**	**330**	*e*PKIKP	**PKPdf**	**17 05 47.2**	**0.0**
TREC	**Trest**	**129.13**	**330**	*e*PKP	**PKPdf**	**17 05 47.2**	**0.0**
PRU	**Pruhonice**	**129.13**	**331**	*e*PKIKP	**PKPdf**	**17 05 47.3**	**+0.1**
PRU	**Pruhonice**	**129.13**	**331**	*e*PKP	**PKPdf**	**17 05 47.3**	**+0.1**
HSKC	**Hora Svate Kat**	**129.23**	**332**	*e*PKP	**PKPdf**	**17 05 46.1**	**-1.3**
MORH	**Mrgy, Hungar**	**129.35**	**325**	⇑P	**PKPdf**	**17 05 46.7**	**-1.0**
ZVC	**Zvikov**	**129.67**	**331**	*e*PKP	**PKiKP**	**17 05 49.0**	**0.0**
RONA	**Rosalia, Austr**	**129.74**	**328**		**PKiKP**	**17 05 49.1**	**-0.1**
RONA	**Rosalia, Austr**	**129.74**	**328**	*i* PKiKP	**PKiKP**	**17 05 49.1**	**-0.1**
	comp=Z,11nm,1.2s						
CONA	**Conrad Observa**	**129.82**	**328**	*i* PKiKP	**PKiKP**	**17 05 49.4**	**0.0**
	comp=Z,11nm,1.3s						
CKRC	**Cesky Krumlov**	**130.03**	**330**	*e*PKIKP	**PKPdf**	**17 05 49.1**	**+0.1**
CKRC	**Cesky Krumlov**	**130.03**	**330**	*e*PKP	**PKPdf**	**17 05 49.1**	**+0.1**
KHC	**Kasperske Hory**	**130.18**	**331**	*e*PKIKP	**PKPdf**	**17 05 49.3**	**+0.1**
KHC	**Kasperske Hory**	**130.18**	**331**	*e*PKP	**PKPdf**	**17 05 49.3**	**+0.1**
GEC2	**GERESS Array S**	**130.31**	**330**	PKIKP	**PKPdf**	**17 05 49.7**	**+0.1**
GERES	**GERESS Array B**	**130.31**	**330**	PKP	**PKPdf**	**17 05 49.3**	**-0.3**
	comp=Z,4.6nm,0.7s,baz=63,slow=1.9,SNR=30						
WET	**Wettzell**	**130.50**	**331**	PKIKP	**PKPdf**	**17 05 48.0**	**-1.9**
SDV	**Santo Domingo**	**130.99**	**86**	*e*P	**PKiKP**	**17 05 52.8**	**-0.1**
SOKA	**Soboth**	**131.05**	**327**		**PKPdf**	**17 05 51.5**	**+0.4**
SOKA					**SKPab**	**17 09 09.2**	**+0.7**
SOKA	**Soboth**	**131.05**	**327**	*e*PKP	**PKPdf**	**17 05 51.5**	**+0.4**
	comp=Z,9.6nm,1.1s						
SOKA				*i* SKP	**SKPab**	**17 09 09.2**	**+0.7**
	comp=Z,9.1nm,1.0s						
BIOA	**Bad Ischl, Aus**	**131.11**	**329**		**PKPdf**	**17 05 51.3**	**+0.2**
BIOA	**Bad Ischl, Aus**	**131.11**	**329**	*i* PKP	**PKPdf**	**17 05 51.3**	**+0.2**
	comp=Z,1.7nm,0.4s						
EKA	**Eskdalemuir Ar**	**131.15**	**347**	PKhKP	PKPpre	17 05 48.1	
	comp=Z,1.8nm,0.6s,baz=83,slow=2.4,SNR=3.7						
EKA				PKP	**PKiKP**	**17 05 51.5**	**-0.3**
	comp=Z,2.5nm,0.6s,baz=24,slow=3.3,SNR=6.7						
EKA				SKP	**SKPbc**	**17 09 08.9**	**+0.8**
	comp=Z,15nm,1.0s,baz=15,slow=3.5,SNR=12						
OBKA	**Obir**	**131.41**	**328**		**SKPab**	**17 09 10.3**	**+0.3**
OBKA	**Obir**	**131.41**	**328**	*e*SKP	**SKPab**	**17 09 10.3**	**+0.3**
	comp=Z,8.5nm,0.9s						
KBA	**Koelnbreinsper**	**131.67**	**329**		**PKPdf**	**17 05 51.8**	**-0.5**
KBA					**SKPbc**	**17 09 10.0**	**-0.5**
KBA	**Koelnbreinsper**	**131.67**	**329**	*e*PKP	**PKPdf**	**17 05 51.8**	**-0.5**
	comp=Z,5.7nm,1.0s						
KBA				*e*SKP	**SKPbc**	**17 09 10.0**	**-0.5**
	comp=Z,10nm,1.1s						
LESA	**Schwarzleotal**	**131.78**	**330**		**PKPdf**	**17 05 52.8**	**+0.4**
LESA					**SKPbc**	**17 09 10.5**	**-0.3**
LESA	**Schwarzleotal**	**131.78**	**330**	*i* PKP	**PKPdf**	**17 05 52.8**	**+0.4**
	comp=Z,7.0nm,0.5s						
LESA				*i* SKP	**SKPbc**	**17 09 10.5**	**-0.3**
	comp=Z,11nm,1.2s						
MYKA	**Terra Mystica**	**131.81**	**328**		**PKPdf**	**17 05 51.8**	**-0.7**
MYKA					**SKPab**	**17 09 11.5**	**-0.2**
MYKA	**Terra Mystica**	**131.81**	**328**	*i* PKP	**PKPdf**	**17 05 51.8**	**-0.7**
	comp=Z,2.7nm,0.6s						
MYKA				*i* SKP	**SKPab**	**17 09 11.5**	**-0.2**
	comp=Z,3.7nm,0.9s						
ABTA	**Abfaltersbach**	**132.32**	**329**		**PKPdf**	**17 05 53.0**	**-0.4**
ABTA					**SKPbc**	**17 09 12.4**	**-0.3**
ABTA	**Abfaltersbach**	**132.32**	**329**	*i* PKP	**PKPdf**	**17 05 53.0**	**-0.4**

	comp=Z,11nm,1.0s						
ABTA				i SKP	SKPbc	17 09 12.4	-0.3
	comp=Z,22nm,1.1s						
BTNL	Ternell	132.36	337	dPKPdf	PKPdf	17 05 53.6	+0.3
WATA	Walderalm	132.38	330		PKPdf	17 05 53.8	+0.2
WATA					SKPab	17 09 14.1	-0.1
WATA	Walderalm	132.38	330	i PKP	PKPdf	17 05 53.8	+0.2
	comp=Z,3.0nm,0.5s						
WATA				i SKP	SKPab	17 09 14.1	-0.1
	comp=Z,5.1nm,0.8s						
MEM	Membach	132.39	337	dPKPdf	PKiKP	17 05 54.0	-0.4
WTTA	Wattenberg	132.40	330		PKiKP	17 05 54.5	-0.2
WTTA					SKPab	17 09 14.5	+0.2
WTTA	Wattenberg	132.40	330	ePKiKP	PKiKP	17 05 54.6	-0.2
	comp=Z,16nm,1.0s						
WTTA				i SKP	SKPab	17 09 14.5	+0.2
	comp=Z,17nm,1.2s						
WTTA	Wattenberg	132.40	330	PKIKP	PKiKP	17 05 54.6	-0.2
STU	Stuttgart	132.47	333	PKIKP	PKPdf	17 05 51.5	-2.0
SQTA	Sankt Quirin	132.64	330		PKPdf	17 05 54.1	+0.1
SQTA					SKPbc	17 09 12.9	-1.0
SQTA	Sankt Quirin	132.64	330	i PKP	PKPdf	17 05 54.1	+0.1
	comp=Z,4.2nm,0.6s						
SQTA				i SKP	SKPbc	17 09 12.9	-1.0
	comp=Z,11nm,1.0s						
SQTA	Sankt Quirin	132.64	330	PKIKP	PKPdf	17 05 54.2	+0.1
RETA	Reutte	132.67	331		PKiKP	17 05 54.8	-0.4
RETA					SKPbc	17 09 14.0	+0.1
RETA	Reutte	132.67	331	i PKiKP	PKiKP	17 05 54.8	-0.4
	comp=Z,6.1nm,1.1s						
RETA				i SKP	SKPbc	17 09 14.0	+0.1
	comp=Z,8.1nm,0.9s						
FETA	Feichten	133.01	330		PKPdf	17 05 55.1	+0.3
FETA					SKPab	17 09 16.4	-0.6
FETA	Feichten	133.01	330	i PKP	PKPdf	17 05 55.1	+0.3
	comp=Z,8.5nm,0.8s						
FETA				eSKP	SKPab	17 09 16.3	-0.6
	comp=Z,15nm,1.0s						
RCHB	Rochefort	133.05	337	dPKPdf	PKiKP	17 05 55.3	-0.5
WLF	Walferdange	133.08	336	dPKPdf	PKPdf	17 05 54.9	+0.2
BMRD	Maredsous	133.11	338	dPKPdf	PKPdf	17 05 54.6	-0.1
DAVA	Damuels	133.24	331		PKiKP	17 05 56.3	-0.2
DAVA					SKPab	17 09 17.5	-0.4
DAVA	Damuels	133.24	331	i PKiKP	PKiKP	17 05 56.3	-0.2
	comp=Z,13nm,1.0s						
DAVA				i SKP	SKPab	17 09 17.5	-0.4
	comp=Z,17nm,1.0s						
DOU	Dourbes	133.34	337	dPKPdf	PKPdf	17 05 55.2	0.0
SALV	Santo Antonio	137.99	125	eP	PKPdf	17 06 05.1	+0.4
KEST	Kesra	141.21	319	PKhKP	PKPpre	17 06 03.9	
	comp=Z,6.0nm,0.8s,baz=282,slow=2.7,SNR=3.3						
KEST				PKP	PKPdf	17 06 09.2	-1.0
	comp=Z,5.6nm,0.7s,baz=200,slow=2.2,SNR=4.8						
BDFB	Brasilia	144.10	132	PKP	PKPab	17 06 13.0	-0.6
	comp=Z,8.7nm,0.6s,baz=203,slow=1.7,SNR=13						
BDFB	Brasilia	144.10	132		PKPab	17 06 13.0	-0.6
PBRG	Braganca	144.48	341	ePKP	PKPbc	17 06 14.5	+0.1
PGAV	Gavieira, Arco	144.79	343	ePKP	PKPdf	17 06 16.1	-0.3
PCAB	Cabril	144.95	343	ePKP	PKPdf	17 06 16.5	-0.1
MVO	Moncorvo	145.15	341	ePKP	PKPdf	17 06 17.0	0.0
POLO	Lamas de Olo	145.19	342	ePKP	PKPdf	17 06 17.4	+0.3
PVRL	Vila Real	145.26	342	ePKP	PKPdf	17 06 17.5	+0.4
MAL2	Monte Alegre,	145.34	106		PKPbc	17 06 17.6	-0.4
ESDC	Sonseca Array	145.38	337	PKPbc	PKPbc	17 06 17.4	0.0
	comp=Z,43nm,0.9s,baz=16,slow=3.7,SNR=104						
ESDC	Sonseca Array	145.38	337		PKPbc	17 06 17.1	-0.3
PTO	Porto	145.65	343	ePKP	PKPab	17 06 18.8	+0.4
PVIS	Viseu	145.83	342	ePKP	PKPab	17 06 19.4	+0.1
MTE	Manteigas	146.01	341		PKPdf	17 06 18.5	+0.1
MTE	Manteigas	146.01	341	ePKP	PKPab	17 06 20.0	0.0
PCBR	Castelo Branco	146.49	341	ePKP	PKPbc	17 06 21.1	+0.4
PCAS	Casmilo, Conde	146.62	342	ePKP	PKPbc	17 06 21.3	+0.3
PMRV	Marv??o	146.84	341	ePKP	PKPbc	17 06 22.2	+0.5
PSARD	Sardoal	146.93	342	ePKP	PKPbc	17 06 22.5	+0.5
JANB	Januaria	147.15	135	eP	PKPdf	17 06 22.0	+0.9
PSBE	So Bento	147.20	342	ePKP	PKPbc	17 06 23.4	+0.6
PESTR	Estremoz	147.41	340	ePKP	PKPbc	17 06 23.4	+0.1
PMTG	Montargil	147.43	341	ePKP	PKPbc	17 06 23.5	+0.2
PARRA	Arraiolos	147.60	341	ePKP	PKPbc	17 06 23.9	0.0
PRPB	Parauapebas	147.82	116	eP	PKPdf	17 06 22.8	+0.6
PBAR	Barrancos	147.84	339	ePKP	PKPbc	17 06 24.8	+0.3
EVO	Evora	147.85	341	ePKP	PKPbc	17 06 24.9	+0.4
PMAFR	Mafra	147.86	343	ePKP	PKPbc	17 06 23.5	-1.1
MOE	Montemor	147.97	341	ePKP	PKPbc	17 06 25.2	+0.4
PBEJ	Beja	148.26	340	ePKP	PKPbc	17 06 26.0	+0.3
MESJ	Messejana	148.55	340	ePKP	PKPbc	17 06 27.1	+0.7
MESJ	Messejana	148.55	340	ePKP	PKPbc	17 06 27.0	+0.7
PCVE	Castro Verde	148.68	340	ePKP	PKPbc	17 06 27.3	+0.6
PVAQ	Vaqueiros	148.77	339	ePKP	PKPbc	17 06 27.5	+0.6
PTEO	Sao Teotonio	148.98	341	ePKP	PKPbc	17 06 28.0	+0.5
MORF	Marmelete	149.18	341	ePKP	PKPbc	17 06 28.6	+0.6
MORF	Marmelete	149.18	341	ePKP	PKiKP	17 06 29.0	-0.3
PFVI	Vila Bisbo	149.39	341	ePKP	PKPbc	17 06 28.9	+0.4
TORD	Torodi Ar. Bea	157.21	284	PKP	PKPdf	17 06 35.2	-0.7
	comp=Z,2.4nm,0.9s,baz=46,slow=3.5,SNR=5.0						
TORD				PKPab	PKPab	17 07 06.1	-1.0
	comp=Z,3.2nm,0.7s,baz=76,slow=5.0,SNR=5.0						
DBIC	Dimbokro	163.87	265	PKP	PKPdf	17 06 42.7	-0.5
	comp=Z,2.8nm,0.8s,baz=119,slow=2.1,SNR=3.6						
DBIC				PKPab	PKPab	17 07 36.0	-0.3
	comp=Z,16nm,0.7s,baz=126,slow=4.6,SNR=22						

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*DJA **16** 16:49:16.8±0.1, 6°S±2°×13°0E±°, h163^{km}±3^{km}, M4.5/32, mb4.2/32, mB5.1/7, MLv4.6/20, Mw(mB)4.5/7, MwMwp5.0/4, Mwp5.3/4*

ISC 16 16:49:17.0±0.7, **5°.56S**±0°.05×**130°.34E**±0°.06, **h150**^{km}, **n52**, σ**1**^{s}.**36**/53, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.12	337	P	Pn	16 49 43.8	+1.0
BNDI	Bandanaira	1.12	337	P	Pn	16 49 44.0	+1.2
BNDI				S	Sn	16 50 04.9	+2.4
SAUI	Saumlaki	2.59	159	P	Pn	16 49 59.7	+0.5
SAUI	Saumlaki	2.59	159	S	Sn	16 50 33.8	+2.0
SAUI	Saumlaki	2.59	159	P	Pn	16 49 59.2	0.0
MSAI	Masohi	2.61	327	P	Pn	16 49 59.2	-0.3
AAI	Ambon	2.84	311	P	Pn	16 50 03.0	+0.7
KRAI	Karang Ratu	2.96	319	P	Pn	16 50 04.7	+0.9
FAKI	Fak Fak	3.24	36	P	Pn	16 50 05.3	-2.1
FAKI	Fak Fak	3.24	36	P	Pn	16 50 05.7	-1.7
KMPI	Kaimana, Papua	3.84	61	P	Pn	16 50 13.9	-1.3
NLAI	Namlea	3.97	305	P	Pn	16 50 20.2	+3.3
SWI	Sorong	4.75	11	P	Pn	16 50 25.3	-1.9
RKPI	Ransiki, Papua	5.55	44	P	Pn	16 50 36.7	-1.0
SANI	Sanana	5.57	309	P	Pn	16 50 37.4	-0.6
SANI	Sanana	5.57	309	P	Pn	16 50 37.8	-0.2
	0.2nm896nm37nm,0.6s						
MWPI	Manokwari, Pap	5.89	39	P	Pn	16 50 42.1	-0.2
	1.0nm29nm,0.9s						
DRS	Darwin Rock St	6.85	175	P	Pn	16 50 54.5	-0.6
SRPI	Serui, Papua	6.93	58	P	Pn	16 50 54.3	-1.8
	0.5nm42nm,0.5s						
TNTI	Ternate	6.96	335	P	Pn	16 50 56.1	-0.4
	0.1nm12nm,0.6s						
BAKI	Biak	7.20	53	P	Pn	16 51 00.4	+0.6
SOEI	Soe	7.33	235	P	Pn	16 51 02.1	+0.6
SOEI	Soe	7.33	235	S	Sn	16 52 24.9	+1.4
SOEI	Soe	7.33	235	P	Pn	16 51 01.7	+0.2
	0.1nm14nm,0.9s						
BATI	Baumata	8.07	235	P	Pn	16 51 10.3	-1.1
	14nm,0.5s						
SMPI	Sarmi	9.07	67	P	Pn	16 51 27.6	+2.9
EDFI	Ende, Flores	9.15	249	P	Pn	16 51 27.3	+1.4
	15nm,1.1s						
WSI	Waingapu	10.76	247	P	Pn	16 51 47.5	+0.4
	25nm,0.5s						
LBFI	Labuhan Bajo,	10.77	254	P	Pn	16 51 50.0	+2.7
	14nm,1.0s						
WBSI	Waikabubak, Su	11.59	249	P	Pn	16 51 58.5	+0.5
	19nm,1.0s						
TOLI2	Tolitoli	11.62	304	P	Pn	16 51 58.5	+0.1
TOLI2	Tolitoli	11.62	304	S	Sn	16 54 08.1	+1.1
DBNI	Kabupaten Domp	12.29	256	P	Pn	16 52 08.6	+1.4
PLAI	Plampang	12.88	255	P	Pn	16 52 16.2	+1.4
PLAI	Plampang	12.88	255	P	Pn	16 52 15.2	+0.4
	14nm,0.5s						
DAV	Davao City (W)	13.42	339	P	Pn	16 52 21.7	+0.1
TWSI	Taliwang, Sumb	13.72	256	P	Pn	16 52 24.0	-1.5
	11nm,0.8s						
KLNI	Mataram	14.43	258	P	Pn	16 52 33.8	-0.6
	26nm,0.6s						
COEN	Coen	15.14	124	P	Pn	16 52 43.2	-0.1
JAGI	Jajag, Banyuwa	16.33	259	P	Pn	16 52 57.2	-0.6
JAGI	Jajag, Banyuwa	16.33	259	P	Pn	16 52 57.3	-0.6
	12nm,1.3s						
GMJI	Gumukmas	16.99	260	P	P	16 53 05.2	-0.1
	18nm,1.2s						
KKM	Kota Kinabalu	18.22	309	P	P	16 53 18.3	-0.5
KKM	Kota Kinabalu	18.22	309	P	P	16 53 19.3	+0.5
	17nm,0.5s						
SNJI	Sawahan-Nganju	18.59	262	P	P	16 53 23.9	+0.9
	8.5nm,0.6s						
PSA00	Pilbara Seismi	18.89	212	P	P	16 53 25.3	-0.7
PCJI	Pacitan	19.21	261	P	P	16 53 28.7	-0.8
	19nm,1.1s						
SBUM	Sibu	19.77	293	P	P	16 53 34.5	-1.2
	5.4nm,0.8s						
BBJI	Bungbulang	22.63	264	P	P	16 54 05.5	0.0
BBJI	Bungbulang	22.63	264	P	P	16 54 04.1	-1.4
	8.4nm,0.6s						
CNJI	Cibinong	23.13	264	P	P	16 54 06.8	-3.3
MUN	Mundaring	29.43	205	P	P	16 55 05.1	-1.4

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*IDC **16** 16:55:31.0±10.0, 17°.88S×178°.03W, h559^{km}±96^{km}, mb3.2/7, mbtmp4.2/7, Error ellipse: s-maj=86.8km s-min=29.4km az=119.0*

*NEIC **16** 16:55:32.3±1.0, 17°.9S±0°.2×178°.0W±0°.2, h574^{km}±11^{km}, mb4.2/38, Error ellipse: s-maj=35.2km s-min=20.9km az=136.0*

ISC 16 16:55:33.5±1.2, **18°.0S**±0°.2×**178°.1W**±0°.2, **h590**^{km}, **n53**, σ**0**^{s}.**56**/53, **mb4.2**/26, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.68	273	P	P	16 56 57.0	+0.9
DZM	Mont Dzumac	15.10	252	P	P	16 58 41.8	-1.3
DZM				IAmb	IAmb	16 58 49.2	
	comp=Z,18nm,1.1s						
EIDS	Eidsvold	29.53	250	P	P	17 00 52.2	+0.4
ARMA	Armidale	30.18	240	P	P	17 00 57.4	-0.1
RABL	Rabaul	32.16	292	P	P	17 01 13.5	-0.9
CTAO	Charters Tower	33.73	261	P	P	17 01 27.8	+0.2
CTAO				IAmb	IAmb	17 01 33.0	
	comp=Z,5.7nm,1.1s						
CAN	Canberra	33.92	233	P	P	17 01 29.3	+0.3
PMG	Port Moresby	34.76	279	P	P	17 01 36.9	+0.7
PMG				IAmb	IAmb	17 01 44.3	
	comp=Z,14nm,1.2s						
TOO	Toolangi	37.38	231	P	P	17 01 58.0	+0.5
COEN	Coen	37.40	270	P	P	17 01 59.0	+1.1
COEN				IAmb	IAmb	17 02 21.5	
	comp=Z,18nm,1.4s						
STKA	Stephens Creek	38.87	241	P	P	17 02 10.4	+0.8
	comp=Z,2.4nm,0.8s,baz=73,slow=14,SNR=2.2						
	comp=Z,2.4nm,0.8s						
STKA	Stephens Creek	38.87	241	P	P	17 02 10.1	+0.5
INKA	Innaminka	39.01	248	P	P	17 02 11.1	+0.4
BBOO	Buckleboo	43.65	241	P	P	17 02 47.2	0.0
BBOO				IAmb	IAmb	17 03 09.8	
	comp=Z,11nm,1.2s						
WR8	Warramunga Arr	44.77	260	P	P	17 02 55.5	-0.6
WR8				IAmb	IAmb	17 02 56.4	
	comp=Z,5.5nm,1.1s						
WB0	Warramunga Arr	44.89	260	P	P	17 02 56.7	-0.3
WB0				IAmb	IAmb	17 02 59.1	
	comp=Z,9.6nm,1.2s						
WRAB	Tennant Creek	44.91	260	P	P	17 02 56.5	-0.6
WRAB				IAmb	IAmb	17 03 31.5	
	comp=Z,10nm,1.4s						
WRA	Warramunga Arr	44.92	260	P	P	17 02 56.8	-0.4
	comp=Z,1.1nm,0.5s,baz=95,slow=7.6,SNR=15						
	comp=Z,1.1nm,0.5s						
WRA	Warramunga Arr	44.92	260	P	P	17 02 56.7	-0.5
AS31	Alice Springs	45.07	254	P	P	17 02 58.2	-0.2
ASAR	Alice Springs	45.07	254	P	P	17 02 58.5	+0.2
	comp=Z,2.9nm,0.4s,baz=90,slow=8.1,SNR=37						
ASAR				PcP	PcP	17 04 26.1	-0.2
	comp=Z,0.5nm,0.6s,baz=105,slow=3.6,SNR=5.2						
	comp=Z,2.9nm,0.4s						
ASAR	Alice Springs	45.07	254	P	P	17 02 57.9	-0.5
FITZ	Fitzroy Crossi	53.32	261	P	P	17 03 58.9	-0.1
	comp=Z,2.0nm,0.9s,baz=108,slow=13,SNR=1.3						
	comp=Z,2.0nm,0.9s						
FITZ	Fitzroy Crossi	53.32	261	P	P	17 03 59.1	+0.1
SOEI	Soe	56.37	270	P	P	17 04 20.2	-0.2
SOEI				IAmb	IAmb	17 04 51.5	
	comp=Z,26nm,1.5s						
PSA00	Pilbara Seismi	58.19	255	P	P	17 04 33.2	+0.6
PSA00				IAmb	IAmb	17 05 01.1	
	comp=Z,13nm,1.1s						
MORW	Morawa	60.74	246	P	P	17 04 48.6	-0.8
MORW				IAmb	IAmb	17 04 55.3	
	comp=Z,24nm,1.4s						
MJAR	Matsushiro Arr	68.12	323	P	P	17 05 35.7	0.0
	comp=Z,2.2nm,0.9s,baz=154,slow=8.4,SNR=4.6						
	comp=Z,2.2nm,0.9s						
MJAR	Matsushiro Arr	68.12	323	IAmb	IAmb	17 05 40.8	
	comp=Z,2.9nm,1.2s						
MAJO	Matsushiro	68.12	323	P	P	17 05 35.2	-0.5
MAJO				IAmb	IAmb	17 06 00.5	
	comp=Z,11nm,1.2s						
YULB	Yu-li	72.04	303	P	P	17 05 59.3	+0.1
YULB				IAmb	IAmb	17 06 16.5	
	comp=Z,15nm,1.2s						
PETK	Petropavlovsk-	73.79	345	P	P	17 06 08.6	+0.1
	comp=Z,3.7nm,0.9s,baz=106,slow=4.8,SNR=4.9						
	comp=Z,3.7nm,0.9s						
PETK	Petropavlovsk-	73.79	345	P	P	17 06 08.8	+0.3
N14K	Kuskokwak Cree	78.73	8	P	P	17 06 36.2	+0.9
O16K	Kokwok River B	78.97	10	P	P	17 06 35.7	-0.9
O16K				IAmb	IAmb	17 06 53.6	
	comp=Z,10nm,1.4s						
O18K	Koktuh Hills	79.73	12	P	P	17 06 40.8	+0.1
J16K	Anvik River	82.12	8	P	P	17 06 53.7	+0.8
GHO	Glory Hole Cre	82.78	14	P	P	17 06 56.1	-0.2
GHO				IAmb	IAmb	17 07 19.0	
	comp=Z,17nm,1.4s						
SCM	Sheep Creek Mo	83.19	14	P	P	17 06 58.4	0.0
J20K	Nowinta River	83.93	10	P	P	17 07 02.4	+0.5
J20K				IAmb	IAmb	17 07 28.3	
	comp=Z,9.1nm,1.4s						
RND	Reindeer	84.24	13	P	P	17 07 03.6	+0.1
RND				IAmb	IAmb	17 07 33.4	
	comp=Z,5.4nm,1.3s						
H21K	Melozitna Rive	85.52	10	P	P	17 07 09.8	+0.3
ILAR	Eielson Array	85.86	13	P	P	17 07 10.5	-0.7
	comp=Z,0.3nm,0.4s,baz=223,slow=5.3,SNR=7.6						
	comp=Z,0.3nm,0.4s						
ILAR	Eielson Array	85.86	13	P	P	17 07 11.0	-0.2
J25K	Salcha River,	86.05	14	P	P	17 07 12.0	-0.1
J25K				IAmb	IAmb	17 07 24.3	
	comp=Z,8.0nm,1.5s						
D19K	Kuna River	87.41	7	P	P	17 07 18.8	+0.3
C19K	Lookout Ridge	87.82	7	P	P	17 07 20.8	+0.4
C19K				IAmb	IAmb	17 08 00.1	
	comp=Z,4.4nm,1.4s						
D22K	Ayikyak River	88.50	9	P	P	17 07 23.7	+0.2
D22K				IAmb	IAmb	17 07 44.0	
	comp=Z,5.5nm,1.4s						
F31M	Tsiigehtchic	91.14	16	P	P	17 07 35.8	+0.1
BRTR	Keskin Array B	145.02	315	PKPbc	PKPdf	17 14 04.8	-0.1
	comp=Z,0.8nm,0.6s,baz=114,slow=4.0,SNR=4.9						
MMAI	Mount Meron Ar	146.41	303	PKPbc	PKPbc	17 14 10.5	+0.7
	comp=Z,0.9nm,0.4s,baz=90,slow=5.0,SNR=4.1						
GERES	GERESS Array B	147.72	345	PKPbc	PKPbc	17 14 13.1	+0.3
	comp=Z,0.5nm,0.5s,baz=8.5,slow=2.7,SNR=5.4						
MURB	Monte Urbino	153.21	343		PKPdf	17 14 16.3	-1.3

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*SDD **16** 17:08:42.2±3.1, 18°.84N×72°.46W, h26^{km}±71^{km}, MD3.2, ML3.4, MW3.4, Presumed earthquake*

*OSPL **16** 17:08:45.9±1.5, 18°.93N×72°.09W, h41^{km}±18^{km}, ML2.1, Presumed earthquake*

ISC 16 17:08:45.7±1.7, **18°.91N**±0°.06×**72°.11W**±0°.07, **h33**^{km}±5^{km}, **n10**, σ**2**^{s}.**10**/18, **8C-1D**, **Haiti region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAPH	Port-au-Prince	0.42	205	i P	Pn	17 08 55.0	-0.5
PAPH				eS	Sb	17 09 02.9	+1.4
JIDR	Jimani	0.48	149	⇓ePg	Pn	17 08 55.2	-1.1
JIDR				⇑eSg	Sb	17 09 03.2	+0.1
JIDR				IAML		17 09 04.7	
	comp=N,3µm,0.3s						
LONE3	El Aguacate, B	0.69	116	i P	Pn	17 08 58.0	-1.3
LONE3				eS	Sn	17 09 07.9	-1.0
LONE3				IAML		17 09 09.4	
	comp=Z,78nm,0.9s						
NEDR	Neiba UASD	0.78	123	⇑ePg	Pn	17 08 59.5	-0.8
NEDR				⇑eSg	Sn	17 09 12.6	+1.7
NEDR				IAML		17 09 19.8	
	comp=N,559nm,0.3s						
SDDR	Presa de Saban	0.78	85	⇑ePg	Pn	17 08 59.7	-0.8
SDDR				IAML		17 09 18.8	
	comp=N,2µm,0.2s						
SDDR	Presa de Saban	0.78	85	i P	Pn	17 08 59.7	-0.8
SDDR				eS	Sn	17 09 08.3	-2.8
SDDR				IAML		17 09 15.6	
	comp=Z,59nm,0.2s						
LODU1	El Espartillar	0.82	132	i P	Pn	17 09 01.0	+0.1
LODU1				eS	Sn	17 09 11.1	-0.8
LODU1				IAML		17 09 13.8	
	comp=Z,110nm,0.3s						
MCDR	Montecristi	1.07	24	eSg	Sb	17 09 20.9	+1.6
MCDR				IAML		17 09 29.3	
	comp=N,392nm,0.3s						
PODR	Polo	1.08	133	⇑ePg	Pn	17 09 04.8	+0.1
PODR				⇑eSg	Sb	17 09 21.7	+1.8
PODR				IAML		17 09 22.9	
	comp=N,1µm,0.3s						
HATOM	Hato Mayor del	2.59	92	⇑ePg	Pb	17 09 30.2	-1.3
HATOM				⇑eSg	Sn	17 10 01.6	+6.0
HATOM				IAML		17 10 06.2	
	comp=N,78nm,0.3s						

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*AUST **16** 17:14:28.0±0.2, 32°S±1°×15°1E±°, h10^{km}, ML3.0/26, Error ellipse: s-maj=5.2km s-min=2.9km az=73.5*

*IDC **16** 17:14:29.4±9.7, 32°.26S×150°.47E, h0^{km}, mbtmp3.0/3, ML3.0/3, Error ellipse: s-maj=154.7km s-min=47.8km az=161.0*

ISC 16 17:14:25.5±1.5, **32°.29S**±0°.03×**150°.81E**±0°.06, **h4**^{km}±14^{km}, **n26**, σ**1**^{s}.**10**/33, **3C**, **New South Wales**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGCD	Mangrove Creek	0.95	165	⇑P	Pb	17 14 44.4	-0.1
MGCD	Mangrove Creek	0.95	165	S	Sg	17 14 56.8	+0.7
NTLS	Newcastle Soft	1.02	129	P	Pn	17 14 45.9	-0.7
NTLS				S	Sb	17 14 59.3	-0.2
AUPHS	Peel High Scho	1.19	3	P	Pn	17 14 49.9	+1.0
AUKHS	Kincumber High	1.26	158	P	Pb	17 14 49.9	+0.1
CATI	Cattai, Sydney	1.26	176	⇑P	Pb	17 14 49.8	-0.1
CATI				S	Sg	17 15 06.4	+0.2
YARR	Yarramundi, NS	1.32	185	⇑P	Pb	17 14 50.8	-0.1
YARR				S	Sg	17 15 08.2	+0.1
SYDH	Sydney Hard Ro	1.47	182	P	Pb	17 14 53.2	-0.1
RIV	Riverview	1.56	169	P	Pb	17 14 54.8	-0.1
RIV	Riverview	1.56	169	S	Sb	17 15 15.3	+0.3
SYDS	Sydney Soft Ro	1.67	168	P	Pb	17 14 56.7	-0.1
MABG	Mt Annan Botan	1.77	181	P	Pb	17 14 58.0	-0.6
MABG				S	Sb	17 15 21.5	+0.3
OKDL	Oakdale	1.79	189	P	Pb	17 14 58.1	-0.8
OKDL				S	Sb	17 15 21.9	+0.1
WTPK	Wilton Park	1.93	184	P	Pb	17 15 00.6	-0.7
WTPK				S	Sb	17 15 25.5	-0.2
ARMA	Armidale	1.99	21	P	Pg	17 15 02.7	-1.1
ARMA	Armidale	1.99	21	S	Sg	17 15 30.1	+0.5
WOLH	Wollongong Har	2.11	179	P	Pb	17 15 02.9	-1.4
YNG	Young	2.85	225	P	Pn	17 15 13.7	+2.0
CNB	Canberra Magne	3.25	201	P	Pn	17 15 18.6	+1.3
CAN	Canberra	3.38	206	P	Pn	17 15 20.6	+1.6
CMSA	Cobar Meteorol	4.42	278	P	Pn	17 15 35.4	+2.1
MILA	Mila	4.94	196	P	Pn	17 15 42.6	+2.0
STKA	Stephens Creek	7.83	271	Pn	Pn	17 16 21.3	+1.0
	0.1nm,0.3s,baz=97,slow=16,SNR=1.6						
STKA				Sn	Sn	17 17 46.4	-3.0
	0.4nm,0.3s,baz=185,slow=16,SNR=5.1						
STKA				Lg	Lg	17 18 29.4	
	0.4nm,0.3s,baz=296,slow=7.1,SNR=2.9						
	0.5nm,0.4s						
ARPS	Mount Arapiles	8.65	236	P	Pn	17 16 32.3	+1.0
	comp=Z,3.9nm,2.4s,comp=Z,0.0nm						
ASAR	Alice Springs	17.22	296	Pn	P	17 18 28.2	-0.4
	comp=Z,0.1nm,0.3s,baz=123,slow=12,SNR=10.0						
	comp=Z,0.2nm,0.5s						
WRA	Warramunga Arr	19.21	306	P	Pn	17 18 52.1	+0.7
	baz=131,slow=10,SNR=1.0						
	comp=Z,0.3nm,0.7s						

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*IDC **16** 17:19:50.2±0.6, 15°.14S×173°.22W, h0^{km}, mb4.1/11, mbtmp4.1/11, MS3.8/27, Error ellipse: s-maj=30.6km s-min=17.9km az=128.0*

*NEIC **16** 17:19:51.3±2.1, 15°.20S±0°.08×173°.0W±0°.1, h10^{km}±1^{km}, mb4.9/39, Error ellipse: s-maj=21.8km s-min=11.9km az=289.0*

ISC 16 17:19:53.8±0.4, **15°.34S**±0°.06×**172°.94W**±0°.07, **h29**^{km}, **n92**, σ**1**^{s}.**61**/51, **mb4.8**/30, **MS3.9**/26, **1D**, **Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	1.82	38		Pn	17 20 21.1	-2.1
AFI				Sn	Sn	17 20 37.2	-8.1
NIUE	Niue	4.70	143		Pn	17 21 03.9	+1.1
NIUE				Sn	Sn	17 21 52.7	-3.7
MSVF	Nonsavu	8.96	253	Pn	Pn	17 21 58.1	-3.3
RAR	Rarotonga	13.80	117	LR	LR	17 27 54.9	
	comp=Z,75nm,19.7s,baz=302,slow=34						
RAR	Rarotonga	13.80	117	Pn	Pn	17 23 07.6	0.0
PINNC	Pines Island,	19.89	246	P	P	17 24 22.0	-1.1
PINNC				IAmb	IAmb	17 24 28.7	
	comp=Z,112nm,1.7s						
DZM	Mont Dzumac	20.63	248	P	Pn	17 24 33.1	-0.4
	comp=Z,7.0nm,1.1s,baz=109,slow=18,SNR=2.2						
DZM	Mont Dzumac	20.63	248	eP	Pn	17 24 35.5	+2.0
	comp=Z,19nm,1.0s						
DZM				eLR	LR	17 29 24.0	
	comp=Z,502nm,27.1s						
DZM	Mont Dzumac	20.63	248	IAmb	IAmb	17 24 37.7	
	comp=Z,22nm,1.4s						
ONTNC	Ouen Toro	20.68	247	P	P	17 24 30.6	-1.0
PPT2	Papeete2	22.52	99	eS	S	17 28 53.4	-3.6
	comp=Z,436nm,31.0s						
PPT2				eLR	LR	17 30 15.6	
	comp=Z,107nm,29.8s						
URZ	Urewera	24.46	199	LR	LR	17 33 22.4	
	comp=Z,350nm,21.5s,baz=6.0,slow=33						
RTZ	Ruatahuna	24.82	199	P	P	17 25 13.3	-0.3
RTZ				IAmb	IAmb	17 25 44.0	
	comp=Z,31nm,1.2s						
TCW	Tory Channel	28.06	201	P	P	17 25 41.0	-1.6
BSWZ	Blackbirch Sta	28.64	201	P	P	17 25 48.6	+0.8
LTZ	Lake Taylor	30.15	202	P	P	17 26 01.0	-0.3
TAOE	Nuku Hiva Isla	32.68	82	eLR	LR	17 34 53.9	
	comp=Z,164nm,27.1s						
CTA	Charters Tower	39.09	257	LR	LR	17 42 20.7	
	comp=Z,92nm,18.5s,baz=77,slow=35						
H11S2	WAKE ISLAND Hy	39.14	328	T	T	18 08 02.8	
	baz=146,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	39.16	328	T	T	18 08 08.7	
	baz=146,slow=76,SNR=16						
H11S1	WAKE ISLAND Hy	39.16	328	T	T	18 07 54.2	
	baz=146,slow=76,SNR=10.0						
H11N3	WAKE ISLAND Hy	40.08	330	T	T	18 10 18.1	
	baz=150,slow=76,SNR=14						
H11N1	WAKE ISLAND Hy	40.09	330	T	T	18 10 17.9	
	baz=150,slow=76,SNR=84						
H11N2	WAKE ISLAND Hy	40.10	330	T	T	18 10 17.1	
	baz=150,slow=76,SNR=86						
STKA	Stephens Creek	44.45	240	P	P	17 28 02.1	-0.4
	comp=Z,0.8nm,0.4s,baz=105,slow=12,SNR=3.2						
	comp=Z,0.8nm,0.4s						
STKA	Stephens Creek	44.45	240	IAmb	IAmb	17 29 20.4	
	comp=Z,20nm,1.2s						
WRA	Warramunga Arr	50.29	257	P	P	17 28 46.3	-1.8
	comp=Z,0.8nm,0.9s,baz=98,slow=6.3,SNR=5.9						
	comp=Z,0.8nm,0.9s						
AS31	Alice Springs	50.55	252		P	17 28 47.9	-2.1
ASAR	Alice Springs	50.55	252	P	P	17 28 48.6	-1.5
	comp=Z,2.5nm,0.8s,baz=88,slow=8.4,SNR=35						
ASAR				LR	LR	17 48 37.1	
	comp=Z,151nm,21.9s,baz=107,slow=34						
	comp=Z,2.5nm,0.8s						
FITZ	Fitzroy Crossi	58.65	258	LR	LR	17 53 21.4	
	comp=Z,77nm,19.7s,baz=142,slow=34						
JCJ	Chichijima	60.63	314	LR	LR	17 51 54.1	
	comp=Z,34nm,19.5s,baz=124,slow=32						

VNDA	Vanda	63.48	186	P	P	17 30 23.5	+2.8
	comp=Z,2.4nm,0.8s,baz=7.9,slow=7.3,SNR=6.3						
VNDA				LR	LR	17 53 27.9	
	comp=Z,27nm,21.6s,baz=352,slow=32						
	comp=Z,2.4nm,0.8s						
MJAR	Matsushiro Arr	69.18	320	LR	LR	17 55 46.7	
	comp=Z,57nm,20.4s,baz=155,slow=31						
ASAJ	Asahikawa	71.73	328	LR	LR	17 54 58.5	
	comp=Z,34nm,21.2s,baz=112,slow=30						
PFO	Pinyon Flats O	72.56	47	LR	LR	17 55 47.9	
	comp=Z,92nm,19.7s,baz=254,slow=30						
PETK	Petropavlovsk-	72.71	342	P	P	17 31 19.4	+0.5
	comp=Z,3.6nm,0.8s,baz=167,slow=5.0,SNR=3.5						
	comp=Z,3.6nm,0.8s						
YBH	Yreka Blue Hor	73.29	37	LR	LR	17 54 41.1	
	comp=Z,8.9nm,21.3s,baz=258,slow=28						
NVAR	Mina Array Bea	73.99	42	P	P	17 31 27.6	+0.5
	comp=Z,0.2nm,0.3s,baz=208,slow=3.9,SNR=2.2						
NVAR				LR	LR	17 56 29.3	
	comp=Z,105nm,18.9s,baz=227,slow=30						
	comp=Z,0.2nm,0.3s						
QSPA	South Pole Qui	74.70	180	P	P	17 31 32.7	+2.1
	comp=Z,9.3nm,1.0s,baz=31,slow=1.3,SNR=21						
QSPA				LR	LR	17 57 33.6	
	comp=Z,46nm,21.1s,baz=39,slow=30						
	comp=Z,9.3nm,1.0s						
QSPA	South Pole Qui	74.70	180		P	17 31 30.2	-0.4
QSPA				IAmb	IAmb	17 31 34.1	
	comp=Z,9.8nm,0.9s						
KDAK	Kodiak Island	74.78	11	LR	LR	17 56 03.8	
	comp=Z,221nm,19.9s,baz=197,slow=29						
M14K	Bethel	76.34	6	P	P	17 31 40.6	+0.8
G08A	Pilot Rock	77.63	36		P	17 31 48.2	+0.7
BBB	Bella Bella	77.64	26	LR	LR	18 00 20.5	
	comp=Z,139nm,20.6s,baz=88,slow=31						
J16K	Anvik River	78.96	6		P	17 31 55.6	+1.3
J16K				IAmb	IAmb	17 31 57.0	
	comp=Z,14nm,0.9s						
TMUT	Trail Mountain	79.12	44	P	P	17 31 58.1	+1.9
J18K	Innoko River	79.56	7	P	P	17 31 58.5	+0.8
TCUT	Toone Canyon	79.91	42	P	P	17 32 00.7	+0.3
TCUT				IAmb	IAmb	17 32 03.5	
	comp=Z,14nm,1.1s						
TX31	Lajitas Ar. Si	80.21	56	P	P	17 31 55.6	-6.5
TX31				IAmb	IAmb	17 32 26.2	
	comp=Z,22nm,1.9s						
TXAR	Lajitas Array	80.21	56	P	P	17 32 03.7	+1.7
	comp=Z,2.2nm,1.1s,baz=216,slow=6.2,SNR=10						
	comp=Z,2.2nm,1.1s						
MA2	Magadan	80.25	342	LR	LR	18 02 56.7	
	comp=Z,27nm,20.8s,baz=128,slow=32						
NEW	Newport	80.41	34	LR	LR	18 01 32.2	
	comp=Z,74nm,18.4s,baz=112,slow=31						
ABQ	Albuquerque	80.43	50	P	P	17 32 02.4	-0.8
ANMO	Albuquerque	80.43	50	LR	LR	18 01 51.4	
	comp=Z,113nm,18.1s,baz=15,slow=31						
NJ2	Nanjing	80.48	307	*e*P	P	17 32 03.0	-0.3
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
J20K	Nowinta River	80.58	8		P	17 32 02.8	-0.3
J20K				IAmb	IAmb	17 32 04.8	
	comp=Z,11nm,1.0s						
MCK	McKinley	80.99	11		P	17 32 04.2	-1.1
MCK				IAmb	IAmb	17 32 06.8	
	comp=Z,11nm,0.9s						
M26K	Nabesna, AK	80.99	14	P	P	17 32 04.6	-0.8
M26K				IAmb	IAmb	17 32 07.0	
	comp=Z,14nm,1.1s						
CN2	Changchun	81.33	320	P	P	17 32 07.4	-0.1
DLBC	Dease Lake	81.49	21	LR	LR	18 01 51.1	
	comp=Z,94nm,19.2s,baz=314,slow=31						
WRH	Wood River Hil	81.81	11	P	P	17 32 09.8	+0.1
WRH				IAmb	IAmb	17 32 31.4	
	comp=Z,22nm,1.3s						
PDAR	Pinedale Array	81.93	42	P	P	17 32 11.2	+0.1
	comp=Z,0.9nm,1.0s,baz=258,slow=4.4,SNR=6.5						
PDAR				LR	LR	18 01 18.9	
	comp=Z,68nm,20.6s,baz=348,slow=30						
	comp=Z,0.9nm,1.0s						
CCB	Clear Creek Bu	82.03	11		P	17 32 10.4	-0.4
CCB				IAmb	IAmb	17 32 11.7	
	comp=Z,13nm,1.0s						
BOZ	Bozeman (W)	82.07	38	IAmb	IAmb	17 32 14.1	
	comp=Z,13nm,1.6s						
ILAR	Eielson Array	82.31	11	P	P	17 32 11.9	-0.3
	comp=Z,1.7nm,0.8s,baz=228,slow=5.7,SNR=14						
ILAR				LR	LR	18 00 46.9	
	comp=Z,83nm,19.7s,baz=166,slow=30						
	comp=Z,1.7nm,0.8s						
J26L	Joseph Creek	82.71	12	IAmb	IAmb	17 32 16.5	
	comp=Z,7.0nm,1.0s						
COLD	Coldfoot	84.02	9	IAmb	IAmb	17 32 24.0	
	comp=Z,9.8nm,1.2s						
APMT	Aspermont	84.56	53	IAmb	IAmb	17 32 26.4	
	comp=Z,14nm,1.2s						
E22K	Anaktuvuk Pass	84.65	8		P	17 32 25.2	+1.0
E22K				IAmb	IAmb	17 32 26.2	
	comp=Z,7.6nm,1.1s						
D20K	Etivluk River	84.65	6	IAmb	IAmb	17 32 25.6	
	comp=Z,10nm,1.1s						
E23K	Chandalar	84.88	9	IAmb	IAmb	17 34 44.2	
	comp=Z,21nm,1.9s						
I30M	Mount Dempster	84.95	15	IAmb	IAmb	17 32 27.4	
	comp=Z,21nm,1.8s						
H03N2	Juan Fernandez	84.96	123	T	T	19 07 23.2	
	baz=258,slow=72,SNR=9.3						
H03N3	Juan Fernandez	84.97	123	T	T	19 07 28.9	
	baz=258,slow=72,SNR=6.8						
H03N1	Juan Fernandez	84.98	123	T	T	19 07 24.8	
	baz=258,slow=72,SNR=10						
D22K	Ayikyak River	85.24	7	IAmb	IAmb	17 32 29.5	
	comp=Z,9.9nm,1.1s						
MAW	Mawson	87.99	198	LR	LR	18 10 44.9	
	comp=Z,38nm,19.0s,baz=125,slow=35						
INK	Inuvik	88.11	14	LR	LR	18 07 34.3	
	comp=Z,92nm,19.3s,baz=18,slow=33						
YAK	Yakutsk	89.24	337	LR	LR	18 05 35.5	
	comp=Z,31nm,21.3s,baz=98,slow=31						
HHC	Hu-ho-hao-te	89.31	313	*e*P	P	17 32 48.5	+0.9
YKA	Yellowknife Ar	89.87	23	P	P	17 32 50.0	+0.4
	comp=Z,1.1nm,0.9s,baz=244,slow=4.7,SNR=8.6						
YKA				LR	LR	18 06 32.9	
	comp=Z,126nm,18.8s,baz=52,slow=31						
	comp=Z,1.1nm,0.9s						
ELIB	Princess Elisa	92.23	185	*d*P	P	17 33 02.4	+1.6
PZH	PanZhiHua	92.64	297	P	P	17 33 05.4	+1.9
ULM	Lac du Bonnet	93.61	39	LR	LR	18 09 18.2	
	comp=Z,163nm,19.6s,baz=4.5,slow=32						
TIXI	Tiksi	95.07	344	LR	LR	18 12 38.9	
	comp=Z,32nm,19.6s,baz=202,slow=33						
WMQ	Urumqi	107.16	312	Pdif	Pdif	17 34 11.6	+3.3
WMQ				PP	PP	17 38 38.3	+2.8
WMQ				AMB	AMB		
	comp=Z,210nm,6.7s						
FINES	FINESS Array B	131.98	348	PKP	PKiKP	17 39 06.2	+1.0
	comp=Z,2.4nm,0.9s,baz=358,slow=5.7,SNR=4.1						
KHC	Kasperske Hory	145.88	352	PKPdf	PKPdf	17 39 26.9	-2.9
KHC	Kasperske Hory	145.88	352	*e*PKP	PKPab	17 39 31.0	+0.1
GERES	GERESS Array B	146.15	352	PKPbc	PKPbc	17 39 31.8	+0.5
	comp=Z,1.1nm,0.8s,baz=13,slow=1.8,SNR=7.4						
BRTR	Keskin Array B	146.39	321	PKPbc	PKPab	17 39 33.0	-0.3
	comp=Z,1.7nm,1.0s,baz=116,slow=2.9,SNR=6.4						
BRTR	Keskin Array B	146.39	321	PKPdf	PKPdf	17 39 29.3	-1.8

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*DJA **16** 17:25:52.3±0.2, 2°N±3°×12°6E±°, h10^{km}, M4.3/18, mB4.9/5, mb4.5/13, MLv4.3/18, Mw(mB)4.1/5*

*NEIC **16** 17:25:53.6±2.0, 1°.62N±0°.09×126°.44E±0°.07, h47^{km}±7^{km}, mb4.3/19, Error ellipse: s-maj=14.3km s-min=9.7km az=207.0*

*IDC **16** 17:25:57.0±3.1, 1°.51N×126°.30E, h75^{km}±28^{km}, mb3.9/9, mbtmp4.2/11, MS3.2/1, Error ellipse: s-maj=38.9km s-min=11.1km az=75.0*

ISC 16 17:25:53.1±0.5**, 1°.66N**±0°.05×**126°.54E**±0°.06**, h35^{km}, n79, σ1^{s}.85**/81**, mb4.3**/24**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.21	137		Pn	17 26 14.8	+1.2
TNTI	Ternate	1.21	137	P	Pn	17 26 14.9	+1.4
TNTI	Ternate	1.21	137	P	Pn	17 26 14.7	+1.2
TNTI				S	Sn	17 26 31.3	+2.6
SGSI	Sangihe	2.25	333	P	Pn	17 26 28.9	+1.0
GTOI	Gorontalo	3.67	254	P	Pn	17 26 48.8	+1.4
SANI	Sanana	3.72	188	P	Pn	17 26 48.3	+0.2
SANI	Sanana	3.72	188	P	Pn	17 26 47.8	-0.3
LUWI	Luwuk	4.62	235		Pn	17 27 01.8	+1.3
LUWI	Luwuk	4.62	235	P	Pn	17 27 02.7	+2.2
LUWI	Luwuk	4.62	235	P	Pn	17 27 02.4	+1.9
LUWI				S	Sn	17 27 56.1	+3.1
MRSI	Marisa	4.74	256	P	Pn	17 27 04.4	+2.3
NLAI	Namlea	4.89	173	P	Pn	17 27 05.7	+1.5
NLAI				S	Sn	17 27 59.3	-0.4
KRAI	Karang Ratu	5.28	159	P	Pn	17 27 13.6	+4.1
	0.2nm968nm32nm,0.6s						
SWI	Sorong	5.34	118	P	Pn	17 27 12.9	+2.5
	22nm,0.9s						
APSI	Ampana	5.51	242	P	Pn	17 27 14.9	+2.2
MSAI	Masohi	5.51	154	P	Pn	17 27 17.5	+4.7
	0.2nm940nm35nm,0.5s						
TOLI2	Tolitoli	5.78	265		Pn	17 27 15.3	-1.1
TOLI2	Tolitoli	5.78	265	P	Pn	17 27 15.7	-0.7
	28nm,0.6s						
MPSI	Mapaga	6.77	259	P	Pn	17 27 31.5	+1.5
	0.1nm16nm,0.6s						
FAKI	Fak Fak	7.30	129	P	Pn	17 27 40.4	+3.1
	24nm,1.2s						
FAKI	Fak Fak	7.30	129	P	Pn	17 27 39.7	+2.4
	0.1nm24nm,1.2s						
KKSI	Kolaka, Sulawe	7.57	220	P	Pn	17 27 41.7	+0.6
	0.1nm734nm31nm,0.8s						
SPSI	Sidrap Palu	8.77	230	P	Pn	17 27 58.7	+1.2
BNSI	Bone	8.80	227	P	Pn	17 27 58.2	+0.3
	36nm,0.6s						
BKSI	Bulukumba	9.44	223	P	Pn	17 28 08.7	+2.0
	22nm,1.1s						
KAPI	Kappang	9.48	226	P	Pn	17 28 08.9	+1.7
	8.2nm,0.5s,baz=11,slow=6.2,SNR=13						
KAPI	Kappang	9.48	226	P	Pn	17 28 08.9	+1.7
	9.2nm,0.8s						
KAPI	Kappang	9.48	226	P	Pn	17 28 08.0	+0.8
	9.3nm,0.8s						
KKM	Kota Kinabalu	11.18	293	Pn	Pn	17 28 26.6	-4.0
KKM	Kota Kinabalu	11.18	293	P	Pn	17 28 32.0	+1.4
	16nm,0.7s						
KKM	Kota Kinabalu	11.18	293	P	Pn	17 28 32.4	+1.8
EDFI	Ende, Flores	11.41	205	P	Pn	17 28 36.0	+2.2
SOEI	Soe	11.56	191		Pn	17 28 32.4	-3.4
SOEI	Soe	11.56	191	P	Pn	17 28 39.4	+3.6
	19nm,0.9s						
SOEI	Soe	11.56	191	P	Pn	17 28 42.6	+6.8
PLAI	Plampang	13.59	220	P	Pn	17 29 07.0	+3.5
	46nm,0.9s						
SBUM	Sibu	14.33	273		Pn	17 29 11.4	-2.2
MTN	Manton Dam	15.11	163	Pn	Pn	17 29 22.6	-1.5
MTN				IAmb	IAmb	17 29 42.4	
	comp=Z,23nm,1.2s						
KNRA	Kununurra	17.36	173		Pn	17 29 51.9	-0.9
KNRA				IAmb	IAmb	17 29 57.0	
	comp=Z,21nm,1.1s						
FITZ	Fitzroy Crossi	19.65	183	P	P	17 30 17.8	-1.2
	comp=Z,1.4nm,0.3s,baz=356,slow=9.7,SNR=17						
FITZ	Fitzroy Crossi	19.65	183	P	P	17 30 17.2	-1.8
YULB	Yu-li	22.20	347	P	P	17 30 43.5	-3.0
YULB				IAmb	IAmb	17 30 56.4	
	comp=Z,26nm,1.5s						
TPUB	Ta-pu	22.27	346		P	17 30 46.7	-0.6
TPUB	Ta-pu	22.27	346	P	P	17 30 45.8	-1.5
	comp=Z,22nm,0.9s						
COEN	Coen	22.64	134	P	P	17 30 51.2	-0.1
	comp=Z,6.7nm,1.2s						
WB0	Warramunga Arr	22.64	160		P	17 30 50.0	-1.3
WB0				IAmb	IAmb	17 30 55.2	
	comp=Z,15nm,0.9s						
WRAB	Tennant Creek	22.78	161	P	P	17 30 51.0	-1.8
WRAB				IAmb	IAmb	17 31 00.9	
	comp=Z,12nm,0.9s						
WRAB	Tennant Creek	22.78	161	P	P	17 30 51.6	-1.2
	comp=Z,7.5nm,0.5s						
WRA	Warramunga Arr	22.79	161	P	P	17 30 51.9	-0.9
	comp=Z,8.1nm,0.5s,baz=340,slow=9.2,SNR=60						
	comp=Z,8.1nm,0.5s						
WR8	Warramunga Arr	22.86	160		P	17 30 51.9	-1.7
MBWA	Marble Bar	23.63	196	P	P	17 30 59.0	-2.2
MBWA				IAmb	IAmb	17 31 06.3	
	comp=Z,24nm,1.5s						
MBWA	Marble Bar	23.63	196	P	P	17 30 59.4	-1.8
	comp=Z,5.8nm,1.5s						
QIS	Mount Isa	25.52	151	P	P	17 31 19.6	+1.0
	comp=Z,4.5nm,2.0s						
AS31	Alice Springs	26.17	165		P	17 31 23.5	-0.9
AS31				IAmb	IAmb	17 31 28.0	
	comp=Z,3.0nm,0.3s						
ASAR	Alice Springs	26.17	165	P	P	17 31 23.9	-0.5
	comp=Z,3.0nm,0.5s,baz=343,slow=7.2,SNR=64						
ASAR				PcP	PcP	17 34 51.0	-0.2
	comp=Z,0.6nm,0.6s,baz=349,slow=2.3,SNR=4.9						
ASAR				S	S	17 35 51.1	-3.1
	comp=Z,0.8nm,1.0s,baz=350,slow=19,SNR=4.3						
	comp=Z,3.0nm,0.5s						
ASAR	Alice Springs	26.17	165		P	17 31 22.8	-1.7
MTSU	Mount Surprise	26.33	139	P	P	17 31 26.5	+0.6
	comp=Z,2.4nm,0.8s						
SLVN	Son La	29.48	313	P	P	17 31 50.7	-3.4
FORT	Forrest	32.29	178	P	P	17 32 18.2	-0.5
FORT				IAmb	IAmb	17 32 27.9	
	comp=Z,3.6nm,0.8s						
ENH	Enshi	32.74	332	P	P	17 32 21.9	-0.8
ENH				IAmb	IAmb	17 32 22.9	
	comp=Z,3.7nm,0.8s						
PZH	PanZhiHua	34.32	318	P	P	17 32 38.3	+1.6
BBOO	Buckleboo	35.44	166	P	P	17 32 45.3	-0.8
STKA	Stephens Creek	36.28	158	P	P	17 32 52.5	-0.8
	comp=Z,1.3nm,0.3s,baz=340,slow=4.7,SNR=5.9						
	comp=Z,1.3nm,0.3s						
STKA	Stephens Creek	36.28	158	P	P	17 32 52.2	-1.1
HHC	Hu-ho-hao-te	41.30	343	*e*P	P	17 33 36.5	+1.1
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA	Gaotai	44.78	330	*e*P	P	17 34 04.3	+0.7
GTA				pP	pP	17 34 09.9	-3.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	Songino Array	49.19	342	P	P	17 34 39.2	+1.2
	comp=Z,0.7nm,0.6s,baz=162,slow=10.0,SNR=3.6						
	comp=Z,0.7nm,0.6s						
PETK	Petropavlovsk-	57.41	22	P	P	17 35 39.8	+1.7
	comp=Z,2.1nm,0.8s,baz=192,slow=4.7,SNR=8.1						
PETK				LR	LR	18 01 19.8	
	comp=Z,21nm,19.2s,baz=133,slow=37						
	comp=Z,2.1nm,0.8s						
MKAR	Makanchi Array	59.15	326	P	P	17 35 49.4	-1.0
	comp=Z,1.3nm,0.5s,baz=120,slow=7.5,SNR=35						
	comp=Z,1.3nm,0.5s						
MKAR	Makanchi Array	59.15	326	P	P	17 35 48.7	-1.7
KSH	Kashi	59.38	316	P	P	17 35 59.3	+7.0
KSH				pmax	pmax		
	comp=Z,3.0nm,1.5s						
ZALV	Zalesovo Beam	62.34	334	P	P	17 36 11.4	-0.5
	comp=Z,0.4nm,0.3s,baz=128,slow=7.1,SNR=2.6						
	comp=Z,0.4nm,0.3s						
KURBB	Kurchatov Arra	63.38	328	P	P	17 36 17.9	-1.0
	comp=Z,1.5nm,0.5s,baz=128,slow=6.3,SNR=10.0						
	comp=Z,1.5nm,0.5s						
KURK	Kurchatov	63.38	328	P	P	17 36 16.8	-2.1
KURK				IAmb	IAmb	17 36 20.7	
	comp=Z,2.7nm,0.6s						
NRIK	Noril'sk	72.39	346	P	P	17 37 15.1	-0.1
	comp=Z,2.5nm,0.6s,baz=104,slow=7.7,SNR=6.0						
	comp=Z,2.5nm,0.6s						
NRIK	Noril'sk	72.39	346	P	P	17 37 14.0	-1.2
NRIK				IAmb	IAmb	17 37 19.6	
	comp=Z,2.8nm,0.7s						
AB31	Akbulak array	73.63	321	P	P	17 37 22.4	-0.6
SALU	Saltoluokta	95.35	338	*e*P	P	17 39 13.9	+0.5
VA01	Torpederas	144.43	153	PKPdf	PKPab	17 45 22.5	-2.0

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*TEH **16** 17:40:03.2, 32°.84N×48°.12E, h9^{km}±32^{km}*

*ISN **16** 17:40:03.7±1.3, 32°.79N×48°.16E, h15^{km}±6^{km}, ML3.1*

ISC 16 17:40:08.5±1.2**, 32°.84N**±0°.04×**48°.11E**±0°.04**, h28^{km}, n27, σ1^{s}.00**/32**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDOB	Doab	0.95	3	Pg	Pn	17 40 22.5	-3.7
AHWZ	Ahwaz	1.57	163	Pg	Pn	17 40 33.9	-0.7
AHWZ				Sg	Sb	17 40 56.2	-0.2
IBZA	Bozab	1.64	353	Pg	Pn	17 40 35.2	-0.6
KCHF	Cheshme Sefid,	1.69	328	Pg	Pn	17 40 35.4	-1.0
IBDR	Badra	1.85	279	*e*Pg	Pn	17 40 37.5	-0.9
IBDR				*e*Sg	Sn	17 41 03.0	+2.1
IGHG	Ghaleghazi	1.97	320	Pn	Pn	17 40 40.3	+0.1
RAFI	Al-Rafai	2.02	237	*e*Pn	Pn	17 40 39.0	-1.8
RAFI				*e*Sn	Sn	17 41 06.0	+0.9
SNQR	Sonqor, Kerman	2.05	349	Pn	Pn	17 40 41.0	-0.4
HAGD	Aghdareh	2.15	23	Pn	Pn	17 40 41.8	-1.0
GLG1	Gilan-e-Gharb	2.24	305	Pn	Pn	17 40 43.6	-0.2
JHBN	Jahan bin	2.24	105	Pn	Pn	17 40 43.4	-0.7
IDHR	Dehrash	2.35	323	Pn	Pn	17 40 45.4	-0.1
IPIR	Pirpir	2.35	93	Pn	Pn	17 40 45.5	-0.1
ZNGN	Zangian	2.43	107	Pn	Pn	17 40 45.7	-1.0
HGHA	Hamedan- Ghaye	2.71	13	Pn	Pn	17 40 50.3	-0.2
QAMS	Qamsar	2.89	71	Pn	Pn	17 40 52.4	-0.6
QABG	Abgarm-Qazvin	3.11	23	Pn	Pn	17 40 55.8	-0.2
BHD	Baghdad	3.16	279	*e*Pn	Pn	17 40 56.0	-0.4
BHD				*e*Sn	Sn	17 41 34.0	+0.8
IQOM	Qom	3.17	50	Pn	Pn	17 40 56.2	-0.6
IZEF	Zefreh	3.55	88	Pn	Pn	17 41 01.8	-0.2
IVRN	Varamin	3.70	53	Pn	Pn	17 41 03.9	0.0
ISFB	Sefidab	3.76	65	Pn	Pn	17 41 04.4	-0.4
IKRK	Kirkuk	4.04	310	*e*Pn	Pn	17 41 08.0	-0.5
IKRK				*e*Sn	Sn	17 41 55.0	+0.1
IKRK				AML	AML	17 42 21.7	
	comp=N,45nm,0.5s						
IKRK				AML	AML	17 42 37.8	
	comp=E,51nm,0.6s						
IDMV	Damavand	4.24	49	Pn	Pn	17 41 11.3	-0.3
MZPU	Pul - Mazandar	4.58	37	Pn	Pn	17 41 16.4	+0.2
IFIR	Firoozkooh	4.75	53	Pn	Pn	17 41 18.3	-0.2
IALA	Alasht	5.05	49	Pn	Pn	17 41 22.9	+0.2

NOU 16 17:45:13.0, 17°.55S×167°.92E, h22^{km}, MLv4.4/21**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.31	124	P	Pn	17 45 22.4	+0.2
RTV	Rentapao	0.54	117	P	Pn	17 45 25.1	-0.3
RTV	Rentapao	0.54	117	S	Sn	17 45 32.8	-0.9
SANVU	Saraoutou	2.20	342	P	Pn	17 45 47.7	-0.6
SANVU	Saraoutou	2.20	342	S	Sn	17 46 14.2	-0.6
INH	Isangel	2.37	147	P	Pn	17 45 51.1	+0.6
MARNC	Mare, Loyalty	3.91	178	P	Pn	17 46 10.8	-1.0
YATNC	Mamie plateau,	4.59	192	P	Pn	17 46 21.1	0.0
DZM	Mont Dzumac	4.71	197	P	Pn	17 46 23.2	+0.4
ONTNC	Ouen Toro	4.93	196	P	Pn	17 46 26.6	+0.8
OUENC	Ouen Island, N	4.95	192	P	Pn	17 46 26.7	+0.7
PINNC	Pines Island,	5.06	185	P	Pn	17 46 28.0	+0.5

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*IDC **16** 18:00:51.7±2.5, 4°.13N×95°.65E, h0^{km}, mb3.3/3, mbtmp3.3/4, ML3.1/1, Error ellipse: s-maj=100.0km s-min=26.9km az=47.0*

*DJA **16** 18:00:56.2±0.8, 5°N±3°×9°6E±°, h10^{km}, M3.7/8, MLv3.7/8*

ISC 16 18:00:58.8±1.0**, 4°.50N**±0°.04×**96°.36E**±0°.08**, h33^{km}, n12, σ1^{s}.89**/16**, mb3.2**/3**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSI	Meulaboh, Aceh	0.23	169	P	Pb	18 01 02.6	-3.2
MLSI				S	Sn	18 01 07.9	-1.4
LHMI	Lhok Sumawe	0.93	39	P	Pn	18 01 14.1	-1.5
LHMI				S	Sn	18 01 27.1	-0.7
KCSI	Kotacane, Aceh	1.71	125	P	Pb	18 01 28.5	-1.2
KCSI				S	Sb	18 01 51.6	+0.7
SNSI	Sinabang, Aceh	2.08	181	P	Pn	18 01 31.9	+0.5
PSI	Prapat	3.06	123	Pn	Pb	18 01 49.8	-3.0
	1.8nm,0.3s,baz=324,slow=13,SNR=11						
PSI				Sn	Sb	18 02 31.4	+1.5
	2.1nm,0.3s,baz=200,slow=10,SNR=6.8						
	9.6nm,0.5s						
GSI	Gunungsitoli	3.40	159	P	Pn	18 01 51.4	+1.8
KULM	Kulim	4.35	79	P	Pn	18 02 03.0	+0.4
IPM	Ipoh	4.65	90	P	Pn	18 02 07.3	+0.5
CMAR	Chiang Mai Arr	14.10	10	Pn	P	18 04 27.2	+3.6
	0.1nm,0.3s,baz=201,slow=11,SNR=6.9						
MKAR	Makanchi Array	43.86	346	P	P	18 09 01.2	-0.8
	0.3nm,0.8s,baz=149,slow=8.3,SNR=1.4						
	0.3nm,0.8s						
WRA	Warramunga Arr	44.53	124	P	P	18 09 08.4	+0.6
	0.4nm,0.6s,baz=304,slow=9.0,SNR=4.9						
	0.4nm,0.6s						
ASAR	Alice Springs	46.08	129	P	P	18 09 20.0	-0.1
	0.2nm,0.6s,baz=301,slow=7.7,SNR=7.3						
	0.2nm,0.6s						

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*NEIC **16** 18:07:22.6±1.7, 14°.73S±0°.10×73°.5W±0°.1, h89^{km}±11^{km}, mb4.2/3, Error ellipse: s-maj=22.7km s-min=7.0km az=55.0*

*IDC **16** 18:07:25.9±2.6, 14°.53S×73°.38W, h98^{km}±20^{km}, mb3.6/4, mbtmp4.0/7, Error ellipse: s-maj=63.0km s-min=19.9km az=29.0*

ISC 16 18:07:22.1±0.8**, 14°.9S**±0°.1×**73°.8W**±0°.1**, h89^{km}, n26, σ2^{s}.27**/25**, mb3.8**/5**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	4.14	314	P	Pn	18 08 27.5	+4.4
	14nm,0.3s,baz=168,slow=10,SNR=6.3						
NNA				S	Sn	18 09 06.1	-4.3
	29nm,0.5s,baz=146,slow=13,SNR=4.4						
NNA	Nana	4.14	314		Pn	18 08 24.6	+1.5
NNA					Sn	18 09 06.1	-4.3
AP01	Chacalluta	4.79	136	Pn	Pn	18 08 32.2	+0.3
PB18	Visviri	4.94	123	Pn	Pn	18 08 32.1	-2.4
PB12	IPOC Station P	4.97	138		Pn	18 08 33.8	-0.7
PB16	IPOC Station P	5.35	130		Pn	18 08 41.1	+1.0
LPAZ	La Paz	5.65	105	P	Pn	18 08 45.8	+1.7
	6.4nm,0.3s,baz=324,slow=8.1,SNR=48						
LPAZ	La Paz	5.65	105		Pn	18 08 45.3	+1.1
PB11	IPOC Station P	6.25	141	Pn	Pn	18 08 49.8	-2.2
GO01	Chusmiza	6.47	138		Pn	18 08 50.6	-4.7
PB08	IPOC Station P	6.84	140	Pn	Pn	18 08 59.5	-0.8
SIV	San Ignacio	12.34	97	P	Pn	18 10 11.4	-3.2
	4.1nm,0.5s,baz=282,slow=14,SNR=19						
BOAV	Boa Vista	21.66	39	P	P	18 12 02.5	-3.1
BOAV				IAmb	IAmb	18 12 09.1	
	comp=Z,6.8nm,0.8s						
TXAR	Lajitas Array	52.59	327	P	P	18 16 29.9	+2.8
	comp=Z,0.3nm,0.6s,baz=156,slow=9.3,SNR=4.7						
	comp=Z,0.3nm,0.6s						
ULM	Lac du Bonnet	67.72	345	P	P	18 18 09.9	+0.1
	comp=Z,2.4nm,0.5s,baz=135,slow=8.6,SNR=3.5						
	comp=Z,2.4nm,0.5s						
ULM	Lac du Bonnet	67.72	345	IAmb	IAmb	18 18 12.1	
	comp=Z,27nm,1.5s						
TORD	Torodi Ar. Bea	79.76	73	P	P	18 19 20.9	-0.1
	comp=Z,1.5nm,0.7s,baz=287,slow=3.6,SNR=6.5						
	comp=Z,1.5nm,0.7s						
TORD	Torodi Ar. Bea	79.76	73	IAmb	IAmb	18 19 21.8	
	comp=Z,1.2nm,0.8s						
YKA	Yellowknife Ar	83.49	342	P	P	18 19 41.9	+2.2
	comp=Z,0.8nm,0.8s,baz=141,slow=4.7,SNR=10						
	comp=Z,0.8nm,0.8s						
YKA	Yellowknife Ar	83.49	342	P	P	18 19 39.5	-0.1
ASAR	Alice Springs	133.05	216	PKP	PKiKP	18 26 30.7	+1.3
	comp=Z,0.3nm,0.7s,baz=136,slow=2.3,SNR=5.9						
WRA	Warramunga Arr	135.66	219	PKP	PKiKP	18 26 36.0	+1.3
	comp=Z,0.4nm,0.5s,baz=134,slow=2.2,SNR=4.7						
ZALV	Zalesovo Beam	137.60	19	PKP	PKiKP	18 26 37.7	+0.1
	comp=Z,0.7nm,0.5s,baz=300,slow=2.9,SNR=5.1						
KURBB	Kurchatov Arra	137.95	26	PKP	PKiKP	18 26 38.0	-0.4
	comp=Z,0.2nm,0.3s,baz=300,slow=2.5,SNR=2.3						
MKAR	Makanchi Array	142.48	27	PKP	PKPdf	18 26 43.7	-1.1
	comp=Z,0.6nm,0.9s,baz=319,slow=3.0,SNR=2.5						
SONM	Songino Array	147.17	360	PKPbc	PKPab	18 26 56.6	-0.4
	comp=Z,1.6nm,0.6s,baz=352,slow=1.9,SNR=11						

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*NNC **16** 18:30:28.0±5.5, 43°.90N×87°.61E, h0^{km}, mb3.5, mpv3.0, Error ellipse: s-maj=39.4km s-min=22.5km az=102.0*

*SOME **16** 18:30:47.1, 44°.45N×85°.30E, h10^{km}*

ISC 16 18:30:31.0±4.3**, 43°.8N**±0°.1×**87°.7E**±0°.2**, h23^{km}, n7, σ1^{s}.65**/11**, 7C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	Zaisan	4.13	333	*e*P	Pb	18 31 43.3	+0.5
	0.3nm,0.1s						
ZSN				*e*S	Sn	18 32 20.7	+0.6
	17nm,0.3s						

MK31	Makanchi Array	4.82	310	⇑Pn	Pn	18 31 41.8	-0.3
	0.2nm,0.1s,baz=126,slow=14,SNR=12						
MK31				⇑Pg	Pb	18 31 56.1	+1.5
	0.5nm,0.2s,baz=144,slow=14,SNR=5.5						
MK31				⇑Sn	Sn	18 32 38.1	+0.9
	1.9nm,0.2s,baz=88,slow=8.6,SNR=7.4						
MK31				⇓Lg	Lg	18 33 01.5	
	0.8nm,0.2s						
PDGK	Podgornoye	5.96	268	⇑Pn	Pn	18 31 57.2	-0.7
	1.9nm,0.7s						
PDGK				⇑Sn	Sn	18 33 05.9	+0.4
	1.8nm,0.5s						
PDGK				⇓Lg	Lg	18 33 38.5	
	5.4nm,0.8s						
KPKS	Kokpek	6.53	270	*e*P	Pb	18 32 17.5	-6.4
	0.1nm,0.1s						
KPKS				*e*S	Sn	18 33 19.0	-0.5
	5.9nm,0.3s						
ARXS	Arharly	7.11	277	*e*P	Pb	18 32 25.2	-8.5
	0.4nm,0.1s						
ARXS				*e*S	Sn	18 33 32.8	-0.9
	6.2nm,0.3s						
KURBB	Kurchatov Arra	9.21	321	⇑Sn	Sn	18 34 25.5	+0.4
	2.4nm,0.3s						
KURBB				⇓Lg	Lg	18 35 23.6	
	4.0nm,0.4s						
KURK	Kurchatov	9.24	321	⇓Sn	Sn	18 34 21.7	-4.0
	0.5nm,0.3s						
KURK				⇑Lg	Lg	18 35 21.3	
	1.0nm,0.6s						

*IDC **16** 18:31:34.2±1.2, 3°.12N×127°.56E, h0^{km}, mb3.8/9, mbtmp3.8/9, MS2.7/2, Error ellipse: s-maj=75.0km s-min=15.0km az=67.0*

*DJA **16** 18:31:37.4±0.5, 3°N±5°×12°8E±°, h10^{km}, M4.1/11, mB4.9/1, mb4.3/7, MLv4.0/11, Mw(mB)4.1/1*

*NEIC **16** 18:31:42.9±1.3, 2°.96N±0°.09×127°.5E±0°.1, h65^{km}±6^{km}, mb4.2/20, Error ellipse: s-maj=16.8km s-min=11.2km az=52.0*

ISC 16 18:31:39.9±0.7**, 3°.14N**±0°.07×**127°.59E**±0°.10**, h49**^{km}**, n42, σ1^{s}.57**/41**, mb4.1**/16**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	2.12	285	P	Pn	18 32 12.9	-0.1
TNTI	Ternate	2.37	185		Pn	18 32 16.6	+0.3
TNTI	Ternate	2.37	185	P	Pn	18 32 17.1	+0.8
DAV	Davao City (W)	4.38	333	LR	LR	18 34 29.7	
	comp=Z,32nm,21.7s,baz=282,slow=40						
GTOI	Gorontalo	5.21	242	P	Pn	18 32 57.8	+2.5
	0.1nm20nm,0.7s						
SANI	Sanana	5.40	197	P	Pn	18 32 58.3	+0.3
	0.1nm14nm,0.7s						
SWI	Sorong	5.41	137	P	Pn	18 32 58.8	+0.6
	0.1nm20nm,0.5s						
MRSI	Marisa	6.23	245	P	Pn	18 33 12.4	+3.0
LUWI	Luwuk	6.36	229	Pn	Pn	18 33 10.8	-0.4
LUWI	Luwuk	6.36	229	P	Pn	18 33 14.3	+3.2
	37nm,0.7s						
KRAI	Karang Ratu	6.47	173	P	Pn	18 33 16.0	+3.3
TOLI2	Tolitoli	7.09	254	Pn	Pn	18 33 21.1	-0.1
FAKI	Fak Fak	7.61	142	Pn	Pn	18 33 30.3	+1.9
MPSI	Mapaga	8.17	250	P	Pn	18 33 39.1	+3.1
MTN	Manton Dam	16.27	168	Pn	Pn	18 35 23.1	-2.1
MTN				IAmb	IAmb	18 35 58.5	
	comp=Z,32nm,1.5s						
JAGI	Jajag, Banyuwa	17.68	229	Pn	Pn	18 35 39.8	-3.1
JAGI				IAmb	IAmb	18 36 03.7	
	comp=Z,12nm,1.0s						
KNRA	Kununurra	18.73	176	P	Pn	18 35 56.0	+0.4
KNRA				IAmb	IAmb	18 36 32.7	
	comp=Z,23nm,1.4s						
YULB	Yu-li	21.03	344	P	P	18 36 19.2	-0.6
YULB				IAmb	IAmb	18 36 34.4	
	comp=Z,13nm,1.1s						
TPUB	Ta-pu	21.14	342	P	P	18 36 20.5	-0.5
TPUB				IAmb	IAmb	18 36 33.5	
	comp=Z,13nm,0.9s						
FITZ	Fitzroy Crossi	21.19	185	P	P	18 36 20.9	-0.6
	comp=Z,0.8nm,0.6s,baz=356,slow=14,SNR=1.3						
	comp=Z,0.8nm,0.6s						
WB0	Warramunga Arr	23.73	164	P	P	18 36 47.2	-0.5
WB0				IAmb	IAmb	18 36 58.7	
	comp=Z,5.0nm,0.8s						
WRAB	Tennant Creek	23.88	164	P	P	18 36 47.8	-1.3
WRAB				IAmb	IAmb	18 37 02.4	
	comp=Z,8.7nm,1.3s						
WRA	Warramunga Arr	23.88	164	P	P	18 36 48.6	-0.6
	comp=Z,0.8nm,0.5s,baz=344,slow=9.0,SNR=12						
	comp=Z,0.8nm,0.5s						
WR8	Warramunga Arr	23.94	164	P	P	18 36 49.2	-0.5
MBWA	Marble Bar	25.35	197	P	P	18 37 01.4	-1.1
MBWA				IAmb	IAmb	18 37 39.1	
	comp=Z,11nm,1.1s						
PSA00	Pilbara Seismi	25.70	197	P	P	18 37 05.9	+0.2
ASAR	Alice Springs	27.35	167	P	P	18 37 20.4	-0.2
	comp=Z,0.1nm,0.4s,baz=333,slow=7.0,SNR=6.0						
	comp=Z,0.1nm,0.4s						
CMAR	Chiang Mai Arr	31.91	301	P	P	18 38 00.2	-0.9
	comp=Z,0.5nm,0.8s,baz=115,slow=8.7,SNR=4.4						
	comp=Z,0.5nm,0.8s						
NWAO	Narrogin (SRO)	37.19	194	P	P	18 38 45.7	-0.8
STKA	Stephens Creek	37.29	160	P	P	18 38 46.8	-0.6
	comp=Z,1.8nm,0.9s,baz=339,slow=10,SNR=4.5						
STKA				LR	LR	18 57 17.7	
	comp=Z,33nm,18.0s,baz=205,slow=41						
	comp=Z,1.8nm,0.9s						
SHL	Shillong	40.91	306	P	P	18 39 18.2	+0.2
SHL				IAmb	IAmb	18 39 37.8	
	comp=Z,4.8nm,1.1s						
SANVU	Saraoutou	43.34	116	P	P	18 39 38.0	+0.3
MKAR	Makanchi Array	58.52	325	P	P	18 41 33.5	+2.1
	comp=Z,2.2nm,0.5s,baz=117,slow=7.9,SNR=49						
	comp=Z,2.2nm,0.5s						
MKAR	Makanchi Array	58.52	325	P	P	18 41 32.1	+0.6
MAKZ	Makanchi	58.71	325		P	18 41 34.9	+2.1
KURBB	Kurchatov Arra	62.69	327	P	P	18 42 01.4	+1.7
	comp=Z,2.9nm,0.8s,baz=126,slow=6.1,SNR=30						
	comp=Z,2.9nm,0.8s						
KURK	Kurchatov	62.69	327		P	18 41 59.9	+0.2
KURK				IAmb	IAmb	18 42 02.2	
	comp=Z,3.5nm,0.8s						
GAR	Garm	62.95	313	P	P	18 42 01.1	-0.7
BVAR	Borovoye Array	68.28	327	P	P	18 42 37.6	+1.8
	comp=Z,1.2nm,0.8s,baz=132,slow=8.8,SNR=5.7						
	comp=Z,1.2nm,0.8s						
AB31	Akbulak array	73.14	321	P	P	18 43 06.2	+0.8
ABKAR	Akbulak array	73.14	321	P	P	18 43 06.6	+1.2
AKTO	Aktyubinsk	74.65	322	P	P	18 43 16.1	+1.9
	comp=Z,1.2nm,0.7s,baz=95,slow=8.7,SNR=5.5						
	comp=Z,1.2nm,0.7s						

*MDD **16** 18:37:51.6±1.4, 36°.68N×12°.61W, h72^{km}±71^{km}, Mb3.8/8, Error ellipse: s-maj=13.1km s-min=8.8km az=72.0*

*INMG **16** 18:37:52.7±1.1, 36°.56N×12°.74W, h34^{km}, ML2.3, Error ellipse: s-maj=5.6km s-min=5.0km az=114.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*

*IGIL **16** 18:37:52.0, 36°.68N×12°.61W, h30^{km}, ML2.3*

ISC 16 18:37:51.1±3.7**, 36°.9N**±0°.1×**12°.4W**±0°.2**, h10**^{km}**, n49, σ1^{s}.30**/89**, 7C, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.84	83	Pn	Pn	18 38 36.9	+0.5
PFVI				Sn	Sn	18 39 10.5	-0.2
PFVI	Vila Bisbo	2.84	83	*e*P	Pn	18 38 36.9	+0.5
PFVI				*e*S	Sn	18 39 10.5	-0.2
PFVI				*i* IAML		18 39 12.4	
PFVI				*i* IAML		18 39 12.8	
PTEO	Sao Teotonio	2.98	76	*e*S	Sn	18 39 14.2	0.0
MORF	Marmelete	3.00	80	*e*P	Pn	18 38 39.5	+0.9
MORF				*e*S	Sn	18 39 13.9	-0.7
MORF				IAML		18 39 17.2	
	comp=N,17nm,0.2s						
MORF	Marmelete	3.00	80	*e*P	Pn	18 38 39.7	+1.1
MORF				*e*S	Sn	18 39 14.9	+0.3
MORF				*i* IAML		18 39 15.8	
MORF				*i* IAML		18 39 19.1	
MORF				*i* IAML		18 39 22.3	
PMAFR	Mafra	3.21	48	Pn	Pn	18 38 42.8	+1.2
PMAFR	Mafra	3.21	48	*e*P	Pn	18 38 43.4	+1.9
PMAFR				*e*S	Sn	18 39 21.9	+2.0
MESJ	Messejana	3.44	72	*e*P	Pn	18 38 45.7	+1.0
MESJ				*e*S	Sn	18 39 25.0	-0.5
MESJ				IAML		18 39 28.6	
	comp=E,4.5nm,0.2s						
MESJ	Messejana	3.44	72	*e*P	Pn	18 38 45.7	+1.0
MESJ				*e*S	Sn	18 39 25.1	-0.4
MESJ				*i* IAML		18 39 26.9	
MESJ				*i* IAML		18 39 30.2	
MESJ				*i* IAML		18 39 31.0	
PCVE	Castro Verde	3.53	76	Pn	Pn	18 38 46.8	+0.9
PCVE				Sn	Sn	18 39 27.0	-0.8
PCVE	Castro Verde	3.53	76	*e*P	Pn	18 38 47.4	+1.5
PCVE				*e*S	Sn	18 39 27.1	-0.7
PCVE				*i* IAML		18 39 29.0	
PCVE				*i* IAML		18 39 29.7	
PBDV	Barranco-do-Ve	3.56	82	Pn	Pn	18 38 47.2	+0.8
PBDV				Sn	Sn	18 39 29.3	+0.7
PBDV	Barranco-do-Ve	3.56	82	*e*P	Pn	18 38 47.6	+1.2
PBDV				*e*S	Sn	18 39 29.7	+1.2
PBDV				*i* IAML		18 39 32.1	
PBDV				*i* IAML		18 39 32.5	
PBDV				*i* IAML		18 39 32.6	
MOE	Montemor	3.59	61	*e*P	Pn	18 38 47.7	+1.0
MOE				*e*S	Sn	18 39 29.7	+0.5
MOE				*i* IAML		18 39 31.1	
MOE				*i* IAML		18 39 33.4	
MOE				*i* IAML		18 39 33.7	
PVAQ	Vaqueiros	3.75	80	*e*P	Pn	18 38 49.9	+1.0
PVAQ				*e*S	Sn	18 39 32.6	-0.5
PVAQ				*i* IAML		18 39 36.7	
PVAQ				*i* IAML		18 39 37.1	
PVAQ				*i* IAML		18 39 37.2	
PBEJ	Beja	3.76	70	*e*S	Sn	18 39 33.2	-0.2
EVO	Evora	3.83	63	Pn	Pn	18 38 51.6	+1.5
EVO				Sn	Sn	18 39 34.9	-0.3
EVO	Evora	3.83	63	*e*P	Pn	18 38 51.8	+1.7
EVO				*e*S	Sn	18 39 35.5	+0.3
EVO				*i* IAML		18 39 35.9	
EVO				*i* IAML		18 39 36.0	
EVO				*i* IAML		18 39 40.7	
PSBE	So Bento	3.86	45	*e*P	Pn	18 38 52.4	+1.8
PSBE				*e*S	Sn	18 39 36.5	+0.5
PARRA	Arraiolos	3.94	59	*e*P	Pn	18 38 52.2	+0.6
PARRA				*e*S	Sn	18 39 37.6	-0.2
PARRA				*i* IAML		18 39 40.2	
PARRA				*i* IAML		18 39 43.1	
PARRA				*i* IAML		18 39 46.2	
PMTG	Montargil	3.94	55	*e*P	Pn	18 38 52.5	+0.9
PMTG				*e*S	Sn	18 39 38.4	+0.5
PMTG				*i* IAML		18 39 43.8	
PMTG				*i* IAML		18 39 45.9	
PMTG				*i* IAML		18 39 54.8	
EGRO	El Granado	3.95	79	Pn	Pn	18 38 52.6	+0.9
EGRO				Sn	Sn	18 39 37.8	-0.3
EGRO	El Granado	3.95	79	P	Pn	18 38 52.6	+0.9
EGRO				⇑*i*IVmb_VC		18 38 54.4	
	comp=E,222nm,SNR=0.7						
EGRO				S	Sn	18 39 37.1	-1.0
PESTR	Estremoz	4.27	60	Pn	Pn	18 38 57.7	+1.6
PESTR				Sn	Sn	18 39 45.2	-0.9
PESTR	Estremoz	4.27	60	*e*S	Sn	18 39 45.9	-0.2
PSARD	Sardoal	4.29	49	*e*P	Pn	18 38 58.2	+1.7
PSARD				*e*S	Sn	18 39 47.8	+1.2
PSARD				*i* IAML		18 39 51.2	
PSARD				*i* IAML		18 39 51.4	
PSARD				*i* IAML		18 39 55.0	
PCAS	Casmilo, Conde	4.40	42	*e*P	Pn	18 38 59.3	+1.4
PCAS				*e*S	Sn	18 39 49.7	+0.5
PBAR	Barrancos	4.43	71	Pn	Pn	18 38 59.2	+1.0
PBAR				Sn	Sn	18 39 49.0	-0.9
PBAR	Barrancos	4.43	71	*e*P	Pn	18 38 59.4	+1.1
PBAR				*e*S	Sn	18 39 49.3	-0.6
PBAR				*i* IAML		18 39 51.4	
PBAR				*i* IAML		18 39 54.8	
PBAR				*i* IAML		18 39 56.6	
EMIN	Mina Concepcio	4.62	77	Pn	Pn	18 39 01.4	+0.5
EMIN				Sn	Sn	18 39 52.8	-1.9
EMIN	Mina Concepcio	4.62	77	P	Pn	18 39 00.4	-0.6
EMIN				⇑*i*IVmb_VC		18 39 03.1	
	comp=E,182nm,SNR=0.7						
EMIN				S	Sn	18 39 52.8	-1.9
EBAD	Badajoz	4.64	64	Pn	Pn	18 39 01.7	+0.6
EBAD				Sn	Sn	18 39 54.4	-0.7
EBAD	Badajoz	4.64	64	P	Pn	18 39 01.6	+0.5
EBAD				⇑*i*IVmb_VC		18 39 06.5	
	comp=E,294nm,SNR=1.7						
EBAD				S	Sn	18 39 54.2	-0.9
PMRV	Marv??o	4.68	55	*e*P	Pn	18 39 02.7	+0.9
PMRV				*e*S	Sn	18 39 55.9	-0.3
PMRV				*i* IAML		18 39 56.7	
PMRV				*i* IAML		18 40 00.8	
PMRV				*i* IAML		18 40 00.9	
PCBR	Castelo Branco	4.86	51	*e*P	Pn	18 39 05.7	+1.5
PVIS	Viseu	5.20	41	*e*S	Sn	18 40 09.1	+0.1
ESPR	Espera	5.21	88	Sn	Sn	18 40 08.6	-0.6
ECAB	El Cabril	5.65	75	Sn	Sn	18 40 17.9	-2.2
ECAB				Pn	Pn	18 39 15.5	+0.4
ECAB	El Cabril	5.65	75	P	Pn	18 39 15.5	+0.4
ECAB				⇑*i*IVmb_VC		18 39 18.0	
	comp=E,142nm,SNR=1.0						
ECAB				S	Sn	18 40 17.9	-2.2
POLO	Lamas de Olo	5.74	37	*e*P	Pn	18 39 17.8	+1.4
POLO				*e*S	Sn	18 40 20.2	-2.2
POLO				*i* IAML		18 40 22.1	
POLO				*i* IAML		18 40 24.7	
PCAB	Cabril	5.90	33	*e*S	Sn	18 40 23.8	-2.4
MVO	Moncorvo	5.98	42	*e*P	Pn	18 39 20.4	+0.7
MVO				*e*S	Sn	18 40 26.8	-1.4
MVO				*i* IAML		18 40 28.1	
MVO				*i* IAML		18 40 36.7	
PGAV	Gavieira, Arco	6.00	31	*e*S	Sn	18 40 27.4	-1.5
PGAV				*i* IAML		18 40 28.0	
PGAV				*i* IAML		18 40 34.4	
ELOB	Lobios	6.01	32	P	Pn	18 39 21.5	+1.4
ELOB				⇑*i*IVmb_VC		18 39 25.1	
	comp=E,213nm,SNR=0.8						
ELOB				S	Sn	18 40 26.4	-2.6
EADA	Adamuz	6.32	76	Pn	Pn	18 39 24.9	+0.6
EADA				Sn	Sn	18 40 34.0	-2.5
EADA	Adamuz	6.32	76	P	Pn	18 39 24.6	+0.3
EADA				⇑*i*IVmb_VC		18 39 26.3	
	comp=E,99nm,SNR=0.7						
EADA				S	Sn	18 40 34.1	-2.5
EAGO	Agolada(Pontev	6.79	28	P	Pn	18 39 31.3	+0.6
EAGO				⇑*i*IVmb_VC		18 39 33.7	
	comp=E,226nm,SNR=0.7						
EAGO				S	Sn	18 40 42.7	-5.3
PAB	San Pablo	6.85	64	P	Pn	18 39 32.9	+1.2
PAB				S	Sn	18 40 49.2	-0.6
PSIM	Granatula de C	7.08	71	P	Pn	18 39 35.1	+0.3
PSIM				S	Sn	18 40 54.3	-1.1

*IDC **16** 18:57:40.5±0.5, 1°.58N×126°.28E, h0^{km}, mb4.3/22, mbtmp4.3/23, ML3.9/1, MS3.5/10, Error ellipse: s-maj=26.9km s-min=10.1km az=76.0*

*DJA **16** 18:57:45.2±0.2, 2°N±2°×12°7E±°, h10^{km}, M4.4/18, mB4.9/8, mb4.7/15, MLv4.5/18, Mw(mB)4.2/8, MwMwp4.4/1, Mwp4.8/1*

*NEIC **16** 18:57:46.4±2.2, 1°.64N±0°.09×126°.43E±0°.08, h42^{km}±7^{km}, mb4.7/58, Error ellipse: s-maj=14.6km s-min=9.2km az=212.0*

ISC 16 18:57:45.7±0.4**, 1°.76N**±0°.05×**126°.52E**±0°.06**, h35**^{km}**, n134, σ1^{s}.83**/119**, mb4.6**/50**, MS3.5**/8**, 1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.29	139		Pn	18 58 07.5	+0.2
TNTI	Ternate	1.29	139	P	Pn	18 58 07.6	+0.2
TNTI				S	Sn	18 58 23.8	+0.4
SGSI	Sangihe	2.16	333	P	Pn	18 58 20.8	+1.6
GTOI	Gorontalo	3.68	252	P	Pn	18 58 42.6	+2.4
SANI	Sanana	3.82	188	P	Pn	18 58 42.0	-0.1
LUWI	Luwuk	4.67	233		Pn	18 58 55.6	+1.9
LUWI	Luwuk	4.67	233	P	Pn	18 58 57.0	+3.3
MRSI	Marisa	4.75	255	P	Pn	18 58 57.4	+2.5
NLAI	Namlea	5.00	173	P	Pn	18 59 00.6	+2.3
	0.4nm1µm40nm,0.6s						
DAV	Davao City (W)	5.36	350	Pn	Pn	18 59 09.6	+6.3
	62nm,0.3s,baz=258,slow=18,SNR=1.9						
DAV				Sn	Sn	19 00 23.5	+20
	58nm,0.3s,baz=311,slow=21,SNR=8.7						
KRAI	Karang Ratu	5.38	160	P	Pn	18 59 06.7	+3.2
	0.2nm966nm70nm,0.9s						
SWI	Sorong	5.41	119	P	Pn	18 59 06.6	+2.7
APSI	Ampana	5.54	241	P	Pn	18 59 08.4	+2.6
AAI	Ambon	5.66	163	P	Pn	18 59 10.2	+2.8
	0.2nm49nm,0.7s						
TOLI2	Tolitoli	5.77	264		Pn	18 59 08.6	-0.3
TOLI2	Tolitoli	5.77	264	P	Pn	18 59 08.9	0.0
MPSI	Mapaga	6.77	258	P	Pn	18 59 25.7	+3.1
	568nm0.1nm1µm41nm,1.0s						
PCI	Palu	7.19	248	P	Pn	18 59 30.4	+2.0
	0.4nm86nm,1.0s						
FAKI	Fak Fak	7.38	129	Pn	Pn	18 59 31.8	+0.8
FAKI	Fak Fak	7.38	129	P	Pn	18 59 22.5	-8.5
FAKI	Fak Fak	7.38	129	P	Pn	18 59 33.7	+2.7
	0.1nm36nm,1.5s						
TTSI	Tana Toraja	8.22	235	P	Pn	18 59 45.1	+2.5
	696nm57nm,1.3s						
MMSI	Mamuju	8.80	240	P	Pn	18 59 53.4	+2.9
	29nm,0.8s						
SPSI	Sidrap Palu	8.82	230	P	Pn	18 59 53.5	+2.7
	566nm49nm,0.9s						
BNSI	Bone	8.86	226	P	Pn	18 59 52.8	+1.5
	57nm,0.7s						
BKSI	Bulukumba	9.50	222	P	Pn	19 00 03.0	+2.9
	429nm28nm,0.5s						
KAPI	Kappang	9.54	225	Pn	Pn	19 00 01.0	+0.4
	3.9nm,0.3s,baz=17,slow=4.2,SNR=5.2						
KAPI				LR	LR	19 02 58.7	
	comp=Z,69nm,20.9s,baz=65,slow=34						
KAPI	Kappang	9.54	225		Pn	19 00 02.8	+2.1
KKM	Kota Kinabalu	11.13	293		Pn	19 00 27.6	+5.1
KKM	Kota Kinabalu	11.13	293	P	Pn	19 00 26.2	+3.7
SOEI	Soe	11.65	191		Pn	19 00 33.4	+3.6
BATI	Baumata	12.22	193	Pn	Pn	19 00 40.9	+3.4
	0.2nm,0.3s,baz=108,slow=3.2,SNR=1.8						
BATI				LR	LR	19 06 16.8	
	comp=Z,241nm,18.6s,baz=16,slow=43						
PLAI	Plampang	13.65	220	P	P	19 01 07.9	+2.6
SBUM	Sibu	14.31	273		P	19 01 12.2	-0.3
MTN	Manton Dam	15.21	163	Pn	Pn	19 01 15.0	-3.0
JAGI	Jajag, Banyuwa	15.97	230		Pn	19 01 29.7	+1.7
JAGI				IAmb	IAmb	19 01 35.2	
	comp=Z,44nm,1.1s						
JAGI	Jajag, Banyuwa	15.97	230	P	P	19 01 35.4	+4.2
KNRA	Kununurra	17.46	173		Pn	19 01 45.6	-1.0
FITZ	Fitzroy Crossi	19.75	182	P	P	19 02 11.2	-1.5
	comp=Z,0.3nm,0.3s,baz=16,slow=10,SNR=10						
	comp=Z,3.3nm,0.6s						
FITZ	Fitzroy Crossi	19.75	182		P	19 02 09.7	-3.0
DLV	Lat	20.55	300	P	P	19 02 20.9	-0.8
DLV				IAmb	IAmb	19 02 29.6	
	comp=Z,34nm,1.4s						
BBJI	Bungbulang	20.93	244	P	P	19 02 24.5	-1.2
YULB	Yu-li	22.10	347	P	P	19 02 35.9	-2.1
TPUB	Ta-pu	22.16	346		P	19 02 35.6	-3.2
TPUB				IAmb	IAmb	19 02 51.6	
	comp=Z,17nm,0.6s						
COEN	Coen	22.72	134	P	P	19 02 43.8	-1.0
COEN	Coen	22.72	134	P	P	19 02 31.9	-13
WB0	Warramunga Arr	22.74	161		P	19 02 44.0	-1.1
WB0				IAmb	IAmb	19 02 47.4	
	comp=Z,23nm,0.6s						
WRAB	Tennant Creek	22.88	161	P	P	19 02 44.7	-1.8
WRAB				IAmb	IAmb	19 02 48.9	
	comp=Z,22nm,0.9s						
WRAB	Tennant Creek	22.88	161	P	P	19 02 44.0	-2.5
WRA	Warramunga Arr	22.89	161	P	P	19 02 44.9	-1.7
	comp=Z,18nm,0.8s,baz=338,slow=9.3,SNR=65						
	comp=Z,18nm,0.8s						
WRA	Warramunga Arr	22.89	161		P	19 02 44.2	-2.4
WR8	Warramunga Arr	22.95	160		P	19 02 45.2	-2.0
WR8				IAmb	IAmb	19 02 49.6	
	comp=Z,24nm,0.9s						
YHNB	Yeheng	23.32	348	P	P	19 02 48.9	-2.0
YHNB				IAmb	IAmb	19 03 14.1	
	comp=Z,21nm,1.2s						
MBWA	Marble Bar	23.72	196	P	P	19 02 52.3	-2.5
MBWA	Marble Bar	23.72	196	P	P	19 02 57.0	+2.3
PSA00	Pilbara Seismi	24.09	195	P	P	19 02 55.2	-2.9
MNAI	Manna	24.32	255	P	P	19 02 58.7	-1.7
AS31	Alice Springs	26.27	165		P	19 03 17.6	-0.4
ASAR	Alice Springs	26.27	165	P	P	19 03 17.4	-0.6
	comp=Z,9.4nm,0.7s,baz=344,slow=7.2,SNR=70						
ASAR				PcP	PcP	19 06 44.1	+0.1
	comp=Z,0.6nm,0.5s,baz=352,slow=2.0,SNR=4.8						
ASAR				S	S	19 07 50.7	+2.2
	comp=Z,1.0nm,1.0s,baz=351,slow=24,SNR=5.0						
	comp=Z,9.4nm,0.7s						
ASAR	Alice Springs	26.27	165		P	19 03 17.9	-0.1
GSI	Gunungsitoli	28.94	270	P	P	19 03 38.7	-3.3
GSI				IAmb	IAmb	19 03 45.0	
	comp=Z,21nm,1.0s						
MEEK	Meekatharra	29.24	195	P	P	19 03 44.5	0.0
JCJ	Chichijima	29.34	29	LR	LR	19 13 58.4	
	comp=Z,58nm,21.9s,baz=201,slow=33						
CMAR	Chiang Mai Arr	31.73	303	P	P	19 04 06.7	+0.1
	comp=Z,1.1nm,0.8s,baz=119,slow=7.1,SNR=11						
CMAR				PcP	PcP	19 06 59.6	+1.7
	comp=Z,0.6nm,0.8s,baz=139,slow=2.3,SNR=5.4						
	comp=Z,1.1nm,0.8s						
CHTO	Chiang Mai	31.90	304		P	19 04 07.7	-0.4
MORW	Morawa	32.25	197	P	P	19 04 10.1	-1.0
MORW				IAmb	IAmb	19 04 50.5	
	comp=Z,21nm,1.5s						
MORW	Morawa	32.25	197	P	P	19 04 10.6	-0.5
FORT	Forrest	32.39	178		P	19 04 11.2	-1.0
FORT				IAmb	IAmb	19 04 14.9	
	comp=Z,6.6nm,0.9s						
COCO	West Island	32.58	244	P	P	19 04 09.0	-5.1
ENH	Enshi	32.64	332	P	P	19 04 14.6	+0.1
ENH				IAmb	IAmb	19 04 26.2	
	comp=Z,9.0nm,0.9s						
BLDU	Ballidu	33.52	195	P	P	19 04 21.8	-0.3
KLBR	Kellerberrin	34.19	193	P	P	19 04 28.0	0.0
MUN	Mundaring	34.95	195	P	P	19 04 34.1	-0.4
BBOO	Buckleboo	35.54	166	IAmb	IAmb	19 04 55.5	
	comp=Z,19nm,1.2s						
BBOO	Buckleboo	35.54	166	P	P	19 04 35.4	-4.2
KSRS	Korea Array	35.55	2	P	P	19 04 41.9	+2.3
	comp=Z,1.8nm,0.7s,baz=179,slow=9.4,SNR=6.9						
	comp=Z,1.8nm,0.7s						
TNCH	TengChong	35.57	313	⇑P	P	19 04 41.3	+1.1
TNCH				sP	sP	19 04 56.8	+3.0
TNCH				S	S	19 10 14.8	+0.8
TNCH				sS	sS	19 10 30.1	+0.2
TNCH				SS	SnSn	19 12 36.3	0.0
TNCH				pmax	pmax		
	comp=Z,11nm,1.5s						
TNCH				pmax	pmax		
	comp=Z,91nm,5.4s						
TNCH				LR	LR		
	comp=N,160nm,5.0s						
TNCH				LR	LR		
	comp=E,170nm,4.2s						
TNCH				LR	LR		
	comp=Z,110nm,5.5s						
NWAO	Narrogin (SRO)	35.59	193	P	P	19 04 39.1	-1.0
NWAO				IAmb	IAmb	19 05 20.9	
	comp=Z,17nm,1.2s						
MJAR	Matsushiro Arr	36.26	16	P	P	19 04 47.3	+1.5
	comp=Z,1.7nm,0.7s,baz=183,slow=9.1,SNR=5.3						
MJAR				LR	LR	19 18 44.7	
	comp=Z,73nm,21.1s,baz=202,slow=35						
	comp=Z,1.7nm,0.7s						
STKA	Stephens Creek	36.38	158	P	P	19 04 45.2	-1.6
	comp=Z,6.1nm,0.8s,baz=333,slow=9.0,SNR=18						
	comp=Z,6.1nm,0.8s						
STKA	Stephens Creek	36.38	158		P	19 04 46.2	-0.6
STKA	Stephens Creek	36.38	158	P	P	19 04 40.1	-6.7
HTT	Hallett	36.90	163	P	P	19 04 45.9	-5.4
LZH	Lanzhou	40.10	331	*e*P	P	19 05 19.8	+1.5
LZH				pP	pP	19 05 25.8	-2.3
LZH				pmax	pmax		
	comp=Z,19nm,1.6s						
SHL	Shillong	40.90	308		P	19 05 23.9	-1.1
SHL				IAmb	IAmb	19 05 26.1	
	comp=Z,14nm,1.2s						
USRK	Ussuriysk Ar.	42.54	6	P	P	19 05 40.7	+2.8
	comp=Z,2.8nm,0.8s,baz=185,slow=3.3,SNR=7.0						
	comp=Z,2.8nm,0.8s						
LSA	Lhasa	43.60	313	P	P	19 05 46.2	-1.1
LSA	Lhasa	43.60	313	P	P	19 05 44.1	-3.3

ASAJ	Asahikawa	44.53	17	P	P	19 05 56.8	+2.8
	comp=Z,6.2nm,1.0s,baz=331,slow=19,SNR=5.6						
ASAJ				LR	LR	19 26 10.4	
	comp=Z,31nm,18.9s,baz=200,slow=38						
	comp=Z,6.2nm,1.0s						
JKA	Kamikawa-asahi	44.53	17	P	P	19 05 56.8	+2.8
GTA	Gaotai	44.68	330	*e*P	P	19 05 56.4	+0.9
GTA				pP	pP	19 05 59.8	-5.6
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GOMU	GeErMu	45.11	323	P	P	19 05 59.9	+0.7
HEH	HeiHe	48.33	1	*e*P	P	19 06 22.9	-0.8
SONM	Songino Array	49.09	342	P	P	19 06 31.1	+1.2
	comp=Z,1.8nm,0.6s,baz=158,slow=9.1,SNR=12						
SONM				PcP	PcP	19 07 54.3	+1.2
	comp=Z,1.0nm,0.8s,baz=165,slow=3.8,SNR=2.6						
	comp=Z,1.8nm,0.6s						
PETK	Petropavlovsk-	57.33	22	P	P	19 07 31.8	+1.6
	comp=Z,1.9nm,0.5s,baz=198,slow=7.1,SNR=12						
	comp=Z,1.9nm,0.5s						
MKAR	Makanchi Array	59.05	326	P	P	19 07 42.5	+0.2
	comp=Z,3.3nm,0.5s,baz=121,slow=8.4,SNR=86						
MKAR				LR	LR	19 34 28.5	
	comp=Z,60nm,19.5s,baz=100,slow=37						
	comp=Z,3.3nm,0.5s						
MKAR	Makanchi Array	59.05	326		P	19 07 42.2	-0.2
MAKZ	Makanchi	59.24	326		P	19 07 43.1	-0.5
MAKZ				IAmb	IAmb	19 07 45.9	
	comp=Z,8.3nm,1.2s						
YAK	Yakutsk	60.17	2	P	P	19 07 51.2	+1.5
	comp=Z,10nm,0.7s,baz=200,slow=0.2,SNR=6.7						
	comp=Z,10nm,0.7s						
YAK	Yakutsk	60.17	2		P	19 07 50.2	+0.5
MA2	Magadan	60.66	14	LR	LR	19 35 26.0	
	comp=Z,17nm,19.6s,baz=226,slow=37						
MANEM	Manem	61.57	312		P	19 07 59.4	-0.7
MANEM				IAmb	IAmb	19 08 03.9	
	comp=Z,9.8nm,1.0s						
ZALV	Zalesovo Beam	62.24	334	P	P	19 08 02.9	-1.0
	comp=Z,0.7nm,0.4s,baz=116,slow=6.4,SNR=5.2						
	comp=Z,0.7nm,0.4s						
ZALV	Zalesovo Beam	62.24	334	P	P	19 08 02.0	-1.9
GAR	Garm	63.11	313		P	19 08 09.6	-0.5
KURBB	Kurchatov Arra	63.28	328	P	P	19 08 10.8	-0.1
	comp=Z,5.5nm,0.8s,baz=132,slow=6.5,SNR=34						
	comp=Z,5.5nm,0.8s						
KURK	Kurchatov	63.29	328		P	19 08 10.3	-0.6
CHGR	Chuyangaron	63.83	313	P	P	19 08 13.9	-1.0
KK31	Karatay Array	64.53	318	P	P	19 08 17.9	-1.5
KKAR	Karatay Array	64.53	318	P	P	19 08 18.0	-1.3
BVAR	Borovoye Array	68.85	327	P	P	19 08 46.9	+0.2
	comp=Z,1.6nm,0.5s,baz=134,slow=8.5,SNR=5.3						
	comp=Z,1.6nm,0.5s						
TIXI	Tiksi	69.81	1		P	19 08 52.6	+0.5
TIXI				IAmb	IAmb	19 09 01.6	
	comp=Z,5.5nm,1.1s						
NRIK	Noril'sk	72.28	346	P	P	19 09 08.1	+0.8
	comp=Z,3.9nm,0.6s,baz=130,slow=7.1,SNR=7.1						
NRIK				LR	LR	19 43 45.6	
	comp=Z,80nm,19.3s,baz=64,slow=38						
	comp=Z,3.9nm,0.6s						
NRIK	Noril'sk	72.28	346	IAmb	IAmb	19 09 15.3	
	comp=Z,6.3nm,0.9s						
ABKAR	Akbulak array	73.54	321	P	P	19 09 14.7	-0.4
ARTI	Arti	76.56	328		P	19 09 31.6	-0.8
ARTI				IAmb	IAmb	19 09 35.5	
	comp=Z,8.6nm,1.0s						
VNDA	Vanda	81.51	173	P	P	19 09 59.4	+0.3
	comp=Z,1.4nm,0.6s,baz=315,slow=7.6,SNR=6.1						
VNDA				LR	LR	19 44 09.5	
	comp=Z,20nm,19.8s,baz=297,slow=34						
	comp=Z,1.4nm,0.6s						
VNDA	Vanda	81.51	173	IAmb	IAmb	19 10 18.3	
	comp=Z,8.5nm,1.4s						
G19K	Purcell Mounta	82.91	23	IAmb	IAmb	19 10 09.8	
	comp=Z,6.1nm,0.8s						
D19K	Kuna River	83.03	21	IAmb	IAmb	19 10 13.8	
	comp=Z,8.5nm,0.9s						
E19K	Redstone River	83.12	22	IAmb	IAmb	19 10 11.1	
	comp=Z,7.0nm,0.8s						
D20K	Etivluk River	83.61	21	IAmb	IAmb	19 10 17.3	
	comp=Z,9.9nm,1.0s						
B20K	Meade River	83.69	20	IAmb	IAmb	19 10 13.8	
	comp=Z,5.8nm,0.7s						
KBZ	Khabaz	84.18	314	P	P	19 10 12.6	-0.9
	comp=Z,1.5nm,0.7s,baz=104,slow=2.0,SNR=4.7						
	comp=Z,1.5nm,0.7s						
B21K	Ikpikpuk River	84.48	20	IAmb	IAmb	19 10 43.2	
	comp=Z,8.6nm,1.1s						
M22K	Willow	85.31	28	P	P	19 10 17.6	-1.3
E23K	Chandalar	86.08	22	IAmb	IAmb	19 10 29.3	
	comp=Z,2.6nm,0.7s						
D24K	Happy Valley	86.46	21	IAmb	IAmb	19 10 32.1	
	comp=Z,4.7nm,0.8s						
ILAR	Eielson Array	86.97	25	P	P	19 10 26.9	-0.2
	comp=Z,0.2nm,0.5s,baz=276,slow=4.5,SNR=6.2						
	comp=Z,0.2nm,0.5s						
KIBK	Kibwezi	88.55	268	P	P	19 10 32.9	-2.9
KIBK				IAmb	IAmb	19 10 41.4	
	comp=Z,6.7nm,1.2s						
BRTR	Keskin Array B	91.11	310	P	P	19 10 46.6	-0.7
	comp=Z,0.4nm,0.6s,baz=181,slow=4.9,SNR=3.9						
	comp=Z,0.4nm,0.6s						
ARCES	ARCESS Array B	92.22	340	P	P	19 10 51.0	-0.6
	comp=Z,2.4nm,0.8s,baz=64,slow=5.5,SNR=5.6						
	comp=Z,2.4nm,0.8s						
FINES	FINESS Array B	93.46	332	P	P	19 10 56.6	-0.8
	comp=Z,1.6nm,0.8s,baz=180,slow=3.8,SNR=5.6						
	comp=Z,1.6nm,0.8s						
LSZ	Lusaka	98.50	255	LR	LR	19 52 47.3	
	comp=Z,71nm,18.1s,baz=340,slow=34						

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*CATAC **16** 18:59:24.0±0.8, 13°N±5°×8°8W±°, h30km±5km, M2.9/6, MLv2.9/6, Error ellipse: s-maj=11.2km s-min=5.0km az=34.5, confirmed*

*SNET **16** 18:59:24.4±0.9, 12°.57N×88°.21W, h16km±13km, ML2.6*

ISC 16 18:59:21.9±2.3**, 12°.46N**±0°.10×**88°.14W**±0°.05**, h17**km±9km**, n19, σ0s.69**/28**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	0.77	47	P	Pg	18 59 37.4	+0.4
CSGN				S	Sg	18 59 47.6	+0.5
POTN	Potosi Cosigui	0.82	49	P	Pb	18 59 38.1	+0.4
POTN				S	Sb	18 59 49.3	+0.9
CNCH	Conchagua	0.87	20	*e*P	Pg	18 59 38.9	0.0
CNCH	Conchagua	0.87	20	P	Pg	18 59 38.9	0.0
CNCH	Conchagua	0.87	20	S	Sb	18 59 50.7	+0.8
LCND	La Caada	0.88	16	*e*P	Pb	18 59 39.0	+0.3
LCND	La Caada	0.88	16	P	Pb	18 59 39.1	+0.3
LCY	Lacayo	0.97	351	*e*P	Pb	18 59 40.7	+0.3
LCY				*e*S	Sg	18 59 53.0	-0.8
VSM	San Miguel	0.98	352	*e*P	Pg	18 59 41.2	+0.3
VSM				*e*S	Sn	18 59 54.0	-0.6
RANC	El Ranchito	0.98	351	*e*P	Pb	18 59 40.9	+0.3
RANC				IAML		18 59 55.4	
	comp=Z,237nm,0.2s						
PACA	Pacayal	1.02	350	*e*P	Pb	18 59 41.4	+0.1
PACA				*e*S	Sg	18 59 54.3	-1.0
PACA	Pacayal	1.02	350	P	Pb	18 59 41.7	+0.4
TECA	Tecapa	1.09	341	*e*P	Pb	18 59 42.3	-0.2
TECA				*e*S	Sg	18 59 56.0	-1.6
PKGN	Cerro Pekin	1.15	79	P	Pn	18 59 43.5	+0.2
PKGN				S	Sb	18 59 58.0	0.0
POLN	Al Sur del Vol	1.31	81	P	Pn	18 59 45.2	-0.2
POLN				S	Sn	19 00 01.1	-1.3
SCLA	Alcaldia de Sa	1.37	335	*e*P	Pn	18 59 46.5	+0.3
MOM2	El Cardon	1.61	90	P	Pn	18 59 49.9	+0.4
MOM2				S	Sn	19 00 08.9	-1.1
JAYA	Jayaque - finc	1.75	313	*e*P	Pn	18 59 52.5	+0.9
JAYA				IAML		19 00 13.9	
	comp=Z,66nm,0.2s						
RBDL	Robledal	2.23	318	*e*P	Pn	18 59 58.9	+0.6

IDC 16 19:05:37.7±1.9**, 1°.81N×126°.64E, h0**km**, mb3.3**/4**, mbtmp3.3**/4**, Error ellipse: s-maj=183.2km s-min=21.8km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.90	161	P	P	19 10 43.0	-0.3
	0.6nm,0.5s,baz=340,slow=11,SNR=9.4						
	0.6nm,0.5s						
ASAR	Alice Springs	26.29	165	P	P	19 11 15.5	+0.3
	0.3nm,0.6s,baz=346,slow=8.3,SNR=8.9						
	0.3nm,0.6s						
MKAR	Makanchi Array	59.08	326	P	P	19 15 39.9	0.0
	0.2nm,0.5s,baz=118,slow=8.5,SNR=7.0						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	63.30	328	P	P	19 16 08.1	-0.2
	0.2nm,0.6s,baz=138,slow=6.1,SNR=2.7						
	0.2nm,0.6s						

TRN 16 19:10:07.7, 13°.69N×58°.43W, h129km**, MD3.7, North-east of Barbados., North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBGH	Gun Hill	1.23	244	*e*P	Pn	19 10 33.5	+0.7
BBGH				*e*S	Sn	19 10 52.1	+0.2
SLAC	Saint Lucia, A	2.41	275	*e*P	Pn	19 10 47.7	+1.0
SLAC				*e*S	Sn	19 11 16.5	-0.2
MCLT	Moule a Chique	2.44	271	*e*P	Pn	19 10 46.9	-0.2
MCLT				*e*S	Sn	19 11 16.6	-0.8
SLBI	Saint Lucia, B	2.50	278	*e*P	Pn	19 10 47.9	+0.1
SLBI				*e*S	Sn	19 11 18.3	-0.3
BIM	Bigot	2.69	288	*e*P	Pn	19 10 51.0	+0.7
BIM				*e*S	Sn	19 11 22.8	-0.4
SVB	Belmont	2.78	262	*e*P	Pn	19 10 53.0	+1.6
SVB				*e*S	Sn	19 11 25.7	+0.5
DLPL	La Plaine	3.18	301	*e*P	Pn	19 10 56.2	-0.5
DSLB	Salisbury	3.38	301	*e*P	Pn	19 10 59.8	+0.6
DSLB				*e*S	Sn	19 11 37.8	-1.4
GRHS	Sauteurs	3.46	245	*e*P	Pn	19 10 59.9	-0.3
GRGR	Grenville	3.51	244	*e*P	Pn	19 11 01.0	+0.1
GRGR				*e*S	Sn	19 11 41.1	-1.0
DSDZ	La Diserade, G	3.65	316	*e*P	Pn	19 11 03.5	+0.7
TBG	Guadaloupe-3	3.78	305	*e*P	Pn	19 11 05.4	+0.8
TBG				*e*S	Sn	19 11 47.6	-1.0
ATGZ	Broadband at L	3.99	307	*e*P	Pn	19 11 07.3	+0.1
ANWB	Willy Bob	5.11	321	*e*P	Pn	19 11 22.8	+0.5

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*IDC **16** 19:32:50.3±6.8, 36°.91N×71°.61E, h131km±64km, mb3.2/2, mbtmp3.6/8, MS3.6/2, Error ellipse: s-maj=51.9km s-min=27.4km az=5.0*

*NNC **16** 19:32:50.9±4.5, 37°.09N×71°.07E, h107km±76km, mb3.2, mpv3.8, Error ellipse: s-maj=46.8km s-min=33.5km az=135.0*

ISC 16 19:32:47.9±1.4**, 36°.9N**±0°.1×**71°.3E**±0°.1**, h106**km**, n20, σ1s.49**/22**, 3C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UCH	Uchtor	5.90	24	P	Pn	19 34 14.4	+1.2
	SNR=11						
EKS2	Erkin-Say	6.09	17	P	Pn	19 34 17.0	+1.5
	SNR=14						
KK31	Karatay Array	6.26	355	P	Pn	19 34 17.7	0.0
	2.7nm,0.2s,baz=179,slow=12,SNR=103						
KK31				⇑S	Sn	19 35 25.9	-1.9
	9.5nm,0.6s,baz=188,slow=24,SNR=5.1						
AAK	Ala-Archa	6.26	22	P	Pn	19 34 19.3	+1.4
	SNR=28						
AAK	Ala-Archa	6.26	22	P	Pn	19 34 19.4	+1.5
	14nm,0.3s,baz=172,slow=6.2,SNR=87						
AAK				S	Sn	19 35 27.5	-0.5
	15nm,1.0s,baz=341,slow=20,SNR=7.0						
AAK	Ala-Archa	6.26	22	⇓P	Pn	19 34 19.2	+1.3
	3.2nm,0.4s						
AAK				⇑S	Sn	19 35 28.6	+0.5
	5.0nm,0.6s						
KBK	Karagaybulak	6.42	25	P	Pn	19 34 22.5	+2.4
	SNR=5.2						
CHMS	Chumysh	6.67	22	P	Pn	19 34 24.4	+1.2
	SNR=9.3						
USP	Ospenovka	6.84	20	P	Pn	19 34 26.5	+0.9
	SNR=14						
TKM2	Tokmak 2	6.88	27	P	Pn	19 34 27.9	+1.5
	SNR=6.0						
MKAR	Makanchi Array	12.85	36	P	Pn	19 35 46.1	-0.4
	1.2nm,0.7s,baz=228,slow=14,SNR=12						
KURBB	Kurchatov Arra	14.69	18	P	Pn	19 36 08.8	-1.5
	0.1nm,0.5s,baz=205,slow=11,SNR=12						
AB31	Akbulak array	14.89	330	P	Pn	19 36 10.2	-2.6
	0.7nm,0.5s,baz=141,slow=12,SNR=22						
BVAR	Borovoye Array	16.17	358	P	Pn	19 36 28.2	-0.5
	0.6nm,0.5s,baz=157,slow=12,SNR=4.9						
BVAR				LR	LR	19 42 57.2	
	comp=Z,73nm,19.9s,baz=61,slow=38						
AKTO	Aktyubinsk	16.59	329	P	P	19 36 35.1	+0.4
	1.0nm,0.4s,baz=131,slow=7.6,SNR=5.9						
AKTO	Aktyubinsk	16.59	329	⇑P	P	19 36 35.2	+0.6
	0.8nm,0.6s						
ZALV	Zalesovo Beam	19.48	24	P	P	19 37 06.5	+0.3
	1.1nm,0.4s,baz=218,slow=9.5,SNR=6.5						
BRTR	Keskin Array B	29.56	287	P	P	19 38 44.9	+2.1
	0.8nm,0.7s,baz=86,slow=7.6,SNR=6.0						
	0.8nm,0.7s						
EKA	Eskdalemuir Ar	52.20	316	LR	LR	20 09 50.1	
	comp=Z,150nm,18.9s,baz=168,slow=42						
ASAR	Alice Springs	84.26	125	P	P	19 45 06.1	-1.8
	0.3nm,0.8s,baz=308,slow=5.0,SNR=4.1						
	0.3nm,0.8s						

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*NEIC **16** 19:41:56.5±2.3, 18°.4S±0°.1×177°.8W±0°.1, h609km±5km, mb4.3/45, Error ellipse: s-maj=21.4km s-min=14.2km az=113.0*

*IDC **16** 19:41:58.6±2.0, 18°.34S×177°.83W, h637km±23km, mb3.5/13, mbtmp4.4/14, Error ellipse: s-maj=25.7km s-min=10.8km az=152.0*

ISC 16 19:41:54.3±0.6**, 18°.5S**±0°.1×**177°.6W**±0°.1**, h600**km**, n152, σ1s.96**/143**, mb4.2**/34**, 20C-17D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.17	279	P	P	19 43 23.0	+1.8
PINNC	Pines Island,	14.58	251	P	P	19 44 58.9	+0.2
DZM	Mont Dzumac	15.37	254	P	P	19 45 06.4	+0.4
	4.0nm,0.6s,baz=74,slow=17,SNR=6.7						
DZM	Mont Dzumac	15.37	254	IAmb	IAmb	19 45 15.3	
	comp=Z,5.8nm,0.8s						
MRZ	Mangatainoka R	22.89	193	P	P	19 46 13.1	-0.6
CAN	Canberra	33.97	234	P	P	19 47 51.0	+1.3
CTA	Charters Tower	34.09	261	P	P	19 47 51.6	+0.8
	comp=Z,5.3nm,0.6s,baz=99,slow=8.7,SNR=11						
	comp=Z,5.3nm,0.6s						
CTAO	Charters Tower	34.09	261	P	P	19 47 51.5	+0.6
CTAO				IAmb	IAmb	19 47 52.2	
	comp=Z,6.2nm,0.7s						
PMG	Port Moresby	35.28	280	P	P	19 48 02.3	+1.5
	comp=Z,10nm,0.8s,baz=80,slow=6.1,SNR=5.0						
	comp=Z,10nm,0.8s						
PMG	Port Moresby	35.28	280	P	P	19 48 01.8	+1.0
PMG				IAmb	IAmb	19 48 03.4	
	comp=Z,14nm,1.0s						
COEN	Coen	37.85	271		P	19 48 22.6	+0.8
STKA	Stephens Creek	39.02	242	P	P	19 48 32.6	+1.5
	comp=Z,5.2nm,0.7s,baz=86,slow=9.7,SNR=18						
	comp=Z,5.2nm,0.7s						
STKA	Stephens Creek	39.02	242	P	P	19 48 32.2	+1.2
BBOO	Buckleboo	43.79	242	P	P	19 49 08.9	+0.3
BBOO				IAmb	IAmb	19 49 10.0	
	comp=Z,7.5nm,0.8s						
WR8	Warramunga Arr	45.11	260		P	19 49 18.6	-0.3
WR8				IAmb	IAmb	19 49 19.7	
	comp=Z,13nm,1.4s						
WB0	Warramunga Arr	45.23	260		P	19 49 19.6	-0.2
WB0				IAmb	IAmb	19 49 20.4	
	comp=Z,9.8nm,0.6s						
WRAB	Tennant Creek	45.26	260	P	P	19 49 19.7	-0.2
WRAB				IAmb	IAmb	19 49 20.2	
	comp=Z,5.8nm,0.7s						
WRA	Warramunga Arr	45.26	260	P	P	19 49 20.2	+0.1
	comp=Z,4.7nm,0.4s,baz=97,slow=7.6,SNR=80						
WRA				PcP	PcP	19 50 47.5	+0.6
	comp=Z,2.1nm,0.8s,baz=93,slow=3.7,SNR=7.5						
WRA				S	S	19 55 14.5	-3.4
	comp=Z,2.2nm,1.0s,baz=95,slow=14,SNR=6.3						
	comp=Z,4.7nm,0.4s						
WRA	Warramunga Arr	45.26	260		P	19 49 19.3	-0.7
ASAR	Alice Springs	45.36	255	P	P	19 49 21.3	+0.6
	comp=Z,11nm,0.7s,baz=98,slow=7.6,SNR=29						
ASAR				PcP	PcP	19 50 47.4	+0.2
	comp=Z,3.1nm,0.7s,baz=104,slow=3.8,SNR=14						
ASAR				S	S	19 55 17.9	-1.3
	comp=Z,2.1nm,0.9s,baz=89,slow=15,SNR=17						
	comp=Z,11nm,0.7s						
ASAR	Alice Springs	45.36	255		P	19 49 21.1	+0.4
ASAR					PcP	19 50 47.0	-0.2
FORT	Forrest	50.45	245	P	P	19 49 58.3	0.0
FITZ	Fitzroy Crossi	53.67	261	P	P	19 50 21.8	+0.2
MBWA	Marble Bar	58.66	256	P	P	19 50 55.7	-0.1
MBWA				IAmb	IAmb	19 51 35.0	
	comp=Z,20nm,1.3s						
MJAR	Matsushiro Arr	68.79	323	P	P	19 51 59.8	0.0
	comp=Z,3.8nm,0.7s,baz=160,slow=6.0,SNR=14						
	comp=Z,3.8nm,0.7s						
UGM	Wanagama	70.37	268	P	P	19 52 10.3	+0.6
UGM				IAmb	IAmb	19 52 15.1	
	comp=Z,13nm,0.7s						
TPUB	Ta-pu	73.18	302	P	P	19 52 24.3	-1.4
PETK	Petropavlovsk-	74.40	345	P	P	19 52 31.9	0.0
	comp=Z,6.5nm,0.8s,baz=130,slow=7.6,SNR=6.6						
	comp=Z,6.5nm,0.8s						
OHAK	Old Harbor	78.09	13	P	P	19 52 52.4	+0.4
OHAK				IAmb	IAmb	19 52 52.8	
	comp=Z,15nm,0.9s						
NVAR	Mina Array Bea	79.31	43	P	P	19 53 00.7	+1.5
	comp=Z,1.4nm,0.7s,baz=226,slow=9.8,SNR=4.7						
	comp=Z,1.4nm,0.7s						
O18K	Koktuh Hills	80.14	11	P	P	19 53 02.8	0.0
O18K				IAmb	IAmb	19 53 03.2	
	comp=Z,12nm,1.0s						
J05D	Fort Rock, OR	80.29	38	P	P	19 53 05.8	+1.6
J05D				IAmb	IAmb	19 53 06.7	
	comp=Z,5.1nm,0.8s						
N17K	Nushagak Hills	80.43	10	P	P	19 53 04.3	0.0
N17K				IAmb	IAmb	19 53 40.5	
	comp=Z,20nm,1.5s						
M16K	Timber Creek	80.62	9	P	P	19 53 06.5	+1.3
ILSW	Iliamna Southw	80.66	12	P	P	19 53 05.0	-0.6
K15K	Wolf Creek Mou	81.49	8	IAmb	IAmb	19 53 11.7	
	comp=Z,14nm,0.8s						
G08A	Pilot Rock	82.79	37	IAmb	IAmb	19 53 19.0	
	comp=Z,9.0nm,1.4s						
IPM	Ipoh	83.22	277	P	P	19 53 19.3	-0.3
IPM				IAmb	IAmb	19 53 21.3	
	comp=Z,12nm,0.8s						
J18K	Innoko River	83.28	9	P	P	19 53 19.1	+0.5
J18K				IAmb	IAmb	19 53 20.0	
	comp=Z,7.7nm,0.9s						
TCRU	Three Creeks R	83.31	46	IAmb	IAmb	19 53 20.0	
	comp=Z,4.8nm,0.4s						
RND	Reindeer	84.64	13	IAmb	IAmb	19 53 26.2	
	comp=Z,9.3nm,0.8s						
ENH	Enshi	85.19	304		P	19 53 29.3	+0.5
ENH				IAmb	IAmb	19 53 30.9	
	comp=Z,8.1nm,0.8s						
TX31	Lajitas Ar. Si	85.67	57	IAmb	IAmb	19 53 33.9	
	comp=Z,3.8nm,1.0s						
TXAR	Lajitas Array	85.67	57	P	P	19 53 33.6	+2.4
	comp=Z,2.2nm,0.8s,baz=217,slow=6.1,SNR=22						
	comp=Z,2.2nm,0.8s						
CCB	Clear Creek Bu	85.96	12	P	P	19 53 30.8	-0.8
MCMT	McKenzie Canyo	86.18	40	P	P	19 53 33.8	+0.4
ILAR	Eielson Array	86.26	13	P	P	19 53 32.5	-0.5
	comp=Z,1.4nm,0.7s,baz=219,slow=4.7,SNR=14						
	comp=Z,1.4nm,0.7s						
E19K	Redstone River	86.98	8	IAmb	IAmb	19 53 37.3	
	comp=Z,3.2nm,0.7s						
PDAR	Pinedale Array	87.24	43	P	P	19 53 39.2	+0.7
	comp=Z,1.3nm,0.9s,baz=200,slow=3.8,SNR=8.3						
	comp=Z,1.3nm,0.9s						
I28M	Miner Creek	88.40	15	IAmb	IAmb	19 53 43.5	
	comp=Z,4.8nm,1.4s						
CMAR	Chiang Mai Arr	89.77	289	P	P	19 53 51.5	+1.0
	comp=Z,2.3nm,0.9s,baz=114,slow=2.8,SNR=19						
	comp=Z,2.3nm,0.9s						
CMAR	Chiang Mai Arr	89.77	289		P	19 53 51.9	+1.5
CHTO	Chiang Mai	89.88	290		P	19 53 51.9	+0.9
CHTO				IAmb	IAmb	19 53 53.0	
	comp=Z,2.9nm,0.8s						
YKA	Yellowknife Ar	94.52	25	P	P	19 54 10.7	-0.5
	comp=Z,0.5nm,0.8s,baz=240,slow=5.4,SNR=4.8						
	comp=Z,0.5nm,0.8s						
MKAR	Makanchi Array	110.05	314	PKiKP	PKiKP	19 59 17.8	-0.8
	comp=Z,0.4nm,0.5s,baz=241,slow=0.7,SNR=9.5						
KURBB	Kurchatov Arra	112.78	318	PKiKP	PKiKP	19 59 22.8	-0.9
	comp=Z,0.2nm,0.6s,baz=93,slow=1.8,SNR=9.5						
BVAR	Borovoye Array	117.74	321	PKP	PKPdf	19 59 32.5	-0.7
	comp=Z,1.0nm,0.5s,baz=123,slow=1.0,SNR=8.1						
ARCES	ARCESS Array B	126.98	350	PKP	PKPdf	19 59 50.5	+0.1
	comp=Z,0.8nm,0.5s,baz=8.5,slow=2.5,SNR=9.7						
FINES	FINESS Array B	133.92	344	PKP	PKPdf	20 00 04.0	+0.3
	comp=Z,2.8nm,0.9s,baz=98,slow=3.9,SNR=7.8						
HFS	Hagfors	137.59	352	PKhKP	PKPpre	20 00 01.2	
	comp=Z,1.6nm,0.7s,baz=44,slow=4.5,SNR=4.1						
AK03	Malin Array Si	141.37	333	PKP	PKPdf	20 00 11.8	-5.9
AKASG	Malin Array Be	141.39	333	PKhKP	PKPpre	20 00 12.2	
	comp=Z,1.0nm,0.4s,baz=43,slow=4.1,SNR=11						
AKBB	Malin Array Si	141.39	333	PKP	PKPdf	20 00 12.4	-5.4
AK04	Malin Array Si	141.40	333	PKP	PKPdf	20 00 12.4	-5.4
AK01	Malin Array Si	141.40	333	PKP	PKPdf	20 00 12.4	-5.4
KIEV	Kiev	141.40	333		PKPpre	20 00 12.8	
KIEV	Kiev	141.40	333	⇓P	PKPdf	20 00 12.7	-5.0
KIEV	Kiev	141.40	333	PKP	PKPdf	20 00 12.6	-5.2
AK22	Malin Array Si	141.41	333	PKP	PKPdf	20 00 12.4	-5.4
AK21	Malin Array Si	141.41	333	PKP	PKPdf	20 00 12.4	-5.4
AK08	Malin Array Si	141.43	332	PKP	PKPdf	20 00 12.4	-5.4
AK09	Malin Array Si	141.43	332	PKP	PKPdf	20 00 12.4	-5.4
AK02	Malin Array Si	141.43	333	PKP	PKPdf	20 00 12.4	-5.4
AK11	Malin Array Si	141.43	333	PKP	PKPdf	20 00 12.4	-5.4
AK18	Malin Array Si	141.44	333	PKP	PKPdf	20 00 11.7	-6.1
AK10	Malin Array Si	141.45	332	PKP	PKPdf	20 00 12.5	-5.4
MI28	Mi28,Pidlybu	141.88	334	PKP	PKPdf	20 00 13.0	-5.6
RNPP9	Sopachiv	142.22	336	PKP	PKPdf	20 00 14.9	-4.3
EKA	Eskdalemuir Ar	142.95	5	PKhKP	PKPpre	20 00 17.5	
	comp=Z,2.1nm,0.8s,baz=309,slow=0.5,SNR=3.8						
SORM	Soroca	143.63	330	⇓P	PKPbc	20 00 20.5	-0.4
PURM	Purcari	143.99	327	⇑P	PKPdf	20 00 22.6	+0.2
MILM	Milestii Mici	144.26	328	⇑P	PKPbc	20 00 21.7	-1.1
VASR	Vaslui	144.96	329	⇓P	PKPab	20 00 25.8	-0.3
VLDR	Vladesti	145.37	328	⇓P	PKPbc	20 00 26.6	+0.4
TLCR		145.44	326	⇓P	PKPbc	20 00 27.1	+0.7
BURAR	Bucovina Array	145.44	332		PKPbc	20 00 27.2	+0.7
BURAR	Bucovina Array	145.44	332	⇑P	PKPbc	20 00 27.4	+0.8
GHRR		145.56	329	⇓P	PKPab	20 00 28.2	-0.2
TESR	Tescani	145.61	330	⇓P	PKPbc	20 00 27.1	+0.3
BR131	Keskin Array S	145.69	315		PKPbc	20 00 26.9	-0.7
BRTR	Keskin Array B	145.69	315	PKPbc	PKPbc	20 00 27.6	+0.1
	comp=Z,2.9nm,0.7s,baz=119,slow=4.9,SNR=18						
BRTR	Keskin Array B	145.69	315		PKPbc	20 00 27.3	-0.3
KIRS	Kirsehir-Merke	145.79	314	⇑P	PKPbc	20 00 27.9	+0.2
CFR	Carcaliu	145.80	327	⇓P	PKPbc	20 00 27.4	0.0
ONER	Baraj Valea Uz	145.86	330	⇑P	PKPab	20 00 28.9	-0.7
TPGR	Topolog	145.87	326	⇑P	PKPbc	20 00 28.4	+0.7
OSTC	Ostas	146.12	344	*e*PKP	PKPab	20 00 29.7	-0.8
CLL	Collm	146.16	348	⇓*i*PKPbc	PKPbc	20 00 28.4	+0.2
	comp=Z,17nm,0.8s						
ANTO	Ankara	146.19	316	⇑P	PKPbc	20 00 29.4	+0.6
UPC	Upice	146.22	344	*e*PKP	PKPbc	20 00 29.5	+1.0
ARCR	ARCALIA	146.23	333	⇑P	PKiKP	20 00 30.0	-0.9
TURR	Turia	146.24	330	⇑P	PKiKP	20 00 30.8	-0.2
DPC	Dobruska-Polom	146.28	344	*e*PKP	PKPbc	20 00 29.7	+1.0
COVR	Voineasa-Covas	146.30	329	⇑P	PKPbc	20 00 28.2	-0.7
KRLC	Kraliky	146.41	343	*e*PKP	PKPbc	20 00 30.0	+0.9
MORC	Moravsky Berou	146.46	342	⇑P	PKPbc	20 00 29.6	+0.4
MORC	Moravsky Berou	146.46	342	*e*PKP	PKPbc	20 00 29.4	+0.2
PVCC	Panska Ves	146.56	346	*e*PKP	PKPbc	20 00 30.4	+1.0
DOPR	Dopca	146.60	330	⇓P	PKPbc	20 00 30.5	+0.8
ISR	Istrita	146.66	328	⇑P	PKPbc	20 00 29.7	-0.2
MLR	Muntele Rosu	146.68	329		PKPbc	20 00 30.2	+0.1
MLR	Muntele Rosu	146.68	329	⇓P	PKPbc	20 00 30.8	+0.7
HSKC	Hora Svate Kat	146.73	347	*e*PKP	PKPbc	20 00 30.6	+0.7
MMAI	Mount Meron Ar	147.06	303	PKPbc	PKPbc	20 00 31.8	+0.4
	comp=Z,3.7nm,0.6s,baz=86,slow=4.3,SNR=8.3						
MARR	Marisel-Cluj	147.08	333	⇑P	PKPbc	20 00 31.6	+0.6
VRAC	Vranov	147.16	343	⇑P	PKPdf	20 00 26.9	-0.9
VRAC	Vranov	147.16	343	*e*PKP	PKPbc	20 00 31.4	+0.4
DRGR		147.16	334	⇑P	PKPbc	20 00 31.5	+0.3
JAVC	Velka Javorina	147.24	341	*e*PKP	PKiKP	20 00 32.7	-0.3
ARR	Arges	147.40	330	⇑P	PKiKP	20 00 33.2	-0.2
KRUC	Moravsky	147.44	343	*e*PKP	PKPbc	20 00 32.4	+0.7
ZVC	Zvikov	147.66	346	*e*PKP	PKPbc	20 00 33.0	+0.7
HUMR	Humele	147.85	329	⇓P	PKPbc	20 00 32.7	-0.2
SIRR	Siria	148.01	334	⇓P	PKPbc	20 00 33.5	+0.2
KHC	Kasperske Hory	148.09	346	*e*PKP	PKiKP	20 00 34.3	-0.4
CKRC	Cesky Krumlov	148.21	345	*e*PKP	PKiKP	20 00 34.6	-0.3
GZR	Gura Zlata	148.23	332	⇓P	PKPbc	20 00 33.7	-0.3
GERES	GERESS Array B	148.33	346	PKPbc	PKPbc	20 00 34.6	+0.5

	comp=Z,2.3nm,0.7s,baz=23,slow=4.4,SNR=18						
ELND	Elena	148.53	326	⇑P	PKPbc	20 00 35.2	+0.5
BZS	Buzias	148.56	334	⇓P	PKPbc	20 00 34.9	+0.2
CONA	Conrad Observa	148.61	342	*i* PKP	PKiKP	20 00 35.8	-0.1
	comp=Z,11nm,1.3s						
RONA	Rosalia, Austr	148.69	342	*e*PKP	PKiKP	20 00 35.9	-0.1
	comp=Z,7.6nm,0.9s,SNR=6.8						
HERR	Herculane	148.79	332	⇓P	PKPbc	20 00 35.3	+0.1
PLVB	Pleven	148.86	328	⇓P	PKPbc	20 00 35.9	+0.5
MOA	Molln	149.12	344	*i* PKP	PKiKP	20 00 36.5	-0.3
	comp=Z,8.8nm,1.4s						
MDVR	Moldovita	149.18	333	⇑P	PKPbc	20 00 36.5	+0.3
MORH	Mrgy, Hungar	149.22	338	⇑P	PKPbc	20 00 36.1	-0.1
BIOA	Bad Ischl, Aus	149.42	345	*i* PKP	PKPbc	20 00 36.8	+0.1
	comp=Z,6.2nm,0.9s						
LESA	Schwarzleotal	149.90	346	*i* PKP	PKPbc	20 00 38.1	+0.2
	comp=Z,2.7nm,0.6s						
SOKA	Soboth	149.99	342	*i* PKP	PKPbc	20 00 38.1	-0.1
	comp=Z,5.8nm,0.9s,SNR=4.8						
KBA	Koelnbreinsper	150.07	345	*e*PKP	PKPbc	20 00 37.9	-0.5
	comp=Z,4.8nm,0.8s						
BOVS	Bovan	150.08	331	⇑P	PKPbc	20 00 38.5	+0.1
WATA	Walderalm	150.23	347	*i* PKP	PKPbc	20 00 38.9	+0.2
	comp=Z,5.7nm,0.6s						
RETA	Reutte	150.24	348	*i* PKP	PKPbc	20 00 39.1	+0.3
	comp=Z,3.6nm,0.7s						
WTTA	Wattenberg	150.28	347	*i* PKP	PKiKP	20 00 39.4	0.0
	comp=Z,7.4nm,0.5s,SNR=7.5						
MYKA	Terra Mystica	150.41	344	*i* PKP	PKPbc	20 00 38.8	-0.3
	comp=Z,3.9nm,0.7s						
SQTA	Sankt Quirin	150.41	348	*i* PKP	PKPbc	20 00 39.5	+0.3
	comp=Z,5.7nm,0.7s						
ABTA	Abfaltersbach	150.58	346	*i* PKP	PKPbc	20 00 39.4	-0.2
	comp=Z,10nm,0.7s,SNR=10						
DAVA	Damuels	150.60	350	*i* PKP	PKiKP	20 00 40.4	+0.3
	comp=Z,7.5nm,0.9s						
FETA	Feichten	150.70	348	*i* PKP	PKiKP	20 00 40.4	+0.1
	comp=Z,6.3nm,0.8s						
FUORN	Ofenpass-Fuorn	151.17	349		PKiKP	20 00 41.7	+0.3
TORD	Torodi Ar. Bea	174.68	173	PKPab	PKPab	20 02 35.1	+0.1
	comp=Z,0.7nm,1.0s,baz=184,slow=5.1,SNR=2.0						

AFAD ***16*** *19:54:16.1, 37°.89N×29°.41E, h7^{km}±3^{km}, ML2.4*

ISK 16 19:54:15.3, 37°.88N×29°.42E, h8^{km}, ML2.4/27, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INCE	Denizli-Bozkur	0.21	144	P	Pg	19 54 20.8	+1.3
INCE				*i* IAML		19 54 25.0	
	comp=N,1µm,0.2s						
INCE				*i* IAML		19 54 25.0	
	comp=E,1µm,0.7s						
INCE				S	Sg	19 54 25.2	+2.7
DNIZ	Denizli-Tavas-	0.39	230	P	Pb	19 54 23.9	-0.7
DNIZ				S	Sb	19 54 31.0	+0.2
DNIZ				*i* IAML		19 54 32.0	
	comp=N,1µm,0.3s						
DNIZ				*i* IAML		19 54 32.0	
	comp=E,1µm,0.3s						
APMY	Acipayam-Deniz	0.42	193	Pg	Pg	19 54 23.9	+0.5
KHL	Karahalli	0.45	10	Pg	Pg	19 54 24.6	+0.5
KHL				Sg	Sg	19 54 31.3	+1.2
PASA	Karahalli, USA	0.47	7	P	Pg	19 54 24.5	0.0
PASA				S	Sb	19 54 32.1	-1.1
PASA				*i* IAML		19 54 37.0	
	comp=E,239nm,0.3s						
PASA				*i* IAML		19 54 39.0	
	comp=N,192nm,0.3s						
BASM	Basmaki-Afyon	0.50	85	Pg	Pg	19 54 25.3	+0.3
BRDR	BURDUR-Merkez	0.54	109	P	Pb	19 54 26.6	-0.5
BRDR				S	Sb	19 54 35.6	+0.6
BRDR				*i* IAML		19 54 36.0	
	comp=N,381nm,0.3s						
BRDR				*i* IAML		19 54 38.0	
	comp=E,238nm,0.2s						
TAVA	DENIZLI_Tavas	0.57	224	P	Pg	19 54 26.7	+0.3
TAVA				S	Sg	19 54 33.2	-0.7
GOLH	Golhisar	0.65	170	P	Pg	19 54 28.4	+0.5
GOLH				S	Sb	19 54 39.3	+1.1
GOLH				*i* IAML		19 54 46.0	
	comp=E,136nm,0.4s						
GOLH				*i* IAML		19 54 48.0	
	comp=N,156nm,0.4s						
DNZT	Denizli-Tavas-	0.68	208	P	Pb	19 54 29.0	-0.4
DNZT				S	Sb	19 54 39.9	+1.0
DNZT				*i* IAML		19 54 43.0	
	comp=N,67nm,0.3s						
CAEL	Denizli, Camel	0.76	186	P	Pb	19 54 31.2	+0.4
CAEL				*i* IAML		19 54 52.0	
	comp=N,125nm,0.4s						
CAEL				*i* IAML		19 54 57.0	
	comp=E,112nm,0.5s						
KULA	Kula-Manisa	0.87	317	Pg	Pb	19 54 32.5	-0.3
NAZL	Nazilli-Aydin	0.90	276	Pg	Pb	19 54 32.9	-0.2
CAME	Cameli-Denizli	0.94	186	Pg	Pg	19 54 33.4	+0.1
SHUT	Suhut-Afyon	1.12	53	Pn	Pb	19 54 37.1	+0.1
ODEM	Odemis-Izmir	1.13	291	Pn	Pn	19 54 37.4	-0.2
KORT	Korkueli	1.15	139	Pn	Pb	19 54 37.6	+0.1
SHAP	Saphane-Kutahy	1.15	352	Pn	Pb	19 54 37.7	+0.1
YER	Yerkesik	1.17	231	Pn	Pb	19 54 37.9	+0.1
ELL	Elmali	1.19	161	Pn	Pn	19 54 38.4	0.0
AYDB	Zeytinkoy-Aydi	1.21	274	Pn	Pn	19 54 38.9	+0.2
DALY	Dalyan (Mula)	1.22	210	Pn	Pg	19 54 39.1	+0.4
SIMA	Simav-Kutahya	1.25	344	Pn	Pg	19 54 39.4	+0.1
SMAA	Simav-Kutahya	1.27	344	Pn	Pg	19 54 39.8	+0.2
SDAG	Sultandagi-AFY	1.31	64	Pn	Pb	19 54 40.3	+0.1
GORD	Gordes-Manisa	1.42	317	Pn	Pb	19 54 41.9	-0.2
MLSB	Milas	1.43	246	Pn	Pb	19 54 42.3	+0.1
GOMA	Golmarmara-Man	1.44	305	Pn	Pb	19 54 42.4	0.0
TURN	Turunc	1.45	221	Pn	Pb	19 54 42.2	-0.3
TVSB	Tavsanli	1.57	1	Pn	Pn	19 54 43.8	+0.2
AKAS	Kas	1.65	175	Pn	Pb	19 54 45.5	-0.5
GCAM	G?zelcaml?	1.74	265	Pn	Pn	19 54 46.5	+0.7
DAT	Datca	1.86	233	Pn	Pn	19 54 48.2	+0.6
ARG	Arkhangelos	1.96	212	Pn	Pn	19 54 49.7	+0.9
BALB	Balikesir	2.13	326	Pn	Pn	19 54 52.4	+1.2
BAND	Balkesir-Ban	2.68	338	⇑S	Sg	19 55 43.6	+2.3
BAND	Balkesir-Ban	2.68	338	⇓P	Pg	19 55 06.9	+0.3

IDC ***16*** *19:54:24.6±0.6, 6°.52N×125°.20E, h0^{km}, mb4.0/16, mbtmp4.0/16, MS3.2/11, Error ellipse: s-maj=14.4km s-min=8.0km az=109.0*

NEIC ***16*** *19:54:26.8±2.0, 6°.59N±0°.06×125°.23E±0°.09, h10^{km}±1^{km}, mb4.4/28, Error ellipse: s-maj=16.7km s-min=7.7km az=299.0*

DJA ***16*** *19:54:28.4±0.6, 7°N±5°×12°5E±°, h21^{km}±8^{km}, M4.8/18, mb4.8/18, mB5.2/6, MLv4.9/6, Mw(mB)4.6/6*

ISC 16 19:54:26.5±0.4, **6°.58N**±0°.05×**125°.31E**±0°.07, **h10^{km}, n80, σ1^{s}.40**/71, **mb4.3**/27, **MS3.2**/8, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.56	29	Pg	Pg	19 54 38.6	+1.3
	698nm,0.3s,baz=226,slow=1.8,SNR=38						
DAV				Lg	Lg	19 54 45.3	
	1µm,0.3s,baz=255,slow=20,SNR=14						
DAV	Davao City (W)	0.56	29		Pg	19 54 38.3	+0.9
DAV	Davao City (W)	0.56	29	P	Pg	19 54 38.6	+1.3
DAV	Davao City (W)	0.56	29	P	Pb	19 54 40.0	+1.6
SGSI	Sangihe	2.88	176	P	Pn	19 55 13.8	+1.3
TNTI	Ternate	6.12	160		Pn	19 55 59.4	+2.3
TNTI	Ternate	6.12	160	P	Pn	19 55 57.7	+0.6
	0.1nm47nm,0.8s						
GTOI	Gorontalo	6.33	201	P	Pn	19 55 58.8	-1.1
MRSI	Marisa	6.93	209	P	Pn	19 56 08.6	+0.5
TOLI2	Tolitoli	7.06	220		Pn	19 56 08.7	-1.3
LUWI	Luwuk	7.98	199		Pn	19 56 25.9	+3.3
LUWI	Luwuk	7.98	199	P	Pn	19 56 26.1	+3.5
	1µm173nm,1.0s						
APSI	Ampana	8.29	206	P	Pn	19 56 28.0	+1.2
	1µm113nm,1.0s						
SANI	Sanana	8.60	175	P	Pn	19 56 30.7	-0.4
	37nm,0.8s						
TGY	Tagaytay City	8.62	330	LR	LR	19 59 49.8	
	comp=Z,94nm,21.4s,baz=116,slow=38						
I39PW	PALAU INFRASON	9.22	84	I	I	20 53 55.0	
	baz=266,slow=295,SNR=0.5						
PCI	Palu	9.22	216	P	Pn	19 56 44.1	+4.4
	23nm,1.0s						
SWI	Sorong	9.48	141	P	Pn	19 56 44.1	+0.9
NLAI	Namlea	9.91	170	P	Pn	19 56 49.1	0.0
	579nm38nm,0.7s						
KRAI	Karang Ratu	10.30	163	P	Pn	19 56 55.1	+0.6
	16nm,0.6s						
AAI	Ambon	10.60	164	P	Pn	19 56 59.2	+0.7
	29nm,1.2s						
TTSI	Tana Toraja	11.02	210	P	Pn	19 57 06.8	+2.5
	23nm,0.9s						
KAPI	Kappang	12.78	206	LR	LR	20 02 16.5	
	comp=Z,67nm,21.9s,baz=32,slow=37						
SOEI	Soe	16.26	184		Pn	19 58 16.2	+0.9
SOEI				IAmb	IAmb	19 58 38.9	
	comp=Z,30nm,0.9s						
SOEI	Soe	16.26	184	P	P	19 58 18.6	+0.3
	comp=Z,35nm,1.2s						
BATI	Baumata	16.75	186	Pn	P	19 58 24.2	+0.5
	comp=Z,1.8nm,0.3s,baz=336,slow=0.1,SNR=6.5						
BATI				LR	LR	20 06 00.7	
	comp=Z,62nm,19.8s,baz=330,slow=42						
KLNI	Mataram	17.50	212	P	P	19 58 34.0	+2.0
	comp=Z,32nm,0.6s						
JAGI	Jajag, Banyuwa	18.63	217		Pn	19 58 46.4	+1.7
JAGI				IAmb	IAmb	19 58 50.2	
	comp=Z,20nm,0.7s						
MTN	Manton Dam	20.14	163	P	P	19 59 01.5	+0.5
MTN				IAmb	IAmb	19 59 20.1	
	comp=Z,24nm,1.4s						
JOW	Kunigami	20.34	8	LR	LR	20 06 14.7	
	comp=Z,62nm,21.1s,baz=258,slow=35						
KNRA	Kununurra	22.38	171		P	19 59 24.4	-0.7
FITZ	Fitzroy Crossi	24.52	179	P	P	19 59 45.8	-0.6
	comp=Z,3.4nm,0.5s,baz=4.6,slow=8.3,SNR=25						
	comp=Z,3.4nm,0.5s						
FITZ	Fitzroy Crossi	24.52	179		P	19 59 45.5	-0.8
PMG	Port Moresby	26.95	126	P	P	20 00 08.9	+0.5
	comp=Z,8.1nm,0.8s,baz=68,slow=2.0,SNR=4.3						
	comp=Z,8.1nm,0.8s						
PMG	Port Moresby	26.95	126	IAmb	IAmb	20 00 09.6	
	comp=Z,7.8nm,0.8s						
COEN	Coen	27.03	139	P	P	20 00 09.8	+0.7
COEN				IAmb	IAmb	20 00 13.9	
	comp=Z,10nm,0.9s						
WB0	Warramunga Arr	27.66	161		P	20 00 13.6	-1.2
WB0				IAmb	IAmb	20 00 35.7	
	comp=Z,5.4nm,0.7s						
WRAB	Tennant Creek	27.81	162	P	P	20 00 14.4	-1.7
WRA	Warramunga Arr	27.81	162	P	P	20 00 15.1	-1.0
	comp=Z,2.6nm,0.9s,baz=333,slow=11,SNR=19						
	comp=Z,2.6nm,0.9s						
WRA	Warramunga Arr	27.81	162	P	P	20 00 15.8	-0.3
WR8	Warramunga Arr	27.88	161		P	20 00 16.5	-0.1
WR8				IAmb	IAmb	20 00 32.4	
	comp=Z,4.4nm,0.8s						
CMAR	Chiang Mai Arr	28.27	297	P	P	20 00 20.1	-0.1
	comp=Z,0.2nm,0.3s,baz=120,slow=6.8,SNR=4.6						
CMAR				LR	LR	20 11 09.1	
	comp=Z,20nm,21.9s,baz=105,slow=36						
	comp=Z,0.2nm,0.3s						
KSRS	Korea Array	30.83	4	P	P	20 00 44.5	+1.9
	comp=Z,1.4nm,0.8s,baz=177,slow=9.4,SNR=5.1						
	comp=Z,1.4nm,0.8s						
AS31	Alice Springs	31.21	165		P	20 00 44.7	-1.6
ASAR	Alice Springs	31.21	165	P	P	20 00 45.1	-1.1
	comp=Z,1.6nm,0.5s,baz=352,slow=8.6,SNR=48						
	comp=Z,1.6nm,0.5s						
ASAR	Alice Springs	31.21	165	P	P	20 00 44.5	-1.7
MJAR	Matsushiro Arr	32.07	20	LR	LR	20 14 08.6	
	comp=Z,43nm,18.9s,baz=186,slow=37						
CTA	Charters Tower	33.57	143	P	P	20 01 07.3	+0.4
	comp=Z,2.2nm,0.8s,baz=288,slow=9.6,SNR=2.8						
CTA				LR	LR	20 15 03.6	
	comp=Z,33nm,18.8s,baz=24,slow=37						
	comp=Z,2.2nm,0.8s						
LZH	Lanzhou	35.35	329	*e*P	P	20 01 24.0	+1.6
LZH				sP	sP	20 01 34.5	+7.8
LZH				pmax	pmax		
	comp=Z,26nm,1.7s						
SHL	Shillong	37.08	304		P	20 01 36.2	-1.2
FORT	Forrest	37.24	176	P	P	20 01 37.0	-1.4
FORT				IAmb	IAmb	20 01 46.4	
	comp=Z,4.5nm,0.8s						
INKA	Innaminka	37.24	157	P	P	20 01 38.3	-0.1
INKA				IAmb	IAmb	20 01 39.1	
	comp=Z,3.7nm,0.6s						
USRK	Ussuriysk Ar.	37.93	8	P	P	20 01 44.5	+0.4
	comp=Z,3.1nm,0.7s,baz=201,slow=7.3,SNR=7.8						
	comp=Z,3.1nm,0.7s						
GTA	Gaotai	39.94	329	*e*P	P	20 02 02.9	+1.7
GTA				pP	sP	20 02 08.3	+2.7
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ASAJ	Asahikawa	40.34	19	LR	LR	20 17 05.6	
	comp=Z,40nm,21.7s,baz=10.0,slow=34						
BBOO	Buckleboo	40.48	166		P	20 02 05.3	-0.2
STKA	Stephens Creek	41.28	159	P	P	20 02 11.9	-0.2
	comp=Z,6.4nm,0.8s,baz=334,slow=7.7,SNR=19						
	comp=Z,6.4nm,0.8s						
STKA	Stephens Creek	41.28	159		P	20 02 11.5	-0.6
HEH	HeiHe	43.57	2	*e*P	P	20 02 30.3	-0.2
SONM	Songino Array	44.17	342	P	P	20 02 35.0	-0.6
	comp=Z,0.3nm,0.6s,baz=165,slow=12,SNR=3.3						
SONM				LR	LR	20 21 46.5	
	comp=Z,69nm,18.3s,baz=150,slow=37						
	comp=Z,0.3nm,0.6s						
CAN	Canberra	47.28	153	P	P	20 03 00.5	+0.3
TOO	Toolangi	47.79	158	P	P	20 03 04.1	-0.1
DZM	Mont Dzumac	49.34	126	P	P	20 03 15.4	-1.1
	comp=Z,4.7nm,0.8s,baz=229,slow=9.1,SNR=5.1						
	comp=Z,4.7nm,0.8s						
DZM	Mont Dzumac	49.34	126	P	P	20 03 15.1	-1.4
DZM				IAmb	IAmb	20 03 21.8	
	comp=Z,7.0nm,0.9s						
MKAR	Makanchi Array	54.42	325	P	P	20 03 53.7	-0.3
	comp=Z,1.0nm,0.8s,baz=116,slow=7.1,SNR=8.8						
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	54.42	325	P	P	20 03 53.3	-0.7
ZALV	Zalesovo Beam	57.42	333	P	P	20 04 14.1	-1.2
	comp=Z,0.4nm,0.4s,baz=92,slow=8.9,SNR=4.2						
	comp=Z,0.4nm,0.4s						
DRK	Karamyk	58.04	313	P	P	20 04 19.9	-0.4
KURBB	Kurchatov Arra	58.59	327	P	P	20 04 22.8	-0.7
	comp=Z,1.6nm,0.8s,baz=125,slow=6.4,SNR=13						
	comp=Z,1.6nm,0.8s						
KURK	Kurchatov	58.59	327	P	P	20 04 22.0	-1.5
KURK				IAmb	IAmb	20 04 28.1	
	comp=Z,2.8nm,0.8s						
GAR	Garm	58.97	312		P	20 04 25.5	-1.0
KK31	Karatay Array	60.20	316		P	20 04 33.8	-1.0
KK31				IAmb	IAmb	20 04 35.9	
	comp=Z,6.2nm,1.4s						
KKAR	Karatay Array	60.20	316		P	20 04 33.4	-1.4
BVAR	Borovoye Array	64.18	327	P	P	20 04 59.8	-1.5
	comp=Z,1.1nm,0.9s,baz=125,slow=7.4,SNR=5.5						
	comp=Z,1.1nm,0.9s						
BORK	Borovoye	64.22	327	P	P	20 05 00.1	-1.5
BORK				IAmb	IAmb	20 05 01.6	
	comp=Z,4.1nm,1.1s						
TIXI	Tiksi	65.04	1	P	P	20 05 04.9	-1.6
TIXI				IAmb	IAmb	20 05 12.4	
	comp=Z,5.5nm,1.4s						
NRIK	Noril'sk	67.34	346	LR	LR	20 37 04.1	
	comp=Z,52nm,18.9s,baz=332,slow=38						
RDOG	Red Dog Mine	77.16	21		P	20 06 17.4	-2.7
ILAR	Eielson Array	83.16	26	P	P	20 06 52.8	+0.2
	comp=Z,0.2nm,0.6s,baz=239,slow=4.5,SNR=4.3						
	comp=Z,0.2nm,0.6s						
NOA	NORSAR Array B	95.62	333	LR	LR	20 54 59.3	
	comp=Z,27nm,18.1s,baz=320,slow=38						

TIR ***16*** *19:55:27.4, 41°.48N×19°.49E, h10^{km}±1^{km}, Md2.6/5, Ml2.7/5*

BEO ***16*** *19:55:29.0±0.6, 41°.46N×19°.68E, h6^{km}±3^{km}, ML2.5/10*

PDG ***16*** *19:55:29.8±0.2, 41°.54N×19°.51E, h10^{km}, MD2.9/2, ML2.8/12, Error ellipse: s-maj=1.0km s-min=1.2km az=0.0*

ISC 16 19:55:28.1±1.1, **41°.46N**±0°.02×**19°.52E**±0°.02, **h7^{km}**±9^{km}, **n54, σ0^{s}.82**/80, **12C-10D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.28	112	Pg	Pg	19 55 34.0	+0.3
TIR				Sg	Sg	19 55 37.2	-0.4
TIR				AML	AML	19 55 40.0	
	3.9nm,0.3s						
ULC	Ulcinj	0.55	338	⇓*i*Pg	Pg	19 55 38.5	-0.2
ULC				*e*Sg	Sg	19 55 46.9	+1.1
SDA	Shkodra	0.59	359	Pg	Pg	19 55 38.3	-1.3
SDA				Sg	Sg	19 55 47.4	0.0
SDA				AMd		19 56 18.9	
PHP	Peshkopia	0.73	72	Pg	Pg	19 55 41.5	-0.7
PHP				Sg	Sg	19 55 52.3	+0.6
PHP				AML	AML	19 55 56.7	
	1.4nm,0.3s						
PHP				AMd		19 56 22.9	
DRME	Dracevica, Mon	0.77	341	*e*Pg	Pn	19 55 45.1	-0.4
DRME	Dracevica, Mon	0.77	341	⇑*i*Pg	Pg	19 55 42.8	-0.2
DRME				*e*Sg	Sg	19 55 53.5	+0.5
BUM	Brajici-Budva	0.96	331	*e*Pg	Pg	19 55 46.5	-0.1
BUM				*e*Sg	Sb	19 56 00.3	+0.1
VLO	Vlora	0.99	181	Pg	Pb	19 55 48.2	+0.6
VLO				Sg	Sb	19 56 01.2	+0.4
VLO				AML	AML	19 56 05.3	
	1.1nm,0.2s						
VLO				AMd		19 56 38.5	
PDG	Podgorica	0.99	349	Pg	Pg	19 55 46.7	-0.5
PDG				Sg	Sb	19 56 00.6	-0.4
PDG				AMd		19 56 28.6	
PDG	Podgorica	0.99	349	⇑P	Pb	19 55 47.9	+0.2
PDG				⇑S	Sn	19 56 02.1	-0.7
PDG	Podgorica	0.99	349	*e*Pg	Pb	19 55 47.5	-0.2
PDG				*e*Sg	Sn	19 56 03.3	+0.5
PDG	Podgorica	0.99	349	⇓*i*Pg	Pg	19 55 47.3	+0.1
PDG				*e*Sg	Sb	19 56 01.8	+0.8
OHR	Ohrid	1.03	109	*i* Pg	Pg	19 55 47.2	-0.7
OHR				*i* Sg	Sn	19 56 03.9	+0.1
CEME	Cevo	1.18	338	⇑*i*Pg	Pg	19 55 50.0	-0.7
CEME				*e*Sg	Sn	19 56 07.4	-0.1
PVY	Plav	1.18	16	*e*Pg	Pg	19 55 50.8	-0.1
PVY	Plav	1.18	16	*e*Pg	Pg	19 55 49.9	-1.0
PVY				*e*Sg	Sn	19 56 07.9	+0.2
HCY	Herceg Novi	1.25	323	⇑*i*Pg	Pn	19 55 51.5	-0.6
HCY				*e*Sg	Sn	19 56 10.1	+0.9
KBN	Korca	1.27	130	Sn	Sn	19 56 10.5	+0.7
NKME	Niksic	1.37	342	*e*Pg	Pn	19 55 53.7	-0.1
NKME				*e*Sg	Sg	19 56 13.5	+1.2
KOME	Kolasin	1.39	360	*e*Pg	Pb	19 55 54.7	+0.1
KOME	Kolasin	1.39	360	*e*Pg	Pn	19 55 53.8	-0.3
KOME				*e*Sg	Sg	19 56 14.8	+1.9
BEY	Berane	1.44	11	*e*Pg	Pn	19 55 54.9	+0.1
IVA	Berane	1.44	11	*e*Pg	Pn	19 55 54.9	+0.1
IVA				*i* Sg	Sg	19 56 16.1	+1.6
TREB	Trebinje	1.53	326	*e*Pg	Pn	19 55 56.2	+0.3
TREB				*e*Sg	Sg	19 56 19.6	+2.3
BRY	Bratogost	1.62	334	⇑*i*Pg	Pb	19 55 58.1	-0.3
BRY				*e*Sg	Sg	19 56 20.8	+0.7
UPM	Unac-Piva	1.80	346	⇓*i*Pn	Pb	19 56 01.0	-0.6
UPM				*e*Sn	Sg	19 56 25.6	-0.5
SJES	Sjenica	1.83	10	*e*Pg	Pb	19 56 01.6	-0.5
SJES				*e*Sg	Sb	19 56 25.9	+0.5
STON	Ston	1.96	317	*e*Pn	Pn	19 56 00.6	-1.1
STON				*e*Sn	Sb	19 56 29.3	+0.7
NOCI	Noci	1.97	251	Sn	Sg	19 56 30.8	-0.6
NOCI				AML	AML	19 56 34.4	
	0.3nm,0.2s						
IGT	Igoumenitsa	2.02	162	*e*Pn	Pn	19 56 03.1	+0.4
SELS	Selova	2.12	33	*e*Pg	Pn	19 56 04.1	0.0
SELS				*e*Sg	Sb	19 56 33.2	-0.4
RUDO	Rudo	2.16	357	*e*Pn	Pb	19 56 06.8	-0.8
IVAS	Ivanjica	2.17	12	*e*Pn	Pn	19 56 04.6	-0.2
BARS	Barje	2.18	51	*e*Pn	Pn	19 56 05.1	+0.2
MATE	Matera	2.27	250	⇑P	Pn	19 56 05.5	-0.6
MATE				⇑S	Sn	19 56 35.4	+1.0
BBLS	Lazi&#263i	2.41	358	*e*Pn	Pb	19 56 10.3	-1.6
GRUS	Gruza	2.59	20	*e*Pn	Pn	19 56 11.1	+0.7
DIVS	Divibare	2.66	7	*e*Pn	Pn	19 56 11.5	-0.1
BOVS	Bovan	2.71	36	⇑P	Pn	19 56 12.3	+0.2
BOVS				⇑S	Sn	19 56 44.8	-0.4
BOVS	Bovan	2.71	36	*e*Pn	Pn	19 56 12.0	-0.2
TRUS	Trudelj	2.84	13	*e*Pn	Pn	19 56 15.7	+1.7
VTS	Vitosha	3.00	66	*e*Pn	Pn	19 56 16.7	+0.4
TEKS	Tekeris	3.09	0	*e*Pn	Pn	19 56 20.0	+2.6
ZAGS	Zajecar	3.09	40	*e*Pn	Pn	19 56 17.5	+0.1
TIP	Timpagrande	3.10	224	⇓P	Pn	19 56 15.9	-1.7
BLKB	Belogradchik	3.18	46	⇓S	Sn	19 56 56.7	-0.2
KUBS	Kucevo	3.35	27	*e*Pn	Pn	19 56 19.2	-1.8
MDVR	Moldovita	3.69	25	⇓S	Sn	19 57 09.6	+0.1
MDVR	Moldovita	3.69	25	⇓P	Pn	19 56 25.4	-0.3
HERR	Herculane	4.03	31	⇑P	Pn	19 56 30.0	-0.2
BZS	Buzias	4.43	19	⇓P	Pn	19 56 35.2	-0.5
GZR	Gura Zlata	4.59	30	⇓P	Pn	19 56 37.1	-1.1
MORH	Mrgy, Hungar	4.80	353	⇓P	Pn	19 56 40.8	0.0
ARR	Arges	5.40	42	⇑P	Pn	19 56 49.0	-0.1

NEIC ***16*** *20:00:35.6±2.2, 43°.54N±0°.04×105°.29W±0°.06, h0^{km}±1^{km}, ML3.3/56, Error ellipse: s-maj=9.0km s-min=3.4km az=229.0*

IDC ***16*** *20:00:35.6±2.8, 43°.19N×105°.17W, h0^{km}, mbtmp3.4/2, ML3.2/2, Error ellipse: s-maj=56.9km s-min=11.1km az=155.0*

ISC 16 20:00:36.3±0.9, **43°.59N**±0°.05×**105°.21W**±0°.05, **h0^{km}, n32, σ1^{s}.59**/31, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.00	57	Pg	Pg	20 00 56.3	+0.8
K22A	Casper	1.34	226	Pn	Pb	20 01 02.4	0.0
LAO	LASA Array	3.19	347	Pn	Pn	20 01 28.0	+0.3
LAO				IAML		20 02 28.4	
	115nm,1.0s						
LAO				IAML		20 02 34.6	
	121nm,0.8s						
BW06	Boulder Array	3.28	257		Pn	20 01 28.2	-1.0
PD31	Pinedale Array	3.28	257		Pn	20 01 28.3	-0.9
PDAR	Pinedale Array	3.28	257	Pn	Pn	20 01 31.1	+1.9
	2.0nm,0.3s,baz=72,slow=17,SNR=25						
PDAR				Lg	Lg	20 02 17.2	
	4.8nm,0.3s,baz=82,slow=27,SNR=3.6						
	2.6nm,0.4s						
PDAR	Pinedale Array	3.28	257		Pn	20 01 30.4	+1.2
RLMT	Red Lodge	3.29	299	Pn	Pn	20 01 30.1	+0.9
RLMT				IAML		20 03 14.1	
	50nm,3.7s						
OGNE	Ogallala	3.54	137	Pn	Pn	20 01 32.9	+0.3
YNE	Yellowstone No	3.73	294		Pn	20 01 36.9	+1.6
YNE				IAML		20 02 40.9	
	comp=N,50nm,0.7s						
YNE				IAML		20 02 44.4	
	comp=E,48nm,0.7s						
YMP	Mirror Lake Pl	3.74	290	Pn	Pn	20 01 37.2	+1.6
YMP				IAML		20 02 45.3	
	comp=E,69nm,0.9s						
YMP				IAML		20 02 54.5	
	comp=N,73nm,0.7s						
ISCO	Idaho Springs	3.79	185		Pn	20 01 37.8	+1.5
ISCO				IAML		20 03 30.8	
	comp=N,41nm,4.0s						
ISCO				IAML		20 03 50.0	
	comp=N,48nm,4.0s						
LOHW	Long Hollow	3.92	272	Pn	Pn	20 01 37.3	-0.6
LOHW				IAML		20 03 24.2	
	comp=N,29nm,4.3s						
H17A	Grant Village	3.96	284	Pn	Pn	20 01 38.5	0.0
H17A				IAML		20 02 51.4	
	comp=E,31nm,2.3s						
H17A				IAML		20 02 52.0	
	comp=N,34nm,1.0s						
MOOW	Moose Ponds	4.02	274	Pn	Pn	20 01 39.2	-0.1
YPP	Pitchstone Pla	4.10	282		Pb	20 01 49.8	+0.3
O20A	White River Ci	4.12	214	Pn	Pn	20 01 41.1	+0.4
O20A				IAML		20 03 22.9	
	comp=N,59nm,4.0s						
K30B	Basset	4.20	101		Pg	20 01 55.5	-1.1
YHH	Holmes Hill	4.23	288		Pb	20 01 50.0	-1.7
E28A	Huff	4.38	45	Pn	Pn	20 01 44.6	+0.5
RDMU	Red Mountain	4.43	229	Pn	Pn	20 01 44.4	-0.5
RDMU				IAML		20 03 04.4	
	comp=N,27nm,1.0s						
RDMU				IAML		20 03 07.2	
	comp=E,32nm,1.4s						
YHB	Horse Butte	4.46	287		Pn	20 01 49.3	+3.9
YHB				IAML		20 03 46.2	
	comp=E,20nm,2.6s						
YHB				IAML		20 04 31.1	
	comp=N,20nm,2.3s						
YHL	Hebgen Lake	4.48	288		Pb	20 01 52.4	-3.5
YHL				IAML		20 03 14.8	
	comp=E,35nm,1.0s						
YHL				IAML		20 03 26.3	
	comp=N,33nm,3.3s						
DGMT	Dagmar	4.94	8		Pn	20 01 50.1	-1.6

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KSCO  Kaye Shedlock'     4.97 156            Pg       20 02 11.3  -0.2
BOZ   Bozeman (W)        5.01 296            Pn       20 01 52.3  -0.5
BOZ                                IAML               20 03 17.0
      comp=N,19nm,4.3s
BOZ                                IAML               20 05 02.9
      comp=N,18nm,4.7s
HWUT  Hardware Ranch     5.09 249  Pn        Pn       20 01 56.5  +2.5
HWUT                               IAML               20 03 40.7
      comp=N,25nm,1.0s
BSUT  Blindstream Ca     5.13 235            Pn       20 01 57.0  +2.3
BSUT                               IAML               20 03 29.0
      comp=N,17nm,2.8s
BSUT                               IAML               20 03 52.9
      comp=E,17nm,1.6s
TCUT  Toone Canyon       5.21 244            Pn       20 01 58.0  +2.3
P18A  Preston Nutter     5.47 225            Pn       20 01 59.1  -0.2
I10CA LAC DU BONNET      9.12  40  I         I        20 59 20.0
      comp=E,0.1nm,1.4s,baz=220,slow=269,SNR=2.0
ULM   Lac du Bonnet      9.23  40  Pn        Pn       20 02 52.0  +1.4
      comp=E,0.6nm,0.3s,baz=229,slow=12,SNR=2.6
ULM                                Lg        Lg       20 05 26.8
      comp=E,0.5nm,0.3s,baz=326,slow=18,SNR=3.6
      comp=E,1.7nm,0.4s
```

IDC 16 20:01:11.2±4.7, 32°.24N×82°.39E, h0km, mb3.3/3, mbtmp3.3/4, ML2.5/1, MS3.5/1, Error ellipse: s-maj=217.7km s-min=35.7km az=64.0, Xizang

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Code  Station Name        Δ°   AZ°    Phase ID            Time      Res
                                   Op        ISC       h  m  s     ISC
KURBB Kurchatov Arra    18.59 352  P         P        20 05 29.6  -0.2
      baz=164,slow=10,SNR=2.7
      0.4nm,0.6s
CMAR  Chiang Mai Arr    20.26 129  P         P        20 05 48.5  +0.2
      0.4nm,0.6s,baz=321,slow=10,SNR=5.6
      0.4nm,0.6s
OBN   Obninsk           39.30 319  LR        LR       20 27 44.3
      comp=Z,62nm,20.6s,baz=189,slow=40
WRA   Warramunga Arr    71.86 129  P         P        20 12 35.5  -0.6
      0.4nm,0.6s,baz=321,slow=6.0,SNR=1.7
      0.4nm,0.6s
ASAR  Alice Springs     74.24 132  P         P        20 12 50.8  +0.5
      0.2nm,0.5s,baz=330,slow=5.4,SNR=4.7
      0.2nm,0.5s
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*NEIC **16** 20:16:42.1±1.8, 21°.59N±0°.10×143°.0E±0°.1, h247km±7km, mb4.1/39, Error ellipse: s-maj=18.4km s-min=14.3km az=83.0*

*IDC **16** 20:16:45.8±4.3, 21°.65N×143°.10E, h295km±42km, mb3.4/18, mbtmp4.1/19, Error ellipse: s-maj=18.7km s-min=12.1km az=80.0*

ISC 16 20:16:46.4±0.6, 21°.56N±0°.09×143°.0E±0°.1, h300km, n66, σ0s.89/64, mb3.9/34, Mariana Islands region

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Code  Station Name        Δ°   AZ°    Phase ID            Time      Res
                                   Op        ISC       h  m  s     ISC
JCJ   Chichijima         5.56 352  P         Pn       20 18 00.3   -10
      67nm,0.3s,baz=284,slow=23,SNR=18
JCJ                                S         S        20 19 04.1   -14
      128nm,0.7s,baz=280,slow=21,SNR=6.4
JHJ2  Mitsune           11.85 347  P         Pn       20 19 27.0   0.0
JMN   Monobe            14.56 328  P         Pn       20 20 00.3  +0.6
JGF   Kuroka            14.84 342  P         P        20 20 00.6  -1.1
MJAR  Matsushiro Arr    15.51 345  P         P        20 20 08.6  -0.4
      1.4nm,0.3s,baz=170,slow=9.6,SNR=12
MJAR  Matsushiro Arr    15.51 345  P         P        20 20 06.2  -2.7
MAJO  Matsushiro        15.51 345  P         P        20 20 07.8  -1.2
MAJO                               IAmb      IAmb     20 20 11.3
      comp=Z,11nm,1.1s
MJB9  Matsu-Tunnel      15.51 345  P         P        20 20 09.0   0.0
MJB9                               IAmb      IAmb     20 20 12.3
      comp=Z,11nm,1.2s
JSD   Sado              16.93 347  P         P        20 20 23.3  -1.1
JSD                                IAmb      IAmb     20 20 24.9
      comp=Z,7.9nm,0.5s
JTM   Tenmabayashi      19.24 356  P         P        20 20 51.3  +2.1
KSRS  Korea Array       20.53 324  P         P        20 21 02.5  -0.1
      comp=Z,1.7nm,0.5s,baz=146,slow=8.9,SNR=9.9
      comp=Z,1.7nm,0.5s
SONM  Songino Array     39.34 321  P         P        20 23 47.0  -0.3
      comp=Z,0.3nm,0.4s,baz=132,slow=6.5,SNR=4.4
      comp=Z,0.3nm,0.4s
CM31  Chiang Mai Arr    41.42 274  P         P        20 24 05.1  +0.6
CM31                               IAmb      IAmb     20 24 07.2
      comp=Z,2.8nm,0.5s
CMAR  Chiang Mai Arr    41.42 274  P         P        20 24 05.5  +0.9
      comp=Z,1.3nm,0.6s,baz=93,slow=6.3,SNR=16
      comp=Z,1.3nm,0.6s
WB0   Warramunga Arr    41.93 192  P         P        20 24 08.7  +0.2
WR8   Warramunga Arr    42.09 192  P         P        20 24 09.8   0.0
WR8                                IAmb      IAmb     20 24 17.8
      comp=Z,9.0nm,1.5s
WRAB  Tennant Creek     42.10 192  P         P        20 24 08.5  -1.4
WRA   Warramunga Arr    42.11 192  P         P        20 24 09.9   0.0
      comp=Z,0.6nm,0.4s,baz=17,slow=9.5,SNR=12
      comp=Z,0.6nm,0.4s
KULM  Kulim             44.08 255  P         P        20 24 27.0  +1.2
KULM                               IAmb      IAmb     20 24 59.3
      comp=Z,23nm,1.4s
ASAR  Alice Springs     45.82 192  P         P        20 24 39.2   0.0
      comp=Z,0.4nm,0.6s,baz=14,slow=10.0,SNR=7.4
      comp=Z,0.4nm,0.6s
SHL   Shillong          46.81 285  P         P        20 24 46.9  -0.3
SHL                                IAmb      IAmb     20 24 47.5
      comp=Z,3.0nm,0.4s
GSI   Gunungsitoli      48.60 252  P         P        20 25 00.4  -0.3
UNV   Unalaska Valle    49.82  37  P         P        20 25 09.9  +0.7
PINNC Pines Island,     49.95 150  P         P        20 25 09.6  -1.0
LVA   Lava Point        50.19  36  P         P        20 25 12.6  +0.5
AKUT  Akutan            50.32  37  P         P        20 25 13.2  +0.2
ZALV  Zalesovo Beam     54.22 322  P         P        20 25 41.1  -0.4
      comp=Z,1.1nm,0.5s,baz=101,slow=7.7,SNR=7.2
      comp=Z,1.1nm,0.5s
MKAR  Makanchi Array    54.67 313  P         P        20 25 45.0  +0.1
      comp=Z,0.6nm,0.4s,baz=89,slow=8.4,SNR=15
      comp=Z,0.6nm,0.4s
MAKZ  Makanchi          54.89 313  P         P        20 25 46.7  +0.2
O15K  Ungalikthiuk R    55.04  32  P         P        20 25 47.8  +0.5
O15K                               IAmb      IAmb     20 26 15.1
      comp=Z,22nm,1.5s
N18K  Kilae Creek       57.36  31  P         P        20 26 02.9  -0.7
N18K                               IAmb      IAmb     20 26 14.1
      comp=Z,5.6nm,1.0s
KURK  Kurchatov         57.47 317  P         P        20 26 04.4  -0.1
KURBB Kurchatov Arra    57.52 317  P         P        20 26 04.5  -0.3
      comp=Z,3.4nm,0.5s,baz=94,slow=7.4,SNR=46
      comp=Z,3.4nm,0.5s
C18K  Utukok River      57.89  21  P         P        20 26 07.2   0.0
C18K                               IAmb      IAmb     20 26 14.4
      comp=Z,3.9nm,1.4s
C19K  Lookout Ridge     58.61  21  P         P        20 26 13.0  +0.9
C19K                               IAmb      IAmb     20 26 14.0
      comp=Z,4.0nm,1.1s
E19K  Redstone River    58.81  23  P         P        20 26 14.5  +1.0
E19K                               IAmb      IAmb     20 26 15.7
      comp=Z,4.2nm,1.4s
D19K  Kuna River        58.87  22  P         P        20 26 13.6  -0.3
D19K                               IAmb      IAmb     20 26 42.9
      comp=Z,6.4nm,1.4s
J20K  Nowinta River     59.04  27  P         P        20 26 16.3  +1.2
D20K  Etivluk River     59.46  22  P         P        20 26 18.6  +0.6
D20K                               IAmb      IAmb     20 26 21.4
      comp=Z,2.0nm,0.7s
B20K  Meade River       59.74  20  P         P        20 26 20.6  +0.9
B20K                               IAmb      IAmb     20 26 20.8
      comp=Z,3.3nm,0.4s
SUA   Susitna One       59.97  31  P         P        20 26 21.6  +0.1
H21K  Melozitna Rive    59.97  26  P         P        20 26 22.4  +1.0
TRF   Thorofare Moun    60.54  28  P         P        20 26 25.4  -0.1
TRF                                IAmb      IAmb     20 26 50.3
      comp=Z,6.7nm,1.3s
D22K  Ayikyak River     60.87  22  P         P        20 26 28.4  +1.0
D22K                               IAmb      IAmb     20 26 29.0
      comp=Z,3.7nm,0.5s
PWL   Port Wells        61.03  31  P         P        20 26 28.4  -0.2
TOLK  Toolik Lake Re    61.91  23  P         P        20 26 35.5  +1.1
TOLK                               IAmb      IAmb     20 26 52.0
      comp=Z,4.6nm,1.4s
ILAR  Eielson Array     62.24  27  P         P        20 26 34.6  -1.9
      comp=Z,0.8nm,0.6s,baz=255,slow=5.5,SNR=13
      comp=Z,0.8nm,0.6s
KLU   Klutina           62.26  31  P         P        20 26 37.2  +0.4
BVAR  Borovoye Array    62.67 320  P         P        20 26 39.6   0.0
      comp=Z,6.5nm,0.3s,baz=100,slow=7.8,SNR=48
      comp=Z,6.5nm,0.3s
KKAR  Karatay Array     63.02 308  P         P        20 26 42.4  +0.3
BMAR  Burnt Mountain    63.54  24  P         P        20 26 46.4  +1.3
INK   Inuvik            67.76  24  P         P        20 27 11.3  -0.5
INK                                IAmb      IAmb     20 27 24.3
      comp=Z,3.1nm,1.2s
AB31  Akbulak array     69.54 316  P         P        20 27 22.9  -0.2
AB31                               IAmb      IAmb     20 27 23.3
      comp=Z,3.8nm,0.5s
ABKAR Akbulak array     69.54 316  P         P        20 27 22.7  -0.3
AKTO  Aktyubinsk        70.56 318  P         P        20 27 28.9  -0.3
      comp=Z,0.7nm,0.4s,baz=126,slow=0.9,SNR=3.6
      comp=Z,0.7nm,0.4s
YKA   Yellowknife Ar    76.65  28  P         P        20 28 04.1  -0.1
      comp=Z,1.0nm,0.6s,baz=323,slow=5.5,SNR=4.2
      comp=Z,1.0nm,0.6s
ARCES ARCESS Array B    79.00 341  P         P        20 28 16.6  -0.4
      comp=Z,0.9nm,0.4s,baz=67,slow=7.6,SNR=15
      comp=Z,0.9nm,0.4s
ARCES ARCESS Array B    79.00 341  IAmb      IAmb     20 28 42.1
      comp=Z,11nm,1.4s
KBZ   Khabaz            82.35 314  P         P        20 28 35.2  +0.1
      comp=Z,1.8nm,0.7s,baz=112,slow=2.9,SNR=5.5
      comp=Z,1.8nm,0.7s
FINES FINESS Array B    83.24 334  P         P        20 28 37.7  -1.6
      comp=Z,1.6nm,0.3s,baz=63,slow=4.8,SNR=31
      comp=Z,1.6nm,0.3s
NVAR  Mina Array Bea    83.36  51  P         P        20 28 41.5  +0.8
      comp=Z,1.0nm,0.7s,baz=284,slow=5.2,SNR=6.0
      comp=Z,1.0nm,0.7s
PDAR  Pinedale Array    87.61  45  P         P        20 29 01.0  -0.5
      comp=Z,0.8nm,1.1s,baz=123,slow=2.6,SNR=4.2
      comp=Z,0.8nm,1.1s
HFS   Hagfors           88.79 337  P         P        20 29 04.2  -2.1
      comp=Z,1.6nm,0.6s,baz=56,slow=2.7,SNR=7.3
      comp=Z,1.6nm,0.6s
PLCA  Paso Flores      145.78 132  PKPbc     PKPdf    20 35 51.0  +1.3
      comp=Z,1.7nm,0.6s,baz=238,slow=2.8,SNR=6.4
PLCA  Paso Flores      145.78 132            PKPdf    20 35 50.6  +0.9
LPAZ  La Paz           150.11  85  PKPbc     PKPbc    20 36 03.8  +0.4
      comp=Z,1.5nm,0.5s,baz=284,slow=2.8,SNR=5.3
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*ASRS **16** 20:25:36.4±0.2, 54°N±1°×88°.2E±1°.0, h5km, MLh3.6/14, Error ellipse: s-maj=2.6km s-min=2.0km az=27.6, confirmed*

*IDC **16** 20:25:39.1±1.1, 53°.63N×88°.12E, h0km, mb3.6/3, mbtmp3.7/7, ML3.3/3, Error ellipse: s-maj=13.5km s-min=11.2km az=180.0*

*NNC **16** 20:25:40.5±2.9, 53°.48N×87°.99E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=22.3km s-min=12.4km az=56.0, Suspected Mining explosion.*

ISC 16 20:25:37.5±0.6, 53°.78N±0°.02×88°.16E±0°.02, h0km, n46, σ1s.63/87, mb3.5/3, 6C-14D, Southwestern Siberia

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Code  Station Name        Δ°   AZ°    Phase ID            Time      Res
                                   Op        ISC       h  m  s     ISC
KIYZ  Kiyzas, Kuzbas     0.32 228 ⇓Pg        Pg       20 25 43.4  -0.2
KIYZ                                Sg       Sg       20 25 47.3  -0.4
KALT3 Kaltan 3           0.50 239   Pg       Pg       20 25 46.8  -0.3
KALT3                               Sg       Sg       20 25 53.9  +0.3
KALT1 Kaltan 1           0.57 231   Pg       Pg       20 25 47.8  -0.5
KALT1                               Sg       Sg       20 25 55.5  -0.1
ERU   Erunakovo, Kuz     0.58 309 ⇓Pg        Pb       20 25 49.7  -0.9
ERU                                 Sg       Sb       20 25 58.5  -1.0
KALT2 Kaltan 2           0.62 233   Pg       Pg       20 25 48.9  -0.4
KALT2                               Sg       Sg       20 25 57.2  -0.2
MALIN Malinovka, Kuz     0.63 236   Pg       Pg       20 25 49.4  -0.2
MALIN                               Sg       Sg       20 25 57.8   0.0
TAIL  Tailep, Kuzbas     0.66 241   Pg       Pg       20 25 49.9  -0.1
TAIL                                Sg       Sg       20 25 59.4  +0.8
KOTO  Kotino, Kuzbas     0.84 300   Pg       Pb       20 25 54.2  -0.7
KOTO                                Sg       Sb       20 26 07.3  +0.6
VCHU  Verkh-Chumysh,     1.03 281 ⇓Pg        Pg       20 25 57.2  -0.1
VCHU                                Sg       Sb       20 26 12.1  -0.2
POMOR Pomortsevo, Ku     1.15 304   Pg       Pb       20 25 59.7  -0.5
POMOR                               Sg       Sn       20 26 18.9  +1.7
ELT   Eltsovka           1.26 247 ⇓Pg        Pg       20 25 60.0  -1.5
ELT                                 Sg       Sg       20 26 17.8   0.0
BJR3  Bachatsky-3 (S     1.27 292   Pg       Pg       20 26 01.4  -0.2
BJR3                                Sg       Sn       20 26 19.8  -0.2
BJR2  Bachatsky-2, K     1.30 294   Pg       Pg       20 26 02.1  -0.3
BJR2                                Sg       Sn       20 26 20.3  -0.7
VEH   Verkhnyaya Baz     1.39 111 ⇓Pg        Pg       20 26 02.7  -1.4
VEH                                 Sg       Sg       20 26 22.2  +0.1
SALR  Pechorkino, Sa     1.58 295 ⇓Pg        Pb       20 26 06.9  -0.7
SALR                                Sg       Sg       20 26 29.4  +1.2
BRCR  Berchikul'         1.87   3 ⇓Pg        Pb       20 26 11.5  -1.0
BRCR                                Sg       Sg       20 26 39.5  +2.0
KEM   Kemerovo           1.98 323   Pg       Pb       20 26 13.3  -1.0
KEM                                 Sg       Sg       20 26 41.5  +0.5
ZAA0  Zalesovo Array     1.98 276 ⇓P         Pb       20 26 13.4  -1.0
      14nm,0.6s
ZAA0                              ⇑S         Sg       20 26 41.1  -0.1
      28nm,0.8s
ZALV  Zalesovo Beam      1.98 276   Pn       Pb       20 26 14.2  -0.2
      20nm,0.3s,baz=101,slow=12,SNR=512
ZALV                                Lg       Lg       20 26 41.5
      14nm,0.3s,baz=99,slow=24,SNR=19
ZALV                                LR       LR       20 27 03.4
      comp=Z,23nm,21.1s,baz=340,slow=42
YALR  Yailyu, Altay      2.04 190   Pg       Pb       20 26 14.6  -0.7
YALR                                Sg       Sb       20 26 40.7  -0.4
ARTR  Artybash           2.05 195 ⇓Pg        Pn       20 26 13.6  +0.4
ARTR                                Sg       Sn       20 26 40.3  +0.8
DJO   Djoy, Khakassi     2.09 117 ⇓Pg        Pb       20 26 15.1  -1.1
DJO                                 Sg       Sb       20 26 42.9  +0.2
CERR  Cheremushki        2.16 114   Pg       Pb       20 26 17.2  -0.2
CERR                                Sg       Sg       20 26 47.4  +0.6
BALAH Balakhonka, Ku     2.22 327   Pg       Pb       20 26 17.4  -1.0
BALAH                               Sg       Sg       20 26 50.2  +1.5
ELDR  Elanda             2.86 207   Pg       Pb       20 26 26.9  -2.4
ELDR                                Sg       Sb       20 27 05.4  +0.6
TEL   Teeli              3.03 155   Pg       Pn       20 26 28.7  +2.0
TEL                                 Sg       Sb       20 27 07.4  -2.4
NVSII Novosibirsk        3.07 292   Pg       Pb       20 26 32.3  -0.7
NVSII                               Sg       Sb       20 27 09.6  -1.4
NVS   Novosibirsk        3.08 292   Pg       Pb       20 26 32.3  -0.7
NVS                                 Sg       Sb       20 27 09.6  -1.4
ULGR  Ulagan, Altay      3.16 182   Pg       Pb       20 26 33.8  -0.7
ULGR                                Sg       Sb       20 27 14.7  +1.1
ARDR  Aradan             3.39 109   Pg       Pb       20 26 38.4   0.0
ARDR                                Sg       Sb       20 27 23.0  +2.9
AKAR  Aktash             3.48 186   Pg       Pb       20 26 39.2  -0.7
AKAR                                Sg       Sg       20 27 26.6  -2.5
CHBI  Chibit, Altay      3.49 187   Pg       Pb       20 26 39.5  -0.7
CHBI                                Sg       Sb       20 27 24.4  +1.2
CUR   Chagan-Uzun        3.68 178   Pg       Pb       20 26 43.4   0.0
CUR                                 Sg       Sb       20 27 31.8  +3.1
MINR  Mina               3.71  70   Pg       Pb       20 26 43.6  -0.2
MINR                                Sg       Sg       20 27 32.7  -3.9
DGZ   Jazzator, Alta     4.11 187   Pg       Pb       20 26 50.7  +0.1
DGZ                                 Sg       Sb       20 27 44.3  +3.5
GZLN  Zheleznogorsk      4.15  49   Pg       Pg       20 26 54.6  -2.3
GZLN                                Sg       Sg       20 27 48.9  -1.7
KURK  Kurchatov          6.61 246 ⇑Pn        Pn       20 27 16.5  +0.7
      5.1nm,0.7s
KURK                              ⇓Sn        Sn       20 28 31.7   0.0
      3.0nm,0.8s
KURK                              ⇑Lg        Lg       20 29 00.5
      10nm,1.0s
KURBB Kurchatov Arra     6.71 246   Pn       Pn       20 27 18.6  +1.5
      0.5nm,0.3s,baz=61,slow=14,SNR=70
KURBB                               Sn       Sn       20 28 32.7  -1.5
      0.1nm,0.3s,baz=61,slow=28,SNR=4.3
KURBB                               Lg       Lg       20 29 07.1
      0.1nm,0.3s,baz=62,slow=35,SNR=5.0
      18nm,0.6s
KURBB Kurchatov Arra     6.71 246 ⇓Pn        Pn       20 27 17.8  +0.6
      21nm,0.6s
KURBB                             ⇓Sn        Sn       20 28 31.7  -2.4
      18nm,0.7s
KURBB                             ⇑Lg        Lg       20 29 04.4
      20nm,0.8s
MK31  Makanchi Array     7.93 211 ⇑Pn        Pn       20 27 34.9  +0.9
      2.6nm,0.6s,baz=32,slow=12,SNR=27
MK31                              ⇓Sn        Sn       20 28 59.1  -5.2
      2.3nm,0.7s,baz=34,slow=26,SNR=3.9
MK31                              ⇑Lg        Lg       20 29 44.3
      11nm,0.8s,baz=35,slow=31,SNR=5.7
MKAR  Makanchi Array     7.93 211   Pn       Pn       20 27 35.6  +1.6
      0.8nm,0.3s,baz=32,slow=13,SNR=32
MKAR                                Sn       Sn       20 28 59.6  -4.8
      0.4nm,0.3s,baz=32,slow=30,SNR=5.8
MKAR                                Lg       Lg       20 29 47.2
      0.3nm,0.3s,baz=30,slow=32,SNR=7.7
      4.9nm,0.6s
BVAR  Borovoye Array    10.64 273   Pn       Pn       20 28 12.9  +1.9
      0.1nm,0.3s,baz=76,slow=14,SNR=12
BVAR                                Sn       Sn       20 30 05.0  -5.7
      0.1nm,0.3s,baz=75,slow=23,SNR=6.1
      3.0nm,0.5s
SONM  Songino Array     12.96 110   Pn       Pn       20 28 45.4  +2.5
      0.4nm,0.6s,baz=305,slow=13,SNR=3.5
SONM                                Lg       Lg       20 32 29.2
      0.1nm,0.3s,baz=311,slow=27,SNR=5.4
CMAR  Chiang Mai Arr    36.23 163   P        P        20 32 42.6  +0.6
      0.2nm,0.4s,baz=345,slow=7.2,SNR=1.5
      0.2nm,0.4s
ILAR  Eielson Array     54.45  26   P        P        20 35 07.1  +1.1
      0.5nm,0.9s,baz=327,slow=7.0,SNR=4.6
      0.5nm,0.9s
ESDC  Sonseca Array     60.34 297   P        P        20 35 48.7  +0.7
      1.1nm,0.8s,baz=43,slow=8.5,SNR=5.6
      1.1nm,0.8s
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IDC 16 20:32:55.5±8.4, 20°.27S×173°.82W, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=363.6km s-min=38.9km az=143.0, Tonga Islands

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Code  Station Name        Δ°   AZ°    Phase ID            Time      Res
                                   Op        ISC       h  m  s     ISC
ASAR  Alice Springs     48.38 256  P         P        20 41 38.8  -0.9
      0.3nm,0.6s,baz=103,slow=7.7,SNR=4.2
      0.3nm,0.6s
WRA   Warramunga Arr    48.51 261  P         P        20 41 41.1  +0.5
      0.3nm,0.8s,baz=97,slow=8.2,SNR=8.6
      0.3nm,0.8s
ILAR  Eielson Array     87.28  11  P         P        20 45 43.5  -0.1
      0.6nm,1.0s,baz=218,slow=6.9,SNR=3.3
      0.6nm,1.0s
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*NEIC **16** 21:04:05.5±1.6, 23°.46N±0°.08×142°.6E±0°.1, h111km±6km, mb4.5/34, Error ellipse: s-maj=19.3km s-min=11.4km az=82.0*

*IDC **16** 21:04:07.0±0.6, 23°.46N×142°.40E, h127km±5km, mb3.8/17, mbtmp4.2/18, Error ellipse: s-maj=15.8km s-min=11.3km az=83.0*

*JMA **16** 21:04:07.5±0.2, 23°.7N±0°.9×14°2E±°, h150km±3km, MV4.8/24, IOTO ISLANDS REGION*

ISC 16 21:04:05.1±0.6, 23°.47N±0°.06×142°.59E±0°.10, h114km±5km, n93, σ1s.25/102, mb4.4/35, Volcano Islands region

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Code  Station Name        Δ°   AZ°    Phase ID            Time      Res
                                   Op        ISC       h  m  s     ISC
JHH2  Haha-jima-NKT2     3.17 353  P         Pn       21 04 54.6  +1.2
JHH2                               S         Sn       21 05 30.4  -0.3
JHH2  Haha-jima-NKT2     3.17 353  A         A        21 04 54.6
      comp=N,4.0nm,1.3s,comp=E,8.0nm,0.4s
CBIJ  Chichi jima        3.63 354  P         Pn       21 05 00.6  +1.0
CBIJ                              eS         Sn       21 05 40.2  -1.4
JCJ   Chichijima         3.63 354  P         Pn       21 04 50.1  -9.4
      comp=E,272nm,0.4s,baz=290,slow=23,SNR=116
JCJ                                S         Sn       21 05 29.5   -12
      comp=E,369nm,0.4s,baz=251,slow=22,SNR=15
JCJ   Chichijima         3.63 354            Pn       21 05 00.1  +0.6
JCJ                                Sn        Sn       21 05 40.2  -1.5
JHJ2  Mitsune            9.91 346  Pn        Pn       21 06 24.3  -0.1
JHJ2  Mitsune            9.91 346 eP         Pn       21 06 24.6  +0.2
JMKN  Mikurajimanish    10.71 346 eP         Pn       21 06 33.9  -1.3
BSO1  Boso 1            11.23 353 eP         Pn       21 06 40.2  -1.5
BSO3  Boso 3            11.44 351 eP         Pn       21 06 42.6  -2.1
JIE   Ise               12.03 336 eP         Pn       21 06 52.9   0.0
JKN2  Miekihoku         12.07 334 eP         Pn       21 06 52.6  -0.7
JOD2  Odawara 2         12.14 346  P         Pn       21 06 51.9  -2.3
JMN   Monobe            12.76 325  Pn        Pn       21 07 03.5  +1.1
INU   Inuyama           12.79 339  Pn        Pn       21 07 01.2  -1.5
JGF   Kuroka            12.91 341  Pn        Pn       21 07 02.2  -2.2
MJAR  Matsushiro Arr    13.56 345  P         Pn       21 07 09.2  -3.6
      comp=E,4.7nm,0.5s,baz=158,slow=12,SNR=23
MJAR  Matsushiro Arr    13.56 345  Pn        Pn       21 07 08.4  -4.4
MAJO  Matsushiro        13.57 345  Pn        Pn       21 07 09.1  -3.8
MJB9  Matsu-Tunnel      13.57 345  Pn        Pn       21 07 10.3  -2.6
JSD   Sado              14.98 347  Pn        Pn       21 07 25.9  -5.0
KSRS  Korea Array       18.78 321  P         P        21 08 15.8  +0.4
      comp=E,10.0nm,0.7s,baz=134,slow=12,SNR=26
KS19  Wonju Array Si    18.85 321            Pn       21 08 18.6  +0.7
KS19                               IAmb      IAmb     21 08 32.2
      comp=Z,39nm,1.4s
ASAJ  Asahikawa         20.59   0  P         Pn       21 08 38.6  +0.3
      comp=Z,9.3nm,0.7s,baz=209,slow=13,SNR=6.6
JKA   Kamikawa-asahi    20.59   0  P         P        21 08 36.9  +2.0
JKA                                IAmb      IAmb     21 08 38.5
      comp=Z,48nm,1.3s
USRK  Ussuriysk Ar.     22.43 340  P         P        21 08 52.9  -1.6
      comp=Z,1.5nm,0.6s,baz=144,slow=11,SNR=6.6
      comp=Z,1.5nm,0.6s
NJ2   Nanjing           22.64 297 eP         P        21 08 57.4  +0.8
NJ2                                pmax      pmax
      comp=Z,7.0nm,0.5s
H11N1 WAKE ISLAND Hy    22.90  95  T         T        21 33 08.1
      baz=283,slow=75,SNR=9.0
H11N2 WAKE ISLAND Hy    22.90  95  T         T        21 33 05.2
      baz=283,slow=75,SNR=14
H11N3 WAKE ISLAND Hy    22.91  95  T         T        21 33 07.5
      baz=283,slow=75,SNR=49
HHC   Hu-ho-hao-te      31.24 311 eP         P        21 10 16.9  +2.9
HHC                                pmax      pmax
      comp=Z,3.0nm,0.8s
PZH   PanZhiHua         37.04 283  P         P        21 11 04.6  +0.3
PZH                                pmax      pmax
      comp=Z,10.0nm,0.7s
SONM  Songino Array     37.63 319  PcP       PcP      21 13 24.3   0.0
      comp=Z,0.3nm,0.5s,baz=90,slow=1.5,SNR=3.8
SONM  Songino Array     37.63 319  P         P        21 11 09.2  +0.1
SONM                                         PcP      21 13 24.7  +0.4
MTN   Manton Dam        37.79 198  P         P        21 11 09.7  -0.7
CHTO  Chiang Mai        40.85 272  P         P        21 11 35.5  -0.6
CM31  Chiang Mai Arr    40.94 271  P         P        21 11 36.6  -0.1
CM31                               IAmb      IAmb     21 11 37.9
      comp=Z,3.5nm,0.6s
CMAR  Chiang Mai Arr    40.94 271  P         P        21 11 36.9  +0.1
      comp=Z,1.9nm,0.6s,baz=62,slow=7.8,SNR=18
      comp=Z,1.9nm,0.6s
CMAR  Chiang Mai Arr    40.94 271  P         P        21 11 36.7  -0.1
KNRA  Kununurra         41.19 200  P         P        21 11 39.0  +0.3
WB0   Warramunga Arr    43.71 191  P         P        21 11 58.6  -0.5
WB0                                IAmb      IAmb     21 12 00.3
      comp=Z,7.8nm,1.1s
WR8   Warramunga Arr    43.88 191  P         P        21 12 00.2  -0.2
WR8                                IAmb      IAmb     21 12 01.2
      comp=Z,10nm,1.1s
WRAB  Tennant Creek     43.88 191  P         P        21 12 00.0  -0.4
WRAB                               IAmb      IAmb     21 12 01.2
      comp=Z,13nm,1.1s
WRA   Warramunga Arr    43.89 191  P         P        21 12 00.2  -0.3
      comp=Z,7.2nm,0.8s,baz=9.2,slow=8.4,SNR=34
WRA                                pP        pwP      21 12 29.2  -0.5
      comp=Z,1.6nm,0.9s,baz=19,slow=8.7,SNR=1.1
      comp=Z,7.2nm,0.8s
WRA   Warramunga Arr    43.89 191  P         P        21 11 59.8  -0.7
FITZ  Fitzroy Crossi    44.51 203  P         P        21 12 05.2  -0.2
SHL   Shillong          45.95 283  P         P        21 12 16.6  -0.5
SHL                                IAmb      IAmb     21 12 17.4
      comp=Z,9.4nm,0.6s
AS31  Alice Springs     47.61 191  P         P        21 12 29.6  -0.1
ASAR  Alice Springs     47.61 191  P         P        21 12 29.7   0.0
      comp=Z,1.6nm,0.6s,baz=18,slow=12,SNR=45
      comp=Z,1.6nm,0.6s
ASAR  Alice Springs     47.61 191  P         P        21 12 29.0  -0.7
WMQ   Urumqi            49.04 308 eP         P        21 12 39.0  -1.6
WMQ                                S         S        21 19 37.8  +1.0
WMQ                                pmax      pmax
      comp=Z,13nm,0.9s
ZALV  Zalesovo Beam     52.49 321  P         P        21 13 05.5  -0.7
      comp=Z,1.7nm,1.0s,baz=73,slow=4.3,SNR=4.0
ZALV                               PcP       PcP      21 14 14.5  -0.8
      comp=Z,0.8nm,0.5s,baz=117,slow=5.6,SNR=4.7
      comp=Z,1.7nm,1.0s
ZALV  Zalesovo Beam     52.49 321  P         P        21 13 05.8  -0.4
ZALV                               PcP       PcP      21 14 14.2  -1.1
MKAR  Makanchi Array    53.10 312  P         P        21 13 10.6  -0.4
      comp=Z,0.9nm,0.7s,baz=85,slow=9.3,SNR=11
MKAR                               PcP       PcP      21 14 16.0  -1.8
      comp=Z,0.6nm,0.7s,baz=89,slow=5.9,SNR=2.4
      comp=Z,0.9nm,0.7s
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MKAR	**Makanchi Array**	53.10	312	P	P	21 13 10.1	-0.9
MKAR				PcP	PcP	21 14 17.0	-0.7
MAKZ	**Makanchi**	53.32	312	P	P	21 13 12.0	-0.5
STKA	**Stephens Creek**	55.04	181	P	P	21 13 24.8	-0.2
	comp=Z,4.1nm,0.6s,baz=344,slow=8.5,SNR=11						
	comp=Z,4.1nm,0.6s						
STKA	**Stephens Creek**	55.04	181	P	P	21 13 25.0	0.0
FORT	**Forrest**	55.71	195	P	P	21 13 29.0	-0.8
FORT				IAmb	IAmb	21 13 30.6	
	comp=Z,5.9nm,0.7s						
KURK	**Kurchatov**	55.81	316	P	P	21 13 29.9	-0.5
KURBB	**Kurchatov Arra**	55.86	316	P	P	21 13 30.4	-0.3
	comp=Z,3.6nm,0.7s,baz=94,slow=7.8,SNR=16						
	comp=Z,3.6nm,0.7s						
BBOO	**Buckleboo**	56.31	187	P	P	21 13 33.6	-0.4
BBOO				IAmb	IAmb	21 13 57.3	
	comp=Z,13nm,1.3s						
D19K	**Kuna River**	57.25	22	P	P	21 13 41.3	+0.9
D19K				IAmb	IAmb	21 13 43.6	
	comp=Z,9.4nm,1.4s						
BOOM	**Boomskoye usch**	57.60	306	P	P	21 13 43.5	0.0
BOOM				IAmb	IAmb	21 13 56.1	
	comp=Z,8.1nm,1.0s						
KSH	**Kashi**	57.80	303	P	P	21 13 47.8	+3.0
KSH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
D22K	**Ayikyak River**	59.26	22	P	P	21 13 56.9	+2.6
ILAR	**Eielson Array**	60.73	28	P	P	21 14 05.2	+0.8
	comp=Z,0.9nm,0.8s,baz=272,slow=5.2,SNR=9.0						
ILAR				pP	pwP	21 14 35.6	-0.4
	comp=Z,1.8nm,0.9s,baz=253,slow=6.2,SNR=8.1						
	comp=Z,0.9nm,0.8s						
ILAR	**Eielson Array**	60.73	28	P	P	21 14 04.4	0.0
BVAR	**Borovoye Array**	60.97	319	P	P	21 14 06.6	+0.4
	comp=Z,4.3nm,0.6s,baz=91,slow=7.7,SNR=34						
	comp=Z,4.3nm,0.6s						
BORK	**Borovoye**	61.02	319	P	P	21 14 06.1	-0.4
BORK				IAmb	IAmb	21 14 07.7	
	comp=Z,5.2nm,0.8s						
MANEM	**Manem**	61.38	301	P	P	21 14 10.9	+1.3
MANEM				IAmb	IAmb	21 14 11.7	
	comp=Z,6.8nm,0.7s						
KK31	**Karatay Array**	61.53	308	P	P	21 14 10.7	+0.5
KK31				IAmb	IAmb	21 14 11.8	
	comp=Z,4.2nm,0.8s						
KKAR	**Karatay Array**	61.53	308	P	P	21 14 10.6	+0.4
CHGR	**Chuyangaron**	63.16	303	P	P	21 14 21.6	+0.4
SHAA	**Shahritus**	64.16	302	P	P	21 14 28.3	+0.5
SHAA				IAmb	IAmb	21 14 29.6	
	comp=Z,9.0nm,0.7s						
ARTI	**Arti**	67.62	323	P	P	21 14 49.7	+0.2
ARTI				IAmb	IAmb	21 14 50.0	
	comp=Z,3.1nm,0.5s						
AB31	**Akbulak array**	67.90	315	P	P	21 14 50.9	-0.5
ABKAR	**Akbulak array**	67.90	315	P	P	21 14 50.8	-0.6
YKA	**Yellowknife Ar**	75.15	28	P	P	21 15 35.9	+1.3
	comp=Z,0.9nm,0.8s,baz=295,slow=6.2,SNR=9.4						
YKA				pP	pwP	21 16 06.9	-0.2
	comp=Z,0.3nm,0.5s,baz=13,slow=6.5,SNR=3.9						
	comp=Z,0.9nm,0.8s						
ARCES	**ARCESS Array B**	77.07	341	P	P	21 15 45.4	0.0
	comp=Z,2.1nm,0.9s,baz=61,slow=5.9,SNR=1.2						
	comp=Z,2.1nm,0.9s						
NEW	**Newport**	79.34	42	P	P	21 15 59.5	+1.1
	comp=Z,2.0nm,0.7s,baz=255,slow=12,SNR=4.0						
NEW				pP	pwP	21 16 32.3	+1.0
	comp=Z,3.4nm,0.9s,baz=335,slow=3.0,SNR=3.9						
	comp=Z,2.0nm,0.7s						
NEW	**Newport**	79.34	42	P	P	21 15 58.6	+0.3
NEW				IAmb	IAmb	21 16 33.8	
	comp=Z,4.5nm,1.0s						
KBZ	**Khabaz**	80.75	314	P	P	21 16 06.1	+0.2
	comp=Z,8.6nm,0.8s,baz=82,slow=3.8,SNR=22						
	comp=Z,8.6nm,0.8s						
FIA1	**FINESS Array S**	81.35	334	P	P	21 16 08.9	+0.2
FINES	**FINESS Array B**	81.35	334	P	P	21 16 08.4	-0.4
	comp=Z,0.7nm,0.5s,baz=44,slow=6.3,SNR=8.6						
FINES				pP	pwP	21 16 41.5	+0.6
	comp=Z,2.4nm,0.8s,baz=88,slow=4.6,SNR=2.2						
	comp=Z,0.7nm,0.5s						
FINES	**FINESS Array B**	81.35	334	P	P	21 16 07.3	-1.4
NVAR	**Mina Array Bea**	82.48	51	P	P	21 16 16.7	+1.2
	comp=Z,1.0nm,0.8s,baz=260,slow=5.8,SNR=5.1						
NVAR				pP	pwP	21 16 49.2	+0.4
	comp=Z,0.5nm,0.6s,baz=254,slow=5.5,SNR=3.1						
	comp=Z,1.0nm,0.8s						
RAYN	**Ar Rayn**	86.95	294	P	P	21 16 37.0	-1.0
RAYN				IAmb	IAmb	21 16 39.4	
	comp=Z,3.1nm,0.7s						
BRTR	**Keskin Array B**	88.73	313	P	P	21 16 45.1	-1.2
	comp=Z,0.9nm,0.8s,baz=65,slow=5.0,SNR=5.6						
BRTR				pP	pwP	21 17 18.4	-0.5
	comp=Z,0.9nm,0.8s,baz=147,slow=2.5,SNR=4.1						
	comp=Z,0.9nm,0.8s						
BRTR	**Keskin Array B**	88.73	313	P	P	21 16 44.8	-1.5
PLCA	**Paso Flores**	147.32	130	PKPbc	PKPbc	21 23 36.0	+0.3
	comp=Z,1.5nm,0.8s,baz=235,slow=7.5,SNR=4.5						
PLCA	**Paso Flores**	147.32	130		PKPdf	21 23 31.6	-1.5
LPAZ	**La Paz**	150.29	82	PKPbc	PKPbc	21 23 45.8	+1.3
	comp=Z,2.7nm,0.6s,baz=262,slow=3.7,SNR=9.5						

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*TIR **16** 21:08:17.0, 41.°56N×19.°40E, h32^{km}±5^{km}, Md2.7/5, Ml2.3/5*
*BEO **16** 21:08:18.5±0.4, 41.°49N×19.°51E, h0^{km}, ML2.2/10*
*PDG **16** 21:08:18.2±0.3, 41.°55N×19.°45E, h4^{km}±1^{km}, ML2.5/11, Error ellipse: s-maj=1.2km s-min=1.7km az=0.0*

ISC 16 21:08:17.5±1.3**, 41.°52N**±0.°03×**19.°40E**±0.°03**, h0**^{km}±10^{km}**, n37, σ0.^{s}78**/60**, 3C, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	0.39	116	Pg	Pg	21 08 25.2	+0.3
TIR				Sg	Sg	21 08 29.4	-0.5
TIR				AML	AML	21 08 33.9	
	0.9nm,0.4s						
ULC	**Ulcinj**	0.46	345	*e*Pg	Pg	21 08 26.1	-0.2
ULC				*e*Sg	Sg	21 08 31.9	-0.3
SDA	**Shkodra**	0.54	8	Pg	Pg	21 08 27.7	0.0
SDA				Sg	Sg	21 08 34.9	+0.2
SDA				AMd		21 09 02.6	
DRME	**Dracevica, Mon**	0.69	346	*e*Pg	Pg	21 08 31.1	+0.5
DRME	**Dracevica, Mon**	0.69	346	*e*Pg	Pg	21 08 30.7	+0.1
DRME				*e*Sg	Sb	21 08 41.4	-0.9
PHP	**Peshkopia**	0.80	78	Pg	Pg	21 08 32.4	-0.3
PHP				Sg	Sb	21 08 43.6	-1.9
PHP				AML	AML	21 08 49.4	
	0.6nm,0.4s						
PHP				AMd		21 09 08.9	
BUM	**Brajici-Budva**	0.87	334	*e*Pg	Pg	21 08 34.0	-0.1
BUM				*e*Sg	Sb	21 08 48.1	+0.5
PDG	**Podgorica**	0.92	353	Pg	Pg	21 08 34.0	-1.0
PDG				Sg	Sg	21 08 46.6	-0.3
PDG				AMd		21 09 24.7	
PDG	**Podgorica**	0.92	353	*e*Pg	Pg	21 08 35.5	+0.5
PDG				*e*Sg	Sn	21 08 49.9	-1.5
PDG	**Podgorica**	0.92	353	⇑*i*Pg	Pg	21 08 35.3	+0.3
PDG				*e*Sg	Sb	21 08 49.1	+0.2
CEME	**Cevo**	1.09	341	*e*Pg	Pg	21 08 37.9	-0.4
CEME				*e*Sg	Sn	21 08 54.8	-1.0
OHR	**Ohrid**	1.13	111	*i* Pg	Pn	21 08 40.4	-0.1
OHR				*i* Sg	Sn	21 08 58.3	+1.6
HCY	**Herceg Novi**	1.15	324	*e*Pg	Pg	21 08 39.3	-0.1
HCY				*i* Sg	Sn	21 08 57.3	+0.2
NKME	**Niksic**	1.29	345	⇑*i*Pg	Pn	21 08 42.9	+0.1
NKME				*e*Sg	Sn	21 09 01.2	+0.5
KOME	**Kolasin**	1.33	4	*e*Pg	Pb	21 08 44.1	+0.7
KOME	**Kolasin**	1.33	4	*e*Pg	Pg	21 08 42.1	-0.9
KOME				*e*Sg	Sn	21 09 01.6	-0.2
BEY	**Berane**	1.40	15	*e*Pg	Pn	21 08 43.8	-0.5
IVA	**Berane**	1.40	15	*e*Pg	Pn	21 08 43.2	-1.1
IVA				*i* Sg	Sn	21 09 04.9	+1.4
TREB	**Trebinje**	1.43	327	*e*Pg	Pn	21 08 44.7	+0.1
TREB				*e*Sg	Sg	21 09 05.1	+1.7
BRY	**Bratogost**	1.52	335	⇑*i*Pg	Pn	21 08 46.2	+0.2
BRY				*e*Sg	Sg	21 09 07.8	+1.4
SJES	**Sjenica**	1.79	14	*e*Pg	Pb	21 08 50.9	-0.3
SJES				*e*Sg	Sg	21 09 16.3	+1.3
PLE	**Pljevlja**	1.81	360	*e*Pg	Pg	21 08 52.2	+0.1
PLE	**Pljevlja**	1.81	360	*e*Pn	Pb	21 08 50.9	-0.6
PLE				*i* Sn	Sg	21 09 16.1	+0.5
STON	**Ston**	1.85	317	*e*Pn	Pb	21 08 52.1	0.0
STON				*e*Sn	Sg	21 09 17.0	+0.1
NOCI	**Noci**	1.91	248	Pn	Pn	21 08 50.2	-1.0
NOCI				Sn	Sn	21 09 16.6	+0.6
NOCI				AML	AML	21 09 19.0	
	0.1nm,0.3s						
NOCI				AMd		21 09 58.0	
RUDO	**Rudo**	2.10	359	*e*Pn	Pb	21 08 55.5	-0.8
IGT	**Igoumenitsa**	2.11	160	Pn	Pn	21 08 54.4	+0.5
IGT				Sn	Sn	21 09 21.3	+0.4
IGT				AML	AML	21 09 27.3	
IGT				AMd		21 10 11.2	
IGT	**Igoumenitsa**	2.11	160	*e*Pn	Pn	21 08 54.1	+0.1
SELS	**Selova**	2.12	36	*e*Pg	Pn	21 08 54.7	+0.5
SELS				*e*Sg	Sb	21 09 23.5	-0.2
IVAS	**Ivanjica**	2.13	15	*e*Pn	Pb	21 08 56.0	-0.9
BARS	**Barje**	2.21	53	*e*Pn	Pn	21 08 55.6	+0.2
BBLS	**Lazi&#263i**	2.34	0	*e*Pn	Pb	21 08 59.6	-1.0
BOSS	**Bosilegrad**	2.49	66	*e*Pn	Pn	21 09 00.4	+1.1
GRUS	**Gruza**	2.56	22	*e*Pn	Pn	21 09 00.4	+0.3
DIVS	**Divibare**	2.61	9	*e*Pn	Pn	21 09 01.7	+0.7
BOVS	**Bovan**	2.71	38	*e*Pn	Pn	21 09 02.3	0.0
TRUS	**Trudelj**	2.80	15	*e*Pn	Pn	21 09 04.8	+1.3

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*NEIC **16** 21:18:35.8±0.6, 45.°70N±0.°04×106.°66W±0.°04, h0^{km}±1^{km}, ML3.0/40, Error ellipse: s-maj=7.6km s-min=5.0km az=188.0*
*IDC **16** 21:18:37.2±1.7, 45.°72N×106.°66W, h0^{km}, mbtmp3.3/2, ML3.2/2, Error ellipse: s-maj=65.5km s-min=10.0km az=134.0*

ISC 16 21:18:35.9±1.1**, 45.°96N**±0.°05×**106.°63W**±0.°06**, h0**^{km}**, n50, σ0.^{s}87**/50**, Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAO	**LASA Array**	0.78	21	Pg	Pn	21 18 55.1	+0.8
LAO				IAML		21 19 30.2	
	352nm,1.6s						
RLMT	**Red Lodge**	2.03	247		Pn	21 19 11.5	-0.1
RLMT				IAML		21 19 38.3	
	101nm,0.5s						
YNE	**Yellowstone No**	2.56	249	Pn	Pn	21 19 18.9	0.0
YNE				IAML		21 20 00.2	
	comp=E,98nm,0.6s						
YNE				IAML		21 20 02.5	
	comp=N,93nm,0.6s						
YMP	**Mirror Lake Pl**	2.77	245	Pn	Pn	21 19 21.6	-0.2
EGMT	**Eagleton**	2.97	315	Pn	Pb	21 19 28.2	-1.5
DGMT	**Dagmar**	3.01	33	Pn	Pb	21 19 29.7	-0.8
YNR	**Norris Junctio**	3.11	248	Pn	Pn	21 19 27.7	+1.2
YNR				IAML		21 20 11.1	
	comp=E,46nm,0.5s						
YNR				IAML		21 20 22.7	
	comp=N,38nm,0.5s						
YHH	**Holmes Hill**	3.19	250	Pn	Pn	21 19 27.6	0.0
H17A	**Grant Village**	3.20	242	Pn	Pn	21 19 26.8	-0.8
K22A	**Casper**	3.31	179	Pn	Pn	21 19 26.7	-2.4
K22A				IAML		21 21 16.6	
	comp=N,60nm,0.1s						
K22A				IAML		21 21 17.2	
	comp=N,63nm,0.1s						
YMR	**Madison River**	3.32	249	Pn	Pn	21 19 28.1	-1.1
YMR				IAML		21 20 27.7	
	comp=N,58nm,1.1s						
YMR				IAML		21 20 35.6	
	comp=E,48nm,1.0s						
YHL	**Hebgen Lake**	3.39	253	Pn	Pn	21 19 29.6	-0.8
YHL				IAML		21 20 28.0	
	comp=N,38nm,0.6s						
YHL				IAML		21 20 30.9	
	comp=E,45nm,0.6s						
YPP	**Pitchstone Pla**	3.40	242	Pn	Pn	21 19 30.6	+0.1
YHB	**Horse Butte**	3.44	251	Pn	Pn	21 19 31.0	+0.1
YHB				IAML		21 20 25.2	
	comp=E,27nm,0.6s						
YHB				IAML		21 20 33.5	
	comp=N,30nm,0.9s						
BOZ	**Bozeman (W)**	3.51	266	Pn	Pn	21 19 32.0	+0.1
BOZ				IAML		21 20 34.0	
	comp=N,31nm,0.8s						
QLMT	**Earthquake Lak**	3.56	253	Pn	Pn	21 19 33.0	+0.4
MOOW	**Moose Ponds**	3.66	234	Pn	Pn	21 19 33.3	-0.7
LOHW	**Long Hollow**	3.67	232	Pn	Pn	21 19 33.8	-0.4
BW06	**Boulder Array**	3.82	214	Pn	Pn	21 19 35.5	-0.7
BW06				IAML		21 20 39.1	
	comp=N,28nm,0.7s						
BW06				IAML		21 20 39.9	
	comp=N,21nm,0.9s						
PD31	**Pinedale Array**	3.82	214	Pn	Pn	21 19 35.8	-0.4
PDAR	**Pinedale Array**	3.82	214	Pn	Pn	21 19 37.5	+1.3
	comp=N,1.4nm,0.3s,baz=34,slow=13,SNR=44						
PDAR				Pg	Pb	21 19 44.8	+0.5
	comp=N,2.4nm,0.3s,baz=38,slow=18,SNR=21						
PDAR				Lg	Lg	21 20 29.4	
	comp=N,2.5nm,0.3s,baz=41,slow=30,SNR=3.7						
	comp=N,1.6nm,0.3s						
PDAR	**Pinedale Array**	3.82	214	Pn	Pn	21 19 34.8	-1.4
LYMT	**Lyon Mountain**	4.04	287	Pn	Pn	21 19 38.5	-0.7
LRM	**Limekiln Ridge**	4.06	270	Pn	Pn	21 19 39.0	-0.6
DLMT	**Dillon**	4.22	264	Pn	Pn	21 19 41.4	-0.3
DLMT				IAML		21 22 16.5	
	comp=N,26nm,4.8s						
MCMT	**McKenzie Canyo**	4.52	258	Pn	Pn	21 19 45.9	+0.1
BPMT	**Black Pine Rid**	4.75	278	Pn	Pn	21 19 48.9	-0.1
MSO	**Missoula**	5.13	282	Pn	Pn	21 19 53.9	-0.2
JTMT	**Jette**	5.54	292	Pn	Pn	21 19 59.4	-0.3
HWUT	**Hardware Ranch**	5.63	221	Pn	Pn	21 20 01.5	+0.6
O20A	**White River Ci**	5.94	192	Pn	Pn	21 20 05.0	-0.3
TCUT	**Toone Canyon**	5.95	217	Pn	Pn	21 20 04.7	-0.9
BSUT	**Blindstream Ca**	6.20	211	Pn	Pn	21 20 07.8	-1.2
PLID	**Pearl Lake**	6.64	266	Pn	Pn	21 20 13.8	-1.1
P18A	**Preston Nutter**	6.86	204	Pn	Pn	21 20 18.3	+0.2
F10A	**Beach Ranch, E**	7.38	274	Pn	Pn	21 20 25.3	+0.3
SRU	**San Rafael Swe**	7.42	204	Pn	Pn	21 20 24.8	-0.8
PV22	**Blue Mesa, Par**	7.59	193	Pn	Pn	21 20 26.1	-1.9
PV21	**Cone Mtn., Par**	7.59	194	Pn	Pn	21 20 27.8	-0.3
PV23	**Carpenter Ridg**	7.71	194	Pn	Pn	21 20 28.7	-0.9
PV04	**Paradox Valley**	7.75	193	Pn	Pn	21 20 29.9	-0.2
PV12	**Saucer Basin,**	7.80	193	Pn	Pn	21 20 31.0	+0.1
PV20	**West Nyswonger**	7.81	194	Pn	Pn	21 20 30.3	-0.6
PV16	**Nyswonger Mesa**	7.83	193	Pn	Pn	21 20 31.3	+0.1
PV11	**David Mesa, Pa**	7.83	193	Pn	Pn	21 20 31.7	+0.5
PV03	**Paradox Valley**	7.87	193	Pn	Pn	21 20 31.1	-0.7
PV18	**Skein Mesa, Pa**	7.89	193	Pn	Pn	21 20 31.0	-1.1
PV01	**Paradox Valley**	7.95	191	Pn	Pn	21 20 32.5	-0.4
I10CA	**LAC DU BONNET**	8.27	55	I	I	22 14 37.9	
	baz=242,slow=244,SNR=5.4						
ULM	**Lac du Bonnet**	8.38	55	Pn	Pn	21 20 40.7	+2.2
	comp=N,0.6nm,0.3s,baz=244,slow=12,SNR=2.6						
ULM				Lg	Lg	21 22 57.5	
	comp=N,0.3nm,0.3s,baz=157,slow=22,SNR=3.4						
	comp=N,1.6nm,0.4s						

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*SDD **16** 21:23:08.6±1.5, 19.°30N×67.°14W, h31^{km}±64^{km}, MD3.3, ML3.5, MW3.3, Presumed earthquake*
*NEIC **16** 21:23:09.3±1.7, 19.°18N±0.°08×67.°24W±0.°04, h20^{km}±11^{km}, ML2.7/12, Md2.7/13(RSPR), Error ellipse: s-maj=11.5km s-min=5.1km az=176.0*
*RSPR **16** 21:23:09.4, 19.°28N×67.°27W, h10^{km}±31^{km}, MD2.7/13*
*OSPL **16** 21:23:09.3±0.5, 19.°22N×67.°28W, h14^{km}±4^{km}, ML2.5, Presumed earthquake*

ISC 16 21:23:09.6±1.6**, 19.°17N**±0.°06×**67.°24W**±0.°03**, h23**^{km}±14^{km}**, n50, σ0.^{s}94**/68**, 24C-2D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	0.71	170		Pb	21 23 23.1	-0.4
AGPR					Sn	21 23 34.4	-0.1
AGPR	**Aguadilla, PR**	0.71	170	⇑*e*P	Pb	21 23 23.1	-0.4
AGPR	**Aguadilla, PR**	0.71	170	*e*S	Sn	21 23 34.4	-0.1
AGPR	**Aguadilla, PR**	0.71	170	⇑*e*Pg	Pb	21 23 23.0	-0.4
AGPR				⇑*e*Sg	Sb	21 23 33.7	+0.9
AGPR				IAML		21 23 35.6	
	comp=N,4µm,0.3s						
AGPR	**Aguadilla, PR**	0.71	170	*i* P	Pb	21 23 23.0	-0.4
AGPR				*e*S	Sb	21 23 32.6	-0.2
AGPR				IAML		21 23 34.4	
	comp=Z,228nm,0.3s						
IDE	**Isla Desecheo**	0.81	196		Pb	21 23 25.0	-0.1
IDE					Sn	21 23 37.4	+0.4
IDE	**Isla Desecheo**	0.81	196	⇓*e*P	Pb	21 23 25.0	-0.1
IDE	**Isla Desecheo**	0.81	196	*e*S	Sn	21 23 37.4	+0.4
AOPR	**Arecibo Observ**	0.94	151		Pn	21 23 26.0	-1.5
AOPR					Sn	21 23 40.4	+0.1
AOPR				IAML		21 23 45.0	
	comp=N,322nm,2.8s						
AOPR	**Arecibo Observ**	0.94	151	⇑*e*P	Pn	21 23 26.1	-1.3
AOPR	**Arecibo Observ**	0.94	151	*e*S	Sn	21 23 40.5	+0.2
AOPR	**Arecibo Observ**	0.94	151	⇑*e*Pg	Pn	21 23 26.1	-1.5
AOPR				*i* Sg	Sn	21 23 40.2	-0.1
AOPR				IAML		21 23 46.1	
	comp=N,2µm,0.3s						
EMPR	**Esperanza - Ma**	0.96	136		Pb	21 23 27.9	+0.2
EMPR					Sn	21 23 44.3	+3.6
EMPR	**Esperanza - Ma**	0.96	136	⇓*e*P	Pb	21 23 27.9	+0.2
EMPR	**Esperanza - Ma**	0.96	136	*e*S	Sn	21 23 44.3	+3.6
LSP	**Las Mesas**	1.00	172		Pn	21 23 27.7	-0.6
LSP					Sn	21 23 42.7	+1.0
LSP	**Las Mesas**	1.00	172	⇑*e*P	Pn	21 23 27.7	-0.6
LSP	**Las Mesas**	1.00	172	*e*S	Sn	21 23 42.7	+1.0
UUPR	**Utuado, UPR, P**	1.04	152		Pn	21 23 28.0	-0.8
UUPR					Sn	21 23 43.2	+0.5
UUPR	**Utuado, UPR, P**	1.04	152	⇑*e*P	Pn	21 23 28.0	-0.8
UUPR	**Utuado, UPR, P**	1.04	152	*e*S	Sn	21 23 43.2	+0.5
CRPR	**Cabo Rojo, PR**	1.17	174		Pn	21 23 29.5	-1.0
CRPR					Sn	21 23 45.3	-0.4
CRPR				IAML		21 23 48.0	
	comp=E,131nm,0.3s						
CRPR				IAML		21 23 55.9	
	comp=N,132nm,0.7s						
CRPR	**Cabo Rojo, PR**	1.17	174	⇑*e*P	Pn	21 23 29.9	-0.6
CRPR	**Cabo Rojo, PR**	1.17	174	*e*S	Sn	21 23 45.9	+0.1
CRPR	**Cabo Rojo, PR**	1.17	174	⇑*e*Pg	Pn	21 23 29.9	-0.6
CRPR				⇑*e*Sg	Sn	21 23 45.7	-0.1
CRPR				IAML		21 23 56.1	
	comp=N,746nm,0.3s						
CRPR	**Cabo Rojo, PR**	1.17	174	*i* P	Pn	21 23 29.9	-0.6
CRPR				*e*S	Sn	21 23 45.7	-0.1
CRPR				IAML		21 23 48.2	
	comp=Z,98nm,0.2s						
ECPR	**Experimental S**	1.19	136	⇑*e*P	Pn	21 23 30.2	-0.6
ECPR	**Experimental S**	1.19	136	*e*S	Sn	21 23 46.1	-0.2
MLPR	**Magueyes Islan**	1.21	171	⇑*e*P	Pn	21 23 30.6	-0.6
MLPR	**Magueyes Islan**	1.21	171	*e*S	Sn	21 23 47.1	+0.3
MLPR	**Magueyes Islan**	1.21	171	⇑*e*Pg	Pn	21 23 30.2	-0.9
MLPR				IAML		21 23 49.5	
	comp=N,734nm,0.3s						
GBPR	**Guanica, Bosqu**	1.24	164		Pn	21 23 31.6	0.0
GBPR					Sb	21 23 48.3	+0.3
GBPR	**Guanica, Bosqu**	1.24	164	⇑*e*P	Pn	21 23 31.6	0.0
GBPR	**Guanica, Bosqu**	1.24	164	*e*S	Sb	21 23 48.3	+0.3
PCDR	**Punta Cana, DR**	1.27	239	⇑*e*Pg	Pb	21 23 32.4	-0.4
PCDR				⇑*e*Sg	Sb	21 23 50.4	+1.7
PCDR				IAML		21 24 25.2	
	comp=N,226nm,1.7s						
OBIP	**Obispado Ponce**	1.27	152	Pn	Pn	21 23 30.6	-1.4
OBIP				Sn	Sn	21 23 48.7	+0.3
OBIP				IAML		21 23 51.1	
	comp=E,114nm,0.4s						
OBIP				IAML		21 23 54.0	
	comp=N,145nm,0.5s						
OBIP	**Obispado Ponce**	1.27	152	⇑*e*P	Pn	21 23 31.4	-0.6
OBIP	**Obispado Ponce**	1.27	152	*e*S	Sn	21 23 48.8	+0.3
GCPR	**Guaynabo City**	1.39	128	Pn	Pn	21 23 32.2	-1.4
GCPR				Sn	Sn	21 23 50.3	-1.0
GCPR	**Guaynabo City**	1.39	128	⇑*e*P	Pn	21 23 32.5	-1.1
GCPR	**Guaynabo City**	1.39	128	*e*S	Sn	21 23 51.3	0.0
SJG	**San Juan**	1.48	135	Pn	Pn	21 23 33.9	-0.9
SJG				IAML		21 24 04.1	
	comp=N,86nm,0.5s						
SJG	**San Juan**	1.48	135	⇑*e*P	Pn	21 23 35.1	+0.3
SJG	**San Juan**	1.48	135	*e*S	Sb	21 23 55.7	+1.0
SJG	**San Juan**	1.48	135	⇑*e*Pg	Pn	21 23 34.0	-0.8
SJG				⇑*e*Sg	Sn	21 23 52.8	-0.6
SJG				IAML		21 24 04.9	
	comp=N,37µm,0.3s						
SJG	**San Juan**	1.48	135	*i* P	Pn	21 23 34.6	-0.2
SJG				IAML		21 24 04.8	
	comp=Z,41nm,0.2s						
MIDR	**Miches**	1.72	264	⇑*e*Pg	Pb	21 23 39.5	-1.2
MIDR				⇑*e*Sg	Sb	21 24 01.3	-0.5
MIDR				IAML		21 24 14.3	
	comp=N,73nm,0.3s						
MIDR				IAML		21 24 28.1	
	comp=N,46nm,1.8s						
DR12	**Loma Pena Alta**	2.06	260	Pn	Pn	21 23 42.9	0.0
HATOM	**Hato Mayor del**	2.06	260	⇑*e*Pg	Pn	21 23 43.3	+0.4
HATOM				IAML		21 24 21.3	
	comp=N,197nm,0.3s						
SDDR	**Presa de Saban**	3.83	268	Pn	Pn	21 24 07.7	+0.4

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*IDC **16** 21:32:22.9±12.0, 36.°48N×136.°35E, h203^{km}±170^{km}, mb3.1/2, mbtmp3.6/2, MS2.8/1, Error ellipse: s-maj=425.3km s-min=28.8km az=79.0*
*JMA **16** 21:32:23.5±0.5, 37°N±1°×13°8E±°, h252^{km}±4^{km}, MV3.0/30, TOYAMA PREF*

ISC 16 21:32:24.6±1.0**, 36.°66N**±0.°08×**137.°60E**±0.°09**, h250**^{km}**, n15, σ1.^{s}12**/17**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAT	**Matsushiro**	0.50	103	P	Pn	21 32 56.6	-0.9
MJAR	**Matsushiro Arr**	0.50	103	P	Pn	21 32 57.1	-0.5
	116nm,0.8s,baz=268,slow=4.0,SNR=226						
JSZ	**Suzu**	0.81	347	*e*P	Pn	21 32 57.6	-0.9
JKG	**Kaga**	1.09	250	*e*P	Pn	21 32 59.3	-0.8
JRY	**Ryogami san**	1.23	121	P	Pn	21 33 00.7	-0.4
JRY				*e*S	S	21 33 28.9	-0.8
JYTA	**Yamagatataniai**	1.27	214	P	Pn	21 33 00.2	-1.1
JYN	**Shimob**	1.39	146	P	Pn	21 33 01.0	-1.2
JSD	**Sado**	1.47	21	P	Pn	21 33 02.2	-0.4
JSD				S	S	21 33 30.4	-2.3
JAG	**Ashikaga**	1.51	98	*i* P	Pn	21 33 01.9	-1.0
JOD2	**Odawara 2**	1.84	139	P	Pn	21 33 05.2	-0.6
JOD2				*e*S	S	21 33 37.1	-1.0
JWT	**Wachi**	2.25	233	*e*P	Pn	21 33 08.8	-0.6
JOTO	**OTAMA OYAMA**	2.36	67	P	Pn	21 33 10.7	+0.2
JHJ	**Hachijo jima 2**	3.96	152	LR	LR	21 35 09.6	
	comp=Z,116nm,20.8s,baz=98,slow=38						
WRA	**Warramunga Arr**	56.38	184	P	P	21 41 41.5	+1.4
	0.2nm,0.8s,baz=1.1,slow=7.4,SNR=5.6						
	0.2nm,0.8s						
FINES	**FINESS Array B**	67.69	331	P	P	21 42 55.8	+1.2
	1.4nm,0.8s,baz=58,slow=5.2,SNR=4.2						
	1.4nm,0.8s						

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*SOME **16** 21:37:37.9, 42.°53N×83.°92E, h10^{km}*
*NNC **16** 21:37:44.1±5.9, 41.°52N×83.°10E, h0^{km}, mb3.6, mpv3.5, Error ellipse: s-maj=42.3km s-min=29.5km az=152.0*

ISC 16 21:37:42.0±2.5**, 42.°2N**±0.°1×**83.°57E**±0.°09**, h15**^{km}**, n21, σ3.^{s}08**/30**, 6C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	2.67	299	Pg	Pb	21 38 29.7	+0.1
	7.3nm,0.2s						
KTMS				Lg	Lg	21 39 07.0	
	13nm,0.2s						
KTMS	**Ketmen**	2.67	299	*e*P	Pb	21 38 29.7	+0.1
	7.3nm,0.2s						
KTMS				*e*S	Sg	21 39 07.0	-0.8
	50nm,0.3s						
SHLS	**Shalkode**	3.17	289	Pg	Pn	21 38 33.9	+2.4
	13nm,0.1s						
SHLS				Lg	Lg	21 39 14.5	
	67nm,0.3s						
SHLS	**Shalkode**	3.17	289	*e*P	Pn	21 38 33.9	+2.4
	8.8nm,0.1s						
SHLS				*e*S	Sb	21 39 14.5	-2.2
	92nm,0.3s						
PDGK	**Podgornoye**	3.21	292	⇑Pn	Pb	21 38 37.7	-1.0
	3.4nm,0.4s						
PDGK				⇓Pg	Pg	21 38 49.9	+6.5
	9.2nm,0.6s						
PDGK				⇓Lg	Lg	21 39 31.0	
	28nm,0.5s						
UZB	**Uzynbulak**	3.48	287	*e*P	Pb	21 38 43.9	+0.4
	2.7nm,0.1s						
UZB				*e*S	Sg	21 39 31.3	-2.5
	48nm,0.4s						
KPKS	**Kokpek**	3.81	291	Pg	Pb	21 38 49.4	+0.5
	0.4nm,0.1s						
KPKS				Lg	Lg	21 39 40.9	
	15nm,0.4s						
KPKS	**Kokpek**	3.81	291	*e*P	Pb	21 38 49.4	+0.5
	0.1nm,0.1s						

KPKS				eS	Sg	21 39 40.9	-3.3
	41nm,0.2s						
SATY	Saty	3.90	284	Pg	Pg	21 38 53.8	-2.9
	4.8nm,0.1s						
SATY				Lg	Lg	21 39 48.9	
	18nm,0.1s						
KAPS	Kapalarasan	4.33	317	Pg	Pb	21 38 57.4	-0.5
	15nm,0.1s						
KAPS				Lg	Lg	21 39 55.3	
	22nm,0.2s						
ARXS	Arharly	4.65	297	eP	Pb	21 39 04.6	+1.3
	1.1nm,0.1s						
ARXS				eS	Sg	21 40 06.8	-4.5
	9.9nm,0.3s						
TDK	Taldyqorghan	4.68	308	eP	Pb	21 39 03.8	+0.1
	4.8nm,0.1s						
TDK				eS	Sb	21 40 05.9	+6.2
	16nm,0.3s						
MK31	Makanchi Array	4.68	349	Pn	Pb	21 39 03.4	-0.3
	0.1nm,0.1s,baz=168,slow=14,SNR=72						
MK31				Pg	Pg	21 39 20.4	+8.8
	3.6nm,0.5s,baz=179,slow=17,SNR=7.4						
MK31				⇓Sn	Sb	21 40 08.2	+8.4
	3.3nm,0.5s						
MK31				⇑Lg	Lg	21 40 36.9	
	4.8nm,0.5s,baz=165,slow=27,SNR=4.8						
KOTS	Kotyrbulak	4.87	284	eP	Pb	21 39 10.7	+3.7
	3.2nm,0.1s						
KOTS				eS	Sg	21 40 17.3	-0.9
	40nm,0.2s						
TNSS	Tian-Shan	4.96	282	eP	Pb	21 39 12.2	+3.5
	0.1nm,0.0s						
TNSS				eS	Sg	21 40 20.4	-0.7
	5.1nm,0.7s						
IZV	Izvestkoviy	5.20	282	eP	Pg	21 39 18.5	-3.0
	2.0nm,0.2s						
IZV				eS	Sg	21 40 30.5	+1.6
	21nm,0.6s						
ZSN	Zaisan	5.32	10	eP	Pn	21 39 09.7	+8.7
	0.4nm,0.2s						
ZSN				eS	Sb	21 40 15.6	-2.8
	5.1nm,0.3s						
MTBS	Maitube	5.34	282	eP	Pg	21 39 21.3	-3.0
	1.5nm,0.1s						
MTBS				eS	Sg	21 40 35.6	+2.1
	10nm,0.4s						
AAK	Ala-Archa	6.73	277	⇑Pg	Pg	21 39 46.2	-4.6
	0.3nm,0.5s						
AAK				⇓Lg	Lg	21 41 18.1	
	1.6nm,0.7s						
KURBB	Kurchatov Arra	9.11	339	⇓Sn	Sn	21 41 59.4	+24
	3.3nm,0.8s						
KURBB				⇑Lg	Lg	21 42 49.6	
	7.4nm,0.7s						
KURK	Kurchatov	9.17	340	⇑Sn	Sn	21 41 59.9	+23
	0.9nm,0.8s						
KURK				⇑Lg	Lg	21 42 50.9	
	1.8nm,0.8s						

OSPL ***16*** *21:50:48.7±1.0, 19.°13N×67.°73W, h0^{km}±7^{km}, ML4.0, Presumed earthquake*

IDC ***16*** *21:50:49.6±1.1, 19.°20N×67.°47W, h0^{km}, mb3.7/6, mbtmp3.8/7, ML3.0/1, Error ellipse: s-maj=32.0km s-min=21.0km az=41.0*

SDD ***16*** *21:50:49.3±1.9, 19.°16N×67.°61W, h12^{km}±92^{km}, MD3.7, ML4.1, MW3.9, Presumed earthquake*

NEIC ***16*** *21:50:50.3±1.2, 19.°03N±0.°02×67.°55W±0.°03, h10^{km}±1^{km}, mb4.3/8, ML4.0/28, Md3.8/10(RSPR), Error ellipse: s-maj=6.0km s-min=2.9km az=230.0*

RSPR ***16*** *21:50:51.0, 19.°01N×67.°80W, h10^{km}±31^{km}, MD3.8/10*

ISC 16 21:50:49.3±1.2, **19.°08N**±0.°04×**67.°65W**±0.°02, **h9**^{km}±8^{km}, **n101, σ1.^{s}83**/134, **mb3.8**/6, **23C-13D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.71	167		Pg	21 51 02.8	-0.3
IDE					Sg	21 51 12.4	0.0
IDE	Isla Desecheo	0.71	167	⇓eP	Pg	21 51 02.8	-0.3
IDE	Isla Desecheo	0.71	167	eS	Sg	21 51 12.4	0.0
AGPR	Aguadilla, PR	0.80	140	Pg	Pg	21 51 04.2	-0.4
AGPR				IAML		21 51 17.1	
	7µm,0.5s						
AGPR	Aguadilla, PR	0.80	140	⇓eP	Pb	21 51 04.9	-0.4
AGPR	Aguadilla, PR	0.80	140	eS	Sb	21 51 15.7	-0.5
AGPR	Aguadilla, PR	0.80	140	⇑ePg	Pb	21 51 04.8	-0.5
AGPR				⇑eSg	Sb	21 51 15.8	-0.4
AGPR				IAML		21 51 15.9	
	comp=N,6µm,0.3s						
AGPR	Aguadilla, PR	0.80	140	i P	Pb	21 51 04.7	-0.6
AGPR				eS	Sb	21 51 15.8	-0.4
AGPR				IAML		21 51 16.9	
	comp=Z,3µm,0.3s						
PCDR	Punta Cana, DR	0.90	231	⇑ePg	Pb	21 51 06.8	-0.2
PCDR				⇓eSg	Sg	21 51 18.6	+0.4
PCDR				IAML		21 51 19.0	
	comp=N,6µm,0.5s						
PRSN	Puerto Rico Se	0.98	151		Pn	21 51 08.7	-0.6
PRSN					Sg	21 51 21.6	+0.5
PRSN	Puerto Rico Se	0.98	151	Pg	Pb	21 51 07.3	-1.2
PRSN					Sb	21 51 18.3	-3.3
PRSN				IAML		21 51 28.2	
	comp=N,12µm,0.3s						
PRSN				IAML		21 51 32.7	
	comp=N,9µm,0.3s						
PRSN	Puerto Rico Se	0.98	151	⇑eP	Pn	21 51 08.7	-0.6
PRSN	Puerto Rico Se	0.98	151	eS	Sg	21 51 21.6	+0.5
LSP	Las Mesas	1.05	149		Pb	21 51 09.2	-0.5
LSP					Sb	21 51 23.0	-0.5
LSP	Las Mesas	1.05	149	⇑eP	Pb	21 51 09.2	-0.5
LSP	Las Mesas	1.05	149	eS	Sb	21 51 23.0	-0.5
AOPR	Arecibo Observ	1.12	131	Pg	Pb	21 51 09.7	-1.1
AOPR				Sg	Sb	21 51 22.9	-2.7
AOPR				IAML		21 51 29.8	
	comp=N,3µm,0.4s						
AOPR				IAML		21 51 34.7	
	comp=E,7µm,0.3s						
AOPR	Arecibo Observ	1.12	131	⇓eP	Pb	21 51 10.2	-0.7
AOPR	Arecibo Observ	1.12	131	eS	Sg	21 51 25.1	-0.4
AOPR	Arecibo Observ	1.12	131	⇑ePg	Pb	21 51 09.8	-1.1
AOPR				⇑eSg	Sb	21 51 24.1	-1.4
AOPR				IAML		21 51 31.4	
	comp=N,3µm,0.3s						
CRPR	Cabo Rojo, PR	1.19	154	Pg	Pn	21 51 11.1	-0.9
CRPR				IAML		21 51 30.8	
	comp=N,5µm,0.7s						
CRPR				IAML		21 51 32.2	
	comp=N,4µm,0.6s						
CRPR	Cabo Rojo, PR	1.19	154		Pb	21 51 11.8	-0.1
CRPR				Sg	Sb	21 51 27.3	-0.1
CRPR	Cabo Rojo, PR	1.19	154	⇑eP	Pn	21 51 10.8	-1.2
CRPR	Cabo Rojo, PR	1.19	154	eS	Sb	21 51 26.4	-1.0
CRPR	Cabo Rojo, PR	1.19	154	⇑ePg	Pg	21 51 12.9	+0.8
CRPR				eSg	Sg	21 51 28.9	+1.4
CRPR				IAML		21 51 32.0	
	comp=N,4µm,0.6s						
CRPR	Cabo Rojo, PR	1.19	154	i P	Pn	21 51 10.7	-1.3
CRPR				eS	Sg	21 51 28.6	+1.0
CRPR				IAML		21 51 29.9	
	comp=Z,4µm,0.5s						
UUPR	Utuado, UPR, P	1.21	133		Pn	21 51 11.4	-0.9
UUPR					Sb	21 51 27.0	-1.0
UUPR	Utuado, UPR, P	1.21	133	Pg	Pn	21 51 11.3	-1.0
UUPR				IAML		21 51 31.9	
	comp=Z,20µm,0.4s						
UUPR				IAML		21 51 32.5	
	comp=Z,20µm,0.3s						
UUPR	Utuado, UPR, P	1.21	133	⇓eP	Pn	21 51 11.4	-0.9
UUPR	Utuado, UPR, P	1.21	133	eS	Sb	21 51 27.0	-1.0
EMPR	Esperanza - Ma	1.22	119		Pg	21 51 12.4	-0.4
EMPR					Sg	21 51 29.1	+0.5
EMPR	Esperanza - Ma	1.22	119	Pg	Pb	21 51 11.6	-0.9
EMPR				IAML		21 51 33.5	
	comp=Z,2µm,0.6s						
EMPR				IAML		21 51 34.2	
	comp=Z,3µm,0.5s						
EMPR	Esperanza - Ma	1.22	119	⇓eP	Pg	21 51 12.4	-0.4
EMPR	Esperanza - Ma	1.22	119	eS	Sg	21 51 29.1	+0.5
MLPR	Magueyes Islan	1.25	153	⇑eP	Pn	21 51 11.7	-1.2
MLPR	Magueyes Islan	1.25	153	eS	Sb	21 51 28.1	-1.1
MLPR	Magueyes Islan	1.25	153	⇓ePg	Pn	21 51 11.6	-1.2
MLPR				⇑eSg	Sg	21 51 29.9	+0.4
MLPR				IAML		21 51 31.2	
	comp=N,754nm,0.6s						
GBPR	Guanica, Bosqu	1.32	146		Pn	21 51 13.4	-0.5
GBPR					Sb	21 51 30.1	-1.2
GBPR	Guanica, Bosqu	1.32	146	⇓eP	Pn	21 51 13.4	-0.5
GBPR	Guanica, Bosqu	1.32	146	eS	Sb	21 51 30.1	-1.2
MIDR	Miches	1.33	266	⇑ePg	Pb	21 51 14.4	0.0
MIDR				⇓eSg	Sg	21 51 32.6	+0.5
MIDR				IAML		21 51 36.6	
	comp=N,1µm,0.3s						
OBIP	Obispado Ponce	1.43	136		Pn	21 51 14.4	-1.0
OBIP					Sn	21 51 32.3	-2.1
OBIP				IAML		21 51 37.4	
	comp=N,2µm,0.6s						
OBIP	Obispado Ponce	1.43	136	⇑eP	Pn	21 51 14.7	-0.8
OBIP	Obispado Ponce	1.43	136	eS	Sn	21 51 33.4	-1.0
ECPR	Experimental S	1.44	122		Pn	21 51 14.4	-1.1
ECPR				IAML		21 51 35.2	
	comp=N,4µm,0.3s						
ECPR				IAML		21 51 37.3	
	comp=N,4µm,0.2s						
ECPR	Experimental S	1.44	122	⇓eP	Pb	21 51 15.2	-1.1
ECPR	Experimental S	1.44	122	eS	Sg	21 51 34.2	-1.3
SMDR	Samana, DR	1.47	278	⇑eP	Pg	21 51 17.6	+0.1
DR12	Loma Pena Alta	1.67	260	Pn	Pb	21 51 20.9	+0.7
HATOM	Hato Mayor del	1.67	260	⇑ePg	Pb	21 51 19.4	-0.7
HATOM				⇓eSg	Sg	21 51 44.1	+1.2
HATOM				IAML		21 51 44.4	
	comp=N,1µm,1.1s						
GCPR	Guaynabo City	1.67	117	Pn	Pn	21 51 17.5	-1.3
GCPR				Sn	Sn	21 51 38.0	-2.2
GCPR	Guaynabo City	1.67	117	⇓eP	Pb	21 51 18.9	-1.4
GCPR	Guaynabo City	1.67	117	eS	Sb	21 51 40.1	-1.2
SJG	San Juan	1.72	124	Pn	Pb	21 51 19.4	-1.7
	comp=N,39nm,0.3s,baz=302,slow=12,SNR=16						
SJG				Sn	Sn	21 51 39.7	-1.7
	comp=N,143nm,0.3s,baz=352,slow=8.7,SNR=12						
SJG	San Juan	1.72	124	Pn	Pn	21 51 18.4	-0.9
SJG				IAML		21 51 46.3	
	comp=N,1µm,0.6s						
SJG	San Juan	1.72	124	⇓eP	Pb	21 51 19.7	-1.4
SJG	San Juan	1.72	124	eS	Sb	21 51 41.8	-0.9
SJG	San Juan	1.72	124	⇑ePg	Pb	21 51 19.6	-1.5
SJG				⇑eSg	Sg	21 51 44.1	-0.5
SJG	San Juan	1.72	124	i P	Pb	21 51 19.4	-1.7
SJG				eS	Sb	21 51 41.8	-1.0
SJG				IAML		21 51 46.6	
	comp=Z,1µm,0.5s						
HUMP	Col San Antoni	1.95	118	Pn	Pn	21 51 22.1	-0.4
NADR	Nagua	2.10	278	⇑ePg	Pb	21 51 28.5	+0.9
NADR				IAML		21 52 04.0	
	comp=N,3µm,0.4s						
SDD	Santo Domingo	2.23	254	Pn	Pb	21 51 28.9	-1.0
SDD				IAML		21 52 07.2	
	comp=E,598nm,0.8s						
SDD				IAML		21 52 07.8	
	comp=N,560nm,0.9s						
SDD	Santo Domingo	2.23	254	⇑eSg	Sg	21 52 01.8	+0.7
SDD				IAML		21 52 07.6	
	comp=N,186nm,1.1s						
DR08	Loma La Naviza	2.25	267	⇑ePg	Pb	21 51 29.8	-0.3
DR08				eSg	Sg	21 52 00.9	-0.8
DR08				IAML		21 52 02.7	
	comp=N,13µm,0.2s						
BANI	BANI	2.66	255	Pn	Pn	21 51 34.6	+2.2
BANI	BANI	2.66	255	⇑ePg	Pb	21 51 37.2	+0.1
BANI				⇑eSg	Sg	21 52 13.7	-1.1
BANI				IAML		21 52 21.0	
	comp=N,740nm,0.5s						
SC01	Santiago de lo	2.93	277	Pn	Pn	21 51 38.1	+2.0
SDDR	Presa de Saban	3.44	269		Pn	21 51 46.6	+3.4
SDDR				IAML		21 52 47.3	
	comp=N,520nm,0.9s						
SDDR	Presa de Saban	3.44	269	eP	Pb	21 51 47.4	-3.2
SDDR				eS	Sb	21 52 34.4	+1.9
SDDR	Presa de Saban	3.44	269	⇑eSg	Sg	21 52 38.2	-1.9
SDDR				IAML		21 52 46.8	
	comp=N,412nm,0.6s						
GRTK	Grand Turk	4.07	307	eP	Pn	21 51 50.2	-1.4
GRTK				eS	Sn	21 52 38.7	-0.7
PAPH	Port-au-Prince	4.44	264	eP	Pn	21 51 55.2	-1.7
PAPH				eS	Sn	21 52 43.6	-5.1
MASC	Masc	6.30	281	eP	Pn	21 52 20.9	-1.5
MASC				eS	Sn	21 53 26.0	-8.4
QMBU	Quimbuelo	6.84	281	eP	Pn	21 52 27.9	-2.0
QMBU				eS	Sn	21 53 43.2	-4.7
NMDO	Nuevo Mundo	7.06	283	eP	Pn	21 52 30.9	-1.9
NMDO				eS	Sn	21 53 49.0	-4.2
GTBY	Guantanamo Bay	7.09	278	eP	Pn	21 52 32.2	-1.0
GTBY				eS	Sn	21 53 50.7	-3.3
CXM	Morne La Croix	7.52	123	Pn	Pn	21 52 36.9	-2.4
RCC	Rio Carpintero	7.64	278	eP	Pn	21 52 36.3	-4.5
RCC				eS	Sn	21 54 02.4	-5.2
BIM	Bigot	7.76	125	Pn	Pn	21 52 43.1	+0.6
PINC	Pinares de May	7.79	282	eP	Pn	21 52 39.3	-3.6
PINC				eS	Sn	21 54 06.3	-5.0
SDV	Santo Domingo	10.54	196	Pn	Pn	21 53 23.6	+2.8
	comp=N,1.0nm,0.3s,baz=26,slow=9.2,SNR=9.4						
	comp=N,6.2nm,0.5s						
SDV	Santo Domingo	10.54	196	Pn	Pn	21 53 21.6	+0.8
BBSR	BB Station	13.50	11	Pn	Pn	21 54 02.5	+1.6
RUSC	La Rusia	14.14	203	Pn	Pn	21 54 09.9	-0.5
ROSC	El Rosal	15.58	206	Pn	P	21 54 38.1	+4.1
	comp=N,2.1nm,0.3s,baz=356,slow=14,SNR=4.5						
ROSC	El Rosal	15.58	206	P	P	21 54 33.4	-0.6
ROSC				IAmb	IAmb	21 54 45.1	
	comp=Z,25nm,1.0s						
BOAV	Boa Vista	17.99	156		P	21 54 59.7	-0.6
FLOC	Florencia	19.08	205	P	Pn	21 55 13.5	+0.4
FLOC				IAmb	IAmb	21 55 18.1	
	comp=Z,30nm,1.4s						
JSC	Jenkinsville	19.39	324		Pn	21 55 15.4	-1.2
JSC				IAmb	IAmb	21 55 22.5	
	comp=Z,10nm,0.8s						
OTAV	Otavalo	21.52	211	P	P	21 55 39.8	+0.5
OTAV				IAmb	IAmb	21 55 54.4	
	comp=Z,8.6nm,0.9s						
SIUC	Southern Illin	26.43	319	P	P	21 56 27.4	+0.9
TXAR	Lajitas Array	34.28	294	P	P	21 57 40.6	+4.5
	comp=Z,0.4nm,0.6s,baz=127,slow=10.0,SNR=4.7						
	comp=Z,0.4nm,0.6s						
TXAR	Lajitas Array	34.28	294	P	P	21 57 37.5	+1.4
SDCO	Great Sand Dun	37.81	307	P	P	21 58 08.8	+2.3
YKA	Yellowknife Ar	54.02	335	P	P	22 00 14.2	+0.6
	comp=Z,0.6nm,0.8s,baz=122,slow=7.0,SNR=4.6						
	comp=Z,0.6nm,0.8s						
ESDC	Sonseca Array	57.98	55	P	P	22 00 44.4	+1.9
	comp=Z,1.2nm,0.8s,baz=264,slow=5.9,SNR=4.4						
	comp=Z,1.2nm,0.8s						
TORD	Torodi Ar. Bea	66.52	84	P	P	22 01 41.1	+1.0
	comp=Z,0.3nm,0.5s,baz=302,slow=6.6,SNR=1.7						
	comp=Z,0.3nm,0.5s						
ILAR	Eielson Array	68.33	333	P	P	22 01 51.1	+0.5
	comp=Z,0.4nm,0.8s,baz=90,slow=5.3,SNR=5.1						
	comp=Z,0.4nm,0.8s						
ILAR	Eielson Array	68.33	333	P	P	22 01 51.6	+0.9
ARCES	ARCESS Array B	73.39	21	P	P	22 02 21.4	+0.1
	comp=Z,1.7nm,0.7s,baz=302,slow=5.2,SNR=6.8						
	comp=Z,1.7nm,0.7s						
ARCES	ARCESS Array B	73.39	21	P	P	22 02 23.3	+1.9

SDD ***16*** *22:03:32.0±4.0, 18.°75N×72.°10W, h29^{km}±47^{km}, MD2.9, ML2.4, MW2.9, Presumed earthquake*

OSPL ***16*** *22:03:36.0±1.0, 18.°81N×71.°72W, h28^{km}±5^{km}, ML2.1, Presumed earthquake*

ISC 16 22:03:33.6±1.7, **18.°81N**±0.°07×**71.°82W**±0.°06, **h11**^{km}±10^{km}, **n8, σ0.^{s}83**/16, **6C, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIDR	Jimani	0.32	186	⇑ePg	Pg	22 03 40.9	+0.9
JIDR				⇑eSg	Sg	22 03 43.7	-0.5
JIDR				IAML		22 03 44.6	
	comp=N,1µm,0.2s						
LONE3	El Aguacate, B	0.40	121	i P	Pb	22 03 43.1	+0.4
LONE3				eS	Sb	22 03 48.6	-0.2
LONE3				IAML		22 03 49.2	
	comp=Z,75nm,0.1s						
SDDR	Presa de Saban	0.53	71	⇑ePg	Pg	22 03 43.3	-0.6
SDDR				⇑eSg	Sn	22 03 58.2	+2.0
SDDR				IAML		22 04 03.4	
	comp=N,28nm,1.9s						
PAPH	Port-au-Prince	0.54	238	i P	Pn	22 03 47.3	0.0
PAPH				eS	Sn	22 03 56.2	-0.2
LODU1	El Espartillar	0.56	144	i P	Pg	22 03 45.0	+0.6
LODU1				eS	Sb	22 03 52.6	-0.8
LODU1				IAML		22 03 53.0	
	comp=Z,142nm,1.8s						
PODR	Polo	0.82	141	⇑ePg	Pb	22 03 49.9	0.0
PODR				⇑eSg	Sb	22 04 00.6	-0.5
PODR				IAML		22 04 05.3	
	comp=N,124nm,1.9s						
PODR	Polo	0.82	141	i P	Pb	22 03 49.9	0.0
PODR				eS	Sb	22 04 00.6	-0.5
LOBH	Bahia de las A	0.96	170	i P	Pn	22 03 52.5	-0.5
LOBH				eS	Sb	22 04 03.9	-1.0
LOBH				IAML		22 04 06.4	
	comp=Z,47nm,2.3s						

RSPR ***16*** *22:10:19.7, 19.°31N×67.°36W, h58^{km}±12^{km}, MD3.6/9*

SDD ***16*** *22:10:19.8±1.8, 19.°26N×67.°22W, h19^{km}±112^{km}, MD3.7, ML3.4, MW3.7, Presumed earthquake*

NEIC ***16*** *22:10:20.0±2.5, 19.°13N±0.°02×67.°23W±0.°04, h13^{km}±6^{km}, ML3.7/24, Md3.6/9(RSPR), Error ellipse: s-maj=5.2km s-min=2.7km az=65.0*

OSPL ***16*** *22:10:20.0±0.3, 19.°27N×67.°32W, h17^{km}±2^{km}, ML3.4, Presumed earthquake*

ISC 16 22:10:21.0±1.4, **19.°17N**±0.°06×**67.°24W**±0.°03, **h22**^{km}±6^{km}, **n60, σ1.^{s}08**/76, **16C-13D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.71	170	Pg	Pb	22 10 34.1	-0.7
AGPR				IAML		22 10 46.5	
	3µm,0.2s						
AGPR				IAML		22 10 46.7	
	3µm,0.3s						
AGPR	Aguadilla, PR	0.71	170	⇑eP	Pb	22 10 34.6	-0.1
AGPR	Aguadilla, PR	0.71	170	eS	Sn	22 10 45.4	-0.6
AGPR	Aguadilla, PR	0.71	170	⇓ePg	Pb	22 10 34.3	-0.4
AGPR				⇑eSg	Sb	22 10 44.3	+0.3
AGPR				IAML		22 10 46.9	
	comp=N,3µm,0.2s						
AGPR	Aguadilla, PR	0.71	170	i P	Pb	22 10 34.6	-0.1
AGPR				eS	Sb	22 10 45.3	+1.2
AGPR				IAML		22 10 49.9	
	comp=Z,1µm,0.2s						
IDE	Isla Desecheo	0.81	196		Pb	22 10 36.5	0.0
IDE					Sn	22 10 49.0	+0.5
IDE	Isla Desecheo	0.81	196	⇓eP	Pb	22 10 36.5	0.0
IDE	Isla Desecheo	0.81	196	eS	Sn	22 10 49.0	+0.5
AOPR	Arecibo Observ	0.94	151		Pb	22 10 37.5	-1.2
AOPR					Sb	22 10 50.9	+0.2
AOPR				IAML		22 10 59.3	
	comp=E,4µm,0.4s						
AOPR				IAML		22 10 59.6	
	comp=N,2µm,0.3s						
AOPR	Arecibo Observ	0.94	151	⇑eP	Pb	22 10 37.7	-1.0
AOPR	Arecibo Observ	0.94	151	eS	Sb	22 10 51.2	+0.5
AOPR	Arecibo Observ	0.94	151	⇓ePg	Pb	22 10 37.5	-1.2
AOPR				IAML		22 10 59.5	
	comp=N,2µm,0.3s						
PRSN	Puerto Rico Se	0.95	175		Sn	22 10 52.2	+0.2
PRSN	Puerto Rico Se	0.95	175	Pg	Pb	22 10 36.6	-2.2
PRSN	Puerto Rico Se	0.95	175	⇑eP	Pb	22 10 38.3	-0.6
PRSN	Puerto Rico Se	0.95	175	eS	Sn	22 10 52.2	+0.2
PRSN	Puerto Rico Se	0.95	175	⇑ePg	Pb	22 10 37.1	-1.7
PRSN				⇑eSg	Sn	22 10 52.1	+0.2
PRSN				IAML		22 10 58.0	
	comp=N,3µm,0.2s						
EMPR	Esperanza - Ma	0.96	136		Pn	22 10 39.5	+0.3
EMPR					Sn	22 10 55.7	+3.4
EMPR	Esperanza - Ma	0.96	136	⇓eP	Pn	22 10 39.5	+0.3
EMPR	Esperanza - Ma	0.96	136	eS	Sn	22 10 55.7	+3.4
LSP	Las Mesas	1.00	172		Pb	22 10 39.2	-0.5
LSP					Sn	22 10 54.2	+0.9
LSP	Las Mesas	1.00	172	⇓eP	Pb	22 10 39.2	-0.5
LSP	Las Mesas	1.00	172	eS	Sn	22 10 54.2	+0.9
UUPR	Utuado, UPR, P	1.04	152		Sn	22 10 55.4	+1.3
UUPR	Utuado, UPR, P	1.04	152	Pn	Pn	22 10 38.2	-2.0
UUPR	Utuado, UPR, P	1.04	152	⇓eP	Pn	22 10 38.9	-1.4
UUPR	Utuado, UPR, P	1.04	152	eS	Sn	22 10 55.4	+1.3
CRPR	Cabo Rojo, PR	1.16	174	Pn	Pn	22 10 41.3	-0.7
CRPR				IAML		22 10 59.4	
	comp=N,807nm,0.4s						
CRPR				IAML		22 10 59.8	
	comp=N,991nm,0.4s						
CRPR	Cabo Rojo, PR	1.16	174	Sn	Sb	22 10 56.8	-0.3
CRPR	Cabo Rojo, PR	1.16	174	⇓eP	Pn	22 10 41.3	-0.7
CRPR	Cabo Rojo, PR	1.16	174	eS	Sb	22 10 57.3	+0.1
CRPR	Cabo Rojo, PR	1.16	174	⇑ePg	Pn	22 10 41.5	-0.6
CRPR				⇑eSg	Sb	22 10 57.2	+0.1
CRPR				IAML		22 11 07.2	
	comp=N,791nm,0.5s						
CRPR	Cabo Rojo, PR	1.16	174	i P	Pn	22 10 41.3	-0.7
CRPR				eS	Sb	22 10 57.2	+0.1
CRPR				IAML		22 10 59.7	
	comp=Z,764nm,0.4s						
ECPR	Experimental S	1.19	135	Pn	Pn	22 10 40.8	-1.5
ECPR				IAML		22 11 01.9	
	comp=Z,2µm,0.3s						
ECPR				IAML		22 11 02.8	
	comp=Z,2µm,0.3s						
ECPR	Experimental S	1.19	135	⇑eP	Pn	22 10 41.4	-0.9
ECPR	Experimental S	1.19	135	eS	Sn	22 11 00.1	+2.3
MLPR	Magueyes Islan	1.21	171	⇓eP	Pn	22 10 42.1	-0.6
MLPR	Magueyes Islan	1.21	171	eS	Sn	22 10 58.6	+0.3
MLPR	Magueyes Islan	1.21	171	⇓ePg	Pn	22 10 41.9	-0.7
MLPR				⇑eSg	Sn	22 10 58.6	+0.3
MLPR				IAML		22 11 00.7	
	comp=N,212nm,0.2s						
GBPR	Guanica, Bosqu	1.24	164		Pn	22 10 42.6	-0.4
GBPR					Sb	22 11 01.3	+2.1
GBPR	Guanica, Bosqu	1.24	164	⇓eP	Pn	22 10 42.6	-0.4
GBPR	Guanica, Bosqu	1.24	164	eS	Sb	22 11 01.3	+2.1
OBIP	Obispado Ponce	1.27	152	Pn	Pn	22 10 42.6	-0.9
OBIP				Sn	Sb	22 11 00.3	0.0
OBIP				IAML		22 11 05.3	
	comp=N,948nm,0.6s						
OBIP	Obispado Ponce	1.27	152	⇑eP	Pn	22 10 43.0	-0.6
OBIP	Obispado Ponce	1.27	152	eS	Sb	22 11 00.8	+0.5
GCPR	Guaynabo City	1.39	128	Pn	Pn	22 10 43.5	-1.6
GCPR				Sn	Sn	22 11 02.1	-0.7
GCPR	Guaynabo City	1.39	128	⇓eP	Pn	22 10 44.2	-0.9
GCPR	Guaynabo City	1.39	128	eS	Sb	22 11 03.2	-0.4
SJG	San Juan	1.47	135	Pn	Pn	22 10 45.1	-1.2
SJG	San Juan	1.47	135	⇑eP	Pn	22 10 46.0	-0.3
SJG	San Juan	1.47	135	eS	Sb	22 11 06.8	+0.7
SJG	San Juan	1.47	135	⇑ePg	Pn	22 10 45.9	-0.3
SJG				⇑eSg	Sb	22 11 07.4	+1.3
SJG	San Juan	1.47	135	i P	Pn	22 10 46.0	-0.3
SJG				IAML		22 11 13.5	
	comp=Z,290nm,0.5s						
HUMP	Col San Antoni	1.67	128	Pn	Pn	22 10 47.6	-1.4
HUMP				IAML		22 11 14.6	
	comp=Z,463nm,0.5s						
MIDR	Miches	1.72	264	⇑ePg	Pn	22 10 49.5	-0.3
MIDR				⇓eSg	Sb	22 11 12.8	-0.4
MIDR				IAML		22 11 23.0	
	comp=N,202nm,0.8s						
DR12	Loma Pena Alta	2.06	260	Pn	Pn	22 10 54.0	-0.5
HATOM	Hato Mayor del	2.06	260	⇓ePg	Pn	22 10 54.8	+0.4
HATOM				⇑eSg	Sb	22 11 23.5	+0.4
HATOM				IAML		22 11 34.0	
	comp=N,194nm,0.7s						
BANI	BANI	3.06	256	Pn	Pn	22 11 07.8	-0.4
SC01	Santiago de lo	3.31	275	Pn	Pn	22 11 10.7	-0.9
SDDR	Presa de Saban	3.83	268	Pn	Pn	22 11 19.6	+0.7
SDDR				IAML		22 12 24.6	
	comp=N,154nm,0.8s						
SDDR				IAML		22 12 32.5	
	comp=N,200nm,1.0s						

IDC ***16*** *22:15:19.9±1.8, 14.°40S×167.°46E, h186^{km}±15^{km}, mb4.0/15, mbtmp4.4/16, Error ellipse: s-maj=18.2km s-min=13.9km az=114.0*

NEIC ***16*** *22:15:21.2±2.0, 14.°4S±0.°1×167.°5E±0.°2, h198^{km}±7^{km}, mb4.5/47, Error ellipse: s-maj=24.4km s-min=17.5km az=131.0*

NOU ***16*** *22:15:24.0, 14.°51S×167.°53E, h191^{km}, MLv4.7/15, Vanuatu Islands*

ISC 16 22:15:21.3±0.5, **14.°40S**±0.°06×**167.°42E**±0.°10, **h200**^{km}, **n100, σ0.^{s}98**/101, **mb4.4**/36, **Vanuatu Islands**

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Code  Station Name        Δ°   AZ°    Phase ID         Time       Res
                                      Op     ISC       h  m  s    ISC
SANVU Saraoutou          1.06 191            Pn        22 15 50.9 -0.6
SANVU Saraoutou          1.06 191     P      Pn        22 15 51.9 +0.4
SANVU Saraoutou          1.06 191     S      Sn        22 16 15.2 +0.1
DVP   Devils Point       3.39 167     P      Pn        22 16 16.2 +0.6
DVP   Devils Point       3.39 167     S      Sn        22 16 57.4 -0.8
MARNC Mare, Loyalty      7.07 175     Pn     Pn        22 17 01.7 -0.7
MARNC Mare, Loyalty      7.07 175     P      Pn        22 17 02.4  0.0
YATNC Mamie plateau,     7.64 184     P      Pn        22 17 12.6 +2.8
DZM   Mont Dzumac        7.69 187     P      Pn        22 17 11.2 +0.7
      3.3nm,0.4s,baz=68,slow=18,SNR=3.3
DZM                                   S      Sn        22 18 37.7 +0.2
      16nm,0.6s,baz=137,slow=19,SNR=3.1
DZM   Mont Dzumac        7.69 187     Pn     Pn        22 17 10.7 +0.1
DZM   Mont Dzumac        7.69 187     P      Pn        22 17 12.3 +1.8
ONTNC Ouen Toro          7.92 186     Pn     Pn        22 17 13.4 -0.1
OUENC Ouen Island, N     8.00 184     P      Pn        22 17 16.1 +1.6
PINNC Pines Island,      8.17 180     Pn     Pn        22 17 17.8 +1.0
EIDS  Eidsvold          18.82 232     P      P         22 19 27.0 +1.0
PMG   Port Moresby      20.43 282     P      P         22 19 44.4 +1.0
      14nm,0.8s,baz=118,slow=8.6,SNR=7.6
      14nm,0.8s
PMG   Port Moresby      20.43 282     P      P         22 19 43.5 +0.1
PMG                                   IAmb   IAmb      22 19 47.2
      comp=Z,17nm,0.8s
CTA   Charters Tower    20.98 251     P      P         22 19 49.8 +0.6
      comp=Z,7.8nm,0.6s,baz=73,slow=12,SNR=14
      comp=Z,7.8nm,0.6s
CTAO  Charters Tower    20.98 251     P      P         22 19 48.2 -1.0
CTAO                                  IAmb   IAmb      22 19 51.6
      comp=Z,9.0nm,0.6s
COEN  Coen              23.51 268     P      P         22 20 13.5  0.0
COEN                                  IAmb   IAmb      22 20 16.1
      comp=Z,16nm,0.9s
INKA  Innaminka         28.13 238     P      P         22 20 54.3 -0.5
STKA  Stephens Creek    29.32 229     P      P         22 21 06.3 +1.0
      comp=Z,7.3nm,0.4s,baz=54,slow=9.1,SNR=19
      comp=Z,7.3nm,0.4s
STKA  Stephens Creek    29.32 229     P      P         22 21 06.1 +0.8
WR8   Warramunga Arr    31.89 255     P      P         22 21 26.4 -1.7
WR8                                   IAmb   IAmb      22 21 27.6
      comp=Z,7.6nm,1.2s
WB0   Warramunga Arr    31.98 256     P      P         22 21 27.2 -1.7
WB0                                   IAmb   IAmb      22 21 28.3
      comp=Z,7.3nm,0.5s
WRA   Warramunga Arr    32.04 255     P      P         22 21 28.3 -1.1
      comp=Z,3.1nm,0.5s,baz=85,slow=9.3,SNR=32
      comp=Z,3.1nm,0.5s
WRA   Warramunga Arr    32.04 255     P      P         22 21 27.3 -2.1
AS31  Alice Springs     32.92 249     P      P         22 21 35.1 -2.0
ASAR  Alice Springs     32.92 249     P      P         22 21 35.9 -1.2
      comp=Z,4.9nm,0.6s,baz=77,slow=9.2,SNR=65
      comp=Z,4.9nm,0.6s
ASAR  Alice Springs     32.92 249     P      P         22 21 35.1 -2.0
BBOO  Buckleboo         33.89 232     P      P         22 21 45.1 -0.2
BBOO                                  IAmb   IAmb      22 22 20.7
      comp=Z,13nm,1.5s
KNRA  Kununurra         37.32 263     P      P         22 22 12.6 -2.0
KNRA                                  IAmb   IAmb      22 22 27.2
      comp=Z,23nm,1.3s
FORT  Forrest           39.59 239     P      P         22 22 33.0 -0.4
FITZ  Fitzroy Crossi    40.22 259     P      P         22 22 38.2 -0.4
MORW  Morawa            49.54 244     P      P         22 23 51.3 -0.8
MORW                                  IAmb   IAmb      22 24 22.7
      comp=Z,12nm,1.4s
TGY   Tagaytay City     54.01 300     P      P         22 24 26.2 +0.9
      comp=Z,215nm,0.4s,baz=158,slow=16,SNR=2.2
JGF   Kuroka            57.30 331     P      P         22 24 48.4  0.0
JMN   Monobe            57.55 327     P      P         22 24 51.0 +0.9
MJAR  Matsushiro Arr    57.68 332     P      P         22 24 50.6 -0.4
      comp=Z,1.7nm,0.5s,baz=174,slow=9.4,SNR=6.7
      comp=Z,1.7nm,0.5s
MJAR  Matsushiro Arr    57.68 332     P      P         22 24 51.3 +0.4
MAJO  Matsushiro        57.68 332     P      P         22 24 50.8 -0.2
MAJO                                  IAmb   IAmb      22 24 51.6
      comp=Z,7.9nm,0.6s
JSD   Sado              58.90 333     P      P         22 25 00.3 +1.0
JSD                                   IAmb   IAmb      22 25 03.0
      comp=Z,18nm,1.4s
JKA   Kamikawa-asahi    62.48 340     P      P         22 25 24.6 +1.2
USRK  Ussuriysk Ar.     66.66 333     P      P         22 25 51.8 +1.4
      comp=Z,2.6nm,0.7s,baz=132,slow=7.1,SNR=7.4
      comp=Z,2.6nm,0.7s
PETK  Petropavlovsk-    67.75 354     P      P         22 25 57.8 +0.7
      comp=Z,7.2nm,0.8s,baz=141,slow=7.6,SNR=6.2
      comp=Z,7.2nm,0.8s
PETK  Petropavlovsk-    67.75 354     P      P         22 25 57.6 +0.6
QSPA  South Pole Qui    75.63 180     P      P         22 26 43.7 -0.4
      comp=Z,1.2nm,0.7s,baz=280,slow=1.6,SNR=5.5
      comp=Z,1.2nm,0.7s
N14K  Kuskokwak Cree    78.15  15     P      P         22 26 58.5 +0.6
ACHA  Angle Creek He    78.54  19     P      P         22 26 59.7 -0.5
ACHA                                  IAmb   IAmb      22 27 32.3
      comp=Z,7.5nm,1.3s
M14K  Bethel            78.80  15     P      P         22 27 00.4 -1.1
M14K                                  IAmb   IAmb      22 27 15.2
      comp=Z,7.6nm,1.2s
K15K  Wolf Creek Mou    80.24  14     P      P         22 27 09.4 +0.2
K15K                                  IAmb   IAmb      22 27 10.3
      comp=Z,6.2nm,0.9s
J16K  Anvik River       81.31  14     P      P         22 27 16.0 +1.1
J16K                                  IAmb   IAmb      22 27 50.7
      comp=Z,8.3nm,1.5s
SLKM  Skilak Lake       81.98  20     P      P         22 27 17.4 -1.1
SONM  Songino Array     82.32 324     P      P         22 27 21.0 +0.4
      comp=Z,1.1nm,0.4s,baz=142,slow=5.1,SNR=14
      comp=Z,1.1nm,0.4s
SONM  Songino Array     82.32 324     IAmb   IAmb      22 27 22.4
      comp=Z,3.5nm,1.1s
SUA   Susitna One       82.53  19     P      P         22 27 21.2 -0.3
PPLA  Purkeypile        83.20  17     P      P         22 27 23.3 -1.6
PPLA                                  IAmb   IAmb      22 27 33.6
      comp=Z,14nm,1.2s
SML   Sawmill           83.56  19     P      P         22 27 26.6  0.0
SCM   Sheep Creek Mo    83.91  20     P      P         22 27 28.4  0.0
BERG  Berg Lake         84.15  22     P      P         22 27 29.6  0.0
O02D  Mt. Diablo Mer    84.40  46     P      P         22 27 31.8 +0.4
O02D                                  IAmb   IAmb      22 27 33.0
      comp=Z,4.8nm,0.7s
C16K  Lisburne Hills    84.75  10     P      P         22 27 32.0 -0.3
IMAR  Indian Mountai    85.21  15     P      P         22 27 34.6 -0.2
CTGM  Chitina Glacie    85.40  22     P      P         22 27 35.5 -0.5
CTGM                                  IAmb   IAmb      22 28 19.3
      comp=Z,22nm,1.4s
WRH   Wood River Hil    85.59  18     P      P         22 27 35.6 -1.1
WRH                                   IAmb   IAmb      22 27 37.5
      comp=Z,3.8nm,0.6s
H22K  Ishtalitna Cre    85.75  16     P      P         22 27 36.7 -0.8
C18K  Utukok River      85.81  11     P      P         22 27 37.9 +0.1
IL31                    86.17  18     P      P         22 27 37.9 -1.5
IL31                                  IAmb   IAmb      22 27 39.4
      comp=Z,6.4nm,0.9s
ILAR  Eielson Array     86.17  18     P      P         22 27 38.1 -1.4
      comp=Z,4.4nm,0.7s,baz=238,slow=4.8,SNR=47
      comp=Z,4.4nm,0.7s
BCAR  Beaver Creek A    86.62  21     P      P         22 27 41.8 -0.1
D20K  Etivluk River     86.77  12     P      P         22 27 43.1 +0.7
D20K                                  IAmb   IAmb      22 27 43.9
      comp=Z,6.8nm,0.9s
NVAR  Mina Array Bea    86.95  49     P      P         22 27 44.8 +0.6
      comp=Z,0.9nm,0.5s,baz=217,slow=6.5,SNR=5.9
      comp=Z,0.9nm,0.5s
E21K  Killik River      87.12  13     P      P         22 27 43.8 -0.2
E21K                                  IAmb   IAmb      22 27 45.5
      comp=Z,4.6nm,0.8s
D22K  Ayikyak River     87.76  13     P      P         22 27 47.2 +0.1
D22K                                  IAmb   IAmb      22 27 49.6
      comp=Z,4.9nm,0.8s
I07A  Izee              88.17  44     P      P         22 27 50.2 +0.5
LTY   Liberty           88.62  40     P      P         22 27 51.8 +0.1
LTY                                   IAmb   IAmb      22 27 52.8
      comp=Z,14nm,1.5s
C23K  Itkillik River    88.97  13     P      P         22 27 53.8 +1.1
C23K                                  IAmb   IAmb      22 27 55.0
      comp=Z,6.3nm,0.9s
C27K  Jago River        90.47  15     P      P         22 28 01.1 +1.4
C27K                                  IAmb   IAmb      22 28 03.9
      comp=Z,7.7nm,1.4s
MKAR  Makanchi Array    97.06 316     P      Pdif      22 28 31.4 +0.8
      comp=Z,1.0nm,0.6s,baz=96,slow=6.1,SNR=11
      comp=Z,1.0nm,0.6s
MKAR  Makanchi Array    97.06 316     P      Pdif      22 28 31.0 +0.5
YKA   Yellowknife Ar    97.19  27     P      P         22 28 29.9 -0.7
      comp=Z,0.5nm,0.7s,baz=261,slow=5.2,SNR=8.2
      comp=Z,0.5nm,0.7s
YKA   Yellowknife Ar    97.19  27     P      P         22 28 29.4 -1.2
ZALV  Zalesovo Beam     97.21 324     P      P         22 28 29.3 -1.6
      comp=Z,0.9nm,0.7s,baz=130,slow=4.4,SNR=6.0
      comp=Z,0.9nm,0.7s
ZALV  Zalesovo Beam     97.21 324     P      P         22 28 30.2 -0.8
ARCES ARCESS Array B   119.97 345     PKP    PKPdf     22 33 47.1 -0.3
      comp=Z,2.0nm,0.5s,baz=68,slow=1.9,SNR=38
ARCES ARCESS Array B   119.97 345            PKPdf     22 33 46.7 -0.7
FINES FINESS Array B   125.47 338     PKP    PKiKP     22 33 58.5  0.0
      comp=Z,1.2nm,0.5s,baz=108,slow=3.9,SNR=14
FINES FINESS Array B   125.47 338            PKPdf     22 33 57.8 -0.3
NB2   NORSAR Subarra   130.34 345     pPKP   SKPab     22 37 13.6 +1.5
      comp=Z,9.9nm,0.8s,baz=38,slow=4.8
NB2   NORSAR Subarra   130.34 345     pPKP   SKPab     22 37 13.6 +1.5
      baz=38,slow=4.8
NOA   NORSAR Array B   130.34 345     PKP    PKPdf     22 34 07.9 +0.4
      comp=Z,0.6nm,0.7s,baz=37,slow=2.1,SNR=3.4
NOA                                   SKPbc  SKPab     22 37 13.9 +1.8
      comp=Z,4.9nm,0.8s,baz=33,slow=2.9,SNR=14
HFS   Hagfors          130.45 343     SKPbc  SKPab     22 37 13.3 +0.8
      comp=Z,5.5nm,0.8s,baz=111,slow=3.2,SNR=10
AKASG Malin Array Be   130.54 326     SKPbc  SKPab     22 37 14.9 +1.7
      comp=Z,1.7nm,0.5s,baz=51,slow=4.5,SNR=10
BRTR  Keskin Array B   132.40 311     PKP    PKPdf     22 34 10.9 -1.3
      comp=Z,0.6nm,0.8s,baz=130,slow=2.3,SNR=3.0
BRTR  Keskin Array B   132.40 311     PKPdf  PKPdf     22 34 11.6 -0.6
EKA   Eskdalemuir Ar   138.50 352     PKP    PKPdf     22 34 22.3 -0.5
      comp=Z,0.6nm,0.5s,baz=323,slow=1.1,SNR=3.8
GERES GERESS Array B   139.41 333     PKP    PKiKP     22 34 26.6 -0.7
      comp=Z,0.4nm,0.4s,baz=48,slow=1.5,SNR=3.0
GERES                                 SKPbc  SKPbc     22 37 42.5 +1.0
      comp=Z,0.6nm,0.8s,baz=56,slow=6.1,SNR=3.5
KEST  Kesra            151.04 321     PKPbc  PKiKP     22 34 51.7 +0.1
      comp=Z,4.9nm,0.4s,baz=161,slow=3.0,SNR=35
KEST  Kesra            151.04 321            PKiKP     22 34 51.5  0.0
ESDC  Sonseca Array    153.71 345     PKPbc  PKiKP     22 34 57.1 +0.2
      comp=Z,0.5nm,0.7s,baz=8.3,slow=4.4,SNR=4.4
ESDC                                  PKPab  PKPab     22 35 09.9 -0.3
      comp=Z,1.3nm,1.0s,baz=12,slow=5.7,SNR=4.0
```

NEIC ***16*** *22:15:58.0±1.3, 35.°676N±0.°009×117.°52W±0.°01, h10km±1km, Error ellipse: s-maj=2.6km s-min=1.6km az=197.0*

PAS 16 22:15:58.6±1.3**, 35.°672N**±0.°008×**117.°527W**±0.°008**, h9**km±4km**, ML3.6**/304**, ML3.3**/152(NEIC)**, Error ellipse: s-maj=1.3km s-min=0.7km az=211.0, Central California**

```
Code  Station Name        Δ°   AZ°    Phase ID         Time       Res
                                      Op     ISC       h  m  s    ISC
WSHM  Spangler Hills     0.08 159     Pg     Pg        22 16 00.7 -0.1
WSHM                                  Sg     Sg        22 16 02.5 +0.1
GPO   China Lake         0.11 259            Pg        22 16 01.4 +0.1
GPO                                          Sg        22 16 04.0 +0.8
CLC   China Lake         0.15 338     Pg     Pg        22 16 01.9 -0.1
CLC                                   Sg     Sg        22 16 04.4 +0.1
CLC                                   IAML             22 16 04.8
      comp=N,8µm,0.4s
CLC                                   IAML             22 16 04.8
      comp=E,10µm,0.4s
SRTC  Snort              0.18 276            Pg        22 16 06.4 +4.0
CCCA  Chr Cany lake      0.20 138     Pg     Pg        22 16 02.7 +0.1
CCCA                                  Sg     Sg        22 16 06.3 +0.9
LRMC  Laurel Mtn Rad     0.23 213     Pg     Pg        22 16 03.2 -0.1
TOW   Tower One          0.24 306            Pg        22 16 07.8 +4.4
RCWM  Renegade Canyo     0.29 341            Pg        22 16 04.3 -0.2
WNMM  Nine Mile Cany     0.35 299            Pg        22 16 05.4 -0.1
WNMM                                         Sg        22 16 10.5 +0.3
WVPM  Volcano Peak E     0.36 320            Pg        22 16 05.5 -0.3
WVPM                                         Sg        22 16 10.8 +0.1
JRC2  Joshua Ridge       0.39 324            Pg        22 16 06.0 -0.2
JRC2                                         Sg        22 16 11.4 +0.1
MPMC  Manual Prospec     0.39   5     Pg     Pg        22 16 05.7 -0.6
MPMC                                  Sg     Sg        22 16 11.3 -0.1
MPMC                                  IAML             22 16 11.9
      comp=E,2µm,0.7s
MPMC                                  IAML             22 16 11.9
      comp=N,2µm,0.5s
WCSM  Coso Springs S     0.40 331            Pg        22 16 06.4 -0.1
WCSM                                         Sg        22 16 12.0 +0.1
WRVM  Rose V. Centra     0.45 319            Pg        22 16 07.0 -0.4
WRVM                                         Sg        22 16 13.1 -0.1
DTP   Desert Tortois     0.48 213            Pg        22 16 07.4 -0.5
DTP                                          Sg        22 16 13.9 -0.3
WBSM  Bird Springs       0.52 255            Pg        22 16 08.3 -0.4
WBSM                                         Sg        22 16 15.3 -0.2
MFS   McCloud Flat S     0.52 329            Pg        22 16 08.4 -0.3
MFS                                          Sg        22 16 15.2 -0.3
WORM  Onyx Ranch         0.58 273            Pg        22 16 09.3 -0.5
WORM                                         Sg        22 16 17.0 -0.6
DAC   Darwin (Calif)     0.61 355            Pg        22 16 09.6 -0.8
QSM   Queen of Sheba     0.61  61     Pg     Pg        22 16 09.9 -0.5
QSM                                   IAML             22 16 18.7
      comp=N,2µm,0.2s
QSM                                   IAML             22 16 18.9
      comp=E,3µm,0.2s
QSM   Queen of Sheba     0.61  61            Sg        22 16 18.1 -0.3
CCAC  Calif City Air     0.65 218            Pg        22 16 10.8 -0.4
CCAC                                         Sg        22 16 20.0 +0.2
WHFM  Hanning Flat       0.67 272            Pg        22 16 10.9 -0.6
WHFM                                         Sg        22 16 19.8 -0.5
GSC   Goldstone, Bar     0.69 122            Sg        22 16 20.9 -0.2
GSC   Goldstone, Bar     0.69 122     Pg     Pg        22 16 11.4 -0.6
GSC                                   IAML             22 16 21.2
      comp=N,3µm,0.4s
GSC                                   IAML             22 16 21.7
      comp=E,3µm,0.5s
ISA   Isabella, Lake     0.77 270     Pg     Pg        22 16 12.5 -1.0
ISA                                   IAML             22 16 23.1
      comp=N,2µm,0.4s
ISA                                   IAML             22 16 25.0
      comp=E,2µm,0.2s
ISA   Isabella, Lake     0.77 270            Sg        22 16 22.8 -0.7
HYS   Haystack Butte     0.81 182            Pg        22 16 13.3 -0.8
HYS                                          Sg        22 16 23.9 -0.7
WASM  Alta Sierra Ca     0.84 275            Pg        22 16 14.1 -0.7
WASM                                         Sg        22 16 25.2 -0.5
GWY   Greenwater Val     0.86  53     Pg     Pg        22 16 14.6 -0.7
GWY                                   IAML             22 16 28.7
      comp=E,1µm,0.5s
GWY                                   IAML             22 16 29.1
      comp=N,1µm,0.3s
EDW2  Edwards Air Fo     0.88 206            Pg        22 16 14.5 -1.0
EDW2                                         Sg        22 16 26.5 -0.4
CGO   Cerro Gordo        0.91 346            Pg        22 16 15.4 -0.7
CGO                                          Sb        22 16 29.9 +0.9
RRX   Edison Barstow     0.91 151            Pg        22 16 15.4 -0.6
ALV   Alvord Mountai     0.95 129            Pg        22 16 16.2 -0.7
ALV                                          Sg        22 16 29.3  0.0
FURC  Furnace Creek,     0.96  34            Pg        22 16 16.7 -0.3
TPO   Tropico Hills      0.98 216     Pg     Pg        22 16 16.5 -0.9
TPO                                   Sg     Sg        22 16 29.9 -0.2
TPO                                   IAML             22 16 32.1
      comp=E,1µm,0.3s
SBB   Saddle Back Bu     1.01 194            Pg        22 16 17.0 -1.0
SHOC  Shoshone, Teco     1.04  77     Pg     Pg        22 16 17.4 -1.2
SHOC  Shoshone, Teco     1.04  77            Sg        22 16 32.3 +0.2
TEJ   El Tejon           1.05 245            Pg        22 16 17.2 -1.4
TEJ                                          Sg        22 16 31.6 -0.6
FOXC  Fox Airport        1.09 212            Pg        22 16 19.0 -0.5
FOXC                                         Sb        22 16 34.5 +0.6
SPG2  Springville 2      1.14 298            Pg        22 16 19.2 -1.2
SPG2                                         Sg        22 16 34.3 -0.8
ALPC  Antelope           1.17 213            Sb        22 16 36.5 +0.3
TJR   Tejon Ranch        1.18 237            Pb        22 16 19.1 -2.1
ARVC  Arvin              1.20 243            Pb        22 16 20.2 -1.1
THC   Tehachapi Micr     1.20 231            Pb        22 16 20.4 -1.2
LRRC  Littlerock Res     1.22 200            Pb        22 16 20.4 -1.3
LRRC                                         Sn        22 16 38.2 -0.1
LEOC  Leona Valley       1.22 212            Pb        22 16 20.5 -1.4
HOLC  Holcomb Ridge      1.24 192            Pn        22 16 20.7 -1.5
HOLC                                         Sb        22 16 38.2  0.0
CJV   Casa Juvan         1.25 204            Sb        22 16 38.3 -0.2
JNH   Juniper Hills      1.27 196            Pn        22 16 21.2 -1.4
JNH                                          Sg        22 16 39.5  0.0
AMDNV Amargosa           1.28  52            Pn        22 16 20.9 -1.7
AMDNV                                        Sb        22 16 39.2  0.0
DSCC  Desert Studies     1.28 114            Pn        22 16 20.5 -2.1
VES   Vestal, Richgr     1.28 278            Pn        22 16 21.7 -0.8
HEC   Hector,Ludlow      1.29 130            Pn        22 16 21.1 -1.7
HEC                                          Sb        22 16 39.4 -0.3
TMC   Table Mountain     1.30 186            Pn        22 16 21.8 -1.4
GRAC  Grapevine Rang     1.33   6            Pn        22 16 22.4 -0.9
GRAC                                  IAML             22 16 44.8
      comp=N,838nm,0.7s
GRAC                                  IAML             22 16 45.0
      comp=E,599nm,0.5s
TUQ   Turquoise Moun     1.33 100            Pn        22 16 22.0 -1.4
TUQ                                          Sb        22 16 40.8 -0.1
WCT   Wildcat Mounta     1.33  33     Pn     Pn        22 16 21.9 -1.6
WCT                                   IAML             22 16 42.5
      comp=N,306nm,0.4s
WCT                                   IAML             22 16 42.7
      comp=E,413nm,0.5s
SGV   South Grapevin     1.37  17            Pn        22 16 22.8 -1.1
SGV                                          Sn        22 16 42.3 +0.1
CHFC  Chilao Flat St     1.40 197            Pn        22 16 24.6 +0.2
CHFC                                         Sg        22 16 43.3 -0.2
BFSC  Mount Baldy Ra     1.43 184     Pn     Pn        22 16 23.7 -1.2
BFSC                                  IAML             22 16 48.4
      comp=E,366nm,0.4s
OSI   Osito Audit: C     1.44 223            Sb        22 16 44.4 +0.4
OSI   Osito Audit: C     1.44 223     Pn     Pn        22 16 24.1 -0.8
OSI                                   IAML             22 16 46.8
      comp=N,755nm,0.7s
OSI                                   IAML             22 16 48.4
      comp=E,613nm,0.6s
SIL   Silver Peak        1.44 156            Pn        22 16 25.1 +0.1
BBRC  Big Bear Solar     1.49 160            Pb        22 16 26.8 +0.2
TIN   Tinemaha, Big      1.49 338     Pn     Pn        22 16 24.9 -0.7
TIN                                   IAML             22 16 53.9
      comp=E,281nm,0.8s
TIN                                   IAML             22 16 54.9
      comp=N,246nm,0.6s
MWC   Mount Wilson       1.51 197     Pn     Pn        22 16 24.9 -1.1
MWC                                   IAML             22 16 48.1
      comp=N,770nm,0.5s
MWC                                   IAML             22 16 50.5
      comp=E,679nm,0.3s
MPI   Mount Pinos, F     1.58 238            Pn        22 16 25.8 -1.2
PASC  Pasadena Art C     1.59 200     Pn     Pn        22 16 25.6 -1.3
PASC                                  IAML             22 16 50.6
      comp=E,338nm,0.5s
PASC                                  IAML             22 16 50.8
      comp=N,387nm,0.5s
LOK   Lockwood Valle     1.59 234            Pn        22 16 27.1 +0.1
OAT   Oat Mountain       1.60 214            Pb        22 16 28.8 +0.5
SVD   Seven Oaks Dam     1.60 167            Sb        22 16 48.9 +0.2
MTPC  Mountain Pass      1.62  96     Pn     Pn        22 16 25.7 -1.8
MTPC                                  IAML             22 16 51.0
      comp=N,616nm,0.2s
MTPC                                  IAML             22 16 54.1
      comp=E,461nm,0.3s
GMN   Gold Mountain      1.64   7     Pn     Pn        22 16 26.9 -0.9
TPNV  Topopah Spring     1.64  39     Pn     Pn        22 16 26.3 -1.4
TPNV                                  IAML             22 16 52.4
      comp=E,320nm,0.5s
TPNV                                  IAML             22 16 53.0
      comp=E,275nm,0.3s
GR2C  Griffith Obs.      1.68 203            Pg        22 16 30.2 -0.5
DSP   Deep Springs       1.73 348     Pn     Pn        22 16 28.1 -0.7
DJJ   Donna J Jenkin     1.74 206            Pn        22 16 28.0 -0.9
MTUM  Tungsten Hills     1.88 334            Pb        22 16 33.6 +0.5
CARC  Carrizo Plain      1.93 260            Pn        22 16 30.5 -1.0
EW2   E Wide Canyon      1.96 152            Pn        22 16 31.0 -0.9
ELS   Elsinore Mount     2.02 178     Pn     Pn        22 16 32.2 -0.7
DANC  Danby, Needles     2.04 120     Pn     Pn        22 16 31.1 -2.0
SHPR  Sheep Range        2.09  66     Pn     Pn        22 16 32.9 -1.0
V12A  Nelson             2.18  88     Pn     Pn        22 16 33.4 -1.7
V12A                                  IAML             22 17 09.5
      comp=N,156nm,0.5s
V12A                                  IAML             22 17 11.1
      comp=E,132nm,0.5s
DNR   Dunn Ranch,Anz     2.23 160     Pn     Pn        22 16 33.7 -2.1
DNR                                   IAML             22 17 20.4
      comp=N,342nm,0.8s
PMD   Palm Desert        2.23 155            Pn        22 16 34.6 -1.1
PMD   Palm Desert        2.23 155     Pn     Pn        22 16 34.0 -1.6
PFO   Pinyon Flats O     2.24 157     Pn     Pn        22 16 34.2 -1.7
MDPB  Devils Postpil     2.32 328     Pn     Pn        22 16 36.4 -0.8
MDPB                                  IAML             22 17 15.0
      comp=E,103nm,0.4s
PHGM  Hog Canyon         2.41 276            Pn        22 16 38.0 -0.3
S11A  Rachel             2.43  35     Pn     Pn        22 16 38.3 -0.3
S11A                                  IAML             22 17 22.6
      comp=N,224nm,1.2s
S11A                                  IAML             22 17 23.1
      comp=E,198nm,0.8s
PKD   Bear Valley Ra     2.46 277     Pn     Pn        22 16 37.4 -1.5
PKD                                   IAML             22 17 26.1
      comp=N,96nm,1.1s
PKD                                   IAML             22 17 32.6
      comp=E,123nm,0.9s
IRM   Iron Mountain      2.47 127     Pn     Pn        22 16 36.6 -2.5
IRM                                   IAML             22 17 18.2
      comp=N,180nm,0.3s
IRM                                   IAML             22 17 18.3
      comp=E,243nm,0.4s
NEE2  Needles Airpor     2.55 110     Pn     Pn        22 16 37.7 -2.4
BORC  Borrego Spring     2.57 159     Pn     Pn        22 16 39.6 -0.8
BC3   Big Chuckawall     2.64 139     Pn     Pn        22 16 39.5 -1.9
BC3                                   IAML             22 17 23.4
      comp=E,116nm,0.6s
BC3                                   IAML             22 17 24.9
      comp=N,178nm,0.5s
PRN   Pahroc Range       2.64  48     Pn     Pn        22 16 40.3 -1.1
PRN                                   IAML             22 17 27.8
      comp=E,124nm,0.5s
PRN                                   IAML             22 17 34.7
      comp=N,105nm,0.8s
LHV   Little Huntoon     2.69 343     Pn     Pn        22 16 42.0  0.0
DPD   Davis Peak         2.69 262            Pn        22 16 40.2 -1.9
DPP   Dos Picos Cty      2.71 170     Pn     Pn        22 16 41.1 -1.2
PMPB  Monarch Peak       2.71 283     Pn     Pn        22 16 42.0 -0.4
MYLM  Yosemite Lake      2.89 307            Pb        22 16 48.8 -1.4
BBGB  Big Mountain B     2.98 289     Pn     Pn        22 16 45.5 -0.7
W13A  Hualapai Mount     3.03 100     Pn     Pn        22 16 45.4 -1.5
W13A                                  IAML             22 17 36.1
      comp=E,53nm,0.6s
W13A                                  IAML             22 17 38.6
      comp=N,71nm,0.8s
HULI  Fort Hunter Li     3.03 278     Pn     Pn        22 16 45.8 -0.9
HULI                                  IAML             22 17 37.3
      comp=E,101nm,0.9s
HULI                                  IAML             22 17 44.7
      comp=N,104nm,1.9s
RYN   Ryan               3.06 345     Pn     Pn        22 16 47.1 -0.1
R11B  Troy Canyon, C     3.09  30     Pn     Pn        22 16 46.6 -1.1
BLYC  Blythe             3.13 127     Pn     Pn        22 16 45.8 -2.3
BLYC                                  IAML             22 17 40.2
      comp=N,107nm,0.6s
BLYC                                  IAML             22 17 41.3
      comp=E,115nm,0.6s
CMB   Columbia Colle     3.29 317     Pn     Pn        22 16 51.0 +0.7
CMB                                   IAML             22 17 44.9
      comp=N,50nm,0.9s
CMB                                   IAML             22 17 47.3
      comp=E,53nm,0.8s
SAO   San Andreas Ge     3.35 290     Pn     Pn        22 16 50.8 -0.3
CBX   Cerro Bola         3.43 168     Pn     Pn        22 16 52.2  0.0
CBX                                   IAML             22 17 55.2
      comp=E,117nm,0.9s
CBX                                   IAML             22 17 55.5
      comp=N,90nm,0.8s
LCMT  Little Creek M     3.71  68     Pn     Pn        22 16 55.6 -0.5
CCUT  Cedar City         3.84  60     Pn     Pn        22 16 58.0  0.0
KNB   Kanab              4.03  69     Pn     Pn        22 16 59.7 -0.9
KNB                                   IAML             22 18 17.3
      comp=N,27nm,1.5s
PSUT  Pine Spring        4.10  45     Pn     Pn        22 16 59.9 -1.6
PSUT                                  IAML             22 18 11.4
      comp=E,26nm,1.0s
Y14A  Wickenburg         4.10 114     Pn     Pn        22 17 00.7 -0.8
Y14A                                  IAML             22 18 16.0
      comp=E,57nm,0.6s
SPR3  Spring Creek 3     4.18  37     Pn     Pn        22 17 00.5 -2.4
SPR3                                  IAML             22 18 16.6
      comp=E,29nm,1.2s
WUAZ  Wupatki            5.02  90     Pn     Pn        22 17 12.1 -2.0
WUAZ                                  IAML             22 18 39.0
      comp=E,31nm,1.0s
WUAZ                                  IAML             22 18 40.8
      comp=E,36nm,0.6s
X16A  Lo Mia Camp, P     5.15 102     Pn     Pn        22 17 15.4 -0.6
X16A                                  IAML             22 18 50.4
      comp=N,17nm,1.2s
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X16A				IAML		22 18 57.6	
	comp=E,14nm,5.0s						
ELK	Elko	5.38	19	Pn	Pn	22 17 19.3	+0.1
ELK				IAML		22 18 50.8	
	comp=E,11nm,0.7s						
DUG	Dugway, Tooele	5.85	38	Pn	Pn	22 17 26.1	+0.4
X18A	Snowflake	6.32	98	Pn	Pn	22 17 31.8	-0.2
PV19	Morning Glory	7.33	66	Pn	Pn	22 17 46.2	+0.2
PV13	Radium Mtn., P	7.40	68	Pn	Pn	22 17 44.8	-2.2

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*OSPL **16** 22:20:04.2±1.3, 19°.11N×67°.75W, h0km±9km, ML4.1, Presumed earthquake*

*SDD **16** 22:20:04.0±2.5, 19°.30N×67°.47W, h20km±124km, MD4.0, ML4.1, MW4.4, Presumed earthquake*

*RSPR **16** 22:20:05.9, 19°.11N×67°.77W, h10km±31km, MD3.9/9*

*RSNC **16** 22:20:06.8±0.7, 19°N±6°×6°8W±°, h0km, mB5.2, mb4.4, ML3.7, Mw(mB)4.5*

*NEIC **16** 22:20:07.4±1.9, 18°.94N±0°.06×67°.55W±0°.05, h16km±4km, mb4.5/58, ML4.3/28, Md3.9/9(RSPR), Error ellipse: s-maj=10.1km s-min=5.2km az=218.0*

*IDC **16** 22:20:09.3±2.1, 18°.72N×67°.71W, h42km±22km, mb3.8/13, mbtmp4.0/14, ML2.5/1, MS3.4/6, Error ellipse: s-maj=23.7km s-min=12.8km az=14.0*

ISC 16 22:20:05.4±1.2**, 19°.02N**±0°.04×**67°.62W**±0°.02**, h6km**±8km**, n188, σ1s.51**/202**, mb4.4**/33**, MS3.5**/4**, 32C-6D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.64	168		Pg	22 20 18.4	+0.6
IDE					Sb	22 20 27.2	-1.0
IDE	Isla Desecheo	0.64	168	⇓eP	Pg	22 20 18.4	+0.6
IDE	Isla Desecheo	0.64	168	eS	Sb	22 20 27.2	-1.0
AGPR	Aguadilla, PR	0.73	139	Pg	Pg	22 20 18.2	-1.2
AGPR				IAML		22 20 32.5	
	13µm,0.4s						
AGPR	Aguadilla, PR	0.73	139	⇓eP	Pb	22 20 20.7	+0.2
AGPR	Aguadilla, PR	0.73	139	eS	Sb	22 20 31.1	+0.4
AGPR	Aguadilla, PR	0.73	139	⇑ePg	Pb	22 20 20.2	-0.3
AGPR				⇑eSg	Sb	22 20 31.0	+0.3
AGPR				IAML		22 20 32.5	
	comp=N,11µm,0.3s						
AGPR	Aguadilla, PR	0.73	139	i P	Pb	22 20 20.2	-0.3
AGPR				eS	Sb	22 20 31.0	+0.3
AGPR				IAML		22 20 31.8	
	comp=Z,6µm,0.2s						
PRSN	Puerto Rico Se	0.91	150		Sn	22 20 37.5	-0.8
PRSN	Puerto Rico Se	0.91	150	Pg	Pg	22 20 23.0	+0.1
PRSN	Puerto Rico Se	0.91	150	⇑eP	Pb	22 20 23.7	+0.1
PRSN	Puerto Rico Se	0.91	150	eS	Sn	22 20 37.5	-0.8
LSP	Las Mesas	0.97	149		Pg	22 20 24.6	+0.4
LSP					Sn	22 20 39.4	-0.5
LSP	Las Mesas	0.97	149	⇑eP	Pg	22 20 24.6	+0.4
LSP	Las Mesas	0.97	149	eS	Sn	22 20 39.4	-0.5
AOPR	Arecibo Observ	1.05	129		Pg	22 20 25.3	-0.4
AOPR					Sg	22 20 38.0	-1.4
AOPR				IAML		22 20 53.4	
	comp=N,7µm,0.5s						
AOPR				IAML		22 20 57.1	
	comp=E,13µm,0.3s						
AOPR	Arecibo Observ	1.05	129	⇑eP	Pg	22 20 25.4	-0.3
AOPR	Arecibo Observ	1.05	129	eS	Sn	22 20 40.9	-0.9
AOPR	Arecibo Observ	1.05	129	⇑ePg	Pg	22 20 25.3	-0.4
AOPR				⇑eSg	Sn	22 20 40.8	-1.0
AOPR				IAML		22 20 53.3	
	comp=N,6µm,0.3s						
CRPR	Cabo Rojo, PR	1.11	154		Pb	22 20 25.1	-2.0
CRPR					Sg	22 20 40.7	-0.5
CRPR	Cabo Rojo, PR	1.11	154		Pb	22 20 25.3	-1.8
CRPR				IAML		22 20 47.6	
	comp=N,7µm,0.5s						
CRPR				IAML		22 20 52.0	
	comp=N,6µm,0.9s						
CRPR	Cabo Rojo, PR	1.11	154	⇑eP	Pg	22 20 27.1	+0.3
CRPR	Cabo Rojo, PR	1.11	154	eS	Sn	22 20 43.8	+0.6
CRPR	Cabo Rojo, PR	1.11	154	⇑ePg	Pb	22 20 25.9	-1.1
CRPR				⇑eSg	Sn	22 20 45.6	+2.4
CRPR				IAML		22 20 51.5	
	comp=N,8µm,0.7s						
CRPR	Cabo Rojo, PR	1.11	154	i P	Pb	22 20 26.4	-0.7
CRPR				eS	Sn	22 20 44.0	+0.8
CRPR				IAML		22 20 45.0	
	comp=Z,5µm,0.4s						
UUPR	Utuado, UPR, P	1.14	132		Sb	22 20 42.7	+0.1
UUPR	Utuado, UPR, P	1.14	132		Pb	22 20 26.6	-1.0
UUPR	Utuado, UPR, P	1.14	132	⇓eP	Pb	22 20 27.1	-0.5
UUPR	Utuado, UPR, P	1.14	132	eS	Sb	22 20 42.7	+0.1
EMPR	Esperanza - Ma	1.16	117		Pb	22 20 27.6	-0.3
EMPR	Esperanza - Ma	1.16	117	Pg	Pb	22 20 26.7	-1.2
EMPR				IAML		22 20 48.6	
	comp=Z,6µm,0.3s						
EMPR				IAML		22 20 49.0	
	comp=Z,5µm,0.5s						
EMPR	Esperanza - Ma	1.16	117	⇑eP	Pb	22 20 27.6	-0.3
EMPR	Esperanza - Ma	1.16	117	eS	Sn	22 20 45.2	+0.7
MLPR	Magueyes Islan	1.17	152	⇑eP	Pb	22 20 27.4	-0.7
MLPR	Magueyes Islan	1.17	152	eS	Sn	22 20 45.5	+0.8
MLPR	Magueyes Islan	1.17	152	⇑ePg	Pb	22 20 26.4	-1.7
MLPR				⇑eSg	Sn	22 20 45.7	+1.0
MLPR				IAML		22 20 47.7	
	comp=N,2µm,0.3s						
GBPR	Guanica, Bosqu	1.25	146		Pn	22 20 29.3	-0.2
GBPR					Sn	22 20 46.4	-0.2
GBPR	Guanica, Bosqu	1.25	146	⇓eP	Pn	22 20 29.3	-0.2
GBPR	Guanica, Bosqu	1.25	146	eS	Sn	22 20 46.4	-0.2
MIDR	Miches	1.36	269	⇑ePg	Pn	22 20 30.2	-0.7
MIDR				⇑eSg	Sg	22 20 50.8	+1.7
MIDR				IAML		22 20 53.3	
	comp=N,2µm,1.1s						
OBIP	Obispado Ponce	1.36	135		Pn	22 20 29.7	-1.3
OBIP				IAML		22 20 52.5	
	comp=N,3µm,0.4s						
OBIP	Obispado Ponce	1.36	135	⇑eP	Pn	22 20 30.3	-0.7
OBIP	Obispado Ponce	1.36	135	eS	Sg	22 20 50.3	+1.0
ECPR	Experimental S	1.38	120	Pn	Pn	22 20 29.6	-1.6
ECPR				IAML		22 20 53.7	
	comp=N,8µm,0.3s						
ECPR				IAML		22 20 54.6	
	comp=N,7µm,0.2s						
ECPR	Experimental S	1.38	120	⇑eP	Pn	22 20 30.4	-0.8
ECPR	Experimental S	1.38	120	eS	Sn	22 20 49.5	-0.3
SMDR	Samana, DR	1.51	281	⇑ePg	Pn	22 20 32.6	-0.4
SMDR				⇑eSg	Sg	22 20 55.1	+1.1
SMDR				IAML		22 20 59.8	
	comp=N,3µm,0.5s						
GCPR	Guaynabo City	1.61	116	Pn	Pn	22 20 33.6	-0.9
GCPR	Guaynabo City	1.61	116	⇑eP	Pn	22 20 34.3	-0.2
GCPR	Guaynabo City	1.61	116	eS	Sn	22 20 55.5	-0.1
SJG	San Juan	1.66	123	P	Pn	22 20 34.3	-0.8
	comp=N,386nm,0.3s,baz=303,slow=11,SNR=138						
SJG				S	Sn	22 20 54.7	-2.0
	comp=N,1µm,0.4s,baz=276,slow=19,SNR=9.3						
SJG				LR	LR	22 21 00.7	
	comp=N,504nm,19.5s,baz=21,slow=32						
SJG	San Juan	1.66	123	Pn	Pn	22 20 34.1	-1.0
SJG	San Juan	1.66	123	IAML		22 21 01.2	
	comp=N,2µm,0.5s						
SJG	San Juan	1.66	123	⇓eP	Pn	22 20 34.9	-0.2
SJG	San Juan	1.66	123	eS	Sb	22 20 57.3	-0.2
SJG	San Juan	1.66	123	⇑ePg	Pn	22 20 34.2	-0.8
SJG	San Juan	1.66	123	P	Pn	22 20 34.2	-0.9
SJG	San Juan	1.66	123	i P	Pn	22 20 34.7	-0.4
SJG				eS	Sb	22 20 58.0	+0.5
SJG				IAML		22 21 02.0	
	comp=Z,2µm,0.4s						
DR12	Loma Pena Alta	1.69	263	Pn	Pn	22 20 35.0	-0.6
HATOM	Hato Mayor del	1.69	263	⇑ePg	Pn	22 20 35.1	-0.4
HATOM				⇑eSg	Sg	22 20 59.4	-0.3
HATOM				IAML		22 21 00.0	
	comp=N,3µm,1.1s						
HUMP	Col San Antoni	1.89	117	Pn	Pn	22 20 37.4	-0.9
NADR	Nagua	2.14	279	⇑ePg	Pn	22 20 42.7	+0.9
NADR				⇑eSg	Sb	22 21 12.4	+0.9
NADR				IAML		22 21 29.1	
	comp=N,8µm,0.3s						
SDD	Santo Domingo	2.25	256	Pn	Pn	22 20 44.0	+0.8
SDD				IAML		22 21 21.0	
	comp=N,1µm,1.0s						
SDD				IAML		22 21 25.7	
	comp=E,1µm,0.8s						
DR08	Loma La Naviza	2.28	269	⇓ePg	Pb	22 20 46.0	-0.9
DR08				⇑eSg	Sb	22 21 16.5	+1.1
DR08				IAML		22 21 21.4	
	comp=N,19µm,0.2s						
BANI	BANI	2.67	257	Pn	Pn	22 20 50.8	+1.6
BANI	BANI	2.67	257	⇑ePg	Pb	22 20 52.2	-1.6
BANI				⇑eSg	Sg	22 21 30.5	-0.8
BANI				IAML		22 21 38.9	
	comp=N,2µm,0.5s						
ABDR	Alto Bandera	2.86	266	⇑ePg	Pb	22 20 55.7	-1.4
ABDR				⇑eSg	Sb	22 21 34.9	+2.4
ABDR				IAML		22 21 56.1	
	comp=N,0.2nm,0.9s						
SC01	Santiago de lo	2.97	278	Pn	Pn	22 20 54.6	+1.4
SDDR	Presa de Saban	3.47	270	Pn	Pn	22 21 02.4	+2.3
SDDR				IAML		22 22 03.1	
	comp=N,926nm,1.1s						
SDDR	Presa de Saban	3.47	270	eP	Pn	22 21 02.5	+2.5
SDDR	Presa de Saban	3.47	270	P	Pn	22 21 02.6	+2.5
PODR	Polo	3.58	257	⇑eSg	Sb	22 21 56.2	+3.2
PODR				IAML		22 22 15.9	
	comp=N,726nm,1.1s						
GRTK	Grand Turk	4.13	308	eP	Pn	22 21 03.1	-6.0
GRTK	Grand Turk	4.13	308	P	Pn	22 21 08.4	-0.7
GDHS	Morne Mazeau,	6.21	115	Pn	Pn	22 21 36.6	-1.2
MASC	Masc	6.34	282	eP	Pn	22 21 39.4	-0.1
CBE	Ff, Capester	6.44	116	Pn	Pn	22 21 40.0	-0.9
QMBU	Quimbuelo	6.88	281	eP	Pn	22 21 45.7	-1.3
QMBU				eS	Sn	22 22 59.3	-6.4
NMDO	Nuevo Mundo	7.10	284	Pn	Pn	22 21 49.2	-0.7
NMDO	Nuevo Mundo	7.10	284	eP	Pn	22 21 48.9	-1.0
NMDO				eS	Sn	22 23 03.8	-7.3
GTBY	Guantanamo Bay	7.13	279	P	Pn	22 21 53.0	+2.7
	comp=N,65nm,1.1s						
RCC	Rio Carpintero	7.68	279	eP	Pn	22 21 57.6	-0.3
RCC				eS	Sn	22 23 19.2	-6.1
URIC	Uribia, Colomb	8.41	211	P	Pn	22 22 05.7	-2.2
	comp=N,17nm,1.2s						
SDV	Santo Domingo	10.48	197	P	Pn	22 22 34.1	-2.5
	comp=N,0.4nm,0.3s,baz=0.0,slow=10,SNR=1.8						
SDV				LR	LR	22 27 17.1	
	comp=N,126nm,18.2s,baz=26,slow=42						
	comp=N,1.8nm,0.5s						
SDV	Santo Domingo	10.48	197	P	Pn	22 22 39.5	+2.9
SJCC	San Jacinto, C	11.65	220	P	Pn	22 22 50.5	-1.9
	comp=N,14nm,1.2s						
OCAC	Ocana	12.06	208	P	Pn	22 22 53.8	-4.3
PAMC	Pamplona, Colo	12.61	204	P	Pn	22 23 04.0	-2.0
	comp=N,200nmcomp=N,15nm,0.7s						
BBSR	BB Station	13.56	11	Pn	Pn	22 23 17.5	-0.8
UREC	San Jos de Ur	13.58	216	P	Pn	22 23 17.4	-1.4
	comp=N,17nm,0.4s						
PTBC	PUERTO BERRIO,	14.07	209	P	Pn	22 23 23.4	-2.1
	comp=N,17nm,1.0s						
RUSC	La Rusia	14.09	203	Pn	Pn	22 23 24.4	-1.8
RUSC	La Rusia	14.09	203	P	Pn	22 23 24.4	-1.8
	comp=N,17nm,1.3s						
DBBC	Dabeiba	14.56	216	P	Pn	22 23 30.2	-2.1
SPBC	San Pablo de B	14.70	206	P	Pn	22 23 34.2	+0.1
	comp=N,16nm,1.2s						
HELC	Santa Helena	14.89	212	P	Pn	22 23 34.7	-2.4
	comp=N,15nm,0.5s						
NORC	Norcasia	15.12	209	P	Pn	22 23 40.8	+0.9
	comp=N,12nm,0.8s						
CBOC	Ciudad Bolivar	15.42	213	P	Pn	22 23 44.5	+0.6
	comp=N,12nm,0.7s						
CHIC	Chingaza	15.49	203	P	Pn	22 23 43.3	-1.8
	comp=N,12nm,1.4s						
ROSC	El Rosal	15.53	206	P	Pn	22 23 47.4	+1.9
	comp=N,28nm,0.7s,baz=352,slow=21,SNR=9.0						
ROSC	El Rosal	15.53	206		P	22 23 50.3	+0.3
ROSC	El Rosal	15.53	206	P	P	22 23 48.3	-1.7
GUY2C	Guyana, Caldas	15.65	210	P	Pn	22 23 46.9	-0.3
	comp=N,346nmcomp=N,28nm,0.7s						
ORTC	Ortega, Tolima	16.76	207	P	Pn	22 24 01.4	+0.3
	comp=N,30nm,0.8s						
PRAC	Prado	16.79	206	P	P	22 24 02.6	-1.0
URMC	La Uribe, Meta	17.01	204	P	P	22 24 06.7	+0.6
Y60A	Bolivia	17.67	330		P	22 24 13.9	+0.8
Y60A				IAmb	IAmb	22 24 30.6	
	comp=Z,24nm,0.7s						
BOAV	Boa Vista	17.92	156		Pn	22 24 14.9	-0.5
SOCE	Pocosol	18.54	245		P	22 24 22.0	-1.0
X58A	Rowland	18.66	328	P	Pn	22 24 27.3	+2.9
X58A				IAmb	IAmb	22 24 30.1	
	comp=Z,23nm,0.5s						
JTS	Las Juntas de	18.87	245	P	Pn	22 24 30.8	+3.7
	comp=Z,6.4nm,0.6s,baz=356,slow=10,SNR=5.0						
JTS				LR	LR	22 30 46.1	
	comp=Z,60nm,20.3s,baz=90,slow=34						
JTS	Las Juntas de	18.87	245	P	Pn	22 24 28.0	+0.9
JTS				IAmb	IAmb	22 24 32.4	
	comp=Z,22nm,1.2s						
FLOC	Florencia	19.03	205	P	Pn	22 24 28.6	-0.5
FLOC				IAmb	IAmb	22 24 33.7	
	comp=Z,46nm,1.3s						
BIRD	Birdtown, Kers	19.30	326	Pn	Pn	22 24 34.2	+2.0
BIRD				IAmb	IAmb	22 24 38.5	
	comp=Z,10.0nm,0.5s						
V58A	Windy Hill, Pi	19.56	331		Pn	22 24 38.9	+3.7
HODGE	Hodges	19.99	322		Pn	22 24 44.3	+4.0
152A	Waverly Hall	20.50	315	P	Pn	22 24 46.0	-0.3
152A				IAmb	IAmb	22 24 51.1	
	comp=Z,19nm,1.1s						
T57A	Hurt	20.62	333	P	Pn	22 24 47.9	+0.1
BG3	Lake Jocassee	20.92	323	P	Pn	22 24 50.6	-0.7
V53A	Saluda	21.34	324	P	P	22 24 53.8	+0.4
V53A				IAmb	IAmb	22 25 07.5	
	comp=Z,14nm,1.1s						
OTAV	Otavalo	21.48	211	P	P	22 24 55.0	-0.4
OTAV				IAmb	IAmb	22 25 03.0	
	comp=Z,35nm,1.2s						
TKL	Tuckaleechee C	21.88	323	P	P	22 25 01.2	+2.0
	comp=Z,2.5nm,0.7s,baz=153,slow=11,SNR=4.1						
TKL				LR	LR	22 34 30.8	
	comp=Z,126nm,18.6s,baz=58,slow=39						
	comp=Z,2.5nm,0.7s						
TKL	Tuckaleechee C	21.88	323	P	P	22 25 01.1	+2.0
LRAL	Lakeview Retre	22.27	313	P	P	22 25 06.3	+3.0
LRAL				IAmb	IAmb	22 25 09.6	
	comp=Z,28nm,1.5s						
Y49A	Blount Mountai	22.34	315	P	P	22 25 06.2	+2.0
Y49A				IAmb	IAmb	22 25 08.0	
	comp=Z,9.7nm,0.8s						
W50A	Signal Mountai	22.48	319	P	P	22 25 05.9	+0.2
W50A				IAmb	IAmb	22 25 10.9	
	comp=Z,9.5nm,0.8s						
R50A	Paris	24.08	326	P	P	22 25 23.6	+1.9
WVT	Waverly	24.65	318	P	P	22 25 27.6	+0.7
WVT				IAmb	IAmb	22 25 28.4	
	comp=Z,19nm,1.5s						
SIUC	Southern Illin	26.50	319	P	P	22 25 44.0	+0.3
SIUC				IAmb	IAmb	22 25 45.8	
	comp=Z,12nm,0.8s						
S44A	Carbondale	26.51	319	P	P	22 25 44.7	+0.9
S44A				IAmb	IAmb	22 25 46.1	
	comp=Z,10nm,0.8s						
N47A	Urbana	26.73	328	P	P	22 25 46.5	+0.8
N47A				IAmb	IAmb	22 25 49.7	
	comp=Z,7.4nm,0.8s						
WHAR	Wooly Hollow	27.18	312	P	P	22 25 51.6	+1.7
WHAR				IAmb	IAmb	22 25 58.0	
	comp=Z,8.4nm,1.1s						
ATAH	Atahualpa	28.07	203	LR	LR	22 39 21.1	
	comp=Z,82nm,18.6s,baz=35,slow=42						
I42A	Draeger Farm,	30.56	329	P	P	22 26 21.1	+1.2
I42A				IAmb	IAmb	22 26 21.7	
	comp=Z,7.4nm,0.8s						
WMOK	Wichita Mounta	31.74	306	P	P	22 26 30.2	-0.2
G40A	Rib Lake	32.20	329	P	P	22 26 35.1	+0.8
TXAR	Lajitas Array	34.33	294	P	P	22 26 52.2	-1.0
	comp=Z,0.5nm,0.7s,baz=126,slow=10,SNR=7.1						
TXAR				PcP	PcP	22 29 27.4	-2.0
	comp=Z,1.4nm,1.0s,baz=324,slow=1.5,SNR=4.2						
	comp=Z,0.5nm,0.7s						
TXAR	Lajitas Array	34.33	294	P	P	22 26 53.7	+0.5
TX31	Lajitas Ar. Si	34.33	294	P	P	22 26 53.7	+0.5
VHRN	Van Horn	35.70	296	P	P	22 27 05.5	+0.4
VHRN				IAmb	IAmb	22 27 06.7	
	comp=Z,4.1nm,1.0s						
K30B	Basset	35.86	318	P	P	22 27 06.6	+0.5
EPLO	Experimental L	37.05	332	P	P	22 27 16.4	+0.2
SDCO	Great Sand Dun	37.87	308	P	P	22 27 24.3	+0.6
ULM	Lac du Bonnet	38.44	331	P	P	22 27 27.3	-0.6
	comp=Z,2.7nm,0.8s,baz=127,slow=5.6,SNR=3.1						
	comp=Z,2.7nm,0.8s						
ULM	Lac du Bonnet	38.44	331	IAmb	IAmb	22 27 45.4	
	comp=Z,8.8nm,1.3s						
BDFB	Brasilia	39.48	149	LR	LR	22 43 58.9	
	comp=Z,94nm,18.5s,baz=234,slow=36						
PV13	Radium Mtn., P	40.50	307	P	P	22 27 46.9	+1.3
PV18	Skein Mesa, Pa	40.59	307	P	P	22 27 47.2	+0.9
PV18				IAmb	IAmb	22 28 04.3	
	comp=Z,8.0nm,0.9s						
RLMT	Red Lodge	43.18	317	P	P	22 28 08.0	+0.6
RLMT				IAmb	IAmb	22 28 16.5	
	comp=Z,12nm,1.4s						
MOOW	Moose Ponds	43.65	314	P	P	22 28 11.8	+0.6
FCC	Fort Churchill	44.13	341	P	P	22 28 14.9	+0.4
PFO	Pinyon Flats O	45.73	299	LR	LR	22 50 20.7	
	comp=Z,56nm,18.2s,baz=76,slow=40						
NVAR	Mina Array Bea	47.84	305	P	P	22 28 45.6	+1.2
	comp=Z,1.9nm,0.9s,baz=104,slow=5.1,SNR=6.5						
	comp=Z,1.9nm,0.9s						
YKA	Yellowknife Ar	54.09	335	P	P	22 29 30.7	-0.1
	comp=Z,2.1nm,0.9s,baz=116,slow=6.5,SNR=18						
	comp=Z,2.1nm,0.9s						
YKA	Yellowknife Ar	54.09	335	P	P	22 29 30.3	-0.4
YKAW3	Yellowknife Wh	54.13	335	P	P	22 29 30.4	-0.7
YKAW3				IAmb	IAmb	22 29 59.7	
	comp=Z,9.0nm,1.5s						
RES	Resolute Bay	57.61	352	P	P	22 29 56.1	+0.3
RES				IAmb	IAmb	22 30 29.3	
	comp=Z,6.5nm,1.3s						
ESDC	Sonseca Array	57.99	55	P	P	22 30 00.1	+0.9
	comp=Z,1.9nm,0.8s,baz=271,slow=6.8,SNR=7.5						
	comp=Z,1.9nm,0.8s						
EKA	Eskdalemuir Ar	60.07	37	P	P	22 30 13.5	+0.2
	comp=Z,2.5nm,1.0s,baz=302,slow=4.8,SNR=3.8						
	comp=Z,2.5nm,1.0s						
DBIC	Dimbokro	62.13	92	P	P	22 30 26.7	-1.2
	comp=Z,3.1nm,0.7s,baz=238,slow=4.9,SNR=3.6						
	comp=Z,3.1nm,0.7s						
DBIC	Dimbokro	62.13	92	P	P	22 30 25.6	-2.3
A36M	Sachs Harbour	62.27	343	P	P	22 30 27.4	-0.5
G31M	Satah River	63.55	336	P	P	22 30 35.6	-0.9
G31M				IAmb	IAmb	22 30 37.3	
	comp=Z,4.4nm,1.0s						
INK	Inuvik	63.63	338	P	P	22 30 35.7	-1.2
INK				IAmb	IAmb	22 30 37.2	
	comp=Z,4.9nm,0.9s						
DAWY	Dawson	65.10	333	P	P	22 30 46.9	+0.1
F28M	Old Crow	65.82	336	P	P	22 30 51.4	+0.1
F28M				IAmb	IAmb	22 30 52.1	
	comp=Z,3.6nm,0.9s						
BCAR	Beaver Creek A	66.05	331	P	P	22 30 53.2	+0.2
SCRK	Sand Creek	67.11	332	P	P	22 31 00.6	+0.8
BMAR	Burnt Mountain	67.59	336	P	P	22 31 03.3	+0.6
E25K	Arctic Village	68.02	337	P	P	22 31 05.8	+0.5
E25K				IAmb	IAmb	22 31 06.7	
	comp=Z,4.4nm,0.9s						
NB2	NORSAR Subarra	68.16	31	P	P	22 31 07.8	+1.5
	comp=Z,1.2nm,0.8s,baz=269,slow=6.5						
NOA	NORSAR Array B	68.16	31	P	P	22 31 06.6	+0.3
	comp=Z,1.0nm,0.7s,baz=271,slow=6.4,SNR=5.6						
	comp=Z,1.0nm,0.7s						
IL31		68.40	333	P	P	22 31 07.3	-0.4
ILAR	Eielson Array	68.40	333	P	P	22 31 07.9	+0.1
	comp=Z,1.9nm,0.9s,baz=99,slow=4.6,SNR=15						
	comp=Z,1.9nm,0.9s						
ILAR	Eielson Array	68.40	333	P	P	22 31 07.4	-0.3
I23K	Minto, Yukon-K	69.45	333	P	P	22 31 14.1	-0.2
TRF	Thorofare Moun	69.91	332	P	P	22 31 17.1	-0.2
PPLA	Purkeypile	70.80	331	P	P	22 31 22.4	-0.4
IMAR	Indian Mountai	71.24	334	P	P	22 31 25.0	-0.2
ARCES	ARCESS Array B	73.44	21	P	P	22 31 38.8	+0.4
	comp=Z,5.5nm,0.9s,baz=291,slow=4.6,SNR=11						
	comp=Z,5.5nm,0.9s						
ARCES	ARCESS Array B	73.44	21	P	P	22 31 39.0	+0.7
FINES	FINESS Array B	75.24	30	P	P	22 31 49.9	+0.9
	comp=Z,1.8nm,0.8s,baz=250,slow=5.5,SNR=4.7						
	comp=Z,1.8nm,0.8s						
FINES	FINESS Array B	75.24	30	P	P	22 31 49.7	+0.8
MLR	Muntele Rosu	79.11	46	P	P	22 32 12.2	+1.0
BRTR	Keskin Array B	86.35	49	P	P	22 32 49.7	+0.7
	comp=Z,0.6nm,0.7s,baz=301,slow=4.3,SNR=4.1						
	comp=Z,0.6nm,0.7s						
STKA	Stephens Creek	150.78	238	PKPbc	PKPdf	22 39 55.9	+2.2
	comp=Z,2.7nm,0.8s,baz=132,slow=2.6,SNR=5.1						
WRA	Warramunga Arr	159.28	264	PKP	PKPdf	22 40 04.6	-1.1
	comp=Z,0.7nm,0.9s,baz=85,slow=1.6,SNR=4.5						
ASAR	Alice Springs	159.43	253	PKPab	PKPab	22 40 40.1	-3.4
	comp=Z,0.9nm,0.8s,baz=88,slow=4.0,SNR=6.7						

WEL 16 22:26:36.8±0.7**, 36°S**±4°×**17°1E**±°**, h33km, M4.1**/11**, ML3.9**/23**, MLv4.1**/11**, Error ellipse: s-maj=5.9km s-min=4.9km az=137.1, confirmed, Northwest of New Zealand**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUZ	Omahuta	2.23	63	P	Pn	22 27 09.6	-1.8
WCZ	Waipu Caves	2.59	84	P	Pn	22 27 15.3	-1.1
WCZ				S	Sn	22 27 47.6	+1.0
WTAZ	Waiatarua	2.82	105	P	Pn	22 27 19.8	+0.2
WTAZ				S	Sn	22 27 53.5	+1.1
AWAZ	Awhitu Peninsu	2.90	107	P	Pn	22 27 20.5	-0.2
AWAZ				S	Sn	22 27 55.9	+1.5
HBAZ	Herne Bay Bore	2.92	103	P	Pn	22 27 20.5	-0.4
HBAZ				S	Sn	22 27 55.3	+0.4
EPAZ	Eden Park BICE	2.94	103	P	Pn	22 27 20.7	-0.5
EPAZ				S	Sn	22 27 55.3	0.0
ABAZ	Army Bay	2.97	98	P	Pn	22 27 21.6	-0.1
ABAZ				S	Sn	22 27 56.1	0.0
MBAZ	Motutapu North	3.04	101	P	Pn	22 27 22.5	-0.2
MBAZ				S	Sn	22 27 60.0	+2.1
ETAZ	East Tamaki Re	3.10	104	P	Pn	22 27 22.9	-0.5
ETAZ				S	Sn	22 28 00.1	+0.8
KBAZ	Karaka Road Bo	3.10	107	P	Pn	22 27 23.8	+0.4
KBAZ				S	Sn	22 28 00.3	+0.9
WIAZ	Waiheke Island	3.23	101	S	Sn	22 28 03.4	+0.8
MKAZ	Moumakai	3.31	106	P	Pn	22 27 26.8	+0.4
MKAZ				S	Sn	22 28 04.6	+0.1
GRZ	Great Barrier	3.46	91	P	Pn	22 27 28.1	-0.3
GRZ				S	Sn	22 28 09.3	+1.1
NPCS	New Plymouth C	3.62	141	S	Sn	22 28 13.2	+1.0
NBEZ	Newall Road No	3.69	145	P	Pn	22 27 31.2	-0.3
NBEZ				S	Sn	22 28 12.8	-1.0
HIZ	Hauiti	3.70	129	P	Pn	22 27 31.4	-0.2
HIZ				S	Sn	22 28 13.4	-0.6
TOZ	Tahuroa Road	3.76	114	P	Pn	22 27 32.8	+0.3
TOZ				S	Sn	22 28 14.7	-0.9
DREZ	Durham Road	3.78	142	P	Pn	22 27 33.1	+0.2
DREZ				S	Sn	22 28 16.2	0.0
VRZ	Vera Road	4.03	136	P	Pn	22 27 35.9	-0.4
VRZ				S	Sn	22 28 22.3	-0.1
TLZ	Tolley Road	4.05	122	P	Pn	22 27 37.3	+0.8
TLZ				S	Sn	22 28 23.9	+1.2
LREZ	Lake Rotokare	4.09	142	P	Pn	22 27 38.5	+1.4
LREZ				S	Sn	22 28 27.8	+4.0
NNVZ	North Ngauruho	4.54	131	P	Pn	22 27 44.3	+0.9
NNVZ				S	Sn	22 28 37.2	+2.1
NTVZ	North Tongarir	4.56	130	P	Pn	22 27 44.6	+1.0
NTVZ				S	Sn	22 28 37.0	+1.4
NGZ	Ngauruhoe	4.56	131	P	Pn	22 27 44.5	+0.8
TMVZ	Te Maari	4.59	130	P	Pn	22 27 45.1	+1.1
TMVZ				S	Sn	22 28 36.8	+0.7
MAVZ	Matarangi	4.59	132	P	Pn	22 27 45.1	+0.9
MAVZ				S	Sn	22 28 37.3	+0.7
WNVZ	Wahianoa	4.65	133	P	Pn	22 27 45.7	+0.8
WNVZ				S	Sn	22 28 38.7	+0.8
QRZ	Quartz Range	4.68	167	P	Pn	22 27 43.2	-2.0
QRZ				S	Sn	22 28 33.2	-5.2
NNZ	Nelson	5.24	161	P	Pn	22 27 52.1	-0.8
NNZ				S	Sn	22 28 49.8	-2.4
TSZ	Takapari Road	5.35	137	P	Pn	22 27 56.9	+2.5
TSZ				S	Sn	22 28 59.4	+4.5
MRZ	Mangatainoka R	5.59	143	P	Pn	22 27 59.7	+2.1
THZ	Tophouse	5.66	167	P	Pn	22 27 58.4	-0.3
THZ				S	Sn	22 29 01.6	-0.9
KHZ	Kahutara	6.42	164	P	Pn	22 28 10.9	+1.9
LTZ	Lake Taylor	6.57	173	P	Pn	22 28 10.8	-0.3
LTZ				S	Sn	22 29 23.1	-1.8
OXZ	Oxford	7.09	175	P	Pn	22 28 16.9	-1.3
OXZ				S	Sn	22 29 31.3	-6.4
FOZ	Fox Glacier	7.34	188	P	Pn	22 28 18.9	-2.7
FOZ				S	Sn	22 29 36.4	-7.3

RPZ	**Rata Peaks**	**7.45**	**181**	P	Pn	22 28 23.1	-0.1
LBZ	**Lake Benmore**	**8.15**	**185**	P	Pn	22 28 33.9	+1.1
LBZ				S	Sn	22 29 59.3	-4.5
ODZ	**Otahua Downs**	**8.79**	**182**	P	Pn	22 28 39.5	-2.0
ODZ				S	Sn	22 30 12.8	-6.6
MLZ	**Mavora Lakes**	**9.39**	**193**	P	Pn	22 28 48.6	-1.2
WHZ	**Wether Hill Ro**	**9.93**	**193**	P	Pn	22 28 56.1	-1.0
SYZ	**Scrubby Hill**	**10.38**	**188**	P	Pn	22 29 01.8	-1.5

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*IDC **16** 22:47:45.6±2.6, 5°63N×126°77E, h87^{km}±22^{km}, mb3.5/9, mbtmp3.8/9, MS3.0/2, Error ellipse: s-maj=58.4km s-min=12.3km az=70.0*

*NEIC **16** 22:47:45.2±2.4, 5°65N±0°09×126°8E±0°2, h75^{km}±8^{km}, mb4.2/15, Error ellipse: s-maj=27.8km s-min=9.4km az=71.0*

*DJA **16** 22:47:45.4±0.6, 5°N±5°×12°7E±°, h10^{km}, M4.6/13, mB5.2/6, mb4.7/8, MLv4.5/13, Mw(mB)4.6/6*

ISC 16 22:47:44.6±0.6**, 5°61N**±0°05×**126°69E**±0°09**, h75^{km}, n44, σ1^{s}50**/48**, mb4.0**/17**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.82**	**323**	P	**Pn**	**22 48 14.5**	**+0.4**
	166nm,0.3s,baz=266,slow=16,SNR=1.5						
DAV				S	**Sn**	**22 48 39.4**	**+3.0**
	259nm,0.3s,baz=265,slow=19,SNR=6.4						
DAV				LR	LR	22 48 56.6	
	comp=Z,63nm,20.2s,baz=189,slow=38						
DAV	**Davao City (W)**	**1.82**	**323**		**Pn**	**22 48 14.8**	**+0.7**
DAV	**Davao City (W)**	**1.82**	**323**	P	**Pn**	**22 48 17.9**	**+3.8**
SGSI	**Sangihe**	**2.24**	**211**	P	**Pn**	**22 48 20.6**	**+1.0**
SGSI				S	**Sn**	**22 48 48.6**	**+2.2**
GAMI	**Galela, Maluku**	**3.90**	**164**	P	**Pn**	**22 48 44.1**	**+1.8**
TNTI	**Ternate**	**4.86**	**172**	Pn	**Pn**	**22 48 57.0**	**+1.8**
TNTI	**Ternate**	**4.86**	**172**	P	**Pn**	**22 48 57.0**	**+1.8**
GTOI	**Gorontalo**	**6.16**	**217**	P	**Pn**	**22 49 13.7**	**+0.6**
	0.2nm43nm,0.5s						
MRSI	**Marisa**	**6.97**	**223**	P	**Pn**	**22 49 25.6**	**+1.5**
TOLI2	**Tolitoli**	**7.40**	**233**	Pn	**Pn**	**22 49 29.0**	**-1.0**
SANI	**Sanana**	**7.64**	**185**	P	**Pn**	**22 49 31.8**	**-1.6**
	2μm28nm,0.4s						
LUWI	**Luwuk**	**7.68**	**211**	Pn	**Pn**	**22 49 38.1**	**+4.2**
LUWI	**Luwuk**	**7.68**	**211**	P	**Pn**	**22 49 35.7**	**+1.8**
	0.3nm66nm,0.8s						
APSI	**Ampana**	**8.21**	**218**	P	**Pn**	**22 49 43.6**	**+2.5**
	958nm55nm,0.7s						
MPSI	**Mapaga**	**8.57**	**233**	P	**Pn**	**22 49 45.4**	**-0.6**
NLAI	**Namlea**	**8.80**	**177**	P	**Pn**	**22 49 48.6**	**-0.6**
TWG	**Pinlang**	**17.95**	**343**	P	**P**	**22 51 47.2**	**-1.6**
TWG				IAmb	IAmb	22 51 55.6	
	comp=Z,12nm,1.1s						
JOW	**Kunigami**	**21.16**	**4**	LR	LR	23 00 04.8	
	comp=Z,29nm,20.9s,baz=318,slow=35						
KNRA	**Kununurra**	**21.25**	**174**	P	**P**	**22 52 25.5**	**+0.7**
FITZ	**Fitzroy Crossi**	**23.58**	**183**	P	**P**	**22 52 49.5**	**+0.8**
	comp=Z,2.3nm,0.6s,baz=16,slow=7.1,SNR=9.9						
	comp=Z,2.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**23.58**	**183**	P	**P**	**22 52 49.1**	**+0.3**
WB0	**Warramunga Arr**	**26.33**	**163**	P	**P**	**22 53 13.4**	**-0.3**
WB0				IAmb	IAmb	22 53 16.9	
	comp=Z,3.6nm,0.6s						
WRA	**Warramunga Arr**	**26.48**	**164**	P	**P**	**22 53 15.4**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=341,slow=10,SNR=24						
	comp=Z,1.2nm,0.6s						
WRA	**Warramunga Arr**	**26.48**	**164**	P	**P**	**22 53 12.9**	**-2.2**
WR8	**Warramunga Arr**	**26.54**	**163**	P	**P**	**22 53 16.0**	**+0.4**
WR8				IAmb	IAmb	22 53 38.2	
	comp=Z,3.4nm,1.1s						
MBWA	**Marble Bar**	**27.47**	**194**	P	**P**	**22 53 22.7**	**-1.2**
MBWA				IAmb	IAmb	22 53 24.6	
	comp=Z,8.1nm,0.9s						
PSA00	**Pilbara Seismi**	**27.84**	**194**	P	**P**	**22 53 26.7**	**-0.5**
PSA00				IAmb	IAmb	22 53 51.6	
	comp=Z,8.6nm,1.0s						
ASAR	**Alice Springs**	**29.94**	**167**	P	**P**	**22 53 45.9**	**0.0**
	comp=Z,1.0nm,0.6s,baz=346,slow=6.9,SNR=18						
ASAR				PcP	**PcP**	**22 56 47.4**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=350,slow=2.6,SNR=6.8						
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**29.94**	**167**	P	**P**	**22 53 45.2**	**-0.7**
ASAR					**PcP**	**22 56 47.1**	**0.0**
MORW	**Morawa**	**35.97**	**196**	P	**P**	**22 54 37.6**	**-0.8**
MORW				IAmb	IAmb	22 54 39.6	
	comp=Z,3.8nm,1.1s						
FORT	**Forrest**	**36.21**	**178**	P	**P**	**22 54 40.3**	**0.0**
FORT				IAmb	IAmb	22 54 40.8	
	comp=Z,3.5nm,0.8s						
USRK	**Ussuriysk Ar.**	**38.71**	**6**	P	**P**	**22 55 01.4**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=206,slow=8.1,SNR=3.0						
	comp=Z,1.2nm,0.6s						
BBOO	**Buckleboo**	**39.23**	**167**	P	**P**	**22 55 06.6**	**+0.7**
NWAO	**Narrogin (SRO)**	**39.37**	**193**	LR	LR	23 13 32.3	
	comp=Z,36nm,18.5s,baz=42,slow=39						
NWAO	**Narrogin (SRO)**	**39.37**	**193**	P	**P**	**22 55 07.2**	**+0.2**
NWAO				IAmb	IAmb	22 55 20.9	
	comp=Z,4.4nm,0.8s						
STKA	**Stephens Creek**	**39.90**	**160**	P	**P**	**22 55 09.1**	**-2.2**
	comp=Z,0.9nm,0.4s,baz=333,slow=10,SNR=3.4						
	comp=Z,0.9nm,0.4s						
STKA	**Stephens Creek**	**39.90**	**160**	P	**P**	**22 55 11.5**	**+0.2**
SONM	**Songino Array**	**45.52**	**341**	P	**P**	**22 55 56.8**	**0.0**
	comp=Z,0.3nm,0.4s,baz=145,slow=5.3,SNR=1.8						
	comp=Z,0.3nm,0.4s						
SONM	**Songino Array**	**45.52**	**341**	P	**P**	**22 55 57.5**	**+0.7**
MKAR	**Makanchi Array**	**56.01**	**325**	P	**P**	**22 57 14.7**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=119,slow=7.2,SNR=11						
MKAR				PcP	**PcP**	**22 58 12.4**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=102,slow=5.5,SNR=2.0						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**56.01**	**325**	P	**P**	**22 57 14.3**	**-1.3**
MKAR				PcP	**PcP**	**22 58 12.4**	**-0.8**
KURBB	**Kurchatov Arra**	**60.15**	**327**	P	**P**	**22 57 42.9**	**-1.5**
	comp=Z,0.4nm,0.6s,baz=130,slow=5.5,SNR=3.2						
	comp=Z,0.4nm,0.6s						
KURK	**Kurchatov**	**60.15**	**327**	P	**P**	**22 57 42.5**	**-1.9**
KURK				IAmb	IAmb	22 58 06.5	
	comp=Z,1.3nm,0.8s						
BVAR	**Borovoye Array**	**65.74**	**327**	P	**P**	**22 58 22.5**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=133,slow=6.3,SNR=2.7						
	comp=Z,0.3nm,0.3s						

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*IDC **16** 22:48:03.8±7.1, 21°66N×142°96E, h253^{km}±66^{km}, mb3.4/9, mbtmp4.0/10, Error ellipse: s-maj=43.9km s-min=12.7km az=76.0*

ISC 16 22:48:09.0±1.0**, 21°7N**±0°1×**143°1E**±0°3**, h311^{km}, n14, σ1^{s}15**/13**, mb3.5**/10**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.48**	**351**	P	Pn	22 49 19.3	-13
	32nm,0.3s,baz=104,slow=23,SNR=9.8						
JCJ				S	S	22 50 21.3	-18
	68nm,0.4s,baz=302,slow=23,SNR=8.2						
MJAR	**Matsushiro Arr**	**15.43**	**345**	P	**P**	**22 51 27.6**	**-2.5**
	1.4nm,0.4s,baz=166,slow=10,SNR=6.7						
SONM	**Songino Array**	**39.33**	**321**	P	**P**	**22 55 10.9**	**+2.1**
	0.4nm,0.3s,baz=136,slow=6.8,SNR=6.1						
WRA	**Warramunga Arr**	**42.23**	**192**	P	**P**	**22 55 32.1**	**-0.4**
	2.5nm,0.7s,baz=18,slow=8.9,SNR=16						
	2.5nm,0.7s						
FITZ	**Fitzroy Crossi**	**43.07**	**205**	P	**P**	**22 55 39.0**	**-0.2**
	1.3nm,0.4s,baz=50,slow=7.9,SNR=1.6						
	1.3nm,0.4s						
ASAR	**Alice Springs**	**45.94**	**192**	P	**P**	**22 56 01.2**	**-0.5**
	0.5nm,0.5s,baz=14,slow=13,SNR=6.5						
	0.5nm,0.5s						
STKA	**Stephens Creek**	**53.26**	**182**	P	**P**	**22 56 56.2**	**-0.1**
	1.2nm,0.5s,baz=344,slow=7.0,SNR=2.8						
	1.2nm,0.5s						
MKAR	**Makanchi Array**	**54.68**	**313**	P	**P**	**22 57 06.0**	**-0.6**
	0.2nm,0.6s,baz=78,slow=10,SNR=4.8						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**57.51**	**317**	P	**P**	**22 57 26.2**	**0.0**
	0.4nm,0.5s,baz=93,slow=7.5,SNR=9.5						
	0.4nm,0.5s						
BVAR	**Borovoye Array**	**62.66**	**320**	P	**P**	**22 58 01.1**	**+0.1**
	1.0nm,0.4s,baz=100,slow=7.6,SNR=12						
	1.0nm,0.4s						
ARCES	**ARCESS Array B**	**78.94**	**341**	P	**P**	**22 59 38.8**	**+0.8**
	2.3nm,0.8s,baz=65,slow=6.1,SNR=1.6						
	2.3nm,0.8s						
FINES	**FINESS Array B**	**83.19**	**334**	P	**P**	**23 00 00.1**	**-0.3**
	3.3nm,0.8s,baz=61,slow=7.6,SNR=7.2						
	3.3nm,0.8s						

PLCA	**Paso Flores**	**145.78**	**131**	PKPbc	**PKPab**	**23 07 13.2**	**+0.3**
	2.2nm,0.6s,baz=236,slow=4.4,SNR=10						
LPAZ	**La Paz**	**150.00**	**85**	PKPbc	**PKiKP**	**23 07 26.1**	**+0.9**
	0.9nm,0.4s,baz=38,slow=2.8,SNR=5.3						

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*RSPR **16** 22:52:57.9, 19°19N×67°98W, h23^{km}±33^{km}, MD2.8/3*

*NEIC **16** 22:52:59.7±1.0, 19°05N±0°03×67°60W±0°04, h14^{km}±5^{km}, ML2.3/12, Md2.8/3(RSPR), Error ellipse: s-maj=6.4km s-min=4.4km az=67.0*

ISC 16 22:52:56.9±1.7**, 19°19N**±0°08×**67°61W**±0°05**, h9^{km}**±11^{km}**, n27, σ0^{s}65**/33**, 1C-4D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.81**	**171**		**Pg**	**22 53 12.7**	**+0.2**
IDE					**Sg**	**22 53 22.1**	**-0.9**
IDE	**Isla Desecheo**	**0.81**	**171**	⇑*i*P	**Pg**	**22 53 12.7**	**+0.2**
IDE	**Isla Desecheo**	**0.81**	**171**	*e*S	**Sg**	**22 53 22.1**	**-0.9**
AGPR	**Aguadilla, PR**	**0.86**	**146**		**Pn**	**22 53 15.0**	**-0.2**
AGPR					**Sb**	**22 53 26.2**	**+0.5**
AGPR	**Aguadilla, PR**	**0.86**	**146**	⇑*i*P	**Pn**	**22 53 15.0**	**-0.2**
AGPR	**Aguadilla, PR**	**0.86**	**146**	*e*S	**Sb**	**22 53 26.2**	**+0.5**
LSP	**Las Mesas**	**1.12**	**154**		**Pg**	**22 53 18.9**	**+0.4**
LSP					**Sb**	**22 53 33.7**	**+0.4**
LSP	**Las Mesas**	**1.12**	**154**	⇑*e*P	**Pg**	**22 53 18.9**	**+0.4**
LSP	**Las Mesas**	**1.12**	**154**	*e*S	**Sb**	**22 53 33.7**	**+0.4**
AOPR	**Arecibo Observ**	**1.17**	**136**	Pn	**Pg**	**22 53 20.0**	**+0.7**
AOPR					**Sb**	**22 53 34.1**	**-0.4**
AOPR				IAML		22 53 46.1	
	comp=N,83nm,1.4s						
AOPR	**Arecibo Observ**	**1.17**	**136**	⇓*i*P	**Pg**	**22 53 20.0**	**+0.7**
AOPR	**Arecibo Observ**	**1.17**	**136**	*e*S	**Sn**	**22 53 35.4**	**-0.2**
UUPR	**Utuado, UPR, P**	**1.25**	**138**		**Pg**	**22 53 21.4**	**+0.4**
UUPR					**Sb**	**22 53 36.6**	**-0.5**
UUPR	**Utuado, UPR, P**	**1.25**	**138**	⇑*i*P	**Pg**	**22 53 21.4**	**+0.4**
UUPR	**Utuado, UPR, P**	**1.25**	**138**	*e*S	**Sb**	**22 53 36.6**	**-0.5**
CRPR	**Cabo Rojo, PR**	**1.27**	**158**	Pn	**Pb**	**22 53 21.1**	**+0.1**
CRPR				Sn	**Sb**	**22 53 36.3**	**-1.1**
CRPR				IAML		22 53 41.9	
	comp=E,66nm,1.1s						
CRPR				IAML		22 53 42.5	
	comp=N,60nm,1.0s						
CRPR	**Cabo Rojo, PR**	**1.27**	**158**	⇓*e*P	**Pg**	**22 53 22.9**	**+1.7**
CRPR	**Cabo Rojo, PR**	**1.27**	**158**	*e*S	**Sn**	**22 53 38.4**	**+0.4**
MLPR	**Magueyes Islan**	**1.32**	**156**	⇓*e*P	**Pg**	**22 53 23.0**	**+0.7**
MLPR	**Magueyes Islan**	**1.32**	**156**	*e*S	**Sb**	**22 53 39.9**	**+0.8**
ECPR	**Experimental S**	**1.46**	**126**	⇓*i*P	**Pg**	**22 53 25.1**	**0.0**
ECPR	**Experimental S**	**1.46**	**126**	*e*S	**Sg**	**22 53 44.9**	**+0.9**
OBIP	**Obispado Ponce**	**1.48**	**140**	Pn	**Pb**	**22 53 24.0**	**-0.7**
GCPR	**Guaynabo City**	**1.69**	**121**	Pn	**Pb**	**22 53 27.7**	**-0.5**
GCPR				IAML		22 53 44.7	
	comp=E,30nm,2.5s						
DR12	**Loma Pena Alta**	**1.72**	**257**	Pn	**Pg**	**22 53 30.0**	**+0.1**
SJG	**San Juan**	**1.75**	**127**	Pn	**Pb**	**22 53 28.7**	**-0.6**
SJG				IAML		22 53 54.7	
	comp=E,29nm,0.3s						
SJG				IAML		22 53 54.9	
	comp=E,30nm,0.6s						
SDDR	**Presa de Saban**	**3.48**	**267**	Pn	**Pn**	**22 53 51.9**	**+0.5**

TRN 16 23:40:53.0, 15°28N×61°13W, h138^{km}, MD3.6, Near East of Dominica., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLPL	**La Plaine**	**0.13**	**296**	*e*P	Pn	23 41 13.2	+1.5
DLPL				*e*S	Sn	23 41 26.9	+1.2
DSLB	**Salisbury**	**0.33**	**300**	*e*P	Pn	23 41 13.7	+1.5
DSLB				*e*S	Sn	23 41 27.8	+1.1
DWS	**Wesley**	**0.34**	**329**	*e*P	Pn	23 41 13.7	+1.6
DWS				*e*S	Sn	23 41 28.0	+1.3
SVN	**Savane Anatole**	**0.43**	**185**	*e*P	Pn	23 41 14.1	+1.4
SVN				*e*S	Sn	23 41 28.9	+1.3
ILAM	**Ilet Lapin Mar**	**0.55**	**154**	*e*P	Pn	23 41 14.7	+1.5
ILAM				*e*S	Sn	23 41 29.6	+1.1
BIM	**Bigot**	**0.76**	**176**	*e*P	Pn	23 41 16.1	+1.5
BIM				*e*S	Sn	23 41 31.8	+0.7
TBG	**Guadaloupe-3**	**0.76**	**319**	*e*P	Pn	23 41 15.6	+1.1
TBG				*e*S	Sn	23 41 31.9	+0.9
ATGZ	**Broadband at L**	**1.00**	**325**	*e*P	Pn	23 41 18.3	+1.7
ATGZ				*e*S	Sn	23 41 35.1	+0.6
DSDZ	**La Diserade, G**	**1.03**	**3**	*e*P	Pn	23 41 18.3	+1.4
DSDZ				*e*S	Sn	23 41 36.1	+1.0
DHSZ	**Broadband at M**	**1.17**	**328**	*e*P	Pn	23 41 19.7	+1.6
DHSZ				*e*S	Sn	23 41 39.7	+2.4
SLBI	**Saint Lucia, B**	**1.25**	**173**	*e*P	Pn	23 41 20.0	+1.0
SLBI				*e*S	Sn	23 41 39.2	+0.3
SLCP	**Castries, St.**	**1.27**	**174**	*e*P	Pn	23 41 20.3	+1.2
SLCP				*e*S	Sn	23 41 40.7	+1.6
SLAC	**Saint Lucia, A**	**1.39**	**171**	*e*P	Pn	23 41 21.7	+1.3
SLAC				*e*S	Sn	23 41 41.7	+0.3
MCLT	**Moule a Chique**	**1.57**	**173**	*e*P	Pn	23 41 24.5	+2.1
MCLT				*e*S	Sn	23 41 46.5	+1.6
MLYT	**Lee's Yard**	**1.77**	**325**	*e*P	Pn	23 41 25.8	+1.2
MLYT				*e*S	Sn	23 41 50.8	+1.9
MBWH	**Windy Hill**	**1.78**	**325**	*e*P	Pn	23 41 25.7	+0.9
MBWH				*e*S	Sn	23 41 50.4	+1.1
SVB	**Belmont**	**2.00**	**184**	*e*P	Pn	23 41 28.6	+1.3
SVB				*e*S	Sn	23 41 54.2	+0.5
ANWB	**Willy Bob**	**2.46**	**345**	*e*P	Pn	23 41 33.2	+0.2
ANWB				*e*S	Sn	23 42 03.2	-0.7
SKI	**Saint Kitts**	**2.57**	**323**	*e*P	Pn	23 41 35.7	+1.4
SKI				*e*S	Sn	23 42 06.5	+0.2
BBGH	**Gun Hill**	**2.61**	**144**	*e*P	Pn	23 41 37.3	+2.4
BBGH				*e*S	Sn	23 42 06.9	-0.2
GRGR	**Grenville**	**3.17**	**189**	*e*P	Pn	23 41 42.3	+0.3
GRFF	**Grenada Fort F**	**3.26**	**191**	*e*P	Pn	23 41 44.1	+0.9

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*ASIES **16** 23:41:52.4, 24°04N×121°53E, h18^{km}, Mw3.8, Fault plane solution: NP1:ϕ_s85.00000°, δ40.00000°, λ149.00000°. NP2:ϕ_s199.00000°, δ71.00000°, λ55.00000°.*

*TAP **16** 23:41:52.3, 24°04N×121°52E, h18^{km}, ML4.2, B*

*JMA **16** 23:41:52.2±0.1, 24°0N±0°3×121°6E±0°9, h16^{km}±1^{km}, MV3.4/12, TAIWAN REGION*

*IDC **16** 23:41:54.2±4.3, 24°03N×121°66E, h47^{km}±43^{km}, mb3.4/8, mbtmp3.7/9, ML3.7/1, MS3.1/3, Error ellipse: s-maj=36.4km s-min=18.6km az=65.0*

ISC 16 23:41:51.6±0.7**, 24°02N**±0°01×**121°55E**±0°01**, h19^{km}**±1^{km}**, n160, σ0^{s}83**/229**, mb3.7**/8**, 14C-10D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.07**	**133**	P	**Pg**	**23 41 56.5**	**+1.5**
HWA				S	**Sg**	**23 41 59.6**	**+2.2**
TWD	**Chiawan**	**0.07**	**37**	⇑*i*P	**Pg**	**23 41 56.0**	**+1.0**
TWD				*i* S	**Sg**	**23 41 58.6**	**+1.1**
ETM	**Tongmen**	**0.08**	**222**	⇑*i*P	**Pg**	**23 41 56.0**	**+0.8**
ETM				*i* S	**Sg**	**23 41 58.2**	**+0.7**
LXIB	**Xiulin Townshi**	**0.13**	**269**	⇑*i*P	**Pg**	**23 41 56.1**	**+0.3**
LXIB				S	**Sg**	**23 41 58.8**	**+0.2**
ETL	**Fush Village**	**0.15**	**26**	P	**Pg**	**23 41 56.7**	**+0.7**
ETL				*e*S	**Sg**	**23 41 59.8**	**+0.8**
NACB	**Ninganchiao**	**0.15**	**15**	P	**Pg**	**23 41 56.7**	**+0.7**
NACB	**Ninganchiao**	**0.15**	**15**	S	**Sg**	**23 41 59.6**	**+0.6**
NACB	**Ninganchiao**	**0.15**	**15**	⇑*i*P	**Pg**	**23 41 56.6**	**+0.6**
NACB				S	**Sg**	**23 41 59.4**	**+0.4**
TEYL	**Yanliau Villag**	**0.16**	**164**	⇑P	**Pg**	**23 41 57.1**	**+1.1**
ETLH	**Xiulin Townshi**	**0.19**	**341**	⇑*i*P	**Pg**	**23 41 57.0**	**+0.5**
ETLH				S	**Sb**	**23 41 60.0**	**+1.1**
ESL	**Shilin**	**0.23**	**207**	⇑*i*P	**Pb**	**23 41 57.5**	**+0.5**
ESL				S	**Sb**	**23 42 01.2**	**+0.6**
SHUL	**Shoufeng**	**0.24**	**177**	⇑P	**Pg**	**23 41 58.4**	**+1.3**
SHUL				S	**Sg**	**23 42 03.5**	**+2.6**
TEGC	**Jichi Village**	**0.31**	**182**	P	**Pb**	**23 41 59.7**	**+1.0**
TEGC				*e*S	**Sn**	**23 42 06.4**	**-0.9**
EHP	**Heping Village**	**0.33**	**31**	*e*P	**Pb**	**23 41 59.7**	**+0.6**
EHP				*e*S	**Sb**	**23 42 04.5**	**+0.4**
WARBT	**Fenglin Townsh**	**0.34**	**206**	⇓*i*P	**Pg**	**23 41 59.0**	**+0.1**
WARBT				S	**Sg**	**23 42 03.7**	**-0.1**
EAHA	**Aohua**	**0.35**	**29**	P	**Pb**	**23 41 59.5**	**+0.2**
EAHA				S	**Sb**	**23 42 04.8**	**+0.2**
OWD	**Renai**	**0.35**	**259**	⇑*i*P	**Pg**	**23 41 59.6**	**+0.5**
OWD				S	**Sg**	**23 42 04.0**	**-0.2**
FUSS	**Fushou**	**0.36**	**308**	⇓*i*P	**Pg**	**23 41 59.9**	**+0.6**
FUSS				S	**Sg**	**23 42 05.0**	**+0.5**
EGFH	**Guangfu**	**0.37**	**198**	*e*P	**Pb**	**23 42 00.0**	**+0.3**
EGFH				*e*S	**Sg**	**23 42 05.0**	**+0.3**
WUSB	**Renai**	**0.40**	**265**	⇑*i*P	**Pg**	**23 42 00.6**	**+0.7**
WUSB				S	**Sg**	**23 42 05.8**	**+0.2**
TWT	**Tachien**	**0.41**	**304**	⇓*i*P	**Pb**	**23 42 01.0**	**+0.5**
TWT				*e*S	**Sg**	**23 42 06.5**	**+0.5**
TDCB	**Techi**	**0.42**	**303**	⇓*i*P	**Pg**	**23 42 01.1**	**+0.6**
TDCB				*e*S	**Sg**	**23 42 06.5**	**+0.1**
NNSB	**Datong**	**0.43**	**339**	⇓*i*P	**Pg**	**23 42 01.1**	**+0.6**
NNSB				S	**Sg**	**23 42 06.6**	**+0.1**
ENA	**Nanau**	**0.44**	**23**	⇑P	**Pb**	**23 42 01.1**	**+0.3**
ENA				S	**Sb**	**23 42 07.6**	**+0.5**
NNS	**Nan Shan**	**0.45**	**339**	⇓*i*P	**Pg**	**23 42 01.3**	**+0.5**
NNS				S	**Sg**	**23 42 07.2**	**+0.2**
VWDT	**VWDT**	**0.46**	**234**	⇑*i*P	**Pg**	**23 42 01.6**	**+0.6**
VWDT				S	**Sb**	**23 42 08.2**	**+0.5**
EWUT	**Wuta**	**0.47**	**26**	*e*P	**Pb**	**23 42 01.6**	**+0.3**
EWUT				*e*S	**Sb**	**23 42 08.3**	**+0.4**
LATG	**Datong**	**0.51**	**357**	⇓*i*P	**Pg**	**23 42 02.4**	**+0.4**
LATG				S	**Sg**	**23 42 09.3**	**+0.4**
HGSD	**Ruisui**	**0.54**	**192**	*e*P	**Pg**	**23 42 03.5**	**+1.0**
EHY	**Hungye**	**0.56**	**202**	P	**Pb**	**23 42 03.0**	**+0.2**
EHY				*e*S	**Sg**	**23 42 10.8**	**+0.5**
EHYH	**Wanrong**	**0.56**	**200**	*e*P	**Pb**	**23 42 03.2**	**+0.4**
EHYH				*e*S	**Sb**	**23 42 10.4**	**0.0**
WCS	**Beigang Elemen**	**0.58**	**273**	*e*P	**Pb**	**23 42 03.5**	**+0.3**
WHP	**Taichung City**	**0.61**	**295**	⇓*i*P	**Pb**	**23 42 04.3**	**+0.7**
WHP				*e*S	**Sb**	**23 42 12.2**	**+0.4**
ESAO	**Su ao**	**0.61**	**26**	*e*S	**Sg**	**23 42 12.6**	**+0.6**
SMLT	**Sun Moon Lake**	**0.61**	**257**	P	**Pb**	**23 42 04.1**	**+0.4**
SMLT				*e*S	**Sb**	**23 42 12.5**	**+0.5**
ENTT	**Nioudou**	**0.61**	**1**	P	**Pb**	**23 42 04.2**	**+0.5**
ENTT				*e*S	**Sg**	**23 42 12.6**	**+0.6**
NDS	**Dongshan**	**0.62**	**14**	*e*P	**Pg**	**23 42 04.7**	**+0.6**
NDS				*e*S	**Sg**	**23 42 13.0**	**+0.5**
TWC	**Suao**	**0.64**	**25**	P	**Pg**	**23 42 04.8**	**+0.5**
TWC				S	**Sg**	**23 42 13.5**	**+0.5**
TYC	**Yuchr**	**0.65**	**259**	⇓P	**Pb**	**23 42 04.5**	**+0.3**
TYC				S	**Sb**	**23 42 12.5**	**-0.4**
YHNB	**Yeheng**	**0.66**	**346**	P	**Pg**	**23 42 05.3**	**+0.6**
YHNB	**Yeheng**	**0.66**	**346**	S	**Sb**	**23 42 14.1**	**+0.6**
YHNB	**Yeheng**	**0.66**	**346**	⇓P	**Pb**	**23 42 04.9**	**+0.3**
YHNB				S	**Sb**	**23 42 13.8**	**+0.4**
YULB	**Yu-li**	**0.67**	**200**	P	**Pb**	**23 42 04.9**	**+0.2**
YULB	**Yu-li**	**0.67**	**200**	S	**Sb**	**23 42 13.7**	**+0.1**
YULB	**Yu-li**	**0.67**	**200**	*e*P	**Pb**	**23 42 04.5**	**-0.2**
YULB				*e*S	**Sb**	**23 42 13.5**	**-0.1**
NSK	**Sanguang**	**0.67**	**345**	P	**Pb**	**23 42 05.1**	**+0.3**
NSK				*e*S	**Sb**	**23 42 13.9**	**+0.1**
TWE	**Neicheng**	**0.70**	**9**	*e*P	**Pb**	**23 42 05.7**	**+0.4**
TWE				S	**Sg**	**23 42 15.8**	**+0.9**
EYUL	**Yuli**	**0.71**	**198**	*e*P	**Pg**	**23 42 06.1**	**+0.6**
EYUL				*e*S	**Sg**	**23 42 16.3**	**+1.4**
EOS4	**EOS4**	**0.71**	**82**	*e*P	**Pn**	**23 42 06.7**	**+0.4**
EOS4				*e*S	**Sn**	**23 42 17.5**	**+1.0**
TWF1	**Yuli**	**0.71**	**199**	*e*P	**Pg**	**23 42 05.9**	**+0.3**
TWF1				*e*S	**Sg**	**23 42 15.6**	**+0.6**
ECBN	**Changbin**	**0.71**	**187**	*e*P	**Pg**	**23 42 06.0**	**+0.5**
ECBN				*e*S	**Sn**	**23 42 16.6**	**-0.5**
WHYT	**Xinyi Township**	**0.72**	**243**	*e*P	**Pg**	**23 42 06.4**	**+0.7**
NFF	**Wufeng Townshi**	**0.72**	**327**	P	**Pb**	**23 42 06.2**	**+0.5**
FUSB	**Fushanzhiwuyua**	**0.73**	**3**	⇑P	**Pb**	**23 42 06.1**	**+0.3**
FUSB				*e*S	**Sb**	**23 42 15.6**	**0.0**
EOS2	**EOS2**	**0.74**	**58**	P	**Pn**	**23 42 08.0**	**+1.1**
EOS3	**EOS3**	**0.75**	**69**	*e*P	**Pn**	**23 42 08.0**	**+1.0**
NWLT	**Wulai**	**0.75**	**357**	P	**Pb**	**23 42 06.4**	**+0.3**
NWLT				*e*S	**Sb**	**23 42 15.7**	**-0.3**
TWQ1	**Liyutan**	**0.78**	**295**	P	**Pg**	**23 42 07.7**	**+0.8**
WJS	**Zhushan**	**0.78**	**255**	*e*P	**Pn**	**23 42 07.9**	**+0.3**
WJS				*e*S	**Sn**	**23 42 19.2**	**+0.4**
NSTT	**Nanjuang**	**0.79**	**320**	P	**Pb**	**23 42 07.4**	**+0.7**
LIOB	**Emei**	**0.79**	**322**	P	**Pg**	**23 42 07.8**	**+0.7**
WNT	**Mingjian**	**0.81**	**260**	*e*P	**Pg**	**23 42 08.2**	**+0.8**
WNT				S	**Sn**	**23 42 20.1**	**+0.6**
TCU	**Taichung**	**0.81**	**279**	P	**Pn**	**23 42 08.9**	**+0.9**
TCU				*e*S	**Sn**	**23 42 20.6**	**+1.1**
KSHI	**Guanxi Townshi**	**0.82**	**336**	*e*P	**Pn**	**23 42 08.7**	**+0.4**
CHKH	**Chenggong**	**0.84**	**190**	*e*P	**Pb**	**23 42 07.3**	**-0.3**
ALS	**Alishan**	**0.85**	**233**	⇑*i*P	**Pg**	**23 42 08.8**	**+0.5**
FULB	**Fuli**	**0.85**	**196**	P	**Pb**	**23 42 08.0**	**+0.1**
NMLH	**Miaoli**	**0.86**	**307**	P	**Pn**	**23 42 09.5**	**+0.8**
NMLH				*e*S	**Sn**	**23 42 21.8**	**+0.9**
EGS		**0.89**	**23**	P	**Pn**	**23 42 09.4**	**+0.3**
WCHH	**Zhanghua**	**0.91**	**274**	*e*P	**Pg**	**23 42 10.1**	**+0.8**
WCH1	**Changhua City**	**0.92**	**273**	*e*P	**Pg**	**23 42 10.9**	**+1.4**
SBCB	**Hsinchu**	**0.92**	**326**	*e*P	**Pg**	**23 42 10.8**	**+1.2**
EHD	**Haiduan**	**0.93**	**200**	*e*P	**Pb**	**23 42 09.0**	**-0.1**
NHDH	**Xindian Distri**	**0.94**	**359**	*e*P	**Pg**	**23 42 10.8**	**+1.0**
CHKT	**Chengkung**	**0.94**	**191**	P	**Pb**	**23 42 08.9**	**-0.4**
CHKT				*e*S	**Sb**	**23 42 21.3**	**0.0**
HSN	**Hsinchu**	**0.94**	**326**	*e*P	**Pg**	**23 42 11.1**	**+1.2**
HSN				*e*S	**Sn**	**23 42 25.5**	**+2.7**
TATO	**Taipei**	**0.95**	**357**	P	**Pg**	**23 42 10.7**	**+0.6**
TATO	**Taipei**	**0.95**	**357**	S	**Sg**	**23 42 23.2**	**+0.6**
TWA	**Mucha**	**0.95**	**2**	*e*P	**Pb**	**23 42 10.1**	**+0.5**
ELDTW	**Lidau**	**0.96**	**211**	*e*P	**Pb**	**23 42 09.6**	**-0.2**
ELDTW				*e*S	**Sb**	**23 42 23.0**	**+0.7**
WGK	**Gukeng**	**0.97**	**250**	*e*P	**Pg**	**23 42 11.0**	**+0.6**
ECS	**Chishang**	**0.97**	**198**	*e*P	**Pn**	**23 42 10.6**	**+0.2**
TIPB	**Shuangxi**	**0.98**	**15**	*e*P	**Pb**	**23 42 10.3**	**+0.3**
TIPB				*e*S	**Sg**	**23 42 23.5**	**0.0**
WDLH	**Douliu**	**0.98**	**250**	*e*P	**Pg**	**23 42 11.3**	**+0.6**
NCUH	**Zhongli**	**1.00**	**341**	*e*P	**Pg**	**23 42 11.9**	**+0.9**
NCUH				*e*S	**Sg**	**23 42 25.9**	**+1.7**
NCU	**National Centr**	**1.00**	**341**	*e*P	**Pb**	**23 42 10.2**	**-0.1**
NCU				*e*S	**Sg**	**23 42 24.8**	**+0.6**
TAP	**Taipei**	**1.01**	**358**	*e*S	**Sn**	**23 42 24.8**	**+0.2**
WCKO	**Fanlu**	**1.04**	**236**	*e*P	**Pn**	**23 42 11.8**	**+0.5**
TWB1	**Santiao Chiao**	**1.06**	**22**	*e*P	**Pb**	**23 42 11.7**	**+0.4**
NWF	**Wu-fen Shan**	**1.06**	**11**	*e*P	**Pn**	**23 42 12.3**	**+0.7**
NWF				*e*S	**Sb**	**23 42 25.8**	**+0.8**
WFSB	**Wu-fen Shan**	**1.06**	**11**	*e*P	**Pn**	**23 42 12.1**	**+0.5**
WFSB				*e*S	**Sn**	**23 42 25.9**	**0.0**
TWS1	**Kuangyinshan**	**1.08**	**354**	*e*P	**Pg**	**23 42 12.7**	**+0.2**
TWS1				*e*S	**Sg**	**23 42 29.7**	**+3.0**
CHN2	**Minshiung**	**1.10**	**244**	*e*P	**Pg**	**23 42 14.0**	**+1.0**
CHN2				*e*S	**Sg**	**23 42 30.2**	**+2.8**
SXI1	**Grass Mountain**	**1.11**	**15**	*e*P	**Pn**	**23 42 12.4**	**+0.2**
SXI1				*e*S	**Sn**	**23 42 27.4**	**+0.3**
STYH	**Taoyuan**	**1.11**	**220**	*e*P	**Pn**	**23 42 12.6**	**+0.5**
TPUB	**Ta-pu**	**1.11**	**230**	P	**Pg**	**23 42 13.3**	**+0.2**
TPUB	**Ta-pu**	**1.11**	**230**	S	**Sg**	**23 42 29.1**	**+1.4**
TPUB	**Ta-pu**	**1.11**	**230**	P	**Pg**	**23 42 13.5**	**+0.4**
TPUB				*e*S	**Sg**	**23 42 28.9**	**+1.2**
ZUZH	**Zhuzihu**	**1.13**	**360**	*e*P	**Pb**	**23 42 13.1**	**+0.4**
ZUZH				*e*S	**Sg**	**23 42 28.8**	**+0.3**
NTST	**Danshui**	**1.14**	**355**	*e*P	**Pg**	**23 42 14.0**	**+0.3**
NTST				*e*S	**Sg**	**23 42 29.8**	**+1.2**
TNOU	**National Taiwa**	**1.14**	**10**	*e*P	**Pg**	**23 42 14.1**	**+0.4**
WTP	**Ta-pu**	**1.16**	**228**	*e*P	**Pg**	**23 42 14.6**	**+0.6**
ANP	**Anpu**	**1.16**	**359**	*e*P	**Pb**	**23 42 14.0**	**+0.9**
CHY	**Chiayi**	**1.16**	**243**	*e*P	**Pg**	**23 42 14.6**	**+0.5**
CHY				*e*S	**Sg**	**23 42 30.1**	**+0.9**
WTCT	**Ta-ch'eng**	**1.17**	**262**	*e*S	**Sg**	**23 42 30.6**	**+0.9**
TWK	**Hsinying**	**1.23**	**232**	*e*P	**Pg**	**23 42 16.1**	**+0.6**
TWK				*e*S	**Sg**	**23 42 32.7**	**+1.1**
SNST	**Tainan City**	**1.25**	**231**	*e*P	**Pb**	**23 42 15.7**	**+1.0**
CHN1	**Nanshi**	**1.26**	**229**	*e*P	**Pg**	**23 42 16.4**	**+0.5**
CHN1				*e*S	**Sg**	**23 42 34.6**	**+2.3**
TWG	**Pinlang**	**1.28**	**200**	*e*P	**Pn**	**23 42 14.9**	**+0.5**
WSF	**Szhu**	**1.28**	**253**	*e*P	**Pn**	**23 42 15.1**	**+0.7**
WSF				*e*S	**Sg**	**23 42 33.5**	**+0.5**
SGST	**Jiashian**	**1.29**	**224**	*e*P	**Pb**	**23 42 16.2**	**+0.9**
SGST				*e*S	**Sg**	**23 42 33.5**	**0.0**
WSL	**Shuilin Townsh**	**1.31**	**248**	*e*P	**Pg**	**23 42 17.1**	**+0.2**
WSL				*e*S	**Sg**	**23 42 35.6**	**+1.6**
JYNG	**Yonagunijimaku**	**1.34**	**71**	*e*P	**Pb**	**23 42 16.0**	**-0.2**
JYNG				*e*S	**Sb**	**23 42 33.0**	**0.0**
CHN8	**Yiju**	**1.40**	**241**	*e*S	**Sg**	**23 42 37.5**	**+0.6**
YOJ	**Yonaguni jima**	**1.40**	**72**	P	**Pn**	**23 42 16.7**	**+0.5**
YOJ	**Yonaguni jima**	**1.40**	**72**	S	**Sb**	**23 42 35.7**	**+1.0**
YOJ	**Yonaguni jima**	**1.40**	**72**	*i* P	**Pn**	**23 42 16.6**	**+0.4**
YOJ				S	**Sb**	**23 42 35.1**	**+0.4**
YOJ	**Yonaguni jima**	**1.40**	**72**	P	**Pn**	**23 42 16.8**	**+0.5**
SSD	**Sandimen**	**1.53**	**214**	*e*P	**Pn**	**23 42 19.0**	**+1.1**
MASBT	**Mashibuluo**	**1.64**	**211**	*e*P	**Pn**	**23 42 20.3**	**+0.8**
PCYT	**Pengchaiyu**	**1.67**	**16**	*e*P	**Pn**	**23 42 20.7**	**+0.8**
PNG	**Penghu**	**1.88**	**256**	*e*P	**Pn**	**23 42 23.6**	**+0.8**
PNG				*e*S	**Sn**	**23 42 47.9**	**+1.8**
WDGT	**Dungji**	**1.89**	**247**	P	**Pn**	**23 42 24.2**	**+1.3**
WDGT				*e*S	**Sn**	**23 42 47.7**	**+1.3**

SLIU	Shizi	1.93	201	eP	Pn	23 42 24.9	+1.5
LAY	Lan-yu	1.98	180	eP	Pn	23 42 23.0	-1.1
IRIF	Iriomote-Funau	2.01	81	P	Pn	23 42 25.3	+0.7
HATJ	Hateruma jima	2.06	89	eS	Sn	23 42 51.5	+1.0
VCHM	Qimei	2.11	248	eP	Pn	23 42 27.2	+1.3
VCHM				eS	Sb	23 42 54.0	-1.0
TWKBT	Hengchun	2.18	198	eP	Pn	23 42 28.1	+1.2
JKRS	Kuro-shima	2.26	84	eP	Pn	23 42 29.3	+1.3
JKRS				eS	Sn	23 42 56.9	+1.6
JIJ	Ishigaki jima	2.39	81	P	Pn	23 42 30.3	+0.5
JIJ				eS	Sn	23 42 59.0	+0.4
PTMZ	Houxiangcun	2.43	295	eP	Pn	23 42 30.6	+0.2
MATB	Ma-tsu	2.57	326	P	Pn	23 42 32.5	+0.2
MATB				eS	Sn	23 43 02.5	-0.5
JISG	Ishigakijimahi	2.58	77	eP	Pn	23 42 32.8	+0.4
JISG				eS	Sn	23 43 03.7	+0.4
KNMB	Chin-men Tao	2.92	279	eP	Pn	23 42 37.7	+0.6
LYJJ	Jianjiangzhen	2.99	328	eP	Pn	23 42 38.3	+0.2
MHZQ	Yeshan	3.08	313	eP	Pn	23 42 39.6	+0.3
MHZQ				eS	Sn	23 43 14.7	-1.0
AXDP	Jialang	3.38	286	eP	Pn	23 42 43.6	+0.3
ZPLA	Ao Xicun	3.48	269	eP	Pn	23 42 45.0	+0.3
DSXP	Dongshan	3.79	266	eP	Pn	23 42 49.3	+0.3
SXFK	Yanhouchang	4.25	305	eP	Pn	23 42 56.2	+0.7
SXFK				eS	Sn	23 43 43.3	-1.4
JOW	Kunigami	6.69	64	P	Pn	23 43 28.8	-0.2
	3.3nm,0.3s,baz=232,slow=13,SNR=5.9 11nm,0.5s						
KSRS	Korea Array	14.46	21	P	P	23 45 22.6	+0.7
	2.4nm,0.6s,baz=200,slow=12,SNR=8.2						
JHJ	Hachijo jima 2	18.38	56	LR	LR	23 53 23.9	
	comp=Z,58nm,19.3s,baz=92,slow=38						
CMAR	Chiang Mai Arr	21.78	260	LR	LR	23 55 47.5	
	comp=Z,15nm,21.4s,baz=30,slow=38						
SONM	Songino Array	26.64	337	P	P	23 47 29.1	-0.2
	1.2nm,0.9s,baz=164,slow=9.5,SNR=7.0 1.2nm,0.9s						
ZALV	Zalesovo Beam	40.56	327	P	P	23 49 28.2	-1.5
	1.1nm,0.5s,baz=125,slow=8.2,SNR=5.8 1.1nm,0.5s						
H11N1	WAKE ISLAND Hy	42.16	87	T	T	00 34 58.9	
	baz=283,slow=75,SNR=7.4						
H11N2	WAKE ISLAND Hy	42.16	87	T	T	00 35 00.6	
	baz=283,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	42.18	87	T	T	00 35 02.7	
	baz=283,slow=75,SNR=14						
H11S3	WAKE ISLAND Hy	42.29	89	T	T	00 34 50.7	
	baz=284,slow=75,SNR=32						
H11S1	WAKE ISLAND Hy	42.30	89	T	T	00 34 51.3	
	baz=284,slow=75,SNR=17						
H11S2	WAKE ISLAND Hy	42.31	89	T	T	00 34 52.0	
	baz=284,slow=75,SNR=14						
KURBB	Kurchatov Arra	42.45	320	P	P	23 49 44.7	-0.5
	0.8nm,0.8s,baz=108,slow=9.5,SNR=5.9 0.8nm,0.8s						
WRA	Warramunga Arr	45.44	163	P	P	23 50 08.1	-1.4
	0.7nm,0.5s,baz=344,slow=7.9,SNR=1.4 0.7nm,0.5s						
BVAR	Borovoye Array	48.01	321	P	P	23 50 29.4	0.0
	0.4nm,0.5s,baz=79,slow=7.9,SNR=4.9 0.4nm,0.5s						
ASAR	Alice Springs	48.90	165	P	P	23 50 35.4	-1.2
	0.4nm,0.3s,baz=344,slow=7.0,SNR=7.6 0.4nm,0.3s						
ILAR	Eielson Array	69.20	27	P	P	23 52 54.9	-2.0
	0.3nm,0.6s,baz=277,slow=5.5,SNR=5.2 0.3nm,0.6s						
NOA	NORSAR Array B	78.52	332	LR	LR	00 31 50.7	
	comp=Z,52nm,19.1s,baz=340,slow=38						
YKA	Yellowknife Ar	82.99	23	P	P	23 54 14.4	-0.9
	0.3nm,0.6s,baz=309,slow=5.8,SNR=6.5 0.3nm,0.6s						

NNC ***16*** *23:48:27.8±0.6, 45°.85N×81°.51E, h0^{km}, mb3.5, mpv3.5, Error ellipse: s-maj=9.4km s-min=2.9km az=126.0*

SOME ***16*** *23:48:29.2, 45°.82N×81°.58E, h25^{km}*

ISC 16 23:48:29.7±1.2**, 45°.77N**±0°.04×**81°.75E**±0°.04**, h29**^{km}±14^{km}**, n43,** σ**1^s.97**/62**, 15C-3D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAKZ	Makanchi	1.05	9	⇑P	Pn	23 48 46.8	-1.7
	6.8nm,0.3s						
MAKZ				⇑S	Sb	23 48 59.2	-3.5
	10nm,0.2s						
MK31	Makanchi Array	1.09	20	⇑P	Pn	23 48 48.2	-0.9
	3.1nm,0.2s,baz=201,slow=17,SNR=436						
MK31				⇓S	Sn	23 49 02.1	-1.1
	6.9nm,0.3s,baz=212,slow=26,SNR=5.9						
KAPS	Kapalarasan	1.75	255	P	Pb	23 48 58.9	-2.2
	50nm,0.2s						
KAPS				S	Sb	23 49 20.6	-2.1
	341nm,0.2s						
KNOS	Konyrlen	2.30	233	Pg	Pb	23 49 09.0	-1.7
	18nm,0.2s						
KNOS				Lg	Lg	23 49 38.0	
	100nm,0.3s						
TDK	Taldyqorghan	2.48	253	Pg	Pb	23 49 11.2	-2.3
	11nm,0.2s						
TDK				Lg	Lg	23 49 41.3	
	241nm,0.4s						
TDK	Taldyqorghan	2.48	253	eP	Pb	23 49 11.2	-2.3
	4.9nm,0.1s						
TDK				eS	Sb	23 49 41.3	-2.3
	242nm,0.2s						
KTMS	Ketmen	2.53	204	Pg	Pb	23 49 12.3	-2.2
	7.5nm,0.2s						
KTMS				Lg	Lg	23 49 42.9	
	46nm,0.2s						
KTMS	Ketmen	2.53	204	eP	Pb	23 49 12.3	-2.2
	7.5nm,0.2s						
KTMS				eS	Sb	23 49 42.9	-2.3
	46nm,0.2s						
ZSN	Zaisan	2.73	51	Pg	Pb	23 49 18.8	+1.0
	2.3nm,0.3s						
ZSN				Lg	Lg	23 49 54.1	
	32nm,0.5s						
ZSN	Zaisan	2.73	51	eP	Pb	23 49 18.8	+1.0
	1.5nm,0.2s						
ZSN				eS	Sb	23 49 54.1	+3.3
	32nm,0.5s						
BLB	Baldybastay	2.86	235	Pg	Pb	23 49 19.4	-0.7
	25nm,0.2s						
BLB				Lg	Lg	23 49 55.5	
	129nm,0.6s						
PDGK	Podgornoye	2.93	214	⇓Pn	Pn	23 49 17.0	+2.6
	15nm,0.7s						
PDGK				⇑Lg	Lg	23 49 58.0	
	84nm,0.6s						
SHLS	Shalkode	3.08	213	Pg	Pb	23 49 21.6	-2.3
	17nm,0.2s						
SHLS				Lg	Lg	23 49 59.2	
	130nm,0.3s						
SHLS	Shalkode	3.08	213	eP	Pb	23 49 21.6	-2.3
	17nm,0.2s						
SHLS				eS	Sb	23 49 59.2	-1.9
	130nm,0.3s						
KPKS	Kokpek	3.18	225	Pg	Pb	23 49 25.0	-0.5
	0.7nm,0.1s						
KPKS				Lg	Lg	23 50 05.7	
	61nm,0.4s						
KPKS	Kokpek	3.18	225	eP	Pb	23 49 25.0	-0.5
	0.4nm,0.1s						
KPKS				eS	Sb	23 50 05.1	+1.3
	81nm,0.2s						
ARXS	Arharly	3.19	242	Pg	Pb	23 49 24.8	-0.9
	5.9nm,0.3s						
ARXS				Lg	Lg	23 50 04.8	
	83nm,0.3s						
ARXS	Arharly	3.19	242	eP	Pb	23 49 24.8	-0.9
	5.9nm,0.3s						
ARXS				eS	Sb	23 50 04.8	+0.7
	83nm,0.3s						
UZB	Uzynbulak	3.27	218	Pg	Pb	23 49 26.6	-0.5
	4.7nm,0.2s						
UZB				Lg	Lg	23 50 07.5	
	35nm,0.3s						
UZB	Uzynbulak	3.27	218	eP	Pb	23 49 26.6	-0.5
	4.7nm,0.2s						
UZB				eS	Sb	23 50 07.5	+1.1
	35nm,0.3s						
KURS	Kuram	3.42	230	Pg	Pb	23 49 29.1	-0.6
	4.5nm,0.3s						
KURS				Lg	Lg	23 50 12.0	
	39nm,0.4s						
SATY	Saty	3.62	223	Pg	Pb	23 49 32.7	-0.3
	3.5nm,0.1s						
SATY				Lg	Lg	23 50 18.6	
	33nm,0.2s						
CHKK	Chushkaly	3.89	242	eP	Pb	23 49 37.5	-0.1
	0.4nm,0.1s						
CHKK				eS	Sb	23 50 26.1	+1.8
	37nm,0.2s						
KTBS	Karatobe	4.15	242	Pg	Pb	23 49 43.2	+1.1
	9.3nm,0.5s						
KTBS				Lg	Lg	23 50 36.2	
	0.5nm,0.2s						
KOTS	Kotyrbulak	4.17	234	Pg	Pb	23 49 42.9	+0.4
	3.2nm,0.3s						
KOTS				Lg	Lg	23 50 35.4	
	27nm,0.5s						
KOTS	Kotyrbulak	4.17	234	eP	Pb	23 49 42.9	+0.4
	3.2nm,0.3s						
KOTS				eS	Sb	23 50 35.4	+2.9
	27nm,0.5s						
KUU	Kurty	4.28	246	Pg	Pb	23 49 44.9	+0.7
	5.7nm,0.0s						
KUU				Lg	Lg	23 50 39.1	
	37nm,0.2s						
KUU	Kurty	4.28	246	eP	Pb	23 49 44.9	+0.7
	5.7nm,0.0s						
KUU				eS	Sb	23 50 39.1	+3.6
	37nm,0.2s						
TNSS	Tian-Shan	4.39	233	Pg	Pb	23 49 47.9	+1.5
	1.4nm,0.4s						
TNSS				Lg	Lg	23 50 44.1	
	3.2nm,0.4s						
TNSS	Tian-Shan	4.39	233	eP	Pb	23 49 47.9	+1.5
	1.4nm,0.4s						
TNSS				eS	Sb	23 50 44.0	+5.0
	3.2nm,0.4s						
IZV	Izvestkoviy	4.58	235	Pg	Pb	23 49 49.5	0.0
IZV				Lg	Lg	23 50 46.8	
IZV	Izvestkoviy	4.58	235	eP	Pb	23 49 49.5	0.0
	0.7nm,0.1s						
IZV				eS	Sb	23 50 46.8	+2.5
	18nm,0.4s						
MTBS	Maitube	4.63	237	Pg	Pb	23 49 50.2	-0.1
	1.7nm,0.1s						
MTBS				Lg	Lg	23 50 48.2	
	33nm,0.3s						
MTBS	Maitube	4.63	237	eP	Pb	23 49 50.2	-0.1
	1.7nm,0.1s						
MTBS				eS	Sb	23 50 48.2	+2.6
	33nm,0.3s						
SEM	Semipalatinsk	4.75	348	Pg	Pb	23 49 55.7	+3.4
	3.9nm,0.3s						
KRBS	Karabastau	4.80	247	Pg	Pb	23 49 53.8	+0.7
	3.0nm,0.6s						
KRBS				Lg	Lg	23 50 54.5	
	11nm,0.4s						
KST	Kastek	4.96	239	Pg	Pb	23 49 57.3	+1.5
	0.8nm,0.1s						
KST	Kastek	4.96	239	eP	Pb	23 49 57.3	+1.5
	0.6nm,0.1s						
KST				eS	Sb	23 51 00.4	+5.3
	11nm,0.6s						
DGS	Degeres	4.96	242	Pg	Pb	23 49 57.4	+1.5
	3.8nm,0.4s						
KURBB	Kurchatov Arra	5.31	337	⇑Pn	Pn	23 49 48.2	+1.3
	0.4nm,0.3s						
KURBB				⇑Pg	Pb	23 50 04.8	+3.1
	4.3nm,0.8s						
KURBB				⇑Sn	Sn	23 50 46.5	-0.7
	3.3nm,0.5s						
KURBB				⇑Lg	Lg	23 51 12.6	
	40nm,0.6s						
KURK	Kurchatov	5.37	338	⇓Pn	Pn	23 49 48.9	+1.1
	0.2nm,0.6s						
KURK				⇑Pg	Pb	23 50 04.8	+2.1
	0.2nm,0.5s						
KURK				⇑Sn	Sn	23 50 47.6	-1.0
	0.9nm,0.6s						
KURK				⇑Lg	Lg	23 51 11.7	
	8.1nm,0.6s						
AAK	Ala-Archa	6.08	242	⇑Pg	Pb	23 50 14.7	-0.2
	6.9nm,0.5s						
AAK				⇑Lg	Lg	23 51 33.5	
	32nm,0.7s						
KK31	Karatay Array	8.47	256	⇑Sn	Sn	23 52 01.6	-3.3
	0.4nm,0.3s,baz=61,slow=22,SNR=3.6						
KK31				⇑Lg	Lg	23 52 53.0	
	2.8nm,0.6s,baz=63,slow=29,SNR=4.4						

IDC ***16*** *23:48:26.6±1.0, 6°.56N×125°.23E, h0^{km}, mb3.6/6, mbtmp3.6/6, MS2.5/1, Error ellipse: s-maj=26.6km s-min=9.2km az=118.0*

ISC 16 23:48:31.6±1.0**, 6°.7N**±0°.1×**125°.5E**±0°.3**, h35**^{km}**, n9,** σ**1^s.11**/8**, mb3.5**/6**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.41	10	LR	LR	23 48 30.0	
	comp=Z,40nm,21.3s,baz=266,slow=5.7						
DAV				Pg	Pn	23 48 39.4	-1.7
	240nm,0.3s,baz=268,slow=2.2,SNR=20						
DAV				Lg	Lg	23 48 45.8	
	964nm,0.3s,baz=252,slow=20,SNR=23						
DAV	Davao City (W)	0.41	10	P	Pn	23 48 42.0	+1.0
KAPI	Kappang	12.94	206	LR	LR	23 56 19.3	
	comp=Z,25nm,21.2s,baz=18,slow=37						
WRA	Warramunga Arr	27.83	162	P	P	23 54 16.9	-1.1
	1.1nm,0.8s,baz=332,slow=10.0,SNR=2.3 1.1nm,0.8s						
ASAR	Alice Springs	31.24	165	P	P	23 54 48.2	+0.1
	0.2nm,0.5s,baz=345,slow=8.8,SNR=5.6 0.2nm,0.5s						
STKA	Stephens Creek	41.29	159	P	P	23 56 13.9	+0.1
	0.9nm,0.6s,baz=355,slow=12,SNR=3.5 0.9nm,0.6s						
MKAR	Makanchi Array	54.47	325	P	P	23 57 56.2	+0.4
	0.4nm,0.9s,baz=111,slow=7.9,SNR=2.1 0.4nm,0.9s						
KURBB	Kurchatov Arra	58.63	327	P	P	23 58 24.6	-0.6
	0.5nm,0.8s,baz=120,slow=6.5,SNR=4.3 0.5nm,0.8s						
ILAR	Eielson Array	83.00	26	P	P	00 00 53.9	+0.9
	0.3nm,0.7s,baz=239,slow=4.7,SNR=6.5 0.3nm,0.7s						

ISN ***17*** *00:03:23.7±0.5, 34°.62N×46°.32E, h8^{km}±6^{km}, ML2.7*

TEH ***17*** *00:03:25.1, 34°.62N×46°.29E, h8^{km}±32^{km}*

ISC 17 00:03:25.0±1.0**, 34°.62N**±0°.05×**46°.31E**±0°.05**, h11**^{km}±9^{km}**, n8,** σ**0^s.77**/12**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDHR	Dehrash	0.10	39	Pg	Pg	00 03 27.9	0.0
IDHR				Sg	Sg	00 03 30.3	+0.2
IGHG	Ghaleghazi	0.36	143	Pg	Pb	00 03 33.0	-0.6
GLG1	Gilan-e-Gharb	0.60	213	Pg	Pb	00 03 37.0	-0.7
KCHF	Cheshme Sefid,	0.70	119	Pg	Pb	00 03 38.9	-0.4
SNQR	Sonqor, Kerman	1.11	77	Pg	Pn	00 03 47.1	+0.3
IBDR	Badra	1.54	192	ePn	Pb	00 03 53.0	-0.5
IBDR				eSn	Sg	00 04 15.0	+0.5
IKRK	Kirkuk	1.79	296	ePn	Pb	00 03 57.0	-0.9
IKRK				eSn	Sb	00 04 21.0	+0.6
IKRK				AML	AML	00 04 25.1	
	comp=E,88nm,0.5s						
IKRK				AML	AML	00 04 30.0	
	comp=N,83nm,0.5s						
BHD	Baghdad	2.09	230	ePn	Pn	00 04 01.0	+1.0
BHD				eSn	Sb	00 04 28.0	-1.0

CATAC ***17*** *00:17:19.5±0.4, 10°N±2°×8°5W±°, h8^{km}±2^{km}, M3.3/11, MLv3.3/11, Error ellipse: s-maj=5.7km s-min=3.4km az=33.7, confirmed*

UCR ***17*** *00:17:19.9±0.7, 9°.77N×84°.82W, h25^{km}±2^{km}, MW3.5*

ISC 17 00:17:19.7±1.1**, 9°.75N**±0°.03×**84°.82W**±0°.02**, h17**^{km}±9^{km}**, n52,** σ**0^s.86**/57**, 6D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENAS	Puntarenas	0.23	356	eP	Pb	00 17 26.0	+0.6
ENAS				eS	Sb	00 17 31.1	+1.9
BITO	Garabito Jaco	0.23	123	eP	Pb	00 17 26.0	+0.5
BITO				eS	Sb	00 17 30.9	+1.6
ROBF	Roble, Puntare	0.25	19	eP	Pb	00 17 26.2	+0.5
ARZA	Esparza	0.28	32	eP	Pb	00 17 26.5	+0.2
JCR1	Jicaral	0.30	290	eP	Pb	00 17 27.2	+0.5
JCR1				eS	Sb	00 17 32.4	+0.9
OROT	Orotina	0.33	60	eP	Pb	00 17 27.1	-0.1
OROT				eS	Sb	00 17 32.7	+0.4
ATEO	Atenas	0.49	62	eP	Pg	00 17 29.5	0.0
JTS	Las Juntas de	0.56	346	P	Pg	00 17 30.6	-0.2
JTS				S	Sb	00 17 38.6	-0.1
JTS	Las Juntas de	0.56	346	eP	Pg	00 17 30.5	-0.2
TCS1	Tacares	0.59	60	P	Pb	00 17 31.9	+0.3
TCS1	Tacares	0.59	60	eP	Pb	00 17 31.8	+0.1
PICV	PH. Pirrs	0.63	101	eP	Pg	00 17 31.9	-0.2
ACOS	Acosta	0.65	86	eP	Pg	00 17 32.1	-0.4
CMARA	Lajas Hojancha	0.65	295	S	Sn	00 17 43.2	-0.9
CMARA	Lajas Hojancha	0.65	295	P	Pg	00 17 32.7	+0.1
SANTA	Santa Ana	0.65	73	eP	Pg	00 17 32.1	-0.4
BELE	Belen	0.66	70	eP	Pg	00 17 32.5	-0.3
SOCE	Pocosol	0.66	17	S	Sb	00 17 42.4	+0.6
SOCE	Pocosol	0.66	17	P	Pb	00 17 32.9	+0.1
SOCE	Pocosol	0.66	17	eP	Pb	00 17 32.9	+0.1
VPL1	V. Platanar	0.68	41	⇓eP	Pg	00 17 32.9	-0.2
INDI	Punta indio, G	0.68	280	eP	Pg	00 17 33.0	-0.1
VPL2	V. Platanar	0.70	38	⇓eP	Pb	00 17 33.7	+0.1
VPS8	V Poas	0.71	53	⇓eP	Pb	00 17 33.8	0.0
ARE1	Arenal 1	0.72	8	⇓eP	Pb	00 17 33.9	+0.1
VARE2	V. Arenal	0.72	8	⇓eP	Pb	00 17 33.9	+0.1
INVE	Universidad In	0.76	342	eP	Pg	00 17 34.1	-0.5
REZ	Monterrey de S	0.79	9	eP	Pb	00 17 30.4	-4.5
LCR2	La Lucha 2	0.80	90	P	Pb	00 17 34.8	-0.5
LCR2	La Lucha 2	0.80	90	S	Sg	00 17 45.6	-0.5
LCR2	La Lucha 2	0.80	90	eP	Pb	00 17 34.5	-0.8
JUD3	Juan Diaz 3	0.82	301	eP	Pb	00 17 35.4	-0.2
TIMP	Tierras Morena	0.85	347	eP	Pb	00 17 35.5	-0.6
PIEC	Cerro El Cedra	0.86	98	eP	Pb	00 17 35.4	-0.9
CVIMO	Finca Echandi	0.91	72	⇓eP	Pb	00 17 36.8	-0.3
MOTZ	Rio Naranjo	0.97	345	eP	Pb	00 17 37.7	-0.3
COVE	Coope Vega, Sa	1.05	23	P	Pb	00 17 38.7	-0.8
MESS	Mesas	1.05	340	eP	Pb	00 17 38.9	-0.6
BUS1	Rivas	1.07	100	eP	Pb	00 17 39.9	-0.2
CVTR	Volcan Turrial	1.08	75	eP	Pb	00 17 39.7	-0.5
VMAR	Armenia, Volca	1.10	345	eP	Pb	00 17 39.7	-0.6
GPS3	Bodega del ICE	1.14	332	eP	Pb	00 17 40.4	-0.5
UPAL	Upala	1.16	351	S	Sn	00 17 56.6	0.0
UPAL	Upala	1.16	351	P	Pg	00 17 41.8	-0.3
OCHAL	Ojochal	1.33	119	P	Pn	00 17 42.9	-0.5
TRT2	Tortugero	1.34	53	S	Sg	00 18 04.7	+1.8
TRT2	Tortugero	1.34	53	P	Pn	00 17 43.5	0.0
TRT2	Tortugero	1.34	53	eP	Pn	00 17 43.4	-0.1
CARN	Rivas	1.59	334	P	Pb	00 17 48.2	-0.4
DRK0	Durika	1.63	107	S	Sn	00 18 08.9	+0.5
DRK0	Durika	1.63	107	P	Pn	00 17 47.2	-0.5
PIRO	Carate, Puerto	1.98	132	P	Pb	00 17 54.5	-0.8

NEIC ***17*** *00:19:14.8±1.7, 19°.13N±0°.03×67°.16W±0°.03, h10^{km}±1^{km}, ML2.3/12, Md3.0/8(RSPR), Error ellipse: s-maj=5.7km s-min=4.7km az=48.0*

OSPL ***17*** *00:19:15.4±0.5, 19°.20N×67°.38W, h14^{km}±3^{km}, ML2.3, Presumed earthquake*

RSPR ***17*** *00:19:16.2, 19°.19N×67°.31W, h15^{km}±14^{km}, MD3.0/8*

ISC 17 00:19:14.0±2.0**, 19°.16N**±0°.08×**67°.22W**±0°.04**, h9**^{km}±13^{km}**, n32,** σ**0^s.60**/38**, 8C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.69	172	⇑eP	Pb	00 19 28.8	+0.5
AGPR	Aguadilla, PR	0.69	172	eS	Sb	00 19 38.7	+0.7
AGPR	Aguadilla, PR	0.69	172	iP	Pb	00 19 28.9	+0.5
AGPR				eS	Sb	00 19 39.2	+1.2
AGPR				IAML		00 19 40.2	
	comp=Z,109nm,0.2s						
IDE	Isla Desecheo	0.81	198		Pg	00 19 30.1	+0.5
IDE					Sb	00 19 41.0	-0.3
IDE	Isla Desecheo	0.81	198	⇑eP	Pg	00 19 30.1	+0.5
IDE	Isla Desecheo	0.81	198	eS	Sb	00 19 41.0	-0.3
AOPR	Arecibo Observ	0.92	152		Sb	00 19 45.4	+0.9
AOPR	Arecibo Observ	0.92	152		Pb	00 19 32.4	+0.2
AOPR				IAML		00 19 51.1	
	comp=N,141nm,0.2s						
AOPR	Arecibo Observ	0.92	152	⇑eP	Pb	00 19 32.3	+0.2
AOPR	Arecibo Observ	0.92	152	eS	Sb	00 19 45.4	+0.9
UUPR	Utuado, UPR, P	1.02	152		Pg	00 19 32.5	-1.1
UUPR					Sg	00 19 46.3	-0.5
UUPR	Utuado, UPR, P	1.02	152	⇑eP	Pg	00 19 32.5	-1.1
UUPR	Utuado, UPR, P	1.02	152	eS	Sg	00 19 46.3	-0.5
CRPR	Cabo Rojo, PR	1.15	175		Pb	00 19 36.0	0.0
CRPR					Sg	00 19 51.4	+0.3
CRPR				IAML		00 19 55.2	
	comp=N,72nm,0.4s						
CRPR				IAML		00 19 55.5	
	comp=E,91nm,0.5s						
CRPR	Cabo Rojo, PR	1.15	175	⇑eP	Pb	00 19 35.6	-0.5
CRPR	Cabo Rojo, PR	1.15	175	eS	Sb	00 19 51.0	-0.2
CRPR	Cabo Rojo, PR	1.15	175	iP	Pb	00 19 36.1	0.0
CRPR				eS	Sg	00 19 51.7	+0.5
CRPR				IAML		00 19 55.2	
	comp=Z,93nm,0.5s						
ECPR	Experimental S	1.16	136	⇑eP	Pb	00 19 36.3	0.0
ECPR	Experimental S	1.16	136	eS	Sb	00 19 50.8	-0.7
MLPR	Magueyes Islan	1.20	172	⇑eP	Pb	00 19 36.1	-0.8
MLPR	Magueyes Islan	1.20	172	eS	Sb	00 19 51.5	-0.9
OBIP	Obispado Ponce	1.25	152		Sb	00 19 54.1	0.0
OBIP	Obispado Ponce	1.25	152		Pg	00 19 38.2	+0.1
OBIP				IAML		00 19 55.6	
	comp=N,48nm,0.4s						
OBIP	Obispado Ponce	1.25	152	⇑eP	Pn	00 19 37.6	-0.1
OBIP	Obispado Ponce	1.25	152	eS	Sb	00 19 54.1	0.0
GCPR	Guaynabo City	1.37	128		Sb	00 19 57.5	+0.1
GCPR	Guaynabo City	1.37	128	Pn	Pg	00 19 41.0	+0.7
GCPR	Guaynabo City	1.37	128	eS	Sb	00 19 57.5	+0.1
SJG	San Juan	1.45	136	Pn	Pg	00 19 42.3	+0.4
SJG				IAML		00 20 04.7	
	comp=N,39nm,0.2s						
SJG				IAML		00 20 08.8	
	comp=N,46nm,0.2s						
SJG	San Juan	1.45	136	iP	Pb	00 19 41.7	+0.5
SJG				eS	Sg	00 20 00.5	-0.2
SJG				IAML		00 20 08.9	
	comp=Z,28nm,0.4s						
DR12	Loma Pena Alta	2.08	260	Pn	Pn	00 19 49.8	+0.6
SDDR	Presa de Saban	3.86	268	Pn	Pn	00 20 12.7	-1.0

PDG ***17*** *00:28:07.3±0.5, 45°.78N×20°.34E, h14^{km}±1^{km}, ML3.5/11, Error ellipse: s-maj=0.8km s-min=0.9km az=0.0*

KRSZO ***17*** *00:28:07.2±0.7, 45°.84N×20°.34E, h7^{km}±6^{km}, ML3.5/55, Error ellipse: s-maj=3.1km s-min=2.3km az=43.0*

BEO ***17*** *00:28:08.6±0.2, 45°.83N×20°.36E, h19^{km}±2^{km}, ML3.2/32*

RHSSO ***17*** *00:28:08.4±0.9, 45°.70N×20°.32E, h9^{km}, ML3.3/6*

PRU ***17*** *00:28:14.1, 46°.02N×19°.97E, h10^{km}*

ISC 17 00:28:08.0±1.0**, 45°.83N**±0°.01×**20°.33E**±0°.01**, h15**^{km}±8^{km}**, n249,** σ**1^s.38**/396**, 27C-14D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUBS	Subotica	0.55	301	ePg	Pb	00 28 19.2	-0.2
SUBS	Subotica	0.55	301	Pg	Pb	00 28 19.2	-0.2
TIM	Timisoara	0.63	98	⇓P	Pb	00 28 20.6	-0.1
TIM				⇓S	Sn	00 28 30.6	-1.5
TIM	Timisoara	0.63	98	Pg	Pb	00 28 20.6	-0.1
TIM				Lg	Lg	00 28 30.6	
BANR	Banloc	0.72	128	⇑P	Pb	00 28 22.2	-0.1
BANR				⇑S	Sn	00 28 33.1	-1.3
BANR	Banloc	0.72	128	ePg	Pb	00 28 22.6	+0.3
BANR				eSg	Sn	00 28 33.3	-1.1
BANR	Banloc	0.72	128	Pg	Pb	00 28 22.2	-0.1
BANR				Pg	Pg	00 28 22.4	+0.3
BANR				Pg	Pb	00 28 22.5	+0.3
BANR				Pn	Pn	00 28 22.6	-1.0
BANR				Lg	Lg	00 28 33.1	
BANR				Sg	Sn	00 28 33.3	-1.1
BANR				Sn	Sb	00 28 34.5	+2.6
FRGS	Fruska Gora	0.77	209	ePg	Pb	00 28 23.1	0.0
FRGS				eSg	Sb	00 28 34.1	+0.8
FRGS	Fruska Gora	0.77	209	Pg	Pg	00 28 22.6	-0.4
FRGS				Pg	Pb	00 28 23.1	0.0
FRGS				Sn	Sb	00 28 33.9	+0.6
FRGS				Sn	Sb	00 28 34.1	+0.8
BZS	Buzias	0.93	103	⇑P	Pb	00 28 25.7	-0.1
BZS	Buzias	0.93	103	ePg	Pb	00 28 25.6	-0.1

BZS				eSg	Sg	00 28 38.1	0.0
BZS	**Buzias**	0.93	103	Pn	Pb	00 28 25.0	-0.7
BZS				Pn	Pg	00 28 25.5	-0.5
BZS				Pg	Pb	00 28 25.6	-0.1
BZS				Pg	Pg	00 28 25.7	-0.3
BZS				Lg	Lg	00 28 38.0	
BZS				Lg	Lg	00 28 38.1	
VRSS	**Vrsac**	1.00	135	ePg	Pb	00 28 26.8	-0.1
VRSS				eSg	Sn	00 28 41.0	-0.2
VRSS	**Vrsac**	1.00	135	Pn	Pb	00 28 26.8	-0.1
VRSS				Sn	Sn	00 28 41.0	-0.2
SIRR	**Siria**	1.02	64	ePg	Pb	00 28 26.6	-0.9
SIRR				eSg	Sb	00 28 40.4	-0.3
SIRR	**Siria**	1.02	64	Pn	Pb	00 28 26.1	-1.3
SIRR				Pn	Pb	00 28 26.5	-0.9
SIRR				Sn	Sb	00 28 40.0	-0.6
SIRR				Sn	Sb	00 28 40.4	-0.3
BEO	**Beograd**	1.03	174	ePg	Pb	00 28 27.0	-0.5
BEO				eSg	Sb	00 28 40.6	-0.2
BEO	**Beograd**	1.03	174	Pn	Pb	00 28 26.7	-0.8
BEO				Pn	Pn	00 28 26.8	-1.0
BEO				Pg	Pb	00 28 27.0	-0.5
BEO				Pg	Pg	00 28 27.1	-0.8
BEO				Sn	Sb	00 28 40.5	-0.2
AVAS	**Avala Beograd**	1.14	173	ePg	Pn	00 28 29.0	-0.5
AVAS				eSg	Sg	00 28 45.8	+0.8
AVAS	**Avala Beograd**	1.14	173	Pn	Pn	00 28 29.0	-0.5
AVAS				Sn	Sg	00 28 45.8	+0.8
MORH	**Mrgy, Hungar**	1.24	289	ePg	Pb	00 28 31.4	+0.4
MORH				eSg	Sg	00 28 49.3	+1.3
MORH	**Mrgy, Hungar**	1.24	289	⇑S	Sg	00 28 48.6	+0.6
MORH	**Mrgy, Hungar**	1.24	289	ePg	Pn	00 28 30.1	-0.7
MORH				eSg	Sg	00 28 48.3	+0.3
MORH	**Mrgy, Hungar**	1.24	289	Pn	Pn	00 28 30.1	-0.7
MORH				Pg	Pb	00 28 31.1	+0.1
MORH				Pb	Pb	00 28 31.4	+0.4
MORH				Sn	Sg	00 28 48.1	+0.1
MORH				Sn	Sg	00 28 48.3	+0.3
MORH				Lg	Lg	00 28 49.3	
TEKS	**Tekeris**	1.40	204	ePg	Pg	00 28 34.4	-0.6
TEKS				eSg	Sb	00 28 52.2	+0.6
TEKS	**Tekeris**	1.40	204	Pg	Pg	00 28 34.4	-0.6
TEKS				Sn	Sb	00 28 52.2	+0.6
MDVR	**Moldovita**	1.43	137	⇑P	Pn	00 28 32.8	-0.7
MDVR	**Moldovita**	1.43	137	ePg	Pn	00 28 33.3	-0.2
MDVR				eSg	Sg	00 28 53.7	-0.5
MDVR	**Moldovita**	1.43	137	Pn	Pn	00 28 32.8	-0.7
MDVR				Pg	Pn	00 28 33.3	-0.2
MDVR				Sn	Sg	00 28 53.7	-0.5
BSZH	**Besenyszg**	1.47	358	⇑S	Sg	00 28 55.4	+0.1
BSZH	**Besenyszg**	1.47	358	Pn	Pb	00 28 35.4	+0.4
BSZH				Pg	Pg	00 28 36.2	0.0
BSZH				Pg	Pn	00 28 36.9	+3.0
BSZH				Lg	Lg	00 28 55.4	
BSZH				Lg	Lg	00 28 57.4	
KOVH	**Kovagotottos**	1.58	280	Pn	Pn	00 28 34.5	-1.0
KOVH				Pg	Pg	00 28 38.6	+0.2
KOVH				Lg	Lg	00 28 58.9	
A266A	**Gyulaj**	1.59	297	Pn	Pn	00 28 35.4	-0.3
A266A				Pg	Pg	00 28 39.3	+0.7
A266A				Lg	Lg	00 29 00.2	
TRUS	**Trudelj**	1.61	178	ePg	Pg	00 28 38.8	-0.1
TRUS				eSg	Sg	00 28 59.6	-0.2
TRUS	**Trudelj**	1.61	178	Pg	Pg	00 28 38.8	-0.1
TRUS				Sn	Sg	00 28 59.6	-0.2
SVIS	**Svilajnac**	1.69	158	ePg	Pg	00 28 39.6	-0.8
SVIS				eSg	Sg	00 29 01.8	-0.5
SVIS	**Svilajnac**	1.69	158	Pg	Pg	00 28 39.6	-0.8
SVIS				Lg	Lg	00 29 01.8	
A267A	**Kaloz**	1.70	312	Pn	Pn	00 28 36.9	-0.1
A267A				Pg	Pg	00 28 40.0	-0.6
A267A				Lg	Lg	00 29 03.8	
KUBS	**Kucevo**	1.71	146	ePn	Pn	00 28 35.4	-1.8
KUBS	**Kucevo**	1.71	146	Pn	Pn	00 28 35.4	-1.8
DIVS	**Divibare**	1.75	188	ePn	Pn	00 28 37.8	-0.1
DIVS				eSg	Sg	00 29 03.4	-1.0
DIVS	**Divibare**	1.75	188	Pn	Pn	00 28 37.8	-0.1
DIVS				Sn	Sg	00 29 03.4	-1.0
HERR	**Herculane**	1.75	122	⇑P	Pn	00 28 37.8	0.0
HERR				⇓S	Sb	00 29 01.4	-0.1
HERR	**Herculane**	1.75	122	Pn	Pn	00 28 37.8	0.0
HERR				Sn	Sb	00 29 01.4	-0.1
GZR	**Gura Zlata**	1.77	103	⇑P	Pn	00 28 38.0	-0.1
GZR				⇑S	Sb	00 29 03.0	+0.8
GZR	**Gura Zlata**	1.77	103	ePn	Pn	00 28 38.3	+0.1
GZR	**Gura Zlata**	1.77	103	Pn	Pn	00 28 37.8	-0.4
GZR				Pn	Pn	00 28 38.0	-0.1
GZR				Pg	Pn	00 28 38.3	+0.1
GZR				Pb	Pb	00 28 38.9	-1.3
GZR				Pg	Pg	00 28 40.2	-1.8
GZR				Sn	Sb	00 29 03.0	+0.8
DEV	**Deva**	1.80	87	⇑P	Pn	00 28 38.6	+0.1
DEV	**Deva**	1.80	87	Pn	Pn	00 28 38.4	-0.1
DEV				Pn	Pn	00 28 38.5	+0.1
DEV				Pn	Pn	00 28 38.6	+0.1
DEV				Pb	Pb	00 28 40.0	-0.6
DEV				Sn	Sn	00 29 00.3	-0.7
A265A	**Kaposfured**	1.86	289	Lg	Lg	00 29 09.7	
BUD	**Budapest**	1.88	332	Pn	Pn	00 28 38.9	-0.7
BUD				Pn	Pb	00 28 41.6	-0.4
BUD				Pn	Pg	00 28 42.2	-2.0
LTVH	**Ltavrtes, Hu**	1.89	34	Pn	Pn	00 28 39.1	-0.6
LTVH				Pg	Pg	00 28 44.6	+0.3
DRGR		1.91	59	⇓S	Sb	00 29 06.7	+0.5
DRGR		1.91	59	ePn	Pn	00 28 39.1	-0.9
DRGR		1.91	59	Pn	Pn	00 28 39.1	-0.9
DRGR				Pn	Pb	00 28 42.0	-0.6
DRGR				Sn	Sb	00 29 06.7	+0.5
DJES	**Djerdap**	1.94	126	⇑P	Pn	00 28 39.9	-0.5
DJES	**Djerdap**	1.94	126	Pn	Pn	00 28 39.9	-0.5
GRUS	**Gruza**	1.96	172	ePn	Pn	00 28 40.8	+0.1
GRUS				eSg	Sg	00 29 12.0	+0.9
GRUS	**Gruza**	1.96	172	Pn	Pn	00 28 40.8	+0.1
GRUS				Lg	Lg	00 29 12.0	
TIH	**Tihany**	2.00	303	Pn	Pn	00 28 41.0	-0.2
TIH				Pg	Pg	00 28 56.2	+10
RMGR	**Halanga-Turnu**	2.04	124	⇑P	Pn	00 28 42.7	+1.0
RMGR	**Halanga-Turnu**	2.04	124	Pn	Pn	00 28 42.7	+1.0
BBLS	**Lazi&#263i**	2.07	199	ePn	Pn	00 28 42.4	+0.1
BBLS				eSg	Sg	00 29 13.5	-1.2
BBLS	**Lazi&#263i**	2.07	199	Pn	Pn	00 28 42.3	-0.1
BBLS				Pn	Pn	00 28 42.4	+0.1
BBLS				Pg	Pg	00 28 47.1	-0.7
BBLS				Lg	Lg	00 29 13.5	
PSZ	**Piszkesteto**	2.11	352	⇓S	Sb	00 29 12.2	+0.2
PSZ	**Piszkesteto**	2.11	352	Pn	Pn	00 28 41.2	-1.6
PSZ				Pn	Pb	00 28 42.0	-4.0
PSZ				Pg	Pg	00 28 45.4	-3.1
PSZ				Sn	Sb	00 29 12.2	+0.2
MARR	**Marisel-Cluj**	2.11	65	⇑S	Sb	00 29 12.4	+0.4
MARR	**Marisel-Cluj**	2.11	65	Sn	Sb	00 29 12.4	+0.4
BORS2	**Bor- Borsko je**	2.11	145	ePn	Pn	00 28 41.0	-1.8
BORS2				eSg	Sb	00 29 12.7	+0.7
A264A	**Tarany**	2.15	280	Pn	Pn	00 28 43.1	-0.2
A264A				Lg	Lg	00 29 19.1	
A263A	**Hollad**	2.25	292	Pn	Pn	00 28 44.4	-0.2
IVAS	**Ivanjica**	2.26	183	ePn	Pn	00 28 44.3	-0.6
IVAS				eSg	Sg	00 29 20.2	-0.4
IVAS	**Ivanjica**	2.26	183	Pn	Pn	00 28 44.3	-0.6
IVAS				Lg	Lg	00 29 20.2	
GOCS	**Kraljevo Serbi**	2.30	170	ePn	Pn	00 28 45.4	-0.1
GOCS				eSg	Sg	00 29 22.4	+0.4
RUDO	**Rudo**	2.32	198	ePn	Pn	00 28 44.3	-1.3
RUDO				eSn	Sn	00 29 12.2	-1.6
RUDO	**Rudo**	2.32	198	ePn	Pn	00 28 44.9	-0.7
RUDO	**Rudo**	2.32	198	Pn	Pn	00 28 44.3	-1.3
RUDO				Pg	Pn	00 28 44.9	-0.7
RUDO				Sn	Sn	00 29 12.2	-1.6
SRE	**Strehaia**	2.34	119	⇓S	Sn	00 29 16.1	+1.7
SRE	**Strehaia**	2.34	119	Sn	Sn	00 29 16.1	+1.7
MPLH	**Magyarpolny**	2.35	306	Pn	Pn	00 28 46.4	+0.3
MPLH				Pn	Pb	00 28 48.9	-1.1
BOVS	**Bovan**	2.41	155	⇑P	Pn	00 28 46.2	-0.6
BOVS	**Bovan**	2.41	155	ePn	Pn	00 28 46.2	-0.6
BOVS	**Bovan**	2.41	155	Pn	Pn	00 28 46.2	-0.6
BOVS				Pn	Pn	00 28 46.2	-0.6
SRO	**Srobarova**	2.42	326	ePN	Pb	00 28 50.1	-1.1
SRO				eSN	Sn	00 29 06.3	-10
SRO				eSG	Sg	00 29 28.4	+2.7
SRO	**Srobarova**	2.42	326	Pn	Pn	00 28 47.6	+0.6
SRO				Pn	Pb	00 28 47.7	-3.4
SRO				Pg	Pg	00 28 50.8	-3.6
ZAGS	**Zajecar**	2.43	146	ePn	Pn	00 28 47.0	-0.1
ZAGS	**Zajecar**	2.43	146	Pn	Pn	00 28 47.0	-0.1
CJR	**Cluj-Napoca**	2.43	68	Pn	Pn	00 28 46.9	-0.3
CJR				Pg	Pb	00 28 51.9	+0.4
CJR				Pg	Pg	00 28 52.4	-2.2
CJR				Lg	Lg	00 29 25.4	
LOT	**Lotru**	2.44	98	⇓P	Pn	00 28 47.9	+0.5
LOT	**Lotru**	2.44	98	Pn	Pn	00 28 47.3	-0.2
LOT				Pn	Pb	00 28 47.4	-4.3
LOT				Pg	Pg	00 28 47.9	-7.0
LOT				Pb	Pb	00 28 49.8	-1.9
A261A	**Ohid**	2.47	298	Pn	Pn	00 28 48.0	+0.3
BLY	**Banja Luka**	2.47	245	⇑iPn	Pn	00 28 47.4	-0.3
BLY				eSn	Sn	00 29 17.7	+0.1
BLY	**Banja Luka**	2.47	245	⇑P	Pn	00 28 47.4	-0.3
BLY	**Banja Luka**	2.47	245	ePn	Pn	00 28 47.3	-0.4
BLY	**Banja Luka**	2.47	245	Pn	Pn	00 28 47.4	-0.4
BLY				Pg	Pg	00 28 55.2	-0.2
BLY				Sn	Sn	00 29 17.7	+0.1
BLY				Lg	Lg	00 29 28.2	
ABAH	**Abaujker**	2.54	14	Pn	Pn	00 28 48.1	-0.6
ABAH				Pg	Pb	00 28 54.9	+1.6
ABAH				Pg	Pg	00 28 55.8	-0.9
ABAH				Sn	Sn	00 29 19.6	+0.3
ABAH				Lg	Lg	00 29 29.5	
BEHE	**Becsehely**	2.55	286	ePn	Pn	00 28 51.0	+2.2
BEHE				eSn	Sb	00 29 22.4	-2.3
BEHE	**Becsehely**	2.55	286	Pn	Pn	00 28 51.0	+2.2
BEHE				Sn	Sb	00 29 22.4	-2.3
A336A	**Medovarce**	2.57	340	Pn	Pn	00 28 49.5	+0.5
SJES	**Sjenica**	2.58	186	ePn	Pn	00 28 49.6	+0.2
SJES	**Sjenica**	2.58	186	Pn	Pn	00 28 49.6	+0.2
PLE	**Pljevlja**	2.59	195	⇑iPn	Pn	00 28 49.5	0.0
PLE				i Sn	Sn	00 29 21.4	+0.7
EGYH	**Egyhazaskeszo**	2.60	309	Pn	Pn	00 28 50.3	+0.7
EGYH				Pn	Pb	00 28 53.2	-1.2
KECS	**Kecovo**	2.66	2	ePG	Pg	00 29 02.7	+3.8
KECS				eSN	Sn	00 29 11.2	-11
KECS				eSG	Sg	00 29 33.4	+0.1
SELS	**Selova**	2.67	168	ePn	Pn	00 28 50.6	+0.1
SELS	**Selova**	2.67	168	Pn	Pn	00 28 50.6	+0.1
TRPA	**Tarpa**	2.75	33	Pn	Pn	00 28 50.2	-1.3
TRPA				Pn	Pb	00 28 50.5	-6.4
TRPA				Pg	Pg	00 28 59.3	-1.5
BLKB	**Belogradchik**	2.77	142	ePn	Pn	00 28 51.6	-0.3
BLKB	**Belogradchik**	2.77	142	Pn	Pn	00 28 51.6	-0.3
BAIL	**Bailesti**	2.80	129	⇓P	Pn	00 28 52.5	+0.2
BAIL	**Bailesti**	2.80	129	Pn	Pn	00 28 52.5	+0.2
UPM	**Unac-Piva**	2.82	202	⇑iPn	Pn	00 28 52.5	-0.2
UPM				i Sn	Sn	00 29 26.6	+0.1
A262A	**Szaknyer**	2.83	293	Pn	Pn	00 28 53.0	+0.4
A262A				Lg	Lg	00 29 41.4	
BMR	**Baia Mare**	2.85	49	⇑P	Pn	00 28 53.3	+0.4
BMR	**Baia Mare**	2.85	49	Pn	Pn	00 28 53.1	+0.1
BMR				Pn	Pb	00 28 53.3	-5.2
BMR				Pg	Pg	00 29 04.8	+2.2
TRSU	**Trosnyk**	2.89	38	Pn	Pn	00 28 52.6	-0.8
TRSU				Pg	Pg	00 29 02.5	-0.9
KOGS	**Kog**	2.90	284	Pn	Pn	00 28 53.5	-0.2
KLINJ	**Klinje**	2.94	206	ePn	Pn	00 28 53.8	-0.5
KLINJ				eSn	Sn	00 29 27.9	-1.4
A335A	**Lovce**	2.95	333	Pn	Pn	00 28 54.4	+0.1
BEY	**Berane**	2.98	186	ePn	Pn	00 28 55.4	+0.7
BEY	**Berane**	2.98	186	Pn	Pn	00 28 55.4	+0.7
IVA	**Berane**	2.98	186	ePn	Pn	00 28 54.6	-0.1
IVA				eSn	Sn	00 29 30.9	+0.7
KNYS	**Krupa na Uni**	2.98	253	ePn	Pn	00 28 54.5	-0.2
KNYS				eSn	Sn	00 29 30.0	-0.2
KORU	**Korolevo**	3.02	38	Pn	Pn	00 28 53.4	-1.8
KOME	**Kolasin**	3.04	191	ePn	Pn	00 28 55.9	+0.3
KOME	**Kolasin**	3.04	191	⇑iPn	Pn	00 28 55.8	+0.2
KOME				eSn	Sn	00 29 32.2	+0.5
ZAPS	**Zavoj**	3.04	146	ePn	Pn	00 28 55.3	-0.3
ZAPS	**Zavoj**	3.04	146	Pn	Pn	00 28 55.3	-0.3
PTJ	**Puntijarka**	3.05	273	Pg	Pg	00 29 07.2	+0.8
ARCR	**ARCALIA**	3.05	64	Pn	Pn	00 28 55.3	-0.3
ARCR				Pg	Pb	00 29 03.9	+1.9
ARCR				Pg	Pg	00 29 06.1	-0.4
ARR	**Arges**	3.06	97	⇑P	Pn	00 28 55.8	0.0
ARR	**Arges**	3.06	97	Pn	Pn	00 28 55.8	0.0
MUKU	**Mukachevo**	3.08	31	Pn	Pn	00 28 54.9	-1.1
BRIU	**Brid**	3.11	35	Pn	Pn	00 28 55.6	-0.8
BRIU				Pg	Pg	00 29 07.9	+0.4
SOP	**Sopron**	3.19	307	Pn	Pn	00 28 57.5	0.0
SOP				Pn	Pb	00 29 00.3	-4.0
BARS	**Barje**	3.20	160	ePn	Pn	00 28 57.6	-0.1
BARS	**Barje**	3.20	160	Pn	Pn	00 28 57.6	-0.1
BRY	**Bratogost**	3.20	204	ePn	Pn	00 28 57.7	-0.2
BRY				i Sn	Sn	00 29 36.2	+0.4
A332A	**Rudnianska**	3.23	338	Pn	Pn	00 28 58.4	+0.2
MODS	**Modra-Piesok**	3.29	322	ePN	Pn	00 28 58.9	-0.1
MODS				ePG	Pg	00 29 09.0	-2.0
MODS				eSG	Sg	00 29 56.5	+2.9
MODS	**Modra-Piesok**	3.29	322	Pn	Pn	00 28 59.2	+0.2
RONA	**Rosalia, Austr**	3.34	305	i Pn	Pn	00 28 59.7	0.0
	3.6nm,0.1s,SNR=23						
RONA				i Sn	Sn	00 29 37.5	-1.7
	4.8nm,0.2s						
RONA	**Rosalia, Austr**	3.34	305	Pn	Pn	00 28 59.7	0.0
	3.6nm,0.1s						
RONA				Sn	Sn	00 29 37.5	-1.7
	4.8nm,0.2s						
LANS	**Liptovska Anna**	3.37	350	ePN	Pb	00 29 04.6	-2.9
LANS				ePG	Pg	00 29 17.1	+4.5
LANS				eSN	Sn	00 29 30.4	-9.5
CRES	**Cresnjevec Ost**	3.41	272	Pn	Pn	00 29 00.0	-0.6
TREB	**Trebinje**	3.42	205	ePn	Pn	00 29 00.8	0.0
TREB				eSn	Sn	00 29 39.5	-1.6
TREB	**Trebinje**	3.42	205	ePn	Pn	00 29 02.8	+2.0
TREB	**Trebinje**	3.42	205	Pn	Pn	00 29 00.8	0.0
TREB				Pg	Pb	00 29 02.8	-5.5
TREB				Sn	Sn	00 29 39.5	-1.6
VLAD	**Vladila**	3.42	121	⇑P	Pn	00 29 00.7	-0.1
VLAD	**Vladila**	3.42	121	Pn	Pn	00 29 00.7	-0.1
CEME	**Cevo**	3.44	198	⇓iPn	Pn	00 29 01.4	+0.3
CEME				eSn	Sn	00 29 42.3	+0.7
PDG	**Podgorica**	3.49	193	ePn	Pn	00 29 02.6	+0.9
PDG	**Podgorica**	3.49	193	⇑iPn	Pn	00 29 02.1	+0.4
PDG				eSn	Sn	00 29 43.8	+1.1
PDG	**Podgorica**	3.49	193	Pn	Pn	00 29 02.6	+0.9
STON	**Ston**	3.51	213	ePn	Pn	00 29 03.2	+1.2
STON	**Ston**	3.51	213	Pn	Pn	00 29 03.2	+1.2
JAVC	**Velka Javorina**	3.53	330	ePN	Pn	00 29 05.7	+3.4
JAVC	**Velka Javorina**	3.53	330	Pn	Pn	00 29 05.7	+3.4
DOPR	**Dopca**	3.53	86	⇓P	Pn	00 29 04.0	+1.6
DOPR	**Dopca**	3.53	86	Pn	Pn	00 29 04.0	+1.6
HUMR	**Humele**	3.54	110	⇓P	Pn	00 29 03.1	+0.7
HUMR	**Humele**	3.54	110	Pn	Pn	00 29 03.1	+0.7
STZU	**Stuzhytsa**	3.54	25	Pg	Pg	00 29 15.4	-0.5
BOJS	**Bojanci**	3.58	267	ePn	Pn	00 29 04.9	+2.0
BOJS	**Bojanci**	3.58	267	Pn	Pn	00 29 04.9	+2.0
NIE	**Niedzica**	3.59	360	Pn	Pn	00 29 04.7	+1.6
ARSA	**Arzberg**	3.61	295	i Pn	Pn	00 29 03.1	-0.3
	0.3nm,0.1s,SNR=5.4						
ARSA				i Sn	Sn	00 29 43.7	-2.0
	3.4nm,0.3s						
ARSA	**Arzberg**	3.61	295	ePn	Pn	00 29 03.3	-0.1
ARSA	**Arzberg**	3.61	295	Pn	Pn	00 29 03.1	-0.3
	0.3nm,0.1s						
ARSA				Pg	Pb	00 29 03.3	-8.2
ARSA				Sn	Sn	00 29 43.7	-2.0
	3.4nm,0.3s						
HCY	**Herceg Novi**	3.63	202	ePn	Pn	00 29 03.9	+0.2
HCY				i Sn	Sn	00 29 47.1	+0.8
STHS	**Stebnicka Huta**	3.64	9	ePN	Pn	00 29 04.0	+0.2
STHS				ePG	Pg	00 29 20.8	+3.1
BOSS	**Bosilegrad**	3.68	154	ePn	Pn	00 29 04.2	-0.1
BOSS	**Bosilegrad**	3.68	154	Pn	Pn	00 29 04.2	-0.1
BUM	**Brajici-Budva**	3.68	197	ePn	Pn	00 29 04.7	+0.3
BUM				i Sn	Sn	00 29 47.9	+0.4
CONA	**Conrad Observa**	3.71	306	i Pn	Pn	00 29 05.1	+0.2
	4.0nm,0.3s,SNR=16						
CONA				i Sn	Sn	00 29 46.6	-1.8
	14nm,0.6s						
CONA	**Conrad Observa**	3.71	306	Pn	Pn	00 29 05.1	+0.2
	4.0nm,0.3s						
CONA				Sn	Sn	00 29 46.6	-1.8
	14nm,0.6s						
DRME	**Dracevica, Mon**	3.74	193	ePn	Pn	00 29 07.8	+2.7
DRME	**Dracevica, Mon**	3.74	193	ePn	Pn	00 29 05.7	+0.6
DRME				eSn	Sn	00 29 49.3	+0.5
DRME	**Dracevica, Mon**	3.74	193	Pn	Pn	00 29 07.8	+2.7
SOKA	**Soboth**	3.77	285	i Pn	Pn	00 29 04.9	-0.8
	0.5nm,0.2s						
SOKA				i Sn	Sn	00 29 49.7	-0.1
	4.8nm,0.5s						
SOKA	**Soboth**	3.77	285	Pn	Pn	00 29 04.9	-0.8
	0.5nm,0.2s						
SOKA				Sn	Sn	00 29 49.7	-0.1
	4.8nm,0.5s						
BURAR	**Bucovina Array**	3.80	60	⇑P	Pn	00 29 06.7	+0.6
BURAR	**Bucovina Array**	3.80	60	Pn	Pn	00 29 06.7	+0.6
OZUR		3.81	84	⇓P	Pn	00 29 07.2	+1.0
OZUR		3.81	84	Pn	Pn	00 29 07.2	+1.0
VTS	**Vitosha**	3.83	146	ePn	Pn	00 29 06.7	+0.1
VTS	**Vitosha**	3.83	146	Pn	Pn	00 29 06.7	+0.1
A001A	**Falkenstein**	3.86	320	Pn	Pn	00 29 07.4	+0.6
PLVB	**Pleven**	3.92	127	⇓P	Pn	00 29 07.2	-0.4
PLVB	**Pleven**	3.92	127	Pn	Pn	00 29 07.2	-0.4
MAUC	**Maruska**	3.92	335	ePN	Pn	00 29 11.0	+3.3
MAUC	**Maruska**	3.92	335	Pn	Pn	00 29 11.0	+3.3
ULC	**Ulcinj**	3.95	192	ePn	Pn	00 29 08.6	+0.6
ULC				eSn	Sn	00 29 53.9	-0.1
MLR	**Muntele Rosu**	3.95	93	⇑P	Pn	00 29 09.4	+1.2
MLR	**Muntele Rosu**	3.95	93	ePn	Pn	00 29 09.7	+1.5
MLR	**Muntele Rosu**	3.95	93	Pn	Pn	00 29 09.4	+1.2
MLR				Pg	Pb	00 29 09.7	-7.7
OBKA	**Obir**	4.07	282	ePn	Pn	00 29 10.0	+0.2
	0.5nm,0.3s						
OBKA				eSn	Sb	00 30 11.8	+3.2
	16nm,0.6s						
OBKA	**Obir**	4.07	282	Pn	Pn	00 29 10.0	+0.2
	0.5nm,0.3s						
OBKA				Lg	Lg	00 30 11.8	
	16nm,0.6s						
A008A	**Tiefenfucha**	4.08	310	Pn	Pn	00 29 10.1	+0.2
KRUC	**Moravsky**	4.19	322	ePN	Pn	00 29 11.0	-0.4
KRUC				e		00 29 14.0	
KRUC	**Moravsky**	4.19	322	ePG	Pb	00 29 21.0	-0.4
KRUC				eSN	Sn	00 29 56.8	-3.2
KRUC	**Moravsky**	4.19	322	Pn	Pn	00 29 11.0	-0.4
KRUC				x	x	00 29 14.0	
KRUC				Pg	Pb	00 29 21.0	-0.4
KRUC				Sn	Sn	00 29 56.8	-3.2
OKC	**Ostrava-Krasne**	4.27	341	ePN	Pn	00 29 13.7	+1.3
OKC	**Ostrava-Krasne**	4.27	341	Pn	Pn	00 29 13.5	+1.1
OKC				Pn	Pb	00 29 13.7	-9.0
OKC				Pg	Pg	00 29 16.5	-13
VRAC	**Vranov**	4.30	325	ePN	Pn	00 29 13.2	+0.3
VRAC				e		00 29 16.1	
VRAC	**Vranov**	4.30	325	ePG	Pb	00 29 22.5	-0.8
VRAC				eSN	Sn	00 30 01.3	-1.4
VRAC	**Vranov**	4.30	325	Pn	Pn	00 29 13.2	+0.3
VRAC				x	x	00 29 16.1	
VRAC				Pg	Pb	00 29 22.5	-0.8
VRAC				Sn	Sn	00 30 01.3	-1.4
MORC	**Moravsky Berou**	4.37	336	ePN	Pn	00 29 14.3	+0.4
MORC				e		00 29 17.4	
MORC	**Moravsky Berou**	4.37	336	Pn	Pn	00 29 14.3	+0.4
MORC				x	x	00 29 17.4	
PLOR	**Plostina**	4.42	87	⇓P	Pn	00 29 15.3	+0.8
PLOR	**Plostina**	4.42	87	Pn	Pn	00 29 15.3	+0.8
SKDS	**Skadanscina**	4.44	269	ePn	Pn	00 29 15.3	+0.6
SKDS	**Skadanscina**	4.44	269	Pn	Pn	00 29 15.3	+0.6
TESR	**Tescani**	4.44	79	⇑P	Pn	00 29 16.3	+1.5
TESR	**Tescani**	4.44	79	Pn	Pn	00 29 16.3	+1.5
VRI	**Vrincioaia**	4.47	87	⇑P	Pn	00 29 16.6	+1.4
VRI	**Vrincioaia**	4.47	87	Pn	Pn	00 29 16.6	+1.4
MOA	**Molln**	4.62	298	i Pn	Pn	00 29 17.1	-0.3
	0.4nm,0.2s						
MOA				eSn	Sn	00 30 09.6	-1.1
	1.4nm,0.3s						
MOA	**Molln**	4.62	298	ePn	Pn	00 29 18.9	+1.6
MOA	**Molln**	4.62	298	Pn	Pn	00 29 17.1	-0.3
	0.4nm,0.2s						
MOA				Pg	Pb	00 29 18.9	-10
MOA				Sn	Sn	00 30 09.6	-1.1
	1.4nm,0.3s						
TREC	**Trest**	4.77	318	eSN	Sn	00 30 12.0	-2.3
TREC	**Trest**	4.77	318	Sn	Sn	00 30 12.0	-2.3
KRLC	**Kraliky**	4.87	332	ePN	Pn	00 29 24.7	+4.0
KRLC	**Kraliky**	4.87	332	Pn	Pn	00 29 24.7	+4.0
BIOA	**Bad Ischl, Aus**	4.96	294	i Pn	Pn	00 29 21.8	-0.1
	1.2nm,0.3s						
BIOA				eSn	Sn	00 30 20.2	+1.1
	6.2nm,0.6s						
BIOA	**Bad Ischl, Aus**	4.96	294	Pn	Pn	00 29 21.8	-0.1
	1.2nm,0.3s						
BIOA				Sn	Sn	00 30 20.2	+1.1
	6.2nm,0.6s						
KBA	**Koelnbreinsper**	4.99	287	i Pn	Pn	00 29 21.5	-0.9
	1.3nm,0.5s						
KBA				eSn	Sn	00 30 19.6	-0.3
	0.5nm,0.3s						
KBA	**Koelnbreinsper**	4.99	287	Pn	Pn	00 29 21.5	-0.9
	1.3nm,0.5s						
KBA				Sn	Sn	00 30 19.6	-0.3
	0.5nm,0.3s						
CKRC	**Cesky Krumlov**	5.07	308	ePN	Pn	00 29 26.8	+3.4
CKRC	**Cesky Krumlov**	5.07	308	Pn	Pn	00 29 26.8	+3.4
DPC	**Dobruska-Polom**	5.26	331	ePN	Pn	00 29 29.5	+3.5
DPC	**Dobruska-Polom**	5.26	331	Pn	Pn	00 29 29.5	+3.5
SRS	**Serrai**	5.28	152	ePn	Pn	00 29 26.0	-0.3
SRS	**Serrai**	5.28	152	Pn	Pn	00 29 26.0	-0.3
OSTC	**Ostas**	5.47	331	ePN	Pn	00 29 32.3	+3.4
OSTC	**Ostas**	5.47	331	Pn	Pn	00 29 32.3	+3.4
ABTA	**Abfaltersbach**	5.50	282	ePn	Pn	00 29 31.2	+1.8
	0.3nm,0.2s						
ABTA				eSn	Sn	00 30 33.3	+1.0
	0.5nm,0.2s						
ABTA	**Abfaltersbach**	5.50	282	Pn	Pn	00 29 31.2	+1.8
	0.3nm,0.2s						
ABTA				Sn	Sn	00 30 33.3	+1.0
	0.5nm,0.2s						
LESA	**Schwarzleotal**	5.51	290	i Pn	Pn	00 29 29.9	+0.3
	1.6nm,0.4s						
LESA				i Sn	Sn	00 30 33.6	+1.0
	0.8nm,0.3s						
LESA	**Schwarzleotal**	5.51	290	Pn	Pn	00 29 29.9	+0.3
	1.6nm,0.4s						
LESA				Sn	Sn	00 30 33.6	+1.0
	0.8nm,0.3s						
KHC	**Kasperske Hory**	5.64	308	ePN	Pn	00 29 34.7	+3.4
KHC				eSN	Sn	00 30 34.1	-1.7
KHC	**Kasperske Hory**	5.64	308	Pn	Pn	00 29 34.7	+3.4
KHC				Sn	Sn	00 30 34.1	-1.7
WTTA	**Wattenberg**	6.17	287	i Pn	Pn	00 29 40.8	+2.2
	0.3nm,0.1s						
WTTA				eSn	Sn	00 30 48.6	-0.3
	2.7nm,0.6s						
WTTA	**Wattenberg**	6.17	287	Pn	Pn	00 29 40.8	+2.2
	0.3nm,0.1s						
WTTA				Sn	Sn	00 30 48.6	-0.3
	2.7nm,0.6s						
CLL	**Collm**	7.32	321	ePn	Pb	00 30 06.0	-8.7
CLL				eSn	Sn	00 31 09.0	-8.1
CLL				eSg	Sg	00 32 03.0	+0.2
BSD	**Bornholm Skovb**	9.91	342	i P	Pn	00 30 32.7	+3.0
BSD				IAML		00 30 45.4	
	comp=Z,8.2nm,0.8s						
LUNU	**Lund**	10.73	339	eP	Pn	00 30 44.0	+3.0
BJUU	**Bjuv**	11.23	339	eP	Pn	00 30 49.6	+1.7
DEL	**Delary**	11.39	342	eP	Pn	00 30 52.3	+2.3

IDC ***17*** *00:46:06.0±3.1, 6°.64S×127°.01E, h399km±34km, mb3.0/4, mbtmp4.0/8, Error ellipse: s-maj=69.3km s-min=12.4km az=65.0*

ISC 17 00:46:06.2±1.1, **6°.72S**±0°.10×**126°.7E**±0°.2, **h400**km, **n8,** σ**1s.37**/10, **mb3.4**/4, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	4.59	221	P	Pn	00 47 26.2	+2.1
	84nm,0.5s,baz=238,slow=0.4,SNR=9.9						
BATI				S	S	00 48 25.4	-2.0
	27nm,0.4s,baz=354,slow=10.0,SNR=3.7						
FITZ	**Fitzroy Crossi**	11.36	185	P	P	00 48 38.5	-0.4
	2.7nm,0.5s,baz=16,slow=7.7,SNR=13						
WRA	**Warramunga Arr**	15.09	151	P	P	00 49 20.0	+0.2
	2.3nm,0.5s,baz=336,slow=9.6,SNR=29						

ASAR	**Alice Springs**	**18.21**	**158**	P	**P**	**00 49 52.8**	**-0.4**
	2.8nm,0.5s,baz=336,slow=8.9,SNR=34						
ASAR				S	**S**	**00 53 00.7**	**0.0**
	0.5nm,0.8s,baz=339,slow=23,SNR=5.2						
SONM	**Songino Array**	**57.20**	**344**	P	**P**	**00 55 11.8**	**-1.6**
	0.3nm,0.5s,baz=171,slow=7.1,SNR=2.3						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**66.23**	**328**	P	**P**	**00 56 13.6**	**+0.7**
	0.3nm,0.5s,baz=125,slow=6.9,SNR=7.6						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**69.92**	**335**	P	**P**	**00 56 35.6**	**+0.3**
	0.9nm,0.4s,baz=131,slow=6.3,SNR=7.0						
	0.9nm,0.4s						
KURBB	**Kurchatov Arra**	**70.59**	**330**	P	**P**	**00 56 40.5**	**+1.1**
	0.6nm,0.5s,baz=135,slow=4.9,SNR=5.6						
	0.6nm,0.5s						

IDC 17 00:55:02.1±1.2, 6°.51N×125°.36E, h0^{km}, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=34.8km s-min=9.8km az=108.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.60**	**21**	Pg	Pg	00 55 14.4	+0.9
	456nm,0.3s,baz=261,slow=6.2,SNR=20						
DAV				Lg	Lg	00 55 20.9	
	299nm,0.3s,baz=104,slow=24,SNR=12						
WRA	**Warramunga Arr**	**27.73**	**162**	P	P	01 00 52.2	-0.3
	0.3nm,0.8s,baz=330,slow=9.8,SNR=0.6						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**31.13**	**165**	P	P	01 01 22.4	-0.3
	0.1nm,0.3s,baz=340,slow=8.4,SNR=4.8						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**54.51**	**325**	P	P	01 04 33.3	+1.5
	0.3nm,0.7s,baz=129,slow=6.3,SNR=4.1						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**58.68**	**327**	P	P	01 04 59.4	-2.0
	0.2nm,0.8s,baz=121,slow=7.4,SNR=2.1						
	0.2nm,0.8s						

RSNC 17 01:05:32.6±0.0, 5°N±1°×7°4W±°, h143^{km}±2^{km}, M3.1, mb4.2, ML2.8, MLv3.3, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPBC	**San Pablo de B**	**0.50**	**321**	P	Pn	01 05 53.3	0.0
SPBC				S	Sn	01 06 09.2	+0.2
CHIC	**Chingaza**	**0.63**	**178**	P	Pn	01 05 54.3	-0.1
CHIC				S	Sn	01 06 09.6	-1.3
ROSC	**El Rosal**	**0.70**	**234**	P	Pn	01 05 54.7	-0.2
ROSC				S	Sn	01 06 10.4	-1.3
RUSC	**La Rusia**	**0.91**	**47**	P	Pn	01 05 56.7	+0.2
VILC	**Villavicencio,**	**1.14**	**177**	P	Pn	01 05 57.8	-0.4
VILC				S	Sn	01 06 16.9	-0.8
NORC	**Norcasia**	**1.15**	**285**	P	Pn	01 05 57.9	-0.3
NORC				S	Sn	01 06 17.4	-0.3
BARC	**Barichara**	**1.44**	**23**	P	Pn	01 06 00.4	-0.9
BARC				S	Sn	01 06 22.2	-1.0
PTBC	**PUERTO BERRIO,**	**1.45**	**331**	P	Pn	01 06 00.0	-1.2
PTBC				S	Sn	01 06 21.9	-1.1
GUY2C	**Guyana, Caldas**	**1.61**	**269**	P	Pn	01 06 03.2	-0.1
GUY2C				S	Sn	01 06 27.5	+0.8
BRJC	**Barrancabermej**	**1.70**	**0**	P	Pn	01 06 03.5	-0.4
BRJC				S	Sn	01 06 26.1	-1.8
NIZA	**Niza - Manizal**	**1.73**	**263**	P	Pn	01 06 04.5	+0.1
NIZA				S	Sn	01 06 30.1	+1.4
PRAC	**Prado**	**1.91**	**216**	P	Pn	01 06 06.2	-0.1
PRAC				S	Sn	01 06 31.9	-0.2
HELC	**Santa Helena**	**2.00**	**298**	P	Pn	01 06 07.6	0.0
HELC				S	Sn	01 06 33.4	-1.1
ORTC	**Ortega, Tolima**	**2.01**	**228**	P	Pn	01 06 07.1	-0.3
ORTC				S	Sn	01 06 33.7	-0.5
URMC	**La Uribe, Meta**	**2.10**	**197**	P	Pn	01 06 08.5	-0.1
URMC				S	Sn	01 06 35.0	-1.2
PAMC	**Pamplona, Colo**	**2.31**	**27**	P	Pn	01 06 10.9	-0.7
PAMC				S	Sn	01 06 40.6	-0.9
CBOC	**Ciudad Bolivar**	**2.33**	**285**	P	Pn	01 06 11.4	-0.1
CBOC				S	Sn	01 06 41.3	0.0
YOTC	**Yotoco, Valle**	**2.88**	**244**	P	Pn	01 06 17.9	-0.4
OCAC	**Ocana**	**2.99**	**8**	P	Pn	01 06 18.9	-0.8
OCAC				S	Sn	01 06 55.4	-0.8
DBBC	**Dabeiba**	**3.00**	**306**	P	Pn	01 06 19.1	-0.8
DBBC				S	Sn	01 06 55.6	-0.8
UREC	**San Jos de Ur**	**3.04**	**325**	P	Pn	01 06 17.4	-2.9
UREC				S	Sn	01 06 54.0	-3.2
MACC	**Macarena, Meta**	**3.10**	**182**	P	Pn	01 06 19.1	-1.9
MACC				S	Sn	01 06 55.7	-2.7
GARC	**Garzon, Huila**	**3.51**	**210**	P	Pn	01 06 25.4	-1.2
GARC				S	Sn	01 07 05.7	-2.7
APAC	**Apartado, Choc**	**3.84**	**313**	P	Pn	01 06 29.5	-1.2
APAC				S	Sn	01 07 14.4	-1.3
FLOC	**Florencia**	**4.12**	**208**	P	Pn	01 06 33.6	-0.7
ARGC	**Ariguani, Magd**	**4.59**	**354**	P	Pn	01 06 38.6	-2.0
ARGC				S	Sn	01 07 30.7	-2.8
SDV	**Santo Domingo**	**4.75**	**40**	P	Pn	01 06 41.2	-1.6
SDV				S	Sn	01 07 36.3	-1.1
SJCC	**San Jacinto, C**	**4.82**	**343**	P	Pn	01 06 39.9	-3.7
SJCC				S	Sn	01 07 32.6	-6.3
URIC	**Uribia, Colomb**	**6.63**	**15**	P	Pn	01 07 06.1	-1.6

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*IDC **17** 01:24:29.4±1.1, 6°.51N×125°.15E, h0^{km}, mb3.7/6, mbtmp3.7/6, MS3.2/3, Error ellipse: s-maj=67.6km s-min=21.3km az=76.0*

*DJA **17** 01:24:32.1±1.0, 7°N±8°×12°5E±°, h53^{km}±14^{km}, M4.8/7, mb4.8/7, mB5.2/5, MLv4.8/6, Mw(mB)4.6/5*

ISC 17 01:24:34.6±0.9, 6°.70N±0°.07×125°.3E±0°.1, h35^{km}, n18, σ1^{s}.74/18, mb3.7/6, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.45**	**35**	P	**Pn**	**01 24 43.6**	**-1.0**
DAV				S	**Sn**	**01 24 53.4**	**+1.9**
DAV	**Davao City (W)**	**0.45**	**35**	P	**Pn**	**01 24 42.0**	**-2.6**
SGSI	**Sangihe**	**3.00**	**176**	P	**Pn**	**01 25 19.6**	**0.0**
SGSI				S	**Sn**	**01 25 57.8**	**+3.4**
GTOI	**Gorontalo**	**6.45**	**201**	P	**Pn**	**01 26 05.9**	**-1.1**
	1.1nm3μm281nm,0.6s						
MRSI	**Marisa**	**7.04**	**209**	P	**Pn**	**01 26 15.1**	**-0.1**
	0.4nm1μm79nm,0.6s						
LUWI	**Luwuk**	**8.10**	**198**	P	**Pn**	**01 26 31.2**	**+1.5**
	58nm,0.8s						
MPSI	**Mapaga**	**8.31**	**221**	P	**Pn**	**01 26 30.4**	**-2.3**
APSI	**Ampana**	**8.40**	**206**	P	**Pn**	**01 26 35.9**	**+2.1**
	882nm38nm,0.5s						
SANI	**Sanana**	**8.71**	**176**	P	**Pn**	**01 26 37.7**	**-0.5**
KRAI	**Karang Ratu**	**10.41**	**163**	P	**Pn**	**01 27 01.2**	**-0.3**
BATI	**Baumata**	**16.87**	**186**	LR	LR	01 36 09.3	
	comp=Z,44nm,19.0s,baz=309,slow=42						
FITZ	**Fitzroy Crossi**	**24.64**	**179**	P	**P**	**01 29 50.0**	**-2.0**
	1.3nm,0.5s,baz=2.0,slow=7.4,SNR=8.7						
	1.3nm,0.5s						
WRA	**Warramunga Arr**	**27.92**	**162**	P	**P**	**01 30 20.4**	**-1.2**
	0.6nm,0.5s,baz=334,slow=11,SNR=6.6						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**31.32**	**165**	P	**P**	**01 30 50.9**	**-0.9**
	0.5nm,0.4s,baz=344,slow=7.7,SNR=9.5						
ASAR				LR	LR	01 43 52.1	
	comp=Z,34nm,18.6s,baz=100,slow=37						
	0.5nm,0.4s						
STKA	**Stephens Creek**	**41.38**	**159**	P	**P**	**01 32 16.7**	**-0.9**
	0.6nm,0.3s,baz=350,slow=6.1,SNR=3.2						
	0.6nm,0.3s						
SONM	**Songino Array**	**44.06**	**342**	LR	LR	01 51 01.8	
	comp=Z,48nm,18.4s,baz=38,slow=36						
MKAR	**Makanchi Array**	**54.33**	**325**	P	**P**	**01 33 59.0**	**+1.3**
	0.4nm,0.6s,baz=121,slow=6.6,SNR=5.5						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**83.05**	**26**	P	**P**	**01 36 57.0**	**+0.7**
	0.3nm,0.6s,baz=245,slow=5.4,SNR=6.5						
	0.3nm,0.6s						

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*SDD **17** 01:25:36.8±2.3, 19°.17N×67°.56W, h18^{km}±117^{km}, MD3.7, ML3.4, MW3.6, Presumed earthquake*

*OSPL **17** 01:25:36.1±0.3, 19°.01N×67°.80W, h4^{km}±2^{km}, ML3.3, Presumed earthquake*

*RSPR **17** 01:25:36.5, 19°.14N×67°.87W, h27^{km}±32^{km}, MD3.1/14*

*NEIC **17** 01:25:38.0±1.4, 18°.96N±0°.04×67°.60W±0°.03, h10^{km}±2^{km}, ML3.4/14, Md3.1/14(RSPR), Error ellipse: s-maj=6.2km s-min=5.2km az=194.0*

ISC 17 01:25:36.4±1.4, 19°.03N±0°.05×67°.62W±0°.03, h5^{km}±10^{km}, n64, σ0^{s}.55/81, 4C-12D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.65**	**168**		**Pg**	**01 25 49.6**	**+0.7**
IDE					**Sg**	**01 25 57.2**	**-0.2**
IDE	**Isla Desecheo**	**0.65**	**168**	⇑*i*P	**Pg**	**01 25 49.6**	**+0.7**
IDE	**Isla Desecheo**	**0.65**	**168**	*e*S	**Sg**	**01 25 57.2**	**-0.2**
AGPR	**Aguadilla, PR**	**0.73**	**139**		**Pb**	**01 25 51.5**	**-0.2**
AGPR					**Sb**	**01 26 02.4**	**+0.5**
AGPR	**Aguadilla, PR**	**0.73**	**139**	⇓*i*P	**Pb**	**01 25 51.5**	**-0.2**
AGPR	**Aguadilla, PR**	**0.73**	**139**	*e*S	**Sb**	**01 26 02.4**	**+0.5**
AGPR	**Aguadilla, PR**	**0.73**	**139**	*e*Pg	**Pb**	**01 25 51.4**	**-0.3**
AGPR				⇓*e*Sg	**Sb**	**01 26 02.5**	**+0.5**
AGPR				IAML		01 26 08.9	
	comp=N,838nm,0.6s						
AGPR	**Aguadilla, PR**	**0.73**	**139**	*i* P	**Pb**	**01 25 51.4**	**-0.3**
AGPR				*e*S	**Sb**	**01 26 02.5**	**+0.5**
AGPR				IAML		01 26 06.1	
	comp=Z,554nm,0.2s						
PCDR	**Punta Cana, DR**	**0.89**	**235**	*e*Pg	**Pg**	**01 25 53.4**	**-0.1**
PCDR				IAML		01 26 07.7	
	comp=N,1μm,0.2s						
PRSN	**Puerto Rico Se**	**0.92**	**151**		**Pg**	**01 25 54.3**	**+0.3**
PRSN					**Sn**	**01 26 09.6**	**0.0**
PRSN	**Puerto Rico Se**	**0.92**	**151**	⇑*e*P	**Pg**	**01 25 54.3**	**+0.3**
PRSN	**Puerto Rico Se**	**0.92**	**151**	*e*S	**Sn**	**01 26 09.6**	**0.0**
PRSN	**Puerto Rico Se**	**0.92**	**151**	*e*Pg	**Pb**	**01 25 54.8**	**0.0**
PRSN				⇓*e*Sg	**Sb**	**01 26 07.8**	**+0.4**
PRSN				IAML		01 26 12.0	
	comp=N,2μm,0.2s						
LSP	**Las Mesas**	**0.98**	**149**		**Pb**	**01 25 55.9**	**-0.1**
LSP					**Sb**	**01 26 09.3**	**0.0**
LSP	**Las Mesas**	**0.98**	**149**	⇑*i*P	**Pb**	**01 25 55.9**	**-0.1**
LSP	**Las Mesas**	**0.98**	**149**	*e*S	**Sb**	**01 26 09.3**	**0.0**
AOPR	**Arecibo Observ**	**1.06**	**130**		**Pg**	**01 25 56.8**	**0.0**
AOPR					**Sn**	**01 26 12.4**	**-0.7**
AOPR	**Arecibo Observ**	**1.06**	**130**	IAML		01 26 19.9	
	comp=E,1μm,0.3s						
AOPR				IAML		01 26 24.7	
	comp=N,975nm,0.4s						
AOPR	**Arecibo Observ**	**1.06**	**130**	⇑*i*P	**Pg**	**01 25 56.8**	**0.0**
AOPR	**Arecibo Observ**	**1.06**	**130**	*e*S	**Sn**	**01 26 12.4**	**-0.7**
AOPR	**Arecibo Observ**	**1.06**	**130**	*e*Pg	**Pg**	**01 25 56.7**	**0.0**
AOPR				IAML		01 26 24.6	
	comp=N,923nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.12**	**155**		**Pg**	**01 25 57.1**	**-0.8**
CRPR				IAML		01 26 17.1	
	comp=E,874nm,0.5s						
CRPR				IAML		01 26 19.1	
	comp=N,860nm,0.6s						
CRPR	**Cabo Rojo, PR**	**1.12**	**155**		**Sn**	**01 26 14.0**	**-0.6**
CRPR	**Cabo Rojo, PR**	**1.12**	**155**	⇓*i*P	**Pn**	**01 26 00.2**	**+1.4**
CRPR	**Cabo Rojo, PR**	**1.12**	**155**	*e*S	**Sn**	**01 26 14.0**	**-0.6**
CRPR	**Cabo Rojo, PR**	**1.12**	**155**	*e*Pg	**Pg**	**01 25 57.2**	**-0.7**
CRPR				*e*Sg	**Sn**	**01 26 15.6**	**+1.0**
CRPR				IAML		01 26 18.9	
	comp=N,920nm,0.7s						
CRPR	**Cabo Rojo, PR**	**1.12**	**155**	*i* P	**Pg**	**01 25 57.3**	**-0.6**
CRPR				IAML		01 26 16.6	
	comp=Z,939nm,0.5s						
HGY1	**Higuey**	**1.13**	**248**	⇓*e*Pg	**Pg**	**01 25 57.0**	**-1.1**
HGY1				IAML		01 26 14.6	
	comp=N,502nm,0.2s						
UUPR	**Utuado, UPR, P**	**1.15**	**132**		**Pg**	**01 25 58.2**	**-0.2**
UUPR					**Sg**	**01 26 13.5**	**+0.2**
UUPR	**Utuado, UPR, P**	**1.15**	**132**	⇓*i*P	**Pg**	**01 25 58.2**	**-0.2**
UUPR	**Utuado, UPR, P**	**1.15**	**132**	*e*S	**Sg**	**01 26 13.5**	**+0.2**
EMPR	**Esperanza - Ma**	**1.17**	**118**		**Pg**	**01 25 58.9**	**+0.2**
EMPR					**Sn**	**01 26 15.9**	**+0.2**
EMPR	**Esperanza - Ma**	**1.17**	**118**	⇓*i*P	**Pg**	**01 25 58.9**	**+0.2**
EMPR	**Esperanza - Ma**	**1.17**	**118**	*e*S	**Sn**	**01 26 15.9**	**+0.2**
MLPR	**Magueyes Islan**	**1.18**	**153**	⇑*e*P	**Pg**	**01 25 59.0**	**-0.1**
MLPR	**Magueyes Islan**	**1.18**	**153**	*e*S	**Sn**	**01 26 16.2**	**+0.1**
MLPR	**Magueyes Islan**	**1.18**	**153**	⇑*e*Pg	**Pg**	**01 25 58.1**	**-1.0**
MLPR				*e*Sg	**Sn**	**01 26 17.2**	**+1.1**
MLPR				IAML		01 26 18.6	
	comp=N,213nm,0.3s						
GBPR	**Guanica, Bosqu**	**1.26**	**146**		**Pn**	**01 26 00.4**	**-0.2**
GBPR					**Sn**	**01 26 17.9**	**-0.1**
GBPR	**Guanica, Bosqu**	**1.26**	**146**	⇓*i*P	**Pn**	**01 26 00.4**	**-0.2**
GBPR	**Guanica, Bosqu**	**1.26**	**146**	*e*S	**Sn**	**01 26 17.9**	**-0.1**
MIDR	**Miches**	**1.36**	**268**	*e*Pg	**Pn**	**01 26 01.8**	**-0.3**
MIDR				⇑*e*Pg	**Pb**	**01 26 01.9**	**-0.4**
MIDR				IAML		01 26 23.3	
	comp=N,354nm,0.4s						
MIDR				IAML		01 26 23.3	
	comp=N,162nm,0.4s						
OBIP	**Obispado Ponce**	**1.37**	**135**		**Pn**	**01 26 01.5**	**-0.7**
OBIP					**Sb**	**01 26 19.8**	**-0.5**
OBIP	**Obispado Ponce**	**1.37**	**135**	IAML		01 26 24.1	
	comp=N,423nm,0.6s						
OBIP	**Obispado Ponce**	**1.37**	**135**	⇑*i*P	**Pn**	**01 26 01.5**	**-0.7**
OBIP	**Obispado Ponce**	**1.37**	**135**	*e*S	**Sb**	**01 26 19.8**	**-0.5**
ECPR	**Experimental S**	**1.38**	**120**	⇓*i*P	**Pn**	**01 26 01.7**	**-0.6**
ECPR	**Experimental S**	**1.38**	**120**	*e*S	**Sg**	**01 26 21.5**	**+0.7**
SMDR	**Samana, DR**	**1.51**	**280**	*e*Pg	**Pn**	**01 26 04.3**	**+0.2**
SMDR				*e*Sg	**Sn**	**01 26 23.7**	**-0.4**
SMDR				IAML		01 26 28.2	
	comp=N,398nm,0.4s						
GCPR	**Guaynabo City**	**1.62**	**116**		**Pn**	**01 26 05.8**	**+0.2**
GCPR					**Sn**	**01 26 26.4**	**-0.4**
GCPR	**Guaynabo City**	**1.62**	**116**	⇓*e*P	**Pn**	**01 26 05.8**	**+0.2**
GCPR	**Guaynabo City**	**1.62**	**116**	*e*S	**Sn**	**01 26 26.4**	**-0.4**
SJG	**San Juan**	**1.66**	**123**		**Pn**	**01 26 05.9**	**-0.3**
SJG	**San Juan**	**1.66**	**123**	IAML		01 26 31.9	
	comp=N,261nm,0.6s						
SJG				IAML		01 26 32.4	
	comp=N,323nm,0.4s						
SJG	**San Juan**	**1.66**	**123**	⇓*i*P	**Pn**	**01 26 05.9**	**-0.3**
SJG	**San Juan**	**1.66**	**123**	*e*S	**Sn**	**01 26 28.1**	**+0.2**
SJG	**San Juan**	**1.66**	**123**	*e*Pg	**Pn**	**01 26 06.1**	**-0.1**
SJG				*e*Sg	**Sn**	**01 26 28.1**	**+0.2**
SJG	**San Juan**	**1.66**	**123**	*i* P	**Pn**	**01 26 06.0**	**-0.2**
SJG				*e*S	**Sb**	**01 26 28.3**	**-0.4**
SJG				IAML		01 26 33.3	
	comp=Z,272nm,0.4s						
DR12	**Loma Pena Alta**	**1.69**	**262**	Pn	**Pb**	**01 26 07.5**	**-0.4**
HATOM	**Hato Mayor del**	**1.69**	**262**	*e*Pg	**Pn**	**01 26 06.4**	**-0.2**
HATOM				IAML		01 26 33.8	
	comp=N,194nm,0.2s						
NAG1	**Nagua**	**2.15**	**279**	*e*Pg	**Pb**	**01 26 15.8**	**-0.1**
DR08	**Loma La Naviza**	**2.28**	**269**	⇓*e*Pg	**Pn**	**01 26 16.5**	**+1.7**
DR08				*e*Sg	**Sb**	**01 26 46.8**	**+0.2**
DR08				IAML		01 26 48.5	
	comp=N,3μm,0.2s						
BANI	**BANI**	**2.67**	**257**	Pn	**Pn**	**01 26 19.8**	**-0.5**
SC01	**Santiago de lo**	**2.97**	**278**		**Pn**	**01 26 25.4**	**+1.2**
SDDR	**Presa de Saban**	**3.48**	**270**		**Pn**	**01 26 32.6**	**+1.4**
SDDR				IAML		01 27 29.1	
	comp=N,128nm,0.6s						

IDC 17 01:31:00.2±4.5, 30°.58S×177°.90W, h0^{km}, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=155.3km s-min=52.1km az=154.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.91**	**279**	P	P	01 37 46.3	+1.1
	1.0nm,0.4s,baz=95,slow=11,SNR=3.2						
	1.0nm,0.4s						
STKA	**Stephens Creek**	**34.52**	**257**	P	P	01 37 51.3	+1.0
	0.9nm,0.4s,baz=117,slow=11,SNR=3.6						
	0.9nm,0.4s						
ASAR	**Alice Springs**	**43.18**	**267**	P	P	01 39 01.9	-1.2
	0.3nm,0.5s,baz=102,slow=8.3,SNR=5.8						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**44.19**	**272**	P	P	01 39 10.2	-1.0
	0.6nm,0.5s,baz=111,slow=8.0,SNR=8.8						
	0.6nm,0.5s						
FINES	**FINESS Array B**	**145.35**	**340**	PKPbc	PKPbc	01 50 38.5	-0.7
	2.3nm,0.8s,baz=23,slow=4.5,SNR=6.1						

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*NOU **17** 01:32:35.4, 37°.07S×176°.94E, h293^{km}, MLv4.3/11, North Island, New Zealand*

*IDC **17** 01:32:35.0±2.1, 36°.45S×177°.13E, h255^{km}±17^{km}, mb3.5/4, mbtmp4.1/4, Error ellipse: s-maj=42.4km s-min=18.5km az=33.0*

*WEL **17** 01:32:40.1±1.0, 37°S±6°×17°7E±°, h251^{km}±8^{km}, M3.5/20, MLv3.5/20, Error ellipse: s-maj=8.7km s-min=7.7km az=106.8, confirmed*

ISC 17 01:32:38.8±1.2, 37°.08S±0°.06×176°.90E±0°.06, h264^{km}±7^{km}, n121, σ0^{s}.94/140, mb3.7/4, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MYRZ	**Mayor Island**	**0.56**	**249**	P	**Pn**	**01 33 13.6**	**+0.2**
WHRZ	**Whale Island**	**0.78**	**175**	P	**Pn**	**01 33 14.9**	**+0.7**
WHRZ				S	**S**	**01 33 45.6**	**+3.3**
OPRZ	**Ohinepanea**	**0.81**	**199**	P	**Pn**	**01 33 14.3**	**0.0**
TGRZ	**Tauranga**	**0.82**	**218**	P	**Pn**	**01 33 14.6**	**+0.2**
MARZ	**Manawahe**	**0.92**	**191**	P	**Pn**	**01 33 15.6**	**+0.8**
HAZ	**Te Kaha**	**0.98**	**134**	P	**Pn**	**01 33 14.7**	**-0.4**
HAZ				S	**S**	**01 33 41.7**	**-2.1**
KARZ	**Kaharoa**	**1.07**	**209**	P	**Pn**	**01 33 16.0**	**+0.4**
KMRZ	**Kaimai**	**1.08**	**224**	P	**Pn**	**01 33 16.2**	**+0.5**
RUGZ	**Raukumara Rang**	**1.08**	**145**	P	**Pn**	**01 33 14.9**	**-0.9**
RUGZ				S	**S**	**01 33 42.9**	**-2.2**
OMRZ	**Omania**	**1.11**	**202**	P	**Pn**	**01 33 16.2**	**+0.3**
URZ	**Urewera**	**1.19**	**172**	P	**Pn**	**01 33 15.9**	**-0.4**
	241nm,0.3s,baz=243,slow=4.8,SNR=449						
URZ				S	**S**	**01 33 43.9**	**-2.1**
	305nm,0.3s,baz=246,slow=9.8,SNR=18						
URZ	**Urewera**	**1.19**	**172**	P	**Pn**	**01 33 15.5**	**-0.8**
URZ	**Urewera**	**1.19**	**172**	P	**Pn**	**01 33 15.7**	**-0.5**
URZ				S	**S**	**01 33 44.4**	**-1.6**
TARZ	**Mount Tarawera**	**1.20**	**195**	P	**Pn**	**01 33 17.7**	**+1.2**
MXZ	**Matakaoa Point**	**1.23**	**114**	P	**Pn**	**01 33 16.1**	**-0.4**
MXZ	**Matakaoa Point**	**1.23**	**114**	P	**Pn**	**01 33 16.3**	**-0.2**
MXZ				S	**S**	**01 33 45.1**	**-1.2**
HLRZ	**Highlands Stat**	**1.25**	**200**	P	**Pn**	**01 33 17.8**	**+1.1**
TOZ	**Tahuroa Road**	**1.29**	**239**	P	**Pn**	**01 33 17.4**	**+0.5**
HSRZ	**Hossack Road**	**1.34**	**203**	P	**Pn**	**01 33 18.3**	**+1.1**
MWZ	**Matawai**	**1.35**	**158**	P	**Pn**	**01 33 17.1**	**-0.2**
MWZ				S	**S**	**01 33 47.2**	**-0.7**
MKAZ	**Moumakai**	**1.39**	**268**	P	**Pn**	**01 33 17.5**	**-0.1**
TWGZ	**Tauwhareparae**	**1.40**	**142**	P	**Pn**	**01 33 18.3**	**+0.6**
TWGZ				S	**S**	**01 33 49.0**	**+0.5**
HRRZ	**Handcock Road**	**1.40**	**200**	P	**Pn**	**01 33 17.9**	**+0.3**
MUGZ	**Murupara**	**1.40**	**184**	P	**Pn**	**01 33 17.5**	**-0.2**
MUGZ				S	**S**	**01 33 47.1**	**-1.3**
WMGZ	**Waiomatatini S**	**1.42**	**122**	P	**Pn**	**01 33 18.2**	**+0.5**
WMGZ				S	**S**	**01 33 48.4**	**-0.2**
GRZ	**Great Barrier**	**1.42**	**305**	P	**Pn**	**01 33 17.0**	**-0.9**
WIAZ	**Waiheke Island**	**1.44**	**281**	P	**Pn**	**01 33 17.5**	**-0.5**
PUZ	**Puketiti**	**1.47**	**133**	P	**Pn**	**01 33 18.4**	**+0.3**
PUZ				S	**S**	**01 33 47.8**	**-1.5**
PRRZ	**Plateau Road**	**1.47**	**196**	P	**Pn**	**01 33 18.6**	**+0.5**
RAGZ	**Rawiri**	**1.48**	**164**	P	**Pn**	**01 33 18.5**	**+0.2**
RAGZ				S	**S**	**01 33 49.3**	**-0.3**
RTZ	**Ruatahuna**	**1.54**	**178**	P	**Pn**	**01 33 18.6**	**-0.1**
RTZ				S	**S**	**01 33 49.0**	**-1.4**
ALRZ	**Allen Road**	**1.55**	**196**	P	**Pn**	**01 33 19.2**	**+0.5**
WPRZ	**Whakapapatarin**	**1.55**	**202**	P	**Pn**	**01 33 19.1**	**+0.4**
TKGZ	**Te Karaka**	**1.56**	**151**	P	**Pn**	**01 33 19.1**	**+0.4**
TKGZ				S	**S**	**01 33 49.7**	**-0.6**
ETAZ	**East Tamaki Re**	**1.58**	**274**	P	**Pn**	**01 33 18.9**	**-0.1**
MBAZ	**Motutapu North**	**1.63**	**280**	P	**Pn**	**01 33 19.2**	**-0.1**
KUTZ	**Kaahu Road**	**1.65**	**211**	P	**Pn**	**01 33 20.1**	**+0.6**
TLZ	**Tolley Road**	**1.65**	**220**	P	**Pn**	**01 33 20.3**	**+0.8**
SNGZ	**Shannon Statio**	**1.74**	**168**	P	**Pn**	**01 33 20.6**	**+0.4**
SNGZ				S	**S**	**01 33 51.9**	**-1.1**
CNGZ	**Carnagh Statio**	**1.75**	**144**	P	**Pn**	**01 33 21.2**	**+1.0**
RIGZ	**Rimuhau**	**1.77**	**157**	P	**Pn**	**01 33 21.2**	**+0.8**
RIGZ				S	**S**	**01 33 53.4**	**0.0**
MTHZ	**Maungataniwha**	**1.77**	**181**	P	**Pn**	**01 33 20.4**	**-0.1**
MTHZ				S	**S**	**01 33 52.3**	**-1.3**
MRHZ	**Matea Rd**	**1.79**	**192**	P	**Pn**	**01 33 20.6**	**0.0**
MRHZ				S	**S**	**01 33 53.8**	**-0.1**
AWAZ	**Awhitu Peninsu**	**1.80**	**270**	P	**Pn**	**01 33 20.5**	**-0.2**
RAHZ	**Arahi**	**1.84**	**175**	P	**Pn**	**01 33 21.6**	**+0.5**
RAHZ				S	**S**	**01 33 54.2**	**-0.4**
WTAZ	**Waiatarua**	**1.86**	**274**	P	**Pn**	**01 33 21.0**	**-0.2**
WATZ	**Wairara**	**1.87**	**209**	P	**Pn**	**01 33 21.7**	**+0.4**
RATZ	**Rangitukua**	**2.00**	**206**	P	**Pn**	**01 33 22.5**	**+0.2**
PRGZ	**Paritu Road**	**2.00**	**157**	P	**Pn**	**01 33 23.0**	**+0.7**
WHHZ	**Waihua**	**2.01**	**172**	P	**Pn**	**01 33 23.0**	**+0.6**
WHHZ				S	**S**	**01 33 56.6**	**-0.5**
NMHZ	**Naumai**	**2.02**	**182**	P	**Pn**	**01 33 23.2**	**+0.6**
NMHZ				S	**S**	**01 33 57.6**	**+0.3**
KNZ	**Kokohu**	**2.04**	**163**	P	**Pn**	**01 33 22.8**	**+0.2**
KNZ				S	**S**	**01 33 56.2**	**-1.2**
RITZ	**Rihia Road**	**2.07**	**203**	P	**Pn**	**01 33 23.4**	**+0.5**
BKZ	**Black Stump Fm**	**2.11**	**189**	P	**Pn**	**01 33 22.6**	**-0.8**
BKZ	**Black Stump Fm**	**2.11**	**189**	P	**Pn**	**01 33 22.9**	**-0.4**
BKZ				S	**S**	**01 33 57.1**	**-1.6**
HIZ	**Hauiti**	**2.16**	**228**	P	**Pn**	**01 33 24.3**	**+0.5**
HIZ	**Hauiti**	**2.16**	**228**	P	**Pn**	**01 33 24.5**	**+0.7**
ARHZ	**Aropaoanui**	**2.18**	**178**	P	**Pn**	**01 33 24.4**	**+0.5**
ARHZ				S	**S**	**01 33 59.3**	**-0.6**
MHGZ	**Mahia Peninsul**	**2.22**	**159**	P	**Pn**	**01 33 24.8**	**+0.5**
NTVZ	**North Tongarir**	**2.24**	**205**	P	**Pn**	**01 33 24.8**	**+0.2**
TMVZ	**Te Maari**	**2.24**	**204**	P	**Pn**	**01 33 24.8**	**+0.1**
KRVZ	**Karewarewa**	**2.24**	**206**	P	**Pn**	**01 33 23.5**	**-1.2**
ETVZ	**East Tongariro**	**2.26**	**204**	P	**Pn**	**01 33 24.9**	**+0.1**
WTVZ	**West Tongariro**	**2.28**	**206**	P	**Pn**	**01 33 25.0**	**0.0**
NNVZ	**North Ngauruho**	**2.29**	**206**	P	**Pn**	**01 33 25.5**	**+0.4**
OTVZ	**Oturere**	**2.30**	**205**	P	**Pn**	**01 33 25.1**	**-0.1**
OTVZ				S	**S**	**01 34 01.5**	**-0.5**
TWVZ	**Taurewa**	**2.30**	**210**	P	**Pn**	**01 33 25.2**	**+0.1**
SNVZ	**South Ngauruho**	**2.33**	**205**	P	**Pn**	**01 33 25.7**	**+0.2**
NGZ	**Ngauruhoe**	**2.33**	**206**	P	**Pn**	**01 33 26.0**	**+0.5**
WCZ	**Waipu Caves**	**2.35**	**298**	P	**Pn**	**01 33 24.1**	**-1.5**
MCHZ	**McNeill Hill**	**2.37**	**184**	P	**Pn**	**01 33 26.2**	**+0.5**
MCHZ				S	**S**	**01 34 01.8**	**-1.2**
COVZ	**Chateau Observ**	**2.37**	**206**	P	**Pn**	**01 33 26.0**	**+0.1**
KWHZ	**Kaweka Forest**	**2.37**	**189**	P	**Pn**	**01 33 25.8**	**+0.1**
KWHZ				S	**S**	**01 34 02.6**	**-0.6**
FWVZ	**Far West T-bar**	**2.42**	**206**	P	**Pn**	**01 33 26.4**	**0.0**
MAVZ	**Matarangi**	**2.43**	**205**	P	**Pn**	**01 33 26.6**	**0.0**
WHVZ	**Whangaehu Hut**	**2.43**	**205**	P	**Pn**	**01 33 26.7**	**+0.1**
TRVZ	**Turoa**	**2.46**	**205**	P	**Pn**	**01 33 27.0**	**+0.2**
WNVZ	**Wahianoa**	**2.47**	**204**	P	**Pn**	**01 33 26.6**	**-0.3**
PKVZ	**Pokaka**	**2.52**	**208**	P	**Pn**	**01 33 27.3**	**0.0**
MTVZ	**Mangateitei**	**2.56**	**206**	P	**Pn**	**01 33 27.6**	**-0.1**
CKHZ	**Cape Kidnapper**	**2.58**	**177**	P	**Pn**	**01 33 27.8**	**+0.1**
KRHZ	**Kereru**	**2.59**	**189**	P	**Pn**	**01 33 27.5**	**-0.4**
VRZ	**Vera Road**	**2.65**	**219**	P	**Pn**	**01 33 29.2**	**+0.8**
KAHZ	**Kahuranaki**	**2.71**	**180**	P	**Pn**	**01 33 29.2**	**+0.1**
PNHZ	**Pukenui**	**2.88**	**191**	P	**Pn**	**01 33 30.2**	**-0.7**
PXZ	**Pawanui**	**2.95**	**181**	P	**Pn**	**01 33 31.1**	**-0.4**
DREZ	**Durham Road**	**2.99**	**224**	P	**Pn**	**01 33 34.3**	**+2.3**
WPHZ	**Waipukurau**	**3.00**	**187**	P	**Pn**	**01 33 31.6**	**-0.4**
TSZ	**Takapari Road**	**3.07**	**194**	P	**Pn**	**01 33 31.9**	**-0.8**
WAZ	**Wanganui**	**3.07**	**209**	P	**Pn**	**01 33 32.5**	**-0.3**
LREZ	**Lake Rotokare**	**3.08**	**219**	P	**Pn**	**01 33 33.7**	**+0.8**
PKE	**Pukeiti**	**3.12**	**226**	P	**Pn**	**01 33 34.7**	**+1.4**
PRHZ	**Porangahau**	**3.19**	**184**	P	**Pn**	**01 33 33.4**	**-0.7**
NBEZ	**Newall Road No**	**3.24**	**227**	P	**Pn**	**01 33 36.2**	**+1.6**
OUZ	**Omahuta**	**3.25**	**304**	P	**Pn**	**01 33 33.4**	**-1.4**
OUZ	**Omahuta**	**3.25**	**304**	P	**Pn**	**01 33 33.7**	**-1.1**
DVHZ	**Dannevirke**	**3.27**	**190**	P	**Pn**	**01 33 33.9**	**-1.0**
NMEZ	**Namu Road**	**3.33**	**225**	P	**Pn**	**01 33 36.8**	**+1.3**
OHWZ	**Ohakea**	**3.36**	**201**	P	**Pn**	**01 33 35.6**	**-0.3**
ANWZ	**Angora Road**	**3.39**	**185**	P	**Pn**	**01 33 35.6**	**-0.7**
POWZ	**Post Office Ro**	**3.42**	**195**	P	**Pn**	**01 33 35.5**	**-1.1**
PRWZ	**Pori Road**	**3.55**	**191**	P	**Pn**	**01 33 37.3**	**-0.6**
BFZ	**Birch Farm**	**3.63**	**188**	P	**Pn**	**01 33 37.6**	**-1.3**
BFZ	**Birch Farm**	**3.63**	**188**	P	**Pn**	**01 33 37.8**	**-1.1**
MRZ	**Mangatainoka R**	**3.72**	**196**	P	**Pn**	**01 33 38.7**	**-1.2**
TIWZ	**Tintock**	**3.78**	**192**	P	**Pn**	**01 33 39.7**	**-0.9**
CPWZ	**Castlepoint**	**3.87**	**188**	P	**Pn**	**01 33 41.1**	**-0.4**
HOWZ	**Holdsworth Sta**	**3.96**	**195**	P	**Pn**	**01 33 40.8**	**-1.9**
OGWZ	**Otaki Gorge**	**3.97**	**199**	P	**Pn**	**01 33 41.1**	**-1.6**
SNZO	**South Karori**	**4.56**	**201**	P	**Pn**	**01 33 47.2**	**-2.4**
QRZ	**Quartz Range**	**5.06**	**221**	P	Pn	01 33 52.5	-3.1
KHZ	**Kahutara**	**5.93**	**205**	P	**Pn**	**01 34 03.9**	**-2.2**
RPZ	**Rata Peaks**	**7.99**	**212**	P	Pn	01 34 29.0	-2.8
ODZ	**Otahua Downs**	**9.25**	**209**	P	Pn	01 34 45.2	-2.5
ASAR	**Alice Springs**	**39.11**	**278**	P	P	01 39 39.1	-2.0
	1.6nm,0.7s,baz=122,slow=7.8,SNR=20						
	1.6nm,0.7s						
WRA	**Warramunga Arr**	**40.73**	**283**	P	P	01 39 52.2	-2.2
	1.3nm,0.5s,baz=121,slow=7.9,SNR=18						
	1.3nm,0.5s						
QSPA	**South Pole Qui**	**53.05**	**180**	P	P	01 41 29.6	+0.8
	1.9nm,0.4s,baz=79,slow=1.1,SNR=5.9						
	1.9nm,0.4s						
PLCA	**Paso Flores**	**80.96**	**135**	P	P	01 44 24.6	+0.5
	1.4nm,0.8s,baz=242,slow=7.9,SNR=5.9						
	1.4nm,0.8s						

ARCES	ARCESS Array B	143.99	343	PKP	PKPab	01 51 35.3	-4.6
	4.5nm,1.0s,baz=36,slow=2.5,SNR=15						
FINES	FINESS Array B	149.54	332	PKPbc	PKPdf	01 51 51.6	+0.5
	1.0nm,0.4s,baz=33,slow=2.7,SNR=13						
BRTR	Keskin Array B	151.21	287	PKPbc	PKPdf	01 51 57.5	+2.8
	0.3nm,0.5s,baz=101,slow=3.9,SNR=3.7						

HLW **17** *01:33:12.2, 27°.41N×34°.55E, h9^{km}±1^{km}, Ml3.1*
SGS **17** *01:33:14.8, 27°.52N×34°.62E, h7^{km}, Ml2.0*
ISC 17 01:33:10.3±0.9, 27°.35N±0°.03×34°.58E±0°.04, h12^{km}, n28, σ1^{s}16/30, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NSFG	Safaga	0.82	225	P	Pn	01 33 28.6	+0.9
TR1	Tor 1	0.86	320	P	Pn	01 33 27.8	-0.5
HHRG	Al Ghardaqah	0.91	262	P	Pn	01 33 29.1	+0.1
MWLHS	Almuwaylih	0.92	64	P	Pn	01 33 30.1	+1.0
KRABS	KRABS	0.96	38	S	Sg	01 33 41.4	+0.1
KRABS	KRABS	0.96	38	P	Pn	01 33 30.2	+0.6
RSHS		0.96	11	S	Sg	01 33 40.6	-1.0
RSHS		0.96	11	P	Pn	01 33 29.6	-0.2
AYUS	`Aynunah	1.03	36	S	Sb	01 33 43.5	-0.2
AYUS				P	Pn	01 33 31.3	+0.6
BDAS	Al Bad`	1.17	23	P	Pg	01 33 33.0	+0.1
HKAT	Jabal Katrina	1.28	336	P	Pb	01 33 34.6	+0.1
HDHB	Dhahab	1.37	1	P	Pb	01 33 35.8	-0.1
WTBKS	WTBKS	1.39	58	P	Pg	01 33 37.7	+0.7
WTBKS	WTBKS	1.39	58	S	Sb	01 33 54.3	+0.3
DESA	DESA	1.41	83	P	Pg	01 33 38.3	+0.8
DESA				S	Sg	01 33 55.3	-0.6
JLOS		1.60	30	P	Pb	01 33 39.8	-0.1
NUB	Nuweibaa	1.67	2	⇑P	Pn	01 33 39.2	-0.2
HAQS	Haql	1.72	10	P	Pg	01 33 55.4	+12
HRDS	Abu Rudays	1.77	320	P	Pb	01 33 42.2	-0.5
HBST	Basata	1.86	4	P	Pn	01 33 43.1	+1.0
JMOS	Jabal al Moall	1.87	14	P	Pb	01 33 43.4	-1.0
JMOS	Jabal al Moall	1.87	14	S	Sn	01 34 05.1	-0.6
HQLS		1.99	12	P	Pn	01 33 45.1	+1.2
NADB	Abo Dabab	2.00	182	P	Pb	01 33 46.1	-0.6
EWJHS	Al Wajh	2.20	122	P	Pb	01 33 49.0	-1.1
ASUT		2.69	272	P	Pn	01 33 55.5	+2.1
ASUT				S	Sn	01 34 25.4	-0.5
HAGS	Hagol	2.98	173	P	Pb	01 33 60.0	-3.5
BRNS	Bernies	3.50	187	P	Pn	01 34 07.7	+3.0

SNET **17** *01:33:42.3±1.1, 15°.46N×90°.73W, h12^{km}±9^{km}, ML3.7*
GCG **17** *01:33:42.4±1.6, 15°.31N×90°.64W, h1^{km}±10^{km}, MD4.2, ML3.7*
CATAC **17** *01:33:43.9±0.2, 15°N±2°×9°1W±°, h3^{km}±1^{km}, M3.8/21, MLv3.8/21, Error ellipse: s-maj=4.0km s-min=2.3km az=32.7, confirmed*
ISC 17 01:33:42.5±1.1, 15°.32N±0°.03×90°.71W±0°.02, h6^{km}±10^{km}, n57, σ0^{s}79/66, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AVCB	Coban	0.33	63	i P	Pg	01 33 48.5	-0.5
AVCB				i S	Sg	01 33 53.3	0.0
AVCB				IAML		01 33 54.6	
	comp=E,64μm,0.3s						
QUIS	Sacapulas	0.37	266	i P	Pg	01 33 50.1	+0.3
QUIS				i S	Sb	01 33 55.8	-1.9
QUIS				IAML		01 33 56.5	
	comp=N,17μm,0.4s						
APG	El Apazote	0.39	143	i P	Pg	01 33 50.1	-0.1
GCG4	OSOP	0.75	167	i P	Pb	01 33 57.5	-0.6
GCG4				i S	Sg	01 34 07.6	+1.0
GCG4				IAML		01 34 10.4	
	comp=N,3μm,0.4s						
HUEH	Huehuetenango	0.77	270	eP	Pg	01 33 56.9	-0.4
HUEH				eS	Sb	01 34 08.8	-0.4
HUEH	Huehuetenango	0.77	270	P	Pg	01 33 56.9	-0.4
HUEH	Huehuetenango	0.77	270	S	Sb	01 34 07.9	-1.4
SOKI	Kika Raxquin	0.83	234	i P	Pb	01 33 59.3	-0.3
ESSG	Sabana Grande	0.94	187	i P	Pb	01 34 01.3	+0.1
ESSG				IAML		01 34 15.5	
	comp=N,890nm,0.2s						
STG8	El Palmar, Qui	1.06	216	i P	Pg	01 34 02.6	-0.4
STG8				IAML		01 34 20.9	
	comp=N,576nm,0.2s						
RTAL	Retalhuleu	1.24	231	eP	Pg	01 34 05.7	-0.5
RTAL				eS	Sn	01 34 23.2	-0.3
RTAL	Retalhuleu	1.24	231	P	Pn	01 34 07.1	+0.7
ZAFR2	Estanzuela, Za	1.50	119	i P	Pn	01 34 02.8	-7.3
ESQI	Esquipulas	1.52	120	eP	Pn	01 34 10.1	-0.3
ESQI				eS	Sg	01 34 32.1	+0.6
ESQI	Esquipulas	1.52	120	P	Pn	01 34 10.5	+0.1
RBDL	Robledal	1.55	140	eP	Pn	01 34 11.2	+0.3
THIG		1.56	255	i P	Pg	01 34 12.5	+0.1
THIG				IAML		01 34 38.1	
	comp=N,423nm,0.3s						
SLOZ	Alcaldia de Sa	1.57	145	S	Sn	01 34 32.3	+0.6
MTO3	Montecristo	1.59	125	eP	Pn	01 34 11.2	-0.3
MTO3	Montecristo	1.59	125	i P	Pn	01 34 11.7	+0.2
MTO3	Montecristo	1.59	125	S	Sb	01 34 33.6	+0.6
FAME	Alcaldia de Sa	1.61	155	P	Pb	01 34 12.7	-0.1
NUBE	Las Nubes	1.67	147	eP	Pn	01 34 12.7	+0.2
NUBE				eS	Sb	01 34 36.0	+0.8
NUBE	Las Nubes	1.67	147	i P	Pn	01 34 13.0	+0.5
NUBE	Las Nubes	1.67	147	P	Pn	01 34 13.0	+0.5
CCIG	Comitan	1.68	305	i P	Pg	01 34 14.5	-0.2
CCIG				i S	Sg	01 34 39.1	+2.6
CCIG				IAML		01 34 42.2	
	comp=N,402nm,0.5s						
CCIG	Comitan	1.68	305	S	Sg	01 34 36.0	-0.4
UNIC	Universidad Ca	1.74	140	eP	Pn	01 34 14.3	+0.9
UNIC	Universidad Ca	1.74	140	P	Pn	01 34 14.2	+0.9
UNIC	Universidad Ca	1.74	140	S	Sg	01 34 38.2	-0.3
RTR	El Retiro	1.75	144	eP	Pn	01 34 14.6	+1.0
PETF	Flores	1.78	27	i P	Pn	01 34 13.8	-0.2
PETF				IAML		01 34 40.8	
	comp=N,3μm,0.6s						
PETF	Flores	1.78	27	P	Pb	01 34 15.7	0.0
PETF	Flores	1.78	27	S	Sb	01 34 39.1	+0.8
SNJE	San Jose	1.79	143	eP	Pn	01 34 14.8	+0.6
SBLS	San Blas	1.81	144	eP	Pn	01 34 15.5	+1.1
CEVE	Cerro Verde	1.82	145	eP	Pn	01 34 15.4	+0.8
CEVE				IAML		01 34 28.0	
	comp=Z,571nm,0.3s						
CEVE	Cerro Verde	1.82	145	P	Pn	01 34 15.4	+0.8
JAYA	Jayaque - finc	2.06	143	eP	Pn	01 34 18.4	+0.6
JAYA	Jayaque - finc	2.06	143	P	Pb	01 34 19.9	-0.5
JAYA	Jayaque - finc	2.06	143	S	Sb	01 34 46.3	0.0
LLGN	La Laguna	2.06	124	P	Pb	01 34 19.6	-0.7
LLGN	La Laguna	2.06	124	S	Sg	01 34 48.4	-0.3
IZABA	Izabal, Puerto	2.09	78	P	Pb	01 34 20.5	-0.4
IZABA	Izabal, Puerto	2.09	78	S	Sg	01 34 50.2	+0.5
PMON	Piamonte	2.09	140	S	Sb	01 34 46.8	-0.4
PMON	Piamonte	2.09	140	P	Pb	01 34 20.6	-0.4
BOQS	Boqueron	2.10	139	eP	Pn	01 34 19.4	+1.0
PIC2	El Picacho	2.10	138	eP	Pn	01 34 20.1	+1.6
UEES	Universidad Ev	2.14	138	P	Pn	01 34 20.2	+1.4
UDBS	Universidad Do	2.19	136	P	Pb	01 34 21.7	-1.0
LOMA	Loma Larga	2.23	138	eP	Pn	01 34 21.1	+0.9
LOMA				eS	Sb	01 34 51.4	0.0
LOMA	Loma Larga	2.23	138	P	Pb	01 34 22.2	-1.2
LALI	Alcalda de L	2.26	143	P	Pb	01 34 22.8	-1.0
PAVA	Las Pavas	2.34	133	eP	Pn	01 34 21.8	+0.1
PAVA				eS	Sb	01 34 54.1	-0.5
PAVA				IAML		01 35 03.8	
	comp=Z,467nm,0.5s						
PAVA	Las Pavas	2.34	133	P	Pb	01 34 24.3	-0.9
UESV	Universidad de	2.50	132	P	Pb	01 34 26.8	-1.1

NNC **17** *01:59:00.8±0.4, 42°.95N×78°.16E, h2^{km}±2^{km}, mb2.6, mpv2.8, Error ellipse: s-maj=3.9km s-min=1.5km az=176.0*
SOME **17** *01:59:01.8, 42°.95N×78°.13E, h15^{km}*
KRNET **17** *01:59:02.8±0.1, 42°.87N×78°.13E, h30^{km}, mb2.4*
ISC 17 01:59:00.8±1.1, 42°.96N±0°.02×78°.14E±0°.02, h2^{km}±10^{km}, n43, σ1^{s}36/83, 13C-13D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	0.22	62	P	Pg	01 59 06.0	+0.8
	42nm,0.1s						
SATY				S	Sg	01 59 09.4	+1.4
	277nm,0.2s						
PRZ	Przheval'sk	0.51	158	⇑eP	Pb	01 59 12.1	-0.5
PRZ				⇑eS	Sg	01 59 18.9	+1.7
KURS	Kuram	0.53	3	P	Pb	01 59 11.7	-1.3
	11nm,0.1s						
KURS				S	Sb	01 59 19.0	-2.2
	16nm,0.3s						
KPKS	Kokpek	0.65	38	P	Pb	01 59 13.6	-1.3
	0.4nm,0.2s						
KPKS				S	Sb	01 59 22.3	-2.2
	37nm,0.2s						
KPKS	Kokpek	0.65	38	eP	Pb	01 59 13.6	-1.3
	5.3nm,0.1s						
KPKS				eS	Sb	01 59 22.3	-2.2
	16nm,0.2s						
UZB	Uzynbulak	0.68	73	P	Pb	01 59 14.0	-1.5
	7.9nm,0.1s						
UZB				S	Sb	01 59 22.9	-2.5
	24nm,0.1s						
UZB	Uzynbulak	0.68	73	eP	Pb	01 59 13.9	-1.5
	7.9nm,0.1s						
UZB				eS	Sb	01 59 22.9	-2.5
	24nm,0.1s						
KOTS	Kotyrbulak	0.80	291	P	Pg	01 59 16.5	+0.3
	6.0nm,0.1s						
KOTS				S	Sg	01 59 27.8	+1.2
	32nm,0.1s						
KOTS	Kotyrbulak	0.80	291	eP	Pg	01 59 16.5	+0.3
	6.0nm,0.1s						
KOTS				eS	Sg	01 59 27.5	+0.9
	32nm,0.1s						
MDOK	Medeo	0.82	285	Pg	Pg	01 59 16.9	+0.3
	2.4nm,0.4s						
MDOK				Lg	Lg	01 59 28.0	
	7.3nm,0.2s						
TNSS	Tian-Shan	0.88	276	P	Pg	01 59 18.1	+0.5
	0.5nm,0.2s						
TNSS				S	Sg	01 59 29.9	+0.9
	2.5nm,0.1s						
TNSS	Tian-Shan	0.88	276	eP	Pg	01 59 18.1	+0.5
	0.5nm,0.2s						
TNSS				eS	Sg	01 59 29.9	+0.9
	2.5nm,0.1s						
SHLS	Shalkode	0.99	78	P	Pn	01 59 24.9	+3.0
	3.6nm,0.2s						
SHLS				S	Sn	01 59 41.6	+5.1
	5.6nm,0.2s						
SHLS	Shalkode	0.99	78	eP	Pn	01 59 24.9	+3.0
	3.6nm,0.2s						
SHLS				eS	Sn	01 59 41.6	+5.1
	5.6nm,0.2s						
PDGK	Podgornoye	1.06	69	⇑P	Pg	01 59 20.6	-0.5
	1.6nm,0.3s						
PDGK				⇑S	Sb	01 59 34.6	-1.7
	4.3nm,0.5s						
KDJ	Kajisay	1.09	221	⇑eP	Pg	01 59 21.9	+0.3
KDJ				⇑eS	Sg	01 59 35.7	0.0
IZV	Izvestkoviy	1.12	275	P	Pg	01 59 22.5	+0.2
	1.8nm,0.1s						
IZV				S	Sg	01 59 37.7	+0.8
	14nm,0.1s						
IZV	Izvestkoviy	1.12	275	eP	Pg	01 59 22.5	+0.2
	1.8nm,0.1s						
IZV				eS	Sg	01 59 37.7	+0.8
	14nm,0.1s						
BLB	Baldybastay	1.17	12	P	Pb	01 59 23.0	-0.8
	7.6nm,0.1s						
BLB				S	Sb	01 59 38.5	-0.9
	31nm,0.3s						
CHKK	Chushkaly	1.23	317	P	Pg	01 59 24.3	-0.1
	6.5nm,0.1s						
CHKK				S	Sg	01 59 40.7	+0.4
	21nm,0.3s						
CHKK	Chushkaly	1.23	317	eP	Pg	01 59 24.3	-0.1
	6.5nm,0.1s						
CHKK				eS	Sg	01 59 40.7	+0.4
	21nm,0.3s						
TARG	Taragay, Kyrgy	1.25	191	⇑eP	Pg	01 59 24.4	-0.4
TARG				⇑eS	Sg	01 59 39.9	-1.1
MTBS	Maitube	1.26	279	P	Pg	01 59 25.0	-0.1
	1.3nm,0.2s						
MTBS				S	Sg	01 59 41.8	+0.3
	4.6nm,0.3s						
MTBS	Maitube	1.26	279	eP	Pg	01 59 25.0	-0.1
	1.3nm,0.2s						
MTBS				eS	Sg	01 59 41.8	+0.3
	4.6nm,0.3s						
ARXS	Arharly	1.28	350	P	Pg	01 59 25.1	-0.2
	4.1nm,0.2s						
ARXS				S	Sb	01 59 41.9	-0.7
	22nm,0.3s						
ARXS	Arharly	1.28	350	eP	Pg	01 59 25.1	-0.2
	4.1nm,0.2s						
ARXS				eS	Sb	01 59 41.9	-0.7
	22nm,0.3s						
KTBS	Karatobe	1.30	306	P	Pg	01 59 25.7	-0.1
	7.1nm,0.2s						
KTBS				S	Sg	01 59 42.8	+0.1
	0.2nm,0.2s						
ULHL	Ulahol	1.57	244	⇓eP	Pn	01 59 30.1	+0.2
ULHL				⇓eS	Sn	01 59 49.8	-1.1
KNOS	Konyrlen	1.59	28	P	Pg	01 59 30.9	-0.5
	2.7nm,0.2s						
KNOS				S	Sg	01 59 51.9	-0.2
	0.6nm,0.2s						
KST	Kastek	1.60	274	P	Pb	01 59 31.2	+0.1
	1.3nm,0.2s						
KST				S	Sn	01 59 52.3	+0.8
	5.8nm,0.4s						
KST	Kastek	1.60	274	eP	Pb	01 59 31.2	+0.1
	1.3nm,0.2s						
KST				eS	Sn	01 59 52.3	+0.8
	5.8nm,0.4s						
BOOM	Boomskoye usch	1.68	255	⇑eP	Pn	01 59 31.8	+0.3
BOOM				⇑eS	Sn	01 59 52.9	-0.8
KTMS	Ketmen	1.69	72	P	Pg	01 59 32.2	-1.1
	1.6nm,0.1s						
KTMS				S	Sg	01 59 54.0	-1.2
	9.5nm,0.3s						
KTMS	Ketmen	1.69	72	eP	Pg	01 59 32.2	-1.1
	1.6nm,0.1s						
KTMS				eS	Sg	01 59 54.0	-1.2
	9.5nm,0.3s						
TKM2	Tokmak 2	1.87	270	⇓eP	Pn	01 59 34.8	+0.8
TKM2				⇓eS	Sn	01 59 57.9	-0.3
KRBS	Karabastau	1.94	293	P	Pb	01 59 36.6	-0.4
	5.2nm,0.2s						
KRBS				S	Sb	02 00 01.9	+0.2
	11nm,0.2s						
KRBS	Karabastau	1.94	293	eP	Pb	01 59 36.5	-0.4
	5.2nm,0.2s						
KRBS				eS	Sb	02 00 01.9	+0.2
	11nm,0.2s						
KBK	Karagaybulak	2.37	264	⇑eP	Pn	01 59 41.5	+0.7
KBK				⇑eS	Sn	02 00 09.6	-0.9
USP	Ospenovka	2.68	278	⇓eP	Pn	01 59 46.2	+1.1
USP				⇓eS	Sn	02 00 17.7	-0.4
AAK	Ala-Archa	2.70	264	⇓eP	Pn	01 59 46.2	+0.8
AAK				⇓eS	Sn	02 00 17.7	-1.0
UCH	Uchtor	2.77	256	⇓eP	Pn	01 59 47.2	+0.5
UCH				⇓eS	Sn	02 00 19.5	-1.4
MAKZ	Makanchi	4.72	34	⇓Pn	Pn	02 00 14.8	+1.7
	0.1nm,0.4s						
MAKZ				⇑Lg	Lg	02 01 33.4	
	1.3nm,1.1s						
MK31	Makanchi Array	4.84	36	⇓Pn	Pn	02 00 15.1	+0.4
	0.1nm,0.2s,baz=209,slow=15,SNR=5.8						
MK31				⇓Lg	Lg	02 01 30.1	
	0.7nm,0.7s,baz=217,slow=29,SNR=4.4						

BGR **17** *02:03:04.7, 23°.86S×178°.74W, h33^{km}*
MOS **17** *02:04:03.7±1.4, 23°.41S×179°.93W, h539^{km}, mb5.0/17, Error ellipse: s-maj=12.0km s-min=9.7km az=46.0*
IDC **17** *02:04:04.5±0.8, 23°.38S×179°.89W, h539^{km}±7^{km}, mb4.3/22, mbtmp5.1/23, Error ellipse: s-maj=11.1km s-min=9.1km az=2.0*
NEIC **17** *02:04:05.0±1.7, 23°.47S±0°.09×179°.92W±0°.09, h541^{km}±6^{km}, mb5.0/309, Error ellipse: s-maj=13.8km s-min=12.2km az=152.0*
NOU **17** *02:04:05.1, 23°.44S×179°.80W, h554^{km}, mb5.1/92, South of Fiji Islands*
GCMT **17** *02:04:08.0±0.5, 23°.64S±0°.06×179°.99E±0°.05, h566^{km}±3^{km}, MW5.3/53, Moment Tensor Solution. s53,c74; Duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.25±.04; $M_{\theta\theta}$0.03±.08; $M_{\phi\phi}$-0.28±.06; $M_{r\theta}$0.38±.07; $M_{\theta\phi}$-0.76±.06; $M_{\phi r}$-0.54±.06; Best double couple: $M_0$1.02400×10^{17} NP1:ϕ_s77.00000°,δ57.00000°,λ160.00000°. NP2: ϕ_s179.00000°,δ73.00000°,λ35.00000°. Principal axes: T 1.1150, Plg36.0000°, Azm43.0000°; N -0.1830, Plg51.0000°, Azm201.0000°; P -0.9320, Plg11.0000°, Azm305.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
ISC 17 02:04:04.9±0.2, 23°.49S±0°.04×179°.86W±0°.04, h550^{km}, n731, σ1^{s}26/685, mb5.0/209, 63C-59D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	5.99	164	P	P	02 05 43.5	+0.3
RAO	Raoul Island	5.99	164	P	P	02 05 43.7	+0.4
	977nm,0.3s,baz=95,slow=3.4,SNR=15						
RAO	Raoul Island	5.99	164	P	P	02 05 43.3	0.0
RAO	Raoul Island	5.99	164	P	P	02 05 43.3	0.0
GLKZ	Green Lake	6.00	164	P	P	02 05 43.6	+0.3
GLKZ				S	S	02 07 06.8	+2.7
MSVF	Nonsavu	6.05	341		P	02 05 43.9	-0.4
MSVF	Nonsavu	6.05	341	P	P	02 05 44.2	0.0
MSVF	Nonsavu	6.05	341	⇑iP	P	02 05 43.6	-0.6
NIUE	Niue	10.24	66	P	P	02 06 25.1	-0.3
NIUE	Niue	10.24	66	P	P	02 06 24.4	-1.0
NIUE				S	S	02 08 24.5	+3.7
INH	Isangel	10.85	289	P	P	02 06 32.5	+0.9
MARNC	Mare, Loyalty	11.38	278		P	02 06 36.6	-0.4
MARNC	Mare, Loyalty	11.38	278	P	P	02 06 37.7	+0.7
MARNC	Mare, Loyalty	11.38	278	S	S	02 08 44.1	+2.0
PINNC	Pines Island,	11.72	272		P	02 06 40.6	0.0
PINNC	Pines Island,	11.72	272	P	P	02 06 41.6	+1.0
AFI	Afiamalu	12.22	40	P	P	02 06 42.6	-3.3
AFI	Afiamalu	12.22	40	P	P	02 06 45.1	-0.8
AFI	Afiamalu	12.22	40	P	P	02 06 42.6	-3.3
OUENC	Ouen Island, N	12.30	272	P	P	02 06 47.6	+1.0
YATNC	Mamie plateau,	12.31	274	P	P	02 06 47.7	+1.0
RTV	Rentapao	12.35	295	P	P	02 06 47.9	+0.8
DVP	Devils Point	12.58	295	P	P	02 06 50.0	+0.6
ONTNC	Ouen Toro	12.67	273		P	02 06 50.1	-0.3
ONTNC	Ouen Toro	12.67	273	P	P	02 06 51.9	+1.5
DZM	Mont Dzumac	12.72	274	P	P	02 06 50.9	0.0
	27nm,0.6s,baz=84,slow=15,SNR=16						
DZM				ScP	ScP	02 14 25.0	+3.5
	16nm,0.7s,baz=173,slow=14,SNR=15						
DZM	Mont Dzumac	12.72	274	eP	P	02 06 50.4	-0.6
	107nm,0.8s						
DZM				eS	S	02 09 11.7	+4.0
	68nm,1.4s						
DZM	Mont Dzumac	12.72	274	P	P	02 06 51.0	0.0
DZM					ScP	02 14 20.8	-0.7
DZM	Mont Dzumac	12.72	274	P	P	02 06 51.9	+0.9
OUZ	Omahuta	13.00	205	P	P	02 06 55.6	+2.1
WCZ	Waipu Caves	13.38	201	P	P	02 06 59.0	+1.5
MXZ	Matakaoa Point	14.11	186	P	P	02 07 04.5	-0.6
MXZ	Matakaoa Point	14.11	186	P	P	02 07 06.9	+1.9
ETAZ	East Tamaki Re	14.15	197	P	P	02 07 06.7	+1.3
MKAZ	Moumakai	14.23	196	P	P	02 07 06.9	+0.7
WMGZ	Waiomatatini S	14.36	186	P	P	02 07 08.3	+0.8
WMGZ				S	S	02 09 34.7	-3.3
HAZ	Te Kaha	14.36	188	P	P	02 07 05.6	-1.9
RUGZ	Raukumara Rang	14.58	188	P	P	02 07 08.8	-1.2
RUGZ				S	S	02 09 38.9	-3.6
SANVU	Saraoutou	14.59	301		P	02 07 08.2	-1.9
PUZ	Puketiti	14.62	186	P	P	02 07 10.6	+0.3
PUZ				S	S	02 09 37.0	-6.1
TOZ	Tahuroa Road	14.74	195		P	02 07 11.7	+0.2
TOZ	Tahuroa Road	14.74	195	P	P	02 07 11.9	+0.5
TWGZ	Tauwhareparae	14.76	187	P	P	02 07 10.0	-1.6
TWGZ				S	S	02 09 42.7	-3.0
FUNA	Funafuti	14.91	356		P	02 07 11.0	-2.5
FUNA	Funafuti	14.91	356	P	P	02 07 12.7	-0.8
URZ	Urewera	14.95	189	P	P	02 07 10.5	-3.1
	43nm,0.3s,baz=279,slow=2.9,SNR=42						
URZ				S	S	02 09 43.7	-5.3
	50nm,0.6s,baz=37,slow=23,SNR=12						
URZ	Urewera	14.95	189	P	P	02 07 13.3	-0.3
URZ	Urewera	14.95	189	P	P	02 07 10.3	-3.3
URZ				S	S	02 09 45.2	-3.8
MWZ	Matawai	14.96	188	P	P	02 07 11.3	-2.5
MWZ				S	S	02 09 44.6	-4.8
CNGZ	Carnagh Statio	15.04	186	P	P	02 07 15.5	+1.0
TLZ	Tolley Road	15.31	194	P	P	02 07 17.0	-0.3
KNZ	Kokohu	15.62	187	P	P	02 07 18.6	-1.9
HIZ	Hauiti	15.64	196	P	P	02 07 21.0	+0.4
HIZ	Hauiti	15.64	196	P	P	02 07 20.7	+0.1
BKZ	Black Stump Fm	15.93	190	P	P	02 07 20.3	-3.4
BKZ	Black Stump Fm	15.93	190	P	P	02 07 23.6	0.0
BKZ	Black Stump Fm	15.93	190	P	P	02 07 21.2	-2.4
VRZ	Vera Road	16.24	195	P	P	02 07 27.4	+0.9
PXZ	Pawanui	16.72	189	P	P	02 07 28.2	-2.6
WAZ	Wanganui	16.79	194	P	P	02 07 30.6	-0.9
TSZ	Takapari Road	16.89	191	P	P	02 07 31.1	-1.3
BFZ	Birch Farm	17.45	190	P	P	02 07 34.9	-2.6
BFZ	Birch Farm	17.45	190	P	P	02 07 35.1	-2.4
MRZ	Mangatainoka R	17.55	192	P	P	02 07 35.1	-3.2
MRZ	Mangatainoka R	17.55	192	P	P	02 07 36.1	-2.3
MSWZ	Moikau Station	18.34	192	P	P	02 07 43.3	-2.3
TCW	Tory Channel	18.34	194	P	P	02 07 44.3	-1.3
SNZO	South Karori	18.34	193	P	P	02 07 44.1	-1.5
BHW	Baring Head	18.40	193	P	P	02 07 44.0	-2.2
QRZ	Quartz Range	18.43	199	P	P	02 07 47.2	+0.8
QRZ	Quartz Range	18.43	199	P	P	02 07 47.3	+0.8
TKNZ	Takaka Hill	18.50	197	P	P	02 07 45.7	-1.5
NNZ	Nelson	18.56	196	P	P	02 07 46.4	-1.2
TUWZ	Tuamarina	18.63	195	P	P	02 07 47.8	-0.5
CMWZ	Cape Campbell	18.87	194	P	P	02 07 50.3	-0.2
MRNZ	Matariki Terra	18.90	197	P	P	02 07 50.4	-0.3
BSWZ	Blackbirch Sta	18.91	195	P	P	02 07 50.6	-0.2
THZ	Tophouse	19.20	197	P	P	02 07 52.6	-0.9
THZ	Tophouse	19.20	197	P	P	02 07 53.2	-0.3
DSZ	Denniston Nort	19.49	199	P	P	02 07 56.2	+0.1
DSZ	Denniston Nort	19.49	199	P	P	02 07 56.0	-0.2
KHZ	Kahutara	19.66	195	P	P	02 07 56.1	-1.5
KHZ	Kahutara	19.66	195	P	P	02 07 58.0	+0.4
KHZ	Kahutara	19.66	195	P	P	02 07 56.1	-1.5
GVZ	Greta Valley S	20.30	195	P	P	02 08 02.5	-0.9
GVZ	Greta Valley S	20.30	195	P	P	02 08 01.9	-1.6
LHI	Lord Howe Isla	20.32	242	P	P	02 08 04.7	+0.9
LTZ	Lake Taylor	20.32	197	P	P	02 08 02.5	-1.2
RPZ	Rata Peaks	21.52	198	P	P	02 08 13.6	-0.9
ODZ	Otahua Downs	22.86	198	P	P	02 08 27.4	+1.0
MLZ	Mavora Lakes	23.92	201	P	P	02 08 36.3	+0.4
SAVO	Savo Central	24.12	303	P	P	02 08 37.8	-0.2
DCZ	Deep Cove	24.33	203	P	P	02 08 40.0	+0.6
TATA	Tatamba Isabel	24.61	304	P	P	02 08 40.8	-1.5
AUWSH	Wavell State H	24.76	255	P	P	02 08 45.4	+1.9
TW1H	Toowoomba 1 Ha	25.72	255	P	P	02 08 53.3	+1.2
ARMA	Armidale	26.29	249	P	P	02 08 58.0	+0.8
ARMA	Armidale	26.29	249	P	P	02 08 57.5	+0.3
EIDS	Eidsvold	26.51	260	P	P	02 08 59.0	0.0
EIDS	Eidsvold	26.51	260	P	P	02 08 59.5	+0.5
SYDH	Sydney Hard Ro	27.68	242	P	P	02 09 10.4	+1.3
TBI	Tubuai	27.87	96	eS	S	02 13 14.6	-1.5
	433nm,28.2s						
TBI				esS	sS	02 15 44.4	-18
	2μm,43.2s						
PPT2	Papeete2	28.92	84	eS	S	02 13 25.8	-6.9
	79nm,25.2s						
PPT2				esS	sS	02 16 19.5	-0.7
	112nm,25.5s						
TIAR	Tiarei	29.14	84	eP	P	02 09 24.6	+2.5
	316nm,1.3s						
CNB	Canberra Magne	29.17	239	P	P	02 09 22.5	+0.3
AUDAR	Daramalan Coll	29.33	239	P	P	02 09 23.9	+0.4
AUMHS	Melrose High S	29.40	239	P	P	02 09 24.6	+0.5
AUMTS	Mt Stromlo	29.46	239	P	P	02 09 25.4	+0.7
CAN	Canberra	29.46	239	P	P	02 09 25.5	+0.8
CAN				IAmb	IAmb	02 09 26.7	
	comp=Z,30nm,0.8s						
CAN	Canberra	29.46	239	P	P	02 09 25.4	+0.8
CAN	Canberra	29.46	239	P	P	02 09 25.5	+0.8
CAN				pmax	pmax		
	comp=Z,30nm,0.8s						
PMOR	Pomariorio Ree	31.28	80	eP	P	02 09 40.8	+0.4
	comp=Z,175nm,1.2s						
TV1H	Townsville Har	31.30	271	P	P	02 09 41.0	+0.4
VAH	Vaihoa	31.44	81	eP	P	02 09 43.0	+1.2
	comp=Z,3.3nm,1.2s						
CMSA	Cobar Meteorol	31.49	248	P	P	02 09 42.7	+0.6

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CTA   Charters Tower    31.61 270   P      P       02 09 43.8 +0.4
      comp=Z,209nm,0.5s,baz=93,slow=10.0,SNR=504
CTA                                 S      S       02 14 13.9  0.0
      comp=Z,3.8nm,0.9s,baz=196,slow=21,SNR=6.6
CTA                                 ScP    ScP     02 15 12.8 +2.7
      comp=Z,6.8nm,0.8s,baz=116,slow=2.6,SNR=7.0
      comp=Z,209nm,0.5s
CTA   Charters Tower    31.61 270   P      P       02 09 43.7 +0.4
CTAO  Charters Tower    31.61 270   P      P       02 09 43.7 +0.4
CTAO                                       ScP     02 15 11.1 +1.0
CTAO  Charters Tower    31.61 270   P      P       02 09 43.7 +0.4
CTAO  Charters Tower    31.61 270   P      P       02 09 43.7 +0.4
CTAO                                pmax   pmax
      comp=Z,230nm,0.6s
CTAO  Charters Tower    31.61 270   P      P       02 09 43.7 +0.4
QLP   Quilpie           32.62 257   P      P       02 09 52.1 +0.4
TOO   Toolangi          32.78 237   P      P       02 09 53.5 +0.5
TOO   Toolangi          32.78 237   P      P       02 09 53.5 +0.5
XMAS  Kiritimati        33.47  44   P      P       02 09 58.3 -0.7
XMAS  Kiritimati        33.47  44   P      P       02 09 58.3 -0.7
MTSU  Mount Surprise    33.85 272   P      P       02 10 02.9 +0.6
BRAT  Ballarat          33.98 237   P      P       02 10 04.1 +1.1
AUMTC Mt Clear Colle    34.03 237   P      P       02 10 04.4 +0.9
PMG   Port Moresby      34.49 288   P      P       02 10 07.5 -0.1
      comp=Z,213nm,0.8s,baz=91,slow=4.9,SNR=77
PMG                                 ScP    ScP     02 15 22.8 +2.5
      comp=Z,3.4nm,0.3s,baz=151,slow=3.9,SNR=5.8
      comp=Z,213nm,0.8s
PMG   Port Moresby      34.49 288   P      P       02 10 06.9 -0.7
PMG   Port Moresby      34.49 288   P      P       02 10 07.7 +0.1
PMG   Port Moresby      34.49 288   P      P       02 10 07.3 -0.3
PMG   Port Moresby      34.49 288⇑iP      P       02 10 07.0 -0.7
PMG                                 pmax   pmax
      comp=Z,189nm,0.7s
PMG   Port Moresby      34.49 288   P      P       02 10 07.5 -0.1
STKA  Stephens Creek    35.00 248   P      P       02 10 12.2 +0.5
      comp=Z,39nm,0.6s,baz=91,slow=9.9,SNR=124
STKA                                ScP    ScP     02 15 24.2 +2.3
      comp=Z,2.7nm,0.7s,baz=83,slow=5.1,SNR=3.0
      comp=Z,39nm,0.6s
STKA  Stephens Creek    35.00 248   P      P       02 10 12.0 +0.3
STKA                                       ScP     02 15 23.5 +1.6
STKA  Stephens Creek    35.00 248   P      P       02 10 12.2 +0.5
INKA  Innaminka         35.67 255   P      P       02 10 18.1 +0.8
INKA                                IAmb   IAmb    02 10 19.4
      comp=Z,25nm,0.7s
INKA                                       ScP     02 15 27.9 +3.4
COEN  Coen              36.18 279   P      P       02 10 21.8 +0.1
COEN                                IAmb   IAmb    02 10 23.2
      comp=Z,33nm,0.8s
COEN  Coen              36.18 279   P      P       02 10 22.1 +0.4
MGBR  Mount Gambier     36.62 238   P      P       02 10 25.4 +0.4
MGBR                                IAmb   IAmb    02 10 26.4
      comp=Z,86nm,1.7s
AUMBR Murray Bridge     37.23 242   P      P       02 10 30.3 +0.3
HTT   Hallett           37.36 245   P      P       02 10 31.6 +0.4
HTT   Hallett           37.36 245   P      P       02 10 31.4 +0.2
AUJCS Jamestown Cent    37.61 246   P      P       02 10 33.8 +0.6
QIS   Mount Isa         37.61 266   P      P       02 10 32.8 -0.6
AUMAR Marden Senior     37.73 243   P      P       02 10 34.6 +0.5
WHYH  Whyalla           38.46 246   P      P       02 10 40.2 +0.1
BBOO  Buckleboo         39.73 246   P      P       02 10 49.9 -0.4
BBOO                                IAmb   IAmb    02 10 50.7
      comp=Z,45nm,1.0s
BBOO  Buckleboo         39.73 246   P      P       02 10 50.1 -0.2
TAOE  Nuku Hiva Isla    40.66  76  eP      P       02 10 59.0 +0.9
      comp=Z,341nm,1.0s
AS31  Alice Springs     42.23 260          P       02 11 10.1 -0.3
AS31                                IAmb   IAmb    02 11 11.4
      comp=Z,28nm,0.6s
ASAR  Alice Springs     42.23 260   P      P       02 11 10.2 -0.1
      comp=Z,92nm,0.8s,baz=95,slow=8.0,SNR=638
ASAR                                ScP    ScP     02 15 52.5 +2.5
      comp=Z,15nm,0.8s,baz=110,slow=4.2,SNR=28
ASAR                                S      S       02 16 49.1 -2.3
      comp=Z,6.2nm,0.7s,baz=99,slow=15,SNR=13
      comp=Z,92nm,0.8s
ASAR  Alice Springs     42.23 260   P      P       02 11 10.3 -0.1
ASAR                                       ScP     02 15 51.6 +1.6
ASAR                                       S       02 16 48.1 -3.4
WR8   Warramunga Arr    42.42 266          P       02 11 10.9 -1.0
WB0   Warramunga Arr    42.56 266          P       02 11 12.1 -0.8
WRAB  Tennant Creek     42.56 266   P      P       02 11 12.1 -0.8
WRAB  Tennant Creek     42.56 266   P      P       02 11 12.1 -0.8
WRAB  Tennant Creek     42.56 266d iP      P       02 11 12.1 -0.8
WRAB                                pmax   pmax
      comp=Z,82nm,0.9s
WRAB  Tennant Creek     42.56 266   P      P       02 11 11.9 -1.1
WRA   Warramunga Arr    42.57 266   P      P       02 11 12.4 -0.6
      comp=Z,120nm,0.7s,baz=103,slow=8.8,SNR=228
WRA                                 ScP    ScP     02 15 53.9 +2.4
      comp=Z,15nm,0.9s,baz=102,slow=4.4,SNR=20
WRA                                 S      S       02 16 52.1 -4.2
      comp=Z,8.9nm,0.9s,baz=101,slow=14,SNR=11
      comp=Z,120nm,0.7s
WRA   Warramunga Arr    42.57 266          P       02 11 11.4 -1.6
WRA                                        ScP     02 15 53.9 +2.4
WRA                                        S       02 16 51.5 -4.8
WRA   Warramunga Arr    42.57 266   P      P       02 11 11.4 -1.6
WRA                                 S      S       02 16 51.5 -4.8
WRA                                 pmax   pmax
      comp=Z,11nm,0.7s
JAY   Jayapura          43.48 293   P      P       02 11 19.9 -0.3
      comp=Z,78nm,0.6s,baz=39,slow=3.9,SNR=13
      comp=Z,78nm,0.6s
JAY   Jayapura          43.48 293   P      P       02 11 19.6 -0.6
      comp=Z,1μmcomp=Z,115nm,1.0s
GENI  Genyem            43.89 292   P      P       02 11 23.4  0.0
GENI  Genyem            43.89 292   P      P       02 11 22.4 -1.0
      comp=Z,212nm,0.9s
SMPI  Sarmi             45.45 292   P      P       02 11 34.6 -0.7
      comp=Z,85nm,1.2s
FORT  Forrest           46.58 249   P      P       02 11 43.2 -0.5
FORT                                       ScP     02 16 09.1 +1.3
MTN   Manton Dam        47.56 274   P      P       02 11 50.4 -0.9
MTN                                 IAmb   IAmb    02 11 50.9
      comp=Z,36nm,0.6s
MTN                                        ScP     02 16 13.6 +1.4
DRS   Darwin Rock St    47.91 274   P      P       02 11 53.4 -0.5
BAKI  Biak              48.08 291   P      P       02 11 56.5 +1.3
      comp=Z,326nm,1.0s
KNRA  Kununurra         48.82 269   P      P       02 12 00.3 -0.3
KNHH  Kane Nui o Ham    48.95  32   P      P       02 12 02.0 +0.5
KMPI  Kaimana, Papua    48.96 287   P      P       02 12 01.2 -0.5
      comp=Z,2μmcomp=Z,204nm,0.7s
HMH   Humu‘ula Sheep    48.99  31          P       02 12 02.9 +0.8
SAUI  Saumlaki          49.22 280   P      P       02 12 03.7  0.0
SAUI  Saumlaki          49.22 280   P      P       02 12 03.9 +0.3
SAUI  Saumlaki          49.22 280   P      P       02 12 03.9 +0.3
HPAH  Hawaii Prepara    49.26  31          P       02 12 04.6 +0.8
MHA   Mahukona          49.30  30   P      P       02 12 04.6 +0.7
MHA   Mahukona          49.30  30   P      P       02 12 04.6 +0.7
DHH   Diamond Head      49.40  27   P      P       02 12 05.2 +0.5
DHH   Diamond Head      49.40  27   P      P       02 12 05.2 +0.5
FAKI  Fak Fak           50.59 286   P      P       02 12 12.9 -0.7
FAKI                                IAmb   IAmb    02 12 13.8
      comp=Z,90nm,1.2s
FAKI  Fak Fak           50.59 286   P      P       02 12 13.7  0.0
FAKI  Fak Fak           50.59 286   P      P       02 12 13.0 -0.7
      comp=Z,74nm,1.2s
FITZ  Fitzroy Crossi    50.99 265   P      P       02 12 16.8 +0.2
      comp=Z,71nm,0.8s,baz=125,slow=4.8,SNR=115
FITZ                                ScP    ScP     02 16 29.6 +2.7
      comp=Z,3.2nm,0.8s,baz=48,slow=2.2,SNR=3.5
FITZ                                S      S       02 18 53.4 +0.3
      comp=Z,3.4nm,0.9s,baz=12,slow=19,SNR=3.1
      comp=Z,71nm,0.8s
FITZ  Fitzroy Crossi    50.99 265   P      P       02 12 16.4 -0.2
FITZ                                       ScP     02 16 27.1 +0.2
FITZ  Fitzroy Crossi    50.99 265   P      P       02 12 16.6 +0.1
BNDI  Bandanaira        51.94 283   P      P       02 12 23.5  0.0
BNDI  Bandanaira        51.94 283   P      P       02 12 22.5 -1.0
      comp=Z,158nm,0.7s
SWI   Sorong            52.44 288   P      P       02 12 26.5 -0.5
MSAI  Masohi            53.34 284   P      P       02 12 32.3 -1.1
      comp=Z,3μmcomp=Z,104nm,0.6s
KRAI  Karang Ratu       53.83 284   P      P       02 12 36.3 -0.6
      comp=Z,65nm,0.9s
VNDA  Vanda             54.80 185   P      P       02 12 44.7 +2.1
      comp=Z,1.1nm,0.5s,baz=358,slow=5.8,SNR=8.2
VNDA                                PcP    PcP     02 13 37.0 +0.5
      comp=Z,2.6nm,0.8s,baz=352,slow=3.5,SNR=5.9
VNDA  Vanda             54.80 185   P      P       02 12 44.8 +2.1
SOEI  Soe               54.94 275   P      P       02 12 44.7 -0.1
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SOEI  Soe               54.94 275   P      P       02 12 44.9  0.0
SOEI  Soe               54.94 275   P      P       02 12 45.8 +0.9
      comp=Z,2μmcomp=Z,204nm,0.9s
NLAI  Namlea            55.02 283   P      P       02 12 44.7 -0.5
      comp=Z,1μmcomp=Z,112nm,1.1s
KLBR  Kellerberrin      55.27 247   P      P       02 12 46.5 -0.3
BATI  Baumata           55.33 274   P      P       02 12 48.5 +1.1
      comp=Z,1μmcomp=Z,150nm,0.6s
MEEK  Meekatharra       55.36 253   P      P       02 12 47.2 -0.3
PSA00 Pilbara Seismi    55.37 259          P       02 12 46.6 -1.0
PSA00 Pilbara Seismi    55.37 259          P       02 12 46.8 -0.8
PSA00                               IAmb   IAmb    02 12 48.0
      comp=Z,14nm,0.8s
PSA00                                      ScP     02 16 45.7 -0.4
PSA00 Pilbara Seismi    55.37 259   P      P       02 12 47.0 -0.6
NWAO  Narrogin (SRO)    55.52 245          P       02 12 47.6 -0.9
NWAO  Narrogin (SRO)    55.52 245   P      P       02 12 48.8 +0.3
NWAO  Narrogin (SRO)    55.52 245   P      P       02 12 48.6 +0.1
NWAO  Narrogin (SRO)    55.52 245   P      P       02 12 47.6 -0.9
NWAO                                pmax   pmax
      comp=Z,46nm,1.3s
MBWA  Marble Bar        55.57 260          P       02 12 47.3 -1.7
MBWA                                IAmb   IAmb    02 12 49.3
      comp=Z,64nm,0.8s
MBWA  Marble Bar        55.57 260   P      P       02 12 48.6 -0.4
MBWA  Marble Bar        55.57 260   P      P       02 12 48.3 -0.7
BLDU  Ballidu           56.30 248   P      P       02 12 53.8 -0.1
MUN   Mundaring         56.52 246   P      P       02 12 56.1 +0.7
SANI  Sanana            56.54 284   P      P       02 12 55.9 +0.1
SANI  Sanana            56.54 284   P      P       02 12 54.7 -1.1
      comp=Z,57nm,0.7s
TNTI  Ternate           56.63 288   P      P       02 12 56.4  0.0
TNTI  Ternate           56.63 288   P      P       02 12 56.0 -0.4
      comp=Z,39nm,0.6s
MORW  Morawa            57.14 250          P       02 12 59.3 -0.4
MORW                                IAmb   IAmb    02 13 00.2
      comp=Z,50nm,0.8s
MORW  Morawa            57.14 250   P      P       02 12 59.6 -0.1
MMRI  Maumere           57.22 275          P       02 12 59.5 -0.9
MMRI                                IAmb   IAmb    02 13 00.7
      comp=Z,110nm,1.0s
MMRI  Maumere           57.22 275   P      P       02 13 00.4  0.0
MMRI  Maumere           57.22 275   P      P       02 12 59.6 -0.8
      comp=Z,128nm,0.9s
BASI  Baing, Sumba      58.16 272   P      P       02 13 07.4 +0.6
      comp=Z,2μmcomp=Z,215nm,0.9s
WSI   Waingapu          58.61 273   P      P       02 13 09.8  0.0
WBSI  Waikabubak, Su    59.45 273   P      P       02 13 15.2 -0.3
LUWI  Luwuk             59.86 283   P      P       02 13 18.7 +0.5
LUWI  Luwuk             59.86 283   P      P       02 13 18.0 -0.2
      comp=Z,116nm,1.0s
BNSI  Bone              60.83 278   P      P       02 13 24.1 -0.5
      comp=Z,76nm,0.8s
DBNI  Kabupaten Domp    60.86 273   P      P       02 13 24.1 -0.7
      comp=Z,986nmcomp=Z,112nm,0.7s
KAPI  Kappang           60.90 278   P      P       02 13 24.9 -0.3
      comp=Z,13nm,0.5s,baz=129,slow=5.8,SNR=6.7
      comp=Z,13nm,0.5s
KAPI  Kappang           60.90 278   P      P       02 13 24.8 -0.3
KAPI  Kappang           60.90 278   P      P       02 13 25.2 +0.1
KAPI  Kappang           60.90 278d iP      P       02 13 24.6 -0.5
KAPI                                pmax   pmax
      comp=Z,11nm,0.9s
APSI  Ampana            60.92 283   P      P       02 13 25.5 +0.3
      comp=Z,48nm,0.7s
PLAI  Plampang          61.23 273   P      P       02 13 27.1 -0.2
PLAI  Plampang          61.23 273   P      P       02 13 26.9 -0.4
      comp=Z,2μmcomp=Z,192nm,0.8s
SPSI  Sidrap Palu       61.32 279   P      P       02 13 26.2 -1.6
      comp=Z,1μmcomp=Z,37nm,0.9s
TTSI  Tana Toraja       61.65 280   P      P       02 13 29.3 -0.7
TWSI  Taliwang, Sumb    62.09 272   P      P       02 13 32.2 -0.6
PMSI  Majene            62.28 279   P      P       02 13 34.4 +0.3
      comp=Z,1μmcomp=Z,118nm,1.1s
TOLI2 Tolitoli          62.60 284          P       02 13 34.6 -1.6
TOLI2                               IAmb   IAmb    02 13 37.7
      comp=Z,61nm,0.6s
TOLI2 Tolitoli          62.60 284   P      P       02 13 36.4 +0.2
MMSI  Mamuju            62.62 280   P      P       02 13 36.1 -0.2
KLNI  Mataram           62.93 272   P      P       02 13 36.7 -1.5
      comp=Z,4μmcomp=Z,66nm,1.0s
MPSI  Mapaga            63.05 283   P      P       02 13 38.3 -0.7
      comp=Z,997nmcomp=Z,97nm,0.9s
IGBI  Denpasar          63.65 272   P      P       02 13 42.9  0.0
      comp=Z,4μmcomp=Z,216nm,0.9s
JAGI  Jajag, Banyuwa    64.69 272          P       02 13 47.7 -1.8
JAGI                                IAmb   IAmb    02 13 49.1
      comp=Z,59nm,1.1s
JAGI  Jajag, Banyuwa    64.69 272   P      P       02 13 49.2 -0.3
JAGI  Jajag, Banyuwa    64.69 272   P      P       02 13 48.0 -1.5
      comp=Z,57nm,1.0s
ABJI  Asem Bagus        64.87 272   P      P       02 13 50.4 -0.2
      comp=Z,41nm,0.5s
KMMI  Kalianget         65.39 273   P      P       02 13 54.2 +0.3
      comp=Z,80nm,1.0s
GMJI  Gumukmas          65.41 272   P      P       02 13 53.3 -0.7
      comp=Z,44nm,0.8s
BBKI  Banjar Baru       66.00 277   P      P       02 13 58.1 +0.4
QSPA  South Pole Qui    66.59 180   P      P       02 14 02.1 +1.5
      comp=Z,11nm,0.8s,baz=40,slow=1.8,SNR=33
      comp=Z,11nm,0.8s
QSPA  South Pole Qui    66.59 180   P      P       02 14 01.8 +1.2
QSPA  South Pole Qui    66.59 180   P      P       02 14 02.2 +1.6
GRJI  Gresik            66.81 272   P      P       02 14 02.9 +0.2
SNJI  Sawahan-Nganju    67.14 271   P      P       02 14 05.4 +0.4
      comp=Z,61nm,0.9s
PCJI  Pacitan           67.52 271   P      P       02 14 06.8 -0.3
NGJI  Ngawi             67.57 272   P      P       02 14 07.6 +0.2
      comp=Z,41nm,0.8s
UGM   Wanagama          68.23 271          P       02 14 10.2 -1.3
UGM                                 IAmb   IAmb    02 14 11.7
      comp=Z,39nm,0.6s
UGM   Wanagama          68.23 271   P      P       02 14 11.4  0.0
UGM   Wanagama          68.23 271   P      P       02 14 10.9 -0.5
      comp=Z,55nm,0.6s
KPJI  Karang Pucung     69.91 271   P      P       02 14 20.8 -0.7
      comp=Z,56nm,0.7s
JOW   Kunigami          70.82 312   P      P       02 14 26.5  0.0
      comp=Z,27nm,0.7s,baz=146,slow=7.8,SNR=10
      comp=Z,27nm,0.7s
JOW   Kunigami          70.82 312          P       02 14 26.3 -0.2
JOW                                 IAmb   IAmb    02 14 28.2
      comp=Z,38nm,0.9s
JOW   Kunigami          70.82 312   P      P       02 14 26.9 +0.4
SBUM  Sibu              70.86 281          P       02 14 26.4 -0.6
SBUM  Sibu              70.86 281   P      P       02 14 28.4 +1.3
SBUM  Sibu              70.86 281   P      P       02 14 27.0 -0.1
MJAR  Matsushiro Arr    71.64 325   P      P       02 14 31.3 +0.2
      comp=Z,5.0nm,0.9s,baz=156,slow=5.9,SNR=4.3
      comp=Z,5.0nm,0.9s
MJAR  Matsushiro Arr    71.64 325   P      P       02 14 30.2 -0.9
MJAR  Matsushiro Arr    71.64 325   P      P       02 14 30.2 -0.9
MJAR                                pmax   pmax
      comp=Z,9.0nm,1.3s
NACB  Ninganchiao       73.97 306          P       02 14 44.1 -0.6
NACB                                IAmb   IAmb    02 14 45.1
      comp=Z,38nm,1.0s
NACB  Ninganchiao       73.97 306   P      P       02 14 45.0 +0.2
TPUB  Ta-pu             74.20 305          P       02 14 44.3 -1.8
TPUB                                IAmb   IAmb    02 14 45.7
      comp=Z,34nm,1.0s
TPUB  Ta-pu             74.20 305   P      P       02 14 46.0 -0.1
YHNB  Yeheng            74.42 306          P       02 14 48.0 +0.6
YHNB  Yeheng            74.42 306   P      P       02 14 47.1 -0.3
KASI  Kota Agung        74.67 271   P      P       02 14 47.9 -1.1
      comp=Z,41nm,1.0s
ADK   Adak              75.10   2   P      P       02 14 50.4 -0.1
MDSI  Maura Dua         75.36 271   P      P       02 14 51.4 -1.4
BELA  Belgrano 2        76.82 173          P       02 15 00.2 +0.4
KSRS  Korea Array       78.02 320   P      P       02 15 08.0 +1.3
      comp=Z,1.1nm,0.4s,baz=125,slow=6.2,SNR=3.4
PETK  Petropavlovsk-    78.73 346   P      P       02 15 10.1 -0.2
      comp=Z,6.8nm,0.8s,baz=140,slow=7.7,SNR=7.4
      comp=Z,6.8nm,0.8s
PETK  Petropavlovsk-    78.73 346   P      P       02 15 10.5 +0.2
PETK  Petropavlovsk-    78.73 346   P      P       02 15 10.5 +0.2
PMSA  Palmer Station    79.23 157   P      P       02 15 13.7 +0.9
NJ2   Nanjing           80.49 311  eP      P       02 15 21.8 +1.8
NJ2                                 pmax   pmax
      comp=Z,12nm,0.5s
SAO   San Andreas Ge    81.37  44          P       02 15 25.6 +1.2
SAO   San Andreas Ge    81.37  44   P      P       02 15 25.6 +1.2
SAO                                 pmax   pmax
      comp=Z,28nm,1.0s
PKD   Bear Valley Ra    81.46  45          P       02 15 25.4 +0.5
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BBGB  Big Mountain B    81.52  44   IAmb   IAmb    02 15 29.2
      comp=Z,37nm,1.1s
MHC   Mount Hamilton    81.60  43   P      P       02 15 27.0 +1.2
MHC                                 IAmb   IAmb    02 15 28.5
      comp=Z,32nm,0.9s
MHC   Mount Hamilton    81.60  43   P      P       02 15 27.0 +1.2
MHC                                 pmax   pmax
      comp=Z,32nm,0.9s
CVS   Carmenet Viney    81.72  42          P       02 15 27.0 +0.8
CVS                                 IAmb   IAmb    02 15 28.5
      comp=Z,42nm,1.0s
HOPS  Hopland Field     81.75  41   P      P       02 15 27.7 +1.4
HOPS                                IAmb   IAmb    02 15 28.9
      comp=Z,32nm,1.1s
GDXM  Geysers           81.80  41   P      P       02 15 28.6 +1.9
GDXM                                IAmb   IAmb    02 15 29.6
      comp=Z,52nm,1.4s
KCPM  Cahto Peak        81.88  40   P      P       02 15 27.6 +0.4
DCMP  DeCamp, Califo    81.89  41   P      P       02 15 27.6 +0.5
CPE   Camp Elliot       81.98  49   P      P       02 15 28.0 +0.4
MDJ   Mudanjiang        82.00 326   P      P       02 15 29.8 +2.3
MDJ                                 pmax   pmax
      comp=Z,10.0nm,2.3s
KMPM  Mount Pierce      82.03  40   P      P       02 15 29.1 +1.3
KMPM                                IAmb   IAmb    02 15 31.0
      comp=Z,96nm,1.2s
MNRC  McLaughlin Min    82.06  42          P       02 15 29.1 +1.2
MNRC                                IAmb   IAmb    02 15 31.0
      comp=Z,44nm,1.0s
KMRM  Mail Ridge        82.15  40   P      P       02 15 28.7 +0.3
KMRM                                IAmb   IAmb    02 15 32.3
      comp=Z,82nm,1.2s
ESJX  Sierra Juarez     82.30  50   P      P       02 15 29.3 -0.2
ESJX                                IAmb   IAmb    02 15 32.5
      comp=Z,52nm,1.3s
VES   Vestal, Richgr    82.35  46   P      P       02 15 29.1 -0.3
VES                                 IAmb   IAmb    02 15 31.3
      comp=Z,42nm,0.9s
TPO   Tropico Hills     82.35  47   P      P       02 15 30.5 +0.9
TPO                                 IAmb   IAmb    02 15 32.1
      comp=Z,54nm,1.2s
SLBS  Sierra La Lagu    82.49  60   P      P       02 15 29.9 -0.6
SLBS                                IAmb   IAmb    02 15 33.4
      comp=Z,39nm,0.9s
SLBS  Sierra La Lagu    82.49  60   P      P       02 15 32.1 +1.6
KHMM  Horse Mountain    82.55  39   P      P       02 15 31.4 +0.8
KHMM                                IAmb   IAmb    02 15 33.6
      comp=Z,32nm,0.9s
KRPM  Rodgers           82.56  39   P      P       02 15 30.2 -0.2
KRPM                                IAmb   IAmb    02 15 33.8
      comp=Z,31nm,1.0s
ISA   Isabella, Lake    82.64  46   P      P       02 15 31.6 +0.6
ISA                                 IAmb   IAmb    02 15 33.5
      comp=Z,34nm,0.8s
ISA   Isabella, Lake    82.64  46   P      P       02 15 31.6 +0.6
ISA                                 pmax   pmax
      comp=Z,34nm,0.9s
O02D  Mt. Diablo Mer    82.66  40          P       02 15 32.0 +0.9
O02D                                IAmb   IAmb    02 15 34.3
      comp=Z,59nm,1.1s
YUH   Yuha Desert       82.67  50   P      P       02 15 31.8 +0.6
SUTB  Sutter Butte      82.68  42          P       02 15 31.2 +0.2
SUTB                                IAmb   IAmb    02 15 33.0
      comp=Z,130nm,1.7s
CMB   Columbia Colle    82.81  43          P       02 15 32.6 +0.8
CMB                                 IAmb   IAmb    02 15 33.9
      comp=Z,31nm,0.9s
CMB   Columbia Colle    82.81  43   P      P       02 15 32.6 +0.8
CMB                                 pmax   pmax
      comp=Z,31nm,0.9s
PFO   Pinyon Flats O    82.84  49          P       02 15 32.0 -0.2
PFO   Pinyon Flats O    82.84  49⇑iP      P       02 15 32.3 +0.2
PFO                                 pmax   pmax
      comp=Z,13nm,1.0s
WHN   Wuhan             82.86 308   P      P       02 15 32.9 +0.8
WHN                                 pmax   pmax
      comp=Z,50nm,0.9s
ORV   Oroville          83.05  42   P      P       02 15 33.9 +1.0
ORV   Oroville          83.05  42   P      P       02 15 33.9 +1.0
ORV                                 pmax   pmax
      comp=Z,26nm,1.0s
KSXB  Camp Six Broad    83.08  39   P      P       02 15 34.3 +1.2
N02D  Trinity Center    83.21  40   IAmb   IAmb    02 15 36.9
      comp=Z,49nm,1.3s
WSHM  Spangler Hills    83.26  47   IAmb   IAmb    02 15 36.4
      comp=Z,28nm,0.9s
CCCA  Chr Cany lake     83.30  47   IAmb   IAmb    02 15 36.8
      comp=Z,49nm,1.0s
O03E  Paynes Creek      83.33  41   IAmb   IAmb    02 15 36.6
      comp=Z,49nm,1.1s
M02C  Callahan          83.39  39   IAmb   IAmb    02 15 37.3
      comp=Z,25nm,0.8s
MDPB  Devils Postpil    83.40  44   IAmb   IAmb    02 15 37.4
      comp=Z,28nm,1.1s
SYO   Syowa Base        83.44 193⇑eP      P       02 15 34.0 -0.3
SYO   Syowa Base        83.44 193⇑ePcP    PcP     02 15 36.0 -1.3
ELIB  Princess Elisa    83.48 187  dP      P       02 15 34.9 +0.1
      comp=Z,5.3nm,0.0s
GSC   Goldstone, Bar    83.55  47   IAmb   IAmb    02 15 37.9
      comp=Z,26nm,0.9s
BC3   Big Chuckawall    83.56  49   IAmb   IAmb    02 15 38.6
      comp=Z,78nm,1.7s
TIN   Tinemaha, Big     83.61  45   IAmb   IAmb    02 15 38.3
      comp=Z,48nm,1.0s
CN2   Changchun         83.64 324  eP      P       02 15 38.4 +2.7
CN2                                 pmax   pmax
      comp=Z,10.0nm,0.7s
GLA   Glamis            83.66  50   IAmb   IAmb    02 15 39.2
      comp=Z,50nm,0.9s
M03C  McCloud           83.74  40   IAmb   IAmb    02 15 38.9
      comp=Z,50nm,0.8s
HATC  Hat Creek Radi    83.85  41   IAmb   IAmb    02 15 39.5
      comp=Z,38nm,0.8s
PNTR  Pine Nut          83.94  43   IAmb   IAmb    02 15 40.0
      comp=Z,46nm,0.9s
IRM   Iron Mountain     84.05  49   IAmb   IAmb    02 15 40.9
      comp=Z,59nm,1.3s
LHV   Little Huntoon    84.14  44   IAmb   IAmb    02 15 41.0
      comp=Z,31nm,1.1s
GRAC  Grapevine Rang    84.14  46   IAmb   IAmb    02 15 41.1
      comp=Z,33nm,1.1s
L04D  Klamath Falls     84.23  39   IAmb   IAmb    02 15 41.3
      comp=Z,53nm,1.2s
SHOC  Shoshone, Teco    84.25  47   IAmb   IAmb    02 15 41.2
      comp=Z,33nm,1.1s
BLYC  Blythe            84.26  50   IAmb   IAmb    02 15 41.8
      comp=Z,32nm,1.0s
113A  Mohawk Valley,    84.26  51   IAmb   IAmb    02 15 41.9
      comp=Z,29nm,1.1s
NVAR  Mina Array Bea    84.37  44   P      P       02 15 40.6 +0.9
      comp=Z,11nm,0.9s,baz=221,slow=7.7,SNR=60
      comp=Z,11nm,0.9s
NVAR  Mina Array Bea    84.37  44          P       02 15 40.2 +0.5
HSIG                    84.37  55   IAmb   IAmb    02 15 42.2
      comp=Z,34nm,0.8s
I03D  Drain, OR         84.57  37   IAmb   IAmb    02 15 42.4
      comp=Z,25nm,0.9s
TROLL Troll, Antarti    84.74 181  ⇑P      P       02 15 40.9  0.0
      comp=Z,321nm,0.3s
NEE2  Needles Airpor    84.75  49   IAmb   IAmb    02 15 44.0
      comp=Z,34nm,0.9s
SNAA  Sanae             85.07 179  ⇑P      P       02 15 41.8 -0.6
      comp=Z,76nm,0.6s
SNAA  Sanae             85.07 179   P      P       02 15 42.2 -0.3
      comp=Z,2.0nm,0.5s,baz=209,slow=8.6,SNR=32
      comp=Z,2.0nm,0.5s
SNAA  Sanae             85.07 179   P      P       02 15 42.2 -0.3
SNAA  Sanae             85.07 179⇓iP      P       02 15 42.3 -0.2
BUCK  Buck Mountain     85.09  37   IAmb   IAmb    02 15 45.7
      comp=Z,45nm,1.1s
COYC  Coyhaique         85.11 138          P       02 15 44.6 +1.5
COYC                                IAmb   IAmb    02 15 46.0
      comp=Z,31nm,0.9s
COYC  Coyhaique         85.11 138   P      P       02 15 45.2 +2.1
VNA3  Neumayer Olymp    85.27 177  ⇑P      P       02 15 42.8 -0.6
      comp=Z,3.6nm,0.4s
K05A  Summer Lake       85.36  39   IAmb   IAmb    02 15 47.2
      comp=Z,27nm,0.9s
VNA2  Neumayer--Watz    85.69 178  ⇑P      P       02 15 45.2 -0.1
      comp=Z,6.6nm,0.6s,baz=181,slow=4.5
H04A  Detroit Lake      85.84  37   IAmb   IAmb    02 15 48.6
      comp=Z,44nm,1.4s
PRN   Pahroc Range      85.90  46   IAmb   IAmb    02 15 49.7
      comp=Z,23nm,1.0s
I05D  Terrebonne, OR    86.10  38   IAmb   IAmb    02 15 49.7
      comp=Z,16nm,0.9s
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TUC   Tucson              86.17  52           P         02 15 49.7 +1.3
TUC                                  IAmb     IAmb      02 15 51.7
      comp=Z,37nm,1.0s
TUC   Tucson              86.17  52  P        P         02 15 49.7 +1.3
TUC                                  pmax     pmax
      comp=Z,37nm,1.0s
TUC   Tucson              86.17  52  P        P         02 15 50.6 +2.2
MA2   Magadan             86.22 346⇓iP        P         02 15 47.1 -0.7
MA2                                  pmax     pmax
      comp=Z,10.0nm,1.1s
MA2   Magadan             86.22 346  P        P         02 15 48.0 +0.2
      comp=Z,15nm,2.4s
ENH   Enshi               86.32 305  P        P         02 15 50.4 +1.4
LYN   LuoYang             86.33 310  P        P         02 15 50.9 +2.0
LYN                                  pmax     pmax
      comp=Z,14nm,0.9s
LL02  Futaleuf            86.40 136           P         02 15 50.0 +0.7
LL02                                 IAmb     IAmb      02 15 52.0
      comp=Z,18nm,0.8s
WVOR  Wild Horse Val      86.52  41  IAmb     IAmb      02 15 52.3
      comp=Z,26nm,1.1s
I07A  Izee                86.99  39  IAmb     IAmb      02 15 54.6
      comp=Z,41nm,1.0s
G06A  Carlson Farm,       87.05  37  IAmb     IAmb      02 15 54.4
      comp=Z,28nm,1.0s
J08A  Circle Bar Ran      87.16  40  IAmb     IAmb      02 15 55.2
      comp=Z,56nm,1.2s
KNB   Kanab               87.18  48  IAmb     IAmb      02 15 55.9
      comp=Z,28nm,1.1s
GNW   Green Mountain      87.32  35  IAmb     IAmb      02 15 55.7
      comp=Z,30nm,1.1s
WUAZ  Wupatki             87.39  49  IAmb     IAmb      02 15 56.8
      comp=Z,26nm,1.2s
HPIG                      87.44  59  IAmb     IAmb      02 15 56.9
      comp=Z,19nm,0.8s
PGC   Sidney              87.69  34  IAmb     IAmb      02 15 57.8
      comp=Z,44nm,1.1s
PKCU  Pink Cliffs         87.76  47  IAmb     IAmb      02 15 59.3
      comp=Z,36nm,1.0s
F07A  Phinny Hill Vi      87.84  37  IAmb     IAmb      02 15 58.2
      comp=Z,27nm,1.1s
G08A  Pilot Rock          88.02  38  IAmb     IAmb      02 15 59.2
      comp=Z,40nm,1.1s
ZAIG  Zacatecas           88.06  64  IAmb     IAmb      02 16 00.7
      comp=Z,17nm,1.0s
MXC   Moxie City          88.06  37  IAmb     IAmb      02 15 59.0
      comp=Z,21nm,0.8s
LTY   Liberty             88.27  36  IAmb     IAmb      02 15 59.7
      comp=Z,25nm,1.0s
E07A  Sunnyside           88.29  37  IAmb     IAmb      02 16 00.4
      comp=Z,32nm,0.9s
HAWA  Hanford             88.36  37  IAmb     IAmb      02 16 00.6
      comp=Z,33nm,0.9s
PLCA  Paso Flores         88.45 134  P        P         02 16 00.3 +1.2
      comp=Z,5.1nm,0.9s,baz=245,slow=2.4,SNR=7.8
      comp=Z,5.1nm,0.9s
PLCA  Paso Flores         88.45 134  P        P         02 16 00.7 +1.6
121A  Cookes Peak, D      88.47  54  IAmb     IAmb      02 16 02.4
      comp=Z,20nm,1.0s
BMO   Blue Mountains      88.72  39  IAmb     IAmb      02 16 01.9
      comp=Z,31nm,1.6s
MFID  Camas Ranch         88.77  41  IAmb     IAmb      02 16 02.6
      comp=Z,35nm,1.0s
SEY   Seymchan            88.90 348 eP        P         02 15 59.9 -0.4
SEY                                  pmax     pmax
      comp=Z,9.0nm,1.0s
EPH   Ephrata             88.91  36  IAmb     IAmb      02 16 02.3
      comp=Z,12nm,0.8s
D08A  Wollman Farm,       89.10  37  IAmb     IAmb      02 16 03.9
      comp=Z,23nm,1.0s
BGU   Big Grassy Mou      89.13  44  IAmb     IAmb      02 16 04.3
      comp=Z,22nm,1.4s
E09A  Wood Farm, Sta      89.21  37  IAmb     IAmb      02 16 04.0
      comp=Z,16nm,1.0s
Q16A  Castle Valley       89.29  47  IAmb     IAmb      02 16 06.6
      comp=Z,20nm,0.9s
F10A  Beach Ranch, E      89.41  38  IAmb     IAmb      02 16 04.7
      comp=Z,16nm,0.9s
CMAR  Chiang Mai Arr      89.51 290  P        P         02 16 05.8 +1.6
      comp=Z,4.9nm,0.9s,baz=134,slow=3.1,SNR=16
      comp=Z,4.9nm,0.9s
CMAR  Chiang Mai Arr      89.51 290           P         02 16 04.9 +0.7
CMAR  Chiang Mai Arr      89.51 290 iP        P         02 16 06.3 +2.1
CMAR                                 pmax     pmax
      comp=Z,5.0nm,0.9s
MPU   Maple Canyon        89.56  45  IAmb     IAmb      02 16 06.6
      comp=Z,18nm,0.9s
PLID  Pearl Lake          89.61  39  IAmb     IAmb      02 16 06.3
      comp=Z,37nm,1.6s
B08A  Colville Reser      89.66  35  IAmb     IAmb      02 16 05.7
      comp=Z,19nm,1.2s
CHTO  Chiang Mai          89.66 291  P        P         02 16 06.1 +1.2
CHTO  Chiang Mai          89.66 291  P        P         02 16 05.3 +0.4
CHTO  Chiang Mai          89.66 291  P        P         02 16 06.2 +1.3
HLID  Hailey              89.70  41  IAmb     IAmb      02 16 07.2
      comp=Z,18nm,1.1s
LLLB  Lillooet            89.73  33  IAmb     IAmb      02 16 06.4
      comp=Z,14nm,1.0s
VHRN  Van Horn            89.75  56  IAmb     IAmb      02 16 07.9
      comp=Z,18nm,1.0s
HVU   Hansel Valley       89.75  44  IAmb     IAmb      02 16 07.2
      comp=Z,25nm,0.9s
Y22A  Socorro             89.75  53  IAmb     IAmb      02 16 07.7
      comp=Z,22nm,1.0s
CTU   Camp Tracy          89.83  45  IAmb     IAmb      02 16 07.4
      comp=Z,22nm,0.9s
P17A  Butcher Ranch,      89.86  46  IAmb     IAmb      02 16 08.7
      comp=Z,30nm,1.1s
MNTX  Cornudas Mount      89.87  55  IAmb     IAmb      02 16 08.1
      comp=Z,15nm,0.9s
C09A  Chrisman Ranch      89.89  36  IAmb     IAmb      02 16 07.1
      comp=Z,32nm,1.6s
BI02  San Fabin de        89.98 130           P         02 16 06.9 +0.7
BI02                                 IAmb     IAmb      02 16 08.3
      comp=Z,16nm,0.8s
TX31  Lajitas Ar. Si      90.10  58  IAmb     IAmb      02 16 09.6
      comp=Z,17nm,0.9s
TXAR  Lajitas Array       90.10  58  P        P         02 16 08.5 +1.6
      comp=Z,11nm,0.8s,baz=213,slow=6.5,SNR=84
      comp=Z,11nm,0.8s
TXAR  Lajitas Array       90.10  58           P         02 16 08.2 +1.4
TXAR  Lajitas Array       90.10  58  P        P         02 16 08.2 +1.4
HHC   Hu-ho-hao-te        90.22 315 eP        P         02 16 09.4 +2.3
HHC                                  pmax     pmax
      comp=Z,8.0nm,0.8s
HHC                                  pmax     pmax
      comp=Z,100nm,4.7s
PV05  Paradox Valley      90.27  48  IAmb     IAmb      02 16 09.9
      comp=Z,11nm,0.9s
P18A  Preston Nutter      90.27  46  IAmb     IAmb      02 16 09.8
      comp=Z,16nm,0.9s
HWUT  Hardware Ranch      90.43  44  IAmb     IAmb      02 16 09.8
      comp=Z,13nm,0.7s
PV10  Paradox Valley      90.45  48  IAmb     IAmb      02 16 10.0
      comp=Z,18nm,0.9s
PV18  Skein Mesa, Pa      90.48  48  IAmb     IAmb      02 16 09.8
      comp=Z,32nm,1.3s
PV20  West Nyswonger      90.49  48  IAmb     IAmb      02 16 10.3
      comp=Z,16nm,0.9s
PV13  Radium Mtn., P      90.50  48  IAmb     IAmb      02 16 10.4
      comp=Z,15nm,1.4s
PV23  Carpenter Ridg      90.51  48  IAmb     IAmb      02 16 10.6
      comp=Z,22nm,0.9s
PV02  Paradox Valley      90.58  48  IAmb     IAmb      02 16 10.3
      comp=Z,15nm,1.0s
PV12  Saucer Basin,       90.59  48  IAmb     IAmb      02 16 11.0
      comp=Z,26nm,1.2s
PV21  Cone Mtn., Par      90.59  48  IAmb     IAmb      02 16 11.0
      comp=Z,10.0nm,0.9s
ALPN  Alpine              90.59  57  IAmb     IAmb      02 16 11.5
      comp=Z,20nm,1.0s
ABQ   Albuquerque         90.60  52  IAmb     IAmb      02 16 11.2
      comp=Z,15nm,1.0s
TASM  ASL Pad, Albuq      90.60  52  IAmb     IAmb      02 16 11.2
      comp=Z,15nm,1.0s
TASM  ASL Pad, Albuq      90.60  52  IAmb     IAmb      02 16 11.2
      comp=Z,16nm,1.1s
TASM  ASL Pad, Albuq      90.60  52  IAmb     IAmb      02 16 11.2
      comp=Z,15nm,1.0s
TASM  ASL Pad, Albuq      90.60  52  IAmb     IAmb      02 16 11.2
      comp=Z,15nm,1.1s
ANMO  Albuquerque         90.60  52           P         02 16 09.4 +0.3
ANMO                                 IAmb     IAmb      02 16 11.2
      comp=Z,15nm,1.1s
ANMO  Albuquerque         90.60  52⇓iP        P         02 16 08.1 -1.0
ANMO                                 pmax     pmax
      comp=Z,13nm,1.0s
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PZH   PanZhiHua           90.60 299  P        P         02 16 10.3 +1.1
PV01  Paradox Valley      90.66  48  IAmb     IAmb      02 16 11.0
      comp=Z,13nm,1.0s
S34M  Telegraph Cree      90.68  24  IAmb     IAmb      02 16 11.1
      comp=Z,17nm,0.9s
PV15  Paradox Valley      90.82  48  IAmb     IAmb      02 16 11.8
      comp=Z,9.3nm,0.9s
CD2   Chengdu             90.97 303  P        P         02 16 12.9 +2.2
CD2                                  pmax     pmax
      comp=Z,20nm,0.8s
DLBC  Dease Lake          91.47  24  P        P         02 16 13.3 +0.9
      comp=Z,3.5nm,0.8s,baz=201,slow=13,SNR=4.6
      comp=Z,3.5nm,0.8s
SAND  Sanderson           91.58  58  IAmb     IAmb      02 16 15.4
      comp=Z,15nm,1.0s
ILAR  Eielson Array       91.61  13  P        P         02 16 12.1 -0.7
      comp=Z,2.0nm,0.8s,baz=231,slow=5.6,SNR=13
      comp=Z,2.0nm,0.8s
S22A  4UR Ranch, Cre      91.67  49  IAmb     IAmb      02 16 16.4
      comp=Z,18nm,1.0s
BILL  Bilibino            91.83 355           P         02 16 13.6 -0.1
BILL                                 IAmb     IAmb      02 16 15.1
      comp=Z,9.9nm,0.9s
BILL  Bilibino            91.83 355⇓iP        P         02 16 14.3 +0.5
BILL                                 pmax     pmax
      comp=Z,10.0nm,0.9s
O20A  White River Ci      91.86  47  IAmb     IAmb      02 16 16.1
      comp=Z,9.3nm,0.9s
SNOW  Snow King Moun      91.90  43  IAmb     IAmb      02 16 17.3
      comp=Z,25nm,1.4s
C16K  Lisburne Hills      92.12   5  IAmb     IAmb      02 17 43.1
      comp=Z,18nm,0.8s
PDAR  Pinedale Array      92.31  44  P        P         02 16 17.4 +0.5
      comp=Z,5.4nm,0.7s,baz=213,slow=3.5,SNR=49
PDAR                                 PP       PP        02 20 04.0 -3.7
      comp=Z,2.0nm,1.0s,baz=239,slow=8.3,SNR=8.3
      comp=Z,5.4nm,0.7s
PDAR  Pinedale Array      92.31  44  P        P         02 16 16.7 -0.1
BOZ   Bozeman (W)         92.47  41  IAmb     IAmb      02 17 45.4
      comp=Z,10nm,0.8s
SDCO  Great Sand Dun      92.60  50  IAmb     IAmb      02 16 20.2
      comp=Z,7.8nm,0.8s
T25A  Trinidad            93.09  51  IAmb     IAmb      02 16 22.2
      comp=Z,6.2nm,0.8s
C19K  Lookout Ridge       93.50   7  IAmb     IAmb      02 17 50.5
      comp=Z,8.0nm,0.7s
HNDO  Hondo               93.63  59  IAmb     IAmb      02 16 25.1
      comp=Z,17nm,0.9s
RLMT  Red Lodge           93.66  42  IAmb     IAmb      02 18 27.9
      comp=Z,22nm,1.9s
YAK   Yakutsk             94.25 339 eP        P         02 16 27.7 +2.8
YAK                                 e*PP      pwP       02 18 28.3 -1.3
YAK                                 e                   02 20 22.1
YAK                                 eS        SKSac     02 26 09.4 +2.8
YAK                                 e                   02 26 51.3
YAK                                 eSS       SS        02 33 31.9 +4.6
YAK                                  pmax     pmax
      comp=Z,14nm,0.8s
YAK                                  pmax     pmax
      comp=N,2.0nm,1.0s
YAK                                  pmax     pmax
      comp=E,2.0nm,0.9s
YAK                                  pmax     pmax
      comp=Z,119nm,2.8s
YAK                                  pmax     pmax
      comp=N,115nm,3.0s
YAK                                  pmax     pmax
      comp=E,102nm,3.2s
YAK                                  smax     smax
      comp=N,84nm,3.2s
YAK                                  smax     smax
      comp=E,64nm,3.3s
APMT  Aspermont           94.57  56  IAmb     IAmb      02 18 25.2
      comp=Z,23nm,1.7s
RSSD  Black Hills         96.49  45           P         02 16 34.4 -1.4
RSSD                                 IAmb     IAmb      02 16 38.8
      comp=Z,4.8nm,0.9s
RSSD  Black Hills         96.49  45  P        P         02 16 34.4 -1.4
RSSD                                 pmax     pmax
      comp=Z,5.0nm,0.9s
SONM  Songino Array       96.88 319  PP       PP        02 20 39.2 -3.1
      comp=Z,1.5nm,1.0s,baz=106,slow=4.7,SNR=4.0
SONM                                 PKKPbc   PKKPbc    02 33 16.8 -0.7
      comp=Z,0.9nm,0.7s,baz=277,slow=4.1,SNR=4.7
INK   Inuvik              97.60  16  P        Pdif      02 16 38.7 -1.1
      comp=Z,2.9nm,0.8s,baz=279,slow=5.0,SNR=5.8
      comp=Z,2.9nm,0.8s
YKA   Yellowknife Ar      99.94  25  P        Pdif      02 16 50.2 -0.1
      comp=Z,0.6nm,0.9s,baz=244,slow=5.3,SNR=4.7
      comp=Z,0.6nm,0.9s
YKA   Yellowknife Ar      99.94  25           Pdif      02 16 51.0 +0.6
YKA   Yellowknife Ar      99.94  25  P        Pdif      02 16 51.0 +0.6
WMQ   Urumqi             107.57 311  Pdif     Pdif      02 17 25.5 +0.6
ZALV  Zalesovo Beam      111.72 321  SKP      SKPdf     02 24 20.0 -0.3
      comp=Z,0.4nm,0.3s,baz=127,slow=0.7,SNR=3.9
MKAR  Makanchi Array     111.97 313  PKiKP    PKiKP     02 21 36.1 -1.6
      comp=Z,1.2nm,0.6s,baz=147,slow=0.6,SNR=7.4
MKAR                                 SKP      SKPdf     02 24 21.2 +0.1
      comp=Z,0.8nm,0.7s,baz=59,slow=1.1,SNR=4.8
MKAR                                 PKKPbc   PKKPbc    02 32 31.6 -0.6
      comp=Z,0.8nm,0.9s,baz=304,slow=2.8,SNR=4.4
MKAR                                 PKKPab   PKKPab    02 32 41.2 +0.1
      comp=Z,0.9nm,0.7s,baz=283,slow=4.1,SNR=7.7
KURK  Kurchatov          115.00 317           PKPdf     02 21 42.1 -1.2
KURK  Kurchatov          115.00 317  PKIKP    PKPdf     02 21 42.1 -1.2
KURBB Kurchatov Arra     115.04 316  PKP      PKPdf     02 21 42.4 -1.0
      comp=Z,1.5nm,0.6s,baz=99,slow=2.1,SNR=11
KURBB                                PP       PP        02 22 49.0 -4.6
      comp=Z,0.8nm,0.7s,baz=98,slow=6.7,SNR=5.6
KURBB                                SKP      SKPdf     02 24 27.1 +0.3
      comp=Z,1.0nm,0.7s,baz=114,slow=2.8,SNR=6.1
BDFB  Brasilia           118.94 125  PKP      PKPdf     02 21 51.3 -0.8
      comp=Z,1.0nm,0.3s,baz=170,slow=4.0,SNR=4.9
KKAR  Karatay Array      119.72 307           PKPdf     02 21 51.9 -0.8
KKAR  Karatay Array      119.72 307  PKIKP    PKPdf     02 21 51.9 -0.8
BVAR  Borovoye Array     120.22 319  PKP      PKPdf     02 21 52.5 -0.8
      comp=Z,3.3nm,0.5s,baz=125,slow=1.3,SNR=15
BVAR                                 SKP      SKPdf     02 24 37.6 +0.9
      comp=Z,2.0nm,0.8s,baz=98,slow=2.1,SNR=5.1
BORK  Borovoye           120.26 319c iPKIKP   PKPdf     02 21 51.6 -1.8
NEEM  North Greenlan     120.84  11 i P       PKPdf     02 21 53.9 -0.4
NEEM  North Greenlan     120.84  11 i P       PKiKP     02 22 01.2 +6.8
NEEM                                 IAmb     IAmb      02 22 01.7
      comp=Z,14nm,0.6s
BOSA  Boshof             122.83 206  PKP      PKPdf     02 21 59.4  0.0
      comp=Z,2.5nm,0.7s,baz=297,slow=2.3,SNR=4.3
SPITS Spitsbergen Ar     124.72 356  PKP      PKPdf     02 22 00.8 -0.5
      comp=Z,5.1nm,0.6s,baz=327,slow=2.4,SNR=7.6
DAG   Danmarks Havn      125.86   5 i P       PKPdf     02 22 02.2 -1.3
SUMG  Summit             126.45  14 i P       PKPdf     02 22 05.3  0.0
ARTI  Arti               126.74 324           PKPdf     02 22 05.3 -0.4
ARTI  Arti               126.74 324 i PKIKP   PKPdf     02 22 05.6 -0.1
ARTI                                                    02 24 11.7
ARTI                                                    02 28 24.2
ARTI                                 SP       SP        02 33 23.8 +2.7
ARTI                                 SS       SS        02 40 30.7 -4.8
MATP  Matopo             128.33 215  SKP      SKPdf     02 24 55.1 +1.7
      comp=Z,6.9nm,0.7s,baz=154,slow=3.8,SNR=20
KIRV  Kirov              130.65 328  SKPbc    SKPbc     02 24 45.4 -0.4
      comp=Z,27nm,0.9s,baz=108,slow=3.1,SNR=12
KIRV  Kirov              130.65 328⇓iPKIKP    PKiKP     02 22 13.8 -0.2
ARCES ARCESS Array B     131.51 348  PKP      PKPdf     02 22 13.0 -1.4
      comp=Z,5.1nm,0.8s,baz=38,slow=1.6,SNR=14
ARCES                                SKPbc    SKPbc     02 24 48.6  0.0
      comp=Z,4.5nm,0.8s,baz=73,slow=4.0,SNR=4.7
ARCES ARCESS Array B     131.51 348           PKPdf     02 22 13.7 -0.7
ARCES ARCESS Array B     131.51 348  PKIKP    PKPdf     02 22 13.7 -0.7
LSZ   Lusaka             132.71 218  PKP      PKiKP     02 22 19.7  0.0
      comp=Z,1.9nm,0.4s,baz=4.9,slow=1.5,SNR=6.3
LSZ                                  SKPbc    SKPbc     02 24 55.4 +0.8
      comp=Z,4.7nm,0.7s,baz=120,slow=2.8,SNR=14
KLMR  Klimovskoe         133.87 334 ePKIKP    PKPdf     02 22 18.2 -0.8
KLMR                                e                   02 24 56.1
KLMR                                 pmax     pmax
      comp=Z,15nm,1.7s
BELG  Belogornoye        133.91 321  PKP      PKiKP     02 22 20.2 -0.6
      comp=Z,9.1nm,0.9s,baz=138,slow=2.0,SNR=2.8
BELG                                 SKPbc    SKPbc     02 24 58.0 +0.8
      comp=Z,19nm,0.6s,baz=340,slow=2.8,SNR=13
BELG  Belogornoye        133.91 321⇑iPKIKP    PKPdf     02 22 19.6 +0.3
TSUM  Tsumeb             134.28 203  SKPbc    SKPbc     02 25 00.2 +0.5
      comp=Z,1.9nm,0.5s,baz=113,slow=6.4,SNR=4.9
AKT   Akhty              136.62 306 ePKIKP    PKPdf     02 22 25.6 +0.7
FINES FINESS Array B     138.10 342  PKhKP    PKPpre    02 22 15.4
      comp=Z,2.2nm,0.7s,baz=46,slow=5.5,SNR=8.2
FINES                                PKP      PKPdf     02 22 26.9  0.0
      comp=Z,3.2nm,0.7s,baz=62,slow=3.3,SNR=6.5
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FINES FINESS Array B     138.10 342           PKPdf     02 22 26.4 -0.5
FINES FINESS Array B     138.10 342  PKIKP    PKPdf     02 22 26.4 -0.5
KBZ   Khabaz             139.62 311  PKhKP    PKPpre    02 22 24.1
      comp=Z,1.7nm,0.8s,baz=131,slow=6.0,SNR=4.2
KIV   Kislovodsk         139.70 311 ePKIKP    PKiKP     02 22 32.0 -1.0
KIV                                  pmax     pmax
      comp=Z,3.0nm,1.1s
NB2   NORSAR Subarra141.70 351       PKP      PKPpre    02 22 28.9
      comp=Z,2.0nm,0.6s,baz=16,slow=3.2
NB2                                  pPKP     SKPbc     02 25 19.4 +0.3
      comp=Z,1.2nm,0.6s,baz=12,slow=2.7
NOA   NORSAR Array B     141.70 351  PKhKP    PKPpre    02 22 28.8
      comp=Z,3.8nm,0.7s,baz=16,slow=4.7,SNR=19
NOA                                  SKPbc    SKPbc     02 25 19.6 +0.6
      comp=Z,2.4nm,0.8s,baz=13,slow=4.2,SNR=7.2
HFS   Hagfors            142.17 349  PKhKP    PKPpre    02 22 30.4
      comp=Z,9.7nm,0.3s,baz=56,slow=3.0,SNR=120
MNK   Minsk              142.74 333 i PKP     PKPdf     02 22 33.3 -2.1
      comp=E,16nm,0.9s
MNK                                 i PKP     PKPdf     02 22 33.3 -2.1
      comp=N,12nm,1.0s
MNK                                 i PKP     PKPdf     02 22 33.3 -2.1
      comp=Z,16nm,1.0s,baz=45
MNK                                 i PKiKP   PKiKP     02 22 37.3 -1.5
MNK                                 i pPKiKP  pPKiKP    02 24 45.4 -0.8
MNK                                 i PP      PP        02 25 50.1 -0.9
MNK                                 i SKS     SKSdf     02 28 50.7 -2.2
MNK                                 i PPP     PPP       02 29 05.5
MNK                                 i SS      SS        02 43 45.4 +1.1
MNK                                 i SSS     SSS       02 49 17.1
MNK                                 i LR      LR        03 24 50.9
MNK                                 i LRM     MLR       03 26 22.7
      comp=E,138nm,20.7s
MNK                                 i LRM     MLR       03 26 26.5
      comp=N,136nm,17.8s
MNK                                 i LRM     MLR       03 26 32.3
      comp=Z,84nm,15.9s
MNK   Minsk              142.74 333 i PKIKP   PKPdf     02 22 33.3 -2.1
MNK                                 i                   02 25 50.1
MNK                                 i                   02 28 50.7
MNK                                 i PPP     PPP       02 29 05.5
MNK                                 i SS      SS        02 43 45.4 +1.1
MNK                                 i SSS     SSS       02 49 17.0
MNK                                  pmax     pmax
      comp=Z,16nm,1.0s
MNK                                  pmax     pmax
      comp=N,12nm,1.0s
MNK                                  pmax     pmax
      comp=E,16nm,0.9s
MNK                                  MLR      MLR
      comp=E,138nm,21.0s
MNK                                  MLR      MLR
      comp=N,136nm,18.0s
MNK                                  MLR      MLR
      comp=Z,84nm,16.0s
NACGM Naroch             142.90 335 ePKP      PKPdf     02 22 32.9 -2.8
      comp=Z,12nm,1.0s,baz=43
ANN   Anapa              142.97 314 ePKIKP    PKPdf     02 22 34.9 -1.2
ANN                                  pmax     pmax
      comp=Z,75nm,1.1s
KONO  Kongsberg          143.26 352 ⇑PKIKP    PKPab     02 22 34.0 -0.2
LRW   Lerwick            143.37   1 eP        PKPab     02 22 34.4 -0.2
STRU  Stroemstad         143.63 350 i P       PKPab     02 22 35.3 -0.4
TJOU  Tjoern             144.52 349 i P       PKPdf     02 22 38.4 +0.1
BORU  Boraas             144.69 348 i P       PKPdf     02 22 38.8 +0.1
AKASG Malin Array Be     144.70 328  PKP      PKPdf     02 22 38.6 -0.3
      comp=Z,17nm,0.8s,baz=45,slow=3.8,SNR=41
AKASG                                SKPbc    SKiKP     02 25 27.2 +0.1
      comp=Z,5.1nm,0.7s,baz=46,slow=2.7,SNR=12
AKASG Malin Array Be     144.70 328           PKPdf     02 22 38.8 -0.2
AKASG Malin Array Be     144.70 328  PKIKP    PKPdf     02 22 38.8 -0.2
AK23  Malin Array Si     144.71 328  PKP      PKPdf     02 22 38.5 -0.4
AK01  Malin Array Si     144.71 328  PKP      PKPdf     02 22 38.6 -0.4
KIEV  Kiev               144.71 328           PKPdf     02 22 38.5 -0.4
KIEV  Kiev               144.71 328 ⇑P        PKPdf     02 22 38.8 -0.1
KIEV  Kiev               144.71 328 ⇑PKIKP    PKPdf     02 22 38.8 -0.1
AK19  Malin Array Si     144.79 328  PKP      PKPdf     02 22 38.8 -0.3
BIGH  Upper Bighouse     144.91   4 eP        PKPdf     02 22 38.9 -0.1
SUW   Suwalki            144.95 336 eP        PKPbc     02 22 39.9  0.0
SIM   Simferopol'        145.06 316 ePKIKP    PKPbc     02 22 40.4 -0.2
SIM                                  pmax     pmax
      comp=Z,23nm,1.2s
ONAU  Onsala             145.07 349 i P       PKPdf     02 22 38.1 -1.2
MI28  Mi28,Pidlybu       145.30 329  PKP      PKPdf     02 22 39.6 -0.4
DEL   Delary             145.56 347 i P       PKPbc     02 22 41.2 -0.5
RNPP9 Sopachiv           145.78 331  PKP      PKPdf     02 22 41.3 +0.5
MCD   Coleburn Disti     145.85   3 eP        PKPbc     02 22 41.8 -0.7
RNPP5 Staryi Chortor     145.91 331  PKP      PKPbc     02 22 42.3 -0.5
LUBAR Lubar, Ukraine     145.92 328  PKP      PKPdf     02 22 41.7 +0.6
KPL   Plockton           145.93   6 eP        PKPbc     02 22 42.1 -0.5
BNN   Bunyan             146.08 305           PKPbc     02 22 43.5 -0.4
BJUU  Bjuv               146.10 347 i P       PKPbc     02 22 42.7 -0.5
LUNU  Lund               146.42 346 i P       PKPbc     02 22 43.7 -0.4
DRUM  Mains of Drumt     146.56   3 eP        PKPbc     02 22 43.7 -0.7
BSD   Bornholm Skovb     146.56 345 i P       PKPdf     02 22 43.0 +1.1
SORM  Soroca             146.75 325 ⇓P        PKPbc     02 22 44.6 -0.6
SORM  Soroca             146.75 325 ⇓PKIKP    PKPbc     02 22 44.6 -0.6
PURM  Purcari            146.84 321 ⇑P        PKPbc     02 22 45.6 +0.1
ILGA  Ilgaz              146.91 310           PKPbc     02 22 46.6 +0.3
INVG  Invergeldie, C     146.96   4 eP        PKPbc     02 22 44.3 -1.2
LAWE  Loch Awe, Argy     147.02   6 eP        PKPbc     02 22 45.5 -0.1
MILM  Milestii Mici      147.22 323 ⇑P        PKPdf     02 22 44.7 +1.4
MILM  Milestii Mici      147.22 323 ⇑PKIKP    PKPdf     02 22 44.7 +1.4
KIRS  Kirsehir-Merke     147.43 307 ⇓P        PKPbc     02 22 47.7 +0.3
BRTR  Keskin Array B     147.44 308  PKPbc    PKPbc     02 22 47.1 -0.4
      comp=Z,1.5nm,0.5s,baz=146,slow=5.3,SNR=16
EDI   Edinburgh          147.51   3 eP        PKPbc     02 22 46.5 -0.5
PGBU  Glenifferbraes     147.54   5 eP        PKPbc     02 22 46.4 -0.7
BEL   Belsk              147.56 336 eP        PKiKP     02 22 48.1 -0.7
GKP   Gorka Klasztor     147.56 341 eP        PKPbc     02 22 47.8 +0.6
MMAI  Mount Meron Ar     147.65 295  PKPbc    PKiKP     02 22 49.1 -0.6
      comp=Z,6.4nm,0.4s,baz=79,slow=6.3,SNR=52
IDGL  Inch Island, C     147.95   8  PKPdf    PKPbc     02 22 47.9 -0.2
VASR  Vaslui             147.95 323 ⇓P        PKPbc     02 22 49.1 +0.6
ANTO  Ankara             148.00 308 ⇓P        PKPbc     02 22 49.1 +0.2
ANTO  Ankara             148.00 308 ⇓PKP2     PKPbc     02 22 49.1 +0.2
EKA   Eskdalemuir Ar     148.10   4  PKPbc    PKPbc     02 22 48.1 -0.4
      comp=Z,8.1nm,0.7s,baz=338,slow=2.6,SNR=23
ESK   Eskdalemuir        148.12   4 eP        PKPbc     02 22 47.5 -1.0
TLCR                     148.20 320 ⇓P        PKPbc     02 22 49.4 +0.3
TLCR                     148.20 320 ⇓PKP2     PKPbc     02 22 49.4 +0.3
VLDR  Vladesti           148.26 322 ⇑P        PKiKP     02 22 49.8 -0.6
JURR  Jurilovca          148.39 319 ⇓P        PKPbc     02 22 49.8 +0.3
TATR  Tatarca            148.42 321 ⇓P        PKPab     02 22 55.2 +0.2
GAL1  Galloway           148.46   5 eP        PKPbc     02 22 48.8 -0.6
KWP   Kalwaria Pacla     148.47 332 eP        PKPbc     02 22 49.8 +0.1
GHRR                     148.51 322 ⇑P        PKiKP     02 22 50.8 -0.1
NEGRR Negrea             148.55 321 ⇑P        PKiKP     02 22 50.5 -0.5
CFR   Carcaliu           148.60 320 ⇑P        PKPbc     02 22 50.1  0.0
CFR   Carcaliu           148.60 320 ⇑PKHKP    PKPbc     02 22 50.1  0.0
TPGR  Topolog            148.62 320 ⇓P        PKiKP     02 22 50.8 -0.4
BSEG  Bad Segeberg       148.65 348 ePKPbc    PKPbc     02 22 50.3 +0.4
      baz=20,slow=2.3
TESR  Tescani            148.66 324 ⇑P        PKPbc     02 22 50.2  0.0
EDMD  Edmundbyers        148.66   2 eP        PKPbc     02 22 49.7 -0.2
BURAR Bucovina Array     148.71 326           PKiKP     02 22 51.2 -0.2
BURAR Bucovina Array     148.71 326 ⇓P        PKiKP     02 22 51.5 +0.1
BURAR Bucovina Array     148.71 326 ⇓PKP2     PKiKP     02 22 51.5 +0.1
TIRR  Tirgusor           148.84 319 ⇑P        PKPbc     02 22 50.8 +0.1
TIRR  Tirgusor           148.84 319 ⇑PKHKP    PKPbc     02 22 50.8 +0.1
KESW  Keswick, Cumbr     148.85   4 eP        PKPbc     02 22 49.7 -0.7
ONER  Baraj Valea Uz     148.91 324 ⇓P        PKiKP     02 22 51.9 +0.1
MFTR  Murfatlar          148.98 319 ⇓P        PKiKP     02 22 51.8 -0.2
VRI   Vrincioaia         149.01 323 ⇓P        PKPbc     02 22 51.4 +0.3
VRI   Vrincioaia         149.01 323 ⇓PKHKP    PKPbc     02 22 51.4 +0.3
TLBR  Topalu             149.01 319 ⇑P        PKPbc     02 22 51.5 +0.4
PLOR  Plostina           149.06 323 ⇓P        PKPbc     02 22 51.3  0.0
PLOR  Plostina           149.06 323 ⇓PKHKP    PKPbc     02 22 51.3  0.0
MANR  Mangalia           149.07 318 ⇓P        PKiKP     02 22 51.8 -0.3
ILTH  Belurgan, Co L     149.12   7  PKPdf    PKPbc     02 22 49.8 -1.2
BISRR Bisoca             149.21 322 ⇓P        PKiKP     02 22 52.4 -0.1
OJC   Ojcow              149.22 335 eP        PKPbc     02 22 51.7 +0.2
IGLA  Glengowla, Co      149.26  11  PKPdf    PKPbc     02 22 51.0 -0.4
STHS  Stebnicka Huta     149.27 333 ePKHKP    PKPbc     02 22 51.6  0.0
STHS  Stebnicka Huta     149.27 333 ePKP      PKPbc     02 22 51.6  0.0
TURR  Turia              149.29 323 ⇓P        PKiKP     02 22 52.4 -0.2
COVR  Voineasa-Covas     149.31 323 ⇑P        PKPbc     02 22 51.9 +0.1
ICOR  Ion Corvin         149.39 319 ⇑P        PKPbc     02 22 52.1 +0.1
BOSR  Bodos              149.47 324 ⇓P        PKiKP     02 22 53.0 +0.1
ARCR  ARCALIA            149.50 326 ⇓P        PKPbc     02 22 52.5 +0.3
BMR   Baia Mare          149.52 328 ⇓P        PKiKP     02 22 52.7 -0.3
BMR   Baia Mare          149.52 328 ⇓PKHKP    PKiKP     02 22 52.7 -0.3
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HPK	Haverah Park	149.55	2	*e*P	PKPbc	02 22 51.5	-0.5
ISR	Istrita	149.56	322	⇑P	PKPbc	02 22 52.5	0.0
ISR	Istrita	149.56	322	⇑PKHKP	PKPbc	02 22 52.5	0.0
NIE	Niedzica	149.66	334	*e*P	PKiKP	02 22 53.8	+0.6
MLR	Muntele Rosu	149.67	323	⇑P	PKPbc	02 22 52.5	-0.3
MLR	Muntele Rosu	149.67	323	⇑PKHKP	PKPbc	02 22 52.5	-0.3
DOPR	Dopca	149.68	324	⇑P	PKiKP	02 22 53.5	0.0
DSB	Dublin	149.88	8	PKPdf	PKPbc	02 22 52.6	-0.3
WME	Myndd Eilian	149.95	5	*e*P	PKPbc	02 22 52.5	-0.5
KSP	Ksiaz	149.95	339	*e*P	PKiKP	02 22 53.9	+0.1
RETH	Rethem/Aller,	149.96	349	*e*PKPbc	PKPbc	02 22 53.4	+0.3
	baz=20,slow=2.3						
CJR	Cluj-Napoca	150.13	327	⇓P	PKPbc	02 22 53.9	+0.1
CJR	Cluj-Napoca	150.13	327	⇓PKIKP	PKPbc	02 22 53.9	+0.1
MESR	Meseseni	150.15	328	⇓P	PKiKP	02 22 54.6	+0.3
STEB	Steborice	150.22	337	⇑*e*PKP	PKPbc	02 22 54.1	+0.3
OSTC	Ostas	150.23	339	*e*PKIKP	PKiKP	02 22 54.5	+0.1
OSTC	Ostas	150.23	339	⇑*e*PKP	PKiKP	02 22 54.5	+0.1
CHVC	Chvalec	150.25	339	*e*PKIKP	PKiKP	02 22 54.4	0.0
CHVC	Chvalec	150.25	339	⇑*e*PKP	PKiKP	02 22 54.4	0.0
ASSE	Asse, Remlinge	150.29	347	*e*PKPbc	PKiKP	02 22 54.1	-0.2
	baz=20,slow=2.3						
UPC	Upice	150.33	339	*e*PKIKP	PKiKP	02 22 54.6	0.0
UPC	Upice	150.33	339	⇑*e*PKP	PKiKP	02 22 54.6	0.0
DPC	Dobruska-Polom	150.37	339	⇑*e*PKP	PKiKP	02 22 54.8	+0.1
MARR	Marisel-Cluj	150.40	327	⇑P	PKPbc	02 22 54.3	-0.1
SGRR	Singureni	150.41	321	⇓P	PKPdf	02 22 46.2	-2.3
MORC	Moravsky Berou	150.43	337	⇓P	PKiKP	02 22 55.2	+0.3
MORC	Moravsky Berou	150.43	337	*e*PKP	PKPbc	02 22 54.6	+0.2
MORC				*e*		02 23 04.1	
MORC	Moravsky Berou	150.43	337	⇓PKIKP	PKiKP	02 22 55.2	+0.3
KRLC	Kraliky	150.45	338	*e*PKIKP	PKiKP	02 22 54.9	0.0
KRLC	Kraliky	150.45	338	⇑*e*PKP	PKiKP	02 22 54.9	0.0
ARR	Arges	150.47	324	⇓P	PKiKP	02 22 55.2	+0.1
TNR	Turnu Rosu	150.48	324	⇑P	PKiKP	02 22 55.4	+0.3
TNR	Turnu Rosu	150.48	324	⇑PKIKP	PKiKP	02 22 55.4	+0.3
CLL	Collm	150.50	344	⇑*e*PKIKP	PKPdf	02 22 49.0	+0.6
CLL				*i*		02 23 03.4	
CLL				pmax	pmax		
	comp=Z,36nm,0.9s						
CLL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CLL	Collm	150.50	344	*e*PKPdf	PKPdf	02 22 49.0	+0.6
CLL				⇑*i*PKPbc	PKPbc	02 22 54.6	+0.2
	comp=Z,36nm,0.9s						
CLL				⇓*i*PKPab	PKPab	02 23 03.4	-0.1
	comp=Z,9.0nm,1.0s						
CLL				*i* x	x	02 23 15.1	
CLL				*e*pPKPab	pPKPab	02 25 04.0	-1.2
DRGR		150.52	328	⇓P	PKPbc	02 22 54.6	-0.1
DRGR		150.52	328	⇓PKIKP	PKPbc	02 22 54.6	-0.1
LOZB	Loznitsa	150.53	319	⇓P	PKPbc	02 22 55.0	+0.2
FOEL	Foel Wylfa	150.54	4	*e*P	PKPbc	02 22 54.1	-0.4
CLZ	Clausthal	150.62	347	*e*PKPbc	PKiKP	02 22 55.2	0.0
	baz=20,slow=2.3						
BRG	Berggiesshubel	150.64	342	*e*PKPbc	PKiKP	02 22 55.2	0.0
	baz=20,slow=2.3						
MAUC	Maruska	150.67	336	⇑*e*PKP	PKiKP	02 22 55.6	+0.3
IWEX	Carrickbyrne,	150.68	9	PKPdf	PKPbc	02 22 53.4	-1.4
PVCC	Panska Ves	150.76	341	*e*PKIKP	PKiKP	02 22 55.6	+0.1
PVCC	Panska Ves	150.76	341	⇑*e*PKP	PKiKP	02 22 55.6	+0.1
CWF	Charnwood Fore	150.78	2	*e*P	PKPbc	02 22 54.5	-0.5
HUMR	Humele	150.80	322	⇓P	PKPbc	02 22 55.0	-0.3
LOT	Lotru	150.88	325	⇓P	PKPbc	02 22 55.2	-0.5
HLM1	Long Mynd	150.93	4	*e*P	PKPbc	02 22 54.9	-0.4
PSZ	Piszkesteto	150.99	332	⇑P	PKPbc	02 22 55.7	0.0
PSZ	Piszkesteto	150.99	332	⇑PKIKP	PKPbc	02 22 55.7	0.0
HSKC	Hora Svate Kat	151.02	342	⇑*e*PKP	PKiKP	02 22 56.0	0.0
DEV	Deva	151.05	326	⇑P	PKiKP	02 22 56.6	+0.4
DEV	Deva	151.05	326	⇑PKIKP	PKiKP	02 22 56.6	+0.4
JAVC	Velka Javorina	151.14	336	*e*PKP	PKiKP	02 22 57.2	+0.8
VRAC	Vranov	151.16	337	⇑P	PKiKP	02 22 56.3	-0.1
VRAC	Vranov	151.16	337	*e*PKP	PKPbc	02 22 56.1	+0.1
VRAC				*e*		02 23 06.4	
VRAC	Vranov	151.16	337	⇑PKIKP	PKiKP	02 22 56.3	-0.1
ELND	Elena	151.22	319	⇑P	PKiKP	02 22 56.7	+0.1
PRU	Pruhonice	151.25	341	*e*PKIKP	PKiKP	02 22 56.4	-0.1
PRU	Pruhonice	151.25	341	⇑*e*PKP	PKiKP	02 22 56.4	-0.1
SIRR	Siria	151.40	328	⇓P	PKPbc	02 22 56.3	-0.3
MCH1	Michaelchurch	151.44	4	*e*P	PKPbc	02 22 55.7	-0.8
KRUC	Moravsky	151.44	337	*e*PKP	PKPbc	02 22 56.7	+0.1
KRUC				*e*		02 23 08.2	
GZR	Gura Zlata	151.44	325	⇓P	PKPbc	02 22 56.5	-0.4
GZR	Gura Zlata	151.44	325	⇓PKIKP	PKPbc	02 22 56.5	-0.4
TANN	Tannenbergstha	151.46	343	*e*PKPbc	PKiKP	02 22 56.9	-0.1
	baz=20,slow=2.3						
MOX	Moxa	151.46	345	*e*PKPbc	PKPbc	02 22 56.7	0.0
	baz=20,slow=2.3						
SMOL	Smolenice	151.52	336	*e*PKIKP	PKiKP	02 22 57.1	0.0
SMOL				*e*		02 23 07.9	
KASTN	Kahler Asten	151.60	349	*e*PKPbc	PKPbc	02 22 57.1	+0.1
	baz=20,slow=2.3						
MONM	Monmouth	151.61	4	*e*P	PKPbc	02 22 56.4	-0.4
MODS	Modra-Piesok	151.69	336	*e*PKIKP	PKiKP	02 22 57.8	+0.3
MODS				*e*		02 23 09.1	
MODS	Modra-Piesok	151.69	336	*e*PKP	PKiKP	02 22 57.8	+0.3
MODS				*e*		02 23 09.1	
PLVB	Pleven	151.70	320	⇑P	PKiKP	02 22 57.6	0.0
SRO	Srobarova	151.73	334	*e*PKIKP	PKiKP	02 22 57.8	+0.3
SRO	Srobarova	151.73	334	*e*PKP	PKiKP	02 22 57.8	+0.3
BZS	Buzias	151.88	327	⇑P	PKPbc	02 22 57.3	-0.4
BZS	Buzias	151.88	327	⇑PKIKP	PKPbc	02 22 57.3	-0.4
MANZ	Manzenberg	151.94	343	*e*PKPbc	PKiKP	02 22 57.9	-0.1
	baz=20,slow=2.3						
HERR	Herculane	151.98	325	⇓P	PKPbc	02 22 57.7	-0.3
KHC	Kasperske Hory	152.30	341	*e*PKIKP	PKiKP	02 22 58.8	+0.1
KHC				*e*		02 23 12.0	
KHC	Kasperske Hory	152.30	341	⇑*e*PKP	PKiKP	02 22 58.8	+0.1
KHC				*e*PKPAB	PKPab	02 23 12.0	+0.8
CKRC	Cesky Krumlov	152.35	340	*e*PKIKP	PKiKP	02 22 59.1	+0.3
CKRC	Cesky Krumlov	152.35	340	⇑*e*PKP	PKiKP	02 22 59.1	+0.3
MDVR	Moldovita	152.41	326	⇓P	PKiKP	02 22 59.1	0.0
GERES	GERESS Array B	152.52	340	PKPbc	PKPbc	02 22 58.8	-0.4
	comp=Z,2.5nm,0.8s,baz=33,slow=3.2,SNR=13						
UCC	Uccle	152.54	354	*d*PKP	PKPbc	02 22 59.0	+0.1
BTNL	Ternell	152.55	352	*d*PKP	PKPbc	02 22 58.9	-0.2
CONA	Conrad Observa	152.59	337	*i* PKP	PKiKP	02 22 59.6	+0.1
	comp=Z,8.2nm,1.0s						
RONA	Rosalia, Austr	152.62	336	*i* PKP	PKiKP	02 22 59.4	0.0
	comp=Z,5.0nm,0.6s						
BHOU	Houvegnez	152.80	352	*d*P	PKPab	02 23 13.7	+0.5
MORH	Mrgy, Hungar	152.85	331	⇓P	PKiKP	02 22 60.0	+0.1
BGES	Gesves	152.88	353	*d*PKP	PKPab	02 23 13.2	-0.4
BMRD	Maredsous	153.00	353	*d*PKP	PKPab	02 23 13.8	-0.2
BOVS	Bovan	153.19	324	⇑P	PKPbc	02 23 00.2	-0.4
MOA	Molln	153.21	339	*e*PKiKP	PKiKP	02 23 02.7	+2.0
	comp=Z,4.7nm,1.1s						
ARSA	Arzberg	153.28	336	*e*PKP	PKPdf	02 22 53.9	+1.2
	comp=Z,1.2nm,0.6s						
WLF	Walferdange	153.45	351	*d*PKP	PKPbc	02 22 59.5	-1.5
BIOA	Bad Ischl, Aus	153.56	339	*e*PKP	PKPdf	02 22 52.5	-0.6
	comp=Z,4.9nm,1.3s						
SOKA	Soboth	153.94	336	*e*PKP	PKPbc	02 23 00.6	-1.6
	comp=Z,6.1nm,1.2s						
LESA	Schwarzleotal	154.10	340	*e*PKP	PKPdf	02 22 53.2	-0.7
	comp=Z,5.0nm,1.1s						
KBA	Koelnbreinsper	154.19	339	*e*PKiKP	PKiKP	02 23 03.7	+0.8
	comp=Z,6.6nm,1.5s						
APE	Apeiranthos	154.33	308	⇑P	PKPdf	02 22 52.0	-2.5
APE	Apeiranthos	154.33	308	⇑PKIKP	PKPdf	02 22 52.0	-2.5
RETA	Reutte	154.59	343	*e*PKP	PKPab	02 23 21.7	+0.6
	comp=Z,4.5nm,0.8s						
ABTA	Abfaltersbach	154.75	340	*i* PKP	PKPdf	02 22 54.0	-0.9
	comp=Z,7.5nm,1.1s						
DAVA	Damuels	155.01	344	*i* PKP	PKPdf	02 22 54.2	-1.0
	comp=Z,10nm,1.1s						
FETA	Feichten	155.03	343	*i* PKP	PKPdf	02 22 54.7	-0.6
	comp=Z,3.3nm,0.8s						
DBIC	Dimbokro	162.60	163	PKP	PKPdf	02 23 04.3	-0.5
	comp=Z,6.1nm,0.9s,baz=345,slow=3.5,SNR=5.3						
DBIC				PKPab	PKPab	02 23 57.8	+1.2
	comp=Z,8.5nm,1.1s,baz=195,slow=3.3,SNR=4.0						
ESDC	Sonseca Array	163.50	11	PKPab	PKPab	02 23 59.9	-0.2
	comp=Z,4.1nm,0.9s,baz=354,slow=4.8,SNR=13						
ESDC	Sonseca Array	163.50	11		PKPab	02 24 00.2	+0.1
TORD	Torodi Ar. Bea	169.61	188	PKP	PKPdf	02 23 09.2	-1.0
	comp=Z,1.3nm,0.3s,baz=18,slow=2.5,SNR=6.6						
TORD				PKPab	PKPab	02 24 27.5	0.0
	comp=Z,1.2nm,0.3s,baz=157,slow=2.2,SNR=4.4						

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*NEIC **17** 02:09:22.5±1.5, 56°.50N±0°.08×148°.3W±0°.1, h10^{km}±2^{km}, ML3.7/62, ML3.3(AEIC), Error ellipse: s-maj=14.7km s-min=8.8km az=160.0*

*IDC **17** 02:09:24.0±3.2, 56°.45N×148°.59W, h0^{km}, mb3.6/1, mbtmp3.4/3, ML2.9/1, Error ellipse: s-maj=51.2km s-min=36.6km az=134.0*

*AEIC **17** 02:09:28.0±1.5, 56°.53N±0°.10×148°.4W±0°.1, h12^{km}±7^{km}, Error ellipse: s-maj=14.8km s-min=8.6km az=157.0*

ISC 17 02:09:23.5±1.4**, 56°.57N**±0°.08×**148°.38W**±0°.05**, h10**^{km}**, n107,** σ1^{s}**14**/93**, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	Kodiak Island	2.59	300		Sn	02 10 34.5	-2.4
KDAK	Kodiak Island	2.59	300		Pn	02 10 05.5	+0.1
KDAK	Kodiak Island	2.59	300	IAML		02 10 28.7	
	127nm,4.7s						
OHAK	Old Harbor	2.77	286		Pn	02 10 06.9	-1.0
OHAK					Sn	02 10 39.4	-1.9
SYI	Shuyak Island	2.98	315		Pn	02 10 09.8	-0.9
SYI	Shuyak Island	2.98	315		Sn	02 10 43.7	-2.7
MID	Middleton Isla	3.07	20		Sn	02 10 46.2	-2.4
MID	Middleton Isla	3.07	20		Pn	02 10 11.1	-0.9
MID	Middleton Isla	3.07	20	IAML		02 10 39.3	
	comp=E,429nm,4.0s						
SII	Sitkinak Islan	3.21	272		Pn	02 10 13.2	-0.8
SII					Sn	02 10 49.0	-3.4
SII	Sitkinak Islan	3.21	272	IAML		02 11 06.4	
	comp=N,178nm,2.6s						
CNPM	China Poot	3.33	334		Pn	02 10 15.7	0.0
CNPM					Sn	02 10 54.1	-1.1
CNPM	China Poot	3.33	334	IAML		02 11 58.0	
	comp=E,110nm,2.9s						
BRSE	Bradley Lake S	3.42	340		Pn	02 10 17.1	+0.3
BRSE					Sn	02 10 54.7	-2.7
BRLK	Bradley Lake	3.47	339		Pn	02 10 17.7	+0.2
BRLK					Sn	02 10 57.1	-1.6
P23K	Montague Islan	3.48	8		Pn	02 10 17.4	-0.2
P23K	Montague Islan	3.48	8	IAML		02 11 11.3	
	comp=N,177nm,2.4s						
P23K				IAML		02 12 13.5	
	comp=E,162nm,3.4s						
SEW	Seward	3.59	351		Pn	02 10 18.9	-0.2
SEW					Sn	02 10 59.4	-2.2
KAHG	Katmai Hook Gl	3.84	303		Pn	02 10 23.4	+0.7
KAHG					Sn	02 11 06.5	-1.4
KAWH	Katmai	3.92	300		Pn	02 10 24.4	+0.8
KAWH					Sn	02 11 07.4	-2.3
KARR	Katmai Rainbow	3.92	302		Pn	02 10 24.4	+0.6
KARR					Sn	02 11 08.7	-1.0
HIN	Hinchinbrook I	3.96	14		Pn	02 10 24.4	+0.1
KAKN	Katmai Knife C	4.01	298		Pn	02 10 25.6	+0.6
KAKN					Sn	02 11 09.3	-2.7
P19K	Oil Pt	4.02	322		Pn	02 10 25.7	+0.6
P19K					Sn	02 11 10.2	-2.1
P19K	Oil Pt	4.02	322	IAML		02 11 57.9	
	comp=E,103nm,2.2s						
SLKM	Skilak Lake	4.07	347		Pn	02 10 25.8	0.0
SLKM	Skilak Lake	4.07	347	IAML		02 11 15.3	
	comp=N,65nm,0.6s						
SLKM				IAML		02 11 25.1	
	comp=E,67nm,1.3s						
ACHA	Angle Creek He	4.10	297		Pn	02 10 27.3	+1.0
KABU	Katmai Buttres	4.10	297		Pn	02 10 26.9	+0.6
CHIR	Chirikof Islan	4.12	263		Pn	02 10 25.1	-1.3
KAHC	Katmai Hardscr	4.13	303		Pn	02 10 27.5	+0.8
O20K	Slope Mountain	4.17	329		Pn	02 10 27.9	+0.6
ANCK	Angle Creek	4.18	296		Pn	02 10 27.6	+0.3
EYAK	Cordova Ski Ar	4.22	18		Pn	02 10 27.8	0.0
EYAK	Cordova Ski Ar	4.22	18	IAML		02 11 18.0	
	comp=N,105nm,0.9s						
EYAK				IAML		02 11 23.8	
	comp=E,96nm,0.7s						
IVE	Iliamna Volcan	4.24	327		Pn	02 10 28.2	+0.1
ILSW	Iliamna Southw	4.25	326		Pn	02 10 28.6	+0.2
ILSW	Iliamna Southw	4.25	326	IAML		02 11 30.5	
	comp=E,76nm,2.2s						
PWL	Port Wells	4.30	0		Pn	02 10 28.9	-0.1
PWL	Port Wells	4.30	0	IAML		02 11 23.6	
	comp=E,60nm,0.7s						
PWL				IAML		02 11 35.6	
	comp=N,58nm,3.1s						
GLI	Glacier Island	4.38	8		Pn	02 10 30.1	+0.1
GLI	Glacier Island	4.38	8	IAML		02 11 26.0	
	comp=E,76nm,0.9s						
GLI				IAML		02 11 27.5	
	comp=N,73nm,2.8s						
GOAT	Goat Mountain	4.46	24		Pn	02 10 30.9	-0.2
PLK4	Peulik 4	4.48	287		Pn	02 10 31.1	-0.4
RED	Redoubt Volcan	4.50	331		Pn	02 10 31.8	+0.1
RED	Redoubt Volcan	4.50	331	IAML		02 11 12.3	
	comp=N,54nm,3.7s						
RED				IAML		02 11 33.3	
	comp=E,56nm,0.7s						
RDSO	Redoubt South	4.52	331		Pn	02 10 32.1	0.0
RDT	Redoubt	4.54	334		Pn	02 10 32.1	-0.1
BERG	Berg Lake	4.55	31		Pn	02 10 31.6	-0.8
RDWB	Redoubt West	4.57	331		Pn	02 10 32.6	-0.2
RC01	Rabbit Creek A	4.59	352		Pn	02 10 32.8	0.0
RC01	Rabbit Creek A	4.59	352	IAML		02 11 17.0	
	comp=N,51nm,4.8s						
RC01				IAML		02 11 33.3	
	comp=E,61nm,0.7s						
BMRM	Bremner River	4.83	22		Pn	02 10 36.0	-0.3
BMRM	Bremner River	4.83	22	IAML		02 11 48.9	
	comp=E,43nm,3.5s						
BMRM				IAML		02 13 54.7	
	comp=N,54nm,4.9s						
KNK	Knik Glacier	4.86	360		Pn	02 10 37.2	+0.6
KNK	Knik Glacier	4.86	360	IAML		02 11 35.4	
	comp=E,43nm,4.5s						
KNK				IAML		02 11 51.0	
	comp=N,52nm,4.7s						
CRQM	Cirque	5.01	31		Pn	02 10 38.2	-0.6
CRQM	Cirque	5.01	31	IAML		02 12 00.5	
	comp=E,55nm,2.5s						
CRQM				IAML		02 12 27.6	
	comp=N,56nm,4.6s						
P17K	Kvichak River	5.04	305		Pn	02 10 39.9	+0.8
TGL	Tana Glacier	5.10	32		Pn	02 10 39.0	-1.1
TGL				IAML		02 11 33.9	
	comp=N,51nm,4.6s						
TGL				IAML		02 12 03.0	
	comp=E,57nm,3.8s						
YAH	Yahtse	5.16	40		Pn	02 10 40.1	-0.8
YAH	Yahtse	5.16	40	IAML		02 13 04.8	
	comp=E,61nm,4.4s						
GHO	Glory Hole Cre	5.23	357		Pn	02 10 42.6	+0.9
GHO	Glory Hole Cre	5.23	357	IAML		02 11 44.6	
	comp=N,53nm,1.8s						
GHO				IAML		02 11 53.8	
	comp=E,47nm,0.6s						
STLK	Strandline Lak	5.26	342		Pn	02 10 43.0	+0.9
STLK	Strandline Lak	5.26	342	IAML		02 11 53.5	
	comp=N,28nm,0.7s						
SPNN	North Nagishla	5.31	337		Pn	02 10 43.5	+0.6
VRDI	Verde Repeater	5.33	27		Pn	02 10 42.7	-0.5
VRDI	Verde Repeater	5.33	27	IAML		02 11 51.6	
	comp=N,34nm,4.5s						
VRDI				IAML		02 12 47.2	
	comp=E,28nm,4.6s						
KIAG	Kiagna River	5.38	33		Pn	02 10 43.2	-0.6
N25K	Chitina, Valde	5.42	20		Pn	02 10 44.3	0.0
GRNC	Granite Creek	5.42	37		Pn	02 10 43.8	-0.7
GLB	Gilahina Butte	5.43	24		Pn	02 10 44.0	-0.4
BALM	Baldy	5.47	32		Pn	02 10 44.5	-0.5
PCA	Pinnacle	5.55	47		Pn	02 10 45.3	-0.9
PTPK	Patty Peak	5.55	31		Pn	02 10 45.9	-0.5
MCARA	McCarthy VSAT	5.57	28		Pn	02 10 46.1	-0.2
BARN	Barnard Glacie	5.70	35		Pn	02 10 47.6	-0.6
BCPM	Bancas Point	5.73	50		Pn	02 10 47.6	-0.9
LOGN	Logan Glacier	5.74	39		Pn	02 10 47.8	-1.1
O28M	Mount Upton	6.00	42		Pn	02 10 51.9	-0.6
WAT6	Susitna Watana	6.04	3		Pn	02 10 53.0	+0.1
M18K	Stony River	6.25	325		Pn	02 10 55.7	0.0
WAT7	Susitna Watana	6.29	358		Pn	02 10 57.1	+0.8
O29M	Mount Kennedy	6.36	50		Pn	02 10 56.6	-0.8
P29M	Windy Craggy	6.42	57		Pn	02 10 56.5	-1.6
YUK8	Steele Glacier	6.50	40		Pn	02 10 59.7	+0.4
L19K	White Mountain	6.53	332		Pn	02 10 59.0	-0.5
DHY	Denali Highway	6.55	4		Pn	02 11 00.7	+0.8
O15K	Ungalikthiuk R	6.64	298		Pn	02 11 02.2	+1.1
M17K	Holitna River	6.73	320		Pn	02 11 02.9	+0.6
YUK6	Outpost Mounta	6.81	46		Pn	02 11 03.7	+0.1
YUK5	Granite Creek	7.12	46		Pn	02 11 07.9	+0.2
N30M	Aishikik Lake	7.61	45		Pn	02 11 13.7	-0.7
M29M	Somme Creek	7.75	36		Pn	02 11 16.5	+0.2
WHY	Whitehorse	8.15	54		Pn	02 11 21.4	-0.4
N31M	Braeburn, Yuko	8.15	48		Pn	02 11 20.8	-1.0
ILAR	Eielson Array	8.26	4	Pn	Pn	02 11 24.5	+1.2
	comp=E,0.2nm,0.3s,baz=189,slow=13,SNR=5.5						
ILAR				Sn	Sn	02 12 54.1	-2.5
	comp=E,0.2nm,0.3s,baz=192,slow=22,SNR=8.8						
	comp=E,0.5nm,0.6s						
B20K	Meade River	14.03	347	Pn	Pn	02 12 41.8	-0.2
YKA	Yellowknife Ar	17.96	57	P	Pn	02 13 35.5	+2.5
	comp=E,1.5nm,0.9s,baz=268,slow=12,SNR=9.1						
H11N2	WAKE ISLAND Hy	49.46	241	T	T	03 11 33.0	
	baz=31,slow=76,SNR=9.2						
H11N3	WAKE ISLAND Hy	49.47	241	T	T	03 11 31.4	
	baz=31,slow=76,SNR=7.3						
H11N1	WAKE ISLAND Hy	49.48	241	T	T	03 11 36.2	
	baz=31,slow=76,SNR=7.8						
H11S1	WAKE ISLAND Hy	50.60	240	T	T	03 13 01.0	
	baz=30,slow=76,SNR=6.8						
H11S2	WAKE ISLAND Hy	50.62	240	T	T	03 12 56.8	
	baz=30,slow=76,SNR=5.9						
H11S3	WAKE ISLAND Hy	50.62	240	T	T	03 12 58.8	
	baz=30,slow=76,SNR=6.2						
SONM	Songino Array	58.84	311	P	P	02 19 24.0	+2.0
	comp=E,0.7nm,0.9s,baz=46,slow=8.3,SNR=3.9						
	comp=E,0.7nm,0.9s						

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*DJA **17** 02:11:29.5±0.2, 2°N±2°×9°9E±°, h136^{km}±3^{km}, M4.5/18, mb4.4/12, mB5.5/3, MLv4.4/18, Mw(mB)4.9/3*

*NEIC **17** 02:11:30.6±1.0, 2°.01N±0°.08×98°.99E±0°.07, h127^{km}±9^{km}, mb4.3/23, Error ellipse: s-maj=11.5km s-min=10.2km az=172.0*

*IDC **17** 02:11:31.5±12.0, 1°.93N×99°.10E, h150^{km}±112^{km}, mb4.0/11, mbtmp4.4/12, ML5.0/1, Error ellipse: s-maj=83.0km s-min=11.2km az=59.0*

ISC 17 02:11:30.1±0.7**, 1°.95N**±0°.05×**98°.98E**±0°.05**, h133**^{km}±7^{km}**, n75,** σ1^{s}**08**/78**, mb4.3**/28**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	0.84	356	LR	LR	02 12 21.8	
	comp=Z,198nm,18.4s,baz=156,slow=65						
MNSI	Mandailing Nat	1.30	152	P	Pn	02 11 56.7	+0.5
MNSI				S	Sn	02 12 16.8	+0.7
GSI	Gunungsitoli	1.54	245		Pn	02 11 59.4	+0.5
GSI				Sn	Sn	02 12 20.6	-0.2
GSI	Gunungsitoli	1.54	245	P	Pn	02 11 59.7	+0.8
GSI				S	Sn	02 12 20.7	-0.2
TSI	Tuntungan	1.59	345	P	Pn	02 11 58.3	-1.1
TSI				S	Sn	02 12 22.8	+0.9
KCSI	Kotacane, Aceh	1.97	322	P	Pn	02 12 03.5	-0.4
KCSI				S	Sn	02 12 27.9	-1.9
PBSI	Pulau Batu	2.11	199	P	Pn	02 12 06.1	+0.5
TPTI		2.22	306	P	Pn	02 12 06.9	0.0
SNSI	Sinabang, Aceh	2.69	280	P	Pn	02 12 13.7	+0.9
PPI	Padang Panjang	2.78	149	P	Pn	02 12 14.8	+0.8
PDSI	Padang	3.21	152	P	Pn	02 12 19.9	+0.3
IPM	Ipoh	3.24	39		Pn	02 12 20.4	+0.5
IPM	Ipoh	3.24	39	P	Pn	02 12 20.4	+0.5
SISI	Saibi	3.26	178	P	Pn	02 12 18.7	-1.5
MLSI	Meulaboh, Aceh	3.45	312	P	Pn	02 12 22.5	-0.1
KULM	Kulim	3.71	27		Pn	02 12 25.3	-0.8
KULM	Kulim	3.71	27	P	Pn	02 12 25.7	-0.4
PPSI	Pulau Pagai	4.80	168	P	Pn	02 12 39.0	-1.5
MYKOM	Kota Tinggi	4.87	92		Pn	02 12 41.4	-0.1
MYKOM	Kota Tinggi	4.87	92	P	Pn	02 12 40.6	-0.9
MASI	Maura Aman, Be	6.02	147	P	Pn	02 12 56.5	-0.5
	0.4nm66nm,0.8s						
MNAI	Manna	7.42	148	P	Pn	02 13 14.6	-1.2
EGSI	Enggano, Bengk	7.97	156	P	Pn	02 13 19.9	-3.3
	33nm,0.4s						
MDSI	Maura Dua	8.24	141	P	Pn	02 13 25.6	-1.2
KASI	Kota Agung	9.25	143	P	Pn	02 13 39.2	-1.1
BBJI	Bungbulang	12.74	137	P	Pn	02 14 27.0	+0.3
BBJI	Bungbulang	12.74	137	P	Pn	02 14 26.0	-0.7
	25nm,0.8s						
BBJI	Bungbulang	12.74	137	P	Pn	02 14 26.8	+0.1
	25nm,0.8s						
CMAR	Chiang Mai Arr	16.40	360	P	P	02 15 13.7	+0.6
	1.8nm,0.3s,baz=191,slow=10,SNR=28						
	3.9nm,0.4s						
KMMI	Kalianget	17.43	121	P	P	02 15 23.3	-1.1
	33nm,0.8s						
TWSI	Taliwang, Sumb	20.77	121	P	P	02 15 59.4	-1.3
	17nm,1.0s						
MPSI	Mapaga	20.98	94	P	P	02 16 03.3	+0.4
	443nm9.3nm,0.8s						
PLAI	Plampang	21.58	120	P	P	02 16 08.9	-0.5
	16nm,0.9s						
TOLI2	Tolitoli	21.81	92	P	P	02 16 12.0	+0.2
TOLI2				IAmb	IAmb	02 16 13.2	
	comp=Z,11nm,0.6s						
SHL	Shillong	24.45	344		P	02 16 36.3	-0.6
PZH	PanZhiHua	24.55	6	P	P	02 16 41.0	+3.3
FITZ	Fitzroy Crossi	32.96	128	P	P	02 17 51.7	-0.6
	comp=Z,6.1nm,0.6s,baz=318,slow=7.0,SNR=7.2						
	comp=Z,6.1nm,0.6s						
FITZ	Fitzroy Crossi	32.96	128	P	P	02 17 52.9	+0.6
LZDM	Lanzhou Array	34.12	7	P	P	02 18 00.8	-1.7
	comp=Z,1.8nm,0.4s,baz=211,slow=11,SNR=4.4						
	comp=Z,1.8nm,0.4s						
KNRA	Kununurra	34.26	122	P	P	02 18 03.4	-0.3
KNRA				IAmb	IAmb	02 18 28.9	
	comp=Z,9.6nm,0.8s						
HHC	Hu-ho-hao-te	40.36	15	*e*P	P	02 18 57.6	+2.7
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,74nm,4.5s						
WB0	Warramunga Arr	40.91	124	P	P	02 19 00.6	+1.0
WRA	Warramunga Arr	40.95	124	P	P	02 18 59.0	-1.0
	comp=Z,8.8nm,0.4s,baz=303,slow=8.9,SNR=45						
	comp=Z,8.8nm,0.4s						
WRA	Warramunga Arr	40.95	124		P	02 19 00.4	+0.5
WR8	Warramunga Arr	41.09	124		P	02 18 60.0	-1.1
AS31	Alice Springs	42.45	129	P	P	02 19 12.7	+0.5
ASAR	Alice Springs	42.45	129	P	P	02 19 10.6	-1.6
	comp=Z,3.4nm,0.6s,baz=300,slow=7.6,SNR=24						
	comp=Z,3.4nm,0.6s						
ASAR	Alice Springs	42.45	129	P	P	02 19 13.5	+1.3
FORT	Forrest	42.74	142	P	P	02 19 16.5	+2.3
FORT				IAmb	IAmb	02 19 35.2	
	comp=Z,4.8nm,1.1s						
KSH	Kashi	42.86	334	P	P	02 19 14.8	-0.5
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WMQ	Urumqi	42.88	348	*e*P	P	02 19 17.6	+2.3
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,170nm,4.7s						
TARG	Taragay, Kyrgy	43.94	337	IAmb	IAmb	02 19 27.1	
	comp=Z,5.0nm,0.6s						
GAR	Garm	45.21	328	P	P	02 19 34.3	+0.3
GAR				IAmb	IAmb	02 20 09.3	
	comp=Z,3.8nm,1.0s						
SHAA	Shahritus	45.38	325	P	P	02 19 35.4	0.0
SHAA				IAmb	IAmb	02 19 36.8	
	comp=Z,5.6nm,0.7s						
AAK	Ala-Archa	46.05	335	P	P	02 19 42.2	+1.6
SONM	Songino Array	46.15	7	P	P	02 19 41.6	+0.3
	comp=Z,1.3nm,0.5s,baz=188,slow=11,SNR=7.6						
	comp=Z,1.3nm,0.5s						
SONM	Songino Array	46.15	7	P	P	02 19 41.7	+0.4
COEN	Coen	46.56	111	P	P	02 19 45.2	+0.3
COEN				IAmb	IAmb	02 20 18.0	
	comp=Z,4.2nm,1.1s						
MKAR	Makanchi Array	46.97	344	P	P	02 19 48.0	+0.4
	comp=Z,2.3nm,0.4s,baz=155,slow=8.7,SNR=65						
	comp=Z,2.3nm,0.4s						
MKAR	Makanchi Array	46.97	344		P	02 19 47.8	+0.2
MAKZ	Makanchi	47.07	344		P	02 19 48.3	0.0
MAKZ				IAmb	IAmb	02 19 50.3	
	comp=Z,2.9nm,0.6s						
BBOO	Buckleboo	49.22	138	P	P	02 20 03.6	-1.5
BBOO				IAmb	IAmb	02 20 28.5	
	comp=Z,10.0nm,1.4s						
INKA	Innaminka	49.83	129	P	P	02 20 11.5	+1.7
INKA				IAmb	IAmb	02 20 12.5	
	comp=Z,3.0nm,0.6s						
KURBB	Kurchatov Arra	51.49	343	P	P	02 20 22.3	+0.5

	comp=Z,2.0nm,0.4s,baz=157,slow=7.2,SNR=20						
	comp=Z,2.0nm,0.4s						
KURK	Kurchatov	51.55	344		P	02 20 22.5	+0.2
KURK				IAmb	IAmb	02 20 23.4	
	comp=Z,4.5nm,1.1s						
STKA	Stephens Creek	52.56	133	P	P	02 20 29.0	-1.1
	comp=Z,1.2nm,0.6s,baz=315,slow=7.0,SNR=4.3						
	comp=Z,1.2nm,0.6s						
ZAA0	Zalesovo Array	53.12	350		P	02 20 33.8	0.0
ZALV	Zalesovo Beam	53.12	350	P	P	02 20 34.0	+0.2
	comp=Z,6.2nm,0.4s,baz=169,slow=7.3,SNR=24						
	comp=Z,6.2nm,0.4s						
ZALV	Zalesovo Beam	53.12	350		P	02 20 33.7	-0.1
BVAR	Borovoye Array	56.15	340	P	P	02 20 55.5	-0.2
	comp=Z,2.4nm,0.5s,baz=136,slow=9.4,SNR=20						
	comp=Z,2.4nm,0.5s						
BORK	Borovoye	56.19	340		P	02 20 56.0	+0.1
BORK				IAmb	IAmb	02 20 58.2	
	comp=Z,3.0nm,0.5s						
EIDS	Eidsvold	57.25	122	P	P	02 21 03.7	-0.3
AB31	Akbulak array	57.71	331		P	02 21 06.5	-0.3
AB31				IAmb	IAmb	02 21 37.5	
	comp=Z,4.5nm,0.7s						
ABKAR	Akbulak array	57.71	331	P	P	02 21 06.7	-0.1
FINES	FINESS Array B	80.16	332	P	P	02 23 24.6	-0.7
	comp=Z,4.0nm,1.0s,baz=117,slow=5.5,SNR=3.4						
	comp=Z,4.0nm,1.0s						

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*VIE **17** 02:12:31.2±0.4, 50°.28N×18°.74E, h0^{km}, mb2.7/12, ml2.8/11, ms3.7/2, Error ellipse: s-maj=3.2km s-min=2.2km az=4.0 18 km W of Katowice Suspected Mining induced.*

*IDC **17** 02:12:31.4±2.3, 49°.93N×19°.00E, h0^{km}, mbtmp3.5/6, ML2.7/5, Error ellipse: s-maj=37.3km s-min=9.0km az=132.0*

*IPEC **17** 02:12:32.2±0.1, 50°.21N×18°.78E, h1^{km}, ML3.0/6, Error ellipse: s-maj=1.5km s-min=0.5km az=173.0*

*PRU **17** 02:12:32.6, 50°.23N×18°.70E, h0^{km}*

*BGR **17** 02:12:32.6±0.3, 50°.25N×18°.76E, h1^{km}, ML3.2/10, Error ellipse: s-maj=5.6km s-min=3.3km az=6.0*

*DNK **17** 02:12:37.7±1.4, 50°.36N×17°.51E, h0^{km}, ML3.1, Suspected explosion*

ISC 17 02:12:30.0±0.6**, 50°.33N**±0°.02×**18°.79E**±0°.02**, h0**^{km}**, n83, σ2^{s}07**/139**, 6C-8D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	Raciborz	0.46	237	*e*PG	Pb	02 12 41.0	+0.1
RAC				*e*SG	Sb	02 12 47.4	-0.8
OKC	Ostrava-Krasne	0.65	220	*e*PG	Pg	02 12 43.2	+0.9
OKC				*e*SG	Sg	02 12 50.6	-0.1
OKC	Ostrava-Krasne	0.65	220	*e*Pg	Pg	02 12 43.4	+1.0
OKC				*e*Sg	Sg	02 12 51.5	+0.8
OJC	Ojcow	0.66	99	*e*Pg	Pb	02 12 44.9	+0.5
OJC				*e*Sg	Sb	02 12 53.8	-0.2
OJC	Ojcow	0.66	99	*e*Pg	Pb	02 12 45.0	+0.7
OJC				*e*Sg	Sb	02 12 54.0	0.0
STEB	Steborice	0.77	239	*e*PG	Pg	02 12 45.8	+1.1
STEB				*e*SG	Sg	02 12 54.8	+0.2
	comp=Z,315nm,0.4s						
ANAC	Anensky vrch	0.94	255	*e*Pg	Pb	02 12 49.7	+0.4
	baz=81						
ANAC				*e*Sg	Sg	02 13 00.5	+0.2
	579nm,0.3s,baz=81						
MORC	Moravsky Berou	0.98	236	⇓P	Pg	02 12 49.4	+0.7
MORC				⇓S	Sg	02 13 02.1	+0.8
MORC	Moravsky Berou	0.98	236	*e*Pg	Pg	02 12 49.3	+0.6
	baz=61						
MORC				*e*Sg	Sg	02 13 00.7	-0.7
	211nm,0.4s,baz=61						
MORC	Moravsky Berou	0.98	236	*e*Pg	Pg	02 12 49.4	+0.7
MORC				*e*Sg	Sg	02 13 01.6	+0.3
MAUC	Maruska	1.15	213	*e*PG	Pg	02 12 52.5	+0.5
LOSC	Losov	1.16	233	*e*Pg	Pg	02 12 52.7	+0.5
	baz=57						
LOSC				*e*Sg	Sg	02 13 05.9	-1.3
	171nm,0.3s,baz=57						
KRLC	Kraliky	1.32	260	*e*PG	Pg	02 12 55.5	+0.3
KRLC				*e*SG	Sg	02 13 12.5	+0.3
	comp=Z,228nm,0.3s						
NIE	Niedzica	1.34	133	*e*Pg	Pb	02 12 56.2	+0.3
NIE				*e*Sg	Sn	02 13 14.3	-0.2
DPC	Dobruska-Polom	1.58	272	*e*PG	Pg	02 13 00.8	+0.5
DPC				*e*SG	Sg	02 13 22.2	+1.4
	comp=Z,175nm,0.3s						
DPC	Dobruska-Polom	1.58	272	*e*Pg	Pg	02 13 01.0	+0.7
DPC				*e*Sg	Sg	02 13 22.8	+2.1
JAVC	Velka Javorina	1.65	207	*e*PN	Pn	02 13 00.6	+0.3
JAVC	Velka Javorina	1.65	207	*e*Pn	Pn	02 13 00.5	+0.3
	baz=28						
OSTC	Ostas	1.66	279	*e*PG	Pb	02 13 02.0	+0.5
OSTC				*e*SG	Sg	02 13 25.0	+1.7
	comp=Z,118nm,0.7s						
KSP	Ksiaz	1.67	289	*e*Pn	Pb	02 13 02.1	+0.5
KSP				*e*Pg	Pg	02 13 04.7	+2.7
KSP				*e*Sg	Sg	02 13 25.7	+2.0
KSP	Ksiaz	1.67	289	*e*Pn	Pg	02 13 02.8	+0.8
KSP				*e*Pg	Pg	02 13 04.7	+2.7
KSP				*e*Sg	Sg	02 13 25.7	+2.0
VRAC	Vranov	1.75	235	Pn	Pn	02 13 01.8	+0.2
	7.1nm,0.3s,baz=66,slow=14,SNR=62						
VRAC				Lg	Lg	02 13 24.2	
	22nm,0.3s,baz=158,slow=18,SNR=18						
VRAC	Vranov	1.75	235	⇓P	Pn	02 13 02.0	+0.3
VRAC				⇑S	Sn	02 13 25.1	+0.4
VRAC	Vranov	1.75	235	*e*Pn	Pn	02 13 02.7	+1.0
	baz=57						
VRAC				*e*Sg	Sn	02 13 25.0	+0.3
	113nm,0.5s,baz=57						
CHVC	Chvalec	1.77	279	*e*PG	Pb	02 13 03.3	0.0
STHS	Stebnicka Huta	1.83	119	*e*PN	Pg	02 13 05.8	+0.7
STHS				*e*PG	Pb	02 13 11.0	+6.6
STHS				*e*SN	Sn	02 13 14.7	-12
STHS				*e*SG	Sg	02 13 32.3	+3.5
KRUC	Moravsky	2.01	232	*e*Pn	Pn	02 13 06.0	+0.9
	baz=53						
KRUC				*e*Sg	Sb	02 13 32.4	-0.5
	65nm,0.4s,baz=53						
MODS	Modra-Piesok	2.20	207	*e*PN	Pn	02 13 07.9	+0.2
MODS				*e*PG	Pg	02 13 15.2	+3.1
MODS				*e*SN	Sn	02 13 20.1	-16
TREC	Trest	2.38	245	*e*SG	Sb	02 13 44.0	+0.4
	comp=Z,47nm,0.2s						
PSZ	Piszkesteto	2.52	163	⇑P	Pn	02 13 12.4	+0.1
PSZ				⇓S	Sn	02 13 43.6	-0.1
PRU	Pruhonice	2.75	264	*e*PN	Pn	02 13 15.9	+0.5
PRU				*e*PG	Pb	02 13 20.6	+0.5
PRU				*e*SG	Sb	02 13 56.5	+2.1
	comp=Z,36nm,0.5s						
PRA	Prague	2.81	266	*e*SG	Sg	02 13 58.8	-1.5
	comp=Z,59nm,0.6s						
CONA	Conrad Observa	3.08	220	*i* Pn	Pn	02 13 19.7	-0.3
	0.9nm,0.3s						
CONA				*i* Sn	Sn	02 13 51.3	-6.2
	25nm,0.6s						
GKP	Gorka Klasztor	3.10	342	*e*P	Pb	02 13 25.3	-0.6
RONA	Rosalia, Austr	3.10	213	*i* Pn	Pn	02 13 20.3	+0.1
	3.4nm,0.4s						
RONA				*i* Sn	Sn	02 13 55.5	-2.6
	3.7nm,0.3s						
ZVC	Zvikov	3.10	255	*e*SG	Sb	02 14 07.3	+2.8
	comp=Z,39nm,0.7s						
BRG	Berggiesshubel	3.14	282	*e*Pg	Pg	02 13 31.7	+1.6
BRG				*e*Sg	Sg	02 14 12.4	+1.8
HSKC	Hora Svate Kat	3.44	277	*e*PN	Pn	02 13 26.7	+1.9
HSKC				*e*PG	Pb	02 13 34.1	+2.4
FBE	Freiberg	3.51	282	*e*Sg	Sg	02 14 23.9	+1.2
KHC	Kasperske Hory	3.59	252	*e*PN	Pn	02 13 27.5	+0.6
KHC				*e*PG	Pb	02 13 34.5	+0.2
KHC				*e*SG	Sg	02 14 23.0	-2.2
	comp=Z,50nm,0.6s						
GERES	GERESS Array B	3.63	248	Pn	Pn	02 13 28.1	+0.6
	0.1nm,0.3s,baz=68,slow=14,SNR=12						
GERES				Pg	Pg	02 13 37.8	-1.7
	0.3nm,0.3s,baz=66,slow=17,SNR=20						
GERES				Lg	Lg	02 14 21.9	
	0.8nm,0.3s,baz=67,slow=31,SNR=8.6						
	1.1nm,0.4s						
ARSA	Arzberg	3.77	216	*i* Pn	Pn	02 13 29.4	+0.1
	0.7nm,0.3s						
ARSA				*i* Sn	Sn	02 14 13.9	-0.4
	11nm,0.5s						
CLL	Collm	3.80	287	*e*Sg	Sg	02 14 34.0	+2.1
CLL	Collm	3.80	287	*e*Pn	Pn	02 13 31.0	+1.3
CLL				*e*Pg	Pg	02 13 45.0	+2.3
CLL				*e*Sg	Sg	02 14 32.0	+0.1
	comp=Z,32nm,0.8s						
MOA	Molln	3.87	232	*i* Pn	Pn	02 13 30.8	-0.1
	comp=Z,0.6nm,0.3s						
MOA				*e*Sn	Sn	02 14 17.4	+0.3
	comp=Z,17nm,0.6s						
TANN	Tannenbergstha	4.05	274	*e*Pn	Pn	02 13 34.4	+1.1
TANN				*e*Pg	Pg	02 13 48.0	+0.4
BMR	Baia Mare	4.08	129	⇑P	Pn	02 13 34.2	+0.5
BMR				⇓S	Sn	02 14 21.2	-0.9
MORH	Mrgy, Hungar	4.12	181	⇑P	Pn	02 13 33.7	-0.5
WERD	Werda	4.15	274	*e*Sg	Sg	02 14 42.2	-1.1
BIOA	Bad Ischl, Aus	4.30	234	*i* Pn	Pn	02 13 37.8	+1.1
	comp=Z,0.8nm,0.2s						
BIOA				*e*Sg	Sg	02 14 48.1	0.0
	comp=Z,40nm,0.7s						
SOKA	Soboth	4.43	216	*e*Pn	Pn	02 13 39.0	+0.6
	comp=Z,0.7nm,0.4s						
SOKA				*e*Sg	Sg	02 14 57.2	+5.1
	comp=Z,1.7nm,0.5s						
SUW	Suwalki	4.57	35	*e*P	Pn	02 13 45.4	+5.1
MARR	Marisel-Cluj	4.65	140	⇓P	Pn	02 13 42.2	+0.6
MARR				⇑S	Sn	02 14 34.8	-1.6
OBKA	Obir	4.75	218	*e*Pn	Pn	02 13 43.5	+0.5
	comp=Z,1.1nm,0.3s						
OBKA				*e*Sg	Sg	02 15 06.4	+3.8
	comp=Z,5.5nm,0.5s						
KBA	Koelnbreinsper	4.86	230	*i* Pn	Pn	02 13 45.7	+1.2
	comp=Z,0.4nm,0.2s						
KBA				*i* Sn	Sn	02 14 42.2	+0.8
	comp=Z,4.0nm,0.5s						
LESA	Schwarzleotal	4.97	237	*e*Pn	Pn	02 13 46.9	+0.9
	comp=Z,0.8nm,0.2s						
LESA				*e*Sg	Sg	02 15 10.5	+0.8
	comp=Z,25nm,0.8s						
BURAR	Bucovina Array	5.03	120	⇑P	Pn	02 13 47.5	+0.8
MYKA	Terra Mystica	5.04	225	*e*Pn	Pn	02 13 46.6	-0.3
	comp=Z,0.6nm,0.2s						
MYKA				*e*Sg	Sg	02 15 11.0	-0.9
	comp=Z,5.6nm,0.6s						
BZS	Buzias	5.08	157	⇓P	Pn	02 13 47.9	+0.5
BSD	Bornholm Skovb	5.34	335	*e*P	Pn	02 13 54.2	+3.4
BSD	Bornholm Skovb	5.34	335	*i* P	Pn	02 13 53.8	+3.0
BSD				*i* S	Sn	02 14 50.1	-2.9
BSD				IAML		02 15 34.5	
	comp=Z,13nm,0.8s						
ABTA	Abfaltersbach	5.50	232	*i* Pn	Pn	02 13 54.1	+0.9
	comp=Z,1.7nm,0.4s						
ABTA				*i* Sg	Sg	02 15 25.8	-0.7
	comp=Z,14nm,0.6s						
WTTA	Wattenberg	5.64	240	*e*Pn	Pn	02 13 56.1	+0.9
	comp=Z,1.0nm,0.3s						
WTTA				*e*Sg	Sg	02 15 28.0	-2.9
	comp=Z,28nm,1.0s						
MDVR	Moldovita	5.89	159	⇓P	Pn	02 13 58.3	-0.3
SQTA	Sankt Quirin	5.90	241	*e*Pn	Pn	02 13 59.0	+0.3
	comp=Z,0.4nm,0.2s						
SQTA				*e*Sg	Sg	02 15 38.4	-1.0
	comp=Z,4.9nm,0.3s						
PABE	Paberze	6.05	29	*e*P	Pn	02 14 05.3	+4.7
LUNU	Lund	6.21	331	*i* P	Pn	02 14 04.8	+1.9
LUNU				*i* S	Sn	02 15 09.1	-5.4
FETA	Feichten	6.28	241	*e*Pn	Pg	02 14 26.1	-4.2
	comp=Z,0.8nm,0.4s						
FETA				*e*Sg	Sg	02 15 53.8	+2.1
	comp=Z,5.0nm,0.5s						
AKASG	Malin Array Be	6.67	83	Sn	Sn	02 15 23.2	-2.5
	comp=Z,1.6nm,0.3s,baz=265,slow=23,SNR=4.7						
AKASG				Lg	Lg	02 15 54.6	
	comp=Z,1.6nm,0.3s,baz=269,slow=24,SNR=4.2						
NACGM	Naroch	6.68	44	*e*P	Pn	02 14 14.6	+5.3
	comp=Z,7.0nm,0.7s,baz=230						
BJUU	Bjuv	6.71	331	*i* P	Pn	02 14 12.1	+2.4
BJUU				*i* S	Sn	02 15 20.2	-6.6
DEL	Delary	6.81	336	*i* P	Pn	02 14 14.2	+3.0
DEL				*e*S	Sn	02 15 24.4	-4.9
DAVOX	Davos/Dischmat	6.90	242	Pn	Pn	02 14 12.6	+0.1
	comp=Z,0.7nm,0.3s,baz=54,slow=8.7,SNR=7.7						
	comp=Z,2.3nm,0.4s						
BORU	Boraas	8.13	336	*i* P	Pn	02 14 32.7	+3.5
BORU				*i* S	Sn	02 15 55.0	-6.6
VSU	Vasula	9.36	27	*e*P	Pn	02 14 50.2	+4.2
HFS	Hagfors	10.24	346	Pn	Pn	02 15 00.1	+2.1
	comp=Z,0.2nm,0.3s,baz=178,slow=19,SNR=5.4						
	comp=Z,1.4nm,0.5s						
MEF	Metsahovi	10.40	16	*e*P	Pn	02 15 04.3	+4.1
RAF	Rauma	10.85	8	*e*P	Pn	02 15 08.5	+2.2
NOA	NORSAR Array B	11.54	341	Pn	Pn	02 15 16.6	+0.7
	baz=155,slow=12,SNR=6.4						
	comp=Z,0.2nm,0.4s						
FINES	FINESS Array B	11.85	17	Pn	Pn	02 15 20.8	+0.7
	comp=Z,0.5nm,0.3s,baz=198,slow=11,SNR=25						
FINES				Sn	Sn	02 17 25.7	-7.2
	comp=Z,0.5nm,0.3s,baz=202,slow=21,SNR=7.2						
	comp=Z,2.4nm,0.6s						
KEF	Keuruu	12.33	13	*e*P	Pn	02 15 28.6	+2.1
JOF	Joensuu	14.33	24	*e*P	Pn	02 15 54.1	+0.1
ARCES	ARCESS Array B	19.53	7	Pn	P	02 16 59.5	+0.8
	comp=Z,2.9nm,0.9s,baz=191,slow=14,SNR=1.6						

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*IDC **17** 02:15:25.5±1.1, 60°.64N×152°.36W, h96^{km}±11^{km}, mb3.9/17, mbtmp4.3/21, Error ellipse: s-maj=14.7km s-min=8.8km az=109.0*

*NEIC **17** 02:15:27.2±1.3, 60°.61N±0°.03×152°.34W±0°.08, h109^{km}±2^{km}, Error ellipse: s-maj=5.6km s-min=4.3km az=116.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.16; $M_{\theta\theta}$-2.26; $M_{\phi\phi}$1.10; $M_{r\theta}$-0.27; $M_{\theta\phi}$0.99; $M_{\phi r}$1.55; Fault plane solution: $M_0$2.70000×10^{15} NP1:ϕ_s69.14000°,δ51.10000°,λ26.51000°. NP2: ϕ_s321.75000°,δ69.67000°,λ137.96000°. Principal axes: T 2.7337, Plg44.0000°, Azm278.0000°; N -0.0727, Plg44.0000°, Azm121.0000°; P -2.6610, Plg11.0000°, Azm19.0000°;*

*ANF **17** 02:15:27.1±0.1, 60°.60N×152°.31W, h106^{km}±1^{km}, ML4.4/90 Error ellipse: s-maj=1.2km s-min=0.9km az=174.0*

*AEIC **17** 02:15:28.4±1.4, 60°.60N±0°.03×152°.29W±0°.06, h104^{km}±3^{km}, ML4.1, mb4.4/17(NEIC), ML4.3/225(NEIC), Mwr4.2/42(NEIC), Error ellipse: s-maj=4.8km s-min=3.0km az=50.0*

*NEIC **17** 02:15:28.2, 60°.60N×152°.30W, h105^{km}*

ISC 17 02:15:27.5±0.5**, 60°.61N**±0°.02×**152°.31W**±0°.02**, h114**^{km}±3^{km}**, n561, σ1^{s}14**/635**, mb4.4**/32**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDT	Redoubt	0.06	232		Pn	02 15 42.1	-1.1
RDT					Sn	02 15 53.6	-1.4
DFR	Drift River	0.18	265		Pn	02 15 42.3	-1.1
DFR					Sn	02 15 53.9	-1.5
RDJH	Redoubt Jeurge	0.24	266		Pn	02 15 42.7	-0.9
RDJH					Sn	02 15 54.3	-1.5
RED	Redoubt Volcan	0.30	230		Pn	02 15 42.6	-1.2
RED				Sn	Sn	02 15 54.0	-2.0
RED				IAML		02 15 54.6	
	comp=N,9µm,0.9s						
RED				IAML		02 15 55.2	
	comp=E,12µm,0.9s						
O20K	Slope Mountain	0.55	196		Pn	02 15 44.6	-0.5
O20K					Sn	02 15 57.3	-1.1
O20K	Slope Mountain	0.55	196	P	Pn	02 15 44.8	-0.5
	baz=19,SNR=142						
O20K				S	Sn	02 15 57.2	-1.3
	baz=19						
O20K				S	Sn	02 15 57.2	-1.3
	baz=19						
SPU	Mount Spurr	0.59	12		Pn	02 15 44.5	-0.9
CAPN	Captain Cook N	0.59	74		Pn	02 15 46.6	+1.2
CAPN	Captain Cook N	0.59	74	P	Pn	02 15 46.5	+1.2
	baz=253,SNR=24						
N20K	Mount Spurr	0.59	5	P	Pn	02 15 44.8	-0.7
	baz=183						
N20K				S	Sn	02 15 57.4	-1.7
	baz=183						
N20K				S	Sn	02 15 57.4	-1.7
	baz=183						
SPCR	Spurr Chakacha	0.60	5		Pn	02 15 44.7	-0.8
SPCR					Sn	02 15 57.8	-1.3
SPCR	Spurr Chakacha	0.60	5		Pn	02 15 44.8	-0.8
SPCR	Spurr Chakacha	0.60	5	P	Pn	02 15 44.7	-0.8
	baz=183,SNR=261						
SPCR				S	Sn	02 15 57.5	-1.6
	baz=183						
SPCN	Chakachatna No	0.62	6		Pn	02 15 45.0	-0.7
SPBG	Spurr Blockage	0.65	358		Pn	02 15 45.4	-0.6
SPBG					Sn	02 15 58.9	-1.0
SPCP	Crater Peak Br	0.66	7		Pn	02 15 45.6	-0.6
ILW	Iliamna West	0.69	217		Pn	02 15 45.4	-0.9
IVE	Iliamna Volcan	0.69	211		Pn	02 15 45.2	-1.1
IVE					Sn	02 15 58.7	-1.7
SPCG	Spurr Capps Gl	0.70	12		Sn	02 15 59.7	-0.9
ILSW	Iliamna Southw	0.75	214		Pn	02 15 45.7	-1.1
ILSW				Sn	Sn	02 15 59.6	-1.7
ILSW				IAML		02 16 01.4	
	comp=N,3µm,0.4s						
ILSW				IAML		02 16 01.9	
	comp=E,5µm,0.8s						
ILS	Iliamna Low So	0.75	210		Pn	02 15 46.0	-0.8
ILS					Sn	02 16 00.1	-1.2
SPNN	North Nagishla	0.78	346		Pn	02 15 46.4	-0.7
STLK	Strandline Lak	0.92	14		Pn	02 15 47.5	-0.8
STLK				Sn	Sn	02 16 02.8	-1.3
STLK				IAML		02 16 05.2	
	comp=E,3µm,0.6s						
STLK				IAML		02 16 05.3	
	comp=N,3µm,0.6s						
HOM	Homer	1.01	160	Pn	Pn	02 15 49.1	0.0
HOM				Sn	Sn	02 16 04.5	-0.8
HOM	Homer	1.01	160	P	Pn	02 15 49.1	0.0
	baz=342,SNR=27						
HOM				S	Sn	02 16 05.2	-0.1
	baz=342						
SLKM	Skilak Lake	1.04	95		Pn	02 15 49.0	-0.4
SLKM				IAML		02 16 05.6	
	comp=N,5µm,0.2s						
SLKM				IAML		02 16 05.8	
	comp=E,6µm,0.3s						
SLKM	Skilak Lake	1.04	95		Sn	02 16 04.7	-1.3
P19K	Oil Pt	1.06	206		Pn	02 15 49.2	-0.5
P19K	Oil Pt	1.06	206		Sn	02 16 05.6	-0.9
P19K	Oil Pt	1.06	206	P	Pn	02 15 49.3	-0.4
	baz=27,SNR=207						
P19K				S	Sn	02 16 05.8	-0.6
	baz=27						
P19K				S	Sn	02 16 05.8	-0.6
	baz=27						
O19K	Port Alsworth	1.08	248	Pn	Pn	02 15 48.7	-1.1
O19K				IAML		02 16 06.0	
	comp=N,8µm,0.5s						
O19K				IAML		02 16 06.0	
	comp=E,7µm,0.5s						
O19K	Port Alsworth	1.08	248		Sn	02 16 05.5	-1.0
O19K	Port Alsworth	1.08	248	P	Pn	02 15 48.9	-0.9
	baz=68,SNR=266						
O19K				S	Sn	02 16 05.2	-1.4
	baz=68						
O19K				S	Sn	02 16 05.2	-1.4
	baz=68						
N19K	Bonanza Creek	1.09	282		Pn	02 15 49.0	-0.9
N19K	Bonanza Creek	1.09	282		Sn	02 16 05.6	-1.3
N19K	Bonanza Creek	1.09	282	P	Pn	02 15 49.1	-0.9
	baz=100,SNR=78						
N19K				S	Sn	02 16 05.4	-1.6
	baz=100						
N19K				S	Sn	02 16 05.4	-1.6
	baz=100						
BRLK	Bradley Lake	1.11	139	Pn	Pn	02 15 49.5	-0.7
BRLK				IAML		02 16 08.1	
	comp=E,9µm,0.3s						
BRLK	Bradley Lake	1.11	139		Sn	02 16 05.8	-1.5
SUA	Susitna One	1.15	41		Pn	02 15 50.8	+0.1
SUA	Susitna One	1.15	41		Sn	02 16 07.4	-0.7
SUA	Susitna One	1.15	41	P	Pn	02 15 50.9	+0.3
	baz=221,SNR=300						
SUA				S	Sn	02 16 07.7	-0.5
	baz=221						
BRSE	Bradley Lake S	1.17	137		Pn	02 15 50.3	-0.5
BRSE					Sn	02 16 07.0	-1.5
BRSE	Bradley Lake S	1.17	137	P	Pn	02 15 50.3	-0.5
	baz=319,SNR=127						
BRSE				S	Sn	02 16 06.9	-1.6
	baz=319						
CNPM	China Poot	1.21	153	Pn	Pn	02 15 50.7	-0.6
O22K	Cooper Landing	1.29	95		Pn	02 15 51.2	-0.8
O22K	Cooper Landing	1.29	95		Sn	02 16 09.8	-0.7
O22K	Cooper Landing	1.29	95	P	Pn	02 15 51.6	-0.4
	baz=276,SNR=262						
O22K				S	Sn	02 16 09.6	-1.0
	baz=276						
M20K	Styx River	1.34	343		Pn	02 15 52.7	0.0
M20K	Styx River	1.34	343	IAML		02 16 12.7	
	comp=N,3µm,0.8s						
M20K				IAML		02 16 13.0	
	comp=E,2µm,0.8s						
M20K	Styx River	1.34	343	P	Pn	02 15 52.7	0.0
	baz=162						
M20K				S	Sn	02 16 11.5	-0.3
	baz=162						
M20K				S	Sn	02 16 11.5	-0.3
	baz=162						
RC01	Rabbit Creek A	1.35	68		Pn	02 15 52.6	-0.2
RC01	Rabbit Creek A	1.35	68	P	Pn	02 15 52.7	-0.1
	baz=249,SNR=186						
RC01				S	Sn	02 16 11.1	-0.9
	baz=249						
SKT	Skwentna	1.43	15		Pn	02 15 53.2	-0.4
SKT				IAML		02 16 18.7	
	comp=N,2µm,0.3s						
SKT				IAML		02 16 23.8	
	comp=E,2µm,0.5s						
SKT	Skwentna	1.43	15	P	Pn	02 15 53.3	-0.4
	baz=195,SNR=257						
SKT				S	Sn	02 16 13.0	-0.6
	baz=195						
SEW	Seward	1.51	108		Pn	02 15 53.7	-0.9
SEW				IAML		02 16 16.7	
	comp=N,3µm,0.4s						
SEW				IAML		02 16 18.3	
	comp=E,4µm,0.6s						
SEW	Seward	1.51	108	P	Pn	02 15 53.7	-0.9
	baz=291,SNR=155						
SEW				S	Sn	02 16 13.9	-1.3
	baz=291						
M22K	Willow	1.56	42		Pn	02 15 55.3	+0.1
M22K	Willow	1.56	42	P	Pn	02 15 55.4	+0.1
	baz=223,SNR=294						
O18K	Koktuh Hills	1.63	244		Pn	02 15 55.0	-1.1
O18K	Koktuh Hills	1.63	244	P	Pn	02 15 55.2	-0.9
	baz=62,SNR=48						
O18K				S	Sn	02 16 16.3	-1.6
	baz=62						
O18K				S	Sn	02 16 16.3	-1.6
	baz=62						
N18K	Kilae Creek	1.76	274		Pn	02 15 57.0	-0.7
N18K	Kilae Creek	1.76	274	IAML		02 16 19.7	
	comp=N,787nm,1.1s						
N18K				IAML		02 16 19.9	
	comp=E,473nm,0.9s						
N18K	Kilae Creek	1.76	274	P	Pn	02 15 57.1	-0.7
	baz=91,SNR=64						
N18K				S	Sn	02 16 18.4	-2.3
	baz=91						
N18K				S	Sn	02 16 18.4	-2.3
	baz=91						
Q19K	Cape Douglas,	1.81	202		Pn	02 15 57.5	-0.9
Q19K				IAML		02 16 26.4	
	comp=N,2µm,0.6s						
Q19K				IAML		02 16 32.9	
	comp=E,3µm,0.9s						
Q19K	Cape Douglas,	1.81	202	P	Pn	02 15 57.6	-0.7
	baz=22,SNR=92						
PMR	Palmer	1.83	56		Pn	02 15 57.6	-0.8
PMR				IAML		02 16 21.9	
	comp=E,3µm,0.4s						
PMR				IAML		02 16 22.6	
	comp=N,3µm,0.2s						
PMR	Palmer	1.83	56	P	Pn	02 15 57.7	-0.8
PMR	Palmer	1.83	56	P	Pn	02 15 57.6	-0.8
	baz=238,SNR=64						
PMR				S	Sn	02 16 20.4	-1.8
	baz=238						
P18K	Big Mountain,	1.91	231		Pn	02 15 58.5	-1.0
P18K				IAML		02 16 22.8	
	comp=E,884nm,1.1s						
P18K	Big Mountain,	1.91	231	P	Pn	02 15 58.7	-0.8
	baz=50,SNR=92						
P18K				S	Sn	02 16 22.1	-1.8

	baz=50						
P18K				S	Sn	02 16 22.1	-1.8
	baz=50						
M18K	Stony River	1.92	299		Pn	02 15 58.8	-0.8
M18K	Stony River	1.92	299	P	Pn	02 15 58.8	-0.8
	baz=116,SNR=57						
M18K				S	Sn	02 16 22.7	-1.5
	baz=116						
PWL	Port Wells	1.97	81	Pn	Pn	02 15 58.9	-1.3
PWL	Port Wells	1.97	81	P	Pn	02 15 58.9	-1.3
	baz=264,SNR=31						
PWL				S	Sn	02 16 23.5	-1.8
	baz=264						
L19K	White Mountain	2.00	323		Pn	02 16 00.4	-0.1
L19K				IAML		02 16 26.7	
	comp=E,793nm,0.9s						
L19K				IAML		02 16 27.5	
	comp=N,962nm,0.9s						
L19K	White Mountain	2.00	323	P	Pn	02 16 00.5	-0.1
	baz=141,SNR=372						
L19K				S	Sn	02 16 25.3	-0.6
	baz=141						
L19K				S	Sn	02 16 25.3	-0.6
	baz=141						
Q20K	Shuyak Island	2.01	181	P	Pn	02 16 00.3	-0.4
	baz=1.8,SNR=88						
Q20K				S	Sn	02 16 24.9	-1.2
	baz=1.8						
Q20K				S	Sn	02 16 24.9	-1.2
	baz=1.8						
SYI	Shuyak Island	2.01	181		Pn	02 16 00.2	-0.5
SYI				IAML		02 16 26.0	
	comp=N,2µm,0.6s						
SYI				IAML		02 16 28.1	
	comp=E,3µm,0.7s						
GHO	Glory Hole Cre	2.01	53	Pn	Pn	02 16 00.1	-0.7
KNK	Knik Glacier	2.04	65	Pn	Pn	02 16 00.3	-0.9
KNK	Knik Glacier	2.04	65	P	Pn	02 16 00.4	-0.8
	baz=248,SNR=43						
KNK				S	Sn	02 16 25.6	-1.4
	baz=248						
CUT	Chulitna	2.05	28		Pn	02 16 01.1	-0.1
CUT	Chulitna	2.05	28	P	Pn	02 16 01.2	0.0
	baz=209,SNR=525						
CUT				S	Sn	02 16 26.7	-0.4
	baz=209						
L22K	Petersville	2.06	20	Pn	Pn	02 16 01.4	0.0
L22K				IAML		02 16 29.6	
	comp=E,2µm,0.5s						
L22K				IAML		02 16 30.1	
	comp=N,2µm,0.6s						
SML	Sawmill	2.27	56		Pn	02 16 03.3	-0.8
SML				IAML		02 16 31.8	
	comp=E,3µm,0.5s						
SML	Sawmill	2.27	56	P	Pn	02 16 03.3	-0.8
	baz=239,SNR=96						
SML				S	Sn	02 16 30.1	-2.0
	baz=239						
PPLA	Purkeypile	2.30	1		Pn	02 16 04.6	+0.1
PPLA				IAML		02 16 35.3	
	comp=E,618nm,0.4s						
PPLA	Purkeypile	2.30	1	P	Pn	02 16 04.8	+0.3
	baz=181,SNR=309						
Q18K	Katmai Hardscr	2.40	216	P	Pn	02 16 05.3	-0.5
	baz=34,SNR=240						
N17K	Nushagak Hills	2.41	270		Pn	02 16 05.2	-0.6
N17K	Nushagak Hills	2.41	270	IAML		02 16 34.0	
	comp=N,1µm,0.9s						
N17K	Nushagak Hills	2.41	270	P	Pn	02 16 05.2	-0.6
	baz=86,SNR=53						
N17K				S	Sn	02 16 33.1	-2.1
	baz=86						
P17K	Kvichak River	2.52	237		Pn	02 16 06.8	-0.4
P17K				IAML		02 16 45.8	
	comp=N,1µm,1.2s						
P17K				IAML		02 16 47.0	
	comp=E,2µm,1.1s						
P17K	Kvichak River	2.52	237	P	Pn	02 16 06.8	-0.4
	baz=54,SNR=53						
M23K	Glacier View	2.52	60	P	Pn	02 16 06.5	-0.8
	baz=243,SNR=47						
M23K				S	Sn	02 16 35.7	-2.0
	baz=243						
M23K				S	Sn	02 16 35.7	-2.0
	baz=243						
P23K	Montague Islan	2.52	102		Pn	02 16 06.1	-1.2
P23K				IAML		02 16 37.1	
	comp=E,3µm,0.5s						
P23K				IAML		02 16 37.4	
	comp=N,2µm,0.3s						
P23K	Montague Islan	2.52	102	P	Pn	02 16 06.2	-1.1
	baz=286,SNR=13						
P23K				S	Sn	02 16 36.0	-1.8
	baz=286						
P23K				S	Sn	02 16 36.0	-1.8
	baz=286						
O17K	Koliganek Bris	2.53	253	P	Pn	02 16 06.9	-0.5
	baz=69,SNR=77						
O17K				S	Sn	02 16 36.2	-1.9
	baz=69						
GLI	Glacier Island	2.58	82		Pn	02 16 05.9	-2.1
GLI	Glacier Island	2.58	82	P	Pn	02 16 05.7	-2.3
	baz=266,SNR=7.5						
GLI				S	Sn	02 16 36.5	-2.7
	baz=266						
M17K	Holitna River	2.62	290		Pn	02 16 08.0	-0.6
M17K	Holitna River	2.62	290	IAML		02 16 41.1	
	comp=N,469nm,1.1s						
M17K				IAML		02 16 41.2	
	comp=E,646nm,0.8s						
M17K	Holitna River	2.62	290	P	Pn	02 16 08.0	-0.6
	baz=106,SNR=75						
M17K				S	Sn	02 16 39.4	-0.7
	baz=106						
L18K	Granite Mounta	2.65	309	Pn	Pn	02 16 08.3	-0.6
L18K	Granite Mounta	2.65	309	P	Pn	02 16 08.4	-0.6
	baz=126,SNR=13						
L18K				S	Sn	02 16 39.2	-1.7
	baz=126						
L18K				S	Sn	02 16 39.2	-1.7
	baz=126						
SCM	Sheep Creek Mo	2.71	61	Pn	Pn	02 16 09.2	-0.5
SCM				IAML		02 16 44.0	
	comp=N,2µm,0.3s						
SCM	Sheep Creek Mo	2.71	61	P	Pn	02 16 09.1	-0.7
	baz=245,SNR=32						
KDAK	Kodiak Island	2.84	183	P	Pn	02 16 09.7	-1.7
	comp=N,270nm,0.3s,baz=35,slow=5.0,SNR=583						
KDAK				S	Sn	02 16 42.6	-2.6
	comp=N,253nm,0.4s,baz=224,slow=9.2,SNR=7.8						
KDAK	Kodiak Island	2.84	183		Pn	02 16 09.6	-1.8
KDAK				IAML		02 16 46.4	
	comp=N,584nm,0.7s						
KDAK				IAML		02 16 57.1	
	comp=N,602nm,0.7s						
KDAK	Kodiak Island	2.84	183	P	Pn	02 16 09.5	-2.0
	baz=3.2						
KDAK				S	Sn	02 16 42.1	-3.1
	baz=3.2						
ACHA	Angle Creek He	2.86	214		Pn	02 16 11.3	-0.4
WAT1	Susitna Watana	2.86	37	P	Pn	02 16 11.3	-0.4
	baz=220						
WAT1				S	Sn	02 16 43.7	-2.1
	baz=220						
FID	Port Fidalgo	2.87	85		Pn	02 16 09.3	-2.6
FID				IAML		02 16 43.5	
	comp=E,2µm,0.2s						
K20K	Telida	2.88	344		Pn	02 16 11.8	-0.1
K20K	Telida	2.88	344	P	Pn	02 16 11.9	-0.1
	baz=162						
HIN	Hinchinbrook I	2.88	92		Pn	02 16 10.0	-2.0
HIN				IAML		02 16 45.6	
	comp=N,1µm,0.4s						
HIN				IAML		02 16 47.2	
	comp=E,2µm,0.5s						
ANCK	Angle Creek	2.91	215		Pn	02 16 12.0	-0.5
Q16K	King Salmon	2.94	231	P	Pn	02 16 12.5	-0.1
	baz=47,SNR=47						
WAT6	Susitna Watana	2.95	46	P	Pn	02 16 12.4	-0.6
	baz=229,SNR=98						
WAT6				S	Sn	02 16 46.2	-1.9
	baz=229						
CNTC	Contact Creek	2.98	219		Pn	02 16 13.0	-0.3
Q17K	Contact Creek	2.98	219	P	Pn	02 16 12.9	-0.4
	baz=37						
CAHL	Cahill	2.99	212		Pn	02 16 13.2	-0.3
TRF	Thorofare Moun	3.01	18	Pn	Pn	02 16 13.5	-0.3
TRF				IAML		02 16 51.2	
	comp=E,614nm,0.5s						
TRF				IAML		02 17 14.4	
	comp=N,650nm,0.7s						
TRF	Thorofare Moun	3.01	18	P	Pn	02 16 13.2	-0.5
	baz=199,SNR=10						
TRF				S	Sn	02 16 48.2	-1.3
	baz=199						
KTH	Kantishna Hill	3.03	12		Pn	02 16 13.4	-0.5
KTH	Kantishna Hill	3.03	12	IAML		02 17 07.2	
	comp=E,493nm,0.8s						
KTH				IAML		02 17 19.5	
	comp=N,546nm,0.8s						
KJL	Kejulik	3.06	215		Pn	02 16 14.4	0.0
O16K	Kokwok River B	3.07	253		Pn	02 16 13.9	-0.5
O16K	Kokwok River B	3.07	253	P	Pn	02 16 13.9	-0.5
	baz=68,SNR=30						
N16K	Nishlik Lake	3.19	270	P	Pn	02 16 15.8	-0.3
	baz=85,SNR=51						
Q23K	Middleton Isla	3.22	109	P	Pn	02 16 15.2	-1.2
	baz=294						
MID	Middleton Isla	3.23	109		Pn	02 16 15.2	-1.3
MID	Middleton Isla	3.23	109	IAML		02 16 53.8	
	comp=N,588nm,0.7s						
MID				IAML		02 16 54.0	
	comp=E,584nm,0.5s						
KLU	Klutina	3.23	71		Pn	02 16 15.5	-1.1
KLU	Klutina	3.23	71	P	Pn	02 16 15.5	-1.1
	baz=256,SNR=30						
KLU				S	Sn	02 16 52.7	-1.9
	baz=256						
EYAK	Cordova Ski Ar	3.24	88		Pn	02 16 14.6	-2.0
EYAK	Cordova Ski Ar	3.24	88	IAML		02 16 55.3	
	comp=N,480nm,0.7s						
EYAK				IAML		02 16 56.0	
	comp=E,395nm,0.3s						
EYAK	Cordova Ski Ar	3.24	88	P	Pn	02 16 14.6	-2.0
	baz=274						
EYAK				S	Sn	02 16 53.3	-1.3
	baz=274						
DIV	Divide	3.24	78		Pn	02 16 15.3	-1.5
DIV				IAML		02 16 57.8	
	comp=E,1µm,0.8s						
RND	Reindeer	3.25	29		Pn	02 16 16.5	-0.4
RND	Reindeer	3.25	29	IAML		02 17 16.0	
	comp=N,529nm,0.7s						
RND				IAML		02 17 21.8	
	comp=E,502nm,0.8s						
L17K	Donlin	3.26	301		Pn	02 16 16.4	-0.5
L17K	Donlin	3.26	301	P	Pn	02 16 16.4	-0.5
	baz=115,SNR=64						
L17K				S	Sn	02 16 53.7	-1.5
	baz=115						
L17K				S	Sn	02 16 53.7	-1.5
	baz=115						
P16K	Nushagak River	3.27	244		Pn	02 16 17.3	+0.2
P16K				IAML		02 17 27.5	
	comp=E,426nm,1.0s						
P16K				IAML		02 17 30.0	
	comp=N,462nm,0.8s						
P16K	Nushagak River	3.27	244	P	Pn	02 16 17.1	0.0
	baz=59,SNR=12						
M16K	Timber Creek	3.28	280		Pn	02 16 16.8	-0.4
M16K	Timber Creek	3.28	280	P	Pn	02 16 16.8	-0.4
	baz=94,SNR=35						
CHUM	Lake Minchumin	3.29	360		Pn	02 16 16.9	-0.4
CHUM	Lake Minchumin	3.29	360	P	Pn	02 16 16.8	-0.4
	baz=180,SNR=105						
M24K	Tolsona, Glenn	3.32	60		Pn	02 16 17.8	0.0
M24K	Tolsona, Glenn	3.32	60	P	Pn	02 16 17.7	0.0
	baz=245,SNR=51						
M24K				S	Sn	02 16 56.0	-0.6
	baz=245						
DHY	Denali Highway	3.41	41	IAML		02 17 00.1	
	comp=N,903nm,0.4s						
DHY	Denali Highway	3.41	41	P	Pn	02 16 18.7	-0.3
	baz=225,SNR=166						
DHY				S	Sn	02 16 57.8	-1.0
	baz=225						
OHAK	Old Harbor	3.43	189		Pn	02 16 16.9	-2.4
OHAK	Old Harbor	3.43	189	IAML		02 16 58.7	
	comp=N,272nm,0.6s						
OHAK				IAML		02 17 07.2	
	comp=E,248nm,1.0s						
OHAK	Old Harbor	3.43	189	P	Pn	02 16 16.8	-2.4
	baz=8.4,SNR=59						
MCK	McKinley	3.51	25		Pn	02 16 20.2	-0.2
MCK				IAML		02 17 31.9	
	comp=E,356nm,0.6s						
MCK				IAML		02 17 35.4	
	comp=N,459nm,1.0s						
MCK	McKinley	3.51	25	P	Pn	02 16 19.8	-0.5
	baz=208,SNR=78						
MCK				S	Sn	02 16 59.0	-2.2
	baz=208						
PLK2	Peulik 2	3.52	218		Pn	02 16 20.4	0.0
J18K	Innoko River	3.54	326		Pn	02 16 20.6	-0.1
J18K	Innoko River	3.54	326	P	Pn	02 16 20.6	-0.1
	baz=142,SNR=69						
J18K				S	Sn	02 16 59.5	-2.2
	baz=142						
K17K	Iditarod	3.55	309		Pn	02 16 20.5	-0.3
K17K	Iditarod	3.55	309	IAML		02 17 03.1	
	comp=N,260nm,1.1s						
K17K				IAML		02 17 03.7	
	comp=E,326nm,1.1s						
K17K	Iditarod	3.55	309	P	Pn	02 16 20.5	-0.3
	baz=124,SNR=55						
K17K				S	Sn	02 17 00.0	-2.1
	baz=124						
BPAW	Bear Paw Mtn.	3.56	9		Pn	02 16 19.7	-1.3
BPAW				IAML		02 17 29.8	
	comp=E,232nm,0.5s						
BPAW	Bear Paw Mtn.	3.56	9	P	Pn	02 16 19.7	-1.3
	baz=190,SNR=90						
PLK3	Peulik 3	3.57	217		Pn	02 16 21.0	-0.1
PLK4	Peulik 4	3.64	217		Pn	02 16 22.0	-0.2
PLK4	Peulik 4	3.64	217	IAML		02 17 07.1	
	comp=N,354nm,0.9s						
PLK4				IAML		02 17 24.8	
	comp=E,260nm,0.8s						
L16K	Owhat River	3.64	291		Pn	02 16 21.5	-0.5
L16K	Owhat River	3.64	291	P	Pn	02 16 21.4	-0.6
	baz=105,SNR=60						
R17L	Mt. Peulik Vol	3.64	217	P	Pn	02 16 21.9	-0.2
	baz=34						
R17L				S	Sn	02 17 04.4	+0.1
	baz=34						
R17L				S	Sn	02 17 04.4	+0.1
	baz=34						
J20K	Nowinta River	3.68	347		Pn	02 16 22.2	-0.4
J20K	Nowinta River	3.68	347	P	Pn	02 16 22.1	-0.4
	baz=166,SNR=173						
J19K	Poorman	3.73	337		Pn	02 16 23.0	-0.2
J19K	Poorman	3.73	337	P	Pn	02 16 23.1	-0.2
	baz=154,SNR=140						
RAGM	Ragged Mountai	3.79	90		Pn	02 16 21.8	-2.2
BMRM	Bremner River	3.80	81		Pn	02 16 22.4	-1.8
BMRM	Bremner River	3.80	81	IAML		02 17 10.6	
	comp=E,886nm,0.4s						
BMRM				IAML		02 17 20.1	
	comp=N,708nm,0.8s						
BMRM	Bremner River	3.80	81	P	Pn	02 16 22.4	-1.8
	baz=268						
BMRM				S	Sn	02 17 06.0	-2.1
	baz=268						
HARP	HAARP	3.87	59	P	Pn	02 16 24.8	-0.3
	baz=245,SNR=32						
HARP				S	Sn	02 17 09.4	-0.3
	baz=245						
HARP				S	Sn	02 17 09.4	-0.3
	baz=245						
N25K	Chitina, Valde	3.88	72	IAML		02 17 09.8	
	comp=N,948nm,0.6s						
N25K				IAML		02 17 10.3	
	comp=E,1µm,0.5s						
N25K	Chitina, Valde	3.88	72	P	Pn	02 16 24.2	-1.1
	baz=258,SNR=13						
N25K				S	Sn	02 17 07.7	-2.3
	baz=258						
N25K				S	Sn	02 17 07.7	-2.3
	baz=258						
N15K	Kwethluk River	3.89	267		Pn	02 16 25.4	0.0
N15K	Kwethluk River	3.89	267	IAML		02 17 26.6	
	comp=N,146nm,1.2s						
N15K				IAML		02 17 31.4	
	comp=E,171nm,0.7s						
N15K	Kwethluk River	3.89	267	P	Pn	02 16 25.3	0.0
	baz=80,SNR=14						
KAIM	Kayak Island	3.99	96		Pn	02 16 26.3	-0.4
KAIM	Kayak Island	3.99	96	IAML		02 17 16.4	
	comp=N,414nm,0.5s						
KAIM				IAML		02 17 21.9	
	comp=E,326nm,0.6s						
KAIM	Kayak Island	3.99	96	P	Pn	02 16 26.1	-0.7
	baz=283						
PAX	Paxson	4.02	51	IAML		02 17 16.4	
	comp=E,462nm,0.3s						
PAX				IAML		02 17 27.6	
	comp=N,724nm,0.9s						
PAX	Paxson	4.02	51	P	Pn	02 16 27.1	0.0
	baz=237,SNR=139						
PAX				S	Sn	02 17 11.0	-2.4
	baz=237						
O15K	Ungalikthiuk R	4.05	252		Pn	02 16 27.0	-0.5
O15K	Ungalikthiuk R	4.05	252	P	Pn	02 16 27.6	+0.1
	baz=66,SNR=9.7						
R16K	Pilot Point	4.08	224		Pn	02 16 27.9	0.0
R16K				IAML		02 17 18.1	
	comp=N,379nm,0.9s						
R16K	Pilot Point	4.08	224	P	Pn	02 16 28.1	+0.1
	baz=40,SNR=7.7						
WACK	Wrangell Chich	4.09	67		Pn	02 16 27.6	-0.6
M15K	Kasigluk River	4.12	275	P	Pn	02 16 27.7	-0.8
	baz=88,SNR=16						
WASW	Wrangell South	4.15	68		Pn	02 16 28.1	-0.9
SII	Sitkinak Islan	4.18	194		Pn	02 16 27.5	-1.8
SII				IAML		02 17 16.4	
	comp=N,326nm,0.8s						
SII				IAML		02 17 27.6	
	comp=E,662nm,0.8s						
SII	Sitkinak Islan	4.18	194	P	Pn	02 16 27.3	-2.0
	baz=13,SNR=22						
GLB	Gilahina Butte	4.22	75		Pn	02 16 28.8	-1.1
GLB				IAML		02 17 19.1	
	comp=E,508nm,0.4s						
GLB				IAML		02 17 22.2	
	comp=N,423nm,0.4s						
J17K	VABM Dome	4.24	314		Pn	02 16 29.5	-0.5
J17K	VABM Dome	4.24	314	P	Pn	02 16 29.2	-0.8
	baz=128,SNR=16						
J17K				S	Sn	02 17 15.7	-2.9
	baz=128						
J17K				S	Sn	02 17 15.7	-2.9
	baz=128						
NEA2	Nenana	4.27	19	P	Pn	02 16 29.2	-1.3
	baz=202,SNR=118						
I20K	Naaghedeneel	4.32	348		Pn	02 16 30.7	-0.4
I20K				IAML		02 17 54.7	
	comp=N,398nm,0.8s						
I20K				IAML		02 17 58.6	
	comp=E,398nm,0.9s						
I20K	Naaghedeneel	4.32	348	P	Pn	02 16 30.6	-0.4
	baz=165,SNR=43						
WRH	Wood River Hil	4.34	25	IAML		02 17 18.2	
	comp=N,164nm,0.9s						
WRH				IAML		02 17 21.1	
	comp=E,173nm,0.6s						
VRDI	Verde Repeater	4.37	78		Pn	02 16 30.8	-1.2
VRDI				IAML		02 17 22.1	
	comp=N,358nm,0.5s						
VRDI				IAML		02 17 22.3	
	comp=E,322nm,0.4s						
K24K	Donnelly Dome	4.43	41	P	Pn	02 16 34.2	+1.6
	baz=226,SNR=331						
K24K				S	Sn	02 17 23.0	-0.2
	baz=226						
K24K				S	Sn	02 17 23.0	-0.2
	baz=226						
MLY	Manley	4.50	9		Pn	02 16 31.7	-1.8
MLY	Manley	4.50	9	P	Pn	02 16 32.4	-1.1
	baz=190,SNR=50						
CRQM	Cirque	4.51	84		Pn	02 16 32.1	-1.8
CRQE	Cirque	4.54	84	P	Pn	02 16 31.9	-2.2
	baz=272,SNR=6.9						
CRQE				S	Sn	02 17 23.2	-2.7
	baz=272						
HDA	Harding Lake	4.55	31	P	Pn	02 16 34.0	-0.2
	baz=215,SNR=343						
HDA				S	Sn	02 17 23.2	-2.8
	baz=215						
CCB	Clear Creek Bu	4.55	25		Pn	02 16 33.4	-0.8
CCB				IAML		02 17 27.4	
	comp=E,291nm,0.4s						
CCB				IAML		02 17 30.0	
	comp=N,138nm,0.4s						
L15K	Ungalak Mounta	4.57	288		Pn	02 16 33.6	-0.9
L15K	Ungalak Mounta	4.57	288	P	Pn	02 16 33.7	-0.8
	baz=100,SNR=12						
MCARA	McCarthy VSAT	4.59	76		Pn	02 16 33.8	-1.0
MCARA	McCarthy VSAT	4.59	76	P	Pn	02 16 33.9	-0.8
	baz=264						
MCARA				S	Sn	02 17 25.8	-1.2
	baz=264						
I21K	Tanana	4.59	2	P	Pn	02 16 33.6	-1.1
	baz=182,SNR=48						
GCSA	Galena City Sc	4.65	335	P	Pn	02 16 35.5	0.0
	baz=151,SNR=95						
TGL	Tana Glacier	4.67	84		Pn	02 16 34.5	-1.4
TGL	Tana Glacier	4.67	84	IAML		02 17 31.9	
	comp=E,651nm,0.6s						
TGL				IAML		02 17 34.2	
	comp=N,494nm,0.7s						
RIDG	Independent Ri	4.70	45		Pn	02 16 36.7	+0.4
RIDG	Independent Ri	4.70	45	P	Pn	02 16 36.6	+0.4
	baz=231,SNR=62						
RIDG				S	Sn	02 17 28.0	-1.7
	baz=231						
O14K	Tigyukauivet M	4.70	257	P	Pn	02 16 36.7	+0.4
	baz=70						
N14K	Kuskokwak Cree	4.72	266		Pn	02 16 36.5	+0.1
N14K	Kuskokwak Cree	4.72	266	IAML		02 18 22.5	
	comp=E,148nm,1.1s						
N14K				IAML		02 18 29.1	
	comp=N,144nm,1.0s						
N14K	Kuskokwak Cree	4.72	266	P	Pn	02 16 36.5	+0.1
	baz=78,SNR=6.5						
SNH	Sunshine Point	4.72	91		Pn	02 16 36.0	-0.5
SNH	Sunshine Point	4.72	91	IAML		02 17 30.1	
	comp=E,371nm,1.0s						
SNH				IAML		02 17 31.0	
	comp=N,309nm,0.5s						
K15K	Wolf Creek Mou	4.74	295		Pn	02 16 36.2	-0.4
K15K	Wolf Creek Mou	4.74	295	P	Pn	02 16 36.3	-0.4
	baz=107,SNR=20						
J16K	Anvik River	4.75	308		Pn	02 16 35.9	-0.9
J16K	Anvik River	4.75	308	P	Pn	02 16 35.8	-1.0
	baz=121,SNR=32						
COLA	College	4.75	24		Pn	02 16 36.5	-0.3
COLA	College	4.75	24	P	Pn	02 16 36.3	-0.5
	baz=207						
COLA				S	Sn	02 17 30.2	-0.4
	baz=207						
M14K	Bethel	4.75	276		Pn	02 16 36.9	+0.1
M14K	Bethel	4.75	276	P	Pn	02 16 36.1	-0.7
	baz=88,SNR=12						
I23K	Minto, Yukon-K	4.75	15		Pn	02 16 37.0	+0.1
I23K				IAML		02 18 06.0	
	comp=N,119nm,0.9s						
I23K				IAML		02 18 14.0	
	comp=E,105nm,0.9s						
I23K	Minto, Yukon-K	4.75	15	P	Pn	02 16 37.1	+0.2
	baz=198,SNR=387						
M26K	Nabesna, AK	4.81	64	P	Pn	02 16 37.8	0.0
	baz=252,SNR=22						
M26K				S	Sn	02 17 30.4	-2.0
	baz=252						
M26K				S	Sn	02 17 30.4	-2.0
	baz=252						
ILAR	Eielson Array	4.87	29	P	Pn	02 16 37.8	-0.7
	comp=E,252nm,0.3s,baz=214,slow=14,SNR=1942						
ILAR				S	Sn	02 17 30.3	-3.4
	comp=E,44nm,0.5s,baz=72,slow=27,SNR=8.0						
ILAR	Eielson Array	4.87	29		Pn	02 16 38.4	-0.1
L26K	Log Cabin Wild	4.89	56	IAML		02 17 55.1	
	comp=N,367nm,0.8s						
L26K	Log Cabin Wild	4.89	56	P	Pn	02 16 38.9	0.0
	baz=244,SNR=48						
ANPB	Aniakchak Plen	4.92	222		Pn	02 16 38.8	-0.5
DOT	Dot Lake	4.93	48	IAML		02 17 50.5	
	comp=N,318nm,1.0s						
DOT				IAML		02 17 54.6	
	comp=E,348nm,0.9s						
H20K	Anotleneega Mo	5.04	348	P	Pn	02 16 39.9	-0.9

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      baz=165,SNR=54
POKR  Poker Plat Res     5.04  24  IAML          02 17 40.4
      comp=N,208nm,0.6s
POKR                               IAML          02 18 15.7
      comp=E,128nm,0.8s
POKR  Poker Plat Res     5.04  24  P      Pn     02 16 40.5 -0.3
      baz=208,SNR=101
H21K  Melozitna Rive     5.07 358         Pn     02 16 40.1 -1.1
H21K  Melozitna Rive     5.07 358  P      Pn     02 16 40.2 -1.0
      baz=177,SNR=59
L14K  Kuka Creek         5.11 283         Pn     02 16 41.5 -0.1
L14K  Kuka Creek         5.11 283  IAML          02 18 35.9
      comp=N,81nm,1.1s
L14K  Kuka Creek         5.11 283  P      Pn     02 16 41.5 -0.1
      baz=94
CHIR  Chirikof Islan     5.11 201         Pn     02 16 39.2 -2.6
CHIR  Chirikof Islan     5.11 201  IAML          02 17 39.6
      comp=N,168nm,1.2s
CHIR                               IAML          02 17 39.7
      comp=E,117nm,0.5s
CHIR  Chirikof Islan     5.11 201  P      Pn     02 16 39.8 -2.0
      baz=19
I17K  Unalakleet         5.11 314         Pn     02 16 41.3 -0.4
I17K  Unalakleet         5.11 314  P      Pn     02 16 41.0 -0.7
      baz=126,SNR=6.1
J25K  Salcha River,      5.14  36         Pn     02 16 42.2  0.0
J25K  Salcha River,      5.14  36  IAML          02 17 38.7
      comp=E,389nm,0.7s
J25K                               IAML          02 17 39.6
      comp=N,316nm,0.7s
J25K  Salcha River,      5.14  36  P      Pn     02 16 42.1 -0.1
      baz=221,SNR=478
SCRK  Sand Creek         5.15  45         Pn     02 16 41.9 -0.4
SCRK                               IAML          02 17 54.7
      comp=E,262nm,0.7s
SCRK                               IAML          02 17 58.2
      comp=N,208nm,0.8s
SCRK  Sand Creek         5.15  45  P      Pn     02 16 41.9 -0.4
      baz=232,SNR=176
GRNC  Granite Creek      5.20  84         Pn     02 16 41.4 -1.7
GRNC  Granite Creek      5.20  84  IAML          02 17 43.8
      comp=E,359nm,0.7s
GRNC                               IAML          02 17 44.4
      comp=N,864nm,0.6s
BARN  Barnard Glacie     5.23  80         Pn     02 16 42.3 -1.2
BARN  Barnard Glacie     5.23  80  IAML          02 17 44.8
      comp=N,267nm,0.5s
BARN                               IAML          02 17 45.1
      comp=E,225nm,0.4s
YAH   Yahtse             5.23  88         Pn     02 16 41.7 -1.9
YAH   Yahtse             5.23  88  IAML          02 17 44.8
      comp=E,315nm,0.5s
YAH                                IAML          02 17 46.1
      comp=N,287nm,0.6s
H19K  Roundabout Mou     5.28 341         Pn     02 16 43.2 -0.8
H19K  Roundabout Mou     5.28 341  P      Pn     02 16 43.4 -0.6
      baz=157,SNR=44
M27K  Edge Creek, AK     5.30  66  P      Pn     02 16 44.7 +0.2
      baz=255,SNR=12
H22K  Ishtalitna Cre     5.32   4  P      Pn     02 16 43.7 -0.9
      baz=185,SNR=56
H18K  Honhosa River      5.33 331         Pn     02 16 44.6 -0.2
H18K  Honhosa River      5.33 331  P      Pn     02 16 44.6 -0.2
      baz=146
H23K  Yukon River        5.38  12  P      Pn     02 16 45.6 +0.1
      baz=194
CTG   Chitna Glacier     5.39  81  P      Pn     02 16 46.0 +0.3
      baz=271,SNR=15
CTGM  Chitina Glacie     5.39  81         Pn     02 16 44.6 -1.0
CTGM  Chitina Glacie     5.39  81  IAML          02 17 47.7
      comp=N,273nm,0.6s
CTGM                               IAML          02 17 48.2
      comp=E,241nm,0.6s
IMAR  Indian Mountai     5.43 354         Pn     02 16 45.6 -0.5
M13K  Dall Lake          5.46 273  P      Pn     02 16 46.8 +0.5
      baz=83,SNR=5.6
BC01  Beaver Creek A     5.54  59         Pn     02 16 46.8 -0.8
L27K  Beaver Creek,      5.54  59  P      Pn     02 16 47.3 -0.3
      baz=248
LOGN  Logan Glacier      5.56  83         Pn     02 16 46.8 -1.1
BCAR  Beaver Creek A     5.56  59         Pn     02 16 48.0 +0.1
H17K  Granite Mounta     5.57 325         Pn     02 16 48.4 +0.5
H17K  Granite Mounta     5.57 325  P      Pn     02 16 47.8 -0.1
      baz=138,SNR=20
CHX   Chaix Hills        5.59  91         Pn     02 16 48.0 -0.3
H24K  Noodor Dome        5.62  19  P      Pn     02 16 48.3 -0.3
      baz=203,SNR=129
J26L  Joseph Creek       5.62  42         Pn     02 16 48.4 -0.3
J26L  Joseph Creek       5.62  42  P      Pn     02 16 48.4 -0.3
      baz=230,SNR=199
YUK2  White River        5.67  73         Pn     02 16 48.7 -0.7
SAMH  Samovar Hills      5.74  90         Pn     02 16 50.9 +0.5
S14K  Fog Glacier        5.76 224  P      Pn     02 16 50.6 -0.1
      baz=38
VNFG  Fog Glacier, M     5.76 224         Pn     02 16 50.4 -0.3
J14K  Nanvaranak Lak     5.76 297         Pn     02 16 50.2 -0.3
J14K  Nanvaranak Lak     5.76 297  P      Pn     02 16 50.3 -0.3
      baz=107,SNR=6.8
BVCY  Beaver Creek       5.77  67         Pn     02 16 50.6 -0.1
BVCY  Beaver Creek       5.77  67  P      Pn     02 16 50.8 +0.1
      baz=257,SNR=14
YUK3  Moose Creek        5.85  73         Pn     02 16 51.1 -0.8
YUK3  Moose Creek        5.85  73  P      Pn     02 16 51.3 -0.6
      baz=264,SNR=12
K27K  Chicken            5.88  50  P      Pn     02 16 51.8 -0.2
      baz=239
G19K  Purcell Mounta     5.95 341         Pn     02 16 52.2 -0.9
G19K  Purcell Mounta     5.95 341  P      Pn     02 16 52.3 -0.9
      baz=156,SNR=105
G21K  Allakaket          5.95 355         Pn     02 16 52.2 -0.9
G21K  Allakaket          5.95 355  P      Pn     02 16 52.6 -0.5
      baz=174
O28M  Mount Upton        5.96  83         Pn     02 16 53.8 +0.3
O28M  Mount Upton        5.96  83  P      Pn     02 16 53.9 +0.4
      baz=274,SNR=56
PCA   Pinnacle           6.01  90         Pn     02 16 53.7 -0.2
PINM  Pinnacle           6.01  90  P      Pn     02 16 53.9 -0.1
      baz=280,SNR=31
G18K  Tagagawik          6.03 334  P      Pn     02 16 54.0 -0.1
      baz=149,SNR=35
K13K  Kusilvak Mount     6.10 288  P      Pn     02 16 54.4 -0.6
      baz=97
H16K  Elim               6.10 316  P      Pn     02 16 54.7 -0.4
      baz=127
YUK8  Steele Glacier     6.15  78  P      Pn     02 16 56.2 +0.1
      baz=269,SNR=12
G17K  Kiwalik Mounta     6.20 326         Pn     02 16 55.9 -0.5
G17K  Kiwalik Mounta     6.20 326  P      Pn     02 16 55.8 -0.5
      baz=138,SNR=12
G23K  Bananza Creek      6.21   8         Pn     02 16 55.8 -0.8
G23K  Bananza Creek      6.21   8  P      Pn     02 16 55.9 -0.8
      baz=190,SNR=98
I26K  Coal Creek Min     6.29  38         Pn     02 16 57.0 -0.7
I26K  Coal Creek Min     6.29  38  P      Pn     02 16 57.0 -0.7
      baz=226
BCPM  Bancas Point       6.34  90         Pn     02 16 57.6 -0.7
G22K  Bettles            6.35   3  P      Pn     02 16 58.0 -0.3
      baz=183
G24K  Hadweenzic Riv     6.48  17  P      Pn     02 16 59.5 -0.7
      baz=201,SNR=101
F20K  Avaraart Lake      6.64 348         Pn     02 17 02.0 -0.3
F20K  Avaraart Lake      6.64 348  P      Pn     02 17 01.8 -0.5
      baz=165,SNR=82
F21K  Alatna River       6.66 356         Pn     02 17 02.0 -0.6
F21K  Alatna River       6.66 356  P      Pn     02 17 01.9 -0.8
      baz=175
YUK4  Talbot Arm         6.69  78  P      Pn     02 17 03.5 +0.2
      baz=269
COLD  Coldfoot           6.71   7         Pn     02 17 02.5 -0.8
COLD  Coldfoot           6.71   7  P      Pn     02 17 02.9 -0.4
      baz=189,SNR=44
G25K  Bearman Lake       6.76  21  P      Pn     02 17 03.4 -0.7
      baz=207,SNR=77
O29M  Mount Kennedy      6.80  87  P      Pn     02 17 04.3 -0.4
      baz=278
SDPT  Sand Point         6.83 223         Pn     02 17 02.7 -2.3
SDPT  Sand Point         6.83 223  P      Pn     02 17 02.9 -2.1
      baz=36
F18K  Selawik            6.84 335         Pn     02 17 04.7 -0.3
F18K  Selawik            6.84 335  P      Pn     02 17 04.9 -0.2
      baz=148,SNR=16
YUK6  Outpost Mounta     6.84  81  P      Pn     02 17 04.6 -0.8
      baz=273
M11K  Mekoryuk           6.87 274  P      Pn     02 17 06.1 +0.7
      baz=82
M29M  Somme Creek        6.87  68         Pn     02 17 05.4 -0.3
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M29M  Somme Creek        6.87  68  P      Pn     02 17 05.6 -0.1
      baz=260,SNR=22
F22K  John River         6.93   0  P      Pn     02 17 05.9 -0.3
      baz=180
DAWY  Dawson             6.94  54         Pn     02 17 06.4 -0.1
DAWY  Dawson             6.94  54  P      Pn     02 17 06.3 -0.1
      baz=246,SNR=55
I27K  Kandik River       6.97  39         Pn     02 17 06.0 -0.8
I27K  Kandik River       6.97  39  P      Pn     02 17 06.0 -0.8
      baz=229,SNR=75
CHNA  Chernabura Isl     6.98 217  P      Pn     02 17 06.6 -0.4
      baz=31
CNBA  Chernabura Isl     6.99 217         Pn     02 17 07.0 -0.1
YUK5  Granite Creek      7.08  79         Pn     02 17 07.3 -1.1
S12K  Black Hills        7.12 231  P      Pn     02 17 09.5 +0.5
      baz=42
L29M  L29M               7.16  63         Pn     02 17 09.3 -0.1
L29M  L29M               7.16  63  P      Pn     02 17 09.2 -0.3
      baz=256
F24K  Squaw Lake         7.20  14         Pn     02 17 09.4 -0.6
F24K  Squaw Lake         7.20  14  P      Pn     02 17 09.4 -0.6
      baz=198,SNR=36
E19K  Redstone River     7.20 345         Pn     02 17 09.7 -0.3
E19K  Redstone River     7.20 345  P      Pn     02 17 09.5 -0.5
      baz=160
ANM   Nome               7.21 309  P      Pn     02 17 11.1 +1.0
      baz=117
PS1A  Pavlof South-1     7.22 228         Pn     02 17 09.8 -0.4
HYT   Haines Junctio     7.27  82         Pn     02 17 09.9 -1.1
HYT   Haines Junctio     7.27  82  P      Pn     02 17 10.7 -0.3
      baz=275,SNR=5.9
P29M  Windy Craggy       7.35  91         Pn     02 17 11.1 -0.9
P29M  Windy Craggy       7.35  91  P      Pn     02 17 11.9 -0.1
      baz=284
G26K  Porcupine Rive     7.39  27         Pn     02 17 11.2 -1.4
G26K  Porcupine Rive     7.39  27  P      Pn     02 17 11.3 -1.3
      baz=214
H27K  Steamboat Moun     7.42  36  P      Pn     02 17 11.9 -1.1
      baz=225,SNR=144
I28M  Miner Creek        7.42  44         Pn     02 17 12.4 -0.6
I28M  Miner Creek        7.42  44  P      Pn     02 17 12.5 -0.6
      baz=235,SNR=111
N30M  Aishikik Lake      7.44  77         Pn     02 17 12.1 -1.2
N30M  Aishikik Lake      7.44  77  P      Pn     02 17 12.3 -1.0
      baz=270,SNR=11
DOL   Dolgoi Island      7.47 227         Pn     02 17 13.2 -0.5
E22K  Anaktuvuk Pass     7.56   1  P      Pn     02 17 15.0 +0.1
      baz=182,SNR=27
F15K  North Star Dit     7.56 318  P      Pn     02 17 14.4 -0.4
      baz=127
J29N  Klondike Camp      7.57  53         Pn     02 17 15.3 +0.4
J29N  Klondike Camp      7.57  53  P      Pn     02 17 15.0  0.0
      baz=246,SNR=53
E23K  Chandalar          7.57   8         Pn     02 17 14.4 -0.6
E23K  Chandalar          7.57   8  P      Pn     02 17 14.8 -0.2
      baz=190,SNR=32
F25K  Christian Rive     7.59  20  P      Pn     02 17 14.2 -1.1
      baz=206,SNR=45
K29M  Barlow Dome        7.63  58         Pn     02 17 15.9  0.0
K29M  Barlow Dome        7.63  58  P      Pn     02 17 15.9  0.0
      baz=251
P30M  Million Dollar     7.63  87  P      Pn     02 17 15.9 +0.1
      baz=280
BMAR  Burnt Mountain     7.63  23         Pn     02 17 14.3 -1.5
DT1   Dutton Round H     7.66 228         Pn     02 17 14.8 -1.3
M30M  Minto, Yukon       7.66  68         Pn     02 17 15.3 -0.9
M30M  Minto, Yukon       7.66  68  P      Pn     02 17 15.9 -0.3
      baz=262
E24K  Your Creek         7.68  11         Pn     02 17 15.8 -0.7
E24K  Your Creek         7.68  11  P      Pn     02 17 16.0 -0.4
      baz=194
E17K  Hotham Inlet       7.73 331         Pn     02 17 16.8 -0.3
E17K  Hotham Inlet       7.73 331  P      Pn     02 17 17.3 +0.2
      baz=143,SNR=76
E18K  Tukpahlearik C     7.74 336  P      Pn     02 17 17.3 +0.1
      baz=148
G27K  Doyon Strip        7.81  33         Pn     02 17 17.0 -1.2
G27K  Doyon Strip        7.81  33  P      Pn     02 17 16.9 -1.2
      baz=222
E20K  Nigu River         7.86 349         Pn     02 17 18.8 -0.1
E20K  Nigu River         7.86 349  P      Pn     02 17 18.8 -0.1
      baz=166
E21K  Killik River       7.90 356  P      Pn     02 17 19.0 -0.4
      baz=174
F26K  Sheenjek River     7.95  23  P      Pn     02 17 18.6 -1.5
      baz=210,SNR=54
I29M  Ogilvie Camp,      7.95  47         Pn     02 17 19.9 -0.3
I29M  Ogilvie Camp,      7.95  47  P      Pn     02 17 20.1  0.0
      baz=240,SNR=28
O30N  Mendenhall         7.96  82         Pn     02 17 19.1 -1.3
O30N  Mendenhall         7.96  82  P      Pn     02 17 19.7 -0.6
      baz=276,SNR=5.3
PLBC  Pleasant Camp      8.07  91         Pn     02 17 21.5 -0.2
PLBC  Pleasant Camp      8.07  91  P      Pn     02 17 21.5 -0.2
      baz=285,SNR=11
N31M  Braeburn, Yuko     8.07  77         Pn     02 17 19.9 -1.9
N31M  Braeburn, Yuko     8.07  77  P      Pn     02 17 21.2 -0.6
      baz=271
E25K  Arctic Village     8.08  18         Pn     02 17 20.6 -1.3
E25K  Arctic Village     8.08  18  P      Pn     02 17 20.8 -1.1
      baz=204,SNR=39
TOLK  Toolik Lake Re     8.15   7  P      Pn     02 17 23.6 +0.8
      baz=189,SNR=30
D19K  Kuna River         8.30 345         Pn     02 17 25.0 +0.2
D19K  Kuna River         8.30 345  P      Pn     02 17 24.8  0.0
      baz=160
D22K  Ayikyak River      8.31 359         Pn     02 17 24.6 -0.3
D22K  Ayikyak River      8.31 359  P      Pn     02 17 24.7 -0.3
      baz=179,SNR=21
D20K  Etivluk River      8.34 349         Pn     02 17 25.0 -0.4
D20K  Etivluk River      8.34 349  P      Pn     02 17 24.7 -0.7
      baz=165
J30M  Hart River         8.37  55         Pn     02 17 26.0 +0.1
J30M  Hart River         8.37  55  P      Pn     02 17 26.2 +0.3
      baz=249
H29M  Whitestone         8.40  42         Pn     02 17 25.2 -1.0
H29M  Whitestone         8.40  42  P      Pn     02 17 25.4 -0.8
      baz=234,SNR=23
D23K  Nanushuk River     8.42   4         Pn     02 17 26.5 +0.1
D23K  Nanushuk River     8.42   4  P      Pn     02 17 26.6 +0.1
      baz=185,SNR=60
D17K  Noatak River       8.52 331         Pn     02 17 27.3 -0.5
D17K  Noatak River       8.52 331  P      Pn     02 17 27.9 +0.2
      baz=141,SNR=10
WHY   Whitehorse         8.57  82         Pn     02 17 27.9 -0.7
WHY   Whitehorse         8.57  82  P      Pn     02 17 27.8 -0.8
      baz=277
I30M  Mount Dempster     8.60  51         Pn     02 17 28.8 -0.3
I30M  Mount Dempster     8.60  51  P      Pn     02 17 29.2 +0.1
      baz=245,SNR=31
S31K  Pelican            8.65 101         Pn     02 17 28.2 -1.3
S31K  Pelican            8.65 101  P      Pn     02 17 28.7 -0.9
      baz=295
C21K  Knifeblade Rid     8.65 354  P      Pn     02 17 29.4 -0.1
      baz=172,SNR=14
D24K  Happy Valley       8.71   8         Pn     02 17 30.3  0.0
D24K  Happy Valley       8.71   8  P      Pn     02 17 30.5 +0.2
      baz=191
RDOG  Red Dog Mine       8.76 333         Pn     02 17 30.9 -0.1
RDOG  Red Dog Mine       8.76 333  P      Pn     02 17 31.5 +0.5
      baz=143
F28M  Old Crow           8.87  32  P      Pn     02 17 31.4 -1.1
      baz=223,SNR=74
E27K  Coleen River       8.89  27  P      Pn     02 17 31.3 -1.6
      baz=216,SNR=40
C18K  Utukok River       8.91 339         Pn     02 17 32.6 -0.5
C18K  Utukok River       8.91 339  P      Pn     02 17 32.9 -0.2
      baz=150
G29M  Pine Creek         8.93  39         Pn     02 17 32.1 -1.2
G29M  Pine Creek         8.93  39  P      Pn     02 17 32.7 -0.6
      baz=232,SNR=22
EPYK  Eagle Plains       9.04  44  P      Pn     02 17 33.7 -1.1
      baz=237,SNR=39
C19K  Lookout Ridge      9.07 343  P      Pn     02 17 34.8 -0.4
      baz=157,SNR=7.0
BESE  Bessie Mountai     9.08  95         Pn     02 17 34.5 -1.0
D25K  Kavik River        9.10  13  P      Pn     02 17 34.9 -0.7
      baz=199,SNR=59
B21K  Ikpikpuk River     9.10 355         Pn     02 17 34.6 -1.0
B21K  Ikpikpuk River     9.10 355  P      Pn     02 17 34.8 -0.8
      baz=173
C17K  DeLong Mountai     9.16 334         Pn     02 17 36.8 +0.4
C17K  DeLong Mountai     9.16 334  P      Pn     02 17 36.9 +0.4
      baz=144,SNR=8.9
C24K  Franklin Bluff     9.27   8         Pn     02 17 37.7 -0.2
C24K  Franklin Bluff     9.27   8  P      Pn     02 17 37.7 -0.2
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      baz=191
C23K  Itkillik River     9.29   4         Pn     02 17 37.0 -1.3
C23K  Itkillik River     9.29   4  P      Pn     02 17 37.6 -0.6
      baz=185,SNR=11
P32M  Atlin              9.34  88  P      Pn     02 17 38.5 -0.5
      baz=284
N32M  Quiet Lake         9.39  78  P      Pn     02 17 38.7 -0.9
      baz=275
JIS   Juneau Island      9.42  96         Pn     02 17 39.1 -0.9
SIT   Sitka              9.49 105  P      Pn     02 17 40.1 -0.9
      baz=299
C16K  Lisburne Hills     9.51 329         Pn     02 17 42.2 +1.1
C16K  Lisburne Hills     9.51 329  P      Pn     02 17 42.3 +1.1
      baz=138,SNR=15
G30M  tAoh Zraii Nji     9.54  41         Pn     02 17 40.2 -1.4
G30M  tAoh Zraii Nji     9.54  41  P      Pn     02 17 40.6 -1.1
      baz=235
H31M  Peel River         9.62  50         Pn     02 17 41.6 -1.1
H31M  Peel River         9.62  50  P      Pn     02 17 42.8 +0.1
      baz=245,SNR=17
B18K  Kokolik River      9.65 340         Pn     02 17 42.5 -0.5
B18K  Kokolik River      9.65 340  P      Pn     02 17 42.6 -0.4
      baz=151
B20K  Meade River        9.65 350         Pn     02 17 41.4 -1.6
B20K  Meade River        9.65 350  P      Pn     02 17 41.4 -1.6
      baz=166
P33M  Teslin, Yukon      9.65  84         Pn     02 17 42.0 -1.2
P33M  Teslin, Yukon      9.65  84  P      Pn     02 17 42.1 -1.2
      baz=281
S32K  Killisnoo          9.66 101         Pn     02 17 43.1 -0.1
S32K  Killisnoo          9.66 101  P      Pn     02 17 44.2 +1.0
      baz=296,SNR=8.9
E28M  Babbage River      9.70  29  P      Pn     02 17 42.4 -1.3
      baz=220,SNR=19
C27K  Jago River         9.74  18         Pn     02 17 43.4 -0.9
C27K  Jago River         9.74  18  P      Pn     02 17 42.9 -1.3
      baz=206
B22K  Teshekpuk Lake     9.78 358  P      Pn     02 17 42.7 -2.1
      baz=177
C26K  Camden Bay         9.84  15         Pn     02 17 44.6 -1.0
C26K  Camden Bay         9.84  15  P      Pn     02 17 44.2 -1.3
      baz=202
D27M  Malcolm River      9.89  24         Pn     02 17 45.0 -1.4
D27M  Malcolm River      9.89  24  P      Pn     02 17 45.2 -1.2
      baz=214
E29M  Blow River         9.95  32         Pn     02 17 46.4 -0.7
E29M  Blow River         9.95  32  P      Pn     02 17 46.1 -1.0
      baz=225,SNR=46
F30M  Barrier River     10.04  39         Pn     02 17 47.1 -1.3
F30M  Barrier River     10.04  39  P      Pn     02 17 47.3 -1.1
      baz=233,SNR=17
G31M  Satah River       10.16  44         Pn     02 17 48.5 -1.4
G31M  Satah River       10.16  44  P      Pn     02 17 48.1 -1.8
      baz=240,SNR=24
Q32M  Nakina River      10.23  91  P      Pn     02 17 50.2 -1.0
      baz=288
UNV   Unalaska Valle    10.24 235  P      Pn     02 17 50.2 -0.9
      baz=43
A19K  Wainwright        10.29 343  P      Pn     02 17 51.1 -0.5
      baz=155
D28M  Stokes Point      10.44  27  P      Pn     02 17 53.9 +0.2
      baz=220,SNR=17
A22K  Sinclair Lake     10.49 355  P      Pn     02 17 51.8 -2.6
      baz=173,SNR=6.2
F31M  Tsiigehtchic      10.60  42         Pn     02 17 54.2 -1.7
F31M  Tsiigehtchic      10.60  42  P      Pn     02 17 53.9 -2.0
      baz=238,SNR=12
R33M  Jennings River    10.75  87         Pn     02 17 57.9 -0.2
R33M  Jennings River    10.75  87  P      Pn     02 17 57.2 -0.9
      baz=286,SNR=5.2
A21K  Barrow            10.90 353         Pn     02 17 58.6 -1.2
A21K  Barrow            10.90 353  P      Pn     02 17 58.3 -1.6
      baz=169
U33K  Whale Pass        11.02 106         Pn     02 18 01.4 -0.3
U33K  Whale Pass        11.02 106  P      Pn     02 18 00.9 -0.7
      baz=302
INK   Inuvik            11.14  38  P      Pn     02 18 01.8 -1.4
      comp=E,26nm,0.6s,baz=240,slow=18,SNR=46
INK                                S      Sn     02 20 00.8 -4.8
      comp=E,3.7nm,0.5s,baz=284,slow=12,SNR=2.1
INK   Inuvik            11.14  38         Pn     02 18 01.8 -1.4
INK                                       Sn     02 20 02.8 -2.7
INK   Inuvik            11.14  38  P      Pn     02 18 01.5 -1.7
      baz=235,SNR=26
DLBC  Dease Lake        11.51  91  P      Pn     02 18 08.3 +0.1
      comp=E,3.1nm,0.4s,baz=239,slow=11,SNR=8.4
DLBC  Dease Lake        11.51  91  P      Pn     02 18 07.6 -0.6
      baz=290
T35M  Bob Quinn         11.98  98  P      Pn     02 18 14.9 +0.4
      baz=297
C36M  Paulatuk          14.66  42         Pn     02 18 46.2 -2.7
C36M  Paulatuk          14.66  42  P      Pn     02 18 46.1 -2.7
      baz=247,SNR=32
A36M  Sachs Harbour     15.56  32         Pn     02 18 58.3 -1.9
A36M  Sachs Harbour     15.56  32  P      Pn     02 18 58.3 -1.9
      baz=237,SNR=147
YKAW3 Yellowknife Wh    17.88  67  P      P      02 19 27.8 +0.1
YKAW3                              IAmb   IAmb   02 19 30.9
      comp=Z,23nm,1.4s
YKAW3                              PcP    PcP    02 24 02.9 +5.0
YKA   Yellowknife Ar    17.89  68  P      Pn     02 19 28.9 +0.1
      comp=Z,5.6nm,0.7s,baz=283,slow=12,SNR=51
YKA                                ScP    ScP    02 27 22.5 +0.2
      comp=Z,0.7nm,0.7s,baz=292,slow=2.8,SNR=7.7
YKA   Yellowknife Ar    17.89  68  P      P      02 19 27.7 -0.1
YKAW1 Yellowknife Wh    17.95  68  P      Pn     02 19 29.1 -0.3
YKAW1                              IAmb   IAmb   02 19 31.3
      comp=Z,12nm,0.8s
RES   Resolute Bay      24.61  33  P      P      02 20 37.3 +0.8
BLKN  Baker Lake        25.55  57  P      P      02 20 48.5 +3.2
BLKN                               IAmb   IAmb   02 20 49.7
      comp=Z,10nm,0.7s
BMO   Blue Mountains    26.00 111  P      P      02 20 50.2 +0.6
NVAR  Mina Array Bea    30.73 121  P      P      02 21 35.8 +4.0
      comp=Z,0.5nm,0.8s,baz=317,slow=7.0,SNR=2.2
NVAR  Mina Array Bea    30.73 121  P      P      02 21 33.7 +1.9
PDAR  Pinedale Array    31.21 105  P      P      02 21 37.5 +1.4
      comp=Z,0.2nm,0.4s,baz=315,slow=8.8,SNR=4.1
      comp=Z,0.2nm,0.4s
PDAR  Pinedale Array    31.21 105  P      P      02 21 37.0 +0.9
IRM   Iron Mountain     35.70 121         P      02 22 15.3 +0.6
IRM                                IAmb   IAmb   02 22 19.2
      comp=Z,10nm,1.1s
WUAZ  Wupatki           36.19 115  P      P      02 22 20.3 +1.3
WUAZ                                      pP     02 22 48.7 +4.2
WUAZ                               IAmb   IAmb   02 22 48.7
      comp=Z,4.2nm,0.9s
SUMG  Summit            39.70  26         P      02 22 48.5 +0.1
SUMG  Summit            39.70  26 i P     P      02 22 48.9 +0.5
SUMG                               IAmb   IAmb   02 22 49.7
      comp=Z,10nm,0.6s
DAG   Danmarks Havn     39.82  15 i P     P      02 22 48.0 -0.9
DAG                                IAmb   IAmb   02 22 48.6
      comp=Z,3.6nm,0.7s
SPITS Spitsbergen Ar    41.28   4  P      P      02 23 00.1 -0.8
      comp=Z,2.8nm,0.3s,baz=28,slow=6.5,SNR=29
      comp=Z,2.8nm,0.3s
DBG   Daneborg          41.66  18 i P     P      02 23 02.2 -1.7
DBG                                IAmb   IAmb   02 23 02.9
      comp=Z,6.5nm,1.0s
NUUK  Nuuk              42.07  40 i P     P      02 23 05.2 -2.2
NUUK                               IAmb   IAmb   02 23 12.6
      comp=Z,98nm,1.4s
SCHQ  Schefferville     42.95  58  P      P      02 23 15.1 +0.4
      comp=Z,7.3nm,1.0s,baz=270,slow=7.1,SNR=5.0
      comp=Z,7.3nm,1.0s
SCHQ  Schefferville     42.95  58  P      P      02 23 15.3 +0.7
HEH   HeiHe             43.91 294  eP     P      02 23 20.8 -1.5
HEH                                pmax   pmax
      comp=Z,9.0nm,0.8s
HILR  Hailar Array B    47.80 299  P      P      02 23 53.2 +0.2
      comp=Z,3.2nm,0.6s,baz=80,slow=9.2,SNR=5.7
      comp=Z,3.2nm,0.6s
ARCES ARCESS Array B    50.14   1  P      P      02 24 09.4 -1.1
      comp=Z,3.4nm,0.8s,baz=347,slow=5.8,SNR=9.9
      comp=Z,3.4nm,0.8s
ARCES ARCESS Array B    50.14   1  P      P      02 24 09.5 -0.9
ARCES                              IAmb   IAmb   02 24 18.4
      comp=Z,8.7nm,1.1s
KSRS  Korea Array       53.38 283  P      P      02 24 35.5 +0.6
      comp=Z,2.8nm,0.7s,baz=36,slow=7.5,SNR=8.3
      comp=Z,2.8nm,0.7s
ULN   Ulaanbaatar       54.42 306         P      02 24 43.6 +1.0
SONM  Songino Array     54.71 306  P      P      02 24 46.0 +1.3
      comp=Z,6.7nm,0.6s,baz=48,slow=6.6,SNR=27
      comp=Z,6.7nm,0.6s
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SONM	**Songino Array**	**54.71**	**306**	P	**P**	**02 24 45.8**	**+1.2**
SONM				IAmb	IAmb	02 24 47.0	
	comp=Z,4.7nm,0.8s						
ZALV	**Zalesovo Beam**	**57.09**	**324**	P	**P**	**02 25 00.9**	**-0.3**
	comp=Z,1.9nm,0.4s,baz=29,slow=5.8,SNR=7.7						
	comp=Z,1.9nm,0.4s						
ZALV	**Zalesovo Beam**	**57.09**	**324**	P	**P**	**02 25 00.4**	**-0.9**
NOA	**NORSAR Array B**	**58.02**	**9**	P	**P**	**02 25 06.9**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=351,slow=7.0,SNR=5.2						
	comp=Z,0.8nm,0.7s						
HHC	**Hu-ho-hao-te**	**58.21**	**297**	*e*P	**P**	**02 25 11.0**	**+1.5**
HHC				pmax	pmax		
	comp=Z,11nm,0.5s						
HHC				pmax	pmax		
	comp=Z,110nm,5.2s						
FINES	**FINESS Array B**	**58.27**	**1**	P	**P**	**02 25 08.2**	**-1.3**
	comp=Z,5.0nm,0.6s,baz=357,slow=7.0,SNR=14						
	comp=Z,5.0nm,0.6s						
FINES	**FINESS Array B**	**58.27**	**1**	P	**P**	**02 25 09.1**	**-0.3**
HFS	**Hagfors**	**59.10**	**8**	P	**P**	**02 25 14.4**	**-0.8**
	comp=Z,1.7nm,0.5s,baz=52,slow=7.8,SNR=2.9						
	comp=Z,1.7nm,0.5s						
BVAR	**Borovoye Array**	**61.69**	**332**	P	**P**	**02 25 32.6**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=53,slow=7.6,SNR=5.8						
	comp=Z,1.2nm,0.6s						
KURK	**Kurchatov**	**61.72**	**326**	P	**P**	**02 25 32.8**	**-0.3**
KURK				IAmb	IAmb	02 25 33.8	
	comp=Z,3.6nm,1.1s						
KURBB	**Kurchatov Arra**	**61.82**	**326**	P	**P**	**02 25 33.6**	**-0.3**
	comp=Z,1.6nm,0.4s,baz=29,slow=6.7,SNR=10						
	comp=Z,1.6nm,0.4s						
EKA	**Eskdalemuir Ar**	**61.84**	**19**	P	**P**	**02 25 33.4**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=344,slow=7.0,SNR=4.9						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**64.17**	**322**	P	**P**	**02 25 49.0**	**-0.5**
	comp=Z,1.3nm,0.6s,baz=40,slow=6.4,SNR=17						
	comp=Z,1.3nm,0.6s						
MKAR	**Makanchi Array**	**64.17**	**322**	P	**P**	**02 25 48.7**	**-0.8**
GTA	**Gaotai**	**64.36**	**305**	P	**P**	**02 25 50.6**	**-0.4**
GTA				pP	pP	02 26 20.8	+1.5
GTA				pmax	pmax		
	comp=Z,15nm,0.9s						
MNK	**Minsk**	**65.24**	**360**	*i* P	**P**	**02 25 55.2**	**-1.0**
	comp=E,11nm,0.8s						
MNK				*i* P	**P**	**02 25 55.2**	**-1.0**
	comp=N,7.0nm,0.7s						
MNK				*i* P	**P**	**02 25 55.2**	**-1.0**
	comp=Z,3.0nm,0.7s,baz=0.0						
MNK				*i* pP	**pP**	**02 26 23.5**	**-0.9**
MNK				*i* PP	**PP**	**02 28 20.3**	**-0.1**
MNK				*i* PPP	PPP	02 29 54.8	
MNK				*i* S	**S**	**02 34 30.7**	**+0.7**
MNK				*i* sS	**sS**	**02 35 19.9**	**+1.5**
MNK				*i* SS	**SS**	**02 38 47.0**	**+3.5**
MNK				*i* SSS	SSS	02 41 55.7	
MNK				*i* LR	LR	02 56 37.7	
MNK				*i* LRM	MLR	02 57 24.6	
	comp=N,207nm,21.1s						
MNK				*i* LRM	MLR	02 57 29.0	
	comp=Z,61nm,15.0s						
MNK				*i* LRM	MLR	02 57 32.2	
	comp=E,107nm,15.8s						
AKASG	**Malin Array Be**	**69.04**	**359**	P	**P**	**02 26 19.5**	**-0.8**
	comp=E,0.4nm,0.3s,baz=2.0,slow=6.1,SNR=4.2						
	comp=E,0.4nm,0.3s						
AKASG	**Malin Array Be**	**69.04**	**359**	P	**P**	**02 26 21.7**	**+1.5**
KSH	**Kashi**	**72.70**	**323**	P	**P**	**02 26 46.0**	**+3.2**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PZH	**PanZhiHua**	**74.65**	**297**	P	**P**	**02 26 57.3**	**+2.9**
CHGR	**Chuyangaron**	**75.42**	**328**		**P**	**02 26 58.5**	**-0.1**
CHGR				IAmb	IAmb	02 26 59.3	
	comp=Z,9.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**82.92**	**295**	P	**P**	**02 27 38.6**	**-0.9**
	comp=Z,3.0nm,0.7s,baz=12,slow=6.1,SNR=15						
	comp=Z,3.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**82.92**	**295**	P	**P**	**02 27 38.5**	**-1.0**
BOSA	**Boshof**	**147.97**	**4**	PKPbc	**PKPbc**	**02 34 58.3**	**-0.7**
	comp=Z,4.9nm,0.6s,baz=360,slow=2.0,SNR=21						
BOSA	**Boshof**	**147.97**	**4**	PKPdf	**PKPbc**	**02 34 58.2**	**-0.9**
QSPA	**South Pole Qui**	**150.41**	**180**	PKPbc	**PKPbc**	**02 35 03.6**	**-0.2**
	comp=Z,6.6nm,0.7s,baz=306,slow=0.4,SNR=27						
QSPA	**South Pole Qui**	**150.41**	**180**	PKPdf	**PKPbc**	**02 35 02.0**	**-1.8**

GCG 17 02:18:05.3±0.3**, 13°.31N×90°.06W, h33**^{km}±4^{km}**, MD3.5,**
Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**0.65**	**25**	*i* P	Pb	02 18 18.4	0.0
NUBE				*i* S	Sn	02 18 28.8	+1.4
JAYA	**Jayaque - finc**	**0.68**	**60**	*i* P	Pn	02 18 18.5	-0.3
JAYA				*i* S	Sb	02 18 28.6	+0.3
MTO3	**Montecristo**	**1.27**	**32**	*i* P	Pn	02 18 27.5	+0.5

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*MEX **17** 02:39:43.0±0.7, 14°.27N×94°.08W, h19^{km}±29^{km}, MD4.3*
*GCG **17** 02:39:43.8±0.5, 14°.18N×93°.93W, h35^{km}±29^{km}, MD4.5*
ISC 17 02:39:38.6±2.0**, 14°.50N**±0°.07×**94°.05W**±0°.04**, h3**^{km}±12^{km}**,**
n19, σ1^{s}64/36**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**1.44**	**34**	*i* P	**Pg**	**02 40 08.2**	**+2.0**
PCIG				*i* S	**Sn**	**02 40 27.2**	**+2.3**
THIG		**1.78**	**77**	*i* P	**Pn**	**02 40 10.5**	**+0.4**
THIG				*e*S	**Sn**	**02 40 32.4**	**-0.8**
THIG		**1.78**	**77**	*i* P	**Pb**	**02 40 11.5**	**-0.3**
THIG				*i* S	**Sn**	**02 40 32.9**	**-0.4**
PATR	**El Naranjo**	**1.86**	**71**	*e*P	**Pn**	**02 40 12.2**	**+0.7**
PATR				*e*S	**Sg**	**02 40 37.4**	**-1.1**
PAVE	**Pavencul**	**1.94**	**69**	*e*P	**Pn**	**02 40 13.5**	**+0.8**
PAVE				*e*S	**Sb**	**02 40 39.0**	**-0.4**
CHUJ	**Union Juarez**	**1.97**	**72**	*e*P	**Pn**	**02 40 14.0**	**+1.0**
CHUJ				*i* S	**Sn**	**02 40 37.5**	**-0.9**
RTAL	**Retalhuleu**	**2.28**	**89**	*e*P	**Pb**	**02 40 21.4**	**+0.9**
RTAL				*e*S	**Sn**	**02 40 44.4**	**-1.4**
HUIG	**Huatulco**	**2.35**	**303**	*e*P	**Pn**	**02 40 21.4**	**+3.3**
HUIG				*e*S	**Sn**	**02 40 48.3**	**+0.9**
TGIG		**2.43**	**22**	*e*P	**Pg**	**02 40 24.6**	**-0.7**
TGIG				*i* S	**Sg**	**02 40 55.9**	**-0.9**
TGIG		**2.43**	**22**	*i* P	**Pg**	**02 40 25.3**	**0.0**
TGIG				*i* S	**Sg**	**02 40 57.2**	**+0.4**
CCIG	**Comitan**	**2.56**	**46**	*i* P	**Pb**	**02 40 25.4**	**+0.2**
CCIG				*i* S	**Sg**	**02 40 58.4**	**-2.5**
CCIG	**Comitan**	**2.56**	**46**	*i* P	**Pb**	**02 40 25.6**	**+0.4**
CCIG				*i* S	**Sg**	**02 40 58.8**	**-2.0**
HUEH	**Huehuetenango**	**2.59**	**71**	*e*P	**Pn**	**02 40 23.8**	**+2.1**
HUEH				*e*S	**Sn**	**02 40 52.8**	**-1.0**
CMIG	**Matias Romero**	**2.69**	**343**	*e*P	**Pb**	**02 40 27.9**	**+0.4**
CMIG				*e*S	**Sb**	**02 40 58.8**	**-2.1**
UXUV	**UXUV**	**2.80**	**358**	*e*P	**Pb**	**02 40 30.7**	**+1.4**
UXUV				*e*S	**Sb**	**02 41 03.2**	**-0.7**
PEIG	**Puerto Escondi**	**3.34**	**297**	*e*P	**Pn**	**02 40 33.3**	**+1.6**
PEIG				*e*S	**Sn**	**02 41 07.6**	**-4.2**
APG	**El Apazote**	**3.51**	**81**	*i* P	**Pn**	**02 40 36.5**	**+2.3**
NEUV	**Arroyo Zacate**	**3.61**	**332**	*e*P	**Pb**	**02 40 40.4**	**-2.6**
NEUV				*e*S	**Sn**	**02 41 18.6**	**+0.2**
NUBE	**Las Nubes**	**4.19**	**98**	*i* P	**Pn**	**02 40 43.9**	**+0.4**

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*KRSC **17** 02:48:35.5±1.5, 58°.93N×158°.63E, h14^{km}±14^{km}, Ml4.3*
*IDC **17** 02:48:37.6±0.6, 58°.78N×158°.98E, h0^{km}, mb3.9/16, mbtmp3.8/19, ML3.9/2, MS3.2/6, Error ellipse: s-maj=16.4km s-min=10.7km az=180.0*
*MOS **17** 02:48:38.9±0.9, 58°.84N×158°.98E, h17^{km}, mb4.5/13, MS3.5/5, Error ellipse: s-maj=11.8km s-min=5.1km az=97.6*
*NEIC **17** 02:48:39.9±1.1, 58°.70N±0°.08×158°.9E±0°.2, h18^{km}±1^{km}, mb4.4/38, Error ellipse: s-maj=14.3km s-min=11.2km az=69.0*
*NERS **17** 02:48:46.4, 59°.13N×158°.32E, h33^{km}*
ISC 17 02:48:39.9±0.4**, 58°.75N**±0°.04×**159°.10E**±0°.03**, h10**^{km}**, n343,**
σ1^{s}35/335**, mb4.3**/43**, MS3.6**/7**, 2C-6D, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALN	**Palana**	**0.57**	**52**	PN	**Pg**	**02 48 49.9**	**-1.0**
PALN				S	**Sg**	**02 48 58.9**	**+0.6**
PALN	**Palana**	**0.57**	**52**	*e*P	**Pg**	**02 48 49.9**	**-1.0**
PALN				*e*S	**Sg**	**02 48 59.0**	**+0.6**
OSSR	**Ossora**	**2.11**	**74**	PN	**Pn**	**02 49 14.1**	**-1.0**
OSSR	**Ossora**	**2.11**	**74**	*e*P	**Pn**	**02 49 14.2**	**-1.0**
SRKR	**Sorokina**	**2.37**	**151**	PN	**Pn**	**02 49 20.4**	**+1.6**
SRKR	**Sorokina**	**2.37**	**151**	*e*P	**Pn**	**02 49 20.4**	**+1.6**
KLY	**Klyuchi**	**2.58**	**160**	PN	**Pn**	**02 49 24.9**	**+3.3**
KLY	**Klyuchi**	**2.58**	**160**	*e*P	**Pn**	**02 49 25.0**	**+3.3**
KOZ	**Kozyrevsk**	**2.73**	**171**	PN	**Pn**	**02 49 25.2**	**+1.5**
KOZ	**Kozyrevsk**	**2.73**	**171**	*e*P	**Pn**	**02 49 25.2**	**+1.5**
ESO	**Esso**	**2.84**	**185**	PN	**Pn**	**02 49 24.6**	**-0.5**
ESO	**Esso**	**2.84**	**185**	*e*P	**Pn**	**02 49 24.7**	**-0.5**
BZWR	**Bezymyannyi-We**	**2.89**	**164**	PN	**Pn**	**02 49 26.7**	**+0.7**
BZWR	**Bezymyannyi-We**	**2.89**	**164**	*e*P	**Pn**	**02 49 26.8**	**+0.7**
KMNR	**Kamenistaya**	**3.06**	**168**	PN	**Pn**	**02 49 29.1**	**+0.8**
KMNR	**Kamenistaya**	**3.06**	**168**	*e*P	**Pn**	**02 49 29.2**	**+0.8**
KBG	**Krutoberegovo**	**3.17**	**141**	PN	**Pn**	**02 49 32.5**	**+2.9**
KBG	**Krutoberegovo**	**3.17**	**141**	*e*P	**Pn**	**02 49 32.5**	**+2.9**
KBTR	**Krutoberegovo**	**3.24**	**140**	PN	**Pn**	**02 49 33.3**	**+2.6**
KBTR	**Krutoberegovo**	**3.24**	**140**	*e*P	**Pn**	**02 49 33.4**	**+2.6**
KZV	**Kizimen**	**3.70**	**169**	PN	**Pn**	**02 49 39.3**	**+2.2**
KZV	**Kizimen**	**3.70**	**169**	*e*P	**Pn**	**02 49 39.4**	**+2.2**
GADL	**Gadlja**	**4.11**	**286**	*e*P	Pn	02 49 49.1	+6.6
GADL				*e*Pg	**Pb**	**02 49 55.4**	**+3.3**
GADL				Pgmax		02 49 59.9	
	180nm,1.0s						
GADL				*e*Sg	**Sb**	**02 50 43.5**	**+1.8**
GADL				Sgmax		02 51 04.4	
	1μm,0.8s						
GADL	**Gadlja**	**4.11**	**286**	*e*PN	Pn	02 49 49.1	+6.6
TLAR	**Talaya**	**4.13**	**308**	*e*P	Pn	02 49 40.4	-2.6
TLAR				Pmax		02 49 42.4	
	10.0nm,0.8s						
TLAR				*e*Pg	**Pb**	**02 49 54.0**	**+1.4**
TLAR				Pgmax		02 49 58.7	
TLAR				*e*Sg	**Sb**	**02 50 42.6**	**0.0**
TLAR				Sgmax		02 50 47.0	
	370nm,0.7s						
TLAR	**Talaya**	**4.13**	**308**	*e*PN	Pn	02 49 40.4	-2.6
MA2	**Magadan**	**4.37**	**285**	Pn	**Pn**	**02 49 45.0**	**-1.3**
	1.0nm,0.3s,baz=112,slow=12,SNR=5.4						
MA2				Pg	Pb	02 49 51.7	-4.9
	2.8nm,0.3s,baz=87,slow=13,SNR=13						
MA2				Lg	Lg	02 50 47.2	
	3.0nm,0.3s,baz=243,slow=2.5,SNR=4.0						
MA2				LR	LR	02 51 27.0	
	comp=Z,231nm,18.3s,baz=106,slow=39						
	9.8nm,0.8s						
MA2	**Magadan**	**4.37**	**285**		Pn	02 49 44.0	-2.2
MA2	**Magadan**	**4.37**	**285**	*e*P	**Pn**	**02 49 44.9**	**-1.3**
MA2				Pmax		02 49 45.4	
	10.0nm,0.6s						
MA2				*e*Pg	Pb	02 49 54.1	-2.5
MA2				*e*Sg	**Sb**	**02 50 50.6**	**+1.3**
MA2				Sgmax		02 50 51.1	
	180nm,0.9s						
MGD	**Magadan 1**	**4.47**	**291**	*e*P	**Pn**	**02 49 46.4**	**-1.2**
MGD				Pmax		02 49 46.9	
	20nm,0.4s						
MGD				*e*Sg	**Sb**	**02 50 52.4**	**+0.1**
MGD				Sgmax		02 51 04.2	
	170nm,0.7s						
MGD	**Magadan 1**	**4.47**	**291**	*e*PN	**Pn**	**02 49 46.4**	**-1.2**
GNL	**Ganaly**	**5.10**	**188**	PN	**Pn**	**02 49 58.2**	**+1.8**
GNL	**Ganaly**	**5.10**	**188**	*e*P	**Pn**	**02 49 58.3**	**+1.8**
KMSK	**Kamenskaya**	**5.12**	**40**	PN	**Pn**	**02 49 56.5**	**+0.1**
KMSK	**Kamenskaya**	**5.12**	**40**	*e*P	**Pn**	**02 49 56.6**	**+0.1**
SEY	**Seymchan**	**5.33**	**325**	Pn	**Pn**	**02 49 57.7**	**-1.7**
	1.1nm,0.3s,baz=176,slow=20,SNR=9.8						
SEY				Lg	Lg	02 51 21.4	
	3.8nm,0.3s,baz=234,slow=23,SNR=7.4						
SEY				LR	LR	02 52 09.2	
	comp=Z,149nm,18.5s,baz=73,slow=40						
	2.0nm,0.2s						
SEY	**Seymchan**	**5.33**	**325**	*e*P	**Pn**	**02 49 58.0**	**-1.4**
SEY				*e*Pg	**Pb**	**02 50 15.0**	**+2.0**
SEY				Pgmax		02 50 22.4	
	30nm,0.6s						
SEY				*e*Sg	**Sb**	**02 51 20.6**	**+3.7**
SEY				Sgmax		02 51 38.6	
	90nm,0.8s						
SEY	**Seymchan**	**5.33**	**325**	*e*PN	**Pn**	**02 49 58.0**	**-1.4**
KRX	**Arik**	**5.41**	**183**	PN	**Pn**	**02 50 01.7**	**+1.2**
KRX	**Arik**	**5.41**	**183**	*e*P	**Pn**	**02 50 01.8**	**+1.2**
TLON	**Talon**	**5.45**	**285**	*e*Sg	**Sb**	**02 51 25.5**	**+5.1**
TLON				Sgmax		02 51 43.8	
	560nm,0.8s						
KOK	**Koryaka**	**5.47**	**183**	PN	**Pn**	**02 50 03.5**	**+2.1**
KOK	**Koryaka**	**5.47**	**183**	*e*P	**Pn**	**02 50 03.6**	**+2.1**
PETK	**Petropavlovsk-**	**5.71**	**189**	Pn	**Pn**	**02 50 05.8**	**+1.3**
	2.9nm,0.7s,baz=27,slow=9.7,SNR=2.1						
PETK				Pg	**Pb**	**02 50 20.5**	**+1.1**
	0.3nm,0.3s,baz=25,slow=19,SNR=2.7						
PETK	**Petropavlovsk-**	**5.71**	**189**		**Pn**	**02 50 04.3**	**-0.3**
PETK	**Petropavlovsk-**	**5.71**	**189**	PN	**Pn**	**02 50 04.3**	**-0.3**
SUUS	**Susuman**	**6.71**	**312**	*e*P	**Pn**	**02 50 17.3**	**-1.0**
SUUS				*e*		02 50 44.1	
SUUS				*e*Sg	**Sb**	**02 52 04.0**	**+7.5**
SUUS				Sgmax		02 52 15.0	
	120nm,0.8s						
SUUS				Sgmax		02 52 15.0	
	60nm,0.9s						
SUUS	**Susuman**	**6.71**	**312**	*e*PN	**Pn**	**02 50 17.3**	**-1.0**
BILL	**Bilibino**	**9.86**	**16**	*e*Sg		02 53 56.0	
BILL				Sgmax		02 54 08.0	
	10.0nm,1.0s						
GAMB	**Gambell**	**14.83**	**58**	P	**Pn**	**02 52 10.7**	**+1.4**
	baz=262						
YAK	**Yakutsk**	**14.84**	**295**	LR	LR	02 56 56.0	
	comp=Z,36nm,20.3s,baz=112,slow=34						
YAK	**Yakutsk**	**14.84**	**295**⇓	*e*P	**Pn**	**02 52 10.5**	**+1.1**
YAK				pmax	pmax		
	comp=Z,14nm,0.6s						
SPIA	**Saint Paul Isl**	**16.27**	**82**	P	**Pn**	**02 52 26.3**	**-1.9**
	baz=287						
TNA	**Tin City**	**16.68**	**52**	P	**Pn**	**02 52 34.0**	**+0.7**
	baz=260						
P08K	**Saint George I**	**16.83**	**84**	P	**Pn**	**02 52 33.1**	**-2.1**
	baz=289						
M11K	**Mekoryuk**	**17.54**	**70**	P	**Pn**	**02 52 43.1**	**-1.0**
	baz=278						
ANM	**Nome**	**17.66**	**56**	P	**Pn**	**02 52 46.2**	**+0.6**
	baz=266						
TIXI	**Tiksi**	**17.81**	**329**	P	**Pn**	**02 52 48.1**	**+0.7**
	comp=Z,3.1nm,0.3s,baz=118,slow=11,SNR=3.6						
TIXI	**Tiksi**	**17.81**	**329**		**Pn**	**02 52 49.4**	**+2.0**
TIXI	**Tiksi**	**17.81**	**329**⇓	*e*P	**P**	**02 52 52.6**	**+4.5**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TIXI				MLR	MLR		
	comp=Z,67nm,12.0s						
F15K	**North Star Dit**	**18.05**	**52**	P	**Pn**	**02 52 51.1**	**+0.7**
	baz=263						
K13K	**Kusilvak Mount**	**18.06**	**64**	P	**Pn**	**02 52 50.2**	**-0.4**
	baz=275						
C16K	**Lisburne Hills**	**18.21**	**44**	P	**Pn**	**02 52 53.6**	**+1.2**
	baz=255						
G15K	**Niukluk**	**18.25**	**55**	P	**Pn**	**02 52 53.2**	**+0.3**
	baz=266						
J14K	**Nanvaranak Lak**	**18.50**	**62**	P	**P**	**02 52 55.3**	**-0.5**
	baz=273						
NIKH	**Nikolski High**	**18.77**	**94**	P	**P**	**02 52 55.8**	**-2.9**
	baz=299						
M13K	**Dall Lake**	**18.92**	**69**	P	**P**	**02 52 59.9**	**-0.5**
	baz=280						
D17K	**Noatak River**	**18.93**	**46**	P	**P**	**02 53 01.4**	**+1.0**
	baz=259						
H16K	**Elim**	**19.01**	**56**	P	**P**	**02 53 02.1**	**+0.7**
	baz=269						
C17K	**DeLong Mountai**	**19.04**	**44**	P	**P**	**02 53 02.7**	**+1.0**
	baz=257						
RDOG	**Red Dog Mine**	**19.06**	**45**	P	**P**	**02 53 03.0**	**+1.1**
	baz=258						
L14K	**Kuka Creek**	**19.08**	**66**	P	**P**	**02 53 01.9**	**-0.1**
	baz=278						
E17K	**Hotham Inlet**	**19.32**	**48**	P	**P**	**02 53 06.1**	**+1.3**
	baz=262						
K15K	**Wolf Creek Mou**	**19.48**	**63**	P	**P**	**02 53 06.8**	**+0.3**
	baz=276						
M14K	**Bethel**	**19.53**	**67**	P	**P**	**02 53 06.9**	**-0.2**
	baz=280						
UNV	**Unalaska Valle**	**19.56**	**90**	P	**P**	**02 53 05.1**	**-2.3**
	baz=297						
L15K	**Ungalak Mounta**	**19.59**	**65**	P	**P**	**02 53 07.8**	**+0.1**
	baz=278						
G17K	**Kiwalik Mounta**	**19.69**	**53**	P	**P**	**02 53 09.5**	**+0.7**
	baz=268						
I17K	**Unalakleet**	**19.71**	**58**	P	**P**	**02 53 09.6**	**+0.6**
	baz=272						
B18K	**Kokolik River**	**19.72**	**41**	P	**P**	**02 53 10.4**	**+1.3**
	baz=256						
C18K	**Utukok River**	**19.79**	**44**		**P**	**02 53 10.3**	**+0.4**
C18K	**Utukok River**	**19.79**	**44**	P	**P**	**02 53 10.9**	**+1.0**
	baz=259,SNR=6.1						
J16K	**Anvik River**	**19.80**	**60**	P	**P**	**02 53 10.3**	**+0.4**
	baz=274						
E18K	**Tukpahlearik C**	**19.83**	**47**	P	**P**	**02 53 11.2**	**+0.8**
	baz=263						
N14K	**Kuskokwak Cree**	**19.84**	**70**	P	**P**	**02 53 10.2**	**-0.3**
	baz=282						
H17K	**Granite Mounta**	**20.00**	**55**	P	**P**	**02 53 12.8**	**+0.6**
	baz=270						
HEH	**HeiHe**	**20.10**	**259**	*e*P	**P**	**02 53 14.3**	**+1.0**
F18K	**Selawik**	**20.14**	**50**	P	**P**	**02 53 14.0**	**+0.4**
	baz=266						
M15K	**Kasigluk River**	**20.15**	**67**	P	**P**	**02 53 13.2**	**-0.7**
	baz=281						
A19K	**Wainwright**	**20.17**	**39**	P	**P**	**02 53 14.9**	**+0.9**
	baz=255						
O14K	**Tigyukauivet M**	**20.22**	**71**	P	**P**	**02 53 13.6**	**-1.0**
	baz=284						
C19K	**Lookout Ridge**	**20.45**	**43**	P	**P**	**02 53 17.3**	**+0.3**
C19K				IAmb	IAmb	02 53 18.1	
	comp=Z,8.7nm,0.7s						
C19K	**Lookout Ridge**	**20.45**	**43**	P	**P**	**02 53 17.4**	**+0.4**
	baz=259,SNR=7.5						
J17K	**VABM Dome**	**20.47**	**59**	P	**P**	**02 53 17.1**	**-0.2**
	baz=275						
G18K	**Tagagawik**	**20.52**	**52**	P	**P**	**02 53 18.9**	**+1.0**
G18K	**Tagagawik**	**20.52**	**52**	P	**P**	**02 53 18.2**	**+0.4**
	baz=269						
L16K	**Owhat River**	**20.53**	**64**	P	**P**	**02 53 17.5**	**-0.5**
	baz=279						
N15K	**Kwethluk River**	**20.56**	**69**	P	**P**	**02 53 17.7**	**-0.6**
	baz=283						
H18K	**Honhosa River**	**20.66**	**54**	P	**P**	**02 53 19.9**	**+0.5**
	baz=271						
FALS	**False Pass**	**20.70**	**84**	P	**P**	**02 53 17.7**	**-2.1**
	baz=295						
D19K	**Kuna River**	**20.89**	**45**	P	**P**	**02 53 22.6**	**+0.7**
	baz=263						
K17K	**Iditarod**	**20.91**	**61**	P	**P**	**02 53 21.6**	**-0.4**
	baz=277						
M16K	**Timber Creek**	**20.91**	**66**	P	**P**	**02 53 21.3**	**-0.8**
	baz=281						
O15K	**Ungalikthiuk R**	**20.95**	**71**	P	**P**	**02 53 21.4**	**-1.2**
	baz=286						
L17K	**Donlin**	**21.00**	**63**	P	**P**	**02 53 22.8**	**-0.3**
	baz=279						
S12K	**Black Hills**	**21.04**	**81**	P	**P**	**02 53 21.5**	**-2.0**
	baz=293						
N16K	**Nishlik Lake**	**21.12**	**67**	P	**P**	**02 53 23.6**	**-0.8**
	baz=283						
E19K	**Redstone River**	**21.13**	**48**	P	**P**	**02 53 24.6**	**+0.1**
	baz=266						
G19K	**Purcell Mounta**	**21.16**	**51**	P	**P**	**02 53 24.9**	**+0.1**
G19K	**Purcell Mounta**	**21.16**	**51**	P	**P**	**02 53 24.9**	**+0.1**
	baz=270						
B20K	**Meade River**	**21.44**	**41**	P	**P**	**02 53 27.9**	**+0.2**
	baz=260						
H19K	**Roundabout Mou**	**21.44**	**53**		**P**	**02 53 26.8**	**-1.0**
H19K				IAmb	IAmb	02 53 31.0	
	comp=Z,7.3nm,0.7s						
H19K	**Roundabout Mou**	**21.44**	**53**	P	**P**	**02 53 28.1**	**+0.4**
	baz=272						
D20K	**Etivluk River**	**21.46**	**44**	P	**P**	**02 53 28.7**	**+0.7**
	baz=264						
J18K	**Innoko River**	**21.52**	**59**		**P**	**02 53 27.9**	**-0.7**
J18K	**Innoko River**	**21.52**	**59**	P	**P**	**02 53 28.8**	**+0.2**
	baz=277						
M17K	**Holitna River**	**21.55**	**64**	P	**P**	**02 53 28.4**	**-0.6**
	baz=281						
E20K	**Nigu River**	**21.58**	**45**	P	**P**	**02 53 29.6**	**+0.3**
	baz=265						
O16K	**Kokwok River B**	**21.68**	**69**	P	**P**	**02 53 29.4**	**-0.9**
	baz=285						
F20K	**Avaraart Lake**	**21.71**	**49**	P	**P**	**02 53 31.3**	**+0.8**
	baz=269						
L18K	**Granite Mounta**	**21.73**	**62**	P	**P**	**02 53 30.2**	**-0.6**
	baz=280						
A21K	**Barrow**	**21.86**	**37**	P	**P**	**02 53 33.2**	**+1.0**
	baz=257						
N17K	**Nushagak Hills**	**21.87**	**67**	P	**P**	**02 53 31.4**	**-1.0**
	baz=284						
P16K	**Nushagak River**	**21.90**	**71**	P	**P**	**02 53 30.6**	**-2.1**
	baz=287						
J19K	**Poorman**	**21.93**	**57**	P	**P**	**02 53 32.6**	**-0.4**
	baz=276						
SDPT	**Sand Point**	**22.01**	**81**	P	**P**	**02 53 31.1**	**-2.8**
	baz=294						
USRK	**Ussuriysk Ar.**	**22.08**	**241**	P	**P**	**02 53 34.2**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=53,slow=7.6,SNR=4.2						
	comp=Z,1.6nm,0.8s						
S14K	**Fog Glacier**	**22.09**	**78**	P	**P**	**02 53 32.6**	**-2.3**
	baz=292						
H20K	**Anotleneega Mo**	**22.10**	**53**	P	**P**	**02 53 34.4**	**-0.4**
	baz=273						
O17K	**Koliganek Bris**	**22.12**	**68**	P	**P**	**02 53 34.0**	**-1.0**
	baz=285						
C21K	**Knifeblade Rid**	**22.16**	**43**	P	**P**	**02 53 36.1**	**+0.6**
	baz=264						
B21K	**Ikpikpuk River**	**22.26**	**42**	P	**P**	**02 53 36.9**	**+0.4**
	baz=264						
M18K	**Stony River**	**22.28**	**64**	P	**P**	**02 53 35.3**	**-1.5**
	baz=282						
A22K	**Sinclair Lake**	**22.33**	**38**	P	**P**	**02 53 37.3**	**+0.1**
	baz=260						
I20K	**Naaghedeneel**	**22.33**	**55**	P	**P**	**02 53 36.6**	**-0.6**
	baz=275						
E21K	**Killik River**	**22.41**	**45**	P	**P**	**02 53 38.0**	**-0.1**
	baz=267						
N18K	**Kilae Creek**	**22.45**	**66**	P	**P**	**02 53 37.2**	**-1.5**
	baz=284						
J20K	**Nowinta River**	**22.55**	**56**	P	**P**	**02 53 40.1**	**+0.5**
J20K	**Nowinta River**	**22.55**	**56**	P	**P**	**02 53 39.4**	**-0.2**
	baz=277						
L19K	**White Mountain**	**22.58**	**62**	P	**P**	**02 53 38.9**	**-1.1**
	baz=281						
F21K	**Alatna River**	**22.58**	**48**		**P**	**02 53 40.3**	**+0.3**
F21K				IAmb	IAmb	02 53 41.0	
	comp=Z,7.2nm,0.9s						
F21K	**Alatna River**	**22.58**	**48**	P	**P**	**02 53 39.4**	**-0.5**
	baz=270,SNR=6.8						
G21K	**Allakaket**	**22.60**	**50**	P	**P**	**02 53 39.5**	**-0.6**
	baz=272						
R16K	**Pilot Point**	**22.60**	**74**	P	**P**	**02 53 38.2**	**-2.0**
	baz=290						
P17K	**Kvichak River**	**22.61**	**70**	P	**P**	**02 53 38.4**	**-1.8**
	baz=287						
Q16K	**King Salmon**	**22.67**	**71**	P	**P**	**02 53 39.1**	**-1.8**
	baz=288						
CHNA	**Chernabura Isl**	**22.70**	**82**	P	**P**	**02 53 38.7**	**-2.5**
	baz=296						
K20K	**Telida**	**22.71**	**58**	P	**P**	**02 53 40.3**	**-1.1**
	baz=279						
B22K	**Teshekpuk Lake**	**22.75**	**40**	P	**P**	**02 53 41.3**	**-0.4**
	baz=263						
D22K	**Ayikyak River**	**22.90**	**44**	P	**P**	**02 53 43.7**	**+0.4**
	baz=267						
H21K	**Melozitna Rive**	**22.94**	**52**	P	**P**	**02 53 43.1**	**-0.7**
	baz=275						
O18K	**Koktuh Hills**	**23.01**	**68**	P	**P**	**02 53 42.7**	**-1.9**
	baz=286						
F22K	**John River**	**23.08**	**48**	P	**P**	**02 53 45.3**	**+0.1**
	baz=271						
N19K	**Bonanza Creek**	**23.08**	**65**	P	**P**	**02 53 43.8**	**-1.5**
	baz=284						
E22K	**Anaktuvuk Pass**	**23.21**	**46**	P	**P**	**02 53 46.1**	**-0.4**
	baz=270						
I21K	**Tanana**	**23.34**	**53**	P	**P**	**02 53 46.9**	**-0.9**
	baz=276						
G22K	**Bettles**	**23.37**	**49**	P	**P**	**02 53 47.7**	**-0.4**
	baz=273						
M20K	**Styx River**	**23.44**	**62**	P	**P**	**02 53 47.3**	**-1.7**
	baz=283						
Q18K	**Katmai Hardscr**	**23.49**	**70**	P	**P**	**02 53 47.8**	**-1.7**
	baz=289						
H22K	**Ishtalitna Cre**	**23.50**	**52**		**P**	**02 53 49.2**	**-0.3**
H22K				IAmb	IAmb	02 53 49.7	
	comp=Z,13nm,1.4s						
H22K	**Ishtalitna Cre**	**23.50**	**52**	P	**P**	**02 53 48.6**	**-0.9**
	baz=275						
D23K	**Nanushuk River**	**23.62**	**44**	P	**P**	**02 53 50.5**	**-0.1**
	baz=269						
C23K	**Itkillik River**	**23.67**	**42**	P	**P**	**02 53 51.1**	**0.0**

C23K				IAmb	IAmb	02 53 54.3	
	comp=Z,17nm,1.3s						
C23K	Itkillik River	23.67	42	P	P	02 53 51.0	0.0
	baz=267						
COLD	Coldfoot	23.86	48	P	P	02 53 52.3	-0.7
COLD				IAmb	IAmb	02 53 53.2	
	comp=Z,9.4nm,1.0s						
COLD	Coldfoot	23.86	48	P	P	02 53 52.2	-0.7
	baz=273,SNR=6.9						
MLY	Manley	23.88	54	P	P	02 53 52.3	-0.9
	baz=278						
BPAW	Bear Paw Mtn.	23.93	56	P	P	02 53 52.4	-1.2
	baz=280						
G23K	Bananza Creek	23.97	49	P	P	02 53 53.6	-0.4
G23K	Bananza Creek	23.97	49	P	P	02 53 53.3	-0.8
	baz=274						
TOLK	Toolik Lake Re	24.03	45	P	P	02 53 54.2	-0.4
	baz=271,SNR=6.0						
E23K	Chandalar	24.03	46	P	P	02 53 54.8	+0.2
E23K				IAmb	IAmb	02 53 55.9	
	comp=Z,10nm,1.0s						
E23K	Chandalar	24.03	46	P	P	02 53 54.1	-0.5
	baz=272						
N20K	Mount Spurr	24.04	63	P	P	02 53 53.2	-1.6
	baz=285						
SPCR	Spurr Chakacha	24.04	63	P	P	02 53 53.0	-1.7
	baz=285						
KTH	Kantishna Hill	24.06	57	P	P	02 53 55.4	+0.4
KTH				IAmb	IAmb	02 53 56.6	
	comp=Z,14nm,1.0s						
Q19K	Cape Douglas,	24.06	69	P	P	02 53 52.3	-2.6
	baz=289						
SKT	Skwentna	24.15	61	P	P	02 53 54.3	-1.3
	baz=284						
O20K	Slope Mountain	24.18	66	P	P	02 53 54.1	-1.9
	baz=287						
H23K	Yukon River	24.26	52	P	P	02 53 55.7	-1.0
	baz=277						
CHIR	Chirikof Islan	24.29	77	P	P	02 53 54.6	-2.4
	baz=295						
D24K	Happy Valley	24.29	43	P	P	02 53 57.1	+0.2
	baz=270						
C24K	Franklin Bluff	24.33	42	P	P	02 53 57.3	+0.1
	baz=269						
TRF	Thorofare Moun	24.36	57		P	02 53 57.7	-0.1
TRF				IAmb	IAmb	02 54 02.4	
	comp=Z,12nm,1.0s						
TRF	Thorofare Moun	24.36	57	P	P	02 53 56.3	-1.5
	baz=281						
I23K	Minto, Yukon-K	24.44	53	P	P	02 53 57.9	-0.4
	baz=278						
E24K	Your Creek	24.46	46	P	P	02 53 58.3	-0.2
	baz=273						
CUT	Chulitna	24.61	60	P	P	02 53 58.6	-1.3
	baz=284						
SUA	Susitna One	24.64	62	P	P	02 53 58.8	-1.5
	baz=285						
CAPN	Captain Cook N	24.66	64	P	P	02 53 58.4	-1.9
	baz=286						
F24K	Squaw Lake	24.73	47		P	02 54 00.6	-0.3
F24K				IAmb	IAmb	02 54 02.2	
	comp=Z,4.9nm,0.8s						
F24K	Squaw Lake	24.73	47	P	P	02 54 00.1	-0.8
	baz=275						
Q20K	Shuyak Island	24.78	69	P	P	02 53 59.3	-2.2
	baz=290						
OHAK	Old Harbor	24.88	73	P	P	02 54 00.2	-2.0
	baz=293						
MCK	McKinley	24.89	56		P	02 54 03.0	+0.6
MCK	McKinley	24.89	56	P	P	02 54 03.0	+0.6
MCK				pmax	pmax		
	comp=Z,22nm,1.2s						
MCK	McKinley	24.89	56	P	P	02 54 01.3	-1.1
	baz=282,SNR=5.1						
H24K	Noodor Dome	24.94	51	P	P	02 54 02.7	-0.1
	baz=278						
G24K	Hadweenzic Riv	24.98	49	P	P	02 54 02.3	-0.9
	baz=277						
COLA	College	25.12	53	*i* P	P	02 54 03.0	-1.4
COLA				pmax	pmax		
	comp=Z,23nm,2.3s						
D25K	Kavik River	25.16	43	P	P	02 54 04.0	-0.8
D25K				IAmb	IAmb	02 54 06.3	
	comp=Z,12nm,0.8s						
D25K	Kavik River	25.16	43	P	P	02 54 04.2	-0.6
	baz=272,SNR=14						
BRSE	Bradley Lake S	25.18	66	P	P	02 54 03.2	-1.9
	baz=289						
RC01	Rabbit Creek A	25.22	63	P	P	02 54 03.6	-1.7
	baz=287						
WAT1	Susitna Watana	25.27	58	P	P	02 54 04.8	-1.1
	baz=284						
PMR	Palmer	25.35	61	P	P	02 54 04.9	-1.6
	baz=286						
O22K	Cooper Landing	25.42	64	P	P	02 54 05.6	-1.6
	baz=288						
CN2	Changchun	25.47	249	*e*P	P	02 54 05.1	-2.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
G25K	Bearman Lake	25.51	49	P	P	02 54 07.5	-0.4
	baz=278						
ILAR	Eielson Array	25.54	54	P	P	02 54 07.5	-0.7
	comp=Z,1.9nm,0.8s,baz=271,slow=9.3,SNR=16						
	comp=Z,1.9nm,0.8s						
ILAR	Eielson Array	25.54	54	P	P	02 54 08.0	-0.3
E25K	Arctic Village	25.54	46		P	02 54 08.2	-0.1
E25K				IAmb	IAmb	02 54 10.3	
	comp=Z,5.7nm,0.8s						
E25K	Arctic Village	25.54	46	P	P	02 54 07.5	-0.7
	baz=275,SNR=7.3						
F25K	Christian Rive	25.57	47	P	P	02 54 09.4	+0.8
F25K	Christian Rive	25.57	47	P	P	02 54 07.8	-0.8
	baz=276,SNR=5.4						
HDA	Harding Lake	25.59	54	P	P	02 54 07.2	-1.5
	baz=282						
C26K	Camden Bay	25.64	41	P	P	02 54 08.8	-0.2
	baz=272,SNR=5.8						
SEW	Seward	25.67	65	P	P	02 54 08.0	-1.4
	baz=289						
WAT6	Susitna Watana	25.70	59	P	P	02 54 08.8	-1.2
	baz=285						
KNK	Knik Glacier	25.71	62	P	P	02 54 08.7	-1.2
	baz=287						
DHY	Denali Highway	25.73	57	P	P	02 54 09.1	-1.1
	baz=284						
M23K	Glacier View	25.93	60	P	P	02 54 10.7	-1.1
	baz=286						
PWL	Port Wells	25.94	63	P	P	02 54 10.5	-1.5
	baz=288						
C27K	Jago River	26.08	42	P	P	02 54 12.6	-0.5
C27K	Jago River	26.08	42	P	P	02 54 13.1	0.0
	baz=274,SNR=7.5						
MJAR	Matsushiro Arr	26.08	221	P	P	02 54 13.8	+0.4
	comp=Z,3.0nm,0.8s,baz=19,slow=10,SNR=6.0						
	comp=Z,3.0nm,0.8s						
SCM	Sheep Creek Mo	26.10	60	P	P	02 54 12.4	-1.1
	baz=287						
F26K	Sheenjek River	26.13	46	P	P	02 54 13.9	+0.3
F26K				IAmb	IAmb	02 54 33.1	
	comp=Z,9.4nm,1.4s						
F26K	Sheenjek River	26.13	46	P	P	02 54 13.4	-0.3
	baz=277						
K24K	Donnelly Dome	26.24	55	P	P	02 54 13.6	-1.0
	baz=284						
G26K	Porcupine Rive	26.38	48	P	P	02 54 15.3	-0.5
	baz=279						
GLI	Glacier Island	26.51	62	P	P	02 54 15.5	-1.6
	baz=289						
M24K	Tolsona, Glenn	26.54	59	P	P	02 54 15.6	-1.8
	baz=287						
SCRK	Sand Creek	26.96	55	P	P	02 54 20.0	-1.2
	baz=285						
I26K	Coal Creek Min	26.97	52	P	P	02 54 20.3	-0.9
	baz=283						
J26L	Joseph Creek	27.00	53	P	P	02 54 21.0	-0.5
	baz=284						
E27K	Coleen River	27.01	45	P	P	02 54 21.1	-0.5
	baz=278						
D27M	Malcolm River	27.08	43	P	P	02 54 22.0	-0.2
	baz=277						
G27K	Doyon Strip	27.24	48	P	P	02 54 22.8	-0.8
	baz=281						
H27K	Steamboat Moun	27.41	49	P	P	02 54 24.5	-0.7
	baz=282						
I27K	Kandik River	27.52	51	P	P	02 54 24.8	-1.4
	baz=283						
BMRM	Bremner River	27.62	61	P	P	02 54 24.6	-2.5
	baz=290						
E28M	Babbage River	27.69	44	P	P	02 54 26.4	-1.2
	baz=279						
K27K	Chicken	27.75	54	P	P	02 54 26.7	-1.5
	baz=286						
F28M	Old Crow	27.75	46	P	P	02 54 28.0	-0.2
	baz=281						
D28M	Stokes Point	27.85	42	P	P	02 54 28.8	-0.2
	baz=279						
MCARA	McCarthy VSAT	28.19	60	P	P	02 54 31.4	-0.7
	baz=290						
I28M	Miner Creek	28.24	51	P	P	02 54 31.9	-0.8
	baz=285						
E29M	Blow River	28.32	44	P	P	02 54 33.0	-0.2
	baz=281						
G29M	Pine Creek	28.61	47	P	P	02 54 35.8	-0.1
	baz=284						
H29M	Whitestone	28.66	49	P	P	02 54 35.7	-0.5
	baz=285						
DAWY	Dawson	28.87	53	P	P	02 54 37.5	-0.7
	baz=288						
CTG	Chitna Glacier	29.10	60	P	P	02 54 38.8	-1.6
	baz=292						
EPYK	Eagle Plains	29.26	48	P	P	02 54 41.2	-0.4
	baz=286						
F30M	Barrier River	29.28	45	P	P	02 54 42.0	+0.2
	baz=284						
G30M	tAoh Zraii Nji	29.28	47	P	P	02 54 41.6	-0.2
	baz=285						
YUK8	Steele Glacier	29.69	59	P	P	02 54 44.9	-0.8
	baz=292						
O28M	Mount Upton	29.70	60	P	P	02 54 45.0	-0.9
	baz=293						
K29M	Barlow Dome	29.72	53	P	P	02 54 44.8	-1.0
	baz=289						
L29M	L29M	29.72	55	P	P	02 54 45.0	-0.8
	baz=290						
I30M	Mount Dempster	29.73	50	P	P	02 54 45.3	-0.6
	baz=288						
INK	Inuvik	29.92	43	P	P	02 54 47.5	+0.1
	baz=285						
J30M	Hart River	29.96	51	P	P	02 54 47.1	-0.8
	baz=289						
G31M	Satah River	30.03	46	P	P	02 54 48.0	-0.4
	baz=286						
YUK4	Talbot Arm	30.16	58	P	P	02 54 48.7	-1.1
	baz=292						
H31M	Peel River	30.35	48	P	P	02 54 50.3	-0.9
	baz=288						
YUK6	Outpost Mounta	30.45	59	P	P	02 54 50.8	-1.6
	baz=293						
M30M	Minto, Yukon	30.49	55	P	P	02 54 51.2	-1.3
	baz=292						
N30M	Aishikik Lake	30.80	57	P	P	02 54 53.6	-1.7
	baz=293						
HYT	Haines Junctio	30.88	59	P	P	02 54 54.5	-1.6
	baz=294						
NRIK	Noril'sk	31.09	319	LR	LR	03 08 49.9	
	comp=Z,57nm,18.4s,baz=347,slow=39						
P29M	Windy Craggy	31.29	61	P	P	02 54 58.3	-1.3
	baz=296						
O30N	Mendenhall	31.53	58	P	P	02 55 00.3	-1.4
	baz=295						
TLY	Talaya	31.59	282	⇓*e*P	P	02 55 01.2	-1.1
TLY				pmax	pmax		
	comp=Z,9.0nm,0.9s						
A36M	Sachs Harbour	31.66	35	P	P	02 55 02.2	-0.5
	baz=285						
FARO	Faro, Yukon	32.09	55	P	P	02 55 06.4	-0.2
	baz=294						
SONM	Songino Array	32.49	274	LR	LR	03 07 54.9	
	comp=Z,43nm,19.3s,baz=354,slow=36						
C36M	Paulatuk	32.87	40	P	P	02 55 12.7	-0.5
C36M				IAmb	IAmb	02 55 13.4	
	comp=Z,6.7nm,0.8s						
C36M	Paulatuk	32.87	40	P	P	02 55 12.3	-1.0
	baz=290						
R32K	Eaglecrest	33.40	62	P	P	02 55 15.6	-2.5
	baz=299						
SIT	Sitka	33.65	64	P	P	02 55 18.0	-2.2
	baz=300						
Q32M	Nakina River	34.08	59	P	P	02 55 21.5	-2.8
	baz=299						
R33M	Jennings River	34.44	58	P	P	02 55 25.6	-1.7
	baz=299						
HHC	Hu-ho-hao-te	34.61	260	*e*P	P	02 55 25.6	-3.3
HHC				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,91nm,5.0s						
U33K	Whale Pass	35.18	64	P	P	02 55 31.4	-2.1
	baz=302						
DLBC	Dease Lake	35.35	59	P	P	02 55 33.7	-1.4
	baz=301						
KOTAN	Kotaneelee Air	37.05	54	P	P	02 55 48.3	-1.2
	baz=302						
TOAD	Toad River Com	37.25	56	P	P	02 55 51.0	-0.2
	baz=303						
YKA	Yellowknife Ar	39.52	47	P	P	02 56 09.5	-0.7
	comp=Z,1.0nm,0.8s,baz=306,slow=8.9,SNR=11						
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	39.52	47	*e*P	P	02 56 09.8	-0.4
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
DGZ	Jazzator, Alta	40.93	290	*i* P	P	02 56 22.2	-0.1
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.5s						
DGZ				MLR	MLR		
	comp=Z,64nm,17.0s						
KURK	Kurchatov	44.48	297	P	P	02 56 49.1	-1.7
KURK	Kurchatov	44.48	297	IAmb	IAmb	02 56 51.8	
	comp=Z,8.6nm,1.2s						
KURK	Kurchatov	44.48	297	⇑*e*P	P	02 56 50.3	-0.5
KURK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KURK				MLR	MLR		
	comp=Z,60nm,15.0s						
KURBB	Kurchatov Arra	44.58	296	P	P	02 56 49.1	-2.5
	comp=Z,2.0nm,0.6s,baz=50,slow=7.9,SNR=9.8						
	comp=Z,2.0nm,0.6s						
KNMB	Chin-men Tao	44.64	238	P	P	02 56 44.3	-8.0
MKAR	Makanchi Array	45.43	290	P	P	02 56 56.9	-1.6
	comp=Z,0.7nm,0.9s,baz=63,slow=6.1,SNR=4.6						
	comp=Z,0.7nm,0.9s						
MKAR	Makanchi Array	45.43	290	P	P	02 56 55.6	-2.9
MKAR	Makanchi Array	45.43	290	*e*P	P	02 56 57.5	-1.0
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BVAR	Borovoye Array	46.59	304	P	P	02 57 06.7	-0.8
	comp=Z,1.6nm,0.9s,baz=54,slow=7.4,SNR=6.2						
BVAR				LR	LR	03 20 32.6	
	comp=Z,75nm,18.2s,baz=4.2,slow=41						
	comp=Z,1.6nm,0.9s						
BORK	Borovoye	46.61	304		P	02 57 05.5	-2.2
BORK				IAmb	IAmb	02 57 09.1	
	comp=Z,2.1nm,0.8s						
BORK	Borovoye	46.61	304	⇓*e*P	P	02 57 06.4	-1.3
BORK				pmax	pmax		
	comp=Z,12nm,3.3s						
BORK				MLR	MLR		
	comp=Z,74nm,16.0s						
ARTI	Arti	49.06	314	⇑*e*P	P	02 57 26.2	-0.4
ARTI				pmax	pmax		
	comp=Z,22nm,4.0s						
ARTI				MLR	MLR		
	comp=Z,90nm,16.0s						
KK31	Karatay Array	53.81	295	P	P	02 58 00.7	-1.7
KK31				IAmb	IAmb	02 58 04.1	
	comp=Z,4.3nm,0.9s						
KK31	Karatay Array	53.81	295	P	P	02 58 00.7	-1.7
KK31				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KKAR	Karatay Array	53.81	295	P	P	02 58 00.0	-2.4
KKAR	Karatay Array	53.81	295	P	P	02 58 00.0	-2.4
ELK	Elko	54.22	69	P	P	02 58 05.1	-0.5
	comp=Z,0.6nm,0.6s,baz=349,slow=5.2,SNR=3.6						
	comp=Z,0.6nm,0.6s						
ELK	Elko	54.22	69	P	P	02 58 05.1	-0.5
ELK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
NVAR	Mina Array Bea	54.48	73	P	P	02 58 08.7	+1.1
	comp=Z,0.8nm,0.7s,baz=308,slow=7.3,SNR=4.7						
	comp=Z,0.8nm,0.7s						
NVAR	Mina Array Bea	54.48	73	P	P	02 58 07.6	0.0
FINES	FINESS Array B	54.73	335	P	P	02 58 08.5	-0.2
	comp=Z,2.3nm,0.9s,baz=29,slow=12,SNR=3.7						
	comp=Z,2.3nm,0.9s						
FINES	FINESS Array B	54.73	335	*i* P	P	02 58 09.1	+0.4
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PDAR	Pinedale Array	55.37	63	P	P	02 58 14.2	+0.2
	comp=Z,0.5nm,0.6s,baz=347,slow=2.7,SNR=7.0						
	comp=Z,0.5nm,0.6s						
PDAR	Pinedale Array	55.37	63	P	P	02 58 12.3	-1.6
SPR3	Spring Creek 3	56.01	70		P	02 58 17.6	-1.1
SPR3				IAmb	IAmb	02 58 21.6	
	comp=Z,3.9nm,1.0s						
BELG	Belogornoye	56.13	317	⇓*e*P	P	02 58 18.9	0.0
BELG				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BSUT	Blindstream Ca	56.53	66	P	P	02 58 21.3	-1.2
BORG	Borgarnes	56.83	0	*i* P	P	02 58 24.2	+0.5
RDMU	Red Mountain	57.07	65	P	P	02 58 24.1	-2.0
GAR	Garm	57.08	292	P	P	02 58 24.3	-1.8
MTPU	Mount Pierson	57.80	69	P	P	02 58 31.7	+0.2
CHGR	Chuyangaron	57.91	292	⇓*e*P	P	02 58 31.6	-0.3
CHGR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NOA	NORSAR Array B	57.96	342	P	P	02 58 29.1	-2.7
	comp=Z,2.9nm,1.1s,baz=18,slow=7.2,SNR=4.5						
	comp=Z,2.9nm,1.1s						
O20A	White River Ci	58.04	65		P	02 58 32.2	-0.7
MVCO	Mesa Verde	60.24	67	P	P	02 58 46.9	-1.4
AKASG	Malin Array Be	63.51	327	P	P	02 59 08.3	-1.4
	comp=Z,0.9nm,0.6s,baz=27,slow=6.8,SNR=6.6						
	comp=Z,0.9nm,0.6s						
AKASG	Malin Array Be	63.51	327	IAmb	IAmb	02 59 17.4	
	comp=Z,4.0nm,1.2s						
AKASG	Malin Array Be	63.51	327	P	P	02 59 08.3	-1.4
AKASG				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KIV	Kislovodsk	64.99	314	*e*P	P	02 59 20.9	+1.2
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KBZ	Khabaz	65.11	314	P	P	02 59 19.6	-0.6
	comp=Z,1.3nm,0.8s,baz=108,slow=5.2,SNR=3.9						
	comp=Z,1.3nm,0.8s						
KBZ	Khabaz	65.11	314	*e*P	P	02 59 21.7	+1.4
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WMOK	Wichita Mounta	66.81	61		P	02 59 30.8	-0.6
WMOK				IAmb	IAmb	03 00 10.6	
	comp=Z,4.9nm,1.5s						
WMOK	Wichita Mounta	66.81	61	P	P	02 59 30.8	-0.6
WMOK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
CLL	Collm	66.88	338	*e*P	P	02 59 32.0	+0.4
CLL	Collm	66.88	338	*e*P	P	02 59 32.0	+0.4
TXAR	Lajitas Array	68.99	68	P	P	02 59 44.4	-0.9
	comp=Z,1.0nm,0.9s,baz=301,slow=5.8,SNR=3.9						
	comp=Z,1.0nm,0.9s						
TXAR	Lajitas Array	68.99	68	P	P	02 59 45.0	-0.3
TXAR	Lajitas Array	68.99	68	P	P	02 59 45.0	-0.3
ASAR	Alice Springs	84.72	203	P	P	03 01 11.2	-2.5
	comp=Z,0.6nm,0.8s,baz=16,slow=5.3,SNR=4.8						
	comp=Z,0.6nm,0.8s						
ASAR	Alice Springs	84.72	203	P	P	03 01 11.9	-1.8
QSPA	South Pole Qui	148.50	180	PKPbc	PKPdf	03 08 23.7	+2.2
	comp=Z,3.2nm,0.7s,baz=302,slow=2.4,SNR=7.6						
QSPA	South Pole Qui	148.50	180		PKPdf	03 08 23.6	+2.1

NIED ***17*** *03:21:53.0, 40°.36N×142°.08E, h51^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.53; $M_{\theta\theta}$1.50; $M_{\phi\phi}$-2.02; $M_{r\theta}$1.57; $M_{\theta\phi}$-0.92; $M_{\phi r}$1.95; Fault plane solution: $M_0$3.14000×10^{14} NP1: ϕ_s147.00000°, δ36.00000°, λ10.00000°. NP2: ϕ_s48.00000°, δ84.00000°, λ125.00000°.*

JMA ***17*** *03:21:53.0±0.1, 40°.4N±0°.3×142°.1E±0°.6, h51^{km}, MV3.5/40, NE OFF IWATE PREF*

JMA Felt I J1 at NE OFF IWATE PREF .

IDC ***17*** *03:21:54.7±2.4, 40°.41N×142°.22E, h81^{km}±24^{km}, mb3.5/5, mbtmp3.7/7, MS3.7/1, Error ellipse: s-maj=44.0km s-min=17.2km az=94.0*

ISC 17 03:21:53.0±1.1**, 40°.38N**±0°.04×**142°.04E**±0°.08**, h50**^{km}±8^{km}**, n24,** σ1^{s}**04**/25**, mb3.9**/5**, 9D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKEN	Kujiedanarisaw	0.30	235	*i* P	Pn	03 22 02.4	+0.2
JKEN				*e*S	Sn	03 22 08.9	+0.2
JANG	Nango	0.40	269	⇓*e*P	Pn	03 22 03.6	+0.5
JANG				⇓*e*S	Sn	03 22 10.8	+0.5
JTH	Tanohata	0.46	197	*e*P	Pn	03 22 03.8	0.0
JTH				*e*S	Sn	03 22 11.3	-0.2
JKZ	Kuzumaki	0.67	234	⇓*e*P	Pn	03 22 06.8	+0.3
JKZ				⇓*e*S	Sn	03 22 16.4	+0.3
JARK	Aomorirokkasho	0.81	321	⇓*i*P	Pn	03 22 08.2	+0.1
JARK				⇓*e*S	Sn	03 22 19.8	+0.6
JTM	Tenmabayashi	0.84	299	⇓*e*P	Pn	03 22 08.8	+0.2
JOM	Ohasama	1.07	212	*e*P	Pn	03 22 12.2	+0.5
JOM				*e*S	Sn	03 22 25.8	+0.4
JAH	Hinai	1.09	260	⇓*e*P	Pn	03 22 12.3	+0.4
JAH				⇓*e*S	Sn	03 22 26.7	+0.8
JOT	Ohata	1.25	324	*e*P	Pn	03 22 14.2	+0.1
JRG	Rokugo	1.46	228	*e*P	Pn	03 22 17.9	+1.0
ASAJ	Asahikawa	3.76	6	P	Pn	03 22 50.0	+1.6
	5.5nm,0.3s,baz=230,slow=8.5,SNR=18						
ASAJ				S	Sn	03 23 32.8	+1.5
	5.8nm,0.4s,baz=75,slow=20,SNR=1.6						
MJAR	Matsushiro Arr	4.87	219	P	Pn	03 23 07.0	+3.3
	2.2nm,0.6s,baz=28,slow=13,SNR=7.9						
H11N2	WAKE ISLAND Hy	29.60	127	T	T	03 58 37.9	
	baz=318,slow=75,SNR=30						
H11N1	WAKE ISLAND Hy	29.61	127	T	T	03 58 39.6	
	baz=318,slow=75,SNR=51						
H11N3	WAKE ISLAND Hy	29.62	127	T	T	03 58 38.7	
	baz=318,slow=75,SNR=42						
H11S1	WAKE ISLAND Hy	30.42	129	T	T	03 59 52.9	
	baz=321,slow=76,SNR=8.5						
H11S3	WAKE ISLAND Hy	30.42	129	T	T	03 59 50.7	
	baz=321,slow=76,SNR=6.0						
H11S2	WAKE ISLAND Hy	30.43	129	T	T	03 59 47.4	
	baz=321,slow=76,SNR=5.1						
ZALV	Zalesovo Beam	40.09	309	P	P	03 29 22.6	-0.8
	0.9nm,0.5s,baz=91,slow=9.0,SNR=4.5						
	0.9nm,0.5s						
MKAR	Makanchi Array	42.83	299	P	P	03 29 45.6	-0.4
	0.4nm,0.5s,baz=83,slow=9.5,SNR=6.8						
	0.4nm,0.5s						
KURBB	Kurchatov Arra	44.39	305	P	P	03 29 57.6	-0.8
	1.5nm,0.7s,baz=80,slow=8.5,SNR=13						
	1.5nm,0.7s						
BVAR	Borovoye Array	48.73	310	P	P	03 30 31.6	-0.7
	0.5nm,0.5s,baz=59,slow=8.1,SNR=4.3						
	0.5nm,0.5s						
AKTO	Aktyubinsk	56.84	311	LR	LR	03 57 28.3	
	comp=Z,64nm,18.1s,baz=53,slow=38						
WRA	Warramunga Arr	60.44	188	P	P	03 31 56.0	-1.4
	1.1nm,1.0s,baz=6.2,slow=6.8,SNR=4.7						
	1.1nm,1.0s						

IDC 17 03:50:07.9±1.9**, 5°.81S**×**130°.55E, h0**^{km}**, mb3.7**/2**, mbtmp3.6**/4**, ML3.4**/2**, Error ellipse: s-maj=117.3km s-min=27.8km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.52	166	Pn	Pn	03 53 36.2	+1.4
	0.2nm,0.3s,baz=346,slow=10,SNR=2.8						
WRA				Sn	Sn	03 56 04.5	-12
	0.2nm,0.3s,baz=350,slow=21,SNR=1.5						
	1.2nm,0.9s						
ASAR	Alice Springs	18.04	170	P	Pn	03 54 18.6	-1.6
	0.1nm,0.3s,baz=344,slow=10,SNR=6.6						
	0.4nm,0.6s						
STKA	Stephens Creek	27.91	160	P	P	03 56 00.2	+0.4
	0.6nm,0.4s,baz=328,slow=15,SNR=3.0						
	0.6nm,0.4s						
MKAR	Makanchi Array	67.54	326	P	P	04 01 06.2	0.0
	0.2nm,0.4s,baz=113,slow=5.8,SNR=4.3						
	0.2nm,0.4s						

IDC ***17*** *04:14:29.2±2.3, 41°.48N×19°.16E, h0^{km}, mb3.8/5, mbtmp3.8/8, ML3.6/2, MS3.4/4, Error ellipse: s-maj=34.0km s-min=27.4km az=32.0*

PDG ***17*** *04:14:31.3±0.3, 41°.49N×19°.44E, h11^{km}, MD3.6/12, ML3.5/13, Error ellipse: s-maj=0.7km s-min=1.2km az=0.0*

NEIC ***17*** *04:14:32.3±1.5, 41°.55N±0°.04×19°.34E±0°.07, h10^{km}±1^{km},* *mb4.4/8, Error ellipse: s-maj=9.4km s-min=6.2km az=257.0*

*SKO **17** 04:14:33.0, 41°.53N×19°.33E, h11^{km}, ML3.8*

*BEO **17** 04:14:33.9±0.6, 41°.51N×19°.46E, h9^{km}±3^{km}, ML3.5/31*

*THE **17** 04:14:33.5, 42°N±8°×1°9E±1°3, h1^{km}±35^{km}, M3.5/43, MLh3.5/43*

*TIR **17** 04:14:33.0, 41°.64N×19°.37E, h27^{km}±1^{km}, Ml3.6/8*

*PRU **17** 04:14:34.6, 41°.12N×18°.65E, h10^{km}, M4.4*

ISC 17 04:14:32.6±1.0**, 41°.54N**±0°.02×**19°.38E**±0°.02**, h13**^{km}±7^{km}**, n244, σ1^{s}58**/287**, mb4.3**/6**, 36C-10D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.41	117	Pg	Pg	04 14 40.3	-0.5
TIR				Sg	Sg	04 14 46.2	-0.1
TIR				AML	AML	04 14 47.9	
	14nm,0.4s						
TIR				AML	AML	04 14 48.3	
	11nm,0.8s						
TIR	Tirane	0.41	117	iPg	Pg	04 14 40.3	-0.5
TIR				iSg	Sb	04 14 48.1	+0.2
ULC	Ulcinj	0.44	347	⇓iPg	Pg	04 14 40.4	-0.9
ULC				iSg	Sb	04 14 48.2	-0.5
SDA	Shkodra	0.52	10	Pg	Pg	04 14 41.9	-1.0
SDA				Sg	Sg	04 14 48.6	-1.2
SDA				AML	AML	04 14 51.6	
	18nm,0.2s						
DRME	Dracevica, Mon	0.67	347	ePg	Pn	04 14 47.1	-0.6
DRME	Dracevica, Mon	0.67	347	⇓iPg	Pg	04 14 44.6	-1.0
DRME				eSg	Sb	04 14 56.0	+0.8
PHP	Peshkopia	0.81	79	Pg	Pg	04 14 47.1	-1.3
PHP				Sg	Sb	04 15 00.4	+1.0
PHP				AML	AML	04 15 04.8	
	12nm,0.5s						
PHP	Peshkopia	0.81	79	P	Pg	04 14 47.0	-1.3
PHP				S	Sb	04 14 59.4	0.0
BUM	Brajici-Budva	0.84	335	⇑iPg	Pg	04 14 48.3	-0.7
BUM				iSg	Sn	04 15 02.1	-0.5
PDG	Podgorica	0.90	354	Pg	Pg	04 14 48.6	-1.4
PDG				Sg	Sg	04 15 00.2	-1.5
PDG	Podgorica	0.90	354		Pg	04 14 48.9	-1.1
PDG					Sn	04 15 03.6	-0.1
PDG	Podgorica	0.90	354	⇑P	Pg	04 14 49.0	-1.0
PDG	Podgorica	0.90	354	ePg	Pg	04 14 49.9	-0.1
PDG				eSg	Sn	04 15 04.4	+0.7
PDG	Podgorica	0.90	354	⇑iPg	Pg	04 14 49.0	-1.0
PDG				iSg	Sn	04 15 03.7	-0.1
CEME	Cevo	1.07	341	⇑iPg	Pb	04 14 51.8	-1.1
CEME				eSg	Sn	04 15 10.2	+2.2
VLO	Vlora	1.07	175	Pg	Pn	04 14 54.7	+1.5
VLO				Sg	Sn	04 15 10.6	+2.6
VLO				AML	AML	04 15 16.1	
	17nm,0.5s						
VLO	Vlora	1.07	175	P	Pn	04 14 55.1	+1.8
VLO				S	Sn	04 15 11.7	+3.8
HCY	Herceg Novi	1.12	324	⇑iPg	Pb	04 14 53.6	-0.3
HCY				iSg	Sn	04 15 11.7	+2.3
PVY	Plav	1.14	22	ePg	Pb	04 14 54.3	0.0
PVY	Plav	1.14	22	⇑iPg	Pb	04 14 52.9	-1.4
PVY				eSg	Sn	04 15 11.4	+1.4
OHR	Ohrid	1.15	111	iPg	Pb	04 14 53.9	-0.4
OHR				iSg	Sn	04 15 12.1	+2.0
OHR				eLg	Lg	04 15 12.8	
	comp=N,1µm,0.9s						
OHR				eLg	Lg	04 15 14.3	
	comp=E,2µm,0.8s						
NKME	Niksic	1.27	346	⇑iPg	Pn	04 14 55.9	-0.2
NKME				eSg	Sg	04 15 15.8	+2.2
KOME	Kolasin	1.32	4	ePg	Pg	04 14 58.8	+0.9
KOME	Kolasin	1.32	4	⇑iPg	Pn	04 14 57.0	+0.2
KOME				eSg	Sg	04 15 17.6	+2.5
BEY	Berane	1.39	16	ePg	Pg	04 14 59.3	0.0
IVA	Berane	1.39	16	⇑iPg	Pn	04 14 57.0	-0.7
IVA				iSg	Sg	04 15 19.2	+1.8
KBN	Korca	1.40	130	Pn	Pg	04 15 00.2	+0.6
KBN				Sn	Sg	04 15 20.6	+2.8
KBN	Korca	1.40	130	P	Pg	04 15 00.0	+0.5
KBN				S	Sg	04 15 21.1	+3.3
TREB	Trebinje	1.41	327	ePn	Pb	04 14 58.4	-0.3
TREB	Trebinje	1.41	327	ePg	Pg	04 14 59.5	-0.1
TREB				eSg	Sg	04 15 20.2	+2.3
BRY	Bratogost	1.50	336	⇑iPg	Pb	04 15 00.1	-0.3
BRY				iSg	Sg	04 15 23.0	+2.1
SKO	Skopje	1.60	74	iPg	Pg	04 15 02.8	-0.5
SKO				iSg	Sg	04 15 25.1	+0.9
NEST	Nestorio	1.69	131	Pn	Pb	04 15 03.9	+0.3
NEST				Sn	Sg	04 15 28.6	+1.6
NEST				AML	AML	04 15 33.2	
	comp=E,2.2nm,1.2s						
NEST	Nestorio	1.69	131	P	Pb	04 15 04.3	+0.7
NEST				S	Sg	04 15 27.6	+0.6
UPM	Unac-Piva	1.70	348	⇑iPn	Pb	04 15 04.0	+0.1
UPM				iSn	Sg	04 15 27.9	+0.5
KLINJ	Klinje	1.73	340	ePn	Pb	04 15 04.0	-0.4
SJES	Sjenica	1.78	14	ePg	Pb	04 15 05.2	+0.1
SJES				eSg	Sg	04 15 30.8	+0.9
PLE	Pljevlja	1.79	0	ePg	Pg	04 15 06.3	-0.7
PLE	Pljevlja	1.79	0	⇑iPn	Pb	04 15 05.0	-0.4
PLE				iSn	Sg	04 15 29.6	-0.7
STON	Ston	1.83	317	ePn	Pb	04 15 06.3	+0.5
STON				eSn	Sg	04 15 30.9	-0.4
KEK	Kerkira	1.85	170		Pn	04 15 04.4	+0.5
PENT	Pentalofos	1.89	135	P	Pb	04 15 07.1	+0.1
NOCI	Noci	1.90	248	⇓Pn	Pn	04 15 04.5	-0.2
NOCI				Sn	Sg	04 15 33.2	-0.5
NOCI				AML	AML	04 15 43.5	
	comp=E,2.7nm,0.3s						
RUDO	Rudo	2.08	360	ePn	Pn	04 15 07.8	+0.6
RUDO	Rudo	2.08	360	ePn	Pb	04 15 10.9	+0.7
IVAS	Ivanjica	2.12	15	ePn	Pn	04 15 08.7	+1.0
SELS	Selova	2.12	37	ePn	Pn	04 15 08.9	+1.2
IGT	Igoumenitsa	2.13	160	Pn	Pn	04 15 09.2	+1.4
IGT				Sn	Sg	04 15 40.6	-0.4
IGT	Igoumenitsa	2.13	160	P	Pn	04 15 09.3	+1.4
IGT	Igoumenitsa	2.13	160	ePn	Pn	04 15 09.0	+1.1
KPRO	Kipourio	2.18	136	P	Pb	04 15 11.2	-0.8
KZN	Kozani	2.19	123	P	Pb	04 15 10.9	-1.2
MATE	Matera	2.21	247	⇑P	Pb	04 15 12.7	+0.4
BARS	Barje	2.22	54	iPn	Pn	04 15 10.0	+1.0
BARS	Barje	2.22	54	ePn	Pn	04 15 10.1	+1.0
GOCS	Kraljevo Serbi	2.31	28	ePn	Pb	04 15 12.3	-1.8
BBLS	Lazi&#263i	2.33	0	ePn	Pn	04 15 12.4	+1.7
GRG	Griva	2.35	103	iPn	Pn	04 15 12.4	+1.5
PRMD	Pramanda	2.39	146	P	Pb	04 15 13.8	-1.7
VAY	Valandovo	2.41	94	iPn	Pn	04 15 13.3	+1.6
VAY				iSn	Sn	04 15 42.1	+1.0
VAY				eLg	Lg	04 15 45.9	
	comp=N,440nm,0.8s						
VAY				eLg	Lg	04 15 46.9	
	comp=E,313nm,0.9s						
BOSS	Bosilegrad	2.50	66	ePn	Pn	04 15 14.4	+1.4
GRUS	Gruza	2.55	22	ePn	Pn	04 15 14.9	+1.3
DIVS	Divibare	2.60	10	ePn	Pn	04 15 15.1	+0.7
TETR	Tetrakomo, Epi	2.62	146	P	Pn	04 15 16.8	+2.0
ACER	Acerenza	2.70	255		Pn	04 15 14.8	-1.0
BOVS	Bovan	2.71	39	⇑P	Pn	04 15 16.7	+0.9
BOVS				⇑S	Sn	04 15 50.8	+2.3
BOVS	Bovan	2.71	39	ePn	Pn	04 15 16.8	+1.0
TRAN	Tran	2.76	61	iP	Pn	04 15 18.2	+1.7
LIT	Litokhoron	2.76	120		Pn	04 15 16.9	+0.3
TRUS	Trudelj	2.79	15	ePn	Pb	04 15 20.3	-2.0
THL	Klokotos Trika	2.81	134	P	Pn	04 15 19.7	+2.5
KKB	Krupnik	2.83	83	P	Pn	04 15 19.1	+1.6
KKB				S	Sn	04 15 53.1	+1.7
KKB	Krupnik	2.83	83	iP	Pn	04 15 19.6	+2.2
KKB				iS	Sn	04 15 53.4	+2.1
KKB	Krupnik	2.83	83	iPn	Pn	04 15 19.9	+2.5
THE	Thessaloniki	2.86	107	iPn	Pn	04 15 18.8	+1.0
TSLK	Tsoukalades, L	2.88	160	P	Pn	04 15 18.5	+0.4
LKD2	Lefkada island	2.91	160	P	Pn	04 15 18.9	+0.2
AMPL	Ampelaki	2.96	151	P	Pn	04 15 20.4	+1.0
AMPL				S	Sn	04 15 56.2	+1.4
HORT	Hortiatis	2.96	107	P	Pn	04 15 20.9	+1.5
ZAPS	Zavoj	2.97	53	ePn	Pn	04 15 20.9	+1.5
DRAG	Dragano-Lefkad	2.99	162	P	Pn	04 15 19.6	-0.1
NYDR	Nydri-Lefkada	3.00	160	P	Pn	04 15 19.7	0.0
NYDR				S	Sn	04 15 55.1	-0.3
TEKS	Tekeris	3.01	2	ePn	Pn	04 15 20.7	+0.7
VTS	Vitosha	3.07	68	P	Pn	04 15 22.1	+1.3
VTS				S	Sn	04 15 59.2	+1.7
VTS	Vitosha	3.07	68	iP	Pn	04 15 22.2	+1.3
VTS				iS	Sn	04 15 58.4	+0.9
VTS	Vitosha	3.07	68	ePn	Pn	04 15 22.3	+1.4
EVGI	Lefkada island	3.07	161	P	Pn	04 15 20.9	+0.1
SOH	Sokhos	3.08	102	P	Pn	04 15 22.6	+1.6
TIP	Timpagrande	3.09	221		Pn	04 15 20.5	-0.7
ZAGS	Zajecar	3.10	42	ePn	Pn	04 15 22.4	+1.2
CUC	Castrocucco	3.11	241	Pn	Pn	04 15 21.9	+0.4
CUC	Castrocucco	3.11	241		Pn	04 15 22.2	+0.8
PLNA	Plana	3.16	71	iP	Pn	04 15 24.1	+2.0
BLSH	Balsha	3.18	64	iP	Pb	04 15 26.9	-2.1
SRS	Serrai	3.20	96	P	Pn	04 15 23.7	+1.1
SRS	Serrai	3.20	96	iPn	Pn	04 15 23.4	+0.9
SRS	Serrai	3.20	96	ePn	Pn	04 15 23.5	+0.9
BLKB	Belogradchik	3.21	48	⇓P	Pn	04 15 24.3	+1.7
BLKB				⇑S	Sn	04 16 02.9	+2.2
BLKB	Belogradchik	3.21	48	ePn	Pn	04 15 24.9	+2.2
FSK	Fiskardo	3.21	163	P	Pn	04 15 22.0	-0.6
FSK				S	Sn	04 15 57.9	-2.7
BORS2	Bor- Borsko je	3.21	36	ePn	Pn	04 15 22.5	-0.2
EVR	Evrytania	3.21	144	P	Pn	04 15 25.0	+2.2
AVAS	Avala Beograd	3.27	14	ePn	Pn	04 15 24.0	+0.5
MMB	Musomishta	3.28	88	P	Pn	04 15 25.5	+1.7
MMB	Musomishta	3.28	88	iP	Pn	04 15 25.6	+1.9
MMB	Musomishta	3.28	88	iPn	Pn	04 15 25.7	+1.9
MAKR	Makrakomi, Fth	3.28	139	P	Pn	04 15 25.9	+2.1
PLG	Polygyros	3.29	109	P	Pn	04 15 25.3	+1.5
KUBS	Kucevo	3.33	30	ePn	Pn	04 15 23.6	-0.8
PVO	Paravola	3.35	150	P	Pn	04 15 26.0	+1.4
AGG	Agios Georgios	3.38	137	P	Pn	04 15 26.9	+1.8
DMLN	Damoulianata-K	3.38	167	P	Pn	04 15 24.9	-0.2
VLS	Valsamata	3.48	164	P	Pn	04 15 25.8	-0.6
VLS				S	Sn	04 16 04.5	-3.1
ANX	Ano Chora	3.53	146	P	Pn	04 15 29.9	+2.8
BLY	Banja Luka	3.59	334	ePn	Pn	04 15 28.9	+1.0
BLY	Banja Luka	3.59	334	⇑P	Pn	04 15 30.4	+2.5
BLY	Banja Luka	3.59	334	ePn	Pb	04 15 38.4	+2.5
RTZL	Ratzakli, Kefa	3.62	162	P	Pn	04 15 28.1	-0.2
FRGS	Fruska Gora	3.63	5	ePn	Pn	04 15 28.9	+0.4
PAOL	Paolisi	3.66	264		Pn	04 15 28.5	-0.4
EFP	Efpalio	3.66	147	P	Pn	04 15 30.8	+1.8
MDVR	Moldovita	3.67	27	⇑P	Pn	04 15 30.0	+1.0
MDVR	Moldovita	3.67	27	ePn	Pn	04 15 29.8	+0.8
AXS	Araxos	3.67	155	P	Pn	04 15 29.4	+0.3
OUR	Ouranopolis	3.69	107	P	Pn	04 15 30.4	+1.1
MPEP	Malo Peshtene	3.70	59	iP	Pn	04 15 31.7	+2.2
ORTH	Orthonies,Zaky	3.82	164	P	Pn	04 15 31.1	0.0
RLS	Riolos of Patr	3.83	154	P	Pn	04 15 31.4	+0.2
VRSS	Vrsac	3.86	21	ePn	Pn	04 15 33.7	+2.1
KAVA	Kavala	3.91	96	P	Pn	04 15 33.2	+0.9
LTHK	Lithakia	3.98	163	P	Pn	04 15 32.6	-0.7
DRO	Drossia	4.00	153	P	Pn	04 15 34.4	+0.8
HERR	Herculane	4.01	33	⇓P	Pn	04 15 34.7	+0.9
RZN	Rozhen	4.02	86	P	Pn	04 15 36.0	+2.0
KNYS	Krupa na Uni	4.03	327	ePn	Pn	04 15 34.5	+0.5
PLD	Plovdiv	4.06	80	ePn	Pn	04 15 36.1	+1.8
KLV	Kalavryta, Ach	4.09	148	P	Pn	04 15 36.1	+1.2
INTR	Introdacqua	4.12	278		Pn	04 15 35.1	-0.2
AOS	Alonnisos	4.17	123	P	Pn	04 15 36.4	+0.5
SRE	Strehaia	4.20	41	⇑P	Pn	04 15 37.7	+1.4
GUR	Goura	4.26	147	P	Pn	04 15 38.0	+0.8
PLVB	Pleven	4.30	63	⇑P	Pn	04 15 40.0	+2.4
BZS	Buzias	4.39	21	⇓P	Pn	04 15 39.5	+0.6
BZS	Buzias	4.39	21	ePn	Pn	04 15 39.0	+0.1
AQU	L'Aquila	4.53	282	ePn	Pn	04 15 41.4	+0.5
CAMP	Campotosto	4.56	285		Pn	04 15 41.4	+0.1
GZR	Gura Zlata	4.58	32	⇑P	Pn	04 15 43.4	+1.9
GZR	Gura Zlata	4.58	32	ePn	Pn	04 15 43.8	+2.2
RDO	Rodhopi	4.65	93		Pn	04 15 43.5	+1.0
MORH	Mrgy, Hungar	4.71	354	ePn	Pn	04 15 44.3	+1.1
MORH	Mrgy, Hungar	4.71	354	⇑P	Pn	04 15 45.8	+2.6
MORH	Mrgy, Hungar	4.71	354	ePn	Pn	04 15 44.7	+1.5
GUMA	Gualdo di Mace	4.73	291		Pn	04 15 43.3	-0.4
ITM	Ithomi	4.78	155		Pn	04 15 44.8	+0.5
NRCA	Norcia	4.83	288		Pn	04 15 44.4	-0.6
FDMO	Fiordimonte	4.90	290		Pn	04 15 46.1	+0.1
BOJS	Bojanci	4.97	324	ePn	Pn	04 15 47.4	+0.5
BOJS	Bojanci	4.97	324	iPn	Pn	04 15 47.4	+0.5
SIRR	Siria	5.01	18	⇑P	Pn	04 15 47.6	+0.2
SIRR	Siria	5.01	18	ePn	Pn	04 15 49.9	+2.5
ELND	Elena	5.02	72	⇓P	Pn	04 15 49.3	+1.7
LOT	Lotru	5.05	38	⇑P	Pn	04 15 49.5	+1.4
ALN	Alexandroupoli	5.07	95		Pn	04 15 49.5	+1.3
HUMR	Humele	5.08	52	⇑P	Pn	04 15 50.7	+2.3
CESX	Cesi	5.17	284		Pn	04 15 49.6	-0.1
RIY	Rijeka	5.20	318	ePn	Pn	04 15 52.0	+2.0
BEHE	Becsehely	5.28	340	ePn	Pn	04 15 47.0	-4.1
MURB	Monte Urbino	5.36	291		Pn	04 15 52.3	0.0
ARR	Arges	5.41	43	⇑P	Pn	04 15 55.3	+2.3
ARR				⇑S	Sn	04 16 56.4	+1.3
CEY	Cerknica	5.53	321	ePn	Pn	04 15 55.4	+0.8
SKDS	Skadanscina	5.59	318	ePn	Pn	04 15 54.8	-0.6
SKDS	Skadanscina	5.59	318	iPn	Pn	04 15 55.2	-0.2
LJU	Ljubljana	5.71	324	ePn	Pn	04 15 58.0	+0.9
DRGR		5.77	23	⇑P	Pn	04 15 59.2	+1.2
DRGR		5.77	23	ePn	Pn	04 15 59.1	+1.1
RAFF	Raffo Rosso	5.80	224	Pn	Pn	04 15 57.0	-1.4
SOKA	Soboth	6.02	330	iPn	Pn	04 16 03.2	+1.9
	comp=E,6.1nm,0.6s						
OBKA	Obir	6.07	327	iPn	Pn	04 16 03.8	+1.7
	comp=E,1.1nm,0.2s						
SABO	M.te Sabotino	6.10	319		Pn	04 16 01.8	-0.7
MLR	Muntele Rosu	6.20	48	Pn	Pn	04 16 06.5	+2.7
	comp=E,1.4nm,0.3s,baz=192,slow=7.4,SNR=17						
MLR				Sn	Sn	04 17 10.9	-3.7
	baz=241,slow=19,SNR=1.2						
	comp=E,7.0nm,0.7s						
MLR	Muntele Rosu	6.20	48		Pn	04 16 05.6	+1.7
MLR	Muntele Rosu	6.20	48	⇑P	Pn	04 16 05.8	+1.9
MLR	Muntele Rosu	6.20	48	ePn	Pn	04 16 05.5	+1.7
DOPR	Dopca	6.21	42	⇑P	Pn	04 16 05.7	+1.8
DOPR				⇓S	Sn	04 17 16.2	+1.5
ISR	Istrita	6.33	53	⇑P	Pn	04 16 08.1	+2.4
ARSA	Arzberg	6.34	336	ePn	Pn	04 16 11.7	+5.9
	comp=E,2.0nm,0.4s						
ARSA	Arzberg	6.34	336	ePn	Pn	04 16 08.5	+2.7
PSZ	Piszkesteto	6.39	3		Pn	04 16 08.7	+2.2
OZUR		6.50	43	⇓P	Pn	04 16 10.0	+2.1
RONA	Rosalia, Austr	6.54	341	iPn	Pn	04 16 14.7	+6.2
	comp=E,1.0nm,0.4s						
TURR	Turia	6.59	45	⇑P	Pn	04 16 10.1	+0.9
TEOL	Teolo	6.79	307		Pn	04 16 11.7	-0.1
PLOR	Plostina	6.81	48	⇑P	Pn	04 16 14.4	+2.3
VRI	Vrincioaia	6.86	48	⇓P	Pn	04 16 15.0	+2.1
CONA	Conrad Observa	6.86	340	iPn	Pn	04 16 16.6	+3.6
	comp=E,0.4nm,0.3s						
MODS	Modra-Piesok	7.00	348	eSN	Sn	04 17 11.1	-23
MODS	Modra-Piesok	7.00	348	ePG	Pg	04 16 50.9	+4.4
KBA	Koelnbreinsper	7.03	324	ePn	Pn	04 16 14.3	-1.0
	comp=E,0.7nm,0.3s						
ABTA	Abfaltersbach	7.18	319	iPn	Pn	04 16 19.5	+2.2
	comp=E,1.0nm,0.3s						
CTI	Castel Tesino	7.18	311		Pn	04 16 16.8	-0.6
MOA	Molln	7.29	332	iPn	Pn	04 16 20.8	+2.2
	comp=E,1.5nm,0.2s						
MOA	Molln	7.29	332	ePn	Pn	04 16 20.9	+2.2
CFR	Carcaliu	7.35	57	⇑P	Pn	04 16 20.6	+1.2
BUR08	Bucovina Ar. S	7.38	32		Pn	04 16 21.3	+1.2
BIOA	Bad Ischl, Aus	7.39	328	iPn	Pn	04 16 22.8	+2.7
	comp=E,1.5nm,0.3s						
TPGR	Topolog	7.39	60	⇑P	Pn	04 16 21.7	+1.6
LESA	Schwarzleotal	7.59	323	iPn	Pn	04 16 23.3	+0.4
	comp=E,1.9nm,0.5s						
IDI	Anoyia	7.59	143	Pn	Pn	04 16 21.9	-1.0
	comp=E,3.7nm,1.0s,baz=333,slow=14,SNR=1.6						
IDI				Sn	Sn	04 17 42.4	-6.4
	comp=E,0.3nm,0.3s,baz=129,slow=14,SNR=1.4						
IDI	Anoyia	7.59	143		Pn	04 16 22.9	0.0
TLCR		7.78	59	⇑P	Pn	04 16 27.9	+2.4
WTTA	Wattenberg	7.97	319	iPn	Pn	04 16 30.2	+2.0
	comp=E,1.9nm,0.2s						
STHS	Stebnicka Huta	7.99	9	ePG	Pg	04 17 03.2	-2.2
STHS	Stebnicka Huta	7.99	9	ePN	Pn	04 16 33.5	+5.2
WATA	Walderalm	8.05	319	ePn	Pn	04 16 30.8	+1.6
	comp=E,1.5nm,0.2s						
SQTA	Sankt Quirin	8.15	317	ePn	Pn	04 16 32.7	+2.0
	comp=E,1.5nm,0.2s						
FETA	Feichten	8.28	314	iPn	Pn	04 16 35.6	+3.2
	comp=E,1.5nm,0.5s						
GERES	GERESS Array B	8.33	333	Pn	Pn	04 16 35.6	+2.5
	baz=147,slow=14,SNR=3.3						
RETA	Reutte	8.56	317	ePn	Pn	04 16 38.3	+2.2
	comp=E,1.5nm,0.5s						
DAVOX	Davos/Dischmat	8.61	311	Pn	Pn	04 16 38.7	+1.7
	comp=E,0.5nm,0.3s,baz=163,slow=15,SNR=6.3						
DAVOX				Sn	Sn	04 18 09.3	-4.6
	comp=E,0.2nm,0.3s,baz=291,slow=7.5,SNR=3.1						
KHC	Kasperske Hory	8.62	334	ePN	Pn	04 16 40.9	+3.9
KHC				eSN	Sn	04 18 14.3	+0.2
DAVA	Damuels	8.90	313	iPn	Pn	04 16 43.8	+2.9
	comp=E,1.0nm,0.3s						
BRTR	Keskin Array B	10.99	95	LR	LR	04 22 16.0	
	comp=E,181nm,18.1s,baz=284,slow=42						
AKASG	Malin Array Be	11.42	33	LR	LR	04 21 57.5	
	comp=E,92nm,21.1s,baz=222,slow=39						
PABE	Paberze	14.30	11	Pn	Pn	04 17 55.4	+0.8
HFS	Hagfors	18.95	351	P	P	04 18 51.6	-1.5
	comp=E,0.1nm,0.3s,baz=161,slow=11,SNR=1.4						
	comp=E,1.5nm,0.7s						
EKA	Eskdalemuir Ar	20.23	321	P	P	04 19 06.0	-1.1
	comp=E,0.5nm,0.6s,baz=120,slow=9.4,SNR=3.6						
	comp=E,0.5nm,0.6s						
ESK	Eskdalemuir	20.24	321	P	P	04 19 06.3	-1.0
ESK				IAmb	IAmb	04 19 13.4	
	comp=Z,32nm,1.5s						
FINES	FINESS Array B	20.35	9	P	P	04 19 06.2	-2.1
	comp=Z,6.5nm,1.0s,baz=170,slow=12,SNR=4.8						
	comp=Z,6.5nm,1.0s						
FINES	FINESS Array B	20.35	9	P	P	04 19 06.9	-1.5
ARTI	Arti	29.14	46	P	P	04 20 32.1	-0.9
ARTI				IAmb	IAmb	04 20 32.7	
	comp=Z,4.2nm,0.8s						
AB31	Akbulak array	29.22	61	P	P	04 20 32.4	-1.4
ABKAR	Akbulak array	29.22	61	P	P	04 20 33.7	-0.1
HRA	Herat	34.26	88	P	P	04 21 17.9	-0.6
HRA				IAmb	IAmb	04 21 19.2	
	comp=Z,3.3nm,0.5s						
BORK	Borovoye	35.69	53	P	P	04 21 31.3	+0.9
BORK				IAmb	IAmb	04 21 31.4	
	comp=Z,2.6nm,0.6s						
BVAR	Borovoye Array	35.73	54	P	P	04 21 30.8	0.0
	comp=Z,1.3nm,0.7s,baz=276,slow=5.8,SNR=8.2						
	comp=Z,1.3nm,0.7s						
FURI	Furi	36.71	147	LR	LR	04 38 45.5	
	comp=Z,44nm,18.6s,baz=58,slow=40						
ZAA0	Zalesovo Array	44.17	50	P	P	04 22 40.4	-0.4
ZALV	Zalesovo Beam	44.17	50	P	P	04 22 40.9	+0.1
	comp=Z,2.5nm,0.3s,baz=283,slow=7.4,SNR=5.8						
	comp=Z,2.5nm,0.3s						
ZALV	Zalesovo Beam	44.17	50	P	P	04 22 40.4	-0.4
MKAR	Makanchi Array	44.37	61	P	P	04 22 41.9	-0.6
	comp=Z,1.1nm,0.7s,baz=278,slow=7.2,SNR=11						
	comp=Z,1.1nm,0.7s						
MKAR	Makanchi Array	44.37	61	P	P	04 22 41.7	-0.8
SONM	Songino Array	59.04	52	LR	LR	04 52 34.5	
	comp=Z,71nm,18.0s,baz=80,slow=39						
LPHEP	Lephephe	64.85	173	P	P	04 25 12.3	+1.0
LBTB	Lobatse	66.46	174	P	P	04 25 22.0	+0.3

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*IDC **17** 04:55:28.7±0.9, 6°.32N×125°.42E, h0^{km}, mb3.9/6, mbtmp3.9/6, MS2.8/3, Error ellipse: s-maj=34.5km s-min=8.9km az=95.0*

*NEIC **17** 04:55:30.4±1.6, 6°.40N±0°.05×125°.4E±0°.1, h10^{km}±1^{km}, mb4.4/13, Error ellipse: s-maj=19.7km s-min=6.0km az=286.0*

ISC 17 04:55:29.7±0.6**, 6°.39N**±0°.06×**125°.4E**±0°.1**, h10**^{km}**, n30, σ1^{s}04**/28**, mb4.2**/13**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.69	12	Pg	Pg	04 55 43.3	+0.2
	849nm,0.3s,baz=174,slow=1.2,SNR=46						
DAV				Lg	Lg	04 55 53.7	
	883nm,0.3s,baz=217,slow=20,SNR=6.4						
DAV	Davao City (W)	0.69	12		Pg	04 55 42.6	-0.4
DAV				Sg	Sb	04 55 53.6	+0.2
DAV	Davao City (W)	0.69	12	P	Pg	04 55 40.0	-3.0
TOLI2	Tolitoli	7.01	222	Pn	Pn	04 57 10.6	-1.8
KAPI	Kappang	12.67	207	LR	LR	05 03 51.6	
	comp=Z,28nm,21.9s,baz=47,slow=40						
JOW	Kunigami	20.50	7	LR	LR	05 06 50.0	
	comp=Z,43nm,21.9s,baz=275,slow=33						
KNRA	Kununurra	22.18	171		P	05 00 27.0	+0.9
KNRA				IAmb	IAmb	05 00 35.4	
	comp=Z,12nm,0.8s						
FITZ	Fitzroy Crossi	24.34	180	P	P	05 00 47.5	-0.4
	comp=Z,2.7nm,0.4s,baz=360,slow=6.7,SNR=16						
	comp=Z,2.7nm,0.4s						
FITZ	Fitzroy Crossi	24.34	180		P	05 00 47.7	-0.2
COEN	Coen	26.81	139	P	P	05 01 10.1	-0.3
WB0	Warramunga Arr	27.45	161	P	P	05 01 15.2	-0.9
WB0				IAmb	IAmb	05 01 37.2	
	comp=Z,5.4nm,0.9s						
WRA	Warramunga Arr	27.60	162	P	P	05 01 17.2	-0.2
	comp=Z,0.6nm,0.5s,baz=330,slow=10,SNR=5.9						
	comp=Z,0.6nm,0.5s						
WR8	Warramunga Arr	27.66	161	P	P	05 01 17.4	-0.6
WR8				IAmb	IAmb	05 01 36.2	
	comp=Z,10.0nm,1.5s						
PSA00	Pilbara Seismi	28.33	191	P	P	05 01 24.9	+1.0
PSA00				IAmb	IAmb	05 01 36.4	
	comp=Z,18nm,1.4s						
ASAR	Alice Springs	31.00	165	P	P	05 01 47.2	-0.4
	comp=Z,1.0nm,0.5s,baz=344,slow=7.9,SNR=13						
	comp=Z,1.0nm,0.5s						
MJAR	Matsushiro Arr	32.20	20	LR	LR	05 14 28.1	
	comp=Z,23nm,19.5s,baz=100,slow=35						
FORT	Forrest	37.05	176	P	P	05 02 40.4	+0.5
FORT				IAmb	IAmb	05 02 42.3	
	comp=Z,2.9nm,0.7s						
BBOO	Buckleboo	40.28	166	P	P	05 03 07.6	+0.5
STKA	Stephens Creek	41.06	159	P	P	05 03 13.2	-0.4
	comp=Z,1.0nm,0.5s,baz=315,slow=7.8,SNR=4.2						
	comp=Z,1.0nm,0.5s						
STKA	Stephens Creek	41.06	159	P	P	05 03 13.4	-0.3
SONM	Songino Array	44.38	342	P	P	05 03 40.7	+0.1
MKAR	Makanchi Array	54.65	325	P	P	05 04 58.6	-0.2
	comp=Z,0.2nm,0.5s,baz=132,slow=7.0,SNR=7.6						
	comp=Z,0.2nm,0.5s						
MKAR	Makanchi Array	54.65	325	P	P	05 04 59.1	+0.2
ZALV	Zalesovo Beam	57.64	333	P	P	05 05 20.4	+0.4
KURBB	Kurchatov Arra	58.81	327	P	P	05 05 31.0	+2.7
	comp=Z,0.5nm,0.4s,baz=124,slow=6.3,SNR=9.8						
	comp=Z,0.5nm,0.4s						
KURK	Kurchatov	58.82	327	P	P	05 05 29.2	+0.9
KURK				IAmb	IAmb	05 05 33.7	
	comp=Z,2.3nm,0.9s						
KKAR	Karatay Array	60.42	316	P	P	05 05 40.7	+1.1
NRIK	Noril'sk	67.55	346	P	P	05 06 25.9	-0.1
NRIK				IAmb	IAmb	05 06 32.0	
	comp=Z,3.5nm,1.2s						
ABKAR	Akbulak array	69.29	320	P	P	05 06 36.6	-0.6
A36M	Sachs Harbour	89.84	17	P	P	05 08 28.8	+0.5

RSPR 17 05:13:37.8, 19°.20N×67°.17W, h46^{km}±7^{km}**, 8C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.73	176	⇑eP	Pn	05 13 50.4	-1.3
AGPR	Aguadilla, PR	0.73	176	eS	Sn	05 14 00.9	-0.8
AGPR	Aguadilla, PR	0.73	176	⇑eP	Pn	05 13 50.6	-1.1
AGPR	Aguadilla, PR	0.73	176	eS	Sn	05 14 01.0	-0.7
LSP	Las Mesas	1.02	176	⇑eP	Pn	05 13 54.6	-1.0
LSP	Las Mesas	1.02	176	eS	Sn	05 14 08.2	-0.6
LSP	Las Mesas	1.02	176	⇑eP	Pn	05 13 54.7	-1.0
LSP	Las Mesas	1.02	176	eS	Sn	05 14 09.1	+0.3
CRPR	Cabo Rojo, PR	1.18	177	⇑eP	Pn	05 13 57.3	-0.6
CRPR	Cabo Rojo, PR	1.18	177	eS	Sn	05 14 11.4	-1.4
CRPR	Cabo Rojo, PR	1.18	177	⇑eP	Pn	05 13 58.6	+0.7
CRPR	Cabo Rojo, PR	1.18	177	eS	Sn	05 14 13.0	+0.1
MLPR	Magueyes Islan	1.23	175	⇑eP	Pn	05 13 57.4	-1.1
MLPR	Magueyes Islan	1.23	175	eS	Sn	05 14 12.7	-1.1
MLPR	Magueyes Islan	1.23	175	⇑eP	Pn	05 13 59.2	+0.7
MLPR	Magueyes Islan	1.23	175	eS	Sn	05 14 14.2	+0.4

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*NEIC **17** 05:28:36.6±1.5, 19°.17N±0°.05×67°.24W±0°.02, h10^{km}±2^{km}, ML3.1/16, Md3.3/12(RSPR), Error ellipse: s-maj=8.0km s-min=3.8km az=1.0*

*OSPL **17** 05:28:36.9±0.3, 19°.27N×67°.33W, h16^{km}±2^{km}, ML2.9, Presumed earthquake*

*SDD **17** 05:28:37.9±0.8, 19°.32N×67°.07W, h31^{km}±999^{km}, MD3.5,* *ML3.0, MW3.5, Presumed earthquake*

*RSPR **17** 05:28:37.6, 19°.34N×67°.29W, h27^{km}±28^{km}, MD3.2/12*

ISC 17 05:28:34.4±1.5**, 19°.34N**±0°.06×**67°.25W**±0°.03**, h17**^{km}±9^{km}**,**
n58, σ0ˢ.83/73**, 4C-10D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	0.88	172	Pn	Pb	05 28 51.5	+0.4
AGPR				IAML		05 29 03.8	
	1µm,0.3s						
AGPR				IAML		05 29 04.2	
	835nm,0.4s						
AGPR	Aguadilla, PR	0.88	172	⇓*i*P	Pb	05 28 51.5	+0.4
AGPR	Aguadilla, PR	0.88	172	*e*S	Sg	05 29 02.5	-0.6
AGPR	Aguadilla, PR	0.88	172	⇑*i*P	Pn	05 28 51.9	-0.1
AGPR				*e*Sg	Sg	05 29 02.5	-0.6
AGPR				IAML		05 29 03.7	
	comp=N,977nm,0.2s						
AGPR	Aguadilla, PR	0.88	172	*i* P	Pb	05 28 51.6	+0.4
AGPR				*e*S	Sg	05 29 02.4	-0.7
AGPR				IAML		05 29 03.1	
	comp=Z,392nm,0.3s						
IDE	Isla Desecheo	0.97	193		Pn	05 28 53.6	+0.4
IDE					Sg	05 29 06.0	-0.1
IDE	Isla Desecheo	0.97	193	⇓*i*P	Pn	05 28 53.6	+0.4
IDE	Isla Desecheo	0.97	193	*e*S	Sg	05 29 06.0	-0.1
AOPR	Arecibo Observ	1.09	155		Pb	05 28 54.8	-0.1
AOPR					Sb	05 29 08.5	-0.3
AOPR	Arecibo Observ	1.09	155	IAML		05 29 13.5	
	comp=N,676nm,0.3s						
AOPR	Arecibo Observ	1.09	155	⇑*i*P	Pb	05 28 54.8	-0.1
AOPR	Arecibo Observ	1.09	155	*e*S	Sb	05 29 08.5	-0.3
AOPR	Arecibo Observ	1.09	155	*e*Pg	Pb	05 28 54.8	-0.1
AOPR				⇑*e*Sg	Sb	05 29 06.7	-2.2
AOPR				IAML		05 29 12.2	
	comp=N,578nm,0.3s						
EMPR	Esperanza - Ma	1.09	142		Pg	05 28 56.5	+0.9
EMPR					Sn	05 29 11.2	+1.5
EMPR	Esperanza - Ma	1.09	142	IAML		05 29 13.4	
	comp=N,480nm,0.4s						
EMPR				IAML		05 29 28.1	
	comp=N,545nm,0.5s						
EMPR	Esperanza - Ma	1.09	142	⇓*e*P	Pg	05 28 56.5	+0.9
EMPR	Esperanza - Ma	1.09	142	*e*S	Sn	05 29 11.2	+1.5
PRSN	Puerto Rico Se	1.12	175	⇑*e*P	Pb	05 28 55.4	0.0
PRSN	Puerto Rico Se	1.12	175	*e*S	Sb	05 29 08.9	-0.7
PRSN	Puerto Rico Se	1.12	175	*e*Pg	Pb	05 28 55.1	-0.2
PRSN				*e*Sg	Sb	05 29 09.0	-0.6
PRSN				IAML		05 29 13.5	
	comp=N,1µm,0.2s						
LSP	Las Mesas	1.17	173		Pb	05 28 56.2	+0.1
LSP					Sb	05 29 11.2	+0.1
LSP	Las Mesas	1.17	173	⇓*i*P	Pb	05 28 56.2	+0.1
LSP	Las Mesas	1.17	173	*e*S	Sb	05 29 11.2	+0.1
UUPR	Utuado, UPR, P	1.19	155		Pn	05 28 56.1	-0.2
UUPR					Sb	05 29 11.1	-0.5
UUPR	Utuado, UPR, P	1.19	155	⇑*i*P	Pn	05 28 56.1	-0.2
UUPR	Utuado, UPR, P	1.19	155	*e*S	Sb	05 29 11.1	-0.5
ECPR	Experimental S	1.32	140	⇑*i*P	Pb	05 28 58.4	-0.2
ECPR	Experimental S	1.32	140	*e*S	Sn	05 29 15.2	+0.1
CRPR	Cabo Rojo, PR	1.33	174		Pn	05 28 58.4	+0.2
CRPR					Sb	05 29 15.2	-0.5
CRPR	Cabo Rojo, PR	1.33	174	IAML		05 29 16.7	
	comp=N,482nm,0.6s						
CRPR				IAML		05 29 17.2	
	comp=N,312nm,0.4s						
CRPR	Cabo Rojo, PR	1.33	174	⇓*i*P	Pn	05 28 58.4	+0.2
CRPR	Cabo Rojo, PR	1.33	174	*e*S	Sb	05 29 15.2	-0.5
CRPR	Cabo Rojo, PR	1.33	174	*e*Pg	Pn	05 28 58.6	+0.4
CRPR				*e*Sg	Sb	05 29 14.4	-1.3
CRPR				IAML		05 29 18.0	
	comp=N,443nm,0.4s						
CRPR	Cabo Rojo, PR	1.33	174	*i* P	Pn	05 28 58.5	+0.3
CRPR				*e*S	Sb	05 29 14.4	-1.3
CRPR				IAML		05 29 18.0	
	comp=Z,296nm,0.3s						
PCDR	Punta Cana, DR	1.35	233	*e*Pg	Pg	05 29 00.9	+0.4
PCDR				⇓*e*Sg	Sg	05 29 18.4	+0.2
PCDR				IAML		05 29 25.2	
	comp=N,311nm,0.8s						
MLPR	Magueyes Islan	1.38	172	⇓*i*P	Pn	05 28 59.1	+0.3
MLPR	Magueyes Islan	1.38	172	*e*S	Sn	05 29 16.0	-0.6
MLPR	Magueyes Islan	1.38	172	*e*Pg	Pn	05 28 59.1	+0.3
MLPR				⇓*i*Sg	Sn	05 29 15.2	-1.4
MLPR				IAML		05 29 17.5	
	comp=N,67nm,0.5s						
GBPR	Guanica, Bosqu	1.40	166		Pb	05 29 00.5	+0.4
GBPR					Sn	05 29 17.5	+0.3
GBPR	Guanica, Bosqu	1.40	166	⇑*e*P	Pb	05 29 00.5	+0.4
GBPR	Guanica, Bosqu	1.40	166	*e*S	Sn	05 29 17.5	+0.3
OBIP	Obispado Ponce	1.43	155		Pn	05 28 59.8	+0.4
OBIP					Sn	05 29 17.4	-0.5
OBIP	Obispado Ponce	1.43	155	⇓*i*P	Pn	05 28 59.8	+0.4
OBIP	Obispado Ponce	1.43	155	*e*S	Sn	05 29 17.4	-0.5
GCPR	Guaynabo City	1.50	133		Pb	05 29 01.6	-0.3
GCPR					Sb	05 29 20.2	-0.4
GCPR	Guaynabo City	1.50	133	⇑*i*P	Pb	05 29 01.6	-0.3
GCPR	Guaynabo City	1.50	133	*e*S	Sb	05 29 20.2	-0.4
SJG	San Juan	1.60	140		Pb	05 29 03.2	-0.4
SJG	San Juan	1.60	140	IAML		05 29 36.4	
	comp=N,197nm,0.4s						
SJG	San Juan	1.60	140	⇓*i*P	Pb	05 29 03.2	-0.4
SJG	San Juan	1.60	140	*e*S	Sn	05 29 21.0	-1.2
SJG	San Juan	1.60	140	*i* P	Pb	05 29 03.1	-0.5
SJG				IAML		05 29 26.8	
	comp=Z,86nm,0.3s						
MIDR	Miches	1.74	259	*e*Pg	Pg	05 29 07.3	-0.6
MIDR				IAML		05 29 40.5	
	comp=N,53nm,2.3s						
MIDR				IAML		05 29 41.3	
	comp=N,82nm,0.8s						
DR12	Loma Pena Alta	2.09	255	Pn	Pb	05 29 11.9	0.0
HATOM	Hato Mayor del	2.09	255	*e*Pg	Pb	05 29 12.0	+0.1
HATOM				*e*Sg	Sn	05 29 36.3	+1.9
HATOM				IAML		05 29 51.0	
	comp=N,77nm,0.9s						
BANI	BANI	3.10	253	Pn	Pn	05 29 25.3	+2.8
SDDR	Presa de Saban	3.84	265		Pn	05 29 34.1	+1.4
REDR	Restauracion	3.92	268	*e*Pg	Pb	05 29 41.1	-2.0
REDR				*e*Sg	Sb	05 30 28.1	-2.3
REDR				IAML		05 30 54.6	
	comp=N,39nm,0.4s						

*IDC **17** 05:56:01.3±7.1, 30°.69S×179°.04E, h540^{km}±83^{km}, mb3.2/3, mbtmp4.3/4, Error ellipse: s-maj=102.8km s-min=40.5km az=13.0*

*NEIC **17** 05:56:03.7±1.1, 30°.6S±0°.2×178°.9E±0°.2, h553^{km}±6^{km}, mb4.0/10, Error ellipse: s-maj=28.3km s-min=19.2km az=186.0*

*WEL **17** 05:56:05.6±1.3, 31°S±8°×18°0E±2°1, h501^{km}±18^{km}, M4.6/6, mB3.8/2, MLv4.6/6, Mw(mB)2.8/2, Error ellipse: s-maj=28.3km s-min=7.9km az=104.9, confirmed*

*NOU **17** 05:56:15.7, 32°.14S×179°.70E, h529^{km}, mb4.2/9, South of Kermadec Islands*

ISC 17 05:56:00.2±0.9**, 30°.62S**±0°.09×**179°.5E**±0°.1**, h550**^{km}**, n48,**
σ2ˢ.13/54**, mb4.0**/9**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	2.65	60	P	P	05 57 12.8	-0.3
GLKZ				S	S	05 58 10.4	-2.0
WCZ	Waipu Caves	6.81	218	P	P	05 57 48.1	+1.9
KUZ	Kuaotunu	6.85	206	P	P	05 57 49.8	+3.3
KUZ	Kuaotunu	6.85	206	P	P	05 57 49.4	+2.9
MBAZ	Motutapu North	7.21	211	P	P	05 57 53.0	+3.0
HAZ	Te Kaha	7.25	191	P	P	05 57 52.4	+2.1
HAZ				S	S	05 59 17.9	-2.8
ETAZ	East Tamaki Re	7.35	210	P	P	05 57 54.5	+3.2
MKAZ	Moumakai	7.38	208	P	P	05 57 54.1	+2.5
WTAZ	Waiatarua	7.49	212	P	P	05 57 55.5	+2.8
AWAZ	Awhitu Peninsu	7.57	211	P	P	05 57 56.1	+2.6
TWGZ	Tauwhareparae	7.63	189	P	P	05 57 55.3	+1.2
TWGZ				S	S	05 59 27.4	-0.3
TOZ	Tahuroa Road	7.81	204	P	P	05 57 58.8	+3.0
TOZ	Tahuroa Road	7.81	204	P	P	05 57 59.0	+3.2
MWZ	Matawai	7.86	191	P	P	05 57 57.1	+0.8
MWZ				S	S	05 59 30.1	-1.5
URZ	Urewera	7.86	194	P	P	05 57 56.2	-0.1
	24nm,0.4s,baz=20,slow=1.4,SNR=16						
URZ				S	S	05 59 28.8	-2.9
	3.9nm,0.4s,baz=217,slow=20,SNR=0.9						
URZ	Urewera	7.86	194	P	P	05 57 57.1	+0.8
URZ	Urewera	7.86	194	P	P	05 57 57.1	+0.8
URZ				S	S	05 59 28.4	-3.2
RIGZ	Rimuhau	8.18	189	P	P	05 58 01.2	+1.7
RIGZ				S	S	05 59 34.9	-2.7
RTZ	Ruatahuna	8.23	194	P	P	05 58 00.5	+0.5
MTHZ	Maungataniwha	8.49	194	P	P	05 58 03.8	+1.2
NMHZ	Naumai	8.73	194	P	P	05 58 06.5	+1.5
HIZ	Hauiti	8.74	204	P	P	05 58 07.9	+2.8
HIZ	Hauiti	8.74	204	P	P	05 58 08.6	+3.6
BKZ	Black Stump Fm	8.86	195	P	P	05 58 07.6	+1.2
KWHZ	Kaweka Forest	9.12	195	P	P	05 58 10.4	+1.3
KWHZ				S	S	05 59 52.6	-2.4
BFZ	Birch Farm	10.37	194	P	P	05 58 22.9	+1.2
TCW	Tory Channel	11.37	200	P	P	05 58 31.9	0.0
QRZ	Quartz Range	11.63	207	P	P	05 58 37.2	+2.6
BSWZ	Blackbirch Sta	11.95	201	P	P	05 58 39.4	+1.5
KHZ	Kahutara	12.69	200	P	P	05 58 47.0	+1.5
INZ	Inchbonnie	13.67	206	P	P	05 58 57.4	+1.6
RPZ	Rata Peaks	14.67	205	P	P	05 59 08.1	+2.1
FOZ	Fox Glacier	14.99	208	P	P	05 59 10.4	+1.1
ODZ	Otahua Downs	15.97	203	P	P	05 59 22.4	+3.2
ARMA	Armidale	23.95	263	P	P	06 00 31.1	-0.7
ARMA				IAmb	IAmb	06 01 07.8	
	comp=Z,17nm,1.4s						
STKA	Stephens Creek	32.29	258	P	P	06 01 43.3	-0.9
	comp=Z,2.9nm,0.7s,baz=87,slow=10,SNR=5.5						
	comp=Z,2.9nm,0.7s						
STKA	Stephens Creek	32.29	258	IAmb	IAmb	06 01 45.3	
	comp=Z,12nm,0.8s						
BBOO	Buckleboo	36.79	255	P	P	06 02 20.8	-1.0
BBOO				IAmb	IAmb	06 02 21.9	
	comp=Z,4.4nm,1.0s						
ASAR	Alice Springs	40.91	268	P	P	06 02 54.0	-1.2
	comp=Z,1.5nm,0.7s,baz=107,slow=8.3,SNR=17						
	comp=Z,1.5nm,0.7s						
WR8	Warramunga Arr	41.77	274	P	P	06 03 00.4	-1.6
WR8				IAmb	IAmb	06 03 01.3	
	comp=Z,2.9nm,0.8s						
WRA	Warramunga Arr	41.92	274	P	P	06 03 01.6	-1.5
	comp=Z,2.9nm,0.6s,baz=114,slow=7.9,SNR=14						
	comp=Z,2.9nm,0.6s						
WRA	Warramunga Arr	41.92	274	P	P	06 03 01.8	-1.4
WB0	Warramunga Arr	41.94	274	P	P	06 03 01.9	-1.4
WB0				IAmb	IAmb	06 03 02.5	
	comp=Z,5.2nm,0.8s						
FORT	Forrest	43.87	256	P	P	06 03 17.4	-0.8
FORT				IAmb	IAmb	06 03 17.9	
	comp=Z,2.9nm,0.6s						
PTCN	Pitcairn Islan	44.65	96	P	P	06 03 30.6	+6.3
FITZ	Fitzroy Crossi	50.17	271	P	P	06 04 04.8	-1.0
BELA	Belgrano 2	69.85	173	P	P	06 06 19.7	+4.4
BELA				IAmb	IAmb	06 06 54.2	
	comp=Z,4.8nm,1.3s						
FINES	FINESS Array B	144.57	338	PKP	PKPab	06 14 34.8	+0.5
	comp=Z,2.3nm,0.5s,baz=55,slow=5.0,SNR=21						

*IDC **17** 06:00:51.0±0.8, 6°.51N×125°.19E, h0^{km}, mb4.0/8, mbtmp4.0/8, Error ellipse: s-maj=20.5km s-min=8.5km az=115.0*

*NEIC **17** 06:00:53.7±1.5, 6°.54N±0°.06×125°.26E±0°.08, h10^{km}±1^{km}, mb4.5/24, Error ellipse: s-maj=15.8km s-min=7.7km az=300.0*

*DJA **17** 06:00:53.9±0.5, 7°N±4°×12°5E±°, h10^{km}, M4.9/9, mb5.0/9, mB5.3/7, MLv5.0/6, Mw(mB)4.7/7*

ISC 17 06:00:53.0±0.6**, 6°.56N**±0°.06×**125°.31E**±0°.08**, h10**^{km}**, n50,**
σ1ˢ.17/50**, mb4.3**/18**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.57	28	Pg	Pg	06 01 05.2	+1.1
	2µm,0.3s,baz=235,slow=2.4,SNR=133						
DAV				Lg	Lg	06 01 12.3	
	3µm,0.3s,baz=246,slow=20,SNR=15						
DAV				LR	LR	06 01 39.2	
	comp=Z,2µm,20.2s,baz=276,slow=71						
DAV	Davao City (W)	0.57	28		Pg	06 01 05.3	+1.2
DAV	Davao City (W)	0.57	28	P	Pg	06 01 05.1	+0.9
DAV	Davao City (W)	0.57	28	P	Pg	06 01 04.0	-0.2
SGSI	Sangihe	2.87	176	P	Pn	06 01 40.5	+1.7
SGSI				S	Sn	06 02 15.4	+2.0
TNTI	Ternate	6.11	160	Pn	Pn	06 02 21.4	-2.0
GTOI	Gorontalo	6.32	201	P	Pn	06 02 27.0	+0.7
MRSI	Marisa	6.92	209	P	Pn	06 02 35.5	+1.0
	0.6nm2µm161nm,0.6s						
TOLI2	Tolitoli	7.05	220		Pn	06 02 34.8	-1.6
LUWI	Luwuk	7.97	199		Pn	06 02 46.2	-2.7
LUWI	Luwuk	7.97	199	P	Pn	06 02 50.1	+1.1
	2µm140nm,0.8s						
MPSI	Mapaga	8.21	221	P	Pn	06 02 53.2	+0.9
APSI	Ampana	8.27	206	P	Pn	06 02 58.3	+5.1
SANI	Sanana	8.58	175	P	Pn	06 02 57.9	+0.5
	993nm34nm,0.8s						
NLAI	Namlea	9.90	170	P	Pn	06 03 16.9	+1.4
	1µm37nm,0.7s						
KRAI	Karang Ratu	10.29	162	P	Pn	06 03 22.4	+1.6
	16nm,0.5s						
TTSI	Tana Toraja	11.01	210	P	Pn	06 03 32.8	+2.1
SBUM	Sibu	13.67	253	Pn	Pn	06 04 08.2	+1.1
SOEI	Soe	16.24	184	Pn	Pn	06 04 42.1	+0.5
SOEI				IAmb	IAmb	06 05 22.2	
	comp=Z,24nm,0.8s						
JAGI	Jajag, Banyuwa	18.62	217		P	06 05 09.4	-1.5
JAGI				IAmb	IAmb	06 05 16.9	
	comp=Z,32nm,1.1s						
MTN	Manton Dam	20.13	163	P	P	06 05 27.6	+0.2
KNRA	Kununurra	22.36	171		P	06 05 51.5	0.0
KNRA				IAmb	IAmb	06 05 53.3	
	comp=Z,24nm,0.8s						
FITZ	Fitzroy Crossi	24.51	179	P	P	06 06 12.3	-0.5
	comp=Z,3.1nm,0.5s,baz=6.0,slow=11,SNR=21						
	comp=Z,3.1nm,0.5s						
COEN	Coen	27.02	139		P	06 06 35.4	-0.2
COEN				IAmb	IAmb	06 06 48.0	
	comp=Z,8.2nm,1.0s						
WB0	Warramunga Arr	27.65	161		P	06 06 40.6	-0.6
WB0				IAmb	IAmb	06 06 52.1	
	comp=Z,9.3nm,1.1s						
WRAB	Tennant Creek	27.79	162	P	P	06 06 42.5	0.0
WRA	Warramunga Arr	27.80	162	P	P	06 06 41.3	-1.2
	comp=Z,1.6nm,0.6s,baz=328,slow=11,SNR=11						
	comp=Z,1.6nm,0.6s						
WR8	Warramunga Arr	27.86	161	P	P	06 06 42.0	-1.1
WR8				IAmb	IAmb	06 07 21.6	
	comp=Z,6.7nm,0.9s						
AS31	Alice Springs	31.20	165		P	06 07 12.0	-0.6
ASAR	Alice Springs	31.20	165	P	P	06 07 11.9	-0.7
	comp=Z,1.7nm,0.6s,baz=349,slow=7.8,SNR=35						
	comp=Z,1.7nm,0.6s						
FORT	Forrest	37.22	176	P	P	06 08 04.4	-0.4
INKA	Innaminka	37.23	157		P	06 08 05.2	+0.4
INKA				IAmb	IAmb	06 08 05.7	
	comp=Z,3.0nm,0.5s						
NWAO	Narrogin (SRO)	40.02	191	P	P	06 08 26.7	-1.5
NWAO				IAmb	IAmb	06 08 42.8	
	comp=Z,30nm,1.5s						
BBOO	Buckleboo	40.47	166		P	06 08 32.0	0.0
BBOO				IAmb	IAmb	06 08 32.6	
	comp=Z,11nm,0.6s						
STKA	Stephens Creek	41.27	159	P	P	06 08 37.8	-0.8
	comp=Z,5.7nm,0.8s,baz=336,slow=8.7,SNR=8.3						
	comp=Z,5.7nm,0.8s						
STKA	Stephens Creek	41.27	159		P	06 08 38.8	+0.2
CAN	Canberra	47.26	153	P	P	06 09 27.7	+1.1
CAN				IAmb	IAmb	06 09 28.6	
	comp=Z,11nm,1.0s						
MKAR	Makanchi Array	54.44	325	P	P	06 10 20.5	-0.1
	comp=Z,0.6nm,0.6s,baz=126,slow=8.4,SNR=8.1						
	comp=Z,0.6nm,0.6s						
FRU1	Bishkek	57.30	317	P	P	06 10 42.9	+1.6
KURBB	Kurchatov Arra	58.60	327	P	P	06 10 49.5	-0.7
	comp=Z,1.1nm,0.6s,baz=123,slow=6.7,SNR=13						
	comp=Z,1.1nm,0.6s						
KURK	Kurchatov	58.61	327	P	P	06 10 49.9	-0.3
KURK				IAmb	IAmb	06 10 55.6	
	comp=Z,2.9nm,0.9s						
GAR	Garm	58.98	312		P	06 10 53.4	+0.2
KKAR	Karatay Array	60.21	316		P	06 11 01.9	+0.4
BVAR	Borovoye Array	64.19	327	P	P	06 11 27.0	-1.0
	comp=Z,0.3nm,0.3s,baz=121,slow=5.6,SNR=2.1						
	comp=Z,0.3nm,0.3s						
BKZ	Black Stump Fm	65.63	138	P	P	06 11 37.8	+0.2
RTZ	Ruatahuna	65.66	138	P	P	06 11 37.6	-0.3
ABKAR	Akbulak array	69.08	320	P	P	06 11 57.4	-1.8
B22K	Teshekpuk Lake	80.92	20		P	06 13 09.6	+2.4
L22K	Petersville	81.41	28	P	P	06 13 09.8	-0.3
L22K				IAmb	IAmb	06 13 15.6	
	comp=Z,12nm,1.5s						
ILAR	Eielson Array	83.17	26	P	P	06 13 18.2	-1.0
	comp=Z,0.4nm,0.9s,baz=243,slow=5.2,SNR=5.9						
	comp=Z,0.4nm,0.9s						

*MOS **17** 06:07:14.6±1.0, 6°.57N×125°.21E, h10^{km}, mb5.0/30, Error ellipse: s-maj=11.7km s-min=5.7km az=113.3*

*BJI **17** 06:07:14.5, 6°.54N×125°.56E, h11^{km}, mB4.9/16, mb4.5/43, Ms4.3/21, Ms7 4.0/22*

*IDC **17** 06:07:14.1±0.5, 6°.54N×125°.16E, h0^{km}, mb4.4/23, mbtmp4.4/23, MS3.9/38, Error ellipse: s-maj=13.9km s-min=7.5km az=111.0*

*DJA **17** 06:07:16.6±0.5, 7°N±4°×12°5E±°, h10^{km}, M5.4/13, mb5.4/13, mB5.6/10, MLv5.7/9, Mw(mB)5.1/10, MwMwp4.6/1, Mwp5.0/1*

*NEIC **17** 06:07:17.1±2.0, 6°.62N±0°.04×125°.16E±0°.07, h10^{km}±1^{km}, mb5.0/117, Error ellipse: s-maj=13.0km s-min=3.7km az=302.0*

*GCMT **17** 06:07:19.1±0.3, 6°.66N±0°.02×125°.20E±0°.02, h28^{km}±1^{km}, MW4.9/76, Moment Tensor Solution. s20,c21; s76,c102; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.26±.16; $M_{\theta\theta}$2.31±.11; $M_{\phi\phi}$-2.56±.12; $M_{r\theta}$-1.32±.21; $M_{\theta\phi}$-0.25±.11; $M_{\phi r}$1.42±.28; Best double couple: $M_0$3.12900×10^{16} NP1:ϕ_s227.00000°, δ51.00000°, λ176.00000°. NP2: ϕ_s319.00000°, δ87.00000°, λ39.00000°. Principal axes: T 3.0910, Plg29.0000°, Azm190.0000°; N 0.0820, Plg51.0000°, Azm324.0000°; P -3.1670, Plg24.0000°, Azm87.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 06:07:17.3±0.3**, 6°.61N**±0°.03×**125°.21E**±0°.05**, h10**^{km}**, n338,**
σ1ˢ.63/294**, mb4.9**/115**, MS4.0**/46**, 11C-14D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.59	38	Pg	Pg	06 07 28.5	-0.2
	4µm,0.3s,baz=264,slow=7.1,SNR=81						
DAV				Lg	Lg	06 07 35.1	
	13µm,0.3s,baz=288,slow=20,SNR=24						
DAV	Davao City (W)	0.59	38		Pg	06 07 28.9	+0.2
DAV	Davao City (W)	0.59	38	P	Pg	06 07 28.5	-0.2
DAV	Davao City (W)	0.59	38	P	Pg	06 07 28.8	+0.2
DAV	Davao City (W)	0.59	38	P	Pg	06 07 27.0	-1.7
SGSI	Sangihe	2.92	174	P	Pn	06 08 05.9	+2.1
SGSI				S	Sn	06 08 42.6	+3.6
GAMI	Galela, Maluku	5.39	151	P	Pn	06 08 39.5	+1.7
	4.4nm7µm384nm,1.0s						
TNTI	Ternate	6.18	160		Pn	06 08 50.5	+1.8
TNTI	Ternate	6.18	160	P	Pn	06 08 51.8	+3.1
TNTI	Ternate	6.18	160	P	Pn	06 08 50.8	+2.1
	3µm191nm,0.7s						
TNTI				pP	Pn	06 08 51.2	+2.5
	3µm191nm,0.7s						
GTOI	Gorontalo	6.33	200	P	Pn	06 08 51.1	+0.4
GTOI				pP	Pn	06 08 51.3	+0.6
MRSI	Marisa	6.91	208	P	Pn	06 08 59.2	+0.5
	4.9nm7µm688nm,0.8s						
MRSI				pP	Pn	06 08 59.8	+1.1
	4.9nm7µm688nm,0.8s						
TOLI2	Tolitoli	7.03	219	Pn	Pn	06 08 59.0	-1.3
LUWI	Luwuk	7.98	198		Pn	06 09 11.5	-1.9
LUWI	Luwuk	7.98	198	P	Pn	06 09 12.3	-1.1
LUWI	Luwuk	7.98	198	P	Pn	06 09 15.0	+1.6
	4µm384nm,0.7s						
LUWI				pP	Pn	06 09 12.3	-1.1
	4µm384nm,0.7s						
MPSI	Mapaga	8.18	221	P	Pn	06 09 15.1	-1.0
APSI	Ampana	8.27	206	P	Pn	06 09 21.6	+4.2
SANI	Sanana	8.63	175	P	Pn	06 09 22.3	-0.1
SANI	Sanana	8.63	175	P	Pn	06 09 22.7	+0.3
	3µm120nm,0.8s						
KKM	Kota Kinabalu	8.96	267	P	Pn	06 09 32.2	+5.2
PCI	Palu	9.19	216	pP	Pn	06 09 30.2	+0.1
I39PW	PALAU INFRASON	9.31	84	I	I	07 01 20.0	
	baz=265,slow=296,SNR=0.6						
SWI	Sorong	9.56	141	P	Pn	06 09 36.8	+1.6
	65nm,0.8s						
SWI				pP		06 09 37.1	
	65nm,0.8s						
NLAI	Namlea	9.96	169	P		06 09 41.1	
	2µm156nm,0.6s						
NLAI				pP	Pn	06 09 40.8	+0.2
	2µm156nm,0.6s						
KRAI	Karang Ratu	10.36	162	P	Pn	06 09 47.0	+0.9
	81nm,1.1s						
KRAI				pP		06 09 47.3	
	81nm,1.1s						
TTSI	Tana Toraja	11.00	209	P	Pn	06 09 56.1	+1.3
FAKI	Fak Fak	11.79	143		Pn	06 10 06.7	+1.1
FAKI	Fak Fak	11.79	143	P	Pn	06 10 08.3	+2.7
FAKI	Fak Fak	11.79	143	P	Pn	06 10 09.1	+3.5
FAKI				pP		06 10 09.4	
KAPI	Kappang	12.77	205	Pn	Pn	06 10 22.1	+3.1
	1.6nm,0.3s,baz=33,slow=9.5,SNR=10						
KAPI				LR	LR	06 15 32.8	
	comp=Z,525nm,19.4s,baz=31,slow=39						
KAPI	Kappang	12.77	205	Pn	Pn	06 10 18.4	-0.6
KAPI	Kappang	12.77	205	P	Pn	06 10 24.8	+5.8
KAPI	Kappang	12.77	205	P	Pn	06 10 18.4	-0.6
SBUM	Sibu	13.59	253		Pn	06 10 30.4	+0.1
SBUM	Sibu	13.59	253	P	P	06 10 36.8	-2.6
MMRI	Maumere	15.43	191	Pn	Pn	06 10 54.5	-0.8
SAUI	Saumlaki	15.71	157		Pn	06 11 00.7	+1.8
SAUI	Saumlaki	15.71	157	P	Pn	06 10 57.5	-1.4
SOEI	Soe	16.28	183	P	Pn	06 11 07.5	+1.1
SOEI	Soe	16.28	183	P	Pn	06 11 07.3	+0.9
BATI	Baumata	16.77	185	Pn	P	06 11 15.2	+0.4
	1.9nm,0.3s,baz=59,slow=12,SNR=1.8						
PLAI	Plampang	17.03	206	P	P	06 11 18.4	+0.8
TPUB	Ta-pu	17.17	346	P	P	06 11 24.2	+5.1
JAY	Jayapura	17.93	120	LR	LR	06 18 34.5	
	comp=Z,194nm,19.2s,baz=314,slow=38						
YHNB	Yeheng	18.33	349	P	P	06 11 38.6	+6.6
JAGI	Jajag, Banyuwa	18.60	217		P	06 11 34.7	-0.2
QZH	Quanzhou	19.30	342	P	Pn	06 11 44.6	+1.0
QZH				S	Sn	06 15 21.1	+1.0
QZH				pmax	pmax		
	comp=Z,38nm,1.1s						
QZH				pmax	pmax		
	comp=Z,350nm,7.8s						
QZH				LR	LR		
	comp=N,310nm,22.7s						
QZH				LR	LR		
	comp=E,820nm,21.0s						
QZH				LR	LR		
	comp=Z,420nm,17.2s						
QIZ	Qiongzhong	19.39	311	P	P	06 11 43.9	+0.3
QIZ				S	Sn	06 15 19.8	-2.7
QIZ				LR	LR		
	comp=N,430nm,20.8s						
QIZ				LR	LR		
	comp=E,250nm,16.7s						
QIZ				LR	LR		
	comp=Z,390nm,19.6s						
QIZ	Qiongzhong	19.39	311	P	Pn	06 11 49.1	+4.4
DRS	Darwin Rock St	19.74	163	P	P	06 11 47.7	+0.3
MTN	Manton Dam	20.20	163	P	P	06 11 53.0	+0.6
	comp=Z,52nm,1.1s						
MTN	Manton Dam	20.20	163		P	06 11 51.8	-0.6
MTN				IAmb	IAmb	06 11 54.8	
	comp=Z,37nm,0.6s						
JOW	Kunigami	20.32	8	P	P	06 11 53.0	-0.7
	comp=Z,31nm,0.9s,baz=164,slow=13,SNR=8.4						
	comp=Z,31nm,0.9s						
JOW	Kunigami	20.32	8	P	P	06 11 54.0	+0.3
JOW	Kunigami	20.32	8	P	Pn	06 11 58.0	+2.3
KDU	Kakadu	20.48	159	P	P	06 11 55.4	-0.1
	comp=Z,59nm,0.8s						
GUMO	Guam	20.55	69	LR	LR	06 18 23.7	
	comp=Z,156nm,21.3s,baz=244,slow=32						
UGM	Wanagama	20.56	226	P	P	06 11 55.4	-1.0
UGM	Wanagama	20.56	226	P	Pn	06 12 02.1	+3.5
UBPT	Khong Chiam	21.20	296	P	P	06 12 08.1	+4.9
BBJI	Bungbulang	22.41	232	P	P	06 12 18.1	+1.7
KNRA	Kununurra	22.42	171	P	P	06 12 16.8	+0.5
	comp=Z,157nm,0.7s						

KNRA	**Kununurra**	**22.42**	**171**	P	**P**	**06 12 15.7**	**-0.7**
IPM	**Ipoh**	**24.17**	**266**	P	**P**	**06 12 38.8**	**+4.8**
CNSH	**ChangSha**	**24.41**	**333**	P	**P**	**06 12 39.9**	**+3.8**
CNSH				pmax	pmax		
	comp=Z,180nm,4.1s						
CNSH				LR	LR		
	comp=Z,230nm,19.2s						
CNSH				LR	LR		
	comp=Z,370nm,21.3s						
CNSH				LR	LR		
	comp=Z,360nm,17.0s						
KULM	**Kulim**	**24.46**	**268**	P	**P**	**06 12 42.1**	**+5.3**
FITZ	**Fitzroy Crossi**	**24.55**	**179**	P	**P**	**06 12 36.0**	**-1.5**
	comp=Z,19nm,0.5s,baz=2.8,slow=6.4,SNR=36						
	comp=Z,19nm,0.5s						
JCJ	**Chichijima**	**25.99**	**36**	LR	LR	06 20 58.2	
	comp=Z,163nm,21.7s,baz=260,slow=32						
NJ2	**Nanjing**	**26.00**	**348**	*e*P	**P**	**06 12 50.6**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
PSI	**Prapat**	**26.47**	**263**	LR	LR	06 24 48.3	
	comp=Z,196nm,18.6s,baz=113,slow=40						
JNU	**Nakatsue**	**26.90**	**11**	LR	LR	06 25 32.2	
	comp=Z,118nm,18.1s,baz=194,slow=41						
PMG	**Port Moresby**	**27.04**	**126**	LR	LR	06 26 05.9	
	comp=Z,103nm,18.4s,baz=293,slow=42						
PMG	**Port Moresby**	**27.04**	**126**	P	**P**	**06 12 59.4**	**-0.7**
PMG	**Port Moresby**	**27.04**	**126**	P	**P**	**06 13 00.4**	**+0.4**
PMG	**Port Moresby**	**27.04**	**126**	⇓*i*P	**P**	**06 12 58.8**	**-1.2**
PMG				pmax	pmax		
	comp=Z,33nm,0.7s						
COEN	**Coen**	**27.12**	**139**	P	**P**	**06 13 00.1**	**-0.6**
	comp=Z,31nm,0.7s						
COEN	**Coen**	**27.12**	**139**	P	**P**	**06 12 59.3**	**-1.4**
COEN				IAmb	IAmb	06 13 18.4	
	comp=Z,25nm,0.8s						
COEN	**Coen**	**27.12**	**139**	P	**P**	**06 13 01.1**	**+0.4**
WB0	**Warramunga Arr**	**27.72**	**161**	IAmb	IAmb	06 13 18.1	
	comp=Z,24nm,0.6s						
WRAB	**Tennant Creek**	**27.86**	**161**	P	**P**	**06 13 06.1**	**-1.3**
WRAB				IAmb	IAmb	06 13 20.7	
	comp=Z,24nm,0.8s						
WRAB	**Tennant Creek**	**27.86**	**161**	P	**P**	**06 13 06.9**	**-0.5**
WRAB	**Tennant Creek**	**27.86**	**161**	⇓*i*P	**P**	**06 13 05.7**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,11nm,0.9s						
WRA	**Warramunga Arr**	**27.87**	**161**	P	**P**	**06 13 05.3**	**-2.1**
	comp=Z,6.7nm,0.8s,baz=339,slow=9.4,SNR=23						
	comp=Z,6.7nm,0.8s						
WRA	**Warramunga Arr**	**27.87**	**161**	P	**P**	**06 13 06.4**	**-1.0**
WR8	**Warramunga Arr**	**27.93**	**161**	IAmb	IAmb	06 13 21.3	
	comp=Z,27nm,0.7s						
WR0	**Warramunga Arr**	**27.95**	**161**	P	**P**	**06 13 06.3**	**-1.9**
WR0				IAmb	IAmb	06 13 32.4	
	comp=Z,27nm,0.9s						
MBWA	**Marble Bar**	**28.11**	**191**	P	**P**	**06 13 10.8**	**+1.2**
	comp=Z,18nm,0.9s						
MBWA	**Marble Bar**	**28.11**	**191**	P	**P**	**06 13 08.8**	**-0.8**
MBWA	**Marble Bar**	**28.11**	**191**	P	P	06 13 14.5	+5.0
CMAR	**Chiang Mai Arr**	**28.17**	**297**	P	**P**	**06 13 11.4**	**+1.3**
	comp=Z,1.3nm,0.3s,baz=116,slow=6.8,SNR=8.9						
CMAR				LR	LR	06 25 09.5	
	comp=Z,150nm,18.0s,baz=100,slow=38						
CMAR	**Chiang Mai Arr**	**28.17**	**297**	P	**P**	**06 13 09.6**	**-0.6**
CMAR	**Chiang Mai Arr**	**28.17**	**297**	P	**P**	**06 13 09.6**	**-0.6**
CHTO	**Chiang Mai**	**28.30**	**298**	P	**P**	**06 13 08.1**	**-3.2**
CHTO	**Chiang Mai**	**28.30**	**298**	P	P	06 13 18.0	+6.7
CHTO	**Chiang Mai**	**28.30**	**298**	P	**P**	**06 13 08.1**	**-3.2**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PSAC1	**Pilbara Seismi**	**28.46**	**191**	P	**P**	**06 13 11.3**	**-1.4**
	comp=Z,20nm,0.6s						
PSAC2	**Pilbara Seismi**	**28.48**	**190**	P	**P**	**06 13 11.8**	**-1.0**
	comp=Z,18nm,0.5s						
PSA00	**Pilbara Seismi**	**28.50**	**191**	P	**P**	**06 13 10.9**	**-2.1**
	comp=Z,16nm,0.5s						
PSA00	**Pilbara Seismi**	**28.50**	**191**		**P**	**06 13 11.1**	**-1.9**
PSA00	**Pilbara Seismi**	**28.50**	**191**	IAmb	IAmb	06 13 32.9	
	comp=Z,19nm,0.9s						
PSA00	**Pilbara Seismi**	**28.50**	**191**	P	**P**	**06 13 15.7**	**+2.7**
PSAB3	**Pilbara Seismi**	**28.51**	**190**	P	**P**	**06 13 12.0**	**-1.1**
	comp=Z,22nm,0.5s						
JHJ	**Hachijo jima 2**	**29.65**	**25**	LR	LR	06 25 52.3	
	comp=Z,236nm,18.7s,baz=285,slow=38						
PZH	**PanZhiHua**	**29.85**	**314**	P	**P**	**06 13 28.3**	**+3.1**
QIS	**Mount Isa**	**30.48**	**153**	P	**P**	**06 13 29.9**	**-0.7**
	comp=Z,34nm,0.7s						
QIS	**Mount Isa**	**30.48**	**153**	P	**P**	**06 13 31.9**	**+1.3**
KSRS	**Korea Array**	**30.80**	**4**	P	**P**	**06 13 31.9**	**-1.3**
	comp=Z,1.3nm,0.6s,baz=198,slow=12,SNR=4.4						
	comp=Z,1.3nm,0.6s						
MTSU	**Mount Surprise**	**30.98**	**143**	P	**P**	**06 13 35.3**	**+0.2**
	comp=Z,9.3nm,0.7s						
MTSU	**Mount Surprise**	**30.98**	**143**	P	**P**	**06 13 36.8**	**+1.7**
XAN	**Xi'an**	**31.18**	**333**	⇓P	**P**	**06 13 37.3**	**+0.6**
XAN				pP	sP	06 13 47.8	+6.7
XAN				pmax	pmax		
	comp=Z,16nm,1.0s						
ASAR	**Alice Springs**	**31.26**	**165**	P	**P**	**06 13 35.4**	**-2.1**
	comp=Z,4.5nm,0.5s,baz=344,slow=7.6,SNR=34						
ASAR				S	**S**	**06 18 42.8**	**-1.5**
	comp=Z,1.3nm,1.0s,baz=352,slow=20,SNR=3.3						
	comp=Z,4.5nm,0.5s						
ASAR	**Alice Springs**	**31.26**	**165**	P	**P**	**06 13 36.3**	**-1.2**
ASAR	**Alice Springs**	**31.26**	**165**	P	**P**	**06 13 36.3**	**-1.2**
ASAR				S	**S**	**06 18 42.8**	**-1.5**
WRKA	**Warakurna**	**31.60**	**175**	P	**P**	**06 13 39.6**	**-0.8**
	comp=Z,5.4nm,1.2s						
MAJO	**Matsushiro**	**32.08**	**20**	⇓*e*P	**P**	**06 13 44.8**	**+0.3**
MJAR	**Matsushiro Arr**	**32.08**	**20**	P	**P**	**06 13 42.7**	**-1.8**
	comp=Z,2.2nm,0.7s,baz=202,slow=9.4,SNR=4.1						
MJAR				LR	LR	06 26 55.7	
	comp=Z,118nm,18.1s,baz=208,slow=37						
	comp=Z,2.2nm,0.7s						
HNS	**HongShan**	**32.11**	**344**	⇓P	**P**	**06 13 45.8**	**+1.1**
HNS				pmax	pmax		
	comp=Z,15nm,1.0s						
HNS				LR	LR		
	comp=Z,200nm,20.6s						
HNS				LR	LR		
	comp=Z,310nm,19.2s						
HNS				LR	LR		
	comp=Z,220nm,16.8s						
TV1H	**Townsville Har**	**33.36**	**141**	P	**P**	**06 13 57.1**	**+1.2**
CTA	**Charters Tower**	**33.65**	**142**	P	**P**	**06 13 59.8**	**+1.3**
	comp=Z,7.4nm,1.3s						
CTA	**Charters Tower**	**33.65**	**142**	LR	LR	06 29 39.9	
	comp=Z,190nm,18.3s,baz=262,slow=40						
CTA	**Charters Tower**	**33.65**	**142**	P	**P**	**06 13 58.8**	**+0.4**
CTA	**Charters Tower**	**33.65**	**142**	P	**P**	**06 13 59.7**	**+1.3**
CTAO	**Charters Tower**	**33.65**	**142**	P	**P**	**06 13 58.5**	**0.0**
CTAO				IAmb	IAmb	06 14 00.9	
	comp=Z,25nm,1.2s						
CTAO	**Charters Tower**	**33.65**	**142**	P	**P**	**06 13 58.8**	**+0.4**
CTAO	**Charters Tower**	**33.65**	**142**	P	**P**	**06 13 58.5**	**0.0**
CTAO				pmax	pmax		
	comp=Z,25nm,1.2s						
MEEK	**Meekatharra**	**33.66**	**191**	P	**P**	**06 13 57.5**	**-1.0**
	comp=Z,18nm,0.7s						
MEEK	**Meekatharra**	**33.66**	**191**	P	**P**	**06 14 01.9**	**+3.4**
BJT	**Baijiatuau**	**34.24**	**348**	P	P	06 14 08.4	+5.0
BJI	**Beijing**	**34.26**	**348**	P	**P**	**06 14 03.0**	**-0.5**
BJI				pP	**pP**	**06 14 07.1**	**+0.4**
BJI				sP	**sP**	**06 14 10.3**	**+2.4**
BJI				PP	**PnPn**	**06 15 17.8**	**0.0**
BJI				S	**S**	**06 19 29.1**	**-1.4**
BJI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BJI				LR	LR		
	comp=Z,75nm,20.4s						
BJI				LR	LR		
	comp=Z,120nm,22.9s						
BJI				LR	LR		
	comp=Z,120nm,19.7s						
LZDM	**Lanzhou Array**	**35.25**	**329**	P	**P**	**06 14 13.4**	**+0.8**
	comp=Z,1.0nm,0.3s,baz=132,slow=6.6,SNR=4.3						
LZDM				LR	LR	06 29 59.5	
	comp=Z,189nm,19.1s,baz=30,slow=39						
LZH	**Lanzhou**	**35.27**	**329**	*e*P	**P**	**06 14 15.3**	**+2.7**
LZH				sP	sP	06 14 25.0	+8.0
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
LZH				LR	LR		
	comp=Z,350nm,14.4s						
LZH				LR	LR		
	comp=Z,340nm,14.1s						
LZH				LR	LR		
	comp=Z,300nm,14.1s						
HHC	**Hu-ho-hao-te**	**36.21**	**342**	*e*P	**P**	**06 14 21.9**	**+1.4**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,5.4s						
HHC				LR	LR		
	comp=Z,160nm,19.9s						
HHC				LR	LR		
	comp=Z,260nm,22.7s						
HHC				LR	LR		
	comp=Z,200nm,22.7s						
SHL	**Shillong**	**36.99**	**304**	P	**P**	**06 14 27.7**	**+0.3**
SHL	**Shillong**	**36.99**	**304**	P	**P**	**06 14 27.7**	**+0.3**
SHL				pmax	pmax		
	comp=Z,65nm,1.4s						
FORT	**Forrest**	**37.27**	**176**	P	**P**	**06 14 28.2**	**-1.2**
	comp=Z,20nm,0.8s						
FORT	**Forrest**	**37.27**	**176**	IAmb	IAmb	06 14 43.7	
	comp=Z,15nm,0.8s						
QLP	**Quilpie**	**37.80**	**152**	P	**P**	**06 14 35.1**	**+1.1**
KMBL	**Kambalda**	**37.89**	**185**	P	**P**	**06 14 32.5**	**-2.3**
	comp=Z,11nm,1.2s						
USRK	**Ussuriysk Ar.**	**37.91**	**8**	P	**P**	**06 14 33.8**	**-0.9**
	comp=Z,3.7nm,0.7s,baz=190,slow=8.6,SNR=6.2						
	comp=Z,3.7nm,0.7s						
MDJ	**Mudanjiang**	**38.05**	**5**	P	**P**	**06 14 35.0**	**-0.9**
MDJ				IAmb	IAmb	06 14 45.5	
	comp=Z,29nm,1.0s						
MDJ	**Mudanjiang**	**38.05**	**5**	P	**P**	**06 14 40.3**	**+4.4**
KLBR	**Kellerberrin**	**38.65**	**190**	P	**P**	**06 14 44.2**	**+3.1**
BNX	**BinXian**	**39.03**	**2**	⇓P	**P**	**06 14 43.8**	**-0.3**
BNX				pmax	pmax		
	comp=Z,11nm,1.1s						
GTA	**Gaotai**	**39.87**	**329**	*e*P	**P**	**06 14 52.8**	**+1.4**
GTA				pP	sP	06 14 56.4	+0.6
GTA				pmax	pmax		
	comp=Z,9.0nm,1.4s						
GTA				LR	LR		
	comp=Z,210nm,18.7s						
GTA				LR	LR		
	comp=Z,260nm,20.3s						
GTA				LR	LR		
	comp=Z,290nm,19.9s						
NWAO	**Narrogin (SRO)**	**40.04**	**190**	P	**P**	**06 14 51.7**	**-1.0**
NWAO				IAmb	IAmb	06 14 56.2	
	comp=Z,33nm,1.3s						
NWAO	**Narrogin (SRO)**	**40.04**	**190**	P	**P**	**06 14 51.7**	**-1.0**
NWAO				pmax	pmax		
	comp=Z,33nm,1.3s						
ASAJ	**Asahikawa**	**40.35**	**19**	LR	LR	06 29 40.9	
	comp=Z,160nm,21.9s,baz=184,slow=33						
GOMU	**GeErMu**	**40.51**	**321**	P	**P**	**06 14 57.3**	**+0.2**
GOMU				pP	pP	06 15 00.5	+0.3
GOMU				sP	sP	06 15 05.0	+3.5
GOMU				S	**S**	**06 21 08.3**	**+1.9**
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GOMU				LR	LR		
	comp=Z,260nm,16.5s						
GOMU				LR	LR		
	comp=Z,240nm,16.5s						
GOMU				LR	LR		
	comp=Z,400nm,16.8s						
BBOO	**Buckleboo**	**40.53**	**166**	P	**P**	**06 14 56.1**	**-0.7**
BBOO				IAmb	IAmb	06 14 59.2	
	comp=Z,28nm,0.6s						
BBOO	**Buckleboo**	**40.53**	**166**	P	**P**	**06 14 56.5**	**-0.3**
EIDS	**Eidsvold**	**40.54**	**143**	P	**P**	**06 14 56.6**	**-0.3**
EIDS	**Eidsvold**	**40.54**	**143**	P	**P**	**06 14 58.8**	**+1.9**
WHYH	**Whyalla**	**41.14**	**164**	P	**P**	**06 15 01.4**	**-0.3**
STKA	**Stephens Creek**	**41.34**	**159**	P	**P**	**06 15 02.5**	**-0.9**
	comp=Z,17nm,0.8s,baz=342,slow=8.2,SNR=32						
	comp=Z,17nm,0.8s						
STKA	**Stephens Creek**	**41.34**	**159**	P	**P**	**06 15 02.8**	**-0.6**
STKA	**Stephens Creek**	**41.34**	**159**	P	**P**	**06 15 02.3**	**-1.2**
HTT	**Hallett**	**41.89**	**163**	P	**P**	**06 15 07.6**	**-0.4**
AULRC	**Lightning Ridg**	**41.99**	**150**	P	**P**	**06 15 09.8**	**+1.0**
CMSA	**Cobar Meteorol**	**42.68**	**154**	P	**P**	**06 15 15.2**	**+0.8**
AUMAR	**Marden Senior**	**43.18**	**164**	P	**P**	**06 15 19.4**	**+1.0**
HEH	**HeiHe**	**43.54**	**2**	*e*P	**P**	**06 15 21.3**	**+0.2**
HEH				pmax	pmax		
	comp=Z,12nm,1.1s						
AUMBR	**Murray Bridge**	**43.59**	**163**	P	**P**	**06 15 22.3**	**+0.6**
ULN	**Ulaanbaatar**	**43.94**	**342**	P	**P**	**06 15 26.0**	**+1.5**
ULN	**Ulaanbaatar**	**43.94**	**342**	⇑*i*P	**P**	**06 15 24.8**	**+0.2**
SONM	**Songino Array**	**44.11**	**342**	P	**P**	**06 15 26.1**	**+0.2**
	comp=Z,1.3nm,1.0s,baz=147,slow=8.8,SNR=6.0						
SONM				LR	LR	06 35 07.6	
	comp=Z,165nm,21.1s,baz=156,slow=38						
	comp=Z,1.3nm,1.0s						
SONM	**Songino Array**	**44.11**	**342**	P	**P**	**06 15 26.1**	**+0.2**
SONM				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PALK	**Pallekele**	**44.18**	**274**	LR	LR	06 34 35.3	
	comp=Z,118nm,20.7s,baz=80,slow=37						
AUDCS	**Dubbo College**	**44.61**	**151**	P	**P**	**06 15 31.0**	**+1.1**
ARMA	**Armidale**	**44.69**	**147**	P	**P**	**06 15 30.3**	**-0.4**
ARMA				IAmb	IAmb	06 15 32.3	
	comp=Z,18nm,0.9s						
ARMA	**Armidale**	**44.69**	**147**	P	**P**	**06 15 31.8**	**+1.1**
HYB	**Hyderabad**	**46.77**	**288**	*e*P	**P**	**06 15 46.1**	**-1.2**
HYB				*e*PP	**PP**	**06 17 37.3**	**-0.1**
SANVU	**Saraoutou**	**47.02**	**118**	P	**P**	**06 15 49.3**	**0.0**
SANVU	**Saraoutou**	**47.02**	**118**	P	**P**	**06 15 49.5**	**+0.3**
ZEA	**Zeya**	**47.02**	**2**	*e*P	**P**	**06 15 47.2**	**-1.5**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BRAT	**Ballarat**	**47.28**	**160**	P	**P**	**06 15 53.8**	**+2.9**
AUMTS	**Mt Stromlo**	**47.34**	**153**	P	**P**	**06 15 54.7**	**+3.2**
CAN	**Canberra**	**47.34**	**153**		**P**	**06 15 51.5**	**0.0**
CAN				IAmb	IAmb	06 15 54.5	
	comp=Z,12nm,0.8s						
CAN	**Canberra**	**47.34**	**153**	P	**P**	**06 15 53.4**	**+1.8**
CAN	**Canberra**	**47.34**	**153**	P	**P**	**06 15 51.5**	**0.0**
CAN				pmax	pmax		
	comp=Z,13nm,0.8s						
CNB	**Canberra Magne**	**47.50**	**153**	P	**P**	**06 15 53.8**	**+1.0**
DZM	**Mont Dzumac**	**49.43**	**126**	*e*P	**P**	**06 16 06.3**	**-1.7**
	comp=Z,58nm,1.1s						
DZM	**Mont Dzumac**	**49.43**	**126**	*e*LR	LR	06 30 15.4	
	comp=Z,182nm,31.2s						
DZM	**Mont Dzumac**	**49.43**	**126**	P	**P**	**06 16 07.0**	**-1.0**
WMQ	**Urumqi**	**49.52**	**325**	*e*P	**P**	**06 16 09.8**	**+1.5**
WMQ				LR	LR		
	comp=Z,170nm,23.3s						
KNGR	**Kungurtug, Tuv**	**49.56**	**337**	⇑*i*P	**P**	**06 16 09.0**	**+0.4**
KNGR				pmax	pmax		
	comp=Z,2.0nm,1.2s						
YATNC	**Mamie plateau,**	**49.79**	**126**	P	**P**	**06 16 10.5**	**0.0**
DGZ	**Jazzator, Alta**	**53.36**	**330**	⇑*i*P	**P**	**06 16 37.2**	**+0.1**
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.3s						
PEA0B	**Petropavlovsk-**	**53.39**	**24**	⇓*i*P	**P**	**06 16 37.3**	**+0.3**
PETK	**Petropavlovsk-**	**53.39**	**24**	P	**P**	**06 16 35.5**	**-1.6**
	comp=Z,14nm,0.9s,baz=193,slow=6.1,SNR=9.9						
PETK				LR	LR	06 39 02.8	
	comp=Z,73nm,20.0s,baz=227,slow=36						
	comp=Z,14nm,0.9s						
PETK	**Petropavlovsk-**	**53.39**	**24**	P	**P**	**06 16 36.5**	**-0.5**
PETK	**Petropavlovsk-**	**53.39**	**24**	P	**P**	**06 16 36.5**	**-0.5**
WUS	**Wushi**	**53.43**	**317**	IAmb	IAmb	06 16 46.9	
	comp=Z,14nm,1.2s						
PET	**Petropavlovsk**	**53.71**	**24**	⇑*i*P	**P**	**06 16 38.9**	**-0.4**
PET				pmax	pmax		
	comp=Z,23nm,1.2s						
SHLS	**Shalkode**	**54.19**	**320**	*e*P	**P**	**06 16 41.1**	**-2.2**
SHLS	**Shalkode**	**54.19**	**320**	*e*P	**P**	**06 16 41.0**	**-2.2**
MK31	**Makanchi Array**	**54.35**	**325**	*c* *i*P	**P**	**06 16 44.2**	**0.0**
MKAR	**Makanchi Array**	**54.35**	**325**	P	**P**	**06 16 43.8**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=119,slow=7.4,SNR=13						
MKAR				LR	LR	06 41 24.7	
	comp=Z,151nm,18.3s,baz=106,slow=38						
	comp=Z,1.4nm,0.5s						
MKAR	**Makanchi Array**	**54.35**	**325**	P	**P**	**06 16 43.4**	**-0.8**
MKAR	**Makanchi Array**	**54.35**	**325**	*i* P	**P**	**06 16 44.2**	**0.0**
UZB	**Uzynbulak**	**54.46**	**320**	*e*P	**P**	**06 16 45.0**	**-0.3**
	comp=Z,4.6nm,0.9s						
UZB	**Uzynbulak**	**54.46**	**320**	*e*P	**P**	**06 16 44.9**	**-0.3**
UZB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MAKZ	**Makanchi**	**54.53**	**325**	P	**P**	**06 16 44.5**	**-1.1**
MAKZ				IAmb	IAmb	06 17 08.6	
	comp=Z,14nm,1.1s						
MAKZ	**Makanchi**	**54.53**	**325**	P	**P**	**06 16 44.5**	**-1.1**
MAKZ				pmax	pmax		
	comp=Z,14nm,1.2s						
TARG	**Taragay, Kyrgy**	**54.62**	**317**	P	**P**	**06 16 47.1**	**+0.4**
TARG				IAmb	IAmb	06 17 06.2	
	comp=Z,12nm,1.1s						
TARG	**Taragay, Kyrgy**	**54.62**	**317**	P	**P**	**06 16 47.1**	**+0.4**
TARG				pmax	pmax		
	comp=Z,13nm,1.1s						
SATY	**Saty**	**54.82**	**319**	*e*P	**P**	**06 16 47.7**	**-0.2**
	comp=Z,4.4nm,0.9s						
SATY	**Saty**	**54.82**	**319**	*e*P	**P**	**06 16 47.6**	**-0.2**
SATY				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KSH	**Kashi**	**54.96**	**314**	P	**P**	**06 16 51.3**	**+2.4**
KSH				pP	sP	06 16 56.6	+3.2
KSH				pmax	pmax		
	comp=Z,7.0nm,1.3s						
YAK	**Yakutsk**	**55.41**	**3**	LR	LR	06 42 51.1	
	comp=Z,79nm,19.1s,baz=132,slow=38						
YAK	**Yakutsk**	**55.41**	**3**	*e*P	**P**	**06 16 51.2**	**-0.3**
YAK				*e*		06 17 52.1	
YAK				*e*		06 18 56.1	
YAK				*e*S	**S**	**06 24 36.9**	**+1.0**
YAK				*e*		06 26 39.7	
YAK				*e*SS	**SS**	**06 28 23.3**	**+2.7**
YAK				pmax	pmax		
	comp=Z,14nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,173nm,4.7s						
YAK				pmax	pmax		
	comp=N,116nm,4.7s						
YAK				pmax	pmax		
	comp=E,86nm,4.7s						
YAK				smax	smax		
	comp=E,129nm,3.4s						
YAK				smax	smax		
	comp=N,60nm,3.5s						
TDK	**Taldyqorghan**	**55.74**	**321**	*e*P	**P**	**06 16 54.3**	**0.0**
	comp=N,4.6nm,0.5s						
TDK	**Taldyqorghan**	**55.74**	**321**	*e*P	**P**	**06 16 54.3**	**0.0**
TDK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MDOK	**Medeo**	**55.75**	**319**	*e*P	**P**	**06 16 54.4**	**-0.3**
MDOK	**Medeo**	**55.75**	**319**	*e*P	**P**	**06 16 54.3**	**-0.3**
TNSS	**Tian-Shan**	**55.76**	**319**	*e*P	**P**	**06 16 54.3**	**-0.7**
TNSS	**Tian-Shan**	**55.76**	**319**	*e*P	**P**	**06 16 54.3**	**-0.7**
AAA	**Alma-Ata**	**55.86**	**319**	*e*P	**P**	**06 16 55.1**	**-0.2**
AAA	**Alma-Ata**	**55.86**	**319**	*e*P	**P**	**06 16 55.1**	**-0.2**
AAK	**Ala-Archa**	**57.23**	**317**	LR	LR	06 41 55.2	
	comp=Z,165nm,21.9s,baz=106,slow=36						
AAK	**Ala-Archa**	**57.23**	**317**	⇓*e*P	**P**	**06 17 06.6**	**+1.5**
ZAA0	**Zalesovo Array**	**57.35**	**333**		**P**	**06 17 03.7**	**-1.9**
ZALV	**Zalesovo Beam**	**57.35**	**333**	P	**P**	**06 17 03.6**	**-1.9**
	comp=Z,0.4nm,0.4s,baz=116,slow=6.8,SNR=8.0						
ZALV				LR	LR	06 43 17.2	
	comp=Z,78nm,19.8s,baz=104,slow=38						
	comp=Z,0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**57.35**	**333**	P	**P**	**06 17 04.2**	**-1.4**
ZALV	**Zalesovo Beam**	**57.35**	**333**	*i* P	**P**	**06 17 08.0**	**+2.4**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MANEM	**Manem**	**57.41**	**311**	P	**P**	**06 17 06.1**	**-0.5**
MANEM				IAmb	IAmb	06 17 14.5	
	comp=Z,61nm,1.7s						
MSVF	**Nonsavu**	**57.50**	**116**	P	**P**	**06 17 07.0**	**-0.2**
MSVF	**Nonsavu**	**57.50**	**116**	P	**P**	**06 17 07.6**	**+0.3**
MSVF	**Nonsavu**	**57.50**	**116**	⇓*i*P	**P**	**06 17 07.9**	**+0.6**
MSVF				pmax	pmax		
	comp=Z,40nm,1.0s						
KURBB	**Kurchatov Arra**	**58.52**	**327**	P	**P**	**06 17 12.2**	**-1.6**
	comp=Z,4.1nm,0.8s,baz=124,slow=6.7,SNR=16						
	comp=Z,4.1nm,0.8s						
KURK	**Kurchatov**	**58.52**	**327**	P	**P**	**06 17 12.2**	**-1.6**
KURK				IAmb	IAmb	06 17 27.1	
	comp=Z,9.2nm,0.8s						
KURK	**Kurchatov**	**58.52**	**327**	⇑*i*P	**P**	**06 17 13.0**	**-0.8**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GAR	**Garm**	**58.88**	**312**	P	**P**	**06 17 16.7**	**-0.1**
SEY	**Seymchan**	**59.60**	**14**	*e*P	**P**	**06 17 20.4**	**-0.7**
SEY				pmax	pmax		
	comp=Z,24nm,1.6s						
KK31	**Karatay Array**	**60.12**	**316**	P	**P**	**06 17 23.9**	**-1.2**
KK31	**Karatay Array**	**60.12**	**316**	P	**P**	**06 17 23.9**	**-1.2**
KK31				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KKAR	**Karatay Array**	**60.12**	**316**	P	**P**	**06 17 23.1**	**-2.0**
KKAR	**Karatay Array**	**60.12**	**316**	P	**P**	**06 17 23.1**	**-2.0**
IUG	**Iuzhnay**	**60.12**	**315**	*e*P	**P**	**06 17 24.8**	**-0.4**
IUG	**Iuzhnay**	**60.12**	**315**	*e*P	**P**	**06 17 24.8**	**-0.4**
CHM	**Chimkent**	**60.47**	**315**	*e*P	**P**	**06 17 27.4**	**-0.1**
CHM	**Chimkent**	**60.47**	**315**	*e*P	**P**	**06 17 27.4**	**-0.1**
BVAR	**Borovoye Array**	**64.10**	**327**	P	**P**	**06 17 50.2**	**-1.4**
	comp=Z,4.0nm,0.9s,baz=115,slow=7.0,SNR=11						
BVAR				LR	LR	06 47 17.3	
	comp=Z,115nm,18.5s,baz=122,slow=38						
	comp=Z,4.0nm,0.9s						
BORK	**Borovoye**	**64.15**	**327**	P	**P**	**06 17 49.6**	**-2.3**
BORK				IAmb	IAmb	06 18 06.0	
	comp=Z,12nm,1.0s						
BORK	**Borovoye**	**64.15**	**327**	⇑*i*P	**P**	**06 17 51.1**	**-0.8**
BORK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TIXI	**Tiksi**	**65.01**	**1**	LR	LR	06 47 39.9	
	comp=Z,124nm,21.2s,baz=199,slow=37						
TIXI	**Tiksi**	**65.01**	**1**		**P**	**06 17 56.1**	**-1.1**
TIXI				IAmb	IAmb	06 18 02.5	
	comp=Z,7.0nm,1.0s						
TIXI	**Tiksi**	**65.01**	**1**	*c* *i*P	**P**	**06 17 56.2**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
URZ	**Urewera**	**65.66**	**137**	LR	LR	06 48 37.3	
	comp=Z,60nm,18.6s,baz=22,slow=38						
BKZ	**Black Stump Fm**	**65.72**	**138**		**P**	**06 18 01.4**	**-1.1**
BKZ	**Black Stump Fm**	**65.72**	**138**	P	**P**	**06 18 03.4**	**+1.0**
BILL	**Bilibino**	**67.19**	**16**	P	**P**	**06 18 10.1**	**-1.2**
BILL				IAmb	IAmb	06 18 20.6	
	comp=Z,7.5nm,1.0s						
BILL	**Bilibino**	**67.19**	**16**	⇓*i*P	**P**	**06 18 11.4**	**+0.1**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NRIK	**Noril'sk**	**67.30**	**346**	P	**P**	**06 18 10.4**	**-1.5**
	comp=Z,2.4nm,0.4s,baz=90,slow=5.9,SNR=2.7						
NRIK				LR	LR	06 50 43.7	
	comp=Z,108nm,18.1s,baz=154,slow=39						
	comp=Z,2.4nm,0.4s						
NRIK	**Noril'sk**	**67.30**	**346**	⇑*i*P	**P**	**06 18 13.1**	**+1.2**
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AB31	**Akbulak array**	**68.98**	**320**		**P**	**06 18 22.2**	**-0.7**
AB31				IAmb	IAmb	06 18 30.6	
	comp=Z,8.9nm,1.1s						
ABKAR	**Akbulak array**	**68.98**	**320**		**P**	**06 18 21.6**	**-1.2**
ARTI	**Arti**	**71.80**	**327**	LR	LR	06 51 11.5	
	comp=Z,127nm,18.1s,baz=94,slow=37						
ARTI	**Arti**	**71.80**	**327**	*c* *i*P	**P**	**06 18 41.0**	**+1.0**
ARTI						06 21 16.7	
ARTI				S	**S**	**06 28 01.8**	**+1.5**
ARTI				SS	**SS**	**06 32 34.6**	**-1.6**
ARTI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
L14K	**Kuka Creek**	**75.68**	**28**	IAmb	IAmb	06 19 09.6	
	comp=Z,29nm,1.3s						
CHNA	**Chernabura Isl**	**76.11**	**35**	P	**P**	**06 19 06.7**	**+1.5**
AKT	**Akhty**	**76.28**	**311**	*e*P	**P**	**06 19 06.4**	**-0.3**
AKT				*e*		06 22 00.2	
AKT				*e*S	**S**	**06 28 50.0**	**-1.6**
AKT				pmax	pmax		
	comp=Z,18nm,1.3s						
C16K	**Lisburne Hills**	**76.35**	**21**	IAmb	IAmb	06 19 12.8	
	comp=Z,8.4nm,1.0s						
KIRV	**Kirov**	**77.00**	**329**	⇓*i*P	**P**	**06 19 10.3**	**+0.2**
BELG	**Belogornoye**	**77.22**	**322**	⇓*i*P	**P**	**06 19 11.3**	**-0.2**
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
E18K	**Tukpahlearik C**	**77.88**	**22**	IAmb	IAmb	06 19 24.2	
	comp=Z,9.1nm,1.0s						
RAYN	**Ar Rayn**	**77.98**	**293**		**P**	**06 19 15.2**	**-1.3**
RAYN				IAmb	IAmb	06 19 24.4	
	comp=Z,16nm,1.1s						

RAYN	**Ar Rayn**	**77.98**	**293**	P	**P**	**06 19 15.2**	**-1.3**
RAYN				pmax	pmax		
	comp=Z,16nm,1.1s						
C19K	**Lookout Ridge**	**78.59**	**21**	IAmb	IAmb	06 19 26.2	
	comp=Z,9.1nm,0.9s						
D19K	**Kuna River**	**79.01**	**21**	IAmb	IAmb	06 19 29.2	
	comp=Z,41nm,1.8s						
E19K	**Redstone River**	**79.16**	**23**	IAmb	IAmb	06 19 31.2	
	comp=Z,14nm,1.1s						
H19K	**Roundabout Mou**	**79.19**	**25**	IAmb	IAmb	06 19 31.0	
	comp=Z,15nm,1.2s						
KBZ	**Khabaz**	**79.92**	**313**	P	**P**	**06 19 24.7**	**-1.9**
	comp=Z,2.1nm,0.9s,baz=183,slow=3.0,SNR=4.2						
	comp=Z,2.1nm,0.9s						
KBZ	**Khabaz**	**79.92**	**313**	⇓*i*P	**P**	**06 19 26.4**	**-0.2**
KIV	**Kislovodsk**	**80.07**	**313**	*e*P	**P**	**06 19 26.8**	**-0.8**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KDAK	**Kodiak Island**	**80.29**	**33**	P	**P**	**06 19 27.9**	**-0.4**
	comp=Z,5.3nm,0.5s,baz=306,slow=4.3,SNR=9.0						
KDAK				LR	LR	06 51 06.5	
	comp=Z,87nm,21.2s,baz=94,slow=33						
	comp=Z,5.3nm,0.5s						
KDAK	**Kodiak Island**	**80.29**	**33**	P	**P**	**06 19 27.9**	**-0.4**
KDAK				pmax	pmax		
	comp=Z,247nm,1.9s						
B21K	**Ikpikpuk River**	**80.42**	**20**	IAmb	IAmb	06 22 22.2	
	comp=Z,10nm,0.8s						
E21K	**Killik River**	**80.51**	**22**	IAmb	IAmb	06 22 12.0	
	comp=Z,15nm,0.7s						
H22K	**Ishtalitna Cre**	**81.31**	**24**	IAmb	IAmb	06 22 27.9	
	comp=Z,14nm,0.7s						
BPAW	**Bear Paw Mtn.**	**81.38**	**26**		**P**	**06 19 33.5**	**-0.7**
BPAW				IAmb	IAmb	06 19 40.5	
	comp=Z,16nm,1.0s						
SUA	**Susitna One**	**81.39**	**29**	P	**P**	**06 19 32.5**	**-1.8**
L22K	**Petersville**	**81.41**	**28**	IAmb	IAmb	06 19 39.9	
	comp=Z,14nm,0.8s						
MLY	**Manley**	**81.53**	**25**	IAmb	IAmb	06 19 44.2	
	comp=Z,12nm,1.2s						
TRF	**Thorofare Moun**	**81.67**	**27**	IAmb	IAmb	06 20 05.3	
	comp=Z,18nm,1.2s						
COLD	**Coldfoot**	**81.85**	**23**		**P**	**06 19 36.9**	**+0.4**
KLMR	**Klimovskoe**	**82.17**	**330**	*e*P	**P**	**06 19 35.2**	**-3.1**
KLMR				*e*		06 22 43.8	
KLMR				pmax	pmax		
	comp=Z,18nm,1.3s						
MCK	**McKinley**	**82.28**	**27**	IAmb	IAmb	06 19 45.2	
	comp=Z,16nm,1.0s						
RND	**Reindeer**	**82.31**	**27**	IAmb	IAmb	06 20 32.2	
	comp=Z,25nm,1.4s						
WRH	**Wood River Hil**	**82.66**	**26**	IAmb	IAmb	06 19 48.9	
	comp=Z,20nm,1.2s						
H24K	**Noodor Dome**	**82.75**	**24**	IAmb	IAmb	06 22 50.2	
	comp=Z,12nm,0.8s						
COLA	**College**	**82.76**	**25**	P	**P**	**06 19 40.4**	**-0.9**
COLA	**College**	**82.76**	**25**	P	**P**	**06 19 44.8**	**+3.6**
COLA	**College**	**82.76**	**25**	P	**P**	**06 19 40.4**	**-0.9**
HDA	**Harding Lake**	**83.15**	**26**	IAmb	IAmb	06 19 44.3	
	comp=Z,6.9nm,0.7s						
IL31		**83.17**	**26**		**P**	**06 19 42.5**	**-0.9**
IL31				IAmb	IAmb	06 19 50.9	
	comp=Z,14nm,1.2s						
ILAR	**Eielson Array**	**83.17**	**26**	P	**P**	**06 19 41.6**	**-1.9**
	comp=Z,1.3nm,0.6s,baz=241,slow=5.1,SNR=28						
	comp=Z,1.3nm,0.6s						
OBN	**Obninsk**	**83.85**	**325**	⇑*e*P	**P**	**06 19 48.3**	**+1.2**
OBN				*e*		06 22 57.1	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,109nm,18.0s						
BMAR	**Burnt Mountain**	**84.03**	**23**	P	**P**	**06 19 47.4**	**-0.5**
J26L	**Joseph Creek**	**84.61**	**26**	IAmb	IAmb	06 20 02.0	
	comp=Z,6.5nm,1.0s						
I26K	**Coal Creek Min**	**84.73**	**25**	IAmb	IAmb	06 23 06.3	
	comp=Z,11nm,0.8s						
L26K	**Log Cabin Wild**	**84.82**	**27**	IAmb	IAmb	06 22 52.6	
	comp=Z,7.3nm,0.6s						
K27K	**Chicken**	**85.30**	**26**	IAmb	IAmb	06 19 56.3	
	comp=Z,13nm,0.9s						
FURI	**Furi**	**85.59**	**278**	LR	LR	06 56 57.4	
	comp=Z,35nm,21.8s,baz=88,slow=35						
BARN	**Barnard Glacie**	**85.78**	**29**	P	**P**	**06 19 57.7**	**+0.7**
BARN				IAmb	IAmb	06 20 05.0	
	comp=Z,17nm,1.1s						
MAW	**Mawson**	**85.92**	**200**	LR	LR	06 57 16.3	
	comp=Z,51nm,19.8s,baz=60,slow=35						
I28M	**Miner Creek**	**86.06**	**25**	IAmb	IAmb	06 20 00.4	
	comp=Z,11nm,0.8s						
VNDA	**Vanda**	**86.45**	**173**	P	**P**	**06 19 57.1**	**-2.6**
	comp=Z,1.4nm,0.8s,baz=297,slow=6.2,SNR=6.0						
VNDA				LR	LR	07 00 03.7	
	comp=Z,54nm,18.3s,baz=338,slow=37						
	comp=Z,1.4nm,0.8s						
EIL	**Elat**	**87.00**	**299**	LR	LR	07 04 21.3	
	comp=Z,68nm,21.3s,baz=350,slow=39						
BRTR	**Keskin Array B**	**87.04**	**309**	P	**P**	**06 20 01.4**	**-2.1**
	comp=Z,0.4nm,0.7s,baz=108,slow=4.0,SNR=5.7						
	comp=Z,0.4nm,0.7s						
ARCES	**ARCESS Array B**	**87.24**	**340**	LR	LR	07 02 52.0	
	comp=Z,91nm,18.1s,baz=334,slow=38						
SPITS	**Spitsbergen Ar**	**87.38**	**349**	LR	LR	07 02 53.1	
	comp=Z,80nm,18.2s,baz=238,slow=38						
PPT2	**Papeete2**	**87.43**	**108**	*e*LR	LR	06 47 48.3	
	comp=Z,140nm,30.2s						
PPT2				*e*LR	LR	06 47 49.8	
	comp=Z,101nm,25.8s						
INK	**Inuvik**	**88.05**	**21**	P	**P**	**06 20 07.4**	**-0.2**
	comp=Z,1.5nm,0.8s,baz=253,slow=1.9,SNR=5.3						
	comp=Z,1.5nm,0.8s						
INK	**Inuvik**	**88.05**	**21**	IAmb	IAmb	06 23 13.5	
	comp=Z,21nm,1.7s						
TBI	**Tubuai**	**88.32**	**114**	*e*LR	LR	06 48 09.7	
	comp=Z,376nm,29.5s						
FINES	**FINESS Array B**	**88.60**	**332**	LR	LR	07 05 03.4	
	comp=Z,93nm,18.2s,baz=303,slow=39						
AK03	**Malin Array Si**	**88.72**	**321**	P	**P**	**06 20 10.0**	**-1.1**
AKASG	**Malin Array Be**	**88.72**	**321**	P	**P**	**06 20 08.6**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=67,slow=4.8,SNR=4.1						
AKASG				LR	LR	07 01 28.4	
	comp=Z,82nm,20.7s,baz=20,slow=37						
	comp=Z,0.2nm,0.3s						
AKASG	**Malin Array Be**	**88.72**	**321**	P	**P**	**06 20 08.6**	**-2.5**
AKASG				pmax	pmax		
	comp=Z,5.0nm,1.3s						
AK06	**Malin Array Si**	**88.76**	**321**	P	**P**	**06 20 10.2**	**-1.1**
AK11	**Malin Array Si**	**88.76**	**321**	P	**P**	**06 20 10.2**	**-1.1**
MNK	**Minsk**	**88.92**	**325**	*i* P	**P**	**06 20 09.6**	**-2.4**
MNK				*i*		06 23 39.2	
MNK				*i* PPP	PPP	06 25 35.5	
MNK				*i* S	**SKSac**	**06 30 38.8**	**-2.9**
MNK				*i* PS	**PnS**	**06 32 03.4**	**-0.5**
MNK				*i* SS	**SS**	**06 36 52.9**	**+0.9**
MNK				*i* SSS	SSS	06 40 27.9	
MNK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,22nm,0.8s						
MNK				pmax	pmax		
	comp=E,26nm,0.8s						
MNK				MLR	MLR		
	comp=E,69nm,17.0s						
MNK				MLR	MLR		
	comp=Z,90nm,15.0s						
MNK				MLR	MLR		
	comp=N,77nm,15.0s						
N32M	**Quiet Lake**	**89.87**	**28**	IAmb	IAmb	06 20 18.7	
	comp=Z,10nm,0.8s						
RNPP9	**Sopachiv**	**90.67**	**322**	P	**P**	**06 20 19.2**	**-1.0**
VRI	**Vrincioaia**	**91.18**	**316**	P	**P**	**06 20 21.8**	**-1.0**
MBAR	**Mbarara**	**94.51**	**270**	LR	LR	07 00 45.2	
	comp=Z,44nm,18.3s,baz=68,slow=34						
SYO	**Syowa Base**	**94.55**	**201**	⇓*e*P	**P**	**06 20 36.6**	**-1.1**
HFS	**Hagfors**	**94.78**	**332**	LR	LR	07 05 05.7	
	comp=Z,128nm,18.9s,baz=36,slow=37						
NOA	**NORSAR Array B**	**95.56**	**333**	LR	LR	07 07 58.7	
	comp=Z,71nm,19.7s,baz=290,slow=38						
TAOE	**Nuku Hiva Isla**	**95.56**	**98**	*e*LR	LR	06 51 38.7	
	comp=Z,122nm,24.5s						
YKA	**Yellowknife Ar**	**97.51**	**24**	P	**P**	**06 20 49.7**	**-1.7**
	comp=Z,1.3nm,0.9s,baz=300,slow=5.4,SNR=15						
YKA				PKKPbc	**PKKPbc**	**06 37 26.4**	**-4.4**
	comp=Z,0.1nm,0.6s,baz=124,slow=2.0,SNR=3.9						
	comp=Z,1.3nm,0.9s						
YKA	**Yellowknife Ar**	**97.51**	**24**	*i* P	**P**	**06 20 51.7**	**+0.3**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
LSZ	**Lusaka**	**98.46**	**256**	LR	LR	07 02 41.5	
	comp=Z,91nm,19.1s,baz=332,slow=34						
PLCA	**Paso Flores**	**143.21**	**160**	PKhKP	PKPpre	06 26 46.9	
	comp=Z,1.5nm,0.7s,baz=304,slow=3.6,SNR=5.4						
CFA	**Coronel Fontan**	**152.13**	**155**	PKPbc	**PKPdf**	**06 27 10.7**	**+3.5**
	comp=Z,1.7nm,0.6s,baz=206,slow=3.8,SNR=7.1						
CPUP	**Villa Florida**	**160.24**	**173**	PKPab	**PKPab**	**06 27 56.0**	**-1.9**
	comp=Z,0.6nm,1.0s,baz=135,slow=1.4,SNR=2.8						
LPAZ	**La Paz**	**163.78**	**128**	PKPab	**PKPab**	**06 28 16.3**	**+1.7**
	comp=Z,2.2nm,0.8s,baz=196,slow=5.3,SNR=6.7						

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*AEIC **17** 06:18:33.3±1.3, 54°.39N±0°.04×161°.45W±0°.06, h26^{km}±7^{km}, Error ellipse: s-maj=6.4km s-min=4.8km az=177.0*

NEIC 17 06:18:31.0±1.4**, 54°.33N**±0°.07×**161°.35W**±0°.06**, h19**^{km}±10^{km}**, ML3.3**/20**, ML3.3**(AEIC)**, Error ellipse: s-maj=10.2km s-min=4.7km az=171.0, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DOL	**Dolgoi Island**	**0.88**	**340**		Pb	06 18 47.5	-0.1
DOL					Sb	06 18 58.4	-0.6
DT1	**Dutton Round H**	**0.95**	**326**		Pb	06 18 48.6	-0.3
DT1					Sb	06 18 59.8	-1.3
DTNA	**Dutton South F**	**0.98**	**328**		Pb	06 18 48.9	-0.4
DTNA					Pn	06 18 49.2	-0.5
DTNA					Sb	06 19 00.8	-1.1
HAG	**Hague Volcano**	**1.04**	**342**		Pb	06 18 50.1	-0.4
HAG					Pn	06 18 50.6	0.0
PS4A	**Pavlof South-4**	**1.06**	**344**		Pb	06 18 50.6	-0.2
PS4A					Pn	06 18 50.8	-0.1
PS4A					Sn	06 19 05.2	0.0
PVV	**Pavlof Volcano**	**1.08**	**346**		Pb	06 18 51.0	-0.1
PS1A	**Pavlof South-1**	**1.12**	**348**		Pn	06 18 51.5	-0.2
PS1A					Pb	06 18 51.8	0.0
PS1A					Sn	06 19 06.5	-0.1
CNBA	**Chernabura Isl**	**1.14**	**63**		Pn	06 18 51.4	-0.4
SDPT	**Sand Point**	**1.14**	**26**		Pn	06 18 51.2	-0.7
SDPT					Pb	06 18 51.6	-0.5
SDPT					Sn	06 19 06.9	-0.2
SDPT	**Sand Point**	**1.14**	**26**	IAML		06 19 08.7	
	comp=N,815nm,0.6s						
SDPT				IAML		06 19 13.1	
	comp=E,561nm,0.3s						
PN7A	**Pavlof North-7**	**1.17**	**342**		Pn	06 18 51.6	-0.8
PN7A					Pb	06 18 52.7	0.0
FALS	**False Pass**	**1.32**	**295**		Pn	06 18 54.7	+0.4
FALS					Pb	06 18 55.0	-0.1
FALS	**False Pass**	**1.32**	**295**	P	Pg	06 18 57.1	+0.7
S12K	**Black Hills**	**1.44**	**344**	P	Pb	06 18 56.8	-0.4
S12K	**Black Hills**	**1.44**	**344**		Pb	06 18 57.0	-0.2
S12K					Sb	06 19 16.1	+0.9
S12K	**Black Hills**	**1.44**	**344**	IAML		06 19 19.4	
	comp=E,2µm,0.5s						
S12K				IAML		06 19 19.4	
	comp=N,1µm,0.6s						
ISNN	**Isanotski Nort**	**1.50**	**291**		Pb	06 18 58.9	+0.6
VNKR	**Veniaminof 5**	**2.05**	**33**		Pn	06 19 06.0	+1.4
VNKR					Pb	06 19 06.5	-1.1
VNWF	**Veniaminof 8**	**2.10**	**28**		Pn	06 19 06.6	+1.4
VNWF					Pb	06 19 07.3	-1.1
VNFG	**Fog Glacier, M**	**2.22**	**27**		Pn	06 19 08.5	+1.7
VNFG					Pb	06 19 09.1	-1.4
VNFG	**Fog Glacier, M**	**2.22**	**27**	IAML		06 20 04.8	
	comp=E,283nm,0.8s						
AKSA	**Akutan Strait**	**2.56**	**268**		Pn	06 19 13.1	+1.7
AKUT	**Akutan**	**2.60**	**268**	Pn	Pn	06 19 13.8	+1.8
AKUT				IAML		06 19 58.2	
	comp=N,129nm,1.4s						
AKUT				IAML		06 20 03.0	
	comp=E,112nm,1.4s						
UNV	**Unalaska Valle**	**3.08**	**263**		Pn	06 19 20.1	+1.6
MNAT	**Makushin Natee**	**3.17**	**264**		Pn	06 19 21.2	+1.3
MNAT					Pb	06 19 21.3	-5.4
MSW	**Makushin Switc**	**3.23**	**265**		Pn	06 19 20.9	+0.3
MSW					Pb	06 19 21.8	-5.8
CHIR	**Chirikof Islan**	**3.62**	**63**	Pn	Pn	06 19 27.4	+1.4
CHIR				IAML		06 20 14.2	
	comp=E,61nm,1.5s						
CHIR				IAML		06 20 41.0	
	comp=N,73nm,1.5s						
PLK4	**Peulik 4**	**4.34**	**38**	Pn	Pn	06 19 39.2	+3.2
PLK4				IAML		06 20 34.2	
	comp=E,27nm,1.3s						
PLK4				IAML		06 20 44.4	
	comp=N,33nm,1.1s						
O14K	**Tigyukauivet M**	**4.94**	**0**	Pn	Pn	06 19 45.8	+1.7
O14K				IAML		06 21 27.4	
	comp=N,17nm,1.1s						
J16K	**Anvik River**	**8.99**	**2**	Pn	Pn	06 20 39.6	-0.1

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*IDC **17** 06:22:28.6±0.8, 11°.48N×125°.77E, h0^{km}, mb4.0/9, mbtmp4.0/9, Error ellipse: s-maj=44.5km s-min=17.8km az=66.0*

ISC 17 06:22:35.8±0.9**, 11°.4N**±0°.2×**125°.7E**±0°.3**, h53**^{km}**, n12,** σ**0ˢ.77**/9**, mb3.9**/9**, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**26.74**	**288**	P	**P**	**06 28 10.0**	**-0.7**
	1.2nm,0.3s,baz=100,slow=8.2,SNR=4.1						
	1.2nm,0.3s						
WRA	**Warramunga Arr**	**32.30**	**165**	P	**P**	**06 28 59.0**	**-0.9**
	0.3nm,0.5s,baz=328,slow=12,SNR=2.6						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**35.77**	**167**	P	**P**	**06 29 30.2**	**+0.2**
	0.4nm,0.4s,baz=354,slow=8.7,SNR=12						
	0.4nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**40.47**	**73**	T	T	07 13 40.3	
	baz=265,slow=74,SNR=68						
H11N2	**WAKE ISLAND Hy**	**40.47**	**73**	T	T	07 13 39.2	
	baz=265,slow=74,SNR=53						
H11N3	**WAKE ISLAND Hy**	**40.48**	**73**	T	T	07 13 34.4	
	baz=265,slow=74,SNR=56						
STKA	**Stephens Creek**	**45.66**	**161**	P	**P**	**06 30 52.0**	**+0.7**
	0.9nm,0.3s,baz=334,slow=10,SNR=4.8						
	0.9nm,0.3s						
MKAR	**Makanchi Array**	**50.78**	**322**	P	**P**	**06 31 30.9**	**+0.1**
	0.4nm,0.3s,baz=117,slow=7.5,SNR=7.1						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**54.81**	**325**	P	**P**	**06 32 01.1**	**+0.7**
	0.6nm,0.5s,baz=158,slow=3.0,SNR=5.1						
	0.6nm,0.5s						
ILAR	**Eielson Array**	**78.68**	**26**	P	**P**	**06 34 31.4**	**-0.7**
	0.3nm,0.6s,baz=248,slow=5.6,SNR=5.7						
	0.3nm,0.6s						
ARCES	**ARCESS Array B**	**82.93**	**340**	P	**P**	**06 34 55.5**	**+0.7**
	6.4nm,1.1s,baz=78,slow=4.9,SNR=6.5						
	6.4nm,1.1s						
FINES	**FINESS Array B**	**84.62**	**332**	P	**P**	**06 35 03.5**	**0.0**
	2.1nm,0.8s,baz=29,slow=4.4,SNR=7.0						
	2.1nm,0.8s						

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*ASRS **17** 06:36:00.0±0.5, 54°.35N×86°.62E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 17 06:36:03.0±3.4**, 54°.35N**×**86°.57E, h0**^{km}**, mbtmp2.7**/2**, ML2.3**/2**, Error ellipse: s-maj=28.2km s-min=17.2km az=44.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.10**	**250**	I	I	06 42 44.6	
	baz=68,slow=347,SNR=14						
ZALV	**Zalesovo Beam**	**1.10**	**250**	Pg	Pg	06 36 23.1	-1.1
	0.6nm,0.3s,baz=68,slow=18,SNR=11						
ZALV				Lg	Lg	06 36 39.9	
	1.0nm,0.3s,baz=76,slow=28,SNR=6.2						
KURBB	**Kurchatov Arra**	**6.17**	**236**	Pn	Pn	06 37 36.3	+1.1
	baz=53,slow=14,SNR=4.1						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**8.04**	**202**	Pn	Pn	06 38 01.9	+0.9
	0.1nm,0.3s,baz=23,slow=13,SNR=5.5						
	0.2nm,0.3s						

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*MOS **17** 06:45:12.3±0.9, 18°.87N×147°.10E, h12^{km}, mb5.0/27, Error ellipse: s-maj=12.8km s-min=6.1km az=111.0*

*IDC **17** 06:45:12.0±0.6, 18°.81N×147°.11E, h0^{km}, mb4.5/24, mbtmp4.5/25, ML3.3/1, MS3.6/21, Error ellipse: s-maj=18.6km s-min=12.7km az=85.0*

*NEIC **17** 06:45:14.5±1.4, 18°.85N±0°.09×147°.1E±0°.1, h10^{km}±1^{km}, mb5.0/174, Error ellipse: s-maj=20.0km s-min=14.5km az=104.0*

ISC 17 06:45:14.0±0.4**, 18°.84N**±0°.05×**147°.10E**±0°.07**, h10**^{km}**, n495,** σ**1ˢ.02**/383**, mb5.0**/135**, MS3.8**/25**, 14C-9D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DPSS	**Saipan**	**3.79**	**199**	Pn	**Pn**	**06 46 14.6**	**+2.1**
GUMO	**Guam**	**5.64**	**203**	Pn	**Pn**	**06 46 40.6**	**+2.7**
GUMO	**Guam**	**5.64**	**203**	P	**Pn**	**06 46 40.6**	**+2.7**
JCJ	**Chichijima**	**9.38**	**332**	Pn	Pn	06 47 18.2	-11
	6.1nm,0.3s,baz=127,slow=20,SNR=1.6						
JHJ	**Hachijo jima 2**	**15.66**	**337**	LR	LR	06 54 20.1	
	comp=Z,87nm,19.4s,baz=105,slow=35						
PATS	**Pohnpei**	**16.17**	**136**	Pn	**Pn**	**06 49 00.4**	**-1.1**
H11S3	**WAKE ISLAND Hy**	**18.57**	**88**	T	T	07 08 24.3	
	baz=275,slow=74,SNR=62						
H11S1	**WAKE ISLAND Hy**	**18.58**	**88**	T	T	07 08 27.0	
	baz=275,slow=74,SNR=57						
H11S2	**WAKE ISLAND Hy**	**18.59**	**88**	T	T	07 08 27.6	
	baz=275,slow=74,SNR=47						
H11N1	**WAKE ISLAND Hy**	**18.71**	**84**	T	T	07 08 36.5	
	baz=271,slow=75,SNR=5.6						
H11N2	**WAKE ISLAND Hy**	**18.71**	**84**	T	T	07 08 38.0	
	baz=271,slow=75,SNR=4.5						
H11N3	**WAKE ISLAND Hy**	**18.73**	**84**	T	T	07 08 41.4	
	baz=271,slow=75,SNR=5.1						
JGF	**Kuroka**	**18.79**	**335**		**P**	**06 49 35.1**	**+1.5**
JOW	**Kunigami**	**19.07**	**298**	LR	LR	06 55 32.4	
	comp=Z,262nm,20.5s,baz=133,slow=32						
JOW	**Kunigami**	**19.07**	**298**	P	**P**	**06 49 38.2**	**+1.4**
MJAR	**Matsushiro Arr**	**19.30**	**338**	P	**P**	**06 49 39.1**	**0.0**
	0.1nm,0.3s,baz=145,slow=16,SNR=5.3						
	1.3nm,0.3s						
MJAR	**Matsushiro Arr**	**19.30**	**338**	P	**P**	**06 49 39.1**	**0.0**
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAJO	**Matsushiro**	**19.30**	**338**	P	**P**	**06 49 39.9**	**+0.8**
MAJO	**Matsushiro**	**19.30**	**338**	⇑*e*P	**P**	**06 49 40.1**	**+1.0**
MJB9	**Matsu-Tunnel**	**19.30**	**338**	P	**P**	**06 49 40.7**	**+1.5**
JNU	**Nakatsue**	**20.33**	**318**	LR	LR	06 57 13.2	
	comp=Z,114nm,18.8s,baz=114,slow=35						
JNU	**Nakatsue**	**20.33**	**318**	P	**P**	**06 49 51.8**	**+1.4**
JSD	**Sado**	**20.63**	**340**		**P**	**06 49 55.0**	**+1.4**
DAV	**Davao City (W)**	**23.97**	**244**	LR	LR	06 58 13.9	
	comp=Z,113nm,20.8s,baz=304,slow=33						
YHNB	**Yeheng**	**24.56**	**288**	P	**P**	**06 50 33.8**	**-0.5**
KSRS	**Korea Array**	**25.01**	**322**	P	**P**	**06 50 38.5**	**+0.5**
	comp=Z,8.9nm,0.7s,baz=145,slow=8.9,SNR=21						
	comp=Z,8.9nm,0.7s						
KSAR	**Wonju Array Be**	**25.02**	**322**		**P**	**06 50 37.3**	**-1.0**
KSAR	**Wonju Array Be**	**25.02**	**322**	P	**P**	**06 50 37.3**	**-1.0**
KS19	**Wonju Array Si**	**25.07**	**322**	P	**P**	**06 50 39.1**	**+0.4**
ASAJ	**Asahikawa**	**25.49**	**352**	LR	LR	07 01 14.4	
	comp=Z,80nm,19.1s,baz=288,slow=38						
PMG	**Port Moresby**	**28.06**	**180**	⇑*e*P	**P**	**06 51 06.9**	**+1.1**
PMG				pmax	pmax		
	comp=Z,9.0nm,1.0s						
USRK	**Ussuriysk Ar.**	**28.28**	**337**	P	**P**	**06 51 08.3**	**+0.7**
	comp=Z,4.0nm,0.7s,baz=131,slow=8.5,SNR=9.0						
	comp=Z,4.0nm,0.7s						
NJ2	**Nanjing**	**28.60**	**303**	*e*P	**P**	**06 51 11.3**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BNX	**BinXian**	**31.40**	**333**	⇑P	**P**	**06 51 36.6**	**+1.5**
BNX				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TIA	**Tai'an**	**31.54**	**309**	P	**P**	**06 51 36.6**	**+0.1**
TIA				pmax	pmax		
	comp=Z,17nm,1.0s						
COEN	**Coen**	**32.81**	**187**		**P**	**06 51 47.6**	**-0.2**
HNS	**HongShan**	**33.80**	**310**	⇑P	**P**	**06 51 56.3**	**+0.1**
HNS				S	S	06 57 10.6	-10
HNS				pmax	pmax		
	comp=Z,66nm,1.0s						
HNS				LR	LR		
	comp=N,180nm,16.7s						
HNS				LR	LR		
	comp=Z,140nm,18.0s						
BJT	**Baijiatuau**	**33.96**	**315**		**P**	**06 51 57.0**	**-0.6**
BJT	**Baijiatuau**	**33.96**	**315**	P	**P**	**06 51 57.0**	**-0.6**
BJT				pmax	pmax		
	comp=Z,57nm,1.6s						
BJI	**Beijing**	**33.96**	**315**	P	**P**	**06 51 58.3**	**+0.7**
BJI				S	**S**	**06 57 19.3**	**-3.3**
BJI				pmax	pmax		
	comp=Z,11nm,1.3s						
BJI				LR	LR		
	comp=N,96nm,12.6s						
BJI				LR	LR		
	comp=E,98nm,17.4s						
BJI				LR	LR		
	comp=Z,60nm,15.7s						
HEH	**HeiHe**	**35.06**	**338**	*e*P	**P**	**06 52 07.8**	**+0.7**
HEH				pmax	pmax		
	comp=Z,14nm,1.4s						
PETK	**Petropavlovsk-**	**35.19**	**11**	LR	LR	07 06 30.4	
	comp=Z,69nm,19.1s,baz=198,slow=36						
QIZ	**Qiongzhong**	**35.20**	**277**	P	**P**	**06 52 08.0**	**-0.6**
QIZ				S	**S**	**06 57 37.4**	**-4.8**
QIZ				LR	LR		
	comp=N,110nm,10.8s						
QIZ				LR	LR		
	comp=E,150nm,9.4s						
QIZ				LR	LR		
	comp=Z,200nm,17.9s						
TIY	**Taiyuan**	**35.58**	**309**	P	**P**	**06 52 15.8**	**+4.0**
XLT	**XiLinHaoTe**	**36.05**	**321**	*e*P	**P**	**06 52 16.5**	**+0.7**
XLT				pP	pwP	06 52 31.0	+9.5
XLT				sP	sP	06 52 35.8	+17
XLT				pmax	pmax		
	comp=Z,10.0nm,1.1s						
XLT				pmax	pmax		
	comp=Z,120nm,3.6s						
BATI	**Baumata**	**36.97**	**221**	LR	LR	07 07 21.6	
	comp=Z,96nm,19.3s,baz=75,slow=36						
HHC	**Hu-ho-hao-te**	**37.46**	**314**	⇓*i*P	**P**	**06 52 27.9**	**+0.1**
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,94nm,4.5s						
HILR	**Hailar Array B**	**37.68**	**331**	P	**P**	**06 52 29.8**	**+0.2**
	comp=Z,18nm,0.7s,baz=133,slow=12,SNR=1.3						
	comp=Z,18nm,0.7s						
ZEA	**Zeya**	**38.06**	**341**	*e*P	**P**	**06 52 31.9**	**-0.7**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BTO	**Baotou**	**38.43**	**312**	*e*P	**P**	**06 52 37.4**	**+1.4**
BTO				pP	**pwP**	**06 52 49.6**	**+7.8**
BTO				sP	sP	06 52 55.0	+16
BTO				pmax	pmax		
	comp=Z,59nm,0.7s						
BTO				pmax	pmax		
	comp=Z,320nm,6.8s						
BTO				LR	LR		
	comp=N,290nm,13.5s						
BTO				LR	LR		
	comp=E,340nm,16.0s						
BTO				LR	LR		
	comp=Z,380nm,14.7s						
KNRA	**Kununurra**	**38.75**	**209**	P	**P**	**06 52 37.6**	**-1.2**
WB0	**Warramunga Arr**	**40.34**	**199**	P	**P**	**06 52 51.6**	**-0.3**
WR8	**Warramunga Arr**	**40.48**	**198**		**P**	**06 52 52.8**	**-0.4**
WRAB	**Tennant Creek**	**40.51**	**199**	P	**P**	**06 52 53.1**	**-0.3**
WRAB	**Tennant Creek**	**40.51**	**199**	⇓*i*P	**P**	**06 52 53.0**	**-0.3**
WRA	**Warramunga Arr**	**40.52**	**199**	P	**P**	**06 52 53.1**	**-0.3**
	comp=Z,3.7nm,0.8s,baz=19,slow=9.1,SNR=9.0						
WRA				PcP	**PcP**	**06 54 54.6**	**-1.4**
	comp=Z,1.2nm,0.5s,baz=19,slow=3.2,SNR=6.4						
	comp=Z,3.7nm,0.8s						
WRA	**Warramunga Arr**	**40.52**	**199**	IAmb	IAmb	06 52 54.5	
	comp=Z,1.0nm,1.2s						
WRA	**Warramunga Arr**	**40.52**	**199**	*i* P	**P**	**06 52 53.5**	**0.0**
MA2	**Magadan**	**40.78**	**3**	LR	LR	07 06 20.8	
	comp=Z,100nm,21.6s,baz=176,slow=31						
MA2	**Magadan**	**40.78**	**3**	*c i*P	**P**	**06 52 56.7**	**+1.5**
MA2				pmax	pmax		
	comp=Z,11nm,0.9s						
LZH	**Lanzhou**	**41.67**	**303**	*e*P	**P**	**06 53 03.0**	**-0.1**
LZH				pP	pwP	06 53 16.6	+7.7
LZH				pmax	pmax		
	comp=Z,37nm,1.2s						
LZH				LR	LR		
	comp=N,230nm,13.7s						

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LZH                                  LR      LR
      comp=E,210nm,13.1s
LZH                                  LR      LR
      comp=Z,200nm,13.1s
LZDM  Lanzhou Array     41.76 303    P       P       06 53 04.2 +0.1
      comp=Z,6.1nm,0.5s,baz=147,slow=6.9,SNR=13
      comp=Z,6.1nm,0.5s
FITZ  Fitzroy Crossi    42.33 211    P       P       06 53 07.2 -1.2
      comp=Z,1.2nm,0.3s,baz=38,slow=10,SNR=11
      comp=Z,1.2nm,0.3s
FITZ  Fitzroy Crossi    42.33 211    P       P       06 53 07.5 -0.8
PZH   PanZhiHua         42.37 289    P       P       06 53 09.0 +0.1
ULN   Ulaanbaatar       43.49 321            P       06 53 17.7  0.0
ULN   Ulaanbaatar       43.49 321⇓iP         P       06 53 18.1 +0.4
SONM  Songino Array     43.87 321    P       P       06 53 20.7 -0.1
      comp=Z,3.0nm,0.7s,baz=136,slow=7.6,SNR=13
SONM                                 LR      LR      07 12 33.0
      comp=Z,124nm,18.9s,baz=80,slow=37
      comp=Z,3.0nm,0.7s
AS31  Alice Springs     44.16 197            P       06 53 23.1  0.0
ASAR  Alice Springs     44.16 197    P       P       06 53 22.6 -0.6
      comp=Z,0.9nm,0.3s,baz=19,slow=6.6,SNR=22
ASAR                                 PcP     PP      06 55 07.5 +1.3
      comp=Z,1.1nm,0.8s,baz=28,slow=3.0,SNR=5.0
      comp=Z,0.9nm,0.3s
ASAR  Alice Springs     44.16 197            P       06 53 21.1 -2.0
SEY   Seymchan          44.21   3    LR      LR      07 09 41.5
      comp=Z,113nm,20.3s,baz=145,slow=33
SEY   Seymchan          44.21   3   eP       P       06 53 23.2 +0.2
SEY                                  pmax    pmax
      comp=Z,9.0nm,1.3s
YAK   Yakutsk           44.84 348    LR      LR      07 13 55.0
      comp=Z,32nm,19.5s,baz=110,slow=38
YAK   Yakutsk           44.84 348   eP       P       06 53 27.8 -0.3
YAK                                 e                06 55 08.8
YAK                                 e                06 55 13.6
YAK                                 eS       S       07 00 02.3 -3.1
YAK                                 e                07 03 20.7
YAK                                  pmax    pmax
      comp=Z,16nm,0.9s
YAK                                  pmax    pmax
      comp=E,3.0nm,1.3s
YAK                                  pmax    pmax
      comp=N,11nm,1.3s
YAK                                  pmax    pmax
      comp=Z,76nm,2.8s
YAK                                  pmax    pmax
      comp=N,48nm,1.7s
YAK                                  pmax    pmax
      comp=E,43nm,1.7s
YAK                                  smax    smax
      comp=N,108nm,2.9s
DZM   Mont Dzumac       44.84 154   eS       S       07 00 03.0 -3.5
      comp=N,42nm,24.1s
DZM                                 eSS      ScS     07 03 24.6 -2.3
      comp=N,72nm,25.1s
DZM                                 eLR      LR      07 06 01.2
      comp=N,166nm,22.9s
CMAR  Chiang Mai Arr    45.51 278    P       P       06 53 34.1  0.0
      comp=N,1.2nm,0.3s,baz=69,slow=6.3,SNR=9.8
CMAR                                 LR      LR      07 11 55.7
      comp=N,33nm,19.5s,baz=90,slow=35
      comp=N,1.2nm,0.3s
CMAR  Chiang Mai Arr    45.51 278ceP         P       06 53 34.0  0.0
CMAR                                 pmax    pmax
      comp=Z,2.0nm,0.3s
GTA   Gaotai            45.52 307   eP       P       06 53 35.3 +1.3
GTA                                  pP      sP      06 53 42.0 +4.8
GTA                                  pmax    pmax
      comp=Z,8.0nm,1.1s
ZAK   Zakamensk         46.84 323   eP       P       06 53 43.4 -0.8
ZAK                                  pmax    pmax
      comp=Z,7.0nm,1.4s
MBWA  Marble Bar        47.94 215    P       P       06 53 51.7 -1.2
NIKH  Nikolski High     48.15  34    P       P       06 53 53.8 -0.3
      baz=242
GOMU  GeErMu            48.90 302    P       P       06 54 00.3 -0.4
GOMU                                 sP      sP      06 54 07.3 +3.3
GOMU                                 pmax    pmax
      comp=Z,7.0nm,0.8s
SPIA  Saint Paul Isl    49.57  29    P       P       06 54 05.4 +0.3
      baz=237
P08K  Saint George I    49.59  30    P       P       06 54 05.4 +0.2
      baz=239
PSI   Prapat            49.72 257    LR      LR      07 17 00.7
      comp=Z,28nm,18.5s,baz=46,slow=38
UNV   Unalaska Valle    49.80  34    P       P       06 54 06.8  0.0
      baz=244
KNGR  Kungurtug, Tuv    50.31 321⇑iP         P       06 54 12.3 +1.3
KNGR                                 pmax    pmax
      comp=Z,4.0nm,0.9s
BILL  Bilibino          50.67   9            P       06 54 13.9 +0.7
BILL                                 IAmb    IAmb    06 54 14.8
      comp=Z,23nm,1.6s
BILL  Bilibino          50.67   9⇓iP         P       06 54 14.1 +0.9
BILL                                 pmax    pmax
      comp=Z,6.0nm,1.1s
STKA  Stephens Creek    50.70 186    P       P       06 54 13.4 -0.4
      comp=Z,1.7nm,0.6s,baz=341,slow=12,SNR=5.2
      comp=Z,1.7nm,0.6s
STKA  Stephens Creek    50.70 186    P       P       06 54 13.2 -0.7
BRDH  Bariadhala        51.75 284    LR      LR      07 18 48.7
      comp=Z,65nm,18.2s,baz=155,slow=39
FALS  False Pass        51.86  34    P       P       06 54 22.7 +0.4
      baz=246
BBOO  Buckleboo         52.43 192            P       06 54 26.5 -0.3
BBOO                                 IAmb    IAmb    06 54 27.1
      comp=Z,17nm,1.0s
GAMB  Gambell           52.84  22    P       P       06 54 29.6 +0.1
      baz=232
S12K  Black Hills       52.91  33    P       P       06 54 29.2 -1.0
      baz=247
M11K  Mekoryuk          53.05  27    P       P       06 54 30.7 -0.3
      baz=240
SDPT  Sand Point        53.61  34    P       P       06 54 34.6 -0.7
      baz=249
TIXI  Tiksi             53.89 353⇓iP         P       06 54 36.8 -0.3
TIXI                                 pmax    pmax
      comp=Z,3.0nm,0.9s
CHNA  Chernabura Isl    53.91  35    P       P       06 54 36.5 -1.0
      baz=250
M13K  Dall Lake         54.30  28    P       P       06 54 40.2  0.0
      baz=242
S14K  Fog Glacier       54.44  33    P       P       06 54 40.8 -0.7
      baz=249
K13K  Kusilvak Mount    54.48  26    P       P       06 54 41.0 -0.5
      baz=240
O14K  Tigyukauivet M    54.74  30    P       P       06 54 42.4 -1.0
      baz=245
N14K  Kuskokwak Cree    54.83  29    P       P       06 54 43.4 -0.7
      baz=244
L14K  Kuka Creek        55.02  27    P       P       06 54 44.5 -1.0
      baz=243
M14K  Bethel            55.07  28    P       P       06 54 45.2 -0.6
      baz=244
TNA   Tin City          55.21  21    P       P       06 54 45.9 -0.9
      baz=235
WMQ   Urumqi            55.22 311   eP       P       06 54 48.0 +0.6
WMQ                                  pP      pwP     06 55 05.0  +12
WMQ                                  pmax    pmax
      comp=Z,23nm,1.3s
J14K  Nanvaranak Lak    55.33  25    P       P       06 54 47.4 -0.3
      baz=241
O15K  Ungalikthiuk R    55.39  30    P       P       06 54 47.6 -0.5
      baz=247
ANM   Nome              55.56  23    P       P       06 54 48.0 -1.3
      baz=238
M15K  Kasigluk River    55.61  28    P       P       06 54 49.0 -0.7
      baz=245
N15K  Kwethluk River    55.66  29    P       P       06 54 49.6 -0.5
      baz=246
L15K  Ungalak Mounta    55.69  27    P       P       06 54 49.9 -0.3
      baz=244
K15K  Wolf Creek Mou    55.94  26    P       P       06 54 51.5 -0.6
      baz=243
P16K  Nushagak River    56.21  31    P       P       06 54 53.2 -0.9
      baz=249
G15K  Niukluk           56.27  23    P       P       06 54 54.0 -0.4
      baz=239
DGZ   Jazzator, Alta    56.31 318⇑iP         P       06 54 55.6 +0.4
DGZ                                  pmax    pmax
      comp=Z,11nm,1.2s
O16K  Kokwok River B    56.37  30    P       P       06 54 54.5 -0.6
      baz=248
CHIR  Chirikof Islan    56.37  35    P       P       06 54 55.0 -0.3
      baz=253
N16K  Nishlik Lake      56.38  29    P       P       06 54 55.2 -0.1
      baz=247
F15K  North Star Dit    56.42  22    P       P       06 54 55.3 -0.2
      baz=238
M16K  Timber Creek      56.51  28    P       P       06 54 55.8 -0.4
      baz=247
R17L  Mt. Peulik Vol    56.54  33    P       P       06 54 56.1 -0.4
      baz=251
L16K  Owhat River       56.57  27    P       P       06 54 56.8 +0.2
      baz=246
Q16K  King Salmon       56.73  31    P       P       06 54 58.0 +0.3
      baz=250
H16K  Elim              56.76  23    P       P       06 54 58.1 +0.3
      baz=241
J16K  Anvik River       56.77  25    P       P       06 54 58.3 +0.3
      baz=244
O17K  Koliganek Bris    56.90  30    P       P       06 54 58.2 -0.8
      baz=249
Q17K  Contact Creek     56.98  32    P       P       06 54 58.8 -0.9
      baz=251
I17K  Unalakleet        57.00  25    P       P       06 55 00.2 +0.6
      baz=243
P17K  Kvichak River     57.02  31    P       P       06 54 58.8 -1.0
      baz=250
N17K  Nushagak Hills    57.13  29    P       P       06 55 00.3 -0.3
      baz=249
L17K  Donlin            57.25  27    P       P       06 55 01.1 -0.3
      baz=247
M17K  Holitna River     57.34  28    P       P       06 55 02.1  0.0
      baz=248
SII   Sitkinak Islan    57.35  34    P       P       06 55 02.0 -0.2
      baz=254
J17K  VABM Dome         57.44  26    IAmb    IAmb    06 55 05.0
      comp=Z,13nm,1.2s
J17K  VABM Dome         57.44  26    P       P       06 55 02.9 +0.2
      baz=245
K17K  Iditarod          57.48  26    IAmb    IAmb    06 55 05.3
      comp=Z,19nm,0.9s
K17K  Iditarod          57.48  26    P       P       06 55 03.2 +0.2
      baz=246
R18K  Karluk            57.50  33    P       P       06 55 02.8 -0.4
      baz=253
Q18K  Katmai Hardscr    57.54  32    P       P       06 55 03.3 -0.3
      baz=252
C16K  Lisburne Hills    57.60  19    P       P       06 55 03.4 -0.4
      baz=236,SNR=5.5
G17K  Kiwalik Mounta    57.76  23    P       P       06 55 05.0  0.0
      baz=242,SNR=5.6
H17K  Granite Mounta    57.78  24    P       P       06 55 05.4 +0.3
      baz=243,SNR=6.0
N18K  Kilae Creek       57.78  29    P       P       06 55 05.3 +0.1
      baz=250
O18K  Koktuh Hills      57.83  30    P       P       06 55 05.6  0.0
      baz=251
L18K  Granite Mounta    57.98  27    P       P       06 55 07.0 +0.5
      baz=248
OHAK  Old Harbor        58.01  34    P       P       06 55 06.3 -0.5
      baz=254
D17K  Noatak River      58.01  20    P       P       06 55 06.0 -0.6
      baz=238,SNR=7.9
M18K  Stony River       58.09  28    P       P       06 55 06.6 -0.8
      baz=249
E17K  Hotham Inlet      58.11  21    P       P       06 55 06.9 -0.4
      baz=240,SNR=5.1
RDOG  Red Dog Mine      58.25  20    P       P       06 55 08.6 +0.2
      baz=238
O19K  Port Alsworth     58.36  30    P       P       06 55 09.0 -0.2
      baz=252
C17K  DeLong Mountai    58.39  19    P       P       06 55 09.6 +0.2
      baz=238
J18K  Innoko River      58.44  26    P       P       06 55 10.0 +0.2
      baz=247
H18K  Honhosa River     58.47  24    IAmb    IAmb    06 55 11.4
      comp=Z,18nm,1.1s
H18K  Honhosa River     58.47  24    P       P       06 55 10.5 +0.6
      baz=245
N19K  Bonanza Creek     58.48  29    P       P       06 55 09.9 -0.3
      baz=251
KDAK  Kodiak Island     58.52  33    P       P       06 55 09.7 -0.7
      baz=255
F18K  Selawik           58.63  22    P       P       06 55 11.3 +0.2
      baz=243
G18K  Tagagawik         58.68  23    IAmb    IAmb    06 55 13.0
      comp=Z,14nm,1.0s
G18K  Tagagawik         58.68  23    P       P       06 55 11.1 -0.3
      baz=244
E18K  Tukpahlearik C    58.69  21    IAmb    IAmb    06 55 13.3
      comp=Z,8.8nm,0.9s
E18K  Tukpahlearik C    58.69  21    P       P       06 55 11.1 -0.3
      baz=241
P19K  Oil Pt            58.72  31    P       P       06 55 12.0 +0.2
      baz=253
ZAA0  Zalesovo Array    58.72 322            P       06 55 11.3 -0.5
ZAA0                                 IAmb    IAmb    06 56 07.5
      comp=Z,10nm,0.9s
ZALV  Zalesovo Beam     58.72 322    P       P       06 55 10.8 -1.1
      comp=Z,6.2nm,0.8s,baz=99,slow=6.5,SNR=24
ZALV                                 LR      LR      07 21 37.4
      comp=Z,70nm,18.5s,baz=16,slow=37
      comp=Z,6.2nm,0.8s
ZALV  Zalesovo Beam     58.72 322            P       06 55 11.4 -0.4
ZALV  Zalesovo Beam     58.72 322  i P       P       06 55 11.1 -0.7
ZALV                                 pmax    pmax
      comp=Z,6.0nm,0.8s
L19K  White Mountain    58.77  28    P       P       06 55 12.1  0.0
L19K  White Mountain    58.77  28    P       P       06 55 12.5 +0.4
      baz=250
Q20K  Shuyak Island     58.84  32    P       P       06 55 12.5 -0.1
      baz=254
GCSA  Galena City Sc    58.87  25    P       P       06 55 12.7  0.0
      baz=246
J19K  Poorman           59.09  26    IAmb    IAmb    06 55 16.0
      comp=Z,13nm,1.1s
J19K  Poorman           59.09  26    P       P       06 55 14.2 -0.1
      baz=248
C18K  Utukok River      59.10  20    P       P       06 55 14.3 -0.1
      baz=240
O20K  Slope Mountain    59.13  30    P       P       06 55 14.9 +0.2
      baz=253
B18K  Kokolik River     59.28  19    P       P       06 55 15.9 +0.5
      baz=239
MK31  Makanchi Array    59.32 314c iP        P       06 55 16.1 -0.1
MKAR  Makanchi Array    59.32 314    P       P       06 55 16.2  0.0
      comp=Z,6.4nm,0.7s,baz=94,slow=9.1,SNR=38
      comp=Z,6.4nm,0.7s
H19K  Roundabout Mou    59.35  24    IAmb    IAmb    06 55 18.0
      comp=Z,13nm,0.9s
H19K  Roundabout Mou    59.35  24    P       P       06 55 16.6 +0.5
      baz=246
G19K  Purcell Mounta    59.36  23    P       P       06 55 16.9 +0.8
      baz=246,SNR=13
M20K  Styx River        59.44  28    P       P       06 55 17.1 +0.3
      baz=252
HOM   Homer             59.49  31    P       P       06 55 16.6 -0.5
      baz=254
K20K  Telida            59.51  27    P       P       06 55 17.1 -0.1
      baz=250
MAKZ  Makanchi          59.54 314            P       06 55 17.9 +0.2
MAKZ                                 IAmb    IAmb    06 55 18.7
      comp=Z,14nm,0.9s
MAKZ  Makanchi          59.54 314    P       P       06 55 17.9 +0.2
MAKZ                                 pmax    pmax
      comp=Z,14nm,1.0s
SPCR  Spurr Chakacha    59.65  29    P       P       06 55 18.0 -0.3
      baz=253
J20K  Nowinta River     59.76  26    P       P       06 55 19.1 +0.2
      baz=250
C19K  Lookout Ridge     59.83  19            P       06 55 20.1 +0.7
C19K                                 IAmb    IAmb    06 55 21.4
      comp=Z,16nm,0.9s
C19K  Lookout Ridge     59.83  19    P       P       06 55 19.6 +0.2
      baz=241,SNR=13
I20K  Naaghedeneel      59.84  25    P       P       06 55 19.8 +0.4
      baz=249
E19K  Redstone River    59.87  22    IAmb    IAmb    06 55 46.1
      comp=Z,18nm,1.6s
E19K  Redstone River    59.87  22    P       P       06 55 20.0 +0.4
      baz=245
STLK  Strandline Lak    59.91  29    P       P       06 55 20.4 +0.3
STLK                                 IAmb    IAmb    06 56 26.4
      comp=Z,18nm,1.6s
A19K  Wainwright        59.93  18    P       P       06 55 20.2 +0.3
      baz=239
H20K  Anotleneega Mo    59.94  24    P       P       06 55 20.6 +0.4
      baz=248
BRSE  Bradley Lake S    59.95  31    P       P       06 55 20.2 -0.2
      baz=255
D19K  Kuna River        60.02  20    IAmb    IAmb    06 55 22.2
      comp=Z,9.8nm,1.1s
D19K  Kuna River        60.02  20    P       P       06 55 21.4 +0.7
      baz=243
PPLA  Purkeypile        60.17  27    P       P       06 55 22.3 +0.4
PPLA  Purkeypile        60.17  27    P       P       06 55 21.1 -0.8
      baz=252
SKT   Skwentna          60.19  29    P       P       06 55 21.3 -0.6
      baz=253
F20K  Avaraart Lake     60.23  22    P       P       06 55 22.0 -0.1
      baz=246
SUA   Susitna One       60.40  29    P       P       06 55 23.3 -0.3
      baz=254
CHUM  Lake Minchumin    60.42  26    P       P       06 55 23.6 +0.2
      baz=252
IMAR  Indian Mountai    60.56  24    P       P       06 55 24.4 +0.1
E20K  Nigu River        60.56  21    P       P       06 55 24.6 +0.2
      baz=245
D20K  Etivluk River     60.62  20    IAmb    IAmb    06 55 25.9
      comp=Z,10.0nm,0.6s
D20K  Etivluk River     60.62  20    P       P       06 55 24.8 +0.1
      baz=245
O22K  Cooper Landing    60.63  30    P       P       06 55 24.8 -0.1
      baz=256
SEW   Seward            60.67  31    P       P       06 55 25.5 +0.4
      baz=256
L22K  Petersville       60.69  28    P       P       06 55 25.2 -0.1
L22K                                 IAmb    IAmb    06 55 26.7
      comp=Z,9.1nm,1.0s
RC01  Rabbit Creek A    60.78  30    P       P       06 55 26.1 +0.2
      baz=256
H21K  Melozitna Rive    60.81  24    IAmb    IAmb    06 55 28.0
      comp=Z,11nm,0.9s
H21K  Melozitna Rive    60.81  24    P       P       06 55 26.5 +0.4
      baz=250
G21K  Allakaket         60.84  23    IAmb    IAmb    06 55 47.3
      comp=Z,22nm,1.6s
G21K  Allakaket         60.84  23    P       P       06 55 26.7 +0.4
      baz=249
CUT   Chulitna          60.88  28    P       P       06 55 26.4 -0.2
      baz=254
I21K  Tanana            60.97  25    IAmb    IAmb    06 55 29.7
      comp=Z,14nm,1.0s
I21K  Tanana            60.97  25    P       P       06 55 26.8 -0.4
      baz=251,SNR=6.6
B20K  Meade River       61.01  19    P       P       06 55 27.5 +0.2
      baz=244,SNR=13
BPAW  Bear Paw Mtn.     61.05  26            P       06 55 28.3 +0.6
BPAW  Bear Paw Mtn.     61.05  26    P       P       06 55 27.7  0.0
      baz=253,SNR=8.8
F21K  Alatna River      61.11  23    P       P       06 55 27.9 -0.2
      baz=249
TRF   Thorofare Moun    61.16  27            P       06 55 28.7  0.0
TRF   Thorofare Moun    61.16  27    P       P       06 55 28.2 -0.4
      baz=254,SNR=5.5
PMR   Palmer            61.19  29    P       P       06 55 28.3 -0.3
PMR   Palmer            61.19  29    P       P       06 55 28.3 -0.3
PMR                                  pmax    pmax
      comp=Z,47nm,1.6s
PMR   Palmer            61.19  29    P       P       06 55 28.5 -0.1
      baz=256
GHO   Glory Hole Cre    61.33  29    P       P       06 55 29.3 -0.4
PWL   Port Wells        61.39  30    P       P       06 55 29.8 -0.3
      baz=257
E21K  Killik River      61.39  21    IAmb    IAmb    06 56 31.4
      comp=Z,26nm,1.9s
E21K  Killik River      61.39  21    P       P       06 55 29.9 -0.2
      baz=248
C21K  Knifeblade Rid    61.40  20    P       P       06 55 29.6 -0.4
      baz=246
MLY   Manley            61.43  25    IAmb    IAmb    06 55 31.9
      comp=Z,15nm,1.0s
MLY   Manley            61.43  25    P       P       06 55 30.2 -0.2
      baz=252,SNR=10.0
H22K  Ishtalitna Cre    61.44  24    P       P       06 55 30.4  0.0
      baz=251
KNK   Knik Glacier      61.45  30    P       P       06 55 30.6  0.0
      baz=257
SML   Sawmill           61.61  29            P       06 55 31.6 -0.1
SML   Sawmill           61.61  29    P       P       06 55 31.5 -0.1
      baz=256
B21K  Ikpikpuk River    61.64  20    IAmb    IAmb    06 55 33.3
      comp=Z,9.4nm,0.9s
B21K  Ikpikpuk River    61.64  20    P       P       06 55 32.0 +0.4
      baz=246
F22K  John River        61.68  22    P       P       06 55 32.9 +1.0
      baz=250
G22K  Bettles           61.73  23    P       P       06 55 32.5 +0.2
      baz=251
WAT1  Susitna Watana    61.75  28    P       P       06 55 32.5 -0.1
      baz=256
A21K  Barrow            61.76  18    P       P       06 55 32.8 +0.4
      baz=243
RND   Reindeer          61.77  27    IAmb    IAmb    06 55 33.7
      comp=Z,7.8nm,0.8s
MCK   McKinley          61.81  27    P       P       06 55 33.0 +0.1
      baz=255
M23K  Glacier View      61.88  29    P       P       06 55 33.1 -0.3
      baz=257
NRIK  Noril'sk          61.94 340    P       P       06 55 33.5 -0.1
      comp=Z,2.4nm,0.4s,baz=117,slow=7.3,SNR=6.6
      comp=Z,2.4nm,0.4s
NRIK  Noril'sk          61.94 340            P       06 55 33.3 -0.3
NRIK                                 IAmb    IAmb    06 55 34.6
      comp=Z,8.1nm,1.0s
NRIK  Noril'sk          61.94 340⇓iP         P       06 55 34.0 +0.4
NRIK                                 pmax    pmax
      comp=Z,8.0nm,1.0s
GLI   Glacier Island    61.98  30    P       P       06 55 34.4 +0.3
      baz=258
NEA2  Nenana            61.99  26    IAmb    IAmb    06 55 35.5
      comp=Z,9.3nm,0.9s
NEA2  Nenana            61.99  26    P       P       06 55 34.6 +0.5
      baz=254,SNR=6.0
D22K  Ayikyak River     61.99  21    IAmb    IAmb    06 55 36.1
      comp=Z,14nm,1.0s
D22K  Ayikyak River     61.99  21    P       P       06 55 34.5 +0.4
      baz=249
I23K  Minto, Yukon-K    62.02  25    IAmb    IAmb    06 55 36.0
      comp=Z,12nm,0.9s
I23K  Minto, Yukon-K    62.02  25    P       P       06 55 34.6 +0.4
      baz=254,SNR=8.6
E22K  Anaktuvuk Pass    62.03  22    IAmb    IAmb    06 55 36.2
      comp=Z,12nm,0.9s
E22K  Anaktuvuk Pass    62.03  22    P       P       06 55 34.6 +0.2
      baz=250,SNR=14
KURK  Kurchatov         62.05 318            P       06 55 34.2 -0.6
KURK                                 IAmb    IAmb    06 55 35.9
      comp=Z,11nm,0.9s
KURK  Kurchatov         62.05 318c iP        P       06 55 34.1 -0.6
KURK                                 pmax    pmax
      comp=Z,17nm,1.1s
WAT6  Susitna Watana    62.06  28    P       P       06 55 34.9 +0.2
      baz=257,SNR=5.4
SCM   Sheep Creek Mo    62.08  29    P       P       06 55 34.6 -0.2
      baz=257
A22K  Sinclair Lake     62.10  18    P       P       06 55 35.1 +0.4
      baz=245
KURBB Kurchatov Arra    62.10 318    P       P       06 55 34.8 -0.3
      comp=Z,14nm,0.9s,baz=98,slow=6.1,SNR=40
      comp=Z,14nm,0.9s
H23K  Yukon River       62.14  25    IAmb    IAmb    06 55 36.9
      comp=Z,8.0nm,0.8s
H23K  Yukon River       62.14  25    P       P       06 55 35.4 +0.3
      baz=253
G23K  Bananza Creek     62.22  24    IAmb    IAmb    06 55 37.7
      comp=Z,11nm,1.3s
G23K  Bananza Creek     62.22  24    P       P       06 55 35.8 +0.2
      baz=252
B22K  Teshekpuk Lake    62.31  19    IAmb    IAmb    06 55 37.5
      comp=Z,14nm,1.1s
B22K  Teshekpuk Lake    62.31  19    P       P       06 55 36.8 +0.7
      baz=247
COLD  Coldfoot          62.31  23    IAmb    IAmb    06 55 38.1
      comp=Z,13nm,1.2s
COLD  Coldfoot          62.31  23    P       P       06 55 36.5 +0.3
      baz=252,SNR=6.4
DHY   Denali Highway    62.33  28    IAmb    IAmb    06 55 37.7
      comp=Z,18nm,1.4s
DHY   Denali Highway    62.33  28    P       P       06 55 36.8 +0.2
      baz=257
WRH   Wood River Hil    62.36  26    IAmb    IAmb    06 55 37.1
      comp=Z,12nm,1.0s
COLA  College           62.56  26    P       P       06 55 38.0 +0.1
      baz=255
EYAK  Cordova Ski Ar    62.57  31    P       P       06 55 38.1 +0.2
      baz=260
KLU   Klutina           62.66  30    P       P       06 55 38.9 +0.2
      baz=259
M24K  Tolsona, Glenn    62.67  29    P       P       06 55 38.7  0.0
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	baz=258						
D23K	Nanushuk River	62.70	21	IAmb	IAmb	06 55 41.2	
	comp=Z,12nm,0.9s						
D23K	Nanushuk River	62.70	21	P	P	06 55 39.5	+0.7
	baz=250						
E23K	Chandalar	62.78	22	P	P	06 55 40.0	+0.6
	baz=252,SNR=14						
POKR	Poker Plat Res	62.80	26	P	P	06 55 40.1	+0.7
	baz=256						
H24K	Noodor Dome	62.80	25	P	P	06 55 40.1	+0.5
	baz=255						
HDA	Harding Lake	62.83	26	IAmb	IAmb	06 55 39.7	
	comp=Z,14nm,1.1s						
HDA	Harding Lake	62.83	26	P	P	06 55 39.2	-0.5
	baz=256,SNR=5.4						
IL31		62.94	26		P	06 55 39.5	-0.9
IL31				IAmb	IAmb	06 55 40.4	
	comp=Z,8.6nm,0.9s						
ILAR	Eielson Array	62.94	26	P	P	06 55 39.3	-1.1
	comp=Z,7.3nm,1.0s,baz=259,slow=5.3,SNR=36						
ILAR				LR	LR	07 23 57.1	
	comp=Z,70nm,19.0s,baz=48,slow=37						
	comp=Z,7.3nm,1.0s						
ILAR	Eielson Array	62.94	26		P	06 55 38.9	-1.5
TOLK	Toolik Lake Re	62.98	22	IAmb	IAmb	06 55 42.6	
	comp=Z,12nm,1.1s						
TOLK	Toolik Lake Re	62.98	22	P	P	06 55 41.2	+0.6
	baz=252						
C23K	Itkillik River	63.02	20	P	P	06 55 41.6	+0.8
	baz=250						
KAIM	Kayak Island	63.12	32	P	P	06 55 41.2	-0.5
	baz=261						
PAX	Paxson	63.16	28	IAmb	IAmb	06 55 43.2	
	comp=Z,20nm,1.4s						
PAX	Paxson	63.16	28	P	P	06 55 42.3	+0.3
	baz=259						
G24K	Hadweenzic Riv	63.19	24	P	P	06 55 42.6	+0.6
	baz=255						
HARP	HAARP	63.19	29	P	P	06 55 42.6	+0.5
	baz=259						
E24K	Your Creek	63.19	22	IAmb	IAmb	06 55 44.0	
	comp=Z,12nm,1.2s						
E24K	Your Creek	63.19	22	P	P	06 55 42.9	+0.8
	baz=253						
BMRM	Bremner River	63.20	31	P	P	06 55 42.2	-0.1
	baz=260						
K24K	Donnelly Dome	63.20	27	P	P	06 55 41.7	-0.4
	baz=258						
F24K	Squaw Lake	63.25	23	IAmb	IAmb	06 55 54.0	
	comp=Z,17nm,1.6s						
F24K	Squaw Lake	63.25	23	P	P	06 55 42.8	+0.3
	baz=254						
N25K	Chitina, Valde	63.31	30	P	P	06 55 42.5	-0.6
	baz=260						
D24K	Happy Valley	63.40	21	P	P	06 55 43.3	-0.1
	baz=252						
J25K	Salcha River,	63.54	26	IAmb	IAmb	06 56 04.0	
	comp=Z,22nm,1.7s						
J25K	Salcha River,	63.54	26	P	P	06 55 43.7	-0.8
	baz=258						
RIDG	Independent Ri	63.59	27	P	P	06 55 44.2	-0.6
	baz=259						
C24K	Franklin Bluff	63.61	21	IAmb	IAmb	06 55 46.5	
	comp=Z,12nm,1.0s						
C24K	Franklin Bluff	63.61	21	P	P	06 55 44.7	0.0
	baz=252						
G25K	Bearman Lake	63.73	24	P	P	06 55 45.7	+0.1
	baz=256						
BOOM	Boomskoye usch	63.75	309	IAmb	IAmb	06 55 48.5	
	comp=Z,5.5nm,0.7s						
KSH	Kashi	63.87	305	P	P	06 55 51.8	+4.6
KSH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CRQE	Cirque	63.89	31	P	P	06 55 46.5	-0.4
	baz=262						
SCRK	Sand Creek	64.01	27	IAmb	IAmb	06 55 48.7	
	comp=Z,14nm,1.1s						
SCRK	Sand Creek	64.01	27	P	P	06 55 47.5	-0.1
	baz=259,SNR=7.8						
MCARA	McCarthy VSAT	64.02	30	P	P	06 55 47.7	+0.1
	baz=262						
F25K	Christian Rive	64.11	23	IAmb	IAmb	06 55 50.4	
	comp=Z,14nm,1.0s						
F25K	Christian Rive	64.11	23	P	P	06 55 48.4	+0.3
	baz=256						
L26K	Log Cabin Wild	64.12	28	P	P	06 55 48.1	-0.3
	baz=260						
M26K	Nabesna, AK	64.18	29	P	P	06 55 49.1	+0.4
	baz=261						
E25K	Arctic Village	64.26	23	P	P	06 55 49.5	+0.4
	baz=256,SNR=6.6						
D25K	Kavik River	64.28	21	IAmb	IAmb	06 55 51.0	
	comp=Z,13nm,0.9s						
D25K	Kavik River	64.28	21	P	P	06 55 49.4	+0.2
	baz=255						
J26L	Joseph Creek	64.28	27	P	P	06 55 49.5	0.0
	baz=260						
BMAR	Burnt Mountain	64.47	23	P	P	06 55 51.0	+0.6
I26K	Coal Creek Min	64.60	26	P	P	06 55 51.4	+0.1
	baz=260						
G26K	Porcupine Rive	64.67	24	P	P	06 55 51.9	+0.2
	baz=258						
F26K	Sheenjek River	64.69	23	IAmb	IAmb	06 55 54.1	
	comp=Z,13nm,1.1s						
F26K	Sheenjek River	64.69	23	P	P	06 55 52.2	+0.3
	baz=258						
M27K	Edge Creek, AK	64.69	29	P	P	06 55 52.3	+0.1
	baz=262						
HYB	Hyderabad	64.77	281	*e*P	P	06 55 54.1	+0.8
CTG	Chitna Glacier	64.77	31	P	P	06 55 52.6	-0.1
	baz=263						
L27K	Beaver Creek,	64.81	28	P	P	06 55 52.5	-0.3
	baz=262						
AAK	Ala-Archa	64.81	309	⇓*i*P	P	06 55 54.8	+1.4
BCAR	Beaver Creek A	64.83	28	P	P	06 55 53.2	+0.2
K27K	Chicken	64.84	27	IAmb	IAmb	06 56 08.5	
	comp=Z,25nm,1.8s						
K27K	Chicken	64.84	27	P	P	06 55 53.0	0.0
	baz=261						
C26K	Camden Bay	64.93	21	P	P	06 55 53.1	-0.3
	baz=256						
ARLS	Aral	64.98	308	P	P	06 55 54.8	+0.3
ARLS				pmax	pmax		
	comp=Z,11nm,0.8s						
BVCY	Beaver Creek	65.17	29	P	P	06 55 55.5	+0.4
	baz=263						
PINM	Pinnacle	65.22	32	P	P	06 55 55.6	+0.1
	baz=265						
C27K	Jago River	65.27	21	P	P	06 55 55.8	+0.2
	baz=257						
YUK3	Moose Creek	65.28	30	P	P	06 55 55.9	-0.2
	baz=264						
I27K	Kandik River	65.28	26	P	P	06 55 56.3	+0.4
	baz=261						
O28M	Mount Upton	65.31	31	P	P	06 55 55.3	-1.1
O28M	Mount Upton	65.31	31	P	P	06 55 56.8	+0.4
	baz=264						
PALK	Pallekele	65.38	269	LR	LR	07 25 31.7	
	comp=Z,22nm,18.0s,baz=60,slow=37						
H27K	Steamboat Moun	65.42	25	IAmb	IAmb	06 55 58.4	
	comp=Z,8.0nm,0.9s						
H27K	Steamboat Moun	65.42	25	P	P	06 55 57.5	+0.8
	baz=261						
G27K	Doyon Strip	65.47	24	P	P	06 55 57.8	+0.8
	baz=260						
YUK8	Steele Glacier	65.56	31	P	P	06 55 58.8	+0.7
	baz=265						
E27K	Coleen River	65.73	23	P	P	06 55 59.7	+1.0
	baz=260						
I28M	Miner Creek	65.95	26	P	P	06 56 00.9	+0.7
	baz=263						
DAWY	Dawson	66.02	27		P	06 56 00.6	-0.1
DAWY	Dawson	66.02	27	P	P	06 56 01.5	+0.8
	baz=264						
ARSB	Arslanbob	66.02	308	IAmb	IAmb	06 56 02.9	
	comp=Z,5.9nm,0.7s						
O29M	Mount Kennedy	66.07	32	P	P	06 56 02.0	+0.9
	baz=266						
YUK4	Talbot Arm	66.11	30	P	P	06 56 01.9	+0.5
	baz=266,SNR=5.7						
D27M	Malcolm River	66.14	22	P	P	06 56 02.1	+0.8
	baz=260						
YUK6	Outpost Mounta	66.22	31	P	P	06 56 02.6	+0.4
	baz=266						
F28M	Old Crow	66.28	24	P	P	06 56 03.0	+0.8
	baz=262						
M29M	Somme Creek	66.28	29	IAmb	IAmb	06 56 04.5	
	comp=Z,8.5nm,0.8s						
M29M	Somme Creek	66.28	29	P	P	06 56 02.9	+0.5
	baz=265						
P29M	Windy Craggy	66.45	32	P	P	06 56 03.9	+0.5
	baz=267						
L29M	L29M	66.49	29	IAmb	IAmb	06 56 22.0	
	comp=Z,12nm,1.2s						
L29M	L29M	66.49	29	P	P	06 56 04.3	+0.7
	baz=265						
E28M	Babbage River	66.55	23	P	P	06 56 04.9	+1.0
	baz=262						
J29N	Klondike Camp	66.57	27	IAmb	IAmb	06 56 06.5	
	comp=Z,20nm,1.6s						
J29N	Klondike Camp	66.57	27	P	P	06 56 05.0	+0.8
	baz=265						
NIL	Nilore	66.62	299	P	P	06 56 05.0	-0.1
NIL	Nilore	66.62	299	P	P	06 56 05.0	-0.1
NIL				pmax	pmax		
	comp=Z,15nm,0.9s						
I29M	Ogilvie Camp,	66.62	26	P	P	06 56 04.4	-0.1
	baz=264						
HYT	Haines Junctio	66.63	31	IAmb	IAmb	06 56 06.9	
	comp=Z,12nm,0.9s						
HYT	Haines Junctio	66.63	31	P	P	06 56 05.3	+0.6
	baz=267,SNR=5.8						
H29M	Whitestone	66.69	25	P	P	06 56 04.9	+0.1
	baz=264						
K29M	Barlow Dome	66.82	28	IAmb	IAmb	06 56 07.4	
	comp=Z,7.9nm,0.7s						
K29M	Barlow Dome	66.82	28	P	P	06 56 06.3	+0.5
	baz=266						
P30M	Million Dollar	66.86	32	P	P	06 56 06.7	+0.6
	baz=268						
N30M	Aishikik Lake	66.86	30	IAmb	IAmb	06 56 08.1	
	comp=Z,9.8nm,0.9s						
N30M	Aishikik Lake	66.86	30	P	P	06 56 06.9	+0.8
	baz=267						
G29M	Pine Creek	66.90	24	P	P	06 56 06.8	+0.6
	baz=264						
D28M	Stokes Point	66.94	22	P	P	06 56 07.2	+0.9
	baz=262						
M30M	Minto, Yukon	67.06	29	P	P	06 56 07.8	+0.4
	baz=267						
E29M	Blow River	67.12	23	P	P	06 56 08.1	+0.6
	baz=263						
PLBC	Pleasant Camp	67.14	33	P	P	06 56 08.0	+0.2
	baz=268						
S31K	Pelican	67.18	34	P	P	06 56 08.0	0.0
	baz=269						
BVAR	Borovoye Array	67.21	320	P	P	06 56 08.2	-0.2
	comp=Z,6.1nm,0.3s,baz=90,slow=7.7,SNR=31						
BVAR				LR	LR	07 26 09.4	
	comp=Z,113nm,18.2s,baz=60,slow=36						
	comp=Z,6.1nm,0.3s						
BORK	Borovoye	67.26	320		P	06 56 08.5	-0.2
BORK	Borovoye	67.26	320	*c* *i*P	P	06 56 08.3	-0.4
BORK				pmax	pmax		
	comp=Z,19nm,1.0s						
O30N	Mendenhall	67.32	31	P	P	06 56 09.9	+0.9
	baz=268						
EPYK	Eagle Plains	67.37	25	P	P	06 56 09.6	+0.4
	baz=265						
J30M	Hart River	67.39	27	IAmb	IAmb	06 56 11.2	
	comp=Z,8.6nm,1.0s						
J30M	Hart River	67.39	27	P	P	06 56 09.7	+0.2
	baz=266						
I30M	Mount Dempster	67.42	26	P	P	06 56 10.2	+0.6
	baz=266						
R31K	City Hall, Gus	67.44	34	P	P	06 56 10.8	+1.1
	baz=269						
N31M	Braeburn, Yuko	67.49	30	P	P	06 56 10.6	+0.5
	baz=268						
MAYO	Mayo, Yukon	67.53	28	P	P	06 56 10.6	+0.3
	baz=267						
G30M	tAoh Zraii Nji	67.61	24	P	P	06 56 10.9	+0.1
	baz=265						
SKAG	Skagway	67.67	33	P	P	06 56 11.7	+0.5
	baz=269						
KK31	Karatay Array	67.70	310	IAmb	IAmb	06 56 30.0	
	comp=Z,10nm,1.1s						
KKAR	Karatay Array	67.70	310		P	06 56 11.6	-0.1
KKAR	Karatay Array	67.70	310	P	P	06 56 11.6	-0.1
F30M	Barrier River	67.83	24	P	P	06 56 12.3	+0.2
	baz=266						
WHY	Whitehorse	67.91	31	P	P	06 56 12.8	0.0
	baz=269						
S32K	Killisnoo	68.06	35	P	P	06 56 13.9	+0.3
	baz=271						
M31M	Drury Creek, Y	68.17	30	P	P	06 56 14.8	+0.5
	baz=269						
H31M	Peel River	68.30	26	IAmb	IAmb	06 56 16.5	
	comp=Z,8.8nm,0.8s						
H31M	Peel River	68.30	26	P	P	06 56 15.7	+0.7
	baz=268						
G31M	Satah River	68.38	25	IAmb	IAmb	06 56 16.5	
	comp=Z,9.2nm,0.8s						
G31M	Satah River	68.38	25	P	P	06 56 16.0	+0.6
	baz=267						
P32M	Atlin	68.49	32	P	P	06 56 16.2	-0.2
	baz=271						
F31M	Tsiigehtchic	68.61	24	P	P	06 56 16.6	-0.2
	baz=268						
FARO	Faro, Yukon	68.66	30	P	P	06 56 16.7	-0.7
	baz=270						
INK	Inuvik	68.73	23	IAmb	IAmb	06 56 18.4	
	comp=Z,6.3nm,0.8s						
INK	Inuvik	68.73	23	P	P	06 56 17.6	0.0
	baz=267						
N32M	Quiet Lake	68.79	31	P	P	06 56 18.7	+0.4
	baz=271						
P33M	Teslin, Yukon	68.93	32	P	P	06 56 19.4	+0.3
	baz=271						
CHGR	Chuyangaron	69.23	305	P	P	06 56 20.9	-0.6
CHGR				pmax	pmax		
	comp=Z,14nm,0.5s						
Q32M	Nakina River	69.25	33	P	P	06 56 21.1	-0.3
	baz=272						
V35K	Ketchikan	69.80	37	P	P	06 56 23.9	-0.6
	baz=274						
S34M	Telegraph Cree	69.90	34	P	P	06 56 25.8	+0.8
	baz=274						
R33M	Jennings River	69.90	33	P	P	06 56 26.1	+0.8
	baz=273						
KBL	Kabul	69.94	301	P	P	06 56 25.2	-0.9
KBL	Kabul	69.94	301	P	P	06 56 25.2	-0.9
KBL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
T35M	Bob Quinn	70.44	35	P	P	06 56 29.4	+0.9
	baz=274						
DLBC	Dease Lake	70.45	34	P	P	06 56 29.4	+0.9
	baz=274						
WTLY	Watson Lake, Y	70.95	32	P	P	06 56 32.0	+0.5
	baz=275						
A36M	Sachs Harbour	71.52	19	IAmb	IAmb	06 56 35.6	
	comp=Z,9.0nm,0.9s						
A36M	Sachs Harbour	71.52	19	P	P	06 56 35.1	+0.4
	baz=274						
PPT	Papeete	71.98	116	LR	LR	07 23 59.5	
	comp=Z,109nm,20.1s,baz=315,slow=32						
PPT2	Papeete2	71.99	116	*e*LR	LR	07 18 25.4	
	comp=Z,133nm,30.5s						
PPT2				*e*LR	LR	07 18 33.8	
	comp=Z,134nm,26.2s						
C36M	Paulatuk	72.13	22	IAmb	IAmb	06 56 39.0	
	comp=Z,14nm,1.1s						
C36M	Paulatuk	72.13	22	P	P	06 56 38.6	+0.2
	baz=276						
LIRD	Liard River Hi	72.38	32	P	P	06 56 40.6	+0.5
	baz=277						
TOAD	Toad River Com	72.89	33	P	P	06 56 43.4	+0.2
	baz=278						
WRGLY	Wrigley	73.13	28	P	P	06 56 45.0	+0.6
	baz=278						
KOTAN	Kotaneelee Air	73.30	31	P	P	06 56 46.1	+0.6
	baz=279						
ARTI	Arti	73.83	325		P	06 56 47.4	-1.3
ARTI				IAmb	IAmb	06 56 50.8	
	comp=Z,8.1nm,0.7s						
ARTI	Arti	73.83	325	*d* *i*P	P	06 56 48.5	-0.2
ARTI						06 59 31.2	
ARTI				S	SKiKP	07 06 15.4	-2.8
ARTI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AB31	Akbulak array	74.14	317	IAmb	IAmb	06 56 51.1	
	comp=Z,12nm,0.8s						
ABKAR	Akbulak array	74.14	317		P	06 56 50.1	-0.6
TBI	Tubuai	74.77	122	*e*LR	LR	07 19 51.8	
	comp=Z,594nm,37.2s						
TBI				*e*LR	LR	07 19 54.7	
	comp=Z,1µm,29.8s						
AKTO	Aktyubinsk	75.14	319	LR	LR	07 31 59.6	
	comp=Z,118nm,18.1s,baz=43,slow=37						
TAOE	Nuku Hiva Isla	76.80	104	*e*LR	LR	07 20 51.3	
	comp=Z,81nm,25.9s						
YKAW3	Yellowknife Wh	77.23	28		P	06 57 07.7	-0.4
YKA	Yellowknife Ar	77.25	28	P	P	06 57 07.9	-0.3
	comp=Z,3.5nm,0.8s,baz=290,slow=6.2,SNR=36						
	comp=Z,3.5nm,0.8s						
YKA	Yellowknife Ar	77.25	28	P	P	06 57 06.5	-1.7
YKA	Yellowknife Ar	77.25	28	P	P	06 57 06.5	-1.7
KIRV	Kirov	78.05	328	⇓*i*P	P	06 57 12.8	+0.1
J05D	Fort Rock, OR	78.52	48	IAmb	IAmb	06 59 10.6	
	comp=Z,10.0nm,0.8s						
PINE	Pine Mountain	78.59	48		P	06 57 17.2	+0.9
PINE				IAmb	IAmb	06 57 18.2	
	comp=Z,16nm,0.8s						
SPITS	Spitsbergen Ar	79.25	351	P	P	06 57 18.9	-0.2
	comp=Z,19nm,1.1s,baz=131,slow=6.1,SNR=2.1						
	comp=Z,19nm,1.1s						
ORV	Oroville	79.30	52	IAmb	IAmb	07 00 20.5	
	comp=Z,13nm,0.7s						
NEW	Newport	79.92	42	P	P	06 57 23.3	0.0
BEKR	Beckworth	80.07	51		P	06 57 24.9	+0.4
BELG	Belogornoye	80.90	322	*c* *i*P	P	06 57 28.4	0.0
BELG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KLMR	Klimovskoe	81.96	332	*e*P	P	06 57 31.4	-2.5
KLMR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NVAR	Mina Array Bea	82.01	52	P	P	06 57 35.6	+0.7
	comp=Z,3.8nm,0.9s,baz=268,slow=5.9,SNR=16						
	comp=Z,3.8nm,0.9s						
NVAR	Mina Array Bea	82.01	52	P	P	06 57 34.8	-0.1
ARCES	ARCESS Array B	82.77	342	P	P	06 57 38.3	+0.3
	comp=Z,1.8nm,0.7s,baz=89,slow=6.2,SNR=5.6						
	comp=Z,1.8nm,0.7s						
ARCES	ARCESS Array B	82.77	342	P	P	06 57 38.3	+0.3
ARCES				pmax	pmax		
	comp=Z,97nm,2.0s						
AKT	Akhty	84.49	312	*e*P	P	06 57 44.3	-3.2
AKT				*e*		07 00 56.3	
AKT				pmax	pmax		
	comp=Z,8.0nm,1.3s						
YHL	Hebgen Lake	84.91	44	IAmb	IAmb	06 57 51.8	
	comp=Z,9.8nm,1.1s						
YMR	Madison River	85.12	44	IAmb	IAmb	06 57 52.8	
	comp=Z,8.4nm,0.9s						
YNR	Norris Junctio	85.30	44	IAmb	IAmb	06 57 55.6	
	comp=Z,16nm,1.4s						
HWUT	Hardware Ranch	85.83	47	IAmb	IAmb	06 57 55.6	
	comp=Z,8.5nm,1.1s						
RLMT	Red Lodge	86.07	44	IAmb	IAmb	07 00 18.6	
	comp=Z,22nm,1.8s						
PDAR	Pinedale Array	86.78	46	P	P	06 57 58.5	-0.6
	comp=Z,0.7nm,0.8s,baz=253,slow=1.5,SNR=7.8						
	comp=Z,0.7nm,0.8s						
KBZ	Khabaz	86.98	315	P	P	06 57 59.4	-0.3
	comp=Z,3.6nm,0.9s,baz=201,slow=4.5,SNR=7.0						
	comp=Z,3.6nm,0.9s						
KBZ	Khabaz	86.98	315	⇑*i*P	P	06 57 59.5	-0.1
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FINES	FINESS Array B	87.31	336	P	P	06 57 59.3	-1.6
	comp=Z,1.4nm,0.4s,baz=71,slow=5.0,SNR=12						
	comp=Z,1.4nm,0.4s						
FINES	FINESS Array B	87.31	336	*i* P	P	06 58 00.7	-0.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WUAZ	Wupatki	88.22	53		P	06 58 06.9	+0.9
PV16	Nyswonger Mesa	88.97	50	IAmb	IAmb	07 00 07.7	
	comp=Z,6.0nm,0.6s						
PV03	Paradox Valley	89.04	50	IAmb	IAmb	07 00 12.1	
	comp=Z,12nm,1.3s						
PV13	Radium Mtn., P	89.10	50	IAmb	IAmb	07 00 05.8	
	comp=Z,5.8nm,0.6s						
SOC	Sochi	89.15	316	*e*P	P	06 58 08.3	-1.7
SOC				*e*S	SKSac	07 08 35.0	-5.2
SOC				*e*SSS	SSS	07 18 29.4	
SOC				pmax	pmax		
	comp=Z,13nm,0.9s						
MNK	Minsk	90.51	329	*i* P	P	06 58 14.5	-1.6
MNK				*i*		07 01 49.7	
MNK				*i* PPP	PPP	07 03 47.4	
MNK				*i* S	SKSac	07 08 41.1	-6.6
MNK				*i* *SS	SKKSac	07 09 07.2	+5.5
MNK				*i* PS	PnS	07 10 20.5	+1.5
MNK				*i* SS	SS	07 15 09.6	-1.5
MNK				*i* SSS	SSS	07 18 46.7	
MNK				pmax	pmax		
	comp=E,25nm,0.8s						
MNK				pmax	pmax		
	comp=Z,22nm,0.8s						
MNK				pmax	pmax		
	comp=N,12nm,0.6s						
MNK				MLR	MLR		
	comp=N,184nm,17.0s						
MNK				MLR	MLR		
	comp=Z,97nm,19.0s						
MNK				MLR	MLR		
	comp=E,109nm,16.0s						
NOA	NORSAR Array B	92.90	340	LR	LR	07 44 20.9	
	comp=E,34nm,21.2s,baz=305,slow=38						
BR131	Keskin Array S	94.96	315	⇑*i*P	P	06 58 36.1	-1.1
BRTR	Keskin Array B	94.96	315	P	P	06 58 35.4	-1.9
	comp=E,0.8nm,0.7s,baz=113,slow=2.8,SNR=4.2						
	comp=E,0.8nm,0.7s						
PLCA	Paso Flores	141.12	132	PKP	PKPdf	07 04 45.0	-0.1
	comp=E,2.0nm,1.1s,baz=166,slow=4.2,SNR=3.6						
PLCA	Paso Flores	141.12	132	PKIKP	PKPdf	07 04 45.0	-0.1
DBIC	Dimbokro	142.49	310	PKhKP	PKPpre	07 04 41.9	
	comp=E,4.8nm,1.0s,baz=29,slow=1.4,SNR=3.6						
LPAZ	La Paz	146.35	91	PKPbc	PKPdf	07 04 56.6	+1.1
	comp=E,2.7nm,0.7s,baz=298,slow=2.2,SNR=11						
LPAZ	La Paz	146.35	91		PKPdf	07 04 58.0	+2.5

IDC ***17*** *06:53:30.1±3.9, 6°.43S×130°.00E, h137^{km}±39^{km}, mb4.0/9, mbtmp4.5/13, Error ellipse: s-maj=32.1km s-min=16.9km az=57.0*

NEIC ***17*** *06:53:31.3±2.3, 6°.28S±0°.07×130°.13E±0°.09, h147^{km}±6^{km}, mb4.2/21, Error ellipse: s-maj=13.2km s-min=10.2km az=96.0*

DJA ***17*** *06:53:31.6±0.2, 6°S±2°×13°0E±°, h150^{km}±4^{km}, M4.8/18, mb4.8/18, mB5.2/13, MLv5.1/16, Mw(mB)4.6/13*

ISC 17 06:53:30.8±0.5**, 6°.36S**±0°.04×**130°.16E**±0°.05**, h146**^{km}**, n91, σ1^{s}.62**/91**, mb4.2**/15**, 2C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.84	352	P	Pn	06 54 06.9	+3.1
BNDI				S	Sn	06 54 31.0	+1.8
SAUI	Saumlaki	1.97	145		Pn	06 54 07.5	+2.1
SAUI	Saumlaki	1.97	145	P	Pn	06 54 06.7	+1.3
SAUI	Saumlaki	1.97	145	P	Pn	06 54 07.1	+1.7
SAUI				S	Sn	06 54 31.3	-0.7
MSAI	Masohi	3.23	338	P	Pn	06 54 23.1	+2.1
AAI	Ambon	3.29	323	P	Pn	06 54 22.0	+0.2
FAKI	Fak Fak	4.00	32		Pn	06 54 31.2	+0.1
FAKI	Fak Fak	4.00	32	S	Sn	06 55 15.4	-2.3
FAKI	Fak Fak	4.00	32	P	Pn	06 54 31.1	+0.1
FAKI	Fak Fak	4.00	32	P	Pn	06 54 31.1	+0.1
KMPI	Kaimana, Papua	4.43	53	P	Pn	06 54 37.5	+0.8
SWI	Sorong	5.57	11	P	Pn	06 54 51.9	+0.2
SANI	Sanana	5.96	316	P	Pn	06 54 59.8	+2.8
SANI	Sanana	5.96	316	S	Sn	06 56 06.7	+2.2
SANI	Sanana	5.96	316	P	Pn	06 55 00.8	+3.8
	0.3nm1µm68nm,0.8s						
DRS	Darwin Rock St	6.08	173	P	Pn	06 55 00.2	+1.6
RKPI	Ransiki, Papua	6.26	40	P	Pn	06 55 02.5	+1.5
MTN	Manton Dam	6.52	172		Pn	06 55 04.5	0.0
MWPI	Manokwari, Pap	6.64	36	P	Pn	06 55 08.0	+2.0
SOEI	Soe	6.74	240		Pn	06 55 09.1	+1.5
SOEI	Soe	6.74	240	P	Pn	06 55 09.4	+1.9
SOEI	Soe	6.74	240	P	Pn	06 55 09.2	+1.7
	0.8nm2µm128nm,0.7s						
BATI	Baumata	7.48	239	P	Pn	06 55 18.5	+1.2
	106nm,0.3s,baz=117,slow=0.9,SNR=15						
BATI				S	Sn	06 56 38.1	-2.8
	111nm,0.6s,baz=313,slow=18,SNR=5.1						
BATI	Baumata	7.48	239	P	Pn	06 55 18.7	+1.4
	0.8nm3µm174nm,0.6s						
BAKI	Biak	7.84	49	P	Pn	06 55 22.4	+0.2
EDFI	Ende, Flores	8.72	254	P	Pn	06 55 37.1	+3.0
	21nm,0.7s						

KNRA	Kununurra	9.36	188		Pn	06 55 41.4	-1.1
GTOI	Gorontalo	9.96	314	P	Pn	06 55 56.1	+5.7
	25nm,0.8s						
BASI	Baing, Sumba	10.23	247	P	Pn	06 55 55.3	+1.3
	96nm,1.0s						
WSI	Waingapu	10.30	251	P	Pn	06 55 56.2	+1.2
	121nm,0.9s						
WBSI	Waikabubak, Su	11.15	252	P	Pn	06 56 06.0	-0.2
	26nm,0.9s						
DBNI	Kabupaten Domp	11.94	259	P	Pn	06 56 18.0	+1.5
FITZ	Fitzroy Crossi	12.48	200	P	Pn	06 56 20.6	-2.9
	8.1nm,0.3s,baz=33,slow=9.4,SNR=52						
FITZ				S	Sn	06 58 29.7	-12
	41nm,0.6s,baz=98,slow=8.3,SNR=8.9						
FITZ	Fitzroy Crossi	12.48	200	Pn	Pn	06 56 21.6	-1.8
PLAI	Plampang	12.52	258	P	Pn	06 56 24.0	0.0
	27nm,0.5s						
WB0	Warramunga Arr	13.95	163		Pn	06 56 40.2	-2.1
WRAB	Tennant Creek	14.10	164	Pn	Pn	06 56 41.4	-2.8
WRA	Warramunga Arr	14.10	164	P	Pn	06 56 41.9	-2.4
	3.1nm,0.4s,baz=345,slow=13,SNR=27						
WRA				S	Sn	06 59 06.9	-14
	12nm,0.7s,baz=347,slow=22,SNR=13						
WRA	Warramunga Arr	14.10	164	Pn	Pn	06 56 42.3	-2.0
WB2	Warramunga Arr	14.11	164	Pn	Pn	06 56 41.9	-2.4
WR8	Warramunga Arr	14.16	163		Pn	06 56 43.2	-1.8
WR0	Warramunga Arr	14.18	163	Pn	Pn	06 56 43.6	-1.6
COEN	Coen	14.87	122		Pn	06 56 54.5	+0.6
COEN	Coen	14.87	122	P	P	06 56 56.3	+0.4
JAGI	Jajag, Banyuwa	16.01	261		Pn	06 57 07.0	-1.0
JAGI				IAmb	IAmb	06 57 20.8	
	comp=Z,15nm,1.1s						
QIS	Mount Isa	16.83	148	P	Pn	06 57 19.5	+1.5
PMG	Port Moresby	17.11	101	P	Pn	06 57 22.7	+1.3
	comp=Z,18nm,0.7s,baz=304,slow=4.0,SNR=7.0						
PMG	Port Moresby	17.11	101		P	06 57 18.3	-2.4
PMG				IAmb	IAmb	06 57 24.0	
	comp=Z,23nm,0.9s						
PMG	Port Moresby	17.11	101	P	Pn	06 57 23.5	+2.1
AS31	Alice Springs	17.58	169	P	Pn	06 57 26.7	-0.3
ASAR	Alice Springs	17.59	169	P	Pn	06 57 26.9	-0.2
	comp=Z,5.6nm,0.7s,baz=340,slow=9.9,SNR=53						
ASAR				S	S	07 00 29.6	-12
	comp=Z,1.6nm,0.6s,baz=348,slow=17,SNR=4.1						
ASAR	Alice Springs	17.59	169	P	P	06 57 26.2	+0.3
MBWA	Marble Bar	17.85	213	P	P	06 57 29.2	+0.4
MBWA				IAmb	IAmb	06 57 39.9	
	comp=Z,6.4nm,0.7s						
MTSU	Mount Surprise	18.11	132	P	Pn	06 57 36.8	+3.6
PSA00	Pilbara Seismi	18.12	212	P	P	06 57 32.7	+0.9
PSA00				IAmb	IAmb	06 57 49.2	
	comp=Z,13nm,0.7s						
PSA00	Pilbara Seismi	18.12	212	P	P	06 57 32.3	+0.6
PSA00				IAmb	IAmb	06 57 41.9	
	comp=Z,3.3nm,0.8s						
PSA00	Pilbara Seismi	18.12	212	P	Pn	06 57 33.5	+0.1
SBUM	Sibu	19.93	295	P	P	06 57 50.2	-1.3
SBUM	Sibu	19.93	295	P	P	06 57 53.3	+1.8
CTA	Charters Tower	20.75	133	P	P	06 58 01.3	+1.1
	comp=Z,1.6nm,0.5s,baz=321,slow=13,SNR=3.5						
	comp=Z,1.6nm,0.5s						
BBJI	Bungbulang	22.37	266	P	P	06 58 18.4	+1.1
BBJI	Bungbulang	22.37	266	P	P	06 58 16.6	-0.7
FORT	Forrest	24.38	184	P	P	06 58 36.6	+1.1
FORT				IAmb	IAmb	06 59 00.1	
	comp=Z,4.3nm,0.7s						
MORW	Morawa	26.23	209	P	P	06 58 52.1	-0.2
BBOO	Buckleboo	26.89	169	P	P	06 58 58.4	+0.2
BBOO				IAmb	IAmb	06 58 59.6	
	comp=Z,12nm,1.5s						
JOW	Kunigami	33.04	357	P	P	06 59 53.1	+0.7
	comp=Z,5.0nm,0.5s,baz=186,slow=8.1,SNR=5.5						
	comp=Z,5.0nm,0.5s						
JOW	Kunigami	33.04	357	P	P	06 59 48.5	-3.9
CMAR	Chiang Mai Arr	39.44	309	P	P	07 00 47.4	+0.4
	comp=Z,1.5nm,0.3s,baz=139,slow=7.6,SNR=12						
	comp=Z,1.5nm,0.3s						
CHTO	Chiang Mai	39.65	310	P	P	07 00 47.3	-1.4
CHTO				IAmb	IAmb	07 00 49.9	
	comp=Z,6.0nm,1.0s						
PZH	PanZhiHua	42.73	321	P	P	07 01 13.8	-0.1
KSAR	Wonju Array Be	43.62	357	P	P	07 01 19.7	-1.0
KS19	Wonju Array Si	43.68	357	P	P	07 01 19.8	-1.3
HHC	Hu-ho-hao-te	49.98	342	eP	P	07 02 11.5	+1.3
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,49nm,4.0s						
ULN	Ulaanbaatar	57.70	342	P	P	07 03 04.0	-2.2
SONM	Songino Array	57.88	341	P	P	07 03 08.4	+0.9
	comp=Z,1.4nm,0.5s,baz=161,slow=6.8,SNR=8.2						
	comp=Z,1.4nm,0.5s						
SONM	Songino Array	57.88	341	IAmb	IAmb	07 03 08.7	
	comp=Z,1.2nm,0.6s						
MK31	Makanchi Array	67.78	327	P	P	07 04 13.6	+0.8
MK31				IAmb	IAmb	07 04 14.2	
	comp=Z,4.9nm,0.8s						
MKAR	Makanchi Array	67.78	327	P	P	07 04 13.4	+0.5
	comp=Z,5.6nm,0.4s,baz=117,slow=8.4,SNR=72						
	comp=Z,5.6nm,0.4s						
MAKZ	Makanchi	67.96	326	P	P	07 04 14.3	+0.4
AAK	Ala-Archa	70.16	320	P	P	07 04 26.0	-1.9
AAK				IAmb	IAmb	07 04 29.7	
	comp=Z,3.4nm,0.7s						
AAK	Ala-Archa	70.16	320	⇑Pg	P	07 04 24.9	-2.9
	comp=Z,2.5nm,0.8s						
AAK				⇑Lg	Lg	07 05 30.6	
	comp=Z,1.1nm,0.7s						
ZAA0	Zalesovo Array	71.08	334	P	P	07 04 32.4	-0.5
ZAA0				IAmb	IAmb	07 04 33.1	
	comp=Z,2.4nm,0.7s						
ZALV	Zalesovo Beam	71.08	334	P	P	07 04 32.3	-0.6
	comp=Z,2.1nm,0.5s,baz=130,slow=5.1,SNR=9.2						
	comp=Z,2.1nm,0.5s						
ZALV	Zalesovo Beam	71.08	334	P	P	07 04 32.4	-0.5
KURBB	Kurchatov Arra	72.05	328	P	P	07 04 38.9	+0.1
	comp=Z,5.5nm,0.2s,baz=128,slow=4.8,SNR=9.0						
	comp=Z,5.5nm,0.2s						
KURK	Kurchatov	72.05	328	P	P	07 04 38.7	-0.1
BVAR	Borovoye Array	77.61	328	P	P	07 05 10.5	-0.2
	comp=Z,1.7nm,0.7s,baz=108,slow=8.0,SNR=7.9						
	comp=Z,1.7nm,0.7s						
NRIK	Noril'sk	80.98	346	P	P	07 05 29.0	+0.3
	comp=Z,2.0nm,0.7s,baz=173,slow=4.0,SNR=3.7						
	comp=Z,2.0nm,0.7s						
NRIK	Noril'sk	80.98	346	IAmb	IAmb	07 05 31.7	
	comp=Z,3.2nm,0.9s						
CPUP	Villa Florida	146.71	168	PKPbc	PKPbc	07 12 56.2	-0.1
	comp=Z,0.3nm,0.7s,baz=212,slow=6.9,SNR=3.8						
LPAZ	La Paz	151.12	141	PKPbc	PKPbc	07 13 08.7	+0.2
	comp=Z,0.5nm,0.4s,baz=135,slow=1.4,SNR=4.5						

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*NEIC **17** 06:57:44.7±1.4, 35°.71N±0°.01×117°.55W±0°.01, h5^{km}±1^{km}, Error ellipse: s-maj=2.6km s-min=2.2km az=140.0*

PAS 17 06:57:45.2±1.3**, 35°.72N**±0°.01×**117°.57W**±0°.01**, h4**^{km}±3^{km}**, ML3.6**/124**, ML3.4**/130(NEIC)**, Error ellipse: s-maj=2.1km s-min=1.3km az=147.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GPO	China Lake	0.10	227		Pg	06 57 47.7	+0.4
GPO					Sg	06 57 49.6	+1.0
CLC	China Lake	0.10	349	Pg	Pg	06 57 47.6	+0.3
WSHM	Spangler Hills	0.13	150		Pg	06 57 48.1	+0.2
WSHM					Sg	06 57 50.4	+0.6
WSHM	Spangler Hills	0.13	150	IAML		06 57 50.6	
	55µm,0.3s						
WSHM				IAML		06 57 50.8	
	33µm,0.3s						
SRTC	Snort	0.14	260		Pg	06 57 48.7	+0.5
SRTC					Sg	06 57 51.7	+1.6
TOW	Tower One	0.18	301		Pg	06 57 49.4	+0.5
TOW					Sg	06 57 52.8	+1.6
RCWM	Renegade Canyo	0.24	346		Pg	06 57 50.0	+0.1
RCWM					Sg	06 57 53.7	+0.6
LRMC	Laurel Mtn Rad	0.25	201		Pg	06 57 50.1	0.0
LRMC				IAML		06 57 54.3	
	comp=E,10µm,0.7s						
LRMC				IAML		06 57 54.9	
	comp=N,8µm,0.4s						
CCCA	Chr Cany lake	0.26	138		Pg	06 57 50.7	+0.5
CCCA					Sg	06 57 54.8	+1.2
CCCA	Chr Cany lake	0.26	138	IAML		06 57 55.2	
	comp=E,19µm,0.6s						
CCCA				IAML		06 57 55.6	
	comp=N,22µm,0.6s						
WNMM	Nine Mile Cany	0.30	295		Pn	06 57 55.5	-0.8
WVPM	Volcano Peak E	0.30	320		Pg	06 57 51.1	-0.1
WVPM					Sg	06 57 55.5	+0.3
JRC2	Joshua Ridge	0.33	324		Pn	06 57 56.2	-0.7
WCSM	Coso Springs S	0.35	333		Pg	06 57 51.9	-0.1
WCSM					Sg	06 57 56.8	+0.2
WRVM	Rose V. Centra	0.39	319		Pg	06 57 52.6	-0.2
WRVM					Sg	06 57 58.0	+0.1
MFS	McCloud Flat S	0.46	330		Pg	06 57 54.0	-0.1
MFS					Sg	06 58 00.7	+0.5
DTP	Desert Tortois	0.50	206		Pg	06 57 54.5	-0.3
DTP					Sg	06 58 01.7	+0.3
WORM	Onyx Ranch	0.55	268		Pg	06 57 55.3	-0.4
WORM					Sg	06 58 02.5	-0.3
DAC	Darwin (Calif)	0.56	358		Pg	06 57 55.4	-0.6
QSM	Queen of Sheba	0.62	66		Pg	06 57 56.9	-0.4
QSM					Sg	06 58 05.3	-0.1
QSM	Queen of Sheba	0.62	66	IAML		06 58 05.6	
	comp=E,3µm,0.3s						
QSM				IAML		06 58 06.8	
	comp=N,2µm,0.3s						
WHFM	Hanning Flat	0.63	268		Pg	06 57 57.0	-0.4
WHFM					Sg	06 58 05.5	0.0
CCAC	Calif City Air	0.67	213		Pg	06 57 57.8	-0.3
CCAC					Sg	06 58 07.1	+0.3
ISA	Isabella, Lake	0.73	266		Pg	06 57 58.9	-0.4
ISA				IAML		06 58 09.4	
	comp=E,1µm,0.5s						
ISA				IAML		06 58 13.0	
	comp=N,936nm,0.7s						
WLHM	Little Horse	0.74	306		Pg	06 57 58.9	-0.6
WLHM					Sg	06 58 08.8	-0.4
GSC	Goldstone, Bar	0.75	123		Pg	06 57 59.3	-0.3
GSC				IAML		06 58 09.8	
	comp=N,3µm,0.3s						
WASM	Alta Sierra Ca	0.80	272		Pg	06 58 00.2	-0.5
WASM					Sg	06 58 11.0	0.0
CWC	Cottonwood Cre	0.83	331		Pg	06 58 00.8	-0.4
HYS	Haystack Butte	0.85	180		Pg	06 58 00.8	-0.7
HYS					Sb	06 58 13.8	-0.6
CGO	Cerro Gordo	0.85	348		Pg	06 58 00.9	-0.8
CGO					Sg	06 58 13.6	+0.8
GWY	Greenwater Val	0.87	57		Pg	06 58 01.4	-0.5
GWY				IAML		06 58 16.3	
	comp=N,2µm,0.5s						
GWY				IAML		06 58 16.6	
	comp=E,3µm,0.4s						
EDW2	Edwards Air Fo	0.90	203		Pg	06 58 01.5	-1.0
EDW2					Sg	06 58 13.5	-0.7
FURC	Furnace Creek,	0.94	37		Pg	06 58 03.2	-0.2
FURC					Sb	06 58 16.4	-0.6
TPO	Tropico Hills	0.99	213		Pg	06 58 03.7	-0.6
TPO				IAML		06 58 23.3	
	comp=E,2µm,0.9s						
TPO				IAML		06 58 24.1	
	comp=N,997nm,0.8s						
SHOC	Shoshone, Teco	1.07	80		Pg	06 58 04.9	-0.9
SPG2	Springville 2	1.08	297		Pg	06 58 05.0	-1.0
VES	Vestal, Richgr	1.23	276		Pg	06 58 08.0	-0.9
VES				IAML		06 58 29.2	
	comp=E,911nm,0.5s						
VES				IAML		06 58 29.7	
	comp=N,726nm,0.8s						
GRAC	Grapevine Rang	1.29	7		Pg	06 58 09.0	-0.9
GRAC				IAML		06 58 30.4	
	comp=E,783nm,0.5s						
GRAC				IAML		06 58 31.9	
	comp=N,863nm,0.7s						
WCT	Wildcat Mounta	1.32	35		Pn	06 58 09.0	-1.5
WCT				IAML		06 58 28.8	
	comp=N,665nm,0.7s						
WCT				IAML		06 58 29.6	
	comp=E,784nm,0.4s						
TUQ	Turquoise Moun	1.37	101		Pn	06 58 10.2	-1.1
TIN	Tinemaha, Big	1.44	339		Pn	06 58 11.6	-0.5
TIN				IAML		06 58 39.1	
	comp=E,596nm,0.7s						
TIN				IAML		06 58 43.6	
	comp=N,480nm,0.7s						
OSI	Osito Audit: C	1.45	221		Pn	06 58 11.5	-0.7
OSI				IAML		06 58 34.5	
	comp=N,486nm,0.9s						
OSI				IAML		06 58 36.2	
	comp=E,576nm,0.7s						
BFSC	Mount Baldy Ra	1.48	183		Pn	06 58 11.1	-1.6
BFSC				IAML		06 58 35.3	
	comp=E,290nm,0.6s						
MWC	Mount Wilson	1.54	195		Pn	06 58 13.3	-0.3
MWC				IAML		06 58 36.8	
	comp=N,632nm,0.5s						
MWC				IAML		06 58 38.2	
	comp=E,575nm,0.5s						
PASC	Pasadena Art C	1.62	198	IAML		06 58 40.9	
	comp=E,432nm,0.6s						
PASC				IAML		06 58 41.3	
	comp=N,318nm,0.5s						
TPNV	Topopah Spring	1.63	41		Pn	06 58 13.7	-1.2
TPNV				IAML		06 58 39.9	
	comp=N,529nm,0.5s						
TPNV				IAML		06 58 41.8	
	comp=N,588nm,0.7s						
MTPC	Mountain Pass	1.66	97		Pn	06 58 12.9	-2.4
MTPC				IAML		06 58 39.9	
	comp=N,382nm,0.4s						
MTPC				IAML		06 58 40.0	
	comp=E,346nm,0.3s						
DSP	Deep Springs	1.68	349		Pn	06 58 14.6	-0.8
ELS	Elsinore Mount	2.07	177		Pn	06 58 19.3	-1.5
SHPR	Sheep Range	2.11	67		Pn	06 58 20.3	-1.1
FIGC	Figueroa Mtn.	2.21	244		Pn	06 58 20.7	-2.0
MCSM	Casa Diablo Ho	2.21	331		Pb	06 58 26.2	+0.3
V12A	Nelson	2.21	89		Pn	06 58 21.1	-1.8
V12A				IAML		06 59 02.5	
	comp=N,133nm,0.9s						
DNR	Dunn Ranch,Anz	2.28	160	IAML		06 59 07.3	
	comp=E,418nm,0.9s						
PFO	Pinyon Flats O	2.29	156		Pn	06 58 22.5	-1.4
S11A	Rachel	2.42	37		Pn	06 58 26.0	+0.3
S11A				IAML		06 59 14.8	
	comp=E,297nm,0.9s						
S11A				IAML		06 59 22.4	
	comp=N,321nm,1.0s						
PKD	Bear Valley Ra	2.42	276		Pn	06 58 26.4	+0.8
PKD				IAML		06 59 12.9	
	comp=E,164nm,0.8s						
IRM	Iron Mountain	2.53	127		Pn	06 58 24.7	-2.4
IRM				IAML		06 59 06.9	
	comp=N,254nm,0.5s						
NEE2	Needles Airpor	2.60	111		Pn	06 58 25.8	-2.2
LHV	Little Huntoon	2.64	344		Pn	06 58 28.7	+0.2
LHV				IAML		06 59 15.6	
	comp=E,88nm,0.8s						
PRN	Pahroc Range	2.64	50		Pn	06 58 28.0	-0.8
PRN				IAML		06 59 20.7	
	comp=E,279nm,0.8s						
PRN				IAML		06 59 20.7	
	comp=N,332nm,0.7s						
PMPB	Monarch Peak	2.67	282		Pn	06 58 30.4	+1.4
PMPB				IAML		06 59 15.0	
	comp=E,246nm,0.7s						
PMPB				IAML		06 59 18.4	
	comp=N,203nm,0.7s						
BC3	Big Chuckawall	2.70	139		Pn	06 58 28.2	-1.2
BC3				IAML		06 59 16.4	
	comp=N,179nm,0.5s						
BC3				IAML		06 59 19.9	
	comp=E,173nm,1.0s						
DPP	Dos Picos Cty	2.76	169		Pn	06 58 29.3	-1.0
NVAR	Mina Array Bea	2.77	348		Pn	06 58 30.3	-0.3
BBGB	Big Mountain B	2.93	288		Pb	06 58 35.8	-2.4
HULI	Fort Hunter Li	2.99	277		Pn	06 58 34.7	+1.3
HULI				IAML		06 59 27.1	
	comp=E,92nm,1.1s						
HULI				IAML		06 59 43.1	
	comp=N,69nm,0.9s						
RYN	Ryan	3.00	346		Pn	06 58 32.7	-1.0
W13A	Hualapai Mount	3.08	100	IAML		06 59 25.0	
	comp=N,66nm,0.9s						
BAR	Barrett	3.12	166		Pn	06 58 34.2	-1.0
BAR				IAML		06 59 23.0	
	comp=E,75nm,0.5s						
BLYC	Blythe	3.19	127		Pn	06 58 33.8	-2.3
BLYC				IAML		06 59 26.6	
	comp=N,163nm,0.5s						
BLYC				IAML		06 59 29.6	
	comp=E,166nm,0.7s						
SAO	San Andreas Ge	3.30	290		Pn	06 58 38.0	+0.3
PNTR	Pine Nut	3.73	335	Pn	Pn	06 58 46.4	+2.5
CCUT	Cedar City	3.85	60	IAML		06 59 52.6	
	comp=E,31nm,1.6s						
KNB	Kanab	4.05	70		Pn	06 58 47.9	-0.2
KNB				IAML		07 00 01.5	
	comp=N,28nm,3.5s						
U15A	North Rim	4.34	79	IAML		07 00 17.3	
	comp=E,28nm,1.2s						
U15A				IAML		07 00 18.3	
	comp=N,24nm,0.9s						
MTPU	Mount Pierson	4.90	60	IAML		06 59 37.6	
	comp=E,15nm,4.7s						
MTPU				IAML		07 00 43.2	
	comp=N,18nm,2.9s						

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*IDC **17** 06:58:14.1±0.9, 18°.85N×147°.20E, h0^{km}, mb4.0/9, mbtmp4.0/9, Error ellipse: s-maj=33.0km s-min=20.5km az=91.0*

ISC 17 06:58:19.4±1.0**, 18°.8N**±0°.2×**147°.2E**±0°.2**, h37**^{km}**, n13, σ0^{s}.58**/10**, mb4.0**/9**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	18.45	88	T	T	07 21 30.7	
	baz=275,slow=74,SNR=20						
H11S1	WAKE ISLAND Hy	18.46	88	T	T	07 21 28.5	
	baz=275,slow=74,SNR=17						
H11S2	WAKE ISLAND Hy	18.46	88	T	T	07 21 32.4	
	baz=275,slow=74,SNR=17						
WRA	Warramunga Arr	40.54	199	P	P	07 05 55.9	+0.6
	2.2nm,1.1s,baz=360,slow=8.4,SNR=8.1						
	2.2nm,1.1s						
SONM	Songino Array	43.96	321	P	P	07 06 23.3	+0.3
	0.5nm,0.3s,baz=119,slow=7.0,SNR=1.9						
	0.5nm,0.3s						
ASAR	Alice Springs	44.18	198	P	P	07 06 24.3	-0.6
	0.3nm,0.6s,baz=27,slow=13,SNR=2.5						
	0.3nm,0.6s						
MKAR	Makanchi Array	59.42	314	P	P	07 08 18.7	+0.4
	0.7nm,0.5s,baz=91,slow=8.9,SNR=7.2						
	0.7nm,0.5s						
KURBB	Kurchatov Arra	62.20	318	P	P	07 08 37.0	-0.2
	2.1nm,0.2s,baz=97,slow=6.4,SNR=6.7						
	2.1nm,0.2s						
ILAR	Eielson Array	62.90	26	P	P	07 08 41.4	-0.2
	1.2nm,1.0s,baz=249,slow=5.5,SNR=6.7						
	1.2nm,1.0s						
BVAR	Borovoye Array	67.30	320	P	P	07 09 10.6	+0.2
	1.3nm,0.4s,baz=86,slow=7.7,SNR=7.2						
	1.3nm,0.4s						
YKA	Yellowknife Ar	77.20	28	P	P	07 10 09.8	+0.6
	0.5nm,0.8s,baz=289,slow=6.0,SNR=4.1						
	0.5nm,0.8s						
FINES	FINESS Array B	87.38	336	P	P	07 11 01.5	-0.9
	2.0nm,0.7s,baz=74,slow=4.4,SNR=5.9						
	2.0nm,0.7s						
LPAZ	La Paz	146.23	91	PKPbc	PKPab	07 17 58.4	0.0
	0.9nm,0.3s,baz=235,slow=4.1,SNR=8.9						

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*IDC **17** 07:00:53.3±3.7, 17°.36S×178°.85W, h488^{km}±43^{km}, mb3.7/18, mbtmp4.5/19, Error ellipse: s-maj=18.0km s-min=14.5km az=110.0*

*NEIC **17** 07:00:56.4±1.1, 17°.42S±0°.07×178°.8W±0°.1, h518^{km}±5^{km}, mb4.3/125, Error ellipse: s-maj=14.6km s-min=9.8km az=69.0*

ISC 17 07:00:57.2±0.4**, 17°.38S**±0°.08×**178°.94W**±0°.08**, h539**^{km}**, n131, σ1^{s}.02**/86**, mb4.2**/76**, 3C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.90	263		P	07 02 11.0	+0.2
AFI	Afiamalu	7.71	64	P	P	07 02 46.3	-5.6
NIUE	Niue	8.73	103	P	P	07 02 59.3	-2.7
FUNA	Funafuti	8.99	348		P	07 03 02.6	-2.1
MARNC	Mare, Loyalty	12.95	250	P	P	07 03 45.2	-0.5
PINNC	Pines Island,	13.82	246	P	P	07 03 54.7	+0.1
DZM	Mont Dzumac	14.53	249	P	P	07 04 01.6	-0.6
	13nm,0.7s,baz=70,slow=18,SNR=16						
URZ	Urewera	21.09	189	P	P	07 05 00.7	-2.8
	19nm,0.8s,baz=288,slow=2.1,SNR=8.8						
	19nm,0.8s						
NNZ	Nelson	24.66	194	P	P	07 05 34.4	-1.0
LTZ	Lake Taylor	26.41	195	P	P	07 05 48.5	-2.3
EIDS	Eidsvold	28.98	249	P	P	07 06 14.3	+0.7
ARMA	Armidale	29.78	239	P	P	07 06 21.6	+1.1
ARMA				IAmb	IAmb	07 06 40.0	
	comp=Z,14nm,1.2s						
WHZ	Wether Hill Ro	30.46	198	P	P	07 06 25.8	-0.2
CTA	Charters Tower	33.04	260	P	P	07 06 48.9	+0.4
	comp=Z,4.1nm,0.7s,baz=100,slow=15,SNR=4.0						
	comp=Z,4.1nm,0.7s						
CTAO	Charters Tower	33.04	260	P	P	07 06 48.9	+0.4
CTAO				IAmb	IAmb	07 06 49.9	
	comp=Z,3.8nm,0.6s						
COEN	Coen	36.60	270		P	07 07 19.2	+0.9
COEN				IAmb	IAmb	07 07 20.0	
	comp=Z,5.4nm,0.7s						
TOO	Toolangi	37.12	230	P	P	07 07 22.9	+0.7
STKA	Stephens Creek	38.45	240	P	P	07 07 34.4	+1.3
	comp=Z,3.0nm,0.4s,baz=85,slow=9.6,SNR=8.1						
	comp=Z,3.0nm,0.4s						
STKA	Stephens Creek	38.45	240	P	P	07 07 34.1	+1.0
BBOO	Buckleboo	43.23	240	P	P	07 08 11.8	+0.7
BBOO				IAmb	IAmb	07 08 12.4	
	comp=Z,8.4nm,0.9s						
HMH	Humu‘ula Sheep	43.38	33	P	P	07 08 12.7	0.0
WR8	Warramunga Arr	44.08	259	P	P	07 08 17.8	-0.2
WB0	Warramunga Arr	44.20	259	P	P	07 08 19.6	+0.7
WRA	Warramunga Arr	44.24	259	P	P	07 08 18.2	-0.9
	comp=Z,2.4nm,0.9s,baz=88,slow=5.0,SNR=15						
	comp=Z,2.4nm,0.9s						
AS31	Alice Springs	44.45	254		P	07 08 21.2	+0.5
ASAR	Alice Springs	44.45	254	P	P	07 08 21.1	+0.3
	comp=Z,10nm,0.6s,baz=89,slow=8.1,SNR=91						
ASAR				S	S	07 14 11.8	-5.1
	comp=Z,0.7nm,1.0s,baz=85,slow=15,SNR=6.2						
	comp=Z,10nm,0.6s						
ASAR	Alice Springs	44.45	254		P	07 08 20.6	-0.1
MTN	Manton Dam	48.31	268	P	P	07 08 50.4	+0.3
MTN				IAmb	IAmb	07 08 51.3	
	comp=Z,5.1nm,0.8s						
KNRA	Kununurra	50.04	264	P	P	07 09 03.5	+0.7
FITZ	Fitzroy Crossi	52.62	260	P	P	07 09 22.6	+1.1
PSA00	Pilbara Seismi	57.56	255	P	P	07 09 56.4	+0.5
MBWA	Marble Bar	57.72	256	P	P	07 09 57.5	+0.5
VNDA	Vanda	60.93	185	P	P	07 10 18.8	+1.3
	comp=Z,1.7nm,0.7s,baz=348,slow=7.1,SNR=8.1						
	comp=Z,1.7nm,0.7s						
VNDA	Vanda	60.93	185	P	P	07 10 18.7	+1.3
QSPA	South Pole Qui	72.67	180	P	P	07 11 30.9	+0.7
	comp=Z,8.2nm,0.6s,baz=24,slow=1.3,SNR=25						
	comp=Z,8.2nm,0.6s						
QSPA	South Pole Qui	72.67	180		P	07 11 31.1	+0.8
QSPA				IAmb	IAmb	07 11 32.0	
	comp=Z,13nm,0.9s						
PETK	Petropavlovsk-	73.04	346	P	P	07 11 32.3	+0.1
	comp=Z,4.2nm,0.8s,baz=144,slow=5.5,SNR=3.8						
	comp=Z,4.2nm,0.8s						
HULI	Fort Hunter Li	76.12	45	P	P	07 11 51.1	+1.1
SII	Sitkinak Islan	76.53	14	P	P	07 11 51.6	-0.1
KMRM	Mail Ridge	76.94	40	P	P	07 11 55.8	+1.3
OHAK	Old Harbor	77.34	14	P	P	07 11 56.4	+0.3
ORV	Oroville	77.93	42	P	P	07 11 59.5	-0.2
PFO	Pinyon Flats O	78.19	49	P	P	07 12 02.1	+0.7
	comp=Z,2.9nm,0.8s,baz=267,slow=3.2,SNR=3.9						
	comp=Z,2.9nm,0.8s						
PFO	Pinyon Flats O	78.19	49	IAmb	IAmb	07 12 02.8	
	comp=Z,5.7nm,1.1s						
YBH	Yreka Blue Hor	78.44	39	P	P	07 12 03.0	+0.5
	comp=Z,0.3nm,0.7s,baz=191,slow=5.2,SNR=4.7						
YBH	Yreka Blue Hor	78.44	39	IAmb	IAmb	07 12 04.3	
	comp=Z,4.8nm,0.9s						
CWC	Cottonwood Cre	78.50	46		P	07 12 03.6	+0.5
CLC	China Lake	78.50	47	P	P	07 12 03.6	+0.6
CLC				IAmb	IAmb	07 12 04.6	
	comp=Z,9.9nm,1.1s						
BEKR	Beckworth	78.83	42	P	P	07 12 05.4	+0.6
BEKR				IAmb	IAmb	07 12 05.7	
	comp=Z,4.6nm,0.6s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNTR	Pine Nut	78.90	43		P	07 12 06.0	+0.8
PNTR				IAmb	IAmb	07 12 06.8	
	comp=Z,12nm,0.8s						
L04D	Klamath Falls	78.96	39	P	P	07 12 06.2	+0.8
DSP	Deep Springs	79.06	45		P	07 12 06.8	+1.1
DSP				IAmb	IAmb	07 12 07.6	
	comp=Z,8.5nm,1.0s						
LHV	Little Huntoon	79.17	44	IAmb	IAmb	07 12 08.4	
	comp=Z,12nm,0.9s						
PAHR	Pah Rah Range	79.37	43		P	07 12 08.2	+0.5
PAHR				IAmb	IAmb	07 12 08.7	
	comp=Z,5.0nm,0.7s						
NVAR	Mina Array Bea	79.39	44	P	P	07 12 08.4	+0.6
	comp=Z,4.8nm,0.7s,baz=226,slow=9.0,SNR=39						
	comp=Z,4.8nm,0.7s						
NV11	Mina Array Sit	79.49	44	IAmb	IAmb	07 12 09.9	
	comp=Z,7.8nm,1.1s						
K05A	Summer Lake	80.11	39	P	P	07 12 12.5	+1.1
K05A				IAmb	IAmb	07 12 13.2	
	comp=Z,14nm,1.0s						
PINE	Pine Mountain	80.69	38		P	07 12 15.6	+1.1
PINE				IAmb	IAmb	07 12 16.3	
	comp=Z,9.6nm,0.9s						
PRN	Pahroc Range	81.08	46	IAmb	IAmb	07 12 18.6	
	comp=Z,9.5nm,1.0s						
WVOR	Wild Horse Val	81.33	41	IAmb	IAmb	07 12 19.3	
	comp=Z,12nm,1.1s						
STLK	Strandline Lak	81.53	13	P	P	07 12 17.3	-0.9
STLK				IAmb	IAmb	07 12 17.8	
	comp=Z,7.4nm,0.8s						
SUA	Susitna One	81.73	13	P	P	07 12 18.5	-0.8
J08A	Circle Bar Ran	81.94	40	IAmb	IAmb	07 12 22.3	
	comp=Z,6.5nm,0.7s						
LCMT	Little Creek M	82.14	47	IAmb	IAmb	07 12 23.9	
	comp=Z,4.8nm,0.8s						
PMR	Palmer	82.21	14	P	P	07 12 21.2	-0.3
PMR				IAmb	IAmb	07 12 26.2	
	comp=Z,13nm,1.3s						
CCUT	Cedar City	82.32	47	IAmb	IAmb	07 12 25.0	
	comp=Z,5.6nm,0.9s						
J18K	Innoko River	82.42	10	IAmb	IAmb	07 12 23.8	
	comp=Z,6.2nm,0.8s						
KNB	Kanab	82.44	48	IAmb	IAmb	07 12 25.5	
	comp=Z,6.6nm,0.8s						
PSUT	Pine Spring	82.45	46	IAmb	IAmb	07 12 25.0	
	comp=Z,6.3nm,0.7s						
319A	Douglas	82.52	54	IAmb	IAmb	07 12 26.5	
	comp=Z,11nm,1.0s						
SML	Sawmill	82.58	14	P	P	07 12 23.0	-0.5
ELK	Elko	82.62	43	P	P	07 12 25.0	+0.5
	comp=Z,4.6nm,0.7s,baz=268,slow=5.7,SNR=20						
	comp=Z,4.6nm,0.7s						
ELK	Elko	82.62	43		P	07 12 25.0	+0.5
ELK				IAmb	IAmb	07 12 25.8	
	comp=Z,4.7nm,0.8s						
BELA	Belgrano 2	82.75	173		P	07 12 24.6	+0.4
E07A	Sunnyside	82.89	37	P	P	07 12 26.3	+0.9
E07A				IAmb	IAmb	07 12 26.9	
	comp=Z,11nm,1.1s						
HAWA	Hanford	82.98	37		P	07 12 26.4	+0.5
HAWA				IAmb	IAmb	07 12 27.2	
	comp=Z,8.3nm,0.8s						
TNA	Tin City	83.11	5	P	P	07 12 26.8	+0.9
TNA				IAmb	IAmb	07 12 46.5	
	comp=Z,15nm,1.1s						
MTPU	Mount Pierson	83.37	47	IAmb	IAmb	07 12 30.9	
	comp=Z,7.0nm,0.9s						
J20K	Nowinta River	83.52	11	IAmb	IAmb	07 12 29.1	
	comp=Z,5.6nm,0.8s						
D08A	Wollman Farm,	83.70	37	IAmb	IAmb	07 12 30.7	
	comp=Z,6.0nm,0.8s						
F10A	Beach Ranch, E	84.09	38	IAmb	IAmb	07 12 32.5	
	comp=Z,8.3nm,0.9s						
B08A	Colville Reser	84.20	35	IAmb	IAmb	07 12 32.5	
	comp=Z,6.5nm,0.8s						
PLID	Pearl Lake	84.36	39	IAmb	IAmb	07 12 34.9	
	comp=Z,6.4nm,1.3s						
M26K	Nabesna, AK	84.41	16	IAmb	IAmb	07 12 34.0	
	comp=Z,10nm,1.0s						
HLID	Hailey	84.56	41	IAmb	IAmb	07 12 35.7	
	comp=Z,4.7nm,0.8s						
MENT	Mentasta	84.67	15	IAmb	IAmb	07 12 34.4	
	comp=Z,5.3nm,0.6s						
M27K	Edge Creek, AK	84.67	16	IAmb	IAmb	07 12 35.2	
	comp=Z,9.6nm,0.9s						
SRU	San Rafael Swe	85.02	47	IAmb	IAmb	07 12 38.0	
	comp=Z,3.7nm,0.8s						
CCB	Clear Creek Bu	85.18	13	IAmb	IAmb	07 12 37.4	
	comp=Z,7.9nm,1.2s						
TCUT	Toone Canyon	85.34	44	IAmb	IAmb	07 12 40.9	
	comp=Z,5.8nm,0.7s						
NEW	Newport	85.38	36	P	P	07 12 37.6	0.0
	comp=Z,3.3nm,0.6s,baz=242,slow=5.7,SNR=10						
	comp=Z,3.3nm,0.6s						
NEW	Newport	85.38	36	IAmb	IAmb	07 12 38.3	
	comp=Z,3.9nm,0.7s						
SCRK	Sand Creek	85.48	15	IAmb	IAmb	07 12 38.6	
	comp=Z,3.4nm,0.7s						
IL31		85.49	13	IAmb	IAmb	07 12 37.8	
	comp=Z,8.2nm,1.1s						
ILAR	Eielson Array	85.49	13	P	P	07 12 37.0	-0.8
	comp=Z,2.6nm,0.8s,baz=221,slow=5.1,SNR=35						
	comp=Z,2.6nm,0.8s						
MNTX	Cornudas Mount	85.69	55	IAmb	IAmb	07 12 40.9	
	comp=Z,4.0nm,0.8s						
J26L	Joseph Creek	86.02	15	IAmb	IAmb	07 12 41.5	
	comp=Z,5.9nm,0.7s						
E19K	Redstone River	86.09	8	IAmb	IAmb	07 12 40.8	
	comp=Z,2.8nm,0.7s						
TXAR	Lajitas Array	86.14	58	P	P	07 12 42.6	+0.9
	comp=Z,3.2nm,0.8s,baz=221,slow=6.5,SNR=21						
	comp=Z,3.2nm,0.8s						
TASM	ASL Pad, Albuq	86.16	52	IAmb	IAmb	07 12 45.2	
	comp=Z,1.2nm,1.2s						
TASM	ASL Pad, Albuq	86.16	52	IAmb	IAmb	07 12 45.2	
	comp=Z,1.2nm,1.1s						
ANMO	Albuquerque	86.16	52	P	P	07 12 42.6	+0.7
	comp=Z,2.6nm,1.0s,baz=209,slow=5.6,SNR=10.0						
	comp=Z,2.6nm,1.0s						
ANMO	Albuquerque	86.16	52		P	07 12 42.2	+0.3
DLMT	Dillon	86.58	40	IAmb	IAmb	07 12 45.1	
	comp=Z,4.9nm,0.8s						
SNOW	Snow King Moun	86.85	43	IAmb	IAmb	07 12 46.8	
	comp=Z,7.4nm,0.9s						
COLD	Coldfoot	86.99	11	IAmb	IAmb	07 12 45.9	
	comp=Z,4.4nm,0.9s						
LOHW	Long Hollow	87.02	43	IAmb	IAmb	07 12 47.3	
	comp=Z,3.8nm,0.7s						
S22A	4UR Ranch, Cre	87.04	49	IAmb	IAmb	07 12 47.9	
	comp=Z,3.5nm,1.0s						
PD31	Pinedale Array	87.32	44	IAmb	IAmb	07 12 48.2	
	comp=Z,3.5nm,0.7s						
PDAR	Pinedale Array	87.32	44	P	P	07 12 47.5	+0.2
	comp=Z,2.6nm,0.5s,baz=215,slow=3.1,SNR=35						
	comp=Z,2.6nm,0.5s						
J29N	Klondike Camp	87.34	16	IAmb	IAmb	07 12 48.5	
	comp=Z,3.9nm,0.6s						
H17A	Grant Village	87.39	42	IAmb	IAmb	07 12 50.4	
	comp=Z,6.5nm,0.8s						
G26K	Porcupine Rive	88.02	13	IAmb	IAmb	07 12 51.2	
	comp=Z,4.7nm,0.8s						
YNE	Yellowstone No	88.03	41	IAmb	IAmb	07 12 52.1	
	comp=Z,4.4nm,0.8s						
D22K	Ayikyak River	88.07	9	IAmb	IAmb	07 12 50.9	
	comp=Z,5.2nm,0.8s						
ELIB	Princess Elisa	89.62	187	*d*P	P	07 12 57.4	+0.1
	comp=Z,7.9nm,0.7s						
TROLL	Troll, Antarti	90.83	180	⇑P	P	07 13 03.0	+0.1
	comp=Z,294nm,0.6s						
SNAA	Sanae	91.14	179	⇑P	P	07 13 04.0	-0.2
	comp=Z,61nm,0.5s						
SNAA	Sanae	91.14	179	P	P	07 13 04.3	+0.1
	comp=Z,2.4nm,0.6s,baz=201,slow=8.8,SNR=25						
	comp=Z,2.4nm,0.6s						
VNA3	Neumayer Olymp	91.30	177	⇑P	P	07 13 05.3	+0.3
	comp=Z,14nm,0.6s						
YKA	Yellowknife Ar	94.06	25	P	P	07 13 17.5	-0.1
	comp=Z,1.4nm,0.7s,baz=253,slow=5.0,SNR=22						
	comp=Z,1.4nm,0.7s						
ARCES	ARCESS Array B	125.71	350	PKP	PKiKP	07 18 57.7	+0.2
	comp=Z,2.8nm,0.9s,baz=48,slow=2.1,SNR=1.9						
BRTR	Keskin Array B	144.06	315	PKP	PKPab	07 19 31.9	+0.2
	comp=Z,0.4nm,0.5s,baz=132,slow=3.5,SNR=3.8						
CLL	Collm	144.84	347		PKPab	07 19 34.2	+0.2
GERES	GERESS Array B	146.97	345	PKPbc	PKPbc	07 19 40.5	+1.0
	comp=Z,1.9nm,0.8s,baz=35,slow=4.9,SNR=8.8						
LESA	Schwarzleotal	148.55	345	*e*PKP	PKPbc	07 19 43.9	+0.3
	comp=Z,1.3nm,0.4s						
WATA	Walderalm	148.89	346	*e*PKP	PKPbc	07 19 44.9	+0.4
	comp=Z,3.2nm,0.5s						
WTTA	Wattenberg	148.95	346	*i* PKP	PKPbc	07 19 45.4	+0.7
	comp=Z,7.1nm,0.6s						
SQTA	Sankt Quirin	149.09	346	*i* PKP	PKPbc	07 19 45.5	+0.6
	comp=Z,5.0nm,0.6s						
ABTA	Abfaltersbach	149.22	345	*i* PKP	PKPbc	07 19 45.2	0.0
	comp=Z,5.3nm,0.6s						
FETA	Feichten	149.38	347	*e*PKP	PKiKP	07 19 47.3	+0.7
	comp=Z,3.6nm,0.9s						

IDC 17 07:12:32.4±49.0**, 30°.07S×177°.55W, h0^{km}, mb3.6**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=900.9km s-min=196.4km az=98.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	34.93	256	P	P	07 19 26.2	+0.2
	0.9nm,0.5s,baz=93,slow=14,SNR=2.8						
	0.9nm,0.5s						
ASAR	Alice Springs	43.52	266	P	P	07 20 37.4	-0.6
	0.2nm,0.5s,baz=110,slow=8.1,SNR=5.9						
	0.2nm,0.5s						
WRA	Warramunga Arr	44.48	272	P	P	07 20 45.7	+0.1
	0.2nm,0.3s,baz=113,slow=8.1,SNR=6.3						
	0.2nm,0.3s						
H03S2	Juan Fernandez	80.32	123	T	T	08 52 04.7	
	baz=242,slow=74,SNR=2.8						
H03S1	Juan Fernandez	80.33	123	T	T	08 51 53.6	
	baz=242,slow=74,SNR=12						
H03S3	Juan Fernandez	80.34	123	T	T	08 51 48.2	
	baz=242,slow=74,SNR=13						

IDC 17 07:16:37.5±6.0**, 24°.45S×176°.89W, h0^{km}, mb3.8**/3**, mbtmp3.8**/3**, Error ellipse: s-maj=197.3km s-min=45.8km az=140.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	44.75	260	P	P	07 24 53.8	+0.8
	1.0nm,1.1s,baz=92,slow=7.3,SNR=8.4						
	1.0nm,1.1s						
WRA	Warramunga Arr	45.20	266	P	P	07 24 55.5	-1.1
	0.2nm,0.3s,baz=107,slow=8.5,SNR=5.4						
	0.2nm,0.3s						
PETK	Petropavlovsk-	80.33	345	P	P	07 28 50.2	+0.1
	5.2nm,1.0s,baz=132,slow=10,SNR=3.5						
	5.2nm,1.0s						
HFS	Hagfors	143.58	351	PKP	PKPdf	07 36 12.9	-0.8
	0.7nm,0.3s,baz=46,slow=6.2,SNR=7.1						

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*ASRS **17** 07:22:50.0±1.5, 53°.72N×91°.08E, h0^{km}, M3.2, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*NNC **17** 07:22:54.1±5.2, 53°.73N×90°.93E, h4^{km}±25^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=44.0km s-min=31.8km az=27.0, Suspected Mining explosion.*

*IDC **17** 07:22:55.6±3.4, 53°.78N×90°.82E, h0^{km}, mbtmp3.4/3, ML3.3/2, Error ellipse: s-maj=29.3km s-min=22.2km az=43.0*

ISC 17 07:22:57.3±3.9**, 53°.7N**±0°.1×**90°.6E**±0°.2**, h0^{km}, n10, σ0ˢ.96**/15**, 8C-6D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.45	277	⇓Pg	Pb	07 23 57.6	-1.6
	1.2nm,0.5s						
ZAA0				⇓Lg	Lg	07 24 53.5	
	15nm,0.8s						
ZALV	Zalesovo Beam	3.45	277	Pn	Pn	07 23 53.8	+1.6
	2.9nm,0.3s,baz=91,slow=16,SNR=4.4						
ZALV				Pg	Pb	07 23 58.6	-0.5
	2.2nm,0.3s,baz=90,slow=16,SNR=23						
ZALV				Lg	Lg	07 24 48.2	
	4.1nm,0.3s,baz=89,slow=28,SNR=9.9						
KURK	Kurchatov	7.95	253	⇑Pn	Pn	07 24 54.1	+0.1
	1.2nm,0.8s						
KURK				⇑Sn	Sn	07 26 25.7	+1.0
	6.0nm,1.0s						
KURK				⇓Lg	Lg	07 27 13.3	
	17nm,0.9s						
KURBB	Kurchatov Arra	8.05	252	Pn	Pn	07 24 55.8	+0.5
	0.3nm,0.3s,baz=65,slow=14,SNR=5.8						
KURBB				Sn	Sn	07 26 26.6	-0.3
	0.1nm,0.3s,baz=66,slow=26,SNR=7.3						
KURBB				Lg	Lg	07 27 15.8	
	0.1nm,0.3s,baz=68,slow=30,SNR=7.2						
	1.1nm,0.3s						
KURBB	Kurchatov Arra	8.05	252	⇓Pn	Pn	07 24 55.5	+0.2
	1.6nm,0.3s						
KURBB				⇓Sn	Sn	07 26 26.2	-0.7
	39nm,0.8s						
KURBB				⇑Lg	Lg	07 27 18.2	
	59nm,0.8s						
MK31	Makanchi Array	8.73	221	⇓Pn	Pn	07 25 04.7	0.0
	0.4nm,0.4s,baz=36,slow=11,SNR=20						
MK31				⇑Sn	Sn	07 26 44.6	+0.9
	3.8nm,0.8s,baz=41,slow=27,SNR=4.7						
MK31				⇑Lg	Lg	07 27 37.7	
	11nm,0.9s,baz=40,slow=25						
MKAR	Makanchi Array	8.73	221	Pn	Pn	07 25 05.4	+0.7
	0.4nm,0.3s,baz=40,slow=13,SNR=18						
MKAR				Sn	Sn	07 26 45.0	+1.3
	0.2nm,0.3s,baz=36,slow=26,SNR=5.4						
	0.7nm,0.3s						
MAKZ	Makanchi	8.84	222	⇑Pn	Pn	07 25 05.4	-0.8
	1.0nm,0.5s						
MAKZ				⇑Sn	Sn	07 26 46.9	+0.4
	3.6nm,0.8s						
MAKZ				⇑Lg	Lg	07 27 40.8	
	8.8nm,1.1s						
SONM	Songino Array	11.57	114	Lg	Lg	07 28 51.3	
	0.1nm,0.3s,baz=302,slow=30,SNR=8.8						
I34MN	SONGINO INFRAS	11.60	114	I	I	08 29 30.0	
	baz=310,slow=330,SNR=0.7						

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*ASRS **17** 07:28:23.0±0.9, 49°.66N×81°.59E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*NNC **17** 07:28:25.1±0.8, 49°.73N×82°.04E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=9.8km s-min=1.9km az=54.0, Suspected Mining explosion.*

*IDC **17** 07:28:27.9±1.6, 49°.78N×81°.73E, h0^{km}, mbtmp2.5/3, ML2.1/3, Error ellipse: s-maj=24.9km s-min=12.0km az=52.0*

ISC 17 07:28:20.7±1.4**, 49°.80N**±0°.08×**82°.19E**±0°.07**, h0^{km}, n8, σ0ˢ.32**/9**, 5C-2D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	2.47	293	⇑Pn	Pb	07 29 05.6	-0.2
	3.5nm,0.7s						
KURK				⇓Sn	Sb	07 29 36.7	0.0
	7.9nm,0.6s						
KURBB	Kurchatov Arra	2.49	291	Pn	Pb	07 29 06.6	+0.4
	0.4nm,0.3s,baz=112,slow=19,SNR=10						
KURBB				Lg	Lg	07 29 36.7	
	1.0nm,0.3s,baz=107,slow=32,SNR=16						
	2.3nm,0.5s						
KURBB	Kurchatov Arra	2.49	291	⇓Pn	Pb	07 29 06.2	0.0
	12nm,0.7s						
KURBB				⇑Sn	Sb	07 29 37.3	-0.1
	32nm,0.7s						
MAKZ	Makanchi	2.99	183	⇑Pg	Pg	07 29 18.1	+0.1
	0.8nm,0.3s						
MAKZ				⇑Lg	Lg	07 29 58.0	
	12nm,1.1s						
MK31	Makanchi Array	3.00	179	Pg	Pg	07 29 18.6	+0.4
	2.2nm,0.6s,baz=357,slow=12,SNR=20						
MK31				⇑Lg	Lg	07 29 59.2	
	5.2nm,0.6s,baz=3.8,slow=27,SNR=8.5						
MKAR	Makanchi Array	3.00	179	Pn	Pg	07 29 17.7	-0.5
	0.9nm,0.3s,baz=357,slow=12,SNR=18						
MKAR				Lg	Lg	07 29 59.4	
	1.1nm,0.3s,baz=355,slow=32,SNR=7.8						
	1.7nm,0.5s						
I46RU	ZALESOVO INFRA	4.47	20	I	I	07 58 40.0	
	baz=197,slow=328,SNR=2.6						
ZALV	Zalesovo Beam	4.47	20	Pn	Pb	07 29 39.9	0.0
	0.1nm,0.3s,baz=208,slow=14,SNR=1.8						
ZALV				Lg	Lg	07 30 47.7	
	0.4nm,0.3s,baz=200,slow=29,SNR=6.0						
	0.5nm,0.4s						

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*IDC **17** 07:32:22.9±0.6, 44°.50S×37°.47E, h0^{km}, mb4.3/12, mbtmp4.3/13, ML4.0/1, MS4.2/50, Error ellipse: s-maj=23.8km s-min=15.7km az=61.0*

*NEIC **17** 07:32:24.8±1.6, 44°.53S±0°.08×37°.3E±0°.1, h10^{km}±1^{km}, mb4.8/36, Error ellipse: s-maj=17.5km s-min=12.4km az=109.0*

*GCMT **17** 07:32:26.8±0.2, 44°.55S±0°.01×37°.36E±0°.03, h12^{km}, MW5.0/98, Moment Tensor Solution. s29,c34; s98,c147; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.27±.09; $M_{\theta\theta}$3.34±.08; $M_{\phi\phi}$-0.06±.09; $M_{r\theta}$1.34±.29; $M_{\theta\phi}$-0.46±.07; $M_{\phi r}$-0.59±.35; Best double couple: $M_0$3.64300×10^{16} NP1:ϕ_s91.00000°,δ34.00000°,λ-101.00000°. NP2: ϕ_s284.00000°,δ57.00000°,λ-83.00000°. Principal axes: T 3.6860, Plg11.0000°, Azm9.0000°; N -0.0810, Plg6.0000°, Azm100.0000°; P -3.6010, Plg77.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 07:32:24.6±0.4**, 44°.49S**±0°.08×**37°.16E**±0°.09**, h10^{km}, n105, σ1ˢ.10**/61**, mb4.7**/27**, MS4.2**/51**, 4C, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRHM	Grahamstown, E	13.98	320	Pn	Pn	07 35 40.2	-2.5
SUR	Sutherland	17.57	308	Pn	Pn	07 36 30.0	+0.2
BOSA	Boshof	18.48	325	P	P	07 36 41.9	+1.2
	0.3nm,0.3s,baz=154,slow=11,SNR=7.6						
BOSA				LR	LR	07 42 25.2	
	comp=Z,1μm,21.0s,baz=165,slow=32						
	7.3nm,0.9s						
BOSA	Boshof	18.48	325		P	07 36 41.0	+0.2
BOSA				IAmb	IAmb	07 36 44.4	
	comp=Z,51nm,1.4s						
FOMA	Nahampoana Res	21.05	26	P	P	07 37 08.2	-0.4
LBTB	Lobatse	21.59	330	P	P	07 37 15.1	+0.6
	comp=Z,18nm,1.0s,baz=186,slow=9.1,SNR=5.8						
LBTB				LR	LR	07 44 19.6	
	comp=Z,884nm,20.4s,baz=160,slow=33						
	comp=Z,18nm,1.0s						
LBTB	Lobatse	21.59	330		P	07 37 15.2	+0.6
LBTB				IAmb	IAmb	07 37 26.0	
	comp=Z,59nm,1.4s						
PHPEN	Phepeng	22.24	324	P	P	07 37 22.6	+1.0
PHPEN				IAmb	IAmb	07 37 31.2	
	comp=Z,26nm,1.1s						
LPHEP	Lephephe	23.02	333		P	07 37 29.4	-0.5
LPHEP				IAmb	IAmb	07 37 36.8	
	comp=Z,32nm,1.4s						
VOI	Vohitsoka	23.89	23		P	07 37 37.7	-0.8
VOI				IAmb	IAmb	07 37 46.7	
	comp=Z,35nm,1.1s						
LKGWB	Lokgwabe	24.14	322		P	07 37 37.6	-3.3
KHWEE	KHWEE	24.48	333	P	P	07 37 43.9	-0.1
KHWEE				IAmb	IAmb	07 37 45.0	
	comp=Z,39nm,1.2s						
KGCAE	Kacgae	24.83	325		P	07 37 46.7	-0.5
MATP	Matopo	25.06	341	LR	LR	07 46 26.4	
	comp=Z,867nm,21.2s,baz=170,slow=34						
KOOLE	Kule	25.57	321	P	P	07 37 52.3	-1.6
GRTLG	Ghanzi	26.57	325	P	P	07 38 02.8	-0.1
GRTLG				IAmb	IAmb	07 38 16.3	
	comp=Z,11nm,0.9s						
MAW	Mawson	26.85	158	LR	LR	07 45 55.0	
	comp=Z,564nm,21.4s,baz=323,slow=30						
OPO	Ambohidratompo	27.18	21	LR	LR	07 47 38.8	
	comp=Z,578nm,18.3s,baz=350,slow=34						
TSUM	Tsumeb	30.05	321	LR	LR	07 49 35.8	
	comp=Z,721nm,20.2s,baz=150,slow=34						
TSUM	Tsumeb	30.05	321		P	07 38 34.6	+0.6
TSUM				IAmb	IAmb	07 38 49.0	
	comp=Z,26nm,1.4s						
LSZ	Lusaka	30.10	343	LR	LR	07 49 13.6	
	comp=Z,674nm,19.9s,baz=152,slow=34						
LSZ	Lusaka	30.10	343		P	07 38 33.2	-1.2
LSZ				IAmb	IAmb	07 38 35.6	
	comp=Z,22nm,1.3s						
TROLL	Troll, Antarti	32.13	199	⇑P	P	07 38 52.3	+0.5
	comp=Z,218nm,0.8s						
SNAA	Sanae	33.28	202	⇑P	P	07 39 01.5	-0.3
	comp=Z,82nm,0.7s						
SNAA	Sanae	33.28	202	P	P	07 39 01.6	-0.3
	comp=Z,5.7nm,1.0s,baz=87,slow=12,SNR=14						
SNAA				LR	LR	07 49 27.1	
	comp=Z,825nm,21.3s,baz=28,slow=31						
	comp=Z,5.7nm,1.0s						
SNAA	Sanae	33.28	202		P	07 39 01.1	-0.7
SNAA				IAmb	IAmb	07 39 04.7	
	comp=Z,17nm,1.4s						
VNA2	Neumayer--Watz	34.18	204	⇑P	P	07 39 07.7	-1.9
	comp=Z,8.2nm,0.8s,baz=60,slow=10						
VNA3	Neumayer Olymp	34.99	204	⇑P	P	07 39 15.4	-1.2
	comp=Z,4.1nm,0.8s						
BELA	Belgrano 2	43.12	197	P	P	07 40 23.5	-1.0
MBAR	Mbarara	44.07	351	LR	LR	07 58 02.0	
	comp=Z,495nm,19.7s,baz=167,slow=35						
QSPA	South Pole Qui	45.72	180	P	P	07 40 46.5	+0.8
	comp=Z,12nm,0.9s,baz=238,slow=5.6,SNR=10						
QSPA				LR	LR	07 57 56.2	
	comp=Z,537nm,21.7s,baz=252,slow=34						
	comp=Z,12nm,0.9s						
QSPA	South Pole Qui	45.72	180	P	P	07 40 45.1	-0.5
QSPA				IAmb	IAmb	07 40 51.6	
	comp=Z,18nm,1.0s						
VNDA	Vanda	53.62	167	P	P	07 41 45.5	+0.1
	comp=Z,1.2nm,0.8s,baz=264,slow=12,SNR=4.7						
VNDA				LR	LR	08 02 29.0	
	comp=Z,603nm,21.8s,baz=222,slow=34						
	comp=Z,1.2nm,0.8s						
PMSA	Palmer Station	55.15	211	LR	LR	08 01 15.2	
	comp=Z,260nm,19.7s,baz=114,slow=31						
ATD	Arta Tunnel	55.99	7	LR	LR	08 04 44.0	
	comp=Z,8.6nm,19.6s,baz=151,slow=35						
DBIC	Dimbokro	63.41	312	P	P	07 42 55.3	+0.9
	comp=Z,5.0nm,0.9s,baz=189,slow=6.1,SNR=3.5						
DBIC				LR	LR	08 07 09.7	
	comp=Z,138nm,19.5s,baz=176,slow=33						
	comp=Z,5.0nm,0.9s						
PALK	Pallekele	64.73	49	LR	LR	08 04 17.0	
	comp=Z,189nm,21.5s,baz=218,slow=30						
TORD	Torodi Ar. Bea	65.80	322	P	P	07 43 11.1	+1.1
	comp=Z,2.7nm,0.8s,baz=144,slow=5.9,SNR=4.0						
TORD				LR	LR	08 13 38.1	
	comp=Z,133nm,18.1s,baz=166,slow=38						
	comp=Z,2.7nm,0.8s						
TORD	Torodi Ar. Bea	65.80	322	IAmb	IAmb	07 43 11.2	
	comp=Z,13nm,0.7s						
FORT	Forrest	69.76	113	P	P	07 43 34.4	-0.6
FORT				IAmb	IAmb	07 43 34.8	
	comp=Z,5.9nm,0.8s						
TRQA	Tornquist	70.18	236	P	P	07 43 38.0	+0.6
PLCA	Paso Flores	73.23	229	P	P	07 43 55.7	-0.1
	comp=Z,3.4nm,1.1s,baz=150,slow=9.0,SNR=4.5						
PLCA				LR	LR	08 12 46.4	
	comp=Z,59nm,18.0s,baz=120,slow=33						
	comp=Z,3.4nm,1.1s						
PLCA	Paso Flores	73.23	229	P	P	07 43 56.1	+0.3
PLCA				IAmb	IAmb	07 43 56.6	
	comp=Z,6.0nm,1.1s						
BBOO	Buckleboo	73.54	120	P	P	07 43 56.5	-1.2
BBOO				IAmb	IAmb	07 43 57.2	
	comp=Z,10.0nm,0.8s						
SNJI	Sawahan-Nganju	73.61	85	P	P	07 43 58.7	+0.2
	comp=Z,11nm,1.0s						
EIL	Elat	73.83	358	LR	LR	08 14 14.2	
	comp=Z,155nm,20.8s,baz=236,slow=34						
CPUP	Villa Florida	75.06	248	P	P	07 44 07.0	+0.3
	comp=Z,0.5nm,0.8s,baz=139,slow=7.5,SNR=4.7						
CPUP				LR	LR	08 10 59.7	
	comp=Z,30nm,20.6s,baz=84,slow=31						
	comp=Z,0.5nm,0.8s						
CPUP	Villa Florida	75.06	248	P	P	07 44 06.7	+0.1
TOO	Toolangi	75.81	129	P	P	07 44 10.2	-0.6
BDFB	Brasilia	75.81	262	LR	LR	08 10 58.3	
	comp=Z,101nm,19.5s,baz=77,slow=30						
FITZ	Fitzroy Crossi	76.49	102	LR	LR	08 13 32.8	
	comp=Z,92nm,18.7s,baz=194,slow=32						
FITZ	Fitzroy Crossi	76.49	102	P	P	07 44 15.6	+0.7
MMAI	Mount Meron Ar	77.16	358	LR	LR	08 17 35.6	
	comp=Z,152nm,20.2s,baz=174,slow=35						
STKA	Stephens Creek	77.57	122	P	P	07 44 19.6	-1.2

	comp=Z,8.3nm,0.7s,baz=214,slow=4.0,SNR=35						
STKA				LR	LR	08 10 55.2	
	comp=Z,108nm,21.3s,baz=207,slow=30						
	comp=Z,8.3nm,0.7s						
STKA	**Stephens Creek**	77.57	122	P	P	07 44 19.7	-1.2
ASAR	**Alice Springs**	78.36	112	P	P	07 44 23.9	-1.5
	comp=Z,3.7nm,0.8s,baz=221,slow=5.3,SNR=46						
ASAR				LR	LR	08 14 10.3	
	comp=Z,87nm,18.9s,baz=252,slow=32						
	comp=Z,3.7nm,0.8s						
IDI	**Anoyia**	80.19	350	LR	LR	08 24 10.5	
	comp=Z,189nm,18.1s,baz=124,slow=39						
BATI	**Baumata**	80.45	95	LR	LR	08 13 03.6	
	comp=Z,47nm,21.5s,baz=228,slow=30						
WRA	**Warramunga Arr**	81.22	109	P	P	07 44 39.1	-1.8
	comp=Z,2.2nm,0.9s,baz=219,slow=4.4,SNR=6.1						
	comp=Z,2.2nm,0.9s						
WRA	**Warramunga Arr**	81.22	109	IAmb	IAmb	07 44 46.9	
	comp=Z,0.4nm,1.2s						
KAPI	**Kappang**	81.23	88	LR	LR	08 15 52.8	
	comp=Z,33nm,18.4s,baz=236,slow=32						
WRAB	**Tennant Creek**	81.23	109	P	P	07 44 40.4	-0.6
WRAB				IAmb	IAmb	07 44 44.8	
	comp=Z,5.6nm,0.8s						
WR8	**Warramunga Arr**	81.32	109	P	P	07 44 40.1	-1.4
WR8				IAmb	IAmb	07 44 49.9	
	comp=Z,10nm,1.4s						
WB0	**Warramunga Arr**	81.38	109	P	P	07 44 40.4	-1.3
AC02	**Maricunga**	82.28	240	P	P	07 44 47.4	+0.4
BRDH	**Bariadhala**	83.32	49	LR	LR	08 15 05.7	
	comp=Z,210nm,21.9s,baz=188,slow=31						
PTLB	**Pontes e Lacer**	83.73	255	P	P	07 44 54.0	0.0
PTLB				IAmb	IAmb	07 45 04.9	
	comp=Z,5.6nm,1.0s						
KEST	**Kesra**	83.75	338	LR	LR	08 22 52.8	
	comp=Z,468nm,20.5s,baz=173,slow=36						
BRTR	**Keskin Array B**	83.90	357	P	P	07 44 54.0	-0.3
	comp=Z,1.4nm,0.9s,baz=160,slow=6.7,SNR=7.3						
BRTR				LR	LR	08 20 41.5	
	comp=Z,73nm,21.6s,baz=170,slow=34						
	comp=Z,1.4nm,0.9s						
VAE	**Valguarnera**	84.15	342	LR	LR	08 23 59.1	
	comp=Z,268nm,18.1s,baz=184,slow=37						
CMAR	**Chiang Mai Arr**	84.18	57	LR	LR	08 18 00.9	
	comp=Z,41nm,18.6s,baz=225,slow=33						
SHL	**Shillong**	85.78	48	P	P	07 45 04.5	+0.3
SHL				IAmb	IAmb	07 45 09.9	
	comp=Z,8.3nm,0.9s						
MDT	**Midelt**	85.82	326	LR	LR	08 23 02.8	
	comp=Z,169nm,19.3s,baz=58,slow=35						
KBZ	**Khabaz**	87.99	4	LR	LR	08 23 42.9	
	comp=Z,106nm,19.7s,baz=194,slow=35						
CTA	**Charters Tower**	88.95	117	LR	LR	08 19 29.2	
	comp=Z,134nm,19.4s,baz=220,slow=32						
LPAZ	**La Paz**	89.23	248	LR	LR	08 23 02.2	
	comp=Z,76nm,18.3s,baz=79,slow=34						
URZ	**Urewera**	90.03	150	LR	LR	08 24 02.9	
	comp=Z,80nm,18.0s,baz=162,slow=34						
MLR	**Muntele Rosu**	90.15	352	LR	LR	08 28 10.4	
	comp=Z,172nm,18.8s,baz=224,slow=37						
QIZ	**Qiongzhong**	91.42	65	P	P	07 45 31.3	+0.3
QIZ	**Qiongzhong**	91.42	65	S	S	07 56 31.4	+1.0
QIZ				LR	LR		
	comp=N,130nm,14.2s						
QIZ				LR	LR		
	comp=E,140nm,18.2s						
QIZ				LR	LR		
	comp=Z,140nm,21.0s						
ESDC	**Sonseca Array**	91.61	329	LR	LR	08 26 55.4	
	comp=Z,250nm,19.9s,baz=142,slow=36						
PZH	**PanZhiHua**	91.99	54	P	P	07 45 35.6	+2.0
AAK	**Ala-Archa**	92.95	27	LR	LR	08 23 10.5	
	comp=Z,70nm,20.7s,baz=216,slow=33						
MDP	**Montagnes des**	93.39	274	LR	LR	08 22 24.8	
	comp=Z,102nm,18.5s,baz=138,slow=32						
DAVOX	**Davos/Dischmat**	94.03	342	LR	LR	08 30 55.3	
	comp=Z,164nm,18.3s,baz=82,slow=37						
AKASG	**Malin Array Be**	95.06	355	LR	LR	08 30 53.4	
	comp=Z,59nm,19.3s,baz=192,slow=37						
VRAC	**Vranov**	95.13	347	LR	LR	08 31 03.9	
	comp=Z,194nm,19.0s,baz=192,slow=37						
GERES	**GERESS Array B**	95.20	345	LR	LR	08 31 39.7	
	comp=Z,123nm,18.4s,baz=188,slow=37						
AKTO	**Aktyubinsk**	96.27	13	LR	LR	08 29 06.4	
	comp=Z,60nm,19.8s,baz=216,slow=35						
BELG	**Belogornoye**	96.93	6	LR	LR	08 30 45.6	
	comp=Z,156nm,20.7s,baz=102,slow=36						
PMG	**Port Moresby**	97.36	111	LR	LR	08 24 13.1	
	comp=Z,81nm,20.0s,baz=166,slow=32						
JAY	**Jayapura**	97.88	101	LR	LR	08 25 60.0	
	comp=Z,50nm,18.5s,baz=252,slow=33						
NNA	**Nana**	98.09	245	LR	LR	08 26 36.9	
	comp=Z,53nm,18.6s,baz=139,slow=33						
DZM	**Mont Dzumac**	99.17	133	*e*LR	LR	08 18 11.2	
	comp=Z,177nm,22.6s						
MKAR	**Makanchi Array**	99.24	30	LR	LR	08 27 30.0	
	comp=Z,57nm,19.4s,baz=308,slow=33						
TBI	**Tubuai**	112.22	173	*e*LR	LR	08 24 12.1	
	comp=Z,596nm,27.0s						
PPT2	**Papeete2**	117.91	173	*e*SS	SS	08 08 35.9	-1.2
	comp=Z,196nm,25.8s						
PPT2	**Papeete2**	117.91	173	*e*LR	LR	08 26 50.0	
	comp=Z,106nm,21.8s						
PPT2				*e*LR	LR	08 26 59.7	
	comp=Z,195nm,36.5s						
TAOE	**Nuku Hiva Isla**	126.85	183	*e*LR	LR	08 31 03.4	
	comp=Z,172nm,22.5s						
TXAR	**Lajitas Array**	145.57	257	PKPbc	PKPdf	07 52 03.6	+0.5
	comp=Z,3.1nm,0.8s,baz=134,slow=5.4,SNR=13						
TXAR	**Lajitas Array**	145.57	257		PKPdf	07 52 03.0	-0.1
ULM	**Lac du Bonnet**	148.11	297	PKPbc	PKPbc	07 52 09.4	-0.3
	comp=Z,2.7nm,0.7s,baz=344,slow=2.0,SNR=3.4						
YKA	**Yellowknife Ar**	155.69	328	PKP	PKPdf	07 52 20.2	+2.7
	comp=Z,0.5nm,1.0s,baz=357,slow=1.5,SNR=3.7						
YKA				PKPab	PKPab	07 52 45.2	+1.3
	comp=Z,1.6nm,0.9s,baz=42,slow=4.0,SNR=9.5						
PDAR	**Pinedale Array**	155.94	278	PKP	PKPdf	07 52 20.4	+1.6
	comp=Z,0.4nm,0.6s,baz=116,slow=5.1,SNR=3.6						
PDAR				PKPab	PKPab	07 52 47.0	+1.0
	comp=Z,0.7nm,0.8s,baz=149,slow=2.5,SNR=4.1						
ILAR	**Eielson Array**	159.55	5	PKPab	PKPab	07 52 59.9	-0.7
	comp=Z,1.3nm,0.9s,baz=335,slow=4.0,SNR=8.3						

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*ASRS **17** 07:34:22.0±0.9, 53°.98N×86°.62E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 17 07:34:25.8±3.0**, 53°.98N×86°.56E, h0**^{km}**, mbtmp2.8**/2**, ML2.3**/2**, Error ellipse: s-maj=24.3km s-min=14.6km az=57.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	1.03	269	I	I	07 40 26.9	
	baz=87,slow=348,SNR=6.0						
ZALV	**Zalesovo Beam**	1.03	269	Pg	Pg	07 34 44.0	-1.5
	0.5nm,0.3s,baz=90,slow=19,SNR=6.0						
ZALV				Lg	Lg	07 35 00.6	
	1.1nm,0.3s,baz=90,slow=26,SNR=8.8						
KURBB	**Kurchatov Arra**	5.96	239	Pn	Pn	07 35 56.4	+1.2
	baz=56,slow=14,SNR=1.7						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	7.70	202	Pn	Pn	07 36 20.2	+1.1
	0.1nm,0.3s,baz=24,slow=13,SNR=4.2						
	0.1nm,0.3s						

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*FUNV **17** 07:37:37.2, 10°.43N×63°.04W, h5^{km}, MW2.9*

ISC 17 07:37:34.6±2.2**, 10°.9N**±0°.4×**63°.09W**±0°.05**, h10**^{km}**, n8, σ1^{s}.57**/11**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMDM	**Guralp CMG5TDE**	1.52	99	*e*P	Pn	07 38 02.4	+0.5
DMDM				*e*S	Sn	07 38 20.0	-1.9
PSMG	**Mucurapo Girls**	1.55	100	*e*S	Sn	07 38 21.3	-1.1
PSGH	**Port of Spain**	1.57	100	*e*P	Pn	07 38 04.0	+1.4
PSGH				*e*S	Sn	07 38 21.5	-1.5
TRN	**Trinidad (W)**	1.68	100	*e*P	Pn	07 38 05.9	+1.8
PCRV	**Puerto La Cruz**	1.70	244	*e*P	Pn	07 38 05.6	+1.2
PCRV				*e*S	Sn	07 38 25.7	-0.6
PCRV	**Puerto La Cruz**	1.70	244	*e*P	Pn	07 38 05.4	+1.0
BENV	**Beln**	4.54	258	*e*P	Pn	07 38 44.3	+0.7
BENV				*e*S	Sn	07 39 34.6	-1.9
CACV	**CAICARA DEL OR**	4.78	226	*e*P	Pn	07 38 39.1	-7.6
CACV				*e*S	Sn	07 39 26.3	-16

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*NNC **17** 07:40:57.8±1.4, 49°.97N×78°.56E, h0^{km}±22^{km}, mb2.5, mpv2.1, Error ellipse: s-maj=31.1km s-min=10.3km az=85.0, Suspected Mining explosion.*

*IDC **17** 07:40:59.6±1.0, 50°.08N×78°.78E, h0^{km}, mbtmp2.3/2, ML1.8/2, Error ellipse: s-maj=13.2km s-min=6.6km az=63.0*

ISC 17 07:40:55.1±4.0**, 50°.01N**±0°.05×**77°.9E**±0°.3**, h0**^{km}**, n8, σ0^{s}.75**/11**, 6C-3D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	0.72	32	Pg	Pb	07 41 10.4	-0.3
	0.7nm,0.3s,baz=165,slow=17,SNR=36						
KURBB				Lg	Lg	07 41 19.0	
	0.9nm,0.3s,baz=162,slow=33,SNR=12						
KURBB	**Kurchatov Arra**	0.72	32	⇑P	Pb	07 41 10.7	0.0
	4.6nm,0.4s						
KURBB				⇓S	Sb	07 41 20.2	-0.9
	18nm,0.5s						
KURK	**Kurchatov**	0.83	32	⇓P	Pb	07 41 12.0	-0.5
	1.0nm,0.4s						
KURK				⇑S	Sg	07 41 22.8	+0.9
	6.8nm,0.7s						
MAKZ	**Makanchi**	4.18	138	⇓Pg	Pb	07 42 09.3	-0.3
	0.1nm,0.3s						
MAKZ				⇑Lg	Lg	07 42 59.6	
	3.5nm,0.9s						
MK31	**Makanchi Array**	4.33	136	⇑Pn	Pn	07 42 02.6	+0.3
	baz=317,slow=10,SNR=9.0						
MK31				⇑Pg	Pb	07 42 12.7	+0.6
	0.4nm,0.5s,baz=327,slow=13,SNR=9.5						
MK31				⇑Lg	Lg	07 43 04.1	
	1.9nm,0.5s,baz=329,slow=28,SNR=15						
MKAR	**Makanchi Array**	4.33	136	Pn	Pn	07 42 02.8	+0.5
	0.1nm,0.3s,baz=325,slow=10,SNR=8.3						
MKAR				Pg	Pb	07 42 10.8	-1.3
	0.2nm,0.3s,baz=326,slow=14,SNR=10.0						
MKAR				Lg	Lg	07 43 05.4	
	0.7nm,0.3s,baz=335,slow=29,SNR=11						
	0.2nm,0.6s						
ZALV	**Zalesovo Beam**	5.80	45	Pn	Pn	07 42 22.6	+0.2
	0.2nm,0.3s,baz=232,slow=14,SNR=2.3						
	0.3nm,0.3s						
I46RU	**ZALESOVO INFRA**	5.80	45	I	I	08 15 40.0	
	baz=218,slow=335,SNR=2.6						

MEX 17 07:41:41.2±0.5**, 15°.99N×95°.61W, h34**^{km}±21^{km}**, MD3.6, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	0.53	245	*e*P	Pb	07 41 50.2	-2.0
HUIG				*i* S	Sb	07 41 57.6	-2.2
PEIG	**Puerto Escondi**	1.48	270	*e*P	Pn	07 42 03.1	-2.3
PEIG				*e*S	Sn	07 42 21.2	-2.4
VHO	**Vista Hermosa**	1.52	315	*e*P	Pn	07 42 03.9	-2.3
VHO				*e*S	Sn	07 42 18.8	-6.2
NEUV	**Arroyo Zacate**	1.72	354	*e*P	Pn	07 42 07.2	-1.6
NEUV				*i* S	Sn	07 42 26.9	-2.7
NEUV	**Arroyo Zacate**	1.72	354	*e*P	Sn	07 42 27.2	-2.5
YOIG	**Yosondua**	2.04	295	*e*P	Pn	07 42 11.8	-1.7
YOIG				*e*S	Sn	07 42 35.5	-2.5
TXIG	**Tlaxiaco**	2.42	302	*e*P	Pn	07 42 17.8	-0.8
TXIG				*i* S	Sn	07 42 47.0	-0.2
PNIG	**Pinotepa**	2.45	280	*e*P	Pn	07 42 19.9	+1.1
PNIG				*i* S	Sn	07 42 44.2	-3.4
TOIG	**Toxpalan**	2.51	327	*e*P	Pn	07 42 19.7	-0.1
TOIG				*e*S	Sn	07 42 49.1	-0.2

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*GCG **17** 07:42:01.9±3.4, 16°.05N×94°.52W, h26^{km}±151^{km}, MD3.9*

*MEX **17** 07:42:04.1±0.9, 16°.15N×94°.56W, h75^{km}±21^{km}, MD4.0*

ISC 17 07:42:01.8±1.3**, 16°.20N**±0°.04×**94°.52W**±0°.03**, h87**^{km}±14^{km}**, n24, σ1^{s}.68**/45**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	0.95	338	*e*P	Pn	07 42 21.2	+0.4
CMIG				*i* S	Sn	07 42 35.0	0.0
UXUV	**UXUV**	1.17	18	*e*P	Pn	07 42 24.4	+1.1
UXUV				*e*S	Sn	07 42 39.6	+0.1
PCIG		1.34	111	*e*P	Pn	07 42 26.2	+0.8
PCIG				*e*S	Sn	07 42 43.8	+0.5
TGIG		1.46	67	*i* P	Pn	07 42 27.7	+0.7
TGIG				*i* S	Sn	07 42 44.9	-1.0
TGIG		1.46	67	*i* P	Pn	07 42 27.7	+0.7
TGIG				*i* S	Sn	07 42 46.2	+0.2
HUIG	**Huatulco**	1.59	255	*i* P	Pn	07 42 28.2	-0.4
HUIG				*i* S	Sn	07 42 47.8	-1.1
HUIG	**Huatulco**	1.59	255	*i* P	Pn	07 42 27.9	-0.7
HUIG				*i* S	Sn	07 42 47.7	-1.1
NEUV	**Arroyo Zacate**	1.94	321	*i* S	Sn	07 42 53.4	-3.7
CCIG	**Comitan**	2.29	88	*e*P	Pn	07 42 37.9	0.0
CCIG				*i* S	Sn	07 43 01.3	-4.2
CCIG	**Comitan**	2.29	88	*i* P	Pn	07 42 38.7	+0.7
VHO	**Vista Hermosa**	2.29	293	*e*P	Pn	07 42 40.5	+2.4
VHO				*e*S	Sn	07 43 07.1	+1.4
PATR	**El Naranjo**	2.45	116	*e*P	Pn	07 42 41.7	+1.6
PATR				*i* S	Sn	07 43 09.0	-0.5
PAVE	**Pavencul**	2.47	114	*e*P	Pn	07 42 42.2	+1.9
PAVE				*i* S	Sn	07 43 09.0	-0.9
PEIG	**Puerto Escondi**	2.54	266	*i* P	Pn	07 42 40.8	-0.3
PEIG				*i* S	Sn	07 43 09.4	-1.8
CHUJ	**Union Juarez**	2.57	115	*e*P	Pn	07 42 42.6	+0.9
CHUJ				*i* S	Sn	07 43 13.5	+1.2
YOIG	**Yosondua**	2.98	283	*e*P	Pn	07 42 49.5	+2.2
YOIG				*i* S	Sn	07 43 19.5	-2.7
TOIG	**Toxpalan**	3.08	308	*e*P	Pn	07 42 47.8	-0.7
TOIG				*i* S	Sn	07 43 25.4	+0.9
TXIG	**Tlaxiaco**	3.29	289	*e*P	Pn	07 42 46.0	-5.5
TXIG				*i* S	Sn	07 43 29.5	-0.2
PNIG	**Pinotepa**	3.47	274	*e*P	Pn	07 42 54.4	+0.6
PNIG				*i* S	Sn	07 43 31.9	-1.9
HLIG	**Huajuapan de L**	3.54	298	*e*P	Pn	07 42 56.7	+1.9
HLIG				*e*S	Sn	07 43 35.4	-0.3
JAUV	**Jalcomulco**	3.83	326	*e*P	Pn	07 42 59.4	+0.8
JAUV				*i* S	Sn	07 43 42.1	-0.4
FTIG	**Fresnillo de T**	3.85	297	*e*P	Pn	07 43 02.0	+3.0
FTIG				*i* S	Sn	07 43 42.1	-1.1
SCIG	**Sabancuy**	4.20	49	*e*P	Pn	07 43 03.9	+0.3
SCIG				*i* S	Sn	07 43 48.0	-3.6
CXUV	**Coxquihui**	4.91	324	*e*P	Pn	07 43 15.7	+2.4
CXUV				*e*S	Sn	07 44 07.0	-2.0

NNC 17 07:55:29.8±3.0**, 43°.61N×87°.36E, h5**^{km}±10^{km}**, mb3.6, mpv3.4, 6C-6D, Error ellipse: s-maj=21.7km s-min=14.0km az=133.0, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	**Zaisan**	4.22	336	Pg	Pb	07 56 46.2	+1.7
	7.2nm,0.5s						
ZSN				Lg	Lg	07 57 40.3	
	21nm,0.8s						
MK31	**Makanchi Array**	4.79	313	⇓Pn	Pn	07 56 42.7	+0.1
	0.5nm,0.3s,baz=128,slow=14,SNR=31						
MK31				⇓Lg	Lg	07 57 58.7	
	5.9nm,0.7s,baz=134,slow=28,SNR=5.1						
MAKZ	**Makanchi**	4.97	312	⇑Pn	Pn	07 56 44.8	-0.2
	1.6nm,0.4s						
MAKZ				⇓Lg	Lg	07 58 04.4	
	6.1nm,1.1s						
KTMS	**Ketmen**	5.10	271	Pg	Pg	07 57 04.7	-2.7
	1.2nm,0.3s						
KTMS				Lg	Lg	07 58 12.5	
	4.7nm,0.2s						
PDGK	**Podgornoye**	5.74	270	⇑Pg	Pb	07 57 14.1	+3.8
	4.4nm,0.9s						
PDGK				⇑Sn	Sn	07 58 02.3	+0.5
	4.0nm,0.7s						
PDGK				⇑Lg	Lg	07 58 29.7	
	7.4nm,1.1s						
SHLS	**Shalkode**	5.78	268	Pg	Pb	07 57 11.9	+0.9
	3.5nm,0.2s						
SHLS				Lg	Lg	07 58 25.2	
	11nm,0.6s						
KNOS	**Konyrlen**	5.95	280	Pg	Pb	07 57 18.8	+4.8
	1.7nm,0.5s						
KNOS				Lg	Lg	07 58 36.6	
	4.8nm,0.5s						
KURBB	**Kurchatov Arra**	9.24	322	⇑Pn	Pn	07 57 42.3	-1.2
	0.7nm,0.6s						
KURBB				⇓Sn	Sn	07 59 31.3	+3.5
	1.9nm,0.8s						
KURBB				Lg	Lg	08 00 26.0	
	5.6nm,0.7s						
KURK	**Kurchatov**	9.27	323	⇑Pn	Pn	07 57 41.8	-2.1
	0.1nm,0.6s						
KURK				⇓Sn	Sn	07 59 32.1	+3.6
	0.7nm,1.1s						
KURK				⇓Lg	Lg	08 00 27.4	
	1.3nm,0.8s						

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*ASRS **17** 08:05:09.0±1.2, 54°.62N×86°.36E, h0^{km}, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 17 08:05:15.0±2.7**, 54°.49N×86°.05E, h0**^{km}**, mbtmp2.8**/2**, ML2.6**/2**, Error ellipse: s-maj=20.8km s-min=12.7km az=45.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	0.91	234	I	I	08 11 30.0	
	0.1nm,0.8s,baz=53,slow=343,SNR=7.0						
ZALV	**Zalesovo Beam**	0.91	234	Pg	Pg	08 05 31.6	-0.8
	1.9nm,0.3s,baz=50,slow=17,SNR=23						
ZALV				Lg	Lg	08 05 45.3	
	3.7nm,0.3s,baz=51,slow=27,SNR=17						
KURBB	**Kurchatov Arra**	6.00	233	Pn	Pn	08 06 46.0	+1.0
	0.1nm,0.3s,baz=50,slow=13,SNR=13						
KURBB				Lg	Lg	08 08 25.9	
	baz=55,slow=34,SNR=1.2						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	8.07	199	Pn	Pn	08 07 13.8	+0.4
	0.1nm,0.3s,baz=18,slow=12,SNR=6.4						
	0.2nm,0.2s						

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*IDC **17** 08:09:40.9±3.4, 54°.18N×87°.26E, h0^{km}, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=30.6km s-min=18.9km az=59.0*

ASRS 17 08:09:40.0±1.1**, 54°.13N×87°.14E, h0**^{km}**, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	1.38	263	I	I	08 17 40.0	
	0.1nm,0.7s,baz=81,slow=348,SNR=15						
ZALV	**Zalesovo Beam**	1.38	263	Pg	Pb	08 10 07.0	+0.3
	1.9nm,0.3s,baz=82,slow=16,SNR=22						
ZALV				Lg	Lg	08 10 27.4	
	0.6nm,0.3s,baz=78,slow=29,SNR=5.1						
KURBB	**Kurchatov Arra**	6.33	240	Pn	Pn	08 11 17.4	+2.9
	0.1nm,0.3s,baz=55,slow=13,SNR=4.2						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	7.97	205	Pn	Pn	08 11 40.0	+3.0
	0.1nm,0.3s,baz=26,slow=14,SNR=1.9						
	0.1nm,0.2s						

IDC 17 08:16:26.4±8.0**, 30°.76S×179°.07W, h0**^{km}**, mb3.5**/2**, mbtmp3.5**/2**, Error ellipse: s-maj=335.0km s-min=59.5km az=156.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	42.17	268	P	P	08 24 20.6	-0.4
	0.3nm,0.7s,baz=112,slow=7.9,SNR=5.8						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	43.19	273	P	P	08 24 29.6	+0.2
	0.7nm,0.4s,baz=111,slow=8.2,SNR=6.3						
	0.7nm,0.4s						
FINES	**FINESS Array B**	145.16	339	PKPbc	PKPbc	08 36 03.9	-0.9
	3.5nm,1.0s,baz=65,slow=4.7,SNR=5.5						

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*ISK **17** 08:21:32.6, 35°.85N×32°.54E, h9^{km}, ML3.5/65*

*AFAD **17** 08:21:35.6, 36°.08N×32°.62E, h18^{km}±1^{km}, ML3.2*

*NIC **17** 08:21:36.8, 35°.55N×32°.63E, h64^{km}±6^{km}, Ml2.8/11*

ISC 17 08:21:32.8±1.0**, 35°.84N**±0°.02×**32°.56E**±0°.02**, h12**^{km}±9^{km}**, n87, σ1^{s}.30**/104**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOZY	**Bozyazi-Mersin**	0.43	52	Pg	Pb	08 21 42.5	+0.2
BOZY				Sg	Sb	08 21 48.1	-0.6
GAZI	**Gazipasa**	0.44	333	P	Pb	08 21 42.5	0.0
GAZI				S	Sg	08 21 47.4	+0.2
GAZI				*i* IAML		08 21 48.0	
	comp=N,1μm,0.3s						
GAZI				*i* IAML		08 21 48.0	
	comp=E,1μm,0.2s						
GAZI	**Gazipasa**	0.44	333	Pg	Pb	08 21 42.3	-0.2
GAZI				Sg	Sg	08 21 47.5	+0.2
TEKE	**Tekeli-Mersin**	0.54	56	Pg	Pb	08 21 44.4	+0.2
TEKE				Sg	Sb	08 21 51.8	-0.1
ALFC	**Alefka**	0.69	177	P	Pb	08 21 47.5	+0.8
ALFC				S	Sb	08 21 56.5	+0.3
ALFC				AML	AML	08 21 58.6	
	3.1nm,0.3s						
ALFC				AML	AML	08 22 01.4	
	3.9nm,0.2s						
BERE	**Bereket-Mersin**	0.73	47	Pg	Pg	08 21 47.4	+0.4
YORU	**Yoruktepe-Mers**	0.75	65	Pg	Pb	08 21 47.8	0.0
YORU				Sg	Sb	08 21 58.8	+0.7
OREN	**Orenkoy-Mersin**	0.81	63	Pg	Pg	08 21 48.8	+0.3
ALAN	**Alanya-ANTALYA**	0.83	329	Pg	Pg	08 21 48.3	-0.5
AKMS	**Akamas**	0.84	193	P	Pn	08 21 50.2	-0.3
AKMS				S	Sb	08 22 00.8	+0.1
AKMS				AML	AML	08 22 02.5	
	2.3nm,0.3s						
AKMS				AML	AML	08 22 07.5	
	1.5nm,0.5s						
AKK1	**Akkuyu-Mersin**	0.85	69	Pg	Pb	08 21 50.1	+0.7
AKK2	**Akkuyu-Mersin**	0.85	70	Pg	Pb	08 21 49.9	+0.4
GULN	**MERSIN_Gulnar**	0.87	67	P	Pg	08 21 49.0	-0.4
GULN				S	Sg	08 22 01.4	+0.5
GULN				*i* IAML		08 22 03.0	
	comp=N,990nm,0.2s						
GULN				*i* IAML		08 22 04.0	
	comp=E,736nm,0.3s						
TEPK	**Tepekoy-MERSIN**	0.88	64	Pg	Pg	08 21 49.9	+0.1
XYLS	**Xyliatos**	0.92	154	P	Pg	08 21 50.4	-0.1
XYLS				S	Sg	08 22 01.7	-0.8
XYLS				AML	AML	08 22 03.8	
	2.8nm,0.3s						
XYLS				AML	AML	08 22 04.0	
	2.0nm,0.3s						
TEVE	**Tevekalti-Mers**	0.93	50	Pg	Pb	08 21 50.9	+0.1
TROD	**Troodos**	0.93	164	P	Pg	08 21 50.8	+0.1
TROD				AML	AML	08 22 11.9	
	0.7nm,0.4s						
TROD				AML	AML	08 22 16.2	
	0.7nm,0.3s						
YESI	**Yesilovacik-Me**	0.94	68	Pg	Pg	08 21 51.0	0.0
TISA	**Tisan-Mersin**	0.96	70	Pg	Pg	08 21 51.3	0.0
LFK	**Lefkose**	0.97	125	Pg	Pb	08 21 51.8	+0.2
ATHAL	**Athalassa**	0.98	136	P	Pn	08 21 52.7	+0.4
ATHAL				S	Sg	08 22 04.5	+0.2
ATHAL				AML	AML	08 22 19.1	
	4.1nm,0.4s						
ATHAL				AML	AML	08 22 37.9	
	3.9nm,1.1s						
IKL	**Isikli**	0.99	66	Pg	Pb	08 21 52.1	+0.2
KARG	**Kargicak-Mersi**	1.00	69	Pg	Pb	08 21 52.4	+0.4
NATA	**Nata**	1.06	180	AML	AML	08 22 18.8	
	2.5nm,0.4s						
NATA				AML	AML	08 22 19.4	
	3.1nm,0.3s						
CSS	**Mathiatis**	1.08	144	Pn	Pb	08 21 53.8	+0.4
CSS	**Mathiatis**	1.08	144	P	Pg	08 21 52.5	-1.1
CSS				S	Sg	08 22 05.0	-2.6
CSS				AML	AML	08 22 10.1	
	0.6nm,0.3s						
CSS				AML	AML	08 22 13.1	
	0.6nm,0.5s						
KEBE	**Keben-Mersin**	1.11	57	Pn	Pn	08 21 54.4	+0.2
HDMB	**Hadim**	1.12	357	Pn	Pg	08 21 53.8	-0.6
APOL	**The Sanctuary**	1.20	168	P	Pg	08 21 58.5	+2.7
APOL				AML	AML	08 22 21.2	
	0.8nm,0.4s						
APOL				AML	AML	08 22 22.1	
	0.6nm,0.4s						
ASGA	**Asgata**	1.20	152	P	Pb	08 21 54.1	-1.2

ASGA				AML	AML	08 22 12.4	
	0.5nm,0.4s						
ASGA				AML	AML	08 22 22.1	
	0.7nm,0.5s						
MVOU	**Mavrovouni**	1.20	133	P	Pn	08 21 54.0	-1.4
MVOU				S	Sb	08 22 07.7	-3.3
MVOU				AML	AML	08 22 13.1	
	1.1nm,0.2s						
MVOU				AML	AML	08 22 14.6	
	1.1nm,0.3s						
SILI	**Silifke-Mersin**	1.22	64	Pn	Pb	08 21 56.1	+0.3
SLFK	**Silifke-Mersin**	1.25	64	Pn	Pb	08 21 56.6	+0.3
MNVG	**Manavgat-Antal**	1.32	316	Pn	Pg	08 21 57.6	-0.6
KKBE	**Karaman, Kazim**	1.41	12	P	Pb	08 21 58.9	-0.2
KKBE				S	Sb	08 22 14.5	-2.6
KIZK	**Mersin**	1.43	63	P	Pn	08 21 58.9	+0.3
KIZK				S	Sn	08 22 17.7	+0.4
KIZK				*i* IAML		08 22 21.0	
	comp=N,717nm,0.4s						
KIZK				*i* IAML		08 22 22.0	
	comp=E,659nm,0.4s						
KIZK	**Mersin**	1.43	63	Pn	Pn	08 21 59.0	+0.5
KRMN	**Karaman**	1.44	23	Pn	Pb	08 21 59.6	-0.1
PARAL	**Paralimni**	1.48	125	AML	AML	08 22 28.3	
	0.4nm,0.6s						
PARAL				AML	AML	08 22 31.6	
	0.4nm,0.4s						
SEYD	**Seydisehir-KON**	1.66	340	Pn	Pn	08 22 02.6	+0.7
SEDI	**Konya, Seydise**	1.73	338	P	Pb	08 22 04.6	0.0
SEDI				S	Sn	08 22 25.1	+0.2
SEDI				*i* IAML		08 22 28.0	
	comp=E,284nm,0.5s						
SEDI				*i* IAML		08 22 30.0	
	comp=N,244nm,0.4s						
ANTB	**Antalya**	1.86	305	Pn	Pn	08 22 05.3	+0.8
MERS	**Mersin**	1.89	57	Pn	Pn	08 22 05.9	+1.0
KERG	**Konya-Eregli**	2.01	38	P	Pb	08 22 08.7	-0.6
KERG				S	Sn	08 22 33.3	+1.5
KERG				*i* IAML		08 22 35.0	
	comp=E,450nm,0.7s						
KERG				*i* IAML		08 22 36.0	
	comp=N,415nm,0.3s						
KONT	**Konya--Tatoy**	2.10	356	P	Pb	08 22 09.5	-1.3
KONT				*i* IAML		08 22 45.0	
	comp=N,90nm,0.8s						
KONT				*i* IAML		08 22 51.0	
	comp=E,119nm,0.5s						
KONT	**Konya--Tatoy**	2.10	356	Pn	Pn	08 22 09.2	+1.3
KORT	**Korkueli**	2.12	304	Pn	Pn	08 22 08.6	+0.4
YESY	**Yesilyurt**	2.15	26	Pn	Pn	08 22 09.7	+1.1
BCK	**Bucak**	2.26	316	Pn	Pn	08 22 11.2	+1.1
GULE	**Gulek**	2.29	50	P	Pb	08 22 13.6	-0.5
GULE				S	Sb	08 22 41.5	-1.0
GULE				*i* IAML		08 22 46.0	
	comp=E,570nm,0.5s						
GULE				*i* IAML		08 22 52.0	
	comp=N,506nm,0.4s						
ELL	**Elmali**	2.33	294	Pn	Pn	08 22 11.9	+0.9
LADK	**Ladik-KONYA**	2.36	356	Pn	Pn	08 22 12.8	+1.4
AKAS	**Kas**	2.43	280	Pn	Pn	08 22 13.6	+1.2
KARA	**Karaisali**	2.46	54	Pn	Pn	08 22 14.1	+1.4
SULT	**Sultanhani-AKS**	2.47	18	Pn	Pn	08 22 14.2	+1.2
ISP	**Isparta**	2.56	321	Pn	Pn	08 22 15.6	+1.3
ASUZ	**Hatay-Arsuz**	2.65	79	P	Pn	08 22 16.9	+1.6
CMRD	**Camardi-Nigde**	2.67	46	Pn	Pn	08 22 17.2	+1.5
KDHN	**Kadinhani**	2.70	353	P	Pn	08 22 16.1	0.0
KDHN				S	Sn	08 22 44.8	-3.9
KDHN				*i* IAML		08 23 04.0	
	comp=E,38nm,0.9s						
KDHN				*i* IAML		08 23 07.0	
	comp=N,31nm,0.7s						
CHBY	**Cihanbeyli**	2.75	5	Pn	Pn	08 22 18.1	+1.3
NIDE	**Nigde/Merkez-G**	2.79	39	P	Pn	08 22 18.6	+1.2
NIDE				S	Sn	08 22 49.7	-1.4
NIDE				*i* IAML		08 23 03.0	
	comp=N,149nm,0.5s						
NIDE				*i* IAML		08 23 08.0	
	comp=E,193nm,0.6s						
GULA	**Gulagac**	2.83	28	Pn	Pn	08 22 19.8	+1.8
CAME	**Cameli-Denizli**	2.85	294	Pn	Pn	08 22 19.3	+1.1
BASM	**Basmaki-Afyon**	2.89	317	Pn	Pn	08 22 20.1	+1.4
SDAG	**Sultandagi-AFY**	2.90	334	Pn	Pn	08 22 20.8	+1.9
TAHT	**Tahtakopru-Hat**	2.98	79	Pn	Pn	08 22 21.5	+1.6
KIZT	**Kizilcal**	3.08	350	Pn	Pn	08 22 22.6	+1.3
APMY	**Acipayam-Deniz**	3.08	303	Pn	Pn	08 22 22.7	+1.3
KOZT	**Kozan**	3.09	57	Pn	Pn	08 22 23.1	+1.7
SHUT	**Suhut-Afyon**	3.14	330	Pn	Pn	08 22 23.6	+1.4
BLVD	**Bolvadin-AFYON**	3.17	339	Pn	Pn	08 22 24.0	+1.4
DALY	**Dalyan (Mula)**	3.30	288	Pn	Pn	08 22 25.2	+0.9
TURN	**Turunc**	3.61	286	Pn	Pn	08 22 30.1	+1.6
ARG	**Arkhangelos**	3.61	277	Pn	Pn	08 22 30.2	+1.6
YER	**Yerkesik**	3.68	292	Pn	Pn	08 22 31.1	+1.6
KMRS	**Kahramanmaras**	3.86	63	Pn	Pn	08 22 34.1	+2.1
GAZ	**Gaziantep**	3.97	69	Pn	Pn	08 22 35.8	+2.2
BNN	**Bunyan**	3.98	40	Pn	Pn	08 22 35.8	+2.0
SARI	**SarD1z-Kayseri**	4.01	49	Pn	Pn	08 22 36.2	+2.1
NAZL	**Nazilli-Aydin**	4.02	303	Pn	Pn	08 22 35.8	+1.6
KULA	**Kula-Manisa**	4.10	312	Pn	Pn	08 22 36.6	+1.3
MMLI	**Mount Malkishu**	4.14	144	Pn	Pn	08 22 37.8	+1.9
AYDB	**Zeytinkoy-Aydi**	4.29	301	Pn	Pn	08 22 39.5	+1.5
BODT	**Bodrum**	4.40	288	Pn	Pn	08 22 40.8	+1.3
GORD	**Gordes-Manisa**	4.64	313	Pn	Pn	08 22 44.7	+1.9
ZKR	**Zakros**	5.23	264	Pn	Pn	08 22 53.2	+2.4
APE	**Apeiranthos**	5.80	284	Pn	Pn	08 23 01.6	+3.0

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*ASRS **17** 08:25:04.0±1.4, 54.°22N×86.°35E, h0^{km}, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 17 08:25:05.3±2.8**, 54.°20N×86.°43E, h0**^{km}**, mbtmp2.7**/2**, ML2.5**/2**, Error ellipse: s-maj=22.1km s-min=12.5km az=61.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	0.98	256	I	I	08 30 43.7	
	0.1nm,0.7s,baz=74,slow=346,SNR=33						
ZALV	**Zalesovo Beam**	0.98	256	Pg	Pg	08 25 22.6	-1.5
	1.2nm,0.3s,baz=71,slow=17,SNR=13						
ZALV				Lg	Lg	08 25 38.8	
	3.9nm,0.3s,baz=78,slow=30,SNR=24						
KURBB	**Kurchatov Arra**	6.01	237	Pn	Pn	08 26 35.5	+0.1
	0.1nm,0.3s,baz=52,slow=13,SNR=5.1						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	7.86	201	Pn	Pn	08 27 02.8	+1.9
	0.1nm,0.3s,baz=24,slow=16,SNR=4.6						
	0.1nm,0.3s						

RSNC 17 08:27:11.0±0.0**, 7°N**±1°**×7°3W**±°**, h150**^{km}±2^{km}**, M2.9, mb3.1, mB4.8, ML2.6, MLv3.2, Mw(mB)4.1, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	0.25	187	P	Pn	08 27 31.1	-0.6
BARC				S	Sn	08 27 46.7	-0.8
BRJC	**Barrancabermej**	0.60	283	P	Pn	08 27 32.7	-0.2
BRJC				S	Sn	08 27 49.8	+0.2
PAMC	**Pamplona, Colo**	0.67	42	P	Pn	08 27 34.1	+0.2
PAMC				S	Sn	08 27 51.1	-0.2
RUSC	**La Rusia**	0.94	176	P	Pn	08 27 35.1	-0.8
RUSC				S	Sn	08 27 53.8	-1.1
PTBC	**PUERTO BERRIO,**	1.33	257	P	Pn	08 27 37.6	-1.3
PTBC				S	Sn	08 27 58.3	-1.8
OCAC	**Ocana**	1.40	353	P	Pn	08 27 39.4	-0.3
OCAC				S	Sn	08 28 01.6	-0.1
SPBC	**San Pablo de B**	1.49	218	P	Pn	08 27 39.9	-0.7
SPBC				S	Sn	08 28 02.3	-1.0
CHIC	**Chingaza**	2.27	195	P	Pn	08 27 48.9	-0.9
CHIC				S	Sn	08 28 19.0	-0.6
ROSC	**El Rosal**	2.30	210	P	Pn	08 27 50.8	+0.7
ROSC				S	Sn	08 28 21.4	+1.2
UREC	**San Jos de Ur**	2.53	291	P	Pn	08 27 50.8	-1.7
UREC				S	Sn	08 28 22.1	-2.4
GUY2C	**Guyana, Caldas**	2.73	234	P	Pn	08 27 55.4	0.0
GUY2C				S	Sn	08 28 30.3	+0.7
VILC	**Villavicencio,**	2.76	191	P	Pn	08 27 54.7	-0.9
VILC				S	Sn	08 28 30.1	+0.1
CBOC	**Ciudad Bolivar**	3.00	251	P	Pn	08 27 58.6	0.0
CBOC				S	Sn	08 28 35.4	0.0
DBBC	**Dabeiba**	3.04	274	P	Pn	08 27 58.6	-0.4
DBBC				S	Sn	08 28 34.3	-1.8
ARGC	**Ariguani, Magd**	3.19	340	P	Pn	08 28 01.2	+0.4
ARGC				S	Sn	08 28 39.2	-0.2
SDV	**Santo Domingo**	3.22	51	P	Pn	08 28 00.7	-0.6
SDV				S	Sn	08 28 37.8	-2.5
PRAC	**Prado**	3.55	209	P	Pn	08 28 04.9	-0.7
PRAC				S	Sn	08 28 46.7	-1.2
APAC	**Apartado, Choc**	3.56	287	P	Pn	08 28 04.9	-0.7
APAC				S	Sn	08 28 47.7	-0.2
ORTC	**Ortega, Tolima**	3.58	216	P	Pn	08 28 05.2	-0.7
ORTC				S	Sn	08 28 48.9	+0.4
SJCC	**San Jacinto, C**	3.64	327	P	Pn	08 28 04.5	-2.2
SJCC				S	Sn	08 28 46.2	-3.7
URMC	**La Uribe, Meta**	3.77	199	P	Pn	08 28 08.1	-0.3
URMC				S	Sn	08 28 51.9	-1.1
YOTC	**Yotoco, Valle**	4.26	228	P	Pn	08 28 13.7	-1.2
YOTC				S	Sn	08 29 05.3	+0.8
PTAC	**Punta Ardita,**	4.63	274	P	Pn	08 28 18.1	-1.5
GARC	**Garzon, Huila**	5.18	207	P	Pn	08 28 25.3	-1.8
POPC	**Popayan, Colom**	5.53	220	P	Pn	08 28 33.8	+2.1
	2.7nm,1.7s						
POPC				S	Sn	08 29 34.2	-0.6
	2.7nm,1.7s						
FLOC	**Florencia**	5.79	206	P	Pn	08 28 33.6	-1.4
	7.1nm,1.3s						
FLOC				S	Sn	08 29 40.4	-0.2
	7.1nm,1.3s						
BBAC	**Balboa, Cauca**	6.29	221	P	Pn	08 28 40.8	-1.1
BBAC				S	Sn	08 29 52.7	-0.2

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*AFAD **17** 08:31:37.7, 36.°46N×27.°17E, h7^{km}±3^{km}, ML2.6*
*ISK **17** 08:31:40.0, 36.°51N×27.°12E, h5^{km}, ML2.6/21*
*THE **17** 08:31:40.5, 37°N±2°×2°7E±°, h3^{km}±2^{km}, M3.0/8, MLh3.0/8*
*ATH **17** 08:31:40.2, 36.°55N×27.°06E, h12^{km}±2^{km}, ML3.0/4, Manual Solution by A.Moschou First location: 2019/12/17 08:32:58, This location: 2019/12/17 08:46:16 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 17 08:31:40.2±0.9**, 36.°52N**±0.°02**×27.°09E**±0.°02**, h10**^{km}±6^{km}**, n52, σ0.^{s}84**/76**, 2D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NISR	**Nisiros**	0.10	20	P	Pg	08 31 43.0	+0.2
NISR				S	Sg	08 31 44.8	+0.1
KLNA	**Kalymnos**	0.45	348	P	Pg	08 31 48.2	-0.7
KLNA				S	Sg	08 31 54.1	-0.7
DAT	**Datca**	0.45	62	P	Pb	08 31 50.2	0.0
DAT				S	Sb	08 31 57.2	+0.2
DAT	**Datca**	0.45	62	Pg	Pb	08 31 50.0	-0.2
DAT				Sg	Sb	08 31 56.6	-0.3
BODT	**Bodrum**	0.57	18	P	Pb	08 31 52.2	-0.1
BODT				S	Sb	08 32 00.9	+0.5
BODT	**Bodrum**	0.57	18	Pg	Pb	08 31 52.2	-0.1
BODT				Sg	Sb	08 32 01.2	+0.8
ASTA	**Astypalaia**	0.59	273	P	Pg	08 31 51.3	-0.3
ASTA				S	Sg	08 31 59.0	-0.5
YKAV	**Yalikavak-Bodr**	0.62	14	Pg	Pb	08 31 53.1	0.0
ARG	**Arkhangelos**	0.89	110	P	Pb	08 31 58.1	+0.4
ARG				S	Sn	08 32 12.2	+0.5
ARG	**Arkhangelos**	0.89	110	Pg	Pb	08 31 57.8	+0.1
ARG				Sg	Sn	08 32 10.8	-0.9
ARG	**Arkhangelos**	0.89	110	P	Pb	08 31 57.9	+0.2
ARG				S	Sn	08 32 11.0	-0.7
DDIM	**Aydin, Didim**	0.94	7	P	Pg	08 31 57.2	-1.1
DDIM				S	Sb	08 32 11.2	0.0
DDIM				*i* IAML		08 32 18.0	
	comp=N,217nm,0.6s						
DDIM				*i* IAML		08 32 24.0	
	comp=E,216nm,1.0s						
MLSB	**Milas**	0.95	35	Pg	Pb	08 31 59.3	+0.6
TURN	**Turunc**	0.96	74	Pg	Pb	08 31 59.2	+0.3
TURN				Sg	Sn	08 32 13.4	-0.1
KSS1	**Kassos Island**	1.11	187	P	Pn	08 32 02.5	+0.8
KSS1				S	Sb	08 32 16.4	+0.6
YER	**Yerkesik**	1.14	57	P	Pn	08 32 03.5	+1.3
YER	**Yerkesik**	1.14	57	Pn	Pn	08 32 02.7	+0.5
YER				Sn	Sn	08 32 19.5	+1.6
GCAM	**G?zelcaml?**	1.18	6	P	Pb	08 32 03.0	+0.3
GCAM				S	Sg	08 32 16.9	-1.4
GCAM	**G?zelcaml?**	1.18	6	Pn	Pn	08 32 03.3	+0.6
DALY	**Dalyan (Mula)**	1.29	76	Pn	Pg	08 32 05.5	+0.5
THR8	**Santorini-Mono**	1.30	265	P	Pn	08 32 03.9	-0.4
THERA	**Ancient Thera,**	1.31	264	P	Pn	08 32 03.7	-0.8
THERA				S	Sb	08 32 22.5	+0.9
THERA	**Ancient Thera,**	1.31	264	P	Pn	08 32 03.1	-1.4
THERA				S	Sb	08 32 20.7	-1.0
APE	**Apeiranthos**	1.36	294	P	Pn	08 32 05.0	-0.2
APE				S	Sg	08 32 25.1	+1.0
APE	**Apeiranthos**	1.36	294	⇓P	Pb	08 32 06.3	+0.5
APE				⇓S	Sg	08 32 26.4	+2.3
APE	**Apeiranthos**	1.36	294	P	Pn	08 32 04.7	-0.6
APE				S	Sb	08 32 22.9	-0.4
THR3	**Thira Island,**	1.36	266	P	Pn	08 32 04.2	-1.0
SNT5	**Nea Kammeni, S**	1.37	266	P	Pn	08 32 04.1	-1.2
SNT5	**Nea Kammeni, S**	1.37	266	P	Pn	08 32 04.0	-1.2
THR9	**Santorini-Faro**	1.40	264	P	Pn	08 32 06.1	+0.3
THR5	**Thira Island,**	1.41	266	P	Pn	08 32 05.6	-0.2
THR5	**Thira Island,**	1.41	266	P	Pn	08 32 06.1	+0.3
DGB	**zmir**	1.54	354	P	Pn	08 32 06.2	-1.4
DGB				S	Sg	08 32 30.8	+1.2
DGB				*i* IAML		08 32 34.0	
	comp=E,47nm,0.6s						
GMLD	**Gumuldur**	1.56	355	Pn	Pg	08 32 10.4	+0.3
AYDB	**Zeytinkoy-Aydi**	1.56	24	Pn	Pg	08 32 10.1	0.0
ZKR	**Zakros**	1.57	207	P	Pn	08 32 08.6	+0.6
ZKR	**Zakros**	1.57	207	P	Pn	08 32 08.3	+0.3
NAZL	**Nazilli-Aydin**	1.73	33	Pn	Pb	08 32 12.2	+0.1
IZMR	**zmir-demi**	1.75	23	P	Pb	08 32 12.0	-0.4
IZMR				S	Sg	08 32 35.8	-0.8
IZMR				*i* IAML		08 32 44.0	
	comp=E,28nm,0.6s						
ZEYE	**Izmir, Urla-Ze**	1.78	345	P	Pn	08 32 10.3	-0.6
ZEYE				S	Sg	08 32 39.0	+1.7
CAME	**Cameli-Denizli**	1.83	76	Pn	Pb	08 32 13.6	-0.2
BLCB	**Balcova**	1.86	359	Pn	Pb	08 32 14.6	+0.4
URLA	**Izmir**	1.88	348	P	Pn	08 32 12.8	+0.5
URLA				S	Sg	08 32 41.5	+0.9
URLA				*i* IAML		08 32 47.0	
	comp=N,100nm,0.9s						
URLA				*i* IAML		08 32 52.0	
	comp=E,72nm,0.7s						
URLA	**Izmir**	1.88	348	Pn	Pb	08 32 14.9	+0.4
ODEM	**Odemis-Izmir**	1.92	24	Pn	Pb	08 32 15.3	0.0
APMY	**Acipayam-Deniz**	2.01	61	Pn	Pb	08 32 16.1	-0.8
CHOS	**Chios island**	2.04	337	P	Pn	08 32 14.2	-0.3
AKAS	**Kas**	2.05	97	Pn	Pb	08 32 16.5	-1.1
IDI	**Anoyia**	2.17	236	P	Pn	08 32 15.2	-1.1
ELL	**Elmali**	2.28	83	Pn	Pb	08 32 20.1	-1.4
KULA	**Kula-Manisa**	2.35	32	Pn	Pb	08 32 21.2	-1.4
KORT	**Korkueli**	2.66	79	Pn	Pb	08 32 25.8	-2.2

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*NNC **17** 08:39:30.0±3.8, 40.°22N×72.°08E, h0^{km}, mb2.6, mpv2.7, Error ellipse: s-maj=28.6km s-min=13.4km az=0.0*
*SOME **17** 08:39:30.6, 40.°18N×72.°05E, h15^{km}*
*KRNET **17** 08:39:32.9±0.1, 40.°22N×71.°96E, h16^{km}, mb2.3*

ISC 17 08:39:32.7±1.1**, 40.°22N**±0.°03**×71.°98E**±0.°03**, h11**^{km}±13^{km}**, n18, σ1.^{s}28**/31**, 16C-10D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	**Osh**	0.69	64	⇑*e*P	Pg	08 39 46.0	-0.1
OHH				⇑*e*S	Sg	08 39 55.8	+0.7
DRK	**Karamyk**	0.75	190	⇓*i*P	Pg	08 39 47.3	0.0
DRK				⇓*i*S	Sg	08 39 57.6	+0.4
SFK	**Sufi-Kurgan**	1.19	100	⇓*e*P	Pb	08 39 55.8	+0.4
SFK				⇓*e*S	Sg	08 40 12.1	+1.0
ARSB	**Arslanbob**	1.34	34	⇑*e*P	Pb	08 39 58.3	+0.3
ARSB				⇑*e*S	Sg	08 40 16.4	+0.5
SALK	**Salom-Alik**	1.55	64	⇑*e*P	Pb	08 40 01.6	0.0
SALK				⇑*e*S	Sg	08 40 23.0	+0.3
ARK	**Arkit**	1.57	360	⇑*e*P	Pb	08 40 02.3	+0.3
ARK				⇑*e*S	Sg	08 40 23.5	+0.1
GAR	**Garm**	1.77	227	⇑*e*P	Pb	08 40 05.3	0.0
GAR				⇑*e*S	Sg	08 40 28.6	-1.0
MNAS	**Manas**	2.30	10	⇑*i*P	Pb	08 40 13.4	-0.9
MNAS				⇑*e*S	Sb	08 40 42.8	0.0
ARLS	**Aral**	2.42	47	⇓*e*P	Pb	08 40 15.2	-1.1
ARLS				⇓*i*S	Sb	08 40 45.7	-0.5
IUG	**Iuzhnay**	2.42	323	Pg	Pb	08 40 15.8	-0.6
	6.7nm,0.2s						
IUG				Lg	Lg	08 40 47.9	
	9.1nm,0.4s						
MRKS	**Merke**	2.69	20	Pg	Pb	08 40 20.2	-0.8
	3.4nm,0.4s						
MRKS				Lg	Lg	08 40 55.7	
	6.9nm,0.3s						
MRKS	**Merke**	2.69	20	*e*P	Pb	08 40 20.2	-0.8
	3.4nm,0.4s						
MRKS				*e*S	Sb	08 40 55.7	+1.7
	6.9nm,0.3s						
UCH	**Uchtor**	2.77	43	⇑*e*P	Pb	08 40 20.4	-2.1
UCH				⇑*e*S	Sb	08 40 54.7	-2.0
JNKS	**Jany-Kuch**	2.92	72	⇓*i*P	Pb	08 40 22.4	-2.6
JNKS				⇓*e*S	Sb	08 40 58.1	-2.7
AAK	**Ala-Archa**	3.07	37	⇑Pg	Pn	08 40 23.3	+2.0
	0.3nm,0.6s						
AAK				⇓Lg	Lg	08 41 07.3	
	2.4nm,1.0s						
KK31	**Karatay Array**	3.08	340	⇓Pg	Pb	08 40 25.9	-1.7
	0.2nm,0.3s,baz=162,slow=13,SNR=5.4						
KK31				⇑Lg	Lg	08 41 07.0	
	1.2nm,0.5s,baz=166,slow=30,SNR=6.4						
BRLS	**Borolday**	3.23	331	Pg	Pb	08 40 28.5	-1.6
	0.6nm,0.2s						
BRLS				Lg	Lg	08 41 09.8	
	1.8nm,0.3s						
BRLS	**Borolday**	3.23	331	*e*P	Pb	08 40 28.5	-1.6
	0.6nm,0.2s						
BRLS				*e*S	Sb	08 41 09.8	+0.3
	1.8nm,0.3s						

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*SNET **17** 08:52:26.7±1.1, 13.°25N×89.°53W, h60^{km}, ML2.2*
*GCG **17** 08:52:26.0±0.4, 13.°19N×89.°60W, h63^{km}±6^{km}, MD3.5*

ISC 17 08:52:25.9±3.3**, 13.°1N**±0.°2**×89.°6W**±0.°1**, h42**^{km}±46^{km}**, n12, σ0.^{s}51**/18**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	**Jayaque - finc**	0.59	12	*e*P	Pn	08 52 37.7	-0.3
JAYA				*e*S	Sn	08 52 45.9	-0.8
JAYA	**Jayaque - finc**	0.59	12	*i* P	Pn	08 52 37.9	-0.1
JAYA				*i* S	Sn	08 52 47.5	+0.9
CEVE	**Cerro Verde**	0.75	357	*e*P	Pn	08 52 39.6	-0.6
CEVE				*e*S	Sn	08 52 51.5	+0.9
SBLS	**San Blas**	0.76	357	*e*P	Pn	08 52 40.4	0.0
SBLS				*e*P		08 52 40.7	
NUBE	**Las Nubes**	0.84	347	*e*P	Pn	08 52 41.4	-0.1
NUBE				*e*S	Sn	08 52 52.9	+0.1
NUBE	**Las Nubes**	0.84	347	*i* P	Pn	08 52 41.4	-0.1
NUBE				*i* S	Sn	08 52 53.1	+0.3
PAVA	**Las Pavas**	0.89	45	*e*P	Pn	08 52 41.7	-0.4
PAVA				*e*S	Sn	08 52 54.3	+0.4
SCLA	**Alcaldia de Sa**	1.03	53	*e*P	Pn	08 52 43.7	-0.2
PACA	**Pacayal**	1.28	72	*e*P	Pn	08 52 47.3	-0.2
MTO3	**Montecristo**	1.33	9	*e*P	Pn	08 52 47.8	-0.4
MTO3	**Montecristo**	1.33	9	*i* P	Pn	08 52 47.9	-0.4
LCND	**La Caada**	1.66	82	*e*P	Pn	08 52 52.5	0.0

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*IDC **17** 08:53:43.1±5.1, 36.°20N×70.°26E, h182^{km}±40^{km}, mb3.4/8, mbtmp3.9/12, Error ellipse: s-maj=42.4km s-min=21.8km az=51.0*
*NEIC **17** 08:53:46.4±2.3, 36.°51N±0.°06×70.°28E±0.°09, h201^{km}±8^{km}, mb4.1/5, Error ellipse: s-maj=11.0km s-min=7.2km az=120.0*
*NNC **17** 08:53:47.3±13.0, 36.°76N×69.°69E, h80^{km}±290^{km}, mb3.8, mpv3.6, Error ellipse: s-maj=98.4km s-min=89.1km az=1.0*

ISC 17 08:53:45.8±0.7**, 36.°47N**±0.°06**×70.°44E**±0.°07**, h204**^{km}**, n42, σ2.^{s}05**/49**, mb3.6**/7**, 3C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANEM	**Manem**	1.46	42		Pn	08 54 21.6	+1.8
SHAA	**Shahritus**	2.15	301		Pn	08 54 25.7	-0.5
KBL	**Kabul**	2.24	211		Pn	08 54 27.4	+0.1
CHGR	**Chuyangaron**	2.41	335		Pn	08 54 28.3	-0.6
GAR	**Garm**	2.53	358		Pn	08 54 30.3	0.0
DRK	**Karamyk**	3.19	19		Pn	08 54 38.9	+0.7
NIL	**Nilore**	3.64	140		Pn	08 54 45.3	+2.0
ALCI	**Alchi Leh**	5.95	110	*e*P	Pn	08 55 13.1	+0.2
ALCI				*e*S	S	08 56 18.8	-2.6
ALCI				IAML		08 56 22.2	
	comp=E,62nm,0.6s						
ALCI				IAML		08 56 22.9	
	comp=N,61nm,0.3s						
DHRM	**DHARAMSHALA**	6.42	129	*e*P	Pn	08 55 19.1	+0.4
DHRM				*e*S	S	08 56 29.6	-2.5
DHRM				IAML		08 56 31.5	
	comp=E,338nm,0.4s						
DHRM				IAML		08 56 34.8	
	comp=N,185nm,0.5s						
KK31	**Karatay Array**	6.63	0		Pn	08 55 20.5	-0.6
KK31	**Karatay Array**	6.63	0	⇓P	Pn	08 55 20.4	-0.7
	comp=N,1.9nm,0.2s,baz=187,slow=16,SNR=126						
KK31				S	S	08 56 31.4	-5.2
	comp=N,14nm,0.7s,baz=197,slow=25,SNR=11						
KKAR	**Karatay Array**	6.63	0		Pn	08 55 20.6	-0.4
AAK	**Ala-Archa**	6.91	26	P	Pn	08 55 25.3	+0.4
	comp=N,5.0nm,0.2s,baz=176,slow=2.3,SNR=20						
AAK				S	S	08 56 40.3	-3.2
	comp=N,14nm,0.6s,baz=9.3,slow=21,SNR=17						
AAK	**Ala-Archa**	6.91	26		Pn	08 55 25.1	+0.2
AAK	**Ala-Archa**	6.91	26	⇑P	Pn	08 55 25.0	+0.1
	comp=N,2.0nm,0.6s						
AAK				⇑S	S	08 56 41.9	-1.6
	comp=N,16nm,0.8s						
BOOM	**Boomskoye usch**	7.36	34	Pn	Pn	08 55 28.6	-2.2
SMLA	**Simla**	7.72	132	*e*P	Pn	08 55 35.4	-0.1
SMLA				*e*S	S	08 56 59.3	-3.4
SMLA				IAML		08 57 03.6	
	comp=E,92nm,0.2s						
SMLA				IAML		08 57 03.7	
	comp=N,97nm,0.5s						
HNLY	**HANLEY**	7.94	115	*e*P	Pn	08 55 40.1	+1.4
HNLY				*e*S	S	08 57 04.0	-4.6
HNLY				IAML		08 57 09.4	
	comp=E,95nm,0.8s						
HNLY				IAML		08 57 09.8	
	comp=N,96nm,0.5s						
KLP	**Kalpa**	8.14	125	*e*P	Pn	08 55 41.8	+0.6
KLP				*e*S	S	08 57 08.7	-4.4
KLP				IAML		08 57 12.9	
	comp=E,97nm,0.2s						
KLP				IAML		08 57 13.8	
	comp=N,96nm,0.7s						
MAKZ	**Makanchi**	13.44	36		Pn	08 56 49.7	+1.2
MKAR	**Makanchi Array**	13.58	37	P	P	08 56 51.9	-0.7
	comp=N,3.1nm,0.8s,baz=216,slow=14,SNR=19						
AB31	**Akbulak array**	14.90	332	P	Pn	08 57 05.5	-0.9
AB31	**Akbulak array**	14.90	332	⇑P	P	08 57 07.0	0.0
	comp=N,2.2nm,0.5s,baz=145,slow=12,SNR=31						
AB31				⇓S	S	08 59 46.3	-5.1
	comp=N,1.4nm,0.7s,baz=343,slow=20,SNR=4.3						
ABKAR	**Akbulak array**	14.90	332		Pn	08 57 05.2	-1.1
KURBB	**Kurchatov Arra**	15.30	20	P	P	08 57 14.4	+2.9
	comp=N,0.5nm,0.6s,baz=210,slow=11,SNR=4.3						
KURK	**Kurchatov**	15.41	20	P	P	08 57 14.4	+1.7
KURK	**Kurchatov**	15.41	20	IAmb	IAmb	08 57 50.3	
	comp=Z,3.6nm,0.4s						
BVAR	**Borovoye Array**	16.55	360	P	Pn	08 57 29.4	+3.1
	comp=Z,1.7nm,0.5s,baz=174,slow=8.8,SNR=4.6						
AKTO	**Aktyubinsk**	16.59	331	P	Pn	08 57 27.0	+0.3
	comp=Z,16nm,0.8s,baz=150,slow=9.8,SNR=36						
AKTO	**Aktyubinsk**	16.59	331	⇓P	Pn	08 57 26.3	-0.4
	comp=Z,11nm,0.8s						
AKTO				⇓S	S	09 00 28.3	-0.3
	comp=Z,3.2nm,1.1s						
ZAA0	**Zalesovo Array**	20.13	25		P	08 58 05.1	+1.1
ZAA0				IAmb	IAmb	08 58 08.6	
	comp=Z,2.7nm,0.5s						
ZALV	**Zalesovo Beam**	20.13	25	P	P	08 58 05.4	+1.4
	comp=Z,2.5nm,0.4s,baz=220,slow=10,SNR=11						
	comp=Z,2.5nm,0.4s						
ZALV	**Zalesovo Beam**	20.13	25		P	08 58 04.4	+0.4
SONM	**Songino Array**	28.72	55	P	P	08 59 26.7	+2.7
	comp=Z,0.9nm,0.8s,baz=261,slow=10,SNR=6.2						
	comp=Z,0.9nm,0.8s						
NRIK	**Noril'sk**	34.24	11	P	P	09 00 14.1	+2.3
	comp=Z,1.8nm,0.5s,baz=197,slow=4.3,SNR=4.5						
	comp=Z,1.8nm,0.5s						
NRIK	**Noril'sk**	34.24	11	IAmb	IAmb	09 00 15.1	

	comp=Z,6.0nm,1.2s						
ARCES	ARCESS Array B	41.00	338	P	P	09 01 09.7	+1.3
	comp=Z,1.0nm,0.7s,baz=117,slow=7.6,SNR=4.6						
	comp=Z,1.0nm,0.7s						
ARCES	ARCESS Array B	41.00	338	IAmb	IAmb	09 01 18.3	
	comp=Z,15nm,1.3s						
ILAR	Eielson Array	74.93	16	P	P	09 05 04.2	+0.3
	comp=Z,0.7nm,0.9s,baz=329,slow=5.4,SNR=5.6						
	comp=Z,0.7nm,0.9s						
YKA	Yellowknife Ar	81.30	2	P	P	09 05 39.8	+1.0
	comp=Z,0.3nm,0.7s,baz=345,slow=5.2,SNR=5.4						
	comp=Z,0.3nm,0.7s						
WRA	Warramunga Arr	82.36	122	P	P	09 05 44.8	-0.3
	comp=Z,0.9nm,0.8s,baz=321,slow=4.7,SNR=5.2						
	comp=Z,0.9nm,0.8s						
ASAR	Alice Springs	84.61	125	P	P	09 05 56.0	-0.5
	comp=Z,0.9nm,0.7s,baz=309,slow=4.8,SNR=18						
	comp=Z,0.9nm,0.7s						

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*IDC **17** 09:19:49.3±2.5, 7°.62S×146°.45E, h228^{km}±40^{km}, mb3.2/2, mbtmp3.3/4, Error ellipse: s-maj=81.5km s-min=25.4km az=126.0*

ISC 17 09:19:47.5±1.2**, 7°.4S**±0°.1×**146°.2E**±0°.2**, h200**^{km}**, n5, σ0^{s}.96**/6**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	2.23	156	P	Pn	09 20 28.4	0.0
	9.7nm,0.2s,baz=356,slow=4.0,SNR=6.5						
PMG				S	Sn	09 21 00.9	+0.5
	26nm,0.5s,baz=54,slow=23,SNR=10						
WRA	Warramunga Arr	17.01	222	P	P	09 23 33.2	+0.6
	0.3nm,0.7s,baz=48,slow=12,SNR=1.8						
ASAR	Alice Springs	20.07	215	P	P	09 24 04.5	-1.3
	0.1nm,0.4s,baz=50,slow=8.9,SNR=6.3						
MKAR	Makanchi Array	78.06	321	P	P	09 31 24.8	+0.6
	0.3nm,0.6s,baz=107,slow=7.7,SNR=5.0						
	0.3nm,0.6s						
ILAR	Eielson Array	87.03	23	P	P	09 32 09.5	-0.5
	0.9nm,1.0s,baz=240,slow=5.8,SNR=4.3						
	0.9nm,1.0s						

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*ASRS **17** 09:35:08.0±0.9, 53°.66N×87°.92E, h0^{km}, M2.9, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*NNC **17** 09:35:11.0±3.7, 53°.55N×88°.10E, h13^{km}±26^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=32.1km s-min=14.3km az=68.0, Suspected Mining explosion.*

*IDC **17** 09:35:11.1±2.8, 53°.58N×87°.89E, h0^{km}, mbtmp3.1/2, ML2.7/2, Error ellipse: s-maj=23.3km s-min=15.6km az=61.0*

ISC 17 09:35:11.5±3.6**, 53°.6N**±0°.1×**87°.8E**±0°.2**, h0**^{km}**, n9, σ1^{s}.12**/14**, 5C-8D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.83	283	I	I	09 47 10.0	
	baz=96,slow=343,SNR=2.3						
ZAA0	Zalesovo Array	1.83	283	⇑Pn	Pn	09 35 43.9	-0.2
	0.4nm,0.5s						
ZAA0				⇓Sn	Sg	09 36 10.2	0.0
	1.7nm,0.3s						
ZALV	Zalesovo Beam	1.83	283	Pn	Pn	09 35 44.1	0.0
	1.9nm,0.3s,baz=96,slow=15,SNR=16						
ZALV				Lg	Lg	09 36 10.8	
	9.9nm,0.3s,baz=101,slow=28,SNR=18						
KURK	Kurchatov	6.35	247	⇑Pn	Pn	09 36 47.9	+1.7
	0.2nm,0.7s						
KURK				⇓Lg	Lg	09 38 35.6	
	0.7nm,0.7s						
KURBB	Kurchatov Arra	6.45	247	Pn	Pn	09 36 48.0	+0.5
	0.1nm,0.3s,baz=61,slow=14,SNR=4.4						
KURBB				Sn	Sn	09 38 01.1	-0.6
	0.1nm,0.3s,baz=46,slow=27,SNR=2.8						
KURBB				Lg	Lg	09 38 35.6	
	0.1nm,0.3s,baz=60,slow=31,SNR=2.3						
	1.1nm,0.3s						
KURBB	Kurchatov Arra	6.45	247	⇓Pn	Pn	09 36 48.2	+0.6
	0.9nm,0.5s						
KURBB				⇑Sn	Sn	09 38 00.9	-0.8
	2.0nm,0.6s						
KURBB				⇓Lg	Lg	09 38 39.5	
	3.5nm,0.9s						
MK31	Makanchi Array	7.66	210	⇑Pn	Pn	09 37 04.1	-0.1
	0.3nm,0.5s,baz=37,slow=17,SNR=8.5						
MK31				⇓Sn	Sn	09 38 32.7	+1.1
	0.3nm,0.5s,baz=155,slow=62,SNR=5.6						
MK31				⇑Lg	Lg	09 39 18.9	
	0.5nm,0.6s,baz=28,slow=28						
MKAR	Makanchi Array	7.66	210	Pn	Pn	09 37 05.8	+1.7
	0.2nm,0.3s,baz=28,slow=13,SNR=8.5						
MKAR				Sn	Sn	09 38 30.2	-1.3
	0.2nm,0.3s,baz=29,slow=25,SNR=5.9						
	0.3nm,0.4s						
MAKZ	Makanchi	7.74	211	⇓Pn	Pn	09 37 03.5	-1.8
	0.5nm,0.7s						
MAKZ				⇓Sn	Sn	09 38 33.5	0.0
	0.3nm,0.5s						
MAKZ				⇓Lg	Lg	09 39 18.0	
	1.3nm,0.8s						

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*IDC **17** 10:08:48.5±1.0, 6°.78N×125°.41E, h0^{km}, mb3.8/5, mbtmp3.8/5, MS2.9/7, Error ellipse: s-maj=27.0km s-min=6.9km az=114.0*

*NEIC **17** 10:08:50.3±1.5, 6°.86N±0°.08×125°.5E±0°.2, h10^{km}±1^{km}, mb4.1/12, Error ellipse: s-maj=31.6km s-min=4.0km az=114.0*

ISC 17 10:08:49.7±0.7**, 6°.83N**±0°.09×**125°.5E**±0°.2**, h10**^{km}**, n28, σ0^{s}.74**/20**, mb4.0**/11**, MS2.7**/5**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.27	26	Pg	Pg	10 08 54.6	-0.6
	8µm,0.3s,baz=270,slow=3.5,SNR=439						
DAV				Lg	Lg	10 08 60.0	
	7µm,0.3s,baz=163,slow=19,SNR=16						
TOLI2	Tolitoli	7.35	220	Pn	Pn	10 10 36.3	-0.8
KAPI	Kappang	13.07	206	LR	LR	10 17 22.9	
	comp=Z,61nm,20.4s,baz=38,slow=40						
BATI	Baumata	17.02	186	LR	LR	10 19 08.3	
	comp=Z,66nm,21.6s,baz=352,slow=36						
JOW	Kunigami	20.07	7	LR	LR	10 20 27.7	
	comp=Z,33nm,21.9s,baz=296,slow=35						
KNRA	Kununurra	22.60	172	P	P	10 13 51.6	+1.0
FITZ	Fitzroy Crossi	24.77	180	P	P	10 14 12.2	+0.4
JCJ	Chichijima	25.67	36	LR	LR	10 25 04.7	
	comp=Z,14nm,19.0s,baz=191,slow=38						
JNU	Nakatsue	26.64	10	LR	LR	10 26 56.4	
	comp=Z,36nm,18.8s,baz=50,slow=41						
WB0	Warramunga Arr	27.85	162	P	P	10 14 39.1	-0.6
WB0				IAmb	IAmb	10 14 53.2	
	comp=Z,7.1nm,1.4s						
WRAB	Tennant Creek	28.00	162	P	P	10 14 41.3	+0.4
WRAB				IAmb	IAmb	10 14 44.6	
	comp=Z,2.9nm,1.1s						
WRA	Warramunga Arr	28.00	162	P	P	10 14 41.0	0.0
	comp=Z,1.2nm,0.6s,baz=330,slow=11,SNR=10						
	comp=Z,1.2nm,0.6s						
WRA	Warramunga Arr	28.00	162	IAmb	IAmb	10 14 44.7	
	comp=Z,0.2nm,1.0s						
WR8	Warramunga Arr	28.06	162	P	P	10 14 41.6	+0.1
WR8				IAmb	IAmb	10 15 13.8	
	comp=Z,2.9nm,0.9s						
CMAR	Chiang Mai Arr	28.29	297	LR	LR	10 25 57.1	
	comp=Z,18nm,20.3s,baz=95,slow=36						
JHJ	Hachijo jima 2	29.35	25	LR	LR	10 26 57.6	
	comp=Z,30nm,18.4s,baz=290,slow=37						
AS31	Alice Springs	31.41	165	P	P	10 15 10.1	-1.1
ASAR	Alice Springs	31.41	165	P	P	10 15 11.6	+0.4
	comp=Z,1.4nm,0.5s,baz=344,slow=7.1,SNR=24						
	comp=Z,1.4nm,0.5s						
ASAR	Alice Springs	31.41	165	P	P	10 15 10.4	-0.8
BBOO	Buckleboo	40.69	166	P	P	10 16 30.9	+0.4
STKA	Stephens Creek	41.45	159	P	P	10 16 36.8	-0.1
	comp=Z,0.8nm,0.3s,baz=332,slow=11,SNR=6.1						
	comp=Z,0.8nm,0.3s						
MKAR	Makanchi Array	54.31	325	P	P	10 18 18.1	+1.7
	comp=Z,0.3nm,0.6s,baz=124,slow=8.9,SNR=4.0						
	comp=Z,0.3nm,0.6s						
KURBB	Kurchatov Arra	58.47	327	P	P	10 18 46.0	+0.1
	comp=Z,0.5nm,0.7s,baz=118,slow=5.6,SNR=2.0						
	comp=Z,0.5nm,0.7s						
KURK	Kurchatov	58.47	327	P	P	10 18 46.4	+0.6
KURK				IAmb	IAmb	10 19 08.8	
	comp=Z,1.4nm,0.8s						
KK31	Karatay Array	60.13	316	P	P	10 18 56.9	-0.6
KK31				IAmb	IAmb	10 19 11.1	
	comp=Z,2.1nm,1.1s						
KKAR	Karatay Array	60.13	316	P	P	10 18 57.3	-0.2
D19K	Kuna River	78.71	21	P	P	10 20 51.6	-0.4
I28M	Miner Creek	85.76	25	P	P	10 21 29.8	+0.8
I28M				IAmb	IAmb	10 21 49.5	
	comp=Z,2.5nm,1.1s						

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*UPP **17** 10:11:29.5±0.1, 58°.99N×18°.21E, h0^{km}, ML2.5, Suspected explosion*

*HEL **17** 10:11:30.1±0.2, 58°.98N×18°.14E, h0^{km}, ML1.9, Explosion*

*DNK **17** 10:11:30.6±3.0, 58°.99N×18°.19E, h0^{km}, ML2.9, Explosion*

*IDC **17** 10:11:33.4±1.9, 59°.29N×18°.01E, h0^{km}, mbtmp2.8/4, ML1.8/4, Error ellipse: s-maj=26.3km s-min=7.1km az=1.0*

ISC 17 10:11:29.5±0.7**, 58°.99N**±0°.02×**18°.23E**±0°.02**, h0**^{km}**, n64, σ1^{s}.27**/89**, Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRTU	Norrtaelje	0.72	16	P	Pg	10 11 43.0	-0.2
	baz=206						
NRTU				S	Sg	10 11 52.4	-0.1
NRTU	Norrtaelje	0.72	16	P	Pg	10 11 43.0	-0.2
	baz=206						
NRTU				S	Sg	10 11 52.4	-0.1
NRTU	Norrtaelje	0.72	16	eP	Pg	10 11 43.0	-0.2
NRTU				eS	Sg	10 11 52.1	-0.5
UPP	Uppsala	0.92	340	P	Pg	10 11 46.8	-0.4
UPP				S	Sg	10 11 58.9	-0.3
UPP	Uppsala	0.92	340	P	Pg	10 11 46.8	-0.4
UPP				S	Sg	10 11 58.9	-0.3
VIKU	Vikbolandet	0.94	239	P	Pg	10 11 47.0	-0.5
VIKU				S	Sg	10 11 59.5	-0.1
VIKU	Vikbolandet	0.94	239	P	Pg	10 11 47.0	-0.5
VIKU				S	Sg	10 11 59.5	-0.1
ESKU	Eskilstuna	0.98	285	P	Pg	10 11 47.4	-0.9
ESKU	Eskilstuna	0.98	285	P	Pg	10 11 47.4	-0.9
FIBU	Brunna	1.02	334	P	Pg	10 11 48.4	-0.6
FIBU	Brunna	1.02	334	P	Pg	10 11 48.4	-0.6
BACU	Backbrunna	1.04	327	P	Pg	10 11 48.7	-0.7
BACU	Backbrunna	1.04	327	P	Pg	10 11 48.7	-0.7
GOTU	Gotland	1.32	172	P	Pg	10 11 53.7	-1.1
GOTU	Gotland	1.32	172	P	Pg	10 11 53.7	-1.1
GOTU	Gotland	1.32	172	eP	Pg	10 11 53.7	-1.1
GOTU				eS	Sg	10 12 11.5	-0.4
GRAU	Graesoe	1.36	6	P	Pg	10 11 54.7	-0.8
GRAU	Graesoe	1.36	6	P	Pg	10 11 54.7	-0.8
OSTU	Oestervaala	1.36	336	P	Pg	10 11 54.6	-1.0
OSTU	Oestervaala	1.36	336	P	Pg	10 11 54.6	-1.0
FORU	Forsmark	1.40	359	P	Pn	10 11 55.5	-0.8
FORU	Forsmark	1.40	359	P	Pn	10 11 55.5	-0.8
AAL	Aland	1.49	36	P	Pn	10 11 57.1	-0.4
AAL	Aland	1.49	36	eP	Pn	10 11 57.2	-0.4
AAL	Aland	1.49	36	P	Pn	10 11 57.1	-0.4
AAL	Aland	1.49	36	eP	Pn	10 11 56.9	-0.6
AAL				eS	Sg	10 12 16.8	-0.5
VSTU	Vaestervik	1.61	215	P	Pn	10 11 59.0	-0.1
VSTU	Vaestervik	1.61	215	P	Pn	10 11 59.0	-0.1
LNKU	Linkoeping	1.62	243	P	Pn	10 11 59.0	-0.3
LNKU	Linkoeping	1.62	243	P	Pn	10 11 59.0	-0.3
NRAU	Nora	1.74	291	P	Pn	10 12 01.1	+0.2
NRAU	Nora	1.74	291	P	Pn	10 12 01.1	+0.2
ASKU	Askersund	1.77	268	P	Pn	10 12 01.5	+0.1
ASKU	Askersund	1.77	268	P	Pn	10 12 01.5	+0.1
SLIT	Slitere, Latvi	2.54	121	eP	Pn	10 12 11.8	-0.1
SLIT	Slitere, Latvi	2.54	121	eP	Pn	10 12 12.0	0.0
SLIT				eSG	Sb	10 12 49.0	+1.3
HFS	Hagfors	2.58	298	Pn	Pn	10 12 13.5	+1.0
	0.4nm,0.3s,baz=111,slow=18,SNR=19						
HFS				Lg	Lg	10 12 46.1	
	1.8nm,0.3s,baz=110,slow=28,SNR=18						
	0.9nm,0.3s						
RAF	Rauma	2.70	40	eP	Pn	10 12 15.3	+1.2
RAF	Rauma	2.70	40	eP	Pn	10 12 15.2	+1.0
RAF				eSG	Sb	10 12 53.4	+1.1
RAF				MSG		10 12 56.7	
	comp=Z,4.4nm,0.2s						
TVF	Tvarminne	2.70	69	ePB	Pb	10 12 17.6	-1.1
TVF				eS	Sn	10 12 49.8	+2.3
TVF				MSG		10 12 54.7	
	comp=Z,3.5nm,0.2s						
ARNU	Arnoeviken	2.74	351	eP	Pn	10 12 14.6	-0.1
ARNU				eS	Sn	10 12 48.6	0.0
BORU	Boraas	3.19	247	i P	Pn	10 12 22.1	+1.2
BORU				i S	Sn	10 13 02.4	+2.8
MEF	Metsahovi	3.36	66	eP	Pn	10 12 25.1	+1.9
MEF	Metsahovi	3.36	66	eP	Pn	10 12 24.1	+0.9
MEF				eS	Sn	10 13 04.4	+0.6
KPF	Kankaanpaa	3.43	32	eP	Pn	10 12 25.8	+1.7
KPF				eSB	Sb	10 13 14.3	+1.1
DEL	Delary	3.44	225	i P	Pn	10 12 25.0	+0.6
DEL				i S	Sn	10 13 06.6	+0.8
TJOU	Tjoern	3.60	257	i P	Pn	10 12 27.2	+0.7
STRU	Stroemstad	3.65	274	eP	Pn	10 12 27.8	+0.7
STRU	Stroemstad	3.65	274	i P	Pn	10 12 27.9	+0.7
STRU				i S	Sn	10 13 09.2	-1.6
HEMU	Hemsoen	3.70	359	ePG	Pb	10 12 36.9	+1.3
HEMU				eS	Sn	10 13 12.8	+0.7
ONAU	Onsala	3.71	247	i P	Pn	10 12 29.4	+1.4
ONAU				i S	Sn	10 13 14.0	+1.7
NC602	NORSAR Array S	3.80	300	eP	Pn	10 12 29.4	+0.1
BJUU	Bjuv	4.05	226	i P	Pn	10 12 33.0	+0.3
BJUU				i S	Sn	10 13 22.0	+1.2
NOA	NORSAR Array B	4.08	303	Pn	Pn	10 12 32.8	-0.3
	baz=129,slow=12,SNR=5.0						
NOA				Lg	Lg	10 13 32.2	
	comp=Z,0.1nm,0.3s,baz=149,slow=19,SNR=6.0						
	comp=Z,0.3nm,0.7s						
BSD	Bornholm Skovb	4.29	206	i P	Pn	10 12 35.0	-1.0
BSD				i S	Sn	10 13 23.0	-3.7
BSD				IAML		10 13 34.8	
	comp=Z,9.8nm,0.9s						
HUSU	Husum	4.39	6	eSG	Sg	10 13 46.6	-3.8
KEF	Keuruu	4.57	43	eP	Pn	10 12 41.5	+1.8
KEF	Keuruu	4.57	43	eP	Pn	10 12 41.6	+1.8
KEF				eS	Sn	10 13 33.8	+0.4
VAF	Ylistaro	4.60	26	eP	Pn	10 12 41.4	+1.2
VAF	Ylistaro	4.60	26	eP	Pn	10 12 43.8	+3.6
VAF				eSG	Sg	10 13 53.0	-4.2
FIA0	FINESS Array S	4.62	54	eP	Pn	10 12 41.9	+1.4
FINES	FINESS Array B	4.62	54	Pn	Pn	10 12 41.9	+1.4
	comp=Z,0.2nm,0.3s,baz=248,slow=12,SNR=12						
FINES				Sn	Sn	10 13 35.5	+0.7
	comp=Z,0.8nm,0.3s,baz=244,slow=22,SNR=12						
FINES				Lg	Lg	10 13 53.1	
	comp=Z,0.9nm,0.3s,baz=240,slow=22,SNR=9.4						
	comp=Z,0.7nm,0.4s						
JOF	Joensuu	7.48	53	eP	Pn	10 13 20.5	+0.8
ARCES	ARCESS Array B	11.03	13	Pn	Pn	10 14 05.8	-2.6
	comp=Z,0.1nm,0.3s,baz=198,slow=14,SNR=8.8						
	comp=Z,1.7nm,0.9s						

UPP 17 10:11:31.2±0.2**, 58°.97N**×**18°.38E, h0**^{km}**, ML2.3, Suspected explosion, Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRTU	Norrtaelje	0.72	10	P	Pg	10 11 44.7	-0.3
	baz=218						
NRTU				S	Sg	10 11 54.5	+0.1
NRTU	Norrtaelje	0.72	10	P	Pg	10 11 44.7	-0.3
	baz=218						
NRTU	Norrtaelje	0.72	10	S	Sg	10 11 54.5	+0.1
UPP	Uppsala	0.97	337	P	Pg	10 11 49.8	+0.1
UPP	Uppsala	0.97	337	P	Pg	10 11 49.8	+0.1
VIKU	Vikbolandet	0.99	242	P	Pg	10 11 49.7	-0.5
VIKU	Vikbolandet	0.99	242	P	Pg	10 11 49.7	-0.5
ESKU	Eskilstuna	1.05	285	P	Pg	10 11 50.8	-0.6
ESKU	Eskilstuna	1.05	285	P	Pg	10 11 50.8	-0.6
FIBU	Brunna	1.07	331	P	Pg	10 11 50.9	-0.7
FIBU	Brunna	1.07	331	P	Pg	10 11 50.9	-0.7
BACU	Backbrunna	1.10	324	P	Pg	10 11 50.8	-1.5
BACU	Backbrunna	1.10	324	P	Pg	10 11 50.8	-1.5
GOTU	Gotland	1.29	175	P	Pg	10 11 55.3	-0.7
GOTU	Gotland	1.29	175	P	Pg	10 11 55.3	-0.7

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*JMA **17** 10:15:26.9±0.2, 42°N±1°×142°.7E±0°.9, h34^{km}±1^{km}, MV3.2/37, S OFF URAKAWA*

JMA Felt I J1 at S OFF URAKAWA .

*IDC **17** 10:15:28.5±2.2, 41°.96N×142°.44E, h51^{km}±21^{km}, mb3.5/8, mbtmp3.7/10, ML3.4/2, MS2.6/1, Error ellipse: s-maj=27.8km s-min=14.4km az=95.0*

ISC 17 10:15:27.2±0.8**, 41°.95N**±0°.06×**142°.77E**±0°.06**, h48**^{km}**, n26, σ1^{s}.44**/24**, mb3.8**/8**, 9D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JEM	Erimo	0.29	78	⇓P	Pn	10 15 34.6	-1.4
JEM				⇓eS	Sn	10 15 40.1	-2.2
JNBK	Urakawa-nobuka	0.33	357	⇓P	Pn	10 15 33.9	-2.5
JNBK				⇓eS	Sn	10 15 40.3	-2.6
JSHD	Hidakashinhida	0.51	333	⇓P	Pn	10 15 36.5	-1.9
JTHR	Tokachihiroo	0.52	49	⇓P	Pn	10 15 37.5	-1.0
JTHR				⇓eS	Sn	10 15 46.0	-0.5
JCH	Churui	0.79	33	⇓P	Pn	10 15 41.3	-0.7
JBT2	Biratori 2	0.88	340	P	Pn	10 15 41.7	-1.5
JIAM	Iburiatsuma	0.92	317	eP	Pn	10 15 43.8	0.0
JFR	Furan	1.22	354	eP	Pn	10 15 47.5	-0.3
JOB	Onbets	1.23	39	⇓P	Pn	10 15 48.7	+0.7
JEW	Eniwo	1.32	313	eP	Pn	10 15 48.8	-0.4
ASAJ	Asahikawa	2.17	357	P	Pn	10 16 02.3	+1.5
	18nm,0.3s,baz=214,slow=9.7,SNR=147						
ASAJ				S	Sn	10 16 27.9	+1.6
	100nm,0.7s,baz=16,slow=25,SNR=9.1						
	35nm,0.3s						
MJAR	Matsushiro Arr	6.46	215	P	Pn	10 17 00.4	+0.7
	0.1nm,0.3s,baz=27,slow=13,SNR=5.4						
MJAR				LR	LR	10 20 08.3	
	comp=Z,51nm,18.5s,baz=1.5,slow=44						
	1.4nm,0.5s						
H11N2	WAKE ISLAND Hy	30.14	130	T	T	10 53 06.2	
	baz=324,slow=76,SNR=26						
H11N1	WAKE ISLAND Hy	30.15	130	T	T	10 53 07.0	
	baz=324,slow=76,SNR=29						
H11N3	WAKE ISLAND Hy	30.16	130	T	T	10 53 08.6	
	baz=324,slow=76,SNR=22						
H11S1	WAKE ISLAND Hy	31.00	132	T	T	10 54 10.5	
	baz=325,slow=76,SNR=23						
H11S3	WAKE ISLAND Hy	31.01	132	T	T	10 54 10.2	
	baz=325,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy	31.02	132	T	T	10 54 07.4	
	baz=325,slow=76,SNR=21						
ZALV	Zalesovo Beam	39.54	308	P	P	10 22 52.6	-0.5
	0.6nm,0.4s,baz=91,slow=8.0,SNR=5.1						
	0.6nm,0.4s						
MKAR	Makanchi Array	42.57	298	P	P	10 23 17.0	-1.2
	0.7nm,0.7s,baz=75,slow=11,SNR=3.1						
	0.7nm,0.7s						
KURBB	Kurchatov Arra	43.95	304	P	P	10 23 28.8	-0.4
	1.0nm,0.4s,baz=76,slow=8.5,SNR=6.4						
	1.0nm,0.4s						
ILAR	Eielson Array	44.82	35	P	P	10 23 38.8	+2.8
	0.4nm,0.8s,baz=276,slow=8.6,SNR=4.0						
	0.4nm,0.8s						
BVAR	Borovoye Array	48.15	309	P	P	10 24 01.6	-0.6
	0.8nm,0.4s,baz=71,slow=8.4,SNR=8.2						
	0.8nm,0.4s						
WRA	Warramunga Arr	62.08	189	P	P	10 25 43.1	+0.2
	0.7nm,0.6s,baz=7.0,slow=6.8,SNR=5.3						
	0.7nm,0.6s						
FINES	FINESS Array B	64.97	332	P	P	10 26 01.4	-0.1
	5.4nm,1.1s,baz=98,slow=3.9,SNR=3.5						
	5.4nm,1.1s						
ASAR	Alice Springs	65.80	189	P	P	10 26 07.8	+0.5
	0.2nm,0.6s,baz=13,slow=7.7,SNR=4.2						
	0.2nm,0.6s						

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*NNC **17** 10:16:39.4±2.0, 40°.10N×81°.66E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=27.6km s-min=13.0km az=60.0*

SOME 17 10:16:37.7, 40°.15N×81°.77E, h5^{km}, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	3.46	343	Pg	Pg	10 17 42.8	-1.2
	1.2nm,0.2s						
KTMS				Lg	Lg	10 18 29.8	
	14nm,0.3s						
KTMS	Ketmen	3.46	343	eP	Pg	10 17 42.8	-1.2
	1.2nm,0.2s						
KTMS				eS	Sg	10 18 29.8	+1.0
	14nm,0.3s						
SHLS	Shalkode	3.46	331	Pg	Pb	10 17 41.6	+2.0
	5.0nm,0.3s						
SHLS				Lg	Lg	10 18 27.7	
	24nm,0.4s						
SHLS	Shalkode	3.46	331	eP	Pb	10 17 39.1	-0.5
	5.6nm,0.1s						
SHLS				eS	Sb	10 18 23.1	+1.0
	34nm,0.4s						
UZB	Uzynbulak	3.63	326	Pg	Pg	10 17 45.3	-2.0
UZB				Lg	Lg	10 18 33.9	
UZB	Uzynbulak	3.63	326	eP	Pb	10 17 44.0	+1.5
	2.4nm,0.2s						
UZB				eS	Sg	10 18 31.3	-3.1
	6.1nm,0.3s						
SATY	Saty	3.85	320	Pg	Pg	10 17 49.9	-1.5
	2.2nm,0.1s						
SATY				Lg	Lg	10 18 41.9	
	10nm,0.3s						
KPKS	Kokpek	4.04	326	Pg	Pg	10 17 53.0	-2.0
	0.2nm,0.2s						
KPKS				Lg	Lg	10 18 47.2	
	11nm,0.5s						
KPKS	Kokpek	4.04	326	eP	Pg	10 17 52.7	-2.3
	0.2nm,0.2s						
KPKS				eS	Sg	10 18 46.3	-1.0
	20nm,0.3s						
KNOS	Konyrlen	4.62	336	Pg	Pg	10 18 03.8	-2.5
	1.1nm,0.2s						
KNOS				Lg	Lg	10 19 06.1	
	4.0nm,0.4s						
BLB	Baldybastay	4.64	329	Pg	Pg	10 18 03.5	-3.1
	16nm,0.7s						
BLB				Lg	Lg	10 19 05.7	
	8.8nm,0.4s						
ARXS	Arharly	5.00	326	Pg	Pg	10 18 09.7	-3.9
	0.8nm,0.3s						
ARXS				Lg	Lg	10 19 16.5	
	4.0nm,0.5s						
ARXS	Arharly	5.00	326	eP	Pg	10 18 09.7	-3.9
	0.8nm,0.3s						
ARXS				eS	Sg	10 19 16.5	-1.9
	4.0nm,0.5s						

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*IDC **17** 10:27:59.5±9.9, 13°.68N×60°.31W, h0^{km}, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=215.4km s-min=87.0km az=159.0*

*TRN **17** 10:28:27.5, 14°.78N×61°.23W, h155^{km}, MD3.8, Martinique.*

ISC 17 10:28:27.6±0.8**, 14°.78N**±0°.04×**61°.2W**±0°.1**, h161**^{km}±6^{km}**, n28, σ1^{s}.03**/44**, mb3.6**/5**, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVN	Savane Anatole	0.08	32	eP	Pn	10 28 49.4	+0.3
SVN				eS	Sn	10 29 05.7	+0.2
BIM	Bigot	0.29	153	eP	Pn	10 28 49.7	+0.3
BIM				eS	Sn	10 29 06.1	-0.1
DLPL	La Plaine	0.55	356	eP	Pn	10 28 51.6	+1.1
DLPL				eS	Sn	10 29 07.8	-0.3
DSLB	Salisbury	0.69	343	eP	Pn	10 28 51.4	+0.2
DSLB				eS	Sn	10 29 09.0	-0.4
SLBI	Saint Lucia, B	0.78	163	eP	Pn	10 28 51.5	-0.3
SLBI				eS	Sn	10 29 09.1	-1.2
SLCP	Castries, St.	0.79	164	eS	Sn	10 29 09.4	-1.1
DWS	Wesley	0.79	353	eP	Pn	10 28 52.1	+0.2
DWS				eS	Sn	10 29 10.1	-0.5
SLAC	Saint Lucia, A	0.93	161	eP	Pn	10 28 53.0	+0.1
SLAC				eS	Sn	10 29 11.4	-0.8
MCLT	Moule a Chique	1.09	166	eP	Pn	10 28 54.1	-0.1
MCLT				eS	Sn	10 29 13.5	-1.1
TBG	Guadaloupe-3	1.15	339	eP	Pn	10 28 54.8	+0.2
ATGZ	Broadband at L	1.40	339	eP	Pn	10 28 58.0	+1.0
SVB	Belmont	1.50	182	eP	Pn	10 28 58.0	0.0
SVB				eS	Sn	10 29 20.4	-1.0
BBGH	Gun Hill	2.28	135	eP	Pn	10 29 08.1	+1.4
BBGH				eS	Sn	10 29 37.4	+0.6
GCMP	Grenada, Carri	2.29	185	eP	Pn	10 29 08.8	+2.1
GCMP				eS	Sn	10 29 36.4	-0.6
GRSS	Sisters	2.49	189	eP	Pn	10 29 08.7	-0.5
GRSS				eS	Sn	10 29 41.8	+0.3

GRHS	Sauteurs	2.57	189	*e*P	Pn	10 29 09.9	-0.2
GRHS				*e*S	Sn	10 29 42.4	-0.7
GRW	Mount Saint Ca	2.64	190	*e*P	Pn	10 29 12.4	+1.4
GRW				*e*S	Sn	10 29 44.4	-0.2
GRGR	Grenville	2.66	189	*e*P	Pn	10 29 11.7	+0.4
GRGR				*e*S	Sn	10 29 45.4	+0.3
GRFF	Grenada Fort F	2.76	191	*e*P	Pn	10 29 14.0	+1.5
GRFF				*e*S	Sn	10 29 46.2	-1.0
ANWB	Willy Bob	2.93	349	*e*P	Pn	10 29 13.9	-0.5
ANWB				*e*S	Sn	10 29 48.6	-2.3
DMDM	Guralp CMG5TDE	4.07	185	*e*S	Sn	10 30 15.3	-1.6
PSMG	Mucurapo Girls	4.09	184	*e*S	Sn	10 30 15.1	-2.5
TRN	Trinidad (W)	4.11	183	*e*S	Sn	10 30 15.4	-2.5
TXAR	Lajitas Array	41.69	298	P	P	10 36 01.5	+0.7
	0.2nm,0.4s,baz=121,slow=5.8,SNR=1.6						
	0.2nm,0.4s						
ULM	Lac du Bonnet	45.16	329	P	P	10 36 28.0	-0.1
	2.5nm,0.5s,baz=127,slow=7.4,SNR=4.7						
	2.5nm,0.5s						
PDAR	Pinedale Array	49.84	314	P	P	10 37 04.9	+0.3
	0.7nm,0.5s,baz=117,slow=9.4,SNR=8.4						
	0.7nm,0.5s						
YKA	Yellowknife Ar	60.51	335	P	P	10 38 21.0	+0.7
	0.5nm,0.6s,baz=118,slow=6.1,SNR=9.3						
	0.5nm,0.6s						
ILAR	Eielson Array	74.92	334	P	P	10 39 49.7	-0.8
	0.2nm,0.5s,baz=96,slow=4.2,SNR=6.9						
	0.2nm,0.5s						

HEL 17 11:00:04.7±0.1**, 60°.40N×24°.84E, h0^{km}, ML1.2,**
Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NUR	Nurmijarvi	0.14	319	PG	Pg	11 00 06.5	-0.9
HEL1	Helsinki	0.23	174	PG	Pg	11 00 08.8	-0.2
HEL1				SG	Sg	11 00 11.9	0.0
MEF	Metsahovi	0.29	230	*e*P	Pg	11 00 11.4	+1.2
MEF	Metsahovi	0.29	230	PG	Pg	11 00 09.7	-0.5
MEF				SG	Sg	11 00 13.6	-0.3
HEL5	Espoo, Suvisaa	0.29	190	PG	Pg	11 00 10.0	-0.2
HEL5				SG	Sg	11 00 14.0	+0.1
PVF	Pernaja	0.53	74	PG	Pg	11 00 13.8	-1.0
	baz=254						
PVF				SG	Sg	11 00 20.8	-0.8
PVF				MSG		11 00 21.6	
	comp=Z,2.1nm,0.2s						
TVF	Tvarminne	0.97	236	PB	Pg	11 00 22.5	-0.8
TVF				MSG		11 00 34.5	
	comp=Z,0.6nm,0.2s						
FIA0	FINESS Array S	1.21	30	PG	Pg	11 00 26.1	-1.7
FIA0				MSG		11 00 41.3	
	comp=Z,1.9nm,0.2s						
FIA0				SN	Sn	11 00 47.2	+1.3
VJF	Virojoki	1.35	83	PG	Pg	11 00 28.9	-1.7
VJF				MSG		11 00 45.4	
	comp=Z,2.4nm,0.2s						
VJF				SB	Sg	11 00 47.3	-0.8
RAF	Rauma	1.64	294	*e*P	Pn	11 00 32.3	-2.4
RAF	Rauma	1.64	294	PG	Pn	11 00 34.1	-0.6
RAF				MSG		11 00 53.7	
	comp=Z,1.8nm,0.2s						
RAF				SN	Sn	11 00 55.6	-0.7
KEF	Keuruu	1.77	1	*e*P	Pn	11 00 35.1	-1.5
KEF	Keuruu	1.77	1	PG	Pn	11 00 36.8	+0.2
KEF				MSG		11 00 57.6	
	comp=Z,1.9nm,0.2s						
KPF	Kankaanpaa	1.97	318	PG	Pn	11 00 39.9	+0.7
	baz=133						
KPF				MSG		11 01 03.3	
	comp=Z,1.8nm,0.2s						
KPF				SG	Sn	11 01 05.0	+0.4
RUF	Ruokolahti	2.26	61	PG	Pb	11 00 45.2	-1.1
RUF				MSG		11 01 11.6	
	comp=Z,1.0nm,0.2s						
VAF	Ylistaro	2.84	340	MSG		11 01 28.6	
	comp=Z,1.1nm,0.2s						

HEL 17 11:00:08.9±0.1**, 64°.41N×27°.82E, h0^{km}, ML1.3,**
Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RMF	Romuvaara	0.94	101	PB	Pg	11 00 26.6	-0.2
	baz=279						
RMF				MSG		11 00 37.7	
	comp=Z,1.5nm,0.2s						
RMF				SB	Sg	11 00 39.8	+0.8
NIF	Nilsia	1.02	180	PG	Pg	11 00 27.5	-0.9
NIF				MSG		11 00 40.0	
	comp=Z,1.8nm,0.2s						
NIF				SB	Sg	11 00 40.8	-0.8
OUL	Oulu	1.07	310	SB	Sg	11 00 42.5	-0.8
OBF4	Vikkela, Lumij	1.24	291	PG	Pg	11 00 31.5	-1.1
OBF4				MSG		11 00 46.5	
	comp=Z,1.7nm,0.2s						
OBF4				SB	Sg	11 00 47.2	-1.5
KU2	Taivalkoski	1.32	7	PN	Pg	11 00 33.6	-0.6
OUF	Merijarvi	1.34	270	PG	Pg	11 00 33.2	-1.4
	baz=88						
OUF				MSG		11 00 49.3	
	comp=Z,1.8nm,0.2s						
OUF				SG	Sg	11 00 50.3	-1.7
KU1	Kurvinen	1.38	32	PN	Pg	11 00 34.6	-0.7
KU1				SN	Sg	11 00 53.3	+0.2
OBF0	Syolatti, Pyha	1.56	275	PG	Pn	11 00 37.1	-0.7
	baz=91						
OBF0				MSG		11 00 55.6	
	comp=Z,2.0nm,0.2s						
OBF0				SN	Sn	11 00 57.1	-1.6
MSF	Maaselka	1.60	18	PG	Pn	11 00 38.1	-0.3
MSF				SN	Sn	11 00 59.4	-0.3
RANF	Ranua	1.67	345	PG	Pn	11 00 39.6	+0.2
	baz=164						
RANF				SG	Sn	11 01 00.8	-0.8
KU6	Riekki	1.85	27	PG	Pn	11 00 42.2	+0.4
KU6				MSG		11 01 03.8	
	comp=Z,1.5nm,0.2s						
KU6				SG	Sn	11 01 05.7	-0.1
SUF	Sumiainen	1.85	205	PG	Pn	11 00 42.3	+0.5
SUF				MSG		11 01 04.1	
	comp=Z,2.2nm,0.2s						
OLKF	Oulanka, Finla	2.03	18	PG	Pb	11 00 45.7	-1.0
OLKF				MSG		11 01 09.3	
	comp=Z,1.2nm,0.2s						
OLKF				SG	Sb	11 01 11.5	-1.0
JOF	Joensuu	2.16	132	PG	Pn	11 00 47.2	+1.1
	baz=315						
JOF				SG	Sb	11 01 14.9	-1.1
TOF	Tornio	2.23	320	MSG		11 01 15.0	
	comp=Z,0.5nm,0.2s						
TOF				SG	Sn	11 01 16.7	+1.3
RNF	Rovaniemi	2.34	342	SG	Sb	11 01 20.8	-0.4
KALU	Kalix	2.39	310	SG	Sb	11 01 21.2	-1.4
KEF	Keuruu	2.61	212	MSG		11 01 25.9	
	comp=Z,1.3nm,0.2s						
KEF				SB	Sb	11 01 27.6	-1.6
VAF	Ylistaro	2.67	241	MSG		11 01 27.7	
	comp=Z,1.1nm,0.2s						
VAF				SB	Sb	11 01 29.4	-1.4
BURU	Burvik	2.79	277	SN	Sn	11 01 28.7	-0.5
FIA0	FINESS Array S	3.08	196	PB	Pn	11 01 01.3	+2.6
FIA0				MSG		11 01 39.3	
	comp=Z,0.6nm,0.2s						
FIA0				SG	Sb	11 01 44.9	+2.4
ERTU	Ertsjaerv	3.19	315	SG	Sb	11 01 45.0	-0.7
KLF	Kolari	3.25	333	SG	Sb	11 01 48.2	+0.7
PAJU	Pajala	3.27	326	SG	Sb	11 01 50.4	+2.3
VRF	Varrio	3.44	11	SB	Sb	11 01 50.4	-2.4
HEF	Hetta	4.35	339	SG	Sg	11 02 24.0	-4.6
HEL1	Helsinki	4.46	199	SN	Sn	11 02 07.6	-2.6
MEF	Metsahovi	4.50	202	SN	Sn	11 02 08.6	-2.4
HEL5	Espoo, Suvisaa	4.54	200	SN	Sn	11 02 08.7	-3.4
HEMU	Hemsoen	4.71	253	SG	Sg	11 02 35.4	-4.6

KRSC ***17*** *11:00:48.8±0.8, 54°.96N×162°.12E, h61^{km}±17^{km}, Ml4.4,*
Felt [II-III] at kordon Kronoki.
MOS ***17*** *11:00:50.1±0.4, 54°.98N×162°.14E, h62^{km}, mb4.3/5, Error*
ellipse: s-maj=9.3km s-min=4.9km az=70.4
ISC 17 11:00:50.6±1.0**, 54°.99N**±0°.03×**162°.11E**±0°.03**, h50**^{km}±10^{km}**,**
n77, σ1^{s}.20/120**, mb4.1**/4**, 2C-3D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	Mys Kozlova	0.49	207	PN	Pn	11 01 01.4	-0.2
MKZ	Mys Kozlova	0.49	207	*e*P	Pn	11 01 01.4	-0.2
TUMD	Tumrok D	1.01	283	PN	Pn	11 01 07.8	-0.5
TUMD				S	Sn	11 01 20.7	-0.8
TUMD	Tumrok D	1.01	283	*e*P	Pn	11 01 07.9	-0.5
TUMD				*e*S	Sn	11 01 20.8	-0.8
KZV	Kizimen	1.05	277	PN	Pn	11 01 08.6	-0.5
KZV				S	Sn	11 01 22.4	-0.4
KZV	Kizimen	1.05	277	*e*P	Pn	11 01 08.6	-0.5
KZV				*e*S	Sn	11 01 22.5	-0.4
BZGR	Bezymyannyi-Gr	1.25	320	PN	Pn	11 01 12.0	+0.3
BZGR				S	Sn	11 01 28.4	+1.0
BZGR	Bezymyannyi-Gr	1.25	320	*e*P	Pn	11 01 12.1	+0.3
BZGR				*e*S	Sn	11 01 28.5	+1.0
KBTR	Krutoberegovo	1.28	18	PN	Pn	11 01 12.6	+0.5
KBTR				S	Sn	11 01 30.1	+2.0
KBTR	Krutoberegovo	1.28	18	*e*P	Pn	11 01 12.6	+0.5
KBTR				*e*S	Sn	11 01 30.2	+2.0
KBG	Krutoberegovo	1.31	15	PN	Pn	11 01 12.9	+0.5
KBG				S	Sn	11 01 30.8	+2.0
KBG	Krutoberegovo	1.31	15	*e*P	Pn	11 01 12.9	+0.5
KBG				*e*S	Sn	11 01 30.8	+2.0
KMNR	Kamenistaya	1.32	306	PN	Pn	11 01 12.9	+0.3
KMNR				S	Sn	11 01 30.4	+1.3
KMNR	Kamenistaya	1.32	306	*e*P	Pn	11 01 12.9	+0.3
KMNR				*e*S	Sn	11 01 30.4	+1.3
BZWR	Bezymyannyi-We	1.34	317	PN	Pn	11 01 13.3	+0.3
BZWR				S	Sn	11 01 30.1	+0.3
BZWR	Bezymyannyi-We	1.34	317	*e*P	Pn	11 01 13.4	+0.3
BZWR				*e*S	Sn	11 01 30.1	+0.3
CIRR	Tsirk	1.37	326	PN	Pn	11 01 14.3	+0.9
CIRR	Tsirk	1.37	326	*e*P	Pn	11 01 14.3	+0.9
KIRR	Kirishev	1.40	314	PN	Pn	11 01 14.5	+0.8
KIRR	Kirishev	1.40	314	*e*P	Pn	11 01 14.6	+0.8
KLY	Klyuchi	1.56	329	PN	Pn	11 01 15.5	-0.3
KLY				S	Sn	11 01 34.8	-0.1
KLY	Klyuchi	1.56	329	*e*P	Pn	11 01 15.6	-0.3
KLY				*e*S	Sn	11 01 34.8	-0.1
KOZ	Kozyrevsk	1.66	311	PN	Pn	11 01 17.9	+0.7
KOZ				S	Sn	11 01 39.6	+2.2
KOZ	Kozyrevsk	1.66	311	*e*P	Pn	11 01 18.0	+0.7
KOZ				*e*S	Sn	11 01 39.6	+2.2
SRKR	Sorokina	1.75	343	PN	Pn	11 01 19.4	+0.9
SRKR	Sorokina	1.75	343	*e*P	Pn	11 01 19.5	+0.9
KII	Karymskiy	1.82	239	PN	Pn	11 01 19.4	-0.1
KII	Karymskiy	1.82	239	*e*P	Pn	11 01 19.5	-0.1
ESO	Esso	2.16	297	PN	Pn	11 01 23.5	-0.5
ESO				S	Sn	11 01 48.2	-1.4
ESO	Esso	2.16	297	*e*P	Pn	11 01 23.6	-0.5
ESO				*e*S	Sn	11 01 48.2	-1.4
BKI	Bering	2.23	83	PN	Pn	11 01 24.9	0.0
BKI				S	Sn	11 01 49.6	-1.6
BKI	Bering	2.23	83	*e*P	Pn	11 01 25.0	0.0
BKI				*e*S	Sn	11 01 49.7	-1.6
NLC	Nalytchevo	2.45	223	PN	Pn	11 01 28.2	+0.3
NLC				S	Sn	11 01 57.6	+1.0
NLC	Nalytchevo	2.45	223	*e*P	Pn	11 01 28.2	+0.3
NLC				*e*S	Sn	11 01 57.6	+1.0
SDLR	Sedlovina	2.56	229	PN	Pn	11 01 30.1	+0.5
SDLR				S	Sn	11 02 00.8	+1.2
SDLR	Sedlovina	2.56	229	*e*P	Pn	11 01 30.2	+0.5
SDLR				*e*S	Sn	11 02 00.8	+1.2
KRER	Koryakskii	2.60	231	PN	Pn	11 01 30.9	+0.6
KRER	Koryakskii	2.60	231	*e*P	Pn	11 01 30.9	+0.6
SMAR	Somma	2.61	230	PN	Pn	11 01 30.8	+0.5
SMAR				S	Sn	11 02 02.3	+1.5
SMAR	Somma	2.61	230	*e*P	Pn	11 01 30.9	+0.5
SMAR				*e*S	Sn	11 02 02.4	+1.5
KRX	Arik	2.61	233	PN	Pn	11 01 30.6	+0.3
KRX	Arik	2.61	233	*e*P	Pn	11 01 30.6	+0.3
AVH	Avacha	2.63	230	PN	Pn	11 01 31.5	+0.9
AVH	Avacha	2.63	230	*e*P	Pn	11 01 31.6	+0.9
UGLR	Uglovaya	2.63	229	PN	Pn	11 01 31.3	+0.7
UGLR				S	Sn	11 02 02.2	+0.8
UGLR	Uglovaya	2.63	229	*e*P	Pn	11 01 31.4	+0.7
UGLR				*e*S	Sn	11 02 02.2	+0.8
KOK	Koryaka	2.66	232	PN	Pn	11 01 31.5	+0.5
KOK	Koryaka	2.66	232	*e*P	Pn	11 01 31.5	+0.5
GNL	Ganaly	2.77	244	PN	Pn	11 01 33.2	+0.8
GNL	Ganaly	2.77	244	*e*P	Pn	11 01 33.3	+0.8
DALK	Dalny	2.79	227	PN	Pn	11 01 33.1	+0.5
DALK				S	Sn	11 02 06.0	+1.0
DALK	Dalny	2.79	227	*e*P	Pn	11 01 33.1	+0.5
DALK				*e*S	Sn	11 02 06.1	+1.0
INSR	Institute	2.83	228	PN	Pn	11 01 34.3	+1.1
INSR				S	Sn	11 02 08.0	+2.0
INSR	Institute	2.83	228	*e*P	Pn	11 01 34.3	+1.1
INSR				*e*S	Sn	11 02 08.0	+2.0
PET	Petropavlovsk	2.84	227	*e*PN	Pn	11 01 34.0	+0.7
PET				*e*S	Sn	11 02 07.6	+1.4
PET				pmax	pmax		
	comp=Z,66nm,0.3s						
PET				smax	smax		
	comp=E,760nm,0.8s						
PET				smax	smax		
	comp=N,821nm,0.5s						
KRMR	Karymshinskiy	3.20	229	PN	Pn	11 01 39.3	+1.1
KRMR				S	Sn	11 02 17.3	+2.2
KRMR	Karymshinskiy	3.20	229	*e*P	Pn	11 01 39.3	+1.1
KRMR				*e*S	Sn	11 02 17.4	+2.2
PEA0B	Petropavlovsk-	3.21	236	*d i*PN	Pn	11 01 40.3	+1.8
RUS	Russkaya	3.34	221	PN	Pn	11 01 40.6	+0.5
RUS				S	Sn	11 02 18.9	+0.4
RUS	Russkaya	3.34	221	*e*P	Pn	11 01 40.6	+0.5
RUS				*e*S	Sn	11 02 18.9	+0.4
GRL	Gorelyy	3.42	226	PN	Pn	11 01 43.2	+1.7
GRL				S	Sn	11 02 23.0	+2.2
GRL	Gorelyy	3.42	226	*e*P	Pn	11 01 43.2	+1.7
GRL				*e*S	Sn	11 02 23.1	+2.2
MTVR	Mutnovka	3.43	224	PN	Pn	11 01 42.7	+1.2
MTVR				S	Sn	11 02 23.2	+2.2
MTVR	Mutnovka	3.43	224	*e*P	Pn	11 01 42.8	+1.2
MTVR				*e*S	Sn	11 02 23.3	+2.2
APC	Apacha	3.58	237	PN	Pn	11 01 45.0	+1.5
APC	Apacha	3.58	237	*e*P	Pn	11 01 45.1	+1.5
ASAK	Asacha	3.62	226	PN	Pn	11 01 45.9	+1.8
ASAK	Asacha	3.62	226	*e*P	Pn	11 01 45.9	+1.8
KDTR	Khodutka, Kamc	4.00	219	PN	Pn	11 01 49.4	+0.2
KDTR	Khodutka, Kamc	4.00	219	*e*P	Pn	11 01 49.4	+0.2
KDTR				*e*S	Sn	11 02 33.2	-1.5
SKR	Severo-Kuril's	5.64	223	*e*PN	Pn	11 02 16.1	+4.4
SKR				pmax	pmax		
	comp=Z,50nm,0.8s						
VLA	Vladivostok	22.90	251	⇓*i*P	P	11 05 46.8	-3.0
VLA				pmax	pmax		
	comp=Z,26nm,0.7s						
YKA	Yellowknife Ar	40.96	45	*i* P	P	11 08 29.7	+1.9
DGZ	Jazzator, Alta	43.91	295	⇓*i*P	P	11 08 50.6	-1.6
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ARTI	Arti	52.91	317	⇑*i*P	P	11 10 00.2	-0.8
ARTI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
FINES	FINESS Array B	58.84	337	*i* P	P	11 10 45.2	+1.8
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BELG	Belogornoye	60.04	320	⇑*i*P	P	11 10 49.2	-2.5
BELG				pmax	pmax		
	comp=Z,1.0nm,0.6s						

OSPL ***17*** *11:02:57.8±0.3, 19°.27N×67°.38W, h15^{km}±3^{km}, ML3.3,*
Presumed earthquake
NEIC ***17*** *11:02:57.5±1.6, 19°.19N±0°.03×67°.16W±0°.04, h10^{km}±1^{km},*
ML3.6/20, Md3.6/11(RSPR), Error ellipse: s-maj=7.6km
s-min=3.9km az=61.0
SDD ***17*** *11:02:57.0±1.4, 19°.34N×67°.14W, h31^{km}±67^{km}, MD3.8,*
ML3.6, MW3.7, Presumed earthquake
RSPR ***17*** *11:02:59.8, 19°.24N×67°.27W, h26^{km}±18^{km}, MD3.6/11*
ISC 17 11:02:56.6±1.4**, 19°.27N**±0°.06×**67°.19W**±0°.04**, h22**^{km}±5^{km}**,**
n62, σ1^{s}.20/74**, 12C-13D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	0.80	175	⇓*i*P	Pn	11 03 12.6	-0.1
AGPR	Aguadilla, PR	0.80	175	*e*S	Sb	11 03 23.1	+0.8
AGPR	Aguadilla, PR	0.80	175	⇓*e*Pg	Pn	11 03 12.6	-0.1
AGPR				⇑*e*Sg	Sn	11 03 23.2	-0.8
AGPR				IAML		11 03 28.1	
	comp=N,2µm,0.6s						
AGPR	Aguadilla, PR	0.80	175	*i* P	Pn	11 03 12.6	-0.1
AGPR				IAML		11 03 26.0	
	comp=Z,1µm,0.7s						
IDE	Isla Desecheo	0.92	197		Pn	11 03 14.4	+0.1
IDE					Sb	11 03 25.6	-0.1
IDE	Isla Desecheo	0.92	197	⇑*e*P	Pn	11 03 14.4	+0.1
IDE	Isla Desecheo	0.92	197	*e*S	Sb	11 03 25.6	-0.1
EMPR	Esperanza - Ma	1.01	142		Pn	11 03 16.9	+1.5
EMPR					Sn	11 03 29.7	+0.8
EMPR	Esperanza - Ma	1.01	142	IAML		11 03 37.4	
	comp=Z,1µm,0.7s						
EMPR				IAML		11 03 37.9	
	comp=Z,1µm,0.5s						
EMPR	Esperanza - Ma	1.01	142	⇑*e*P	Pn	11 03 16.9	+1.5
EMPR	Esperanza - Ma	1.01	142	*e*S	Sn	11 03 29.7	+0.8
AOPR	Arecibo Observ	1.01	156		Pn	11 03 15.7	+0.2
AOPR					Sn	11 03 28.8	-0.2
AOPR				IAML		11 03 30.2	
	comp=N,2µm,0.5s						
AOPR				IAML		11 03 39.9	
	comp=E,3µm,0.4s						
AOPR	Arecibo Observ	1.01	156	⇓*i*P	Pn	11 03 15.7	+0.2
AOPR	Arecibo Observ	1.01	156	*e*S	Sn	11 03 28.6	-0.4
AOPR	Arecibo Observ	1.01	156	⇓*e*Pg	Pn	11 03 15.8	+0.2
AOPR				IAML		11 03 41.9	
	comp=N,1µm,0.3s						
PRSN	Puerto Rico Se	1.05	178		Pb	11 03 16.1	+0.1
PRSN					Sb	11 03 28.2	-1.1
PRSN	Puerto Rico Se	1.05	178	IAML		11 03 33.8	
	comp=N,4µm,0.3s						
PRSN				IAML		11 03 37.4	
	comp=N,4µm,0.3s						
PRSN	Puerto Rico Se	1.05	178	⇑*e*P	Pb	11 03 16.1	+0.1
PRSN	Puerto Rico Se	1.05	178	*e*S	Sb	11 03 28.2	-1.1
PRSN	Puerto Rico Se	1.05	178	⇓*e*Pg	Pb	11 03 16.2	+0.1
PRSN				*e*Sg	Sn	11 03 29.8	-0.2
PRSN				IAML		11 03 36.0	
	comp=N,2µm,0.2s						
LSP	Las Mesas	1.09	175		Pb	11 03 17.1	+0.2
LSP					Sb	11 03 30.7	0.0
LSP	Las Mesas	1.09	175	⇑*i*P	Pb	11 03 17.1	+0.2
LSP	Las Mesas	1.09	175	*e*S	Sb	11 03 30.7	0.0
UUPR	Utuado, UPR, P	1.10	156		Pn	11 03 16.9	+0.1
UUPR	Utuado, UPR, P	1.10	156	⇑*e*P	Pn	11 03 16.9	+0.1
ECPR	Experimental S	1.23	140	⇑*e*P	Pb	11 03 19.4	+0.2
CRPR	Cabo Rojo, PR	1.26	177		Pb	11 03 19.5	-0.2
CRPR				IAML		11 03 37.8	
	comp=N,830nm,0.8s						
CRPR	Cabo Rojo, PR	1.26	177		Sn	11 03 35.3	+0.1
CRPR	Cabo Rojo, PR	1.26	177	⇓*i*P	Pb	11 03 19.5	-0.2
CRPR	Cabo Rojo, PR	1.26	177	*e*S	Sn	11 03 34.0	-1.2
CRPR	Cabo Rojo, PR	1.26	177	⇓*e*Pg	Pb	11 03 19.5	-0.2
CRPR				IAML		11 03 47.4	
	comp=N,742nm,0.5s						
CRPR	Cabo Rojo, PR	1.26	177	*i* P	Pb	11 03 19.5	-0.2
CRPR				*e*S	Sb	11 03 35.5	+0.1
CRPR				IAML		11 03 40.1	
	comp=Z,506nm,0.2s						
MLPR	Magueyes Islan	1.30	174	⇓*i*P	Pb	11 03 20.1	-0.3
MLPR	Magueyes Islan	1.30	174	*e*S	Sn	11 03 35.6	-0.7
MLPR	Magueyes Islan	1.30	174	⇓*e*Pg	Pb	11 03 20.1	-0.3
MLPR				*i* Sg	Sn	11 03 35.9	-0.4
MLPR				IAML		11 03 38.2	
	comp=N,229nm,0.8s						
GBPR	Guanica, Bosqu	1.32	167		Pb	11 03 20.6	-0.1
GBPR	Guanica, Bosqu	1.32	167	⇑*e*P	Pb	11 03 20.6	-0.1
OBIP	Obispado Ponce	1.34	156		Pb	11 03 20.9	-0.1
OBIP					Sb	11 03 38.9	+1.2
OBIP				IAML		11 03 39.7	
	comp=E,855nm,0.9s						
OBIP				IAML		11 03 42.5	
	comp=N,639nm,0.8s						
OBIP	Obispado Ponce	1.34	156	⇓*i*P	Pb	11 03 20.9	-0.1
OBIP	Obispado Ponce	1.34	156	*e*S	Sb	11 03 37.6	-0.2
PCDR	Punta Cana, DR	1.36	237	*e*Pg	Pb	11 03 21.6	+0.3
PCDR				⇑*e*Sg	Sb	11 03 39.1	+0.8
PCDR				IAML		11 03 47.0	
	comp=N,758nm,0.8s						
GCPR	Guaynabo City	1.42	132		Pb	11 03 22.5	+0.2
GCPR	Guaynabo City	1.42	132	⇓*e*P	Pb	11 03 22.5	+0.2
GCPR	Guaynabo City	1.42	132	*e*S	Sb	11 03 40.5	+0.6
SJG	San Juan	1.52	139		Pb	11 03 24.1	+0.1
SJG	San Juan	1.52	139	⇓*e*P	Pb	11 03 24.2	+0.1
SJG	San Juan	1.52	139	*e*S	Sn	11 03 41.9	+0.4
SJG	San Juan	1.52	139	*i* P	Pb	11 03 24.4	+0.4
SJG				IAML		11 03 48.1	
	comp=Z,172nm,0.3s						
MIDR	Miches	1.79	261	⇑*e*Pg	Pn	11 03 27.2	+1.1
MIDR				⇑*e*Sg	Sb	11 03 50.3	-0.3
MIDR				IAML		11 04 06.9	
	comp=N,255nm,1.2s						
SMDR	Samana, DR	1.89	271	*e*Pg	Pn	11 03 28.0	+0.4
SMDR				IAML		11 04 11.1	
	comp=N,296nm,0.8s						
DR12	Loma Pena Alta	2.13	257		Pn	11 03 32.5	+1.5
HATOM	Hato Mayor del	2.13	257	⇑*e*Pg	Pn	11 03 32.4	+1.5
HATOM				⇓*e*Sg	Sn	11 03 59.1	+2.3
HATOM				IAML		11 04 08.0	
	comp=N,192nm,0.3s						
DR08	Loma La Naviza	2.70	264	⇑*e*Pg	Pn	11 03 41.2	+2.4
DR08				*e*Sg	Sb	11 04 15.4	-1.6
DR08				IAML		11 04 21.2	
	comp=N,3µm,0.2s						
SC01	Santiago de lo	3.35	273		Pn	11 03 49.8	+2.1
SDDR	Presa de Saban	3.89	266		Pn	11 03 58.1	+2.9
SDDR				IAML		11 05 05.3	
	comp=N,233nm,0.9s						
SDDR	Presa de Saban	3.89	266	*e*P	Pn	11 03 57.3	+2.2
SDDR				*e*S	Sn	11 04 43.2	+3.0
SDDR				IAML		11 05 05.5	
	comp=N,204nm,0.8s						
SDDR				IAML		11 05 09.8	
	comp=N,247nm,0.8s						
GRTK	Grand Turk	4.32	302	*e*P	Pn	11 04 00.1	-0.9
MASC	Masc	6.70	279	*e*P	Pn	11 04 31.9	-1.9
QMBU	Quimbuelo	7.24	279	*e*P	Pn	11 04 38.9	-2.3
GTBY	Guantanamo Bay	7.50	276	*e*P	Pn	11 04 39.2	-5.6
RCC	Rio Carpintero	8.05	277	*e*P	Pn	11 04 48.5	-3.8
PINC	Pinares de May	8.19	280	*e*P	Pn	11 04 50.2	-3.9

NEIC ***17*** *11:04:05.9±1.1, 17°.8S±0°.2×178°.5W±0°.2, h564^{km}±11^{km},*
mb4.1/12, Error ellipse: s-maj=28.8km s-min=13.9km
az=142.0
IDC ***17*** *11:04:06.3±7.7, 17°.28S×178°.94W, h562^{km}±95^{km}, mb3.2/6,*
mbtmp4.2/7, Error ellipse: s-maj=83.7km s-min=33.7km
az=152.0
ISC 17 11:04:06.1±0.7**, 17°.9S**±0°.2×**178°.6W**±0°.1**, h579**^{km}**, n28,**
σ1^{s}.08/28**, mb4.1**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.24	272	P	P	11 05 24.6	-0.5
AFI	Afiamalu	7.61	60	P	P	11 05 58.1	-3.0
NIUE	Niue	8.28	100	P	P	11 06 06.6	-0.8
MARNC	Mare, Loyalty	13.14	252	P	P	11 06 54.4	-2.1
SANVU	Saraoutou	13.86	278	P	P	11 07 03.7	-0.2
PINNC	Pines Island,	13.96	248	P	P	11 07 04.5	-0.3
DZM	Mont Dzumac	14.71	251	P	P	11 07 11.3	-1.1
	9.1nm,1.0s,baz=92,slow=17,SNR=3.2						
DZM	Mont Dzumac	14.71	251	P	P	11 07 12.2	-0.2
ARMA	Armidale	29.85	240	P	P	11 09 28.4	+0.6
CAN	Canberra	33.63	232	P	P	11 10 00.6	+0.8
COEN	Coen	36.97	270	P	P	11 10 28.1	+0.5
COEN				IAmb	IAmb	11 10 35.1	
	comp=Z,7.2nm,1.2s						
TOO	Toolangi	37.10	231	P	P	11 10 29.4	+0.9
TOO				IAmb	IAmb	11 10 29.9	
	comp=Z,1.6nm,0.6s						
STKA	Stephens Creek	38.53	241	P	P	11 10 41.0	+0.8
	comp=Z,3.5nm,0.5s,baz=88,slow=9.5,SNR=12						
	comp=Z,3.5nm,0.5s						
BBOO	Buckleboo	43.31	241	P	P	11 11 18.2	+0.2
BBOO				IAmb	IAmb	11 11 18.8	
	comp=Z,8.4nm,0.9s						
WR8	Warramunga Arr	44.35	259	P	P	11 11 25.5	-0.8
WRA	Warramunga Arr	44.51	259	P	P	11 11 26.4	-1.0
	comp=Z,1.2nm,0.5s,baz=91,slow=7.1,SNR=29						
	comp=Z,1.2nm,0.5s						
AS31	Alice Springs	44.67	254		P	11 11 28.5	-0.1

AS31				IAmb	IAmb	11 11 29.0	
	comp=Z,4.9nm,0.6s						
ASAR	Alice Springs	44.67	254	P	P	11 11 28.4	-0.2
	comp=Z,16nm,0.5s,baz=88,slow=8.3,SNR=412						
	comp=Z,16nm,0.5s						
ASAR	Alice Springs	44.67	254		P	11 11 28.6	-0.1
FORT	Forrest	49.91	245	P	P	11 12 07.2	-0.4
O18K	Koktuh Hills	79.73	12	P	P	11 15 14.8	+0.6
L18K	Granite Mounta	81.67	10	P	P	11 15 25.5	+1.4
J16K	Anvik River	82.09	8	P	P	11 15 27.8	+1.5
J16K				IAmb	IAmb	11 15 50.6	
	comp=Z,9.2nm,1.4s						
ILAR	Eielson Array	85.87	13	P	P	11 15 44.3	-0.5
	comp=Z,0.6nm,1.0s,baz=221,slow=5.4,SNR=9.1						
	comp=Z,0.6nm,1.0s						
TXAR	Lajitas Array	86.08	58	P	P	11 15 48.1	+1.3
	comp=Z,0.6nm,0.8s,baz=222,slow=2.0,SNR=3.6						
	comp=Z,0.6nm,0.8s						
PDAR	Pinedale Array	87.41	43	P	P	11 15 53.9	+1.0
	comp=Z,0.2nm,0.5s,baz=235,slow=4.5,SNR=4.3						
	comp=Z,0.2nm,0.5s						
PDAR	Pinedale Array	87.41	43	P	P	11 15 53.8	+0.9
D22K	Ayikyak River	88.48	9	P	P	11 15 57.8	+0.8
D22K				IAmb	IAmb	11 16 21.1	
	comp=Z,7.0nm,1.4s						

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*IDC **17** 11:12:39.0±9.8, 6°.25S×107°.15E, h272^{km}±89^{km}, mb3.3/9, mbtmp4.0/9, MS3.4/1, Error ellipse: s-maj=118.5km s-min=13.2km az=56.0*

*DJA **17** 11:12:41.8±0.3, 6°S±6°×10°8E±°, h305^{km}±4^{km}, M3.9/15, mB4.9/2, mb4.2/11, MLv3.8/15, Mw(mB)4.2/2*

ISC 17 11:12:42.1±0.7**, 6°.1S**±0°.1×**107°.55E**±0°.10**, h300^{km}, n34, σ0^{s}.94**/34**, mb3.4**/9**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNJI	Cibinong	1.32	198	P	Pn	11 13 23.5	-0.7
SKJI	Sukabumi	1.37	226	P	Pn	11 13 24.4	-0.1
BBJI	Bungbulang	1.41	176	P	Pn	11 13 23.9	-0.9
KPJI	Karang Pucung	1.88	133	P	Pn	11 13 28.3	+0.3
CTJI	Waduk Cacaban	1.89	120	P	Pn	11 13 29.0	+1.0
KASI	Kota Agung	3.08	280	P	Pn	11 13 40.5	+1.8
TPI	Tanjungpandan	3.27	2	P	Pn	11 13 41.3	+0.6
UGM	Wanagama	3.49	122	P	Pn	11 13 42.4	-0.5
MDSI	Maura Dua	3.69	295	P	Pn	11 13 43.5	-1.6
PCJI	Pacitan	4.19	121	P	Pn	11 13 49.3	-1.1
SNJI	Sawahan-Nganju	4.52	113	P	Pn	11 13 55.3	+0.9
MNAI	Manna	4.87	290	P	Pn	11 13 59.6	+1.4
EGSI	Enggano, Bengk	5.29	277	P	Pn	11 14 02.9	-0.2
	3μm35nm,0.7s						
GMJI	Gumukmas	6.26	111	P	Pn	11 14 15.3	+0.7
JAGI	Jajag, Banyuwa	6.98	111	P	Pn	11 14 21.7	-1.7
	0.2nm5.0nm,0.4s						
RTBI	Rangdo, Negare	7.72	109	P	Pn	11 14 32.7	+0.3
	0.1nm34nm,1.0s						
PPSI	Pulau Pagai	8.19	293	P	Pn	11 14 38.1	0.0
	1μm33nm,0.6s						
PDSI	Padang	8.72	306	P	Pn	11 14 45.0	+0.4
	27nm,0.4s						
TWSI	Taliwang, Sumb	9.64	107	P	Pn	11 14 55.2	-0.7
	10nm,1.2s						
SISI	Saibi	9.65	299	P	Pn	11 14 56.5	+0.4
PLAI	Plampang	10.51	106	P	Pn	11 15 06.4	-0.3
	27nm,1.1s						
PBSI	Pulau Batu	11.00	302	P	Pn	11 15 12.0	-0.6
	80nm,1.5s						
TPTI		13.88	312	P	P	11 15 45.4	-1.6
EDFI	Ende, Flores	14.28	102	P	P	11 15 50.4	-1.2
CMAR	Chiang Mai Arr	25.79	341	P	P	11 17 47.0	+0.5
	0.5nm,0.3s,baz=167,slow=8.7,SNR=4.9						
	0.5nm,0.3s						
WRA	Warramunga Arr	29.47	120	P	P	11 18 19.2	0.0
	0.3nm,0.8s,baz=292,slow=8.5,SNR=1.6						
	0.3nm,0.8s						
ASAR	Alice Springs	30.82	127	P	P	11 18 32.5	+1.6
	0.3nm,0.4s,baz=302,slow=8.1,SNR=15						
ASAR				PcP	PcP	11 21 21.2	+1.0
	0.1nm,0.6s,baz=309,slow=2.8,SNR=3.0						
	0.3nm,0.4s						
JOW	Kunigami	38.36	31	LR	LR	11 36 20.2	
	comp=Z,60nm,20.1s,baz=124,slow=37						
STKA	Stephens Creek	40.88	133	P	P	11 19 55.8	0.0
	1.7nm,0.6s,baz=207,slow=4.5,SNR=5.0						
	1.7nm,0.6s						
SONM	Songino Array	53.66	359	P	P	11 21 34.8	+1.4
	0.5nm,0.4s,baz=182,slow=6.8,SNR=3.7						
	0.5nm,0.4s						
MKAR	Makanchi Array	57.18	340	P	P	11 21 58.2	-0.1
	1.4nm,0.4s,baz=152,slow=8.0,SNR=22						
	1.4nm,0.4s						
KURBB	Kurchatov Arra	61.75	339	P	P	11 22 29.5	+0.2
	3.4nm,0.2s,baz=156,slow=6.4,SNR=2.5						
	3.4nm,0.2s						
ZALV	Zalesovo Beam	62.76	345	P	P	11 22 35.4	-0.3
	0.6nm,0.3s,baz=148,slow=6.5,SNR=5.6						
	0.6nm,0.3s						
BVAR	Borovoye Array	66.71	337	P	P	11 23 00.6	-0.6
	0.7nm,0.5s,baz=150,slow=9.6,SNR=4.7						
	0.7nm,0.5s						

HEL 17 11:14:43.8±0.7**, 61°.45N×31°.48E, h0^{km}, ML1.4, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUF	Ruokolahti	1.22	270	PG	Pg	11 15 05.4	-1.7
RUF				MSG		11 15 20.6	
	comp=Z,4.9nm,0.2s						
RUF				SG	Sg	11 15 21.1	-1.7
JOF	Joensuu	1.48	357	PG	Pn	11 15 10.1	-1.5
	baz=180						
JOF				SG	Sg	11 15 29.7	-1.5
NIF	Nilsia	2.59	320	PN	Pn	11 15 26.6	-0.3
	baz=130						
NIF				SN	Sn	11 15 59.2	+0.2
NIF				MSG		11 16 00.2	
	comp=Z,0.9nm,0.2s						
FIA0	FINESS Array S	2.59	272	PN	Pn	11 15 27.4	+0.4
	baz=75						
FIA0				MSG		11 16 00.2	
	comp=Z,1.1nm,0.2s						
FIA0				SB	Sn	11 16 00.6	+1.5
ARBE	Arbavere	3.39	236	SG	Sb	11 16 28.8	+2.5

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*TXNET **17** 11:16:57.9, 31°.6N±0°.9×104°.2W±1°.0, h7^{km}±2^{km}, ML3.5/19, Error ellipse: s-maj=1.8km s-min=0.9km az=51.8, final*

*NEIC **17** 11:16:58.3±0.5, 31°.62N±0°.01×104°.19W±0°.01, h5^{km}±1^{km}, mb_Lg3.4/101, ML3.8/82, Error ellipse: s-maj=2.8km s-min=2.2km az=321.0*

ISC 17 11:16:58.5±0.9**, 31°.62N**±0°.02×**104°.20W**±0°.02**, h11^{km}±8^{km}, n100, σ1^{s}.05**/105**, 1C, Western Texas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPB09	Culberson Coun	0.18	331	⇑P	Pg	11 17 02.3	-0.2
TPB09				S	Sg	11 17 04.8	-0.5
TPB13	Reeves - Culbe	0.31	102		Pg	11 17 05.0	+0.3
TPB13	Reeves - Culbe	0.31	102	P	Pg	11 17 05.0	+0.3
PECS	Pecos	0.38	131		Pg	11 17 06.0	0.0
PECS					Sg	11 17 11.6	+0.6
PECS	Pecos	0.38	131	P	Pg	11 17 06.0	0.0
PECS				S	Sg	11 17 11.6	+0.6
TPB12	Southwest of T	0.45	153		Pg	11 17 07.5	+0.1
TPB12	Southwest of T	0.45	153	P	Pg	11 17 07.5	+0.1
TPB07	Mentone	0.45	95		Pg	11 17 07.7	+0.2
TPB07					Sb	11 17 14.4	-1.0
TPB07	Mentone	0.45	95	P	Pg	11 17 07.7	+0.2
TPB07				S	Sb	11 17 14.4	-1.0
TPB10	Southeast of T	0.50	131		Pg	11 17 08.5	+0.1
TPB10					Sg	11 17 15.6	+0.5
TPB10	Southeast of T	0.50	131	P	Pg	11 17 08.5	+0.1
TPB10				S	Sg	11 17 15.6	+0.5
GDL2	Guadalupe Moun	0.60	346		Pg	11 17 09.7	-0.5
GDL2	Guadalupe Moun	0.60	346	P	Pg	11 17 09.7	-0.5
PCOS	Crockett Middl	0.62	109		Sb	11 17 19.7	-0.5
PCOS	Crockett Middl	0.62	109	S	Sb	11 17 19.7	-0.5
LWM2	Layne Water Mi	0.63	123	P	Pb	11 17 11.1	-0.4
LWM2				S	Sb	11 17 20.2	-0.3
CLNB	Carlsbad	0.70	23		Pg	11 17 11.2	-0.9
CLNB	Carlsbad	0.70	23	P	Pg	11 17 11.8	-0.3
TPB01	Permian Basin	0.76	152	P	Pg	11 17 12.6	-0.6
TPB01				S	Sg	11 17 23.3	+0.1
TPB03	Saragosa	0.79	132		Pg	11 17 13.7	-0.1
TPB03					Sb	11 17 24.9	-0.2
TPB03	Saragosa	0.79	132	P	Pg	11 17 13.7	-0.1
TPB03				S	Sb	11 17 24.9	-0.2
TPB06	Permian Basin	0.84	88	P	Pb	11 17 14.9	-0.2
TPB04	Verhalen	0.90	118		Pg	11 17 15.6	-0.3
TPB04					Sb	11 17 28.1	-0.2
TPB04	Verhalen	0.90	118	P	Pg	11 17 15.6	-0.3
TPB04				S	Sb	11 17 28.1	-0.2
TPB16	Coyonosa	0.95	121		Pg	11 17 16.4	-0.4
TPB16					Sb	11 17 29.6	0.0
TPB16	Coyonosa	0.95	121	P	Pg	11 17 16.4	-0.4
TPB16				S	Sb	11 17 29.6	0.0
HTMS	Hat Mesa	0.98	29		Pg	11 17 16.6	-0.8
MNTX	Cornudas Mount	1.01	275		Pg	11 17 17.6	-0.4
MNTX					Sg	11 17 31.0	-0.2
MNTX	Cornudas Mount	1.01	275	P	Pg	11 17 17.6	-0.4
MNTX				S	Sg	11 17 31.0	-0.2
TPB05	Hovey Rd	1.02	133	P	Pg	11 17 17.6	-0.5
TPB05				S	Sb	11 17 31.8	0.0
VHRN	Van Horn	1.07	219		Pg	11 17 18.4	-0.7
VHRN					Sb	11 17 33.2	+0.1
VHRN				IAML		11 17 39.1	
	2μm,0.5s						
VHRN	Van Horn	1.07	219	P	Pg	11 17 18.4	-0.7
VHRN				S	Sb	11 17 33.3	+0.1
MNHN	Monahans	1.26	102		Pg	11 17 21.3	-1.4
MNHN	Monahans	1.26	102	P	Pg	11 17 21.3	-1.4
TPB08	Permian Basin	1.32	123		Pn	11 17 23.1	0.0
TPB08	Permian Basin	1.32	123	P	Pn	11 17 23.1	0.0
ALPN	Alpine	1.33	159		Pn	11 17 22.5	-0.7
ALPN					Sg	11 17 40.3	-1.0
ALPN	Alpine	1.33	159	P	Pn	11 17 22.5	-0.7
ALPN				S	Sg	11 17 40.3	-1.0
CPRX	Cap Rock	1.44	11		Pn	11 17 24.7	0.0
CPRX	Cap Rock	1.44	11	P	Pn	11 17 24.7	0.0
ODSA	Odessa	1.49	70		Pn	11 17 25.7	+0.3
ODSA					Sg	11 17 45.8	-0.7
ODSA	Odessa	1.49	70	P	Pn	11 17 25.6	+0.3
ODSA				S	Sg	11 17 45.8	-0.7
TMB04	Seminole	1.77	55	P	Pb	11 17 30.2	-0.8
TMB01	Midkiff	1.81	88	P	Pb	11 17 30.9	-0.8
TMB02	Rankin	1.89	102	P	Pb	11 17 32.5	-0.7
TMB02				S	Sb	11 17 57.7	+0.8
EPT	El Paso	1.97	275		Pb	11 17 33.8	-0.7
EPT					Sg	11 18 01.1	-0.9
EPT				IAML		11 18 02.5	
	comp=E,535nm,0.6s						
EPT				IAML		11 18 03.8	
	comp=N,580nm,0.4s						
EPT	El Paso	1.97	275	S	Sg	11 18 01.1	-0.9
EPT	El Paso	1.97	275	P	Pb	11 17 33.8	-0.7
TMB06	Greenwood	2.07	79	P	Pb	11 17 35.6	-0.6
TMB05	Klondike	2.23	62	P	Pb	11 17 37.7	-1.1
TX31	Lajitas Ar. Si	2.32	168		Pn	11 17 38.5	+1.7
TX31	Lajitas Ar. Si	2.32	168	P	Pn	11 17 38.5	+1.7
TXAR	Lajitas Array	2.32	168		Pn	11 17 38.4	+1.6
SAND	Sanderson	2.44	132		Pn	11 17 40.1	+1.7
SAND				IAmb_Lg		11 18 20.3	
	comp=Z,236nm,0.7s						
SGCY	Sterling City	2.63	83	Pn	Pn	11 17 43.0	+2.0
SGCY				IAmb_Lg		11 18 25.2	
	comp=Z,132nm,1.0s						
MSTX	Muleshoe	2.63	27	Pn	Pn	11 17 42.8	+1.7
MSTX				IAmb_Lg		11 18 21.9	
	comp=Z,135nm,1.0s						
POST	Post	2.70	57		Pn	11 17 43.8	+1.8
OZNA	Ozona	2.72	104		Pn	11 17 43.4	+1.2
CRNM	Carthage	3.16	318		Pn	11 17 50.1	+1.7
SN07	Snyder 07	3.16	61	IAmb_Lg		11 18 43.1	
	comp=Z,67nm,0.7s						
121A	Cookes Peak, D	3.18	288		Pn	11 17 49.5	+0.9
Y22A	Socorro	3.28	316		Pn	11 17 51.7	+1.6
Y22A				IAML		11 19 01.9	
	comp=N,240nm,0.9s						
DKNS	Dickens	3.44	53		Pn	11 17 52.2	+0.2
DKNS				IAmb_Lg		11 18 49.4	
	comp=Z,86nm,0.8s						
DRIO	Del Rio	3.78	124		Pn	11 17 58.2	+1.4
ABQ	Albuquerque	3.82	331	IAML		11 19 00.8	
	comp=Z,185nm,0.8s						
ABQ				IAML		11 19 03.2	
	comp=Z,132nm,0.9s						
ANMO	Albuquerque	3.82	331		Pn	11 17 59.2	+1.7
TASM	ASL Pad, Albuq	3.82	331		Pn	11 17 58.7	+1.2
TASM				IAML		11 19 00.9	
	comp=Z,154nm,0.8s						
TASM				IAML		11 19 03.3	
	comp=Z,156nm,0.8s						
TASM	ASL Pad, Albuq	3.82	331		Pn	11 17 59.7	+2.2
TASM				IAML		11 19 00.9	
	comp=Z,157nm,0.8s						
TASM				IAmb_Lg		11 19 00.9	
	comp=Z,90nm,0.9s						
TASM				IAML		11 19 03.2	
	comp=Z,153nm,0.8s						
TASM	ASL Pad, Albuq	3.82	331	IAML		11 19 01.4	
	comp=Z,146nm,0.9s						
TASM				IAML		11 19 03.3	
	comp=Z,148nm,0.8s						
TASM	ASL Pad, Albuq	3.82	331	IAML		11 19 00.9	
	comp=Z,133nm,0.8s						
TASM				IAML		11 19 03.2	
	comp=Z,135nm,0.8s						
TASM				IAmb_Lg		11 19 03.7	
	comp=Z,152nm,1.2s						
APMT	Aspermont	3.84	63		Pn	11 17 59.1	+1.5
APMT				IAmb_Lg		11 19 09.6	
	comp=Z,52nm,0.8s						
JCT	Junction City	3.94	106		Pn	11 18 00.5	+1.5
ABTX	Abilene, Hawle	3.99	74	IAmb_Lg		11 19 12.1	
	comp=Z,57nm,1.0s						
PH02	Texas Public H	4.21	26		Pn	11 18 04.0	+1.3
PH02				IAML		11 19 14.4	
	comp=Z,381nm,1.1s						
PH02				IAmb_Lg		11 19 14.5	
	comp=Z,205nm,1.3s						
PH02				IAML		11 19 17.1	
	comp=Z,338nm,1.3s						
319A	Douglas	4.35	268		Pn	11 18 06.2	+1.5
BRDY	Brady	4.46	93		Pn	11 18 09.3	+3.3
BRDY				IAmb_Lg		11 19 30.1	
	comp=Z,100nm,0.9s						
HPIG		4.84	196		Pn	11 18 12.4	+0.9
HPIG				IAML		11 19 46.7	
	comp=E,75nm,0.8s						
RTBA	Rita Blanca	4.96	14		Pn	11 18 15.2	+2.1
RTBA				IAmb_Lg		11 19 39.5	
	comp=Z,56nm,0.8s						
PLPT	Palo Pinto	5.13	75	IAmb_Lg		11 19 46.2	
	comp=Z,36nm,1.0s						
833A	Chaparral WMA,	5.30	127	IAmb_Lg		11 19 54.7	
	comp=Z,46nm,0.8s						
WMOK	Wichita Mounta	5.50	54	Pn	Pn	11 18 22.4	+1.9
T25A	Trinidad	5.51	358	Pn	Pn	11 18 22.9	+2.2
TUC	Tucson	5.64	279	IAmb_Lg		11 20 10.4	
	comp=Z,18nm,0.9s						
TUC	Tucson	5.64	279	IAmb_Lg		11 20 12.6	
	comp=Z,17nm,0.8s						
EF02	Christine	5.66	119	IAmb_Lg		11 20 08.6	
	comp=Z,164nm,1.2s						
WHTX	Lake Whitney,	5.75	85	Pn	Pn	11 18 25.0	+1.2
WHTX				IAmb_Lg		11 20 10.2	
	comp=Z,43nm,1.2s						
FW06	Azle	5.78	75	IAmb_Lg		11 20 07.1	
	comp=Z,69nm,1.2s						
ELIS	Ellis County	5.96	41	IAmb_Lg		11 20 19.9	
	comp=Z,56nm,0.9s						
SDCO	Great Sand Dun	6.21	350	Pn	Pn	11 18 31.9	+1.5
MLDN	Muldoon	6.41	105	IAmb_Lg		11 20 37.0	
	comp=Z,70nm,0.9s						
NOKA	Waynoka	6.64	40	IAmb_Lg		11 20 32.4	
	comp=Z,52nm,0.9s						
OKCSW	OKLAHOMA CITY	6.79	54	IAmb_Lg		11 20 44.0	
	comp=Z,72nm,1.1s						
214A	Organ Pipe Nat	7.34	275	Pn	Pn	11 18 48.2	+2.5
OK052	Battle Ridge R	7.54	53	IAmb_Lg		11 21 12.1	
	comp=Z,45nm,1.3s						
KAN08	Anthony NE Sta	7.60	41	IAmb_Lg		11 21 17.1	
	comp=Z,33nm,1.2s						
PV18	Skein Mesa, Pa	7.66	331	Pn	Pn	11 18 52.4	+2.2
CBKS	Cedar Bluff	8.05	26	IAmb_Lg		11 21 37.0	
	comp=Z,37nm,0.9s						
R32A	Long Quarter,	8.14	32	IAmb_Lg		11 21 30.2	
	comp=Z,53nm,1.2s						
OGNE	Ogallala	9.47	10	IAmb_Lg		11 21 59.3	
	comp=Z,35nm,0.9s						
KSU1	Kansas State U	9.70	38	IAmb_Lg		11 22 15.9	
	comp=Z,36nm,1.0s						

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*IDC **17** 11:26:35.9±1.1, 24°.94N×45°.96W, h0^{km}, mb3.9/9, mbtmp3.9/9, MS3.7/16, Error ellipse: s-maj=30.5km s-min=29.4km az=169.0*

ISC 17 11:26:38.2±1.0**, 24°.9N**±0°.2×**45°.9W**±0°.2**, h15^{km}, n28, σ0^{s}.98**/9**, mb4.0**/8**, MS3.8**/15**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	San Juan	19.98	254	LR	LR	11 36 59.9	
	comp=Z,73nm,21.2s,baz=102,slow=31						
SDV	Santo Domingo	28.42	240	LR	LR	11 42 27.2	
	comp=Z,69nm,20.8s,baz=70,slow=34						
SADO	Sadowa	33.36	315	LR	LR	11 43 56.2	
	comp=Z,129nm,21.4s,baz=68,slow=31						
BDFB	Brasilia	40.36	183	LR	LR	11 48 43.5	
	comp=Z,82nm,20.5s,baz=103,slow=33						
FRB	Frobisher Bay	41.58	345	LR	LR	11 49 01.2	
	comp=Z,316nm,18.8s,baz=129,slow=32						
DBIC	Dimbokro	43.26	108	LR	LR	11 49 18.0	
	comp=Z,63nm,19.4s,baz=329,slow=32						
H10N2	ASCENSION HYDR	44.70	133	T	T	12 22 23.7	
	baz=317,slow=75,SNR=29						
H10N3	ASCENSION HYDR	44.70	133	T	T	12 22 22.8	
	baz=317,slow=75,SNR=28						
H10N1	ASCENSION HYDR	44.72	133	T	T	12 22 25.4	
	baz=317,slow=75,SNR=24						
H10S3	ASCENSION HYDR	45.42	134	T	T	12 23 22.8	
	baz=317,slow=74,SNR=27						
H10S2	ASCENSION HYDR	45.43	134	T	T	12 23 24.1	
	baz=263,slow=74,SNR=29						
ULM	Lac du Bonnet	45.86	317	LR	LR	11 50 46.6	
	comp=Z,134nm,19.5s,baz=17,slow=32						
CMIG	Matias Romero	46.16	270	LR	LR	11 51 09.3	
	comp=Z,55nm,20.1s,baz=76,slow=32						
TORD	Torodi Ar. Bea	46.31	96	P	P	11 35 03.1	-0.6
	0.7nm,0.8s,baz=307,slow=8.2,SNR=0.6						
TORD				LR	LR	11 51 59.4	
	comp=Z,108nm,21.3s,baz=270,slow=33						
	0.7nm,0.8s						
LPAZ	La Paz	46.32	210	P	P	11 35 04.5	+0.1
	1.5nm,0.8s,baz=336,slow=4.1,SNR=4.7						
	1.5nm,0.8s						
ANMO	Albuquerque	52.70	296	LR	LR	11 58 41.9	
	comp=Z,44nm,18.7s,baz=48,slow=37						
PDAR	Pinedale Array	54.51	306	P	P	11 36 06.0	+0.3
	1.8nm,1.1s,baz=111,slow=7.0,SNR=5.7						
	1.8nm,1.1s						
YKA	Yellowknife Ar	58.37	329	P	P	11 36 30.9	-1.7
	0.4nm,0.8s,baz=95,slow=6.3,SNR=5.6						
	0.4nm,0.8s						
NEW	Newport	59.51	313	LR	LR	12 00 32.2	
	comp=Z,161nm,18.3s,baz=64,slow=34						
ARCES	ARCESS Array B	60.41	23	P	P	11 36 46.8	+0.2
	0.8nm,0.6s,baz=267,slow=5.4,SNR=5.7						
	0.8nm,0.6s						
PFO	Pinyon Flats O	61.09	296	LR	LR	12 01 48.7	
	comp=Z,149nm,18.2s,baz=48,slow=35						
NVAR	Mina Array Bea	61.62	302	LR	LR	12 01 11.4	
	comp=Z,190nm,20.5s,baz=72,slow=34						
YBH	Yreka Blue Hor	64.32	306	LR	LR	12 03 21.1	
	comp=Z,13nm,19.1s,baz=62,slow=34						
ILAR	Eielson Array	72.26	334	P	P	11 38 03.4	+0.7
	0.4nm,0.8s,baz=70,slow=4.3,SNR=6.1						
ILAR				LR	LR	12 10 09.9	
	comp=Z,99nm,18.0s,baz=60,slow=36						
	0.4nm,0.8s						
MBAR	Mbarara	78.18	96	LR	LR	12 12 14.9	
	comp=Z,42nm,18.0s,baz=352,slow=35						
BVAR	Borovoye Array	84.80	33	P	P	11 39 13.1	+1.1
	0.7nm,0.7s,baz=322,slow=4.4,SNR=2.6						
	0.7nm,0.7s						
KURBB	Kurchatov Arra	90.25	32	P	P	11 39 38.3	0.0
	1.1nm,0.2s,baz=306,slow=4.6,SNR=2.3						
	1.1nm,0.2s						
ZALV	Zalesovo Beam	90.71	27	P	P	11 39 41.0	+0.6
	0.6nm,0.6s,baz=318,slow=2.0,SNR=3.7						
	0.6nm,0.6s						

IDC 17 11:33:08.4±1.5**, 5°.94N×124°.48E, h0^{km}, mb3.2**/3**, mbtmp3.2**/3**, Error ellipse: s-maj=37.4km s-min=22.8km az=98.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.57	44	Pg	Pn	11 33 36.8	-0.8
	40nm,0.3s,baz=93,slow=16,SNR=3.8						
WRA	Warramunga Arr	27.48	160	P	P	11 38 57.5	+0.8
	0.2nm,0.7s,baz=337,slow=11,SNR=5.6						
	0.2nm,0.7s						
ASAR	Alice Springs	30.83	163	P	P	11 39 25.6	-0.8
	0.1nm,0.3s,baz=333,slow=8.8,SNR=5.5						
	0.1nm,0.3s						
MKAR	Makanchi Array	54.48	325	P	P	11 42 37.9	0.0
	0.2nm,0.4s,baz=134,slow=8.2,SNR=4.1						
	0.2nm,0.4s						

IDC 17 11:33:46.3±1.4**, 6°.45N×125°.41E, h0^{km}, mb3.5**/4**, mbtmp3.5**/4**, Error ellipse: s-maj=47.5km s-min=9.2km az=99.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.64	15	Pg	Pg	11 33 58.1	-0.4
	456nm,0.3s,baz=251,slow=3.2,SNR=17						
DAV				Lg	Lg	11 34 07.8	
	369nm,0.3s,baz=75,slow=20,SNR=8.6						
DAV	Davao City (W)	0.64	15	P	Pg	11 33 57.0	-1.6
WRA	Warramunga Arr	27.66	162	P	P	11 39 35.5	-0.5
	0.3nm,0.4s,baz=339,slow=9.5,SNR=4.6						
	0.3nm,0.4s						
ASAR	Alice Springs	31.06	165	P	P	11 40 05.5	-0.7
	0.1nm,0.4s,baz=338,slow=6.7,SNR=5.4						
	0.1nm,0.4s						
STKA	Stephens Creek	41.12	159	P	P	11 41 33.5	+1.3
	0.5nm,0.3s,baz=338,slow=17,SNR=1.8						
	0.5nm,0.3s						
MKAR	Makanchi Array	54.59	325	P	P	11 43 16.9	+0.4
	0.3nm,0.6s,baz=133,slow=7.4,SNR=2.5						
	0.3nm,0.6s						

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*IDC **17** 11:47:17.7±1.4, 50°.12N×76°.20E, h0^{km}, mbtmp2.8/3, ML2.2/3, Error ellipse: s-maj=15.8km s-min=12.2km az=33.0*

*NNC **17** 11:47:18.5±4.0, 49°.87N×76°.53E, h0^{km}, mb2.8, mpv2.6, Error ellipse: s-maj=40.8km s-min=22.1km az=122.0, Suspected Mining explosion.*

ISC 17 11:47:16.9±1.2**, 50°.12N**±0°.07×**76°.24E**±0°.07**, h0^{km}, n9, σ1^{s}.60**/13**, 5C-3D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	1.55	70	Pg	Pg	11 47 46.6	0.0
	0.8nm,0.3s,baz=255,slow=15,SNR=15						
KURBB				Lg	Lg	11 48 07.8	
	0.9nm,0.3s,baz=256,slow=30,SNR=6.4						
KURBB	Kurchatov Arra	1.55	70	⇑Pn	Pb	11 47 46.4	0.0
	2.6nm,0.4s						
KURBB				⇑Sn	Sn	11 48 07.7	+1.1
	29nm,0.7s						
KURK	Kurchatov	1.64	68	⇓Pn	Pn	11 47 47.5	+0.6
	2.1nm,0.6s						
KURK				⇓Sn	Sg	11 48 10.2	+0.8
	11nm,0.9s						
BVAR	Borovoye Array	4.67	311	Pn	Pn	11 48 28.7	+0.1
	baz=125,slow=14,SNR=3.0						
	0.5nm,0.4s						
MAKZ	Makanchi	5.05	129	⇓Pg	Pb	11 48 46.0	-0.2
	0.8nm,0.5s						
MAKZ				⇑Lg	Lg	11 49 48.1	
	1.3nm,0.5s						
MK31	Makanchi Array	5.22	127	⇑Pg	Pb	11 48 46.2	-2.8
	0.3nm,0.6s,baz=327,slow=16,SNR=4.1						
MK31				⇑Lg	Lg	11 49 55.6	
	0.6nm,0.3s,baz=316,slow=24,SNR=4.4						
MKAR	Makanchi Array	5.22	127	Pn	Pn	11 48 37.6	+1.4
	0.1nm,0.3s,baz=306,slow=14,SNR=9.1						
MKAR				Pg	Pb	11 48 46.6	-2.4
	0.2nm,0.3s,baz=309,slow=14,SNR=4.1						

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MKAR                                Sn     Sn     11 49 38.0 +1.0
      0.3nm,0.3s,baz=310,slow=21,SNR=4.5
MKAR                                Lg     Lg     11 49 57.6
      0.4nm,0.3s,baz=309,slow=25,SNR=5.1
      0.2nm,0.3s
I46RU ZALESOVO INFRA   6.54  51     I      I      12 28 00.0
      baz=234,slow=327,SNR=11
ZALV  Zalesovo Beam    6.54  51     Pn     Pn     11 48 54.6 +0.4
      0.4nm,0.3s,baz=243,slow=15,SNR=5.6
ZALV                                Sn     Sn     11 50 06.8 -2.6
      0.2nm,0.3s,baz=238,slow=24,SNR=5.1
      0.8nm,0.3s
```

IDC 17 11:54:34.4±2.2**, 0°.60N**×**125°.84E, h0^{km}, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=191.7km s-min=27.9km az=65.0, Northern Molucca Sea**

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Code  Station Name      Δ°   AZ°    Phase ID        Time      Res
                                    Op     ISC     h  m  s    ISC
WRA   Warramunga Arr   22.05 158    P      P      11 59 30.2 -0.8
      1.2nm,0.7s,baz=336,slow=11,SNR=12
      1.2nm,0.7s
ASAR  Alice Springs    25.36 163    P      P      12 00 04.0 +0.6
      0.4nm,0.4s,baz=347,slow=11,SNR=12
      0.4nm,0.4s
MKAR  Makanchi Array   59.63 327    P      P      12 04 40.3 -0.1
      0.2nm,0.4s,baz=130,slow=6.1,SNR=2.0
      0.2nm,0.4s
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*IDC **17** 12:06:20.8±0.7, 45°.80N×81°.65E, h0^{km}, mb3.8/11, mbtmp3.8/17, ML3.4/6, MS3.7/2, Error ellipse: s-maj=11.1km s-min=7.9km az=121.0*

*NNC **17** 12:06:21.5±0.3, 45°.88N×81°.50E, h0^{km}±4^{km}, mb4.5, mpv4.3, Error ellipse: s-maj=6.3km s-min=1.5km az=123.0*

*ASRS **17** 12:06:21.8±0.2, 46°N±2°×8°1E±°, h9^{km}, MLh4.8/11, Error ellipse: s-maj=6.1km s-min=1.9km az=128.7, confirmed*

*MOS **17** 12:06:21.9±1.0, 45°.87N×81°.52E, h12^{km}, mb4.2/7, Error ellipse: s-maj=7.5km s-min=4.2km az=68.5*

*NEIC **17** 12:06:22.1±1.7, 45°.95N±0°.07×81°.7E±0°.1, h10^{km}±1^{km}, mb4.3/4, Error ellipse: s-maj=18.5km s-min=7.0km az=302.0*

*SOME **17** 12:06:23.3, 45°.85N×81°.42E, h15^{km}, MS3.1*

ISC 17 12:06:21.4±1.0**, 45°.88N**±0°.02×**81°.49E**±0°.02**, h1**^{km}±6^{km}**, n189, σ2^{s}19**/259**, mb3.8**/19**, 22C-12D, Kazakhstan-Xinjiang border region**

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Code  Station Name      Δ°   AZ°    Phase ID        Time      Res
                                    Op     ISC     h  m  s    ISC
MAKZ  Makanchi          0.99  20           Pg     12 06 40.6 +0.1
MAKZ                                Sn     Sg     12 06 52.4 -0.9
MAKZ  Makanchi          0.99  20   ⇓Pg     Pg     12 06 40.5 +0.1
MAKZ                                Sg     Sg     12 06 53.7 +0.4
MAKZ  Makanchi          0.99  20   ⇓P      Pg     12 06 40.6 +0.1
      58nm,0.4s
MAKZ                               ⇑S      Sb     12 06 54.3 -0.7
      192nm,0.4s
MAKZ  Makanchi          0.99  20    PG     Pg     12 06 40.8 +0.4
MAKZ                                              12 06 54.7
MK31  Makanchi Array    1.07  31    Pn     Pb     12 06 41.9 -0.9
MK31                                Sn     Sb     12 06 53.7 -3.6
MK31  Makanchi Array    1.07  31   ⇑P      Pb     12 06 42.1 -0.7
      55nm,0.3s,baz=200,slow=18,SNR=1114
MK31                               ⇑S      Sg     12 06 56.7 +0.8
      51nm,0.3s,baz=203,slow=29,SNR=8.3
MK31  Makanchi Array    1.07  31d iPG      Pb     12 06 41.9 -0.9
MK31                                pmax   pmax
      comp=Z,55nm,0.3s
MKAR  Makanchi Array    1.07  31    Pg     Pb     12 06 42.0 -0.8
      comp=Z,51nm,0.3s,baz=200,slow=17,SNR=1486
MKAR                                Lg     Lg     12 06 56.4
      comp=Z,83nm,0.3s,baz=203,slow=29,SNR=23
KAPS  Kapalarasan       1.61 249    P      Pg     12 06 52.5 +0.3
      comp=Z,719nm,0.4s
KAPS                                S      Sg     12 07 14.3 +1.3
      comp=Z,2µm,0.4s
KNOS  Konyrlen          2.23 228    Pg     Pg     12 07 03.6 -0.5
      comp=Z,213nm,0.3s
KNOS                                Lg     Lg     12 07 32.9
      comp=Z,915nm,0.3s
TDK   Taldyqorghan      2.34 249    Pg     Pg     12 07 05.8 -0.4
      comp=Z,303nm,0.5s
TDK                                 Lg     Lg     12 07 36.2
      comp=Z,3µm,0.4s
TDK   Taldyqorghan      2.34 249   eP      Pg     12 07 05.8 -0.4
      comp=Z,303nm,0.5s
TDK                                eS      Sg     12 07 36.2 -0.2
      comp=Z,3µm,0.4s
TDK   Taldyqorghan      2.34 249   eP      Pb     12 07 02.9 -1.4
TDK                                eS      Sb     12 07 33.6  0.0
TDK   Taldyqorghan      2.34 249   ePN     Pb     12 07 02.8 -1.4
TDK                                eS      Sb     12 07 33.6  0.0
KTMS  Ketmen            2.56 199    Pg     Pb     12 07 08.4 +0.2
      comp=Z,72nm,0.3s
KTMS                                Lg     Lg     12 07 41.0
      comp=Z,555nm,0.3s
KTMS  Ketmen            2.56 199   eP      Pb     12 07 08.4 +0.2
      comp=Z,72nm,0.3s
KTMS                               eS      Sb     12 07 41.0 +0.8
      comp=Z,555nm,0.3s
BLB   Baldybastay       2.78 231    Pg     Pb     12 07 12.8 +1.0
      comp=Z,136nm,0.3s
BLB                                 Lg     Lg     12 07 49.4
      comp=Z,1µm,0.5s
ZSN   Zaisan            2.81  55    Pg     Pg     12 07 17.4 +2.1
ZSN                                 Lg     Lg     12 07 56.1
ZSN   Zaisan            2.81  55   eP      Pg     12 07 15.3  0.0
      comp=Z,34nm,0.3s
ZSN                                eS      Sg     12 07 52.4 +0.8
      comp=Z,246nm,0.8s
ZSN   Zaisan            2.81  55   eP      Pn     12 07 07.4  0.0
ZSN                                eS      Sn     12 07 41.7 -0.3
ZSN   Zaisan            2.81  55   ePN     Pn     12 07 07.4  0.0
ZSN                                eS      Sn     12 07 41.6 -0.3
PDGK  Podgornoye        2.92 210   ⇑Pn     Pn     12 07 10.5 +1.5
      comp=Z,11nm,0.6s
PDGK                               ⇑Pg     Pb     12 07 15.1 +0.9
      comp=Z,153nm,0.6s
PDGK                               ⇑Lg     Lg     12 07 52.3
      comp=Z,834nm,0.6s
PDGK  Podgornoye        2.92 210    PN     Pn     12 07 10.5 +1.5
SHLS  Shalkode          3.08 209    Pg     Pb     12 07 16.0 -1.0
      comp=Z,177nm,0.5s
SHLS                                Lg     Lg     12 07 53.8
      comp=Z,2µm,0.5s
SHLS  Shalkode          3.08 209   eP      Pb     12 07 16.0 -1.0
      comp=Z,177nm,0.5s
SHLS                               eS      Sb     12 07 53.8 -1.3
      comp=Z,2µm,0.5s
SHLS  Shalkode          3.08 209   eP      Pn     12 07 10.8 -0.4
SHLS  Shalkode          3.08 209   ePN     Pn     12 07 10.8 -0.4
ARXS  Arharly           3.08 239    Pg     Pb     12 07 18.0 +1.0
      comp=Z,90nm,0.4s
ARXS                                Lg     Lg     12 07 57.8
      comp=Z,994nm,0.5s
ARXS  Arharly           3.08 239   eP      Pb     12 07 18.0 +1.0
      comp=Z,90nm,0.4s
ARXS                               eS      Sb     12 07 57.8 +2.8
      comp=Z,994nm,0.5s
KPKS  Kokpek            3.13 221    Pg     Pb     12 07 18.8 +0.9
      comp=Z,0.6nm,0.3s
KPKS                                Lg     Lg     12 07 58.9
      comp=Z,2µm,0.7s
KPKS  Kokpek            3.13 221   eP      Pb     12 07 18.8 +0.9
      comp=Z,0.6nm,0.3s
KPKS                               eS      Sb     12 07 58.9 +2.4
      comp=Z,2µm,0.7s
UZB   Uzynbulak         3.25 214    Pg     Pb     12 07 21.4 +1.5
      comp=Z,39nm,0.6s
UZB                                 Lg     Lg     12 08 02.6
      comp=Z,644nm,0.4s
UZB   Uzynbulak         3.25 214   eP      Pb     12 07 21.4 +1.5
      comp=Z,39nm,0.6s
UZB                                eS      Sb     12 08 02.6 +2.7
      comp=Z,644nm,0.4s
UZB   Uzynbulak         3.25 214   eP      Pn     12 07 15.0 +1.5
UZB                                eS      Sb     12 07 55.5 -4.5
UZB   Uzynbulak         3.25 214   ePN     Pn     12 07 15.0 +1.5
UZB                                eS      Sb     12 07 55.4 -4.5
KURS  Kuram             3.36 226    Pg     Pb     12 07 22.9 +1.2
      comp=Z,74nm,0.6s
KURS                                Lg     Lg     12 08 05.9
      comp=Z,480nm,0.4s
SATY  Saty              3.58 219    Pg     Pb     12 07 27.2 +1.7
      comp=Z,175nm,0.8s
SATY                                Lg     Lg     12 08 13.2
      comp=Z,448nm,0.4s
SATY  Saty              3.58 219   eP      Pn     12 07 19.8 +1.8
SATY  Saty              3.58 219   ePN     Pn     12 07 19.8 +1.8
CHKK  Chushkaly         3.78 239    Pg     Pb     12 07 30.9 +1.9
      comp=Z,119nm,0.8s
CHKK                                Lg     Lg     12 08 19.8
      comp=Z,320nm,0.4s
CHKK  Chushkaly         3.78 239   eP      Pb     12 07 30.9 +1.9
      comp=Z,119nm,0.8s
CHKK                               eS      Sg     12 08 19.8 -3.0
      comp=Z,320nm,0.4s
CHKK  Chushkaly         3.78 239   eP      Pn     12 07 22.2 +1.4
CHKK  Chushkaly         3.78 239   ePN     Pn     12 07 22.2 +1.4
KTBS  Karatobe          4.05 239    Pg     Pb     12 07 35.8 +2.3
      comp=Z,126nm,0.6s
KTBS                                Lg     Lg     12 08 27.9
      comp=Z,0.5nm,0.5s
PRZ   Przheval'sk       4.05 214           Pn     12 07 26.0 +1.4
PRZ   Przheval'sk       4.05 214    Pg     Pg     12 07 38.0 -1.0
PRZ   Przheval'sk       4.05 214    Sg     Sg     12 08 28.9 -2.7
PRZ   Przheval'sk       4.05 214    Pn     Pn     12 07 26.1 +1.4
PRZ   Przheval'sk       4.05 214    PN     Pn     12 07 26.0 +1.4
KOTS  Kotyrbulak        4.09 231    Pg     Pg     12 07 37.4 -2.4
      comp=Z,92nm,0.5s
KOTS                                Lg     Lg     12 08 30.8
      comp=Z,473nm,0.5s
KOTS  Kotyrbulak        4.09 231   eP      Pg     12 07 37.4 -2.4
      comp=Z,92nm,0.5s
KOTS                               eS      Sg     12 08 30.8 -2.0
      comp=Z,473nm,0.5s
KUU   Kurty             4.16 243    Pg     Pb     12 07 38.3 +3.0
      comp=Z,67nm,0.7s
KUU                                 Lg     Lg     12 08 31.6
      comp=Z,345nm,0.3s
KUU   Kurty             4.16 243   eP      Pb     12 07 38.3 +3.0
      comp=Z,67nm,0.7s
KUU                                eS      Sg     12 08 31.6 -3.4
      comp=Z,345nm,0.3s
MDOK  Medeo             4.17 231    Pg     Pb     12 07 37.5 +1.8
      comp=Z,84nm,0.7s
MDOK                                Lg     Lg     12 08 30.8
      comp=Z,236nm,0.7s
MDOK  Medeo             4.17 231   eP      Pn     12 07 28.1 +1.7
MDOK                               eS      Sn     12 08 18.4 +2.7
MDOK  Medeo             4.17 231   ePN     Pn     12 07 28.0 +1.7
MDOK                               eS      Sn     12 08 18.4 +2.7
KNDC  Almaty            4.18 232   ⇑Pg     Pb     12 07 38.4 +2.6
      comp=Z,188nm,0.8s
KNDC                               ⇑Lg     Lg     12 08 31.9
      comp=Z,334nm,0.8s
AAA   Alma-Ata          4.22 232   eP      Pn     12 07 28.4 +1.6
AAA   Alma-Ata          4.22 232   ePN     Pn     12 07 28.4 +1.6
TNSS  Tian-Shan         4.31 230    Pg     Pb     12 07 41.2 +3.0
      comp=Z,8.7nm,0.5s
TNSS                                Lg     Lg     12 08 37.0
      comp=Z,43nm,0.6s
TNSS  Tian-Shan         4.31 230   eP      Pb     12 07 41.2 +3.0
      comp=Z,8.7nm,0.5s
TNSS                               eS      Sg     12 08 37.0 -2.9
      comp=Z,43nm,0.6s
TNSS  Tian-Shan         4.31 230   eP      Pn     12 07 30.2 +1.8
TNSS                               eS      Sn     12 08 22.5 +2.9
TNSS  Tian-Shan         4.31 230   ePN     Pn     12 07 30.2 +1.8
TNSS                               eS      Sn     12 08 22.4 +2.9
IZV   Izvestkoviy       4.50 233    Pg     Pb     12 07 42.5 +1.3
      comp=Z,31nm,0.5s
IZV                                 Lg     Lg     12 08 39.6
      comp=Z,147nm,0.6s
IZV   Izvestkoviy       4.50 233   eP      Pb     12 07 43.0 +1.8
      comp=Z,31nm,0.5s
IZV                                eS      Sb     12 08 39.9 +4.0
      comp=Z,147nm,0.6s
MTBS  Maitube           4.54 235    Pg     Pb     12 07 43.9 +2.0
      comp=Z,29nm,0.5s
MTBS                                Lg     Lg     12 08 41.6
      comp=Z,342nm,0.4s
MTBS  Maitube           4.54 235   eP      Pb     12 07 43.9 +2.0
      comp=Z,29nm,0.5s
MTBS                               eS      Sb     12 08 41.6 +4.5
      comp=Z,342nm,0.4s
SEM   Semipalatinsk     4.61 350    Pg     Pg     12 07 48.1 -1.6
      comp=Z,26nm,0.4s
SEM                                 Lg     Lg     12 08 49.4
      comp=Z,132nm,0.6s
SEM   Semipalatinsk     4.61 350   eP      Pg     12 07 48.1 -1.6
      comp=Z,26nm,0.4s
SEM                                eS      Sg     12 08 49.4 -0.1
      comp=Z,132nm,0.6s
DGS   Degeres           4.86 239    Pg     Pg     12 07 51.6 -2.9
      comp=Z,40nm,0.6s
DGS                                 Lg     Lg     12 08 55.4
      comp=Z,209nm,0.4s
KDJ   Kajisay           4.86 221           Pn     12 07 36.4 +0.6
KDJ   Kajisay           4.86 221    S      Sn     12 08 30.8 -2.0
KDJ   Kajisay           4.86 221    Pg     Pb     12 07 50.9 +3.4
KDJ   Kajisay           4.86 221    Pn     Pn     12 07 37.4 +1.6
KDJ   Kajisay           4.86 221    Sg     Sg     12 08 58.4 +0.8
KDJ   Kajisay           4.86 221    PN     Pn     12 07 36.4 +0.6
TARG  Taragay, Kyrgy    4.93 214           Pn     12 07 38.4 +1.6
TARG  Taragay, Kyrgy    4.93 214    PN     Pn     12 07 38.4 +1.6
WUS   Wushi             4.96 200           Pn     12 07 38.7 +1.7
WUS   Wushi             4.96 200    Pn     Pn     12 07 38.2 +1.1
WUS                                 S      Sn     12 08 32.1 -3.0
KURBB Kurchatov Arra    5.14 339    Pn     Pn     12 07 41.1 +1.7
      comp=Z,0.5nm,0.3s,baz=166,slow=12,SNR=24
KURBB                               Sn     Sn     12 08 38.4 -1.0
      comp=Z,1.6nm,0.3s,baz=159,slow=21,SNR=5.8
KURBB                               Lg     Lg     12 08 59.4
      comp=Z,2.2nm,0.3s,baz=148,slow=26,SNR=9.2
      comp=Z,1.7nm,0.3s
KURBB Kurchatov Arra    5.14 339   ⇓Pn     Pn     12 07 41.3 +1.9
      comp=Z,7.5nm,0.6s
KURBB                              ⇓Pg     Pb     12 07 55.2 +3.1
      comp=Z,22nm,0.8s
KURBB                              ⇓Sn     Sn     12 08 39.8 +0.4
      comp=Z,69nm,0.8s
KURBB                              ⇓Lg     Lg     12 09 05.1
      comp=Z,409nm,0.6s
KURBB Kurchatov Arra    5.14 339    PN     Pn     12 07 41.3 +1.9
TKM2  Tokmak 2          5.15 237    P      Pn     12 07 41.5 +1.7
      SNR=10
KURK  Kurchatov         5.21 340           Pn     12 07 38.5 -1.8
KURK  Kurchatov         5.21 340    Pn     Pn     12 07 41.2 +0.9
KURK                                Pg     Pg     12 07 57.7 -3.4
KURK                                Sg     Sg     12 09 03.3 -5.2
KURK  Kurchatov         5.21 340   ⇑Pn     Pn     12 07 42.1 +1.8
      comp=Z,0.6nm,0.6s
KURK                               ⇑Pg     Pb     12 07 56.3 +3.2
      comp=Z,7.1nm,0.9s
KURK                               ⇓Sn     Sn     12 08 41.4 +0.5
      comp=Z,13nm,0.7s
KURK                               ⇑Lg     Lg     12 09 06.3
      comp=Z,242nm,0.8s
KURK  Kurchatov         5.21 340   i PN    Pn     12 07 42.0 +1.7
BOOM  Boomskoye usch    5.23 232           Pn     12 07 43.2 +2.4
BOOM  Boomskoye usch    5.23 232    S      Sn     12 08 34.9 -6.9
BOOM  Boomskoye usch    5.23 232    Pn     Pn     12 07 43.1 +2.4
BOOM  Boomskoye usch    5.23 232    PN     Pn     12 07 43.2 +2.4
ULHL  Ulahol            5.24 228    P      Pn     12 07 43.8 +2.9
      SNR=11
BTLS  Baital            5.30 264    Pg     Pg     12 08 01.3 -1.6
      comp=Z,82nm,0.8s
BTLS                                Lg     Lg     12 09 11.9
      comp=Z,156nm,0.8s
BTLS  Baital            5.30 264   eP      Pg     12 08 01.3 -1.6
      comp=Z,82nm,0.8s
BTLS                               eS      Sg     12 09 11.9 +0.4
      comp=Z,156nm,0.8s
TUNR  Tungur            5.38  35    Pn     Pn     12 07 45.3 +2.6
TUNR                                S      Sn     12 08 47.4 +2.1
DGZ   Jazzator, Alta    5.54  44    Pn     Pn     12 07 48.0 +3.0
DGZ                                 S      Sn     12 08 51.3 +1.9
DGZ   Jazzator, Alta    5.54  44   i PN    Pn     12 07 47.4 +2.4
CHMS  Chumysh           5.61 242    P      Pg     12 08 05.7 -3.2
      SNR=14
USP   Ospenovka         5.63 245    P      Pn     12 07 47.5 +1.3
      SNR=14
KBK   Karagaybulak      5.69 238    P      Pn     12 07 49.3 +2.2
      SNR=13
FRU1  Bishkek           5.79 240    Sg     Sg     12 09 23.9 -3.5
FRU1  Bishkek           5.79 240    Pg     Pb     12 08 07.1 +3.9
AAK   Ala-Archa         5.97 240    P      Pn     12 07 53.0 +1.9
      SNR=9.6
AAK   Ala-Archa         5.97 240    Pn     Pn     12 07 52.9 +1.9
      comp=Z,1.6nm,0.3s,baz=75,slow=6.8,SNR=23
AAK                                 Sn     Sn     12 08 58.8 -1.3
      comp=Z,4.5nm,0.3s,baz=262,slow=8.8,SNR=5.2
AAK                                 Lg     Lg     12 09 27.3
      comp=Z,3.2nm,0.3s,baz=263,slow=22,SNR=6.6
      comp=Z,4.7nm,0.4s
AAK   Ala-Archa         5.97 240    Pn     Pn     12 07 52.5 +1.6
AAK                                 Pg     Pg     12 08 12.4 -3.4
AAK                                 Sg     Sg     12 09 28.0 -5.2
AAK   Ala-Archa         5.97 240   ⇑Pn     Pn     12 07 52.1 +1.1
      comp=Z,25nm,0.5s
AAK                                ⇓Pg     Pg     12 08 11.7 -4.1
      comp=Z,82nm,0.5s
AAK                                ⇑Sn     Sn     12 08 60.0 -0.1
      comp=Z,134nm,0.6s
AAK                                ⇑Lg     Lg     12 09 27.1
      comp=Z,430nm,0.6s
AAK   Ala-Archa         5.97 240c iPN      Pn     12 07 52.6 +1.6
AAK                                 pmax   pmax
      comp=Z,25nm,0.5s
CHBI  Chibit, Altay     6.00  40    Pn     Pn     12 07 54.6 +3.4
CHBI                                S      Sn     12 09 02.0 +1.4
AKAR  Aktash            6.05  41    Pn     Pn     12 07 55.3 +3.2
AKAR                                S      Sn     12 09 05.7 +3.6
AKAR  Aktash            6.05  41    PN     Pn     12 07 55.2 +3.2
AKAR                                S      Sn     12 09 05.6 +3.6
ELDR  Elanda            6.16  28    Pn     Pn     12 07 56.0 +2.6
ELDR                                S      Sn     12 09 05.7 +1.4
ELDR  Elanda            6.16  28    PN     Pn     12 07 55.9 +2.6
ELDR                                S      Sn     12 09 05.7 +1.4
UCH   Uchtor            6.21 236    P      Pn     12 07 57.4 +2.9
      SNR=7.6
CUR   Chagan-Uzun       6.25  45    Pn     Pn     12 07 57.4 +2.6
CUR                                 S      Sn     12 09 09.5 +2.6
CUR   Chagan-Uzun       6.25  45    PN     Pn     12 07 57.4 +2.6
CUR                                 S      Sn     12 09 09.5 +2.6
EKS2  Erkin-Say         6.40 243    P      Pn     12 07 59.3 +2.5
      SNR=6.0
ULGR  Ulagan, Altay     6.42  40    Pn     Pn     12 08 00.2 +3.1
ULGR                                S      Sn     12 09 14.0 +3.0
ULGR  Ulagan, Altay     6.42  40    PN     Pn     12 08 00.2 +3.1
ULGR                                S      Sn     12 09 14.0 +3.0
ARLS  Aral              6.55 235    Pn     Pn     12 07 60.0 +1.0
ARTR  Artybash          7.05  31    Pn     Pn     12 08 08.7 +3.0
ARTR                                S      Sn     12 09 28.5 +2.0
ARTR  Artybash          7.05  31    PN     Pn     12 08 08.6 +3.0
ARTR                                S      Sn     12 09 28.4 +2.0
YALR  Yailyu, Altay     7.15  32    Pn     Pn     12 08 09.8 +2.8
MNAS  Manas             7.29 246    Pn     Pn     12 08 10.5 +1.4
KSH   Kashi             7.54 214    Pn     Pb     12 08 24.8 -8.2
KSH                                 Sn     Sg     12 10 32.0 +8.6
KSH                                 smax   smax
      comp=N,52nm,1.2s
KSH                                 smax   smax
      comp=E,35nm,0.9s
DZA   Taraz             7.86 251   eP      Pn     12 08 18.6 +1.8
DZA   Taraz             7.86 251   eP      Pn     12 08 18.6 +1.8
KK31  Karatay Array     8.32 254           Pn     12 08 23.9 +0.9
KK31  Karatay Array     8.32 254   ⇓Pn     Pn     12 08 24.0 +0.9
      comp=E,5.8nm,0.3s,baz=63,slow=12,SNR=150
KK31                               ⇑Sn     Sn     12 09 57.7  0.0
      comp=E,8.2nm,0.4s,baz=57,slow=28,SNR=5.2
KK31                               ⇑Lg     Lg     12 10 44.7
      comp=E,39nm,0.6s,baz=65,slow=29,SNR=7.0
KK31  Karatay Array     8.32 254   eP      Pn     12 08 24.1 +1.0
KK31                               e              12 09 57.3
KKAR  Karatay Array     8.32 254           Pn     12 08 23.9 +0.8
KKAR  Karatay Array     8.32 254    P      Pn     12 08 23.9 +0.8
ZAA0  Zalesovo Array    8.36  14           Pn     12 08 23.0 -0.6
ZAA0  Zalesovo Array    8.36  14   ⇑Pn     Pn     12 08 24.6 +1.0
      comp=E,1.0nm,0.6s
ZAA0                               ⇑Sn     Sn     12 09 56.5 -2.0
      comp=E,4.1nm,1.0s
ZAA0                               ⇓Lg     Lg     12 10 48.2
      comp=E,12nm,0.9s
ZALV  Zalesovo Beam     8.36  14    Pn     Pn     12 08 24.9 +1.3
      comp=E,1.2nm,0.3s,baz=199,slow=13,SNR=27
ZALV                                Sn     Sn     12 09 57.0 -1.5
      comp=E,1.8nm,0.3s,baz=197,slow=24,SNR=4.1
ZALV                                Lg     Lg     12 10 45.6
      comp=E,1.4nm,0.3s,baz=195,slow=27,SNR=5.6
ZALV                                LR     LR     12 11 52.6
      comp=E,136nm,18.7s,baz=302,slow=40
      comp=E,6.8nm,0.5s
ZALV  Zalesovo Beam     8.36  14           Pn     12 08 21.6 -2.0
IUG   Iuzhnay           9.05 250   eP      Pn     12 08 35.5 +2.3
IUG                                eS      Sn     12 10 19.7 +3.8
IUG   Iuzhnay           9.05 250   eP      Pn     12 08 35.5 +2.3
IUG                                eS      Sn     12 10 19.6 +3.8
BVA0  Borovoye Array   10.16 319   ⇑Pn     Pn     12 08 50.1 +1.8
      comp=E,3.2nm,0.7s,baz=249,slow=40,SNR=7.7
BVA0                               ⇑Sn     Sn     12 10 41.9 -0.8
      comp=E,5.5nm,1.1s,baz=127,slow=26,SNR=4.2
BVA0                               ⇓Lg     Lg     12 11 45.5
      comp=E,58nm,1.4s,baz=124,slow=24,SNR=5.8
BVA0  Borovoye Array   10.16 319    P      Pn     12 08 50.6 +2.4
BVA0                                S      Sn     12 10 41.9 -0.8
BVAR  Borovoye Array   10.16 319    Pn     Pn     12 08 49.5 +1.2
      comp=E,0.1nm,0.3s,baz=132,slow=15,SNR=6.0
BVAR                                Sn     Sn     12 10 41.1 -1.6
      comp=E,0.2nm,0.3s,baz=133,slow=22,SNR=4.3
BVAR                                Lg     Lg     12 11 45.6
      comp=E,0.3nm,0.3s,baz=121,slow=23,SNR=6.7
      comp=E,1.4nm,0.3s
BORK  Borovoye         10.21 319   i P     Pn     12 08 50.5 +1.7
GAR   Garm             10.73 234           Pn     12 08 57.2 +0.9
MANEM Manem            11.08 225           Pn     12 09 02.9 +1.8
KNGR  Kungurtug, Tuv   11.69  60   i P     Pn     12 09 08.1 -1.1
AB31  Akbulak array    14.92 291           Pn     12 09 50.8 -2.5
AB31                                IAmb   IAmb   12 10 01.4
      comp=Z,6.3nm,0.7s
AB31  Akbulak array    14.92 291    P      Pn     12 09 50.6 -2.7
      comp=Z,4.1nm,0.7s,baz=93,slow=14,SNR=52
AB31  Akbulak array    14.92 291    P      Pn     12 09 50.6 -2.7
ABKAR Akbulak array    14.92 291           Pn     12 09 50.5 -2.8
GTA   Gaotai           14.94 109   eP      P      12 09 59.3 -0.3
GTA                                 sP     Pn     12 10 05.9  +12
GTA                                 pmax   pmax
      comp=Z,2.0nm,1.1s
TLY   Talaya           15.69  60   i P     Pn     12 10 00.8 -2.7
TLY                                 pmax   pmax
      comp=Z,6.0nm,1.1s
AKTO  Aktyubinsk       16.29 295    Pn     Pn     12 10 09.2 -1.9
      comp=Z,0.4nm,0.3s,baz=94,slow=15,SNR=6.8
AKTO                                Sn     Sn     12 13 04.9 -7.4
      comp=Z,0.2nm,0.3s,baz=72,slow=20,SNR=1.7
AKTO                                Lg     Lg     12 14 55.4
      comp=Z,0.2nm,0.3s,baz=172,slow=17,SNR=4.4
      comp=Z,1.2nm,0.3s
AKTO  Aktyubinsk       16.29 295   ⇑P      Pn     12 10 08.8 -2.3
      comp=Z,1.5nm,0.7s
SONM  Songino Array    17.13  74    P      P      12 10 22.1 -1.7
      comp=Z,0.4nm,0.3s,baz=284,slow=11,SNR=1.8
SONM                                Lg     Lg     12 15 31.8
      comp=Z,0.2nm,0.3s,baz=284,slow=31,SNR=5.6
      comp=Z,0.7nm,0.5s
ULN   Ulaanbaatar      17.57  74   i P     P      12 10 28.6 -0.1
ULN                                 pmax   pmax
      comp=Z,12nm,3.6s
ARTI  Arti             17.82 315    P      P      12 10 33.1 +1.9
ARTI                                S      S      12 13 52.2 -4.3
LSA   Lhasa            17.84 152           P      12 10 30.7 -1.4
LSA   Lhasa            17.84 152    P      P      12 10 30.7 -1.4
LSA                                 pmax   pmax
      comp=Z,4.0nm,0.7s
SHL   Shillong         21.92 154           P      12 11 15.1 -1.1
SHL                                 IAmb   IAmb   12 11 20.0
      comp=Z,14nm,1.0s
SHL   Shillong         21.92 154    P      P      12 11 15.1 -1.1
SHL                                 pmax   pmax
      comp=Z,15nm,1.0s
BELG  Belogornoye      22.94 299   i P     P      12 11 27.9 +1.2
BELG                                pmax   pmax
      comp=Z,3.0nm,1.0s
NRIK  Noril'sk         23.73   5   i P     P      12 11 35.3 +0.8
NRIK                                pmax   pmax
      comp=Z,2.0nm,0.9s
AKT   Akhty            24.69 272   eP      P      12 11 43.0 -0.9
AKT                                e              12 12 15.2
AKT                                e              12 15 19.2
AKT                                eS      S      12 16 07.1 +0.7
AKT                                 pmax   pmax
      comp=Z,4.0nm,0.4s
KBZ   Khabaz           27.29 280    P      P      12 12 09.0 +1.9
      comp=Z,0.9nm,0.7s,baz=74,slow=7.6,SNR=3.8
```

	comp=Z,0.9nm,0.7s						
KBZ	Khabaz	27.29	280	*i* P	P	12 12 09.6	+2.5
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.4s						
KIV	Kislovodsk	27.36	280	*e*P	P	12 12 09.6	+1.6
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CM31	Chiang Mai Arr	30.94	146	P	P	12 12 37.8	-2.0
CMAR	Chiang Mai Arr	30.94	146	P	P	12 12 39.9	+0.1
	comp=Z,2.9nm,0.7s,baz=324,slow=8.9,SNR=22						
	comp=Z,2.9nm,0.7s						
CMAR	Chiang Mai Arr	30.94	146	P	P	12 12 37.9	-1.8
CMAR	Chiang Mai Arr	30.94	146	*e*P	P	12 12 40.4	+0.6
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YAK	Yakutsk	31.73	42	*e*P	P	12 12 45.9	-0.4
YAK				*e*		12 13 50.0	
YAK				*e*		12 15 36.8	
YAK				*e*S	S	12 17 56.2	-0.4
YAK				*e*SS	SnSn	12 19 46.6	+4.2
YAK				*e*		12 23 18.2	
YAK				pmax	pmax		
	comp=Z,11nm,1.0s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,98nm,3.8s						
YAK				pmax	pmax		
	comp=N,54nm,4.3s						
YAK				pmax	pmax		
	comp=E,89nm,4.3s						
YAK				smax	smax		
	comp=N,90nm,3.0s						
YAK				smax	smax		
	comp=E,63nm,2.8s						
LVZ	Lovozero	32.53	329	*i* P	P	12 12 55.1	+1.7
LVZ				pmax	pmax		
	comp=Z,14nm,1.1s						
TIXI	Tiksi	34.06	25	*i* P	P	12 13 05.7	-0.9
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s						
VSU	Vasula	34.85	311	*i* P	P	12 13 13.7	+0.1
VSU				pmax	pmax		
	comp=Z,15nm,1.1s						
BRTR	Keskin Array B	35.21	277	P	P	12 13 18.1	+0.9
	comp=Z,1.1nm,0.8s,baz=94,slow=7.7,SNR=6.6						
	comp=Z,1.1nm,0.8s						
NB2	NORSAR Subarra	42.28	317	P	P	12 14 16.3	+0.2
	comp=Z,1.2nm,0.8s,baz=77,slow=8.6						
NOA	NORSAR Array B	42.28	317	P	P	12 14 16.5	+0.4
	comp=Z,1.2nm,0.6s,baz=78,slow=8.1,SNR=4.6						
	comp=Z,1.2nm,0.6s						
CLL	Collm	44.12	303	*e*P	P	12 14 32.0	+1.0
CLL	Collm	44.12	303	*e*P	P	12 14 32.0	+1.0
EKA	Eskdalemuir Ar	51.36	313	P	P	12 15 26.1	-1.0
	comp=Z,0.6nm,0.5s,baz=69,slow=8.0,SNR=3.9						
	comp=Z,0.6nm,0.5s						
ESDC	Sonseca Array	60.15	297	P	P	12 16 30.7	+0.2
	comp=Z,0.5nm,0.7s,baz=316,slow=10,SNR=1.4						
	comp=Z,0.5nm,0.7s						
ILAR	Eielson Array	63.41	21	P	P	12 16 52.2	+0.2
	comp=Z,0.4nm,0.6s,baz=322,slow=4.8,SNR=12						
ILAR				LR	LR	12 46 53.3	
	comp=Z,192nm,19.6s,baz=78,slow=38						
	comp=Z,0.4nm,0.6s						
ILAR	Eielson Array	63.41	21	P	P	12 16 51.9	-0.1
ILAR	Eielson Array	63.41	21	*e*P	P	12 16 51.9	-0.1
YKA	Yellowknife Ar	71.21	8	P	P	12 17 41.0	-0.4
	comp=Z,0.4nm,0.6s,baz=346,slow=6.3,SNR=6.5						
	comp=Z,0.4nm,0.6s						
YKA	Yellowknife Ar	71.21	8	P	P	12 17 41.0	-0.4
TORD	Torodi Ar. Bea	73.60	272	P	P	12 17 56.5	+0.1
	comp=Z,0.7nm,0.8s,baz=37,slow=6.9,SNR=3.9						
	comp=Z,0.7nm,0.8s						
WRA	Warramunga Arr	81.12	131	P	P	12 18 37.2	-1.1
	comp=Z,0.6nm,0.8s,baz=338,slow=5.2,SNR=3.4						
	comp=Z,0.6nm,0.8s						
ASAR	Alice Springs	83.97	133	P	P	12 18 51.4	-1.8
	comp=Z,0.3nm,0.8s,baz=335,slow=5.3,SNR=5.2						
	comp=Z,0.3nm,0.8s						

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*AFAD **17** 12:20:22.3, 36.°06N×43.°37E, h14^{km}±1^{km}, ML2.9*

*ISK **17** 12:20:50.7, 37.°65N×42.°40E, h5^{km}, ML2.1/5*

ISC 17 12:20:23.2±3.7**, 36.°1N**±0.°2×**43.°36E**±0.°07**, h18**^{km}±18^{km}**,**
n10, σ**1.^{s}09**/15**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAKT	HAKKARI	1.52	11	P	Pb	12 20 50.9	-0.1
HAKT				S	Sg	12 21 11.8	-0.6
HAKT				*i* IAML		12 21 15.0	
	comp=N,124nm,0.4s						
HAKT				*i* IAML		12 21 15.0	
	comp=E,173nm,0.3s						
SIRN	Sırnak	1.62	332	P	Pn	12 20 50.5	-0.5
SIRN				S	Sg	12 21 15.8	+0.3
SIRN				*i* IAML		12 21 17.0	
	comp=N,347nm,0.5s						
SIRN				*i* IAML		12 21 17.0	
	comp=E,399nm,0.5s						
YOVA	Hakkari_Yksek	1.70	26	P	Pb	12 20 54.1	+0.1
YOVA				*i* IAML		12 21 17.0	
	comp=E,86nm,1.7s						
YOVA				S	Sg	12 21 17.6	-0.3
YOVA				*i* IAML		12 21 26.0	
	comp=N,58nm,0.6s						
PERV	Siirt/Pervari-	1.99	341	P	Pb	12 20 58.1	-0.9
PERV				S	Sg	12 21 26.1	-1.2
PERV				*i* IAML		12 21 31.0	
	comp=E,222nm,0.6s						
PERV				*i* IAML		12 21 35.0	
	comp=N,150nm,0.6s						
AKDM	Akdamar-Van	2.28	353	Pg	Pg	12 21 07.5	+0.5
MARD	Mardin	2.42	302	P	Pb	12 21 04.9	-1.4
MARD				S	Sb	12 21 35.9	0.0
MARD				*i* IAML		12 21 41.0	
	comp=E,162nm,0.4s						
SVAN	Silvan-Diyarba	2.71	321	Pg	Pb	12 21 12.3	+1.2
DYBB	Diyarbakir	3.19	307	Pn	Pg	12 21 24.4	0.0
AGRB	Hanur-Agry	3.52	355	Pn	Pb	12 21 26.7	+1.6
SVRC	Sivrice-ELAZID	3.98	307	Pn	Pb	12 21 34.8	+2.0

IDC 17 12:24:52.7±6.2**, 5.°07S**×**147.°09E, h153**^{km}±86^{km}**, mb3.4**/3**,**
mbtmp3.7/5**, Error ellipse: s-maj=127.6km**
s-min=36.0km az=118.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.31	179	P	Pn	12 25 57.1	0.0
	2.5nm,0.3s,baz=342,slow=6.4,SNR=2.0						
PMG				S	Sn	12 26 41.2	-6.1
	20nm,0.4s,baz=200,slow=18,SNR=9.0						
WRA	Warramunga Arr	19.30	219	P	P	12 29 06.0	0.0
	1.2nm,0.6s,baz=39,slow=11,SNR=46						
ASAR	Alice Springs	22.44	213	P	P	12 29 38.8	-0.3
	1.5nm,1.0s,baz=39,slow=10,SNR=15						
	1.5nm,1.0s						
FITZ	Fitzroy Crossi	24.64	237	P	P	12 29 59.7	+0.5
	2.2nm,0.4s,baz=44,slow=11,SNR=14						
	2.2nm,0.4s						
ZALV	Zalesovo Beam	78.28	328	P	P	12 36 35.2	-0.3
	0.3nm,0.3s,baz=123,slow=5.3,SNR=2.1						
	0.3nm,0.3s						

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*IDC **17** 12:35:19.1±1.4, 30.°35S×178.°82W, h234^{km}±13^{km}, mb3.3/3,*
mbtmp4.0/5, Error ellipse: s-maj=29.2km s-min=18.3km
az=133.0

ISC 17 12:35:18.9±0.8**, 30.°29S**±0.°08×**178.°5W**±0.°2**, h250**^{km}**, n37,**
σ**1.^{s}57**/40**, mb3.1**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.15	26	P	Pn	12 36 06.2	+11
RAO	Raoul Island	1.16	26	P	Pn	12 35 54.6	-0.3
	179nm,0.2s,baz=53,slow=20,SNR=1.3						
RAO				S	S	12 36 18.5	-4.7
	997nm,0.3s,baz=47,slow=17,SNR=7.8						
RAO	Raoul Island	1.16	26	P	Pn	12 36 07.0	+12
RIZ	Raoul Island	1.16	26	P	Pn	12 36 07.6	+13
WMGZ	Waiomatatini S	7.93	198	P	Pn	12 37 12.8	+1.6
WMGZ				S	S	12 38 42.2	+0.6
HAZ	Te Kaha	8.05	201	P	Pn	12 37 13.0	+0.2
HAZ				S	S	12 38 46.9	+2.3
PUZ	Puketiti	8.21	198	P	Pn	12 37 14.2	-0.5
PUZ				S	S	12 38 48.5	+0.3
TWGZ	Tauwhareparae	8.38	199	P	Pn	12 37 16.5	-0.5
TWGZ				S	S	12 38 54.4	+2.1
MWZ	Matawai	8.66	201	P	Pn	12 37 20.0	-0.6
TKGZ	Te Karaka	8.66	199	S	S	12 38 59.2	+0.4
URZ	Urewera	8.73	203	P	Pn	12 37 20.2	-1.2
	13nm,0.8s,baz=266,slow=2.9,SNR=7.7						
URZ				S	S	12 38 56.1	-4.2
	48nm,0.4s,baz=113,slow=23,SNR=16						
URZ	Urewera	8.73	203	P	Pn	12 37 22.3	+1.0
MUGZ	Murupara	9.05	204	P	P	12 37 29.3	-3.3
SNGZ	Shannon Statio	9.13	201	P	Pn	12 37 26.6	+0.1
KNZ	Kokohu	9.26	199	P	Pn	12 37 27.9	-0.1
RAHZ	Arahi	9.34	202	P	Pn	12 37 28.3	-0.8
MTHZ	Maungataniwha	9.36	203	P	Pn	12 37 31.1	+1.8
NMHZ	Naumai	9.59	202	P	Pn	12 37 31.7	-0.6
ARHZ	Aropaoanui	9.68	201	P	Pn	12 37 33.4	+0.1
BKZ	Black Stump Fm	9.76	204	P	Pn	12 37 33.0	-1.4
HIZ	Hauiti	9.86	212	P	P	12 37 41.3	-0.3
MCHZ	McNeill Hill	9.94	202	P	Pn	12 37 36.7	+0.1
KWHZ	Kaweka Forest	10.01	203	P	Pn	12 37 38.0	+0.4
DZM	Mont Dzumac	15.79	298	P	P	12 38 47.3	-0.2
	3.9nm,0.5s,baz=150,slow=16,SNR=8.0						
ASAR	Alice Springs	42.68	267	P	P	12 42 50.9	-0.7
	0.2nm,0.4s,baz=105,slow=7.4,SNR=14						
	0.2nm,0.4s						
WRA	Warramunga Arr	43.66	272	P	P	12 42 58.4	-1.0
	0.5nm,0.5s,baz=110,slow=8.2,SNR=11						
	0.5nm,0.5s						
PETK	Petropavlovsk-	85.60	346	P	P	12 47 29.6	+0.8
	3.6nm,0.6s,baz=119,slow=6.6,SNR=4.5						
	3.6nm,0.6s						
MKAR	Makanchi Array	117.37	310	PKP	PKiKP	12 53 35.5	+1.0
	0.1nm,0.3s,baz=48,slow=2.1,SNR=2.1						
KURBB	Kurchatov Arra	120.70	314	PKP	PKiKP	12 53 41.9	+1.2
	0.6nm,0.5s,baz=119,slow=1.9,SNR=6.7						
BVAR	Borovoye Array	126.02	316	PKP	PKiKP	12 53 52.8	+1.5
	1.1nm,0.5s,baz=87,slow=3.1,SNR=4.6						
ARCES	ARCESS Array B	138.39	348	PKhKP	PKPpre	12 54 07.2	
	3.8nm,1.0s,baz=63,slow=3.3,SNR=4.3						
ARCES				PKP	PKPdf	12 54 14.6	+0.9
	2.1nm,0.9s,baz=77,slow=1.3,SNR=1.1						
FINES	FINESS Array B	144.89	340	PKP	PKPdf	12 54 26.2	+0.8
	6.7nm,0.3s,baz=48,slow=4.0,SNR=80						
NOA	NORSAR Array B	148.58	351	PKPbc	PKiKP	12 54 37.4	+0.4
	0.8nm,0.5s,baz=17,slow=4.2,SNR=3.6						
HFS	Hagfors	149.05	348	PKPbc	PKiKP	12 54 38.0	+0.1
	2.9nm,0.7s,baz=42,slow=2.4,SNR=8.2						
AKASG	Malin Array Be	150.95	322	PKPbc	PKiKP	12 54 43.3	+1.2
	2.6nm,0.6s,baz=52,slow=2.6,SNR=5.9						
MMAI	Mount Meron Ar	151.08	284	PKPbc	PKiKP	12 54 45.6	+2.6
	1.4nm,0.4s,baz=127,slow=2.2,SNR=2.7						
BRTR	Keskin Array B	152.16	299	PKPbc	PKiKP	12 54 46.2	+1.0
	0.8nm,0.5s,baz=136,slow=4.4,SNR=3.7						

AUST 17 12:53:56.1±0.4**, 19°S**±3°×**12°0E**±°**, h10**^{km}**, mb4.2**/2**,**
ML2.7/8**, Error ellipse: s-maj=7.7km s-min=5.0km**
az=123.8, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAAN	Eighty Mile Be	1.42	96	P	Pn	12 54 20.1	-1.9
CAAN				S	Sn	12 54 40.4	-0.3
MBWA	Marble Bar	2.03	188	P	Pn	12 54 31.3	+0.8
MBWA				S	Sb	12 54 57.5	-1.1
PSAC1	Pilbara Seismi	2.40	185	P	Pn	12 54 35.9	+0.4
PSAC1				S	Sn	12 55 05.6	+0.7
AUBRM	Broome Senior	2.41	61	P	Pn	12 54 37.2	+1.6
PSAC2	Pilbara Seismi	2.42	183	S	Sn	12 55 06.6	+1.1
PSA00	Pilbara Seismi	2.43	184	P	Pn	12 54 36.2	+0.2
PSA00				S	Sn	12 55 06.8	+1.0
GIRL	Giralia	6.44	236	P	Pn	12 55 30.6	-0.4
	comp=Z,0.1nmcomp=Z,48nm,1.5s						
GIRL				S	Sn	12 56 39.1	-5.4
MEEK	Meekatharra	7.58	190	P	Pn	12 55 46.4	-0.4
MEEK	Meekatharra	7.58	190	S	Sn	12 57 08.5	-4.4
CVQOZ	Cooralya Stati	7.64	225	P	Pn	12 55 47.4	-0.1
PLAI	Plampang	10.47	348	P	Pn	12 56 26.5	+0.1
MORW	Morawa	10.54	199	P	Pn	12 56 26.9	-0.3
BLDU	Ballidu	11.82	194	P	Pn	12 56 43.4	-1.5
	comp=Z,15nm,2.6s						

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*IDC **17** 12:54:50.7±1.5, 0.°69S×128.°64E, h0^{km}, mb3.7/4,*
mbtmp3.7/6, ML3.7/2, MS3.3/5, Error ellipse: s-maj=94.4km
s-min=19.9km az=70.0

*DJA **17** 12:54:55.2±0.2, 1°S±3°×12°8E±°, h10^{km}, M4.2/14, mB4.9/3,*
mb4.4/7, MLv4.1/14, Mw(mB)4.2/3

ISC 17 12:54:53.6±0.9**, 0.°76S**±0.°07×**128.°33E**±0.°08**, h17**^{km}**, n20,**
σ**1.^{s}45**/17**, mb3.9**/4**, MS3.7**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.80	328	P	Pn	12 55 25.5	+1.6
KRAI	Karang Ratu	2.54	178	P	Pn	12 55 36.7	+2.6
SANI	Sanana	2.67	241	P	Pn	12 55 35.5	-0.3
NLAI	Namlea	2.75	206	P	Pn	12 55 37.5	+0.5
AAI	Ambon	2.91	183	P	Pn	12 55 40.6	+1.4
SWI	Sorong	2.93	92	P	Pb	12 55 43.4	-2.1
BNDI	Bandanaira	4.06	157	P	Pn	12 55 56.3	+1.4
FAKI	Fak Fak	4.47	119	P	Pn	12 56 02.8	+2.2
LUWI	Luwuk	5.56	267	P	Pn	12 56 16.2	+0.5
	0.3nm1μm54nm,0.7s						
APSI	Ampana	6.68	269	P	Pn	12 56 32.0	+1.0
TTSI	Tana Toraja	8.80	255	P	Pn	12 57 01.1	+0.9
	9.3nm,0.6s						
KAPI	Kappang	9.55	244	LR	LR	13 00 49.8	
	comp=Z,54nm,19.4s,baz=102,slow=36						
FITZ	Fitzroy Crossi	17.43	189	P	Pn	12 58 56.2	+0.1
	0.2nm,0.3s,baz=14,slow=12,SNR=5.8						
FITZ				LR	LR	13 06 29.4	
	comp=Z,58nm,20.7s,baz=36,slow=40						
	1.7nm,0.6s						
WRA	Warramunga Arr	19.95	163	P	P	12 59 24.5	-0.6
	0.2nm,0.3s,baz=345,slow=11,SNR=12						
	1.4nm,0.8s						
ASAR	Alice Springs	23.40	167	P	P	13 00 01.4	-0.5
	2.2nm,0.7s,baz=348,slow=12,SNR=42						
ASAR				LR	LR	13 08 54.3	
	comp=Z,35nm,18.9s,baz=5.0,slow=36						
	2.2nm,0.7s						
STKA	Stephens Creek	33.39	159	P	P	13 01 30.9	-0.5
	1.2nm,0.8s,baz=0.0,slow=9.1,SNR=3.4						
	1.2nm,0.8s						
LZDM	Lanzhou Array	43.14	330	LR	LR	13 21 04.5	
	comp=Z,101nm,21.4s,baz=275,slow=36						
MKAR	Makanchi Array	62.14	326	P	P	13 05 13.1	-0.8
	0.2nm,0.6s,baz=110,slow=7.0,SNR=4.9						
	0.2nm,0.6s						
KURBB	Kurchatov Arra	66.36	328	P	P	13 05 43.3	+1.9
	0.4nm,0.4s,baz=129,slow=5.9,SNR=4.9						
	0.4nm,0.4s						
OBN	Obninsk	91.63	325	LR	LR	13 50 23.9	
	comp=Z,60nm,21.3s,baz=20,slow=36						

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*MOS **17** 13:17:09.8±0.9, 45.°86N×81.°38E, h12^{km}, mb4.1/5, Error*
ellipse: s-maj=11.3km s-min=5.5km az=76.5

*NNC **17** 13:17:09.5±0.3, 45.°86N×81.°59E, h1^{km}±5^{km}, mb4.5,*
mpv4.2, Error ellipse: s-maj=4.8km s-min=1.7km az=121.0

*IDC **17** 13:17:09.2±0.8, 45.°82N×81.°60E, h0^{km}, mb3.7/8,*
mbtmp3.7/14, ML3.3/5, MS2.9/1, Error ellipse:
s-maj=12.0km s-min=8.2km az=120.0

*SOME **17** 13:17:12.1, 45.°83N×81.°42E, h15^{km}, MS3.1*

*ASRS **17** 13:17:13.1±0.3, 46°N±3°×8°1E±°, h9^{km}, MLh4.5/12, Error*
ellipse: s-maj=8.9km s-min=3.6km az=125.9, confirmed

ISC 17 13:17:10.4±1.1**, 45.°93N**±0.°03×**81.°54E**±0.°03**, h4**^{km}±7^{km}**,**
n106, σ**2.^{s}33**/154**, mb3.8**/12**, 16C-15D,**
Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAKZ	Makanchi	0.93	19	⇓Pg	Pb	13 17 28.8	-0.3
MAKZ				Sg	Sb	13 17 40.8	-1.0
MAKZ	Makanchi	0.93	19	⇑P	Pb	13 17 28.6	-0.5
	48nm,0.3s						
MAKZ				⇓S	Sb	13 17 42.1	+0.3
	90nm,0.3s						
MAKZ	Makanchi	0.93	19	PG	Pb	13 17 28.8	-0.3
MAKZ						13 17 40.8	
MK31	Makanchi Array	1.01	31	⇑P	Pb	13 17 30.0	-0.4
	37nm,0.3s,baz=204,slow=17,SNR=3869						
MK31				⇓S	Sb	13 17 44.2	0.0
	63nm,0.3s,baz=205,slow=29,SNR=5.5						
MK31	Makanchi Array	1.01	31	*d i*PG	Pb	13 17 30.0	-0.4
MK31				pmax	pmax		
	comp=Z,15nm,0.2s						
MKAR	Makanchi Array	1.01	31	Pg	Pb	13 17 30.1	-0.4
	comp=Z,50nm,0.3s,baz=201,slow=17,SNR=2059						
MKAR				Lg	Lg	13 17 44.5	
	comp=Z,81nm,0.3s,baz=205,slow=29,SNR=25						
KAPS	Kapalarasan	1.66	248	P	Pn	13 17 40.7	+0.3
	comp=Z,727nm,0.2s						
KAPS				S	Sb	13 18 02.4	-0.5
	comp=Z,2μm,0.2s						
KNOS	Konyrlen	2.29	228	Pg	Pb	13 17 52.2	-0.2
	comp=Z,212nm,0.3s						
KNOS				Lg	Lg	13 18 21.4	
	comp=Z,691nm,0.3s						
TDK	Taldyqorghan	2.39	248	Pg	Pb	13 17 54.1	+0.1
	comp=Z,255nm,0.4s						
TDK				Lg	Lg	13 18 24.3	
	comp=Z,2μm,0.3s						
TDK	Taldyqorghan	2.39	248	*e*P	Pb	13 17 54.1	+0.1
	comp=Z,255nm,0.4s						
TDK				*e*S	Sb	13 18 24.3	+0.5
	comp=Z,2μm,0.3s						
KTMS	Ketmen	2.62	199	Pg	Pb	13 17 57.5	-0.6
	comp=Z,67nm,0.3s						
KTMS				Lg	Lg	13 18 30.2	
	comp=Z,368nm,0.2s						
KTMS	Ketmen	2.62	199	*e*P	Pb	13 17 57.5	-0.6
	comp=Z,67nm,0.3s						
KTMS				*e*S	Sb	13 18 30.2	-0.5
	comp=Z,368nm,0.2s						
ZSN	Zaisan	2.75	55	Pg	Pg	13 18 04.9	+1.8
	comp=Z,45nm,0.4s						
ZSN				Lg	Lg	13 18 42.7	
	comp=Z,124nm,0.5s						
ZSN	Zaisan	2.75	55	*e*P	Pg	13 18 04.9	+1.8
	comp=Z,45nm,0.4s						
ZSN				*e*S	Sg	13 18 42.7	+4.0
	comp=Z,124nm,0.5s						
BLB	Baldybastay	2.84	231	Pg	Pb	13 18 01.9	+0.2
	comp=Z,258nm,0.2s						
BLB				Lg	Lg	13 18 38.5	
	comp=Z,880nm,0.4s						
PDGK	Podgornoye	2.98	210	⇑Pn	Pn	13 17 58.6	0.0
	comp=Z,11nm,0.5s						
PDGK				⇓Pg	Pb	13 18 04.8	+0.7
	comp=Z,159nm,0.6s						
PDGK				⇑Lg	Lg	13 18 40.9	
	comp=Z,640nm,0.6s						
PDGK	Podgornoye	2.98	210	PN	Pn	13 17 58.6	0.0
ARXS	Arharly	3.14	238	Pg	Pb	13 18 06.7	0.0
	comp=Z,86nm,0.4s						
ARXS				Lg	Lg	13 18 47.1	
	comp=Z,610nm,0.3s						
ARXS	Arharly	3.14	238	*e*P	Pb	13 18 06.8	0.0
	comp=Z,86nm,0.4s						
ARXS				*e*S	Sb	13 18 47.1	+1.7
	comp=Z,610nm,0.3s						
SHLS	Shalkode	3.15	209	Pg	Pn	13 18 04.0	+3.1
	comp=Z,135nm,0.4s						
SHLS				Lg	Lg	13 18 41.2	
	comp=Z,910nm,0.4s						
SHLS	Shalkode	3.15	209	*e*P	Pn	13 18 04.0	+3.1
	comp=Z,135nm,0.4s						
SHLS				*e*S	Sn	13 18 41.2	+2.3
	comp=Z,910nm,0.4s						
KPKS	Kokpek	3.19	221	Pg	Pb	13 18 07.3	-0.5
	comp=Z,0.3nm,0.2s						
KPKS				Lg	Lg	13 18 47.1	
	comp=Z,498nm,0.4s						
KPKS	Kokpek	3.19	221	*e*P	Pb	13 18 07.3	-0.5
	comp=Z,0.3nm,0.2s						
KPKS				*e*S	Sb	13 18 47.1	0.0
	comp=Z,498nm,0.4s						
UZB	Uzynbulak	3.31	214	Pg	Pb	13 18 09.6	-0.2
	comp=Z,47nm,0.3s						
UZB				Lg	Lg	13 18 50.8	
	comp=Z,278nm,0.3s						
UZB	Uzynbulak	3.31	214	*e*P	Pb	13 18 09.6	-0.2
	comp=Z,47nm,0.3s						
UZB				*e*S	Sb	13 18 50.8	+0.3
	comp=Z,278nm,0.3s						
KURS	Kuram	3.42	226	Pg	Pb	13 18 11.4	-0.2
	comp=Z,59nm,0.3s						
KURS				Lg	Lg	13 18 54.1	
	comp=Z,206nm,0.4s						
SATY	Saty	3.64	219	Pg	Pb	13 18 16.0	+0.6
	comp=Z,94nm,0.5s						
SATY				Lg	Lg	13 19 01.8	
	comp=Z,653nm,0.3s						
PRZ	Przheval'sk	4.12	214	Pn	Pn	13 18 16.0	+1.7
KOTS	Kotyrbulak	4.15	231	Pg	Pb	13 18 25.2	+1.1
	comp=Z,72nm,0.7s						
KOTS				Lg	Lg	13 19 18.0	
	comp=Z,199nm,0.5s						
KOTS	Kotyrbulak	4.15	231	*e*P	Pb	13 18 25.2	+1.1
	comp=Z,72nm,0.7s						
KOTS				*e*S	Sb	13 19 18.0	+3.2
	comp=Z,199nm,0.5s						
KUU	Kurty	4.22	243	*e*P	Pb	13 18 26.4	+1.3
	comp=Z,43nm,0.2s						
KUU				*e*S	Sb	13 19 19.5	+3.1
	comp=Z,328nm,0.4s						
KNDC	Almaty	4.25	232	⇓Pg	Pb	13 18 26.6	+1.0
	comp=Z,152nm,0.8s						
KNDC				⇑Lg	Lg	13 19 19.9	
	comp=Z,157nm,0.8s						
SEM	Semipalatinsk	4.56	350	*e*P	Pb	13 18 36.1	+5.0
	comp=Z,42nm,0.3s						
SEM				*e*S	Sg	13 19 36.0	-0.8
	comp=Z,170nm,0.4s						
MTBS	Maitube	4.60	234	*e*P	Pb	13 18 34.2	+2.5
	comp=Z,30nm,0.4s						
MTBS				*e*S	Sb	13 19 32.8	+5.3
	comp=Z,284nm,0.4s						
WMQ	Urumqi	4.86	114	Pn	Pn	13 18 26.1	+1.8
WMQ				Sn	Sn	13 19 22.3	+1.2
WMQ				smax	smax		
	comp=N,83nm,0.9s						
WMQ				smax	smax		
	comp=E,63nm,0.9s						
KST	Kastek	4.92	236	Pg	Pb	13 18 39.7	+2.5
	comp=E,51nm,0.5s						
KST				Lg	Lg	13 19 42.7	
	comp=E,89nm,0.6s						
KST	Kastek	4.92	236	*e*P	Pb	13 18 39.7	+2.5
	comp=E,51nm,0.5s						
KST				*e*S	Sb	13 19 42.7	+5.9
	comp=E,89nm,0.6s						
KDJ	Kajisay	4.93	221	Pn	Pn	13 18 26.8	+1.3
KDJ	Kajisay	4.93	221	S	Sn	13 19 16.4	-6.6
WUS	Wushi	5.02	200	Pn	Pn	13 18 26.6	0.0
KURBB	Kurchatov Arra	5.11	338	Pn	Pn	13 18 29.5	+1.9
	comp=E,0.5nm,0.3s,baz=168,slow=12,SNR=13						
KURBB				Sn	Sn	13 19 25.0	-2.0
	comp=E,1.3nm,0.3s,baz=158,slow=22,SNR=7.2						
KURBB				Lg	Lg	13 19 52.9	
	comp=E,2.9nm,0.3s,baz=168,slow=31,SNR=10						
	comp=E,1.4nm,0.3s						
KURBB	Kurchatov Arra	5.11	338	⇓Pn	Pn	13 18 29.7	+2.1
	comp=E,2.5nm,0.3s						
KURBB				⇑Pg	Pb	13 18 42.6	+2.4
	comp=E,14nm,0.7s						
KURBB				⇑Lg	Lg	13 19 55.2	
	comp=E,486nm,0.9s						
KURBB	Kurchatov Arra	5.11	338	PN	Pn	13 18 29.7	+2.1
KURK	Kurchatov	5.17	339	Pn	Pn	13 18 29.9	+1.5
KURK				S	Sn	13 19 30.0	+1.5
KURK	Kurchatov	5.17	339	⇑Pn	Pn	13 18 29.8	+1.3
	comp=E,0.2nm,0.3s						
KURK				⇓Pg	Pb	13 18 43.6	+2.4
	comp=E,2.6nm,0.6s						
KURK				⇑Lg	Lg	13 19 54.5	
	comp=E,170nm,0.9s						
KURK	Kurchatov	5.17	339	*i* PN	Pn	13 18 29.0	+0.5
TKM2	Tokmak 2	5.21	237	P	Pn	13 18 29.7	+0.4
	SNR=11						
BOOM	Boomskoye usch	5.29	231	Pn	Pn	13 18 30.5	+0.1
ULHL	Ulahol	5.30	228	P	Pn	13 18 31.9	+1.4
	SNR=5.0						
TUNR	Tungur	5.31	35	Pn	Pn	13 18 34.1	+3.5
TUNR				S	Sn	13 19 31.3	-0.9
TUNR				Sg	Sg	13 19 59.0	-1.9
TUNR	Tungur	5.31	35	PN	Pn	13 18 34.0	+3.5
TUNR						13 19 58.9	

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BTLS  Baital             5.34 263  Pg     Pb     13 18 48.6 +4.3
      comp=E,57nm,0.4s
BTLS                               Lg     Lg     13 19 57.4
      comp=E,73nm,0.6s
BTLS  Baital             5.34 263  eP     Pb     13 18 48.6 +4.3
      comp=E,57nm,0.4s
BTLS                               eS     Sg     13 19 57.4 -4.4
      comp=E,73nm,0.6s
UKR   Ust'-Kan           5.45  22  Pn     Pn     13 18 35.9 +3.4
UKR                                S      Sn     13 19 34.7 -1.0
UKR                                Sg     Sg     13 20 01.3 -4.1
UKR   Ust'-Kan           5.45  22  PN     Pn     13 18 35.8 +3.4
UKR                                              13 20 01.2
DGZ   Jazzator, Alta     5.47  44  Pn     Pn     13 18 36.2 +3.3
DGZ                                S      Sn     13 19 37.1 +0.7
DGZ                                Sg     Sg     13 20 05.7 -0.5
DGZ   Jazzator, Alta     5.47  44  PN     Pn     13 18 36.2 +3.3
CHMS  Chumysh            5.67 241  P      Pb     13 18 52.9 +3.0
      SNR=10
USP   Ospenovka          5.69 245  P      Pn     13 18 35.6 -0.1
      SNR=23
KBK   Karagaybulak       5.75 238  P      Pn     13 18 37.4 +0.7
      SNR=15
CHBI  Chibit, Altay      5.93  40  Pn     Pn     13 18 42.5 +3.5
CHBI                               S      Sn     13 19 50.9 +3.4
AKAR  Aktash             5.99  41  Pn     Pn     13 18 43.4 +3.6
AKAR                               S      Sn     13 19 52.9 +3.9
AKAR                               Sg     Sg     13 20 20.5 -2.1
AKAR  Aktash             5.99  41  PN     Pn     13 18 44.3 +4.4
AAK   Ala-Archa          6.03 239  P      Pn     13 18 41.0 +0.4
      SNR=9.4
AAK   Ala-Archa          6.03 239  Pn     Pn     13 18 40.8 +0.2
      comp=E,1.7nm,0.3s,baz=264,slow=19,SNR=14
AAK                                Lg     Lg     13 20 15.2
      comp=E,1.7nm,0.3s,baz=270,slow=19,SNR=1.7
      comp=E,2.7nm,0.3s
AAK   Ala-Archa          6.03 239 ⇑Pn     Pn     13 18 40.4 -0.1
      comp=E,17nm,0.5s
AAK                               ⇑Pg     Pb     13 19 00.0 +3.9
      comp=E,81nm,0.7s
AAK                               ⇓Lg     Lg     13 20 23.8
      comp=E,151nm,0.5s
AAK   Ala-Archa          6.03 239 i PN    Pn     13 18 40.4 -0.1
AAK                                pmax   pmax
      comp=Z,17nm,0.5s
ELDR  Elanda             6.09  28  Pn     Pn     13 18 43.4 +2.3
ELDR                               S      Sn     13 19 51.8 +0.4
ELDR                               Sg     Sg     13 20 23.0 -2.8
ELDR  Elanda             6.09  28  PN     Pn     13 18 44.5 +3.3
CUR   Chagan-Uzun        6.19  45  Pn     Pn     13 18 45.6 +3.0
CUR                                S      Sn     13 19 56.2 +2.4
CUR                                Sg     Sg     13 20 27.1 -1.8
CUR   Chagan-Uzun        6.19  45  PN     Pn     13 18 45.6 +3.0
ULGR  Ulagan, Altay      6.36  40  Pn     Pn     13 18 49.1 +4.1
ULGR                               S      Sn     13 20 01.4 +3.4
ULGR                               Sg     Sg     13 20 33.1 -1.3
ULGR  Ulagan, Altay      6.36  40  PN     Pn     13 18 49.0 +4.1
EKS2  Erkin-Say          6.46 242  P      Pn     13 18 47.9 +1.6
      SNR=15
MRKS  Merke              6.76 245  eP     Pb     13 19 14.6 +6.2
      comp=Z,11nm,0.5s
MRKS                               eS     Sg     13 20 42.2 -5.0
      comp=Z,48nm,0.6s
ARTR  Artybash           6.99  31  Pn     Pn     13 18 56.2 +2.8
ARTR                               S      Sn     13 20 15.9 +2.6
ZAA0  Zalesovo Array     8.30  14 ⇑Pn     Pn     13 19 11.9 +0.4
      comp=Z,0.5nm,0.6s
ZAA0                              ⇑Sn     Sn     13 20 46.0 +0.4
      comp=Z,1.9nm,0.8s
ZAA0                              ⇓Lg     Lg     13 21 36.8
      comp=Z,7.6nm,1.0s
ZALV  Zalesovo Beam      8.30  14  Pn     Pn     13 19 13.0 +1.5
      comp=Z,1.1nm,0.3s,baz=200,slow=13,SNR=20
ZALV                               Sn     Sn     13 20 40.1 -5.4
      comp=Z,0.4nm,0.3s,baz=183,slow=23,SNR=2.0
ZALV                               Lg     Lg     13 21 37.4
      comp=Z,1.7nm,0.3s,baz=180,slow=27,SNR=5.9
ZALV                               LR     LR     13 22 30.0
      comp=Z,76nm,18.6s,baz=16,slow=38
      comp=Z,4.8nm,0.5s
KK31  Karatay Array      8.37 254 ⇓Pn     Pn     13 19 11.8 -0.7
      comp=Z,4.7nm,0.3s,baz=64,slow=13,SNR=165
KK31                              ⇓Sn     Sn     13 20 48.4 +1.0
      comp=Z,7.2nm,0.5s,baz=58,slow=24,SNR=4.9
KK31                              ⇑Lg     Lg     13 21 34.8
      comp=Z,19nm,0.5s,baz=60,slow=32,SNR=6.0
KK31  Karatay Array      8.37 254  P      Pn     13 19 11.8 -0.7
KK31                               S      Sn     13 20 48.4 +1.0
BVA0  Borovoye Array    10.14 318 ⇓Pn     Pn     13 19 38.3 +1.6
      comp=Z,1.8nm,0.8s
BVA0                              ⇑Sn     Sn     13 21 28.6 -2.2
      comp=Z,2.0nm,0.6s
BVA0                              ⇓Lg     Lg     13 22 33.6
      comp=Z,21nm,0.9s,baz=124,slow=22,SNR=4.1
BVA0  Borovoye Array    10.14 318  P      Pn     13 19 38.3 +1.6
BVA0                               S      Sn     13 21 28.6 -2.2
BVAR  Borovoye Array    10.14 318  Pn     Pn     13 19 36.8 +0.1
      comp=Z,0.1nm,0.3s,baz=120,slow=14,SNR=7.6
BVAR                               Sn     Sn     13 21 28.1 -2.7
      comp=Z,0.2nm,0.3s,baz=126,slow=24,SNR=5.4
BVAR                               Lg     Lg     13 22 29.1
      comp=Z,0.2nm,0.3s,baz=120,slow=20,SNR=3.8
      comp=Z,0.7nm,0.3s
AB31  Akbulak array     14.93 291 ⇑P      Pn     13 20 38.3 -3.8
      comp=Z,3.4nm,0.8s,baz=98,slow=9.9,SNR=36
AB31  Akbulak array     14.93 291  P      Pn     13 20 38.3 -3.8
AKTO  Aktyubinsk        16.30 295  Pn     Pn     13 20 57.9 -2.1
      comp=Z,0.4nm,0.3s,baz=93,slow=15,SNR=5.5
AKTO                               Sn     Sn     13 23 53.5 -7.5
      comp=Z,0.2nm,0.3s,baz=48,slow=21,SNR=3.8
      comp=Z,0.8nm,0.3s
AKTO  Aktyubinsk        16.30 295 ⇓P      Pn     13 20 58.0 -2.0
      comp=Z,1.7nm,0.8s
AKTO  Aktyubinsk        16.30 295  P      Pn     13 20 58.0 -2.0
SONM  Songino Array     17.08  75  P      Pn     13 21 09.6 -0.5
      comp=Z,0.5nm,0.5s,baz=279,slow=9.8,SNR=4.1
SONM  Songino Array     17.08  75  eP     Pn     13 21 09.8 -0.3
ARTI  Arti              17.81 314  P      P      13 21 23.1 +3.4
ARTI                               S      S      13 24 43.8 -1.0
NRIK  Noril'sk          23.67   5 i P     P      13 22 22.6  0.0
NRIK                               pmax   pmax
      comp=Z,7.0nm,1.8s
KBZ   Khabaz            27.31 279 i P     P      13 22 56.1 +0.1
KBZ                                pmax   pmax
      comp=Z,5.0nm,1.8s
CMAR  Chiang Mai Arr    30.96 146  P      P      13 23 28.4 -0.2
      comp=Z,2.0nm,0.9s,baz=323,slow=9.4,SNR=16
      comp=Z,2.0nm,0.9s
CMAR  Chiang Mai Arr    30.96 146  eP     P      13 23 28.8 +0.2
CMAR                               pmax   pmax
      comp=Z,1.0nm,0.6s
YAK   Yakutsk           31.66  42 i P     P      13 23 34.1 -0.3
YAK                                pmax   pmax
      comp=Z,3.0nm,0.8s
LVZ   Lovozero          32.50 329 i P     P      13 23 42.2 +0.5
LVZ                                pmax   pmax
      comp=Z,16nm,1.1s
TIXI  Tiksi             33.99  25 i P     P      13 23 55.6 +0.9
TIXI                               pmax   pmax
      comp=Z,1.0nm,1.0s
ARCES ARCESS Array B    36.14 330  P      P      13 24 14.0 +0.8
      comp=Z,3.0nm,0.9s,baz=95,slow=11,SNR=1.8
      comp=Z,3.0nm,0.9s
HFS   Hagfors           41.26 315  P      P      13 24 56.6 +0.4
      comp=Z,1.0nm,0.6s,baz=81,slow=9.1,SNR=2.2
      comp=Z,1.0nm,0.6s
NOA   NORSAR Array B    42.27 317  P      P      13 25 04.8 +0.2
      comp=Z,0.5nm,0.5s,baz=78,slow=8.2,SNR=2.7
      comp=Z,0.5nm,0.5s
ILAR  Eielson Array     63.35  21  P      P      13 27 39.6 -0.6
      comp=Z,0.2nm,0.5s,baz=325,slow=6.6,SNR=4.7
      comp=Z,0.2nm,0.5s
ILAR  Eielson Array     63.35  21  eP     P      13 27 39.8 -0.4
YKA   Yellowknife Ar    71.15   8  P      P      13 28 29.5 -0.2
      comp=Z,0.2nm,0.6s,baz=352,slow=7.2,SNR=3.1
      comp=Z,0.2nm,0.6s
TORD  Torodi Ar. Bea    73.63 272  P      P      13 28 44.8 -0.4
      comp=Z,0.7nm,0.8s,baz=40,slow=7.2,SNR=0.8
      comp=Z,0.7nm,0.8s
ASAR  Alice Springs     83.98 133  P      P      13 29 40.1 -1.7
      comp=Z,0.2nm,0.8s,baz=322,slow=6.0,SNR=3.2
      comp=Z,0.2nm,0.8s
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*NEIC **17** 13:37:41.8±1.0, 6°.4S±0°.2×149°.5E±0°.1, h35km±2km, mb4.1/18, Error ellipse: s-maj=36.0km s-min=6.3km az=319.0*

*IDC **17** 13:37:42.3±8.0, 6°.29S×149°.39E, h58km±59km, mb3.2/2, mbtmp3.8/4, ML4.1/1, Error ellipse: s-maj=84.4km s-min=52.4km az=123.0*

ISC 17 13:37:42.6±0.7**, 6°.5S**±0°.2×**149°.6E**±0°.2**, h49**km**, n26, σ0s.96**/27**, mb3.9**/5**, New Britain region**

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Code  Station Name        Δ°   AZ°   Phase ID        Time      Res
                                     Op     ISC      h  m  s   ISC
RABL  Rabaul             3.43  48           Pn     13 38 33.4 -0.2
PMG   Port Moresby       3.77 220    P      Pn     13 38 38.7 +0.4
      27nm,0.3s,baz=355,slow=6.4,SNR=45
PMG                                  S      Sn     13 39 22.7 +1.3
      68nm,0.4s,baz=128,slow=21,SNR=21
PMG   Port Moresby       3.77 220           Pn     13 38 38.5 +0.2
COEN  Coen               9.74 220    Pn     Pn     13 39 59.5 -0.7
MTN   Manton Dam        19.26 250    P      P      13 42 02.2 -1.2
MTN                                  IAmb   IAmb   13 42 26.6
      comp=Z,15nm,1.2s
WB0   Warramunga Arr    19.81 227    P      P      13 42 08.5 -0.7
WB0                                  IAmb   IAmb   13 42 09.3
      comp=Z,3.5nm,0.7s
WR8   Warramunga Arr    19.85 226    P      P      13 42 09.1 -0.6
WR8                                  IAmb   IAmb   13 42 34.6
      comp=Z,13nm,1.4s
WRAB  Tennant Creek     19.95 227    P      P      13 42 09.7 -1.0
WRAB                                 IAmb   IAmb   13 42 10.7
      comp=Z,4.5nm,0.7s
WRA   Warramunga Arr    19.96 227    P      P      13 42 10.1 -0.8
      comp=Z,0.6nm,0.3s,baz=52,slow=11,SNR=26
      comp=Z,3.2nm,0.5s
WRA   Warramunga Arr    19.96 227    P      P      13 42 09.8 -1.1
KNRA  Kununurra         22.38 244    P      P      13 42 34.5 -2.4
KNRA                                 IAmb   IAmb   13 43 18.3
      comp=Z,26nm,1.4s
INKA  Innaminka         22.74 201    P      P      13 42 41.3 +0.6
AS31  Alice Springs     22.79 220    P      P      13 42 40.4 -0.8
ASAR  Alice Springs     22.79 220    P      P      13 42 40.2 -1.0
      comp=Z,0.5nm,0.5s,baz=51,slow=9.2,SNR=21
      comp=Z,0.5nm,0.5s
ASAR  Alice Springs     22.79 220    P      P      13 42 40.5 -0.8
FITZ  Fitzroy Crossi    26.06 242    P      P      13 43 10.4 -1.3
STKA  Stephens Creek    26.33 196    P      P      13 43 14.1 +0.1
      comp=Z,0.5nm,0.5s,baz=357,slow=16,SNR=1.7
      comp=Z,0.5nm,0.5s
STKA  Stephens Creek    26.33 196    P      P      13 43 13.6 -0.5
STKA                                 IAmb   IAmb   13 43 43.5
      comp=Z,14nm,1.2s
TOO   Toolangi          31.15 186    P      P      13 43 57.3 +0.4
TOO                                  IAmb   IAmb   13 44 04.1
      comp=Z,2.0nm,1.3s
J14K  Nanvaranak Lak    77.70  20    P      P      13 49 34.8 +1.0
QSPA  South Pole Qui    83.47 180    P      P      13 50 04.5 -0.4
B20K  Meade River       84.32  16    P      P      13 50 09.4 +0.5
B20K                                 IAmb   IAmb   13 50 26.0
      comp=Z,2.4nm,1.1s
MCARA McCarthy VSAT     85.09  26    P      P      13 50 13.2 +0.2
BCPM  Bancas Point      86.12  28    P      P      13 50 19.5 +1.3
KBO   Bosley Butte      91.49  48    P      P      13 50 44.7 +0.6
O02D  Mt. Diablo Mer    92.32  50    P      P      13 50 48.4 +0.3
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*SOME **17** 13:38:50.2, 39°.53N×77°.05E, h15km*

*KRNET **17** 13:38:50.0±0.1, 39°.50N×77°.00E, mb3.2*

*NNC **17** 13:38:51.3±0.9, 39°.59N×77°.05E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=6.1km s-min=4.6km az=168.0*

ISC 17 13:38:52.0±1.9**, 39°.46N**±0°.09×**77°.08E**±0°.05**, h10**km**, n41, σ1s.35**/66**, 22C-16D, Southern Xinjiang**

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Code  Station Name        Δ°   AZ°   Phase ID        Time      Res
                                     Op     ISC      h  m  s   ISC
JNKS  Jany-Kuch          1.93 326⇑eP    Pn     13 39 25.0 -0.2
JNKS                             ⇑eS    Sb     13 39 50.5 -1.3
TARG  Taragay, Kyrgy     2.33  13⇑iP    Pn     13 39 31.7 +0.9
TARG                             ⇑eS    Sb     13 40 02.2 -1.3
KDJ   Kajisay            2.67   2⇑iP    Pn     13 39 36.1 +0.9
KDJ                              ⇑eS    Sn     13 40 09.5 +1.8
SFK   Sufi-Kurgan        2.81 282⇑eP    Pn     13 39 37.5 +0.2
SFK                              ⇑eS    Sn     13 40 12.4 +1.0
ULHL  Ulahol             2.85 347⇓iP    Pn     13 39 38.5 +0.7
ULHL                             ⇓eS    Sn     13 40 13.8 +1.4
SALK  Salom-Alik         2.87 301⇓eP    Pn     13 39 38.6 +0.6
SALK                             ⇓eS    Sn     13 40 14.0 +1.2
BOOM  Boomskoye usch     3.15 344⇓eP    Pn     13 39 42.4 +0.6
BOOM                             ⇓iS    Sn     13 40 20.7 +1.2
PRZ   Przheval'sk        3.18  18⇓iP    Pn     13 39 43.6 +1.3
PRZ                              ⇓eS    Sn     13 40 22.7 +2.3
ARLS  Aral               3.19 320⇑eP    Pn     13 39 42.7 +0.4
ARLS                             ⇑iS    Sn     13 40 21.1 +0.6
UCH   Uchtor             3.38 326⇑eP    Pn     13 39 45.7 +0.4
UCH                              ⇑iS    Sn     13 40 26.3 +0.6
TNSS  Tian-Shan          3.58 358  Pg   Pb     13 39 53.4 -2.1
      1.9nm,0.4s
TNSS                               Lg   Lg     13 40 41.1
      4.8nm,0.4s
TNSS  Tian-Shan          3.58 358 eP    Pb     13 39 53.4 -2.1
      2.0nm,0.4s
TNSS                              eS    Sb     13 40 39.2  0.0
      5.1nm,0.4s
KBK   Karagaybulak       3.58 334⇓iP    Pn     13 39 48.4 +0.7
KBK                              ⇓eS    Sn     13 40 30.8 +0.7
IZV   Izvestkoviy        3.59 355  Pg   Pb     13 39 55.0 -0.7
      3.8nm,0.3s
IZV                                Lg   Lg     13 40 41.7
      29nm,0.4s
IZV   Izvestkoviy        3.59 355 eP    Pb     13 39 55.0 -0.7
      3.8nm,0.3s
IZV                               eS    Sb     13 40 41.6 +2.3
      29nm,0.4s
TKM2  Tokmak 2           3.63 343⇑iP    Pn     13 39 49.2 +0.7
TKM2                             ⇑iS    Sn     13 40 32.4 +0.8
ARSB  Arslanbob          3.64 302⇑eP    Pn     13 39 48.9 +0.3
ARSB                             ⇑eS    Sn     13 40 31.8 +0.1
KST   Kastek             3.68 347  Pg   Pb     13 39 55.7 -1.5
      2.6nm,0.4s
KST                                Lg   Lg     13 40 44.7
      20nm,0.2s
KST   Kastek             3.68 347 eP    Pb     13 39 55.4 -1.8
      2.3nm,0.3s
KST                               eS    Sb     13 40 42.4 +0.5
      20nm,0.6s
MDOK  Medeo              3.70 360  Pg   Pb     13 39 56.5 -1.0
      3.0nm,0.1s
MDOK                               Lg   Lg     13 40 44.3
      14nm,0.7s
MTBS  Maitube            3.70 353  Pg   Pb     13 39 56.5 -1.0
      3.3nm,0.3s
MTBS                               Lg   Lg     13 40 44.3
      23nm,0.2s
MTBS  Maitube            3.70 353 eP    Pb     13 39 56.5 -1.0
      3.3nm,0.3s
MTBS                              eS    Sb     13 40 44.3 +1.9
      23nm,0.2s
AAK   Ala-Archa          3.73 329⇑iP    Pn     13 39 50.4 +0.6
AAK                              ⇑eS    Sn     13 40 34.4 +0.6
AAK   Ala-Archa          3.73 329 ⇓Pg   Pb     13 39 57.3 -0.7
      2.4nm,0.7s
AAK                               ⇓Lg   Lg     13 40 45.6
      14nm,0.7s
SATY  Saty               3.73  15  Pg   Pb     13 39 58.0 -0.1
      7.8nm,0.4s
SATY                               Lg   Lg     13 40 46.8
      25nm,0.4s
KOTS  Kotyrbulak         3.77   0  Pg   Pb     13 39 58.1 -0.7
      5.7nm,0.3s
KOTS                               Lg   Lg     13 40 47.5
      88nm,0.2s
KOTS  Kotyrbulak         3.77   0 eP    Pb     13 39 58.1 -0.7
      5.7nm,0.3s
KOTS                              eS    Sb     13 40 47.5 +2.9
      88nm,0.2s
DGS   Degeres            3.91 346  Pg   Pb     13 40 01.0  0.0
      4.2nm,0.3s
DGS                                Lg   Lg     13 40 52.1
      20nm,0.4s
UZB   Uzynbulak          3.96  21  Pg   Pb     13 40 01.4 -0.7
      6.8nm,0.2s
UZB                                Lg   Lg     13 40 53.7
      7.0nm,0.6s
UZB   Uzynbulak          3.96  21 eP    Pb     13 40 01.4 -0.7
      4.7nm,0.3s
UZB                               eS    Sb     13 40 52.4 +2.3
      8.2nm,0.6s
SHLS  Shalkode           4.11  25  Pg   Pg     13 40 07.7 -3.0
      14nm,0.3s
SHLS                               Lg   Lg     13 41 04.5
      21nm,0.7s
SHLS  Shalkode           4.11  25 eP    Pb     13 40 06.7 +2.2
      14nm,0.5s
SHLS                              eS    Sg     13 41 01.8 -2.1
      14nm,0.4s
PDGK  Podgornoye         4.27  24 ⇑Pg   Pb     13 40 06.1 -1.2
      9.6nm,0.6s
PDGK                              ⇓Lg   Lg     13 41 02.3
      13nm,0.9s
USP   Ospenovka          4.27 334⇓eP    Pn     13 39 57.9 +0.8
USP                              ⇓eS    Sn     13 40 47.3 +0.3
KRBS  Karabastau         4.36 346  Pg   Pb     13 40 07.9 -0.9
      2.2nm,0.3s
KRBS                               Lg   Lg     13 41 04.5
      3.1nm,0.4s
MRKS  Merke              4.39 320  Pg   Pb     13 40 09.8 +0.5
      4.1nm,0.3s
MRKS                               Lg   Lg     13 41 07.0
      9.9nm,0.3s
MRKS  Merke              4.39 320 eP    Pb     13 40 08.7 -0.5
      4.1nm,0.3s
MRKS                              eS    Sb     13 41 05.0 +2.8
      11nm,0.4s
MNAS  Manas              4.60 313⇑eP    Pn     13 40 02.2 +0.5
MNAS                             ⇑eS    Sn     13 40 55.4 +0.1
ARXS  Arharly            4.78   6  Pg   Pb     13 40 15.8 -0.1
      2.6nm,0.5s
ARXS                               Lg   Lg     13 41 17.4
      10nm,0.3s
ARXS  Arharly            4.78   6 eP    Pb     13 40 15.8 -0.1
      2.6nm,0.5s
ARXS                              eS    Sb     13 41 17.4 +3.8
      10nm,0.3s
KK31  Karatay Array      6.14 308 ⇓Pg   Pb     13 40 40.2 +1.1
      2.6nm,0.7s,baz=125,slow=15,SNR=9.8
KK31                              ⇑Lg   Lg     13 42 03.8
      4.3nm,0.7s,baz=131,slow=28,SNR=4.5
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*IDC **17** 13:43:33.0±2.8, 61°.11N×151°.35W, h0km, mb3.8/5, mbtmp3.8/6, ML3.0/1, Error ellipse: s-maj=60.5km s-min=18.4km az=138.0*

*AEIC **17** 13:43:41.6±1.0, 61°.39N±0°.02×149°.92W±0°.05, h41km±4km, ML3.2, ML3.4/196(NEIC), Error ellipse: s-maj=3.7km s-min=3.1km az=223.0*

*NEIC **17** 13:43:41.1±1.2, 61°.41N±0°.02×149°.94W±0°.05, h40km±5km, Error ellipse: s-maj=3.6km s-min=3.0km az=46.0*

ISC 17 13:43:40.2±0.8**, 61°.39N**±0°.03×**149°.94W**±0°.02**, h42**km**, n155, σ1s.30**/113**, mb3.9**/5**, Southern Alaska**

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Code  Station Name        Δ°   AZ°   Phase ID        Time      Res
                                     Op     ISC      h  m  s   ISC
RC01  Rabbit Creek A     0.31 161           Pn     13 43 49.5 +0.7
RC01                                 IAML          13 43 57.4
      comp=N,5µm,0.3s
RC01  Rabbit Creek A     0.31 161           Sn     13 43 56.5 +1.8
M22K  Willow             0.38 347           Pn     13 43 49.6 +0.1
M22K  Willow             0.38 347           Sn     13 43 56.8 +0.8
SUA   Susitna One        0.39 282           Pn     13 43 50.5 +0.6
SUA   Susitna One        0.39 282           Sn     13 43 57.9 +1.4
PMR   Palmer             0.44  62           Pn     13 43 50.5 +0.2
PMR   Palmer             0.44  62           Sn     13 43 58.2 +0.9
GHO   Glory Hole Cre     0.62  51           Pn     13 43 53.0 +0.3
GHO                                  IAML          13 44 03.8
      comp=N,1µm,0.2s
GHO   Glory Hole Cre     0.62  51           Sn     13 44 03.1 +1.4
KNK   Knik Glacier       0.71  87           Pn     13 43 54.6 +0.7
KNK                                  IAML          13 44 07.4
      comp=E,2µm,0.3s
KNK                                  IAML          13 44 07.8
      comp=N,2µm,0.5s
KNK   Knik Glacier       0.71  87           Sn     13 44 05.6 +1.8
CAPN  Captain Cook N     0.85 224           Pn     13 43 58.0 +2.3
SML   Sawmill            0.88  61           Pn     13 43 56.4 +0.3
SML   Sawmill            0.88  61           Sn     13 44 09.8 +2.0
SLKM  Skilak Lake        0.89 189    Pn     Pn     13 43 56.8 +0.5
SLKM                                 IAML          13 44 11.8
      comp=N,2µm,0.3s
SLKM  Skilak Lake        0.89 189           Sn     13 44 09.6 +1.6
O22K  Cooper Landing     0.91 173           Pn     13 43 57.2 +0.6
O22K  Cooper Landing     0.91 173           Sn     13 44 10.4 +1.9
STLK  Strandline Lak     0.92 278           Pn     13 43 57.4 +0.7
STLK                                 IAML          13 44 10.5
      comp=E,992nm,0.2s
STLK  Strandline Lak     0.92 278           Sn     13 44 10.1 +1.4
PWL   Port Wells         0.94 123           Pn     13 43 58.0 +1.1
SKT   Skwentna           0.96 309           Pn     13 43 57.6 +0.3
SKT                                  IAML          13 44 11.4
      comp=N,1µm,0.3s
SKT                                  IAML          13 44 13.2
      comp=E,1µm,0.3s
SKT   Skwentna           0.96 309           Sn     13 44 10.7 +0.9
SPCG  Spurr Capps Gl     1.01 266           Sn     13 44 12.6 +1.7
SPU   Mount Spurr        1.04 260           Pn     13 43 58.8 +0.5
SPCR  Spurr Chakacha     1.11 261           Pn     13 44 00.1 +0.8
SPCR  Spurr Chakacha     1.11 261           Sn     13 44 15.2 +1.8
M23K  Glacier View       1.14  68           Sn     13 44 16.4 +2.3
SPBG  Spurr Blockage     1.18 265           Pn     13 44 01.3 +1.0
L22K  Petersville        1.21 342           Pn     13 44 01.1 +0.4
L22K                                 IAML          13 44 19.2
      comp=E,849nm,0.3s
L22K                                 IAML          13 44 19.4
      comp=N,668nm,0.3s
SEW   Seward             1.31 169           Pn     13 44 02.3 +0.4
SEW                                  IAML          13 44 26.6
      comp=E,540nm,0.6s
SEW                                  IAML          13 44 27.0
      comp=N,509nm,0.5s
SCM   Sheep Creek Mo     1.33  69           Pn     13 44 03.4 +1.0
SCM                                  IAML          13 44 22.7
      comp=N,856nm,0.8s
RDT   Redoubt            1.45 237           Pn     13 44 04.9 +0.9
GLI   Glacier Island     1.47 109           Pn     13 44 04.9 +0.7
GLI                                  IAML          13 44 28.5
      comp=N,770nm,0.6s
WAT7  Susitna Watana     1.54  19           Pn     13 44 06.6 +1.3
WAT6  Susitna Watana     1.59  40           Pn     13 44 07.1 +1.2
WAT1  Susitna Watana     1.59  24           Pn     13 44 07.1 +1.3
M20K  Styx River         1.60 290           Pn     13 44 07.0 +0.9
RDSO  Redoubt South      1.66 237           Pn     13 44 07.9 +1.0
RDWB  Redoubt West       1.68 239           Pn     13 44 08.3 +1.2
RED   Redoubt Volcan     1.69 236           Pn     13 44 08.3 +1.1
RED                                  IAML          13 44 31.8
      comp=E,411nm,0.5s
RED                                  IAML          13 44 34.9
      comp=N,435nm,0.4s
BRLK  Bradley Lake       1.69 196           Pn     13 44 08.5 +1.3
BRLK                                 IAML          13 44 32.8
      comp=E,466nm,0.5s
BRLK                                 IAML          13 44 36.5
      comp=N,434nm,0.5s
BRSE  Bradley Lake S     1.70 194           Pn     13 44 08.1 +0.8
FID   Port Fidalgo       1.80 109           Pn     13 44 09.1 +0.4
FID                                  IAML          13 44 39.9
      comp=N,440nm,0.5s
FID                                  IAML          13 44 40.9
      comp=E,425nm,0.3s
PPLA  Purkeypile         1.85 326           Pn     13 44 10.7 +1.2
PPLA                                 IAML          13 44 35.1
      comp=E,365nm,0.9s
PPLA                                 IAML          13 44 47.1
      comp=N,352nm,1.0s
P23K  Montague Islan     1.87 137           Pn     13 44 09.9 +0.2
HOM   Homer              1.93 207           Pn     13 44 12.3 +1.9
M24K  Tolsona, Glenn     1.93  66    IAML          13 44 39.8
      comp=N,458nm,0.6s
KLU   Klutina            1.94  85           Pn     13 44 11.6 +0.9
KLU                                  IAML          13 44 39.2
      comp=N,302nm,0.4s
KLU                                  IAML          13 44 43.8
      comp=E,216nm,0.4s
HIN   Hinchinbrook I     1.95 119           Pn     13 44 11.3 +0.5
CNPM  China Poot         1.97 200           Pn     13 44 12.1 +1.0
CNPM                                 IAML          13 44 40.7
      comp=E,438nm,0.6s
CNPM                                 IAML          13 44 41.6
      comp=N,291nm,0.4s
DIV   Divide             2.03  95           Pn     13 44 12.7 +0.7
DIV                                  IAML          13 44 44.9
      comp=N,354nm,0.5s
DHY   Denali Highway     2.08  34           Pn     13 44 14.4 +1.7
TRF   Thorofare Moun     2.08 356    IAML          13 44 42.9
      comp=E,246nm,0.7s
```

TRF				IAML		13 44 43.4	
	comp=N,320nm,0.6s						
ILS	**Iliamna Low So**	**2.10**	**228**		**Pn**	**13 44 14.5**	**+1.6**
EYAK	**Cordova Ski Ar**	**2.21**	**110**		**Pn**	**13 44 14.8**	**+0.5**
EYAK	**Cordova Ski Ar**	**2.21**	**110**	IAML		13 44 54.9	
	comp=N,181nm,0.7s						
EYAK				IAML		13 44 55.1	
	comp=E,153nm,0.6s						
N19K	**Bonanza Creek**	**2.28**	**257**		**Pn**	**13 44 16.8**	**+1.4**
P19K	**Oil Pt**	**2.38**	**225**	IAML		13 44 51.9	
	comp=E,315nm,0.5s						
P19K				IAML		13 44 57.1	
	comp=N,250nm,0.5s						
MCK	**McKinley**	**2.40**	**11**	IAML		13 44 59.0	
	comp=N,174nm,0.9s						
MCK				IAML		13 45 01.6	
	comp=E,151nm,0.6s						
O19K	**Port Alsworth**	**2.46**	**243**		**Pn**	**13 44 18.6**	**+1.0**
L19K	**White Mountain**	**2.47**	**291**	IAML		13 44 50.8	
	comp=E,189nm,0.4s						
N25K	**Chitina, Valde**	**2.57**	**83**	IAML		13 45 00.7	
	comp=N,187nm,0.6s						
N25K				IAML		13 45 01.4	
	comp=E,112nm,0.4s						
BMRM	**Bremner River**	**2.62**	**97**		**Pn**	**13 44 20.3**	**+0.3**
BMRM	**Bremner River**	**2.62**	**97**	IAML		13 45 03.3	
	comp=N,221nm,0.8s						
BMRM				IAML		13 45 11.7	
	comp=E,181nm,0.6s						
PAX	**Paxson**	**2.63**	**51**		**Pn**	**13 44 22.1**	**+1.9**
GOAT	**Goat Mountain**	**2.67**	**105**		**Pn**	**13 44 21.1**	**+0.4**
CHUM	**Lake Minchumin**	**2.73**	**337**		**Pn**	**13 44 22.5**	**+1.0**
WACK	**Wrangell Chich**	**2.74**	**75**		**Pn**	**13 44 23.0**	**+1.1**
K20K	**Telida**	**2.76**	**318**	IAML		13 45 14.5	
	comp=E,107nm,0.6s						
BPAW	**Bear Paw Mtn.**	**2.77**	**350**		**Pn**	**13 44 22.6**	**+0.7**
BPAW	**Bear Paw Mtn.**	**2.77**	**350**	IAML		13 45 14.2	
	comp=E,96nm,0.7s						
M18K	**Stony River**	**2.83**	**275**		**Pn**	**13 44 24.0**	**+1.3**
GLB	**Gilahina Butte**	**2.95**	**86**		**Pn**	**13 44 25.0**	**+0.5**
GLB	**Gilahina Butte**	**2.95**	**86**	IAML		13 45 12.8	
	comp=E,80nm,0.6s						
GLB				IAML		13 45 13.5	
	comp=N,155nm,0.8s						
N18K	**Kilae Creek**	**2.98**	**259**		**Pn**	**13 44 25.9**	**+1.0**
O18K	**Koktuh Hills**	**3.02**	**242**	IAML		13 45 28.6	
	comp=N,82nm,1.1s						
SYI	**Shuyak Island**	**3.04**	**205**		**Pn**	**13 44 27.1**	**+1.4**
SYI	**Shuyak Island**	**3.04**	**205**	IAML		13 45 13.8	
	comp=N,79nm,1.1s						
SYI				IAML		13 45 14.7	
	comp=E,85nm,0.8s						
VRDI	**Verde Repeater**	**3.13**	**90**		**Pn**	**13 44 27.5**	**+0.3**
VRDI	**Verde Repeater**	**3.13**	**90**	IAML		13 45 17.6	
	comp=N,70nm,0.6s						
WRH	**Wood River Hil**	**3.21**	**14**		**Pn**	**13 44 29.7**	**+1.6**
L18K	**Granite Mounta**	**3.31**	**288**		**Pn**	**13 44 30.5**	**+1.1**
L18K	**Granite Mounta**	**3.31**	**288**	IAML		13 45 27.8	
	comp=N,57nm,1.1s						
MENT	**Mentasta**	**3.31**	**59**	IAML		13 45 31.5	
	comp=N,147nm,1.1s						
HDA	**Harding Lake**	**3.33**	**23**	IAML		13 45 26.1	
	comp=N,105nm,0.8s						
HDA				IAML		13 45 26.8	
	comp=E,60nm,0.9s						
MCARA	**McCarthy VSAT**	**3.33**	**87**	IAML		13 45 27.6	
	comp=N,145nm,1.0s						
CRQM	**Cirque**	**3.37**	**98**		**Pn**	**13 44 30.9**	**+0.6**
J20K	**Nowinta River**	**3.40**	**327**	IAML		13 45 12.3	
	comp=E,126nm,0.5s						
CCB	**Clear Creek Bu**	**3.42**	**16**		**Pn**	**13 44 31.6**	**+0.8**
M26K	**Nabesna, AK**	**3.44**	**70**	IAML		13 45 35.4	
	comp=N,58nm,0.7s						
M26K				IAML		13 45 40.6	
	comp=E,52nm,0.5s						
L26K	**Log Cabin Wild**	**3.50**	**59**	IAML		13 45 30.5	
	comp=E,113nm,0.4s						
L26K				IAML		13 45 34.6	
	comp=N,66nm,0.8s						
TGL	**Tana Glacier**	**3.51**	**97**		**Pn**	**13 44 32.7**	**+0.4**
TGL	**Tana Glacier**	**3.51**	**97**	IAML		13 45 33.6	
	comp=N,113nm,0.7s						
DOT	**Dot Lake**	**3.55**	**48**	IAML		13 45 33.9	
	comp=N,68nm,0.9s						
DOT				IAML		13 45 34.7	
	comp=E,73nm,0.7s						
PTPK	**Patty Peak**	**3.62**	**90**		**Pn**	**13 44 34.5**	**+0.8**
N17K	**Nushagak Hills**	**3.64**	**259**	IAML		13 45 17.4	
	comp=E,64nm,0.5s						
N17K				IAML		13 45 37.0	
	comp=N,53nm,1.0s						
IL31		**3.67**	**21**		**Pn**	**13 44 35.4**	**+1.1**
ILAR	**Eielson Array**	**3.67**	**21**	Pn	**Pn**	**13 44 36.0**	**+1.7**
	comp=N,1.0nm,0.3s,baz=208,slow=14,SNR=30						
ILAR				Sn	**Sn**	**13 45 21.8**	**+5.4**
	comp=N,4.4nm,0.3s,baz=212,slow=23,SNR=7.2						
	comp=N,1.9nm,0.3s						
MLY	**Manley**	**3.68**	**355**		**Pn**	**13 44 35.3**	**+0.8**
J19K	**Poorman**	**3.70**	**317**		**Pn**	**13 44 35.5**	**+0.8**
J19K	**Poorman**	**3.70**	**317**	IAML		13 45 36.2	
	comp=N,48nm,1.1s						
J19K				IAML		13 45 37.0	
	comp=E,52nm,0.9s						
KIAG	**Kiagna River**	**3.71**	**94**		**Pn**	**13 44 35.3**	**+0.3**
SCRK	**Sand Creek**	**3.78**	**44**	IAML		13 45 40.7	
	comp=E,52nm,0.7s						
I23K	**Minto, Yukon-K**	**3.79**	**4**		**Pn**	**13 44 36.8**	**+0.9**
I23K	**Minto, Yukon-K**	**3.79**	**4**	IAML		13 45 45.3	
	comp=N,40nm,0.7s						
I23K				IAML		13 45 47.8	
	comp=E,43nm,1.1s						
J25K	**Salcha River,**	**3.85**	**31**	IAML		13 45 32.9	
	comp=N,44nm,0.6s						
J25K				IAML		13 45 35.1	
	comp=E,62nm,0.5s						
O17K	**Koliganek Bris**	**3.88**	**249**		**Pn**	**13 44 38.3**	**+1.1**
POKR	**Poker Plat Res**	**3.91**	**16**		**Pn**	**13 44 39.0**	**+1.3**
POKR	**Poker Plat Res**	**3.91**	**16**	IAML		13 45 42.5	
	comp=E,42nm,0.9s						
POKR				IAML		13 45 45.4	
	comp=N,37nm,0.6s						
I21K	**Tanana**	**3.92**	**347**	IAML		13 45 46.8	
	comp=E,46nm,0.8s						
I21K				IAML		13 45 47.8	
	comp=N,36nm,0.7s						
BARN	**Barnard Glacie**	**4.02**	**91**		**Pn**	**13 44 40.2**	**+0.8**
BARN	**Barnard Glacie**	**4.02**	**91**	IAML		13 45 46.2	
	comp=E,56nm,0.5s						
L17K	**Donlin**	**4.04**	**284**		**Pn**	**13 44 40.4**	**+0.9**
YAH	**Yahtse**	**4.14**	**101**		**Pn**	**13 44 39.9**	**-1.1**
YAH	**Yahtse**	**4.14**	**101**	IAML		13 45 47.9	
	comp=E,40nm,1.1s						
YAH				IAML		13 45 51.0	
	comp=N,42nm,0.9s						
K17K	**Iditarod**	**4.15**	**292**		**Pn**	**13 44 41.9**	**+0.9**
K17K	**Iditarod**	**4.15**	**292**	IAML		13 45 52.1	
	comp=E,49nm,0.8s						
K17K				IAML		13 45 52.6	
	comp=N,48nm,0.8s						
J26L	**Joseph Creek**	**4.27**	**40**		**Pn**	**13 44 45.3**	**+2.6**
J26L	**Joseph Creek**	**4.27**	**40**	IAML		13 45 41.6	
	comp=N,54nm,0.6s						
J26L				IAML		13 45 42.1	
	comp=E,38nm,0.7s						
CAHL	**Cahill**	**4.30**	**221**		**Pn**	**13 44 44.5**	**+1.4**
LOGN	**Logan Glacier**	**4.38**	**93**		**Pn**	**13 44 44.8**	**+0.6**
LOGN	**Logan Glacier**	**4.38**	**93**	IAML		13 45 57.1	
	comp=E,28nm,0.7s						
LOGN				IAML		13 46 02.6	
	comp=N,33nm,0.8s						
M16K	**Timber Creek**	**4.38**	**269**		**Pn**	**13 44 45.4**	**+1.3**
H21K	**Melozitna Rive**	**4.47**	**345**	IAML		13 45 60.0	
	comp=N,26nm,0.7s						
H21K				IAML		13 46 08.0	
	comp=E,27nm,0.7s						
L16K	**Owhat River**	**4.57**	**278**	IAML		13 46 10.1	
	comp=N,24nm,0.8s						
J17K	**VABM Dome**	**4.70**	**299**		**Pn**	**13 44 49.3**	**+0.7**
O28M	**Mount Upton**	**4.78**	**93**		**Pn**	**13 44 51.0**	**+1.2**
O28M	**Mount Upton**	**4.78**	**93**	IAML		13 46 10.4	
	comp=N,27nm,0.9s						
I26K	**Coal Creek Min**	**4.98**	**35**	IAML		13 46 18.1	
	comp=N,28nm,1.0s						
I26K				IAML		13 46 28.9	
	comp=E,30nm,0.8s						
H19K	**Roundabout Mou**	**5.08**	**328**		**Pn**	**13 44 54.5**	**+0.9**
H19K	**Roundabout Mou**	**5.08**	**328**	IAML		13 46 29.1	
	comp=N,22nm,0.9s						
H19K				IAML		13 46 38.5	
	comp=E,28nm,1.1s						
N15K	**Kwethluk River**	**5.12**	**261**	IAML		13 46 22.7	
	comp=E,35nm,1.2s						
N15K				IAML		13 46 26.4	
	comp=N,28nm,1.1s						
M15K	**Kasigluk River**	**5.27**	**267**		**Pn**	**13 44 57.3**	**+1.0**
J16K	**Anvik River**	**5.32**	**296**		**Pn**	**13 44 57.7**	**+0.7**
H18K	**Honhosa River**	**5.36**	**319**		**Pn**	**13 44 58.6**	**+1.1**
H18K	**Honhosa River**	**5.36**	**319**	IAML		13 46 02.4	
	comp=E,19nm,0.5s						
H18K				IAML		13 46 02.4	
	comp=N,13nm,0.6s						
G21K	**Allakaket**	**5.38**	**345**		**Pn**	**13 44 59.5**	**+1.6**
G21K	**Allakaket**	**5.38**	**345**	IAML		13 46 00.9	
	comp=N,15nm,0.5s						
G21K				IAML		13 46 01.3	
	comp=E,22nm,0.5s						
O15K	**Ungalikthiuk R**	**5.39**	**250**		**Pn**	**13 44 59.5**	**+1.5**
L15K	**Ungalak Mounta**	**5.53**	**278**		**Pn**	**13 45 00.8**	**+0.9**
G19K	**Purcell Mounta**	**5.73**	**330**		**Pn**	**13 45 03.2**	**+0.6**
M14K	**Bethel**	**5.87**	**269**		**Pn**	**13 45 05.8**	**+1.3**
G18K	**Tagagawik**	**5.96**	**323**		**Pn**	**13 45 06.9**	**+1.2**
N14K	**Kuskokwak Cree**	**5.96**	**261**		**Pn**	**13 45 07.2**	**+1.5**
O14K	**Tigyukauivet M**	**6.02**	**254**		**Pn**	**13 45 08.1**	**+1.5**
L14K	**Kuka Creek**	**6.13**	**275**		**Pn**	**13 45 10.0**	**+2.0**
P29M	**Windy Craggy**	**6.28**	**101**		**Pn**	**13 45 12.0**	**+1.8**
J14K	**Nanvaranak Lak**	**6.54**	**288**		**Pn**	**13 45 14.9**	**+1.3**
FINES	**FINESS Array B**	**57.46**	**2**	P	**P**	**13 53 23.0**	**-1.0**
	comp=E,2.7nm,0.9s,baz=353,slow=7.1,SNR=2.2						
	comp=E,2.7nm,0.9s						
BVAR	**Borovoye Array**	**61.52**	**334**	P	**P**	**13 53 50.9**	**-1.4**
	comp=E,0.5nm,0.5s,baz=38,slow=5.6,SNR=3.6						
	comp=E,0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**61.81**	**327**	P	**P**	**13 53 52.6**	**-1.6**
	comp=E,0.4nm,0.5s,baz=28,slow=6.5,SNR=4.3						
	comp=E,0.4nm,0.5s						
MKAR	**Makanchi Array**	**64.26**	**323**	P	**P**	**13 54 08.6**	**-2.0**
	comp=E,0.4nm,0.5s,baz=36,slow=6.6,SNR=7.2						
	comp=E,0.4nm,0.5s						
AKASG	**Malin Array Be**	**68.26**	**1**	P	**P**	**13 54 35.1**	**-0.9**
	comp=E,0.6nm,0.4s,baz=3.3,slow=6.5,SNR=2.4						
	comp=E,0.6nm,0.4s						

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*IDC **17** 14:19:36.5±1.2, 6°.31N×124°.52E, h0^{km}, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=73.6km s-min=22.0km az=79.0*

ISC 17 14:19:41.5±1.1**, 6°.5N**±0°.1×**125°.2E**±0°.3**, h35**^{km}**, n7,** σ**1^{s}67**/7**,**
mb3.6/6**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.70**	**36**	P	**Pn**	**14 19 54.0**	**-1.0**
FITZ	**Fitzroy Crossi**	**24.45**	**179**	P	**P**	**14 24 57.6**	**+0.4**
	1.8nm,0.5s,baz=358,slow=9.8,SNR=20						
	1.8nm,0.5s						
WRA	**Warramunga Arr**	**27.78**	**161**	P	**P**	**14 25 26.8**	**-0.6**
	0.8nm,0.9s,baz=330,slow=10,SNR=2.5						
	0.8nm,0.9s						
ASAR	**Alice Springs**	**31.17**	**164**	P	**P**	**14 25 57.0**	**-0.5**
	0.4nm,0.6s,baz=338,slow=6.8,SNR=19						
	0.4nm,0.6s						
STKA	**Stephens Creek**	**41.26**	**159**	P	**P**	**14 27 23.1**	**-0.3**
	0.6nm,0.4s,baz=336,slow=16,SNR=4.0						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**58.58**	**327**	P	**P**	**14 29 33.6**	**-1.2**
	0.3nm,0.3s,baz=116,slow=8.4,SNR=2.5						
	0.3nm,0.3s						
ILAR	**Eielson Array**	**83.29**	**26**	P	**P**	**14 32 07.3**	**+2.8**
	0.4nm,0.7s,baz=258,slow=5.6,SNR=4.9						
	0.4nm,0.7s						

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*DJA **17** 14:53:40.9±7.3, 10°S±16°×12°7E±6°0, h10^{km}, M4.1/7, mb4.3/1, MLv4.0/7*

*IDC **17** 14:53:54.5±1.8, 10°.08S×124°.96E, h0^{km}, mb3.4/2, mbtmp3.5/4, ML3.5/2, Error ellipse: s-maj=200.5km s-min=31.2km az=56.0*

ISC 17 14:53:59.9±1.3**, 9°.6S**±0°.2×**126°.2E**±0°.2**, h35**^{km}**, n7,** σ**2^{s}41**/9**,**
Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.88**	**266**	P	**Pn**	**14 54 32.3**	**+2.6**
BATI	**Baumata**	**2.53**	**257**	P	**Pn**	**14 54 37.4**	**-1.2**
MMRI	**Maumere**	**4.01**	**284**	P	**Pn**	**14 54 59.5**	**+0.6**
WRA	**Warramunga Arr**	**12.93**	**143**	Pn	**Pn**	**14 57 04.0**	**+2.7**
	0.3nm,0.3s,baz=317,slow=14,SNR=7.9						
WRA				Sn	**Sn**	**14 59 24.0**	**0.0**
	0.4nm,0.3s,baz=318,slow=25,SNR=6.6						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**15.78**	**153**	Pn	**P**	**14 57 42.5**	**-0.7**
	0.2nm,0.3s,baz=319,slow=10,SNR=38						
ASAR				Sn	**Sn**	**15 00 29.9**	**-3.7**
	0.1nm,0.3s,baz=317,slow=20,SNR=8.9						
	0.9nm,0.6s						
MKAR	**Makanchi Array**	**68.44**	**329**	P	**P**	**15 04 57.6**	**-0.8**
	0.2nm,0.4s,baz=138,slow=6.5,SNR=5.3						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**72.85**	**330**	P	**P**	**15 05 23.0**	**-2.1**
	0.3nm,0.8s,baz=139,slow=5.1,SNR=2.4						
	0.3nm,0.8s						

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*BGR **17** 14:56:10.4±0.6, 49°.54N×6°.19E, h10^{km}, ML1.7/2, Error ellipse: s-maj=5.6km s-min=4.4km az=89.0*

*STR **17** 14:56:10.9±0.0, 49°.57N±0°.09×6°.19E±0°.09, h9^{km}, MLv1.9/10, LOCSAT earthModelID haslach_taup-2.11 preliminary*

*LDG **17** 14:56:10.7±0.1, 49°.55N×6°.15E, h10^{km}, Ml2.5/20, Error ellipse: s-maj=1.5km s-min=1.0km az=87.0*

*BNS **17** 14:56:11.1±0.8, 49°.55N×6°.14E, h10^{km}±1^{km}, ML1.7*

*UCC **17** 14:56:12.3±0.7, 49°.62N×6°.12E, h10^{km}±1^{km}, ML1.9*

ISC 17 14:56:09.9±0.9**, 49°.55N**±0°.01×**6°.18E**±0°.02**, h18**^{km}±3^{km}**,**
n72, σ**0^{s}89**/135**, 4C-32D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WLF	**Walferdange**	**0.12**	**350**	*e*Pg	**Pg**	**14 56 13.9**	**+0.1**
WLF				*e*Sg	**Sg**	**14 56 15.8**	**-0.6**
WLF	**Walferdange**	**0.12**	**350**	Pg	**Pg**	**14 56 13.9**	**+0.1**
WLF				Sg	**Sg**	**14 56 15.9**	**-0.5**
WLF	**Walferdange**	**0.12**	**350**	κP	**Pg**	**14 56 13.9**	**+0.1**
WLF				*d*S	**Sg**	**14 56 15.8**	**-0.6**
NEUF	**Neufchef**	**0.25**	**205**	Pg	**Pg**	**14 56 16.0**	**+0.4**
NEUF				Sg	**Sg**	**14 56 19.6**	**+0.2**
LVIA	**Vianden**	**0.39**	**2**	κP	**Pb**	**14 56 18.5**	**+0.2**
LVIA				*d*S	**Sg**	**14 56 23.2**	**-0.2**
RIVT	**Riveris**	**0.41**	**67**	*e*Pg	**Pb**	**14 56 18.6**	**-0.1**
RIVT				*e*Sg	**Sb**	**14 56 23.8**	**-0.8**
DUP	**Duppenweiler**	**0.42**	**109**	Pg	**Pb**	**14 56 19.4**	**+0.6**
DUP				Sg	**Sb**	**14 56 24.7**	**-0.1**
LKLB	**Kalborn**	**0.55**	**355**	κP	**Pb**	**14 56 21.6**	**+0.5**
LKLB				*d*S	**Sb**	**14 56 28.6**	**-0.1**
	comp=N,21nm,0.2s						
LOH	**Wallersheim-Lo**	**0.67**	**20**	Pg	**Pb**	**14 56 23.9**	**+0.7**
LOH				Sg	**Sb**	**14 56 32.0**	**-0.2**
	comp=N,45nm,0.2s						
MANO	**Manonville**	**0.74**	**193**	Pg	**Pn**	**14 56 25.7**	**+0.2**
MANO				Pn	**Pb**	**14 56 26.9**	**+2.6**
MANO				Sg	**Sn**	**14 56 35.6**	**-0.7**
MANO				Sn	**Sb**	**14 56 38.3**	**+4.2**
HILG	**Hillesheim**	**0.81**	**23**	*e*Pg	**Pn**	**14 56 26.3**	**-0.2**
HILG				*e*Sg	**Sn**	**14 56 38.2**	**+0.1**
	comp=N,48nm,0.2s						
BHOU	**Houvegnez**	**0.81**	**352**	*d*P	**Pb**	**14 56 25.8**	**+0.3**
BHOU				*d*S	**Sg**	**14 56 35.8**	**-0.9**
	comp=N,25nm,0.1s						
VOEL	**Voellerdingen**	**0.85**	**133**	Pg	**Pn**	**14 56 27.7**	**+0.7**
VOEL				Sg	**Sn**	**14 56 39.0**	**0.0**
RCHB	**Rochefort**	**0.87**	**315**	*e*Pg	**Pb**	**14 56 27.0**	**+0.6**
RCHB				*e*Sg	**Sg**	**14 56 37.8**	**-0.5**
RCHB	**Rochefort**	**0.87**	**315**	Pg	**Pb**	**14 56 26.7**	**+0.3**
RCHB				Sg	**Sb**	**14 56 38.0**	**+0.3**
RCHB	**Rochefort**	**0.87**	**315**	*d*P	**Pb**	**14 56 27.1**	**+0.6**
RCHB				*d*S	**Sg**	**14 56 37.5**	**-0.8**
ABH	**Alteburg**	**0.94**	**69**	*e*Pg	**Pn**	**14 56 28.1**	**-0.3**
ABH				*e*Sg	**Sb**	**14 56 40.9**	**+0.9**
OLFT	**Oleftalsperre**	**0.96**	**9**	*e*Pg	**Pn**	**14 56 28.4**	**-0.1**
OLFT				*e*Sg	**Sg**	**14 56 40.3**	**-0.9**
BGG	**Burgeitz**	**0.99**	**48**	*e*Pg	**Pn**	**14 56 29.1**	**+0.1**
BGG				*e*Sg	**Sn**	**14 56 43.1**	**+0.5**
	comp=N,26nm,0.1s						
LAGB	**Langenfeld Gru**	**1.01**	**36**	Pg	**Pn**	**14 56 29.0**	**-0.2**
BHE	**Schloss Buerre**	**1.03**	**38**	⇑Pg	**Pn**	**14 56 29.9**	**+0.4**
BHE				*e*Sg	**Sb**	**14 56 42.7**	**+0.3**
	comp=N,22nm,0.1s						
BTNL	**Ternell**	**1.04**	**358**	κP	**Pn**	**14 56 30.3**	**+0.6**
PAGF	**Fort de Pagny**	**1.04**	**197**	*e*Pg	**Pn**	**14 56 29.9**	**+0.3**
PAGF				*e*Sg	**Sb**	**14 56 43.0**	**+0.3**
	comp=N,4.8nm,0.1s						
BCLA	**Clavier**	**1.04**	**327**	*d*P	**Pn**	**14 56 30.3**	**+0.6**
BCLA				*d*S	**Sg**	**14 56 42.9**	**-0.9**
	comp=N,15nm,0.1s						
GIVF	**Givet**	**1.04**	**303**	*e*Pn	**Pn**	**14 56 29.8**	**+0.2**
GIVF				*e*Sg	**Sg**	**14 56 42.9**	**-0.9**
	comp=N,33nm,0.3s						
CIEL	**Dossenheim-sur**	**1.05**	**132**	Pg	**Pn**	**14 56 30.9**	**+1.0**
CIEL				Sg	**Sn**	**14 56 45.5**	**+1.4**
MEM	**Membach**	**1.07**	**354**	*e*Pg	**Pn**	**14 56 30.6**	**+0.6**
MEM				*e*Sg	**Sb**	**14 56 44.5**	**+1.0**
MEM	**Membach**	**1.07**	**354**	*b*P	**Pn**	**14 56 31.1**	**+1.1**
MEM				*d*P	**Pn**	**14 56 31.1**	**+1.1**
MEM				*d*S	**Sg**	**14 56 43.0**	**-1.6**
BGES	**Gesves**	**1.10**	**320**	*d*P	**Pn**	**14 56 31.3**	**+0.9**
BGES				*d*S	**Sb**	**14 56 45.2**	**+0.9**
	comp=Z,21nm,0.2s						
OCHT	**Ochtendung**	**1.10**	**43**	*e*Pg	**Pn**	**14 56 30.4**	**0.0**
PEB	**Petersbachel**	**1.10**	**116**	Pn	**Pn**	**14 56 31.5**	**+1.0**
PEB				Sn	**Sn**	**14 56 45.6**	**+0.4**
KLL	**Kalltalsperre**	**1.10**	**4**	*e*Pg	**Pn**	**14 56 31.2**	**+0.7**
KLL				*e*Sg	**Sb**	**14 56 45.1**	**+0.6**
	comp=Z,14nm,0.3s						
DREG	**Dreilaegerbach**	**1.12**	**2**	*e*Pg	**Pn**	**14 56 31.4**	**+0.7**
DREG				*e*Sg	**Sb**	**14 56 45.9**	**+1.0**
	comp=Z,15nm,0.2s						
IMS	**Imsbach**	**1.12**	**87**	Sg	**Sn**	**14 56 46.8**	**+1.1**
STB	**Steinbach**	**1.13**	**22**	*e*Pg	**Pn**	**14 56 31.6**	**+0.7**
STB				*e*Sg	**Sg**	**14 56 45.9**	**-0.7**
	comp=Z,15nm,0.3s						
TDN	**Todenfeld**	**1.14**	**25**	*e*Pg	**Pn**	**14 56 31.3**	**+0.3**
TDN				*e*Sg	**Sb**	**14 56 45.7**	**+0.1**
	comp=Z,16nm,0.1s						
LEMB	**Lembach**	**1.15**	**116**	Pg	**Pn**	**14 56 32.1**	**+0.9**
LEMB				Sg	**Sn**	**14 56 47.1**	**+0.6**
DOU	**Dourbes**	**1.17**	**299**	Pg	**Pg**	**14 56 32.5**	**0.0**
DOU				Sg	**Sb**	**14 56 46.6**	**+0.3**
DOU	**Dourbes**	**1.17**	**299**	*b*P	**Pg**	**14 56 32.5**	**0.0**
DOU				*d*S	**Sb**	**14 56 46.5**	**+0.2**
	comp=N,14nm,0.1s						
SAVF	**Savonnieres en**	**1.17**	**217**	*e*Pg	**Pg**	**14 56 31.9**	**-0.5**
SAVF	**Savonnieres en**	**1.17**	**217**	*e*Pg	**Pg**	**14 56 32.0**	**-0.5**
SAVF				*e*Sg	**Sg**	**14 56 46.7**	**-1.0**
	comp=N,12nm,0.3s						
SAVF				*e*Sg	**Sn**	**14 56 47.3**	**+0.5**
	comp=N,8.9nm,0.3s						
SAVF	**Savonnieres en**	**1.17**	**217**	Pg	**Pg**	**14 56 33.3**	**+0.8**
SAVF				Sg	**Sn**	**14 56 48.8**	**+2.0**
XAFF	**Xaffevillers**	**1.18**	**166**	Pg	**Pg**	**14 56 31.8**	**-0.9**
XAFF				Sg	**Sn**	**14 56 48.0**	**+0.9**
BMRD	**Maredsous**	**1.19**	**310**	*b*P	**Pg**	**14 56 32.9**	**0.0**
BMRD				*d*S	**Sg**	**14 56 47.8**	**-0.6**
	comp=E,24nm,0.2s						
GSH	**Grosshau**	**1.20**	**6**	*e*Pg	**Pg**	**14 56 32.1**	**-1.0**
GSH				*e*Sg	**Sb**	**14 56 47.0**	**-0.1**
	comp=E,37nm,0.3s						
HOHE	**HOHENGOEFT**	**1.23**	**136**	Pg	**Pg**	**14 56 34.0**	**+0.2**
HOHE				Sg	**Sn**	**14 56 50.0**	**+1.5**
MEZF	**Maizieres J'vi**	**1.29**	**216**	*e*Pg	**Pg**	**14 56 33.8**	**-0.9**
MEZF				*e*Sn	**Sn**	**14 56 50.3**	**+0.6**
	comp=E,14nm,0.4s						
BEBN	**Eben Emael**	**1.29**	**346**	*d*P	**Pg**	**14 56 34.6**	**-0.2**
BEBN				*d*S	**Sg**	**14 56 50.9**	**-0.8**
ETNF	**Estrennes**	**1.29**	**184**	Pn	**Pg**	**14 56 34.6**	**-0.3**
ETNF				Sg	**Sg**	**14 56 51.6**	**-0.2**
CDF	**Champ du Feu**	**1.35**	**147**	*e*Pn	**Pg**	**14 56 34.6**	**-1.3**
CDF	**Champ du Feu**	**1.35**	**147**	*e*Pg	**Pg**	**14 56 35.7**	**-0.2**
CDF				*e*Sg	**Sg**	**14 56 53.1**	**-0.4**
	comp=E,4.6nm,0.2s						
WLS	**Welschbruch**	**1.37**	**145**	Pg	**Pg**	**14 56 36.2**	**-0.2**
BAIF	**Baives**	**1.38**	**292**	*e*Pn	**Pn**	**14 56 34.7**	**+0.4**
BAIF	**Baives**	**1.38**	**292**	*e*Pg	**Pg**	**14 56 35.6**	**-0.9**
BAIF				*e*Sg	**Sb**	**14 56 52.8**	**+0.4**
	comp=E,17nm,0.3s						
GWBE	**Wiesbaden**	**1.41**	**66**	Pg	**Pg**	**14 56 37.0**	**-0.1**
ECH	**Echery**	**1.48**	**154**	*e*Pg	**Pg**	**14 56 38.2**	**-0.3**
ECH				*e*Sg	**Sg**	**14 56 57.1**	**-0.6**
ECH	**Echery**	**1.48**	**154**	Pn	**Pb**	**14 56 36.8**	**-0.1**
ECH				Pg	**Pg**	**14 56 38.2**	**-0.3**
ECH				Sn	**Sg**	**14 56 57.4**	**-0.4**
TGA	**Tangissart**	**1.50**	**315**	κP	**Pg**	**14 56 38.2**	**-0.7**
TGA				*d*S	**Sn**	**14 56 56.4**	**+1.2**
	comp=E,28nm,0.1s						
SFTF	**Sexfontaines**	**1.54**	**210**	*e*Pn	**Pn**	**14 56 36.0**	**-0.5**
SFTF	**Sexfontaines**	**1.54**	**210**	*e*Pg	**Pg**	**14 56 38.6**	**-1.0**
SFTF				*e*Sg	**Sg**	**14 56 59.0**	**-0.7**
	comp=E,9.1nm,0.3s						
HAU	**Haudompre**	**1.55**	**176**	*e*Pn	**Pg**	**14 56 39.1**	**-0.6**
HAU				*e*Sg	**Sg**	**14 56 58.7**	**-1.2**
	comp=E,8.0nm,0.2s						
BABA	**Baden-Baden-Ne**	**1.56**	**121**	Pn	**Pb**	**14 56 38.1**	**-0.1**
BABA				Sn	**Sg**	**14 56 59.5**	**-0.7**
TNS	**Taunus Mts**	**1.61**	**64**	*e*Pg	**Pg**	**14 56 40.9**	**-0.1**
OPP	**Oppenau**	**1.69**	**128**	Pn	**Pb**	**14 56 39.7**	**-0.7**
BSKQ	**Steenkerk**	**1.75**	**310**	*d*S	**Sn**	**14 57 02.1**	**+1.0**
HINF	**Hinteralfeld**	**1.79**	**165**	*e*Pg	**Pg**	**14 56 43.0**	**-1.3**
HINF				*e*Sn	**Sn**	**14 57 01.7**	**-0.6**
HINF				*e*Sg	**Sg**	**14 57 06.7**	**-0.9**
	comp=E,4.1nm,0.2s						
LOR	**Lormes**	**2.76**	**215**	*e*Pn	**Pn**	**14 56 53.7**	**+0.4**
LOR	**Lormes**	**2.76**	**215**	*e*Pg	**Pg**	**14 57 01.4**	**-1.4**
LOR				*e*Sn	**Sn**	**14 57 25.2**	**-0.9**
	comp=E,6.9nm,0.2s						
LOR				*e*Sg	**Sg**	**14 57 37.0**	**-1.5**
	comp=E,7.8nm,0.5s						
CABF	**La Chapelle**	**2.94**	**181**	*e*Sg	**Sg**	**14 57 43.6**	**-0.8**
	comp=E,2.4nm,0.4s						
SSF	**Saint Saulge**	**3.06**	**217**	*e*Pn	**Pn**	**14 56 57.8**	**+0.3**
SSF	**Saint Saulge**	**3.06**	**217**	*e*Pg	**Pg**	**14 57 06.2**	**-2.4**
SSF				*e*Sn	**Sn**	**14 57 32.1**	**-1.5**
	comp=E,1.7nm,0.3s						
SSF				*e*Sg	**Sg**	**14 57 45.8**	**-2.5**
	comp=E,1.8nm,0.3s						
SMF	**Signal de Mont**	**3.30**	**209**	*e*Sn	**Sn**	**14 57 38.5**	**-1.0**
	comp=E,1.4nm,0.2s						

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*UPP **17** 15:04:59.6±0.1, 67°.19N×20°.67E, h0^{km}, ML2.5, Confirmed Induced event*

*HEL **17** 15:04:59.2±0.3, 67°.16N×20°.50E, h0^{km}, ML1.6, Suspected explosion*

ISC 17 15:04:58.8±0.8**, 67°.17N**±0°.02×**20°.87E**±0°.02**, h0**^{km}**, n30,**
σ**1^{s}34**/48**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.13**	**247**	P	**Pg**	**15 05 01.3**	**+0.1**
	baz=55						
DUNU				S	**Sg**	**15 05 02.6**	**-0.2**
MASU	**Masugnsbyn**	**0.52**	**56**	P	**Pb**	**15 05 10.7**	**-0.2**
MASU				S	**Sb**	**15 05 18.8**	**-0.2**
ERTU	**Ertsjaerv**	**0.81**	**139**	P	**Pb**	**15 05 15.6**	**-0.1**
ERTU	**Ertsjaerv**	**0.81**	**139**	PG	**Pb**	**15 05 15.3**	**-0.4**
ERTU				SB	**Sb**	**15 05 28.2**	**+1.0**
KUA	**Kurravaara**	**0.81**	**346**	P	**Pg**	**15 05 14.4**	**0.0**
RATU	**Laukkuluspa**	**0.82**	**324**	P	**Pg**	**15 05 14.0**	**-0.5**
SALU	**Saltoluokta**	**0.94**	**284**	*e*P	**Pb**	**15 05 16.8**	**-1.2**
LANU	**Lannavaara**	**0.98**	**26**	PG	**Pb**	**15 05 18.3**	**-0.3**
LANU				SG	**Sb**	**15 05 32.2**	**+0.1**
NIKU	**Nikkaluokta**	**0.99**	**316**	P	**Pg**	**15 05 16.9**	**-0.9**
KLF	**Kolari**	**1.21**	**86**	PG	**Pn**	**15 05 23.0**	**+0.1**
KLF				MSG		15 05 39.9	
	comp=Z,2.1nm,0.2s						
KLF				SG	**Sn**	**15 05 41.0**	**+1.0**
HEF	**Hetta**	**1.63**	**39**	*e*P	**Pg**	**15 05 29.8**	**-0.3**
HEF	**Hetta**	**1.63**	**39**	PG	**Pg**	**15 05 30.0**	**-0.1**
HEF				MSG		15 05 51.0	
	comp=Z,3.3nm,0.2s						
HEF				SG	**Sg**	**15 05 53.0**	**+1.7**
KALU	**Kalix**	**1.65**	**142**	PG	**Pg**	**15 05 31.0**	**+0.6**
KALU				SN	**Sg**	**15 05 54.9**	**+3.1**
TOF	**Tornio**	**1.76**	**127**	PG	**Pg**	**15 05 32.6**	**+0.1**
TOF				MSG		15 05 54.9	
	comp=Z,4.0nm,0.2s						

TOF				SG	Sg	15 05 57.8	+2.5
KIF	Kilpisjarvi	1.84	359	PG	Pg	15 05 33.6	-0.5
KIF				MSG		15 05 55.4	
	comp=Z,6.0nm,0.2s						
KIF				SG	Sg	15 05 59.5	+1.6
KTK1	Kautokeino	2.05	25	PG	Pb	15 05 36.9	0.0
KTK1				SG	Sg	15 06 04.9	+0.3
RNF	Rovaniemi	2.11	103	PB	Pg	15 05 38.3	-0.8
	baz=289						
RNF				SG	Sg	15 06 08.7	+2.3
TRO	Tromso	2.58	345	PG	Pg	15 05 46.8	-1.3
BURU	Burvik	2.61	175	PG	Pb	15 05 45.4	-1.0
BURU				SG	Sb	15 06 18.1	-0.7
RANF	Ranua	2.63	113	PG	Pg	15 05 48.4	-0.8
RANF				SG	Sg	15 06 23.1	-0.2
OUL	Oulu	2.93	133	SG	Sg	15 06 32.5	-0.2
ARA0	ARCESS Array S	2.93	34	PB	Pb	15 05 49.9	-2.0
	baz=219						
ARA0				SB	Sb	15 06 29.6	+1.4
RAJF	Raja-Jooseppi	3.11	62	PB	Pb	15 05 54.8	-0.2
RAJF				SG	Sg	15 06 38.7	+0.1
OUF	Merijarvi	3.24	149	SB	Sb	15 06 35.6	-1.3
UMAU	Umeaa	3.30	181	SN	Sn	15 06 33.6	+2.0
VRF	Varrio	3.42	76	PG	Pg	15 06 03.6	-0.6
VRF				SG	Sg	15 06 47.6	-0.8
KEV	Kevo	3.44	38	PG	Pg	15 06 03.8	-1.0
KEV				SN	Sn	15 06 37.6	+2.6
OLKF	Oulanka, Finla	3.49	100	SG	Sg	15 06 49.8	-1.0
MSF	Maaselka	3.50	107	SG	Sg	15 06 51.2	-0.1
KU6	Riekki	3.78	104	PN	Pb	15 06 02.1	-4.2
KU6				SG	Sg	15 06 58.0	-2.1

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*IDC **17** 15:05:12.1±0.7, 6°.50N×125°.10E, h0^{km}, mb4.0/10, mbtmp4.0/10, MS3.3/4, Error ellipse: s-maj=16.6km s-min=9.3km az=125.0*

*NEIC **17** 15:05:14.9±1.2, 6°.59N±0°.06×125°.22E±0°.07, h15^{km}±4^{km}, mb4.4/28, Error ellipse: s-maj=13.1km s-min=4.6km az=129.0*

*DJA **17** 15:05:14.6±0.6, 7°N±5°×12°5E±°, h10^{km}, M4.6/12, mb4.8/12, mB5.0/7, MLv4.6/6, Mw(mB)4.3/7*

ISC 17 15:05:13.7±0.5**, 6°.59N**±0°.06×**125°.26E**±0°.08**, h10**^{km}**, n57,** σ**1^{s}.04**/51**, mb4.3**/23**, MS3.2**/4**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.57	33	Pg	Pg	15 05 26.7	+1.9
	467nm,0.3s,baz=218,slow=1.0,SNR=27						
DAV				Lg	Lg	15 05 36.7	
	1μm,0.3s,baz=163,slow=19,SNR=12						
DAV	Davao City (W)	0.57	33		Pg	15 05 26.5	+1.6
DAV	Davao City (W)	0.57	33	P	Pg	15 05 23.0	-1.9
DAV	Davao City (W)	0.57	33	P	Pg	15 05 18.0	-6.9
TNTI	Ternate	6.15	160	Pn	Pn	15 06 46.4	+1.7
TNTI	Ternate	6.15	160	P	Pn	15 06 46.8	+2.2
	0.2nm24nm,0.4s						
GTOI	Gorontalo	6.32	201	P	Pn	15 06 48.0	+0.9
MRSI	Marisa	6.92	209	P	Pn	15 06 56.5	+1.3
	0.4nm739nm65nm,0.6s						
TOLI2	Tolitoli	7.04	220	Pn	Pn	15 06 56.5	-0.4
LUWI	Luwuk	7.97	198	P	Pn	15 07 15.6	+5.9
	1μm92nm,0.9s						
SANI	Sanana	8.61	175	P	Pn	15 07 17.9	-0.6
	24nm,0.8s						
I39PW	PALAU INFRASON	9.26	84	I	I	16 04 00.0	
	baz=268,slow=301,SNR=2.1						
KRAI	Karang Ratu	10.32	162	P	Pn	15 07 42.9	+0.9
TTSI	Tana Toraja	11.00	210	P	Pn	15 07 55.3	+4.0
SOEI	Soe	16.27	184	Pn	Pn	15 09 02.0	-0.5
NACB	Ninganchiao	17.84	349		Pn	15 09 22.0	-0.2
MTN	Manton Dam	20.17	163	P	P	15 09 48.9	+0.5
MTN				IAmb	IAmb	15 09 57.4	
	comp=Z,20nm,1.2s						
JOW	Kunigami	20.34	8	LR	LR	15 17 40.7	
	comp=Z,26nm,20.2s,baz=319,slow=37						
KNRA	Kununurra	22.39	171		P	15 10 12.1	-0.3
KNRA				IAmb	IAmb	15 10 20.1	
	comp=Z,20nm,0.8s						
FITZ	Fitzroy Crossi	24.53	179	P	P	15 10 33.3	-0.4
COEN	Coen	27.07	139	P	P	15 10 56.7	0.0
COEN				IAmb	IAmb	15 11 02.1	
	comp=Z,10nm,1.1s						
WB0	Warramunga Arr	27.69	161		P	15 11 01.1	-1.1
WB0				IAmb	IAmb	15 11 14.0	
	comp=Z,4.8nm,0.8s						
WRAB	Tennant Creek	27.83	161	P	P	15 11 02.6	-0.9
WRAB				IAmb	IAmb	15 11 30.7	
	comp=Z,3.7nm,0.7s						
WRA	Warramunga Arr	27.84	161	P	P	15 11 02.8	-0.8
	comp=Z,1.8nm,0.8s,baz=340,slow=9.0,SNR=15						
	comp=Z,1.8nm,0.8s						
WRA	Warramunga Arr	27.84	161	P	P	15 11 02.6	-0.9
WR8	Warramunga Arr	27.90	161		P	15 11 03.0	-1.1
WR8				IAmb	IAmb	15 11 17.9	
	comp=Z,4.1nm,0.8s						
MBWA	Marble Bar	28.10	191	P	P	15 11 05.0	-0.9
MBWA				IAmb	IAmb	15 11 40.2	
	comp=Z,8.9nm,0.9s						
LHMI	Lhok Sumawe	28.19	269	P	P	15 11 05.4	-1.4
CM31	Chiang Mai Arr	28.22	297	P	P	15 11 06.6	-0.5
CMAR	Chiang Mai Arr	28.22	297	P	P	15 11 07.7	+0.6
	comp=Z,0.5nm,0.5s,baz=105,slow=6.7,SNR=5.5						
CMAR				LR	LR	15 22 10.9	
	comp=Z,12nm,20.4s,baz=95,slow=36						
	comp=Z,0.5nm,0.5s						
PSA00	Pilbara Seismi	28.48	191	P	P	15 11 08.3	-0.9
PSA00				IAmb	IAmb	15 11 31.3	
	comp=Z,12nm,1.1s						
JGF	Kuroka	30.94	19	P	P	15 11 31.1	+0.1
AS31	Alice Springs	31.23	165		P	15 11 33.0	-0.6
ASAR	Alice Springs	31.23	165	P	P	15 11 33.2	-0.4
	comp=Z,1.7nm,0.6s,baz=349,slow=8.0,SNR=72						
	comp=Z,1.7nm,0.6s						
ASAR	Alice Springs	31.23	165	P	P	15 11 32.9	-0.7
FORT	Forrest	37.25	176	P	P	15 12 25.5	-0.2
FORT				IAmb	IAmb	15 12 32.4	
	comp=Z,4.4nm,0.8s						
INKA	Innaminka	37.27	157		P	15 12 25.7	-0.1
INKA				IAmb	IAmb	15 12 26.9	
	comp=Z,3.2nm,0.5s						
NWAO	Narrogin (SRO)	40.03	191	P	P	15 12 49.1	+0.1
NWAO				IAmb	IAmb	15 13 00.0	
	comp=Z,27nm,1.4s						
BBOO	Buckleboo	40.50	166		P	15 12 52.7	-0.2
STKA	Stephens Creek	41.30	159	P	P	15 13 00.1	+0.6
	comp=Z,4.4nm,0.5s,baz=334,slow=8.7,SNR=10						
	comp=Z,4.4nm,0.5s						
STKA	Stephens Creek	41.30	159		P	15 12 59.6	+0.1
TOO	Toolangi	47.82	158	P	P	15 13 50.9	-0.7
MKAR	Makanchi Array	54.39	325	P	P	15 14 41.4	+0.4
	comp=Z,0.6nm,0.6s,baz=126,slow=7.9,SNR=6.3						
	comp=Z,0.6nm,0.6s						
MKAR	Makanchi Array	54.39	325	P	P	15 14 41.0	+0.1
DGAR	Diego Garcia	54.48	256	P	P	15 14 41.5	-0.5
ZALV	Zalesovo Beam	57.40	333	P	P	15 15 00.7	-1.5
	comp=Z,0.4nm,0.3s,baz=146,slow=6.6,SNR=4.1						
	comp=Z,0.4nm,0.3s						
KURBB	Kurchatov Arra	58.56	327	P	P	15 15 10.6	+0.1
	comp=Z,1.8nm,0.7s,baz=126,slow=6.1,SNR=15						
	comp=Z,1.8nm,0.7s						
KURK	Kurchatov	58.56	327	P	P	15 15 09.6	-1.0
KURK				IAmb	IAmb	15 15 16.0	
	comp=Z,2.5nm,0.7s						
KK31	Karatay Array	60.16	316	P	P	15 15 22.3	+0.5
KK31				IAmb	IAmb	15 15 23.3	
	comp=Z,3.2nm,0.9s						
KKAR	Karatay Array	60.16	316	P	P	15 15 22.5	+0.7
BVAR	Borovoye Array	64.14	327	P	P	15 15 47.8	-0.6
	comp=Z,0.9nm,0.7s,baz=130,slow=6.6,SNR=4.0						
	comp=Z,0.9nm,0.7s						
TIXI	Tiksi	65.03	1	P	P	15 15 53.5	-0.2
TIXI				IAmb	IAmb	15 16 17.7	
	comp=Z,3.4nm,1.1s						
BKZ	Black Stump Fm	65.67	138	P	P	15 15 58.8	+0.2
RTZ	Ruatahuna	65.71	138	P	P	15 15 58.8	-0.1
AKTO	Aktyubinsk	70.53	321	P	P	15 16 28.7	-0.1
	comp=Z,1.7nm,0.8s,baz=79,slow=10,SNR=1.7						
AKTO				LR	LR	15 47 33.5	
	comp=Z,55nm,19.1s,baz=273,slow=36						
	comp=Z,1.7nm,0.8s						
ILAR	Eielson Array	83.17	26	P	P	15 17 39.6	-0.3
	comp=Z,0.3nm,0.6s,baz=243,slow=4.5,SNR=8.3						
	comp=Z,0.3nm,0.6s						
FINES	FINESS Array B	88.64	332	LR	LR	16 01 03.6	
	comp=Z,123nm,18.2s,baz=297,slow=38						

GCG 17 15:05:16.0±0.7**, 14°.03N**×**91°.83W, h4**^{km}±112^{km}**, MD3.9, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG5	El Palmar, Qui	0.60	51	*i* P	Pb	15 05 30.2	+1.1
STG8	El Palmar, Qui	0.62	48	*i* P	Pn	15 05 31.2	-0.7
FG16	Alotenango, Sa	1.30	79	*i* P	Pg	15 05 35.8	-5.2
APG	El Apazote	1.64	54	*i* P	Pn	15 05 46.3	+0.4
APG				*i* S	Sg	15 06 09.2	+0.4

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*JMA **17** 15:16:07.1±0.1, 37°.2N±0°.4×141°.0E±0°.7, h93^{km}, MV3.6/38, E OFF FUKUSHIMA PREF*

JMA Felt I J1 at E OFF FUKUSHIMA PREF .

*IDC **17** 15:16:14.8±5.4, 36°.66N×140°.09E, h152^{km}±29^{km}, mb3.2/3, mbtmp3.6/3, Error ellipse: s-maj=71.0km s-min=43.2km az=76.0*

ISC 17 15:16:06.5±1.6**, 37°.14N**±0°.08×**141°.0E**±0°.1**, h96**^{km}±8^{km}**, n23,** σ**1^{s}.12**/26**, mb3.6**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.20	260	P	Pn	15 16 20.5	+0.2
ONAJ				*e*S	Sn	15 16 30.3	-0.2
JFK	Kawauchi	0.27	330	*i* P	Pn	15 16 20.7	+0.2
JFK				*e*S	Sn	15 16 30.4	-0.6
JFFD	Fukushimafurud	0.39	264	P	Pn	15 16 21.6	+0.5
JFFD				*e*S	Sn	15 16 32.0	0.0
JMM	Marumori	0.76	345	*i* P	Pn	15 16 24.3	+0.2
JMM				*e*S	Sn	15 16 36.9	-0.3
JFY	Yanaizu	1.10	285	P	Pn	15 16 28.0	+0.3
JFY				*e*S	Sn	15 16 44.1	+0.3
JOU	Okura	1.26	347	*i* P	Pn	15 16 29.8	+0.2
JYS	Shirataka	1.33	325	P	Pn	15 16 31.0	+0.5
JIO	Ouri	1.34	10	P	Pn	15 16 30.5	-0.1
JIO				S	Sn	15 16 47.8	-1.0
JAG	Ashikaga	1.46	241	*i* P	Pn	15 16 32.6	+0.6
JAG				S	Sn	15 16 51.4	0.0
JKT	Katashina	1.48	256	P	Pn	15 16 33.5	+1.2
JNS	Sasagawa	1.53	297	*e*P	Pn	15 16 33.4	+0.5
JUON	Uonuma	1.58	273	P	Pn	15 16 34.3	+0.7
JYK	Kaneyama	1.86	343	P	Pn	15 16 37.7	+0.6
JYK				*e*S	Sn	15 17 00.7	+0.3
MJAR	Matsushiro Arr	2.35	256	P	Pn	15 16 44.5	+1.0
	4.4nm,0.2s,baz=80,slow=14,SNR=29						
MJAR				S	Sn	15 17 07.2	-4.6
	21nm,0.5s,baz=90,slow=16,SNR=19						
H11N2	WAKE ISLAND Hy	28.46	120	T	T	15 52 16.9	
	baz=314,slow=75,SNR=9.0						
H11N1	WAKE ISLAND Hy	28.46	120	T	T	15 52 17.6	
	baz=314,slow=75,SNR=9.9						
H11N3	WAKE ISLAND Hy	28.48	120	T	T	15 52 17.4	
	baz=314,slow=75,SNR=7.8						
H11S1	WAKE ISLAND Hy	29.17	123	T	T	15 53 02.5	
	baz=315,slow=75,SNR=8.5						
H11S3	WAKE ISLAND Hy	29.17	123	T	T	15 53 02.3	
	baz=315,slow=75,SNR=5.3						
H11S2	WAKE ISLAND Hy	29.18	123	T	T	15 53 00.3	
	baz=315,slow=75,SNR=5.9						
ZALV	Zalesovo Beam	41.62	312	P	P	15 23 44.8	-0.2
	0.7nm,0.5s,baz=106,slow=8.3,SNR=3.6						
	0.7nm,0.5s						
MKAR	Makanchi Array	43.81	302	P	P	15 24 03.1	+0.3
	0.4nm,0.6s,baz=88,slow=9.3,SNR=3.7						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	45.70	308	P	P	15 24 17.9	+0.2
	0.5nm,0.5s,baz=82,slow=7.9,SNR=6.8						
	0.5nm,0.5s						

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*NEIC **17** 15:25:14.6±0.5, 60°.36N±0°.01×139°.68W±0°.01, h7^{km}±8^{km}, ML2.6/74, ML2.4(AEIC), Error ellipse: s-maj=2.1km s-min=0.4km az=157.0*

*AEIC **17** 15:25:14.4±1.5, 60°.37N±0°.01×139°.72W±0°.03, h4^{km}±7^{km}, Error ellipse: s-maj=2.0km s-min=1.8km az=175.0*

*ANF **17** 15:25:14.2±0.2, 60°.36N×139°.65W, h4^{km}±2^{km}, ML2.9/17, Error ellipse: s-maj=1.7km s-min=1.4km az=8.0*

ISC 17 15:25:14.4±1.0**, 60°.36N**±0°.02×**139°.68W**±0°.01**, h5**^{km}±9^{km}**, n97,** σ**0^{s}.83**/129**, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINM	Pinnacle	0.39	228	P	Pg	15 25 22.2	+0.4
	baz=47,SNR=1000						
PINM				S	Sg	15 25 28.3	+1.4
	baz=47						
PCA	Pinnacle	0.39	228		Pg	15 25 22.1	+0.2
PCA	Pinnacle	0.39	228		Sg	15 25 27.9	+1.0
BCPM	Bancas Point	0.40	177		Pg	15 25 22.0	-0.1
BCPM	Bancas Point	0.40	177		Sg	15 25 27.9	+0.6
O28M	Mount Upton	0.49	329		Pg	15 25 24.0	+0.2
O28M				IAML		15 25 31.7	
	comp=E,527nm,0.6s						
O28M	Mount Upton	0.49	329		Sg	15 25 30.2	0.0
O28M	Mount Upton	0.49	329	P	Pg	15 25 24.0	+0.2
	baz=148						
O28M				S	Sg	15 25 31.1	+0.9
	baz=148						
O29M	Mount Kennedy	0.55	95		Pg	15 25 24.8	-0.1
O29M				IAML		15 25 33.1	
	comp=N,483nm,0.5s						
O29M				IAML		15 25 33.3	
	comp=E,353nm,0.3s						
O29M	Mount Kennedy	0.55	95		Sg	15 25 32.5	+0.5
O29M	Mount Kennedy	0.55	95	P	Pg	15 25 24.8	-0.1
	baz=276						
O29M				S	Sg	15 25 32.4	+0.3
	baz=276						
SAMH	Samovar Hills	0.59	248		Pg	15 25 26.2	+0.5
SAMH					Sg	15 25 34.5	+1.0
CHX	Chaix Hills	0.78	248		Pg	15 25 29.6	+0.4
CHX					Sg	15 25 40.0	+0.7
YUK7	Dusty Glacier	0.78	76		Pg	15 25 29.6	+0.3
YUK7					Pb	15 25 29.7	-0.9
YUK7					Sg	15 25 40.5	+1.0
LOGN	Logan Glacier	0.81	306		Pn	15 25 40.3	+7.7
LOGN					Sg	15 25 40.6	+0.3
LOGN	Logan Glacier	0.81	306		Pg	15 25 28.8	-1.0
LOGN	Logan Glacier	0.81	306	IAML		15 25 42.0	
	comp=N,162nm,0.6s						
LOGN				IAML		15 25 43.9	
	comp=E,152nm,0.5s						
YUK6	Outpost Mounta	0.88	47		Pg	15 25 31.4	+0.3
YUK6					Sb	15 25 44.0	-0.3
YUK6	Outpost Mounta	0.88	47	P	Pg	15 25 31.6	+0.4
	baz=228,SNR=275						
YUK6				S	Sg	15 25 42.7	+0.2
	baz=228						
YUK8	Steele Glacier	0.93	357		Pg	15 25 32.1	-0.1
YUK8					Sb	15 25 45.7	-0.3
YUK8	Steele Glacier	0.93	357	P	Pg	15 25 32.4	+0.1
	baz=177,SNR=704						
YUK8				S	Sg	15 25 44.2	-0.1
	baz=177						
CTGM	Chitina Glacie	1.02	308		Pg	15 25 32.7	-1.2
CTGM				IAML		15 25 47.3	
	comp=N,103nm,0.5s						
CTGM	Chitina Glacie	1.02	308		Sg	15 25 46.9	-0.2
CTG	Chitna Glacier	1.02	307	P	Pg	15 25 32.7	-1.2
	baz=126,SNR=84						
CTG				S	Sg	15 25 46.4	-0.8
	baz=126						
YAH	Yahtse	1.03	271		Pg	15 25 32.8	-1.3
YAH				IAML		15 25 51.9	
	comp=E,179nm,0.6s						
YAH				IAML		15 25 53.7	
	comp=N,181nm,0.7s						
YAH	Yahtse	1.03	271		Sb	15 25 48.4	-0.3
GRNC	Granite Creek	1.09	291		Pg	15 25 33.2	-2.1
GRNC				IAML		15 25 54.0	
	comp=N,179nm,0.5s						
GRNC				IAML		15 25 55.4	
	comp=E,101nm,0.7s						
GRNC	Granite Creek	1.09	291		Sg	15 25 49.7	+0.2
YUK4	Talbot Arm	1.11	26	P	Pn	15 25 37.9	+1.1
	baz=208,SNR=103						
HYT	Haines Junctio	1.17	65		Pg	15 25 36.4	-0.4
HYT				IAML		15 25 52.4	
	comp=N,74nm,0.7s						
HYT				IAML		15 25 52.5	
	comp=E,136nm,0.4s						
HYT	Haines Junctio	1.17	65		Sg	15 25 52.3	+0.3
HYT	Haines Junctio	1.17	65	P	Pg	15 25 36.5	-0.4
	baz=247,SNR=207						
HYT				S	Sg	15 25 51.9	0.0
	baz=247						
YUK5	Granite Creek	1.19	48		Pg	15 25 37.1	0.0
BARN	Barnard Glacie	1.20	307	Pg	Pg	15 25 35.8	-1.6
BARN				IAML		15 25 44.1	
	comp=E,79nm,0.5s						
BARN				IAML		15 25 54.4	
	comp=N,89nm,0.4s						
P29M	Windy Craggy	1.22	126	P	Pg	15 25 35.5	-2.1
	baz=308						
P29M				S	Sb	15 25 54.0	+0.1
	baz=308						
P30M	Million Dollar	1.38	99		Pn	15 25 39.3	-1.0
P30M	Million Dollar	1.38	99	IAML		15 26 01.9	
	comp=N,92nm,0.7s						
P30M				IAML		15 26 02.1	
	comp=E,89nm,0.8s						
P30M	Million Dollar	1.38	99	P	Pn	15 25 39.1	-1.2
	baz=281,SNR=99						
P30M				Sb	Sn	15 25 59.5	+0.5
	baz=281						
BARK	Barkley Ridge	1.40	273		Pn	15 25 40.0	-0.7
YUK3	Moose Creek	1.48	345		Pn	15 25 41.3	-0.6
YUK3	Moose Creek	1.48	345	P	Pn	15 25 41.8	-0.1
	baz=165,SNR=287						
YUK3				Sb	Sg	15 26 01.7	0.0
	baz=165						
YUK2	White River	1.54	339		Pn	15 25 42.3	-0.3
SNH	Sunshine Point	1.58	265	Pn	Pn	15 25 43.0	-0.2
SNH				IAML		15 26 07.9	
	comp=E,109nm,0.4s						
SNH				IAML		15 26 08.2	
	comp=N,79nm,0.6s						
TGL	Tana Glacier	1.61	286		Pn	15 25 41.9	-1.7
TGL				IAML		15 26 10.1	
	comp=N,100nm,0.7s						
TGL				IAML		15 26 10.2	
	comp=E,64nm,0.6s						
N30M	Aishikik Lake	1.68	48		Pn	15 25 44.5	-0.1
N30M	Aishikik Lake	1.68	48	P	Pb	15 25 45.9	+0.1
	baz=230						
N30M				Sb	Sb	15 26 07.4	+0.1
	baz=230						
CRQE	Cirque	1.73	285	P	Pn	15 25 44.1	-1.2
	baz=102						
CRQE				Sb	Sg	15 26 09.7	-0.3
	baz=102						
CRQM	Cirque	1.76	285		Pn	15 25 44.0	-1.7
O30N	Mendenhall	1.82	75		Pn	15 25 46.2	-0.3
O30N				IAML		15 26 15.4	
	comp=E,34nm,0.9s						
O30N				IAML		15 26 19.0	
	comp=N,47nm,1.1s						
O30N	Mendenhall	1.82	75	P	Pn	15 25 46.1	-0.3
	baz=258,SNR=25						
O30N				Sb	Sb	15 26 11.6	+0.3
	baz=258						
PLBC	Pleasant Camp	1.90	117		Pn	15 25 47.4	0.0
PLBC	Pleasant Camp	1.90	117	P	Pn	15 25 47.0	-0.3
	baz=300,SNR=48						
PLBC				Sb	Sg	15 26 14.4	-0.8
	baz=300						
MCARA	McCarthy VSAT	1.94	304		Pn	15 25 48.0	0.0
MCARA				IAML		15 26 17.3	
	comp=N,70nm,1.0s						
MCARA				IAML		15 26 22.1	
	comp=E,65nm,0.7s						
MCARA	McCarthy VSAT	1.94	304	P	Pn	15 25 48.2	+0.3
	baz=121,SNR=194						
MCARA				Sb	Sb	15 26 15.3	+0.7
	baz=121						
BERG	Berg Lake	2.00	273		Pn	15 25 48.9	+0.1
VRDI	Verde Repeater	2.05	297		Pn	15 25 49.4	-0.2
VRDI				IAML		15 26 18.2	
	comp=N,36nm,0.7s						
BVCY	Beaver Creek	2.14	345		Pn	15 25 51.4	+0.5
BVCY	Beaver Creek	2.14	345	P	Pn	15 25 50.5	-0.3
	baz=164,SNR=43						
BVCY				Sb	Sb	15 26 21.7	+1.1
	baz=164						
M29M	Somme Creek	2.18	15	Pn	Pn	15 25 51.2	-0.2
M29M				IAML		15 26 25.4	
	comp=E,34nm,0.4s						
M29M				IAML		15 26 25.9	
	comp=N,32nm,0.7s						
M29M	Somme Creek	2.18	15	P	Pn	15 25 52.0	+0.6
	baz=196						
M29M				S	Sn	15 26 19.4	+0.6
	baz=196						
N31M	Braeburn, Yuko	2.22	58	Pn	Pn	15 25 52.2	+0.3
N31M				IAML		15 26 27.6	
	comp=N,38nm,0.5s						
N31M				IAML		15 26 28.6	
	comp=E,31nm,1.0s						
N31M	Braeburn, Yuko	2.22	58	P	Pn	15 25 51.8	0.0
	baz=241,SNR=41						
N31M				Sb	Sg	15 26 24.0	-1.4
	baz=241						
M27K	Edge Creek, AK	2.27	333		Pn	15 25 52.9	+0.2
M27K				IAML		15 26 33.1	
	comp=N,28nm,1.0s						
M27K	Edge Creek, AK	2.27	333	P	Pn	15 25 52.7	0.0
	baz=151						
M27K				Sg	Sg	15 26 25.7	-1.5
	baz=151						
M27K				Sg	Sg	15 26 25.7	-1.5
	baz=151						
GLB	Gilahina Butte	2.29	300		Pn	15 25 53.0	+0.1
GLB				IAML		15 26 28.7	
	comp=N,22nm,0.7s						
SKAG	Skagway	2.37	110		Sn	15 26 24.6	+1.3
SKAG	Skagway	2.37	110	Sb	Sg	15 26 29.0	-1.3
	baz=294						
WHY	Whitehorse	2.39	81		Pn	15 25 54.0	-0.4
WHY				IAML		15 26 31.7	
	comp=E,29nm,0.5s						
WHY	Whitehorse	2.39	81	P	Pn	15 25 54.2	-0.1
	baz=265,SNR=90						
WHY				S	Sn	15 26 24.2	+0.1
	baz=265						
KAIM	Kayak Island	2.41	262	Pn	Pn	15 25 54.3	-0.2
KAIM				IAML		15 26 23.8	
	comp=E,33nm,1.1s						
RAGM	Ragged Mountai	2.48	273	Pn	Pn	15 25 55.4	-0.1
BMRM	Bremner River	2.50	286		Pn	15 25 55.6	-0.1
BMRM	Bremner River	2.50	286	P	Pn	15 25 56.0	+0.2
	baz=102						
BMRM				S	Sn	15 26 26.8	+0.1
	baz=102						
GOAT	Goat Mountain	2.51	277		Pn	15 25 55.9	0.0
M26K	Nabesna, AK	2.60	324		Pn	15 25 57.4	+0.3
M30M	Minto, Yukon	2.62	31	Pg	Pg	15 26 03.7	-0.9
	baz=213						
M30M				Sb	Sg	15 26 36.4	-2.1
	baz=213						
N25K	Chitina, Valde	2.71	300		Pn	15 25 59.1	+0.5
N25K	Chitina, Valde	2.71	300	P	Pn	15 25 59.3	+0.6
	baz=115						
N25K				Sb	Sb	15 26 37.5	+0.7
	baz=115						
N25K				Sb	Sb	15 26 37.5	+0.7
	baz=115						
R31K	City Hall, Gus	2.80	132	Sb	Sb	15 26 41.0	+1.6
	baz=316						
L29M	L29M	2.86	14	P	Pn	15 26 01.6	+0.9
	baz=196						
L29M				S	Sn	15 26 36.8	+1.3
	baz=196						
L27K	Beaver Creek,	2.90	340	P	Pn	15 26 01.3	+0.1
	baz=158						
L27K				Sb	Sb	15 26 44.2	+1.8
	baz=158						
EYAK	Cordova Ski Ar	3.02	276	P	Pn	15 26 02.0	-0.7
	baz=91						
P32M	Atlin	3.09	102	P	Pn	15 26 02.9	-1.0
	baz=287,SNR=12						
P32M				S	Sn	15 26 40.5	-0.8
	baz=287						
M31M	Drury Creek, Y	3.15	52	IAML		15 27 01.5	
	comp=N,9.6nm,0.5s						
M31M	Drury Creek, Y	3.15	52	Sb	Sb	15 26 52.1	+2.5
	baz=236						

L26K	**Log Cabin Wild**	3.20	328		Pn	15 26 05.7	+0.4
L26K	**Log Cabin Wild**	3.20	328	IAML		15 26 49.0	
	comp=E,9.8nm,0.4s						
L26K				IAML		15 27 04.3	
	comp=N,9.2nm,1.0s						
L26K	**Log Cabin Wild**	3.20	328	P	Pn	15 26 05.7	+0.4
	baz=145						
MENT	**Mentasta**	3.23	325	IAML		15 27 09.9	
	comp=E,10nm,1.0s						
KLU	**Klutina**	3.26	293	IAML		15 26 54.6	
	comp=E,18nm,0.7s						
KLU	**Klutina**	3.26	293	P	Pn	15 26 06.4	+0.3
	baz=108						
KLU				S	Sn	15 26 45.5	+0.2
	baz=108						
N32M	**Quiet Lake**	3.33	73	P	Pn	15 26 07.3	+0.1
	baz=259						
N32M				S	Sn	15 26 47.3	+0.1
	baz=259						
P33M	**Teslin, Yukon**	3.42	89	P	Pn	15 26 07.5	-0.9
	baz=276,SNR=19						
P33M				Sb	Sb	15 26 59.3	+2.0
	baz=276						
K29M	**Barlow Dome**	3.65	15	P	Pn	15 26 12.9	+1.4
	baz=197						
K29M				S	Sn	15 26 54.9	0.0
	baz=197						
DAWY	**Dawson**	3.73	2		Pn	15 26 13.3	+0.7
DAWY	**Dawson**	3.73	2	P	Pn	15 26 13.8	+1.3
	baz=182,SNR=16						
SCM	**Sheep Creek Mo**	4.00	295	P	Pn	15 26 16.5	+0.2
	baz=108						

KRSC 17 15:33:26.3±0.6, 55°.68N×162°.30E, h45km±17km, Ml3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	0.60	29	eP	Pn	15 33 39.5	+1.0
KBTR				eS	Sn	15 33 49.0	+1.7
KBG	**Krutoberegovo**	0.61	21	eP	Pn	15 33 39.5	+0.8
KBG				eS	Sn	15 33 48.6	+1.0
ZLN	**Zelenaya**	0.91	292	eP	Pn	15 33 43.8	+1.0
BZGR	**Bezymyannyi-Gr**	0.94	286	eP	Pn	15 33 44.0	+0.8
BZWR	**Bezymyannyi-We**	1.06	286	eP	Pn	15 33 45.9	+1.1
KLY	**Klyuchi**	1.12	305	eP	Pn	15 33 44.9	-0.6
KLY				eS	Sn	15 33 58.0	-1.8
KIRR	**Kirishev**	1.14	284	eP	Pn	15 33 47.2	+1.3
SRKR	**Sorokina**	1.16	327	eP	Pn	15 33 47.1	+1.0
KMNR	**Kamenistaya**	1.17	274	eP	Pn	15 33 48.0	+1.7
KMNR				eS	Sn	15 34 03.6	+2.4
MKZ	**Mys Kozlova**	1.18	196	eP	Pn	15 33 47.9	+1.7
MKZ				eS	Sn	15 34 03.9	+2.8
TUMD	**Tumrok D**	1.19	247	eP	Pn	15 33 48.1	+1.7
TUMD				eS	Sn	15 34 03.3	+1.8
KZV	**Kizimen**	1.28	244	eP	Pn	15 33 49.6	+1.8
KOZ	**Kozyrevsk**	1.42	286	eP	Pn	15 33 51.9	+2.3
KOZ				eS	Sn	15 34 10.6	+3.5
SRDR	**Sredinnyy**	1.58	295	eS	Sn	15 34 13.3	+2.1
ESO	**Esso**	2.05	278	eP	Pn	15 33 59.5	+1.3
BKI	**Bering**	2.15	101	eP	Pn	15 34 02.3	+2.8
BKI				eS	Sn	15 34 28.7	+3.9
KII	**Karymskiy**	2.33	226	eP	Pn	15 34 05.0	+2.8
SPN	**Mys Shipunski**	2.91	208	eP	Pn	15 34 11.5	+1.4
SPN				eS	Sn	15 34 45.1	+1.3
NLC	**Nalytchevo**	3.05	216	eS	Sn	15 34 50.1	+2.9
SDLR	**Sedlovina**	3.13	221	eP	Pn	15 34 16.2	+3.1
KRX	**Arik**	3.16	224	eP	Pn	15 34 17.4	+3.8
KRER	**Koryakskii**	3.16	222	eP	Pn	15 34 18.7	+5.0
SMAR	**Somma**	3.17	222	eP	Pn	15 34 16.5	+2.6
AVH	**Avacha**	3.19	222	eP	Pn	15 34 17.9	+3.9
UGLR	**Uglovaya**	3.21	221	eP	Pn	15 34 17.0	+2.8
KOK	**Koryaka**	3.21	223	eP	Pn	15 34 18.0	+3.8
GNL	**Ganaly**	3.22	234	eP	Pn	15 34 19.1	+4.6
DALK	**Dalny**	3.37	219	eP	Pn	15 34 18.8	+2.4
PET	**Petropavlovsk**	3.42	220	eP	Pn	15 34 19.0	+2.1
KRMR	**Karymshinskiy**	3.76	222	eP	Pn	15 34 26.2	+4.5
KRMR				eS	Sn	15 35 10.8	+6.1
RUS	**Russkaya**	3.95	216	eP	Pn	15 34 27.7	+3.4
GRL	**Gorelyy**	4.00	220	eP	Pn	15 34 29.9	+4.8
MTVR	**Mutnovka**	4.02	219	eP	Pn	15 34 29.0	+3.6
ASAK	**Asacha**	4.20	220	eP	Pn	15 34 32.7	+4.8

NOU 17 15:46:43.8, 14°.80S×167°.29E, h73km, MLv4.3/8, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	0.65	187	P	Pn	15 46 59.5	+1.1
DVP	**Devils Point**	3.03	164	P	Pn	15 47 29.2	-0.3
DZM	**Mont Dzumac**	7.28	186	P	Pn	15 48 28.0	+0.4
PINNC	**Pines Island,**	7.77	179	P	Pn	15 48 34.8	+0.6

BEO **17** *15:49:15.1±0.3, 43°.30N×17°.97E, h11km±2km, ML2.3/12*
RHSSO **17** *15:49:16.8±0.5, 43°.23N×18°.08E, h8km, ML2.5/3*
PDG **17** *15:49:16.1±0.3, 43°.23N×18°.07E, h10km±1km, ML2.6/11, Error ellipse: s-maj=1.2km s-min=0.8km az=90.0*
ISC 17 15:49:15.9±1.0, 43°.25N±0°.02×18°.07E±0°.02, h9km±9km, n45, σ0^s.86/84, 7C-6D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLINJ	**Klinje**	0.39	102	ePg	Pg	15 49 23.9	+0.3
KLINJ				eSg	Sb	15 49 30.1	-1.1
STON	**Ston**	0.46	215	ePg	Pg	15 49 24.5	-0.5
STON				Sg	Sg	15 49 31.7	+0.7
STON	**Ston**	0.46	215	ePg	Pg	15 49 24.6	-0.3
STON				eSg	Sg	15 49 31.8	+0.7
BRY	**Bratogost**	0.49	135	⇑iPg	Pg	15 49 25.6	+0.1
BRY				i Sg	Sb	15 49 33.6	-0.6
TREB	**Trebinje**	0.57	158	⇑iPg	Pg	15 49 26.4	-0.6
TREB				eSg	Sb	15 49 35.5	-0.9
TREB	**Trebinje**	0.57	158	ePg	Pg	15 49 26.5	-0.6
TREB				eSg	Sb	15 49 35.5	-0.9
DBRK	**Dubrovnik**	0.58	174	ePg	Pg	15 49 27.0	-0.2
DBRK				Sg	Sg	15 49 34.5	-0.4
UPM	**Unac-Piva**	0.61	94	⇑iPg	Pg	15 49 27.6	-0.3
UPM				i Sg	Sb	15 49 37.3	-0.5
RICI	**Ricice**	0.72	290	ePg	Pg	15 49 29.4	-0.4
RICI				Sg	Sg	15 49 40.0	+0.6
MAKA	**Makarska**	0.77	273	ePg	Pg	15 49 30.0	-0.7
MAKA				Sg	Sg	15 49 41.1	+0.5
NKME	**Niksic**	0.81	126	⇑iPg	Pg	15 49 31.0	-0.5
NKME				eSg	Sb	15 49 43.5	+0.2
HCY	**Herceg Novi**	0.86	158	⇓iPg	Pg	15 49 31.4	-1.1
HCY				i Sg	Sb	15 49 45.3	+0.6
LSTV	**Lastovo**	0.99	241	ePg	Pg	15 49 33.4	-1.5
LSTV				Sg	Sg	15 49 48.0	+0.3
RUDO	**Rudo**	1.02	68	ePg	Pg	15 49 34.8	-0.7
RUDO				eSg	Sg	15 49 48.9	+0.1
RUDO	**Rudo**	1.02	68	ePg	Pg	15 49 35.0	-0.5
RUDO				eSg	Sg	15 49 48.8	0.0
BUM	**Brajici-Budva**	1.13	147	⇓iPg	Pb	15 49 36.9	-0.7
BUM				i Sg	Sn	15 49 54.2	+0.6
KOME	**Kolasin**	1.14	110	ePg	Pb	15 49 37.3	-0.5
KOME	**Kolasin**	1.14	110	⇓iPg	Pb	15 49 37.4	-0.4
KOME				eSg	Sn	15 49 54.9	+1.1
BBLS	**Lazi&#263i**	1.15	57	ePg	Pb	15 49 37.2	-0.9
BBLS				eSg	Sg	15 49 53.7	+0.7
HVAR	**Hvar**	1.18	267	ePg	Pb	15 49 37.0	-1.6
HVAR				Sg	Sb	15 49 53.7	-0.3
PDG	**Podgorica**	1.20	133	ePg	Pb	15 49 37.5	-1.3
PDG				eSg	Sn	15 49 55.2	0.0
PDG	**Podgorica**	1.20	133	⇑iPg	Pb	15 49 37.7	-1.1
PDG				i Sg	Sn	15 49 56.6	+1.4
DRME	**Dracevica, Mon**	1.34	142	ePg	Pb	15 49 41.0	-0.3
DRME	**Dracevica, Mon**	1.34	142	⇓iPg	Pb	15 49 41.2	-0.1
DRME				eSg	Sg	15 50 00.6	+1.4
BEY	**Berane**	1.39	105	ePg	Pb	15 49 42.2	0.0
IVA	**Berane**	1.39	105	⇑iPg	Pb	15 49 41.8	-0.4
IVA				i Sg	Sg	15 50 02.7	+2.0
SJES	**Sjenica**	1.39	89	ePg	Pb	15 49 42.4	+0.2
SJES				eSg	Sg	15 50 02.1	+1.3
KIJV	**Kijevo**	1.42	303	ePn	Pn	15 49 41.8	-0.2
KIJV				Sg	Sb	15 50 01.7	+0.8
PVY	**Plav**	1.54	115	ePg	Pb	15 49 44.9	+0.2
PVY	**Plav**	1.54	115	⇓iPg	Pn	15 49 43.7	0.0
PVY				i Sg	Sg	15 50 06.8	+1.4
ULC	**Ulcinj**	1.55	145	⇓iPg	Pn	15 49 42.7	-1.1
ULC				i Sg	Sg	15 50 07.9	+2.1
IVAS	**Ivanjica**	1.56	77	ePg	Pn	15 49 43.7	-0.2
IVAS				eSg	Sg	15 50 06.8	+0.9
BLY	**Banja Luka**	1.63	337	⇑iPn	Pb	15 49 46.3	+0.2
BLY				eSn	Sb	15 50 07.5	+0.7
BLY	**Banja Luka**	1.63	337	ePg	Pn	15 49 44.7	-0.1
BLY				eSg	Sn	15 50 04.5	-1.4
DIVS	**Divibare**	1.64	58	ePg	Pn	15 49 45.0	0.0
DIVS				eSg	Sb	15 50 07.4	+0.3
TEKS	**Tekeris**	1.68	39	ePn	Pn	15 49 44.8	-0.7
TEKS				eSn	Sn	15 50 05.5	-1.6
ZIRJ	**Zirje**	1.81	284	ePn	Pn	15 49 48.1	+0.8
ZIRJ				Sn	Sb	15 50 11.7	-0.3
MORI	**Morici**	1.82	291	ePn	Pn	15 49 48.6	+1.1
MORI				Sn	Sb	15 50 12.7	+0.3
TRUS	**Trudelj**	1.96	59	ePn	Pn	15 49 47.7	-1.6
TRUS				eSn	Sn	15 50 14.3	+0.3
GRUS	**Gruza**	2.03	71	ePn	Pn	15 49 49.0	-1.3
GRUS				eSn	Sn	15 50 16.1	+0.3
SELS	**Selova**	2.23	90	ePn	Pn	15 49 53.6	+0.5
DUGI	**Dugi Otok**	2.31	290	ePn	Pn	15 49 55.1	+1.0
DUGI				Sn	Sn	15 50 23.9	+1.2
VIRC	**Vir**	2.42	297	ePn	Pn	15 49 56.8	+1.2
VIRC				Sn	Sn	15 50 26.2	+0.9
NVLJ	**Novalja**	2.66	301	ePn	Pn	15 49 58.9	0.0
NVLJ				Sn	Sn	15 50 32.6	+1.4
BARS	**Barje**	2.78	98	ePn	Pn	15 50 00.9	+0.2

NOU **17** *15:49:48.2, 14°.31S×166°.94E, h111km, MLv5.2/15, Vanuatu Islands*
NEIC **17** *15:49:51.1±1.7, 14°.55S±0°.07×167°.5E±0°.1, h112km±7km, mb4.4/22, Error ellipse: s-maj=18.5km s-min=9.3km az=109.0*
IDC **17** *15:49:52.3±4.8, 14°.68S×167°.32E, h120km±40km, mb3.5/6, mbtmp3.9/7, Error ellipse: s-maj=31.1km s-min=29.3km az=20.0*
ISC 17 15:49:49.5±0.6, 14°.49S±0°.08×167°.36E±0°.09, h100km, n46, σ1^s.09/48, mb4.3/15, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	0.96	189		Pn	15 50 11.2	+1.6
SANVU				Sn	Sn	15 50 24.9	+0.3
SANVU	**Saraoutou**	0.96	189	P	Pn	15 50 11.4	+1.8
DVP	**Devils Point**	3.31	166	P	Pn	15 50 41.6	+2.1
RTV	**Rentapao**	3.44	163	P	Pn	15 50 44.8	+3.6
MARNC	**Mare, Loyalty**	6.98	175	Pn	Pn	15 51 27.8	-1.4
MARNC	**Mare, Loyalty**	6.98	175	P	Pn	15 51 29.9	+0.7
YATNC	**Mamie plateau,**	7.54	183	P	Pn	15 51 37.4	+0.6
DZM	**Mont Dzumac**	7.59	186	P	Pn	15 51 38.3	+0.7
	23nm,0.3s,baz=47,slow=19,SNR=42						
DZM				S	Sn	15 52 60.0	-2.1
	37nm,0.6s,baz=266,slow=23,SNR=9.1						
DZM	**Mont Dzumac**	7.59	186		Pn	15 51 38.0	+0.4
DZM	**Mont Dzumac**	7.59	186	P	Pn	15 51 38.2	+0.6
ONTNC	**Ouen Toro**	7.82	186		Pn	15 51 41.9	+1.2
ONTNC	**Ouen Toro**	7.82	186	P	Pn	15 51 42.3	+1.6
OUENC	**Ouen Island, N**	7.90	183	P	Pn	15 51 43.2	+1.5
PINNC	**Pines Island,**	8.08	179	Pn	Pn	15 51 45.2	+1.1
PINNC	**Pines Island,**	8.08	179	P	Pn	15 51 44.5	+0.4
FUNA	**Funafuti**	13.02	64	Pn	Pn	15 52 50.8	-0.1
LHI	**Lord Howe Isla**	18.58	203	P	P	15 53 59.3	+0.5
EIDS	**Eidsvold**	18.72	232	P	P	15 54 01.5	+1.1
EIDS				IAmb	IAmb	15 54 02.9	
	comp=Z,12nm,1.1s						
RAO	**Raoul Island**	20.03	140	P	P	15 54 14.1	-0.5
CTAO	**Charters Tower**	20.90	252	P	P	15 54 24.9	+0.8
CTAO				IAmb	IAmb	15 54 57.3	
	comp=Z,14nm,1.4s						
ARMA	**Armidale**	21.47	220	P	P	15 54 29.6	-0.6
BKZ	**Black Stump Fm**	25.86	164	P	P	15 55 11.8	-0.1
BKZ				IAmb	IAmb	15 55 51.9	
	comp=Z,34nm,1.3s						
INKA	**Innaminka**	28.03	238	P	P	15 55 32.2	+0.7
STKA	**Stephens Creek**	29.21	229	P	P	15 55 43.0	+1.1
	comp=Z,4.5nm,0.5s,baz=54,slow=9.4,SNR=22						
	comp=Z,4.5nm,0.5s						
STKA	**Stephens Creek**	29.21	229	P	P	15 55 42.7	+0.8
WR8	**Warramunga Arr**	31.82	255	P	P	15 56 05.6	+0.5
WB0	**Warramunga Arr**	31.91	256	P	P	15 56 05.8	0.0
WB0				IAmb	IAmb	15 56 33.1	
	comp=Z,6.4nm,1.4s						
WRA	**Warramunga Arr**	31.97	256	P	P	15 56 05.8	-0.5
	comp=Z,0.6nm,1.0s,baz=84,slow=9.3,SNR=1.7						
	comp=Z,0.6nm,1.0s						
AS31	**Alice Springs**	32.84	249	P	P	15 56 13.7	-0.3
ASAR	**Alice Springs**	32.84	249	P	P	15 56 13.0	-1.0
	comp=Z,0.7nm,0.7s,baz=82,slow=8.8,SNR=14						
	comp=Z,0.7nm,0.7s						
ASAR	**Alice Springs**	32.84	249	P	P	15 56 13.8	-0.2
BBOO	**Buckleboo**	33.80	232	P	P	15 56 22.8	+0.6
BBOO				IAmb	IAmb	15 56 23.6	
	comp=Z,4.8nm,1.1s						
FORT	**Forrest**	39.49	239	P	P	15 57 11.0	+0.5
FORT				IAmb	IAmb	15 57 48.7	
	comp=Z,3.6nm,0.9s						
HUH	**Hualalai**	49.65	48	P	P	15 58 31.1	-0.5
TPUB	**Ta-pu**	59.16	309	P	P	15 59 39.5	-0.8
TPUB				IAmb	IAmb	15 59 45.8	
	comp=Z,9.7nm,1.0s						
VNDA	**Vanda**	63.10	181	P	P	16 00 04.8	-1.2
	comp=Z,0.4nm,0.5s,baz=9.4,slow=7.7,SNR=1.9						
	comp=Z,0.4nm,0.5s						
VNDA	**Vanda**	63.10	181	P	P	16 00 04.7	-1.3
VNDA				IAmb	IAmb	16 00 13.8	
	comp=Z,4.1nm,1.4s						
CASY	**Casey**	63.78	202	P	P	16 00 10.2	-0.4
CASY				IAmb	IAmb	16 00 27.5	
	comp=Z,5.0nm,1.2s						
QSPA	**South Pole Qui**	75.54	180	P	P	16 01 22.6	-0.4
	comp=Z,0.9nm,0.7s,baz=107,slow=0.5,SNR=6.8						
	comp=Z,0.9nm,0.7s						
QSPA	**South Pole Qui**	75.54	180	P	P	16 01 22.6	-0.4
SII	**Sitkinak Islan**	77.71	21	P	P	16 01 35.0	-0.1
K17K	**Iditarod**	81.49	15	P	P	16 01 55.6	+0.2
K17K				IAmb	IAmb	16 02 13.4	
	comp=Z,19nm,1.5s						
GLB	**Gilahina Butte**	84.93	21	P	P	16 02 13.6	+0.4
GLB				IAmb	IAmb	16 02 54.9	
	comp=Z,11nm,1.4s						
I21K	**Tanana**	85.14	16	P	P	16 02 14.7	+0.6
I21K				IAmb	IAmb	16 02 16.8	
	comp=Z,9.0nm,1.5s						
ILAR	**Eielson Array**	86.27	18	P	P	16 02 21.2	+1.5
	comp=Z,0.4nm,0.7s,baz=237,slow=5.2,SNR=7.2						
	comp=Z,0.4nm,0.7s						
ILAR	**Eielson Array**	86.27	18	P	P	16 02 19.7	0.0

IDC **17** *15:52:07.3±1.2, 3°.03S×100°.80E, h0km, mb3.9/11, mbtmp3.9/11, MS2.7/1, Error ellipse: s-maj=55.3km s-min=15.7km az=52.0*
NEIC **17** *15:52:13.6±1.4, 2°.85S±0°.10×101°.0E±0°.1, h35km±2km, mb4.4/18, Error ellipse: s-maj=18.8km s-min=15.1km az=229.0*
DJA **17** *15:52:14.1±0.7, 3°S±3°×10°1E±°, h15km±6km, M4.2/16, mb4.3/2, MLv4.1/16*
ISC 17 15:52:14.2±0.5, 2°.93S±0°.05×100°.99E±0°.04, h46km, n65, σ1^s.43/56, mb4.3/21, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRJI	**Kerinci**	0.96	30	P	Pn	15 52 32.1	+0.6
KRJI				S	Sn	15 52 47.0	+2.9
PPSI	**Pulau Pagai**	0.99	280	P	Pn	15 52 32.9	+1.2
PPSI				S	Sn	15 52 47.8	+3.2
MASI	**Maura Aman, Be**	1.27	99	P	Pn	15 52 35.6	0.0
UBSI	**University, Be**	1.53	123	P	Pn	15 52 40.4	+1.3
UBSI				S	Sn	15 53 00.1	+2.4
KSI	**Kapahiang**	1.76	114	P	Pn	15 52 43.9	+1.6
PDSI	**Padang**	2.07	345	P	Pn	15 52 47.3	+0.7
MNAI	**Manna**	2.43	126		Pn	15 52 51.7	+0.3
MNAI	**Manna**	2.43	126	P	Pn	15 52 51.9	+0.5
SISI	**Saibi**	2.48	310	P	Pn	15 52 53.5	+1.4
PPI	**Padang Panjang**	2.53	347	P	Pn	15 52 54.7	+1.9
EGSI	**Enggano, Bengk**	2.73	152	P	Pn	15 52 55.6	0.0
MDSI	**Maura Dua**	3.54	116	P	Pn	15 53 09.7	+3.0
LWLI	**Liwa**	3.70	124	P	Pn	15 53 11.8	+2.8
PMBI	**Palembang**	3.78	90	Pn	Pn	15 53 08.5	-1.5
KLSI		4.12	115	P	Pn	15 53 17.7	+2.9
DSRI	**Dabo**	4.34	56	P	Pn	15 53 19.1	+1.4
KASI	**Kota Agung**	4.35	126	P	Pn	15 53 20.3	+2.5
TPRI	**Tanjung Pinang**	5.21	43	P	Pn	15 53 32.1	+2.4
	0.2nm39nm,0.4s						
MYKOM	**Kota Tinggi**	5.50	31	P	Pn	15 53 36.2	+2.6
JAGI	**Jajag, Banyuwa**	14.21	113	Pn	Pn	15 55 32.1	-0.7
CMAR	**Chiang Mai Arr**	21.35	355	P	P	15 56 55.4	-2.4
	0.6nm,0.5s,baz=172,slow=12,SNR=5.5						
CMAR				LR	LR	16 04 15.7	
	comp=Z,24nm,21.5s,baz=180,slow=34						
	0.6nm,0.5s						
LUWI	**Luwuk**	21.85	86	P	P	15 57 03.8	+0.6
LUWI				IAmb	IAmb	15 57 34.7	
	comp=Z,38nm,1.4s						
SOEI	**Soe**	24.10	107	P	P	15 57 26.9	+1.0
SOEI				IAmb	IAmb	15 58 09.8	
	comp=Z,9.2nm,1.1s						
PSA00	**Pilbara Seismi**	26.07	137	P	P	15 57 45.3	+1.6
H08S2	**Diego Garcia H**	28.75	259	T	T	16 27 26.7	
	baz=83,slow=76,SNR=9.0						
H08S3	**Diego Garcia H**	28.75	260	T	T	16 27 28.2	
	baz=83,slow=76,SNR=128						
H08S1	**Diego Carcia H**	28.76	259	T	T	16 27 28.2	
	baz=83,slow=76,SNR=12						
H01W3	**Cape Leeuwin H**	34.06	160	T	T	16 34 42.2	
	baz=334						
H01W2	**Cape Leeuwin H**	34.07	161	T	T	16 34 43.7	
	baz=334,SNR=3.0						
H01W1	**Cape Leeuwin H**	34.08	160	T	T	16 34 43.7	
	baz=334						
TATO	**Taipei**	34.14	34	P	P	15 58 53.6	-1.4
WB0	**Warramunga Arr**	36.66	120	P	P	15 59 15.5	-1.3
WB0				IAmb	IAmb	15 59 54.9	
	comp=Z,6.7nm,1.4s						
WRA	**Warramunga Arr**	36.68	120	P	P	15 59 16.4	-0.5
	comp=Z,0.9nm,0.5s,baz=304,slow=8.9,SNR=12						
	comp=Z,0.9nm,0.5s						
WRA	**Warramunga Arr**	36.68	120	P	P	15 59 15.9	-1.1
WR8	**Warramunga Arr**	36.82	120	P	P	15 59 17.3	-0.9
WR8				IAmb	IAmb	15 59 18.7	
	comp=Z,2.5nm,0.7s						
ASAR	**Alice Springs**	37.91	126	P	P	15 59 27.6	+0.2
	comp=Z,0.4nm,0.5s,baz=300,slow=8.2,SNR=17						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	37.91	126	P	P	15 59 26.9	-0.6
BBOO	**Buckleboo**	44.30	136	P	P	16 00 20.0	+0.2
BBOO				IAmb	IAmb	16 00 54.9	
	comp=Z,8.3nm,1.4s						
STKA	**Stephens Creek**	47.80	132	P	P	16 00 47.5	+0.2
	comp=Z,0.9nm,0.6s,baz=309,slow=14,SNR=3.4						
	comp=Z,0.9nm,0.6s						
SONM	**Songino Array**	50.78	5	P	P	16 01 11.1	+1.1
	comp=Z,2.7nm,0.8s,baz=185,slow=8.2,SNR=16						
	comp=Z,2.7nm,0.8s						
SONM	**Songino Array**	50.78	5	P	P	16 01 09.7	-0.2
JGF	**Kuroka**	51.25	38	P	P	16 01 13.5	-0.1
MKAR	**Makanchi Array**	52.19	344	P	P	16 01 20.4	0.0
	comp=Z,1.6nm,0.6s,baz=147,slow=8.1,SNR=16						
	comp=Z,1.6nm,0.6s						
MAKZ	**Makanchi**	52.29	344	P	P	16 01 21.5	+0.4
VOI	**Vohitsoka**	55.84	246	P	P	16 01 47.1	-0.5
KURBB	**Kurchatov Arra**	56.72	343	P	P	16 01 53.1	0.0
	comp=Z,0.7nm,0.6s,baz=163,slow=7.3,SNR=6.0						
	comp=Z,0.7nm,0.6s						
ZAA0	**Zalesovo Array**	58.26	349	P	P	16 02 03.5	-0.5
ZAA0				IAmb	IAmb	16 02 04.7	
	comp=Z,5.4nm,0.8s						
ZALV	**Zalesovo Beam**	58.26	349	P	P	16 02 04.2	+0.3
	comp=Z,5.6nm,0.8s,baz=172,slow=5.1,SNR=26						
	comp=Z,5.6nm,0.8s						
ZALV	**Zalesovo Beam**	58.26	349	P	P	16 02 03.5	-0.5
H04N2	**CROZET ISLANDS**	60.64	217	T	T	17 07 24.8	
	baz=61,slow=75,SNR=275						
H04N1	**CROZET ISLANDS**	60.66	217	T	T	17 07 25.2	
	baz=61,slow=75,SNR=266						
H04N3	**CROZET ISLANDS**	60.66	217	T	T	17 07 23.9	
	baz=61,slow=75,SNR=242						
H04S1	**CROZET ISLANDS**	60.92	216	T	T	17 07 46.4	
	baz=60,slow=76,SNR=42						
H04S3	**CROZET ISLANDS**	60.93	216	T	T	17 07 46.4	
	baz=60,slow=76,SNR=89						
H04S2	**CROZET ISLANDS**	60.94	216	T	T	17 07 43.3	
	baz=60,slow=76,SNR=50						
BVAR	**Borovoye Array**	61.39	340	P	P	16 02 24.6	-0.9
	comp=Z,1.5nm,0.6s,baz=156,slow=9.4,SNR=6.3						
	comp=Z,1.5nm,0.6s						
BORK	**Borovoye**	61.44	339	P	P	16 02 25.4	-0.4
BORK				IAmb	IAmb	16 02 37.9	
	comp=Z,3.2nm,0.8s						
AB31	**Akbulak array**	62.92	331	P	P	16 02 35.5	-0.3
AB31				IAmb	IAmb	16 02 36.5	
	comp=Z,3.2nm,0.8s						
ABKAR	**Akbulak array**	62.92	331	P	P	16 02 35.4	-0.4
KBZ	**Khabaz**	69.65	319	P	P	16 03 18.8	-0.2
	comp=Z,1.0nm,0.7s,baz=128,slow=4.1,SNR=3.6						
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	74.67	312	P	P	16 03 48.6	-0.7
	comp=Z,0.9nm,0.8s,baz=100,slow=6.4,SNR=4.9						
	comp=Z,0.9nm,0.8s						
TIXI	**Tiksi**	76.62	9	P	P	16 03 58.2	-1.4
TIXI				IAmb	IAmb	16 03 60.0	
	comp=Z,6.2nm,1.4s						
C18K	**Utukok River**	95.57	21	P	P	16 05 34.0	-0.3
C18K				IAmb	IAmb	16 05 50.2	
	comp=Z,4.4nm,1.4s						
TXAR	**Lajitas Array**	144.82	39	PKPbc	PKPab	16 11 46.2	+0.2
	comp=Z,0.5nm,0.6s,baz=234,slow=1.2,SNR=5.7						
TXAR	**Lajitas Array**	144.82	39		PKPab	16 11 45.6	-0.4

IDC 17 15:56:33.1±13.0, 4°.40N×126°.85E, h148km±120km, mb2.9/3, mbtmp3.3/3, Error ellipse: s-maj=164.6km s-min=27.0km az=64.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	25.28	163	P	P	16 01 46.4	+0.4
	0.2nm,0.3s,baz=343,slow=10,SNR=7.5						
	0.2nm,0.3s						
ASAR	**Alice Springs**	28.73	166	P	P	16 02 16.2	-0.5
	0.3nm,0.7s,baz=352,slow=7.0,SNR=6.0						
ASAR				PcP	PcP	16 05 23.2	-0.3
	0.1nm,0.4s,baz=359,slow=2.9,SNR=4.2						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	57.08	325	P	P	16 06 03.9	-0.1
	0.2nm,0.4s,baz=117,slow=8.3,SNR=4.5						
	0.2nm,0.4s						

NEIC **17** *16:14:22.4±1.4, 44°.87S±0°.07×167°.3E±0°.1, h100km±5km, mb4.3/5, Error ellipse: s-maj=13.9km s-min=8.5km az=116.0*
WEL **17** *16:14:23.6±0.7, 45°S±4°×16°7E±°, h98km±5km, M4.4/15, ML4.3/15, MLv4.4/15, Error ellipse: s-maj=6.6km s-min=3.8km az=125.4, confirmed*
WEL **17** *16:14:23.6, 45°.02S×167°.41E, h111km, ML4.4, Mw4.2, Moment Tensor Solution. s6 Moment tensor: Scale 10^{15} Nm; M_{rr}2.77; $M_{\theta\theta}$-1.47; $M_{\phi\phi}$-1.30; $M_{r\theta}$-0.12; $M_{\theta\phi}$0.33; $M_{\phi r}$-0.76; Fault plane solution: $M_0$2.34000×10^{15} NP1: ϕ_s141.00000°, δ51.00000°, λ102.00000°. NP2: ϕ_s303.00000°, δ40.00000°, λ76.00000°. Principal axes: T -1.7634, Plg79.0000°, Azm101.0000°; N -1.1516, Plg9.0000°, Azm313.0000°; P 2.9150, Plg6.0000°, Azm223.0000°; Stations used: WHZ WKZ PYZ APZ LBZ ODZ REVERSE FAULTING*
NOU **17** *16:14:24.6, 45°.05S×167°.62E, h91km, MLv4.6/18, South Island, New Zealand*
IDC **17** *16:14:26.6±10.0, 44°.85S×167°.52E, h138km±88km, mb3.5/5, mbtmp3.9/5, Error ellipse: s-maj=79.6km s-min=20.0km az=56.0*
ISC 17 16:14:23.1±0.7, 45°.00S±0°.04×167°.43E±0°.04, h115km±5km, n102, σ1^s.29/117, mb4.0/8, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAFS	**Te Anau Fire S**	0.47	154	P	Pn	16 14 40.4	+0.2
TAFS				S	Sn	16 14 52.9	-0.2
MSZ	**Milford Sound**	0.48	48	P	Pn	16 14 40.9	+0.6
MSZ				S	Sn	16 14 53.3	+0.1
DCZ	**Deep Cove**	0.50	202		Pn	16 14 39.8	-0.6
DCZ				Sn	Sn	16 14 50.8	-2.7
DCZ	**Deep Cove**	0.50	202	P	Pn	16 14 39.8	-0.6
DCZ				S	Sn	16 14 51.8	-1.7
MLZ	**Mavora Lakes**	0.61	127		Pn	16 14 41.1	-0.1

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MLZ                                    Sn     Sn     16 14 54.1 -0.9
MLZ    Mavora Lakes        0.61 127    P      Pn     16 14 41.3 +0.1
MLZ                                    S      Sn     16 14 54.5 -0.4
GLNY   Glenorchy           0.71  79    P      Pn     16 14 42.6 +0.6
GLNY                                   S      Sn     16 14 55.6 -0.6
RLNS   Resolution Isl      0.86 217    P      Pn     16 14 42.9 -0.5
RLNS                                   S      Sn     16 14 56.5 -2.3
QTPS   Queenstown Pol      0.88  93    P      Pn     16 14 44.1 +0.7
QTPS                                   S      Sn     16 14 58.8  0.0
WHZ    Wether Hill Ro      0.97 158           Pn     16 14 44.1 -0.2
WHZ                                    Sn     Sn     16 14 59.3 -1.1
WHZ    Wether Hill Ro      0.97 158    P      Pn     16 14 44.2 -0.2
WHZ                                    S      Sn     16 14 59.1 -1.3
WKZ    Wanaka              1.15  82           Pn     16 14 46.7 +0.5
WKZ    Wanaka              1.15  82    P      Pn     16 14 47.1 +0.9
WKZ                                    S      Sn     16 15 04.0 +0.3
RRKS   Rarakau             1.15 178    P      Pn     16 14 46.4 +0.2
RRKS                                   S      Sn     16 15 02.7 -0.9
PYZ    Puysegur Point      1.28 204           Pn     16 14 47.1 -0.5
PYZ    Puysegur Point      1.28 204    P      Pn     16 14 47.4 -0.2
PYZ    Puysegur Point      1.28 204    P      Sn     16 15 04.6 -1.6
PYZ    Puysegur Point      1.28 204    P      Pn     16 14 47.1 -0.5
PYZ                                    S      Sn     16 15 04.7 -1.6
JCZ    Jackson Bay         1.34  47    P      Pn     16 14 49.0 +0.5
JCZ    Jackson Bay         1.34  47    P      Sn     16 15 06.6 -1.1
JCZ    Jackson Bay         1.34  47    P      Pn     16 14 48.9 +0.5
JCZ                                    S      Sn     16 15 07.2 -0.5
EAZ    Earnscleugh         1.35 101    P      Pn     16 14 49.1 +0.7
EAZ                                    S      Sn     16 15 07.2 -0.5
TUZ    Tuapeka             1.82 122    P      Pn     16 14 54.4 +0.4
TUZ                                    S      Sn     16 15 15.7 -1.9
APZ    The Paps            1.88 168    P      Pn     16 14 54.4 -0.4
APZ                                    S      Sn     16 15 17.6 -1.3
SYZ    Scrubby Hill        1.95 143    P      Pn     16 14 55.9 +0.3
SYZ    Scrubby Hill        1.95 143    S      Sn     16 15 18.4 -2.0
SYZ    Scrubby Hill        1.95 143    P      Pn     16 14 55.7 +0.1
SYZ                                    S      Sn     16 15 18.9 -1.6
LBZ    Lake Benmore        2.06  74           Pn     16 14 56.5 -0.6
LBZ    Lake Benmore        2.06  74    P      Pn     16 14 56.8 -0.3
LBZ                                    S      Sn     16 15 21.9 -1.1
FOZ    Fox Glacier         2.26  50           Pn     16 14 59.1 -0.4
FOZ    Fox Glacier         2.26  50    P      Pn     16 14 59.2 -0.4
ODZ    Otahua Downs        2.28  92           Pn     16 14 59.6 -0.3
ODZ    Otahua Downs        2.28  92    P      Pn     16 14 59.9  0.0
ODZ    Otahua Downs        2.28  92    S      Sn     16 15 25.2 -2.8
ODZ    Otahua Downs        2.28  92    P      Pn     16 14 59.8  0.0
HHSZ   Highcliff Hill      2.40 113    P      Pn     16 15 01.8 +0.4
TMZ    Timaru              2.63  78    P      Pn     16 15 03.6 -0.7
ARCZ   Arundel             2.88  70    P      Pn     16 15 06.5 -1.2
RPZ    Rata Peaks          2.90  65           Pn     16 15 06.8 -1.1
RPZ    Rata Peaks          2.90  65    P      Pn     16 15 07.3 -0.6
RPZ    Rata Peaks          2.90  65    S      Sn     16 15 40.6 -1.9
RPZ    Rata Peaks          2.90  65    P      Pn     16 15 07.0 -0.9
WVZ    Waitaha Valley      3.07  52    P      Pn     16 15 09.1 -1.0
MHCZ   Mount Hutt          3.32  65    P      Pn     16 15 12.1 -1.3
WACZ   Wakanui South       3.33  73    P      Pn     16 15 12.7 -0.9
RACZ   Rakaia              3.61  71    P      Pn     16 15 17.0 -0.2
INZ    Inchbonnie          3.69  53           Pn     16 15 17.3 -1.0
INZ    Inchbonnie          3.69  53    P      Pn     16 15 17.4 -0.9
OXZ    Oxford              3.72  65           Pn     16 15 16.9 -1.8
OXZ    Oxford              3.72  65    P      Pn     16 15 16.9 -1.8
MQZ    McQueen's Vall      3.97  73    Pn     Pn     16 15 20.7 -1.3
MQZ    McQueen's Vall      3.97  73    P      Pn     16 15 20.9 -1.1
AKCZ   Akaroa Harbour      4.09  76    P      Pn     16 15 23.7 +0.1
LTZ    Lake Taylor         4.14  59           Pn     16 15 22.9 -1.5
LTZ    Lake Taylor         4.14  59    P      Pn     16 15 23.0 -1.5
AMCZ   Amberley            4.18  66    Pn     Pn     16 15 23.6 -1.3
GVZ    Greta Valley S      4.53  65    Pn     Pn     16 15 27.9 -1.7
DSZ    Denniston Nort      4.56  46           Pn     16 15 29.1 -0.9
KHZ    Kahutara            5.13  62    Pn     Pn     16 15 36.4 -1.2
KHZ    Kahutara            5.13  62    P      Pn     16 15 36.8 -0.8
THZ    Tophouse            5.14  53           Pn     16 15 36.2 -1.6
MRNZ   Matariki Terra      5.30  49           Pn     16 15 38.6 -1.4
QRZ    Quartz Range        5.61  44           Pn     16 15 43.2 -0.9
QRZ    Quartz Range        5.61  44    P      Pn     16 15 43.5 -0.6
TKNZ   Takaka Hill         5.67  48           Pn     16 15 43.7 -1.3
BSWZ   Blackbirch Sta      5.74  57    Pn     Pn     16 15 44.2 -1.7
NNZ    Nelson              5.77  51    Pn     Pn     16 15 45.2 -1.1
TUWZ   Tuamarina           5.95  55    Pn     Pn     16 15 47.4 -1.3
TCW    Tory Channel        6.28  55    Pn     Pn     16 15 51.8 -1.5
SNZO   South Karori        6.47  58    Pn     Pn     16 15 54.9 -0.9
SNZO   South Karori        6.47  58    P      Pn     16 15 56.3 +0.5
MRZ    Mangatainoka R      7.40  57    Pn     Pn     16 16 05.3 -3.0
BFZ    Birch Farm          7.79  59    P      Pn     16 16 12.4 -1.2
HIZ    Hauiti              8.53  43    P      Pn     16 16 23.2 -0.5
OUZ    Omahuta            10.85  28    P      Pn     16 16 57.7 +2.7
GLAD   Gladstone          14.76 279    P      P      16 17 50.7 +1.7
MOO    Moorlands          14.85 273    P      P      16 17 52.4 +2.4
ASAR   Alice Springs      34.55 297    P      P      16 21 01.8 +1.1
       0.8nm,0.6s,baz=131,slow=5.7,SNR=23
ASAR                                   PcP    PcP    16 23 32.9 -0.1
       0.7nm,0.8s,baz=125,slow=3.5,SNR=6.9
       0.8nm,0.6s
ASAR   Alice Springs      34.55 297    P      P      16 20 56.7 -3.9
WR8    Warramunga Arr     36.94 302    P      P      16 21 17.9 -3.2
WR8                                    IAmb   IAmb   16 21 24.6
       comp=Z,6.3nm,1.4s
WRA    Warramunga Arr     37.04 302    P      P      16 21 22.7 +0.8
       comp=Z,1.7nm,0.9s,baz=135,slow=8.3,SNR=5.4
WRA                                    PcP    PcP    16 23 39.1 -1.2
       comp=Z,0.9nm,0.7s,baz=134,slow=3.1,SNR=6.4
       comp=Z,1.7nm,0.9s
WB0    Warramunga Arr     37.15 302    P      P      16 21 19.8 -3.0
WB0                                    IAmb   IAmb   16 21 58.6
       comp=Z,4.3nm,1.2s
H01W1  Cape Leeuwin H     41.40 265    T      T      17 05 55.9
       baz=121,slow=75,SNR=110
H01W2  Cape Leeuwin H     41.41 265    T      T      17 05 55.4
       baz=121,slow=75,SNR=118
H01W3  Cape Leeuwin H     41.42 265    T      T      17 05 57.2
       baz=121,slow=75,SNR=111
QSPA   South Pole Qui     45.13 180    P      P      16 22 29.9 +2.2
       comp=Z,0.8nm,0.7s,baz=50,slow=1.5,SNR=7.8
       comp=Z,0.8nm,0.7s
QSPA   South Pole Qui     45.13 180    IAmb   IAmb   16 22 56.6
       comp=Z,5.6nm,1.3s
PLCA   Paso Flores        80.09 139    P      P      16 26 21.9 +1.8
       comp=Z,2.0nm,1.0s,baz=131,slow=5.1,SNR=3.7
       comp=Z,2.0nm,1.0s
H08S2  Diego Garcia H     88.13 261    T      T      18 03 53.2
       baz=136,slow=76,SNR=7.6
H08S1  Diego Carcia H     88.14 261    T      T      18 03 54.3
       baz=136,slow=76,SNR=8.4
H08S3  Diego Garcia H     88.15 261    T      T      18 03 55.4
       baz=136,slow=76,SNR=54
CMAR   Chiang Mai Arr     88.55 298    P      P      16 27 05.0 +2.0
       comp=Z,1.3nm,0.9s,baz=144,slow=3.1,SNR=9.6
       comp=Z,1.3nm,0.9s
CMAR   Chiang Mai Arr     88.55 298    P      P      16 27 03.1 +0.1
PZH    PanZhiHua          92.92 305    P      P      16 27 21.5 -1.7
HHC    Hu-ho-hao-te       99.04 321    eP     Pdif   16 27 50.5 -0.1
HHC                                    pmax   pmax
       comp=Z,8.0nm,0.6s
HHC                                    pmax   pmax
       comp=Z,94nm,5.0s
KURBB  Kurchatov Arra    122.31 311    PKP    PKPdf  16 33 03.4 -0.3
       comp=Z,0.2nm,0.3s,baz=106,slow=1.9,SNR=6.9
KURK   Kurchatov         122.31 311           PKPdf  16 33 03.4 -0.3
BRTR   Keskin Array B    145.81 278    PKPbc  PKPab  16 33 49.5 +0.3
       comp=Z,1.1nm,0.8s,baz=151,slow=4.9,SNR=8.9
TORD   Torodi Ar. Bea    146.00 205    PKPbc  PKPbc  16 33 49.4 -0.3
       comp=Z,2.7nm,0.8s,baz=125,slow=2.2,SNR=7.9
ARCES  ARCESS Array B    148.88 335    PKPbc  PKPbc  16 33 56.0  0.0
       comp=Z,4.2nm,1.0s,baz=46,slow=3.5,SNR=4.5
AKASG  Malin Array Be    151.67 297    PKPbc  PKiKP  16 34 03.5  0.0
       comp=Z,1.4nm,0.6s,baz=84,slow=2.3,SNR=5.8
FINES  FINESS Array B    152.16 320    PKPbc  PKiKP  16 34 04.3 +0.2
       comp=Z,2.6nm,0.8s,baz=110,slow=4.5,SNR=7.2
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NIED ***17*** *16:25:31.8, 46°.75N×154°.57E, h30^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.05; $M_{\theta\theta}$3.78; $M_{\phi\phi}$-2.73; $M_{r\theta}$-0.65; $M_{\theta\phi}$1.62; $M_{\phi r}$-0.43; Fault plane solution: $M_0$3.71000×10^{15} NP1: ϕ_s302.00000°, δ79.00000°, λ0.00000°. NP2: ϕ_s212.00000°, δ90.00000°, λ169.00000°.*

MOS ***17*** *16:25:34.5±1.2, 47°.31N×153°.82E, h63^{km}, mb4.5/7 Error ellipse: s-maj=12.4km s-min=6.7km az=64.0*

SKHL ***17*** *16:25:34.0±0.8, 47°.10N×154°.40E, h57^{km}±7^{km}, mb4.9/6*

IDC ***17*** *16:25:39.2±2.9, 47°.51N×153°.63E, h60^{km}±24^{km}, mb3.7/16, mbtmp4.0/20, ML3.6/4, MS3.4/2, Error ellipse: s-maj=36.4km s-min=15.8km az=151.0*

NEIC ***17*** *16:25:40.5±1.0, 47°.7N±0°.1×153°.5E±0°.2, h60^{km}±6^{km}, mb4.5/56, Error ellipse: s-maj=22.0km s-min=9.5km az=141.0*

ISC 17 16:25:37.2±0.6**, 47°.34N**±0°.08×**153°.85E**±0°.07**, h50^{km}, n137,** σ**1^{s}36**/132**, mb4.4**/48**, 1D, Kuril Islands**

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Code   Station Name        Δ°   AZ°    Phase ID          Time      Res
                                       Op     ISC     h  m  s      ISC
SKR    Severo-Kuril's      3.66  23    ePN    Pn     16 26 31.3  0.0
SKR                                    eS     Sn     16 27 13.1 -0.1
SKR                                    pmax   pmax
       comp=Z,142nm,0.4s
SKR                                    smax   smax
       comp=E,212nm,0.6s
SKR                                    smax   smax
       comp=N,255nm,0.5s
SKR    Severo-Kuril's      3.66  23    eP     Pn     16 26 31.0 -0.3
SKR                                    AMB    AMB    16 26 33.2
       comp=N,170nm,0.4s
SKR                                    eS     Sn     16 27 12.4 -0.8
SKR                                    A      A      16 27 15.8
       comp=N,150nm,0.3s
SKR                                    A      A      16 27 15.8
       comp=N,230nm,0.3s
PAU    Pauzhetka           4.56  24    eP     Pn     16 26 42.8 -0.8
PAU                                    AMB    AMB    16 26 46.3
       comp=N,50nm,0.3s
PAU                                    eS     Sn     16 27 33.8 -1.4
PAU                                    A      A      16 27 38.2
       comp=N,210nm,0.3s
PAU                                    A      A      16 27 38.2
       comp=N,180nm,0.3s
KUR    Kuril'sk            4.65 245    ePN    Pn     16 26 44.3 -0.5
KUR                                    eS     Sn     16 27 39.2 +1.7
KUR                                    pmax   pmax
       comp=Z,167nm,0.5s
KUR                                    pmax   pmax
       comp=N,66nm,0.2s
KUR                                    pmax   pmax
       comp=E,48nm,0.3s
KUR                                    smax   smax
       comp=N,276nm,0.6s
KUR                                    smax   smax
       comp=E,181nm,0.6s
KUR    Kuril'sk            4.65 245    eP     Pn     16 26 44.6 -0.2
KUR                                    AMB    AMB    16 26 48.6
       comp=E,140nm,0.4s
KUR                                    eS     Sn     16 27 37.5  0.0
KUR                                    A      A      16 27 45.5
       comp=E,240nm,0.6s
KUR                                    A      A      16 27 45.5
       comp=E,290nm,0.6s
SHO    Shikotan            6.02 237    eP     Pn     16 27 03.5 -0.1
SHO                                    eS     Sn     16 28 11.2  0.0
PEA0B  Petropavlovsk-      6.28  22           Pn     16 27 07.3 +0.1
PEA0B  Petropavlovsk-      6.28  22    PN     Pn     16 27 07.3 +0.1
PETK   Petropavlovsk-      6.28  22    P      Pn     16 27 07.0 -0.1
       comp=E,2.1nm,0.3s,baz=195,slow=10,SNR=74
PETK                                   S      Sn     16 28 27.2 +10
       comp=E,1.5nm,0.5s,baz=196,slow=14,SNR=0.6
       comp=E,8.7nm,0.5s
PETK   Petropavlovsk-      6.28  22           Pn     16 27 06.9 -0.3
PET    Petropavlovsk       6.47  27    Pn     Pn     16 27 08.7 -1.1
PET    Petropavlovsk       6.47  27    ePN    Pn     16 27 08.8 -1.0
PET                                    pmax   pmax
       comp=Z,23nm,0.5s
PET    Petropavlovsk       6.47  27    eP     Pn     16 27 09.4 -0.4
PET                                    AMB    AMB    16 27 10.6
       comp=Z,10.0nm,0.7s
PET                                    eS     Sn     16 28 18.7 -3.5
PET                                    A      A      16 28 29.6
       comp=Z,30nm,0.7s
PET                                    A      A      16 28 29.6
       comp=Z,30nm,0.7s
YUK    Yuzh-Kuril'sk       6.50 242    ePN    Pn     16 27 08.8 -1.3
YUK                                    pmax   pmax
       comp=Z,141nm,0.3s
YUK                                    pmax   pmax
       comp=N,72nm,0.2s
YUK                                    pmax   pmax
       comp=E,86nm,0.2s
YUK                                    pmax   pmax
       comp=Z,275nm,1.1s
YUK    Yuzh-Kuril'sk       6.50 242    eP     Pn     16 27 09.2 -0.9
YUK                                    AMB    AMB    16 27 12.4
       comp=Z,120nm,0.3s
YUK                                    eS     Sn     16 28 20.1 -2.8
YUK                                    A      A      16 28 41.8
       comp=Z,400nm,0.8s
YUK                                    A      A      16 28 41.8
       comp=Z,340nm,0.8s
RUSJ   Misakicho           6.83 245    ePN    Pn     16 27 16.2 +1.4
RUSJ                                   i S    Sn     16 28 35.2 +4.1
GLVR   Golovnino           6.87 241    ePN    Pn     16 27 13.5 -1.7
GLVR                                   pmax   pmax
       comp=Z,140nm,0.8s
GLVR                                   pmax   pmax
       comp=N,55nm,0.3s
GLVR                                   pmax   pmax
       comp=E,55nm,0.3s
GLVR   Golovnino           6.87 241    eP     Pn     16 27 13.5 -1.7
GLVR                                   AMB    AMB    16 27 18.7
       comp=E,140nm,0.8s
GLVR                                   i S    Sn     16 28 31.9 -0.1
NMR    Nemuro--Hokkai      6.96 238    ePN    Pn     16 27 13.1 -3.4
NMR    Nemuro--Hokkai      6.96 238    eP     Pn     16 27 13.1 -3.4
YSS    Yuzhno-Sakhali      7.57 271    ePN    Pn     16 27 27.7 +2.8
YSS                                    eS     Sn     16 28 53.2 +3.9
YSS                                    pmax   pmax
       comp=Z,30nm,0.7s
YSS                                    pmax   pmax
       comp=E,20nm,0.6s
YSS                                    smax   smax
       comp=E,30nm,0.5s
YSS                                    MLR    MLR
       comp=Z,500nm,16.0s
YSS    Yuzhno-Sakhali      7.57 271    eP     Pn     16 27 27.6 +2.7
YSS                                    eS     Sn     16 28 52.6 +3.3
AKK    Akkeshi             7.69 239    eP     Pn     16 27 23.2 -3.3
TYV    Tymovskoe           8.14 300    eP     Pn     16 27 36.7 +4.0
JKA    Kamikawa-asahi      8.50 252           Pn     16 27 38.5 +0.8
JKA    Kamikawa-asahi      8.50 252    eP     Pn     16 27 39.6 +2.0
ASAJ   Asahikawa           8.50 252    P      Pn     16 27 39.6 +1.9
       comp=Z,2.1nm,0.3s,baz=67,slow=19,SNR=18
       comp=Z,7.5nm,0.5s
NKL    Nikolayevsk        10.24 309    eP     Pn     16 28 04.5 +3.2
SHEM   Shemya Is, Ala     14.07  60    P      P      16 29 03.2 +3.3
USRK   Ussuriysk Ar.      15.56 266    P      Pn     16 29 12.4 -0.8
       comp=Z,0.4nm,0.3s,baz=70,slow=14,SNR=14
       comp=Z,7.4nm,0.8s
SEY    Seymchan           15.65 358    P      Pn     16 29 13.9 -0.2
       comp=Z,0.1nm,0.3s,baz=18,slow=20,SNR=1.9
       comp=Z,0.8nm,0.4s
MAJO   Matsushiro         15.84 233    Pn     P      16 29 19.7 -0.1
MAJO   Matsushiro         15.84 233    P      P      16 29 19.7 -0.1
MAJO                                   pmax   pmax
       comp=Z,7.0nm,1.0s
MJAR   Matsushiro Arr     15.84 233    P      Pn     16 29 13.7 -3.0
       comp=Z,1.3nm,0.7s,baz=28,slow=14,SNR=4.5
MJAR                                   LR     LR     16 35 41.6
       comp=Z,42nm,20.7s,baz=56,slow=38
MJAR   Matsushiro Arr     15.84 233    P      Pn     16 29 13.7 -3.0
MJAR                                   pmax   pmax
       comp=Z,6.0nm,1.5s
KIWB   Kanaga Island      19.27  66    P      Pn     16 30 00.9 +2.1
ATKA   Atka Island        21.10  65    P      P      16 30 20.1 +2.9
KSRS   Korea Array        21.45 252    P      P      16 30 21.6 +0.5
       comp=Z,1.7nm,0.8s,baz=49,slow=14,SNR=2.4
       comp=Z,1.7nm,0.8s
BILL   Bilibino           21.70  13    P      P      16 30 23.5 -0.1
JSU    Suzuyama           23.88 237    P      P      16 30 48.1 +2.0
TIK    Tiksi              27.03 343    eP     P      16 31 13.0 -1.2
TIXI   Tiksi              27.05 343    P      P      16 31 13.0 -1.3
TIXI   Tiksi              27.05 343    P      P      16 31 13.0 -1.3
TIXI                                   pmax   pmax
       comp=Z,2.0nm,1.2s
J14K   Nanvaranak Lak     28.20  41    P      P      16 31 25.8 +1.1
J14K                                   IAmb   IAmb   16 31 55.1
       comp=Z,13nm,1.4s
C16K   Lisburne Hills     29.30  30    P      P      16 31 34.9 +0.5
H11N2  WAKE ISLAND Hy     29.52 154    T      T      17 03 43.2
       baz=341,slow=76,SNR=169
H11N1  WAKE ISLAND Hy     29.54 154    T      T      17 03 44.5
       baz=341,slow=76,SNR=174
H11N3  WAKE ISLAND Hy     29.54 154    T      T      17 03 43.7
       baz=341,slow=76,SNR=128
J16K   Anvik River        29.63  41    P      P      16 31 38.1 +0.7
J16K                                   IAmb   IAmb   16 31 49.6
       comp=Z,10nm,1.4s
M16K   Timber Creek       30.07  45    P      P      16 31 42.3 +0.9
K17K   Iditarod           30.58  42    P      P      16 31 46.7 +0.9
K17K                                   IAmb   IAmb   16 31 47.4
       comp=Z,16nm,1.4s
H11S1  WAKE ISLAND Hy     30.63 156    T      T      17 04 15.3
       baz=343,slow=76,SNR=356
H11S3  WAKE ISLAND Hy     30.64 156    T      T      17 04 03.5
       baz=343,slow=76,SNR=359
H11S2  WAKE ISLAND Hy     30.64 156    T      T      17 04 02.2
       baz=343,slow=76,SNR=284
C18K   Utukok River       30.86  30    P      P      16 31 48.8 +0.6
D19K   Kuna River         31.88  31    P      P      16 31 58.0 +0.8
D20K   Etivluk River      32.47  31           P      16 32 03.1 +0.6
D20K                                   IAmb   IAmb   16 32 05.6
       comp=Z,8.7nm,1.2s
B20K   Meade River        32.66  29    P      P      16 32 04.9 +0.9
B20K                                   IAmb   IAmb   16 32 05.7
       comp=Z,9.7nm,1.1s
IMAR   Indian Mountai     32.99  37    P      P      16 32 07.6 +0.6
G21K   Allakaket          33.17  36    P      P      16 32 09.7 +1.1
B21K   Ikpikpuk River     33.40  30    P      P      16 32 11.5 +1.1
B21K                                   IAmb   IAmb   16 32 13.4
       comp=Z,6.9nm,0.8s
D22K   Ayikyak River      33.90  31    P      P      16 32 16.0 +1.1
E22K   Anaktuvuk Pass     34.08  33    P      P      16 32 17.5 +1.1
TRF    Thorofare Moun     34.27  41    P      P      16 32 19.1 +0.9
COLD   Coldfoot           34.56  35    P      P      16 32 21.4 +0.8
COLD                                   IAmb   IAmb   16 32 21.8
       comp=Z,4.2nm,0.6s
H23K   Yukon River        34.69  37    P      P      16 32 23.1 +1.4
H23K                                   IAmb   IAmb   16 32 32.3
       comp=Z,7.5nm,1.5s
TOLK   Toolik Lake Re     34.98  32           P      16 32 25.2 +1.0
TOLK                                   IAmb   IAmb   16 32 25.9
       comp=Z,11nm,1.5s
E24K   Your Creek         35.31  33    P      P      16 32 28.3 +1.2
CCB    Clear Creek Bu     35.38  39    P      P      16 32 28.6 +1.0
CCB                                    IAmb   IAmb   16 32 49.2
       comp=Z,6.4nm,1.4s
F24K   Squaw Lake         35.48  34    P      P      16 32 29.4 +0.9
F24K                                   IAmb   IAmb   16 32 32.2
       comp=Z,3.2nm,0.7s
ILAR   Eielson Array      35.77  39    P      P      16 32 31.4 +0.3
       comp=Z,0.9nm,0.5s,baz=262,slow=9.6,SNR=21
       comp=Z,0.9nm,0.5s
ILAR   Eielson Array      35.77  39    P      P      16 32 31.1 +0.2
ILAR   Eielson Array      35.77  39    P      P      16 32 31.2 +0.2
G26K   Porcupine Rive     37.05  35    IAmb   IAmb   16 32 44.5
       comp=Z,6.6nm,0.8s
SCRK   Sand Creek         37.06  40    P      P      16 32 42.4 +0.2
SCRK                                   IAmb   IAmb   16 32 49.1
       comp=Z,6.6nm,1.4s
K27K   Chicken            37.90  40    P      P      16 32 49.8 +0.8
K27K                                   IAmb   IAmb   16 32 51.1
       comp=Z,6.8nm,1.0s
M27K   Edge Creek, AK     38.17  43    P      P      16 32 52.9 +1.3
M27K                                   IAmb   IAmb   16 33 27.9
       comp=Z,10nm,1.3s
F28M   Old Crow           38.56  34    IAmb   IAmb   16 32 57.0
       comp=Z,2.8nm,0.7s
I28M   Miner Creek        38.68  38    IAmb   IAmb   16 32 58.4
       comp=Z,12nm,1.4s
H29M   Whitestone         39.25  36    P      P      16 33 02.0 +1.7
L29M   L29M               39.77  41    P      P      16 33 06.1 +1.4
L29M                                   IAmb   IAmb   16 33 07.6
       comp=Z,4.3nm,0.8s
I30M   Mount Dempster     40.19  38    P      P      16 33 09.3 +1.0
I30M                                   IAmb   IAmb   16 33 10.3
       comp=Z,3.8nm,0.8s
INK    Inuvik             40.88  33    P      P      16 33 14.7 +0.9
INK                                    IAmb   IAmb   16 33 15.8
       comp=Z,11nm,1.4s
INK    Inuvik             40.88  33    P      P      16 33 14.7 +0.9
INK                                    pmax   pmax
       comp=Z,11nm,1.4s
C36M   Paulatuk           44.05  30    P      P      16 33 40.6 +1.1
C36M                                   IAmb   IAmb   16 33 41.7
       comp=Z,15nm,1.3s
KURK   Kurchatov          47.46 303    P      P      16 34 06.2 -0.4
KURK   Kurchatov          47.46 303    IAmb   IAmb   16 34 09.0
       comp=Z,1.7nm,0.9s
KURK   Kurchatov          47.46 303    P      P      16 34 06.2 -0.4
KURK                                   pmax   pmax
       comp=Z,2.0nm,0.9s
KURK   Kurchatov          47.46 303    eP     P      16 34 06.2 -0.4
KURBB  Kurchatov Arra     47.55 303    P      P      16 34 06.2 -1.1
       comp=Z,1.1nm,0.7s,baz=68,slow=8.5,SNR=8.6
       comp=Z,1.1nm,0.7s
RES    Resolute Bay       50.12  19    P      P      16 34 27.6 +0.9
RES    Resolute Bay       50.12  19    P      P      16 34 27.6 +0.9
YKA    Yellowknife Ar     50.15  37    P      P      16 34 28.5 +1.4
       comp=Z,1.9nm,0.8s,baz=300,slow=8.3,SNR=10.0
       comp=Z,1.9nm,0.8s
YKA    Yellowknife Ar     50.15  37    P      P      16 34 27.3 +0.2
YKA    Yellowknife Ar     50.15  37    P      P      16 34 27.3 +0.2
BVAR   Borovoye Array     50.87 309    P      P      16 34 31.6 -1.1
       comp=Z,0.5nm,0.3s,baz=46,slow=7.8,SNR=5.7
       comp=Z,0.5nm,0.3s
CMAR   Chiang Mai Arr     53.00 257    P      P      16 34 48.6 -0.3
       comp=Z,0.3nm,0.4s,baz=41,slow=7.2,SNR=4.5
       comp=Z,0.3nm,0.4s
BLKN   Baker Lake         56.10  30    P      P      16 35 11.1 +0.3
BLKN                                   IAmb   IAmb   16 35 22.8
       comp=Z,8.5nm,1.2s
ILON   Igloolik, Nuna     56.66  21    P      P      16 35 15.2 +0.5
ILON                                   IAmb   IAmb   16 35 42.5
       comp=Z,6.4nm,1.2s
ARCES  ARCESS Array B     57.46 341    P      P      16 35 18.9 -1.4
       comp=Z,3.4nm,0.9s,baz=30,slow=7.1,SNR=3.5
       comp=Z,3.4nm,0.9s
ARCES  ARCESS Array B     57.46 341    IAmb   IAmb   16 35 21.4
       comp=Z,20nm,1.4s
ARCES  ARCESS Array B     57.46 341    P      P      16 35 19.0 -1.4
ARCES                                  pmax   pmax
       comp=Z,20nm,1.5s
AB31   Akbulak array      58.43 310    P      P      16 35 26.6 -0.9
ABKAR  Akbulak array      58.43 310    P      P      16 35 26.4 -1.1
FFC    Flin Flon          59.96  41    P      P      16 35 39.2 +1.2
FFC    Flin Flon          59.96  41    P      P      16 35 39.2 +1.2
FFC                                    pmax   pmax
       comp=Z,2.0nm,1.1s
SUMG   Summit             60.08   4    P      P      16 35 38.6 -0.4
SUMG                                   IAmb   IAmb   16 35 40.0
       comp=Z,4.4nm,0.8s
SUMG   Summit             60.08   4    P      P      16 35 38.6 -0.4
SUMG                                   pmax   pmax
       comp=Z,4.0nm,0.8s
FCC    Fort Churchill     60.49  34    P      P      16 35 42.0 +0.5
FCC                                    IAmb   IAmb   16 35 42.2
       comp=Z,3.0nm,0.6s
FCC    Fort Churchill     60.49  34    P      P      16 35 42.0 +0.5
FCC                                    pmax   pmax
       comp=Z,3.0nm,0.6s
FIA1   FINESS Array S     63.72 335    P      P      16 36 02.1 -0.9
FINES  FINESS Array B     63.72 335    P      P      16 36 02.1 -0.9
       comp=Z,3.7nm,0.4s,baz=35,slow=7.5,SNR=41
       comp=Z,3.7nm,0.4s
FINES  FINESS Array B     63.72 335    P      P      16 36 01.9 -1.2
PFO    Pinyon Flats O     65.98  66    LR     LR     17 05 13.1
       comp=Z,74nm,18.2s,baz=21,slow=36
NC303  NORSAR Array S     67.63 341    P      P      16 36 28.1 -0.2
NC405  NORSAR Array S     67.65 341    P      P      16 36 28.3 -0.2
NC204  NORSAR Array S     67.71 342    P      P      16 36 28.8 -0.1
NB201  NORSAR Array S     67.80 341    P      P      16 36 29.1 -0.3
NB2    NORSAR Subarra     67.83 341    P      P      16 36 29.2 -0.4
       comp=Z,1.3nm,0.5s,baz=26,slow=6.2
NOA    NORSAR Array B     67.83 341    P      P      16 36 29.2 -0.4
       comp=Z,1.7nm,0.6s,baz=25,slow=6.3,SNR=10
       comp=Z,1.7nm,0.6s
HFS    Hagfors            68.08 340    P      P      16 36 31.1  0.0
       comp=Z,4.2nm,0.4s,baz=50,slow=4.6,SNR=38
       comp=Z,4.2nm,0.4s
AKASG  Malin Array Be     71.33 326    P      P      16 36 50.1 -1.2
       comp=Z,1.1nm,0.3s,baz=36,slow=6.0,SNR=4.8
       comp=Z,1.1nm,0.3s
AKASG  Malin Array Be     71.33 326    P      P      16 36 50.1 -1.2
AKASG                                  pmax   pmax
       comp=Z,4.0nm,1.3s
BUR08  Bucovina Ar. S     75.35 327           P      16 37 14.8 -0.3
BUR08                                  IAmb   IAmb   16 37 15.7
       comp=Z,3.6nm,0.6s
BURAR  Bucovina Array     75.37 327    P      P      16 37 14.7 -0.5
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BURAR				IAmb	IAmb	16 37 15.9	
	comp=Z,3.0nm,0.7s						
EKA	**Eskdalemuir Ar**	**75.88**	**347**	P	**P**	**16 37 18.7**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=10,slow=5.8,SNR=2.6						
	comp=Z,0.3nm,0.4s						
CLL	**Collm**	**76.13**	**336**	⇓*i*P	**P**	**16 37 19.3**	**-0.1**
	comp=Z,7.0nm,0.5s						
CLL				*e*PcP	**PcP**	**16 37 30.0**	**-1.4**
TXAR	**Lajitas Array**	**76.77**	**61**	P	**P**	**16 37 23.5**	**0.0**
	comp=Z,0.4nm,0.6s,baz=317,slow=6.7,SNR=2.4						
	comp=Z,0.4nm,0.6s						
GERES	**GERESS Array B**	**78.14**	**334**	P	**P**	**16 37 30.5**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=38,slow=6.8,SNR=5.4						
	comp=Z,0.6nm,0.5s						
BRTR	**Keskin Array B**	**78.30**	**317**	P	**P**	**16 37 31.4**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=40,slow=3.6,SNR=5.5						
	comp=Z,0.8nm,0.8s						
BRTR	**Keskin Array B**	**78.30**	**317**	P	**P**	**16 37 31.6**	**-0.4**
BRTR	**Keskin Array B**	**78.30**	**317**	P	**P**	**16 37 31.6**	**-0.4**
RDO	**Rodhopi**	**80.67**	**323**	P	**P**	**16 37 44.7**	**+0.1**
RDO				IAmb	IAmb	16 37 57.5	
	comp=Z,6.1nm,1.3s						
MMAI	**Mount Meron Ar**	**82.80**	**312**	P	**P**	**16 37 56.8**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=45,slow=6.3,SNR=1.8						
	comp=Z,0.4nm,0.3s						
H03N2	**Juan Fernandez**	**138.25**	**90**	T	T	19 18 37.6	
	baz=309,slow=77,SNR=16						
H03N1	**Juan Fernandez**	**138.27**	**90**	T	T	19 18 33.8	
	baz=309,slow=77,SNR=12						
H03N3	**Juan Fernandez**	**138.27**	**90**	T	T	19 18 40.1	
	baz=309,slow=77,SNR=16						

*DJA **17** 16:30:29.9±4.3, 7°N±38°×12°5E±°, h64^{km}±48^{km}, M4.6/6, mB5.1/5, mb4.7/6, MLv4.6/6, Mw(mB)4.4/5*

*IDC **17** 16:30:30.6±0.7, 6°.52N×125°.18E, h0^{km}, mb4.0/13, mbtmp4.0/13, MS3.1/5, Error ellipse: s-maj=17.1km s-min=8.9km az=122.0*

*NEIC **17** 16:30:33.2±1.7, 6°.62N±0°.06×125°.22E±0°.09, h10^{km}±1^{km}, mb4.4/31, Error ellipse: s-maj=18.0km s-min=4.2km az=119.0*

ISC 17 16:30:32.8±0.5**, 6°.62N**±0°.06×**125°.21E**±0°.09**, h10**^{km}**, n61, σ0^s.95**/53**, mb4.4**/27**, MS3.1**/3**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.58**	**40**	Pg	**Pg**	**16 30 44.8**	**+0.7**
	421nm,0.3s,baz=226,slow=2.1,SNR=27						
DAV				Lg	Lg	16 30 51.8	
	687nm,0.3s,baz=252,slow=19,SNR=11						
DAV				LR	LR	16 31 12.9	
	comp=Z,3μm,20.0s,baz=141,slow=63						
DAV	**Davao City (W)**	**0.58**	**40**		**Pg**	**16 30 44.5**	**+0.3**
DAV	**Davao City (W)**	**0.58**	**40**	P	**Pg**	**16 30 44.4**	**+0.3**
DAV	**Davao City (W)**	**0.58**	**40**	P	**Pg**	**16 30 43.0**	**-1.1**
GTOI	**Gorontalo**	**6.34**	**200**	P	**Pn**	**16 32 07.1**	**+0.8**
MRSI	**Marisa**	**6.92**	**208**	P	**Pn**	**16 32 14.8**	**+0.5**
	70nm,0.9s						
TOLI2	**Tolitoli**	**7.03**	**219**	Pn	Pn	16 32 14.9	-1.0
LUWI	**Luwuk**	**7.99**	**198**	P	**Pn**	**16 32 30.1**	**+1.0**
	1μm55nm,0.9s						
APSI	**Ampana**	**8.28**	**206**	P	**Pn**	**16 32 34.5**	**+1.4**
	47nm,1.0s						
SANI	**Sanana**	**8.65**	**175**	P	**Pn**	**16 32 41.0**	**+2.9**
I39PW	**PALAU INFRASON**	**9.31**	**84**	I	I	17 31 10.0	
	baz=268,slow=301,SNR=2.4						
KAPI	**Kappang**	**12.78**	**205**	LR	LR	16 38 53.5	
	comp=Z,61nm,21.6s,baz=56,slow=40						
BATI	**Baumata**	**16.79**	**185**	LR	LR	16 42 08.1	
	comp=Z,47nm,19.1s,baz=306,slow=42						
JAGI	**Jajag, Banyuwa**	**18.61**	**216**	P	**P**	**16 34 51.1**	**+0.6**
MTN	**Manton Dam**	**20.21**	**163**	P	**P**	**16 35 08.0**	**0.0**
MTN				IAmb	IAmb	16 35 44.2	
	comp=Z,39nm,1.4s						
JOW	**Kunigami**	**20.31**	**8**	P	**P**	**16 35 10.2**	**+1.1**
	comp=Z,8.0nm,0.7s,baz=170,slow=6.1,SNR=3.5						
JOW				LR	LR	16 42 01.6	
	comp=Z,60nm,21.4s,baz=313,slow=34						
	comp=Z,8.0nm,0.7s						
JOW	**Kunigami**	**20.31**	**8**	Pn	**P**	**16 35 10.3**	**+1.2**
JOW				IAmb	IAmb	16 35 15.9	
	comp=Z,21nm,1.2s						
KNRA	**Kununurra**	**22.43**	**171**	P	**P**	**16 35 31.5**	**-0.5**
KNRA				IAmb	IAmb	16 35 35.7	
	comp=Z,11nm,0.8s						
IPM	**Ipoh**	**24.16**	**266**	P	**P**	**16 35 49.8**	**+0.3**
IPM				IAmb	IAmb	16 36 12.8	
	comp=Z,20nm,1.4s						
FITZ	**Fitzroy Crossi**	**24.57**	**179**	P	**P**	**16 35 52.0**	**-1.0**
COEN	**Coen**	**27.13**	**139**	P	**P**	**16 36 16.1**	**-0.3**
COEN				IAmb	IAmb	16 36 22.3	
	comp=Z,7.4nm,0.9s						
WRAB	**Tennant Creek**	**27.88**	**161**	P	**P**	**16 36 21.1**	**-2.0**
WRAB				IAmb	IAmb	16 36 48.7	
	comp=Z,10nm,1.5s						
WRA	**Warramunga Arr**	**27.88**	**161**	P	**P**	**16 36 20.8**	**-2.3**
	comp=Z,1.9nm,0.9s,baz=341,slow=8.9,SNR=6.2						
	comp=Z,1.9nm,0.9s						
WR8	**Warramunga Arr**	**27.95**	**161**	P	**P**	**16 36 23.1**	**-0.6**
WR8				IAmb	IAmb	16 36 34.1	
	comp=Z,6.8nm,1.3s						
CMAR	**Chiang Mai Arr**	**28.16**	**297**	P	**P**	**16 36 25.8**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=115,slow=7.1,SNR=13						
	comp=Z,1.0nm,0.7s						
KSAR	**Wonju Array Be**	**30.78**	**4**	P	**P**	**16 36 48.6**	**+0.1**
KS19	**Wonju Array Si**	**30.84**	**4**	P	**P**	**16 36 49.2**	**+0.1**
AS31	**Alice Springs**	**31.28**	**165**	P	**P**	**16 36 51.9**	**-1.2**
ASAR	**Alice Springs**	**31.28**	**165**	P	P	16 36 51.7	-1.5
	comp=Z,0.8nm,0.6s,baz=354,slow=8.6,SNR=22						
	comp=Z,0.8nm,0.6s						
ASAR	**Alice Springs**	**31.28**	**165**	P	**P**	**16 36 51.9**	**-1.3**
MJAR	**Matsushiro Arr**	**32.07**	**20**	P	**P**	**16 37 00.2**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=194,slow=9.5,SNR=2.6						
MJAR				LR	LR	16 49 57.6	
	comp=Z,43nm,19.5s,baz=160,slow=36						
	comp=Z,1.3nm,0.8s						
MJAR	**Matsushiro Arr**	**32.07**	**20**	IAmb	IAmb	16 37 09.2	
	comp=Z,4.4nm,1.4s						
SHL	**Shillong**	**36.98**	**304**		**P**	**16 37 43.2**	**+0.4**
SHL				IAmb	IAmb	16 37 44.2	
	comp=Z,5.1nm,0.8s						
INKA	**Innaminka**	**37.32**	**157**	P	**P**	**16 37 44.9**	**-0.5**
USRK	**Ussuriysk Ar.**	**37.90**	**8**	P	**P**	**16 37 50.7**	**+0.5**
	comp=Z,3.0nm,0.9s,baz=194,slow=9.9,SNR=3.8						
	comp=Z,3.0nm,0.9s						
ASAJ	**Asahikawa**	**40.34**	**19**	LR	LR	16 55 42.4	
	comp=Z,40nm,18.8s,baz=120,slow=37						
BBOO	**Buckleboo**	**40.55**	**166**	P	**P**	**16 38 11.4**	**-1.1**
BBOO				IAmb	IAmb	16 38 12.3	
	comp=Z,6.6nm,0.7s						
STKA	**Stephens Creek**	**41.35**	**159**	P	**P**	**16 38 18.2**	**-0.9**
	comp=Z,2.8nm,0.7s,baz=315,slow=6.6,SNR=8.3						
	comp=Z,2.8nm,0.7s						
STKA	**Stephens Creek**	**41.35**	**159**		**P**	**16 38 18.1**	**-0.9**
TOO	**Toolangi**	**47.87**	**158**	P	**P**	**16 39 11.4**	**+0.3**
TOO				IAmb	IAmb	16 39 23.4	
	comp=Z,4.1nm,1.5s						
TLY	**Talaya**	**48.33**	**342**	P	**P**	**16 39 14.3**	**-0.1**
PETK	**Petropavlovsk-**	**53.38**	**24**	P	**P**	**16 39 53.4**	**+0.9**
	comp=Z,6.4nm,1.0s,baz=203,slow=11,SNR=3.6						
	comp=Z,6.4nm,1.0s						
MKAR	**Makanchi Array**	**54.33**	**325**	P	**P**	**16 40 00.1**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=122,slow=8.4,SNR=13						
	comp=Z,1.4nm,0.7s						
MAKZ	**Makanchi**	**54.52**	**325**	P	**P**	**16 40 01.8**	**+0.8**
MAKZ				IAmb	IAmb	16 40 02.3	
	comp=Z,2.4nm,0.8s						
TARG	**Taragay, Kyrgy**	**54.60**	**317**	P	**P**	**16 40 02.8**	**+0.7**
ZALV	**Zalesovo Beam**	**57.34**	**333**	P	**P**	**16 40 19.7**	**-1.3**
	comp=Z,0.7nm,0.5s,baz=122,slow=5.6,SNR=5.2						
	comp=Z,0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**58.50**	**327**	P	**P**	**16 40 28.3**	**-0.9**
	comp=Z,3.0nm,0.7s,baz=125,slow=6.3,SNR=36						
	comp=Z,3.0nm,0.7s						
KURK	**Kurchatov**	**58.50**	**327**		P	16 40 27.3	-1.9
KURK				IAmb	IAmb	16 40 29.8	
	comp=Z,5.2nm,0.7s						
GAR	**Garm**	**58.87**	**312**	P	**P**	**16 40 32.5**	**+0.3**
KK31	**Karatay Array**	**60.10**	**316**		**P**	**16 40 40.4**	**-0.1**
KK31				IAmb	IAmb	16 40 41.6	
	comp=Z,4.1nm,0.8s						
KKAR	**Karatay Array**	**60.10**	**316**		**P**	**16 40 40.4**	**-0.1**
BVAR	**Borovoye Array**	**64.09**	**327**	P	**P**	**16 41 06.5**	**-0.5**
	comp=Z,2.0nm,0.8s,baz=118,slow=8.8,SNR=8.3						
	comp=Z,2.0nm,0.8s						
BORK	**Borovoye**	**64.13**	**327**	P	**P**	**16 41 06.9**	**-0.4**
BORK				IAmb	IAmb	16 41 08.0	
	comp=Z,3.4nm,0.8s						
TIXI	**Tiksi**	**65.00**	**1**	P	**P**	**16 41 11.5**	**-1.1**
TIXI				IAmb	IAmb	16 41 11.7	
	comp=Z,4.0nm,1.1s						
BKZ	**Black Stump Fm**	**65.73**	**138**	P	**P**	**16 41 17.6**	**-0.5**
AB31	**Akbulak array**	**68.97**	**320**	P	**P**	**16 41 37.7**	**-0.6**
AB31				IAmb	IAmb	16 41 38.4	
	comp=Z,3.8nm,1.2s						
ABKAR	**Akbulak array**	**68.97**	**320**	P	**P**	**16 41 37.6**	**-0.7**
L22K	**Petersville**	**81.41**	**28**	P	**P**	**16 42 48.9**	**-0.9**
RC01	**Rabbit Creek A**	**81.85**	**29**	P	**P**	**16 42 51.8**	**-0.4**
ILAR	**Eielson Array**	**83.16**	**26**	P	**P**	**16 42 57.9**	**-1.0**
	comp=Z,0.2nm,0.7s,baz=237,slow=5.4,SNR=5.4						
	comp=Z,0.2nm,0.7s						
J26L	**Joseph Creek**	**84.61**	**26**	P	**P**	**16 43 06.5**	**+0.1**
J26L				IAmb	IAmb	16 43 14.9	
	comp=Z,2.9nm,1.1s						

*MEX **17** 16:31:22.2±0.7, 15°.14N×93°.02W, h93^{km}±7^{km}, MD4.0*

*GCG **17** 16:31:32.1±0.3, 15°.15N×92°.26W, h33^{km}±3^{km}, MD3.9*

ISC 17 16:31:18.5±1.5**, 15°.14N**±0°.07×**93°.02W**±0°.05**, h108**^{km}±12^{km}**, n20, σ2^s.31**/33**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.60**	**342**	*e*P	**Pn**	**16 31 36.7**	**+0.8**
PCIG				*e*S	**Sn**	**16 31 48.2**	**-0.7**
PATR	**El Naranjo**	**0.76**	**91**	*e*P	**Pn**	**16 31 38.1**	**+0.6**
PATR				*e*S	**Sn**	**16 31 51.1**	**-0.7**
THIG		**0.77**	**107**	*e*P	**Pn**	**16 31 38.6**	**+1.3**
THIG				*e*S	**Sn**	**16 31 50.7**	**-0.6**
PAVE	**Pavencul**	**0.82**	**86**	*e*P	**Pn**	**16 31 39.0**	**+1.0**
PAVE				*e*S	**Sn**	**16 31 52.5**	**-0.3**
CHUJ	**Union Juarez**	**0.89**	**93**	*e*P	**Pn**	**16 31 39.6**	**+0.9**
CHUJ				*i* S	**Sn**	**16 31 53.4**	**-0.5**
SMCA	**Catarina**	**0.96**	**107**	*i* P	**Pn**	**16 31 40.3**	**+1.2**
RTAL	**Retalhuleu**	**1.42**	**115**	*e*S	**Sn**	**16 32 04.8**	**+0.9**
CCIG	**Comitan**	**1.42**	**37**	*e*P	**Pn**	**16 31 46.6**	**+2.1**
CCIG				*e*S	**Sn**	**16 32 02.6**	**-1.5**
HUEH	**Huehuetenango**	**1.48**	**83**	*e*P	**Pn**	**16 31 44.2**	**-1.0**
HUEH				*i* S	**Sn**	**16 32 04.9**	**-0.6**
TGIG		**1.64**	**357**	*e*P	**Pn**	**16 31 47.9**	**+1.0**
TGIG				*e*S	**Sn**	**16 32 07.0**	**-1.6**
STG2	**El Palmar, Qui**	**1.74**	**113**	*i* P	**Pn**	**16 31 47.0**	**-1.3**
STG8	**El Palmar, Qui**	**1.75**	**113**	*i* P	**Pn**	**16 31 47.3**	**-1.3**
STG5	**El Palmar, Qui**	**1.78**	**114**	*i* P	**Pn**	**16 31 47.5**	**-1.2**
UXUV	**UXUV**	**2.42**	**334**	*e*P	**Pn**	**16 31 59.4**	**+2.5**
UXUV				*e*S	**Sn**	**16 32 22.1**	**-4.3**
APG	**El Apazote**	**2.48**	**93**	*i* P	**Pn**	**16 32 00.9**	**+3.1**
CMIG	**Matias Romero**	**2.64**	**318**	*e*P	**Pn**	**16 32 02.4**	**+2.6**
CMIG				*e*S	**Sn**	**16 32 26.4**	**-5.0**
HUIG	**Huatulco**	**3.04**	**282**	*e*P	**Pn**	**16 32 07.7**	**+2.7**
HUIG				*e*S	**Sn**	**16 32 38.1**	**-2.8**
NEUV	**Arroyo Zacate**	**3.70**	**314**	*e*P	**Pn**	**16 32 18.5**	**+4.7**
NEUV				*e*S	**Sn**	**16 32 54.6**	**-2.0**
TOIG	**Toxpalan**	**4.87**	**308**	*e*S	**Sn**	**16 33 20.4**	**-4.5**
TXIG	**Tlaxiaco**	**5.02**	**295**	*e*P	**Pn**	**16 32 33.3**	**+1.4**
TXIG				*e*S	**Sn**	**16 33 28.8**	**-0.1**

*CATAC **17** 16:41:28.4±0.6, 14°N±4°×9°2W±°, h34^{km}±8^{km}, M3.0/7, MLv3.0/7, Error ellipse: s-maj=9.5km s-min=4.2km az=31.7, confirmed*

*GCG **17** 16:41:30.0±1.0, 14°.13N×91°.55W, h50^{km}±18^{km}, MD3.3, ML3.2*

ISC 17 16:41:28.0±2.5**, 14°.1N**±0°.1×**91°.6W**±0°.1**, h84**^{km}±16^{km}**, n16, σ1^s.51**/21**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG5	**El Palmar, Qui**	**0.40**	**30**	*i* P	**Pn**	**16 41 42.1**	**+0.6**
STG5				*i* S	**Sn**	**16 41 51.8**	**+0.4**
STG2	**El Palmar, Qui**	**0.41**	**25**	*i* P	**Pn**	**16 41 42.7**	**+1.1**
STG2				*i* S	**Sn**	**16 41 52.9**	**+1.2**
STG8	**El Palmar, Qui**	**0.44**	**27**	*i* P	**Pn**	**16 41 43.0**	**+1.1**
STG8				*i* S	**Sn**	**16 41 53.6**	**+1.4**
STG8				IAML		16 41 56.0	
	comp=E,1μm,0.1s						
RTAL	**Retalhuleu**	**0.48**	**344**	P	**Pn**	**16 41 41.0**	**-1.0**
ESSG	**Sabana Grande**	**0.77**	**65**	*i* P	**Pn**	**16 41 44.3**	**-0.5**
ESSG				*i* S	**Sn**	**16 41 55.8**	**-1.5**
ESSG				IAML		16 41 57.4	
	comp=E,364nm,0.2s						
SOKI	**Kika Raxquin**	**0.77**	**11**	*i* P	**Pn**	**16 41 44.8**	**-0.4**
SOKI				*i* S	**Sn**	**16 41 56.0**	**-1.9**
SOKI				IAML		16 41 57.3	
	comp=N,552nm,0.3s						
SMCA	**Catarina**	**0.94**	**328**	*i* P	**Pn**	**16 41 46.2**	**-0.4**
FG16	**Alotenango, Sa**	**1.03**	**78**	*i* P	**Pn**	**16 41 44.7**	**-3.1**
PCG5	**San Vicente Pa**	**1.15**	**82**	*i* P	**Pn**	**16 41 47.0**	**-2.3**
APG	**El Apazote**	**1.41**	**48**	*i* P	**Pn**	**16 41 54.7**	**+2.2**
FAME	**Alcaldia de Sa**	**1.51**	**98**	P	**Pn**	**16 41 54.0**	**+0.4**
FAME	**Alcaldia de Sa**	**1.51**	**98**	S	**Sn**	**16 42 12.4**	**-0.6**
NUBE	**Las Nubes**	**1.73**	**95**	P	**Pn**	**16 41 57.7**	**+1.2**
NUBE	**Las Nubes**	**1.73**	**95**	S	**Sn**	**16 42 18.2**	**0.0**
JAYA	**Jayaque - finc**	**2.08**	**101**	S	**Sn**	**16 42 28.5**	**+1.8**
LALI	**Alcalda de L**	**2.24**	**104**	P	**Pn**	**16 42 03.1**	**-0.1**

*IDC **17** 16:43:12.2±2.5, 54°.04S×6°.71E, h0^{km}, mb4.1/5, mbtmp4.2/6, ML3.9/1, MS4.0/35, Error ellipse: s-maj=78.8km s-min=24.4km az=59.0*

*NEIC **17** 16:43:13.6±1.8, 54°.1S±0°.1×6°.7E±0°.3, h10^{km}±1^{km}, mb4.7/15, Error ellipse: s-maj=27.0km s-min=20.9km az=115.0*

*GCMT **17** 16:43:17.6±0.2, 54°.01S±0°.01×6°.76E±0°.03, h26^{km}±1^{km}, MW5.0/107, Moment Tensor Solution. s32,c40; s107,c146; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.62±.16; M$_{\theta\theta}$4.15±.13; M$_{\phi\phi}$-3.53±.12; M$_{r\theta}$0.59±.22; M$_{\theta\phi}$0.40±.11; M$_{\phi r}$0.14±.25; Best double couple: M$_0$3.90000×10^{16} NP1:φ$_s$132.00000°, δ84.00000°, λ4.00000°. NP2:φ$_s$42.00000°, δ87.00000°, λ174.00000°. Principal axes: T 4.2450, Plg7.0000°, Azm357.0000°; N -0.6870, Plg83.0000°, Azm193.0000°; P -3.5550, Plg2.0000°, Azm87.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 16:43:13.5±0.7**, 54°.04S**±0°.09×**6°.7E**±0°.2**, h10**^{km}**, n62, σ0^s.76**/25**, mb4.5**/10**, MS4.1**/35**, 5D, Bouvet Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**17.96**	**196**	⇓P	**P**	**16 47 24.3**	**+0.9**
	comp=Z,27nm,0.6s						
VNA2	**Neumayer--Watz**	**18.06**	**195**	⇓P	**P**	**16 47 25.3**	**+0.7**
	comp=Z,12nm,0.6s,baz=17,slow=15						
TROLL	**Troll, Antarti**	**18.13**	**184**	⇓P	**Pn**	**16 47 24.6**	**-0.5**
	comp=Z,2μm,0.8s						
SNAA	**Sanae**	**18.18**	**190**	⇓P	**Pn**	**16 47 25.6**	**-0.1**
	comp=Z,451nm,0.8s						
SNAA	**Sanae**	**18.18**	**190**	P	**Pn**	**16 47 25.7**	**0.0**
	comp=Z,0.4nm,0.3s,baz=15,slow=11,SNR=49						
SNAA				LR	LR	16 52 53.8	
	comp=Z,609nm,20.4s,baz=18,slow=32						
	comp=Z,16nm,0.8s						
SNAA	**Sanae**	**18.18**	**190**		**Pn**	**16 47 25.3**	**-0.4**
VNA3	**Neumayer Olymp**	**18.71**	**197**	⇓P	**P**	**16 47 31.3**	**-0.4**
	comp=Z,18nm,0.8s						
BOSA	**Boshof**	**28.80**	**36**	LR	LR	16 58 29.9	
	comp=Z,421nm,20.0s,baz=200,slow=32						
H04S2	**CROZET ISLANDS**	**29.25**	**95**	T	T	17 20 28.0	
	baz=240,slow=75,SNR=191						
H04S3	**CROZET ISLANDS**	**29.25**	**94**	T	T	17 20 29.3	
	baz=240,slow=75,SNR=176						
H04S1	**CROZET ISLANDS**	**29.26**	**95**	T	T	17 20 29.0	
	baz=240,slow=75,SNR=153						
MAW	**Mawson**	**29.35**	**139**	LR	LR	16 58 47.2	
	comp=Z,199nm,21.4s,baz=281,slow=32						
LBTB	**Lobatse**	**32.23**	**33**	P	**P**	**16 49 41.9**	**0.0**
LBTB				IAmb	IAmb	16 50 23.6	
	comp=Z,7.5nm,1.2s						
KOOLE	**Kule**	**32.63**	**24**	P	**P**	**16 49 45.3**	**-0.1**
KOOLE				IAmb	IAmb	16 49 49.0	
	comp=Z,14nm,1.3s						
LPHEP	**Lephephe**	**33.86**	**33**	P	**P**	**16 49 55.8**	**-0.4**
LPHEP				IAmb	IAmb	16 50 30.6	
	comp=Z,19nm,1.4s						
PMSA	**Palmer Station**	**35.61**	**224**	LR	LR	17 03 33.1	
	comp=Z,105nm,18.3s,baz=112,slow=34						
TSUM	**Tsumeb**	**35.77**	**18**	LR	LR	17 02 56.0	
	comp=Z,389nm,18.9s,baz=198,slow=33						
TSUM	**Tsumeb**	**35.77**	**18**	P	**P**	**16 50 12.8**	**+0.1**
QSPA	**South Pole Qui**	**36.20**	**180**	P	**P**	**16 50 16.0**	**-0.1**
	comp=Z,4.8nm,0.7s,baz=235,slow=4.6,SNR=22						
QSPA				LR	LR	17 04 20.5	
	comp=Z,315nm,20.5s,baz=222,slow=35						
	comp=Z,4.8nm,0.7s						
QSPA	**South Pole Qui**	**36.20**	**180**		**P**	**16 50 15.6**	**-0.4**
QSPA				IAmb	IAmb	16 50 28.6	
	comp=Z,10nm,1.1s						
MATP	**Matopo**	**37.46**	**35**	LR	LR	17 04 00.1	
	comp=Z,280nm,20.4s,baz=198,slow=33						
LSZ	**Lusaka**	**42.17**	**32**	LR	LR	17 07 00.5	
	comp=Z,413nm,18.2s,baz=204,slow=34						
SBA	**Scott Base**	**47.80**	**174**	P	**P**	**16 51 51.0**	**+0.7**
VNDA	**Vanda**	**47.80**	**173**	P	**P**	**16 51 51.0**	**+0.7**
	comp=Z,1.9nm,0.8s,baz=181,slow=3.6,SNR=6.6						
VNDA				LR	LR	17 11 23.5	
	comp=Z,211nm,20.2s,baz=196,slow=35						
	comp=Z,1.9nm,0.8s						
VNDA	**Vanda**	**47.80**	**173**	P	**P**	**16 51 50.6**	**+0.3**
VNDA				IAmb	IAmb	16 52 01.5	
	comp=Z,4.2nm,0.9s						
PLCA	**Paso Flores**	**51.40**	**252**	LR	LR	17 10 46.5	
	comp=Z,38nm,21.2s,baz=145,slow=32						
CPUP	**Villa Florida**	**53.98**	**274**	P	**P**	**16 52 38.5**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=156,slow=5.2,SNR=4.8						
CPUP				LR	LR	17 12 21.8	
	comp=Z,14nm,21.9s,baz=88,slow=32						
	comp=Z,0.6nm,0.7s						
CPUP	**Villa Florida**	**53.98**	**274**	P	**P**	**16 52 38.2**	**+0.8**
BO01	**Tunca**	**56.13**	**257**	P	**P**	**16 52 51.5**	**-1.4**
BO01				IAmb	IAmb	16 53 27.4	
	comp=Z,16nm,1.4s						
MBAR	**Mbarara**	**56.83**	**29**	LR	LR	17 16 06.0	
	comp=Z,324nm,18.4s,baz=192,slow=35						
BDFB	**Brasilia**	**56.99**	**290**	P	**P**	**16 53 00.2**	**+0.9**
	comp=Z,1.5nm,0.4s,baz=173,slow=8.1,SNR=3.4						
BDFB				LR	LR	17 12 10.2	
	comp=Z,120nm,20.0s,baz=143,slow=30						
	comp=Z,1.5nm,0.4s						
BDFB	**Brasilia**	**56.99**	**290**	IAmb	IAmb	16 53 31.0	
	comp=Z,7.4nm,1.2s						
DBIC	**Dimbokro**	**61.26**	**347**	LR	LR	17 13 00.1	
	comp=Z,159nm,21.7s,baz=192,slow=29						
SIV	**San Ignacio**	**64.16**	**278**	LR	LR	17 18 35.2	
	comp=Z,146nm,19.2s,baz=112,slow=33						
LPAZ	**La Paz**	**68.07**	**272**	P	**P**	**16 54 13.3**	**-0.7**
	comp=Z,2.3nm,1.0s,baz=122,slow=5.5,SNR=4.1						
LPAZ				LR	LR	17 21 06.9	
	comp=Z,81nm,21.6s,baz=82,slow=33						
	comp=Z,2.3nm,1.0s						
LPAZ	**La Paz**	**68.07**	**272**	P	**P**	**16 54 12.8**	**-1.2**
LPAZ				IAmb	IAmb	16 54 21.7	
	comp=Z,5.6nm,1.2s						
FURI	**Furi**	**68.27**	**34**	LR	LR	17 23 19.3	
	comp=Z,240nm,18.3s,baz=178,slow=35						
H01W2	**Cape Leeuwin H**	**71.67**	**124**	T	T	18 14 11.3	
	baz=216,slow=75,SNR=586						
H01W3	**Cape Leeuwin H**	**71.68**	**124**	T	T	18 14 12.3	
	baz=216,slow=75,SNR=534						
H01W1	**Cape Leeuwin H**	**71.68**	**124**	T	T	18 14 08.0	
	baz=216,slow=75,SNR=614						
NNA	**Nana**	**76.61**	**268**	LR	LR	17 26 18.3	
	comp=Z,45nm,22.0s,baz=148,slow=34						
MDP	**Montagnes des**	**76.80**	**298**	LR	LR	17 23 28.2	
	comp=Z,108nm,21.8s,baz=153,slow=32						
ATAH	**Atahualpa**	**81.39**	**270**	LR	LR	17 31 24.4	
	comp=Z,15nm,19.5s,baz=135,slow=36						
PALK	**Pallekele**	**86.58**	**73**	LR	LR	17 24 40.2	
	comp=Z,35nm,19.4s,baz=214,slow=29						
EIL	**Elat**	**86.88**	**24**	LR	LR	17 34 24.9	
	comp=Z,221nm,18.1s,baz=190,slow=35						
MDT	**Midelt**	**87.04**	**350**	LR	LR	17 28 58.9	
	comp=Z,100nm,20.1s,baz=358,slow=32						
URZ	**Urewera**	**87.70**	**172**	LR	LR	17 33 04.2	
	comp=Z,82nm,20.4s,baz=185,slow=34						
ROSC	**El Rosal**	**88.61**	**280**	LR	LR	17 34 21.8	
	comp=Z,76nm,18.2s,baz=220,slow=35						
KEST	**Kesra**	**89.43**	**2**	LR	LR	17 34 02.3	
	comp=Z,58nm,19.0s,baz=302,slow=34						
SDV	**Santo Domingo**	**89.77**	**285**	LR	LR	17 33 13.5	
	comp=Z,82nm,20.3s,baz=68,slow=33						
MMAI	**Mount Meron Ar**	**90.19**	**24**	LR	LR	17 34 54.2	
	comp=Z,148nm,20.1s,baz=184,slow=34						
ASAR	**Alice Springs**	**90.27**	**133**	LR	LR	17 28 35.6	
	comp=Z,35nm,21.4s,baz=188,slow=30						
IDI	**Anoyia**	**90.34**	**15**	LR	LR	17 37 39.1	
	comp=Z,62nm,18.9s,baz=150,slow=36						
VAE	**Valguarnera**	**91.39**	**6**	LR	LR	17 35 12.4	
	comp=Z,100nm,18.9s,baz=158,slow=34						
CSS	**Mathiatis**	**91.58**	**22**	P	**P**	**16 56 18.9**	**-1.1**
CSS				IAmb	IAmb	16 56 20.9	
	comp=Z,7.5nm,1.1s						
ESDC	**Sonseca Array**	**93.79**	**352**	LR	LR	17 36 38.1	
	comp=Z,62nm,18.7s,baz=239,slow=34						
ACER	**Acerenza**	**94.78**	**7**	P	**P**	**16 56 35.9**	**+1.3**
BRTR	**Keskin Array B**	**96.23**	**21**	LR	LR	17 42 33.6	
	comp=Z,54nm,18.0s,baz=198,slow=37						
BATI	**Baumata**	**96.96**	**118**	LR	LR	17 31 57.6	
	comp=Z,78nm,21.4s,baz=220,slow=30						
JTS	**Las Juntas de**	**99.20**	**275**	LR	LR	17 42 08.3	
	comp=Z,76nm,18.1s,baz=96,slow=36						
KAPI	**Kappang**	**99.21**	**112**	LR	LR	17 33 30.1	
	comp=Z,31nm,21.5s,baz=214,slow=30						
YKA	**Yellowknife Ar**	**149.03**	**310**	PKPbc	**PKPbc**	**17 03 00.1**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=91,slow=2.0,SNR=4.1						

*IDC **17** 16:44:49.6±1.5, 19°.30N×147°.04E, h0^{km}, mb3.9/7, mbtmp3.9/7, Error ellipse: s-maj=46.6km s-min=30.0km az=90.0*

*NEIC **17** 16:44:51.3±0.8, 19°.21N±0°.10×147°.0E±0°.1, h10^{km}±1^{km}, mb4.4/15, Error ellipse: s-maj=24.9km s-min=11.2km az=303.0*

ISC 17 16:44:54.7±0.7**, 19°.20N**±0°.09×**147°.0E**±0°.2**, h37**^{km}**, n26, σ0^s.79**/26**, mb4.2**/15**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DPSS	**Saipan**	**4.11**	**197**	Pn	**Pn**	**16 45 54.4**	**-0.4**
JYT	**Yasato**	**18.00**	**342**	P	**Pn**	**16 49 01.2**	**-0.7**
MAJO	**Matsushiro**	**18.94**	**338**	P	**P**	**16 49 11.7**	**-0.8**
MJB9	**Matsu-Tunnel**	**18.94**	**338**		**P**	**16 49 12.4**	**-0.1**
MJB9				IAmb	IAmb	16 49 25.5	
	comp=Z,16nm,1.5s						
RABL	**Rabaul**	**23.79**	**167**	P	**P**	**16 50 03.8**	**-0.3**
FITZ	**Fitzroy Crossi**	**42.60**	**211**	P	**P**	**16 52 46.9**	**-0.4**
ASAR	**Alice Springs**	**44.48**	**197**	P	**P**	**16 53 03.4**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=16,slow=9.2,SNR=5.1						
	comp=Z,0.2nm,0.4s						
M16K	**Timber Creek**	**56.23**	**28**	P	**P**	**16 54 30.3**	**-0.7**
ZALV	**Zalesovo Beam**	**58.39**	**322**	P	**P**	**16 54 44.8**	**-1.5**
	comp=Z,0.4nm,0.4s,baz=90,slow=8.6,SNR=4.7						
	comp=Z,0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**58.39**	**322**	P	**P**	**16 54 46.1**	**-0.1**
MKAR	**Makanchi Array**	**59.02**	**314**	P	**P**	**16 54 51.5**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=84,slow=8.4,SNR=6.1						
	comp=Z,0.7nm,0.8s						
MKAR	**Makanchi Array**	**59.02**	**314**	P	**P**	**16 54 50.8**	**0.0**
D20K	**Etivluk River**	**60.30**	**20**	P	**P**	**16 54 59.9**	**+0.6**
D20K				IAmb	IAmb	16 55 01.4	
	comp=Z,9.5nm,1.4s						
D22K	**Ayikyak River**	**61.68**	**21**	P	**P**	**16 55 09.9**	**+1.3**
D22K				IAmb	IAmb	16 55 11.8	
	comp=Z,4.4nm,1.3s						
KURK	**Kurchatov**	**61.74**	**318**	P	**P**	**16 55 08.8**	**-0.5**
KURK				IAmb	IAmb	16 55 11.4	
	comp=Z,1.5nm,1.0s						
KURBB	**Kurchatov Arra**	**61.79**	**318**	P	**P**	**16 55 09.6**	**0.0**
	comp=Z,2.4nm,0.9s,baz=99,slow=6.8,SNR=15						
	comp=Z,2.4nm,0.9s						
ILAR	**Eielson Array**	**62.65**	**26**	P	**P**	**16 55 14.7**	**-0.5**
	comp=Z,1.8nm,1.1s,baz=249,slow=6.7,SNR=6.0						
	comp=Z,1.8nm,1.1s						
SCRK	**Sand Creek**	**63.72**	**27**	P	**P**	**16 55 22.8**	**+0.4**
SCRK				IAmb	IAmb	16 56 04.3	
	comp=Z,6.6nm,1.5s						
J26L	**Joseph Creek**	**63.99**	**27**	P	**P**	**16 55 24.2**	**0.0**
J26L				IAmb	IAmb	16 55 25.7	
	comp=Z,5.4nm,1.4s						
M27K	**Edge Creek, AK**	**64.41**	**29**	P	**P**	**16 55 27.6**	**+0.5**
M27K				IAmb	IAmb	16 55 56.0	
	comp=Z,2.5nm,1.0s						
BVAR	**Borovoye Array**	**66.89**	**320**	P	**P**	**16 55 43.2**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=95,slow=7.4,SNR=7.7						

	comp=Z,1.6nm,0.7s						
BORK	**Borovoye**	**66.93**	**320**	P	**P**	**16 55 43.4**	**+0.2**
BORK				IAmb	IAmb	16 55 46.3	
	comp=Z,2.2nm,0.8s						
I30M	**Mount Dempster**	**67.13**	**26**	P	**P**	**16 55 44.7**	**+0.2**
I30M				IAmb	IAmb	16 56 17.3	
	comp=Z,3.0nm,1.4s						
ABKAR	**Akbulak array**	**73.83**	**317**	P	**P**	**16 56 24.5**	**-1.0**
KMPM	**Mount Pierce**	**76.97**	**52**	P	**P**	**16 56 43.0**	**-0.8**
FINES	**FINESS Array B**	**86.95**	**336**	P	**P**	**16 57 37.8**	**+2.1**
	comp=Z,1.6nm,0.8s,baz=97,slow=7.1,SNR=4.0						
	comp=Z,1.6nm,0.8s						

IDC 17 16:50:22.9±6.4**,31°.77S**×**178°.38W,h0**^{km}**,mb3.5**/2**,**
mbtmp3.5/2**,Error ellipse: s-maj=266.1km**
s-min=62.7km az=158.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.73**	**269**	P	P	16 58 21.5	-0.5
	0.2nm,0.3s,baz=108,slow=7.9,SNR=5.5						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**43.84**	**274**	P	P	16 58 31.2	+0.1
	0.3nm,0.2s,baz=114,slow=7.3,SNR=9.7						
	0.3nm,0.2s						
FINES	**FINESS Array B**	**146.31**	**339**	PKPbc	PKPdf	17 10 04.0	+0.5
	3.6nm,1.1s,baz=57,slow=5.1,SNR=3.3						

IDC 17 17:00:23.5±2.4**,33°.11N**×**121°.41E,h0**^{km}**,mb3.5**/2**,**
mbtmp3.4/3**,ML3.0**/1**,Error ellipse: s-maj=76.9km**
s-min=23.4km az=143.0,Yellow Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**6.87**	**49**	Pn	Pn	17 02 05.4	0.0
	0.3nm,0.3s,baz=230,slow=14,SNR=2.0						
KSRS				Lg	Lg	17 04 01.3	
	1.9nm,0.3s,baz=230,slow=31,SNR=7.9						
	0.6nm,0.4s						
CMAR	**Chiang Mai Arr**	**24.86**	**240**	P	P	17 05 48.5	+0.6
	0.8nm,0.9s,baz=44,slow=8.5,SNR=6.2						
	0.8nm,0.9s						
BRTR	**Keskin Array B**	**68.21**	**304**	P	P	17 11 25.4	-0.7
	0.4nm,0.6s,baz=64,slow=3.4,SNR=3.1						
	0.4nm,0.6s						

*SOME **17** 17:27:44.1,41°.68N×81°.68E,h15^{km}*
*NNC **17** 17:27:45.8±1.8,41°.75N×81°.61E,h0^{km},mb4.0,mpv3.7,*
Error ellipse: s-maj=12.9km s-min=9.4km az=169.0
ISC 17 17:27:48.2±2.5**,41°.8N**±0°.1×**81°.39E**±0°.09**,h16**^{km}**,n20,**
σ**1**^{s}**.30**/25**,8C-4D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.86**	**336**	Pg	**Pb**	**17 28 21.7**	**-0.2**
	12nm,0.1s						
KTMS				Lg	Lg	17 28 49.3	
	36nm,0.2s						
KTMS	**Ketmen**	**1.86**	**336**	*e*P	**Pb**	**17 28 21.2**	**-0.6**
	26nm,0.3s						
KTMS				*e*S	**Sg**	**17 28 47.9**	**-0.1**
	42nm,0.3s						
SHLS	**Shalkode**	**2.00**	**315**	Pg	**Pn**	**17 28 21.4**	**-0.1**
	77nm,0.1s						
SHLS				Lg	Lg	17 28 48.7	
	236nm,0.3s						
SHLS	**Shalkode**	**2.00**	**315**	*e*P	**Pn**	**17 28 20.7**	**-0.8**
	77nm,0.1s						
SHLS				*e*S	**Sn**	**17 28 47.2**	**+0.9**
	261nm,0.4s						
PDGK	**Podgornoye**	**2.11**	**319**	⇑Pg	**Pb**	**17 28 25.0**	**-1.1**
	39nm,0.7s						
PDGK				⇓Lg	Lg	17 28 57.4	
	60nm,0.5s						
UZB	**Uzynbulak**	**2.24**	**309**	Pg	**Pb**	**17 28 28.7**	**+0.4**
	24nm,0.3s						
UZB				Lg	Lg	17 29 01.9	
	91nm,0.3s						
UZB	**Uzynbulak**	**2.24**	**309**	*e*P	**Pb**	**17 28 28.7**	**+0.4**
	24nm,0.3s						
UZB				*e*S	**Sg**	**17 29 00.8**	**+0.6**
	91nm,0.2s						
SATY	**Saty**	**2.57**	**301**	Pg	**Pb**	**17 28 35.4**	**+1.4**
	14nm,0.3s						
SATY				Lg	Lg	17 29 12.5	
	60nm,0.3s						
KPKS	**Kokpek**	**2.63**	**311**	Pg	**Pn**	**17 28 32.8**	**+2.7**
	8.2nm,0.3s						
KPKS				Lg	Lg	17 29 08.5	
	16nm,0.2s						
KPKS	**Kokpek**	**2.63**	**311**	*e*P	**Pb**	**17 28 35.8**	**+0.7**
	6.1nm,0.2s						
KPKS				*e*S	**Sg**	**17 29 13.0**	**+0.2**
	125nm,0.4s						
KURS	**Kuram**	**2.94**	**307**	Pg	**Pb**	**17 28 40.3**	**0.0**
	6.3nm,0.2s						
KURS				Lg	Lg	17 29 21.7	
	24nm,0.4s						
KNOS	**Konyrlen**	**3.07**	**329**	Pg	**Pb**	**17 28 41.9**	**-0.6**
	13nm,0.2s						
KNOS				Lg	Lg	17 29 22.8	
	39nm,0.4s						
BLB	**Baldybastay**	**3.17**	**319**	Pg	**Pb**	**17 28 44.2**	**-0.1**
	15nm,0.2s						
BLB				Lg	Lg	17 29 27.4	
	35nm,0.3s						
KNDC	**Almaty**	**3.59**	**296**	⇓Pg	**Pg**	**17 28 55.1**	**-1.8**
	24nm,0.6s						
KNDC				⇑Lg	Lg	17 29 43.4	
	40nm,0.7s						
ARXS	**Arharly**	**3.59**	**314**	Pg	**Pb**	**17 28 52.5**	**+1.2**
	5.8nm,0.4s						
ARXS				Lg	Lg	17 29 41.8	
	23nm,0.4s						
ARXS	**Arharly**	**3.59**	**314**	*e*P	**Pb**	**17 28 52.5**	**+1.2**
	5.8nm,0.4s						
ARXS				*e*S	**Sg**	**17 29 41.8**	**-1.7**
	23nm,0.4s						
MAKZ	**Makanchi**	**5.07**	**5**	⇓Pn	**Pn**	**17 29 03.3**	**-0.2**
	2.5nm,0.5s						
MAKZ				⇑Sn	**Sn**	**17 30 05.1**	**+3.3**
	2.5nm,0.6s						
MAKZ				⇑Lg	Lg	17 30 25.4	
	4.0nm,0.6s						
MK31	**Makanchi Array**	**5.08**	**7**	Pn	**Pn**	**17 29 03.5**	**-0.1**
	1.0nm,0.4s,baz=192,slow=13,SNR=37						
MK31				⇑Lg	Lg	17 30 24.3	
	5.7nm,0.5s,baz=186,slow=25,SNR=5.4						
AAK	**Ala-Archa**	**5.20**	**282**	⇑Pg	**Pg**	**17 29 25.9**	**-1.8**
	2.8nm,0.6s						
AAK				⇓Lg	Lg	17 30 39.2	
	5.6nm,0.8s						
KK31	**Karatay Array**	**8.16**	**283**	⇑Pg	Pb	17 30 21.3	+12
	1.0nm,0.7s,baz=92,slow=16,SNR=5.5						
KK31				⇑Lg	Lg	17 32 08.3	
	1.9nm,0.8s,baz=91,slow=25,SNR=6.0						

*MOS **17** 17:53:56.7±0.8,29°.85N×139°.00E,h409^{km},mb4.5/43,*
Error ellipse: s-maj=8.1km s-min=4.5km az=109.5
*NIED **17** 17:53:56.5,29°.81N×139°.39E,h427^{km},MW4.5,Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm;
M_{rr}-4.92; $M_{\theta\theta}$4.75; $M_{\phi\phi}$0.16; $M_{r\theta}$3.37; $M_{\theta\phi}$3.57; $M_{\phi r}$0.28;
Fault plane solution: $M_0$6.79000×10^{15} NP1:ϕ_s42.00000°,
δ34.00000°,λ-120.00000°. NP2:ϕ_s257.00000°,
δ61.00000°,λ-72.00000°.
*JMA **17** 17:53:56.5±0.3,30°N±1°×13°9E±°,h427^{km}±3^{km},MV4.7/36,*
NEAR TORISHIMA IS
*NEIC **17** 17:53:57.6±1.8,29°.81N±0°.06×139°.1E±0°.1,h405^{km}±6^{km},*
mb4.4/170,Error ellipse: s-maj=13.2km s-min=9.0km
az=74.0
*IDC **17** 17:53:59.1±0.6,29°.86N×139°.00E,h420^{km}±5^{km},mb3.9/32,*
mbtmp4.8/40,Error ellipse: s-maj=9.5km s-min=6.8km
az=80.0
ISC 17 17:53:57.5±0.4**,29°.81N**±0°.03×**139°.12E**±0°.05**,h409**^{km}±3^{km}**,**
h410^{km}**:pP-P,n506,**σ**1**^{s}**.18**/526**,mb4.4**/181**,32C-18D,**
Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**3.31**	**10**	*e*P	**P**	**17 55 04.6**	**+0.8**
JHCJ				*e*S	**S**	**17 55 55.2**	**-2.5**
JHJ2	**Mitsune**	**3.35**	**10**		**P**	**17 55 04.5**	**+0.4**
JHJ2					**S**	**17 55 54.3**	**-4.1**
JHJ2	**Mitsune**	**3.35**	**10**	P	**P**	**17 55 04.5**	**+0.4**
JHJ2	**Mitsune**	**3.35**	**10**	S	**S**	**17 55 57.0**	**-1.4**
JHJ2	**Mitsune**	**3.35**	**10**	*e*P	**P**	**17 55 04.9**	**+0.8**
JHJ	**Hachijo jima 2**	**3.35**	**10**	P	**P**	**17 55 04.8**	**+0.7**
	300nm,0.4s,baz=339,slow=20,SNR=48						
JHJ				S	**S**	**17 55 55.5**	**-3.0**
	716nm,0.3s,baz=81,slow=18,SNR=13						
CBIJ	**Chichi jima**	**3.81**	**134**	*i* P	**P**	**17 55 07.5**	**-0.9**
CBIJ				*e*S	**S**	**17 56 03.1**	**-3.0**
JCJ	**Chichijima**	**3.81**	**134**	P	P	17 54 57.0	-11
	124nm,0.4s,baz=282,slow=23,SNR=82						
JCJ				S	S	17 55 52.1	-14
	2μm,0.3s,baz=288,slow=22,SNR=6.3						
JCJ	**Chichijima**	**3.81**	**134**		**P**	**17 55 08.1**	**-0.3**
JCJ					**S**	**17 56 02.2**	**-3.9**
JCJ	**Chichijima**	**3.81**	**134**	P	**P**	**17 55 07.5**	**-0.9**
JCJ	**Chichijima**	**3.81**	**134**	S	**S**	**17 56 02.7**	**-3.4**
JHH2	**Haha-jima-NKT2**	**4.15**	**139**	*e*S	**S**	**17 56 08.4**	**-3.4**
TTO1	**TONANKAI O.B.S**	**4.29**	**333**	*e*P	**P**	**17 55 15.0**	**+2.6**
JSG	**Sagara**	**4.92**	**351**		**P**	**17 55 18.2**	**-0.6**
JSG	**Sagara**	**4.92**	**351**	P	**P**	**17 55 20.6**	**+1.8**
JTNC	**Tanabenakahech**	**4.99**	**324**	P	**P**	**17 55 21.5**	**+1.9**
JIE	**Ise**	**5.01**	**336**	*e*P	**P**	**17 55 22.1**	**+2.3**
JIE				*e*S	**S**	**17 56 27.6**	**+0.5**
BSO1	**Boso 1**	**5.08**	**18**	P	**P**	**17 55 20.2**	**+0.3**
BSO1				*e*S	**S**	**17 56 25.5**	**-1.9**
JOD2	**Odawara 2**	**5.44**	**360**	P	**P**	**17 55 23.9**	**-0.3**
INU	**Inuyama**	**5.81**	**343**		**P**	**17 55 29.4**	**+1.3**
INU	**Inuyama**	**5.81**	**343**	P	**P**	**17 55 29.2**	**+1.2**
JMN	**Monobe**	**5.94**	**313**		**P**	**17 55 31.7**	**+2.2**
JMN	**Monobe**	**5.94**	**313**	P	**P**	**17 55 31.1**	**+1.6**
JGF	**Kuroka**	**5.97**	**346**		**P**	**17 55 30.7**	**+0.9**
JGF	**Kuroka**	**5.97**	**346**	P	**P**	**17 55 30.2**	**+0.4**
JRY	**Ryogami san**	**6.20**	**358**	*i* P	**P**	**17 55 32.2**	**-0.1**
JTO	**Tosashimizu**	**6.21**	**301**	P	**P**	**17 55 34.7**	**+2.3**
MJAR	**Matsushiro Arr**	**6.76**	**354**	P	**P**	**17 55 37.6**	**-1.5**
	45nm,0.3s,baz=172,slow=10,SNR=338						
MJAR				S	**S**	**17 56 59.6**	**-1.7**
	20nm,0.6s,baz=184,slow=29,SNR=5.6						
MAJO	**Matsushiro**	**6.76**	**354**		**P**	**17 55 37.8**	**-1.2**
MAJO	**Matsushiro**	**6.76**	**354**	P	**P**	**17 55 38.2**	**-0.9**
MAJO	**Matsushiro**	**6.76**	**354**	*c i*P	**P**	**17 55 37.9**	**-1.2**
MJB9	**Matsu-Tunnel**	**6.77**	**354**		**P**	**17 55 38.9**	**-0.3**
JHS	**Saijyo**	**7.25**	**317**	P	**P**	**17 55 46.1**	**+1.5**
JSU	**Suzuyama**	**7.66**	**285**	P	**P**	**17 55 49.4**	**+0.3**
JSU	**Suzuyama**	**7.66**	**285**	S	**S**	**17 57 18.5**	**-1.3**
JNU	**Nakatsue**	**7.78**	**297**	P	**P**	**17 55 52.3**	**+1.9**
	63nm,0.9s,baz=151,slow=4.2,SNR=25						
JNU	**Nakatsue**	**7.78**	**297**	P	**P**	**17 55 51.7**	**+1.3**
JNU	**Nakatsue**	**7.78**	**297**	P	**P**	**17 55 52.1**	**+1.7**
JNU	**Nakatsue**	**7.78**	**297**	S	**S**	**17 57 23.8**	**+1.5**
JOI	**OKI**	**8.13**	**324**	*e*P	**P**	**17 55 55.2**	**+1.2**
JSD	**Sado**	**8.24**	**355**		**P**	**17 55 54.1**	**-1.2**
JSD	**Sado**	**8.24**	**355**	P	**P**	**17 55 53.8**	**-1.5**
JSJ	**Shimokoshiki**	**8.31**	**285**	P	**P**	**17 55 57.9**	**+1.7**
JAMN	**Amaminishikomi**	**8.85**	**262**	*e*P	**P**	**17 56 03.8**	**+1.6**
JTU	**Tsushima**	**9.49**	**302**	P	**P**	**17 56 11.0**	**+1.8**
JTU	**Tsushima**	**9.49**	**302**	S	**S**	**17 57 59.4**	**+1.6**
JTU	**Tsushima**	**9.49**	**302**	*e*P	**P**	**17 56 11.0**	**+1.8**
JOW	**Kunigami**	**10.01**	**255**	P	**P**	**17 56 17.6**	**+2.5**
	85nm,0.7s,baz=99,slow=9.9,SNR=44						
JOW	**Kunigami**	**10.01**	**255**		**P**	**17 56 17.1**	**+2.0**
JOW	**Kunigami**	**10.01**	**255**	P	**P**	**17 56 17.6**	**+2.5**
JOW	**Kunigami**	**10.01**	**255**	*e*P	**P**	**17 56 17.7**	**+2.6**
JKE	**Kume jima 2**	**11.43**	**255**	*e*P	**P**	**17 56 32.6**	**+1.8**
JOT	**Ohata**	**11.66**	**7**	*e*P	**P**	**17 56 34.3**	**+1.3**
TJN	**Taejon**	**11.84**	**307**		**P**	**17 56 36.0**	**+0.9**
TJN	**Taejon**	**11.84**	**307**	P	**P**	**17 56 36.3**	**+1.2**
TJN	**Taejon**	**11.84**	**307**	P	**P**	**17 56 36.0**	**+0.9**
KSRS	**Korea Array**	**12.05**	**312**	P	**P**	**17 56 38.8**	**+1.4**
	42nm,0.8s,baz=123,slow=10,SNR=84						
KSRS				PP		17 57 25.6	
	5.7nm,0.6s,baz=136,slow=9.7,SNR=4.3						
KSAR	**Wonju Array Be**	**12.07**	**312**		**P**	**17 56 37.4**	**-0.2**
KSAR	**Wonju Array Be**	**12.07**	**312**	P	**P**	**17 56 37.4**	**-0.2**
KS19	**Wonju Array Si**	**12.11**	**312**	P	**P**	**17 56 37.7**	**-0.5**
JOSM	**Okushiri--Mats**	**12.25**	**1**	*e*P	**P**	**17 56 40.6**	**+1.0**
ERM	**Erimo**	**12.61**	**14**	P	**P**	**17 56 44.5**	**+1.0**
ERM	**Erimo**	**12.61**	**14**	P	**P**	**17 56 44.4**	**+1.0**
ERM	**Erimo**	**12.61**	**14**	P	**P**	**17 56 44.5**	**+1.0**
JEM	**Erimo**	**12.61**	**14**	P	**P**	**17 56 44.5**	**+1.0**
JOGS	**Gusukube**	**13.19**	**251**	P	**P**	**17 56 52.7**	**+2.6**
JCH	**Churui**	**13.23**	**14**	*e*P	**P**	**17 56 51.6**	**+1.3**
JMJ	**Miyako jima 2**	**13.26**	**251**	P	**P**	**17 56 51.4**	**+0.5**
JHR	**Hokuryu**	**14.06**	**8**	P	**P**	**17 57 01.3**	**+2.0**
VLA	**Vladivostok**	**14.50**	**338**	*i* P	**P**	**17 57 04.9**	**+0.9**
VLA				pmax	pmax		
	comp=Z,54nm,0.6s						
NMR	**Nemuro--Hokkai**	**14.53**	**20**	*e*P	**P**	**17 57 04.8**	**+0.4**
ASAJ	**Asahikawa**	**14.55**	**10**	P	**P**	**17 57 06.8**	**+2.2**
	comp=Z,43nm,0.6s,baz=221,slow=9.2,SNR=75						
JKA	**Kamikawa-asahi**	**14.55**	**10**		**P**	**17 57 05.6**	**+1.0**
JTKR	**Abashiri--Toko**	**14.64**	**14**	*e*P	**P**	**17 57 07.5**	**+1.9**
GLVR	**Golovnino**	**14.81**	**18**	*e*P	**P**	**17 57 07.5**	**+0.1**
GLVR				pmax	pmax		
	comp=Z,156nm,0.7s						
GLVR				pmax	pmax		
	comp=N,89nm,0.5s						
GLVR				pmax	pmax		
	comp=E,56nm,0.4s						
RUSJ	**Misakicho**	**15.08**	**17**	*e*P	**P**	**17 57 12.2**	**+1.9**
YUK	**Yuzh-Kuril'sk**	**15.18**	**19**	*e*P	**P**	**17 57 13.4**	**+2.0**
YUK				pmax	pmax		
	comp=Z,171nm,0.6s						
YUK				pmax	pmax		
	comp=N,91nm,0.5s						
YUK				pmax	pmax		
	comp=E,41nm,0.3s						
YOJ	**Yonaguni jima**	**15.30**	**253**	P	**P**	**17 57 12.7**	**-0.3**
YOJ	**Yonaguni jima**	**15.30**	**253**	P	**P**	**17 57 13.2**	**+0.3**
YOJ	**Yonaguni jima**	**15.30**	**253**	P	**P**	**17 57 12.7**	**-0.3**
YOJ				pmax	pmax		
	comp=Z,90nm,0.8s						
TEY	**Ternei**	**15.33**	**353**	⇑*e*P	**P**	**17 57 13.7**	**+0.7**
TEY				pmax	pmax		
	comp=N,30nm,0.9s						
TEY				pmax	pmax		
	comp=Z,50nm,0.7s						
USRK	**Ussuriysk Ar.**	**15.45**	**340**	P	**P**	**17 57 14.5**	**+0.2**
	comp=Z,64nm,0.8s,baz=164,slow=11,SNR=61						
TATO	**Taipei**	**16.38**	**257**	P	**P**	**17 57 23.3**	**-1.3**
TATO	**Taipei**	**16.38**	**257**	P	**P**	**17 57 25.2**	**+0.6**
YHNB	**Yeheng**	**16.59**	**256**		**P**	**17 57 25.4**	**-1.5**
YHNB	**Yeheng**	**16.59**	**256**	P	**P**	**17 57 26.1**	**-0.8**
NACB	**Ninganchiao**	**16.59**	**254**		**P**	**17 57 24.9**	**-1.9**
NACB	**Ninganchiao**	**16.59**	**254**	P	**P**	**17 57 25.4**	**-1.5**
MDJ	**Mudanjiang**	**16.60**	**336**		**P**	**17 57 26.1**	**-0.6**
MDJ	**Mudanjiang**	**16.60**	**336**	P	**P**	**17 57 27.3**	**+0.7**
GUMO	**Guam**	**16.99**	**161**	P	**P**	**17 57 33.9**	**+2.8**
	comp=Z,195nm,0.8s,baz=182,slow=13,SNR=5.2						
YULB	**Yu-li**	**17.17**	**252**	P	**P**	**17 57 31.2**	**-1.8**
YULB	**Yu-li**	**17.17**	**252**	P	**P**	**17 57 32.1**	**-0.9**
YSS	**Yuzhno-Sakhali**	**17.35**	**8**		**P**	**17 57 34.1**	**-0.5**
YSS	**Yuzhno-Sakhali**	**17.35**	**8**	P	**P**	**17 57 37.3**	**+2.7**
YSS	**Yuzhno-Sakhali**	**17.35**	**8**	*e*P	**P**	**17 57 35.5**	**+0.9**
YSS				*e*S	**S**	**18 00 34.3**	**+0.1**
YSS				pmax	pmax		
	comp=Z,30nm,1.2s						
YSS				smax	smax		
	comp=N,30nm,1.4s						
YSS				smax	smax		
	comp=E,20nm,1.4s						
TWG	**Pinlang**	**17.61**	**251**	P	**P**	**17 57 36.5**	**-1.1**
CN2	**Changchun**	**17.71**	**326**	⇓P	**P**	**17 57 38.4**	**-0.1**
CN2				*e*sP	sP	17 59 23.5	-3.8
CN2				*e*S	**S**	**18 00 37.5**	**-3.8**
CN2				pmax	pmax		
	comp=Z,30nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
TPUB	**Ta-pu**	**17.76**	**253**	P	**P**	**17 57 38.8**	**-0.5**
TPUB	**Ta-pu**	**17.76**	**253**	P	**P**	**17 57 39.4**	**+0.1**
BNX	**BinXian**	**18.37**	**333**	⇓P	**P**	**17 57 45.3**	**-0.1**
BNX				S	**S**	**18 00 56.3**	**+3.1**
BNX				pmax	pmax		
	comp=Z,160nm,0.8s						
BNX				pmax	pmax		
	comp=Z,180nm,5.5s						
KNMB	**Chin-men Tao**	**19.20**	**259**	P	**P**	**17 57 52.4**	**-1.6**
TIA	**Tai'an**	**19.51**	**295**	P	**P**	**17 57 55.3**	**-1.5**
TIA				pmax	pmax		
	comp=Z,30nm,0.8s						
GRNR	**Gornyy**	**21.04**	**355**	⇑*i*P	**P**	**17 58 11.5**	**+0.9**
GRNR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TYV	**Tymovskoe**	**21.20**	**6**	*e*P	**P**	**17 58 13.2**	**+1.2**
TYV				pmax	pmax		
	comp=Z,24nm,1.2s						
TYV				pmax	pmax		
	comp=Z,600nm,3.0s						
WHN	**Wuhan**	**21.42**	**278**	P	**P**	**17 58 15.8**	**+1.5**
HNS	**HongShan**	**21.66**	**297**	⇓P	**P**	**17 58 15.8**	**-0.6**
HNS				pmax	pmax		
	comp=Z,13nm,0.6s						
HEH	**HeiHe**	**22.25**	**340**	*e*P	**P**	**17 58 22.1**	**+0.5**
HEH				pmax	pmax		
	comp=Z,36nm,0.9s						
XLT	**XiLinHaoTe**	**23.09**	**314**	*e*P	**P**	**17 58 29.6**	**+0.2**
XLT				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HILR	**Hailar Array B**	**24.60**	**329**	P	**P**	**17 58 43.1**	**+0.3**
	comp=Z,7.2nm,0.7s,baz=129,slow=12,SNR=11						
HILR				pP	**pP**	**17 59 50.6**	**+0.4**
	comp=Z,4.9nm,0.7s,baz=130,slow=16,SNR=1.0						
	comp=Z,7.2nm,0.7s						
HHC	**Hu-ho-hao-te**	**24.94**	**304**	*e*P	**P**	**17 58 47.8**	**+1.8**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,61nm,4.5s						
ZEA	**Zeya**	**25.43**	**343**	*e*P	**P**	**17 58 50.6**	**+0.6**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.6s						
ENH	**Enshi**	**25.63**	**279**	IAmb	IAmb	17 58 52.8	
	comp=Z,16nm,1.1s						
ENH	**Enshi**	**25.63**	**279**	P	**P**	**17 58 52.5**	**+0.3**
PETK	**Petropavlovsk-**	**26.97**	**25**	P	**P**	**17 59 05.5**	**+1.8**
	comp=Z,3.1nm,0.7s,baz=170,slow=2.2,SNR=15						
	comp=Z,3.1nm,0.7s						
PETK	**Petropavlovsk-**	**26.97**	**25**	P	**P**	**17 59 04.3**	**+0.7**
PET	**Petropavlovsk**	**27.26**	**26**	P	**P**	**17 59 06.3**	**0.0**
PET				IAmb	IAmb	17 59 41.5	
	comp=Z,39nm,1.5s						
LZH	**Lanzhou**	**30.15**	**291**	*e*P	**P**	**17 59 31.5**	**-0.6**
LZH				S	S	18 03 17.5	-43
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
LZDM	**Lanzhou Array**	**30.27**	**291**	P	**P**	**17 59 33.1**	**-0.1**
	comp=Z,3.7nm,0.3s,baz=113,slow=11,SNR=6.4						
	comp=Z,3.7nm,0.3s						
ULN	**Ulaanbaatar**	**30.51**	**315**	P	**P**	**17 59 34.8**	**-0.2**
ULN	**Ulaanbaatar**	**30.51**	**315**	*ce*P	**P**	**17 59 33.2**	**-1.8**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MA2	**Magadan**	**30.80**	**12**	P	**P**	**17 59 38.2**	**+1.0**
	comp=Z,24nm,0.6s,baz=195,slow=9.0,SNR=35						
	comp=Z,24nm,0.6s						
MA2	**Magadan**	**30.80**	**12**	P	**P**	**17 59 37.2**	**0.0**
MA2	**Magadan**	**30.80**	**12**	P	**P**	**17 59 37.8**	**+0.6**
MA2	**Magadan**	**30.80**	**12**	*ce*P	**P**	**17 59 38.1**	**+0.9**
MA2				pmax	pmax		
	comp=Z,53nm,2.5s						
MA2	**Magadan**	**30.80**	**12**	P	**P**	**17 59 37.0**	**-0.2**
	comp=Z,47nm,0.7s						
SONM	**Songino Array**	**30.90**	**315**	P	**P**	**17 59 38.7**	**+0.3**
	comp=Z,1.2nm,0.4s,baz=126,slow=8.5,SNR=12						
SONM				PcP	**PcP**	**18 02 23.0**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=148,slow=3.4,SNR=5.7						
SONM				ScP	**ScP**	**18 05 26.0**	**-0.4**
	comp=Z,2.0nm,0.7s,baz=126,slow=3.1,SNR=9.0						
	comp=Z,1.2nm,0.4s						
SONM	**Songino Array**	**30.90**	**315**	P	**P**	**17 59 38.4**	**0.0**
KKM	**Kota Kinabalu**	**32.01**	**227**	P	**P**	**17 59 48.8**	**+0.4**
KMI	**Kunming**	**32.53**	**271**	P	**P**	**17 59 54.5**	**+1.6**
KMI				pmax	pmax		
	comp=Z,19nm,1.0s						
YAK	**Yakutsk**	**32.82**	**352**	P	**P**	**17 59 54.1**	**-0.4**
	comp=Z,9.9nm,0.5s,baz=92,slow=1.3,SNR=9.4						
YAK				PcP	**PcP**	**18 02 28.0**	**-0.1**
	comp=Z,6.8nm,0.3s,baz=48,slow=2.0,SNR=5.1						
	comp=Z,9.9nm,0.5s						
YAK	**Yakutsk**	**32.82**	**352**	P	**P**	**17 59 53.5**	**-1.1**
YAK				IAmb	IAmb	17 59 55.6	
	comp=Z,12nm,0.7s						
YAK					**pP**	**18 01 06.0**	**-2.6**
YAK	**Yakutsk**	**32.82**	**352**	*e*P	**P**	**17 59 53.8**	**-0.7**
YAK				*e**PP	**pP**	**18 01 07.1**	**-1.5**
YAK				*e*		18 01 18.0	
YAK				*e*		18 02 27.9	
YAK				*e*S	**S**	**18 04 41.4**	**+0.5**
YAK				*e**SS	**sS**	**18 06 57.0**	**-0.2**
YAK				*e*SS	**SS**	**18 07 26.6**	**+2.9**
YAK				*e*		18 09 33.3	
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,103nm,3.0s						
YAK				pmax	pmax		
	comp=E,70nm,3.3s						
YAK				pmax	pmax		
	comp=N,84nm,3.0s						
YAK				smax	smax		
	comp=N,132nm,2.0s						
YAK				smax	smax		
	comp=E,70nm,2.5s						
PZH	**PanZhiHua**	**33.03**	**274**	P	**P**	**17 59 56.8**	**-0.2**
PZH				S	**S**	**18 04 42.3**	**-3.1**
PZH				pmax	pmax		
	comp=Z,20nm,1.0s						
FAKI	**Fak Fak**	**33.20**	**193**	P	**P**	**17 59 57.8**	**-0.6**
FAKI				IAmb	IAmb	18 00 04.4	
	comp=Z,18nm,1.0s						
FAKI	**Fak Fak**	**33.20**	**193**	P	**P**	**17 59 59.5**	**+1.1**
MRSI	**Marisa**	**33.45**	**212**	P	**P**	**18 00 03.6**	**+3.1**
TOLI2	**Tolitoli**	**33.45**	**215**	P	**P**	**17 59 59.4**	**-1.1**
TOLI2				IAmb	IAmb	18 00 01.3	
	comp=Z,10nm,0.7s						
TOLI2	**Tolitoli**	**33.45**	**215**	P	**P**	**17 59 59.7**	**-0.8**
GTA	**Gaotai**	**33.52**	**297**	P	**P**	**18 00 01.3**	**+0.3**
GTA				pP	PP	18 01 32.0	+4.5
GTA				S	**S**	**18 04 49.5**	**-3.1**
GTA				pmax	pmax		
	comp=Z,22nm,0.8s						
SANI	**Sanana**	**34.08**	**204**	P	**P**	**18 00 06.4**	**+0.6**
SANI	**Sanana**	**34.08**	**204**	P	**P**	**18 00 03.4**	**-2.4**
	comp=Z,30nm,0.7s						
SEY	**Seymchan**	**34.23**	**11**	P	**P**	**18 00 07.7**	**+1.1**
	comp=Z,8.9nm,0.8s,baz=201,slow=6.0,SNR=17						
	comp=Z,8.9nm,0.8s						
SEY	**Seymchan**	**34.23**	**11**	*e*P	**P**	**18 00 06.4**	**-0.1**
SEY				pmax	pmax		
	comp=Z,15nm,1.1s						
LUWI	**Luwuk**	**34.42**	**210**	P	**P**	**18 00 07.2**	**-1.5**
LUWI				IAmb	IAmb	18 00 30.7	
	comp=Z,16nm,0.7s						
LUWI	**Luwuk**	**34.42**	**210**	P	**P**	**18 00 08.8**	**+0.1**
KRAI	**Karang Ratu**	**34.50**	**199**	P	**P**	**18 00 12.1**	**+2.6**
	comp=Z,450nmcomp=Z,46nm,0.9s						
APSI	**Ampana**	**34.80**	**212**	P	**P**	**18 00 13.3**	**+1.3**
	comp=Z,866nmcomp=Z,53nm,0.6s						
AAI	**Ambon**	**34.91**	**199**	P	**P**	**18 00 14.9**	**+2.0**
	comp=Z,62nm,0.8s						
SBUM	**Sibu**	**37.31**	**228**	P	**P**	**18 00 33.5**	**+0.6**
SBUM	**Sibu**	**37.31**	**228**	P	**P**	**18 00 32.9**	**-0.1**
GOMU	**GeErMu**	**37.45**	**292**	P	**P**	**18 00 33.3**	**-1.1**
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CHTO	**Chiang Mai**	**38.04**	**263**	P	**P**	**18 00 38.5**	**-0.5**
CHTO				IAmb	IAmb	18 00 40.2	
	comp=Z,26nm,0.8s						
CHTO	**Chiang Mai**	**38.04**	**263**	P	**P**	**18 00 39.5**	**+0.5**
CHTO	**Chiang Mai**	**38.04**	**263**	P	**P**	**18 00 39.0**	**0.0**
	comp=Z,35nm,0.8s						
CHTO	**Chiang Mai**	**38.04**	**263**	P	**P**	**18 00 38.5**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,26nm,0.8s						
CM31	**Chiang Mai Arr**	**38.19**	**262**	P	**P**	**18 00 40.4**	**+0.1**
CM31				IAmb	IAmb	18 00 42.7	
	comp=Z,13nm,0.9s						
CMAR	**Chiang Mai Arr**	**38.19**	**262**	P	**P**	**18 00 40.5**	**+0.2**

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      comp=Z,5.4nm,0.7s,baz=52,slow=7.2,SNR=55
CMAR                                PcP    PcP    18 02 46.0 +1.0
      comp=Z,1.8nm,0.6s,baz=30,slow=1.4,SNR=8.9
      comp=Z,5.4nm,0.7s
CMAR  Chiang Mai Arr     38.19 262         P      18 00 40.3  0.0
CMAR                                       PcP    18 02 45.7 +0.7
CMAR  Chiang Mai Arr     38.19 262  i P    P      18 00 40.7 +0.4
CMAR                                pmax   pmax
      comp=Z,7.0nm,0.7s
KAPI  Kappang            39.29 211    P    P      18 00 49.2  0.0
KAPI  Kappang            39.29 211    P    P      18 00 49.3  0.0
KAPI                                pmax   pmax
      comp=Z,9.0nm,0.9s
BILL  Bilibino           41.48  15    P    P      18 01 06.5 +0.3
BILL                                IAmb   IAmb   18 01 08.2
      comp=Z,11nm,0.9s
BILL  Bilibino           41.48  15ceP      P      18 01 06.1 -0.1
BILL                                pmax   pmax
      comp=Z,21nm,1.7s
PBKI  Pangkalan Bun      41.65 224    P    P      18 01 17.7 +9.4
SHL   Shillong           41.82 276    P    P      18 01 08.6 -1.2
SHL                                 IAmb   IAmb   18 01 10.9
      comp=Z,23nm,1.1s
SHL   Shillong           41.82 276    P    P      18 01 08.6 -1.2
SHL                                 pmax   pmax
      comp=Z,23nm,1.1s
EDFI  Ende, Flores       41.84 206    P    P      18 01 09.7 -0.2
      comp=Z,19nm,0.7s
SOEI  Soe                41.85 202    P    P      18 01 08.2 -1.8
SOEI  Soe                41.85 202    P    P      18 01 12.1 +2.1
SOEI  Soe                41.85 202    P    P      18 01 11.6 +1.6
      comp=Z,64nm,1.0s
TIXI  Tiksi              42.27 355    P    P      18 01 11.3 -1.1
TIXI  Tiksi              42.27 355ceP      P      18 01 12.0 -0.4
TIXI                                pmax   pmax
      comp=Z,3.0nm,0.6s
LBFI  Labuhan Bajo,      42.33 209    P    P      18 01 14.9 +1.3
      comp=Z,36nm,1.0s
BATI  Baumata            42.48 203    P    P      18 01 15.5 +0.7
      comp=Z,43nm,0.6s
WMQ   Urumqi             42.82 304  eP     P      18 01 18.4 +1.0
WMQ                                 pP     pwP    18 02 38.3 -1.6
WMQ                                 pmax   pmax
      comp=Z,17nm,0.9s
DBNI  Kabupaten Domp     43.03 211    P    P      18 01 19.4 +0.2
      comp=Z,20nm,0.9s
MTN   Manton Dam         43.10 191    P    P      18 01 19.2 -0.5
DGZ   Jazzator, Alta     43.45 312  i P    P      18 01 21.9 -0.4
DGZ                                 pmax   pmax
      comp=Z,9.0nm,0.9s
PLAI  Plampang           43.56 211    P    P      18 01 23.3 -0.1
PLAI  Plampang           43.56 211    P    P      18 01 23.1 -0.3
      comp=Z,628nmcomp=Z,55nm,0.9s
COEN  Coen               43.68 174    P    P      18 01 24.4 +0.1
COEN                                IAmb   IAmb   18 01 26.8
      comp=Z,14nm,1.1s
COEN  Coen               43.68 174    P    P      18 01 26.4 +2.1
KULM  Kulim              43.71 244         P      18 01 23.8 -0.8
KULM                                IAmb   IAmb   18 01 26.3
      comp=Z,30nm,1.0s
KULM  Kulim              43.71 244    P    P      18 01 25.6 +1.0
KULM  Kulim              43.71 244    P    P      18 01 26.2 +1.6
      comp=Z,30nm,1.1s
TWSI  Taliwang, Sumb     43.89 213    P    P      18 01 26.3 +0.3
      comp=Z,36nm,0.9s
IPM   Ipoh               43.92 242    P    P      18 01 25.2 -1.1
IPM                                 IAmb   IAmb   18 01 26.9
      comp=Z,17nm,0.9s
KLNI  Mataram            43.99 214    P    P      18 01 27.6 +0.8
      comp=Z,753nmcomp=Z,71nm,1.0s
KHKI  Kahang-Kahang      44.18 215    P    P      18 01 30.1 +1.9
      comp=Z,704nmcomp=Z,72nm,1.1s
RTBI  Rangdo, Negare     44.59 215    P    P      18 01 32.1 +0.6
JAGI  Jajag, Banyuwa     45.01 216    P    P      18 01 32.7 -2.0
JAGI                                IAmb   IAmb   18 01 35.2
      comp=Z,20nm,1.0s
JAGI  Jajag, Banyuwa     45.01 216    P    P      18 01 34.9 +0.2
      comp=Z,22nm,0.8s
SJI   Sawahan            45.66 220    P    P      18 01 39.6 -0.3
      comp=Z,27nm,0.7s
ZAA0  Zalesovo Array     45.68 318    P    P      18 01 38.0 -1.4
ZAA0                                       PcP    18 03 08.5 -0.9
ZALV  Zalesovo Beam      45.68 318    P    P      18 01 38.9 -0.6
      comp=Z,3.6nm,0.3s,baz=104,slow=7.5,SNR=26
ZALV                                PcP    PcP    18 03 08.9 -0.5
      comp=Z,5.0nm,0.4s,baz=108,slow=3.4,SNR=20
ZALV                                ScP    ScP    18 06 20.8 -1.7
      comp=Z,1.0nm,0.5s,baz=125,slow=4.7,SNR=4.1
      comp=Z,3.6nm,0.3s
ZALV  Zalesovo Beam      45.68 318    P    P      18 01 38.4 -1.0
ZALV                                       PcP    18 03 08.6 -0.8
SNJI  Sawahan-Nganju     45.70 220    P    P      18 01 41.0 +0.7
      comp=Z,27nm,0.6s
KNRA  Kununurra          46.31 194         P      18 01 45.2 +0.5
UGM   Wanagama           46.51 221         P      18 01 46.4 +0.1
UGM   Wanagama           46.51 221    P    P      18 01 46.2 -0.1
MK31  Makanchi Array     46.68 308deP      P      18 01 47.0 -0.3
MKAR  Makanchi Array     46.68 308    P    P      18 01 47.1 -0.2
      comp=Z,2.3nm,0.3s,baz=86,slow=10,SNR=55
MKAR                                PcP    PcP    18 03 13.1 -0.1
      comp=Z,4.1nm,0.5s,baz=80,slow=12,SNR=16
MKAR                                ScP    ScP    18 06 26.1 -0.9
      comp=Z,1.9nm,0.7s,baz=77,slow=5.2,SNR=8.5
      comp=Z,2.3nm,0.3s
MKAR  Makanchi Array     46.68 308         P      18 01 46.6 -0.7
MKAR                                       pwP    18 03 12.7 +0.6
MAKZ  Makanchi           46.90 308    P    P      18 01 48.3 -0.6
MAKZ                                PcP    PcP    18 03 13.1 -0.8
KPJI  Karang Pucung      46.96 223    P    P      18 01 50.0 +0.3
      comp=Z,51nm,0.8s
MNSI  Mandailing Nat     47.39 240    P    P      18 01 53.1 +0.1
KLSI                     47.57 230    P    P      18 01 55.2 +0.8
MDSI  Maura Dua          47.79 230    P    P      18 01 56.1 +0.1
      comp=Z,940nmcomp=Z,99nm,0.9s
BBJI  Bungbulang         47.84 224    P    P      18 01 57.2 +0.8
BBJI  Bungbulang         47.84 224    P    P      18 01 56.9 +0.5
      comp=Z,21nm,0.7s
KRJI  Kerinci            47.96 235    P    P      18 01 59.2 +1.7
      comp=Z,2µmcomp=Z,72nm,1.1s
MASI  Maura Aman, Be     48.15 234    P    P      18 01 59.4 +0.6
LWLI  Liwa               48.26 230    P    P      18 02 00.7 +1.0
      comp=Z,78nm,0.8s
KSI   Kapahiang          48.26 233    P    P      18 02 00.1 +0.4
      comp=Z,3µmcomp=Z,44nm,0.9s
KASI  Kota Agung         48.35 229    P    P      18 01 59.2 -1.0
      comp=Z,31nm,0.9s
GSI   Gunungsitoli       48.59 242    P    P      18 02 02.2 +0.1
GSI                                 PcP    PcP    18 03 18.1 -2.4
GSI   Gunungsitoli       48.59 242    P    P      18 02 02.3 +0.2
GSI   Gunungsitoli       48.59 242    P    P      18 02 02.5 +0.4
NRIK  Noril'sk           49.15 338    P    P      18 02 06.1 +0.7
      comp=Z,1.9nm,0.3s,baz=138,slow=7.7,SNR=4.3
NRIK                                S      S      18 08 37.9 -0.8
      comp=Z,0.9nm,0.3s,baz=204,slow=23,SNR=12
      comp=Z,1.9nm,0.3s
NRIK  Noril'sk           49.15 338    P    P      18 02 05.8 +0.3
NRIK  Noril'sk           49.15 338  i P    P      18 02 05.6 +0.1
NRIK                                pmax   pmax
      comp=Z,4.0nm,0.9s
KURK  Kurchatov          49.17 313         P      18 02 04.9 -1.0
KURK                                IAmb   IAmb   18 02 07.3
      comp=Z,10nm,0.3s
KURK                                PcP    PcP    18 03 21.4 -0.6
KURK  Kurchatov          49.17 313ceP      P      18 02 05.6 -0.3
KURK                                pmax   pmax
      comp=Z,15nm,1.3s
KURBB Kurchatov Arra     49.23 313    P    P      18 02 05.8 -0.5
      comp=Z,5.0nm,0.3s,baz=91,slow=8.0,SNR=42
KURBB                               PcP    PcP    18 03 21.6 -0.7
      comp=Z,1.4nm,0.4s,baz=95,slow=4.0,SNR=5.6
KURBB                               S      S      18 08 45.0 +4.6
      comp=Z,1.1nm,0.6s,baz=90,slow=17,SNR=7.6
      comp=Z,5.0nm,0.3s
FITZ  Fitzroy Crossi     49.37 197         P      18 02 08.6 +0.8
FITZ  Fitzroy Crossi     49.37 197    P    P      18 02 08.0 +0.3
M14K  Bethel             49.37  34    P    P      18 02 08.9 +1.7
M14K                                IAmb   IAmb   18 02 12.8
      comp=Z,18nm,1.2s
WB0   Warramunga Arr     49.50 186         P      18 02 08.6 -0.1
WB0                                 IAmb   IAmb   18 02 09.9
      comp=Z,25nm,0.9s
WRAB  Tennant Creek      49.66 186    P    P      18 02 09.6 -0.3
WRAB                                IAmb   IAmb   18 02 11.2
      comp=Z,17nm,0.9s
WRAB  Tennant Creek      49.66 186    P    P      18 02 09.8 -0.2
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WRAB  Tennant Creek      49.66 186    P    P      18 02 09.6 -0.3
WRAB                                pmax   pmax
      comp=Z,17nm,0.9s
PRZ   Przheval'sk        49.67 302    P    P      18 02 10.9 +0.8
PRZ   Przheval'sk        49.67 302    P    P      18 02 10.9 +0.8
PRZ                                 pmax   pmax
      comp=Z,27nm,0.6s
WR8   Warramunga Arr     49.67 186         P      18 02 10.3 +0.2
WR8                                 IAmb   IAmb   18 02 11.3
      comp=Z,22nm,0.9s
WR8                                 PcP    PcP    18 03 25.1 +0.8
WRA   Warramunga Arr     49.67 186    P    P      18 02 10.2 +0.2
      comp=Z,16nm,0.7s,baz=0.0,slow=7.7,SNR=87
WRA                                 PcP    PcP    18 03 25.4 +1.1
      comp=Z,3.2nm,0.4s,baz=359,slow=3.9,SNR=11
WRA                                 ScP    ScP    18 06 40.2 +0.3
      comp=Z,1.7nm,0.8s,baz=355,slow=4.2,SNR=5.7
WRA                                 S      S      18 08 44.5 -2.6
      comp=Z,2.3nm,0.8s,baz=9.7,slow=14,SNR=7.1
      comp=Z,16nm,0.7s
WRA   Warramunga Arr     49.67 186         P      18 02 09.3 -0.7
EGSI  Enggano, Bengk     49.71 232    P    P      18 02 08.9 -1.5
      comp=Z,42nm,0.8s
QIS   Mount Isa          50.07 179    P    P      18 02 13.6 +0.6
TARG  Taragay, Kyrgy     50.20 301    P    P      18 02 14.9 +0.7
TARG                                pmax   pmax
      comp=Z,12nm,0.9s
KSH   Kashi              51.90 299    P    P      18 02 30.0 +3.6
KSH                                 pmax   pmax
      comp=Z,11nm,0.8s
AAK   Ala-Archa          52.51 303         P      18 02 30.7 -0.2
AAK                                 PcP    PcP    18 03 34.9 -0.1
AAK   Ala-Archa          52.51 303ceP      P      18 02 30.9  0.0
AAK                                 pmax   pmax
      comp=Z,4.0nm,0.7s
ARLS  Aral               52.76 302    P    P      18 02 33.2 +0.6
ARLS                                pmax   pmax
      comp=Z,8.0nm,0.9s
E19K  Redstone River     52.77  26    P    P      18 02 33.3 +1.2
E19K                                PcP    PcP    18 03 36.7 +1.5
ASAR  Alice Springs      53.40 186    P    P      18 02 37.8 +0.5
      comp=Z,9.8nm,0.7s,baz=8.7,slow=8.8,SNR=116
ASAR                                PcP    PcP    18 03 39.2 +1.0
      comp=Z,2.1nm,0.7s,baz=7.9,slow=4.5,SNR=6.5
ASAR                                ScP    ScP    18 06 53.9 -2.1
      comp=Z,0.5nm,0.8s,baz=12,slow=6.1,SNR=2.5
ASAR                                S      S      18 09 32.6 -4.9
      comp=Z,0.7nm,0.6s,baz=18,slow=21,SNR=11
      comp=Z,9.8nm,0.7s
ASAR  Alice Springs      53.40 186         P      18 02 37.4 +0.2
ASAR                                PcP    PcP    18 03 39.2 +1.0
ARSB  Arslanbob          53.84 301         P      18 02 40.5 +0.1
ARSB  Arslanbob          53.84 301    P    P      18 02 40.5 +0.1
ARSB                                pmax   pmax
      comp=Z,7.0nm,0.8s
MBWA  Marble Bar         54.00 203         P      18 02 41.8 +0.3
MBWA                                PcP    PcP    18 03 40.0 -0.5
MBWA  Marble Bar         54.00 203    P    P      18 02 42.5 +1.0
BVAR  Borovoye Array     54.23 316    P    P      18 02 42.8  0.0
      comp=Z,19nm,0.4s,baz=96,slow=7.1,SNR=97
BVAR                                PcP    PcP    18 03 40.9 -0.2
      comp=Z,7.3nm,0.6s,baz=98,slow=4.4,SNR=11
BVAR                                S      S      18 09 45.6 -2.2
      comp=Z,0.6nm,0.6s,baz=96,slow=14,SNR=3.7
      comp=Z,19nm,0.4s
BORK  Borovoye           54.27 316         P      18 02 42.9 -0.1
BORK                                PcP    PcP    18 03 41.1 -0.1
BORK  Borovoye           54.27 316ceP      P      18 02 42.6 -0.5
BORK                                pmax   pmax
      comp=Z,13nm,0.6s
PSA00 Pilbara Seismi     54.35 202         P      18 02 43.7 -0.3
PSA00                               IAmb   IAmb   18 02 45.4
      comp=Z,14nm,0.8s
PSA00 Pilbara Seismi     54.35 202  IAmb   IAmb   18 02 45.4
      comp=Z,23nm,0.8s
PSA00 Pilbara Seismi     54.35 202    P    P      18 02 44.9 +0.9
ARK   Arkit              54.51 302    P    P      18 02 45.7 +0.6
ARK                                 pmax   pmax
      comp=Z,21nm,0.7s
E22K  Anaktuvuk Pass     54.91  25    P    P      18 02 48.4 +1.0
NIL   Nilore             55.31 292         P      18 02 50.7 -0.1
NIL                                 IAmb   IAmb   18 02 52.2
      comp=Z,20nm,0.8s
NIL   Nilore             55.31 292    P    P      18 02 50.7 -0.1
NIL                                 pmax   pmax
      comp=Z,20nm,0.8s
KK31  Karatay Array      55.33 304  IAmb   IAmb   18 02 51.7
      comp=Z,16nm,0.8s
KKAR  Karatay Array      55.33 304         P      18 02 50.6 -0.2
KKAR                                PcP    PcP    18 03 45.1 -0.5
KKAR  Karatay Array      55.33 304    P    P      18 02 50.6 -0.2
KKAR                                              18 03 45.1
MANEM Manem              55.59 297  IAmb   IAmb   18 02 54.7
      comp=Z,29nm,0.7s
GAR   Garm               56.30 299  IAmb   IAmb   18 02 58.6
      comp=Z,27nm,0.8s
ILAR  Eielson Array      56.66  30    P    P      18 02 59.7  0.0
      comp=Z,0.9nm,0.6s,baz=260,slow=4.9,SNR=21
ILAR                                PcP    PcP    18 03 50.0 -0.3
      comp=Z,0.7nm,0.7s,baz=281,slow=4.3,SNR=4.6
ILAR                                pP     pP     18 04 22.6 -0.9
      comp=Z,0.7nm,0.7s,baz=272,slow=6.9,SNR=4.9
      comp=Z,0.9nm,0.6s
CHGR  Chuyangaron        57.26 299    P    P      18 03 04.5 +0.1
CHGR                                pmax   pmax
      comp=Z,104nm,0.7s
SCRK  Sand Creek         57.94  30    P    P      18 03 09.3 +0.6
SCRK                                PcP    PcP    18 03 56.2 +0.6
SHAA  Shahritus          58.33 298  IAmb   IAmb   18 03 12.9
      comp=Z,24nm,0.7s
KBL   Kabul              58.43 294         P      18 03 11.9 -0.7
KBL                                 IAmb   IAmb   18 03 15.0
      comp=Z,6.9nm,0.6s
KBL   Kabul              58.43 294    P    P      18 03 11.9 -0.7
KBL                                 pmax   pmax
      comp=Z,7.0nm,0.6s
GC1S  Gold Coast 1 S     59.26 165    P    P      18 03 18.4 +0.6
SVE   Sverdlovsk         59.44 321  eP     P      18 03 19.1 +0.3
SVE                                 pmax   pmax
      comp=Z,7.0nm,0.6s
MEEK  Meekatharra        59.46 201    P    P      18 03 19.8 +0.5
G29M  Pine Creek         60.19  27  IAmb   IAmb   18 03 26.3
      comp=Z,7.7nm,0.6s
ARTI  Arti               60.74 321         P      18 03 26.8 -0.7
ARTI  Arti               60.74 321d iP     P      18 03 27.2 -0.3
ARTI                                              18 04 05.4
ARTI                                *PP    pP     18 04 52.8 +0.6
ARTI                                S      S      18 11 12.3 +0.9
ARTI                                SS     SS     18 15 18.6 +0.6
ARTI                                pmax   pmax
      comp=Z,13nm,0.6s
EPYK  Eagle Plains       60.77  27    P    P      18 03 28.8 +1.2
EPYK                                IAmb   IAmb   18 03 29.6
      comp=Z,13nm,0.6s
ARMA  Armidale           61.06 168    P    P      18 03 30.3 +0.3
I30M  Mount Dempster     61.08  29  IAmb   IAmb   18 03 32.2
      comp=Z,4.5nm,0.6s
FORT  Forrest            61.16 191         P      18 03 31.2 +0.7
AB31  Akbulak array      61.28 313         P      18 03 31.0 -0.2
ABKAR Akbulak array      61.28 313    P    P      18 03 31.0 -0.3
CMSA  Cobar Meteorol     61.33 174    P    P      18 03 31.9 +0.3
STKA  Stephens Creek     61.39 178    P    P      18 03 33.2 +1.2
      comp=Z,8.1nm,0.5s,baz=350,slow=6.5,SNR=28
      comp=Z,8.1nm,0.5s
STKA  Stephens Creek     61.39 178         P      18 03 32.5 +0.5
STKA  Stephens Creek     61.39 178    P    P      18 03 32.6 +0.5
H31M  Peel River         61.82  28  IAmb   IAmb   18 03 36.3
      comp=Z,5.5nm,0.7s
BBOO  Buckleboo          62.34 183         P      18 03 38.9 +0.6
BBOO                                IAmb   IAmb   18 03 40.1
      comp=Z,16nm,1.2s
BBOO  Buckleboo          62.34 183    P    P      18 03 39.1 +0.8
MORW  Morawa             62.55 203         P      18 03 40.2 +0.4
MORW  Morawa             62.55 203    P    P      18 03 40.4 +0.6
JIS   Juneau Island      63.39  36    P    P      18 03 45.6 +0.8
BLDU  Ballidu            63.76 201    P    P      18 03 47.0 -0.6
HRA   Herat              63.82 296         P      18 03 48.3  0.0
HRA                                 IAmb   IAmb   18 03 49.0
      comp=Z,6.2nm,0.5s
KLBR  Kellerberrin       64.35 200    P    P      18 03 51.7 +0.4
KIRV  Kirov              64.94 325ceP      P      18 03 54.7  0.0
MUN   Mundaring          65.19 201    P    P      18 03 57.3 +0.7
NWAO  Narrogin (SRO)     65.75 200    P    P      18 04 00.8 +0.7
NWAO  Narrogin (SRO)     65.75 200    P    P      18 04 00.9 +0.7
NWAO  Narrogin (SRO)     65.75 200    P    P      18 04 00.8 +0.7
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NWAO                                pmax   pmax
      comp=Z,48nm,0.7s
SPITS Spitsbergen Ar     67.23 349    P    P      18 04 09.8 +0.9
      comp=Z,11nm,0.9s,baz=102,slow=6.9,SNR=6.3
      comp=Z,11nm,0.9s
KLMR  Klimovskoe         68.89 329  eP     P      18 04 17.5 -1.7
KLMR                                pmax   pmax
      comp=Z,7.0nm,0.7s
ARA0  ARCESS Array S     70.09 340  eP     P      18 04 27.1 +0.7
ARCES ARCESS Array B     70.09 340    P    P      18 04 27.1 +0.7
      comp=Z,8.3nm,0.5s,baz=70,slow=8.7,SNR=77
      comp=Z,8.3nm,0.5s
ARCES ARCESS Array B     70.09 340  IAmb   IAmb   18 04 45.4
      comp=Z,25nm,1.4s
ARCES ARCESS Array B     70.09 340    P    P      18 04 27.2 +0.7
ARCES                               pmax   pmax
      comp=Z,25nm,1.4s
YKA   Yellowknife Ar     71.04  28    P    P      18 04 32.4 +0.3
      comp=Z,0.8nm,0.7s,baz=303,slow=6.5,SNR=9.5
YKA                                 pP     pP     18 06 04.7 +3.7
      comp=Z,0.5nm,0.8s,baz=294,slow=6.3,SNR=3.9
      comp=Z,0.8nm,0.7s
KTK1  Kautokeino         71.06 340  eP     P      18 04 33.1 +0.9
JETT  Jettan, Norway     71.56 341  eP     P      18 04 35.8 +0.6
VRH   Novokhopyorsk      71.70 319  eP     P      18 04 33.7 -2.6
VRH                                 pmax   pmax
      comp=Z,10.0nm,0.8s
TRO   Tromso             71.93 341  eP     P      18 04 37.5 +0.3
LKRN  Lenkeran, Azer     72.31 305    P    P      18 04 40.3 +0.2
SEKA  Sheki              72.39 308    P    P      18 04 40.9 +0.3
MNGR  Mingechevir, A     72.65 307    P    P      18 04 42.3 +0.3
LPSR  Galich'ya Gora     72.66 321  eP     P      18 04 38.9 -2.9
LPSR                                pmax   pmax
      comp=Z,10.0nm,0.9s
TAU   Tasmania Unive     72.75 174    P    P      18 04 43.1 +0.8
OBN   Obninsk            72.77 324⇑eP      P      18 04 42.0 -0.4
OBN                                 e*PP   pwP    18 06 14.2 -2.1
OBN                                 e             18 07 30.2
OBN                                 ePPP   PPP    18 09 19.7
OBN                                 eSS    SS     18 18 22.0 -0.8
OBN                                 pmax   pmax
      comp=Z,10.0nm,0.9s
VSR   Storozhevoye       73.14 320  eP     P      18 04 42.5 -2.2
VSR                                 pmax   pmax
      comp=Z,10.0nm,0.9s
VORD  Divnogorie         73.19 319  eP     P      18 04 41.8 -3.1
VORD                                pmax   pmax
      comp=Z,10.0nm,0.9s
GANJ  Ganja              73.23 307    P    P      18 04 45.3 -0.2
STEI  Steigen            74.05 341  eP     P      18 04 50.1 +0.5
KBZ   Khabaz             74.20 311    P    P      18 04 51.5 +0.7
      comp=Z,15nm,0.8s,baz=80,slow=3.9,SNR=55
      comp=Z,15nm,0.8s
KBZ   Khabaz             74.20 311  i P    P      18 04 51.0 +0.1
KBZ                                 pmax   pmax
      comp=Z,13nm,0.9s
KIV   Kislovodsk         74.23 312         P      18 04 51.4 +0.2
KIV   Kislovodsk         74.23 312  eP     P      18 04 50.7 -0.5
KIV                                 pmax   pmax
      comp=Z,15nm,1.1s
FINES FINESS Array B     74.32 333    P    P      18 04 51.1 -0.1
      comp=Z,7.6nm,0.4s,baz=68,slow=5.0,SNR=101
      comp=Z,7.6nm,0.4s
SHA1  Shidzhatmaz        74.35 312  i P    P      18 04 51.4 -0.7
NAX   Nakhchivan         74.43 306    P    P      18 04 52.8 +0.4
NEUR  Neytrino           74.53 311  i P    P      18 04 52.4 -0.7
NEUR                                pmax   pmax
      comp=Z,2.0nm,1.1s
RAUS  Rausandaksla       75.40 340  eP     P      18 04 57.3  0.0
VAGH  Vaagaholmen        75.43 341  eP     P      18 04 57.8 +0.5
MOR8  Moi Rana           75.47 340  eP     P      18 04 56.8 -0.9
VSU   Vasula             75.72 330  i P    P      18 04 58.9 -0.2
VSU                                 pmax   pmax
      comp=Z,12nm,0.9s
STOK  Stokkvaagen        75.78 340  eP     P      18 05 00.0 +0.7
LEIR  Leirfjorden        75.90 340  eP     P      18 05 00.2 +0.2
VSLR  Vesyoloye          76.17 312  i P    P      18 05 01.9 -0.2
VSLR                                pmax   pmax
      comp=Z,27nm,1.0s
PINE  Pine Mountain      76.56  47    P    P      18 05 05.4 +1.0
J05D  Fort Rock, OR      76.61  48  IAmb   IAmb   18 05 07.4
      comp=Z,6.0nm,0.8s
K05A  Summer Lake        77.10  48    P    P      18 05 08.5 +1.0
K05A                                IAmb   IAmb   18 05 12.3
      comp=Z,7.9nm,1.2s
GURO  Guroymak-BITLI     77.13 307  IAmb   IAmb   18 05 09.1
      comp=Z,6.7nm,0.9s
NSS   Namsos             77.35 339  eP     P      18 05 08.2 +0.1
BMO   Blue Mountains     78.31  45  IAmb   IAmb   18 05 15.7
      comp=Z,3.6nm,0.8s
PABE  Paberze            78.67 328    P    P      18 05 15.2 -0.2
BEKR  Beckworth          78.83  50    P    P      18 05 17.3 +0.4
BEKR                                IAmb   IAmb   18 05 18.9
      comp=Z,7.5nm,0.7s
AKASG Malin Array Be     78.84 322    P    P      18 05 15.9 -0.5
      comp=Z,4.4nm,0.5s,baz=52,slow=5.6,SNR=12
      comp=Z,4.4nm,0.5s
AKASG Malin Array Be     78.84 322  IAmb   IAmb   18 05 17.1
      comp=Z,4.0nm,1.1s
AKASG Malin Array Be     78.84 322    P    P      18 05 16.0 -0.5
AKASG                               pmax   pmax
      comp=Z,4.0nm,1.1s
AKBB  Malin Array Si     78.84 322  i P    P      18 05 16.2 -0.2
AKBB                                pmax   pmax
      comp=Z,8.0nm,0.9s
AKBB  Malin Array Si     78.84 322    P    P      18 05 15.9 -0.5
KIEV  Kiev               78.85 322  ⇓P     P      18 05 15.8 -0.8
KIEV  Kiev               78.85 322    P    P      18 05 15.7 -0.8
AK22  Malin Array Si     78.89 323    P    P      18 05 16.1 -0.6
SIM   Simferopol'        79.14 316  eP     P      18 05 17.5 -0.7
SIM                                 pmax   pmax
      comp=Z,13nm,0.7s
ARPR  Arapgir-MALATY     79.40 309  IAmb   IAmb   18 05 26.9
      comp=Z,18nm,1.1s
CMB   Columbia Colle     79.72  52  IAmb   IAmb   18 05 23.1
      comp=Z,4.8nm,0.5s
HFS   Hagfors            79.86 336    P    P      18 05 21.2 -0.5
      comp=Z,11nm,0.4s,baz=94,slow=4.5,SNR=111
      comp=Z,11nm,0.4s
LUBAR Lubar, Ukraine     80.06 322    P    P      18 05 22.8 -0.1
DOMB  Dombas             80.06 339  eP     P      18 05 23.0 +0.2
NC204 NORSAR Array S     80.07 337    P    P      18 05 22.4 -0.4
NB2   NORSAR Subarra     80.09 337    P    P      18 05 22.7 -0.3
      comp=Z,4.5nm,0.5s,baz=44,slow=5.1
NB2   NORSAR Subarra     80.09 337    P    P      18 05 22.7 -0.3
      baz=44,slow=5.1
NB2   NORSAR Subarra     80.09 337    P    P      18 05 19.1 -3.9
NB2                                 pmax   pmax
      comp=Z,1.0nm,0.6s
NOA   NORSAR Array B     80.09 337    P    P      18 05 22.6 -0.4
      comp=Z,7.8nm,0.6s,baz=45,slow=5.1,SNR=44
NOA                                 pP     pwP    18 06 57.1 -1.3
      comp=Z,1.6nm,0.9s,baz=43,slow=5.6,SNR=4.4
      comp=Z,7.8nm,0.6s
MOL   Molde              80.14 339  eP     P      18 05 23.7 +0.6
NC602 NORSAR Array S     80.20 337  eP     P      18 05 22.9 -0.6
NORES NORESS Array B     80.20 337    P    P      18 05 22.7 -0.8
RNPP8 Varash             80.23 324    P    P      18 05 23.4 -0.4
RNPP5 Staryi Chortor     80.27 324    P    P      18 05 23.8 -0.3
AKN   Aaknes             80.61 339  eP     P      18 05 26.1 +0.5
RYN   Ryan               80.69  51  IAmb   IAmb   18 05 29.0
      comp=Z,3.7nm,0.6s
SORM  Soroca             80.75 321  ⇑P     P      18 05 26.3 -0.3
SORM  Soroca             80.75 321    P    P      18 05 26.3 -0.3
BZK   Bozkurt            80.77 313  ⇓P     P      18 05 27.2 +0.3
NVAR  Mina Array Bea     80.94  51    P    P      18 05 29.8 +1.7
      comp=Z,3.6nm,0.6s,baz=281,slow=5.6,SNR=16
      comp=Z,3.6nm,0.6s
NVAR  Mina Array Bea     80.94  51    P    P      18 05 28.9 +0.8
GAZ   Gaziantep          81.13 308  IAmb   IAmb   18 05 30.4
      comp=Z,8.6nm,0.6s
BNN   Bunyan             81.19 310  IAmb   IAmb   18 05 30.9
      comp=Z,13nm,1.3s
ILGA  Ilgaz              81.44 312  IAmb   IAmb   18 05 32.5
      comp=Z,12nm,0.9s
KMPD  K-Podol'skiy       81.54 322    P    P      18 05 30.2 -0.5
RAYN  Ar Rayn            81.61 292    P    P      18 05 31.5 -0.2
RAYN  Ar Rayn            81.61 292    P    P      18 05 31.8 +0.2
ELK   Elko               81.75  48    P    P      18 05 33.1 +0.8
ELK   Elko               81.75  48    P    P      18 05 33.1 +0.8
ELK                                 pmax   pmax
      comp=Z,2.0nm,0.6s
TLCR                     82.17 318  ⇑P     P      18 05 34.0  0.0
TLCR                     82.17 318    P    P      18 05 34.0  0.0
BR131 Keskin Array S     82.19 311  i P    P      18 05 34.2 -0.2
```

BRTR	Keskin Array B	82.19	311	P	P	18 05 34.5	0.0
	comp=Z,11nm,0.8s,baz=94,slow=3.7,SNR=75						
BRTR				pP	pP	18 07 07.5	+2.1
	comp=Z,0.4nm,0.7s,baz=76,slow=5.2,SNR=1.8						
	comp=Z,11nm,0.8s						
BRTR	Keskin Array B	82.19	311		P	18 05 34.3	-0.2
VLDR	Vladesti	82.21	319	⇑P	P	18 05 35.0	+0.8
GMN	Gold Mountain	82.23	51	IAmb	IAmb	18 05 36.9	
	comp=Z,4.9nm,0.5s						
BIR	Birlad	82.23	319	⇑P	P	18 05 35.0	+0.6
BIR	Birlad	82.23	319	P	P	18 05 34.9	+0.6
KIRS	Kirsehir-Merke	82.33	311	⇓P	P	18 05 35.4	+0.3
JURR	Jurilovca	82.37	318	⇓P	P	18 05 35.0	0.0
PRAR	RASCA	82.37	321	⇑P	P	18 05 34.9	-0.1
GIRR	Girov	82.46	320	⇓P	P	18 05 35.7	+0.2
GHRR		82.47	319	⇓P	P	18 05 35.9	+0.4
CFR	Carcaliu	82.56	318	⇑P	P	18 05 35.4	-0.7
CFR	Carcaliu	82.56	318	P	P	18 05 35.3	-0.7
TPGR	Topolog	82.58	318	⇑P	P	18 05 36.4	+0.2
H17A	Grant Village	82.61	43	IAmb	IAmb	18 05 41.1	
	comp=Z,5.6nm,0.9s						
TESR	Tescani	82.64	320	⇑P	P	18 05 36.4	0.0
ANTO	Ankara	82.66	312	P	P	18 05 36.9	+0.1
ANTO				IAmb	IAmb	18 05 37.8	
	comp=Z,12nm,0.9s						
ANTO	Ankara	82.66	312	P	P	18 05 36.9	+0.1
ANTO				pmax	pmax		
	comp=Z,12nm,0.9s						
PANC	Panciu	82.73	319	⇓P	P	18 05 36.7	-0.1
HVU	Hansel Valley	82.74	46	IAmb	IAmb	18 05 39.5	
	comp=Z,6.2nm,1.0s						
BUR08	Bucovina Ar. S	82.76	321	P	P	18 05 37.0	-0.2
BURAR	Bucovina Array	82.77	321	P	P	18 05 37.0	-0.2
BURAR	Bucovina Array	82.77	321	⇓P	P	18 05 37.5	+0.3
BURAR	Bucovina Array	82.77	321	P	P	18 05 37.5	+0.3
TIRR	Tirgusor	82.81	318	⇑P	P	18 05 37.6	+0.2
TIRR	Tirgusor	82.81	318	P	P	18 05 37.5	+0.2
ODBI	Odobesti	82.84	319	⇑P	P	18 05 38.0	+0.6
WCT	Wildcat Mounta	82.92	52	IAmb	IAmb	18 05 40.2	
	comp=Z,3.6nm,0.8s						
FURC	Furnace Creek,	82.93	52	IAmb	IAmb	18 05 40.5	
	comp=Z,10nm,0.8s						
VRI	Vrincioaia	82.97	319	⇑P	P	18 05 38.8	+0.6
VRI	Vrincioaia	82.97	319	P	P	18 05 38.7	+0.6
TLBR	Topalu	82.98	318	⇓P	P	18 05 38.8	+0.6
PLOR	Plostina	83.02	319	⇑P	P	18 05 39.0	+0.6
PLOR	Plostina	83.02	319	P	P	18 05 39.0	+0.6
TPNV	Topopah Spring	83.10	51	IAmb	IAmb	18 05 41.2	
	comp=Z,11nm,0.8s						
BISRR	Bisoca	83.17	319	⇑P	P	18 05 39.8	+0.6
QSM	Queen of Sheba	83.19	52	IAmb	IAmb	18 05 42.0	
	comp=Z,11nm,0.8s						
GWY	Greenwater Val	83.22	52	P	P	18 05 40.0	+0.3
GWY				IAmb	IAmb	18 05 41.8	
	comp=Z,9.8nm,0.7s						
TURR	Turia	83.26	320	⇓P	P	18 05 40.1	+0.5
OZUR		83.36	320	⇑P	P	18 05 40.9	+0.8
ICOR	Ion Corvin	83.37	318	⇑P	P	18 05 41.0	+0.8
GSC	Goldstone, Bar	83.59	53	IAmb	IAmb	18 05 43.7	
	comp=Z,6.6nm,0.8s						
HWUT	Hardware Ranch	83.59	45	IAmb	IAmb	18 05 44.1	
	comp=Z,10nm,0.8s						
DUG	Dugway, Tooele	83.60	47	P	P	18 05 41.7	+0.1
DUG				IAmb	IAmb	18 05 44.0	
	comp=Z,7.8nm,0.8s						
DUG	Dugway, Tooele	83.60	47	P	P	18 05 41.7	+0.1
DUG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MLR	Muntele Rosu	83.63	319	IAmb	IAmb	18 05 43.3	
	comp=Z,11nm,1.3s						
MLR	Muntele Rosu	83.63	319	⇑P	P	18 05 42.0	+0.3
MLR	Muntele Rosu	83.63	319	P	P	18 05 41.9	+0.3
PRN	Pahroc Range	83.66	50	IAmb	IAmb	18 05 44.4	
	comp=Z,6.7nm,1.1s						
DOPR	Dopca	83.66	320	⇑P	P	18 05 42.2	+0.6
PSUT	Pine Spring	83.84	49	IAmb	IAmb	18 05 44.8	
	comp=Z,4.0nm,0.6s						
TCUT	Toone Canyon	83.97	46	P	P	18 05 45.4	+1.8
TCUT				IAmb	IAmb	18 05 45.7	
	comp=Z,8.1nm,0.7s						
SHPR	Sheep Range	84.07	51	P	P	18 05 44.4	+0.3
BW06	Boulder Array	84.15	44	IAmb	IAmb	18 05 45.9	
	comp=Z,6.2nm,1.2s						
PD31	Pinedale Array	84.15	44	IAmb	IAmb	18 05 45.9	
	comp=Z,6.0nm,1.2s						
PDAR	Pinedale Array	84.15	44	P	P	18 05 44.8	+0.3
	comp=Z,1.6nm,0.9s,baz=345,slow=1.5,SNR=10						
	comp=Z,1.6nm,0.9s						
ARR	Arges	84.45	320	⇑P	P	18 05 46.0	+0.4
MMAI	Mount Meron Ar	84.55	305	P	P	18 05 46.7	+0.3
	comp=Z,1.2nm,0.4s,baz=15,slow=3.6,SNR=8.4						
	comp=Z,1.2nm,0.4s						
V12A	Nelson	84.70	52	IAmb	IAmb	18 05 49.8	
	comp=Z,4.8nm,0.8s						
PFO	Pinyon Flats O	84.73	54	P	P	18 05 47.0	-0.3
PFO				IAmb	IAmb	18 05 49.2	
	comp=Z,7.5nm,0.7s						
PFO	Pinyon Flats O	84.73	54	P	P	18 05 47.0	-0.3
PFO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ELND	Elena	85.20	317	⇑P	P	18 05 49.1	-0.2
MTPU	Mount Pierson	85.21	49	IAmb	IAmb	18 05 52.3	
	comp=Z,4.2nm,0.8s						
P17A	Butcher Ranch,	85.32	47	IAmb	IAmb	18 05 52.4	
	comp=Z,4.8nm,0.7s						
MORC	Moravsky Berou	85.33	326	*e*P	P	18 05 50.6	+0.8
KNB	Kanab	85.36	50	IAmb	IAmb	18 05 53.1	
	comp=Z,6.1nm,0.7s						
BC3	Big Chuckawall	85.41	54	IAmb	IAmb	18 05 52.7	
	comp=Z,5.4nm,0.7s						
SRU	San Rafael Swe	85.67	47	IAmb	IAmb	18 05 54.1	
	comp=Z,3.5nm,0.7s						
JAVC	Velka Javorina	85.88	326	*e*P	P	18 05 53.2	+0.7
BZS	Buzias	85.95	321	⇓P	P	18 05 51.9	-1.0
BZS	Buzias	85.95	321	P	P	18 05 51.9	-1.0
HERR	Herculane	85.98	320	⇓P	P	18 05 52.0	-1.0
VRAC	Vranov	86.10	326	*e*P	P	18 05 53.4	-0.1
SRO	Srobarova	86.26	325	*e*P	P	18 05 53.6	-0.7
SRO				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SRO	Srobarova	86.26	325	*e*P	P	18 05 53.6	-0.7
KRUC	Moravsky	86.36	326	*e*P	P	18 05 54.2	-0.6
CLL	Collm	86.37	329	*i* P	P	18 05 55.0	+0.3
CLL	Collm	86.37	329	*i* P	P	18 05 55.0	+0.3
MODS	Modra-Piesok	86.40	325	*e*P	P	18 05 54.3	-0.7
MODS				pmax	pmax		
	comp=Z,11nm,1.4s						
MODS	Modra-Piesok	86.40	325	*e*P	P	18 05 54.3	-0.7
MDVR	Moldovita	86.43	321	⇑P	P	18 05 54.3	-0.9
MORH	Mrgy, Hungar	87.15	323	⇓P	P	18 05 57.7	-0.8
RONA	Rosalia, Austr	87.34	325	*i* PcP	P	18 05 59.6	+0.2
	comp=Z,4.1nm,0.7s						
CONA	Conrad Observa	87.40	326	*i* PcP	P	18 05 59.9	+0.1
	comp=Z,4.4nm,0.9s						
GERES	GERESS Array B	87.79	327	P	P	18 06 00.8	-0.9
	comp=Z,1.4nm,0.4s,baz=44,slow=6.1,SNR=11						
	comp=Z,1.4nm,0.4s						
ARSA	Arzberg	88.03	325	*e*P	P	18 06 02.3	-0.4
	comp=Z,2.1nm,0.6s						
MOA	Molln	88.23	326	*e*P	P	18 06 02.1	-1.5
	comp=Z,6.9nm,1.4s						
BIOA	Bad Ischl, Aus	88.64	327	*e*PcP	P	18 06 05.3	-0.2
	comp=Z,3.1nm,0.7s						
SOKA	Soboth	88.67	325	*i* P	P	18 06 05.0	-0.8
	comp=Z,4.3nm,0.9s						
LIT	Litokhoron	88.94	317	P	P	18 06 05.8	-1.3
KBA	Koelnbreinsper	89.21	326	*i* P	P	18 06 06.3	-2.2
	comp=Z,9.0nm,1.7s						
EKA	Eskdalemuir Ar	89.25	340	P	P	18 06 08.0	-0.2
	comp=Z,1.8nm,0.6s,baz=56,slow=3.3,SNR=14						
	comp=Z,1.8nm,0.6s						
EKA	Eskdalemuir Ar	89.25	340	P	P	18 06 08.0	-0.2
LESA	Schwarzleotal	89.29	327	*i* P	P	18 06 08.0	-0.6
	comp=Z,4.3nm,0.6s						
MYKA	Terra Mystica	89.39	326	*i* P	P	18 06 07.5	-1.7
	comp=Z,2.5nm,0.6s						
ABTA	Abfaltersbach	89.85	326	*e*P	P	18 06 09.5	-1.8
	comp=Z,6.2nm,1.0s						
WTTA	Wattenberg	89.89	327	*e*P	P	18 06 09.7	-1.9
	comp=Z,4.3nm,0.6s						
SQTA	Sankt Quirin	90.13	327	*e*P	P	18 06 11.6	-1.0
	comp=Z,2.0nm,0.5s						
RETA	Reutte	90.14	328	*e*P	P	18 06 10.4	-2.2
	comp=Z,1.7nm,0.6s						
FETA	Feichten	90.50	328	*e*P	P	18 06 13.4	-0.9
	comp=Z,7.2nm,1.7s						
DAVA	Damuels	90.69	328	*i* P	P	18 06 14.3	-1.0
	comp=Z,9.3nm,0.9s						
T25A	Trinidad	90.70	46	IAmb	IAmb	18 06 19.4	
	comp=Z,3.8nm,0.8s						
TASM	ASL Pad, Albuq	90.75	48	IAmb	IAmb	18 06 18.7	
	comp=Z,3.3nm,0.7s						
ANMO	Albuquerque	90.75	48	P	P	18 06 15.9	+0.1
ANMO				IAmb	IAmb	18 06 18.7	
	comp=Z,3.3nm,0.8s						
ANMO	Albuquerque	90.75	48	P	P	18 06 16.0	+0.1
ANMO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ABQ	Albuquerque	90.76	48	IAmb	IAmb	18 06 18.7	
	comp=Z,3.6nm,0.8s						
FUORN	Ofenpass-Fuorn	91.01	328	P	P	18 06 16.0	-0.8
TX31	Lajitas Ar. Si	96.08	51	P	P	18 06 40.7	+0.5
TX31				IAmb	IAmb	18 06 47.8	
	comp=Z,3.8nm,1.2s						
TXAR	Lajitas Array	96.08	51	P	P	18 06 40.9	+0.7
	comp=Z,1.2nm,0.6s,baz=298,slow=2.7,SNR=12						
TXAR				pP	pP	18 08 13.7	-0.3
	comp=Z,1.0nm,0.7s,baz=298,slow=2.7,SNR=5.0						
	comp=Z,1.2nm,0.6s						
QSPA	South Pole Qui	119.57	180	PKP	PKiKP	18 11 58.7	-0.1
	comp=Z,3.1nm,0.6s,baz=289,slow=0.7,SNR=34						
QSPA				PKKPbc	PKKPab	18 22 11.2	-0.9
	comp=Z,0.7nm,0.8s,baz=272,slow=1.4,SNR=5.4						
QSPA	South Pole Qui	119.57	180		PKPdf	18 11 58.3	-0.4
TORD	Torodi Ar. Bea	120.78	310	PKP	PKPdf	18 12 02.0	-0.5
	comp=Z,1.1nm,0.6s,baz=43,slow=2.4,SNR=9.0						
BOSA	Boshof	123.01	254	PKP	PKPdf	18 12 06.1	-0.5
	comp=Z,3.8nm,1.1s,baz=129,slow=2.9,SNR=3.8						
DBIC	Dimbokro	129.88	310	PKP	PKPdf	18 12 19.3	-0.7
	comp=Z,2.8nm,0.6s,baz=166,slow=3.0,SNR=4.9						
DBIC				SKPab	SKPbc	18 15 02.4	-1.0
	comp=Z,6.3nm,0.9s,baz=86,slow=5.0,SNR=6.7						
SNAA	Sanae	133.29	196	SKPab	SKPbc	18 15 14.0	+0.2
	comp=Z,2.0nm,0.9s,baz=202,slow=5.4,SNR=8.3						
ESPZ	Base Esperanza	144.84	167		PKPdf	18 12 45.4	-0.4
LPAZ	La Paz	151.63	68	PKP	PKPdf	18 13 00.1	+1.2
	comp=Z,1.0nm,0.8s,baz=231,slow=5.7,SNR=3.6						
LPAZ				PKPbc	PKiKP	18 13 06.9	+1.0
	comp=Z,4.8nm,0.7s,baz=266,slow=1.5,SNR=18						
PLCA	Paso Flores	153.55	122	PKPbc	PKiKP	18 13 08.7	+0.1
	comp=Z,1.6nm,0.6s,baz=216,slow=1.3,SNR=8.5						

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*UPP **17** 18:00:28.5±0.1, 67°.06N×20°.94E, h0^{km}, ML1.7, Suspected explosion*

*IDC **17** 18:00:29.4±2.3, 67°.08N×21°.13E, h0^{km}, mbtmp2.9/2, ML1.5/2, Error ellipse: s-maj=37.6km s-min=11.4km az=94.0*

ISC 17 18:00:28.6±1.0**, 67°.07N**±0°.03×**20°.96E**±0°.03**, h0^{km}, n18, σ0s.54**/23**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	Dundret	0.16	290	P	Pg	18 00 31.8	+0.1
	baz=104						
DUNU				S	Sg	18 00 34.1	+0.4
MASU	Masugnsbyn	0.56	45	P	Pg	18 00 39.4	+0.1
MASU				S	Sg	18 00 47.0	+0.4
ERTU	Ertsjaerv	0.71	136	P	Pg	18 00 41.8	-0.3
PAJU	Pajala	0.85	92	P	Pg	18 00 44.3	-0.4
PAJU				S	Sg	18 00 55.7	0.0
HARU	Harads	0.91	180	P	Pg	18 00 45.4	-0.5
KUA	Kurravaara	0.92	345	P	Pg	18 00 45.8	-0.4
RATU	Laukkuluspa	0.93	326	P	Pg	18 00 45.8	-0.5
RATU				S	Sg	18 00 58.5	+0.3
SALU	Saltoluokta	1.00	289	P	Pg	18 00 47.4	-0.4
SALU	Saltoluokta	1.00	289	*e*P	Pg	18 00 47.1	-0.7
LANU	Lannavaara	1.06	22	P	Pg	18 00 48.3	-0.6
NIKU	Nikkaluokta	1.09	318	P	Pg	18 00 48.9	-0.6
KOVU	Salmi	1.20	346	P	Pg	18 00 50.8	-0.7
KALU	Kalix	1.55	140	P	Pn	18 00 57.0	-0.4
SJUU	Sjulsmark	1.59	170	P	Pn	18 00 57.6	-0.2
HEF	Hetta	1.70	36	*e*P	Pn	18 00 59.2	-0.2
I37NO	I37NO	2.20	337	I	I	18 17 18.6	
	baz=150,slow=314,SNR=5.1						
ARCES	ARCESS Array B	3.00	32	Pn	Pn	18 01 17.5	+0.2
	0.1nm,0.3s,baz=218,slow=14,SNR=16						
ARCES				Sn	Sn	18 01 54.5	+0.5
	0.2nm,0.3s,baz=220,slow=24,SNR=8.0						
	2.1nm,0.8s						
FINES	FINESS Array B	6.07	156	Pn	Pn	18 02 00.7	+1.4
	baz=344,slow=14,SNR=1.8						
FINES				Sn	Sn	18 03 09.0	-0.4
	0.1nm,0.3s,baz=341,slow=23,SNR=1.5						
	4.8nm,1.2s						

IDC 17 18:28:43.2±1.6**, 1°.53N**×**125°.88E, h0^{km}, mb3.4**/5**, mbtmp3.4**/5**, Error ellipse: s-maj=187.2km s-min=21.1km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.90	159	P	P	18 33 49.0	+0.2
	0.4nm,0.3s,baz=336,slow=11,SNR=9.2						
	0.4nm,0.3s						
ASAR	Alice Springs	26.23	163	P	P	18 34 21.8	+1.7
	0.2nm,0.6s,baz=349,slow=9.9,SNR=3.2						
	0.2nm,0.6s						
STKA	Stephens Creek	36.42	157	P	P	18 35 47.7	-1.9
	1.0nm,0.4s,baz=342,slow=9.8,SNR=7.6						
	1.0nm,0.4s						
MKAR	Makanchi Array	58.88	326	P	P	18 38 44.4	+0.4
	0.2nm,0.4s,baz=128,slow=8.8,SNR=1.8						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	63.14	328	P	P	18 39 12.5	-0.2
	0.1nm,0.4s,baz=125,slow=6.1,SNR=2.8						
	0.1nm,0.4s						

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*NEIC **17** 18:29:19.7±3.0, 35°.73N±0°.04×120°.37W±0°.03, h6^{km}±3^{km}, Error ellipse: s-maj=6.7km s-min=2.2km az=212.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.21; $M_{\theta\theta}$-3.28; $M_{\phi\phi}$3.48; $M_{r\theta}$0.54; $M_{\theta\phi}$0.66; $M_{\phi r}$0.35; Fault plane solution: $M_0$3.51000×10^{15} NP1: ϕ_s230.31000°, δ87.95000°, λ-10.66000°. NP2: ϕ_s320.70000°, δ79.35000°, λ-177.92000°. Principal axes: T 3.5891, Plg6.0000°, Azm276.0000°; N -0.1696, Plg79.0000°, Azm40.0000°; P -3.4195, Plg9.0000°, Azm185.0000°;*

*IDC **17** 18:29:20.5±1.5, 35°.74N×120°.13W, h0^{km}, mb3.4/2, mbtmp3.5/8, ML3.9/5, MS3.8/22 Error ellipse: s-maj=18.9km s-min=9.1km az=77.0*

*NCEDC **17** 18:29:21.0±2.7, 35°.81N±0°.04×120°.36W±0°.03, h6^{km}±4^{km}, Mwr4.3/8, mb4.3/18(NEIC), ML4.1/178(NEIC), Mwr4.3/175(NEIC), Mww4.4/20(NEIC), Error ellipse: s-maj=6.4km s-min=2.2km az=211.0*

*NEIC **17** 18:29:21, 35°.81N×120°.35W, h12^{km}*

*NEIC **17** 18:29:21, 35°.81N×120°.35W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.66; $M_{\theta\theta}$-2.75; $M_{\phi\phi}$3.41; $M_{r\theta}$-1.00; $M_{\theta\phi}$0.71; $M_{\phi r}$0.00; Fault plane solution: $M_0$3.36000×10^{15} NP1:ϕ_s49.42000°, δ76.29000°, λ-16.56000°. NP2:ϕ_s143.46000°, δ73.92000°, λ-165.72000°. Principal axes: T 3.4933, Plg2.0000°, Azm97.0000°; N -0.2786, Plg69.0000°, Azm191.0000°; P -3.2147, Plg21.0000°, Azm6.0000°;*

*NEIC **17** 18:29:21, 35°.81N×120°.23W, h12^{km}, Moment Tensor Solution. Duration: 0 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.60; $M_{\theta\theta}$-3.92; $M_{\phi\phi}$4.52; $M_{r\theta}$0.07; $M_{\theta\phi}$0.95; $M_{\phi r}$-2.50; Fault plane solution: $M_0$5.02000×10^{15} NP1: ϕ_s233.91000°, δ69.55000°, λ10.76000°. NP2: ϕ_s140.12000°, δ79.93000°, λ159.22000°. Principal axes: T 5.6150, Plg22.0000°, Azm95.0000°; N -1.5440, Plg67.0000°, Azm295.0000°; P -4.0710, Plg7.0000°, Azm188.0000°;*

*NEIC **17** 18:29:21, 35°.81N×120°.35W, h6^{km}*

*NEIC **17** 18:29:21, 35°.81N×120°.35W, h6^{km}*

ISC 17 18:29:20.7±0.7**, 35°.77N**±0°.02×**120°.37W**±0°.02**, h11**^{km}±4^{km}**, n286, σ1s.04**/273**, mb4.2**/5**, MS3.9**/14**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKLM	Kerr Lake	0.03	93		Pg	18 29 22.7	0.0
GHIB	Gold Hill	0.06	18		Pg	18 29 22.5	-0.6
GHIB					Sg	18 29 23.6	-1.1
GHIB	Gold Hill	0.06	18		Pg	18 29 22.4	-0.6
GHIB					Sg	18 29 23.5	-1.2
PHAM	Harlan Ranch	0.07	340		Pg	18 29 23.0	-0.1
TCHL	Shandon	0.09	196		Pg	18 29 24.5	+1.2
PAGB	Antelope Grade	0.11	114		Pg	18 29 24.0	+0.4
PAGB					Sg	18 29 26.6	+1.0
PHFM	Heflinger Ranc	0.11	347		Pg	18 29 23.5	-0.2
PMRM	Maxey Ranch	0.11	84		Pg	18 29 23.7	+0.1
PWKM	Work Ranch	0.12	289		Pb	18 29 24.5	-0.6
THIS	South End of C	0.13	113		Pg	18 29 24.4	+0.5
TRAM	Private Proper	0.13	140		Pb	18 29 24.6	-0.6
PHGM	Hog Canyon	0.14	318		Pg	18 29 24.2	+0.2
PHGM					Sg	18 29 26.7	+0.3
CTM	Castle Mountai	0.16	10		Pg	18 29 24.7	+0.3
JCNB	Joaquin Canyon	0.17	343		Pg	18 29 24.7	+0.2
JCNB					Sg	18 29 27.5	+0.3
PSTM	Stockdale Moun	0.19	324		Pg	18 29 25.1	+0.2
PSTM	Stockdale Moun	0.19	324		Pg	18 29 25.0	+0.1
PSTM					Sg	18 29 27.9	+0.2
TRC	Taylor Ranch	0.19	334		Pg	18 29 25.2	+0.4
TRC					Sg	18 29 28.7	+0.9
PVCM	Vineyard Canyo	0.20	318		Pg	18 29 25.3	+0.2
PKD	Bear Valley Ra	0.22	321		Pg	18 29 25.1	-0.3
PKD				IAML		18 29 29.1	
	comp=N,59µm,0.5s						
PKD				IAML		18 29 29.1	
	comp=E,72µm,0.5s						
PPO	Portuguese Can	0.22	295		Pb	18 29 26.3	-0.5
TCAS	Cass Winery, P	0.23	223		Pb	18 29 26.6	-0.2
TCAS					Sg	18 29 30.6	+1.9
TSCN	Private Proper	0.23	175		Pb	18 29 26.9	0.0
AVNL	Avenal, CA USA	0.25	14		Pg	18 29 26.6	+0.7
TRAY	Twisselman Ran	0.30	138		Pb	18 29 27.7	-0.4
TRAY					Sb	18 29 32.7	-0.4
PBPM	Bitterwater Pu	0.31	129		Pb	18 29 28.1	-0.1
LCUV	Le Cuvier	0.32	248		Pb	18 29 28.0	-0.5
LCUV					Sb	18 29 33.1	-0.5
PSMM	Smith Mountain	0.35	328		Pg	18 29 28.4	+0.7
RAMR	Ramage Ranch	0.43	251		Pb	18 29 30.1	-0.2
PANM	San Antonio Re	0.44	271		Pb	18 29 30.1	-0.3
PTAM	Tassajara Cree	0.47	216		Pb	18 29 31.1	0.0
YEG	Yeguas Mountai	0.47	135		Pb	18 29 31.0	-0.1
PSAM	San Ardo	0.49	301		Pg	18 29 30.6	+0.3
EFD	Emergency Oper	0.54	213		Pg	18 29 29.2	-2.0
SMMC	Simmler	0.55	146		Pb	18 29 32.4	-0.1
PMPB	Monarch Peak	0.56	322		Pg	18 29 31.9	+0.2
PMPB				IAML		18 29 49.1	
	comp=E,14µm,0.8s						
PMPB				IAML		18 29 50.5	
	comp=N,13µm,1.3s						
WSRE	Westside REC,	0.60	20		Pb	18 29 33.8	+0.6
LSDC	Los Osos Digit	0.61	219		Pb	18 29 34.0	+0.6
PCBM	Cambria	0.62	246		Pb	18 29 33.6	+0.1
CARC	Carrizo Plain	0.63	137		Pb	18 29 33.8	0.0
DPD	Davis Peak	0.64	212		Pn	18 29 34.5	-1.2
PABC	Pismo Preserve	0.65	200		Pn	18 29 34.7	-1.2
DCD	Diablo Creek	0.68	215		Pb	18 29 35.0	+0.5
PCCM	Crazy Canyon	0.72	296		Pg	18 29 34.9	+0.3
LRC	Lone Oak Road	0.72	311		Pg	18 29 34.8	+0.1
HULI	Fort Hunter Li	0.74	290		Pg	18 29 35.3	+0.1
HULI				IAML		18 29 50.3	
	comp=N,14µm,0.5s						
CRGC	Crocker Grade	0.75	135		Pb	18 29 36.1	+0.3
PAPM	Alder Peak	0.82	280		Pg	18 29 36.6	+0.1
LRV	Little Rabbit	0.83	321		Pg	18 29 37.0	+0.2
BMSM	Mercy Hot Spri	0.95	339		Pg	18 29 39.1	+0.1
BSGM	Shirttail Gulc	0.96	312		Pg	18 29 38.5	-0.7
BBGB	Big Mountain B	0.97	326		Pg	18 29 39.1	-0.3
VOG	Valley Oaks Go	0.97	55		Pg	18 29 38.7	-0.6
PKM	Mcpherson Peak	0.99	153		Pb	18 29 40.0	0.0
BVL	Bear Valley	1.04	321		Pb	18 29 40.2	-0.6
VES	Vestal, Richgr	1.05	86		Pb	18 29 39.9	-1.0
VES				Sg	Sb	18 29 54.0	-0.5
VES				IAML		18 30 02.6	
	comp=E,8µm,0.6s						
BSMM	Soledad Missio	1.05	306		Pb	18 29 40.1	-0.8
KARE	Kearney REC, C	1.08	40		Pb	18 29 40.1	-1.3
FIGC	Figueroa Mtn.	1.09	163		Pn	18 29 41.8	-0.2
BAPM	Anderson Peak	1.11	292		Pb	18 29 41.0	-1.0
BAKC	Calstate	1.12	112		Pb	18 29 41.2	-0.8
BJCM	Johnson Can.	1.13	313		Pb	18 29 41.2	-1.1
BCW	Bitter Crk WRg	1.14	136		Pb	18 29 41.8	-0.8
BJOM	Mount Johnson	1.14	318		Pb	18 29 41.7	-0.8
SCZ	Santa Cruz	1.17	315		Pb	18 29 41.7	-1.3
NJQ	Nojoqui County	1.25	173		Pb	18 29 43.9	-0.3
MAGC	SCE Magundon P	1.25	109		Pn	18 29 42.9	-1.2
BPRM	Ponciano Ridge	1.27	300		Pn	18 29 43.2	-1.3
SYP	Santa Ynez Pea	1.29	165		Pb	18 29 44.8	-0.2
BSRM	Salinas Radio	1.29	314		Pn	18 29 43.5	-1.2
BPCNC	Pine Canyon	1.29	308		Pn	18 29 43.6	-1.1
SAO	San Andreas Ge	1.32	319		Pn	18 29 43.8	-1.3
FRI	Friant	1.33	24		Pn	18 29 43.9	-1.3
FRP	Fremont Peak	1.33	318		Pn	18 29 44.0	-1.3
FRP	Fremont Peak	1.33	318		Pn	18 29 43.8	-1.5
LTR	Lone Tree Road	1.34	326		Pb	18 29 45.9	0.0
SPG2	Springville 2	1.37	71		Pn	18 29 44.8	-1.0
HSFM	Saint Francis	1.38	319		Pn	18 29 45.3	-0.6
MHDM	Hidden Dam	1.39	16		Pn	18 29 44.8	-1.3
ARVC	Arvin	1.41	117		Pn	18 29 45.4	-0.9
SBC	Santa Barbara	1.44	158		Pb	18 29 47.3	-0.2
LEGD	La Grand CA	1.45	7		Pn	18 29 45.6	-1.3
LEGD	La Grand CA	1.45	7	IAML		18 30 04.6	
	comp=N,3µm,0.4s						
LEGD				IAML		18 30 07.9	
	comp=E,3µm,0.4s						
FORD	Fort Ord Natur	1.46	309		Pn	18 29 45.8	-1.2
HFEM	San Felipe	1.47	326		Pn	18 29 47.1	0.0
TEJ	El Tejon	1.48	111		Pn	18 29 45.8	-1.5
HPCM	Pacheco Lake	1.48	331		Pn	18 29 47.0	-0.3
LOK	Lockwood Valle	1.48	135		Pn	18 29 46.7	-0.7
HERM	Elkhorn Road	1.49	314		Pn	18 29 46.4	-1.0
HMOM	Monterey	1.50	304		Pn	18 29 46.4	-1.2
SCKWR	San Luis Creek	1.52	338		Pb	18 29 48.5	-0.4
CSR	Chase Ranch	1.53	321		Pn	18 29 47.4	-0.7
CDC	Canada Road	1.54	325		Pn	18 29 47.7	-0.4
HCAM	Canada Road	1.54	325		Pn	18 29 48.4	+0.2
ISA	Isabella, Lake	1.55	94		Pn	18 29 47.4	-0.9
ISA				IAML		18 30 09.7	
	comp=N,3µm,0.2s						
ISA				IAML		18 30 10.8	
	comp=E,3µm,0.5s						
HCBM	Chamberlain	1.56	318		Pn	18 29 47.7	-0.6
THC	Tehachapi Micr	1.64	121		Pn	18 29 48.9	-0.8
JELB	Ellicott, Sant	1.65	315		Pn	18 29 49.0	-0.5
CADM	Anderson Res.	1.72	324		Pn	18 29 50.2	-0.3
MMIM	Miami Mountain	1.72	17		Pn	18 29 50.1	-0.6
BSM	San Miguel Isl	1.73	179		Pn	18 29 50.9	+0.1
WORM	Onyx Ranch	1.73	92		Pn	18 29 51.0	+0.2
CMPM	Mikes Peak	1.75	335		Pn	18 29 51.2	0.0
JLAB	Laurel Hill	1.76	322		Pn	18 29 50.8	-0.4
KCC	Kaiser Creek	1.76	28		Pn	18 29 50.9	-0.3
OSI	Osito Audit: C	1.78	130		Pn	18 29 50.4	-1.1
OSI				IAML		18 30 19.2	
	comp=E,3µm,1.1s						
OSI				IAML		18 30 20.8	
	comp=N,3µm,0.7s						
MBUM	Mount Bullion	1.80	7		Pn	18 29 51.2	-0.6
CCOB	Coe Ranch Numb	1.82	325		Pn	18 29 52.0	0.0
JUCM	University of	1.83	313		Pn	18 29 50.4	-1.7
ARN	Arnold Ranch	1.83	330		Pn	18 29 51.5	-0.6
MHC	Mount Hamilton	1.87	327		Pn	18 29 52.1	-0.7
MHC				IAML		18 30 29.7	
	comp=E,1µm,1.1s						
MTOS	Mt Oso, Westle	1.89	336		Pn	18 29 51.7	-1.3
BUCR	Buckhorn Ranch	1.90	5		Pn	18 29 52.7	-0.5
CMMM	Mount Mocho	1.91	332		Pn	18 29 53.2	-0.1
MHR	Mount Hamilton	1.94	325		Pn	18 29 53.5	-0.1
TPO	Tropico Hills	1.97	116		Pn	18 29 53.7	-0.4
TPO				IAML		18 30 22.6	
	comp=N,3µm,0.9s						
CWC	Cottonwood Cre	1.97	70		Pn	18 29 54.8	+0.6
CWC				IAML		18 30 21.5	
	comp=E,3µm,0.3s						
JBNB	Ben Lomond Mou	1.97	314		Pn	18 29 52.9	-1.2
CMLM	Mount Lewis	1.99	329		Pn	18 29 54.2	-0.2
WNMM	Nine Mile Cany	2.00	87		Pn	18 29 55.1	+0.7
OAT	Oat Mountain	2.03	134		Pb	18 29 56.5	-1.1
FOXC	Fox Airport	2.03	120		Pn	18 29 55.7	+0.8
CALM	Calaveras Res.	2.03	326		Pn	18 29 54.5	-0.4
MFS	McCloud Flat S	2.07	80		Pn	18 29 56.1	+0.5
CSTL	Corral Hollow	2.07	334		Pn	18 29 56.0	+0.6

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JSJM  St Joseph         2.08 319          Pn     18 29 55.5 -0.1
JPC   Peters Creek,     2.10 316          Pn     18 29 55.1 -0.8
JBMM  Black Mountain    2.11 318          Pn     18 29 55.2 -0.8
DTP   Desert Tortois    2.12 103          Pn     18 29 57.0 +0.8
MDPB  Devils Postpil    2.12  29          Pn     18 29 56.9 +0.4
MDPB  Devils Postpil    2.12  29   IAML          18 30 33.1
      comp=N,2µm,0.7s
MDPB                               IAML          18 30 35.3
      comp=E,2µm,0.7s
MMPM  Mammoth Pass      2.13  30          Pn     18 29 57.0 +0.6
MMPM  Mammoth Pass      2.13  30          Pn     18 29 57.1 +0.6
WCSM  Coso Springs S    2.13  82          Pn     18 29 57.5 +1.2
SRTC  Snort             2.13  91          Pn     18 29 56.9 +0.5
JPSM                    2.14 312          Pn     18 29 55.0 -1.3
MTUM  Tungsten Hills    2.14  42          Pn     18 29 57.6 +1.0
TIN   Tinemaha, Big     2.15  53   Pn     Pn     18 29 57.6 +1.0
MINS  Minaret Summit    2.15  29          Pn     18 29 57.4 +0.6
MLIM  Lincoln Peak      2.15  30          Pn     18 29 58.2 +1.3
MLIM  Lincoln Peak      2.15  30          Pn     18 29 58.0 +1.1
WENL  Wente Vineyard    2.15 329          Pn     18 29 56.6  0.0
JFP   Foothills Park    2.16 318          Pn     18 29 55.8 -0.8
MDYM  Dry Creek         2.17  30          Pn     18 29 58.0 +0.9
MLCM  Laurel Creek C    2.17  32          Pn     18 29 57.9 +0.8
JSFB  Stanford Teles    2.18 319          Pn     18 29 56.8 -0.1
MMLB  Mammoth Lakes     2.19  30          Pn     18 29 58.3 +1.0
MCMM  Convict Lake      2.19  33          Pn     18 29 58.5 +1.2
CVLM  Vallecito         2.19 328          Pn     18 29 57.2 +0.1
MCVM  Convict Lake      2.19  34          Pn     18 29 58.3 +0.9
MDCM  Deadman Creek     2.21  29          Pn     18 29 58.4 +0.8
LRMC  Laurel Mtn Rad    2.21  97          Pn     18 29 57.1 -0.3
LRMC                               IAML          18 30 31.9
      comp=E,1µm,0.7s
LRMC                               IAML          18 30 34.8
      comp=N,1µm,0.7s
MCBM  Casa Benchmark    2.21  32          Pn     18 29 58.7 +1.1
MEMM  East Mammoth H    2.21  31          Pn     18 29 58.6 +1.0
JRSC  Jasper Ridge      2.21 318          Pn     18 29 56.3 -1.1
JRSC                               IAML          18 30 47.3
      comp=E,822nm,0.9s
MCSM  Casa Diablo Ho    2.21  32          Pn     18 29 58.8 +1.1
CGO   Cerro Gordo       2.22  69          Pn     18 29 58.4 +0.7
MLAC  Mammoth, Mammo    2.23  33          Pn     18 29 58.9 +1.1
MDRNC Doe Ridge         2.23  33          Pn     18 29 59.1 +1.2
CNIC  Niles Canyon      2.23 325          Pn     18 29 57.4 -0.3
CLC   China Lake        2.25  88          Pn     18 29 57.9 -0.2
CLC                                IAML          18 30 35.5
      comp=E,821nm,1.0s
CLC                                IAML          18 30 52.3
      comp=N,805nm,0.9s
CMB   Columbia Colle    2.26 360          Pn     18 29 57.6 -0.4
MFBM  Five Bridges      2.27  43          Pn     18 29 59.8 +1.5
MLHM  Little Hot Cre    2.27  33          Pn     18 29 59.9 +1.4
CBSNC Byron Hot Spri    2.28 334          Pn     18 29 57.8 -0.5
CMOB  Morgan Territo    2.33 331          Pn     18 29 59.6 +0.5
WSHM  Spangler Hills    2.35  93          Pn     18 29 59.0 -0.3
WSHM                               IAML          18 30 36.3
      comp=N,858nm,0.7s
WSHM                               IAML          18 30 37.1
      comp=N,1µm,0.8s
MPMC  Manual Prospec    2.36  82          Pn     18 29 59.4 -0.1
MPMC                               IAML          18 30 39.4
      comp=E,1µm,1.1s
MPMC                               IAML          18 30 46.5
      comp=N,912nm,1.0s
JCHM  Cahill Ridge      2.37 318          Pn     18 29 58.4 -1.2
CLCB  Lake Chabot       2.39 326          Pn     18 29 59.7  0.0
CSLM  San Leandro Hi    2.40 325          Pn     18 29 59.9 -0.1
PASC  Pasadena Art C    2.40 131          Pn     18 29 59.4 -0.7
PASC                               IAML          18 30 35.6
      comp=E,604nm,1.0s
PASC                               IAML          18 30 48.1
      comp=N,559nm,1.1s
MRCM  Red Rock Canyo    2.42  38          Pn     18 30 01.8 +1.4
SAC   San Andreas       2.44 318          Pn     18 29 59.5 -1.0
BGC   Bolinger Road     2.45 327          Pn     18 30 00.7  0.0
MWC   Mount Wilson      2.45 129          Pn     18 30 00.9 +0.1
MWC                                IAML          18 30 38.4
      comp=N,1µm,0.9s
MWC                                IAML          18 30 39.8
      comp=E,1µm,1.0s
CRHM  Round Hill Res    2.45 328          Pn     18 30 01.3 +0.6
CCCA  Chr Cany lake     2.46  95          Pn     18 30 00.7 -0.2
CCCA                               IAML          18 30 43.6
      comp=E,1µm,1.3s
JSBM  San Bruno Moun    2.50 320          Pn     18 30 00.8 -0.6
DSP   Deep Springs      2.50  50          Pn     18 30 02.0 +0.7
DSP                                IAML          18 30 46.8
      comp=E,852nm,0.8s
DSP                                IAML          18 30 48.5
      comp=N,732nm,1.1s
JMGM  Milagra Ridge     2.51 318          Pn     18 30 00.3 -1.2
BRIB  Briones           2.57 327          Pn     18 30 02.1 -0.2
BKS   Berkeley--Byer    2.58 325          Pn     18 30 02.2 -0.2
JPRM  Presidio of Sa    2.63 321          Pn     18 30 02.5 -0.6
AGC   Angel Island      2.66 322          Pn     18 30 02.7 -0.8
CPIM  Pinole Ridge      2.66 327          Pn     18 30 03.9 +0.3
WELL  Weller Preserv    2.67 354          Pn     18 30 04.3 +0.6
GRAC  Grapevine Rang    2.71  62          Pn     18 30 05.0 +0.7
QSM   Queen of Sheba    2.85  85          Pn     18 30 05.8 -0.3
QSM                                IAML          18 30 54.2
      comp=E,705nm,0.8s
QSM                                IAML          18 30 58.7
      comp=N,826nm,0.8s
FARB  Farallon Islan    2.85 313          Pn     18 30 04.5 -1.7
LHV   Little Huntoon    2.89  31          Pn     18 30 06.8 +0.2
LHV                                IAML          18 31 04.5
      comp=N,950nm,0.8s
FURC  Furnace Creek,    2.92  75          Pn     18 30 07.5 +0.4
GMN   Gold Mountain     2.93  58          Pn     18 30 07.5 +0.1
GMN                                IAML          18 31 00.5
      comp=N,768nm,0.6s
GMN                                IAML          18 31 04.8
      comp=E,424nm,0.6s
GSC   Goldstone, Bar    2.94  98          Pn     18 30 06.8 -0.7
GSC                                IAML          18 31 02.0
      comp=N,747nm,0.8s
GSC                                IAML          18 31 04.6
      comp=E,894nm,0.7s
GWY   Greenwater Val    3.03  81          Pn     18 30 08.6 -0.2
GWY                                IAML          18 31 09.3
      comp=N,596nm,1.5s
GWY                                IAML          18 31 10.1
      comp=E,550nm,1.0s
CVS   Carmenet Viney    3.06 328          Pn     18 30 08.6 -0.5
MCCM  Marconi Confer    3.10 320          Pn     18 30 08.3 -1.3
MCCM                               IAML          18 31 17.8
      comp=N,339nm,1.7s
NVAR  Mina Array Bea    3.12  31   Pn     Pn     18 30 11.0 +0.9
      comp=N,6.9nm,0.3s,baz=217,slow=14,SNR=38
NVAR                               Pg     Pb     18 30 14.9 -1.5
      comp=N,14nm,0.3s,baz=212,slow=17,SNR=48
NVAR                               Lg     Lg     18 30 58.4
      comp=N,23nm,0.3s,baz=216,slow=31,SNR=5.2
NVAR                               LR     LR     18 31 38.2
      comp=N,720nm,22.0s,baz=222,slow=44
      comp=N,3.2nm,0.3s
NVAR  Mina Array Bea    3.12  31          Pn     18 30 10.7 +0.5
NV11  Mina Array Sit    3.19  33          Pn     18 30 11.7 +0.7
WCT   Wildcat Mounta    3.19  70          Pn     18 30 11.3 +0.4
WCT                                IAML          18 31 10.1
      comp=E,294nm,1.3s
RYN   Ryan              3.21  27          Pn     18 30 11.8 +0.6
RYN                                IAML          18 31 06.5
      comp=E,295nm,1.1s
ELS   Elsinore Mount    3.22 130          Pn     18 30 10.7 -0.6
SHOC  Shoshone, Teco    3.33  87          Pn     18 30 12.7 -0.1
PNTR  Pine Nut          3.37  10          Pn     18 30 14.5 +1.1
PNTR                               IAML          18 31 19.9
      comp=E,783nm,1.0s
PNTR                               IAML          18 31 28.1
      comp=N,763nm,1.2s
MNRC  McLaughlin Min    3.51 333          Pn     18 30 15.3  0.0
MPK   Martis Peak       3.53   4          Pn     18 30 17.4 +1.7
MPK                                IAML          18 31 34.7
      comp=N,656nm,0.9s
GDXM  Geysers           3.59 328          Pn     18 30 14.9 -1.5
DNR   Dunn Ranch,Anz    3.79 124          Pn     18 30 19.3 +0.1
HOPS  Hopland Field     3.87 327          Pn     18 30 20.1  0.0
PFO   Pinyon Flats O    3.88 123   Pn     Pn     18 30 20.7 +0.3
      comp=N,9.8nm,0.3s,baz=298,slow=11,SNR=75
PFO                                LR     LR     18 31 03.1
      comp=N,199nm,21.4s,baz=310,slow=28
PFO                                Sn     Sn     18 31 05.7 -0.2
      comp=N,14nm,0.3s,baz=296,slow=21,SNR=8.4
      comp=N,71nm,0.7s
PFO   Pinyon Flats O    3.88 123          Pn     18 30 20.1 -0.3
ORV   Oroville          3.88 347          Pn     18 30 21.0 +0.7
PMD   Palm Desert       3.91 122          Pn     18 30 20.4 -0.4
MTPC  Mountain Pass     3.93  93          Pn     18 30 20.5 -0.7
MTPC                               IAML          18 31 30.4
      comp=N,170nm,1.1s
MTPC                               IAML          18 31 57.0
      comp=E,154nm,0.8s
CPE   Camp Elliot       3.95 136          Pn     18 30 21.0 -0.2
DPP   Dos Picos Cty     3.96 133          Pn     18 30 21.1 -0.4
Q09A  Carvers           3.97  39          Pn     18 30 22.1 +0.4
PAHR  Pah Rah Range     4.00  11          Pn     18 30 23.0 +0.9
PAHR                               IAML          18 31 35.2
      comp=N,163nm,1.3s
PAHR                               IAML          18 31 40.8
      comp=E,201nm,1.4s
BEKR  Beckworth         4.08   0          Pn     18 30 23.5 +0.2
BEKR                               IAML          18 31 40.3
      comp=E,252nm,0.8s
BEKR                               IAML          18 31 40.5
      comp=N,164nm,0.8s
BORC  Borrego Spring    4.11 126          Pn     18 30 23.5 +0.1
BORC                               IAML          18 31 27.7
      comp=N,155nm,0.9s
BORC                               IAML          18 31 29.5
      comp=E,176nm,1.1s
S11A  Rachel            4.16  62          Pn     18 30 24.2 -0.1
DANC  Danby, Needles    4.24 104          Pn     18 30 25.7 +0.5
SHPR  Sheep Range       4.28  79          Pn     18 30 26.8 +0.9
BAR   Barrett           4.35 134          Pn     18 30 26.7 -0.1
V12A  Nelson            4.49  89          Pn     18 30 28.6 -0.1
V12A                               IAML          18 31 54.8
      comp=N,124nm,1.3s
BC3   Big Chuckawall    4.57 116          Pn     18 30 28.8 -1.0
BC3                                IAML          18 31 59.9
      comp=N,139nm,0.9s
BC3                                IAML          18 32 10.2
      comp=E,145nm,1.3s
IRM   Iron Mountain     4.58 109          Pn     18 30 29.4 -0.6
IRM                                IAML          18 31 26.2
      comp=E,124nm,0.7s
IRM                                IAML          18 32 15.4
      comp=N,94nm,1.8s
CBX   Cerro Bola        4.62 137   IAML          18 31 29.2
      comp=E,172nm,1.9s
CBX                                IAML          18 32 06.9
      comp=N,234nm,1.1s
O02D  Mt. Diablo Mer    4.79 337          Pn     18 30 33.7 +0.8
NEE2  Needles Airpor    4.81 100          Pn     18 30 32.5 -0.6
NEE2                               IAML          18 31 35.7
      comp=E,237nm,0.9s
YUH   Yuha Desert       4.83 129          Pn     18 30 33.6 +0.3
HATC  Hat Creek Radi    5.11 351          Pn     18 30 37.7 +0.5
HATC                               IAML          18 32 50.9
      comp=N,220nm,2.1s
BLYC  Blythe            5.22 111          Pn     18 30 37.9 -0.8
BLYC                               IAML          18 31 41.8
      comp=N,101nm,0.6s
BLYC                               IAML          18 32 19.7
      comp=E,109nm,1.0s
ESJX  Sierra Juarez     5.26 134          Pn     18 30 39.7 +0.3
ESJX                               IAML          18 32 38.2
      comp=E,61nm,0.1s
ESJX                               IAML          18 33 43.1
      comp=N,79nm,0.1s
W13A  Hualapai Mount    5.34  95   IAML          18 32 27.9
      comp=N,66nm,1.5s
W13A                               IAML          18 32 42.8
      comp=E,61nm,1.7s
Y14A  Wickenburg        6.33 105          Pn     18 30 53.5 -0.5
ELK   Elko              6.40  38   Pn     Pn     18 30 56.2 +1.1
      comp=E,2.4nm,0.5s,baz=234,slow=13
ELK                                Lg     Lg     18 32 39.1
      comp=E,5.3nm,0.3s,baz=299,slow=23,SNR=8.1
ELK                                LR     LR     18 33 31.7
      comp=E,414nm,18.9s,baz=242,slow=40
BGU   Big Grassy Mou    7.72  46          Pn     18 31 14.6 +1.3
PINE  Pine Mountain     8.02 357          Pn     18 31 14.3 -3.0
PDAR  Pinedale Array   10.90  47   Pn     Pn     18 32 01.6 +4.7
      comp=E,0.1nm,0.3s,baz=250,slow=13,SNR=3.4
PDAR                               Lg     Lg     18 35 00.9
      baz=232,slow=22,SNR=2.9
      comp=E,0.2nm,0.6s
ANMO  Albuquerque      11.39  90   LR     LR     18 36 50.3
      comp=E,455nm,19.4s,baz=278,slow=40
NEW   Newport          12.71  10   Pn     Pn     18 32 25.1 +3.7
      comp=E,0.2nm,0.3s,baz=199,slow=18,SNR=3.2
NEW                                LR     LR     18 37 57.7
      comp=E,524nm,18.8s,baz=192,slow=41
      comp=E,0.9nm,0.4s
LPIG  La Paz           14.53 140   LR     LR     18 38 41.8
      comp=E,438nm,18.5s,baz=2.5,slow=39
TPB01 Permian Basin    14.67 104          Pn     18 32 50.0 +1.7
TX31  Lajitas Ar. Si   15.47 110          Pn     18 32 59.5 +0.5
TX31                               IAmb   IAmb   18 33 08.2
      comp=Z,21nm,1.5s
TXAR  Lajitas Array    15.47 110   Pn     P      18 33 01.6 -1.8
      comp=Z,0.1nm,0.3s,baz=289,slow=12,SNR=13
TXAR                               LR     LR     18 39 35.7
      comp=Z,358nm,19.9s,baz=303,slow=40
      comp=Z,2.6nm,1.0s
TXAR  Lajitas Array    15.47 110          Pn     18 32 59.2 +0.2
SAND  Sanderson        16.39 106   Pn     Pn     18 33 11.6 +0.8
SMWD  Samnorwood       16.42  86   Pn     Pn     18 33 11.7 +0.5
SMWD                               IAmb   IAmb   18 33 27.8
      comp=Z,33nm,1.0s
SGCY  Sterling City    16.44  98   Pn     Pn     18 33 11.1 -0.4
BBB   Bella Bella      17.31 344   LR     LR     18 40 35.8
      comp=Z,384nm,19.3s,baz=174,slow=39
BRDY  Brady            18.36  98   P      Pn     18 33 35.0 -0.4
DEOK  Depew            19.36  83   P      P      18 33 44.8 -1.5
DEOK                               IAmb   IAmb   18 34 01.3
      comp=Z,13nm,1.0s
ECSD  EROS Data Cent   19.87  59          P      18 33 46.1 -5.8
ECSD                               IAmb   IAmb   18 33 50.0
      comp=Z,23nm,1.2s
TUL3  Leonard          19.92  82   P      P      18 33 49.0 -3.4
TUL3                               IAmb   IAmb   18 33 58.2
      comp=Z,17nm,0.9s
FFC   Flin Flon        22.82  28   P      P      18 34 23.1 -0.4
DLBC  Dease Lake       23.56 347   LR     LR     18 44 35.1
      comp=Z,451nm,20.5s,baz=134,slow=39
YKA   Yellowknife Ar   26.98   6   P      P      18 35 04.7 +2.5
      comp=Z,0.2nm,0.6s,baz=193,slow=9.7,SNR=4.3
YKA                                LR     LR     18 44 56.9
      comp=Z,156nm,21.6s,baz=286,slow=35
      comp=Z,0.2nm,0.6s
CMIG  Matias Romero    29.30 123   LR     LR     18 47 51.1
      comp=Z,310nm,18.9s,baz=287,slow=38
TKL   Tuckaleechee C   29.61  79   LR     LR     18 47 11.4
      comp=Z,363nm,19.0s,baz=343,slow=36
KDAK  Kodiak Island    30.68 326   LR     LR     18 45 32.2
      comp=Z,213nm,18.1s,baz=86,slow=32
I28M  Miner Creek      31.91 345   P      P      18 35 48.3 +2.4
I28M                               IAmb   IAmb   18 35 49.7
      comp=Z,3.4nm,0.9s
G31M  Satah River      32.22 350   P      P      18 35 50.7 +2.2
H29M  Whitestone       32.26 346   P      P      18 35 51.1 +2.1
H29M                               IAmb   IAmb   18 35 58.9
      comp=Z,4.9nm,1.2s
SADO  Sadowa           32.42  61   LR     LR     18 48 48.0
      comp=Z,274nm,21.6s,baz=355,slow=36
I26K  Coal Creek Min   32.53 342   P      P      18 35 53.5 +2.2
L22K  Petersville      32.76 334   P      P      18 35 55.8 +2.3
ILAR  Eielson Array    33.10 339   P      P      18 35 59.3 +3.0
      comp=Z,0.6nm,0.7s,baz=152,slow=8.2,SNR=8.0
      comp=Z,0.6nm,0.7s
INK   Inuvik           33.42 351   LR     LR     18 50 56.7
      comp=Z,294nm,21.3s,baz=182,slow=39
PPLA  Purkeypile       33.50 334   P      P      18 36 00.3 +0.3
J20K  Nowinta River    34.99 335   P      P      18 36 14.4 +1.7
J19K  Poorman          35.40 334   P      P      18 36 18.1 +1.9
J19K                               IAmb   IAmb   18 36 19.7
      comp=Z,3.8nm,0.8s
IMAR  Indian Mountai   36.01 337   P      P      18 36 23.4 +2.0
JTS   Las Juntas de    40.93 119   LR     LR     18 53 37.7
      comp=Z,145nm,21.4s,baz=316,slow=36
SFJD  Kangerlussuaq    49.77  29   LR     LR     18 59 12.7
      comp=Z,243nm,18.5s,baz=229,slow=36
ROSC  El Rosal         52.33 115   LR     LR     19 03 23.5
      comp=Z,80nm,18.5s,baz=269,slow=39
PPT   Papeete          59.83 213   LR     LR     18 59 29.8
      comp=Z,54nm,21.9s,baz=206,slow=30
BORG  Borgarnes        61.91  29   LR     LR     19 06 00.8
      comp=Z,122nm,19.9s,baz=294,slow=36
TIXI  Tiksi            62.57 341   LR     LR     19 11 48.7
      comp=Z,66nm,18.2s,baz=16,slow=41
H11N3 WAKE ISLAND Hy   64.99 277   T      T      19 49 32.5
      baz=58,slow=75,SNR=100
H11N2 WAKE ISLAND Hy   65.00 277   T      T      19 49 31.8
      baz=58,slow=75,SNR=114
H11N1 WAKE ISLAND Hy   65.01 277   T      T      19 49 32.9
      baz=58,slow=75,SNR=125
H11S1 WAKE ISLAND Hy   65.78 276   T      T      19 50 34.8
      baz=57,slow=75,SNR=38
H11S2 WAKE ISLAND Hy   65.79 276   T      T      19 50 35.4
      baz=57,slow=75,SNR=35
H11S3 WAKE ISLAND Hy   65.80 276   T      T      19 50 33.1
      baz=57,slow=75,SNR=23
MDP   Montagnes des    69.00  99   LR     LR     19 14 00.5
      comp=Z,48nm,18.7s,baz=22,slow=39
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*IDC **17** 18:41:45.9±1.0, 6°.53N×125°.05E, h0km, mb3.7/6, mbtmp3.7/6, MS2.3/1, Error ellipse: s-maj=22.8km s-min=15.1km az=110.0*

ISC 17 18:41:46.2±1.2,**7°.1N**±0°.2×**126°.3E**±0°.2,**h10**km**,n8,**σ1.s**12**/7,**mb3.8**/6,**Mindanao**

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Code  Station Name      Δ°   AZ°   Phase ID         Time       Res
                                   Op     ISC     h  m  s     ISC
DAV   Davao City (W)    0.67 268   Pg     Pb     18 42 00.0 +0.1
      1µm,0.3s,baz=229,slow=1.4,SNR=67
DAV                                LR     LR     18 42 33.6
      comp=Z,367nm,19.6s,baz=77,slow=63
KAPI  Kappang          13.67 209   LR     LR     18 50 01.4
      comp=Z,14nm,18.2s,baz=3.5,slow=39
WRA   Warramunga Arr   28.02 164   P      P      18 47 36.9 -0.8
      0.5nm,0.6s,baz=327,slow=11,SNR=7.4
      0.5nm,0.6s
ASAR  Alice Springs    31.48 166   P      P      18 48 07.1 -1.2
      0.3nm,0.5s,baz=343,slow=7.2,SNR=8.0
      0.3nm,0.5s
STKA  Stephens Creek   41.43 160   P      P      18 49 34.5 +1.4
      1.1nm,0.7s,baz=318,slow=14,SNR=2.8
      1.1nm,0.7s
MKAR  Makanchi Array   54.55 324   P      P      18 51 15.3 +0.7
      0.5nm,0.5s,baz=122,slow=8.0,SNR=5.3
      0.5nm,0.5s
KURBB Kurchatov Arra   58.68 327   P      P      18 51 44.0 +0.2
      0.6nm,0.2s,baz=137,slow=5.8,SNR=2.8
      0.6nm,0.2s
BVAR  Borovoye Array   64.27 326   P      P      18 52 20.8 -0.8
      0.6nm,0.8s,baz=120,slow=8.5,SNR=2.8
      0.6nm,0.8s
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*PRU **17** 18:53:44.7, 41°.02N×20°.13E, h10km, M4.4*
*PDG **17** 18:53:44.8±0.6, 40°.99N×19°.60E, h12km±1km, MD3.5/1, ML3.5/13, Error ellipse: s-maj=0.6km s-min=1.1km az=0.0*
*NEIC **17** 18:53:45.7±1.5, 40°.99N±0°.04×19°.64E±0°.07, h16km±5km, mb4.4/17, Error ellipse: s-maj=8.0km s-min=5.0km az=81.0*
*SKO **17** 18:53:46.1, 41°.03N×19°.65E, h9km, ML3.3*
*IDC **17** 18:53:46.3±2.9, 40°.90N×19°.51E, h36km±19km, mb3.5/10, mbtmp3.6/16, ML3.1/5, MS3.0/2, Error ellipse: s-maj=29.4km s-min=12.0km az=36.0*
*THE **17** 18:53:46.5, 41°N±2°×2°0E±°, h0km±3km, M3.3/16, MLh3.3/16*
*TIR **17** 18:53:46.7, 40°.99N×19°.75E, h34km, Ml3.6/4*
*BEO **17** 18:53:47.2±0.5, 41°.03N×19°.67E, h17km±3km, ML3.4/10*

ISC 17 18:53:46.7±0.9,**41°.00N**±0°.02×**19°.69E**±0°.02,**h31**km±6km**,n222,**σ1.s**54**/287,**mb4.2**/14**,16C-22D,Albania**

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Code  Station Name      Δ°   AZ°   Phase ID         Time       Res
                                   Op     ISC     h  m  s     ISC
TIR   Tirane            0.38  20   Pg     Pb     18 53 54.1 -1.1
TIR                                Sg     Sb     18 54 01.6 +0.4
TIR                                AML    AML    18 54 03.0
      22nm,0.4s
TIR   Tirane            0.38  20   Pg     Pb     18 53 54.4 -0.9
TIR                                Sg     Sb     18 54 01.0 -0.1
TIR                                AML    AML    18 54 01.4
      22nm,0.4s
TIR   Tirane            0.38  20  i Sg    Sn     18 54 02.2  0.0
VLO   Vlora             0.55 196   Pg     Pb     18 53 57.5 -0.4
VLO                                Sg     Sn     18 54 06.0 -0.4
VLO                                AML    AML    18 54 10.1
      62nm,0.3s
VLO   Vlora             0.55 196   P      Pb     18 53 57.6 -0.4
VLO                                S      Sn     18 54 05.9 -0.5
VLO                                AML    AML    18 54 10.1
      62nm,0.3s
VLO   Vlora             0.55 196   P      Pb     18 53 57.8 -0.1
VLO                                S      Sn     18 54 06.9 +0.5
OHR   Ohrid             0.84  82  i Pg    Pb     18 54 01.8 -1.1
OHR                               i Sg    Sn     18 54 14.3 +0.4
OHR                               eLg     Lg     18 54 16.5
      comp=N,809nm,0.7s
OHR                               eLg     Lg     18 54 18.9
      comp=E,1µm,0.6s
PHP   Peshkopia         0.89  39   Pg     Pb     18 54 01.7 -2.0
PHP                                Sg     Sn     18 54 16.0 +1.0
PHP                                AML    AML    18 54 22.4
      comp=E,9.5nm,0.5s
PHP   Peshkopia         0.89  39   Pg     Pb     18 54 02.0 -1.7
PHP                                Sg     Sn     18 54 16.3 +1.3
PHP                                AML    AML    18 54 22.0
      comp=E,8.4nm,1.3s
PHP   Peshkopia         0.89  39   P      Pb     18 54 02.2 -1.4
PHP                                S      Sb     18 54 14.6 -0.6
KBN   Korca             0.91 114   Pg     Pb     18 54 02.9 -1.1
KBN                                Sg     Sb     18 54 15.4 -0.5
KBN   Korca             0.91 114   Pg     Pb     18 54 02.7 -1.3
KBN                                Sg     Sn     18 54 15.9 +0.4
KBN   Korca             0.91 114   P      Pb     18 54 02.4 -1.7
KBN                                S      Sn     18 54 16.4 +0.9
ULC   Ulcinj            1.02 341⇑iPg     Pn     18 54 05.3 +0.4
ULC                               i Sg    Sn     18 54 19.5 +1.2
SDA   Shkodra           1.06 352   Pg     Pb     18 54 06.9 +0.4
SDA                                Sg     Sn     18 54 22.4 +3.2
NEST  Nestorio          1.18 119   Pn     Pb     18 54 08.0 -0.6
NEST                               Sn     Sb     18 54 24.5 +0.9
NEST                               AML    AML    18 54 28.3
      comp=E,3.1nm,0.5s
NEST  Nestorio          1.18 119   P      Pn     18 54 07.5 +0.3
NEST                               S      Sb     18 54 24.1 +0.4
DRME  Dracevica, Mon    1.25 342  ePg     Pb     18 54 10.2 +0.5
DRME  Dracevica, Mon    1.25 342⇓iPg     Pb     18 54 09.4 -0.3
DRME                              eSg     Sb     18 54 27.1 +1.7
KEK   Kerkira           1.28 176          Pb     18 54 09.4 -0.8
KEK                                Sn     Sb     18 54 27.1 +0.7
BUM   Brajici-Budva     1.43 336⇓iPg     Pn     18 54 11.8 +1.2
BUM                               i Sg    Sb     18 54 31.7 +0.9
PDG   Podgorica         1.47 347   Pg     Pb     18 54 13.1 -0.3
PDG                                Sg     Sb     18 54 34.1 +2.4
PDG   Podgorica         1.47 347          Pb     18 54 12.6 -0.7
PDG                                Sn     Sb     18 54 31.8 +0.1
PDG   Podgorica         1.47 347 ⇑P       Pb     18 54 13.1 -0.3
PDG   Podgorica         1.47 347  ePg     Pb     18 54 13.1 -0.3
PDG                               eSg     Sb     18 54 33.6 +1.9
PDG   Podgorica         1.47 347⇓iPg     Pb     18 54 12.7 -0.7
PDG                               i Sg    Sb     18 54 33.7 +2.0
IGT   Igoumenitsa       1.54 161   Pn     Pb     18 54 14.5 -0.1
IGT                                Sn     Sb     18 54 33.9 +0.2
IGT   Igoumenitsa       1.54 161   P      Pb     18 54 14.7  0.0
IGT                                S      Sb     18 54 35.8 +2.0
IGT   Igoumenitsa       1.54 161  ePn     Pb     18 54 15.1 +0.5
LFKM  Lefkimmi          1.57 170   P      Pb     18 54 15.3 +0.1
LFKM                               S      Sb     18 54 37.1 +2.5
JAN   Janina            1.60 146   P      Pb     18 54 15.6 -0.1
JAN                                S      Sb     18 54 38.0 +2.4
PVY   Plav              1.61   7  ePg     Pb     18 54 16.2 +0.3
PVY   Plav              1.61   7⇑iPn     Pb     18 54 15.0 -0.9
PVY                               i Sn    Sb     18 54 37.7 +1.9
SKO   Skopje            1.64  53  i Pg    Pb     18 54 15.6 -0.7
SKO                               i Sg    Sb     18 54 37.8 +1.3
KPRO  Kipourio          1.65 129   P      Pb     18 54 15.8 -0.6
KPRO                               S      Sb     18 54 37.8 +1.1
CEME  Cevo              1.65 340⇑iPn     Pn     18 54 15.0 +1.4
CEME                              eSn     Sb     18 54 37.8 +0.8
HCY   Herceg Novi       1.71 329⇓iPn     Pn     18 54 15.4 +1.1
HCY                               i Sn    Sb     18 54 38.0 -0.4
KZN   Kozani            1.73 113   P      Pb     18 54 16.4 -1.4
PRMD  Pramanda          1.82 143   P      Pb     18 54 19.0 -0.3
NKME  Niksic            1.85 343⇓iPn     Pn     18 54 18.0 +1.6
NKME                              eSn     Sb     18 54 42.0 -0.7
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KOME	Kolasin	1.86	356	*e*Pg	Pb	18 54 19.3	-0.7
KOME				*e*Sg	Sb	18 54 46.6	+3.7
KOME	Kolasin	1.86	356	⇓*i*Pn	Pn	18 54 18.5	+2.0
KOME				*e*Sn	Sb	18 54 43.4	+0.5
BEY	Berane	1.88	5	*e*Pg	Pb	18 54 20.4	0.0
IVA	Berane	1.88	5	⇑*i*Pn	Pb	18 54 19.7	-0.7
IVA				*i* Sn	Sb	18 54 44.7	+1.1
TREB	Trebinje	1.99	330	*e*Pn	Pn	18 54 19.1	+0.9
TREB	Trebinje	1.99	330	*e*Pn	Pn	18 54 19.3	+1.1
NOCI	Noci	2.00	265	Sn	Sb	18 54 48.6	+1.6
TETR	Tetrakomo, Epi	2.05	143	P	Pb	18 54 21.8	-1.4
GRG	Griva	2.05	90	P	Pn	18 54 21.0	+2.0
GRG	Griva	2.05	90	*i* Pn	Pn	18 54 21.3	+2.2
BRY	Bratogost	2.09	336	⇑*i*Pn	Pn	18 54 21.1	+1.4
BRY				*i* Sn	Sb	18 54 47.8	-1.8
VAY	Valandovo	2.20	81	*i* Pn	Pn	18 54 22.3	+1.3
VAY				*i* Sn	Sb	18 54 50.8	-1.7
VAY				*e*Lg	Lg	18 54 51.6	
	comp=E,186nm,0.9s						
VAY				*e*Lg	Lg	18 54 53.2	
	comp=N,105nm,0.7s						
SJES	Sjenica	2.27	5	*e*Pg	Pb	18 54 25.2	-1.9
SJES				*e*Sg	Sb	18 54 59.0	+4.2
THL	Klokotos Trika	2.28	128	P	Pn	18 54 24.2	+2.0
UPM	Unac-Piva	2.28	345	⇓*i*Pn	Pn	18 54 23.7	+1.3
UPM				*i* Sn	Sn	18 54 52.6	+3.1
TSLK	Tsoukalades, L	2.29	161	P	Pn	18 54 23.9	+1.6
MATE	Matera	2.29	262	⇓P	Pn	18 54 23.3	+0.9
LIT	Litokhoron	2.31	112	P	Pn	18 54 24.3	+1.6
LIT	Litokhoron	2.31	112		Pn	18 54 23.9	+1.2
KLINJ	Klinje	2.32	340	*e*Pn	Pn	18 54 24.5	+1.6
PLE	Pljevlja	2.34	355	*e*Pg	Pb	18 54 26.7	-1.6
PLE	Pljevlja	2.34	355	⇑*i*Pn	Pn	18 54 23.3	+0.1
PLE				*i* Sn	Sb	18 54 55.6	-1.3
AMPL	Ampelaki	2.38	150	P	Pn	18 54 25.7	+2.2
STON	Ston	2.39	322	*e*Pn	Pn	18 54 24.6	+0.9
STON				*e*Sn	Sn	18 54 52.6	+0.7
BARS	Barje	2.41	40	*i* Pn	Pn	18 54 26.3	+2.3
BARS	Barje	2.41	40	*e*Pn	Pn	18 54 26.4	+2.3
SELS	Selova	2.46	25	*e*Pn	Pn	18 54 26.6	+1.9
SELS				*e*Sn	Sn	18 54 56.4	+2.6
BOSS	Bosilegrad	2.57	53	*e*Pn	Pn	18 54 27.7	+1.5
BOSS				*e*Sn	Sn	18 54 57.9	+1.5
IVAS	Ivanjica	2.60	7	*e*Pn	Pn	18 54 28.2	+1.5
RUDO	Rudo	2.63	355	*e*Pn	Pn	18 54 28.6	+1.6
GOCS	Kraljevo Serbi	2.71	18	*e*Pn	Pn	18 54 30.5	+2.3
KKB	Krupnik	2.72	71	*i* Pn	Pn	18 54 29.9	+1.7
ACER	Acerenza	2.85	267		Pn	18 54 30.3	+0.3
BBLS	Lazi&#263i	2.88	356	*e*Pn	Pn	18 54 32.4	+2.0
TIP	Timpagrande	2.89	232		Pn	18 54 30.3	-0.4
TIP	Timpagrande	2.89	232	⇓P	Pn	18 54 32.0	+1.3
SRS	Serrai	2.95	86	*i* Pn	Pn	18 54 32.9	+1.4
SRS	Serrai	2.95	86	*e*Pn	Pn	18 54 32.8	+1.4
GRUS	Gruza	2.99	14	*e*Pn	Pn	18 54 34.0	+2.1
BOVS	Bovan	3.03	29	⇓P	Pn	18 54 34.5	+2.0
BOVS	Bovan	3.03	29	*e*Pn	Pn	18 54 34.2	+1.7
BOVS				*e*Sn	Sn	18 55 09.7	+2.0
VTS	Vitosha	3.10	57	*e*Pn	Pn	18 54 35.7	+2.0
DIVS	Divibare	3.11	4	*e*Pn	Pn	18 54 35.2	+1.5
MMB	Musomishta	3.11	78	*i* Pn	Pn	18 54 35.2	+1.6
CUC	Castrocucco	3.12	253		Pn	18 54 34.5	+0.7
ZAPS	Zavoj	3.16	43	*e*Pn	Pn	18 54 36.6	+2.3
TRUS	Trudelj	3.27	9	*e*Pn	Pn	18 54 37.6	+1.8
ZAGS	Zajecar	3.39	33	*e*Pn	Pn	18 54 39.4	+2.0
BLKB	Belogradchik	3.43	39	*e*Pn	Pn	18 54 40.5	+2.4
BORS2	Bor- Borsko je	3.54	28	*e*Pn	Pn	18 54 40.0	+0.5
TEKS	Tekeris	3.55	358	*e*Pn	Pn	18 54 40.8	+1.1
KUBS	Kucevo	3.71	23	*e*Pn	Pn	18 54 42.2	+0.3
KUBS				*e*Sn	Sn	18 55 25.3	+0.7
AVAS	Avala Beograd	3.75	9	*e*Pn	Pn	18 54 43.7	+1.3
PAOL	Paolisi	3.88	272		Pn	18 54 44.7	+0.5
PLD	Plovdiv	3.96	71	*e*Pn	Pn	18 54 47.3	+2.0
MDVR	Moldovita	4.06	21	⇓P	Pn	18 54 48.2	+1.5
MDVR	Moldovita	4.06	21	*e*Pn	Pn	18 54 48.2	+1.5
FRGS	Fruska Gora	4.16	1	*e*Pn	Pn	18 54 49.1	+1.1
BLY	Banja Luka	4.18	335	*e*Pn	Pn	18 54 49.7	+1.4
ITM	Ithomi	4.19	155		Pn	18 54 48.7	+0.2
VRSS	Vrsac	4.29	16	*e*Pn	Pn	18 54 51.1	+1.2
HERR	Herculane	4.37	26	⇓P	Pn	18 54 52.7	+1.8
PLVB	Pleven	4.37	55	⇓P	Pn	18 54 53.6	+2.7
RDO	Rodhopi	4.42	86		Pn	18 54 52.7	+1.1
INTR	Introdacqua	4.46	285		Pn	18 54 53.4	+1.1
ALN	Alexandroupoli	4.81	89	Pn	Pn	18 54 58.1	+1.1
BZS	Buzias	4.83	16	⇓P	Pn	18 54 58.6	+1.4
BZS	Buzias	4.83	16	*e*Pn	Pn	18 54 58.6	+1.4
AQU	L'Aquila	4.90	288	*e*Pn	Pn	18 54 58.7	+0.4
GZR	Gura Zlata	4.94	26	*e*Pn	Pn	18 55 00.6	+1.8
CAMP	Campotosto	4.94	290		Pn	18 54 58.4	-0.6
ELND	Elena	5.00	65	⇑P	Pn	18 55 01.8	+2.3
GUMA	Gualdo di Mace	5.17	296	Pn	Pn	18 55 01.6	-0.3
NRCA	Norcia	5.24	293		Pn	18 55 03.6	+0.7
MORH	Mrgy, Hungar	5.27	352	*e*Pn	Pn	18 55 03.1	-0.2
FDMO	Fiordimonte	5.33	295		Pn	18 55 05.2	+1.1
LOT	Lotru	5.35	32	⇓P	Pn	18 55 06.9	+2.4
BOJS	Bojanci	5.55	326	*e*Pn	Pn	18 55 08.7	+1.6
BOJS	Bojanci	5.55	326	*i* Pn	Pn	18 55 08.4	+1.3
BOJS				*e*Sn	Sn	18 56 08.1	-1.7
CESX	Cesi	5.55	289		Pn	18 55 08.6	+1.4
RAFF	Raffo Rosso	5.60	229	Pn	Pn	18 55 07.4	-0.5
SGRR	Singureni	5.65	53	⇓P	Pn	18 55 10.7	+2.3
ARR	Arges	5.67	38	⇑P	Pn	18 55 11.5	+2.7
MURB	Monte Urbino	5.79	295		Pn	18 55 11.8	+1.3
BEHE	Becsehely	5.87	340	Pn	Pn	18 55 11.9	+0.5
APE	Apeiranthos	6.00	129	⇓P	Pn	18 55 15.7	+2.3
CEY	Cerknica	6.10	323	*e*Pn	Pn	18 55 16.1	+1.4
DRGR		6.19	20	⇑P	Pn	18 55 18.3	+2.3
DRGR		6.19	20	*e*Pn	Pn	18 55 16.9	+0.9
TRI	Trieste	6.39	319		Pn	18 55 19.4	+0.8
MLR	Muntele Rosu	6.40	43	Pn	Pn	18 55 22.2	+3.2
	comp=N,0.8nm,0.3s,baz=144,slow=16,SNR=12						
MLR				LR	LR	18 58 36.2	
	comp=N,153nm,18.0s,baz=246,slow=44						
	comp=N,3.3nm,0.5s						
MLR	Muntele Rosu	6.40	43		Pn	18 55 19.5	+0.5
MLR	Muntele Rosu	6.40	43	⇓P	Pn	18 55 22.1	+3.1
DOPR	Dopca	6.47	38	⇑P	Pn	18 55 22.8	+3.0
ISR	Istrita	6.49	48	⇑P	Pn	18 55 23.0	+2.9
NEHR	Nehoiu	6.55	45	⇑P	Pn	18 55 23.5	+2.7
SOKA	Soboth	6.60	331	*i* Pn	Pn	18 55 23.7	+2.0
	comp=N,2.1nm,0.4s						
SOKA				*i* Sn	Sn	18 56 33.3	-2.5
	comp=N,8.4nm,0.6s						
OBKA	Obir	6.65	328	*i* Pn	Pn	18 55 24.0	+1.7
	comp=N,1.0nm,0.2s						
OBKA				*i* Sn	Sn	18 56 36.5	-0.5
	comp=N,13nm,0.3s						
SABO	M.te Sabotino	6.67	320	Pn	Pn	18 55 22.8	+0.3
OZUR		6.75	39	⇑P	Pn	18 55 26.7	+3.1
OSSC	Osservatorio P	6.75	295	Pn	Pn	18 55 23.6	-0.1
PSZ	Piszkesteto	6.92	1	Pn	Pn	18 55 26.9	+0.9
PSZ	Piszkesteto	6.92	1	⇓P	Pn	18 55 27.7	+1.7
ARSA	Arzberg	6.93	336	Pn	Pn	18 55 27.0	+0.8
ARSA	Arzberg	6.93	336	*i* Pn	Pn	18 55 27.3	+1.2
	comp=N,2.3nm,0.5s						
ARSA				*e*Sn	Sn	18 56 44.4	+0.5
	comp=N,1.6nm,0.4s						
ARSA	Arzberg	6.93	336	*e*Pn	Pn	18 55 27.6	+1.5
PLOR	Plostina	7.01	44	⇓P	Pn	18 55 30.4	+3.2
IDI	Anoyia	7.02	143	Pn	Pn	18 55 26.1	-1.3
	comp=N,1.0nm,0.3s,baz=349,slow=10,SNR=1.7						
IDI				Sn	Sn	18 56 40.8	-5.2
	comp=N,0.8nm,0.3s,baz=294,slow=20,SNR=2.2						
IDI	Anoyia	7.02	143	Pn	Pn	18 55 27.0	-0.4
VRI	Vrincioaia	7.06	44	⇓P	Pn	18 55 30.8	+2.9
RONA	Rosalia, Austr	7.13	341	*e*Pn	Pn	18 55 29.4	+0.6
	comp=N,1.9nm,0.6s						
RONA				*e*Sn	Sn	18 56 48.5	-0.3
	comp=N,1.4nm,0.4s						
MYKA	Terra Mystica	7.13	324	*i* Pn	Pn	18 55 30.9	+2.1
	comp=N,0.3nm,0.2s						
MYKA				*e*Sn	Sn	18 56 47.2	-1.6
	comp=N,4.7nm,0.3s						
MANR	Mangalia	7.16	64	⇓P	Pn	18 55 32.1	+2.9
MANT	Manisa	7.28	107	Pn	Pn	18 55 32.7	+1.7
STAL	STALIGIAL	7.30	318	Pn	Pn	18 55 31.1	0.0
TEOL	Teolo	7.31	309	Pn	Pn	18 55 30.3	-0.9
CONA	Conrad Observa	7.45	340	*e*Pn	Pn	18 55 34.0	+0.7
	comp=N,1.1nm,0.4s						
CONA				*e*Sn	Sn	18 56 55.2	-1.6
	comp=N,1.3nm,0.4s						
CFR	Carcaliu	7.46	53	⇑P	Pn	18 55 36.3	+3.0
CIMO	Cimolais	7.47	318	Pn	Pn	18 55 32.9	-0.6
TPGR	Topolog	7.48	56	⇑P	Pn	18 55 36.4	+2.8
KBA	Koelnbreinsper	7.61	325	*e*Pn	Pn	18 55 37.7	+2.2
	comp=N,1.2nm,0.3s						
KBA				*i* Sn	Sn	18 56 58.2	-2.4
	comp=N,2.9nm,0.3s						
BURAR	Bucovina Array	7.71	29	Pn	Pn	18 55 37.3	+0.4
BUR08	Bucovina Ar. S	7.73	29		Pn	18 55 37.7	+0.6
ABTA	Abfaltersbach	7.74	320	*i* Pn	Pn	18 55 38.3	+1.0
	comp=N,1.7nm,0.3s						
ABTA				*i* Sn	Sn	18 57 02.7	-1.1
	comp=N,6.8nm,0.4s						
MOA	Molln	7.87	332	*e*Pn	Pn	18 55 39.8	+0.8
	comp=N,1.0nm,0.2s						
MOA				*i* Sn	Sn	18 57 07.9	+0.8
	comp=N,8.0nm,0.4s						
BIOA	Bad Ischl, Aus	7.97	329	*i* Pn	Pn	18 55 40.4	+0.1
	comp=N,2.0nm,0.3s						
BIOA				*i* Sn	Sn	18 57 08.7	-0.7
	comp=N,10nm,0.6s						
SALO	Salr	8.12	308	Pn	Pn	18 55 42.7	+0.2
LESA	Schwarzleotal	8.16	324	*e*Pn	Pn	18 55 42.1	-0.9
	comp=N,1.0nm,0.2s						
LESA				*e*Sn	Sn	18 57 12.3	-1.9
	comp=N,3.6nm,0.3s						
MSSA	Maissana	8.20	297	Pn	Pn	18 55 44.3	+0.8
BORA	Eskisehir	8.28	94	Pn	Pn	18 55 45.8	+1.0
WTTA	Wattenberg	8.53	320	*i* Pn	Pn	18 55 50.3	+2.2
	comp=N,5.2nm,0.5s						
WTTA				*i* Sn	Sn	18 57 21.9	-1.4
	comp=N,26nm,0.8s						
WATA	Walderalm	8.61	320	*e*Pn	Pn	18 55 51.5	+2.3
	comp=N,8.4nm,0.5s						
WATA				*i* Sn	Sn	18 57 24.9	-0.4
	comp=N,11nm,0.4s						
CKRC	Cesky Krumlov	8.70	336	*e*SN	Sn	18 57 26.7	-0.7
SQTA	Sankt Quirin	8.71	318	*i* Pn	Pn	18 55 50.9	+0.3
	comp=N,3.4nm,0.3s						
SQTA				*i* Sn	Sn	18 57 26.2	-1.6
	comp=N,6.4nm,0.4s						
FETA	Feichten	8.83	316	*i* Pn	Pn	18 55 53.5	+1.2
	comp=N,0.7nm,0.4s						
FETA				*i* Sn	Sn	18 57 28.7	-2.0
	comp=N,1.4nm,0.4s						
FUORN	Ofenpass-Fuorn	8.83	313	Pn	Pn	18 55 52.0	-0.4
GEC2	GERESS Array S	8.92	334	Pn	Pn	18 55 52.0	-1.4
GERES	GERESS Array B	8.92	334	Pn	Pn	18 55 54.8	+1.3
	baz=146,slow=12,SNR=2.8						
GERES				Sn	Sn	18 57 30.4	-2.5
	comp=N,0.2nm,0.3s,baz=154,slow=23,SNR=12						
	comp=N,0.3nm,0.4s						
RETA	Reutte	9.12	318	*e*Pn	Pn	18 55 58.1	+2.1
	comp=N,0.4nm,0.2s						
RETA				*i* Sn	Sn	18 57 36.0	-1.6
	comp=N,9.9nm,0.5s						
DAVOX	Davos/Dischmat	9.14	313	Pn	Pn	18 55 57.1	+0.6
	comp=N,0.3nm,0.3s,baz=283,slow=4.7,SNR=3.3						
DAVOX				Sn	Sn	18 57 29.9	-8.5
	comp=N,0.4nm,0.3s,baz=144,slow=18,SNR=2.8						
	comp=N,1.0nm,0.3s						
KHC	Kasperske Hory	9.21	334	*e*SN	Sn	18 57 37.2	-2.6
TUE	Stuetta	9.27	310	Pn	Pn	18 55 57.6	-0.8
DAVA	Damuels	9.45	315	*e*Pn	Pn	18 56 03.1	+2.4
	comp=N,2.3nm,0.5s						
DAVA				*i* Sn	Sn	18 57 43.4	-2.4
	comp=N,4.3nm,0.5s						
ANTO	Ankara	10.05	92	Pn	Pn	18 56 09.9	+0.9
BNI	Bardonecchia	10.35	297	Pn	Pn	18 56 13.6	+0.5
SENIN	Lac Senin/Sane	10.45	305	Pn	Pn	18 56 14.7	+0.2
BRTR	Keskin Array B	10.72	92	Pn	Pn	18 56 20.1	+1.9
	comp=N,0.1nm,0.3s,baz=268,slow=13,SNR=2.1						
	comp=N,0.2nm,0.4s						
BFO	Black Forest	10.91	316	Pn	Pn	18 56 21.0	+0.4
ECH	Echery	11.48	313	Pn	Pn	18 56 26.6	-1.8
AKASG	Malin Array Be	11.75	31	LR	LR	19 01 47.9	
	comp=N,52nm,20.4s,baz=245,slow=40						
SSB	Saint Sauveur	11.87	296	Pn	Pn	18 56 30.3	-3.4
WLF	Walferdange	12.86	317	Pn	Pn	18 56 46.0	-1.2
HFS	Hagfors	19.52	351	P	P	18 58 10.1	-1.1
	comp=N,0.2nm,0.3s,baz=145,slow=10,SNR=5.4						
	comp=N,1.2nm,0.7s						
NC405	NORSAR Array S	20.73	349	P	P	18 58 24.1	-0.2
NOA	NORSAR Array B	20.73	348	P	P	18 58 23.2	-1.2
	comp=N,0.1nm,0.4s,baz=154,slow=10.0,SNR=2.4						
	comp=N,0.1nm,0.4s						
NBO00	NORSAR Array S	20.79	348	P	P	18 58 23.9	-1.2
NBO00				IAmb	IAmb	18 58 44.9	
	comp=Z,18nm,1.3s						
EKA	Eskdalemuir Ar	20.79	321	P	P	18 58 24.9	-0.2
	comp=Z,0.6nm,0.5s,baz=113,slow=11,SNR=4.2						
	comp=Z,0.6nm,0.5s						
FINES	FINESS Array B	20.84	9	P	P	18 58 25.2	-0.3
	comp=Z,1.1nm,0.6s,baz=203,slow=8.3,SNR=11						
	comp=Z,1.1nm,0.6s						
FIA1	FINESS Array S	20.84	9	P	P	18 58 24.8	-0.7
NC204	NORSAR Array S	21.03	348	P	P	18 58 27.5	-0.1
AB31	Akbulak array	29.29	60	P	P	18 59 44.8	-1.2
ABKAR	Akbulak array	29.29	60	P	P	18 59 45.1	-0.9
ARTI	Arti	29.35	45	P	P	18 59 46.0	-0.4
ARTI				IAmb	IAmb	18 59 48.7	
	comp=Z,3.5nm,0.4s						
BORK	Borovoye	35.82	53	P	P	19 00 43.9	+0.8
BVAR	Borovoye Array	35.86	53	P	P	19 00 44.8	+1.4
	comp=Z,2.2nm,0.7s,baz=242,slow=3.2,SNR=16						
	comp=Z,2.2nm,0.7s						
KURBB	Kurchatov Arra	41.13	56	P	P	19 01 28.1	+0.5
	comp=Z,0.8nm,0.4s,baz=286,slow=9.6,SNR=19						
	comp=Z,0.8nm,0.4s						
MAKZ	Makanchi	44.21	61	P	P	19 01 52.6	-0.2
MAKZ				IAmb	IAmb	19 02 04.4	
	comp=Z,5.8nm,1.2s						
ZAA0	Zalesovo Array	44.33	50		P	19 01 54.3	+0.7
ZALV	Zalesovo Beam	44.33	50	P	P	19 01 54.2	+0.6
	comp=Z,5.2nm,0.5s,baz=278,slow=8.2,SNR=28						
	comp=Z,5.2nm,0.5s						
MKAR	Makanchi Array	44.42	61	P	P	19 01 54.6	+0.1
	comp=Z,0.3nm,0.3s,baz=281,slow=7.5,SNR=14						
	comp=Z,0.3nm,0.3s						
SONM	Songino Array	59.19	52	P	P	19 03 45.4	+0.7
	comp=Z,0.8nm,0.7s,baz=280,slow=8.6,SNR=5.1						
	comp=Z,0.8nm,0.7s						
C27K	Jago River	69.02	354	P	P	19 04 50.1	+1.4
E29M	Blow River	69.65	351	P	P	19 04 54.0	+1.4
E29M				IAmb	IAmb	19 05 02.4	
	comp=Z,4.1nm,1.3s						
D23K	Nanushuk River	70.12	356	P	P	19 04 57.4	+1.9
D23K				IAmb	IAmb	19 05 07.9	
	comp=Z,5.5nm,1.4s						
CMAR	Chiang Mai Arr	70.14	83	P	P	19 04 54.7	-1.7
	comp=Z,0.4nm,0.6s,baz=311,slow=6.6,SNR=2.6						
	comp=Z,0.4nm,0.6s						
D19K	Kuna River	70.82	359	P	P	19 05 00.9	+1.1
D19K				IAmb	IAmb	19 05 15.7	
	comp=Z,5.0nm,1.4s						
C16K	Lisburne Hills	70.99	2	P	P	19 05 01.8	+1.1
H29M	Whitestone	71.78	351	P	P	19 05 06.9	+1.3
I30M	Mount Dempster	72.48	350	P	P	19 05 11.0	+1.0
I30M				IAmb	IAmb	19 05 50.3	
	comp=Z,4.0nm,1.4s						
J26L	Joseph Creek	74.02	353	P	P	19 05 20.2	+1.2
J26L				IAmb	IAmb	19 05 20.6	
	comp=Z,4.5nm,1.3s						
ILAR	Eielson Array	74.04	354	P	P	19 05 18.1	-0.9
	comp=Z,0.3nm,0.6s,baz=10,slow=6.4,SNR=5.1						
	comp=Z,0.3nm,0.6s						
BCAR	Beaver Creek A	75.23	351	P	P	19 05 27.7	+1.7

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*NEIC **17** 19:04:09.3±1.4, 43°.70N±0°.05×105°.33W±0°.07, h0^{km}±1^{km}, ML3.3/62, Error ellipse: s-maj=9.9km s-min=6.4km az=317.0*

*IDC **17** 19:04:10.8±2.2, 44°.00N×105°.76W, h0^{km}, mb4.2/1, mbtmp3.7/4, ML3.4/3, MS3.3/1, Error ellipse: s-maj=85.6km s-min=8.8km az=147.0*

ISC 17 19:04:09.7±0.9**, 43°.71N**±0°.06×**105°.30W**±0°.06**, h0^{km}, n66, σ1§18**/65**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.00	65		Pb	19 04 29.9	-0.2
K22A	Casper	1.38	221		Pg	19 04 35.4	-0.9
K22A				IAML		19 04 57.0	
	290nm,0.3s						
K22A				IAML		19 04 58.5	
	301nm,0.3s						
LAO	LASA Array	3.05	348		Pn	19 04 59.9	+0.7
RLMT	Red Lodge	3.17	298		Pn	19 05 02.0	+0.9
RLMT				IAML		19 05 52.3	
	89nm,0.3s						
RLMT				IAML		19 05 55.6	
	74nm,0.3s						
PD31	Pinedale Array	3.25	255		Pn	19 05 03.0	+0.8
PDAR	Pinedale Array	3.25	255	Pn	Pn	19 05 03.5	+1.4
	4.6nm,0.3s,baz=69,slow=16,SNR=35						
PDAR				Lg	Lg	19 05 46.1	
	3.0nm,0.3s,baz=303,slow=23,SNR=3.6						
	7.4nm,0.3s						
BW06	Boulder Array	3.25	255		Pn	19 05 03.3	+1.2
BW06				IAML		19 05 51.2	
	47nm,0.4s						
YNE	Yellowstone No	3.62	293		Pn	19 05 07.3	+0.1
YNE				IAML		19 06 06.4	
	comp=N,68nm,0.3s						
YNE				IAML		19 06 08.2	
	comp=E,81nm,0.3s						
YMP	Mirror Lake Pl	3.64	288		Pn	19 05 08.8	+1.3
OGNE	Ogallala	3.67	138		Pn	19 05 08.8	+0.9
OGNE				IAML		19 06 15.1	
	comp=E,97nm,2.2s						
LKWY	Lake	3.77	285		Pn	19 05 09.4	+0.1
LKWY				IAML		19 06 04.9	
	comp=E,37nm,2.2s						
LKWY				IAML		19 06 24.4	
	comp=E,35nm,1.7s						
LOHW	Long Hollow	3.85	270		Pn	19 05 12.1	+1.7
H17A	Grant Village	3.86	282		Pn	19 05 11.3	+0.7
H17A				IAML		19 06 14.4	
	comp=E,41nm,1.1s						
H17A				IAML		19 06 18.2	
	comp=N,30nm,0.8s						
ISCO	Idaho Springs	3.91	184		Pn	19 05 12.2	+0.8
ISCO				IAML		19 06 21.0	
	comp=N,25nm,2.1s						
MOOW	Moose Ponds	3.94	272		Pn	19 05 13.6	+1.9
SNOW	Snow King Moun	3.97	268		Pn	19 05 13.1	+1.0
SNOW				IAML		19 06 18.4	
	comp=N,51nm,4.1s						
SNOW				IAML		19 06 28.0	
	comp=N,47nm,1.2s						
YNR	Norris Junctio	3.99	286		Pn	19 05 13.4	+0.9
YNR				IAML		19 06 27.4	
	comp=N,24nm,1.0s						
YPP	Pitchstone Pla	4.01	280		Pn	19 05 14.1	+1.4
YPP				IAML		19 06 30.5	
	comp=E,32nm,3.7s						
YHH	Holmes Hill	4.13	287		Pn	19 05 14.7	+0.4
FXWY	Fox Creek	4.15	271		Pn	19 05 16.6	+2.0
YMR	Madison River	4.18	285		Pn	19 05 16.9	+1.9
YMR				IAML		19 06 38.8	
	comp=N,49nm,1.0s						
YMR				IAML		19 06 48.0	
	comp=E,38nm,5.0s						
O20A	White River Ci	4.19	213		Pn	19 05 16.2	+1.2
O20A				IAML		19 06 46.6	
	comp=E,49nm,1.2s						
O20A				IAML		19 07 10.7	
	comp=E,48nm,4.1s						
K30B	Basset	4.29	102		Pn	19 05 18.1	+1.8
E28A	Huff	4.34	47		Pn	19 05 18.0	+1.1
YHB	Horse Butte	4.36	286		Pn	19 05 18.4	+1.0
YHB				IAML		19 06 33.4	
	comp=E,26nm,2.3s						
YHL	Hebgen Lake	4.37	287		Pn	19 05 18.6	+0.9
YHL				IAML		19 06 39.5	
	comp=E,50nm,1.6s						
YHL				IAML		19 06 52.6	
	comp=N,37nm,1.2s						
RDMU	Red Mountain	4.46	227		Pn	19 05 20.8	+2.0
RDMU				IAML		19 06 35.3	
	comp=N,31nm,1.3s						
RDMU				IAML		19 06 35.8	
	comp=E,26nm,1.1s						
QLMT	Earthquake Lak	4.54	286		Pn	19 05 21.8	+1.9
DGMT	Dagmar	4.82	9		Pn	19 05 25.3	+1.7
BSUT	Blindstream Ca	5.15	234		Pn	19 05 29.0	+0.6
BSUT				IAML		19 07 01.2	
	comp=N,21nm,4.8s						
BSUT				IAML		19 07 15.0	
	comp=E,20nm,3.0s						
TCUT	Toone Canyon	5.21	242		Pn	19 05 29.9	+0.8
EGMT	Eagleton	5.32	326		Pn	19 05 30.9	+0.4
P18A	Preston Nutter	5.51	224		Pn	19 05 33.4	+0.1
LRM	Limekiln Ridge	5.51	295		Pn	19 05 33.7	+0.5
MDND	Maddock	5.75	42		Pn	19 05 35.7	-0.6
PV22	Blue Mesa, Par	5.80	208		Pn	19 05 37.4	+0.2
SPUT	South Promonto	5.80	248		Pn	19 05 37.9	+0.8
HVU	Hansel Valley	5.83	253		Pn	19 05 38.7	+1.1
PV07	Paradox Valley	5.84	207		Pn	19 05 38.8	+1.1
P17A	Butcher Ranch,	5.88	226		Pn	19 05 38.7	+0.5
PV15	Paradox Valley	5.88	205		Pn	19 05 39.5	+1.2
LYMT	Lyon Mountain	5.91	306		Pn	19 05 39.5	+0.9
PV23	Carpenter Ridg	5.95	209		Pn	19 05 39.8	+0.5
PV04	Paradox Valley	5.97	208		Pn	19 05 40.9	+1.4
PV12	Saucer Basin,	6.00	207		Pn	19 05 41.0	+1.0
PV14	Lion Creek, Pa	6.03	209		Pn	19 05 42.0	+1.6
PV10	Paradox Valley	6.03	209		Pn	19 05 41.3	+0.9
PV20	West Nyswonger	6.04	209		Pn	19 05 42.4	+2.0
PV11	David Mesa, Pa	6.04	208		Pn	19 05 42.4	+1.9
SRU	San Rafael Swe	6.04	222		Pn	19 05 39.2	-1.3
PV16	Nyswonger Mesa	6.04	208		Pn	19 05 42.1	+1.5
PV19	Morning Glory	6.07	209		Pn	19 05 42.2	+1.3
PV03	Paradox Valley	6.07	207		Pn	19 05 41.9	+0.9
PV02	Paradox Valley	6.08	206		Pn	19 05 42.0	+0.9
PV17	East Wray Mesa	6.09	208		Pn	19 05 42.0	+0.8
PV18	Skein Mesa, Pa	6.10	208		Pn	19 05 42.5	+1.2
PV13	Radium Mtn., P	6.15	207		Pn	19 05 41.1	-0.9
TMUT	Trail Mountain	6.25	227		Pn	19 05 43.1	-0.4
ECSD	EROS Data Cent	6.30	87		Pn	19 05 44.9	+1.1
PV05	Paradox Valley	6.32	208		Pn	19 05 42.1	-2.3
T25A	Trinidad	6.60	174		Pn	19 05 48.6	+0.4
DUG	Dugway, Tooele	6.61	240		Pn	19 05 49.5	+1.2
ELK	Elko	7.95	252	Pn	Pn	19 06 06.3	-0.3
	comp=E,0.1nm,0.3s,baz=66,slow=17,SNR=1.8						
	comp=E,0.3nm,0.3s						
ULM	Lac du Bonnet	9.18	41	Pn	Pn	19 06 22.7	-0.6
	comp=E,1.9nm,0.3s,baz=225,slow=13,SNR=9.7						
ULM				Lg	Lg	19 08 52.8	
	comp=E,0.3nm,0.3s,baz=342,slow=16,SNR=1.7						
	comp=E,3.4nm,0.3s						
PFO	Pinyon Flats O	13.31	225	LR	LR	19 12 54.5	
	comp=E,143nm,20.4s,baz=24,slow=39						
ARCES	ARCESS Array B	61.45	18	P	P	19 14 27.4	-0.1
	comp=E,2.6nm,0.8s,baz=336,slow=5.9,SNR=4.0						
	comp=E,2.6nm,0.8s						

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*IDC **17** 19:16:11.3±0.9, 6°.45N×125°.22E, h0^{km}, mb3.7/8, mbtmp3.7/8, MS2.9/2, Error ellipse: s-maj=21.1km s-min=9.3km az=116.0*

*DJA **17** 19:16:13.3±0.5, 7°N±4°×12°5E±°, h10^{km}, M4.8/7, mb4.9/7, mB5.1/6, MLv5.0/6, Mw(mB)4.5/6*

ISC 17 19:16:13.8±0.7**, 6°.63N**±0°.06×**125°.20E**±0°.09**, h10^{km}, n21, σ1§17**/18**, mb3.8**/8**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.58	40	Pg	Pg	19 16 25.1	+0.1
	1µm,0.3s,baz=264,slow=5.8,SNR=58						
DAV				Lg	Lg	19 16 34.8	
	4µm,0.3s,baz=301,slow=19,SNR=25						
DAV	Davao City (W)	0.58	40	P	Pg	19 16 25.4	+0.3
DAV				S	Sg	19 16 32.9	+0.2
DAV	Davao City (W)	0.58	40	P	Pg	19 16 26.0	+0.9
SGSI	Sangihe	2.94	174	P	Pn	19 17 02.1	+1.5
SGSI				S	Sn	19 17 37.7	+1.7
GTOI	Gorontalo	6.34	200	P	Pn	19 17 47.1	-0.2
	1.4nm4µm350nm,0.6s						
MRSI	Marisa	6.92	208	P	Pn	19 17 54.0	-1.3
	0.7nm2µm184nm,0.6s						
LUWI	Luwuk	7.99	198	P	Pn	19 18 11.1	+1.0
	56nm,0.6s						
MPSI	Mapaga	8.19	220	P	Pn	19 18 12.4	-0.3
SANI	Sanana	8.65	175	P	Pn	19 18 18.0	-1.1
	25nm,0.9s						
I39PW	PALAU INFRASON	9.32	84	I	I	20 14 00.0	
	baz=267,slow=293,SNR=1.2						
KAPI	Kappang	12.78	205	LR	LR	19 24 27.9	
	comp=Z,58nm,19.8s,baz=40,slow=39						
BATI	Baumata	16.79	185	Pn	Pn	19 20 08.5	-0.7
	2.3nm,0.3s,baz=190,slow=0.8,SNR=6.1						

JOW	Kunigami	20.31	8	LR	LR	19 27 35.3	
	comp=Z,35nm,21.4s,baz=116,slow=33						
WRA	Warramunga Arr	27.89	161	P	P	19 22 01.4	-2.7
	1.4nm,0.9s,baz=337,slow=8.6,SNR=2.3						
	1.4nm,0.9s						
CMAR	Chiang Mai Arr	28.15	297	P	P	19 22 07.2	+0.7
	0.3nm,0.5s,baz=116,slow=6.7,SNR=4.8						
	0.3nm,0.5s						
ASAR	Alice Springs	31.29	165	P	P	19 22 32.5	-1.7
	0.7nm,0.5s,baz=343,slow=7.0,SNR=8.1						
	0.7nm,0.5s						
STKA	Stephens Creek	41.36	159	P	P	19 23 57.2	-2.9
	1.9nm,0.8s,baz=341,slow=8.6,SNR=3.0						
	1.9nm,0.8s						
MKAR	Makanchi Array	54.32	325	P	P	19 25 40.7	+0.1
	0.2nm,0.5s,baz=114,slow=8.0,SNR=7.9						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	58.49	327	P	P	19 26 09.8	-0.4
	0.2nm,0.3s,baz=125,slow=5.4,SNR=7.2						
	0.2nm,0.3s						
BVAR	Borovoye Array	64.08	327	P	P	19 26 48.1	+0.2
	0.5nm,0.7s,baz=123,slow=7.1,SNR=3.0						
	0.5nm,0.7s						
ILAR	Eielson Array	83.16	26	P	P	19 28 39.2	-0.7
	0.5nm,0.6s,baz=247,slow=5.9,SNR=4.3						
	0.5nm,0.6s						

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*IDC **17** 19:16:15.0±3.0, 5°.39S×152°.01E, h0km, mb4.0/4, mbtmp4.0/5, ML2.1/1, MS3.0/1, Error ellipse: s-maj=81.5km s-min=27.1km az=107.0*

*NEIC **17** 19:16:17.1±2.3, 5°.73S±0°.06×152°.18E±0°.08, h10km±1km, mb4.1/14, Error ellipse: s-maj=16.6km s-min=5.1km az=124.0*

ISC 17 19:16:20.6±0.8**, 5°.73S**±0°.06×**152°.15E**±0°.10**, h45km, n27, σ0s.86**/29**, mb4.0**/12**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.53	1		Pn	19 16 45.6	+0.1
RABL				Sn	Sn	19 17 04.1	-0.1
MANU	Manus Island	6.02	307		Pn	19 17 47.5	+0.4
PMG	Port Moresby	6.15	233	Pn	Pn	19 17 49.6	+0.7
	2.7nm,0.3s,baz=27,slow=12,SNR=9.4						
PMG				Sn	Sn	19 18 58.2	+0.2
	4.2nm,0.3s,baz=72,slow=15,SNR=3.8						
	18nm,0.7s						
PMG	Port Moresby	6.15	233		Pn	19 17 48.5	-0.4
PMG				Sn	Sn	19 18 57.5	-0.5
CTA	Charters Tower	15.38	201	LR	LR	19 25 05.5	
	comp=Z,55nm,18.5s,baz=40,slow=34						
WB0	Warramunga Arr	22.20	229	P	P	19 21 12.5	-0.9
WB0				IAmb	IAmb	19 21 16.5	
	comp=Z,3.4nm,0.7s						
WR8	Warramunga Arr	22.23	229		P	19 21 13.4	-0.3
WR8				IAmb	IAmb	19 21 28.5	
	comp=Z,9.2nm,1.4s						
WRAB	Tennant Creek	22.33	229	P	P	19 21 14.5	-0.2
WRAB				IAmb	IAmb	19 21 18.1	
	comp=Z,4.4nm,0.7s						
WRA	Warramunga Arr	22.35	229	P	P	19 21 15.3	+0.4
	comp=Z,4.4nm,0.6s,baz=52,slow=10.0,SNR=31						
	comp=Z,4.4nm,0.6s						
WRA	Warramunga Arr	22.35	229	P	P	19 21 14.3	-0.6
PINNC	Pines Island,	22.36	140	P	P	19 21 15.0	+0.1
INKA	Innaminka	24.43	205		P	19 21 36.0	+0.9
INKA				IAmb	IAmb	19 21 40.2	
	comp=Z,3.3nm,0.8s						
AS31	Alice Springs	25.03	223		P	19 21 41.4	+0.7
AS31				IAmb	IAmb	19 21 44.7	
	comp=Z,2.7nm,0.6s						
ASAR	Alice Springs	25.03	223	P	P	19 21 42.5	+1.9
	comp=Z,7.2nm,0.7s,baz=58,slow=8.9,SNR=125						
	comp=Z,7.2nm,0.7s						
ASAR	Alice Springs	25.03	223		P	19 21 41.6	+0.9
FITZ	Fitzroy Crossi	28.65	242	P	P	19 22 14.0	+0.7
BBOO	Buckleboo	30.83	207	P	P	19 22 32.1	-0.4
BBOO				IAmb	IAmb	19 22 42.0	
	comp=Z,5.1nm,1.2s						
TOLI2	Tolitoli	32.05	281	P	P	19 22 41.8	-1.6
FORT	Forrest	33.66	219	P	P	19 22 58.4	+1.1
FORT				IAmb	IAmb	19 23 28.4	
	comp=Z,2.9nm,0.8s						
SNZO	South Karori	40.75	154	P	P	19 23 56.9	-0.3
CMAR	Chiang Mai Arr	57.69	296	P	P	19 26 06.0	-1.0
	comp=Z,0.9nm,0.9s,baz=116,slow=5.7,SNR=6.3						
	comp=Z,0.9nm,0.9s						
PZH	PanZhiHua	58.38	306	P	P	19 26 13.3	+1.4
HHC	Hu-ho-hao-te	59.43	325	eP	P	19 26 20.4	+1.5
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,45nm,4.9s						
SONM	Songino Array	66.77	328	P	P	19 27 06.7	-0.8
	comp=Z,0.6nm,0.6s,baz=146,slow=4.3,SNR=4.7						
	comp=Z,0.6nm,0.6s						
SONM	Songino Array	66.77	328	P	P	19 27 06.9	-0.6
PPLA	Purkeypile	80.28	23	P	P	19 28 26.5	-0.1
TORD	Torodi Ar. Bea	149.96	286	PKPbc	PKPbc	19 36 06.9	-0.3
	comp=Z,0.6nm,0.7s,baz=65,slow=4.9,SNR=4.0						

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*KRNET **17** 19:24:16.9±0.1, 41°.15N×71°.41E, h16km, mb2.5*

*ISU **17** 19:24:16, 41°.20N×71°.25E, h19km*

*SOME **17** 19:24:16.5, 41°.20N×71°.35E, h10km*

*NNC **17** 19:24:19.7±3.0, 41°.31N×71°.35E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=25.2km s-min=10.2km az=8.0*

ISC 17 19:24:16.2±0.9**, 41°.24N**±0°.02×**71°.32E**±0°.02**, h13**km±7km**, n27, σ1s.56**/48**, 16C-2D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSNS	Kasansay	0.17	117	P	Pg	19 24 20.7	+0.5
KSNS				S	Sg	19 24 24.5	+1.5
NAM	Namangan	0.35	133	P	Pb	19 24 23.3	-1.1
NAM				S	Sb	19 24 29.2	-0.7
CHDK	Chadak	0.50	239	P	Pg	19 24 25.7	-0.4
CHDK				S	Sg	19 24 31.8	-1.1
ARK	Arkit	0.74	40	⇑iP	Pb	19 24 31.5	+0.4
ARK				⇑iS	Sb	19 24 42.3	+1.1
FRG	Fergana	0.93	158	P	Pn	19 24 39.2	+4.1
FRG				S	Sn	19 24 52.2	+3.9
CHMI	Chimion	0.98	171	P	Pn	19 24 36.6	+0.9
PSK	Pskem	0.99	315	P	Pn	19 24 35.6	-0.4
PSK				S	Sn	19 24 49.7	-0.2
CHMG	Chimgan	1.03	288	P	Pb	19 24 35.5	-0.6
CHMG				S	Sb	19 24 49.4	-0.3
TSTA	Tashata	1.10	126	P	Pn	19 24 38.0	+0.7
TSTA				S	Sn	19 24 53.8	+1.4
CHRV	Charvak	1.11	292	P	Pb	19 24 37.1	-0.2
CHRV				S	Sb	19 24 51.9	+0.3
ARSB	Arslanbob	1.26	85	⇓eP	Pg	19 24 39.3	-1.1
ARSB				⇓eS	Sb	19 24 56.2	+0.2
TVKS	Tavaksay	1.30	286	P	Pg	19 24 39.1	-2.1
TVKS				S	Sg	19 24 56.9	-1.2
OHH	Osh	1.32	122	⇑iP	Pn	19 24 39.7	-0.8
OHH				⇑iS	Sg	19 24 56.2	-2.6
IUG	Iuzhnay	1.33	314	P	Pb	19 24 42.1	+1.0
	8.3nm,0.1s						
IUG				S	Sn	19 25 00.1	+1.8
	37nm,0.2s						
MNAS	Manas	1.53	35	⇑iP	Pg	19 24 46.1	+0.4
MNAS				⇑iS	Sg	19 25 06.9	+1.3
DRK	Karamyk	1.79	168	⇑iP	Pb	19 24 48.5	-0.6
DRK				⇑iS	Sn	19 25 11.1	+1.2
SALK	Salom-Alik	1.92	100	⇑eP	Pb	19 24 51.2	-0.1
SALK				⇑eS	Sb	19 25 15.7	+0.4
KK31	Karatay Array	1.96	342	Pn	Pg	19 24 53.5	-0.4
	4.7nm,0.6s,baz=156,slow=15,SNR=30						
KK31				Sn	Sg	19 25 20.2	+0.9
	3.8nm,0.3s,baz=157,slow=26,SNR=14						
SFK	Sufi-Kurgan	2.06	126	⇑eP	Pb	19 24 52.6	-1.1
SFK				⇑eS	Sb	19 25 19.0	-0.3
MRKS	Merke	2.07	43	Pg	Pg	19 24 55.4	-0.5
	2.9nm,0.3s						
MRKS				Lg	Lg	19 25 23.8	
	18nm,0.3s						
MRKS	Merke	2.07	43	eP	Pg	19 24 55.4	-0.5
	2.9nm,0.3s						
MRKS				eS	Sg	19 25 23.8	+1.0
	18nm,0.3s						
ARLS	Aral	2.34	74	⇑eP	Pb	19 24 57.7	-0.7
ARLS				⇑eS	Sb	19 25 27.6	+0.4
AAK	Ala-Archa	2.75	58	⇑Pn	Pg	19 25 07.4	-1.6
	0.8nm,0.4s						
AAK				⇑Lg	Lg	19 25 44.8	
	1.2nm,0.6s						
DGS	Degeres	3.87	57	Pg	Pg	19 25 27.7	-2.6
	0.4nm,0.2s						
DGS				Lg	Lg	19 26 18.5	
	4.1nm,0.6s						
KST	Kastek	3.90	61	Pg	Pg	19 25 28.1	-2.8
	1.8nm,0.2s						
KST				Lg	Lg	19 26 19.3	
	6.4nm,0.5s						
KST	Kastek	3.90	61	eP	Pg	19 25 28.1	-2.8
	1.8nm,0.2s						
KST				eS	Sg	19 26 19.3	-2.0
	6.4nm,0.5s						
KRBS	Karabastau	4.05	51	Pg	Pg	19 25 31.0	-2.9
	0.6nm,0.4s						
KRBS				Lg	Lg	19 26 24.3	
	0.9nm,0.4s						

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*TAP **17** 19:24:43.2, 24°.67N×122°.67E, h112km, ML3.5, C*

*JMA **17** 19:24:43.3±0.2, 25°N±1°×122°.6E±0°.5, h111km±1km, MV2.7/18, NW OFF ISHIGAKIJIMA IS*

ISC 17 19:24:43.2±1.3**, 24°.64N**±0°.04×**122°.66E**±0°.02**, h114**km±6km**, n108, σ0s.79**/189**, 7C-8D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.32	126	iP	Pn	19 24 59.5	0.0
JYNG				eS	Sn	19 25 11.4	-0.2
YOJ	Yonaguni jima	0.36	119	⇑iP	Pn	19 24 59.7	0.0
YOJ				iS	Sn	19 25 11.8	-0.3
YOJ	Yonaguni jima	0.36	119	eP	Pn	19 24 59.7	0.0
YOJ				eS	Sn	19 25 11.7	-0.3
EOS2	EOS2	0.45	241	eS	Sn	19 25 13.6	+1.0
EOS3	EOS3	0.47	222	P	Pn	19 25 00.8	+0.7
EOS3				S	Sn	19 25 14.6	+1.8
EOS4	EOS4	0.60	211	P	Pn	19 25 01.0	+0.3
EOS4				S	Sn	19 25 14.7	+0.7
EGS		0.69	287	eS	Sn	19 25 13.4	-2.4
TWB1	Santiao Chiao	0.71	301	eP	Pn	19 25 02.1	+0.1
TWC	Suao	0.74	268	eP	Pn	19 25 02.0	-0.2
TWC				eS	Sn	19 25 15.6	-1.0
ESAO	Su ao	0.75	265	eP	Pn	19 25 02.5	+0.2
ESAO				eS	Sn	19 25 15.6	-1.0
TIPB	Shuangxi	0.83	294	⇓iP	Pn	19 25 03.2	+0.2
TIPB				S	Sn	19 25 17.3	-0.7
ILA	Ilan	0.84	279	eS	Sn	19 25 17.9	-0.3
SXI1	Grass Mountain	0.84	302	⇓P	Pn	19 25 03.4	+0.1
SXI1				eS	Sn	19 25 17.6	-0.8
NDS	Dongshan	0.86	270	eP	Pn	19 25 03.9	+0.6
NDS				eS	Sn	19 25 18.2	-0.3
ENA	Nanau	0.86	256	eP	Pn	19 25 03.7	+0.3
ENA				eS	Sn	19 25 18.7	+0.1
EAHA	Aohua	0.90	250	eS	Sn	19 25 19.3	+0.2
NWF	Wu-fen Shan	0.91	298	eP	Pn	19 25 04.1	+0.2
NWF				eS	Sn	19 25 19.3	-0.2
WFSB	Wu-fen Shan	0.91	298	eP	Pn	19 25 04.2	+0.4
WFSB				eS	Sn	19 25 19.3	0.0
TWE	Neicheng	0.91	275	P	Pn	19 25 04.1	+0.4
TWE				eS	Sn	19 25 19.1	-0.2
TNOU	National Taiwa	0.95	302	eP	Pn	19 25 04.0	-0.2
TNOU				eS	Sn	19 25 20.2	+0.2
FUSB	Fushanzhiwuyua	0.98	277	⇓iP	Pn	19 25 04.8	+0.2
FUSB				eS	Sn	19 25 20.1	-0.7
ENTT	Nioudou	1.00	270	P	Pn	19 25 05.4	+0.8
ENTT				eS	Sn	19 25 21.1	+0.2
IRIF	Iriomote-Funau	1.02	107	P	Pn	19 25 04.9	+0.1
IRIF				eS	Sn	19 25 20.9	-0.4
LATG	Datong	1.04	264	eP	Pn	19 25 05.8	+0.6
LATG				eS	Sn	19 25 22.1	+0.3
ETL	Fush Village	1.06	243	iP	Pn	19 25 05.6	+0.2
ETL				iS	Sn	19 25 21.6	-0.5
NWLT	Wulai	1.06	278	P	Pn	19 25 05.4	+0.1
NWLT				S	Sn	19 25 21.6	-0.5
NACB	Ninganchiao	1.08	245	P	Pn	19 25 05.3	-0.2
NACB				S	Sn	19 25 21.6	-0.8
NHDH	Xindian Distri	1.08	287	eP	Pn	19 25 05.7	+0.2
PCYT	Pengchaiyu	1.12	332	⇓iP	Pn	19 25 06.5	+0.5
TWD	Chiawan	1.12	240	P	Pn	19 25 05.8	-0.1
TWD				eS	Sn	19 25 22.6	-0.5
ZUZH	Zhuzihu	1.14	297	P	Pn	19 25 06.4	+0.2
ZUZH				S	Sn	19 25 22.8	-0.7
ETLH	Xiulin Townshi	1.16	248	eP	Pn	19 25 06.5	0.0
ETLH				eS	Sn	19 25 22.9	-1.1
HWA	Hwalien	1.17	236	eP	Pn	19 25 06.7	+0.2
HWA				eS	Sn	19 25 24.3	+0.3
ANP	Anpu	1.17	298	eP	Pn	19 25 07.2	+0.6
YHNB	Yeheng	1.17	272	⇓iP	Pn	19 25 07.1	+0.5
YHNB				S	Sn	19 25 24.2	-0.1
NNSB	Datong	1.18	260	P	Pn	19 25 07.0	+0.3
NNSB				S	Sn	19 25 24.3	-0.3
NSK	Sanguang	1.19	272	⇓P	Pn	19 25 07.1	+0.4
NSK				S	Sn	19 25 24.3	-0.3
NNS	Nan Shan	1.19	261	P	Pn	19 25 07.2	+0.4
NNS				S	Sn	19 25 24.4	-0.3
HATJ	Hateruma jima	1.19	119	eP	Pn	19 25 07.4	+0.7
HATJ				eS	Sn	19 25 25.0	+0.5
NTST	Danshui	1.22	296	P	Pn	19 25 07.3	+0.4
NTST				S	Sn	19 25 24.8	-0.2
TWS1	Kuangyinshan	1.22	292	P	Pn	19 25 07.3	+0.4
TWS1				S	Sn	19 25 24.8	-0.3
TEYL	Yanliau Villag	1.24	232	P	Pn	19 25 07.1	-0.1
TEYL				S	Sn	19 25 25.3	-0.1
ETM	Tongmen	1.26	238	P	Pn	19 25 07.4	-0.1
ETM				S	Sn	19 25 25.2	-0.7
JKRS	Kuro-shima	1.29	108	P	Pn	19 25 08.4	+0.6
JKRS				eS	Sn	19 25 26.4	0.0
LXIB	Xiulin Townshi	1.29	242	⇑iP	Pn	19 25 07.7	-0.3
LXIB				S	Sn	19 25 26.1	-0.7
SHUL	Shoufeng	1.31	230	P	Pn	19 25 08.3	+0.2
SHUL				eS	Sn	19 25 27.1	+0.2
FUSS	Fushou	1.35	253	P	Pn	19 25 09.5	+0.7
FUSS				S	Sn	19 25 28.4	+0.3
KSHI	Guanxi Townshi	1.36	276	P	Pn	19 25 09.4	+0.8
KSHI				S	Sn	19 25 28.3	+0.5
JIJ	Ishigaki jima	1.38	101	P	Pn	19 25 08.8	+0.1
JIJ				eS	Sn	19 25 27.2	-1.0
NCUH	Zhongli	1.38	284	S	Sn	19 25 28.7	+0.5
TEGC	Jichi Village	1.38	228	S	Sn	19 25 28.6	+0.4
ESL	Shilin	1.39	234	⇑P	Pn	19 25 08.6	-0.4
ESL				S	Sn	19 25 27.4	-1.1
NFF	Wufeng Townshi	1.41	270	P	Pn	19 25 09.8	+0.6
NFF				S	Sn	19 25 28.8	-0.1
TWT	Tachien	1.41	254	P	Pn	19 25 10.4	+1.1
TWT				S	Sn	19 25 29.3	+0.2
TDCB	Techi	1.42	255	P	Pn	19 25 10.4	+1.0
TDCB				S	Sn	19 25 29.2	-0.2
WARBT	Fenglin Townsh	1.48	232	⇑iP	Pn	19 25 09.6	-0.5
WARBT				eS	Sn	19 25 29.1	-1.4
EGFH	Guangfu	1.48	230	eP	Pn	19 25 10.1	0.0
EGFH				eS	Sn	19 25 30.1	-0.4
LIOB	Emei	1.50	271	P	Pn	19 25 10.7	+0.5
LIOB				S	Sn	19 25 30.4	-0.3
JISG	Ishigakijimahi	1.50	92	P	Pn	19 25 10.3	+0.1
JISG				eS	Sn	19 25 30.0	-0.8
NSTT	Nanjuang	1.51	270	P	Pn	19 25 10.8	+0.5
NSTT				S	Sn	19 25 30.9	-0.1
OWD	Renai	1.52	244	P	Pn	19 25 10.8	+0.2
OWD				S	Sn	19 25 30.5	-0.8
HSN	Hsinchu	1.55	276	eS	Sn	19 25 30.7	-1.0
WUSB	Renai	1.55	246	⇑iP	Pn	19 25 11.5	+0.6
WUSB				S	Sn	19 25 31.4	-0.7
WHP	Taichung City	1.60	257	P	Pn	19 25 12.8	+1.3
WHP				S	Sn	19 25 33.9	+0.8
HGSD	Ruisui	1.61	225	P	Pn	19 25 11.5	0.0
HGSD				S	Sn	19 25 33.1	+0.1
VWDT	VWDT	1.65	238	⇑iP	Pn	19 25 12.5	+0.6
VWDT				S	Sn	19 25 33.7	-0.2
EHYH	Wanrong	1.66	227	eP	Pn	19 25 11.8	-0.3
EHYH				S	Sn	19 25 33.1	-1.1
EHY	Hungye	1.67	228	⇓P	Pn	19 25 11.8	-0.4
WCS	Beigang Elemen	1.70	250	P	Pn	19 25 13.8	+1.2
WCS				S	Sn	19 25 36.0	+1.1
NMLH	Miaoli	1.71	267	eS	Sn	19 25 35.2	0.0
ECBN	Changbin	1.72	220	P	Pn	19 25 12.9	0.0
ECBN				S	Sn	19 25 34.8	-0.7
NSY	Sanyi	1.75	263	eS	Sn	19 25 36.5	+0.4
TWQ1	Liyutan	1.75	261	eS	Sn	19 25 36.1	0.0
YULB	Yu-li	1.76	225	⇑iP	Pn	19 25 12.9	-0.5
YULB				S	Sn	19 25 34.6	-1.8
SMLT	Sun Moon Lake	1.78	245	eP	Pn	19 25 14.8	+1.2
SMLT				eS	Sn	19 25 38.1	+1.2
TWF1	Yuli	1.79	224	⇓P	Pn	19 25 13.6	-0.1
TWF1				eS	Sn	19 25 36.0	-1.1
TYC	Yuchr	1.80	246	eP	Pn	19 25 15.4	+1.5
TYC				eS	Sn	19 25 38.8	+1.6
CHKH	Chenggong	1.85	219	eP	Pn	19 25 14.1	-0.4
CHKH				eS	Sn	19 25 37.0	-1.3
JTJ	Tarama	1.86	90	eP	Pn	19 25 14.9	+0.4
JTJ				eS	Sn	19 25 38.1	-0.3
WHYT	Xinyi Township	1.90	241	eP	Pn	19 25 16.4	+1.3
WHYT				eS	Sn	19 25 40.8	+1.3
FULB	Fuli	1.90	221	eP	Pn	19 25 15.2	0.0
FULB				eS	Sn	19 25 39.6	0.0
YUS	Yu-Shan	1.94	234	eP	Pn	19 25 16.7	+0.7
YUS				eS	Sn	19 25 40.2	-0.9
CHKT	Chengkung	1.94	218	eP	Pn	19 25 15.2	-0.4
CHKT				eS	Sn	19 25 38.9	-1.4
ECS	Chishang	2.03	221	eP	Pn	19 25 17.3	+0.5
ALS	Alishan	2.04	237	eP	Pn	19 25 18.3	+1.2
ALS				eS	Sn	19 25 43.9	+0.9
ELDTW	Lidau	2.09	226	P	Pn	19 25 17.3	-0.3
ELDTW				eS	Sn	19 25 42.0	-1.8
CHN5	Tsauling	2.09	241	P	Pn	19 25 18.8	+1.2
CHN5				S	Sn	19 25 45.9	+2.1
WDLH	Douliu	2.16	244	eS	Sn	19 25 46.9	+1.7
WCKO	Fanlu	2.23	238	eP	Pn	19 25 20.3	+1.0
WCKO				eS	Sn	19 25 48.2	+1.3
STYH	Taoyuan	2.26	230	eP	Pn	19 25 20.8	+1.1
STYH				eS	Sn	19 25 48.1	+0.5
TPUB	Ta-pu	2.29	235	eP	Pn	19 25 21.3	+1.3
TPUB				eS	Sn	19 25 49.2	+0.9
JIRB	Irabujima	2.29	85	eP	Pn	19 25 20.4	+0.4
JIRB				eS	Sn	19 25 48.0	-0.3
TWGBT	Beinan	2.32	219	eP	Pn	19 25 19.9	-0.5
TWG	Pinlang	2.32	219	eP	Pn	19 25 20.0	-0.5
WTP	Ta-pu	2.33	234	eP	Pn	19 25 21.6	+1.0
JIKM	Ikemajima	2.37	83	eS	Sn	19 25 50.2	+0.1
TWK	Hsinying	2.41	236	eP	Pn	19 25 23.1	+1.4
JMJ2	Miyako jima3	2.43	87	eP	Pn	19 25 22.7	+0.9
JMJ2				eS	Sn	19 25 51.9	+0.5
CHN1	Nanshi	2.43	234	eP	Pn	19 25 22.9	+1.0
CHN1				eS	Sn	19 25 52.2	+0.6
SGST	Jiashian	2.46	231	eP	Pn	19 25 22.7	+0.5
SGST				eS	Sn	19 25 52.8	+0.7
JOGS	Gusukube	2.50	87	eS	Sn	19 25 53.4	+0.3
SSD	Sandimen	2.65	225	eP	Pn	19 25 26.0	+1.3
MASBT	Mashibuluo	2.75	223	eP	Pn	19 25 27.1	+1.1
EAST	Anshuo	2.80	217	eP	Pn	19 25 26.3	-0.4
LYUB	Lan-yu	2.81	201	eP	Pn	19 25 25.9	-0.8
LYUB				eS	Sn	19 25 58.4	-1.9
MATB	Ma-tsu	2.88	302	eP	Pn	19 25 27.1	-0.6
WDGT	Dungji	3.07	244	eP	Pn	19 25 30.1	-0.1
WDGT				eS	Sn	19 26 05.6	-0.9
PTMZ	Houxiangcun	3.24	278	eP	Pn	19 25 32.2	-0.3
PTMZ				eS	Sn	19 26 06.9	-3.6

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*IDC **17** 19:51:29.9±1.5, 55°.94N×113°.33E, h0km, mb3.2/4, mbtmp3.3/7, ML3.9/2, Error ellipse: s-maj=27.6km s-min=22.6km az=40.0*

*MOS **17** 19:51:32.2±0.9, 55°.86N×113°.20E, h13km, mb3.6/1, Error ellipse: s-maj=15.1km s-min=8.4km az=76.2*

*BYKL **17** 19:51:33.7±0.1, 55°.93N×113°.15E, h21km±2km*

ISC 17 19:51:31.2±1.1**, 55°.81N**±0°.02×**113°.11E**±0°.02**, h3**km±9km**, n63, σ2s.32**/108**, mb3.1**/4**, 8C-3D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.40	39	⇑iPg	Pg	19 51 40.6	+1.7
SVKR				eSg	Sg	19 51 45.7	+1.7
SVKR				Pmax			
	1μm,0.1s						
SVKR				Smax			
	59μm,0.3s						
SVKR	Severomuysk	0.40	39	⇑iPG	Pg	19 51 40.7	+1.8
SVKR				e		19 51 45.4	
SVKR				pmax	pmax		
	comp=Z,1μm,0.1s						
SVKR				smax	smax		
	comp=N,59μm,0.3s						
UKT	Uakit	0.43	138	⇑iPg	Pn	19 51 43.5	-1.0
UKT				eSg	Sb	19 51 50.9	+2.3
UKT				Pmax			
	comp=N,1μm,0.4s						
UKT				Smax			
	comp=N,3μm,0.3s						
UKT	Uakit	0.43	138	⇑iPG	Pn	19 51 43.5	-1.0
UKT				e		19 51 51.0	
UKT				pmax	pmax		
	comp=Z,936nm,0.3s						
UKT				smax	smax		
	comp=E,3μm,0.3s						
YOAB	Uoyan, Buryati	0.85	294	ePg	Pb	19 51 50.0	+1.4
YOAB				ePb	Pn	19 51 51.2	+1.1
YOAB				eSg	Sg	19 52 00.6	+2.2
YOAB				eSb	Sn	19 52 05.8	+2.7
YOAB				max			
	comp=E,127nm,0.2s						
YOAB				max			
	comp=E,2μm,0.7s						
YOAB	Uoyan, Buryati	0.85	294	ePG	Pb	19 51 49.6	+1.0
YOAB				e		19 52 01.4	
YOAB				pmax	pmax		
	comp=Z,125nm,0.2s						
YOAB				smax	smax		
	comp=N,2μm,0.5s						
KMO	Kumora	1.08	275	⇑iPg	Pn	19 51 54.0	+0.7
KMO				eSg	Sn	19 52 09.1	+0.3
KMO				eSb	Sb	19 52 12.1	+5.0
KMO				Pmax			
	comp=N,188nm,0.3s						
KMO				max			
	comp=N,2μm,0.9s						
KMO	Kumora	1.08	275	⇑iPG	Pn	19 51 54.0	+0.7
KMO				e		19 52 08.9	
KMO				pmax	pmax		
	comp=Z,115nm,0.4s						
KMO				smax	smax		
	comp=N,2μm,0.9s						
YLYR	Ulyunkhan	1.46	231	⇑iPg	Pg	19 52 01.6	+2.5
YLYR				eSg	Sg	19 52 22.7	+4.8
YLYR				Pmax			
	comp=N,133nm,0.3s						
YLYR				Smax			
	comp=N,1μm,0.3s						
YLYR	Ulyunkhan	1.46	231	⇑iPN	Pg	19 52 01.6	+2.5
YLYR				e		19 52 21.8	
YLYR				pmax	pmax		
	comp=Z,133nm,0.3s						
YLYR				smax	smax		
	comp=E,1μm,0.4s						
NLYR	Nelyaty	1.60	64	⇓iPg	Pn	19 52 00.7	+0.2
NLYR				e		19 52 07.8	
NLYR				eSg	Sn	19 52 21.6	-0.1
NLYR				max			
	comp=E,341nm,0.5s						
NLYR				Smax			
	comp=E,767nm,0.4s						
NLYR	Nelyaty	1.60	64	⇓iPN	Pn	19 52 00.7	+0.2
NLYR				e		19 52 21.3	
NLYR				pmax	pmax		
	comp=Z,106nm,0.3s						
NLYR				smax	smax		
	comp=E,763nm,0.5s						
NIZB	Nizh Angarsk	2.02	270	ePn	Pb	19 52 08.7	+0.2
NIZB				ePg	Pg	19 52 10.4	+0.6
NIZB				eSg	Sg	19 52 36.3	+0.4
NIZB				e		19 52 38.8	
NIZB				Pmax			
	comp=E,96nm,0.5s						
NIZB				max			
	comp=E,347nm,0.6s						
BOD	Bodaibo	2.07	13	ePn	Pn	19 52 07.3	+0.4
BOD				ePg	Pb	19 52 08.9	-0.6
BOD				eSn	Sn	19 52 31.2	-2.1
BOD				eSg	Sb	19 52 33.6	-2.0
BOD				Pmax			
	comp=E,117nm,0.3s						
BOD				Smax			

	comp=E,721nm,0.3s						
BOD	**Bodaibo**	**2.07**	**13**	*e*PN	**Pn**	**19 52 06.7**	**-0.2**
BOD				*e*		19 52 08.1	
BOD				*e*S	**Sn**	**19 52 30.3**	**-3.0**
BOD				*e*		19 52 33.3	
BOD				pmax	pmax		
	comp=Z,94nm,0.3s						
BOD				smax	smax		
	comp=N,721nm,0.3s						
SYVR	**Suvo**	**2.81**	**221**	⇓*i*Pn	**Pb**	**19 52 20.0**	**-2.1**
SYVR				*e*Pg	**Pg**	**19 52 25.5**	**+0.5**
SYVR				*e*		19 52 27.6	
SYVR				*e*Sg	**Sg**	**19 53 03.1**	**+1.6**
SYVR				max			
	comp=N,47nm,0.5s						
SYVR				Smax			
	comp=N,422nm,1.0s						
SYVR	**Suvo**	**2.81**	**221**	*e*PN	**Pb**	**19 52 20.0**	**-2.1**
SYVR				*e*		19 52 26.2	
SYVR				*e*		19 53 02.9	
SYVR				pmax	pmax		
	comp=Z,48nm,0.7s						
SYVR				smax	smax		
	comp=E,429nm,1.0s						
CRS	**Chara**	**3.07**	**67**	*e*Pn	**Pn**	**19 52 21.3**	**+0.6**
CRS				*e*Pg	**Pb**	**19 52 27.8**	**+1.3**
CRS				*e*PgPg	**Pg**	**19 52 33.5**	**+3.5**
CRS				*e*Sg	**Sb**	**19 53 07.0**	**+2.6**
CRS				max			
	comp=E,137nm,0.7s						
CRS				Smax			
	comp=E,256nm,1.2s						
MXMB	**Maximikha**	**3.60**	**227**	*e*Pg	**Pg**	**19 52 40.5**	**+0.3**
MXMB				*e*Sg	**Sg**	**19 53 28.5**	**+1.7**
VTMR	**Vitim**	**3.65**	**355**	*e*Pn	**Pn**	**19 52 27.5**	**-1.1**
VTMR				*e*		19 52 35.3	
VTMR				*e*Pg	**Pb**	**19 52 37.5**	**+1.1**
VTMR				*e*Sn	**Sn**	**19 53 08.7**	**-3.5**
VTMR				*e*Sg	**Sb**	**19 53 23.5**	**+2.5**
CIT	**Chita**	**3.81**	**176**	*e*Pg	**Pg**	**19 52 44.4**	**+0.3**
CIT				*e*Sg	**Sg**	**19 53 35.7**	**+2.3**
CIT				Pmax			
	comp=E,59nm,0.4s						
CIT				Smax			
	comp=E,423nm,0.4s						
CIT	**Chita**	**3.81**	**176**	*e*PN	**Pn**	**19 52 34.0**	**+3.2**
CIT				*e*		19 52 44.3	
CIT				*e*		19 53 36.0	
CIT				pmax	pmax		
	comp=Z,78nm,1.5s						
CIT				smax	smax		
	comp=E,469nm,0.6s						
OGRR	**Ongureny**	**3.87**	**238**	*e*Pn	**Pn**	**19 52 34.3**	**+2.7**
OGRR				*e*Pg	**Pg**	**19 52 45.3**	**+0.1**
OGRR				*e*Sg	**Sg**	**19 53 36.7**	**+1.4**
OGRR				Pmax			
	comp=E,37nm,0.7s						
OGRR				Smax			
	comp=E,81nm,0.5s						
OGRR	**Ongureny**	**3.87**	**238**	*e*PN	**Pn**	**19 52 34.2**	**+2.7**
OGRR				*e*		19 52 44.4	
OGRR				*e*		19 53 36.4	
OGRR				pmax	pmax		
	comp=Z,22nm,1.1s						
OGRR				smax	smax		
	comp=N,116nm,1.5s						
KHNR	**Khani**	**3.98**	**71**	*e*Pn	**Pn**	**19 52 34.3**	**+1.2**
KHNR				*e*Pg	**Pb**	**19 52 44.1**	**+2.1**
KHNR				*e*		19 53 22.5	
KHNR				*e*Sg	**Sg**	**19 53 35.8**	**-3.1**
GORB	**Goryachinsk**	**4.00**	**227**	*e*Pg	**Pg**	**19 52 47.2**	**-0.5**
GORB				*e*Sg	**Sg**	**19 53 39.9**	**+0.5**
UZR	**Uzur**	**4.00**	**234**	*e*Pg	**Pg**	**19 52 46.5**	**-1.2**
UZR				*e*		19 52 52.7	
UZR				*e*Sg	**Sg**	**19 53 39.3**	**-0.2**
UZR				max			
	comp=N,22nm,0.5s						
UZR				Smax			
	comp=N,137nm,0.9s						
TUP	**Tupik**	**4.17**	**107**	*e*Pn	**Pn**	**19 52 36.8**	**+1.1**
TUP				*e*		19 52 44.4	
TUP				*e*Pg	**Pg**	**19 52 48.5**	**-2.5**
TUP				*e*Sg	**Sg**	**19 53 43.1**	**-1.8**
TUP				Pmax			
	comp=N,38nm,0.5s						
TUP				Smax			
	comp=N,459nm,0.4s						
TUP	**Tupik**	**4.17**	**107**	*e*PN	**Pn**	**19 52 36.8**	**+1.1**
TUP				*e*		19 52 46.7	
TUP				*e*S	**Sn**	**19 53 23.1**	**-1.8**
TUP				*e*		19 53 42.4	
TUP				pmax	pmax		
	comp=Z,38nm,0.5s						
TUP				smax	smax		
	comp=N,460nm,0.8s						
KELR	**Kotokel**	**4.25**	**226**	*e*Pg	**Pg**	**19 52 52.6**	**+0.1**
KELR				*e*Sg	**Sg**	**19 53 49.3**	**+1.8**
ZRHB	**Zarechye**	**4.78**	**229**	*e*Sg	**Sg**	**19 54 05.3**	**+0.6**
ZRHB				Smax			
	comp=N,562nm,1.3s						
YKLR	**Yuktali**	**4.83**	**77**	*e*Pg	**Pb**	**19 53 00.1**	**+3.6**
YKLR				*e*Sg	**Sg**	**19 54 02.5**	**-3.9**
TRG	**Tyrgan**	**5.00**	**235**	*e*Pg	**Pg**	**19 53 04.5**	**-2.5**
TRG				*e*Sg	**Sg**	**19 54 10.5**	**-1.3**
TRG				Pmax			
	comp=N,8.0nm,0.5s						
TRG				Smax			
	comp=N,44nm,0.4s						
UUDB	**Ulan-Yde**	**5.10**	**221**	*e*Pg	**Pg**	**19 53 06.8**	**-2.0**
UUDB				*e*Sg	**Sg**	**19 54 15.2**	**+0.3**
UUDB				Pmax			
	comp=N,71nm,0.8s						
UUDB				Smax			
	comp=N,248nm,1.7s						
FFNB	**Fofonovo**	**5.32**	**227**	*e*Pg	**Pg**	**19 53 11.0**	**-2.0**
FFNB				*e*Sg	**Sg**	**19 54 21.7**	**-0.1**
KAB	**Kabansk**	**5.36**	**228**	*e*Pg	**Pg**	**19 53 11.4**	**-2.4**
KAB				*e*Sg	**Sg**	**19 54 22.1**	**-1.1**
KAB				Pmax			
	comp=N,22nm,0.2s						
KAB				Smax			
	comp=N,387nm,1.6s						
STDB	**Stepnoy Dvoret**	**5.40**	**230**	*e*Sg	**Sg**	**19 54 23.7**	**-0.7**
HRMR	**Khuramsha**	**5.56**	**224**	*e*Pg	**Pg**	**19 53 15.2**	**-2.4**
HRMR				*e*Sg	**Sg**	**19 54 28.7**	**-0.9**
HRMR				Pmax			
	comp=N,59nm,1.1s						
HRMR				Smax			
	comp=N,192nm,0.8s						
BGT	**Bolshoye Golou**	**5.91**	**234**	*e*Pg	**Pg**	**19 53 21.9**	**-2.4**
BGT				*e*Sg	**Sg**	**19 54 40.0**	**-0.8**
BGT				Pmax			
	comp=N,4.0nm,0.3s						
BGT				Smax			
	comp=N,90nm,1.5s						
KPC	**Khapcheranga**	**6.13**	**184**	*e*Pn	**Pn**	**19 53 04.9**	**+2.1**
KPC				*e*Pg	**Pg**	**19 53 26.5**	**-2.1**
KPC				*e*Sg	**Sg**	**19 54 47.7**	**-0.3**
KPC				*e*		19 54 59.2	
KPC				Pmax			
	comp=N,19nm,0.6s						
KPC				max			
	comp=N,114nm,1.0s						
KPC	**Khapcheranga**	**6.13**	**184**	*e*PN	**Pn**	**19 53 04.4**	**+1.6**
KPC				*e*		19 53 24.8	
KPC				*e*		19 54 47.0	
KPC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KPC				smax	smax		
	comp=E,114nm,0.9s						
LSTR	**Listvyanka**	**6.29**	**235**	*e*Sg	**Sg**	**19 54 51.3**	**-1.8**
LSTR				Smax			
	comp=E,73nm,1.8s						
IRK	**Irkutsk**	**6.32**	**239**	*e*Sg	**Sg**	**19 54 52.3**	**-1.6**
IRK				Smax			
	comp=E,117nm,0.4s						
IVK	**Ivanovka**	**6.53**	**236**	*e*Sg	**Sg**	**19 54 59.0**	**-1.7**
IVK				Smax			
	comp=E,120nm,1.2s						
CLNS	**Chul'man**	**6.63**	**76**	*e*Pg	**Pb**	**19 53 31.7**	**+4.5**
CLNS				*e*Sg	**Sg**	**19 54 57.2**	**-6.9**
TLY	**Talaya**	**6.97**	**238**	*e*Sg	**Sg**	**19 55 12.6**	**-2.3**
TLY				Smax			
	comp=E,33nm,1.6s						
ARS	**Arshan**	**7.42**	**243**	*e*Sg	**Sg**	**19 55 24.8**	**-4.5**
ARS				*e*		19 55 31.8	
ARS				max			
	comp=E,168nm,0.8s						
HILR	**Hailar Array B**	**7.45**	**144**	Pn	**Pn**	**19 53 21.3**	**+0.5**
	baz=327,slow=14						
HILR				Lg	Lg	19 55 24.9	
	baz=327,slow=34						
	comp=E,1.1nm,0.4s						
HIA	**Hailar**	**7.70**	**146**	*e*Sg	**Sg**	**19 55 34.1**	**-4.1**
HIA				Smax			
	comp=E,98nm,1.0s						
ZAK	**Zakamensk**	**8.03**	**231**	*e*Sg	**Sg**	**19 55 44.4**	**-4.5**
ZAK				Smax			
	comp=E,36nm,1.2s						
MOY	**Mondy**	**8.29**	**245**	*e*Pg	Pg	19 54 03.5	-6.4
MOY				*e*Sg	**Sg**	**19 55 52.1**	**-5.2**
MOY				Pmax			
	comp=E,21nm,1.3s						
MOY				Smax			
	comp=E,49nm,1.3s						
MOY	**Mondy**	**8.29**	**245**	*e*PN	**Pn**	**19 53 35.4**	**+3.0**
MOY				*e*		19 54 03.5	
MOY				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ORL	**Orlik**	**8.46**	**253**	*e*Pn	**Pn**	**19 53 36.5**	**+1.8**
ORL				*e*		19 53 53.7	
ORL				*e*Pg	Pg	19 54 07.6	-5.5
ORL				*e*Sg	**Sg**	**19 55 58.1**	**-4.5**
ORL				Pmax			
	comp=Z,9.0nm,1.2s						
ORL				Smax			
	comp=Z,30nm,1.2s						
ULN	**Ulaanbaatar**	**8.79**	**208**	*e*Sg	**Sg**	**19 56 10.1**	**-3.2**
ULN				Smax			
	comp=Z,114nm,1.8s						
SONM	**Songino Array**	**9.00**	**210**	Pn	**Pn**	**19 53 44.0**	**+1.8**
	comp=Z,0.1nm,0.4s,baz=23,slow=12,SNR=1.2						
SONM				Lg	Lg	19 56 19.0	
	comp=Z,1.4nm,0.3s,baz=25,slow=28,SNR=7.6						
SONM	**Songino Array**	**9.00**	**210**	P	**Pn**	**19 53 44.0**	**+1.8**
YAK	**Yakutsk**	**10.57**	**47**	Lg	Lg	19 56 55.1	
	comp=Z,0.8nm,0.3s,baz=154,slow=22,SNR=7.2						
TIXI	**Tiksi**	**17.25**	**17**	P	**Pn**	**19 55 27.7**	**-5.1**
	comp=Z,0.4nm,0.3s,baz=237,slow=10.0,SNR=10						
	comp=Z,0.8nm,0.3s						
KURK	**Kurchatov**	**21.10**	**271**	P	**P**	**19 56 18.3**	**+1.7**
MKAR	**Makanchi Array**	**21.12**	**258**	P	**P**	**19 56 17.2**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=63,slow=11,SNR=4.4						
	comp=Z,0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**21.19**	**270**	P	**P**	**19 56 18.3**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=66,slow=11,SNR=5.6						
	comp=Z,0.7nm,0.6s						
WRA	**Warramunga Arr**	**77.57**	**160**	P	**P**	**20 03 27.8**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=355,slow=5.6,SNR=1.9						
	comp=Z,0.4nm,0.7s						
ASAR	**Alice Springs**	**81.12**	**161**	P	**P**	**20 03 47.6**	**0.0**
	comp=Z,0.1nm,0.6s,baz=348,slow=5.2,SNR=2.8						
	comp=Z,0.1nm,0.6s						

SJA ***17*** *19:56:32.9±0.7, 21°.33S×66°.73W, h256km±7km, ML3.5, MW3.6*

SCB ***17*** *19:56:36.0±1.3, 21°.41S×66°.76W, h216km±8km, MB5.8, ML3.7/3, Error ellipse: s-maj=4.5km s-min=4.1km az=0.0*

ISC 17 19:56:35.7±1.8**, 21°.43S**±0°.05×**66°.77W**±0°.05**,**
h224km±14km**, n38,** σ**1**^{s}.**17**/51**, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.07**	**80**	Pg	**Pn**	**19 57 08.9**	**0.0**
MOCB				Sg	**S**	**19 57 32.9**	**-1.8**
MOCB				IAML		19 57 34.0	
	589nm,0.6s						
YJA	**Yavi**	**1.38**	**123**	Pg	**Pn**	**19 57 11.4**	**+0.3**
YJA	**Yavi**	**1.38**	**123**	*e*P	**Pn**	**19 57 12.0**	**+0.9**
YJA				*e*S	**S**	**19 57 38.0**	**-0.7**
AF01	**San Pedro de A**	**2.00**	**221**	*e*P	Pn	19 57 21.5	+5.2
AF01				IAML		19 58 43.4	
	comp=Z,74nm,0.4s						
PB09	**IPOC Station P**	**2.33**	**261**	Pg	**Pn**	**19 57 20.7**	**+1.2**
PB09	**IPOC Station P**	**2.33**	**261**	*e*P	**Pn**	**19 57 20.0**	**+0.5**
PB09				*e*S	**S**	**19 57 55.9**	**+2.3**
PB09				IAML		19 57 57.0	
	comp=Z,48nm,0.3s						
PB01	**IPOC Station P**	**2.56**	**278**	Pg	**Pn**	**19 57 22.5**	**+0.6**
PB01				Sg	**S**	**19 57 57.7**	**-0.2**
PB01	**IPOC Station P**	**2.56**	**278**	*e*P	**Pn**	**19 57 21.6**	**-0.4**
PB01				*e*S	**S**	**19 57 58.4**	**+0.5**
PB01				IAML		19 58 00.4	
	comp=Z,89nm,0.1s						
SALTA		**2.81**	**172**	*e*P	**Pn**	**19 57 21.5**	**-3.5**
SALTA				*e*P		19 57 22.7	
SALTA				*e*P		19 57 23.3	
SALTA				IAML		19 58 23.5	
	comp=Z,58nm,0.1s						
PB03	**IPOC Station P**	**2.84**	**257**	*e*P	**Pn**	**19 57 25.5**	**+0.5**
PB03				*e*S	**S**	**19 58 03.2**	**-0.3**
PB03				IAML		19 58 05.0	
	comp=Z,214nm,0.1s						
GO01	**Chusmiza**	**2.87**	**307**	Pg	**Pn**	**19 57 26.3**	**+0.6**
GO01	**Chusmiza**	**2.87**	**307**	*e*S	**S**	**19 58 08.1**	**+3.4**
GO01				IAML		19 58 09.8	
	comp=Z,67nm,0.2s						
PB06	**IPOC Station P**	**2.89**	**244**	Pg	**Pn**	**19 57 26.7**	**+1.1**
PB06	**IPOC Station P**	**2.89**	**244**	*e*P	**Pn**	**19 57 26.4**	**+0.8**
PB06				*e*S	**S**	**19 58 05.3**	**+0.8**
PB06				IAML		19 58 07.9	
	comp=Z,102nm,0.1s						
PB02	**IPOC Station P**	**2.92**	**272**	Pg	**Pn**	**19 57 26.1**	**+0.3**
PB02				Sg	**S**	**19 58 03.5**	**-1.4**
PB02				IAML		19 58 04.4	
	comp=Z,201nm,0.5s						
PB02	**IPOC Station P**	**2.92**	**272**	*e*P	**Pn**	**19 57 25.9**	**+0.1**
PB02				*e*S	**S**	**19 58 04.0**	**-0.9**
PB02				IAML		19 58 05.9	
	comp=Z,230nm,0.1s						
PB07	**IPOC Station P**	**2.92**	**264**	*e*S	**S**	**19 58 04.3**	**-0.7**
PB07				IAML		19 58 04.9	
	comp=Z,155nm,0.4s						
HMBC	**Humberstone**	**3.13**	**291**	*e*P	**Pn**	**19 57 27.8**	**-0.5**
HMBC				*e*S	**S**	**19 58 08.0**	**-1.4**
HMBC				IAML		19 58 09.1	
	comp=Z,146nm,0.3s						
PB11	**IPOC Station P**	**3.17**	**301**	Pg	**Pn**	**19 57 28.5**	**-0.3**
PB11				Sg	**S**	**19 58 08.6**	**-1.7**
PB11				IAML		19 58 11.4	
	comp=Z,99nm,0.4s						
PB11	**IPOC Station P**	**3.17**	**301**	*e*P	**Pn**	**19 57 28.0**	**-0.8**
PB11				*e*S	**S**	**19 58 09.8**	**-0.5**
PB11				IAML		19 58 11.1	
	comp=Z,133nm,0.1s						
AZAP	**Zapla**	**3.19**	**151**	*e*P	**Pn**	**19 57 29.6**	**+0.6**
AZAP				*e*S	**S**	**19 58 11.8**	**+0.9**
AZAP				IAML		19 58 12.4	
	comp=Z,65nm,0.3s						
PATCX	**Punta Patache**	**3.22**	**280**	*e*P	**Pn**	**19 57 29.1**	**-0.1**
PATCX				IAML		19 58 17.6	
	comp=Z,34nm,0.3s						
TA01	**Diego Aracena**	**3.30**	**285**	*e*P	**Pn**	**19 57 29.5**	**-0.6**
TA01				IAML		19 58 16.0	
	comp=Z,31nm,0.3s						
TA02	**Huaiquique**	**3.35**	**290**	*e*P	**Pn**	**19 57 30.2**	**-0.4**
TA02				IAML		19 58 15.2	
	comp=Z,138nm,0.2s						
SOET	**ToroToro**	**3.42**	**15**	Pg	**Pn**	**19 57 31.6**	**-0.3**
SLA	**San Lorenzo**	**3.47**	**161**	*e*P	**Pn**	**19 57 33.9**	**+1.7**
PB05	**IPOC Station P**	**3.48**	**245**	*e*P	**Pn**	**19 57 32.0**	**-0.3**
PB05				*e*S	**S**	**19 58 15.2**	**-1.5**
PB05				IAML		19 58 22.8	
	comp=Z,51nm,0.5s						
PB16	**IPOC Station P**	**4.02**	**320**	Pg	**Pn**	**19 57 40.2**	**+1.0**
GO02	**Mina Guanaco**	**4.53**	**214**	Pg	**Pn**	**19 57 45.7**	**+0.6**
GO02	**Mina Guanaco**	**4.53**	**214**	*e*P	**Pn**	**19 57 45.1**	**-0.1**
GO02				*e*S	**S**	**19 58 38.8**	**-1.1**
PB14	**IPOC Station P**	**4.62**	**226**	Pg	**Pn**	**19 57 46.5**	**+0.3**
BBOJ	**La Paz, Jacaqu**	**4.63**	**343**	Pg	**Pn**	**19 57 47.8**	**+1.0**
FSA	**Cafayete**	**4.71**	**171**	*e*P	**Pn**	**19 57 49.3**	**+2.0**
BBOE	**La Paz, Chanca**	**4.74**	**346**	Pg	**Pn**	**19 57 48.9**	**+0.8**
BBOD	**La Paz, Gloria**	**5.07**	**340**	Pg	**Pn**	**19 57 52.9**	**+0.6**
LPAZ	**La Paz**	**5.28**	**346**	Pg	**Pn**	**19 57 54.8**	**-0.1**
LPAZ	**La Paz**	**5.28**	**346**	*e*P	Pn	19 57 45.3	-10
BBOB	**La Paz, Bander**	**5.42**	**346**	Pg	**Pn**	**19 57 56.5**	**-0.1**

NEIC ***17*** *20:05:30.8±1.7, 30°.72N±0°.06×142°.2E±0°.1, h10km±1km, mb4.4/31, Error ellipse: s-maj=16.8km s-min=8.4km az=72.0*

IDC ***17*** *20:05:30.3±0.8, 30°.67N×141°.98E, h0km, mb4.0/22, mbtmp4.1/25, ML3.7/3, MS3.0/3, Error ellipse: s-maj=25.1km s-min=16.5km az=77.0*

NIED ***17*** *20:05:32.5, 30°.79N×142°.26E, h45km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.13; $M_{\theta\theta}$-0.09; $M_{\phi\phi}$-1.04; $M_{r\theta}$-0.96; $M_{\theta\phi}$0.16; $M_{\phi r}$1.44; Fault plane solution: $M_0$2.04000×10^{15} NP1: ϕ_s183.00000°, δ18.00000°, λ121.00000°. NP2: ϕ_s331.00000°, δ74.00000°, λ80.00000°.*

JMA ***17*** *20:05:32.5±0.2, 30°.8N±0°.8×14°2E±°, h45km, MV4.4/30, NEAR TORISHIMA IS*

ISC 17 20:05:32.8±0.5**, 30°.74N**±0°.05×**142°.16E**±0°.08**, h23**km**, n93,**
σ**1**^{s}.**38**/95**, mb4.2**/35**, 1D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.10**	**321**	Pn	**Pn**	**20 06 18.4**	**-1.8**
JHJ2				Sn	**Sn**	**20 06 55.4**	**-1.2**
JHJ2	**Mitsune**	**3.10**	**321**	*e*P	**Pn**	**20 06 20.5**	**+0.2**
JHJ	**Hachijo jima 2**	**3.12**	**320**	Pn	**Pn**	**20 06 19.2**	**-1.4**
	20nm,0.3s,baz=280,slow=21,SNR=7.2						
JHJ				Sn	**Sn**	**20 06 55.2**	**-1.9**
	41nm,0.3s,baz=82,slow=19,SNR=4.6						
JHJ				LR	LR	20 07 35.5	
	comp=Z,309nm,18.0s,baz=327,slow=41						
	49nm,0.3s						
CBIJ	**Chichi jima**	**3.63**	**180**	*e*P	**Pn**	**20 06 28.8**	**+1.2**
CBIJ				*e*S	**Sn**	**20 07 08.9**	**-0.7**
JCJ	**Chichijima**	**3.63**	**180**	Pn	Pn	20 06 17.4	-10
	9.6nm,0.3s,baz=33,slow=21,SNR=12						
JCJ				Sn	Sn	20 06 58.2	-11
	35nm,0.3s,baz=214,slow=22,SNR=6.6						
JCJ	**Chichijima**	**3.63**	**180**		**Pn**	**20 06 24.8**	**-2.8**
JCJ				Sn	**Sn**	**20 07 08.5**	**-1.1**
BSO1	**Boso 1**	**4.03**	**346**	*e*P	**Pn**	**20 06 32.8**	**+0.2**
BSO4	**Boso 4**	**4.51**	**341**	*e*P	**Pn**	**20 06 41.3**	**+1.7**
JSG	**Sagara**	**5.16**	**321**	Pn	**Pn**	**20 06 49.3**	**+0.7**
JOD2	**Odawara 2**	**5.20**	**331**	*e*P	**Pn**	**20 06 50.2**	**+1.0**
JYT	**Yasato**	**5.72**	**344**	*e*P	**Pn**	**20 06 57.4**	**+1.2**
JIE	**Ise**	**5.87**	**310**	*e*P	**Pn**	**20 06 59.8**	**+1.4**
JRY	**Ryogami san**	**5.93**	**333**	*e*P	**Pn**	**20 07 00.8**	**+1.5**
JRY				*e*S	**Sn**	**20 08 06.8**	**+0.3**
JAG	**Ashikaga**	**6.11**	**339**	P	**Pn**	**20 07 02.2**	**+0.6**
JGF	**Kuroka**	**6.31**	**322**	Pn	**Pn**	**20 07 04.2**	**-0.2**
INU	**Inuyama**	**6.31**	**318**	Pn	**Pn**	**20 07 03.6**	**-0.8**
MJAR	**Matsushiro Arr**	**6.66**	**331**	Pn	**Pn**	**20 07 10.8**	**+1.5**
	0.9nm,0.3s,baz=160,slow=11,SNR=105						
MJAR				Sn	**Sn**	**20 08 24.0**	**-0.5**
	0.3nm,0.3s,baz=81,slow=9.4,SNR=5.3						
MJAR				LR	LR	20 09 48.7	
	comp=Z,101nm,19.3s,baz=174,slow=39						
	12nm,0.6s						
MJAR	**Matsushiro Arr**	**6.66**	**331**		**Pn**	**20 07 09.1**	**-0.1**
MAJO	**Matsushiro**	**6.67**	**331**		**Pn**	**20 07 10.3**	**+1.0**
MJB9	**Matsu-Tunnel**	**6.67**	**331**		**Pn**	**20 07 11.4**	**+2.0**
JFK	**Kawauchi**	**6.70**	**351**	*e*S	**Sn**	**20 08 18.9**	**-6.5**
JMN	**Monobe**	**7.62**	**295**	Pn	**Pn**	**20 07 22.1**	**-0.5**
JSD	**Sado**	**7.96**	**337**	Pn	**Pn**	**20 07 26.5**	**-0.6**
ASAJ	**Asahikawa**	**13.36**	**1**	Pn	**Pn**	**20 08 40.1**	**-0.8**
	0.9nm,0.3s,baz=197,slow=12,SNR=7.7						
	7.1nm,0.8s						
JKA	**Kamikawa-asahi**	**13.36**	**1**	Pn	**Pn**	**20 08 39.2**	**-1.8**
KSRS	**Korea Array**	**13.56**	**303**	Pn	**Pn**	**20 08 46.9**	**+3.1**
	0.2nm,0.3s,baz=111,slow=13,SNR=4.6						
YOJ	**Yonaguni jima**	**18.08**	**254**	P	**Pn**	**20 09 41.8**	**-0.7**
YOJ				IAmb	IAmb	20 09 45.0	
	comp=Z,16nm,0.7s						
BNX	**BinXian**	**18.89**	**327**	⇓P	**Pn**	**20 09 52.8**	**+0.5**
BNX				pmax	pmax		
	comp=Z,12nm,1.6s						
YHNB	**Yeheng**	**19.36**	**257**	P	**P**	**20 09 55.0**	**-2.0**
YHNB				IAmb	IAmb	20 09 58.9	
	comp=Z,19nm,1.2s						
NACB	**Ninganchiao**	**19.38**	**255**	P	**P**	**20 09 55.5**	**-1.5**
YULB	**Yu-li**	**19.95**	**254**	P	**P**	**20 10 01.5**	**-1.8**
YULB				IAmb	IAmb	20 10 06.1	
	comp=Z,9.9nm,0.6s						
TPUB	**Ta-pu**	**20.54**	**254**	P	**P**	**20 10 08.4**	**-1.4**
TPUB				IAmb	IAmb	20 10 14.4	
	comp=Z,30nm,1.5s						
HILR	**Hailar Array B**	**25.27**	**324**	P	**P**	**20 10 58.5**	**+1.2**
	comp=Z,1.7nm,0.4s,baz=128,slow=11,SNR=4.9						
	comp=Z,1.7nm,0.4s						
HHC	**Hu-ho-hao-te**	**26.68**	**301**	*e*P	**P**	**20 11 11.1**	**+1.0**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,82nm,4.6s						
SONM	**Songino Array**	**32.17**	**312**	P	**P**	**20 11 59.9**	**+1.1**
	comp=Z,1.0nm,0.6s,baz=124,slow=8.7,SNR=9.0						
	comp=Z,1.0nm,0.6s						
SONM	**Songino Array**	**32.17**	**312**	P	**P**	**20 11 57.3**	**-1.6**
GTA	**Gaotai**	**35.46**	**296**	*e*P	**P**	**20 12 27.3**	**-0.2**
GTA				pP	pP	20 12 30.3	-2.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PZH	**PanZhiHua**	**35.60**	**273**	P	**P**	**20 12 29.9**	**+1.0**
CHTO	**Chiang Mai**	**40.77**	**263**	P	**P**	**20 13 11.1**	**-1.3**
CMAR	**Chiang Mai Arr**	**40.92**	**263**	P	**P**	**20 13 12.0**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=47,slow=7.7,SNR=1.6						
	comp=Z,0.4nm,0.3s						
TIXI	**Tiksi**	**41.60**	**354**	P	**P**	**20 13 17.9**	**-0.6**
	comp=Z,0.8nm,0.2s,baz=9.8,slow=2.2,SNR=3.7						
	comp=Z,0.8nm,0.2s						
ZALV	**Zalesovo Beam**	**46.78**	**317**	P	**P**	**20 13 60.0**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=101,slow=7.7,SNR=4.2						
	comp=Z,0.6nm,0.4s						
MK31	**Makanchi Array**	**48.21**	**307**	P	**P**	**20 14 11.0**	**-0.5**
MKAR	**Makanchi Array**	**48.21**	**307**	P	**P**	**20 14 12.4**	**+0.9**
	comp=Z,1.5nm,0.7s,baz=94,slow=9.4,SNR=16						
	comp=Z,1.5nm,0.7s						
MKAR	**Makanchi Array**	**48.21**	**307**	P	**P**	**20 14 10.9**	**-0.6**
MAKZ	**Makanchi**	**48.42**	**307**	P	**P**	**20 14 13.1**	**-0.1**
MAKZ				IAmb	IAmb	20 14 20.6	
	comp=Z,4.3nm,1.2s						
KURK	**Kurchatov**	**50.47**	**312**		**P**	**20 14 29.2**	**+0.5**
KURK				IAmb	IAmb	20 14 30.3	
	comp=Z,3.4nm,0.8s						
KURBB	**Kurchatov Arra**	**50.53**	**312**	P	**P**	**20 14 29.7**	**+0.6**
	comp=Z,2.4nm,0.7s,baz=87,slow=8.0,SNR=26						
	comp=Z,2.4nm,0.7s						
WB0	**Warramunga Arr**	**50.76**	**189**	P	**P**	**20 14 30.9**	**-0.2**
WB0				IAmb	IAmb	20 14 45.0	
	comp=Z,8.3nm,1.2s						
E19K	**Redstone River**	**50.79**	**26**	P	**P**	**20 14 32.4**	**+1.6**
E19K				IAmb	IAmb	20 14 33.9	
	comp=Z,4.9nm,1.3s						
WRAB	**Tennant Creek**	**50.93**	**189**	P	**P**	**20 14 31.6**	**-0.9**
WRAB				IAmb	IAmb	20 15 15.9	
	comp=Z,5.5nm,1.2s						
WRA	**Warramunga Arr**	**50.94**	**189**	P	**P**	**20 14 32.6**	**+0.1**
	comp=Z,1.5nm,0.3s,baz=6.3,slow=7.5,SNR=12						
	comp=Z,1.5nm,0.3s						
WUS	**Wushi**	**51.01**	**300**	P	**P**	**20 14 32.8**	**-0.3**
GSI	**Gunungsitoli**	**51.35**	**244**	P	**P**	**20 14 35.8**	**0.0**
J20K	**Nowinta River**	**51.37**	**30**	P	**P**	**20 14 34.9**	**-0.3**
J20K				IAmb	IAmb	20 15 01.7	
	comp=Z,4.9nm,1.2s						
KSH	**Kashi**	**53.76**	**299**	P	P	20 14 59.1	+5.6
KSH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ILAR	**Eielson Array**	**54.56**	**30**	P	**P**	**20 15 01.3**	**+2.5**
	comp=Z,0.4nm,0.7s,baz=259,slow=6.5,SNR=4.5						
	comp=Z,0.4nm,0.7s						
ILAR	**Eielson Array**	**54.56**	**30**	P	**P**	**20 14 59.2**	**+0.4**
ASAR	**Alice Springs**	**54.67**	**189**	P	**P**	**20 15 00.2**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=351,slow=10,SNR=5.1						
	comp=Z,0.7nm,0.5s						
BVAR	**Borovoye Array**	**55.39**	**316**	P	**P**	**20 15 06.4**	**+1.4**
	comp=Z,1.5nm,0.6s,baz=97,slow=7.1,SNR=9.9						
	comp=Z,1.5nm,0.6s						
BORK	**Borovoye**	**55.43**	**316**	P	**P**	**20 15 04.5**	**-0.8**
ARSB	**Arslanbob**	**55.60**	**301**	P	**P**	**20 15 06.7**	**-0.1**
ARSB				IAmb	IAmb	20 15 30.8	
	comp=Z,5.4nm,1.4s						
KK31	**Karatay Array**	**56.99**	**304**		**P**	**20 15 16.6**	**0.0**
KK31				IAmb	IAmb	20 15 18.7	
	comp=Z,3.3nm,0.8s						
KKAR	**Karatay Array**	**56.99**	**304**		**P**	**20 15 16.6**	**0.0**
MANEM	**Manem**	**57.51**	**297**	P	**P**	**20 15 19.9**	**-0.7**

MANEM				IAmb	IAmb	20 15 24.0	
	comp=Z,8.1nm,0.7s						
GAR	Garm	58.15	299		P	20 15 25.2	+0.3
CHGR	Chuyangaron	59.11	299	P	P	20 15 31.3	-0.3
G31M	Satah River	59.64	27	P	P	20 15 34.8	+0.1
SHAA	Shahritus	60.21	298		P	20 15 38.9	-0.3
SHAA				IAmb	IAmb	20 15 42.5	
	comp=Z,8.2nm,0.7s						
ARTI	Arti	61.67	321	P	P	20 15 49.1	+0.4
	comp=Z,5.4nm,0.6s,baz=131,slow=4.4,SNR=13						
	comp=Z,5.4nm,0.6s						
ARTI	Arti	61.67	321		P	20 15 48.0	-0.6
AB31	Akbulak array	62.58	313		P	20 15 55.0	+0.2
AB31				IAmb	IAmb	20 15 59.9	
	comp=Z,1.6nm,0.6s						
ABKAR	Akbulak array	62.58	313	P	P	20 15 54.8	-0.1
AKTO	Aktyubinsk	63.44	315	P	P	20 16 00.7	+0.1
	comp=Z,1.7nm,0.9s,baz=87,slow=2.5,SNR=3.6						
	comp=Z,1.7nm,0.9s						
HRA	Herat	65.76	297	P	P	20 16 17.1	+0.8
HRA				IAmb	IAmb	20 16 18.8	
	comp=Z,1.9nm,0.7s						
NWAO	Narrogin (SRO)	67.57	203	LR	LR	20 46 00.2	
	comp=Z,409nm,18.5s,baz=338,slow=36						
BELG	Belogornoye	68.89	319	P	P	20 16 36.8	+1.3
	comp=Z,6.1nm,0.9s,baz=101,slow=10,SNR=4.0						
	comp=Z,6.1nm,0.9s						
YKA	Yellowknife Ar	68.97	29	P	P	20 16 33.3	-2.5
YKAW1	Yellowknife Wh	69.02	29	P	P	20 16 34.1	-2.0
ARCES	ARCESS Array B	70.11	340	P	P	20 16 45.0	+2.2
	comp=Z,4.5nm,1.0s,baz=56,slow=6.7,SNR=2.3						
	comp=Z,4.5nm,1.0s						
ARCES	ARCESS Array B	70.11	340	P	P	20 16 42.2	-0.6
FINES	FINESS Array B	74.69	333	P	P	20 17 11.8	+1.6
	comp=Z,0.7nm,0.4s,baz=55,slow=7.2,SNR=10						
	comp=Z,0.7nm,0.4s						
FINES	FINESS Array B	74.69	333	P	P	20 17 10.4	+0.3
KBZ	Khabaz	75.53	312	P	P	20 17 17.9	+2.5
	comp=Z,1.2nm,0.7s,baz=104,slow=3.3,SNR=5.3						
	comp=Z,1.2nm,0.7s						
AKASG	Malin Array Be	79.69	323	P	P	20 17 39.2	+0.8
	comp=Z,1.3nm,0.3s,baz=51,slow=6.0,SNR=2.3						
	comp=Z,1.3nm,0.3s						
HFS	Hagfors	80.09	337	P	P	20 17 40.1	-0.3
	comp=Z,0.7nm,0.5s,baz=12,slow=7.4,SNR=2.4						
	comp=Z,0.7nm,0.5s						
NOA	NORSAR Array B	80.24	338	P	P	20 17 42.0	+0.7
	comp=Z,0.3nm,0.5s,baz=50,slow=2.3,SNR=1.6						
	comp=Z,0.3nm,0.5s						
PDAR	Pinedale Array	81.65	45	P	P	20 17 52.1	+2.6
	comp=Z,0.1nm,0.4s,baz=268,slow=5.9,SNR=2.2						
	comp=Z,0.1nm,0.4s						
PDAR	Pinedale Array	81.65	45	P	P	20 17 49.0	-0.5
BRTR	Keskin Array B	83.53	313	P	P	20 18 00.8	+1.6
	comp=Z,0.4nm,0.6s,baz=93,slow=4.2,SNR=3.6						
	comp=Z,0.4nm,0.6s						
BRTR	Keskin Array B	83.53	313	P	P	20 17 59.4	+0.2
RAYN	Ar Rayn	83.67	293	P	P	20 18 00.8	+0.7
ATD	Arta Tunnel	92.04	285	LR	LR	21 03 44.4	
	comp=Z,5.5nm,19.9s,baz=106,slow=38						

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*IDC **17** 20:09:57.0±1.8, 4°.10S×131°.78E, h0^{km}, mb3.8/7, mbtmp3.8/9, ML3.7/2, Error ellipse: s-maj=63.8km s-min=32.7km az=85.0*

ISC 17 20:10:02.0±1.0, **4°.23S**±0°.10×**131°.5E**±0°.3, **h29**^{km}, **n11**, σ**2^{s}.14**/12, **mb3.8**/8, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	14.94	202	Pn	Pn	20 13 31.1	-0.1
	0.4nm,0.3s,baz=24,slow=9.1,SNR=11						
	1.5nm,0.4s						
WRA	Warramunga Arr	15.86	170	Pn	Pn	20 13 44.0	+0.6
	0.2nm,0.3s,baz=353,slow=14,SNR=13						
WRA				Sn	Sn	20 16 33.3	-5.1
	0.2nm,0.3s,baz=0.0,slow=22,SNR=2.7						
	0.3nm,0.4s						
ASAR	Alice Springs	19.46	173	P	Pn	20 14 30.1	+2.1
	1.1nm,0.5s,baz=352,slow=11,SNR=31						
STKA	Stephens Creek	29.09	162	P	P	20 16 02.8	+2.6
	1.1nm,0.6s,baz=343,slow=15,SNR=2.8						
CMAR	Chiang Mai Arr	39.22	306	P	P	20 17 28.8	+0.7
	0.6nm,0.6s,baz=140,slow=7.5,SNR=6.2						
	0.6nm,0.6s						
SONM	Songino Array	56.34	340	P	P	20 19 39.5	-1.0
	0.3nm,0.6s,baz=145,slow=5.3,SNR=2.0						
	0.3nm,0.6s						
MKAR	Makanchi Array	66.78	326	P	P	20 20 50.8	0.0
	0.3nm,0.6s,baz=119,slow=7.8,SNR=4.6						
	0.3nm,0.6s						
ZALV	Zalesovo Beam	69.81	333	P	P	20 21 08.5	-1.1
	0.5nm,0.5s,baz=115,slow=6.8,SNR=2.5						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	70.98	327	P	P	20 21 16.9	0.0
	0.9nm,0.6s,baz=123,slow=5.3,SNR=14						
	0.9nm,0.6s						
TIXI	Tiksi	75.75	359	P	P	20 21 43.5	-1.1
	0.9nm,0.2s,baz=221,slow=5.1,SNR=4.4						
	0.9nm,0.2s						
BVAR	Borovoye Array	76.56	327	P	P	20 21 49.4	-0.1
	0.4nm,0.4s,baz=116,slow=6.6,SNR=3.1						
	0.4nm,0.4s						

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*NEIC **17** 20:17:19.2±1.8, 31°.24N±0°.06×130°.32E±0°.09, h153^{km}±6^{km}, mb4.4/55, Error ellipse: s-maj=11.9km s-min=7.8km az=113.0*

*IDC **17** 20:17:19.6±1.3, 31°.27N×130°.41E, h163^{km}±8^{km}, mb3.8/24, mbtmp4.2/28, Error ellipse: s-maj=18.4km s-min=12.3km az=141.0*

*NIED **17** 20:17:20.7, 31°.25N×130°.38E, h155^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.12; $M_{\theta\theta}$-1.55; $M_{\phi\phi}$0.44; $M_{r\theta}$0.30; $M_{\theta\phi}$-0.95; $M_{\phi r}$0.72; Fault plane solution: $M_0$1.82000×10^{15} NP1: ϕ_s280.00000°, δ46.00000°, λ142.00000°. NP2: ϕ_s39.00000°, δ63.00000°, λ51.00000°.*

*JMA **17** 20:17:20.7±0.1, 31°.3N±0°.4×130°.4E±0°.7, h155^{km}±1^{km}, MD3.8/38, MV4.1/38, SATSUMA PENINSULA REGION*

JMA Felt I J1 at SATSUMA PENINSULA REGION.

ISC 17 20:17:19.7±0.5, **31°.23N**±0°.04×**130°.32E**±0°.05, **h164**^{km}±4^{km}, **n162**, σ**1^{s}.17**/174, **mb4.3**/65, **2D**, **Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSU	Suzuyama	0.30	23	Pn	Pn	20 17 41.8	-0.1
JSU	Suzuyama	0.30	23	*i* P	Pn	20 17 41.9	-0.1
JTSR	Tashiro 2	0.52	97	*i* P	Pn	20 17 42.6	-0.1
JTSR				S	Sn	20 17 58.7	-1.7
JTSR	Tashiro 2	0.52	97	A	A	20 17 42.6	
	comp=N,6.0nm,0.3s,comp=E,3.0nm,0.3s						
JSJ	Shimokoshiki	0.68	311	⇓*i*P	Pn	20 17 43.3	-0.3
JTN	Tanegashima 3	0.81	135	*i* P	Pn	20 17 44.5	+0.1
JTN				S	Sn	20 18 02.2	-1.1
JTN	Tanegashima 3	0.81	135	A	A	20 17 44.5	
	comp=N,6.0nm,0.5s,comp=E,5.0nm,0.6s						
JNAR	Kushima--Naru	0.87	70	A	A	20 17 44.6	
	comp=N,6.0nm,0.5s,comp=E,3.0nm,0.9s						
JTZ	Takazaki	0.94	44	*i* P	Pn	20 17 45.1	-0.2
JTZ				S	Sn	20 18 03.1	-1.9
JZO	Okuchi	0.94	15	A	A	20 17 45.3	
	comp=N,4.0nm,2.4s,comp=E,5.0nm,3.5s						
JMTN	Minamitane	0.97	149	*i* P	Pn	20 17 45.8	+0.2
JMTN				S	Sn	20 18 04.9	-0.5
JYAK	Yakushimahirau	1.00	170	*i* P	Pn	20 17 46.0	+0.2
JYAK				S	Sn	20 18 04.8	-1.0
JIU3	Izumi3	1.38	18	*i* P	Pn	20 17 49.3	+0.1
JIU3				S	Sn	20 18 10.3	-1.7
JNN	Nakanoshima	1.43	196	⇓*i*P	Pn	20 17 50.3	+0.6
JNN	Nakanoshima	1.43	196	A	A	20 17 50.3	
	comp=N,4.0nm,2.9s,comp=E,4.0nm,1.2s						
JNU	Nakatsue	1.95	14	P	Pn	20 17 55.1	0.0
	comp=E,62nm,0.4s,baz=326,slow=3.2,SNR=260						
JNU				S	Sn	20 18 21.0	-1.6
	comp=E,89nm,0.4s,baz=183,slow=17,SNR=8.0						
JNU	Nakatsue	1.95	14		Pn	20 17 54.6	-0.5
JNU				Sn	Sn	20 18 20.0	-2.6
JTAJ	Takarajima	2.28	205	P	Pn	20 17 59.9	+0.9
JMN	Monobe	3.91	49		Pn	20 18 17.8	-1.4
JMN				Sn	Sn	20 19 00.3	-5.2
JOW	Kunigami	4.73	203	P	Pn	20 18 29.1	-0.7
	comp=E,27nm,0.2s,baz=139,slow=28,SNR=51						
JOW				S	Sn	20 19 15.5	-9.2
	comp=E,30nm,0.3s,baz=344,slow=17,SNR=4.7						
JOW	Kunigami	4.73	203		Pn	20 18 29.1	-0.8
JOW				Sn	Sn	20 19 20.7	-4.0
TJN	Taejon	5.69	335		Pn	20 18 42.8	+0.4
KSAR	Wonju Array Be	6.52	343		Pn	20 18 52.9	-0.4
KSRS	Korea Array	6.52	343	P	Pn	20 18 54.5	+1.2
	comp=E,24nm,0.8s,baz=168,slow=13,SNR=51						
KS19	Wonju Array Si	6.58	343		Pn	20 18 53.1	-1.0
INCN	Inchon	6.94	335		Pn	20 18 59.8	+0.8
INU	Inuyama	6.95	52		Pn	20 19 00.9	+1.8
JGF	Kuroka	7.33	52		Pn	20 19 05.9	+1.8
JHJ	Hachijo jima 2	8.24	74	P	Pn	20 19 20.8	+4.5
	comp=E,88nm,0.3s,baz=119,slow=18,SNR=18						
JHJ2	Mitsune	8.27	74	Pn	Pn	20 19 20.1	+3.4
MAJO	Matsushiro	8.43	49	Pn	Pn	20 19 19.5	+0.7
MJB9	Matsu-Tunnel	8.43	49	Pn	Pn	20 19 19.9	+1.1
MJAR	Matsushiro Arr	8.43	49	P	Pn	20 19 19.5	+0.7
	comp=E,2.0nm,0.3s,baz=271,slow=19,SNR=21						
MJAR				S	Sn	20 20 51.1	-1.7
	comp=E,4.2nm,0.6s,baz=259,slow=36,SNR=6.9						
YULB	Yu-li	11.19	228	Pn	Pn	20 19 51.4	-3.7
USRK	Ussuriysk Ar.	13.02	5	P	P	20 20 26.2	+3.4
	comp=E,1.6nm,0.5s,baz=197,slow=10,SNR=4.1						
CNSH	ChangSha	15.41	263	P	P	20 20 52.3	+2.8
CNSH				pmax	pmax		
	comp=Z,21nm,1.0s						
ASAJ	Asahikawa	16.10	34	P	Pn	20 20 55.5	-1.4
	comp=Z,7.3nm,0.6s,baz=253,slow=15,SNR=8.0						
JKA	Kamikawa-asahi	16.10	34	Pn	Pn	20 20 54.8	-2.1
JKA				IAmb	IAmb	20 21 08.1	
	comp=Z,35nm,1.4s						
SZP	Santa	16.30	216	P	Pn	20 20 59.7	+0.2
XLT	XiLinHaoTe	16.92	322	*e*P	Pn	20 21 09.6	+2.7
XLT				sP	sP	20 21 55.3	+0.7
XLT				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC	Hu-ho-hao-te	17.92	308	*e*P	P	20 21 17.8	+0.6
HHC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,59nm,4.4s						
ENH	Enshi	17.93	272		P	20 21 17.4	+0.1
LZDM	Lanzhou Array	22.64	289	P	P	20 22 08.8	+1.5
	comp=Z,6.4nm,0.5s,baz=125,slow=7.4,SNR=5.8						
	comp=Z,6.4nm,0.5s						
CD2	Chengdu	22.74	276	P	P	20 22 08.3	+0.4
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
ULN	Ulaanbaatar	24.31	320	P	P	20 22 22.2	0.0
SONM	Songino Array	24.66	319	P	P	20 22 25.4	+0.1
	comp=Z,2.1nm,0.8s,baz=140,slow=9.9,SNR=12						
	comp=Z,2.1nm,0.8s						
SONM	Songino Array	24.66	319	P	P	20 22 25.2	-0.1
PZH	PanZhiHua	25.43	267	P	P	20 22 33.0	+0.5
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GTA	Gaotai	26.10	297	*e*P	P	20 22 39.3	+0.9
GTA				sP	pP	20 22 46.3	-26
GTA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CHTO	Chiang Mai	30.89	254		P	20 23 20.4	-0.5
CHTO				IAmb	IAmb	20 23 23.2	
	comp=Z,4.0nm,0.8s						
CMAR	Chiang Mai Arr	31.06	253	P	P	20 23 23.2	+0.8
	comp=Z,1.7nm,0.6s,baz=52,slow=7.7,SNR=14						
	comp=Z,1.7nm,0.6s						
CMAR	Chiang Mai Arr	31.06	253	P	P	20 23 22.8	+0.3
SHL	Shillong	34.16	270		P	20 23 49.4	-0.2
SHL				IAmb	IAmb	20 23 51.7	
	comp=Z,3.4nm,0.6s						
H11N2	WAKE ISLAND Hy	34.80	100	T	T	21 00 14.8	
	baz=296,slow=75,SNR=3.5						
H11N1	WAKE ISLAND Hy	34.80	100	T	T	21 00 08.1	
	baz=296,slow=75,SNR=3.1						
H11N3	WAKE ISLAND Hy	34.82	100	T	T	21 00 11.2	
	baz=296,slow=75,SNR=4.2						
SAUI	Saumlaki	39.00	178	P	P	20 24 28.2	-2.1
ZALV	Zalesovo Beam	39.55	319	P	P	20 24 33.2	-1.3
	comp=Z,0.4nm,0.4s,baz=115,slow=6.8,SNR=2.3						
ZALV				PcP	PcP	20 26 37.1	-1.4
	comp=Z,0.9nm,0.5s,baz=123,slow=4.6,SNR=4.6						
	comp=Z,0.4nm,0.4s						
MKAR	Makanchi Array	39.78	307	P	P	20 24 36.3	-0.3
	comp=Z,0.8nm,0.6s,baz=89,slow=10.0,SNR=9.4						
MKAR				PcP	PcP	20 26 39.4	0.0
	comp=Z,0.3nm,0.4s,baz=72,slow=4.3,SNR=9.0						
	comp=Z,0.8nm,0.6s						
MKAR	Makanchi Array	39.78	307	P	P	20 24 36.0	-0.6
MAKZ	Makanchi	40.00	307	P	P	20 24 38.3	0.0
KURK	Kurchatov	42.63	313	P	P	20 24 59.9	+0.2
KURK	Kurchatov	42.63	313		PcP	20 26 47.7	-0.9
KURBB	Kurchatov Arra	42.67	312	P	P	20 25 00.5	+0.5
	comp=Z,0.8nm,0.4s,baz=110,slow=6.4,SNR=14						
KURBB				PcP	PcP	20 26 47.7	-1.1
	comp=Z,0.3nm,0.4s,baz=105,slow=3.4,SNR=5.0						
	comp=Z,0.8nm,0.4s						
GSI	Gunungsitoli	42.94	233	P	P	20 25 03.5	+0.9
MNAI	Manna	43.97	221	P	P	20 25 09.5	-1.4
KNRA	Kununurra	46.66	182	P	P	20 25 33.4	+1.5
BVAR	Borovoye Array	47.90	315	P	P	20 25 41.3	+0.2
	comp=Z,1.5nm,0.3s,baz=83,slow=9.5,SNR=9.2						
BVAR				PcP	PcP	20 27 06.9	-0.1
	comp=Z,0.9nm,0.4s,baz=121,slow=3.5,SNR=7.5						
	comp=Z,1.5nm,0.3s						
BORK	Borovoye	47.94	315		P	20 25 41.1	-0.4
BORK				IAmb	IAmb	20 25 42.4	
	comp=Z,3.5nm,0.5s						
BORK				PcP	PcP	20 27 07.2	0.0
KK31	Karatay Array	48.18	302		P	20 25 43.4	-0.1
KKAR	Karatay Array	48.18	302	P	P	20 25 43.9	+0.4
KKAR				PcP	PcP	20 27 07.2	-1.0
C16K	Lisburne Hills	51.91	25	P	P	20 26 10.4	-0.7
N15K	Kwethluk River	53.41	36	P	P	20 26 22.4	+0.2
C18K	Utukok River	53.48	25	P	P	20 26 22.4	-0.3
C18K				IAmb	IAmb	20 26 46.4	
	comp=Z,5.9nm,1.4s						
C19K	Lookout Ridge	54.11	25	P	P	20 26 27.6	+0.3
C19K				PcP	PcP	20 27 31.1	+1.3
D19K	Kuna River	54.59	25	P	P	20 26 30.9	+0.1
D19K				PcP	PcP	20 27 32.2	+0.5
AB31	Akbulak array	54.67	311		P	20 26 31.9	+0.4
AB31				IAmb	IAmb	20 26 33.3	
	comp=Z,1.8nm,0.5s						
ABKAR	Akbulak array	54.67	311	P	P	20 26 31.9	+0.4
ARTI	Arti	54.79	320	P	P	20 26 32.8	+0.5
	comp=Z,3.1nm,0.5s,baz=103,slow=3.2,SNR=9.7						
	comp=Z,3.1nm,0.5s						
ARTI	Arti	54.79	320	P	P	20 26 32.7	+0.4
E19K	Redstone River	54.86	27	P	P	20 26 33.1	+0.5
E19K				PcP	PcP	20 27 33.0	+0.3
B22K	Teshekpuk Lake	56.34	23	P	P	20 26 43.7	+0.6
B22K				PcP	sP	20 27 39.1	+0.1
STLK	Strandline Lak	57.37	34	P	P	20 26 49.6	-1.1
STLK				IAmb	IAmb	20 26 51.6	
	comp=Z,6.7nm,0.8s						
L22K	Petersville	57.76	33	P	P	20 26 53.7	+0.4
L22K				IAmb	IAmb	20 27 10.1	
	comp=Z,8.2nm,1.5s						
ILAR	Eielson Array	59.19	30	P	P	20 27 02.4	-0.8
	comp=Z,0.5nm,0.6s,baz=279,slow=6.1,SNR=6.7						
	comp=Z,0.5nm,0.6s						
BELG	Belogornoye	61.68	316	P	P	20 27 20.5	+0.4
	comp=Z,6.4nm,0.7s,baz=328,slow=3.7,SNR=6.4						
	comp=Z,6.4nm,0.7s						
M27K	Edge Creek, AK	61.86	32	P	P	20 27 22.1	+0.7
M27K				IAmb	IAmb	20 27 23.4	
	comp=Z,3.6nm,1.1s						
L29M	L29M	63.33	31	P	P	20 27 32.2	+1.2
L29M				IAmb	IAmb	20 27 33.9	
	comp=Z,8.5nm,1.4s						
SPB2	Spitsbergen Ar	64.33	348	P	P	20 27 36.9	-0.4
SPITS	Spitsbergen Ar	64.33	348	P	P	20 27 37.1	-0.2
	comp=Z,1.2nm,0.4s,baz=86,slow=11,SNR=13						
	comp=Z,1.2nm,0.4s						
KBS	Kingsbay	64.69	349	P	P	20 27 39.2	-0.4
KEV	Kevo	65.48	338	P	P	20 27 44.0	-0.8
ARCES	ARCESS Array B	66.05	338	P	P	20 27 47.7	-0.8
	comp=Z,1.7nm,0.6s,baz=61,slow=7.1,SNR=17						
	comp=Z,1.7nm,0.6s						
ARCES	ARCESS Array B	66.05	338	P	P	20 27 47.9	-0.6
MSVF	Nonsavu	66.86	130	P	P	20 27 54.8	+0.4
MSVF	Nonsavu	66.86	130	P	P	20 27 55.5	+1.1
MSVF	Nonsavu	66.86	130	pmax	pmax		
	comp=Z,221nm,1.2s						
MSVF	Nonsavu	66.86	130	P	P	20 27 54.8	+0.4
KBZ	Khabaz	67.46	308	P	P	20 27 59.3	+1.6
	comp=Z,5.3nm,0.8s,baz=73,slow=2.8,SNR=19						
	comp=Z,5.3nm,0.8s						
KIV	Kislovodsk	67.52	309		P	20 27 59.5	+1.2
KIV				IAmb	IAmb	20 28 00.6	
	comp=Z,8.3nm,0.8s						
FIA1	FINESS Array S	69.44	330	P	P	20 28 09.2	-0.5
FINES	FINESS Array B	69.44	330	P	P	20 28 09.3	-0.4
	comp=Z,5.0nm,0.4s,baz=70,slow=6.0,SNR=78						
	comp=Z,5.0nm,0.4s						
GURO	Guroymak-BITLI	70.11	304	P	P	20 28 15.0	+0.5
GURO				IAmb	IAmb	20 28 16.7	
	comp=Z,4.9nm,0.7s						
MARD	Mardin	71.52	303		P	20 28 23.3	+0.3
MARD				IAmb	IAmb	20 28 24.8	
	comp=Z,8.7nm,0.7s						
AK03	Malin Array Si	72.93	319	P	P	20 28 29.9	-1.0
AKASG	Malin Array Be	72.94	319	P	P	20 28 30.7	-0.3
	comp=Z,2.4nm,0.4s,baz=57,slow=6.3,SNR=14						
	comp=Z,2.4nm,0.4s						
AKASG	Malin Array Be	72.94	319	P	P	20 28 30.5	-0.5
AKBB	Malin Array Si	72.94	319	P	P	20 28 30.0	-1.0
AKBB				IAmb	IAmb	20 28 31.3	
	comp=Z,5.7nm,0.8s						
AKBB	Malin Array Si	72.94	319	P	P	20 28 29.7	-1.3
AK09	Malin Array Si	72.95	319	P	P	20 28 30.5	-0.5
AK01	Malin Array Si	72.95	319	P	P	20 28 30.6	-0.5
KIEV	Kiev	72.95	319	P	P	20 28 29.9	-1.1
KIEV				IAmb	IAmb	20 28 31.3	
	comp=Z,5.2nm,0.8s						
KIEV	Kiev	72.95	319	P	P	20 28 30.5	-0.6
AK05	Malin Array Si	72.99	319	P	P	20 28 30.8	-0.5
YKA	Yellowknife Ar	73.24	26	P	P	20 28 32.5	-0.1
	comp=Z,0.4nm,0.7s,baz=307,slow=6.3,SNR=5.7						
	comp=Z,0.4nm,0.7s						
RAYN	Ar Rayn	73.99	288		P	20 28 37.1	-0.6
RAYN				IAmb	IAmb	20 28 39.2	
	comp=Z,4.5nm,0.8s						
BAL3X	Bal3x, Balta	74.05	317	P	P	20 28 37.0	-0.5
LUBAR	Lubar, Ukraine	74.14	319	P	P	20 28 37.3	-0.7
BNN	Bunyan	74.33	306	P	P	20 28 38.6	-0.9
BNN				IAmb	IAmb	20 28 41.7	
	comp=Z,4.2nm,0.9s						
ILGA	Ilgaz	74.75	309	P	P	20 28 42.0	0.0
ILGA				IAmb	IAmb	20 29 02.9	
	comp=Z,9.7nm,1.4s						
HFS	Hagfors	75.26	332	P	P	20 28 43.4	-0.8
	comp=Z,1.8nm,0.4s,baz=72,slow=4.8,SNR=22						
	comp=Z,1.8nm,0.4s						
BR131	Keskin Array S	75.43	308		P	20 28 45.5	-0.3
BR131				IAmb	IAmb	20 28 47.5	
	comp=Z,7.9nm,0.9s						
BRTR	Keskin Array B	75.43	308	P	P	20 28 46.5	+0.6
	comp=Z,5.0nm,0.8s,baz=104,slow=5.2,SNR=31						
	comp=Z,5.0nm,0.8s						
BRTR	Keskin Array B	75.43	308		P	20 28 45.4	-0.5
NB201	NORSAR Array S	75.61	334	P	P	20 28 45.0	-1.2
NB2	NORSAR Subarra	75.65	334	P	P	20 28 45.4	-1.1
	comp=Z,1.4nm,0.5s,baz=47,slow=5.6						
NOA	NORSAR Array B	75.65	334	P	P	20 28 45.5	-1.0
	comp=Z,1.5nm,0.5s,baz=49,slow=5.5,SNR=14						
	comp=Z,1.5nm,0.5s						
SUMG	Summit	76.19	357	P	P	20 28 49.7	-0.1
BUR08	Bucovina Ar. S	76.76	318		P	20 28 53.4	+0.2
BUR08				IAmb	IAmb	20 28 54.3	
	comp=Z,4.0nm,0.8s						
BURAR	Bucovina Array	76.77	318	P	P	20 28 53.7	+0.6
BURAR				IAmb	IAmb	20 28 54.6	
	comp=Z,3.4nm,0.8s						
MMAI	Mount Meron Ar	77.40	301	P	P	20 28 58.1	+1.2
	comp=Z,1.3nm,0.6s,baz=69,slow=8.2,SNR=2.8						
	comp=Z,1.3nm,0.6s						
MLR	Muntele Rosu	77.46	316	P	P	20 28 57.0	-0.1
MLR				IAmb	IAmb	20 28 58.9	
	comp=Z,7.6nm,1.3s						
BORA	Eskisehir	77.49	309	P	P	20 28 57.5	+0.1
BORA				IAmb	IAmb	20 28 58.2	
	comp=Z,6.2nm,0.7s						
BALJ	Balqa	77.68	300	P	P	20 28 59.2	+0.8
BALJ				IAmb	IAmb	20 29 00.1	
	comp=Z,9.6nm,0.7s						
GHAJ	Ghor Haditha	78.11	299	P	P	20 29 01.5	+0.7
OJC	Ojcow	78.32	322		P	20 29 02.1	+0.5
ELL	Elmali	79.45	307		P	20 29 08.4	+0.2
ELL				IAmb	IAmb	20 29 09.0	
	comp=Z,8.1nm,0.6s						
STEB	Steborice	79.54	323	*e*P	P	20 29 09.0	+0.7
AKAS	Kas	79.93	306	P	P	20 29 09.9	-0.9
KRLC	Kraliky	79.97	323	*e*P	P	20 29 11.2	+0.6
VRAC	Vranov	80.53	323	P	P	20 29 13.7	+0.1
	comp=Z,4.3nm,0.8s,baz=46,slow=10,SNR=4.9						
	comp=Z,4.3nm,0.8s						
ARG	Arkhangelos	80.96	307	P	P	20 29 15.6	-0.5
CLL	Collm	81.09	326	*i* P	P	20 29 16.6	+0.1
	comp=Z,7.0nm,0.7s						
RONA	Rosalia, Austr	81.67	321	*e*PcP	P	20 29 20.7	+1.1
	comp=Z,4.4nm,1.2s						
ZVC	Zvikov	81.69	324	*e*P	P	20 29 20.0	+0.3
CONA	Conrad Observa	81.76	322	*i* PcP	P	20 29 21.4	+1.2
	comp=Z,4.2nm,0.6s,SNR=6.1						
CKRC	Cesky Krumlov	82.02	323	*e*P	P	20 29 21.8	+0.4
KHC	Kasperske Hory	82.19	324	*e*P	P	20 29 22.4	0.0
GERES	GERESS Array B	82.31	323	P	P	20 29 23.6	+0.5
	comp=Z,1.1nm,0.6s,baz=38,slow=6.8,SNR=5.8						
	comp=Z,1.1nm,0.6s						
ARSA	Arzberg	82.36	321	*e*P	P	20 29 23.5	+0.2
	comp=Z,3.4nm,0.7s						
MOA	Molln	82.65	322	*i* PcP	P	20 29 26.1	+1.3
	comp=Z,4.0nm,0.4s						
SOKA	Soboth	82.98	321	*i* PcP	P	20 29 27.2	+0.7
	comp=Z,6.0nm,0.8s						
BIOA	Bad Ischl, Aus	83.08	323	*e*PcP	P	20 29 28.6	+1.6
	comp=Z,7.1nm,1.0s						
OBKA	Obir	83.35	321	*i* PcP	P	20 29 29.0	+0.6
	comp=Z,5.7nm,0.7s,SNR=4.8						
KBA	Koelnbreinsper	83.62	322	*i* PcP	P	20 29 30.1	+0.2
	comp=Z,4.4nm,0.6s						
LESA	Schwarzleotal	83.75	323	*i* PcP	P	20 29 31.1	+0.6
	comp=Z,6.2nm,0.5s,SNR=7.9						
MYKA	Terra Mystica	83.75	322	*i* P	P	20 29 30.4	-0.1
	comp=Z,7.2nm,0.5s,SNR=4.1						
ABTA	Abfaltersbach	84.27	322	*i* P	P	20 29 32.6	-0.6
	comp=Z,4.6nm,0.6s						
WTTA	Wattenberg	84.39	323	*e*PcP	P	20 29 34.0	+0.2
	comp=Z,7.3nm,1.3s						
RETA	Reutte	84.69	324	*e*PcP	P	20 29 35.7	+0.5
	comp=Z,2.9nm,1.0s						
EKA	Eskdalemuir Ar	85.03	335	P	P	20 29 35.5	-1.1
	comp=Z,1.0nm,0.5s,baz=36,slow=5.0,SNR=8.4						
	comp=Z,1.0nm,0.5s						
NVAR	Mina Array Bea	85.75	47	P	P	20 29 42.1	+1.2
	comp=Z,0.5nm,0.5s,baz=328,slow=5.3,SNR=4.3						
	comp=Z,0.5nm,0.5s						

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*BJI **17** 20:18:02.3, 6°.13N×125°.63E, h22^{km}, mB5.8/66, mb5.1/91, Ms5.2/99, Ms7 4.9/97*

*NEIC **17** 20:18:03.7, 6°.48N×125°.61E, h18^{km}, Moment Tensor Solution. Duration: 2^{s}.2 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.36; $M_{\theta\theta}$1.19; $M_{\phi\phi}$-0.83; $M_{r\theta}$-0.76; $M_{\theta\phi}$-0.56; $M_{\phi r}$0.01; Fault plane solution: $M_0$1.42000×10^{17} NP1: ϕ_s331.95000°, δ59.49000°, λ-0.80000°. NP2:ϕ_s62.36000°, δ89.31000°, λ-149.49000°. Principal axes: T 1.6138, Plg21.0000°, Azm193.0000°; N -0.5643, Plg59.0000°, Azm64.0000°; P -1.0494, Plg22.0000°, Azm291.0000°;*

*NEIC **17** 20:18:03.7, 6°.48N×125°.51E, h18^{km}*

*MOS **17** 20:18:03.5±0.8, 6°.49N×125°.39E, h16^{km}, mb5.6/62, MS4.9/15, Error ellipse: s-maj=9.0km s-min=4.4km az=110.0*

*MAN **17** 20:18:04.8, 6°.55N×125°.40E, h1^{km}, mb5.8, ML4.8, MS5.2*

MAN INTENSITY V - DIGOS CITY DAVAO DEL SUR; INTENSITY IV - GENERAL SANTOS CITY; INTENSITY III - KIDAPAWAN CITY COTABATO.

*NEIC **17** 20:18:05.2±2.0, 6°.46N±0°.06×125°.53E±0°.07, h14^{km}±3^{km}, mb5.6/302, Ms_20 4.9/61, Mww5.4/18, Error ellipse: s-maj=10.0km s-min=7.8km az=58.0*

*GFZ **17** 20:18:06.1, 6°.50N×125°.50E, h15^{km}, MW5.2, Moment Tensor Solution. s98 Moment tensor: M_{rr}-2.49; $M_{\theta\theta}$7.80; $M_{\phi\phi}$-5.31; $M_{r\theta}$-2.69; $M_{\theta\phi}$-4.54; $M_{\phi r}$-0.12; Fault plane solution: NP1:ϕ_s333.00000°, δ73.00000°, λ0.00000°. NP2:ϕ_s63.00000°, δ89.00000°, λ-16.00000°. Principal axes: T 9.7400, Plg12.0000°, Azm197.0000°; N -2.8100, Plg73.0000°, Azm65.0000°; P -6.9300, Plg13.0000°, Azm289.0000°;*

IDC **17** *20:18:07.0±1.4, 6°.48N×125°.48E, h26^{km}±8^{km}, mb4.9/43, mbtmp5.1/44, ML5.1/1, MS4.7/45 Error ellipse: s-maj=13.8km s-min=7.3km az=67.0*

GCMT **17** *20:18:07.2±0.1, 6°.55N±0°.01×125°.36E±0°.01, h12^{km}, MW5.5/127, Moment Tensor Solution. s83,c129; s127,c214; Duration: 1^{s}4 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.35±.03; $M_{\theta\theta}$1.44±.02; $M_{\phi\phi}$-1.09±.03; $M_{r\theta}$-1.12±.06; $M_{\theta\phi}$-0.60±.02; $M_{\phi r}$1.18±.07; Best double couple: $M_0$2.14700×10^{17} NP1:ϕ_s238.00000°, δ39.00000°, λ-171.00000°. NP2:ϕ_s141.00000°, δ84.00000°, λ-51.00000°. Principal axes: T 2.3260, Plg29.0000°, Azm201.0000°; N -0.3570, Plg39.0000°, Azm317.0000°; P -1.9670, Plg38.0000°, Azm85.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA **17** *20:18:10.5±0.3, 6°N±2°×12°5E±°, h36^{km}±3^{km}, M5.4/129, mB5.9/118, mb5.7/129, MLv6.1/9, Mw(mB)5.5/118, MwMwp5.2/78, Mwp5.4/78*

ISC 17 20:18:05.9±0.5**, 6°.46N**±0°.03×**125°.53E**±0°.04**, h18**^{km}±2^{km}**, h19**^{km}**:pP-P, n1152,** σ**1^{s}63**/1061**, mb5.5**/334**, MS4.9**/115**, 20C-8D, Mindanao**

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Code   Station Name        Δ°  AZ°    Phase ID           Time     Res
                                      Op     ISC        h  m  s   ISC
DAV    Davao City (W)     0.61   5    Pg     Pg        20 18 18.6 +0.5
       13µm,0.3s,baz=197,slow=1.3,SNR=2260
DAV                                   Lg     Lg        20 18 25.5
       28µm,0.3s,baz=73,slow=19,SNR=20
DAV    Davao City (W)     0.61   5           Pb        20 18 17.9 -0.1
DAV    Davao City (W)     0.61   5    P      Pg        20 18 18.6 +0.5
DAV    Davao City (W)     0.61   5    S      Sn        20 18 29.0 -0.1
DAV    Davao City (W)     0.61   5    P      Pg        20 18 18.5 +0.5
DAV    Davao City (W)     0.61   5    P      Pb        20 18 10.0 -8.0
SGSI   Sangihe            2.75 180    P      Pn        20 18 51.5 +2.3
TNTI   Ternate            5.94 162           Pn        20 19 35.7 +2.7
TNTI   Ternate            5.94 162    P      Pn        20 19 37.0 +4.0
TNTI   Ternate            5.94 162    P      Pn        20 19 36.5 +3.5
       4.7nm8µm869nm,1.0s
GTOI   Gorontalo          6.30 204    P      Pn        20 19 37.6 -0.4
MRSI   Marisa             6.94 211    P      Pn        20 19 46.1 -0.6
TOLI2  Tolitoli           7.11 222           Pn        20 19 46.2 -3.0
TOLI2  Tolitoli           7.11 222    P      Pn        20 19 46.6 -2.5
LUWI   Luwuk              7.94 200           Pn        20 20 01.2 +0.7
LUWI   Luwuk              7.94 200    P      Pn        20 20 03.8 +3.3
LUWI   Luwuk              7.94 200    P      Pn        20 20 04.2 +3.7
MPSI   Mapaga             8.28 223    P      Pn        20 20 04.0 -1.1
       9µm188nm,0.7s
APSI   Ampana             8.28 208    P      Pn        20 20 06.9 +1.7
SANI   Sanana             8.46 177    P      Pn        20 20 09.0 +1.3
SANI   Sanana             8.46 177    P      Pn        20 20 08.0 +0.3
       7µm6µm597nm,0.8s
TARAI  Tarakan            8.52 249    P      Pn        20 20 05.9 -2.5
       6µm567nm,0.8s
TGY    Tagaytay City      8.84 330    Pn     Pn        20 20 19.1 +6.3
       baz=335,slow=1.5
I39PW  PALAU INFRASON     9.02  83    I      I         21 10 20.0
       0.1nm,0.6s,baz=267,slow=299,SNR=4.4
SWI    Sorong             9.25 142    P      Pn        20 20 23.5 +5.0
       239nm,0.8s
PCI    Palu               9.26 218    P      Pn        20 20 18.1 -0.5
       9µm5µm487nm,0.9s
KKM    Kota Kinabalu      9.27 268           Pn        20 20 18.9 +0.1
KKM    Kota Kinabalu      9.27 268    P      Pn        20 20 21.0 +2.2
KKM    Kota Kinabalu      9.27 268    P      Pn        20 20 20.5 +1.7
NLAI   Namlea             9.76 171    P      Pn        20 20 27.1 +1.6
KRAI   Karang Ratu       10.12 163    P      Pn        20 20 33.5 +3.0
       3µm384nm,0.8s
MSAI   Masohi            10.31 161    P      Pn        20 20 37.8 +4.7
       4µm4µm279nm,0.8s
AAI    Ambon             10.42 165    P      Pn        20 20 36.6 +2.0
       4µm459nm,0.9s
TTSI   Tana Toraja       11.03 211    P      Pn        20 20 44.7 +1.9
       5µm5µm627nm,1.1s
MWPI   Manokwari, Pap    11.23 131    P      Pn        20 20 51.1 +5.5
       7µm462nm,1.3s
MMSI   Mamuju            11.23 216    P      Pn        20 20 46.8 +1.1
       6µm3µm219nm,1.0s
KKSI   Kolaka, Sulawe    11.25 200    P      Pn        20 20 48.5 +2.7
       6µm3µm341nm,1.3s
FAKI   Fak Fak           11.48 144           Pn        20 20 49.9 +0.8
FAKI   Fak Fak           11.48 144    P      Pn        20 20 53.3 +4.2
FAKI   Fak Fak           11.48 144    P      Pn        20 20 53.8 +4.7
       3µm294nm,1.1s
BKB    Balikpapan        11.53 229           Pn        20 20 48.7 -1.1
BKB    Balikpapan        11.53 229    P      Pn        20 20 50.7 +0.9
BKB    Balikpapan        11.53 229    P      Pn        20 20 51.3 +1.5
       8µm5µm481nm,1.1s
RKPI   Ransiki, Papua    11.71 132    P      Pn        20 21 00.5 +8.2
       9µm451nm,1.2s
BNDI   Bandanaira        11.75 158    P      Pn        20 20 55.2 +2.5
BNDI   Bandanaira        11.75 158    P      Pn        20 20 57.1 +4.4
       638nm,1.8s
SPSI   Sidrap Palu       11.84 209    P      Pn        20 20 56.9 +2.9
       5µm2µm189nm,0.9s
PMSI   Majene            11.89 214    P      Pn        20 20 58.4 +3.7
       5µm4µm283nm,1.1s
BNSI   Bone              12.07 207    P      Pn        20 21 00.2 +3.1
       7µm7µm522nm,1.1s
KAPI   Kappang           12.77 207    Pn     Pn        20 21 10.1 +3.4
       3.6nm,0.3s,baz=23,slow=12,SNR=70
KAPI                                  LR     LR        20 26 17.9
       comp=Z,3µm,19.7s,baz=40,slow=38
KAPI   Kappang           12.77 207           Pn        20 21 08.0 +1.3
KAPI   Kappang           12.77 207    P      Pn        20 21 08.1 +1.4
KAPI   Kappang           12.77 207    P      Pn        20 21 10.3 +3.6
       223nm,1.2s
KAPI   Kappang           12.77 207    P      Pn        20 21 08.0 +1.3
BKSI   Bulukumba         12.88 205    P      Pn        20 21 11.6 +3.3
       6µm7µm233nm,1.8s
MTKI   Muara Teweh, K    12.91 236    P      Pn        20 21 10.2 +1.6
BAKI   Biak              13.01 125    P      P         20 21 15.4 -5.0
       4µm7µm452nm,1.3s
SRPI   Serui, Papua      13.52 127    P      P         20 21 27.3 +1.3
SBUM   Sibu              13.85 254           Pn        20 21 21.5 +0.1
SBUM   Sibu              13.85 254    P      Pn        20 21 23.4 +2.0
SBUM   Sibu              13.85 254    P      Pn        20 21 24.0 +2.6
BBKI   Banjar Baru       14.52 228    P      Pn        20 21 33.7 +3.0
MMRI   Maumere           15.35 192           Pn        20 21 40.3 -1.5
MMRI                                  IAmb   IAmb      20 21 50.0
       comp=Z,608nm,1.5s
MMRI   Maumere           15.35 192    P      P         20 21 44.1 -2.2
MMRI   Maumere           15.35 192    P      P         20 21 48.0 +1.6
       comp=Z,4µmcomp=Z,8µmcomp=Z,471nm,1.3s
SAUI   Saumlaki          15.46 158           Pn        20 21 42.6 -0.6
SAUI                                  IAmb   IAmb      20 21 49.9
       comp=Z,297nm,1.1s
SAUI   Saumlaki          15.46 158    P      Pn        20 21 44.4 +1.2
SAUI   Saumlaki          15.46 158    P      Pn        20 21 44.0 +0.8
       comp=Z,3µmcomp=Z,6µmcomp=Z,502nm,0.9s
EDFI   Ende, Flores      15.58 194    P      Pn        20 21 46.4 +1.5
       comp=Z,4µmcomp=Z,3µmcomp=Z,174nm,1.2s
SMPI   Sarmi             15.61 122    P      P         20 21 52.4 +3.1
LBFI   Labuhan Bajo,     15.87 201    P      P         20 21 51.4 -0.7
       comp=Z,6µmcomp=Z,702nm,1.3s
SOEI   Soe               16.16 184           P         20 21 54.3 -1.2
SOEI                                  IAmb   IAmb      20 21 56.5
       comp=Z,412nm,1.3s
SOEI   Soe               16.16 184    P      P         20 21 55.4  0.0
SOEI   Soe               16.16 184    P      P         20 21 55.1 -0.3
       comp=Z,5µmcomp=Z,9µmcomp=Z,792nm,1.2s
DBNI   Kabupaten Domp    16.51 206    P      P         20 21 59.1 -0.2
       comp=Z,4µmcomp=Z,4µmcomp=Z,254nm,1.2s
BATI   Baumata           16.66 186    Pn     P         20 22 00.6 -0.3
       comp=Z,6.3nm,0.3s,baz=139,slow=0.6,SNR=60
       comp=Z,182nm,0.7s
BATI   Baumata           16.66 186    P      P         20 22 00.6 -0.3
       comp=Z,3µmcomp=Z,5µmcomp=Z,588nm,1.0s
TWGBT  Beinan            16.82 346    P      P         20 22 02.0 -0.7
TWG    Pinlang           16.83 346    P      Pn        20 21 59.8 -0.8
WSI    Waingapu          16.85 198    P      P         20 22 02.6 -0.4
       comp=Z,11µmcomp=Z,632nm,1.7s
PLAI   Plampang          17.04 207    P      P         20 22 06.1 +1.0
PLAI   Plampang          17.04 207    P      P         20 22 06.2 +1.1
       comp=Z,7µmcomp=Z,7µmcomp=Z,543nm,1.0s
WBSI   Waikabubak, Su    17.12 201    P      P         20 22 07.4 +1.3
       comp=Z,11µmcomp=Z,361nm,1.6s
GENI   Genyem            17.16 121    P      P         20 22 07.9 +1.4
GENI   Genyem            17.16 121    P      P         20 22 14.7 +8.2
       comp=Z,5µmcomp=Z,359nm,1.1s
BASI   Baing, Sumba      17.29 197    P      P         20 22 11.7 +3.9
       comp=Z,5µmcomp=Z,8µmcomp=Z,489nm,1.5s
YULB   Yu-li             17.32 347    P      Pn        20 22 05.4 -1.5
YULB   Yu-li             17.32 347    P      P         20 22 09.6 +1.4
TWSI   Taliwang, Sumb    17.38 210    P      P         20 22 10.6 +1.7
       comp=Z,8µmcomp=Z,791nm,1.0s
TPUB   Ta-pu             17.40 345    P      Pn        20 22 07.0 -0.8
TPUB   Ta-pu             17.40 345    P      P         20 22 10.2 +1.1
KLNI   Mataram           17.52 213    P      P         20 22 11.9 +1.5
       comp=Z,7µmcomp=Z,7µmcomp=Z,408nm,1.1s
JAY    Jayapura          17.58 120    P      P         20 22 14.4 +3.3
       comp=Z,51nm,1.1s,baz=342,slow=3.8,SNR=3.9
JAY                                   LR     LR        20 29 15.7
       comp=Z,2µm,19.1s,baz=306,slow=38
JAY    Jayapura          17.58 120    P      P         20 22 14.5 +3.3
KMMI   Kalianget         17.69 221    P      P         20 22 15.2 +2.8
       comp=Z,10µmcomp=Z,530nm,1.1s
KHKI   Kahang-Kahang     17.74 214    P      P         20 22 15.6 +2.8
       comp=Z,7µmcomp=Z,5µmcomp=Z,288nm,1.1s
NACB   Ninganchiao       18.02 348    P      Pn        20 22 11.2 -4.2
NACB   Ninganchiao       18.02 348    P      P         20 22 17.3 +1.5
YOJ    Yonaguni jima     18.06 353    P      Pn        20 22 14.0 -2.0
YOJ    Yonaguni jima     18.06 353    P      P         20 22 18.1 +1.7
YOJ    Yonaguni jima     18.06 353    P      Pn        20 22 14.0 -2.0
YOJ                                   pmax   pmax
       comp=Z,49nm,1.0s
ABJI   Asem Bagus        18.09 219    P      P         20 22 20.9 +4.1
       comp=Z,5µmcomp=Z,189nm,0.9s
RTBI   Rangdo, Negare    18.19 216    P      P         20 22 21.0 +3.1
       comp=Z,6µmcomp=Z,6µmcomp=Z,615nm,1.2s
DNP    Denpasar          18.22 214    P      P         20 22 22.2 +4.1
JMJ    Miyako jima 2     18.25 359    P      P         20 22 21.3 +2.8
IGBI   Denpasar          18.37 214    P      Pn        20 22 22.1 +2.3
       comp=Z,6µmcomp=Z,10µmcomp=Z,604nm,1.0s
BLJI   Banyuglugur       18.46 220    P      Pn        20 22 22.8 +1.9
       comp=Z,5µmcomp=Z,4µmcomp=Z,270nm,1.1s
YHNB   Yeheng            18.54 348    P      P         20 22 20.0 -1.7
YHNB   Yeheng            18.54 348    P      Pn        20 22 24.5 +2.5
GRJI   Gresik            18.60 225    P      Pn        20 22 28.4 +5.7
       comp=Z,10µmcomp=Z,495nm,1.3s
JAGI   Jajag, Banyuwa    18.67 218    P      Pn        20 22 23.4 -0.2
JAGI   Jajag, Banyuwa    18.67 218    P      Pn        20 22 25.3 +1.8
JAGI   Jajag, Banyuwa    18.67 218    P      Pn        20 22 24.7 +1.2
       comp=Z,5µmcomp=Z,4µmcomp=Z,231nm,0.9s
TATO   Taipei            18.82 349    P      P         20 22 23.9 -0.7
TATO   Taipei            18.82 349    P      Pn        20 22 28.2 +3.0
GMJI   Gumukmas          18.95 220    P      Pn        20 22 28.1 +1.1
       comp=Z,5µmcomp=Z,305nm,1.0s
TBJI   Tambak Boyo       18.98 226    P      Pn        20 22 27.9 +0.6
       comp=Z,479nm,1.5s
KNMB   Chin-men Tao      19.17 340    P      Pn        20 22 30.1 +0.6
KNMB                                  IAmb   IAmb      20 22 38.9
       comp=Z,420nm,1.3s
HKPS   Hong Kong Po S    19.19 326    P      P         20 22 27.6 -1.2
HKPS   Hong Kong Po S    19.19 326    P      Pn        20 22 30.1 +0.4
DRS    Darwin Rock St    19.51 164    P      Pn        20 22 33.9 +0.3
QZH    Quanzhou          19.55 341 ⇑iP      Pn        20 22 37.4 +3.4
QZH                                   S      Sn        20 26 16.4 +3.4
QZH                                   pmax   pmax
       comp=Z,290nm,1.6s
QZH                                   pmax   pmax
       comp=Z,4µm,4.5s
QZH                                   LR     LR
       comp=Z,3µm,19.6s
QZH                                   LR     LR
       comp=Z,7µm,23.7s
QZH                                   LR     LR
       comp=Z,4µm,20.6s
NGJI   Ngawi             19.63 226    P      Pn        20 22 37.3 +2.2
       comp=Z,9µmcomp=Z,568nm,1.4s
SJI    Sawahan           19.68 224    P      Pn        20 22 35.5 -0.2
SNJI   Sawahan-Nganju    19.71 224    P      Pn        20 22 37.2 +0.9
       comp=Z,5µmcomp=Z,6µmcomp=Z,435nm,1.4s
QIZ    Qiongzhong        19.73 311    P      P         20 22 32.8 -1.9
QIZ    Qiongzhong        19.73 311    P      Pn        20 22 35.8 -0.4
QIZ                                   S      S         20 26 17.0 +0.4
QIZ                                   pmax   pmax
       comp=Z,68nm,1.2s
QIZ                                   pmax   pmax
       comp=Z,1µm,4.9s
QIZ                                   LR     LR
       comp=Z,4µm,22.2s
QIZ                                   LR     LR
       comp=Z,3µm,18.8s
QIZ                                   LR     LR
       comp=Z,5µm,18.6s
QIZ    Qiongzhong        19.73 311    P      Pn        20 22 36.7 +0.5
MTN    Manton Dam        19.97 164    P      Pn        20 22 38.3 -0.8
       comp=Z,188nm,1.0s,comp=Z,0.0nm
MTN    Manton Dam        19.97 164    P      P         20 22 36.4 -0.9
TPI    Tanjungpandan     20.05 243    P      Pn        20 22 39.5 -0.7
SMRI   Semarang          20.16 229    P      P         20 22 39.5  0.0
SMRI   Semarang          20.16 229    P      Pn        20 22 41.4  0.0
SMRI   Semarang          20.16 229    P      Pn        20 22 42.3 +0.9
       comp=Z,10µmcomp=Z,822nm,1.2s
KDU    Kakadu            20.23 160    P      Pn        20 22 41.6 -0.6
       comp=Z,201nm,1.0s,comp=Z,0.0nm
GZH    Guangzhou         20.27 326    P      Pn        20 22 42.5 -0.1
GZH                                   S      Sn        20 26 37.3 +6.7
GZH                                   pmax   pmax
       comp=Z,100nm,1.1s
GZH                                   LR     LR
       comp=Z,7µm,16.9s
GZH                                   LR     LR
       comp=Z,3µm,19.6s
GZH                                   LR     LR
       comp=Z,7µm,18.0s
GUMO   Guam              20.31  68    P      Pn        20 22 42.6 -0.5
       comp=Z,126nm,0.8s,baz=182,slow=8.5,SNR=2.8
       comp=Z,126nm,0.8s
PCJI   Pacitan           20.41 225    P      Pn        20 22 44.1 -0.2
       comp=Z,4µmcomp=Z,4µmcomp=Z,237nm,1.0s
JOW    Kunigami          20.43   7    P      P         20 22 43.3 +1.0
       comp=Z,96nm,0.8s,baz=199,slow=8.9,SNR=14
JOW                                   LR     LR        20 29 46.7
       comp=Z,3µm,22.0s,baz=143,slow=34
       comp=Z,96nm,0.8s
JOW    Kunigami          20.43   7    P      P         20 22 41.0 -1.3
JOW                                   IAmb   IAmb      20 22 50.4
       comp=Z,412nm,1.1s
JOW    Kunigami          20.43   7    P      Pn        20 22 43.5 -1.0
UGM    Wanagama          20.68 227    P      P         20 22 45.4 +0.2
UGM                                   IAmb   IAmb      20 23 02.5
       comp=Z,347nm,1.1s
UGM    Wanagama          20.68 227    P      Pn        20 22 46.5 -1.0
UGM    Wanagama          20.68 227    P      Pn        20 22 47.7 +0.2
       comp=Z,5µmcomp=Z,307nm,2.1s
YOGI   Yogyakarta        20.78 227    P      Pn        20 22 50.0 +1.3
       comp=Z,5µmcomp=Z,9µmcomp=Z,686nm,1.1s
MMPI   Merauke           20.96 135    P      Pn        20 22 53.5 +2.8
CTJI   Waduk Cacaban     21.09 231    P      P         20 22 51.6 +2.1
       comp=Z,5µmcomp=Z,6µmcomp=Z,492nm,1.1s
PPBI   Pangkal Pinang    21.17 247    P      P         20 22 51.8 +1.4
KPJI   Karang Pucung     21.49 231    P      P         20 22 55.8 +2.0
       comp=Z,5µmcomp=Z,7µmcomp=Z,519nm,1.0s
UBPT   Khong Chiam       21.54 296    P      P         20 22 53.9 -0.5
TPRI   Tanjung Pinang    21.66 256    P      P         20 22 56.1 +0.4
       comp=Z,3µmcomp=Z,169nm,1.3s
DSRI   Dabo              22.01 253    P      P         20 23 00.5 +1.0
       comp=Z,3µmcomp=Z,3µmcomp=Z,172nm,1.2s
MYKOM  Kota Tinggi       22.11 259    P      P         20 22 59.8 -0.7
MYKOM                                 IAmb   IAmb      20 23 15.4
       comp=Z,367nm,1.4s
MYKOM  Kota Tinggi       22.11 259    P      P         20 23 01.1 +0.6
MYKOM  Kota Tinggi       22.11 259    P      P         20 23 01.9 +1.4
KNRA   Kununurra         22.22 172    P      P         20 23 02.0 +0.4
       comp=Z,599nm,0.9s,comp=Z,0.0nm
KNRA   Kununurra         22.22 172    P      P         20 23 01.8 +0.1
BBJI   Bungbulang        22.57 232    P      P         20 23 05.9 +0.4
BBJI   Bungbulang        22.57 232    P      P         20 23 05.7 +0.2
       comp=Z,3µmcomp=Z,262nm,1.0s
PMBI   Palembang         22.72 246    P      P         20 23 08.6 +1.5
PMBI   Palembang         22.72 246    P      P         20 23 08.2 +1.1
       comp=Z,2µmcomp=Z,5µmcomp=Z,492nm,1.1s
DBJI   Dramaga           22.76 236    P      P         20 23 09.5 +2.0
       comp=Z,5µmcomp=Z,470nm,1.3s
CNJI   Cibinong          22.89 234    P      P         20 23 08.8  0.0
       comp=Z,3µmcomp=Z,295nm,1.1s
SBJI   Serang            23.04 238    P      P         20 23 12.8 +2.4
JMBI   JAMBI             23.28 251    P      P         20 23 17.0 +4.2
MANU   Manus Island      23.38 110    P      P         20 23 12.5 -1.3
BLSI   Bandar Lampung    23.41 240    P      P         20 23 15.9 +1.8
       comp=Z,3µmcomp=Z,4µmcomp=Z,392nm,1.0s
KLI    Kotabumi          23.50 242    P      P         20 23 16.1 +1.1
KLSI                     23.53 242    P      P         20 23 15.8 +0.5
       comp=Z,4µmcomp=Z,6µmcomp=Z,218nm,1.8s
GULI   GuiLin            23.69 324    P      P         20 23 15.8 -0.9
GULI                                  S      S         20 27 29.5 -1.5
GULI                                  pmax   pmax
       comp=Z,54nm,1.4s
GULI                                  LR     LR
       comp=Z,3µm,17.8s
GULI                                  LR     LR
       comp=Z,5µm,19.9s
GULI                                  LR     LR
       comp=Z,4µm,18.5s
MDSI   Maura Dua         23.93 243    P      P         20 23 19.5 +0.4
       comp=Z,3µmcomp=Z,152nm,0.9s
KASI   Kota Agung        24.13 241    P      P         20 23 21.0  0.0
       comp=Z,3µmcomp=Z,226nm,0.9s
LWLI   Liwa              24.27 242    P      P         20 23 22.9 +0.4
FITZ   Fitzroy Crossi    24.40 180    P      P         20 23 23.3 -0.1
       comp=Z,87nm,0.6s,baz=4.1,slow=8.9,SNR=147
FITZ                                  S      S         20 27 40.0 -2.3
       comp=Z,23nm,0.9s,baz=182,slow=14,SNR=3.8
       comp=Z,87nm,0.6s
FITZ   Fitzroy Crossi    24.40 180    P      P         20 23 22.2 -1.2
IPM    Ipoh              24.47 267    P      P         20 23 23.1 -1.1
IPM                                   IAmb   IAmb      20 23 31.9
       comp=Z,221nm,1.2s
IPM    Ipoh              24.47 267    P      P         20 23 23.8 -0.4
IPM    Ipoh              24.47 267    P      P         20 23 24.1 -0.1
CNSH   ChangSha          24.68 333    P      P         20 23 27.3 +1.4
CNSH                                  S      S         20 27 49.0 +2.1
CNSH                                  pmax   pmax
       comp=Z,54nm,2.3s
CNSH                                  pmax   pmax
       comp=Z,1µm,3.9s
CNSH                                  LR     LR
       comp=Z,2µm,19.0s
CNSH                                  LR     LR
       comp=Z,3µm,19.2s
CNSH                                  LR     LR
       comp=Z,2µm,15.8s
KULM   Kulim             24.77 269    P      P         20 23 26.2 -0.7
KULM                                  IAmb   IAmb      20 23 52.7
       comp=Z,180nm,1.1s
KULM   Kulim             24.77 269    P      P         20 23 27.4 +0.5
KULM   Kulim             24.77 269    P      P         20 23 28.1 +1.2
SSE    Sheshan           24.85 351    P      P         20 23 26.3 -1.0
SSE                                   S      S         20 27 48.3 -1.1
SSE                                   pmax   pmax
       comp=Z,82nm,1.3s
SSE                                   pmax   pmax
       comp=Z,1µm,3.5s
SSE                                   LR     LR
       comp=Z,540nm,17.7s
SSE                                   LR     LR
       comp=Z,1µm,17.9s
MNAI   Manna             24.96 245    P      P         20 23 27.9 -0.7
MNAI   Manna             24.96 245    P      P         20 23 29.2 +0.6
MNAI   Manna             24.96 245    P      P         20 23 28.9 +0.3
       comp=Z,7µmcomp=Z,375nm,0.9s
KSI    Kapahiang         25.00 247    P      P         20 23 29.5 +0.5
       comp=Z,3µmcomp=Z,4µmcomp=Z,313nm,0.7s
MASI   Maura Aman, Be    25.13 248    P      P         20 23 31.7 +1.5
       comp=Z,5µmcomp=Z,367nm,1.5s
BKNI   Bangkinang        25.18 257    P      P         20 23 30.6  0.0
BKNI   Bangkinang        25.18 257    P      P         20 23 32.2 +1.6
BKNI   Bangkinang        25.18 257    P      P         20 23 31.8 +1.2
       comp=Z,2µmcomp=Z,3µmcomp=Z,267nm,1.0s
UBSI   University, Be    25.34 247    P      P         20 23 33.0 +1.0
KRJI   Kerinci           25.48 251    P      P         20 23 35.3 +1.9
       comp=Z,3µmcomp=Z,478nm,1.3s
JCJ    Chichijima        25.93  36    P      P         20 23 25.4  -12
       comp=Z,126nm,0.8s,baz=281,slow=9.1,SNR=7.5
JCJ                                   LR     LR        20 33 17.0
       comp=Z,747nm,21.6s,baz=265,slow=35
JCJ    Chichijima        25.93  36    P      P         20 23 35.7 -1.6
JCJ    Chichijima        25.93  36    P      P         20 23 37.7 +0.5
XMI    Christmas Isla    25.93 230    P      P         20 23 39.6 +2.2
PPI    Padang Panjang    26.00 256    P      P         20 23 38.3 +0.2
       comp=Z,3µmcomp=Z,3µmcomp=Z,136nm,1.1s
EGSI   Enggano, Bengk    26.00 244    P      P         20 23 36.9 -1.2
       comp=Z,3µmcomp=Z,4µmcomp=Z,279nm,1.4s
PDSI   Padang            26.07 255    P      P         20 23 38.8 +0.1
       comp=Z,2µmcomp=Z,177nm,1.1s
WHN    Wuhan             26.16 338    P      P         20 23 41.8 +2.5
WHN                                   S      S         20 28 13.5 +3.2
WHN                                   pmax   pmax
       comp=Z,110nm,0.9s
WHN                                   LR     LR
       comp=Z,2µm,10.0s
WHN                                   LR     LR
       comp=Z,3µm,9.9s
WHN                                   LR     LR
       comp=Z,4µm,18.9s
NJ2    Nanjing           26.21 347 ⇑P       P         20 23 42.6 +2.9
NJ2                                   pmax   pmax
       comp=Z,68nm,2.0s
NJ2                                   pmax   pmax
       comp=Z,1µm,3.6s
NJ2                                   LR     LR
       comp=Z,1µm,20.8s
NJ2                                   LR     LR
       comp=Z,2µm,20.8s
NJ2                                   LR     LR
       comp=Z,2µm,18.0s
MNSI   Mandailing Nat    26.49 259    P      P         20 23 45.1 +2.6
       comp=Z,69nm,0.7s
PMG    Port Moresby      26.70 126    P      P         20 23 45.6 +1.3
       comp=Z,73nm,0.7s,baz=328,slow=8.5,SNR=27
PMG                                   S      S         20 28 20.1 +0.9
       comp=Z,6.8nm,0.7s,baz=233,slow=20,SNR=1.4
       comp=Z,73nm,0.7s
PMG    Port Moresby      26.70 126    P      P         20 23 44.8 +0.4
PMG    Port Moresby      26.70 126    P      P         20 23 46.2 +1.8
PMG    Port Moresby      26.70 126    P      P         20 23 45.8 +1.4
       comp=Z,2µmcomp=Z,230nm,0.9s
PMG    Port Moresby      26.70 126  i P      P         20 23 45.1 +0.7
PMG                                   pmax   pmax
       comp=Z,101nm,1.0s
COEN   Coen              26.80 139    P      P         20 23 46.9 +1.6
       comp=Z,144nm,1.4s
COEN   Coen              26.80 139    P      P         20 23 45.6 +0.3
COEN   Coen              26.80 139    P      P         20 23 47.0 +1.8
GYA    Guiyang           26.81 320 ⇑P       P         20 23 47.9 +2.5
GYA                                   S      S         20 28 21.4 +0.4
GYA                                   pmax   pmax
       comp=Z,7.0nm,1.0s
GYA                                   pmax   pmax
       comp=Z,800nm,3.2s
GYA                                   LR     LR
       comp=Z,3µm,22.2s
GYA                                   LR     LR
       comp=Z,5µm,18.6s
GYA                                   LR     LR
       comp=Z,5µm,19.8s
JNU    Nakatsue          26.99  10    P      P         20 23 45.9 -1.0
       comp=Z,35nm,0.9s,baz=105,slow=4.0,SNR=5.5
JNU                                   LR     LR        20 35 23.6
       comp=Z,1µm,20.0s,baz=188,slow=38
       comp=Z,35nm,0.9s
JNU    Nakatsue          26.99  10    P      P         20 23 44.8 -2.1
JNU    Nakatsue          26.99  10    P      P         20 23 48.9 +2.1
TSI    Tuntungan         27.02 265    P      P         20 23 48.6 +1.4
       comp=Z,2µmcomp=Z,253nm,1.1s
PPSI   Pulau Pagai       27.07 251    P      P         20 23 50.7 +3.0
       comp=Z,3µmcomp=Z,177nm,1.1s
WB0    Warramunga Arr    27.48 162    P      P         20 23 50.8 -0.5
WB0                                   IAmb   IAmb      20 24 02.9
       comp=Z,151nm,1.1s
SISI   Saibi             27.50 255    P      P         20 23 51.4 -0.2
WRAB   Tennant Creek     27.62 162    P      P         20 23 51.9 -0.7
WRAB                                  IAmb   IAmb      20 24 05.0
       comp=Z,127nm,1.1s
WRAB   Tennant Creek     27.62 162    P      P         20 23 52.8 +0.2
WRAB   Tennant Creek     27.62 162 ceP      P         20 23 52.4 -0.2
WRAB                                  pmax   pmax
       comp=Z,72nm,1.2s
WRA    Warramunga Arr    27.63 162    P      P         20 23 52.1 -0.5
       comp=Z,43nm,1.1s,baz=329,slow=11,SNR=41
WRA                                   S      S         20 28 29.8 -4.0
       comp=Z,26nm,1.2s,baz=333,slow=15,SNR=4.6
       comp=Z,43nm,1.1s
WRA    Warramunga Arr    27.63 162    P      P         20 23 50.7 -1.9
WR8    Warramunga Arr    27.69 162    P      P         20 23 52.7 -0.5
WR8                                   IAmb   IAmb      20 24 31.8
       comp=Z,203nm,1.2s
KCSI   Kotacane, Aceh    27.80 265    P      P         20 23 53.6 -0.7
       comp=Z,1µmcomp=Z,127nm,1.2s
MBWA   Marble Bar        28.03 192    P      P         20 23 55.5 -0.7
       comp=Z,79nm,1.4s
MBWA   Marble Bar        28.03 192    P      P         20 23 55.2 -1.0
MBWA                                  IAmb   IAmb      20 24 14.4
       comp=Z,240nm,1.7s
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MBWA	Marble Bar	28.03	192	P	P	20 23 55.9	-0.2
ENH	Enshi	28.08	329	P	P	20 23 55.8	-0.8
ENH				IAmb	IAmb	20 24 06.1	
	comp=Z,117nm,1.0s						
ENH				IAMs_20	IAMs_20	20 36 36.6	
	comp=Z,3µm,18.0s						
ENH	Enshi	28.08	329	P	P	20 23 58.2	+1.6
JMN	Monobe	28.22	15	P	P	20 23 55.6	-2.2
JMN				IAmb	IAmb	20 24 07.8	
	comp=Z,93nm,1.1s						
JMN	Monobe	28.22	15	P	P	20 24 00.9	+3.1
GSI	Gunungsitoli	28.34	261	P	P	20 23 56.9	-2.2
GSI	Gunungsitoli	28.34	261	P	P	20 23 59.4	+0.3
GSI	Gunungsitoli	28.34	261	P	P	20 23 59.1	0.0
	comp=Z,3µmcomp=Z,228nm,2.0s						
PSAC1	Pilbara Seismi	28.38	191	P	P	20 23 58.3	-1.0
	comp=Z,122nm,1.1s						
PSAC2	Pilbara Seismi	28.39	191	P	P	20 23 58.8	-0.6
	comp=Z,127nm,1.1s						
PSA00	Pilbara Seismi	28.41	191	P	P	20 23 58.2	-1.3
PSA00				IAmb	IAmb	20 24 10.6	
	comp=Z,82nm,0.8s						
PSA00	Pilbara Seismi	28.41	191	P	P	20 23 58.1	-1.5
PSA00				IAmb	IAmb	20 24 00.1	
	comp=Z,100nm,1.0s						
PSA00	Pilbara Seismi	28.41	191	P	P	20 23 59.4	-0.1
TPTI		28.42	265	P	P	20 24 01.8	+2.0
	comp=Z,67nm,1.0s						
LHMI	Lhok Sumawe	28.45	269	P	P	20 24 02.3	+2.2
LHMI	Lhok Sumawe	28.45	269	P	P	20 24 00.9	+0.8
	comp=Z,3µmcomp=Z,205nm,0.9s						
CMAR	Chiang Mai Arr	28.52	297	P	P	20 24 00.2	-0.4
	comp=Z,4.2nm,0.6s,baz=117,slow=7.2,SNR=22						
CMAR				ScP	ScP	20 30 50.1	-2.7
	comp=Z,1.8nm,0.8s,baz=100,slow=3.1,SNR=6.4						
CMAR				PKiKP	PKiKP	20 34 47.2	-0.4
	comp=Z,1.1nm,0.8s,baz=252,slow=1.3,SNR=6.0						
	comp=Z,4.2nm,0.6s						
CMAR	Chiang Mai Arr	28.52	297	P	P	20 23 58.3	-2.3
CMAR					ScP	20 30 49.4	-3.4
CMAR	Chiang Mai Arr	28.52	297	*i* P	P	20 24 00.4	-0.2
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KMI	Kunming	28.64	313	⇓P	P	20 24 03.4	+1.5
KMI				S	S	20 28 54.3	+4.3
KMI				pmax	pmax		
	comp=Z,53nm,1.8s						
KMI				pmax	pmax		
	comp=Z,390nm,5.7s						
KMI				LR	LR		
	comp=Z,1µm,14.9s						
KMI				LR	LR		
	comp=Z,4µm,17.5s						
KMI				LR	LR		
	comp=Z,4µm,18.6s						
CHTO	Chiang Mai	28.64	298	P	P	20 24 00.7	-1.1
CHTO	Chiang Mai	28.64	298	P	P	20 24 01.7	-0.1
CHTO	Chiang Mai	28.64	298	P	P	20 24 01.5	-0.3
	comp=Z,65nm,1.1s						
CHTO	Chiang Mai	28.64	298	P	P	20 24 00.7	-1.1
CHTO				pmax	pmax		
	comp=Z,62nm,1.0s						
CHTO				MLR	MLR		
	comp=Z,1µm,21.0s						
MLSI	Meulaboh, Aceh	29.07	267	P	P	20 24 10.5	+4.9
	comp=Z,2µmcomp=Z,131nm,0.7s						
SNSI	Sinabang, Aceh	29.38	263	P	P	20 24 09.4	+1.1
	comp=Z,2µmcomp=Z,164nm,1.0s						
JHJ	Hachijo jima 2	29.65	25	LR	LR	20 36 45.5	
	comp=Z,2µm,18.5s,baz=206,slow=38						
TJN	Taejon	29.83	3	P	P	20 24 15.8	+3.8
TJN	Taejon	29.83	3	*i* P	P	20 24 11.3	-0.7
PZH	PanZhiHua	30.18	314	P	P	20 24 15.5	+0.1
PZH				S	S	20 29 13.3	-0.8
PZH				pmax	pmax		
	comp=Z,30nm,1.6s						
PZH				pmax	pmax		
	comp=Z,130nm,3.6s						
PZH				LR	LR		
	comp=Z,3µm,18.1s						
PZH				LR	LR		
	comp=Z,2µm,20.1s						
PZH				LR	LR		
	comp=Z,3µm,19.2s						
QIS	Mount Isa	30.20	153	P	P	20 24 16.6	+1.1
	comp=Z,184nm,1.2s						
QIS	Mount Isa	30.20	153	P	P	20 24 16.4	+0.9
LYN	LuoYang	30.45	338	⇓P	P	20 24 18.4	+0.9
LYN				pP	pP	20 24 22.6	-0.6
LYN				S	S	20 29 20.4	+2.6
LYN				pmax	pmax		
	comp=Z,120nm,0.9s						
LYN				pmax	pmax		
	comp=Z,1µm,3.6s						
LYN				LR	LR		
	comp=Z,4µm,22.7s						
LYN				LR	LR		
	comp=Z,5µm,18.9s						
LYN				LR	LR		
	comp=Z,2µm,24.7s						
TIA	Tai'an	30.60	347	P	P	20 24 21.1	+2.2
TIA				S	S	20 29 18.1	-2.0
TIA				pmax	pmax		
	comp=Z,960nm,3.5s						
TIA				LR	LR		
	comp=Z,1µm,24.5s						
TIA				LR	LR		
	comp=Z,3µm,24.9s						
TIA				LR	LR		
	comp=Z,2µm,19.2s						
INU	Inuyama	30.64	19	P	P	20 24 17.5	-1.7
INU				IAmb	IAmb	20 24 35.5	
	comp=Z,54nm,0.9s						
INU				IAMs_20	IAMs_20	20 38 43.9	
	comp=Z,2µm,18.0s						
INU	Inuyama	30.64	19	P	P	20 24 19.5	+0.3
MTSU	Mount Surprise	30.68	143	P	P	20 24 21.5	+1.8
	comp=Z,82nm,0.9s						
MTSU	Mount Surprise	30.68	143	P	P	20 24 22.5	+2.8
INCN	Inchon	30.90	2	IAMs_20	IAMs_20	20 35 41.6	
	comp=Z,2µm,21.0s						
INCN	Inchon	30.90	2	P	P	20 24 25.0	+3.5
KSAR	Wonju Array Be	30.92	4	P	P	20 24 19.6	-1.9
KSAR	Wonju Array Be	30.92	4	P	P	20 24 19.7	-1.9
KSRS	Korea Array	30.93	4	P	P	20 24 22.1	+0.4
	comp=Z,21nm,1.0s,baz=187,slow=9.6,SNR=28						
	comp=Z,21nm,1.0s						
KS19	Wonju Array Si	30.98	4	P	P	20 24 20.1	-2.1
KS19				IAmb	IAmb	20 24 28.8	
	comp=Z,130nm,1.2s						
JGF	Kuroka	30.98	19	P	P	20 24 20.1	-2.1
AS31	Alice Springs	31.04	165	P	P	20 24 23.1	+0.2
ASAR	Alice Springs	31.04	165	P	P	20 24 23.2	+0.3
	comp=Z,17nm,0.6s,baz=351,slow=8.0,SNR=156						
ASAR				S	S	20 29 27.6	+0.3
	comp=Z,6.3nm,0.9s,baz=349,slow=17,SNR=4.9						
ASAR				ScP	ScP	20 30 58.9	-2.0
	comp=Z,4.0nm,0.9s,baz=356,slow=4.0,SNR=4.2						
ASAR				LR	LR	20 38 35.9	
	comp=Z,588nm,20.1s,baz=342,slow=40						
	comp=Z,17nm,0.6s						
ASAR	Alice Springs	31.04	165	P	P	20 24 22.9	0.0
WRKA	Warakurna	31.42	175	P	P	20 24 26.5	+0.2
	comp=Z,29nm,0.9s						
XAN	Xi'an	31.46	333	⇑P	P	20 24 27.1	+0.6
XAN				pP	sP	20 24 37.0	+2.4
XAN				S	S	20 29 33.8	+0.1
XAN				pmax	pmax		
	comp=Z,1µm,3.9s						
XAN				LR	LR		
	comp=Z,3µm,20.6s						
XAN				LR	LR		
	comp=Z,4µm,21.3s						
XAN				LR	LR		
	comp=Z,3µm,16.5s						
CD2	Chengdu	31.75	323	P	P	20 24 30.9	+1.7
CD2				pP	pP	20 24 34.5	-0.3
CD2				S	S	20 29 40.1	+1.6
CD2				pmax	pmax		
	comp=Z,50nm,0.9s						
CD2				pmax	pmax		
	comp=Z,950nm,3.9s						
CD2				LR	LR		
	comp=Z,4µm,19.7s						
CD2				LR	LR		
	comp=Z,6µm,15.2s						
CD2				LR	LR		
	comp=Z,5µm,18.4s						
TNCH	TengChong	31.77	309	P	P	20 24 29.6	+0.1
TNCH				pP	pP	20 24 33.9	-1.2
TNCH				PP	PnPn	20 25 34.0	+0.1
TNCH				S	S	20 29 38.3	-0.8
TNCH				SS	SnSn	20 31 30.8	+4.2
TNCH				pmax	pmax		
	comp=Z,16nm,2.0s						
TNCH				LR	LR		
	comp=Z,660nm,9.5s						
TNCH				LR	LR		
	comp=Z,870nm,15.4s						
TNCH				LR	LR		
	comp=Z,3µm,18.6s						
MAJO	Matsushiro	32.11	19	P	P	20 24 30.0	-2.2
MAJO				IAmb	IAmb	20 24 53.7	
	comp=Z,139nm,1.9s						
MAJO	Matsushiro	32.11	19	IAMs_20	IAMs_20	20 39 57.0	
	comp=Z,2µm,18.0s						
MAJO	Matsushiro	32.11	19	P	P	20 24 31.8	-0.4
MAJO	Matsushiro	32.11	19	*i* P	P	20 24 31.8	-0.4
MAJO				pmax	pmax		
	comp=Z,14nm,0.8s						
MJAR	Matsushiro Arr	32.11	19	P	P	20 24 30.4	-1.8
	comp=Z,13nm,0.8s,baz=194,slow=9.1,SNR=28						
MJAR				LR	LR	20 36 08.7	
	comp=Z,2µm,21.4s,baz=214,slow=34						
	comp=Z,13nm,0.8s						
MJAR	Matsushiro Arr	32.11	19	P	P	20 24 28.9	-3.3
MJB9	Matsu-Tunnel	32.12	19	P	P	20 24 29.4	-2.8
MJB9				IAmb	IAmb	20 24 54.7	
	comp=Z,136nm,1.9s						
HNS	HongShan	32.34	344	⇑P	P	20 24 35.3	+1.2
HNS				S	S	20 29 43.9	-3.3
HNS				pmax	pmax		
	comp=Z,36nm,1.0s						
HNS				LR	LR		
	comp=Z,1µm,19.0s						
HNS				LR	LR		
	comp=Z,3µm,18.2s						
HNS				LR	LR		
	comp=Z,2µm,19.2s						
DL2	Dalian	32.49	354	P	P	20 24 36.4	+0.9
DL2				S	S	20 29 52.8	+3.1
DL2				pmax	pmax		
	comp=Z,190nm,0.9s						
DL2				pmax	pmax		
	comp=Z,860nm,6.4s						
DL2				LR	LR		
	comp=Z,3µm,19.6s						
DL2				LR	LR		
	comp=Z,2µm,25.5s						
DL2				LR	LR		
	comp=Z,2µm,19.4s						
TV1H	Townsville Har	33.05	141	P	P	20 24 43.1	+2.6
TIY	Taiyuan	33.31	341	P	P	20 24 46.8	+4.0
TIY				S	S	20 30 03.8	+1.2
TIY				pmax	pmax		
	comp=Z,54nm,0.7s						
TIY				pmax	pmax		
	comp=Z,740nm,4.7s						
TIY				LR	LR		
	comp=Z,2µm,20.6s						
TIY				LR	LR		
	comp=Z,1µm,17.9s						
TIY				LR	LR		
	comp=Z,1µm,20.6s						
CTA	Charters Tower	33.34	143	P	P	20 24 44.7	+1.6
	comp=Z,36nm,1.3s						
CTA	Charters Tower	33.34	143	P	P	20 24 45.4	+2.2
	comp=Z,53nm,0.9s,baz=321,slow=9.5,SNR=19						
CTA				LR	LR	20 40 12.0	
	comp=Z,1µm,18.1s,baz=302,slow=40						
	comp=Z,53nm,0.9s						
CTA	Charters Tower	33.34	143	P	P	20 24 45.8	+2.7
CTA	Charters Tower	33.34	143	P	P	20 24 44.7	+1.6
CTAO	Charters Tower	33.34	143	P	P	20 24 42.8	-0.3
CTAO				IAmb	IAmb	20 24 49.3	
	comp=Z,117nm,1.1s						
CTAO	Charters Tower	33.34	143	P	P	20 24 45.9	+2.8
CTAO	Charters Tower	33.34	143	P	P	20 24 42.8	-0.3
CTAO				pmax	pmax		
	comp=Z,117nm,1.2s						
CTAO				MLR	MLR		
	comp=Z,1µm,20.0s						
MEEK	Meekatharra	33.58	191	P	P	20 24 44.1	-1.0
	comp=Z,77nm,0.9s						
MEEK	Meekatharra	33.58	191	P	P	20 24 44.4	-0.7
COCO	West Island	34.02	237	P	P	20 24 50.2	+1.2
COCO	West Island	34.02	237	P	P	20 24 54.8	+5.8
	comp=Z,74nm,1.1s						
COCO	West Island	34.02	237	P	P	20 24 51.5	+2.5
BJT	Baijiatuau	34.46	347	P	P	20 24 53.0	+0.4
BJT	Baijiatuau	34.46	347	P	P	20 24 53.7	+1.1
BJT	Baijiatuau	34.46	347	P	P	20 24 53.0	+0.4
BJT				pmax	pmax		
	comp=Z,255nm,1.2s						
BJT				MLR	MLR		
	comp=Z,1µm,19.0s						
BJI	Beijing	34.48	347	P	P	20 24 53.0	+0.3
BJI				pP	pP	20 24 57.4	-0.9
BJI				sP	sP	20 25 00.0	-0.8
BJI				PP	PnPn	20 26 09.3	+1.3
BJI				S	S	20 30 21.3	+1.0
BJI				pmax	pmax		
	comp=Z,97nm,1.1s						
BJI				pmax	pmax		
	comp=Z,720nm,3.5s						
BJI				LR	LR		
	comp=Z,350nm,24.3s						
BJI				LR	LR		
	comp=Z,1µm,23.7s						
BJI				LR	LR		
	comp=Z,840nm,18.8s						
IMP	Imphal	35.33	305	*e*P	P	20 25 01.4	+1.0
IMP				IAmb	IAmb	20 25 08.4	
	comp=Z,37nm,1.0s						
LZDM	Lanzhou Array	35.54	329	P	P	20 25 03.8	+1.5
	comp=Z,108nm,1.0s,baz=162,slow=11,SNR=14						
LZDM				LR	LR	20 41 32.3	
	comp=Z,2µm,18.2s,baz=95,slow=40						
	comp=Z,108nm,1.0s						
LZH	Lanzhou	35.56	329	⇓P	P	20 25 04.3	+1.9
LZH				pP	pP	20 25 08.3	+0.2
LZH				PP	PP	20 26 25.6	+2.3
LZH				S	S	20 30 41.1	+3.5
LZH				pmax	pmax		
	comp=Z,97nm,1.3s						
LZH				pmax	pmax		
	comp=Z,2µm,4.5s						
LZH				LR	LR		
	comp=Z,3µm,16.2s						
LZH				LR	LR		
	comp=Z,3µm,15.5s						
LZH				LR	LR		
	comp=Z,3µm,15.5s						
PSTR	Posyet	36.35	7	*i* P	P	20 25 08.6	-0.2
HHC	Hu-ho-hao-te	36.45	342	⇓*i*P	P	20 25 12.9	+3.0
HHC				pP	sP	20 25 17.3	-0.7
HHC				PP	PP	20 26 39.9	+6.9
HHC				S	S	20 30 55.3	+4.4
HHC				pmax	pmax		
	comp=Z,90nm,1.5s						
HHC				pmax	pmax		
	comp=Z,370nm,5.9s						
HHC				LR	LR		
	comp=Z,1µm,22.8s						
HHC				LR	LR		
	comp=Z,2µm,21.8s						
HHC				LR	LR		
	comp=Z,2µm,23.7s						
MORW	Morawa	36.48	194	P	P	20 25 09.4	-0.7
	comp=Z,46nm,1.0s						
MORW	Morawa	36.48	194	P	P	20 25 09.5	-0.7
MORW	Morawa	36.48	194	P	P	20 25 10.0	-0.1
BTO	Baotou	36.73	340	*e*P	P	20 25 16.8	+4.6
BTO				PP	PP	20 26 43.9	+7.9
BTO				S	S	20 30 59.3	+4.1
BTO				SS	SnSn	20 33 30.5	+4.0
BTO				pmax	pmax		
	comp=Z,41nm,1.9s						
BTO				pmax	pmax		
	comp=Z,2µm,4.6s						
BTO				LR	LR		
	comp=Z,4µm,20.1s						
BTO				LR	LR		
	comp=Z,9µm,21.7s						
BTO				LR	LR		
	comp=Z,4µm,22.8s						
VLA	Vladivostok	36.94	8	*i* P	P	20 25 13.7	-0.1
VLA				pmax	pmax		
	comp=Z,250nm,1.3s						
TEZP	TEZPUR	37.04	307	*e*P	P	20 25 16.9	+1.9
TEZP				IAmb	IAmb	20 25 25.2	
	comp=Z,155nm,1.7s						
INKA	Innaminka	37.04	157	P	P	20 25 14.8	-0.1
FORT	Forrest	37.10	176	P	P	20 25 15.5	+0.1
	comp=Z,95nm,0.8s						
FORT	Forrest	37.10	176	P	P	20 25 14.6	-0.8
FORT				IAmb	IAmb	20 25 22.2	
	comp=Z,67nm,0.8s						
CN2	Changchun	37.19	360	⇓P	P	20 25 16.1	+0.1
CN2				*e*pP	sP	20 25 28.0	+3.9
CN2				*e*S	S	20 30 59.3	-2.7
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=Z,400nm,12.0s						
CN2				LR	LR		
	comp=Z,500nm,12.0s						
CN2				LR	LR		
	comp=Z,500nm,13.0s						
SHL	Shillong	37.33	304	P	P	20 25 16.7	-0.9
SHL				IAmb	IAmb	20 25 24.2	
	comp=Z,88nm,0.7s						
SHL	Shillong	37.33	304	*e*P	P	20 25 18.7	+1.0
SHL				IAmb	IAmb	20 25 24.4	
	comp=Z,163nm,1.3s						
SHL	Shillong	37.33	304	P	P	20 25 16.7	-0.9
SHL				pmax	pmax		
	comp=Z,88nm,0.7s						
QLP	Quilpie	37.52	152	P	P	20 25 19.3	+0.4
	comp=Z,143nm,1.1s						
QLP	Quilpie	37.52	152	P	P	20 25 20.1	+1.1
GUWA	GUWAHATI	37.75	305	*e*P	P	20 25 22.8	+1.8
GUWA				IAmb	IAmb	20 25 34.4	
	comp=Z,18nm,1.0s						
KMBL	Kambalda	37.77	185	P	P	20 25 20.4	-0.7
	comp=Z,74nm,1.0s						
BLDU	Ballidu	37.82	192	P	P	20 25 20.1	-1.4
	comp=Z,53nm,1.0s						
BLDU	Ballidu	37.82	192	P	P	20 25 21.2	-0.2
USRK	Ussuriysk Ar.	38.02	8	P	P	20 25 24.0	+1.1
	comp=Z,58nm,0.8s,baz=192,slow=8.0,SNR=48						
	comp=Z,58nm,0.8s						
MDJ	Mudanjiang	38.17	5	P	P	20 25 24.3	0.0
MDJ				IAMs_20	IAMs_20	20 39 47.4	
	comp=Z,1µm,21.0s						
MDJ	Mudanjiang	38.17	5	P	P	20 25 25.8	+1.5
MDJ				S	S	20 31 22.0	+5.2
MDJ				pmax	pmax		
	comp=Z,170nm,1.7s						
MDJ				LR	LR		
	comp=Z,1µm,20.4s						
MDJ				LR	LR		
	comp=Z,1µm,21.2s						
MDJ				LR	LR		
	comp=Z,2µm,20.8s						
MDJ	Mudanjiang	38.17	5	P	P	20 25 25.8	+1.5
XLT	XiLinHaoTe	38.20	349	*e*P	P	20 25 24.3	-0.4
XLT				pP	sP	20 25 38.3	+5.5
XLT				S	S	20 31 15.3	-2.2
XLT				pmax	pmax		
	comp=Z,180nm,1.2s						
XLT				pmax	pmax		
	comp=Z,780nm,4.4s						
XLT				LR	LR		
	comp=Z,2µm,20.4s						
XLT				LR	LR		
	comp=Z,1µm,17.4s						
AUNRC	North Rockhamp	38.40	141	P	P	20 25 28.7	+2.3
KLBR	Kellerberrin	38.56	191	P	P	20 25 27.0	-0.7
	comp=Z,139nm,1.0s						
KLBR	Kellerberrin	38.56	191	P	P	20 25 27.0	-0.7
ERM	Erimo	38.72	21	IAMs_20	IAMs_20	20 43 37.7	
	comp=Z,1µm,20.0s						
DHUB	DHUBRI	39.07	304	*e*P	P	20 25 33.4	+1.3
DHUB				IAmb	IAmb	20 25 41.2	
	comp=Z,34nm,0.8s						
GD1S	Gladstone Soft	39.16	141	P	P	20 25 35.1	+2.3
BNX	BinXian	39.17	2	⇑P	P	20 25 33.3	+0.7
BNX				pP	pP	20 25 36.1	-2.1
BNX				S	S	20 31 30.3	-1.5
BNX				pmax	pmax		
	comp=Z,74nm,1.5s						
BNX				pmax	pmax		
	comp=Z,1µm,3.0s						
BNX				LR	LR		
	comp=Z,1µm,21.6s						
BNX				LR	LR		
	comp=Z,1µm,20.4s						
BNX				LR	LR		
	comp=Z,2µm,20.9s						
MUN	Mundaring	39.24	193	P	P	20 25 32.9	-0.5
	comp=Z,42nm,1.0s						
MUN	Mundaring	39.24	193	P	P	20 25 33.1	-0.3
MUN	Mundaring	39.24	193	P	P	20 25 32.9	-0.5
COBR	COOCHBEHAR	39.62	304	*e*P	P	20 25 38.9	+2.2
TEY	Ternei	39.62	12	⇓*e*P	P	20 25 37.2	+0.8
TEY				*e*		20 25 40.9	
TEY				pmax	pmax		
	comp=N,40nm,0.9s						
TEY				pmax	pmax		
	comp=Z,80nm,1.0s						
LSA	Lhasa	39.77	310	IAMs_20	IAMs_20	20 45 10.0	
	comp=Z,1µm,18.0s						
LSA	Lhasa	39.77	310	P	P	20 25 35.0	-3.4
LSA				S	S	20 31 38.6	-3.6
LSA				pmax	pmax		
	comp=Z,12nm,0.9s						
LSA				LR	LR		
	comp=Z,650nm,16.8s						
LSA				LR	LR		
	comp=Z,780nm,18.2s						
LSA				LR	LR		
	comp=Z,1µm,19.2s						
LSA	Lhasa	39.77	310	P	P	20 25 40.3	+1.9
NWAO	Narrogin (SRO)	39.95	191	P	P	20 25 38.7	-0.6
	comp=Z,91nm,1.0s						
NWAO	Narrogin (SRO)	39.95	191	P	P	20 25 38.0	-1.3
NWAO				IAmb	IAmb	20 25 40.4	
	comp=Z,102nm,1.1s						
NWAO	Narrogin (SRO)	39.95	191	P	P	20 25 39.3	-0.1
NWAO	Narrogin (SRO)	39.95	191	P	P	20 25 39.2	-0.1
NWAO	Narrogin (SRO)	39.95	191	P	P	20 25 38.0	-1.3
NWAO				pmax	pmax		
	comp=Z,102nm,1.1s						
GTA	Gaotai	40.16	329	*e*P	P	20 25 43.3	+2.2
GTA				pP	pP	20 25 46.9	0.0
GTA				S	S	20 31 48.3	+1.2
GTA				pmax	pmax		
	comp=Z,18nm,1.7s						
GTA				pmax	pmax		
	comp=Z,880nm,6.0s						
GTA				LR	LR		
	comp=Z,3µm,18.3s						
GTA				LR	LR		
	comp=Z,2µm,17.5s						
GTA				LR	LR		
	comp=Z,3µm,19.1s						
EIDS	Eidsvold	40.23	143	P	P	20 25 42.8	+1.1
	comp=Z,70nm,1.4s						
EIDS	Eidsvold	40.23	143	P	P	20 25 40.7	-1.1
EIDS				IAmb	IAmb	20 25 49.3	
	comp=Z,184nm,1.7s						
EIDS	Eidsvold	40.23	143	P	P	20 25 43.3	+1.6
BBOO	Buckleboo	40.31	166	P	P	20 25 43.1	+0.8
	comp=Z,224nm,0.9s						
BBOO	Buckleboo	40.31	166	P	P	20 25 42.8	+0.4
BBOO	Buckleboo	40.31	166	P	P	20 25 43.2	+0.8
ASAJ	Asahikawa	40.38	19	P	P	20 25 44.2	+1.5
	comp=Z,37nm,1.0s,baz=234,slow=9.3,SNR=11						
ASAJ				LR	LR	20 41 10.2	
	comp=Z,2µm,22.0s,baz=216,slow=34						
	comp=Z,37nm,1.0s						
JKA	Kamikawa-asahi	40.38	19	P	P	20 25 41.0	-1.7
JKA				IAmb	IAmb	20 25 54.5	
	comp=Z,113nm,1.1s						
GTK	Tadong	40.73	305	*e*P	P	20 25 46.3	+0.3

GTK				IAmb	IAmb	20 25 53.7	
	comp=Z,64nm,0.4s						
GOMU	**GeErMu**	**40.82**	**321**	P	**P**	**20 25 47.4**	**+0.4**
GOMU				pP	pP	20 25 50.8	-1.9
GOMU				sP	sP	20 25 55.6	+0.6
GOMU				S	**S**	**20 32 00.8**	**+3.2**
GOMU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GOMU				LR	LR		
	comp=Z,3µm,17.2s						
GOMU				LR	LR		
	comp=Z,3µm,17.5s						
GOMU				LR	LR		
	comp=Z,4µm,17.3s						
BWNR	**Bhubaneshwar**	**40.86**	**294**	*e*P	**P**	**20 25 48.2**	**+0.9**
BWNR				IAmb	IAmb	20 25 56.5	
	comp=Z,79nm,1.4s						
WHYH	**Whyalla**	**40.91**	**164**	P	**P**	**20 25 48.4**	**+1.2**
STKA	**Stephens Creek**	**41.09**	**159**	P	**P**	**20 25 49.9**	**+1.2**
	comp=Z,876nm,1.0s						
STKA	**Stephens Creek**	**41.09**	**159**	P	**P**	**20 25 50.2**	**+1.4**
	comp=Z,128nm,0.9s,baz=335,slow=8.1,SNR=216						
STKA				ScP	**ScP**	**20 31 35.0**	**-2.4**
	comp=Z,12nm,1.0s,baz=338,slow=5.5,SNR=4.1						
STKA				S	**S**	**20 32 00.4**	**-0.4**
	comp=Z,4.0nm,0.7s,baz=89,slow=21,SNR=6.1						
STKA				LR	LR	20 44 35.0	
	comp=Z,721nm,21.9s,baz=330,slow=39						
	comp=Z,128nm,0.9s						
STKA	**Stephens Creek**	**41.09**	**159**	P	**P**	**20 25 49.3**	**+0.6**
STKA	**Stephens Creek**	**41.09**	**159**	P	**P**	**20 25 49.9**	**+1.2**
STKA	**Stephens Creek**	**41.09**	**159**	*i* P	**P**	**20 25 49.2**	**+0.5**
PTPS	**Port Pirie**	**41.15**	**164**	P	**P**	**20 25 51.3**	**+2.1**
AUJCS	**Jamestown Cent**	**41.35**	**163**	P	**P**	**20 25 52.3**	**+1.4**
AUCAS	**Cummins Area S**	**41.63**	**167**	P	**P**	**20 25 55.3**	**+2.2**
RKGY	**Rocky Gully**	**41.64**	**191**	P	**P**	**20 25 53.5**	**+0.3**
	comp=Z,190nm,1.1s						
HTT	**Hallett**	**41.66**	**163**	P	**P**	**20 25 54.8**	**+1.4**
	comp=Z,31nm,0.9s						
HTT	**Hallett**	**41.66**	**163**	P	**P**	**20 25 55.1**	**+1.7**
HTT	**Hallett**	**41.66**	**163**	P	**P**	**20 25 54.8**	**+1.4**
AULRC	**Lightning Ridg**	**41.71**	**150**	P	**P**	**20 25 55.2**	**+1.4**
BOK	**Bokaro**	**41.77**	**299**	*e*P	**P**	**20 25 56.7**	**+2.2**
BOK				IAmb	IAmb	20 26 05.6	
	comp=Z,39nm,1.1s						
JMUI	**Jamui**	**41.84**	**300**	*e*P	**P**	**20 25 56.9**	**+1.9**
JMUI				IAmb	IAmb	20 26 05.7	
	comp=Z,28nm,0.8s						
AUALB	**St Joseph's Co**	**41.86**	**189**	P	**P**	**20 25 55.8**	**+0.8**
TW1H	**Toowoomba 1 Ha**	**42.38**	**144**	P	**P**	**20 26 01.1**	**+1.6**
CMSA	**Cobar Meteorol**	**42.41**	**154**	P	**P**	**20 26 01.0**	**+1.4**
	comp=Z,77nm,0.9s						
CMSA	**Cobar Meteorol**	**42.41**	**154**	P	**P**	**20 26 01.5**	**+2.0**
RAGD	**RAYAGADA**	**42.81**	**291**	*e*P	**P**	**20 26 04.6**	**+1.5**
RAGD				IAmb	IAmb	20 26 13.8	
	comp=Z,72nm,0.9s						
AUWSH	**Wavell State H**	**42.91**	**143**	P	**P**	**20 26 05.7**	**+2.0**
HIA	**Hailar**	**42.94**	**354**	P	**P**	**20 26 04.5**	**+0.8**
HIA	**Hailar**	**42.94**	**354**	IAMs_20	IAMs_20	20 44 11.6	
	comp=Z,1µm,20.0s						
HIA	**Hailar**	**42.94**	**354**	P	**P**	**20 26 05.9**	**+2.2**
HIA	**Hailar**	**42.94**	**354**	P	**P**	**20 26 04.5**	**+0.8**
HIA				pmax	pmax		
	comp=Z,199nm,1.0s						
HIA				MLR	MLR		
	comp=Z,1µm,20.0s						
AUMAR	**Marden Senior**	**42.95**	**164**	P	**P**	**20 26 05.6**	**+1.8**
YSS	**Yuzhno-Sakhali**	**42.98**	**17**	P	**P**	**20 26 01.8**	**-2.1**
YSS				IAMs_20	IAMs_20	20 42 47.7	
	comp=Z,1µm,19.0s						
YSS	**Yuzhno-Sakhali**	**42.98**	**17**	P	**P**	**20 26 02.5**	**-1.5**
YSS	**Yuzhno-Sakhali**	**42.98**	**17**	*e*P	**P**	**20 26 02.4**	**-1.5**
YSS				*e*S	**S**	**20 32 27.0**	**-1.4**
YSS				pmax	pmax		
	comp=Z,300nm,3.3s						
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
HILR	**Hailar Array B**	**43.23**	**355**	P	**P**	**20 26 07.5**	**+1.5**
	comp=Z,149nm,0.8s,baz=162,slow=11,SNR=79						
	comp=Z,149nm,0.8s						
AUMBR	**Murray Bridge**	**43.36**	**164**	P	**P**	**20 26 08.7**	**+1.6**
HEH	**HeiHe**	**43.68**	**2**	*e*P	**P**	**20 26 09.8**	**+0.2**
HEH				PP	**PP**	**20 27 52.3**	**+0.9**
HEH				S	**S**	**20 32 39.4**	**+0.8**
HEH				pmax	pmax		
	comp=Z,230nm,1.0s						
HEH				pmax	pmax		
	comp=Z,1µm,4.8s						
HEH				LR	LR		
	comp=Z,880nm,21.6s						
HEH				LR	LR		
	comp=Z,990nm,19.2s						
HEH				LR	LR		
	comp=Z,2µm,21.5s						
ULN	**Ulaanbaatar**	**44.17**	**342**	P	**P**	**20 26 13.2**	**-0.6**
ULN	**Ulaanbaatar**	**44.17**	**342**	IAMs_20	IAMs_20	20 45 24.3	
	comp=Z,1µm,21.0s						
ULN	**Ulaanbaatar**	**44.17**	**342**	P	**P**	**20 26 14.4**	**+0.6**
	comp=Z,241nm,1.1s						
ULN	**Ulaanbaatar**	**44.17**	**342**	*ce*P	**P**	**20 26 13.7**	**-0.1**
ULN				pmax	pmax		
	comp=Z,105nm,1.7s						
AUDCS	**Dubbo College**	**44.33**	**152**	P	**P**	**20 26 16.9**	**+1.9**
SONM	**Songino Array**	**44.35**	**342**	P	**P**	**20 26 15.3**	**+0.2**
	comp=Z,24nm,1.0s,baz=158,slow=3.9,SNR=54						
SONM				LR	LR	20 45 41.4	
	comp=Z,2µm,21.6s,baz=156,slow=37						
	comp=Z,24nm,1.0s						
SONM	**Songino Array**	**44.35**	**342**	P	**P**	**20 26 14.6**	**-0.5**
SONM				IAmb	IAmb	20 26 24.2	
	comp=Z,78nm,1.4s						
ARMA	**Armidale**	**44.39**	**147**	P	**P**	**20 26 17.3**	**+1.6**
	comp=Z,78nm,0.9s						
ARMA	**Armidale**	**44.39**	**147**	P	**P**	**20 26 16.0**	**+0.2**
ARMA				IAmb	IAmb	20 26 31.4	
	comp=Z,91nm,1.1s						
ARMA	**Armidale**	**44.39**	**147**	P	**P**	**20 26 18.2**	**+2.5**
PALK	**Pallekele**	**44.50**	**274**	LR	LR	20 45 27.8	
	comp=Z,661nm,20.6s,baz=88,slow=37						
PALK	**Pallekele**	**44.50**	**274**	P	**P**	**20 26 17.0**	**+0.2**
AUPHS	**Peel High Scho**	**44.53**	**148**	P	**P**	**20 26 19.3**	**+2.6**
VJD	**Vijayawada**	**45.00**	**287**	*e*P	**P**	**20 26 23.8**	**+3.1**
VJD				IAmb	IAmb	20 26 35.1	
	comp=Z,100nm,1.3s						
GRNR	**Gornyy**	**45.09**	**10**	⇓*i*P	**P**	**20 26 22.1**	**+1.2**
GRNR				pmax	pmax		
	comp=N,40nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,60nm,1.3s						
ARPS	**Mount Arapiles**	**45.63**	**162**	P	**P**	**20 26 26.7**	**+1.3**
	comp=Z,100nm,1.1s						
ALBI	**Allahabad**	**45.77**	**299**	*e*P	**P**	**20 26 27.9**	**+1.3**
YNG	**Young**	**45.95**	**153**	P	**P**	**20 26 29.5**	**+1.6**
	comp=Z,73nm,1.2s						
MGBR	**Mount Gambier**	**46.14**	**163**	P	**P**	**20 26 28.8**	**-0.6**
MGBR				IAmb	IAmb	20 26 42.7	
	comp=Z,79nm,0.9s						
CIT	**Chita**	**46.48**	**350**	*e*P	**P**	**20 26 35.4**	**+3.5**
CIT				*e*		20 29 05.4	
CIT				*e*		20 33 23.6	
CIT				pmax	pmax		
	comp=Z,250nm,2.8s						
TYV	**Tymovskoe**	**46.51**	**15**	*e*P	**P**	**20 26 33.6**	**+1.6**
TYV				pmax	pmax		
	comp=Z,36nm,1.2s						
TYV				pmax	pmax		
	comp=Z,600nm,5.2s						
SYDH	**Sydney Hard Ro**	**46.59**	**151**	P	**P**	**20 26 36.0**	**+3.1**
BRCI	**Bahraich**	**46.64**	**302**	*e*P	**P**	**20 26 36.3**	**+2.8**
BRCI				IAmb	IAmb	20 26 41.4	
	comp=Z,408nm,0.7s						
SANVU	**Saraoutou**	**46.67**	**118**	P	**P**	**20 26 35.9**	**+2.1**
RIV	**Riverview**	**46.85**	**150**	P	**P**	**20 26 38.0**	**+3.0**
	comp=Z,98nm,1.4s						
RIV	**Riverview**	**46.85**	**150**	P	**P**	**20 26 38.5**	**+3.5**
RIV	**Riverview**	**46.85**	**150**	P	**P**	**20 26 37.9**	**+3.0**
AUHPC	**Hawkesdale P12**	**47.02**	**162**	P	**P**	**20 26 38.9**	**+2.7**
BRAT	**Ballarat**	**47.03**	**160**	P	**P**	**20 26 38.6**	**+2.3**
AUMTC	**Mt Clear Colle**	**47.07**	**160**	P	**P**	**20 26 38.6**	**+2.0**
AUMTS	**Mt Stromlo**	**47.07**	**154**	P	**P**	**20 26 38.7**	**+1.9**
CAN	**Canberra**	**47.07**	**154**	P	**P**	**20 26 38.9**	**+2.1**
	comp=Z,143nm,1.1s						
CAN	**Canberra**	**47.07**	**154**	P	**P**	**20 26 37.4**	**+0.7**
CAN	**Canberra**	**47.07**	**154**	P	**P**	**20 26 38.7**	**+1.9**
CAN	**Canberra**	**47.07**	**154**	P	**P**	**20 26 37.4**	**+0.7**
CAN				pmax	pmax		
	comp=Z,123nm,1.0s						
AUDAR	**Daramalan Coll**	**47.08**	**153**	P	**P**	**20 26 38.8**	**+2.0**
AUMHS	**Melrose High S**	**47.15**	**154**	P	**P**	**20 26 39.9**	**+2.6**
ZEA	**Zeya**	**47.16**	**1**	*e*P	**P**	**20 26 37.5**	**+0.4**
ZEA				pmax	pmax		
	comp=E,20nm,1.3s						
ZEA				pmax	pmax		
	comp=N,80nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,200nm,1.2s						
CNB	**Canberra Magne**	**47.23**	**153**	P	**P**	**20 26 40.3**	**+2.3**
	comp=Z,109nm,1.1s						
CNB	**Canberra Magne**	**47.23**	**153**	P	**P**	**20 26 40.5**	**+2.5**
ZAK	**Zakamensk**	**47.57**	**341**	*e*P	**P**	**20 26 43.0**	**+2.5**
ZAK				pmax	pmax		
	comp=Z,23nm,1.5s						
TOO	**Toolangi**	**47.60**	**158**	P	**P**	**20 26 43.0**	**+2.2**
	comp=Z,28nm,1.5s						
TOO	**Toolangi**	**47.60**	**158**	P	**P**	**20 26 40.8**	**0.0**
TOO	**Toolangi**	**47.60**	**158**	P	**P**	**20 26 40.8**	**0.0**
TOO				pmax	pmax		
	comp=Z,45nm,1.3s						
MLBS	**Spotswood, Mel**	**47.62**	**159**	P	**P**	**20 26 44.5**	**+3.7**
KOD	**Kodaikanal**	**47.66**	**278**	*e*P	**P**	**20 26 43.5**	**+1.5**
KOD				IAML		20 26 49.9	
	comp=Z,107nm,1.2s						
AUUHS	**Ulladulla High**	**47.77**	**152**	P	**P**	**20 26 45.0**	**+2.9**
AUSMG	**Snowy Mountain**	**47.83**	**155**	P	**P**	**20 26 45.0**	**+2.3**
TLY	**Talaya**	**48.58**	**342**	*i* P	**P**	**20 26 48.2**	**0.0**
TLY				pmax	pmax		
	comp=Z,43nm,1.0s						
JHNI	**Jhansi**	**48.59**	**298**	*e*P	**P**	**20 26 50.4**	**+1.1**
MILA	**Mila**	**48.60**	**155**	P	**P**	**20 26 50.4**	**+1.8**
	comp=Z,14nm,1.7s						
AKL	**Akola**	**49.03**	**292**	*e*P	**P**	**20 26 54.0**	**+1.8**
DZM	**Mont Dzumac**	**49.09**	**126**	*e*S	**S**	**20 33 50.8**	**-6.4**
	comp=Z,1µm,29.2s						
DZM				*e*LQ	LQ	20 38 37.9	
	comp=Z,3µm,33.5s						
DZM				*e*LR	LR	20 40 51.5	
	comp=Z,2µm,31.4s						
BHPL	**Bhopal**	**49.14**	**295**	*e*P	**P**	**20 26 54.9**	**+2.0**
BHPL				IAmb	IAmb	20 27 03.2	
	comp=Z,35nm,0.9s						
JOSI	**Joshimath**	**49.28**	**305**	*e*P	**P**	**20 26 53.9**	**-0.3**
JOSI				IAmb	IAmb	20 26 59.9	
	comp=Z,166nm,1.1s						
MOY	**Mondy**	**49.42**	**340**	*e*P	**P**	**20 26 54.8**	**0.0**
MOY				pmax	pmax		
	comp=Z,86nm,1.8s						
GUNA	**GUNA**	**49.53**	**297**	*e*P	**P**	**20 26 57.7**	**+1.8**
GUNA				IAmb	IAmb	20 27 06.0	
	comp=Z,110nm,1.0s						
WMQ	**Urumqi**	**49.82**	**324**	*e*P	**P**	**20 27 01.4**	**+3.5**
WMQ				S	**S**	**20 34 09.9**	**+3.1**
WMQ				pmax	pmax		
	comp=Z,19nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,590nm,3.9s						
WMQ				LR	LR		
	comp=Z,3µm,19.7s						
WMQ				LR	LR		
	comp=Z,2µm,17.9s						
WMQ				LR	LR		
	comp=Z,1µm,21.1s						
DDI	**Dehra Dun**	**50.44**	**304**	*e*P	**P**	**20 27 04.6**	**+1.8**
DDI				IAmb	IAmb	20 27 09.0	
	comp=Z,110nm,1.1s						
AUBRN	**Burnie High Sc**	**50.82**	**160**	P	**P**	**20 27 08.1**	**+2.8**
SKR	**Severo-Kuril's**	**50.92**	**25**	*e*P	P	20 26 54.7	-11
SKR				pmax	pmax		
	comp=Z,700nm,6.3s						
KUDL	**Kundal**	**51.12**	**301**	*e*P	**P**	**20 27 08.2**	**+0.4**
KUDL				IAmb	IAmb	20 27 12.7	
	comp=Z,35nm,0.8s						
SMLA	**Simla**	**51.41**	**305**	*e*P	**P**	**20 27 11.4**	**+1.4**
SMLA				IAmb	IAmb	20 27 16.2	
	comp=Z,152nm,0.8s						
GLAD	**Gladstone**	**51.53**	**158**	P	**P**	**20 27 12.5**	**+1.9**
CORO	**Coronation Par**	**51.63**	**159**	P	**P**	**20 27 13.8**	**+2.4**
BOD	**Bodaibo**	**52.01**	**352**	*e*P	**P**	**20 27 14.3**	**+0.3**
BOD				pmax	pmax		
	comp=Z,57nm,1.8s						
BHK	**Bhakra**	**52.11**	**305**	*e*P	**P**	**20 27 13.3**	**-2.0**
BHK				IAmb	IAmb	20 27 21.6	
	comp=Z,141nm,0.9s						
ALCI	**Alchi Leh**	**52.42**	**309**	*e*P	**P**	**20 27 17.7**	**-0.3**
ALCI				IAmb	IAmb	20 27 23.3	
	comp=Z,68nm,0.8s						
DHRM	**DHARAMSHALA**	**52.47**	**306**	*e*P	**P**	**20 27 19.7**	**+1.5**
DHRM				IAmb	IAmb	20 27 23.7	
	comp=Z,192nm,1.0s						
MOO	**Moorlands**	**52.52**	**160**	P	**P**	**20 27 20.3**	**+2.3**
	comp=Z,47nm,1.2s						
MOO	**Moorlands**	**52.52**	**160**	P	**P**	**20 27 20.6**	**+2.6**
UDPR	**Udaipur**	**52.73**	**296**	*e*P	**P**	**20 27 22.0**	**+1.9**
UDPR				IAmb	IAmb	20 27 29.5	
	comp=Z,115nm,1.1s						
TAU	**Tasmania Unive**	**52.98**	**160**	P	**P**	**20 27 21.3**	**-0.1**
TAU				IAmb	IAmb	20 27 41.2	
	comp=Z,85nm,1.3s						
TAU	**Tasmania Unive**	**52.98**	**160**	P	**P**	**20 27 23.7**	**+2.3**
TAU	**Tasmania Unive**	**52.98**	**160**	P	**P**	**20 27 21.3**	**-0.1**
TAU				pmax	pmax		
	comp=Z,85nm,1.3s						
PEA0B	**Petropavlovsk-**	**53.40**	**24**	*ce*P	**P**	**20 27 25.1**	**+0.7**
PETK	**Petropavlovsk-**	**53.40**	**24**	P	**P**	**20 27 25.7**	**+1.3**
	comp=Z,34nm,0.8s,baz=194,slow=5.4,SNR=26						
PETK				LR	LR	20 50 12.3	
	comp=Z,572nm,19.4s,baz=213,slow=36						
	comp=Z,34nm,0.8s						
PETK	**Petropavlovsk-**	**53.40**	**24**	P	**P**	**20 27 24.3**	**-0.1**
ZSN	**Zaisan**	**53.58**	**327**	*e*P	**P**	**20 27 25.6**	**-0.3**
ZSN	**Zaisan**	**53.58**	**327**	*e*P	**P**	**20 27 25.6**	**-0.3**
DGZ	**Jazzator, Alta**	**53.65**	**330**	*i* P	**P**	**20 27 25.9**	**-0.6**
DGZ				pmax	pmax		
	comp=Z,47nm,1.1s						
PET	**Petropavlovsk**	**53.72**	**24**	P	**P**	**20 27 25.3**	**-1.4**
PET	**Petropavlovsk**	**53.72**	**24**	P	**P**	**20 27 29.3**	**+2.6**
PET	**Petropavlovsk**	**53.72**	**24**	*e*P	**P**	**20 27 27.0**	**+0.3**
PET				*e*S	**S**	**20 34 59.9**	**0.0**
PET				pmax	pmax		
	comp=Z,600nm,11.0s						
PET				pmax	pmax		
	comp=Z,82nm,1.4s						
PET				pmax	pmax		
	comp=Z,300nm,11.4s						
PET				MLR	MLR		
	comp=Z,900nm,16.0s						
PET				MLR	MLR		
	comp=Z,1µm,16.0s						
WUS	**Wushi**	**53.75**	**317**	IAMs_20	IAMs_20	20 54 17.5	
	comp=Z,1µm,19.0s						
JMU	**Jammu**	**53.81**	**306**	*e*P	**P**	**20 27 29.3**	**+2.1**
JMU				IAML		20 27 34.0	
	comp=Z,139nm,1.2s						
SHLS	**Shalkode**	**54.50**	**320**	*e*P	**P**	**20 27 30.5**	**-2.4**
	comp=Z,44nm,1.2s						
SHLS	**Shalkode**	**54.50**	**320**	*e*P	**P**	**20 27 30.4**	**-2.4**
SHLS				pmax	pmax		
	comp=Z,44nm,1.2s						
MK31	**Makanchi Array**	**54.65**	**325**	*ce*P	**P**	**20 27 34.2**	**+0.5**
MKAR	**Makanchi Array**	**54.65**	**325**	P	**P**	**20 27 33.9**	**+0.2**
	comp=Z,21nm,0.8s,baz=124,slow=7.5,SNR=43						
MKAR				LR	LR	20 52 20.4	
	comp=Z,1µm,18.4s,baz=122,slow=38						
	comp=Z,21nm,0.8s						
MKAR	**Makanchi Array**	**54.65**	**325**	P	**P**	**20 27 33.0**	**-0.7**
UZB	**Uzynbulak**	**54.78**	**319**	*e*P	**P**	**20 27 34.3**	**-0.6**
	comp=Z,35nm,1.1s						
UZB	**Uzynbulak**	**54.78**	**319**	*e*P	**P**	**20 27 34.2**	**-0.6**
UZB				pmax	pmax		
	comp=Z,35nm,1.1s						
MAKZ	**Makanchi**	**54.84**	**325**	P	**P**	**20 27 33.9**	**-1.2**
MAKZ				IAmb	IAmb	20 27 43.1	
	comp=Z,71nm,1.1s						
MAKZ				IAMs_20	IAMs_20	20 52 49.9	
	comp=Z,2µm,18.0s						
MAKZ	**Makanchi**	**54.84**	**325**	P	**P**	**20 27 33.9**	**-1.2**
MAKZ				pmax	pmax		
	comp=Z,71nm,1.1s						
MAKZ				MLR	MLR		
	comp=Z,2µm,18.0s						
TARG	**Taragay, Kyrgy**	**54.94**	**317**	P	**P**	**20 27 35.5**	**-0.9**
TARG				IAmb	IAmb	20 27 53.9	
	comp=Z,95nm,1.1s						
TARG	**Taragay, Kyrgy**	**54.94**	**317**	P	**P**	**20 27 35.5**	**-0.9**
TARG				pmax	pmax		
	comp=Z,95nm,1.1s						
SATY	**Saty**	**55.14**	**319**	*e*P	**P**	**20 27 36.9**	**-0.6**
	comp=Z,46nm,1.0s						
SATY	**Saty**	**55.14**	**319**	*e*P	**P**	**20 27 36.8**	**-0.6**
SATY				pmax	pmax		
	comp=Z,46nm,1.0s						
KSH	**Kashi**	**55.28**	**314**	P	**P**	**20 27 39.8**	**+1.2**
KSH				pP	pP	20 27 44.4	0.0
KSH				S	**S**	**20 35 24.8**	**+2.9**
KSH				pmax	pmax		
	comp=Z,34nm,1.3s						
KSH				pmax	pmax		
	comp=Z,380nm,3.5s						
KSH				LR	LR		
	comp=Z,1µm,17.5s						
KSH				LR	LR		
	comp=Z,2µm,18.9s						
KSH				LR	LR		
	comp=Z,1µm,21.0s						
NIL	**Nilore**	**55.33**	**307**	P	**P**	**20 27 38.1**	**-0.8**
NIL	**Nilore**	**55.33**	**307**	P	**P**	**20 27 38.1**	**-0.8**
NIL				pmax	pmax		
	comp=Z,215nm,0.9s						
FUNA	**Funafuti**	**55.54**	**105**	P	**P**	**20 27 43.7**	**+3.1**
YAK	**Yakutsk**	**55.54**	**2**	LR	LR	20 53 17.8	
	comp=Z,823nm,19.9s,baz=180,slow=38						
YAK	**Yakutsk**	**55.54**	**2**	P	**P**	**20 27 39.3**	**-0.5**
YAK	**Yakutsk**	**55.54**	**2**	IAMs_20	IAMs_20	20 52 58.7	
	comp=Z,990nm,20.0s						
YAK	**Yakutsk**	**55.54**	**2**	*e*P	**P**	**20 27 39.6**	**-0.2**
YAK				*e*		20 28 37.4	
YAK				*e*		20 29 43.0	
YAK				*e*S	**S**	**20 35 25.7**	**+1.5**
YAK				*e*		20 37 28.2	
YAK				*e*SS	**SS**	**20 39 11.7**	**+2.4**
YAK				pmax	pmax		
	comp=Z,485nm,1.2s						
YAK				pmax	pmax		
	comp=N,240nm,1.3s						
YAK				pmax	pmax		
	comp=E,71nm,1.4s						
YAK				pmax	pmax		
	comp=Z,121nm,2.5s						
YAK				pmax	pmax		
	comp=N,95nm,2.5s						
YAK				pmax	pmax		
	comp=E,99nm,2.3s						
YAK				smax	smax		
	comp=E,218nm,2.7s						
YAK				smax	smax		
	comp=N,78nm,2.2s						
YAK				MLR	MLR		
	comp=Z,1µm,21.0s						
YAK				MLR	MLR		
	comp=E,136nm,12.0s						
YAK				MLR	MLR		
	comp=N,699nm,21.0s						
TDK	**Taldyqorghan**	**56.05**	**321**	*e*P	**P**	**20 27 43.6**	**-0.3**
	comp=N,23nm,1.0s						
TDK	**Taldyqorghan**	**56.05**	**321**	*e*P	**P**	**20 27 43.5**	**-0.3**
TDK				pmax	pmax		
	comp=Z,23nm,1.0s						
MDOK	**Medeo**	**56.07**	**319**	*e*P	**P**	**20 27 43.8**	**-0.5**
MDOK	**Medeo**	**56.07**	**319**	*e*P	**P**	**20 27 43.7**	**-0.5**
TNSS	**Tian-Shan**	**56.08**	**319**	*e*P	**P**	**20 27 43.8**	**-0.8**
TNSS	**Tian-Shan**	**56.08**	**319**	*e*P	**P**	**20 27 43.8**	**-0.8**
AAA	**Alma-Ata**	**56.18**	**319**	*e*P	**P**	**20 27 44.5**	**-0.4**
	comp=Z,26nm,1.4s						
AAA	**Alma-Ata**	**56.18**	**319**	*e*P	**P**	**20 27 44.4**	**-0.4**
AAA				pmax	pmax		
	comp=Z,26nm,1.4s						
ULHL	**Ulahol**	**56.21**	**317**	P	**P**	**20 27 46.5**	**+1.2**
	SNR=11						
MA2	**Magadan**	**56.38**	**15**	P	**P**	**20 27 46.1**	**+0.3**
MA2	**Magadan**	**56.38**	**15**	P	**P**	**20 27 46.9**	**+1.0**
MA2	**Magadan**	**56.38**	**15**	*ce*P	**P**	**20 27 46.8**	**+0.9**
MA2				pmax	pmax		
	comp=Z,175nm,1.7s						
KUU	**Kurty**	**56.86**	**319**	*e*P	**P**	**20 27 49.3**	**-0.4**
	comp=Z,29nm,1.3s						
KUU	**Kurty**	**56.86**	**319**	*e*P	**P**	**20 27 49.2**	**-0.4**
KUU				pmax	pmax		
	comp=Z,29nm,1.3s						
TKM2	**Tokmak 2**	**56.93**	**318**	P	**P**	**20 27 51.1**	**+0.7**
	SNR=12						
KBK	**Karagaybulak**	**57.25**	**317**	P	**P**	**20 27 53.7**	**+1.1**
	SNR=9.6						
UCH	**Uchtor**	**57.37**	**317**	P	**P**	**20 27 54.8**	**+0.9**
	SNR=26						
CHMS	**Chumysh**	**57.52**	**318**	P	**P**	**20 27 55.7**	**+1.3**
	SNR=8.5						
AAK	**Ala-Archa**	**57.55**	**317**	P	**P**	**20 27 55.9**	**+1.2**
	SNR=11						
AAK	**Ala-Archa**	**57.55**	**317**	P	**P**	**20 27 56.0**	**+1.3**
	comp=Z,4.9nm,0.9s,baz=110,slow=7.1,SNR=14						
AAK				LR	LR	20 56 44.5	
	comp=Z,972nm,18.4s,baz=108,slow=40						
	comp=Z,4.9nm,0.9s						
AAK	**Ala-Archa**	**57.55**	**317**	P	**P**	**20 27 54.9**	**+0.1**
AAK	**Ala-Archa**	**57.55**	**317**	IAMs_20	IAMs_20	20 52 17.1	
	comp=Z,1µm,22.0s						
AAK	**Ala-Archa**	**57.55**	**317**	*i* P	**P**	**20 27 55.3**	**+0.6**
	SNR=26						
AAK	**Ala-Archa**	**57.55**	**317**	*ce*P	**P**	**20 27 54.0**	**-0.7**
AAK				pmax	pmax		
	comp=Z,48nm,1.7s						
ZAA0	**Zalesovo Array**	**57.63**	**333**	P	**P**	**20 27 53.1**	**-1.7**
ZALV	**Zalesovo Beam**	**57.63**	**333**	P	**P**	**20 27 53.5**	**-1.3**
	comp=Z,22nm,0.9s,baz=128,slow=5.1,SNR=34						
ZALV				LR	LR	20 54 13.7	
	comp=Z,772nm,19.7s,baz=133,slow=38						
ZALV				PKPPKP	**P'P'df**	**20 57 43.7**	**+1.6**
	comp=Z,1.0nm,0.8s,baz=232,slow=7.2,SNR=4.6						
ZALV				PKP2bc	**P'P'bc**	**20 57 53.3**	**-0.5**
	comp=Z,1.4nm,0.9s,baz=249,slow=4.1,SNR=5.5						
	comp=Z,22nm,0.9s						
ZALV	**Zalesovo Beam**	**57.63**	**333**	P	**P**	**20 27 52.6**	**-2.2**
MANEM	**Manem**	**57.74**	**311**	IAmb	IAmb	20 28 23.9	
	comp=Z,2µm,0.3s						
SGDS	**Sogindy**	**57.79**	**318**	*e*P	**P**	**20 27 55.9**	**-0.4**
USP	**Ospenovka**	**57.80**	**318**	P	**P**	**20 27 56.4**	**+0.1**
	SNR=14						
EKS2	**Erkin-Say**	**58.05**	**317**	P	**P**	**20 27 58.8**	**+0.6**
	SNR=13						
KURBB	**Kurchatov Arra**	**58.81**	**327**	P	**P**	**20 28 02.4**	**-0.7**
	comp=Z,48nm,1.0s,baz=128,slow=5.4,SNR=71						
KURBB				PKPPKP	**P'P'df**	**20 57 40.4**	**-0.1**
	comp=Z,1.1nm,1.0s,baz=274,slow=2.2,SNR=4.3						
KURBB				PKP2bc	**P'P'bc**	**20 57 50.2**	**-1.1**
	comp=Z,1.2nm,0.9s,baz=269,slow=3.5,SNR=5.4						
	comp=Z,48nm,1.0s						
KURK	**Kurchatov**	**58.81**	**327**	P	**P**	**20 28 02.2**	**-0.9**
KURK	**Kurchatov**	**58.81**	**327**	IAMs_20	IAMs_20	20 54 56.0	
	comp=Z,578nm,18.0s						
KURK	**Kurchatov**	**58.81**	**327**	*ce*P	**P**	**20 28 02.8**	**-0.3**
KURK				pmax	pmax		
	comp=Z,155nm,1.3s						
KBL	**Kabul**	**58.93**	**307**	P	**P**	**20 28 03.7**	**-0.9**
KBL	**Kabul**	**58.93**	**307**	P	**P**	**20 28 03.7**	**-0.9**
KBL				pmax	pmax		
	comp=Z,58nm,0.8s						
SEY	**Seymchan**	**59.67**	**14**	LR	LR	20 52 31.7	
	comp=Z,646nm,22.0s,baz=216,slow=35						
SEY	**Seymchan**	**59.67**	**14**	*e*P	**P**	**20 28 08.6**	**-0.3**
SEY				*e*S	**S**	**20 36 17.0**	**-1.4**
SEY				pmax	pmax		
	comp=Z,186nm,1.6s						
SEY				MLR	MLR		
	comp=Z,520nm,18.0s						
DZA	**Taraz**	**59.80**	**316**	*e*P	**P**	**20 28 09.8**	**-0.5**
DZA	**Taraz**	**59.80**	**316**	*e*P	**P**	**20 28 09.7**	**-0.5**
CHGR	**Chuyangaron**	**59.97**	**311**	P	**P**	**20 28 11.6**	**+0.1**
KK31	**Karatay Array**	**60.44**	**316**	P	**P**	**20 28 13.1**	**-1.4**
KK31				IAmb	IAmb	20 28 25.9	
	comp=Z,49nm,0.9s						
KK31	**Karatay Array**	**60.44**	**316**	P	**P**	**20 28 13.1**	**-1.4**
KK31				pmax	pmax		
	comp=Z,49nm,1.0s						
KKAR	**Karatay Array**	**60.44**	**316**	P	**P**	**20 28 13.3**	**-1.3**
KKAR	**Karatay Array**	**60.44**	**316**	P	**P**	**20 28 13.3**	**-1.3**
IUG	**Iuzhnay**	**60.44**	**315**	*e*P	**P**	**20 28 14.3**	**-0.5**
IUG	**Iuzhnay**	**60.44**	**315**	*e*P	**P**	**20 28 14.2**	**-0.5**

SHAA	**Shahritus**	60.45	310	IAmb	IAmb	20 28 47.7	
	comp=Z,88nm,1.0s						
CHM	**Chimkent**	60.80	315	*e*P	P	20 28 16.7	-0.4
CHM	**Chimkent**	60.80	315	*e*P	P	20 28 16.6	-0.4
BRLS	**Borolday**	60.88	316	*e*P	P	20 28 17.2	-0.3
BRLS	**Borolday**	60.88	316	*e*P	P	20 28 17.2	-0.3
JCZ	**Jackson Bay**	63.63	147	P	P	20 28 38.6	+2.6
HRA	**Herat**	64.39	305	P	P	20 28 40.0	-1.4
HRA				IAmb	IAmb	20 28 46.3	
	comp=Z,33nm,1.0s						
BVAR	**Borovoye Array**	64.40	327	P	P	20 28 39.8	-1.0
	comp=Z,15nm,0.9s,baz=67,slow=11,SNR=8.8						
BVAR				LR	LR	20 58 03.4	
	comp=Z,980nm,21.1s,baz=120,slow=37						
	comp=Z,15nm,0.9s						
BORK	**Borovoye**	64.44	327	IAMs_20	IAMs_20	20 57 53.0	
	comp=Z,1µm,21.0s						
BORK	**Borovoye**	64.44	327	*ce*P	P	20 28 40.6	-0.5
BORK				pmax	pmax		
	comp=Z,65nm,1.3s						
LBZ	**Lake Benmore**	64.60	146	P	P	20 28 41.7	-0.6
RAO	**Raoul Island**	64.89	126	LR	LR	20 57 00.1	
	comp=Z,147nm,19.1s,baz=324,slow=36						
TIXI	**Tiksi**	65.15	1	LR	LR	20 56 59.9	
	comp=Z,2µm,21.9s,baz=200,slow=36						
TIXI	**Tiksi**	65.15	1	P	P	20 28 43.9	-1.5
TIXI	**Tiksi**	65.15	1	*ce*P	P	20 28 44.7	-0.7
TIXI				pmax	pmax		
	comp=Z,110nm,1.3s						
URZ	**Urewera**	65.34	137	P	P	20 28 47.0	-0.2
	comp=Z,15nm,0.8s,baz=252,slow=20,SNR=1.8						
URZ				LR	LR	20 58 37.7	
	comp=Z,311nm,18.7s,baz=302,slow=37						
	comp=Z,15nm,0.8s						
BKZ	**Black Stump Fm**	65.40	138	P	P	20 28 49.1	+1.5
BKZ	**Black Stump Fm**	65.40	138	P	P	20 28 50.1	+2.4
AFI	**Afiamalu**	65.42	108	P	P	20 28 50.4	+2.2
RTZ	**Ruatahuna**	65.44	138	P	P	20 28 48.2	+0.2
ATKA	**Atka Island**	66.97	36	P	P	20 28 56.5	-0.9
ATKA	**Atka Island**	66.97	36	P	P	20 28 58.5	+1.1
BILL	**Bilibino**	67.25	15	P	P	20 28 58.8	-0.1
BILL	**Bilibino**	67.25	15	IAMs_20	IAMs_20	20 59 44.0	
	comp=Z,723nm,20.0s						
BILL	**Bilibino**	67.25	15	*ce*P	P	20 29 00.2	+1.3
BILL				pmax	pmax		
	comp=Z,87nm,1.7s						
NRIK	**Noril'sk**	67.51	346	P	P	20 28 59.1	-1.4
	comp=Z,28nm,1.0s,baz=129,slow=6.5,SNR=14						
NRIK				LR	LR	21 00 18.9	
	comp=Z,1µm,19.2s,baz=150,slow=38						
	comp=Z,28nm,1.0s						
NRIK	**Noril'sk**	67.51	346	P	P	20 28 59.1	-1.4
NRIK				IAmb	IAmb	20 29 04.5	
	comp=Z,59nm,1.2s						
NRIK	**Noril'sk**	67.51	346	*i* P	P	20 28 59.5	-1.1
NRIK				pmax	pmax		
	comp=Z,37nm,1.0s						
NIUE	**Niue**	68.43	113	P	P	20 29 10.2	+3.0
ALNE	**Al Ain**	68.94	293	*i* P	P	20 29 10.6	+0.1
	SNR=7.1						
AB31	**Akbulak array**	69.30	320	P	P	20 29 10.4	-1.7
AB31				IAmb	IAmb	20 29 26.5	
	comp=Z,27nm,0.9s						
ABKAR	**Akbulak array**	69.30	320	P	P	20 29 10.5	-1.6
NIKH	**Nikolski High**	70.30	36	P	P	20 29 17.6	-0.6
	baz=254						
SPIA	**Saint Paul Isl**	70.79	31	P	P	20 29 20.7	-0.4
	baz=251						
AKTO	**Aktyubinsk**	70.79	321	P	P	20 29 20.7	-0.6
	comp=Z,9.6nm,0.8s,baz=96,slow=6.2,SNR=17						
AKTO				LR	LR	21 03 38.2	
	comp=Z,1µm,18.8s,baz=78,slow=39						
	comp=Z,9.6nm,0.8s						
P08K	**Saint George I**	70.97	32	P	P	20 29 22.0	-0.3
	baz=252						
MZR	**Muzera**	71.00	292	*i* P	P	20 29 22.7	-0.4
	SNR=13						
SVE	**Sverdlovsk**	71.03	328	*e*P	P	20 29 21.7	-0.9
SVE				pmax	pmax		
	comp=Z,56nm,1.4s						
UNV	**Unalaska Valle**	71.89	35	P	P	20 29 27.0	-0.8
	baz=256						
ARTI	**Arti**	72.09	327	P	P	20 29 28.3	-0.7
	comp=Z,7.7nm,0.9s,baz=103,slow=5.4,SNR=9.5						
ARTI				LR	LR	21 04 25.7	
	comp=Z,786nm,19.2s,baz=108,slow=39						
	comp=Z,7.7nm,0.9s						
ARTI	**Arti**	72.09	327	P	P	20 29 26.7	-2.2
ARTI				IAMs_20	IAMs_20	21 04 15.1	
	comp=Z,915nm,19.0s						
ARTI	**Arti**	72.09	327	*c i*P	P	20 29 27.7	-1.3
ARTI						20 32 10.3	
ARTI				S	S	20 38 49.6	-0.5
ARTI				SS	SS	20 43 23.0	-4.3
ARTI				pmax	pmax		
	comp=Z,31nm,1.8s						
ARTI				MLR	MLR		
	comp=Z,814nm,20.0s						
GAMB	**Gambell**	72.42	24	P	P	20 29 31.8	+1.1
	baz=248						
CASY	**Casey**	73.37	186	P	P	20 29 35.5	-0.8
CASY				IAmb	IAmb	20 29 44.8	
	comp=Z,32nm,0.7s						
M11K	**Mekoryuk**	73.76	29	P	P	20 29 38.6	-0.1
	baz=254						
TNA	**Tin City**	74.57	23	P	P	20 29 43.9	+0.5
	baz=251						
S12K	**Black Hills**	74.81	34	P	P	20 29 45.9	+0.8
	baz=259						
K13K	**Kusilvak Mount**	74.89	27	IAmb	IAmb	20 29 53.7	
	comp=Z,97nm,1.4s						
K13K	**Kusilvak Mount**	74.89	27	P	P	20 29 46.0	+0.6
	baz=255						
M13K	**Dall Lake**	75.14	29	P	P	20 29 46.6	-0.2
	baz=257						
ANM	**Nome**	75.29	25	IAMs_20	IAMs_20	21 08 56.5	
	comp=Z,421nm,19.0s						
ANM	**Nome**	75.29	25	P	P	20 29 48.5	+0.9
	baz=254						
J14K	**Nanvaranak Lak**	75.60	27	P	P	20 29 49.3	0.0
	baz=256						
SDPT	**Sand Point**	75.63	35	P	P	20 29 49.7	0.0
	baz=260						
LKRN	**Lenkeran, Azer**	75.65	308	P	P	20 29 49.7	-0.5
L14K	**Kuka Creek**	75.67	28	P	P	20 29 50.0	+0.2
	baz=257,SNR=12						
N14K	**Kuskokwak Cree**	75.84	30	IAmb	IAmb	20 29 54.0	
	comp=Z,64nm,0.9s						
N14K	**Kuskokwak Cree**	75.84	30	P	P	20 29 50.9	0.0
	baz=258,SNR=7.6						
M14K	**Bethel**	75.88	29	IAmb	IAmb	20 29 54.0	
	comp=Z,56nm,0.9s						
M14K	**Bethel**	75.88	29	P	P	20 29 52.0	+1.0
	baz=258,SNR=11						
F15K	**North Star Dit**	75.91	24	P	P	20 29 50.1	-1.0
F15K				IAmb	IAmb	20 29 59.4	
	comp=Z,118nm,1.9s						
F15K	**North Star Dit**	75.91	24	P	P	20 29 51.9	+0.7
	baz=254						
O14K	**Tigyukauivet M**	75.92	30	IAmb	IAmb	20 29 57.2	
	comp=Z,64nm,1.0s						
O14K	**Tigyukauivet M**	75.92	30	P	P	20 29 51.9	+0.6
	baz=259						
G15K	**Niukluk**	75.96	24	P	P	20 29 51.2	-0.3
	baz=255						
CHNA	**Chernabura Isl**	76.05	35	P	P	20 29 52.3	+0.2
	baz=261						
S14K	**Fog Glacier**	76.30	34	P	P	20 29 53.6	-0.1
	baz=261						
L15K	**Ungalak Mounta**	76.30	28	P	P	20 29 54.0	+0.6
	baz=258,SNR=6.4						
C16K	**Lisburne Hills**	76.38	21	P	P	20 29 53.6	-0.1
	baz=253,SNR=24						
K15K	**Wolf Creek Mou**	76.41	27	IAmb	IAmb	20 30 02.6	
	comp=Z,126nm,1.7s						
K15K	**Wolf Creek Mou**	76.41	27	P	P	20 29 53.9	-0.1
	baz=258						
M15K	**Kasigluk River**	76.48	29	P	P	20 29 54.1	-0.3
	baz=259						
AKT	**Akhty**	76.61	311	*e*P	P	20 29 54.7	-1.1
AKT				*e*		20 30 05.1	
AKT				*e*		20 32 44.0	
AKT				*e*S	S	20 39 39.0	-2.6
AKT				*e*		20 40 07.7	
AKT				pmax	pmax		
	comp=Z,20nm,0.9s						
H16K	**Elim**	76.62	25	P	P	20 29 55.1	-0.1
	baz=257						
O15K	**Ungalikthiuk R**	76.63	31	P	P	20 29 56.0	+0.6
	baz=260						
N15K	**Kwethluk River**	76.67	30	IAmb	IAmb	20 30 01.8	
	comp=Z,86nm,1.1s						
N15K	**Kwethluk River**	76.67	30	P	P	20 29 55.4	-0.2
	baz=260,SNR=8.7						
MAK	**Makhachkala**	76.86	312	*e*P	P	20 29 52.0	-5.0
MAK				*e*		20 32 42.8	
MAK				*e*PPP	PPP	20 34 34.7	
MAK				*e*S	S	20 39 38.7	-5.3
MAK				*e*SS	SS	20 44 33.5	-6.9
MAK				*e*SSS	SSS	20 47 53.7	
MAK				pmax	pmax		
	comp=Z,18nm,0.4s						
MAK				MLR	MLR		
	comp=Z,662nm,18.0s						
SEKA	**Sheki**	77.00	311	P	P	20 29 56.8	-1.1
J16K	**Anvik River**	77.03	26	P	P	20 29 58.4	+0.8
	baz=258						
D17K	**Noatak River**	77.04	22	P	P	20 29 58.5	+1.0
	baz=255,SNR=38						
MNGR	**Mingechevir, A**	77.06	310	P	P	20 29 57.7	-0.5
I17K	**Unalakleet**	77.11	26	P	P	20 29 58.8	+0.8
	baz=258,SNR=8.1						
RDOG	**Red Dog Mine**	77.19	21	IAmb	IAmb	20 30 06.7	
	comp=Z,88nm,1.3s						
RDOG	**Red Dog Mine**	77.19	21	P	P	20 29 58.9	+0.5
	baz=255,SNR=14						
C17K	**DeLong Mountai**	77.21	21	P	P	20 29 58.1	-0.4
	baz=255,SNR=24						
KIRV	**Kirov**	77.28	329	P	P	20 29 59.0	0.0
	comp=Z,19nm,0.7s,baz=139,slow=2.1,SNR=9.7						
KIRV				LR	LR	21 07 48.4	
	comp=Z,609nm,19.1s,baz=100,slow=39						
	comp=Z,19nm,0.7s						
KIRV	**Kirov**	77.28	329	*i* P	P	20 29 59.2	+0.2
E17K	**Hotham Inlet**	77.36	23	P	P	20 29 59.5	+0.2
	baz=256,SNR=32						
M16K	**Timber Creek**	77.37	29	P	P	20 29 58.4	-1.1
M16K				IAmb	IAmb	20 30 02.5	
	comp=Z,33nm,0.8s						
M16K	**Timber Creek**	77.37	29	P	P	20 29 59.8	+0.3
	baz=260,SNR=9.0						
N16K	**Nishlik Lake**	77.37	29	P	P	20 29 59.8	+0.3
	baz=261						
G17K	**Kiwalik Mounta**	77.47	24	P	P	20 30 00.3	+0.4
	baz=258						
BELG	**Belogornoye**	77.53	322	P	P	20 29 59.9	-0.6
	comp=Z,33nm,0.9s,baz=129,slow=1.8,SNR=19						
	comp=Z,33nm,0.9s						
BELG	**Belogornoye**	77.53	322	*i* P	P	20 29 59.9	-0.6
BELG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
P16K	**Nushagak River**	77.54	31	P	P	20 30 00.8	+0.3
	baz=262						
O16K	**Kokwok River B**	77.57	30	IAmb	IAmb	20 30 03.9	
	comp=Z,33nm,0.9s						
O16K	**Kokwok River B**	77.57	30	P	P	20 30 01.0	+0.4
	baz=262,SNR=7.3						
GANJ	**Ganja**	77.64	310	P	P	20 30 00.9	-0.6
H17K	**Granite Mounta**	77.66	25	IAmb	IAmb	20 30 14.4	
	comp=Z,48nm,1.4s						
H17K	**Granite Mounta**	77.66	25	P	P	20 30 00.8	-0.2
	baz=259,SNR=13						
J17K	**VABM Dome**	77.73	26	P	P	20 30 01.7	+0.2
	baz=260						
L17K	**Donlin**	77.87	28	P	P	20 30 03.1	+0.9
	baz=261						
E18K	**Tukpahlearik C**	77.90	22	IAmb	IAmb	20 30 10.8	
	comp=Z,124nm,1.7s						
E18K	**Tukpahlearik C**	77.90	22	P	P	20 30 03.1	+0.7
	baz=258						
B18K	**Kokolik River**	77.91	20	P	P	20 30 02.8	+0.4
	baz=256						
C18K	**Utukok River**	77.95	21	IAmb	IAmb	20 30 10.9	
	comp=Z,55nm,1.2s						
C18K	**Utukok River**	77.95	21	P	P	20 30 02.7	0.0
	baz=257,SNR=18						
K17K	**Iditarod**	77.96	27	IAmb	IAmb	20 30 28.0	
	comp=Z,50nm,1.1s						
K17K	**Iditarod**	77.96	27	P	P	20 30 03.1	+0.3
	baz=261,SNR=11						
F18K	**Selawik**	78.09	23	P	P	20 30 03.9	+0.5
	baz=259,SNR=12						
O17K	**Koliganek Bris**	78.10	30	P	P	20 30 04.2	+0.6
	baz=262						
N17K	**Nushagak Hills**	78.16	30	IAmb	IAmb	20 30 10.7	
	comp=Z,82nm,1.5s						
N17K	**Nushagak Hills**	78.16	30	P	P	20 30 04.4	+0.5
	baz=262,SNR=6.7						
M17K	**Holitna River**	78.16	29	P	P	20 30 04.1	+0.2
	baz=262						
NAX	**Nakhchivan**	78.23	309	P	P	20 30 04.0	-0.9
RAYN	**Ar Rayn**	78.33	293	P	P	20 30 04.1	-1.6
RAYN				IAmb	IAmb	20 30 11.2	
	comp=Z,36nm,0.8s						
RAYN	**Ar Rayn**	78.33	293	IAMs_20	IAMs_20	21 11 28.5	
	comp=Z,484nm,19.0s						
RAYN	**Ar Rayn**	78.33	293	*i* P	P	20 30 04.2	-1.5
	SNR=41						
RAYN	**Ar Rayn**	78.33	293	P	P	20 30 04.1	-1.5
RAYN				pmax	pmax		
	comp=Z,36nm,0.9s						
RAYN				MLR	MLR		
	comp=Z,500nm,19.0s						
H18K	**Honhosa River**	78.34	25	IAmb	IAmb	20 30 12.9	
	comp=Z,78nm,1.8s						
H18K	**Honhosa River**	78.34	25	P	P	20 30 04.5	-0.4
	baz=260,SNR=10						
G18K	**Tagagawik**	78.36	24	P	P	20 30 05.1	+0.2
	baz=260,SNR=7.3						
P17K	**Kvichak River**	78.36	31	P	P	20 30 06.0	+1.0
	baz=263						
A19K	**Wainwright**	78.36	19	P	P	20 30 05.9	+1.1
	baz=257						
CHIR	**Chirikof Islan**	78.42	34	P	P	20 30 06.3	+0.9
	baz=264						
C19K	**Lookout Ridge**	78.62	21	P	P	20 30 06.8	+0.4
	baz=258						
L18K	**Granite Mounta**	78.63	28	P	P	20 30 07.5	+1.1
	baz=262,SNR=6.4						
J18K	**Innoko River**	78.79	27	P	P	20 30 07.8	+0.5
	baz=262						
N18K	**Kilae Creek**	78.81	29	P	P	20 30 07.9	+0.3
	baz=263,SNR=6.3						
GCSA	**Galena City Sc**	78.90	25	P	P	20 30 07.8	-0.1
	baz=262						
M18K	**Stony River**	78.94	29	P	P	20 30 08.6	+0.4
	baz=263,SNR=7.8						
P18K	**Big Mountain,**	79.00	31	P	P	20 30 09.0	+0.4
	baz=264						
G19K	**Purcell Mounta**	79.03	24	P	P	20 30 09.3	+0.7
	baz=261,SNR=13						
D19K	**Kuna River**	79.03	21	P	P	20 30 09.0	+0.4
	baz=260,SNR=25						
Q18K	**Katmai Hardscr**	79.03	32	P	P	20 30 09.0	+0.1
	baz=264						
O18K	**Koktuh Hills**	79.06	30	IAmb	IAmb	20 30 11.9	
	comp=Z,71nm,1.1s						
O18K	**Koktuh Hills**	79.06	30	P	P	20 30 09.2	+0.3
	baz=264,SNR=6.8						
E19K	**Redstone River**	79.18	23	IAmb	IAmb	20 30 18.9	
	comp=Z,67nm,1.1s						
E19K	**Redstone River**	79.18	23	P	P	20 30 10.0	+0.6
	baz=261						
H19K	**Roundabout Mou**	79.19	25	IAmb	IAmb	20 30 18.9	
	comp=Z,42nm,0.9s						
H19K	**Roundabout Mou**	79.19	25	P	P	20 30 10.4	+0.9
	baz=262,SNR=16						
SII	**Sitkinak Islan**	79.29	34	P	P	20 30 10.4	+0.2
	baz=266						
J19K	**Poorman**	79.34	26	P	P	20 30 10.7	+0.4
	baz=263,SNR=12						
L19K	**White Mountain**	79.47	28	P	P	20 30 12.1	+0.9
	baz=264,SNR=7.7						
N19K	**Bonanza Creek**	79.51	29	IAmb	IAmb	20 30 20.0	
	comp=Z,115nm,1.5s						
N19K	**Bonanza Creek**	79.51	29	P	P	20 30 12.3	+0.8
	baz=264,SNR=8.5						
O19K	**Port Alsworth**	79.53	30	P	P	20 30 11.2	-0.2
	baz=265						
D20K	**Etivluk River**	79.61	21	IAmb	IAmb	20 30 20.3	
	comp=Z,72nm,1.1s						
D20K	**Etivluk River**	79.61	21	P	P	20 30 12.1	+0.3
	baz=261						
B20K	**Meade River**	79.63	20	IAmb	IAmb	20 30 18.5	
	comp=Z,74nm,1.1s						
B20K	**Meade River**	79.63	20	P	P	20 30 12.3	+0.5
	baz=260						
E20K	**Nigu River**	79.70	22	P	P	20 30 12.8	+0.5
	baz=262						
F20K	**Avaraart Lake**	79.70	23	P	P	20 30 12.7	+0.5
	baz=262						
Q19K	**Cape Douglas,**	79.77	31	P	P	20 30 12.4	-0.4
	baz=266						
OHAK	**Old Harbor**	79.83	33	IAmb	IAmb	20 30 15.6	
	comp=Z,92nm,1.3s						
OHAK	**Old Harbor**	79.83	33	P	P	20 30 15.1	+2.0
OHAK	**Old Harbor**	79.83	33	P	P	20 30 12.8	-0.3
	baz=266						
H20K	**Anotleneega Mo**	79.84	25	P	P	20 30 12.6	-0.4
	baz=263						
I20K	**Naaghedeneel**	79.93	25	IAmb	IAmb	20 30 22.1	
	comp=Z,68nm,1.1s						
I20K	**Naaghedeneel**	79.93	25	P	P	20 30 13.3	-0.1
	baz=264						
K20K	**Telida**	79.95	27	IAmb	IAmb	20 30 22.3	
	comp=Z,72nm,1.6s						
K20K	**Telida**	79.95	27	P	P	20 30 13.2	-0.6
	baz=264						
J20K	**Nowinta River**	80.00	26	IAmb	IAmb	20 30 22.5	
	comp=Z,146nm,1.9s						
J20K	**Nowinta River**	80.00	26	P	P	20 30 14.7	+0.7
	baz=264,SNR=11						
A21K	**Barrow**	80.03	19	P	P	20 30 13.6	-0.3
	baz=261						
P19K	**Oil Pt**	80.03	31	P	P	20 30 14.8	+0.6
	baz=266						
KARS	**Kars**	80.10	310	P	P	20 30 15.1	-0.1
KARS				IAmb	IAmb	20 30 39.6	
	comp=Z,72nm,1.2s						
KARS	**Kars**	80.10	310	P	P	20 30 15.1	-0.1
KARS				pmax	pmax		
	comp=Z,72nm,1.2s						
GOF	**Gofitskoye**	80.16	315	*ce*P	P	20 30 18.4	+3.2
KDAK	**Kodiak Island**	80.24	33	LR	LR	21 02 41.2	
	comp=Z,282nm,20.8s,baz=245,slow=33						
KDAK	**Kodiak Island**	80.24	33	P	P	20 30 16.0	+0.7
KDAK	**Kodiak Island**	80.24	33	P	P	20 30 16.0	+0.7
KDAK				pmax	pmax		
	comp=Z,297nm,2.0s						
KDAK	**Kodiak Island**	80.24	33	P	P	20 30 16.3	+1.0
	baz=267						
KBZ	**Khabaz**	80.25	313	P	P	20 30 14.8	-0.8
	comp=Z,3.1nm,1.0s,baz=70,slow=3.1,SNR=7.1						
	comp=Z,3.1nm,1.0s						
KBZ	**Khabaz**	80.25	313	*ce*P	P	20 30 14.7	-1.0
KBZ				pmax	pmax		
	comp=Z,11nm,1.1s						
M20K	**Styx River**	80.25	28	P	P	20 30 15.9	+0.4
	baz=266						
C21K	**Knifeblade Rid**	80.33	21	P	P	20 30 16.4	+0.8
	baz=263						
IMAR	**Indian Mountai**	80.36	24	P	P	20 30 15.3	-0.5
O20K	**Slope Mountain**	80.37	30	P	P	20 30 16.1	0.0
	baz=266						
Q20K	**Shuyak Island**	80.39	32	P	P	20 30 16.3	+0.2
	baz=267						
KIV	**Kislovodsk**	80.40	313	P	P	20 30 15.7	-1.0
KIV	**Kislovodsk**	80.40	313	*e*P	P	20 30 15.1	-1.6
KIV				*e*S	S	20 40 21.4	-0.8
KIV				*e*SS	SS	20 45 35.8	+2.0
KIV				pmax	pmax		
	comp=Z,17nm,1.1s						
SHA1	**Shidzhatmaz**	80.42	313	*i* P	P	20 30 17.8	+0.9
B21K	**Ikpikpuk River**	80.45	20	IAmb	IAmb	20 30 22.9	
	comp=Z,63nm,0.9s						
B21K	**Ikpikpuk River**	80.45	20	P	P	20 30 15.9	-0.3
	baz=263						
G21K	**Allakaket**	80.51	24	P	P	20 30 16.8	+0.2
	baz=264,SNR=22						
A22K	**Sinclair Lake**	80.51	19	P	P	20 30 16.6	0.0
	baz=262						
E21K	**Killik River**	80.54	22	IAmb	IAmb	20 30 23.3	
	comp=Z,46nm,1.1s						
E21K	**Killik River**	80.54	22	P	P	20 30 16.9	+0.1
	baz=264						
F21K	**Alatna River**	80.59	23	P	P	20 30 17.5	+0.4
	baz=264						
N20K	**Mount Spurr**	80.65	29	P	P	20 30 17.7	+0.1
	baz=266						
SPCR	**Spurr Chakacha**	80.65	29	P	P	20 30 17.3	-0.2
	baz=266						
H21K	**Melozitna Rive**	80.71	25	P	P	20 30 17.7	-0.1
	baz=265						
PPLA	**Purkeypile**	80.77	27	IAmb	IAmb	20 31 02.6	
	comp=Z,55nm,1.2s						
PPLA	**Purkeypile**	80.77	27	P	P	20 30 18.1	-0.2
	baz=266						
CHUM	**Lake Minchumin**	80.78	26	P	P	20 30 18.6	+0.5
	baz=266,SNR=7.4						
HOM	**Homer**	80.84	31	P	P	20 30 18.6	+0.1
	baz=267						
GURO	**Guroymak-BITLI**	80.93	308	P	P	20 30 18.6	-1.0
GURO				IAmb	IAmb	20 30 27.9	
	comp=Z,61nm,1.2s						
B22K	**Teshekpuk Lake**	80.94	20	IAmb	IAmb	20 30 25.4	
	comp=Z,49nm,1.0s						
B22K	**Teshekpuk Lake**	80.94	20	P	P	20 30 19.4	+0.6
	baz=264						
SKT	**Skwentna**	81.02	28	P	P	20 30 20.1	+0.6
	baz=267,SNR=15						
I21K	**Tanana**	81.02	25	IAmb	IAmb	20 30 40.1	
	comp=Z,44nm,1.0s						
I21K	**Tanana**	81.02	25	P	P	20 30 20.1	+0.7
	baz=266,SNR=12						
D22K	**Ayikyak River**	81.05	21	P	P	20 30 19.1	-0.4
	baz=265						
F22K	**John River**	81.12	23	P	P	20 30 20.5	+0.6
	baz=265						
VRH	**Novokhopyorsk**	81.12	321	*e*P	P	20 30 18.8	-1.4
VRH				pmax	pmax		
	comp=Z,35nm,0.8s						
BRSE	**Bradley Lake S**	81.30	31	P	P	20 30 21.5	+0.5
	baz=268						
E22K	**Anaktuvuk Pass**	81.31	22	IAmb	IAmb	20 30 29.7	
	comp=Z,58nm,1.1s						
E22K	**Anaktuvuk Pass**	81.31	22	P	P	20 30 21.5	+0.5
	baz=266,SNR=30						
H22K	**Ishtalitna Cre**	81.32	24	IAmb	IAmb	20 30 28.1	
	comp=Z,54nm,1.2s						
H22K	**Ishtalitna Cre**	81.32	24	P	P	20 30 22.0	+1.0
	baz=266						
G22K	**Bettles**	81.33	23	P	P	20 30 21.1	+0.1
	baz=266						
SUA	**Susitna One**	81.36	29	IAmb	IAmb	20 30 23.8	
	comp=Z,58nm,0.8s						
SUA	**Susitna One**	81.36	29	P	P	20 30 21.3	-0.2
	baz=268,SNR=10						
BPAW	**Bear Paw Mtn.**	81.38	26	IAmb	IAmb	20 30 28.2	
	comp=Z,64nm,1.0s						
BPAW	**Bear Paw Mtn.**	81.38	26	P	P	20 30 22.0	+0.6
	baz=267,SNR=8.7						
KTH	**Kantishna Hill**	81.38	27	IAmb	IAmb	20 30 30.1	
	comp=Z,49nm,1.1s						
MLY	**Manley**	81.53	25	IAmb	IAmb	20 30 30.6	
	comp=Z,80nm,1.2s						
MLY	**Manley**	81.53	25	P	P	20 30 22.6	+0.4
	baz=267,SNR=19						
SLKM	**Skilak Lake**	81.58	30	IAmb	IAmb	20 30 49.4	
	comp=Z,55nm,1.0s						
CUT	**Chulitna**	81.63	28	IAmb	IAmb	20 30 59.8	
	comp=Z,83nm,1.2s						
CUT	**Chulitna**	81.63	28	P	P	20 30 22.5	-0.1
	baz=268						
TRF	**Thorofare Moun**	81.66	27	IAmb	IAmb	20 30 30.8	
	comp=Z,59nm,1.0s						
TRF	**Thorofare Moun**	81.66	27	P	P	20 30 23.0	0.0
	baz=268,SNR=18						
M22K	**Willow**	81.67	29	P	P	20 30 22.7	-0.2
	baz=268,SNR=9.3						
D23K	**Nanushuk River**	81.78	21	IAmb	IAmb	20 30 30.6	
	comp=Z,80nm,1.3s						
D23K	**Nanushuk River**	81.78	21	P	P	20 30 24.2	+0.8
	baz=267,SNR=25						
O22K	**Cooper Landing**	81.83	30	P	P	20 30 23.4	-0.4
	baz=269						
RC01	**Rabbit Creek A**	81.84	29	P	P	20 30 23.3	-0.5
	baz=269						
C23K	**Itkillik River**	81.86	20	P	P	20 30 23.7	0.0
	baz=266						
COLD	**Coldfoot**	81.86	23	IAmb	IAmb	20 30 30.7	
	comp=Z,49nm,1.0s						
COLD	**Coldfoot**	81.86	23	P	P	20 30 24.2	+0.4
	baz=267,SNR=25						

G23K	**Bananza Creek**	**81.91**	**24**	P	**P**	**20 30 24.3**	**+0.1**
G23K				IAmb	IAmb	20 30 31.2	
	comp=Z,87nm,1.4s						
G23K	**Bananza Creek**	**81.91**	**24**	P	**P**	**20 30 24.8**	**+0.6**
	baz=268						
SEW	**Seward**	**81.96**	**30**	IAmb	IAmb	20 30 30.7	
	comp=Z,63nm,1.1s						
SEW	**Seward**	**81.96**	**30**	P	**P**	**20 30 25.7**	**+1.3**
	baz=269						
H23K	**Yukon River**	**82.07**	**24**	IAmb	IAmb	20 30 31.8	
	comp=Z,53nm,1.0s						
H23K	**Yukon River**	**82.07**	**24**	P	**P**	**20 30 25.4**	**+0.4**
	baz=268						
KOPT	**Kop Dagi**	**82.09**	**309**	IAmb	IAmb	20 30 34.2	
	comp=Z,42nm,1.1s						
I23K	**Minto, Yukon-K**	**82.12**	**25**	IAmb	IAmb	20 30 32.4	
	comp=Z,43nm,0.9s						
I23K	**Minto, Yukon-K**	**82.12**	**25**	P	**P**	**20 30 25.8**	**+0.6**
	baz=268,SNR=26						
E23K	**Chandalar**	**82.12**	**22**	IAmb	IAmb	20 30 39.8	
	comp=Z,50nm,1.0s						
E23K	**Chandalar**	**82.12**	**22**	P	**P**	**20 30 25.8**	**+0.5**
	baz=268,SNR=38						
PMR	**Palmer**	**82.14**	**29**	IAmb	IAmb	20 30 27.8	
	comp=Z,36nm,0.8s						
PMR	**Palmer**	**82.14**	**29**	P	**P**	**20 30 24.3**	**-1.0**
PMR	**Palmer**	**82.14**	**29**	P	**P**	**20 30 24.8**	**-0.6**
	baz=269,SNR=7.6						
TOLK	**Toolik Lake Re**	**82.17**	**22**	IAmb	IAmb	20 30 31.8	
	comp=Z,46nm,0.9s						
TOLK	**Toolik Lake Re**	**82.17**	**22**	P	**P**	**20 30 26.1**	**+0.6**
	baz=268,SNR=38						
NEA2	**Nenana**	**82.23**	**26**	IAmb	IAmb	20 30 32.6	
	comp=Z,32nm,0.8s						
NEA2	**Nenana**	**82.23**	**26**	P	**P**	**20 30 26.5**	**+0.6**
	baz=269,SNR=16						
MCK	**McKinley**	**82.27**	**27**	P	**P**	**20 30 26.1**	**0.0**
	baz=269,SNR=37						
RND	**Reindeer**	**82.30**	**27**	IAmb	IAmb	20 30 32.2	
	comp=Z,48nm,1.2s						
WAT1	**Susitna Watana**	**82.43**	**28**	P	**P**	**20 30 26.9**	**0.0**
	baz=269						
D24K	**Happy Valley**	**82.45**	**21**	P	**P**	**20 30 27.3**	**+0.4**
	baz=268						
KLMR	**Klimovskoe**	**82.46**	**330**	*e*P	**P**	**20 30 25.5**	**-1.5**
KLMR				*e*		20 33 33.0	
KLMR				pmax	pmax		
	comp=Z,28nm,1.0s						
KNK	**Knik Glacier**	**82.46**	**29**	IAmb	IAmb	20 30 30.1	
	comp=Z,38nm,0.8s						
KNK	**Knik Glacier**	**82.46**	**29**	P	**P**	**20 30 26.8**	**-0.3**
	baz=270,SNR=8.5						
C24K	**Franklin Bluff**	**82.52**	**21**	IAmb	IAmb	20 30 33.7	
	comp=Z,40nm,0.9s						
C24K	**Franklin Bluff**	**82.52**	**21**	P	**P**	**20 30 27.6**	**+0.4**
	baz=268						
PWL	**Port Wells**	**82.52**	**30**	P	**P**	**20 30 27.9**	**+0.5**
	baz=270,SNR=14						
SML	**Sawmill**	**82.53**	**29**	IAmb	IAmb	20 30 48.9	
	comp=Z,53nm,1.0s						
SML	**Sawmill**	**82.53**	**29**	P	**P**	**20 30 27.9**	**+0.4**
	baz=270,SNR=6.7						
E24K	**Your Creek**	**82.55**	**22**	P	**P**	**20 30 28.2**	**+0.7**
	baz=269						
SOC	**Sochi**	**82.56**	**313**	*e*P	**P**	**20 30 29.2**	**+1.3**
SOC				*e*		20 33 29.9	
SOC				*e*S	**S**	**20 40 44.7**	**+0.4**
SOC				pmax	pmax		
	comp=Z,18nm,0.9s						
WRH	**Wood River Hil**	**82.65**	**26**	IAmb	IAmb	20 30 49.0	
	comp=Z,61nm,1.4s						
VORD	**Divnogorie**	**82.66**	**320**	*e*P	**P**	**20 30 28.2**	**-0.1**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR	**Storozhevoye**	**82.73**	**321**	*e*P	**P**	**20 30 29.5**	**+0.8**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
H24K	**Noodor Dome**	**82.75**	**24**	IAmb	IAmb	20 30 50.0	
	comp=Z,63nm,1.1s						
H24K	**Noodor Dome**	**82.75**	**24**	P	**P**	**20 30 29.4**	**+0.8**
	baz=270						
COLA	**College**	**82.76**	**25**	P	**P**	**20 30 28.0**	**-0.5**
COLA	**College**	**82.76**	**25**	P	**P**	**20 30 29.2**	**+0.7**
COLA	**College**	**82.76**	**25**	P	**P**	**20 30 28.0**	**-0.5**
COLA				pmax	pmax		
	comp=Z,24nm,1.0s						
COLA	**College**	**82.76**	**25**	P	**P**	**20 30 28.4**	**-0.1**
	baz=270						
F24K	**Squaw Lake**	**82.77**	**23**	IAmb	IAmb	20 30 50.4	
	comp=Z,37nm,1.1s						
F24K	**Squaw Lake**	**82.77**	**23**	P	**P**	**20 30 28.3**	**-0.3**
	baz=269,SNR=22						
CCB	**Clear Creek Bu**	**82.78**	**26**	IAmb	IAmb	20 30 54.6	
	comp=Z,55nm,1.4s						
WAT6	**Susitna Watana**	**82.81**	**28**	P	**P**	**20 30 29.1**	**+0.1**
	baz=270,SNR=20						
M23K	**Glacier View**	**82.81**	**29**	P	**P**	**20 30 29.0**	**+0.1**
	baz=270						
LPSR	**Galich'ya Gora**	**82.85**	**322**	*e*P	**P**	**20 30 30.0**	**+0.8**
LPSR				pmax	pmax		
	comp=Z,36nm,0.9s						
G24K	**Hadweenzic Riv**	**82.92**	**24**	IAmb	IAmb	20 30 55.3	
	comp=Z,46nm,1.1s						
G24K	**Hadweenzic Riv**	**82.92**	**24**	P	**P**	**20 30 29.3**	**0.0**
	baz=270						
POKR	**Poker Plat Res**	**82.94**	**25**	P	**P**	**20 30 30.1**	**+0.6**
	baz=270						
DHY	**Denali Highway**	**82.97**	**27**	P	**P**	**20 30 29.6**	**-0.3**
	baz=270						
P23K	**Montague Islan**	**82.99**	**30**	P	**P**	**20 30 30.4**	**+0.6**
	baz=271						
SCM	**Sheep Creek Mo**	**83.00**	**29**	P	**P**	**20 30 30.1**	**+0.1**
	baz=271						
GLI	**Glacier Island**	**83.13**	**29**	P	**P**	**20 30 30.7**	**+0.1**
	baz=271						
HDA	**Harding Lake**	**83.15**	**26**	IAmb	IAmb	20 30 36.5	
	comp=Z,28nm,0.8s						
HDA	**Harding Lake**	**83.15**	**26**	P	**P**	**20 30 30.0**	**-0.6**
	baz=271,SNR=13						
ILAR	**Eielson Array**	**83.17**	**26**	P	**P**	**20 30 29.9**	**-0.9**
	comp=Z,10nm,0.9s,baz=252,slow=4.1,SNR=50						
ILAR				PKKP	**PKKPdf**	**20 48 46.9**	**+2.1**
	comp=Z,0.6nm,1.0s,baz=149,slow=1.9,SNR=2.6						
	comp=Z,10nm,0.9s						
ILAR	**Eielson Array**	**83.17**	**26**	P	**P**	**20 30 29.2**	**-1.5**
D25K	**Kavik River**	**83.33**	**21**	IAmb	IAmb	20 30 42.6	
	comp=Z,65nm,1.5s						
D25K	**Kavik River**	**83.33**	**21**	P	**P**	**20 30 31.8**	**+0.3**
	baz=271						
G25K	**Bearman Lake**	**83.47**	**24**	P	**P**	**20 30 32.9**	**+0.8**
	baz=271						
MOS	**Moscow**	**83.53**	**325**	*e*P	**P**	**20 30 30.7**	**-2.0**
MOS				*e*		20 33 48.2	
MOS				pmax	pmax		
	comp=Z,34nm,1.0s						
MOS				MLR	MLR		
	comp=E,600nm,20.0s						
MOS				MLR	MLR		
	comp=Z,700nm,20.0s						
Q23K	**Middleton Isla**	**83.53**	**31**	P	**P**	**20 30 32.5**	**-0.1**
	baz=272						
M24K	**Tolsona, Glenn**	**83.54**	**28**	P	**P**	**20 30 32.8**	**0.0**
	baz=272						
F25K	**Christian Rive**	**83.63**	**23**	IAmb	IAmb	20 30 55.8	
	comp=Z,44nm,1.4s						
F25K	**Christian Rive**	**83.63**	**23**	P	**P**	**20 30 33.9**	**+0.8**
	baz=272						
E25K	**Arctic Village**	**83.64**	**22**	IAmb	IAmb	20 30 53.7	
	comp=Z,52nm,1.1s						
E25K	**Arctic Village**	**83.64**	**22**	P	**P**	**20 30 34.2**	**+1.1**
	baz=272,SNR=20						
K24K	**Donnelly Dome**	**83.67**	**27**	P	**P**	**20 30 33.9**	**+0.5**
	baz=272,SNR=11						
KLU	**Klutina**	**83.68**	**29**	IAmb	IAmb	20 30 53.8	
	comp=Z,43nm,1.0s						
KLU	**Klutina**	**83.68**	**29**	P	**P**	**20 30 33.7**	**+0.2**
	baz=272,SNR=7.2						
ARPR	**Arapgir-MALATY**	**83.80**	**309**	P	**P**	**20 30 33.9**	**-0.8**
ARPR				IAmb	IAmb	20 30 59.4	
	comp=Z,39nm,1.3s						
ARPR				IAMs_20	IAMs_20	21 12 43.2	
	comp=Z,443nm,21.0s						
EYAK	**Cordova Ski Ar**	**83.80**	**30**	P	**P**	**20 30 37.1**	**+3.2**
EYAK	**Cordova Ski Ar**	**83.80**	**30**	P	**P**	**20 30 34.4**	**+0.5**
	baz=272						
J25K	**Salcha River,**	**83.83**	**26**	P	**P**	**20 30 33.5**	**-0.6**
	baz=272						
C26K	**Camden Bay**	**83.83**	**20**	P	**P**	**20 30 35.1**	**+1.2**
	baz=272						
PAX	**Paxson**	**83.84**	**27**	IAmb	IAmb	20 30 56.0	
	comp=Z,73nm,1.4s						
PAX	**Paxson**	**83.84**	**27**	P	**P**	**20 30 34.2**	**-0.1**
	baz=272,SNR=12						
HARP	**HAARP**	**84.01**	**28**	P	**P**	**20 30 35.6**	**+0.6**
	baz=272						
BMAR	**Burnt Mountain**	**84.04**	**23**	P	**P**	**20 30 35.7**	**+0.5**
RIDG	**Independent Ri**	**84.09**	**27**	P	**P**	**20 30 35.4**	**-0.1**
	baz=273,SNR=20						
OBN	**Obninsk**	**84.16**	**325**	LR	LR	21 10 02.2	
	comp=Z,517nm,20.6s,baz=21,slow=37						
OBN	**Obninsk**	**84.16**	**325**	*i* P	**P**	**20 30 34.8**	**-1.1**
OBN				pmax	pmax		
	comp=Z,16nm,1.1s						
OBN				MLR	MLR		
	comp=Z,545nm,21.0s						
F26K	**Sheenjek River**	**84.20**	**23**	P	**P**	**20 30 37.0**	**+1.0**
	baz=273						
C27K	**Jago River**	**84.26**	**21**	IAmb	IAmb	20 30 42.5	
	comp=Z,45nm,0.9s						
C27K	**Jago River**	**84.26**	**21**	P	**P**	**20 30 36.6**	**+0.4**
	baz=273						
N25K	**Chitina, Valde**	**84.31**	**29**	IAmb	IAmb	20 30 57.3	
	comp=Z,60nm,1.2s						
N25K	**Chitina, Valde**	**84.31**	**29**	P	**P**	**20 30 37.1**	**+0.4**
	baz=273,SNR=8.4						
BMRM	**Bremner River**	**84.34**	**29**	P	**P**	**20 30 36.4**	**-0.4**
	baz=273,SNR=8.3						
G26K	**Porcupine Rive**	**84.38**	**23**	IAmb	IAmb	20 30 43.7	
	comp=Z,42nm,1.0s						
G26K	**Porcupine Rive**	**84.38**	**23**	P	**P**	**20 30 37.3**	**+0.5**
	baz=273						
DOT	**Dot Lake**	**84.44**	**27**	IAmb	IAmb	20 30 57.2	
	comp=Z,36nm,1.0s						
SCRK	**Sand Creek**	**84.46**	**26**	IAmb	IAmb	20 30 56.9	
	comp=Z,35nm,1.1s						
SCRK	**Sand Creek**	**84.46**	**26**	P	**P**	**20 30 37.6**	**+0.2**
	baz=273,SNR=14						
KAIM	**Kayak Island**	**84.49**	**30**	P	**P**	**20 30 38.4**	**+0.9**
	baz=273						
J26L	**Joseph Creek**	**84.61**	**26**	IAmb	IAmb	20 30 58.0	
	comp=Z,37nm,0.9s						
J26L	**Joseph Creek**	**84.61**	**26**	P	**P**	**20 30 37.8**	**-0.3**
	baz=274						
MENT	**Mentasta**	**84.64**	**27**	IAmb	IAmb	20 30 58.6	
	comp=Z,27nm,0.9s						
MENT	**Mentasta**	**84.64**	**27**	P	**P**	**20 30 39.6**	**+1.3**
GLB	**Gilahina Butte**	**84.69**	**29**	IAmb	IAmb	20 30 47.9	
	comp=Z,48nm,1.0s						
I26K	**Coal Creek Min**	**84.73**	**25**	P	**P**	**20 30 39.0**	**+0.4**
	baz=274						
GAZ	**Gaziantep**	**84.80**	**307**	IAmb	IAmb	20 30 47.4	
	comp=Z,63nm,1.5s						
L26K	**Log Cabin Wild**	**84.81**	**27**	IAmb	IAmb	20 30 45.6	
	comp=Z,36nm,1.2s						
L26K	**Log Cabin Wild**	**84.81**	**27**	P	**P**	**20 30 39.7**	**+0.6**
	baz=274,SNR=8.9						
VRDI	**Verde Repeater**	**84.88**	**29**	IAmb	IAmb	20 31 02.0	
	comp=Z,39nm,1.1s						
APA	**Apatity**	**84.89**	**337**	*i* P	**P**	**20 30 38.7**	**-0.7**
APA				*i*		20 33 55.3	
APA				*i* S	**S**	**20 41 07.2**	**+0.4**
M26K	**Nabesna, AK**	**85.01**	**28**	IAmb	IAmb	20 30 48.9	
	comp=Z,54nm,1.2s						
M26K	**Nabesna, AK**	**85.01**	**28**	P	**P**	**20 30 40.2**	**0.0**
	baz=274						
MCARA	**McCarthy VSAT**	**85.08**	**29**	P	**P**	**20 30 40.9**	**+0.4**
	baz=274						
CRQE	**Cirque**	**85.09**	**30**	P	**P**	**20 30 41.1**	**+0.3**
	baz=274						
E27K	**Coleen River**	**85.12**	**22**	P	**P**	**20 30 41.0**	**+0.3**
E27K				IAmb	IAmb	20 30 54.5	
	comp=Z,47nm,1.1s						
E27K	**Coleen River**	**85.12**	**22**	P	**P**	**20 30 41.3**	**+0.7**
	baz=275						
TGL	**Tana Glacier**	**85.22**	**30**	IAmb	IAmb	20 30 49.3	
	comp=Z,38nm,0.9s						
G27K	**Doyon Strip**	**85.22**	**23**	IAmb	IAmb	20 30 48.4	
	comp=Z,32nm,1.1s						
G27K	**Doyon Strip**	**85.22**	**23**	P	**P**	**20 30 42.1**	**+1.0**
	baz=275						
D27M	**Malcolm River**	**85.26**	**21**	P	**P**	**20 30 41.9**	**+0.6**
	baz=276						
K27K	**Chicken**	**85.30**	**26**	P	**P**	**20 30 41.7**	**+0.2**
	baz=275						
H27K	**Steamboat Moun**	**85.33**	**24**	IAmb	IAmb	20 30 48.4	
	comp=Z,48nm,1.1s						
H27K	**Steamboat Moun**	**85.33**	**24**	P	**P**	**20 30 42.5**	**+0.8**
	baz=275						
I27K	**Kandik River**	**85.35**	**25**	P	**P**	**20 30 41.9**	**0.0**
	baz=275						
ASF	**Jabal al Asfar**	**85.45**	**302**	LR	LR	21 16 52.6	
	comp=Z,56µm,18.3s,baz=54,slow=41						
L27K	**Beaver Creek,**	**85.49**	**27**	IAmb	IAmb	20 31 08.5	
	comp=Z,46nm,1.2s						
L27K	**Beaver Creek,**	**85.49**	**27**	P	**P**	**20 30 42.6**	**0.0**
	baz=275						
BCAR	**Beaver Creek A**	**85.51**	**27**	P	**P**	**20 30 42.2**	**-0.5**
M27K	**Edge Creek, AK**	**85.53**	**28**	IAmb	IAmb	20 31 03.7	
	comp=Z,81nm,1.6s						
M27K	**Edge Creek, AK**	**85.53**	**28**	P	**P**	**20 30 42.8**	**-0.1**
	baz=275						
BNN	**Bunyan**	**85.75**	**308**	IAmb	IAmb	20 30 51.8	
	comp=Z,54nm,1.2s						
F28M	**Old Crow**	**85.83**	**23**	IAmb	IAmb	20 30 51.0	
	comp=Z,40nm,0.9s						
F28M	**Old Crow**	**85.83**	**23**	P	**P**	**20 30 44.3**	**+0.2**
	baz=277,SNR=37						
E28M	**Babbage River**	**85.84**	**22**	IAmb	IAmb	20 30 53.1	
	comp=Z,45nm,1.1s						
E28M	**Babbage River**	**85.84**	**22**	P	**P**	**20 30 44.5**	**+0.3**
	baz=277						
MAW	**Mawson**	**85.89**	**200**	P	**P**	**20 30 43.3**	**-0.9**
	comp=Z,4.2nm,0.6s,baz=67,slow=12,SNR=3.8						
	comp=Z,4.2nm,0.6s						
FURI	**Furi**	**85.92**	**278**	IAMs_20	IAMs_20	21 10 45.6	
	comp=Z,397nm,20.0s						
CTG	**Chitna Glacier**	**85.93**	**29**	P	**P**	**20 30 45.0**	**+0.1**
	baz=276,SNR=14						
BVCY	**Beaver Creek**	**86.00**	**28**	P	**P**	**20 30 44.8**	**-0.3**
	baz=276						
D28M	**Stokes Point**	**86.03**	**21**	P	**P**	**20 30 45.3**	**+0.3**
	baz=278						
I28M	**Miner Creek**	**86.06**	**25**	P	**P**	**20 30 46.2**	**+0.7**
	baz=277						
YUK3	**Moose Creek**	**86.26**	**28**	P	**P**	**20 30 46.9**	**+0.3**
	baz=277						
VNDA	**Vanda**	**86.27**	**173**	P	**P**	**20 30 45.5**	**-0.5**
	comp=Z,6.6nm,1.0s,baz=306,slow=6.5,SNR=22						
VNDA				LR	LR	21 10 45.3	
	comp=Z,352nm,19.3s,baz=350,slow=37						
	comp=Z,6.6nm,1.0s						
DAWY	**Dawson**	**86.47**	**26**	IAmb	IAmb	20 30 56.1	
	comp=Z,47nm,1.4s						
DAWY	**Dawson**	**86.47**	**26**	P	**P**	**20 30 47.2**	**-0.1**
	baz=277,SNR=14						
E29M	**Blow River**	**86.47**	**22**	IAmb	IAmb	20 30 56.8	
	comp=Z,90nm,1.9s						
E29M	**Blow River**	**86.47**	**22**	P	**P**	**20 30 47.4**	**+0.2**
	baz=279						
SIM	**Simferopol'**	**86.49**	**315**	*e*P	**P**	**20 30 50.4**	**+2.6**
SIM				*e*SKS	**SKSac**	**20 41 10.5**	**-3.2**
SIM				pmax	pmax		
	comp=Z,33nm,1.2s						
O28M	**Mount Upton**	**86.51**	**29**	P	**P**	**20 30 47.4**	**-0.6**
	baz=277						
BALJ	**Balqa**	**86.52**	**302**	P	**P**	**20 30 47.3**	**-1.0**
BALJ				IAmb	IAmb	20 30 56.0	
	comp=Z,54nm,1.1s						
PINM	**Pinnacle**	**86.56**	**30**	P	**P**	**20 30 48.4**	**+0.5**
	baz=277						
H29M	**Whitestone**	**86.60**	**24**	IAmb	IAmb	20 30 56.8	
	comp=Z,59nm,1.2s						
H29M	**Whitestone**	**86.60**	**24**	P	**P**	**20 30 48.2**	**+0.3**
	baz=278						
MMAI	**Mount Meron Ar**	**86.63**	**303**	P	**P**	**20 30 49.1**	**+0.2**
	comp=Z,5.6nm,0.8s,baz=79,slow=8.9,SNR=6.7						
	comp=Z,5.6nm,0.8s						
G29M	**Pine Creek**	**86.64**	**23**	P	**P**	**20 30 48.4**	**+0.3**
	baz=278,SNR=17						
YUK8	**Steele Glacier**	**86.65**	**29**	P	**P**	**20 30 48.6**	**0.0**
	baz=277						
GHAJ	**Ghor Haditha**	**86.65**	**301**	IAmb	IAmb	20 31 02.9	
	comp=Z,51nm,1.0s						
I29M	**Ogilvie Camp,**	**86.75**	**25**	IAmb	IAmb	20 30 57.5	
	comp=Z,42nm,0.9s						
I29M	**Ogilvie Camp,**	**86.75**	**25**	P	**P**	**20 30 48.7**	**0.0**
	baz=278,SNR=17						
J29N	**Klondike Camp**	**86.92**	**26**	P	**P**	**20 30 50.3**	**+0.6**
	baz=278						
PPT2	**Papeete2**	**87.09**	**108**	*e*LQ	LQ	20 54 41.9	
PPT2				*e*LR	LR	20 58 28.4	
	comp=Z,585nm,28.2s						
PPT2				*e*LR	LR	20 58 29.0	
	comp=Z,893nm,27.2s						
M29M	**Somme Creek**	**87.11**	**28**	P	**P**	**20 30 50.7**	**+0.1**
	baz=278						
L29M	**L29M**	**87.16**	**27**	IAmb	IAmb	20 30 58.2	
	comp=Z,23nm,0.8s						
L29M	**L29M**	**87.16**	**27**	P	**P**	**20 30 50.8**	**+0.1**
	baz=279						
YUK4	**Talbot Arm**	**87.18**	**29**	P	**P**	**20 30 51.3**	**+0.2**
	baz=278						
EPYK	**Eagle Plains**	**87.24**	**24**	P	**P**	**20 30 50.7**	**-0.4**
EPYK				IAmb	IAmb	20 31 37.6	
	comp=Z,44nm,1.2s						
EPYK	**Eagle Plains**	**87.24**	**24**	P	**P**	**20 30 51.5**	**+0.5**
	baz=280,SNR=8.8						
K29M	**Barlow Dome**	**87.32**	**26**	IAmb	IAmb	20 31 01.6	
	comp=Z,57nm,1.6s						
K29M	**Barlow Dome**	**87.32**	**26**	P	**P**	**20 30 51.1**	**-0.5**
	baz=279						
G30M	**tAoh Zraii Nji**	**87.33**	**23**	IAmb	IAmb	20 30 55.1	
	comp=Z,78nm,1.6s						
G30M	**tAoh Zraii Nji**	**87.33**	**23**	P	**P**	**20 30 51.3**	**-0.2**
	baz=280						
O29M	**Mount Kennedy**	**87.36**	**30**	P	**P**	**20 30 50.7**	**-1.2**
	baz=278						
BRTR	**Keskin Array B**	**87.37**	**310**	P	**P**	**20 30 52.9**	**+0.5**
	comp=Z,4.0nm,0.8s,baz=115,slow=5.1,SNR=18						
BRTR				PP	**PP**	**20 34 14.4**	**-2.3**
	comp=Z,1.6nm,0.9s,baz=76,slow=5.2,SNR=4.6						
	comp=Z,4.0nm,0.8s						
BRTR	**Keskin Array B**	**87.37**	**310**	P	**P**	**20 30 50.4**	**-2.1**
BRTR	**Keskin Array B**	**87.37**	**310**	*i* P	**P**	**20 30 54.2**	**+1.8**
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YUK6	**Outpost Mounta**	**87.37**	**29**	P	**P**	**20 30 52.2**	**+0.2**
	baz=278						
F30M	**Barrier River**	**87.38**	**22**	IAmb	IAmb	20 31 01.3	
	comp=Z,49nm,1.2s						
F30M	**Barrier River**	**87.38**	**22**	P	**P**	**20 30 52.2**	**+0.5**
	baz=280						
ARCES	**ARCESS Array B**	**87.49**	**340**	P	**P**	**20 30 51.4**	**-0.8**
	comp=Z,4.5nm,0.7s,baz=70,slow=5.4,SNR=11						
	comp=Z,4.5nm,0.7s						
ARCES	**ARCESS Array B**	**87.49**	**340**	IAmb	IAmb	20 31 16.4	
	comp=Z,47nm,1.5s						
ARCES	**ARCESS Array B**	**87.49**	**340**	P	**P**	**20 30 51.4**	**-0.8**
ARCES				pmax	pmax		
	comp=Z,47nm,1.5s						
I30M	**Mount Dempster**	**87.57**	**25**	P	**P**	**20 30 52.8**	**0.0**
	baz=280						
SPITS	**Spitsbergen Ar**	**87.59**	**349**	P	**P**	**20 30 53.0**	**+0.4**
	comp=Z,5.6nm,0.8s,baz=83,slow=12,SNR=5.7						
	comp=Z,5.6nm,0.8s						
SPITS	**Spitsbergen Ar**	**87.59**	**349**	P	**P**	**20 30 53.0**	**+0.4**
J30M	**Hart River**	**87.71**	**25**	IAmb	IAmb	20 31 03.4	
	comp=Z,25nm,1.2s						
J30M	**Hart River**	**87.71**	**25**	P	**P**	**20 30 53.7**	**+0.2**
	baz=280						
KIBK	**Kibwezi**	**87.76**	**267**	P	**P**	**20 30 52.8**	**-1.9**
KIBK				IAMs_20	IAMs_20	21 07 34.9	
	comp=Z,339nm,20.0s						
HYT	**Haines Junctio**	**87.80**	**29**	P	**P**	**20 30 54.0**	**0.0**
	baz=279						
M30M	**Minto, Yukon**	**87.85**	**27**	P	**P**	**20 30 54.5**	**+0.4**
	baz=280						
P29M	**Windy Craggy**	**87.88**	**30**	P	**P**	**20 30 54.0**	**-0.3**
	baz=279						
N30M	**Aishikik Lake**	**87.90**	**28**	P	**P**	**20 30 54.6**	**+0.2**
	baz=280						
TBI	**Tubuai**	**87.97**	**114**	*e*SS	SS	20 47 22.8	-3.8
	comp=Z,828nm,29.8s						
TBI				*e*LQ	LQ	20 55 06.1	
	comp=Z,2µm,32.8s						
TBI				*e*LR	LR	20 58 53.0	
	comp=Z,2µm,27.0s						
INK	**Inuvik**	**88.08**	**21**	LR	LR	21 15 04.1	
	comp=Z,208nm,18.3s,baz=284,slow=39						
INK	**Inuvik**	**88.08**	**21**	P	**P**	**20 30 54.7**	**-0.2**
	baz=283						
G31M	**Satah River**	**88.09**	**23**	IAmb	IAmb	20 30 59.4	
	comp=Z,25nm,0.8s						
G31M	**Satah River**	**88.09**	**23**	P	**P**	**20 30 55.0**	**0.0**
	baz=282,SNR=16						
F31M	**Tsiigehtchic**	**88.18**	**22**	IAmb	IAmb	20 30 59.7	
	comp=Z,27nm,0.8s						
F31M	**Tsiigehtchic**	**88.18**	**22**	P	**P**	**20 30 54.8**	**-0.7**
	baz=282,SNR=17						
P30M	**Million Dollar**	**88.19**	**30**	P	**P**	**20 30 55.2**	**-0.6**
	baz=280						
H31M	**Peel River**	**88.30**	**24**	IAmb	IAmb	20 31 01.2	
	comp=Z,19nm,0.9s						
H31M	**Peel River**	**88.30**	**24**	P	**P**	**20 30 56.3**	**+0.2**
	baz=282						
O30N	**Mendenhall**	**88.50**	**29**	P	**P**	**20 30 57.0**	**-0.2**
	baz=280						
N31M	**Braeburn, Yuko**	**88.51**	**28**	IAmb	IAmb	20 31 03.6	
	comp=Z,29nm,0.9s						
N31M	**Braeburn, Yuko**	**88.51**	**28**	P	**P**	**20 30 57.2**	**-0.1**
	baz=281						
PLBC	**Pleasant Camp**	**88.60**	**30**	P	**P**	**20 30 56.9**	**-0.7**
	baz=280						
FINES	**FINESS Array B**	**88.88**	**332**	P	**P**	**20 30 58.0**	**-0.9**
	comp=Z,3.1nm,0.6s,baz=45,slow=5.7,SNR=15						
FINES				LR	LR	21 13 35.3	
	comp=Z,547nm,20.1s,baz=73,slow=38						
	comp=Z,3.1nm,0.6s						
FINES	**FINESS Array B**	**88.88**	**332**	*i* P	**P**	**20 31 00.6**	**+1.7**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
M31M	**Drury Creek, Y**	**89.02**	**27**	P	**P**	**20 30 59.1**	**-0.6**
	baz=282						
AKASG	**Malin Array Be**	**89.03**	**321**	P	**P**	**20 30 59.8**	**0.0**
	comp=Z,4.4nm,0.9s,baz=74,slow=3.8,SNR=8.8						
AKASG				PP	**PP**	**20 34 30.6**	**+1.0**
	comp=Z,3.1nm,0.9s,baz=74,slow=7.6,SNR=5.5						
AKASG				LR	LR	21 15 26.4	
	comp=Z,396nm,19.5s,baz=72,slow=39						
	comp=Z,4.4nm,0.9s						
AKASG	**Malin Array Be**	**89.03**	**321**	P	**P**	**20 30 58.6**	**-1.2**
AKASG	**Malin Array Be**	**89.03**	**321**	*i* P	**P**	**20 31 00.0**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKBB	**Malin Array Si**	**89.03**	**321**	P	**P**	**20 31 00.1**	**+0.3**
AKBB	**Malin Array Si**	**89.03**	**321**	P	**P**	**20 31 00.1**	**+0.3**
AKBB				pmax	pmax		
	comp=Z,14nm,1.1s						
KIEV	**Kiev**	**89.05**	**321**	P	**P**	**20 30 59.5**	**-0.4**
KIEV	**Kiev**	**89.05**	**321**	P	**P**	**20 30 59.5**	**-0.4**
KIEV				pmax	pmax		
	comp=Z,12nm,1.1s						
WHY	**Whitehorse**	**89.10**	**29**	IAmb	IAmb	20 31 19.8	
	comp=Z,37nm,1.0s						
WHY	**Whitehorse**	**89.10**	**29**	P	**P**	**20 30 59.2**	**-0.9**
	baz=282						
MNK	**Minsk**	**89.22**	**325**	*i* P	**P**	**20 31 00.0**	**-0.6**
MNK				*i*		20 34 30.2	
MNK				*i* PPP	PPP	20 36 26.5	
MNK				*i* S	**SKSac**	**20 41 29.4**	**-0.4**
MNK				*i* PS	**PnS**	**20 42 55.1**	**+0.1**
MNK				*i* SS	**SS**	**20 47 45.0**	**+2.1**
MNK				*i* SSS	SSS	20 51 20.3	
MNK				pmax	pmax		
	comp=E,10.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,15nm,0.8s						
MNK				pmax	pmax		
	comp=Z,21nm,0.9s						
MNK				MLR	MLR		
	comp=Z,594nm,20.0s						
MNK				MLR	MLR		
	comp=N,604nm,19.0s						
A36M	**Sachs Harbour**	**89.75**	**17**	P	**P**	**20 31 01.8**	**-1.0**
A36M	**Sachs Harbour**	**89.75**	**17**	P	**P**	**20 31 03.1**	**+0.3**
	baz=290						
LODK	**Lodwar**	**89.78**	**273**	IAMs_20	IAMs_20	21 09 52.2	
	comp=Z,314nm,20.0s						
N32M	**Quiet Lake**	**89.86**	**28**	P	**P**	**20 31 02.6**	**-0.9**
N32M				IAmb	IAmb	20 31 23.5	
	comp=Z,39nm,0.9s						
N32M	**Quiet Lake**	**89.86**	**28**	P	**P**	**20 31 03.9**	**+0.3**

	baz=283						
P32M	Atlin	89.90	30	P	P	20 31 03.3	-0.5
	baz=283						
S32K	Killisnoo	89.90	32	P	P	20 31 04.1	+0.4
	baz=282						
ISP	Isparta	90.02	308	IAMs_20	IAMs_20	21 18 27.3	
	comp=Z,330nm,21.0s						
P33M	Teslin, Yukon	90.20	29	P	P	20 31 04.8	-0.4
	baz=283						
TIRR	Tirgusor	90.58	315	IAMs_20	IAMs_20	21 13 57.2	
	comp=Z,477nm,22.0s						
Q32M	Nakina River	90.76	30	P	P	20 31 07.0	-1.1
	baz=284						
U33K	Whale Pass	90.97	33	P	P	20 31 08.3	-0.5
	baz=283						
C36M	Paulatuk	91.06	19	P	P	20 31 08.8	-0.1
	baz=291						
CRAG	Craig	91.12	34	P	P	20 31 09.2	-0.3
	baz=283						
R33M	Jennings River	91.30	30	P	P	20 31 09.8	-0.7
	baz=285						
WRAK	Wrangell Islan	91.33	33	P	P	20 31 09.6	-0.8
	baz=284						
S34M	Telegraph Cree	91.60	31	P	P	20 31 11.1	-0.6
	baz=285						
V35K	Ketchikan	91.99	34	P	P	20 31 13.3	-0.2
	baz=284						
DLBC	Dease Lake	92.03	31	LR	LR	21 06 34.6	
	comp=Z,221nm,21.8s,baz=282,slow=32						
DLBC	Dease Lake	92.03	31	P	P	20 31 13.4	-0.4
	baz=286						
MLR	Muntele Rosu	92.12	316	LR	LR	21 17 07.5	
	comp=Z,645nm,22.0s,baz=67,slow=38						
BURAR	Bucovina Array	92.18	318	P	P	20 31 13.4	-1.3
T35M	Bob Quinn	92.30	32	P	P	20 31 14.8	-0.3
	baz=286						
WRGLY	Wrigley	93.54	25	P	P	20 31 20.5	0.0
	baz=292						
LIRD	Liard River Hi	93.68	29	P	P	20 31 21.3	0.0
	baz=289						
TOAD	Toad River Com	94.29	29	P	P	20 31 23.8	-0.3
	baz=290						
STHS	Stebnicka Huta	94.33	321	eS	S	20 42 35.9	+0.3
KOTAN	Kotaneelee Air	94.41	28	P	P	20 31 23.9	-0.7
	baz=291						
SYO	Syowa Base	94.52	201⇑	ePcP	PcP	20 31 28.4	+3.2
MBAR	Mbarara	94.83	270	LR	LR	21 11 38.5	
	comp=Z,351nm,21.9s,baz=69,slow=34						
MBAR	Mbarara	94.83	270	IAMs_20	IAMs_20	21 10 30.0	
	comp=Z,462nm,21.0s						
BBB	Bella Bella	94.84	36	LR	LR	21 08 22.5	
	comp=Z,163nm,20.7s,baz=286,slow=32						
HFS	Hagfors	95.06	332	P	P	20 31 25.9	-1.7
	comp=Z,2.6nm,0.9s,baz=109,slow=7.8,SNR=6.6						
HFS				LR	LR	21 16 24.9	
	comp=Z,698nm,21.7s,baz=60,slow=37						
	comp=Z,2.6nm,0.9s						
TAOE	Nuku Hiva Isla	95.23	98	eLR	LR	21 02 02.2	
	comp=Z,1µm,26.8s						
PSZ	Piszkesteto	95.59	319	IAMs_20	IAMs_20	21 19 55.4	
	comp=Z,460nm,20.0s						
NB2	NORSAR Subarra	95.83	334	P	P	20 31 32.0	+0.9
	comp=Z,2.3nm,0.9s,baz=63,slow=4.6						
NOA	NORSAR Array B	95.83	334	P	P	20 31 32.0	+0.9
	comp=Z,1.9nm,0.8s,baz=65,slow=4.6,SNR=5.7						
NOA				PP	PP	20 35 14.5	-8.2
	comp=Z,2.8nm,1.2s,baz=67,slow=8.2,SNR=3.8						
NOA				LR	LR	21 17 39.6	
	comp=Z,656nm,21.8s,baz=55,slow=37						
	comp=Z,1.9nm,0.8s						
NOA	NORSAR Array B	95.83	334	P	P	20 31 32.0	+0.9
QSPA	South Pole Qui	96.35	180	P	P	20 31 33.0	-0.4
	comp=Z,7.8nm,0.8s,baz=318,slow=2.7,SNR=12						
QSPA				LR	LR	21 14 50.3	
	comp=Z,175nm,21.5s,baz=348,slow=35						
	comp=Z,7.8nm,0.8s						
QSPA	South Pole Qui	96.35	180	P	P	20 31 32.5	-0.9
QSPA				IAmb	IAmb	20 31 52.3	
	comp=Z,20nm,1.1s						
MORC	Moravsky Berou	96.54	322	ePP	PP	20 35 30.1	+1.6
JAVC	Velka Javorina	96.74	321	ePP	PP	20 35 35.1	+5.0
KRLC	Kraliky	96.91	322	AMS	AMS	21 20 10.0	
	comp=Z,500nm,20.1s						
OSTC	Ostas	97.10	323	AMS	AMS	21 17 40.0	
	comp=Z,600nm,23.9s						
DPC	Dobruska-Polom	97.10	322	AMS	AMS	21 16 30.0	
	comp=Z,500nm,19.9s						
MODS	Modra-Piesok	97.14	320	ePP	PP	20 35 41.8	+8.6
MODS				eS	SKKSac	20 42 40.7	0.0
UPC	Upice	97.24	323	AMS	AMS	21 17 40.0	
	comp=Z,700nm,20.5s						
VRAC	Vranov	97.27	321	LR	LR	21 21 15.0	
	comp=Z,294nm,19.0s,baz=70,slow=39						
VRAC	Vranov	97.27	321	ePP	PP	20 35 33.7	-0.5
KRUC	Moravsky	97.47	321	ePP	PP	20 35 33.5	-2.2
YKAW3	Yellowknife Wh	97.48	24	IAmb	IAmb	20 31 43.2	
	comp=Z,11nm,0.9s						
YKA	Yellowknife Ar	97.52	24	P	P	20 31 38.6	-0.1
	comp=Z,4.4nm,0.8s,baz=302,slow=5.2,SNR=22						
YKA				PP	PP	20 35 41.1	+5.5
	comp=Z,1.5nm,1.1s,baz=295,slow=7.0,SNR=3.5						
YKA				PKKPbc	PKKPbc	20 48 16.1	-1.9
	comp=Z,0.4nm,0.5s,baz=121,slow=2.7,SNR=5.0						
	comp=Z,4.4nm,0.8s						
YKA	Yellowknife Ar	97.52	24	P	P	20 31 37.3	-1.4
YKAW1	Yellowknife Wh	97.57	24	IAmb	IAmb	20 31 43.5	
	comp=Z,10nm,0.9s						
TREC	Trest	97.96	322	AMS	AMS	21 16 20.0	
	comp=Z,700nm,23.3s						
RONA	Rosalia, Austr	97.97	320	i PP	PP	20 35 40.0	+0.4
	comp=Z,17nm,1.3s						
PVCC	Panska Ves	98.10	323	AMS	AMS	21 18 00.0	
	comp=Z,700nm,18.6s						
CONA	Conrad Observa	98.18	320	ePP	PP	20 35 40.5	-0.8
	comp=Z,18nm,1.3s						
PRU	Pruhonice	98.30	322	AMS	AMS	21 18 10.0	
	comp=Z,700nm,19.1s						
PRA	Prague	98.34	323	AMS	AMS	21 18 40.0	
	comp=Z,800nm,21.3s						
ARSA	Arzberg	98.61	320	ePP	PP	20 35 43.0	-1.5
	comp=Z,9.2nm,1.4s						
LSZ	Lusaka	98.73	256	LR	LR	21 12 01.2	
	comp=Z,217nm,21.6s,baz=88,slow=33						
CLL	Collm	98.74	324	eP	Pdif	20 31 48.0	+3.6
CLL				eS	S	20 43 10.0	-3.4
CLL				MLR	MLR		
	comp=Z,700nm,20.5s						
HSKC	Hora Svate Kat	98.75	323	AMS	AMS	21 18 40.0	
	comp=Z,600nm,15.2s						
MATP	Matopo	98.79	250	LR	LR	21 11 05.4	
	comp=Z,261nm,19.9s,baz=81,slow=32						
CKRC	Cesky Krumlov	98.85	321	AMS	AMS	21 24 50.0	
	comp=Z,500nm,17.7s						
SOKA	Soboth	99.12	319	i PP	PP	20 35 51.4	+2.9
	comp=Z,31nm,1.3s						
KHC	Kasperske Hory	99.19	322	AMS	AMS	21 23 40.0	
	comp=Z,500nm,17.5s						
MOA	Molln	99.21	321	i PP	PP	20 35 50.0	+1.0
	comp=Z,12nm,1.5s						
GERES	GERESS Array B	99.22	322	PP	PP	20 35 45.0	-4.2
	comp=Z,0.3nm,0.4s,baz=33,slow=9.9,SNR=1.7						
GERES				LR	LR	21 19 25.9	
	comp=Z,427nm,21.1s,baz=70,slow=37						
OBKA	Obir	99.49	319	ePP	PP	20 35 49.6	-1.8
	comp=Z,8.7nm,1.1s						
BIOA	Bad Ischl, Aus	99.67	321	ePP	PP	20 35 51.4	-1.1
	comp=Z,7.2nm,1.2s						
ELIB	Princess Elisa	99.88	198	dPdif	Pdif	20 31 47.9	-1.3
KBA	Koelnbreinsper	100.07	320	ePP	PP	20 35 54.5	-1.3
	comp=Z,6.6nm,1.3s						
LESA	Schwarzleotal	100.37	320	i PP	PP	20 35 57.2	-0.8
	comp=Z,11nm,1.3s						
ABTA	Abfaltersbach	100.72	320	ePP	PP	20 36 00.4	-0.2
	comp=Z,7.7nm,1.6s						
WTTA	Wattenberg	101.09	321	ePP	PP	20 36 05.0	+1.6
	comp=Z,11nm,1.5s						
WATA	Walderalm	101.10	321	i PP	PP	20 36 02.8	-0.8
	comp=Z,18nm,1.4s						
RKT	Rikitea	101.22	112	eLR	LR	21 04 58.1	
	comp=Z,2µm,29.8s						
SQTA	Sankt Quirin	101.37	321	ePP	PP	20 36 05.9	+0.4
	comp=Z,12nm,1.4s						
RETA	Reutte	101.55	321	i PP	PP	20 36 01.5	-5.4
	comp=Z,12nm,1.5s						
FETA	Feichten	101.75	321	ePP	PP	20 36 07.5	-1.0
	comp=Z,5.0nm,1.1s						
DAVA	Damuels	102.18	321	i PP	PP	20 36 09.9	-1.8
	comp=Z,16nm,1.2s						
NVAR	Mina Array Bea	105.97	47	Pdiff	Pdif	20 32 18.1	+1.0
	comp=Z,1.8nm,0.9s,baz=268,slow=5.1,SNR=6.1						
SNAA	Sanae	107.53	195	PKKPbc	PKKPbc	20 47 47.8	-1.2
	comp=Z,1.5nm,1.0s,baz=280,slow=5.9,SNR=3.4						
PDAR	Pinedale Array	110.08	40	PKiKP	PKiKP	20 36 36.6	-0.5
	comp=Z,0.4nm,0.6s,baz=302,slow=3.7,SNR=3.3						
PDAR				PKKPab	PKKPab	20 47 50.2	-1.1
	comp=Z,0.6nm,0.7s,baz=134,slow=3.0,SNR=4.7						
WUAZ	Wupatki	112.22	48	IAMs_20	IAMs_20	21 13 40.4	
	comp=Z,679nm,22.0s						
ESDC	Sonseca Array	114.63	319	PP	PP	20 37 42.1	-0.2
	comp=Z,5.6nm,1.2s,baz=66,slow=6.8,SNR=9.9						
G40A	Rib Lake	119.38	28		PKPdf	20 36 53.5	-1.0
TXAR	Lajitas Array	120.84	50	PKP	PKiKP	20 36 58.4	+0.3
	comp=Z,1.6nm,0.7s,baz=248,slow=1.3,SNR=10						
TXAR	Lajitas Array	120.84	50		PKPdf	20 36 56.5	-1.4
TORD	Torodi Ar. Bea	120.91	289	PKP	PKiKP	20 36 58.4	0.0
	comp=Z,4.6nm,0.7s,baz=34,slow=4.2,SNR=14						
TORD				PKKPab	PKKPab	20 47 03.9	+0.8
	comp=Z,1.0nm,0.9s,baz=327,slow=2.4,SNR=3.0						
TORD	Torodi Ar. Bea	120.91	289		PKPdf	20 36 55.8	-2.5
BRDY	Brady	123.28	46		PKPdf	20 36 58.8	-3.7
CCM	Cathedral Cave	124.04	35		PKPdf	20 37 02.0	-1.7
CCM	Cathedral Cave	124.04	35	PKIKP	PKPdf	20 37 02.0	-1.7
ACSO	Alum Creek Sta	126.63	27		PKPdf	20 37 06.4	-2.2
WVT	Waverly	127.33	34		PKPdf	20 37 07.2	-2.8
WVT	Waverly	127.33	34	PKIKP	PKPdf	20 37 07.2	-2.8
T50A	Nancy	128.26	31		PKPdf	20 37 10.3	-1.5
DBIC	Dimbokro	128.80	284	PKP	PKPdf	20 37 13.0	-0.4
	comp=Z,3.2nm,0.8s,baz=125,slow=3.6,SNR=5.0						
DBIC	Dimbokro	128.80	284	PKIKP	PKPdf	20 37 13.0	-0.4
PLCA	Paso Flores	142.96	160	PKhKP	PKPpre	20 37 32.8	
	comp=Z,4.2nm,0.7s,baz=221,slow=3.1,SNR=6.3						
PLCA				PKP	PKPdf	20 37 36.4	-2.6
	comp=Z,6.6nm,1.2s,baz=251,slow=3.6,SNR=6.1						
PLCA				SKPbc	SKPbc	20 41 14.0	-2.6
	comp=Z,5.0nm,1.1s,baz=155,slow=4.5,SNR=3.1						
PLCA	Paso Flores	142.96	160	eP	PKPdf	20 37 39.7	+0.6
BOAB	BOACO BROADBAN	143.75	59		PKPab	20 37 37.4	-0.4
JTS	Las Juntas de	145.38	61	P	PKPbc	20 37 43.8	0.0
	comp=Z,796nmcomp=Z,52nm,0.9s						
TRQA	Tornquist	147.81	169	PKPdf	PKPdf	20 37 44.3	-3.1
TRQA					PKPbc	20 37 49.2	-1.0
TRQA	Tornquist	147.81	169	PKHKP	PKPdf	20 37 44.3	-3.1
TRQA						20 37 49.2	
MT13	San Alfonso	149.15	154	PKPdf	PKPdf	20 37 45.8	-4.0
MT13					PKPbc	20 37 54.2	+0.3
MT13					PKPab	20 37 59.0	+0.8
CFA	Coronel Fontan	151.86	155	PKPbc	PKPbc	20 37 59.8	-0.6
	comp=Z,6.5nm,0.7s,baz=238,slow=3.3,SNR=13						
CAPC	Capurgana	152.71	57	P	PKPbc	20 38 01.9	-0.8
	comp=Z,65nm,0.9s						
LCO	Las Campanas	152.83	148	PKPdf	PKPdf	20 37 51.7	-4.1
LCO					pPKPdf	20 37 59.5	-2.6
LCO	Las Campanas	152.83	148	PKIKP	PKPdf	20 37 51.7	-4.1
LCO						20 37 59.5	
APAC	Apartado, Choc	153.74	57	P	PKPdf	20 37 58.6	+1.4
	comp=Z,48nm,1.1s						
AC06	Mina Casimiro	154.31	146	PKPdf	PKPdf	20 37 54.1	-3.6
AC06					pPKPdf	20 38 00.7	-3.3
AC06				PKPab	PKPab	20 38 17.7	-2.1
DBBC	Dabeiba	154.51	59	P	PKPdf	20 38 00.1	+1.7
MCRA	Macar, Loja	154.55	87	P	PKPab	20 38 15.5	-5.9
UREC	San Jos de Ur	154.69	56	P	PKPdf	20 37 59.2	+0.7
	comp=Z,710nmcomp=Z,31nm,0.9s						
PSAL	Palomas, Salto	155.33	174	eP	PKPdf	20 37 58.0	-0.8
HELC	Santa Helena	155.52	60	P	PKPdf	20 38 00.0	-0.1
	comp=Z,7.8nm,1.0s						
GUY2C	Guyana, Caldas	156.13	61	P	PKPdf	20 38 00.6	-0.5
	comp=Z,493nmcomp=Z,19nm,0.9s						
CPSB	Cacapava Do Su	156.16	182	eP	PKPdf	20 38 00.6	+0.6
NORC	Norcasia	156.40	60	P	PKPdf	20 38 00.3	-0.6
	comp=Z,453nmcomp=Z,5.4nm,0.7s						
ORTC	Ortega, Tolima	156.84	64	P	PKPdf	20 38 01.0	-0.4
	comp=Z,12nm,0.8s						
ROSC	El Rosal	157.23	61	PKP	PKPdf	20 38 02.1	-0.2
	comp=Z,11nm,0.4s,baz=194,slow=4.2,SNR=5.7						
PRAC	Prado	157.25	64	P	PKPdf	20 38 00.7	-1.3
	comp=Z,1µmcomp=Z,22nm,1.4s						
SDV	Santo Domingo	157.82	47	eP	PKPdf	20 38 01.9	-1.0
CPUP	Villa Florida	160.05	172	PKP	PKPdf	20 38 04.9	+0.1
	comp=Z,0.7nm,0.9s,baz=308,slow=2.5,SNR=2.9						
CPUP				PKPab	PKPab	20 38 44.6	+0.3
	comp=Z,2.6nm,1.1s,baz=158,slow=4.0,SNR=4.2						
CPUP	Villa Florida	160.05	172	PKPdf	PKPdf	20 38 01.5	-3.4
CPUP					PKPab	20 38 41.8	-2.5
CPUP	Villa Florida	160.05	172	eP	PKPdf	20 38 04.7	-0.2
LPAZ	La Paz	163.44	127	PKP	PKPdf	20 38 10.2	+0.8
	comp=Z,19nm,1.1s,baz=349,slow=1.6,SNR=22						
LPAZ				PKPab	PKPab	20 39 02.0	+1.6
	comp=Z,5.5nm,0.8s,baz=237,slow=5.4,SNR=4.7						
LPAZ	La Paz	163.44	127	eP	PKPdf	20 38 07.1	-2.3
DIAM	Diamantina, MG	164.21	221	eP	PKPdf	20 38 09.0	-0.5
MURT	Porto Murtinho	164.59	169	eP	PKPdf	20 38 08.9	-0.6
SIV	San Ignacio	168.53	146	PKP	PKPdf	20 38 12.2	-0.6
	comp=Z,9.0nm,0.9s,baz=211,slow=2.9,SNR=13						
SIV				PKPab	PKPab	20 39 20.8	-1.2
	comp=Z,4.6nm,0.8s,baz=240,slow=6.2,SNR=3.1						
SDBA	SAO DESIDERIO	168.86	237	eP	PKPdf	20 38 12.3	-0.8
BDFB	Brasilia	168.89	214	PKP	PKPdf	20 38 16.5	+3.4
	comp=Z,5.0nm,0.8s,baz=50,slow=2.8,SNR=9.9						
BDFB	Brasilia	168.89	214		PKPdf	20 38 09.3	-3.7
BDFB	Brasilia	168.89	214	PKIKP	PKPdf	20 38 09.4	-3.7
PP1B	Ponte de Pedra	168.92	178	eP	PKPdf	20 38 12.4	-0.6
BOAV	Boa Vista	169.33	35	eP	PKPdf	20 38 12.7	-0.7
ARAG	Araguaiana, MT	170.45	196	eP	PKPdf	20 38 12.9	-1.0
SALV	Santo Antonio	170.54	173	eP	PKPdf	20 38 13.2	-0.7
SNDB	Serra Nova Dou	173.68	210	eP	PKPdf	20 38 15.6	+0.2
PDRB	Porto dos Gac	174.41	157	eP	PKPdf	20 38 14.7	-1.0
PRPB	Parauapebas	175.36	273	eP	PKPdf	20 38 14.8	-1.2
CLDB	Colider	175.42	163	eP	PKPdf	20 38 15.6	-0.4
ITTB	Itaituba	177.57	31	eP	PKPdf	20 38 15.4	-1.1
NPGB	Novo Progresso	178.94	124	eP	PKPdf	20 38 16.6	0.0

IDC **17** *20:22:57.1±0.7, 22°.38S×170°.91E, h0^{km}, mb4.7/11, mbtmp4.7/12, ML4.8/1, MS4.1/7, Error ellipse: s-maj=27.0km s-min=21.5km az=63.0*

BJI **17** *20:22:58.3, 22°.20S×171°.07E, h13^{km}, mb4.9/33*

MOS **17** *20:23:00.6±1.6, 22°.11S×170°.27E, h15^{km}, mb5.1/25, Error ellipse: s-maj=36.3km s-min=14.6km az=119.5*

BGR **17** *20:23:01.9, 22°.20S×171°.64E, h33^{km}*

NEIC **17** *20:23:01.9, 22°.12S×170°.63E, h18^{km}, Moment Tensor Solution. Duration: 1^s.5 Moment tensor: Scale 10^{16}Nm; M_{rr}1.87; $M_{\theta\theta}$-1.54; $M_{\phi\phi}$-0.33; $M_{r\theta}$1.44; $M_{\theta\phi}$0.14; $M_{\phi r}$-0.18; Fault plane solution: $M_0$2.26000×10^{16} NP1: ϕ_s276.04000°, δ24.88000°, λ89.19000°. NP2: ϕ_s96.94000°, δ65.12000°, λ90.38000°. Principal axes: T 2.3995, Plg70.0000°, Azm8.0000°; N -0.3128, Plg0.0000°, Azm277.0000°; P -2.0868, Plg20.0000°, Azm187.0000°;*

NEIC **17** *20:23:01.1±2.4, 22°.48S±0°.05×170°.45E±0°.06, h10^{km}±1^{km}, mb5.3/64, Mww4.8/13 Error ellipse: s-maj=11.3km s-min=3.6km az=48.0*

NEIC **17** *20:23:01.9, 22°.52S×170°.41E, h18^{km}*

NOU **17** *20:23:03.8, 22°.39S×170°.34E, h8^{km}, MLv5.3/24, Southeast of Loyalty Islands*

GCMT **17** *20:23:06.1±0.3, 22°.50S±0°.02×170°.63E±0°.03, h27^{km}±1^{km}, MW5.0/67, Moment Tensor Solution. s19,c21; s67,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.92±.28; $M_{\theta\theta}$-2.64±.17; $M_{\phi\phi}$-0.28±.15; $M_{r\theta}$2.68±.27; $M_{\theta\phi}$1.23±.08; $M_{\phi r}$0.10±.25; Best double couple: $M_0$4.06100×10^{16} NP1: ϕ_s309.00000°, δ28.00000°, λ119.00000°. NP2: ϕ_s97.00000°, δ66.00000°, λ76.00000°. Principal axes: T 4.0740, Plg66.0000°, Azm341.0000°; N -0.0260, Plg13.0000°, Azm103.0000°; P -4.0480, Plg20.0000°, Azm198.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 20:22:59.8±0.3**, 22°.48S**±0°.05×**170°.51E**±0°.05**, h10^{km}, n350, σ1^s.68**/333**, mb5.1**/59**, MS4.5**/7**, 27C-32D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.51	293		Pn	20 23 41.4	+0.7
MARNC				Sn	Sn	20 24 08.3	-3.0
MARNC	Mare, Loyalty	2.51	293	P	Pn	20 23 41.4	+0.7
MARNC	Mare, Loyalty	2.51	293	P	Sn	20 24 12.6	+1.3
PINNC	Pines Island,	2.83	267		Pn	20 23 46.5	+1.4
PINNC				Sn	Sn	20 24 19.2	-0.2
PINNC	Pines Island,	2.83	267	P	Pn	20 23 47.1	+1.9
PINNC	Pines Island,	2.83	267	P	Sn	20 24 21.6	+2.2
INH	Isangel	3.14	338	P	Pn	20 23 50.6	+1.2
YATNC	Mamie plateau,	3.38	276	P	Pn	20 23 53.5	+0.8
YATNC	Mamie plateau,	3.38	276	P	Sn	20 24 33.8	+0.9
OUENC	Ouen Island, N	3.39	270	P	Pn	20 23 55.1	+2.2
OUENC	Ouen Island, N	3.39	270	P	Sn	20 24 34.4	+1.2
ONTNC	Ouen Toro	3.76	272		Pn	20 23 58.7	+0.8
ONTNC				Sn	Sn	20 24 40.7	-1.5
ONTNC	Ouen Toro	3.76	272	P	Pn	20 24 00.3	+2.4
ONTNC	Ouen Toro	3.76	272	P	Sn	20 24 43.2	+1.0
DZM	Mont Dzumac	3.79	275	Pn	Pn	20 24 00.4	+2.0
	54nm,0.3s,baz=138,slow=14,SNR=163						
DZM				Sn	Sn	20 24 44.9	+1.8
	52nm,0.3s,baz=78,slow=18,SNR=10						
DZM				LR	LR	20 25 34.0	
	comp=Z,3µm,18.6s,baz=7.5,slow=38						
	158nm,0.4s						
DZM	Mont Dzumac	3.79	275	ePn	Pn	20 23 59.9	+1.5
	311nm,0.9s						
DZM				eSn	Sn	20 24 44.0	+0.9
	893nm,0.9s						
DZM	Mont Dzumac	3.79	275		Pn	20 24 00.0	+1.6
DZM				Sn	Sn	20 24 40.5	-2.7
DZM	Mont Dzumac	3.79	275	P	Pn	20 24 00.3	+1.9
DZM	Mont Dzumac	3.79	275	P	Sn	20 24 44.6	+1.5
RTV	Rentapao	5.06	337	P	Pn	20 24 18.0	+2.2
DVP	Devils Point	5.21	335	P	Pn	20 24 20.5	+2.6
DVP	Devils Point	5.21	335	P	Sn	20 25 19.6	+1.6
KOUNC	Koumac, New Ca	6.11	287	P	Pn	20 24 33.9	+3.7
NFK	Norfolk Island	6.93	199	P	Pn	20 24 42.4	+0.9
	comp=Z,595nm,1.0s						
SANVU	Saraoutou	7.66	335		Pn	20 24 53.2	+1.6
SANVU	Saraoutou	7.66	335	P	Pn	20 24 55.1	+3.5
MSVF	Nonsavu	8.51	58		Pn	20 25 06.3	+3.0
MSVF	Nonsavu	8.51	58	i P	Pn	20 25 06.7	+3.4
URZ	Urewera	16.72	162	LR	LR	20 32 18.7	
	comp=Z,1µm,18.4s,baz=337,slow=34						
RTZ	Ruatahuna	17.01	162	P	P	20 27 00.5	+0.6
BKZ	Black Stump Fm	17.40	164		Pn	20 27 04.5	+1.7
MRZ	Mangatainoka R	18.63	168	P	P	20 27 18.1	+0.6
BFZ	Birch Farm	18.78	166	P	P	20 27 19.6	+0.3
LTZ	Lake Taylor	20.30	176	P	P	20 27 37.1	+1.3
LTZ				IAmb	IAmb	20 27 46.9	
	comp=Z,287nm,2.0s						
CTZ	Chatham Island	23.73	156	P	P	20 28 12.8	+0.8
CTZ				IAmb	IAmb	20 28 21.0	
	comp=Z,131nm,1.2s						
RABL	Rabaul	25.42	313	P	P	20 28 28.5	+0.7
RABL				IAmb	IAmb	20 28 32.4	
	comp=Z,33nm,0.6s						
PMG	Port Moresby	25.89	296	P	P	20 28 33.7	+1.6
	comp=Z,13nm,0.6s,baz=67,slow=4.1,SNR=5.4						
	comp=Z,13nm,0.6s						
PMG	Port Moresby	25.89	296	P	P	20 28 32.8	+0.7
PMG	Port Moresby	25.89	296	i P	P	20 28 31.6	-0.6
PMG				pmax	pmax		
	comp=Z,21nm,1.0s						
COEN	Coen	27.28	283	P	P	20 28 45.8	+1.1
RAR	Rarotonga	27.59	93	LR	LR	20 39 36.4	
	comp=Z,167nm,18.0s,baz=270,slow=37						
WR8	Warramunga Arr	33.61	267	P	P	20 29 41.1	+0.3
WR8				IAmb	IAmb	20 29 49.6	
	comp=Z,106nm,1.7s						
ASAR	Alice Springs	33.64	261	P	P	20 29 42.0	+1.0
	comp=Z,4.1nm,0.8s,baz=82,slow=9.2,SNR=4.9						
	comp=Z,4.1nm,0.8s						
ASAR	Alice Springs	33.64	261	P	P	20 29 41.2	+0.2
ASAR	Alice Springs	33.64	261	P	P	20 29 42.0	+1.0
WRAB	Tennant Creek	33.76	267	i P	P	20 29 41.0	-1.0
WRAB				pmax	pmax		
	comp=Z,37nm,1.4s						
WRA	Warramunga Arr	33.77	267	P	P	20 29 47.4	+5.4
	comp=Z,2.9nm,0.7s,baz=102,slow=7.7,SNR=1.7						
WRA	Warramunga Arr	33.77	267	P	P	20 29 42.0	0.0
WRA	Warramunga Arr	33.77	267	P	P	20 29 42.0	0.0
WRA				pmax	pmax		
	comp=Z,2.0nm,1.5s						
TBI	Tubuai	36.80	99	eLR	LR	20 40 04.3	
	comp=Z,2µm,29.2s						
PPT2	Papeete2	37.73	90	eSS	SS	20 38 50.9	-1.6
	comp=Z,109nm,25.8s						
PPT2				eLR	LR	20 40 31.1	
	comp=Z,228nm,26.2s						
PPT2				eLR	LR	20 40 33.7	
	comp=Z,204nm,28.5s						
MTN	Manton Dam	38.62	278	P	P	20 30 23.1	-0.6
KNRA	Kununurra	39.93	272	P	P	20 30 35.2	+0.6
KNRA				IAmb	IAmb	20 30 47.6	
	comp=Z,54nm,1.2s						
FAKI	Fak Fak	41.88	292	P	P	20 30 50.8	+0.2
FAKI				IAmb	IAmb	20 31 55.5	
	comp=Z,39nm,1.1s						
FITZ	Fitzroy Crossi	42.20	267	P	P	20 30 54.0	+0.8
PSA00	Pilbara Seismi	46.79	261	P	P	20 31 30.0	+0.1
PSA00	Pilbara Seismi	46.79	261	P	P	20 31 30.2	+0.2
PSA00				IAmb	IAmb	20 31 36.5	
	comp=Z,24nm,1.4s						
MBWA	Marble Bar	46.98	262	P	P	20 31 31.0	-0.4
MBWA				IAmb	IAmb	20 31 41.0	
	comp=Z,14nm,0.8s						
TAOE	Nuku Hiva Isla	49.18	82	eLR	LR	20 45 49.0	
	comp=Z,300nm,24.9s						
KEKH	Kekaha	52.87	35	P	P	20 32 17.4	+1.4
OVEH	Oceanview Est	52.90	41	P	P	20 32 18.2	+1.7
OVEH				IAmb	IAmb	20 34 00.6	
	comp=Z,152nm,1.2s						
DHH	Diamond Head	53.34	38	P	P	20 32 20.7	+1.2
DHH	Diamond Head	53.34	38	P	P	20 32 20.7	+1.2
PUH	Pauahi	53.40	41	P	P	20 32 23.0	+2.8
HMH	Humu‘ula Sheep	53.41	41	P	P	20 32 21.5	+1.0
TOLI2	Tolitoli	53.81	289	P	P	20 32 23.6	+0.4
JAGI	Jajag, Banyuwa	55.77	275	P	P	20 32 37.4	0.0
JAGI				IAmb	IAmb	20 34 32.1	
	comp=Z,34nm,1.3s						
JCJ	Chichijima	56.39	329	P	P	20 32 42.4	+0.9
UGM	Wanagama	59.32	274	P	P	20 33 03.1	+0.7
KKM	Kota Kinabalu	60.20	291	P	P	20 33 07.4	-1.2
KKM				IAmb	IAmb	20 33 22.5	
	comp=Z,26nm,1.0s						
LEM	Lembang	62.39	274	P	P	20 33 25.1	+1.5
JOW	Kunigami	63.82	318	P	P	20 33 33.1	+0.6
	comp=Z,20nm,0.9s,baz=94,slow=9.4,SNR=4.1						
	comp=Z,20nm,0.9s						
JOW	Kunigami	63.82	318	P	P	20 33 32.8	+0.2
JOW				IAmb	IAmb	20 33 34.2	
	comp=Z,32nm,1.0s						
YOJ	Yonaguni jima	65.61	312	P	P	20 33 44.3	0.0
YOJ	Yonaguni jima	65.61	312	P	P	20 33 44.3	0.0
YOJ				pmax	pmax		
	comp=Z,53nm,0.9s						
JGF	Kuroka	65.75	331	P	P	20 33 44.2	-0.8
JGF				IAmb	IAmb	20 34 39.2	
	comp=Z,25nm,1.2s						
TWG	Pinlang	65.90	310	P	P	20 33 45.2	-1.0
TWG				IAmb	IAmb	20 33 54.9	
	comp=Z,12nm,0.7s						
YULB	Yu-li	66.11	310	P	P	20 33 46.1	-1.4
YULB				IAmb	IAmb	20 34 52.2	
	comp=Z,30nm,1.5s						
MJA0	Matsu Arr-Jizo	66.14	332	eP	P	20 33 46.2	-1.3
MJA0				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MJAR	Matsushiro Arr	66.16	332	P	P	20 33 46.2	-1.4
	comp=Z,2.4nm,0.7s,baz=166,slow=7.0,SNR=7.7						
	comp=Z,2.4nm,0.7s						
MJAR	Matsushiro Arr	66.16	332	P	P	20 33 46.8	-0.8
MJAR	Matsushiro Arr	66.16	332	P	P	20 33 46.8	-0.8
MJAR				pmax	pmax		
	comp=Z,11nm,1.6s						
MAJO	Matsushiro	66.16	332	P	P	20 33 46.8	-0.8
MAJO				IAmb	IAmb	20 35 30.8	
	comp=Z,53nm,1.8s						
MAJO	Matsushiro	66.16	332	P	P	20 33 46.8	-0.8
MAJO				pmax	pmax		
	comp=Z,53nm,1.8s						
MJB9	Matsu-Tunnel	66.16	332	P	P	20 33 47.5	-0.1
MJB9				IAmb	IAmb	20 34 25.6	
	comp=Z,36nm,1.5s						
TPUB	Ta-pu	66.52	310		P	20 33 49.2	-0.9
YHNB	Yeheng	66.87	312	P	P	20 33 53.5	+1.0
JNU	Nakatsue	66.98	324	P	P	20 33 51.2	-1.7
JSD	Sado	67.39	333	P	P	20 33 54.0	-1.3

QSPA	**South Pole Qui**	**67.59**	**180**	P	**P**	**20 33 56.6**	**0.0**
	comp=Z,9.1nm,0.9s,baz=59,slow=2.9,SNR=4.8						
	comp=Z,9.1nm,0.9s						
QSPA	**South Pole Qui**	**67.59**	**180**	P	**P**	**20 33 57.5**	**+1.0**
QSPA				IAmb	IAmb	20 34 08.5	
	comp=Z,20nm,1.1s						
KSRS	**Korea Array**	**71.84**	**325**	P	**P**	**20 34 22.1**	**-0.7**
	comp=Z,3.5nm,0.9s,baz=149,slow=6.4,SNR=6.7						
	comp=Z,3.5nm,0.9s						
KSRS	**Korea Array**	**71.84**	**325**	*e*P	**P**	**20 34 22.5**	**-0.3**
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
IPM	**Ipoh**	**72.92**	**282**	P	**P**	**20 34 29.7**	**-0.2**
IPM				IAmb	IAmb	20 34 31.6	
	comp=Z,20nm,1.0s						
NJ2	**Nanjing**	**73.35**	**316**	*e*P	**P**	**20 34 35.8**	**+3.8**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
KULM	**Kulim**	**73.60**	**283**	P	**P**	**20 34 33.6**	**-0.3**
KULM				IAmb	IAmb	20 35 01.8	
	comp=Z,82nm,2.0s						
GSI	**Gunungsitoli**	**74.77**	**278**	P	**P**	**20 34 41.0**	**+0.3**
GSI				IAmb	IAmb	20 34 43.0	
	comp=Z,40nm,1.0s						
PET	**Petropavlovsk**	**75.89**	**353**	*i* P	**P**	**20 34 45.7**	**-0.5**
PET				pmax	pmax		
	comp=Z,17nm,1.1s						
PEA0B	**Petropavlovsk-**	**76.09**	**352**	P	**P**	**20 34 47.1**	**-0.3**
PEA0B	**Petropavlovsk-**	**76.09**	**352**	P	**P**	**20 34 47.1**	**-0.3**
PEA0B				pmax	pmax		
	comp=Z,175nm,1.9s						
PETK	**Petropavlovsk-**	**76.09**	**352**	P	**P**	**20 34 46.9**	**-0.5**
	comp=Z,4.1nm,1.0s,baz=143,slow=5.5,SNR=6.6						
	comp=Z,4.1nm,1.0s						
PETK	**Petropavlovsk-**	**76.09**	**352**	P	**P**	**20 34 45.9**	**-1.5**
TIA	**Tai'an**	**77.14**	**318**	P	**P**	**20 34 53.6**	**-0.2**
TIA				pmax	pmax		
	comp=Z,27nm,0.8s						
BNX	**BinXian**	**78.37**	**331**	⇓P	**P**	**20 34 59.1**	**-1.3**
BNX				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ENH	**Enshi**	**78.64**	**309**		**P**	**20 35 01.7**	**-0.6**
ENH				IAmb	IAmb	20 35 03.3	
	comp=Z,19nm,1.0s						
BELA	**Belgrano 2**	**78.78**	**175**	P	**P**	**20 35 01.6**	**-0.7**
HNS	**HongShan**	**79.39**	**318**	⇑P	**P**	**20 35 06.8**	**+0.6**
HNS				pmax	pmax		
	comp=Z,12nm,1.0s						
CMAR	**Chiang Mai Arr**	**80.91**	**294**	P	**P**	**20 35 17.0**	**+2.2**
	comp=Z,7.7nm,0.8s,baz=136,slow=4.0,SNR=49						
CMAR				PKKPbc	**PKKPbc**	**20 53 51.8**	**-1.1**
	comp=Z,0.9nm,0.6s,baz=294,slow=2.5,SNR=8.0						
	comp=Z,7.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**80.91**	**294**		**P**	**20 35 15.6**	**+0.8**
KMI	**Kunming**	**80.99**	**302**	P	**P**	**20 35 16.8**	**+1.4**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.2s						
CHTO	**Chiang Mai**	**81.07**	**295**		**P**	**20 35 16.5**	**+0.8**
CHTO				IAmb	IAmb	20 35 18.7	
	comp=Z,17nm,0.9s						
CHTO	**Chiang Mai**	**81.07**	**295**	P	**P**	**20 35 16.5**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,17nm,0.9s						
PZH	**PanZhiHua**	**82.45**	**303**	P	**P**	**20 35 23.3**	**+0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
HHC	**Hu-ho-hao-te**	**83.44**	**319**	*e*P	**P**	**20 35 30.1**	**+2.4**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TNCH	**TengChong**	**84.29**	**300**	P	**P**	**20 35 33.5**	**+1.0**
TNCH				pP	sP	20 35 36.5	+1.3
TNCH				sP	PcP	20 35 38.5	+2.2
TNCH				pmax	pmax		
	comp=Z,14nm,1.1s						
ZEA	**Zeya**	**84.59**	**336**	*e*P	**P**	**20 35 32.2**	**-0.9**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.6s						
TROLL	**Troll, Antarti**	**85.40**	**184**	⇑P	**P**	**20 35 36.8**	**-0.6**
	comp=Z,713nm,0.8s						
LZH	**Lanzhou**	**85.77**	**312**	*e*P	**P**	**20 35 40.5**	**+0.8**
LZH				pP	PcP	20 35 45.6	+3.1
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
N15K	**Kwethluk River**	**85.78**	**14**	P	**P**	**20 35 38.6**	**-0.3**
N15K				IAmb	IAmb	20 36 41.3	
	comp=Z,46nm,1.4s						
NVL	**N'lazarevskaya**	**85.80**	**187**	*e*P	**P**	**20 35 37.4**	**-1.7**
NVL				*e*		20 39 00.4	
NVL				*e*S	**SKSac**	**20 46 02.1**	**-2.5**
NVL				*e*SSS	SSS	20 55 19.5	
NVL				pmax	pmax		
	comp=Z,11nm,1.1s						
NVL				MLR	MLR		
	comp=Z,397nm,19.0s						
SNAA	**Sanae**	**85.99**	**182**	⇑P	**P**	**20 35 39.2**	**-1.0**
	comp=Z,150nm,0.9s						
SNAA	**Sanae**	**85.99**	**182**	P	**P**	**20 35 39.2**	**-1.0**
	comp=Z,7.8nm,0.9s,baz=188,slow=7.2,SNR=16						
	comp=Z,7.8nm,0.9s						
SNAA	**Sanae**	**85.99**	**182**		**P**	**20 35 39.0**	**-1.1**
SNAA				IAmb	IAmb	20 35 51.8	
	comp=Z,20nm,1.3s						
SNAA	**Sanae**	**85.99**	**182**	*i* P	**P**	**20 35 39.9**	**-0.2**
SNAA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SEY	**Seymchan**	**86.33**	**352**	*e*P	**P**	**20 35 40.5**	**-1.1**
SEY				pmax	pmax		
	comp=Z,12nm,1.2s						
VNA3	**Neumayer Olymp**	**86.53**	**180**	⇑P	**P**	**20 35 41.6**	**-1.1**
	comp=Z,14nm,0.8s						
O18K	**Koktuh Hills**	**86.70**	**17**	P	**P**	**20 35 45.1**	**+1.6**
VNA2	**Neumayer--Watz**	**86.84**	**181**	⇑P	**P**	**20 35 43.6**	**-0.7**
	comp=Z,15nm,0.8s,baz=171,slow=4.2						
K15K	**Wolf Creek Mou**	**87.38**	**13**	P	**P**	**20 35 46.4**	**-0.4**
J16K	**Anvik River**	**88.46**	**13**	P	**P**	**20 35 53.3**	**+1.5**
J16K				IAmb	IAmb	20 37 54.0	
	comp=Z,41nm,1.9s						
YBH	**Yreka Blue Hor**	**88.81**	**43**	LR	LR	21 08 28.3	
	comp=Z,20nm,21.7s,baz=288,slow=31						
BEKR	**Beckworth**	**89.38**	**46**	P	**P**	**20 35 58.1**	**+1.1**
QSM	**Queen of Sheba**	**89.90**	**51**	P	**P**	**20 36 01.2**	**+1.9**
SHL	**Shillong**	**89.91**	**298**		**P**	**20 36 00.2**	**+0.4**
SHL				IAmb	IAmb	20 36 01.3	
	comp=Z,19nm,1.0s						
SHL	**Shillong**	**89.91**	**298**	P	**P**	**20 36 00.2**	**+0.4**
SHL				pmax	pmax		
	comp=Z,19nm,1.0s						
ULN	**Ulaanbaatar**	**90.16**	**323**		**P**	**20 36 00.5**	**+0.1**
ULN				IAmb	IAmb	20 36 01.4	
	comp=Z,19nm,1.1s						
ULN	**Ulaanbaatar**	**90.16**	**323**	P	**P**	**20 36 00.5**	**+0.1**
ULN				pmax	pmax		
	comp=Z,19nm,1.2s						
GTA	**Gaotai**	**90.20**	**313**	*e*P	**P**	**20 36 01.8**	**+1.0**
GTA				sP	pwP	20 36 10.3	+1.9
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BILL	**Bilibino**	**90.30**	**358**	*i* P	**P**	**20 35 59.2**	**-1.2**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YAK	**Yakutsk**	**90.31**	**342**	*i* P	**P**	**20 35 59.8**	**-0.7**
YAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
K05A	**Summer Lake**	**90.47**	**43**	P	**P**	**20 36 01.9**	**-0.2**
SONM	**Songino Array**	**90.51**	**323**	P	**P**	**20 36 01.9**	**-0.2**
	comp=Z,9.9nm,0.9s,baz=145,slow=5.2,SNR=34						
	comp=Z,9.9nm,0.9s						
SONM	**Songino Array**	**90.51**	**323**		**P**	**20 36 01.9**	**-0.2**
SONM				IAmb	IAmb	20 36 02.9	
	comp=Z,12nm,1.0s						
J05D	**Fort Rock, OR**	**90.54**	**43**	P	**P**	**20 36 01.6**	**-0.7**
J05D				IAmb	IAmb	20 36 04.7	
	comp=Z,45nm,2.0s						
LSA	**Lhasa**	**92.22**	**301**	P	**P**	**20 36 09.7**	**-1.2**
LSA	**Lhasa**	**92.22**	**301**	P	**P**	**20 36 09.7**	**-1.2**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ILAR	**Eielson Array**	**92.96**	**17**	P	P	20 36 09.2	-3.6
	comp=Z,0.6nm,0.8s,baz=227,slow=4.9,SNR=6.2						
	comp=Z,0.6nm,0.8s						
ILAR	**Eielson Array**	**92.96**	**17**	P	**P**	**20 36 10.9**	**-1.9**
ILAR	**Eielson Array**	**92.96**	**17**	*e*P	**P**	**20 36 12.3**	**-0.5**
ELK	**Elko**	**93.23**	**47**	LR	LR	21 15 14.8	
	comp=Z,180nm,18.0s,baz=226,slow=34						
H03S2	**Juan Fernandez**	**93.42**	**129**	T	T	22 19 54.4	
	baz=239,slow=74,SNR=3.8						
H03S1	**Juan Fernandez**	**93.43**	**129**	T	T	22 19 55.6	
	baz=239,slow=74,SNR=3.1						
H03S3	**Juan Fernandez**	**93.44**	**129**	T	T	22 19 52.5	
	baz=239,slow=74,SNR=3.4						
ZAK	**Zakamensk**	**93.61**	**324**	*e*P	P	20 35 59.9	-16
ZAK				pmax	pmax		
	comp=Z,12nm,1.4s						
PLCA	**Paso Flores**	**95.33**	**138**	*e*P	**P**	**20 36 27.6**	**+3.0**
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NEW	**Newport**	**95.49**	**40**	LR	LR	21 16 19.0	
	comp=Z,132nm,18.2s,baz=308,slow=34						
PDAR	**Pinedale Array**	**97.94**	**47**	LR	LR	21 14 39.1	
	comp=Z,125nm,21.2s,baz=307,slow=32						
WMQ	**Urumqi**	**100.29**	**313**	*e*P	**Pdif**	**20 36 49.8**	**+3.2**
DGZ	**Jazzator, Alta**	**102.52**	**319**	*i* P	**Pdif**	**20 36 58.5**	**+2.0**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MKAR	**Makanchi Array**	**104.86**	**315**	Pdiff	**Pdif**	**20 37 08.6**	**+1.7**
	comp=Z,0.7nm,0.7s,baz=92,slow=7.4,SNR=3.8						
MKAR				PKKPbc	**PKKPbc**	**20 52 48.5**	**-2.6**
	comp=Z,1.0nm,0.8s,baz=266,slow=2.6,SNR=6.9						
KURBB	**Kurchatov Arra**	**108.27**	**318**	PKiKP	**PKiKP**	**20 41 25.3**	**-2.8**
	comp=Z,0.6nm,0.8s,baz=110,slow=2.1,SNR=7.5						
KURBB				PP	**PP**	**20 41 49.5**	**-2.6**
	comp=Z,0.9nm,1.0s,baz=106,slow=6.9,SNR=4.0						
KURBB				PKKPbc	**PKKPbc**	**20 52 40.0**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=289,slow=4.1,SNR=5.0						
BCIP	**Isla Barro Col**	**111.55**	**89**	P	Pdif	20 38 01.0	+24
	comp=Z,119nm,1.1s						
BVAR	**Borovoye Array**	**113.65**	**320**	PKiKP	**PKiKP**	**20 41 38.1**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=38,slow=3.5,SNR=4.3						
CHIC	**Chingaza**	**115.54**	**96**	P	**Pdif**	**20 38 02.2**	**+6.6**
PTLB	**Pontes e Lacer**	**118.48**	**123**	*e*P	**Pdif**	**20 38 13.3**	**+5.2**
TULEG	**Thule**	**118.69**	**13**	*i* P	**PKPdf**	**20 41 44.8**	**-2.5**
VILB	**Vilhena**	**119.10**	**120**	*e*P	**Pdif**	**20 38 13.8**	**+2.9**
ARTI	**Arti**	**120.64**	**323**	PKP	**PKPdf**	**20 41 50.0**	**-1.6**
	comp=Z,2.9nm,0.6s,baz=90,slow=2.2,SNR=5.7						
ARTI	**Arti**	**120.64**	**323**	*i* PKIKP	**PKPdf**	**20 41 50.6**	**-1.0**
ARTI						20 43 16.4	
ARTI						20 49 02.4	
ARTI				SP	SP	20 53 10.4	+2.0
ARTI				SS	**SKKSdf**	**20 59 45.3**	**+0.4**
NEEM	**North Greenlan**	**121.49**	**10**	*i* P	**PKPdf**	**20 41 51.0**	**-2.1**
KULLO	**Kullorsuaq**	**122.19**	**14**	*i* P	**PKPdf**	**20 41 51.3**	**-2.8**
SPITS	**Spitsbergen Ar**	**122.93**	**354**	PKP	**PKPdf**	**20 41 53.9**	**-1.6**
	comp=Z,8.1nm,0.9s,baz=90,slow=5.0,SNR=5.0						
DAG	**Danmarks Havn**	**125.47**	**3**	*i* P	**PKPdf**	**20 41 57.9**	**-2.5**
GDH	**Godhavn**	**126.31**	**18**	*i* P	**PKPdf**	**20 41 58.3**	**-3.7**
BDFB	**Brasilia**	**126.53**	**132**	PKP	**PKPdf**	**20 42 02.4**	**-1.9**
	comp=Z,1.9nm,0.5s,baz=117,slow=2.3,SNR=3.6						
SUMG	**Summit**	**127.32**	**11**	*i* P	**PKPdf**	**20 42 03.1**	**-1.4**
BELG	**Belogornoye**	**127.46**	**320**	PKP	**PKPdf**	**20 42 04.5**	**-0.2**
	comp=Z,11nm,0.8s,baz=98,slow=3.1,SNR=9.8						
DBG	**Daneborg**	**127.82**	**4**	*i* P	**PKPdf**	**20 42 03.7**	**-1.1**
ARCES	**ARCESS Array B**	**128.49**	**345**	PKP	**PKPdf**	**20 42 04.8**	**-1.4**
	comp=Z,2.2nm,0.6s,baz=79,slow=1.9,SNR=21						
NUUK	**Nuuk**	**129.91**	**23**	*i* P	**PKPdf**	**20 42 07.5**	**-1.6**
KBZ	**Khabaz**	**132.15**	**309**	PKP	**PKiKP**	**20 42 16.0**	**+1.0**
	comp=Z,1.4nm,0.8s,baz=300,slow=1.5,SNR=4.5						
KBZ	**Khabaz**	**132.15**	**309**	*i* PKIKP	**PKPdf**	**20 42 15.5**	**+1.6**
KBZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KIV	**Kislovodsk**	**132.27**	**310**	*e*PKIKP	**PKPdf**	**20 42 15.4**	**+1.1**
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
OBN	**Obninsk**	**132.84**	**326**	⇑*e*PKIKP	**PKPdf**	**20 42 16.1**	**+1.2**
OBN				*e*PPP	PPP	20 47 32.3	
OBN				*e*SS	SS	21 02 40.2	+19
OBN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	**FINESS Array B**	**134.02**	**337**	PKhKP	PKPpre	20 42 12.9	
	comp=Z,2.6nm,0.8s,baz=27,slow=3.7,SNR=4.5						
FINES				SKPbc	**SKPbc**	**20 45 43.6**	**-2.6**
	comp=Z,2.2nm,0.7s,baz=52,slow=3.1,SNR=4.0						
FINES	**FINESS Array B**	**134.02**	**337**	*e*PKIKP	**PKPdf**	**20 42 16.5**	**-0.4**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NRS	**Narsarsuaq**	**134.08**	**23**	*i* P	**PKPdf**	**20 42 13.0**	**-4.0**
MNK	**Minsk**	**137.52**	**328**	*i* PKP	**PKPdf**	**20 42 21.7**	**-2.0**
	comp=E,31nm,0.7s						
MNK				*i* PKP	**PKPdf**	**20 42 21.7**	**-2.0**
	comp=N,19nm,0.6s						
MNK				*i* PKP	**PKPdf**	**20 42 21.7**	**-2.0**
	comp=Z,9.0nm,0.6s,baz=56						
MNK				*i* PP	**PP**	**20 45 08.2**	**-1.3**
MNK				*i* PPP	PPP	20 48 10.6	
MNK				*i* SKS	**SKSdf**	**20 49 32.4**	**-2.0**
MNK				*i* SS	**SS**	**21 03 18.0**	**+0.7**
MNK				*i* SSS	SSS	21 08 24.6	
MNK				*i* LQ	LQ	21 36 20.8	
MNK				*i* LRM	MLR	21 41 54.5	
	comp=N,81nm,15.5s						
MNK				*i* LRM	MLR	21 42 24.0	
	comp=E,97nm,17.8s						
MNK				*i* LRM	MLR	21 42 24.0	
	comp=Z,162nm,18.3s						
MNK	**Minsk**	**137.52**	**328**	*i* PKIKP	**PKPdf**	**20 42 21.6**	**-2.0**
MNK				*i*		20 45 08.1	
MNK				*i* PPP	PPP	20 48 10.6	
MNK				*i*		20 49 32.3	
MNK				*i* SS	SS	21 03 17.9	+0.6
MNK				*i* SSS	SSS	21 08 24.6	
MNK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MNK				pmax	pmax		
	comp=N,19nm,0.6s						
MNK				pmax	pmax		
	comp=E,31nm,0.7s						
MNK				MLR	MLR		
	comp=N,81nm,15.0s						
MNK				MLR	MLR		
	comp=Z,162nm,18.0s						
MNK				MLR	MLR		
	comp=E,97nm,18.0s						
AKASG	**Malin Array Be**	**138.79**	**323**	PKP	**PKPdf**	**20 42 25.1**	**-1.0**
	comp=E,0.8nm,0.5s,baz=50,slow=3.7,SNR=1.6						
NOA	**NORSAR Array B**	**138.87**	**345**	PKhKP	PKPpre	20 42 15.8	
	comp=E,0.4nm,0.7s,baz=32,slow=2.8,SNR=4.0						
HFS	**Hagfors**	**139.00**	**343**	PKhKP	PKPpre	20 42 14.5	
	comp=E,1.9nm,0.7s,baz=154,slow=4.1,SNR=5.1						
HFS				PKP	**PKPdf**	**20 42 24.1**	**-2.1**
	comp=E,2.0nm,0.8s,baz=90,slow=5.9,SNR=5.2						
KIRS	**Kirsehir-Merke**	**139.60**	**304**	⇓P	**PKPdf**	**20 42 29.6**	**+1.5**
BRTR	**Keskin Array B**	**139.69**	**305**	PKhKP	PKPpre	20 42 24.4	
	comp=E,0.8nm,0.7s,baz=105,slow=1.7,SNR=5.7						
BRTR				PKP	**PKPdf**	**20 42 27.9**	**-0.5**
	comp=E,0.8nm,0.7s,baz=127,slow=3.8,SNR=4.5						
BRTR	**Keskin Array B**	**139.69**	**305**	*e*PKIKP	**PKPdf**	**20 42 28.1**	**-0.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
DEL	**Delary**	**141.95**	**339**	*i* P	**PKPdf**	**20 42 26.8**	**-4.9**
SHAB	**Shabla**	**142.21**	**313**	⇑P	PKiKP	20 42 53.9	+18
VRI	**Vrincioaia**	**142.50**	**317**	⇓P	**PKPdf**	**20 42 33.1**	**+0.1**
VRI	**Vrincioaia**	**142.50**	**317**	⇓PKIKP	**PKPdf**	**20 42 33.1**	**+0.1**
BJUU	**Bjuv**	**142.55**	**339**	*i* P	**PKPdf**	**20 42 28.0**	**-4.7**
BSD	**Bornholm Skovb**	**142.66**	**337**	*i* P	**PKPdf**	**20 42 27.7**	**-5.3**
LUNU	**Lund**	**142.77**	**339**	*i* P	**PKPdf**	**20 42 27.8**	**-5.3**
MLR	**Muntele Rosu**	**143.16**	**317**	⇓P	PKPab	20 42 31.6	+1.7
MLR	**Muntele Rosu**	**143.16**	**317**	⇓PKIKP	PKPab	20 42 31.6	+1.7
BMR	**Baia Mare**	**143.56**	**322**	⇑P	PKPab	20 42 32.8	+1.6
BMR	**Baia Mare**	**143.56**	**322**	⇑PKIKP	PKPab	20 42 32.8	+1.5
STHS	**Stebnicka Huta**	**143.81**	**326**	*e*PKIKP	**PKPdf**	**20 42 36.7**	**+1.5**
STHS	**Stebnicka Huta**	**143.81**	**326**	*e*PKP	**PKPdf**	**20 42 36.7**	**+1.5**
MDB	**Medias**	**143.82**	**319**	⇑P	PKPbc	20 42 34.2	+1.2
MDB	**Medias**	**143.82**	**319**	⇑PKIKP	PKPbc	20 42 34.2	+1.2
CJR	**Cluj-Napoca**	**144.01**	**320**	⇓P	PKPab	20 42 34.1	+1.0
CJR	**Cluj-Napoca**	**144.01**	**320**	⇓PKIKP	PKPab	20 42 34.1	+1.0
ARR	**Arges**	**144.04**	**318**	⇑P	PKPab	20 42 33.8	+0.6
TNR	**Turnu Rosu**	**144.13**	**318**	⇓P	PKPbc	20 42 34.9	+1.0
TNR	**Turnu Rosu**	**144.13**	**318**	⇓PKIKP	PKPbc	20 42 34.9	+0.9
HUMR	**Humele**	**144.20**	**316**	⇓P	**PKPab**	**20 42 33.8**	**0.0**
ELND	**Elena**	**144.29**	**313**	⇓P	**PKPab**	**20 42 34.9**	**+0.7**
MARR	**Marisel-Cluj**	**144.31**	**321**	⇑P	**PKPab**	**20 42 34.5**	**+0.3**
DRGR		**144.49**	**321**	⇑P	**PKPab**	**20 42 35.0**	**+0.1**
DRGR		**144.49**	**321**	⇑PKIKP	**PKPab**	**20 42 35.0**	**+0.1**
LOT	**Lotru**	**144.53**	**318**	⇓P	**PKPab**	**20 42 35.4**	**+0.2**
LTVH	**Ltavrtes, Hu**	**144.63**	**322**	⇓P	**PKPab**	**20 42 36.3**	**+1.1**
MCD	**Coleburn Disti**	**144.64**	**354**	*e*P	**PKPab**	**20 42 33.1**	**-1.9**
VLAD	**Vladila**	**144.81**	**316**	⇑P	**PKPab**	**20 42 37.2**	**+1.2**
DEV	**Deva**	**144.84**	**319**	⇓P	**PKPab**	**20 42 36.5**	**+0.4**
DEV	**Deva**	**144.84**	**319**	⇓PKIKP	**PKPab**	**20 42 36.5**	**+0.4**
PLVB	**Pleven**	**144.94**	**315**	⇓P	**PKPab**	**20 42 37.1**	**+0.5**
KPL	**Plockton**	**145.07**	**356**	*e*P	**PKPbc**	**20 42 33.8**	**-2.7**
OKC	**Ostrava-Krasne**	**145.11**	**328**	*e*PKIKP	**PKPbc**	**20 42 36.7**	**-0.2**
OKC	**Ostrava-Krasne**	**145.11**	**328**	*e*PKP	**PKPbc**	**20 42 36.7**	**-0.2**
RUE	**Ruedersdorf**	**145.13**	**335**	*e*PKPbc	**PKPbc**	**20 42 36.4**	**-0.5**
	baz=36,slow=2.7						
GZR	**Gura Zlata**	**145.17**	**319**	⇑P	**PKPbc**	**20 42 36.9**	**-0.4**
GZR	**Gura Zlata**	**145.17**	**319**	⇑PKIKP	**PKPbc**	**20 42 36.9**	**-0.4**
BSEG	**Bad Segeberg**	**145.20**	**339**	*e*PKPbc	**PKPbc**	**20 42 36.4**	**-0.6**
	baz=36,slow=2.7						
DRUM	**Mains of Drumt**	**145.23**	**353**	*e*P	**PKPbc**	**20 42 33.7**	**-3.3**
STEB	**Steborice**	**145.23**	**329**	*e*PKP	**PKPbc**	**20 42 37.1**	**-0.2**
SRE	**Strehaia**	**145.26**	**317**	⇑P	**PKPab**	**20 42 38.8**	**+1.1**
SRE	**Strehaia**	**145.26**	**317**	⇑PKIKP	**PKPab**	**20 42 38.8**	**+1.1**
SIRR	**Siria**	**145.38**	**321**	⇑P	**PKPbc**	**20 42 37.9**	**0.0**
PSZ	**Piszkesteto**	**145.43**	**324**		**PKPbc**	**20 42 37.3**	**-0.8**
PSZ	**Piszkesteto**	**145.43**	**324**	⇓P	**PKPbc**	**20 42 38.2**	**+0.1**
PSZ	**Piszkesteto**	**145.43**	**324**	⇓PKIKP	**PKPbc**	**20 42 38.2**	**+0.1**
MORC	**Moravsky Berou**	**145.44**	**329**	⇓P	**PKPbc**	**20 42 38.1**	**+0.1**
MORC	**Moravsky Berou**	**145.44**	**329**	*e*PKP	**PKPbc**	**20 42 37.5**	**-0.6**
MORC	**Moravsky Berou**	**145.44**	**329**	⇓PKIKP	**PKPbc**	**20 42 38.1**	**+0.1**
OSTC	**Ostas**	**145.53**	**331**	*e*PKIKP	**PKPdf**	**20 42 38.1**	**-0.1**
OSTC	**Ostas**	**145.53**	**331**	*e*PKP	**PKPdf**	**20 42 38.1**	**-0.1**
CHVC	**Chvalec**	**145.57**	**331**	*e*PKIKP	**PKPdf**	**20 42 38.2**	**-0.1**
CHVC	**Chvalec**	**145.57**	**331**	*e*PKP	**PKPdf**	**20 42 38.2**	**-0.1**
MAUC	**Maruska**	**145.58**	**328**	*e*PKP	**PKPdf**	**20 42 38.4**	**+0.1**
KRLC	**Kraliky**	**145.60**	**330**	*e*PKIKP	**PKPdf**	**20 42 38.1**	**-0.3**
KRLC	**Kraliky**	**145.60**	**330**	*e*PKP	**PKPdf**	**20 42 38.1**	**-0.3**
DPC	**Dobruska-Polom**	**145.62**	**330**	*e*PKIKP	**PKPdf**	**20 42 38.4**	**0.0**
DPC	**Dobruska-Polom**	**145.62**	**330**	*e*PKP	**PKPdf**	**20 42 38.4**	**0.0**
GORT1	**Trebel**	**145.64**	**338**	*e*PKPbc	**PKPdf**	**20 42 38.0**	**-0.2**
	baz=36,slow=2.7						
HERR	**Herculane**	**145.65**	**318**	⇑P	**PKPdf**	**20 42 37.0**	**-1.5**
UPC	**Upice**	**145.65**	**331**	*e*PKIKP	**PKPdf**	**20 42 38.5**	**+0.1**
UPC	**Upice**	**145.65**	**331**	*e*PKP	**PKPdf**	**20 42 38.5**	**+0.1**
BZS	**Buzias**	**145.75**	**320**	⇑P	**PKPdf**	**20 42 38.6**	**-0.1**
BZS	**Buzias**	**145.75**	**320**	⇑PKIKP	**PKPdf**	**20 42 38.6**	**-0.1**
INVG	**Invergeldie, C**	**145.86**	**355**	*e*P	**PKPdf**	**20 42 37.0**	**-1.5**
JAVC	**Velka Javorina**	**145.99**	**327**	*e*PKP	**PKPdf**	**20 42 40.6**	**+1.5**
LAWE	**Loch Awe, Argy**	**146.13**	**356**	*e*P	**PKPdf**	**20 42 38.4**	**-0.5**
MDVR	**Moldovita**	**146.13**	**319**	⇓P	**PKPdf**	**20 42 40.1**	**+0.7**
FLTG	**Flechtingen**	**146.21**	**337**	*e*PKPbc	**PKPdf**	**20 42 39.3**	**+0.1**
	baz=36,slow=2.7						
VRAC	**Vranov**	**146.22**	**329**	⇓P	**PKPbc**	**20 42 41.3**	**+0.9**
VRAC	**Vranov**	**146.22**	**329**	*e*PKP	**PKPdf**	**20 42 39.6**	**+0.2**
VRAC	**Vranov**	**146.22**	**329**	⇓PKP2	**PKPbc**	**20 42 41.3**	**+0.9**
PVCC	**Panska Ves**	**146.28**	**332**	*e*PKP2	**PKPdf**	**20 42 40.2**	**+0.8**
PVCC	**Panska Ves**	**146.28**	**332**	*e*PKP	**PKPdf**	**20 42 40.2**	**+0.8**
BRG	**Berggiesshubel**	**146.29**	**333**	*e*PKPbc	**PKPdf**	**20 42 39.9**	**+0.5**
	baz=36,slow=2.7						
CLL	**Collm**	**146.34**	**334**	⇑*i*PKP2	**PKPdf**	**20 42 40.0**	**+0.5**
CLL				pmax	pmax		
	comp=Z,29nm,0.7s						
CLL	**Collm**	**146.34**	**334**	*e*PKPbc	**PKPdf**	**20 42 40.0**	**+0.5**
	baz=36,slow=2.7						
CLL	**Collm**	**146.34**	**334**	⇑*i*PKPbc	**PKPdf**	**20 42 40.0**	**+0.5**
	comp=Z,29nm,0.7s						
CLL				*i* x	x	20 42 43.8	
CLL				*i* x	x	20 42 49.5	
CLL				*i* x	x	20 43 00.1	
CLL				*e*PP	**PP**	**20 46 07.0**	**+4.2**
KRUC	**Moravsky**	**146.48**	**329**	*e*PKP	**PKPdf**	**20 42 40.6**	**+0.8**
MODS	**Modra-Piesok**	**146.51**	**327**	*e*PKP2	**PKPdf**	**20 42 41.5**	**+1.6**
MODS	**Modra-Piesok**	**146.51**	**327**	*e*PKP	**PKPdf**	**20 42 41.5**	**+1.6**
ASSE	**Asse, Remlinge**	**146.57**	**337**	*e*PKPbc	**PKPdf**	**20 42 40.8**	**+1.0**
	baz=36,slow=2.7						
PRU	**Pruhonice**	**146.68**	**331**	*e*PKP2	**PKPdf**	**20 42 41.3**	**+1.2**
PRU	**Pruhonice**	**146.68**	**331**	*e*PKP	**PKPdf**	**20 42 41.3**	**+1.2**
HSKC	**Hora Svate Kat**	**146.70**	**333**	*e*PKP	**PKPdf**	**20 42 40.8**	**+0.6**
BOVS	**Bovan**	**146.71**	**317**	⇑P	**PKPdf**	**20 42 41.4**	**+1.0**
TREC	**Trest**	**146.75**	**330**	*e*PKP2	**PKPdf**	**20 42 41.6**	**+1.3**
TREC	**Trest**	**146.75**	**330**	*e*PKP	**PKPdf**	**20 42 41.6**	**+1.3**
EKA	**Eskdalemuir Ar**	**146.85**	**353**	PKPbc	**PKPdf**	**20 42 40.6**	**+0.4**
	comp=Z,14nm,0.6s,baz=2.7,slow=3.2,SNR=58						
ESK	**Eskdalemuir**	**146.87**	**353**	*e*P	**PKPdf**	**20 42 39.4**	**-0.9**
NEUB	**Neuenburg**	**146.90**	**335**	*e*PKPbc	**PKPdf**	**20 42 41.6**	**+1.1**
	baz=36,slow=2.7						
CLZ	**Clausthal**	**146.91**	**337**	*e*PKPbc	**PKPdf**	**20 42 42.1**	**+1.5**
	baz=36,slow=2.7						
MORH	**Mrgy, Hungar**	**147.13**	**323**	⇓P	**PKPdf**	**20 42 42.9**	**+1.9**
NEWG	**New Galloway**	**147.17**	**354**	*e*P	**PKPdf**	**20 42 41.4**	**+0.7**
VAY	**Valandovo**	**147.19**	**312**	*i* P	**PKPdf**	**20 42 42.4**	**+1.2**
EDMD	**Edmundbyers**	**147.20**	**352**	*e*P	**PKPdf**	**20 42 40.9**	**0.0**
ZVC	**Zvikov**	**147.24**	**331**	*e*PKP	**PKPdf**	**20 42 43.1**	**+2.0**
TANN	**Tannenbergstha**	**147.25**	**334**	*e*PKPbc	**PKPdf**	**20 42 42.9**	**+1.7**
	baz=36,slow=2.7						
GTTG	**Gottingen**	**147.30**	**337**	*e*PKPbc	**PKPdf**	**20 42 43.0**	**+1.9**
	baz=36,slow=2.7						
MOX	**Moxa**	**147.41**	**335**	*e*PKPbc	**PKPdf**	**20 42 42.9**	**+1.5**
	baz=36,slow=2.7						
RONA	**Rosalia, Austr**	**147.45**	**327**	*i* PKP	**PKPdf**	**20 42 43.9**	**+2.4**
	comp=Z,13nm,0.7s						
GAL1	**Galloway**	**147.46**	**355**	*e*P	**PKPdf**	**20 42 41.4**	**+0.2**
CONA	**Conrad Observa**	**147.51**	**328**	*i* PKP	**PKPbc**	**20 42 44.3**	**0.0**
	comp=Z,9.6nm,0.9s,SNR=6.8						
CKRC	**Cesky Krumlov**	**147.63**	**330**	*e*PKP2	**PKPdf**	**20 42 44.1**	**+2.3**
CKRC	**Cesky Krumlov**	**147.63**	**330**	*e*PKP	**PKPdf**	**20 42 44.1**	**+2.3**
CKRC				*e*x	x	20 42 48.4	
MANZ	**Manzenberg**	**147.72**	**334**	*e*PKPbc	**PKPdf**	**20 42 44.0**	**+2.1**
	baz=36,slow=2.7						
KHC	**Kasperske Hory**	**147.74**	**331**	*e*PKP2	**PKPdf**	**20 42 43.4**	**+1.4**
KHC	**Kasperske Hory**	**147.74**	**331**	*e*PKP	**PKPdf**	**20 42 43.4**	**+1.4**
KHC				*e*pPKP	**sPKPdf**	**20 42 46.7**	**+1.9**
ROTZ	**Rotzenmuhle**	**147.85**	**333**	*e*PKPbc	**PKPdf**	**20 42 44.4**	**+2.3**
	baz=36,slow=2.7						
GEC2	**GERESS Array S**	**147.89**	**331**	*e*PKPbc	**PKPdf**	**20 42 44.5**	**+2.2**
	baz=36,slow=2.7						
GERES	**GERESS Array B**	**147.89**	**331**	PKPbc	**PKPdf**	**20 42 44.4**	**+2.0**
	comp=Z,7.0nm,0.6s,baz=32,slow=3.5,SNR=29						
IOMK	**Kirk Michael**	**148.05**	**355**	*e*P	**PKPdf**	**20 42 43.2**	**+0.9**
KASTN	**Kahler Asten**	**148.13**	**339**	*e*PKPbc	**PKPdf**	**20 42 44.9**	**+2.3**
	baz=36,slow=2.7						
ARSA	**Arzberg**	**148.14**	**327**	*e*PKP	**PKPbc**	**20 42 46.1**	**+0.2**
	comp=Z,10nm,1.0s						
MOA	**Molln**	**148.34**	**329**	*e*PKP	**PKPdf**	**20 42 45.8**	**+2.8**
	comp=Z,3.7nm,0.6s						
ILTH	**Belurgan, Co L**	**148.41**	**356**	*e*P	**PKPdf**	**20 42 44.3**	**+1.5**
OHR	**Ohrid**	**148.49**	**313**	*i* P	**PKPdf**	**20 42 45.4**	**+2.0**
LBWR	**Ladybower, Pea**	**148.56**	**351**	*e*P	**PKPdf**	**20 42 44.9**	**+1.8**
BIOA	**Bad Ischl, Aus**	**148.75**	**329**	*e*PKP	**PKPdf**	**20 42 46.0**	**+2.3**
	comp=Z,4.0nm,0.6s						
SOKA	**Soboth**	**148.77**	**327**	*i* PKP	**PKPdf**	**20 42 46.6**	**+2.8**
	comp=Z,8.3nm,0.8s						
BLY	**Banja Luka**	**148.83**	**322**	⇓P	**PKPbc**	**20 42 48.7**	**+0.9**
PDG	**Podgorica**	**148.86**	**316**	⇓P	**PKPbc**	**20 42 47.3**	**-0.6**
WME	**Myndd Eilian**	**148.88**	**354**	*e*P	**PKPdf**	**20 42 45.3**	**+1.7**
WPS	**Cemaes, Angles**	**148.90**	**354**	*e*P	**PKPdf**	**20 42 45.6**	**+2.0**
WLF1	**Llynfaes**	**149.00**	**354**	*e*P	**PKPdf**	**20 42 46.1**	**+2.3**
OBKA	**Obir**	**149.13**	**327**	*e*pPKP	pPKPdf	20 42 47.3	+0.8
	comp=Z,5.7nm,0.7s						
CWF	**Charnwood Fore**	**149.15**	**350**	*e*P	**PKPdf**	**20 42 46.9**	**+2.8**
FOEL	**Foel Wylfa**	**149.26**	**353**	*e*P	**PKPdf**	**20 42 47.2**	**+3.0**
KBA	**Koelnbreinsper**	**149.33**	**329**	*i* pPKP	pPKPdf	20 42 47.8	+0.9
	comp=Z,7.5nm,0.8s						
LESA	**Schwarzleotal**	**149.40**	**330**	*i* pPKP	pPKPdf	20 42 48.1	+1.2
	comp=Z,13nm,0.7s,SNR=8.0						
LJU	**Ljubljana**	**149.46**	**326**	*i* PKPdf	**PKPbc**	**20 42 48.5**	**-0.7**
LJU				*i*		20 42 52.7	
MYKA	**Terra Mystica**	**149.50**	**328**	*i* pPKP	pPKPdf	20 42 48.0	+1.0
	comp=Z,12nm,0.8s						
CRNS	**Crni Vrh**	**149.57**	**326**	*i* PKPdf	**PKPdf**	**20 42 48.3**	**+3.2**
CRNS				*i*		20 42 52.5	
HLM1	**Long Mynd**	**149.58**	**352**	*e*P	**PKPdf**	**20 42 47.3**	**+2.5**
BHOU	**Houvegnez**	**149.64**	**340**	*d*PKPdf	**PKPbc**	**20 42 49.1**	**-0.5**
BHOU				*d*PKP	**sPKPbc**	**20 42 54.5**	**+2.1**
CADS	**Cadrg**	**149.73**	**327**	*e*PKPdf	**PKPdf**	**20 42 48.4**	**+3.0**
CADS				*i*		20 42 53.3	
STU	**Stuttgart**	**149.85**	**335**	*e*PKPbc	**PKPbc**	**20 42 49.5**	**-0.6**
	baz=36,slow=2.7						
BGES	**Gesves**	**149.90**	**341**	*d*PKPdf	**PKPdf**	**20 42 48.4**	**+3.0**
ABTA	**Abfaltersbach**	**149.97**	**329**	*i* pPKP	pPKPdf	20 42 49.2	+1.4
	comp=Z,11nm,0.7s						
WATA	**Walderalm**	**149.97**	**331**	*i* pPKP	pPKPdf	20 42 49.5	+1.6
	comp=Z,8.2nm,0.7s						
WTTA	**Wattenberg**	**149.99**	**331**	*i* pPKP	pPKPdf	20 42 49.7	+1.7
	comp=Z,17nm,0.9s,SNR=6.1						
MCH1	**Michaelchurch**	**150.11**	**352**	*e*P	**PKPdf**	**20 42 48.9**	**+3.2**
RETA	**Reutte**	**150.21**	**332**	*i* pPKP	pPKPdf	20 42 50.2	+2.0
	comp=Z,7.6nm,0.8s						
SQTA	**Sankt Quirin**	**150.22**	**331**	*i* pPKP	pPKPdf	20 42 50.4	+2.1
	comp=Z,21nm,0.7s,SNR=8.5						
MONM	**Monmouth**	**150.24**	**352**	*e*P	**PKPdf**	**20 42 49.2**	**+3.4**
DOU	**Dourbes**	**150.30**	**342**	*d*PKPdf	**PKPbc**	**20 42 50.0**	**-1.2**
DOU				*d*PKP	**sPKPab**	**20 43 01.6**	**+1.5**
UBR	**Ueberruh**	**150.35**	**333**	*e*PKPbc	**PKPbc**	**20 42 50.3**	**-1.1**

	baz=36,slow=2.7						
SWN1	Swindon	150.41	350	eP	PKPbc	20 42 50.3	-1.1
FETA	Feichten	150.58	331	i pPKP	PKPdf	20 42 51.3	+4.5
	comp=Z,17nm,0.8s,SNR=8.0						
DAVA	Damuels	150.75	332	i pPKP	PKPdf	20 42 51.7	+4.6
	comp=Z,10nm,0.8s						
KEST	Kesra	158.95	313	PKPab	PKPab	20 43 33.5	-1.3
	comp=Z,11nm,1.1s,baz=37,slow=5.1,SNR=3.6						
ESDC	Sonseca Array	162.22	346	PKPab	PKPab	20 43 46.0	-2.8
	comp=Z,0.4nm,0.6s,baz=33,slow=4.4,SNR=4.6						
TORD	Torodi Ar. Bea	165.88	231	PKP	PKPdf	20 43 05.0	-0.9
	comp=Z,2.3nm,0.9s,baz=25,slow=3.0,SNR=8.0						
TORD	Torodi Ar. Bea	165.88	231		PKPdf	20 43 04.6	-1.3

NEIC 17 20:26:07.5±1.9, 21°.03N±0°.08×121°.02E±0°.08, h28km±7km, mb4.5/19, Error ellipse: s-maj=12.1km s-min=9.4km az=151.0

TAP 17 20:26:09.9, 21°.24N×121°.21E, h80km, ML4.2, D

JMA 17 20:26:09.3±1.0, 21°N±4°×12°1E±°, h30km, MV4.4/19, TAIWAN REGION

IDC 17 20:26:15.0±7.8, 21°.08N×121°.45E, h94km±75km, mb3.5/9, mbtmp3.9/10, ML3.8/1, Error ellipse: s-maj=34.9km s-min=21.4km az=60.0

ISC 17 20:26:11.5±1.2, 21°.17N±0°.08×121°.13E±0°.03, h65km±8km, n178, σ1s.48/252, mb4.2/16, 10C-3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSEB	Hengchuen, Pin	0.76	344	⇑iP	Pn	20 26 26.3	-0.4
TSEB				i S	Sn	20 26 38.9	+0.9
TWKBT	Hengchun	0.83	339	⇑iP	Pn	20 26 27.0	-0.5
TWKBT				i S	Sn	20 26 39.6	+0.2
TWK1	Hengchun	0.83	339	⇑iP	Pn	20 26 27.0	-0.6
TWK1				S	Sn	20 26 39.3	-0.2
SMST	Manzhou Townsh	0.89	342	⇓iP	Pn	20 26 27.8	-0.6
SMST				S	Sn	20 26 40.7	-0.1
HEN	Hengchun	0.91	336	⇓iP	Pn	20 26 28.3	-0.3
HEN				i S	Sn	20 26 41.3	0.0
LYUB	Lan-yu	0.93	27	⇑iP	Pn	20 26 27.1	-1.8
LYUB				i S	Sn	20 26 40.3	-1.4
LAY	Lan-yu	0.95	24	i P	Pn	20 26 27.4	-1.7
LAY				eS	Sn	20 26 40.2	-2.1
SLIU	Shizi	1.09	344	⇓iP	Pn	20 26 30.2	-0.7
SLIU				S	Sn	20 26 45.4	0.0
TAWH	Dawu Township	1.19	349	⇑iP	Pn	20 26 30.9	-1.2
TAWH				S	Sn	20 26 46.5	-1.1
TAW	Tawu	1.21	350	⇑iP	Pn	20 26 31.0	-1.4
TAW				S	Sn	20 26 47.4	-0.6
EAST	Anshuo	1.24	348	⇑iP	Pn	20 26 31.7	-1.2
EAST				i S	Sn	20 26 48.8	-0.1
SCZT	Fangliau	1.29	339	⇑iP	Pn	20 26 32.8	-0.7
SCZT				i S	Sn	20 26 49.2	-0.8
WLCH	Liuqiu	1.37	329	P	Pn	20 26 34.8	+0.2
WLCH				S	Sn	20 26 53.9	+2.0
TWP	Hsiaoliuchiu	1.38	329	⇑iP	Pn	20 26 34.7	+0.1
TWP				i S	Sn	20 26 53.9	+1.9
ECL	Taimali	1.43	353	⇑iP	Pn	20 26 33.4	-2.0
ECL				eS	Sn	20 26 52.4	-1.0
MASBT	Mashibuluo	1.51	342	P	Pn	20 26 35.6	-0.9
TTN	Taitung	1.58	1	i P	Pn	20 26 36.9	-0.5
TTN				i S	Sn	20 26 55.3	-1.6
SSD	Sandimen	1.64	344	P	Pn	20 26 37.3	-0.8
TWGBT	Beinan	1.65	358	P	Pn	20 26 36.3	-1.9
TWGBT	Beinan	1.65	358	P	Pn	20 26 36.3	-1.9
TWG	Pinlang	1.65	358		Pn	20 26 36.0	-2.3
TWG	Pinlang	1.65	358	P	Pn	20 26 36.2	-2.1
TWG				S	Sn	20 26 57.0	-1.6
SGLT	Jiouru	1.66	339	i P	Pn	20 26 39.1	+0.7
SGLT				S	Sn	20 26 59.6	+0.7
WSSB	Gushan	1.68	331	eP	Pn	20 26 38.7	0.0
WSSB				S	Sn	20 26 59.5	+0.3
TWM1	Shoushan	1.78	338	i P	Pn	20 26 40.5	+0.5
TWM1				i S	Sn	20 27 01.8	+0.1
ECS	Chishang	1.92	2	P	Pn	20 26 40.7	-1.3
ECS				eS	Sn	20 27 04.9	-0.3
CHKT	Chengkung	1.94	6	P	Pn	20 26 40.6	-1.5
SGST	Jiashian	1.97	345	i P	Pn	20 26 41.3	-1.4
SGST				i S	Sn	20 27 06.5	+0.1
EHD	Haiduan	1.98	2	P	Pn	20 26 39.1	-3.6
SHHT	Tainan City	1.98	339	eP	Pn	20 26 41.9	-0.9
ELDTW	Lidau	2.02	357	P	Pn	20 26 41.8	-1.6
ELDTW				S	Sn	20 27 04.6	-3.0
STYH	Taoyuan	2.02	351	i P	Pn	20 26 43.0	-0.3
STYH				eS	Sn	20 27 07.8	+0.2
FULB	Fuli	2.03	4	eP	Pn	20 26 42.6	-0.9
FULB				eS	Sn	20 27 05.1	-2.7
CHN3	Shinhua	2.03	340	eP	Pn	20 26 43.9	+0.4
CHN3				S	Sn	20 27 08.3	+0.6
CHKH	Chenggong	2.03	7	P	Pn	20 26 42.1	-1.3
CHKH				eS	Sn	20 27 05.6	-2.2
TAI1	Yung-k'ang	2.04	336	eP	Pn	20 26 43.5	-0.1
TAI1				eS	Sn	20 27 07.9	-0.2
CHN1	Nanshi	2.09	345	i P	Pn	20 26 43.6	-0.6
CHN1				i S	Sn	20 27 09.1	-0.1
SSHA	Shanhua	2.11	338	eP	Pn	20 26 43.9	-0.7
SSHA				eS	Sn	20 27 09.4	-0.3
WTP	Ta-pu	2.12	347	i P	Pn	20 26 44.0	-0.7
WTP				eS	Sn	20 27 09.6	-0.5
ECBN	Changbin	2.16	8	P	Pn	20 26 43.6	-1.6
TPUB	Ta-pu	2.17	348		Pn	20 26 44.3	-1.1
TPUB				Sn	Sn	20 27 10.2	-1.1
TPUB	Ta-pu	2.17	348	P	Pn	20 26 44.7	-0.7
TPUB	Ta-pu	2.17	348	i P	Pn	20 26 44.6	-0.8
TPUB				eS	Sn	20 27 11.1	-0.2
TWK	Hsinying	2.17	344	P	Pn	20 26 44.7	-0.8
SCLT	Jiali	2.18	337	i P	Pn	20 26 45.0	-0.4
SCLT				eS	Sn	20 27 10.8	-0.6
TWF1	Yuli	2.18	4	P	Pn	20 26 43.5	-2.0
TSCK	Chigu Township	2.20	334	i P	Pn	20 26 44.7	-1.0
TSCK				S	Sn	20 27 09.5	-2.3
YULB	Yu-li	2.22	4		Pn	20 26 43.6	-2.5
YULB	Yu-li	2.22	4	P	Pn	20 26 44.8	-1.3
YULB	Yu-li	2.22	4	P	Pn	20 26 44.1	-2.0
WCKO	Fanlu	2.31	348	eP	Pn	20 26 46.1	-1.2
WCKO				S	Sn	20 27 13.5	-1.2
EHYH	Wanrong	2.33	5	P	Pn	20 26 46.0	-1.4
CHN8	Yiju	2.33	339	eP	Pn	20 26 46.5	-1.0
CHN8				eS	Sn	20 27 14.0	-1.1
HGSD	Ruisui	2.33	7	P	Pn	20 26 47.1	-0.4
EHY	Hungye	2.34	4	P	Pn	20 26 45.8	-1.9
ALS	Alishan	2.35	353	i P	Pn	20 26 47.9	-0.2
ALS				eS	Sn	20 27 16.2	+0.1
CHY	Chiayi	2.41	344	i P	Pn	20 26 47.9	-0.7
CHY				S	Sn	20 27 15.7	-1.3
CHN2	Minshiung	2.43	346	eP	Pn	20 26 47.8	-1.1
CHN2				S	Sn	20 27 17.2	-0.4
CHN5	Tsauling	2.46	350	i P	Pn	20 26 48.6	-0.7
CHN5				eS	Sn	20 27 17.6	-0.7
WDGT	Dungji	2.49	327	i P	Pn	20 26 48.1	-1.6
WDGT				i S	Sn	20 27 15.3	-3.6
WSL	Shuilin Townsh	2.49	341	i P	Pn	20 26 48.6	-1.1
WSL				S	Sn	20 27 16.9	-2.0
WHYT	Xinyi Township	2.53	354	i P	Pn	20 26 50.1	-0.2
WHYT				S	Sn	20 27 19.9	-0.2
WARBT	Fenglin Townsh	2.55	5	eP	Pn	20 26 48.9	-1.6
TEGC	Jichi Village	2.56	8	eP	Pn	20 26 51.0	+0.3
WGK	Gukeng	2.56	348	P	Pn	20 26 50.1	-0.6
WGK				eS	Sn	20 27 20.8	0.0
WDLH	Douliu	2.57	348	eP	Pn	20 26 51.4	+0.6
WDLH				i S	Sn	20 27 20.0	-0.9
VCHM	Qimei	2.57	323	P	Pn	20 26 49.2	-1.6
VCHM				i S	Sn	20 27 17.9	-3.1
VWDT	VWDT	2.58	0	eP	Pn	20 26 50.9	+0.1
WDL	Douliou City	2.60	348	eP	Pn	20 26 49.9	-1.2
WSF	Szhu	2.60	341	i P	Pn	20 26 50.0	-1.2
WSF				S	Sn	20 27 19.9	-1.7
SHUL	Shoufeng	2.64	9	eP	Pn	20 26 51.6	-0.1
ESL	Shilin	2.65	6	eP	Pn	20 26 50.5	-1.4
WJS	Zhushan	2.67	352	eP	Pn	20 26 51.9	-0.3
SMLT	Sun Moon Lake	2.71	356	eP	Pn	20 26 52.5	-0.3
TEYL	Yanliau Villag	2.72	9	eP	Pn	20 26 53.6	+0.7
WNT	Mingjian	2.73	351	eP	Pn	20 26 52.5	-0.5
WNT				S	Sn	20 27 24.3	-0.5
TYC	Yuchr	2.74	355	eP	Pn	20 26 52.6	-0.4
OWD	Renai	2.78	1	eP	Pn	20 26 53.6	-0.1
WTCT	Ta-ch'eng	2.80	344	eP	Pn	20 26 52.7	-1.1
WTCT				S	Sn	20 27 25.5	-1.0
PNG	Penghu	2.80	329	eP	Pn	20 26 52.2	-1.7
PNG				S	Sn	20 27 23.9	-2.6
ETM	Tongmen	2.81	7	eP	Pn	20 26 53.0	-1.0
WUSB	Renai	2.81	360	eP	Pn	20 26 54.2	0.0
HWA	Hwalien	2.83	9	eP	Pn	20 26 54.6	+0.3
LXIB	Xiulin Townshi	2.85	5	eP	Pn	20 26 53.3	-1.5
WCS	Beigang Elemen	2.88	356	i P	Pn	20 26 54.6	-0.5
TWD	Chiawan	2.93	8	eP	Pn	20 26 54.9	-0.9
WCH1	Changhua City	2.94	350	eP	Pn	20 26 55.3	-0.6
WCHH	Zhanghua	2.95	350	P	Pn	20 26 55.2	-0.7
WCHH				i S	Sn	20 27 29.2	-0.9
TCU	Taichung	3.00	352	eP	Pn	20 26 56.4	-0.2
TCU				eS	Sn	20 27 30.1	-1.3
NACB	Ninganchiao	3.02	8		Pn	20 26 55.5	-1.5
NACB				Sn	Sn	20 27 32.7	+0.7
NACB	Ninganchiao	3.02	8	P	Pn	20 26 56.4	-0.6
NACB	Ninganchiao	3.02	8	eP	Pn	20 26 55.8	-1.1
ETLH	Xiulin Townshi	3.04	6	eP	Pn	20 26 56.8	-0.5
FUSS	Fushou	3.07	2	eP	Pn	20 26 58.0	+0.1
TDCB	Techi	3.07	0	eP	Pn	20 26 57.7	-0.1
TWT	Tachien	3.07	1	eP	Pn	20 26 57.8	-0.1
WHP	Taichung City	3.10	357	eP	Pn	20 26 57.9	-0.2
EOS4	EOS4	3.14	20	eP	Pn	20 26 58.2	0.0
TWQ1	Liyutan	3.19	354	eP	Pn	20 26 58.6	-0.6
NSY	Sanyi	3.25	354	eP	Pn	20 26 59.9	-0.2
NNSB	Datong	3.26	4	eP	Pn	20 27 00.3	0.0
NNS	Nan Shan	3.27	4	eP	Pn	20 27 01.0	+0.6
ENA	Nanau	3.30	10	eP	Pn	20 27 00.1	-0.6
EWUT	Wuta	3.32	10	eP	Pn	20 27 01.3	+0.3
LATG	Datong	3.37	6	eP	Pn	20 27 01.6	-0.3
NFF	Wufeng Townshi	3.45	360	eP	Pn	20 27 02.2	-0.7
NSTT	Nanjuang	3.45	358	eP	Pn	20 27 01.9	-0.9
LIOB	Emei	3.47	358	eP	Pn	20 27 02.3	-0.7
ENTT	Nioudou	3.48	7	eP	Pn	20 27 03.2	-0.1
TWC	Suao	3.49	11	eP	Pn	20 27 03.7	+0.3
YHNB	Yeheng	3.50	4		Pn	20 27 02.9	-0.6
YHNB	Yeheng	3.50	4	eP	Pn	20 27 04.2	+0.7
NSK	Sanguang	3.50	3	eP	Pn	20 27 04.1	+0.5
TWE	Neicheng	3.57	8	eP	Pn	20 27 04.5	0.0
JYNG	Yonagunijimaku	3.67	27	P	Pn	20 27 05.7	-0.1
JYNG				eS	Sn	20 27 46.9	-1.1
YOJ	Yonaguni jima	3.71	28		Pn	20 27 05.9	-0.5
YOJ				Sn	Sn	20 27 46.9	-1.9
YOJ	Yonaguni jima	3.71	28	P	Pn	20 27 06.4	+0.1
YOJ	Yonaguni jima	3.71	28	P	Pn	20 27 06.5	+0.1
YOJ				eS	Sn	20 27 48.2	-0.7
HATJ	Hateruma jima	3.79	40	eP	Pn	20 27 07.0	-0.5
HATJ				S	Sn	20 27 49.5	-1.3
TATO	Taipei	3.81	5		Pn	20 27 07.2	-0.4
TATO				Sn	Sn	20 27 51.2	0.0
IRIF	Iriomote-Funau	3.96	37	P	Pn	20 27 09.6	-0.2
IRIF				eS	Sn	20 27 54.3	-0.7
JKRS	Kuro-shima	4.05	40	P	Pn	20 27 10.8	-0.1
JKRS				eS	Sn	20 27 55.5	-1.6
KNM	Kinmen	4.08	323	eP	Pn	20 27 11.4	0.0
KNM				i S	Sn	20 27 56.6	-1.3
KNMB	Chin-men Tao	4.14	323		Pn	20 27 10.5	-1.8
KNMB				Sn	Sn	20 27 55.3	-4.2
KNMB	Chin-men Tao	4.14	323	eP	Pn	20 27 11.0	-1.3
KNMB				eS	Sn	20 27 56.1	-3.4
ZPLA	Ao Xicun	4.16	312	eP	Pn	20 27 11.2	-1.3
ZPLA				eS	Sn	20 27 56.6	-3.3
JIJ	Ishigaki jima	4.23	41	P	Pn	20 27 12.4	-0.9
JIJ				eS	Sn	20 27 58.3	-3.2
DSXP	Dongshan	4.26	307	eP	Pn	20 27 12.6	-1.3
PTMZ	Houxiangcun	4.28	335	i P	Pn	20 27 12.9	-1.2
PTMZ				S	Sn	20 27 58.5	-4.2
JISG	Ishigakijimahi	4.49	40	P	Pn	20 27 16.2	-0.8
JISG				S	Sn	20 28 05.5	-2.5
AXDP	Jialang	4.72	323	i P	Pn	20 27 19.4	-0.8
AXDP				i S	Sn	20 28 10.2	-3.4
JTJ	Tarama	4.78	43	eP	Pn	20 27 20.4	-0.5
JTJ				S	Sn	20 28 13.4	-1.5
MATB	Ma-tsu	5.08	348	eP	Pn	20 27 23.2	-1.9
MATB				i S	Sn	20 28 17.9	-4.6
JIRB	Irabujima	5.21	45	eP	Pn	20 27 25.8	-1.0
JMJ2	Miyako jima3	5.26	47	P	Pn	20 27 26.5	-1.0
JMJ2				eS	Sn	20 28 23.6	-3.1
MHZQ	Yeshan	5.28	339	i P	Pn	20 27 26.7	-1.1
MHZQ				S	Sn	20 28 23.1	-4.1
JMJ	Miyako jima 2	5.28	46	P	Pn	20 27 26.5	-1.3
JOGS	Gusukube	5.32	47	eP	Pn	20 27 27.6	-0.8
JOGS				eS	Sn	20 28 26.3	-2.1
JIKM	Ikemajima	5.33	45	P	Pn	20 27 27.4	-1.0
JIKM				eS	Sn	20 28 26.2	-2.3
LYJJ	Jianjiangzhen	5.50	347	i P	Pn	20 27 29.4	-1.5
LYJJ				S	Sn	20 28 27.5	-5.3
HKPS	Hong Kong Po S	6.59	281	Pn	Pn	20 27 39.7	-6.1
HKPS				Sn	Sn	20 28 53.8	-5.7
HKPS	Hong Kong Po S	6.59	281	P	Pn	20 27 44.7	-1.1
JOW	Kunigami	8.63	48	Pn	Pn	20 28 11.1	-2.5
QIZ	Qiongzhong	10.82	261	Pn	Pn	20 28 37.4	-6.2
KSRS	Korea Array	17.27	18	P	P	20 30 09.6	+0.8
	0.4nm,0.3s,baz=198,slow=11,SNR=9.5						
	3.2nm,0.6s						
JSG	Sagara	20.16	45	P	P	20 30 39.6	-1.0
JGF	Kuroka	20.22	41	P	P	20 30 40.8	-0.5
JGF				IAmb	IAmb	20 30 55.9	
	comp=Z,31nm,1.5s						
MJAR	Matsushiro Arr	21.36	40	P	P	20 30 54.0	+0.5
	comp=Z,1.0nm,0.8s,baz=212,slow=8.1,SNR=5.1						
	comp=Z,1.0nm,0.8s						
MJAR	Matsushiro Arr	21.36	40	IAmb	IAmb	20 30 56.5	
	comp=Z,5.6nm,1.3s						
JKA	Kamikawa-asahi	29.00	33	P	P	20 32 05.6	+0.5
SONM	Songino Array	29.14	339	P	P	20 32 08.6	+2.1
	comp=Z,1.9nm,0.7s,baz=159,slow=9.5,SNR=12						
	comp=Z,1.9nm,0.7s						
SONM	Songino Array	29.14	339	P	P	20 32 05.9	-0.6
MKAR	Makanchi Array	40.51	318	P	P	20 33 45.9	+1.8
	comp=Z,0.9nm,0.7s,baz=105,slow=8.8,SNR=6.4						
	comp=Z,0.9nm,0.7s						
MKAR	Makanchi Array	40.51	318	P	P	20 33 42.6	-1.5
WB0	Warramunga Arr	42.70	161	P	P	20 34 01.2	-1.0
WB0				IAmb	IAmb	20 34 02.0	
	comp=Z,12nm,1.4s						
ZAA0	Zalesovo Array	42.77	329	P	P	20 34 03.2	+0.7
ZALV	Zalesovo Beam	42.77	329	P	P	20 34 05.5	+3.1
	comp=Z,2.2nm,0.3s,baz=116,slow=9.0,SNR=13						
	comp=Z,2.2nm,0.3s						
ZALV	Zalesovo Beam	42.77	329	P	P	20 34 02.8	+0.4
WR8	Warramunga Arr	42.91	161	P	P	20 34 02.3	-1.6
KURK	Kurchatov	44.40	322	P	P	20 34 15.5	-0.1
KURK				IAmb	IAmb	20 34 31.8	
	comp=Z,4.4nm,1.2s						
KURBB	Kurchatov Arra	44.41	322	P	P	20 34 17.9	+2.2
	comp=Z,0.7nm,0.7s,baz=117,slow=7.6,SNR=6.0						
	comp=Z,0.7nm,0.7s						
ASAR	Alice Springs	46.27	164	P	P	20 34 29.7	-1.0
	comp=Z,0.4nm,0.5s,baz=344,slow=6.4,SNR=5.7						
	comp=Z,0.4nm,0.5s						
NRIK	Noril'sk	52.30	346	P	P	20 35 17.3	+1.2
	comp=Z,3.5nm,0.8s,baz=116,slow=9.4,SNR=4.4						
	comp=Z,3.5nm,0.8s						
NRIK	Noril'sk	52.30	346	P	P	20 35 16.3	+0.2
NRIK				IAmb	IAmb	20 35 18.2	
	comp=Z,3.6nm,0.8s						
C16K	Lisburne Hills	64.42	23	P	P	20 36 41.6	+1.1
C19K	Lookout Ridge	66.59	23	P	P	20 36 56.1	+1.4
M16K	Timber Creek	66.85	31	P	P	20 36 56.7	+0.3
D19K	Kuna River	67.11	23	P	P	20 36 59.3	+1.3
D19K				IAmb	IAmb	20 37 17.2	
	comp=Z,6.5nm,1.5s						
B21K	Ikpikpuk River	68.35	22	P	P	20 37 07.1	+1.4
B21K				IAmb	IAmb	20 37 07.9	
	comp=Z,3.0nm,0.8s						
B22K	Teshekpuk Lake	68.73	21	P	P	20 37 09.2	+1.2
B22K				IAmb	IAmb	20 37 09.8	
	comp=Z,4.9nm,0.9s						
K20K	Telida	68.99	29	P	P	20 37 11.7	+2.0
D25K	Kavik River	71.27	22	P	P	20 37 24.5	+0.8
D25K				IAmb	IAmb	20 37 31.3	
	comp=Z,4.9nm,1.2s						
ILAR	Eielson Array	71.91	27	P	P	20 37 26.9	-0.6
	comp=Z,0.3nm,0.5s,baz=270,slow=5.7,SNR=5.2						
	comp=Z,0.3nm,0.5s						
ILAR	Eielson Array	71.91	27	P	P	20 37 27.3	-0.2
FINES	FINESS Array B	74.02	330	P	P	20 37 42.4	+2.4
	comp=Z,1.7nm,0.9s,baz=35,slow=5.1,SNR=1.9						
	comp=Z,1.7nm,0.9s						
FINES	FINESS Array B	74.02	330	P	P	20 37 41.3	+1.3
M29M	Somme Creek	76.15	28	P	P	20 37 53.9	+1.5
M29M				IAmb	IAmb	20 38 00.2	
	comp=Z,8.3nm,1.4s						
HERN	Volcan Telica	136.63	42		PKPdf	20 45 26.1	-1.3

NOU 17 20:29:17.1, 40°.21S×173°.57E, h199km, MLv3.8/9, Cook Strait, New Zealand

WEL 17 20:29:21.2±1.0, 40°S±4°×17°4E±°, h153km±7km, M3.3/30, MLv3.3/30, Error ellipse: s-maj=8.9km s-min=4.4km az=109.7, confirmed

ISC 17 20:29:17.1±1.6, 40°.25S±0°.05×173°.59E±0°.06, h185km±9km, n105, σ1s.27/113, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUWZ	D'Urville Isla	0.60	155	P	Pn	20 29 44.1	+1.1
DUWZ				S	Sn	20 30 01.3	-1.8
NMEZ	Namu Road	0.87	15	P	Pn	20 29 45.7	+1.2
NMEZ				S	Sn	20 30 04.8	-0.7
TKNZ	Takaka Hill	0.91	211	P	Pn	20 29 45.8	+1.1
TKNZ				S	Sn	20 30 04.1	-2.1
NNZ	Nelson	0.97	189	P	Pn	20 29 46.3	+1.2
NNZ				S	Sn	20 30 05.1	-1.8
QRZ	Quartz Range	0.99	234	P	Pn	20 29 46.2	+1.0
QRZ	Quartz Range	0.99	234	P	Pn	20 29 46.3	+1.1
QRZ				S	Sn	20 30 05.0	-2.1
NBEZ	Newall Road No	1.01	13	P	Pn	20 29 46.7	+1.3
NBEZ				S	Sn	20 30 06.8	-0.4
LREZ	Lake Rotokare	1.01	39	P	Pn	20 29 46.6	+1.1
LREZ				S	Sn	20 30 05.9	-1.3
KHEZ	Kahui Hut	1.01	19	P	Pn	20 29 46.8	+1.2
KHEZ	Kahui Hut	1.01	19	P	Pn	20 29 46.9	+1.3
KHEZ				S	Sn	20 30 06.7	-0.8
TCW	Tory Channel	1.09	151	P	Pn	20 29 47.5	+1.5
PKE	Pukeiti	1.10	16	P	Pn	20 29 47.5	+1.2
DREZ	Durham Road	1.17	24	P	Pn	20 29 48.2	+1.5
KIW	Kapiti Island	1.18	121	P	Pn	20 29 47.9	+1.2
WAZ	Wanganui	1.19	66	P	Pn	20 29 48.6	+1.8
TUWZ	Tuamarina	1.21	167	P	Pn	20 29 48.7	+1.8
MRNZ	Matariki Terra	1.30	209	P	Pn	20 29 49.0	+1.2
OGWZ	Otaki Gorge	1.33	115	P	Pn	20 29 49.4	+1.4
SNZO	South Karori	1.35	142	P	Pn	20 29 49.4	+1.3
WEL	Wellington	1.37	139	P	Pn	20 29 49.7	+1.4
CAW	Cannon Point	1.41	128	P	Pn	20 29 50.1	+1.4
VRZ	Vera Road	1.45	39	P	Pn	20 29 49.9	+0.9
BSWZ	Blackbirch Sta	1.48	172	P	Pn	20 29 51.0	+1.7
BHW	Baring Head	1.51	140	P	Pn	20 29 49.7	+0.1
CMWZ	Cape Campbell	1.57	163	P	Pn	20 29 52.4	+2.2
MRZ	Mangatainoka R	1.57	106	P	Pn	20 29 51.5	+1.3
THZ	Tophouse	1.59	199	P	Pn	20 29 51.9	+1.4
HOWZ	Holdsworth Sta	1.60	114	P	Pn	20 29 51.8	+1.3
PKVZ	Pokaka	1.66	55	P	Pn	20 29 52.3	+1.1
MTVZ	Mangateitei	1.69	60	P	Pn	20 29 52.5	+1.0
MTW	Mount Morrison	1.71	122	P	Pn	20 29 53.0	+1.4
MSWZ	Moikau Station	1.71	133	P	Pn	20 29 53.0	+1.4
TRVZ	Turoa	1.79	58	P	Pn	20 29 53.5	+0.9
PAWZ	Paruwai Farm	1.79	129	P	Pn	20 29 53.7	+1.3
WNVZ	Wahianoa	1.81	60	P	Pn	20 29 53.7	+1.0
MAVZ	Matarangi	1.81	58	P	Pn	20 29 54.1	+1.2
FWVZ	Far West T-bar	1.81	57	P	Pn	20 29 53.8	+0.9
TIWZ	Tintock	1.83	107	P	Pn	20 29 54.2	+1.5
TSZ	Takapari Road	1.83	85	P	Pn	20 29 54.1	+1.3
COVZ	Chateau Observ	1.84	56	P	Pn	20 29 53.9	+0.9
PRWZ	Pori Road	1.85	100	P	Pn	20 29 54.7	+1.8
TWVZ	Taurewa	1.85	51	P	Pn	20 29 53.9	+0.7
MOVZ	Moawhango	1.87	64	P	Pn	20 29 53.9	+0.6
TUVZ	Tukino	1.87	59	P	Pn	20 29 54.6	+1.2
NGZ	Ngauruhoe	1.89	56	P	Pn	20 29 54.5	+0.9
SNVZ	South Ngauruho	1.91	57	P	Pn	20 29 54.8	+1.0
WTVZ	West Tongariro	1.92	54	P	Pn	20 29 54.8	+1.0
NNVZ	North Ngauruho	1.93	55	P	Pn	20 29 54.9	+0.9
OTVZ	Oturere	1.94	56	P	Pn	20 29 55.2	+1.1
TMWZ	Te Maipa	1.95	117	P	Pn	20 29 55.5	+1.5
TRWZ	Traveller	1.96	126	P	Pn	20 29 54.7	+0.5
KRVZ	Karewarewa	1.96	55	P	Pn	20 29 55.2	+0.8
DVHZ	Dannevirke	1.98	92	P	Pn	20 29 55.5	+1.2
NTVZ	North Tongarir	1.98	55	P	Pn	20 29 55.6	+1.0
ETVZ	East Tongariro	1.98	56	P	Pn	20 29 55.7	+1.2
TMVZ	Te Maari	1.99	56	P	Pn	20 29 55.9	+1.3
HIZ	Hauiti	2.00	30	P	Pn	20 29 55.5	+0.9
HIZ	Hauiti	2.00	30	P	Pn	20 29 55.5	+0.9
DSZ	Denniston Nort	2.01	222	P	Pn	20 29 56.3	+1.7
PNHZ	Pukenui	2.03	81	P	Pn	20 29 56.1	+1.1
KATZ	Kakaramea	2.07	53	P	Pn	20 29 56.6	+1.2
BFZ	Birch Farm	2.07	103	P	Pn	20 29 56.8	+1.5
BFZ	Birch Farm	2.07	103	P	Pn	20 29 56.7	+1.3
KHZ	Kahutara	2.16	181	P	Pn	20 29 57.9	+1.7
KHZ	Kahutara	2.16	181	P	Pn	20 29 57.9	+1.7
RITZ	Rihia Road	2.17	55	P	Pn	20 29 57.9	+1.4
RATZ	Rangitukua	2.19	51	P	Pn	20 29 58.1	+1.5
WPHZ	Waipukurau	2.20	86	P	Pn	20 29 58.1	+1.4
ANWZ	Angora Road	2.22	96	P	Pn	20 29 58.5	+1.6
KRHZ	Kereru	2.23	75	P	Pn	20 29 58.0	+1.0
WATZ	Wairara	2.27	48	P	Pn	20 29 59.3	+1.8
PRHZ	Porangahau	2.33	91	P	Pn	20 29 59.6	+1.4
KWHZ	Kaweka Forest	2.34	70	P	Pn	20 29 59.9	+1.5
KUTZ	Kaahu Road	2.47	45	P	Pn	20 30 01.2	+1.3
BKZ	Black Stump Fm	2.49	65	P	Pn	20 30 00.7	+0.6
BKZ	Black Stump Fm	2.49	65	P	Pn	20 30 00.6	+0.6
PXZ	Pawanui	2.52	86	P	Pn	20 30 01.7	+1.3
MCHZ	McNeill Hill	2.53	72	P	Pn	20 30 02.0	+1.5
KAHZ	Kahuranaki	2.57	81	P	Pn	20 30 02.3	+1.4
MRHZ	Matea Rd	2.61	58	P	Pn	20 30 01.7	+0.3
LTZ	Lake Taylor	2.71	201	P	Pn	20 30 04.3	+1.7
NMHZ	Naumai	2.74	66	P	Pn	20 30 04.1	+1.0
GVZ	Greta Valley S	2.74	188	P	Pn	20 30 04.3	+1.4
ARHZ	Aropaoanui	2.81	70	P	Pn	20 30 03.9	+0.2
MTHZ	Maungataniwha	2.88	62	P	Pn	20 30 05.1	+0.5
KMRZ	Kaimai	3.02	38	P	Pn	20 30 09.7	+3.3
OXZ	Oxford	3.28	200	P	Pn	20 30 10.4	+1.0
URZ	Urewera	3.38	55	P	Pn	20 30 10.6	-0.1
URZ	Urewera	3.38	55	P	Pn	20 30 10.6	-0.1
KNZ	Kokohu	3.39	70	P	Pn	20 30 11.2	+0.5
MHGZ	Mahia Peninsul	3.51	73	P	Pn	20 30 11.6	-0.6
MQZ	McQueen's Vall	3.52	191	P	Pn	20 30 12.7	+0.4
MHCZ	Mount Hutt	3.60	204	P	Pn	20 30 14.8	+1.4
MWZ	Matawai	3.61	59	P	Pn	20 30 13.7	+0.1
RACZ	Rakaia	3.63	197	P	Pn	20 30 14.7	+1.0
TKGZ	Te Karaka	3.77	63	P	Pn	20 30 16.4	+0.9
WACZ	Wakanui South	3.91	199	P	Pn	20 30 18.3	+1.2
RUGZ	Raukumara Rang	3.92	56	P	Pn	20 30 17.3	-0.2
CNGZ	Carnagh Statio	3.99	65	P	Pn	20 30 19.3	+1.0
TWGZ	Tauwhareparae	3.99	60	P	Pn	20 30 19.3	+0.9
HAZ	Te Kaha	4.11	54	P	Pn	20 30 19.4	-0.4
FOZ	Fox Glacier	4.32	219	P	Pn	20 30 23.1	+0.8
TMZ	Timaru	4.55	204	P	Pn	20 30 26.4	+1.1
JCZ	Jackson Bay	5.22	221	P	Pn	20 30 34.5	+0.5
JCZ	Jackson Bay	5.22	221	P	Pn	20 30 34.6	+0.5

IDC 17 20:33:12.7±1.3, 6°.34N×125°.35E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=45.3km s-min=9.3km az=100.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.76	17	Pg	Pg	20 33 27.1	-0.3
	317nm,0.3s,baz=240,slow=6.8,SNR=16						
DAV				Lg	Lg	20 33 38.0	
	604nm,0.3s,baz=63,slow=21,SNR=20						
WRA	Warramunga Arr	27.57	161	P	P	20 39 01.1	-0.6
	0.2nm,0.4s,baz=333,slow=11,SNR=8.6						
	0.2nm,0.4s						
ASAR	Alice Springs	30.97	165	P	P	20 39 32.3	+0.4
	0.5nm,0.5s,baz=344,slow=7.3,SNR=13						
	0.5nm,0.5s						
STKA	Stephens Creek	41.04	159	P	P	20 40 57.6	-0.3
	1.0nm,0.6s,baz=318,slow=16,SNR=2.8						
	1.0nm,0.6s						
MKAR	Makanchi Array	54.64	325	P	P	20 42 44.1	+0.8
	0.2nm,0.6s,baz=127,slow=6.2,SNR=1.2						
	0.2nm,0.6s						

NOU 17 20:43:50.6, 41°.26S×172°.76E, h134km, MLv3.9/9, South Island, New Zealand

WEL 17 20:43:52.9±1.2, 41°S±8°×17°3E±1°0, h121km±8km, M3.1/11, MLv3.1/11, Error ellipse: s-maj=12.9km s-min=10.1km az=94.4, confirmed

ISC 17 20:43:49.5±1.6, 41°.28S±0°.06×172°.76E±0°.05, h152km±8km, n61, σ0s.95/68, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRNZ	Matariki Terra	0.12	180	P	Pn	20 44 10.7	+0.8
MRNZ				S	Sn	20 44 23.9	-1.6
MATW	Matariki Wadsw	0.15	195	P	Pn	20 44 10.7	+0.7
MATW				S	Sn	20 44 24.2	-1.4
MOTS	Motueka DOC wo	0.25	51	P	Pn	20 44 11.0	+0.9
MOTS				S	Sn	20 44 24.9	-0.8
TKNZ	Takaka Hill	0.29	32	P	Pn	20 44 11.0	+0.7
TKNZ				S	Sn	20 44 24.9	-1.2
BTWS	Nelson Brightw	0.30	111	P	Pn	20 44 11.6	+1.4
BTWS				S	Sn	20 44 25.8	-0.3
NNZ	Nelson	0.47	83	P	Pn	20 44 11.6	+0.7
NNZ				S	Sn	20 44 26.7	-0.5
QRZ	Quartz Range	0.49	339	P	Pn	20 44 11.8	+0.8
QRZ	Quartz Range	0.49	339	S	Sn	20 44 26.3	-1.1
QRZ	Quartz Range	0.49	339	P	Pn	20 44 11.9	+0.9
QRZ				S	Sn	20 44 25.9	-1.5
THZ	Tophouse	0.49	167	P	Pn	20 44 12.1	+1.0
DSZ	Denniston Nort	0.85	237	P	Pn	20 44 14.2	+0.8
TUWZ	Tuamarina	0.91	100	P	Pn	20 44 15.1	+1.5
BSWZ	Blackbirch Sta	0.95	118	P	Pn	20 44 14.9	+0.9
DUWZ	D'Urville Isla	1.00	62	P	Pn	20 44 15.7	+1.2
TCW	Tory Channel	1.15	87	P	Pn	20 44 16.9	+1.1
CMWZ	Cape Campbell	1.19	114	P	Pn	20 44 17.6	+1.5
KHZ	Kahutara	1.28	153	P	Pn	20 44 18.2	+1.3
SNZO	South Karori	1.47	92	P	Pn	20 44 19.5	+0.7
SNZO	South Karori	1.47	92	P	Sn	20 44 40.9	-0.4
WEL	Wellington	1.52	91	P	Pn	20 44 20.2	+0.8
LTZ	Lake Taylor	1.54	193	P	Pn	20 44 21.0	+1.3
KIW	Kapiti Island	1.68	76	P	Pn	20 44 21.9	+0.8
GVZ	Greta Valley S	1.70	173	P	Pn	20 44 22.8	+1.5
CAW	Cannon Point	1.75	85	P	Pn	20 44 22.4	+0.5
MSWZ	Moikau Station	1.88	95	P	Pn	20 44 23.9	+0.5
OGWZ	Otaki Gorge	1.88	77	P	Pn	20 44 24.1	+0.7
AMCZ	Amberley	1.90	182	P	Pn	20 44 24.5	+1.0
PAWZ	Paruwai Farm	2.01	94	P	Pn	20 44 25.2	+0.3
MTW	Mount Morrison	2.07	88	P	Pn	20 44 25.9	+0.4
OXZ	Oxford	2.11	194	P	Pn	20 44 26.6	+0.6
HOWZ	Holdsworth Sta	2.12	80	P	Pn	20 44 26.5	+0.3
MRZ	Mangatainoka R	2.23	75	P	Pn	20 44 27.6	+0.2
WAZ	Wanganui	2.28	49	P	Pn	20 44 30.4	+2.4
WVZ	Waitaha Valley	2.34	219	P	Pn	20 44 29.5	+0.8
TMWZ	Te Maipa	2.37	87	P	Pn	20 44 29.6	+0.5
MHCZ	Mount Hutt	2.42	201	P	Pn	20 44 30.3	+0.6
MQZ	McQueen's Vall	2.42	182	P	Pn	20 44 30.3	+0.6
OKCZ	Okains Bay	2.45	175	P	Pn	20 44 31.5	+1.4
RACZ	Rakaia	2.49	190	P	Pn	20 44 31.2	+0.8
PRWZ	Pori Road	2.54	74	P	Pn	20 44 31.6	+0.4
AKCZ	Akaroa Harbour	2.59	178	P	Pn	20 44 32.7	+1.0
VRZ	Vera Road	2.64	36	P	Pn	20 44 34.2	+1.8
BFZ	Birch Farm	2.71	78	P	Pn	20 44 33.6	+0.3
BFZ	Birch Farm	2.71	78	S	Sn	20 45 06.0	-1.0
BFZ	Birch Farm	2.71	78	P	Pn	20 44 33.5	+0.2
TSZ	Takapari Road	2.73	64	P	Pn	20 44 33.8	+0.3
RPZ	Rata Peaks	2.74	207	P	Pn	20 44 34.3	+0.7
RPZ	Rata Peaks	2.74	207	P	Pn	20 44 34.3	+0.7
WACZ	Wakanui South	2.75	194	P	Pn	20 44 34.6	+0.9
DVHZ	Dannevirke	2.77	70	P	Pn	20 44 34.0	-0.1
ARCZ	Arundel	2.91	203	P	Pn	20 44 36.1	+0.3
PNHZ	Pukenui	2.96	64	P	Pn	20 44 36.4	0.0
OTVZ	Oturere	3.07	47	P	Pn	20 44 39.1	+1.1
PRHZ	Porangahau	3.12	72	P	Pn	20 44 38.7	+0.3
FOZ	Fox Glacier	3.13	223	P	Pn	20 44 39.2	+0.7
TMZ	Timaru	3.36	202	P	Pn	20 44 42.0	+0.6
KAHZ	Kahuranaki	3.47	66	P	Pn	20 44 43.0	0.0
JCZ	Jackson Bay	4.04	225	P	Pn	20 44 51.0	+0.6
JCZ	Jackson Bay	4.04	225	P	Pn	20 44 51.0	+0.6
ODZ	Otahua Downs	4.07	202	P	Pn	20 44 51.0	+0.4
ODZ	Otahua Downs	4.07	202	P	Pn	20 44 51.1	+0.6

JMA 17 21:00:54.2±0.5, 31°N±2°×14°3E±°, h21km, MV3.6/13, FAR E OFF IZU ISLANDS, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.13	307	eP	Pn	21 01 43.9	+1.6
JHJ2				eS	Sn	21 02 21.0	+1.9
BSO1	Boso 1	3.72	336	eP	Pn	21 01 52.2	+2.4
BSO3	Boso 3	4.02	332	eP	Pn	21 01 56.9	+2.6
JHO	Hitachi	5.65	341	eP	Pn	21 02 18.9	+1.9
JRY	Ryogami san	5.75	327	eP	Pn	21 02 21.7	+3.4
JAG	Ashikaga	5.86	333	eP	Pn	21 02 22.6	+2.8

IDC 17 21:05:26.6±4.5, 6°.38S×129°.08E, h190km±42km, mb3.1/1, mbtmp3.8/4, Error ellipse: s-maj=63.5km s-min=17.2km az=72.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.12	196	P	Pn	21 08 15.3	+1.9
	1.7nm,0.5s,baz=25,slow=12,SNR=12						
FITZ				S	Sn	21 10 27.7	-0.7
	2.8nm,0.3s,baz=139,slow=6.1,SNR=9.0						
WRA	Warramunga Arr	14.42	160	P	Pn	21 08 40.5	-1.7
	0.5nm,0.3s,baz=339,slow=14,SNR=18						
WRA				S	Sn	21 11 10.4	-13
	1.2nm,0.4s,baz=349,slow=21,SNR=10.0						
ASAR	Alice Springs	17.81	165	P	Pn	21 09 22.7	-0.3
	2.0nm,0.6s,baz=352,slow=11,SNR=31						
ASAR				S	S	21 12 35.9	-0.1
	0.5nm,0.5s,baz=325,slow=22,SNR=6.0						
MKAR	Makanchi Array	67.21	327	P	P	21 16 00.1	-0.3
	0.4nm,0.6s,baz=138,slow=7.3,SNR=5.9						
	0.4nm,0.6s						

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*IDC **17** 21:23:22.0±1.4, 28°.67S×63°.41E, h0km, mb3.9/5, mbtmp3.9/5, MS3.2/2, Error ellipse: s-maj=48.7km s-min=31.2km az=96.0*

ISC 17 21:23:23.2±1.5, 28°.7S±0°.2×63°.4E±0°.4, h10km, n13, σ1ˢ27/6, mb3.9/5, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H04N2	CROZET ISLANDS	19.70	204	T	T	21 49 40.3	
	baz=33,slow=75,SNR=429						
H04N1	CROZET ISLANDS	19.71	204	T	T	21 49 47.6	
	baz=33,slow=75,SNR=364						
H04N3	CROZET ISLANDS	19.72	204	T	T	21 49 40.0	
	baz=33,slow=75,SNR=299						
H01W2	Cape Leeuwin H	43.24	112	T	T	22 17 11.4	
	baz=266,slow=74,SNR=5.8						
H01W3	Cape Leeuwin H	43.25	112	T	T	22 17 11.5	
	baz=266,slow=74,SNR=6.6						
H01W1	Cape Leeuwin H	43.26	112	T	T	22 17 12.6	
	baz=266,slow=74,SNR=7.7						
CMAR	Chiang Mai Arr	58.11	41	P	P	21 33 15.6	-1.5
	0.8nm,0.7s,baz=224,slow=7.3,SNR=8.1						
CMAR				LR	LR	21 54 26.8	
	comp=Z,11nm,20.2s,baz=90,slow=32						
	0.8nm,0.7s						
QSPA	South Pole Qui	61.50	180	P	P	21 33 39.4	-0.6
	3.7nm,0.6s,baz=185,slow=2.5,SNR=6.4						
	3.7nm,0.6s						
ASAR	Alice Springs	62.70	103	P	P	21 33 49.5	+0.8
	0.7nm,0.8s,baz=238,slow=5.7,SNR=7.1						
	0.7nm,0.8s						
WRA	Warramunga Arr	64.46	100	P	P	21 34 00.9	+0.6
	0.5nm,0.8s,baz=246,slow=6.4,SNR=2.2						
	0.5nm,0.8s						
PMG	Port Moresby	80.15	95	LR	LR	22 09 11.8	
	comp=Z,22nm,19.7s,baz=304,slow=34						
ZALV	Zalesovo Beam	84.34	13	P	P	21 35 55.6	+0.6
	0.5nm,0.5s,baz=189,slow=8.6,SNR=2.5						
	0.5nm,0.5s						
YKA	Yellowknife Ar	146.13	358	PKPbc	PKPab	21 43 04.4	+0.9
	0.6nm,0.8s,baz=358,slow=3.3,SNR=6.0						

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*SJA **17** 21:25:26.9±0.5, 24°.10S×67°.14W, h200km±3km, ML3.9, MW3.9*

*IDC **17** 21:25:27.4±1.9, 24°.06S×67°.08W, h170km±18km, mb3.5/3, mbtmp3.8/9, Error ellipse: s-maj=24.0km s-min=16.7km az=102.0*

*NEIC **17** 21:25:27.2±2.0, 24°.14S±0°.07×67°.03W±0°.09, h164km±7km, mb4.2/6, ML4.1(GUC), Error ellipse: s-maj=12.5km s-min=10.2km az=93.0*

*GUC **17** 21:25:28.6±0.8, 24°.10S×67°.19W, h188km±9km, ML4.1*

*VAO **17** 21:25:33.7±2.7, 23°.88S×66°.75W, h209km±13km, mb4.2,*

Presumed earthquake

ISC 17 21:25:27.6±0.6, 24°.10S±0°.04×67°.19W±0°.03, h185km±6km, n113, σ1ˢ21/139, 11C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALTA		0.79	99	⇓eP	Pn	21 25 56.0	+1.0
SALTA		0.79	99	eP	Pn	21 25 56.0	+1.0
SALTA				eS	Sn	21 26 17.2	+1.1
AF01	San Pedro de A	1.46	321		Pn	21 26 00.8	+0.8
AF01	San Pedro de A	1.46	321	eP	Pn	21 25 56.4	-3.6
AF01				IAML		21 26 46.4	
	comp=Z,310nm,0.7s						
SLA	San Lorenzo	1.66	112	⇓eP	Pn	21 26 03.0	+1.3
SLA	San Lorenzo	1.66	112	eP	Pn	21 26 02.8	+1.1
SLA				eS	Sn	21 26 28.8	+0.7
HJA	Humahuaca	1.86	62	eP	Pn	21 26 04.8	+0.8
HJA				eS	Sn	21 26 33.3	+1.2
AZAP	Zapla	1.94	94	eP	Pn	21 26 05.3	+0.7
AZAP				eS	Sn	21 26 33.7	+0.3
AZAP				IAML		21 26 36.6	
	comp=Z,246nm,0.8s						
FSA	Cafayete	2.29	152	eP	Pn	21 26 09.1	+0.8
GO02	Mina Guanaco	2.43	244	Pn	Pn	21 26 10.7	+0.7
GO02	Mina Guanaco	2.43	244	⇑iP	Pn	21 26 11.5	+1.4
GO02				i S	Sn	21 26 43.8	+0.7
GO02				IAML		21 26 45.6	
	comp=N,1µm,0.4s						
GO02	Mina Guanaco	2.43	244	eP	Pn	21 26 11.5	+1.4
GO02				eS	Sn	21 26 44.3	+1.1
GO02				IAML		21 26 48.1	
	comp=Z,923nm,0.5s						
YJA	Yavi	2.46	39	eP	Pn	21 26 11.8	+1.3
YJA				eS	Sn	21 26 44.7	+0.8
YJA	Yavi	2.46	39	eP	Pn	21 26 12.0	+1.4
YJA				eS	Sn	21 26 45.0	+1.1
PB06	IPOC Station P	2.59	302	Pn	Pn	21 26 13.0	+1.2
PB06	IPOC Station P	2.59	302	⇑iP	Pn	21 26 13.3	+1.5
PB06				i S	Sn	21 26 46.5	+0.3
PB06				IAML		21 26 48.9	
	comp=E,443nm,0.3s						
PB06	IPOC Station P	2.59	302	eP	Pn	21 26 13.3	+1.5
PB06				eS	Sn	21 26 47.1	+0.9
PB06				IAML		21 26 50.4	
	comp=Z,315nm,0.7s						
PB09	IPOC Station P	2.97	320	Pn	Pn	21 26 17.2	+0.8
PB09	IPOC Station P	2.97	320	⇑iP	Pn	21 26 18.1	+1.7
PB09				IAML		21 26 56.5	
	comp=N,259nm,0.5s						
PB09	IPOC Station P	2.97	320	eP	Pn	21 26 18.1	+1.7
PB09				eS	Sn	21 26 55.5	+1.2
PB09				IAML		21 26 56.2	
	comp=Z,246nm,0.6s						
PB14	IPOC Station P	2.98	259	Pn	Pn	21 26 17.0	+0.5
PB14	IPOC Station P	2.98	259	⇑iP	Pn	21 26 17.4	+0.8
PB14				i S	Sn	21 26 53.1	-1.6
PB14				IAML		21 26 54.5	
	comp=E,204nm,0.4s						
PB14	IPOC Station P	2.98	259	eP	Pn	21 26 17.4	+0.8
PB14				eS	Sn	21 26 55.4	+0.8
PB14				IAML		21 26 56.5	
	comp=Z,182nm,1.1s						
PB05	IPOC Station P	3.03	294	Pn	Pn	21 26 17.8	+0.8
PB05	IPOC Station P	3.03	294	⇑iP	Pn	21 26 17.9	+1.0
PB05				i S	Sn	21 26 53.4	-2.1
PB05				IAML		21 26 59.7	
	comp=N,149nm,0.3s						
PB05	IPOC Station P	3.03	294	eP	Pn	21 26 18.0	+1.0
PB05				eS	Sn	21 26 56.0	+0.5
PB05				IAML		21 26 59.9	
	comp=Z,112nm,0.5s						
PB03	IPOC Station P	3.12	310	Pn	Pn	21 26 18.5	+0.4
PB03	IPOC Station P	3.12	310	⇑eP	Pn	21 26 19.2	+1.1
PB03				IAML		21 27 00.0	
	comp=N,258nm,0.5s						
PB03	IPOC Station P	3.12	310	eP	Pn	21 26 19.2	+1.1
PB03				eS	Sn	21 26 57.9	+0.3
PB03				IAML		21 27 01.7	
	comp=Z,228nm,0.4s						
PB10	IPOC Station P	3.14	280	Pn	Pn	21 26 18.8	+0.6
PB10	IPOC Station P	3.14	280	⇑iP	Pn	21 26 19.4	+1.3
PB10				eS	Sn	21 26 57.6	+0.1
PB10				IAML		21 26 59.0	
	comp=N,186nm,0.4s						
PB10	IPOC Station P	3.14	280	eP	Pn	21 26 19.4	+1.3
PB10				eS	Sn	21 26 58.0	+0.5
PB10				IAML		21 27 03.5	
	comp=Z,157nm,0.5s						
AHML	Horco Molle	3.16	148	eP	Pn	21 26 05.0	-13
AC02	Maricunga	3.24	212	Pn	Pn	21 26 20.6	+0.7
AC02	Maricunga	3.24	212	⇑eP	Pn	21 26 21.2	+1.3
AC02	Maricunga	3.24	212	eP	Pn	21 26 20.7	+0.8
PB07	IPOC Station P	3.43	313	Pn	Pn	21 26 22.2	+0.3
PB07	IPOC Station P	3.43	313	eP	Pn	21 26 22.8	+0.8
PB07				i S	Sn	21 27 02.0	-2.3
PB07	IPOC Station P	3.43	313	eP	Pn	21 26 22.7	+0.8
PB07				eS	Sn	21 27 04.4	0.0
PB07				IAML		21 27 06.7	
	comp=Z,231nm,0.4s						
AC01	Pan de Azucar	3.70	236	Pn	Pn	21 26 24.5	-0.6
AC01	Pan de Azucar	3.70	236	⇑eP	Pn	21 26 25.0	-0.2
AC01	Pan de Azucar	3.70	236	eP	Pn	21 26 24.9	-0.2
AC01				IAML		21 27 10.6	
	comp=Z,106nm,0.8s						
PB01	IPOC Station P	3.71	325	Pn	Pn	21 26 25.3	-0.1
PB01	IPOC Station P	3.71	325	⇑eP	Pn	21 26 25.8	+0.5
PB01	IPOC Station P	3.71	325	eP	Pn	21 26 25.8	+0.5
PB01				eS	Sn	21 27 10.0	-0.5
PB01				IAML		21 27 15.1	
	comp=Z,90nm,0.3s						
PB02	IPOC Station P	3.73	317	Pn	Pn	21 26 25.7	+0.1
PB02	IPOC Station P	3.73	317	eP	Pn	21 26 25.9	+0.3
PB02				i S	Sn	21 27 08.3	-2.6
PB02	IPOC Station P	3.73	317	eP	Pn	21 26 26.0	+0.5
PB02				eS	Sn	21 27 10.4	-0.5
PB02				IAML		21 27 13.7	
	comp=Z,224nm,0.5s						
PATCX	Punta Patache	4.26	319	Pn	Pn	21 26 32.5	+0.2
PATCX	Punta Patache	4.26	319	eP	Pn	21 26 33.0	+0.7
PATCX	Punta Patache	4.26	319	eP	Pn	21 26 33.0	+0.7
PATCX				eS	Sn	21 27 22.0	-1.0
PATCX				IAML		21 27 32.9	
	comp=Z,83nm,0.4s						
AC06	Mina Casimiro	4.32	221	Pn	Pn	21 26 31.9	-1.1
AC06	Mina Casimiro	4.32	221	eP	Pn	21 26 32.5	-0.5
PB08	IPOC Station P	4.34	335	⇑iP	Pn	21 26 34.7	+1.1
PB08				i S	Sn	21 27 23.4	-1.9
PB08	IPOC Station P	4.34	335	eP	Pn	21 26 34.3	+0.7
PB08				IAML		21 27 31.2	
	comp=Z,68nm,0.5s						
GO03	Copiapo	4.43	218	Pn	Pn	21 26 33.8	-0.6
GO03	Copiapo	4.43	218	eP	Pn	21 26 33.5	-0.9
GO03				eS	Sn	21 27 25.4	-1.5
GO03				IAML		21 27 29.2	
	comp=Z,93nm,0.3s						
TA01	Diego Aracena	4.47	321	Pn	Pn	21 26 34.3	-0.7
HMBC	Humberstone	4.55	326	Pn	Pn	21 26 34.6	-1.4
HMBC	Humberstone	4.55	326	eP	Pn	21 26 35.2	-0.9
HMBC	Humberstone	4.55	326	eP	Pn	21 26 35.3	-0.8
HMBC				IAML		21 27 34.0	
	comp=Z,120nm,0.4s						
GO01	Chusmiza	4.78	337	Pn	Pn	21 26 39.6	+0.2
PB11	IPOC Station P	4.88	332	Pn	Pn	21 26 39.8	-0.6
PB11	IPOC Station P	4.88	332	eP	Pn	21 26 39.8	-0.6
PB11				IAML		21 27 37.1	
	comp=Z,66nm,0.8s						
ACLC	CERRO LA CRUZ	5.31	178	eP	Pn	21 26 46.0	+0.1
AC05	El Transito	5.47	210	Pn	Pn	21 26 46.6	-1.2
LCO	Las Campanas	5.82	212	Pn	Pn	21 26 50.6	-1.9
PB12	IPOC Station P	6.19	331	Pn	Pn	21 26 56.2	-1.1
CFA	Coronel Fontan	7.54	187	P	Pn	21 27 14.9	+0.2
	comp=Z,0.8nm,0.3s,baz=342,slow=12,SNR=14						
CFA				S	Sn	21 28 34.7	-5.0
	comp=Z,1.8nm,0.3s,baz=134,slow=19,SNR=6.0						
CO06	Fray Jorge	7.65	210	Pn	Pn	21 27 15.2	-1.0
LPAZ	La Paz	7.82	353	P	Pn	21 27 19.4	+0.2
	comp=Z,2.1nm,0.4s,baz=160,slow=7.4,SNR=9.9						
LPAZ	La Paz	7.82	353	Pn	Pn	21 27 19.0	-0.1
CO02	Combarbal	7.84	205	Pn	Pn	21 27 17.5	-1.4
CPUP	Villa Florida	9.20	106	P	Pn	21 27 35.5	-1.1
	comp=Z,0.9nm,0.9s,baz=280,slow=15,SNR=6.4						
CPUP	Villa Florida	9.20	106		Pn	21 27 34.4	-2.2
MT02	Curacav	9.76	200	Pn	Pn	21 27 45.1	+1.2
SIV	San Ignacio	9.90	37	P	Pn	21 27 43.8	-2.0
	comp=Z,1.9nm,0.6s,baz=209,slow=13,SNR=10						
BI02	San Fabin de	13.01	195	Pn	Pn	21 28 25.3	-0.4
CPSB	Cacapava Do Su	13.74	120	eP	P	21 28 37.5	0.0
PTGB	Pitanga	13.79	96	eP	P	21 28 38.3	+0.1
ITAB	Concordia	13.93	106		P	21 28 38.6	-1.0
TRQA	Tornquist	14.61	163	Pn	Pn	21 28 44.1	-1.5
ITRB	Iturama	16.22	78	eP	Pn	21 29 05.0	-0.4
ARAG	Araguaiana, MT	16.68	63	eP	Pn	21 29 11.9	+0.9
PLCA	Paso Flores	16.83	189	P	Pn	21 29 12.8	+0.3
	comp=Z,2.7nm,1.1s,baz=345,slow=13,SNR=3.6						
PLCA	Paso Flores	16.83	189	P	P	21 29 11.8	+0.2
PLCA				IAmb	IAmb	21 29 21.4	
	comp=Z,4.6nm,1.0s						
CLDB	Colider	17.04	41	eP	Pn	21 29 13.8	-1.4
SPB	Sao Paulo	18.08	92	P	P	21 29 23.8	-1.5
SPB				IAmb	IAmb	21 29 26.0	
	comp=Z,9.5nm,0.8s						
SPB	Sao Paulo	18.08	92	eP	P	21 29 23.4	-2.0
VAO	Valinhos	18.57	91	P	P	21 29 29.9	-0.9
VAO	Valinhos	18.57	91	eP	P	21 29 30.1	-0.7
IPMB	Ipameri, GO	18.72	75	eP	Pn	21 29 32.5	-2.5
SNDB	Serra Nova Dou	19.31	54	eP	P	21 29 38.3	-0.4
PARB	Paraibuna	19.76	92	eP	Pn	21 29 44.6	-2.8
BDFB	Brasilia	19.88	69	P	P	21 29 45.0	0.0
	comp=Z,16nm,0.6s,baz=240,slow=10,SNR=25						
BDFB	Brasilia	19.88	69	P	P	21 29 44.8	-0.2
BDFB				IAmb	IAmb	21 29 46.1	
	comp=Z,17nm,0.8s						
PMNB	Patos De Minas	20.10	78	eP	P	21 29 47.2	-0.1
JANB	Januaria	23.33	72	eP	P	21 30 18.5	-0.9
SMTB	Santa Maria do	24.09	54	eP	P	21 30 26.7	+0.4
SDBA	SAO DESIDERIO	24.11	65	eP	P	21 30 26.0	-0.5
GUA01	Guaratinga, BA	26.71	79	eP	P	21 30 49.5	-0.4
QSPA	South Pole Qui	66.11	180	P	P	21 35 56.7	+2.0
	comp=Z,2.3nm,0.5s,baz=187,slow=2.0,SNR=2.6						
	comp=Z,2.3nm,0.5s						
QSPA	South Pole Qui	66.11	180	P	P	21 35 56.4	+1.7
QSPA				IAmb	IAmb	21 35 57.7	
	comp=Z,2.6nm,0.6s						
TORD	Torodi Ar. Bea	76.77	69	P	P	21 37 00.2	+1.1
	comp=Z,0.9nm,0.7s,baz=278,slow=5.7,SNR=4.2						
	comp=Z,0.9nm,0.7s						
TORD	Torodi Ar. Bea	76.77	69	P	P	21 36 59.4	+0.3
PDAR	Pinedale Array	77.14	329	P	P	21 37 02.6	+1.7
	comp=Z,0.2nm,0.5s,baz=99,slow=5.1,SNR=4.3						
	comp=Z,0.2nm,0.5s						
PDAR	Pinedale Array	77.14	329	P	P	21 37 03.4	+2.5
ASAR	Alice Springs	128.29	205	PKP	PKiKP	21 44 14.1	+0.7
	comp=Z,0.6nm,0.5s,baz=136,slow=1.9,SNR=9.0						
ASAR	Alice Springs	128.29	205		PKiKP	21 44 13.7	+0.4
WRA	Warramunga Arr	131.46	207	PKP	PKiKP	21 44 20.4	+0.6
	comp=Z,0.5nm,0.5s,baz=151,slow=2.1,SNR=9.0						
ZALV	Zalesovo Beam	143.56	28	PKP	PKPdf	21 44 39.5	-0.4
	comp=Z,1.2nm,0.6s,baz=344,slow=4.8,SNR=7.1						
MKAR	Makanchi Array	146.71	39	PKPbc	PKPab	21 44 47.9	-1.2
	comp=Z,1.7nm,0.8s,baz=305,slow=2.9,SNR=11						
MKAR	Makanchi Array	146.71	39		PKPbc	21 44 47.5	0.0

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*IDC **17** 21:26:51.3±0.7, 60°.69S×40°.95W, h0km, mb4.2/8, mbtmp4.2/10, ML3.8/2, MS3.8/6, Error ellipse: s-maj=31.5km s-min=16.7km az=78.0*

*NEIC **17** 21:26:52.9±1.6, 60°.76S±0°.09×40°.9W±0°.2, h10km±1km, mb4.7/24, Error ellipse: s-maj=19.4km s-min=14.1km az=117.0*

ISC 17 21:26:52.4±0.5, 60°.78S±0°.07×40°.81W±0°.09, h10km, n62, σ1ˢ19/48, mb4.6/15, MS3.8/5, 4C, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	6.91	22		Pn	21 28 33.8	+0.2
ESPZ	Base Esperanza	8.03	244	Pn	Pn	21 28 47.6	-1.4
PMSA	Palmer Station	11.34	239	Pn	Pn	21 29 34.4	+0.2
	0.6nm,0.3s,baz=81,slow=11,SNR=6.1						
	6.8nm,0.8s						
PMSA	Palmer Station	11.34	239	Pn	Pn	21 29 34.1	0.0
EFI	East Falkland	13.20	306	Pn	Pn	21 30 03.1	+3.5
VNA3	Neumayer Olymp	16.19	143	⇑P	Pn	21 30 35.8	-3.8
	comp=Z,8.5nm,0.7s						
VNA1	Neumayer--Stat	16.39	141	⇑P	Pn	21 30 39.9	-2.2
	comp=Z,7.8nm,0.6s						
BELA	Belgrano 2	17.30	176		P	21 30 55.4	+0.4
MG02	Cerro Sombrero	17.39	285		P	21 30 55.1	-0.9
SNAA	Sanae	18.39	142	⇑P	P	21 31 06.9	-0.2
	comp=Z,90nm,0.8s						
SNAA	Sanae	18.39	142	P	Pn	21 31 08.8	+1.7
	comp=Z,0.3nm,0.3s,baz=284,slow=13,SNR=18						
SNAA				LR	LR	21 36 39.3	
	comp=Z,284nm,21.2s,baz=308,slow=32						
	comp=Z,5.5nm,0.9s						
SNAA	Sanae	18.39	142	P	P	21 31 07.6	+0.5
MG05	Puerto Natales	19.64	283	P	Pn	21 31 21.3	-1.0
MG05				IAmb	IAmb	21 31 21.6	
	comp=Z,33nm,0.7s						
GO09	Cerro Castillo	19.83	284	P	Pn	21 31 23.3	-1.2
GO09				IAmb	IAmb	21 31 23.9	
	comp=Z,48nm,0.9s						
TROLL	Troll, Antarti	20.10	142	⇑P	P	21 31 26.0	+0.1
	comp=Z,79nm,0.3s						
TRQA	Tornquist	26.35	320	P	P	21 32 28.4	+0.1
TRQA				IAmb	IAmb	21 32 32.0	
	comp=Z,19nm,1.4s						
QSPA	South Pole Qui	29.46	180	P	P	21 32 57.6	+1.5
	comp=Z,1.6nm,0.3s,baz=181,slow=7.6,SNR=7.7						
	comp=Z,1.6nm,0.3s						
QSPA	South Pole Qui	29.46	180	P	P	21 32 57.3	+1.2
VA03	San Esteban	34.08	312	P	P	21 33 36.9	+0.1
CO03	El Pedregal	35.86	313	P	P	21 33 52.3	+0.1
CO03				IAmb	IAmb	21 34 15.5	
	comp=Z,15nm,1.2s						
CPUP	Villa Florida	36.23	334	P	P	21 33 54.2	-1.1
	comp=Z,0.4nm,0.7s,baz=169,slow=5.2,SNR=3.4						
	comp=Z,0.4nm,0.7s						
CPUP	Villa Florida	36.23	334	P	P	21 33 54.3	-1.0
CO01	Juntas del Tor	36.43	314	P	P	21 33 57.6	+0.3
CO01				IAmb	IAmb	21 34 10.2	
	comp=Z,16nm,1.3s						
MAW	Mawson	40.51	145	LR	LR	21 50 33.8	
	comp=Z,69nm,18.1s,baz=266,slow=35						
GO02	Mina Guanaco	40.69	318	P	P	21 34 33.4	+0.2
VNDA	Vanda	41.24	187	P	P	21 34 38.5	+1.8
	comp=Z,1.8nm,0.9s,baz=247,slow=4.3,SNR=5.6						
VNDA				LR	LR	21 51 32.1	
	comp=Z,117nm,19.4s,baz=176,slow=36						
	comp=Z,1.8nm,0.9s						
VNDA	Vanda	41.24	187	P	P	21 34 39.1	+2.3
PB05	IPOC Station P	43.04	318	P	P	21 34 51.8	-0.4
PB05				IAmb	IAmb	21 35 18.1	
	comp=Z,24nm,1.4s						
PB03	IPOC Station P	43.65	319	P	P	21 34 56.5	-0.6
PB03				IAmb	IAmb	21 34 57.9	
	comp=Z,12nm,0.9s						
PB07	IPOC Station P	43.99	319	P	P	21 34 59.5	-0.3
PB07				IAmb	IAmb	21 35 35.8	
	comp=Z,16nm,1.2s						
PB01	IPOC Station P	44.50	320	P	P	21 35 03.8	-0.1
BDFB	Brasilia	45.37	350	P	P	21 35 09.9	-0.9
	comp=Z,2.5nm,0.5s,baz=172,slow=9.3,SNR=4.8						
	comp=Z,2.5nm,0.5s						
BDFB	Brasilia	45.37	350	P	P	21 35 10.1	-0.7
BDFB				IAmb	IAmb	21 35 11.9	
	comp=Z,8.8nm,1.2s						
GO01	Chusmiza	45.70	321	P	P	21 35 13.8	-0.1
PB11	IPOC Station P	45.76	321	P	P	21 35 12.9	-1.0
SIV	San Ignacio	47.05	333	P	P	21 35 23.7	-0.3
	comp=Z,3.4nm,0.7s,baz=152,slow=6.2,SNR=14						
	comp=Z,3.4nm,0.7s						
PB16	IPOC Station P	47.05	321	P	P	21 35 25.4	+0.8
PB16				IAmb	IAmb	21 35 26.2	
	comp=Z,4.7nm,0.8s						
LPAZ	La Paz	48.58	324	P	P	21 35 36.6	+0.1
	comp=Z,2.0nm,0.4s,baz=82,slow=6.0,SNR=9.9						
	comp=Z,2.0nm,0.4s						
LPAZ	La Paz	48.58	324	P	P	21 35 37.0	+0.5
LPAZ				IAmb	IAmb	21 35 37.9	
	comp=Z,7.8nm,1.2s						
H04S2	CROZET ISLANDS	51.84	119	T	T	22 33 02.2	
	baz=220,slow=75,SNR=8.8						
H04S3	CROZET ISLANDS	51.85	119	T	T	22 33 02.1	
	baz=220,slow=75,SNR=8.3						
H04S1	CROZET ISLANDS	51.86	119	T	T	22 33 02.2	
	baz=220,slow=75,SNR=7.9						
H10S2	ASCENSION HYDR	55.25	32	T	T	22 37 13.9	
	baz=26,slow=74,SNR=3.4						

H10S3	ASCENSION HYDR	55.26	32	T	T	22 37 09.7	
	baz=194,slow=74,SNR=3.3						
H10N3	ASCENSION HYDR	56.36	32	T	T	22 38 37.7	
	baz=194,slow=75,SNR=3.5						
H10N1	ASCENSION HYDR	56.36	32	T	T	22 38 32.5	
	baz=194,slow=75,SNR=2.2						
H10N2	ASCENSION HYDR	56.38	32	T	T	22 38 40.9	
	baz=194,slow=75,SNR=3.3						
BOAV	Boa Vista	64.82	338	P	P	21 37 30.6	-0.6
TORD	Torodi Ar. Bea	81.06	42	P	P	21 39 08.4	+1.1
	comp=Z,3.3nm,0.9s,baz=199,slow=4.9,SNR=11						
	comp=Z,3.3nm,0.9s						
TORD	Torodi Ar. Bea	81.06	42	P	P	21 39 08.3	+1.0
NWAO	Narrogin (SRO)	84.92	162	LR	LR	22 14 05.2	
	comp=Z,88nm,19.6s,baz=290,slow=33						
FORT	Forrest	88.32	170	P	P	21 39 43.4	-0.5
FORT				IAmb	IAmb	21 39 45.0	
	comp=Z,3.9nm,0.8s						
ASAR	Alice Springs	95.75	175	P	P	21 40 17.5	-1.0
	comp=Z,0.4nm,0.6s,baz=163,slow=2.4,SNR=5.8						
ASAR				LR	LR	22 21 28.0	
	comp=Z,33nm,21.5s,baz=298,slow=34						
	comp=Z,0.4nm,0.6s						
CTA	Charters Tower	99.22	187	LR	LR	22 23 37.3	
	comp=Z,30nm,18.0s,baz=228,slow=34						
FINES	FINESS Array B	132.19	37	PKP	PKPdf	21 46 04.5	-0.3
	comp=Z,2.1nm,0.9s,baz=90,slow=1.4,SNR=4.2						
H31M	Peel River	143.74	316		PKPpre	21 46 23.3	
I30M	Mount Dempster	144.12	314	PKPdf	PKPbc	21 46 24.9	0.0
INK	Inuvik	144.84	320	PKP	PKPab	21 46 25.9	-0.8
	comp=Z,4.6nm,0.7s,baz=90,slow=4.2,SNR=11						
INK	Inuvik	144.84	320	PKPdf	PKPbc	21 46 26.7	-0.1
H29M	Whitestone	145.35	315		PKPbc	21 46 28.4	-0.2
ILAR	Eielson Array	147.72	310	PKPbc	PKPbc	21 46 35.4	-0.2
	comp=Z,1.9nm,0.6s,baz=138,slow=2.1,SNR=26						
ZALV	Zalesovo Beam	150.66	79	PKPab	PKPab	21 46 50.8	+0.5
	comp=Z,0.5nm,0.6s,baz=260,slow=4.1,SNR=2.2						

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*AFAD **17** 21:27:25.7, 35°.17N×27°.75E, h17^{km}±4^{km}, ML2.5*
*ISK **17** 21:27:28.9, 35°.21N×27°.82E, h58^{km}±2^{km}, ML2.7/17*
*ATH **17** 21:27:29.9, 35°.29N×27°.98E, h28^{km}±16^{km}, ML2.7/4, Manual Solution by S.Koutrakis First location: 2019/12/17 21:29:03, This location: 2019/12/18 05:29:08 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 2 km*
*THE **17** 21:27:31.0, 35°N±14°×2°8E±1°5, h0^{km}±29^{km}, M2.3/6, MLh2.3/6*
ISC 17 21:27:27.4±1.4**, 35°.21N**±0°.05×**27°.84E**±0°.04**, h13**^{km}±10^{km}**, n46,** σ1^{s}**07**/59**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	Arkhangelos	1.03	13	P	Pg	21 27 47.1	-0.2
ARG				S	Sg	21 27 59.1	-1.7
ARG	Arkhangelos	1.03	13	Pg	Pg	21 27 47.7	+0.4
ARG				Sg	Sb	21 28 02.1	+1.4
ARG	Arkhangelos	1.03	13	P	Pg	21 27 47.2	-0.2
ARG				S	Sg	21 27 59.4	-1.5
ZKR	Zakros	1.33	266	P	Pg	21 27 54.6	+1.6
ZKR	Zakros	1.33	266	Pn	Pn	21 27 51.7	-0.1
YAZI	Mula-Dat§a-	1.50	348	P	Pn	21 27 54.0	-0.1
YAZI				S	Sg	21 28 15.0	-0.9
YAZI				*i* IAML		21 28 20.0	
	comp=N,52nm,0.4s						
YAZI				*i* IAML		21 28 22.0	
	comp=E,49nm,0.3s						
NISR	Nisiros	1.52	338	P	Pb	21 27 55.3	-0.1
NISR				S	Sn	21 28 13.3	-0.6
NISR	Nisiros	1.52	338	P	Pn	21 27 54.8	+0.6
NISR				S	Sn	21 28 13.2	-0.7
DAT	Datca	1.53	352	Pn	Pn	21 27 54.7	+0.1
TURN	Turunc	1.60	12	P	Pb	21 27 57.2	+0.4
TURN				S	Sg	21 28 20.6	+1.7
TURN				*i* IAML		21 28 27.0	
	comp=E,46nm,0.3s						
TURN				*i* IAML		21 28 28.0	
	comp=N,61nm,0.5s						
TURN	Turunc	1.60	12	Pn	Pn	21 27 55.9	+0.5
IZZE	Mula-Seydike	1.67	42	P	Pn	21 27 56.1	-0.2
IZZE				S	Sg	21 28 21.9	+0.9
IZZE				*i* IAML		21 28 27.0	
	comp=N,75nm,0.4s						
IZZE				*i* IAML		21 28 41.0	
	comp=E,52nm,0.4s						
DALY	Dalyan (Mula)	1.74	22	Pn	Pn	21 27 57.8	+0.5
FETY	Fethiye	1.75	35	P	Pn	21 27 51.1	-6.4
AKAS	Kas	1.76	54	Pn	Pn	21 27 58.4	+0.6
NPS	Neapolis	1.82	272	P	Pb	21 28 01.0	+0.3
NPS				S	Sg	21 28 25.4	-0.7
NPS	Neapolis	1.82	272	P	Pb	21 28 00.7	0.0
NPS				S	Sg	21 28 25.3	-0.8
BDRM	Kayabasi	1.88	350	P	Pn	21 28 00.6	+1.3
BDRM				S	Sb	21 28 25.4	+0.2
BDRM				*i* IAML		21 28 32.0	
	comp=E,54nm,0.5s						
BODT	Bodrum	1.90	347	P	Pb	21 28 01.2	-0.8
BODT	Bodrum	1.90	347	Pn	Pn	21 27 59.9	+0.3
YER	Yerkesik	1.96	10	P	Pb	21 28 02.6	-0.4
YER				S	Sb	21 28 27.1	-0.2
YER	Yerkesik	1.96	10	Pn	Pn	21 28 00.9	+0.5
MLSB	Milas	2.08	359	Pn	Pn	21 28 02.6	+0.5
CAME	Cameli-Denizli	2.10	34	Pn	Pn	21 28 03.0	+0.6
THERA	Ancient Thera,	2.24	302	P	Pn	21 28 05.6	+1.3
CAEL	Denizli, Camel	2.26	32	P	Pb	21 28 07.8	-0.3
ELL	Elmali	2.28	47	Pn	Pn	21 28 05.5	+0.7
DNZT	Denizli-Tavas-	2.28	25	P	Pn	21 28 06.0	+1.2
DNZT				S	Sb	21 28 36.5	-0.2
TAVA	DENIZLI_Tavas	2.42	21	P	Pn	21 28 07.8	+1.1
TAVA				*i* IAML		21 28 59.0	
	comp=N,23nm,1.1s						
TAVA				*i* IAML		21 28 59.0	
	comp=E,21nm,0.5s						
IDI	Anoyia	2.42	273	Pn	Pn	21 28 07.5	+0.8
IDI	Anoyia	2.42	273	P	Pb	21 28 09.2	-1.6
AYDN	Tasoluk	2.45	1	P	Pn	21 28 07.8	+0.6
AYDN				S	Sn	21 28 35.9	-1.1
AYDN				*i* IAML		21 28 50.0	
	comp=N,22nm,0.6s						
AYDN				*i* IAML		21 28 52.0	
	comp=E,25nm,0.6s						
GOLH	Golhisar	2.46	34	P	Pn	21 28 08.9	+1.5
GOLH				*i* IAML		21 28 55.0	
	comp=E,24nm,0.7s						
GOLH				*i* IAML		21 29 13.0	
	comp=N,27nm,1.0s						
APMY	Acipayam-Deniz	2.55	27	Pn	Pn	21 28 09.4	+0.8
DNIZ	Denizli-Tavas-	2.60	21	P	Pn	21 28 10.8	+1.5
ESEN	Aydn-Nazilli	2.62	9	P	Pn	21 28 12.1	+2.7
APE	Apeiranthos	2.63	315	Pn	Pn	21 28 10.3	+0.6
APE	Apeiranthos	2.63	315	P	Pn	21 28 10.2	+0.5
AYDB	Zeytinkoy-Aydi	2.73	1	Pn	Pn	21 28 11.6	+0.5
NAZL	Nazilli-Aydin	2.77	7	Pn	Pn	21 28 12.7	+1.1
VAM	Vamos	2.98	275	P	Pb	21 28 17.6	-2.8
KIRA	zmir-Kiraz	3.02	8	P	Pn	21 28 15.6	+0.6
GVD	Gavdhos	3.10	264	Pn	Pn	21 28 16.9	+0.8
GVD	Gavdhos	3.10	264	P	Pn	21 28 18.7	+2.6
IMMV	Iera Moni Meta	3.17	276	Pn	Pn	21 28 17.8	+0.8
AKMS	Akamas	3.69	92	P	Pn	21 28 23.5	-0.6

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*IDC **17** 21:36:42.3±7.9, 30°.00N×138°.15E, h0^{km}, mb3.4/4, mbtmp3.4/4, MS3.4/1, Error ellipse: s-maj=349.9km s-min=26.5km az=69.0*
*JMA **17** 21:37:04.6±0.1, 27°.3N±0°.6×130°.5E±0°.8, h67^{km}, MV3.6/25, NEAR MINAMI-DAITOJIMA IS*
ISC 17 21:37:05.3±2.5**, 27°.36N**±0°.03×**130°.50E**±0°.04**, h26**^{km}±20^{km}**, n24,** σ1^{s}**37**/40**, mb3.4**/4**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JZK	Kikaishima	1.06	334	*e*P	Pn	21 37 24.5	0.0
JZK				*e*S	Sb	21 37 39.2	+0.7
JAM	Amami Oshima	1.31	323	P	Pn	21 37 27.2	-0.7
JAM				S	Sn	21 37 43.3	-1.4
JTK	Tokunoshima	1.44	288	P	Pn	21 37 29.1	-0.6
JTK				S	Sn	21 37 46.1	-1.6
JAMN	Amaminishikomi	1.46	307	P	Pn	21 37 29.0	-1.0
JAMN				S	Sn	21 37 46.0	-2.4
JKDJ	Kitadaitoujima	1.58	153	*e*P	Pn	21 37 30.5	-1.1
JKDJ				S	Sn	21 37 49.2	-1.9
JOKE	Okinoerabujima	1.71	271	P	Pn	21 37 33.2	-0.3
JOKE				*e*S	Sn	21 37 53.5	-1.0
JYRO	Yoronjima	1.85	260	*e*P	Pn	21 37 34.8	-0.6
JYRO				S	Sn	21 37 56.5	-1.5
JOW	Kunigami	2.05	256	*e*P	Pn	21 37 37.5	-0.6
JTAJ	Takarajima	2.12	328	*e*P	Pn	21 37 38.7	-0.4
JTAJ				S	Sn	21 38 02.2	-2.4
JIH	Iheya	2.27	262	*e*P	Pn	21 37 40.7	-0.5
JIH				S	Sn	21 38 06.9	-1.5
JNTH	Nagotoyohara	2.36	250	P	Pn	21 37 41.8	-0.6
JNTH				*e*S	Sn	21 38 08.2	-2.3
JNN	Nakanoshima	2.53	348	*e*P	Pn	21 37 44.2	-0.6
JNN				*e*S	Sn	21 38 12.9	-1.9
JJT3	Tamagusuku3	2.71	244	P	Pn	21 37 46.7	-0.5
JJT3				*e*S	Sn	21 38 17.7	-1.4
JYAK	Yakushimahirau	2.87	0	*e*P	Pn	21 37 48.9	-0.5
JYAK				*e*S	Sn	21 38 20.7	-2.3
JAGN	Aguni-jima	3.00	256	*e*P	Pn	21 37 50.5	-0.7
JAGN				*e*S	Sn	21 38 24.8	-1.5
JMTN	Minamitane	3.05	7	*e*P	Pn	21 37 51.3	-0.6
JMTN				*e*S	Sn	21 38 25.4	-2.1
JKC	Kuchinoerabu	3.10	355	*e*P	Pn	21 37 52.3	-0.3
JKC				*e*S	Sn	21 38 27.1	-1.7
JTN	Tanegashima 3	3.31	7	*e*P	Pn	21 37 54.8	-0.7
JKE	Kume jima 2	3.47	254	*e*P	Pn	21 37 56.4	-1.2
JKE				*e*S	Sn	21 38 36.8	-1.1
SONM	Songino Array	27.77	324	P	P	21 42 53.5	+1.3
	0.2nm,0.5s,baz=125,slow=9.8,SNR=2.3						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	42.60	321	LR	LR	22 03 34.1	
	comp=Z,45nm,18.8s,baz=319,slow=36						
WRA	Warramunga Arr	47.17	175	P	P	21 45 36.1	+0.4
	0.3nm,0.7s,baz=15,slow=7.6,SNR=4.7						
	0.3nm,0.7s						
BVAR	Borovoye Array	50.80	317	P	P	21 46 05.0	+1.6
	0.8nm,0.7s,baz=82,slow=11,SNR=4.1						
	0.8nm,0.7s						
ASAR	Alice Springs	50.83	176	P	P	21 46 05.2	+1.4
	0.2nm,0.5s,baz=355,slow=7.8,SNR=5.2						
	0.2nm,0.5s						

IDC 17 21:45:02.8±1.9**, 0°.30N**×**123°.60E, h0**^{km}**, mb3.2**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=195.1km s-min=28.1km az=62.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.70	153	P	P	21 50 04.9	-1.4
	0.4nm,0.4s,baz=326,slow=12,SNR=10						
	0.4nm,0.4s						
ASAR	Alice Springs	25.84	158	P	P	21 50 37.5	+1.4
	0.2nm,0.3s,baz=352,slow=15,SNR=4.6						
	0.2nm,0.3s						
MKAR	Makanchi Array	58.68	328	P	P	21 55 01.9	-0.2
	0.2nm,0.5s,baz=140,slow=7.5,SNR=2.3						
	0.2nm,0.5s						

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*TAP **17** 21:48:14.2, 24°.57N×122°.04E, h65^{km}±1^{km}, ML2.7, B*
*JMA **17** 21:48:14.1±0.1, 25°N±3°×122°.1E±0°.7, h72^{km}±1^{km}, MV1.8/9, TAIWAN REGION*
ISC 17 21:48:14.4±1.3**, 24°.57N**±0°.03×**122°.07E**±0°.02**, h66**^{km}±6^{km}**, n68,** σ0^{s}**66**/117**, 2C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.20	280	⇑*i*P	Pn	21 48 24.5	-0.1
TWC				S	Sn	21 48 31.5	-0.4
ESAO	Su ao	0.21	271	P	Pn	21 48 24.6	+0.1
ESAO				S	Sn	21 48 31.9	0.0
EOS2	EOS2	0.21	136	*i* P	Pn	21 48 25.1	+0.7
EOS2				S	Sn	21 48 33.5	+1.8
EWUT	Wuta	0.29	244	P	Pn	21 48 25.0	-0.1
EWUT				*i* S	Sn	21 48 32.7	-0.1
EGS		0.30	335	*e*P	Pn	21 48 25.3	+0.1
NDS	Dongshan	0.33	281	P	Pn	21 48 25.5	+0.1
NDS				S	Sn	21 48 33.4	+0.1
ENA	Nanau	0.33	244	⇓*i*P	Pn	21 48 25.2	-0.1
ENA				*i* S	Sn	21 48 33.1	-0.2
EOS3	EOS3	0.36	142	P	Pn	21 48 26.2	+0.7
EAHA	Aohua	0.39	231	*e*P	Pn	21 48 25.6	-0.2
EAHA				*i* S	Sn	21 48 34.6	+0.5
TWE	Neicheng	0.40	292	*i* P	Pn	21 48 26.0	+0.1
TWE				*e*S	Sn	21 48 34.7	+0.5
TWB1	Santiao Chiao	0.44	350	*i* S	Sn	21 48 34.1	-0.8
TIPB	Shuangxi	0.46	331	P	Pn	21 48 26.2	-0.3
TIPB				S	Sn	21 48 34.5	-0.7
ENTT	Nioudou	0.46	278	*i* P	Pn	21 48 26.7	+0.1
ENTT				*e*S	Sn	21 48 35.2	-0.2
FUSB	Fushanzhiwuyua	0.48	293	⇑*i*P	Pn	21 48 26.9	+0.2
FUSB				S	Sn	21 48 36.0	+0.3
LATG	Datong	0.50	266	P	Pn	21 48 26.8	-0.2
LATG				S	Sn	21 48 36.3	+0.2
EOS4	EOS4	0.50	153	*e*P	Pn	21 48 26.5	0.0
EOS4				*e*S	Sn	21 48 35.8	+0.5
SXI1	Grass Mountain	0.55	341	P	Pn	21 48 26.7	-0.7
SXI1				*e*S	Sn	21 48 36.9	-0.1
NWLT	Wulai	0.56	292	*e*P	Pn	21 48 27.7	+0.2
NWLT				*i* S	Sn	21 48 36.7	-0.3
NWF	Wu-fen Shan	0.56	332	*e*P	Pn	21 48 27.2	-0.4
NWF				*i* S	Sn	21 48 36.5	-0.7
WFSB	Wu-fen Shan	0.56	332	*e*S	Sn	21 48 35.7	-1.4
ETL	Fush Village	0.58	225	*e*P	Pn	21 48 27.0	-0.8
ETL				*e*S	Sn	21 48 37.3	-0.2
NACB	Ninganchiao	0.59	228	P	Pn	21 48 27.1	-0.7
NACB				*i* S	Sn	21 48 37.3	-0.2
TNOU	National Taiwa	0.64	335	*e*P	Pn	21 48 28.2	-0.1
YHNB	Yeheng	0.64	279	P	Pn	21 48 28.5	0.0
YHNB				*i* S	Sn	21 48 38.6	-0.1
NNSB	Datong	0.64	257	*e*P	Pn	21 48 28.4	-0.1
NNSB				*e*S	Sn	21 48 38.9	+0.1
ETLH	Xiulin Townshi	0.65	236	*e*P	Pn	21 48 28.5	-0.1
ETLH				*e*S	Sn	21 48 38.1	-0.8
NNS	Nan Shan	0.65	258	*e*P	Pn	21 48 28.4	-0.2
NNS				*e*S	Sn	21 48 38.4	-0.5
TWD	Chiawan	0.66	221	*e*S	Sn	21 48 38.5	-0.3
NSK	Sanguang	0.66	279	P	Pn	21 48 28.5	-0.1
NSK				S	Sn	21 48 38.7	-0.3
HWA	Hwalien	0.73	216	*e*S	Sn	21 48 41.5	+1.2
ZUZH	Zhuzihu	0.76	321	*e*P	Pn	21 48 29.9	+0.1
ZUZH				*i* S	Sn	21 48 41.5	+0.5
ANP	Anpu	0.79	321	*e*P	Pn	21 48 30.6	+0.4
TWS1	Kuangyinshan	0.79	312	*e*P	Pn	21 48 30.6	+0.5
TWS1				*e*S	Sn	21 48 42.6	+0.9
ETM	Tongmen	0.80	221	*e*P	Pn	21 48 29.5	-0.8
ETM				S	Sn	21 48 41.1	-0.8
JYNG	Yonagunijimaku	0.81	99	*e*P	Pn	21 48 30.2	0.0
JYNG				*e*S	Sn	21 48 42.0	+0.1
LXIB	Xiulin Townshi	0.81	228	P	Pn	21 48 29.8	-0.7
LXIB				S	Sn	21 48 40.8	-1.6
TWY	Chenhua	0.82	329	*e*S	Sn	21 48 41.0	-1.3
FUSS	Fushou	0.82	247	*e*P	Pn	21 48 30.8	+0.1
FUSS				S	Sn	21 48 42.4	-0.3
TEYL	Yanliau Villag	0.82	212	*e*P	Pn	21 48 29.6	-0.9
TEYL				S	Sn	21 48 41.7	-0.6
KSHI	Guanxi Townshi	0.84	284	*e*S	Sn	21 48 44.0	+1.3
YOJ	Yonaguni jima	0.86	97	*e*P	Pn	21 48 31.0	0.0
YOJ				*i* S	Sn	21 48 43.2	0.0
YOJ	Yonaguni jima	0.86	97	*e*P	Pn	21 48 30.9	-0.1
NFF	Wufeng Townshi	0.87	274	P	Pn	21 48 31.1	0.0
NFF				*i* S	Sn	21 48 43.3	-0.2
TWT	Tachien	0.88	249	P	Pn	21 48 32.5	+1.2
TWT				S	Sn	21 48 43.8	0.0
TDCB	Techi	0.89	249	*e*P	Pn	21 48 31.9	+0.4
TDCB				*i* S	Sn	21 48 43.7	-0.4
SHUL	Shoufeng	0.91	211	*e*P	Pn	21 48 31.3	-0.3
SHUL				*e*S	Sn	21 48 46.2	+2.0
ESL	Shilin	0.95	218	*e*S	Sn	21 48 43.6	-1.7
LIOB	Emei	0.96	274	*e*P	Pn	21 48 32.2	0.0
LIOB				*i* S	Sn	21 48 45.1	-0.4
NSTT	Nanjuang	0.97	274	*e*P	Pn	21 48 32.4	0.0
NSTT				*i* S	Sn	21 48 45.6	-0.1
TEGC	Jichi Village	0.99	210	*e*S	Sn	21 48 45.5	-0.5
OWD	Renai	1.02	233	P	Pn	21 48 33.1	0.0
OWD				S	Sn	21 48 46.2	-0.8
WUSB	Renai	1.04	237	*e*P	Pn	21 48 33.6	+0.2
WUSB				S	Sn	21 48 47.2	-0.3
WARBT	Fenglin Townsh	1.06	216	*e*P	Pn	21 48 32.4	-1.1
WHP	Taichung City	1.07	254	*e*P	Pn	21 48 34.7	+1.0
WHP				*i* S	Sn	21 48 48.6	+0.6
EGFH	Guangfu	1.07	213	*e*P	Pn	21 48 33.4	-0.3
WCS	Beigang Elemen	1.18	244	*e*P	Pn	21 48 35.8	+0.8
WCS				S	Sn	21 48 51.3	+1.0
VWDT	VWDT	1.18	226	P	Pn	21 48 35.1	+0.1
VWDT				S	Sn	21 48 49.9	-0.4
HGSD	Ruisui	1.23	209	*e*P	Pn	21 48 36.3	+0.6
HGSD				*e*S	Sn	21 48 50.2	-1.3
SMLT	Sun Moon Lake	1.27	237	*e*P	Pn	21 48 37.2	+0.8
TYC	Yuchr	1.29	239	*e*P	Pn	21 48 37.9	+1.4
WHYT	Xinyi Township	1.41	232	*e*P	Pn	21 48 39.5	+1.3
WHYT				*i* S	Sn	21 48 57.1	+1.1
IRIF	Iriomote-Funau	1.53	99	P	Pn	21 48 39.4	-0.3
IRIF				*e*S	Sn	21 48 58.6	-0.1
FULB	Fuli	1.54	208	*e*P	Pn	21 48 39.7	-0.2
FULB				*e*S	Sn	21 48 57.7	-1.4
JKRS	Kuro-shima	1.80	100	*e*P	Pn	21 48 43.5	+0.2
JKRS				*e*S	Sn	21 49 05.5	+0.4
JIJ	Ishigaki jima	1.90	96	*e*P	Pn	21 48 44.6	-0.1
JIJ				*e*S	Sn	21 49 06.9	-0.6
JISG	Ishigakijimahi	2.04	89	*e*P	Pn	21 48 46.5	0.0
JISG				*e*S	Sn	21 49 11.4	+0.5
JTJ	Tarama	2.40	88	*e*P	Pn	21 48 51.5	+0.1
JIRB	Irabujima	2.83	84	*e*S	Sn	21 49 30.0	-0.3

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*NEIC **17** 21:49:28.9±1.8, 25°.31S±0°.09×177°.0W±0°.2, h64^{km}±7^{km}, mb4.5/24, Error ellipse: s-maj=22.9km s-min=12.1km az=107.0*
*IDC **17** 21:49:33.0±7.6, 25°.16S×177°.19W, h92^{km}±64^{km}, mb4.1/12, mbtmp4.4/13, ML4.6/1, MS3.3/5, Error ellipse: s-maj=29.9km s-min=17.9km az=49.0*
ISC 17 21:49:28.1±0.5**, 25°.39S**±0°.06×**177°.02W**±0°.09**, h50**^{km}**, n75,** σ1^{s}**75**/64**, mb4.5**/20**, MS3.5**/3**, 4C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.93	191	Pn	Pn	21 50 27.7	+1.7
MSVF	Nonsavu	8.89	328		Pn	21 51 37.8	+3.8
NIUE	Niue	9.09	48	Pn	Pn	21 51 36.8	+0.1
AFI	Afiamalu	12.44	24	Pn	Pn	21 52 20.3	-2.4
URZ	Urewera	13.76	200	P	P	21 52 47.2	-0.4
	3.0nm,0.3s,baz=270,slow=5.0,SNR=9.2						
URZ				S	Sn	21 55 06.8	-4.9
	14nm,0.9s,baz=197,slow=19,SNR=1.6						
	13nm,0.5s						
TOZ	Tahuroa Road	13.85	206		P	21 52 50.9	+2.3
HIZ	Hauiti	14.78	206		P	21 52 59.9	+0.9
BKZ	Black Stump Fm	14.78	200		P	21 52 59.3	+0.2
DZM	Mont Dzumac	15.49	279	LR	LR	21 57 04.8	
	comp=Z,45nm,21.4s,baz=68,slow=30						
DZM	Mont Dzumac	15.49	279		P	21 53 09.4	+2.2
DZM				IAmb	IAmb	21 53 15.8	
	comp=Z,24nm,0.9s						
RAR	Rarotonga	16.38	79	LR	LR	21 58 32.3	
	comp=Z,77nm,19.3s,baz=288,slow=33						
MRZ	Mangatainoka R	16.43	200	Pn	Pn	21 53 14.9	-0.4
MRZ				IAmb	IAmb	21 53 57.9	
	comp=Z,41nm,1.2s						
TUWZ	Tuamarina	17.67	203	P	Pn	21 53 29.6	-1.0
THZ	Tophouse	18.34	205	P	P	21 53 37.4	-1.0
THZ				IAmb	IAmb	21 53 50.3	
	comp=Z,52nm,1.2s						
PPT	Papeete	26.66	78	LR	LR	22 03 07.9	
	comp=Z,33nm,20.0s,baz=297,slow=30						
EIDS	Eidsvold	28.78	263	P	P	21 55 23.1	+1.6
EIDS				IAmb	IAmb	21 55 24.2	
	comp=Z,8.8nm,0.7s						
CTAO	Charters Tower	34.20	271	P	P	21 56 10.0	+0.9
STKA	Stephens Creek	36.73	250	P	P	21 56 31.0	+0.2
	comp=Z,1.5nm,0.5s,baz=88,slow=9.6,SNR=6.4						
	comp=Z,1.5nm,0.5s						
STKA	Stephens Creek	36.73	250	P	P	21 56 30.9	+0.2
STKA				IAmb	IAmb	21 57 00.5	
	comp=Z,10nm,1.0s						
PMG	Port Moresby	37.53	289	P	P	21 56 37.2	-0.4
COEN	Coen	39.02	279	P	P	21 56 50.6	+0.4
COEN				IAmb	IAmb	21 57 21.9	
	comp=Z,9.4nm,1.1s						
BBOO	Buckleboo	41.39	248	P	P	21 57 08.7	-1.0
BBOO				IAmb	IAmb	21 57 08.8	
	comp=Z,5.9nm,1.1s						
AS31	Alice Springs	44.48	261	P	P	21 57 34.1	-0.7
ASAR	Alice Springs	44.48	261	P	P	21 57 34.5	-0.4
	comp=Z,1.7nm,0.6s,baz=92,slow=7.5,SNR=24						
	comp=Z,1.7nm,0.6s						
WR8	Warramunga Arr	44.87	267	P	P	21 57 35.2	-2.7
WRAB	Tennant Creek	45.01	267	P	P	21 57 38.1	-0.9
WRA	Warramunga Arr	45.02	267	P	P	21 57 37.7	-1.4
	comp=Z,2.5nm,0.4s,baz=101,slow=8.1,SNR=27						
	comp=Z,2.5nm,0.4s						
WRA	Warramunga Arr	45.02	267	P	P	21 57 37.2	-1.9
WB0	Warramunga Arr	45.02	267	P	P	21 57 37.2	-1.9
WB0				IAmb	IAmb	21 57 39.3	
	comp=Z,3.6nm,0.7s						
FORT	Forrest	48.35	250	P	P	21 58 03.1	-1.9
FORT				IAmb	IAmb	21 58 06.4	
	comp=Z,5.1nm,0.7s						
KNRA	Kununurra	51.39	270	P	P	21 58 27.8	-0.5
VNDA	Vanda	53.15	186	P	P	21 58 43.6	+3.2
	comp=Z,0.8nm,0.6s,baz=15,slow=6.3,SNR=6.1						
	comp=Z,0.8nm,0.6s						
VNDA	Vanda	53.15	186	P	P	21 58 43.4	+3.0
FITZ	Fitzroy Crossi	53.42	266	P	P	21 58 41.9	-1.4
BATI	Baumata	58.03	274	P	P	21 59 16.1	-0.3
	comp=Z,9.8nm,0.4s,baz=117,slow=2.3,SNR=2.3						
	comp=Z,9.8nm,0.4s						
MORW	Morawa	58.91	250	P	P	21 59 20.3	-2.1
CASY	Casey	59.98	206	P	P	21 59 28.4	-0.7
KAPI	Kappang	63.71	277	LR	LR	22 28 47.0	
	comp=Z,29nm,20.0s,baz=164,slow=37						
DAV	Davao City (W)	64.43	292	LR	LR	22 26 07.4	
	comp=Z,74nm,20.0s,baz=82,slow=34						
QSPA	South Pole Qui	64.70	180	P	P	22 00 02.5	+1.7
	comp=Z,10.0nm,0.8s,baz=40,slow=1.7,SNR=25						
	comp=Z,10.0nm,0.8s						
QSPA	South Pole Qui	64.70	180	P	P	22 00 02.3	+1.4
BELA	Belgrano 2	74.62	172	P	P	22 01 01.4	-0.1
BELA				IAmb	IAmb	22 01 02.8	
	comp=Z,7.2nm,0.9s						
MAW	Mawson	77.29	200	P	P	22 01 17.8	+0.9
	comp=Z,2.5nm,0.5s,baz=138,slow=10,SNR=2.8						
	comp=Z,2.5nm,0.5s						
PETK	Petropavlovsk-	81.20	345	P	P	22 01 36.3	-1.9
	comp=Z,4.1nm,0.8s,baz=190,slow=7.4,SNR=2.7						
	comp=Z,4.1nm,0.8s						
PETK	Petropavlovsk-	81.20	345	P	P	22 01 36.5	-1.7
H03S2	Juan Fernandez	82.51	124	T	T	23 33 06.0	
	baz=243,slow=74,SNR=19						
H03S1	Juan Fernandez	82.53	124	T	T	23 33 02.0	
	baz=243,slow=74,SNR=23						
H03S3	Juan Fernandez	82.53	124	T	T	23 33 01.4	
	baz=243,slow=74,SNR=28						
H03N3	Juan Fernandez	82.68	123	T	T	23 33 15.4	
	baz=250,slow=72,SNR=8.4						
H03N2	Juan Fernandez	82.68	123	T	T	23 33 16.8	
	baz=250,slow=72,SNR=4.1						
H03N1	Juan Fernandez	82.69	123	T	T	23 33 08.8	
	baz=250,slow=72,SNR=6.7						
TROLL	Troll, Antarti	82.87	180	⇑P	P	22 01 47.4	+0.3
	comp=Z,473nm,0.7s						
SNAA	Sanae	83.12	178	⇑P	P	22 01 48.4	+0.1
	comp=Z,96nm,0.9s						
SNAA	Sanae	83.12	178	P	P	22 01 48.5	+0.1
	comp=Z,4.8nm,0.9s,baz=198,slow=6.7,SNR=13						
	comp=Z,4.8nm,0.9s						
SNAA	Sanae	83.12	178	P	P	22 01 47.9	-0.5
SNAA				IAmb	IAmb	22 01 49.5	
	comp=Z,5.8nm,1.0s						
VNA3	Neumayer Olymp	83.23	176	⇑P	P	22 01 48.7	-0.1
	comp=Z,12nm,0.8s						
VNA2	Neumayer--Watz	83.67	177	⇑P	P	22 01 51.5	+0.4
	comp=Z,8.9nm,0.6s,baz=175,slow=3.5						
NVAR	Mina Array Bea	83.98	42	P	P	22 01 53.8	+0.5
	comp=Z,0.8nm,0.5s,baz=260,slow=4.3,SNR=4.3						
	comp=Z,0.8nm,0.5s						
PLCA	Paso Flores	85.28	133	P	P	22 02 01.6	+1.7
	comp=Z,2.0nm,0.7s,baz=223,slow=4.4,SNR=6.0						
	comp=Z,2.0nm,0.7s						
PLCA	Paso Flores	85.28	133	P	P	22 02 01.2	+1.3
PLCA				IAmb	IAmb	22 02 06.8	
	comp=Z,8.0nm,1.2s						
CMAR	Chiang Mai Arr	92.58	289	P	P	22 02 34.7	0.0
	comp=Z,1.0nm,0.8s,baz=110,slow=4.7,SNR=9.2						
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	115.15	312	PKP	PKPdf	22 08 01.2	-2.6

	comp=Z,0.3nm,0.6s,baz=151,slow=2.0,SNR=1.9						
MKAR	Makanchi Array	115.15	312		PKPdf	22 08 00.9	-2.9
BVAR	Borovoye Array	123.34	318	PKP	PKPdf	22 08 17.3	-2.0
	comp=Z,0.9nm,0.5s,baz=158,slow=2.0,SNR=6.9						
ARCES	ARCESS Array B	133.87	349	PKP	PKPdf	22 08 36.0	-2.9
	comp=Z,2.0nm,0.8s,baz=103,slow=4.0,SNR=3.9						
FINES	FINESS Array B	140.69	343	PKP	PKPdf	22 08 48.6	-3.0
	comp=Z,2.7nm,1.0s,baz=49,slow=8.6,SNR=3.6						
NB2	NORSAR Subarra	143.92	353	PKP	PKPab	22 08 55.1	+0.4
	comp=Z,0.7nm,0.7s,baz=16,slow=3.2						
NOA	NORSAR Array B	143.92	353	PKP	PKPab	22 08 55.1	+0.4
	comp=Z,1.0nm,0.8s,baz=23,slow=3.8,SNR=4.8						
HFS	Hagfors	144.49	351	PKP	PKPab	22 08 54.8	-2.0
	comp=Z,1.4nm,0.4s,baz=67,slow=3.9,SNR=19						
MARD	Mardin	145.81	300	PKPbc	PKPdf	22 09 00.9	-0.6
AKASG	Malin Array Be	147.67	328	PKPbc	PKPdf	22 09 06.0	+1.9
	comp=Z,2.9nm,0.5s,baz=44,slow=4.2,SNR=13						
EKA	Eskdalemuir Ar	149.75	7	PKPbc	PKPbc	22 09 11.2	-0.8
	comp=Z,0.2nm,0.5s,baz=11,slow=3.1,SNR=1.2						
BRTR	Keskin Array B	150.63	307	PKPbc	PKPbc	22 09 14.8	-0.1
	comp=Z,1.2nm,0.6s,baz=141,slow=5.1,SNR=8.5						
MMAI	Mount Meron Ar	150.78	293	PKPbc	PKPbc	22 09 15.9	+0.6
	comp=Z,5.2nm,0.5s,baz=86,slow=5.9,SNR=16						
MMAI				PKPab	PKiKP	22 09 19.5	+3.5
	comp=Z,5.1nm,0.5s,baz=72,slow=4.7,SNR=14						
TORD	Torodi Ar. Bea	167.76	174	PKPab	PKPab	22 10 35.9	-0.2
	comp=Z,1.3nm,0.9s,baz=160,slow=1.0,SNR=6.4						

IDC 17 21:52:02.5±1.3, 6°.96N×125°.04E, h0^{km}, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=25.8km s-min=11.8km az=166.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.54	78	LR	LR	21 52 05.5	
	comp=Z,125nm,21.3s,baz=188,slow=5.5						
DAV				Pg	Pb	21 52 14.3	-0.7
	345nm,0.3s,baz=90,slow=2.0,SNR=1.7						
DAV				Lg	Lg	21 52 19.9	
	496nm,0.3s,baz=248,slow=19,SNR=3.8						
WRA	Warramunga Arr	28.25	161	P	P	21 57 58.8	+1.2
	0.3nm,0.3s,baz=327,slow=12,SNR=4.9						
	0.3nm,0.3s						
ASAR	Alice Springs	31.64	164	P	P	21 58 26.4	-1.3
	0.3nm,0.5s,baz=342,slow=8.1,SNR=4.8						
	0.3nm,0.5s						
MKAR	Makanchi Array	53.97	325	P	P	22 01 29.1	+0.9
	0.5nm,0.7s,baz=126,slow=7.3,SNR=3.4						
	0.5nm,0.7s						
ILAR	Eielson Array	82.93	26	P	P	22 04 28.0	-1.2
	0.4nm,0.8s,baz=243,slow=3.8,SNR=3.2						
	0.4nm,0.8s						

IDC 17 21:56:17.2±0.9, 7°.03N×126°.19E, h21^{km}±5^{km}, mb3.8/5, mbtmp3.9/5, MS2.8/1, Error ellipse: s-maj=20.0km s-min=10.6km az=21.0

NEIC 17 21:56:17.0±1.0, 6°.55N±0°.09×125°.2E±0°.1, h10^{km}±1^{km}, mb4.4/12, Error ellipse: s-maj=24.7km s-min=6.4km az=125.0

ISC 17 21:56:17.1±0.6, 6°.55N±0°.07×125°.2E±0°.1, h10^{km}, n27, σ1^{s}.32/28, mb4.3/12, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.62	33	Pg	Pg	21 56 30.0	+0.9
	1µm,0.3s,baz=215,slow=2.0,SNR=36						
DAV				Lg	Lg	21 56 36.7	
	1µm,0.3s,baz=239,slow=19,SNR=11						
DAV	Davao City (W)	0.62	33		Pg	21 56 29.5	+0.4
DAV				Sg	Sg	21 56 38.4	+1.1
DAV	Davao City (W)	0.62	33	P	Pg	21 56 26.0	-3.1
TNTI	Ternate	6.12	160	Pn	Pn	21 57 44.9	-2.8
TOLI2	Tolitoli	7.00	220	Pn	Pn	21 57 58.7	-1.0
LUWI	Luwuk	7.93	198	Pn	Pn	21 58 18.6	+6.0
KAPI	Kappang	12.73	206	LR	LR	22 04 40.6	
	comp=Z,40nm,19.8s,baz=44,slow=37						
KNRA	Kununurra	22.36	171		P	22 01 15.8	+0.3
KNRA				IAmb	IAmb	22 01 29.4	
	comp=Z,15nm,0.8s						
FITZ	Fitzroy Crossi	24.49	179	P	P	22 01 36.6	-0.1
WB0	Warramunga Arr	27.66	161	P	P	22 02 04.5	-0.8
WB0				IAmb	IAmb	22 02 20.8	
	comp=Z,8.9nm,1.4s						
WRA	Warramunga Arr	27.81	161	P	P	22 02 07.2	+0.5
	comp=Z,1.3nm,0.9s,baz=343,slow=9.8,SNR=7.0						
	comp=Z,1.3nm,0.9s						
WR8	Warramunga Arr	27.87	161	P	P	22 02 06.4	-0.9
WR8				IAmb	IAmb	22 02 36.2	
	comp=Z,9.7nm,1.4s						
PSA00	Pilbara Seismi	28.44	191	P	P	22 02 14.2	+1.9
AS31	Alice Springs	31.20	165	P	P	22 02 35.9	-0.9
ASAR	Alice Springs	31.20	165	P	P	22 02 36.1	-0.7
	comp=Z,0.7nm,0.5s,baz=347,slow=7.5,SNR=13						
	comp=Z,0.7nm,0.5s						
ASAR	Alice Springs	31.20	165	P	P	22 02 36.9	+0.1
FORT	Forrest	37.22	176	P	P	22 03 28.1	-0.7
FORT				IAmb	IAmb	22 03 54.1	
	comp=Z,7.1nm,1.2s						
BBOO	Buckleboo	40.47	166	P	P	22 03 55.9	-0.2
BBOO				IAmb	IAmb	22 03 57.1	
	comp=Z,5.1nm,0.6s						
STKA	Stephens Creek	41.28	159	P	P	22 04 02.2	-0.6
	comp=Z,1.3nm,0.5s,baz=357,slow=7.5,SNR=4.4						
STKA				pP	pP	22 04 08.8	+2.8
	comp=Z,6.0nm,0.8s,baz=346,slow=7.6,SNR=8.4						
	comp=Z,1.3nm,0.5s						
STKA	Stephens Creek	41.28	159	P	P	22 04 02.1	-0.7
KURBB	Kurchatov Arra	58.58	327	P	P	22 06 13.7	-0.3
	comp=Z,0.6nm,0.3s,baz=123,slow=6.9,SNR=8.6						
KURBB				pP	pP	22 06 19.8	+2.3
	comp=Z,2.5nm,0.7s,baz=125,slow=6.1,SNR=4.8						
	comp=Z,0.6nm,0.3s						
KURK	Kurchatov	58.58	327	P	P	22 06 12.9	-1.2
KURK				IAmb	IAmb	22 06 22.0	
	comp=Z,3.6nm,0.8s						
KKAR	Karatay Array	60.17	316	P	P	22 06 25.6	+0.3
BVAR	Borovoye Array	64.16	327	P	P	22 06 50.5	-1.3
	comp=Z,0.7nm,0.8s,baz=128,slow=11,SNR=4.0						
BVAR				pP	pP	22 06 57.2	+1.9
	comp=Z,1.9nm,0.9s,baz=138,slow=7.8,SNR=6.9						
	comp=Z,0.7nm,0.8s						
BKZ	Black Stump Fm	65.66	138	P	P	22 07 01.0	-0.9
D19K	Kuna River	79.05	21	P	P	22 08 20.4	-0.9
ILAR	Eielson Array	83.21	26	pP	P	22 08 42.9	-0.6
	comp=Z,0.3nm,0.7s,baz=238,slow=5.0,SNR=6.4						

DJA 17 21:56:41.2±1.4, 9°S±4°×11°0E±°, h12^{km}±11^{km}, M3.9/19, mB5.2/1, mb4.0/7, MLv3.9/19, Mw(mB)4.5/1, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UGM	Wanagama	1.20	9	P	Pn	21 57 03.7	-0.2
PCJI	Pacitan	1.23	42	P	Pn	21 57 03.5	-0.7
YOGI	Yogyakarta	1.29	358	P	Pn	21 57 04.9	-0.1
SNJI	Sawahan-Nganju	1.93	47	P	Pn	21 57 14.0	0.0
SJI	Sawahan	1.96	46	P	Pn	21 57 13.7	-0.7
SMRI	Semarang	2.05	3	P	Pn	21 57 15.7	+0.2
NGJI	Ngawi	2.06	33	P	Pn	21 57 16.8	+1.2
KPJI	Karang Pucung	2.25	322	P	Pn	21 57 19.0	+0.7
CTJI	Waduk Cacaban	2.38	331	P	Pn	21 57 21.1	+1.0
TBJI	Tambak Boyo	2.72	33	P	Pn	21 57 24.5	-0.3
GRJI	Gresik	3.04	44	P	Pn	21 57 29.6	+0.4
BBJI	Bungbulang	3.12	301	P	Pn	21 57 30.1	-0.3
GMJI	Gumukmas	3.18	75	P	Pn	21 57 30.5	-0.6
BLJI	Banyuglugur	3.49	67	P	Pn	21 57 35.4	0.0
CNJI	Cibinong	3.65	299	P	Pn	21 57 37.0	-0.5
JAGI	Jajag, Banyuwa	3.82	81	P	Pn	21 57 39.7	-0.2
ABJI	Asem Bagus	4.07	72	P	Pn	21 57 43.2	-0.1
RTBI	Rangdo, Negare	4.59	82	P	Pn	21 57 50.8	+0.2
IGBI	Denpasar	4.76	87	P	Pn	21 57 52.7	-0.1
KLNI	Mataram	5.73	84	P	Pn	21 58 05.6	-0.6
	0.1nm2µm9.6nm,0.9s						
KASI	Kota Agung	6.80	301	P	Pn	21 58 21.8	+0.9
	0.1nm8.3nm,1.2s						
PLAI	Plampang	7.35	88	P	Pn	21 58 28.3	-0.2
	0.1nm11nm,1.3s						
MNAI	Manna	8.72	302	P	Pn	21 58 46.5	-0.7
	31nm,1.9s						
EGSI	Enggano, Bengk	8.83	294	P	Pn	21 58 47.4	-1.3
LUWI	Luwuk	14.74	58	P	Pn	22 00 09.2	-0.5

GCG 17 21:59:01.5±0.4, 14°.05N×89°.65W, h6^{km}±182^{km}, MD3.6

SNET 17 21:59:01.1±1.2, 14°.10N×89°.71W, h12^{km}, ML2.2

CATAC 17 21:59:02.1±0.3, 14°N±2°×9°0W±°, h2^{km}±1^{km}, M2.6/9, MLv2.6/9, Error ellipse: s-maj=3.3km s-min=2.5km az=170.4, confirmed

ISC 17 21:59:01.4±1.1, 14°.09N±0°.03×89°.74W±0°.04, h10^{km}±6^{km}, n31, σ0^{s}.65/37, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RBDL	Robledal	0.06	66	*e*P	Pg	21 59 04.4	+0.7
RBDL				*e*S	Sg	21 59 06.1	+0.8
SLOZ	Alcaldia de Sa	0.08	215	P	Pg	21 59 02.5	-1.3
SLOZ				S	Sg	21 59 04.7	-0.8
NUBE	Las Nubes	0.19	192	*e*P	Pg	21 59 06.3	+0.8
NUBE				*e*S	Sg	21 59 09.2	+0.8
NUBE	Las Nubes	0.19	192	*i* P	Pg	21 59 06.3	+0.8
NUBE				*i* S	Sg	21 59 09.2	+0.8
NUBE	Las Nubes	0.19	192	P	Pg	21 59 06.3	+0.8
RTR	El Retiro	0.21	155	*e*P	Pg	21 59 06.8	+0.9
UNIC	Universidad Ca	0.21	120	*e*P	Pg	21 59 06.1	+0.2
UNIC	Universidad Ca	0.21	120	S	Sg	21 59 09.1	+0.2
UNIC	Universidad Ca	0.21	120	P	Pg	21 59 06.0	+0.2
SNJE	San Jose	0.26	150	*e*P	Pg	21 59 07.3	+0.6
SBLS	San Blas	0.27	156	*e*P	Pg	21 59 07.6	+0.5
SBLS				*e*S	Sg	21 59 11.8	+1.0
CEVE	Cerro Verde	0.28	157	*e*P	Pb	21 59 08.0	-0.7
FAME	Alcaldia de Sa	0.36	228	P	Pg	21 59 09.4	+0.8
MTO3	Montecristo	0.48	50	*e*P	Pg	21 59 11.0	+0.2
MTO3	Montecristo	0.48	50	*i* P	Pg	21 59 11.1	+0.2
MTO3	Montecristo	0.48	50	P	Pg	21 59 11.0	+0.2
MTO3	Montecristo	0.48	50	S	Sg	21 59 17.6	+0.5
JAYA	Jayaque - finc	0.52	147	*e*P	Pg	21 59 11.8	+0.4
JAYA	Jayaque - finc	0.52	147	P	Pg	21 59 11.9	+0.4
JAYA	Jayaque - finc	0.52	147	S	Sb	21 59 19.1	-1.1
PMON	Piamonte	0.56	132	*e*P	Pb	21 59 12.8	-0.5
PMON				*e*S	Sb	21 59 20.9	-0.5
PMON	Piamonte	0.56	132	P	Pb	21 59 12.7	-0.6
ESQI	Esquipulas	0.60	39	P	Pg	21 59 13.4	+0.3
ESQI	Esquipulas	0.60	39	S	Sg	21 59 21.8	+0.7
UEES	Universidad Ev	0.61	127	P	Pb	21 59 13.9	-0.3
LLGN	La Laguna	0.77	85	S	Sb	21 59 27.2	-0.4
PAVA	Las Pavas	0.86	116	S	Sb	21 59 30.1	-0.1
SCLA	Alcaldia de Sa	1.05	111	S	Sb	21 59 35.8	+0.2
APG	El Apazote	1.15	322	*i* P	Pg	21 59 24.0	+0.5
PACA	Pacayal	1.51	114	P	Pg	21 59 30.1	-0.2
PACA	Pacayal	1.51	114	S	Sb	21 59 48.7	-0.1

SOME 17 22:02:06.9, 40°.68N×83°.38E, h10^{km}

NNC 17 22:02:11.4±2.6, 40°.89N×83°.36E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=23.6km s-min=15.1km az=9.0

ISC 17 22:02:09.0±2.8, 40°.6N±0°.1×83°.14E±0°.10, h10^{km}, n21, σ2^{s}.44/28, 3C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	3.50	325	Pg	Pg	22 03 12.9	-3.2
	2.5nm,0.2s						
KTMS				Lg	Lg	22 04 00.2	
	25nm,0.3s						
KTMS	Ketmen	3.50	325	*e*P	Pg	22 03 12.9	-3.2
	2.5nm,0.2s						
KTMS				*e*S	Sg	22 04 00.2	-1.2
	25nm,0.3s						
SHLS	Shalkode	3.73	314	Pg	Pb	22 03 13.4	-1.7
	3.6nm,0.1s						
SHLS				Lg	Lg	22 04 02.2	
	100nm,0.4s						
SHLS	Shalkode	3.73	314	*e*P	Pb	22 03 13.4	-1.7
	3.6nm,0.1s						
SHLS				*e*S	Sb	22 04 02.1	+1.7
	100nm,0.4s						
PDGK	Podgornoye	3.83	316	⇑Pg	Pg	22 03 24.0	+1.5
	5.2nm,0.4s						
PDGK				⇑Lg	Lg	22 04 12.4	
	51nm,1.1s						
UZB	Uzynbulak	3.97	311	Pg	Pb	22 03 21.2	+2.0
	3.5nm,0.1s						
UZB				Lg	Lg	22 04 16.1	
	19nm,0.4s						
UZB	Uzynbulak	3.97	311	*e*P	Pg	22 03 22.0	-3.1
	3.5nm,0.1s						
UZB				*e*S	Sg	22 04 15.8	-0.8
	28nm,0.3s						
SATY	Saty	4.29	306	Pg	Pg	22 03 29.5	-1.7
	2.1nm,0.3s						
SATY				Lg	Lg	22 04 28.7	
	21nm,0.3s						
KPKS	Kokpek	4.37	312	Pg	Pg	22 03 29.4	-3.2
	0.3nm,0.2s						
KPKS				Lg	Lg	22 04 28.8	
	20nm,0.2s						
KPKS	Kokpek	4.37	312	*e*P	Pg	22 03 29.4	-3.2
	0.3nm,0.2s						
KPKS				*e*S	Sg	22 04 28.8	-0.3
	20nm,0.2s						
KURS	Kuram	4.68	309	Pg	Pg	22 03 34.9	-3.6
	1.2nm,0.3s						
KURS				Lg	Lg	22 04 38.7	
	5.3nm,0.5s						
KNOS	Konyrlen	4.74	323	Pg	Pb	22 03 34.7	+2.4
	6.0nm,0.3s						
KNOS				Lg	Lg	22 04 37.9	
	8.5nm,0.3s						
KOTS	Kotyrbulak	5.20	302	Pg	Pg	22 03 46.1	-2.4
	4.9nm,0.3s						
KOTS				Lg	Lg	22 04 57.6	
	17nm,0.5s						
KOTS	Kotyrbulak	5.20	302	*e*P	Pg	22 03 46.1	-2.4
	4.9nm,0.3s						
KOTS				*e*S	Sg	22 04 57.6	+1.8
	17nm,0.5s						
MDOK	Medeo	5.20	301	Pg	Pg	22 03 45.8	-2.8
	1.6nm,0.6s						
MDOK				Lg	Lg	22 04 56.6	
	5.5nm,0.5s						
TNSS	Tian-Shan	5.21	300	Pg	Pg	22 03 47.2	-1.7
	1.0nm,0.6s						
TNSS				Lg	Lg	22 04 59.2	
	2.4nm,0.6s						
TNSS	Tian-Shan	5.21	300	*e*P	Pg	22 03 47.2	-1.7
	1.0nm,0.6s						
TNSS				*e*S	Sg	22 04 59.2	+2.8
	2.4nm,0.6s						
KST	Kastek	5.88	297	Pg	Pg	22 03 58.6	-2.9
	2.6nm,0.7s						
KST				Lg	Lg	22 05 18.8	
	6.5nm,0.5s						
KST	Kastek	5.88	297	*e*P	Pg	22 03 58.6	-2.9
	2.6nm,0.7s						
KST				*e*S	Sg	22 05 18.8	+1.1
	6.5nm,0.5s						
MK31	Makanchi Array	6.20	355	⇑Pn	Pn	22 03 42.5	+2.0
	0.4nm,0.5s,baz=162,slow=13,SNR=3.9						
MK31				⇓Lg	Lg	22 05 17.3	
	2.4nm,0.6s,baz=161,slow=27,SNR=4.8						
MAKZ	Makanchi	6.24	353	⇓Pn	Pn	22 03 42.0	+0.9
	3.0nm,1.1s						
MAKZ				⇓Lg	Lg	22 05 20.4	
	5.4nm,1.2s						

JMA 17 22:08:08.2±0.2, 38°.3N±0°.8×14°4E±°, h54^{km}, MV3.6/29, FAR E OFF NORTH HONSHU, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.17	291	P	Pn	22 08 42.9	+1.1
OFUJ				*e*S	Sn	22 09 08.4	+0.9
JIKH	Ishinomakikobu	2.20	271	P	Pn	22 08 43.2	+0.9
JIKH				S	Sn	22 09 09.1	+0.8
JKMT	Kesennumamotoy	2.24	284	P	Pn	22 08 43.9	+1.0
JKMT				*e*S	Sn	22 09 10.4	+1.1
MIYJ	Miyakonagasawa	2.28	304	P	Pn	22 08 44.2	+0.8
MIYJ				*e*S	Sn	22 09 11.1	+0.8
JOM	Ohasama	2.59	297	P	Pn	22 08 49.1	+1.4
JOM				*e*S	Sn	22 09 19.8	+1.9
JANG	Nango	2.96	315	*e*P	Pn	22 08 53.9	+1.2
JANG				*e*S	Sn	22 09 27.1	+0.1
JYK	Kaneyama	3.12	282	P	Pn	22 08 56.8	+1.9
JYK				*e*S	Sn	22 09 33.1	+2.3
JCH	Churui	4.34	351	*e*P	Pn	22 09 12.6	+0.9
JCH				*e*S	Sn	22 09 58.1	-2.9
BSO1	Boso 1	4.51	217	*e*P	Pn	22 09 13.2	-0.3
JRY	Ryogami san	4.86	243	*e*P	Pn	22 09 19.9	+1.2
JRY				*e*S	Sn	22 10 12.8	-0.9
NEM2	Nemuro 2	5.16	12	*e*P	Pn	22 09 20.5	-2.4
NEM2				*e*S	Sn	22 10 15.5	-5.6
JOSM	Okushiri--Mats	5.25	317	*e*P	Pn	22 09 27.0	+2.9
JTKR	Abashiri--Toko	5.65	357	*e*P	Pn	22 09 29.3	-0.3
JTKR				*e*S	Sn	22 10 30.1	-3.0

SJA 17 22:38:16.4±0.7, 27°.06S×69°.27W, h116^{km}±3^{km}, ML4.1, MW3.9

GUC 17 22:38:17.1±0.6, 27°.04S×69°.33W, h122^{km}±3^{km}, ML4.1

NEIC 17 22:38:17.5±1.4, 27°.05S±0°.05×69°.29W±0°.06, h112^{km}±5^{km}, mb4.3/17, ML4.1(GUC), Error ellipse: s-maj=8.9km s-min=5.5km az=121.0

IDC 17 22:38:18.8±0.8, 27°.18S×69°.02W, h123^{km}±5^{km}, mb3.9/5, mbtmp4.3/6, Error ellipse: s-maj=34.5km s-min=13.9km az=95.0

ISC 17 22:38:16.7±0.6, 27°.05S±0°.03×69°.28W±0°.03, h116^{km}±4^{km}, n120, σ1^{s}.56/158, mb4.3/9, 4C-8D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC02	Maricunga	0.26	32		Pn	22 38 34.4	+0.7
AC02				Sn	Sn	22 38 46.4	0.0
AC02	Maricunga	0.26	32	⇑*i*P	Pn	22 38 34.3	+0.7
AC02				*i* S	Sn	22 38 46.5	+0.2
AC02				IAML		22 38 47.6	
	comp=E,6µm,0.3s						
AC02	Maricunga	0.26	32	*e*P	Pn	22 38 34.2	+0.5
AC02				*e*S	Sn	22 38 47.0	+0.7
AC02				IAML		22 38 49.1	
	comp=Z,2µm,0.5s						
AC06	Mina Casimiro	1.00	252	Pn	Pn	22 38 38.7	+0.3
AC06				Sn	Sn	22 38 54.9	0.0
AC06	Mina Casimiro	1.00	252	⇑*i*P	Pn	22 38 38.9	+0.5
AC06				*i* S	Sn	22 38 55.1	+0.2
AC06				IAML		22 38 56.8	
	comp=N,2µm,0.3s						
GO03	Copiapo	1.00	237	Pn	Pn	22 38 39.0	+0.5
GO03				Sn	Sn	22 38 55.2	+0.2
GO03	Copiapo	1.00	237	⇑*i*P	Pn	22 38 39.0	+0.5
GO03				*i* S	Sn	22 38 55.5	+0.5
GO03				IAML		22 38 56.8	
	comp=N,5µm,0.2s						
GO03	Copiapo	1.00	237	*e*P	Pn	22 38 38.9	+0.5
GO03				*e*S	Sn	22 38 55.8	+0.8
GO03				IAML		22 38 56.5	
	comp=Z,2µm,0.3s						
AC01	Pan de Azucar	1.48	307	Pn	Pn	22 38 44.4	+0.6
AC01				Sn	Sn	22 39 04.2	0.0
AC01	Pan de Azucar	1.48	307	⇑*i*P	Pn	22 38 44.5	+0.8
AC01				*i* S	Sn	22 39 04.2	0.0
AC01				IAML		22 39 05.2	
	comp=E,2µm,0.1s						
AC01	Pan de Azucar	1.48	307	*e*P	Pn	22 38 44.5	+0.8
AC01				*e*S	Sn	22 39 05.1	+0.9
AC01				IAML		22 39 07.1	
	comp=Z,1µm,0.4s						
TINO	Tinogasta	1.82	124	*e*P	Pn	22 38 39.7	-8.2
GO02	Mina Guanaco	1.90	352	Pn	Pn	22 38 49.7	+0.6
GO02				Sn	Sn	22 39 13.9	+0.1
GO02	Mina Guanaco	1.90	352	⇓*i*P	Pn	22 38 49.9	+0.8
GO02				*e*S	Sn	22 39 14.5	+0.7
GO02				IAML		22 39 15.9	
	comp=E,3µm,0.1s						
GO02	Mina Guanaco	1.90	352	*e*P	Pn	22 38 50.0	+0.8
GO02				*e*S	Sn	22 39 14.9	+1.2
GO02				IAML		22 39 18.6	
	comp=Z,2µm,0.1s						
VCA	Vinchina	1.93	151	⇓*e*P	Pn	22 38 51.1	+1.9
VCA	Vinchina	1.93	151	*e*P	Pn	22 38 46.1	-3.1
VCA				*e*S	Sn	22 39 13.0	-1.0
AC04	Llanos de Chal	1.96	234	Pn	Pn	22 38 50.0	+0.5
AC04				Sn	Sn	22 39 13.7	-0.8
AC04	Llanos de Chal	1.96	234	⇓*i*P	Pn	22 38 50.0	+0.5
AC04				*i* S	Sn	22 39 14.8	+0.2
AC04				IAML		22 39 17.6	
	comp=E,3µm,0.5s						
AC04	Llanos de Chal	1.96	234	*e*P	Pn	22 38 44.5	-5.0
AC04				*e*P		22 38 50.2	
AC04				IAML		22 39 22.6	
	comp=Z,1µm,0.7s						
AC05	El Transito	1.98	206	Pn	Pn	22 38 50.4	+0.5
AC05				Sn	Sn	22 39 15.9	+0.8
AC05	El Transito	1.98	206	⇓*i*P	Pn	22 38 50.7	+0.8
AC05				*i* S	Sn	22 39 16.2	+1.0
AC05				IAML		22 39 18.5	
	comp=E,3µm,0.3s						
AC05	El Transito	1.98	206	*e*P	Pn	22 38 50.7	+0.8
AC05				*e*S	Sn	22 39 16.4	+1.2
AC05				IAML		22 39 22.5	
	comp=Z,715nm,1.2s						
LCO	Las Campanas	2.32	212	Pn	Pn	22 38 53.9	-0.4
LCO				Sn	Sn	22 39 23.6	+0.6
LCO	Las Campanas	2.32	212	⇓*i*P	Pn	22 38 54.5	+0.2
LCO				*e*S	Sn	22 39 23.7	+0.6
LCO	Las Campanas	2.32	212	*e*P	Pn	22 38 53.9	-0.4
LCO				*e*S	Sn	22 39 23.4	+0.4
LCO				IAML		22 39 25.2	
	comp=Z,2µm,0.4s						
AGUA	GUANDACOL	2.52	164	*e*P	Pn	22 38 58.5	+1.8
AGUA				*e*S	Sn	22 39 24.9	-2.6
AGUA				IAML		22 39 31.2	
	comp=Z,423nm,0.3s						
PB14	IPOC Station P	2.62	337	Pn	Pn	22 38 58.6	+0.4
PB14				Sn	Sn	22 39 27.6	-2.5
PB14	IPOC Station P	2.62	337	⇓*i*P	Pn	22 38 58.8	+0.5
PB14				*i* S	Sn	22 39 28.2	-1.9
PB14				IAML		22 39 30.4	
	comp=E,318nm,0.2s						
PB14	IPOC Station P	2.62	337	*e*P	Pn	22 38 58.8	+0.5
PB14				*e*S	Sn	22 39 29.4	-0.7
PB14				IAML		22 39 32.8	
	comp=Z,440nm,0.5s						
AANI	Anillaco	2.71	131	*e*P	Pn	22 38 59.7	+0.4
AANI				IAML		22 39 37.9	
	comp=Z,476nm,0.7s						
CO01	Juntas del Tor	3.00	194	Pn	Pn	22 39 04.2	+1.1
CO01				Sn	Sn	22 39 36.1	-2.7
CO01	Juntas del Tor	3.00	194	⇓*i*P	Pn	22 39 04.5	+1.4
CO01				*e*S	Sn	22 39 35.8	-3.1
CO01	Juntas del Tor	3.00	194	*e*P	Pn	22 39 04.8	+1.7
CO01				*e*S	Sn	22 39 38.0	-0.8
FSA	Cafayete	3.10	73	*e*P	Pn	22 38 51.0	-13
FSA				*e*S	Sn	22 39 53.8	+13
AROD	Rodeo	3.11	183	*e*P	Pn	22 39 06.7	+2.1
AROD				*e*S	Sn	22 39 40.2	-1.3
ACDV	Cuesta del Vie	3.11	177	*e*S	Sn	22 39 44.0	+2.7
ACLC	CERRO LA CRUZ	3.13	140	*e*P	Pn	22 39 05.9	+1.1
ACLC				*e*S	Sn	22 39 41.7	-0.1
CO05	La Serena	3.33	211		Pn	22 39 06.6	-0.7
CYA	Choya	3.38	115	*e*P	Pn	22 39 08.2	+0.3
GO04	Tololo Observa	3.38	203	Pn	Pn	22 39 08.0	-0.2
GO04	Tololo Observa	3.38	203	*e*P	Pn	22 39 07.8	-0.4
GO04	Tololo Observa	3.38	203	*e*P	Pn	22 39 07.9	-0.2
GO04				*e*S	Sn	22 39 37.0	-11
GO04				IAML		22 40 11.3	
	comp=Z,903nm,0.5s						
ACCO	Cerro Coronel	3.53	177	*e*P	Pn	22 39 11.6	+1.5
ACCO				*e*S	Sn	22 39 53.8	+2.4
SALTA		3.87	44	*e*P	Pn	22 39 15.5	+0.5
SALTA		3.87	44	*e*P	Pn	22 39 12.6	-2.3
SALTA				*e*P		22 39 13.1	
SALTA				*e*P		22 39 16.4	
SALTA				*e*S	Sn	22 39 59.2	-0.7
AVFE	Valle Fertil	3.93	156	*e*P	Pn	22 39 16.0	+0.7
AVFE				*e*S	Sn	22 39 59.4	-1.4
AVFE				IAML		22 40 01.4	
	comp=Z,266nm,0.4s						
CO03	El Pedregal	3.97	198	Pn	Pn	22 39 15.1	-0.7
CO03	El Pedregal	3.97	198	*e*P	Pn	22 39 15.4	-0.4
CO03	El Pedregal	3.97	198	*e*P	Pn	22 39 15.9	+0.1
CO03				*e*S	Sn	22 40 01.8	+0.2
CO03				IAML		22 40 02.8	
	comp=Z,226nm,0.2s						
APLL	PUNTA DE LOS L	4.11	145	*e*P	Pn	22 39 18.2	+0.5
SLA	San Lorenzo	4.12	57	⇓*e*P	Pn	22 39 19.9	+2.0
SLA	San Lorenzo	4.12	57	*e*P	Pn	22 39 20.1	+2.2
CO06	Fray Jorge	4.16	209	Pn	Pn	22 39 16.4	-1.9

CO06	Fray Jorge	4.16	209	eP	Pn	22 39 16.5	-1.7
AF01	San Pedro de A	4.21	14	Pn	Pn	22 39 20.1	+0.9
PB05	IPOC Station P	4.27	348	Pn	Pn	22 39 17.8	-2.1
RTLL	Cerro Villicun	4.32	171	eP	Pn	22 39 15.9	-4.5
RTLL				IAML		22 40 11.8	
	comp=Z,190nm,0.4s						
PB06	IPOC Station P	4.34	356	Pn	Pn	22 39 19.8	-1.1
CO02	Combarbal	4.40	200	Pn	Pn	22 39 19.9	-1.8
CFA	Coronel Fontan	4.62	169	P	Pn	22 39 25.4	+0.8
	comp=Z,24nm,0.3s,baz=354,slow=12,SNR=130						
CFA				S	Sn	22 40 14.9	-2.4
	comp=Z,7.5nm,0.3s,baz=328,slow=15,SNR=4.3						
CFA	Coronel Fontan	4.62	169	eS	Sn	22 40 11.2	-6.1
CFA				IAML		22 40 20.6	
	comp=Z,57nm,0.4s						
RTLS	Leoncito	4.73	180	eP	Pn	22 39 26.0	-0.2
RTLS				eS	Sn	22 40 22.6	+2.4
RTLS				eS	Sn	22 40 22.6	+2.4
RTLS				IAML		22 41 03.3	
	comp=Z,129nm,0.8s						
PB03	IPOC Station P	5.00	355	Pn	Pn	22 39 27.8	-2.0
PB09	IPOC Station P	5.24	0	Pn	Pn	22 39 31.9	-1.0
PB09	IPOC Station P	5.24	0	IAML		22 41 11.4	
	comp=Z,139nm,0.5s						
PB07	IPOC Station P	5.33	354	Pn	Pn	22 39 31.9	-2.4
PB07	IPOC Station P	5.33	354	eS	Sn	22 40 32.5	-2.2
PB02	IPOC Station P	5.74	354	Pn	Pn	22 39 37.0	-2.7
VA06	Catapilco	5.76	197	Pn	Pn	22 39 37.4	-2.4
VA03	San Esteban	5.80	191	Pn	Pn	22 39 39.4	-1.1
PB01	IPOC Station P	5.99	358	Pn	Pn	22 39 40.9	-2.2
PEL	Peldehue	6.19	191	Pn	Pn	22 39 43.0	-2.7
PATCX	Punta Patache	6.26	352	Pn	Pn	22 39 44.5	-2.2
MT02	Curacav	6.39	194	Pn	Pn	22 39 44.9	-3.5
MT08	Bocatoma Ro	6.40	186	Pn	Pn	22 39 48.1	-0.7
MT03	Universidad Ad	6.51	189	Pn	Pn	22 39 48.5	-1.5
LMEL	Las Melosas	6.82	186	Pn	Pn	22 39 53.8	-0.5
MT09	Talagante	6.86	192	Pn	Pn	22 39 51.5	-3.4
BO04	La Punta	7.01	189	Pn	Pn	22 39 53.9	-2.8
PB11	IPOC Station P	7.27	357	Pn	Pn	22 39 57.2	-3.3
GO01	Chusmiza	7.35	1	Pn	Pn	22 39 58.9	-3.0
BO02	Sierra Bellavi	7.82	189	Pn	Pn	22 40 04.6	-3.2
PB16	IPOC Station P	8.68	359	Pn	Pn	22 40 17.3	-2.7
LPAZ	La Paz	10.77	6	P	Pn	22 40 47.1	-1.1
	comp=Z,2.3nm,0.4s,baz=206,slow=4.4,SNR=7.7						
TRQA	Tornquist	12.57	153	Pn	Pn	22 41 08.5	-3.0
SIV	San Ignacio	13.39	36	P	Pn	22 41 18.6	-3.7
	comp=Z,2.5nm,0.5s,baz=230,slow=13,SNR=14						
PLCA	Paso Flores	13.68	184	P	P	22 41 30.4	-0.3
	comp=Z,0.9nm,0.5s,baz=360,slow=12,SNR=8.0						
PLCA	Paso Flores	13.68	184		P	22 41 31.4	+0.7
VILB	Vilhena	16.41	33		Pn	22 42 00.1	-0.3
BDFB	Brasilia	22.79	64	P	P	22 43 08.6	-1.3
	comp=Z,8.7nm,0.9s,baz=236,slow=7.4,SNR=8.3						
	comp=Z,8.7nm,0.9s						
BDFB	Brasilia	22.79	64	P	P	22 43 08.5	-1.3
BDFB				IAmb	IAmb	22 43 09.9	
	comp=Z,13nm,1.1s						
RUSC	La Rusia	32.96	353	P	P	22 44 42.0	+1.0
RUSC				IAmb	IAmb	22 44 48.6	
	comp=Z,6.3nm,1.1s						
TEIG	Tepich	50.48	337	P	P	22 47 03.9	+1.0
SNAA	Sanae	57.18	160	P	P	22 47 51.5	+0.3
QSPA	South Pole Qui	63.16	180	P	P	22 48 33.2	+1.0
	comp=Z,1.2nm,0.9s,baz=209,slow=6.6,SNR=2.3						
QSPA				pP	pP	22 49 02.9	+1.0
	comp=Z,1.1nm,0.6s,baz=176,slow=1.8,SNR=3.2						
	comp=Z,1.2nm,0.9s						
QSPA	South Pole Qui	63.16	180	P	P	22 48 32.3	+0.2
QSPA				IAmb	IAmb	22 48 37.0	
	comp=Z,2.6nm,1.1s						
W50A	Signal Mountai	63.75	345	P	P	22 48 36.1	-0.1
SWET	Sewanee	63.90	345	P	P	22 48 37.8	+0.6
SWET				IAmb	IAmb	22 48 55.3	
	comp=Z,6.8nm,1.1s						
MGMO	Mountain Grove	67.43	340	P	P	22 49 00.1	+0.3
CCM	Cathedral Cave	67.96	341	P	P	22 49 03.1	+0.1
CCM				IAmb	IAmb	22 49 04.5	
	comp=Z,3.6nm,0.6s						
R40A	Maddies Statio	68.48	341	P	P	22 49 07.5	+1.2
DBIC	Dimbokro	70.72	72	P	P	22 49 21.5	+0.9
	comp=Z,3.7nm,0.7s,baz=264,slow=4.9,SNR=5.5						
	comp=Z,3.7nm,0.7s						
DBIC	Dimbokro	70.72	72	P	P	22 49 21.1	+0.5
DBIC				IAmb	IAmb	22 49 22.1	
	comp=Z,4.5nm,0.8s						
LMN	Caledonia Moun	72.67	3	P	P	22 49 32.7	+1.1
BW06	Boulder Array	78.76	331	P	P	22 50 07.6	+1.0
TORD	Torodi Ar. Bea	79.58	69	P	P	22 50 12.0	+0.6
	comp=Z,1.5nm,0.5s,baz=278,slow=4.7,SNR=10						
	comp=Z,1.5nm,0.5s						
TORD	Torodi Ar. Bea	79.58	69	P	P	22 50 11.5	+0.2
BOSA	Boshof	81.17	118	P	P	22 50 21.0	+1.0
	comp=Z,3.2nm,0.8s,baz=250,slow=10,SNR=3.8						
	comp=Z,3.2nm,0.8s						
BOSA	Boshof	81.17	118	P	P	22 50 20.8	+0.8
BOSA				IAmb	IAmb	22 50 21.6	
	comp=Z,8.2nm,1.1s						
LBTB	Lobatse	83.03	114	P	P	22 50 30.2	+0.5
LBTB				IAmb	IAmb	22 50 31.0	
	comp=Z,2.5nm,0.7s						
F10A	Beach Ranch, E	84.70	329	P	P	22 50 39.0	+1.5
F10A				IAmb	IAmb	22 50 39.8	
	comp=Z,3.0nm,0.8s						
ASAR	Alice Springs	124.83	206	PKP	PKiKP	22 57 04.0	+0.1
	comp=Z,0.2nm,0.4s,baz=132,slow=1.4,SNR=3.1						
ASAR	Alice Springs	124.83	206		PKPdf	22 57 03.0	-0.6
KURK	Kurchatov	146.05	37		PKPab	22 57 43.3	-0.3
KURBB	Kurchatov Arra	146.05	37	PKPbc	PKPab	22 57 44.0	+0.4
	comp=Z,2.7nm,0.8s,baz=302,slow=3.4,SNR=22						
KURBB				pPKPbc	pPKPab	22 58 16.4	+0.9
	comp=Z,1.3nm,0.8s,baz=308,slow=3.5,SNR=4.2						
ZALV	Zalesovo Beam	147.05	28	PKPbc	PKPbc	22 57 44.6	-1.0
	comp=Z,2.8nm,0.6s,baz=297,slow=3.3,SNR=15						
ZALV				pPKPbc	pPKPbc	22 58 17.9	-0.2
	comp=Z,1.1nm,0.6s,baz=306,slow=4.2,SNR=3.6						
ZALV	Zalesovo Beam	147.05	28		PKPdf	22 57 43.9	+0.6
MAKZ	Makanchi	149.99	41	PKPbc	PKiKP	22 57 54.1	-0.2
MKAR	Makanchi Array	150.18	41	PKPbc	PKiKP	22 57 54.7	0.0
	comp=Z,2.4nm,0.6s,baz=295,slow=2.6,SNR=28						
MKAR				pPKPbc	pPKPbc	22 58 27.6	+1.1
	comp=Z,2.5nm,0.7s,baz=318,slow=2.2,SNR=9.6						

IDC 17 22:53:55.4±7.0, 7°.38S×128°.91E, h232^{km}±76^{km}, mb3.1/1, mbtmp4.1/5, Error ellipse: s-maj=77.6km s-min=24.6km az=42.0

ISC 17 22:53:52.3±1.2, 7°.48S±0°.09×129°.23E±0°.07, h200^{km}, n13, σ2^{s}.48/17, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.12	104	P	Pn	22 54 29.2	-2.8
DRS	Darwin Rock St	5.19	162	P	Pn	22 55 11.6	+2.5
SOEI	Soe	5.40	245	P	Pn	22 55 12.6	+0.7
SOEI	Soe	5.40	245	S	Sn	22 56 15.9	+1.1
BATI	Baumata	6.13	243	P	Pn	22 55 21.3	+0.1
	48nm,0.4s,baz=302,slow=8.0,SNR=14						
BATI				S	Sn	22 56 32.6	+1.0
	40nm,0.6s,baz=115,slow=22,SNR=4.1						
FITZ	Fitzroy Crossi	11.11	198	P	Pn	22 56 26.8	+0.8
	0.8nm,0.3s,baz=15,slow=11,SNR=2.3						
FITZ				S	Sn	22 58 25.9	-4.1
	1.1nm,0.3s,baz=86,slow=16,SNR=2.0						
PLAI	Plampang	11.41	262	P	Pn	22 56 27.9	-1.9
WRAB	Tennant Creek	13.34	159	P	P	22 56 58.0	+1.2
WRA	Warramunga Arr	13.34	159	P	P	22 56 57.7	+0.8
	5.3nm,0.4s,baz=334,slow=11,SNR=37						
WRA				S	S	22 59 20.4	-2.6
	1.5nm,0.3s,baz=331,slow=23,SNR=7.9						
COEN	Coen	15.14	116	P	P	22 57 17.5	+0.7
QIS	Mount Isa	16.43	143	P	Pn	22 57 34.5	+2.6
ASAR	Alice Springs	16.71	165	P	Pn	22 57 39.0	+3.8
	2.6nm,0.4s,baz=341,slow=9.5,SNR=35						
ASAR				S	Sn	23 00 39.6	-3.8
	1.1nm,0.8s,baz=354,slow=23,SNR=6.8						
MKAR	Makanchi Array	68.21	327	P	P	23 04 29.4	-1.8
	0.3nm,0.3s,baz=123,slow=5.3,SNR=6.5						
	0.3nm,0.3s						

IDC 17 22:56:53.3±4.2, 39°.35N×73°.84E, h21^{km}±25^{km}, mb3.6/7, mbtmp3.7/8, ML2.5/1, MS2.7/1, Error ellipse: s-maj=32.7km s-min=24.0km az=64.0

SOME 17 22:56:54.3, 39°.60N×72°.85E, h5^{km}

KRNET 17 22:56:55.0±0.1, 39°.53N×72°.69E, h14^{km}, mb3.9

NNC 17 22:57:11.2±4.0, 40°.47N×72°.60E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=38.1km s-min=20.0km az=170.0

ISC 17 22:56:55.5±1.3, 39°.48N±0°.04×72°.68E±0°.03, h1^{km}±9^{km}, n46, σ1^{s}.96/76, mb3.8/6, 31C-25D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.68	270	⇓eP	Pg	22 57 08.4	-0.1
DRK				⇓eS	Sg	22 57 18.2	+0.9
SFK	Sufi-Kurgan	0.83	50	⇑eP	Pg	22 57 10.3	-1.1
SFK				⇑eS	Sg	22 57 21.5	-0.6
OHH	Osh	1.05	4	⇓eP	Pg	22 57 14.1	-1.4
OHH				⇓eS	Sg	22 57 28.1	-1.0
SALK	Salom-Alik	1.65	32	⇓eP	Pn	22 57 24.8	-1.0
SALK				⇓eS	Sn	22 57 47.1	-0.7
ARSB	Arslanbob	1.86	7	⇓eP	Pn	22 57 28.7	+0.1
ARSB				⇓eS	Sn	22 57 53.4	+0.6
GAR	Garm	1.90	256	⇑eP	Pb	22 57 30.6	-0.4
GAR				⇑eS	Sg	22 57 56.6	+0.2
ARK	Arkit	2.38	347	⇑eP	Pn	22 57 36.8	+1.0
ARK				⇑eS	Sn	22 58 07.3	+1.6
ARLS	Aral	2.69	27	⇑eP	Pn	22 57 40.9	+0.8
ARLS				⇑eS	Sn	22 58 14.4	+1.0
JNKS	Jany-Kuch	2.77	54	⇓eP	Pn	22 57 42.3	+1.1
JNKS				⇓eS	Sn	22 58 16.9	+1.4
CHGR	Chuyangaron	2.86	254	⇑eP	Pn	22 57 44.2	+1.9
CHGR				⇑eS	Sb	22 58 20.2	-2.7
MNAS	Manas	3.01	358	⇓eP	Pn	22 57 45.5	+1.1
MNAS				⇓eS	Sn	22 58 22.3	+1.1
UCH	Uchtor	3.08	26	⇑eP	Pn	22 57 46.6	+0.9
UCH				⇑eS	Sn	22 58 24.2	+0.8
EKS2	Erkin-Say	3.29	14	⇓eP	Pn	22 57 49.2	+1.0
EKS2				⇓eS	Sn	22 58 28.8	+0.8
MRKS	Merke	3.29	7	eP	Pb	22 57 54.2	-0.5
	21nm,0.3s						
MRKS				eS	Sb	22 58 38.2	+2.9
	121nm,0.2s						
AAK	Ala-Archa	3.44	23	Pn	Pn	22 57 47.4	-3.0
	0.5nm,0.3s,baz=162,slow=6.4,SNR=18						
AAK				Pg	Pb	22 57 54.6	-2.7
	3.8nm,0.3s,baz=179,slow=7.8,SNR=41						
AAK				Lg	Lg	22 58 38.3	
	7.0nm,0.3s,baz=344,slow=19,SNR=18						
	5.0nm,0.6s						
AAK	Ala-Archa	3.44	23	⇑eP	Pn	22 57 51.4	+1.0
AAK				⇑eS	Sn	22 58 32.6	+0.7
AAK	Ala-Archa	3.44	23	⇑Pn	Pn	22 57 54.7	+4.3
	21nm,0.6s						
AAK				⇓Lg	Lg	22 58 35.2	
	24nm,0.5s						
KBK	Karagaybulak	3.61	28	⇓eP	Pn	22 57 53.7	+1.0
KBK				⇓eS	Sn	22 58 36.6	+0.5
FRU1	Bishkek	3.64	23	⇓eP	Pn	22 57 54.3	+1.3
FRU1				⇓eS	Sn	22 58 37.6	+0.9
CHMS	Chumysh	3.85	23	⇓eP	Pn	22 57 56.9	+1.0
CHMS				⇓eS	Sn	22 58 42.2	+0.4
ULHL	Ulahol	3.87	43	⇓eP	Pn	22 57 57.4	+1.1
ULHL				⇓eS	Sn	22 58 43.1	+0.7
BOOM	Boomskoye usch	3.89	38	⇑eP	Pn	22 57 57.8	+1.2
BOOM				⇑eS	Sn	22 58 43.6	+0.6
KK31	Karatay Array	3.97	336	⇓Pn	Pn	22 58 00.6	+3.0
	41nm,0.8s,baz=141,slow=13,SNR=136						
KK31				⇑Lg	Lg	22 58 49.7	
	64nm,0.5s,baz=146,slow=24,SNR=20						
USP	Ospenovka	4.03	19	⇑eP	Pn	22 57 59.4	+1.1
USP				⇑eS	Sn	22 58 46.4	+0.3
TKM2	Tokmak 2	4.08	32	⇑eP	Pn	22 58 00.4	+1.1
TKM2				⇑eS	Sn	22 58 48.1	+0.3
BRLS	Borolday	4.14	330	eP	Pb	22 58 08.2	-1.0
	5.2nm,0.3s						
BRLS				eS	Sb	22 59 03.0	+3.1
	29nm,0.3s						
KDJ	Kajisay	4.32	51	⇑eP	Pn	22 58 03.9	+1.4
KDJ				⇑eS	Sn	22 58 54.2	+0.5
KST	Kastek	4.34	34	eP	Pb	22 58 11.0	-1.5
	5.2nm,0.6s						
KST				eS	Sb	22 59 07.6	+2.2
	26nm,0.7s						
TARG	Taragay, Kyrgy	4.50	58	⇑eP	Pn	22 58 06.4	+1.2
TARG				⇑eS	Sn	22 58 58.7	+0.2
MTBS	Maitube	4.61	37	eP	Pb	22 58 15.6	-1.6
	8.1nm,0.3s						
MTBS				eS	Sb	22 59 15.2	+1.9
	12nm,0.4s						
KOTS	Kotyrbulak	5.02	40	eP	Pb	22 58 24.1	-0.1
	7.9nm,0.7s						
KOTS				eS	Sb	22 59 30.1	+4.9
	115nm,0.7s						
PRZ	Przheval'sk	5.27	53	⇑eP	Pn	22 58 17.0	+1.5
PRZ				⇑eS	Sn	22 59 16.8	-0.2
MKAR	Makanchi Array	10.13	41	Pg	Pn	22 59 48.0	+26
	0.1nm,0.3s,baz=229,slow=13,SNR=4.5						
MKAR				LR	LR	23 03 22.1	
	comp=Z,42nm,20.4s,baz=284,slow=40						
KURBB	Kurchatov Arra	11.88	18	Pn	Pn	22 59 44.2	-1.7
	baz=211,slow=14,SNR=2.3						
KURBB				Lg	Lg	23 03 07.5	
	baz=202,slow=27,SNR=6.5						
AB31	Akbulak array	13.34	321	⇑Pn	Pn	23 00 07.2	+1.3
	1.4nm,0.8s,baz=261,slow=35,SNR=29						
AB31				⇑Sn	Sn	23 02 31.2	-3.7
	2.1nm,0.8s,baz=126,slow=24,SNR=7.8						
BVAR	Borovoye Array	13.64	354	Pn	Pn	23 00 11.6	+1.6
	baz=160,slow=11,SNR=3.2						
AKTO	Aktyubinsk	15.06	321	Pn	P	23 00 35.5	+0.7
	2.2nm,0.3s,baz=119,slow=9.6,SNR=21						
AKTO				Sn	Sn	23 03 07.1	-10
	0.2nm,0.3s,baz=355,slow=21,SNR=5.2						
AKTO	Aktyubinsk	15.06	321	⇑Pn	P	23 00 35.7	+0.9
	4.4nm,0.8s						
AKTO				⇓Sn	Sn	23 03 13.5	-3.2
	1.0nm,0.5s						
ZALV	Zalesovo Beam	16.66	26	Pn	Pn	23 00 48.2	-1.9
	0.1nm,0.3s,baz=198,slow=7.6,SNR=1.5						
CMAR	Chiang Mai Arr	30.90	125	P	P	23 03 01.6	-12
	0.5nm,0.3s,baz=322,slow=10,SNR=2.1						
	0.5nm,0.3s						
FINES	FINESS Array B	35.82	323	P	P	23 03 56.5	+0.3
	0.9nm,0.8s,baz=141,slow=9.3,SNR=5.1						
	0.9nm,0.8s						
ARCES	ARCESS Array B	38.94	336	P	P	23 04 22.7	+0.2
	3.7nm,1.1s,baz=114,slow=8.3,SNR=8.1						
	3.7nm,1.1s						
HFS	Hagfors	41.60	320	P	P	23 04 44.6	-0.1
	1.0nm,0.4s,baz=105,slow=11,SNR=11						
	1.0nm,0.4s						
GERES	GERESS Array B	42.36	303	P	P	23 04 52.7	+1.5
	0.4nm,0.6s,baz=75,slow=11,SNR=2.6						
	0.4nm,0.6s						
NOA	NORSAR Array B	42.85	321	P	P	23 04 54.7	-0.2
	0.3nm,0.6s,baz=91,slow=8.0,SNR=2.1						
	0.3nm,0.6s						
TORD	Torodi Ar. Bea	67.12	268	P	P	23 07 50.1	-1.0
	0.4nm,0.5s,baz=41,slow=7.2,SNR=1.5						
	0.4nm,0.5s						

IDC 17 23:35:16.7±1.1, 27°.27N×128°.31E, h41^{km}±10^{km}, mb4.7/17, mbtmp4.9/17, Error ellipse: s-maj=26.0km s-min=13.5km az=66.0

NEIC 17 23:35:16.7±1.5, 27°.35N±0°.05×128°.4E±0°.1, h35^{km}±1^{km}, mb4.5/48, Error ellipse: s-maj=17.3km s-min=7.0km az=108.0

JMA 17 23:35:17.0±0.1, 27°.3N±0°.5×128°.4E±0°.7, h49^{km}±1^{km}, NEAR OKINAWAJIMA ISLAND

ISC 17 23:35:17.0±0.7, 27°.29N±0°.05×128°.43E±0°.06, h47^{km}±7^{km}, n147, σ1^{s}.09/144, mb4.5/45, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOKE	Okinoerabujima	0.15	60	P	Pn	23 35 24.8	+0.2
JYRO	Yoronjima	0.26	176	P	Pn	23 35 25.9	+0.4
JYRO				S	Sn	23 35 31.7	+0.3
JOW	Kunigami	0.47	197	P	Pn	23 35 28.3	+0.6
	5µm,0.3s,baz=92,slow=19						
JOW				S	Sn	23 35 36.0	+0.6
	37µm,0.4s,baz=162,slow=20,SNR=18						
JOW	Kunigami	0.47	197		Pn	23 35 28.1	+0.4
JOW	Kunigami	0.47	197	P	Pn	23 35 28.3	+0.6
JOW	Kunigami	0.47	197	P	Pn	23 35 28.1	+0.4
JOW				eS	Sn	23 35 35.7	+0.4
JIH	Iheya	0.48	239	P	Pn	23 35 28.2	+0.4
JIH				S	Sn	23 35 35.9	+0.4
JTK	Tokunoshima	0.68	43	P	Pn	23 35 30.2	-0.2
JNTH	Nagotoyohara	0.85	205	P	Pn	23 35 33.0	+0.4
JAMN	Amaminishikomi	1.16	35	P	Pn	23 35 36.4	-0.5
JAGN	Aguni-jima	1.27	237	P	Pn	23 35 38.6	+0.3
JJT3	Tamagusuku3	1.28	207	eP	Pn	23 35 39.8	+1.3
JAM	Amami Oshima	1.53	43	P	Pn	23 35 41.9	0.0
JZK	Kikaishima	1.71	53	P	Pn	23 35 45.4	+1.1
JKE	Kume jima 2	1.75	237	P	Pn	23 35 45.1	+0.2
JTAJ	Takarajima	1.98	20	P	Pn	23 35 47.8	-0.3
JNN	Nakanoshima	2.84	26	P	Pn	23 35 59.6	-0.3
JKDJ	Kitadaitoujima	2.89	117	P	Pn	23 35 59.2	-1.3
JYAK	Yakushimahirau	3.46	31	eP	Pn	23 36 08.3	0.0
JMJ	Miyako jima 2	3.74	230	P	Pn	23 36 09.7	-2.5
JMTN	Minamitane	3.78	34	eP	Pn	23 36 12.9	+0.2
JTN	Tanegashima 3	4.03	33	eP	Pn	23 36 17.6	+1.4
JSU	Suzuyama	4.56	22	P	Pn	23 36 25.2	+1.7
YOJ	Yonaguni jima	5.63	241	Pn	Pn	23 36 38.3	+0.1
YOJ	Yonaguni jima	5.63	241	P	Pn	23 36 37.8	-0.4
JNU	Nakatsue	6.19	19	Pn	Pn	23 36 48.0	+2.2
JNU	Nakatsue	6.19	19	P	Pn	23 36 48.4	+2.5
JNU	Nakatsue	6.19	19	P	Pn	23 36 48.1	+2.2
	6.6nm,0.3s,baz=211,slow=5.8,SNR=33						
NACB	Ninganchiao	6.90	245	Pn	Pn	23 36 54.2	-1.4
NACB	Ninganchiao	6.90	245	P	Pn	23 36 54.6	-1.0
YULB	Yu-li	7.53	241	Pn	Pn	23 37 01.1	-3.0
YULB	Yu-li	7.53	241	P	Pn	23 37 01.6	-2.6
JMN	Monobe	7.96	35	Pn	Pn	23 37 10.0	0.0
JMN	Monobe	7.96	35	P	Pn	23 37 10.1	0.0
TWGBT	Beinan	8.01	238	P	Pn	23 37 07.6	-3.2
TWG	Pinlang	8.02	238	Pn	Pn	23 37 07.3	-3.6
TPUB	Ta-pu	8.10	242	Pn	Pn	23 37 11.1	-1.0
TPUB	Ta-pu	8.10	242	P	Pn	23 37 10.9	-1.1
INU	Inuyama	10.88	40	P	Pn	23 37 48.4	-1.7
JGF	Kuroka	11.26	40	P	Pn	23 37 52.7	-2.5
JSD	Sado	13.54	35	P	Pn	23 38 25.1	-1.2
BJT	Baijiatuau	16.27	324	P	P	23 39 06.4	+1.8
BJT	Baijiatuau	16.27	324	P	P	23 39 06.4	+1.8
BJT	Baijiatuau	16.27	324	pmax	pmax		
	comp=Z,7.0nm,0.8s						
ASAJ	Asahikawa	20.31	31	P	Pn	23 39 51.3	0.0
	comp=Z,13nm,0.8s,baz=211,slow=12,SNR=3.5						
	comp=Z,13nm,0.8s						
LZDM	Lanzhou Array	22.72	298	P	P	23 40 15.8	+0.5
	comp=Z,14nm,0.7s,baz=134,slow=8.5,SNR=16						
	comp=Z,14nm,0.7s						
ULN	Ulaanbaatar	26.47	327	P	P	23 40 52.2	+2.3
GTA	Gaotai	26.67	304	eP	P	23 40 51.3	-0.4
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,270nm,7.6s						
SONM	Songino Array	26.77	326	P	P	23 40 53.7	+1.1
	comp=Z,3.7nm,0.5s,baz=147,slow=10,SNR=21						
	comp=Z,3.7nm,0.5s						
SONM	Songino Array	26.77	326	P	P	23 40 53.9	+1.3
SONM	Songino Array	26.77	326	P	P	23 40 53.9	+1.3
SONM	Songino Array	26.77	326	pmax	pmax		
	comp=Z,2.0nm,0.6s						
CHTO	Chiang Mai	28.36	259	P	P	23 41 06.9	0.0
CHTO				IAmb	IAmb	23 41 08.1	
	comp=Z,5.3nm,0.7s						
CHTO	Chiang Mai	28.36	259	P	P	23 41 07.6	+0.8
	comp=Z,48nm,1.1s						
CMAR	Chiang Mai Arr	28.50	258	P	P	23 41 09.3	+1.3
	comp=Z,2.3nm,0.3s,baz=55,slow=6.9,SNR=6.5						
BKNI	Bangkinang	37.55	229	P	P	23 42 27.0	0.0
MKAR	Makanchi Array	40.97	311	P	P	23 42 54.7	-0.5
	comp=Z,3.3nm,0.7s,baz=92,slow=9.3,SNR=20						
	comp=Z,3.3nm,0.7s						
MKAR	Makanchi Array	40.97	311	P	P	23 42 55.0	-0.3
ZAA0	Zalesovo Array	41.52	322	P	P	23 42 58.1	-1.5
ZALV	Zalesovo Beam	41.52	322	P	P	23 42 58.3	-1.3
	comp=Z,12nm,0.6s,baz=112,slow=8.9,SNR=44						
	comp=Z,12nm,0.6s						
ZALV	Zalesovo Beam	41.52	322	P	P	23 42 57.9	-1.7
WUS	Wushi	42.44	302	P	P	23 43 08.7	+1.2
KURK	Kurchatov	44.18	316	P	P	23 43 20.6	-0.6
KURBB	Kurchatov Arra	44.22	316	P	P	23 43 21.1	-0.3
	comp=Z,27nm,0.6s,baz=103,slow=9.0,SNR=46						
	comp=Z,27nm,0.6s						
AAK	Ala-Archa	46.02	304	P	P	23 43 36.3	+0.2
ARSB	Arslanbob	47.14	302	P	P	23 43 46.0	+1.1
ARSB	Arslanbob	47.14	302	P	P	23 43 46.0	+1.1
WRA	Warramunga Arr	47.30	172	P	P	23 43 46.4	+0.4
	comp=Z,3.3nm,0.7s,baz=353,slow=8.3,SNR=6.8						
	comp=Z,3.3nm,0.7s						
MANEM	Manem	48.35	297	P	P	23 43 55.2	+0.8
MANEM				IAmb	IAmb	23 43 57.0	
	comp=Z,5.2nm,0.7s						
KK31	Karatay Array	48.95	305	P	P	23 43 59.5	+0.8
KK31				IAmb	IAmb	23 44 00.2	
	comp=Z,3.4nm,0.8s						
KK31	Karatay Array	48.95	305	P	P	23 43 59.5	+0.8
KK31	Karatay Array	48.95	305	pmax	pmax		
	comp=Z,3.0nm,0.9s						
KKAR	Karatay Array	48.95	305	P	P	23 43 59.2	+0.5
KKAR	Karatay Array	48.95	305	P	P	23 43 59.2	+0.5
BVAR	Borovoye Array	49.61	318	P	P	23 44 03.7	+0.2
	comp=Z,29nm,0.7s,baz=82,slow=10,SNR=62						
	comp=Z,29nm,0.7s						
BORK	Borovoye	49.66	318	P	P	23 44 03.7	-0.2
BORK	Borovoye	49.66	318	P	P	23 44 03.4	-0.5
CHGR	Chuyangaron	50.23	299	P	P	23 44 07.6	-1.0
CHGR				IAmb	IAmb	23 44 08.8	
	comp=Z,2.8nm,0.6s						
ASAR	Alice Springs	50.93	174	P	P	23 44 14.3	+0.6
	comp=Z,1.5nm,0.8s,baz=2.5,slow=8.2,SNR=18						
SHAA	Shahritus	51.16	298	P	P	23 44 16.4	+0.8
SHAA				IAmb	IAmb	23 44 17.9	
	comp=Z,8.8nm,0.7s						
F15K	North Star Dit	55.98	27	P	P	23 44 51.2	+0.9
AB31	Akbulak array	56.06	313	P	P	23 44 50.7	-0.4
AB31				IAmb	IAmb	23 44 51.4	
	comp=Z,3.0nm,0.8s						
ABKAR	Akbulak array	56.06	313	P	P	23 44 50.7	-0.4
C16K	Lisburne Hills	56.17	24	P	P	23 44 52.1	+0.6
HRA	Herat	56.39	295	P	P	23 44 53.8	-0.2
HRA				IAmb	IAmb	23 44 55.0	
	comp=Z,3.0nm,0.7s						
ARTI	Arti	56.78	321	P	P	23 44 54.7	-1.5
N15K	Kwethluk River	57.57	34	P	P	23 45 02.3	+0.6
C18K	Utukok River	57.74	24	P	P	23 45 03.1	+0.3
J17K	VABM Dome	58.15	30	P	P	23 45 06.3	+0.6
G18K	Tagagawik	58.46	27	P	P	23 45 08.3	+0.5
G18K				IAmb	IAmb	23 45 09.7	
	comp=Z,2.4nm,0.8s						
D19K	Kuna River	58.85	24	P	P	23 45 10.8	+0.3
D19K				IAmb	IAmb	23 45 12.1	
	comp=Z,5.2nm,1.1s						
E19K	Redstone River	59.11	26	P	P	23 45 13.2	+0.9
E19K				IAmb	IAmb	23 45 14.4	
	comp=Z,5.0nm,1.1s						
B20K	Meade River	59.31	23	P	P	23 45 13.5	-0.1
D20K	Etivluk River	59.41	24	P	P	23 45 14.8	+0.4
D20K				IAmb	IAmb	23 45 16.0	
	comp=Z,2.7nm,0.8s						
STKA	Stephens Creek	60.16	167	P	P	23 45 20.7	+0.8
	comp=Z,4.2nm,0.8s,baz=335,slow=10,SNR=3.5						
	comp=Z,4.2nm,0.8s						
B21K	Ikpikpuk River	60.17	23	P	P	23 45 20.4	+0.8
B21K				IAmb	IAmb	23 45 21.9	
	comp=Z,3.6nm,0.8s						
E21K	Killik River	60.37	25	P	P	23 45 21.6	+0.6
E21K				IAmb	IAmb	23 45 23.1	
	comp=Z,4.7nm,0.9s						
D22K	Ayikyak River	60.85	24	P	P	23 45 25.2	+1.0
D22K				IAmb	IAmb	23 45 26.3	
	comp=Z,2.9nm,0.8s						
E22K	Anaktuvuk Pass	61.18	25	P	P	23 45 28.1	+1.6
E22K				IAmb	IAmb	23 45 29.4	
	comp=Z,4.6nm,0.9s						
SKT	Skwentna	61.66	32	P	P	23 45 30.2	+0.3
SKT				IAmb	IAmb	23 45 31.4	
	comp=Z,4.7nm,1.1s						
L22K	Petersville	61.97	31	P	P	23 45 32.1	+0.1
L22K				IAmb	IAmb	23 45 32.2	
	comp=Z,2.3nm,0.9s						
RND	Reindeer	62.74	30	P	P	23 45 36.6	-0.5
BMAR	Burnt Mountain	63.98	25	P	P	23 45 46.8	+1.6
F26K	Sheenjek River	64.10	25	P	P	23 45 47.5	+1.5
MENT	Mentasta	65.12	30	P	P	23 45 52.6	-0.1
M26K	Nabesna, AK	65.55	31	P	P	23 45 56.2	+0.6
M26K				IAmb	IAmb	23 45 56.5	
	comp=Z,1.7nm,0.6s						

F30M	Barrier River	67.24	24	P	P	23 46 07.3	+1.1
I30M	Mount Dempster	67.69	27	P	P	23 46 09.9	+0.7
KBZ	Khabaz	68.63	309	P	P	23 46 15.8	+0.5
	comp=Z,49nm,0.9s,baz=109,slow=4.8,SNR=67						
	comp=Z,49nm,0.9s						
A36M	Sachs Harbour	69.17	19	P	P	23 46 19.7	+1.5
A36M				IAmb	IAmb	23 46 21.3	
	comp=Z,3.8nm,0.7s						
WHY	Whitehorse	69.77	31	P	P	23 46 22.6	+0.4
KOPT	Kop Dagi	71.53	306	P	P	23 46 35.1	+1.5
KOPT				IAmb	IAmb	23 46 35.6	
	comp=Z,2.6nm,0.7s						
FIA1	FINESS Array S	72.03	330	P	P	23 46 34.7	-1.0
FINES	FINESS Array B	72.03	330	P	P	23 46 35.1	-0.6
	comp=Z,18nm,0.6s,baz=63,slow=5.6,SNR=51						
	comp=Z,18nm,0.6s						
FINES	FINESS Array B	72.03	330	P	P	23 46 34.5	-1.3
MARD	Mardin	72.28	303	P	P	23 46 37.3	-0.6
RAYN	Ar Rayn	73.64	288	P	P	23 46 45.9	-0.2
RAYN				IAmb	IAmb	23 46 46.8	
	comp=Z,5.1nm,1.1s						
AKASG	Malin Array Be	74.85	319	P	P	23 46 51.6	-0.9
	comp=Z,25nm,0.6s,baz=58,slow=6.6,SNR=12						
	comp=Z,25nm,0.6s						
BR131	Keskin Array S	76.53	308	P	P	23 47 02.1	-0.4
BR131				IAmb	IAmb	23 47 02.9	
	comp=Z,4.5nm,0.8s						
BRTR	Keskin Array B	76.53	308	P	P	23 47 02.3	-0.3
	comp=Z,20nm,0.8s,baz=101,slow=4.6,SNR=149						
	comp=Z,20nm,0.8s						
BRTR	Keskin Array B	76.53	308	P	P	23 47 02.1	-0.4
YKA	Yellowknife Ar	77.50	25	P	P	23 47 08.0	+0.6
	comp=Z,20nm,0.9s,baz=300,slow=6.1,SNR=59						
	comp=Z,20nm,0.9s						
MMAI	Mount Meron Ar	78.00	301	P	P	23 47 11.5	+0.6
	comp=Z,16nm,0.7s,baz=72,slow=8.0,SNR=32						
	comp=Z,16nm,0.7s						
NC405	NORSAR Array S	78.21	334	P	P	23 47 10.8	-0.6
BALJ	Balqa	78.21	300	P	P	23 47 11.8	-0.2
NOA	NORSAR Array B	78.45	334	P	P	23 47 11.9	-0.8
	comp=Z,44nm,0.8s,baz=52,slow=5.6,SNR=56						
	comp=Z,44nm,0.8s						
NOA	NORSAR Array B	78.45	334	P	P	23 47 11.9	-0.8
BUR08	Bucovina Ar. S	78.57	318	P	P	23 47 13.5	-0.3
BUR08				IAmb	IAmb	23 47 14.1	
	comp=Z,3.2nm,0.8s						
BURAR	Bucovina Array	78.57	318	P	P	23 47 13.7	0.0
BURAR				IAmb	IAmb	23 47 14.5	
	comp=Z,2.6nm,0.7s						
CSS	Mathiatis	78.75	303	P	P	23 47 14.1	-0.8
MLR	Muntele Rosu	79.12	316	P	P	23 47 16.4	-0.5
ELL	Elmali	80.46	306	P	P	23 47 23.3	-0.9
ELL	Elmali	80.46	306	P	P	23 47 23.3	-0.9
ELL	Elmali	80.46	306	pmax	pmax		
	comp=Z,5.0nm,0.6s						
ALN	Alexandroupoli	81.22	311	P	P	23 47 27.3	-0.7
ALN	Alexandroupoli	81.22	311	P	P	23 47 27.3	-0.7
ALN	Alexandroupoli	81.22	311	pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARG	Arkhangelos	81.98	307	P	P	23 47 32.2	+0.1
ARG				IAmb	IAmb	23 47 33.2	
	comp=Z,5.1nm,0.8s						
ARG	Arkhangelos	81.98	307	P	P	23 47 32.3	+0.1
ARG	Arkhangelos	81.98	307	pmax	pmax		
	comp=Z,5.0nm,0.8s						
LIT	Litokhoron	83.97	312	P	P	23 47 41.9	-0.5
GERES	GERESS Array B	84.47	323	P	P	23 47 44.4	-0.5
	comp=Z,4.6nm,1.0s,baz=56,slow=7.1,SNR=3.5						
	comp=Z,4.6nm,1.0s						
IDI	Anoyia	84.73	307	P	P	23 47 45.3	-1.1
IDI				IAmb	IAmb	23 47 46.3	
	comp=Z,5.2nm,1.1s						
ITM	Ithomi	85.84	310	P	P	23 47 50.5	-1.4
FUORN	Ofenpass-Fuorn	87.66	323	P	P	23 48 02.2	+1.3
DAVOX	Davos/Dischmat	87.77	323	P	P	23 48 00.3	-1.0
	comp=Z,23nm,0.7s,baz=149,slow=0.8,SNR=28						
FDMO	Fiordimonte	88.23	318	P	P	23 48 04.3	+0.9

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*NEIC **17** 23:35:20.9±2.0, 19.°02N±0.°03×67.°08W±0.°02, h10^{km}±2^{km}, ML2.3/17, Md2.9/13(RSPR), Error ellipse: s-maj=5.6km s-min=3.6km az=20.0*

*SDD **17** 23:35:20.3±2.4, 19.°14N×67.°09W, h19^{km}±55^{km}, MD3.2, ML2.8, MW2.8, Presumed earthquake*

*OSPL **17** 23:35:20.6±0.3, 19.°12N×67.°30W, h20^{km}±2^{km}, ML2.1, Presumed earthquake*

*RSPR **17** 23:35:21.9, 19.°12N×67.°27W, h24^{km}±28^{km}, MD2.9/13*

ISC 17 23:35:18.6±1.5**, 19.°10N**±0.°05×**67.°12W**±0.°03**, h5**^{km}±10^{km}**, n53, σ0^{s}44**/69**, 15C-10D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	0.63	179	Pg	Pb	23 35 32.5	+0.4
AGPR				IAML		23 35 42.3	
	164nm,0.3s						
AGPR				IAML		23 35 46.8	
	154nm,0.7s						
AGPR	Aguadilla, PR	0.63	179	⇓eP	Pb	23 35 32.9	+0.8
AGPR	Aguadilla, PR	0.63	179	eS	Sb	23 35 41.6	+0.4
AGPR	Aguadilla, PR	0.63	179	⇑ePg	Pb	23 35 32.7	+0.6
AGPR				eSg	Sb	23 35 41.7	+0.4
AGPR				IAML		23 35 44.4	
	comp=N,1µm,0.2s						
AGPR	Aguadilla, PR	0.63	179	i P	Pb	23 35 32.7	+0.6
AGPR				eS	Sb	23 35 41.6	+0.4
AGPR				IAML		23 35 43.9	
	comp=Z,80nm,1.2s						
IDE	Isla Desecheo	0.79	205		Pb	23 35 34.9	+0.2
IDE					Sb	23 35 45.1	-0.6
IDE	Isla Desecheo	0.79	205	⇓eP	Pb	23 35 34.9	+0.2
IDE	Isla Desecheo	0.79	205	eS	Sb	23 35 45.1	-0.6
AOPR	Arecibo Observ	0.83	155		Pb	23 35 35.5	0.0
AOPR					Sg	23 35 45.8	+0.6
AOPR				IAML		23 35 56.9	
	comp=N,132nm,0.5s						
AOPR				IAML		23 36 00.1	
	comp=E,235nm,0.3s						
AOPR	Arecibo Observ	0.83	155	⇓eP	Pb	23 35 36.0	+0.5
AOPR	Arecibo Observ	0.83	155	eS	Sb	23 35 47.6	+0.7
AOPR	Arecibo Observ	0.83	155	⇑eSg	Sn	23 35 48.5	-1.1
AOPR				IAML		23 35 57.2	
	comp=N,979nm,0.3s						
PRSN	Puerto Rico Se	0.88	181		Pb	23 35 36.3	0.0
PRSN					Sb	23 35 48.2	-0.2
PRSN	Puerto Rico Se	0.88	181	⇑eP	Pb	23 35 36.3	0.0
PRSN	Puerto Rico Se	0.88	181	eS	Sb	23 35 48.2	-0.2
LSP	Las Mesas	0.92	178		Pb	23 35 37.1	0.0
LSP					Sb	23 35 49.9	+0.3
LSP	Las Mesas	0.92	178	⇑eP	Pb	23 35 37.1	0.0
LSP	Las Mesas	0.92	178	eS	Sb	23 35 49.9	+0.3
UUPR	Utuado, UPR, P	0.93	156		Pn	23 35 38.3	0.0
UUPR					Sb	23 35 50.1	+0.4
UUPR	Utuado, UPR, P	0.93	156	⇑eP	Pn	23 35 38.3	0.0
UUPR	Utuado, UPR, P	0.93	156	eS	Sb	23 35 50.1	+0.4
ECPR	Experimental S	1.06	137	⇓eP	Pn	23 35 40.1	0.0
ECPR	Experimental S	1.06	137	eS	Sn	23 35 55.7	+0.4
CRPR	Cabo Rojo, PR	1.09	179	Pg	Pg	23 35 39.5	0.0
CRPR				Sg	Sg	23 35 53.4	-0.3
CRPR	Cabo Rojo, PR	1.09	179	IAML		23 35 55.0	
	comp=N,71nm,0.5s						
CRPR				IAML		23 36 02.6	
	comp=N,60nm,0.6s						
CRPR	Cabo Rojo, PR	1.09	179	⇓eP	Pg	23 35 39.7	+0.2
CRPR	Cabo Rojo, PR	1.09	179	eS	Sg	23 35 53.0	-0.7
CRPR	Cabo Rojo, PR	1.09	179	⇑ePg	Pg	23 35 39.5	0.0
CRPR				⇑eSg	Sg	23 35 53.6	-0.1
CRPR				IAML		23 35 57.4	
	comp=N,366nm,0.3s						
CRPR	Cabo Rojo, PR	1.09	179	i P	Pg	23 35 39.6	+0.1
CRPR				eS	Sg	23 35 53.7	0.0
CRPR				IAML		23 35 54.3	
	comp=Z,38nm,0.8s						
MLPR	Magueyes Islan	1.13	176	⇓eP	Pg	23 35 40.2	-0.1
MLPR	Magueyes Islan	1.13	176	eS	Sg	23 35 54.8	-0.1
MLPR	Magueyes Islan	1.13	176	⇑ePg	Pg	23 35 40.1	-0.1
MLPR				⇑eSg	Sg	23 35 54.4	-0.5
MLPR				IAML		23 35 57.5	
	comp=N,198nm,0.3s						
GBPR	Guanica, Bosqu	1.14	168		Pn	23 35 41.5	+0.3
GBPR					Sb	23 35 56.0	-0.1
GBPR	Guanica, Bosqu	1.14	168	⇓eP	Pn	23 35 41.5	+0.3
GBPR	Guanica, Bosqu	1.14	168	eS	Sb	23 35 56.0	-0.1
OBIP	Obispado Ponce	1.16	155	Pn	Pg	23 35 40.7	-0.2
OBIP					Sb	23 35 56.1	-0.4
OBIP	Obispado Ponce	1.16	155	⇓eP	Pn	23 35 41.2	-0.2
OBIP	Obispado Ponce	1.16	155	eS	Sb	23 35 57.0	+0.4
GCPR	Guaynabo City	1.26	129	Pn	Pn	23 35 43.0	+0.2
GCPR				Sn	Sn	23 36 00.2	0.0
GCPR	Guaynabo City	1.26	129	⇓eP	Pn	23 35 43.1	+0.3
GCPR	Guaynabo City	1.26	129	eS	Sn	23 36 00.2	0.0
PCDR	Punta Cana, DR	1.33	244	⇑ePg	Pn	23 35 43.3	-0.5
PCDR				eSg	Sg	23 36 01.6	+0.3
PCDR				IAML		23 36 06.0	
	comp=N,7.8nm,0.3s						
PCDR				IAML		23 36 46.6	
	comp=N,172nm,2.1s						
SJG	San Juan	1.35	137	Pn	Pn	23 35 42.6	-1.5
SJG				IAML		23 36 09.0	
	comp=N,41nm,0.2s						
SJG	San Juan	1.35	137	⇑eP	Pg	23 35 44.5	0.0
SJG	San Juan	1.35	137	eS	Sn	23 36 02.2	-0.2
SJG	San Juan	1.35	137	i P	Pg	23 35 44.6	+0.2
SJG				IAML		23 36 06.1	
	comp=Z,22nm,1.0s						
HUMP	Col San Antoni	1.54	128	Pn	Pg	23 35 47.6	-0.4
HUMP				Sn	Sg	23 36 07.8	-0.2
HUMP	Col San Antoni	1.54	128	IAML		23 36 10.4	
	comp=Z,40nm,0.2s						
HUMP				IAML		23 36 13.6	
	comp=Z,32nm,0.2s						
HUMP	Col San Antoni	1.54	128	⇓eP	Pg	23 35 48.0	-0.1
HUMP	Col San Antoni	1.54	128	eS	Sg	23 36 08.0	-0.1
MIDR	Miches	1.83	267	⇑ePg	Pb	23 35 52.0	-0.5
MIDR				⇑eSg	Sg	23 36 17.5	+0.2
MIDR				IAML		23 36 58.6	
	comp=N,47nm,2.7s						
DR12	Loma Pena Alta	2.16	262	Pn	Pn	23 35 56.0	+0.7
HATOM	Hato Mayor del	2.16	262	⇑ePg	Pb	23 35 57.8	-0.5
HATOM				⇑eSg	Sb	23 36 26.5	+1.2
HATOM				IAML		23 36 30.4	
	comp=N,154nm,0.3s						

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*GFZ **17** 23:35:12.1, 26.°62N×128.°92E, h51^{km}, MW5.1, Moment Tensor Solution. s41 Moment tensor: M$_{rr}$4.44; M$_{\theta\theta}$-1.79; M$_{\phi\phi}$-2.65; M$_{r\theta}$1.58; M$_{\theta\phi}$-2.85; M$_{\phi r}$1.44; Fault plane solution: NP1:φ$_s$217.00000°, δ33.00000°, λ84.00000°. NP2:φ$_s$44.00000°, δ57.00000°, λ94.00000°. Principal axes: T 4.9000, Plg78.0000°, Azm327.0000°; N 0.6500, Plg3.0000°, Azm222.0000°; P -5.5500, Plg12.0000°, Azm131.0000°;*

*BJI **17** 23:35:18.2, 26.°97N×128.°71E, h61^{km}, mB4.9/37, mb4.9/67, Ms4.5/65, Ms7 4.4/64*

*MOS **17** 23:35:19.0±1.0, 27.°40N×128.°38E, h36^{km}, mb5.6/98, MS4.9/19, Error ellipse: s-maj=6.4km s-min=3.6km az=119.3*

*IDC **17** 23:35:20.7±0.5, 27.°31N×128.°39E, h41^{km}±5^{km}, mb4.9/35, mbtmp5.1/38, ML4.0/4, Error ellipse: s-maj=12.7km s-min=7.6km az=95.0*

*NEIC **17** 23:35:21.9±1.8, 27.°35N±0.°04×128.°34E±0.°09, h41^{km}±4^{km}, mb5.4/425, Mww5.1/26, Error ellipse: s-maj=11.2km s-min=6.4km az=102.0*

*NEIC **17** 23:35:21.7, 27.°33N×128.°36E, h46^{km}*

*GCMT **17** 23:35:21.9±0.2, 27.°29N±0.°01×128.°49E±0.°01, h47^{km}, MW5.1/107, Moment Tensor Solution. s106,c154; s107,c166; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$5.90±.14; M$_{\theta\theta}$-1.96±.10; M$_{\phi\phi}$-3.93±.11; M$_{r\theta}$1.83±.08; M$_{\theta\phi}$-2.85±.08; M$_{\phi r}$1.89±.09; Best double couple: M$_0$6.48800×10^{16} NP1:φ$_s$212.00000°, δ33.00000°, λ84.00000°. NP2:φ$_s$39.00000°, δ57.00000°, λ94.00000°. Principal axes: T 6.4690, Plg78.0000°, Azm322.0000°; N 0.0480, Plg3.0000°, Azm217.0000°; P -6.5070, Plg12.0000°, Azm126.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **17** 23:35:21.7, 27.°23N×128.°59E, h46^{km}, Moment Tensor Solution. Duration: 1^{s}9 Moment tensor: Scale 10^{16}Nm; M$_{rr}$5.65; M$_{\theta\theta}$-2.42; M$_{\phi\phi}$-3.23; M$_{r\theta}$1.73; M$_{\theta\phi}$-2.91; M$_{\phi r}$1.66; Fault plane solution: M$_0$6.19000×10^{16} NP1: φ$_s$218.89000°, δ33.67000°, λ86.51000°. NP2:φ$_s$43.08000°, δ56.40000°, λ92.32000°. Principal axes: T 6.1359, Plg78.0000°, Azm321.0000°; N 0.1101, Plg2.0000°, Azm222.0000°; P -6.2460, Plg11.0000°, Azm131.0000°;*

*JMA **17** 23:35:22.1±0.1, 27.°3N±0.°5×12°8E±°, h47^{km}, MD5.1/15, MW5.2/15, NEAR OKINAWAJIMA ISLAND*

JMA Felt IV J1 at NEAR OKINAWAJIMA ISLAND .

*NIED **17** 23:35:22.1, 27.°31N×128.°43E, h47^{km}, MW5.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.27; M$_{\theta\theta}$-0.01; M$_{\phi\phi}$-1.26; M$_{r\theta}$2.75; M$_{\theta\phi}$-2.03; M$_{\phi r}$2.56; Fault plane solution: M$_0$4.30000×10^{16} NP1: φ$_s$187.00000°, δ18.00000°, λ48.00000°. NP2:φ$_s$50.00000°, δ77.00000°, λ102.00000°.*

*BGR **17** 23:35:27.3, 28.°00N×127.°17E, h33^{km}, mb5.6, Ms5.0*

ISC 17 23:35:21.6±0.3**, 27.°31N**±0.°03×**128.°41E**±0.°03**, h49**^{km}±2^{km}**, h49**^{km}**:pP-P, n1210, σ1^{s}35**/1097**, mb5.4**/377**, MS4.8**/33**, 75C-29D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOKE	Okinoerabujima	0.15	71	P	Pn	23 35 29.6	+0.1
JOKE				S	Sn	23 35 34.8	-0.3
JOKE	Okinoerabujima	0.15	71	A	A	23 35 29.6	
	comp=N,2µm,0.2s,comp=E,491nm,0.3s						
JYRO	Yoronjima	0.29	173	P	Pn	23 35 30.7	+0.2
JYRO				S	Sn	23 35 36.6	-0.3
JYRO	Yoronjima	0.29	173	A	A	23 35 30.7	
	comp=N,204nm,0.4s,comp=E,322nm,0.5s						
JIH	Iheya	0.48	235	S	Sn	23 35 40.7	+0.3
JIH	Iheya	0.48	235	A	A	23 35 40.7	
	comp=N,148nm,0.7s,comp=E,260nm,1.4s						
JOW	Kunigami	0.49	194	P	Pn	23 35 33.0	+0.3
	comp=E,24µm,0.3s,baz=95,slow=19,SNR=116						
JOW				S	Sn	23 35 40.9	+0.2
	comp=E,52µm,0.4s,baz=168,slow=20,SNR=15						
JOW	Kunigami	0.49	194	Pn	Pn	23 35 32.7	0.0
JOW				Sn	Sn	23 35 40.2	-0.4
JOW	Kunigami	0.49	194	S	Sn	23 35 40.7	0.0
JOW	Kunigami	0.49	194	P	Pn	23 35 33.0	+0.3
JOW				S	Sn	23 35 40.6	-0.1
JOW	Kunigami	0.49	194	A	A	23 35 33.0	
	comp=N,387nm,0.5s,comp=E,303nm,0.9s						
JTK	Tokunoshima	0.67	45	P	Pn	23 35 35.1	+0.2
JTK				S	Sn	23 35 44.0	-0.6
JTK	Tokunoshima	0.67	45	A	A	23 35 35.1	
	comp=N,296nm,0.7s,comp=E,313nm,0.5s						
JNTH	Nagotoyohara	0.86	204	eS	Sn	23 35 49.1	0.0
JNTH	Nagotoyohara	0.86	204	A	A	23 35 49.1	
	comp=N,42nm,0.9s,comp=E,81nm,5.0s						
JAMN	Amaminishikomi	1.15	36	A	A	23 35 42.0	
	comp=N,44nm,1.3s,comp=E,42nm,0.7s						
JAGN	Aguni-jima	1.27	236	eS	Sn	23 35 59.6	+0.8
JAGN	Aguni-jima	1.27	236	A	A	23 35 59.6	
	comp=N,57nm,2.1s,comp=E,44nm,3.1s						
JJT3	Tamagusuku3	1.29	206	A	A	23 35 44.2	
	comp=N,137nm,4.6s,comp=E,158nm,2.2s						
JAM	Amami Oshima	1.52	44	A	A	23 35 47.4	
	comp=N,26nm,0.8s,comp=E,29nm,1.5s						
JZK	Kikaishima	1.70	54	eP	Pn	23 35 50.2	+1.4
JZK	Kikaishima	1.70	54	A	A	23 35 50.2	
	comp=N,160nm,1.3s,comp=E,132nm,1.5s						
JKE	Kume jima 2	1.75	236	A	A	23 35 51.0	
	comp=N,14nm,3.5s,comp=E,11nm,3.3s						
JTAJ	Takarajima	1.96	21	eP	Pn	23 35 52.5	+0.2
JTAJ				eS	Sn	23 36 14.9	-0.9
JTAJ	Takarajima	1.96	21	A	A	23 35 52.5	
	comp=N,15nm,1.3s,comp=E,29nm,1.1s						
JNN	Nakanoshima	2.83	27	eS	Sn	23 36 35.8	-1.3
JNN	Nakanoshima	2.83	27	A	A	23 36 35.8	
	comp=N,15nm,1.1s,comp=E,20nm,1.0s						
JKDJ	Kitadaitoujima	2.92	117	P	Pn	23 36 04.0	-1.5
JKDJ				eS	Sn	23 36 35.2	-4.1
JKDJ	Kitadaitoujima	2.92	117	A	A	23 36 04.0	
	comp=N,15nm,4.0s,comp=E,13nm,2.7s						
JOGS	Gusukube	3.71	227	A	A	23 36 18.7	
	comp=N,17nm,3.0s,comp=E,19nm,3.2s						
JMTN	Minamitane	3.77	35	eP	Pn	23 36 19.2	+2.0
JMTN	Minamitane	3.77	35	A	A	23 36 19.2	
	comp=N,10.0nm,4.9s,comp=E,11nm,6.3s						
JMJ2	Miyako jima3	3.78	228	A	A	23 36 19.6	
	comp=N,14nm,4.4s,comp=E,17nm,5.7s						
JIRB	Irabujima	3.82	230	A	A	23 36 20.3	
	comp=N,8.0nm,4.0s,comp=E,11nm,2.9s						
JTN	Tanegashima 3	4.02	33	A	A	23 36 22.9	
	comp=N,11nm,1.8s,comp=E,12nm,2.3s						
JTJ	Tarama	4.27	232	A	A	23 36 26.5	
	comp=N,8.0nm,2.6s,comp=E,8.0nm,3.7s						
JSU	Suzuyama	4.54	23	Pn	Pn	23 36 27.9	+0.1
JNAR	Kushima--Naru	4.88	30	A	A	23 36 35.0	
	comp=N,5.0nm,1.6s,comp=E,5.0nm,3.0s						
JKRS	Kuro-shima	5.01	233	A	A	23 36 37.0	
	comp=N,17nm,2.7s,comp=E,12nm,3.4s						
JNKG	Nichinankitago	5.04	30	A	A	23 36 37.3	
	comp=N,5.0nm,1.9s,comp=E,6.0nm,1.9s						
HATJ	Hateruma jima	5.27	233	A	A	23 36 40.6	
	comp=N,12nm,3.6s,comp=E,11nm,2.4s						
YOJ	Yonaguni jima	5.63	241	Pn	Pn	23 36 42.6	-0.2
YOJ	Yonaguni jima	5.63	241	P	Pn	23 36 42.6	-0.2
JNU	Nakatsue	6.17	20	S	Sn	23 38 01.5	+2.1
	comp=E,121nm,0.9s,baz=240,slow=18,SNR=0.8						
	comp=E,52nm,0.6s						
JNU	Nakatsue	6.17	20	Pn	Pn	23 36 52.5	+2.4
TATO	Taipei	6.64	251	Pn	Pn	23 36 60.0	+3.3
TATO	Taipei	6.64	251	P	Pn	23 36 54.8	-1.8
YHNB	Yeheng	6.86	249	Pn	Pn	23 37 01.1	+1.4
YHNB	Yeheng	6.86	249	P	Pn	23 36 57.1	-2.5
JTU	Tsushima	7.24	6	P	Pn	23 37 06.4	+1.7
SSE	Sheshan	7.35	303	P	Pn	23 37 04.0	-2.3
SSE				S	Sn	23 38 27.3	-1.1
SSE				pmax	pmax		
	comp=Z,27nm,0.7s						
SSE				pmax	pmax		
	comp=Z,160nm,4.4s						
SSE				LR	LR		
	comp=N,560nm,18.5s						
SSE				LR	LR		
	comp=E,960nm,18.6s						
JMN	Monobe	7.94	35	Pn	Pn	23 37 14.5	+0.1
TWG	Pinlang	8.02	238	Pn	Pn	23 37 12.1	-3.4
TPUB	Ta-pu	8.10	242	Pn	Pn	23 37 14.7	-1.9
TJN	Taejon	9.08	355	Pn	Pn	23 37 33.4	+3.4
TJN	Taejon	9.08	355	P	Pn	23 37 28.7	-1.3
QZH	Quanzhou	9.13	257	⇓iP	Pn	23 37 34.3	+3.5
QZH				sP		23 37 49.6	
QZH				S	Sn	23 39 16.4	+4.2
QZH				pmax	pmax		
	comp=E,87nm,1.2s						
QZH				LR	LR		
	comp=E,2µm,20.3s						
QZH				LR	LR		
	comp=E,1µm,21.3s						
QZH				LR	LR		
	comp=E,3µm,22.7s						
KNMB	Chin-men Tao	9.46	255	Pn	Pn	23 37 34.8	-0.5
NJ2	Nanjing	9.56	302	eP	Pn	23 37 38.4	+1.9
NJ2				pmax	pmax		
	comp=E,56nm,0.9s						
NJ2				LR	LR		
	comp=E,1µm,16.1s						
NJ2				LR	LR		
	comp=E,2µm,22.3s						
NJ2				LR	LR		
	comp=E,2µm,18.9s						
KSAR	Wonju Array Be	10.11	358	Pn	Pn	23 37 47.5	+3.4
KSRS	Korea Array	10.12	358	P	Pn	23 37 43.5	-0.7
	comp=E,1.5nm,0.3s,baz=176,slow=13,SNR=60						
	comp=E,23nm,0.7s						
KSRS	Korea Array	10.12	358	P	Pn	23 37 43.5	-0.7
KS19	Wonju Array Si	10.17	358	Pn	Pn	23 37 44.8	-0.1
JGF	Kuroka	11.24	41	Pn	Pn	23 38 03.0	+3.4
JCJ	Chichijima	12.26	88	P	Pn	23 38 00.9	-13
	comp=E,95nm,0.6s,baz=306,slow=13,SNR=6.5						
JCJ				S	Sn	23 40 08.8	-20
	comp=E,84nm,0.6s,baz=122,slow=24,SNR=4.3						
MAJO	Matsushiro	12.40	40	Pn	Pn	23 38 17.1	+1.8
MAJO	Matsushiro	12.40	40	P	Pn	23 38 17.1	+1.8
MJAR	Matsushiro Arr	12.40	40	P	Pn	23 38 16.5	+1.1
	comp=E,0.1nm,0.3s,baz=238,slow=14,SNR=11						
	comp=E,4.8nm,0.7s						
MJAR	Matsushiro Arr	12.40	40	P	Pn	23 38 16.5	+1.1
WHN	Wuhan	12.73	288	P	Pn	23 38 19.0	-0.9
WHN				LR	LR		
	comp=E,2µm,12.1s						
WHN				LR	LR		
	comp=E,2µm,9.1s						
WHN				LR	LR		
	comp=E,4µm,19.0s						
DL2	Dalian	12.88	336	P	Pn	23 38 24.8	+3.0
DL2				S	Sn	23 40 46.3	+2.7
DL2				pmax	pmax		
	comp=E,62nm,1.7s						
DL2				pmax	pmax		
	comp=E,580nm,7.1s						
DL2				LR	LR		
	comp=E,1µm,15.5s						
DL2				LR	LR		
	comp=E,1µm,14.4s						
DL2				LR	LR		
	comp=E,2µm,15.3s						
TIA	Tai'an	13.06	316	P	P	23 38 29.8	-3.7
TIA				pmax	pmax		
	comp=E,40nm,0.8s						
TIA				LR	LR		
	comp=E,1µm,14.1s						
TIA				LR	LR		
	comp=E,1µm,14.1s						
TIA				LR	LR		
	comp=E,2µm,13.7s						
JSD	Sado	13.52	35	Pn	Pn	23 38 32.9	+2.3
CNSH	ChangSha	13.74	277	P	Pn	23 38 36.6	+2.9
CNSH				S	Sn	23 41 12.5	+7.7
CNSH				pmax	pmax		
	comp=E,41nm,1.1s						
CNSH				LR	LR		
	comp=E,700nm,14.4s						
CNSH				LR	LR		
	comp=E,2µm,17.5s						
CNSH				LR	LR		
	comp=E,2µm,18.7s						
HNS	HongShan	15.32	314	⇑P	P	23 38 56.8	-1.7
HNS				S	S	23 41 53.5	-3.9
HNS				pmax	pmax		
	comp=E,55nm,0.8s						
HNS				LR	LR		
	comp=E,970nm,16.0s						
HNS				LR	LR		
	comp=E,1µm,15.6s						
HNS				LR	LR		
	comp=E,1µm,20.2s						
LYN	LuoYang	15.46	302	P	Pn	23 38 57.4	+1.0
LYN				PP	pP	23 39 10.4	-0.6
LYN				S	Sn	23 41 49.3	+2.8
LYN				pmax	pmax		
	comp=E,58nm,1.0s						
LYN				pmax	pmax		
	comp=E,1µm,4.9s						
LYN				LR	LR		
	comp=E,1µm,11.8s						
LYN				LR	LR		
	comp=E,2µm,12.3s						
LYN				LR	LR		
	comp=E,2µm,15.5s						
BJT	Baijiatuau	16.24	324	P	P	23 39 11.4	+2.7
BJT				IAmb	IAmb	23 39 12.7	
	comp=Z,118nm,0.8s						
BJI	Beijing	16.25	324	P	Pn	23 39 06.9	+0.5
BJI				pP	pP	23 39 16.3	-3.5
BJI				PP	sP	23 39 21.5	-4.4
BJI				S	Sn	23 42 03.8	-1.9
BJI				PcP	PcP	23 44 01.8	+3.5
BJI				pmax	pmax		
	comp=Z,71nm,0.9s						
BJI				pmax	pmax		
	comp=Z,210nm,6.3s						
BJI				LR	LR		
	comp=Z,560nm,18.1s						
BJI				LR	LR		
	comp=Z,450nm,17.0s						
BJI				LR	LR		
	comp=Z,640nm,19.9s						
CN2	Changchun	16.63	352	eP	P	23 39 12.5	-0.4
CN2				epP	pP	23 39 21.0	-3.0
CN2				eS	Sn	23 42 14.5	-0.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,300nm,4.0s						

CN2				LR	LR		
	comp=Z,600nm,11.0s						
CN2				LR	LR		
	comp=Z,400nm,11.0s						
CN2				LR	LR		
	comp=Z,600nm,13.0s						
TIY	**Taiyuan**	**16.98**	**312**	P	**P**	**23 39 17.9**	**+0.9**
TIY				PP	**sP**	**23 39 33.8**	**-0.3**
TIY				S	**Sn**	**23 42 23.3**	**-0.2**
TIY				LR	LR		
	comp=Z,510nm,13.0s						
TIY				LR	LR		
	comp=Z,770nm,16.1s						
TIY				LR	LR		
	comp=Z,940nm,16.7s						
USRK	**Ussuriysk Ar.**	**17.09**	**9**	P	**Pn**	**23 39 17.5**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=184,slow=8.6,SNR=15						
USRK	**Ussuriysk Ar.**	**17.09**	**9**	P	**Pn**	**23 39 17.5**	**+0.5**
MDJ	**Mudanjiang**	**17.29**	**3**	P	**P**	**23 39 23.8**	**+3.5**
MDJ				S	**Sn**	**23 42 33.5**	**+2.6**
MDJ				pmax	pmax		
	comp=Z,14nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,310nm,7.2s						
XAN	**Xi'an**	**18.04**	**297**	⇑P	**P**	**23 39 26.3**	**-2.4**
XAN				S	**Sn**	**23 42 49.0**	**-0.3**
XAN				pmax	pmax		
	comp=Z,65nm,0.6s						
XAN				pmax	pmax		
	comp=Z,520nm,3.9s						
XAN				LR	LR		
	comp=Z,1µm,13.7s						
XAN				LR	LR		
	comp=Z,2µm,22.7s						
XAN				LR	LR		
	comp=Z,2µm,23.4s						
BNX	**BinXian**	**18.41**	**358**	⇓P	**Pn**	**23 39 33.6**	**+0.6**
BNX				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BNX				pmax	pmax		
	comp=Z,260nm,6.7s						
BNX				LR	LR		
	comp=Z,670nm,25.0s						
BNX				LR	LR		
	comp=Z,2µm,20.8s						
BNX				LR	LR		
	comp=Z,1µm,19.6s						
QIZ	**Qiongzhong**	**18.94**	**248**	P	**P**	**23 39 37.8**	**-0.9**
QIZ				sP	**sP**	**23 39 54.6**	**-1.4**
QIZ				S	**Sn**	**23 43 08.4**	**-2.7**
QIZ				sS	**sS**	**23 43 28.3**	**-0.8**
QIZ				pmax	pmax		
	comp=Z,180nm,3.5s						
QIZ				LR	LR		
	comp=Z,390nm,22.5s						
QIZ				LR	LR		
	comp=Z,790nm,20.3s						
QIZ				LR	LR		
	comp=Z,950nm,21.0s						
ERM	**Erimo**	**18.99**	**36**		**P**	**23 39 37.1**	**-1.9**
ERM	**Erimo**	**18.99**	**36**	P	**P**	**23 39 37.1**	**-1.9**
ERM				pmax	pmax		
	comp=Z,72nm,0.8s						
XLT	**XiLinHaoTe**	**19.31**	**332**	*e*P	**Pn**	**23 39 44.6**	**+0.6**
XLT				pP	pP	23 39 55.9	+2.2
XLT				sP	sP	23 40 01.1	+1.3
XLT				PP	**PnPn**	**23 40 04.5**	**+6.3**
XLT				S	**S**	**23 43 17.9**	**-0.7**
XLT				sS	sS	23 43 36.3	-0.1
XLT				SS	**SnSn**	**23 43 46.4**	**+12**
XLT				pmax	pmax		
	comp=Z,65nm,1.0s						
XLT				pmax	pmax		
	comp=Z,310nm,4.2s						
XLT				LR	LR		
	comp=Z,890nm,18.7s						
XLT				LR	LR		
	comp=Z,1µm,17.4s						
HHC	**Hu-ho-hao-te**	**19.37**	**318**	⇑*i*P	**Pn**	**23 39 44.6**	**-0.2**
HHC				PP	**sP**	**23 40 04.0**	**+3.5**
HHC				S	**S**	**23 43 12.8**	**-7.1**
HHC				pmax	pmax		
	comp=Z,30nm,1.0s						
HHC				pmax	pmax		
	comp=Z,490nm,4.5s						
HHC				LR	LR		
	comp=Z,950nm,15.5s						
HHC				LR	LR		
	comp=Z,1µm,17.6s						
HHC				LR	LR		
	comp=Z,2µm,16.6s						
GYA	**Guiyang**	**19.42**	**272**	⇑P	**Pn**	**23 39 45.5**	**0.0**
GYA				pP	pP	23 39 54.8	-0.3
GYA				S	**S**	**23 43 16.3**	**-4.8**
GYA				pmax	pmax		
	comp=Z,23nm,1.2s						
GYA				pmax	pmax		
	comp=Z,300nm,5.1s						
GYA				LR	LR		
	comp=Z,970nm,16.7s						
GYA				LR	LR		
	comp=Z,940nm,20.5s						
GYA				LR	LR		
	comp=Z,1µm,20.8s						
BTO	**Baotou**	**20.16**	**316**	*e*P	**P**	**23 39 52.3**	**+0.4**
BTO				pP	**pP**	**23 40 02.8**	**-0.2**
BTO				S	**S**	**23 43 31.8**	**-3.8**
BTO				pmax	pmax		
	comp=Z,20nm,0.8s						
BTO				pmax	pmax		
	comp=Z,320nm,4.1s						
BTO				LR	LR		
	comp=Z,2µm,20.4s						
BTO				LR	LR		
	comp=Z,1µm,19.6s						
BTO				LR	LR		
	comp=Z,2µm,23.5s						
ASAJ	**Asahikawa**	**20.29**	**31**	P	**P**	**23 39 53.5**	**+0.4**
	comp=Z,10nm,0.6s,baz=220,slow=22,SNR=5.3						
	comp=Z,10nm,0.6s						
JKA	**Kamikawa-asahi**	**20.29**	**31**		**P**	**23 39 53.4**	**+0.2**
CD2	**Chengdu**	**21.82**	**285**	P	**P**	**23 40 08.3**	**-1.5**
CD2				pP	pP	23 40 19.3	-1.8
CD2				S	**S**	**23 44 02.5**	**-6.0**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				LR	LR		
	comp=Z,1µm,11.4s						
CD2				LR	LR		
	comp=Z,1µm,19.0s						
CD2				LR	LR		
	comp=Z,2µm,13.3s						
LZH	**Lanzhou**	**22.61**	**299**	*e*P	**P**	**23 40 20.8**	**+2.4**
LZH				pP	pP	23 40 32.1	+2.5
LZH				S	**S**	**23 44 23.3**	**+0.4**
LZH				pmax	pmax		
	comp=Z,100nm,1.3s						
LZH				pmax	pmax		
	comp=Z,360nm,5.8s						
LZH				LR	LR		
	comp=Z,820nm,13.1s						
LZH				LR	LR		
	comp=Z,870nm,13.7s						
LZH				LR	LR		
	comp=Z,1µm,14.4s						
YSS	**Yuzhno-Sakhali**	**22.63**	**26**	P	**P**	**23 40 18.2**	**0.0**
YSS	**Yuzhno-Sakhali**	**22.63**	**26**	*e*P	**P**	**23 40 18.1**	**-0.1**
YSS				*e*S	**S**	**23 44 19.5**	**-3.1**
YSS				pmax	pmax		
	comp=Z,60nm,0.8s						
YSS				MLR	MLR		
	comp=N,600nm,15.0s						
YSS				MLR	MLR		
	comp=E,500nm,16.0s						
LZDM	**Lanzhou Array**	**22.69**	**298**	P	**P**	**23 40 20.3**	**+0.9**
	comp=E,60nm,0.6s,baz=142,slow=7.5,SNR=60						
	comp=E,60nm,0.6s						
HIA	**Hailar**	**22.92**	**345**	*i* P	**P**	**23 40 20.5**	**-0.8**
HIA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KMI	**Kunming**	**23.12**	**270**	⇓P	**P**	**23 40 25.3**	**+1.5**
KMI				pP	pP	23 40 37.0	+1.7
KMI				S	**S**	**23 44 25.8**	**-6.0**
KMI				pmax	pmax		
	comp=Z,48nm,1.1s						
KMI				pmax	pmax		
	comp=Z,160nm,7.0s						
KMI				LR	LR		
	comp=Z,610nm,17.9s						
KMI				LR	LR		
	comp=Z,710nm,19.0s						
KMI				LR	LR		
	comp=Z,790nm,22.0s						
HILR	**Hailar Array B**	**23.19**	**346**	P	**P**	**23 40 24.0**	**0.0**
	comp=Z,31nm,0.5s,baz=159,slow=12,SNR=24						
	comp=Z,31nm,0.5s						
PZH	**PanZhiHua**	**23.78**	**274**	P	**P**	**23 40 29.8**	**-0.2**
PZH				S	**S**	**23 44 37.5**	**-4.8**
PZH				pmax	pmax		
	comp=Z,50nm,1.0s						
PZH				LR	LR		
	comp=Z,510nm,23.3s						
PZH				LR	LR		
	comp=Z,720nm,19.2s						
PZH				LR	LR		
	comp=Z,1µm,18.6s						
KKM	**Kota Kinabalu**	**24.13**	**211**	P	**P**	**23 40 32.8**	**-0.3**
KKM	**Kota Kinabalu**	**24.13**	**211**	P	**P**	**23 40 37.3**	**+4.2**
ZEA	**Zeya**	**26.41**	**358**	*e*P	**P**	**23 40 52.5**	**-0.9**
ZEA				MLR	MLR		
	comp=E,200nm,14.0s						
ZEA				MLR	MLR		
	comp=N,300nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,12.0s						
ULN	**Ulaanbaatar**	**26.44**	**327**	P	**P**	**23 40 54.4**	**+0.5**
ULN				IAmb	IAmb	23 41 10.4	
	comp=Z,72nm,1.1s						
ULN	**Ulaanbaatar**	**26.44**	**327**	P	**P**	**23 40 53.4**	**-0.5**
ULN	**Ulaanbaatar**	**26.44**	**327**	*ce*P	**P**	**23 40 53.0**	**-0.9**
ULN				pmax	pmax		
	comp=Z,80nm,1.7s						
GTA	**Gaotai**	**26.64**	**304**	LR	LR		
	comp=Z,1µm,20.3s						
GTA	**Gaotai**	**26.64**	**304**	LR	LR		
	comp=E,830nm,18.7s						
GTA	**Gaotai**	**26.64**	**304**	LR	LR		
	comp=N,600nm,16.7s						
GTA	**Gaotai**	**26.64**	**304**	PP	**PnPn**	**23 41 39.3**	**+0.9**
GTA	**Gaotai**	**26.64**	**304**	PcP	**PcP**	**23 44 19.9**	**+1.1**
GTA	**Gaotai**	**26.64**	**304**	S	**S**	**23 45 21.5**	**-6.1**
GTA	**Gaotai**	**26.64**	**304**	PcS	PcS	23 47 59.8	-0.3
SONM	**Songino Array**	**26.74**	**326**	P	**P**	**23 40 58.2**	**+1.5**
	comp=N,29nm,0.8s,baz=141,slow=9.2,SNR=50						
	comp=N,29nm,0.8s						
SONM	**Songino Array**	**26.74**	**326**	P	**P**	**23 40 57.6**	**+1.0**
SONM				IAmb	IAmb	23 41 13.4	
	comp=Z,78nm,1.0s						
TNCH	**TengChong**	**26.90**	**272**	⇓P	**P**	**23 40 57.8**	**-0.5**
TNCH				sP	sP	23 41 16.1	-0.5
TNCH				S	**S**	**23 45 31.8**	**-0.1**
TNCH				pmax	pmax		
	comp=Z,130nm,2.9s						
TNCH				LR	LR		
	comp=Z,420nm,14.1s						
TNCH				LR	LR		
	comp=Z,1µm,15.8s						
TNCH				LR	LR		
	comp=Z,2µm,17.5s						
MPSI	**Mapaga**	**28.04**	**198**	P	**P**	**23 41 10.1**	**+1.8**
CHTO	**Chiang Mai**	**28.35**	**259**	P	**P**	**23 41 11.2**	**+0.1**
CHTO				IAmb	IAmb	23 41 13.1	
	comp=Z,39nm,0.9s						
CHTO	**Chiang Mai**	**28.35**	**259**	P	**P**	**23 41 11.2**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,39nm,0.9s						
CM31	**Chiang Mai Arr**	**28.49**	**258**	P	**P**	**23 41 11.7**	**-0.7**
CMAR	**Chiang Mai Arr**	**28.49**	**258**	P	**P**	**23 41 13.3**	**+1.0**
	comp=Z,8.8nm,0.8s,baz=55,slow=7.2,SNR=48						
CMAR				PcP	**PcP**	**23 44 24.7**	**+1.3**
	comp=Z,6.0nm,0.8s,baz=41,slow=1.1,SNR=16						
CMAR				ScP	**ScP**	**23 48 02.1**	**+1.6**
	comp=Z,1.0nm,0.3s,baz=58,slow=2.2,SNR=4.1						
	comp=Z,8.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**28.49**	**258**	P	**P**	**23 41 11.8**	**-0.5**
CMAR	**Chiang Mai Arr**	**28.49**	**258**	*ce*P	**P**	**23 41 13.3**	**+1.0**
CMAR				pmax	pmax		
	comp=Z,11nm,0.9s						
SANI	**Sanana**	**29.29**	**185**	P	**P**	**23 41 21.2**	**+1.8**
	comp=Z,32nm,0.9s						
GOMU	**GeErMu**	**29.79**	**296**	P	**P**	**23 41 21.8**	**-2.4**
GOMU				S	**S**	**23 46 18.1**	**+0.4**
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GOMU				LR	LR		
	comp=Z,210nm,15.0s						
GOMU				LR	LR		
	comp=Z,260nm,15.1s						
GOMU				LR	LR		
	comp=Z,570nm,15.1s						
ZAK	**Zakamensk**	**29.96**	**327**	*e*P	P	23 41 38.0	+13
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.6s						
KRAI	**Karang Ratu**	**30.45**	**180**	P	**P**	**23 41 30.1**	**+0.4**
MMSI	**Mamuju**	**31.20**	**199**	P	**P**	**23 41 37.3**	**+0.9**
	comp=Z,36nm,1.1s						
MOY	**Mondy**	**31.90**	**327**	*e*P	**P**	**23 41 42.2**	**-0.1**
MOY				pmax	pmax		
	comp=Z,13nm,1.8s						
SHL	**Shillong**	**32.68**	**275**	P	**P**	**23 41 49.2**	**-0.4**
LSA	**Lhasa**	**32.74**	**283**	P	**P**	**23 41 51.2**	**+0.8**
LSA	**Lhasa**	**32.74**	**283**	P	P	23 41 42.3	-8.1
LSA	**Lhasa**	**32.74**	**283**	P	**P**	**23 41 50.9**	**+0.6**
LSA	**Lhasa**	**32.74**	**283**	P	**P**	**23 41 51.2**	**+0.8**
LSA				pmax	pmax		
	comp=Z,15nm,0.6s						
BBKI	**Banjar Baru**	**33.28**	**205**	P	**P**	**23 41 56.6**	**+2.0**
	comp=Z,6µmcomp=Z,55nm,1.1s						
PEA0B	**Petropavlovsk-**	**33.69**	**32**	P	**P**	**23 41 57.1**	**-0.7**
PEA0B				IAmb	IAmb	23 41 58.5	
	comp=Z,65nm,0.8s						
PEA0B	**Petropavlovsk-**	**33.69**	**32**	P	**P**	**23 41 57.1**	**-0.7**
PEA0B				pmax	pmax		
	comp=Z,65nm,0.9s						
PETK	**Petropavlovsk-**	**33.69**	**32**	P	**P**	**23 41 57.0**	**-0.8**
	comp=Z,49nm,0.8s,baz=216,slow=7.1,SNR=30						
	comp=Z,49nm,0.8s						
PETK	**Petropavlovsk-**	**33.69**	**32**	P	**P**	**23 41 56.6**	**-1.2**
PETK	**Petropavlovsk-**	**33.69**	**32**	P	**P**	**23 41 56.6**	**-1.2**
PET	**Petropavlovsk**	**34.10**	**33**	P	**P**	**23 42 01.6**	**+0.3**
PET	**Petropavlovsk**	**34.10**	**33**	*e*P	**P**	**23 42 00.6**	**-0.7**
PET				*e*S	**S**	**23 47 21.4**	**-2.2**
PET				pmax	pmax		
	comp=Z,96nm,0.8s						
PET				MLR	MLR		
	comp=Z,400nm,22.0s						
PET	**Petropavlovsk**	**34.10**	**33**	P	**P**	**23 42 01.5**	**+0.2**
	comp=Z,105nm,0.9s						
KULM	**Kulim**	**34.33**	**235**	P	**P**	**23 42 04.1**	**+0.4**
KULM				IAmb	IAmb	23 42 06.5	
	comp=Z,52nm,1.2s						
KULM	**Kulim**	**34.33**	**235**	P	**P**	**23 42 05.8**	**+2.1**
	comp=Z,46nm,1.2s						
IPM	**Ipoh**	**34.61**	**234**	P	**P**	**23 42 05.8**	**-0.4**
IPM				IAmb	IAmb	23 42 08.3	
	comp=Z,69nm,1.2s						
IPM	**Ipoh**	**34.61**	**234**	P	**P**	**23 42 07.4**	**+1.2**
	comp=Z,58nm,1.3s						
MYKOM	**Kota Tinggi**	**34.61**	**227**	P	**P**	**23 42 07.2**	**+1.0**
YAK	**Yakutsk**	**34.73**	**1**	P	**P**	**23 42 05.8**	**-0.8**
	comp=Z,40nm,0.6s,baz=37,slow=3.1,SNR=7.7						
	comp=Z,40nm,0.6s						
YAK	**Yakutsk**	**34.73**	**1**	P	**P**	**23 42 07.8**	**+1.2**
YAK				IAmb	IAmb	23 42 08.3	
	comp=Z,44nm,0.7s						
YAK	**Yakutsk**	**34.73**	**1**	*e*P	**P**	**23 42 06.2**	**-0.4**
YAK				*e**PP	**pP**	**23 42 17.3**	**-2.0**
YAK				*e*		23 43 23.1	
YAK				*e*PPP	PPP	23 43 36.5	
YAK				*e*		23 44 38.7	
YAK				*e*S	**S**	**23 47 34.7**	**+1.6**
YAK				*e**SS	**sS**	**23 47 53.7**	**-0.5**
YAK				*e*SS	**SnSn**	**23 49 51.8**	**+2.2**
YAK				*e*SSS	SSS	23 50 08.6	
YAK				*e*		23 52 24.3	
YAK				pmax	pmax		
	comp=Z,22nm,0.9s						
YAK				pmax	pmax		
	comp=N,16nm,1.3s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,113nm,2.3s						
YAK				pmax	pmax		
	comp=Z,82nm,2.8s						
YAK				pmax	pmax		
	comp=E,67nm,2.8s						
YAK				smax	smax		
	comp=N,167nm,3.5s						
YAK				smax	smax		
	comp=E,149nm,2.8s						
SAUI	**Saumlaki**	**35.20**	**175**	P	**P**	**23 42 14.2**	**+3.0**
MA2	**Magadan**	**35.74**	**19**	P	**P**	**23 42 14.1**	**-1.3**
	comp=E,39nm,1.6s						
H11N2	**WAKE ISLAND Hy**	**35.98**	**94**	T	T	00 20 04.8	
	baz=290,slow=74,SNR=364						
H11N1	**WAKE ISLAND Hy**	**35.98**	**94**	T	T	00 20 04.9	
	baz=290,slow=74,SNR=356						
TPI	**Tanjungpandan**	**35.98**	**217**	P	**P**	**23 42 20.5**	**+2.6**
	comp=E,30nm,1.2s						
H11N3	**WAKE ISLAND Hy**	**35.99**	**94**	T	T	00 20 06.1	
	baz=290,slow=74,SNR=364						
H11S3	**WAKE ISLAND Hy**	**36.22**	**96**	T	T	00 20 33.8	
	baz=292,slow=75,SNR=91						
H11S1	**WAKE ISLAND Hy**	**36.22**	**96**	T	T	00 20 32.8	
	baz=292,slow=75,SNR=80						
H11S2	**WAKE ISLAND Hy**	**36.23**	**96**	T	T	00 20 35.1	
	baz=292,slow=75,SNR=94						
WMQ	**Urumqi**	**36.58**	**308**	*e*P	**P**	**23 42 23.3**	**+0.4**
WMQ				pP	pP	23 42 36.8	+1.4
WMQ				PcP	**PcP**	**23 44 46.3**	**+0.9**
WMQ				S	**S**	**23 48 02.8**	**+0.7**
WMQ				pmax	pmax		
	comp=E,14nm,0.9s						
WMQ				pmax	pmax		
	comp=E,120nm,3.9s						
WMQ				LR	LR		
	comp=E,460nm,17.1s						
WMQ				LR	LR		
	comp=E,570nm,20.7s						
WMQ				LR	LR		
	comp=E,680nm,21.7s						
DBNI	**Kabupaten Domp**	**36.92**	**197**	P	**P**	**23 42 26.5**	**+0.6**
	comp=E,19nm,1.2s						
PLAI	**Plampang**	**37.38**	**197**	P	**P**	**23 42 29.8**	**0.0**
	comp=E,502nmcomp=E,54nm,1.0s						
BKNI	**Bangkinang**	**37.56**	**229**	P	**P**	**23 42 32.3**	**+0.9**
BKNI				IAmb	IAmb	23 43 08.5	
	comp=Z,334nm,0.4s						
BATI	**Baumata**	**37.58**	**188**	P	**P**	**23 42 36.0**	**+4.5**
	comp=Z,59nm,0.8s						
JAGI	**Jajag, Banyuwa**	**38.16**	**203**	P	**P**	**23 42 36.0**	**-0.4**
SJI	**Sawahan**	**38.39**	**207**	P	**P**	**23 42 39.4**	**+1.0**
	comp=Z,46nm,1.1s						
SNJI	**Sawahan-Nganju**	**38.44**	**207**	P	**P**	**23 42 37.1**	**-1.8**
	comp=Z,50nm,1.5s						
DGZ	**Jazzator, Alta**	**38.44**	**317**	*i* P	**P**	**23 42 38.6**	**0.0**
PPI	**Padang Panjang**	**38.57**	**229**	P	**P**	**23 42 41.3**	**+1.4**
	comp=Z,54nm,1.2s						
RABL	**Rabaul**	**38.82**	**140**	P	**P**	**23 42 43.6**	**+1.6**
PDSI	**Padang**	**38.86**	**228**	P	**P**	**23 42 44.3**	**+1.9**
	comp=Z,1µmcomp=Z,22nm,0.7s						
SEY	**Seymchan**	**38.94**	**17**	P	**P**	**23 42 42.6**	**+0.2**
	comp=Z,2.6nm,0.6s,baz=209,slow=2.9,SNR=5.9						
	comp=Z,2.6nm,0.6s						
SEY	**Seymchan**	**38.94**	**17**	*e*P	P	23 42 52.9	+10
SEY				pmax	pmax		
	comp=Z,14nm,1.3s						
KLSI		**39.19**	**219**	P	**P**	**23 42 47.9**	**+2.9**
KPJI	**Karang Pucung**	**39.27**	**212**	P	**P**	**23 42 47.6**	**+1.9**
	comp=Z,630nmcomp=Z,40nm,1.1s						
MDSI	**Maura Dua**	**39.34**	**220**	P	**P**	**23 42 47.6**	**+1.3**
	comp=Z,20nm,0.9s						
ZSN	**Zaisan**	**39.38**	**313**	*e*P	**P**	**23 42 46.2**	**-0.2**
ZSN	**Zaisan**	**39.38**	**313**	*e*P	**P**	**23 42 46.2**	**-0.2**
MASI	**Maura Aman, Be**	**39.42**	**224**	P	**P**	**23 42 49.2**	**+2.2**
DBJI	**Dramaga**	**39.66**	**215**	P	**P**	**23 42 52.0**	**+3.0**
	comp=Z,39nm,0.6s						
BBJI	**Bungbulang**	**39.99**	**213**	P	**P**	**23 42 54.0**	**+2.2**
SISI	**Saibi**	**40.09**	**229**	P	**P**	**23 42 53.8**	**+1.3**
	comp=Z,45nm,1.2s						
PPSI	**Pulau Pagai**	**40.54**	**227**	P	**P**	**23 43 00.1**	**+3.8**
	comp=Z,66nm,1.1s						
PMG	**Port Moresby**	**40.78**	**151**	P	P	23 43 03.5	+5.3
	comp=Z,42nm,0.8s						
MK31	**Makanchi Array**	**40.94**	**311**	*ce*P	**P**	**23 42 59.9**	**+0.6**
MKAR	**Makanchi Array**	**40.94**	**311**	P	**P**	**23 42 59.5**	**+0.2**
	comp=Z,12nm,0.6s,baz=100,slow=9.5,SNR=59						
MKAR				PcP	**PcP**	**23 44 58.2**	**-0.7**
	comp=Z,8.3nm,0.8s,baz=76,slow=5.1,SNR=7.6						
MKAR				ScP	**ScP**	**23 48 43.8**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=96,slow=4.3,SNR=2.7						
	comp=Z,12nm,0.6s						
MKAR	**Makanchi Array**	**40.94**	**311**	P	**P**	**23 42 59.1**	**-0.2**
MKAR	**Makanchi Array**	**40.94**	**311**	P	**P**	**23 42 59.1**	**-0.2**
EGSI	**Enggano, Bengk**	**41.14**	**222**	P	**P**	**23 43 01.1**	**-0.1**
	comp=Z,53nm,1.0s						
MAKZ	**Makanchi**	**41.16**	**311**	P	**P**	**23 43 01.1**	**0.0**
MAKZ	**Makanchi**	**41.16**	**311**	P	**P**	**23 43 01.1**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,28nm,1.2s						
MAKZ	**Makanchi**	**41.16**	**311**	P	**P**	**23 43 01.0**	**0.0**
MAKZ				PcP	**PcP**	**23 44 59.5**	**-0.2**
ZAA0	**Zalesovo Array**	**41.49**	**322**	P	**P**	**23 43 02.1**	**-1.5**
ZAA0				IAmb	IAmb	23 43 04.0	
	comp=Z,14nm,0.7s						
ZALV	**Zalesovo Beam**	**41.49**	**322**	P	**P**	**23 43 02.7**	**-0.9**
	comp=Z,13nm,0.6s,baz=110,slow=8.8,SNR=43						
ZALV				PcP	**PcP**	**23 44 59.5**	**-1.0**
	comp=Z,9.0nm,0.9s,baz=124,slow=2.7,SNR=7.2						
ZALV				ScP	**ScP**	**23 48 46.6**	**0.0**
	comp=Z,1.0nm,0.7s,baz=134,slow=4.2,SNR=2.8						
	comp=Z,13nm,0.6s						
ZALV	**Zalesovo Beam**	**41.49**	**322**	P	**P**	**23 43 02.8**	**-0.8**
ZALV	**Zalesovo Beam**	**41.49**	**322**	*i* P	**P**	**23 43 00.9**	**-2.8**
ZALV				pmax	pmax		
	comp=Z,13nm,0.6s						
SHLS	**Shalkode**	**42.38**	**305**	*e*P	**P**	**23 43 08.3**	**-3.0**
SHLS	**Shalkode**	**42.38**	**305**	*e*P	**P**	**23 43 08.3**	**-3.0**
WUS	**Wushi**	**42.42**	**302**	P	**P**	**23 43 13.4**	**+1.8**
WUS				IAmb	IAmb	23 43 14.2	
	comp=Z,34nm,1.0s						
UZB	**Uzynbulak**	**42.70**	**305**	*e*P	**P**	**23 43 13.4**	**-0.6**
	comp=Z,34nm,1.2s						
UZB	**Uzynbulak**	**42.70**	**305**	*e*P	**P**	**23 43 13.3**	**-0.6**
UZB				pmax	pmax		
	comp=Z,34nm,1.2s						
SEM	**Semipalatinsk**	**43.07**	**316**	*e*P	**P**	**23 43 16.4**	**-0.5**
	comp=Z,26nm,0.6s						
SEM	**Semipalatinsk**	**43.07**	**316**	*e*P	**P**	**23 43 16.4**	**-0.5**
SEM				pmax	pmax		
	comp=Z,26nm,0.6s						
PRZ	**Przheval'sk**	**43.10**	**304**	IAmb	IAmb	23 43 19.8	
	comp=Z,52nm,0.8s						
PRZ	**Przheval'sk**	**43.10**	**304**	P	**P**	**23 43 19.3**	**+2.1**
PRZ				pmax	pmax		
	comp=Z,69nm,1.0s						
SATY	**Saty**	**43.14**	**305**	*e*P	**P**	**23 43 17.1**	**-0.4**
	comp=Z,21nm,1.0s						
SATY	**Saty**	**43.14**	**305**	*e*P	**P**	**23 43 17.0**	**-0.4**
SATY				pmax	pmax		
	comp=Z,21nm,1.0s						
TDK	**Taldyqorghan**	**43.33**	**308**	*e*P	**P**	**23 43 18.6**	**-0.3**
	comp=Z,31nm,0.8s						
TDK	**Taldyqorghan**	**43.33**	**308**	*e*P	**P**	**23 43 18.5**	**-0.3**
TDK				pmax	pmax		
	comp=Z,31nm,0.8s						
TARG	**Taragay, Kyrgy**	**43.50**	**303**	P	**P**	**23 43 21.5**	**+0.8**
TARG				IAmb	IAmb	23 43 23.5	
	comp=Z,83nm,1.0s						
TARG	**Taragay, Kyrgy**	**43.50**	**303**	P	**P**	**23 43 21.5**	**+0.8**
TARG				pmax	pmax		
	comp=Z,83nm,1.0s						
KDJ	**Kajisay**	**43.99**	**303**	P	**P**	**23 43 25.3**	**+1.0**
KDJ				IAmb	IAmb	23 43 26.8	
	comp=Z,72nm,0.9s						
KDJ	**Kajisay**	**43.99**	**303**	P	**P**	**23 43 25.3**	**+1.0**
KDJ				pmax	pmax		
	comp=Z,72nm,0.9s						
MDOK	**Medeo**	**44.14**	**305**	*e*P	**P**	**23 43 25.1**	**-0.5**
MDOK	**Medeo**	**44.14**	**305**	*e*P	**P**	**23 43 25.0**	**-0.5**
KURK	**Kurchatov**	**44.15**	**316**	P	**P**	**23 43 24.3**	**-1.0**
KURK	**Kurchatov**	**44.15**	**316**	*ce*P	**P**	**23 43 24.0**	**-1.3**
KURK				pmax	pmax		
	comp=Z,57nm,1.3s						
KURBB	**Kurchatov Arra**	**44.19**	**316**	P	**P**	**23 43 25.4**	**-0.1**
	comp=Z,32nm,0.7s,baz=102,slow=8.8,SNR=103						
KURBB				PcP	**PP**	**23 45 08.4**	**-0.7**

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      comp=Z,11nm,1.1s,baz=108,slow=3.0,SNR=5.3
      comp=Z,32nm,0.7s
TNSS  Tian-Shan          44.21 305 eP    P      23 43 25.6 -0.7
TNSS  Tian-Shan          44.21 305 eP    P      23 43 25.6 -0.7
CHKK  Chushkaly          44.23 306 eP    P      23 43 25.7 -0.4
CHKK  Chushkaly          44.23 306 eP    P      23 43 25.7 -0.4
AAA   Alma-Ata           44.24 305 eP    P      23 43 25.9 -0.4
      comp=Z,38nm,1.1s
AAA   Alma-Ata           44.24 305 eP    P      23 43 25.8 -0.4
AAA                                 pmax  pmax
      comp=Z,39nm,1.1s
TIXI  Tiksi              44.38   0  P    P      23 43 27.4 +0.6
TIXI  Tiksi              44.38   0ceP    P      23 43 25.7 -1.0
TIXI                                pmax  pmax
      comp=Z,24nm,1.7s
ULHL  Ulahol             44.69 303  P    P      23 43 31.3 +1.3
      SNR=9.6
KUU   Kurty              44.71 306 eP    P      23 43 29.6 -0.3
      comp=Z,13nm,0.7s
KUU   Kurty              44.71 306 eP    P      23 43 29.5 -0.3
KUU                                 pmax  pmax
      comp=Z,13nm,0.7s
KSH   Kashi              44.86 300  P    P      23 43 35.1 +3.8
KSH                                 pP    pP    23 43 46.3 +2.2
KSH                                 pmax  pmax
      comp=Z,17nm,1.0s
KSH                                 LR    LR
      comp=Z,480nm,16.5s
KSH                                 LR    LR
      comp=Z,520nm,19.2s
KSH                                 LR    LR
      comp=Z,520nm,15.5s
BOOM  Boomskoye usch     44.92 304  P    P      23 43 32.6 +0.8
BOOM  Boomskoye usch     44.92 304  P    P      23 43 32.6 +0.8
BOOM                                pmax  pmax
      comp=Z,20nm,0.7s
TKM2  Tokmak 2           45.19 304  P    P      23 43 30.7 -3.3
      SNR=6.0
FITZ  Fitzroy Crossi     45.22 184  P    P      23 43 34.0  0.0
KBK   Karagaybulak       45.66 304  P    P      23 43 38.8 +1.2
      SNR=23
CHMS  Chumysh            45.82 305  P    P      23 43 39.8 +1.1
      SNR=27
UCH   Uchtor             45.97 303  P    P      23 43 42.2 +1.8
      SNR=7.9
AAK   Ala-Archa          45.99 304  P    P      23 43 41.1 +0.8
      SNR=13
AAK   Ala-Archa          45.99 304  P    P      23 43 40.6 +0.3
AAK                                 IAmb  IAmb  23 43 41.8
      comp=Z,14nm,0.8s
AAK   Ala-Archa          45.99 304 i P   P      23 43 40.8 +0.6
      SNR=14
AAK   Ala-Archa          45.99 304ceP    P      23 43 39.7 -0.5
AAK                                 pmax  pmax
      comp=Z,14nm,0.7s
USP   Ospenovka          46.01 305  P    P      23 43 40.5 +0.3
      SNR=19
ARLS  Aral               46.11 303  P    P      23 43 38.3 -2.9
ARLS                                pmax  pmax
      comp=Z,106nm,0.8s
EKS2  Erkin-Say          46.52 304  P    P      23 43 45.4 +1.1
      SNR=11
BILL  Bilibino           46.59  19  P    P      23 43 43.8 -0.6
BILL  Bilibino           46.59  19ceP    P      23 43 44.5 +0.1
BILL                                pmax  pmax
      comp=Z,25nm,1.0s
BILL  Bilibino           46.59  19  P    P      23 43 44.0 -0.3
BILL                                pP    pP    23 43 55.0 -2.3
BILL                                PcP   PcP   23 45 18.5 +0.9
HYB   Hyderabad          46.89 269 eP    P      23 43 47.4  0.0
HYB                                epP   pP     23 43 59.9 -0.6
ARSB  Arslanbob          47.12 302  P    P      23 43 49.8 +0.8
ARSB                                IAmb  IAmb  23 43 50.9
      comp=Z,27nm,1.0s
WB0   Warramunga Arr     47.16 172  P    P      23 43 49.9 +0.6
WB0                                 IAmb  IAmb  23 44 04.0
      comp=Z,52nm,1.2s
OHH   Osh                47.28 301  P    P      23 43 49.3 -1.0
OHH                                 pmax  pmax
      comp=Z,41nm,1.0s
WRAB  Tennant Creek      47.32 172  P    P      23 43 51.0 +0.5
WRAB                                IAmb  IAmb  23 44 04.5
      comp=Z,81nm,1.6s
WRAB  Tennant Creek      47.32 172  P    P      23 43 51.0 +0.5
WRAB                                pmax  pmax
      comp=Z,81nm,1.6s
WRA   Warramunga Arr     47.33 172  P    P      23 43 51.0 +0.4
      comp=Z,5.1nm,0.6s,baz=353,slow=8.1,SNR=16
      comp=Z,5.1nm,0.6s
WRA   Warramunga Arr     47.33 172  P    P      23 43 50.4 -0.2
WRA   Warramunga Arr     47.33 172  P    P      23 43 50.4 -0.2
WRA                                 pmax  pmax
      comp=Z,4.0nm,1.5s
WR8   Warramunga Arr     47.36 172  P    P      23 43 53.3 +2.4
WR8                                 IAmb  IAmb  23 44 05.7
      comp=Z,90nm,1.4s
NIL   Nilore             47.49 292  P    P      23 43 51.6 -0.3
NIL                                 IAmb  IAmb  23 43 53.0
      comp=Z,48nm,0.8s
NIL   Nilore             47.49 292  P    P      23 43 51.6 -0.3
NIL                                 pmax  pmax
      comp=Z,48nm,0.8s
ARK   Arkit              47.87 303  P    P      23 43 55.9 +1.0
ARK                                 pmax  pmax
      comp=Z,64nm,0.9s
DRK   Karamyk            48.09 300  P    P      23 43 57.7 +0.9
DRK                                 pmax  pmax
      comp=Z,23nm,0.7s
NRIK  Noril'sk           48.27 342  P    P      23 43 56.7 -0.6
      comp=Z,19nm,1.0s,baz=116,slow=9.1,SNR=24
NRIK                                PcP   PcP   23 45 22.1 -1.5
      comp=Z,16nm,0.9s,baz=115,slow=3.7,SNR=5.5
      comp=Z,19nm,1.0s
NRIK  Noril'sk           48.27 342  P    P      23 43 56.1 -1.3
NRIK                                IAmb  IAmb  23 43 57.9
      comp=Z,35nm,1.2s
NRIK  Noril'sk           48.27 342 i P   P      23 43 56.1 -1.3
NRIK                                pmax  pmax
      comp=Z,23nm,1.0s
MANEM Manem              48.32 297  P    P      23 44 00.2 +1.6
MANEM                               IAmb  IAmb  23 44 02.3
      comp=Z,37nm,0.7s
DZA   Taraz              48.33 304 eP    P      23 43 58.0 -0.2
DZA   Taraz              48.33 304 eP    P      23 43 58.0 -0.2
KK31  Karatay Array      48.92 305  P    P      23 44 02.9  0.0
KK31                                IAmb  IAmb  23 44 05.1
      comp=Z,39nm,0.8s
KKAR  Karatay Array      48.92 305  P    P      23 44 03.0 +0.2
GAR   Garm               49.27 299  P    P      23 44 05.6 -0.1
PSA00 Pilbara Seismi     49.30 191  P    P      23 44 05.5 -0.3
IUG   Iuzhnay            49.30 303 eP    P      23 44 05.7 -0.2
IUG   Iuzhnay            49.30 303 eP    P      23 44 05.6 -0.2
BRLS  Borolday           49.42 305 eP    P      23 44 07.3 +0.6
BRLS  Borolday           49.42 305 eP    P      23 44 07.2 +0.6
BVAR  Borovoye Array     49.58 318  P    P      23 44 07.6 -0.1
      comp=Z,32nm,0.7s,baz=97,slow=9.6,SNR=52
BVAR                                PcP   PcP   23 45 28.4 -0.3
      comp=Z,8.5nm,0.5s,baz=111,slow=2.9,SNR=11
      comp=Z,32nm,0.7s
CHM   Chimkent           49.62 304 eP    P      23 44 07.8 -0.3
      comp=Z,20nm,1.0s
CHM   Chimkent           49.62 304 eP    P      23 44 07.8 -0.3
CHM                                 pmax  pmax
      comp=Z,20nm,1.0s
BORK  Borovoye           49.63 318  P    P      23 44 08.2 +0.2
BORK                                IAmb  IAmb  23 44 09.3
      comp=Z,65nm,0.8s
BORK  Borovoye           49.63 318 i P   P      23 44 08.3 +0.3
BORK                                pmax  pmax
      comp=Z,64nm,0.9s
BORK  Borovoye           49.63 318  PcP  PcP    23 45 28.6 -0.2
CTAO  Charters Tower     50.19 158  P    P      23 44 15.1 +2.5
CTAO                                IAmb  IAmb  23 44 30.4
      comp=Z,28nm,0.9s
CTAO  Charters Tower     50.19 158  P    P      23 44 15.1 +2.5
CTAO                                pmax  pmax
      comp=Z,28nm,0.9s
CHGR  Chuyangaron        50.20 299  P    P      23 44 12.3 -0.4
CHGR                                IAmb  IAmb  23 45 34.3
      comp=Z,49nm,0.8s
CHGR  Chuyangaron        50.20 299  P    P      23 44 12.3 -0.4
CHGR                                pmax  pmax
      comp=Z,49nm,0.8s
KBL   Kabul              50.81 294  P    P      23 44 17.6 +0.1
KBL   Kabul              50.81 294  P    P      23 44 17.6 +0.1
KBL                                 pmax  pmax
      comp=Z,76nm,0.7s
AS31  Alice Springs      50.96 174  P    P      23 44 18.4 +0.1
ASAR  Alice Springs      50.96 174  P    P      23 44 19.3 +1.0
      comp=Z,5.9nm,0.9s,baz=355,slow=7.3,SNR=32
ASAR  Alice Springs      50.96 174  P    P      23 44 18.9 +0.5
ASAR  Alice Springs      50.96 174  P    P      23 44 18.9 +0.5
SHAA  Shahritus          51.13 298  P    P      23 44 20.1 +0.4
SHAA                                IAmb  IAmb  23 44 22.8
      comp=Z,325nm,1.7s
P08K  Saint George I     52.34  38  P    P      23 44 28.7 +0.4
      baz=263
NIKH  Nikolski High      52.41  43  P    P      23 44 29.3 +0.5
      baz=267
GAMB  Gambell            52.61  29  P    P      23 44 30.1  0.0
      baz=256
UNV   Unalaska Valle     53.86  42  P    P      23 44 39.5  0.0
      baz=268
M11K  Mekoryuk           54.53  34  P    P      23 44 44.7 +0.4
      baz=263
TNA   Tin City           54.60  27  P    P      23 44 46.0 +1.3
TNA   Tin City           54.60  27  P    P      23 44 45.3 +0.6
      baz=258,SNR=13
K13K  Kusilvak Mount     55.46  32  IAmb IAmb   23 44 53.6
      comp=Z,72nm,1.4s
K13K  Kusilvak Mount     55.46  32  P    P      23 44 51.6 +0.7
      baz=264,SNR=6.1
ANM   Nome               55.48  29  P    P      23 44 52.1 +1.0
ANM                                 IAmb  IAmb  23 44 53.8
      comp=Z,55nm,0.9s
ANM   Nome               55.48  29  P    P      23 44 52.1 +1.0
ANM                                 pmax  pmax
      comp=Z,55nm,0.9s
ANM   Nome               55.48  29  P    P      23 44 52.0 +1.0
      baz=261,SNR=14
SVE   Sverdlovsk         55.51 322 eP    P      23 44 51.3 -0.1
SVE                                 pmax  pmax
      comp=Z,36nm,0.9s
SVE                                 MLR   MLR
      comp=Z,584nm,15.0s
M13K  Dall Lake          55.95  34  P    P      23 44 55.2 +0.7
      baz=266
F15K  North Star Dit     55.96  27  IAmb IAmb   23 44 57.1
      comp=Z,92nm,0.9s
F15K  North Star Dit     55.96  27  P    P      23 44 55.8 +1.2
      baz=261
AB31  Akbulak array      56.03 313  P    P      23 44 54.8 -0.5
AB31                                IAmb  IAmb  23 44 56.3
      comp=Z,40nm,0.8s
ABKAR Akbulak array      56.03 313  P    P      23 44 54.5 -0.7
J14K  Nanvaranak Lak     56.05  31  P    P      23 44 56.2 +1.1
      baz=264
G15K  Niukluk            56.11  28  P    P      23 44 56.9 +1.3
      baz=262,SNR=22
C16K  Lisburne Hills     56.15  24  P    P      23 44 56.5 +0.8
C16K                                IAmb  IAmb  23 44 57.3
      comp=Z,70nm,0.8s
C16K  Lisburne Hills     56.15  24  P    P      23 44 56.2 +0.5
      baz=259,SNR=35
L14K  Kuka Creek         56.34  33  IAmb IAmb   23 45 18.0
      comp=Z,47nm,1.1s
L14K  Kuka Creek         56.34  33  P    P      23 44 58.8 +1.6
      baz=266,SNR=7.4
HRA   Herat              56.36 295  P    P      23 44 58.6 +0.4
HRA                                 IAmb  IAmb  23 44 59.9
      comp=Z,31nm,0.8s
S12K  Black Hills        56.47  40  P    P      23 44 58.0 -0.3
      baz=270
M14K  Bethel             56.65  33  P    P      23 44 60.0 +0.5
M14K                                IAmb  IAmb  23 45 20.0
      comp=Z,30nm,1.0s
M14K  Bethel             56.65  33  P    P      23 45 00.7 +1.2
      baz=267,SNR=5.1
ARTI  Arti               56.75 321  P    P      23 44 58.9 -1.3
ARTI                                IAmb  IAmb  23 45 00.6
      comp=Z,51nm,0.5s
ARTI  Arti               56.75 321c iP   P      23 44 59.5 -0.8
ARTI                                            23 45 55.1
ARTI                                            23 47 01.6
ARTI                                S     S     23 52 50.6 +1.2
ARTI                                SS    SS    23 56 33.9 -3.5
ARTI                                pmax  pmax
      comp=Z,26nm,0.6s
ARTI                                MLR   MLR
      comp=Z,600nm,16.0s
ARTI  Arti               56.75 321  P    P      23 44 59.5 -0.8
ARTI                                PcP   PcP   23 45 56.2 +0.5
N14K  Kuskokwak Cree     56.75  34  P    P      23 45 00.8 +0.7
      baz=268
H16K  Elim               56.83  29  P    P      23 45 01.6 +0.9
      baz=264,SNR=25
D17K  Noatak River       56.89  25  P    P      23 45 02.3 +1.2
      baz=261,SNR=44
L15K  Ungalak Mounta     56.93  32  P    P      23 45 02.2 +0.7
      baz=267
O14K  Tigyukauivet M     56.94  35  P    P      23 45 02.6 +1.0
      baz=268
K15K  Wolf Creek Mou     56.95  32  P    P      23 45 02.9 +1.3
      baz=266
C17K  DeLong Mountai     56.97  24  P    P      23 45 02.5 +0.8
      baz=261
RDOG  Red Dog Mine       57.01  25  P    P      23 45 02.8 +0.9
      baz=261,SNR=10
M15K  Kasigluk River     57.27  34  P    P      23 45 04.7 +0.8
      baz=268
E17K  Hotham Inlet       57.28  26  P    P      23 45 05.1 +1.2
      baz=263,SNR=32
SDPT  Sand Point         57.37  40  P    P      23 45 06.0 +1.3
      baz=272
I17K  Unalakleet         57.44  30  P    P      23 45 06.2 +1.2
      baz=266,SNR=12
J16K  Anvik River        57.44  30  IAmb IAmb   23 45 07.7
      comp=Z,63nm,1.8s
J16K  Anvik River        57.44  30  P    P      23 45 06.3 +1.2
      baz=266
N15K  Kwethluk River     57.56  34  IAmb IAmb   23 45 08.2
      comp=Z,49nm,1.1s
N15K  Kwethluk River     57.56  34  P    P      23 45 07.1 +1.2
      baz=269,SNR=8.2
G17K  Kiwalik Mounta     57.59  28  P    P      23 45 07.3 +1.3
      baz=265,SNR=32
B18K  Kokolik River      57.60  23  P    P      23 45 07.5 +1.4
      baz=262,SNR=50
O15K  Ungalikthiuk R     57.68  35  P    P      23 45 07.8 +1.0
      baz=270
C18K  Utukok River       57.72  24  P    P      23 45 07.8 +0.7
      baz=262,SNR=34
E18K  Tukpahlearik C     57.79  26  P    P      23 45 08.8 +1.4
E18K  Tukpahlearik C     57.79  26  P    P      23 45 08.9 +1.4
      baz=264,SNR=34
H17K  Granite Mounta     57.85  29  IAmb IAmb   23 45 10.6
      comp=Z,37nm,1.0s
H17K  Granite Mounta     57.85  29  P    P      23 45 09.3 +1.4
      baz=266,SNR=11
A19K  Wainwright         57.98  22  P    P      23 45 10.0 +1.3
      baz=262
F18K  Selawik            58.09  27  P    P      23 45 10.8 +1.4
      baz=265,SNR=48
M16K  Timber Creek       58.13  33  P    P      23 45 11.1 +1.1
      baz=269
J17K  VABM Dome          58.13  30  IAmb IAmb   23 45 13.4
      comp=Z,29nm,0.8s
J17K  VABM Dome          58.13  30  P    P      23 45 11.3 +1.4
      baz=268
N16K  Nishlik Lake       58.22  34  P    P      23 45 12.0 +1.4
      baz=270,SNR=8.4
C19K  Lookout Ridge      58.35  24  P    P      23 45 12.4 +1.0
      baz=264,SNR=37
G18K  Tagagawik          58.44  27  P    P      23 45 12.8 +0.9
G18K                                IAmb  IAmb  23 45 14.2
      comp=Z,53nm,0.8s
G18K  Tagagawik          58.44  27  P    P      23 45 12.9 +0.9
      baz=267,SNR=33
L17K  Donlin             58.46  32  P    P      23 45 13.8 +1.6
      baz=269,SNR=11
K17K  Iditarod           58.47  31  IAmb IAmb   23 45 14.4
      comp=Z,26nm,1.0s
K17K  Iditarod           58.47  31  P    P      23 45 13.8 +1.6
      baz=269,SNR=9.3
H18K  Honhosa River      58.52  28  IAmb IAmb   23 45 14.9
      comp=Z,46nm,1.1s
H18K  Honhosa River      58.52  28  P    P      23 45 13.7 +1.0
      baz=267,SNR=17
O16K  Kokwok River B     58.56  35  IAmb IAmb   23 45 15.2
      comp=Z,31nm,1.1s
O16K  Kokwok River B     58.56  35  P    P      23 45 14.2 +1.2
      baz=271,SNR=5.4
P16K  Nushagak River     58.63  36  P    P      23 45 14.3 +0.9
      baz=272
D19K  Kuna River         58.83  24  P    P      23 45 15.6 +0.8
      baz=266
M17K  Holitna River      58.87  33  P    P      23 45 16.6 +1.6
      baz=270,SNR=9.8
N17K  Nushagak Hills     59.00  34  IAmb IAmb   23 45 18.8
      comp=Z,40nm,1.0s
N17K  Nushagak Hills     59.00  34  P    P      23 45 17.5 +1.5
      baz=271,SNR=9.2
O17K  Koliganek Bris     59.07  35  P    P      23 45 17.4 +1.0
      baz=272
G19K  Purcell Mounta     59.09  27  IAmb IAmb   23 45 18.6
      comp=Z,39nm,1.0s
G19K  Purcell Mounta     59.09  27  P    P      23 45 17.4 +0.8
      baz=268,SNR=22
E19K  Redstone River     59.09  26  P    P      23 45 17.6 +1.1
      baz=267
GCSA  Galena City Sc     59.14  29  P    P      23 45 17.2 +0.3
      baz=269
J18K  Innoko River       59.20  30  IAmb IAmb   23 45 19.6
      comp=Z,86nm,1.9s
J18K  Innoko River       59.20  30  P    P      23 45 18.0 +0.7
      baz=270
L18K  Granite Mounta     59.21  32  IAmb IAmb   23 45 19.7
      comp=Z,28nm,1.0s
L18K  Granite Mounta     59.21  32  P    P      23 45 19.0 +1.6
      baz=271,SNR=9.7
B20K  Meade River        59.29  23  P    P      23 45 18.5 +0.8
      baz=266
Q16K  King Salmon        59.33  36  P    P      23 45 19.1 +0.8
      baz=273
H19K  Roundabout Mou     59.34  28  P    P      23 45 19.8 +1.6
H19K  Roundabout Mou     59.34  28  P    P      23 45 19.5 +1.3
      baz=269,SNR=47
D20K  Etivluk River      59.39  24  P    P      23 45 19.8 +1.2
      baz=267
P17K  Kvichak River      59.42  35  P    P      23 45 19.9 +1.0
      baz=273
E20K  Nigu River         59.53  25  P    P      23 45 20.6 +1.0
      baz=268,SNR=120
R17L  Mt. Peulik Vol     59.55  37  P    P      23 45 21.0 +1.2
      baz=274
A21K  Barrow             59.57  21  P    P      23 45 20.3 +0.6
      baz=265,SNR=5.1
N18K  Kilae Creek        59.63  34  IAmb IAmb   23 45 23.1
      comp=Z,31nm,1.0s
N18K  Kilae Creek        59.63  34  P    P      23 45 21.4 +1.0
      baz=272,SNR=5.1
M18K  Stony River        59.64  33  P    P      23 45 22.0 +1.6
      baz=272,SNR=10
F20K  Avaraart Lake      59.66  26  P    P      23 45 22.4 +1.9
F20K                                IAmb  IAmb  23 45 23.7
      comp=Z,34nm,0.9s
F20K  Avaraart Lake      59.66  26  P    P      23 45 21.5 +1.1
      baz=269
J19K  Poorman            59.68  30  P    P      23 45 21.9 +1.2
J19K  Poorman            59.68  30  P    P      23 45 21.7 +1.0
      baz=271,SNR=13
H20K  Anotleneega Mo     59.99  28  P    P      23 45 23.9 +1.1
      baz=270,SNR=16
O18K  Koktuh Hills       60.02  34  P    P      23 45 24.3 +1.3
      baz=273,SNR=6.5
P18K  Big Mountain,      60.03  35  IAmb IAmb   23 45 25.2
      comp=Z,58nm,1.1s
P18K  Big Mountain,      60.03  35  P    P      23 45 24.1 +0.9
      baz=274,SNR=5.2
ACHA  Angle Creek He     60.06  36  P    P      23 45 23.0 -0.4
ACHA                                IAmb  IAmb  23 45 24.1
      comp=Z,26nm,1.0s
C21K  Knifeblade Rid     60.07  24  P    P      23 45 24.4 +1.2
      baz=268
L19K  White Mountain     60.07  32  IAmb IAmb   23 45 26.0
      comp=Z,29nm,1.0s
L19K  White Mountain     60.07  32  P    P      23 45 24.7 +1.3
      baz=272
A22K  Sinclair Lake      60.09  22  P    P      23 45 24.1 +0.9
      baz=267,SNR=34
B21K  Ikpikpuk River     60.15  23  P    P      23 45 24.9 +1.1
B21K                                IAmb  IAmb  23 45 26.0
      comp=Z,116nm,0.8s
B21K  Ikpikpuk River     60.15  23  P    P      23 45 25.0 +1.3
      baz=268
I20K  Naaghedeneel       60.17  29  P    P      23 45 25.5 +1.6
      baz=271
STKA  Stephens Creek     60.19 167  P    P      23 45 24.5 +0.1
      comp=Z,3.2nm,0.6s,baz=346,slow=6.9,SNR=9.4
      comp=Z,3.2nm,0.6s
STKA  Stephens Creek     60.19 167  P    P      23 45 27.4 +3.0
STKA  Stephens Creek     60.19 167  P    P      23 45 24.5 +0.1
BBOO  Buckleboo          60.23 173  P    P      23 45 24.2 -0.6
BBOO                                IAmb  IAmb  23 45 40.9
      comp=Z,23nm,0.9s
N19K  Bonanza Creek      60.32  33  IAmb IAmb   23 45 30.9
      comp=Z,25nm,0.9s
N19K  Bonanza Creek      60.32  33  P    P      23 45 26.4 +1.2
      baz=273
J20K  Nowinta River      60.33  29  P    P      23 45 26.6 +1.5
      baz=272,SNR=24
E21K  Killik River       60.35  25  P    P      23 45 26.5 +1.3
E21K                                IAmb  IAmb  23 45 27.1
      comp=Z,125nm,0.8s
E21K  Killik River       60.35  25  P    P      23 45 26.0 +0.8
      baz=270
K20K  Telida             60.39  30  P    P      23 45 27.1 +1.6
      baz=272,SNR=11
O19K  Port Alsworth      60.44  34  P    P      23 45 27.0 +1.2
      baz=274
IMAR  Indian Mountai     60.45  27  P    P      23 45 26.9 +1.0
F21K  Alatna River       60.54  26  P    P      23 45 27.3 +0.8
      baz=271,SNR=35
G21K  Allakaket          60.54  27  P    P      23 45 27.7 +1.2
      baz=271,SNR=58
B22K  Teshekpuk Lake     60.58  22  P    P      23 45 27.5 +0.9
      baz=269
D22K  Ayikyak River      60.83  24  P    P      23 45 29.6 +1.2
D22K                                IAmb  IAmb  23 45 30.9
      comp=Z,129nm,0.8s
D22K  Ayikyak River      60.83  24  P    P      23 45 29.8 +1.4
      baz=270
H21K  Melozitna Rive     60.85  28  P    P      23 45 30.0 +1.4
      baz=272,SNR=35
M20K  Styx River         60.90  32  IAmb IAmb   23 45 31.4
      comp=Z,20nm,0.8s
M20K  Styx River         60.90  32  P    P      23 45 30.7 +1.6
      baz=274,SNR=9.7
P19K  Oil Pt             61.03  35  P    P      23 45 30.5 +0.5
      baz=275
F22K  John River         61.04  26  P    P      23 45 31.4 +1.5
      baz=272
CHUM  Lake Minchumin     61.15  30  P    P      23 45 32.1 +1.5
      baz=274,SNR=14
E22K  Anaktuvuk Pass     61.16  25  P    P      23 45 31.8 +1.0
E22K                                IAmb  IAmb  23 45 33.2
      comp=Z,106nm,0.8s
E22K  Anaktuvuk Pass     61.16  25  P    P      23 45 32.0 +1.3
      baz=272,SNR=52
I21K  Tanana             61.21  28  P    P      23 45 32.7 +1.7
      baz=273,SNR=7.3
OHAK  Old Harbor         61.24  37  P    P      23 45 31.7 +0.4
      baz=276
PPLA  Purkeypile         61.27  31  IAmb IAmb   23 45 39.3
      comp=Z,32nm,0.9s
PPLA  Purkeypile         61.27  31  P    P      23 45 33.0 +1.4
      baz=274,SNR=6.9
O20K  Slope Mountain     61.29  34  P    P      23 45 33.1 +1.3
      baz=275
G22K  Bettles            61.32  26  P    P      23 45 32.6 +0.9
      baz=273
DZM   Mont Dzumac        61.34 139  P    P      23 45 33.8 +1.2
      comp=Z,7.3nm,0.9s,baz=53,slow=10,SNR=2.8
      comp=Z,7.3nm,0.9s
DZM   Mont Dzumac        61.34 139 eS    S      23 53 42.7 -7.1
      comp=Z,506nm,31.6s
DZM                                eSS    SS    23 57 46.3 -5.1
      comp=Z,234nm,27.8s
DZM                                eLR    LR    00 03 44.0
      comp=Z,587nm,23.4s
DZM   Mont Dzumac        61.34 139  P    P      23 45 34.4 +1.8
SPCR  Spurr Chakacha     61.40  33  P    P      23 45 33.6 +1.2
      baz=275,SNR=18
N20K  Mount Spurr        61.40  33  P    P      23 45 33.6 +1.2
      baz=275
H22K  Ishtalitna Cre     61.43  27  P    P      23 45 34.3 +1.8
      baz=273
KIRV  Kirov              61.46 324ceP    P      23 45 32.4 -0.4
SPU   Mount Spurr        61.47  33  IAmb IAmb   23 45 35.5
      comp=Z,45nm,1.0s
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C23K	Itkillik River	61.54	23	P	P	23 45 34.3	+1.1
	baz=272,SNR=22						
D23K	Nanushuk River	61.55	24	P	P	23 45 34.6	+1.3
D23K	Nanushuk River	61.55	24	P	P	23 45 34.9	+1.6
	baz=272,SNR=51						
STLK	Strandline Lak	61.55	32	IAmb	IAmb	23 45 34.7	
	comp=Z,19nm,0.8s						
KDAK	Kodiak Island	61.55	37	P	P	23 45 33.5	0.0
KDAK	Kodiak Island	61.55	37	P	P	23 45 33.5	0.0
KDAK				pmax	pmax		
	comp=Z,72nm,0.8s						
KDAK	Kodiak Island	61.55	37	P	P	23 45 34.0	+0.5
	baz=277						
KDAK	Kodiak Island	61.55	37	P	P	23 45 33.9	+0.4
Q20K	Shuyak Island	61.56	36	P	P	23 45 33.3	-0.2
	baz=276						
SKT	Skwentna	61.65	32	IAmb	IAmb	23 45 35.5	
	comp=Z,36nm,1.0s						
SKT	Skwentna	61.65	32	P	P	23 45 34.5	+0.5
	baz=275,SNR=12						
BPAW	Bear Paw Mtn.	61.71	29	P	P	23 45 35.6	+1.1
	baz=275						
MLY	Manley	61.75	28	IAmb	IAmb	23 45 38.0	
	comp=Z,23nm,0.7s						
MLY	Manley	61.75	28	P	P	23 45 36.0	+1.3
	baz=274,SNR=20						
KTH	Kantishna Hill	61.79	30	IAmb	IAmb	23 45 38.3	
	comp=Z,24nm,1.0s						
COLD	Coldfoot	61.82	26	P	P	23 45 36.5	+1.4
	baz=274,SNR=11						
HOM	Homer	61.83	35	P	P	23 45 36.8	+1.5
	baz=276						
G23K	Bananza Creek	61.92	26	IAmb	IAmb	23 45 38.5	
	comp=Z,40nm,0.9s						
G23K	Bananza Creek	61.92	26	P	P	23 45 37.1	+1.2
	baz=274,SNR=11						
L22K	Petersville	61.95	31	IAmb	IAmb	23 45 37.8	
	comp=Z,80nm,1.2s						
TOLK	Toolik Lake Re	61.97	24	P	P	23 45 36.8	+0.6
TOLK	Toolik Lake Re	61.97	24	P	P	23 45 37.4	+1.2
	baz=274,SNR=36						
E23K	Chandalar	61.99	25	P	P	23 45 37.7	+1.4
	baz=274,SNR=48						
SUA	Susitna One	62.07	32	P	P	23 45 37.2	+0.1
	baz=276,SNR=9.5						
TRF	Thorofare Moun	62.08	30	P	P	23 45 37.6	+0.4
	baz=276						
H23K	Yukon River	62.18	27	P	P	23 45 39.5	+1.9
	baz=275						
CUT	Chulitna	62.20	31	P	P	23 45 38.0	+0.3
	baz=276,SNR=9.1						
D24K	Happy Valley	62.21	24	P	P	23 45 39.2	+1.4
D24K	Happy Valley	62.21	24	P	P	23 45 39.1	+1.4
	baz=274,SNR=50						
C24K	Franklin Bluff	62.21	23	P	P	23 45 39.0	+1.3
C24K	Franklin Bluff	62.21	23	P	P	23 45 38.7	+1.0
	baz=274,SNR=41						
BRSE	Bradley Lake S	62.27	34	P	P	23 45 39.6	+1.3
	baz=277,SNR=8.4						
I23K	Minto, Yukon-K	62.32	28	IAmb	IAmb	23 46 00.6	
	comp=Z,28nm,1.1s						
I23K	Minto, Yukon-K	62.32	28	P	P	23 45 39.7	+1.3
	baz=276,SNR=9.0						
M22K	Willow	62.34	32	P	P	23 45 38.9	+0.3
	baz=277,SNR=9.3						
E24K	Your Creek	62.41	25	P	P	23 45 40.4	+1.3
	baz=275						
SLKM	Skilak Lake	62.44	33	IAmb	IAmb	23 45 41.0	
	comp=Z,49nm,1.1s						
NEA2	Nenana	62.50	29	P	P	23 45 40.8	+1.1
	baz=276,SNR=34						
RC01	Rabbit Creek A	62.60	33	P	P	23 45 40.6	+0.1
	baz=277						
MCK	McKinley	62.65	30	IAmb	IAmb	23 45 42.5	
	comp=Z,51nm,1.1s						
MCK	McKinley	62.65	30	P	P	23 45 41.2	+0.4
	baz=277,SNR=17						
O22K	Cooper Landing	62.68	33	P	P	23 45 41.1	+0.1
	baz=278						
F24K	Squaw Lake	62.69	25	P	P	23 45 42.2	+1.2
	baz=276,SNR=47						
RND	Reindeer	62.73	30	P	P	23 45 41.3	-0.1
RND				IAmb	IAmb	23 45 42.6	
	comp=Z,89nm,0.9s						
RND	Reindeer	62.73	30	P	P	23 45 41.3	-0.1
RND				pmax	pmax		
	comp=Z,89nm,0.9s						
PMR	Palmer	62.83	32	P	P	23 45 42.1	+0.2
	baz=278,SNR=7.3						
H24K	Noodor Dome	62.86	27	P	P	23 45 43.8	+1.6
H24K	Noodor Dome	62.86	27	P	P	23 45 43.6	+1.4
	baz=276,SNR=21						
SEW	Seward	62.87	34	P	P	23 45 42.5	+0.3
	baz=278,SNR=5.8						
G24K	Hadweenzic Riv	62.93	26	P	P	23 45 42.6	0.0
	baz=276,SNR=16						
WAT1	Susitna Watana	62.93	31	P	P	23 45 42.7	0.0
	baz=277						
COLA	College	62.99	28	P	P	23 45 44.9	+2.0
COLA				IAmb	IAmb	23 45 45.9	
	comp=Z,23nm,0.7s						
COLA	College	62.99	28	P	P	23 45 44.9	+2.0
COLA				pmax	pmax		
	comp=Z,23nm,0.7s						
COLA	College	62.99	28	P	P	23 45 44.2	+1.3
D25K	Kavik River	63.06	23	P	P	23 45 44.5	+1.0
	baz=276						
POKR	Poker Plat Res	63.13	28	P	P	23 45 45.0	+1.1
	baz=277,SNR=21						
KNK	Knik Glacier	63.17	32	P	P	23 45 44.6	+0.3
	baz=278,SNR=9.3						
SML	Sawmill	63.17	32	P	P	23 45 44.5	+0.2
	baz=278,SNR=6.1						
PWL	Port Wells	63.31	33	P	P	23 45 45.2	+0.1
	baz=279,SNR=9.8						
WAT6	Susitna Watana	63.34	31	P	P	23 45 45.8	+0.2
	baz=278,SNR=20						
BELG	Belogornoye	63.39	317	*i* P	P	23 45 45.4	-0.4
BELG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ILAR	Eielson Array	63.41	29	P	P	23 45 45.2	-0.5
	comp=Z,9.0nm,0.7s,baz=277,slow=5.7,SNR=50						
ILAR	Eielson Array	63.41	29	P	P	23 45 46.5	+0.8
ILAR	Eielson Array	63.41	29	P	P	23 45 45.3	-0.5
DHY	Denali Highway	63.43	30	P	P	23 45 46.4	+0.3
	baz=278						
HDA	Harding Lake	63.43	29	IAmb	IAmb	23 45 46.8	
	comp=Z,44nm,0.9s						
HDA	Harding Lake	63.43	29	P	P	23 45 45.7	-0.2
	baz=278,SNR=15						
M23K	Glacier View	63.46	32	P	P	23 45 46.0	-0.2
	baz=279,SNR=5.3						
G25K	Bearman Lake	63.47	26	P	P	23 45 46.9	+0.8
	baz=278,SNR=11						
E25K	Arctic Village	63.49	25	IAmb	IAmb	23 45 49.2	
	comp=Z,48nm,1.1s						
E25K	Arctic Village	63.49	25	P	P	23 45 47.4	+1.1
	baz=277,SNR=32						
C26K	Camden Bay	63.50	23	P	P	23 45 48.0	+1.7
	baz=277,SNR=6.9						
F25K	Christian Rive	63.53	25	P	P	23 45 48.5	+1.9
F25K				IAmb	IAmb	23 45 49.9	
	comp=Z,30nm,0.8s						
F25K	Christian Rive	63.53	25	P	P	23 45 48.1	+1.5
	baz=278,SNR=35						
SCM	Sheep Creek Mo	63.64	32	P	P	23 45 47.4	0.0
	baz=279,SNR=8.8						
P23K	Montague Islan	63.90	34	P	P	23 45 49.6	+0.6
	baz=280						
GLI	Glacier Island	63.90	33	P	P	23 45 49.7	+0.6
	baz=280						
C27K	Jago River	63.95	23	IAmb	IAmb	23 45 52.0	
	comp=Z,44nm,0.8s						
C27K	Jago River	63.95	23	P	P	23 45 50.5	+1.2
	baz=278,SNR=23						
BMAR	Burnt Mountain	63.96	25	P	P	23 45 51.1	+1.7
SOHO	SOHO	64.00	285	*i* P	P	23 45 51.0	+0.8
	SNR=6.9						
K24K	Donnelly Dome	64.03	29	IAmb	IAmb	23 45 51.3	
	comp=Z,34nm,0.9s						
K24K	Donnelly Dome	64.03	29	P	P	23 45 50.4	+0.5
	baz=279,SNR=10						
F26K	Sheenjek River	64.09	25	P	P	23 45 52.0	+1.8
F26K				IAmb	IAmb	23 45 53.5	
	comp=Z,138nm,1.6s						
F26K	Sheenjek River	64.09	25	P	P	23 45 51.8	+1.6
	baz=279,SNR=39						
HATD	Hatta, Dubai	64.11	286	P	P	23 45 51.8	+0.7
M24K	Tolsona, Glenn	64.13	31	IAmb	IAmb	23 45 52.5	
	comp=Z,42nm,0.8s						
M24K	Tolsona, Glenn	64.13	31	P	P	23 45 51.5	+0.8
	baz=280						
ASHO	Ashiyiah	64.22	286	P	P	23 45 52.4	+0.5
PAX	Paxson	64.31	30	IAmb	IAmb	23 45 53.6	
	comp=Z,24nm,0.9s						
PAX	Paxson	64.31	30	P	P	23 45 52.2	+0.3
	baz=280						
G26K	Porcupine Rive	64.34	26	IAmb	IAmb	23 45 55.7	
	comp=Z,68nm,1.4s						
G26K	Porcupine Rive	64.34	26	P	P	23 45 53.3	+1.5
	baz=280						
KLU	Klutina	64.36	32	P	P	23 45 52.7	+0.6
KLU	Klutina	64.36	32	P	P	23 45 52.2	+0.1
	baz=280						
RIDG	Independent Ri	64.45	29	IAmb	IAmb	23 45 54.2	
	comp=Z,36nm,1.0s						
RIDG	Independent Ri	64.45	29	P	P	23 45 52.9	+0.2
	baz=280						
NAZ	Nazwa, Dubai	64.46	286	P	P	23 45 54.0	+0.7
Q23K	Middleton Isla	64.53	34	P	P	23 45 54.1	+1.0
	baz=281						
HARP	HAARP	64.55	31	P	P	23 45 53.8	+0.4
	baz=280						
FAQ	Al Faqa, Dubai	64.60	286	*i* P	P	23 45 54.7	+0.5
	SNR=12						
EYAK	Cordova Ski Ar	64.61	33	P	P	23 45 53.4	-0.3
	baz=281						
ALNE	Al Ain	64.70	285	*i* P	P	23 45 55.1	+0.2
	SNR=14						
SCRK	Sand Creek	64.78	29	IAmb	IAmb	23 45 55.8	
	comp=Z,23nm,0.8s						
SCRK	Sand Creek	64.78	29	P	P	23 45 54.9	0.0
	baz=281,SNR=14						
DOT	Dot Lake	64.81	30	IAmb	IAmb	23 45 56.3	
	comp=Z,36nm,0.9s						
J26L	Joseph Creek	64.87	29	P	P	23 45 55.6	+0.2
J26L				IAmb	IAmb	23 45 56.4	
	comp=Z,32nm,0.8s						
J26L	Joseph Creek	64.87	29	P	P	23 45 55.0	-0.4
	baz=281,SNR=32						
I26K	Coal Creek Min	64.89	28	P	P	23 45 55.2	-0.2
	baz=281						
E27K	Coleen River	64.95	24	IAmb	IAmb	23 45 58.7	
	comp=Z,82nm,1.4s						
E27K	Coleen River	64.95	24	P	P	23 45 57.0	+1.2
	baz=281,SNR=23						
N25K	Chitina, Valde	64.96	32	IAmb	IAmb	23 45 58.5	
	comp=Z,64nm,1.6s						
N25K	Chitina, Valde	64.96	32	P	P	23 45 56.8	+0.7
	baz=281,SNR=6.5						
D27M	Malcolm River	64.98	23	P	P	23 45 57.3	+1.3
	baz=281,SNR=17						
BMRM	Bremner River	65.08	32	P	P	23 45 57.7	+0.8
	baz=282,SNR=10						
MENT	Mentasta	65.10	30	IAmb	IAmb	23 45 59.1	
	comp=Z,38nm,0.8s						
AJN	Ajban	65.18	286	P	P	23 45 58.2	+0.2
G27K	Doyon Strip	65.20	26	P	P	23 45 58.6	+1.2
	baz=282,SNR=9.9						
L26K	Log Cabin Wild	65.25	30	P	P	23 45 58.6	+0.7
L26K				IAmb	IAmb	23 46 00.1	
	comp=Z,30nm,1.0s						
L26K	Log Cabin Wild	65.25	30	P	P	23 45 58.6	+0.7
	baz=282,SNR=15						
H27K	Steamboat Moun	65.36	26	IAmb	IAmb	23 46 02.6	
	comp=Z,50nm,1.6s						
H27K	Steamboat Moun	65.36	26	P	P	23 45 59.9	+1.3
	baz=282,SNR=12						
GLB	Gilahina Butte	65.36	32	IAmb	IAmb	23 46 00.7	
	comp=Z,64nm,1.2s						
I27K	Kandik River	65.46	27	P	P	23 46 00.3	+1.1
I27K	Kandik River	65.46	27	P	P	23 46 00.6	+1.4
	baz=282,SNR=36						
M26K	Nabesna, AK	65.54	31	IAmb	IAmb	23 46 01.9	
	comp=Z,80nm,1.0s						
M26K	Nabesna, AK	65.54	31	P	P	23 46 00.7	+0.9
	baz=282,SNR=30						
VRDI	Verde Repeater	65.58	32	IAmb	IAmb	23 46 02.0	
	comp=Z,49nm,1.1s						
MAK	Makhachkala	65.60	307	*e*P	P	23 45 58.9	-1.5
MAK				*e*S	S	23 54 43.0	+0.7
MAK				*e*SS	SS	23 58 58.8	+2.4
MAK				pmax	pmax		
	comp=Z,18nm,0.3s						
MAK				MLR	MLR		
	comp=Z,435nm,15.0s						
K27K	Chicken	65.60	29	P	P	23 46 00.9	+0.8
	baz=282						
E28M	Babbage River	65.61	24	IAmb	IAmb	23 46 02.8	
	comp=Z,56nm,1.2s						
E28M	Babbage River	65.61	24	P	P	23 46 01.6	+1.5
	baz=283,SNR=34						
F28M	Old Crow	65.71	25	IAmb	IAmb	23 46 03.5	
	comp=Z,70nm,1.4s						
F28M	Old Crow	65.71	25	P	P	23 46 02.2	+1.5
	baz=283,SNR=27						
D28M	Stokes Point	65.73	23	P	P	23 46 02.2	+1.4
	baz=283						
MCARA	McCarthy VSAT	65.75	32	IAmb	IAmb	23 46 04.4	
	comp=Z,56nm,1.0s						
MCARA	McCarthy VSAT	65.75	32	P	P	23 46 01.9	+0.9
	baz=283,SNR=11						
LKRN	Lenkeran, Azer	65.82	302	P	P	23 46 03.1	+1.2
AKT	Akhty	65.83	306c	*i*P	P	23 46 02.0	-0.1
AKT				*e*		23 46 32.5	
AKT				*e*SS	SS	23 58 54.2	-6.2
AKT				pmax	pmax		
	comp=Z,47nm,0.9s						
CRQE	Cirque	65.85	33	P	P	23 46 02.5	+0.6
	baz=283,SNR=8.4						
L27K	Beaver Creek,	65.92	30	P	P	23 46 03.3	+1.1
	baz=283						
TGL	Tana Glacier	65.98	33	IAmb	IAmb	23 46 04.4	
	comp=Z,56nm,1.0s						
KLMR	Klimovskoe	66.02	328	*e*P	P	23 46 00.2	-2.6
KLMR				pmax	pmax		
	comp=Z,33nm,1.2s						
M27K	Edge Creek, AK	66.06	31	IAmb	IAmb	23 46 05.2	
	comp=Z,33nm,0.9s						
M27K	Edge Creek, AK	66.06	31	P	P	23 46 04.1	+0.9
	baz=283,SNR=14						
I28M	Miner Creek	66.17	27	IAmb	IAmb	23 46 14.0	
	comp=Z,26nm,0.9s						
I28M	Miner Creek	66.17	27	P	P	23 46 05.2	+1.3
	baz=284,SNR=17						
E29M	Blow River	66.25	24	P	P	23 46 05.2	+1.1
	baz=284,SNR=17						
SEKA	Sheki	66.29	305	P	P	23 46 05.6	+0.6
MNGR	Mingechevir, A	66.50	305	P	P	23 46 07.1	+0.9
BVCY	Beaver Creek	66.50	31	P	P	23 46 07.0	+1.0
	baz=284,SNR=6.9						
TOO	Toolangi	66.50	165	P	P	23 46 07.3	+1.2
TOO	Toolangi	66.50	165	P	P	23 46 07.4	+1.2
TOO				pmax	pmax		
	comp=Z,7.0nm,1.2s						
G29M	Pine Creek	66.57	25	P	P	23 46 07.7	+1.4
	baz=285,SNR=19						
H29M	Whitestone	66.61	26	IAmb	IAmb	23 46 09.1	
	comp=Z,24nm,0.9s						
H29M	Whitestone	66.61	26	P	P	23 46 07.8	+1.3
	baz=285,SNR=11						
CTG	Chitna Glacier	66.64	32	P	P	23 46 08.1	+1.1
	baz=284,SNR=8.6						
CTGM	Chitina Glacie	66.64	32	IAmb	IAmb	23 46 09.1	
	comp=Z,32nm,0.8s						
DAWY	Dawson	66.74	29	P	P	23 46 08.2	+0.7
	baz=285,SNR=12						
LOGN	Logan Glacier	66.83	32	IAmb	IAmb	23 46 11.8	
	comp=Z,30nm,1.1s						
YUK3	Moose Creek	66.84	31	P	P	23 46 09.2	+0.9
	baz=285,SNR=11						
I29M	Ogilvie Camp,	66.86	27	IAmb	IAmb	23 46 10.4	
	comp=Z,24nm,0.9s						
I29M	Ogilvie Camp,	66.86	27	P	P	23 46 09.3	+1.2
	baz=285,SNR=18						
APA	Apatity	66.94	335	*e*P	P	23 46 07.3	-1.3
APA				MLR	MLR		
	comp=Z,837nm,5.1s						
MZR	Muzera	67.02	285	*i* P	P	23 46 09.9	+0.1
	SNR=10						
GANJ	Ganja	67.09	305	P	P	23 46 10.9	+0.8
J29N	Klondike Camp	67.13	28	IAmb	IAmb	23 46 12.1	
	comp=Z,37nm,0.8s						
J29N	Klondike Camp	67.13	28	P	P	23 46 11.3	+1.4
	baz=286						
EPYK	Eagle Plains	67.22	26	IAmb	IAmb	23 46 12.3	
	comp=Z,41nm,0.9s						
EPYK	Eagle Plains	67.22	26	P	P	23 46 11.3	+0.9
	baz=286,SNR=16						
F30M	Barrier River	67.22	24	IAmb	IAmb	23 46 12.8	
	comp=Z,101nm,1.4s						
F30M	Barrier River	67.22	24	P	P	23 46 11.5	+1.1
	baz=286,SNR=16						
VRH	Novokhopyorsk	67.23	317	*e*P	P	23 46 09.4	-1.3
VRH				pmax	pmax		
	comp=Z,60nm,0.7s						
O28M	Mount Upton	67.23	32	IAmb	IAmb	23 46 13.2	
	comp=Z,38nm,0.9s						
O28M	Mount Upton	67.23	32	P	P	23 46 12.1	+1.2
	baz=285						
G30M	tAoh Zraii Nji	67.24	25	IAmb	IAmb	23 46 12.3	
	comp=Z,52nm,1.1s						
G30M	tAoh Zraii Nji	67.24	25	P	P	23 46 11.1	+0.6
	baz=286						
YUK8	Steele Glacier	67.29	32	P	P	23 46 12.5	+1.2
	baz=286,SNR=5.7						
PINM	Pinnacle	67.38	33	P	P	23 46 12.8	+1.2
	baz=286,SNR=5.8						
L29M	L29M	67.54	29	IAmb	IAmb	23 46 15.5	
	comp=Z,74nm,1.3s						
L29M	L29M	67.54	29	P	P	23 46 14.2	+1.7
	baz=286,SNR=25						
M29M	Somme Creek	67.57	30	P	P	23 46 14.5	+1.7
	baz=286,SNR=14						
K29M	Barlow Dome	67.59	29	P	P	23 46 14.3	+1.4
	baz=286,SNR=20						
I30M	Mount Dempster	67.67	27	IAmb	IAmb	23 46 15.1	
	comp=Z,22nm,0.9s						
I30M	Mount Dempster	67.67	27	P	P	23 46 14.4	+0.9
	baz=287,SNR=15						
YUK4	Talbot Arm	67.80	31	P	P	23 46 15.5	+1.2
	baz=286,SNR=10						
SPB2	Spitsbergen Ar	67.80	348	IAmb	IAmb	23 46 14.7	
	comp=Z,40nm,0.8s						
SPITS	Spitsbergen Ar	67.80	348	P	P	23 46 13.3	-0.6
	comp=Z,24nm,0.6s,baz=85,slow=9.5,SNR=27						
	comp=Z,24nm,0.6s						
SPITS	Spitsbergen Ar	67.80	348	P	P	23 46 13.3	-0.6
SPITS				pmax	pmax		
	comp=Z,33nm,0.8s						
INK	Inuvik	67.83	23	IAmb	IAmb	23 46 16.1	
	comp=Z,83nm,1.6s						
INK	Inuvik	67.83	23	P	P	23 46 14.9	+0.7
	baz=288,SNR=15						
J30M	Hart River	67.88	28	P	P	23 46 16.0	+1.3
	baz=287,SNR=15						
G31M	Satah River	67.99	25	P	P	23 46 15.5	+0.3
	baz=288,SNR=10						
F31M	Tsiigehtchic	68.02	24	P	P	23 46 15.7	+0.3
	baz=288,SNR=8.6						
YUK6	Outpost Mounta	68.04	32	P	P	23 46 17.4	+1.4
	baz=287,SNR=5.6						
GOF	Gofitskoye	68.11	310c	*i*P	P	23 46 16.5	+0.2
O29M	Mount Kennedy	68.13	32	IAmb	IAmb	23 46 19.2	
	comp=Z,56nm,1.4s						
O29M	Mount Kennedy	68.13	32	P	P	23 46 17.9	+1.5
	baz=287,SNR=7.2						
NAX	Nakhchivan	68.13	304	P	P	23 46 17.4	+0.7
NCK	Nalchik	68.19	309	*i* P	P	23 46 16.4	-0.5
NCK				pmax	pmax		
	comp=Z,18nm,0.9s						
KBS	Kingsbay	68.21	349c	*e*P	P	23 46 18.1	+1.6
KBS				pmax	pmax		
	comp=Z,41nm,2.5s						
KBS	Kingsbay	68.21	349	*i* P	P	23 46 16.3	-0.1
M30M	Minto, Yukon	68.28	30	IAmb	IAmb	23 46 20.8	
	comp=Z,46nm,1.6s						
M30M	Minto, Yukon	68.28	30	P	P	23 46 18.6	+1.4
	baz=287,SNR=9.6						
H31M	Peel River	68.31	26	IAmb	IAmb	23 46 19.1	
	comp=Z,36nm,0.9s						
H31M	Peel River	68.31	26	P	P	23 46 18.1	+0.8
	baz=288,SNR=20						
MOS	Moscow	68.31	323	*e*P	P	23 46 14.8	-2.6
MOS				*e*		23 46 38.8	
MOS				pmax	pmax		
	comp=Z,38nm,0.7s						
MOS				MLR	MLR		
	comp=N,300nm,18.0s						
MOS				MLR	MLR		
	comp=E,600nm,18.0s						
MOS				MLR	MLR		
	comp=Z,600nm,18.0s						
HYT	Haines Junctio	68.48	32	IAmb	IAmb	23 46 21.1	
	comp=Z,54nm,1.4s						
HYT	Haines Junctio	68.48	32	P	P	23 46 19.9	+1.3
	baz=288,SNR=10						
N30M	Aishikik Lake	68.48	31	P	P	23 46 19.9	+1.4
	baz=288,SNR=8.0						
KEV	Kevo	68.49	338	P	P	23 46 17.6	-0.7
KEV				IAmb	IAmb	23 46 18.6	
	comp=Z,35nm,0.9s						
KEV	Kevo	68.49	338	P	P	23 46 17.6	-0.7
KEV				pmax	pmax		
	comp=Z,35nm,0.9s						
LPSR	Galich'ya Gora	68.49	319	*e*P	P	23 46 17.5	-1.1
LPSR				pmax	pmax		
	comp=Z,60nm,0.8s						
HSPB	Hornsund (broa	68.51	347	*e*P	P	23 46 18.4	0.0
KBZ	Khabaz	68.60	309	P	P	23 46 20.4	+1.0
	comp=Z,48nm,0.9s,baz=127,slow=2.1,SNR=83						
	comp=Z,48nm,0.9s						
KBZ	Khabaz	68.60	309	*i* P	P	23 46 20.0	+0.6
KBZ				pmax	pmax		
	comp=Z,59nm,1.0s						
KIV	Kislovodsk	68.68	309	P	P	23 46 20.2	+0.1
KIV	Kislovodsk	68.68	309	⇑P	P	23 46 20.7	+0.6
KIV	Kislovodsk	68.68	309	*i* P	P	23 46 20.6	+0.6
	SNR=33						
KIV	Kislovodsk	68.68	309	*e*P	P	23 46 19.1	-1.0
KIV				pmax	pmax		
	comp=Z,76nm,1.1s						
KIV				MLR	MLR		
	comp=Z,121nm,17.0s						
KIV	Kislovodsk	68.68	309	P	P	23 46 20.4	+0.3
	comp=Z,634nmcomp=Z,67nm,1.1s						
KIV	Kislovodsk	68.68	309	P	P	23 46 20.6	+0.6
P29M	Windy Craggy	68.73	33	IAmb	IAmb	23 46 22.3	
	comp=Z,24nm,0.8s						
P29M	Windy Craggy	68.73	33	P	P	23 46 21.7	+1.6
	baz=288						
VORD	Divnogorie	68.76	317	*e*P	P	23 46 17.0	-3.3
VORD				pmax	pmax		
	comp=Z,30nm,1.0s						
VSR	Storozhevoye	68.76	318	*e*P	P	23 46 17.2	-3.1
VSR				pmax	pmax		
	comp=Z,40nm,0.9s						
SHA1	Shidzhatmaz	68.77	309c	*e*P	P	23 46 21.4	+0.6
NEUR	Neytrino	68.88	309	*i* P	P	23 46 21.7	+0.2
NEUR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
P30M	Million Dollar	68.95	32	P	P	23 46 22.7	+1.3
	baz=288						
ARCES	ARCESS Array B	69.06	338	P	P	23 46 21.0	-0.9
	comp=Z,17nm,0.9s,baz=64,slow=8.2,SNR=17						
	comp=Z,17nm,0.9s						
ARCES	ARCESS Array B	69.06	338	P	P	23 46 21.3	-0.6
ARCES	ARCESS Array B	69.06	338	P	P	23 46 21.0	-0.9
N31M	Braeburn, Yuko	69.07	31	IAmb	IAmb	23 46 24.7	
	comp=Z,46nm,1.1s						
N31M	Braeburn, Yuko	69.07	31	P	P	23 46 23.6	+1.5
	baz=289,SNR=11						
OBN	Obninsk	69.08	322	P	P	23 46 21.4	-0.8
OBN				IAmb	IAmb	23 46 22.1	
	comp=Z,31nm,0.6s						
OBN	Obninsk	69.08	322c	*e*P	P	23 46 21.0	-1.2
OBN				*e*		23 46 46.6	
OBN				*e*		23 48 54.6	
OBN				pmax	pmax		
	comp=Z,61nm,1.7s						
OBN				MLR	MLR		
	comp=Z,728nm,18.0s						
OBN	Obninsk	69.08	322	P	P	23 46 21.2	-1.0
	comp=Z,39nm,0.7s						
A36M	Sachs Harbour	69.15	19	P	P	23 46 22.7	+0.4
A36M				IAmb	IAmb	23 46 24.7	
	comp=Z,133nm,0.8s						
A36M	Sachs Harbour	69.15	19	P	P	23 46 23.0	+0.6
	baz=294,SNR=79						
O30N	Mendenhall	69.16	32	P	P	23 46 23.8	+1.1
	baz=289,SNR=5.6						

KARS	**Kars**	**69.44**	**306**	IAmb	IAmb	23 46 27.2	
	comp=Z,42nm,0.8s						
PLBC	**Pleasant Camp**	**69.45**	**33**	P	**P**	**23 46 25.6**	**+1.2**
	baz=289						
M31M	**Drury Creek, Y**	**69.46**	**30**	P	**P**	**23 46 25.5**	**+1.0**
	baz=290,SNR=14						
WHY	**Whitehorse**	**69.75**	**31**	IAmb	IAmb	23 46 29.1	
	comp=Z,178nm,1.6s						
WHY	**Whitehorse**	**69.75**	**31**	P	**P**	**23 46 27.9**	**+1.5**
	baz=290,SNR=15						
NOR	**Nord**	**69.87**	**355**	P	**P**	**23 46 26.0**	**-0.7**
NOR				pmax	pmax		
	comp=Z,11nm,0.8s						
NOR	**Nord**	**69.87**	**355**	*i* P	**P**	**23 46 25.7**	**-0.9**
NOR				IAmb	IAmb	23 46 26.6	
	comp=Z,6.5nm,0.8s						
SKAG	**Skagway**	**69.95**	**33**	P	**P**	**23 46 29.0**	**+1.5**
	baz=290,SNR=5.2						
S31K	**Pelican**	**70.01**	**34**	P	**P**	**23 46 29.2**	**+1.3**
	baz=290						
ALE	**Alert**	**70.26**	**1**	P	**P**	**23 46 29.1**	**0.0**
N32M	**Quiet Lake**	**70.41**	**31**	IAmb	IAmb	23 46 32.5	
	comp=Z,36nm,1.0s						
N32M	**Quiet Lake**	**70.41**	**31**	P	**P**	**23 46 31.5**	**+1.2**
	baz=291,SNR=9.6						
C36M	**Paulatuk**	**70.63**	**21**	P	**P**	**23 46 32.1**	**+0.7**
	baz=296,SNR=25						
P32M	**Atlin**	**70.67**	**32**	P	**P**	**23 46 33.2**	**+1.2**
	baz=291,SNR=6.3						
R32K	**Eaglecrest**	**70.75**	**34**	P	**P**	**23 46 33.9**	**+1.5**
	baz=291						
SIT	**Sitka**	**70.78**	**35**	P	**P**	**23 46 34.0**	**+1.4**
	baz=291						
SOC	**Sochi**	**70.84**	**310**	*e*P	**P**	**23 46 32.8**	**-0.4**
SOC				*e*		23 49 16.1	
SOC				*e*SSS	SSS	00 03 23.1	
SOC				pmax	pmax		
	comp=Z,60nm,0.8s						
SOC				MLR	MLR		
	comp=Z,317nm,21.0s						
P33M	**Teslin, Yukon**	**70.87**	**31**	P	**P**	**23 46 34.5**	**+1.3**
	baz=292,SNR=14						
GURO	**Guroymak-BITLI**	**70.89**	**304**	P	**P**	**23 46 33.7**	**-0.1**
GURO				IAmb	IAmb	23 46 35.7	
	comp=Z,37nm,0.8s						
KHAM	**Kharkiv**	**70.91**	**317**	P	**P**	**23 46 33.4**	**-0.2**
S32K	**Killisnoo**	**71.01**	**35**	P	**P**	**23 46 35.1**	**+1.1**
	baz=291						
KOPT	**Kop Dagi**	**71.51**	**306**	P	**P**	**23 46 39.2**	**+1.5**
KOPT				IAmb	IAmb	23 46 40.5	
	comp=Z,39nm,0.9s						
Q32M	**Nakina River**	**71.60**	**33**	P	**P**	**23 46 38.9**	**+1.1**
	baz=292						
FIA1	**FINESS Array S**	**72.00**	**330**	IAmb	IAmb	23 46 40.7	
	comp=Z,51nm,0.8s						
FINES	**FINESS Array B**	**72.00**	**330**	P	**P**	**23 46 39.5**	**-0.5**
	comp=Z,21nm,0.7s,baz=67,slow=5.2,SNR=32						
	comp=Z,21nm,0.7s						
FINES	**FINESS Array B**	**72.00**	**330**	P	**P**	**23 46 38.9**	**-1.0**
FINES	**FINESS Array B**	**72.00**	**330**	*ce*P	**P**	**23 46 37.7**	**-2.2**
FINES				pmax	pmax		
	comp=Z,21nm,0.7s						
R33M	**Jennings River**	**72.05**	**32**	P	**P**	**23 46 41.7**	**+1.3**
	baz=293						
MARD	**Mardin**	**72.25**	**303**	P	**P**	**23 46 41.8**	**-0.2**
MARD				IAmb	IAmb	23 46 43.4	
	comp=Z,64nm,0.7s						
U33K	**Whale Pass**	**72.26**	**36**	P	**P**	**23 46 42.8**	**+1.3**
	baz=293						
CRAG	**Craig**	**72.50**	**36**	P	**P**	**23 46 44.3**	**+1.3**
	baz=293						
WRAK	**Wrangell Islan**	**72.54**	**35**	P	**P**	**23 46 44.5**	**+1.3**
	baz=293						
S34M	**Telegraph Cree**	**72.56**	**33**	P	**P**	**23 46 44.8**	**+1.5**
	baz=294,SNR=6.0						
WTLY	**Watson Lake, Y**	**72.76**	**31**	P	**P**	**23 46 46.0**	**+1.5**
	baz=295,SNR=5.7						
DLBC	**Dease Lake**	**72.88**	**33**	P	**P**	**23 46 46.9**	**+1.6**
	baz=294,SNR=5.8						
VSU	**Vasula**	**72.92**	**327**	*ce*P	**P**	**23 46 44.9**	**-0.5**
VSU				pmax	pmax		
	comp=Z,39nm,0.8s						
T35M	**Bob Quinn**	**73.37**	**34**	P	**P**	**23 46 49.8**	**+1.7**
	baz=294						
ARPR	**Arapgir-MALATY**	**73.40**	**306**	IAmb	IAmb	23 46 50.9	
	comp=Z,37nm,1.0s						
RAYN	**Ar Rayn**	**73.62**	**288**	P	**P**	**23 46 50.5**	**+0.2**
RAYN				IAmb	IAmb	23 46 51.8	
	comp=Z,59nm,1.0s						
RAYN	**Ar Rayn**	**73.62**	**288**	*i* P	**P**	**23 46 50.9**	**+0.6**
	SNR=36						
RAYN	**Ar Rayn**	**73.62**	**288**	P	**P**	**23 46 50.5**	**+0.2**
RAYN				pmax	pmax		
	comp=Z,59nm,1.0s						
RAYN	**Ar Rayn**	**73.62**	**288**	P	**P**	**23 46 50.4**	**+0.1**
RAYN				PcP	**PcP**	**23 47 06.2**	**+0.2**
WRGLY	**Wrigley**	**73.65**	**27**	IAmb	IAmb	23 46 51.8	
	comp=Z,56nm,1.1s						
WRGLY	**Wrigley**	**73.65**	**27**	P	**P**	**23 46 51.0**	**+1.4**
	baz=298,SNR=12						
MNK	**Minsk**	**73.98**	**323**	*i* P	**P**	**23 46 50.7**	**-1.0**
	comp=E,14nm,1.0s						
MNK				*i* P	**P**	**23 46 50.7**	**-1.0**
	comp=N,19nm,0.9s						
MNK				*i* P	**P**	**23 46 50.7**	**-1.0**
	comp=Z,42nm,0.8s,baz=66						
MNK				*i* PcP	**pP**	**23 47 05.7**	**+0.3**
MNK				*i* PP	**PP**	**23 49 35.6**	**-1.3**
MNK				*i* PPP	PPP	23 51 20.9	
MNK				*i* S	**S**	**23 56 20.9**	**+0.6**
MNK				*i* ScS	**ScS**	**23 56 57.8**	**+0.1**
MNK				*i* SS	**SS**	**00 01 06.4**	**+1.6**
MNK				*i* SSS	SSS	00 04 28.2	
MNK				*i* LQ	LQ	00 14 27.2	
MNK				*i* LR	LR	00 20 04.8	
MNK				*i* LRM	MLR	00 22 46.5	
	comp=Z,611nm,17.5s						
MNK				*i* LRM	MLR	00 22 49.6	
	comp=E,233nm,17.2s						
MNK				*i* LRM	MLR	00 22 51.5	
	comp=N,414nm,16.7s						
MNK	**Minsk**	**73.98**	**323**	*i* P	**P**	**23 46 50.7**	**-1.0**
MNK				*i*		23 47 05.7	
MNK				*i*		23 49 35.5	
MNK				*i* PPP	PPP	23 51 20.8	
MNK				*i* S	**S**	**23 56 20.8**	**+0.6**
MNK				*i*		23 56 57.7	
MNK				*i* SS	**SS**	**00 01 06.4**	**+1.6**
MNK				pmax	pmax		
	comp=E,14nm,1.0s						
MNK				pmax	pmax		
	comp=Z,42nm,0.8s						
MNK				pmax	pmax		
	comp=N,19nm,0.9s						
MNK				MLR	MLR		
	comp=Z,611nm,18.0s						
MNK				MLR	MLR		
	comp=E,233nm,17.0s						
MNK				MLR	MLR		
	comp=N,414nm,17.0s						
SIM	**Simferopol'**	**74.09**	**313**	*e*P	**P**	**23 46 51.9**	**-0.7**
SIM				pmax	pmax		
	comp=Z,68nm,0.8s						
DAG	**Danmarks Havn**	**74.21**	**353**	P	**P**	**23 46 51.9**	**-0.8**
DAG				pmax	pmax		
	comp=Z,28nm,1.0s						
DAG	**Danmarks Havn**	**74.21**	**353**	*i* P	**P**	**23 46 51.8**	**-0.9**
DAG				IAmb	IAmb	23 46 52.7	
	comp=Z,17nm,0.8s						
TOKA	**Tokat**	**74.26**	**307**	IAmb	IAmb	23 46 55.2	
	comp=Z,47nm,0.9s						
LIRD	**Liard River Hi**	**74.29**	**31**	P	**P**	**23 46 55.0**	**+1.5**
	baz=297,SNR=25						
NACGM	**Naroch**	**74.39**	**324**	*e*P	**P**	**23 46 54.0**	**-0.1**
RES	**Resolute Bay**	**74.46**	**11**	IAmb	IAmb	23 46 55.4	
	comp=Z,47nm,0.9s						
RES	**Resolute Bay**	**74.46**	**11**	P	**P**	**23 46 54.4**	**+0.3**
RES				pmax	pmax		
	comp=Z,62nm,1.1s						
AK03	**Malin Array Si**	**74.81**	**319**	P	**P**	**23 46 55.9**	**-0.7**
AKASG	**Malin Array Be**	**74.82**	**319**	P	**P**	**23 46 56.3**	**-0.4**
	comp=Z,25nm,0.6s,baz=63,slow=6.4,SNR=50						
	comp=Z,25nm,0.6s						
AKASG	**Malin Array Be**	**74.82**	**319**	*ce*P	**P**	**23 46 54.5**	**-2.2**
AKASG				pmax	pmax		
	comp=Z,39nm,0.8s						
AKBB	**Malin Array Si**	**74.82**	**319**	IAmb	IAmb	23 46 56.9	
	comp=Z,42nm,0.7s						
AKBB	**Malin Array Si**	**74.82**	**319**	*ce*P	**P**	**23 46 55.8**	**-0.9**
AKBB				pmax	pmax		
	comp=Z,38nm,0.9s						
AKBB	**Malin Array Si**	**74.82**	**319**	P	**P**	**23 46 55.8**	**-0.9**
AK09	**Malin Array Si**	**74.82**	**319**	P	**P**	**23 46 55.5**	**-1.2**
AK01	**Malin Array Si**	**74.83**	**319**	P	**P**	**23 46 56.0**	**-0.7**
AK08	**Malin Array Si**	**74.83**	**319**	P	**P**	**23 46 55.6**	**-1.1**
KIEV	**Kiev**	**74.83**	**319**	P	**P**	**23 46 55.6**	**-1.1**
KIEV				IAmb	IAmb	23 46 56.9	
	comp=Z,38nm,0.7s						
KIEV	**Kiev**	**74.83**	**319**	⇑P	**P**	**23 46 56.4**	**-0.3**
KIEV	**Kiev**	**74.83**	**319**	*i* P	**P**	**23 46 55.9**	**-0.8**
	SNR=15						
KIEV	**Kiev**	**74.83**	**319**	P	**P**	**23 46 55.6**	**-1.1**
KIEV				pmax	pmax		
	comp=Z,38nm,0.7s						
KIEV	**Kiev**	**74.83**	**319**	P	**P**	**23 46 55.7**	**-1.1**
	comp=Z,263nm,0.8s						
AK04	**Malin Array Si**	**74.84**	**319**	P	**P**	**23 46 55.9**	**-0.9**
AK02	**Malin Array Si**	**74.84**	**319**	P	**P**	**23 46 55.8**	**-1.0**
AK23	**Malin Array Si**	**74.85**	**320**	P	**P**	**23 46 56.1**	**-0.7**
AK11	**Malin Array Si**	**74.86**	**319**	P	**P**	**23 46 56.0**	**-0.9**
KOTAN	**Kotaneelee Air**	**74.87**	**30**	P	**P**	**23 46 57.9**	**+1.0**
	baz=299						
TOAD	**Toad River Com**	**74.95**	**31**	P	**P**	**23 46 58.5**	**+1.1**
	baz=298,SNR=7.9						
BNN	**Bunyan**	**75.28**	**306**	IAmb	IAmb	23 47 01.2	
	comp=Z,51nm,0.9s						
BZK	**Bozkurt**	**75.34**	**310**	⇑P	**P**	**23 47 00.1**	**+0.3**
NE56	**Odesa**	**75.47**	**315**	P	**P**	**23 46 58.6**	**-1.9**
NEEM	**North Greenlan**	**75.48**	**360**	*i* P	**P**	**23 47 00.2**	**-0.2**
NEEM				IAmb	IAmb	23 47 01.1	
	comp=Z,78nm,1.2s						
PABE	**Paberze**	**75.58**	**325**	IAmb	IAmb	23 47 02.0	
	comp=Z,56nm,0.9s						
MI28	**Mi28,Pidlybu**	**75.61**	**320**	P	**P**	**23 46 59.3**	**-1.9**
BAL3X	**Bal3x, Balta**	**75.75**	**317**	P	**P**	**23 47 01.3**	**-0.8**
TULEG	**Thule**	**75.84**	**4**	IAmb	IAmb	23 47 02.5	
	comp=Z,56nm,0.8s						
TULEG	**Thule**	**75.84**	**4**	*i* P	**P**	**23 47 01.0**	**-1.1**
TULEG				IAmb	IAmb	23 47 02.3	
	comp=Z,59nm,0.9s						
ILGA	**Ilgaz**	**75.91**	**309**	IAmb	IAmb	23 47 05.0	
	comp=Z,31nm,0.9s						
LUBAR	**Lubar, Ukraine**	**76.00**	**319**	P	**P**	**23 47 01.8**	**-1.7**
PURM	**Purcari**	**76.17**	**315**	⇑P	**P**	**23 47 04.4**	**-0.1**
RNPP9	**Sopachiv**	**76.41**	**321**	P	**P**	**23 47 05.2**	**-0.5**
RNPP8	**Varash**	**76.46**	**321**	P	**P**	**23 47 05.3**	**-0.8**
RNPP5	**Staryi Chortor**	**76.49**	**321**	P	**P**	**23 47 05.4**	**-0.8**
BR131	**Keskin Array S**	**76.50**	**308**	P	**P**	**23 47 06.5**	**-0.2**
BR131				IAmb	IAmb	23 47 07.8	
	comp=Z,72nm,0.8s						
BR131	**Keskin Array S**	**76.50**	**308**	*i* P	**P**	**23 47 06.7**	**0.0**
BRTR	**Keskin Array B**	**76.50**	**308**	P	**P**	**23 47 06.6**	**-0.1**
	comp=Z,48nm,0.8s,baz=95,slow=3.5,SNR=166						
	comp=Z,48nm,0.8s						
BRTR	**Keskin Array B**	**76.50**	**308**	P	**P**	**23 47 06.6**	**-0.1**
BR104	**Keskin Array S**	**76.50**	**308**	P	**P**	**23 47 06.5**	**-0.2**
	comp=Z,477nmcomp=Z,66nm,0.9s						
BR106	**Keskin Array S**	**76.51**	**308**	P	**P**	**23 47 06.8**	**0.0**
	comp=Z,483nmcomp=Z,66nm,1.1s						
BR105	**Keskin Array S**	**76.52**	**308**	P	**P**	**23 47 06.6**	**-0.2**
	comp=Z,537nmcomp=Z,75nm,1.0s						
KIRS	**Kirsehir-Merke**	**76.55**	**307**	⇑P	**P**	**23 47 07.0**	**+0.1**
DBG	**Daneborg**	**76.56**	**352**	*i* P	**P**	**23 47 05.8**	**-0.4**
DBG				IAmb	IAmb	23 47 06.5	
	comp=Z,28nm,0.9s						
SUW	**Suwalki**	**76.67**	**324**	*e*P	**P**	**23 47 07.0**	**-0.2**
ANTO	**Ankara**	**77.03**	**308**	P	**P**	**23 47 09.0**	**-0.6**
ANTO				IAmb	IAmb	23 47 10.8	
	comp=Z,54nm,1.0s						
ANTO	**Ankara**	**77.03**	**308**	⇑P	**P**	**23 47 09.7**	**+0.1**
ANTO	**Ankara**	**77.03**	**308**	P	**P**	**23 47 09.0**	**-0.6**
ANTO				pmax	pmax		
	comp=Z,54nm,1.0s						
ANTO	**Ankara**	**77.03**	**308**	P	**P**	**23 47 09.6**	**0.0**
	comp=Z,275nmcomp=Z,29nm,1.0s						
ANTO	**Ankara**	**77.03**	**308**	P	**P**	**23 47 09.6**	**0.0**
ANTO				pP	**pP**	**23 47 22.2**	**-1.3**
HORU	**Horodok**	**77.09**	**319**	P	**P**	**23 47 08.8**	**-0.9**
KMPD	**K-Podol'skiy**	**77.36**	**318**	P	**P**	**23 47 10.2**	**-1.0**
KMPD				P	**P**	**23 47 09.9**	**-1.3**
VASR	**Vaslui**	**77.42**	**316**	⇑P	**P**	**23 47 11.6**	**0.0**
TLCR		**77.42**	**314**	⇓P	**P**	**23 47 11.5**	**-0.1**
TLCR		**77.42**	**314**	P	**P**	**23 47 11.4**	**-0.1**
YKAW3	**Yellowknife Wh**	**77.44**	**25**	IAmb	IAmb	23 47 13.4	
	comp=Z,58nm,1.2s						
YKA	**Yellowknife Ar**	**77.48**	**25**	P	**P**	**23 47 12.3**	**+0.7**
	comp=Z,19nm,0.9s,baz=299,slow=6.4,SNR=84						
	comp=Z,19nm,0.9s						
YKA	**Yellowknife Ar**	**77.48**	**25**	*ce*P	**P**	**23 47 10.8**	**-0.8**
YKA				pmax	pmax		
	comp=Z,19nm,0.9s						
JURR	**Jurilovca**	**77.56**	**314**	⇓P	**P**	**23 47 12.7**	**+0.3**
VLDR	**Vladesti**	**77.59**	**315**	⇑P	**P**	**23 47 12.8**	**+0.3**
BIR	**Birlad**	**77.69**	**316**	⇑P	**P**	**23 47 13.6**	**+0.6**
BIR	**Birlad**	**77.69**	**316**	P	**P**	**23 47 13.6**	**+0.6**
VARL	**Varlezi**	**77.71**	**315**	⇑P	**P**	**23 47 13.6**	**+0.4**
TPGR	**Topolog**	**77.82**	**314**	⇓P	**P**	**23 47 14.1**	**+0.3**
CFR	**Carcaliu**	**77.85**	**315**	⇑P	**P**	**23 47 13.6**	**-0.4**
CFR	**Carcaliu**	**77.85**	**315**	P	**P**	**23 47 13.5**	**-0.4**
GHRR		**77.92**	**316**	⇓P	**P**	**23 47 15.1**	**+0.8**
IZVR	**Izvoarele**	**77.92**	**315**	⇑P	**P**	**23 47 14.7**	**+0.4**
HFS	**Hagfors**	**77.94**	**332**	P	**P**	**23 47 13.9**	**-0.3**
	comp=Z,50nm,0.8s,baz=64,slow=6.8,SNR=66						
	comp=Z,50nm,0.8s						
HFS	**Hagfors**	**77.94**	**332**	P	**P**	**23 47 13.9**	**-0.3**
SAHE	**Sakarya_HENDEK**	**77.96**	**310**	⇓P	**P**	**23 47 15.0**	**+0.3**
MMAI	**Mount Meron Ar**	**77.98**	**301**	P	**P**	**23 47 15.7**	**+0.7**
	comp=Z,16nm,0.7s,baz=75,slow=6.1,SNR=25						
	comp=Z,16nm,0.7s						
TIRR	**Tirgusor**	**78.00**	**314**	IAmb	IAmb	23 47 15.9	
	comp=Z,32nm,1.0s						
TIRR	**Tirgusor**	**78.00**	**314**	⇓P	**P**	**23 47 14.8**	**0.0**
TIRR	**Tirgusor**	**78.00**	**314**	P	**P**	**23 47 14.8**	**0.0**
TIRR	**Tirgusor**	**78.00**	**314**	P	**P**	**23 47 14.6**	**-0.2**
	comp=Z,36nm,1.1s						
GIRR	**Girov**	**78.07**	**317**	⇓P	**P**	**23 47 15.3**	**+0.1**
PANC	**Panciu**	**78.16**	**316**	⇑P	**P**	**23 47 16.7**	**+1.0**
TESR	**Tescani**	**78.18**	**316**	⇑P	**P**	**23 47 15.7**	**-0.2**
TESR	**Tescani**	**78.18**	**316**	P	**P**	**23 47 15.4**	**-0.4**
	comp=Z,85nm,0.9s						
BALJ	**Balqa**	**78.18**	**300**	P	**P**	**23 47 16.5**	**+0.4**
BALJ				IAmb	IAmb	23 47 17.8	
	comp=Z,106nm,0.9s						
ODBI	**Odobesti**	**78.27**	**315**	⇑P	**P**	**23 47 17.3**	**+1.0**
KULLO	**Kullorsuaq**	**78.29**	**2**	*i* P	**P**	**23 47 15.4**	**-0.5**
KULLO				IAmb	IAmb	23 47 16.2	
	comp=Z,52nm,0.9s						
KSV	**Kosov**	**78.30**	**318**	P	**P**	**23 47 15.6**	**-0.9**
NB2	**NORSAR Subarra**	**78.42**	**334**	P	**P**	**23 47 15.9**	**-1.0**
	comp=Z,61nm,0.8s,baz=51,slow=5.6						
NB2	**NORSAR Subarra**	**78.42**	**334**	P	**P**	**23 47 15.9**	**-1.0**
	baz=51,slow=5.6						
NB2	**NORSAR Subarra**	**78.42**	**334**	P	**P**	**23 47 15.8**	**-1.1**
NB2				pmax	pmax		
	comp=Z,15nm,0.9s						
NOA	**NORSAR Array B**	**78.42**	**334**	P	**P**	**23 47 16.1**	**-0.8**
	comp=Z,44nm,0.8s,baz=52,slow=5.6,SNR=151						
	comp=Z,44nm,0.8s						
NOA	**NORSAR Array B**	**78.42**	**334**	P	**P**	**23 47 16.1**	**-0.8**
ONER	**Baraj Valea Uz**	**78.42**	**316**	⇑P	**P**	**23 47 17.5**	**+0.4**
VRI	**Vrincioaia**	**78.43**	**316**	⇓P	**P**	**23 47 17.8**	**+0.6**
VRI	**Vrincioaia**	**78.43**	**316**	P	**P**	**23 47 17.8**	**+0.6**
VRI	**Vrincioaia**	**78.43**	**316**	P	**P**	**23 47 17.2**	**0.0**
STNU	**Starunia**	**78.45**	**319**	P	**P**	**23 47 16.7**	**-0.5**
NC204	**NORSAR Array S**	**78.45**	**334**	P	**P**	**23 47 16.6**	**-0.5**
NORES	**NORESS Array B**	**78.47**	**333**	P	**P**	**23 47 16.2**	**-0.9**
NC602	**NORSAR Array S**	**78.47**	**333**	IAmb	IAmb	23 47 17.2	
	comp=Z,37nm,1.0s						
PLOR	**Plostina**	**78.48**	**316**	⇑P	**P**	**23 47 17.8**	**+0.3**
PLOR	**Plostina**	**78.48**	**316**	P	**P**	**23 47 17.8**	**+0.3**
BUR08	**Bucovina Ar. S**	**78.54**	**318**	P	**P**	**23 47 18.1**	**+0.2**
BUR08				IAmb	IAmb	23 47 19.1	
	comp=Z,34nm,0.8s						
BURAR	**Bucovina Array**	**78.54**	**318**	⇓P	**P**	**23 47 18.2**	**+0.2**
BURAR	**Bucovina Array**	**78.54**	**318**	P	**P**	**23 47 18.1**	**+0.2**
ICOR	**Ion Corvin**	**78.54**	**314**	⇑P	**P**	**23 47 18.7**	**+0.9**
BISRR	**Bisoca**	**78.58**	**315**	⇓P	**P**	**23 47 18.6**	**+0.4**
NBO00	**NORSAR Array S**	**78.59**	**334**	IAmb	IAmb	23 47 18.2	
	comp=Z,42nm,0.8s						
NAO01	**NORSAR Array S**	**78.66**	**334**	IAmb	IAmb	23 47 18.4	
	comp=Z,40nm,0.9s						
COVR	**Voineasa-Covas**	**78.76**	**316**	⇓P	**P**	**23 47 19.0**	**0.0**
TURR	**Turia**	**78.78**	**316**	⇑P	**P**	**23 47 20.1**	**+0.9**
ISR	**Istrita**	**78.89**	**315**	⇓P	**P**	**23 47 20.5**	**+0.7**
ISR	**Istrita**	**78.89**	**315**	P	**P**	**23 47 20.5**	**+0.7**
OZUR		**78.90**	**316**	⇑P	**P**	**23 47 20.6**	**+0.8**
BOSR	**Bodos**	**78.99**	**316**	⇑P	**P**	**23 47 21.2**	**+0.9**
BEL	**Belsk**	**79.00**	**323**	*e*P	**P**	**23 47 20.8**	**+0.6**
BEL	**Belsk**	**79.00**	**323**	P	**P**	**23 47 20.8**	**+0.6**
KWP	**Kalwaria Pacla**	**79.04**	**320**	*e*P	**P**	**23 47 21.1**	**+0.6**
KWP	**Kalwaria Pacla**	**79.04**	**320**	P	**P**	**23 47 20.9**	**+0.4**
MLR	**Muntele Rosu**	**79.09**	**316**	P	**P**	**23 47 21.0**	**0.0**
	comp=Z,32nm,0.9s,baz=88,slow=3.1,SNR=42						
	comp=Z,32nm,0.9s						
MLR	**Muntele Rosu**	**79.09**	**316**	P	**P**	**23 47 20.8**	**-0.2**
MLR				IAmb	IAmb	23 47 22.9	
	comp=Z,66nm,1.2s						
MLR	**Muntele Rosu**	**79.09**	**316**	⇑P	**P**	**23 47 22.0**	**+1.0**
MLR	**Muntele Rosu**	**79.09**	**316**	P	**P**	**23 47 20.8**	**-0.2**
MLR				pmax	pmax		
	comp=Z,66nm,1.2s						
DOPR	**Dopca**	**79.21**	**316**	⇓P	**P**	**23 47 22.2**	**+0.7**
PRD	**Provadia**	**79.23**	**313**	P	**P**	**23 47 22.6**	**+1.0**
SULR		**79.27**	**315**	⇓P	**P**	**23 47 22.2**	**+0.5**
ISP	**Isparta**	**79.51**	**307**	*ce*P	**P**	**23 47 23.5**	**+0.1**
ISP				pmax	pmax		
	comp=Z,65nm,1.7s						
BMR	**Baia Mare**	**79.53**	**318**	⇑P	**P**	**23 47 23.9**	**+0.7**
BMR	**Baia Mare**	**79.53**	**318**	P	**P**	**23 47 23.9**	**+0.7**
STRU	**Stroemstad**	**79.62**	**332**	*i* P	**P**	**23 47 22.4**	**-0.9**
LOZB	**Loznitsa**	**79.66**	**313**	⇑P	**P**	**23 47 24.4**	**+0.4**
MDB	**Medias**	**79.74**	**317**	⇑P	**P**	**23 47 24.9**	**+0.5**
MDB	**Medias**	**79.74**	**317**	P	**P**	**23 47 24.9**	**+0.5**
BORU	**Boraas**	**79.77**	**330**	*i* P	**P**	**23 47 23.4**	**-0.8**
KONO	**Kongsberg**	**79.90**	**333**	P	**P**	**23 47 24.7**	**-0.3**
KONO				IAmb	IAmb	23 47 25.5	
	comp=Z,34nm,0.9s						
KONO	**Kongsberg**	**79.90**	**333**	*ce*P	**P**	**23 47 24.6**	**-0.3**
KONO				pmax	pmax		
	comp=Z,18nm,0.7s						
KONO	**Kongsberg**	**79.90**	**333**	P	**P**	**23 47 24.3**	**-0.6**
CJR	**Cluj-Napoca**	**79.94**	**317**	⇑P	**P**	**23 47 26.5**	**+0.9**
CJR	**Cluj-Napoca**	**79.94**	**317**	P	**P**	**23 47 26.4**	**+0.9**
DEL	**Delary**	**79.94**	**329**	*i* P	**P**	**23 47 24.9**	**-0.3**
ARR	**Arges**	**79.96**	**316**	⇓P	**P**	**23 47 26.3**	**+0.6**
SUMG	**Summit**	**79.97**	**356**	IAmb	IAmb	23 47 27.2	
	comp=Z,68nm,0.9s						
SUMG	**Summit**	**79.97**	**356**	P	**P**	**23 47 25.9**	**+0.3**
SUMG				pmax	pmax		
	comp=Z,82nm,0.9s						
SUMG	**Summit**	**79.97**	**356**	*i* P	**P**	**23 47 26.4**	**+0.8**
SUMG				IAmb	IAmb	23 47 27.0	
	comp=Z,61nm,0.8s						
STHS	**Stebnicka Huta**	**79.97**	**321**	*e*P	**P**	**23 47 25.1**	**-0.5**
STHS				pmax	pmax		
	comp=Z,14nm,1.1s						
STHS	**Stebnicka Huta**	**79.97**	**321**	*e*P	**P**	**23 47 25.1**	**-0.5**
TJOU	**Tjoern**	**80.03**	**331**	*i* P	**P**	**23 47 24.8**	**-0.8**
TNR	**Turnu Rosu**	**80.05**	**316**	⇓P	**P**	**23 47 27.0**	**+0.9**
TNR	**Turnu Rosu**	**80.05**	**316**	P	**P**	**23 47 26.9**	**+0.9**
BAND	**Balkesir-Ban**	**80.06**	**310**	⇓P	**P**	**23 47 26.3**	**+0.1**
GKP	**Gorka Klasztor**	**80.10**	**325**	*e*P	**P**	**23 47 26.4**	**+0.3**
GKP	**Gorka Klasztor**	**80.10**	**325**	P	**P**	**23 47 27.0**	**+0.9**
SZH	**Strazhitsa**	**80.11**	**314**	P	**P**	**23 47 27.2**	**+0.8**
JMB	**Yambol**	**80.11**	**313**	P	**P**	**23 47 27.2**	**+0.8**
MESR	**Meseseni**	**80.11**	**318**	⇑P	**P**	**23 47 27.3**	**+1.0**
HUMR	**Humele**	**80.14**	**315**	⇑P	**P**	**23 47 26.2**	**-0.4**
SCO	**Scoresbysund**	**80.21**	**350**	IAmb	IAmb	23 47 27.9	
	comp=Z,34nm,1.0s						
SCO	**Scoresbysund**	**80.21**	**350**	*i* P	**P**	**23 47 27.4**	**+1.0**
SCO				IAmb	IAmb	23 47 28.2	
	comp=Z,28nm,0.9s						
BSD	**Bornholm Skovb**	**80.23**	**328**	*i* P	**P**	**23 47 26.6**	**-0.1**
BSD				IAmb	IAmb	23 47 27.4	
	comp=Z,70nm,0.8s						
MARR	**Marisel-Cluj**	**80.25**	**318**	⇑P	**P**	**23 47 27.8**	**+0.5**
ONAU	**Onsala**	**80.28**	**331**	*i* P	**P**	**23 47 25.9**	**-1.0**
ELND	**Elena**	**80.33**	**313**	⇓P	**P**	**23 47 28.0**	**+0.3**
OJC	**Ojcow**	**80.36**	**322**	*e*P	**P**	**23 47 28.1**	**+0.5**
OJC	**Ojcow**	**80.36**	**322**	P	**P**	**23 47 28.1**	**+0.5**
OJC	**Ojcow**	**80.36**	**322**	P	**P**	**23 47 28.1**	**+0.5**
DRGR		**80.43**	**318**	⇓P	**P**	**23 47 28.3**	**+0.1**
DRGR		**80.43**	**318**	P	**P**	**23 47 28.3**	**+0.1**
LOT	**Lotru**	**80.45**	**316**	⇑P	**P**	**23 47 28.8**	**+0.4**
NIE	**Niedzica**	**80.50**	**321**	*e*P	**P**	**23 47 29.0**	**+0.6**
BALB	**Balikesir**	**80.53**	**310**	IAmb	IAmb	23 47 29.8	
	comp=Z,81nm,1.1s						
MANT	**Manisa**	**80.59**	**308**	IAmb	IAmb	23 47 30.1	
	comp=Z,36nm,1.0s						
LUNU	**Lund**	**80.62**	**329**	*i* P	**P**	**23 47 28.8**	**-0.1**
PVL	**Pavlikeni**	**80.69**	**314**	P	**P**	**23 47 30.2**	**+0.7**
VLAD	**Vladila**	**80.76**	**315**	⇑P	**P**	**23 47 30.0**	**+0.1**
DEV	**Deva**	**80.77**	**317**	⇑P	**P**	**23 47 30.6**	**+0.7**
DEV	**Deva**	**80.77**	**317**	P	**P**	**23 47 30.6**	**+0.7**
KECS	**Kecovo**	**80.88**	**320**	*e*P	**P**	**23 47 31.0**	**+0.6**
KECS				pmax	pmax		
	comp=Z,20nm,0.9s						
KECS	**Kecovo**	**80.88**	**320**	*e*P	**P**	**23 47 31.0**	**+0.6**
AKAS	**Kas**	**80.88**	**306**	IAmb	IAmb	23 47 30.6	
	comp=Z,62nm,0.9s						
PLVB	**Pleven**	**80.92**	**314**	⇓P	**P**	**23 47 31.4**	**+0.6**
COP	**Copenhagen**	**81.06**	**329**	*i* P	**P**	**23 47 31.8**	**+0.6**
COP				IAmb	IAmb	23 47 32.4	
	comp=Z,109nm,0.7s						
OVD	**Ostervraa, Den**	**81.07**	**331**	*i* P	**P**	**23 47 31.1**	**-0.1**
OVD				IAmb	IAmb	23 47 31.5	
	comp=Z,110nm,0.9s						
GZR	**Gura Zlata**	**81.09**	**317**	⇑P	**P**	**23 47 32.1**	**+0.3**
GZR	**Gura Zlata**	**81.09**	**317**	P	**P**	**23 47 32.0**	**+0.3**
ILON	**Igloolik, Nuna**	**81.12**	**10**	IAmb	IAmb	23 47 32.6	
	comp=Z,32nm,0.8s						
ALN	**Alexandroupoli**	**81.19**	**311**	IAmb	IAmb	23 47 33.1	
	comp=Z,48nm,0.9s						
SRE	**Strehaia**	**81.19**	**316**	⇓P	**P**	**23 47 33.1**	**+0.9**
SRE	**Strehaia**	**81.19**	**316**	P	**P**	**23 47 33.0**	**+0.9**
HOMB	**Homborsund**	**81.20**	**332**	*i* P	**P**	**23 47 31.1**	**-0.7**
CAVK	**Edirne/Enez-Ca**	**81.20**	**311**	⇑P	**P**	**23 47 32.4**	**+0.2**
KDZ	**Kurdzhali**	**81.30**	**312**	P	**P**	**23 47 33.5**	**+0.7**
SIRR	**Siria**	**81.33**	**318**	⇓P	**P**	**23 47 33.1**	**+0.3**
RDO	**Rodhopi**	**81.41**	**312**	P	**P**	**23 47 33.0**	**-0.3**
RDO				IAmb	IAmb	23 47 34.4	
	comp=Z,50nm,0.9s						
YER	**Yerkesik**	**81.41**	**307**	P	**P**	**23 47 33.7**	**+0.1**
BAIL	**Bailesti**	**81.42**	**315**	⇑P	**P**	**23 47 34.2**	**+0.9**
OKC	**Ostrava-Krasne**	**81.47**	**322**	*e*P	**P**	**23 47 33.8**	**+0.3**
OKC	**Ostrava-Krasne**	**81.47**	**322**	*e*P	**P**	**23 47 33.8**	**+0.3**
MPEP	**Malo Peshtene**	**81.50**	**314**	P	**P**	**23 47 34.8**	**+1.0**
PSZ	**Piszkesteto**	**81.51**	**320**	P	**P**	**23 47 34.3**	**+0.4**
PSZ				pmax	pmax		
	comp=Z,23nm,1.2s						
VALD	**Valchedram**	**81.53**	**315**	P	**P**	**23 47 34.8**	**+0.9**
PUNG	**Punghina**	**81.55**	**316**	⇑P	**P**	**23 47 34.6**	**+0.5**
HERR	**Herculane**	**81.57**	**316**	⇓P	**P**	**23 47 34.4**	**+0.3**
STEB	**Steborice**	**81.62**	**322**	*e*P	**P**	**23 47 34.8**	**+0.4**
GOET	**G??ttrup**	**81.66**	**331**	*i* P	**P**	**23 47 34.5**	**+0.1**
GOET				IAmb	IAmb	23 47 35.6	
	comp=Z,189nm,0.9s						
RZN	**Rozhen**	**81.67**	**313**	P	**P**	**23 47 35.9**	**+0.9**
BZS	**Buzias**	**81.68**	**317**	⇑P	**P**	**23 47 34.4**	**-0.3**
BZS	**Buzias**	**81.68**	**317**	P	**P**	**23 47 34.4**	**-0.3**
SNART	**Snartemo**	**81.68**	**333**	*i* P	**P**	**23 47 34.8**	**+0.4**
MORC	**Moravsky Berou**	**81.83**	**322**	IAmb	IAmb	23 47 37.1	
	comp=Z,31nm,1.0s						
MORC	**Moravsky Berou**	**81.83**	**322**	⇑P	**P**	**23 47 35.8**	**+0.2**
MORC	**Moravsky Berou**	**81.83**	**322**	*e*P	**P**	**23 47 36.0**	**+0.5**
MORC	**Moravsky Berou**	**81.83**	**322**	P	**P**	**23 47 35.7**	**+0.2**
MAUC	**Maruska**	**81.90**	**322**	*e*P	**P**	**23 47 36.4**	**+0.5**
KSP	**Ksiaz**	**81.92**	**324**	*e*P	**P**	**23 47 36.5**	**+0.6**
KSP	**Ksiaz**	**81.92**	**324**	P	**P**	**23 47 36.8**	**+0.9**
ARG	**Arkhangelos**	**81.95**	**307**	IAmb	IAmb	23 47 37.1	
	comp=Z,53nm,0.9s						
MUD	**Monsted U'grnd**	**82.05**	**331**	*i* P	**P**	**23 47 36.3**	**0.0**
MUD				IAmb	IAmb	23 47 37.4	
	comp=Z,82nm,0.9s						
MDVR	**Moldovita**	**82.05**	**316**	⇑P	**P**	**23 47 36.9**	**+0.1**
KRLC	**Kraliky**	**82.08**	**323**	*e*P	**P**	**23 47 37.4**	**+0.6**
KRLC				MLR	MLR		
	comp=Z,600nm,17.7s						
KRLC	**Kraliky**	**82.08**	**323**	*e*P	**P**	**23 47 37.4**	**+0.6**
KRLC				AMS	AMS	00 27 30.0	
	comp=Z,600nm,17.7s						
OSTC	**Ostas**	**82.12**	**323**	AMS	AMS	00 27 40.0	
	comp=Z,700nm,18.5s						

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PLNA  Plana              82.13 314   P      P      23 47 38.5 +1.2
SAATT Saattut            82.15   0 i P      P      23 47 36.3 -0.4
DPC   Dobruska-Polom     82.18 323 eP       P      23 47 38.0 +0.7
DPC                                  MLR    MLR
      comp=Z,700nm,18.4s
DPC   Dobruska-Polom     82.18 323 eP       P      23 47 38.0 +0.7
DPC                                  AMS    AMS    00 27 40.0
      comp=Z,700nm,18.4s
VTS   Vitosha            82.18 314   P      P      23 47 38.9 +1.3
CHVC  Chvalec            82.19 323 eP       P      23 47 37.8 +0.5
CHVC  Chvalec            82.19 323 eP       P      23 47 37.8 +0.5
UPC   Upice              82.25 323 eP       P      23 47 38.5 +0.8
UPC                                  MLR    MLR
      comp=Z,700nm,17.0s
UPC   Upice              82.25 323 eP       P      23 47 38.5 +0.8
UPC                                  AMS    AMS    00 27 50.0
      comp=Z,700nm,17.0s
JAVC  Velka Javorina     82.26 321 eP       P      23 47 39.4 +1.6
RUE   Ruedersdorf        82.28 326 eP       P      23 47 38.5 +0.8
      comp=Z,50nm,0.9s,baz=53,slow=5.1
MMB   Musomishta         82.38 313   P      P      23 47 38.9 +0.3
SSRD  Sdr. Stenderup     82.45 330 i P      P      23 47 37.7 -0.9
SSRD                                 IAmb   IAmb   23 47 38.6
      comp=Z,255nm,0.9s
SMOL  Smolenice          82.58 321 eP       P      23 47 40.5 +1.1
SMOL                                 pmax   pmax
      comp=Z,28nm,0.9s
VRAC  Vranov             82.61 322   P      P      23 47 40.5 +1.0
      comp=Z,32nm,0.8s,baz=66,slow=5.5,SNR=48
      comp=Z,32nm,0.8s
VRAC  Vranov             82.61 322 ⇓P       P      23 47 40.3 +0.8
VRAC  Vranov             82.61 322 eP       P      23 47 40.4 +0.8
VRAC  Vranov             82.61 322   P      P      23 47 40.5 +1.0
BOVS  Bovan              82.64 315 ⇑P       P      23 47 39.7 -0.1
KKB   Krupnik            82.64 313   P      P      23 47 40.2 +0.3
MODS  Modra-Piesok       82.75 321 eP       P      23 47 41.2 +0.9
MODS                                 pmax   pmax
      comp=Z,87nm,1.1s
MODS  Modra-Piesok       82.75 321 eP       P      23 47 41.2 +0.9
KRUC  Moravsky           82.85 322 eP       P      23 47 41.3 +0.5
KRUC  Moravsky           82.85 322   P      P      23 47 41.1 +0.3
KRUC                                 pmax   pmax
      comp=Z,30nm,0.8s
SAQQ  Saqqaq             82.96   0 i P      P      23 47 40.6 -0.3
SAQQ                                 IAmb   IAmb   23 47 41.7
      comp=Z,49nm,1.0s
PVCC  Panska Ves         83.00 324 eP       P      23 47 42.4 +0.9
PVCC                                 MLR    MLR
      comp=Z,600nm,22.2s
PVCC  Panska Ves         83.00 324 eP       P      23 47 42.4 +0.9
PVCC                                 AMS    AMS    00 28 10.0
      comp=Z,600nm,22.2s
BSEG  Bad Segeberg       83.09 328   P      P      23 47 42.7 +0.8
BSEG                                 pmax   pmax
      comp=Z,58nm,1.3s
BSEG  Bad Segeberg       83.09 328 eP       P      23 47 42.4 +0.6
      comp=Z,46nm,0.9s,baz=53,slow=5.1
BRG   Berggiesshubel     83.13 324   P      P      23 47 42.7 +0.5
BRG                                  pmax   pmax
      comp=Z,26nm,1.5s
BRG   Berggiesshubel     83.13 324 eP       P      23 47 42.7 +0.5
      comp=Z,15nm,0.9s,baz=53,slow=5.1
MORH  Mrgy, Hungar       83.14 319 ⇓P       P      23 47 42.5 +0.2
GORT1 Trebel             83.19 327 eP       P      23 47 43.4 +1.0
      comp=Z,114nm,1.1s,baz=53,slow=5.1
TREC  Trest              83.22 323 eP       P      23 47 43.1 +0.4
TREC  Trest              83.22 323 eP       P      23 47 43.1 +0.4
VAY   Valandovo          83.27 313 i P      P      23 47 43.2 +0.2
PRU   Pruhonice          83.33 324 eP       P      23 47 43.7 +0.5
PRU                                  MLR    MLR
      comp=Z,600nm,16.5s
PRU   Pruhonice          83.33 324 eP       P      23 47 43.7 +0.5
PRU                                  AMS    AMS    00 28 20.0
      comp=Z,600nm,16.5s
PRA   Prague             83.34 324 eP       P      23 47 44.0 +0.7
PRA                                  MLR    MLR
      comp=Z,600nm,19.3s
PRA   Prague             83.34 324 eP       P      23 47 44.0 +0.7
PRA                                  AMS    AMS    00 28 20.0
      comp=Z,600nm,19.3s
CLL   Collm              83.36 325⇑iP       P      23 47 43.7 +0.4
CLL                                  pmax   pmax
      comp=Z,66nm,0.9s
CLL                                  MLR    MLR
      comp=Z,600nm,18.2s
CLL   Collm              83.36 325 eP       P      23 47 43.6 +0.2
      comp=Z,58nm,0.8s,baz=53,slow=5.1
CLL   Collm              83.36 325⇑iP       P      23 47 43.7 +0.4
      comp=Z,66nm,0.9s
CLL                                ePP      PP     23 50 57.0 +2.0
CLL                                ex       x      23 58 30.0
CLL                                ePS      PnS    23 58 54.0 -2.8
CLL                                ePPS     PPS    23 59 30.0
CLL                                  AMS    AMS    00 29 00.0
      comp=Z,600nm,18.2s
APE   Apeiranthos        83.38 308 ⇑P       P      23 47 43.7 -0.2
APE   Apeiranthos        83.38 308   P      P      23 47 43.6 -0.2
HSKC  Hora Svate Kat     83.55 324 eP       P      23 47 45.0 +0.6
HSKC                                 AMS    AMS    00 28 30.0
      comp=Z,800nm,16.5s
GRG   Griva              83.56 313   P      P      23 47 44.1 -0.6
GRG                                  pmax   pmax
      comp=Z,61nm,1.3s
FLTG  Flechtingen        83.63 327 eP       P      23 47 44.8 +0.1
      comp=Z,72nm,0.9s,baz=53,slow=5.1
RONA  Rosalia, Austr     83.67 321 i P      P      23 47 45.3 +0.2
      comp=Z,5.6nm,0.9s
HOOD  Mount Hood Mea     83.72  42   P      P      23 47 46.7 +1.2
HOOD                                 IAmb   IAmb   23 48 04.2
      comp=Z,74nm,1.5s
H04A  Detroit Lake       83.74  43   IAmb   IAmb   23 47 47.6
      comp=Z,39nm,1.5s
ILULI Ilulissat          83.76 360 i P      P      23 47 44.8 -0.3
ILULI                                IAmb   IAmb   23 47 46.3
      comp=Z,30nm,0.7s
CONA  Conrad Observa     83.78 321 i P      P      23 47 46.8 +1.1
      comp=Z,22nm,0.8s,SNR=15
EPH   Ephrata            83.79  39   IAmb   IAmb   23 47 47.6
      comp=Z,36nm,1.4s
ZVC   Zvikov             83.83 323 eP       P      23 47 46.4 +0.6
ZVC                                  AMS    AMS    00 28 40.0
      comp=Z,700nm,19.5s
LIT   Litokhoron         83.94 312   P      P      23 47 45.7 -0.9
LIT                                  IAmb   IAmb   23 47 46.9
      comp=Z,55nm,0.8s
LIT   Litokhoron         83.94 312   P      P      23 47 45.7 -0.9
LIT                                  pmax   pmax
      comp=Z,55nm,0.8s
ASSE  Asse, Remlinge     84.02 327 eP       P      23 47 47.3 +0.6
      comp=Z,32nm,0.9s,baz=53,slow=5.1
NEUB  Neuenburg          84.04 326 eP       P      23 47 47.4 +0.5
      comp=Z,94nm,0.9s,baz=53,slow=5.1
I04A  Tendick Farm,      84.08  43   IAmb   IAmb   23 47 49.5
      comp=Z,41nm,1.1s
CKRC  Cesky Krumlov      84.12 323 eP       P      23 47 47.9 +0.5
CKRC                                 MLR    MLR
      comp=Z,500nm,17.2s
CKRC  Cesky Krumlov      84.12 323 eP       P      23 47 47.9 +0.5
CKRC                                 AMS    AMS    00 28 20.0
      comp=Z,500nm,17.2s
WAH2  Wahluke Slope      84.14  40   P      P      23 47 48.9 +1.4
WAH2                                 IAmb   IAmb   23 47 49.1
      comp=Z,22nm,0.8s
TANN  Tannenbergstha     84.16 325 eP       P      23 47 47.8 +0.3
      comp=Z,28nm,1.1s,baz=53,slow=5.1
PLN   Plauen             84.28 325 eP       P      23 47 48.4 +0.3
      comp=Z,12nm,1.0s,baz=53,slow=5.1
RETH  Rethem/Aller,      84.28 328 eP       P      23 47 48.4 +0.4
      comp=Z,66nm,1.1s,baz=53,slow=5.1
KHC   Kasperske Hory     84.33 323   IAmb   IAmb   23 47 50.2
      comp=Z,26nm,1.1s
KHC   Kasperske Hory     84.33 323 eP       P      23 47 49.1 +0.6
KHC                                  MLR    MLR
      comp=Z,700nm,17.0s
KHC   Kasperske Hory     84.33 323 eP       P      23 47 49.1 +0.6
KHC                                  AMS    AMS    00 29 00.0
      comp=Z,700nm,17.0s
CLZ   Clausthal          84.35 327 eP       P      23 47 49.3 +0.8
      comp=Z,109nm,1.0s,baz=53,slow=5.1
ARSA  Arzberg            84.35 321 eP       P      23 47 48.7 +0.1
      comp=Z,11nm,1.2s
GEC2  GERESS Array S     84.44 323   IAmb   IAmb   23 47 50.4
      comp=Z,24nm,1.0s
GEC2  GERESS Array S     84.44 323 eP       P      23 47 49.2 +0.1
      comp=Z,25nm,1.0s,baz=53,slow=5.1
GERES GERESS Array B     84.44 323   P      P      23 47 49.3 +0.3
      comp=Z,10nm,0.8s,baz=47,slow=5.9,SNR=48
      comp=Z,10nm,0.8s
PHP   Peshkopia          84.45 314   P      P      23 47 48.8 -0.4
PHP                                  pmax   pmax
      comp=Z,62nm,1.0s
MOX   Moxa               84.46 325   P      P      23 47 49.5 +0.5
MOX                                  pmax   pmax
      comp=Z,32nm,1.5s
MOX   Moxa               84.46 325 eP       P      23 47 49.3 +0.3
      comp=Z,21nm,1.0s,baz=53,slow=5.1
MOX                                eL       L      00 29 39.0
      comp=Z,486nm,18.1s
OHR   Ohrid              84.52 314 i P      P      23 47 49.5 -0.1
AGG   Agios Georgios     84.59 311   P      P      23 47 48.4 -1.5
AGG                                  pmax   pmax
      comp=Z,64nm,1.0s
MANZ  Manzenberg         84.60 324 eP       P      23 47 50.2 +0.4
      comp=Z,8.7nm,1.0s,baz=53,slow=5.1
NEW   Newport            84.64  38   IAmb   IAmb   23 47 52.0
      comp=Z,20nm,0.8s
NEW   Newport            84.64  38   P      P      23 47 51.0 +1.0
ROTZ  Rotzenmuhle        84.68 324 eP       P      23 47 50.7 +0.5
      comp=Z,14nm,1.0s,baz=53,slow=5.1
WET   Wettzell           84.70 323   P      P      23 47 50.9 +0.6
WET                                  pmax   pmax
      comp=Z,23nm,2.1s
WET   Wettzell           84.70 323 eP       P      23 47 50.6 +0.3
      comp=Z,23nm,1.2s,baz=53,slow=5.1
IDI   Anoyia             84.70 307   P      P      23 47 49.3 -1.4
      comp=Z,18nm,0.6s,baz=59,slow=4.5,SNR=5.9
      comp=Z,18nm,0.6s
IDI   Anoyia             84.70 307   IAmb   IAmb   23 47 52.3
      comp=Z,33nm,0.9s
MOA   Molln              84.71 322 i P      P      23 47 50.8 +0.4
      comp=Z,22nm,0.9s,SNR=11
GTTG  Gottingen          84.73 327 eP       P      23 47 51.2 +0.8
      comp=Z,75nm,0.9s,baz=53,slow=5.1
KBN   Korca              84.78 313   P      P      23 47 50.1 -0.8
KBN                                  pmax   pmax
      comp=Z,88nm,1.0s
BLY   Banja Luka         84.80 318 ⇑P       P      23 47 50.7 -0.1
PDG   Podgorica          84.80 315 ⇑P       P      23 47 50.5 -0.3
YPT   Yellepit           84.89  40   IAmb   IAmb   23 48 09.4
      comp=Z,21nm,1.0s
PERS  Pernice            84.93 321 i P      P      23 47 51.5 -0.1
SOKA  Soboth             84.96 321 i P      P      23 47 52.0 +0.3
      comp=Z,21nm,0.9s,SNR=9.3
PINE  Pine Mountain      84.98  43   P      P      23 47 52.9 +0.9
PINE                                 IAmb   IAmb   23 47 54.9
      comp=Z,40nm,1.1s
YBH   Yreka Blue Hor     85.00  45   IAmb   IAmb   23 47 54.7
      comp=Z,34nm,1.5s
GOLS  Golise             85.00 320 i P      P      23 47 51.9  0.0
J05D  Fort Rock, OR      85.08  43   IAmb   IAmb   23 47 54.6
      comp=Z,21nm,0.9s
E09A  Wood Farm, Sta     85.09  39   IAmb   IAmb   23 47 54.7
      comp=Z,36nm,1.3s
BIOA  Bad Ischl, Aus     85.14 322 i PcP    P      23 47 53.5 +1.0
      comp=Z,39nm,1.2s,SNR=16
GRF   Grafenberg Arr     85.24 325   P      P      23 47 54.3 +1.4
GRF                                  pmax   pmax
      comp=Z,77nm,1.4s
GRF   Grafenberg Arr     85.24 325 eP       P      23 47 53.7 +0.8
      comp=Z,76nm,1.1s,baz=53,slow=5.1
GRF                                eL       L      00 29 52.7
      comp=Z,637nm,18.7s
GRFO  Grafenberg         85.24 325   P      P      23 47 53.8 +0.9
GRFO                                 PcP    PcP    23 47 56.6 +0.6
OBKA  Obir               85.33 321 i P      P      23 47 53.3 -0.2
      comp=Z,13nm,1.2s
BOJS  Bojanci            85.50 320 i P      P      23 47 54.7 +0.4
K05A  Summer Lake        85.59  44   P      P      23 47 55.6 +0.5
K05A                                 IAmb   IAmb   23 47 57.2
      comp=Z,34nm,1.1s
KBA   Koelnbreinsper     85.67 322 eP       P      23 47 54.2 -1.1
      comp=Z,11nm,0.7s
MYKA  Terra Mystica      85.77 321 i P      P      23 47 56.0 +0.2
      comp=Z,18nm,0.9s
ITM   Ithomi             85.81 310   P      P      23 47 54.8 -1.3
ITM                                  IAmb   IAmb   23 47 56.8
      comp=Z,139nm,0.8s
LESA  Schwarzleotal      85.83 322 i PcP    P      23 47 56.7 +0.7
      comp=Z,47nm,1.0s,SNR=20
KEK   Kerkira            85.91 313   P      P      23 47 55.7 -0.7
KEK                                  IAmb   IAmb   23 47 57.2
      comp=Z,35nm,1.0s
SFJD  Kangerlussuaq      85.98 360   P      P      23 47 55.5 -0.7
SFJD                                 IAmb   IAmb   23 47 56.4
      comp=Z,36nm,1.0s
SFJD  Kangerlussuaq      85.98 360   P      P      23 47 55.5 -0.7
SFJD                                 pmax   pmax
      comp=Z,36nm,1.0s
SFJD  Kangerlussuaq      85.98 360 i P      P      23 47 55.8 -0.5
SFJD                                 IAmb   IAmb   23 47 56.6
      comp=Z,29nm,0.7s
BUG   Bochum--Univer     86.10 328   P      P      23 47 57.8 +0.7
BUG                                  pmax   pmax
      comp=Z,27nm,1.6s
FUR   Furstenfeldbru     86.14 323   P      P      23 47 58.3 +0.9
FUR                                  pmax   pmax
      comp=Z,92nm,1.0s
FUR   Furstenfeldbru     86.14 323 eP       P      23 47 58.4 +0.9
      comp=Z,92nm,1.0s,baz=53,slow=5.1
TNS   Taunus Mts         86.31 326   P      P      23 47 58.1 -0.2
TNS                                  pmax   pmax
      comp=Z,17nm,1.1s
ABTA  Abfaltersbach      86.32 322 i P      P      23 47 58.3 -0.2
      comp=Z,34nm,1.1s,SNR=8.2
O03E  Paynes Creek       86.35  46   IAmb   IAmb   23 48 00.5
      comp=Z,41nm,1.4s
WATA  Walderalm          86.48 323 i PcP    P      23 47 59.6 +0.3
      comp=Z,30nm,1.1s,SNR=5.2
WTTA  Wattenberg         86.49 322 i PcP    P      23 48 00.1 +0.7
      comp=Z,48nm,1.1s,SNR=11
STAL  STALIGIAL          86.50 321   IAmb   IAmb   23 47 59.6
      comp=Z,36nm,1.1s
CIMO  Cimolais           86.62 321   P      P      23 47 58.6 -1.3
CIMO                                 IAmb   IAmb   23 48 00.2
      comp=Z,26nm,1.1s
J08A  Circle Bar Ran     86.70  42   IAmb   IAmb   23 48 03.2
      comp=Z,26nm,1.2s
SQTA  Sankt Quirin       86.75 323 i P      P      23 48 00.5 -0.1
      comp=Z,22nm,1.0s,SNR=8.8
RETA  Reutte             86.83 323 i PcP    P      23 48 01.3 +0.4
      comp=Z,6.7nm,0.8s
STU   Stuttgart          86.85 325   IAmb   IAmb   23 48 02.4
      comp=Z,23nm,1.0s
STU   Stuttgart          86.85 325   P      P      23 48 01.5 +0.6
STU                                  pmax   pmax
      comp=Z,24nm,1.0s
ORV   Oroville           86.95  47   P      P      23 48 02.0 +0.4
ORV   Oroville           86.95  47   P      P      23 48 02.0 +0.4
ORV                                  pmax   pmax
      comp=Z,14nm,1.0s
UBR   Ueberruh           87.06 323 eP       P      23 48 02.2 +0.2
      comp=Z,35nm,1.0s,baz=53,slow=5.1
FETA  Feichten           87.13 323 i P      P      23 48 02.4 -0.1
      comp=Z,20nm,1.0s,SNR=6.1
WVOR  Wild Horse Val     87.14  43   P      P      23 48 03.8 +1.2
FCC   Fort Churchill     87.27  21   IAmb   IAmb   23 48 03.9
      comp=Z,34nm,1.0s
DAVA  Damuels            87.42 323 i P      P      23 48 03.9  0.0
      comp=Z,19nm,0.8s,SNR=6.6
BEKR  Beckworth          87.51  46   P      P      23 48 04.8 +0.3
BEKR                                 IAmb   IAmb   23 48 06.5
      comp=Z,24nm,1.0s
FFC   Flin Flon          87.55  27   P      P      23 48 04.6 +0.4
BFO   Black Forest       87.58 325   P      P      23 48 04.2 -0.3
BFO                                  IAmb   IAmb   23 48 06.7
      comp=Z,41nm,1.7s
BFO   Black Forest       87.58 325   P      P      23 48 04.2 -0.3
BFO                                  pmax   pmax
      comp=Z,41nm,1.7s
FUORN Ofenpass-Fuorn     87.63 323   P      P      23 48 05.9 +0.9
FUORN                                IAmb   IAmb   23 48 06.8
      comp=Z,49nm,1.1s
DAVOX Davos/Dischmat     87.74 323   P      P      23 48 05.1 -0.4
      comp=Z,23nm,0.7s,baz=61,slow=7.6,SNR=42
DAVOX Davos/Dischmat     87.74 323   P      P      23 48 05.1 -0.4
WLF   Walferdange        87.80 327   IAmb   IAmb   23 48 06.7
      comp=Z,14nm,0.8s
WLF   Walferdange        87.80 327   P      P      23 48 06.1 +0.6
WLF                                  pmax   pmax
      comp=Z,25nm,1.7s
SLE   Schleitheim        87.85 324   P      P      23 48 05.3 -0.5
EKA   Eskdalemuir Ar     87.87 335   P      P      23 48 04.6 -1.0
      comp=Z,3.2nm,0.5s,baz=31,slow=5.9,SNR=15
      comp=Z,3.2nm,0.5s
EKA   Eskdalemuir Ar     87.87 335   P      P      23 48 04.6 -1.0
MPK   Martis Peak        88.04  46   IAmb   IAmb   23 48 09.5
      comp=Z,26nm,1.1s
SALO  Salr               88.11 322   IAmb   IAmb   23 48 08.9
      comp=Z,29nm,0.9s
FDMO  Fiordimonte        88.20 318   P      P      23 48 08.5 +1.0
FDMO                                 IAmb   IAmb   23 48 10.2
      comp=Z,123nm,1.5s
TUE   Stuetta            88.22 323   IAmb   IAmb   23 48 11.2
      comp=Z,22nm,0.9s
PAHR  Pah Rah Range      88.22  46   IAmb   IAmb   23 48 10.1
      comp=Z,18nm,1.0s
MFID  Camas Ranch        88.23  41   IAmb   IAmb   23 48 10.4
      comp=Z,24nm,1.4s
ECH   Echery             88.25 325   P      P      23 48 06.6 -1.1
INTR  Introdacqua        88.32 317   IAmb   IAmb   23 48 25.1
      comp=Z,50nm,1.4s
MURB  Monte Urbino       88.40 319   P      P      23 48 09.9 +1.4
AQU   L'Aquila           88.42 318   P      P      23 48 08.3 -0.3
AQU                                  pmax   pmax
      comp=Z,48nm,1.2s
EGMT  Eagleton           88.67  35   P      P      23 48 10.2 +0.5
EGMT                                 IAmb   IAmb   23 48 11.3
      comp=Z,19nm,0.8s
DLMT  Dillon             88.87  38   IAmb   IAmb   23 48 29.0
      comp=Z,27nm,0.9s
BCYI  Bear Canyon        89.08  39   P      P      23 48 13.3 +1.4
NVAR  Mina Array Bea     89.64  46   P      P      23 48 15.8 +1.1
      comp=Z,3.1nm,0.8s,baz=295,slow=4.5,SNR=9.2
      comp=Z,3.1nm,0.8s
NVAR  Mina Array Bea     89.64  46   P      P      23 48 14.4 -0.2
IDGL  Inch Island, C     89.67 336   P      P      23 48 13.6 -0.5
YHL   Hebgen Lake        89.97  38   IAmb   IAmb   23 48 35.3
      comp=Z,20nm,1.2s
YHB   Horse Butte        90.03  38   IAmb   IAmb   23 48 19.3
      comp=Z,19nm,1.1s
ILTH  Belurgan, Co L     90.06 335   P      P      23 48 15.8 -0.1
ELK   Elko               90.19  43   P      P      23 48 18.8 +1.6
YMR   Madison River      90.21  38   P      P      23 48 18.7 +1.5
YMR                                  IAmb   IAmb   23 48 36.0
      comp=Z,16nm,1.0s
YPP   Pitchstone Pla     90.55  38   IAmb   IAmb   23 48 43.5
      comp=Z,46nm,1.9s
BNI   Bardonecchia       90.56 323   P      P      23 48 18.7  0.0
BNI   Bardonecchia       90.56 323   P      P      23 48 18.7  0.0
BNI                                  pmax   pmax
      comp=Z,14nm,1.1s
H17A  Grant Village      90.60  38   P      P      23 48 20.9 +1.8
H17A                                 IAmb   IAmb   23 48 23.5
      comp=Z,32nm,1.2s
YMP   Mirror Lake Pl     90.60  37   IAmb   IAmb   23 48 38.7
      comp=Z,25nm,1.2s
DSB   Dublin             90.68 335   P      P      23 48 20.9 +2.0
RLMT  Red Lodge          90.83  37   IAmb   IAmb   23 48 22.2
      comp=Z,17nm,1.1s
MOOW  Moose Ponds        90.92  38   P      P      23 48 22.0 +1.5
PPT2  Papeete2           91.10 109 eP       P      23 48 16.2 -5.3
      comp=Z,32nm,24.0s
PPT2  Papeete2           91.10 109 eS       S      23 59 13.5 -2.5
      comp=Z,80nm,28.8s
PPT2  Papeete2           91.10 109 eLR      LR     00 17 28.0
      comp=Z,274nm,23.8s
PPT2                               eLR      LR     00 17 29.3
      comp=Z,225nm,25.8s
IWEX  Carrickbyrne,      91.51 334   P      P      23 48 23.3 +0.6
FURC  Furnace Creek,     91.71  47   IAmb   IAmb   23 48 26.4
      comp=Z,20nm,1.0s
SPR3  Spring Creek 3     91.80  44   IAmb   IAmb   23 49 03.2
      comp=Z,24nm,2.0s
TPNV  Topopah Spring     91.83  46   IAmb   IAmb   23 48 27.0
      comp=Z,11nm,0.9s
HWUT  Hardware Ranch     91.83  41   IAmb   IAmb   23 48 27.5
      comp=Z,29nm,1.3s
QSM   Queen of Sheba     92.00  48   IAmb   IAmb   23 48 27.6
      comp=Z,18nm,1.0s
GWY   Greenwater Val     92.00  47   IAmb   IAmb   23 48 27.7
      comp=Z,14nm,1.1s
PDAR  Pinedale Array     92.22  39   P      P      23 48 26.9 +0.3
      comp=Z,3.5nm,0.9s,baz=333,slow=1.3,SNR=22
PDAR  Pinedale Array     92.22  39   P      P      23 48 26.6  0.0
TCUT  Toone Canyon       92.23  41   IAmb   IAmb   23 48 29.5
      comp=Z,22nm,1.3s
PRN   Pahroc Range       92.32  45   IAmb   IAmb   23 48 29.7
      comp=Z,18nm,1.3s
GSC   Goldstone, Bar     92.43  48   IAmb   IAmb   23 48 29.7
      comp=Z,15nm,1.0s
SHPR  Sheep Range        92.79  46   P      P      23 48 30.3 +1.1
BSUT  Blindstream Ca     92.98  41   IAmb   IAmb   23 48 58.0
      comp=Z,20nm,1.7s
ULM   Lac du Bonnet      93.38  27   P      P      23 48 31.3 -0.1
      comp=Z,20nm,0.9s,baz=327,slow=5.1,SNR=21
      comp=Z,20nm,0.9s
ULM   Lac du Bonnet      93.38  27   P      P      23 48 31.3 -0.1
V12A  Nelson             93.46  47   IAmb   IAmb   23 48 34.8
      comp=Z,14nm,1.1s
PFO   Pinyon Flats O     93.66  49   P      P      23 48 34.2 +1.0
PFO                                  IAmb   IAmb   23 48 35.4
      comp=Z,22nm,1.0s
PFO   Pinyon Flats O     93.66  49   P      P      23 48 34.2 +1.0
PFO                                  pmax   pmax
      comp=Z,22nm,1.0s
PMD   Palm Desert        93.69  49   P      P      23 48 33.7 +0.5
PMD                                  IAmb   IAmb   23 48 35.3
      comp=Z,19nm,0.9s
P18A  Preston Nutter     93.87  41   IAmb   IAmb   23 48 57.4
      comp=Z,44nm,1.9s
TBI   Tubuai             93.89 114 eS       S      23 59 33.4 -7.1
      comp=Z,743nm,37.5s
TBI                                eSS      SS     00 06 01.9 +0.7
      comp=Z,682nm,44.5s
TBI   Tubuai             93.89 114 eLR      LR     00 18 43.0
      comp=Z,1μm,30.2s
KNB   Kanab              93.96  45   IAmb   IAmb   23 48 37.7
      comp=Z,12nm,0.9s
IRM   Iron Mountain      94.21  48   IAmb   IAmb   23 48 38.1
      comp=Z,15nm,1.1s
RSSD  Black Hills        94.24  35   P      P      23 48 36.0 +0.3
RSSD                                 IAmb   IAmb   23 48 53.5
      comp=Z,18nm,1.2s
RSSD  Black Hills        94.24  35   P      P      23 48 36.1 +0.3
RSSD                                 pmax   pmax
      comp=Z,18nm,1.3s
BC3   Big Chuckawall     94.31  49   IAmb   IAmb   23 48 38.5
      comp=Z,19nm,1.0s
YUH   Yuha Desert        94.59  50   IAmb   IAmb   23 48 39.7
      comp=Z,15nm,1.1s
U15A  North Rim          94.66  45   IAmb   IAmb   23 48 57.7
      comp=Z,33nm,1.8s
EPLO  Experimental L     94.68  26   IAmb   IAmb   23 52 09.6
      comp=Z,48nm,1.9s
BLYC  Blythe             94.87  48   IAmb   IAmb   23 48 41.1
      comp=Z,20nm,1.1s
KEST  Kesra              94.95 314   P      P      23 48 39.7 +0.7
      comp=Z,4.4nm,0.7s,baz=25,slow=6.0,SNR=4.9
      comp=Z,4.4nm,0.7s
KEST  Kesra              94.95 314   IAmb   IAmb   23 51 14.3
      comp=Z,13nm,0.9s
ESJX  Sierra Juarez      94.95  50   P      P      23 48 39.6 +0.3
ESJX                                 IAmb   IAmb   23 48 55.8
      comp=Z,27nm,1.1s
TAOE  Nuku Hiva Isla     95.27  97 eLR      LR     00 19 26.0
      comp=Z,182nm,23.7s
PV23  Carpenter Ridg     95.36  42   IAmb   IAmb   23 48 59.4
      comp=Z,9.7nm,0.8s
PV10  Paradox Valley     95.40  42   IAmb   IAmb   23 48 59.8
      comp=Z,14nm,1.0s
PV05  Paradox Valley     95.56  42   IAmb   IAmb   23 48 45.6
      comp=Z,20nm,1.5s
PV03  Paradox Valley     95.59  42   IAmb   IAmb   23 49 08.1
      comp=Z,27nm,1.9s
ESDC  Sonseca Array      99.94 325   P      Pdif   23 49 00.5 -1.0
      comp=Z,1.4nm,0.8s,baz=32,slow=4.4,SNR=6.5
      comp=Z,1.4nm,0.8s
TXAR  Lajitas Array     104.77  45   Pdiff  Pdif   23 49 26.3 +3.1
      comp=Z,0.8nm,1.0s,baz=317,slow=6.2,SNR=4.0
TXAR                                 PKiKP  PKiKP  23 53 37.1 -1.3
      comp=Z,0.6nm,0.9s,baz=294,slow=3.4,SNR=3.5
RKT   Rikitea           105.82 108 eLR      LR     00 24 31.6
      comp=Z,2μm,32.8s
TORD  Torodi Ar. Bea    114.52 301   PKP    PKPdf  23 53 56.2 -0.8
      comp=Z,1.3nm,0.7s,baz=24,slow=5.6,SNR=7.8
TORD                                 PP     PP     23 54 51.6 -2.1
      comp=Z,1.5nm,0.9s,baz=55,slow=4.5,SNR=4.5
KOOLE Kule              115.69 256          PKiKP  23 53 59.4 +0.2
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QSPA	**South Pole Qui**	117.09	180	PKP	PKPdf	23 53 59.9	-0.5
	comp=Z,3.1nm,0.8s,baz=27,slow=1.3,SNR=7.5						
DBIC	**Dimbokro**	123.58	300	PKP	PKPdf	23 54 13.1	-1.3
	comp=Z,6.5nm,0.9s,baz=104,slow=0.6,SNR=6.4						
DBIC	**Dimbokro**	123.58	300	PKPdf	PKPdf	23 54 13.8	-0.6
DBIC	**Dimbokro**	123.58	300	PKIKP	PKPdf	23 54 13.1	-1.3
TROLL	**Troll, Antarti**	126.58	198	⇑PKPdf	PKiKP	23 54 19.3	+0.2
	comp=Z,543nm,0.8s						
SNAA	**Sanae**	128.21	198	⇑PKPdf	PKiKP	23 54 22.2	-0.1
	comp=Z,78nm,1.1s						
SNAA	**Sanae**	128.21	198	PKP	PKPdf	23 54 20.4	-1.2
	comp=Z,5.1nm,1.1s,baz=237,slow=0.9,SNR=7.6						
SNAA	**Sanae**	128.21	198		PKiKP	23 54 22.2	-0.1
SNAA	**Sanae**	128.21	198	PKIKP	PKPdf	23 54 20.4	-1.2
VNA2	**Neumayer--Watz**	129.85	197	⇑PKPdf	PKiKP	23 54 25.1	-0.4
	comp=Z,18nm,0.6s,baz=99,slow=1.8						
VNA3	**Neumayer Olymp**	130.25	196	⇑PKPdf	PKPdf	23 54 25.3	-0.1
	comp=Z,4.1nm,0.7s						
VNA1	**Neumayer--Stat**	130.25	197	⇑PKPdf	PKiKP	23 54 26.6	+0.4
	comp=Z,14nm,0.9s						
SDV	**Santo Domingo**	139.56	30	PKPdf	PKPdf	23 54 45.2	+0.4
MG05	**Puerto Natales**	151.00	153		PKiKP	23 55 09.0	-0.2
NNA	**Nana**	151.84	62		PKPbc	23 55 11.8	0.0
NNA	**Nana**	151.84	62	PKIKP	PKPbc	23 55 11.8	0.0
MAL2	**Monte Alegre,**	154.72	6	PKPdf	PKPdf	23 55 08.9	-0.7
LPAZ	**La Paz**	161.15	58	PKP	PKPdf	23 55 19.1	+1.0
	comp=Z,4.3nm,0.9s,baz=352,slow=1.9,SNR=10						
LPAZ	**La Paz**	161.15	58	PKIKP	PKPdf	23 55 19.1	+1.0
BDFB	**Brasilia**	167.92	343	PKP	PKPdf	23 55 23.7	+0.3
	comp=Z,0.7nm,0.3s,baz=180,slow=5.1,SNR=5.4						
BDFB				PKPab	PKPab	23 56 29.2	-1.2
	comp=Z,4.4nm,0.8s,baz=12,slow=2.9,SNR=6.6						
BDFB	**Brasilia**	167.92	343		PKPab	23 56 28.9	-1.5
BDFB	**Brasilia**	167.92	343	PKIKP	PKPdf	23 55 23.7	+0.3
BDFB						23 56 29.2	
CPUP	**Villa Florida**	174.78	80	PKP	PKPdf	23 55 25.8	-0.6
	comp=Z,0.3nm,0.5s,baz=190,slow=1.6,SNR=3.9						
CPUP	**Villa Florida**	174.78	80	PKIKP	PKPdf	23 55 25.8	-0.6

IDC 17 23:42:22.9±54.0**, 17°.87S**×**170°.88W, h0**^{km}**, mb4.0**/3**,**
mbtmp4.0/3**, Error ellipse: s-maj=1061.0km**
s-min=206.7km az=82.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	44.98	243	P	P	23 50 40.1	-0.1
	0.7nm,0.4s,baz=58,slow=9.5,SNR=1.9						
	0.7nm,0.4s						
WRA	**Warramunga Arr**	51.68	258	P	P	23 51 31.5	-0.6
	0.4nm,0.3s,baz=98,slow=6.8,SNR=8.1						
	0.4nm,0.3s						
ASAR	**Alice Springs**	51.70	254	P	P	23 51 32.5	+0.3
	2.1nm,0.6s,baz=93,slow=7.6,SNR=22						
	2.1nm,0.6s						

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*HEL **17** 23:44:42.7±0.4, 67°.76N×20°.06E, h0^{km}, ML1.1, Suspected explosion*

UPP 17 23:44:42.2±0.1**, 67°.85N**×**20°.22E, h0**^{km}**, ML2.0,**
Confirmed Induced event, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	0.12	22	P	Pg	23 44 44.6	+0.2
	baz=215						
KUA				S	Sg	23 44 46.4	+0.5
RATU	**Laukkuluspa**	0.24	265	P	Pg	23 44 46.9	+0.1
RATU				S	Sg	23 44 50.3	+0.4
KOVU	**Salmi**	0.38	356	P	Pg	23 44 49.4	0.0
KOVU				S	Sg	23 44 54.7	+0.4
NIKU	**Nikkaluokta**	0.45	273	P	Pg	23 44 50.8	0.0
NIKU				S	Sg	23 44 56.7	+0.1
LANU	**Lannavaara**	0.70	72	P	Pg	23 44 55.3	-0.3
LANU	**Lannavaara**	0.70	72	PG	Pb	23 44 57.0	-0.3
LANU				SG	Sb	23 45 06.5	-0.9
SALU	**Saltoluokta**	0.81	235	*e*P	Pg	23 44 57.5	-0.2
KIF	**Kilpisjarvi**	1.18	10	*e*P	Pn	23 45 06.2	+0.3
KIF	**Kilpisjarvi**	1.18	10	PG	Pn	23 45 06.2	+0.3
KIF				MSG		23 45 22.4	
	comp=Z,1.8nm,0.2s						
KIF				SG	Sn	23 45 22.5	-0.2
PAJU	**Pajala**	1.39	125	PN	Pn	23 45 08.9	+0.1
PAJU				SN	Sn	23 45 28.0	+0.2
HEF	**Hetta**	1.41	65	PG	Pb	23 45 09.7	+0.4
HEF				MSG		23 45 27.8	
	comp=Z,0.7nm,0.2s						
HEF				SG	Sn	23 45 29.8	+1.6
KLF	**Kolari**	1.56	111	MSG		23 45 30.4	
	comp=Z,0.8nm,0.2s						
KLF				SN	Sg	23 45 34.8	+2.5
KTK1	**Kautokeino**	1.62	42	PG	Pg	23 45 14.2	+1.1
KTK1				SG	Sg	23 45 35.9	+1.9
TRO	**Tromso**	1.85	346	SG	Sg	23 45 42.0	+0.3
KALU	**Kalix**	2.35	147	PN	Pn	23 45 19.9	-2.1
TOF	**Tornio**	2.40	136	PG	Pb	23 45 25.1	-1.1
TOF				MSG		23 45 53.2	
	comp=Z,0.7nm,0.2s						
TOF				SG	Sg	23 45 58.3	-0.8
ARA0	**ARCESS Array S**	2.57	46	PB	Pb	23 45 29.1	+0.1
	baz=229						
ARA0				SB	Sb	23 46 01.5	+0.3
RNF	**Rovaniemi**	2.57	116	PG	Pb	23 45 28.5	-0.6
RNF				SG	Sb	23 46 02.9	+1.7
RAJF	**Raja-Jooseppi**	3.09	74	SB	Sb	23 46 17.6	+1.6
KEV	**Kevo**	3.12	49	SN	Sn	23 46 13.5	+3.1
OUL	**Oulu**	3.59	138	SG	Sb	23 46 31.3	+0.9
OUL	**Oulu**	3.59	138	P	Sb	23 46 31.4	+1.0
OUF	**Merijarvi**	3.95	150	SB	Sb	23 46 36.3	-4.4

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*IDC **17** 23:48:42.2±1.5, 38°.06N×15°.02E, h0^{km}, mb3.4/2, mbtmp3.3/3, ML2.9/1, Error ellipse: s-maj=71.8km s-min=15.1km az=131.0*

*ROM **17** 23:48:44.4±0.1, 37°.839N±0°.004×14°.935E±0°.007, h28^{km}, ML3.5/163, Error ellipse: s-maj=0.5km s-min=0.5km az=116.0*

*PDG **17** 23:48:47.6±0.3, 38°.14N×15°.47E, h10^{km}±11^{km}, ML3.9/11, Error ellipse: s-maj=35.1km s-min=18.9km az=90.0*

ISC 17 23:48:44.4±0.8**, 37°.84N**±0°.02×**14°.96E**±0°.02**, h28**^{km}±3^{km}**,**
n95, σ1^{s}.53/123**, 19C-26D, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMSG	**Monte Spagnolo**	0.02	208	⇓P	Pb	23 48 49.1	-0.4
EMSG				AML	AML		
	comp=E,80450μm,0.4s						
EMSG				AML	AML		
EMSG				AML	AML		
EMSG				AML	AML		
	comp=E,80357μm,0.4s						
EMSG				AML	AML		
	comp=N,89108μm,0.6s						
EMCN	**Etna Monte Con**	0.07	132	⇓P	Pn	23 48 49.6	-0.1
EMCN				AML	AML		
	comp=N,47150μm,1.1s						
EMCN				AML	AML		
	comp=E,53500μm,0.7s						
EMCN				AML	AML		
	comp=N,44793μm,0.2s						
EMCN				AML	AML		
	comp=E,49242μm,0.2s						
EPIT	**Pozzo Pitarron**	0.08	112	P	Pb	23 48 49.8	+0.1
EPZF	**Pizzo Felice**	0.09	259	⇑P	Pb	23 48 49.0	-0.7
EPZF				S	Sb	23 48 53.0	-0.2
EPZF				AML	AML		
EPZF				AML	AML		
EPZF				AML	AML		
EPZF				AML	AML		
EPZF				AML	AML		
EPZF				AML	AML		
ECTS	**Castiglione**	0.13	72	⇓P	Pn	23 48 49.9	-0.8
ECTS				S	Sb	23 48 54.3	+0.7
ECTS				AML	AML		
	comp=N,54414μm,0.3s						
ESLN	**Serra La Nave**	0.15	177	⇓P	Pn	23 48 49.9	-1.2
ESLN				AML	AML		
	comp=E,30050μm,0.4s						
ESLN				AML	AML		
	comp=N,17650μm,0.9s						
ESLN				AML	AML		
	comp=E,19600μm,0.4s						
ESLN				AML	AML		
	comp=N,17284μm,0.4s						
ESLN				AML	AML		
	comp=E,30048μm,0.4s						
ECHR	**Santa Chiara**	0.16	194	P	Pn	23 48 50.1	-1.0
ECHR				S	Sn	23 48 54.4	+0.3
EVRN	**Santa Venerina**	0.20	138	P	Pn	23 48 50.7	-0.9
MUCR	**Ucria**	0.21	341	⇑P	Pn	23 48 50.0	-1.9
MUCR				S	Sb	23 48 54.6	-0.5
MUCR				AML	AML		
	comp=N,88200μm,0.3s						
MUCR				AML	AML		
	comp=E,67150μm,0.3s						
MUCR				AML	AML		
	comp=E,67143μm,0.3s						
MUCR				AML	AML		
	comp=N,88160μm,0.3s						
ESML	**S. M. di Licod**	0.23	197	P	Pn	23 48 50.8	-1.3
AIO	**Antillo**	0.25	59	⇑P	Pn	23 48 51.5	-0.9
AIO				S	Sb	23 48 56.8	+1.1
AIO				AML	AML		
	comp=N,18650μm,1.4s						
AIO				AML	AML		
	comp=E,18050μm,0.6s						
AIO				AML	AML		
	comp=N,18650μm,0.6s						
AIO				AML	AML		
	comp=E,18050μm,1.4s						
AIO				AML	AML		
	comp=N,18605μm,0.3s						
AIO				AML	AML		
	comp=E,16232μm,0.3s						
EPOZ	**Pozzillo**	0.34	164	P	Pb	23 48 51.7	-0.6
EPOZ				S	Sb	23 48 56.6	-1.1
EPOZ				AML	AML		
	comp=N,16700μm,0.6s						
EPOZ				AML	AML		
	comp=E,17450μm,0.5s						
EPOZ				AML	AML		
	comp=E,17450μm,1.5s						
EPOZ				AML	AML		
	comp=N,16231μm,0.3s						
EPOZ				AML	AML		
	comp=E,17161μm,0.3s						
GALF	**Gagliano Caste**	0.34	248	⇑P	Pb	23 48 52.0	-0.4
GALF				S	Sn	23 48 57.5	-2.0
GALF				AML	AML		
	comp=N,2965μm,0.9s						
GALF				AML	AML		
	comp=E,45150μm,0.8s						
GALF				AML	AML		
	comp=N,20750μm,0.6s						
GALF				AML	AML		
	comp=N,2965μm,1.1s						
GALF				AML	AML		
	comp=E,4990μm,0.8s						
GALF				AML	AML		
	comp=N,2777μm,0.3s						
GALF				AML	AML		
	comp=E,45156μm,0.8s						
GALF				AML	AML		
	comp=E,4989μm,0.8s						
GALF				AML	AML		
	comp=N,19784μm,0.4s						
CAGR	**Agira**	0.43	239	P	Pb	23 48 54.1	+0.4
CAGR				AML	AML		
	comp=E,13950μm,0.5s						
CAGR				AML	AML		
	comp=N,12000μm,0.4s						
CAGR				AML	AML		
	comp=N,12000μm,1.6s						
CAGR				AML	AML		
	comp=N,12008μm,0.4s						
CAGR				AML	AML		
	comp=E,13947μm,0.5s						
MPNC	**Port Mandanici**	0.43	45	⇑P	Pb	23 48 54.2	+0.4
MPNC				S	Sn	23 49 02.2	+0.4
MPNC				AML	AML		
	comp=E,18550μm,0.5s						
MPNC				AML	AML		
	comp=N,15750μm,0.3s						
MPNC				AML	AML		
	comp=E,18585μm,0.5s						
MPNC				AML	AML		
	comp=N,15738μm,0.3s						
MILZ	**Milazzo**	0.48	26	P	Pb	23 48 55.0	+0.5
MILZ				S	Sn	23 49 03.4	+0.5
MILZ				AML	AML		
	comp=E,23950μm,0.4s						
MILZ				AML	AML		
	comp=N,21450μm,0.8s						
MILZ				AML	AML		
	comp=N,21450μm,1.2s						
MILZ				AML	AML		
	comp=N,21432μm,0.8s						
MILZ				AML	AML		
	comp=E,23950μm,1.6s						
HLNI	**Lentini**	0.50	188	⇓P	Pb	23 48 54.2	-0.6
HLNI				S	Sb	23 49 02.1	+0.4
HLNI				AML	AML		
	comp=N,9120μm,0.8s						
HLNI				AML	AML		
	comp=E,6665μm,1.4s						
HLNI				AML	AML		
	comp=N,8463μm,0.3s						
HLNI				AML	AML		
	comp=E,6566μm,0.2s						
VPL	**Vulcano Piano**	0.54	2	⇓P	Pb	23 48 55.3	-0.1
VPL				S	Sn	23 49 04.1	-0.3
VPL				AML	AML		
	comp=E,16450μm,0.6s						
VPL				AML	AML		
	comp=N,15550μm,0.5s						
VPL				AML	AML		
	comp=E,16411μm,0.6s						
VPL				AML	AML		
	comp=N,15506μm,0.5s						
IVGP	**Vulcano Grotta**	0.56	360	P	Pb	23 48 55.4	-0.4
VAE	**Valguarnera**	0.57	231	Pg	Pb	23 48 57.4	+1.5
	comp=N,16nm,0.3s,baz=288,slow=3.2,SNR=25						
HAGA	**Augusta**	0.58	165	⇓P	Pn	23 48 55.7	-1.0
HAGA				S	Sb	23 49 04.9	+1.0
HAGA				AML	AML		
	comp=N,16800μm,0.4s						
HAGA				AML	AML		
	comp=E,13950μm,0.3s						
HAGA				AML	AML		
	comp=N,16790μm,0.5s						
HAGA				AML	AML		
	comp=E,13918μm,0.3s						
LLI	**Lipari**	0.60	359	⇓P	Pn	23 48 56.5	-0.6
LLI				AML	AML		
	comp=N,59600μm,0.4s						
LLI				AML	AML		
	comp=E,50350μm,0.6s						
LLI				AML	AML		
	comp=E,50324μm,0.6s						
LLI				AML	AML		
	comp=N,59564μm,0.4s						
MSRU	**Castanea**	0.60	45	P	Pn	23 48 57.0	-0.2
MSRU				S	Sn	23 49 07.4	+1.4
MSRU				AML	AML		
	comp=E,14900μm,0.2s						
MSRU				AML	AML		
	comp=N,10190μm,0.6s						
MSRU				AML	AML		
	comp=E,14891μm,0.2s						
MSRU				AML	AML		
	comp=N,10170μm,0.6s						
AGST	**Augusta-Monte**	0.62	160	⇓P	Pn	23 48 56.4	-0.9
AGST				S	Sn	23 49 06.4	+0.1
PLLN	**Pollina**	0.67	283	⇑P	Pn	23 48 57.6	-0.4
PLLN				AML	AML		
	comp=N,14400μm,1.4s						
PLLN				AML	AML		
	comp=E,14900μm,0.6s						
PLLN				AML	AML		
	comp=N,14400μm,0.6s						
PLLN				AML	AML		
	comp=E,14929μm,0.6s						
PLLN				AML	AML		
	comp=N,13066μm,0.5s						
PETRA	**Petralia Sopra**	0.67	270	⇓P	Pn	23 48 57.8	-0.5
PETRA				AML	AML		
	comp=N,4605μm,0.4s						
PETRA				AML	AML		
	comp=E,5255μm,0.4s						
PETRA				AML	AML		
	comp=E,5255μm,1.6s						
PETRA				AML	AML		
	comp=N,4605μm,1.6s						
PETRA				AML	AML		
	comp=E,5250μm,0.4s						
PETRA				AML	AML		
	comp=N,4608μm,0.5s						
HVZN	**Vizzini**	0.69	197	⇓P	Pn	23 48 57.4	-1.0
HVZN				S	Sn	23 49 08.1	-0.1
HVZN				AML	AML		
	comp=E,13000μm,1.4s						
HVZN				AML	AML		
	comp=E,13000μm,0.6s						
HVZN				AML	AML		
	comp=N,15900μm,0.4s						
HVZN				AML	AML		
	comp=E,12792μm,0.3s						
HVZN				AML	AML		
	comp=N,15874μm,0.4s						
SSY	**Sortino**	0.69	173	⇓P	Pn	23 48 57.4	-1.0
SSY				S	Sn	23 49 08.3	+0.1
SSY				AML	AML		
	comp=E,33250μm,0.2s						
SSY				AML	AML		
	comp=N,62050μm,1.1s						
SSY				AML	AML		
	comp=N,60467μm,0.3s						
SSY				AML	AML		
	comp=E,33274μm,0.2s						
CSLB	**Castelbuono**	0.72	278	⇓P	Pn	23 48 57.5	-1.3
CSLB				AML	AML		
	comp=E,1440μm,0.4s						
CSLB				AML	AML		
	comp=N,1805μm,1.2s						
CSLB				AML	AML		
	comp=E,1439μm,0.4s						
CSLB				AML	AML		
	comp=N,1601μm,0.5s						
SICLA	**Scilla**	0.72	55	⇓P	Pb	23 48 59.2	+0.7
SICLA				AML	AML		
	comp=E,3685μm,0.4s						
SICLA				AML	AML		
	comp=N,3610μm,0.4s						
SICLA				AML	AML		
	comp=N,3612μm,0.4s						
SICLA				AML	AML		
	comp=E,3687μm,0.4s						
RESU	**Resuttano**	0.74	255	⇑P	Pb	23 49 00.0	+1.1
RESU				AML	AML		
	comp=N,4265μm,0.6s						
RESU				AML	AML		
	comp=E,2160μm,0.5s						
RESU				AML	AML		
	comp=N,4265μm,1.4s						
RESU				AML	AML		
	comp=E,2162μm,0.5s						
RESU				AML	AML		
	comp=N,4269μm,0.6s						
GIB	**Gibilmanna**	0.76	282	⇓P	Pn	23 48 58.4	-1.0
GIB				AML	AML		
	comp=N,10225μm,1.5s						
GIB				AML	AML		
	comp=E,8805μm,0.4s						
GIB				AML	AML		
	comp=N,10225μm,0.5s						
GIB				AML	AML		
	comp=E,8798μm,0.5s						
GIB				AML	AML		
	comp=N,9893μm,0.5s						
RAFF	**Raffo Rosso**	0.78	218	P	Pn	23 48 59.2	-0.4
RAFF				AML	AML		
	comp=E,3150μm,0.5s						
RAFF				AML	AML		
	comp=N,2905μm,0.7s						
RAFF				AML	AML		
	comp=E,3150μm,1.5s						
RAFF				AML	AML		
	comp=N,2849μm,0.6s						
RAFF				AML	AML		
	comp=E,3151μm,0.5s						
IFIL	**Filicudi I Eol**	0.79	337	P	Pn	23 48 58.5	-1.2
IFIL				AML	AML		
	comp=E,26700μm,1.4s						
IFIL				AML	AML		
	comp=N,12165μm,0.3s						
IFIL				AML	AML		
	comp=E,26700μm,0.6s						
IFIL				AML	AML		
	comp=E,24810μm,0.5s						
IFIL				AML	AML		
	comp=N,12144μm,0.3s						
SOI	**Samo**	0.89	75	⇑P	Pb	23 49 02.0	+0.7
SOI				AML	AML		
	comp=N,4890μm,0.5s						
SOI				AML	AML		
	comp=N,4890μm,1.5s						
SOI				AML	AML		
	comp=E,3120μm,0.5s						
SOI				AML	AML		
	comp=N,4889μm,0.5s						
SOI				AML	AML		
	comp=E,3119μm,0.5s						
ACATE	**Acate (RG)**	0.90	204	⇓P	Pn	23 49 00.7	-0.5
ACATE				AML	AML		
	comp=E,8690μm,0.3s						
ACATE				AML	AML		
	comp=N,8355μm,1.3s						
ACATE				AML	AML		
	comp=E,8640μm,0.3s						
ACATE				AML	AML		
	comp=E,8690μm,0.3s						
ACATE				AML	AML		
	comp=N,8355μm,1.3s						
ACATE				AML	AML		
	comp=N,8250μm,1.3s						
ACATE				AML	AML		
	comp=N,8355μm,0.7s						
ACATE				AML	AML		
	comp=N,8250μm,0.7s						
ACATE				AML	AML		
	comp=E,8702μm,0.3s						
ACATE				AML	AML		
	comp=E,8666μm,0.3s						
ACATE				AML	AML		
	comp=N,8194μm,0.4s						
ACATE				AML	AML		
	comp=N,7725μm,0.4s						
ISTR	**Stromboli Gino**	0.96	11	P	Pn	23 49 02.1	0.0
ALJA	**Alia**	0.96	265	P	Pb	23 49 03.7	+1.1
ALJA				AML	AML		
	comp=N,1563μm,0.4s						
IST3	**Stromboli F**	0.98	12	P	Pn	23 49 02.6	+0.2
CMDO	**Montedoro**	0.98	248	P	Pb	23 49 04.0	+1.1
CMDO				AML	AML		
	comp=E,805μm,1.0s						
CMDO				AML	AML		
	comp=N,1176μm,0.9s						
CMDO				AML	AML		
	comp=N,1176μm,1.1s						
CMDO				AML	AML		
	comp=E,805μm,1.0s						
CMDO				AML	AML		
	comp=N,1176μm,0.9s						
CMDO				AML	AML		
	comp=E,805μm,1.0s						
CLTA	**Licata**	1.05	230	P	Pn	23 49 04.3	+1.1
CLTA				AML	AML		
	comp=E,2695μm,0.5s						
CLTA				AML	AML		
	comp=N,1715μm,0.4s						
CLTA				AML	AML		
	comp=E,2695μm,1.5s						
CLTA				AML	AML		
	comp=E,2696μm,0.5s						
CLTA				AML	AML		
	comp=N,1715μm,0.4s						
JOPP	**Joppolo**	1.05	43	⇓P	Pn	23 49 03.9	+0.5
JOPP				AML	AML		
	comp=N,1970μm,0.4s						
JOPP				AML	AML		
	comp=N,1970μm,1.6s						
JOPP				AML	AML		
	comp=E,1755μm,0.8s						
JOPP				AML	AML		
	comp=N,1970μm,0.4s						
JOPP				AML	AML		
	comp=E,1200μm,0.2s						
CROCE	**Santa Croce Ca**	1.06	199	⇓P	Pn	23 49 03.2	-0.3

CROCE	comp=E,4370µm,0.6s			AML	AML		
CROCE	comp=N,5585µm,0.5s			AML	AML		
CROCE	comp=E,3670µm,0.5s			AML	AML		
CROCE	comp=N,4400µm,0.5s			AML	AML		
CROCE	comp=E,4370µm,0.6s			AML	AML		
CROCE	comp=N,5585µm,0.5s			AML	AML		
CROCE	comp=E,3670µm,1.5s			AML	AML		
CROCE	comp=E,4370µm,1.4s			AML	AML		
CROCE	comp=E,4250µm,0.4s			AML	AML		
CROCE	comp=E,3572µm,0.4s			AML	AML		
CROCE	comp=N,4400µm,0.5s			AML	AML		
CROCE	comp=N,5584µm,0.5s			AML	AML		
HPAC	**Pachino**	**1.15**	**174**	P	**Pn**	**23 49 04.6**	**0.0**
HPAC	comp=N,4450µm,0.8s			AML	AML		
HPAC	comp=N,4450µm,1.2s			AML	AML		
HPAC	comp=E,4465µm,0.7s			AML	AML		
HPAC	comp=E,3556µm,0.2s			AML	AML		
HPAC	comp=N,4065µm,0.3s			AML	AML		
SOLUN	**Solunto**	**1.16**	**283**	⇑P	**Pn**	**23 49 04.7**	**-0.1**
SOLUN	comp=E,1800µm,0.7s			AML	AML		
SOLUN	comp=N,1300µm,0.6s			AML	AML		
SOLUN	comp=E,1800µm,0.7s			AML	AML		
SOLUN	comp=N,1302µm,0.6s			AML	AML		
PLAC	**Placanica**	**1.31**	**62**	P	**Pb**	**23 49 09.2**	**+0.7**
PLAC	comp=E,1590µm,1.1s			AML	AML		
PLAC	comp=N,1620µm,1.1s			AML	AML		
PLAC	comp=E,1590µm,0.9s			AML	AML		
PLAC	comp=N,1620µm,0.9s			AML	AML		
PLAC	comp=N,1460µm,0.5s			AML	AML		
PLAC	comp=E,1500µm,0.4s			AML	AML		
PLAC	comp=E,1529µm,0.4s			AML	AML		
PLAC	comp=N,1605µm,0.4s			AML	AML		
PLAC	comp=N,1460µm,0.5s			AML	AML		
PLAC	comp=E,1501µm,0.4s			AML	AML		
CORL	**Corleone**	**1.31**	**273**	P	**Pn**	**23 49 07.8**	**+0.9**
CORL	comp=E,2075µm,0.5s			AML	AML		
CORL	comp=N,1765µm,0.5s			AML	AML		
CORL	comp=N,1765µm,1.5s			AML	AML		
CORL	comp=N,1767µm,0.5s			AML	AML		
CORL	comp=E,2071µm,0.5s			AML	AML		
GRI	**Girifalco**	**1.51**	**49**	P	**Pn**	**23 49 10.6**	**+1.0**
CRJA	**Costa Raja**	**1.55**	**269**	P	**Pb**	**23 49 12.4**	**-0.1**
CRJA	comp=E,2240µm,0.7s			AML	AML		
CRJA	comp=N,1460µm,1.3s			AML	AML		
CRJA	comp=E,2240µm,1.3s			AML	AML		
CRJA	comp=N,1365µm,0.5s			AML	AML		
CRJA	comp=E,2239µm,0.7s			AML	AML		
MMGO	**Monte Magaggia**	**1.58**	**264**	P	**Pn**	**23 49 11.6**	**+1.0**
MBFT	**Monte Bonifato**	**1.59**	**274**	P	**Pn**	**23 49 11.3**	**+0.5**
MBFT	comp=N,524µm,0.7s			AML	AML		
MBFT	comp=E,712µm,0.8s			AML	AML		
MBFT	comp=N,524µm,1.3s			AML	AML		
MBFT	comp=E,712µm,0.8s			AML	AML		
MBFT	comp=E,143µm,0.8s			AML	AML		
MBFT	comp=N,523µm,0.7s			AML	AML		
MBFT	comp=N,136µm,0.8s			AML	AML		
USI	**Ustica**	**1.65**	**302**	P	**Pn**	**23 49 10.8**	**-0.7**
CAR1	**CAROLEI**	**1.72**	**34**	P	**Pn**	**23 49 12.9**	**+0.4**
CAR1	comp=E,2535µm,0.4s			AML	AML		
CAR1	comp=N,2840µm,0.3s			AML	AML		
CAR1	comp=N,3185µm,0.3s			AML	AML		
CAR1	comp=N,3185µm,1.7s			AML	AML		
CAR1	comp=N,2840µm,1.7s			AML	AML		
CAR1	comp=E,2510µm,0.3s			AML	AML		
CAR1	comp=N,3186µm,0.3s			AML	AML		
CAR1	comp=N,2836µm,0.3s			AML	AML		
CAR1	comp=E,2533µm,0.4s			AML	AML		
CAR1	comp=E,2511µm,0.3s			AML	AML		
SPS2	**Spezzano della**	**1.81**	**36**	P	**Pn**	**23 49 14.4**	**+0.7**
SPS2	comp=E,536µm,1.1s			AML	AML		
SPS2	comp=N,598µm,1.0s			AML	AML		
SPS2	comp=E,536µm,0.9s			AML	AML		
SPS2	comp=N,598µm,1.0s			AML	AML		
SPS2	comp=E,522µm,0.4s			AML	AML		
SPS2	comp=N,598µm,0.3s			AML	AML		
CET2	**Cetraro**	**1.85**	**24**	P	**Pn**	**23 49 14.6**	**+0.2**
CET2	comp=E,3160µm,0.5s			AML	AML		
CET2	comp=N,2290µm,0.7s			AML	AML		
CET2	comp=E,3160µm,0.6s			AML	AML		
CET2	comp=N,2278µm,0.4s			AML	AML		
MARS	**Marsala (TP) I**	**1.90**	**268**	P	**Pn**	**23 49 16.6**	**+1.6**
MARS	comp=E,794µm,1.4s			AML	AML		
MARS	comp=N,737µm,1.5s			AML	AML		
MARS	comp=N,737µm,0.5s			AML	AML		
MARS	comp=E,794µm,0.6s			AML	AML		
MARS	comp=E,794µm,1.4s			AML	AML		
TIP	**Timpagrande**	**1.94**	**46**	P	**Pn**	**23 49 17.3**	**+1.7**
TIP	comp=N,319µm,0.6s			AML	AML		
TIP	comp=E,214µm,0.5s			AML	AML		
TIP	comp=N,339µm,0.6s			AML	AML		
TIP	comp=E,223µm,0.5s			AML	AML		
TIP	comp=N,339µm,0.6s			AML	AML		
TIP	comp=N,319µm,0.6s			AML	AML		
TIP	comp=E,223µm,0.5s			AML	AML		
TIP	comp=E,214µm,0.5s			AML	AML		
CELI	**Celico**	**1.97**	**37**	P	**Pn**	**23 49 16.9**	**+0.7**
CELI	comp=N,455µm,1.2s			AML	AML		
CELI	comp=E,1110µm,0.5s			AML	AML		
CELI	comp=N,1160µm,1.2s			AML	AML		
CELI	comp=E,446µm,0.5s			AML	AML		
CELI	comp=N,953µm,0.4s			AML	AML		
CELI	comp=N,380µm,0.4s			AML	AML		
CELI	comp=E,447µm,0.5s			AML	AML		
CELI	comp=E,1110µm,0.5s			AML	AML		
TDS	**Terranova Siba**	**2.11**	**30**	⇑P	**Pn**	**23 49 18.3**	**+0.5**
TDS	comp=E,244µm,0.6s			AML	AML		
TDS	comp=N,220µm,1.6s			AML	AML		
TDS	comp=E,243µm,0.6s			AML	AML		
TDS	comp=N,224µm,1.7s			AML	AML		
MMN	**Mormanno**	**2.20**	**21**	P	**Pn**	**23 49 19.7**	**+0.6**
CUC	**Castrocucco**	**2.25**	**17**	⇑P	**Pn**	**23 49 20.3**	**+0.5**
CUC	comp=E,670µm,0.7s			AML	AML		
CUC	comp=N,456µm,0.9s			AML	AML		
CUC	comp=N,466µm,0.8s			AML	AML		
CUC	comp=E,670µm,1.3s			AML	AML		
CUC	comp=E,674µm,0.7s			AML	AML		
CUC	comp=N,457µm,0.9s			AML	AML		
CUC	comp=E,674µm,0.7s			AML	AML		
CUC	comp=E,670µm,0.7s			AML	AML		
BULG	**Bulgheria - Ca**	**2.26**	**8**	⇑P	**Pn**	**23 49 20.0**	**0.0**
BULG	comp=E,234µm,0.6s			AML	AML		
BULG	comp=N,434µm,1.3s			AML	AML		
BULG	comp=E,238µm,0.7s			AML	AML		
BULG	comp=N,464µm,1.3s			AML	AML		
BULG	comp=E,238µm,1.3s			AML	AML		
BULG	comp=E,234µm,1.4s			AML	AML		
BULG	comp=N,464µm,0.7s			AML	AML		
BULG	comp=N,434µm,0.7s			AML	AML		
BULG	comp=N,425µm,0.5s			AML	AML		
BULG	comp=N,442µm,0.5s			AML	AML		
BULG	comp=E,235µm,0.6s			AML	AML		
BULG	comp=E,238µm,0.7s			AML	AML		
SALB	**San Lorenzo Be**	**2.30**	**28**	P	**Pn**	**23 49 22.1**	**+1.5**
SALB	comp=E,760µm,0.5s			AML	AML		
SALB	comp=N,407µm,0.4s			AML	AML		
SALB	comp=E,760µm,0.5s			AML	AML		
SALB	comp=N,407µm,0.4s			AML	AML		
MGR	**Morigerati**	**2.34**	**11**	⇓P	**Pn**	**23 49 21.0**	**0.0**
MGR	comp=E,258µm,0.4s			AML	AML		
MGR	comp=N,256µm,0.3s			AML	AML		
MGR	comp=N,257µm,0.3s			AML	AML		
MGR	comp=E,258µm,0.4s			AML	AML		
MGR	comp=E,301µm,0.6s			AML	AML		
MGR	comp=N,260µm,0.5s			AML	AML		
SIRI	**Monte Sirino -**	**2.44**	**16**	⇓P	**Pn**	**23 49 23.1**	**+0.6**
SIRI	comp=E,547µm,0.4s			AML	AML		
SIRI	comp=N,468µm,0.6s			AML	AML		
SIRI	comp=E,547µm,1.6s			AML	AML		
SIRI	comp=N,445µm,0.4s			AML	AML		
SIRI	comp=E,547µm,0.4s			AML	AML		
SIRI	comp=E,568µm,0.4s			AML	AML		
CMPR	**Campora**	**2.49**	**6**	P	**Pn**	**23 49 22.8**	**-0.3**
CMPR	comp=E,166µm,1.5s			AML	AML		
CMPR	comp=N,137µm,0.4s			AML	AML		
CMPR	comp=E,163µm,0.5s			AML	AML		
CMPR	comp=N,137µm,0.4s			AML	AML		
ORI	**Oriolo Calabro**	**2.50**	**27**	P	**Pn**	**23 49 25.5**	**+2.2**
SCHR	**S. Chirico Rap**	**2.51**	**20**	P	**Pn**	**23 49 24.3**	**+0.9**
MCEL	**Monticello**	**2.56**	**14**	P	**Pn**	**23 49 24.7**	**+0.5**
MCEL	comp=E,266µm,1.6s			AML	AML		
MCEL	comp=N,294µm,0.6s			AML	AML		
MCEL	comp=E,260µm,1.6s			AML	AML		
MCEL	comp=N,298µm,0.5s			AML	AML		
MCEL	comp=E,260µm,0.4s			AML	AML		
MCEL	comp=E,266µm,0.4s			AML	AML		
MCEL	comp=N,298µm,0.5s			AML	AML		
MCEL	comp=N,294µm,0.6s			AML	AML		
MCEL	comp=E,239µm,0.4s			AML	AML		
MCEL	comp=E,246µm,0.4s			AML	AML		
SLCN	**Sala Consilina**	**2.60**	**11**	P	**Pn**	**23 49 25.9**	**+1.2**
SLCN	comp=N,340µm,1.3s			AML	AML		
SLCN	comp=N,298µm,1.0s			AML	AML		
SLCN	comp=E,404µm,1.0s			AML	AML		
SLCN	comp=E,430µm,0.3s			AML	AML		
SLCN	comp=N,340µm,0.7s			AML	AML		
SLCN	comp=N,323µm,0.9s			AML	AML		
SLCN	comp=E,404µm,0.3s			AML	AML		
SLCN	comp=E,431µm,0.3s			AML	AML		
SLCN	comp=N,295µm,0.4s			AML	AML		
CDRU	**Civita di Ruta**	**2.66**	**6**	P	**Pn**	**23 49 25.6**	**+0.1**
CDRU	comp=E,119µm,0.2s			AML	AML		
CDRU	comp=N,64µm,1.3s			AML	AML		
CDRU	comp=E,119µm,1.8s			AML	AML		
CDRU	comp=N,64µm,0.7s			AML	AML		
CDRU	comp=E,119µm,0.2s			AML	AML		
CDRU	comp=N,64µm,0.8s			AML	AML		
CRAC	**Craco**	**2.77**	**24**	P	**Pn**	**23 49 28.4**	**+1.5**
CRAC	comp=E,454µm,0.6s			AML	AML		
CRAC	comp=N,469µm,0.5s			AML	AML		
CRAC	comp=E,449µm,0.4s			AML	AML		
CRAC	comp=N,469µm,0.5s			AML	AML		
MIGL	**Miglionico**	**2.99**	**22**	⇓P	**Pn**	**23 49 33.1**	**+3.2**
MIGL	comp=E,762µm,0.8s			AML	AML		
MIGL	comp=E,762µm,1.2s			AML	AML		
MIGL	comp=N,620µm,0.9s			AML	AML		
MIGL	comp=E,762µm,0.8s			AML	AML		
MIGL	comp=N,514µm,0.5s			AML	AML		
ACER	**Acerenza**	**3.04**	**14**	P	**Pn**	**23 49 32.2**	**+1.5**
ACER	comp=N,270µm,1.6s			AML	AML		
ACER	comp=E,286µm,0.8s			AML	AML		
ACER	comp=N,242µm,0.7s			AML	AML		
ACER	comp=E,335µm,1.0s			AML	AML		
ACER	comp=E,286µm,1.2s			AML	AML		
ACER	comp=N,242µm,1.3s			AML	AML		
ACER	comp=E,287µm,0.8s			AML	AML		
ACER	comp=E,334µm,0.8s			AML	AML		
ACER	comp=N,242µm,0.7s			AML	AML		
ACER	comp=N,270µm,0.4s			AML	AML		
MTMR	**Montemarano**	**3.07**	**1**	P	**Pn**	**23 49 32.3**	**+1.2**
MTMR	comp=E,560µm,0.9s			AML	AML		
MTMR	comp=N,920µm,0.8s			AML	AML		
MTMR	comp=N,920µm,1.2s			AML	AML		
MTMR	comp=N,47µm,49.4s			AML	AML		
MTMR	comp=E,81µm,1.0s			AML	AML		
MTMR	comp=N,755µm,0.2s			AML	AML		
MTMR	comp=E,510µm,0.2s			AML	AML		
LTRZ	**Laterza**	**3.11**	**27**	P	**Pn**	**23 49 33.5**	**+1.9**
LTRZ	comp=E,142µm,0.5s			AML	AML		
LTRZ	comp=N,1220µm,0.3s			AML	AML		
LTRZ	comp=E,142µm,1.5s			AML	AML		
LTRZ	comp=E,141µm,0.5s			AML	AML		
LTRZ	comp=E,130µm,0.4s			AML	AML		
MATE	**Matera**	**3.11**	**25**	P	**Pn**	**23 49 33.6**	**+2.0**
MATE	comp=N,172µm,0.6s			AML	AML		
MATE	comp=E,148µm,1.0s			AML	AML		
MATE	comp=N,172µm,1.4s			AML	AML		
MATE	comp=E,142µm,0.3s			AML	AML		
MATE	comp=N,172µm,0.6s			AML	AML		
TAR1	**Taranto**	**3.23**	**33**	P	**Pn**	**23 49 34.5**	**+1.3**
TAR1	comp=E,201µm,0.2s			AML	AML		
TAR1	comp=N,206µm,1.3s			AML	AML		
TAR1	comp=N,187µm,0.2s			AML	AML		
TAR1	comp=E,201µm,0.2s			AML	AML		
AMUR	**Altamura**	**3.31**	**22**	P	**Pn**	**23 49 35.9**	**+1.5**
AMUR	comp=E,171µm,0.9s			AML	AML		
AMUR	comp=N,144µm,0.3s			AML	AML		
AMUR	comp=E,171µm,1.1s			AML	AML		
AMUR	comp=N,144µm,0.3s			AML	AML		
AMUR	comp=E,145µm,0.3s			AML	AML		
MRVN	**Minervino Murg**	**3.35**	**16**	P	**Pn**	**23 49 36.6**	**+1.6**
NOCI	**Noci**	**3.37**	**28**	⇑P	**Pn**	**23 49 36.3**	**+1.2**
NOCI	comp=N,202µm,0.3s			AML	AML		
NOCI	comp=E,148µm,1.5s			AML	AML		
NOCI	comp=E,136µm,0.2s			AML	AML		
NOCI	comp=N,201µm,0.2s			AML	AML		
KEST	**Kesra** comp=N,0.5nm,0.3s,baz=111,slow=14,SNR=11	**4.97**	**247**	Pn	**Pn**	**23 49 59.2**	**+1.9**
KEST	comp=N,0.4nm,0.3s,baz=74,slow=19,SNR=1.4 comp=N,3.0nm,0.8s			Sn	**Sn**	**23 50 55.8**	**+1.8**
ULC	**Ulcinj**	**5.27**	**37**	⇓*i*Pn	**Pn**	**23 50 01.0**	**-0.3**
ULC				*i* Sn	**Sn**	**23 50 57.0**	**-4.1**
HCY	**Herceg Novi**	**5.34**	**29**	⇓*i*Pn	**Pn**	**23 50 01.7**	**-0.5**
HCY				*i* Sn	**Sn**	**23 50 59.5**	**-3.2**
BUM	**Brajici-Budva**	**5.38**	**33**	⇑*i*Pn	**Pn**	**23 50 03.2**	**+0.4**
BUM				*i* Sn	**Sn**	**23 50 59.6**	**-4.2**
DRME	**Dracevica, Mon**	**5.42**	**35**	⇑*i*Pn	**Pn**	**23 50 03.5**	**+0.2**
DRME				*e*Sn	**Sn**	**23 51 01.1**	**-3.5**
CEME	**Cevo**	**5.59**	**32**	⇓*i*Pn	**Pn**	**23 50 06.0**	**+0.3**
CEME				*e*Sn	**Sn**	**23 51 05.1**	**-3.9**
PDG	**Podgorica**	**5.64**	**34**	⇑*i*Pn	**Pn**	**23 50 06.2**	**-0.1**
PDG				*i* Sn	**Sn**	**23 51 06.7**	**-3.4**
BRY	**Bratogost**	**5.74**	**27**	⇑*i*Pn	**Pn**	**23 50 08.7**	**+0.8**
BRY				*i* Sn	**Sn**	**23 51 08.9**	**-4.0**
NKME	**Niksic**	**5.79**	**31**	⇑*i*Pn	**Pn**	**23 50 08.4**	**0.0**
NKME				*e*Sn	**Sn**	**23 51 10.3**	**-3.6**
KOME	**Kolasin**	**6.09**	**33**	⇓*i*Pn	**Pn**	**23 50 13.4**	**+0.7**
KOME				*e*Sn	**Sn**	**23 51 16.9**	**-4.5**
IVA	**Berane**	**6.28**	**35**	⇓*i*Pn	**Pn**	**23 50 16.4**	**+1.2**
IVA				*i* Sn	**Sn**	**23 51 21.1**	**-4.9**
PLE	**Pljevlja**	**6.43**	**30**	⇑*i*Pn	**Pn**	**23 50 18.1**	**+0.7**
PLE				*i* Sn	**Sn**	**23 51 25.8**	**-4.1**
FINES	**FINESS Array B** comp=N,0.5nm,0.5s,baz=186,slow=9.8,SNR=4.5 comp=N,0.5nm,0.5s	**24.63**	**13**	P	**P**	**23 54 02.2**	**+0.1**
MKAR	**Makanchi Array** comp=N,0.3nm,0.6s,baz=281,slow=7.3,SNR=4.9 comp=N,0.3nm,0.6s	**49.19**	**57**	P	**P**	**23 57 30.5**	**+0.6**

TAP ***17*** *23:53:30.5, 24°.56N×122°.61E, h14km±1km, ML2.7, C*
JMA ***17*** *23:53:30.6±0.1, 25°N±1°×122°.6E±0°.5, h9km±2km, MV2.0/9,*
NW OFF ISHIGAKIJIMA IS
ISC 17 23:53:30.8±1.0**, 24°.60N**±0°.03×**122°.61E**±0°.02**, h14**km±8km**,**
n44, σ0

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.34**	**116**	*e*P	**Pg**	**23 53 37.7**	**0.0**
JYNG				*e*S	**Sg**	**23 53 42.9**	**+0.5**
EOS2	**EOS2**	**0.39**	**243**	P	**Pb**	**23 53 38.9**	**-0.4**
EOS2				S	**Sb**	**23 53 44.7**	**-0.4**
YOJ	**Yonaguni jima**	**0.39**	**110**	⇓*i*P	**Pg**	**23 53 38.6**	**-0.1**
YOJ				S	**Sb**	**23 53 44.7**	**-0.6**
YOJ	**Yonaguni jima**	**0.39**	**110**	P	**Pg**	**23 53 38.6**	**-0.1**

YOJ				*e*S	**Sg**	**23 53 44.3**	**+0.3**
EOS3	**EOS3**	**0.41**	**221**	⇓*i*P	**Pg**	**23 53 39.1**	**+0.2**
EOS3				*i* S	**Sb**	**23 53 46.0**	**+0.3**
EOS4	**EOS4**	**0.55**	**209**	*e*P	**Pg**	**23 53 41.4**	**0.0**
EOS4				*i* S	**Sb**	**23 53 49.2**	**-0.2**
EGS		**0.66**	**292**	P	**Pn**	**23 53 45.2**	**-0.5**
EGS				S	**Sn**	**23 53 55.5**	**-0.5**
TWC	**Suao**	**0.69**	**271**	P	**Pg**	**23 53 43.7**	**-0.6**
TWC				S	**Sb**	**23 53 54.2**	**+0.2**
TWB1	**Santiao Chiao**	**0.70**	**306**	P	**Pb**	**23 53 44.6**	**-0.1**
TWB1				*e*S	**Sb**	**23 53 54.7**	**+0.5**
ESAO	**Su ao**	**0.70**	**268**	*e*P	**Pb**	**23 53 44.5**	**-0.2**
ESAO				*e*S	**Sb**	**23 53 54.5**	**+0.4**
EWUT	**Wuta**	**0.77**	**259**	*e*P	**Pb**	**23 53 45.9**	**-0.1**
EWUT				*i* S	**Sg**	**23 53 55.9**	**-0.1**
TIPB	**Shuangxi**	**0.80**	**298**	P	**Pn**	**23 53 47.4**	**-0.3**
TIPB				S	**Sn**	**23 53 58.6**	**-0.8**
ENA	**Nanau**	**0.81**	**258**	*i* P	**Pg**	**23 53 46.1**	**-0.4**
ENA				*i* S	**Sg**	**23 53 56.7**	**-0.5**
NDS	**Dongshan**	**0.81**	**273**	P	**Pn**	**23 53 47.8**	**0.0**
NDS				S	**Sb**	**23 53 58.1**	**+0.6**
SXI1	**Grass Mountain**	**0.83**	**307**	*e*P	**Pn**	**23 53 47.6**	**-0.5**
SXI1				S	**Sb**	**23 53 59.1**	**+1.1**
EAHA	**Aohua**	**0.84**	**252**	*e*P	**Pg**	**23 53 46.9**	**-0.1**
TWE	**Neicheng**	**0.87**	**278**	*e*P	**Pg**	**23 53 47.0**	**-0.6**
TWE				*i* S	**Sn**	**23 54 00.5**	**-0.4**
WFSB	**Wu-fen Shan**	**0.89**	**302**	*e*P	**Pn**	**23 53 48.5**	**-0.3**
WFSB				*e*S	**Sb**	**23 54 00.3**	**+0.6**
TNOU	**National Taiwa**	**0.94**	**306**	P	**Pb**	**23 53 48.9**	**+0.1**
TNOU				S	**Sb**	**23 54 01.2**	**+0.1**
FUSB	**Fushanzhiwuyua**	**0.94**	**280**	*i* P	**Pn**	**23 53 49.6**	**0.0**
FUSB				S	**Sb**	**23 54 02.1**	**+0.7**
ENTT	**Nioudou**	**0.95**	**273**	*i* P	**Pn**	**23 53 49.9**	**+0.2**
ENTT				S	**Sb**	**23 54 02.5**	**+1.0**
LATG	**Datong**	**0.99**	**267**	*i* P	**Pb**	**23 53 50.0**	**+0.3**
LATG				*e*S	**Sb**	**23 54 03.0**	**+0.3**
ETL	**Fush Village**	**1.00**	**244**	*e*P	**Pg**	**23 53 49.6**	**-0.5**
TWA	**Mucha**	**1.01**	**292**	*e*P	**Pn**	**23 53 50.8**	**+0.3**
NACB	**Ninganchiao**	**1.02**	**246**	*i* P	**Pb**	**23 53 49.9**	**-0.3**
NACB				*e*S	**Sb**	**23 54 04.0**	**+0.7**
NWLT	**Wulai**	**1.02**	**280**	*i* P	**Pn**	**23 53 50.9**	**+0.2**
NWLT				S	**Sb**	**23 54 04.1**	**+0.5**
IRIF	**Iriomote-Funau**	**1.05**	**104**	P	**Pb**	**23 53 50.4**	**-0.4**
IRIF				*e*S	**Sb**	**23 54 04.3**	**-0.1**
ETLH	**Xiulin Townshi**	**1.10**	**249**	*e*P	**Pn**	**23 53 51.9**	**0.0**
YHNB	**Yeheng**	**1.13**	**274**	*i* P	**Pn**	**23 53 52.6**	**+0.4**
YHNB				*i* S	**Sg**	**23 54 07.3**	**+0.1**
NNSB	**Datong**	**1.13**	**262**	*e*P	**Pn**	**23 53 52.5**	**+0.2**
NSK	**Sanguang**	**1.14**	**274**	*i* P	**Pg**	**23 53 52.7**	**-0.1**
NSK				S	**Sn**	**23 54 07.9**	**0.0**
ETM	**Tongmen**	**1.20**	**239**	*e*P	**Pn**	**23 53 53.0**	**-0.1**
HATJ	**Hateruma jima**	**1.22**	**116**	S	**Sn**	**23 54 10.2**	**+0.7**
LXIB	**Xiulin Townshi**	**1.23**	**242**	*e*P	**Pg**	**23 53 54.5**	**-0.1**
LXIB				*e*S	**Sn**	**23 54 11.6**	**+1.4**
FUSS	**Fushou**	**1.29**	**255**	*e*P	**Pg**	**23 53 55.9**	**+0.2**
JKRS	**Kuro-shima**	**1.32**	**105**	*e*S	**Sb**	**23 54 11.7**	**-0.5**
NFF	**Wufeng Townshi**	**1.36**	**272**	*e*P	**Pn**	**23 53 55.5**	**+0.2**
JIJ	**Ishigaki jima**	**1.42**	**99**	*e*P	**Pn**	**23 53 56.4**	**+0.3**
JIJ				*e*S	**Sb**	**23 54 15.3**	**+0.4**
WARBT	**Fenglin Townsh**	**1.42**	**232**	*e*P	**Pn**	**23 53 55.9**	**-0.2**
EGFH	**Guangfu**	**1.42**	**230**	*e*P	**Pn**	**23 53 55.9**	**-0.2**
LIOB	**Emei**	**1.45**	**272**	*e*P	**Pn**	**23 53 56.5**	**0.0**
OWD	**Renai**	**1.46**	**244**	*e*P	**Pn**	**23 53 57.1**	**+0.3**
WUSB	**Renai**	**1.49**	**246**	*e*P	**Pb**	**23 53 58.0**	**-0.3**
VWDT	**VWDT**	**1.58**	**238**	*e*P	**Pn**	**23 53 57.2**	**-1.2**

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*SDD **18** 00:06:36.2±2.6, 19°.18N×69°.66W, h20^{km}±14^{km}, MD3.7, ML3.6, MW4.0, Presumed earthquake*

*OSPL **18** 00:06:36.7±2.0, 19°.30N×69°.67W, h0^{km}±11^{km}, ML3.2, Presumed earthquake*

ISC 18 00:06:34.7±1.0**, 19°.18N**±0°.03×**69°.66W**±0°.02**, h24**^{km}±8^{km}**, n42, σ1^s.30**/62**, 4C-7D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NADR	**Nagua**	**0.26**	**313**	*e*Pg	**Pb**	**00 06 40.7**	**-0.4**
NADR				*e*Sg	**Sb**	**00 06 45.9**	**+0.5**
NADR				IAML		00 06 46.2	
	comp=N,34µm,0.3s						
NAG1	**Nagua**	**0.26**	**311**	*e*Pg	**Pb**	**00 06 40.7**	**-0.5**
DR08	**Loma La Naviza**	**0.41**	**238**	*e*Pg	**Pb**	**00 06 43.3**	**-0.1**
DR08				*e*Sg	**Sb**	**00 06 49.6**	**+0.3**
DR08				IAML		00 06 50.5	
	comp=N,49µm,0.2s						
SMDR	**Samana, DR**	**0.46**	**76**	⇑*e*Pg	**Pb**	**00 06 44.3**	**+0.1**
SMDR				*e*Sg	**Sn**	**00 06 52.8**	**-0.3**
SMDR				IAML		00 06 53.0	
	comp=N,4µm,0.7s						
HATOM	**Hato Mayor del**	**0.47**	**146**	*e*Pg	**Pb**	**00 06 45.0**	**+0.6**
HATOM				*e*Sg	**Sn**	**00 06 52.5**	**-0.9**
HATOM				IAML		00 06 52.9	
	comp=N,20µm,0.3s						
CADR	**Cabrera**	**0.56**	**331**	*e*Pg	**Pb**	**00 06 45.4**	**-0.4**
CADR				⇓*e*Sg	**Sb**	**00 06 54.1**	**+0.7**
CADR				IAML		00 06 55.7	
	comp=N,19µm,0.3s						
SFDR	**San Fco. de Ma**	**0.56**	**281**	*e*Pg	**Pb**	**00 06 45.7**	**-0.2**
SFDR				*e*Sg	**Sn**	**00 06 54.9**	**-0.9**
SFDR				IAML		00 06 55.4	
	comp=N,4µm,0.5s						
MIDR	**Miches**	**0.60**	**109**	*e*Pg	**Pb**	**00 06 47.0**	**+0.4**
MIDR				⇓*e*Pg	**Pb**	**00 06 47.1**	**+0.4**
MIDR				IAML		00 06 58.8	
	comp=N,765nm,0.3s						
MIDR				IAML		00 06 58.8	
	comp=N,319nm,0.3s						
SDD	**Santo Domingo**	**0.76**	**199**	⇓*e*Pg	**Pb**	**00 06 49.2**	**0.0**
SDD				⇓*e*Sg	**Sn**	**00 07 00.2**	**-0.3**
SDD				IAML		00 07 00.3	
	comp=N,323nm,0.5s						
SDD	**Santo Domingo**	**0.76**	**199**	*i* P	**Pb**	**00 06 49.2**	**0.0**
SDD				*e*S	**Sb**	**00 06 59.7**	**+0.6**
ABDR	**Alto Bandera**	**0.99**	**249**	*e*Pg	**Pn**	**00 06 52.7**	**-0.6**
ABDR				IAML		00 06 57.9	
	comp=N,1.5nm,0.3s						
SC01	**Santiago de lo**	**1.04**	**284**	*e*Pg	**Pb**	**00 06 54.6**	**+0.5**
SC01				⇓*e*Sg	**Sn**	**00 07 10.6**	**+3.0**
SC01				IAML		00 07 18.9	
	comp=N,574nm,0.7s						
SC01	**Santiago de lo**	**1.04**	**284**	*i* P	**Pb**	**00 06 54.8**	**+0.7**
HGY1	**Higuey**	**1.06**	**123**	*e*Pg	**Pb**	**00 06 54.9**	**+0.4**
HGY1				IAML		00 07 19.1	
	comp=N,901nm,0.3s						
PCDR	**Punta Cana, DR**	**1.38**	**119**	*e*Pg	**Pb**	**00 07 00.7**	**+0.9**
PCDR				IAML		00 07 26.2	
	comp=N,534nm,0.5s						
LUDR	**Luperon**	**1.42**	**300**	⇓*e*Pg	**Pb**	**00 07 00.4**	**0.0**
LUDR				*e*Sg	**Sb**	**00 07 21.4**	**+3.4**
SDDR	**Presa de Saban**	**1.56**	**263**	*e*P	**Pb**	**00 07 03.1**	**+0.2**
SDDR				*e*S	**Sb**	**00 07 23.3**	**+1.1**
SDDR	**Presa de Saban**	**1.56**	**263**	*e*Pg	**Pb**	**00 07 03.2**	**+0.3**
SDDR				IAML		00 07 30.2	
	comp=N,398nm,0.7s						
SDDR	**Presa de Saban**	**1.56**	**263**	*i* P	**Pb**	**00 07 03.1**	**+0.3**
SDDR				IAML		00 07 31.4	
	comp=Z,127nm,0.3s						
LOPP1	**Punta Rusia, P**	**1.60**	**295**	*i* P	**Pb**	**00 07 02.9**	**-0.7**
LOPP1				*e*S	**Sb**	**00 07 25.0**	**+1.6**
LOPP1				IAML		00 07 31.7	
	comp=Z,508nm,0.9s						
REDR	**Restauracion**	**1.64**	**270**	*e*Pg	**Pb**	**00 07 08.3**	**+4.0**
REDR				*e*Sg	Sb	00 07 34.1	+9.5
REDR				IAML		00 07 34.6	
	comp=N,1µm,0.5s						
LONE3	**El Aguacate, B**	**1.80**	**252**	*i* P	**Pb**	**00 07 06.7**	**-0.4**
LONE3				*e*S	**Sb**	**00 07 30.2**	**+0.9**
LONE3				IAML		00 07 35.6	
	comp=Z,152nm,0.6s						
PODR	**Polo**	**1.84**	**237**	*e*Pg	**Pb**	**00 07 08.6**	**+0.7**
PODR				IAML		00 07 40.7	
	comp=N,399nm,1.2s						
PODR	**Polo**	**1.84**	**237**	*i* P	**Pb**	**00 07 08.5**	**+0.7**
LODU1	**El Espartillar**	**1.91**	**245**	*i* P	**Pb**	**00 07 09.4**	**+0.5**
LODU1				IAML		00 07 42.3	
	comp=Z,398nm,2.8s						
MCDR	**Montecristi**	**2.02**	**291**	⇑*e*Pg	**Pb**	**00 07 09.5**	**-1.2**
MCDR				⇓*e*Sg	**Sb**	**00 07 37.3**	**+2.0**
MCDR				IAML		00 07 42.9	
	comp=N,2µm,0.3s						
LOVI	**El Cajuil, Ovi**	**2.13**	**230**	*i* P	**Pb**	**00 07 12.5**	**0.0**
LOVI				*e*S	**Sb**	**00 07 38.7**	**+0.2**
LOVI				IAML		00 07 47.2	
	comp=Z,138nm,1.1s						
JIDR	**Jimani**	**2.19**	**252**	*e*Pg	**Pb**	**00 07 13.4**	**-0.2**
JIDR				IAML		00 07 48.1	
	comp=N,1µm,0.3s						
LOBH	**Bahia de las A**	**2.29**	**235**	*i* P	**Pb**	**00 07 15.5**	**+0.1**
LOBH				IAML		00 08 00.3	
	comp=Z,77nm,1.8s						
AGPR	**Aguadilla, PR**	**2.51**	**106**	*i* P	**Pb**	**00 07 17.3**	**-1.9**
AGPR				IAML		00 07 59.8	
	comp=Z,180nm,0.2s						
PAPH	**Port-au-Prince**	**2.59**	**256**	*i* P	**Pb**	**00 07 18.7**	**-1.7**
CRPR	**Cabo Rojo, PR**	**2.68**	**115**	*e*Pg	**Pb**	**00 07 21.9**	**-0.1**
CRPR				*e*Sg	**Sb**	**00 07 57.3**	**+2.8**
CRPR				IAML		00 08 14.1	
	comp=N,576nm,0.3s						
CRPR	**Cabo Rojo, PR**	**2.68**	**115**	*i* P	**Pb**	**00 07 20.9**	**-1.2**
CRPR				IAML		00 08 13.0	
	comp=Z,102nm,0.3s						
GRTK	**Grand Turk**	**2.70**	**329**	*e*P	**Pn**	**00 07 16.4**	**-0.2**
GRTK	**Grand Turk**	**2.70**	**329**	⇑*i*P	**Pn**	**00 07 16.6**	**0.0**
GRTK				*e*S	**Sn**	**00 07 48.4**	**-0.1**
GRTK				IAML		00 07 52.1	
	comp=Z,93nm,2.4s						
AOPR	**Arecibo Observ**	**2.87**	**106**	⇑*e*Pg	**Pb**	**00 07 25.1**	**-0.2**
AOPR				IAML		00 08 09.7	
	comp=N,3µm,0.3s						
MASC	**Masc**	**4.42**	**284**	*e*P	**Pn**	**00 07 38.8**	**-1.5**
QMBU	**Quimbuelo**	**4.96**	**283**	*e*P	**Pn**	**00 07 46.8**	**-0.9**
QMBU				*e*Pg	**Pn**	**00 07 50.4**	**+2.6**
QMBU				*e*S	**Sn**	**00 08 42.8**	**-1.6**
GTBY	**Guantanamo Bay**	**5.20**	**279**	*e*P	**Pn**	**00 07 50.6**	**-0.3**
MOAC	**Moa**	**5.20**	**287**	*e*P	**Pn**	**00 07 49.0**	**-2.0**
RCC	**Rio Carpintero**	**5.75**	**279**	*e*P	**Pn**	**00 07 56.4**	**-2.1**
PINC	**Pinares de May**	**5.92**	**284**	*e*P	**Pn**	**00 07 58.3**	**-2.6**

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*MOS **18** 00:14:05.1±1.1, 29°.56N×105°.00E, h14^{km}, mb5.2/94, MS4.6/15, Error ellipse: s-maj=6.2km s-min=3.3km az=126.1*

*GCMT **18** 00:14:06.8±0.2, 29°.52N±0°.02×104°.86E±0°.02, h12^{km}, MW4.9/106, Moment Tensor Solution. s38,c44; s106,c165; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.65±.06; M$_{\theta\theta}$-0.83±.06; M$_{\phi\phi}$-1.82±.06; M$_{r\theta}$0.24±.22; M$_{\theta\phi}$-1.21±.05; M$_{\phi r}$-1.93±.22; Best double couple: M$_0$3.26000×10^{16} NP1:φ$_s$51.00000°,δ33.00000°, λ123.00000°. NP2:φ$_s$193.00000°,δ63.00000°,λ71.00000°. Principal axes: T 3.4690, Plg66.0000°, Azm67.0000°; N -0.4180, Plg17.0000°, Azm202.0000°; P -3.0500, Plg16.0000°, Azm297.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **18** 00:14:06.9, 29°.60N×104°.83E, h14^{km}, mB5.1/34, mb4.9/57, ML5.3/27, Ms5.1/81, Ms7 4.9/76*

*NEIC **18** 00:14:06.8±1.4, 29°.61N±0°.06×104°.96E±0°.08, h10^{km}, mb5.2/300, Mww4.9/17, Error ellipse: s-maj=11.1km s-min=10.3km az=84.0*

*NEIC **18** 00:14:07.2, 29°.52N×105°.04E, h12^{km}, Moment Tensor Solution. Duration: 1^s.6 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.52; M$_{\theta\theta}$-0.92; M$_{\phi\phi}$-1.60; M$_{r\theta}$0.60; M$_{\theta\phi}$-1.11; M$_{\phi r}$-0.13; Fault plane solution: M$_0$2.55000×10^{16} NP1: φ$_s$205.40000°,δ43.14000°,λ73.08000°. NP2:φ$_s$48.03000°, δ49.14000°,λ105.26000°. Principal axes: T 2.6489, Plg78.0000°, Azm23.0000°; N -0.2144, Plg11.0000°, Azm218.0000°; P -2.4345, Plg3.0000°, Azm127.0000°;*

*NEIC **18** 00:14:07.2, 29°.62N×104°.93E, h12^{km}*

*IDC **18** 00:14:08.1±2.6, 29°.61N×105°.02E, h20^{km}±16^{km}, mb4.7/34, mbtmp4.8/37, ML5.0/3, MS4.3/57, Error ellipse: s-maj=13.6km s-min=9.6km az=51.0*

*BGR **18** 00:14:13.6, 30°.35N×105°.51E, h33^{km}, mb5.1, Ms4.7*

ISC 18 00:14:07.8±0.5**, 29°.64N**±0°.02×**104°.99E**±0°.03**, h16**^{km}±2^{km}**, h17**^{km}**:pP-P, n992, σ1^s.35**/917**, mb5.1**/316**, MS4.4**/75**, 46C-31D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.65**	**320**	⇓Pg	**Pn**	**00 14 35.4**	**-0.8**
CD2				Sg	**Sb**	**00 14 57.8**	**-0.7**
CD2				smax	smax		
	comp=N,70µm,0.7s						
CD2				smax	smax		
	comp=E,76µm,0.8s						
GYA	**Guiyang**	**3.50**	**155**	⇑Pn	**Pn**	**00 15 01.6**	**0.0**
GYA				Pg	**Pg**	**00 15 13.3**	**-1.6**
GYA				Sn	**Sn**	**00 15 44.8**	**+2.1**
GYA				smax	smax		
	comp=N,4µm,0.9s						
GYA				smax	smax		
	comp=E,4µm,1.2s						
GYA				LR	LR		
	comp=N,47µm,4.4s						
GYA				LR	LR		
	comp=E,39µm,3.9s						
GYA				LR	LR		
	comp=Z,45µm,5.0s						
ENH	**Enshi**	**3.96**	**80**		**Pn**	**00 15 09.8**	**+2.0**
ENH	**Enshi**	**3.96**	**80**	P	**Pn**	**00 15 11.0**	**+3.2**
ENH	**Enshi**	**3.96**	**80**	S	**Sb**	**00 16 01.4**	**-3.4**
PZH	**PanZhiHua**	**4.24**	**223**	Pn	**Pn**	**00 15 12.9**	**+1.1**
PZH				Pg	**Pb**	**00 15 24.1**	**+2.1**
PZH				Sg	**Sb**	**00 16 16.3**	**+3.3**
PZH				smax	smax		
	comp=N,3µm,1.1s						
PZH				smax	smax		
	comp=E,3µm,1.1s						
PZH				LR	LR		
	comp=N,14µm,5.9s						
PZH				LR	LR		
	comp=E,10µm,6.9s						
PZH				LR	LR		
	comp=Z,16µm,5.2s						
KMI	**Kunming**	**4.92**	**204**	⇑Pn	**Pn**	**00 15 21.6**	**+0.3**
KMI				Sn	**Sn**	**00 16 18.1**	**+0.1**
KMI				smax	smax		
	comp=N,890nm,1.1s						
KMI				smax	smax		
	comp=E,680nm,0.9s						
KMI				LR	LR		
	comp=N,22µm,4.7s						
KMI				LR	LR		
	comp=E,17µm,5.2s						
KMI				LR	LR		
	comp=Z,13µm,6.7s						
XAN	**Xi'an**	**5.52**	**36**	Pn	**Pn**	**00 15 30.3**	**+1.0**
XAN				Pg	**Pg**	**00 15 49.3**	**-4.2**
XAN				Sn	**Sn**	**00 16 32.1**	**-0.3**
XAN				Sg	**Sg**	**00 17 01.3**	**-3.6**
XAN				LR	LR		
	comp=N,14µm,5.3s						
XAN				LR	LR		
	comp=E,16µm,5.5s						
XAN				LR	LR		
	comp=Z,9µm,5.2s						
LZDM	**Lanzhou Array**	**6.39**	**351**	Pn	**Pn**	**00 15 43.0**	**+1.5**
	baz=178,slow=13						
LZDM				Sn	**Sn**	**00 16 54.2**	**-0.1**
	baz=167,slow=22						
LZDM				Lg	Lg	00 17 27.1	
	baz=184,slow=39						
LZDM				LR	LR	00 18 25.1	
	comp=Z,2µm,21.3s,baz=10.0,slow=40						
	190nm,0.3s						
GULI	**GuiLin**	**6.45**	**131**	Pn	**Pn**	**00 15 37.3**	**-4.8**
GULI				Sn	**Sn**	**00 16 50.9**	**-4.4**
GULI				smax	smax		
	comp=N,1µm,1.4s						
GULI				smax	smax		
	comp=E,1µm,1.1s						
LZH	**Lanzhou**	**6.50**	**352**	⇓Pn	**Pn**	**00 15 44.5**	**+1.6**
LZH				Sn	**Sn**	**00 17 00.6**	**+3.8**
LZH				Sg	**Sg**	**00 17 30.6**	**-5.8**
LZH				smax	smax		
	comp=E,2µm,1.5s						
LZH				smax	smax		
	comp=E,3µm,1.6s						
LZH				LR	LR		
	comp=E,18µm,9.3s						
LZH				LR	LR		
	comp=E,16µm,9.3s						
LZH				LR	LR		
	comp=E,10µm,9.3s						
CNSH	**ChangSha**	**7.11**	**100**	Pn	**Pn**	**00 15 52.3**	**+1.1**
CNSH				Sn	**Sn**	**00 17 10.1**	**-1.6**
CNSH				smax	smax		
	comp=E,1µm,1.1s						
CNSH				smax	smax		
	comp=E,960nm,1.1s						
CNSH				LR	LR		
	comp=E,7µm,5.2s						
CNSH				LR	LR		
	comp=E,6µm,6.3s						
CNSH				LR	LR		
	comp=E,9µm,9.8s						
TNCH	**TengChong**	**7.36**	**233**	Pn	**Pn**	**00 15 50.6**	**-4.1**
TNCH				Sn	**Sn**	**00 17 15.3**	**-2.7**
TNCH				Sg	**Sg**	**00 17 58.1**	**-5.9**
TNCH				smax	smax		
	comp=E,2µm,1.8s						
TNCH				smax	smax		
	comp=E,1µm,2.5s						
TNCH				LR	LR		
	comp=E,9µm,5.6s						
TNCH				LR	LR		
	comp=E,8µm,4.7s						
TNCH				LR	LR		
	comp=E,11µm,7.2s						
LYN	**LuoYang**	**8.01**	**50**	P	**Pn**	**00 16 04.3**	**+0.8**
LYN				S	**Sn**	**00 17 31.3**	**-2.5**
LYN				pmax	pmax		
	comp=E,340nm,0.8s						
LYN				smax	smax		
	comp=E,2µm,0.9s						
LYN				smax	smax		
	comp=E,1µm,1.1s						
LYN				LR	LR		
	comp=E,9µm,5.6s						
LYN				LR	LR		
	comp=E,10µm,5.3s						
LYN				LR	LR		
	comp=E,8µm,5.2s						
WHN	**Wuhan**	**8.16**	**81**	⇓P	**Pn**	**00 16 05.6**	**+0.1**
WHN				S	**Sn**	**00 17 38.3**	**+0.9**
WHN				LR	LR		
	comp=E,29µm,4.6s						
WHN				LR	LR		
	comp=E,13µm,4.3s						
GZH	**Guangzhou**	**9.93**	**129**	P	**Pn**	**00 16 26.8**	**-3.1**
GZH				S	**Sn**	**00 18 20.6**	**-0.4**
GZH				LR	LR		
	comp=E,10µm,4.5s						
GZH				LR	LR		
	comp=E,17µm,4.8s						
TIY	**Taiyuan**	**10.16**	**36**	P	**Pn**	**00 16 33.0**	**0.0**
TIY				S	**Sn**	**00 18 26.0**	**-0.6**
TIY				pmax	pmax		
	comp=E,110nm,0.7s						
TIY				LR	LR		
	comp=E,4µm,9.7s						
TIY				LR	LR		
	comp=E,4µm,7.2s						
TIY				LR	LR		
	comp=E,2µm,8.9s						
GTA	**Gaotai**	**10.64**	**338**	P	**Pn**	**00 16 41.8**	**+2.2**
GTA				pP		00 16 45.4	
GTA				pmax	pmax		
	comp=E,38nm,0.8s						
GTA				LR	LR		
	comp=E,5µm,13.5s						
GTA				LR	LR		
	comp=E,8µm,14.3s						
GTA				LR	LR		
	comp=E,7µm,14.3s						
GOMU	**GeErMu**	**10.76**	**310**	P	**Pn**	**00 16 40.8**	**-0.7**
GOMU				S	**Sn**	**00 18 42.1**	**+0.4**
GOMU				LR	LR		
	comp=E,5µm,10.5s						
GOMU				LR	LR		
	comp=E,6µm,10.6s						
GOMU				LR	LR		
	comp=E,10µm,10.4s						
MORE	**Moreh**	**10.95**	**243**	Pn	**Pn**	**00 16 43.5**	**-0.2**
HKPS	**Hong Kong Po S**	**11.02**	**130**	Pn	**Pn**	**00 16 45.0**	**+0.2**
HNS	**HongShan**	**11.21**	**44**	⇑P	**Pn**	**00 16 49.3**	**+2.1**
HNS				pmax	pmax		
	comp=E,20nm,0.9s						
HNS				LR	LR		
	comp=E,3µm,9.1s						
HNS				LR	LR		
	comp=E,4µm,9.7s						
HNS				LR	LR		
	comp=E,2µm,11.2s						
QIZ	**Qiongzhong**	**11.45**	**156**	P	**Pn**	**00 16 50.9**	**+0.2**
QIZ				S	**Sn**	**00 19 02.1**	**+3.8**
QIZ				pmax	pmax		
	comp=E,22nm,1.2s						
QIZ				LR	LR		
	comp=E,8µm,6.2s						
QIZ				LR	LR		
	comp=E,3µm,4.6s						
QIZ				LR	LR		
	comp=E,7µm,7.7s						
BTO	**Baotou**	**11.69**	**19**	*e*P	**Pn**	**00 16 54.6**	**+0.7**
BTO				PP	**PnPn**	**00 17 05.1**	**+3.3**
BTO				sP		00 17 09.3	
BTO				S	**Sn**	**00 19 06.4**	**+2.3**
BTO				SS	**SnSn**	**00 19 20.8**	**+4.5**
BTO				pmax	pmax		
	comp=E,53nm,0.9s						
BTO				pmax	pmax		
	comp=E,250nm,3.9s						
BTO				LR	LR		
	comp=E,6µm,7.1s						
BTO				LR	LR		
	comp=E,10µm,10.8s						
BTO				LR	LR		
	comp=E,6µm,9.5s						
LSA	**Lhasa**	**12.04**	**274**		**Pn**	**00 16 57.5**	**-1.6**
LSA	**Lhasa**	**12.04**	**274**	P	Pn	00 16 54.0	-5.1
LSA				S	**Sn**	**00 19 08.4**	**-4.8**
LSA				pmax	pmax		
	comp=Z,23nm,1.0s						
LSA				LR	LR		
	comp=N,4µm,12.4s						
LSA				LR	LR		
	comp=E,1µm,5.8s						
LSA				LR	LR		
	comp=Z,2µm,8.3s						
LSA	**Lhasa**	**12.04**	**274**	Pn	**Pn**	**00 16 58.5**	**-0.5**
LSA	**Lhasa**	**12.04**	**274**	P	**Pn**	**00 16 57.5**	**-1.6**
CHTO	**Chiang Mai**	**12.10**	**208**	Pn	**Pn**	**00 16 58.4**	**-1.2**
CHTO	**Chiang Mai**	**12.10**	**208**	P	**Pn**	**00 17 02.7**	**+3.1**
CHTO	**Chiang Mai**	**12.10**	**208**	P	**Pn**	**00 17 02.4**	**+2.8**
CHTO	**Chiang Mai**	**12.10**	**208**	P	**Pn**	**00 16 58.4**	**-1.2**
TIA	**Tai'an**	**12.12**	**54**	P	**Pn**	**00 17 01.4**	**+1.7**
TIA				S	**Sn**	**00 19 21.8**	**+7.4**
TIA				pmax	pmax		
	comp=Z,82nm,1.1s						
TIA				pmax	pmax		
	comp=Z,610nm,3.9s						
TIA				LR	LR		
	comp=Z,6µm,5.8s						
TIA				LR	LR		
	comp=Z,4µm,5.8s						
TIA				LR	LR		
	comp=Z,2µm,4.4s						
NJ2	**Nanjing**	**12.16**	**75**	*e*P	**Pn**	**00 17 03.8**	**+3.5**
NJ2				pmax	pmax		
	comp=Z,36nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,260nm,3.5s						
NJ2				LR	LR		
	comp=Z,3µm,6.9s						
NJ2				LR	LR		
	comp=Z,5µm,6.6s						
NJ2				LR	LR		
	comp=Z,3µm,5.9s						
SHL	**Shillong**	**12.31**	**254**	Pn	**Pn**	**00 16 59.3**	**-3.2**
SHL	**Shillong**	**12.31**	**254**	P	**Pn**	**00 16 59.3**	**-3.2**
HHC	**Hu-ho-hao-te**	**12.40**	**24**	*e*P	**Pn**	**00 17 05.5**	**+1.8**
HHC				S	**Sn**	**00 19 24.3**	**+2.7**
HHC				sS		00 19 31.4	
HHC				SS	**SnSn**	**00 19 37.6**	**+3.7**
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,80nm,4.7s						

HHC				LR	LR		
	comp=Z,2μm,7.2s						
HHC				LR	LR		
	comp=Z,2μm,8.1s						
HHC				LR	LR		
	comp=Z,1μm,7.6s						
CM31	Chiang Mai Arr	12.42	208	Pn	Pn	00 17 05.6	+1.7
CMAR	Chiang Mai Arr	12.42	208	Pn	Pn	00 17 05.2	+1.2
	comp=Z,1.5nm,0.3s,baz=21,slow=12,SNR=31						
CMAR				Lg	Lg	00 20 50.4	
	comp=Z,0.6nm,0.3s,baz=18,slow=20,SNR=5.1						
CMAR				LR	LR	00 22 20.5	
	comp=Z,874nm,21.7s,baz=30,slow=40						
CMAR				ScP	ScP	00 26 16.9	+0.1
	comp=Z,0.4nm,0.3s,baz=40,slow=2.1,SNR=4.6						
	comp=Z,14nm,0.9s						
CMAR	Chiang Mai Arr	12.42	208	Pn	Pn	00 17 04.9	+0.9
QZH	Quanzhou	12.97	108	P	Pn	00 17 13.3	+1.9
QZH				S	Sn	00 19 44.6	+9.2
QZH				pmax	pmax		
	comp=Z,99nm,1.4s						
QZH				LR	LR		
	comp=Z,3μm,6.0s						
QZH				LR	LR		
	comp=Z,7μm,6.4s						
QZH				LR	LR		
	comp=Z,7μm,8.6s						
BJT	Baijiatuau	13.83	39	Pn	Pn	00 17 23.4	+0.4
BJT	Baijiatuau	13.83	39	P	Pn	00 17 25.5	+2.5
BJT	Baijiatuau	13.83	39	P	Pn	00 17 23.4	+0.4
BRDH	Bariadhala	13.84	243	LR	LR	00 23 15.1	
	comp=Z,1μm,18.1s,baz=77,slow=40						
BJI	Beijing	13.85	38	P	Pn	00 17 24.0	+0.7
BJI				pP	P	00 17 27.9	-3.7
BJI				S	Sn	00 20 00.4	+3.8
BJI				pmax	pmax		
	comp=Z,17nm,1.0s						
BJI				pmax	pmax		
	comp=Z,100nm,6.6s						
BJI				LR	LR		
	comp=Z,1μm,14.8s						
BJI				LR	LR		
	comp=Z,1μm,10.5s						
BJI				LR	LR		
	comp=Z,480nm,11.6s						
SSE	Sheshan	14.06	80	P	Pn	00 17 26.9	+0.6
SSE				S	Sn	00 20 04.9	+2.9
SSE				pmax	pmax		
	comp=Z,20nm,0.8s						
SSE				pmax	pmax		
	comp=Z,110nm,3.0s						
SSE				LR	LR		
	comp=Z,1μm,7.7s						
SSE				LR	LR		
	comp=Z,3μm,8.2s						
UBPT	Khong Chiam	14.30	178	P	Pn	00 17 31.8	+2.2
TPUB	Ta-pu	15.36	111	Pn	Pn	00 17 44.3	+0.4
TPUB	Ta-pu	15.36	111	P	P	00 17 46.4	-2.1
YHNB	Yeheng	15.40	105	Pn	Pn	00 17 45.1	+0.6
YHNB	Yeheng	15.40	105	P	P	00 17 47.9	-1.1
NACB	Ninganchiao	15.78	106		P	00 17 51.8	-1.3
NACB	Ninganchiao	15.78	106	P	P	00 17 53.8	+0.6
YULB	Yu-li	15.86	109	Pn	Pn	00 17 51.4	+1.0
YULB	Yu-li	15.86	109	P	P	00 17 54.0	-0.1
TWGBT	Beinan	15.95	111	P	P	00 17 54.8	-0.3
DL2	Dalian	16.55	52	P	Pn	00 18 00.1	+1.0
DL2				S	S	00 21 08.8	-5.3
DL2				pmax	pmax		
	comp=Z,130nm,1.1s						
DL2				pmax	pmax		
	comp=Z,410nm,3.5s						
DL2				LR	LR		
	comp=Z,1μm,7.9s						
DL2				LR	LR		
	comp=Z,2μm,7.5s						
DL2				LR	LR		
	comp=Z,2μm,8.6s						
XLT	XiLinHaoTe	16.75	29	eP	Pn	00 18 02.6	+0.8
XLT				pP	P	00 18 05.9	+1.9
XLT				sP	pP	00 18 09.6	+0.9
XLT				S	Sn	00 21 05.3	-2.3
XLT				sS	S	00 21 17.0	-1.4
XLT				pmax	pmax		
	comp=Z,61nm,0.8s						
XLT				pmax	pmax		
	comp=Z,170nm,3.5s						
XLT				LR	LR		
	comp=Z,3μm,7.7s						
XLT				LR	LR		
	comp=Z,910nm,10.2s						
SONM	Songino Array	18.20	3	P	P	00 18 20.5	+0.6
	comp=Z,1.3nm,0.3s,baz=185,slow=12,SNR=31						
SONM				LR	LR	00 26 33.9	
	comp=Z,666nm,18.3s,baz=184,slow=41						
	comp=Z,11nm,0.8s						
SONM	Songino Array	18.20	3	P	Pn	00 18 19.7	-0.1
ULN	Ulaanbaatar	18.27	4	P	P	00 18 21.0	+0.3
ULN	Ulaanbaatar	18.27	4	P	P	00 18 21.7	+1.0
	comp=Z,1μmcomp=Z,116nm,0.9s						
ULN	Ulaanbaatar	18.27	4	P	P	00 18 21.0	+0.3
ULN				pmax	pmax		
	comp=Z,23nm,0.9s						
SNY	Shenyang	19.33	46	⇓P	Pn	00 18 33.9	+0.5
SNY				S	S	00 22 11.3	+0.8
SNY				pmax	pmax		
	comp=Z,38nm,1.1s						
SNY				pmax	pmax		
	comp=Z,320nm,3.6s						
SNY				LR	LR		
	comp=Z,620nm,11.2s						
SNY				LR	LR		
	comp=Z,780nm,8.4s						
SNY				LR	LR		
	comp=Z,690nm,14.5s						
WMQ	Urumqi	19.75	320	eP	Pn	00 18 37.8	-0.7
WMQ				PP	PnPn	00 18 56.1	+3.8
WMQ				S	S	00 22 14.8	-4.2
WMQ				pmax	pmax		
	comp=Z,70nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,560nm,5.1s						
WMQ				LR	LR		
	comp=Z,3μm,11.3s						
WMQ				LR	LR		
	comp=Z,2μm,10.3s						
WMQ				LR	LR		
	comp=Z,1μm,18.7s						
TJN	Taejon	19.91	64	P	P	00 18 39.1	+0.5
TJN				IAmb	IAmb	00 18 43.1	
	comp=Z,120nm,0.7s						
TJN	Taejon	19.91	64	P	P	00 18 39.1	+0.5
TJN				pmax	pmax		
	comp=Z,120nm,0.7s						
KSAR	Wonju Array Be	20.58	62	P	P	00 18 45.8	-0.1
KSAR	Wonju Array Be	20.58	62	P	P	00 18 45.8	-0.1
KS19	Wonju Array Si	20.58	62	P	P	00 18 46.4	+0.5
KSRS	Korea Array	20.61	62	P	P	00 18 46.4	+0.1
	comp=Z,25nm,0.9s,baz=248,slow=11,SNR=27						
	comp=Z,25nm,0.9s						
JOW	Kunigami	20.70	92	P	P	00 18 47.4	0.0
	comp=Z,28nm,0.3s,baz=134,slow=21,SNR=22						
JOW				LR	LR	00 27 24.2	
	comp=Z,625nm,20.1s,baz=290,slow=38						
	comp=Z,28nm,0.3s						
JOW	Kunigami	20.70	92	P	P	00 18 48.5	+1.2
JOW	Kunigami	20.70	92	P	Pn	00 18 49.9	+0.2
ZAK	Zakamensk	20.76	357	eP	Pn	00 18 49.8	-0.5
ZAK				pmax	pmax		
	comp=Z,44nm,1.1s						
PBA	Port Blair	21.22	215	P	P	00 18 51.6	-1.3
TGY	Tagaytay City	21.36	133	LR	LR	00 27 46.7	
	comp=Z,1μm,19.6s,baz=111,slow=38						
CN2	Changchun	21.57	44	P	P	00 18 57.4	+0.9
CN2				pP	sP	00 19 08.9	+5.3
CN2				sP	pP	00 19 14.6	+13
CN2				S	S	00 22 47.3	-7.7
CN2				pmax	pmax		
	comp=Z,40nm,1.3s						
CN2				pmax	pmax		
	comp=Z,400nm,3.0s						
CN2				LR	LR		
	comp=Z,800nm,8.0s						
CN2				LR	LR		
	comp=Z,700nm,8.0s						
CN2				LR	LR		
	comp=Z,900nm,9.0s						
KNGR	Kungurtug, Tuv	21.68	347	i P	P	00 18 58.9	+1.1
KNGR				pmax	pmax		
	comp=Z,63nm,1.0s						
JSU	Suzuyama	22.00	79	P	P	00 19 01.4	+0.2
TLY	Talaya	22.04	358	P	P	00 19 01.6	0.0
MOY	Mondy	22.20	353	eP	P	00 19 05.6	+2.2
MOY				pmax	pmax		
	comp=Z,38nm,1.6s						
JNU	Nakatsue	22.36	74	LR	LR	00 28 52.7	
	comp=Z,910nm,18.3s,baz=270,slow=40						
JNU	Nakatsue	22.36	74	P	P	00 19 05.9	+0.8
JNU	Nakatsue	22.36	74	P	P	00 19 06.7	+1.6
IRK	Irkutsk	22.59	359	eP	P	00 19 09.5	+2.1
IRK				pmax	pmax		
	comp=Z,118nm,1.3s						
HIA	Hailar	22.59	26	P	P	00 19 06.8	-0.8
HIA	Hailar	22.59	26	P	P	00 19 08.8	+1.3
HIA	Hailar	22.59	26	i P	P	00 19 07.7	+0.2
HIA				pmax	pmax		
	comp=Z,33nm,1.0s						
HILR	Hailar Array B	22.84	25	P	P	00 19 10.1	+0.1
	comp=Z,21nm,0.6s,baz=202,slow=10,SNR=28						
	comp=Z,21nm,0.6s						
ZSN	Zaisan	23.63	324	eP	P	00 19 18.1	0.0
ZSN				eS	S	00 23 34.4	+2.4
ZSN	Zaisan	23.63	324	eP	P	00 19 18.0	0.0
ZSN				eS	S	00 23 34.3	+2.4
BNX	BinXian	23.82	41	⇑P	P	00 19 20.3	+0.4
BNX				S	S	00 23 40.9	+6.0
BNX				pmax	pmax		
	comp=Z,35nm,1.5s						
BNX				pmax	pmax		
	comp=Z,410nm,5.0s						
BNX				LR	LR		
	comp=Z,940nm,7.7s						
BNX				LR	LR		
	comp=Z,1μm,6.9s						
BNX				LR	LR		
	comp=Z,690nm,10.8s						
WUS	Wushi	23.87	306	IAmb	IAmb	00 19 23.9	
	comp=Z,120nm,1.2s						
DGZ	Jazzator, Alta	24.06	331	i P	P	00 19 22.1	-0.2
DGZ				pmax	pmax		
	comp=Z,42nm,1.3s						
SHLS	Shalkode	24.46	310	eP	P	00 19 23.3	-2.8
	comp=Z,40nm,1.2s						
SHLS	Shalkode	24.46	310	eP	P	00 19 23.3	-2.8
SHLS				pmax	pmax		
	comp=Z,40nm,1.2s						
PDGK	Podgornoye	24.52	311	P	P	00 19 25.9	-0.7
MDJ	Mudanjiang	24.54	46	IAmb	IAmb	00 19 29.1	
	comp=Z,67nm,1.3s						
MDJ	Mudanjiang	24.54	46	P	P	00 19 27.8	+1.3
MDJ				S	S	00 23 44.9	-1.6
MDJ				pmax	pmax		
	comp=Z,47nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,310nm,3.5s						
MDJ				LR	LR		
	comp=Z,1μm,18.6s						
MDJ				LR	LR		
	comp=Z,1μm,18.6s						
MDJ				LR	LR		
	comp=Z,1μm,11.0s						
MDJ	Mudanjiang	24.54	46	P	P	00 19 28.0	+1.5
KULM	Kulim	24.56	190	P	P	00 19 26.3	-0.7
KULM	Kulim	24.56	190	P	P	00 19 27.3	+0.3
KULM	Kulim	24.56	190	P	P	00 19 27.7	+0.7
	comp=Z,47nm,1.0s						
MK31	Makanchi Array	24.59	320	ceP	P	00 19 27.5	+0.5
MKAR	Makanchi Array	24.59	320	P	P	00 19 26.9	-0.1
	comp=Z,23nm,0.6s,baz=124,slow=10,SNR=80						
MKAR				LR	LR	00 29 59.8	
	comp=Z,2μm,20.6s,baz=138,slow=39						
	comp=Z,23nm,0.6s						
MKAR	Makanchi Array	24.59	320	P	P	00 19 26.6	-0.4
UZB	Uzynbulak	24.75	310	eP	P	00 19 28.4	-0.3
	comp=Z,39nm,0.8s						
UZB				eS	S	00 23 52.0	+1.7
UZB	Uzynbulak	24.75	310	eP	P	00 19 28.4	-0.3
UZB				eS	S	00 23 52.0	+1.7
UZB				pmax	pmax		
	comp=Z,39nm,0.8s						
MAKZ	Makanchi	24.77	320	P	P	00 19 28.1	-0.6
MAKZ	Makanchi	24.77	320	P	P	00 19 28.1	-0.6
MAKZ				pmax	pmax		
	comp=Z,210nm,1.6s						
PRZ	Przheval'sk	24.91	308	P	P	00 19 31.5	+1.3
PRZ				pmax	pmax		
	comp=Z,105nm,1.1s						
TARG	Taragay, Kyrgy	25.05	306	IAmb	IAmb	00 19 57.9	
	comp=Z,34nm,0.9s						
TARG	Taragay, Kyrgy	25.05	306	P	P	00 19 32.5	+0.8
TARG				pmax	pmax		
	comp=Z,42nm,1.1s						
SATY	Saty	25.13	309	eP	P	00 19 31.7	-0.4
SATY				eS	S	00 23 58.0	+1.7
SATY	Saty	25.13	309	eP	P	00 19 31.7	-0.4
SATY				eS	S	00 23 58.0	+1.7
IPM	Ipoh	25.30	189	P	P	00 19 31.4	-2.3
IPM	Ipoh	25.30	189	P	P	00 19 32.4	-1.3
IPM	Ipoh	25.30	189	P	P	00 19 33.1	-0.6
	comp=Z,38nm,1.3s						
KDJ	Kajisay	25.62	307	P	P	00 19 37.9	+1.3
KDJ				pmax	pmax		
	comp=Z,113nm,1.2s						
KSH	Kashi	25.75	300	P	P	00 19 39.4	+1.7
KSH				S	S	00 24 10.0	+3.9
KSH				pmax	pmax		
	comp=Z,49nm,1.5s						
KSH				LR	LR		
	comp=Z,750nm,10.0s						
KSH				LR	LR		
	comp=Z,1μm,10.7s						
KSH				LR	LR		
	comp=Z,1μm,15.1s						
KKM	Kota Kinabalu	25.75	154	P	P	00 19 36.9	-1.0
KKM				IAmb	IAmb	00 19 40.7	
	comp=Z,42nm,1.0s						
KKM	Kota Kinabalu	25.75	154	P	P	00 19 39.6	+1.8
KKM	Kota Kinabalu	25.75	154	P	P	00 19 40.6	+2.8
	comp=Z,45nm,0.9s						
USRK	Ussuriysk Ar.	25.88	48	P	P	00 19 38.8	+0.1
	comp=Z,21nm,0.7s,baz=246,slow=9.1,SNR=20						
	comp=Z,21nm,0.7s						
TDK	Taldyqorghan	25.96	314	eP	P	00 19 39.3	-0.2
	comp=Z,29nm,0.9s						
TDK	Taldyqorghan	25.96	314	eP	P	00 19 39.2	-0.2
TDK				pmax	pmax		
	comp=Z,29nm,0.9s						
MDOK	Medeo	26.09	309	eP	P	00 19 40.6	-0.3
MDOK				eS	S	00 24 13.3	+1.7
MDOK	Medeo	26.09	309	eP	P	00 19 40.5	-0.3
MDOK				eS	S	00 24 13.2	+1.7
TNSS	Tian-Shan	26.11	308	eP	P	00 19 40.7	-0.6
TNSS	Tian-Shan	26.11	308	eP	P	00 19 40.7	-0.6
AAA	Alma-Ata	26.19	309	eP	P	00 19 41.2	-0.5
	comp=Z,38nm,1.0s						
AAA	Alma-Ata	26.19	309	eP	P	00 19 41.1	-0.5
AAA				pmax	pmax		
	comp=Z,38nm,1.0s						
ULHL	Ulahol	26.32	306	P	P	00 19 45.4	+2.4
	SNR=19						
CHKK	Chushkaly	26.39	310	eP	P	00 19 43.1	-0.3
CHKK	Chushkaly	26.39	310	eP	P	00 19 43.1	-0.3
MLSI	Meulaboh, Aceh	26.51	199	P	P	00 19 46.1	+1.5
	comp=Z,54nm,1.1s						
BOOM	Boomskoye usch	26.61	307	P	P	00 19 45.5	-0.1
BOOM	Boomskoye usch	26.61	307	P	P	00 19 45.5	-0.1
BOOM				pmax	pmax		
	comp=Z,198nm,1.5s						
HEH	HeiHe	26.64	33	eP	P	00 19 46.1	+0.6
HEH				pP	pP	00 19 49.3	-1.3
HEH				S	S	00 24 25.3	+5.6
HEH				sS	sS	00 24 33.8	+5.6
HEH				pmax	pmax		
	comp=Z,190nm,0.9s						
HEH				pmax	pmax		
	comp=Z,190nm,5.2s						
HEH				LR	LR		
	comp=Z,560nm,8.9s						
HEH				LR	LR		
	comp=Z,600nm,10.9s						
HEH				LR	LR		
	comp=Z,970nm,11.3s						
TSI	Tuntungan	26.70	194	P	P	00 19 48.1	+1.8
TKM2	Tokmak 2	26.99	307	P	P	00 19 50.5	+1.4
	SNR=26						
NIL	Nilore	27.25	287	P	P	00 19 50.6	-0.6
NIL				IAmb	IAmb	00 19 56.5	
	comp=Z,43nm,0.8s						
NIL	Nilore	27.25	287	P	P	00 19 50.7	-0.6
NIL				pmax	pmax		
	comp=Z,43nm,0.9s						
TPTI		27.26	197	P	P	00 19 54.9	+3.5
	comp=Z,19nm,1.1s						
KBK	Karagaybulak	27.36	307	P	P	00 19 53.0	+0.6
	SNR=48						
UCH	Uchtor	27.53	305	P	P	00 19 55.2	+1.0
	SNR=21						
ARLS	Aral	27.56	305	P	P	00 19 54.7	+0.6
ARLS				pmax	pmax		
	comp=Z,23nm,1.4s						
CHMS	Chumysh	27.61	307	P	P	00 19 56.0	+1.7
	SNR=9.2						
FRU1	Bishkek	27.63	307	P	P	00 19 54.1	-0.5
FRU1	Bishkek	27.63	307	P	P	00 19 54.1	-0.5
FRU1				pmax	pmax		
	comp=Z,37nm,1.1s						
AAK	Ala-Archa	27.67	306	P	P	00 19 55.6	+0.5
	SNR=15						
AAK	Ala-Archa	27.67	306	LR	LR	00 33 11.5	
	comp=Z,911nm,20.3s,baz=86,slow=41						
AAK	Ala-Archa	27.67	306	P	P	00 19 53.9	-1.2
AAK	Ala-Archa	27.67	306	i P	P	00 19 55.1	0.0
	SNR=6.0						
AAK	Ala-Archa	27.67	306	ceP	P	00 19 55.6	+0.5
AAK				pmax	pmax		
	comp=Z,38nm,1.7s						
MYKOM	Kota Tinggi	27.72	182	P	P	00 19 55.2	-0.3
JGF	Kuroka	27.82	69	P	P	00 19 57.9	+1.5
USP	Ospenovka	27.87	308	P	P	00 19 57.1	+0.4
	SNR=36						
SBUM	Sibu	27.90	164	P	P	00 19 57.2	+0.1
SBUM	Sibu	27.90	164	P	P	00 19 57.7	+0.6
EKS2	Erkin-Say	28.18	306	P	P	00 20 00.3	+0.7
	SNR=15						
OHH	Osh	28.36	301	P	P	00 19 59.6	-1.5
OHH				pmax	pmax		
	comp=Z,25nm,1.2s						
ZAA0	Zalesovo Array	28.37	335	IAmb	IAmb	00 20 03.0	
	comp=Z,104nm,1.6s						
ZALV	Zalesovo Beam	28.37	335	P	P	00 20 01.0	0.0
	comp=Z,21nm,0.7s,baz=135,slow=8.8,SNR=126						
ZALV				LR	LR	00 32 04.3	
	comp=Z,982nm,21.8s,baz=139,slow=38						
	comp=Z,21nm,0.7s						
ZALV	Zalesovo Beam	28.37	335	P	P	00 20 00.9	-0.1
ZALV	Zalesovo Beam	28.37	335	i P	P	00 20 01.0	0.0
ZALV				pmax	pmax		
	comp=Z,22nm,0.7s						
ARSB	Arslanbob	28.39	303	IAmb	IAmb	00 20 04.9	
	comp=Z,54nm,1.7s						
MJAR	Matsushiro Arr	28.57	67	P	P	00 20 02.3	-0.7
	comp=Z,5.8nm,0.9s,baz=266,slow=9.7,SNR=8.6						
MJAR				LR	LR	00 31 23.2	
	comp=Z,254nm,19.1s,baz=196,slow=36						
	comp=Z,5.8nm,0.9s						
MJAR	Matsushiro Arr	28.57	67	P	P	00 20 01.3	-1.7
MJAR	Matsushiro Arr	28.57	67	P	P	00 20 01.3	-1.7
MJAR				pmax	pmax		
	comp=Z,15nm,1.4s						
MANEM	Manem	28.73	295	IAmb	IAmb	00 20 38.4	
	comp=Z,27nm,0.9s						
KURBB	Kurchatov Arra	28.86	324	P	P	00 20 05.2	-0.2
	comp=Z,13nm,0.6s,baz=130,slow=9.2,SNR=145						
KURBB				ScP	ScP	00 26 53.6	-1.7
	comp=Z,1.8nm,1.1s,baz=138,slow=2.3,SNR=4.8						
KURBB				LR	LR	00 32 40.9	
	comp=Z,1μm,20.0s,baz=162,slow=38						
	comp=Z,13nm,0.6s						
KURBB	Kurchatov Arra	28.86	324	P	P	00 20 04.5	-0.9
KURK	Kurchatov	28.88	324	P	P	00 20 04.5	-1.0
KURK	Kurchatov	28.88	324	ceP	P	00 20 05.5	0.0
KURK				pmax	pmax		
	comp=Z,78nm,1.7s						
ZEA	Zeya	29.02	28	eP	P	00 20 08.1	+1.3
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA				MLR	MLR		
	comp=E,200nm,7.0s						
ZEA				MLR	MLR		
	comp=N,500nm,11.0s						
ZEA				MLR	MLR		
	comp=Z,800nm,11.0s						
ARK	Arkit	29.25	303	P	P	00 20 10.0	+0.9
ARK				pmax	pmax		
	comp=Z,13nm,1.5s						
DSRI	Dabo	29.95	181	P	P	00 20 16.7	+1.4
	comp=Z,2μmcomp=Z,14nm,1.2s						
DZA	Taraz	29.98	305	eP	P	00 20 15.1	-0.4
	comp=Z,21nm,1.4s						
DZA	Taraz	29.98	305	eP	P	00 20 15.0	-0.4
DZA				pmax	pmax		
	comp=Z,21nm,1.4s						
KK31	Karatay Array	30.61	305	IAmb	IAmb	00 20 23.1	
	comp=Z,50nm,1.2s						
KK31	Karatay Array	30.61	305	eP	P	00 20 20.1	-0.9
KKAR	Karatay Array	30.61	305	P	P	00 20 20.2	-0.8
KKAR	Karatay Array	30.61	305	P	P	00 20 20.2	-0.8
IUG	Iuzhnay	30.73	304	eP	P	00 20 21.8	-0.4
	comp=Z,35nm,1.5s						
IUG	Iuzhnay	30.73	304	eP	P	00 20 21.8	-0.4
IUG				pmax	pmax		
	comp=Z,35nm,1.5s						
KBL	Kabul	30.74	289	P	P	00 20 20.9	-1.6
KBL	Kabul	30.74	289	P	P	00 20 20.9	-1.6
KBL				pmax	pmax		
	comp=Z,11nm,0.9s						
CHGR	Chuyangaron	30.83	297	P	P	00 20 22.3	-0.8
CHGR				pmax	pmax		
	comp=Z,30nm,0.9s						
CHM	Chimkent	31.08	304	eP	P	00 20 25.0	-0.2
	comp=Z,8.5nm,0.6s						
CHM	Chimkent	31.08	304	eP	P	00 20 25.0	-0.2
CHM				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SHAA	Shahritus	31.55	294	IAmb	IAmb	00 21 16.4	
	comp=Z,29nm,1.1s						
PALK	Pallekele	31.88	231	LR	LR	00 34 52.0	
	comp=Z,303nm,20.7s,baz=32,slow=39						
TOLI2	Tolitoli	32.11	149	P	P	00 20 35.6	+1.2
JCJ	Chichijima	32.74	85	LR	LR	00 33 07.9	
	comp=Z,485nm,21.3s,baz=207,slow=35						
YSS	Yuzhno-Sakhali	33.91	49	eP	P	00 20 50.3	+0.4
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,800nm,13.0s						
YSS				MLR	MLR		
	comp=N,400nm,16.0s						
YSS				MLR	MLR		
	comp=E,800nm,12.0s						
MDSI	Maura Dua	33.94	181	P	P	00 20 49.7	-0.6
	comp=E,538nmcomp=E,27nm,1.0s						
KLSI		34.13	180	P	P	00 20 53.0	+1.0
	comp=E,24nm,1.0s						
BBKI	Banjar Baru	34.24	162	P	P	00 20 57.3	+4.3
	comp=E,61nm,1.3s						
APSI	Ampana	34.30	149	P	P	00 20 54.3	+0.8
	comp=E,1μmcomp=E,39nm,1.5s						
BVAR	Borovoye Array	34.41	323	P	P	00 20 54.5	+0.3
	comp=E,4.5nm,0.5s,baz=120,slow=9.0,SNR=25						
BVAR				PcP	PcP	00 23 28.7	-0.8
	comp=E,3.2nm,0.7s,baz=117,slow=5.0,SNR=4.3						
BVAR				ScP	ScP	00 27 12.8	-1.2
	comp=E,1.9nm,0.7s,baz=116,slow=3.4,SNR=5.8						
BVAR				LR	LR	00 36 10.6	
	comp=E,1μm,20.0s,baz=114,slow=38						
	comp=E,4.5nm,0.5s						
BORK	Borovoye	34.46	323	P	P	00 20 54.3	-0.3
BORK	Borovoye	34.46	323	ceP	P	00 20 55.2	+0.7
BORK				pmax	pmax		
	comp=Z,38nm,1.7s						
MMSI	Mamuju	34.80	155	P	P	00 21 00.4	+2.5
	comp=Z,704nmcomp=Z,40nm,1.4s						
LUWI	Luwuk	34.92	148	P	P	00 20 58.5	-0.4
LUWI	Luwuk	34.92	148	P	P	00 21 00.3	+1.4
LUWI	Luwuk	34.92	148	P	P	00 20 59.7	+0.8
TTSI	Tana Toraja	35.47	154	P	P	00 21 04.6	+1.0
	comp=Z,19nm,1.4s						

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YAK   Yakutsk           36.21  19   LR     LR      00 37 37.6
       comp=Z,224nm,21.4s,baz=252,slow=39
YAK   Yakutsk           36.21  19   P      P       00 21 09.2  -0.3
YAK                                 IAmb   IAmb    00 21 33.4
       comp=Z,27nm,0.7s
YAK   Yakutsk           36.21  19  eP      P       00 21 09.9  +0.4
YAK                                e*PP    sP      00 21 19.5  +2.7
YAK                                e               00 22 31.5
YAK                                ePPP    PPP     00 22 46.2
YAK                                e               00 23 35.4
YAK                                eS      S       00 26 47.5  -1.2
YAK                                eSS     SnSn    00 29 14.8  -0.3
YAK                                e               00 31 24.9
YAK                                 pmax   pmax
       comp=Z,18nm,0.9s
YAK                                 pmax   pmax
       comp=N,9.0nm,1.2s
YAK                                 pmax   pmax
       comp=E,4.0nm,1.5s
YAK                                 pmax   pmax
       comp=Z,127nm,2.6s
YAK                                 pmax   pmax
       comp=N,96nm,2.5s
YAK                                 pmax   pmax
       comp=E,109nm,2.2s
YAK                                 smax   smax
       comp=E,248nm,3.3s
YAK                                 smax   smax
       comp=N,230nm,3.0s
YAK                                 MLR    MLR
       comp=Z,139nm,9.0s
YAK                                 MLR    MLR
       comp=N,134nm,11.0s
YAK                                 MLR    MLR
       comp=E,136nm,10.0s
SPSI  Sidrap Palu       36.30 155   P      P       00 21 11.4  +0.7
       comp=E,22nm,1.9s
BNSI  Bone              36.82 154   P      P       00 21 18.0  +2.8
       comp=E,26nm,1.0s
KPJI  Karang Pucung     36.95 173   P      P       00 21 17.1  +0.8
       comp=E,53nm,1.0s
KAPI  Kappang           37.26 155   P      P       00 21 18.0  -0.9
       comp=E,5.6nm,0.3s,baz=326,slow=12,SNR=2.6
       comp=E,5.6nm,0.3s
KAPI  Kappang           37.26 155   P      P       00 21 17.8  -1.1
KAPI  Kappang           37.26 155   P      P       00 21 19.7  +0.8
KAPI  Kappang           37.26 155   P      P       00 21 19.7  +0.8
KAPI  Kappang           37.26 155   P      P       00 21 18.0  -0.9
BKSI  Bulukumba         37.68 155   P      P       00 21 23.4  +1.0
       comp=E,16nm,0.8s
SJI   Sawahan           37.73 169   P      P       00 21 24.6  +1.7
       comp=E,17nm,0.6s
SNJI  Sawahan-Nganju    37.77 169   P      P       00 21 25.1  +1.7
       comp=E,34nm,1.0s
JAGI  Jajag, Banyuwa    38.90 165   P      P       00 21 33.0  +0.3
JAGI  Jajag, Banyuwa    38.90 165   P      P       00 21 34.8  +2.1
       comp=E,30nm,1.0s
NLAI  Namlea            38.95 143   P      P       00 21 35.5  +2.3
       comp=E,833nmcomp=E,57nm,1.4s
KHKI  Kahang-Kahang     39.14 163   P      P       00 21 36.6  +1.9
       comp=E,712nmcomp=E,60nm,1.3s
AB31  Akbulak array     39.22 313 i P      P       00 21 35.1   0.0
ABKAR Akbulak array     39.22 313   P      P       00 21 34.5  -0.6
KRAI  Karang Ratu       39.71 142   P      P       00 21 40.6  +1.1
AAI   Ambon             39.91 142   P      P       00 21 42.5  +1.3
MSAI  Masohi            40.02 141   P      P       00 21 44.9  +2.8
DBNI  Kabupaten Domp    40.03 159   P      P       00 21 42.0  -0.2
       comp=E,548nmcomp=E,45nm,1.1s
AKTO  Aktyubinsk        40.70 314   P      P       00 21 46.1  -1.3
NRIK  Noril'sk          40.99 351   P      P       00 21 49.7  +0.1
       comp=E,68nm,0.9s,baz=144,slow=7.3,SNR=84
NRIK                                LR     LR      00 40 22.6
       comp=E,376nm,18.5s,baz=156,slow=38
       comp=E,68nm,0.9s
NRIK  Noril'sk          40.99 351   P      P       00 21 49.8  +0.3
NRIK                                IAmb   IAmb    00 21 52.9
       comp=Z,84nm,0.9s
NRIK  Noril'sk          40.99 351 i P      P       00 21 49.8  +0.3
NRIK                                pmax   pmax
       comp=Z,91nm,1.0s
SVE   Sverdlovsk        41.13 324deP       P       00 21 51.8  +1.0
SVE                                 pmax   pmax
       comp=Z,62nm,1.3s
EDFI  Ende, Flores      41.42 155   P      P       00 21 53.3  -0.4
WBSI  Waikabubak, Su    41.45 158   P      P       00 21 52.7  -1.2
MMRI  Maumere           41.52 154   P      P       00 21 52.8  -1.7
MMRI                                IAmb   IAmb    00 21 56.7
       comp=Z,84nm,1.0s
MMRI  Maumere           41.52 154   P      P       00 21 53.2  -1.3
MMRI  Maumere           41.52 154   P      P       00 21 54.2  -0.3
ARTI  Arti              42.13 323   LR     LR      00 40 53.9
       comp=Z,866nm,19.8s,baz=112,slow=38
ARTI  Arti              42.13 323   P      P       00 21 59.0   0.0
ARTI                                IAmb   IAmb    00 22 01.1
       comp=Z,63nm,1.3s
ARTI  Arti              42.13 323c iP      P       00 21 59.3  +0.2
ARTI                                               00 23 38.5
ARTI                                S      S       00 28 23.0  +5.0
ARTI                                SS     SS      00 31 26.5  +0.9
ARTI                                pmax   pmax
       comp=Z,58nm,1.4s
ARTI                                MLR    MLR
       comp=Z,739nm,18.0s
BASI  Baing, Sumba      42.38 157   P      P       00 22 02.7  +1.2
       comp=Z,2µmcomp=Z,112nm,1.9s
MA2   Magadan           42.90  32   P      P       00 22 05.2   0.0
       comp=Z,2.8nm,0.4s,baz=119,slow=19,SNR=1.5
       comp=Z,2.8nm,0.4s
MA2   Magadan           42.90  32   P      P       00 22 05.3   0.0
MA2                                 IAmb   IAmb    00 23 41.3
       comp=Z,56nm,1.4s
MA2   Magadan           42.90  32   P      P       00 22 05.3   0.0
MA2                                 pmax   pmax
       comp=Z,56nm,1.4s
BATI  Baumata           43.51 153   P      P       00 22 08.8  -1.8
       comp=Z,20nm,0.3s,baz=248,slow=19,SNR=1.9
BATI                                LR     LR      00 41 35.5
       comp=Z,219nm,21.0s,baz=342,slow=38
       comp=Z,20nm,0.3s
BATI  Baumata           43.51 153   P      P       00 22 12.1  +1.4
       comp=Z,970nmcomp=Z,45nm,1.1s
ALNE  Al Ain            44.02 275 i P      P       00 22 13.5  -1.3
       SNR=7.5
TIXI  Tiksi             44.04  11   LR     LR      00 42 09.5
       comp=Z,368nm,19.9s,baz=210,slow=38
TIXI  Tiksi             44.04  11   P      P       00 22 13.1  -1.1
TIXI                                IAmb   IAmb    00 22 16.1
       comp=Z,51nm,1.1s
TIXI  Tiksi             44.04  11ceP       P       00 22 13.7  -0.6
TIXI                                pmax   pmax
       comp=Z,40nm,1.0s
PETK  Petropavlovsk-    44.72  43   LR     LR      00 43 42.3
       comp=Z,108nm,19.8s,baz=242,slow=40
SEY   Seymchan          45.00  28   P      P       00 22 22.0   0.0
       comp=Z,6.0nm,0.7s,baz=275,slow=5.1,SNR=10
SEY                                 LR     LR      00 42 24.1
       comp=Z,295nm,18.6s,baz=248,slow=38
       comp=Z,6.0nm,0.7s
SEY   Seymchan          45.00  28  eP      P       00 22 24.4  +2.4
SEY                                e               00 24 02.4
SEY                                 pmax   pmax
       comp=Z,7.0nm,0.9s
SAUI  Saumlaki          45.17 142   P      P       00 22 22.5  -1.4
LKRN  Lenkeran, Azer    46.74 297   P      P       00 22 38.3  +2.1
AKT   Akhty             47.27 301  eP      P       00 22 39.1  -1.4
AKT                                e               00 24 09.7
AKT                                e               00 24 29.5
AKT                                eS      S       00 29 31.5  -1.7
AKT                                 pmax   pmax
       comp=Z,25nm,0.8s
AKT                                 MLR    MLR
       comp=Z,220nm,10.0s
MAK   Makhachkala       47.34 303  eP      P       00 22 38.5  -2.2
MAK                                e               00 24 30.1
MAK                                eS      S       00 29 32.6  -1.2
MAK                                eSS     SS      00 32 59.8  -1.3
MAK                                eSSS    SSS     00 34 00.8
MAK                                 pmax   pmax
       comp=Z,15nm,0.2s
MAK                                 MLR    MLR
       comp=Z,305nm,14.0s
KIRV  Kirov             47.39 324   LR     LR      00 44 08.2
       comp=Z,463nm,19.6s,baz=98,slow=38
KIRV  Kirov             47.39 324ceP       P       00 22 41.6  +0.7
BELG  Belogornoye       47.43 316   LR     LR      00 44 26.2
       comp=Z,502nm,19.7s,baz=92,slow=38
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SEKA  Sheki             47.70 300   P      P       00 22 45.0  +1.3
MNGR  Mingechevir, A    47.82 300   P      P       00 22 46.5  +1.9
GANJ  Ganja             48.41 300   P      P       00 22 51.1  +1.9
DRS   Darwin Rock St    48.72 145   P      P       00 22 51.1  -0.6
MTN   Manton Dam        49.19 145   P      P       00 22 54.1  -1.2
MTN                                 IAmb   IAmb    00 22 59.5
       comp=Z,35nm,1.4s
NAX   Nakhchivan        49.23 298   P      P       00 22 57.5  +2.0
KDU   Kakadu            49.73 144   P      P       00 22 58.1  -1.3
       comp=Z,11nm,0.9s
TRLG  Trialeti          49.98 301   P      P       00 23 02.5  +1.2
NCK   Nalchik           50.15 304 i P      P       00 23 02.2  -0.2
NCK                                 pmax   pmax
       comp=Z,17nm,1.2s
GOF   Gofitskoye        50.41 306ceP       P       00 23 05.7  +1.4
KNRA  Kununurra         50.56 150   P      P       00 23 04.9  -0.8
KNRA  Kununurra         50.56 150   IAmb   IAmb    00 23 08.2
       comp=Z,23nm,0.8s
KBZ   Khabaz            50.63 304   P      P       00 23 05.8  -0.1
       comp=Z,12nm,1.0s,baz=126,slow=9.4,SNR=18
KBZ                                 LR     LR      00 47 28.7
       comp=Z,450nm,18.2s,baz=81,slow=40
       comp=Z,12nm,1.0s
KBZ   Khabaz            50.63 304ceP       P       00 23 05.5  -0.5
KBZ                                 pmax   pmax
       comp=Z,15nm,1.0s
KVAR  Kislovodsk Arr    50.75 304   LR     LR      00 46 37.3
       comp=Z,224nm,19.3s,baz=162,slow=38
KIV   Kislovodsk        50.76 304   P      P       00 23 07.0  -0.1
KIV   Kislovodsk        50.76 304 ⇓P       P       00 23 08.0  +0.9
KIV   Kislovodsk        50.76 304 i P      P       00 23 07.3  +0.2
       SNR=16
KIV   Kislovodsk        50.76 304  eP      P       00 23 05.3  -1.8
KIV                                eS      S       00 30 21.4  -0.7
KIV                                                00 35 28.8
KIV                                 pmax   pmax
       comp=Z,21nm,3.4s
KIV                                 pmax   pmax
       comp=Z,129nm,1.1s
KIV                                 MLR    MLR
       comp=Z,207nm,17.0s
KIV   Kislovodsk        50.76 304   P      P       00 23 08.0  +0.9
       comp=Z,1µmcomp=Z,107nm,1.2s
KIV                                 pP     sP      00 23 15.0  +0.5
       comp=Z,1µmcomp=Z,107nm,1.2s
SHA1  Shidzhatmaz       50.80 304ceP       P       00 23 07.5  -0.1
NEUR  Neytrino          50.82 303 i P      P       00 23 07.2  -0.5
NEUR                                pmax   pmax
       comp=Z,24nm,1.3s
VRH   Novokhopyorsk     51.03 314  eP      P       00 23 07.2  -1.7
VRH                                 pmax   pmax
       comp=Z,30nm,1.0s
FITZ  Fitzroy Crossi    51.47 155   LR     LR      00 47 43.3
       comp=Z,144nm,18.3s,baz=339,slow=39
BILL  Bilibino          52.18  25   P      P       00 23 16.7  -0.6
BILL  Bilibino          52.18  25ceP       P       00 23 16.8  -0.4
BILL                                pmax   pmax
       comp=Z,15nm,1.0s
MBWA  Marble Bar        52.46 163   P      P       00 23 18.5  -1.3
       comp=Z,22nm,0.9s
MBWA  Marble Bar        52.46 163   P      P       00 23 18.6  -1.3
VORD  Divnogorie        52.57 313  eP      P       00 23 19.3  -1.1
VORD                                pmax   pmax
       comp=Z,10.0nm,1.1s
VSR   Storozhevoye      52.64 314  eP      P       00 23 19.1  -1.8
VSR                                 pmax   pmax
       comp=Z,20nm,1.0s
KLMR  Klimovskoe        52.70 326  eP      P       00 23 19.4  -1.8
KLMR                               e               00 24 28.2
KLMR                                pmax   pmax
       comp=Z,108nm,1.1s
LPSR  Galich'ya Gora    52.74 316  eP      P       00 23 20.5  -1.1
LPSR                                pmax   pmax
       comp=Z,40nm,1.2s
PSAC2 Pilbara Seismi    52.89 163   P      P       00 23 21.3  -1.8
       comp=Z,25nm,1.5s
SOC   Sochi             52.94 304  eP      P       00 23 23.1  -0.1
SOC                                e               00 25 28.5
SOC                                ePPP    PPP     00 26 33.4
SOC                                eS      S       00 30 53.2  +1.4
SOC                                 pmax   pmax
       comp=Z,27nm,0.9s
SOC                                 MLR    MLR
       comp=Z,200nm,15.0s
RAYN  Ar Rayn           53.06 278   P      P       00 23 23.9  -0.6
RAYN                                IAmb   IAmb    00 23 26.4
       comp=Z,58nm,1.1s
RAYN  Ar Rayn           53.06 278 i P      P       00 23 23.1  -1.4
       SNR=30
RAYN  Ar Rayn           53.06 278   P      P       00 23 24.4  -0.1
MOS   Moscow            53.47 319  eP      P       00 23 25.5  -1.4
MOS                                eS      S       00 30 57.0  -1.6
MOS                                 pmax   pmax
       comp=Z,90nm,1.2s
MOS                                 pmax   pmax
       comp=E,57nm,1.2s
MOS                                 MLR    MLR
       comp=E,700nm,19.0s
MOS                                 MLR    MLR
       comp=Z,900nm,19.0s
OBN   Obninsk           54.08 319   LR     LR      00 47 48.8
       comp=Z,956nm,18.2s,baz=13,slow=37
OBN   Obninsk           54.08 319   P      P       00 23 31.6  +0.3
OBN   Obninsk           54.08 319d iP      P       00 23 31.6  +0.3
OBN                                i               00 24 31.6
OBN                                 pmax   pmax
       comp=Z,42nm,1.2s
OBN                                 MLR    MLR
       comp=Z,766nm,17.0s
OBN   Obninsk           54.08 319   P      P       00 23 32.1  +0.7
       comp=Z,56nm,1.4s
SHEM  Shemya Is, Ala    54.59  44   LR     LR      00 50 07.2
       comp=Z,65nm,18.1s,baz=319,slow=40
ARPR  Arapgir-MALATY    54.72 299   P      P       00 23 35.9  -0.7
ARPR                                IAmb   IAmb    00 23 40.0
       comp=Z,35nm,1.1s
TOKA  Tokat             55.88 301   IAmb   IAmb    00 23 47.1
       comp=Z,49nm,1.5s
APA   Apatity           55.95 334⇓eP       P       00 23 41.2  -3.5
APA                                e               00 24 41.5
APA                                 MLR    MLR
       comp=Z,3µm,18.9s
WB0   Warramunga Arr    56.71 146   IAmb   IAmb    00 23 53.6
       comp=Z,36nm,0.8s
WRAB  Tennant Creek     56.83 147   P      P       00 23 50.5  -1.2
WRAB  Tennant Creek     56.83 147   P      P       00 23 50.6  -1.0
WRAB  Tennant Creek     56.83 147ceP       P       00 23 51.3  -0.3
WRAB                                pmax   pmax
       comp=Z,56nm,0.7s
WRA   Warramunga Arr    56.84 147   P      P       00 23 51.0  -0.7
       comp=Z,38nm,0.8s,baz=336,slow=7.2,SNR=78
       comp=Z,38nm,0.8s
WRA   Warramunga Arr    56.84 147   P      P       00 23 49.8  -1.8
WRA   Warramunga Arr    56.84 147ceP       P       00 23 51.0  -0.7
WRA                                 pmax   pmax
       comp=Z,43nm,0.8s
WB1   Warramunga Ar.    56.85 147   P      P       00 23 50.6  -1.2
COEN  Coen              56.88 134   P      P       00 23 52.0  -0.1
       comp=Z,19nm,0.8s
COEN  Coen              56.88 134   P      P       00 23 52.3  +0.3
PUL   Pulkovo           57.26 325ceP       P       00 23 55.0  +0.9
PUL                                 pmax   pmax
       comp=Z,27nm,0.3s
VADS  Vadso             57.57 337  eP      P       00 23 57.4  +1.2
ASF   Jabal al Asfar    57.57 291   LR     LR      00 53 40.3
       comp=Z,40µm,19.9s,baz=40,slow=41
MSF   Maaselka          57.63 332   P      P       00 23 56.3  -0.4
MSF                                 pmax   pmax
       comp=Z,30nm,2.2s
ILGA  Ilgaz             57.77 302   P      P       00 23 58.6  +0.3
KIRS  Kirsehir-Merke    58.07 300 ⇓P       P       00 24 00.9  +0.6
BR131 Keskin Array S    58.13 301   IAmb   IAmb    00 24 04.0
       comp=Z,23nm,1.0s
BR131 Keskin Array S    58.13 301 i P      P       00 24 00.5  -0.4
BRTR  Keskin Array B    58.13 301   P      P       00 24 00.5  -0.4
       comp=Z,13nm,0.9s,baz=114,slow=6.0,SNR=52
BRTR                                LR     LR      00 53 26.0
       comp=Z,90nm,21.3s,baz=60,slow=40
       comp=Z,13nm,0.9s
BRTR  Keskin Array B    58.13 301   P      P       00 24 00.3  -0.5
BRTR  Keskin Array B    58.13 301ceP       P       00 24 00.9   0.0
BRTR                                pmax   pmax
       comp=Z,13nm,0.9s
BR104 Keskin Array S    58.14 301   P      P       00 24 01.1  +0.2
       comp=Z,126nmcomp=Z,16nm,0.9s
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BR106 Keskin Array S    58.15 301   P      P       00 24 01.2  +0.2
       comp=Z,114nmcomp=Z,16nm,0.9s
BR105 Keskin Array S    58.15 301   P      P       00 24 01.2  +0.2
       comp=Z,137nmcomp=Z,17nm,0.9s
KEV   Kevo              58.37 336   P      P       00 24 02.9  +1.1
MMAI  Mount Meron Ar    58.53 293   P      P       00 24 04.7  +1.0
       comp=Z,19nm,1.1s,baz=83,slow=6.8,SNR=16
MMAI                                LR     LR      00 54 29.3
       comp=Z,190nm,20.5s,baz=64,slow=41
       comp=Z,19nm,1.1s
SGF   Sodankyl          58.59 334   P      P       00 24 03.1  -0.3
SGF                                 pmax   pmax
       comp=Z,31nm,1.4s
BALJ  Balqa             58.62 292   P      P       00 24 04.5  +0.3
ANTO  Ankara            58.73 301   P      P       00 24 03.9  -1.1
ANTO  Ankara            58.73 301 ⇓P       P       00 24 05.8  +0.9
ANTO  Ankara            58.73 301   P      P       00 24 05.8  +0.9
ANTO  Ankara            58.73 301   P      P       00 24 05.4  +0.5
       comp=Z,353nmcomp=Z,33nm,1.2s
WRKA  Warakurna         58.79 155   P      P       00 24 04.5  -0.8
       comp=Z,19nm,1.1s
ARA0  ARCESS Array S    58.90 336  eP      P       00 24 06.1  +0.5
ARCES ARCESS Array B    58.90 336   P      P       00 24 05.2  -0.3
       comp=Z,5.8nm,0.7s,baz=78,slow=5.4,SNR=30
ARCES                               LR     LR      00 51 30.1
       comp=Z,397nm,19.0s,baz=99,slow=38
       comp=Z,5.8nm,0.7s
ARCES ARCESS Array B    58.90 336   P      P       00 24 04.9  -0.7
AK09  Malin Array Si    58.92 314   P      P       00 24 05.8  -0.2
AK08  Malin Array Si    58.94 314   P      P       00 24 05.9  -0.2
AK03  Malin Array Si    58.94 314   P      P       00 24 05.6  -0.5
AKASG Malin Array Be    58.94 314   P      P       00 24 05.8  -0.3
       comp=Z,5.9nm,0.5s,baz=74,slow=6.2,SNR=34
AKASG                               LR     LR      00 50 56.2
       comp=Z,436nm,20.0s,baz=75,slow=37
       comp=Z,5.9nm,0.5s
AKASG Malin Array Be    58.94 314   P      P       00 24 05.5  -0.6
AKASG                               IAmb   IAmb    00 24 08.1
       comp=Z,19nm,1.2s
AKASG Malin Array Be    58.94 314ceP       P       00 24 06.0  -0.1
AKASG                               pmax   pmax
       comp=Z,9.0nm,0.5s
AKBB  Malin Array Si    58.94 314ceP       P       00 24 06.3  +0.2
AKBB                                pmax   pmax
       comp=Z,31nm,1.2s
AKBB  Malin Array Si    58.94 314   P      P       00 24 05.9  -0.2
AK10  Malin Array Si    58.94 314   P      P       00 24 06.0  -0.1
AK01  Malin Array Si    58.95 314   P      P       00 24 05.8  -0.4
KIEV  Kiev              58.95 314   P      P       00 24 05.2  -0.9
KIEV  Kiev              58.95 314 i P      P       00 24 05.2  -0.9
       SNR=18
KIEV  Kiev              58.95 314   P      P       00 24 05.3  -0.9
KIEV                                pmax   pmax
       comp=Z,65nm,1.5s
KIEV  Kiev              58.95 314   P      P       00 24 05.9  -0.3
       comp=Z,115nm,1.2s
AK02  Malin Array Si    58.96 314   P      P       00 24 06.0  -0.2
OUL   Oulu              58.97 331   P      P       00 24 06.2  +0.2
OUL                                 pmax   pmax
       comp=Z,38nm,1.4s
AK05  Malin Array Si    58.97 314   P      P       00 24 06.1  -0.2
MNK   Minsk             59.14 319 i P      P       00 24 08.0  +0.6
       comp=E,8.0nm,0.8s,baz=81
MNK                               i P      P       00 24 08.0  +0.6
       comp=N,19nm,0.9s
MNK                               i P      P       00 24 08.0  +0.6
       comp=Z,13nm,0.7s
MNK                               i PcP    PcP     00 24 56.0  +0.1
MNK                               i PP     PP      00 26 18.9  +1.1
MNK                               i PPP    PPP     00 27 39.4
MNK                               i S      S       00 32 16.9  +3.0
MNK                               i ScS    ScS     00 34 11.4   +15
MNK                               i SS     SS      00 36 12.8  +5.1
MNK                               i SSS    SSS     00 38 44.0
MNK                               i LQ     LQ      00 46 00.6
MNK                               i LRM    MLR     00 50 55.9
       comp=N,425nm,14.3s
MNK                               i LRM    MLR     00 51 01.5
       comp=Z,643nm,15.9s
MNK   Minsk             59.14 319 i P      P       00 24 07.9  +0.6
MNK                               i                00 24 55.9
MNK                               i                00 26 18.9
MNK                               i PPP    PPP     00 27 39.3
MNK                               i S      S       00 32 16.9  +3.0
MNK                               i SS     SS      00 36 12.8  +5.1
MNK                                 pmax   pmax
       comp=E,8.0nm,0.8s
MNK                                 pmax   pmax
       comp=Z,13nm,0.7s
MNK                                 pmax   pmax
       comp=N,19nm,0.9s
MNK                                 MLR    MLR
       comp=E,251nm,16.0s
MNK                                 MLR    MLR
       comp=N,425nm,14.0s
MNK                                 MLR    MLR
       comp=Z,643nm,16.0s
FIA1  FINESS Array S    59.20 327   P      P       00 24 07.1  -0.6
FINES FINESS Array B    59.20 327   P      P       00 24 07.6  -0.2
       comp=Z,9.0nm,0.5s,baz=88,slow=6.8,SNR=97
FINES                               LR     LR      00 51 48.9
       comp=Z,270nm,19.2s,baz=87,slow=38
       comp=Z,9.0nm,0.5s
FINES FINESS Array B    59.20 327ceP       P       00 24 07.9  +0.2
FINES                               pmax   pmax
       comp=Z,9.0nm,0.4s
BAL3X Bal3x, Balta      59.21 311   P      P       00 24 08.5  +0.5
VSU   Vasula            59.22 323ceP       P       00 24 08.0  +0.1
VSU                                 pmax   pmax
       comp=Z,69nm,1.3s
MORW  Morawa            59.33 169   P      P       00 24 09.3  +0.4
       comp=Z,19nm,1.4s
MORW  Morawa            59.33 169   P      P       00 24 08.8  -0.1
MORW                                IAmb   IAmb    00 24 09.9
       comp=Z,28nm,1.3s
MORW  Morawa            59.33 169   P      P       00 24 09.7  +0.8
CSS   Mathiatis         59.62 295   IAmb   IAmb    00 24 14.8
       comp=Z,33nm,1.0s
CSS   Mathiatis         59.62 295   P      P       00 24 11.3  +0.2
       comp=Z,36nm,0.9s
NACGM Naroch            59.70 319  eP      P       00 24 11.5  +0.2
       comp=E,418nm,17.9s
KTK1  Kautokeino        59.73 336  eP      P       00 24 12.6  +1.3
ASAR  Alice Springs     59.85 149   P      P       00 24 12.3  -0.3
       comp=E,22nm,0.8s,baz=330,slow=6.3,SNR=111
ASAR                                LR     LR      00 53 25.8
       comp=E,102nm,19.0s,baz=296,slow=39
       comp=E,22nm,0.8s
ASAR  Alice Springs     59.85 149   P      P       00 24 11.7  -1.0
MI28  Mi28,Pidlybu      59.87 314   P      P       00 24 12.4  -0.1
EIL   Elat              59.93 289   LR     LR      00 53 31.6
       comp=E,290nm,21.4s,baz=5.0,slow=39
SORM  Soroca            59.99 311 ⇑P       P       00 24 14.1  +0.7
SORM  Soroca            59.99 311   P      P       00 24 14.1  +0.7
LUBAR Lubar, Ukraine    60.01 313   P      P       00 24 13.6  +0.1
QIS   Mount Isa         60.03 142   P      P       00 24 13.1  -0.9
       comp=Z,23nm,0.9s
QIS   Mount Isa         60.03 142   P      P       00 24 13.0  -0.9
ATD   Arta Tunnel       60.23 267   P      P       00 24 15.5  -0.2
BORA  Eskisehir         60.47 302   IAmb   IAmb    00 24 20.1
       comp=Z,21nm,1.1s
TPGR  Topolog           60.68 307 ⇑P       P       00 24 19.6  +1.4
JETT  Jettan, Norway    60.69 336  eP      P       00 24 19.1  +1.2
TIRR  Tirgusor          60.78 307   IAmb   IAmb    00 24 22.1
       comp=Z,14nm,1.0s
TIRR  Tirgusor          60.78 307   P      P       00 24 19.3  +0.4
TIRR                                pmax   pmax
       comp=Z,17nm,1.1s
TIRR  Tirgusor          60.78 307   P      P       00 24 19.2  +0.4
       comp=Z,17nm,1.1s
MTSU  Mount Surprise    60.78 136   P      P       00 24 19.5  +0.4
       comp=Z,12nm,0.8s
MTSU  Mount Surprise    60.78 136   P      P       00 24 19.4  +0.3
CFR   Carcaliu          60.80 308 ⇓P       P       00 24 19.3  +0.4
CFR   Carcaliu          60.80 308   P      P       00 24 19.3  +0.4
RNPP9 Sopachiv          60.88 315   P      P       00 24 19.7  +0.3
RNPP8 Varash            60.91 315   P      P       00 24 19.8  +0.2
RNPP5 Staryi Chortor    60.91 315   P      P       00 24 19.7   0.0
SPITS Spitsbergen Ar    60.94 346   P      P       00 24 18.5  -0.9
       comp=Z,13nm,1.1s,baz=93,slow=9.3,SNR=10.0
SPITS                               LR     LR      00 55 11.6
       comp=Z,179nm,18.3s,baz=101,slow=40
       comp=Z,13nm,1.1s
BLDU  Ballidu           60.95 168   P      P       00 24 19.7  -0.4
       comp=Z,17nm,1.1s
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BLDU	Ballidu	60.95	168	P	P	00 24 19.6	-0.4
ISP	Isparta	60.98	299	ceP	P	00 24 19.3	-1.2
ISP				pmax	pmax		
	comp=Z,41nm,0.8s						
GHRR		61.08	309	⇑P	P	00 24 20.9	0.0
KMPD	K-Podol'skiy	61.13	312	P	P	00 24 20.8	-0.4
KMPD				P	P	00 24 20.8	-0.4
PABE	Paberze	61.19	320	P	P	00 24 20.7	-0.7
TRO	Tromso	61.19	337	eP	P	00 24 21.4	+0.1
ICOR	Ion Corvin	61.29	307	⇓P	P	00 24 22.8	+0.5
GIRR	Girov	61.48	310	⇓P	P	00 24 23.6	+0.1
TESR	Tescani	61.49	310	⇑P	P	00 24 23.8	+0.1
VRI	Vrincioaia	61.59	309	⇓P	P	00 24 26.1	+1.7
VRI	Vrincioaia	61.59	309	P	P	00 24 26.1	+1.7
PLOR	Plostina	61.65	309	⇓P	P	00 24 26.5	+1.7
PLOR	Plostina	61.65	309	P	P	00 24 26.4	+1.7
ELL	Elmali	61.76	298	P	P	00 24 25.1	-0.7
ELL	Elmali	61.76	298	P	P	00 24 25.1	-0.7
ELL				pmax	pmax		
	comp=Z,166nm,0.7s						
ISR	Istrita	61.90	308	⇓P	P	00 24 28.0	+1.4
ISR	Istrita	61.90	308	P	P	00 24 27.9	+1.4
COVR	Voineasa-Covas	61.95	309	⇑P	P	00 24 27.9	+1.1
TURR	Turia	62.02	309	⇓P	P	00 24 28.3	+1.0
KSV	Kosov	62.09	312	P	P	00 24 27.7	0.0
KLBR	Kellerberrin	62.09	168	P	P	00 24 27.2	-0.5
	comp=Z,36nm,0.8s						
KLBR	Kellerberrin	62.09	168	P	P	00 24 27.7	0.0
BURAR	Bucovina Array	62.16	311	P	P	00 24 28.3	-0.1
BURAR	Bucovina Array	62.16	311	⇓P	P	00 24 29.0	+0.6
BURAR	Bucovina Array	62.16	311	P	P	00 24 28.9	+0.6
OZUR		62.17	309	⇑P	P	00 24 28.8	+0.5
MLR	Muntele Rosu	62.22	309	LR	LR	00 54 03.7	
	comp=Z,260nm,20.2s,baz=58,slow=38						
MLR	Muntele Rosu	62.22	309	P	P	00 24 28.5	-0.2
MLR				IAmb	IAmb	00 24 31.5	
	comp=Z,17nm,1.0s						
MLR	Muntele Rosu	62.22	309	⇓P	P	00 24 30.1	+1.4
MLR	Muntele Rosu	62.22	309	P	P	00 24 30.1	+1.4
TNA	Tin City	62.24	28	P	P	00 24 28.3	0.0
	baz=281						
BOSR	Bodos	62.26	309	⇓P	P	00 24 30.7	+1.8
MANT	Manisa	62.27	300	P	P	00 24 29.1	-0.2
LOZB	Loznitsa	62.33	306	⇑P	P	00 24 30.0	+0.7
STNU	Starunia	62.36	312	P	P	00 24 30.1	+0.6
BALB	Balikesir	62.44	302	P	P	00 24 29.8	-0.4
DOPR	Dopca	62.47	309	⇑P	P	00 24 30.3	0.0
C16K	Lisburne Hills	62.71	25	P	P	00 24 31.4	0.0
	baz=282						
KMBL	Kambalda	62.76	164	P	P	00 24 31.9	-0.3
	comp=Z,7.6nm,1.0s						
STEI	Steigen	62.81	335	eP	P	00 24 34.3	+2.3
ARCR	ARCALIA	62.87	311	⇑P	P	00 24 34.7	+1.8
SPIA	Saint Paul Isl	62.88	38	P	P	00 24 32.6	-0.1
	baz=283						
ELND	Elena	62.95	306	⇓P	P	00 24 33.9	+0.4
ARR	Arges	63.14	309	⇑P	P	00 24 35.6	+0.8
KWP	Kalwaria Pacla	63.27	314	P	P	00 24 36.9	+1.4
KWP	Kalwaria Pacla	63.27	314	P	P	00 24 36.1	+0.6
BMR	Baia Mare	63.27	312	⇑P	P	00 24 36.7	+1.1
BMR	Baia Mare	63.27	312	P	P	00 24 36.7	+1.1
NWAO	Narrogin (SRO)	63.30	168	LR	LR	00 52 42.1	
	comp=Z,114nm,20.6s,baz=331,slow=37						
NWAO	Narrogin (SRO)	63.30	168	P	P	00 24 37.5	+1.8
NWAO				IAmb	IAmb	00 24 38.0	
	comp=Z,17nm,0.9s						
NWAO	Narrogin (SRO)	63.30	168	P	P	00 24 37.5	+1.8
NWAO				pmax	pmax		
	comp=Z,17nm,0.9s						
TNR	Turnu Rosu	63.30	309	⇑P	P	00 24 37.1	+1.2
TNR	Turnu Rosu	63.30	309	P	P	00 24 37.0	+1.2
CTA	Charters Tower	63.45	136	LR	LR	00 51 48.0	
	comp=Z,116nm,21.8s,baz=334,slow=36						
CTA	Charters Tower	63.45	136	P	P	00 24 37.7	+0.7
CTAO	Charters Tower	63.45	136	P	P	00 24 36.0	-1.0
CTAO				IAmb	IAmb	00 24 40.7	
	comp=Z,20nm,1.1s						
CTAO	Charters Tower	63.45	136	P	P	00 24 38.3	+1.3
CTAO	Charters Tower	63.45	136	P	P	00 24 36.0	-1.0
CTAO				pmax	pmax		
	comp=Z,20nm,1.1s						
C17K	DeLong Mountai	63.45	24	P	P	00 24 36.6	+0.2
	baz=284,SNR=18						
CJR	Cluj-Napoca	63.47	310	P	P	00 24 39.8	+2.9
MOR8	Moi Rana	63.50	333	eP	P	00 24 36.9	+0.1
ANM	Nome	63.50	29	P	P	00 24 36.0	-0.8
ANM	Nome	63.50	29	P	P	00 24 36.0	-0.8
ANM				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ANM	Nome	63.50	29	P	P	00 24 37.2	+0.4
	baz=284						
F15K	North Star Dit	63.53	28	IAmb	IAmb	00 24 40.0	
	comp=Z,19nm,0.9s						
F15K	North Star Dit	63.53	28	P	P	00 24 37.5	+0.5
	baz=284						
RAUS	Rausandaksla	63.59	333	eP	P	00 24 38.8	+1.4
RDOG	Red Dog Mine	63.65	25	P	P	00 24 37.5	-0.2
	baz=284						
D17K	Noatak River	63.67	25	P	P	00 24 38.4	+0.6
	baz=284,SNR=36						
LOT	Lotru	63.70	309	⇑P	P	00 24 39.7	+1.1
RDO	Rodhopi	63.71	304	IAmb	IAmb	00 24 40.7	
	comp=Z,18nm,1.3s						
B18K	Kokolik River	63.72	23	P	P	00 24 39.1	+1.0
	baz=284,SNR=26						
A19K	Wainwright	63.76	22	P	P	00 24 39.2	+0.9
	baz=284,SNR=11						
MESR	Meseseni	63.77	311	⇓P	P	00 24 40.2	+1.3
MARR	Marisel-Cluj	63.79	311	⇑P	P	00 24 40.0	+0.8
G15K	Niukluk	63.95	28	P	P	00 24 40.2	+0.4
	baz=284						
FORT	Forrest	63.97	158	P	P	00 24 40.2	0.0
	comp=Z,11nm,1.2s						
FORT	Forrest	63.97	158	P	P	00 24 40.9	+0.7
FORT				IAmb	IAmb	00 24 43.5	
	comp=Z,35nm,1.8s						
STOK	Stokkvaagen	64.02	333	eP	P	00 24 41.6	+1.5
DRGR		64.03	311	⇑P	P	00 24 41.4	+0.7
DRGR		64.03	311	P	P	00 24 41.4	+0.7
LEIR	Leirfjorden	64.04	333	eP	P	00 24 41.2	+0.9
C18K	Utukok River	64.11	24	IAmb	IAmb	00 24 43.6	
	comp=Z,20nm,0.8s						
C18K	Utukok River	64.11	24	P	P	00 24 41.0	+0.1
	baz=285						
DEV	Deva	64.16	310	P	P	00 24 42.8	+1.4
DEV				pmax	pmax		
	comp=Z,17nm,1.4s						
STHS	Stebnicka Huta	64.24	314	eP	P	00 24 41.9	-0.1
STHS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
STHS	Stebnicka Huta	64.24	314	eP	P	00 24 41.9	-0.1
E17K	Hotham Inlet	64.29	26	P	P	00 24 42.6	+0.6
	baz=285,SNR=44						
GZR	Gura Zlata	64.39	309	⇓P	P	00 24 43.1	+0.1
GZR	Gura Zlata	64.39	309	P	P	00 24 43.1	+0.1
K13K	Kusilvak Mount	64.47	32	IAmb	IAmb	00 24 46.6	
	comp=Z,22nm,0.9s						
K13K	Kusilvak Mount	64.47	32	P	P	00 24 43.7	+0.6
	baz=285,SNR=6.8						
C19K	Lookout Ridge	64.55	23	IAmb	IAmb	00 24 47.0	
	comp=Z,25nm,0.8s						
C19K	Lookout Ridge	64.55	23	P	P	00 24 44.4	+0.8
	baz=286,SNR=30						
E18K	Tukpahlearik C	64.66	25	IAmb	IAmb	00 24 47.3	
	comp=Z,18nm,0.8s						
E18K	Tukpahlearik C	64.66	25	P	P	00 24 44.6	+0.3
	baz=286						
J14K	Nanvaranak Lak	64.75	31	IAmb	IAmb	00 24 46.8	
	comp=Z,42nm,1.6s						
J14K	Nanvaranak Lak	64.75	31	P	P	00 24 45.3	+0.3
	baz=286						
HERR	Herculane	64.78	309	⇑P	P	00 24 45.5	0.0
H16K	Elim	64.79	28	P	P	00 24 45.4	+0.2
	baz=286,SNR=8.0						
NIE	Niedzica	64.83	314	P	P	00 24 47.7	+1.9
TATA	Tatamba Isabel	64.85	117	P	P	00 24 47.6	+1.3
SIRR	Siria	64.88	310	⇑P	P	00 24 46.9	+0.7
OJC	Ojcow	64.91	315	P	P	00 24 47.1	+0.8
OJC				pmax	pmax		
	comp=Z,27nm,1.2s						
B20K	Meade River	65.09	22	P	P	00 24 47.6	+0.5
	baz=288						
BZS	Buzias	65.10	310	⇓P	P	00 24 48.6	+0.9
BZS	Buzias	65.10	310	P	P	00 24 48.5	+0.9
G17K	Kiwalik Mounta	65.19	27	P	P	00 24 48.2	+0.4
	baz=287						
NOR	Nord	65.20	352	i P	P	00 24 47.5	-0.1
NOR				IAmb	IAmb	00 24 50.5	
	comp=Z,9.6nm,1.2s						
D19K	Kuna River	65.24	24	P	P	00 24 48.5	+0.4
	baz=288						
F18K	Selawik	65.25	26	P	P	00 24 48.5	+0.4
	baz=287,SNR=13						
MDVR	Moldovita	65.29	309	⇓P	P	00 24 49.6	+0.7
HFS	Hagfors	65.41	327	P	P	00 24 48.7	-0.6
	comp=Z,7.5nm,0.5s,baz=93,slow=5.9,SNR=48						
HFS				LR	LR	00 56 02.6	
	comp=Z,201nm,20.6s,baz=72,slow=38						
	comp=Z,7.5nm,0.5s						
A22K	Sinclair Lake	65.47	21	P	P	00 24 50.1	+0.6
	baz=290,SNR=16						
M13K	Dall Lake	65.50	33	P	P	00 24 50.5	+0.6
	baz=287						
PSZ	Piszkesteto	65.53	313	P	P	00 24 50.6	+0.2
PSZ				IAmb	IAmb	00 24 53.9	
	comp=Z,30nm,1.4s						
PSZ	Piszkesteto	65.53	313	P	P	00 24 50.6	+0.2
PSZ				pmax	pmax		
	comp=Z,30nm,1.4s						
L14K	Kuka Creek	65.54	32	P	P	00 24 51.2	+1.1
	baz=287						
BOVS	Bovan	65.65	308	⇑P	P	00 24 51.4	+0.2
I17K	Unalakleet	65.66	29	IAmb	IAmb	00 24 53.9	
	comp=Z,16nm,0.9s						
I17K	Unalakleet	65.66	29	P	P	00 24 51.7	+0.9
	baz=288,SNR=7.8						
H17K	Granite Mounta	65.66	28	IAmb	IAmb	00 24 52.5	
	comp=Z,12nm,0.9s						
H17K	Granite Mounta	65.66	28	P	P	00 24 51.5	+0.7
	baz=288						
D20K	Etivluk River	65.69	23	P	P	00 24 51.6	+0.6
	baz=289						
K15K	Wolf Creek Mou	65.78	31	P	P	00 24 52.4	+0.7
	baz=288						
UNV	Unalaska Valle	65.81	40	P	P	00 24 51.8	-0.1
	baz=288						
G18K	Tagagawik	65.86	27	P	P	00 24 52.0	-0.2
	baz=289,SNR=5.1						
J16K	Anvik River	65.88	30	IAmb	IAmb	00 24 55.8	
	comp=Z,12nm,0.9s						
J16K	Anvik River	65.88	30	P	P	00 24 53.0	+0.7
	baz=288,SNR=7.6						
E19K	Redstone River	65.89	25	IAmb	IAmb	00 24 55.5	
	comp=Z,16nm,0.7s						
E19K	Redstone River	65.89	25	P	P	00 24 52.7	+0.4
	baz=289						
L15K	Ungalak Mounta	65.99	31	P	P	00 24 53.6	+0.6
	baz=288						
E20K	Nigu River	65.99	24	P	P	00 24 53.4	+0.4
	baz=290						
GRG	Griva	66.02	305	P	P	00 24 53.0	-0.7
GRG				pmax	pmax		
	comp=Z,38nm,1.0s						
M14K	Bethel	66.06	32	P	P	00 24 54.4	+1.0
	baz=288,SNR=6.3						
B21K	Ikpikpuk River	66.06	22	P	P	00 24 54.0	+0.6
	baz=290,SNR=31						
IDI	Anoyia	66.08	298	P	P	00 24 53.6	-0.5
IDI				IAmb	IAmb	00 25 01.9	
	comp=Z,22nm,1.1s						
C21K	Knifeblade Rid	66.17	23	P	P	00 24 54.8	+0.7
	baz=291						
NC303	NORSAR Array S	66.17	328	P	P	00 24 54.1	-0.2
NC303				IAmb	IAmb	00 24 55.9	
	comp=Z,31nm,1.2s						
B22K	Teshekpuk Lake	66.19	21	P	P	00 24 54.4	+0.3
	baz=291						
H18K	Honhosa River	66.21	27	IAmb	IAmb	00 24 59.7	
	comp=Z,51nm,2.0s						
H18K	Honhosa River	66.21	27	P	P	00 24 54.5	+0.1
	baz=289						
BUD	Budapest	66.23	312	P	P	00 24 55.0	+0.2
BUD				pmax	pmax		
	comp=Z,19nm,1.7s						
LIT	Litokhoron	66.24	304	P	P	00 24 54.7	-0.4
LIT				IAmb	IAmb	00 24 56.0	
	comp=Z,28nm,1.3s						
LIT	Litokhoron	66.24	304	P	P	00 24 54.7	-0.4
LIT				pmax	pmax		
	comp=Z,28nm,1.3s						
NC602	NORSAR Array S	66.24	328	IAmb	IAmb	00 24 57.8	
	comp=Z,39nm,1.4s						
NC602	NORSAR Array S	66.24	328	eP	P	00 24 54.6	-0.1
NORES	NORESS Array B	66.24	328	P	P	00 24 55.5	+0.8
STEB	Steborice	66.24	315	eP	P	00 24 55.5	+0.6
NB2	NORSAR Subarra	66.30	328	P	P	00 24 54.1	-1.0
	comp=Z,33nm,1.2s,baz=71,slow=6.5						
NB2	NORSAR Subarra	66.30	328	P	P	00 24 54.1	-1.0
	baz=71,slow=6.5						
NB2	NORSAR Subarra	66.30	328	P	P	00 24 52.2	-2.9
NOA	NORSAR Array B	66.30	328	P	P	00 24 54.4	-0.7
	comp=Z,8.2nm,0.9s,baz=72,slow=6.5,SNR=20						
NOA				LR	LR	00 56 09.3	
	comp=Z,312nm,18.9s,baz=70,slow=38						
	comp=Z,8.2nm,0.9s						
G19K	Purcell Mounta	66.38	26	IAmb	IAmb	00 25 05.4	
	comp=Z,21nm,0.8s						
G19K	Purcell Mounta	66.38	26	P	P	00 24 55.8	+0.3
	baz=290						
NC204	NORSAR Array S	66.43	328	P	P	00 24 55.1	-0.8
NC204				IAmb	IAmb	00 24 57.5	
	comp=Z,29nm,1.1s						
MORC	Moravsky Berou	66.44	315	IAmb	IAmb	00 24 58.8	
	comp=Z,24nm,1.3s						
MORC	Moravsky Berou	66.44	315	⇓P	P	00 24 57.5	+1.2
MORC	Moravsky Berou	66.44	315	eP	P	00 24 56.1	-0.1
MORC	Moravsky Berou	66.44	315	P	P	00 24 57.4	+1.2
N14K	Kuskokwak Cree	66.45	33	P	P	00 24 56.3	+0.3
	baz=289						
J17K	VABM Dome	66.50	29	IAmb	IAmb	00 25 27.9	
	comp=Z,57nm,1.9s						
J17K	VABM Dome	66.50	29	P	P	00 24 56.6	+0.4
	baz=289						
INKA	Innaminka	66.53	146	P	P	00 24 56.8	-0.1
F20K	Avaraart Lake	66.58	25	IAmb	IAmb	00 24 59.5	
	comp=Z,13nm,0.8s						
F20K	Avaraart Lake	66.58	25	P	P	00 24 56.8	+0.1
	baz=291,SNR=15						
BORU	Boraas	66.63	324	i P	P	00 24 57.4	+0.2
JAVC	Velka Javorina	66.65	314	eP	P	00 24 58.7	+1.1
M15K	Kasigluk River	66.67	32	P	P	00 24 57.9	+0.5
	baz=289						
E21K	Killik River	66.70	23	P	P	00 24 57.7	+0.2
	baz=292						
AGG	Agios Georgios	66.72	303	P	P	00 24 57.1	-1.1
AGG				pmax	pmax		
	comp=Z,28nm,1.1s						
KRLC	Kraliky	66.81	316	eP	P	00 24 59.5	+0.9
KRLC				MLR	MLR		
	comp=Z,700nm,15.9s						
KRLC	Kraliky	66.81	316	eP	P	00 24 59.5	+0.9
KRLC				AMS	AMS	00 55 10.0	
	comp=Z,700nm,15.9s						
H19K	Roundabout Mou	66.84	27	P	P	00 24 59.2	+0.8
	baz=291,SNR=20						
MORH	Mrgy, Hungar	66.88	311	⇑P	P	00 24 59.5	+0.5
OSL	Oslo	66.89	327	eP	P	00 24 59.4	+0.6
SMOL	Smolenice	66.91	314	eP	P	00 25 01.3	+2.1
SMOL				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GCSA	Galena City Sc	66.94	27	P	P	00 24 59.3	+0.3
	baz=291						
STRU	Stroemstad	66.97	326	i P	P	00 24 59.9	+0.6
D22K	Ayikyak River	66.97	23	P	P	00 24 59.9	+0.6
	baz=292						
OSTC	Ostas	66.99	316	eP	P	00 25 00.6	+0.9
OSTC				MLR	MLR		
	comp=Z,800nm,20.7s						
OSTC	Ostas	66.99	316	eP	P	00 25 00.6	+0.9
OSTC				AMS	AMS	00 55 30.0	
	comp=Z,800nm,20.7s						
DPC	Dobruska-Polom	67.00	316	eP	P	00 25 01.0	+1.2
DPC				MLR	MLR		
	comp=Z,800nm,17.5s						
DPC	Dobruska-Polom	67.00	316	eP	P	00 25 01.0	+1.2
DPC				AMS	AMS	00 55 30.0	
	comp=Z,800nm,17.5s						
BJUU	Bjuv	67.00	322	i P	P	00 25 00.2	+0.6
MODS	Modra-Piesok	67.05	314	eP	P	00 25 01.8	+1.7
MODS				pmax	pmax		
	comp=Z,45nm,1.4s						
MODS	Modra-Piesok	67.05	314	eP	P	00 25 01.8	+1.7
K17K	Iditarod	67.06	30	P	P	00 25 00.9	+1.0
	baz=290,SNR=9.7						
CHVC	Chvalec	67.08	316	eP	P	00 25 00.3	0.0
CHVC				MLR	MLR		
	comp=Z,700nm,17.3s						
CHVC	Chvalec	67.08	316	eP	P	00 25 00.3	0.0
CHVC				AMS	AMS	00 55 30.0	
	comp=Z,700nm,17.3s						
N15K	Kwethluk River	67.12	33	P	P	00 25 01.2	+0.9
	baz=290						
ONAU	Onsala	67.14	324	i P	P	00 25 01.0	+0.5
VRAC	Vranov	67.17	315	LR	LR	00 56 57.1	
	comp=Z,317nm,18.6s,baz=68,slow=38						
VRAC	Vranov	67.17	315	⇓P	P	00 25 02.3	+1.5
VRAC	Vranov	67.17	315	eP	P	00 25 01.2	+0.3
VRAC	Vranov	67.17	315	P	P	00 25 02.3	+1.5
L17K	Donlin	67.26	30	P	P	00 25 02.2	+1.0
	baz=290						
C23K	Itkillik River	67.27	21	P	P	00 25 01.7	+0.6
	baz=294						
KBN	Korca	67.29	305	P	P	00 25 01.9	+0.1
KBN				pmax	pmax		
	comp=Z,40nm,1.0s						
F21K	Alatna River	67.33	24	IAmb	IAmb	00 25 04.5	
	comp=Z,20nm,0.8s						
F21K	Alatna River	67.33	24	P	P	00 25 02.0	+0.4
	baz=292						
M16K	Timber Creek	67.35	32	IAmb	IAmb	00 25 05.9	
	comp=Z,24nm,0.9s						
M16K	Timber Creek	67.35	32	P	P	00 25 02.7	+0.9
	baz=290						
QLP	Quilpie	67.37	142	P	P	00 25 03.0	+0.7
KRUC	Moravsky	67.38	315	eP	P	00 25 02.4	+0.3
KRUC	Moravsky	67.38	315	P	P	00 25 04.0	+1.9
KRUC				pmax	pmax		
	comp=Z,11nm,1.7s						
H20K	Anotleneega Mo	67.46	26	P	P	00 25 02.8	+0.4
	baz=292						
J18K	Innoko River	67.47	29	IAmb	IAmb	00 25 05.7	
	comp=Z,17nm,0.8s						
J18K	Innoko River	67.47	29	P	P	00 25 02.8	+0.3
	baz=291						
E22K	Anaktuvuk Pass	67.56	23	IAmb	IAmb	00 25 06.0	
	comp=Z,32nm,1.0s						
E22K	Anaktuvuk Pass	67.56	23	P	P	00 25 03.5	+0.5
	baz=294,SNR=30						
O15K	Ungalikthiuk R	67.59	34	IAmb	IAmb	00 25 07.3	
	comp=Z,26nm,0.8s						
O15K	Ungalikthiuk R	67.59	34	P	P	00 25 03.9	+0.6
	baz=290						
G21K	Allakaket	67.59	25	IAmb	IAmb	00 25 06.1	
	comp=Z,27nm,0.9s						
G21K	Allakaket	67.59	25	P	P	00 25 03.3	+0.1
	baz=293,SNR=18						
D23K	Nanushuk River	67.60	22	P	P	00 25 04.1	+0.9
	baz=294						
N16K	Nishlik Lake	67.63	32	P	P	00 25 04.0	+0.4
	baz=291						
S12K	Black Hills	67.65	38	P	P	00 25 04.3	+0.5
	baz=290						
F22K	John River	67.68	24	P	P	00 25 04.4	+0.6
	baz=294						
IMAR	Indian Mountai	67.71	26	P	P	00 25 03.7	-0.3
J19K	Poorman	67.73	28	IAmb	IAmb	00 25 07.3	
	comp=Z,15nm,0.9s						
J19K	Poorman	67.73	28	P	P	00 25 04.7	+0.6
	baz=292						
TREC	Trest	67.86	315	P	P	00 25 05.8	+0.6
TREC				pmax	pmax		
	comp=Z,16nm,1.3s						
RONA	Rosalia, Austr	67.90	313	epP	P	00 25 06.9	+1.4
	comp=Z,14nm,1.4s,SNR=5.3						
M17K	Holitna River	67.91	31	P	P	00 25 06.8	+1.5
	baz=291						
C24K	Franklin Bluff	67.92	21	IAmb	IAmb	00 25 08.7	
	comp=Z,27nm,0.9s						
C24K	Franklin Bluff	67.92	21	P	P	00 25 05.5	+0.3
	baz=296,SNR=10.0						
L18K	Granite Mounta	67.94	30	IAmb	IAmb	00 26 00.8	
	comp=Z,46nm,1.8s						
L18K	Granite Mounta	67.94	30	P	P	00 25 06.2	+0.8
	baz=292						
CONA	Conrad Observa	68.09	314	epP	P	00 25 08.2	+1.4
	comp=Z,17nm,1.4s,SNR=5.4						
TOLK	Toolik Lake Re	68.10	22	IAmb	IAmb	00 25 09.4	
	comp=Z,20nm,0.8s						
TOLK	Toolik Lake Re	68.10	22	P	P	00 25 06.9	+0.4
	baz=295,SNR=22						
D24K	Happy Valley	68.13	22	P	P	00 25 07.0	+0.5
	baz=296						
G22K	Bettles	68.16	24	P	P	00 25 06.7	0.0
	baz=294						
H21K	Melozitna Rive	68.19	26	IAmb	IAmb	00 25 09.8	
	comp=Z,14nm,0.9s						
H21K	Melozitna Rive	68.19	26	P	P	00 25 07.4	+0.4
	baz=294						
PRU	Pruhonice	68.20	316	P	P	00 25 06.6	-0.7
PRU				pmax	pmax		
	comp=Z,11nm,1.4s						
PRA	Prague	68.23	316	AMS	AMS	00 56 10.0	
	comp=Z,800nm,14.7s						
BRG	Berggiesshubel	68.25	317	P	P	00 25 07.8	+0.2
BRG				pmax	pmax		
	comp=Z,15nm,1.4s						
BRG	Berggiesshubel	68.25	317	eP	P	00 25 09.2	+1.6
	comp=Z,24nm,1.5s,baz=66,slow=6.2						
J20K	Nowinta River	68.26	28	IAmb	IAmb	00 25 10.8	
	comp=Z,22nm,0.8s						
J20K	Nowinta River	68.26	28	P	P	00 25 08.2	+0.8
	baz=293						
O16K	Kokwok River B	68.27	33	IAmb	IAmb	00 25 10.9	
	comp=Z,29nm,1.1s						
O16K	Kokwok River B	68.27	33	P	P	00 25 08.6	+1.1
	baz=292						
E23K	Chandalar	68.34	23	IAmb	IAmb	00 25 11.1	
	comp=Z,27nm,0.9s						
E23K	Chandalar	68.34	23	P	P	00 25 08.4	+0.4
	baz=296						
N17K	Nushagak Hills	68.34	32	P	P	00 25 09.1	+1.1
	baz=292						
DAG	Danmarks Havn	68.42	348	i P	P	00 25 07.0	-1.2
COLD	Coldfoot	68.50	24	IAmb	IAmb	00 25 10.4	
	comp=Z,15nm,1.0s						
COLD	Coldfoot	68.50	24	P	P	00 25 09.4	+0.6
	baz=295,SNR=9.1						
ARSA	Arzberg	68.55	313	eP	P	00 25 09.8	+0.2
	comp=Z,9.1nm,1.2s						
M18K	Stony River	68.59	31	P	P	00 25 10.4	+0.9
	baz=293						
ZVC	Zvikov	68.60	315	eP	P	00 25 10.7	+0.9
K20K	Telida	68.61	28	IAmb	IAmb	00 25 13.3	
	comp=Z,20nm,1.0s						
K20K	Telida	68.61	28	P	P	00 25 10.5	+0.9
	baz=293						
H22K	Ishtalitna Cre	68.63	25	IAmb	IAmb	00 25 11.6	
	comp=Z,14nm,1.2s						
H22K	Ishtalitna Cre	68.63	25	P	P	00 25 10.5	+0.8
	baz=295,SNR=8.2						
CLL	Collm	68.65	318	P	P	00 25 10.2	+0.2
CLL				IAmb	IAmb	00 25 12.2	
	comp=Z,21nm,1.3s						
CLL	Collm	68.65	318	i P	P	00 25 10.3	+0.2
CLL				pmax	pmax		
	comp=Z,18nm,1.3s						
CLL	Collm	68.65	318	eP	P	00 25 11.4	+1.4
	comp=Z,19nm,1.3s,baz=66,slow=6.2						
CLL	Collm	68.65	318	i P	P	00 25 10.3	+0.2
	comp=Z,18nm,1.3s						
CLL				ex	x	00 25 20.0	
CLL				ePP	PP	00 27 42.0	+0.7
CLL				AMS	AMS	00 56 00.0	
	comp=N,300nm,19.7s						
CLL				AMS	AMS	00 56 00.0	
	comp=E,300nm,20.7s						
O17K	Koliganek Bris	68.67	33	P	P	00 25 10.9	+0.9
	baz=292						
I21K	Tanana	68.70	26	IAmb	IAmb	00 25 14.0	
	comp=Z,26nm,1.0s						
I21K	Tanana	68.70	26	P	P	00 25 11.0	+0.8
	baz=294						
E24K	Your Creek	68.71	23	IAmb	IAmb	00 25 13.4	
	comp=Z,24nm,0.9s						
E24K	Your Creek	68.71	23	P	P	00 25 10.9	+0.6
	baz=296						
BBOO	Buckleboo	68.74	152	IAmb	IAmb	00 25 13.6	
	comp=Z,17nm,0.9s						

BBOO	**Buckleboo**	**68.74**	**152**	P	**P**	**00 25 09.7**	**-1.0**
L19K	**White Mountain**	**68.75**	**30**	IAmb	IAmb	00 25 14.2	
	comp=Z,20nm,1.0s						
L19K	**White Mountain**	**68.75**	**30**	P	**P**	**00 25 11.3**	**+0.8**
	baz=293						
CKRC	**Cesky Krumlov**	**68.75**	**315**	*e*P	**P**	**00 25 11.0**	**+0.2**
CKRC				MLR	MLR		
	comp=Z,600nm,19.5s						
CKRC	**Cesky Krumlov**	**68.75**	**315**	*e*P	**P**	**00 25 11.0**	**+0.2**
CKRC				AMS	AMS	00 56 30.0	
	comp=Z,600nm,19.5s						
S14K	**Fog Glacier**	**68.76**	**37**	P	**P**	**00 25 10.9**	**0.0**
	baz=292						
G23K	**Bananza Creek**	**68.78**	**24**	P	**P**	**00 25 11.2**	**+0.5**
	baz=296						
D25K	**Kavik River**	**68.83**	**21**	IAmb	IAmb	00 25 14.0	
	comp=Z,32nm,1.3s						
D25K	**Kavik River**	**68.83**	**21**	P	**P**	**00 25 11.2**	**+0.2**
	baz=298,SNR=18						
N18K	**Kilae Creek**	**68.88**	**31**	P	**P**	**00 25 12.2**	**+0.8**
	baz=293						
MUD	**Monsted U'grnd**	**68.88**	**324**	*i* P	**P**	**00 25 12.9**	**+1.5**
MUD				IAmb	IAmb	00 25 14.8	
	comp=Z,34nm,1.3s						
C26K	**Camden Bay**	**69.00**	**20**	P	**P**	**00 25 12.9**	**+1.0**
	baz=299						
SOKA	**Soboth**	**69.06**	**313**	*i* pP	**P**	**00 25 14.4**	**+1.5**
	comp=Z,23nm,1.3s						
KHC	**Kasperske Hory**	**69.09**	**315**	*ce*P	**P**	**00 25 13.9**	**+1.0**
KHC				pmax	pmax		
	comp=Z,12nm,1.7s						
KHC	**Kasperske Hory**	**69.09**	**315**	*e*P	**P**	**00 25 13.4**	**+0.5**
KHC				AMS	AMS	00 56 40.0	
	comp=Z,800nm,20.8s						
CHUM	**Lake Minchumin**	**69.11**	**28**	P	**P**	**00 25 13.6**	**+0.9**
	baz=295,SNR=8.4						
GEC2	**GERESS Array S**	**69.11**	**315**		**P**	**00 25 12.7**	**-0.5**
GEC2				IAmb	IAmb	00 25 15.6	
	comp=Z,27nm,1.4s						
GEC2	**GERESS Array S**	**69.11**	**315**	P	**P**	**00 25 12.3**	**-0.9**
GEC2				pmax	pmax		
	comp=Z,16nm,1.5s						
GEC2	**GERESS Array S**	**69.11**	**315**	*e*P	**P**	**00 25 14.9**	**+1.7**
	comp=Z,28nm,1.4s,baz=66,slow=6.2						
GERES	**GERESS Array B**	**69.11**	**315**	P	**P**	**00 25 13.4**	**+0.3**
	comp=Z,3.2nm,0.6s,baz=66,slow=7.5,SNR=23						
GERES				LR	LR	00 57 10.5	
	comp=Z,571nm,19.8s,baz=79,slow=37						
	comp=Z,3.2nm,0.6s						
MOA	**Molln**	**69.13**	**314**	*e*P	**P**	**00 25 13.4**	**+0.2**
	comp=Z,6.6nm,1.1s						
SNART	**Snartemo**	**69.15**	**326**	*i* P	**P**	**00 25 14.3**	**+1.3**
F24K	**Squaw Lake**	**69.17**	**23**	P	**P**	**00 25 13.3**	**+0.2**
	baz=297						
P17K	**Kvichak River**	**69.20**	**33**	P	**P**	**00 25 14.3**	**+1.0**
	baz=293						
BSEG	**Bad Segeberg**	**69.21**	**321**	P	**P**	**00 25 15.4**	**+1.9**
BSEG				pmax	pmax		
	comp=Z,19nm,1.1s						
MLY	**Manley**	**69.24**	**26**	P	**P**	**00 25 13.7**	**+0.1**
MLY				IAmb	IAmb	00 25 16.9	
	comp=Z,18nm,0.9s						
MLY	**Manley**	**69.24**	**26**	P	**P**	**00 25 14.2**	**+0.6**
	baz=296,SNR=14						
TANN	**Tannenbergstha**	**69.29**	**317**	*e*P	**P**	**00 25 15.7**	**+1.6**
	comp=Z,20nm,1.5s,baz=66,slow=6.2						
H23K	**Yukon River**	**69.34**	**25**	IAmb	IAmb	00 25 17.8	
	comp=Z,25nm,1.0s						
H23K	**Yukon River**	**69.34**	**25**	P	**P**	**00 25 15.2**	**+1.0**
	baz=296						
JMIC	**Jan Mayen**	**69.44**	**341**	LR	LR	00 58 45.4	
	comp=Z,469nm,19.8s,baz=280,slow=38						
N19K	**Bonanza Creek**	**69.46**	**31**	IAmb	IAmb	00 25 19.1	
	comp=Z,21nm,0.8s						
N19K	**Bonanza Creek**	**69.46**	**31**	P	**P**	**00 25 16.0**	**+0.9**
	baz=294,SNR=7.1						
C27K	**Jago River**	**69.50**	**20**	P	**P**	**00 25 16.0**	**+0.9**
	baz=300						
WET	**Wettzell**	**69.51**	**316**	P	**P**	**00 25 17.2**	**+1.7**
WET				pmax	pmax		
	comp=Z,9.0nm,1.3s						
O18K	**Koktuh Hills**	**69.52**	**32**	P	**P**	**00 25 16.4**	**+1.1**
	baz=294						
BPAW	**Bear Paw Mtn.**	**69.55**	**27**	P	**P**	**00 25 16.1**	**+0.6**
	baz=296						
BIOA	**Bad Ischl, Aus**	**69.58**	**314**	*e*pP	**P**	**00 25 16.6**	**+0.6**
	comp=Z,12nm,1.0s						
PPLA	**Purkeypile**	**69.58**	**28**	P	**P**	**00 25 16.5**	**+0.6**
	baz=295,SNR=8.4						
M20K	**Styx River**	**69.61**	**30**	IAmb	IAmb	00 25 19.7	
	comp=Z,22nm,0.9s						
M20K	**Styx River**	**69.61**	**30**	P	**P**	**00 25 16.9**	**+0.9**
	baz=295						
E25K	**Arctic Village**	**69.66**	**22**		**P**	**00 25 16.2**	**0.0**
E25K	**Arctic Village**	**69.66**	**22**	P	**P**	**00 25 16.8**	**+0.7**
	baz=299						
ROTZ	**Rotzenmuhle**	**69.68**	**316**	*e*P	**P**	**00 25 18.6**	**+2.1**
	comp=Z,5.3nm,1.2s,baz=66,slow=6.2						
G24K	**Hadweenzic Riv**	**69.69**	**24**	IAmb	IAmb	00 25 18.0	
	comp=Z,20nm,1.0s						
G24K	**Hadweenzic Riv**	**69.69**	**24**	P	**P**	**00 25 16.9**	**+0.6**
	baz=298						
P18K	**Big Mountain,**	**69.69**	**33**	P	**P**	**00 25 17.1**	**+0.7**
	baz=294						
MOX	**Moxa**	**69.71**	**317**	*e*L	L	00 57 10.7	
	comp=Z,371nm,20.3s						
I23K	**Minto, Yukon-K**	**69.72**	**26**	IAmb	IAmb	00 25 19.6	
	comp=Z,22nm,1.0s						
I23K	**Minto, Yukon-K**	**69.72**	**26**	P	**P**	**00 25 17.1**	**+0.6**
	baz=297,SNR=8.9						
Q17K	**Contact Creek**	**69.84**	**34**	P	**P**	**00 25 18.0**	**+0.5**
	baz=294						
F25K	**Christian Rive**	**69.89**	**23**	IAmb	IAmb	00 25 21.2	
	comp=Z,14nm,1.1s						
F25K	**Christian Rive**	**69.89**	**23**	P	**P**	**00 25 18.2**	**+0.6**
	baz=299						
H24K	**Noodor Dome**	**69.95**	**25**	P	**P**	**00 25 18.3**	**+0.3**
	baz=298						
KBA	**Koelnbreinsper**	**69.99**	**313**	*e*pP	**P**	**00 25 19.4**	**+0.6**
	comp=Z,12nm,1.1s						
NEA2	**Nenana**	**70.08**	**26**	IAmb	IAmb	00 25 22.2	
	comp=Z,32nm,0.9s						
NEA2	**Nenana**	**70.08**	**26**	P	**P**	**00 25 19.3**	**+0.5**
	baz=297,SNR=23						
Q18K	**Katmai Hardscr**	**70.10**	**33**	P	**P**	**00 25 19.6**	**+0.5**
	baz=294						
TRF	**Thorofare Moun**	**70.12**	**28**	IAmb	IAmb	00 27 39.8	
	comp=Z,61nm,1.9s						
TRF	**Thorofare Moun**	**70.12**	**28**	P	**P**	**00 25 19.7**	**+0.5**
	baz=296						
G25K	**Bearman Lake**	**70.14**	**24**	P	**P**	**00 25 19.9**	**+0.8**
	baz=299						
AUJCS	**Jamestown Cent**	**70.14**	**150**	P	**P**	**00 25 19.8**	**+0.4**
SKT	**Skwentna**	**70.25**	**29**	IAmb	IAmb	00 25 23.1	
	comp=Z,22nm,1.0s						
SKT	**Skwentna**	**70.25**	**29**	P	**P**	**00 25 20.8**	**+0.9**
	baz=296,SNR=9.6						
LESA	**Schwarzleotal**	**70.28**	**314**	*e*P	**P**	**00 25 20.4**	**0.0**
	comp=Z,11nm,0.9s,SNR=7.4						
N20K	**Mount Spurr**	**70.30**	**30**	P	**P**	**00 25 20.6**	**+0.4**
	baz=296						
SPCR	**Spurr Chakacha**	**70.30**	**30**	P	**P**	**00 25 20.7**	**+0.5**
	baz=296						
GRF	**Grafenberg Arr**	**70.30**	**317**	*e*L	L	00 57 42.7	
	comp=Z,463nm,21.3s						
DBG	**Daneborg**	**70.31**	**346**	*i* P	**P**	**00 25 18.4**	**-1.5**
DBG				IAmb	IAmb	00 25 19.0	
	comp=Z,7.2nm,1.0s						
BMAR	**Burnt Mountain**	**70.33**	**23**	P	**P**	**00 25 20.6**	**+0.4**
F26K	**Sheenjek River**	**70.34**	**22**	P	**P**	**00 25 20.7**	**+0.3**
	baz=300						
STKA	**Stephens Creek**	**70.37**	**147**	P	**P**	**00 25 20.1**	**-0.8**
	comp=Z,5.7nm,0.8s,baz=332,slow=8.0,SNR=15						
	comp=Z,5.7nm,0.8s						
STKA	**Stephens Creek**	**70.37**	**147**	P	**P**	**00 25 20.5**	**-0.3**
COLA	**College**	**70.41**	**26**	P	**P**	**00 25 20.6**	**-0.1**
COLA	**College**	**70.41**	**26**	P	**P**	**00 25 21.1**	**+0.4**
COLA	**College**	**70.41**	**26**	P	**P**	**00 25 20.8**	**+0.2**
COLA	**College**	**70.41**	**26**	P	**P**	**00 25 20.9**	**+0.2**
	baz=298						
POKR	**Poker Plat Res**	**70.45**	**25**	P	**P**	**00 25 21.5**	**+0.5**
	baz=298,SNR=14						
HTT	**Hallett**	**70.48**	**150**	P	**P**	**00 25 21.6**	**+0.1**
MCK	**McKinley**	**70.53**	**27**	IAmb	IAmb	00 27 46.9	
	comp=Z,58nm,1.9s						
MCK	**McKinley**	**70.53**	**27**	P	**P**	**00 25 21.8**	**+0.3**
	baz=298						
D27M	**Malcolm River**	**70.53**	**20**	P	**P**	**00 25 22.0**	**+0.5**
	baz=303						
CUT	**Chulitna**	**70.59**	**29**	P	**P**	**00 25 21.9**	**+0.1**
	baz=297						
ABTA	**Abfaltersbach**	**70.65**	**313**	*i* P	**P**	**00 25 22.3**	**-0.3**
	comp=Z,5.8nm,0.7s						
STAL	**STALIGIAL**	**70.71**	**313**	IAmb	IAmb	00 25 24.2	
	comp=Z,16nm,1.1s						
RND	**Reindeer**	**70.71**	**27**	IAmb	IAmb	00 25 25.2	
	comp=Z,11nm,0.7s						
SUA	**Susitna One**	**70.82**	**30**	P	**P**	**00 25 23.4**	**0.0**
	baz=297,SNR=5.7						
ILAR	**Eielson Array**	**70.82**	**26**	P	**P**	**00 25 22.1**	**-1.2**
	comp=Z,9.3nm,1.0s,baz=280,slow=5.1,SNR=44						
ILAR				LR	LR	00 57 06.4	
	comp=Z,213nm,19.4s,baz=293,slow=36						
	comp=Z,9.3nm,1.0s						
ILAR	**Eielson Array**	**70.82**	**26**	P	**P**	**00 25 21.8**	**-1.5**
G26K	**Porcupine Rive**	**70.84**	**23**	P	**P**	**00 25 24.0**	**+0.7**
	baz=301						
CIMO	**Cimolais**	**70.86**	**313**	IAmb	IAmb	00 25 25.3	
	comp=Z,30nm,1.6s						
FUR	**Furstenfeldbru**	**70.87**	**315**	P	**P**	**00 25 24.0**	**+0.2**
FUR				pmax	pmax		
	comp=Z,46nm,1.0s						
FUR	**Furstenfeldbru**	**70.87**	**315**	*e*P	**P**	**00 25 26.1**	**+2.3**
	baz=66,slow=6.2						
E27K	**Coleen River**	**70.91**	**21**	IAmb	IAmb	00 25 28.1	
	comp=Z,27nm,1.5s						
E27K	**Coleen River**	**70.91**	**21**	P	**P**	**00 25 24.1**	**+0.3**
	baz=302						
M22K	**Willow**	**70.95**	**29**	P	**P**	**00 25 24.6**	**+0.6**
	baz=297						
CAPN	**Captain Cook N**	**70.95**	**30**	P	**P**	**00 25 24.3**	**+0.2**
	baz=297						
HDA	**Harding Lake**	**70.98**	**26**	IAmb	IAmb	00 25 53.5	
	comp=Z,8.1nm,0.5s						
HDA	**Harding Lake**	**70.98**	**26**	P	**P**	**00 25 24.2**	**0.0**
	baz=299						
WTTA	**Wattenberg**	**71.00**	**314**	*e*P	**P**	**00 25 24.4**	**-0.5**
	comp=Z,7.8nm,0.6s						
WATA	**Walderalm**	**71.01**	**314**	*i* P	**P**	**00 25 24.8**	**-0.1**
	comp=Z,10nm,1.1s						
WAT1	**Susitna Watana**	**71.10**	**28**	P	**P**	**00 25 25.1**	**+0.1**
	baz=298						
D28M	**Stokes Point**	**71.15**	**20**	P	**P**	**00 25 25.6**	**+0.6**
	baz=304						
SQTA	**Sankt Quirin**	**71.28**	**314**	*e*P	**P**	**00 25 25.8**	**-0.7**
	comp=Z,16nm,0.7s,SNR=6.4						
E28M	**Babbage River**	**71.32**	**20**	IAmb	IAmb	00 25 29.4	
	comp=Z,16nm,0.9s						
E28M	**Babbage River**	**71.32**	**20**	P	**P**	**00 25 26.7**	**+0.5**
	baz=304						
Q20K	**Shuyak Island**	**71.36**	**33**	P	**P**	**00 25 26.7**	**+0.1**
	baz=296						
RC01	**Rabbit Creek A**	**71.42**	**30**	P	**P**	**00 25 26.6**	**-0.4**
	baz=298						
PMR	**Palmer**	**71.45**	**29**	P	**P**	**00 25 26.9**	**-0.1**
PMR	**Palmer**	**71.45**	**29**	P	**P**	**00 25 26.8**	**-0.2**
	baz=298,SNR=8.8						
GHO	**Glory Hole Cre**	**71.45**	**29**	P	**P**	**00 25 27.4**	**+0.2**
GHO				IAmb	IAmb	00 25 29.5	
	comp=Z,28nm,1.0s						
RETA	**Reutte**	**71.45**	**314**	*i* P	**P**	**00 25 27.9**	**+0.4**
	comp=Z,3.5nm,0.8s						
DHY	**Denali Highway**	**71.46**	**27**	P	**P**	**00 25 26.7**	**-0.6**
	baz=299						
J25K	**Salcha River,**	**71.47**	**25**	P	**P**	**00 25 27.0**	**-0.2**
	baz=300						
OHAK	**Old Harbor**	**71.54**	**34**	P	**P**	**00 25 27.9**	**+0.3**
	baz=296						
WAT6	**Susitna Watana**	**71.55**	**28**	P	**P**	**00 25 27.8**	**-0.1**
	baz=299						
BRSE	**Bradley Lake S**	**71.60**	**31**	P	**P**	**00 25 28.5**	**+0.4**
	baz=297						
G27K	**Doyon Strip**	**71.63**	**23**	IAmb	IAmb	00 25 31.4	
	comp=Z,13nm,0.9s						
G27K	**Doyon Strip**	**71.63**	**23**	P	**P**	**00 25 28.6**	**+0.4**
	baz=303						
KDAK	**Kodiak Island**	**71.63**	**33**	P	**P**	**00 25 28.4**	**+0.1**
	baz=296						
FETA	**Feichten**	**71.66**	**314**	*e*P	**P**	**00 25 28.8**	**-0.1**
	comp=Z,20nm,1.2s,SNR=5.0						
SML	**Sawmill**	**71.68**	**29**	P	**P**	**00 25 28.7**	**+0.1**
	baz=299,SNR=12						
K24K	**Donnelly Dome**	**71.72**	**26**	P	**P**	**00 25 28.2**	**-0.5**
	baz=300,SNR=23						
TNS	**Taunus Mts**	**71.73**	**318**	P	**P**	**00 25 27.8**	**-1.3**
TNS				pmax	pmax		
	comp=Z,16nm,1.2s						
F28M	**Old Crow**	**71.77**	**21**	P	**P**	**00 25 29.2**	**+0.2**
	baz=304						
UBR	**Ueberruh**	**71.78**	**315**	*e*P	**P**	**00 25 30.9**	**+1.4**
	comp=Z,8.3nm,0.7s,baz=66,slow=6.2						
KNK	**Knik Glacier**	**71.81**	**29**	IAmb	IAmb	00 25 32.1	
	comp=Z,34nm,1.1s						
KNK	**Knik Glacier**	**71.81**	**29**	P	**P**	**00 25 29.5**	**+0.2**
	baz=299,SNR=6.0						
I26K	**Coal Creek Min**	**71.92**	**24**	P	**P**	**00 25 29.7**	**-0.2**
I26K				IAmb	IAmb	00 25 33.1	
	comp=Z,16nm,0.8s						
I26K	**Coal Creek Min**	**71.92**	**24**	P	**P**	**00 25 30.2**	**+0.3**
	baz=302,SNR=16						
E29M	**Blow River**	**71.94**	**20**	IAmb	IAmb	00 25 33.1	
	comp=Z,20nm,0.9s						
E29M	**Blow River**	**71.94**	**20**	P	**P**	**00 25 30.2**	**+0.3**
	baz=306						
M23K	**Glacier View**	**71.94**	**29**	P	**P**	**00 25 30.5**	**+0.4**
	baz=299						
H27K	**Steamboat Moun**	**71.99**	**23**	IAmb	IAmb	00 25 34.3	
	comp=Z,26nm,0.9s						
H27K	**Steamboat Moun**	**71.99**	**23**	P	**P**	**00 25 31.0**	**+0.6**
	baz=303						
SEW	**Seward**	**72.01**	**30**	P	**P**	**00 25 30.8**	**+0.4**
	baz=298						
DAVA	**Damuels**	**72.08**	**315**	*i* P	**P**	**00 25 31.3**	**-0.1**
	comp=Z,8.2nm,1.1s						
SCM	**Sheep Creek Mo**	**72.08**	**28**	IAmb	IAmb	00 27 07.5	
	comp=Z,43nm,1.3s						
SCM	**Sheep Creek Mo**	**72.08**	**28**	P	**P**	**00 25 31.2**	**+0.2**
	baz=299						
CMSA	**Cobar Meteorol**	**72.10**	**144**	P	**P**	**00 25 31.8**	**+0.5**
RIDG	**Independent Ri**	**72.11**	**26**	IAmb	IAmb	00 25 33.5	
	comp=Z,21nm,0.8s						
RIDG	**Independent Ri**	**72.11**	**26**	P	**P**	**00 25 30.6**	**-0.6**
	baz=301						
FUORN	**Ofenpass-Fuorn**	**72.12**	**314**	IAmb	IAmb	00 25 33.8	
	comp=Z,35nm,1.4s						
PWL	**Port Wells**	**72.14**	**30**	IAmb	IAmb	00 25 34.2	
	comp=Z,24nm,0.9s						
PWL	**Port Wells**	**72.14**	**30**	P	**P**	**00 25 31.1**	**-0.1**
	baz=299						
NEEM	**North Greenlan**	**72.18**	**355**	*i* P	**P**	**00 25 31.8**	**+0.2**
NEEM				IAmb	IAmb	00 25 34.6	
	comp=Z,22nm,0.6s						
J26L	**Joseph Creek**	**72.20**	**25**	P	**P**	**00 25 31.4**	**-0.3**
	baz=302						
PAX	**Paxson**	**72.26**	**27**	P	**P**	**00 25 31.5**	**-0.6**
PAX				IAmb	IAmb	00 25 33.6	
	comp=Z,22nm,1.4s						
PAX	**Paxson**	**72.26**	**27**	P	**P**	**00 25 31.5**	**-0.6**
PAX				pmax	pmax		
	comp=Z,22nm,1.4s						
PAX	**Paxson**	**72.26**	**27**	P	**P**	**00 25 32.6**	**+0.5**
	baz=301						
DAVOX	**Davos/Dischmat**	**72.29**	**314**	LR	LR	00 59 28.0	
	comp=Z,468nm,20.3s,baz=78,slow=38						
I27K	**Kandik River**	**72.30**	**24**	IAmb	IAmb	00 25 36.6	
	comp=Z,24nm,0.9s						
I27K	**Kandik River**	**72.30**	**24**	P	**P**	**00 25 33.0**	**+0.8**
	baz=303,SNR=19						
SCRK	**Sand Creek**	**72.31**	**26**	IAmb	IAmb	00 25 35.2	
	comp=Z,15nm,0.8s						
SCRK	**Sand Creek**	**72.31**	**26**	P	**P**	**00 25 31.9**	**-0.5**
	baz=302,SNR=11						
M24K	**Tolsona, Glenn**	**72.42**	**28**	P	**P**	**00 25 33.9**	**+0.9**
	baz=300,SNR=9.2						
DOT	**Dot Lake**	**72.46**	**26**	IAmb	IAmb	00 25 36.3	
	comp=Z,15nm,1.0s						
BFO	**Black Forest**	**72.60**	**316**	P	**P**	**00 25 32.8**	**-1.5**
BFO	**Black Forest**	**72.60**	**316**	P	**P**	**00 25 32.8**	**-1.5**
BFO				pmax	pmax		
	comp=Z,11nm,0.9s						
BFO	**Black Forest**	**72.60**	**316**	*e*P	**P**	**00 25 35.6**	**+1.4**
	comp=Z,13nm,1.0s,baz=66,slow=6.2						
HARP	**HAARP**	**72.68**	**27**	P	**P**	**00 25 35.3**	**+0.8**
	baz=301						
SLE	**Schleitheim**	**72.74**	**315**	P	**P**	**00 25 35.6**	**+0.5**
SLE				pmax	pmax		
	comp=Z,25nm,1.2s						
TUE	**Stuetta**	**72.75**	**314**	IAmb	IAmb	00 25 37.4	
	comp=Z,53nm,1.8s						
G29M	**Pine Creek**	**72.76**	**22**	P	**P**	**00 25 35.2**	**+0.3**
	baz=306						
KLU	**Klutina**	**72.84**	**28**	P	**P**	**00 25 35.7**	**+0.2**
	baz=301,SNR=14						
A36M	**Sachs Harbour**	**72.88**	**14**	IAmb	IAmb	00 25 38.3	
	comp=Z,34nm,0.9s						
A36M	**Sachs Harbour**	**72.88**	**14**	P	**P**	**00 25 35.8**	**+0.4**
	baz=316,SNR=27						
P23K	**Montague Islan**	**72.96**	**30**	P	**P**	**00 25 36.9**	**+0.7**
	baz=300						
MENT	**Mentasta**	**72.97**	**26**	P	**P**	**00 25 37.0**	**+0.8**
I28M	**Miner Creek**	**72.97**	**23**	IAmb	IAmb	00 25 39.7	
	comp=Z,17nm,0.9s						
I28M	**Miner Creek**	**72.97**	**23**	P	**P**	**00 25 36.5**	**+0.3**
	baz=304,SNR=17						
MEM	**Membach**	**72.98**	**319**	*d*P	**P**	**00 25 35.2**	**-1.3**
MEM				*d*pP	**P**	**00 25 38.4**	**+1.9**
K27K	**Chicken**	**73.00**	**25**	IAmb	IAmb	00 25 39.6	
	comp=Z,21nm,0.9s						
K27K	**Chicken**	**73.00**	**25**	P	**P**	**00 25 37.0**	**+0.6**
	baz=303						
F30M	**Barrier River**	**73.04**	**20**	P	**P**	**00 25 36.6**	**+0.1**
F30M				IAmb	IAmb	00 25 39.5	
	comp=Z,48nm,1.4s						
F30M	**Barrier River**	**73.04**	**20**	P	**P**	**00 25 36.9**	**+0.4**
	baz=308						
H29M	**Whitestone**	**73.06**	**22**	IAmb	IAmb	00 26 09.3	
	comp=Z,24nm,1.4s						
H29M	**Whitestone**	**73.06**	**22**	P	**P**	**00 25 36.9**	**+0.2**
	baz=306						
L26K	**Log Cabin Wild**	**73.06**	**26**	P	**P**	**00 25 37.0**	**+0.2**
	baz=302						
VAE	**Valguarnera**	**73.07**	**304**	LR	LR	01 02 25.0	
	comp=Z,92nm,21.9s,baz=127,slow=40						
DIV	**Divide**	**73.08**	**29**	IAmb	IAmb	00 25 39.5	
	comp=Z,29nm,1.1s						
INK	**Inuvik**	**73.28**	**19**	IAmb	IAmb	00 25 40.4	
	comp=Z,18nm,0.8s						
INK	**Inuvik**	**73.28**	**19**	P	**P**	**00 25 37.9**	**0.0**
INK				pmax	pmax		
	comp=Z,25nm,2.7s						
INK	**Inuvik**	**73.28**	**19**	P	**P**	**00 25 37.8**	**0.0**
	baz=309,SNR=8.1						
SCO	**Scoresbysund**	**73.29**	**344**	*i* P	**P**	**00 25 38.8**	**+1.0**
SCO				IAmb	IAmb	00 25 41.0	
	comp=Z,8.8nm,0.9s						
G30M	**tAoh Zraii Nji**	**73.29**	**21**	P	**P**	**00 25 37.8**	**-0.3**
	baz=307						
WLF	**Walferdange**	**73.31**	**318**	IAmb	IAmb	00 25 41.5	
	comp=Z,35nm,1.0s						
WLF	**Walferdange**	**73.31**	**318**	P	**P**	**00 25 38.2**	**-0.2**
WLF				pmax	pmax		
	comp=Z,37nm,1.3s						
WLF	**Walferdange**	**73.31**	**318**	*e*P	**P**	**00 25 40.8**	**+2.3**
	comp=Z,33nm,1.0s,baz=66,slow=6.2						
WLF	**Walferdange**	**73.31**	**318**	*d*P	**P**	**00 25 37.8**	**-0.6**
	comp=Z,20nm,1.1s						
N25K	**Chitina, Valde**	**73.32**	**28**	IAmb	IAmb	00 25 41.8	
	comp=Z,26nm,1.1s						
N25K	**Chitina, Valde**	**73.32**	**28**	P	**P**	**00 25 38.8**	**+0.4**
	baz=302						
ECH	**Echery**	**73.35**	**316**	P	**P**	**00 25 39.1**	**+0.4**
ECH				pmax	pmax		
	comp=Z,9.0nm,1.2s						
EYAK	**Cordova Ski Ar**	**73.39**	**29**	P	**P**	**00 25 39.9**	**+1.2**
EYAK	**Cordova Ski Ar**	**73.39**	**29**	P	**P**	**00 25 39.1**	**+0.5**
	baz=301						
BCLA	**Clavier**	**73.47**	**319**	*d*P	**P**	**00 25 40.0**	**+0.7**
	comp=Z,6.8nm,0.9s						
OPO	**Ambohidratompo**	**73.48**	**237**	LR	LR	00 55 51.7	
	comp=Z,62nm,20.4s,baz=163,slow=34						
EPYK	**Eagle Plains**	**73.50**	**22**	P	**P**	**00 25 38.1**	**-1.2**
EPYK				IAmb	IAmb	00 25 41.2	
	comp=Z,20nm,1.0s						
EPYK	**Eagle Plains**	**73.50**	**22**	P	**P**	**00 25 39.5**	**+0.2**
	baz=307,SNR=7.5						
M26K	**Nabesna, AK**	**73.53**	**27**	IAmb	IAmb	00 25 43.5	
	comp=Z,18nm,0.9s						
M26K	**Nabesna, AK**	**73.53**	**27**	P	**P**	**00 25 40.0**	**+0.4**
	baz=303,SNR=10						
L27K	**Beaver Creek,**	**73.62**	**26**	IAmb	IAmb	00 25 43.7	
	comp=Z,32nm,1.1s						
L27K	**Beaver Creek,**	**73.62**	**26**	P	**P**	**00 25 40.8**	**+0.7**
	baz=304,SNR=16						
BMRM	**Bremner River**	**73.65**	**28**	P	**P**	**00 25 40.8**	**+0.5**
	baz=302,SNR=8.1						
GLB	**Gilahina Butte**	**73.73**	**28**	IAmb	IAmb	00 25 43.9	
	comp=Z,24nm,1.0s						
F31M	**Tsiigehtchic**	**73.77**	**20**	P	**P**	**00 25 40.4**	**-0.3**
	baz=309						
G31M	**Satah River**	**73.93**	**21**	P	**P**	**00 25 41.2**	**-0.5**
	baz=309,SNR=7.0						
DAWY	**Dawson**	**73.96**	**24**	IAmb	IAmb	00 25 44.5	
	comp=Z,18nm,1.1s						
DAWY	**Dawson**	**73.96**	**24**	P	**P**	**00 25 42.0**	**-0.1**
	baz=305,SNR=12						
M27K	**Edge Creek, AK**	**74.00**	**26**	IAmb	IAmb	00 25 47.4	
	comp=Z,23nm,1.0s						
M27K	**Edge Creek, AK**	**74.00**	**26**	P	**P**	**00 25 43.2**	**+0.8**
	baz=304,SNR=11						
TULEG	**Thule**	**74.00**	**358**	IAmb	IAmb	00 25 44.6	
	comp=Z,14nm,1.0s						
TULEG	**Thule**	**74.00**	**358**	*i* P	**P**	**00 25 41.5**	**-0.6**
TULEG				IAmb	IAmb	00 25 44.3	
	comp=Z,13nm,1.0s						
MCARA	**McCarthy VSAT**	**74.08**	**28**	IAmb	IAmb	00 25 46.5	
	comp=Z,21nm,0.8s						
MCARA	**McCarthy VSAT**	**74.08**	**28**	P	**P**	**00 25 43.4**	**+0.6**
	baz=303						
I30M	**Mount Dempster**	**74.31**	**23**	P	**P**	**00 25 44.4**	**+0.3**
	baz=308						
BVCY	**Beaver Creek**	**74.36**	**26**	P	**P**	**00 25 45.3**	**+1.0**
	baz=304,SNR=9.1						
CRQE	**Cirque**	**74.39**	**28**	P	**P**	**00 25 45.0**	**+0.3**
	baz=303						
TGL	**Tana Glacier**	**74.50**	**28**	IAmb	IAmb	00 25 48.8	
	comp=Z,26nm,0.9s						
H31M	**Peel River**	**74.62**	**22**	IAmb	IAmb	00 25 47.9	
	comp=Z,18nm,0.9s						
H31M	**Peel River**	**74.62**	**22**	P	**P**	**00 25 46.0**	**+0.2**
	baz=309						
J30M	**Hart River**	**74.72**	**23**	P	**P**	**00 25 46.6**	**0.0**
J30M	**Hart River**	**74.72**	**23**	P	**P**	**00 25 46.4**	**-0.2**
	baz=308						
K29M	**Barlow Dome**	**74.75**	**24**	IAmb	IAmb	00 25 50.2	
	comp=Z,16nm,0.8s						
K29M	**Barlow Dome**	**74.75**	**24**	P	**P**	**00 25 47.0**	**+0.2**
	baz=307,SNR=16						
BARN	**Barnard Glacie**	**74.81**	**28**	IAmb	IAmb	00 25 51.0	
	comp=Z,17nm,0.8s						
YUK3	**Moose Creek**	**74.88**	**27**	P	**P**	**00 25 48.0**	**+0.4**
	baz=305						
L29M	**L29M**	**74.98**	**25**	IAmb	IAmb	00 25 51.9	
	comp=Z,27nm,1.1s						
L29M	**L29M**	**74.98**	**25**	P	**P**	**00 25 48.5**	**+0.6**
	baz=307						
CTG	**Chitna Glacier**	**74.99**	**28**	P	**P**	**00 25 48.7**	**+0.5**
	baz=304						
CTGM	**Chitina Glacie**	**74.99**	**28**	IAmb	IAmb	00 25 52.1	
	comp=Z,20nm,0.8s						
SUMG	**Summit**	**75.02**	**349**	IAmb	IAmb	00 25 51.5	
	comp=Z,20nm,1.1s						
SUMG	**Summit**	**75.02**	**349**	P	**P**	**00 25 48.3**	**-0.2**
SUMG				pmax	pmax		
	comp=Z,17nm,1.2s						
SUMG	**Summit**	**75.02**	**349**	*i* P	**P**	**00 25 47.6**	**-0.9**
SUMG				IAmb	IAmb	00 25 51.8	
	comp=Z,22nm,1.1s						
BNI	**Bardonecchia**	**75.06**	**313**	IAmb	IAmb	00 25 51.0	
	comp=Z,19nm,1.1s						
BNI	**Bardonecchia**	**75.06**	**313**	P	**P**	**00 25 50.4**	**+1.5**
BNI				pmax	pmax		
	comp=Z,19nm,1.3s						
C36M	**Paulatuk**	**75.07**	**16**	IAmb	IAmb	00 25 50.6	
	comp=Z,66nm,1.4s						
C36M	**Paulatuk**	**75.07**	**16**	P	**P**	**00 25 48.1**	**-0.1**
	baz=317,SNR=12						
RES	**Resolute Bay**	**75.12**	**5**	P	**P**	**00 25 49.1**	**+0.6**
RES				pmax	pmax		
	comp=Z,13nm,1.1s						
M29M	**Somme Creek**	**75.25**	**25**	P	**P**	**00 25 50.3**	**+0.7**
	baz=306						
YUK8	**Steele Glacier**	**75.43**	**27**	P	**P**	**00 25 51.5**	**+0.6**
	baz=306						

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O28M  Mount Upton       75.56  27   IAmb   IAmb    00 26 35.4
            comp=Z,14nm,0.6s
O28M  Mount Upton       75.56  27   P      P       00 25 51.9 +0.3
            baz=305
EKA   Eskdalemuir Ar    75.59 326   P      P       00 25 50.7 -0.8
            comp=Z,3.9nm,0.8s,baz=54,slow=6.2,SNR=6.4
            comp=Z,3.9nm,0.8s
M30M  Minto, Yukon      75.79  25   P      P       00 25 52.9 +0.2
            baz=308,SNR=5.5
YUK4  Talbot Arm        75.83  26   P      P       00 25 52.9 -0.2
            baz=307
PINM  Pinnacle          75.93  28   P      P       00 25 53.5  0.0
            baz=306
YUK6  Outpost Mounta    76.18  27   P      P       00 25 55.0 -0.1
            baz=307
N30M  Aishikik Lake     76.36  26   IAmb   IAmb    00 27 05.9
            comp=Z,13nm,0.7s
N30M  Aishikik Lake     76.36  26   P      P       00 25 56.3 +0.3
            baz=308
HYT   Haines Junctio    76.59  27   P      P       00 25 57.7 +0.4
            baz=308
MBAR  Mbarara           76.63 262   P      P       00 25 57.5 -0.9
MBAR                                IAmb   IAmb    00 26 00.5
            comp=Z,26nm,1.6s
MBAR  Mbarara           76.63 262ceP       P       00 25 58.9 +0.5
MBAR                                pmax   pmax
            comp=Z,12nm,1.3s
CAN   Canberra          76.77 144   IAmb   IAmb    00 26 00.2
            comp=Z,33nm,1.5s
CAN   Canberra          76.77 144   P      P       00 25 59.3 +0.8
AUDAR Daramalan Coll    76.79 144   P      P       00 25 56.0 -2.6
N31M  Braeburn, Yuko    76.84  25   IAmb   IAmb    00 26 02.6
            comp=Z,26nm,0.8s
N31M  Braeburn, Yuko    76.84  25   P      P       00 25 58.9 +0.3
            baz=309,SNR=11
M31M  Drury Creek, Y    76.90  24   P      P       00 25 58.9  0.0
            baz=310
CNB   Canberra Magne    76.95 144   P      P       00 26 00.2 +0.7
BORG  Borgarnes         77.10 339   LR     LR      01 03 53.8
            comp=Z,158nm,18.3s,baz=64,slow=39
O30N  Mendenhall        77.17  26   IAmb   IAmb    00 27 05.0
            comp=Z,24nm,0.7s
O30N  Mendenhall        77.17  26   P      P       00 26 01.1 +0.5
            baz=309,SNR=6.6
P29M  Windy Craggy      77.23  28   P      P       00 26 01.4 +0.6
            baz=308
P30M  Million Dollar    77.24  27   P      P       00 26 01.1 +0.2
            baz=308
KEST  Kesra             77.50 304   P      P       00 26 03.0 +0.1
            comp=Z,5.2nm,0.8s,baz=314,slow=4.1,SNR=5.2
KEST                                LR     LR      01 06 37.5
            comp=Z,98nm,18.8s,baz=346,slow=41
            comp=Z,5.2nm,0.8s
KEST  Kesra             77.50 304   IAmb   IAmb    00 26 05.1
            comp=Z,45nm,1.6s
WHY   Whitehorse        77.70  26   P      P       00 26 03.4 -0.1
            baz=310
POIN  Pond Inlet        77.91   1   IAmb   IAmb    00 26 07.5
            comp=Z,16nm,1.0s
N32M  Quiet Lake        78.05  25   IAmb   IAmb    00 27 53.8
            comp=Z,24nm,0.7s
N32M  Quiet Lake        78.05  25   P      P       00 26 05.8 +0.4
            baz=311
SKAG  Skagway           78.30  27   P      P       00 26 07.4 +0.7
            baz=310
P33M  Teslin, Yukon     78.77  26   P      P       00 26 10.0 +0.6
            baz=311
P32M  Atlin             78.84  26   P      P       00 26 10.2 +0.4
            baz=311
Q32M  Nakina River      79.81  26   P      P       00 26 15.5 +0.2
            baz=312
R33M  Jennings River    80.02  25   P      P       00 26 16.8 +0.5
            baz=313
WTLY  Watson Lake, Y    80.31  24   IAmb   IAmb    00 27 04.2
            comp=Z,36nm,1.8s
WTLY  Watson Lake, Y    80.31  24   P      P       00 26 17.9 +0.2
            baz=315
DLBC  Dease Lake        81.03  26   P      P       00 26 21.9 +0.2
            comp=Z,1.4nm,0.3s,baz=175,slow=15,SNR=4.0
            comp=Z,1.4nm,0.3s
LIRD  Liard River Hi    81.77  24   P      P       00 26 25.8 +0.3
            baz=317
SFJD  Kangerlussuaq     81.90 351 i P      P       00 26 25.5 -0.5
SFJD                                IAmb   IAmb    00 26 28.3
            comp=Z,19nm,0.5s
YKA   Yellowknife Ar    82.86  17   P      P       00 26 31.1  0.0
            comp=Z,4.2nm,0.7s,baz=324,slow=5.5,SNR=28
YKA                                 LR     LR      01 07 51.3
            comp=Z,63nm,18.9s,baz=20,slow=39
            comp=Z,4.2nm,0.7s
YKA   Yellowknife Ar    82.86  17   P      P       00 26 30.6 -0.5
ESDC  Sonseca Array     84.57 313   P      P       00 26 40.5 +0.1
            comp=Z,2.8nm,0.8s,baz=45,slow=4.9,SNR=14
ESDC                                LR     LR      01 07 19.3
            comp=Z,178nm,20.0s,baz=48,slow=38
            comp=Z,2.8nm,0.8s
ESDC  Sonseca Array     84.57 313   P      P       00 26 39.4 -1.1
BLKN  Baker Lake        84.91   9   IAmb   IAmb    00 26 43.5
            comp=Z,18nm,1.1s
BBB   Bella Bella       86.22  30   LR     LR      01 08 17.0
            comp=Z,133nm,21.6s,baz=299,slow=38
LSZ   Lusaka            86.39 250   P      P       00 26 48.1 -1.8
LSZ                                 IAmb   IAmb    00 26 51.5
            comp=Z,21nm,1.1s
LSZ   Lusaka            86.39 250   P      P       00 26 48.1 -1.8
PCBR  Castelo Branco    86.68 315  eP      P       00 26 53.6 +2.7
PMRV  Marv??o           86.87 314  eP      P       00 26 53.7 +1.9
PSARD Sardoal           87.25 315  eP      P       00 26 56.0 +2.3
PARRA Arraiolos         87.64 314  eP      P       00 26 57.5 +1.9
EVO   Evora             87.80 314  eP      P       00 26 56.7 +0.5
PBEJ  Beja              88.00 313  eP      P       00 26 58.6 +1.4
PVAQ  Vaqueiros         88.28 313  eP      P       00 27 00.8 +2.2
MESJ  Messejana         88.34 313  eP      P       00 26 58.6 -0.3
PTEO  Sao Teotonio      88.84 313  eP      P       00 27 03.6 +2.4
FCC   Fort Churchill    90.51  10   IAmb   IAmb    00 27 11.2
            comp=Z,9.9nm,0.9s
FFC   Flin Flon         92.83  15   P      P       00 27 19.2 -0.2
FFC   Flin Flon         92.83  15   P      P       00 27 19.2 -0.2
FFC                                 pmax   pmax
            comp=Z,36nm,1.8s
C09A  Chrisman Ranch    93.67  28   IAmb   IAmb    00 27 27.6
            comp=Z,11nm,1.1s
NEW   Newport           93.75  27   LR     LR      01 12 45.3
            comp=Z,231nm,19.1s,baz=327,slow=38
SCHQ  Schefferville     95.58 355   P      P       00 27 31.7 -0.4
            comp=Z,3.5nm,0.6s,baz=35,slow=7.7,SNR=5.9
            comp=Z,3.5nm,0.6s
BOSA  Boshof            95.62 240   LR     LR      01 09 06.1
            comp=Z,69nm,19.0s,baz=22,slow=34
ULM   Lac du Bonnet     98.34  13   LR     LR      01 15 10.1
            comp=Z,105nm,20.6s,baz=3.0,slow=37
PDAR  Pinedale Array   101.25  25   PP     PP      00 32 03.6 -2.5
            comp=Z,0.4nm,0.6s,baz=315,slow=6.4,SNR=5.2
TXAR  Lajitas Array    115.29  28   PKP    PKiKP   00 32 47.5 -1.5
            comp=Z,0.3nm,0.6s,baz=191,slow=0.3,SNR=6.6
QSPA  South Pole Qui   119.42 180   PKP    PKPdf   00 32 54.7 -0.9
            comp=Z,2.7nm,0.7s,baz=301,slow=1.5,SNR=6.9
QSPA  South Pole Qui   119.42 180   PKPdf  PKPdf   00 32 54.9 -0.8
SNAA  Sanae            123.44 201   PKP    PKPdf   00 33 02.3 -1.0
            comp=Z,1.5nm,0.9s,baz=156,slow=9.6,SNR=5.1
SNAA  Sanae            123.44 201   PKPdf  PKPdf   00 33 02.0 -1.3
SNAA  Sanae            123.44 201c iPKIKP  PKPdf   00 33 01.8 -1.5
SNAA                                pmax   pmax
            comp=Z,4.0nm,1.7s
BELA  Belgrano 2       128.40 190   PKPdf  PKiKP   00 33 13.2  0.0
RUSC  La Rusia         144.62 357   PKPdf  PKPab   00 33 42.8 -0.7
BOAV  Boa Vista        145.26 334          PKPbc   00 33 43.2 -1.9
ROSC  El Rosal         145.71 359   PKPbc  PKPbc   00 33 47.2 +0.2
            comp=Z,36nm,0.7s,baz=166,slow=7.0,SNR=14
BDFB  Brasilia         151.54 293   PKPbc  PKiKP   00 34 02.3  0.0
            comp=Z,1.2nm,0.4s,baz=178,slow=2.8,SNR=3.7
BDFB                                PKPab  sPKPbc  00 34 10.0 +0.4
            comp=Z,3.0nm,0.5s,baz=46,slow=5.7,SNR=5.1
BDFB  Brasilia         151.54 293          PKPdf   00 33 52.6 -3.1
BDFB  Brasilia         151.54 293   PKIKP  PKPdf   00 33 52.6 -3.1
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*MOS **18** 00:22:30.7±1.0, 6°.66N×125°.15E, h11^{km}, mb5.0/34, Error ellipse: s-maj=12.1km s-min=5.7km az=115.2*

*IDC **18** 00:22:30.1±0.5, 6°.61N×125°.08E, h0^{km}, mb4.5/26, mbtmp4.5/26, MS3.8/18, Error ellipse: s-maj=12.0km s-min=8.2km az=131.0*

*BJI **18** 00:22:31.6, 6°.35N×125°.17E, h25^{km}, mB5.3/13, mb4.6/51, Ms4.5/12, Ms7 4.2/13*

*NEIC **18** 00:22:33.2±2.1, 6°.71N±0°.06×125°.19E±0°.07, h10^{km}±1^{km}, mb5.0/165, Error ellipse: s-maj=14.0km s-min=7.4km az=132.0*

*DJA **18** 00:22:34.6±0.2, 7°N±2°×12°5E±°, h10^{km}, M4.8/72, mB5.3/36, mb5.0/72, MLv5.4/9, Mw(mB)4.7/36, MwMwp4.6/3, Mwp5.0/3*

ISC 18 00:22:36.3±0.3, **6°.71N**±0°.03×**125°.31E**±0°.05, **h35^{km}, n610,** σ**1^{s}48**/535, **mb4.9**/173, **MS3.9**/23, **2C-4D, Mindanao**

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Code  Station Name      Δ°   AZ°      Phase ID          Time     Res
                                    Op     ISC        h  m  s    ISC
DAV   Davao City (W)     0.45  37   Pg     Pn      00 22 44.0 -2.2
            1µm,0.3s,baz=228,slow=1.4,SNR=174
DAV                                 Lg     Lg      00 22 51.4
            8µm,0.3s,baz=236,slow=3.3,SNR=48
DAV   Davao City (W)     0.45  37          Pn      00 22 43.4 -2.9
DAV   Davao City (W)     0.45  37   P      Pn      00 22 43.4 -2.9
DAV                                 S      Sn      00 22 49.4 -3.7
DAV   Davao City (W)     0.45  37   P      Pn      00 22 43.0 -3.3
SGSI  Sangihe            3.01 176   P      Pn      00 23 22.2 +0.6
GAMI  Galela, Maluku     5.44 153   P      Pn      00 23 56.6 +1.7
TNTI  Ternate            6.25 161          Pn      00 24 06.7 +0.6
TNTI  Ternate            6.25 161   P      Pn      00 24 08.0 +1.9
            0.7nm2µm164nm,1.0s
GTOI  Gorontalo          6.46 201   P      Pn      00 24 07.2 -1.7
GTOI                                S      Sn      00 25 20.2 -1.2
MRSI  Marisa             7.04 209   P      Pn      00 24 14.7 -2.3
MRSI                                S      Sn      00 25 31.9 -4.0
TOLI2 Tolitoli           7.16 219   Pn     Pn      00 24 12.6 -6.0
LUWI  Luwuk              8.11 198   Pn     Pn      00 24 32.9 +1.3
LUWI  Luwuk              8.11 198   P      Pn      00 24 34.1 +2.5
MPSI  Mapaga             8.32 221   P      Pn      00 24 36.5 +2.0
            29nm,0.8s
APSI  Ampana             8.40 206   P      Pn      00 24 37.3 +1.6
SANI  Sanana             8.73 176   P      Pn      00 24 38.3 -1.9
            1µm130nm,0.8s
I39PW PALAU INFRASON     9.21  84   I      I       01 19 00.0
            baz=267,slow=300,SNR=2.8
NLAI  Namlea            10.04 170   P      Pn      00 24 58.6 +0.4
            1µm126nm,0.6s
KRAI  Karang Ratu       10.43 163   P      Pn      00 25 05.4 +1.9
            62nm,0.6s
AAI   Ambon             10.72 164   P      Pn      00 25 07.5  0.0
            5µm83nm,0.6s
TTSI  Tana Toraja       11.13 210   P      Pn      00 25 15.7 +2.6
            926nm107nm,1.1s
MMSI  Mamuju            11.31 215   P      Pn      00 25 17.0 +1.4
            566nm34nm,1.0s
SPSI  Sidrap Palu       11.96 208   P      Pn      00 25 25.5 +1.1
            32nm,0.8s
BNSI  Bone              12.20 205   P      Pn      00 25 30.5 +2.8
            853nm77nm,1.1s
KAPI  Kappang           12.90 206   Pn     Pn      00 25 39.0 +1.7
            baz=14,slow=12
KAPI  Kappang           12.90 206   Pn     Pn      00 25 39.8 +2.5
KAPI  Kappang           12.90 206   P      Pn      00 25 39.0 +1.7
KAPI  Kappang           12.90 206   P      Pn      00 25 39.8 +2.5
BKSI  Bulukumba         13.03 204   P      Pn      00 25 40.3 +1.3
            642nm34nm,1.1s
SBUM  Sibu              13.71 253   Pn     Pn      00 25 48.6 +0.2
SBUM  Sibu              13.71 253   P      Pn      00 25 49.4 +1.0
BBKI  Banjar Baru       14.54 226   P      P       00 26 03.3 -2.5
            75nm,1.0s
MMRI  Maumere           15.55 191   Pn     Pn      00 26 11.5 -1.6
SAUI  Saumlaki          15.77 158   Pn     Pn      00 26 15.6 -0.4
SAUI                                IAmb   IAmb    00 26 23.3
            comp=Z,91nm,0.6s
SAUI  Saumlaki          15.77 158   P      P       00 26 17.4 -2.1
EDFI  Ende, Flores      15.78 193   P      Pn      00 26 16.3 +0.2
            comp=Z,1µmcomp=Z,25nm,0.8s
SOEI  Soe               16.39 184   Pn     Pn      00 26 23.1 -0.8
SOEI  Soe               16.39 184   P      P       00 26 25.4 -1.1
            comp=Z,1µmcomp=Z,93nm,0.8s
DBNI  Kabupaten Domp    16.64 205   P      P       00 26 29.3 +0.1
BATI  Baumata           16.89 186   Pn     Pn      00 26 29.1 -1.0
            comp=Z,5.5nm,0.3s,baz=236,slow=2.3,SNR=7.7
BATI  Baumata           16.89 186   P      P       00 26 31.7 -0.2
            comp=Z,1µmcomp=Z,111nm,1.2s
TPUB  Ta-pu             17.10 345          Pn      00 26 32.0 -0.8
PLAI  Plampang          17.16 206   P      P       00 26 36.3 +1.4
            comp=Z,1µmcomp=Z,101nm,1.0s
WBSI  Waikabubak, Su    17.28 200   P      P       00 26 36.7 +0.4
            comp=Z,1µmcomp=Z,61nm,1.3s
GENI  Genyem            17.48 121   P      P       00 26 38.4  0.0
            comp=Z,88nm,0.8s
TWSI  Taliwang, Sumb    17.49 209   P      P       00 26 40.3 +1.7
            comp=Z,1µmcomp=Z,114nm,0.9s
KLNI  Mataram           17.62 212   P      P       00 26 40.4 +0.5
            comp=Z,1µmcomp=Z,124nm,0.8s
KMMI  Kalianget         17.74 220   P      P       00 26 44.1 +2.8
            comp=Z,1µmcomp=Z,75nm,1.3s
SRBI  Singaraja         17.81 215   P      P       00 26 44.3 +2.2
            comp=Z,47nm,1.5s
KHKI  Kahang-Kahang     17.83 213   P      P       00 26 44.3 +2.1
            comp=Z,66nm,0.9s
JAY   Jayapura          17.90 120   P      P       00 26 46.0 +2.9
ABJI  Asem Bagus        18.16 218   P      P       00 26 48.0 +2.1
            comp=Z,42nm,1.3s
RTBI  Rangdo, Negare    18.27 215   P      Pn      00 26 50.5 +3.2
            comp=Z,1µmcomp=Z,133nm,0.9s
IGBI  Denpasar          18.45 213   P      Pn      00 26 50.7 +1.2
            comp=Z,214nm,1.1s
JAGI  Jajag, Banyuwa    18.74 217   P      Pn      00 26 51.3 -1.7
JAGI                                IAmb   IAmb    00 26 57.6
            comp=Z,73nm,0.9s
JAGI  Jajag, Banyuwa    18.74 217   P      Pn      00 26 54.3 +1.4
            comp=Z,857nmcomp=Z,88nm,1.1s
GMJI  Gumukmas          19.01 219   P      Pn      00 26 57.9 +1.7
QIZ   Qiongzhong        19.40 311   P      Pn      00 26 59.0 -1.8
QIZ                                 S      Sn      00 30 38.0 +0.4
QIZ                                 pmax   pmax
            comp=Z,27nm,1.2s
QIZ                                 LR     LR
            comp=Z,370nm,13.7s
QIZ                                 LR     LR
            comp=Z,370nm,12.4s
QIZ                                 LR     LR
            comp=Z,570nm,15.8s
NGJI  Ngawi             19.66 225   P      Pn      00 27 04.1 +0.2
            comp=Z,69nm,1.0s
SJI   Sawahan           19.70 223   P      Pn      00 27 06.5 +1.9
SNJI  Sawahan-Nganju    19.74 223   P      Pn      00 27 07.3 +2.2
            comp=Z,47nm,1.0s
JOW   Kunigami          20.21   8   P      P       00 27 08.2 -0.1
            comp=Z,27nm,0.9s,baz=214,slow=8.3,SNR=3.6
            comp=Z,27nm,0.9s
JOW   Kunigami          20.21   8   IAmb   IAmb    00 27 12.9
            comp=Z,205nm,2.0s
MTN   Manton Dam        20.27 163   P      P       00 27 08.6 -0.4
            comp=Z,71nm,1.1s
MTN   Manton Dam        20.27 163   P      P       00 27 07.2 -1.8
PCJI  Pacitan           20.44 224   P      Pn      00 27 16.3 +3.2
KDU   Kakadu            20.55 160   P      P       00 27 10.4 -1.6
            comp=Z,50nm,0.8s
CTJI  Waduk Cacaban     21.08 230   P      P       00 27 22.4 +4.6
            comp=Z,50nm,1.1s
KPJI  Karang Pucung     21.48 230   P      P       00 27 25.0 +2.9
            comp=Z,71nm,1.1s
TPRI  Tanjung Pinang    21.51 255   P      P       00 27 25.8 +3.3
DSRI  Dabo              21.88 252   P      P       00 27 28.4 +1.9
            comp=Z,39nm,1.4s
KNRA  Kununurra         22.51 171   P      P       00 27 31.9 -1.2
            comp=Z,89nm,0.8s
KNRA  Kununurra         22.51 171   P      P       00 27 31.0 -2.0
BBJI  Bungbulang        22.55 232   P      P       00 27 33.6 -0.1
            comp=Z,49nm,1.0s
DBJI  Dramaga           22.73 235   P      P       00 27 39.6 +4.1
            comp=Z,90nm,0.8s
CNJI  Cibinong          22.86 233   P      P       00 27 37.4 +0.5
            comp=Z,860nmcomp=Z,34nm,0.9s
KLSI                    23.45 242   P      P       00 27 44.4 +1.5
            comp=Z,748nmcomp=Z,36nm,1.1s
MDSI  Maura Dua         23.84 243   P      P       00 27 50.0 +3.4
KASI  Kota Agung        24.06 240   P      P       00 27 50.5 +1.9
            comp=Z,41nm,1.0s
IPM   Ipoh              24.27 266   P      P       00 27 49.5 -1.1
IPM                                 IAmb   IAmb    00 27 53.2
            comp=Z,67nm,1.4s
IPM   Ipoh              24.27 266   P      P       00 27 50.8 +0.3
            comp=Z,32nm,1.1s
KULM  Kulim             24.56 268   P      P       00 27 52.2 -1.0
KULM                                IAmb   IAmb    00 27 58.6
            comp=Z,44nm,1.2s
KULM  Kulim             24.56 268   P      P       00 27 53.8 +0.6
FITZ  Fitzroy Crossi    24.65 179   P      P       00 27 51.9 -2.0
MNAI  Manna             24.88 244   P      P       00 27 55.1 -0.9
MNAI  Manna             24.88 244   P      P       00 27 58.1 +2.1
            comp=Z,90nm,0.8s
BKNI  Bangkinang        25.02 256   P      P       00 27 56.8 -0.6
PPI   Padang Panjang    25.86 255   P      P       00 28 05.6 +0.7
            comp=Z,20nm,0.8s
EGSI  Enggano, Bengk    25.92 243   P      P       00 28 05.4 -0.1
            comp=Z,44nm,1.3s
NJ2   Nanjing           25.92 347  eP      P       00 28 06.5 +1.2
NJ2                                 pmax   pmax
            comp=Z,6.0nm,0.6s
PDSI  Padang            25.93 254   P      P       00 28 07.9 +2.3
            comp=Z,36nm,1.4s
GYA   Guiyang           26.48 320  ⇑P      P       00 28 12.1 +1.5
GYA                                 S      S       00 32 41.5 -0.9
GYA                                 pmax   pmax
            comp=Z,13nm,0.7s
GYA                                 pmax   pmax
            comp=Z,560nm,7.6s
GYA                                 LR     LR
            comp=Z,260nm,10.5s
GYA                                 LR     LR
            comp=Z,530nm,20.8s
GYA                                 LR     LR
            comp=Z,460nm,18.8s
PSI   Prapat            26.57 263   LR     LR      00 40 37.5
            comp=Z,280nm,18.9s,baz=42,slow=41
JNU   Nakatsue          26.78  10   LR     LR      00 40 19.2
            comp=Z,101nm,18.1s,baz=153,slow=40
PMG   Port Moresby      27.03 126   LR     LR      00 39 40.0
            comp=Z,106nm,21.1s,baz=278,slow=38
PMG   Port Moresby      27.03 126   P      P       00 28 13.8 -1.7
PMG   Port Moresby      27.03 126   P      P       00 28 17.1 +1.6
            comp=Z,67nm,0.9s
PMG   Port Moresby      27.03 126 i P      P       00 28 15.9 +0.4
PMG                                 pmax   pmax
            comp=Z,63nm,1.0s
COEN  Coen              27.13 139   P      P       00 28 16.7 +0.3
SISI  Saibi             27.36 254   P      P       00 28 19.9 +1.4
            comp=Z,42nm,0.8s
KCSI  Kotacane, Aceh    27.60 265   P      P       00 28 22.0 +1.3
            comp=Z,16nm,1.0s
WB0   Warramunga Arr    27.79 161   IAmb   IAmb    00 28 43.8
            comp=Z,22nm,0.7s
WRAB  Tennant Creek     27.93 162   P      P       00 28 20.0 -3.5
WRAB                                IAmb   IAmb    00 28 51.5
            comp=Z,31nm,1.1s
WRAB  Tennant Creek     27.93 162 i P      P       00 28 21.2 -2.3
WRAB                                pmax   pmax
            comp=Z,12nm,0.9s
WRA   Warramunga Arr    27.94 162   P      P       00 28 21.5 -2.1
            comp=Z,8.8nm,0.8s,baz=329,slow=11,SNR=15
            comp=Z,8.8nm,0.8s
WRA   Warramunga Arr    27.94 162   P      P       00 28 22.6 -1.0
WRA   Warramunga Arr    27.94 162 i P      P       00 28 23.3 -0.3
WRA                                 pmax   pmax
            comp=Z,8.0nm,0.6s
WR8   Warramunga Arr    28.00 161   IAmb   IAmb    00 29 03.1
            comp=Z,21nm,0.8s
GSI   Gunungsitoli      28.17 260   P      P       00 28 25.4 -0.4
CM31  Chiang Mai Arr    28.21 297   P      P       00 28 25.6 -0.4
CMAR  Chiang Mai Arr    28.21 297   P      P       00 28 24.7 -1.3
            comp=Z,4.4nm,0.8s,baz=117,slow=7.3,SNR=27
CMAR                                LR     LR      00 39 38.9
            comp=Z,146nm,18.5s,baz=95,slow=37
            comp=Z,4.4nm,0.8s
CMAR  Chiang Mai Arr    28.21 297   P      P       00 28 23.9 -2.1
CMAR  Chiang Mai Arr    28.21 297  eP      P       00 28 26.0  0.0
CMAR                                pmax   pmax
            comp=Z,5.0nm,0.8s
KMI   Kunming           28.30 313   P      P       00 28 27.8 +0.7
KMI                                 pmax   pmax
            comp=Z,20nm,1.4s
KMI                                 LR     LR
            comp=Z,280nm,16.4s
KMI                                 LR     LR
            comp=Z,270nm,19.1s
KMI                                 LR     LR
            comp=Z,460nm,20.0s
CHTO  Chiang Mai        28.33 298   P      P       00 28 26.1 -1.1
CHTO  Chiang Mai        28.33 298   P      P       00 28 28.8 +1.6
CHTO  Chiang Mai        28.33 298   P      P       00 28 26.1 -1.1
CHTO                                pmax   pmax
            comp=Z,8.0nm,0.9s
PSAC1 Pilbara Seismi    28.58 191   P      P       00 28 28.3 -1.0
            comp=Z,25nm,1.0s
PSA00 Pilbara Seismi    28.61 191   P      P       00 28 27.4 -2.2
PZH   PanZhiHua         29.85 314   P      P       00 28 40.8 +0.1
LYN   LuoYang           30.13 339   P      P       00 28 43.4 +0.5
LYN                                 pmax   pmax
            comp=Z,16nm,0.8s
QIS   Mount Isa         30.53 153   P      P       00 28 45.3 -1.3
            comp=Z,36nm,1.1s
KSRS  Korea Array       30.69   4   P      P       00 28 48.5 +0.7
            comp=Z,5.8nm,0.8s,baz=186,slow=11,SNR=5.1
KSRS                                LR     LR      00 43 31.9
            comp=Z,49µm,18.3s,baz=190,slow=41
            comp=Z,5.8nm,0.8s
KSRS  Korea Array       30.69   4  eP      P       00 28 48.8 +1.0
KSRS                                pmax   pmax
            comp=Z,6.0nm,0.8s
MTSU  Mount Surprise    31.01 143   P      P       00 28 52.9 +2.0
            comp=Z,9.0nm,0.8s
AS31  Alice Springs     31.34 165   P      P       00 28 52.4 -1.3
ASAR  Alice Springs     31.34 165   P      P       00 28 51.5 -2.2
            comp=Z,5.0nm,0.6s,baz=348,slow=7.5,SNR=30
            comp=Z,5.0nm,0.6s
ASAR  Alice Springs     31.34 165   P      P       00 28 51.8 -1.9
ASAR  Alice Springs     31.34 165   P      P       00 28 51.8 -1.9
CD2   Chengdu           31.42 323   P      P       00 28 55.0 +0.6
CD2                                 pmax   pmax
            comp=Z,20nm,0.7s
WRKA  Warakurna         31.69 175   P      P       00 28 56.9 +0.1
            comp=Z,3.8nm,0.9s
MJAR  Matsushiro Arr    31.95  20   P      P       00 28 58.1 -0.9
            comp=Z,4.8nm,0.8s,baz=194,slow=9.4,SNR=8.7
MJAR                                LR     LR      00 40 02.5
            comp=Z,178nm,21.6s,baz=208,slow=33
            comp=Z,4.8nm,0.8s
MJAR  Matsushiro Arr    31.95  20   P      P       00 28 59.6 +0.6
MJAR  Matsushiro Arr    31.95  20   P      P       00 28 59.6 +0.6
MJAR                                pmax   pmax
            comp=Z,21nm,1.9s
MJA0  Matsu Arr-Jizo    31.96  20  eP      P       00 29 00.1 +1.0
MJA0                                pmax   pmax
            comp=Z,5.0nm,0.8s
HNS   HongShan          32.04 344  ⇓P      P       00 29 03.6 +4.0
HNS                                 pmax   pmax
            comp=Z,14nm,1.0s
MEEK  Meekatharra       33.78 191   P      P       00 29 14.1 -1.0
            comp=Z,18nm,1.3s
BJT   Baijiatuau        34.16 347   P      P       00 29 18.3 +0.1
BJT                                 IAmb   IAmb    00 29 26.4
            comp=Z,19nm,1.1s
BJT   Baijiatuau        34.16 347   P      P       00 29 18.3 +0.1
BJT                                 pmax   pmax
            comp=Z,19nm,1.1s
BJI   Beijing           34.18 347   P      P       00 29 18.4 +0.1
BJI                                 pmax   pmax
            comp=Z,7.0nm,1.0s
LZDM  Lanzhou Array     35.21 329   P      P       00 29 29.0 +1.3
            comp=Z,0.9nm,0.3s,baz=156,slow=11,SNR=6.0
LZH   Lanzhou           35.23 329  eP      P       00 29 29.4 +1.7
LZH                                 sP     sP      00 29 39.4 -3.0
LZH                                 pmax   pmax
            comp=Z,33nm,1.2s
LZH                                 LR     LR
            comp=Z,300nm,14.1s
LZH                                 LR     LR
            comp=Z,310nm,14.4s
LZH                                 LR     LR
            comp=Z,290nm,13.7s
BRDH  Bariadhala        36.10 300   LR     LR      00 46 42.2
            comp=Z,173nm,18.2s,baz=180,slow=40
HHC   Hu-ho-hao-te      36.14 342  eP      P       00 29 37.3 +1.9
HHC                                 pmax   pmax
            comp=Z,8.0nm,0.7s
HHC                                 pmax   pmax
            comp=Z,430nm,6.0s
BTO   Baotou            36.42 340  eP      P       00 29 42.0 +4.3
BTO                                 pmax   pmax
            comp=Z,24nm,1.4s
BTO                                 pmax   pmax
            comp=Z,520nm,7.0s
SHL   Shillong          37.01 304   P      P       00 29 41.9 -1.2
SHL                                 IAmb   IAmb    00 29 48.8
            comp=Z,44nm,1.0s
SHL   Shillong          37.01 304   P      P       00 29 41.9 -1.2
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SHL				pmax	pmax		
	comp=Z,44nm,1.0s						
INKA	Innaminka	37.36	157	P	P	00 29 44.5	-1.2
FORT	Forrest	37.37	176	P	P	00 29 45.1	-0.6
	comp=Z,18nm,0.7s						
USRK	Ussuriysk Ar.	37.80	8	P	P	00 29 49.8	+0.6
	comp=Z,14nm,0.9s,baz=206,slow=9.4,SNR=9.9						
	comp=Z,14nm,0.9s						
XLT	XiLinHaoTe	37.92	349	eP	P	00 29 50.3	-0.1
XLT				pmax	pmax		
	comp=Z,7.0nm,1.0s						
XLT				pmax	pmax		
	comp=Z,280nm,5.1s						
MDJ	Mudanjiang	37.94	5	P	P	00 29 50.4	-0.1
MDJ				IAmb	IAmb	00 30 02.8	
	comp=Z,42nm,1.2s						
MDJ	Mudanjiang	37.94	5	P	P	00 29 52.4	+1.9
MDJ				pmax	pmax		
	comp=Z,29nm,1.1s						
KMBL	Kambalda	38.00	185	P	P	00 29 48.2	-3.0
KLBR	Kellerberrin	38.76	190	P	P	00 29 56.8	-0.7
	comp=Z,35nm,0.8s						
BNX	BinXian	38.92	2	⇑P	P	00 30 00.8	+2.1
BNX				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TEY	Ternei	39.42	13	eP	P	00 30 03.7	+0.8
LSA	Lhasa	39.44	310	P	P	00 30 01.5	-2.3
LSA				IAmb	IAmb	00 30 05.7	
	comp=Z,59nm,1.9s						
LSA	Lhasa	39.44	310	P	P	00 30 01.5	-2.3
LSA				pmax	pmax		
	comp=Z,59nm,1.9s						
GTA	Gaotai	39.83	329	eP	P	00 30 07.9	+1.3
GTA				pP	pP	00 30 12.3	-4.7
GTA				pmax	pmax		
	comp=Z,11nm,1.5s						
GTA				LR	LR		
	comp=Z,240nm,15.5s						
GTA				LR	LR		
	comp=Z,190nm,13.9s						
GTA				LR	LR		
	comp=Z,250nm,17.1s						
EIDS	Eidsvold	40.56	143	P	P	00 30 12.2	-0.5
	comp=Z,19nm,1.1s						
EIDS	Eidsvold	40.56	143	P	P	00 30 12.5	-0.1
EIDS				IAmb	IAmb	00 30 49.8	
	comp=Z,42nm,1.5s						
BBOO	Buckleboo	40.61	166	P	P	00 30 11.0	-1.9
	comp=Z,44nm,0.9s						
BBOO	Buckleboo	40.61	166	P	P	00 30 11.2	-1.7
STKA	Stephens Creek	41.40	159	P	P	00 30 18.2	-1.2
	comp=Z,125nm,0.9s						
STKA	Stephens Creek	41.40	159	P	P	00 30 18.3	-1.2
	comp=Z,20nm,0.8s,baz=333,slow=8.0,SNR=22						
STKA				PcP	PcP	00 32 17.9	+0.8
	comp=Z,6.0nm,0.6s,baz=324,slow=4.0,SNR=4.1						
	comp=Z,20nm,0.8s						
STKA	Stephens Creek	41.40	159	P	P	00 30 18.1	-1.2
STKA	Stephens Creek	41.40	159	i P	P	00 30 19.5	+0.1
RKGY	Rocky Gully	41.84	190	P	P	00 30 23.9	+0.9
	comp=Z,42nm,1.7s						
HTT	Hallett	41.96	163	P	P	00 30 24.0	-0.1
	comp=Z,7.6nm,0.8s						
HTT	Hallett	41.96	163	P	P	00 30 24.0	-0.1
HIA	Hailar	42.67	355	i P	P	00 30 29.6	0.0
HIA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CMSA	Cobar Meteorol	42.73	154	P	P	00 30 28.2	-2.1
	comp=Z,11nm,0.8s						
HILR	Hailar Array B	42.96	355	P	P	00 30 32.6	+0.7
	comp=Z,3.5nm,0.6s,baz=169,slow=9.6,SNR=7.4						
	comp=Z,3.5nm,0.6s						
ULN	Ulaanbaatar	43.87	342	P	P	00 30 40.0	+0.6
ULN	Ulaanbaatar	43.87	342	P	P	00 30 40.1	+0.6
ULN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SONM	Songino Array	44.04	342	P	P	00 30 40.6	-0.2
	comp=Z,1.8nm,0.8s,baz=159,slow=8.1,SNR=8.2						
SONM				LR	LR	00 49 21.7	
	comp=Z,85nm,20.5s,baz=126,slow=37						
	comp=Z,1.8nm,0.8s						
SONM	Songino Array	44.04	342	P	P	00 30 40.0	-0.9
PALK	Pallekele	44.26	274	LR	LR	00 50 36.5	
	comp=Z,95nm,19.0s,baz=49,slow=38						
ARMA	Armidale	44.72	147	P	P	00 30 47.1	+0.6
	comp=Z,15nm,0.7s						
ARMA	Armidale	44.72	147	P	P	00 30 46.6	+0.2
ARMA				IAmb	IAmb	00 31 03.4	
	comp=Z,11nm,0.7s						
ARPS	Mount Arapiles	45.94	161	P	P	00 30 54.6	-1.3
	comp=Z,15nm,1.2s						
YNG	Young	46.27	153	P	P	00 30 58.0	-0.6
	comp=Z,14nm,1.9s						
TYV	Tymovskoe	46.32	15	eP	P	00 31 10.3	+12
TYV				pmax	pmax		
	comp=Z,15nm,1.3s						
TYV				pmax	pmax		
	comp=Z,400nm,3.2s						
HYB	Hyderabad	46.83	288	eP	P	00 31 02.3	-0.9
ZEA	Zeya	46.91	2	eP	P	00 31 06.9	+3.6
SANVU	Saraoutou	46.98	118	P	P	00 31 04.6	+0.2
CAN	Canberra	47.40	153	P	P	00 31 08.9	+1.5
CAN	Canberra	47.40	153	P	P	00 31 08.6	+1.2
CAN				IAmb	IAmb	00 31 19.6	
	comp=Z,18nm,0.9s						
CAN	Canberra	47.40	153	P	P	00 31 08.6	+1.2
CAN				pmax	pmax		
	comp=Z,18nm,0.9s						
CNB	Canberra Magne	47.55	153	P	P	00 31 10.2	+1.6
TOO	Toolangi	47.91	158	P	P	00 31 11.1	-0.2
	comp=Z,4.8nm,0.9s						
TOO	Toolangi	47.91	158	P	P	00 31 11.4	+0.1
TOO	Toolangi	47.91	158	P	P	00 31 11.4	+0.1
TOO				pmax	pmax		
	comp=Z,9.0nm,1.3s						
DZM	Mont Dzumac	49.42	127	P	P	00 31 23.9	+0.6
	comp=Z,12nm,0.6s,baz=244,slow=13,SNR=12						
	comp=Z,12nm,0.6s						
DZM	Mont Dzumac	49.42	127	eLR	LR	00 45 31.1	
	comp=Z,384nm,28.6s						
DZM	Mont Dzumac	49.42	127	IAmb	IAmb	00 31 36.8	
	comp=Z,27nm,1.1s						
WMQ	Urumqi	49.49	324	eP	P	00 31 24.9	+1.4
PETK	Petropavlovsk-	53.26	24	P	P	00 31 53.1	+1.7
	comp=Z,24nm,0.7s,baz=196,slow=2.5,SNR=22						
	comp=Z,24nm,0.7s						
PETK	Petropavlovsk-	53.26	24	P	P	00 31 52.1	+0.7
DGZ	Jazzator, Alta	53.32	330	i P	P	00 31 51.2	-0.9
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PET	Petropavlovsk	53.58	24	P	P	00 31 54.7	+1.0
PET	Petropavlovsk	53.58	24	P	P	00 31 54.7	+1.0
MKAR	Makanchi Array	54.32	325	P	P	00 31 59.3	0.0
	comp=Z,5.6nm,0.6s,baz=124,slow=6.5,SNR=40						
MKAR				LR	LR	00 56 51.0	
	comp=Z,121nm,18.0s,baz=94,slow=38						
	comp=Z,5.6nm,0.6s						
MKAR	Makanchi Array	54.32	325	P	P	00 31 58.5	-0.9
MKAR	Makanchi Array	54.32	325	eP	P	00 31 59.2	-0.1
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MAKZ	Makanchi	54.50	325	P	P	00 32 00.1	-0.6
MAKZ	Makanchi	54.50	325	P	P	00 32 00.1	-0.6
MAKZ				pmax	pmax		
	comp=Z,13nm,1.2s						
TARG	Taragay, Kyrgy	54.60	317	P	P	00 32 01.8	-0.2
TARG	Taragay, Kyrgy	54.60	317	P	P	00 32 01.8	-0.2
TARG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NIL	Nilore	55.01	307	P	P	00 32 03.3	-1.3
NIL				IAmb	IAmb	00 32 12.3	
	comp=Z,21nm,0.9s						
NIL	Nilore	55.01	307	P	P	00 32 03.3	-1.3
NIL				pmax	pmax		
	comp=Z,21nm,1.0s						
YAK	Yakutsk	55.30	3	P	P	00 32 05.1	-1.0
YAK	Yakutsk	55.30	3	eP	P	00 32 07.7	+1.6
YAK				e*PP	pP	00 32 14.5	-2.5
YAK				e		00 33 08.1	
YAK				e		00 34 11.4	
YAK				ePPP	PPP	00 35 23.0	
YAK				eS	S	00 39 50.8	+3.3
YAK				e*SS	pS	00 40 02.2	+1.5
YAK				e		00 41 55.5	
YAK				eSS	SS	00 43 36.7	+4.5
YAK				pmax	pmax		
	comp=Z,38nm,1.1s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.6s						
YAK				pmax	pmax		
	comp=Z,219nm,3.0s						
YAK				pmax	pmax		
	comp=N,160nm,2.4s						
YAK				pmax	pmax		
	comp=E,167nm,3.0s						
YAK				smax	smax		
	comp=N,124nm,2.7s						
YAK				smax	smax		
	comp=E,93nm,1.8s						
MA2	Magadan	56.20	15	LR	LR	00 55 05.5	
	comp=E,47nm,21.2s,baz=144,slow=35						
MA2	Magadan	56.20	15	P	P	00 32 12.4	-0.2
MA2	Magadan	56.20	15	P	P	00 32 12.4	-0.2
MA2				pmax	pmax		
	comp=Z,38nm,1.1s						
MA2	Magadan	56.20	15	P	P	00 32 15.3	+2.7
	comp=Z,37nm,2.0s						
AAK	Ala-Archa	57.22	317	LR	LR	00 59 32.0	
	comp=Z,90nm,19.2s,baz=112,slow=39						
AAK	Ala-Archa	57.22	317	P	P	00 32 19.7	-0.7
AAK	Ala-Archa	57.22	317	i P	P	00 32 19.8	-0.6
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ZALV	Zalesovo Beam	57.30	333	P	P	00 32 19.1	-1.4
	comp=Z,0.7nm,0.3s,baz=101,slow=7.7,SNR=5.7						
	comp=Z,0.7nm,0.3s						
ZALV	Zalesovo Beam	57.30	333	P	P	00 32 18.6	-1.9
MANEM	Manem	57.41	311	IAmb	IAmb	00 32 30.3	
	comp=Z,24nm,1.0s						
MSVF	Nonsavu	57.46	116	P	P	00 32 22.1	-0.2
MSVF	Nonsavu	57.46	116	P	P	00 32 22.1	-0.2
MSVF				pmax	pmax		
	comp=Z,44nm,0.7s						
KURBB	Kurchatov Arra	58.48	327	P	P	00 32 27.8	-1.1
	comp=Z,3.8nm,0.6s,baz=130,slow=7.4,SNR=28						
	comp=Z,3.8nm,0.6s						
KURK	Kurchatov	58.48	327	P	P	00 32 27.7	-1.1
KURK				IAmb	IAmb	00 32 41.7	
	comp=Z,13nm,0.9s						
KURK	Kurchatov	58.48	327	i P	P	00 32 28.8	-0.1
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KBL	Kabul	58.61	306	P	P	00 32 29.5	-0.9
KBL	Kabul	58.61	306	P	P	00 32 29.5	-0.9
KBL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SEY	Seymchan	59.48	14	eP	P	00 32 36.2	+0.6
SEY				pmax	pmax		
	comp=Z,22nm,1.8s						
KK31	Karatay Array	60.10	316	P	P	00 32 39.4	-0.9
KK31	Karatay Array	60.10	316	P	P	00 32 39.4	-0.9
KK31				pmax	pmax		
	comp=Z,67nm,2.0s						
KKAR	Karatay Array	60.10	316	P	P	00 32 38.8	-1.5
KKAR	Karatay Array	60.10	316	P	P	00 32 38.8	-1.5
BVAR	Borovoye Array	64.06	327	P	P	00 33 05.2	-1.4
	comp=Z,2.2nm,0.9s,baz=123,slow=7.3,SNR=9.3						
	comp=Z,2.2nm,0.9s						
BORK	Borovoye	64.11	327	P	P	00 33 05.2	-1.8
BORK	Borovoye	64.11	327	i P	P	00 33 07.0	0.0
BORK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TIXI	Tiksi	64.91	1	i P	P	00 33 12.6	+0.8
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
URZ	Urewera	65.68	137	LR	LR	01 02 27.0	
	comp=Z,59nm,20.2s,baz=303,slow=36						
RTZ	Ruatahuna	65.77	138	P	P	00 33 18.9	+0.8
BILL	Bilibino	67.07	16	P	P	00 33 25.3	-0.5
BILL				IAmb	IAmb	00 33 29.3	
	comp=Z,8.7nm,0.9s						
BILL	Bilibino	67.07	16	i P	P	00 33 27.1	+1.3
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NRIK	Noril'sk	67.22	346	P	P	00 33 25.3	-1.4
	comp=Z,2.5nm,0.7s,baz=107,slow=6.6,SNR=7.5						
NRIK				LR	LR	01 04 57.4	
	comp=Z,86nm,18.5s,baz=150,slow=38						
	comp=Z,2.5nm,0.7s						
NRIK	Noril'sk	67.22	346	i P	P	00 33 27.3	+0.6
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AB31	Akbulak array	68.96	320	P	P	00 33 36.7	-1.3
ABKAR	Akbulak array	68.96	320	P	P	00 33 36.0	-2.0
NIKH	Nikolski High	70.22	36	P	P	00 33 46.6	+0.8
	baz=254						
AKTO	Aktyubinsk	70.46	321	LR	LR	01 06 01.3	
	comp=Z,146nm,19.6s,baz=130,slow=37						
SPIA	Saint Paul Isl	70.69	31	P	P	00 33 49.5	+1.0
	baz=252						
SVE	Sverdlovsk	70.69	328	eP	P	00 33 47.4	-1.1
P08K	Saint George I	70.88	32	P	P	00 33 50.9	+1.2
	baz=253						
ARTI	Arti	71.76	327	d iP	P	00 33 53.2	-1.8
ARTI				S	S	00 43 15.1	+2.4
ARTI				SS	SS	00 47 51.8	+2.9
ARTI				pmax	pmax		
	comp=Z,17nm,2.2s						
UNV	Unalaska Valle	71.81	35	P	P	00 33 56.0	+0.7
	baz=256						
M11K	Mekoryuk	73.64	29	P	P	00 34 07.4	+1.4
	baz=254						
S12K	Black Hills	74.72	34	P	P	00 34 13.5	+1.0
	baz=259						
K13K	Kusilvak Mount	74.77	27	P	P	00 34 14.3	+1.7
	baz=255						
ANM	Nome	75.16	25	P	P	00 34 16.6	+1.8
	baz=254						
LKRN	Lenkeran, Azer	75.32	308	P	P	00 34 16.7	+0.4
J14K	Nanvaranak Lak	75.47	27	P	P	00 34 18.6	+2.0
	baz=256						
L14K	Kuka Creek	75.55	28	P	P	00 34 18.7	+1.7
	baz=257						
SDPT	Sand Point	75.55	35	P	P	00 34 18.9	+1.7
	baz=261						
N14K	Kuskokwak Cree	75.73	30	P	P	00 34 19.7	+1.5
	baz=259						
F15K	North Star Dit	75.76	24	P	P	00 34 19.8	+1.5
	baz=254						
M14K	Bethel	75.77	29	P	P	00 34 20.2	+1.9
	baz=258						
O14K	Tigyukauivet M	75.81	31	P	P	00 34 20.4	+1.7
	baz=259						
G15K	Niukluk	75.82	24	P	P	00 34 19.9	+1.3
	baz=255						
CHNA	Chernabura Isl	75.97	35	P	P	00 34 21.0	+1.3
	baz=262						
L15K	Ungalak Mounta	76.18	28	P	P	00 34 22.1	+1.4
	baz=258						
S14K	Fog Glacier	76.21	34	P	P	00 34 22.3	+1.2
	baz=261						
C16K	Lisburne Hills	76.22	21	IAmb	IAmb	00 34 24.9	
	comp=Z,16nm,1.0s						
C16K	Lisburne Hills	76.22	21	P	P	00 34 22.4	+1.6
	baz=253						
K15K	Wolf Creek Mou	76.28	27	P	P	00 34 22.6	+1.3
	baz=258						
M15K	Kasigluk River	76.37	29	P	P	00 34 23.4	+1.6
	baz=259						
H16K	Elim	76.48	25	P	P	00 34 23.7	+1.3
	baz=257						
O15K	Ungalikthiuk R	76.53	31	P	P	00 34 23.8	+1.1
	baz=260						
N15K	Kwethluk River	76.56	30	P	P	00 34 23.8	+0.9
	baz=260						
SEKA	Sheki	76.67	311	P	P	00 34 25.2	+1.2
MNGR	Mingechevir, A	76.73	310	P	P	00 34 24.7	+0.4
D17K	Noatak River	76.89	22	P	P	00 34 25.5	+0.9
	baz=256,SNR=20						
J16K	Anvik River	76.90	27	P	P	00 34 24.9	+0.1
	baz=259						
I17K	Unalakleet	76.98	26	P	P	00 34 25.6	+0.4
	baz=259						
RDOG	Red Dog Mine	77.04	21	IAmb	IAmb	00 34 30.4	
	comp=Z,25nm,1.4s						
RDOG	Red Dog Mine	77.04	21	P	P	00 34 26.1	+0.6
	baz=256						
C17K	DeLong Mountai	77.05	21	P	P	00 34 25.9	+0.4
	baz=255						
E17K	Hotham Inlet	77.21	23	P	P	00 34 27.6	+1.2
	baz=257,SNR=12						
M16K	Timber Creek	77.26	29	P	P	00 34 27.7	+0.9
	baz=261						
N16K	Nishlik Lake	77.26	30	P	P	00 34 28.3	+1.4
	baz=261						
GANJ	Ganja	77.31	310	P	P	00 34 27.9	+0.3
G17K	Kiwalik Mounta	77.33	24	P	P	00 34 28.9	+1.7
	baz=258						
P16K	Nushagak River	77.44	31	P	P	00 34 28.8	+1.0
	baz=262						
O16K	Kokwok River B	77.47	30	P	P	00 34 29.4	+1.4
	baz=262						
H17K	Granite Mounta	77.52	25	IAmb	IAmb	00 34 38.1	
	comp=Z,16nm,1.2s						
H17K	Granite Mounta	77.52	25	P	P	00 34 29.8	+1.6
	baz=259						
J17K	VABM Dome	77.60	27	IAmb	IAmb	00 34 38.7	
	comp=Z,16nm,1.2s						
J17K	VABM Dome	77.60	27	P	P	00 34 30.3	+1.6
	baz=260						
L17K	Donlin	77.75	28	P	P	00 34 30.6	+1.1
	baz=261						
E18K	Tukpahlearik C	77.75	22	IAmb	IAmb	00 34 33.8	
	comp=Z,12nm,0.9s						
E18K	Tukpahlearik C	77.75	22	P	P	00 34 30.9	+1.5
	baz=258,SNR=7.8						
B18K	Kokolik River	77.75	20	P	P	00 34 30.6	+1.2
	baz=256,SNR=12						
C18K	Utukok River	77.80	21	IAmb	IAmb	00 34 33.8	
	comp=Z,11nm,0.9s						
C18K	Utukok River	77.80	21	P	P	00 34 30.9	+1.1
	baz=257						
K17K	Iditarod	77.84	27	P	P	00 34 31.5	+1.5
	baz=261						
NAX	Nakhchivan	77.90	309	P	P	00 34 31.2	+0.2
F18K	Selawik	77.95	23	P	P	00 34 31.7	+1.2
	baz=259						
O17K	Koliganek Bris	77.99	30	P	P	00 34 32.1	+1.2
	baz=263						
RAYN	Ar Rayn	78.03	293	P	P	00 34 30.3	-1.6
RAYN				IAmb	IAmb	00 34 32.7	
	comp=Z,8.0nm,0.8s						
RAYN	Ar Rayn	78.03	293	P	P	00 34 30.3	-1.6
RAYN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
M17K	Holitna River	78.04	29	P	P	00 34 32.4	+1.2
	baz=262						
N17K	Nushagak Hills	78.04	30	P	P	00 34 32.9	+1.6
	baz=262						
R17L	Mt. Peulik Vol	78.12	33	P	P	00 34 33.6	+1.9
	baz=264						
A19K	Wainwright	78.20	20	P	P	00 34 34.0	+2.1
	baz=257						
H18K	Honhosa River	78.21	25	P	P	00 34 33.8	+1.8
	baz=260						
G18K	Tagagawik	78.21	24	P	P	00 34 33.9	+1.8
	baz=260						
P17K	Kvichak River	78.25	31	P	P	00 34 33.7	+1.3
	baz=263						
Q17K	Contact Creek	78.44	32	P	P	00 34 34.8	+1.2
	baz=264						
C19K	Lookout Ridge	78.47	21	IAmb	IAmb	00 34 37.6	
	comp=Z,17nm,0.8s						
C19K	Lookout Ridge	78.47	21	P	P	00 34 35.0	+1.5
	baz=258,SNR=16						
L18K	Granite Mounta	78.50	28	P	P	00 34 35.6	+1.9
	baz=263						
J18K	Innoko River	78.66	27	P	P	00 34 36.6	+2.0
	baz=262						
N18K	Kilae Creek	78.70	29	P	P	00 34 36.8	+1.9
	baz=264						
GCSA	Galena City Sc	78.77	25	P	P	00 34 36.7	+1.6
	baz=262						
M18K	Stony River	78.82	29	P	P	00 34 37.1	+1.6
	baz=264						
D19K	Kuna River	78.88	21	IAmb	IAmb	00 34 39.3	
	comp=Z,11nm,0.7s						
D19K	Kuna River	78.88	21	P	P	00 34 37.5	+1.8
	baz=260						
G19K	Purcell Mounta	78.89	24	P	P	00 34 37.5	+1.7
	baz=261						
O18K	Koktuh Hills	78.95	30	P	P	00 34 38.1	+1.8
	baz=264						
E19K	Redstone River	79.03	23	IAmb	IAmb	00 34 41.0	
	comp=Z,17nm,1.1s						
E19K	Redstone River	79.03	23	P	P	00 34 38.1	+1.6
	baz=261						
H19K	Roundabout Mou	79.06	25	IAmb	IAmb	00 34 46.8	
	comp=Z,13nm,1.0s						
H19K	Roundabout Mou	79.06	25	P	P	00 34 38.5	+1.8
	baz=262						
SII	Sitkinak Islan	79.20	34	P	P	00 34 39.1	+1.4
	baz=266						
J19K	Poorman	79.21	26	P	P	00 34 39.2	+1.6
	baz=263						
L19K	White Mountain	79.36	28	P	P	00 34 40.3	+1.8
	baz=264						
N19K	Bonanza Creek	79.40	29	P	P	00 34 40.4	+1.6
	baz=265						
O19K	Port Alsworth	79.42	30	P	P	00 34 40.2	+1.4
	baz=265						
D20K	Etivluk River	79.46	21	IAmb	IAmb	00 34 42.5	
	comp=Z,14nm,0.9s						
D20K	Etivluk River	79.46	21	P	P	00 34 40.3	+1.4
	baz=261						
B20K	Meade River	79.47	20	IAmb	IAmb	00 34 42.7	
	comp=Z,17nm,0.8s						
B20K	Meade River	79.47	20	P	P	00 34 40.0	+1.2
	baz=261						
E20K	Nigu River	79.54	22	P	P	00 34 40.6	+1.1
	baz=262						
F20K	Avaraart Lake	79.55	23	P	P	00 34 40.9	+1.5
	baz=262,SNR=9.2						
Q19K	Cape Douglas,	79.67	31	P	P	00 34 41.4	+1.2
	baz=266						
H20K	Anotleneega Mo	79.70	25	P	P	00 34 41.7	+1.4
	baz=264						
OHAK	Old Harbor	79.74	33	P	P	00 34 41.6	+1.0
	baz=266						
KARS	Kars	79.77	310	IAmb	IAmb	00 34 52.0	
	comp=Z,19nm,0.9s						
I20K	Naaghedeneel	79.79	25	P	P	00 34 41.6	+0.9
	baz=264						
K20K	Telida	79.83	27	P	P	00 34 42.0	+1.0
	baz=265						
A21K	Barrow	79.86	19	P	P	00 34 42.6	+1.6
	baz=261						
J20K	Nowinta River	79.87	26	P	P	00 34 42.7	+1.5
	baz=264						
KBZ	Khabaz	79.92	313	P	P	00 34 39.5	-2.3
	comp=Z,3.0nm,0.9s,baz=155,slow=5.8,SNR=7.5						
	comp=Z,3.0nm,0.9s						
KBZ	Khabaz	79.92	313	i P	P	00 34 41.7	-0.1
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NEUR	Neytrino	80.06	313	i P	P	00 34 42.5	-0.4
NEUR				pmax	pmax		
	comp=Z,2.0nm,1.2s						
KIV	Kislovodsk	80.07	313	eP	P	00 34 41.9	-0.9
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SHA1	Shidzhatmaz	80.09	313	i P	P	00 34 42.6	-0.5
M20K	Styx River	80.14	28	IAmb	IAmb	00 35 43.1	
	comp=Z,25nm,1.4s						
M20K	Styx River	80.14	28	P	P	00 34 43.9	+1.1
	baz=266						
KDAK	Kodiak Island	80.15	33	LR	LR	01 04 33.8	
	comp=Z,117nm,21.8s,baz=234,slow=31						
KDAK	Kodiak Island	80.15	33	P	P	00 34 44.6	+1.8
	baz=267						
C21K	Knifeblade Rid	80.17	21	P	P	00 34 44.3	+1.5
	baz=263						
IMAR	Indian Mountai	80.22	24	P	P	00 34 43.8	+0.8
O20K	Slope Mountain	80.26	30	P	P	00 34 44.6	+1.1
	baz=267						
B21K	Ikpikpuk River	80.29	20	IAmb	IAmb	00 34 47.6	
	comp=Z,23nm,0.9s						
B21K	Ikpikpuk River	80.29	20	P	P	00 34 45.2	+1.9
	baz=263						
Q20K	Shuyak Island	80.30	32	P	P	00 34 44.7	+1.1
	baz=267						
A22K	Sinclair Lake	80.34	19	P	P	00 34 44.9	+1.4
	baz=263						
G21K	Allakaket	80.37	24	IAmb	IAmb	00 34 48.1	
	comp=Z,12nm,0.9s						
G21K	Allakaket	80.37	24	P	P	00 34 45.3	+1.5
	baz=265						
E21K	Killik River	80.38	22	P	P	00 34 45.1	+1.1
	baz=264						

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F21K  Alatna River      80.44  23  P      P       00 34 45.6 +1.4
      baz=265
N20K  Mount Spurr       80.53  29  P      P       00 34 46.4 +1.5
      baz=267
SPCR  Spurr Chakacha    80.53  29  P      P       00 34 46.5 +1.6
      baz=267
H21K  Melozitna Rive    80.58  25  P      P       00 34 46.3 +1.4
      baz=266
GURO  Guroymak-BITLI    80.60 308  IAmb   IAmb    00 34 49.3
      comp=Z,13nm,0.9s
PPLA  Purkeypile        80.64  27  P      P       00 34 47.1 +1.5
      baz=266
CHUM  Lake Minchumin    80.65  26  P      P       00 34 45.6 +0.3
      baz=266
HOM   Homer             80.73  31  P      P       00 34 46.4 +0.5
      baz=268
B22K  Teshekpuk Lake    80.78  20  IAmb   IAmb    00 34 49.5
      comp=Z,16nm,0.8s
B22K  Teshekpuk Lake    80.78  20  P      P       00 34 47.6 +1.7
      baz=264
I21K  Tanana            80.88  25  P      P       00 34 48.2 +1.6
      baz=266
D22K  Ayikyak River     80.90  21  IAmb   IAmb    00 34 50.5
      comp=Z,36nm,1.9s
D22K  Ayikyak River     80.90  21  P      P       00 34 48.0 +1.4
      baz=265
SKT   Skwentna          80.90  28  P      P       00 34 48.4 +1.6
      baz=267
F22K  John River        80.97  23  P      P       00 34 48.3 +1.2
      baz=266
E22K  Anaktuvuk Pass    81.16  22  IAmb   IAmb    00 34 51.9
      comp=Z,16nm,1.2s
E22K  Anaktuvuk Pass    81.16  22  P      P       00 34 49.2 +1.1
      baz=266,SNR=10
H22K  Ishtalitna Cre    81.18  24  IAmb   IAmb    00 34 52.3
      comp=Z,15nm,1.2s
H22K  Ishtalitna Cre    81.18  24  P      P       00 34 49.5 +1.3
      baz=267,SNR=9.9
G22K  Bettles           81.19  23  P      P       00 34 49.2 +1.1
      baz=266
BRSE  Bradley Lake S    81.19  31  P      P       00 34 48.6 +0.2
      baz=268
BPAW  Bear Paw Mtn.     81.25  26  P      P       00 34 49.6 +1.0
      baz=267
SUA   Susitna One       81.25  29  P      P       00 34 49.4 +0.6
      baz=268
L22K  Petersville       81.28  28  P      P       00 34 48.6 -0.3
MLY   Manley            81.40  25  IAmb   IAmb    00 34 53.5
      comp=Z,11nm,0.8s
MLY   Manley            81.40  25  P      P       00 34 50.0 +0.6
      baz=267,SNR=6.0
CUT   Chulitna          81.51  28  P      P       00 34 51.1 +1.1
      baz=268
TRF   Thorofare Moun    81.53  27  IAmb   IAmb    00 34 59.1
      comp=Z,21nm,1.1s
TRF   Thorofare Moun    81.53  27  P      P       00 34 51.9 +1.6
      baz=268
D23K  Nanushuk River    81.62  21  IAmb   IAmb    00 34 54.2
      comp=Z,18nm,1.1s
D23K  Nanushuk River    81.62  21  P      P       00 34 52.1 +1.6
      baz=267
C23K  Itkillik River    81.70  20  IAmb   IAmb    00 34 54.5
      comp=Z,14nm,0.8s
C23K  Itkillik River    81.70  20  P      P       00 34 52.6 +1.8
      baz=267
COLD  Coldfoot          81.72  23  P      P       00 34 52.8 +1.8
      baz=268
RC01  Rabbit Creek A    81.73  29  P      P       00 34 52.9 +1.8
      baz=269
KOPT  Kop Dagi          81.76 309  IAmb   IAmb    00 34 58.1
      comp=Z,12nm,0.9s
G23K  Bananza Creek     81.77  24  P      P       00 34 53.2 +1.9
      baz=268
SEW   Seward            81.85  30  P      P       00 34 53.6 +1.8
      baz=269
H23K  Yukon River       81.93  24  P      P       00 34 53.3 +1.1
      baz=268
E23K  Chandalar         81.97  22  IAmb   IAmb    00 34 59.1
      comp=Z,18nm,1.1s
E23K  Chandalar         81.97  22  P      P       00 34 52.9 +0.4
      baz=268
I23K  Minto, Yukon-K    81.99  25  IAmb   IAmb    00 34 57.8
      comp=Z,8.2nm,0.6s
I23K  Minto, Yukon-K    81.99  25  P      P       00 34 53.2 +0.8
      baz=269,SNR=6.9
TOLK  Toolik Lake Re    82.01  22  IAmb   IAmb    00 34 56.4
      comp=Z,9.2nm,0.8s
TOLK  Toolik Lake Re    82.01  22  P      P       00 34 53.7 +1.1
      baz=268,SNR=6.4
PMR   Palmer            82.03  29  P      P       00 34 53.5 +0.8
      baz=269
NEA2  Nenana            82.10  26  P      P       00 34 54.2 +1.1
      baz=269
KLMR  Klimovskoe        82.13 330 eP      P       00 34 50.0 -3.2
KLMR                               pmax   pmax
      comp=Z,8.0nm,0.9s
MCK   McKinley          82.15  27  P      P       00 34 53.1 -0.3
MCK   McKinley          82.15  27  P      P       00 34 53.1 -0.3
MCK                                pmax   pmax
      comp=Z,20nm,0.8s
MCK   McKinley          82.15  27  P      P       00 34 54.5 +1.2
      baz=269
RND   Reindeer          82.18  27  P      P       00 34 53.4 -0.2
RND                                IAmb   IAmb    00 34 59.7
      comp=Z,17nm,1.0s
RND   Reindeer          82.18  27  P      P       00 34 53.4 -0.2
RND                                pmax   pmax
      comp=Z,17nm,1.0s
SOC   Sochi             82.23 313 eP      P       00 34 52.7 -1.4
SOC                               e               00 37 59.9
SOC                               ePPP    PPP     00 39 51.5
SOC                               eS      S       00 45 04.2 -3.0
SOC                               eSS     SS      00 50 33.1 +5.6
SOC                               eSSS    SSS     00 53 46.8
SOC                                pmax   pmax
      comp=Z,10.0nm,0.7s
D24K  Happy Valley      82.30  21  IAmb   IAmb    00 34 58.4
      comp=Z,15nm,0.9s
D24K  Happy Valley      82.30  21  P      P       00 34 55.4 +1.4
      baz=269
WAT1  Susitna Watana    82.31  28  P      P       00 34 55.4 +1.1
      baz=270
KNK   Knik Glacier      82.35  29  P      P       00 34 55.4 +0.9
      baz=270
C24K  Franklin Bluff    82.36  21  IAmb   IAmb    00 34 57.9
      comp=Z,12nm,0.9s
C24K  Franklin Bluff    82.36  21  P      P       00 34 55.7 +1.4
      baz=269
E24K  Your Creek        82.40  22  P      P       00 34 56.4 +1.7
      baz=269
PWL   Port Wells        82.41  30  P      P       00 34 56.1 +1.4
      baz=270
SML   Sawmill           82.41  29  P      P       00 34 55.8 +1.0
      baz=270
WRH   Wood River Hil    82.52  26  IAmb   IAmb    00 35 01.0
      comp=Z,15nm,1.2s
H24K  Noodor Dome       82.62  24  IAmb   IAmb    00 35 03.3
      comp=Z,8.4nm,0.9s
H24K  Noodor Dome       82.62  24  P      P       00 34 56.7 +0.9
      baz=270
F24K  Squaw Lake        82.62  23  IAmb   IAmb    00 35 02.4
      comp=Z,6.6nm,0.8s
F24K  Squaw Lake        82.62  23  P      P       00 34 57.6 +1.8
      baz=270
WAT6  Susitna Watana    82.68  28  P      P       00 34 58.0 +1.6
      baz=270
M23K  Glacier View      82.70  29  P      P       00 34 57.4 +1.1
      baz=271
G24K  Hadweenzic Riv    82.78  24  P      P       00 34 58.5 +1.9
      baz=270
POKR  Poker Plat Res    82.80  25  P      P       00 34 58.4 +1.6
      baz=270
DHY   Denali Highway    82.85  27  P      P       00 34 58.1 +1.0
      baz=271
SCM   Sheep Creek Mo    82.89  29  P      P       00 34 58.2 +0.9
      baz=271
GLI   Glacier Island    83.01  29  P      P       00 34 58.6 +0.7
      baz=271
HDA   Harding Lake      83.02  26  IAmb   IAmb    00 35 09.2
      comp=Z,10nm,0.8s
HDA   Harding Lake      83.02  26  P      P       00 34 59.3 +1.4
      baz=271,SNR=5.3
ILAR  Eielson Array     83.04  26  P      P       00 34 57.9 -0.1
      comp=Z,3.1nm,0.7s,baz=238,slow=3.7,SNR=47
      comp=Z,3.1nm,0.7s
ILAR  Eielson Array     83.04  26  P      P       00 34 57.2 -0.8
D25K  Kavik River       83.17  21  IAmb   IAmb    00 35 02.8
      comp=Z,9.2nm,0.9s
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D25K  Kavik River       83.17  21  P      P       00 34 59.9 +1.3
      baz=271
G25K  Bearman Lake      83.33  24  P      P       00 35 00.6 +1.2
      baz=272
M24K  Tolsona, Glenn    83.42  28  P      P       00 35 00.8 +0.7
      baz=272
Q23K  Middleton Isla    83.43  31  P      P       00 35 01.1 +1.1
      baz=272
F25K  Christian Rive    83.48  23  IAmb   IAmb    00 35 08.3
      comp=Z,18nm,1.6s
F25K  Christian Rive    83.48  23  P      P       00 35 01.0 +0.8
      baz=272
E25K  Arctic Village    83.49  22  IAmb   IAmb    00 35 07.7
      comp=Z,18nm,1.4s
E25K  Arctic Village    83.49  22  P      P       00 35 01.1 +0.8
      baz=272
K24K  Donnelly Dome     83.55  27  P      P       00 35 01.3 +0.6
      baz=272
KLU   Klutina           83.56  29  P      P       00 35 01.4 +0.6
      baz=272
C26K  Camden Bay        83.67  20  P      P       00 35 01.4 +0.3
      baz=272
J25K  Salcha River,     83.70  26  IAmb   IAmb    00 35 07.6
      comp=Z,24nm,1.8s
J25K  Salcha River,     83.70  26  P      P       00 35 02.3 +0.8
      baz=272
PAX   Paxson            83.72  27  P      P       00 35 03.1 +1.5
      baz=272
OBN   Obninsk           83.82 325 i P     P       00 35 00.8 -1.3
OBN                               i               00 35 07.5
OBN                                pmax   pmax
      comp=Z,6.0nm,0.8s
HARP  HAARP             83.89  28  P      P       00 35 04.0 +1.7
      baz=273
BMAR  Burnt Mountain    83.90  23  P      P       00 35 03.4 +1.0
RIDG  Independent Ri    83.96  27  P      P       00 35 03.9 +1.1
      baz=273
F26K  Sheenjek River    84.05  23  P      P       00 35 04.0 +0.9
      baz=273
C27K  Jago River        84.10  21  IAmb   IAmb    00 35 07.6
      comp=Z,13nm,0.9s
C27K  Jago River        84.10  21  P      P       00 35 04.9 +1.6
      baz=273
N25K  Chitina, Valde    84.19  29  P      P       00 35 05.4 +1.3
      baz=273
BMRM  Bremner River     84.23  29  P      P       00 35 05.5 +1.4
      baz=273
G26K  Porcupine Rive    84.23  23  IAmb   IAmb    00 35 12.0
      comp=Z,12nm,1.1s
G26K  Porcupine Rive    84.23  23  P      P       00 35 05.1 +1.1
      baz=274
SCRK  Sand Creek        84.33  26  P      P       00 35 05.6 +0.8
      baz=274
KAIM  Kayak Island      84.38  30  P      P       00 35 06.0 +1.1
      baz=274
J26L  Joseph Creek      84.48  26  P      P       00 35 06.0 +0.5
      baz=274
I26K  Coal Creek Min    84.60  25  IAmb   IAmb    00 35 09.6
      comp=Z,16nm,1.1s
I26K  Coal Creek Min    84.60  25  P      P       00 35 06.8 +0.9
      baz=274
L26K  Log Cabin Wild    84.68  27  IAmb   IAmb    00 35 17.9
      comp=Z,9.2nm,1.0s
L26K  Log Cabin Wild    84.68  27  P      P       00 35 07.4 +0.9
      baz=274
TOKA  Tokat             84.82 310  P      P       00 35 06.5 -1.2
TOKA                               IAmb   IAmb    00 35 47.3
      comp=Z,7.4nm,0.6s
M26K  Nabesna, AK       84.89  28  P      P       00 35 08.0 +0.4
      baz=275
MCARA McCarthy VSAT     84.96  29  P      P       00 35 08.7 +0.8
      baz=275
E27K  Coleen River      84.97  22  IAmb   IAmb    00 35 15.6
      comp=Z,11nm,1.1s
E27K  Coleen River      84.97  22  P      P       00 35 08.9 +1.1
      baz=276
CRQE  Cirque            84.98  30  P      P       00 35 07.8 -0.2
      baz=275
G27K  Doyon Strip       85.08  23  P      P       00 35 09.7 +1.3
      baz=276
D27M  Malcolm River     85.10  21  IAmb   IAmb    00 35 14.9
      comp=Z,8.0nm,0.8s
D27M  Malcolm River     85.10  21  P      P       00 35 09.5 +1.1
      baz=276
K27K  Chicken           85.17  26  P      P       00 35 09.9 +1.1
      baz=275
H27K  Steamboat Moun    85.19  24  IAmb   IAmb    00 35 15.0
      comp=Z,12nm,1.1s
H27K  Steamboat Moun    85.19  24  P      P       00 35 10.2 +1.3
      baz=276
I27K  Kandik River      85.21  25  P      P       00 35 10.7 +1.6
      baz=276
L27K  Beaver Creek,     85.37  27  IAmb   IAmb    00 35 22.2
      comp=Z,11nm,1.1s
L27K  Beaver Creek,     85.37  27  P      P       00 35 11.1 +1.2
      baz=276
M27K  Edge Creek, AK    85.42  28  P      P       00 35 11.2 +1.0
      baz=276
BNN   Bunyan            85.42 308  IAmb   IAmb    00 35 12.7
      comp=Z,8.7nm,1.0s
BARN  Barnard Glacie    85.65  29  IAmb   IAmb    00 35 16.7
      comp=Z,12nm,0.7s
F28M  Old Crow          85.68  23  IAmb   IAmb    00 35 17.4
      comp=Z,12nm,0.8s
F28M  Old Crow          85.68  23  P      P       00 35 12.5 +1.2
      baz=277
E28M  Babbage River     85.69  21  IAmb   IAmb    00 35 17.2
      comp=Z,9.9nm,1.0s
E28M  Babbage River     85.69  21  P      P       00 35 12.4 +1.1
      baz=277
CTG   Chitna Glacier    85.81  29  P      P       00 35 13.6 +1.3
      baz=276
BVCY  Beaver Creek      85.88  28  P      P       00 35 13.4 +1.0
      baz=277
I28M  Miner Creek       85.93  25  P      P       00 35 13.8 +1.2
I28M  Miner Creek       85.93  25  P      P       00 35 14.0 +1.3
      baz=277
MAW   Mawson            86.05 200  LR     LR      01 09 45.2
      comp=Z,91nm,18.8s,baz=42,slow=33
YUK3  Moose Creek       86.14  28  P      P       00 35 14.8 +0.9
      baz=277
BALJ  Balqa             86.20 302  IAmb   IAmb    00 35 21.0
      comp=Z,13nm,0.8s
MMAI  Mount Meron Ar    86.31 303  P      P       00 35 14.3 -1.0
      comp=Z,6.8nm,1.0s,baz=67,slow=8.0,SNR=6.0
      comp=Z,6.8nm,1.0s
E29M  Blow River        86.31  22  IAmb   IAmb    00 35 26.8
      comp=Z,15nm,1.7s
E29M  Blow River        86.31  22  P      P       00 35 15.0 +0.6
      baz=279
DAWY  Dawson            86.34  26         P       00 35 16.5 +1.8
DAWY                               IAmb   IAmb    00 37 41.0
      comp=Z,27nm,1.9s
DAWY  Dawson            86.34  26  P      P       00 35 15.6 +1.0
      baz=278
GHAJ  Ghor Haditha      86.34 301  P      P       00 35 14.6 -0.7
O28M  Mount Upton       86.39  29  P      P       00 35 15.4 +0.1
      baz=277
PINM  Pinnacle          86.45  30  P      P       00 35 15.8 +0.5
      baz=277
H29M  Whitestone        86.46  24  P      P       00 35 16.5 +1.3
      baz=279
G29M  Pine Creek        86.49  23  P      P       00 35 16.6 +1.3
      baz=279
VNDA  Vanda             86.55 173  P      P       00 35 14.7 -0.6
      comp=Z,2.2nm,0.9s,baz=305,slow=5.2,SNR=7.9
      comp=Z,2.2nm,0.9s
VNDA  Vanda             86.55 173  P      P       00 35 15.5 +0.3
VNDA  Vanda             86.55 173  P      P       00 35 15.5 +0.3
VNDA                               pmax   pmax
      comp=Z,4.0nm,1.2s
I29M  Ogilvie Camp,     86.61  25  IAmb   IAmb    00 35 20.8
      comp=Z,12nm,1.1s
I29M  Ogilvie Camp,     86.61  25  P      P       00 35 16.4 +0.5
      baz=279
M29M  Somme Creek       86.98  28  P      P       00 35 18.5 +0.5
      baz=279
L29M  L29M              87.03  27  P      P       00 35 18.5 +0.4
      baz=279
BR131 Keskin Array S    87.04 309 i P     P       00 35 17.0 -1.8
BRTR  Keskin Array B    87.04 309  P      P       00 35 16.6 -2.1
      comp=Z,1.4nm,0.8s,baz=104,slow=5.0,SNR=11
      comp=Z,1.4nm,0.8s
BRTR  Keskin Array B    87.04 309  P      P       00 35 17.1 -1.6
BRTR  Keskin Array B    87.04 309 eP      P       00 35 16.9 -1.8
BRTR                               pmax   pmax
      comp=Z,2.0nm,0.8s
BR105 Keskin Array S    87.06 309  P      P       00 35 17.1 -1.7
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      comp=Z,2.4nm,0.8s
YUK4  Talbot Arm        87.06  29  P      P       00 35 18.8 +0.3
      baz=279
EPYK  Eagle Plains      87.09  24  IAmb   IAmb    00 35 20.7
      comp=Z,9.1nm,1.1s
EPYK  Eagle Plains      87.09  24  P      P       00 35 19.1 +0.8
      baz=280
ARCES ARCESS Array B    87.18 340  P      P       00 35 16.3 -2.3
      comp=Z,2.4nm,0.9s,baz=92,slow=8.2,SNR=3.7
      comp=Z,2.4nm,0.9s
ARCES ARCESS Array B    87.18 340 eP      P       00 35 18.3 -0.3
ARCES                              pmax   pmax
      comp=Z,3.0nm,1.0s
G30M  tAoh Zraii Nji    87.18  23  P      P       00 35 18.8 +0.1
      baz=280
K29M  Barlow Dome       87.19  26  P      P       00 35 20.7 +1.8
K29M  Barlow Dome       87.19  26  P      P       00 35 19.3 +0.4
      baz=280
F30M  Barrier River     87.23  22  P      P       00 35 19.0 +0.1
      baz=281
O29M  Mount Kennedy     87.25  30  P      P       00 35 19.5 +0.2
      baz=279
YUK6  Outpost Mounta    87.26  29  P      P       00 35 19.8 +0.3
      baz=279
PPT2  Papeete2          87.38 108 eLR     LR      01 03 06.1
      comp=Z,124nm,34.8s
PPT2                              eLR     LR      01 03 08.6
      comp=Z,178nm,26.8s
I30M  Mount Dempster    87.44  25  P      P       00 35 20.4 +0.3
      baz=280
J30M  Hart River        87.57  25  P      P       00 35 21.3 +0.5
      baz=280
HYT   Haines Junctio    87.69  29  P      P       00 35 21.5 +0.1
      baz=280
M30M  Minto, Yukon      87.72  27  P      P       00 35 23.5 +2.1
M30M                               IAmb   IAmb    00 36 02.6
      comp=Z,20nm,1.8s
M30M  Minto, Yukon      87.72  27  P      P       00 35 22.0 +0.6
      baz=280
P29M  Windy Craggy      87.77  30  P      P       00 35 22.8 +1.1
      baz=280
N30M  Aishikik Lake     87.78  28  P      P       00 35 22.8 +1.0
      baz=280
CSS   Mathiatis         87.82 305  P      P       00 35 23.9 +1.5
      comp=Z,6.7nm,1.2s
INK   Inuvik            87.92  21  P      P       00 35 23.3 +1.2
      baz=283
G31M  Satah River       87.94  23  P      P       00 35 23.2 +1.0
      baz=282
F31M  Tsiigehtchic      88.03  22  P      P       00 35 23.5 +0.8
      baz=283
P30M  Million Dollar    88.08  30  P      P       00 35 23.4 +0.2
      baz=280
H31M  Peel River        88.15  24  P      P       00 35 24.1 +0.7
      baz=282
TBI   Tubuai            88.27 114 eLR     LR      01 03 24.3
      comp=Z,750nm,28.5s
TBI                               eLR     LR      01 03 33.0
      comp=Z,1µm,29.0s
N31M  Braeburn, Yuko    88.39  28  P      P       00 35 26.6 +1.9
FIA1  FINESS Array S    88.55 332  P      P       00 35 24.9 -0.4
FINES FINESS Array B    88.55 332  P      P       00 35 23.2 -2.0
      comp=Z,3.0nm,0.8s,baz=57,slow=7.0,SNR=8.7
      comp=Z,3.0nm,0.8s
FINES FINESS Array B    88.55 332 eP      P       00 35 23.8 -1.5
FINES                              pmax   pmax
      comp=Z,3.0nm,0.8s
AK09  Malin Array Si    88.68 321  P      P       00 35 27.2 +1.1
AK08  Malin Array Si    88.69 321  P      P       00 35 26.4 +0.2
AKASG Malin Array Be    88.70 321  P      P       00 35 23.1 -3.1
      comp=Z,1.1nm,0.6s,baz=69,slow=4.1,SNR=5.0
AKASG Malin Array Be    88.70 321 eP      P       00 35 28.4 +2.2
AKASG                              pmax   pmax
      comp=Z,1.0nm,0.6s
AKBB  Malin Array Si    88.70 321 i P     P       00 35 26.3 +0.1
AKBB                               pmax   pmax
      comp=Z,5.0nm,1.1s
AKBB  Malin Array Si    88.70 321  P      P       00 35 26.8 +0.6
AK01  Malin Array Si    88.71 321  P      P       00 35 26.8 +0.6
KIEV  Kiev              88.71 321  P      P       00 35 26.7 +0.4
AK04  Malin Array Si    88.73 321  P      P       00 35 26.8 +0.4
AK11  Malin Array Si    88.74 321  P      P       00 35 26.5 +0.1
AK21  Malin Array Si    88.80 321  P      P       00 35 27.5 +0.8
AK17  Malin Array Si    88.81 321  P      P       00 35 27.6 +0.9
AK20  Malin Array Si    88.83 321  P      P       00 35 27.0 +0.2
BAL3X Bal3x, Balta      88.88 318  P      P       00 35 28.2 +1.1
MNK   Minsk             88.89 325 i P     P       00 35 24.5 -2.5
      comp=E,7.0nm,0.8s
MNK                               i P     P       00 35 24.5 -2.5
      comp=N,6.0nm,0.8s
MNK                               i P     P       00 35 24.5 -2.5
      comp=Z,3.0nm,0.6s,baz=80
MNK                               i PcP   PcP     00 35 26.5 -2.0
MNK                               i PP    PP      00 38 10.0  -46
MNK                               i PPP   PPP     00 40 49.7
MNK                               i S     S       00 45 53.5  -19
MNK                               i SS    SS      00 52 35.8  +31
MNK                               i SSS   SSS     00 55 41.1
MNK   Minsk             88.89 325 i P     P       00 35 24.5 -2.5
MNK                               i               00 35 26.4
MNK                               i PPP   PPP     00 40 49.7
MNK                               i S     SKSac   00 45 53.5 -0.4
MNK                               i SSS   SSS     00 55 41.1
MNK                                pmax   pmax
      comp=E,7.0nm,0.8s
MNK                                pmax   pmax
      comp=Z,3.0nm,0.6s
MNK                                pmax   pmax
      comp=N,6.0nm,0.8s
WHY   Whitehorse        88.99  29  P      P       00 35 28.2 +0.7
      baz=282
SIT   Sitka             89.49  33  P      P       00 35 30.5 +0.7
      baz=282
A36M  Sachs Harbour     89.57  17  IAmb   IAmb    00 35 36.5
      comp=Z,5.9nm,0.8s
MI28  Mi28,Pidlybu      89.64 321  P      P       00 35 30.7 +0.1
N32M  Quiet Lake        89.74  28  IAmb   IAmb    00 35 43.0
      comp=Z,14nm,1.0s
N32M  Quiet Lake        89.74  28  P      P       00 35 31.1 +0.2
      baz=284
RNPP8 Varash            90.68 322  P      P       00 35 35.9 +0.4
RNPP1 Kostyukhnivka     90.73 322  P      P       00 35 36.6 +0.9
UZHM  Uzhgorod          93.53 320  P      P       00 35 50.8 +2.1
SYO   Syowa Base        94.68 201⇓eP      P       00 35 55.0 +1.6
SYO   Syowa Base        94.68 201⇓epP     pP      00 35 58.4 -6.2
RES   Resolute Bay      95.14  10  IAmb   IAmb    00 35 58.0
      comp=Z,4.7nm,0.8s
TAOE  Nuku Hiva Isla    95.48  98 eLR     LR      01 06 49.2
      comp=Z,198nm,26.2s
NB2   NORSAR Subarra    95.50 333  P      P       00 35 54.4 -3.2
      comp=Z,1.3nm,0.8s,baz=63,slow=4.6
NOA   NORSAR Array B    95.50 333  P      P       00 35 54.8 -2.7
      comp=Z,0.7nm,0.7s,baz=63,slow=4.6,SNR=5.0
      comp=Z,0.7nm,0.7s
NOA   NORSAR Array B    95.50 333 eP      P       00 35 55.2 -2.4
QSPA  South Pole Qui    96.60 180  LR     LR      01 23 38.8
      comp=Z,40nm,18.1s,baz=290,slow=38
YKA   Yellowknife Ar    97.38  24  P      Pdif    00 36 06.1 +0.1
      comp=Z,0.7nm,0.7s,baz=300,slow=5.3,SNR=7.3
      comp=Z,0.7nm,0.7s
YKA   Yellowknife Ar    97.38  24  P      Pdif    00 36 05.4 -0.6
YKA   Yellowknife Ar    97.38  24 eP      Pdif    00 36 09.8 +3.8
CLL   Collm             98.41 324 eP      Pdif    00 36 13.0 +2.1
CLL                               e               00 40 19.0
CLL   Collm             98.41 324 ePdif   Pdif    00 36 13.0 +2.1
CLL                               ePP     PP      00 40 19.0 +8.2
LSZ   Lusaka            98.58 256  LR     LR      01 17 38.0
      comp=Z,77nm,20.2s,baz=112,slow=34
RKT   Rikitea          101.52 112 eLR     LR      01 09 34.5
      comp=Z,3µm,39.2s
TORD  Torodi Ar. Bea   120.62 289  PKP    PKPdf   00 41 24.2 -1.3
      comp=Z,0.9nm,0.8s,baz=32,slow=4.2,SNR=5.5
TORD  Torodi Ar. Bea   120.62 289         PKPdf   00 41 22.8 -2.7
TXAR  Lajitas Array    120.84  50  PKP    PKiKP   00 41 26.7 +0.8
      comp=Z,0.5nm,0.7s,baz=332,slow=1.6,SNR=4.9
PLCA  Paso Flores      143.28 160  PKP    PKPdf   00 42 06.3 -1.1
      comp=Z,1.8nm,0.7s,baz=244,slow=3.7,SNR=5.9
PLCA  Paso Flores      143.28 160 ePKIKP  PKPdf   00 42 07.8 +0.4
TRQA  Tornquist        148.10 169  PKPdf  PKPdf   00 42 15.8 +0.1
TRQA  Tornquist        148.10 169  PKIKP  PKPdf   00 42 15.8 +0.1
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*NOU **18** 00:32:14.3, 23°.39S×179°.52W, h580km, mb4.6/20, South of Fiji Islands*

*IDC **18** 00:32:15.7±0.9, 23°.49S×179°.91W, h539km±8km, mb3.8/21,* *mbtmp4.7/22, Error ellipse: s-maj=13.2km s-min=10.4km az=63.0*

*NEIC **18** 00:32:16.2±1.9, 23.°55S±0.°10×180.°0W±0.°1, h541km±6km, mb4.8/57, Error ellipse: s-maj=15.4km s-min=13.9km az=112.0*

ISC 18 00:32:14.9±0.3, **23.°58S**±0.°04×**179.°94W**±0.°05, **h532**km, **n334**, σ**1.s37**/364, **mb4.8**/65, **30C-27D**, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	5.92	163	P	P	00 33 52.6	+0.9
RIZ				S	S	00 35 08.0	-3.1
RAO	Raoul Island	5.93	163	P	P	00 33 54.3	+2.4
	1µm,0.3s,baz=68,slow=21,SNR=12						
RAO				S	S	00 35 12.8	+1.6
	466nm,0.4s,baz=288,slow=20,SNR=2.1						
RAO	Raoul Island	5.93	163	P	P	00 33 52.5	+0.6
RAO	Raoul Island	5.93	163	P	P	00 33 54.2	+2.4
GLKZ	Green Lake	5.94	163	P	P	00 33 54.2	+2.3
GLKZ				S	S	00 35 08.9	-2.5
MSVF	Nonsavu	6.12	342	P	P	00 33 54.9	+0.9
MSVF	Nonsavu	6.12	342	P	P	00 33 56.0	+2.1
NIUE	Niue	10.35	66	P	P	00 34 37.0	+0.7
NIUE	Niue	10.35	66	P	P	00 34 36.1	-0.1
NIUE				S	S	00 36 37.2	+4.7
MARNC	Mare, Loyalty	11.32	278	P	P	00 34 48.1	+1.8
MARNC	Mare, Loyalty	11.32	278	P	P	00 34 48.4	+2.1
PINNC	Pines Island,	11.65	272	P	P	00 34 52.2	+2.4
PINNC	Pines Island,	11.65	272	P	P	00 34 52.7	+2.9
PINNC	Pines Island,	11.65	272	S	S	00 37 04.8	+7.5
OUENC	Ouen Island, N	12.23	273	P	P	00 35 00.4	+4.5
YATNC	Mamie plateau,	12.24	275	P	P	00 34 59.4	+3.4
RTV	Rentapao	12.32	296	P	P	00 34 58.7	+1.9
ONTNC	Ouen Toro	12.61	273	P	P	00 35 00.6	+0.9
DZM	Mont Dzumac	12.65	274	P	P	00 35 02.4	+2.1
	17nm,0.7s,baz=115,slow=14						
DZM	Mont Dzumac	12.65	274	P	P	00 35 01.3	+1.0
DZM	Mont Dzumac	12.65	274	P	P	00 35 03.6	+3.3
WCZ	Waipu Caves	13.28	201	P	P	00 35 09.5	+3.0
HAZ	Te Kaha	14.27	187	P	P	00 35 17.2	+0.5
HAZ				S	S	00 37 46.4	-0.3
RUGZ	Raukumara Rang	14.48	188	P	P	00 35 21.3	+2.1
SANVU	Saraoutou	14.57	301	P	P	00 35 23.2	+3.0
SANVU	Saraoutou	14.57	301	P	P	00 35 21.4	+1.2
TWGZ	Tauwhareparae	14.66	187	P	P	00 35 24.1	+3.1
TWGZ				S	S	00 37 53.2	-1.2
URZ	Urewera	14.85	189	P	P	00 35 20.5	-2.3
	31nm,0.5s,baz=293,slow=3.8,SNR=19						
URZ				S	S	00 37 52.2	-5.6
	13nm,0.5s,baz=303,slow=11,SNR=13						
URZ	Urewera	14.85	189	P	P	00 35 23.5	+0.7
URZ	Urewera	14.85	189	P	P	00 35 20.7	-2.1
URZ				S	S	00 37 55.6	-2.3
MWZ	Matawai	14.87	188	P	P	00 35 22.2	-0.9
MWZ				S	S	00 37 54.5	-3.8
FUNA	Funafuti	14.99	357	P	P	00 35 20.7	-4.0
RAGZ	Rawiri	15.04	188	P	P	00 35 26.1	+1.2
RTZ	Ruatahuna	15.22	189	P	P	00 35 26.2	-0.6
MTHZ	Maungataniwha	15.47	189	P	P	00 35 30.9	+1.6
MTHZ				S	S	00 38 08.5	-0.7
NMHZ	Naumai	15.71	189	P	P	00 35 30.8	-1.1
NMHZ				S	S	00 38 09.6	-4.0
BKZ	Black Stump Fm	15.83	190	P	P	00 35 32.0	-1.1
BKZ	Black Stump Fm	15.83	190	P	P	00 35 32.0	-1.1
BKZ				S	S	00 38 13.4	-2.2
TWVZ	Taurewa	15.94	193	P	P	00 35 34.1	-0.1
KAHZ	Kahuranaki	16.39	189	P	P	00 35 37.8	-0.8
KAHZ				S	S	00 38 25.3	+0.2
BFZ	Birch Farm	17.35	190	P	P	00 35 45.9	-1.6
QRZ	Quartz Range	18.32	198	P	P	00 35 57.8	+1.4
QRZ	Quartz Range	18.32	198	P	P	00 35 57.8	+1.4
MRNZ	Matariki Terra	18.79	197	P	P	00 35 59.8	-0.9
DSZ	Denniston Nort	19.38	199	P	P	00 36 06.5	+0.4
KHZ	Kahutara	19.55	195	P	P	00 36 07.3	-0.2
RPZ	Rata Peaks	21.41	198	P	P	00 36 26.7	+2.3
RPZ	Rata Peaks	21.41	198	P	P	00 36 24.5	+0.1
JCZ	Jackson Bay	22.44	202	P	P	00 36 33.9	+0.2
TATA	Tatamba Isabel	24.60	305	P	P	00 36 52.1	-1.1
EIDS	Eidsvold	26.42	260	P	P	00 37 09.8	+0.6
CTAO	Charters Tower	31.54	270	P	P	00 37 54.3	+0.6
CTAO	Charters Tower	31.54	270	P	P	00 37 54.5	+0.8
TOO	Toolangi	32.67	237	P	P	00 38 03.4	+0.2
TOO				IAmb	IAmb	00 39 25.9	
	comp=Z,18nm,1.0s						
PMG	Port Moresby	34.45	289	P	P	00 38 18.9	+0.5
	comp=Z,74nm,0.8s,baz=86,slow=4.6,SNR=16						
	comp=Z,74nm,0.8s						
PMG	Port Moresby	34.45	289	P	P	00 38 18.6	+0.3
PMG	Port Moresby	34.45	289	P	P	00 38 18.1	-0.3
	comp=Z,730nmcomp=Z,92nm,0.8s						
PMG	Port Moresby	34.45	289	P	P	00 38 18.2	-0.1
STKA	Stephens Creek	34.90	248	P	P	00 38 22.8	+0.9
	comp=Z,6.9nm,0.6s,baz=96,slow=11,SNR=19						
	comp=Z,6.9nm,0.6s						
STKA	Stephens Creek	34.90	248	P	P	00 38 22.8	+0.9
STKA				IAmb	IAmb	00 38 23.5	
	comp=Z,32nm,0.8s						
INKA	Innaminka	35.58	255	P	P	00 38 28.6	+0.9
COEN	Coen	36.12	279	P	P	00 38 32.6	+0.3
COEN				IAmb	IAmb	00 38 34.1	
	comp=Z,9.7nm,0.6s						
BBOO	Buckleboo	39.62	247	P	P	00 39 00.2	-0.4
AS31	Alice Springs	42.15	260	P	P	00 39 20.9	0.0
ASAR	Alice Springs	42.15	260	P	P	00 39 20.9	+0.1
	comp=Z,19nm,0.5s,baz=100,slow=8.3,SNR=134						
ASAR				pP	pP	00 40 57.6	+2.5
	comp=Z,1.1nm,0.5s,baz=89,slow=7.5,SNR=4.5						
ASAR				ScP	ScP	00 44 03.9	+0.9
	comp=Z,5.3nm,0.8s,baz=108,slow=4.1,SNR=19						
ASAR				S	S	00 44 59.1	-3.3
	comp=Z,1.4nm,0.7s,baz=97,slow=15,SNR=7.1						
	comp=Z,19nm,0.5s						
WR8	Warramunga Arr	42.34	266	P	P	00 39 21.5	-0.9
WR8				IAmb	IAmb	00 39 22.7	
	comp=Z,26nm,0.9s						
WB0	Warramunga Arr	42.48	266	P	P	00 39 23.1	-0.4
WRAB	Tennant Creek	42.48	266	P	P	00 39 22.9	-0.5
WRAB				IAmb	IAmb	00 39 23.8	
	comp=Z,30nm,0.8s						
WRAB	Tennant Creek	42.48	266	P	P	00 39 23.0	-0.5
WRAB				PcP	PcP	00 41 04.3	+0.1
WRA	Warramunga Arr	42.49	266	P	P	00 39 22.9	-0.7
	comp=Z,28nm,0.5s,baz=89,slow=5.6,SNR=347						
WRA				ScP	ScP	00 44 04.8	+0.4
	comp=Z,3.9nm,1.0s,baz=103,slow=4.2,SNR=6.8						
WRA				S	S	00 45 02.8	-4.6
	comp=Z,1.7nm,0.8s,baz=98,slow=13,SNR=6.8						
	comp=Z,28nm,0.5s						
JAY	Jayapura	43.45	293	P	P	00 39 31.1	0.0
	comp=Z,35nm,0.5s,baz=133,slow=5.0,SNR=19						
	comp=Z,35nm,0.5s						
JAY	Jayapura	43.45	293	P	P	00 39 30.6	-0.5
	comp=Z,49nm,0.8s						
FORT	Forrest	46.48	249	P	P	00 39 53.3	-0.9
FORT				IAmb	IAmb	00 39 54.5	
	comp=Z,18nm,0.6s						
MTN	Manton Dam	47.49	274	P	P	00 40 00.8	-1.2
MTN				IAmb	IAmb	00 40 01.8	
	comp=Z,13nm,0.7s						
KNRA	Kununurra	48.75	269	P	P	00 40 11.2	-0.1
KNRA				IAmb	IAmb	00 40 12.2	
	comp=Z,46nm,1.1s						
KHLU	Kahalu`u	48.90	31	P	P	00 40 12.5	0.0
HMH	Humu'ula Sheep	49.10	31	P	P	00 40 15.0	+0.8
DHH	Diamond Head	49.51	28	P	P	00 40 17.5	+0.7
DRV	Dumont d'Urvil	49.86	200	P	P	00 40 17.8	-1.0
FAKI	Fak Fak	50.55	287	P	P	00 40 23.9	-0.8
FITZ	Fitzroy Crossi	50.91	265	P	P	00 40 27.0	-0.3
SWI	Sorong	52.40	288	P	P	00 40 37.6	-0.4
SBA	Scott Base	54.70	183	P	P	00 40 56.7	+3.4
SBA	Scott Base	54.70	183	P	P	00 40 56.4	+3.1
VNDA	Vanda	54.70	185	P	P	00 40 55.0	+1.6
	comp=Z,1.5nm,0.6s,baz=3.9,slow=6.1,SNR=9.3						
VNDA				ScP	ScP	00 44 53.8	-1.5
	comp=Z,1.2nm,0.6s,baz=10,slow=4.1,SNR=7.6						
	comp=Z,1.5nm,0.6s						
VNDA	Vanda	54.70	185	P	P	00 40 54.5	+1.2
SOEI	Soe	54.88	275	P	P	00 40 54.9	-0.9
SOEI				IAmb	IAmb	00 41 06.9	
	comp=Z,51nm,0.8s						
SOEI	Soe	54.88	275	P	P	00 40 56.4	+0.7
	comp=Z,71nm,1.0s						
PSA00	Pilbara Seismi	55.28	259	P	P	00 40 56.5	-1.9
MBWA	Marble Bar	55.49	260	P	P	00 40 58.8	-1.0
MORW	Morawa	57.04	250	P	P	00 41 10.0	-0.4
EDFI	Ende, Flores	57.61	275	P	P	00 41 13.8	-0.8
	comp=Z,50nm,0.8s						
BASI	Baing, Sumba	58.09	273	P	P	00 41 17.9	+0.2
	comp=Z,62nm,1.0s						
GIRL	Giralia	60.05	257	P	P	00 41 31.4	+0.6
DBNI	Kabupaten Domp	60.80	273	P	P	00 41 34.8	-1.0
	comp=Z,516nmcomp=Z,45nm,0.6s						
PLAI	Plampang	61.16	273	P	P	00 41 37.9	-0.3
TWSI	Taliwang, Sumb	62.02	273	P	P	00 41 43.4	-0.4
	comp=Z,832nmcomp=Z,30nm,0.6s						
TOLI2	Tolitoli	62.55	284	P	P	00 41 46.4	-0.9
TOLI2				IAmb	IAmb	00 41 48.7	
	comp=Z,32nm,0.6s						
KLNI	Mataram	62.86	273	P	P	00 41 48.3	-0.9
	comp=Z,24nm,0.7s						
MPSI	Mapaga	62.99	283	P	P	00 41 49.0	-1.1
	comp=Z,735nmcomp=Z,57nm,0.9s						
JAGI	Jajag, Banyuwa	64.62	272	P	P	00 41 58.6	-1.9
JAGI				IAmb	IAmb	00 41 59.5	
	comp=Z,17nm,0.5s						
JAGI	Jajag, Banyuwa	64.62	272	P	P	00 41 59.4	-1.1
	comp=Z,27nm,0.5s						
GMJI	Gumukmas	65.34	272	P	P	00 42 03.9	-1.1
	comp=Z,30nm,0.9s						
QSPA	South Pole Qui	66.50	180	P	P	00 42 12.8	+1.3
	comp=Z,17nm,0.6s,baz=30,slow=1.4,SNR=47						
	comp=Z,17nm,0.6s						
QSPA	South Pole Qui	66.50	180	P	P	00 42 12.9	+1.3
QSPA				IAmb	IAmb	00 42 13.7	
	comp=Z,17nm,0.7s						
QSPA	South Pole Qui	66.50	180	P	P	00 42 12.8	+1.3
PCJI	Pacitan	67.45	271	P	P	00 42 17.5	-0.6
UGM	Wanagama	68.16	271	P	P	00 42 21.6	-0.9
UGM				IAmb	IAmb	00 42 22.7	
	comp=Z,21nm,0.6s						
UGM	Wanagama	68.16	271	P	P	00 42 21.6	-0.9
	comp=Z,35nm,0.8s						
KPJI	Karang Pucung	69.83	271	P	P	00 42 31.7	-0.8
	comp=Z,23nm,0.8s						
JOW	Kunigami	70.82	312	P	P	00 42 38.0	-0.1
JOW				IAmb	IAmb	00 42 39.5	
	comp=Z,41nm,0.9s						
MJAR	Matsushiro Arr	71.67	326	P	P	00 42 42.8	-0.1
	comp=Z,7.3nm,0.8s,baz=148,slow=5.7,SNR=14						
	comp=Z,7.3nm,0.8s						
MJAR	Matsushiro Arr	71.67	326	P	P	00 42 42.9	+0.1
MAJO	Matsushiro	71.67	326	P	P	00 42 42.9	0.0
NACB	Ninganchiao	73.97	306	P	P	00 42 55.6	-0.7
NACB				IAmb	IAmb	00 42 56.3	
	comp=Z,19nm,0.8s						
ADK	Adak	75.19	2	P	P	00 43 02.1	-0.4
ADK	Adak	75.19	2	P	P	00 43 02.3	-0.2
EGSI	Enggano, Bengk	76.70	270	P	P	00 43 11.2	-0.6
BELA	Belgrano 2	76.74	173	P	P	00 43 11.1	+0.2
UNV	Unalaska Valle	77.97	8	P	P	00 43 17.0	-0.7
KSRS	Korea Array	78.04	320	P	P	00 43 18.6	+0.1
	comp=Z,3.9nm,0.7s,baz=132,slow=5.5,SNR=8.3						
	comp=Z,3.9nm,0.7s						
MAW	Mawson	78.07	200	P	P	00 43 19.0	+0.8
	comp=Z,3.3nm,0.7s,baz=153,slow=5.0,SNR=3.6						
	comp=Z,3.3nm,0.7s						
PETK	Petropavlovsk-	78.81	346	P	P	00 43 22.0	-0.2
	comp=Z,12nm,0.7s,baz=125,slow=6.4,SNR=10						
	comp=Z,12nm,0.7s						
PMSA	Palmer Station	79.18	157	P	P	00 43 24.6	+0.5
NJ2	Nanjing	80.50	311	*e*P	P	00 43 34.8	+3.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
USRK	Ussuriysk Ar.	80.53	327	P	P	00 43 31.9	+0.5
	comp=Z,5.6nm,0.6s,baz=138,slow=5.5,SNR=7.2						
	comp=Z,5.6nm,0.6s						
MDJ	Mudanjiang	82.03	326	P	P	00 43 39.7	+0.5
MDJ				IAmb	IAmb	00 46 47.3	
	comp=Z,102nm,2.0s						
MDJ	Mudanjiang	82.03	326	P	P	00 43 40.3	+1.1
MDJ				pmax	pmax		
	comp=Z,21nm,0.7s						
MDJ	Mudanjiang	82.03	326	P	P	00 43 40.2	+1.1
WHN	Wuhan	82.85	308	P	P	00 43 44.5	+0.8
MG02	Cerro Sombrero	83.17	145	P	P	00 43 45.7	+0.7
SYO	Syowa Base	83.33	193	⇓*e*P	P	00 43 45.0	-0.4
SYO	Syowa Base	83.33	193	⇓*e*PcP	PcP	00 43 49.8	+1.3
ELIB	Princess Elisa	83.39	187	*d*P	P	00 43 45.6	-0.2
GSI	Gunungsitoli	83.63	274	P	P	00 43 48.8	+0.8
GSI				IAmb	IAmb	00 47 02.2	
	comp=Z,64nm,1.7s						
CN2	Changchun	83.67	324	P	P	00 43 47.3	-0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BNX	BinXian	83.93	326	⇑P	P	00 43 48.9	+0.2
BNX				pmax	pmax		
	comp=Z,13nm,0.7s						
TIA	Tai'an	84.06	314	P	P	00 43 50.4	+0.8
TIA				pmax	pmax		
	comp=Z,24nm,0.9s						
TROLL	Troll, Antarti	84.65	181	⇑P	P	00 43 51.9	-0.3
	comp=Z,487nm,0.4s						
SNAA	Sanae	84.98	179	⇑P	P	00 43 52.6	-1.1
	comp=Z,60nm,0.5s						
SNAA	Sanae	84.98	179	P	P	00 43 52.8	-0.8
	comp=Z,1.7nm,0.4s,baz=209,slow=8.4,SNR=39						
	comp=Z,1.7nm,0.4s						
SNAA	Sanae	84.98	179	P	P	00 43 52.9	-0.8
N15K	Kwethluk River	85.01	10	P	P	00 43 53.8	+0.2
N15K				IAmb	IAmb	00 43 55.3	
	comp=Z,14nm,0.7s						
COYC	Coyhaique	85.09	138	P	P	00 43 56.5	+1.9
COYC				IAmb	IAmb	00 45 23.8	
	comp=Z,60nm,1.6s						
COYC	Coyhaique	85.09	138	P	P	00 43 56.0	+1.4
VNA3	Neumayer Olymp	85.19	177	⇑P	P	00 43 53.9	-0.7
	comp=Z,3.1nm,0.4s						
O18K	Koktuh Hills	85.57	12	P	P	00 43 56.0	-0.4
VNA2	Neumayer--Watz	85.61	178	⇑P	P	00 43 56.1	-0.5
	comp=Z,4.4nm,0.5s,baz=177,slow=5.0						
CNPM	China Poot	86.11	14	P	P	00 43 59.0	+0.1
ENH	Enshi	86.31	305	IAmb	IAmb	00 44 02.2	
	comp=Z,16nm,0.9s						
HNS	HongShan	86.33	314	⇓P	P	00 44 01.6	+1.1
HNS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LYN	LuoYang	86.33	310	P	P	00 44 01.9	+1.3
LYN				pmax	pmax		
	comp=Z,14nm,0.6s						
LL02	Futaleuf	86.39	136	P	P	00 44 01.7	+0.8
LL02				IAmb	IAmb	00 44 03.1	
	comp=Z,17nm,0.8s						
BRLK	Bradley Lake	86.40	14	P	P	00 43 59.9	-0.4
M17K	Holitna River	86.61	11	P	P	00 44 02.0	+0.8
M17K				IAmb	IAmb	00 46 13.9	
	comp=Z,53nm,1.6s						
BJI	Beijing	86.84	316	P	P	00 44 03.8	+1.0
BJI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
L18K	Granite Mounta	87.50	11	P	P	00 44 05.7	+0.2
L18K				IAmb	IAmb	00 44 59.3	
	comp=Z,63nm,2.0s						
ELK	Elko	87.75	43	P	P	00 44 05.7	-1.8
	comp=Z,0.5nm,0.5s,baz=297,slow=6.8,SNR=2.6						
	comp=Z,0.5nm,0.5s						
L19K	White Mountain	87.79	11	P	P	00 44 07.2	+0.4
L19K				IAmb	IAmb	00 44 08.7	
	comp=Z,58nm,1.9s						
SUA	Susitna One	87.95	14	P	P	00 44 07.5	-0.2
PLCA	Paso Flores	88.44	134	P	P	00 44 12.0	+1.3
	comp=Z,1.2nm,0.5s,baz=240,slow=8.1,SNR=2.2						
	comp=Z,1.2nm,0.5s						
PLCA	Paso Flores	88.44	134	IAmb	IAmb	00 45 19.7	
	comp=Z,34nm,2.0s						
GHO	Glory Hole Cre	88.63	14	P	P	00 44 09.6	-1.2
GHO				IAmb	IAmb	00 44 11.5	
	comp=Z,16nm,0.8s						
CMAR	Chiang Mai Arr	89.47	290	P	P	00 44 17.1	+1.4
	comp=Z,2.0nm,0.3s,baz=131,slow=3.4,SNR=23						
CMAR				pP	pwP	00 46 16.2	-0.7
	comp=Z,1.1nm,0.3s,baz=101,slow=4.6,SNR=1.6						
	comp=Z,2.0nm,0.3s						
CMAR	Chiang Mai Arr	89.47	290	P	P	00 44 16.7	+1.0
TMUT	Trail Mountain	89.58	46	P	P	00 44 17.3	+1.2
CHTO	Chiang Mai	89.62	291	P	P	00 44 16.7	+0.3
CHTO				IAmb	IAmb	00 44 18.4	
	comp=Z,7.0nm,0.9s						
TX31	Lajitas Ar. Si	90.21	58	P	P	00 44 20.2	+1.3
TX31				IAmb	IAmb	00 47 05.3	
	comp=Z,14nm,1.7s						
TXAR	Lajitas Array	90.21	58	P	P	00 44 20.4	+1.4
	comp=Z,1.4nm,0.7s,baz=211,slow=6.6,SNR=15						
	comp=Z,1.4nm,0.7s						
TXAR	Lajitas Array	90.21	58	P	P	00 44 19.9	+0.9
HHC	Hu-ho-hao-te	90.23	315	*e*P	P	00 44 19.8	+1.0
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,5.7s						
HILR	Hailar Array B	90.34	326	P	P	00 44 18.9	-0.1
	comp=Z,1.5nm,0.5s,baz=97,slow=6.0,SNR=3.5						
	comp=Z,1.5nm,0.5s						
PZH	PanZhiHua	90.58	299	P	P	00 44 22.3	+1.5
CD2	Chengdu	90.95	303	P	P	00 44 23.9	+1.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ILAR	Eielson Array	91.71	14	P	P	00 44 23.5	-1.4
	comp=Z,0.7nm,0.8s,baz=203,slow=5.5,SNR=3.7						
	comp=Z,0.7nm,0.8s						
ILAR	Eielson Array	91.71	14	P	P	00 44 24.0	-0.9
PDAR	Pinedale Array	92.42	44	P	P	00 44 28.1	-1.0
	comp=Z,0.4nm,0.6s,baz=256,slow=4.1,SNR=3.2						
	comp=Z,0.4nm,0.6s						
PDAR	Pinedale Array	92.42	44	P	P	00 44 28.4	-0.6
SONM	Songino Array	96.90	319	P	P	00 44 48.4	-0.7
	comp=Z,0.3nm,0.4s,baz=122,slow=4.8,SNR=3.6						
	comp=Z,0.3nm,0.4s						
SONM	Songino Array	96.90	319	P	P	00 44 48.8	-0.3
SONM				IAmb	IAmb	00 48 33.7	
	comp=Z,10nm,2.0s						
WMQ	Urumqi	107.57	311	Pdif	Pdif	00 45 38.1	+1.5
ZALV	Zalesovo Beam	111.74	321	PKiKP	PKiKP	00 49 47.4	-1.4
	comp=Z,0.9nm,0.7s,baz=120,slow=1.5,SNR=5.4						
ZALV	Zalesovo Beam	111.74	321		PKiKP	00 49 47.5	-1.3
MKAR	Makanchi Array	111.98	313	Pdiff	Pdif	00 45 57.8	+1.7
	comp=Z,0.2nm,0.5s,baz=84,slow=5.7,SNR=5.1						
MKAR				PKiKP	PKiKP	00 49 48.3	-1.2
	comp=Z,0.6nm,0.6s,baz=84,slow=0.5,SNR=7.9						
MKAR				SKP	SKPdf	00 52 32.9	-1.6
	comp=Z,0.9nm,1.0s,baz=96,slow=3.7,SNR=4.8						
MKAR				PKKPab	PKKPab	01 00 53.4	+0.6
	comp=Z,0.7nm,0.7s,baz=299,slow=3.4,SNR=4.3						
MKAR	Makanchi Array	111.98	313		PKiKP	00 49 47.5	-2.1
KURK	Kurchatov	115.01	317	PKPdf	PKPdf	00 49 53.8	-1.3
KURBB	Kurchatov Arra	115.06	316	PKP	PKPdf	00 49 54.0	-1.2
	comp=Z,1.1nm,0.6s,baz=103,slow=1.7,SNR=12						
KK31	Karatay Array	119.72	307		PKPdf	00 50 03.3	-1.2
KBL	Kabul	119.75	297	PKPdf	PKPdf	00 50 04.7	-0.4
BVAR	Borovoye Array	120.24	319	PKP	PKPdf	00 50 04.3	-0.9
	comp=Z,1.9nm,0.4s,baz=142,slow=1.3,SNR=16						
BVAR				SKP	SKPdf	00 52 48.7	-1.4
	comp=Z,0.8nm,0.6s,baz=109,slow=3.5,SNR=3.7						
SHAA	Shahritus	120.92	301	PKPdf	PKiKP	00 50 07.2	0.0
ARCES	ARCESS Array B	131.59	348	PKhKP	PKPpre	00 50 16.1	
	comp=Z,4.5nm,1.1s,baz=39,slow=3.5,SNR=3.6						
ARCES				PKP	PKPdf	00 50 25.4	-0.9
	comp=Z,1.4nm,0.5s,baz=51,slow=1.9,SNR=12						
ARCES				SKPbc	SKPbc	00 53 01.1	-1.2
	comp=Z,6.4nm,0.9s,baz=20,slow=3.9,SNR=4.7						
ARCES	ARCESS Array B	131.59	348		PKPdf	00 50 25.1	-1.3
FINES	FINESS Array B	138.16	342	PKhKP	PKPpre	00 50 27.7	
	comp=Z,1.1nm,0.6s,baz=145,slow=4.7,SNR=8.4						
FINES				PKP	PKPdf	00 50 39.2	+0.4
	comp=Z,0.9nm,0.3s,baz=75,slow=2.9,SNR=10						
FINES				SKP	SKPbc	00 53 21.4	-1.6
	comp=Z,5.0nm,0.7s,baz=86,slow=2.9,SNR=10.0						
NB2	NORSAR Subarra	141.78	351	PKP	PKPpre	00 50 40.7	
	comp=Z,0.5nm,0.5s,baz=16,slow=3.2						
NB2				pPKP	SKPbc	00 53 31.5	-1.1
	comp=Z,0.8nm,0.6s,baz=12,slow=2.6						
NB2	NORSAR Subarra	141.78	351	PKP	PKPpre	00 50 40.7	
	baz=16,slow=3.2						
NOA	NORSAR Array B	141.78	351	PKhKP	PKPpre	00 50 40.7	
	comp=Z,2.2nm,0.6s,baz=16,slow=4.6,SNR=13						
NOA				SKPbc	SKPbc	00 53 31.0	-1.6
	comp=Z,1.1nm,0.7s,baz=14,slow=4.2,SNR=5.7						
NC602	NORSAR Array S	142.02	351	*e*P	PKPpre	00 50 41.2	
HFS	Hagfors	142.25	349	PKhKP	PKPpre	00 50 41.8	
	comp=Z,11nm,0.4s,baz=59,slow=3.0,SNR=148						
HFS				SKPbc	SKPbc	00 53 31.7	-2.0
	comp=Z,3.4nm,0.8s,baz=107,slow=1.5,SNR=4.6						
SKAR	Skarslia	142.48	353	*e*P	PKPdf	00 50 43.2	-3.4
MNK	Minsk	142.79	333	*i* PKP	PKPdf	00 50 43.9	-3.4
	comp=E,9.0nm,0.9s						
MNK				*i* PKP	PKPdf	00 50 43.9	-3.4
	comp=N,3.0nm,0.8s						
MNK				*i* PKP	PKPdf	00 50 43.9	-3.4
	comp=Z,21nm,0.9s,baz=46						
MNK				*i* PKiKP	PKiKP	00 50 47.7	-3.0
MNK				*i* pPKP	pPKPdf	00 52 50.6	-0.9
MNK				*i* sPKP		00 53 43.3	
MNK				*i* PP	PP	00 54 00.4	-2.4
MNK				*i* SKP		00 54 24.2	
MNK				*i* PKS	PKSdf	00 54 52.9	+30
MNK				*i* PPP	PPP	00 56 29.0	
MNK				*i* SKS	SKSdf	00 57 30.8	+24
MNK				*i* SS	SS	01 11 35.5	-22
MNK				*i* SSS	SSS	01 17 27.8	
BER	Bergen	143.04	356	*e*P	PKPbc	00 50 45.3	-0.2
KONO	Kongsberg	143.34	352	PKPdf	PKPab	00 50 45.6	-0.6
KONO	Kongsberg	143.34	352	*e*P	PKPab	00 50 45.9	-0.4
ODD1	Odda	143.40	354	*e*P	PKPab	00 50 46.3	-0.3
PABE	Paberze	143.55	337	PKPdf	PKPab	00 50 47.0	-0.2
STRU	Stroemstad	143.71	350	*i* P	PKPab	00 50 47.1	-0.6
TJOU	Tjoern	144.59	349	*i* P	PKPdf	00 50 49.7	-0.6
AK03	Malin Array Si	144.72	328	PKP	PKPdf	00 50 50.0	-0.8
AKASG	Malin Array Be	144.74	328	PKP	PKPdf	00 50 50.4	-0.4
	comp=Z,11nm,0.5s,baz=44,slow=4.2,SNR=46						
AKASG				SKPbc	SKPbc	00 53 38.5	-1.4
	comp=Z,5.6nm,0.9s,baz=50,slow=2.1,SNR=8.0						
AKBB	Malin Array Si	144.74	328	PKP	PKPdf	00 50 50.1	-0.7
AK23	Malin Array Si	144.75	328	PKP	PKPdf	00 50 50.1	-0.7
AK01	Malin Array Si	144.75	328	PKP	PKPdf	00 50 50.0	-0.8
KIEV	Kiev	144.75	328	PKPdf	PKPdf	00 50 49.7	-1.1
KIEV	Kiev	144.75	328	⇓P	PKPdf	00 50 50.1	-0.7
KIEV	Kiev	144.75	328	PKP	PKPdf	00 50 50.0	-0.8
AK04	Malin Array Si	144.75	328	PKP	PKPdf	00 50 50.0	-0.8
AK09	Malin Array Si	144.76	327	PKP	PKPdf	00 50 49.9	-0.9
BORU	Boraas	144.76	348	*i* P	PKPdf	00 50 50.3	-0.3
AK08	Malin Array Si	144.76	327	PKP	PKPdf	00 50 50.0	-0.8
AK02	Malin Array Si	144.77	327	PKP	PKPdf	00 50 49.9	-1.0
AK22	Malin Array Si	144.77	328	PKP	PKPdf	00 50 50.1	-0.8
AK11	Malin Array Si	144.78	328	PKP	PKPdf	00 50 50.2	-0.7
AK21	Malin Array Si	144.78	328	PKP	PKPdf	00 50 50.0	-0.9
AK10	Malin Array Si	144.79	327	PKP	PKPdf	00 50 50.3	-0.6
AK05	Malin Array Si	144.80	327	PKP	PKPdf	00 50 50.3	-0.6
AK18	Malin Array Si	144.80	328	PKP	PKPdf	00 50 50.3	-0.6
AK12	Malin Array Si	144.81	328	PKP	PKPdf	00 50 50.3	-0.6
AK16	Malin Array Si	144.81	328	PKP	PKPdf	00 50 49.8	-1.1
AK20	Malin Array Si	144.81	328	PKP	PKPdf	00 50 50.0	-0.9
HOMB	Homborsund	144.82	352	*i* P	PKPbc	00 50 51.2	+0.1
AK06	Malin Array Si	144.82	327	PKP	PKPdf	00 50 50.1	-0.9
AK19	Malin Array Si	144.83	328	PKP	PKPdf	00 50 50.4	-0.6
AK17	Malin Array Si	144.83	328	PKP	PKPdf	00 50 50.4	-0.6
AK14	Malin Array Si	144.84	328	PKP	PKPdf	00 50 50.3	-0.7
AK07	Malin Array Si	144.84	327	PKP	PKPdf	00 50 50.3	-0.7
AK13	Malin Array Si	144.87	328	PKP	PKPdf	00 50 50.5	-0.5
SNART	Snartemo	144.90	353	*i* P	PKPbc	00 50 51.7	+0.3
SUW	Suwalki	145.00	336	*e*PKP	PKPab	00 50 53.0	+0.3
ONAU	Onsala	145.14	349	*i* P	PKPdf	00 50 51.1	-0.2
MI28	Mi28,Pidlybu	145.34	329	PKP	PKPdf	00 50 51.1	-0.7
DEL	Delary	145.62	346	*i* P	PKPdf	00 50 52.7	+0.6
RNPP9	Sopachiv	145.82	331	PKP	PKPdf	00 50 53.3	+0.7
RNPP8	Varash	145.89	331	PKP	PKPdf	00 50 53.6	+0.8
RNPP5	Staryi Chortor	145.96	331	PKP	PKPdf	00 50 53.4	+0.5
BNN	Bunyan	146.07	305	PKPbc	PKPdf	00 50 54.4	+0.7
BJUU	Bjuv	146.17	347	*i* P	PKPdf	00 50 54.0	+0.9
LUNU	Lund	146.49	346	*i* P	PKPbc	00 50 55.7	-0.3
BSD	Bornholm Skovb	146.63	344	*i* P	PKPbc	00 50 55.7	-0.7
SORM	Soroca	146.78	325	⇓P	PKPbc	00 50 56.4	-0.7
ILGA	Ilgaz	146.91	310	PKPbc	PKPbc	00 50 57.3	-0.7
MILM	Milestii Mici	147.25	322	⇓P	PKPdf	00 50 56.1	+1.0
KIRS	Kirsehir-Merke	147.42	306	⇓P	PKPbc	00 50 58.8	-0.4
BRTR	Keskin Array B	147.43	308	PKPbc	PKPbc	00 50 58.8	-0.5
	comp=Z,2.9nm,0.6s,baz=144,slow=5.4,SNR=19						
BRTR	Keskin Array B	147.43	308	PKPbc	PKPbc	00 50 58.4	-0.9
BEL	Belsk	147.61	336	*e*PKP	PKPbc	00 50 59.6	+0.4
MMAI	Mount Meron Ar	147.62	295	PKPbc	PKPbc	00 51 00.4	+0.5
	comp=Z,10nm,0.5s,baz=77,slow=5.4,SNR=63						
ANTO	Ankara	147.99	308	PKPbc	PKPbc	00 50 59.5	-1.1
ANTO	Ankara	147.99	308	⇓P	PKPbc	00 51 00.4	-0.2
EKA	Eskdalemuir Ar	148.20	3	PKPbc	PKPbc	00 50 59.1	-1.5
	comp=Z,0.7nm,0.3s,baz=336,slow=2.4,SNR=18						

TLCR		148.22	320	⇓P	PKPbc	00 51 00.8	-0.1
VLDR	Vladesti	148.28	321	⇓P	PKPbc	00 51 01.1	+0.1
GIRR	Girov	148.49	324	⇓P	PKPbc	00 51 01.4	-0.1
KWP	Kalwaria Pacla	148.52	331	*e*PKP	PKPbc	00 51 01.6	+0.1
GHRR		148.54	322	⇑P	PKiKP	00 51 02.2	-0.5
CFR	Carcaliu	148.63	320	⇓P	PKPbc	00 51 01.4	-0.5
TESR	Tescani	148.69	324	⇑P	PKPbc	00 51 01.3	-0.7
BURAR	Bucovina Array	148.74	326	PKPbc	PKPbc	00 51 01.1	-1.2
BURAR	Bucovina Array	148.74	326	⇑P	PKiKP	00 51 02.9	-0.4
MFTR	Murfatlar	149.00	318	⇑P	PKPbc	00 51 02.7	-0.1
VRI	Vrincioaia	149.03	322	⇓P	PKPbc	00 51 02.3	-0.6
PLOR	Plostina	149.09	322	⇑P	PKPbc	00 51 02.6	-0.5
MANR	Mangalia	149.09	318	⇑P	PKPbc	00 51 03.0	-0.1
OJC	Ojcow	149.27	335	*e*PKP	PKPbc	00 51 03.1	-0.3
STHS	Stebnicka Huta	149.31	332	*e*PKP	PKPbc	00 51 02.8	-0.7
TURR	Turia	149.31	323	⇓P	PKPbc	00 51 03.6	0.0
MLR	Muntele Rosu	149.70	323	⇑P	PKPbc	00 51 04.2	-0.5
NIE	Niedzica	149.70	333	*e*PKP	PKiKP	00 51 05.2	0.0
DOPR	Dopca	149.71	324	⇓P	PKPbc	00 51 04.8	+0.3
KSP	Ksiaz	150.01	339	*e*PKP	PKiKP	00 51 05.5	-0.2
CJR	Cluj-Napoca	150.16	326	⇓P	PKPbc	00 51 05.4	-0.2
STEB	Steborice	150.27	337	⇑*e*PKP	PKPbc	00 51 05.9	+0.2
STEB				*e*PKPAB	PKPab	00 51 14.4	+0.1
OSTC	Ostas	150.28	339	⇑*e*PKP	PKiKP	00 51 06.1	-0.2
CHVC	Chvalec	150.31	339	⇑*e*PKP	PKPbc	00 51 05.6	-0.2
UPC	Upice	150.39	339	⇑*e*PKP	PKPbc	00 51 06.0	0.0
DPC	Dobruska-Polom	150.42	339	⇑*e*PKP	PKiKP	00 51 06.4	-0.2
DPC				*e*PKPAB	PKPab	00 51 15.5	+0.5
MARR	Marisel-Cluj	150.43	327	⇓P	PKPbc	00 51 05.8	-0.6
MORC	Moravsky Berou	150.48	337	PKPbc	PKPbc	00 51 04.8	-1.4
MORC	Moravsky Berou	150.48	337	⇓P	PKPbc	00 51 06.3	0.0
MORC	Moravsky Berou	150.48	337	*e*PKP	PKPbc	00 51 05.2	-1.1
ARR	Arges	150.50	323	⇑P	PKiKP	00 51 07.4	+0.4
KRLC	Kraliky	150.50	338	⇑*e*PKP	PKPbc	00 51 06.5	+0.2
KRLC				*e*PKPAB	PKPab	00 51 15.7	+0.4
DRGR		150.55	327	⇑P	PKPbc	00 51 06.4	-0.2
CLL	Collm	150.57	343	*e*PKPdf	PKPdf	00 51 01.0	+0.7
CLL				⇓*i*PKPbc	PKPbc	00 51 06.1	-0.2
	comp=Z,16nm,0.8s						
CLL				⇑*i*PKPab	PKPab	00 51 15.3	-0.2
	comp=Z,10.0nm,0.7s						
CLL				*e*pPKPbc	pPKPab	00 53 15.0	+1.2
MAUC	Maruska	150.72	336	⇑*e*PKP	PKiKP	00 51 07.4	+0.1
PVCC	Panska Ves	150.83	341	⇑*e*PKP	PKiKP	00 51 07.2	-0.2
PVCC				*e*PKPAB	PKPab	00 51 17.6	+1.0
HUMR	Humele	150.83	322	⇓P	PKPbc	00 51 06.3	-0.8
JAVC	Velka Javorina	151.19	336	*e*	PKPab	00 51 19.5	+1.2
VRAC	Vranov	151.22	337	⇑P	PKPab	00 51 18.7	+0.5
VRAC	Vranov	151.22	337	*e*PKP	PKPbc	00 51 07.5	-0.4
ELND	Elena	151.23	318	⇓P	PKPbc	00 51 08.0	-0.2
PRU	Pruhonice	151.31	340	⇑*e*PKP	PKPbc	00 51 08.0	-0.1
SIRR	Siria	151.44	328	⇑P	PKPbc	00 51 08.3	-0.2
GZR	Gura Zlata	151.47	325	⇑P	PKPbc	00 51 08.2	-0.5
KRUC	Moravsky	151.49	337	*e*PKP	PKPbc	00 51 08.2	-0.3
PLVB	Pleven	151.72	320	⇓P	PKPbc	00 51 09.2	0.0
MODS	Modra-Piesok	151.74	335	*e*PKP	PKPbc	00 51 08.6	-0.5
SRO	Srobarova	151.78	333	*e*PKP	PKPab	00 51 20.0	-0.7
BZS	Buzias	151.92	327	⇑P	PKPbc	00 51 08.9	-0.7
HERR	Herculane	152.01	325	⇓P	PKPbc	00 51 09.2	-0.6
KHC	Kasperske Hory	152.36	341	⇑*e*PKP	PKPbc	00 51 10.4	-0.1
KHC				*e*PKPAB	PKPab	00 51 23.6	+0.4
CKRC	Cesky Krumlov	152.41	339	⇑*e*PKP	PKPbc	00 51 10.5	-0.1
GERES	GERESS Array B	152.58	340	PKPbc	PKPbc	00 51 10.4	-0.7
	comp=Z,0.6nm,0.5s,baz=342,slow=2.1,SNR=6.4						
GERES				PKPab	PKPab	00 51 24.0	-0.1
	comp=Z,0.9nm,0.7s,baz=14,slow=6.9,SNR=5.8						
CONA	Conrad Observa	152.64	337	*e*PKP	PKPab	00 51 25.1	+0.7
	comp=Z,7.1nm,0.6s						
RONA	Rosalia, Austr	152.67	336	*i* PKP	PKPab	00 51 25.2	+0.7
	comp=Z,6.9nm,0.6s,SNR=7.2						
MORH	Mrgy, Hungar	152.89	331	⇓P	PKPbc	00 51 11.1	-0.6
BCLA	Clavier	152.90	353	*d*PKP	PKPab	00 51 24.5	-0.8
BMRD	Maredsous	153.07	353	*d*PKP	PKPab	00 51 26.0	0.0
MOA	Molln	153.27	338	*e*PKP	PKPab	00 51 27.6	+0.6
	comp=Z,8.7nm,1.4s						
ARSA	Arzberg	153.33	336	*e*PKP	PKPab	00 51 27.6	+0.2
	comp=Z,4.1nm,0.7s						
BIOA	Bad Ischl, Aus	153.61	339	*e*PKP	PKPab	00 51 29.1	+0.6
	comp=Z,3.5nm,0.9s						
SOKA	Soboth	154.00	336	*e*PKP	PKPab	00 51 30.2	-0.1
	comp=Z,4.1nm,0.6s						
OBKA	Obir	154.32	337	*e*PKP	PKPab	00 51 31.4	-0.3
	comp=Z,2.0nm,0.9s						
MYKA	Terra Mystica	154.53	338	*i* PKP	PKPab	00 51 32.0	-0.6
	comp=Z,3.4nm,0.6s,SNR=6.9						
WATA	Walderalm	154.57	342	*e*PKP	PKPab	00 51 32.4	-0.4
	comp=Z,4.3nm,0.7s						
WTTA	Wattenberg	154.61	341	*i* PKP	PKPab	00 51 32.9	-0.1
	comp=Z,5.6nm,0.5s,SNR=5.1						
RETA	Reutte	154.66	343	*e*PKP	PKPab	00 51 33.3	+0.3
	comp=Z,4.3nm,0.6s						
DAVA	Damuels	155.07	344	*e*PKP	PKPab	00 51 34.6	-0.3
	comp=Z,5.6nm,0.6s						
FETA	Feichten	155.09	343	*e*PKP	PKPab	00 51 34.8	-0.2
	comp=Z,6.8nm,1.3s						
TUE	Stuetta	155.96	344	PKPab	PKPab	00 51 37.6	-1.3
ESDC	Sonseca Array	163.60	11	PKPab	PKPab	00 52 12.0	-0.2
	comp=Z,1.5nm,0.9s,baz=345,slow=5.8,SNR=5.9						
ESDC	Sonseca Array	163.60	11		PKPab	00 52 11.6	-0.6
TORD	Torodi Ar. Bea	169.51	189	PKPab	PKPab	00 52 38.2	-0.5
	comp=Z,0.9nm,0.8s,baz=126,slow=2.1,SNR=5.3						
TORD	Torodi Ar. Bea	169.51	189		PKPab	00 52 38.5	-0.2

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*IDC **18** 00:41:04.1±2.4, 6°.49S×142°.68E, h0^{km}, mb3.9/4, mbtmp3.8/6, ML3.5/2, Error ellipse: s-maj=103.2km s-min=25.3km az=89.0*

ISC 18 00:41:10.5±1.8, 6°.7S±0°.1×142°.1E±0°.4, h35^{km}, n6, σ2^{s}55/7, mb3.8/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	15.19	209	Pn	P	00 44 44.3	-2.9
	0.2nm,0.3s,baz=30,slow=13,SNR=4.1						
WRA				Sn	Sn	00 47 28.9	-0.7
	0.1nm,0.3s,baz=17,slow=22,SNR=1.3						
WRA				Lg	Lg	00 49 14.8	
	0.1nm,0.3s,baz=42,slow=24,SNR=2.1						
	0.6nm,0.5s						
ASAR	Alice Springs	18.64	204	P	Pn	00 45 29.8	+3.9
	0.2nm,0.3s,baz=29,slow=10,SNR=8.9						
ASAR				Lg	Lg	00 51 02.9	
	0.1nm,0.3s,baz=20,slow=30,SNR=3.5						
	1.4nm,0.6s						
STKA	Stephens Creek	25.07	181	P	P	00 46 31.1	-0.7
	0.7nm,0.5s,baz=359,slow=13,SNR=3.0						
	0.7nm,0.5s						
MKAR	Makanchi Array	74.99	322	P	P	00 52 49.0	+0.6
	1.3nm,1.0s,baz=106,slow=9.1,SNR=4.2						
	1.3nm,1.0s						
ZALV	Zalesovo Beam	77.06	329	P	P	00 52 59.2	-0.8
	0.2nm,0.3s,baz=103,slow=4.6,SNR=2.0						
	0.2nm,0.3s						
BVAR	Borovoye Array	84.50	325	P	P	00 53 40.0	+0.2
	2.0nm,0.8s,baz=116,slow=6.6,SNR=7.6						
	2.0nm,0.8s						

IDC 18 01:04:42.2±1.3, 6°.38N×125°.42E, h0^{km}, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=38.4km s-min=12.7km az=94.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.70	13	Pg	Pg	01 04 55.6	-0.1
	2μm,0.3s,baz=188,slow=1.2,SNR=30						
FITZ	Fitzroy Crossi	24.32	179	P	P	01 10 02.1	+0.4
	3.4nm,1.0s,baz=358,slow=10,SNR=6.2						
	3.4nm,1.0s						
WRA	Warramunga Arr	27.59	162	P	P	01 10 31.2	-0.1
	0.3nm,0.5s,baz=327,slow=11,SNR=6.1						
	0.3nm,0.5s						
ASAR	Alice Springs	30.99	165	P	P	01 11 01.7	+0.2
	0.4nm,0.5s,baz=348,slow=7.8,SNR=9.4						
	0.4nm,0.5s						
STKA	Stephens Creek	41.05	159	P	P	01 12 27.1	-0.5
	1.2nm,0.7s,baz=356,slow=13,SNR=3.0						
	1.2nm,0.7s						

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*AEIC **18** 01:28:42.1±1.7, 66°.01N±0°.03×166°.2W±0°.2, h8^{km}±6^{km}, ML3.3, ML3.4/48(NEIC), Error ellipse: s-maj=11.7km s-min=4.7km az=89.0*

*IDC **18** 01:28:44.0±1.9, 66°.31N×166°.58W, h0^{km}, mb3.8/3, mbtmp3.8/5, ML3.3/2, Error ellipse: s-maj=70.2km s-min=18.5km az=7.0*

*NEIC **18** 01:28:43.1±1.8, 65°.97N±0°.03×166°.2W±0°.2, h8^{km}±6^{km}, Error ellipse: s-maj=10.1km s-min=4.7km az=93.0*

ISC 18 01:28:42.6±1.4, 66°.00N±0°.04×166°.20W±0°.04, h5^{km}±10^{km}, n80, σ0^{s}83/87, mb4.1/3, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
F15K	North Star Dit	0.70	114		Pg	01 28 56.1	+0.1
F15K					Sg	01 29 05.7	+0.6
TNA	Tin City	0.84	239		Pg	01 28 57.8	-0.9
TNA					Sg	01 29 09.2	-0.3
TNA				IAML		01 29 12.7	
	comp=N,1μm,0.3s						
TNA				IAML		01 29 12.8	
	comp=E,1μm,0.9s						
G15K	Niukluk	1.35	137		Pn	01 29 07.1	-1.0
G15K					Sb	01 29 25.2	-0.8
ANM	Nome	1.48	166		Pn	01 29 09.4	-0.5
ANM				Sn	Sn	01 29 28.2	-1.4
E17K	Hotham Inlet	2.06	56		Pn	01 29 16.5	-1.3
D17K	Noatak River	2.10	34		Pn	01 29 17.7	-0.7
H16K	Elim	2.15	128		Pn	01 29 18.4	-0.7
H16K					Sn	01 29 45.5	-0.6
C16K	Lisburne Hills	2.31	8		Pn	01 29 21.0	-0.3
C16K					Sn	01 29 50.3	+0.3
C16K				IAML		01 30 06.4	
	comp=N,216nm,0.8s						
G17K	Kiwalik Mounta	2.34	100		Pn	01 29 20.9	-0.9
RDOG	Red Dog Mine	2.43	31		Pn	01 29 22.3	-0.6
E18K	Tukpahlearik C	2.64	55		Pn	01 29 25.2	-0.6
E18K				IAML		01 30 13.6	
	comp=E,211nm,0.6s						
F18K	Selawik	2.71	74		Pn	01 29 25.9	-0.9
C17K	DeLong Mountai	2.75	24		Pn	01 29 27.4	+0.1
H17K	Granite Mounta	2.83	109		Pn	01 29 27.9	-0.5
G18K	Tagagawik	3.09	89		Pn	01 29 31.3	-0.7
I17K	Unalakleet	3.16	130		Pn	01 29 32.2	-0.7
C18K	Utukok River	3.29	34		Pn	01 29 34.5	-0.3
C18K				IAML		01 30 35.5	
	comp=E,90nm,0.7s						
H18K	Honhosa River	3.36	101		Pn	01 29 35.4	-0.3
H18K				IAML		01 30 32.9	
	comp=E,71nm,0.5s						
H18K				IAML		01 30 39.9	
	comp=N,115nm,0.8s						
J14K	Nanvaranak Lak	3.46	159		Pn	01 29 37.0	0.0
J14K				IAML		01 30 35.1	
	comp=E,85nm,1.1s						
J14K				IAML		01 30 43.4	
	comp=N,66nm,0.8s						
J16K	Anvik River	3.64	136		Pn	01 29 39.3	-0.2
G19K	Purcell Mounta	3.71	84		Pn	01 29 39.9	-0.7
G19K				IAML		01 30 49.4	
	comp=E,62nm,0.7s						
B18K	Kokolik River	3.77	24		Pn	01 29 41.4	0.0
E19K	Redstone River	3.85	64		Pn	01 29 42.5	+0.1
E19K				IAML		01 30 53.8	
	comp=E,64nm,0.5s						
E19K				IAML		01 31 00.1	
	comp=N,80nm,0.6s						
D19K	Kuna River	4.01	48		Pn	01 29 44.8	+0.1
D19K				IAML		01 30 52.2	
	comp=E,53nm,0.8s						
D19K				IAML		01 31 01.0	
	comp=N,78nm,1.0s						
C19K	Lookout Ridge	4.02	36		Pn	01 29 45.3	+0.6
C19K				IAML		01 30 58.2	
	comp=E,56nm,1.2s						
J17K	VABM Dome	4.02	127		Pn	01 29 45.1	+0.4
J17K				IAML		01 30 33.8	
	comp=E,67nm,0.6s						
J17K				IAML		01 30 54.8	
	comp=N,60nm,1.1s						
H19K	Roundabout Mou	4.05	92		Pn	01 29 44.4	-0.7
K13K	Kusilvak Mount	4.14	170		Pn	01 29 46.3	0.0
K13K				IAML		01 30 57.6	
	comp=E,63nm,0.9s						
K13K				IAML		01 30 59.6	
	comp=N,53nm,0.7s						
K15K	Wolf Creek Mou	4.24	149		Pn	01 29 48.2	+0.4
K15K				IAML		01 31 05.2	
	comp=E,60nm,1.4s						
E20K	Nigu River	4.51	55		Pn	01 29 51.9	+0.3
D20K	Etivluk River	4.60	49		Pn	01 29 52.6	-0.1
D20K				IAML		01 31 21.2	
	comp=E,34nm,0.8s						
D20K				IAML		01 31 22.1	
	comp=N,34nm,1.8s						
H20K	Anotleneega Mo	4.70	91		Pn	01 29 53.6	-0.4
K17K	Iditarod	4.75	130		Pn	01 29 54.8	0.0
J18K	Innoko River	4.79	118		Pn	01 29 55.7	+0.3
J18K				IAML		01 31 19.4	
	comp=N,25nm,1.1s						
J18K				IAML		01 31 20.3	
	comp=E,27nm,1.2s						
L15K	Ungalak Mounta	4.81	152		Pn	01 29 55.9	+0.3
J19K	Poorman	4.92	109	Pn	Pn	01 29 56.5	-0.5
L14K	Kuka Creek	4.93	160		Pn	01 29 57.8	+0.6
IMAR	Indian Mountai	5.08	84		Pn	01 29 59.6	+0.2
G21K	Allakaket	5.16	78		Pn	01 29 59.5	-0.8
F21K	Alatna River	5.21	71		Pn	01 30 00.5	-0.7
B20K	Meade River	5.26	36		Pn	01 30 01.6	-0.2
E21K	Killik River	5.34	57		Pn	01 30 03.3	+0.4
C21K	Knifeblade Rid	5.39	49		Pn	01 30 04.2	+0.6
J20K	Nowinta River	5.41	104		Pn	01 30 03.9	+0.1
M14K	Bethel	5.60	158	Pn	Pn	01 30 07.0	+0.5
L18K	Granite Mounta	5.63	128		Pn	01 30 07.5	+0.7
M11K	Mekoryuk	5.64	180	Pn	Pn	01 30 06.2	-0.7
M13K	Dall Lake	5.75	166	Pn	Pn	01 30 08.9	+0.4
M15K	Kasigluk River	5.87	153		Pn	01 30 10.8	+0.6
D22K	Ayikyak River	5.95	55		Pn	01 30 11.7	+0.5
M16K	Timber Creek	5.95	144		Pn	01 30 12.1	+0.8
E22K	Anaktuvuk Pass	6.01	63		Pn	01 30 13.6	+1.5
M17K	Holitna River	6.03	136	Pn	Pn	01 30 13.6	+1.2
L19K	White Mountain	6.27	122	Pn	Pn	01 30 16.1	+0.4
B22K	Teshekpuk Lake	6.45	42		Pn	01 30 17.6	-0.4
M18K	Stony River	6.45	130		Pn	01 30 18.6	+0.5
N15K	Kwethluk River	6.47	152	Pn	Pn	01 30 18.9	+0.4
A22K	Sinclair Lake	6.49	34		Pn	01 30 18.4	-0.2
D23K	Nanushuk River	6.65	56		Pn	01 30 21.5	+0.6
E23K	Chandalar	6.80	65		Pn	01 30 23.4	+0.4
TOLK	Toolik Lake Re	6.94	60		Pn	01 30 25.8	+0.9
N18K	Kilae Creek	7.06	134		Pn	01 30 27.5	+1.0
M20K	Styx River	7.08	120		Pn	01 30 27.6	+0.8
O14K	Tigyukauivet M	7.14	159		Pn	01 30 27.8	+0.2
E24K	Your Creek	7.22	65		Pn	01 30 29.8	+1.0
TRF	Thorofare Moun	7.27	103		Pn	01 30 30.3	+0.8
O15K	Ungalikthiuk R	7.45	154	Pn	Pn	01 30 32.2	+0.4
SPNN	North Nagishla	7.58	122		Pn	01 30 32.1	-1.6
STLK	Strandline Lak	7.79	119	Pn	Pn	01 30 37.6	+1.0
SPU	Mount Spurr	7.93	121	Pn	Pn	01 30 39.3	+0.8
IL31		8.15	90		Pn	01 30 40.9	-0.5
ILAR	Eielson Array	8.15	90	Pn	Pn	01 30 41.5	+0.1
	comp=E,0.5nm,0.3s,baz=284,slow=13,SNR=27						
ILAR				Sn	Sn	01 32 09.5	-4.2
	baz=295,slow=22,SNR=2.7						
	comp=E,1.8nm,0.5s						
ILAR	Eielson Array	8.15	90		Pn	01 30 40.4	-1.0
F25K	Christian Rive	8.26	70		Pn	01 30 43.4	+0.5
E25K	Arctic Village	8.32	66		Pn	01 30 44.4	+0.7
BMAR	Burnt Mountain	8.67	71	Pn	Pn	01 30 48.7	+0.2
INK	Inuvik	12.81	65	Pn	Pn	01 31 46.0	+0.9
	comp=E,0.1nm,0.3s,baz=285,slow=12,SNR=1.8						
	comp=E,1.5nm,1.0s						
YKA	Yellowknife Ar	22.15	75	P	P	01 33 40.6	+1.8
	comp=E,1.0nm,0.9s,baz=303,slow=12,SNR=6.8						
	comp=E,1.0nm,0.9s						
KBZ	Khabaz	68.32	338	P	P	01 39 44.9	+0.6
	comp=E,1.1nm,0.8s,baz=18,slow=9.2,SNR=4.2						
	comp=E,1.1nm,0.8s						
CMAR	Chiang Mai Arr	75.27	282	P	P	01 40 26.9	+0.5
	comp=E,1.1nm,0.3s,baz=24,slow=8.7,SNR=4.1						
	comp=E,1.1nm,0.3s						

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*IDC **18** 01:36:25.2±1.0, 6°.44N×125°.44E, h0^{km}, mb3.7/5, mbtmp3.7/5, MS2.9/5, Error ellipse: s-maj=35.8km s-min=9.4km az=97.0*

ISC 18 01:36:26.5±1.1, 6°.45N±0°.09×125°.5E±0°.3, h10^{km}, n13, σ1^{s}01/7, mb3.7/5, MS2.8/3, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.63	12	Pg	Pg	01 36 39.1	+0.4
	208nm,0.3s,baz=251,slow=11,SNR=7.8						
DAV				Lg	Lg	01 36 45.2	
	458nm,0.3s,baz=248,slow=19,SNR=7.0						
DAV	Davao City (W)	0.63	12	P	Pn	01 36 41.0	-0.5
KAPI	Kappang	12.73	207	LR	LR	01 44 57.5	
	comp=Z,41nm,18.4s,baz=43,slow=40						
BATI	Baumata	16.64	186	LR	LR	01 47 28.4	
	comp=Z,69nm,18.1s,baz=15,slow=40						
JAY	Jayapura	17.64	120	LR	LR	01 48 48.4	
	comp=Z,34nm,18.1s,baz=344,slow=42						
WRA	Warramunga Arr	27.65	162	P	P	01 42 13.5	-1.2
	0.5nm,0.8s,baz=331,slow=9.7,SNR=2.7						
	0.5nm,0.8s						
CMAR	Chiang Mai Arr	28.45	297	LR	LR	01 55 18.9	
	comp=Z,20nm,18.1s,baz=100,slow=40						
ASAR	Alice Springs	31.05	165	P	P	01 42 45.1	+0.2
	0.3nm,0.5s,baz=345,slow=7.8,SNR=4.9						
	0.3nm,0.5s						
MJAR	Matsushiro Arr	32.15	20	LR	LR	01 54 41.0	
	comp=Z,17nm,21.9s,baz=184,slow=34						
STKA	Stephens Creek	41.11	159	P	P	01 44 11.2	+0.4
	0.9nm,0.4s,baz=341,slow=9.6,SNR=4.8						
	0.9nm,0.4s						
MKAR	Makanchi Array	54.61	325	P	P	01 45 54.5	-0.9
	0.6nm,0.7s,baz=115,slow=7.5,SNR=4.9						
	0.6nm,0.7s						
KURBB	Kurchatov Arra	58.78	327	P	P	01 46 25.9	+1.1
	0.7nm,0.8s,baz=129,slow=5.9,SNR=7.3						
	0.7nm,0.8s						
KMBO	Kilima Mbogo	88.34	269	LR	LR	02 28 36.9	
	comp=Z,203nm,19.9s,baz=139,slow=36						

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*MOS **18** 01:56:43.4±1.0, 29°.77S×178°.62W, h11^{km}, mb5.7/29, MS5.7/19, Error ellipse: s-maj=9.7km s-min=8.2km az=53.6*

*IPGP **18** 01:56:44.0, 29°.75S×178°.52W, h15^{km}, Mw6.0, Fault plane solution: NP1:φ$_{s}$346.00000°, δ83.00000°, λ173.00000°. NP2:φ$_{s}$77.00000°, δ83.00000°, λ7.00000°.*

*ISC-PP **18** 01:56:44, 29°.76S×178°.49W, h16^{km}, Mwppsm6.1, Moment Tensor Solution. s25 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.14±.11; M$_{θθ}$-0.39±.19; M$_{φφ}$0.54±.14; M$_{rθ}$-0.09±.17; M$_{θφ}$0.14±.14; M$_{φr}$0.49±.11; Fault plane solution: M$_{0}$1.64000×10^{18} NP1:φ$_{s}$67.70000°, δ74.80000°, λ352.90000°. NP2:φ$_{s}$159.50000°, δ83.10000°, λ-164.70000°.*

*NEIC **18** 01:56:44.3, 29°.77S×178°.48W, h10^{km}*

*NEIC **18** 01:56:44.3, 29°.76S×178°.49W, h12^{km}*

*NEIC **18** 01:56:44.3, 29°.86S×178°.15W, h12^{km}, Moment Tensor Solution. Duration: 4^{s}9 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-2.25; M$_{θθ}$-2.51; M$_{φφ}$4.76; M$_{rθ}$1.17; M$_{θφ}$6.32; M$_{φr}$-2.27; Fault plane solution: M$_{0}$7.96000×10^{17} NP1: φ$_{s}$253.10000°, δ67.52000°, λ-12.43000°. NP2: φ$_{s}$347.92000°, δ78.53000°, λ-157.03000°. Principal axes: T 8.5900, Plg7.0000°, Azm119.0000°; N -1.4589, Plg64.0000°, Azm13.0000°; P -7.1311, Plg24.0000°, Azm212.0000°;*

*NOU **18** 01:56:44.8, 29°.78S×178°.57W, h0^{km}, ML5.6/116, Kermadec Islands, New Zealand*

*NEIC **18** 01:56:44.3±1.7, 29°.76S±0°.06×178°.49W±0°.08, h10^{km}±1^{km}, mb5.7/96, Ms_20 5.7/527, Mwb5.8/68, Mww5.9/52, Error ellipse: s-maj=14.9km s-min=6.2km az=132.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.57; M$_{θθ}$-3.81; M$_{φφ}$3.24; M$_{rθ}$1.17; M$_{θφ}$5.58; M$_{φr}$1.30; Fault plane solution: M$_{0}$6.85000×10^{17} NP1: φ$_{s}$342.88000°, δ76.98000°, λ171.25000°. NP2: φ$_{s}$74.87000°, δ81.48000°, λ13.17000°. Principal axes: T 6.7852, Plg15.0000°, Azm299.0000°; N 0.1210, Plg74.0000°, Azm107.0000°; P -6.9062, Plg3.0000°, Azm208.0000°;*

*GFZ **18** 01:56:45.7, 29°.74S×178°.57W, h15^{km}, MW5.9, Moment Tensor Solution. s13 Moment tensor: M$_{rr}$-0.35; M$_{θθ}$-2.36; M$_{φφ}$2.71; M$_{rθ}$3.49; M$_{θφ}$5.49; M$_{φr}$2.93; Fault plane solution: NP1:φ$_{s}$344.00000°, δ58.00000°, λ173.00000°. NP2:φ$_{s}$78.00000°, δ84.00000°, λ32.00000°. Principal axes: T 8.4100, Plg27.0000°, Azm305.0000°; N -2.1200, Plg58.0000°, Azm88.0000°; P -6.2900, Plg17.0000°, Azm206.0000°;*

*IDC **18** 01:56:46.8±3.1, 29°.85S×178°.62W, h26^{km}±20^{km}, mb4.7/18, mbtmp4.9/21, ML3.9/3, MS5.5/52 Error ellipse: s-maj=14.7km s-min=13.9km az=108.0*

*GCMT **18** 01:56:48.3±0.1, 29°.75S×178°.58W, h12^{km}, MW5.9/160, Moment Tensor Solution. s141,c292; s160,c481; Duration: 2^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.44±.04; M$_{θθ}$-3.60±.05; M$_{φφ}$5.04±.05; M$_{rθ}$2.33±.12; M$_{θφ}$6.90±.04; M$_{φr}$-0.48±.12; Best double couple: M$_{0}$8.55000×10^{17} NP1:φ$_{s}$345.00000°, δ74.00000°, λ-169.00000°. NP2:φ$_{s}$252.00000°, δ80.00000°, λ-16.00000°. Principal axes: T 8.9100, Plg4.0000°, Azm300.0000°; N -0.7210, Plg71.0000°, Azm41.0000°; P -8.1890, Plg19.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 18 01:56:45.0±0.6, 29°.80S±0°.03×178°.43W±0°.04, h15^{km}±3^{km}, n943, σ1^{s}79/681, mb5.5/155, MS5.7/351, 11C-10D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	0.70	40	P	Pb	01 56 57.9	-1.0
GLKZ				S	Sg	01 57 09.7	+1.8
RIZ	Raoul Island	0.71	38	P	Pb	01 56 57.8	-1.2
RIZ				S	Sg	01 57 09.6	+1.4
RAO	Raoul Island	0.71	39	Pn	Pb	01 56 58.5	-0.6
	9μm,0.3s,baz=204,slow=6.2,SNR=260						
RAO				Sn	Sg	01 57 09.1	+0.9
	40μm,0.3s,baz=131,slow=20,SNR=16						
RAO	Raoul Island	0.71	39		Pb	01 56 57.9	-1.2
RAO				Sg	Sb	01 57 06.5	-2.2
RAO	Raoul Island	0.71	39	P	Pb	01 56 58.9	-0.2
RAO	Raoul Island	0.71	39	S	Sg	01 57 09.2	+0.9
RAO	Raoul Island	0.71	39	P	Pb	01 56 57.9	-1.2
RAO						01 57 06.5	
GRZ	Great Barrier	8.22	217	P	Pn	01 58 49.1	+5.4
WMGZ	Waiomatatini S	8.41	197	P	Pn	01 58 46.0	-0.4
WMGZ				S	Sn	02 00 26.5	+5.4
KUZ	Kuaotunu	8.47	214	P	Pn	01 58 49.1	+1.9
HAZ	Te Kaha	8.53	201	P	Pn	01 58 45.2	-2.7
HAZ				S	Sn	02 00 29.4	+5.4
PKGZ	Pakihiroa	8.55	199	P	Pn	01 58 44.8	-3.4
PKGZ				S	Sn	02 00 27.1	+2.7
WCZ	Waipu Caves	8.62	223	P	Pn	01 58 51.0	+1.8
OUZ	Omahuta	8.63	229	P	Pn	01 58 49.4	+0.1
OUZ	Omahuta	8.63	229	P	Pn	01 58 50.2	+0.9
PUZ	Puketiti	8.69	198	P	Pn	01 58 45.6	-4.6
PUZ				S	Sn	02 00 30.2	+2.3
RUGZ	Raukumara Rang	8.76	201	P	Pn	01 58 47.9	-3.3
RUGZ				S	Sn	02 00 36.1	+6.4
TWGZ	Tauwhareparae	8.87	199	P	Pn	01 58 53.2	+0.6
TWGZ				S	Sn	02 00 35.3	+3.0
CNGZ	Carnagh Statio	9.09	197	P	Pn	01 58 52.1	-3.5
MWZ	Matawai	9.14	200	P	Pn	01 58 53.5	-2.9
MWZ				S	Sn	02 00 42.8	+3.7
URZ	Urewera	9.21	202	Pn	Pn	01 58 55.2	-2.0
	6.4nm,0.3s,baz=38,slow=4.5,SNR=12						
URZ				Sn	Sn	02 00 39.6	-1.0
	2.5nm,0.3s,baz=351,slow=19,SNR=1.0						
URZ				LR	LR	02 02 11.6	
	comp=Z,70μm,20.9s,baz=30,slow=36						
	35nm,1.1s						
URZ	Urewera	9.21	202	P	Pn	01 58 56.6	-0.6
URZ	Urewera	9.21	202	P	Pn	01 58 55.4	-1.9
URZ				S	Sn	02 00 43.6	+3.0
RAGZ	Rawiri	9.32	201	P	Pn	01 58 59.0	0.0
RAGZ				S	Sn	02 00 48.8	+5.1
RIGZ	Rimuhau	9.42	198	P	Pn	01 58 59.5	-0.7
RIGZ				S	Sn	02 00 48.7	+2.9
RTZ	Ruatahuna	9.57	202		Pn	01 58 60.0	-2.4
RAHZ	Arahi	9.81	201	P	Pn	01 59 05.1	-0.4
RAHZ				S	Sn	02 00 57.9	+2.4
MTHZ	Maungataniwha	9.83	202	P	Pn	01 59 07.4	+1.5
MTHZ				S	Sn	02 00 59.4	+3.4
NMHZ	Naumai	10.07	202	P	Pn	01 59 08.7	-0.4

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NMHZ                               S        Sn       02 01 04.6 +2.8
BKZ   Black Stump Fm   10.23 203   P        Pn       01 59 12.4 +1.1
BKZ   Black Stump Fm   10.23 203   P        Pn       01 59 13.5 +2.1
BKZ                                S        Sn       02 01 09.1 +3.2
HIZ   Hauiti           10.31 211   P        Pn       01 59 15.4 +3.0
ETVZ  East Tongariro   10.48 206   P        Pn       01 59 21.2 +6.3
KWHZ  Kaweka Forest    10.49 202   P        Pn       01 59 18.7 +3.8
SNVZ  South Ngauruho   10.55 206   P        Pn       01 59 20.4 +4.5
KAHZ  Kahuranaki       10.68 200   P        Pn       01 59 18.4 +0.9
KAHZ                               S        Sn       02 01 18.4 +1.5
WNVZ  Wahianoa         10.69 206   P        Pn       01 59 23.8 +6.0
KRHZ  Kereru           10.70 202   P        Pn       01 59 19.9 +2.1
KRHZ                               S        Sn       02 01 12.9 -4.5
VRZ   Vera Road        10.86 209   P        Pn       01 59 25.1 +5.2
PNHZ  Pukenui          11.00 202   P        Pn       01 59 16.2 -5.7
NFK   Norfolk Island   11.91 270   P        Pn       01 59 35.8 +1.5
      comp=Z,471nm,1.5s,comp=Z,0.0nm
MSVF  Nonsavu          12.44 344   Pn       Pn       01 59 42.4 +0.7
MSVF  Nonsavu          12.44 344   P        Pn       01 59 44.1 +2.4
MSVF  Nonsavu          12.44 344 i P        Pn       01 59 42.6 +0.9
TCW   Tory Channel     12.83 206            Pn       01 59 44.7 -2.1
NIUE  Niue             13.19  38   P        Pn       01 59 48.2 -3.6
      comp=Z,357nm,1.2s,comp=Z,0.0nm
NIUE  Niue             13.19  38   Pn       Pn       01 59 47.3 -4.5
CTZ   Chatham Island   13.98 175   Pn       Pn       02 00 01.8 -0.7
PINNC Pines Island,    14.55 296            Pn       02 00 08.0 -2.5
PINNC Pines Island,    14.55 296   P        Pn       02 00 09.4 -1.0
MARNC Mare, Loyalty    14.74 301            Pn       02 00 10.4 -2.7
MARNC Mare, Loyalty    14.74 301   P        Pn       02 00 14.1 +1.0
INH   Isangel          15.12 310   P        Pn       02 00 20.1 +1.9
OUENC Ouen Island, N   15.13 296   P        Pn       02 00 18.8 +0.6
YATNC Mamie plateau,   15.28 297   P        Pn       02 00 19.0 -1.3
ONTNC Ouen Toro        15.49 295            Pn       02 00 21.1 -1.8
ONTNC                              IAmb     IAmb     02 00 28.6
      comp=Z,442nm,1.4s
ONTNC Ouen Toro        15.49 295   P        Pn       02 00 24.6 +1.6
DZM   Mont Dzumac      15.62 296   Pn       Pn       02 00 24.0 -0.8
      comp=Z,0.2nm,0.3s,baz=122,slow=15,SNR=11
DZM                                LR       LR       02 05 09.0
      comp=Z,47µm,18.3s,baz=174,slow=32
      comp=Z,63nm,1.1s
DZM   Mont Dzumac      15.62 296 ePn        Pn       02 00 22.6 -2.2
      comp=Z,1µm,1.3s
DZM                              eLR        LR       02 03 43.2
      comp=Z,96µm,26.0s
DZM   Mont Dzumac      15.62 296   Pn       Pn       02 00 23.5 -1.3
DZM                                IAmb     IAmb     02 00 31.0
      comp=Z,416nm,1.2s
DZM   Mont Dzumac      15.62 296   P        Pn       02 00 23.8 -1.0
FOZ   Fox Glacier      16.61 211            Pn       02 00 35.9 -1.3
RTV   Rentapao         16.94 312   P        Pn       02 00 42.5 +0.9
AFI   Afiamalu         16.97  23   Pn       Pn       02 00 40.9 -1.2
AFI   Afiamalu         16.97  23   P        P        02 00 43.6 -0.3
AFI   Afiamalu         16.97  23   P        Pn       02 00 40.9 -1.2
AFI                                pmax     pmax
      comp=Z,139nm,1.0s
DVP   Devils Point     17.14 312   P        P        02 00 45.7  0.0
JCZ   Jackson Bay      17.50 212   P        Pn       02 00 49.1 +0.6
WKZ   Wanaka           17.98 210   P        Pn       02 00 54.5 +0.2
KOUNC Koumac, New Ca   18.13 297   P        Pn       02 00 56.3 -0.1
RAR   Rarotonga        18.87  67   P        Pn       02 01 08.9 +3.5
      comp=Z,1.8nm,0.3s,baz=270,slow=19,SNR=2.4
RAR                                LR       LR       02 06 29.7
      comp=Z,12µm,21.3s,baz=238,slow=31
      comp=Z,28nm,0.7s
RAR   Rarotonga        18.87  67   P        P        02 01 04.6 -0.1
RAR   Rarotonga        18.87  67   P        Pn       02 01 08.9 +3.5
LHI   Lord Howe Isla   19.43 259   P        P        02 01 08.8 -2.1
SANVU Saraoutou        19.46 314   P        P        02 01 08.4 -2.8
SANVU                              IAmb     IAmb     02 01 21.0
      comp=Z,671nm,1.5s
SANVU Saraoutou        19.46 314   P        P        02 01 10.5 -0.8
FUNA  Funafuti         21.29 354   P        P        02 01 28.4 -2.6
FUNA                               IAmb     IAmb     02 01 42.6
      comp=Z,678nm,1.6s
FUNA  Funafuti         21.29 354   P        P        02 01 31.6 +0.5
GC1S  Gold Coast 1 S   24.57 267   P        P        02 02 05.8 +1.3
ARMA  Armidale         25.87 261   P        P        02 02 20.5 +4.1
ARMA  Armidale         25.87 261   P        P        02 02 16.1 -0.3
ARMA  Armidale         25.87 261   P        P        02 02 17.8 +1.4
TW1H  Toowoomba 1 Ha   26.03 268   P        P        02 02 19.6 +1.8
MGCD  Mangrove Creek   26.14 255   P        P        02 02 25.4 +6.7
MGCD  Mangrove Creek   26.14 255   P        P        02 02 21.4 +2.7
WOLH  Wollongong Har   26.35 252   P        P        02 02 22.3 +1.8
AUPHS Peel High Scho   26.44 259   P        P        02 02 23.3 +1.9
SYDH  Sydney Hard Ro   26.45 253   P        P        02 02 22.2 +0.8
HURO  Huro Makira      26.58 312   P        P        02 02 22.6 -0.1
TBI   Tubuai           26.65  83 eP         P        02 02 18.7 -4.6
      comp=Z,2µm,25.0s
TBI                              eS         S        02 06 54.3 -3.8
      comp=Z,19µm,46.2s
TBI                              eLQ        LQ       02 07 45.7
      comp=Z,185µm,25.5s
TBI                              eLR        LR       02 09 05.8
      comp=Z,121µm,26.0s
TBI                              eLR        LR       02 09 09.1
      comp=Z,25µm,24.5s
NGOA  Tingoa Renbel    27.01 308   P        P        02 02 26.1 -0.5
EIDS  Eidsvold         27.34 272   P        P        02 02 29.9 +0.4
      comp=Z,87nm,1.5s,comp=Z,0.0nm
EIDS  Eidsvold         27.34 272   P        P        02 02 27.5 -2.0
EIDS                               IAmb     IAmb     02 02 37.3
      comp=Z,138nm,1.4s
EIDS  Eidsvold         27.34 272   P        P        02 02 30.2 +0.7
CNB   Canberra Magne   27.62 250   P        P        02 02 33.7 +1.7
      comp=Z,63nm,1.2s,comp=Z,0.0nm
CNB   Canberra Magne   27.62 250   P        P        02 02 33.4 +1.4
AUDAR Daramalan Coll   27.80 250   P        P        02 02 34.8 +1.2
AUMHS Melrose High S   27.84 250   P        P        02 02 35.2 +1.2
MILA  Mila             27.91 246   P        P        02 02 35.7 +1.1
      comp=Z,38nm,1.1s
AUMTS Mt Stromlo       27.91 250   P        P        02 02 35.7 +1.0
CAN   Canberra         27.92 250   P        P        02 02 36.2 +1.6
      comp=Z,50nm,1.2s,comp=Z,0.0nm
CAN   Canberra         27.92 250   P        P        02 02 33.7 -1.0
CAN                                IAmb     IAmb     02 02 44.7
      comp=Z,238nm,1.9s
CAN   Canberra         27.92 250   P        P        02 02 35.4 +0.7
CAN   Canberra         27.92 250   P        P        02 02 33.7 -1.0
CAN                                pmax     pmax
      comp=Z,238nm,1.9s
CAN                                MLR      MLR
      comp=Z,8µm,18.0s
AUDCS Dubbo College    28.27 257   P        P        02 02 39.4 +1.6
AUSMG Snowy Mountain   28.29 248   P        P        02 02 39.3 +1.3
YNG   Young            28.39 252   P        P        02 02 40.5 +1.5
      comp=Z,42nm,1.7s
AUNRC North Rockhamp   28.44 276   P        P        02 02 39.2 -0.1
PAE   Paea             28.96  72 eP         P        02 02 42.8 -1.2
      comp=Z,102nm,1.5s
PAE                              eLR        LR       02 10 09.3
      comp=Z,3µm,23.5s
PPT2  Papeete2         29.00  72 eP         P        02 02 42.0 -2.5
      comp=Z,135nm,1.3s
PPT2                             eLQ        LQ       02 08 39.5
      comp=Z,39µm,23.8s
PPT2                             eLR        LR       02 10 07.9
      comp=Z,22µm,25.0s
PPT2                             eLR        LR       02 10 14.5
      comp=Z,17µm,26.5s
PPTF  Pamatai, Papee   29.01  72   P        P        02 02 48.4 +3.9
PPT   Papeete          29.01  72   P        P        02 02 49.5 +5.0
      comp=Z,71nm,1.0s,baz=250,slow=6.9,SNR=4.0
PPT                                LR       LR       02 12 48.5
      comp=Z,5µm,18.6s,baz=246,slow=33
AULRC Lightning Ridg   29.14 262   P        P        02 02 47.6 +2.0
TVO   Taravao          29.17  72 eLR        LR       02 10 14.9
      comp=Z,3µm,23.4s
TIAR  Tiarei           29.21  72 eP         P        02 02 46.8 +0.6
      comp=Z,224nm,0.9s
TIAR                             eLR        LR       02 10 16.0
      comp=Z,15µm,23.4s
GLAD  Gladstone        29.37 239   P        P        02 02 48.8 +1.3
TATA  Tatamba Isabel   29.50 312   P        P        02 02 50.8 +2.0
CORO  Coronation Par   30.11 238   P        P        02 02 55.7 +1.7
AUTAR Taroona High S   30.29 235   P        P        02 02 57.1 +1.6
MOO   Moorlands        30.29 236   P        P        02 02 56.8 +1.2
      comp=Z,125nm,1.3s
MOO   Moorlands        30.29 236   P        P        02 02 56.3 +0.7
TAU   Tasmania Unive   30.31 235   P        P        02 02 54.5 -1.2
TAU                                IAmb     IAmb     02 02 57.9
      comp=Z,154nm,1.1s
TAU   Tasmania Unive   30.31 235   IAMs_20  IAMs_20  02 15 40.1
      comp=Z,16µm,19.0s
TAU   Tasmania Unive   30.31 235   P        P        02 02 56.3 +0.6
TAU   Tasmania Unive   30.31 235   P        P        02 02 54.5 -1.2
TAU                                pmax     pmax
      comp=Z,154nm,1.2s
TAU                                MLR      MLR
      comp=Z,16µm,19.0s
CMSA  Cobar Meteorol   30.82 258   P        P        02 03 01.1 +0.7
      comp=Z,100nm,1.4s,comp=Z,0.0nm
CMSA  Cobar Meteorol   30.82 258   P        P        02 03 00.8 +0.4
TOO   Toolangi         30.86 246   P        P        02 03 01.9 +1.1
      comp=Z,45nm,1.1s,comp=Z,0.0nm
TOO   Toolangi         30.86 246   P        P        02 03 00.1 -0.6
TOO   Toolangi         30.86 246   P        P        02 03 00.1 -0.6
TOO                                pmax     pmax
      comp=Z,51nm,1.2s
AUBRN Burnie High Sc   30.98 239   P        P        02 03 03.1 +1.5
PMOR  Pomariorio Ree   31.72  69 eP         P        02 03 11.6 +3.2
      comp=Z,299nm,1.4s
PMOR                             eLR        LR       02 11 27.3
      comp=Z,14µm,22.1s
VAH   Vaihoa           31.81  70 eLR        LR       02 11 25.2
      comp=Z,45µm,35.4s
TARA  Tarawa           32.07 344   IAMs_20  IAMs_20  02 13 31.9
      comp=Z,12µm,19.0s
BRAT  Ballarat         32.09 246   P        P        02 03 12.8 +1.3
AUMTC Mt Clear Colle   32.14 246   P        P        02 03 13.2 +1.3
QLP   Quilpie          32.97 266   P        P        02 03 20.1 +0.7
      comp=Z,116nm,1.3s
QLP   Quilpie          32.97 266   P        P        02 03 19.8 +0.5
TV1H  Townsville Har   33.21 280   P        P        02 03 21.7 +0.2
CTA   Charters Tower   33.34 279   P        P        02 03 23.3 +0.6
      comp=Z,50nm,1.4s
CTA   Charters Tower   33.34 279   LR       LR       02 15 26.6
      comp=Z,20µm,18.6s,baz=107,slow=34
CTA   Charters Tower   33.34 279   P        P        02 03 22.9 +0.3
CTA   Charters Tower   33.34 279   P        P        02 03 23.2 +0.6
CTAO  Charters Tower   33.34 279   P        P        02 03 21.4 -1.2
CTAO  Charters Tower   33.34 279   P        P        02 03 23.0 +0.3
CTAO  Charters Tower   33.34 279   P        P        02 03 21.4 -1.2
CTAO                               pmax     pmax
      comp=Z,254nm,1.5s
AUHPC Hawkesdale P12   33.39 245   P        P        02 03 25.1 +2.2
ARPS  Mount Arapiles   33.75 247   P        P        02 03 26.4 +0.4
      comp=Z,45nm,1.2s
STKA  Stephens Creek   34.25 256   P        P        02 03 30.8 +0.4
      comp=Z,478nm,1.3s
STKA  Stephens Creek   34.25 256   P        P        02 03 30.4 -0.1
      comp=Z,61nm,1.0s,baz=91,slow=9.3,SNR=52
STKA                               LR       LR       02 16 05.8
      comp=Z,7µm,19.4s,baz=91,slow=34
      comp=Z,61nm,1.0s
STKA  Stephens Creek   34.25 256   P        P        02 03 29.2 -1.3
STKA  Stephens Creek   34.25 256   P        P        02 03 30.5 +0.1
STKA  Stephens Creek   34.25 256 eP         P        02 03 30.6 +0.1
STKA                               pmax     pmax
      comp=Z,61nm,1.0s
MGBR  Mount Gambier    34.76 246   P        P        02 03 33.8 -1.1
MGBR                               IAmb     IAmb     02 03 37.2
      comp=Z,75nm,1.1s
INKA  Innaminka        35.71 263            P        02 03 41.9 -1.2
MTSU  Mount Surprise   35.82 280   P        P        02 03 44.5 +0.4
      comp=Z,41nm,1.1s
MTSU  Mount Surprise   35.82 280   P        P        02 03 45.2 +1.1
AUMBR Murray Bridge    35.87 250   P        P        02 03 45.1 +0.8
HTT   Hallett          36.31 253   P        P        02 03 48.2 -0.1
      comp=Z,85nm,0.9s
HTT   Hallett          36.31 253   P        P        02 03 48.4 +0.2
      comp=Z,211nm,1.0s
HTT   Hallett          36.31 253   P        P        02 03 48.1 -0.1
HTT   Hallett          36.31 253   P        P        02 03 48.1 -0.1
AUMAR Marden Senior    36.41 251   P        P        02 03 49.9 +0.9
AUJCS Jamestown Cent   36.60 253   P        P        02 03 51.4 +0.7
PTPS  Port Pirie       37.11 253   P        P        02 03 56.7 +1.7
WHYH  Whyalla          37.48 254   P        P        02 03 58.4 +0.3
PMG   Port Moresby     38.01 295   LR       LR       02 16 40.4
      comp=Z,13µm,21.6s,baz=116,slow=32
PMG   Port Moresby     38.01 295   P        P        02 04 00.6 -2.2
PMG                                IAmb     IAmb     02 04 09.9
      comp=Z,138nm,1.4s
PMG   Port Moresby     38.01 295   IAMs_20  IAMs_20  02 16 28.8
      comp=Z,12µm,21.0s
PMG   Port Moresby     38.01 295   P        P        02 04 02.9 +0.1
PMG   Port Moresby     38.01 295   P        P        02 04 02.9 +0.1
      comp=Z,4µmcomp=Z,1µmcomp=Z,74nm,1.7s
PMG   Port Moresby     38.01 295 i P        P        02 04 01.9 -0.9
PMG                                pmax     pmax
      comp=Z,48nm,1.1s
COEN  Coen             38.75 286   P        P        02 04 09.5 +0.6
      comp=Z,64nm,1.3s,comp=Z,0.0nm
COEN  Coen             38.75 286   P        P        02 04 07.5 -1.5
COEN  Coen             38.75 286   P        P        02 04 09.1 +0.1
BBOO  Buckleboo        38.77 254   P        P        02 04 08.1 -0.9
      comp=Z,149nm,1.2s,comp=Z,0.0nm
BBOO  Buckleboo        38.77 254   P        P        02 04 07.4 -1.6
BBOO                               IAmb     IAmb     02 04 15.3
      comp=Z,125nm,1.0s
BBOO  Buckleboo        38.77 254   P        P        02 04 07.9 -1.1
AUCAS Cummins Area S   38.87 251   P        P        02 04 12.5 +2.7
QIS   Mount Isa        38.90 274   P        P        02 04 09.7 -0.5
      comp=Z,38nm,1.1s,comp=Z,0.0nm
QIS   Mount Isa        38.90 274   P        P        02 04 09.5 -0.7
RKT   Rikitea          39.30  91 eP         P        02 04 15.7 +2.2
      comp=Z,5µm,43.5s
RKT                              eS         S        02 10 16.0 +2.0
      comp=Z,5µm,28.5s
RKT                              eSS        SS       02 13 04.0 -3.6
      comp=Z,34µm,23.5s
RKT                              eLR        LR       02 14 57.6
      comp=Z,65µm,28.8s
TAOE  Nuku Hiva Isla   41.42  68 eP         P        02 04 26.7 -4.6
      comp=Z,307nm,24.8s
TAOE                             eS         S        02 10 41.5 -4.6
      comp=Z,406nm,25.3s
TAOE                             eSS        SS       02 13 51.0 +0.5
      comp=Z,18µm,25.9s
TAOE                             eLR        LR       02 15 49.9
      comp=Z,10µm,23.8s
MANU  Manus Island     42.62 304   P        P        02 04 39.5 -1.4
MANU                               IAmb     IAmb     02 04 41.6
      comp=Z,217nm,1.1s
AS31  Alice Springs    42.77 266   P        P        02 04 40.6 -1.6
ASAR  Alice Springs    42.77 266   P        P        02 04 41.1 -1.1
      comp=Z,37nm,1.0s,baz=114,slow=8.1,SNR=52
ASAR                               ScP      ScP      02 10 21.8 -2.3
      comp=Z,1.9nm,1.0s,baz=123,slow=5.0,SNR=3.9
ASAR                               LR       LR       02 21 46.0
      comp=Z,16µm,18.6s,baz=114,slow=35
      comp=Z,37nm,1.0s
ASAR  Alice Springs    42.77 266            P        02 04 40.9 -1.3
PTCN  Pitcairn Islan   42.92  96   IAMs_20  IAMs_20  02 17 41.5
      comp=Z,9µm,22.0s
WRAB  Tennant Creek    43.70 272   P        P        02 04 48.0 -1.6
WRAB  Tennant Creek    43.70 272   IAMs_20  IAMs_20  02 21 32.9
      comp=Z,10µm,18.0s
WRAB  Tennant Creek    43.70 272   P        P        02 04 48.5 -1.2
WRAB  Tennant Creek    43.70 272 i P        P        02 04 49.3 -0.4
WRAB                               pmax     pmax
      comp=Z,151nm,0.9s
WRA   Warramunga Arr   43.70 272   P        P        02 04 48.7 -1.0
      comp=Z,36nm,0.8s,baz=110,slow=7.7,SNR=69
WRA                                S        S        02 11 17.9 -1.6
      comp=Z,1.3nm,1.0s,baz=115,slow=5.6,SNR=4.9
      comp=Z,36nm,0.8s
WRA   Warramunga Arr   43.70 272            P        02 04 47.4 -2.3
WRA   Warramunga Arr   43.70 272 eP         P        02 04 48.7 -1.0
WRA                                pmax     pmax
      comp=Z,35nm,0.8s
MMPI  Merauke          43.99 290   P        P        02 04 51.2 -0.8
FORT  Forrest          45.84 255   P        P        02 05 05.0 -1.7
      comp=Z,120nm,0.9s
FORT  Forrest          45.84 255   P        P        02 05 04.8 -1.8
FORT                               IAmb     IAmb     02 05 14.6
      comp=Z,90nm,0.9s
JOHN  Johnston Islan   47.06  12   IAMs_20  IAMs_20  02 20 37.0
      comp=Z,11µm,21.0s
WRKA  Warakurna        47.18 262   P        P        02 05 16.0 -1.3
      comp=Z,43nm,1.1s
JAY   Jayapura         47.29 297   LR       LR       02 22 32.9
      comp=Z,6µm,21.8s,baz=102,slow=33
JAY   Jayapura         47.29 297   P        P        02 05 18.1 -0.1
      comp=Z,2µmcomp=Z,115nm,1.3s
GENI  Genyem           47.66 297   P        P        02 05 20.8 -0.2
GENI  Genyem           47.66 297   P        P        02 05 20.8 -0.2
KDU   Kakadu           48.45 280   P        P        02 05 26.2 -0.9
      comp=Z,45nm,1.3s
SBA   Scott Base       48.60 184   P        P        02 05 28.2 +0.7
SBA   Scott Base       48.60 184   P        P        02 05 28.2 +0.7
SBA                                pmax     pmax
      comp=Z,141nm,1.1s
VNDA  Vanda            48.65 186   P        P        02 05 28.6 +0.8
      comp=Z,7.9nm,0.8s,baz=24,slow=5.9,SNR=28
VNDA                               LR       LR       02 22 47.6
      comp=Z,2µm,20.1s,baz=26,slow=32
      comp=Z,7.9nm,0.8s
VNDA  Vanda            48.65 186   P        P        02 05 27.8 -0.1
VNDA                               IAmb     IAmb     02 05 52.7
      comp=Z,107nm,1.6s
SMPI  Sarmi            49.17 296   P        P        02 05 33.2 +0.5
      comp=Z,92nm,1.5s
MTN   Manton Dam       49.52 279   P        P        02 05 34.6 -0.8
      comp=Z,81nm,1.4s,comp=Z,0.0nm
MTN   Manton Dam       49.52 279   P        P        02 05 33.5 -1.9
MTN                                IAmb     IAmb     02 05 41.4
      comp=Z,53nm,0.9s
DRS   Darwin Rock St   49.91 279   P        P        02 05 40.4 +2.0
KNRA  Kununurra        50.29 274   P        P        02 05 42.7 +1.5
      comp=Z,148nm,1.5s,comp=Z,0.0nm
KNRA  Kununurra        50.29 274   P        P        02 05 39.8 -1.4
KMBL  Kambalda         50.84 252   P        P        02 05 43.1 -2.2
BAKI  Biak             51.70 295   P        P        02 05 52.8 +0.9
SAUI  Saumlaki         51.79 284   P        P        02 05 51.5 -1.0
SAUI  Saumlaki         51.79 284   P        P        02 05 54.0 +1.4
SAUI  Saumlaki         51.79 284   P        P        02 05 52.4 -0.2
FITZ  Fitzroy Crossi   51.99 270   LR       LR       02 27 03.1
      comp=Z,6µm,18.9s,baz=112,slow=35
FITZ  Fitzroy Crossi   51.99 270   P        P        02 05 52.8 -1.2
FITZ                               IAmb     IAmb     02 06 01.8
      comp=Z,68nm,1.1s
FITZ  Fitzroy Crossi   51.99 270   P        P        02 05 53.8 -0.1
KMPI  Kaimana, Papua   52.17 290   P        P        02 05 53.1 -2.2
FAKI  Fak Fak          53.78 290   P        P        02 06 05.7 -1.6
FAKI  Fak Fak          53.78 290   P        P        02 06 06.6 -0.7
FAKI  Fak Fak          53.78 290   P        P        02 06 10.1 +2.8
      comp=Z,3µmcomp=Z,2µmcomp=Z,171nm,1.3s
POHA  Pohakuloa        53.99  27   P        P        02 06 10.9 +2.1
KLBR  Kellerberrin     54.19 251   P        P        02 06 08.8 -1.2
      comp=Z,178nm,1.1s
KLBR  Kellerberrin     54.19 251   P        P        02 06 09.8 -0.3
NWAO  Narrogin (SRO)   54.26 249   P        P        02 06 14.3 +3.8
NWAO  Narrogin (SRO)   54.26 249   P        P        02 06 12.1 +1.6
NWAO  Narrogin (SRO)   54.26 249   P        P        02 06 14.1 +3.6
DHH   Diamond Head     54.52  24   P        P        02 06 12.4  0.0
DHH   Diamond Head     54.52  24   P        P        02 06 12.4  0.0
KIP   Kipapa           54.59  24   P        P        02 06 15.8 +2.9
KIP   Kipapa           54.59  24   P        P        02 06 15.9 +3.0
BNDI  Bandanaira       54.81 287   P        P        02 06 16.5 +1.7
BNDI  Bandanaira       54.81 287   P        P        02 06 16.2 +1.4
MEEK  Meekatharra      54.95 257   P        P        02 06 13.7 -2.0
      comp=Z,62nm,1.3s
MEEK  Meekatharra      54.95 257   P        P        02 06 16.7 +1.0
AUHAR St Anne’s Scho   55.30 249   P        P        02 06 20.6 +2.5
BLDU  Ballidu          55.32 252   P        P        02 06 17.0 -1.3
      comp=Z,46nm,1.2s
BLDU  Ballidu          55.32 252   P        P        02 06 19.1 +0.8
MUN   Mundaring        55.35 250   P        P        02 06 16.6 -1.8
      comp=Z,58nm,1.2s
MUN   Mundaring        55.35 250   P        P        02 06 20.1 +1.6
MUN   Mundaring        55.35 250   P        P        02 06 16.6 -1.8
CASY  Casey            55.49 208   P        P        02 06 15.9 -3.0
PSAC2 Pilbara Seismi   55.62 263   P        P        02 06 17.7 -2.9
PSAB3 Pilbara Seismi   55.65 263   P        P        02 06 24.6 +3.8
PSA00 Pilbara Seismi   55.66 263   P        P        02 06 17.6 -3.2
PSA00 Pilbara Seismi   55.66 263            P        02 06 18.0 -2.8
PSA00                              IAmb     IAmb     02 06 31.9
      comp=Z,148nm,1.9s
PSA00 Pilbara Seismi   55.66 263   P        P        02 06 17.3 -3.5
PSA00                              IAmb     IAmb     02 06 31.0
      comp=Z,89nm,1.2s
PSA00 Pilbara Seismi   55.66 263   P        P        02 06 21.8 +0.9
PSAC1 Pilbara Seismi   55.71 263   P        P        02 06 21.7 +0.5
      comp=Z,69nm,1.2s
MTKN  Mount Kenneth    55.71 250   P        P        02 06 23.0 +1.9
SWI   Sorong           55.77 291   P        P        02 06 22.0 +0.3
GUMO  Guam             55.79 315   LR       LR       02 28 27.9
      comp=Z,3µm,18.9s,baz=133,slow=34
MBWA  Marble Bar       55.92 263   P        P        02 06 21.1 -1.6
      comp=Z,96nm,1.1s
MBWA  Marble Bar       55.92 263   P        P        02 06 19.8 -2.9
MBWA                               IAmb     IAmb     02 06 28.7
      comp=Z,92nm,1.0s
MBWA  Marble Bar       55.92 263   P        P        02 06 23.1 +0.4
MSAI  Masohi           56.27 287   P        P        02 06 28.8 +3.5
      comp=Z,141nm,1.3s
MORW  Morawa           56.34 253   P        P        02 06 23.8 -1.9
      comp=Z,34nm,1.2s
MORW  Morawa           56.34 253   P        P        02 06 22.9 -2.7
MORW                               IAmb     IAmb     02 06 31.7
      comp=Z,65nm,1.3s
MORW  Morawa           56.34 253   P        P        02 06 26.6 +1.0
AAI   Ambon            56.70 287   P        P        02 06 29.3 +1.0
      comp=Z,2µmcomp=Z,99nm,1.3s
KRAI  Karang Ratu      56.73 287   P        P        02 06 28.9 +0.3
      comp=Z,98nm,1.2s
SOEI  Soe              56.90 278   P        P        02 06 28.9 -1.0
SOEI  Soe              56.90 278   P        P        02 06 32.2 +2.3
SOEI  Soe              56.90 278   P        P        02 06 32.7 +2.8
      comp=Z,3µmcomp=Z,3µmcomp=Z,141nm,1.2s
BATI  Baumata          57.20 277   LR       LR       02 31 07.1
      comp=Z,28µm,19.3s,baz=136,slow=36
BATI  Baumata          57.20 277   P        P        02 06 36.0 +4.1
      comp=Z,2µmcomp=Z,2µmcomp=Z,90nm,1.0s
NLAI  Namlea           57.85 286   P        P        02 06 40.4 +3.9
      comp=Z,2µmcomp=Z,83nm,1.9s
MMRI  Maumere          59.19 278   P        P        02 06 43.8 -2.1
MMRI  Maumere          59.19 278   P        P        02 06 47.2 +1.4
MMRI  Maumere          59.19 278   P        P        02 06 50.5 +4.7
      comp=Z,2µmcomp=Z,4µmcomp=Z,144nm,1.1s
SANI  Sanana           59.43 287   P        P        02 06 48.4 +0.9
SANI  Sanana           59.43 287   P        P        02 06 47.3 -0.2
BASI  Baing, Sumba     59.86 276   P        P        02 06 47.8 -2.6
      comp=Z,2µmcomp=Z,150nm,1.5s
VA02  Isla de Pascua   59.86 106   IAMs_20  IAMs_20  02 25 44.3
      comp=Z,5µm,20.0s
TNTI  Ternate          59.88 290   P        P        02 06 48.4 -2.2
RPN   Rapa Nui         59.96 106   LR       LR       02 26 07.8
      comp=Z,5µm,21.3s,baz=244,slow=29
QSPA  South Pole Qui   60.30 180   P        P        02 06 53.5 +0.6
      comp=Z,66nm,0.9s,baz=40,slow=2.4,SNR=138
QSPA                               LR       LR       02 32 05.6
      comp=Z,3µm,18.1s,baz=42,slow=35
      comp=Z,66nm,0.9s
QSPA  South Pole Qui   60.30 180   P        P        02 06 53.2 +0.3
WSI   Waingapu         60.37 276   P        P        02 06 51.7 -2.2
WBSI  Waikabubak, Su   61.16 275   P        P        02 07 00.0 +0.6
      comp=Z,46nm,1.2s
DBNI  Kabupaten Domp   62.64 276   P        P        02 07 11.0 +1.7
BKSI  Bulukumba        62.66 280   P        P        02 07 12.3 +2.9
      comp=Z,29nm,1.1s
LUWI  Luwuk            62.67 286   P        P        02 07 08.5 -0.9
LUWI  Luwuk            62.67 286   P        P        02 07 10.0 +0.6
      comp=Z,54nm,1.2s
PLAI  Plampang         62.95 275   P        P        02 07 10.7 -0.6
PLAI  Plampang         62.95 275   P        P        02 07 12.1 +0.8
      comp=Z,2µmcomp=Z,1µmcomp=Z,81nm,0.9s
KAPI  Kappang          63.13 280   LR       LR       02 35 57.4
      comp=Z,2µm,18.1s,baz=122,slow=37
KAPI  Kappang          63.13 280   P        P        02 07 10.2 -2.4
KAPI                               IAmb     IAmb     02 07 31.0
      comp=Z,46nm,1.1s
KAPI  Kappang          63.13 280   IAMs_20  IAMs_20  02 37 49.8
      comp=Z,4µm,18.0s
KAPI  Kappang          63.13 280   P        P        02 07 14.6 +2.0
KAPI  Kappang          63.13 280   P        P        02 07 10.9 -1.7
KAPI  Kappang          63.13 280   P        P        02 07 10.2 -2.4
KAPI                               pmax     pmax
      comp=Z,46nm,1.2s
KAPI                               MLR      MLR
      comp=Z,4µm,18.0s
BNSI  Bone             63.14 281   P        P        02 07 15.2 +2.6
      comp=Z,2µmcomp=Z,1µmcomp=Z,51nm,1.4s
SPSI  Sidrap Palu      63.66 281   P        P        02 07 17.6 +1.6
      comp=Z,31nm,1.2s
APSI  Ampana           63.68 285   P        P        02 07 16.6 +0.4
      comp=Z,33nm,1.1s
TWSI  Taliwang, Sumb   63.77 275   P        P        02 07 15.9 -0.9
TTSI  Tana Toraja      64.09 282   P        P        02 07 20.3 +1.4
      comp=Z,2µmcomp=Z,23nm,0.8s
KLNI  Mataram          64.60 275   P        P        02 07 16.1 -6.1
      comp=Z,49nm,1.1s
PMSI  Majene           64.62 281   P        P        02 07 24.7 +2.3
      comp=Z,2µmcomp=Z,63nm,1.0s
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DAV	**Davao City (W)**	**65.03**	**295**	LR	LR	02 33 58.9	
	comp=Z,657nm,20.8s,baz=122,slow=34						
KHKI	**Kahang-Kahang**	**65.05**	**275**	P	**P**	**02 07 24.4**	**-0.7**
	comp=Z,1µmcomp=Z,50nm,1.3s						
IGBI	**Denpasar**	**65.23**	**274**	P	**P**	**02 07 28.1**	**+1.8**
	comp=Z,147nm,1.2s						
TOLI2	**Tolitoli**	**65.50**	**286**	P	**P**	**02 07 26.7**	**-1.4**
RTBI	**Rangdo, Negare**	**65.58**	**274**	P	**P**	**02 07 32.2**	**+3.6**
	comp=Z,1µmcomp=Z,79nm,1.3s						
MPSI	**Mapaga**	**65.82**	**285**	P	**P**	**02 07 33.3**	**+3.2**
	comp=Z,26nm,1.0s						
JAGI	**Jajag, Banyuwa**	**66.26**	**274**	P	**P**	**02 07 30.7**	**-2.3**
JAGI				IAmb	IAmb	02 07 38.0	
	comp=Z,69nm,1.2s						
JAGI	**Jajag, Banyuwa**	**66.26**	**274**	P	**P**	**02 07 32.7**	**-0.3**
JAGI	**Jajag, Banyuwa**	**66.26**	**274**	P	**P**	**02 07 32.8**	**-0.3**
	comp=Z,2µmcomp=Z,59nm,1.1s						
ABJI	**Asem Bagus**	**66.51**	**274**	P	**P**	**02 07 36.8**	**+2.2**
	comp=Z,2µmcomp=Z,49nm,1.3s						
GMJI	**Gumukmas**	**66.97**	**274**	P	**P**	**02 07 37.9**	**+0.4**
	comp=Z,1µmcomp=Z,52nm,1.1s						
KMMI	**Kalianget**	**67.11**	**275**	P	**P**	**02 07 38.4**	**0.0**
	comp=Z,82nm,1.4s						
BKB	**Balikpapan**	**67.51**	**282**	IAMs_20	IAMs_20	02 35 52.7	
	comp=Z,4µm,20.0s						
SNJI	**Sawahan-Nganju**	**68.67**	**273**	P	**P**	**02 07 49.6**	**+1.2**
	comp=Z,2µmcomp=Z,738nmcomp=Z,35nm,1.2s						
SJI	**Sawahan**	**68.68**	**273**	P	**P**	**02 07 48.0**	**-0.4**
PCJI	**Pacitan**	**68.97**	**273**	P	**P**	**02 07 50.5**	**+0.4**
UGM	**Wanagama**	**69.68**	**272**	P	**P**	**02 07 56.4**	**+1.9**
UGM	**Wanagama**	**69.68**	**272**	P	**P**	**02 07 54.7**	**+0.2**
	comp=Z,50nm,1.0s						
BELA	**Belgrano 2**	**70.42**	**172**		**P**	**02 07 57.3**	**-0.8**
CTJI	**Waduk Cacaban**	**71.27**	**273**	P	**P**	**02 08 05.0**	**+0.7**
	comp=Z,2µmcomp=Z,67nm,0.9s						
KPJI	**Karang Pucung**	**71.34**	**272**	P	**P**	**02 08 06.6**	**+2.0**
	comp=Z,43nm,1.1s						
KKM	**Kota Kinabalu**	**72.02**	**288**	P	**P**	**02 08 07.7**	**-1.1**
KKM				IAmb	IAmb	02 08 31.3	
	comp=Z,81nm,1.4s						
KKM	**Kota Kinabalu**	**72.02**	**288**	P	**P**	**02 08 08.5**	**-0.3**
	comp=Z,867nmcomp=Z,42nm,1.6s						
BBJI	**Bungbulang**	**72.39**	**271**	P	**P**	**02 08 10.6**	**-0.4**
BBJI	**Bungbulang**	**72.39**	**271**	P	**P**	**02 08 14.6**	**+3.6**
MAW	**Mawson**	**72.73**	**201**	P	**P**	**02 08 11.2**	**-0.8**
	comp=Z,7.9nm,1.1s,baz=112,slow=8.4,SNR=6.2						
MAW				LR	LR	02 39 54.4	
	comp=Z,4µm,18.1s,baz=116,slow=36						
	comp=Z,7.9nm,1.1s						
TGY	**Tagaytay City**	**72.91**	**298**	LR	LR	02 36 55.2	
	comp=Z,1µm,21.6s,baz=115,slow=33						
CNJI	**Cibinong**	**72.91**	**271**	P	**P**	**02 08 14.5**	**+0.4**
	comp=Z,683nmcomp=Z,26nm,1.0s						
PMSA	**Palmer Station**	**72.96**	**156**	LR	LR	02 33 39.7	
	comp=Z,3µm,20.8s,baz=242,slow=30						
PMSA	**Palmer Station**	**72.96**	**156**	P	**P**	**02 08 13.1**	**-0.4**
PMSA				IAmb	IAmb	02 08 22.3	
	comp=Z,142nm,1.8s						
PMSA	**Palmer Station**	**72.96**	**156**	*e*P	**P**	**02 08 16.4**	**+2.9**
DBJI	**Dramaga**	**73.61**	**272**	P	**P**	**02 08 19.1**	**+0.9**
JHJ	**Hachijo jima 2**	**74.04**	**324**	LR	LR	02 36 59.1	
	comp=Z,707nm,19.8s,baz=108,slow=33						
TPI	**Tanjungpandan**	**74.68**	**276**	P	**P**	**02 08 22.0**	**-2.5**
	comp=Z,829nmcomp=Z,30nm,1.1s						
JOW	**Kunigami**	**75.98**	**312**	LR	LR	02 38 06.5	
	comp=Z,3µm,21.2s,baz=140,slow=33						
KASI	**Kota Agung**	**76.06**	**272**	P	**P**	**02 08 32.6**	**+0.2**
	comp=Z,40nm,1.1s						
MG05	**Puerto Natales**	**76.20**	**142**	P	**P**	**02 08 33.5**	**+1.0**
MG05				IAmb	IAmb	02 08 48.6	
	comp=Z,55nm,1.1s						
MG05				IAMs_20	IAMs_20	02 36 52.4	
	comp=Z,3µm,18.0s						
ESPZ	**Base Esperanza**	**76.26**	**157**	P	**P**	**02 08 32.5**	**-0.2**
ESPZ				IAmb	IAmb	02 08 42.0	
	comp=Z,94nm,1.0s						
KLSI		**76.26**	**272**	P	**P**	**02 08 36.8**	**+3.2**
	comp=Z,1000nmcomp=Z,33nm,1.1s						
GO09	**Cerro Castillo**	**76.50**	**142**	P	**P**	**02 08 34.7**	**+0.4**
GO09				IAMs_20	IAMs_20	02 32 54.3	
	comp=Z,4µm,22.0s						
MDSI	**Maura Dua**	**76.84**	**272**	P	**P**	**02 08 36.6**	**-0.2**
	comp=Z,55nm,1.1s						
PMBI	**Palembang**	**77.09**	**274**	IAMs_20	IAMs_20	02 45 24.7	
	comp=Z,4µm,19.0s						
INU	**Inuyama**	**77.20**	**324**	P	**P**	**02 08 40.2**	**+1.9**
MG02	**Cerro Sombrero**	**77.34**	**144**	P	**P**	**02 08 38.4**	**-0.6**
MG02				IAMs_20	IAMs_20	02 37 56.3	
	comp=Z,3µm,18.0s						
ELIB	**Princess Elisa**	**77.39**	**187**	*d*P	**P**	**02 08 38.1**	**-1.0**
ELIB				*d*pP	**pP**	**02 08 41.1**	**-2.3**
ELIB				*d*sP	**sP**	**02 08 42.4**	**-2.6**
MJA0	**Matsu Arr-Jizo**	**77.52**	**326**	*e*P	**P**	**02 08 40.5**	**+0.4**
MJA0				pmax	pmax		
	comp=Z,27nm,1.2s						
MJAR	**Matsushiro Arr**	**77.54**	**326**	P	**P**	**02 08 38.7**	**-1.5**
	comp=Z,16nm,1.0s,baz=161,slow=5.6,SNR=15						
MJAR				LR	LR	02 40 21.6	
	comp=Z,1µm,19.5s,baz=135,slow=34						
	comp=Z,16nm,1.0s						
MJAR	**Matsushiro Arr**	**77.54**	**326**	P	**P**	**02 08 38.4**	**-1.8**
MAJO	**Matsushiro**	**77.54**	**326**	P	**P**	**02 08 38.9**	**-1.3**
MAJO	**Matsushiro**	**77.54**	**326**	P	**P**	**02 08 41.6**	**+1.4**
MAJO	**Matsushiro**	**77.54**	**326**	P	**P**	**02 08 38.9**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,45nm,1.3s						
MJB9	**Matsu-Tunnel**	**77.55**	**326**	P	**P**	**02 08 39.1**	**-1.2**
SYO	**Syowa Base**	**77.61**	**193**	⇓*i*P	**P**	**02 08 37.8**	**-2.3**
SYO	**Syowa Base**	**77.61**	**193**	⇑*i*PcP	**PcP**	**02 08 49.1**	**-1.2**
YOJ	**Yonaguni jima**	**77.90**	**307**	P	**P**	**02 08 41.1**	**-1.3**
YOJ				IAmb	IAmb	02 08 52.0	
	comp=Z,77nm,1.1s						
YOJ	**Yonaguni jima**	**77.90**	**307**	P	**P**	**02 08 41.1**	**-1.3**
YOJ				pmax	pmax		
	comp=Z,77nm,1.1s						
MNAI	**Manna**	**77.97**	**272**	IAMs_20	IAMs_20	02 43 53.8	
	comp=Z,4µm,20.0s						
EGSI	**Enggano, Bengk**	**78.07**	**271**	P	**P**	**02 08 44.9**	**+1.2**
AY03	**Cochrane**	**78.44**	**138**	IAMs_20	IAMs_20	02 33 50.8	
	comp=Z,4µm,21.0s						
TROLL	**Troll, Antarti**	**78.46**	**180**	⇓P	**P**	**02 08 44.5**	**-0.6**
	comp=Z,5µm,0.8s						
SNAA	**Sanae**	**78.76**	**179**	⇓P	**P**	**02 08 45.7**	**-0.9**
	comp=Z,1µm,0.8s						
SNAA	**Sanae**	**78.76**	**179**	P	**P**	**02 08 45.8**	**-0.8**
	comp=Z,35nm,0.9s,baz=187,slow=4.5,SNR=76						
SNAA				LR	LR	02 42 25.9	
	comp=Z,4µm,18.7s,baz=195,slow=35						
	comp=Z,35nm,0.9s						
SNAA	**Sanae**	**78.76**	**179**	P	**P**	**02 08 45.8**	**-0.9**
SNAA	**Sanae**	**78.76**	**179**	*i* P	**P**	**02 08 47.2**	**+0.6**
SNAA				pmax	pmax		
	comp=Z,87nm,1.1s						
JNU	**Nakatsue**	**78.86**	**319**	LR	LR	02 39 53.8	
	comp=Z,638nm,20.6s,baz=135,slow=33						
VNA3	**Neumayer Olymp**	**78.92**	**176**	⇓P	**P**	**02 08 46.6**	**-0.8**
	comp=Z,99nm,0.8s						
YHNB	**Yeheng**	**79.17**	**307**	IAMs_20	IAMs_20	02 41 35.9	
	comp=Z,3µm,19.0s						
MASI	**Maura Aman, Be**	**79.18**	**273**	P	**P**	**02 08 53.2**	**+3.3**
	comp=Z,2µmcomp=Z,115nm,1.1s						
VNA2	**Neumayer--Watz**	**79.35**	**177**	⇓P	**P**	**02 08 49.2**	**-0.6**
	comp=Z,106nm,0.7s,baz=172,slow=4.8						
NVL	**N'lazarevskaya**	**79.45**	**183**	*e*P	**P**	**02 08 49.5**	**-0.8**
NVL				*e*		02 11 49.8	
NVL				*e*PPP	PPP	02 13 38.5	
NVL				*e*S	**S**	**02 18 52.0**	**+1.4**
NVL				*e*SS	**SS**	**02 24 00.8**	**+4.1**
NVL				*e*SSS	SSS	02 27 26.5	
NVL				pmax	pmax		
	comp=Z,145nm,1.4s						
NVL				MLR	MLR		
	comp=Z,4µm,17.0s						
COCO	**West Island**	**79.53**	**262**	IAMs_20	IAMs_20	02 42 36.9	
	comp=Z,4µm,21.0s						
VNA1	**Neumayer--Stat**	**79.58**	**177**	⇓P	**P**	**02 08 50.7**	**-0.3**
	comp=Z,178nm,1.0s						
COYC	**Coyhaique**	**79.62**	**137**	P	**P**	**02 08 51.4**	**-0.4**
COYC				IAmb	IAmb	02 09 01.2	
	comp=Z,86nm,1.2s						
ERM	**Erimo**	**79.76**	**332**	IAMs_20	IAMs_20	02 40 18.1	
	comp=Z,4µm,20.0s						
GO07	**Milladeo Hill,**	**79.95**	**134**	IAMs_20	IAMs_20	02 35 17.9	
	comp=Z,5µm,22.0s						
LL07	**Hotel Espejo d**	**80.21**	**134**	IAMs_20	IAMs_20	02 35 04.9	
	comp=Z,4µm,22.0s						
MYKOM	**Kota Tinggi**	**80.24**	**278**	P	**P**	**02 08 56.0**	**+0.4**
MYKOM	**Kota Tinggi**	**80.24**	**278**	P	**P**	**02 08 55.3**	**-0.3**
	comp=Z,38nm,1.2s						
PAF	**Port-aux-Franc**	**80.38**	**218**	IAMs_20	IAMs_20	02 40 16.6	
	comp=Z,5µm,20.0s						
LL02	**Futaleuf**	**81.04**	**135**	P	**P**	**02 08 59.1**	**-0.3**
LL02				IAmb	IAmb	02 09 08.6	
	comp=Z,95nm,1.4s						
H03S2	**Juan Fernandez**	**81.11**	**124**	T	T	03 38 31.8	
	baz=238,slow=75,SNR=7924						
H03S1	**Juan Fernandez**	**81.12**	**124**	T	T	03 38 32.9	
	baz=238,slow=75						
H03S3	**Juan Fernandez**	**81.12**	**124**	T	T	03 38 31.8	
	baz=238,slow=75						
VA04	**Juan Fernndez**	**81.27**	**124**	IAMs_20	IAMs_20	02 35 23.7	
	comp=Z,4µm,21.0s						
ASAJ	**Asahikawa**	**81.74**	**333**	LR	LR	02 40 59.3	
	comp=Z,3µm,21.0s,baz=148,slow=32						
LR04	**Corral**	**81.80**	**131**	IAMs_20	IAMs_20	02 35 42.1	
	comp=Z,3µm,21.0s						
BKNI	**Bangkinang**	**81.94**	**275**	IAMs_20	IAMs_20	02 48 45.1	
	comp=Z,3µm,20.0s						
SHEM	**Shemya Is, Ala**	**82.44**	**355**	LR	LR	02 39 23.7	
	comp=Z,3µm,22.0s,baz=141,slow=31						
LR03	**Panguipulli**	**82.64**	**132**	P	**P**	**02 09 08.6**	**+0.7**
LR03				IAmb	IAmb	02 09 17.4	
	comp=Z,109nm,1.4s						
LR03				IAMs_20	IAMs_20	02 36 07.2	
	comp=Z,4µm,22.0s						
PLCA	**Paso Flores**	**83.19**	**133**	P	**P**	**02 09 11.6**	**+0.8**
	comp=Z,7.0nm,1.0s,baz=224,slow=3.2,SNR=6.0						
PLCA				LR	LR	02 37 21.1	
	comp=Z,3µm,21.2s,baz=240,slow=29						
	comp=Z,7.0nm,1.0s						
PLCA	**Paso Flores**	**83.19**	**133**	P	**P**	**02 09 11.4**	**+0.5**
PLCA				IAmb	IAmb	02 09 20.2	
	comp=Z,70nm,1.4s						
PLCA	**Paso Flores**	**83.19**	**133**	*e*P	**P**	**02 09 14.4**	**+3.5**
SSE	**Sheshan**	**83.43**	**311**	P	**P**	**02 09 12.3**	**+0.4**
SSE				S	**S**	**02 19 31.0**	**-1.9**
SSE				pmax	pmax		
	comp=Z,16nm,0.6s						
SSE				pmax	pmax		
	comp=Z,170nm,3.3s						
SSE				LR	LR		
	comp=Z,720nm,22.0s						
SSE				LR	LR		
	comp=Z,770nm,20.0s						
BI05	**Punta Hualpn**	**83.62**	**129**	IAMs_20	IAMs_20	02 36 51.6	
	comp=Z,4µm,22.0s						
KSRS	**Korea Array**	**83.65**	**320**	P	**P**	**02 09 12.9**	**0.0**
	comp=Z,8.8nm,1.0s,baz=137,slow=6.0,SNR=10.0						
	comp=Z,8.8nm,1.0s						
KSAR	**Wonju Array Be**	**83.67**	**320**	P	**P**	**02 09 12.1**	**-0.9**
KSAR	**Wonju Array Be**	**83.67**	**320**	P	**P**	**02 09 12.1**	**-0.9**
IPM	**Ipoh**	**84.03**	**279**	P	**P**	**02 09 14.4**	**-1.0**
IPM				IAmb	IAmb	02 09 23.0	
	comp=Z,116nm,1.8s						
IPM	**Ipoh**	**84.03**	**279**	P	**P**	**02 09 16.1**	**+0.6**
IPM	**Ipoh**	**84.03**	**279**	P	**P**	**02 09 13.0**	**-2.5**
	comp=Z,33nm,1.4s						
YSS	**Yuzhno-Sakhali**	**84.05**	**334**	P	**P**	**02 09 14.4**	**-0.3**
YSS				IAmb	IAmb	02 09 24.7	
	comp=Z,74nm,1.1s						
YSS	**Yuzhno-Sakhali**	**84.05**	**334**	P	**P**	**02 09 16.8**	**+2.1**
YSS	**Yuzhno-Sakhali**	**84.05**	**334**	*e*P	**P**	**02 09 15.3**	**+0.6**
YSS				*e**SP	**pP**	**02 09 20.8**	**+1.9**
YSS				*e*PPP	PPP	02 14 22.4	
YSS				*e*S	**SKSac**	**02 19 37.2**	**+0.1**
YSS				*e*SS	**SS**	**02 25 10.8**	**+3.0**
YSS				pmax	pmax		
	comp=Z,500nm,3.0s						
YSS				pmax	pmax		
	comp=Z,40nm,1.2s						
YSS				smax	smax		
	comp=N,1µm,11.4s						
YSS				smax	smax		
	comp=E,1µm,11.4s						
QIZ	**Qiongzhong**	**84.40**	**295**	P	**P**	**02 09 17.3**	**+0.1**
QIZ				PP	**PP**	**02 12 35.8**	**+3.3**
QIZ				S	**S**	**02 19 44.8**	**+1.7**
QIZ				pmax	pmax		
	comp=E,300nm,5.3s						
QIZ				LR	LR		
	comp=E,530nm,17.9s						
QIZ				LR	LR		
	comp=E,630nm,20.6s						
QIZ				LR	LR		
	comp=E,1µm,23.4s						
LPIG	**La Paz**	**84.54**	**58**	LR	LR	02 41 44.0	
	comp=E,4µm,18.1s,baz=232,slow=32						
SLBS	**Sierra La Lagu**	**84.57**	**59**	IAMs_20	IAMs_20	02 39 06.5	
	comp=Z,4µm,20.0s						
KULM	**Kulim**	**84.76**	**279**	P	**P**	**02 09 18.4**	**-0.7**
KULM				IAmb	IAmb	02 09 36.6	
	comp=Z,64nm,1.5s						
KULM	**Kulim**	**84.76**	**279**	P	**P**	**02 09 20.2**	**+1.1**
KULM	**Kulim**	**84.76**	**279**	P	**P**	**02 09 20.4**	**+1.3**
	comp=Z,28nm,1.4s						
PET	**Petropavlovsk**	**84.87**	**346**	IAMs_20	IAMs_20	02 41 35.1	
	comp=Z,3µm,20.0s						
BI02	**San Fabin de**	**84.96**	**130**	P	**P**	**02 09 20.0**	**0.0**
BI02				IAMs_20	IAMs_20	02 40 52.0	
	comp=Z,3µm,19.0s						
PSI	**Prapat**	**85.00**	**276**	LR	LR	02 49 42.7	
	comp=Z,4µm,18.4s,baz=130,slow=38						
JRSC	**Jasper Ridge**	**85.07**	**42**	IAMs_20	IAMs_20	02 43 22.0	
	comp=Z,3µm,19.0s						
PETK	**Petropavlovsk-**	**85.14**	**346**	P	**P**	**02 09 20.4**	**+0.4**
	comp=Z,18nm,1.0s,baz=102,slow=11,SNR=5.9						
PETK				LR	LR	02 41 58.2	
	comp=Z,2µm,21.0s,baz=160,slow=32						
	comp=Z,18nm,1.0s						
PETK	**Petropavlovsk-**	**85.14**	**346**	P	**P**	**02 09 19.5**	**-0.6**
CPE	**Camp Elliot**	**85.20**	**48**	IAMs_20	IAMs_20	02 40 40.9	
	comp=Z,3µm,18.0s						
MCCM	**Marconi Confer**	**85.21**	**41**	IAMs_20	IAMs_20	02 45 48.8	
	comp=Z,3µm,18.0s						
OSI	**Osito Audit: C**	**85.30**	**46**	IAMs_20	IAMs_20	02 40 55.3	
	comp=Z,3µm,20.0s						
PASC	**Pasadena Art C**	**85.35**	**46**	IAMs_20	IAMs_20	02 42 38.6	
	comp=Z,3µm,18.0s						
BAR	**Barrett**	**85.35**	**48**	IAMs_20	IAMs_20	02 38 46.8	
	comp=Z,3µm,21.0s						
ML02	**Panimavida**	**85.36**	**129**	IAMs_20	IAMs_20	02 37 53.6	
	comp=Z,4µm,21.0s						
GSI	**Gunungsitoli**	**85.42**	**274**	P	**P**	**02 09 22.3**	**-0.2**
GSI				IAmb	IAmb	02 09 29.3	
	comp=Z,38nm,0.9s						
GSI	**Gunungsitoli**	**85.42**	**274**	P	**P**	**02 09 25.8**	**+3.3**
GSI	**Gunungsitoli**	**85.42**	**274**	P	**P**	**02 09 21.1**	**-1.4**
	comp=Z,49nm,1.0s						
NJ2	**Nanjing**	**85.57**	**311**	*e*P	**P**	**02 09 23.8**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,16nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,300nm,3.5s						
NJ2				LR	LR		
	comp=Z,2µm,17.5s						
NJ2				LR	LR		
	comp=Z,1µm,17.5s						
NJ2				LR	LR		
	comp=Z,3µm,22.7s						
CVS	**Carmenet Viney**	**85.59**	**41**	IAMs_20	IAMs_20	02 45 52.8	
	comp=Z,3µm,18.0s						
HOPS	**Hopland Field**	**85.69**	**40**	IAMs_20	IAMs_20	02 39 22.5	
	comp=Z,2µm,19.0s						
UBPT	**Khong Chiam**	**85.87**	**290**	P	**P**	**02 09 25.9**	**+1.3**
VES	**Vestal, Richgr**	**85.89**	**44**	IAMs_20	IAMs_20	02 43 58.8	
	comp=Z,2µm,18.0s						
BORC	**Borrego Spring**	**85.89**	**48**	P	**P**	**02 09 24.1**	**-0.2**
BORC				IAmb	IAmb	02 09 34.7	
	comp=Z,116nm,1.6s						
PFO	**Pinyon Flats O**	**86.08**	**48**	LR	LR	02 40 39.9	
	comp=Z,3µm,19.6s,baz=233,slow=30						
PFO	**Pinyon Flats O**	**86.08**	**48**	P	**P**	**02 09 25.8**	**+0.4**
PFO				IAmb	IAmb	02 09 37.0	
	comp=Z,142nm,1.8s						
PFO	**Pinyon Flats O**	**86.08**	**48**	IAMs_20	IAMs_20	02 41 16.2	
	comp=Z,3µm,19.0s						
PFO	**Pinyon Flats O**	**86.08**	**48**	P	**P**	**02 09 25.8**	**+0.4**
PFO				pmax	pmax		
	comp=Z,142nm,1.8s						
ISA	**Isabella, Lake**	**86.14**	**45**	IAMs_20	IAMs_20	02 39 32.6	
	comp=Z,3µm,19.0s						
KMRM	**Mail Ridge**	**86.20**	**39**	IAMs_20	IAMs_20	02 45 56.5	
	comp=Z,4µm,19.0s						
BO02	**Sierra Bellavi**	**86.33**	**128**	P	**P**	**02 09 26.9**	**+0.1**
BO02				IAmb	IAmb	02 09 35.6	
	comp=Z,103nm,1.4s						
BO02				IAMs_20	IAMs_20	02 38 24.3	
	comp=Z,3µm,21.0s						
BO01	**Tunca**	**86.35**	**128**	IAMs_20	IAMs_20	02 37 35.7	
	comp=Z,3µm,22.0s						
VA05	**Santo Domingo**	**86.39**	**127**	IAMs_20	IAMs_20	02 38 48.8	
	comp=Z,2µm,20.0s						
P08K	**Saint George I**	**86.39**	**5**	IAMs_20	IAMs_20	02 41 50.7	
	comp=Z,3µm,20.0s						
USRK	**Ussuriysk Ar.**	**86.46**	**327**	P	**P**	**02 09 27.5**	**+0.7**
	comp=Z,9.4nm,1.0s,baz=114,slow=4.8,SNR=8.3						
	comp=Z,9.4nm,1.0s						
LRMC	**Laurel Mtn Rad**	**86.51**	**46**	IAMs_20	IAMs_20	02 41 24.4	
	comp=Z,3µm,20.0s						
MT01	**Popeta**	**86.52**	**127**	P	**P**	**02 09 27.8**	**+0.1**
CMB	**Columbia Colle**	**86.57**	**42**	IAMs_20	IAMs_20	02 44 36.9	
	comp=Z,3µm,18.0s						
KHMM	**Horse Mountain**	**86.65**	**38**	IAMs_20	IAMs_20	02 46 19.7	
	comp=Z,4µm,19.0s						
WELL	**Weller Preserv**	**86.65**	**42**	IAMs_20	IAMs_20	02 44 03.9	
	comp=Z,3µm,18.0s						
O02D	**Mt. Diablo Mer**	**86.67**	**39**	IAMs_20	IAMs_20	02 45 58.4	
	comp=Z,3µm,18.0s						
WSHM	**Spangler Hills**	**86.71**	**46**	IAMs_20	IAMs_20	02 41 14.6	
	comp=Z,3µm,20.0s						
VA01	**Torpederas**	**86.71**	**126**	IAMs_20	IAMs_20	02 38 37.7	
	comp=Z,4µm,22.0s						
TPTI		**86.73**	**276**	P	**P**	**02 09 26.3**	**-2.7**
	comp=Z,664nmcomp=Z,30nm,1.3s						
BC3	**Big Chuckawall**	**86.76**	**48**	IAMs_20	IAMs_20	02 41 19.0	
	comp=Z,3µm,19.0s						
KHBM	**Hayfork Bally**	**86.78**	**39**	IAMs_20	IAMs_20	02 38 43.1	
	comp=Z,3µm,21.0s						
GLA	**Glamis**	**86.79**	**49**	IAMs_20	IAMs_20	02 41 30.8	
	comp=Z,3µm,19.0s						
CWC	**Cottonwood Cre**	**86.89**	**45**	IAMs_20	IAMs_20	02 43 56.4	
	comp=Z,4µm,18.0s						
BO04	**La Punta**	**86.90**	**128**	IAMs_20	IAMs_20	02 37 53.3	
	comp=Z,3µm,22.0s						
SPIA	**Saint Paul Isl**	**86.92**	**4**	IAMs_20	IAMs_20	02 42 28.5	
	comp=Z,4µm,20.0s						
MT02	**Curacav**	**86.94**	**127**	IAMs_20	IAMs_20	02 39 06.5	
	comp=Z,3µm,21.0s						
MT05	**Renca**	**87.14**	**127**	IAMs_20	IAMs_20	02 41 57.8	
	comp=Z,2µm,19.0s						
TIN	**Tinemaha, Big**	**87.20**	**44**	IAMs_20	IAMs_20	02 44 40.6	
	comp=Z,3µm,18.0s						
VA06	**Catapilco**	**87.21**	**126**	IAMs_20	IAMs_20	02 39 03.8	
	comp=Z,3µm,21.0s						
MT03	**Universidad Ad**	**87.24**	**127**	IAMs_20	IAMs_20	02 42 11.5	
	comp=Z,3µm,19.0s						
KSXB	**Camp Six Broad**	**87.24**	**38**	IAMs_20	IAMs_20	02 43 38.4	
	comp=Z,2µm,20.0s						
LMEL	**Las Melosas**	**87.26**	**128**	IAMs_20	IAMs_20	02 44 15.7	
	comp=Z,3µm,18.0s						
MT13	**San Alfonso**	**87.26**	**128**	IAMs_20	IAMs_20	02 39 59.9	
	comp=Z,2µm,20.0s						
MT16	**CCHEN**	**87.27**	**127**	IAMs_20	IAMs_20	02 42 12.2	
	comp=Z,2µm,20.0s						
IRM	**Iron Mountain**	**87.27**	**48**	IAMs_20	IAMs_20	02 42 02.6	
	comp=Z,3µm,19.0s						
N02D	**Trinity Center**	**87.27**	**39**	IAMs_20	IAMs_20	02 38 59.3	
	comp=Z,3µm,22.0s						
CNSH	**ChangSha**	**87.30**	**305**	P	**P**	**02 09 32.4**	**+1.1**
CNSH				S	**S**	**02 20 11.5**	**+0.3**
CNSH				SS	**SS**	**02 25 59.3**	**+3.1**
CNSH				pmax	pmax		
	comp=Z,16nm,1.3s						
CNSH				LR	LR		
	comp=Z,790nm,18.8s						
CNSH				LR	LR		
	comp=Z,830nm,24.5s						
CNSH				LR	LR		
	comp=Z,2µm,27.1s						
PEL	**Peldehue**	**87.32**	**127**	IAMs_20	IAMs_20	02 39 28.7	
	comp=Z,3µm,22.0s						
QSM	**Queen of Sheba**	**87.33**	**46**	P	**P**	**02 09 32.0**	**+0.7**
QSM				IAmb	IAmb	02 09 44.5	
	comp=Z,56nm,1.2s						
TYV	**Tymovskoe**	**87.36**	**337**	*e*P	P	02 09 39.5	+8.5
TYV				pmax	pmax		
	comp=Z,31nm,1.5s						
TYV				pmax	pmax		
	comp=Z,1µm,3.7s						
M02C	**Callahan**	**87.48**	**38**	IAMs_20	IAMs_20	02 46 56.8	
	comp=Z,2µm,19.0s						
GULI	**GuiLin**	**87.51**	**301**	P	**P**	**02 09 28.4**	**-4.0**
GULI	**GuiLin**	**87.51**	**301**	S	**S**	**02 20 11.3**	**-2.1**
GULI	**GuiLin**	**87.51**	**301**	SS	SS	02 26 08.3	+8.8
GULI				pmax	pmax		
	comp=Z,12nm,0.9s						
GULI				pmax	pmax		
	comp=Z,320nm,5.3s						
GULI				LR	LR		
	comp=N,930nm,20.8s						
GULI				LR	LR		
	comp=E,750nm,24.0s						
GULI				LR	LR		
	comp=Z,2µm,23.5s						
VA03	**San Esteban**	**87.62**	**127**	IAMs_20	IAMs_20	02 39 17.6	
	comp=Z,4µm,21.0s						
FURC	**Furnace Creek,**	**87.66**	**45**	IAMs_20	IAMs_20	02 42 50.7	
	comp=Z,3µm,20.0s						
SHOC	**Shoshone, Teco**	**87.66**	**46**	IAMs_20	IAMs_20	02 44 28.8	
	comp=Z,3µm,18.0s						
WHN	**Wuhan**	**87.69**	**307**	P	**P**	**02 09 33.8**	**+0.7**
WHN				S	**S**	**02 20 15.1**	**+0.3**
WHN				SS	**SS**	**02 26 01.8**	**-0.1**
WHN				LR	LR		
	comp=Z,2µm,13.8s						
WHN				LR	LR		
	comp=Z,4µm,17.6s						
WHN				LR	LR		
	comp=Z,6µm,22.5s						
YBH	**Yreka Blue Hor**	**87.80**	**38**	LR	LR	02 43 02.9	
	comp=Z,117nm,19.3s,baz=247,slow=32						
HATC	**Hat Creek Radi**	**87.85**	**40**	IAMs_20	IAMs_20	02 47 30.5	
	comp=Z,3µm,18.0s						
LHMI	**Lhok Sumawe**	**87.91**	**277**	IAMs_20	IAMs_20	02 52 53.5	
	comp=Z,3µm,20.0s						
NEE2	**Needles Airpor**	**87.99**	**48**	IAMs_20	IAMs_20	02 42 25.7	
	comp=Z,3µm,19.0s						
NVAR	**Mina Array Bea**	**88.06**	**43**	P	**P**	**02 09 37.5**	**+2.4**
	comp=Z,6.1nm,0.9s,baz=223,slow=8.5,SNR=19						
NVAR				LR	LR	02 44 02.4	
	comp=Z,4µm,18.2s,baz=239,slow=32						
	comp=Z,6.1nm,0.9s						
NVAR	**Mina Array Bea**	**88.06**	**43**	P	**P**	**02 09 35.9**	**+0.9**
CO02	**Combarbal**	**88.18**	**125**	IAMs_20	IAMs_20	02 39 01.4	
	comp=Z,4µm,22.0s						
DL2	**Dalian**	**88.26**	**318**	P	**P**	**02 09 35.6**	**0.0**
DL2				S	S	02 20 24.8	+4.9
DL2				pmax	pmax		
	comp=Z,73nm,1.3s						
DL2				LR	LR		
	comp=Z,2µm,25.5s						
DL2				LR	LR		
	comp=Z,2µm,20.4s						
DL2				LR	LR		
	comp=Z,4µm,23.3s						
TPNV	**Topopah Spring**	**88.34**	**45**	P	**P**	**02 09 36.8**	**+0.4**
TPNV				IAmb	IAmb	02 09 47.7	
	comp=Z,55nm,1.2s						
TPNV				IAMs_20	IAMs_20	02 43 13.9	
	comp=Z,3µm,20.0s						
TPNV	**Topopah Spring**	**88.34**	**45**	P	**P**	**02 09 36.8**	**+0.4**
TPNV				pmax	pmax		
	comp=Z,55nm,1.2s						
CO03	**El Pedregal**	**88.60**	**125**	P	**P**	**02 09 38.0**	**+0.2**
CO05	**La Serena**	**88.72**	**124**	IAMs_20	IAMs_20	02 39 47.9	
	comp=Z,3µm,20.0s						
TUC	**Tucson**	**89.04**	**52**	P	**P**	**02 09 39.6**	**0.0**
TUC	**Tucson**	**89.04**	**52**	P	**P**	**02 09 39.6**	**0.0**
TUC				pmax	pmax		
	comp=Z,235nm,1.7s						
TIA	**Tai'an**	**89.29**	**313**	P	**P**	**02 09 40.3**	**-0.3**
TIA				S	**S**	**02 20 28.8**	**-1.0**
TIA				SS	**SS**	**02 26 26.8**	**+1.7**
TIA				pmax	pmax		
	comp=Z,31nm,1.3s						
TIA				pmax	pmax		
	comp=Z,450nm,5.5s						
TIA				LR	LR		
	comp=Z,1µm,23.0s						
TIA				LR	LR		

	comp=Z,2µm,21.6s						
TIA				LR	LR		
	comp=Z,3µm,24.5s						
R18K	**Karluk**	**89.35**	**13**	IAMs_20	IAMs_20	02 41 45.9	
	comp=Z,3µm,22.0s						
PRN	**Pahroc Range**	**89.37**	**45**	P	**P**	**02 09 41.1**	**-0.1**
CN2	**Changchun**	**89.44**	**323**	P	**P**	**02 09 39.6**	**-1.5**
CN2				pP	PcP	02 09 44.5	+2.0
CN2				sP	pP	02 09 46.6	+1.3
CN2				S	**S**	**02 20 28.0**	**-2.8**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,400nm,4.0s						
CN2				LR	LR		
	comp=Z,800nm,23.0s						
CN2				LR	LR		
	comp=Z,2µm,23.0s						
CN2				LR	LR		
	comp=Z,2µm,25.0s						
COR	**Corvallis**	**89.48**	**36**	IAMs_20	IAMs_20	02 40 15.4	
	comp=Z,4µm,20.0s						
319A	**Douglas**	**89.52**	**53**	P	**P**	**02 09 42.0**	**0.0**
GRNR	**Gornyy**	**89.58**	**333**	*e*P	P	02 09 34.0	-7.6
HPIG		**89.60**	**59**	P	**P**	**02 09 42.4**	**-0.1**
HPIG				IAmb	IAmb	02 09 52.4	
	comp=Z,105nm,1.8s						
AC04	**Llanos de Chal**	**89.79**	**123**	IAMs_20	IAMs_20	02 40 05.4	
	comp=Z,4µm,21.0s						
BNX	**BinXian**	**89.81**	**325**	⇑P	**P**	**02 09 41.4**	**-1.4**
BNX				S	**S**	**02 20 36.9**	**+2.8**
BNX				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BNX				pmax	pmax		
	comp=Z,200nm,5.7s						
BNX				LR	LR		
	comp=Z,870nm,20.4s						
BNX				LR	LR		
	comp=Z,1µm,21.5s						
BNX				LR	LR		
	comp=Z,1µm,23.7s						
CFA	**Coronel Fontan**	**89.89**	**127**	P	**P**	**02 09 44.5**	**+0.7**
	comp=Z,2.5nm,0.8s,baz=255,slow=4.1,SNR=4.7						
CFA				LR	LR	02 41 14.0	
	comp=Z,1µm,21.1s,baz=216,slow=30						
	comp=Z,2.5nm,0.8s						
KDAK	**Kodiak Island**	**89.92**	**14**	LR	LR	02 42 32.1	
	comp=Z,4µm,22.0s,baz=208,slow=30						
AC05	**El Transito**	**90.02**	**124**	P	**P**	**02 09 44.6**	**0.0**
AC05				IAmb	IAmb	02 09 57.5	
	comp=Z,64nm,1.4s						
HOPE	**Hope Point**	**90.04**	**159**	IAMs_20	IAMs_20	02 45 33.3	
	comp=Z,4µm,20.0s						
PINE	**Pine Mountain**	**90.16**	**38**	P	**P**	**02 09 45.7**	**+1.0**
JRQG	**Juriquilla Cam**	**90.25**	**66**	P	**P**	**02 09 45.0**	**-0.8**
JRQG				IAmb	IAmb	02 10 14.7	
	comp=Z,59nm,1.7s						
LCMT	**Little Creek M**	**90.26**	**47**	P	**P**	**02 09 45.5**	**+0.3**
LCMT				IAmb	IAmb	02 09 56.8	
	comp=Z,37nm,1.2s						
M11K	**Mekoryuk**	**90.42**	**6**	IAMs_20	IAMs_20	02 46 46.2	
	comp=Z,3µm,18.0s						
WVOR	**Wild Horse Val**	**90.50**	**40**	P	**P**	**02 09 46.7**	**+0.4**
WVOR				IAmb	IAmb	02 09 58.1	
	comp=Z,78nm,1.5s						
WVOR				IAMs_20	IAMs_20	02 50 31.8	
	comp=Z,2µm,18.0s						
WVOR	**Wild Horse Val**	**90.50**	**40**	P	**P**	**02 09 46.7**	**+0.4**
WVOR				pmax	pmax		
	comp=Z,78nm,1.5s						
WVOR				MLR	MLR		
	comp=Z,2µm,18.0s						
WUAZ	**Wupatki**	**90.55**	**49**	IAMs_20	IAMs_20	02 43 08.6	
	comp=Z,2µm,20.0s						
UNM	**Universidad Na**	**90.56**	**68**	IAMs_20	IAMs_20	02 42 12.4	
	comp=Z,3µm,20.0s						
SYI	**Shuyak Island**	**90.72**	**13**	IAMs_20	IAMs_20	02 42 36.4	
	comp=Z,3µm,22.0s						
GO03	**Copiapo**	**90.75**	**123**	IAMs_20	IAMs_20	02 40 53.8	
	comp=Z,3µm,21.0s						
AC06	**Mina Casimiro**	**90.79**	**122**	IAMs_20	IAMs_20	02 40 55.0	
	comp=Z,3µm,22.0s						
N15K	**Kwethluk River**	**90.91**	**9**	IAMs_20	IAMs_20	02 42 53.1	
	comp=Z,3µm,20.0s						
GYA	**Guiyang**	**90.93**	**300**	⇑P	**P**	**02 09 50.1**	**+1.4**
GYA				SKS	**SKSac**	**02 20 18.4**	**-2.0**
GYA				S	**S**	**02 20 44.1**	**-1.5**
GYA				pmax	pmax		
	comp=Z,17nm,1.3s						
GYA				pmax	pmax		
	comp=Z,140nm,4.0s						
GYA				LR	LR		
	comp=Z,730nm,20.2s						
GYA				LR	LR		
	comp=Z,990nm,22.4s						
GYA				LR	LR		
	comp=Z,2µm,21.4s						
ENH	**Enshi**	**90.96**	**305**	P	**P**	**02 09 47.5**	**-1.1**
J08A	**Circle Bar Ran**	**91.20**	**39**	P	**P**	**02 09 50.2**	**+0.7**
AC01	**Pan de Azucar**	**91.29**	**121**	IAMs_20	IAMs_20	02 40 24.3	
	comp=Z,3µm,21.0s						
LYN	**LuoYang**	**91.33**	**310**	P	**P**	**02 09 51.8**	**+1.6**
LYN				sP	pwP	02 09 58.6	+1.5
LYN				PP	**PP**	**02 13 29.5**	**+1.5**
LYN				S	**S**	**02 20 44.0**	**-4.7**
LYN				pmax	pmax		
	comp=Z,37nm,0.9s						
LYN				pmax	pmax		
	comp=Z,560nm,4.4s						
LYN				LR	LR		
	comp=Z,2µm,22.1s						
LYN				LR	LR		
	comp=Z,2µm,20.0s						
LYN				LR	LR		
	comp=Z,4µm,22.7s						
ELK	**Elko**	**91.36**	**43**	LR	LR	02 46 41.7	
	comp=Z,3µm,18.0s,baz=228,slow=33						
ELK	**Elko**	**91.36**	**43**	P	**P**	**02 09 51.0**	**+0.5**
ELK	**Elko**	**91.36**	**43**	P	**P**	**02 09 51.0**	**+0.5**
ELK				pmax	pmax		
	comp=Z,23nm,1.2s						
HNS	**HongShan**	**91.55**	**313**	⇓P	**P**	**02 09 51.8**	**+0.7**
HNS				PP	**PP**	**02 13 35.0**	**+5.3**
HNS				S	**S**	**02 20 55.3**	**+4.8**
HNS				pmax	pmax		
	comp=Z,12nm,1.4s						
HNS				LR	LR		
	comp=Z,1µm,23.0s						
HNS				LR	LR		
	comp=Z,870nm,23.1s						
HNS				LR	LR		
	comp=Z,2µm,23.3s						
EPT	**El Paso**	**91.69**	**54**	IAMs_20	IAMs_20	02 43 12.9	
	comp=Z,3µm,18.0s						
CNPM	**China Poot**	**91.80**	**13**	IAMs_20	IAMs_20	02 43 53.0	
	comp=Z,4µm,22.0s						
AC02	**Maricunga**	**91.99**	**122**	IAMs_20	IAMs_20	02 45 15.6	
	comp=Z,3µm,19.0s						
BRLK	**Bradley Lake**	**92.09**	**14**	IAMs_20	IAMs_20	02 43 17.2	
	comp=Z,3µm,22.0s						
BJI	**Beijing**	**92.24**	**316**	P	**P**	**02 09 53.6**	**-0.6**
BJI				PP	**PP**	**02 13 35.8**	**+0.8**
BJI				SKS	**SKSac**	**02 20 25.6**	**-1.2**
BJI				sS	**ScS**	**02 21 01.8**	**+3.0**
BJI				SS	**SS**	**02 27 09.6**	**+2.1**
BJI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BJI				pmax	pmax		
	comp=Z,75nm,3.5s						
BJI				LR	LR		
	comp=Z,710nm,25.9s						
BJI				LR	LR		
	comp=Z,550nm,30.6s						
BJI				LR	LR		
	comp=Z,2µm,32.5s						
PB14	**IPOC Station P**	**92.29**	**120**	IAMs_20	IAMs_20	02 41 05.8	
	comp=Z,3µm,21.0s						
TXAR	**Lajitas Array**	**92.39**	**57**	P	**P**	**02 09 57.5**	**+2.2**
	comp=Z,2.0nm,1.0s,baz=211,slow=4.4,SNR=7.5						
TXAR				LR	LR	02 46 40.2	
	comp=Z,2µm,18.3s,baz=230,slow=32						
	comp=Z,2.0nm,1.0s						
TXAR	**Lajitas Array**	**92.39**	**57**	P	**P**	**02 09 56.1**	**+0.8**
MNTX	**Cornudas Mount**	**92.44**	**55**	P	**P**	**02 09 55.3**	**-0.1**
MNTX				IAmb	IAmb	02 10 05.3	
	comp=Z,80nm,1.9s						
DUG	**Dugway, Tooele**	**92.47**	**44**	IAMs_20	IAMs_20	02 45 46.2	
	comp=Z,3µm,20.0s						
GO02	**Mina Guanaco**	**92.59**	**121**	IAMs_20	IAMs_20	02 41 12.8	
	comp=Z,3µm,22.0s						
MA2	**Magadan**	**92.62**	**345**	LR	LR	02 43 14.7	
	comp=Z,1µm,21.2s,baz=154,slow=30						
MA2	**Magadan**	**92.62**	**345**	IAMs_20	IAMs_20	02 45 24.1	
	comp=Z,3µm,22.0s						
SEW	**Seward**	**92.70**	**14**	IAMs_20	IAMs_20	02 45 46.7	
	comp=Z,3µm,20.0s						
MFID	**Camas Ranch**	**92.71**	**40**	P	**P**	**02 09 57.3**	**+0.8**
MFID				IAmb	IAmb	02 10 07.3	
	comp=Z,35nm,1.1s						
BBB	**Bella Bella**	**92.75**	**28**	LR	LR	02 42 50.1	
	comp=Z,2µm,21.8s,baz=230,slow=30						
PB10	**IPOC Station P**	**92.80**	**119**	IAMs_20	IAMs_20	02 41 24.3	
	comp=Z,3µm,21.0s						
BMO	**Blue Mountains**	**92.81**	**39**	P	**P**	**02 09 56.9**	**0.0**
BMO				IAMs_20	IAMs_20	02 50 12.9	
	comp=Z,2µm,20.0s						
BMO	**Blue Mountains**	**92.81**	**39**	P	**P**	**02 09 56.9**	**0.0**
BMO				pmax	pmax		
	comp=Z,17nm,1.0s						
BMO				MLR	MLR		
	comp=Z,2µm,20.0s						
CMAR	**Chiang Mai Arr**	**92.85**	**290**	P	**P**	**02 09 58.5**	**+1.0**
	comp=Z,1.1nm,0.3s,baz=137,slow=3.5,SNR=10						
CMAR				PP	**PP**	**02 13 36.3**	**-4.0**
	comp=Z,1.2nm,0.3s,baz=125,slow=5.0,SNR=6.5						
CMAR				LR	LR	02 54 14.6	
	comp=Z,557nm,19.7s,baz=135,slow=37						
	comp=Z,1.1nm,0.3s						
CMAR	**Chiang Mai Arr**	**92.85**	**290**	P	**P**	**02 09 56.6**	**-1.0**
CMIG	**Matias Romero**	**92.93**	**72**	LR	LR	02 41 17.0	
	comp=Z,1µm,21.9s,baz=239,slow=29						
O22K	**Cooper Landing**	**92.99**	**14**	IAMs_20	IAMs_20	02 46 38.3	
	comp=Z,2µm,20.0s						
CHTO	**Chiang Mai**	**93.03**	**290**	P	**P**	**02 09 59.9**	**+1.5**
CHTO	**Chiang Mai**	**93.03**	**290**	P	**P**	**02 10 01.6**	**+3.2**
KMI	**Kunming**	**93.22**	**297**	P	**P**	**02 10 01.6**	**+2.2**
KMI				PP	**PP**	**02 13 45.4**	**+2.1**
KMI				S	S	02 21 11.8	+5.3
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,230nm,6.8s						
KMI				LR	LR		
	comp=Z,500nm,20.7s						
KMI				LR	LR		
	comp=Z,1µm,19.8s						
KMI				LR	LR		
	comp=Z,1µm,20.9s						
MVCO	**Mesa Verde**	**93.42**	**49**	IAMs_20	IAMs_20	02 45 50.1	
	comp=Z,3µm,18.0s						
XAN	**Xi'an**	**93.45**	**307**	⇑P	**P**	**02 09 58.8**	**-1.3**
XAN				pP	pwP	02 10 09.4	+2.4
XAN				SKS	**SKSac**	**02 20 36.5**	**+2.4**
XAN				S	**S**	**02 21 06.8**	**-1.0**
XAN				pmax	pmax		
	comp=Z,15nm,1.0s						
XAN				pmax	pmax		
	comp=Z,250nm,5.3s						
XAN				LR	LR		
	comp=Z,2µm,20.6s						
XAN				LR	LR		
	comp=Z,1µm,19.9s						
XAN				LR	LR		
	comp=Z,2µm,22.7s						
ANMO	**Albuquerque**	**93.50**	**52**	LR	LR	02 46 48.6	
	comp=Z,2µm,18.4s,baz=232,slow=32						
ANMO	**Albuquerque**	**93.50**	**52**	P	**P**	**02 10 00.8**	**+0.3**
ANMO				IAmb	IAmb	02 10 11.4	
	comp=Z,38nm,1.4s						
ANMO	**Albuquerque**	**93.50**	**52**	IAMs_20	IAMs_20	02 45 04.8	
	comp=Z,3µm,18.0s						
ANMO	**Albuquerque**	**93.50**	**52**	P	**P**	**02 10 00.8**	**+0.3**
ANMO				pmax	pmax		
	comp=Z,39nm,1.5s						
RC01	**Rabbit Creek A**	**93.54**	**14**	IAMs_20	IAMs_20	02 46 54.9	
	comp=Z,2µm,20.0s						
HLID	**Hailey**	**93.60**	**41**	P	**P**	**02 10 00.6**	**-0.1**
HLID				IAMs_20	IAMs_20	02 50 11.9	
	comp=Z,2µm,18.0s						
K17K	**Iditarod**	**93.60**	**9**	IAMs_20	IAMs_20	02 44 35.5	
	comp=Z,2µm,22.0s						
PWL	**Port Wells**	**93.62**	**14**	IAMs_20	IAMs_20	02 46 02.1	
	comp=Z,3µm,20.0s						
J16K	**Anvik River**	**93.85**	**8**	P	**P**	**02 10 00.7**	**-0.4**
J16K				IAMs_20	IAMs_20	02 44 55.9	
	comp=Z,2µm,20.0s						
GLI	**Glacier Island**	**93.91**	**15**	IAMs_20	IAMs_20	02 45 18.8	
	comp=Z,3µm,20.0s						
NNA	**Nana**	**93.95**	**106**	LR	LR	02 42 27.7	
	comp=Z,2µm,21.0s,baz=247,slow=29						
NNA	**Nana**	**93.95**	**106**	IAMs_20	IAMs_20	02 41 29.7	
	comp=Z,3µm,22.0s						
PB06	**IPOC Station P**	**94.00**	**119**	IAMs_20	IAMs_20	02 42 00.1	
	comp=Z,4µm,22.0s						
SKT	**Skwentna**	**94.01**	**12**	IAMs_20	IAMs_20	02 44 22.2	
	comp=Z,4µm,22.0s						
HWUT	**Hardware Ranch**	**94.08**	**44**	P	**P**	**02 10 03.5**	**+0.6**
HWUT				IAmb	IAmb	02 10 25.2	
	comp=Z,31nm,1.5s						
HWUT				IAMs_20	IAMs_20	02 49 29.6	
	comp=Z,3µm,19.0s						
KNK	**Knik Glacier**	**94.10**	**14**	IAMs_20	IAMs_20	02 46 58.6	
	comp=Z,3µm,20.0s						
PB03	**IPOC Station P**	**94.23**	**118**	IAMs_20	IAMs_20	02 42 39.3	
	comp=Z,2µm,22.0s						
PB07	**IPOC Station P**	**94.30**	**118**	IAMs_20	IAMs_20	02 42 28.4	
	comp=Z,3µm,21.0s						
S31K	**Pelican**	**94.31**	**21**	IAMs_20	IAMs_20	02 43 50.7	
	comp=Z,3µm,21.0s						
GHO	**Glory Hole Cre**	**94.33**	**14**	IAMs_20	IAMs_20	02 50 36.6	
	comp=Z,3µm,19.0s						
S32K	**Killisnoo**	**94.44**	**22**	IAMs_20	IAMs_20	02 43 55.2	
	comp=Z,3µm,22.0s						
SML	**Sawmill**	**94.48**	**14**	IAMs_20	IAMs_20	02 47 21.7	
	comp=Z,2µm,20.0s						
BMRM	**Bremner River**	**94.56**	**16**	IAMs_20	IAMs_20	02 44 33.0	
	comp=Z,3µm,22.0s						
ANM	**Nome**	**94.61**	**6**	IAMs_20	IAMs_20	02 49 15.0	
	comp=Z,2µm,20.0s						
L22K	**Petersville**	**94.65**	**12**	IAMs_20	IAMs_20	02 45 18.2	
	comp=Z,4µm,22.0s						
PZH	**PanZhiHua**	**94.70**	**298**	P	P	02 10 11.6	+5.5
PZH				PP	**PP**	**02 13 53.9**	**-0.9**
PZH				S	**S**	**02 21 19.0**	**-0.2**
PZH				SS	**SS**	**02 27 39.8**	**-3.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PZH				pmax	pmax		
	comp=Z,170nm,6.3s						
PZH				LR	LR		
	comp=Z,560nm,19.2s						
PZH				LR	LR		
	comp=Z,530nm,23.5s						
PZH				LR	LR		
	comp=Z,850nm,21.0s						
SCM	**Sheep Creek Mo**	**94.71**	**14**	IAMs_20	IAMs_20	02 44 44.9	
	comp=Z,3µm,21.0s						
TA01	**Diego Aracena**	**94.73**	**117**	IAMs_20	IAMs_20	02 42 46.6	
	comp=Z,3µm,22.0s						
PB09	**IPOC Station P**	**94.76**	**118**	IAMs_20	IAMs_20	02 42 45.4	
	comp=Z,4µm,22.0s						
S22A	**4UR Ranch, Cre**	**94.82**	**49**	IAMs_20	IAMs_20	02 45 46.6	
	comp=Z,3µm,20.0s						
AF01	**San Pedro de A**	**94.91**	**120**	IAMs_20	IAMs_20	02 43 34.3	
	comp=Z,3µm,21.0s						
VRDI	**Verde Repeater**	**95.06**	**16**	IAMs_20	IAMs_20	02 45 20.3	
	comp=Z,3µm,21.0s						
NEW	**Newport**	**95.11**	**36**	LR	LR	02 44 27.3	
	comp=Z,3µm,21.9s,baz=228,slow=30						
HMBC	**Humberstone**	**95.11**	**117**	IAMs_20	IAMs_20	02 42 48.6	
	comp=Z,3µm,22.0s						
N25K	**Chitina, Valde**	**95.12**	**15**	IAMs_20	IAMs_20	02 45 13.8	
	comp=Z,3µm,21.0s						
ATAH	**Atahualpa**	**95.12**	**101**	LR	LR	02 42 35.1	
	comp=Z,2µm,21.7s,baz=239,slow=29						
GLB	**Gilahina Butte**	**95.16**	**16**	IAMs_20	IAMs_20	02 44 29.0	
	comp=Z,3µm,20.0s						
M24K	**Tolsona, Glenn**	**95.21**	**15**	IAMs_20	IAMs_20	02 47 19.0	
	comp=Z,2µm,19.0s						
P29M	**Windy Craggy**	**95.23**	**19**	IAMs_20	IAMs_20	02 47 40.6	
	comp=Z,3µm,19.0s						
MCARA	**McCarthy VSAT**	**95.30**	**16**	IAMs_20	IAMs_20	02 45 26.6	
	comp=Z,3µm,20.0s						
SEY	**Seymchan**	**95.31**	**347**	LR	LR	02 45 34.9	
	comp=Z,2µm,21.6s,baz=150,slow=31						
SEY	**Seymchan**	**95.31**	**347**	*i*P	**P**	**02 10 08.8**	**+1.0**
SEY				pmax	pmax		
	comp=Z,9.0nm,1.3s						
LOGN	**Logan Glacier**	**95.33**	**17**	IAMs_20	IAMs_20	02 45 27.5	
	comp=Z,3µm,20.0s						
TNA	**Tin City**	**95.40**	**4**	IAMs_20	IAMs_20	02 49 30.8	
	comp=Z,3µm,19.0s						
CD2	**Chengdu**	**95.45**	**302**	P	**P**	**02 10 09.6**	**+0.3**
CD2				S	**S**	**02 21 23.6**	**-1.8**
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
CD2				pmax	pmax		
	comp=Z,190nm,6.4s						
CD2				LR	LR		
	comp=Z,1µm,15.9s						
CD2				LR	LR		
	comp=Z,890nm,17.8s						
CD2				LR	LR		
	comp=Z,1µm,19.0s						
HHC	**Hu-ho-hao-te**	**95.55**	**314**	*e*P	**P**	**02 10 10.3**	**+0.7**
HHC				sP	sP	02 10 17.1	+1.8
HHC				SKS	**SKSac**	**02 20 48.9**	**+3.7**
HHC				S	**ScS**	**02 21 27.4**	**+0.7**
HHC				sS	pS	02 21 31.6	+0.1
HHC				SS	**SS**	**02 27 58.3**	**+3.2**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,62nm,4.5s						
HHC				LR	LR		
	comp=Z,1µm,22.1s						
HHC				LR	LR		
	comp=Z,1µm,23.0s						
HHC				LR	LR		
	comp=Z,3µm,22.1s						
KTH	**Kantishna Hill**	**95.57**	**12**	IAMs_20	IAMs_20	02 45 34.4	
	comp=Z,2µm,21.0s						
PB11	**IPOC Station P**	**95.58**	**116**	IAMs_20	IAMs_20	02 41 55.4	
	comp=Z,3µm,21.0s						
APG	**El Apazote**	**95.59**	**76**	LR	LR	02 42 50.4	
	comp=Z,81nm,21.9s,baz=264,slow=29						
J20K	**Nowinta River**	**95.60**	**10**	IAMs_20	IAMs_20	02 44 34.2	
	comp=Z,2µm,22.0s						
FXWY	**Fox Creek**	**95.60**	**42**	IAMs_20	IAMs_20	02 51 37.0	
	comp=Z,3µm,18.0s						
SNOW	**Snow King Moun**	**95.66**	**43**	IAMs_20	IAMs_20	02 49 17.4	
	comp=Z,3µm,20.0s						
PB12	**IPOC Station P**	**95.70**	**115**	IAMs_20	IAMs_20	02 42 43.4	
	comp=Z,4µm,22.0s						
PB08	**IPOC Station P**	**95.76**	**117**	IAMs_20	IAMs_20	02 43 19.0	
	comp=Z,3µm,21.0s						
F15K	**North Star Dit**	**95.80**	**6**	IAMs_20	IAMs_20	02 48 06.3	
	comp=Z,2µm,19.0s						
DHY	**Denali Highway**	**95.82**	**14**	IAMs_20	IAMs_20	02 51 12.1	
	comp=Z,2µm,19.0s						
AP01	**Chacalluta**	**95.82**	**115**	IAMs_20	IAMs_20	02 43 08.7	
	comp=Z,3µm,21.0s						
LOHW	**Long Hollow**	**95.84**	**43**	IAMs_20	IAMs_20	02 49 59.1	
	comp=Z,3µm,19.0s						
H18K	**Honhosa River**	**95.93**	**8**	IAMs_20	IAMs_20	02 45 46.7	
	comp=Z,2µm,22.0s						
BW06	**Boulder Array**	**95.96**	**44**	IAMs_20	IAMs_20	02 52 25.6	
	comp=Z,2µm,20.0s						
PD31	**Pinedale Array**	**95.96**	**44**	P	**P**	**02 10 11.3**	**-0.3**
PDAR	**Pinedale Array**	**95.96**	**44**	P	**P**	**02 10 13.5**	**+1.9**
	comp=Z,1.0nm,0.9s,baz=227,slow=3.7,SNR=6.7						
PDAR				PKKPbc	**PKKPbc**	**02 26 59.4**	**-1.4**
	comp=Z,0.7nm,0.9s,baz=96,slow=4.6,SNR=4.4						
PDAR				LR	LR	02 49 59.7	
	comp=Z,1µm,18.0s,baz=231,slow=33						
	comp=Z,1.0nm,0.9s						
PDAR	**Pinedale Array**	**95.96**	**44**	P	**P**	**02 10 12.2**	**+0.6**
GO01	**Chusmiza**	**96.00**	**117**	IAMs_20	IAMs_20	02 46 44.2	
	comp=Z,2µm,19.0s						
BPAW	**Bear Paw Mtn.**	**96.06**	**12**	IAMs_20	IAMs_20	02 45 01.4	
	comp=Z,2µm,22.0s						
PAX	**Paxson**	**96.13**	**14**	IAMs_20	IAMs_20	02 45 39.4	
	comp=Z,4µm,22.0s						
M26K	**Nabesna, AK**	**96.19**	**16**	IAMs_20	IAMs_20	02 45 28.0	
	comp=Z,3µm,21.0s						
M27K	**Edge Creek, AK**	**96.42**	**16**	IAMs_20	IAMs_20	02 46 55.2	
	comp=Z,3µm,20.0s						
TNCH	**TengChong**	**96.47**	**295**	*e*P	**P**	**02 10 15.8**	**+1.6**
TNCH				PP	**PP**	**02 14 08.4**	**-0.2**
TNCH				S	S	02 21 25.4	-9.3
TNCH				sS	pS	02 21 40.8	+0.6
TNCH				SS	**SS**	**02 28 05.0**	**-3.8**
TNCH				pmax	pmax		
	comp=Z,260nm,4.0s						
TNCH				LR	LR		
	comp=Z,950nm,17.5s						
TNCH				LR	LR		
	comp=Z,940nm,17.2s						
TNCH				LR	LR		
	comp=Z,2µm,21.7s						
PB16	**IPOC Station P**	**96.50**	**115**	IAMs_20	IAMs_20	02 43 08.6	
	comp=Z,3µm,21.0s						
735A	**Kenedy**	**96.50**	**61**	IAMs_20	IAMs_20	02 46 22.7	
	comp=Z,2µm,20.0s						
O30N	**Mendenhall**	**96.64**	**19**	IAMs_20	IAMs_20	02 47 50.0	
	comp=Z,3µm,20.0s						
L26K	**Log Cabin Wild**	**96.65**	**15**	IAMs_20	IAMs_20	02 47 36.2	
	comp=Z,3µm,20.0s						
DLBC	**Dease Lake**	**96.72**	**23**	LR	LR	02 49 25.4	
	comp=Z,2µm,18.0s,baz=216,slow=33						
ISCO	**Idaho Springs**	**96.75**	**48**	IAMs_20	IAMs_20	02 46 12.6	
	comp=Z,2µm,20.0s						
AMTX	**Amarillo**	**96.77**	**54**	IAMs_20	IAMs_20	02 46 45.4	
	comp=Z,3µm,20.0s						
K24K	**Donnelly Dome**	**96.80**	**14**	IAMs_20	IAMs_20	02 48 32.0	
	comp=Z,3µm,20.0s						
NEA2	**Nenana**	**96.86**	**12**	IAMs_20	IAMs_20	02 48 28.5	
	comp=Z,3µm,20.0s						
N30M	**Aishikik Lake**	**96.91**	**19**	IAMs_20	IAMs_20	02 48 28.3	
	comp=Z,3µm,20.0s						
WRH	**Wood River Hil**	**96.93**	**13**	IAMs_20	IAMs_20	02 46 26.5	
	comp=Z,4µm,22.0s						
PB18	**Visviri**	**96.93**	**115**	IAMs_20	IAMs_20	02 44 19.3	
	comp=Z,3µm,20.0s						
DOT	**Dot Lake**	**97.03**	**15**	IAMs_20	IAMs_20	02 45 56.2	
	comp=Z,3µm,22.0s						
L27K	**Beaver Creek,**	**97.03**	**16**	IAMs_20	IAMs_20	02 46 26.5	
	comp=Z,3µm,21.0s						
N31M	**Braeburn, Yuko**	**97.30**	**19**	IAMs_20	IAMs_20	02 45 11.7	
	comp=Z,3µm,22.0s						
I23K	**Minto, Yukon-K**	**97.31**	**12**	IAMs_20	IAMs_20	02 49 25.4	
	comp=Z,3µm,19.0s						
SCRK	**Sand Creek**	**97.33**	**15**	IAMs_20	IAMs_20	02 46 27.3	
	comp=Z,3µm,21.0s						
COLA	**College**	**97.34**	**13**	P	Pdif	02 10 19.1	+2.1
IMAR	**Indian Mountai**	**97.35**	**10**	P	Pdif	02 10 18.1	+1.0
ILAR	**Eielson Array**	**97.43**	**13**	P	Pdif	02 10 18.3	+0.8
	comp=Z,0.6nm,1.0s,baz=220,slow=4.7,SNR=11						
ILAR				PKKPbc	**PKKPbc**	**02 26 54.2**	**-3.1**
	comp=Z,0.5nm,0.9s,baz=207,slow=1.0,SNR=3.5						
ILAR				LR	LR	02 46 51.3	
	comp=Z,3µm,21.7s,baz=204,slow=31						
	comp=Z,0.6nm,1.0s						
J25K	**Salcha River,**	**97.60**	**14**	P	Pdif	02 10 18.4	+0.1
J25K				IAMs_20	IAMs_20	02 52 27.1	
	comp=Z,2µm,19.0s						
H22K	**Ishtalitna Cre**	**97.64**	**11**	IAMs_20	IAMs_20	02 45 49.2	
	comp=Z,2µm,22.0s						
K27K	**Chicken**	**97.81**	**15**	IAMs_20	IAMs_20	02 47 20.6	
	comp=Z,3µm,21.0s						
H23K	**Yukon River**	**97.89**	**12**	IAMs_20	IAMs_20	02 49 55.8	
	comp=Z,2µm,20.0s						
M30M	**Minto, Yukon**	**97.91**	**18**	IAMs_20	IAMs_20	02 44 54.6	
	comp=Z,3µm,22.0s						
JTS	**Las Juntas de**	**98.03**	**83**	LR	LR	02 44 55.0	
	comp=Z,2µm,20.4s,baz=240,slow=29						
JTS	**Las Juntas de**	**98.03**	**83**	IAMs_20	IAMs_20	02 45 02.7	
	comp=Z,2µm,20.0s						
LZH	**Lanzhou**	**98.06**	**307**	*e*P	Pdif	02 10 23.3	+2.1
LZH				pP	pwP	02 10 29.8	+1.7
LZH				SKS	**SKSac**	**02 21 01.6**	**+3.0**
LZH				S	**S**	**02 21 46.3**	**-1.6**
LZH				SS	**SS**	**02 28 30.6**	**-0.4**
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
LZH				LR	LR		
	comp=Z,890nm,21.0s						
LZH				LR	LR		
	comp=Z,990nm,21.6s						
LZH				LR	LR		

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      comp=Z,2µm,22.0s
LZDM  Lanzhou Array    98.10 307   LR       LR       02 50 31.3
      comp=Z,743nm,22.0s,baz=85,slow=33
H24K  Noodor Dome      98.20  12   IAMs_20  IAMs_20  02 47 50.0
      comp=Z,3µm,20.0s
BILL  Bilibino         98.21 354   IAMs_20  IAMs_20  02 49 21.2
      comp=Z,3µm,20.0s
BILL  Bilibino         98.21 354 i P        Pdif     02 10 22.4 +1.5
BILL                               pmax     pmax
      comp=Z,5.0nm,1.3s
BILL                               MLR      MLR
      comp=Z,708nm,19.0s
RDOG  Red Dog Mine     98.25   6   IAMs_20  IAMs_20  02 49 34.1
      comp=Z,2µm,20.0s
E19K  Redstone River   98.27   8   IAMs_20  IAMs_20  02 56 38.6
      comp=Z,2µm,18.0s
HKT   Hockley          98.54  60   IAMs_20  IAMs_20  02 50 25.8
      comp=Z,2µm,20.0s
I26K  Coal Creek Min   98.67  14   IAMs_20  IAMs_20  02 47 39.3
      comp=Z,2µm,20.0s
LPAZ  La Paz           98.73 114   LR       LR       02 45 56.5
      comp=Z,1µm,21.1s,baz=224,slow=30
LPAZ  La Paz           98.73 114 eP         Pdif     02 10 28.9 +3.6
EGMT  Eagleton         98.88  39   IAMs_20  IAMs_20  02 54 39.5
      comp=Z,2µm,18.0s
C18K  Utukok River     98.98   6   IAMs_20  IAMs_20  02 47 14.6
      comp=Z,2µm,20.0s
G24K  Hadweenzic Riv   99.05  12   IAMs_20  IAMs_20  02 47 53.4
      comp=Z,3µm,22.0s
D19K  Kuna River       99.16   7   IAMs_20  IAMs_20  02 48 06.0
      comp=Z,3µm,22.0s
I27K  Kandik River     99.26  15   IAMs_20  IAMs_20  02 47 58.1
      comp=Z,3µm,21.0s
C19K  Lookout Ridge    99.58   7   IAMs_20  IAMs_20  02 47 46.4
      comp=Z,3µm,22.0s
E21K  Killik River     99.62   9   IAMs_20  IAMs_20  02 48 14.3
      comp=Z,3µm,22.0s
E22K  Anaktuvuk Pass   99.64  10   IAMs_20  IAMs_20  02 48 47.0
      comp=Z,2µm,21.0s
F24K  Squaw Lake       99.71  11   IAMs_20  IAMs_20  02 56 19.8
      comp=Z,2µm,20.0s
H27K  Steamboat Moun   99.81  14   IAMs_20  IAMs_20  02 48 14.7
      comp=Z,3µm,20.0s
I29M  Ogilvie Camp,    99.81  16   IAMs_20  IAMs_20  02 48 43.7
      comp=Z,3µm,20.0s
G26K  Porcupine Rive   99.96  13   IAMs_20  IAMs_20  02 46 48.8
      comp=Z,3µm,22.0s
RSSD  Black Hills     100.06  45   IAMs_20  IAMs_20  02 52 44.1
      comp=Z,2µm,18.0s
G27K  Doyon Strip     100.28  14   IAMs_20  IAMs_20  02 50 43.0
      comp=Z,2µm,19.0s
TOLK  Toolik Lake Re  100.44  10   IAMs_20  IAMs_20  02 58 43.3
      comp=Z,2µm,18.0s
F26K  Sheenjek River  100.54  13   IAMs_20  IAMs_20  02 47 51.9
      comp=Z,3µm,22.0s
YAK   Yakutsk         100.56 338 i P        Pdif     02 10 28.5 -2.9
YAK                                pmax     pmax
      comp=Z,7.0nm,0.7s
D23K  Nanushuk River  100.57  10   IAMs_20  IAMs_20  02 50 10.7
      comp=Z,3µm,18.0s
R32A  Long Quarter,   100.62  52   IAMs_20  IAMs_20  02 51 40.2
      comp=Z,2µm,18.0s
B21K  Ikpikpuk River  100.64   8   IAMs_20  IAMs_20  02 48 16.4
      comp=Z,3µm,22.0s
B20K  Meade River     100.71   7   IAMs_20  IAMs_20  02 49 30.9
      comp=Z,2µm,22.0s
OK052 Battle Ridge R  100.76  55   IAMs_20  IAMs_20  02 52 38.3
      comp=Z,3µm,21.0s
H31M  Peel River      101.14  17   IAMs_20  IAMs_20  02 48 43.1
      comp=Z,3µm,22.0s
F28M  Old Crow        101.33  14   IAMs_20  IAMs_20  02 51 04.9
      comp=Z,3µm,20.0s
C23K  Itkillik River  101.38  10   IAMs_20  IAMs_20  02 49 31.9
      comp=Z,3µm,20.0s
E27K  Coleen River    101.46  13   IAMs_20  IAMs_20  02 48 53.3
      comp=Z,2µm,21.0s
D25K  Kavik River     101.57  11   IAMs_20  IAMs_20  02 49 51.1
      comp=Z,2µm,22.0s
E28M  Babbage River   102.23  14   IAMs_20  IAMs_20  02 48 20.6
      comp=Z,2µm,22.0s
F30M  Barrier River   102.23  15   IAMs_20  IAMs_20  02 50 22.8
      comp=Z,3µm,21.0s
DGMT  Dagmar          102.24  41   IAMs_20  IAMs_20  02 53 48.4
      comp=Z,2µm,20.0s
C27K  Jago River      102.30  12   IAMs_20  IAMs_20  02 49 25.4
      comp=Z,3µm,22.0s
E29M  Blow River      102.39  14   IAMs_20  IAMs_20  02 51 19.0
      comp=Z,3µm,21.0s
BGNE  Belgrade        102.44  49   IAMs_20  IAMs_20  02 49 36.5
      comp=Z,2µm,22.0s
SONM  Songino Array   102.45 318   PKKPbc   PKKPbc   02 26 40.3 -2.1
      comp=Z,0.5nm,0.7s,baz=280,slow=2.5,SNR=3.9
D27M  Malcolm River   102.48  13   IAMs_20  IAMs_20  02 49 04.2
      comp=Z,3µm,22.0s
GTA   Gaotai          102.48 308 eP         Pdif     02 10 48.3 +7.6
GTA                                sP       sPdif    02 11 02.6  +16
GTA                                PP       PP       02 14 57.3 +3.2
GTA   Gaotai          102.48 308   SS       SS       02 29 35.0 +2.6
GTA                                pmax     pmax
      comp=Z,5.0nm,0.9s
GTA                                LR       LR
      comp=N,830nm,22.7s
GTA                                LR       LR
      comp=E,1µm,21.5s
GTA                                LR       LR
      comp=Z,2µm,24.3s
PALK  Pallekele       102.99 271   IAMs_20  IAMs_20  02 56 08.8
      comp=Z,2µm,20.0s
143A  Socs Landing,   103.18  60   IAMs_20  IAMs_20  02 51 03.4
      comp=Z,3µm,20.0s
N35A  Tabor           103.86  51   IAMs_20  IAMs_20  02 53 41.0
      comp=Z,3µm,18.0s
ECSD  EROS Data Cent  104.54  48   IAMs_20  IAMs_20  02 52 27.7
      comp=Z,3µm,20.0s
MDND  Maddock         104.60  43   IAMs_20  IAMs_20  02 56 30.1
      comp=Z,3µm,19.0s
YKA   Yellowknife Ar  105.07  26   PP       PP       02 15 13.8 +1.1
      comp=Z,0.5nm,0.8s,baz=242,slow=8.4,SNR=5.5
YKA                                PKKPbc   PKKPbc   02 26 31.3 -3.5
      comp=Z,1.1nm,1.0s,baz=32,slow=3.3,SNR=5.4
F33A  5 Mile Ranch,   105.70  46   IAMs_20  IAMs_20  02 55 06.2
      comp=Z,3µm,21.0s
Z47A  Carrollton      105.91  61   IAMs_20  IAMs_20  02 53 46.8
      comp=Z,3µm,21.0s
C36M  Paulatuk        106.42  17   IAMs_20  IAMs_20  02 52 51.5
      comp=Z,2µm,20.0s
MTDJ  Mount Denham    108.06  79   IAMs_20  IAMs_20  02 49 29.3
      comp=Z,3µm,22.0s
SPB   Sao Paulo       109.05 133   IAMs_20  IAMs_20  02 53 05.6
      comp=Z,3µm,22.0s
HMDM  Hanimaadhoo     109.28 267   IAMs_20  IAMs_20  03 00 13.5
      comp=Z,2µm,20.0s
HYB   Hyderabad       109.51 279 ePKiKP     PKiKP    02 15 15.1 -0.5
HYB                              eSKSac     SKSac    02 21 51.1 -0.9
SDV   Santo Domingo   109.78  91   IAMs_20  IAMs_20  02 52 15.0
      comp=Z,2µm,21.0s
W52A  Murphy          109.82  60   IAMs_20  IAMs_20  02 54 23.3
      comp=Z,2µm,20.0s
T50A  Nancy           109.88  58   IAMs_20  IAMs_20  02 54 32.9
      comp=Z,2µm,20.0s
H43A  Windswept, Lux  110.64  50   IAMs_20  IAMs_20  03 01 46.3
      comp=Z,3µm,20.0s
L46A  Eue Claire      110.73  53   IAMs_20  IAMs_20  02 57 10.9
      comp=Z,2µm,20.0s
I45A  Fountain        111.51  51   IAMs_20  IAMs_20  02 55 33.3
      comp=Z,2µm,18.0s
KMSC  Kings Mountain  111.80  61   IAMs_20  IAMs_20  03 02 21.9
      comp=Z,2µm,20.0s
Y57A  Sumter          112.11  63   IAMs_20  IAMs_20  02 58 22.1
      comp=Z,2µm,20.0s
V55A  Taylorsville    112.15  60   IAMs_20  IAMs_20  02 55 32.1
      comp=Z,3µm,20.0s
WMQ   Urumqi          112.56 309   PKP      PKiKP    02 15 20.3 -0.4
WMQ                                PP       PP       02 16 11.5 +3.7
WMQ                                SKS      SKSdf    02 22 30.1 -2.2
WMQ                                SS       SS       02 31 43.0 -5.8
WMQ                                AMB      AMB
      comp=Z,250nm,5.1s
WMQ                                LR       LR
      comp=Z,540nm,23.5s
WMQ                                LR       LR
      comp=Z,680nm,21.3s
WMQ                                LR       LR
      comp=Z,720nm,19.1s
Y58A  Scranton        112.63  63   IAMs_20  IAMs_20  02 56 26.9
      comp=Z,2µm,21.0s
V58A  Windy Hill, Pi  113.73  61   IAMs_20  IAMs_20  02 58 48.7
      comp=Z,2µm,20.0s
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Y60A  Bolivia          113.79  63   IAMs_20  IAMs_20  02 57 22.5
      comp=Z,2µm,19.0s
ABPO  Ambohimpanom     114.49 228   IAMs_20  IAMs_20  02 54 14.3
      comp=Z,3µm,20.0s
Q56A  Snyder Ridge,    114.77  58   IAMs_20  IAMs_20  02 57 24.1
      comp=Z,3µm,21.0s
ZSN   Zaisan           115.60 312 ePKP       PKPdf    02 15 26.0 -0.3
ZSN   Zaisan           115.60 312 ePKIKP     PKPdf    02 15 26.0 -0.3
V61A  Roper            115.67  62   IAMs_20  IAMs_20  03 00 49.1
      comp=Z,2µm,19.0s
MKAR  Makanchi Array   117.10 310   PKP      PKPdf    02 15 28.1 -1.1
      comp=Z,1.0nm,0.6s,baz=90,slow=1.2,SNR=9.1
MKAR  Makanchi Array   117.10 310            PKPdf    02 15 28.2 -1.0
MKAR  Makanchi Array   117.10 310 ePKIKP     PKPdf    02 15 29.2  0.0
MKAR                                pmax     pmax
      comp=Z,1.0nm,0.6s
MAKZ  Makanchi         117.31 310            PKPdf    02 15 28.1 -1.6
MAKZ  Makanchi         117.31 310   PKIKP    PKPdf    02 15 28.1 -1.6
ZALV  Zalesovo Beam    117.34 319   PKP      PKPdf    02 15 28.1 -1.3
      comp=Z,0.7nm,0.6s,baz=135,slow=0.4,SNR=4.9
ZALV  Zalesovo Beam    117.34 319            PKPdf    02 15 28.5 -0.9
ZALV  Zalesovo Beam    117.34 319 ePKIKP     PKiKP    02 15 29.6 +0.2
ZALV                                pmax     pmax
      comp=Z,1.0nm,0.6s
BOSA  Boshof           117.66 204   PKP      PKPdf    02 15 29.4 -1.8
      comp=Z,6.7nm,1.1s,baz=15,slow=4.1,SNR=3.8
BOSA  Boshof           117.66 204   PKPdf    PKPdf    02 15 30.8 -0.3
BOSA  Boshof           117.66 204   PKIKP    PKPdf    02 15 30.8 -0.3
WUS   Wushi            117.69 304            PKPdf    02 15 29.2 -1.5
MSEY  Mahe Island      118.05 246   IAMs_20  IAMs_20  03 04 55.1
      comp=Z,2µm,20.0s
SHLS  Shalkode         118.06 306 ePKP       PKPdf    02 15 30.1 -1.2
SHLS  Shalkode         118.06 306 ePKIKP     PKPdf    02 15 30.1 -1.2
UZB   Uzynbulak        118.37 306 ePKP       PKPdf    02 15 31.4 -0.6
UZB   Uzynbulak        118.37 306 ePKIKP     PKPdf    02 15 31.3 -0.6
SATY  Saty             118.78 305 ePKP       PKPdf    02 15 32.1 -0.6
SATY                              ePP        PP       02 16 49.1 -2.5
SATY  Saty             118.78 305 ePKIKP     PKPdf    02 15 32.1 -0.6
SATY                              e                   02 16 49.1
TARG  Taragay, Kyrgy   118.86 304            PKPdf    02 15 32.7 -0.6
TARG  Taragay, Kyrgy   118.86 304   PKIKP    PKPdf    02 15 32.7 -0.6
NRIK  Noril'sk         118.94 336   PKP      PKPdf    02 15 30.1 -2.0
      comp=Z,2.3nm,0.3s,baz=0.0,slow=2.0,SNR=4.9
NRIK  Noril'sk         118.94 336 i PKIKP    PKiKP    02 15 33.0 +0.9
TDK   Taldyqorghan     119.27 308 ePKP       PKPdf    02 15 33.0 -0.5
TDK   Taldyqorghan     119.27 308 ePKIKP     PKPdf    02 15 33.0 -0.5
KSH   Kashi            119.61 301   PKP      PKiKP    02 15 35.3 +0.8
KSH                                 LR       LR
      comp=Z,870nm,21.3s
KSH                                 LR       LR
      comp=Z,480nm,18.5s
KSH                                 LR       LR
      comp=Z,940nm,21.6s
MDOK  Medeo            119.77 305 ePKP       PKPdf    02 15 33.9 -0.8
MDOK  Medeo            119.77 305 ePKIKP     PKPdf    02 15 33.8 -0.8
KURK  Kurchatov        120.37 314            PKPdf    02 15 34.0 -1.3
KURK  Kurchatov        120.37 314 i PKIKP    PKPdf    02 15 34.8 -0.5
KURBB Kurchatov Arra   120.41 314   PKP      PKPdf    02 15 33.7 -1.7
      comp=Z,3.8nm,0.6s,baz=107,slow=1.9,SNR=17
NBIT  Itapeh - BA      120.50 133 eP         PKiKP    02 15 38.7 +1.9
MPOM  Morne Pois Mar   120.82  90   IAMs_20  IAMs_20  03 06 03.6
      comp=Z,2µm,18.0s
AAK   Ala-Archa        121.47 304            PKPdf    02 15 37.3 -0.7
AAK   Ala-Archa        121.47 304 i PKIKP    PKPdf    02 15 37.9 -0.1
TULEG Thule            123.31  15            PKPdf    02 15 40.1 -0.1
TULEG                               IAMs_20  IAMs_20  03 01 59.5
      comp=Z,2µm,22.0s
KBL   Kabul            123.64 294            PKPdf    02 15 41.2 -1.2
KBL   Kabul            123.64 294   PKIKP    PKPdf    02 15 41.3 -1.2
MATP  Matopo           123.72 211   PKP      PKiKP    02 15 58.0  +15
      comp=Z,4.1nm,0.7s,baz=110,slow=0.2,SNR=10
GAR   Garm             123.74 299            PKPdf    02 15 41.6 -0.8
DZA   Taraz            123.80 304 ePKP       PKPdf    02 15 41.5 -0.7
DZA   Taraz            123.80 304 ePKIKP     PKPdf    02 15 41.5 -0.7
KGCAE Kacgae           124.01 203   PKPdf    PKPdf    02 15 42.8 -0.7
KK31  Karatay Array    124.43 304            PKPdf    02 15 42.2 -1.3
KK31  Karatay Array    124.43 304   PKIKP    PKPdf    02 15 42.2 -1.3
KKAR  Karatay Array    124.43 304            PKPdf    02 15 42.0 -1.4
KKAR  Karatay Array    124.43 304   PKIKP    PKPdf    02 15 42.0 -1.4
KOOLE Kule             124.53 201            PKPdf    02 15 43.2 -1.3
IUG   Iuzhnay          124.60 303 ePKP       PKPdf    02 15 43.1 -0.8
IUG                               ePP        PP       02 17 28.9 -2.3
IUG   Iuzhnay          124.60 303 ePKIKP     PKPdf    02 15 43.1 -0.8
IUG                               e                   02 17 28.9
BRLS  Borolday         124.91 304 ePKP       PKPdf    02 15 43.8 -0.6
BRLS                              ePP        PP       02 17 31.2 -2.0
BRLS  Borolday         124.91 304 ePKIKP     PKPdf    02 15 43.7 -0.6
BRLS                              e                   02 17 31.2
CHM   Chimkent         124.95 303 ePKP       PKPdf    02 15 43.8 -0.7
CHM   Chimkent         124.95 303 ePKIKP     PKPdf    02 15 43.7 -0.7
BVAR  Borovoye Array   125.72 316   PKP      PKPdf    02 15 44.2 -1.4
      comp=Z,7.2nm,0.8s,baz=94,slow=1.9,SNR=23
GRTLG Ghanzi           125.72 203            PKPdf    02 15 45.8 -1.0
BORK  Borovoye         125.76 316            PKPdf    02 15 44.2 -1.4
BORK  Borovoye         125.76 316c iPKIKP    PKPdf    02 15 45.0 -0.6
BORK                                pmax     pmax
      comp=Z,24nm,1.7s
LSZ   Lusaka           128.35 213   PKP      PKPdf    02 15 51.2 -0.7
      comp=Z,2.3nm,0.7s,baz=106,slow=3.5,SNR=6.9
LSZ   Lusaka           128.35 213   PKPdf    PKPdf    02 15 51.8 -0.1
LSZ   Lusaka           128.35 213   PKIKP    PKPdf    02 15 51.8 -0.1
TSUM  Tsumeb           128.89 200   IAMs_20  IAMs_20  03 10 38.9
      comp=Z,2µm,20.0s
HRA   Herat            129.05 292   PKPdf    PKPdf    02 15 51.9 -0.9
KBS   Kingsbay         130.58 357   IAMs_20  IAMs_20  03 08 43.3
      comp=Z,2µm,20.0s
SVE   Sverdlovsk       131.20 321 i PKIKP    PKiKP    02 15 56.6 -0.2
SVE                                 pmax     pmax
      comp=Z,20nm,1.7s
SVE                                 MLR      MLR
      comp=Z,2µm,22.0s
ABKAR Akbulak array    132.24 311            PKPdf    02 15 57.9 -0.1
ARTI  Arti             132.50 321            PKPdf    02 15 57.4 -0.9
ARTI  Arti             132.50 321 i PKIKP    PKPdf    02 15 58.9 +0.6
ARTI                                                  02 18 18.6
ARTI                                MLR      MLR
      comp=Z,3µm,21.0s
KIBK  Kibwezi          132.71 234   IAMs_20  IAMs_20  03 14 58.3
      comp=Z,2µm,18.0s
KIRV  Kirov            136.62 326c iPKIKP    PKiKP    02 16 08.6 +0.9
APA   Apatity          137.73 342 i PKIKP    PKiKP    02 16 15.0 +5.3
APA                               e                   02 18 52.7
APA                                 MLR      MLR
      comp=Z,3µm,21.4s
ARCES ARCESS Array B   137.93 348   PKP      PKPdf    02 16 08.0 -0.1
      comp=Z,3.6nm,0.9s,baz=13,slow=1.6,SNR=5.8
ARCES ARCESS Array B   137.93 348   PKPdf    PKPdf    02 16 07.8 -0.4
ARCES ARCESS Array B   137.93 348 ePKIKP     PKPdf    02 16 07.6 -0.5
ARCES                               pmax     pmax
      comp=Z,4.0nm,0.9s
LODK  Lodwar           138.62 237   IAMs_20  IAMs_20  03 25 33.6
      comp=Z,1µm,18.0s
BELG  Belogornoye      139.50 317 i PKIKP    PKPdf    02 16 11.3 -0.1
KLMR  Klimovskoe       140.06 332 ePKIKP     PKPdf    02 16 09.7 -2.5
KLMR                              e                   02 19 09.2
KLMR                                PPP      PPP      02 22 14.1
KLMR                                pmax     pmax
      comp=Z,49nm,1.4s
RAYN  Ar Rayn          140.42 272   IAMs_20  IAMs_20  03 12 47.0
      comp=Z,1µm,22.0s
AKT   Akhty            141.14 300 ePKIKP     PKiKP    02 16 16.4 -1.3
AKT                               ePPP       PPP      02 22 18.7
AKT                                 pmax     pmax
      comp=Z,24nm,1.4s
VRH   Novokhopyorsk    143.35 317 ePKIKP     PKPdf    02 16 18.1 -0.3
VRH                                 pmax     pmax
      comp=Z,10.0nm,0.9s
MOS   Moscow           143.63 326 ePKIKP     PKPbc    02 16 16.5 +0.3
MOS                                 pmax     pmax
      comp=Z,38nm,1.4s
MOS                                 MLR      MLR
      comp=E,700nm,21.0s
MOS                                 MLR      MLR
      comp=Z,1µm,21.0s
GOF   Gofitskoye       144.14 307cePKIKP     PKPdf    02 16 19.6 -0.4
PUL   Pulkovo          144.30 335c iPKIKP    PKPbc    02 16 18.3 +0.2
PUL                                 pmax     pmax
      comp=Z,50nm,0.7s
LPSR  Galich'ya Gora   144.41 321 ePKIKP     PKPab    02 16 17.9 -0.5
LPSR                                pmax     pmax
      comp=Z,29nm,0.9s
FIA1  FINESS Array S   144.46 340            PKPab    02 16 18.1 -0.2
FINES FINESS Array B   144.46 340   PKP      PKPab    02 16 18.2 -0.1
      comp=Z,17nm,0.7s,baz=61,slow=2.8,SNR=43
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FINES FINESS Array B   144.46 340            PKPab    02 16 18.3  0.0
KBZ   Khabaz           144.47 305   PKP      PKPbc    02 16 19.5 +0.4
      comp=Z,6.2nm,0.8s,baz=123,slow=2.0,SNR=14
KBZ   Khabaz           144.47 305 ePKIKP     PKPbc    02 16 19.2 +0.1
KBZ                                 pmax     pmax
      comp=Z,6.0nm,0.8s
OBN   Obninsk          144.47 325   PKPdf    PKPab    02 16 18.1 -0.5
OBN   Obninsk          144.47 325c iPKIKP    PKPab    02 16 18.6 +0.1
OBN                               i                   02 16 27.0
OBN                               i SS       SS       02 38 23.4 +1.2
OBN                                 pmax     pmax
      comp=Z,30nm,0.9s
KIV   Kislovodsk       144.58 305   PKPdf    PKPab    02 16 18.8 -0.7
KIV                                 IAMs_20  IAMs_20  03 30 39.4
      comp=Z,1µm,19.0s
KIV   Kislovodsk       144.58 305 i PKIKP    PKPbc    02 16 19.9 +0.2
KIV                                 pmax     pmax
      comp=Z,16nm,1.1s
KIV   Kislovodsk       144.58 305   PKP      PKPdf    02 16 20.5 -0.5
SHA1  Shidzhatmaz      144.64 305c iPKIKP    PKPdf    02 16 21.2  0.0
NSS   Namsos           144.64 352 eP         PKPbc    02 16 19.3 +0.2
NEUR  Neytrino         144.68 304 i PKIKP    PKPdf    02 16 21.9 +0.6
VSR   Storozhevoye     144.84 318 ePKIKP     PKPab    02 16 17.7 -2.4
VSR                                 pmax     pmax
      comp=Z,10.0nm,1.0s
VORD  Divnogorie       144.87 318 ePKIKP     PKPab    02 16 19.2 -0.9
VORD                                pmax     pmax
      comp=Z,10.0nm,1.0s
ERBR  Yeremizino-Bor   145.76 309 ePKIKP     PKPdf    02 16 22.1 -0.7
ERBR                              e                   02 16 25.6
ERBR                              e                   02 19 43.5
ERBR                                pmax     pmax
      comp=Z,226nm,1.3s
ERBR                                MLR      MLR
      comp=N,3µm,27.0s
ERBR                                MLR      MLR
      comp=Z,2µm,24.0s
LABN  Labinsk          145.84 307 ePKP2      PKPbc    02 16 23.4 -0.1
LABN                                pmax     pmax
      comp=Z,71nm,1.3s
VSU   Vasula           146.53 336c iPKP2     PKPbc    02 16 25.0 -0.1
VSU                                 pmax     pmax
      comp=Z,154nm,1.7s
SOC   Sochi            146.76 305 i PKP2     PKPab    02 16 28.2 +0.6
SOC                               e                   02 19 49.8
SOC                               ePPP       PPP      02 23 08.7
SOC                               eSSS       SSS      02 44 16.7
SOC                                 pmax     pmax
      comp=Z,36nm,1.0s
MOL   Molde            147.00 355 eP         PKiKP    02 16 30.3 +1.5
DOMB  Dombas           147.38 353 eP         PKPbc    02 16 27.6 +0.1
AKN   Aaknes           147.42 355 eP         PKPbc    02 16 28.4 +0.8
NC405 NORSAR Array S   147.97 351            PKPbc    02 16 28.8 -0.3
ANN   Anapa            148.07 308 ePKIKP     PKPdf    02 16 25.4 -1.3
ANN                               e                   02 16 28.9
ANN                               e                   02 19 57.4
ANN                                 pmax     pmax
      comp=N,54nm,1.0s
ANN                                 pmax     pmax
      comp=Z,60nm,0.9s
ANN                                 pmax     pmax
      comp=E,43nm,1.0s
ANN                                 MLR      MLR
      comp=N,2µm,21.0s
ANN                                 MLR      MLR
      comp=Z,1µm,20.0s
ANN                                 MLR      MLR
      comp=E,2µm,26.0s
NB2   NORSAR Subarra148.11 351      PKP      PKPbc    02 16 28.7 -0.8
      comp=Z,144nm,1.7s,baz=17,slow=2.6
NB2   NORSAR Subarra148.11 351      PKPab    PKPbc    02 16 28.7 -0.8
      baz=17,slow=2.6
NOA   NORSAR Array B 148.11 351     PKPbc    PKPdf    02 16 27.8 +1.5
      comp=Z,20nm,1.1s,baz=14,slow=4.3,SNR=22
NOA   NORSAR Array B 148.11 351   ePKIKP     PKPdf    02 16 27.5 +1.2
NOA                                 pmax     pmax
      comp=Z,20nm,1.1s
NC602 NORSAR Array S 148.36 351   eP         PKPdf    02 16 27.4 +0.7
HYA   Hoyanger         148.49 356 eP         PKiKP    02 16 31.9  0.0
HFS   Hagfors          148.59 348   PKPbc    PKPbc    02 16 29.4 -1.3
      comp=Z,13nm,0.9s,baz=0.0,slow=0.0,SNR=16
SKAR  Skarslia         148.79 354 eP         PKiKP    02 16 32.2 -0.5
MNK   Minsk            148.88 330 i PKP2     PKPbc    02 16 32.3 +0.7
MNK                               i SS       SS       02 39 13.2 +1.2
MNK                                 pmax     pmax
      comp=Z,31nm,0.9s
MNK                                 pmax     pmax
      comp=E,9.0nm,0.8s
MNK                                 pmax     pmax
      comp=N,9.0nm,0.9s
MNK                                 MLR      MLR
      comp=E,855nm,20.0s
MNK                                 MLR      MLR
      comp=Z,1µm,19.0s
MNK                                 MLR      MLR
      comp=N,891nm,19.0s
KONO  Kongsberg        149.66 352 eP         PKPbc    02 16 33.6 +0.2
ODD1  Odda             149.70 355 eP         PKiKP    02 16 34.5 -0.1
PABE  Paberze          149.75 335            PKPbc    02 16 33.2 -0.6
BLS5  Blasjo           150.20 355 eP         PKiKP    02 16 36.3 +0.7
SIM   Simferopol'      150.28 310 ePKIKP     PKPbc    02 16 35.4  0.0
SIM                                 pmax     pmax
      comp=Z,33nm,1.0s
BNN   Bunyan           150.43 297            PKPdf    02 16 29.7 -1.2
AKASG Malin Array Be   150.60 323   PKPbc    PKPbc    02 16 35.0 -0.9
      comp=Z,18nm,0.8s,baz=48,slow=2.5,SNR=34
AKASG Malin Array Be   150.60 323            PKPdf    02 16 30.6 +0.1
AKASG Malin Array Be   150.60 323   PKIKP    PKPdf    02 16 30.6 +0.1
AKBB  Malin Array Si   150.60 323            PKPdf    02 16 30.1 -0.4
AKBB  Malin Array Si   150.60 323   PKIKP    PKPdf    02 16 30.1 -0.4
KIEV  Kiev             150.61 323   IAMs_20  IAMs_20  03 25 01.0
      comp=Z,1µm,21.0s
MMAI  Mount Meron Ar   151.02 285   PKPbc    PKPbc    02 16 37.9 +0.2
      comp=Z,39nm,1.1s,baz=70,slow=5.6,SNR=27
HOMB  Homborsund       151.14 352 eP         PKPbc    02 16 36.9 -0.1
SNART Snartemo         151.21 354 eP         PKPab    02 16 44.4 -0.6
BR131 Keskin Array S   151.98 299   PKPdf    PKPdf    02 16 32.8 -0.5
BR131 Keskin Array S   151.98 299   PKIKP    PKPdf    02 16 32.8 -0.5
BRTR  Keskin Array B   151.98 299   PKP      PKPdf    02 16 33.0 -0.3
      comp=Z,0.6nm,0.8s,baz=134,slow=3.6,SNR=4.2
BRTR                                PKPbc    PKPbc    02 16 39.4 -0.4
      comp=Z,5.1nm,0.9s,baz=127,slow=3.3,SNR=22
BRTR  Keskin Array B   151.98 299            PKPdf    02 16 32.2 -1.0
CSS   Mathiatis        152.75 289   PKPdf    PKPdf    02 16 33.5 -0.8
CSS                                 IAMs_20  IAMs_20  03 23 31.0
      comp=Z,2µm,21.0s
EDA   Edea             152.87 199            PKPdf    02 16 32.4 -2.8
RGN   Rugen            153.86 344   IAMs_20  IAMs_20  03 27 38.7
      comp=Z,1µm,20.0s
TIRR  Tirgusor         154.22 312   IAMs_20  IAMs_20  03 30 09.9
      comp=Z,1µm,20.0s
EKA   Eskdalemuir Ar   154.26   6   PKPbc    PKPbc    02 16 44.0  0.0
      comp=Z,0.8nm,0.7s,baz=325,slow=0.9,SNR=2.0
BORA  Eskisehir        154.35 301            PKPbc    02 16 42.2 -2.7
BURAR Bucovina Array   154.53 321            PKPdf    02 16 35.7 -0.9
ISP   Isparta          154.72 296   IAMs_20  IAMs_20  03 27 45.7
      comp=Z,2µm,22.0s
MLR   Muntele Rosu     155.28 316   IAMs_20  IAMs_20  03 29 13.5
      comp=Z,2µm,21.0s
STHS  Stebnicka Huta   155.37 328 ePKP2      PKPab    02 17 01.3 -1.6
STHS  Stebnicka Huta   155.37 328 ePKP       PKPab    02 17 01.3 -1.6
OJC   Ojcow            155.41 331            PKPdf    02 16 37.0 -0.6
OJC   Ojcow            155.41 331   PKIKP    PKPdf    02 16 37.0 -0.6
DBIC  Dimbokro         156.21 164   PKP      PKPdf    02 16 39.7  0.0
      comp=Z,3.2nm,0.9s,baz=112,slow=2.3,SNR=4.1
DBIC                                PKPab    PKPab    02 17 04.8 -2.5
      comp=Z,5.8nm,0.8s,baz=225,slow=3.4,SNR=3.7
DBIC  Dimbokro         156.21 164            PKPdf    02 16 46.8 +7.1
OKC   Ostrava-Krasne   156.38 333   AMS      AMS      03 26 00.0
      comp=Z,1µm,18.2s
STEB  Steborice        156.45 333 ePKPAB     PKPab    02 17 16.4 +8.9
OSTC  Ostas            156.53 336 ePKP2      PKPab    02 17 10.2 +2.3
OSTC                                MLR      MLR
      comp=Z,2µm,19.8s
OSTC  Ostas            156.53 336 ePKPAB     PKPab    02 17 10.2 +2.3
OSTC                                AMS      AMS      03 29 00.0
      comp=Z,2µm,19.8s
CHVC  Chvalec          156.56 336   AMS      AMS      03 29 10.0
      comp=Z,2µm,24.7s
UPC   Upice            156.64 336 ePKP2      PKPab    02 17 10.1 +1.8
UPC                                 MLR      MLR
      comp=Z,2µm,21.4s
UPC   Upice            156.64 336 ePKPAB     PKPab    02 17 10.1 +1.8
UPC                                 AMS      AMS      03 29 10.0
      comp=Z,2µm,21.4s
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DPC	Dobruska-Polom	156.66	336	*e*PKP2	PKPab	02 17 09.6	+1.1
DPC				MLR	MLR		
	comp=Z,2µm,24.1s						
DPC	Dobruska-Polom	156.66	336	*e*PKPAB	PKPab	02 17 09.6	+1.1
DPC				AMS	AMS	03 29 10.0	
	comp=Z,2µm,24.1s						
MORC	Moravsky Berou	156.67	333	*e*PKP	PKPdf	02 16 40.6	+1.3
KRLC	Kraliky	156.72	335	AMS	AMS	03 35 30.0	
	comp=Z,2µm,24.0s						
CLL	Collm	156.88	342	*i* PKIKP	PKPdf	02 16 41.7	+2.2
CLL				pmax	pmax		
	comp=Z,17nm,1.0s						
CLL				MLR	MLR		
	comp=Z,2µm,22.0s						
JAVC	Velka Javorina	157.34	332	*e*PKP	PKPdf	02 16 41.8	+1.6
HSKC	Hora Svate Kat	157.39	340	*e*PKPAB	PKPab	02 17 19.7	+8.2
HSKC				AMS	AMS	03 28 40.0	
	comp=Z,2µm,23.4s						
VRAC	Vranov	157.41	334	*e*PKP	PKPdf	02 16 41.7	+1.5
PRU	Pruhonice	157.58	338	AMS	AMS	03 27 50.0	
	comp=Z,2µm,20.1s						
KRUC	Moravsky	157.69	334	*e*PKP	PKPdf	02 16 42.4	+1.8
MODS	Modra-Piesok	157.88	331	*e*PKIKP	PKPdf	02 16 48.6	+7.7
MODS				*e*		02 17 13.3	
MODS	Modra-Piesok	157.88	331	*e*PKP	PKPdf	02 16 48.6	+7.7
MODS				*e*		02 17 13.3	
ZVC	Zvikov	158.17	337	AMS	AMS	03 28 20.0	
	comp=Z,2µm,22.0s						
KHC	Kasperske Hory	158.64	338	*e*PKIKP	PKPdf	02 16 39.0	-2.8
KHC				*e*		02 40 57.3	
KHC				*e*		02 47 00.3	
KHC				MLR	MLR		
	comp=Z,2µm,20.4s						
KHC	Kasperske Hory	158.64	338	*e*PKPDF	PKPdf	02 16 39.0	-2.8
KHC				*e*PKPAB	PKPab	02 17 18.5	+1.5
KHC				*e*SS	SS	02 40 57.3	-0.9
KHC				*e*x	x	02 47 00.3	
KHC				AMS	AMS	03 28 40.0	
	comp=Z,2µm,20.4s						
CKRC	Cesky Krumlov	158.66	336	AMS	AMS	03 39 50.0	
	comp=Z,2µm,20.2s						
CONA	Conrad Observa	158.82	333	*e*PKP	PKPab	02 17 18.0	+0.1
	comp=Z,7.5nm,1.1s						
RONA	Rosalia, Austr	158.82	332	*e*PKP	PKPab	02 17 17.8	-0.1
	comp=Z,8.5nm,1.2s						
GERES	GERESS Array B	158.84	337	PKP	PKPdf	02 16 41.3	-0.8
	comp=Z,1.2nm,1.1s,baz=302,slow=3.0,SNR=4.7						
MOA	Molln	159.49	335	*e*PKP	PKPab	02 17 21.2	+0.4
	comp=Z,11nm,1.4s						
BIOA	Bad Ischl, Aus	159.85	336	*e*PKP	PKPab	02 17 22.2	-0.1
	comp=Z,15nm,1.5s						
SOKA	Soboth	160.16	332	*e*pPKP	PKPab	02 17 25.5	+1.7
	comp=Z,15nm,1.5s						
LESA	Schwarzleotal	160.42	337	*e*pPKP	PKPab	02 17 26.0	+1.1
	comp=Z,14nm,1.5s						
MYKA	Terra Mystica	160.75	334	*e*pPKP	PKPab	02 17 27.3	+0.9
	comp=Z,5.2nm,1.3s						
WATA	Walderalm	160.85	339	*e*PKP	PKPab	02 17 27.2	+0.4
	comp=Z,5.0nm,0.7s						
WTTA	Wattenberg	160.90	339	*e*PKP	PKPab	02 17 27.2	+0.1
	comp=Z,3.6nm,0.7s						
RETA	Reutte	160.96	341	*e*pPKP	PKPab	02 17 28.2	+1.0
	comp=Z,11nm,1.1s						
SQTA	Sankt Quirin	161.07	339	*e*pPKP	PKPab	02 17 29.2	+1.4
	comp=Z,9.7nm,1.0s						
DAVA	Damuels	161.39	342	*e*PKP	PKPab	02 17 28.8	-0.4
	comp=Z,14nm,1.6s						
FETA	Feichten	161.40	340	*e*PKP	PKPab	02 17 29.2	0.0
	comp=Z,8.0nm,1.3s						
TORD	Torodi Ar. Bea	163.42	180	PKP	PKPdf	02 16 47.1	-0.8
	comp=Z,2.8nm,1.0s,baz=8.4,slow=2.9,SNR=9.6						
TORD				PKPab	PKPab	02 17 37.8	-0.8
	comp=Z,18nm,0.9s,baz=141,slow=1.6,SNR=20						
TORD				PP	PP	02 21 22.0	-0.4
	comp=Z,2.6nm,0.9s,baz=128,slow=3.4,SNR=4.5						
TORD	Torodi Ar. Bea	163.42	180	PKPdf	PKPdf	02 16 46.1	-1.8
PGAV	Gavieira, Arco	165.50	31	*e*LR	LR	03 14 34.6	
PGAV				*i* IAMs_20	IAMs_20	03 24 49.4	
	comp=Z,1µm,20.0s						
POLO	Lamas de Olo	166.18	31	*e*PKPab	PKPab	02 17 58.6	+8.2
MVO	Moncorvo	166.69	29	*e*LR	LR	03 15 00.8	
MVO				*i* IAMs_20	IAMs_20	03 26 48.0	
	comp=Z,1µm,20.0s						
MTE	Manteigas	167.07	33	*e*PKPab	PKPab	02 18 02.5	+8.2
MTE				*e*LQ	LQ	03 07 01.8	
MTE				*e*LR	LR	03 15 37.0	
MTE				*i* IAMs_20	IAMs_20	03 30 48.3	
	comp=Z,2µm,18.0s						
PSARD	Sardoal	167.38	37	*e*PKPab	PKPab	02 18 03.8	+8.2
PMTG	Montargil	167.73	39	*e*PKPab	PKPab	02 18 05.5	+8.4
PMRV	Marv??o	167.90	35	*e*PKPab	PKPab	02 18 06.5	+8.6
PMRV				*e*LR	LR	03 14 48.8	
PMRV				*i* IAMs_20	IAMs_20	03 43 27.4	
	comp=Z,1µm,20.0s						
PARRA	Arraiolos	168.01	39	*e*PKPab	PKPab	02 18 07.1	+8.6
PESTR	Estremoz	168.22	37	*e*PKPab	PKPab	02 18 07.8	+8.5
EVO	Evora	168.23	40	*e*PKPab	PKPab	02 18 08.2	+8.8
PBAR	Barrancos	169.02	38	*e*PKPab	PKPab	02 18 10.5	+7.6
ESDC	Sonseca Array	169.16	23	PKP	PKPdf	02 16 52.0	+0.2
	comp=Z,1.7nm,1.1s,baz=319,slow=4.3,SNR=4.2						
ESDC	Sonseca Array	169.16	23	PKPdf	PKPdf	02 16 50.8	-0.9
PVAQ	Vaqueiros	169.17	43	*e*LR	LR	03 16 28.9	
PVAQ				*i* IAMs_20	IAMs_20	03 28 12.8	
	comp=Z,2µm,22.0s						
TAM	Tamanrasset	172.17	208	PKPdf	PKPdf	02 16 52.0	-2.0
TAM	Tamanrasset	172.17	208	PKIKP	PKPdf	02 16 52.0	-2.0
MD01	Midelt array s	173.79	59	PKPdf	PKPdf	02 16 53.1	-1.3

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*IDC **18** 02:09:21.8±1.0, 29°.62S×178°.42W, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=38.3km s-min=12.8km az=146.0*

ISC 18 02:09:23.6±0.8**, 29°.8S**±0°.2×**178°.5W**±0°.2**, h10**km**, n12, σ0.41**/10**, mb4.2**/5**, 3C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	0.70	45	Pn	Pb	02 09 37.9	-0.1
	882nm,0.3s,baz=60,slow=23,SNR=9.7						
RAO				Sn	Sg	02 09 46.5	+0.1
	1µm,0.3s,baz=102,slow=22,SNR=23						
STKA	Stephens Creek	34.21	256	P	P	02 16 09.1	-0.4
	2.2nm,0.6s,baz=104,slow=7.1,SNR=4.7						
	2.2nm,0.6s						
ASAR	Alice Springs	42.72	266	P	P	02 17 21.4	+0.3
	0.7nm,0.8s,baz=106,slow=8.5,SNR=5.9						
	0.7nm,0.8s						
WRA	Warramunga Arr	43.65	272	P	P	02 17 29.0	+0.3
	1.2nm,0.5s,baz=111,slow=8.1,SNR=10						
	1.2nm,0.5s						
QSPA	South Pole Qui	60.36	180	P	P	02 19 33.2	+0.5
	1.2nm,0.3s,baz=21,slow=2.2,SNR=6.3						
	1.2nm,0.3s						
TROLL	Troll, Antarti	78.52	180	⇑P	P	02 21 24.7	-0.1
	comp=Z,177nm,0.8s						
SNAA	Sanae	78.81	179	⇑P	P	02 21 25.8	-0.6
	comp=Z,41nm,1.0s						
VNA3	Neumayer Olymp	78.98	176	⇑P	P	02 21 26.8	-0.4
	comp=Z,6.1nm,0.8s						
H03S2	Juan Fernandez	81.18	124	T	T	03 51 06.9	
	baz=239,slow=74,SNR=18						
H03S1	Juan Fernandez	81.19	124	T	T	03 51 17.8	
	baz=239,slow=74,SNR=15						
H03S3	Juan Fernandez	81.20	124	T	T	03 51 05.5	
	baz=239,slow=74,SNR=18						
FINES	FINESS Array B	144.39	340	PKP	PKPdf	02 28 59.5	+0.1
	comp=Z,1.0nm,0.8s,baz=75,slow=1.6,SNR=5.3						

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*SGS **18** 02:18:42.6, 27°.96N×34°.49E, h16km, Ml1.3*
*HLW **18** 02:18:42.7, 27°.97N×34°.36E, h22km±2km, Md2.5, Ml2.4*

ISC 18 02:18:41.0±1.0**, 27°.96N**±0°.05×**34°.48E**±0°.04**, h15**km**, n16, σ0.47**/18**, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSHS		0.44	39	P	Pb	02 18 51.3	+0.8
RSHS				S	Sb	02 18 57.4	+0.6
TR1	Tor 1	0.47	276	P	Pb	02 18 50.9	-0.2
KRABS	KRABS	0.69	78	P	Pb	02 18 55.3	+0.5
HKAT	Jabal Katrina	0.71	322	P	Pb	02 18 55.2	0.0
BDAS	Al Bad`	0.72	49	P	Pb	02 18 55.5	+0.2
AYUS	`Aynunah	0.73	72	P	Pn	02 18 55.9	-0.9
HDHB	Dhahab	0.77	9	P	Pn	02 18 57.5	+0.2
TR2	Tor 2	0.79	302	P	Pg	02 18 56.4	-0.1
NUB	Nuweibaa	1.07	8	P	Pg	02 19 01.4	-0.3
HHRG	Al Ghardaqah	1.10	228	P	Pg	02 19 02.2	0.0
HHRG				S	Sn	02 19 17.5	+0.7
HAQS	Haql	1.15	19	P	Sb	02 19 16.9	-0.5
JLOS		1.18	49	P	Pn	02 19 02.7	-0.3
WTBKS	WTBKS	1.27	84	P	Pb	02 19 04.5	-0.2
HBST	Basata	1.27	10	P	Pb	02 19 04.8	+0.1
HRDS	Abu Rudays	1.28	306	P	Pn	02 19 04.4	0.0
SUZ	Suez	2.37	323	P	Pn	02 19 18.9	-0.4

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*IDC **18** 02:21:52.6±1.0, 29°.61S×178°.51W, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=39.6km s-min=14.3km az=152.0*

ISC 18 02:21:54.1±0.8**, 29°.8S**±0°.2×**178°.5W**±0°.2**, h10**km**, n9, σ0.80**/10**, mb4.0**/4**, 3C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	0.70	44	Pn	Pb	02 22 08.6	+0.3
	215nm,0.3s,baz=90,slow=20,SNR=2.8						
RAO				Sn	Sn	02 22 20.9	0.0
	880nm,0.3s,baz=284,slow=23,SNR=11						
STKA	Stephens Creek	34.23	256	P	P	02 28 40.8	+0.7
	2.0nm,0.7s,baz=104,slow=11,SNR=4.7						
	2.0nm,0.7s						
ASAR	Alice Springs	42.73	266	P	P	02 29 51.6	-0.1
	1.0nm,0.9s,baz=104,slow=7.2,SNR=8.1						
	1.0nm,0.9s						
WRA	Warramunga Arr	43.66	272	P	P	02 29 58.9	-0.4
	1.0nm,0.5s,baz=110,slow=8.0,SNR=11						
	1.0nm,0.5s						
QSPA	South Pole Qui	60.35	180	P	P	02 32 04.1	+1.0
	1.8nm,0.8s,baz=31,slow=3.8,SNR=5.8						
	1.8nm,0.8s						
TROLL	Troll, Antarti	78.51	180	⇑P	P	02 33 54.8	-0.5
	comp=Z,191nm,0.8s						
SNAA	Sanae	78.81	179	⇑P	P	02 33 56.3	-0.5
VNA3	Neumayer Olymp	78.97	176	⇑P	P	02 33 56.3	-1.4
FINES	FINESS Array B	144.40	340	PKP	PKPab	02 41 27.3	-0.7
	comp=Z,1.1nm,0.6s,baz=54,slow=2.4,SNR=3.6						

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*NEIC **18** 02:26:06.0±2.1, 19°.48N±0°.04×68°.68W±0°.05, h10km±2km, ML2.6/14, Md3.3/10(RSPR), Error ellipse: s-maj=9.7km s-min=4.0km az=315.0*
*SDD **18** 02:26:10.3±1.6, 18°.24N×69°.04W, h78km±29km, MD3.5, ML3.5, MW3.0, Presumed earthquake*
*OSPL **18** 02:26:10.8±1.6, 18°.57N×68°.94W, h88km±92km, ML2.9, Presumed earthquake*
*RSPR **18** 02:26:12.9, 19°.09N×68°.34W, h138km±10km, MD3.3/10*

ISC 18 02:26:08.7±1.5**, 18°.69N**±0°.10×**68°.89W**±0°.05**, h112**km±10km**, n51, σ1.59**/62**, 4C-10D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIDR	Miches	0.33	333	*e*Pg	Pn	02 26 24.6	-0.2
MIDR				IAML		02 26 40.5	
	comp=N,96nm,0.2s						
DR12	Loma Pena Alta	0.48	282		Pn	02 26 24.6	-1.1
DR12					Sn	02 26 36.5	-2.0
HATOM	Hato Mayor del	0.48	282	*e*Pg	Pn	02 26 24.6	-1.0
HATOM				IAML		02 26 40.6	
	comp=N,511nm,0.3s						
PCDR	Punta Cana, DR	0.51	109⇓	*e*Pg	Pn	02 26 24.8	-1.0
PCDR				IAML		02 27 04.3	
	comp=N,204nm,2.2s						
SMDR	Samana, DR	0.66	335	*e*Pg	Pn	02 26 27.6	+0.6
SMDR				*e*Sg	Sn	02 26 43.2	+2.4
SMDR				IAML		02 26 47.6	
	comp=N,4µm,0.3s						
NADR	Nagua	1.13	306	*e*Pg	Pn	02 26 33.4	+1.9
NADR				IAML		02 26 55.3	
	comp=N,3µm,0.3s						
NAG1	Nagua	1.14	306	*e*Pg	Pn	02 26 33.1	+1.6
IDE	Isla Desecheo	1.38	102		Pn	02 26 34.9	+0.7
IDE					Sn	02 26 53.0	-0.5
IDE	Isla Desecheo	1.38	102⇓	*e*P	Pn	02 26 34.9	+0.7
IDE	Isla Desecheo	1.38	102	*e*S	Sn	02 26 53.0	-0.5
AGPR	Aguadilla, PR	1.70	97	Pn	Pn	02 26 38.3	+0.2
AGPR	Aguadilla, PR	1.70	97⇓	*e*P	Pn	02 26 39.2	+1.1
AGPR	Aguadilla, PR	1.70	97	*e*S	Sn	02 27 01.1	+0.6
AGPR	Aguadilla, PR	1.70	97	*e*Pg	Pn	02 26 38.7	+0.6
AGPR				IAML		02 27 06.4	
	comp=N,584nm,0.3s						
AGPR	Aguadilla, PR	1.70	97	*i* P	Pn	02 26 39.4	+1.3
AGPR				IAML		02 27 06.9	
	comp=Z,90nm,1.4s						
PRSN	Puerto Rico Se	1.72	105		Pn	02 26 40.1	+1.8
PRSN					Sn	02 27 02.7	+1.8
PRSN	Puerto Rico Se	1.72	105⇓	*e*P	Pn	02 26 40.1	+1.8
PRSN	Puerto Rico Se	1.72	105	*e*S	Sn	02 27 02.7	+1.8
LSP	Las Mesas	1.79	106		Pn	02 26 40.9	+1.7
LSP					Sn	02 27 03.9	+1.6
LSP	Las Mesas	1.79	106⇓	*e*P	Pn	02 26 40.9	+1.7
LSP	Las Mesas	1.79	106	*e*S	Sn	02 27 03.9	+1.6
CRPR	Cabo Rojo, PR	1.82	112		Pn	02 26 38.5	-1.1
CRPR					Sn	02 27 03.5	+0.4
CRPR				IAML		02 27 12.5	
	comp=N,33nm,1.2s						
CRPR	Cabo Rojo, PR	1.82	112⇑	*e*P	Pn	02 26 41.6	+2.0
CRPR	Cabo Rojo, PR	1.82	112	*e*S	Sn	02 27 04.6	+1.6
CRPR	Cabo Rojo, PR	1.82	112	*i* P	Pn	02 26 38.6	-1.0
CRPR				IAML		02 27 09.4	
	comp=Z,49nm,2.2s						
MLPR	Magueyes Islan	1.89	112⇓	*e*P	Pn	02 26 42.5	+2.0
MLPR	Magueyes Islan	1.89	112	*e*S	Sn	02 27 07.1	+2.5
AOPR	Arecibo Observ	2.06	99		Pn	02 26 42.4	-0.1
AOPR					Sn	02 27 08.6	+0.2
AOPR	Arecibo Observ	2.06	99⇓	*e*P	Pn	02 26 43.5	+1.0
AOPR	Arecibo Observ	2.06	99	*e*S	Sn	02 27 07.5	-0.9
AOPR	Arecibo Observ	2.06	99⇑	*e*Pg	Pn	02 26 43.0	+0.5
AOPR				*e*Sg	Sn	02 27 08.3	-0.1
AOPR				IAML		02 27 14.2	
	comp=N,1µm,0.3s						
UUPR	Utuado, UPR, P	2.10	101		Pn	02 26 44.7	+1.6
UUPR					Sn	02 27 08.3	-1.2
UUPR	Utuado, UPR, P	2.10	101⇑	*e*P	Pn	02 26 44.7	+1.6
UUPR	Utuado, UPR, P	2.10	101	*e*S	Sn	02 27 08.3	-1.2
OBIP	Obispado Ponce	2.26	106	Pn	Pn	02 26 45.9	+0.8
OBIP				Sn	Sn	02 27 15.1	+2.0
OBIP				IAML		02 28 10.6	
	comp=E,41nm,0.1s						
OBIP				IAML		02 28 16.7	
	comp=N,24nm,1.4s						
SDDR	Presa de Saban	2.29	278	Pn	Pn	02 26 47.6	+2.1
SDDR				IAML		02 27 24.2	
	comp=N,24nm,0.8s						
ECPR	Experimental S	2.43	98⇓	*e*P	Pn	02 26 47.9	+0.7
ECPR	Experimental S	2.43	98	*e*S	Sn	02 27 13.3	-3.6
LOVI	El Cajuil, Ovi	2.52	250	*e*S	Sn	02 27 13.8	-5.1
LOVI				IAML		02 27 16.1	
	comp=Z,83nm,1.2s						
SJG	San Juan	2.66	102		Pn	02 26 50.5	+0.2
SJG				IAML		02 27 23.7	
	comp=Z,23nm,0.5s						
SJG				IAML		02 27 29.1	
	comp=Z,21nm,0.9s						
SJG	San Juan	2.66	102⇓	*e*P	Pn	02 26 51.4	+1.0
SJG	San Juan	2.66	102	*e*S	Sn	02 27 20.4	-1.9
SJG	San Juan	2.66	102	*i* P	Pn	02 26 50.6	+0.3
SJG				IAML		02 27 17.0	
	comp=Z,30nm,1.4s						
GCPR	Guaynabo City	2.69	98		Pn	02 26 49.9	-0.8
GCPR					Sn	02 27 20.2	-2.8
GCPR				IAML		02 27 25.5	
	comp=E,23nm,1.5s						
GCPR	Guaynabo City	2.69	98⇑	*e*P	Pn	02 26 51.0	+0.3
GCPR	Guaynabo City	2.69	98	*e*S	Sn	02 27 18.7	-4.3
LOBH	Bahia de las A	2.74	253	*i* P	Pn	02 26 50.5	-0.8
LOBH				*e*S	Sn	02 27 20.2	-3.9
LOBH				IAML		02 27 27.2	
	comp=Z,59nm,1.9s						
HUMP	Col San Antoni	2.94	100		Pn	02 26 53.4	-0.5
HUMP					Sn	02 27 26.5	-2.3
HUMP				IAML		02 27 32.9	
	comp=E,23nm,0.9s						
HUMP	Col San Antoni	2.94	100⇓	*e*P	Pn	02 26 54.1	+0.2
HUMP	Col San Antoni	2.94	100	*e*S	Sn	02 27 26.8	-2.0
GRTK	Grand Turk	3.51	324	*e*S	Sn	02 27 40.3	-2.1
GRTK				IAML		02 27 42.0	
	comp=Z,146nm,1.9s						

GCG 18 02:27:18.4±0.5**, 13°.77N**×**90°.93W, h77**km±10km**, MD3.6, ML2.9, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESSJ	San Jos, E	0.46	116	*i* P	Pn	02 27 29.8	-1.8
ESSG	Sabana Grande	0.62	9	*e*P	Pn	02 27 33.2	0.0
FG16	Alotenango, Sa	0.65	39	*i* P	Pn	02 27 35.0	+1.5
PCG5	San Vicente Pa	0.70	50	*i* P	Pn	02 27 34.0	0.0
STG5	El Palmar, Qui	0.75	327	*e*P	Pn	02 27 38.8	+4.3
STG8	El Palmar, Qui	0.80	329	*e*P	Pn	02 27 39.7	+4.5
STG8				IAML		02 27 59.0	
	comp=N,162nm,0.1s						
NUBE	Las Nubes	1.12	83	*i* P	Pn	02 27 39.5	+0.6
NUBE				*e*S	Sn	02 27 55.4	+1.0
APG	El Apazote	1.31	20	*i* P	Pn	02 27 44.7	+3.3

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*IDC **18** 02:27:35.4±1.2, 29°.23S×178°.50W, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=56.0km s-min=11.9km az=179.0*
*NEIC **18** 02:27:36.2±0.7, 29°.7S±0°.2×178°.6W±0°.2, h10km±2km, mb4.1/6, Error ellipse: s-maj=34.5km s-min=6.9km az=321.0*

ISC 18 02:27:37.1±0.7**, 29°.6S**±0°.2×**178°.6W**±0°.1**, h10**km**, n21, σ2.19**/19**, mb4.0**/8**, 3C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	0.65	59	Pn	Pg	02 27 49.8	+0.1
	452nm,0.3s,baz=203,slow=3.0,SNR=14						
RAO				Sn	Sb	02 28 00.6	+0.8
	3µm,0.3s,baz=107,slow=20,SNR=16						
RAO	Raoul Island	0.65	59		Pb	02 27 50.1	-0.5
RAO				Sg	Sn	02 28 01.4	-1.3
LTZ	Lake Taylor	15.09	207	Pn	Pn	02 31 07.2	-3.1
STKA	Stephens Creek	34.20	256	P	P	02 34 25.9	+3.0
	0.6nm,0.3s,baz=79,slow=10,SNR=4.0						
	0.6nm,0.3s						
AS31	Alice Springs	42.67	266	P	P	02 35 32.2	-2.1
AS31				IAmb	IAmb	02 35 43.5	
	comp=Z,0.7nm,0.7s						
ASAR	Alice Springs	42.67	266	P	P	02 35 34.2	0.0
	comp=Z,0.8nm,0.9s,baz=101,slow=7.6,SNR=7.5						
	comp=Z,0.8nm,0.9s						
ASAR	Alice Springs	42.67	266	P	P	02 35 32.5	-1.7
WRA	Warramunga Arr	43.59	272	P	P	02 35 41.1	-0.5
	comp=Z,1.3nm,0.9s,baz=109,slow=8.1,SNR=9.1						
	comp=Z,1.3nm,0.9s						
WRA	Warramunga Arr	43.59	272	P	P	02 35 40.8	-0.9
WB0	Warramunga Arr	43.60	272	P	P	02 35 39.6	-2.2
WB0				IAmb	IAmb	02 35 54.4	
	comp=Z,6.7nm,1.1s						
FITZ	Fitzroy Crossi	51.88	270	P	P	02 36 43.1	-2.9
FITZ				IAmb	IAmb	02 37 11.2	
	comp=Z,3.0nm,1.4s						
QSPA	South Pole Qui	60.52	180	P	P	02 37 49.1	+1.9
	comp=Z,2.0nm,0.7s,baz=12,slow=2.8,SNR=5.9						
	comp=Z,2.0nm,0.7s						
BELA	Belgrano 2	70.65	172	P	P	02 38 50.8	-1.6
TROLL	Troll, Antarti	78.68	180	⇑P	P	02 39 43.9	+4.7
	comp=Z,191nm,0.8s						
SNAA	Sanae	78.98	179	⇑P	P	02 39 34.6	-6.1
SNAA	Sanae	78.98	179	P	P	02 39 38.9	-1.8
SNAA				IAmb	IAmb	02 39 51.4	
	comp=Z,4.4nm,1.2s						
VNA3	Neumayer Olymp	79.14	176	⇑P	P	02 39 42.8	+1.2
H03S2	Juan Fernandez	81.32	124	T	T	04 10 32.5	
	baz=238,slow=75,SNR=7.5						
H03S1	Juan Fernandez	81.33	124	T	T	04 10 32.1	
	baz=238,slow=75,SNR=8.3						
H03S3	Juan Fernandez	81.34	124	T	T	04 10 31.0	
	baz=238,slow=75,SNR=9.4						
FINES	FINESS Array B	144.22	340	PKP	PKiKP	02 47 16.6	+0.5
	comp=Z,0.9nm,0.5s,baz=64,slow=3.2,SNR=4.0						

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*NEIC **18** 02:29:35.2±0.6, 28°.5S±0°.2×176°.14W±0°.10, h10km±2km, mb4.3/8, Error ellipse: s-maj=33.0km s-min=4.3km az=155.0*
*IDC **18** 02:29:38.4±2.8, 28°.06S×176°.84W, h0km, mb4.2/3, mbtmp4.2/3, Error ellipse: s-maj=70.9km s-min=27.8km az=120.0*

ISC 18 02:29:34.6±0.8**, 29°.11S**±0°.08×**176°.00W**±0°.07**, h10**km**, n30, σ2.51**/42**, mb4.3**/7**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.69	265	Pn	Pg	02 30 07.9	+0.9
	344nm,0.3s,baz=110,slow=9.1,SNR=7.5						
RAO				Sn	Sb	02 30 26.8	-0.1
	3µm,0.3s,baz=95,slow=21,SNR=11						
RAO	Raoul Island	1.69	265		Pg	02 30 06.9	-0.1
RAO				Sn	Sb	02 30 26.9	-0.1
GLKZ	Green Lake	1.69	264	P	Pg	02 30 08.0	+1.0
GLKZ				S	Sn	02 30 26.5	+0.6
RIZ	Raoul Island	1.69	265	P	Pg	02 30 07.7	+0.5
RIZ				S	Sn	02 30 26.6	+0.6
WMGZ	Waiomatatini S	9.85	207	S	Sn	02 33 46.6	-0.4
PKGZ	Pakihiroa	10.03	208	P	Pn	02 31 59.0	+0.2
PKGZ				S	Sn	02 33 48.5	-2.9
HAZ	Te Kaha	10.06	209	P	Pn	02 31 58.9	-0.3
HAZ				S	Sn	02 33 52.1	0.0
RUGZ	Raukumara Rang	10.28	209	P	Pn	02 32 04.4	+2.0
RUGZ				S	Sn	02 33 54.6	-3.1
TWGZ	Tauwhareparae	10.34	207	P	Pn	02 32 03.2	+0.2
TWGZ				S	Sn	02 33 57.3	-1.6
MWZ	Matawai	10.66	209	P	Pn	02 32 07.1	-0.3
MWZ				S	Sn	02 34 03.1	-3.6
OUZ	Omahuta	10.71	233	P	Pn	02 32 16.7	+8.6
URZ	Urewera	10.77	210	P	Pn	02 32 07.8	-1.2
URZ				S	Sn	02 34 05.1	-4.5
NIUE	Niue	11.42	30	Pn	Pn	02 32 14.1	-3.8
KAHZ	Kahuranaki	12.16	207	P	Pn	02 32 31.1	+3.1
KAHZ				S	Sn	02 34 39.9	-3.8
KRHZ	Kereru	12.24	209	P	Pn	02 32 30.8	+1.7
KRHZ				S	Sn	02 34 39.0	-6.6
DVHZ	Dannevirke	12.88	208	P	Pn	02 32 39.6	+1.9
DVHZ				S	Sn	02 34 53.6	-7.5
STKA	Stephens Creek	36.48	255	P	P	02 36 41.5	+1.5
	1.6nm,0.4s,baz=88,slow=9.3,SNR=5.0						
	1.6nm,0.4s						
BBOO	Buckleboo	41.01	252	P	P	02 37 17.8	-0.2
BBOO				IAmb	IAmb	02 37 20.4	
	comp=Z,5.4nm,0.8s						
AS31	Alice Springs	44.94	265	P	P	02 37 49.3	-0.7
AS31				IAmb	IAmb	02 37 52.4	
	comp=Z,2.1nm,1.1s						
ASAR	Alice Springs	44.94	265	P	P	02 37 50.0	0.0
	comp=Z,3.4nm,0.7s,baz=112,slow=8.3,SNR=14						
	comp=Z,3.4nm,0.7s						
ASAR	Alice Springs	44.94	265	P	P	02 37 48.9	-1.2
WRA	Warramunga Arr	45.82	270	P	P	02 37 56.6	-0.4
	comp=Z,1.1nm,0.4s,baz=111,slow=7.9,SNR=12						
	comp=Z,1.1nm,0.4s						
WRA	Warramunga Arr	45.82	270	P	P	02 37 55.8	-1.2
WB0	Warramunga Arr	45.83	270	P	P	02 37 55.2	-2.0
FORT	Forrest	48.07	253	P	P	02 38 14.7	+0.2
FORT				IAmb	IAmb	02 38 16.0	
	comp=Z,2.9nm,0.8s						
FITZ	Fitzroy Crossi	54.12	268	P	P	02 38 58.5	-1.6
CASY	Casey	57.08	208	P	P	02 39 24.0	+3.3
SNAA	Sanae	79.38	178	P	P	02 41 44.3	+3.8
SNAA				IAmb	IAmb	02 42 12.0	
	comp=Z,5.5nm,1.5s						
FINES	FINESS Array B	144.50	342	PKP	PKPdf	02 49 10.9	+0.3
	comp=Z,2.3nm,0.9s,baz=104,slow=2.9,SNR=1.8						
NOA	NORSAR Array B	147.71	353	PKPbc	PKiKP	02 49 20.8	-0.1
	comp=Z,0.7nm,0.9s,baz=12,slow=2.3,SNR=3.2						

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*SOME **18** 02:29:41.9, 39°.88N×69°.92E, h5km*
*NNC **18** 02:29:42.0±3.3, 40°.02N×68°.72E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=27.5km s-min=22.2km az=109.0*
*ISU **18** 02:29:45, 40°.24N×68°.41E, h20km*

ISC 18 02:29:42.4±0.9**, 40°.00N**±0°.04×**68°.34E**±0°.04**, h10**km**, n22, σ1.67**/30**, 3C-1D, Southeastern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZI	Dzhizak	0.41	286	P	Pb	02 29 51.3	-0.5
DZI				S	Sb	02 29 58.9	+0.7

KRSA	Karasay	0.47	284	P	Pb	02 29 52.2	-0.7
KRSA				S	Sb	02 30 00.6	+0.7
AGL	Agalyk	1.23	247	P	Pn	02 30 05.4	-0.2
AGL				S	Sn	02 30 23.2	+0.9
NZBK	Nazarbek	1.36	26	S	Sg	02 30 29.4	+3.4
TGS	TashGRES	1.68	32	S	Sn	02 30 31.1	-2.4
TVKS	Tavaksay	1.86	32	S	Sb	02 30 38.9	-1.0
BAYS	Baysun	1.99	207	P	Pn	02 30 17.3	+1.0
BAYS				S	Sb	02 30 43.1	-0.7
CHMG	Chimgan	2.00	39	S	Sn	02 30 41.2	-0.4
CHRV	Charvak	2.04	36	S	Sb	02 30 45.5	+0.3
MINT	Mingtut	2.07	76	S	Sn	02 30 43.4	+0.3
CHDK	Chadak	2.08	61	S	Sn	02 30 42.1	-1.3
NUT	Nurota	2.11	286	S	Sb	02 30 45.8	-1.2
PSK	Pskem	2.46	38	S	Sg	02 30 59.0	-2.6
ZRB	Zarabog	2.48	221	S	Sg	02 31 02.2	0.0
IUG	Iuzhnay	2.50	30	Pg	Pn	02 30 24.9	+1.7
	13nm,0.2s						
IUG				Lg	Lg	02 30 56.4	
	46nm,0.4s						
FRG	Fergana	2.66	81	S	Sn	02 31 00.3	+2.6
BRLS	Borolday	3.23	20	Pg	Pn	02 30 35.6	+2.4
	2.0nm,0.1s						
BRLS				Lg	Lg	02 31 14.5	
	11nm,0.2s						
BRLS	Borolday	3.23	20	eP	Pn	02 30 35.5	+2.4
	2.0nm,0.1s						
BRLS				eS	Sn	02 31 14.5	+2.8
	8.0nm,0.1s						
TMD	Tamdy-Bulak	3.31	303	S	Sg	02 31 27.9	-0.6
KK31	Karatay Array	3.50	27	⇓Pn	Pn	02 30 34.9	-2.0
	0.5nm,0.3s,baz=202,slow=17,SNR=13						
KK31				⇑Pg	Pb	02 30 44.4	-0.1
	1.4nm,0.3s,baz=209,slow=17,SNR=8.7						
KK31				⇑Sn	Sn	02 31 16.5	-1.9
	0.5nm,0.2s						
KK31				⇑Lg	Lg	02 31 28.9	
	6.1nm,0.5s,baz=205,slow=29,SNR=12						
MRKS	Merke	4.59	52	Pg	Pn	02 30 52.1	+0.2
	1.8nm,0.2s						
MRKS				Lg	Lg	02 31 42.7	
	6.7nm,0.6s						
MRKS	Merke	4.59	52	eP	Pn	02 30 52.1	+0.2
	0.7nm,0.1s						
MRKS				eS	Sn	02 31 42.7	-2.5
	4.0nm,0.2s						

IDC 18 02:32:45.7±5.8, 36.°63N×76.°15E, h0km, mb3.7/3, mbtmp3.6/8, ML3.2/5, Error ellipse: s-maj=95.9km s-min=37.5km az=139.0

NNC 18 02:33:06.5±4.5, 38.°00N×75.°62E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=37.9km s-min=30.2km az=31.0

ISC 18 02:33:03.8±0.8, 37.°55N±0.°05×75.°9E±0.°1, h105km, n18, σ2.s53/30, mb3.8/3, 6C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALCI	Alchi Leh	3.48	163	eP	Pn	02 33 58.7	+2.3
ALCI				eS	Sn	02 34 39.0	+1.9
ALCI				IAML		02 34 44.3	
	comp=E,76nm,0.2s						
ALCI				IAML		02 34 45.6	
	comp=N,75nm,0.3s						
AAK	Ala-Archa	5.20	348	Pn	Pn	02 34 21.3	+1.9
	comp=N,1.4nm,0.3s,baz=164,slow=13,SNR=12						
AAK				Sn	Sn	02 35 20.1	+1.8
	comp=N,0.8nm,0.3s,baz=355,slow=17,SNR=7.7						
	comp=N,2.8nm,0.4s						
AAK	Ala-Archa	5.20	348	⇑Pn	Pn	02 34 20.9	+1.5
	comp=N,5.2nm,0.9s						
AAK				⇑Pg		02 34 32.1	
	comp=N,7.3nm,0.8s						
AAK				⇓Sn	Sn	02 35 16.4	-1.8
	comp=N,14nm,0.9s						
AAK				⇓Lg	Lg	02 35 35.1	
	comp=N,10nm,1.0s						
DHRM	DHARAMSHALA	5.29	177	eP	Pn	02 34 24.0	+3.2
DHRM				eP	Pn	02 34 24.4	+3.6
DHRM				eS	Sn	02 35 19.1	-1.6
DHRM				eS	Sn	02 35 21.0	+0.3
DHRM				IAML		02 35 26.1	
	comp=N,376nm,0.3s						
DHRM				IAML		02 35 26.2	
	comp=E,347nm,0.5s						
DHRM				IAML		02 35 26.4	
	comp=N,445nm,0.6s						
DHRM				IAML		02 35 26.4	
	comp=E,368nm,0.6s						
SDNR	Sundarnagar	6.09	172	eP	Pn	02 34 33.4	+2.0
SDNR				eS	Sn	02 35 35.2	-4.6
SDNR				IAML		02 35 38.7	
	comp=N,28nm,0.4s						
SDNR				IAML		02 35 42.2	
	comp=E,33nm,0.1s						
BHK	Bhakra	6.15	176	eP	Pn	02 34 33.2	+1.3
BHK				eS	Sn	02 35 38.6	-2.1
BHK				IAML		02 35 42.8	
	comp=N,76nm,0.3s						
BHK				IAML		02 35 45.7	
	comp=E,110nm,0.3s						
PDGK	Podgornoye	6.38	24	⇑Pn	Pn	02 34 35.5	+0.2
	comp=E,4.7nm,0.6s						
PDGK				⇑Lg	Lg	02 36 19.3	
	comp=E,7.2nm,0.9s						
SMLA	Simla	6.48	171	eP	Pn	02 34 38.9	+2.2
SMLA				eP	Pn	02 34 40.0	+3.3
SMLA				eS	Sn	02 35 45.4	-3.8
SMLA				eS	Sn	02 35 46.8	-2.4
SMLA				IAML		02 35 52.3	
	comp=N,94nm,0.4s						
SMLA				IAML		02 35 52.5	
	comp=N,98nm,0.4s						
SMLA				IAML		02 35 52.9	
	comp=E,101nm,0.2s						
SMLA				IAML		02 35 53.8	
	comp=E,109nm,0.2s						
KK31	Karatay Array	6.92	325	⇑Pn	Pn	02 34 42.7	0.0
	comp=E,0.7nm,0.2s,baz=131,slow=12,SNR=20						
KK31				⇑Sn	Sn	02 35 55.3	-4.5
	comp=E,3.9nm,0.5s,baz=140,slow=25,SNR=9.2						
TKRD	Thakurdwara	8.72	163	eS	Sn	02 36 39.2	-4.5
LGTI	Lohaghat	8.83	156	eS	Sn	02 36 42.9	-3.6
MKAR	Makanchi Array	10.37	25	Pn	Pn	02 35 28.2	-1.1
	comp=E,0.1nm,0.3s,baz=200,slow=14,SNR=4.9						
	comp=E,0.2nm,0.4s						
KURBB	Kurchatov Arra	13.20	7	Pn	Pn	02 36 05.5	-1.4
	comp=E,0.1nm,0.3s,baz=196,slow=12,SNR=4.2						
	comp=E,0.4nm,0.3s						
BVAR	Borovoye Array	15.95	348	Pn	Pn	02 36 42.3	+0.2
	comp=E,0.1nm,0.3s,baz=158,slow=9.6,SNR=3.9						
	comp=E,0.9nm,0.5s						
ZALV	Zalesovo Beam	17.51	18	P	P	02 37 00.9	+0.3
	comp=E,0.5nm,0.3s,baz=214,slow=9.8,SNR=8.1						
	comp=E,1.6nm,0.4s						
FINES	FINESS Array B	38.88	324	P	P	02 40 19.4	+0.8
	comp=E,2.0nm,0.8s,baz=119,slow=10.0,SNR=11						
	comp=E,2.0nm,0.8s						
HFS	Hagfors	44.71	321	P	P	02 41 06.9	+0.8
	comp=E,1.3nm,0.7s,baz=116,slow=6.7,SNR=1.5						
	comp=E,1.3nm,0.7s						
NOA	NORSAR Array B	45.95	322	P	P	02 41 16.0	+0.2
	comp=E,0.2nm,0.5s,baz=90,slow=8.3,SNR=1.4						
	comp=E,0.2nm,0.5s						

NNC 18 02:40:10.5±5.9, 37.°97N×75.°73E, h0km, mb4.4, mpv4.0, Error ellipse: s-maj=50.4km s-min=38.2km az=23.0

NEIC 18 02:40:11.5±1.6, 37.°80N±0.°08×75.°91E±0.°10, h125km±8km, mb4.0/13, Error ellipse: s-maj=12.8km s-min=9.4km az=135.0

IDC 18 02:40:11.3±3.8, 37.°70N×75.°91E, h126km±30km, mb3.4/13, mbtmp3.9/18, Error ellipse: s-maj=28.9km s-min=16.7km az=9.0

ISC 18 02:40:10.3±0.5, 37.°66N±0.°05×75.°94E±0.°07, h125km, n77, σ1.s25/86, mb3.8/17, 5C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANEM	Manem	3.38	269		Pn	02 41 03.1	+1.0
ALCI	Alchi Leh	3.58	163	eP	Pn	02 41 05.8	+1.1
ALCI				eS	Sn	02 41 47.0	+0.2
ALCI				IAML		02 41 51.4	
	comp=E,172nm,0.2s						
ALCI				IAML		02 41 52.4	
	comp=N,189nm,0.3s						
DRK	Karamyk	3.72	301		Pn	02 41 06.8	+0.4
TARG	Taragay, Kyrgy	4.32	19		Pn	02 41 14.4	-0.1
ARSB	Arslanbob	4.32	329		Pn	02 41 13.7	-0.6
WUS	Wushi	4.36	35		Pn	02 41 14.2	-0.5
NIL	Nilore	4.56	210		Pn	02 41 20.2	+2.8
KDJ	Kajisay	4.57	12		Pn	02 41 17.9	+0.2
ULHL	Ulahol	4.59	3	P	Pn	02 41 18.4	+0.4
	SNR=9.1						
GAR	Garm	4.62	289		Pn	02 41 17.8	-0.6
UCH	Uchtor	4.70	347	P	Pn	02 41 20.0	+0.4
	SNR=28						
BOOM	Boomskoye usch	4.83	360		Pn	02 41 21.6	+0.5
KBK	Karagaybulak	5.05	352	P	Pn	02 41 24.9	+0.8
	SNR=20						
AAK	Ala-Archa	5.10	348	P	Pn	02 41 25.7	+1.0
	SNR=8.0						
AAK	Ala-Archa	5.10	348	P	Pn	02 41 25.6	+0.9
	comp=N,6.7nm,0.3s,baz=153,slow=7.2,SNR=17						
AAK				S	Sn	02 42 22.5	-0.2
	comp=N,32nm,0.7s,baz=1.1,slow=9.3,SNR=3.9						
AAK	Ala-Archa	5.10	348		Pn	02 41 25.3	+0.6
AAK	Ala-Archa	5.10	348	⇑Pn	Pn	02 41 25.3	+0.6
	comp=N,20nm,1.3s						
AAK				⇓Pg		02 41 37.5	
	comp=N,10nm,0.6s						
AAK				⇑Sn	Sn	02 42 20.9	-1.8
	comp=N,35nm,0.9s						
PRZ	Przheval'sk	5.18	21		Pn	02 41 26.8	+0.9
FRU1	Bishkek	5.25	349	Pn	Pn	02 41 26.7	+0.1
TKM2	Tokmak 2	5.27	357	P	Pn	02 41 27.8	+0.8
	SNR=57						
EKS2	Erkin-Say	5.27	342	P	Pn	02 41 28.4	+1.4
	SNR=8.2						
DHRM	DHARAMSHALA	5.40	177	eP	Pn	02 41 30.1	+1.2
DHRM				eS	Sn	02 42 27.8	-2.3
DHRM				IAML		02 42 33.7	
	comp=N,460nm,0.2s						
DHRM				IAML		02 42 33.9	
	comp=E,428nm,0.2s						
CHMS	Chumysh	5.42	351	P	Pn	02 41 29.5	+0.7
	SNR=6.7						
CHGR	Chuyangaron	5.44	283		Pn	02 41 27.8	-1.4
HNLY	HANLEY	5.46	152	eP	Pn	02 41 32.6	+2.6
HNLY				eS	Sn	02 42 30.1	-1.9
HNLY				IAML		02 42 35.9	
	comp=E,18nm,0.7s						
HNLY				IAML		02 42 39.6	
	comp=N,22nm,0.2s						
SHAA	Shahritus	6.21	272		Pn	02 41 39.4	-0.2
BHK	Bhakra	6.26	177	eP	Pn	02 41 41.8	+1.8
BHK				eS	Sn	02 42 49.3	-0.6
BHK				IAML		02 42 55.6	
	comp=E,356nm,0.4s						
BHK				IAML		02 42 56.0	
	comp=N,411nm,0.4s						
PDGK	Podgornoye	6.28	24	⇑Pn	Pn	02 41 39.9	-0.6
	comp=N,31nm,0.7s						
PDGK				⇑Lg	Lg	02 43 24.3	
	comp=N,18nm,0.7s						
KBL	Kabul	6.39	243		Pn	02 41 43.1	+0.9
SMLA	Simla	6.59	171	eP	Pn	02 41 45.6	+0.9
SMLA				eS	Sn	02 42 55.9	-2.6
SMLA				IAML		02 43 01.2	
	comp=E,203nm,0.2s						
SMLA				IAML		02 43 01.9	
	comp=N,251nm,0.5s						
KK31	Karatay Array	6.84	324		Pn	02 41 47.3	-0.7
KK31	Karatay Array	6.84	324	⇑Pn	Pn	02 41 47.0	-1.0
	comp=N,1.9nm,0.2s,baz=124,slow=12,SNR=118						
KK31				⇓Sn	Sn	02 43 01.9	-2.6
	comp=N,21nm,0.6s,baz=145,slow=24,SNR=4.0						
KKAR	Karatay Array	6.84	324		Pn	02 41 47.1	-0.9
DDI	Dehra Dun	7.52	166	eP	Pn	02 41 57.7	+0.3
DDI				eS	Sn	02 43 17.1	-4.1
DDI				IAML		02 43 23.4	
	comp=E,236nm,0.1s						
DDI				IAML		02 43 26.4	
	comp=N,260nm,0.1s						
JOSI	Joshimath	7.69	156	eP	Pn	02 42 00.6	+0.8
JOSI				eS	Sn	02 43 21.2	-4.2
JOSI				IAML		02 43 27.3	
	comp=N,252nm,0.3s						
JOSI				IAML		02 43 27.8	
	comp=E,235nm,0.2s						
LGTI	Lohaghat	8.93	156	eS	Sn	02 43 50.1	-5.1
LGTI				IAML		02 43 51.6	
	comp=E,58nm,0.3s						
LGTI				IAML		02 43 52.4	
	comp=N,71nm,0.1s						
KUDL	Kundal	9.50	177	eP	Pn	02 42 24.8	+0.9
KUDL				eS	Sn	02 44 03.2	-5.6
KUDL				IAML		02 44 09.0	
	comp=N,52nm,0.2s						
KUDL				IAML		02 44 09.4	
	comp=E,55nm,0.1s						
MAKZ	Makanchi	10.18	24	Pn	Pn	02 42 31.7	-1.3
MKAR	Makanchi Array	10.27	25	P	Pn	02 42 33.4	-0.8
	comp=E,0.8nm,0.5s,baz=204,slow=13,SNR=12						
MKAR	Makanchi Array	10.27	25	Pn	Pn	02 42 32.9	-1.3
KURBB	Kurchatov Arra	13.10	7	P	Pn	02 43 09.6	-1.8
	comp=E,2.3nm,0.6s,baz=190,slow=12,SNR=11						
KURK	Kurchatov	13.20	7		Pn	02 43 10.3	-2.4
BVAR	Borovoye Array	15.85	348	P	P	02 43 47.0	-0.5
	comp=E,2.7nm,0.5s,baz=154,slow=9.2,SNR=8.1						
AB31	Akbulak array	16.37	320		Pn	02 43 51.7	-0.9
ABKAR	Akbulak array	16.37	320		Pn	02 43 51.5	-1.2
ZAA0	Zalesovo Array	17.41	18	P	P	02 44 04.0	-0.6
ZALV	Zalesovo Beam	17.41	18	P	P	02 44 04.5	-0.1
	comp=E,3.9nm,0.5s,baz=206,slow=9.5,SNR=16						
ZALV	Zalesovo Beam	17.41	18	P	P	02 44 04.1	-0.4
AKTO	Aktyubinsk	18.08	321	P	Pn	02 44 13.0	-0.3
	comp=E,3.4nm,0.4s,baz=109,slow=8.6,SNR=11						
ARTI	Arti	22.12	334	P	P	02 44 56.1	+0.8
	comp=E,3.1nm,0.5s,baz=141,slow=7.0,SNR=7.6						
	comp=E,3.1nm,0.5s						
ARTI	Arti	22.12	334	P	P	02 44 55.5	+0.2
SONM	Songino Array	24.43	56	P	P	02 45 19.1	+1.9
	comp=E,2.5nm,0.7s,baz=255,slow=8.7,SNR=14						
	comp=E,2.5nm,0.7s						
SONM	Songino Array	24.43	56	P	P	02 45 18.1	+0.9
BR131	Keskin Array S	32.86	287	P	P	02 46 32.9	+0.6
BR131				IAmb	IAmb	02 46 34.7	
	comp=Z,1.6nm,0.9s						
BRTR	Keskin Array B	32.86	287	P	P	02 46 33.7	+1.4
	comp=Z,0.3nm,0.3s,baz=98,slow=10,SNR=4.1						
	comp=Z,0.3nm,0.3s						
AKASG	Malin Array Be	35.36	307	P	P	02 46 53.6	+0.1
	comp=Z,0.4nm,0.3s,baz=78,slow=7.9,SNR=4.1						
	comp=Z,0.4nm,0.3s						
AKASG	Malin Array Be	35.36	307	P	P	02 46 53.5	+0.1
AKASG				IAmb	IAmb	02 47 31.2	
	comp=Z,5.2nm,1.4s						
BUR08	Bucovina Ar. S	38.02	302	P	P	02 47 16.6	+0.4
BUR08				IAmb	IAmb	02 47 52.1	
	comp=Z,6.1nm,1.5s						
FIA1	FINESS Array S	38.80	324	P	P	02 47 22.8	+0.4
FINES	FINESS Array B	38.80	324	P	P	02 47 23.2	+0.8
	comp=Z,1.5nm,0.3s,baz=105,slow=7.9,SNR=24						
	comp=Z,1.5nm,0.3s						
FINES	FINESS Array B	38.80	324	P	P	02 47 23.0	+0.5
ARCES	ARCESS Array B	41.65	336	P	P	02 47 47.0	+1.1
	comp=Z,1.1nm,0.8s,baz=115,slow=8.1,SNR=1.3						
	comp=Z,1.1nm,0.8s						
TIXI	Tiksi	43.23	22	P	P	02 47 59.0	+0.4
TIXI				IAmb	IAmb	02 48 00.1	
	comp=Z,2.4nm,0.6s						
HFS	Hagfors	44.63	321	P	P	02 48 10.2	+0.3
	comp=Z,1.6nm,0.8s,baz=103,slow=10,SNR=1.9						
	comp=Z,1.6nm,0.8s						
NC303	NORSAR Array S	45.79	322	P	P	02 48 19.8	+0.8
NOA	NORSAR Array B	45.87	322	P	P	02 48 18.6	-1.1
	comp=Z,0.4nm,0.6s,baz=90,slow=7.9,SNR=3.6						
	comp=Z,0.4nm,0.6s						
EKA	Eskdalemuir Ar	54.20	316	P	P	02 49 22.3	-0.2
	comp=Z,1.2nm,0.9s,baz=74,slow=6.6,SNR=1.3						
	comp=Z,1.2nm,0.9s						
C19K	Lookout Ridge	66.00	19	P	P	02 50 43.7	+0.8
C19K				IAmb	IAmb	02 50 44.8	
	comp=Z,2.0nm,0.8s						
E21K	Killik River	67.89	18	P	P	02 50 55.1	+0.3
E21K				IAmb	IAmb	02 51 35.8	
	comp=Z,3.1nm,1.4s						
TORD	Torodi Ar. Bea	69.67	271	P	P	02 51 07.4	+0.7
	comp=Z,0.2nm,0.3s,baz=43,slow=8.1,SNR=4.6						
	comp=Z,0.2nm,0.3s						
TORD	Torodi Ar. Bea	69.67	271	P	P	02 51 06.7	0.0
TORD				IAmb	IAmb	02 51 15.9	
	comp=Z,2.1nm,1.4s						
IMAR	Indian Mountai	69.83	19	P	P	02 51 06.9	+0.1
ILAR	Eielson Array	72.53	18	P	P	02 51 23.5	+0.4
	comp=Z,0.7nm,0.9s,baz=320,slow=4.8,SNR=5.5						
	comp=Z,0.7nm,0.9s						
ILAR	Eielson Array	72.53	18	P	P	02 51 22.9	-0.3
YKA	Yellowknife Ar	79.83	5	P	P	02 52 05.0	+0.6
	comp=Z,0.4nm,0.5s,baz=349,slow=5.5,SNR=6.2						
	comp=Z,0.4nm,0.5s						
YKA	Yellowknife Ar	79.83	5	P	P	02 52 04.2	-0.2
ASAR	Alice Springs	81.77	128	P	P	02 52 15.9	+0.7
	comp=Z,0.4nm,0.6s,baz=313,slow=4.7,SNR=6.6						
	comp=Z,0.4nm,0.6s						

IDC 18 02:41:31.4±5.2, 28.°75S×178.°17W, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=119.0km s-min=15.2km az=46.0

ISC 18 02:41:30.1±2.0, 28.°5S±0.°1×177.°8W±0.°3, h10km, n8, σ1.s60/8, mb3.9/3, 1C-3D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.77	189	LR	LR	02 41 31.7	
	comp=Z,607nm,19.3s,baz=113,slow=0.6						
RAO				Pn	Pn	02 41 47.0	0.0
	224nm,0.3s,baz=264,slow=5.2,SNR=10						
RAO				Sn	Sb	02 41 55.8	-0.3
	975nm,0.3s,baz=122,slow=23,SNR=19						
STKA	Stephens Creek	35.13	254	P	P	02 48 24.6	+0.6
	0.6nm,0.3s,baz=80,slow=6.1,SNR=3.2						
	0.6nm,0.3s						
ASAR	Alice Springs	43.43	265	P	P	02 49 33.5	+0.1
	0.8nm,0.8s,baz=102,slow=8.1,SNR=5.9						
	0.8nm,0.8s						
WRA	Warramunga Arr	44.25	270	P	P	02 49 38.7	-1.2
	1.4nm,0.8s,baz=110,slow=8.0,SNR=5.5						
	1.4nm,0.8s						
TROLL	Troll, Antarti	79.78	180	⇓P	P	02 53 40.1	+1.9
	comp=Z,191nm,0.8s						
SNAA	Sanae	80.05	178	⇓P	P	02 53 40.7	+1.1
VNA3	Neumayer Olymp	80.19	176	⇓P	P	02 53 37.9	-2.4
VNA1	Neumayer--Stat	80.86	176	⇑P	P	02 53 37.2	-6.6

IDC 18 02:49:31.8±1.2, 29.°30S×178.°45W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=202.9km s-min=13.2km az=174.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.47	84	Pn	Pn	02 49 46.4	+0.7
	115nm,0.3s,baz=90,slow=20,SNR=2.4						
RAO				Sn	Sb	02 49 54.8	+4.4
	390nm,0.3s,baz=114,slow=22,SNR=14						
STKA	Stephens Creek	34.36	255	P	P	02 56 20.4	0.0
	0.5nm,0.3s,baz=76,slow=12,SNR=2.8						
	0.5nm,0.3s						
ASAR	Alice Springs	42.78	266	P	P	02 57 30.9	-0.4
	0.5nm,0.8s,baz=101,slow=8.3,SNR=4.1						
	0.5nm,0.8s						
WRA	Warramunga Arr	43.67	271	P	P	02 57 38.5	-0.1
	0.8nm,0.6s,baz=113,slow=8.0,SNR=4.9						
	0.8nm,0.6s						

IDC 18 02:50:05.4±1.4, 6.°55N×125.°24E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=33.5km s-min=9.9km az=116.0

ISC 18 02:50:06.5±1.4, 6.°6N±0.°1×125.°3E±0.°3, h10km, n5, σ0.s36/4, mb3.6/3, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.56	31	Pg	Pb	02 50 18.4	0.0
	287nm,0.3s,baz=249,slow=7.5,SNR=7.9						
DAV				Lg	Lg	02 50 25.0	
	1µm,0.3s,baz=228,slow=14,SNR=18						
DAV	Davao City (W)	0.56	31	P	Pn	02 50 26.0	+5.5
WRA	Warramunga Arr	27.83	162	P	P	02 55 56.0	-0.3
	0.4nm,0.6s,baz=342,slow=8.8,SNR=2.7						
	0.4nm,0.6s						
ASAR	Alice Springs	31.23	165	P	P	02 56 26.6	+0.2
	0.6nm,0.6s,baz=355,slow=7.7,SNR=11						
	0.6nm,0.6s						
MKAR	Makanchi Array	54.41	325	P	P	02 59 33.9	0.0
	0.3nm,0.5s,baz=140,slow=7.6,SNR=5.9						
	0.3nm,0.5s						

TAP 18 02:52:22.3, 24.°27N×121.°87E, h25km, ML4.0, B

JMA 18 02:52:22.4±0.1, 24.°2N±0.°6×121.°9E±0.°6, h29km±1km, MV3.2/12, TAIWAN REGION

ISC 18 02:52:22.2±0.9, 24.°23N±0.°01×121.°90E±0.°02, h18km±2km, n140, σ0.s72/229, 11C-7D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.17	299	eP	Pg	02 52 27.1	+0.4
EHP				eS	Sg	02 52 31.2	+1.4
EAHA	Aohua	0.18	305	⇓P	Pg	02 52 27.2	+0.4
EAHA				eS	Sg	02 52 31.2	+1.1
EWUT	Wuta	0.24	333	⇓iP	Pb	02 52 28.1	+0.3
EWUT				eS	Sg	02 52 32.4	+0.6
ENA	Nanau	0.25	324	⇓iP	Pb	02 52 28.1	+0.1
ENA				S	Sg	02 52 32.4	+0.6
ETL	Fush Village	0.26	255	⇓P	Pg	02 52 28.7	+0.5
ETL				eS	Sg	02 52 33.6	+1.3
NACB	Ninganchiao	0.28	259	P	Pb	02 52 28.9	+0.2
NACB	Ninganchiao	0.28	259	P	Pb	02 52 28.8	0.0
NACB				S	Sg	02 52 33.9	+1.1
TWD	Chiawan	0.31	242	P	Pg	02 52 29.4	+0.4
TWD				eS	Sb	02 52 35.2	+1.1
ESAO	Su ao	0.35	352	P	Pg	02 52 29.7	+0.1
ESAO				eS	Sb	02 52 35.3	+0.1
EOS2	EOS2	0.36	58	eP	Pn	02 52 31.8	-0.6
HWA	Hwalien	0.37	227	eP	Pb	02 52 31.2	+0.9
HWA				eS	Sn	02 52 39.0	-0.3
ETLH	Xiulin Townshi	0.38	267	P	Pg	02 52 30.3	0.0
ETLH				eS	Sg	02 52 36.1	+0.4
TWC	Suao	0.38	353	⇓iP	Pg	02 52 30.2	0.0
TWC				eS	Sb	02 52 36.2	+0.1
EOS3	EOS3	0.39	81	⇑P	Pn	02 52 32.5	-0.2
EOS4	EOS4	0.40	106	P	Pn	02 52 32.3	-0.4
NDS	Dongshan	0.44	337	⇓P	Pg	02 52 31.3	+0.1
NDS				S	Sb	02 52 38.1	+0.4
TEYL	Yanliau Villag	0.45	218	P	Pb	02 52 32.2	+0.5
TEYL				eS	Sn	02 52 40.7	-0.6
ETM	Tongmen	0.46	235	P	Pg	02 52 31.9	+0.4
LATG	Datong	0.46	312	⇑iP	Pg	02 52 31.4	-0.2
LATG				S	Sg	02 52 38.0	0.0
LXIB	Xiulin Townshi	0.49	245	⇑iP	Pb	02 52 32.1	-0.3
LXIB				S	Sb	02 52 40.2	+0.9
ENTT	Nioudou	0.51	323	⇑iP	Pb	02 52 32.4	-0.2
ENTT				S	Sb	02 52 39.7	0.0
NNSB	Datong	0.51	293	⇑iP	Pb	02 52 32.5	-0.3
NNSB				i S	Sg	02 52 39.5	0.0
NNS	Nan Shan	0.53	294	P	Pb	02 52 32.7	-0.2
NNS				S	Sb	02 52 40.0	-0.2
TWE	Neicheng	0.54	337	i P	Pb	02 52 32.9	-0.1
TWE				S	Sb	02 52 40.4	+0.1
SHUL	Shoufeng	0.54	215	eP	Pg	02 52 33.8	+0.8
SHUL				eS	Sn	02 52 44.0	+0.5
ILA	Ilan	0.55	346	P	Pb	02 52 32.9	-0.5
ILA				S	Sg	02 52 41.1	+0.4
ESL	Shilin	0.59	226	P	Pb	02 52 34.1	+0.1
ESL				eS	Sg	02 52 43.4	+1.4
FUSS	Fushou	0.60	272	P	Pb	02 52 34.2	0.0
FUSS				eS	Sb	02 52 42.5	+0.1
FUSB	Fushanzhiwuyua	0.60	332	⇑iP	Pb	02 52 33.8	-0.3
FUSB				S	Sb	02 52 42.5	+0.2
TEGC	Jichi Village	0.61	213	P	Pg	02 52 35.0	+0.6
TEGC				eS	Sn	02 52 46.6	+1.3
EGS		0.61	3	eP	Pb	02 52 34.7	+0.4
YHNB	Yeheng	0.65	313	P	Pb	02 52 34.7	-0.3
YHNB	Yeheng	0.65	313	⇑iP	Pb	02 52 34.7	-0.3
YHNB				i S	Sb	02 52 43.3	-0.4
NWLT	Wulai	0.66	327	eP	Pb	02 52 34.7	-0.4
NWLT				eS	Sb	02 52 43.5	-0.4

TWT	Tachien	0.66	272	P	Pb	02 52 35.5	+0.2
TWT				S	Sg	02 52 44.7	+0.4
NSK	Sanguang	0.67	312	⇑*i*P	Pb	02 52 34.9	-0.4
NSK				S	Sb	02 52 43.5	-0.6
TDCB	Techi	0.68	272	⇑*i*P	Pb	02 52 35.5	0.0
TDCB				S	Sb	02 52 44.3	-0.3
WARBT	Fenglin Townsh	0.69	223	P	Pb	02 52 35.5	-0.2
EGFH	Guangfu	0.70	218	*e*P	Pg	02 52 36.5	+0.4
OWD	Renai	0.72	248	⇑P	Pb	02 52 36.0	-0.2
OWD				*e*S	Sb	02 52 46.0	+0.3
TIPB	Shuangxi	0.74	355	⇓P	Pb	02 52 36.7	+0.1
TIPB				S	Sb	02 52 46.4	0.0
WUSB	Renai	0.75	252	⇑P	Pb	02 52 36.7	-0.1
WUSB				S	Sg	02 52 47.4	+0.3
TWB1	Santiao Chiao	0.78	6	*e*P	Pb	02 52 37.5	+0.2
TWB1				*e*S	Sb	02 52 47.9	+0.4
TWA	Mucha	0.80	339	P	Pb	02 52 37.7	+0.1
TWA				*e*S	Sg	02 52 49.2	+0.6
NHDH	Xindian Distri	0.81	335	*e*P	Pg	02 52 38.2	+0.2
NHDH				*e*S	Sb	02 52 48.6	+0.3
NFF	Wufeng Townshi	0.82	300	*e*P	Pb	02 52 37.7	-0.2
NFF				S	Sb	02 52 48.6	0.0
TATO	Taipei	0.83	333	P	Pb	02 52 38.1	0.0
VWDT	VWDT	0.84	236	*e*P	Pb	02 52 38.2	0.0
VWDT				*e*S	Sg	02 52 50.0	+0.2
NWF	Wu-fen Shan	0.85	353	*e*P	Pb	02 52 38.6	+0.2
NWF				*e*S	Sg	02 52 50.5	+0.4
WFSB	Wu-fen Shan	0.85	353	P	Pb	02 52 38.7	+0.4
WFSB				S	Sg	02 52 50.6	+0.6
HGSD	Ruisui	0.85	211	P	Pb	02 52 38.4	0.0
HGSD				*e*S	Sn	02 52 53.0	+1.7
KSHI	Guanxi Townshi	0.86	310	*e*P	Pb	02 52 39.0	+0.5
KSHI				*e*S	Sg	02 52 50.8	+0.5
NHY	Taipei	0.86	340	*e*P	Pg	02 52 39.3	+0.2
SXI1	Grass Mountain	0.86	359	P	Pb	02 52 39.1	+0.4
SXI1				*i* S	Sn	02 52 51.4	-0.3
WHP	Taichung City	0.87	273	*e*P	Pb	02 52 38.7	-0.1
WHP				*e*S	Sb	02 52 50.1	-0.1
EHYH	Wanrong	0.89	215	*e*P	Pb	02 52 38.7	-0.4
EHYH				*e*S	Sb	02 52 51.2	+0.6
EHY	Hungye	0.89	216	*e*P	Pb	02 52 38.6	-0.6
LIOB	Emei	0.91	297	*e*P	Pb	02 52 39.5	+0.1
LIOB				*e*S	Sg	02 52 52.0	+0.1
NSTT	Nanjuang	0.91	296	*e*P	Pb	02 52 39.7	+0.2
NSTT				*e*S	Sb	02 52 51.3	0.0
WCS	Beigang Elemen	0.92	260	*e*P	Pb	02 52 39.5	-0.1
TNOU	National Taiwa	0.93	353	*e*P	Pb	02 52 40.1	+0.4
TNOU				*e*S	Sb	02 52 52.0	+0.4
SMLT	Sun Moon Lake	0.98	250	*e*P	Pb	02 52 40.4	-0.2
JYNG	Yonagunijimaku	0.98	77	P	Pb	02 52 40.9	+0.3
JYNG				*e*S	Sg	02 52 55.1	+0.9
NCU	National Centr	0.98	319	P	Pb	02 52 39.2	-1.5
NCU				*e*S	Sb	02 52 53.4	0.0
NCUH	Zhongli	0.98	319	*e*P	Pb	02 52 40.6	-0.1
NCUH				*e*S	Sg	02 52 54.9	+0.6
ZUZH	Zhuzihu	0.98	341	*e*P	Pb	02 52 40.4	-0.3
ZUZH				*e*S	Sb	02 52 54.0	+0.6
ECBN	Changbin	1.00	204	*e*P	Pb	02 52 40.5	-0.4
ECBN				*e*S	Sn	02 52 54.8	0.0
YULB	Yu-li	1.00	214	P	Pb	02 52 40.1	-0.9
YULB	Yu-li	1.00	214	P	Pb	02 52 39.9	-1.1
YULB				*e*S	Sb	02 52 53.7	0.0
SBCB	Hsinchu	1.00	304	P	Pn	02 52 41.5	+0.2
SBCB				*e*S	Sg	02 52 56.2	+1.2
TYC	Yuchr	1.01	252	P	Pb	02 52 41.0	-0.1
ANP	Anpu	1.01	340	*e*P	Pb	02 52 41.0	-0.3
HSN	Hsinchu	1.02	304	*e*S	Sg	02 52 56.4	+0.9
TWF1	Yuli	1.03	212	P	Pb	02 52 40.2	-1.3
TWQ1	Liyutan	1.03	277	P	Pn	02 52 42.2	+0.4
TWQ1				*e*S	Sg	02 52 56.7	+0.8
YOJ	Yonaguni jima	1.04	77	P	Pb	02 52 41.8	+0.2
YOJ	Yonaguni jima	1.04	77	P	Pb	02 52 41.7	0.0
YOJ				*e*S	Sg	02 52 57.3	+1.2
YOJ	Yonaguni jima	1.04	77	*e*P	Pb	02 52 41.8	+0.2
YOJ				*e*S	Sn	02 52 56.3	+0.4
NMLH	Miaoli	1.06	287	P	Pg	02 52 42.8	0.0
NMLH				*e*S	Sg	02 52 57.9	+1.3
TWY	Chenhua	1.08	345	*e*P	Pb	02 52 42.2	-0.2
WHYT	Xinyi Township	1.09	241	P	Pn	02 52 42.9	+0.2
WHYT				*e*S	Sg	02 52 58.1	+0.3
TCU	Taichung	1.12	266	*e*P	Pb	02 52 43.6	+0.6
TCU				*e*S	Sg	02 52 59.7	+1.0
CHKH	Chenggong	1.13	204	*e*P	Pn	02 52 41.9	-1.2
WJS	Zhushan	1.15	250	*e*P	Pb	02 52 44.0	+0.5
WJS				S	Sg	02 53 00.0	+0.6
WNT	Mingjian	1.17	253	*e*P	Pg	02 52 44.9	+0.1
WNT				S	Sg	02 53 01.0	+0.9
FULB	Fuli	1.17	209	*e*P	Pn	02 52 42.9	-0.7
CHKT	Chengkung	1.23	204	*e*P	Pn	02 52 43.0	-1.4
CHKT				*e*S	Sb	02 52 58.8	-1.5
ALS	Alishan	1.23	235	*e*P	Pb	02 52 45.5	+0.4
ALS				*e*S	Sg	02 53 02.1	-0.2
WCHH	Zhanghua	1.23	263	*e*P	Pb	02 52 45.5	+0.5
WCHH				*e*S	Sg	02 53 02.7	+0.4
WCH1	Changhua City	1.25	263	*e*S	Sg	02 53 03.2	+0.5
EHD	Haiduan	1.25	211	*e*P	Pn	02 52 42.9	-1.8
CHN5	Tsauling	1.28	241	P	Pb	02 52 46.4	+0.6
CHN5				*e*S	Sg	02 53 04.3	+0.5
ECS	Chishang	1.29	209	*e*P	Pn	02 52 45.4	+0.1
ELDTW	Lidau	1.31	218	*e*P	Pn	02 52 45.2	-0.6
WDL	Douliou City	1.35	248	*e*S	Sg	02 53 06.0	+0.2
WDLH	Douliu	1.36	247	*e*P	Pb	02 52 47.3	+0.2
WDLH				*e*S	Sg	02 53 06.3	+0.1
PCYT	Pengchaiyu	1.40	6	*e*P	Pn	02 52 46.5	-0.4
WCKO	Fanlu	1.42	237	*e*P	Pb	02 52 48.7	+0.5
WCKO				*e*S	Sg	02 53 07.7	-0.6
STYH	Taoyuan	1.47	225	P	Pn	02 52 48.3	+0.4
STYH				S	Sb	02 53 07.6	+0.2
CHN2	Minshiung	1.48	242	*e*S	Sg	02 53 10.4	+0.4
TPUB	Ta-pu	1.49	232	P	Pb	02 52 49.5	+0.2
TPUB	Ta-pu	1.49	232	*i* P	Pb	02 52 49.5	+0.2
TPUB				S	Sb	02 53 08.9	+1.1
WTCT	Ta-ch'eng	1.52	257	*e*S	Sg	02 53 10.6	-0.9
WTP	Ta-pu	1.53	231	P	Pb	02 52 49.9	-0.2
WTP				*e*S	Sg	02 53 10.9	-0.8
CHY	Chiayi	1.53	242	*e*P	Pb	02 52 50.3	+0.2
CHY				*e*S	Sg	02 53 10.8	-1.0
TWGBT	Beinan	1.59	208	P	Pn	02 52 49.6	+0.1
TWGBT	Beinan	1.59	208	*e*P	Pn	02 52 48.5	-1.0
TWG	Pinlang	1.59	209	*e*P	Pn	02 52 49.2	-0.3
TWK	Hsinying	1.61	234	*e*P	Pb	02 52 51.5	+0.1
TWK				*e*S	Sb	02 53 12.7	+1.3
CHN1	Nanshi	1.63	231	P	Pb	02 52 51.5	-0.3
CHN1				*e*S	Sb	02 53 13.1	+1.1
SNST	Tainan City	1.63	232	P	Pb	02 52 51.5	-0.2
SNST				*e*S	Sb	02 53 13.0	+1.0
WSF	Szhu	1.64	249	*e*S	Sb	02 53 13.5	+1.2
SGST	Jiashian	1.66	227	*e*P	Pn	02 52 51.1	+0.7
SGST				S	Sb	02 53 13.2	+0.3
IRIF	Iriomote-Funau	1.67	86	*e*P	Pn	02 52 50.2	-0.4
IRIF				*e*S	Sn	02 53 11.8	+0.3
WSL	Shuilin Townsh	1.68	246	*e*P	Pb	02 52 52.3	-0.4
WSL				*e*S	Sb	02 53 14.7	+1.2
HATJ	Hateruma jima	1.75	95	*e*S	Sn	02 53 13.6	+0.2
CHN8	Yiju	1.78	241	*e*S	Sb	02 53 16.9	+0.7
SSD	Sandimen	1.88	219	*e*P	Pb	02 52 55.6	-0.4
SSD				*e*S	Sb	02 53 20.2	+1.1
JKRS	Kuro-shima	1.93	89	*e*P	Pn	02 52 54.6	+0.6
TSCK	Chigu Township	1.98	237	*e*S	Sb	02 53 21.6	-0.4
MASBT	Mashibuluo	1.99	216	*e*P	Pn	02 52 56.3	+1.4
MASBT				S	Sb	02 53 22.3	+0.1
JIJ	Ishigaki jima	2.05	86	*e*P	Pn	02 52 55.8	0.0
JIJ				*e*S	Sn	02 53 20.7	-0.2
EAST	Anshuo	2.08	208	*e*P	Pn	02 52 56.0	-0.1
TAWH	Dawu Township	2.10	207	*e*P	Pn	02 52 56.8	+0.4
SCZT	Fangliau	2.19	213	*e*P	Pn	02 52 58.5	+0.8
SCZT				*e*S	Sb	02 53 27.9	-0.2
LAY	Lan-yu	2.20	188	*e*P	Pn	02 52 56.0	-1.9
LAY				*e*S	Sn	02 53 22.5	-2.1
JISG	Ishigakijimahi	2.23	80	*e*P	Pn	02 52 57.8	-0.4
JISG				*e*S	Sn	02 53 25.4	+0.2
LYUB	Lan-yu	2.23	188	P	Pn	02 52 55.7	-2.6
LYUB				*e*S	Sn	02 53 21.5	-3.9
PHUB	P'eng-hu	2.25	252	*e*P	Pn	02 52 58.2	-0.2
PHUB				*e*S	Sn	02 53 25.9	+0.2
WDGT	Dungji	2.27	245	*e*P	Pn	02 52 59.2	+0.5
VCHM	Qimei	2.48	246	*e*P	Pn	02 53 02.0	+0.3
VCHM				S	Sn	02 53 31.8	+0.3
TWKBT	Hengchun	2.49	204	P	Pn	02 53 01.6	-0.1
TWKBT				*e*S	Sn	02 53 31.9	+0.3
MATB	Ma-tsu	2.61	318	*e*P	Pn	02 53 02.1	-1.3
PTMZ	Houxiangcun	2.66	288	P	Pn	02 53 02.9	-1.2
XPSS	Dashiqiu	3.10	331	*e*P	Pn	02 53 08.6	-1.6
KNM	Kinmen	3.17	274	*e*P	Pn	02 53 11.8	+0.7
MHZQ	Yeshan	3.20	306	*e*P	Pn	02 53 10.3	-1.3
KNMB	Chin-men Tao	3.21	275	*e*P	Pn	02 53 10.5	-1.2
AXDP	Jialang	3.64	281	*e*P	Pn	02 53 17.2	-0.4
ZPLA	Ao Xicun	3.80	266	*e*P	Pn	02 53 19.2	-0.7

NEIC ***18*** *02:58:16.3±1.2, 9°.54N±0°.04×126°.6E±0°.1, h36^{km}±8^{km}, mb4.5/30, Error ellipse: s-maj=17.6km s-min=5.3km az=79.0*

IDC ***18*** *02:58:18.7±4.7, 9°.58N×126°.81E, h64^{km}±43^{km}, mb3.7/15, mbtmp4.0/16, ML5.2/2, Error ellipse: s-maj=44.1km s-min=14.2km az=65.0*

DJA ***18*** *02:58:45.5±2.3, 8°N±22°×12°6E±1°2, h91^{km}±8^{km}, M4.4/6, mb4.7/6, mB6.7/1, MLv4.3/4, Mw(mB)6.5/1*

ISC 18 02:58:16.5±0.5**, 9°.53N**±0°.05×**126°.6E**±0°.1**, h43^{km}, n63, σ1^s.12**/62**, mb4.3**/31**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	2.64	202	P	Pn	02 59 01.8	+5.1
	143nm,0.3s,baz=92,slow=12,SNR=11						
DAV				S	Sn	02 59 31.6	+4.1
	350nm,0.4s,baz=346,slow=23,SNR=3.9						
	375nm,0.4s						
DAV	Davao City (W)	2.64	202	Pn	Pn	02 58 56.5	-0.2
DAV				Sn	Sn	02 59 25.1	-2.5
DAV	Davao City (W)	2.64	202	P	Pn	02 59 02.4	+5.7
TNTI	Ternate	8.73	175	Pn	Pn	03 00 19.8	-0.5
GTOI	Gorontalo	9.53	202	P	Pn	03 00 31.0	-0.2
	0.1nm35nm,0.8s						
BKB	Balikpapan	14.43	223	Pn	Pn	03 01 35.9	-2.2
BNSI	Bone	15.27	205	P	Pn	03 01 50.8	+1.5
	43nm,1.1s						
EDFI	Ende, Flores	18.80	195	P	Pn	03 02 33.3	-0.2
SOEI	Soe	19.30	187		P	03 02 38.4	+0.3
BATI	Baumata	19.82	189	P	Pn	03 02 46.2	+0.7
	15nm,0.3s,baz=216,slow=1.9,SNR=10						
BATI	Baumata	19.82	189	P	Pn	03 02 47.2	+1.6
	126nm,1.0s						
PLAI	Plampang	20.24	206	P	Pn	03 02 53.0	+2.5
JAGI	Jajag, Banyuwa	21.75	215	P	P	03 03 04.7	+0.1
JAGI				IAmb	IAmb	03 03 11.8	
	comp=Z,15nm,1.1s						
MTN	Manton Dam	22.68	168	P	P	03 03 15.3	+0.8
KNRA	Kununurra	25.14	175	P	P	03 03 37.6	-0.1
KNRA				IAmb	IAmb	03 03 57.7	
	comp=Z,8.7nm,0.8s						
FITZ	Fitzroy Crossi	27.47	182	P	P	03 03 58.4	-0.3
CMAR	Chiang Mai Arr	28.22	291	P	P	03 04 09.3	+3.7
	comp=Z,0.6nm,0.3s,baz=103,slow=9.6,SNR=4.2						
	comp=Z,0.6nm,0.3s						
CMAR	Chiang Mai Arr	28.22	291	P	P	03 04 05.0	-0.6
GSI	Gunungsitoli	30.00	256	P	P	03 04 21.5	+0.1
WB0	Warramunga Arr	30.11	165	P	P	03 04 21.7	-0.5
WB0				IAmb	IAmb	03 04 58.0	
	comp=Z,8.0nm,1.2s						
WRA	Warramunga Arr	30.26	165	P	P	03 04 22.0	-1.6
	comp=Z,0.4nm,0.7s,baz=327,slow=10,SNR=4.7						
	comp=Z,0.4nm,0.7s						
AS31	Alice Springs	33.76	168	P	P	03 04 53.1	-1.2
ASAR	Alice Springs	33.76	168	P	P	03 04 53.7	-0.6
	comp=Z,0.4nm,0.3s,baz=350,slow=7.3,SNR=15						
	comp=Z,0.4nm,0.3s						
MORW	Morawa	39.70	195	P	P	03 05 44.7	-0.1
MORW				IAmb	IAmb	03 05 55.2	
	comp=Z,9.7nm,1.1s						
FORT	Forrest	40.10	178		P	03 05 48.3	+0.2
FORT				IAmb	IAmb	03 05 58.1	
	comp=Z,4.6nm,0.7s						
SONM	Songino Array	41.82	340	P	P	03 06 02.3	+0.1
	comp=Z,0.3nm,0.5s,baz=156,slow=7.4,SNR=2.0						
	comp=Z,0.3nm,0.5s						
SONM	Songino Array	41.82	340	P	P	03 06 01.6	-0.6
BBOO	Buckleboo	43.06	168		P	03 06 12.2	-0.1
BBOO				IAmb	IAmb	03 06 22.4	
	comp=Z,6.2nm,0.8s						
STKA	Stephens Creek	43.60	161	P	P	03 06 16.6	-0.1
	comp=Z,1.0nm,0.4s,baz=356,slow=9.1,SNR=5.0						
	comp=Z,1.0nm,0.4s						
PETK	Petropavlovsk-	50.18	24	P	P	03 07 07.7	-0.1
MKAR	Makanchi Array	52.80	323	P	P	03 07 27.9	+0.3
	comp=Z,1.4nm,0.5s,baz=125,slow=8.1,SNR=17						
	comp=Z,1.4nm,0.5s						
MKAR	Makanchi Array	52.80	323	P	P	03 07 27.1	-0.4
MAKZ	Makanchi	53.00	323	P	P	03 07 28.5	-0.6
MAKZ				IAmb	IAmb	03 08 02.6	
	comp=Z,4.5nm,1.1s						
NIL	Nilore	54.41	305	P	P	03 07 38.6	-1.0
ZALV	Zalesovo Beam	55.42	331	P	P	03 07 45.9	-0.6
	comp=Z,0.4nm,0.4s,baz=123,slow=5.3,SNR=2.1						
	comp=Z,0.4nm,0.4s						
MANEM	Manem	56.60	309		P	03 07 55.5	0.0
MANEM				IAmb	IAmb	03 07 58.9	
	comp=Z,4.5nm,0.8s						
KURK	Kurchatov	56.85	326	P	P	03 07 56.7	-0.1
KURK				IAmb	IAmb	03 07 59.7	
	comp=Z,3.1nm,0.7s						
KURBB	Kurchatov Arra	56.86	326	P	P	03 07 56.5	-0.3
	comp=Z,1.0nm,0.6s,baz=124,slow=6.6,SNR=11						
	comp=Z,1.0nm,0.6s						
GAR	Garm	58.01	310	P	P	03 08 04.5	-0.8
GAR				IAmb	IAmb	03 08 13.6	
	comp=Z,4.3nm,0.7s						
CHGR	Chuyangaron	58.80	310	P	P	03 08 10.2	-0.6
KK31	Karatay Array	58.99	315	P	P	03 08 11.1	-0.9
KKAR	Karatay Array	58.99	315		P	03 08 11.3	-0.7
TIXI	Tiksi	62.08	1	P	P	03 08 32.5	+0.1
BVAR	Borovoye Array	62.45	326	P	P	03 08 35.7	+0.4
	comp=Z,0.8nm,0.6s,baz=120,slow=8.8,SNR=4.4						
	comp=Z,0.8nm,0.6s						
BORK	Borovoye	62.50	326		P	03 08 35.5	-0.1
BORK				IAmb	IAmb	03 08 45.1	
	comp=Z,2.7nm,0.9s						
AB31	Akbulak array	67.64	319		P	03 09 08.4	-0.6
ABKAR	Akbulak array	67.64	319	P	P	03 09 08.3	-0.7
ARTI	Arti	70.10	327	P	P	03 09 23.9	-0.3
ARTI				IAmb	IAmb	03 09 52.7	
	comp=Z,8.2nm,1.4s						
C18K	Utukok River	74.73	21	P	P	03 09 53.2	+1.6
D19K	Kuna River	75.80	22	P	P	03 09 58.8	+1.0
D19K				IAmb	IAmb	03 10 06.2	
	comp=Z,7.1nm,1.1s						
B21K	Ikpikpuk River	77.22	21	P	P	03 10 06.6	+0.9
B21K				IAmb	IAmb	03 10 17.9	
	comp=Z,6.1nm,0.9s						
D22K	Ayikyak River	77.82	21	P	P	03 10 10.3	+1.2
D22K				IAmb	IAmb	03 10 29.5	
	comp=Z,6.6nm,1.4s						
RAYN	Ar Rayn	78.14	292	P	P	03 10 10.8	-1.0
C23K	Itkillik River	78.63	21	P	P	03 10 16.0	+2.5
C23K				IAmb	IAmb	03 10 25.0	
	comp=Z,5.8nm,1.1s						
ILAR	Eielson Array	79.96	26	P	P	03 10 21.1	+0.1
	comp=Z,0.5nm,0.9s,baz=239,slow=4.4,SNR=6.7						
	comp=Z,0.5nm,0.9s						
ARCES	ARCESS Array B	84.99	340	P	P	03 10 47.0	-0.1
	comp=Z,1.9nm,0.6s,baz=76,slow=6.5,SNR=17						
	comp=Z,1.9nm,0.6s						
ARCES	ARCESS Array B	84.99	340	P	P	03 10 47.5	+0.4
FINES	FINESS Array B	86.69	332	P	P	03 10 55.9	+0.3
	comp=Z,0.9nm,0.4s,baz=85,slow=4.8,SNR=12						
	comp=Z,0.9nm,0.4s						
FINES	FINESS Array B	86.69	332	P	P	03 10 55.6	+0.1
HFS	Hagfors	92.85	333	P	P	03 11 24.1	-0.4
	comp=Z,2.5nm,1.0s,baz=134,slow=8.2,SNR=4.4						
	comp=Z,2.5nm,1.0s						
NOA	NORSAR Array B	93.56	334	P	P	03 11 26.6	-1.3
	comp=Z,0.5nm,0.7s,baz=79,slow=5.9,SNR=3.6						
	comp=Z,0.5nm,0.7s						
YKA	Yellowknife Ar	94.30	24	P	P	03 11 31.6	+0.5
	comp=Z,0.7nm,0.9s,baz=295,slow=5.5,SNR=5.3						
	comp=Z,0.7nm,0.9s						
PLCA	Paso Flores	145.41	157	PKPbc	PKPab	03 17 50.6	+0.3
	comp=Z,2.1nm,1.0s,baz=214,slow=3.6,SNR=3.9						

IDC ***18*** *03:06:34.8±26.0, 31°.38N×128°.30E, h0^{km}, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=611.2km s-min=323.7km az=139.0*

JMA ***18*** *03:06:46.7±0.2, 30°.6N±0°.4×131°.3E±1°.0, h32^{km}±1^{km}, MV3.2/39, NEAR TANEGASHIMA ISLAND*

ISC 18 03:06:47.2±1.2**, 30°.62N**±0°.04×**131°.27E**±0°.07**, h32^{km}**±8^{km}**, n16, σ0^s.51**/29**, mb3.9**/3**, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTN	Tanegashima 3	0.25	278	*i* P	Pb	03 06 53.8	-0.4
JTN				S	Sb	03 06 59.6	+0.6
JMTN	Minamitane	0.39	235	*e*P	Pb	03 06 55.8	-0.2
JMTN				*e*S	Sn	03 07 03.2	+0.4
JTSR	Tashiro 2	0.62	332	*i* P	Pb	03 06 59.1	-0.6
JTSR				*e*S	Sn	03 07 08.9	+0.2
JYAK	Yakushimahirau	0.76	240	*e*P	Pn	03 07 01.1	-0.5
JYAK				*e*S	Sn	03 07 11.8	-0.1
JNAR	Kushima--Naru	0.91	0	P	Pb	03 07 03.9	-0.5
JNAR				*e*S	Sb	03 07 16.8	+0.7
JKC	Kuchinoerabu	0.94	261	*e*P	Pn	03 07 03.9	-0.2
JKC				*e*S	Sn	03 07 17.0	+0.6
JNKG	Nichinankitago	1.04	5	P	Pb	03 07 06.0	-0.7
JNKG				*e*S	Sb	03 07 19.9	-0.2
JSU	Suzuyama	1.13	322	P	Pn	03 07 06.6	-0.2
JSU				*e*S	Sn	03 07 21.8	+0.7
JTZ	Takazaki	1.29	353	P	Pn	03 07 09.4	+0.5
JTZ				*e*S	Sb	03 07 27.2	+0.1
JNN	Nakanoshima	1.43	238	*e*P	Pn	03 07 11.3	+0.3
JNN				*e*S	Sn	03 07 29.3	+0.6
JZO	Okuchi	1.62	340	P	Pn	03 07 13.8	+0.3
JZO				*e*S	Sn	03 07 34.1	+0.8
JTSN	Tsuno	1.64	7	*e*P	Pn	03 07 13.8	+0.1
JTSN				*e*S	Sn	03 07 34.2	+0.5
JSJ	Shimokoshiki	1.70	309	P	Pn	03 07 13.9	-0.7
JSJ				*e*S	Sn	03 07 35.3	+0.1
WRA	Warramunga Arr	50.36	176	P	P	03 15 40.7	-0.5
	1.1nm,0.9s,baz=352,slow=8.4,SNR=4.7						
	1.1nm,0.9s						
ASAR	Alice Springs	54.03	177	P	P	03 16 09.2	+0.6
	0.7nm,0.7s,baz=359,slow=7.8,SNR=10						
	0.7nm,0.7s						
STKA	Stephens Creek	62.92	170	P	P	03 17 10.1	-0.2
	1.0nm,0.3s,baz=359,slow=7.7,SNR=4.8						
	1.0nm,0.3s						

IDC ***18*** *03:26:25.8±2.1, 1°.97N×126°.86E, h0^{km}, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=209.3km s-min=22.5km az=67.0*

DJA ***18*** *03:26:29.5±0.4, 2°N±7°×12°7E±°, h10^{km}, M3.3/6, MLv3.3/6*

ISC 18 03:26:31.7±1.2**, 1°.7N**±0°.1×**126°.61E**±0°.08**, h35^{km}, n7, σ1^s.65**/7**, mb3.4**/4**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.17	140	P	Pn	03 26 51.4	-0.2
GAMI	Galela, Maluku	1.19	82	P	Pn	03 26 53.1	+1.2
GTOI	Gorontalo	3.74	254	P	Pn	03 27 28.0	+1.0
WRA	Warramunga Arr	22.78	161	P	P	03 31 30.8	-0.6
	0.4nm,0.4s,baz=340,slow=11,SNR=5.7						
	0.4nm,0.4s						
ASAR	Alice Springs	26.17	165	P	P	03 32 05.2	+2.1
	0.3nm,0.4s,baz=345,slow=9.5,SNR=9.2						
	0.3nm,0.4s						
MKAR	Makanchi Array	59.17	326	P	P	03 36 27.9	-1.4
	0.2nm,0.4s,baz=108,slow=6.9,SNR=5.3						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	63.40	328	P	P	03 36 56.4	-1.3
	0.2nm,0.3s,baz=127,slow=6.7,SNR=2.1						
	0.2nm,0.3s						

UCR ***18*** *03:27:17.4±1.1, 8°.56N×82°.99W, h40^{km}±5^{km}, MW3.8*

UPA ***18*** *03:27:18.4±2.4, 8°.63N×82°.97W, h19^{km}±4^{km}, MW3.9*

CATAC ***18*** *03:27:18.7±0.2, 9°N±2°×8°3W±°, h12^{km}±1^{km}, M3.6/14, MLv3.6/14, Error ellipse: s-maj=4.5km s-min=3.5km az=176.1, confirmed*

ISC 18 03:27:18.4±1.0**, 8°.60N**±0°.02×**82°.97W**±0°.02**, h33^{km}**±2^{km}**, n81, σ1^s.14**/101**, 15C-9D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NELY	Ciudad Neily	0.05	25	⇓*e*P	Pb	03 27 24.0	0.0
CDITO	Canoas	0.10	106	P	Pb	03 27 24.0	-0.2
CDITO	Canoas	0.10	106	S	Sb	03 27 28.8	+0.7
LPPC	Paso Canoas	0.15	118	*e*P	Pb	03 27 24.2	-0.3
LPPC				*e*S	Sb	03 27 29.7	+1.0
DMCAL	E. de Neily	0.19	69	⇑*e*P	Pb	03 27 25.0	+0.1
EDAD	Golfito	0.20	284	⇓*e*P	Pn	03 27 24.2	-0.4
VITO	San Vito	0.22	360	*e*P	Pb	03 27 25.5	+0.2
LESP3	La Esperanza,	0.26	138	⇑*e*P	Pn	03 27 25.0	-0.8
LESP3				*e*S	Sb	03 27 30.9	+0.2
SCLRA	Santa Clara, W	0.29	39	*e*P	Pb	03 27 26.2	-0.1
BRU2	Volcan	0.34	55	⇑*i*P	Pb	03 27 26.4	-0.4
BRU2				*i* S	Sb	03 27 33.9	+1.4
BRU2	Volcan	0.34	55	P	Pb	03 27 26.4	-0.4
BRU2	Volcan	0.34	55	⇑*e*P	Pb	03 27 26.4	-0.4
PTJ1	Puerto Jimnez	0.34	259	*e*P	Pb	03 27 26.0	-0.6
PTJ1				*e*S	Sb	03 27 33.4	+1.1
PTJ1	Puerto Jimnez	0.34	259	P	Pb	03 27 25.8	-0.9
ALCO	Alturas Coton,	0.37	21	*e*P	Pb	03 27 26.7	-0.6
ALCO				*e*S	Sn	03 27 34.1	+0.4
PTPM	Petroterminale	0.40	167	⇓*e*P	Pb	03 27 27.0	-0.6
PTPM				*e*S	Sn	03 27 35.5	+1.2
PTPA	Petro Terminal	0.41	166	⇓*e*P	Pb	03 27 27.0	-0.7
PIRO	Carate, Puerto	0.41	242	*e*P	Pb	03 27 26.4	-1.3
PIRO				*e*S	Sb	03 27 34.5	+0.5
PIRO	Carate, Puerto	0.41	242	P	Pb	03 27 26.4	-1.3
PIRO	Carate, Puerto	0.41	242	⇓*e*P	Pb	03 27 26.4	-1.3
JEFFS	S de V. Baru	0.44	81	⇑*e*P	Pb	03 27 27.7	-0.4
BAGA3	Bagala, Chiriq	0.46	107	*e*P	Pb	03 27 25.1	-3.3
EDP2	Potrero Grande	0.46	334	⇑*e*P	Pb	03 27 27.9	-0.6
PTAR3	Potrerillos Ar	0.48	79	*e*P	Pb	03 27 28.3	-0.4
PTAR3				*e*S	Sn	03 27 37.4	+1.1
LIMO3	Limones	0.51	168	*e*P	Pb	03 27 28.6	-0.6
LMNES	Limones	0.51	168	⇓*e*P	Pb	03 27 28.3	-0.9
BQTLY	Boquete Panama	0.53	73	*e*P	Pb	03 27 28.7	-0.8
DVD	David	0.54	108	*e*P	Pb	03 27 28.6	-1.1
DVD				*e*S	Sn	03 27 38.7	+1.0
FIMO	Fila Mora	0.54	315	⇑*e*P	Pb	03 27 28.9	-0.9
BQSF3	Alto Boquete,	0.55	75	*e*P	Pb	03 27 29.1	-0.8
BQSF3				*e*S	Sb	03 27 38.3	+0.5
LNBQ3	Los Naranjos,	0.56	70	*e*P	Pb	03 27 29.2	-0.8
LNBQ3				*e*S	Sb	03 27 38.2	+0.3
LOCO3	Loma Colorada,	0.58	109	⇑*e*P	Pn	03 27 29.1	-1.2
LOCO3				*e*S	Sn	03 27 39.9	+1.3
LOMA3	Las Lomas, Chi	0.60	106	⇑*e*P	Pn	03 27 29.3	-1.2
LOMA3				*e*S	Sb	03 27 39.1	+0.2
PANP	Palmar Norte	0.60	306	*e*P	Pn	03 27 29.2	-1.4
PSOM3	Paja de Sombre	0.65	83	*e*P	Pn	03 27 30.1	-1.1
PSOM3				*e*S	Sn	03 27 40.3	-0.1
CHIR3	Chiriqui UPA,	0.66	108	*e*P	Pn	03 27 30.2	-1.3
BURE	Buenos Aires	0.68	327	*e*P	Pn	03 27 30.3	-1.4
DRK0	Durika	0.71	337	*e*P	Pn	03 27 30.6	-1.8
DRK0				*e*S	Sn	03 27 41.9	-0.4
DRK0	Durika	0.71	337	P	Pn	03 27 30.5	-1.8
DRK0	Durika	0.71	337	S	Sn	03 27 38.0	-4.2
DRK0	Durika	0.71	337	⇑*e*P	Pn	03 27 30.5	-1.8
EDPE	Pejibaye, P	0.81	313	*e*P	Pn	03 27 32.1	-1.5
PBNVO	Pueblo Nuevo,	0.82	69	*e*P	Pn	03 27 32.4	-1.3
OCHAL	Ojochal	0.83	306	P	Pn	03 27 32.2	-1.7
OCHAL	Ojochal	0.83	306	S	Sn	03 27 44.4	-0.6
RBALA	Bur	0.85	71	⇑*e*P	Pn	03 27 32.9	-1.2
CHGR2	Aguacate	0.88	68	*e*P	Pn	03 27 33.4	-1.1
CHGR2				*e*S	Sn	03 27 44.8	-1.4
SAJE	San Jernim	0.91	324	⇑*e*P	Pn	03 27 33.4	-1.7
CNI2	El Empalme, Bo	0.95	31	*e*P	Pn	03 27 33.5	-2.0
CNI2				*e*S	Sn	03 27 48.5	+0.6
CEUA	Cerro Uatsi, L	1.01	2	*e*P	Pb	03 27 37.5	0.0
BRIBI	Bribri	1.02	8	*e*P	Pn	03 27 37.4	+0.9
REME3	Remedios, Chir	1.19	108	*e*P	Pn	03 27 37.8	-0.9
BUS1	Rivas	1.22	321	⇑*e*P	Pn	03 27 38.2	-1.4
QUEP	Quepos	1.44	305	P	Pn	03 27 42.3	+0.1
VERB	Verbena	1.52	332	⇓*e*P	Pn	03 27 43.4	0.0
LCR2	La Lucha 2	1.53	318	*e*S	Sn	03 28 03.6	+1.2
LCR2	La Lucha 2	1.53	318	P	Pn	03 27 42.6	-1.0
LCR2	La Lucha 2	1.53	318	S	Sn	03 28 02.1	-0.4
VTCV	VTCV, Calle Va	1.56	331	⇑*e*P	Pn	03 27 43.8	-0.3
ABRB	Las Abras (San	1.58	332	*e*P	Pn	03 27 42.8	-1.6
LCOCO	El Coco	1.58	339	⇓*e*P	Pn	03 27 44.8	+0.6
CVTV	Tajo	1.59	331	⇑*e*P	Pn	03 27 44.5	-0.1
CVTQ	Turrialba Volc	1.60	331	⇓*e*P	Pn	03 27 44.9	+0.2

ACOS	Acosta	1.67	315	*e*P	Pn	03 27 44.4	-1.2
MESA3	La Mesa, Verag	1.82	104	*e*P	Pn	03 27 47.3	-0.1
SAFE3	Santa Fe, Vera	1.87	92	*e*P	Pn	03 27 48.5	+0.3
GMAL	Guarumal, Vera	1.91	116	*e*P	Pn	03 27 47.6	-1.1
GMAL				*e*S	Sn	03 28 13.6	+2.0
TCS1	Tacares	1.94	318	P	Pn	03 27 50.1	+0.8
TRT2	Tortugero	2.08	339	P	Pn	03 27 51.2	+0.1
TRT2	Tortugero	2.08	339	S	Sn	03 28 17.7	+1.8
TRT2	Tortugero	2.08	339	*e*P	Pn	03 27 51.2	+0.1
MARI3	Mariato, Verag	2.18	116	*e*P	Pn	03 27 53.1	+0.8
SOCE	Pocosol	2.40	318	P	Pn	03 27 56.4	+0.9
CACAO	El Cacao, Vera	2.43	121	*e*P	Pn	03 27 55.3	-0.5
JTS	Las Juntas de	2.58	311	*e*P	Pn	03 27 58.7	+0.8
JTS				*e*S	Sn	03 28 30.1	+2.0
JTS	Las Juntas de	2.58	311	P	Pn	03 27 58.4	+0.5
JTS				S	Sn	03 28 29.2	+1.1
AZU	Azuero	2.79	107	*e*P	Pn	03 28 02.1	+1.4
CMARA	Lajas Hojancha	2.80	300	P	Pn	03 28 00.7	-0.3
CMARA	Lajas Hojancha	2.80	300	S	Sn	03 28 34.6	+0.9
BCIP	Isla Barro Col	3.15	79	P	Pn	03 28 06.0	+0.4
ELI1	Hacienda Flor	3.26	309	P	Pn	03 28 08.7	+1.5

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*ANF **18** 03:34:35.4±0.3, 66°.35N×157°.32W, h1^{km}±2^{km}, ML4.6/97, Error ellipse: s-maj=1.4km s-min=1.2km az=110.0*

*NEIC **18** 03:34:35.8, 66°.34N×157°.27W, h7^{km}*

*IDC **18** 03:34:35.6±0.8, 66°.33N×157°.71W, h0^{km}, mb4.0/14, mbtmp4.0/17, ML3.9/4, Error ellipse: s-maj=27.5km s-min=10.1km az=25.0*

*NEIC **18** 03:34:36.1±1.6, 66°.34N±0°.01×157°.27W±0°.04, h9^{km}±3^{km}, Error ellipse: s-maj=2.3km s-min=2.1km az=56.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.98; M$_{\theta\theta}$1.05; M$_{\phi\phi}$-0.06; M$_{r\theta}$-0.13; M$_{\theta\phi}$-0.25; M$_{\phi r}$0.24; Fault plane solution: M$_{0}$1.08000×10^{15} NP1: ϕ_s114.52000°, δ51.29000°, λ-73.79000°. NP2: ϕ_s269.58000°, δ41.47000°, λ-109.21000°. Principal axes: T 1.1169, Plg5.0000°, Azm193.0000°; N -0.0726, Plg13.0000°, Azm284.0000°; P -1.0443, Plg76.0000°, Azm82.0000°;*

*AEIC **18** 03:34:36.1±1.8, 66°.328N±0°.009×157°.27W±0°.04, h10^{km}±3^{km}, ML4.1, mb4.2/12(NEIC), ML4.3/158(NEIC), Mwr4.0/48(NEIC) Error ellipse: s-maj=2.2km s-min=1.1km az=113.0*

ISC 18 03:34:35.8±1.0**, 66°.35N**±0°.01×**157°.25W**±0°.02**, h7**^{km}±6^{km}**, n451,** σ**0**^{s}**.83**/487**, mb4.1**/19**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
G19K	Purcell Mounta	0.22	163		Pg	03 34 40.2	0.0
G19K					Sg	03 34 43.5	+0.3
G19K	Purcell Mounta	0.22	163	IAML		03 34 43.7	
	comp=E,306μm,0.3s						
G19K				IAML		03 34 43.8	
	comp=N,184μm,0.6s						
G19K	Purcell Mounta	0.22	163	P	Pg	03 34 40.4	+0.2
	baz=340,SNR=1000						
G19K				S	Sg	03 34 43.4	+0.3
	baz=340						
G19K				S	Sg	03 34 43.4	+0.3
	baz=340						
G18K	Tagagawik	0.73	232		Pg	03 34 49.7	-0.2
G18K					Sg	03 34 59.9	+0.5
G18K	Tagagawik	0.73	232	P	Pg	03 34 49.7	-0.2
	baz=51,SNR=1000						
G18K				S	Sg	03 34 59.6	+0.1
	baz=51						
H19K	Roundabout Mou	0.89	158		Pg	03 34 52.4	-0.5
H19K	Roundabout Mou	0.89	158		Sg	03 35 04.1	-0.4
H19K				IAML		03 35 08.9	
	comp=N,9μm,0.2s						
H19K	Roundabout Mou	0.89	158	P	Pg	03 34 52.4	-0.5
	baz=338						
H19K				S	Sg	03 35 04.3	-0.1
	baz=338						
F20K	Avaraart Lake	0.92	40		Pg	03 34 53.3	-0.2
F20K					Sg	03 35 05.7	+0.1
F20K				IAML		03 35 10.3	
	comp=N,11μm,0.2s						
F20K	Avaraart Lake	0.92	40	P	Pg	03 34 53.4	-0.2
	baz=221,SNR=1000						
F20K				S	Sg	03 35 06.0	+0.5
	baz=221						
F20K				S	Sg	03 35 06.0	+0.5
	baz=221						
F18K	Selawik	1.00	286		Pg	03 34 54.5	-0.3
F18K					Sb	03 35 08.4	-0.3
F18K					Sg	03 35 09.2	+1.3
F18K	Selawik	1.00	286	P	Pg	03 34 54.6	-0.3
	baz=104,SNR=625						
F18K				S	Sb	03 35 08.8	+0.1
	baz=104						
F18K				S	Sb	03 35 08.8	+0.1
	baz=104						
E19K	Redstone River	1.11	0		Pg	03 34 56.9	-0.1
E19K					Sb	03 35 12.1	+0.1
E19K	Redstone River	1.11	0	P	Pg	03 34 57.0	-0.1
	baz=181						
E19K				S	Sb	03 35 12.1	+0.1
	baz=181						
E19K				S	Sb	03 35 12.1	+0.1
	baz=181						
H18K	Honhosa River	1.29	201		Pn	03 34 59.3	-1.0
H18K					Sb	03 35 16.4	-0.9
H18K	Honhosa River	1.29	201	IAML		03 35 18.6	
	comp=E,6μm,0.5s						
H18K	Honhosa River	1.29	201	P	Pn	03 34 59.3	-1.0
	baz=20						
H18K				S	Sb	03 35 16.3	-0.9
	baz=20						
H20K	Anotleneega Mo	1.30	131		Pn	03 34 59.6	-0.8
H20K					Pb	03 35 00.1	-0.5
H20K					Sb	03 35 17.2	-0.3
H20K	Anotleneega Mo	1.30	131	P	Pn	03 34 59.7	-0.8
	baz=312						
H20K				S	Sg	03 35 17.6	+0.1
	baz=312						
H20K				S	Sg	03 35 17.6	+0.1
	baz=312						
IMAR	Indian Mountai	1.47	103		Pn	03 35 02.3	-0.5
IM01	Indian Mountai	1.48	102		Pn	03 35 02.2	-0.6
IM01					Sb	03 35 22.5	0.0
G21K	Allakaket	1.51	82		Pn	03 35 03.0	-0.3
G21K	Allakaket	1.51	82	IAML		03 35 27.4	
	comp=N,6μm,0.8s						
G21K	Allakaket	1.51	82	P	Pn	03 35 03.0	-0.3
	baz=265						
G21K				S	Sn	03 35 23.1	-0.2
	baz=265						
GCSA	Galena City Sc	1.62	174		Pn	03 35 04.6	-0.2
GCSA					Sn	03 35 25.7	-0.2
GCSA					Sb	03 35 26.9	+0.3
GCSA	Galena City Sc	1.62	174	P	Pn	03 35 04.6	-0.2
	baz=354,SNR=543						
GCSA				S	Sb	03 35 26.2	-0.4
	baz=354						
G17K	Kiwalik Mounta	1.64	240		Pn	03 35 04.1	-0.9
G17K					Pb	03 35 04.4	-2.0
G17K					Sn	03 35 26.1	-0.2
G17K	Kiwalik Mounta	1.64	240	P	Pn	03 35 04.1	-0.9
	baz=57,SNR=545						
G17K				S	Sn	03 35 25.8	-0.5
	baz=57						
G17K				S	Sn	03 35 25.8	-0.5
	baz=57						
E18K	Tukpahlearik C	1.71	311		Pn	03 35 06.4	+0.5
E18K	Tukpahlearik C	1.71	311	P	Pn	03 35 06.6	+0.6
	baz=128						
E18K				S	Sb	03 35 28.8	-0.3
	baz=128						
E18K				S	Sb	03 35 28.8	-0.3
	baz=128						
F21K	Alatna River	1.73	58		Pn	03 35 06.1	-0.2
F21K				Sn	Sn	03 35 27.3	-1.3
F21K				IAML		03 35 33.9	
	comp=N,4μm,0.6s						
F21K	Alatna River	1.73	58	P	Pn	03 35 06.3	0.0
	baz=241,SNR=734						
H17K	Granite Mounta	1.80	219		Pn	03 35 06.7	-0.6
H17K	Granite Mounta	1.80	219	IAML		03 35 33.5	
	comp=N,3μm,0.7s						
H17K	Granite Mounta	1.80	219	P	Pn	03 35 06.5	-0.8
	baz=37,SNR=1000						
I20K	Naaghedeneel	1.94	142		Pn	03 35 09.1	-0.1
I20K	Naaghedeneel	1.94	142	P	Pn	03 35 09.4	+0.2
	baz=324,SNR=167						
I20K				Sb	Sg	03 35 37.8	-0.3
	baz=324						
H21K	Melozitna Rive	1.94	109		Pn	03 35 08.8	-0.5
H21K					Sb	03 35 36.5	+0.4
H21K	Melozitna Rive	1.94	109	IAML		03 35 40.3	
	comp=E,3μm,0.6s						
H21K				IAML		03 35 40.7	
	comp=N,3μm,0.3s						
H21K	Melozitna Rive	1.94	109	P	Pn	03 35 08.9	-0.5
	baz=293						
E20K	Nigu River	1.96	12		Pn	03 35 10.7	+1.2
E20K					Pb	03 35 11.0	-0.8
E20K	Nigu River	1.96	12	P	Pb	03 35 11.1	-0.8
	baz=193						
E17K	Hotham Inlet	1.96	294		Pn	03 35 09.3	-0.1
E17K	Hotham Inlet	1.96	294	P	Pn	03 35 09.4	-0.1
	baz=110,SNR=450						
E17K				Sb	Sb	03 35 37.1	+0.6
	baz=110						
D19K	Kuna River	2.18	352		Pn	03 35 13.5	+1.0
D19K					Sb	03 35 42.6	-0.1
D19K	Kuna River	2.18	352	IAML		03 35 45.1	
	comp=E,2μm,0.6s						
D19K				IAML		03 35 45.3	
	comp=N,2μm,0.6s						
D19K	Kuna River	2.18	352	P	Pn	03 35 13.8	+1.3
	baz=171						
D19K				Sb	Sg	03 35 44.4	-1.3
	baz=171						
F22K	John River	2.31	58		Pn	03 35 14.7	+0.5
F22K	John River	2.31	58	P	Pn	03 35 14.7	+0.5
	baz=242						
F22K				Sb	Sg	03 35 48.8	-1.1
	baz=242						
G22K	Bettles	2.36	73		Pn	03 35 14.4	-0.5
G22K	Bettles	2.36	73	P	Pn	03 35 14.4	-0.5
	baz=258,SNR=126						
D20K	Etivluk River	2.38	6		Pn	03 35 16.5	+1.1
D20K	Etivluk River	2.38	6	IAML		03 35 53.5	
	comp=N,1μm,1.0s						
D20K				IAML		03 35 54.6	
	comp=E,2μm,0.5s						
D20K	Etivluk River	2.38	6	P	Pn	03 35 16.4	+1.1
	baz=186						
D20K				Sb	Sb	03 35 50.5	+1.8
	baz=186						
D20K				Sb	Sb	03 35 50.5	+1.8
	baz=186						
H22K	Ishtalitna Cre	2.43	98		Pn	03 35 15.8	-0.2
H22K				IAML		03 35 55.7	
	comp=N,1μm,0.8s						
H22K	Ishtalitna Cre	2.43	98	P	Pn	03 35 15.9	0.0
	baz=283,SNR=141						
H22K				Sb	Sb	03 35 51.3	+1.3
	baz=283						
H22K				Sb	Sb	03 35 51.3	+1.3
	baz=283						
E21K	Killik River	2.45	30		Pn	03 35 17.0	+0.8
E21K	Killik River	2.45	30	IAML		03 35 54.5	
	comp=E,1μm,0.8s						
E21K	Killik River	2.45	30	P	Pn	03 35 17.0	+0.8
	baz=213						
E21K				Sb	Sg	03 35 53.1	-1.3
	baz=213						
E21K				Sb	Sg	03 35 53.1	-1.3
	baz=213						
J19K	Poorman	2.47	163		Pn	03 35 16.4	0.0
J19K	Poorman	2.47	163	IAML		03 35 53.4	
	comp=N,2μm,0.5s						
J19K				IAML		03 35 54.5	
	comp=E,1μm,0.3s						
J19K	Poorman	2.47	163	P	Pn	03 35 16.5	0.0
	baz=344,SNR=224						
J19K				Sb	Sb	03 35 51.9	+0.9
	baz=344						
J19K				Sb	Sb	03 35 51.9	+0.9
	baz=344						
J20K	Nowinta River	2.54	148		Pn	03 35 17.1	-0.5
J20K				IAML		03 36 01.2	
	comp=N,2μm,0.7s						
J20K				IAML		03 36 05.4	
	comp=E,1μm,0.6s						
J20K	Nowinta River	2.54	148	P	Pn	03 35 17.0	-0.5
	baz=330						
J20K				Sb	Sg	03 35 55.5	-1.9
	baz=330						
J20K				Sb	Sg	03 35 55.5	-1.9
	baz=330						
D17K	Noatak River	2.66	303		Pn	03 35 19.2	+0.2
D17K	Noatak River	2.66	303	P	Pn	03 35 19.3	+0.2
	baz=118,SNR=59						
H16K	Elim	2.70	233		Pn	03 35 18.1	-1.5
H16K	Elim	2.70	233	P	Pn	03 35 18.2	-1.5
	baz=48,SNR=126						
H16K				Sb	Sb	03 35 58.8	+1.1
	baz=48						
H16K				Sb	Sb	03 35 58.8	+1.1
	baz=48						
C18K	Utukok River	2.76	328		Pn	03 35 20.9	+0.4
C18K	Utukok River	2.76	328	P	Pn	03 35 20.9	+0.4
	baz=145,SNR=68						
E22K	Anaktuvuk Pass	2.77	47	Pn	Pn	03 35 21.8	+1.2
E22K				Sn	Sn	03 35 51.9	-2.4
E22K				IAML		03 36 09.1	
	comp=E,875nm,0.9s						
E22K	Anaktuvuk Pass	2.77	47	P	Pn	03 35 22.0	+1.4
	baz=232,SNR=212						
RDOG	Red Dog Mine	2.79	310		Pn	03 35 21.6	+0.8
RDOG	Red Dog Mine	2.79	310	P	Pn	03 35 21.9	+1.0
	baz=126,SNR=46						
I17K	Unalakleet	2.87	212		Pn	03 35 21.8	-0.2
I17K				IAML		03 36 09.0	
	comp=N,1μm,0.6s						
I17K	Unalakleet	2.87	212	P	Pn	03 35 21.7	-0.3
	baz=29,SNR=528						
C19K	Lookout Ridge	2.91	343		Pn	03 35 21.7	-0.8
C19K				IAML		03 36 18.9	
	comp=E,866nm,0.9s						
C19K				IAML		03 36 19.0	
	comp=N,851nm,0.9s						
C19K	Lookout Ridge	2.91	343	P	Pn	03 35 23.4	+0.9
	baz=161,SNR=71						
J18K	Innoko River	2.91	175		Pn	03 35 22.3	-0.2
J18K	Innoko River	2.91	175	P	Pn	03 35 22.4	-0.2
	baz=356,SNR=72						
J18K				Sb	Sb	03 36 05.1	+1.4
	baz=356						
G23K	Bananza Creek	2.91	80		Pn	03 35 21.5	-1.2
G23K	Bananza Creek	2.91	80	IAML		03 36 14.5	
	comp=N,1μm,0.8s						
G23K				IAML		03 36 16.6	
	comp=E,886nm,0.7s						
G23K	Bananza Creek	2.91	80	P	Pn	03 35 21.4	-1.2
	baz=266						
COLD	Coldfoot	2.92	69		Pn	03 35 22.3	-0.4
COLD				IAML		03 36 12.9	
	comp=E,765nm,0.7s						
COLD				IAML		03 36 13.1	
	comp=N,768nm,0.5s						
COLD	Coldfoot	2.92	69	P	Pn	03 35 22.3	-0.4
	baz=256,SNR=21						
C21K	Knifeblade Rid	2.97	17		Pn	03 35 23.8	+0.5
C21K	Knifeblade Rid	2.97	17	P	Pn	03 35 24.0	+0.6
	baz=200,SNR=30						
MLY	Manley	3.00	113		Pn	03 35 22.9	-0.9
MLY	Manley	3.00	113	P	Pn	03 35 23.1	-0.7
	baz=299,SNR=48						
J17K	VABM Dome	3.07	196		Pn	03 35 24.4	-0.3
J17K				IAML		03 36 20.4	
	comp=E,870nm,0.8s						
J17K				IAML		03 36 21.4	
	comp=N,763nm,0.7s						
J17K	VABM Dome	3.07	196	P	Pn	03 35 24.6	-0.1
	baz=14,SNR=67						
D22K	Ayikyak River	3.08	32		Pn	03 35 26.0	+1.1
D22K	Ayikyak River	3.08	32	P	Pn	03 35 25.9	+1.1
	baz=217,SNR=102						
F15K	North Star Dit	3.09	261		Pn	03 35 24.0	-1.0
F15K	North Star Dit	3.09	261	P	Pn	03 35 24.0	-1.0
	baz=75,SNR=21						
G15K	Niukluk	3.12	247		Pn	03 35 23.9	-1.6
G15K	Niukluk	3.12	247	P	Pn	03 35 23.9	-1.6
	baz=61						
C17K	DeLong Mountai	3.13	316		Pn	03 35 25.5	0.0
C17K	DeLong Mountai	3.13	316	P	Pn	03 35 26.1	+0.6
	baz=130,SNR=35						
H23K	Yukon River	3.18	96		Pn	03 35 25.8	-0.5
H23K				IAML		03 36 18.6	
	comp=E,829nm,0.9s						
H23K				IAML		03 36 21.6	
	comp=N,1μm,0.8s						
H23K	Yukon River	3.18	96	P	Pn	03 35 26.1	-0.1
	baz=283						
CHUM	Lake Minchumin	3.24	138		Pn	03 35 26.5	-0.5
CHUM	Lake Minchumin	3.24	138	P	Pn	03 35 28.3	+1.2
	baz=322,SNR=70						
K20K	Telida	3.30	154		Pn	03 35 28.2	+0.4
K20K	Telida	3.30	154	P	Pn	03 35 27.9	0.0
	baz=337,SNR=9.6						
J16K	Anvik River	3.40	207		Pn	03 35 29.1	0.0
J16K	Anvik River	3.40	207	IAML		03 36 26.3	
	comp=N,764nm,1.0s						
J16K	Anvik River	3.40	207	P	Pn	03 35 29.2	0.0
	baz=23,SNR=242						
E23K	Chandalar	3.43	57		Pn	03 35 30.5	+0.7
E23K	Chandalar	3.43	57	P	Pn	03 35 30.4	+0.6
	baz=243,SNR=105						
B21K	Ikpikpuk River	3.43	16		Pn	03 35 29.4	-0.2
B21K	Ikpikpuk River	3.43	16	P	Pn	03 35 29.4	-0.2
	baz=198						
BPAW	Bear Paw Mtn.	3.47	128	Pn	Pn	03 35 29.8	-0.5
BPAW				IAML		03 36 28.4	
	comp=E,596nm,1.2s						
BPAW				IAML		03 36 33.4	
	comp=N,744nm,0.9s						
BPAW	Bear Paw Mtn.	3.47	128	P	Pn	03 35 30.5	+0.2
	baz=313,SNR=21						
I23K	Minto, Yukon-K	3.47	107		Pn	03 35 29.6	-0.6
I23K				IAML		03 36 27.1	
	comp=E,590nm,0.5s						
I23K				IAML		03 36 30.7	
	comp=N,560nm,0.6s						
I23K	Minto, Yukon-K	3.47	107	P	Pn	03 35 29.7	-0.5
	baz=294,SNR=77						
B18K	Kokolik River	3.48	332		Pn	03 35 30.9	+0.6
B18K	Kokolik River	3.48	332	P	Pn	03 35 31.0	+0.6
	baz=148,SNR=37						
D23K	Nanushuk River	3.63	41		Pn	03 35 33.1	+0.8
D23K				IAML		03 36 38.8	
	comp=N,711nm,1.1s						
D23K	Nanushuk River	3.63	41	P	Pn	03 35 33.5	+1.2
	baz=227,SNR=41						
B20K	Meade River	3.67	0		Pn	03 35 33.6	+0.6
B20K	Meade River	3.67	0	IAML		03 36 49.7	
	comp=E,578nm,1.1s						
B20K				IAML		03 37 06.8	
	comp=N,544nm,1.2s						
B20K	Meade River	3.67	0	P	Pn	03 35 33.5	+0.6
	baz=181						
K17K	Iditarod	3.68	188		Pn	03 35 32.7	-0.4
K17K				IAML		03 36 39.3	
	comp=N,520nm,1.1s						
K17K				IAML		03 36 42.6	
	comp=E,488nm,0.7s						
K17K	Iditarod	3.68	188	P	Pn	03 35 32.7	-0.4
	baz=6.5,SNR=49						
C16K	Lisburne Hills	3.68	305		Pn	03 35 32.9	-0.2
C16K	Lisburne Hills	3.68	305	P	Pn	03 35 33.8	+0.7
	baz=118,SNR=26						
TOLK	Toolik Lake Re	3.74	49		Pn	03 35 34.8	+0.9
TOLK				IAML		03 36 42.6	
	comp=N,587nm,0.8s						
TOLK	Toolik Lake Re	3.74	49	P	Pn	03 35 34.3	+0.4
	baz=236,SNR=54						
E24K	Your Creek	3.82	59		Pn	03 35 35.3	+0.3
E24K	Your Creek	3.82	59	IAML		03 36 43.8	
	comp=E,556nm,0.6s						
E24K				IAML		03 36 44.0	
	comp=N,424nm,0.6s						
E24K	Your Creek	3.82	59	P	Pn	03 35 35.4	+0.3
	baz=247						
ANM	Nome	3.84	246		Pn	03 35 33.3	-2.0
ANM				IAML		03 36 44.5	
	comp=N,360nm,0.7s						
ANM	Nome	3.84	246	P	Pn	03 35 33.2	-2.0
	baz=59						
NEA2	Nenana	3.84	114		Pn	03 35 34.8	-0.5
NEA2	Nenana	3.84	114	P	Pn	03 35 35.3	0.0
	baz=301,SNR=65						
H24K	Noodor Dome	3.85	93		Pn	03 35 34.9	-0.6
H24K				IAML		03 36 45.7	
	comp=N,421nm,0.6s						
H24K				IAML		03 36 47.6	
	comp=E,381nm,0.6s						
H24K	Noodor Dome	3.85	93	P	Pn	03 35 35.0	-0.4
	baz=282						
F24K	Squaw Lake	3.87	68		Pn	03 35 35.2	-0.5
F24K	Squaw Lake	3.87	68	IAML		03 36 45.1	
	comp=N,576nm,0.8s						
F24K	Squaw Lake	3.87	68	P	Pn	03 35 35.2	-0.5
	baz=256,SNR=19						
KTH	Kantishna Hill	3.89	133		Pn	03 35 36.6	+0.6
KTH				IAML		03 36 40.9	
	comp=E,408nm,1.4s						
KTH				IAML		03 36 45.1	
	comp=N,497nm,1.6s						
G24K	Hadweenzic Riv	3.92	80		Pn	03 35 35.6	-0.9
G24K	Hadweenzic Riv	3.92	80	P	Pn	03 35 35.5	-1.0
	baz=269,SNR=14						
PPLA	Purkeypile	4.10	146		Pn	03 35 40.1	+1.1
PPLA				IAML		03 36 51.2	
	comp=E,334nm,1.7s						
PPLA				IAML		03 36 59.4	
	comp=N,348nm,1.2s						
PPLA	Purkeypile	4.10	146	P	Pn	03 35 39.9	+1.0
	baz=330,SNR=44						
A19K	Wainwright	4.12	342		Pn	03 35 39.8	+0.7
A19K	Wainwright	4.12	342	P	Pn	03 35 39.8	+0.7
	baz=158						
TRF	Thorofare Moun	4.16	131		Pn	03 35 40.4	+0.6
TRF				IAML		03 36 59.0	
	comp=N,447nm,1.3s						
TRF	Thorofare Moun	4.16	131	P	Pn	03 35 40.3	+0.6
	baz=317,SNR=56						
L18K	Granite Mounta	4.16	176		Pn	03 35 39.7	+0.1
L18K				IAML		03 36 50.5	
	comp=N,380nm,0.9s						
L18K				IAML		03 36 51.0	
	comp=E,293nm,0.6s						
L18K	Granite Mounta	4.16	176	P	Pn	03 35 40.0	+0.4
	baz=357,SNR=21						
COLA	College	4.17	107		Pn	03 35 40.0	+0.2
COLA	College	4.17	107	P	Pn	03 35 39.6	-0.1
	baz=295						
POKR	Poker Plat Res	4.24	103		Pn	03 35 40.7	-0.1
POKR				IAML		03 36 52.9	
	comp=E,298nm,0.6s						
POKR				IAML		03 36 57.1	
	comp=N,275nm,0.8s						
POKR	Poker Plat Res	4.24	103	P	Pn	03 35 40.6	-0.1
	baz=291,SNR=85						
B22K	Teshekpuk Lake	4.25	18		Pn	03 35 41.4	+0.5
B22K				IAML		03 36 59.3	
	comp=E,332nm,0.9s						
B22K				IAML		03 37 08.7	
	comp=N,440nm,1.0s						
B22K	Teshekpuk Lake	4.25	18	P	Pn	03 35 40.2	-0.7
	baz=201,SNR=87						
D24K	Happy Valley	4.26	45		Pn	03 35 41.7	+0.7
D24K	Happy Valley	4.26	45	P	Pn	03 35 41.8	+0.7
	baz=233						
L17K	Donlin	4.26	187		Pn	03 35 41.0	-0.1
L17K	Donlin	4.26	187	P	Pn	03 35 40.9	-0.1
	baz=5.6,SNR=36						
WRH	Wood River Hil	4.27	112		Pn	03 35 40.1	-1.1
CCB	Clear Creek Bu	4.29	109		Pn	03 35 40.6	-0.8
C23K	Itkillik River	4.29	32		Pn	03 35 41.4	-0.1
C23K	Itkillik River	4.29	32	IAML		03 37 06.5	
	comp=N,459nm,0.6s						
C23K				IAML		03 37 28.1	
	comp=E,345nm,1.3s						
C23K	Itkillik River	4.29	32	P	Pn	03 35 41.6	+0.1
	baz=218,SNR=32						
L19K	White Mountain	4.32	165		Pn	03 35 42.0	+0.2
L19K				IAML		03 36 59.6	
	comp=N,260nm,0.8s						
L19K				IAML		03 37 02.6	
	comp=E,279nm,0.9s						
L19K	White Mountain	4.32	165	P	Pn	03 35 42.1	+0.2
	baz=347,SNR=84						

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MCK   McKinley          4.39 123         Pn     03 35 43.1 +0.2
MCK   McKinley          4.39 123   P     Pn     03 35 43.1 +0.2
      baz=310,SNR=26
TNA   Tin City          4.44 265   Pn    Pn     03 35 42.5 -1.0
TNA                                IAML         03 37 05.0
      comp=N,351nm,0.9s
TNA   Tin City          4.44 265   P     Pn     03 35 42.8 -0.7
      baz=75
G25K  Bearman Lake      4.47  80   P     Pn     03 35 44.2 +0.3
      baz=270
K15K  Wolf Creek Mou    4.48 207         Pn     03 35 44.0 -0.1
K15K  Wolf Creek Mou    4.48 207   IAML         03 37 05.9
      comp=E,283nm,1.9s
K15K                               IAML         03 37 10.0
      comp=N,354nm,1.6s
K15K  Wolf Creek Mou    4.48 207   P     Pn     03 35 44.5 +0.4
      baz=23,SNR=8.0
J14K  Nanvaranak Lak    4.53 220         Pn     03 35 43.5 -1.2
J14K  Nanvaranak Lak    4.53 220   IAML         03 37 11.9
      comp=N,337nm,1.3s
J14K  Nanvaranak Lak    4.53 220   P     Pn     03 35 43.5 -1.2
      baz=34
IL01                    4.59 105         Pn     03 35 45.4 -0.1
IL31                    4.59 105         Pn     03 35 44.8 -0.7
ILAR  Eielson Array     4.59 105   Pn    Pn     03 35 46.0 +0.4
      comp=N,26nm,0.3s,baz=294,slow=14,SNR=1219
ILAR                               Sn    Sn     03 36 37.5 -1.5
      comp=N,12nm,0.3s,baz=302,slow=29,SNR=4.5
ILAR                               Lg    Lg     03 36 59.0
      comp=N,16nm,0.3s,baz=304,slow=32,SNR=5.4
ILAR  Eielson Array     4.59 105         Pn     03 35 44.7 -0.9
RND   Reindeer          4.64 126         Pn     03 35 47.0 +0.6
C24K  Franklin Bluff    4.66  40         Pn     03 35 46.9 +0.4
C24K  Franklin Bluff    4.66  40   P     Pn     03 35 46.3 -0.2
      baz=228
F25K  Christian Rive    4.72  69         Pn     03 35 47.6 +0.2
F25K                               IAML         03 37 12.6
      comp=N,232nm,0.6s
F25K  Christian Rive    4.72  69   P     Pn     03 35 47.7 +0.2
      baz=260
HDA   Harding Lake      4.73 110         Pn     03 35 46.6 -0.9
HDA                                IAML         03 37 05.9
      comp=N,234nm,0.6s
HDA                                IAML         03 37 06.1
      comp=E,225nm,0.5s
HDA   Harding Lake      4.73 110   P     Pn     03 35 46.5 -1.0
      baz=299,SNR=26
A22K  Sinclair Lake     4.75   9         Pn     03 35 47.0 -0.7
A22K  Sinclair Lake     4.75   9   P     Pn     03 35 47.9 +0.2
      baz=191,SNR=52
L22K  Petersville       4.75 141         Pn     03 35 49.7 +1.8
L22K                               IAML         03 36 44.7
      comp=N,206nm,1.0s
L22K                               IAML         03 36 45.8
      comp=E,182nm,0.8s
M20K  Styx River        4.84 156         Pn     03 35 49.9 +0.8
M20K  Styx River        4.84 156   IAML         03 37 14.8
      comp=E,191nm,1.1s
M20K  Styx River        4.84 156   P     Pn     03 35 50.3 +1.2
      baz=340
E25K  Arctic Village    4.87  63         Pn     03 35 49.2 -0.3
E25K                               IAML         03 37 16.3
      comp=N,275nm,0.9s
E25K  Arctic Village    4.87  63   P     Pn     03 35 49.2 -0.3
      baz=254,SNR=28
M18K  Stony River       4.92 172         Pn     03 35 50.2 +0.1
M18K  Stony River       4.92 172   P     Pn     03 35 50.3 +0.1
      baz=353,SNR=60
M17K  Holitna River     4.97 181         Pn     03 35 51.0 +0.2
M17K  Holitna River     4.97 181   IAML         03 37 16.7
      comp=E,275nm,1.1s
M17K  Holitna River     4.97 181   P     Pn     03 35 51.1 +0.2
      baz=0.8,SNR=13
CUT   Chulitna          4.99 139         Pn     03 35 51.6 +0.6
CUT   Chulitna          4.99 139   P     Pn     03 35 52.2 +1.2
      baz=326,SNR=10
A21K  Barrow            5.00   2         Pn     03 35 50.7 -0.4
A21K  Barrow            5.00   2   P     Pn     03 35 50.6 -0.6
      baz=183,SNR=8.1
L15K  Ungalak Mounta    5.05 204         Pn     03 35 51.6 -0.3
L15K  Ungalak Mounta    5.05 204   P     Pn     03 35 51.9 +0.1
      baz=20
SKT   Skwentna          5.05 148         Pn     03 35 52.4 +0.5
SKT                                IAML         03 37 24.1
      comp=E,231nm,0.9s
SKT   Skwentna          5.05 148   P     Pn     03 35 53.3 +1.3
      baz=333,SNR=78
WAT7  Susitna Watana    5.05 130         Pn     03 35 52.9 +0.9
D25K  Kavik River       5.08  49         Pn     03 35 52.6 +0.2
D25K                               IAML         03 37 22.5
      comp=E,195nm,0.8s
D25K                               IAML         03 37 28.2
      comp=N,192nm,1.1s
D25K  Kavik River       5.08  49   P     Pn     03 35 52.6 +0.2
      baz=239
BMAR  Burnt Mountain    5.11  72         Pn     03 35 51.3 -1.4
BM01  Burnt Mountain    5.13  72         Pn     03 35 52.6 -0.4
WAT1  Susitna Watana    5.15 129         Pn     03 35 54.2 +0.9
WAT1  Susitna Watana    5.15 129   P     Pn     03 35 54.2 +0.9
      baz=317
J25K  Salcha River,     5.25 104         Pn     03 35 54.2 -0.5
J25K  Salcha River,     5.25 104   P     Pn     03 35 54.3 -0.3
      baz=295,SNR=45
F26K  Sheenjek River    5.30  69         Pn     03 35 55.2 -0.2
F26K  Sheenjek River    5.30  69   IAML         03 37 31.6
      comp=E,179nm,0.8s
F26K  Sheenjek River    5.30  69   P     Pn     03 35 55.3 -0.2
      baz=261
DHY   Denali Highway    5.36 123         Pn     03 35 56.8 +0.5
DHY   Denali Highway    5.36 123   P     Pn     03 35 57.0 +0.7
      baz=312,SNR=46
G26K  Porcupine Rive    5.39  77         Pn     03 35 56.2 -0.4
G26K  Porcupine Rive    5.39  77   P     Pn     03 35 56.1 -0.4
      baz=270
SPNN  North Nagishla    5.39 156         Pn     03 35 57.8 +1.0
M16K  Timber Creek      5.41 189         Pn     03 35 56.2 -0.5
M16K  Timber Creek      5.41 189   IAML         03 37 30.2
      comp=E,119nm,1.9s
M16K                               IAML         03 37 37.2
      comp=N,136nm,0.9s
M16K  Timber Creek      5.41 189   P     Pn     03 35 56.3 -0.5
      baz=7.3,SNR=7.4
STLK  Strandline Lak    5.42 151         Pn     03 35 58.1 +1.0
K24K  Donnelly Dome     5.48 113         Pn     03 35 57.9  0.0
K24K  Donnelly Dome     5.48 113   P     Pn     03 35 57.7 -0.2
      baz=303,SNR=13
K13K  Kusilvak Mount    5.49 220         Pn     03 35 57.8 -0.2
K13K  Kusilvak Mount    5.49 220   P     Pn     03 35 56.8 -1.2
      baz=33
SPBG  Spurr Blockage    5.55 155         Pn     03 36 00.2 +1.4
L14K  Kuka Creek        5.57 208         Pn     03 35 58.7 -0.3
L14K  Kuka Creek        5.57 208   P     Pn     03 35 59.0  0.0
      baz=23
M22K  Willow            5.58 143         Pn     03 36 01.1 +2.1
SPCG  Spurr Capps Gl    5.58 153         Pn     03 36 00.5 +1.2
WAT6  Susitna Watana    5.59 128         Pn     03 35 60.0 +0.5
WAT6  Susitna Watana    5.59 128   P     Pn     03 35 59.9 +0.5
      baz=317,SNR=20
CKL   Chakachamna La    5.61 155         Pn     03 36 01.0 +1.2
N20K  Mount Spurr       5.63 154   P     Pn     03 36 01.1 +1.1
      baz=339
SPCR  Spurr Chakacha    5.63 154   P     Pn     03 36 01.1 +1.2
      baz=339,SNR=5.2
SPU   Mount Spurr       5.68 154         Pn     03 36 01.4 +0.8
SUA   Susitna One       5.68 147         Pn     03 36 01.3 +0.6
SUA   Susitna One       5.68 147   P     Pn     03 36 01.5 +0.8
      baz=332,SNR=14
N19K  Bonanza Creek     5.70 166   Pn    Pn     03 36 01.4 +0.5
N19K  Bonanza Creek     5.70 166   P     Pn     03 36 01.2 +0.3
      baz=349,SNR=11
N18K  Kilae Creek       5.73 173         Pn     03 36 01.6 +0.4
N18K  Kilae Creek       5.73 173   P     Pn     03 36 01.7 +0.5
      baz=354,SNR=20
C26K  Camden Bay        5.83  47         Pn     03 36 03.4 +0.9
C26K  Camden Bay        5.83  47   P     Pn     03 36 03.2 +0.7
      baz=238,SNR=40
N17K  Nushagak Hills    5.85 180         Pn     03 36 03.2 +0.4
N17K  Nushagak Hills    5.85 180   P     Pn     03 36 03.1 +0.2
      baz=360,SNR=47
GHO   Glory Hole Cre    5.87 138         Pn     03 36 04.4 +1.2
I26K  Coal Creek Min    5.88  94         Pn     03 36 02.6 -0.7
I26K  Coal Creek Min    5.88  94   P     Pn     03 36 03.0 -0.4
      baz=286
M15K  Kasigluk River    5.88 197         Pn     03 36 03.0 -0.3
M15K  Kasigluk River    5.88 197   P     Pn     03 36 03.0 -0.3
      baz=14
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N16K  Nishlik Lake      5.94 187         Pn     03 36 03.8 -0.4
N16K  Nishlik Lake      5.94 187   P     Pn     03 36 04.0 -0.2
      baz=5.9,SNR=12
PMR   Palmer            5.96 139         Pn     03 36 05.5 +1.1
PMR   Palmer            5.96 139   P     Pn     03 36 05.3 +1.0
      baz=327,SNR=9.2
J26L  Joseph Creek      6.00 102         Pn     03 36 05.0 -0.1
J26L  Joseph Creek      6.00 102   P     Pn     03 36 05.1  0.0
      baz=294,SNR=43
M14K  Bethel            6.00 203         Pn     03 36 05.6 +0.7
M14K  Bethel            6.00 203   P     Pn     03 36 04.9 -0.1
      baz=18
SML   Sawmill           6.00 135         Pn     03 36 06.0 +0.9
SML   Sawmill           6.00 135   P     Pn     03 36 05.5 +0.5
      baz=323,SNR=8.5
C27K  Jago River        6.05  51         Pn     03 36 06.6 +1.0
C27K  Jago River        6.05  51   P     Pn     03 36 07.0 +1.4
      baz=244,SNR=22
SCRK  Sand Creek        6.07 107         Pn     03 36 05.1 -0.9
SCRK  Sand Creek        6.07 107   P     Pn     03 36 05.5 -0.5
      baz=299,SNR=12
PAX   Paxson            6.09 118         Pn     03 36 07.0 +0.8
PAX   Paxson            6.09 118   P     Pn     03 36 06.7 +0.5
      baz=309,SNR=5.4
RDJH  Redoubt Jeurge    6.12 159         Pn     03 36 07.4 +0.8
NCT   North Crescent    6.13 160         Pn     03 36 07.5 +0.8
DFR   Drift River       6.13 158         Pn     03 36 07.7 +0.8
RDT   Redoubt           6.19 157         Pn     03 36 08.6 +0.9
RDWB  Redoubt West      6.21 159         Pn     03 36 08.7 +0.7
DOT   Dot Lake          6.21 110         Pn     03 36 06.7 -1.1
G27K  Doyon Strip       6.23  79         Pn     03 36 07.8 -0.3
G27K  Doyon Strip       6.23  79   P     Pn     03 36 07.8 -0.3
      baz=273
RC01  Rabbit Creek A    6.24 144   Pn    Pn     03 36 10.5 +2.2
RDSO  Redoubt South     6.26 159         Pn     03 36 09.2 +0.7
SCM   Sheep Creek Mo    6.28 132         Pn     03 36 09.4 +0.6
SCM   Sheep Creek Mo    6.28 132   P     Pn     03 36 09.4 +0.6
      baz=320
RED   Redoubt Volcan    6.29 159         Pn     03 36 09.8 +0.9
KNK   Knik Glacier      6.29 138         Pn     03 36 10.5 +1.6
KNK   Knik Glacier      6.29 138   P     Pn     03 36 10.6 +1.6
      baz=326,SNR=6.4
O19K  Port Alsworth     6.32 167         Pn     03 36 09.6 +0.3
O19K  Port Alsworth     6.32 167   P     Pn     03 36 09.5 +0.3
      baz=349
E27K  Coleen River      6.33  66         Pn     03 36 09.0 -0.5
E27K  Coleen River      6.33  66   P     Pn     03 36 09.0 -0.5
      baz=260
N15K  Kwethluk River    6.34 193         Pn     03 36 09.2 -0.4
N15K  Kwethluk River    6.34 193   P     Pn     03 36 09.2 -0.4
      baz=10
H27K  Steamboat Moun    6.34  84         Pn     03 36 10.6 +1.0
H27K  Steamboat Moun    6.34  84   P     Pn     03 36 09.2 -0.5
      baz=278
I27K  Kandik River      6.43  90         Pn     03 36 10.4 -0.4
I27K  Kandik River      6.43  90   P     Pn     03 36 10.4 -0.4
      baz=284,SNR=9.1
M24K  Tolsona, Glenn    6.43 126         Pn     03 36 12.5 +1.6
M24K  Tolsona, Glenn    6.43 126   P     Pn     03 36 12.2 +1.3
      baz=316
M13K  Dall Lake         6.56 208   Pn    Pn     03 36 12.6  0.0
M13K  Dall Lake         6.56 208   P     Pn     03 36 12.7 +0.2
      baz=22
HARP  HAARP             6.57 122   P     Pn     03 36 13.8 +1.0
      baz=312
O18K  Koktuh Hills      6.59 171         Pn     03 36 13.1  0.0
O18K  Koktuh Hills      6.59 171   P     Pn     03 36 13.0  0.0
      baz=353
O17K  Koliganek Bris    6.61 179         Pn     03 36 13.4 +0.2
O17K  Koliganek Bris    6.61 179   P     Pn     03 36 13.4 +0.2
      baz=359,SNR=11
O20K  Slope Mountain    6.63 160         Pn     03 36 13.8 +0.1
O20K                                     Pn     03 36 14.7 +1.0
O20K  Slope Mountain    6.63 160   P     Pn     03 36 14.1 +0.5
      baz=344
IVE   Iliamna Volcan    6.64 161         Pn     03 36 14.9 +1.1
ILSW  Iliamna Southw    6.66 162         Pn     03 36 15.5 +1.4
MENT  Mentasta          6.74 114         Pn     03 36 15.2 +0.1
N14K  Kuskokwak Cree    6.76 199   Pn    Pn     03 36 15.2 -0.1
N14K  Kuskokwak Cree    6.76 199   P     Pn     03 36 15.7 +0.4
      baz=15
PWL   Port Wells        6.79 140   P     Pn     03 36 16.1 +0.3
      baz=328
K27K  Chicken           6.79 103         Pn     03 36 15.9 +0.1
K27K  Chicken           6.79 103   P     Pn     03 36 16.2 +0.4
      baz=297
O16K  Kokwok River B    6.80 184         Pn     03 36 15.8 -0.1
O16K  Kokwok River B    6.80 184   P     Pn     03 36 15.9 +0.1
      baz=2.8
D27M  Malcolm River     6.81  57         Pn     03 36 16.6 +0.5
D27M  Malcolm River     6.81  57   P     Pn     03 36 17.4 +1.3
      baz=252,SNR=18
L26K  Log Cabin Wild    6.83 113         Pn     03 36 16.1 -0.2
L26K  Log Cabin Wild    6.83 113   P     Pn     03 36 15.9 -0.4
      baz=305,SNR=9.2
F28M  Old Crow          6.92  72         Pn     03 36 17.4 -0.2
F28M  Old Crow          6.92  72   P     Pn     03 36 17.6 -0.1
      baz=268
P19K  Oil Pt            6.97 163   P     Pn     03 36 19.2 +1.0
      baz=346
KLU   Klutina           6.97 129         Pn     03 36 18.6 +0.3
KLU   Klutina           6.97 129   P     Pn     03 36 19.6 +1.3
      baz=319
P18K  Big Mountain,     7.05 172         Pn     03 36 19.2 -0.2
P18K  Big Mountain,     7.05 172   P     Pn     03 36 19.4  0.0
      baz=353
GLI   Glacier Island    7.11 136   P     Pn     03 36 20.9 +0.8
      baz=325
I28M  Miner Creek       7.14  89         Pn     03 36 20.5 -0.2
I28M  Miner Creek       7.14  89   P     Pn     03 36 20.4 -0.2
      baz=285
E28M  Babbage River     7.16  64         Pn     03 36 20.4 -0.5
E28M  Babbage River     7.16  64   P     Pn     03 36 20.7 -0.1
      baz=260,SNR=18
SEW   Seward            7.19 147   P     Pn     03 36 22.4 +1.3
      baz=334
M11K  Mekoryuk          7.21 218   P     Pn     03 36 21.5  0.0
      baz=30
BRSE  Bradley Lake S    7.26 153   P     Pn     03 36 23.1 +0.9
      baz=339
O15K  Ungalikthiuk R    7.30 191         Pn     03 36 22.1 -0.7
O15K  Ungalikthiuk R    7.30 191   P     Pn     03 36 22.7 -0.1
      baz=8.2
N25K  Chitina, Valde    7.31 125         Pn     03 36 23.9 +0.9
N25K  Chitina, Valde    7.31 125   P     Pn     03 36 24.8 +1.8
      baz=316
M26K  Nabesna, AK       7.33 116         Pn     03 36 23.6 +0.3
M26K  Nabesna, AK       7.33 116   P     Pn     03 36 23.8 +0.5
      baz=309
O14K  Tigyukauivet M    7.36 196         Pn     03 36 23.9 +0.3
O14K  Tigyukauivet M    7.36 196   P     Pn     03 36 23.7 +0.1
      baz=13
BC01  Beaver Creek A    7.38 109         Pn     03 36 22.5 -1.3
L27K  Beaver Creek,     7.38 109         Pn     03 36 22.9 -1.0
L27K  Beaver Creek,     7.38 109   P     Pn     03 36 22.9 -1.0
      baz=303
BCAR  Beaver Creek A    7.39 109         Pn     03 36 23.0 -1.1
D28M  Stokes Point      7.59  59   P     Pn     03 36 27.9 +1.2
      baz=256
H29M  Whitestone        7.61  82         Pn     03 36 26.9 -0.1
H29M  Whitestone        7.61  82   P     Pn     03 36 27.2 +0.2
      baz=280
Q19K  Cape Douglas,     7.63 166   P     Pn     03 36 27.4 +0.1
      baz=349
G29M  Pine Creek        7.66  77         Pn     03 36 28.1 +0.4
G29M  Pine Creek        7.66  77   P     Pn     03 36 28.2 +0.5
      baz=275
GLB   Gilahina Butte    7.70 124         Pn     03 36 29.0 +0.7
Q16K  King Salmon       7.71 178   P     Pn     03 36 28.5 +0.1
      baz=358
E29M  Blow River        7.73  66         Pn     03 36 28.2 -0.3
E29M  Blow River        7.73  66   P     Pn     03 36 28.9 +0.4
      baz=264,SNR=11
M27K  Edge Creek, AK    7.77 114         Pn     03 36 29.3  0.0
M27K  Edge Creek, AK    7.77 114   P     Pn     03 36 29.6 +0.3
      baz=308,SNR=7.7
KAHC  Katmai Hardscr    7.80 171         Pn     03 36 30.0 +0.3
Q18K  Katmai Hardscr    7.80 171   P     Pn     03 36 30.0 +0.3
      baz=353
DAWY  Dawson            7.84  99         Pn     03 36 29.7 -0.5
DAWY  Dawson            7.84  99   P     Pn     03 36 30.3 +0.1
      baz=295,SNR=24
MCARA McCarthy VSAT     8.00 122   P     Pn     03 36 32.9 +0.5
      baz=314
BVCY  Beaver Creek      8.11 111   P     Pn     03 36 33.2 -0.7
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      baz=306
EPYK  Eagle Plains      8.24  80         Pn     03 36 35.5 -0.2
EPYK  Eagle Plains      8.24  80   P     Pn     03 36 35.6  0.0
      baz=279
G30M  tAoh Zraii Nji    8.36  76         Pn     03 36 37.3  0.0
G30M  tAoh Zraii Nji    8.36  76   P     Pn     03 36 37.1 -0.2
      baz=275,SNR=6.9
CRQE  Cirque            8.44 125   P     Pn     03 36 38.7 +0.2
      baz=318
F30M  Barrier River     8.49  72   P     Pn     03 36 40.3 +1.2
      baz=271
I30M  Mount Dempster    8.64  88         Pn     03 36 41.0 -0.2
I30M  Mount Dempster    8.64  88   P     Pn     03 36 41.2  0.0
      baz=287,SNR=11
YUK3  Moose Creek       8.65 114   P     Pn     03 36 42.2 +0.7
      baz=309
K29M  Barlow Dome       8.68  98         Pn     03 36 41.2 -0.6
K29M  Barlow Dome       8.68  98   P     Pn     03 36 41.6 -0.2
      baz=296
L29M  L29M              8.79 103         Pn     03 36 42.8 -0.3
L29M  L29M              8.79 103   P     Pn     03 36 43.3 +0.1
      baz=300
J30M  Hart River        8.87  92         Pn     03 36 44.2 -0.2
J30M  Hart River        8.87  92   P     Pn     03 36 44.5 +0.1
      baz=291
KDAK  Kodiak Island     8.87 164   Pn    Pn     03 36 46.6 +2.3
      comp=N,3.0nm,0.3s,baz=9.6,slow=7.8,SNR=14
KDAK  Kodiak Island     8.87 164   P     Pn     03 36 46.0 +1.7
      baz=348
M29M  Somme Creek       9.01 107         Pn     03 36 45.5 -0.8
M29M  Somme Creek       9.01 107   P     Pn     03 36 46.2  0.0
      baz=304
LOGN  Logan Glacier     9.10 120         Pn     03 36 47.8 +0.2
G31M  Satah River       9.13  76         Pn     03 36 46.6 -1.1
G31M  Satah River       9.13  76   P     Pn     03 36 46.9 -0.9
      baz=277
YUK8  Steele Glacier    9.23 115         Pn     03 36 50.1 +0.7
YUK8  Steele Glacier    9.23 115   P     Pn     03 36 50.9 +1.5
      baz=311
H31M  Peel River        9.30  83         Pn     03 36 50.3 +0.1
INK   Inuvik            9.34  67   Pn    Pn     03 36 51.5 +0.9
      comp=N,0.7nm,0.3s,baz=313,slow=9.1,SNR=9.1
INK                                Sn    Sn     03 38 32.8 -3.0
      comp=N,0.6nm,0.3s,baz=168,slow=14,SNR=2.1
      comp=N,3.6nm,0.5s
INK   Inuvik            9.34  67         Pn     03 36 51.1 +0.5
INK   Inuvik            9.34  67   P     Pn     03 36 51.1 +0.5
      baz=269
O28M  Mount Upton       9.42 118   P     Pn     03 36 55.1 +3.0
      baz=314
M30M  Minto, Yukon      9.59 104         Pn     03 36 53.4 -0.7
M30M  Minto, Yukon      9.59 104   P     Pn     03 36 54.4 +0.3
      baz=302
YUK4  Talbot Arm        9.60 113   P     Pn     03 36 53.9 -0.5
      baz=309
N30M  Aishikik Lake    10.11 110         Pn     03 37 01.2 -0.2
N30M  Aishikik Lake    10.11 110   P     Pn     03 37 01.6 +0.2
      baz=308
M31M  Drury Creek, Y   10.73 102   P     Pn     03 37 10.0 +0.2
      baz=303
O30N  Mendenhall       10.93 111   P     Pn     03 37 12.2 -0.3
      baz=310
WHY   Whitehorse       11.45 109   P     Pn     03 37 20.0 +0.3
      baz=309
A36M  Sachs Harbour    12.56  49         Pn     03 37 33.2 -1.5
A36M  Sachs Harbour    12.56  49   P     Pn     03 37 33.0 -1.7
      baz=259,SNR=66
C36M  Paulatuk         12.76  62         Pn     03 37 37.5 +0.1
DLBC  Dease Lake       14.78 109   Pn    Pn     03 38 08.0 +2.9
      comp=N,0.4nm,0.3s,baz=273,slow=8.9,SNR=12
DLBC                               Lg    Lg     03 42 17.7
      comp=N,0.1nm,0.3s,baz=61,slow=22,SNR=4.7
      comp=N,2.6nm,0.5s
YKAW3 Yellowknife Wh   18.49  82   P     Pn     03 38 52.5 +0.4
YKA   Yellowknife Ar   18.52  82   P     Pn     03 38 53.7 +1.2
      comp=N,0.2nm,0.3s,baz=297,slow=10,SNR=10
      comp=N,2.6nm,0.8s
YKA   Yellowknife Ar   18.52  82   P     P      03 38 52.0 -0.5
YKAW1 Yellowknife Wh   18.58  82   P     Pn     03 38 53.8 +0.6
RES   Resolute Bay     21.27  40   P     P      03 39 25.1 +2.8
      comp=N,1.2nm,0.6s,baz=248,slow=9.3,SNR=6.2
      comp=N,1.2nm,0.6s
RES   Resolute Bay     21.27  40   P     P      03 39 23.1 +0.9
RES                                IAmb  IAmb   03 39 36.3
      comp=Z,9.0nm,1.3s
SEY   Seymchan         21.35 285   P     P      03 39 25.3 +2.1
      comp=Z,2.6nm,0.5s,baz=76,slow=7.6,SNR=9.1
TIXI  Tiksi            25.39 315   P     P      03 40 02.3 -1.0
      comp=Z,2.7nm,0.3s,baz=74,slow=7.4,SNR=3.8
      comp=Z,2.7nm,0.3s
POIN  Pond Inlet       26.42  41   P     P      03 40 12.9 +0.4
ILON  Igloolik, Nuna   26.92  49   P     P      03 40 18.1 +1.1
ILON                               IAmb  IAmb   03 40 18.8
      comp=Z,5.1nm,0.8s
PDAR  Pinedale Array   35.01 108   P     P      03 41 30.0 +1.1
      comp=Z,0.3nm,0.6s,baz=307,slow=13,SNR=3.4
      comp=Z,0.3nm,0.6s
PDAR  Pinedale Array   35.01 108   P     P      03 41 28.2 -0.7
NVAR  Mina Array Bea   35.63 122   P     P      03 41 36.2 +2.0
      comp=Z,1.0nm,0.7s,baz=343,slow=5.1,SNR=4.8
      comp=Z,1.0nm,0.7s
NVAR  Mina Array Bea   35.63 122   P     P      03 41 33.5 -0.7
NRIK  Noril'sk         37.39 328   P     P      03 41 49.2 +0.6
      comp=Z,2.4nm,0.6s,baz=69,slow=8.6,SNR=3.0
      comp=Z,2.4nm,0.6s
NRIK  Noril'sk         37.39 328   P     P      03 41 49.0 +0.3
TXAR  Lajitas Array    49.07 112   P     P      03 43 24.9 +1.4
      comp=Z,0.8nm,0.6s,baz=328,slow=6.2,SNR=11
      comp=Z,0.8nm,0.6s
TXAR  Lajitas Array    49.07 112   P     P      03 43 23.7 +0.2
SONM  Songino Array    49.75 299   P     P      03 43 29.7 +1.1
      comp=Z,1.2nm,0.6s,baz=24,slow=6.2,SNR=8.6
      comp=Z,1.2nm,0.6s
SONM  Songino Array    49.75 299   P     P      03 43 27.8 -0.7
SONM                               IAmb  IAmb   03 43 34.0
      comp=Z,1.9nm,1.0s
ZALV  Zalesovo Beam    51.22 318   P     P      03 43 39.3  0.0
      comp=Z,1.2nm,0.5s,baz=26,slow=7.1,SNR=9.0
      comp=Z,1.2nm,0.5s
ZALV  Zalesovo Beam    51.22 318   P     P      03 43 38.8 -0.6
HHC   Hu-ho-hao-te     53.85 290  eP     P      03 43 56.5 -2.7
HHC                                pmax  pmax
      comp=Z,10.0nm,0.6s
HHC                                pmax  pmax
      comp=Z,69nm,6.1s
BVAR  Borovoye Array   55.59 327   P     P      03 44 11.6  0.0
      comp=Z,1.7nm,0.6s,baz=33,slow=8.0,SNR=8.6
      comp=Z,1.7nm,0.6s
KURK  Kurchatov        55.77 320   P     P      03 44 10.0 -2.8
KURBB Kurchatov Arra   55.88 320   P     P      03 44 13.4 -0.2
      comp=Z,1.9nm,1.0s,baz=28,slow=7.0,SNR=5.6
      comp=Z,1.9nm,1.0s
EKA   Eskdalemuir Ar   57.07  17   P     P      03 44 23.2 +1.3
      comp=Z,2.6nm,0.7s,baz=330,slow=5.2,SNR=9.1
      comp=Z,2.6nm,0.7s
MKAR  Makanchi Array   58.38 316   P     P      03 44 30.9 -0.4
      comp=Z,0.7nm,0.7s,baz=32,slow=4.8,SNR=5.0
      comp=Z,0.7nm,0.7s
MKAR  Makanchi Array   58.38 316   P     P      03 44 31.1 -0.3
GTA   Gaotai           59.43 299  eP     P      03 44 39.8 +0.9
GTA                                pP    sP     03 44 43.1 +1.1
GTA                                pmax  pmax
      comp=Z,3.0nm,0.9s
AB31  Akbulak array    61.27 333   P     P      03 44 50.2 -1.0
AB31                               IAmb  IAmb   03 44 57.7
      comp=Z,1.9nm,0.8s
ESDC  Sonseca Array    72.31  21   P     P      03 46 03.3 +1.5
      comp=Z,2.4nm,0.7s,baz=359,slow=5.5,SNR=12
      comp=Z,2.4nm,0.7s
ESDC  Sonseca Array    72.31  21   IAmb  IAmb   03 46 07.6
      comp=Z,2.1nm,0.8s
CMAR  Chiang Mai Arr   78.66 290   P     P      03 46 36.9 -1.6
      comp=Z,0.7nm,0.3s,baz=26,slow=4.1,SNR=4.4
      comp=Z,0.7nm,0.3s
VNDA  Vanda           145.77 195   PKPbc PKPab  03 54 14.7 +0.8
      comp=Z,0.6nm,0.6s,baz=357,slow=5.4,SNR=2.7
VNDA  Vanda           145.77 195         PKPab  03 54 14.1 +0.1
```

IDC 18 03:39:12.0±2.3, 3.71S×128.17E, h0km, mb3.4/2, mbtmp3.4/3, ML3.3/1, MS3.9/1, Error ellipse: s-maj=158.1km s-min=30.0km az=67.0, Seram

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Code  Station Name      Δ°   AZ°    Phase ID       Time       Res
                                   Op    ISC      h  m  s    ISC
WRA   Warramunga Arr   17.23 160   P     Pn     03 43 13.7 -0.5
      0.1nm,0.3s,baz=338,slow=13,SNR=2.0
      0.1nm,0.3s
```

ASAR	Alice Springs	20.60	165	P	P	03 43 53.4	+0.4
	1.8nm,0.9s,baz=350,slow=9.7,SNR=18						
	1.8nm,0.9s						
CTA	Charters Tower	24.00	134	LR	LR	03 54 36.1	
	comp=Z,232nm,18.1s,baz=25,slow=38						
MKAR	Makanchi Array	64.49	327	P	P	03 49 50.5	-0.1
	0.1nm,0.3s,baz=113,slow=6.9,SNR=2.0						
	0.1nm,0.3s						

DNK ***18*** *03:46:40.3±4.6, 75°.90N×7°.43E, h30km±39km, ML2.8, Presumed earthquake*

MOS ***18*** *03:46:41.9±1.2, 76°.05N×7°.07E, h10km, mb4.8/50, Error ellipse: s-maj=24.7km s-min=4.7km az=93.2*

IDC ***18*** *03:46:41.4±0.4, 75°.89N×7°.00E, h0km, mb4.2/24, mbtmp4.2/29, ML3.3/4, MS4.3/50, Error ellipse: s-maj=11.5km s-min=9.2km az=52.0*

BER ***18*** *03:46:42.2±4.2, 76°.01N×7°.22E, h10km, Mw5.0, ML4.4(NAO), Confirmed Earthquake*

NAO ***18*** *03:46:42.2±0.7, 76°.05N×7°.26E, h15km, ML4.4*

NEIC ***18*** *03:46:43.0±1.4, 76°.07N±0°.07×7°.0E±0°.3, h10km±1km, mb4.9/182, Error ellipse: s-maj=12.7km s-min=11.2km az=282.0*

FCIAR ***18*** *03:46:44.0, 75°.88N×8°.60E, h10km, station OMEGA has station magnitude of 4.10*

GCMT ***18*** *03:46:45.0±0.2, 75°.88N±0°.03×6°.95E±0°.05, h12km, MW5.0/113, Moment Tensor Solution. s35,c39; s113,c171; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-3.47±.08; Mθθ0.35±.08; Mφφ3.12±.07; Mrθ0.13±.40; Mθφ0.84±.07; Mφr-0.38±.28; Best double couple: M0 3.43600×10¹⁶ NP1:φs199.00000°, δ42.00000°, λ-85.00000°. NP2:φs12.00000°, δ48.00000°, λ-95.00000°. Principal axes: T 3.3710, Plg3.0000°, Azm105.0000°; N 0.1340, Plg4.0000°, Azm15.0000°; P -3.5000, Plg85.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

KOLA ***18*** *03:46:51.0, 75°.50N×8°.76E, h0km, ML3.0 Error ellipse: s-maj=118.9km s-min=43.2km az=30.0, Greenland sea, Knipovich ridge, south*

ISC 18 03:46:43.5±0.3**, 76°.10N**±0°.03×**7°.64E**±0°.04**, h10km, n674, σ1°.94**/579**, mb4.8**/162**, MS4.3**/49**, 13C-1D, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSPB	Hornsund (broa	2.06	60	*e*Pn	Pn	03 47 17.2	-0.8
HSPB				*e*Sn	Sn	03 47 40.5	-3.1
HSPB	Hornsund (broa	2.06	60	Pn	Pn	03 47 17.5	-0.5
HSPB				Sn	Sn	03 47 40.4	-3.3
HSPB	Hornsund (broa	2.06	60	P	Pn	03 47 16.9	-1.1
HSPB				S	Sn	03 47 37.9	-5.7
HSPB	Hornsund (broa	2.06	60	*e*P	Pn	03 47 16.9	-1.1
HSPB				*e*S	Sn	03 47 41.2	-2.4
HSPB	Hornsund (broa	2.06	60	*e*P	Pn	03 47 17.0	-1.0
HSPB				*e*S	Sn	03 47 40.9	-2.7
HSPB				IAML		03 47 46.5	
	comp=Z,142nm,1.0s						
HSPB				*e*		03 49 08.3	
HSPB	Hornsund (broa	2.06	60	P	Pn	03 47 17.0	-1.0
BRBA	Barentsburg A	2.46	34	Pn	Pn	03 47 22.9	-0.6
BRBA	Barentsburg A	2.46	34	*e*P	Pn	03 47 23.1	-0.5
BRBA				*e*S	Sn	03 47 48.2	-5.4
BRBA				IAML		03 47 50.5	
	comp=Z,305nm,0.2s						
BRBB	Barentsburg B	2.48	33	Pn	Pn	03 47 23.6	-0.2
BRBB	Barentsburg B	2.48	33	P	Pn	03 47 23.7	-0.2
BRBB				S	Sn	03 47 47.1	-7.1
BRBB	Barentsburg B	2.48	33	*e*P	Pn	03 47 23.4	-0.5
BRBB				*e*S	Sn	03 47 48.6	-5.6
SPA0	Spitsbergen Ar	2.85	39	Pn	Pn	03 47 29.5	+0.5
	baz=217,slow=14						
SPA0				Sn	Sn	03 48 02.5	-0.9
	baz=224,slow=18						
SPA0	Spitsbergen Ar	2.85	39	⇑*i*P	Pn	03 47 29.6	+0.5
SPA0				*i* S	Sn	03 48 03.1	-0.2
SPA0	Spitsbergen Ar	2.85	39	Pn	Pn	03 47 29.5	+0.5
	baz=217,slow=14						
SPA0				Sn	Sn	03 48 02.5	-0.9
	baz=224,slow=18						
SPA0				IAML		03 48 06.7	
	comp=Z,148nm,0.6s						
SPB2	Spitsbergen Ar	2.85	39		Pn	03 47 29.5	+0.5
SPITS	Spitsbergen Ar	2.85	39	Pn	Pn	03 47 29.6	+0.5
	comp=Z,60nm,0.4s,baz=202,slow=13,SNR=506						
SPITS				Sn	Sn	03 48 02.7	-0.6
	baz=228,slow=22						
SPITS	Spitsbergen Ar	2.85	39	P	Pn	03 47 29.5	+0.5
KBS	Kingsbay	2.99	16		Pn	03 47 30.3	-0.5
KBS	Kingsbay	2.99	16	Pn	Pn	03 47 30.4	-0.4
KBS				Sn	Sn	03 48 03.4	-3.2
KBS	Kingsbay	2.99	16	P	Pn	03 47 29.9	-0.9
KBS				S	Sn	03 48 00.5	-6.1
KBS	Kingsbay	2.99	16	*e*P	Pn	03 47 31.0	+0.2
KBS				Sn	Sn	03 48 03.4	-3.2
KBS				IAML		03 48 12.3	
	comp=Z,137nm,0.6s						
KBS	Kingsbay	2.99	16	*ce*P	Pn	03 47 31.2	+0.4
KBS				pmax	pmax		
	comp=Z,296nm,0.7s						
KBS	Kingsbay	2.99	16	*e*P	Pn	03 47 30.5	-0.3
KBS				*i* S	Sn	03 48 00.2	-6.4
BJO1	Bjornoya	3.31	113	*e*P	Pn	03 47 33.4	-1.8
BEA1	Bear Island, N	3.31	113	Pn	Pn	03 47 32.9	-2.4
	baz=314,slow=18						
BEAR	Bear Island, N	3.32	114	Pn	Pn	03 47 32.9	-2.4
	baz=314,slow=18						
HOPEN	Hopen	4.14	76	Pn	Pn	03 47 45.9	-0.7
HOPEN				Sn	Sn	03 48 32.1	-2.9
HOPEN	Hopen	4.14	76	*e*P	Pn	03 47 45.9	-0.7
HOPEN				*e*S	Sn	03 48 30.6	-4.5
HOPEN				*e*		03 48 39.8	
DAG	Danmarks Havn	6.19	289	*e*P	Pn	03 48 09.3	-5.4
DAG				*e*S	Sn	03 49 13.8	-12
DAG	Danmarks Havn	6.19	289	P	Pn	03 48 09.3	-5.4
DAG				pmax	pmax		
	comp=Z,83nm,1.1s						
DAG	Danmarks Havn	6.19	289	*i* P	Pn	03 48 09.3	-5.4
DAG				*e*S	Sn	03 49 12.9	-12
DAG				IAML		03 49 16.3	
	comp=Z,48nm,0.3s						
JNW	Jan Mayen West	6.81	230	*e*P	Pn	03 48 17.7	-5.5
JNE	Jan Mayen East	6.82	229	*e*P	Pn	03 48 17.8	-5.5
JMIC	Jan Mayen	6.86	230	Pn	Pn	03 48 18.5	-5.4
	comp=Z,52nm,0.3s,baz=78,slow=6.8,SNR=5.6						
JMIC				LR	LR	03 50 16.4	
	comp=Z,1µm,19.1s,baz=60,slow=33						
JMIC	Jan Mayen	6.86	230	*e*P	Pn	03 48 18.4	-5.5
JMI	Jan Mayen	6.95	230	*e*P	Pn	03 48 19.1	-6.0
HAMF	Hammerfest	7.13	132	Pn	Pn	03 48 23.2	-4.4
HAMF				Sn	Sn	03 49 35.6	-13
HAMF	Hammerfest	7.13	132	Pn	Pn	03 48 23.2	-4.4
HAMF				Sn	Sn	03 49 35.6	-13
NOR	Nord	7.17	331	Pn	Pn	03 48 25.1	-3.0
NOR				Sn	Sn	03 49 42.6	-6.7
NOR	Nord	7.17	331	*e*P	Pn	03 48 25.1	-3.0
NOR				*e*S	Sn	03 49 42.2	-7.1
NOR	Nord	7.17	331	P	Pn	03 48 25.0	-3.0
NOR				pmax	pmax		
	comp=Z,40nm,1.6s						
NOR	Nord	7.17	331	*e*P	Pn	03 48 24.6	-3.4
NOR				*i* S	Sn	03 49 42.8	-6.6
NOR				IAML		03 49 45.9	
	comp=Z,46nm,0.5s						
TRO	Tromso	7.29	147	Pn	Pn	03 48 28.7	-1.1
TRO	Tromso	7.29	147	Pn	Pn	03 48 28.7	-1.1
DBG	Daneborg	7.31	270	Pn	Pn	03 48 23.5	-6.5
DBG				Sn	Sn	03 49 39.8	-13
DBG	Daneborg	7.31	270	*e*P	Pn	03 48 23.4	-6.6
DBG				*e*S	Sn	03 49 37.1	-16
DBG	Daneborg	7.31	270	*e*P	Pn	03 48 23.6	-6.4
DBG				*i* S	Sn	03 49 37.2	-16
DBG				IAML		03 49 43.5	
	comp=Z,20nm,0.6s						
JETT	Jettan, Norway	7.56	144	Pn	Pn	03 48 32.5	-1.1
JETT	Jettan, Norway	7.56	144	Pn	Pn	03 48 32.5	-1.1
KIF	Kilpisjarvi	8.13	144	Pn	Pn	03 48 38.5	-2.8
KIF				Sn	Sn	03 50 02.6	-10
KIF	Kilpisjarvi	8.13	144	*e*P	Pn	03 48 38.8	-2.4
KIF				*e*S	Sn	03 50 01.9	-11
KIF	Kilpisjarvi	8.13	144	P	Pn	03 48 38.8	-2.4
ARA0	ARCESS Array S	8.40	132	Pn	Pn	03 48 40.9	-4.2
	baz=325,slow=11						
ARA0				Sn	Sn	03 50 07.0	-13
	baz=335,slow=37						
ARA0	ARCESS Array S	8.40	132	Pn	Pn	03 48 40.9	-4.2
	baz=325,slow=11						
ARA0				Sn	Sn	03 50 07.0	-13
	baz=335,slow=37						
ARCES	ARCESS Array B	8.40	132	Pn	Pn	03 48 41.1	-4.0
	comp=Z,1.8nm,0.3s,baz=332,slow=11,SNR=33						
ARCES				Sn	Sn	03 50 07.1	-13
	comp=Z,5.8nm,0.3s,baz=332,slow=18,SNR=14						
ARCES				LR	LR	03 52 10.0	
	comp=Z,778nm,20.7s,baz=288,slow=39						
	comp=Z,23nm,0.5s						
ARCES	ARCESS Array B	8.40	132		Pn	03 48 41.0	-4.2
ARCES	ARCESS Array B	8.40	132	P	Pn	03 48 42.4	-2.8
ARCES				S	Sn	03 50 05.3	-15
KTK1	Kautokeino	8.48	139	Pn	Pn	03 48 44.2	-2.0
KTK1				Sn	Sn	03 50 12.1	-10
KTK1	Kautokeino	8.48	139	*e*P	Pn	03 48 44.1	-2.1
KTK1				*e*S	Sn	03 50 12.7	-9.1
KEV	Kevo	8.49	129		Pn	03 48 42.4	-3.9
KEV	Kevo	8.49	129	Pn	Pn	03 48 42.8	-3.4
KEV				Sn	Sn	03 50 08.9	-13
KEV	Kevo	8.49	129	*e*P	Pn	03 48 43.1	-3.2
KEV	Kevo	8.49	129	P	Pn	03 48 42.4	-3.9
STEI	Steigen	8.53	160	*e*P	Pn	03 48 45.9	-0.9
VADS	Vadso	8.65	123	Pn	Pn	03 48 45.5	-3.0
VADS				Sn	Sn	03 50 14.4	-12
VADS	Vadso	8.65	123	P	Pn	03 48 47.9	-0.5
VADS				S	Sn	03 50 14.1	-12
VADS	Vadso	8.65	123	*e*P	Pn	03 48 45.5	-3.0
VADS				*e*S	Sn	03 50 13.7	-12
ZFI2	Zemlya Franca-	9.07	41	*e*P	Pn	03 48 54.1	-0.1
ZFI2				*e*S	Sn	03 50 31.8	-4.3
FAUS	Fauske	9.08	161	P	Pn	03 48 53.9	-0.4
FAUS	Fauske	9.08	161	*e*P	Pn	03 48 53.6	-0.6
OMEGA	Omega	9.08	41	*e*P	Pn	03 48 54.3	0.0
OMEGA				*e*S	Sn	03 50 31.9	-4.5
	comp=Z,55nm,1.1s						
HEF	Hetta	9.10	140	Pn	Pn	03 48 51.8	-2.8
HEF	Hetta	9.10	140	*e*P	Pn	03 48 51.6	-3.0
SCO	Scoresbysund	10.09	251		Pn	03 49 01.2	-6.8
SCO	Scoresbysund	10.09	251	*i* P	Pn	03 49 01.5	-6.6
SCO				*i* S	Sn	03 50 41.2	-20
SCO				IAML		03 50 51.4	
	comp=Z,12nm,0.7s						
SCO	Scoresbysund	10.09	251	P	Pn	03 49 01.2	-6.9
SCO	Scoresbysund	10.09	251	*i* P	Pn	03 49 01.5	-6.6
SCO				*i* S	Sn	03 50 41.2	-20
SCO				IAML		03 50 51.4	
	comp=Z,12nm,0.7s						
TERR	Teriberka	10.60	116	P	Pn	03 49 13.3	-1.8
TERR				S	Sn	03 51 00.3	-13
APA0	Apatity Array	11.48	124	Pn	Pn	03 49 22.9	-4.3
	baz=322,slow=16						
APA0	Apatity Array	11.48	124	P	Pn	03 49 23.6	-3.6
APA0				S	Sn	03 51 20.4	-15
APA0	Apatity Array	11.48	124	Pn	Pn	03 49 22.9	-4.3
	baz=322,slow=16						
LVZ	Lovozero	11.57	121		Pn	03 49 24.1	-4.4
LVZ	Lovozero	11.57	121	S	Sn	03 51 23.4	-14
LVZ	Lovozero	11.57	121	*ce*P	Pn	03 49 27.8	-0.7
LVZ				pmax	pmax		
	comp=Z,29nm,0.8s						
APA	Apatity	11.60	124	P	Pn	03 49 27.1	-1.7
APA				S	Sn	03 51 23.1	-15
KVDA	Kovda	12.25	127	P	Pn	03 49 34.3	-3.4
KVDA				S	Sn	03 51 39.5	-15
MSF	Maaselka	12.26	135	P	Pn	03 49 35.6	-2.2
MSF				pmax	pmax		
	comp=Z,56nm,0.7s						
OUL	Oulu	12.52	142	P	Pn	03 49 40.1	-1.2
OUL				pmax	pmax		
	comp=Z,108nm,0.9s						
SUMG	Summit	12.64	277		Pn	03 49 39.1	-4.1
SUMG	Summit	12.64	277	*e*	Pn	03 49 37.7	-5.7
SUMG				*e*		03 51 49.2	
SUMG	Summit	12.64	277	P	Pn	03 49 39.2	-4.1
SUMG	Summit	12.64	277	*e*	Pn	03 49 37.7	-5.7
SUMG				*e*		03 51 49.2	
NEEM	North Greenlan	13.01	304	*e*	Pn	03 49 43.0	-5.3
NEEM				*i*		03 51 55.9	
NEEM	North Greenlan	13.01	304	*e*	Pn	03 49 43.0	-5.3
NEEM				*i*		03 51 55.9	
VAF	Ylistaro	14.05	151	*e*P	Pn	03 49 59.4	-2.8
BORG	Borgarnes	14.70	235	LR	LR	03 54 18.4	
	comp=Z,1µm,19.3s,baz=106,slow=32						
NC204	NORSAR Array S	14.94	174	Pn	Pn	03 50 12.8	-1.6
NC405	NORSAR Array S	15.13	172	Pn	Pn	03 50 17.4	+0.5
KEF	Keuruu	15.16	148	*e*P	Pn	03 50 13.8	-3.6
NB201	NORSAR Array S	15.18	173	Pn	Pn	03 50 17.3	-0.3
NOA	NORSAR Array B	15.19	173	Pn	Pn	03 50 15.0	-2.7
	baz=185,slow=19,SNR=3.6						
NOA				LR	LR	03 55 12.9	
	comp=Z,427nm,21.1s,baz=345,slow=34						
	comp=Z,2.4nm,0.9s						
JOF	Joensuu	15.41	136	*e*P	Pn	03 50 15.7	-4.9
NC602	NORSAR Array S	15.50	173	Pn	Pn	03 50 22.5	+0.7
KULLO	Kullorsuaq	15.75	297	*i*	Pn	03 50 17.5	-7.4
KULLO	Kullorsuaq	15.75	297	*i*	Pn	03 50 17.5	-7.4
FIA0	FINESS Array S	16.02	147	P	Pn	03 50 25.2	-3.3
	baz=349,slow=14						
FIA0	FINESS Array S	16.02	147	P	Pn	03 50 25.2	-3.3
	baz=349,slow=14						
FIA1	FINESS Array S	16.02	147		Pn	03 50 25.1	-3.4
FINES	FINESS Array B	16.02	147	Pn	Pn	03 50 25.0	-3.5
	comp=Z,0.8nm,0.3s,baz=353,slow=14,SNR=20						
FINES				LR	LR	03 56 38.0	
	comp=Z,803nm,21.4s,baz=326,slow=38						
	comp=Z,10nm,0.8s						
HFS	Hagfors	16.19	169	Pn	Pn	03 50 30.0	-0.6
	comp=Z,0.5nm,0.3s,baz=16,slow=11,SNR=18						
	comp=Z,12nm,0.8s						
LSH	Leshukonskoye	16.53	112	*e*P	Pn	03 50 29.1	-5.8
	comp=Z,149nm,1.8s						
LSH				*e*S	Sn	03 53 17.3	-21
KONO	Kongsberg	16.55	176	Pn	Pn	03 50 34.0	-1.2
KONO	Kongsberg	16.55	176	*ce*P	Pn	03 50 34.7	-0.5
KONO				pmax	pmax		
	comp=Z,58nm,1.7s						
UPNV	Upernavik	16.64	291	*e*	Pn	03 50 26.8	-9.5
UPNV	Upernavik	16.64	291	*e*	Pn	03 50 26.8	-9.5
TULEG	Thule	16.94	309		Pn	03 50 32.7	-7.4
TULEG				IAmb	IAmb	03 50 33.9	
	comp=Z,91nm,1.0s						
TULEG	Thule	16.94	309	*i*	Pn	03 50 32.1	-7.9
TULEG				*i*		03 53 32.9	
TULEG	Thule	16.94	309	*i*	Pn	03 50 32.1	-7.9
TULEG				*i*		03 53 32.9	
ARBE	Arbavere	17.95	149	*e*P	Pn	03 50 47.2	-5.5
SVZ	Severnaya Zeml	18.19	37	P	P	03 50 57.9	+2.0
KLMR	Klimovskoe	18.81	127	*e*P	P	03 50 58.3	-4.5
	comp=Z,106nm,1.6s						
KLMR	Klimovskoe	18.81	127	*e*P	P	03 51 02.3	-0.4
KLMR				pmax	pmax		
	comp=Z,97nm,1.5s						
VSU	Vasula	19.00	148	*e*P	P	03 51 01.9	-2.8
VSU	Vasula	19.00	148	*ce*P	Pn	03 51 08.5	+3.1
VSU				pmax	pmax		
	comp=Z,34nm,1.0s						
SFJD	Kangerlussuaq	19.57	274	LR	LR	03 57 54.9	
	comp=Z,1µm,19.4s,baz=80,slow=35						
PBUR	Paburge	20.86	157	*e*P	P	03 51 24.8	-0.2
EKA	Eskdalemuir Ar	21.25	197	P	P	03 51 26.6	-2.7
	comp=Z,1.0nm,0.6s,baz=10.0,slow=9.4,SNR=3.8						
	comp=Z,1.0nm,0.6s						
POIN	Pond Inlet	21.34	305		P	03 51 29.0	-1.1
PABE	Paberze	21.57	154		P	03 51 32.0	-0.7
PABE	Paberze	21.57	154	*e*P	P	03 51 31.8	-0.9
ISAL	Salakas	21.75	151	*e*P	P	03 51 34.4	-0.2
IDGL	Inch Island, C	21.88	204	P	P	03 51 42.7	+6.7
IIGN	Ignalina	21.97	151	*e*P	P	03 51 36.8	-0.3
BSEG	Bad Segeberg	22.29	176	P	P	03 51 41.7	+1.3
BSEG				pmax	pmax		
	comp=Z,28nm,1.6s						
NACGM	Naroch	22.48	150	*e*P	P	03 51 41.9	-0.6
NRIK	Noril'sk	22.75	65	P	P	03 51 47.2	+1.9
	comp=Z,9.9nm,0.8s,baz=322,slow=6.7,SNR=11						
NRIK				LR	LR	04 03 10.9	
	comp=Z,719nm,20.3s,baz=326,slow=43						
	comp=Z,9.9nm,0.8s						
NRIK	Noril'sk	22.75	65	P	P	03 51 47.5	+2.3
NRIK	Noril'sk	22.75	65	*e*P	P	03 51 46.2	+1.0
NRIK				pmax	pmax		
	comp=Z,14nm,1.0s						
ILTH	Belurgan, Co L	22.80	202	P	P	03 51 49.5	+3.7
RES	Resolute Bay	22.85	318	P	P	03 51 44.9	-1.3
	comp=Z,6.4nm,1.0s,baz=44,slow=10,SNR=8.2						
RES				LR	LR	04 01 18.2	
	comp=Z,383nm,21.9s,baz=32,slow=38						
	comp=Z,6.4nm,1.0s						
KIRV	Kirov	22.93	116	P	P	03 51 45.0	-2.1
	comp=Z,18nm,0.7s,baz=334,slow=10,SNR=11						
KIRV				LR	LR	04 01 01.4	
	comp=Z,976nm,18.5s,baz=297,slow=38						
	comp=Z,18nm,0.7s						
KIRV	Kirov	22.93	116	*ce*P	P	03 51 47.0	-0.1
SUW	Suwalki	22.96	156	*e*P	P	03 51 49.7	+2.1
SUW	Suwalki	22.96	156	P	P	03 51 46.8	-0.8
SUW	Suwalki	22.96	156	P	P	03 51 46.8	-0.8
MNK	Minsk	23.01	149	*i* P	P	03 51 52.0	+4.0
	comp=E,36nm,0.9s						
MNK				*i* P	P	03 51 52.0	+4.0
	comp=N,9.0nm,0.8s						
MNK				*i* P	P	03 51 52.0	+4.0
	comp=Z,16nm,0.6s,baz=348						
MNK				*i* PP	PnPn	03 52 16.0	+3.4
MNK				*i* S	Sn	03 56 07.8	-6.4
MNK				*i* SS	SnSn	03 56 40.8	+11
MNK				*i* LQ	LQ	03 58 44.7	
MNK				*i* LR	LR	03 59 33.5	
MNK				*i* LRM	MLR	04 00 32.2	
	comp=E,618nm,17.5s						
MNK				*i* LRM	MLR	04 01 09.4	
	comp=Z,700nm,17.6s						
MNK				*i* LRM	MLR	04 01 50.5	
	comp=N,281nm,15.8s						
MNK	Minsk	23.01	149	*i* P	P	03 51 51.9	+4.0
MNK				*i*		03 52 15.9	
MNK				*i* SS	SnSn	03 56 40.7	+11
MNK				pmax	pmax		
	comp=Z,16nm,0.6s						
MNK				pmax	pmax		
	comp=E,36nm,0.9s						
MNK				pmax	pmax		
	comp=N,9.0nm,0.8s						
MNK				MLR	MLR		
	comp=E,618nm,17.0s						
MNK				MLR	MLR		
	comp=Z,700nm,18.0s						
MNK				MLR	MLR		
	comp=N,281nm,16.0s						
MOS	Moscow	23.27	134	*e*P	P	03 51 50.9	+0.2
MOS				pmax	pmax		
	comp=Z,300nm,2.0s						
MOS				pmax	pmax		
	comp=Z,103nm,1.6s						
RETH	Rethem/Aller,	23.47	177	*e*P	P	03 51 52.6	0.0
	baz=2.7,slow=9.8						
DSB	Dublin	23.58	201	P	P	03 51 58.6	+4.8
OBN	Obninsk	23.69	136	P	P	03 51 57.9	+3.1
	comp=Z,17nm,0.5s,baz=259,slow=6.2,SNR=9.8						
OBN				LR	LR	04 00 50.6	
	comp=Z,964nm,20.6s,baz=249,slow=36						
OBN	Obninsk	23.69	136	P	P	03 51 55.8	+1.0
OBN	Obninsk	23.69	136	*i* P	P	03 51 56.1	+1.3
OBN				*i*		03 52 23.0	
OBN				pmax	pmax		
	comp=Z,51nm,1.4s						
OBN	Obninsk	23.69	136	P	P	03 51 55.6	+0.8
	comp=Z,45nm,2.1s						
IGLA	Glengowla, Co	23.70	206	P	P	03 51 58.7	+3.8
CLZ	Clausthal	24.38	176	*e*P	P	03 52 00.9	-0.5
	comp=Z,38nm,1.6s,baz=2.7,slow=9.8						
ILON	Igloolik, Nuna	24.75	302	P	P	03 52 03.4	-1.1
ILON				IAmb	IAmb	03 52 15.1	
	comp=Z,33nm,1.1s						
BUG	Bochum--Univer	24.76	181	P	P	03 52 05.8	+1.0
BUG				pmax	pmax		
	comp=Z,30nm,1.6s						
CLL	Collm	24.98	172	*e*P	P	03 52 06.0	-0.8
CLL				pmax	pmax		
	comp=Z,27nm,1.9s						
CLL	Collm	24.98	172	*e*P	P	03 52 06.0	-0.8
	comp=Z,27nm,1.9s						
CLL				*i* x	x	03 52 27.2	
MEM	Membach	25.60	182	*d*P	P	03 52 12.7	+0.3
MOX	Moxa	25.61	174	P	P	03 52 12.3	-0.2
MOX				pmax	pmax		
	comp=Z,17nm,1.1s						
MOX	Moxa	25.61	174	*e*P	P	03 52 12.1	-0.4
	comp=Z,20nm,1.2s,baz=2.7,slow=9.8						
MOX				*e*L	L	04 01 37.8	
	comp=Z,517nm,18.2s						
PLN	Plauen	25.78	173	P	P	03 52 13.5	-0.5
PLN	Plauen	25.78	173	*e*P	P	03 52 13.6	-0.5
	comp=Z,6.0nm,1.1s,baz=2.7,slow=9.8						
RNPP9	Sopachiv	25.81	153	P	P	03 52 14.5	+0.2
PVCC	Panska Ves	25.82	170	P	P	03 52 13.9	-0.5
PVCC				pmax	pmax		
	comp=Z,15nm,1.4s						
TANN	Tannenbergstha	25.86	173	*e*P	P	03 52 14.6	-0.2
	comp=Z,11nm,1.1s,baz=2.7,slow=9.8						
RNPP8	Varash	25.88	153	P	P	03 52 15.2	+0.3
RNPP5	Staryi Chortor	25.99	153	P	P	03 52 16.2	+0.3
DPC	Dobruska-Polom	26.09	167	*e*P	P	03 52 19.0	+2.1
DPC	Dobruska-Polom	26.09	167	*e*P	P	03 52 19.0	+2.1
MANZ	Manzenberg	26.28	173	*e*P	P	03 52 19.8	+1.2
	comp=Z,1.8nm,1.1s,baz=2.7,slow=9.8						
PRU	Pruhonice	26.36	170	P	P	03 52 20.3	+1.0
PRU				pmax	pmax		
	comp=Z,11nm,1.6s						
OJC	Ojcow	26.43	162	*e*P	P	03 52 21.6	+1.6
OJC	Ojcow	26.43	162	P	P	03 52 19.0	-1.0
OJC	Ojcow	26.43	162	P	P	03 52 19.0	-1.0
OJC	Ojcow	26.43	162	P	P	03 52 20.0	0.0
	comp=Z,25nm,1.3s						
MI28	Mi28,Pidlybu	26.49	151	P	P	03 52 20.8	+0.4
LPSR	Galich'ya Gora	26.50	135	*e*P	P	03 52 21.1	+0.6
LPSR				pmax	pmax		
	comp=Z,40nm,1.6s						
ROTZ	Rotzenmuhle	26.50	173	*e*P	P	03 52 20.3	-0.2
	comp=Z,5.6nm,1.7s,baz=2.7,slow=9.8						
FRB	Frobisher Bay	26.52	285	LR	LR	04 02 43.1	
	comp=Z,1µm,19.5s,baz=50,slow=36						
GRF	Grafenberg Arr	26.55	175	*e*L	L	04 00 24.8	
	comp=Z,400nm,19.6s						
MORC	Moravsky Berou	26.73	166	P	P	03 52 22.0	-0.7
MORC				IAmb	IAmb	03 52 29.4	
	comp=Z,37nm,1.8s						
MORC	Moravsky Berou	26.73	166	*e*P	P	03 52 21.5	-1.1
MORC	Moravsky Berou	26.73	166	P	P	03 52 22.0	-0.7
MORC				pmax	pmax		
	comp=Z,37nm,1.8s						
AK21	Malin Array Si	26.80	149	P	P	03 52 23.7	+0.4
AK22	Malin Array Si	26.82	149	P	P	03 52 23.9	+0.5
AK20	Malin Array Si	26.83	149	P	P	03 52 23.9	+0.4
AK19	Malin Array Si	26.85	149	P	P	03 52 24.1	+0.4
AK04	Malin Array Si	26.87	149	P	P	03 52 24.3	+0.4
AK17	Malin Array Si	26.89	149	P	P	03 52 24.5	+0.4
AKASG	Malin Array Be	26.90	149	P	P	03 52 22.1	-2.1
	comp=Z,0.9nm,0.5s,baz=345,slow=9.5,SNR=7.3						
AKASG				LR	LR	04 02 44.6	
	comp=Z,561nm,21.7s,baz=352,slow=36						
	comp=Z,0.9nm,0.5s						
AKASG	Malin Array Be	26.90	149	P	P	03 52 25.1	+1.0
AKASG	Malin Array Be	26.90	149	P	P	03 52 25.1	+1.0
AKASG				pmax	pmax		
	comp=Z,4.0nm,1.3s						
AKBB	Malin Array Si	26.90	149	P	P	03 52 24.3	+0.2
AKBB	Malin Array Si	26.90	149	*ce*P	P	03 52 23.1	-1.0
AKBB				pmax	pmax		
	comp=Z,13nm,1.1s						
KIEV	Kiev	26.91	149	P	P	03 52 24.3	+0.1
KIEV	Kiev	26.91	149	P	P	03 52 24.3	+0.1
KIEV				pmax	pmax		
	comp=Z,13nm,1.0s						
KIEV	Kiev	26.91	149	P	P	03 52 24.6	+0.4
	comp=Z,55nm,1.6s						
AK11	Malin Array Si	26.91	149	P	P	03 52 24.7	+0.4
ARTI	Arti	26.94	108	LR	LR	04 05 43.3	
	comp=Z,472nm,18.1s,baz=288,slow=42						
ARTI	Arti	26.94	108		P	03 52 24.0	-0.5
ARTI	Arti	26.94	108	*c i*P	P	03 52 25.6	+1.2

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ARTI                                              03 55 42.4
ARTI                              S        S       03 57 05.3 +4.3
ARTI                              SS       SnSn    03 58 09.7 +3.9
ARTI                              pmax     pmax
       comp=Z,18nm,0.9s
AK12   Malin Array Si    26.95 149 P        P       03 52 25.0 +0.4
TREC   Trest             27.10 169 P        P       03 52 25.1  -0.9
TREC                              pmax     pmax
       comp=Z,9.0nm,2.2s
VRAC   Vranov            27.14 167 LR       LR      04 02 00.5
       comp=Z,295nm,20.0s,baz=316,slow=34
VRAC   Vranov            27.14 167 eP       P       03 52 25.6  -0.7
VRAC   Vranov            27.14 167 P        P       03 52 27.1 +0.8
VRAC                              pmax     pmax
       comp=Z,20nm,1.4s
WET    Wettzell          27.14 172 P        P       03 52 26.7 +0.3
WET    Wettzell          27.14 172 eP       P       03 52 26.8 +0.3
       comp=Z,26nm,1.6s,baz=2.7,slow=9.8
KHC    Kasperske Hory    27.18 171 eP       P       03 52 28.8 +2.1
KHC    Kasperske Hory    27.18 171 eP       P       03 52 28.8 +2.1
KHC    Kasperske Hory    27.18 171 P        P       03 52 26.5  -0.2
       comp=Z,5.7nm,1.5s
STHS   Stebnicka Huta    27.34 160 eP       P       03 52 31.1 +2.9
STHS                              eS       S       03 57 09.1 +1.5
STHS   Stebnicka Huta    27.34 160 eP       P       03 52 31.1 +2.9
KRUC   Moravsky          27.37 167 eP       P       03 52 28.0  -0.4
STU    Stuttgart         27.44 178 P        P       03 52 29.8 +0.8
STU                               pmax     pmax
       comp=Z,10.0nm,1.1s
GEC2   GERESS Array S    27.47 171          P       03 52 29.1  -0.3
GEC2   GERESS Array S    27.47 171 P        P       03 52 29.9 +0.5
GEC2                              pmax     pmax
       comp=Z,15nm,1.7s
GERES  GERESS Array B    27.47 171 P        P       03 52 26.8  -2.6
       comp=Z,0.6nm,0.8s,baz=327,slow=7.1,SNR=14
GERES                             LR       LR      04 03 29.8
       comp=Z,399nm,18.1s,baz=342,slow=37
       comp=Z,0.6nm,0.8s
GERES  GERESS Array B    27.47 171 eP       P       03 52 31.9 +2.5
GERES                             pmax     pmax
       comp=Z,3.0nm,1.0s
LUBAR  Lubar, Ukraine    27.49 151 P        P       03 52 29.8 +0.4
VSR    Storozhevoye      27.88 135 eP       P       03 52 30.7  -2.2
VSR                               pmax     pmax
       comp=Z,30nm,2.1s
BFO    Black Forest      27.88 179          P       03 52 31.9  -1.1
BFO                               IAmb     IAmb    03 52 44.7
       comp=Z,17nm,1.2s
BFO    Black Forest      27.88 179 P        P       03 52 31.9  -1.1
BFO                               pmax     pmax
       comp=Z,17nm,1.2s
MODS   Modra-Piesok      28.11 166 eP       P       03 52 38.6 +3.6
MODS   Modra-Piesok      28.11 166 eP       P       03 52 38.6 +3.6
VORD   Divnogorie        28.14 135 eP       P       03 52 35.3 +0.1
VORD                              pmax     pmax
       comp=Z,10.0nm,1.6s
TIXI   Tiksi             28.27  35 P        P       03 52 36.7 +0.5
TIXI                              IAmb     IAmb    03 53 00.2
       comp=Z,22nm,1.6s
TIXI   Tiksi             28.27  35ceP       P       03 52 39.6 +3.4
TIXI                              pmax     pmax
       comp=Z,16nm,1.7s
BELG   Belogornoye       28.32 124 LR       LR      04 03 44.5
       comp=Z,752nm,20.2s,baz=294,slow=36
BELG   Belogornoye       28.32 124 i P      P       03 52 37.3 +0.5
BELG                              pmax     pmax
       comp=Z,10.0nm,1.1s
VRH    Novokhopyorsk     28.33 132 eP       P       03 52 36.4  -0.5
VRH                               pmax     pmax
       comp=Z,30nm,1.5s
CONA   Conrad Observa    28.48 168 eP       P       03 52 38.3  -0.1
       comp=Z,6.1nm,1.2s
MOA    Molln             28.49 171 eP       P       03 52 37.8  -0.6
       comp=Z,8.4nm,1.3s
BIOA   Bad Ischl, Aus    28.62 172 eP       P       03 52 40.6 +1.0
       comp=Z,6.8nm,1.1s
BERU   Beregovo          28.64 159 P        P       03 52 39.8 +0.1
KMPD   K-Podol'skiy      28.68 153 P        P       03 52 40.3 +0.2
RONA   Rosalia, Austr    28.73 168 eP       P       03 52 40.4  -0.2
       comp=Z,9.5nm,1.8s
WATA   Walderalm         28.92 174 epP      P       03 52 46.0 +3.6
       comp=Z,8.3nm,1.3s
WTTA   Wattenberg        28.99 174 epP      P       03 52 46.6 +3.5
       comp=Z,3.4nm,1.1s
SQTA   Sankt Quirin      29.02 175 epP      P       03 52 45.0 +1.7
       comp=Z,5.7nm,1.1s
KBA    Koelnbreinsper    29.22 172 epP      P       03 52 47.3 +2.2
       comp=Z,13nm,1.8s
A36M   Sachs Harbour     29.42 332 P        P       03 52 45.3  -1.1
A36M   Sachs Harbour     29.42 332 P        P       03 52 47.9 +1.5
       baz=21
DAVOX  Davos/Dischmat    29.44 177 LR       LR      04 05 58.1
       comp=Z,344nm,18.1s,baz=301,slow=40
BUR08  Bucovina Ar. S    29.46 155          P       03 52 46.8  -0.4
BURAR  Bucovina Array    29.49 155 P        P       03 52 46.6  -0.8
MYKA   Terra Mystica     29.68 172 eP       P       03 52 49.5 +0.4
       comp=Z,17nm,1.7s
SOKA   Soboth            29.69 170 eP       P       03 52 50.1 +0.9
       comp=Z,4.1nm,0.8s
MLR    Muntele Rosu      31.67 155 LR       LR      04 06 41.0
       comp=Z,491nm,18.9s,baz=7.0,slow=38
C36M   Paulatuk          31.77 330 P        P       03 53 08.2 +1.1
       baz=20
BLKN   Baker Lake        31.95 307          P       03 53 07.6  -1.1
BLKN                              IAmb     IAmb    03 53 09.6
       comp=Z,16nm,1.0s
AKTO   Aktyubinsk        32.38 113 LR       LR      04 07 03.2
       comp=Z,582nm,18.1s,baz=282,slow=38
A21K   Barrow            32.47 351 P        P       03 53 14.2 +1.0
       baz=7.3
A22K   Sinclair Lake     32.72 350 P        P       03 53 17.1 +1.6
       baz=7.9
BORK   Borovoye          32.81  98          P       03 53 17.4 +1.0
BORK   Borovoye          32.81  98 i P      P       03 53 17.3 +0.9
BORK                              pmax     pmax
       comp=Z,5.0nm,1.0s
BVAR   Borovoye Array    32.84  98 P        P       03 53 18.4 +1.7
       comp=Z,1.6nm,0.6s,baz=339,slow=7.9,SNR=10.0
BVAR                              PP       PP      03 54 33.3 +2.6
       comp=Z,13nm,0.8s,baz=339,slow=7.9,SNR=8.1
BVAR                              LR       LR      04 09 17.8
       comp=Z,753nm,19.0s,baz=298,slow=41
       comp=Z,1.6nm,0.6s
MURB   Monte Urbino      33.01 173 P        P       03 53 18.5 +0.1
C26K   Camden Bay        33.22 343 P        P       03 53 21.2 +1.3
       baz=12
B22K   Teshekpuk Lake    33.31 348 P        P       03 53 21.4 +0.8
       baz=8.5
D28M   Stokes Point      33.32 339 P        P       03 53 22.1 +1.5
       baz=14
C27K   Jago River        33.42 342          P       03 53 21.7   0.0
C27K                              IAmb     IAmb    03 53 25.2
       comp=Z,12nm,0.9s
C27K   Jago River        33.42 342 P        P       03 53 22.6 +0.9
       baz=12,SNR=7.9
NRCA   Norcia            33.46 173 P        P       03 53 20.9  -1.4
D27M   Malcolm River     33.59 340 P        P       03 53 23.9 +0.8
       baz=13
C23K   Itkillik River    33.66 347 P        P       03 53 25.0 +1.3
       baz=9.6,SNR=15
C24K   Franklin Bluff    33.67 345 P        P       03 53 25.5 +1.8
       baz=10
A19K   Wainwright        33.74 353 P        P       03 53 25.5 +1.2
       baz=5.1
B20K   Meade River       33.80 351 P        P       03 53 26.7 +1.8
       baz=6.8
INK    Inuvik            33.82 335          P       03 53 24.9  -0.2
INK                               IAmb     IAmb    03 53 27.6
       comp=Z,12nm,1.0s
INK    Inuvik            33.82 335 P        P       03 53 24.9  -0.2
INK                               pmax     pmax
       comp=Z,12nm,1.0s
INK    Inuvik            33.82 335 P        P       03 53 26.1 +1.1
       baz=16,SNR=8.4
D25K   Kavik River       33.91 344 P        P       03 53 27.4 +1.4
       baz=11
AB31   Akbulak array     33.91 112          P       03 53 27.5 +1.5
AB31                              IAmb     IAmb    03 53 34.4
       comp=Z,29nm,1.6s
ABKAR  Akbulak array     33.91 112          P       03 53 27.3 +1.2
SCHQ   Schefferville     34.01 275 LR       LR      04 05 48.5
       comp=Z,548nm,20.9s,baz=59,slow=34
B21K   Ikpikpuk River    34.08 349          P       03 53 27.2  -0.1
B21K   Ikpikpuk River    34.08 349 P        P       03 53 29.0 +1.6
       baz=7.8
E28M   Babbage River     34.09 339          P       03 53 27.1  -0.4
E28M                              IAmb     IAmb    03 53 30.8
       comp=Z,15nm,1.1s
E28M   Babbage River     34.09 339 P        P       03 53 28.7 +1.3
       baz=14,SNR=12
E29M   Blow River        34.16 338          P       03 53 27.3  -0.7
E29M   Blow River        34.16 338 P        P       03 53 29.8 +1.7
       baz=14,SNR=20
D24K   Happy Valley      34.23 345 P        P       03 53 30.1 +1.4
       baz=10
D23K   Nanushuk River    34.53 346 P        P       03 53 33.1 +1.9
       baz=9.3
C21K   Knifeblade Rid    34.55 349 P        P       03 53 33.5 +2.0
       baz=7.7
B18K   Kokolik River     34.60 353 P        P       03 53 33.2 +1.3
       baz=4.7
E27K   Coleen River      34.67 340          P       03 53 32.4  -0.1
E27K                              IAmb     IAmb    03 53 35.4
       comp=Z,16nm,1.1s
E27K   Coleen River      34.67 340 P        P       03 53 33.8 +1.2
       baz=13,SNR=11
F31M   Tsiigehtchic      34.68 335          P       03 53 32.0  -0.5
F31M                              IAmb     IAmb    03 53 41.2
       comp=Z,20nm,1.1s
F31M   Tsiigehtchic      34.68 335 P        P       03 53 33.8 +1.3
       baz=16
F30M   Barrier River     34.72 336          P       03 53 31.6  -1.3
F30M   Barrier River     34.72 336 P        P       03 53 34.3 +1.4
       baz=15
D22K   Ayikyak River     34.73 348 P        P       03 53 34.6 +1.6
       baz=8.5
TOLK   Toolik Lake Re    34.79 346          P       03 53 33.3  -0.3
TOLK   Toolik Lake Re    34.79 346 P        P       03 53 35.4 +1.9
       baz=9.7,SNR=6.6
C19K   Lookout Ridge     34.80 352          P       03 53 33.4  -0.2
C19K                              IAmb     IAmb    03 53 47.4
       comp=Z,24nm,1.2s
C19K   Lookout Ridge     34.80 352 P        P       03 53 35.6 +2.0
       baz=5.6,SNR=9.7
E25K   Arctic Village    35.04 343          P       03 53 35.6  -0.1
E25K                              IAmb     IAmb    03 53 39.1
       comp=Z,19nm,0.9s
E25K   Arctic Village    35.04 343 P        P       03 53 36.9 +1.2
       baz=11,SNR=22
D20K   Etivluk River     35.08 350 P        P       03 53 37.6 +1.7
       baz=6.8
F28M   Old Crow          35.09 339          P       03 53 35.6  -0.6
F28M                              IAmb     IAmb    03 53 46.2
       comp=Z,15nm,0.8s
F28M   Old Crow          35.09 339 P        P       03 53 37.1 +1.0
       baz=13,SNR=11
E21K   Killik River      35.23 348 P        P       03 53 38.6 +1.3
       baz=7.8
G31M   Satah River       35.23 335 P        P       03 53 37.8 +0.5
G31M                              IAmb     IAmb    03 53 39.9
       comp=Z,17nm,1.0s
G31M   Satah River       35.23 335 P        P       03 53 38.6 +1.3
       baz=15
E24K   Your Creek        35.28 345 P        P       03 53 39.1 +1.3
       baz=10.0
C18K   Utukok River      35.30 353          P       03 53 36.7  -1.3
C18K                              IAmb     IAmb    03 53 41.9
       comp=Z,14nm,0.9s
C18K   Utukok River      35.30 353 P        P       03 53 39.5 +1.6
       baz=4.9,SNR=11
D19K   Kuna River        35.35 351 P        P       03 53 39.9 +1.5
       baz=6.1
F26K   Sheenjek River    35.36 342 P        P       03 53 40.0 +1.6
       baz=12
E23K   Chandalar         35.37 345 P        P       03 53 39.9 +1.4
       baz=9.5
G30M   tAoh Zraii Nji    35.37 336          P       03 53 37.1  -1.5
G30M   tAoh Zraii Nji    35.37 336 P        P       03 53 39.8 +1.2
       baz=14,SNR=5.9
E22K   Anaktuvuk Pass    35.42 347          P       03 53 39.0   0.0
E22K                              IAmb     IAmb    03 53 42.2
       comp=Z,24nm,1.2s
E22K   Anaktuvuk Pass    35.42 347 P        P       03 53 40.1 +1.1
       baz=8.7,SNR=15
BILL   Bilibino          35.47  14 P        P       03 53 39.6 +0.3
BILL   Bilibino          35.47  14ceP       P       03 53 40.4 +1.1
BILL                              pmax     pmax
       comp=Z,6.0nm,1.0s
ZAA0   Zalesovo Array    35.47  83          P       03 53 39.5   0.0
ZAA0                              IAmb     IAmb    03 53 48.4
       comp=Z,11nm,1.0s
ZALV   Zalesovo Beam     35.47  83 P        P       03 53 40.7 +1.2
       comp=Z,2.4nm,0.9s,baz=324,slow=9.2,SNR=8.1
ZALV                              PcP      PcP     03 56 08.8 +0.2
       comp=Z,1.1nm,0.5s,baz=307,slow=4.7,SNR=3.0
ZALV                              LR       LR      04 12 03.4
       comp=Z,477nm,18.3s,baz=303,slow=43
       comp=Z,2.4nm,0.9s
ZALV   Zalesovo Beam     35.47  83          P       03 53 40.1 +0.6
ZALV                                       PcP     03 56 08.7 +0.1
ZALV   Zalesovo Beam     35.47  83 eP       P       03 53 40.9 +1.4
ZALV                              pmax     pmax
       comp=Z,2.0nm,0.8s
KIV    Kislovodsk        35.51 134 eP       P       03 53 40.4 +0.4
KIV                               pmax     pmax
       comp=Z,5.0nm,1.1s
E20K   Nigu River        35.51 350 P        P       03 53 40.9 +1.1
       baz=6.9
C17K   DeLong Mountai    35.53 354 P        P       03 53 41.5 +1.6
       baz=4.0
F25K   Christian Rive    35.57 343 P        P       03 53 41.6 +1.3
       baz=11,SNR=14
G29M   Pine Creek        35.61 338 P        P       03 53 42.0 +1.4
       baz=14,SNR=7.9
BMAR   Burnt Mountain    35.65 342          P       03 53 41.1 +0.2
KBZ    Khabaz            35.76 134 P        P       03 53 41.8  -0.3
       comp=Z,2.7nm,0.9s,baz=347,slow=3.0,SNR=7.3
KBZ                               LR       LR      04 08 33.5
       comp=Z,564nm,21.5s,baz=334,slow=37
       comp=Z,2.7nm,0.9s
KBZ    Khabaz            35.76 134 i P      P       03 53 42.6 +0.6
KBZ                               pmax     pmax
       comp=Z,7.0nm,1.1s
C16K   Lisburne Hills    35.78 356          P       03 53 42.4 +0.4
C16K                              IAmb     IAmb    03 54 02.4
       comp=Z,24nm,1.3s
C16K   Lisburne Hills    35.78 356 P        P       03 53 43.9 +1.9
       baz=3.1,SNR=6.0
F24K   Squaw Lake        35.79 344          P       03 53 42.2   0.0
F24K   Squaw Lake        35.79 344 P        P       03 53 43.7 +1.5
       baz=10,SNR=6.3
RDOG   Red Dog Mine      35.95 354          P       03 53 44.0 +0.6
RDOG                              IAmb     IAmb    03 53 46.9
       comp=Z,19nm,1.0s
RDOG   Red Dog Mine      35.95 354 P        P       03 53 45.3 +1.8
       baz=4.1
EPYK   Eagle Plains      36.02 336 P        P       03 53 44.0  -0.1
EPYK                              IAmb     IAmb    03 53 46.0
       comp=Z,32nm,1.4s
EPYK   Eagle Plains      36.02 336 P        P       03 53 45.2 +1.1
       baz=14,SNR=5.4
G27K   Doyon Strip       36.03 340 P        P       03 53 45.9 +1.7
       baz=12
G26K   Porcupine Rive    36.06 341 P        P       03 53 46.5 +2.1
       baz=12
F22K   John River        36.06 347 P        P       03 53 46.4 +1.9
       baz=8.4
COLD   Coldfoot          36.23 346 IAmb     IAmb    03 53 49.1
       comp=Z,11nm,0.8s
COLD   Coldfoot          36.23 346 P        P       03 53 47.5 +1.7
       baz=9.1
D17K   Noatak River      36.31 354 P        P       03 53 48.5 +2.0
       baz=4.0,SNR=9.0
H29M   Whitestone        36.32 337 IAmb     IAmb    03 53 48.8
       comp=Z,31nm,1.4s
H29M   Whitestone        36.32 337 P        P       03 53 47.9 +1.2
       baz=13
H31M   Peel River        36.33 335 IAmb     IAmb    03 53 49.3
       comp=Z,17nm,1.4s
H31M   Peel River        36.33 335 P        P       03 53 48.3 +1.5
       baz=15
E19K   Redstone River    36.35 350 P        P       03 53 48.2 +1.3
       baz=6.3
F21K   Alatna River      36.42 348 P        P       03 53 49.2 +1.7
       baz=7.8
G25K   Bearman Lake      36.42 343 P        P       03 53 48.9 +1.5
       baz=11
E18K   Tukpahlearik C    36.51 352 P        P       03 53 50.0 +1.7
       baz=5.0
G24K   Hadweenzic Riv    36.58 344 P        P       03 53 50.3 +1.5
       baz=10,SNR=6.8
H27K   Steamboat Moun    36.59 340 P        P       03 53 50.7 +1.7
       baz=12,SNR=5.9
G22K   Bettles           36.61 346 P        P       03 53 50.7 +1.6
       baz=8.5
F20K   Avaraart Lake     36.70 349 P        P       03 53 51.2 +1.4
       baz=6.9
G23K   Bananza Creek     36.73 345 P        P       03 53 51.7 +1.5
       baz=9.1
E17K   Hotham Inlet      36.89 353 P        P       03 53 53.2 +1.7
       baz=4.5,SNR=8.7
ESDC   Sonseca Array     36.89 195 P        P       03 53 50.6  -1.2
       comp=Z,2.2nm,0.9s,baz=1.4,slow=9.5,SNR=7.3
       comp=Z,2.2nm,0.9s
ESDC   Sonseca Array     36.89 195          P       03 53 50.5  -1.3
YKAW1  Yellowknife Wh    36.90 319 IAmb     IAmb    03 53 59.7
       comp=Z,16nm,1.2s
YKA    Yellowknife Ar    36.91 319 P        P       03 53 51.8 +0.1
       comp=Z,2.2nm,0.9s,baz=13,slow=8.9,SNR=18
YKA                               PP       PP      03 55 13.9  -1.6
       comp=Z,0.9nm,0.8s,baz=13,slow=11,SNR=4.3
YKA                               PcP      PcP     03 56 12.6  -0.1
       comp=Z,1.1nm,0.8s,baz=6.1,slow=2.5,SNR=7.0
       comp=Z,2.2nm,0.9s
YKA    Yellowknife Ar    36.91 319 P        P       03 53 50.7  -1.0
YKA    Yellowknife Ar    36.91 319 eP       P       03 53 51.9 +0.2
YKA                               pmax     pmax
       comp=Z,2.0nm,0.9s
KURK   Kurchatov         36.96  91          P       03 53 53.4 +1.2
KURK                              IAmb     IAmb    03 54 01.2
       comp=Z,23nm,1.0s
KURK   Kurchatov         36.96  91ceP       P       03 53 53.3 +1.1
KURK                              pmax     pmax
       comp=Z,15nm,1.7s
KURBB  Kurchatov Arra    37.02  92 P        P       03 53 54.1 +1.4
       comp=Z,4.2nm,0.8s,baz=334,slow=7.6,SNR=19
KURBB                             PP       PP      03 55 14.8  -2.1
       comp=Z,1.6nm,0.9s,baz=334,slow=11,SNR=1.6
KURBB                             LR       LR      04 12 51.0
       comp=Z,949nm,19.1s,baz=324,slow=42
       comp=Z,4.2nm,0.8s
I30M   Mount Dempster    37.10 336 IAmb     IAmb    03 53 55.4
       comp=Z,27nm,1.5s
I30M   Mount Dempster    37.10 336 P        P       03 53 54.3 +0.8
       baz=14,SNR=6.9
G21K   Allakaket         37.12 348 P        P       03 53 55.0 +1.5
       baz=7.7
I29M   Ogilvie Camp,     37.15 337 IAmb     IAmb    03 54 03.1
       comp=Z,11nm,0.8s
I29M   Ogilvie Camp,     37.15 337 P        P       03 53 54.8 +1.0
       baz=13,SNR=5.2
I27K   Kandik River      37.21 339 IAmb     IAmb    03 53 57.5
       comp=Z,16nm,1.1s
I27K   Kandik River      37.21 339 P        P       03 53 55.6 +1.3
       baz=12,SNR=8.9
I28M   Miner Creek       37.22 338 P        P       03 53 55.5 +1.1
       baz=13
F18K   Selawik           37.30 352 P        P       03 53 56.8 +1.8
       baz=5.3,SNR=16
YAK    Yakutsk           37.32  41 LR       LR      04 10 41.4
       comp=Z,219nm,20.9s,baz=296,slow=38
H24K   Noodor Dome       37.46 344 P        P       03 53 58.2 +1.9
       baz=9.7,SNR=7.1
WRGLY  Wrigley           37.51 326 IAmb     IAmb    03 53 58.6
       comp=Z,35nm,1.5s
WRGLY  Wrigley           37.51 326 P        P       03 53 58.0 +1.2
       baz=18
H23K   Yukon River       37.58 345 P        P       03 53 59.3 +1.9
       baz=9.1
H22K   Ishtalitna Cre    37.62 346 P        P       03 54 00.1 +2.4
       baz=8.4,SNR=6.7
I26K   Coal Creek Min    37.63 340 P        P       03 53 59.5 +1.7
       baz=11
G19K   Purcell Mounta    37.66 350 IAmb     IAmb    03 54 09.5
       comp=Z,21nm,1.5s
G19K   Purcell Mounta    37.66 350 P        P       03 53 60.0 +1.9
       baz=6.2
IMAR   Indian Mountai    37.66 348 P        P       03 53 57.8  -0.3
J30M   Hart River        37.73 335 P        P       03 54 00.0 +1.2
       baz=14
H21K   Melozitna Rive    37.94 347 P        P       03 54 02.5 +2.1
       baz=7.8,SNR=6.3
G18K   Tagagawik         37.97 351 IAmb     IAmb    03 54 11.9
       comp=Z,54nm,1.9s
G18K   Tagagawik         37.97 351 P        P       03 54 03.0 +2.3
       baz=5.6
POKR   Poker Plat Res    38.14 343 IAmb     IAmb    03 54 06.5
       comp=Z,18nm,1.1s
POKR   Poker Plat Res    38.14 343 P        P       03 54 04.0 +1.9
       baz=9.7
H20K   Anotleneega Mo    38.21 348 P        P       03 54 04.3 +1.6
       baz=7.0,SNR=16
I23K   Minto, Yukon-K    38.24 345 P        P       03 54 04.5 +1.6
       baz=9.0,SNR=7.1
H19K   Roundabout Mou    38.25 349 P        P       03 54 05.0 +2.1
       baz=6.4
BRTR   Keskin Array B    38.26 147 P        P       03 54 04.3 +0.8
       comp=Z,0.7nm,0.7s,baz=352,slow=6.2,SNR=4.1
BRTR                              PP       PP      03 55 26.8  -4.0
       comp=Z,0.7nm,0.9s,baz=10,slow=8.8,SNR=1.8
BRTR                              LR       LR      04 10 50.5
       comp=Z,291nm,20.4s,baz=358,slow=38
BRTR   Keskin Array B    38.26 147 P        P       03 54 02.6  -0.9
BRTR   Keskin Array B    38.26 147 i P      P       03 54 07.0 +3.5
BRTR                              pmax     pmax
       comp=Z,1.0nm,0.6s
BR104  Keskin Array S    38.28 147 P        P       03 54 03.8 +0.1
       comp=Z,2.7nm,0.9s
F15K   North Star Dit    38.34 355 P        P       03 54 06.0 +2.2
       baz=3.2
COLA   College           38.41 343 P        P       03 54 06.2 +1.8
       baz=9.5
G17K   Kiwalik Mounta    38.44 352 P        P       03 54 06.3 +1.7
       baz=4.8,SNR=5.9
MLY    Manley            38.44 345 P        P       03 54 06.6 +1.9
       baz=8.5
ILAR   Eielson Array     38.45 343 P        P       03 54 07.0 +2.4
       comp=Z,9.3nm,0.9s,baz=2.6,slow=6.9,SNR=95
       comp=Z,9.3nm,0.9s
ILAR   Eielson Array     38.45 343          P       03 54 03.9  -0.8
ILAR   Eielson Array     38.45 343 eP       P       03 54 07.0 +2.4
ILAR                              pmax     pmax
       comp=Z,10.0nm,0.9s
J26L   Joseph Creek      38.46 340 P        P       03 54 06.4 +1.5
       baz=11
J25K   Salcha River,     38.49 342 P        P       03 54 06.8 +1.6
       baz=10
DAWY   Dawson            38.52 337 P        P       03 54 07.2 +1.8
       baz=12
K29M   Barlow Dome       38.56 336 IAmb     IAmb    03 54 08.7
       comp=Z,24nm,1.3s
K29M   Barlow Dome       38.56 336 P        P       03 54 07.6 +1.8
       baz=13
H18K   Honhosa River     38.70 351 P        P       03 54 08.8 +2.0
       baz=5.6
NEA2   Nenana            38.77 344 P        P       03 54 09.9 +2.4
       baz=9.0
K27K   Chicken           38.80 339 P        P       03 54 09.7 +2.0
       baz=11
HDA    Harding Lake      38.81 343 P        P       03 54 09.9 +2.2
       baz=9.8
AKT    Akhty             38.81 129 eP       P       03 54 07.9  -0.2
AKT                               e                03 55 37.7
AKT                               e                03 56 18.0
AKT                               pmax     pmax
       comp=Z,29nm,1.3s
AKT                               MLR      MLR
       comp=Z,613nm,18.0s
VAE    Valguarnera       38.84 171 LR       LR      04 10 18.9
       comp=Z,367nm,18.6s,baz=351,slow=37
I20K   Naaghedeneel      38.88 348 P        P       03 54 11.0 +2.7
       baz=7.0
H17K   Granite Mounta    38.98 352 P        P       03 54 11.6 +2.5
       baz=5.0
SCRK   Sand Creek        39.01 341 P        P       03 54 11.4 +1.9
       baz=11
G15K   Niukluk           39.04 354 P        P       03 54 12.3 +2.7
       baz=3.4
GCSA   Galena City Sc    39.05 350 P        P       03 54 12.0 +2.4
       baz=6.1
RIDG   Independent Ri    39.31 341 P        P       03 54 14.4 +2.4
       baz=10
K24K   Donnelly Dome     39.32 342 P        P       03 54 14.4 +2.3
       baz=10
L29M   L29M              39.34 336 P        P       03 54 14.5 +2.2
       baz=13
H16K   Elim              39.35 353 P        P       03 54 14.9 +2.7
       baz=4.1
BPAW   Bear Paw Mtn.     39.38 345 P        P       03 54 15.0 +2.4
       baz=8.2
J20K   Nowinta River     39.48 348 P        P       03 54 15.4 +2.1
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	baz=7.0						
ANM	Nome	39.50	355	P	P	03 54 15.7	+2.2
	baz=2.9						
MCK	McKinley	39.62	344	P	P	03 54 16.7	+2.2
	baz=8.9						
CHUM	Lake Minchumin	39.68	346	P	P	03 54 16.7	+1.7
	baz=7.7,SNR=5.0						
BCAR	Beaver Creek A	39.72	339		P	03 54 14.6	-0.8
L27K	Beaver Creek,	39.73	339	P	P	03 54 17.3	+1.8
	baz=11						
M30M	Minto, Yukon	39.73	335	P	P	03 54 17.1	+1.6
	baz=13,SNR=5.9						
J19K	Poorman	39.74	349	P	P	03 54 17.3	+1.8
	baz=6.5						
M31M	Drury Creek, Y	39.84	333	P	P	03 54 18.3	+1.9
	baz=14						
L26K	Log Cabin Wild	39.90	340	P	P	03 54 19.3	+2.4
	baz=11						
KTH	Kantishna Hill	39.92	345	IAmb	IAmb	03 54 38.4	
	comp=Z,30nm,1.6s						
TRF	Thorofare Moun	39.99	345	P	P	03 54 20.1	+2.3
	baz=8.3						
DGZ	Jazzator, Alta	40.02	84	*i* P	P	03 54 19.6	+1.4
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
M29M	Somme Creek	40.03	336	P	P	03 54 19.8	+1.8
	baz=12						
I17K	Unalakleet	40.06	352	P	P	03 54 19.4	+1.4
	baz=4.6						
PAX	Paxson	40.12	341	P	P	03 54 19.9	+1.1
	baz=10.0,SNR=5.7						
DHY	Denali Highway	40.16	343	P	P	03 54 20.5	+1.3
	baz=9.3,SNR=5.9						
BVCY	Beaver Creek	40.28	338	P	P	03 54 21.4	+1.3
	baz=12						
K20K	Telida	40.30	347	P	P	03 54 21.9	+1.8
	baz=7.0						
J18K	Innoko River	40.32	349	P	P	03 54 22.3	+1.9
	baz=6.0						
M27K	Edge Creek, AK	40.43	339	P	P	03 54 22.0	+0.6
	baz=11						
KEST	Kesra	40.47	178	P	P	03 54 21.1	-0.8
	comp=Z,2.5nm,0.7s,baz=22,slow=3.1,SNR=5.3						
KEST				LR	LR	04 10 40.9	
	comp=Z,366nm,18.1s,baz=19,slow=36						
	comp=Z,2.5nm,0.7s						
KEST	Kesra	40.47	178	P	P	03 54 20.9	-1.0
M26K	Nabesna, AK	40.48	339	P	P	03 54 23.2	+1.4
	baz=11,SNR=5.8						
WAT1	Susitna Watana	40.49	343	P	P	03 54 23.3	+1.6
	baz=8.9						
J17K	VABM Dome	40.49	351	IAmb	IAmb	03 54 25.8	
	comp=Z,16nm,1.0s						
J17K	VABM Dome	40.49	351	P	P	03 54 23.3	+1.7
	baz=5.1						
KOTAN	Kotaneelee Air	40.57	325	P	P	03 54 23.7	+1.2
	baz=16						
PPLA	Purkeypile	40.65	346	P	P	03 54 24.8	+1.6
	baz=7.6						
J16K	Anvik River	40.66	352	IAmb	IAmb	03 54 27.1	
	comp=Z,23nm,1.3s						
J16K	Anvik River	40.66	352	P	P	03 54 24.9	+1.8
	baz=4.5						
HARP	HAARP	40.66	341	P	P	03 54 24.7	+1.5
	baz=10.0						
WAT6	Susitna Watana	40.68	343	P	P	03 54 25.0	+1.5
	baz=9.1						
N31M	Braeburn, Yuko	40.69	334	P	P	03 54 24.8	+1.4
	baz=13						
N32M	Quiet Lake	40.72	332	P	P	03 54 25.1	+1.4
	baz=14						
N30M	Aishikik Lake	40.86	335	P	P	03 54 25.9	+1.1
	baz=12						
YUK3	Moose Creek	40.87	337	P	P	03 54 26.0	+0.9
	baz=12						
L22K	Petersville	40.94	345		P	03 54 26.0	+0.6
L22K				IAmb	IAmb	03 54 28.0	
	comp=Z,25nm,1.4s						
CUT	Chulitna	41.02	345	P	P	03 54 27.7	+1.6
	baz=8.2						
M24K	Tolsona, Glenn	41.03	342	P	P	03 54 26.9	+0.7
	baz=9.6						
YUK4	Talbot Arm	41.12	336	P	P	03 54 27.0	-0.2
	baz=12						
K17K	Iditarod	41.14	350	P	P	03 54 28.6	+1.5
	baz=5.3						
WTLY	Watson Lake, Y	41.22	328	P	P	03 54 28.5	+0.7
	baz=15						
J14K	Nanvaranak Lak	41.28	354	P	P	03 54 29.8	+1.6
	baz=3.4						
YUK8	Steele Glacier	41.29	337	P	P	03 54 29.7	+1.0
	baz=12						
MOY	Mondy	41.38	70	*e*P	P	03 54 32.2	+2.9
MOY				pmax	pmax		
	comp=Z,73nm,1.8s						
SCM	Sheep Creek Mo	41.39	342	P	P	03 54 30.7	+1.5
	baz=9.1						
N25K	Chitina, Valde	41.40	340	P	P	03 54 30.4	+1.1
	baz=10.0						
WHY	Whitehorse	41.41	333	P	P	03 54 30.3	+0.9
	baz=13						
O30N	Mendenhall	41.43	334	IAmb	IAmb	03 54 40.0	
	comp=Z,18nm,1.1s						
O30N	Mendenhall	41.43	334	P	P	03 54 30.5	+1.0
	baz=13						
M23K	Glacier View	41.46	343	P	P	03 54 31.5	+1.8
	baz=9.0						
SML	Sawmill	41.49	343	P	P	03 54 31.5	+1.5
	baz=8.8						
MCARA	McCarthy VSAT	41.49	339	P	P	03 54 31.9	+1.9
	baz=10						
MK31	Makanchi Array	41.50	90	*ce*P	P	03 54 32.2	+2.0
MKAR	Makanchi Array	41.50	90	P	P	03 54 31.7	+1.5
	comp=Z,1.6nm,0.5s,baz=354,slow=6.9,SNR=18						
MKAR				PP	PP	03 56 05.7	-0.1
	comp=Z,2.4nm,0.8s,baz=326,slow=7.0,SNR=4.0						
MKAR				LR	LR	04 14 30.5	
	comp=Z,911nm,21.4s,baz=318,slow=40						
	comp=Z,1.6nm,0.5s						
MKAR	Makanchi Array	41.50	90		P	03 54 31.1	+0.9
L19K	White Mountain	41.51	348	IAmb	IAmb	03 54 33.4	
	comp=Z,14nm,1.0s						
L19K	White Mountain	41.51	348	P	P	03 54 32.0	+1.9
	baz=6.5						
HYT	Haines Junctio	41.52	335	P	P	03 54 31.6	+1.2
	baz=12						
SKT	Skwentna	41.53	345		P	03 54 29.2	-1.0
SKT				IAmb	IAmb	03 54 32.8	
	comp=Z,29nm,1.2s						
SKT	Skwentna	41.53	345	P	P	03 54 30.6	+0.3
	baz=7.7,SNR=8.8						
LIRD	Liard River Hi	41.55	326	P	P	03 54 31.7	+1.2
	baz=16						
L18K	Granite Mounta	41.56	349	IAmb	IAmb	03 54 41.8	
	comp=Z,50nm,1.6s						
L18K	Granite Mounta	41.56	349	P	P	03 54 31.2	+0.7
	baz=5.9						
KNGR	Kungurtug, Tuv	41.57	74	*i* P	P	03 54 32.9	+2.0
P33M	Teslin, Yukon	41.61	331	IAmb	IAmb	03 54 47.2	
	comp=Z,48nm,2.0s						
P33M	Teslin, Yukon	41.61	331	P	P	03 54 32.0	+0.9
	baz=14						
M22K	Willow	41.66	344	P	P	03 54 32.3	+1.0
	baz=8.1						
K15K	Wolf Creek Mou	41.68	352	P	P	03 54 32.7	+1.2
	baz=4.1						
M20K	Styx River	41.72	346	P	P	03 54 33.0	+1.1
	baz=7.1						
L17K	Donlin	41.72	350	P	P	03 54 33.3	+1.5
	baz=5.3						
KNK	Knik Glacier	41.89	343	P	P	03 54 33.9	+0.6
	baz=8.7						
TOAD	Toad River Com	41.97	325	P	P	03 54 34.8	+0.8
	baz=16						
FFC	Flin Flon	41.98	305		P	03 54 33.5	-0.5
FFC				IAmb	IAmb	03 54 40.9	
	comp=Z,27nm,1.4s						
FFC	Flin Flon	41.98	305	P	P	03 54 33.5	-0.5
FFC				pmax	pmax		
	comp=Z,27nm,1.4s						
SUA	Susitna One	41.99	345		P	03 54 34.1	-0.1
SUA	Susitna One	41.99	345	P	P	03 54 35.3	+1.1
	baz=7.9						
BMRM	Bremner River	42.03	340	P	P	03 54 35.5	+1.0
	baz=9.9						
CRQE	Cirque	42.12	339	P	P	03 54 36.0	+0.8
	baz=10						
O29M	Mount Kennedy	42.14	336	P	P	03 54 35.9	+0.5
	baz=12						
KK31	Karatay Array	42.15	104		P	03 54 36.9	+1.3
KK31	Karatay Array	42.15	104	P	P	03 54 36.9	+1.3
KK31				pmax	pmax		
	comp=Z,14nm,1.2s						
KKAR	Karatay Array	42.15	104		P	03 54 36.4	+0.8
KKAR	Karatay Array	42.15	104	P	P	03 54 36.4	+0.8
M18K	Stony River	42.25	348	P	P	03 54 37.7	+1.6
	baz=6.1						
L15K	Ungalak Mounta	42.29	352	P	P	03 54 38.4	+1.9
	baz=4.1						
RC01	Rabbit Creek A	42.30	344	P	P	03 54 37.3	+0.8
	baz=8.2						
GLI	Glacier Island	42.32	342	P	P	03 54 37.5	+0.7
	baz=9.0						
N20K	Mount Spurr	42.34	346	P	P	03 54 38.2	+1.2
	baz=7.3						
SPCR	Spurr Chakacha	42.34	346	P	P	03 54 38.8	+1.7
	baz=7.3						
M17K	Holitna River	42.41	349	P	P	03 54 39.3	+1.8
	baz=5.5,SNR=5.1						
PWL	Port Wells	42.43	343	P	P	03 54 38.8	+1.2
	baz=8.6						
PINM	Pinnacle	42.51	337	P	P	03 54 39.7	+1.3
	baz=11						
EYAK	Cordova Ski Ar	42.54	341	P	P	03 54 40.1	+1.6
	baz=9.4						
L14K	Kuka Creek	42.67	353	P	P	03 54 41.2	+1.7
	baz=3.6						
P29M	Windy Craggy	42.72	335	P	P	03 54 41.7	+1.7
	baz=12						
M16K	Timber Creek	42.86	350	P	P	03 54 42.8	+1.7
	baz=4.9						
N19K	Bonanza Creek	42.86	347	P	P	03 54 42.5	+1.3
	baz=6.5						
O22K	Cooper Landing	42.90	344	P	P	03 54 43.1	+1.7
	baz=8.1						
DLBC	Dease Lake	43.00	329	LR	LR	04 13 06.7	
	comp=Z,445nm,19.3s,baz=14,slow=37						
DLBC	Dease Lake	43.00	329	P	P	03 54 43.5	+1.1
	baz=14						
KAIM	Kayak Island	43.05	340	P	P	03 54 43.9	+1.3
	baz=9.8						
N18K	Kilae Creek	43.06	348	P	P	03 54 44.0	+1.2
	baz=6.0						
ZAK	Zakamensk	43.10	69	*e*P	P	03 54 40.3	-3.0
ZAK				*e*		03 56 34.7	
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.9s						
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.9s						
P23K	Montague Islan	43.21	342	P	P	03 54 45.2	+1.2
	baz=8.8						
M14K	Bethel	43.24	353	P	P	03 54 45.4	+1.3
	baz=3.9						
M15K	Kasigluk River	43.25	352	P	P	03 54 45.5	+1.3
	baz=4.3						
SEW	Seward	43.26	343	P	P	03 54 45.4	+1.1
	baz=8.1						
N17K	Nushagak Hills	43.28	349	IAmb	IAmb	03 54 49.3	
	comp=Z,48nm,1.6s						
N17K	Nushagak Hills	43.28	349	P	P	03 54 45.8	+1.3
	baz=5.5						
N16K	Nishlik Lake	43.40	350	P	P	03 54 45.9	+0.4
	baz=5.0						
O19K	Port Alsworth	43.47	347	IAmb	IAmb	03 54 49.0	
	comp=Z,24nm,1.1s						
O19K	Port Alsworth	43.47	347	P	P	03 54 47.4	+1.4
	baz=6.5						
O20K	Slope Mountain	43.48	346	P	P	03 54 46.8	+0.6
	baz=7.0						
AAK	Ala-Archa	43.53	100		P	03 54 48.1	+1.1
AAK	Ala-Archa	43.53	100	P	P	03 54 48.1	+1.1
AAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BRSE	Bradley Lake S	43.70	344	P	P	03 54 48.5	+0.5
	baz=7.6						
M11K	Mekoryuk	43.71	356	P	P	03 54 48.7	+0.8
	baz=2.4						
N15K	Kwethluk River	43.76	351	P	P	03 54 49.0	+0.7
	baz=4.5						
HOM	Homer	43.84	345	P	P	03 54 49.7	+0.7
	baz=7.3						
O18K	Koktuh Hills	43.85	348	P	P	03 54 49.9	+0.7
	baz=6.1						
P19K	Oil Pt	43.95	346	P	P	03 54 50.6	+0.6
	baz=6.8						
O17K	Koliganek Bris	44.03	349	P	P	03 54 51.6	+1.1
	baz=5.5						
N14K	Kuskokwak Cree	44.06	352	P	P	03 54 51.8	+1.1
	baz=3.9						
S31K	Pelican	44.20	333	P	P	03 54 52.7	+0.8
	baz=12						
O16K	Kokwok River B	44.25	350	P	P	03 54 53.2	+0.9
	baz=5.1						
P18K	Big Mountain,	44.31	348	P	P	03 54 53.7	+0.8
	baz=6.0						
T35M	Bob Quinn	44.45	328	P	P	03 54 54.4	+0.4
	baz=14						
S32K	Killisnoo	44.50	332	P	P	03 54 54.5	+0.2
	baz=12						
O14K	Tigyukauivet M	44.71	352	P	P	03 54 57.2	+1.2
	baz=4.0						
O15K	Ungalikthiuk R	44.74	351	P	P	03 54 56.5	+0.3
	baz=4.5						
ZEA	Zeya	44.80	47	*e*P	P	03 54 59.1	+2.4
ZEA				pmax	pmax		
	comp=Z,20nm,1.3s						
ZEA				MLR	MLR		
	comp=N,200nm,16.0s						
Q20K	Shuyak Island	44.94	345	P	P	03 54 57.8	0.0
	baz=6.9						
ULM	Lac du Bonnet	44.95	298	P	P	03 54 55.9	-2.1
	comp=N,5.6nm,1.0s,baz=40,slow=7.9,SNR=3.8						
ULM				LR	LR	04 13 54.1	
	comp=N,762nm,19.9s,baz=44,slow=36						
	comp=N,5.6nm,1.0s						
ULM	Lac du Bonnet	44.95	298	IAmb	IAmb	03 55 29.4	
	comp=Z,40nm,1.8s						
ULM	Lac du Bonnet	44.95	298	*e*P	P	03 54 56.8	-1.2
ULM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SIT	Sitka	44.98	332	P	P	03 54 58.5	+0.4
	baz=12						
Q18K	Katmai Hardscr	45.05	347	P	P	03 54 59.1	+0.3
	baz=6.0						
MMAI	Mount Meron Ar	45.10	146	LR	LR	04 15 57.6	
	comp=Z,208nm,18.8s,baz=352,slow=39						
Q16K	King Salmon	45.10	348	P	P	03 54 59.5	+0.4
	baz=5.5						
TARG	Taragay, Kyrgy	45.18	97	IAmb	IAmb	03 55 10.4	
	comp=Z,15nm,1.1s						
WRAK	Wrangell Islan	45.26	330	P	P	03 55 00.9	+0.5
	baz=13						
EDM	Edmonton	45.53	314		P	03 55 01.2	-1.5
EDM	Edmonton	45.53	314	P	P	03 55 01.2	-1.5
EDM				pmax	pmax		
	comp=Z,38nm,1.2s						
WMQ	Urumqi	45.59	86	*e*P	P	03 55 05.0	+1.7
WMQ				pP	pwP	03 55 11.5	+2.9
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
WMQ				LR	LR		
	comp=N,700nm,19.1s						
WMQ				LR	LR		
	comp=E,640nm,19.1s						
WMQ				LR	LR		
	comp=Z,650nm,19.1s						
U33K	Whale Pass	45.65	330	P	P	03 55 03.8	+0.3
	baz=12						
KDAK	Kodiak Island	45.77	345	P	P	03 55 05.0	+0.6
	baz=6.8						
SONM	Songino Array	46.19	67	P	P	03 55 10.0	+2.0
	comp=Z,1.1nm,0.9s,baz=314,slow=5.7,SNR=6.8						
	comp=Z,1.1nm,0.9s						
SONM	Songino Array	46.19	67		P	03 55 08.1	0.0
SONM				IAmb	IAmb	03 55 17.1	
	comp=Z,15nm,1.3s						
SONM	Songino Array	46.19	67	*e*P	P	03 55 10.6	+2.6
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CRAG	Craig	46.28	330	P	P	03 55 08.1	-0.4
	baz=12						
ULN	Ulaanbaatar	46.31	67		P	03 55 09.3	+0.4
ULN				IAmb	IAmb	03 55 18.4	
	comp=Z,18nm,1.1s						
ULN	Ulaanbaatar	46.31	67	*ce*P	P	03 55 11.5	+2.5
ULN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SADO	Sadowa	46.31	280	LR	LR	04 13 34.4	
	comp=Z,240nm,21.2s,baz=88,slow=35						
KSH	Kashi	46.84	100	P	P	03 55 23.8	+11
KSH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KSH				LR	LR		
	comp=N,490nm,17.5s						
KSH				LR	LR		
	comp=E,450nm,15.8s						
KSH				LR	LR		
	comp=Z,440nm,15.8s						
SHAA	Shahritus	46.87	109	IAmb	IAmb	03 55 21.8	
	comp=Z,32nm,1.3s						
MANEM	Manem	47.71	105	IAmb	IAmb	03 55 39.4	
	comp=Z,58nm,1.6s						
CHIR	Chirikof Islan	47.90	347	P	P	03 55 21.1	0.0
	baz=5.6						
S12K	Black Hills	48.29	352	P	P	03 55 24.3	+0.2
	baz=3.5						
EIL	Elat	48.33	148	LR	LR	04 17 18.6	
	comp=Z,231nm,18.8s,baz=1.0,slow=38						
SDPT	Sand Point	48.59	351	P	P	03 55 26.8	+0.4
	baz=4.0						
NEW	Newport	50.96	315	LR	LR	04 17 14.9	
	comp=Z,409nm,20.2s,baz=36,slow=36						
B08A	Colville Reser	51.24	317	IAmb	IAmb	03 55 55.0	
	comp=Z,24nm,1.6s						
ECSD	EROS Data Cent	51.29	296	IAmb	IAmb	03 55 55.2	
	comp=Z,23nm,1.4s						
MSO	Missoula	51.79	312		P	03 55 49.7	-1.2
RSSD	Black Hills	52.49	302	P	P	03 55 55.4	-0.9
RSSD				IAmb	IAmb	03 56 04.1	
	comp=Z,30nm,1.8s						
RSSD	Black Hills	52.49	302	P	P	03 55 55.4	-0.9
RSSD				pmax	pmax		
	comp=Z,30nm,1.8s						
RLMT	Red Lodge	52.56	307	IAmb	IAmb	03 55 58.1	
	comp=Z,11nm,0.8s						
YNE	Yellowstone No	52.82	308	IAmb	IAmb	03 56 05.6	
	comp=Z,11nm,1.2s						
YMP	Mirror Lake Pl	53.10	308	IAmb	IAmb	03 56 02.2	
	comp=Z,19nm,1.2s						
YHL	Hebgen Lake	53.19	309	IAmb	IAmb	03 56 03.5	
	comp=Z,14nm,1.0s						
LON	Longmire	53.20	318	IAmb	IAmb	03 56 07.8	
	comp=Z,32nm,1.7s						
TAM	Tamanrasset	53.37	182		P	03 56 02.6	-0.3
TAM				IAmb	IAmb	03 56 11.4	
	comp=Z,18nm,1.2s						
TAM	Tamanrasset	53.37	182	P	P	03 56 02.6	-0.3
TAM				pmax	pmax		
	comp=Z,18nm,1.2s						
YPP	Pitchstone Pla	53.68	308	IAmb	IAmb	03 56 14.5	
	comp=Z,26nm,1.4s						
YSS	Yuzhno-Sakhali	53.87	37	*e*P	P	03 56 11.3	+5.2
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
G08A	Pilot Rock	54.15	316	IAmb	IAmb	03 56 17.3	
	comp=Z,22nm,1.6s						
MOOW	Moose Ponds	54.17	308	IAmb	IAmb	03 56 17.1	
	comp=Z,17nm,1.4s						
LOHW	Long Hollow	54.27	308	IAmb	IAmb	03 56 18.5	
	comp=Z,16nm,1.5s						
BMO	Blue Mountains	54.30	314	IAmb	IAmb	03 56 17.2	
	comp=Z,24nm,1.6s						
FXWY	Fox Creek	54.33	308	IAmb	IAmb	03 56 17.8	
	comp=Z,12nm,1.1s						
BW06	Boulder Array	54.89	307	IAmb	IAmb	03 56 22.9	
	comp=Z,21nm,1.3s						
PD31	Pinedale Array	54.89	307	IAmb	IAmb	03 56 22.9	
	comp=Z,21nm,1.3s						
PDAR	Pinedale Array	54.89	307	P	P	03 56 12.9	-1.0
	comp=Z,5.8nm,1.0s,baz=31,slow=4.0,SNR=23						
PDAR				LR	LR	04 20 47.2	
	comp=Z,294nm,20.5s,baz=32,slow=37						
	comp=Z,5.8nm,1.0s						
PDAR	Pinedale Array	54.89	307		P	03 56 12.4	-1.5
HLID	Hailey	55.03	311	IAmb	IAmb	03 56 22.2	
	comp=Z,12nm,1.3s						
RAYN	Ar Rayn	55.93	137		P	03 56 20.9	-0.4
RAYN				IAmb	IAmb	03 56 29.5	
	comp=Z,18nm,1.1s						
RAYN	Ar Rayn	55.93	137	P	P	03 56 20.9	-0.4
RAYN				pmax	pmax		
	comp=Z,18nm,1.2s						
HWUT	Hardware Ranch	56.39	308	IAmb	IAmb	03 56 33.3	
	comp=Z,18nm,1.4s						
MGMO	Mountain Grove	56.61	289	IAmb	IAmb	03 56 25.3	
	comp=Z,18nm,1.4s						
ISCO	Idaho Springs	56.96	302	IAmb	IAmb	03 56 36.8	
	comp=Z,11nm,1.3s						
BSUT	Blindstream Ca	57.27	307	IAmb	IAmb	03 56 39.4	
	comp=Z,22nm,1.6s						
T35A	Sooner Cattle	57.79	293	IAmb	IAmb	03 56 42.2	
	comp=Z,15nm,1.1s						
ELK	Elko	57.91	311	LR	LR	04 24 29.6	
	comp=Z,396nm,18.7s,baz=36,slow=39						
ELK	Elko	57.91	311	IAmb	IAmb	03 56 43.9	
	comp=Z,14nm,1.5s						
YBH	Yreka Blue Hor	58.24	318	LR	LR	04 21 18.2	
	comp=Z,28nm,21.7s,baz=55,slow=36						
SPR3	Spring Creek 3	59.44	310	IAmb	IAmb	03 56 49.9	
	comp=Z,11nm,1.3s						
PAHR	Pah Rah Range	59.66	314	IAmb	IAmb	03 56 56.5	
	comp=Z,20nm,1.5s						
PSUT	Pine Spring	59.80	309	IAmb	IAmb	03 56 51.7	
	comp=Z,7.6nm,1.0s						
R11B	Troy Canyon, C	60.30	311	IAmb	IAmb	03 57 00.1	
	comp=Z,8.5nm,1.3s						
WMOK	Wichita Mounta	60.38	295	IAmb	IAmb	03 56 52.8	
	comp=Z,7.5nm,1.0s						
RYN	Ryan	60.56	313	IAmb	IAmb	03 57 03.0	
	comp=Z,19nm,1.7s						
CCUT	Cedar City	60.66	309	IAmb	IAmb	03 56 55.9	
	comp=Z,9.8nm,1.4s						
NVAR	Mina Array Bea	60.71	313	P	P	03 56 54.2	-0.6
	comp=Z,1.9nm,0.9s,baz=57,slow=5.7,SNR=4.4						
	comp=Z,1.9nm,0.9s						
NVAR	Mina Array Bea	60.71	313	P	P	03 56 53.6	-1.2
ANMO	Albuquerque	61.82	302	LR	LR	04 24 54.1	
	comp=Z,891nm,19.6s,baz=40,slow=37						
ANMO	Albuquerque	61.82	302		P	03 57 00.9	-1.4
ANMO				IAmb	IAmb	03 57 11.0	
	comp=Z,11nm,1.6s						
ANMO	Albuquerque	61.82	302	P	P	03 57 00.9	-1.4
ANMO				pmax	pmax		
	comp=Z,11nm,1.6s						
TASM	ASL Pad, Albuq	61.82	302	IAmb	IAmb	03 57 11.1	
	comp=Z,13nm,1.6s						
WUAZ	Wupatki	62.25	306		P	03 57 04.8	-0.4
TORD	Torodi Ar. Bea	63.03	186	P	P	03 57 08.2	-2.1
	comp=Z,9.0nm,1.1s,baz=3.8,slow=6.8,SNR=11						
	comp=Z,9.0nm,1.1s						
MJAR	Matsushiro Arr	63.34	43	P	P	03 57 14.0	+1.7
	comp=Z,4.1nm,1.0s,baz=351,slow=6.4,SNR=4.6						
	comp=Z,4.1nm,1.0s						
MJAR	Matsushiro Arr	63.34	43	P	P	03 57 12.7	+0.5
MJAR	Matsushiro Arr	63.34	43	P	P	03 57 14.0	+1.7
MJA0	Matsu Arr-Jizo	63.35	43	*e*P	P	03 57 14.3	+2.0
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRDY	Brady	63.76	294	IAmb	IAmb	03 57 22.8	
	comp=Z,11nm,1.2s						
SHL	Shillong	64.00	89		P	03 57 24.3	+7.3
SHL	Shillong	64.00	89	P	P	03 57 24.3	+7.4
SHL				pmax	pmax		
	comp=Z,49nm,1.7s						
PFO	Pinyon Flats O	65.06	310	LR	LR	04 27 39.0	
	comp=Z,431nm,19.2s,baz=45,slow=38						
SAND	Sanderson	65.72	296	IAmb	IAmb	03 57 30.3	
	comp=Z,8.7nm,1.4s						
TX31	Lajitas Ar. Si	66.65	298	IAmb	IAmb	03 57 42.5	
	comp=Z,7.8nm,1.1s						
TXAR	Lajitas Array	66.65	298	P	P	03 57 32.9	-1.1
	comp=Z,5.0nm,1.1s,baz=53,slow=4.8,SNR=20						
TXAR				LR	LR	04 27 57.6	
	comp=Z,394nm,18.2s,baz=16,slow=37						
	comp=Z,5.0nm,1.1s						
TXAR	Lajitas Array	66.65	298		P	03 57 32.3	-1.7
BRDH	Bariadhala	66.72	90	LR	LR	04 31 38.7	
	comp=Z,286nm,21.4s,baz=324,slow=40						
DBIC	Dimbokro	69.73	193	P	P	03 57 50.9	-2.4
	comp=Z,2.8nm,0.8s,baz=1.9,slow=6.3,SNR=3.7						
	comp=Z,2.8nm,0.8s						
DBIC	Dimbokro	69.73	193	P	P	03 57 52.3	-0.9
DBIC	Dimbokro	69.73	193	P	P	03 57 52.3	-0.9
DBIC				pmax	pmax		

	comp=Z,18nm,1.3s						
CMAR	Chiang Mai Arr	72.53	84	P	P	03 58 10.8	+0.6
	comp=Z,1.1nm,0.3s,baz=353,slow=4.8,SNR=10						
	comp=Z,1.1nm,0.3s						
CMAR	Chiang Mai Arr	72.53	84	*i* P	P	03 58 11.3	+1.1
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
LPIG	La Paz	73.11	302	LR	LR	04 31 43.5	
	comp=Z,288nm,19.8s,baz=30,slow=37						
CMIG	Matias Romero	76.51	286	LR	LR	04 34 19.6	
	comp=Z,220nm,21.8s,baz=0.5,slow=37						
APG	El Apazote	77.48	281	LR	LR	04 32 49.1	
	comp=Z,34nm,20.4s,baz=85,slow=36						
MBAR	Mbarara	77.75	156	LR	LR	04 35 26.3	
	comp=Z,97nm,19.0s,baz=324,slow=38						
SDV	Santo Domingo	78.61	261	LR	LR	04 32 55.9	
	comp=Z,103nm,19.3s,baz=64,slow=35						
PALK	Pallekele	78.94	105	LR	LR	04 37 41.0	
	comp=Z,187nm,20.0s,baz=338,slow=39						
KMBO	Kilima Mbogo	78.98	150	LR	LR	04 34 38.3	
	comp=Z,748nm,21.3s,baz=299,slow=36						
JTS	Las Juntas de	80.71	275	LR	LR	04 34 38.3	
	comp=Z,110nm,18.1s,baz=38,slow=36						
OTAV	Otavalo	88.83	266		P	03 59 36.1	-1.8
OTAV				IAmb	IAmb	03 59 47.2	
	comp=Z,8.6nm,1.1s						
OTAV	Otavalo	88.83	266	P	P	03 59 36.1	-1.8
OTAV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ASAR	Alice Springs	121.23	60	PKP	PKPdf	04 05 34.8	-1.1
	comp=Z,1.1nm,0.5s,baz=2.0,slow=1.8,SNR=18						
ASAR	Alice Springs	121.23	60		PKPdf	04 05 34.4	-1.5
SNAA	Sanae	147.71	186	PKPbc	PKPbc	04 06 25.6	-0.6
	comp=Z,13nm,1.2s,baz=19,slow=3.9,SNR=14						
SNAA	Sanae	147.71	186		PKPdf	04 06 23.5	+0.2
SNAA	Sanae	147.71	186	PKIKP	PKPdf	04 06 23.5	+0.2

*BER **18** 03:52:17.1±4.0, 75°.92N×7°.24E, h10^{km}, Mw3.8, ML3.3(NAO), Confirmed Earthquake*

*NAO **18** 03:52:17.3±0.7, 76°.01N×7°.23E, h15^{km}, ML3.3*

*IDC **18** 03:52:19.6±1.8, 75°.95N×8°.84E, h0^{km}, mb3.5/2, mbtmp3.6/5, ML3.1/3, Error ellipse: s-maj=28.0km s-min=11.6km az=79.0*

*FCIAR **18** 03:52:20.0, 76°.08N×8°.64E, h10^{km}, station OMEGA has station magnitude of 3.40*

*DNK **18** 03:52:20.1±3.1, 76°.22N×6°.30E, h15^{km}, ML2.2, Presumed earthquake*

*KOLA **18** 03:52:25.1, 76°.63N×8°.79E, h0^{km}, ML2.3, Error ellipse: s-maj=19.8km s-min=14.0km az=30.0, Greenland sea,Knipovich ridge, middle*

ISC 18 03:52:14.3±0.8**, 76°.10N**±0°.06×**6°.85E**±0°.05**, h10^{km}, n47, σ2^{s}.48**/64**, 1C, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSPB	Hornsund (broa	2.22	62	Pn	Pb	03 52 52.9	-1.6
HSPB				Sn	Sn	03 53 16.0	-2.5
HSPB	Hornsund (broa	2.22	62	P	Pb	03 52 52.5	-2.0
HSPB				S	Sn	03 53 15.4	-3.1
HSPB	Hornsund (broa	2.22	62	*e*P	Pb	03 52 52.3	-2.1
HSPB				*e*S	Sn	03 53 15.8	-2.8
HSPB	Hornsund (broa	2.22	62	*e*P	Pb	03 52 52.7	-1.8
HSPB				*e*S	Sn	03 53 16.0	-2.5
HSPB				IAML		03 53 17.0	
	comp=Z,16nm,0.3s						
BRBA	Barentsburg A	2.57	37	Pn	Pb	03 52 58.5	-1.9
BRBA	Barentsburg A	2.57	37	Pn	Pb	03 52 58.5	-1.9
BRBB	Barentsburg B	2.59	36	Pn	Pb	03 52 59.1	-1.6
BRBB	Barentsburg B	2.59	36	P	Pb	03 52 58.8	-2.0
BRBB				S	Sn	03 53 23.7	-4.0
BRBB	Barentsburg B	2.59	36	Pn	Pb	03 52 59.1	-1.6
SPA0	Spitsbergen Ar	2.98	41	Pn	Pb	03 53 05.1	-2.3
	baz=216,slow=14						
SPA0				Sn	Sn	03 53 38.0	+0.8
	baz=205,slow=28						
SPA0	Spitsbergen Ar	2.98	41	⇑*i*P	Pb	03 53 05.1	-2.3
SPA0				*i* S	Sn	03 53 37.6	+0.3
SPA0	Spitsbergen Ar	2.98	41	Pn	Pb	03 53 05.1	-2.3
	baz=216,slow=14						
SPA0				Sn	Sn	03 53 38.0	+0.8
	baz=205,slow=28						
SPA0				IAML		03 53 45.4	
	comp=Z,19nm,0.6s						
SPITS	Spitsbergen Ar	2.98	41	Pn	Pb	03 53 05.0	-2.3
	baz=211,slow=13						
SPITS				Sn	Sn	03 53 36.5	-0.7
	baz=217,slow=24						
	comp=Z,14nm,0.3s						
SPITS	Spitsbergen Ar	2.98	41	P	Pb	03 53 04.7	-2.6
SPITS				S	Sn	03 53 36.0	-1.2
KBS	Kingsbay	3.05	19	P	Pb	03 53 06.4	-2.1
KBS				S	Sn	03 53 35.1	-3.7
KBS	Kingsbay	3.05	19	*e*P	Pb	03 53 06.7	-1.8
KBS				IAML		03 53 42.5	
	comp=Z,8.5nm,0.6s						
KBS	Kingsbay	3.05	19	*i* P	Pb	03 53 05.8	-2.6
KBS				*i* S	Sn	03 53 39.5	+0.6
HOPEN	Hopen	4.33	76	*e*P	Pn	03 53 21.3	+1.3
HOPEN				*e*S	Sn	03 54 05.7	-4.7
DAG	Danmarks Havn	6.01	289	*e*P	Pn	03 53 45.3	+2.3
DAG				*e*S	Sn	03 54 48.4	-3.4
DAG	Danmarks Havn	6.01	289	*e*P	Pn	03 53 45.9	+2.9
DAG				*i* S	Sn	03 54 49.6	-2.1
DAG				IAML		03 54 51.2	
	comp=Z,19nm,0.3s						
NOR	Nord	7.08	332	Pn	Pn	03 54 00.7	+3.1
NOR	Nord	7.08	332	*e*P	Pn	03 54 00.9	+3.2
NOR	Nord	7.08	332	*i* P	Pn	03 54 00.7	+3.1
DBG	Daneborg	7.12	269	Pn	Pn	03 54 00.5	+2.3
DBG				Sn	Sn	03 55 12.6	-6.4
DBG	Daneborg	7.12	269	*e*P	Pn	03 53 59.2	+1.0
DBG				*e*S	Sn	03 55 12.0	-7.0
DBG	Daneborg	7.12	269	*i* P	Pn	03 54 00.0	+1.8
DBG				*i* S	Sn	03 55 11.6	-7.4
DBG				IAML		03 55 16.7	
	comp=Z,3.5nm,0.3s						
HAMF	Hammerfest	7.27	130	*e*P	Pn	03 53 59.5	-0.9
TRO	Tromso	7.39	145	*e*P	Pn	03 54 04.2	+2.2
JETT	Jettan, Norway	7.67	142	*e*P	Pn	03 54 07.8	+1.8
KIF	Kilpisjarvi	8.24	143	*e*P	Pn	03 54 14.0	+0.4
KIF	Kilpisjarvi	8.24	143	*e*P	Pn	03 54 14.4	+0.9
ARA0	ARCESS Array S	8.54	131	Pn	Pn	03 54 16.9	-0.9
	baz=327,slow=14						
ARA0				Sn	Sn	03 55 43.0	-11
	baz=327,slow=28						
ARA0	ARCESS Array S	8.54	131	Pn	Pn	03 54 16.9	-0.9
	baz=327,slow=14						
ARA0				Sn	Sn	03 55 43.0	-11
	baz=327,slow=28						
ARCES	ARCESS Array B	8.54	131	Pn	Pn	03 54 16.4	-1.5
	comp=Z,0.3nm,0.3s,baz=332,slow=11,SNR=6.7						
ARCES				Sn	Sn	03 55 44.6	-10
	comp=Z,0.4nm,0.3s,baz=329,slow=19,SNR=5.1						
	comp=Z,2.9nm,0.5s						
KTK1	Kautokeino	8.61	137	*e*P	Pn	03 54 19.3	+0.6
KEV	Kevo	8.64	127	*e*P	Pn	03 54 18.7	-0.4
VADS	Vadso	8.81	121	*e*P	Pn	03 54 21.7	+0.2
ZFI2	Zemlya Franca-	9.20	41	*e*P	Pn	03 54 29.6	+2.9
ZFI2				*e*S	Sn	03 56 04.7	-5.4
OMEGA	Omega	9.21	41	*e*P	Pn	03 54 29.8	+3.0
OMEGA				*e*S	Sn	03 56 05.3	-5.0
	comp=Z,12nm,3.2s						
HEF	Hetta	9.22	138	*e*P	Pn	03 54 27.5	+0.4
SCO	Scoresbysund	9.90	250	*i* P	Pn	03 54 39.0	+2.6
SCO				*i* S	Sn	03 56 18.9	-8.5
SCO	Scoresbysund	9.90	250	*i* P	Pn	03 54 39.0	+2.6
SCO				*i* S	Sn	03 56 18.9	-8.5
SCO				IAML		03 56 36.0	
	comp=Z,4.8nm,1.3s						
APA0	Apatity Array	11.64	123	Pn	Pn	03 55 00.7	+0.6
	baz=320,slow=16						
APA0	Apatity Array	11.64	123	Pn	Pn	03 55 00.7	+0.6
	baz=320,slow=16						
FINES	FINESS Array B	16.12	145	Pn	Pn	03 56 01.2	+0.6
	comp=Z,0.1nm,0.3s,baz=349,slow=11,SNR=4.1						
	comp=Z,2.7nm,1.0s						
KURBB	Kurchatov Arra	37.21	91	P	P	03 59 27.8	+2.6
	comp=Z,0.8nm,0.7s,baz=345,slow=7.0,SNR=4.8						
	comp=Z,0.8nm,0.7s						
ILAR	Eielson Array	38.39	342	P	P	03 59 42.6	+7.6
	comp=Z,0.3nm,0.8s,baz=355,slow=7.7,SNR=4.3						
	comp=Z,0.3nm,0.8s						

*IDC **18** 04:01:06.6±0.7, 1°.96N×127°.69E, h0^{km}, mb4.4/14, mbtmp4.4/14, Error ellipse: s-maj=39.6km s-min=13.4km az=72.0*

*NEIC **18** 04:01:20.1±1.7, 1°.74N±0°.09×127°.27E±0°.09, h109^{km}±7^{km}, mb4.6/49, Error ellipse: s-maj=15.3km s-min=11.2km az=48.0*

*DJA **18** 04:01:20.4±0.3, 2°N±3°×12°7E±°, h91^{km}±5^{km}, M4.4/18, mb4.5/12, mB4.9/6, MLv4.5/18, Mw(mB)4.2/6*

ISC 18 04:01:20.1±0.4**, 1°.77N**±0°.05×**127°.30E**±0°.06**, h112^{km}, n97, σ1^{s}.06**/99**, mb4.5**/40**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAMI	Galela, Maluku	0.49	82	P	Pn	04 01 36.2	-0.9
GAMI				S	Sn	04 01 48.8	-1.1
TNTI	Ternate	0.99	176		Pn	04 01 41.4	-0.1
TNTI				Sn	Sn	04 01 56.3	-1.1
TNTI	Ternate	0.99	176	P	Pn	04 01 41.5	+0.1
TNTI				S	Sn	04 01 57.2	-0.3
SGSI	Sangihe	2.60	317	P	Pn	04 01 59.5	-1.4
KMSI	Cibinong	3.52	250	P	Pn	04 02 13.6	+0.4
SANI	Sanana	4.01	199	P	Pn	04 02 18.5	-1.2
GTOI	Gorontalo	4.43	255	P	Pn	04 02 26.4	+1.0
SWI	Sorong	4.74	123	P	Pn	04 02 30.1	+0.6
NLAI	Namlea	4.98	182	P	Pn	04 02 32.1	-0.6
LUWI	Luwuk	5.32	238	Pn	Pn	04 02 35.5	-1.8
LUWI	Luwuk	5.32	238	P	Pn	04 02 37.1	-0.2
MSAI	Masohi	5.33	162	P	Pn	04 02 38.1	+0.6
	0.3nm71nm,0.8s						
AAI	Ambon	5.49	171	P	Pn	04 02 40.2	+0.5
	0.2nm56nm,0.6s						
MRSI	Marisa	5.51	257	P	Pn	04 02 39.5	-0.4
APSI	Ampana	6.25	245	P	Pn	04 02 49.5	-0.4
	0.5nm1μm43nm,0.4s						
TOLI2	Tolitoli	6.55	264	Pn	Pn	04 02 53.7	-0.3
FAKI	Fak Fak	6.79	133	Pn	Pn	04 02 59.5	+2.2
FAKI	Fak Fak	6.79	133	P	Pn	04 02 59.3	+2.0
	0.1nm19nm,1.4s						
KDI	Kendari	7.36	219	P	Pn	04 03 04.7	-0.3
SPSI	Sidrap Palu	9.44	233	P	Pn	04 03 33.7	+0.5
	27nm,0.6s						
BNSI	Bone	9.45	230	P	Pn	04 03 33.4	+0.1
	15nm,0.7s						
EDFI	Ende, Flores	11.85	208	P	Pn	04 04 09.4	+3.7
	9.1nm,0.7s						
PLAI	Plampang	14.17	222	P	Pn	04 04 37.2	+1.3
MTN	Manton Dam	15.01	165	P	Pn	04 04 46.4	-0.1
SBUM	Sibu	15.09	273		P	04 04 50.7	+0.6
KNRA	Kununurra	17.39	175	P	P	04 05 15.3	-0.3
UGM	Wanagama	19.30	240	P	Pn	04 05 39.0	+0.3
UGM				IAmb	IAmb	04 05 55.7	
	comp=Z,38nm,1.2s						
FITZ	Fitzroy Crossi	19.81	185	P	P	04 05 41.0	-0.9
	comp=Z,7.2nm,0.6s,baz=19,slow=9.7,SNR=30						
	comp=Z,7.2nm,0.6s						
FITZ	Fitzroy Crossi	19.81	185	P	P	04 05 40.8	-1.2
TPUB	Ta-pu	22.36	344	P	P	04 06 08.3	-0.8
TPUB				IAmb	IAmb	04 06 27.2	
	comp=Z,37nm,1.2s						
WB0	Warramunga Arr	22.50	162		P	04 06 09.6	-1.0
WRAB	Tennant Creek	22.65	163	P	P	04 06 11.2	-0.9
WRA	Warramunga Arr	22.65	163	P	P	04 06 11.3	-0.8
	comp=Z,29nm,0.5s,baz=340,slow=11,SNR=117						
	comp=Z,29nm,0.5s						
WRA	Warramunga Arr	22.65	163		P	04 06 09.9	-2.2
WR8	Warramunga Arr	22.71	162		P	04 06 11.7	-1.0
WR8				IAmb	IAmb	04 06 12.2	
	comp=Z,26nm,0.5s						
MBWA	Marble Bar	23.96	198	P	P	04 06 23.4	-0.9
MBWA				IAmb	IAmb	04 06 54.3	
	comp=Z,34nm,1.5s						
PSA00	Pilbara Seismi	24.32	197	P	P	04 06 26.6	-0.9
PSA00				IAmb	IAmb	04 06 43.7	
	comp=Z,21nm,1.4s						
AS31	Alice Springs	26.08	166		P	04 06 42.4	-1.1
ASAR	Alice Springs	26.09	166	P	P	04 06 42.6	-0.9
	comp=Z,2.4nm,0.4s,baz=348,slow=7.3,SNR=43						
	comp=Z,2.4nm,0.4s						
ASAR	Alice Springs	26.09	166		P	04 06 43.4	-0.1
INKA	Innaminka	32.06	157	P	P	04 07 36.5	+0.1
INKA				IAmb	IAmb	04 07 37.2	
	comp=Z,3.9nm,0.5s						
CMAR	Chiang Mai Arr	32.38	303	P	P	04 07 40.6	+1.3
	comp=Z,1.3nm,0.3s,baz=122,slow=8.3,SNR=4.3						
	comp=Z,1.3nm,0.3s						
CMAR	Chiang Mai Arr	32.38	303	P	P	04 07 38.6	-0.7
LYN	LuoYang	35.43	339	P	P	04 08 06.1	+0.6
LYN				pmax	pmax		
	comp=Z,16nm,0.8s						
MJAR	Matsushiro Arr	36.04	15	P	P	04 08 07.9	-2.9
	comp=Z,1.9nm,0.5s,baz=196,slow=9.6,SNR=4.6						
	comp=Z,1.9nm,0.5s						
STKA	Stephens Creek	36.11	159	P	P	04 08 11.2	-0.1
	comp=Z,21nm,0.7s,baz=332,slow=8.9,SNR=46						
	comp=Z,21nm,0.7s						
STKA	Stephens Creek	36.11	159	P	P	04 08 11.3	-0.1
SHL	Shillong	41.51	308	P	P	04 08 56.8	0.0
SHL				IAmb	IAmb	04 08 57.6	
	comp=Z,8.9nm,0.7s						
XLT	XiLinHaoTe	43.12	348	*e*P	P	04 09 09.3	-0.2
XLT				sP	sP	04 09 43.1	-3.8
XLT				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA	Gaotai	45.06	330	*e*P	P	04 09 27.3	+2.2
GTA				sP	pP	04 09 37.4	-13
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONM	Songino Array	49.33	342	P	P	04 09 59.0	+0.9
	comp=Z,1.4nm,0.6s,baz=157,slow=8.5,SNR=9.5						
	comp=Z,1.4nm,0.6s						
SONM	Songino Array	49.33	342	P	P	04 09 58.9	+0.9
MKAR	Makanchi Array	59.48	326	P	P	04 11 12.3	+0.8
	comp=Z,5.3nm,0.4s,baz=116,slow=7.9,SNR=68						
	comp=Z,5.3nm,0.4s						
TARG	Taragay, Kyrgy	59.59	319	P	P	04 11 11.7	-1.1
TARG				IAmb	IAmb	04 11 17.7	
	comp=Z,10nm,1.5s						
MAKZ	Makanchi	59.67	326		P	04 11 13.4	+0.6
MAKZ				IAmb	IAmb	04 11 13.8	
	comp=Z,6.0nm,0.6s						
LBZ	Lake Benmore	59.75	146	P	P	04 11 11.2	-2.2
KDJ	Kajisay	60.19	319	P	P	04 11 17.3	+0.7
ZALV	Zalesovo Beam	62.58	333	P	P	04 11 31.9	-0.3
	comp=Z,0.7nm,0.3s,baz=113,slow=6.9,SNR=3.8						
	comp=Z,0.7nm,0.3s						
ZALV	Zalesovo Beam	62.58	333	P	P	04 11 31.7	-0.5
ARSB	Arslanbob	62.66	316	P	P	04 11 33.7	+0.5
ARSB				IAmb	IAmb	04 11 38.9	
	comp=Z,8.7nm,1.5s						
GAR	Garm	63.67	313	P	P	04 11 40.4	+0.5
GAR				IAmb	IAmb	04 11 42.2	
	comp=Z,8.6nm,0.6s						
KURBB	Kurchatov Arra	63.69	328	P	P	04 11 39.9	+0.3
	comp=Z,6.1nm,0.5s,baz=128,slow=6.3,SNR=29						
	comp=Z,6.1nm,0.5s						
KURK	Kurchatov	63.69	328		P	04 11 40.0	+0.4
KKAR	Karatay Array	65.05	317		P	04 11 49.4	+0.7
BVAR	Borovoye Array	69.27	327	P	P	04 12 15.2	+0.1
	comp=Z,2.1nm,0.6s,baz=139,slow=7.3,SNR=9.3						
	comp=Z,2.1nm,0.6s						
BORK	Borovoye	69.31	327	P	P	04 12 15.1	-0.3
BORK				IAmb	IAmb	04 12 16.2	
	comp=Z,3.5nm,0.7s						
BILL	Bilibino	71.30	14	P	P	04 12 28.2	+1.1
BILL				IAmb	IAmb	04 13 07.0	
	comp=Z,9.9nm,1.5s						
NRIK	Noril'sk	72.46	346	P	P	04 12 34.2	+0.2
	comp=Z,1.4nm,0.4s,baz=118,slow=5.2,SNR=3.7						
	comp=Z,1.4nm,0.4s						
NRIK	Noril'sk	72.46	346	P	P	04 12 34.1	0.0
AB31	Akbulak array	74.02	321		P	04 12 43.5	-0.1
ABKAR	Akbulak array	74.02	321	P	P	04 12 43.6	-0.1
KPA	Kalaupapa	76.04	69	P	P	04 12 57.7	+1.9
G19K	Purcell Mounta	82.59	23	IAmb	IAmb	04 13 32.8	
	comp=Z,5.9nm,0.8s						
E19K	Redstone River	82.82	22	P	P	04 13 33.5	+1.9
E19K				IAmb	IAmb	04 13 34.1	
	comp=Z,5.4nm,0.8s						
D20K	Etivluk River	83.32	21	P	P	04 13 35.9	+1.6
D20K				IAmb	IAmb	04 13 36.3	
	comp=Z,4.3nm,0.8s						
SEW	Seward	85.10	30	P	P	04 13 43.0	-0.4
PMR	Palmer	85.39	28	P	P	04 13 44.5	-0.3
PMR				IAmb	IAmb	04 13 45.7	
	comp=Z,15nm,1.2s						
GHO	Glory Hole Cre	85.50	28	P	P	04 13 45.5	+0.1
GHO				IAmb	IAmb	04 14 25.0	
	comp=Z,19nm,1.3s						
C23K	Itkillik River	85.61	20	P	P	04 13 46.3	+0.6
C23K				IAmb	IAmb	04 13 58.1	
	comp=Z,6.7nm,1.2s						
RND	Reindeer	85.67	27	P	P	04 13 45.6	-0.6
RND				IAmb	IAmb	04 14 08.8	
	comp=Z,5.0nm,1.3s						
KNK	Knik Glacier	85.69	29	P	P	04 13 46.9	+0.6
PWL	Port Wells	85.71	29	P	P	04 13 46.6	+0.2
SML	Sawmill	85.78	28	P	P	04 13 46.0	-0.8
DHY	Denali Highway	86.31	27	P	P	04 13 49.2	-0.3
DHY				IAmb	IAmb	04 14 27.3	
	comp=Z,12nm,1.5s						
ILAR	Eielson Array	86.62	25	P	P	04 13 49.0	-1.7
	comp=Z,1.0nm,1.2s,baz=260,slow=4.8,SNR=7.2						
	comp=Z,1.0nm,1.2s						
ILAR	Eielson Array	86.62	25	P	P	04 13 48.9	-1.9
J25K	Salcha River,	87.26	26	P	P	04 13 52.9	-1.1
C27K	Jago River	88.00	21	P	P	04 13 56.8	-0.5
J26L	Joseph Creek	88.04	26	P	P	04 13 57.1	-0.7
BCAR	Beaver Creek A	88.85	27	P	P	04 14 01.8	+0.3
I27K	Kandik River	88.85	25	P	P	04 14 01.9	+0.4
I27K				IAmb	IAmb	04 14 32.5	
	comp=Z,9.1nm,1.5s						
F28M	Old Crow	89.46	22	P	P	04 14 03.6	-0.6
F28M				IAmb	IAmb	04 14 29.9	
	comp=Z,7.0nm,1.5s						
E28M	Babbage River	89.53	21	P	P	04 14 04.6	0.0
E28M				IAmb	IAmb	04 14 30.3	
	comp=Z,6.7nm,1.4s						
I28M	Miner Creek	89.56	25	P	P	04 14 05.5	+0.6
L29M	L29M	90.51	27	P	P	04 14 06.9	-2.3
L29M				IAmb	IAmb	04 14 37.6	
	comp=Z,6.4nm,1.4s						
K29M	Barlow Dome	90.72	26	P	P	04 14 10.0	-0.3
FINES	FINESS Array B	93.82	332	P	P	04 14 23.9	-0.6
	comp=Z,1.6nm,0.9s,baz=264,slow=3.5,SNR=3.6						
	comp=Z,1.6nm,0.9s						

*MEX **18** 04:16:42.2±0.8, 15°.46N×93°.75W, h65^{km}±12^{km}, MD4.2*

*GCG **18** 04:16:43.3±0.5, 15°.63N×93°.48W, h36^{km}±999^{km}, MD4.2, ML4.1, MW2.8*

ISC 18 04:16:39.9±1.2**, 15°.48N**±0°.04×**93°.69W**±0°.03**, h75^{km}**±13^{km}**, n43, σ2^{s}.78**/80**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.51	64	*e*P	Pn	04 16 53.9	+0.6
PCIG				*e*S	Sn	04 17 03.2	+0.1
TGIG		1.40	23	*e*P	Pn	04 17 04.6	+0.8
TGIG				*e*S	Sn	04 17 21.0	-0.9
TGBT	Tuxtla Gutierr	1.41	24	*e*P	Pn	04 17 03.8	-0.1
TGBT				*e*S	Sn	04 17 21.6	-0.3
PATR	El Naranjo	1.45	104	*e*P	Pn	04 17 05.7	+1.1
PATR				*e*S	Sn	04 17 23.7	+0.4
PAVE	Pavencul	1.49	101	*e*P	Pn	04 17 06.4	+1.3
PAVE				*e*S	Sn	04 17 25.6	+1.5
THIG		1.49	112	*e*P	Pn	04 17 06.3	+1.4
THIG				*e*S	Sn	04 17 24.3	+0.5
CHUJ	Union Juarez	1.57	104	*e*P	Pn	04 17 07.5	+1.2
CHUJ				*e*S	Sn	04 17 27.1	+0.9
SMCA	Catarina	1.68	112	*i* P	Pn	04 17 08.4	+1.0
SMCA				*e*S	Sn	04 17 28.4	+0.1
CCIG	Comitan	1.69	62	*e*P	Pn	04 17 09.9	+2.2
CCIG				*e*S	Sn	04 17 26.9	-2.0
UXUV	UXUV	1.88	347	*e*P	Pn	04 17 11.9	+1.9
UXUV				*e*S	Sn	04 17 29.1	-3.9
CMIG	Matias Romero	1.97	325	*e*P	Pn	04 17 12.3	+1.0
CMIG				*e*S	Sn	04 17 31.7	-3.5
HUEH	Huehuetenango	2.12	94	*e*P	Pn	04 17 15.4	+2.0
HUEH				*e*S	Sn	04 17 42.6	+3.6
RTAL	Retalhuleu	2.15	116	*e*P	Pn	04 17 15.3	+1.6
RTAL				*e*S	Sn	04 17 40.4	+0.9
HUIG	Huatulco	2.35	277	*e*P	Pn	04 17 16.1	-0.2
HUIG				*e*S	Sn	04 17 41.8	-2.5
STG2	El Palmar, Qui	2.47	115	*e*P	Pn	04 17 15.4	-2.7
STG2				*e*S	Sn	04 17 39.9	-7.5
STG8	El Palmar, Qui	2.48	114	*i* Pg	Pn	04 17 15.3	-3.1
STG8				*i* S	Sn	04 17 41.5	-6.4
STG8				IAML		04 17 50.0	
	comp=N,917nm,0.2s						
STG5	El Palmar, Qui	2.50	115	*e*P	Pn	04 17 15.8	-2.8
STG5				*i* S	Sn	04 17 41.4	-6.8
NEUV	Arroyo Zacate	3.00	318	*e*P	Pn	04 17 26.8	+1.6
NEUV				*e*S	Sn	04 18 01.8	+1.6
APG	El Apazote	3.15	98	*i* P	Pn	04 17 29.2	+1.8
VHO	Vista Hermosa	3.32	299	*e*P	Pn	04 17 32.9	+3.2
VHO				*e*S	Sn	04 18 09.2	+0.9
PMUV	Sontecomapan	3.34	336	*e*S	Sn	04 18 05.5	-3.0
PEIG	Puerto Escondi	3.37	279	*e*P	Pn	04 17 29.0	-1.2
PEIG				*e*S	Sn	04 18 06.0	-3.1
PETF	Flores	3.94	68	*e*P	Pn	04 17 39.1	+1.1
PETF				*e*S	Sn	04 18 20.7	-2.4
PETF	Flores	3.94	68	*e*P	Pn	04 17 39.7	+1.7
PETF				*i* S	Sn	04 18 21.0	-2.0
PETF				IAML		04 18 27.8	
	comp=E,517nm,0.6s						
YOIG	Yosondua	3.95	291	*e*P	Pn	04 17 41.0	+2.7
YOIG				*e*S	Sn	04 18 23.3	-0.4
NUBE	Las Nubes	4.10	112	*e*P	Pn	04 17 43.9	+3.6
TOIG	Toxpalan	4.15	309	*e*P	Pn	04 17 44.0	+3.1
TOIG				*e*S	Sn	04 18 29.6	+1.3
SCIG	Sabancuy	4.21	34	*e*P	Pn	04 17 42.0	+0.4
SCIG				*e*S	Sn	04 18 27.9	-1.7
TXIG	Tlaxiaco	4.29	295	*e*P	Pn	04 17 46.3	+3.2
TXIG				*e*S	Sn	04 18 32.7	+0.7
HLIG	Huajuapan de L	4.58	301	*e*P	Pn	04 17 48.8	+1.9
HLIG				*e*S	Sn	04 18 38.0	-1.0
JAUV	Jalcomulco	4.87	323	*e*P	Pn	04 17 50.3	-0.5
JAUV				*e*S	Sn	04 18 44.6	-1.4
FTIG	Fresnillo de T	4.89	300	*e*P	Pn	04 17 54.7	+3.6
FTIG				*e*S	Sn	04 18 43.1	-3.4
MGIG	Malinaltepec	5.05	291	*e*P	Pn	04 17 57.7	+4.3
MGIG				*e*S	Sn	04 18 43.3	-7.3
CRIG	Cruz Grande	5.38	284	*e*P	Pn	04 17 58.9	+1.3
CRIG				*e*S	Sn	04 18 50.4	-7.8
PPM	Popocatepetl	5.91	308	*e*P	Pn	04 18 10.9	+5.6
DAIG	Los Arroyos	5.93	286	*e*P	Pn	04 18 05.9	+0.8
DAIG				*e*S	Sn	04 19 09.3	-2.4
CXUV	Coxquihui	5.96	322	*e*P	Pn	04 18 07.4	+1.7
CXUV				*e*S	Sn	04 19 12.6	0.0
YAIG	Yautepec	6.14	304	*e*P	Pn	04 18 12.6	+4.5
YAIG				*e*S	Sn	04 19 14.0	-3.1
MEIG	Mezcala	6.18	294	*e*P	Pn	04 18 10.4	+1.8
MEIG				*e*S	Sn	04 19 19.1	+1.1
CAIG	El Cayaco	6.51	285	*e*P	Pn	04 18 16.4	+3.3
CAIG				*e*S	Sn	04 19 22.8	-3.0
MYIG	Merida	6.62	34	*e*P	Pn	04 18 18.2	+3.7
MYIG				*e*S	Sn	04 19 25.0	-3.5
ARIG	Puente Sto Nin	6.95	295	*e*P	Pn	04 18 23.3	+4.1
ARIG				*e*S	Sn	04 19 35.2	-1.7
TEIG	Tepich	6.99	47	*e*P	Pn	04 18 19.5	-0.1
TEIG				*e*S	Sn	04 19 32.6	-5.1

NNC 18 04:20:32.7±5.5**, 36°.88N×70°.68E, h0^{km}, mb3.7, mpv3.3, 5C-1D, Error ellipse: s-maj=43.4km s-min=36.3km az=161.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.22	359	⇑P	Pn	04 22 07.3	+1.6
	1.8nm,0.3s,baz=178,slow=12,SNR=16						
KK31				⇑S	Sn	04 23 19.5	+2.1
	2.0nm,0.4s,baz=184,slow=23,SNR=5.0						
AAK	Ala-Archa	6.46	26	⇑P	Pn	04 22 08.9	-0.2
	0.4nm,0.4s						
AAK				⇓S	Sn	04 23 23.7	+0.2
	6.1nm,1.0s						
AB31	Akbulak array	14.63	331	⇑P	Pn	04 23 58.2	-2.5
	0.7nm,0.3s,baz=155,slow=12,SNR=43						
AB31				⇑S	Sn	04 26 42.4	-1.1
	0.9nm,0.7s,baz=166,slow=22,SNR=4.1						

*BJI **18** 04:44:11.5, 41°.41S×89°.05W, h10^{km}, Ms5.3/6, Ms7 5.0/7*

*MOS **18** 04:44:13.1±1.0, 41°.36S×89°.18W, h10^{km}, mb5.1/17, Error*

ellipse: s-maj=13.9km s-min=11.6km az=84.0

*IDC **18** 04:44:13.4±0.6, 41°.40S×89°.21W, h0^{km}, mb4.4/14, mbtmp4.4/15, ML4.1/1, MS4.6/36, Error ellipse: s-maj=21.3km s-min=15.4km az=91.0*

*NEIC **18** 04:44:14.3, 41°.18S×89°.26W, h10^{km}*

*NEIC **18** 04:44:14.7, 41°.26S×89°.34W, h18^{km}, Moment Tensor Solution. Duration: 2^{s}5 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.25; $M_{\theta\theta}$0.30; $M_{\phi\phi}$-0.05; $M_{r\theta}$-0.34; $M_{\theta\phi}$-1.76; $M_{\phi r}$0.41; Fault plane solution: $M_0$1.86000×10^{17} NP1: ϕ_s266.29000°, δ78.25000°, λ172.93000°. NP2: ϕ_s357.73000°, δ83.08000°, λ11.83000°. Principal axes: T 2.0178, Plg13.0000°, Azm222.0000°; N -0.3659, Plg76.0000°, Azm28.0000°; P -1.6519, Plg3.0000°, Azm132.0000°;*

*NEIC **18** 04:44:14.5±1.9, 41°.19S±0°.08×89°.2W±0°.2, h10^{km}±1^{km}, mb5.0/114, Ms_20 4.9/68, Mwb5.5/18, Mww5.4/37 Error ellipse: s-maj=19.8km s-min=13.8km az=275.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.72; $M_{\theta\theta}$-0.28; $M_{\phi\phi}$-0.44; $M_{r\theta}$0.16; $M_{\theta\phi}$-1.91; $M_{\phi r}$0.01; Fault plane solution: $M_0$2.02000×10^{17} NP1: ϕ_s178.94000°, δ83.19000°, λ3.74000°. NP2: ϕ_s88.49000°, δ86.29000°, λ173.18000°. Principal axes: T 1.5628, Plg7.0000°, Azm44.0000°; N 0.7137, Plg82.0000°, Azm240.0000°; P -2.2765, Plg2.0000°, Azm134.0000°;*

*NEIC **18** 04:44:14.7, 41°.16S×89°.21W, h18^{km}*

*GFZ **18** 04:44:16.6, 41°.29S×89°.27W, h15^{km}, MW5.4, Moment Tensor Solution. s62 Moment tensor: M_{rr}-0.43; $M_{\theta\theta}$0.17; $M_{\phi\phi}$0.26; $M_{r\theta}$0.33; $M_{\theta\phi}$-1.23; $M_{\phi r}$-0.22; Fault plane solution: NP1: ϕ_s91.00000°, δ89.00000°, λ165.00000°. NP2: ϕ_s182.00000°, δ75.00000°, λ1.00000°. Principal axes: T 1.5300, Plg11.0000°, Azm46.0000°; N -0.4900, Plg75.0000°, Azm266.0000°; P -1.0400, Plg9.0000°, Azm138.0000°;*

*GCMT **18** 04:44:16.5±0.1, 41°.32S±0°.01×89°.47W±0°.01, h12^{km}, MW5.4/141, Moment Tensor Solution. s107,c172; s141,c263; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.24±.02; $M_{\theta\theta}$0.26±.02; $M_{\phi\phi}$-0.01±.02; $M_{r\theta}$0.09±.04; $M_{\theta\phi}$-1.48±.01; $M_{\phi r}$-0.29±.04; Best double couple: $M_0$1.51500×10^{17} NP1: ϕ_s87.00000°, δ79.00000°, λ180.00000°. NP2: ϕ_s177.00000°, δ90.00000°, λ11.00000°. Principal axes: T 1.6430, Plg8.0000°, Azm43.0000°; N -0.2560, Plg79.0000°, Azm179.0000°; P -1.3870, Plg8.0000°, Azm312.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*GUC **18** 04:44:19.0, 41°.12S×89°.09W, h15^{km}, MW5.6*

ISC 18 04:44:13.9±0.3, **41°.25S**±0°.05×**89°.39W**±0°.05, **h10^{km}, n310,** σ**1^{s}66**/248, **mb5.0**/67, **MS4.8**/68, **2C-8D, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03S2	**Juan Fernandez**	**11.12**	**52**	Pn	**Pn**	**04 46 51.9**	**-0.8**
	baz=239,slow=74						
H03S2				T	T	04 58 26.1	
	baz=224,slow=73,SNR=3112						
H03S1	**Juan Fernandez**	**11.13**	**52**	Pn	**Pn**	**04 46 52.2**	**-0.6**
	baz=239,slow=74						
H03S1				T	T	04 58 27.4	
	baz=224,slow=73,SNR=3686						
H03S3	**Juan Fernandez**	**11.14**	**52**	Pn	**Pn**	**04 46 51.9**	**-1.1**
	baz=239,slow=74						
H03S3				T	T	04 58 26.7	
	baz=224,slow=73,SNR=1678						
VA04	**Juan Fernndez**	**11.31**	**51**	Pn	**Pn**	**04 46 53.5**	**-2.1**
VA04	**Juan Fernndez**	**11.31**	**51**	*e*P	**Pn**	**04 46 52.8**	**-2.8**
VA04				*e*S	**Sn**	**04 49 06.0**	**+4.0**
VA04				IVMs_BB	IVMs_BB	04 52 02.0	
	comp=Z,12μm,5.4s						
H03N3	**Juan Fernandez**	**11.39**	**50**	Pn	**Pn**	**04 46 55.3**	**-1.1**
	baz=189,slow=22						
H03N3				T	T	04 58 40.2	
	baz=224,slow=72,SNR=2764						
H03N2	**Juan Fernandez**	**11.40**	**50**	Pn	**Pn**	**04 46 54.4**	**-2.1**
	baz=189,slow=22						
H03N2				T	T	04 58 31.6	
	baz=224,slow=72,SNR=4727						
H03N1	**Juan Fernandez**	**11.41**	**50**	Pn	**Pn**	**04 46 55.0**	**-1.6**
	baz=189,slow=22						
H03N1				T	T	04 58 38.3	
	baz=224,slow=72,SNR=3682						
GO07	**Milladeo Hill,**	**11.82**	**104**	Pn	**Pn**	**04 47 03.7**	**+1.3**
LL05	**Los Muermos**	**11.97**	**96**	Pn	**Pn**	**04 47 04.8**	**+0.2**
AY01	**Puyuhuapi**	**12.69**	**110**		**Pn**	**04 47 14.8**	**+0.4**
LL01	**San Ignacio de**	**12.72**	**101**	Pn	**Pn**	**04 47 14.6**	**-0.2**
LR03	**Panguipulli**	**13.09**	**88**	Pn	**Pn**	**04 47 19.6**	**-0.3**
LL02	**Futaleuf**	**13.15**	**104**		**Pn**	**04 47 22.3**	**+1.6**
COYC	**Coyhaique**	**13.30**	**115**		**Pn**	**04 47 23.3**	**+0.6**
AY03	**Cochrane**	**13.45**	**122**		**Pn**	**04 47 24.2**	**-0.4**
PLCA	**Paso Flores**	**14.24**	**94**	Pn	**Pn**	**04 47 38.4**	**+2.7**
	comp=Z,0.2nm,0.3s,baz=255,slow=11,SNR=14						
PLCA				LR	LR	04 51 49.2	
	comp=Z,2μm,21.3s,baz=259,slow=32						
PLCA	**Paso Flores**	**14.24**	**94**		**Pn**	**04 47 35.6**	**-0.1**
PLCA	**Paso Flores**	**14.24**	**94**	P	**Pn**	**04 47 35.6**	**-0.1**
PLCA	**Paso Flores**	**14.24**	**94**	*e*P	**P**	**04 47 39.0**	**-4.1**
BI02	**San Fabin de**	**14.82**	**78**		**Pn**	**04 47 39.4**	**-4.1**
ML02	**Panimavida**	**15.09**	**75**		**Pn**	**04 47 44.6**	**-2.6**
BO03	**Pichilemu**	**15.32**	**69**	*e*P	**Pn**	**04 47 45.9**	**-4.2**
GO09	**Cerro Castillo**	**15.44**	**136**		**Pn**	**04 47 52.0**	**+0.4**
MG05	**Puerto Natales**	**15.59**	**138**		**Pn**	**04 47 53.2**	**-0.3**
BO01	**Tunca**	**15.99**	**71**		**Pn**	**04 47 56.5**	**-2.4**
BO01				IAmb	IAmb	04 48 03.4	
	comp=Z,319nm,1.8s						
BO01	**Tunca**	**15.99**	**71**	*e*P	**Pn**	**04 47 56.1**	**-2.8**
BO01				*e*S	**Sn**	**04 51 01.7**	**+5.5**
VA05	**Santo Domingo**	**16.01**	**67**		**Pn**	**04 47 58.9**	**-0.2**
BO02	**Sierra Bellavi**	**16.01**	**72**		**Pn**	**04 47 55.6**	**-3.6**
MT01	**Popeta**	**16.15**	**69**		**Pn**	**04 47 57.1**	**-3.8**
MT01				IAmb	IAmb	04 48 04.7	
	comp=Z,140nm,1.2s						
VA01	**Torpederas**	**16.34**	**66**	P	**Pn**	**04 48 03.4**	**0.0**
VA01				IAmb	IAmb	04 48 06.5	
	comp=Z,158nm,1.4s						
MT09	**Talagante**	**16.38**	**69**	Pn	**Pn**	**04 48 00.8**	**-3.3**
BO04	**La Punta**	**16.54**	**70**	Pn	**Pn**	**04 48 03.1**	**-2.9**
BO04				IAmb	IAmb	04 48 12.1	
	comp=Z,158nm,1.2s						
BO04	**La Punta**	**16.54**	**70**	*e*P	**Pn**	**04 48 03.7**	**-2.2**
MT02	**Curacav**	**16.56**	**67**		**Pn**	**04 48 03.9**	**-2.3**
MT02				IAmb	IAmb	04 48 09.6	
	comp=Z,118nm,1.2s						
MT05	**Renca**	**16.76**	**68**		**Pn**	**04 48 08.5**	**-0.3**
VA06	**Catapilco**	**16.85**	**65**	Pn	**Pn**	**04 48 08.1**	**-1.7**
MT03	**Universidad Ad**	**16.87**	**69**		**Pn**	**04 48 09.0**	**-1.2**
MT13	**San Alfonso**	**16.89**	**70**		**Pn**	**04 48 08.8**	**-1.7**
MT16	**CCHEN**	**16.89**	**69**	P	**Pn**	**04 48 09.7**	**-0.8**
LMEL	**Las Melosas**	**16.90**	**70**	P	**Pn**	**04 48 07.3**	**-3.3**
LMEL				IAmb	IAmb	04 48 17.0	
	comp=Z,161nm,1.4s						
PEL	**Peldehue**	**16.94**	**67**		**Pn**	**04 48 09.6**	**-1.4**
PEL				IAmb	IAmb	04 48 14.9	
	comp=Z,171nm,1.2s						
PEL	**Peldehue**	**16.94**	**67**	P	**Pn**	**04 48 09.6**	**-1.4**
PEL				pmax	pmax		
	comp=Z,171nm,1.2s						
MT08	**Bocatoma Ro**	**17.24**	**69**		**Pn**	**04 48 11.8**	**-3.2**
VA03	**San Esteban**	**17.24**	**67**		**Pn**	**04 48 13.3**	**-1.6**
VA03				IAmb	IAmb	04 48 18.3	
	comp=Z,171nm,1.0s						
CO06	**Fray Jorge**	**17.80**	**59**	P	**Pn**	**04 48 20.0**	**-1.8**
CO06				IAmb	IAmb	04 48 25.6	
	comp=Z,229nm,1.6s						
MG02	**Cerro Sombrero**	**17.88**	**137**	P	**P**	**04 48 24.0**	**+0.8**
CO03	**El Pedregal**	**18.31**	**61**		**P**	**04 48 27.7**	**-0.5**
CO05	**La Serena**	**18.56**	**58**	P	**P**	**04 48 29.3**	**-1.6**
GO04	**Tololo Observa**	**18.67**	**60**	P	**P**	**04 48 30.8**	**-1.5**
GO04				IAmb	IAmb	04 48 36.1	
	comp=Z,116nm,1.1s						
CO01	**Juntas del Tor**	**19.26**	**60**	P	**P**	**04 48 37.1**	**-1.7**
CFA	**Coronel Fontan**	**19.51**	**67**	P	**Pn**	**04 48 42.5**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=238,slow=11,SNR=17						
CFA				LR	LR	04 54 42.6	
	comp=Z,2μm,19.0s,baz=220,slow=32						
	comp=Z,19nm,1.0s						
LCO	**Las Campanas**	**19.52**	**57**		**P**	**04 48 38.2**	**-3.4**
LCO	**Las Campanas**	**19.52**	**57**	P	**P**	**04 48 38.2**	**-3.4**
LCO				pmax	pmax		
	comp=Z,53nm,1.2s						
AC04	**Llanos de Chal**	**19.85**	**55**		**P**	**04 48 43.2**	**-1.8**
MG01	**Puerto William**	**19.85**	**141**	P	**Pn**	**04 48 45.8**	**-0.6**
MG01				IAmb	IAmb	04 48 50.1	
	comp=Z,72nm,0.9s						
AC05	**El Transito**	**19.91**	**58**		**P**	**04 48 44.7**	**-1.1**
GO03	**Copiapo**	**20.80**	**55**	P	**P**	**04 48 52.8**	**-2.7**
GO03				IAMs_20	IAMs_20	04 54 26.0	
	comp=Z,5μm,21.0s						
AC06	**Mina Casimiro**	**20.90**	**54**		**P**	**04 48 54.8**	**-1.6**
AC06				IAmb	IAmb	04 49 01.7	
	comp=Z,130nm,1.1s						
AC06				IAMs_20	IAMs_20	04 54 28.4	
	comp=Z,5μm,20.0s						
TRQA	**Tornquist**	**21.31**	**90**		**P**	**04 48 59.8**	**-1.0**
TRQA				IAmb	IAmb	04 49 09.7	
	comp=Z,119nm,1.2s						
TRQA	**Tornquist**	**21.31**	**90**	P	**P**	**04 48 59.8**	**-1.0**
TRQA				pmax	pmax		
	comp=Z,119nm,1.2s						
AC01	**Pan de Azucar**	**21.64**	**52**	P	**P**	**04 49 02.6**	**-1.8**
AC01				IAmb	IAmb	04 49 15.2	
	comp=Z,130nm,1.2s						
AC01				IAMs_20	IAMs_20	04 54 46.0	
	comp=Z,4μm,21.0s						
AC02	**Maricunga**	**22.03**	**56**		**P**	**04 49 08.4**	**-0.8**
AC02				IAmb	IAmb	04 49 20.4	
	comp=Z,90nm,1.0s						
PB14	**IPOC Station P**	**22.91**	**50**	IAMs_20	IAMs_20	04 55 25.5	
	comp=Z,4μm,21.0s						
GO02	**Mina Guanaco**	**22.98**	**52**		**P**	**04 49 17.1**	**-1.9**
GO02				IAMs_20	IAMs_20	04 55 28.2	
	comp=Z,5μm,22.0s						
PB10	**IPOC Station P**	**23.70**	**48**	IAMs_20	IAMs_20	04 55 47.3	
	comp=Z,4μm,21.0s						
EFI	**East Falkland**	**23.79**	**127**	P	**P**	**04 49 26.9**	**+0.4**
EFI	**East Falkland**	**23.79**	**127**	*i* P	**P**	**04 49 26.2**	**-0.3**
EFI				pmax	pmax		
	comp=Z,87nm,0.9s						
PB05	**IPOC Station P**	**24.42**	**47**	P	**P**	**04 49 31.4**	**-1.4**
PB05				IAmb	IAmb	04 49 42.0	
	comp=Z,75nm,1.4s						
PB05				IAMs_20	IAMs_20	04 56 09.4	
	comp=Z,4μm,22.0s						
PB06	**IPOC Station P**	**24.89**	**48**	IAMs_20	IAMs_20	04 56 33.8	
	comp=Z,3μm,18.0s						
PB03	**IPOC Station P**	**25.31**	**47**	IAMs_20	IAMs_20	04 56 45.0	
	comp=Z,3μm,20.0s						
AF01	**San Pedro de A**	**25.49**	**51**	IAMs_20	IAMs_20	04 56 59.8	
	comp=Z,3μm,20.0s						
PB07	**IPOC Station P**	**25.50**	**46**	P	**P**	**04 49 40.0**	**-2.6**
PB07				IAmb	IAmb	04 49 59.8	
	comp=Z,68nm,1.3s						
PB07				IAMs_20	IAMs_20	04 56 50.0	
	comp=Z,3μm,20.0s						
PB09	**IPOC Station P**	**25.80**	**47**	IAMs_20	IAMs_20	04 57 00.8	
	comp=Z,3μm,20.0s						
PATCX	**Punta Patache**	**26.09**	**44**	IAMs_20	IAMs_20	04 56 56.9	
	comp=Z,4μm,22.0s						
PB01	**IPOC Station P**	**26.27**	**46**	P	**P**	**04 49 47.6**	**-1.9**
PB01				IAmb	IAmb	04 50 01.1	
	comp=Z,40nm,1.1s						
PB01				IAMs_20	IAMs_20	04 57 14.5	
	comp=Z,3μm,20.0s						
TA01	**Diego Aracena**	**26.29**	**44**	IAMs_20	IAMs_20	04 57 02.1	
	comp=Z,4μm,21.0s						
HMBC	**Humberstone**	**26.68**	**44**	P	**P**	**04 49 51.2**	**-2.0**
HMBC				IAMs_20	IAMs_20	04 57 14.5	
	comp=Z,4μm,22.0s						
PB08	**IPOC Station P**	**27.18**	**45**	IAMs_20	IAMs_20	04 57 41.8	
	comp=Z,3μm,21.0s						
PB11	**IPOC Station P**	**27.23**	**44**	IAMs_20	IAMs_20	04 57 31.0	
	comp=Z,4μm,22.0s						
GO01	**Chusmiza**	**27.55**	**45**	IAMs_20	IAMs_20	04 57 52.5	
	comp=Z,3μm,19.0s						
PMSA	**Palmer Station**	**27.69**	**157**	LR	LR	04 57 58.4	
	comp=Z,1μm,20.1s,baz=306,slow=30						
PMSA	**Palmer Station**	**27.69**	**157**	P	**P**	**04 50 02.3**	**+0.5**
PMSA	**Palmer Station**	**27.69**	**157**	*e*P	**P**	**04 50 02.6**	**+0.9**
AP01	**Chacalluta**	**28.04**	**41**	IAMs_20	IAMs_20	04 58 11.6	
	comp=Z,4μm,20.0s						
PB16	**IPOC Station P**	**28.49**	**43**	P	**P**	**04 50 06.9**	**-3.1**
PB16				IAmb	IAmb	04 50 14.6	
	comp=Z,82nm,1.8s						
ESPZ	**Base Esperanza**	**29.17**	**150**	P	**P**	**04 50 13.4**	**-1.6**
ESPZ				IAmb	IAmb	04 50 37.7	
	comp=Z,79nm,2.0s						
CPUP	**Villa Florida**	**30.32**	**71**	P	**P**	**04 50 25.3**	**-0.3**
	comp=Z,2.9nm,1.1s,baz=247,slow=10,SNR=10						
CPUP				LR	LR	05 01 40.7	
	comp=Z,711nm,18.6s,baz=240,slow=35						
	comp=Z,2.9nm,1.1s						
CPUP	**Villa Florida**	**30.32**	**71**	P	**P**	**04 50 24.2**	**-1.3**
LPAZ	**La Paz**	**30.91**	**43**	P	**P**	**04 50 32.7**	**+1.2**
	comp=Z,4.7nm,0.7s,baz=258,slow=2.4,SNR=15						
LPAZ				LR	LR	05 00 18.8	
	comp=Z,2μm,18.4s,baz=198,slow=31						
	comp=Z,4.7nm,0.7s						
LPAZ	**La Paz**	**30.91**	**43**	P	**P**	**04 50 27.9**	**-3.6**
LPAZ				IAmb	IAmb	04 50 41.0	
	comp=Z,47nm,1.6s						
LPAZ	**La Paz**	**30.91**	**43**	*e*P	**P**	**04 50 33.1**	**+1.5**
NNA	**Nana**	**31.16**	**24**	LR	LR	04 59 41.7	
	comp=Z,1μm,20.6s,baz=203,slow=30						
NNA	**Nana**	**31.16**	**24**	*i* P	**P**	**04 50 32.9**	**-0.2**
NNA				pmax	pmax		
	comp=Z,24nm,1.0s						
ITAB	**Concordia**	**33.56**	**77**	P	**P**	**04 50 53.7**	**-0.3**
AMBA	**Amambai (Brazi**	**34.11**	**68**	*e*P	**P**	**04 50 59.5**	**+0.6**
PTGB	**Pitanga**	**35.07**	**74**	*e*P	**P**	**04 51 08.7**	**+1.5**
SIV	**San Ignacio**	**35.09**	**53**	LR	LR	05 03 55.0	
	comp=Z,2μm,21.7s,baz=256,slow=34						
AQDB	**Aquidauana**	**35.25**	**64**	P	**P**	**04 51 07.4**	**-1.3**
ATAH	**Atahualpa**	**35.36**	**19**	LR	LR	05 02 03.2	
	comp=Z,3μm,20.6s,baz=211,slow=30						
RPRD	**Ribas do Rio P**	**36.62**	**66**	*e*P	**P**	**04 51 21.4**	**+0.9**
PTLB	**Pontes e Lacer**	**36.68**	**54**	P	**P**	**04 51 19.4**	**-1.5**
PTLB				IAmb	IAmb	04 51 29.1	
	comp=Z,38nm,1.3s						
PTLB	**Pontes e Lacer**	**36.68**	**54**	*e*P	**P**	**04 51 20.8**	**-0.2**
HOPE	**Hope Point**	**36.99**	**129**	*i* P	**P**	**04 51 21.4**	**-1.8**
PP1B	**Ponte de Pedra**	**37.81**	**62**	*e*P	**P**	**04 51 31.5**	**+0.9**
VILB	**Vilhena**	**38.00**	**51**	P	**P**	**04 51 30.2**	**-2.0**
VILB				IAmb	IAmb	04 51 40.6	
	comp=Z,33nm,1.0s						
VILB	**Vilhena**	**38.00**	**51**	*e*P	**P**	**04 51 32.5**	**+0.3**
C2SB	**Chapadao do Su**	**38.38**	**65**	*e*P	**P**	**04 51 36.7**	**+1.4**
SALV	**Santo Antonio**	**38.51**	**59**	*e*P	**P**	**04 51 36.9**	**+0.4**
ITRB	**Iturama**	**39.47**	**69**	*e*P	**P**	**04 51 46.3**	**+1.7**
RCLB	**Rio Claro- Sao**	**39.76**	**75**	*e*P	**P**	**04 51 47.5**	**+0.5**
VAO	**Valinhos**	**39.82**	**76**	P	**P**	**04 51 46.9**	**-0.6**
VAO				IAmb	IAmb	04 51 51.1	
	comp=Z,90nm,1.7s						
VAO	**Valinhos**	**39.82**	**76**	*e*P	**P**	**04 51 49.0**	**+1.5**
BB19B	**Bebedouro**	**39.89**	**72**	*e*P	**P**	**04 51 50.2**	**+2.2**
PDRB	**Porto dos Gac**	**41.12**	**54**	*e*P	**P**	**04 51 58.4**	**+0.2**
ARAG	**Araguaiana, MT**	**41.22**	**63**	*e*P	**P**	**04 52 00.2**	**+1.2**
RKT	**Rikitea**	**42.07**	**281**	*e*SS	SS	05 01 40.3	+7.8
	comp=Z,14μm,31.2s						
RKT				*e*LR	LR	05 03 33.5	
	comp=Z,6μm,43.5s						
IPMB	**Ipameri, GO**	**42.12**	**69**	*e*P	**P**	**04 52 07.6**	**+1.1**
CLDB	**Colider**	**42.26**	**54**	*e*P	**P**	**04 52 08.2**	**+0.6**
OTAV	**Otavalo**	**42.47**	**16**	P	**P**	**04 52 07.2**	**-2.6**
OTAV	**Otavalo**	**42.47**	**16**	P	**P**	**04 52 07.2**	**-2.6**
OTAV				pmax	pmax		
	comp=Z,15nm,1.1s						
OTAV	**Otavalo**	**42.47**	**16**	*e*P	**P**	**04 52 12.5**	**+2.8**
BSCB	**Bom Sucesso**	**42.65**	**76**	*e*P	**P**	**04 52 13.2**	**+2.4**
BELA	**Belgrano 2**	**42.78**	**165**	P	**P**	**04 52 11.0**	**-0.1**
TEFE	**Tefe**	**43.66**	**37**	*e*P	**P**	**04 52 19.4**	**+0.5**
BDFB	**Brasilia**	**43.85**	**67**	P	**P**	**04 52 20.7**	**+0.1**
	comp=Z,17nm,0.9s,baz=219,slow=7.6,SNR=15						
BDFB				LR	LR	05 10 06.2	
	comp=Z,3μm,18.9s,baz=228,slow=36						
	comp=Z,17nm,0.9s						
BDFB	**Brasilia**	**43.85**	**67**	P	**P**	**04 52 18.6**	**-2.0**
BDFB				IAmb	IAmb	04 52 23.8	
	comp=Z,42nm,1.2s						
SNDB	**Serra Nova Dou**	**44.27**	**60**	*e*P	**P**	**04 52 24.4**	**+0.5**
FLOC	**Florencia**	**44.43**	**20**	P	**P**	**04 52 23.3**	**-1.7**
DIAM	**Diamantina, MG**	**45.16**	**74**	*e*P	**P**	**04 52 32.7**	**+1.6**
NPGB	**Novo Progresso**	**45.55**	**51**	*e*P	**P**	**04 52 34.2**	**+0.2**
MACA	**Manacapuru-AM**	**45.87**	**42**	P	**P**	**04 52 34.4**	**-2.1**
MACA	**Manacapuru-AM**	**45.87**	**42**	*e*P	**P**	**04 52 36.9**	**+0.4**
SJMB	**Sao Joao De Ma**	**46.71**	**76**	*e*P	**P**	**04 52 46.0**	**+2.9**
JANB	**Januaria**	**46.85**	**70**	*e*P	**P**	**04 52 45.4**	**+1.1**
RIB01	**Linhares ES**	**46.91**	**77**	*e*P	**P**	**04 52 46.4**	**+1.7**
ITTB	**Itaituba**	**47.51**	**49**	*e*P	**P**	**04 52 48.6**	**-0.7**
ROSC	**El Rosal**	**47.90**	**20**	LR	LR	05 11 21.8	
	comp=Z,2μm,18.0s,baz=189,slow=34						
SDBA	**SAO DESIDERIO**	**48.26**	**67**	*e*P	**P**	**04 52 57.0**	**+1.7**
VNA3	**Neumayer Olymp**	**48.31**	**155**	⇓P	**P**	**04 52 54.8**	**-0.2**
	comp=Z,19nm,0.8s						
VNA1	**Neumayer--Stat**	**48.85**	**154**	⇓P	**P**	**04 52 59.4**	**+0.4**
	comp=Z,22nm,0.8s						
QSPA	**South Pole Qui**	**48.98**	**180**	P	**P**	**04 53 01.3**	**+1.0**
	comp=Z,4.4nm,0.8s,baz=136,slow=4.4,SNR=9.3						
QSPA				LR	LR	05 10 40.0	
	comp=Z,354nm,20.2s,baz=132,slow=32						
	comp=Z,4.4nm,0.8s						
QSPA	**South Pole Qui**	**48.98**	**180**	P	**P**	**04 53 01.0**	**+0.7**
QSPA				IAmb	IAmb	04 53 18.3	
	comp=Z,30nm,1.6s						
SMTB	**Santa Maria do**	**49.01**	**61**	*e*P	**P**	**04 53 03.0**	**+2.0**
GUA01	**Guaratinga, BA**	**49.08**	**75**	*e*P	**P**	**04 53 04.4**	**+2.9**
VNA2	**Neumayer--Watz**	**49.09**	**154**	⇓P	**P**	**04 53 01.2**	**+0.2**
	comp=Z,14nm,0.6s,baz=264,slow=8.6						
RUSC	**La Rusia**	**49.24**	**22**	P	**P**	**04 52 58.8**	**-4.4**
RUSC				IAmb	IAmb	04 53 13.1	
	comp=Z,17nm,0.9s						
PRPB	**Parauapebas**	**49.61**	**56**	*e*P	**P**	**04 53 06.8**	**+1.2**
CMC01	**Camacan, BA**	**50.08**	**74**	*e*P	**P**	**04 53 10.6**	**+1.4**
SNAA	**Sanae**	**50.40**	**156**	⇓P	**P**	**04 53 09.7**	**-1.2**
	comp=Z,140nm,0.7s						
SNAA	**Sanae**	**50.40**	**156**	P	**P**	**04 53 10.7**	**-0.3**
	comp=Z,5.4nm,0.8s,baz=251,slow=6.8,SNR=16						
SNAA				LR	LR	05 11 26.1	
	comp=Z,399nm,18.2s,baz=264,slow=32						
	comp=Z,5.4nm,0.8s						
SNAA	**Sanae**	**50.40**	**156**	P	**P**	**04 53 10.8**	**-0.2**
SNAA	**Sanae**	**50.40**	**156**	*i* P	**P**	**04 53 09.5**	**-1.4**
SNAA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BOAV	**Boa Vista**	**50.77**	**39**	P	**P**	**04 53 13.4**	**-0.9**
BOAV				IAmb	IAmb	04 53 16.6	
	comp=Z,25nm,1.3s						
BOAV	**Boa Vista**	**50.77**	**39**	*e*P	**P**	**04 53 14.7**	**+0.4**
HDC	**Heredia**	**51.23**	**7**	IAMs_20	IAMs_20	05 09 44.3	
	comp=Z,952nm,19.0s						
JTS	**Las Juntas de**	**51.45**	**6**	LR	LR	05 09 52.4	
	comp=Z,1μm,19.6s,baz=181,slow=30						
JTS	**Las Juntas de**	**51.45**	**6**	IAMs_20	IAMs_20	05 09 41.2	
	comp=Z,1μm,20.0s						
JTS	**Las Juntas de**	**51.45**	**6**	*i* P	**P**	**04 53 18.5**	**-0.8**
JTS				pmax	pmax		
	comp=Z,14nm,1.9s						
TROLL	**Troll, Antarti**	**51.94**	**157**	⇓P	**P**	**04 53 22.8**	**+0.2**
	comp=Z,679nm,0.7s						
SDV	**Santo Domingo**	**52.79**	**24**	LR	LR	05 13 36.8	
	comp=Z,1μm,21.3s,baz=194,slow=33						
SDV	**Santo Domingo**	**52.79**	**24**	P	**P**	**04 53 28.1**	**-1.4**
SDV				IAMs_20	IAMs_20	05 13 25.9	
	comp=Z,1μm,20.0s						
SDV	**Santo Domingo**	**52.79**	**24**	*e*P	**P**	**04 53 29.9**	**+0.3**
TBI	**Tubuai**	**52.80**	**270**	*e*S	**S**	**05 00 58.5**	**+0.6**
	comp=Z,2μm,37.0s						
TBI				*e*SS	**SS**	**05 04 36.0**	**-0.4**
	comp=Z,426nm,20.0s						
TBI				*e*LQ	LQ	05 06 31.5	
	comp=Z,4μm,31.0s						
TBI				*e*LR	LR	05 08 23.1	
	comp=Z,4μm,26.5s						
TBI				*e*LR	LR	05 08 39.6	
	comp=Z,852nm,26.2s						
SBA	**Scott Base**	**52.86**	**195**	P	**P**	**04 53 30.1**	**+0.9**
SBA	**Scott Base**	**52.86**	**195**	P	**P**	**04 53 30.1**	**+0.9**
SBA				pmax	pmax		
	comp=Z,110nm,1.9s						
VNDA	**Vanda**	**53.96**	**195**	P	**P**	**04 53 37.1**	**-0.1**
	comp=Z,3.7nm,1.0s,baz=119,slow=6.8,SNR=6.3						
VNDA				LR	LR	05 11 39.4	
	comp=Z,566nm,21.7s,baz=112,slow=31						
	comp=Z,3.7nm,1.0s						
VNDA	**Vanda**	**53.96**	**195**	P	**P**	**04 53 37.9**	**+0.6**
VNDA	**Vanda**	**53.96**	**195**	P	**P**	**04 53 37.9**	**+0.6**
VNDA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TAOE	**Nuku Hiva Isla**	**55.12**	**291**	*e*S	**S**	**05 01 29.2**	**-0.5**
	comp=Z,424nm,26.3s						
TAOE				*e*LR	LR	05 09 47.1	
	comp=Z,933nm,25.9s						
NVL	**N'lazarevskaya**	**55.17**	**157**	*e*P	**P**	**04 53 46.2**	**+0.1**
NVL				*e*		04 55 54.0	
NVL				*e*PPP	PPP	04 57 02.1	
NVL				*e*S	**S**	**05 01 30.2**	**+1.4**
NVL				*e*SS	**SS**	**05 05 15.7**	**+3.6**
NVL				pmax	pmax		
	comp=Z,22nm,1.5s						
NVL				MLR	MLR		
	comp=Z,747nm,22.0s						
NBTA	**Tacaratu-PE**	**55.34**	**70**	*e*P	**P**	**04 53 49.0**	**+0.9**
APG	**El Apazote**	**55.98**	**359**	P	**P**	**04 53 55.8**	**+3.0**
	comp=Z,0.3nm,0.5s,baz=207,slow=14,SNR=4.5						
APG				LR	LR	05 12 12.8	
	comp=Z,23nm,18.6s,baz=204,slow=30						
PPT2	**Papeete2**	**56.30**	**276**	*e*S	**S**	**05 01 47.0**	**+1.7**
	comp=Z,242nm,25.2s						
PPT2				*e*SS	**SS**	**05 05 29.2**	**-2.8**
	comp=Z,330nm,26.2s						
PPT2				*e*LQ	LQ	05 08 00.6	
	comp=Z,775nm,29.5s						
PPT2				*e*LR	LR	05 10 11.1	
	comp=Z,450nm,37.2s						
PPT2				*e*LR	LR	05 10 18.3	
	comp=Z,797nm,37.5s						
PPT	**Papeete**	**56.31**	**276**	LR	LR	05 11 32.7	
	comp=Z,180nm,21.2s,baz=125,slow=29						
NBPS	**Pedro II - PI**	**56.39**	**63**	*e*P	**P**	**04 53 57.7**	**+2.0**
MDP	**Montagnes des**	**57.06**	**45**	LR	LR	05 16 12.5	
	comp=Z,1μm,21.0s,baz=216,slow=34						
ELIB	**Princess Elisa**	**57.77**	**160**	*d*P	**P**	**04 54 04.7**	**-0.1**
	comp=Z,7.4nm,0.9s						
NBPA	**Parau_RN**	**58.37**	**68**	*e*P	**P**	**04 54 13.0**	**+3.4**
NBPV	**Pedro Velho**	**59.18**	**70**	*e*P	**P**	**04 54 16.6**	**+1.4**
RAR	**Rarotonga**	**61.80**	**266**	LR	LR	05 15 08.1	
	comp=Z,112nm,21.9s,baz=128,slow=30						
SDDR	**Presa de Saban**	**62.24**	**19**	IAMs_20	IAMs_20	05 17 57.5	
	comp=Z,704nm,21.0s						
SJG	**San Juan**	**62.87**	**25**	LR	LR	05 20 55.1	
	comp=Z,629nm,18.6s,baz=205,slow=35						
SJG	**San Juan**	**62.87**	**25**	IAMs_20	IAMs_20	05 20 25.0	
	comp=Z,806nm,20.0s						
SYO	**Syowa Base**	**63.78**	**162**	⇓*e*P	**P**	**04 54 43.2**	**-2.3**
SYO	**Syowa Base**	**63.78**	**162**	⇓*e*pP	pP	04 54 46.6	-1.0
LPIG	**La Paz**	**67.86**	**339**	LR	LR	05 17 54.1	
	comp=Z,144nm,19.2s,baz=168,slow=30						
URZ	**Urewera**	**68.36**	**238**	LR	LR	05 17 27.7	
	comp=Z,833nm,19.5s,baz=118,slow=29						
MAW	**Mawson**	**69.45**	**169**	P	**P**	**04 55 22.0**	**+0.3**
	comp=Z,4.9nm,0.9s,baz=250,slow=2.9,SNR=4.8						
MAW				LR	LR	05 24 15.0	
	comp=Z,445nm,19.6s,baz=198,slow=35						
	comp=Z,4.9nm,0.9s						
HNDO	**Hondo**	**71.02**	**351**		**P**	**04 55 31.8**	**+0.1**
HNDO				IAmb	IAmb	04 55 58.2	
	comp=Z,9.3nm,0.8s						
TXAR	**Lajitas Array**	**71.46**	**347**	P	**P**	**04 55 36.5**	**+1.9**
	comp=Z,1.9nm,0.8s,baz=163,slow=6.5,SNR=10						
	comp=Z,1.9nm,0.8s						
TXAR	**Lajitas Array**	**71.46**	**347**	P	**P**	**04 55 34.9**	**+0.3**
TX31	**Lajitas Ar. Si**	**71.46**	**347**	IAmb	IAmb	04 55 58.3	
	comp=Z,16nm,1.2s						
CASY	**Casey**	**71.70**	**188**	IAMs_20	IAMs_20	05 23 04.9	
	comp=Z,508nm,18.0s						
OZNA	**Ozona**	**72.63**	**349**	IAmb	IAmb	04 55 52.0	
	comp=Z,21nm,1.2s						
SGCY	**Sterling City**	**73.60**	**350**	IAmb	IAmb	04 56 04.0	
	comp=Z,15nm,1.2s						
ABTX	**Abilene, Hawle**	**74.12**	**351**	IAmb	IAmb	04 55 58.4	
	comp=Z,15nm,1.2s						
PLPT	**Palo Pinto**	**74.16**	**352**	P	**P**	**04 55 50.4**	**+0.1**
PLPT				IAmb	IAmb	04 56 06.6	
	comp=Z,17nm,1.2s						
APMT	**Aspermont**	**74.86**	**351**	P	**P**	**04 55 54.1**	**-0.4**
MSTX	**Muleshoe**	**75.86**	**349**	IAmb	IAmb	04 56 11.4	
	comp=Z,11nm,0.8s						
CPCT	**Cooper Cave**	**76.46**	**4**	IAmb	IAmb	04 56 14.2	
	comp=Z,11nm,0.9s						
AMTX	**Amarillo**	**76.60**	**350**	IAmb	IAmb	04 56 15.2	
	comp=Z,12nm,0.9s						
SMWD	**Samnorwood**	**76.64**	**351**	IAmb	IAmb	04 56 18.1	

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       comp=Z,13nm,1.2s
TKL    Tuckaleechee C   76.71   5   LR        LR        05 25 12.2
       comp=Z,360nm,18.1s,baz=180,slow=32
ANMO   Albuquerque      77.43 346   P         P         04 56 11.2 +1.9
       comp=Z,3.5nm,1.0s,baz=153,slow=4.6,SNR=7.6
       comp=Z,3.5nm,1.0s
ANMO   Albuquerque      77.43 346             P         04 56 09.5 +0.2
U49A   Red Boiling Sp   77.46   3   P         P         04 56 09.7 +0.6
U49A                                IAmb      IAmb      04 56 20.1
       comp=Z,15nm,0.8s
T35A   Sooner Cattle    78.06 354   IAmb      IAmb      04 56 24.9
       comp=Z,24nm,1.3s
PFO    Pinyon Flats O   78.56 337   LR        LR        05 23 44.9
       comp=Z,189nm,19.3s,baz=155,slow=30
CCM    Cathedral Cave   78.95 359             P         04 56 17.4 +0.1
CCM                                 IAmb      IAmb      04 56 28.4
       comp=Z,14nm,0.8s
CCM    Cathedral Cave   78.95 359   P         P         04 56 17.4 +0.1
CCM                                 pmax      pmax
       comp=Z,14nm,0.8s
MVCO   Mesa Verde       80.02 345   IAmb      IAmb      04 57 04.3
       comp=Z,41nm,1.9s
MSVF   Nonsavu          80.40 255 i P         P         04 56 25.1  -0.9
MSVF                                pmax      pmax
       comp=Z,8.0nm,1.1s
P38A   Dawn             80.58 357   IAmb      IAmb      04 56 36.8
       comp=Z,9.6nm,0.7s
WSHM   Spangler Hills   80.71 337   IAMs_20   IAMs_20   05 25 40.5
       comp=Z,563nm,21.0s
P52A   Corning          80.78   6   P         P         04 56 28.1 +0.8
PV18   Skein Mesa, Pa   81.10 345   IAmb      IAmb      04 56 39.8
       comp=Z,19nm,1.1s
O48B   Farmland         81.22   3   P         P         04 56 30.1 +0.5
O48B                                IAmb      IAmb      04 56 33.0
       comp=Z,20nm,1.0s
Q16A   Castle Valley    82.23 343   IAmb      IAmb      04 56 49.2
       comp=Z,21nm,1.3s
SRU    San Rafael Swe   82.27 344   P         P         04 56 36.9 +1.5
SRU                                 IAmb      IAmb      04 56 47.4
       comp=Z,14nm,1.4s
SRU    San Rafael Swe   82.27 344   P         P         04 56 36.9 +1.5
SRU                                 pmax      pmax
       comp=Z,14nm,1.4s
P18A   Preston Nutter   82.71 344   IAmb      IAmb      04 56 50.8
       comp=Z,10nm,1.2s
SPR3   Spring Creek 3   83.05 341   IAmb      IAmb      04 57 19.3
       comp=Z,27nm,1.9s
NV11   Mina Array Sit   83.54 338   IAmb      IAmb      04 56 47.5
       comp=Z,10.0nm,1.3s
NVAR   Mina Array Bea   83.58 338   P         P         04 56 44.9 +2.6
       comp=Z,1.9nm,0.7s,baz=179,slow=5.9,SNR=6.9
NVAR                                LR        LR        05 28 09.5
       comp=Z,108nm,18.7s,baz=154,slow=32
       comp=Z,1.9nm,0.7s
BSUT   Blindstream Ca   83.69 344   IAmb      IAmb      04 56 55.9
       comp=Z,14nm,1.2s
DUG    Dugway, Tooele   83.82 342   IAmb      IAmb      04 56 56.6
       comp=Z,16nm,1.1s
HWUT   Hardware Ranch   84.89 343   P         P         04 56 49.5 +0.7
HWUT                                IAmb      IAmb      04 57 23.0
       comp=Z,13nm,1.4s
ELK    Elko             84.92 341   P         P         04 56 51.5 +2.5
       comp=Z,0.9nm,0.9s,baz=189,slow=10,SNR=3.7
ELK                                 LR        LR        05 27 37.4
       comp=Z,180nm,19.7s,baz=146,slow=31
       comp=Z,0.9nm,0.9s
K22A   Casper           84.94 347   P         P         04 56 49.3 +0.3
PDAR   Pinedale Array   85.59 345   P         P         04 56 54.6 +2.3
       comp=Z,3.7nm,1.0s,baz=180,slow=8.3,SNR=14
       comp=Z,3.7nm,1.0s
PDAR   Pinedale Array   85.59 345   P         P         04 56 53.6 +1.2
DZM    Mont Dzumac      85.74 244 eLR         LR        05 23 52.9
       comp=Z,1µm,28.6s
RSSD   Black Hills      86.00 349   P         P         04 56 55.0 +0.7
RSSD                                IAmb      IAmb      04 57 00.5
       comp=Z,12nm,1.1s
RSSD   Black Hills      86.00 349   P         P         04 56 55.0 +0.7
RSSD                                pmax      pmax
       comp=Z,12nm,1.2s
SADO   Sadowa           86.13   7   LR        LR        05 32 05.0
       comp=Z,308nm,18.3s,baz=184,slow=33
YHH    Holmes Hill      87.79 345             P         04 57 04.2 +1.1
BOSA   Boshof           87.91 127   P         P         04 57 02.8  -1.3
       comp=Z,5.0nm,0.8s,baz=159,slow=5.5,SNR=6.0
BOSA                                LR        LR        05 30 38.8
       comp=Z,295nm,19.5s,baz=212,slow=32
       comp=Z,5.0nm,0.8s
BOSA   Boshof           87.91 127   P         P         04 57 03.2  -1.0
BOSA   Boshof           87.91 127   P         P         04 57 03.2  -1.0
BOSA                                pmax      pmax
       comp=Z,43nm,1.7s
YBH    Yreka Blue Hor   87.94 336   LR        LR        05 28 58.4
       comp=Z,12nm,18.9s,baz=143,slow=30
BOZ    Bozeman (W)      88.72 345   P         P         04 57 08.2 +0.9
BOZ    Bozeman (W)      88.72 345   P         P         04 57 08.2 +0.9
BOZ                                 pmax      pmax
       comp=Z,12nm,0.8s
TSUM   Tsumeb           89.62 115   LR        LR        05 30 48.4
       comp=Z,147nm,21.9s,baz=228,slow=31
DBIC   Dimbokro         90.26  81   P         P         04 57 15.6 +0.5
       comp=Z,3.9nm,1.0s,baz=180,slow=1.0,SNR=3.8
DBIC                                LR        LR        05 37 01.2
       comp=Z,236nm,18.6s,baz=250,slow=35
       comp=Z,3.9nm,1.0s
DBIC   Dimbokro         90.26  81   IAmb      IAmb      04 57 43.0
       comp=Z,20nm,1.5s
DBIC   Dimbokro         90.26  81   P         P         04 57 15.6 +0.5
DBIC                                pmax      pmax
       comp=Z,20nm,1.5s
GRTLG  Ghanzi           90.54 119   P         P         04 57 15.6  -1.0
GRTLG                               IAmb      IAmb      04 57 19.7
       comp=Z,13nm,1.0s
LBTB   Lobatse          90.73 125   LR        LR        05 31 46.2
       comp=Z,194nm,20.0s,baz=220,slow=32
LBTB   Lobatse          90.73 125   P         P         04 57 16.2  -1.1
LBTB   Lobatse          90.73 125   P         P         04 57 16.3  -1.1
LBTB                                pmax      pmax
       comp=Z,114nm,2.0s
ULM    Lac du Bonnet    91.30 356   LR        LR        05 33 01.9
       comp=Z,255nm,21.7s,baz=172,slow=32
LPHEP  Lephephe         92.10 124             P         04 57 23.1  -0.7
NEW    Newport          92.45 342   LR        LR        05 31 35.0
       comp=Z,138nm,19.6s,baz=146,slow=31
STKA   Stephens Creek   93.36 221   LR        LR        05 32 30.8
       comp=Z,296nm,19.1s,baz=172,slow=31
STKA   Stephens Creek   93.36 221 i P         P         04 57 28.9  -0.4
BBOO   Buckleboo        95.23 217   P         P         04 57 38.4 +0.5
BBOO                                IAmb      IAmb      05 01 26.4
       comp=Z,18nm,1.8s
MATP   Matopo           95.91 124   LR        LR        05 34 50.8
       comp=Z,297nm,20.7s,baz=217,slow=32
SCHQ   Schefferville    97.64  13   LR        LR        05 40 54.2
       comp=Z,208nm,18.2s,baz=216,slow=35
LODK   Lodwar          117.91 112   IAMs_20   IAMs_20   05 47 14.5
       comp=Z,326nm,20.0s
FAKI   Fak Fak         121.97 231   IAMs_20   IAMs_20   05 49 32.2
       comp=Z,284nm,19.0s
CLL    Collm           127.80  51 eSKKSac     SKKSac    05 12 19.0 +0.7
CLL                               ePPS        PPS       05 16 57.0
CLL                               ex          x         05 18 45.0
CLL                               eSS         SS        05 22 18.0   -16
CLL                               eSSS        SSS       05 27 18.0
CLL                                 AMS       AMS       05 57 00.0
       comp=Z,300nm,18.7s
ATD    Arta Tunnel     128.84 111   IAMs_20   IAMs_20   05 54 32.5
       comp=Z,242nm,19.0s
NOA    NORSAR Array B  129.89  39   PKP       PKiKP     05 03 25.8 +2.3
       comp=Z,1.4nm,0.9s,baz=260,slow=2.0,SNR=3.3
BILL   Bilibino        132.75 330 i PKIKP     PKPdf     05 03 28.1 +0.3
BILL                                pmax      pmax
       comp=Z,1.0nm,1.1s
RNPP8  Varash          135.50  54   PKP       PKPdf     05 03 32.7  -0.8
SEY    Seymchan        138.35 323 i PKIKP     PKPdf     05 03 39.1 +0.7
PUL    Pulkovo         139.08  42 i PKIKP     PKPdf     05 03 39.6  -0.2
PUL                                 pmax      pmax
       comp=Z,31nm,0.9s
ARPR   Arapgir-MALATY  140.50  75   IAMs_20   IAMs_20   06 03 53.8
       comp=Z,202nm,19.0s
OBN    Obninsk         142.37  50 i PKIKP     PKPdf     05 03 46.4 +0.5
OBN                                 pmax      pmax
       comp=Z,6.0nm,0.9s
KULM   Kulim           143.08 197   IAMs_20   IAMs_20   06 00 41.2
       comp=Z,220nm,20.0s
KLMR   Klimovskoe      143.57  40 ePKIKP      PKPdf     05 03 46.7  -1.2
KLMR                                pmax      pmax
       comp=Z,32nm,1.5s
LPSR   Galich'ya Gora  143.68  54 ePKHKP      PKPpre    05 03 44.2
LPSR                                pmax      pmax
       comp=Z,12nm,0.9s
VSR    Storozhevoye    143.73  56 ePKHKP      PKPpre    05 03 44.0
VSR                                 pmax      pmax
       comp=Z,7.0nm,1.1s
VORD   Divnogorie      143.79  57 ePKHKP      PKPpre    05 03 43.5
VORD                                pmax      pmax
       comp=Z,9.0nm,0.9s
TIXI   Tiksi           144.15 340             PKPdf     05 03 47.5  -1.1
TIXI   Tiksi           144.15 340 i PKIKP     PKPdf     05 03 47.9  -0.7
NEUR   Neytrino        144.87  70 i PKIKP     PKPdf     05 03 50.3  -0.7
SHA1   Shidzhatmaz     144.94  70 i PKIKP     PKPdf     05 03 50.5  -0.6
KIV    Kislovodsk      145.01  69 i PKIKP     PKPab     05 03 48.9  -1.6
KIV                                 pmax      pmax
       comp=Z,9.0nm,1.1s
KBZ    Khabaz          145.11  70   PKPbc     PKiKP     05 03 52.6  -2.3
       comp=Z,2.3nm,0.9s,baz=242,slow=3.8,SNR=5.2
KBZ    Khabaz          145.11  70 i PKIKP     PKPdf     05 03 50.8  -0.3
VRH    Novokhopyorsk   145.34  56 ePKP2       PKPbc     05 03 49.9  -1.2
VRH                                 pmax      pmax
       comp=Z,10.0nm,0.9s
GOF    Gofitskoye      145.49  67ceePKIKP     PKPab     05 03 52.8 +0.7
AKT    Akhty           148.06  75 ePKP2       PKPab     05 04 03.7 +1.4
YAK    Yakutsk         148.79 325 ePKP2       PKPbc     05 04 00.1  -0.4
YAK                               e                     05 07 36.7
YAK                               eSS         SS        05 26 45.1 +3.9
YAK                                 pmax      pmax
       comp=Z,19nm,1.1s
YAK                                 pmax      pmax
       comp=N,8.0nm,1.7s
YAK                                 pmax      pmax
       comp=E,5.0nm,1.1s
YAK                                 pmax      pmax
       comp=Z,162nm,4.2s
YAK                                 pmax      pmax
       comp=N,109nm,2.7s
YAK                                 pmax      pmax
       comp=E,152nm,3.3s
MDJ    Mudanjiang      151.45 290   PKPbc     PKPdf     05 04 03.3 +1.9
QIZ    Qiongzhong      152.42 222   PKPbc     PKPdf     05 04 03.3  -0.4
QIZ                                 PP        PP        05 07 54.8 +2.4
QIZ                                 LR        LR
       comp=E,100nm,25.5s
QIZ                                 LR        LR
       comp=E,140nm,27.5s
HYB    Hyderabad       154.08 153 ePKPdf      PKPdf     05 04 06.1   0.0
HYB                               ePKiKP      PKiKP     05 04 14.6 +0.3
ARTI   Arti            154.24  43 i PKIKP     PKiKP     05 04 13.2  -0.2
ARTI                                                    05 08 01.9
ARTI                                SS        SS        05 27 44.3 +2.4
NJ2    Nanjing         155.64 257 ePKP        PKPdf     05 04 08.5 +0.7
CMAR   Chiang Mai Arr  156.19 200   PKP       PKPdf     05 04 08.5  -0.5
       comp=E,0.6nm,0.3s,baz=119,slow=1.5,SNR=4.5
CMAR   Chiang Mai Arr  156.19 200             PKPdf     05 04 08.0  -1.0
AB31   Akbulak array   157.10  59             PKPdf     05 04 08.8  -0.3
ABKAR  Akbulak array   157.10  59             PKPdf     05 04 08.6  -0.6
WHN    Wuhan           158.06 248   PKP       PKPdf     05 04 09.6  -1.4
GYA    Guiyang         160.16 227 ⇑PKP        PKPdf     05 04 13.4  -0.4
GYA                                 PP        PP        05 08 39.4 +3.8
GYA                                 SS        SS        05 28 45.9 +0.3
GYA                                 LR        LR
       comp=E,120nm,3.8s
GYA                                 LR        LR
       comp=E,150nm,3.8s
GYA                                 LR        LR
       comp=E,74nm,7.1s
BVAR   Borovoye Array  161.97  42   PKPab     PKPab     05 05 01.0 +0.1
       comp=E,0.9nm,0.6s,baz=318,slow=5.8,SNR=4.1
BVAR   Borovoye Array  161.97  42   PKP2      PKPab     05 05 01.0 +0.1
PZH    PanZhiHua       162.65 215   PKP       PKPdf     05 04 15.8  -0.6
HHC    Hu-ho-hao-te    164.18 275 ePKP        PKPdf     05 04 13.8  -3.6
ZALV   Zalesovo Beam   166.72  15   PKP       PKPdf     05 04 18.8   0.0
       comp=E,0.5nm,0.5s,baz=225,slow=1.2,SNR=4.0
ZALV   Zalesovo Beam   166.72  15             PKPdf     05 04 19.2 +0.4
ZALV   Zalesovo Beam   166.72  15   PKIKP     PKPdf     05 04 19.2 +0.4
SONM   Songino Array   166.97 306   PKPab     PKPab     05 05 23.2  -0.1
       comp=E,0.6nm,0.6s,baz=20,slow=4.6,SNR=3.8
KURK   Kurchatov       167.40  37             PKPdf     05 04 19.0  -0.5
KURK   Kurchatov       167.40  37   PKIKP     PKPdf     05 04 20.4 +0.9
KURK                                                    05 05 25.2
KURBB  Kurchatov Arra  167.43  38   PKP       PKPdf     05 04 20.4 +1.0
       comp=E,0.4nm,0.7s,baz=329,slow=1.0,SNR=2.7
KURBB                               PKPab     PKPab     05 05 25.2 +0.3
       comp=E,0.7nm,0.8s,baz=304,slow=4.7,SNR=4.9
KSH    Kashi           168.70  94   PKP       PKPdf     05 04 19.8  -1.1
WMQ    Urumqi          176.65  39   PKP       PKPdf     05 04 22.4  -1.7
WMQ                                 PP        PP        05 10 02.3 +3.2
WMQ                                 LR        LR
       comp=E,280nm,24.0s
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*IDC **18** 04:46:08.3±1.7, 22°.57S×171°.57E, h0km, mb4.3/5, mbtmp4.4/6, ML4.3/1, MS4.1/1, Error ellipse: s-maj=48.4km s-min=29.7km az=38.0*

*NEIC **18** 04:46:12.4±1.8, 22°.82S±0°.10×171°.28E±0°.07, h10km±1km, mb4.4/15, Error ellipse: s-maj=16.9km s-min=11.2km az=9.0*

*NOU **18** 04:46:21.6, 22°.38S×170°.56E, h0km, MLv4.8/12, Southeast of Loyalty Islands*

ISC 18 04:46:11.5±0.7**, 22°.87S**±0°.08×**171°.31E**±0°.08**, h10**km**, n48, σ1s.02**/42**, mb4.5**/15**, 1C-4D, Southeast of Loyalty Islands**

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Code   Station Name       Δ°   AZ°   Phase ID            Time       Res
                                     Op        ISC       h  m  s    ISC
MARNC  Mare, Loyalty      3.34 294   P         Pn        04 47 03.1  -0.7
PINNC  Pines Island,      3.58 273   P         Pn        04 47 08.8 +1.7
INH    Isangel            3.82 330   P         Pn        04 47 10.6 +0.2
OUENC  Ouen Island, N     4.16 275   P         Pn        04 47 16.4 +1.4
YATNC  Mamie plateau,     4.17 280   P         Pn        04 47 15.3 +0.1
ONTNC  Ouen Toro          4.53 276   P         Pn        04 47 21.5 +1.4
DZM    Mont Dzumac        4.57 279   Pn        Pn        04 47 21.8 +1.0
       12nm,0.3s,baz=80,slow=7.2,SNR=369
DZM                                  Sn        Sn        04 48 13.7  -0.4
       9.6nm,0.3s,baz=280,slow=22,SNR=6.6
       33nm,0.3s
DZM    Mont Dzumac        4.57 279   P         Pn        04 47 21.7 +0.8
RTV    Rentapao           5.74 331   P         Pn        04 47 38.4 +1.7
       724nm,0.8s
DVP    Devils Point       5.90 330   P         Pn        04 47 40.6 +1.6
       1µm,1.1s
MSVF   Nonsavu            8.13  52             Pn        04 48 10.8 +1.1
SANVU  Saraoutou          8.35 332   Pn        Pn        04 48 11.7  -0.9
TCW    Tory Channel      18.45 173   P         P         04 50 28.1 +0.8
EIDS   Eidsvold          18.63 258   P         Pn        04 50 29.7 +0.1
EIDS                                 IAmb      IAmb      04 50 36.8
       comp=Z,16nm,1.1s
ARMA   Armidale          19.11 243   P         Pn        04 50 34.9  -0.7
CTAO   Charters Tower    23.47 272   P         P         04 51 19.4  -2.1
CTAO                                 IAmb      IAmb      04 51 52.6
       comp=Z,14nm,1.2s
COEN   Coen              28.09 283             P         04 52 04.3 +0.7
BBOO   Buckleboo         32.58 245   P         P         04 52 43.8 +0.6
BBOO                                 IAmb      IAmb      04 52 45.7
       comp=Z,8.1nm,1.1s
AS31   Alice Springs     34.31 261             P         04 52 58.4   0.0
ASAR   Alice Springs     34.31 261   P         P         04 52 58.7 +0.3
       comp=Z,4.9nm,0.9s,baz=85,slow=8.8,SNR=30
       comp=Z,4.9nm,0.9s
ASAR   Alice Springs     34.31 261             P         04 52 57.8  -0.6
WR8    Warramunga Arr    34.34 268   P         P         04 52 57.3  -1.3
WR8                                  IAmb      IAmb      04 53 16.9
       comp=Z,4.2nm,1.1s
WB0    Warramunga Arr    34.48 268   P         P         04 52 58.3  -1.6
WB0                                  IAmb      IAmb      04 53 00.2
       comp=Z,13nm,1.4s
WRA    Warramunga Arr    34.49 268   P         P         04 52 59.5  -0.5
       comp=Z,1.5nm,0.7s,baz=96,slow=8.1,SNR=6.2
       comp=Z,1.5nm,0.7s
WRA    Warramunga Arr    34.49 268   P         P         04 52 59.0  -0.9
MTN    Manton Dam        39.41 278   P         P         04 53 41.5  -0.3
MTN                                  IAmb      IAmb      04 54 11.8
       comp=Z,12nm,1.2s
H11S2  WAKE ISLAND Hy    41.36 353   T         T         05 37 39.2
       baz=172,slow=76,SNR=9.6
H11S3  WAKE ISLAND Hy    41.36 353   T         T         05 37 36.9
       baz=172,slow=76,SNR=7.1
H11S1  WAKE ISLAND Hy    41.38 353   T         T         05 37 39.2
       baz=172,slow=76,SNR=9.2
H11N1  WAKE ISLAND Hy    42.55 354   T         T         05 39 07.0
       baz=172,slow=76,SNR=9.4
H11N3  WAKE ISLAND Hy    42.55 354   T         T         05 39 08.1
       baz=172,slow=76,SNR=7.2
H11N2  WAKE ISLAND Hy    42.56 354   T         T         05 39 07.6
       baz=172,slow=76,SNR=11
FITZ   Fitzroy Crossi    42.92 268   P         P         04 54 10.4  -0.3
FITZ                                 IAmb      IAmb      04 54 12.4
       comp=Z,3.1nm,0.8s
MBWA   Marble Bar        47.65 262   P         P         04 54 48.5 +0.2
NWAO   Narrogin (SRO)    48.38 246   LR        LR        05 13 39.6
       comp=Z,193nm,21.0s,baz=226,slow=34
CASY   Casey             57.61 205   P         P         04 56 01.0  -0.4
CASY                                 IAmb      IAmb      04 56 02.1
       comp=Z,8.6nm,1.4s
QSPA   South Pole Qui    67.20 180   P         P         04 57 06.0 +0.3
       comp=Z,5.0nm,0.8s,baz=24,slow=2.0,SNR=7.7
       comp=Z,5.0nm,0.8s
QSPA   South Pole Qui    67.20 180   P         P         04 57 05.3  -0.4
MAW    Mawson            75.81 202   P         P         04 57 58.2 +0.9
       comp=Z,5.4nm,0.9s,baz=105,slow=9.2,SNR=4.1
       comp=Z,5.4nm,0.9s
PETK   Petropavlovsk-    76.58 352   P         P         04 58 01.5  -0.4
CMAR   Chiang Mai Arr    81.75 294   P         P         04 58 31.9 +1.0
       comp=Z,0.7nm,0.3s,baz=134,slow=4.2,SNR=9.1
       comp=Z,0.7nm,0.3s
CMAR   Chiang Mai Arr    81.75 294   P         P         04 58 31.2 +0.3
TROLL  Troll, Antarti    85.05 183 ⇓P          P         04 58 45.9  -1.3
       comp=Z,253nm,0.7s
SNAA   Sanae             85.62 182 ⇓P          P         04 58 48.5  -1.5
       comp=Z,35nm,0.6s
VNA3   Neumayer Olymp    86.14 180 ⇓P          P         04 58 50.8  -1.7
       comp=Z,5.3nm,0.6s
VNA2   Neumayer--Watz    86.45 180 ⇓P          P         04 58 52.9  -1.1
       comp=Z,3.9nm,0.7s,baz=170,slow=5.5
VNA1   Neumayer--Stat    86.73 180 ⇑P          P         04 58 54.2  -1.1
       comp=Z,4.0nm,0.8s
GERES  GERESS Array B   148.59 331   PKPbc     PKPdf     05 05 55.0  -0.1
       comp=Z,0.6nm,0.5s,baz=45,slow=2.6,SNR=5.7
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*SDD **18** 04:51:28.5±2.1, 20°.09N×70°.54W, h20km±22km, MD3.7, ML2.6, MW3.2, Presumed earthquake*

*OSPL **18** 04:51:30.4±1.6, 19°.93N×70°.45W, h0km±8km, ML2.5, Presumed earthquake*

ISC 18 04:51:28.9±1.3**, 19°.99N**±0°.05×**70°.49W**±0°.04**, h10**km±12km**, n16, σ0s.93**/24**, 1C-3D, Dominican Republic region**

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Code   Station Name       Δ°   AZ°   Phase ID            Time       Res
                                     Op        ISC       h  m  s    ISC
SODR   Sosua Marina B     0.25 199⇓ePg         Pg        04 51 34.4 +0.3
SODR                              ⇓eSg         Sb        04 51 40.0   0.0
SODR                                 IAML                04 51 40.1
       comp=N,2µm,0.6s
LUDR   Luperon            0.45 257 ePg         Pg        04 51 38.2 +0.5
SC01   Santiago de lo     0.61 202 ePg         Pg        04 51 40.8 +0.1
SC01                                 IAML                04 52 02.1
       comp=N,182nm,0.5s
SC01   Santiago de lo     0.61 202 i P         Pg        04 51 40.9 +0.3
LOPP1  Punta Rusia, P     0.68 259 i P         Pg        04 51 42.8 +0.6
LOPP1                              eS          Sb        04 51 52.9 +0.4
LOPP1                                IAML                04 52 00.4
       comp=Z,105nm,1.4s
SFDR   San Fco. de Ma     0.74 162 ePg         Pg        04 51 43.3 +0.1
SFDR                                 IAML                04 51 56.3
       comp=N,421nm,0.1s
NAG1   Nagua              0.86 137 ePg         Pg        04 51 44.9  -0.7
NADR   Nagua              0.87 137 ePg         Pg        04 51 45.5  -0.2
NADR                               eSg         Sb        04 51 59.8 +2.0
NADR                                 IAML                04 52 04.5
       comp=N,275nm,0.2s
SDDR   Presa de Saban     1.26 217⇑ePg         Pn        04 51 50.4  -2.1
SDDR                              ⇓eSg         Sb        04 52 07.6  -1.4
SDDR                                 IAML                04 52 11.6
       comp=N,32nm,0.5s
SDDR   Presa de Saban     1.26 217 i P         Pn        04 51 51.4  -1.1
SDDR                               eS          Sb        04 52 08.1  -0.9
SDDR                                 IAML                04 52 10.5
       comp=Z,38nm,1.2s
HATOM  Hato Mayor del     1.59 139 ePg         Pn        04 51 57.1   0.0
HATOM                                IAML                04 52 20.3
       comp=N,49nm,0.2s
GRTK   Grand Turk         1.63 338 i P         Pb        04 51 58.8  -0.2
GRTK                               eS          Sg        04 52 20.8  -0.5
GRTK                                 IAML                04 52 24.5
       comp=Z,82nm,1.8s
LONE3  El Aguacate, B     1.66 214 i P         Pn        04 51 57.9  -0.3
LONE3                              eS          Sn        04 52 20.0 +0.4
LONE3                                IAML                04 52 23.1
       comp=Z,32nm,0.7s
LODU1  El Espartillar     1.88 210 i P         Pn        04 52 02.1 +1.1
LODU1                                IAML                04 52 28.9
       comp=Z,86nm,0.6s
JIDR   Jimani             1.97 221 ePg         Pn        04 52 03.4 +1.0
JIDR                               eSg         Sb        04 52 29.5   0.0
JIDR                                 IAML                04 52 33.1
       comp=N,37nm,1.1s
LOBH   Bahia de las A     2.38 207 i P         Pn        04 52 08.7 +0.7
LOBH                                 IAML                04 52 46.1
       comp=Z,57nm,1.9s
```

IDC 18 04:59:03.5±0.8**, 19°.95S**×**175°.45W, h0**km**, mb3.9**/6**, mbtmp4.0**/7**, ML4.3**/1**, Error ellipse: s-maj=37.3km s-min=22.7km az=133.0, Tonga Islands**

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Code   Station Name       Δ°   AZ°   Phase ID            Time       Res
                                     Op        ISC       h  m  s    ISC
URZ    Urewera           19.36 198   P         Pn        05 03 31.8 +0.1
       0.9nm,0.3s,baz=334,slow=8.6,SNR=9.3
       14nm,0.8s
ASAR   Alice Springs     46.97 256   P         P         05 07 36.9 +0.2
       0.4nm,0.4s,baz=87,slow=8.6,SNR=10
       0.4nm,0.4s
WRA    Warramunga Arr    47.05 261   P         P         05 07 37.7 +0.4
       0.5nm,0.4s,baz=96,slow=5.8,SNR=7.1
       0.5nm,0.4s
QSPA   South Pole Qui    70.12 180   P         P         05 10 17.1  -0.5
       1.5nm,0.6s,baz=64,slow=2.5,SNR=5.7
       1.5nm,0.6s
NVAR   Mina Array Bea    79.00  42   P         P         05 11 11.3 +1.7
       0.6nm,0.4s,baz=238,slow=8.4,SNR=4.1
       0.6nm,0.4s
H03S2  Juan Fernandez    84.32 124   T         T         06 44 32.9
       baz=249,slow=75,SNR=28
H03S1  Juan Fernandez    84.33 124   T         T         06 44 37.2
       baz=249,slow=75,SNR=86
H03S3  Juan Fernandez    84.34 124   T         T         06 44 34.8
       baz=249,slow=75,SNR=27
H03N2  Juan Fernandez    84.45 123   T         T         06 44 32.7
       baz=257,slow=72,SNR=18
H03N3  Juan Fernandez    84.45 123   T         T         06 44 38.3
       baz=257,slow=72,SNR=12
H03N1  Juan Fernandez    84.47 123   T         T         06 44 21.7
       baz=257,slow=72,SNR=8.0
TXAR   Lajitas Array     84.75  56   P         P         05 11 40.2 +0.1
       1.1nm,1.1s,baz=232,slow=5.2,SNR=4.1
       1.1nm,1.1s
ILAR   Eielson Array     87.27  12   P         P         05 11 51.7 +0.2
       0.3nm,0.5s,baz=224,slow=4.9,SNR=9.7
       0.3nm,0.5s
ARCES  ARCESS Array B   128.79 351   PKP       PKPdf     05 18 11.1  -1.2
       4.7nm,1.1s,baz=51,slow=2.2,SNR=3.6
EKA    Eskdalemuir Ar   144.19   8   PKP       PKPab     05 18 38.5  -0.3
       1.1nm,0.7s,baz=319,slow=2.4,SNR=3.7
BRTR   Keskin Array B   148.20 315   PKPbc     PKPdf     05 18 50.1 +1.5
       1.1nm,0.8s,baz=43,slow=2.2,SNR=5.6
GERES  GERESS Array B   150.24 348   PKPbc     PKPbc     05 18 55.8  -0.8
       0.4nm,0.5s,baz=11,slow=5.0,SNR=2.8
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*SKHL **18** 05:18:18.6±0.8, 47°.90N×153°.10E, h136km±5km, mb5.3/5, msha5.8/4*

*MOS **18** 05:18:19.1±1.0, 48°.03N×152°.89E, h147km, mb4.3/13, Error ellipse: s-maj=10.9km s-min=4.7km az=64.5*

*NEIC **18** 05:18:21.8±1.2, 48°.2N±0°.1×152°.7E±0°.2, h141km±7km, mb4.4/37, Error ellipse: s-maj=20.8km s-min=11.7km az=140.0*

*JMA **18** 05:18:21.5±0.9, 46°N±10°×15°4E±°, h167km, MV4.1/11, KURILE ISLANDS REGION*

*IDC **18** 05:18:22.7±1.0, 48°.20N×152°.68E, h154km±8km, mb3.6/23, mbtmp4.1/27, Error ellipse: s-maj=17.0km s-min=9.9km az=158.0*

ISC 18 05:18:20.4±0.5**, 47°.90N**±0°.06×**152°.97E**±0°.06**, h150**km**, n151, σ2s.30**/172**, mb4.2**/46**, 5C-3D, Kuril Islands**

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Code   Station Name       Δ°   AZ°   Phase ID            Time       Res
                                     Op        ISC       h  m  s    ISC
SKR    Severo-Kuril's     3.46  35 ePN         Pn        05 19 12.1  -1.5
SKR                                eS          Sn        05 19 52.8  -2.1
SKR                                  pmax      pmax
```

	comp=Z,103nm,0.6s						
SKR				smax	smax		
	comp=N,249nm,0.7s						
SKR				smax	smax		
	comp=E,187nm,0.6s						
SKR	Severo-Kuril's	3.46	35	eP	Pn	05 19 12.1	-1.5
SKR				AMB	AMB	05 19 12.8	
	comp=E,90nm,0.4s						
SKR				eS	Sn	05 19 51.6	-3.3
SKR				A	A	05 19 53.9	
	comp=E,150nm,0.5s						
SKR				A	A	05 19 53.9	
	comp=E,190nm,0.5s						
PAU	Pauzhetka	4.35	34	PN	Pn	05 19 23.6	-1.6
PAU				S	Sn	05 20 12.3	-3.4
PAU	Pauzhetka	4.35	34	eP	Pn	05 19 23.5	-1.6
PAU				AMB	AMB	05 19 24.0	
	comp=E,100nm,0.4s						
PAU				eS	Sn	05 20 12.1	-3.6
PAU				A	A	05 20 13.7	
	comp=E,460nm,0.3s						
PAU				A	A	05 20 13.7	
	comp=E,410nm,0.3s						
KUR	Kuril'sk	4.42	235	ePN	Pn	05 19 25.5	-0.6
KUR				eS	Sn	05 20 19.2	+2.1
KUR				pmax	pmax		
	comp=Z,86nm,0.5s						
KUR				smax	smax		
	comp=E,141nm,0.7s						
KUR				smax	smax		
	comp=N,120nm,0.3s						
KUR	Kuril'sk	4.42	235	eP	Pn	05 19 24.4	-1.7
KUR				AMB	AMB	05 19 36.0	
	comp=N,110nm,0.7s						
KUR				eS	Sn	05 20 14.3	-2.8
KUR				A	A	05 20 19.7	
	comp=N,130nm,0.7s						
KUR				A	A	05 20 19.7	
	comp=N,160nm,0.7s						
KDTR	Khodutka, Kamc	5.12	38	PN	Pn	05 19 32.1	-3.2
KDTR				S	Sn	05 20 26.5	-7.2
KDTR	Khodutka, Kamc	5.12	38	eP	Pn	05 19 32.1	-3.2
KDTR				eS	Sn	05 20 26.5	-7.2
ASAK	Asacha	5.49	33	PN	Pn	05 19 38.8	-1.5
MTVR	Mutnovka	5.68	34	PN	Pn	05 19 41.3	-1.6
MTVR				S	Sn	05 20 42.8	-4.5
GRL	Gorelyy	5.69	33	PN	Pn	05 19 41.9	-1.1
APC	Apacha	5.70	26	PN	Pn	05 19 42.1	-0.8
RUS	Russkaya	5.77	36	PN	Pn	05 19 40.8	-3.1
RUS				S	Sn	05 20 42.6	-6.5
SHO	Shikotan	5.88	229	PN	Pn	05 19 51.3	+5.8
KRMR	Karymshinskiy	5.94	32	PN	Pn	05 19 44.6	-1.5
KRMR	Karymshinskiy	5.94	32	eP	Pn	05 19 44.6	-1.5
PEA0B	Petropavlovsk-	6.02	28	Pn	Pn	05 19 46.7	-0.6
PEA0B	Petropavlovsk-	6.02	28	⇑iPN	Pn	05 19 46.3	-1.0
PETK	Petropavlovsk-	6.02	28	P	Pn	05 19 45.8	-1.5
	comp=N,17nm,0.6s,baz=205,slow=11,SNR=37						
PET	Petropavlovsk	6.28	33	Pn	Pn	05 19 50.2	-0.5
PET	Petropavlovsk	6.28	33	eS	Sn	05 20 57.1	-4.3
YUK	Yuzh-Kuril'sk	6.28	235	PN	Pn	05 19 50.3	-0.5
YUK				i S	Sn	05 21 00.0	-1.6
YUK				pmax	pmax		
	comp=N,65nm,0.3s						
YUK				pmax	pmax		
	comp=Z,217nm,0.3s						
YUK				pmax	pmax		
	comp=E,112nm,0.2s						
YUK				smax	smax		
	comp=N,109nm,0.2s						
YUK				smax	smax		
	comp=E,172nm,0.3s						
YUK	Yuzh-Kuril'sk	6.28	235	eP	Pn	05 19 50.3	-0.5
YUK				AMB	AMB	05 19 50.7	
	comp=E,220nm,0.3s						
YUK				i S	Sn	05 21 00.0	-1.6
YUK				A	A	05 21 03.3	
	comp=E,110nm,0.2s						
YUK				A	A	05 21 03.3	
	comp=E,170nm,0.2s						
DALK	Dalny	6.32	34	PN	Pn	05 19 49.8	-1.5
KOK	Koryaka	6.49	32	PN	Pn	05 19 52.8	-0.8
KOK	Koryaka	6.49	32	eP	Pn	05 19 52.8	-0.8
AVH	Avacha	6.50	32	PN	Pn	05 19 53.3	-0.5
SMAR	Somma	6.53	32	PN	Pn	05 19 53.5	-0.7
KRX	Arik	6.55	31	PN	Pn	05 19 53.0	-1.4
SDLR	Sedlovina	6.57	33	PN	Pn	05 19 52.9	-1.8
GLVR	Golovnino	6.66	234	PN	Pn	05 19 56.4	+0.5
GLVR				i S	Sn	05 21 08.2	-2.5
GLVR				pmax	pmax		
	comp=N,58nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,93nm,0.1s						
GLVR	Golovnino	6.66	234	eP	Pn	05 19 56.4	+0.5
GLVR				AMB	AMB	05 19 59.5	
	comp=Z,90nm,0.2s						
GLVR				i S	Sn	05 21 08.2	-2.5
JRA	Rausu	6.76	237	eP	Pn	05 19 56.8	-0.3
NEM2	Nemuro 2	6.80	231	eP	Pn	05 19 54.7	-3.0
NEM2				S	Sn	05 21 06.0	-8.0
NMR	Nemuro--Hokkai	6.80	231	ePN	Pn	05 19 54.6	-3.2
NMR	Nemuro--Hokkai	6.80	231	eP	Pn	05 19 54.9	-2.9
SPN	Mys Shipunski	6.88	38	PN	Pn	05 19 56.1	-2.6
SPN	Mys Shipunski	6.88	38	eP	Pn	05 19 56.1	-2.6
JNK	Nakash	7.21	236	eP	Pn	05 20 02.3	-0.8
JNK				eS	Sn	05 21 22.4	-1.3
UGL	Uglegorsk	7.34	283	eP	Pn	05 20 04.7	-0.2
TYV	Tymovskoe	7.35	298	ePN	Pn	05 20 05.6	+0.5
TYV				eS	Sn	05 21 23.7	-3.5
TYV				pmax	pmax		
	comp=Z,20nm,1.2s						
TYV				pmax	pmax		
	comp=Z,400nm,3.7s						
TYV				smax	smax		
	comp=N,15nm,1.4s						
TYV				smax	smax		
	comp=E,13nm,1.4s						
TYV				smax	smax		
	comp=N,400nm,3.7s						
TYV				smax	smax		
	comp=E,700nm,3.7s						
TYV	Tymovskoe	7.35	298	eP	Pn	05 20 05.2	+0.1
JTKR	Abashiri--Toko	7.44	241	eP	Pn	05 20 06.8	+0.6
AKK	Akkeshi	7.51	232	eP	Pn	05 20 04.4	-2.9
JAK	Akkeshi	7.61	233	eP	Pn	05 20 05.7	-2.8
JAK				eS	Sn	05 21 25.9	-7.4
JAR	Ashorobuto	7.92	238	eP	Pn	05 20 12.6	-0.1
JAR				S	Sn	05 21 38.5	-2.5
JOB	Onbets	8.14	235	S	Sn	05 21 39.9	-6.2
JKA	Kamikawa-asahi	8.15	246		Pn	05 20 17.2	+1.4
JKA	Kamikawa-asahi	8.15	246	eP	Pn	05 20 17.5	+1.8
ASAJ	Asahikawa	8.15	246	P	Pn	05 20 17.5	+1.7
	comp=E,20nm,0.4s,baz=69,slow=14,SNR=15						
JCH	Churui	8.59	236	eP	Pn	05 20 19.0	-2.6
JCH				S	Sn	05 21 49.5	-7.5
ERM	Erimo	9.11	233	Pn	Pn	05 20 28.4	-0.1
ERM	Erimo	9.11	233	PN	Pn	05 20 28.4	-0.1
JNBK	Urakawa-nobuka	9.15	236	eP	Pn	05 20 25.2	-3.9
JNBK				eS	Sn	05 22 03.4	-7.1
NKL	Nikolayevsk	9.42	308	eP	Pn	05 20 32.5	0.0
KBG	Krutoberegovo	10.28	32	PN	Pn	05 20 41.3	-2.6
KBG	Krutoberegovo	10.28	32	eP	Pn	05 20 41.3	-2.6
JANG	Nango	11.14	232	eP	Pn	05 20 49.2	-6.2
JANG				eS	Sn	05 22 44.9	-14
USRK	Ussuriysk Ar.	15.02	264	P	P	05 21 45.9	-0.8
	comp=E,14nm,0.6s,baz=69,slow=14,SNR=13						
MJAR	Matsushiro Arr	15.73	229	P	P	05 21 55.3	+0.7
	comp=E,1.4nm,0.3s,baz=51,slow=11,SNR=1.7						
MJAR	Matsushiro Arr	15.73	229	P	P	05 21 55.3	+0.7
MJAR				pmax	pmax		
	comp=Z,6.0nm,1.5s						
HEH	HeiHe	16.88	288	eP	Pn	05 22 08.3	+0.6
HEH				pmax	pmax		
	comp=Z,20nm,0.8s						
KSRS	Korea Array	21.08	250	P	P	05 22 53.0	+0.3
	comp=Z,7.5nm,0.8s,baz=47,slow=11,SNR=12						
	comp=Z,7.5nm,0.8s						
J14K	Nanvaranak Lak	28.18	42	P	P	05 24 00.1	+1.8
JOW	Kunigami	28.55	231	P	P	05 24 02.9	+0.9
J16K	Anvik River	29.60	42	P	P	05 24 11.4	+0.4
M16K	Timber Creek	30.11	46	P	P	05 24 17.2	+1.7
H11N2	WAKE ISLAND Hy	30.29	153	T	T	05 56 13.2	
	baz=341,slow=76,SNR=71						
H11N1	WAKE ISLAND Hy	30.30	153	T	T	05 56 12.0	
	baz=341,slow=76,SNR=57						
H11N3	WAKE ISLAND Hy	30.31	153	T	T	05 56 14.9	
	baz=341,slow=76,SNR=42						
K17K	Iditarod	30.57	43	P	P	05 24 21.4	+2.0
K17K				IAmb	IAmb	05 24 32.0	
	comp=Z,12nm,1.4s						
SONM	Songino Array	30.88	288	P	P	05 24 22.4	-0.1
	comp=Z,0.7nm,0.7s,baz=64,slow=9.1,SNR=4.5						
	comp=Z,0.7nm,0.7s						
SONM	Songino Array	30.88	288	IAmb	IAmb	05 24 22.9	
	comp=Z,2.3nm,1.2s						
SONM	Songino Array	30.88	288	P	P	05 24 22.4	-0.1
SONM				pmax	pmax		
	comp=Z,2.0nm,1.2s						
J18K	Innoko River	31.36	42	P	P	05 24 28.0	+1.5
J18K				IAmb	IAmb	05 24 28.6	
	comp=Z,6.1nm,1.1s						
H11S1	WAKE ISLAND Hy	31.39	154	T	T	05 57 42.0	
	baz=342,slow=76,SNR=44						
H11S3	WAKE ISLAND Hy	31.39	154	T	T	05 57 43.3	
	baz=342,slow=76,SNR=40						
H11S2	WAKE ISLAND Hy	31.41	154	T	T	05 57 44.1	
	baz=342,slow=76,SNR=66						
H19K	Roundabout Mou	31.73	38	P	P	05 24 31.3	+1.7
D20K	Etivluk River	32.30	32	P	P	05 24 36.1	+1.4
B20K	Meade River	32.46	29		P	05 24 37.4	+1.5
B20K				IAmb	IAmb	05 24 38.6	
	comp=Z,4.9nm,0.7s						
IMAR	Indian Mountai	32.90	37	P	P	05 24 41.3	+1.5
B21K	Ikpikpuk River	33.21	30		P	05 24 44.5	+2.0
B21K				IAmb	IAmb	05 24 44.8	
	comp=Z,5.9nm,0.7s						
PPLA	Purkeypile	33.38	43	P	P	05 24 46.2	+2.0
D22K	Ayikyak River	33.74	32	P	P	05 24 48.3	+1.2
D22K				IAmb	IAmb	05 25 16.7	
	comp=Z,8.8nm,1.4s						
E22K	Anaktuvuk Pass	33.94	33		P	05 24 50.5	+1.7
E22K				IAmb	IAmb	05 24 51.2	
	comp=Z,8.1nm,1.5s						
TRF	Thorofare Moun	34.24	42	P	P	05 24 53.7	+2.0
TRF				IAmb	IAmb	05 24 54.6	
	comp=Z,9.8nm,1.2s						
NEA2	Nenana	34.78	40	P	P	05 24 57.8	+1.7
NEA2				IAmb	IAmb	05 24 59.2	
	comp=Z,7.9nm,0.8s						
E24K	Your Creek	35.17	34	P	P	05 25 01.4	+2.0
COLA	College	35.30	39	P	P	05 25 02.5	+2.0
COLA	College	35.30	39	P	P	05 25 02.5	+2.0
COLA				pmax	pmax		
	comp=Z,14nm,0.7s						
CCB	Clear Creek Bu	35.32	40		P	05 25 02.6	+1.9
CCB				IAmb	IAmb	05 25 03.4	
	comp=Z,4.6nm,0.8s						
IL31		35.72	40		P	05 25 05.3	+1.3
IL31				IAmb	IAmb	05 25 10.4	
	comp=Z,9.1nm,1.4s						
ILAR	Eielson Array	35.72	40	P	P	05 25 05.2	+1.1
	comp=Z,2.0nm,0.8s,baz=260,slow=6.0,SNR=32						
	comp=Z,2.0nm,0.8s						
ILAR	Eielson Array	35.72	40	eP	P	05 25 05.2	+1.1
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
D25K	Kavik River	36.04	32	P	P	05 25 08.3	+1.5
D25K				IAmb	IAmb	05 25 09.0	
	comp=Z,3.1nm,0.6s						
K27K	Chicken	37.85	41	P	P	05 25 24.3	+2.1
K27K				IAmb	IAmb	05 25 25.3	
	comp=Z,6.5nm,1.0s						
LZDM	Lanzhou Array	37.94	270	P	P	05 25 24.3	+0.7
	comp=Z,1.9nm,0.4s,baz=90,slow=3.0,SNR=4.4						
	comp=Z,1.9nm,0.4s						
L27K	Beaver Creek,	38.09	42	P	P	05 25 26.8	+2.7
L27K				IAmb	IAmb	05 25 28.1	
	comp=Z,9.1nm,1.1s						
I28M	Miner Creek	38.60	38	IAmb	IAmb	05 25 31.3	
	comp=Z,4.7nm,0.8s						
I30M	Mount Dempster	40.11	38		P	05 25 43.1	+2.0
I30M				IAmb	IAmb	05 25 43.8	
	comp=Z,6.4nm,0.7s						
ZALV	Zalesovo Beam	41.87	305	P	P	05 25 54.2	-1.2
	comp=Z,1.3nm,0.5s,baz=68,slow=6.7,SNR=6.9						
ZALV				pP	pP	05 26 29.0	+1.7
	comp=Z,0.8nm,0.5s,baz=115,slow=5.9,SNR=3.0						
ZALV				PcP	PcP	05 27 48.7	+0.6
	comp=Z,0.7nm,0.4s,baz=80,slow=4.1,SNR=5.0						
	comp=Z,1.3nm,0.5s						
ZALV	Zalesovo Beam	41.87	305	P	P	05 25 54.3	-1.1
ZALV	Zalesovo Beam	41.87	305	eP	P	05 25 54.6	-0.8
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
DGZ	Jazzator, Alta	41.97	298	⇓eP	P	05 25 55.5	-1.0
A36M	Sachs Harbour	42.87	27		P	05 26 05.5	+2.3
MK31	Makanchi Array	46.33	296	d iP	P	05 26 30.8	-0.3
MKAR	Makanchi Array	46.33	296	P	P	05 26 30.3	-0.8
	comp=Z,2.4nm,0.6s,baz=65,slow=7.9,SNR=16						
MKAR				pP	pP	05 27 04.6	+0.9
	comp=Z,1.0nm,0.7s,baz=63,slow=6.2,SNR=3.8						
MKAR				PcP	PcP	05 28 04.7	+1.1
	comp=Z,0.4nm,0.6s,baz=87,slow=3.9,SNR=2.2						
	comp=Z,2.4nm,0.6s						
MKAR	Makanchi Array	46.33	296	eP	P	05 26 31.2	+0.1
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	Makanchi Array	46.33	296	eP	P	05 26 31.2	+0.1
KURK	Kurchatov	46.65	303		P	05 26 32.9	-0.6
KURK				IAmb	IAmb	05 26 33.8	
	comp=Z,7.1nm,0.7s						
KURK	Kurchatov	46.65	303	⇑iP	P	05 26 33.0	-0.4
KURK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KURK	Kurchatov	46.65	303	eP	P	05 26 33.0	-0.4
KURBB	Kurchatov Arra	46.74	303	P	P	05 26 33.3	-0.8
	comp=Z,4.4nm,0.6s,baz=68,slow=8.4,SNR=21						
KURBB				pP	pP	05 27 08.2	+1.4
	comp=Z,1.7nm,0.7s,baz=69,slow=8.6,SNR=3.4						
KURBB				PcP	PcP	05 28 06.2	+1.2
	comp=Z,0.4nm,0.5s,baz=72,slow=3.8,SNR=4.3						
	comp=Z,4.4nm,0.6s						
BVAR	Borovoye Array	50.06	309	P	P	05 26 58.8	-0.7
	comp=Z,1.6nm,0.3s,baz=53,slow=7.3,SNR=8.8						
BVAR				PcP	PcP	05 28 18.0	+1.1
	comp=Z,1.2nm,0.5s,baz=46,slow=4.2,SNR=1.9						
	comp=Z,1.6nm,0.3s						
YKA	Yellowknife Ar	50.06	37	P	P	05 27 01.1	+1.7
	comp=Z,1.7nm,0.7s,baz=300,slow=8.0,SNR=13						
	comp=Z,1.7nm,0.7s						
YKA	Yellowknife Ar	50.06	37	eP	P	05 27 01.4	+2.1
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BORK	Borovoye	50.08	309	⇓iP	P	05 26 58.7	-0.9
BORK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CHTO	Chiang Mai	52.30	256		P	05 27 18.5	+1.9
CHTO				IAmb	IAmb	05 27 20.9	
	comp=Z,3.8nm,0.7s						
CHTO	Chiang Mai	52.30	256	P	P	05 27 18.5	+1.9
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CMAR	Chiang Mai Arr	52.56	255	P	P	05 27 20.1	+1.6
	comp=Z,0.6nm,0.3s,baz=28,slow=8.3,SNR=6.6						
	comp=Z,0.6nm,0.3s						
AAK	Ala-Archa	53.24	296	⇑eP	P	05 27 23.5	+0.1
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK	Ala-Archa	53.24	296	eP	P	05 27 23.5	+0.1
ARTI	Arti	54.20	317		P	05 27 28.7	-1.3
ARTI				IAmb	IAmb	05 27 30.4	
	comp=Z,6.4nm,0.8s						
ARTI	Arti	54.20	317	c iP	P	05 27 29.2	-0.8
ARTI				*PP	pP	05 28 03.5	-0.1
ARTI						05 28 33.0	
ARTI				S	S	05 34 56.6	+1.4
ARTI				SS	SS	05 38 37.6	-0.7
ARTI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
EDM	Edmonton	55.59	47	P	P	05 27 41.8	+1.7
EDM	Edmonton	55.59	47	P	P	05 27 41.8	+1.7
EDM				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ARCES	ARCESS Array B	56.73	340	P	P	05 27 47.1	-0.7
	comp=Z,1.4nm,0.7s,baz=13,slow=6.6,SNR=4.0						
	comp=Z,1.4nm,0.7s						
ARCES	ARCESS Array B	56.73	340	eP	P	05 27 48.2	+0.3
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PLID	Pearl Lake	59.10	56		P	05 28 07.5	+2.5
PLID				IAmb	IAmb	05 28 08.2	
	comp=Z,4.8nm,0.8s						
NVAR	Mina Array Bea	61.99	63	P	P	05 28 26.0	+1.3
	comp=Z,1.0nm,0.5s,baz=290,slow=6.9,SNR=4.1						
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	62.96	334	P	P	05 28 29.2	-1.2
	comp=Z,1.4nm,0.5s,baz=38,slow=7.9,SNR=18						
	comp=Z,1.4nm,0.5s						
PD31	Pinedale Array	64.15	54		P	05 28 41.1	+2.1
PDAR	Pinedale Array	64.15	54	P	P	05 28 41.0	+2.1
	comp=Z,1.6nm,0.7s,baz=304,slow=1.6,SNR=18						
	comp=Z,1.6nm,0.7s						
NOA	NORSAR Array B	67.11	341	P	P	05 28 56.4	-0.9
	comp=Z,0.2nm,0.4s,baz=31,slow=6.5,SNR=5.6						
	comp=Z,0.2nm,0.4s						
NOA	NORSAR Array B	67.11	341	eP	P	05 28 56.5	-0.8
HFS	Hagfors	67.34	339	P	P	05 28 58.0	-0.7
	comp=Z,0.8nm,0.3s,baz=47,slow=5.0,SNR=14						
	comp=Z,0.8nm,0.3s						
HFS	Hagfors	67.34	339	P	P	05 28 58.0	-0.7
KBZ	Khabaz	69.99	314	P	P	05 29 15.8	+0.4
	comp=Z,2.3nm,0.8s,baz=22,slow=5.3,SNR=6.1						
	comp=Z,2.3nm,0.8s						
KBZ	Khabaz	69.99	314	⇑iP	P	05 29 15.1	-0.3
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KBZ	Khabaz	69.99	314	eP	P	05 29 15.1	-0.3
AKASG	Malin Array Be	70.54	326	P	P	05 29 17.5	-1.1
	comp=Z,0.4nm,0.3s,baz=38,slow=5.7,SNR=2.3						
	comp=Z,0.4nm,0.3s						
AKASG	Malin Array Be	70.54	326	P	P	05 29 17.5	-1.1
AKASG				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ASAR	Alice Springs	73.27	198	P	P	05 29 37.7	+2.6
	comp=Z,0.4nm,0.4s,baz=7.7,slow=5.2,SNR=6.8						
	comp=Z,0.4nm,0.4s						
EKA	Eskdalemuir Ar	75.20	346	P	P	05 29 45.9	0.0
	comp=Z,0.5nm,0.5s,baz=15,slow=5.9,SNR=3.9						
	comp=Z,0.5nm,0.5s						
TXAR	Lajitas Array	77.01	61	P	P	05 29 58.7	+1.9
	comp=Z,2.9nm,0.6s,baz=296,slow=4.3,SNR=44						
	comp=Z,2.9nm,0.6s						
GERES	GERESS Array B	77.38	334	P	P	05 29 59.1	+0.6
	comp=Z,0.3nm,0.3s,baz=19,slow=3.4,SNR=2.8						
	comp=Z,0.3nm,0.3s						
BRTR	Keskin Array B	77.48	316	P	P	05 29 59.8	+0.5
	comp=Z,0.5nm,0.6s,baz=52,slow=8.0,SNR=3.9						
	comp=Z,0.5nm,0.6s						
BRTR	Keskin Array B	77.48	316	i P	P	05 30 01.3	+2.0
CPUP	Villa Florida	147.97	59	PKPbc	PKiKP	05 37 49.6	0.0
	comp=Z,0.2nm,0.6s,baz=304,slow=2.5,SNR=4.0						
NVL	N'lazarevskaya	150.64	205	ePKIKP	PKPdf	05 37 44.4	-3.1
NVL				pmax	pmax		
	comp=Z,14nm,0.9s						

DJA 18 05:27:39.3±0.3**, 10˚S**±3˚×**12˚3E**±˚**, h10km, M3.4**/7**, mB4.8**/1**, mb3.9**/4**, MLv3.2**/7**, Mw(mB)4.0**/1**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	0.47	126	P	Pg	05 27 48.4	-0.1
SOEI	Soe	0.99	80	P	Pg	05 27 57.8	-0.6
MMRI	Maumere	1.65	321	P	Pb	05 28 09.5	-0.3
EDFI	Ende, Flores	1.96	307	P	Pn	05 28 11.9	-0.8
DBNI	Kabupaten Domp	5.11	286	P	Pn	05 28 55.5	-0.4
	0.0nm6.7nm,0.5s						
PLAI	Plampang	5.54	281	P	Pn	05 29 01.5	-0.4
	0.1nm20nm,0.7s						
TWSI	Taliwang, Sumb	6.42	280	P	Pn	05 29 13.6	-0.5
	636nm8.4nm,0.7s						

*DJA **18** 05:32:42.5±3.4, 8˚N±29˚×12˚5E±˚, h148km±16km, M4.9/7, mb4.9/7, mB5.0/3, MLv5.0/7, Mw(mB)4.3/3*
*IDC **18** 05:32:55.8±0.9, 6˚.47N×125˚.27E, h0km, mb3.8/7, mbtmp3.8/7, MS3.1/1, Error ellipse: s-maj=23.3km s-min=9.2km az=111.0*
*NEIC **18** 05:32:55.4±2.8, 6˚.48N±0˚.05×125˚.5E±0˚.1, h10km±1km, mb4.3/11, Error ellipse: s-maj=21.1km s-min=7.7km az=264.0*
ISC 18 05:32:55.9±0.7**, 6˚.47N**±0˚.06×**125˚.4E**±0˚.1**, h10km, n34,** σ1s**91**/30**, mb4.0**/13**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.62	19	Pg	Pb	05 33 08.3	-0.6
	369nm,0.3s,baz=221,slow=1.9,SNR=26						
DAV				Lg	Lg	05 33 19.0	
	686nm,0.3s,baz=72,slow=20,SNR=9.4						
DAV	Davao City (W)	0.62	19		Pb	05 33 07.5	-1.5
DAV	Davao City (W)	0.62	19	P	Pb	05 33 08.2	-0.8
DAV	Davao City (W)	0.62	19	P	Pb	05 33 08.0	-1.0
SGSI	Sangihe	2.77	177	P	Pg	05 33 47.8	-1.4
GTOI	Gorontalo	6.26	202	P	Pn	05 34 29.8	+1.3
	0.4nm1μm111nm,0.7s						
MRSI	Marisa	6.88	210	P	Pn	05 34 37.9	+1.0
	1μm102nm,0.5s						
TOLI2	Tolitoli	7.03	221	Pn	Pn	05 34 37.6	-1.4
LUWI	Luwuk	7.91	199		Pn	05 34 52.2	+1.2
LUWI	Luwuk	7.91	199	P	Pn	05 34 53.3	+2.2
	2μm81nm,0.8s						
SANI	Sanana	8.49	176	P	Pn	05 35 03.8	+4.7
	30nm,0.8s						
I39PW	PALAU INFRASON	9.16	83	I	I	06 32 20.0	
	baz=266,slow=292,SNR=0.8						
NLAI	Namlea	9.80	170	P	Pn	05 35 20.4	+3.3
TTSI	Tana Toraja	10.96	211	P	Pn	05 35 48.8	+16
MTN	Manton Dam	20.03	163	P	P	05 37 26.4	-2.8
MTN				IAmb	IAmb	05 38 04.2	
	comp=Z,9.8nm,0.9s						
JOW	Kunigami	20.43	7	LR	LR	05 44 35.9	
	comp=Z,53nm,21.3s,baz=57,slow=34						
KNRA	Kununurra	22.26	171		P	05 37 51.9	-1.4
FITZ	Fitzroy Crossi	24.42	179	P	P	05 38 13.0	-1.9
COEN	Coen	26.91	139	P	P	05 38 35.2	-2.3
COEN				IAmb	IAmb	05 38 47.3	
	comp=Z,11nm,1.1s						
WB0	Warramunga Arr	27.55	161	P	P	05 38 43.0	-0.2
WB0				IAmb	IAmb	05 39 08.0	
	comp=Z,6.9nm,0.9s						
WRA	Warramunga Arr	27.69	162	P	P	05 38 45.9	+1.4
	comp=Z,1.4nm,0.8s,baz=340,slow=9.2,SNR=5.0						
	comp=Z,1.4nm,0.8s						
WRA	Warramunga Arr	27.69	162	P	P	05 38 41.2	-3.3
WR8	Warramunga Arr	27.75	161	P	P	05 38 45.2	+0.2
WR8				IAmb	IAmb	05 39 17.8	
	comp=Z,3.5nm,0.8s						
WR0	Warramunga Arr	27.77	161	P	P	05 38 41.2	-4.0
WR0				IAmb	IAmb	05 39 18.0	
	comp=Z,5.1nm,0.9s						
CMAR	Chiang Mai Arr	28.38	297	P	P	05 38 52.2	+1.5
	comp=Z,0.7nm,0.3s,baz=105,slow=9.3,SNR=4.2						
	comp=Z,0.7nm,0.3s						
ASAR	Alice Springs	31.09	165	P	P	05 39 16.2	+1.6
	comp=Z,0.6nm,0.5s,baz=345,slow=7.2,SNR=10						
	comp=Z,0.6nm,0.5s						
ASAR	Alice Springs	31.09	165	P	P	05 39 12.6	-2.1
FORT	Forrest	37.13	176	P	P	05 40 08.0	+1.1
FORT				IAmb	IAmb	05 40 41.0	
	comp=Z,4.5nm,0.8s						
BBOO	Buckleboo	40.37	166	P	P	05 40 34.6	+0.5
BBOO				IAmb	IAmb	05 40 55.9	
	comp=Z,4.9nm,0.7s						
STKA	Stephens Creek	41.16	159	P	P	05 40 43.2	+2.6
	comp=Z,1.1nm,0.4s,baz=341,slow=11,SNR=4.1						
	comp=Z,1.1nm,0.4s						
STKA	Stephens Creek	41.16	159	P	P	05 40 39.5	-1.1
MKAR	Makanchi Array	54.55	325	P	P	05 42 26.2	+1.9
	comp=Z,0.5nm,0.6s,baz=109,slow=8.4,SNR=2.7						
	comp=Z,0.5nm,0.6s						
KURBB	Kurchatov Arra	58.72	327	P	P	05 42 54.0	+0.1
	comp=Z,0.9nm,0.8s,baz=124,slow=5.9,SNR=5.8						
	comp=Z,0.9nm,0.8s						
ILAR	Eielson Array	83.22	26	P	P	05 45 22.6	+0.2
	comp=Z,0.3nm,0.7s,baz=234,slow=5.0,SNR=3.3						
	comp=Z,0.3nm,0.7s						

*MDD **18** 06:19:20.6±0.6, 36˚.96N×10˚.99W, h40km, mb_Lg3.1/9, Error ellipse: s-maj=5.4km s-min=3.5km az=83.0*
*INMG **18** 06:19:22.6±1.4, 36˚.97N×10˚.88W, h31km±8km, ML2.4, Error ellipse: s-maj=7.3km s-min=2.9km az=74.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*
*CNRM **18** 06:19:22.4, 36˚.78N×10˚.43W, h108km, ML3.3*
*IGIL **18** 06:19:22.4, 36˚.97N×10˚.86W, h29km, ML1.8*

ISC 18 06:19:19.9±2.1, 36°.99N±0°.05×10°.87W±0°.10, h35^{km}, n84, σ1ˢ.67/128, 1C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	1.64	85	P	Pn	06 19 47.0	+0.7
PFVI				S	Sn	06 20 05.5	-0.7
PFVI	Vila Bisbo	1.64	85	⇑ iP	Pn	06 19 47.9	+1.6
PFVI				eS	Sn	06 20 06.6	+0.5
PFVI				i IAML		06 20 07.7	
PFVI				i IAML		06 20 07.8	
PFVI				i IAML		06 20 08.2	
PFVI	Vila Bisbo	1.64	85	P	Pn	06 19 47.1	+0.9
MORF	Marmelete	1.80	79	eP	Pn	06 19 50.1	+1.7
MORF	Marmelete	1.80	79	eP	Pn	06 19 50.2	+1.7
MORF				eS	Sn	06 20 11.3	+1.2
MORF				i IAML		06 20 17.2	
MORF				i IAML		06 20 17.7	
MORF				i IAML		06 20 20.2	
PTEO	Sao Teotonio	1.80	72	eP	Pn	06 19 50.2	+1.8
PTEO				eS	Sn	06 20 10.6	+0.6
PTEO				i IAML		06 20 15.6	
PTEO				i IAML		06 20 17.4	
PTEO				i IAML		06 20 19.1	
MESJ	Messejana	2.27	67	eP	Pn	06 19 56.6	+1.6
MESJ				eS	Sn	06 20 21.6	-0.1
MESJ				IAML		06 20 23.8	
	comp=N,5.2nm,0.2s						
MESJ	Messejana	2.27	67	eP	Pn	06 19 56.6	+1.6
MESJ				eS	Sn	06 20 21.7	-0.1
MESJ				i IAML		06 20 24.1	
MESJ				i IAML		06 20 26.1	
MESJ				i IAML		06 20 27.0	
PMAFR	Mafra	2.33	32	eP	Pn	06 19 57.2	+1.5
PMAFR				eS	Sn	06 20 23.6	+0.6
PMAFR				i IAML		06 20 24.7	
PMAFR				i IAML		06 20 24.9	
PMAFR				i IAML		06 20 25.0	
PCVE	Castro Verde	2.35	73	P	Pn	06 19 57.1	+1.1
PCVE				S	Sn	06 20 24.2	+0.7
PCVE	Castro Verde	2.35	73	eP	Pn	06 19 57.8	+1.8
PCVE				eS	Sn	06 20 23.4	-0.1
PCVE				i IAML		06 20 27.4	
PCVE				i IAML		06 20 27.9	
PCVE				i IAML		06 20 28.0	
PBDV	Barranco-do-Ve	2.36	83	P	Pn	06 19 57.8	+1.6
PBDV				S	Sn	06 20 25.2	+1.2
PBDV	Barranco-do-Ve	2.36	83	eP	Pn	06 19 58.2	+2.0
PBDV				eS	Sn	06 20 24.9	+0.8
PBDV				i IAML		06 20 28.6	
PBDV				i IAML		06 20 28.7	
PBDV				i IAML		06 20 29.0	
MOE	Montemor	2.51	52	eP	Pn	06 19 59.9	+1.6
MOE				eS	Sn	06 20 27.8	+0.1
MOE				i IAML		06 20 28.9	
MOE				i IAML		06 20 29.5	
MOE				i IAML		06 20 30.3	
PVAQ	Vaqueiros	2.55	80	eP	Pn	06 20 00.8	+2.0
PVAQ				eS	Sn	06 20 28.5	-0.1
PVAQ				i IAML		06 20 32.7	
PVAQ				i IAML		06 20 34.0	
PVAQ				i IAML		06 20 36.6	
PVAQ	Vaqueiros	2.55	80	P	Pn	06 19 58.6	-0.1
PVAQ	Vaqueiros	2.55	80	S	Sn	06 20 27.7	-0.9
PBEJ	Beja	2.60	66	eP	Pn	06 20 01.2	+1.7
PBEJ				eS	Sn	06 20 29.9	0.0
PBEJ				i IAML		06 20 31.6	
PBEJ				i IAML		06 20 32.0	
PBEJ				i IAML		06 20 32.4	
EVO	Evora	2.74	55	P	Pn	06 20 02.8	+1.4
EVO				S	Sn	06 20 32.6	-0.6
EVO	Evora	2.74	55	eP	Pn	06 20 02.9	+1.6
EVO				eS	Sn	06 20 33.0	-0.2
EVO				i IAML		06 20 34.4	
EVO				i IAML		06 20 34.4	
EVO				i IAML		06 20 34.6	
EGRO	El Granado	2.76	78	P	Pn	06 20 02.8	+1.2
EGRO				S	Sn	06 20 34.6	+0.9
EGRO	El Granado	2.76	78	Pn	Pn	06 20 03.2	+1.7
EGRO				Sn	Sn	06 20 34.0	+0.4
EGRO				i IVmb_Lg		06 20 39.6	
PARRA	Arraiolos	2.88	50	eP	Pn	06 20 04.5	+1.2
PARRA				eS	Sn	06 20 36.8	-0.1
PARRA				i IAML		06 20 38.1	
PARRA				i IAML		06 20 38.3	
PARRA				i IAML		06 20 38.6	
PMTG	Montargil	2.94	44	eP	Pn	06 20 05.4	+1.3
PMTG				eS	Sn	06 20 38.1	-0.1
PMTG				i IAML		06 20 39.7	
PMTG				i IAML		06 20 42.1	
PMTG				i IAML		06 20 42.7	
PSBE	So Bento	3.00	32	eP	Pn	06 20 06.6	+1.6
PSBE				eS	Sn	06 20 40.5	+0.8
PSBE				i IAML		06 20 41.3	
PSBE				i IAML		06 20 42.5	
PSBE				i IAML		06 20 47.4	
PESTR	Estremoz	3.20	53	eP	Pn	06 20 08.7	+1.1
PESTR				eS	Sn	06 20 44.2	-0.4
PESTR				i IAML		06 20 45.1	
PESTR				i IAML		06 21 02.2	
PESTR	Estremoz	3.20	53	P	Pn	06 20 08.8	+1.1
PESTR	Estremoz	3.20	53	S	Sn	06 20 45.1	+0.5
PBAR	Barrancos	3.26	68	P	Pn	06 20 09.7	+1.1
PBAR				S	Sn	06 20 45.2	-1.0
PBAR	Barrancos	3.26	68	eP	Pn	06 20 10.1	+1.5
PBAR				eS	Sn	06 20 45.2	-1.0
PBAR				i IAML		06 20 47.0	
PBAR				i IAML		06 20 48.4	
PBAR				i IAML		06 20 51.2	
PSARD	Sardoal	3.36	38	eP	Pn	06 20 11.4	+1.4
PSARD				eS	Sn	06 20 48.1	-0.5
PSARD				i IAML		06 20 49.8	
PSARD				i IAML		06 20 49.8	
PSARD				i IAML		06 20 50.7	
EMIN	Mina Concepcio	3.43	76	P	Pn	06 20 11.9	+1.0
EMIN				S	Sn	06 20 49.4	-0.9
EMIN	Mina Concepcio	3.43	76	Pn	Pn	06 20 12.5	+1.6
EMIN				Sn	Sn	06 20 50.0	-0.4
EMIN				i IVmb_Lg		06 20 54.8	
EBAD	Badajoz	3.52	59	P	Pn	06 20 13.4	+1.2
EBAD				S	Sn	06 20 50.9	-1.7
EBAD	Badajoz	3.52	59	Pn	Pn	06 20 13.6	+1.5
EBAD				Sn	Sn	06 20 51.5	-1.1
EBAD				i IVmb_Lg		06 21 00.9	
PCAS	Casmilo, Conde	3.58	31	eP	Pn	06 20 14.4	+1.5
PCAS				eS	Sn	06 20 54.1	+0.2
PCAS				i IAML		06 20 55.7	
PCAS				i IAML		06 20 55.8	
PCAS				i IAML		06 20 57.9	
PMRV	Marv??o	3.66	47	eP	Pn	06 20 15.3	+1.2
PMRV				eS	Sn	06 20 54.8	-1.3
PMRV				i IAML		06 20 56.4	
PMRV				i IAML		06 20 56.7	
PMRV				i IAML		06 20 57.5	
PCBR	Castelo Branco	3.90	42	eP	Pn	06 20 19.0	+1.8
PCBR				eS	Sn	06 21 00.8	-0.9
PCBR				i IAML		06 21 02.3	
PCBR				i IAML		06 21 02.8	
PCBR				i IAML		06 21 03.2	
ESPR	Espera	4.02	90	P	Pn	06 20 20.8	+1.9
ESPR				S	Sn	06 21 04.9	0.0
ESPR	Espera	4.02	90	Pn	Pn	06 20 21.1	+2.2
ESPR				Sn	Sn	06 21 03.9	-0.9
ESPR				i IVmb_Lg		06 21 06.6	
MTE	Manteigas	4.28	36	eP	Pn	06 20 24.0	+1.4
MTE				eS	Sn	06 21 10.4	-0.9
MTE				i IAML		06 21 12.4	
MTE				i IAML		06 21 14.5	
MTE				i IAML		06 21 14.9	
PVIS	Viseu	4.38	31	eP	Pn	06 20 25.2	+1.2
PVIS				eS	Sn	06 21 13.2	-0.7
ECAB	El Cabril	4.47	74	P	Pn	06 20 26.2	+1.1
ECAB				S	Sn	06 21 14.3	-1.6
ECAB	El Cabril	4.47	74	Pn	Pn	06 20 26.8	+1.7
ECAB				Sn	Sn	06 21 14.7	-1.2
ECAB				i IVmb_Lg		06 21 19.1	
UMV12	Villanueva de	4.56	88	Sn	Sn	06 21 18.3	+0.2
AVE	Averroes	4.65	141	P	Pn	06 20 27.4	-0.3
AVE				S	Sn	06 21 17.2	-3.2
EPLA	Plasencia	4.85	49	Pn	Pn	06 20 31.8	+1.4
EPLA				Sn	Sn	06 21 23.9	-1.4
EPLA				i IVmb_Lg		06 21 25.2	
EMIJ	Mijas	4.91	93	S	Sn	06 21 24.4	-2.6
PVRL	Vila Real	4.93	29	eP	Pn	06 20 32.6	+1.1
PVRL				eS	Sn	06 21 25.6	-1.8
PVRL				i IAML		06 21 27.1	
PVRL				i IAML		06 21 28.1	
PVRL				i IAML		06 21 28.6	
POLO	Lamas de Olo	4.98	28	eP	Pn	06 20 33.5	+1.2
POLO				eS	Sn	06 21 26.2	-2.5
POLO				i IAML		06 21 28.2	
POLO				i IAML		06 21 29.1	
POLO				i IAML		06 21 31.1	
CIBOR	Castaar de Ib	5.03	57	Pn	Pn	06 20 34.4	+1.5
CIBOR				Sn	Sn	06 21 26.8	-3.0
MVO	Moncorvo	5.13	34	eP	Pn	06 20 35.3	+1.1
MVO				eS	Sn	06 21 30.2	-1.9
MVO				i IAML		06 21 32.0	
MVO				i IAML		06 21 32.3	
MVO				i IAML		06 21 33.0	
SRHM	Skhour des Reh	5.13	151	P	Pn	06 20 34.9	+0.5
SRHM	Skhour des Reh	5.13	151	S	Sn	06 21 31.9	-0.5
EADA	Adamuz	5.13	75	P	Pn	06 20 35.1	+0.8
EADA				S	Sn	06 21 30.4	-2.0
EADA	Adamuz	5.13	75	Pn	Pn	06 20 35.7	+1.4
EADA				Sn	Sn	06 21 30.1	-2.2
EADA				i IVmb_Lg		06 21 39.4	
PCAB	Cabril	5.20	24	eP	Pn	06 20 36.7	+1.5
PCAB				eS	Sn	06 21 32.7	-1.2
ELOB	Lobios	5.33	23	Pn	Pn	06 20 38.0	+1.0
ELOB				Sn	Sn	06 21 34.0	-3.3
PGAV	Gavieira, Arco	5.36	21	eP	Pn	06 20 38.9	+1.5
PGAV				eS	Sn	06 21 36.2	-1.8
PAB	San Pablo	5.73	62	Pn	Pn	06 20 44.5	+1.9
PAB				Sn	Sn	06 21 43.7	-3.4
PAB				i IVmb_Lg		06 21 55.6	
PBRG	Braganca	5.77	32	eP	Pn	06 20 44.5	+1.4
PBRG				eS	Sn	06 21 45.3	-2.8
PBRG				i IAML		06 21 48.2	
PBRG				i IAML		06 21 49.1	
PBRG				i IAML		06 21 49.1	
ELGU	Los Guajares,	5.80	89	S	Sn	06 21 46.8	-2.2
IFR	Ifrane	5.84	125	P	Pn	06 20 43.5	-0.7
IFR				S	Sn	06 21 45.2	-4.8
ECAL	Calabor	5.88	32	P	Pn	06 20 45.2	+0.5
ECAL				S	Sn	06 21 48.8	-2.2
ECAL	Calabor	5.88	32	Pn	Pn	06 20 45.5	+0.9
ECAL				Sn	Sn	06 21 48.0	-2.9
PSIM	Granatula de C	5.91	70	Pn	Pn	06 20 46.6	+1.6
PSIM				Sn	Sn	06 21 49.6	-2.0
LCRM	LCR	5.92	122	P	Pn	06 20 42.4	-2.8
LCRM	LCR	5.92	122	S	Sn	06 21 45.4	-6.5
EAGO	Agolada(Pontev	6.18	19	Pn	Pn	06 20 49.9	+1.2
EAGO				Sn	Sn	06 21 53.9	-4.2
EQES	Quesada	6.26	80	Pn	Pn	06 20 51.2	+1.3
EQES				Sn	Sn	06 21 59.0	-1.3
OUK	Oukaimeden	6.29	156	P	Pn	06 20 48.2	-2.3
OUK	Oukaimeden	6.29	156	S	Sn	06 21 56.2	-5.0
MD31	MD31	6.49	128	P	Pn	06 20 50.0	-3.1
MD31	MD31	6.49	128	S	Sn	06 21 58.8	-7.1
MDT	Midelt	6.62	127	P	Pn	06 20 51.8	-3.1
MDT	Midelt	6.62	127	S	Sn	06 22 01.9	-7.3
TIO	Tiouine	6.75	153	P	Pn	06 20 56.3	-0.4
TIO				S	Sn	06 22 06.6	-5.8
TIO	Tiouine	6.75	153	P	Pn	06 20 54.9	-1.7
TIO	Tiouine	6.75	153	S	Sn	06 22 07.1	-5.4
EPON	Pontenova	6.94	23	Pn	Pn	06 20 60.0	+0.9
EPON				Sn	Sn	06 22 14.0	-2.7
OUZM	OUZ	6.96	149	P	Pn	06 20 58.4	-1.2
OUZM	OUZ	6.96	149	S	Sn	06 22 12.6	-5.0
TZRR	Tazzarine	7.60	143	P	Pn	06 21 05.8	-2.5
TZRR	Tazzarine	7.60	143	S	Sn	06 22 26.7	-6.6

TAP 18 06:41:15.9, 22°.74N×120°.86E, h9^{km}, ML1.9, 4C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECL	Taimali	0.17	148	i P	Pg	06 41 20.3	+0.9
ECL				i S	Sg	06 41 22.4	+0.6
SSD	Sandimen	0.21	272	⇑ iP	Pg	06 41 20.6	+0.4
SSD				i S	Sg	06 41 23.3	+0.1
TWG	Pinlang	0.21	67	⇑ iP	Pg	06 41 20.9	+0.7
TWG				S	Sg	06 41 24.0	+0.8
TWGBT	Beinan	0.22	69	⇑ iP	Pg	06 41 20.9	+0.6
TWGBT				S	Sg	06 41 23.6	+0.3
MASBT	Mashibuluo	0.24	239	⇑ iP	Pg	06 41 21.4	+0.6
MASBT				i S	Sg	06 41 24.5	+0.4
EAST	Anshuo	0.35	182	P	Pb	06 41 23.7	-0.7
EAST				S	Sg	06 41 28.3	+0.8
SCZT	Fangliau	0.43	211	P	Pg	06 41 24.8	+0.6
SCZT				eS	Sg	06 41 30.8	+1.0
STYH	Taoyuan	0.44	350	P	Pg	06 41 24.9	+0.5
STYH				S	Sg	06 41 30.9	+0.7
ELDTW	Lidau	0.47	18	i P	Pg	06 41 25.4	+0.3
ELDTW				i S	Sg	06 41 31.8	+0.5
EHD	Haiduan	0.52	38	eP	Pg	06 41 25.6	-0.4
EHD				eS	Sg	06 41 31.7	-1.1
SLIU	Shizi	0.52	186	eP	Pg	06 41 26.4	+0.4
SLIU				eS	Sg	06 41 33.6	+0.8
WTP	Ta-pu	0.55	336	eP	Pb	06 41 28.4	+0.6
WTP				eS	Sb	06 41 36.6	+0.8
TPUB	Ta-pu	0.60	339	P	Pb	06 41 29.2	+0.6
TPUB				eS	Sn	06 41 38.9	-1.6
TWF1	Yuli	0.73	33	P	Pg	06 41 30.0	0.0
TWF1				eS	Sg	06 41 38.7	-0.8
YUS	Yu-Shan	0.75	6	P	Pg	06 41 30.7	+0.2
YUS				eS	Sb	06 41 41.8	-0.2

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*TAP **18** 06:41:28.3, 24°.64N×122°.66E, h105^{km}, ML3.3, C*

*JMA **18** 06:41:28.5±0.2, 25°N±2°×122°.6E±0°.6, h104^{km}±2^{km}, MV2.1/12, NW OFF ISHIGAKIJIMA IS*

ISC 18 06:41:29.1±1.5, 24°.58N±0°.04×122°.66E±0°.03, h100^{km}±8^{km}, n88, σ0ˢ.80/160, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.29	116	eP	Pn	06 41 43.8	+0.1
JYNG				eS	Sn	06 41 55.0	+0.5
YOJ	Yonaguni jima	0.34	110	P	Pn	06 41 43.9	0.0
YOJ				S	Sn	06 41 55.3	+0.4
YOJ	Yonaguni jima	0.34	110	eP	Pn	06 41 44.2	+0.3
YOJ				eS	Sn	06 41 55.4	+0.4
EOS2	EOS2	0.42	248	P	Pn	06 41 44.6	+0.4
EOS2				S	Sn	06 41 56.9	+1.4
EOS3	EOS3	0.43	227	P	Pn	06 41 44.8	+0.6
EOS3				S	Sn	06 41 57.5	+1.9
EOS4	EOS4	0.55	214	P	Pn	06 41 45.0	+0.1
EOS4				S	Sn	06 41 57.4	+0.7
TWC	Suao	0.74	272	i P	Pn	06 41 46.4	-0.5
TWC				S	Sn	06 41 59.2	-1.0
ESAO	Su ao	0.74	270	P	Pn	06 41 46.1	-0.8
ESAO				eS	Sn	06 41 59.7	-0.6
TWB1	Santiao Chiao	0.74	305	P	Pn	06 41 46.6	-0.3
TWB1				eS	Sn	06 41 59.6	-0.7
EWUT	Wuta	0.81	261	P	Pn	06 41 47.2	-0.4
EWUT				eS	Sn	06 42 01.2	-0.2
ENA	Nanau	0.85	260	eP	Pn	06 41 47.7	-0.2
ENA				eS	Sn	06 42 02.3	+0.2
TIPB	Shuangxi	0.85	297	i P	Pn	06 41 47.8	-0.2
TIPB				S	Sn	06 42 01.4	-0.8
NDS	Dongshan	0.86	274	eP	Pn	06 41 48.0	-0.1
NDS				eS	Sn	06 42 02.0	-0.3
EAHA	Aohua	0.87	254	eP	Pn	06 41 48.1	-0.1
EAHA				S	Sn	06 42 03.2	+0.6
SXI1	Grass Mountain	0.88	306	P	Pn	06 41 48.0	-0.3
SXI1				eS	Sn	06 42 02.8	0.0
TWE	Neicheng	0.91	279	i P	Pn	06 41 48.4	-0.2
TWE				eS	Sn	06 42 02.6	-0.7
NWF	Wu-fen Shan	0.94	302	P	Pn	06 41 48.2	-0.7
NWF				eS	Sn	06 42 03.9	+0.1
WFSB	Wu-fen Shan	0.94	302	eP	Pn	06 41 48.8	0.0
WFSB				eS	Sn	06 42 03.9	+0.2
FUSB	Fushanzhiwuyua	0.99	281	P	Pn	06 41 49.4	-0.2
FUSB				eS	Sn	06 42 04.3	-0.6
ENTT	Nioudou	1.00	274	i P	Pn	06 41 49.9	+0.4
ENTT				eS	Sn	06 42 04.8	-0.1
IRIF	Iriomote-Funau	1.01	104	eP	Pn	06 41 49.6	+0.1
IRIF				eS	Sn	06 42 04.8	-0.2
LATG	Datong	1.03	268	P	Pn	06 41 49.9	-0.1
LATG				eS	Sn	06 42 05.1	-0.7
ETL	Fush Village	1.03	246	P	Pn	06 41 49.2	-0.7
ETL				eS	Sn	06 42 04.9	-0.7
NACB	Ninganchiao	1.05	248	P	Pn	06 41 49.5	-0.6
NACB	Ninganchiao	1.05	248	eP	Pn	06 41 49.4	-0.6
NACB				S	Sn	06 42 05.5	-0.4
TWA	Mucha	1.06	292	eP	Pn	06 41 50.0	-0.2
TWA				eS	Sn	06 42 05.1	-0.9
NWLT	Wulai	1.07	281	P	Pn	06 41 50.2	-0.2
NWLT				i S	Sn	06 42 05.3	-1.1
TWD	Chiawan	1.09	243	i P	Pn	06 41 49.9	-0.6
TWD				S	Sn	06 42 06.1	-0.6
HWA	Hwalien	1.13	238	eP	Pn	06 41 50.7	-0.3
TATO	Taipei	1.14	291	P	Pn	06 41 50.8	-0.2
ETLH	Xiulin Townshi	1.14	251	eP	Pn	06 41 50.8	-0.4
ETLH				S	Sn	06 42 07.0	-0.8
ZUZH	Zhuzihu	1.17	300	P	Pn	06 41 51.1	-0.3
ZUZH				eS	Sn	06 42 07.7	-0.6
HATJ	Hateruma jima	1.17	116	eS	Sn	06 42 07.8	-0.5
YHNB	Yeheng	1.17	275	P	Pn	06 41 51.6	+0.1
YHNB	Yeheng	1.17	275	P	Pn	06 41 51.6	+0.1
YHNB				S	Sn	06 42 08.1	-0.4
NNSB	Datong	1.17	263	eP	Pn	06 41 51.4	-0.2
NNSB				eS	Sn	06 42 08.0	-0.6
NNS	Nan Shan	1.18	264	eP	Pn	06 41 51.5	-0.1
NNS				eS	Sn	06 42 08.2	-0.5
NSK	Sanguang	1.19	275	i P	Pn	06 41 51.8	+0.1
NSK				eS	Sn	06 42 08.5	-0.3
TEYL	Yanliau Villag	1.20	234	eP	Pn	06 41 51.4	-0.4
TEYL				eS	Sn	06 42 09.0	+0.1
ETM	Tongmen	1.23	240	eP	Pn	06 41 51.6	-0.5
ETM				eS	Sn	06 42 08.8	-0.6
TWS1	Kuangyinshan	1.24	295	eP	Pn	06 41 52.1	-0.2
TWS1				eS	Sn	06 42 09.4	-0.4
LXIB	Xiulin Townshi	1.27	244	eP	Pn	06 41 52.1	-0.7
LXIB				eS	Sn	06 42 10.3	-0.2
SHUL	Shoufeng	1.27	232	i P	Pn	06 41 52.5	-0.2
SHUL				S	Sn	06 42 10.6	+0.1
JKRS	Kuro-shima	1.28	105	eP	Pn	06 41 53.5	+0.8
JKRS				eS	Sn	06 42 11.5	+1.0
FUSS	Fushou	1.33	256	eP	Pn	06 41 53.8	+0.2
WHF	Hehuan Shan	1.34	251	i P	Pn	06 41 53.5	-0.4
WHF				eS	Sn	06 42 12.3	-0.3
ESL	Shilin	1.35	236	eP	Pn	06 41 53.0	-0.6
KSHI	Guanxi Townshi	1.36	279	eP	Pn	06 41 54.1	+0.4
KSHI				i S	Sn	06 42 12.3	0.0
JIJ	Ishigaki jima	1.37	99	P	Pn	06 41 53.8	0.0
TWT	Tachien	1.39	257	P	Pn	06 41 54.7	+0.5
TWT				S	Sn	06 42 13.2	0.0
NFF	Wufeng Townshi	1.40	272	i P	Pn	06 41 54.4	+0.1
NFF				i S	Sn	06 42 13.1	-0.2
TDCB	Techi	1.41	257	i P	Pn	06 41 54.9	+0.5
TDCB				S	Sn	06 42 12.7	-0.8
EGFH	Guangfu	1.45	231	eP	Pn	06 41 54.2	-0.5
EGFH				eS	Sn	06 42 12.8	-1.3
WARBT	Fenglin Townsh	1.45	234	P	Pn	06 41 53.8	-0.9
WARBT				eS	Sn	06 42 12.5	-1.7
OWD	Renai	1.49	246	i P	Pn	06 41 55.0	-0.4
OWD				i S	Sn	06 42 14.9	-0.4
LIOB	Emei	1.50	273	i P	Pn	06 41 55.5	+0.1
LIOB				i S	Sn	06 42 14.7	-0.6
JISG	Ishigakijimahi	1.50	89	P	Pn	06 41 54.5	-0.9
JISG				eS	Sn	06 42 14.6	-0.7
NSTT	Nanjuang	1.51	272	P	Pn	06 41 55.7	+0.2
NSTT				S	Sn	06 42 15.1	-0.4
WUSB	Renai	1.52	248	i P	Pn	06 41 56.1	+0.3
WUSB				eS	Sn	06 42 15.7	-0.3
HGSD	Ruisui	1.56	226	eP	Pn	06 41 55.8	-0.4
HGSD				eS	Sn	06 42 14.9	-1.8
WHP	Taichung City	1.59	259	i P	Pn	06 41 57.6	+1.0
WHP				S	Sn	06 42 18.2	+0.8
VWDT	VWDT	1.61	240	i P	Pn	06 41 57.0	+0.2
VWDT				S	Sn	06 42 17.5	-0.2
EHYH	Wanrong	1.62	228	eP	Pn	06 41 56.2	-0.7
EHY	Hungye	1.62	229	eP	Pn	06 41 56.1	-0.9
WCS	Beigang Elemen	1.68	252	eP	Pn	06 41 58.4	+0.8
NMLH	Miaoli	1.70	269	eP	Pn	06 41 58.0	+0.1
NMLH				eS	Sn	06 42 19.8	0.0
YULB	Yu-li	1.72	227	P	Pn	06 41 57.4	-0.7
YULB	Yu-li	1.72	227	eP	Pn	06 41 57.5	-0.7
YULB				S	Sn	06 42 18.7	-1.4
NSY	Sanyi	1.74	265	eP	Pn	06 41 59.1	+0.8
NSY				eS	Sn	06 42 21.6	+1.0
TWF1	Yuli	1.75	226	eP	Pn	06 41 57.8	-0.6
TWF1				eS	Sn	06 42 18.5	-2.3
SMLT	Sun Moon Lake	1.75	247	P	Pn	06 41 59.3	+0.7
TYC	Yuchr	1.78	248	P	Pn	06 41 59.7	+0.9
TYC				eS	Sn	06 42 23.4	+2.0
CHKH	Chenggong	1.80	220	eP	Pn	06 41 58.8	-0.4
CHKH				S	Sn	06 42 21.4	-0.6
FULB	Fuli	1.86	223	eP	Pn	06 42 00.0	+0.1
FULB				eS	Sn	06 42 22.9	-0.5
WHYT	Xinyi Township	1.87	242	P	Pn	06 42 01.1	+1.0
WHYT				eS	Sn	06 42 25.9	+2.2
CHKT	Chengkung	1.89	219	P	Pn	06 41 59.5	-0.8
CHKT				eS	Sn	06 42 22.2	-1.9
YUS	Yu-Shan	1.90	236	P	Pn	06 42 01.1	+0.2
YUS				eS	Sn	06 42 24.6	-0.4
WJS	Zhushan	1.92	247	eP	Pn	06 42 01.2	+0.5
ALS	Alishan	2.00	238	eP	Pn	06 42 02.4	+0.4
ALS				eS	Sn	06 42 28.3	+1.2
ELDTW	Lidau	2.04	228	eP	Pn	06 42 01.7	-0.7
ELDTW				eS	Sn	06 42 27.4	-0.3
CHN5	Tsauling	2.06	242	eP	Pn	06 42 03.3	+0.8
CHN5				eS	Sn	06 42 30.1	+2.0
STYH	Taoyuan	2.22	231	P	Pn	06 42 05.6	+1.1
STYH				eS	Sn	06 42 32.7	+1.0
TPUB	Ta-pu	2.25	236	P	Pn	06 42 06.2	+1.2
TPUB	Ta-pu	2.25	236	eP	Pn	06 42 06.0	+0.9
TPUB				eS	Sn	06 42 34.9	+2.4
WTP	Ta-pu	2.29	235	eP	Pn	06 42 06.5	+0.9
TWK	Hsinying	2.38	237	eP	Pn	06 42 07.8	+1.1
TWK				eS	Sn	06 42 35.2	-0.3
CHN1	Nanshi	2.39	235	eP	Pn	06 42 07.9	+1.0
CHN1				eS	Sn	06 42 37.3	+1.5
LYUB	Lan-yu	2.75	201	eP	Pn	06 42 12.3	+0.8
LYUB				eS	Sn	06 42 41.2	-3.0

IDC 18 07:06:55.5±242.0, 56°.77N×42°.17E, h0^{km}, Error ellipse: s-maj=99.1km s-min=64.1km az=94.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	2.73	271	I	I	07 23 50.0	
	0.1nm,0.8s,baz=88,slow=328,SNR=5.8						
I31KZ	AKTYUBINSK INF	11.36	117	I	I	08 15 10.0	
	baz=314,slow=321,SNR=1.3						
I46RU	ZALESOVO INFRA	24.11	79	I	I	09 35 20.0	
	baz=295,slow=328,SNR=2.1						
I34MN	SONGINO INFRAS	38.93	75	I	I	11 03 50.0	
	baz=307,slow=340,SNR=0.8						

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*SKHL **18** 07:16:17.4±0.7, 45°.10N×149°.70E, h33^{km}±2^{km}, mb4.7/4*

*IDC **18** 07:16:19.6±5.5, 45°.27N×149°.58E, h89^{km}±61^{km}, mb3.1/3, mbtmp3.6/4, ML2.7/1, MS2.7/1, Error ellipse: s-maj=278.3km s-min=30.4km az=121.0*

ISC 18 07:16:17.1±1.0, 45°.1N±0°.1×149°.64E±0°.09, h60^{km}, n16, σ1ˢ.38/13, mb3.3/3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.26	275	eP	Pn	07 16 37.7	-0.9
KUR				AMB	AMB	07 16 38.1	
	1µm,0.5s						
KUR				eS	Sn	07 16 53.5	-1.1
KUR				A	A	07 16 54.9	
	2µm,0.6s						
KUR				A	A	07 16 54.9	
	2µm,0.6s						
YUK	Yuzh-Kuril'sk	2.92	249	eP	Pn	07 17 02.6	+1.5
YUK				AMB	AMB	07 17 04.5	
	80nm,0.4s						
YUK				eS	Sn	07 17 34.3	-0.6
YUK				A	A	07 17 42.7	
	400nm,0.5s						
YUK				A	A	07 17 42.7	

	400nm,0.5s						
NMR	Nemuro--Hokkai	3.32	239	*e*P	Pn	07 17 07.3	+0.7
NMR				*e*S	Sn	07 17 44.4	-0.4
AKK	Akkeshi	4.06	240	*e*P	Pn	07 17 18.5	+1.9
AKK				*e*S	Sn	07 18 01.7	-1.1
YSS	Yuzhno-Sakhali	5.13	293	*e*P	Pn	07 17 33.4	+2.1
YSS				AMB	AMB	07 17 38.7	
	20nm,0.6s						
PETK	Petropavlovsk-	9.56	31	P	Pn	07 18 33.2	+1.3
	0.3nm,0.3s,baz=201,slow=14,SNR=5.2						
	6.9nm,1.0s						
MA2	Magadan	14.48	2	LR	LR	07 24 50.1	
	comp=Z,32nm,18.6s,baz=108,slow=36						
H11N2	WAKE ISLAND Hy	29.09	145	T	T	07 53 01.4	
	baz=335,slow=76,SNR=110						
H11N1	WAKE ISLAND Hy	29.11	145	T	T	07 53 01.0	
	baz=335,slow=76,SNR=98						
H11N3	WAKE ISLAND Hy	29.11	145	T	T	07 53 02.5	
	baz=335,slow=76,SNR=105						
H11S1	WAKE ISLAND Hy	30.12	146	T	T	07 54 18.2	
	baz=336,slow=76,SNR=198						
H11S3	WAKE ISLAND Hy	30.12	146	T	T	07 54 22.2	
	baz=336,slow=76,SNR=98						
H11S2	WAKE ISLAND Hy	30.14	146	T	T	07 54 19.4	
	baz=336,slow=76,SNR=97						
ILAR	Eielson Array	39.31	37	P	P	07 23 38.2	-1.6
	0.4nm,0.8s,baz=276,slow=8.4,SNR=3.0						
	0.4nm,0.8s						
ASAR	Alice Springs	69.96	195	P	P	07 27 22.0	0.0
	0.2nm,0.6s,baz=15,slow=5.2,SNR=4.6						
	0.2nm,0.6s						
TXAR	Lajitas Array	80.40	58	P	P	07 28 21.8	-0.5
	0.2nm,0.5s,baz=324,slow=6.2,SNR=7.1						
	0.2nm,0.5s						

NNC ***18*** *07:19:37.1±12.0, 49°.69N×81°.89E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=169.9km s-min=36.1km az=54.0, Suspected Mining explosion.*
IDC ***18*** *07:19:38.9±1.3, 49°.72N×81°.66E, h0^{km}, mbtmp2.2/2, ML1.7/2, Error ellipse: s-maj=17.4km s-min=8.6km az=58.0*
ISC 18 07:19:36.8±1.2**, 49°.58N**±0°.08×**81°.52E**±0°.10**, h0^{km}, n8, σ0^s.46**/9**, 3C-4D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	2.19	302	⇓Pn	Pb	07 20 17.5	+0.3
	2.7nm,0.9s						
KURK				⇓Sn	Sg	07 20 47.2	+0.2
	5.8nm,0.8s						
KURBB	Kurchatov Arra	2.19	299	Pg	Pg	07 20 18.4	-0.3
	0.1nm,0.3s,baz=112,slow=19,SNR=31						
KURBB				Lg	Lg	07 20 48.8	
	0.2nm,0.3s,baz=108,slow=31,SNR=12						
KURBB	Kurchatov Arra	2.19	299	⇑Pn	Pb	07 20 17.5	+0.2
	9.5nm,0.9s						
KURBB				⇑Sn	Sg	07 20 47.0	-0.1
	17nm,0.7s						
MAKZ	Makanchi	2.79	174	⇓Lg	Lg	07 21 07.7	
	3.7nm,0.8s						
MK31	Makanchi Array	2.84	169	⇑Pg	Pg	07 20 30.3	-0.8
	0.9nm,0.6s,baz=99,slow=15,SNR=5.1						
MK31				⇓Lg	Lg	07 21 09.0	
	2.9nm,0.6s,baz=192,slow=35,SNR=10.0						
MKAR	Makanchi Array	2.84	169	Pn	Pb	07 20 28.8	+0.5
	0.2nm,0.3s,baz=349,slow=14,SNR=3.8						
MKAR				Pg	Pg	07 20 31.2	+0.1
	0.2nm,0.3s,baz=357,slow=15,SNR=6.6						
MKAR				Lg	Lg	07 21 10.2	
	0.4nm,0.3s,baz=352,slow=28,SNR=15						
	0.3nm,0.4s						
I46RU	ZALESOVO INFRA	4.83	24	I	I	07 48 20.0	
	0.1nm,1.2s,baz=200,slow=328,SNR=1.5						
ZALV	Zalesovo Beam	4.83	24	Pn	Pn	07 20 50.6	0.0
	0.1nm,0.3s,baz=213,slow=12,SNR=1.7						
ZALV				Lg	Lg	07 22 08.9	
	0.2nm,0.3s,baz=198,slow=23,SNR=6.6						
	0.4nm,0.4s						

BER ***18*** *07:38:44.1±3.6, 75°.94N×7°.32E, h10^{km}, Mw3.5, ML2.8(NAO), Confirmed Earthquake*
NAO ***18*** *07:38:44.1±0.7, 76°.03N×7°.23E, h15^{km}, ML2.8*
DNK ***18*** *07:38:46.8±1.1, 76°.38N×5°.64E, h2^{km}±10^{km}, ML1.9, Presumed earthquake*
FCIAR ***18*** *07:38:47.0, 75°.96N×8°.41E, h10^{km}, station SPA0 has station magnitude of 2.84*
KOLA ***18*** *07:38:48.5, 76°.32N×8°.75E, h0^{km}, ML1.9, Error ellipse: s-maj=23.3km s-min=15.7km az=10.0, Greenland sea, Knipovich ridge, middle*
ISC 18 07:38:38.5±0.8**, 76°.07N**±0°.05×**6°.99E**±0°.04**, h10^{km}, n37, σ3^s.16**/55**, 1C, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSPB	Hornsund (broa	2.21	61	Pn	Pb	07 39 19.5	+1.1
HSPB				Sn	Sn	07 39 42.5	+0.1
HSPB	Hornsund (broa	2.21	61	P	Pb	07 39 19.3	+0.9
HSPB				S	Sn	07 39 42.6	+0.1
HSPB	Hornsund (broa	2.21	61	*e*P	Pb	07 39 19.1	+0.7
HSPB				*e*S	Sn	07 39 42.9	+0.5
HSPB	Hornsund (broa	2.21	61	*e*P	Pb	07 39 19.5	+1.1
HSPB				*e*S	Sn	07 39 42.4	0.0
HSPB				IAML		07 39 43.8	
	comp=Z,7.1nm,0.3s						
BRBB	Barentsburg B	2.60	35	Pn	Pb	07 39 25.6	+0.5
BRBB	Barentsburg B	2.60	35	P	Pg	07 39 27.2	-1.0
BRBB				S	Sn	07 39 50.3	-1.8
BRBB	Barentsburg B	2.60	35	*e*P	Pb	07 39 26.0	+0.9
SPA0	Spitsbergen Ar	2.98	40	Pn	Pb	07 39 31.9	+0.3
	baz=219,slow=12						
SPA0				Sn	Sb	07 40 04.4	-3.6
	baz=226,slow=22						
SPA0	Spitsbergen Ar	2.98	40	⇑*i*P	Pb	07 39 31.8	+0.3
SPA0				*i* S	Sb	07 40 04.8	-3.2
SPA0	Spitsbergen Ar	2.98	40	Pn	Pb	07 39 31.9	+0.3
	baz=219,slow=12						
SPA0				Sn	Sb	07 40 04.4	-3.6
	baz=226,slow=22						
SPA0				IAML		07 40 07.8	
	comp=Z,7.4nm,0.5s						
SPITS	Spitsbergen Ar	2.98	40	P	Pb	07 39 31.4	-0.2
SPITS				S	Sn	07 40 04.2	+2.6
KBS	Kingsbay	3.07	18	Pn	Pb	07 39 33.4	+0.3
KBS	Kingsbay	3.07	18	P	Pb	07 39 33.2	+0.1
KBS				S	Sb	07 40 07.1	-3.3
KBS	Kingsbay	3.07	18	*e*P	Pb	07 39 33.9	+0.9
KBS	Kingsbay	3.07	18	*i* P	Pb	07 39 33.3	+0.3
KBS				*i* S	Sb	07 40 07.5	-3.0
HOPEN	Hopen	4.30	75	Pn	Pn	07 39 48.2	+4.3
HOPEN				Sn	Sn	07 40 32.2	-1.8
HOPEN	Hopen	4.30	75	Pn	Pn	07 39 48.2	+4.3
HOPEN				Sn	Sn	07 40 32.2	-1.8
DAG	Danmarks Havn	6.05	289	*e*P	Pn	07 40 11.8	+4.0
DAG	Danmarks Havn	6.05	289	*i* P	Pn	07 40 11.0	+3.1
DAG				*i* S	Sn	07 41 12.2	-4.8
DAG				IAML		07 41 20.9	
	comp=Z,2.7nm,0.5s						
NOR	Nord	7.12	332	Pn	Pn	07 40 27.5	+5.0
NOR	Nord	7.12	332	*e*P	Pn	07 40 27.7	+5.2
NOR	Nord	7.12	332	*i* P	Pn	07 40 25.2	+2.7
DBG	Daneborg	7.15	269	Pn	Pn	07 40 26.3	+3.4
DBG				Sn	Sn	07 41 42.1	-1.9
DBG	Daneborg	7.15	269	Pn	Pn	07 40 26.3	+3.4
DBG				Sn	Sn	07 41 42.1	-1.9
DBG	Daneborg	7.15	269	*i* P	Pn	07 40 25.9	+3.0
DBG				*i* S	Sn	07 41 41.0	-3.0
DBG				IAML		07 41 48.4	
	comp=Z,3.3nm,0.7s						
KIF	Kilpisjarvi	8.19	143	Pn	Pn	07 40 41.5	+4.4
KIF	Kilpisjarvi	8.19	143	Pn	Pn	07 40 41.5	+4.4
ARA0	ARCESS Array S	8.50	131	Pn	Pn	07 40 44.4	+2.9
	baz=332,slow=11						
ARA0				Sn	Sn	07 42 10.4	-6.8
	baz=329,slow=22						
ARA0	ARCESS Array S	8.50	131	Pn	Pn	07 40 44.4	+2.9
	baz=332,slow=11						
ARA0				Sn	Sn	07 42 10.4	-6.8
	baz=329,slow=22						
KTK1	Kautokeino	8.56	137	*e*P	Pg	07 41 13.5	-8.7
KEV	Kevo	8.59	127	Pn	Pn	07 40 46.8	+4.0
KEV				Sn	Sn	07 42 13.2	-6.3
KEV	Kevo	8.59	127	Pn	Pn	07 40 46.8	+4.0
KEV				Sn	Sn	07 42 13.2	-6.3
KEV	Kevo	8.59	127	SN	Sn	07 42 13.1	-6.4
ZFI2	Zemlya Franca-	9.20	41	P	Pn	07 40 56.3	+5.3
ZFI2				S	Sn	07 42 33.4	-0.9
OMEGA	Omega	9.21	41	P	Pn	07 40 56.5	+5.4
OMEGA				S	Sn	07 42 33.5	-1.1
SCO	Scoresbysund	9.93	251	*i* P	Pn	07 41 04.4	+3.5
SCO				*i* S	Sn	07 42 46.5	-5.7
SCO	Scoresbysund	9.93	251	*i* P	Pn	07 41 04.4	+3.5
SCO				*i* S	Sn	07 42 46.5	-5.7
SCO				IAML		07 43 26.9	
	comp=Z,4.0nm,1.1s						

HEL 18 07:40:44.1±0.4**, 67°.82N×20°.16E, h0^{km}, ML1.4, Suspected explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANU	Lannavaara	0.73	71	PG	Pg	07 40 56.6	-1.5
LANU				SG	Sg	07 41 06.2	-1.3
KIF	Kilpisjarvi	1.22	11	PN	Pn	07 41 08.3	0.0
KIF				SG	Sg	07 41 21.6	-1.5
KIF				MSG		07 41 21.9	
	comp=Z,3.1nm,0.2s						
HEF	Hetta	1.44	64	PG	Pn	07 41 09.7	-1.7
	baz=245						
HEF				MSG		07 41 27.4	
	comp=Z,2.6nm,0.2s						
HEF				SG	Sg	07 41 29.0	-1.3
ERTU	Ertsjaerv	1.50	147	PN	Pn	07 41 11.9	-0.3
ERTU				SN	Sn	07 41 32.4	+0.1
KLF	Kolari	1.57	110	PN	Pn	07 41 12.1	-1.1
KLF				MSG		07 41 31.3	
	comp=Z,1.7nm,0.2s						
KLF				SN	Sg	07 41 34.7	+0.1
KTK1	Kautokeino	1.65	42	PG	Pn	07 41 14.3	-0.1
KTK1				SG	Sn	07 41 36.3	+0.1
JETT	Jettan, Norway	1.75	3	*e*P	Pn	07 41 14.3	-1.4
TRO	Tromso	1.88	347	SG	Sn	07 41 42.3	+0.5
KALU	Kalix	2.34	146	PG	Pn	07 41 24.2	+0.6
	baz=327						
TOF	Tornio	2.39	135	PG	Pn	07 41 25.4	+1.0
TOF				MSG		07 41 54.8	
	comp=Z,2.0nm,0.2s						
RNF	Rovaniemi	2.58	115	PG	Pn	07 41 28.4	+1.3
RNF				SG	Sb	07 42 01.9	-1.4
ARA0	ARCESS Array S	2.61	46	SB	Sn	07 42 01.8	+2.0
RAJF	Raja-Jooseppi	3.12	74	SG	Sb	07 42 19.2	+0.3
RANF	Ranua	3.18	122	SG	Sb	07 42 22.1	+1.6
VRF	Varrio	3.59	87	SN	Sn	07 42 22.4	-1.6
OBF8	Ulkokalla	3.75	158	PB	Pn	07 41 45.3	+2.2

CATAC ***18*** *07:47:54.4±0.1, 12°N±2°×8°7W±°, h113^{km}, M3.5/42, MLv3.5/42, Error ellipse: s-maj=4.7km s-min=1.9km az=39.6, confirmed*
UCR ***18*** *07:47:55.2±1.7, 11°.63N×87°.05W, h28^{km}±6^{km}, MW3.9*
ISC 18 07:47:54.6±1.3**, 12°.04N**±0°.04×**86°.69W**±0°.04**, h120^{km}**±6^{km}**, n115, σ0^s.84**/146**, 8C-9D, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	0.17	34	P	Pn	07 48 10.9	-0.2
COPN	Copaltepe	0.17	34	⇑*e*P	Pn	07 48 10.7	-0.5
COPN				*e*S	Sn	07 48 22.9	-0.7
AMTN	Mateare	0.32	52	S	Sn	07 48 24.8	+0.3
AMTN	Mateare	0.32	52	P	Pn	07 48 11.2	-0.4
ABCN	Banco Central	0.38	77	P	Pn	07 48 11.5	-0.3
ABCN	Banco Central	0.38	77	S	Sn	07 48 25.2	+0.3
APYN	Apoyeque	0.38	60	P	Pn	07 48 13.0	+1.1
APYN				S	Sn	07 48 25.9	+0.9
APQ2	Apoyeque	0.39	66	P	Pn	07 48 11.2	-0.8
APQ2				S	Sn	07 48 25.3	+0.3
MOMN	Momotombo	0.39	21	P	Pn	07 48 11.6	-0.4
ALLN	Telcor Managua	0.42	74	P	Pn	07 48 11.8	-0.3
ALLN	Telcor Managua	0.42	74	S	Sn	07 48 25.7	+0.5
MOM2	El Cardon	0.44	27	P	Pn	07 48 11.9	-0.4
MOM2				S	Sn	07 48 26.2	+0.7
MGAN	Managua	0.44	76	P	Pn	07 48 11.9	-0.3
MGAN	Managua	0.44	76	S	Sn	07 48 26.6	+1.2
MGAN	Managua	0.44	76	⇓*i*P	Pn	07 48 11.9	-0.3
MGAN				*e*S	Sn	07 48 25.3	-0.1
CNGA	Al SSO del Vol	0.45	358	P	Pn	07 48 12.2	-0.2
CNGN	Cerro Negro	0.46	359	P	Pn	07 48 12.2	-0.3
CNGN	Cerro Negro	0.46	359	S	Sn	07 48 27.1	+1.3
CNGN	Cerro Negro	0.46	359	⇑*e*P	Pn	07 48 12.0	-0.4
CNGN				*e*S	Sn	07 48 26.6	+0.8
MAS3	Al N del Volca	0.50	92	P	Pn	07 48 13.0	+0.5
MAS3				S	Sn	07 48 26.1	0.0
AERN	Aeropuerto Man	0.52	78	P	Pn	07 48 12.5	-0.1
AERN	Aeropuerto Man	0.52	78	S	Sn	07 48 26.8	+0.6
SABN	Sabanita	0.52	99	P	Pn	07 48 11.5	-1.2
NANN	Nandasmo	0.56	100	P	Pn	07 48 13.6	+0.6
NANN	Nandasmo	0.56	100	S	Sn	07 48 28.1	+1.3
QUEN	Al S del Volca	0.57	344	P	Pn	07 48 12.1	-1.0
TELN	Telica	0.58	346	P	Pn	07 48 11.4	-1.9
POLN	Al Sur del Vol	0.62	349	P	Pn	07 48 13.1	-0.3
POLN				S	Sn	07 48 29.2	+1.6
PKGN	Cerro Pekin	0.69	336	P	Pn	07 48 13.7	-0.2
PKGN				S	Sn	07 48 29.1	+0.7
NADN	Granada	0.70	114	P	Pn	07 48 13.0	-1.0
NADN				S	Sn	07 48 28.9	+0.3
NADN	Granada	0.70	114	*e*P	Pn	07 48 13.1	-0.9
NADN				*e*S	Sn	07 48 27.9	-0.7
CRIN	San Cristobal	0.75	332	P	Pn	07 48 14.1	-0.3
CRIN	San Cristobal	0.75	332	⇑*i*P	Pn	07 48 14.3	-0.2
CRIN				*e*S	Sn	07 48 29.5	+0.1
ARIN	Rivas	1.02	125	S	Sn	07 48 30.3	-3.2
LIMN	Finca el Limon	1.06	17	P	Pn	07 48 17.0	-0.4
LIMN				S	Sn	07 48 34.4	-0.3
BOAB	BOACO BROADBAN	1.08	68	P	Pn	07 48 17.2	-0.2
MORN	Al O del Volca	1.13	116	P	Pn	07 48 17.9	-0.1
MORN				S	Sn	07 48 34.2	-1.4
MATN	Matagalpa	1.16	40	P	Pn	07 48 16.8	-1.5
MATN	Matagalpa	1.16	40	S	Sn	07 48 35.4	-0.9
POTN	Potosi Cosigui	1.25	320	P	Pn	07 48 18.9	-0.3
POTN				S	Sn	07 48 38.1	+0.2
POTN	Potosi Cosigui	1.25	320	⇑*i*P	Pn	07 48 19.0	-0.2
POTN				*e*S	Sn	07 48 38.0	+0.2
CSGN	Cosiguina Volc	1.26	318	P	Pn	07 48 19.1	-0.3
CSGN				S	Sn	07 48 38.9	+0.7
CSGN	Cosiguina Volc	1.26	318	⇑*i*P	Pn	07 48 19.1	-0.3
CSGN				*e*S	Sn	07 48 38.4	+0.1
LCRUZ	La Cruz	1.41	133	⇓*i*P	Pn	07 48 20.9	-0.1
LCRUZ				*e*S	Sn	07 48 40.6	-0.5
CARN	Rivas	1.42	126	P	Pn	07 48 21.0	-0.2
CARN				S	Sn	07 48 41.0	-0.3
CARN	Rivas	1.42	126	*e*P	Pn	07 48 21.2	+0.1
RCON	San Juan de Ri	1.53	20	P	Pn	07 48 22.6	+0.1
RCPN	Sur Rio San Ju	1.59	21	P	Pn	07 48 23.0	-0.2
OCON	Estacion meteo	1.59	7	P	Pn	07 48 23.0	-0.3
RCVN	Varillal2	1.61	17	P	Pn	07 48 23.5	0.0
RCVN	Varillal2	1.61	17	S	Sn	07 48 45.7	+0.3
CNCH	Conchagua	1.66	318	P	Pn	07 48 23.7	-0.4
CNCH	Conchagua	1.66	318	S	Sn	07 48 46.9	+0.4
LCND	La Caada	1.72	317	P	Pn	07 48 24.4	-0.3
BUAI	Buenos Aires	1.76	131	*e*P	Pn	07 48 25.6	+0.5
PEJA	Penjamo Buenos	1.76	130	*e*P	Pn	07 48 24.7	-0.5
LAPC	Finca la Perla	1.76	136	⇑*e*P	Pn	07 48 24.9	-0.3
ELI1	Hacienda Flor	1.78	141	P	Pn	07 48 26.5	+1.1
ELI1	Hacienda Flor	1.78	141	S	Sn	07 48 49.5	+0.7
VORI	VORI	1.79	133	*e*P	Pn	07 48 26.8	+1.0
VRLE	La Escondida,	1.80	134	*e*P	Pn	07 48 26.1	+0.4
GPS1	Guardaparques	1.82	134	*e*P	Pn	07 48 26.8	+0.9
GPS3	Bodega del ICE	1.82	134	*e*P	Pn	07 48 28.6	+2.6
GPS3				*e*S	Sn	07 48 51.6	+1.8
ALIBA	Liberia Airpor	1.82	142	*e*P	Pn	07 48 26.4	+0.4
ALIBA				*e*S	Sn	07 48 51.2	+1.4
GPS2	Hotel Rincn d	1.83	134	*e*P	Pn	07 48 26.6	+0.5
YUSH	Yuscaran	1.91	355	P	Pn	07 48 27.2	+0.1
DELF	Filadelfia	1.93	145	⇓*i*P	Pn	07 48 28.0	+0.8
DELF				*e*S	Sn	07 48 52.5	+0.3
CLARA	Aguas Claras	1.94	130	*e*P	Pn	07 48 27.3	-0.1
CLARA				*e*S	Sn	07 48 52.5	+0.2
MESS	Mesas	1.95	131	⇓*i*P	Pn	07 48 27.3	-0.3
VMAR	Armenia, Volca	1.97	128	⇓*i*P	Pn	07 48 27.1	-0.7
VMAR				*e*S	Sn	07 48 53.2	+0.2
UPAL	Upala	2.00	124	P	Pn	07 48 27.3	-0.7
UPAL	Upala	2.00	124	*e*P	Pn	07 48 27.3	-0.7
UPAL				*e*S	Sn	07 48 53.3	-0.2
CUI	Cuipilapa	2.03	132	⇑*i*P	Pn	07 48 28.8	+0.2
BAGA	Bagaces	2.05	137	⇓*i*P	Pn	07 48 28.7	-0.1
BAGA				*e*S	Sn	07 48 54.3	-0.6
TGUH	Tegucigalpa,Un	2.08	344	P	Pn	07 48 31.4	+2.0
PLVR	Palo Verde	2.13	142	*e*P	Pn	07 48 30.6	+0.7
PACA	Pacayal	2.14	312	P	Pn	07 48 30.6	+0.6
PACA	Pacayal	2.14	312	S	Sn	07 48 57.3	+0.3
JUD3	Juan Diaz 3	2.18	149	⇓*i*P	Pn	07 48 30.8	+0.4
TIMP	Tierras Morena	2.19	131	⇑*i*P	Pn	07 48 30.6	+0.1
INVE	Universidad In	2.23	134	*e*P	Pn	07 48 31.3	+0.3
NICO	Nicoya	2.25	147	⇓*i*P	Pn	07 48 31.7	+0.4
NICO				*e*S	Sn	07 48 57.9	-1.5
QUEB	Quebradon, Cot	2.25	129	*e*P	Pn	07 48 31.2	-0.2
QUEB				*e*S	Sn	07 49 01.1	+1.7
TILA	Tilaran	2.30	133	*e*P	Pn	07 48 31.5	-0.4
TILA				*e*S	Sn	07 49 00.1	-0.3
CMARA	Lajas Hojancha	2.36	148	P	Pn	07 48 33.0	+0.3
CMARA	Lajas Hojancha	2.36	148	S	Sn	07 48 60.0	-1.9
CMARA	Lajas Hojancha	2.36	148	⇓*i*P	Pn	07 48 33.0	+0.3
JTS	Las Juntas de	2.43	135	P	Pn	07 48 33.4	-0.2
JTS				S	Sn	07 49 02.6	-0.9
JTS	Las Juntas de	2.43	135	*e*P	Pn	07 48 33.4	-0.2
JUNT	Juntas	2.43	136	*e*P	Pn	07 48 33.6	-0.1
CEDE	Laguna Cedeo	2.48	128	*e*P	Pn	07 48 34.3	0.0
ARE1	Arenal 1	2.49	129	*e*P	Pn	07 48 34.4	0.0
VARE2	V. Arenal	2.49	129	*e*P	Pn	07 48 34.4	0.0
CASO	Castillo	2.49	130	*e*P	Pn	07 48 34.3	-0.1
SCLA	Alcaldia de Sa	2.59	310	P	Pn	07 48 35.7	+0.1
UESV	Universidad de	2.59	308	S	Sn	07 49 07.1	0.0
UESV	Universidad de	2.59	308	P	Pn	07 48 37.0	+1.3
JCR1	Jicaral	2.67	144	*e*P	Pn	07 48 37.3	+0.6
PAVA	Las Pavas	2.75	307	S	Sn	07 49 11.4	+0.3
VPL2	V. Platanar	2.84	127	*e*P	Pn	07 48 42.0	+3.0
UDBS	Universidad Do	2.93	305	S	Sn	07 49 14.9	-0.1
UEES	Universidad Ev	3.00	304	S	Sn	07 49 16.2	-0.4
JAYA	Jayaque - finc	3.13	301	S	Sn	07 49 18.2	-1.9
TRT2	Tortugero	3.25	117	P	Pn	07 48 43.5	-0.7
ACOS	Acosta	3.33	132	*e*P	Pn	07 48 45.6	+0.1
PICV	PH. Pirrs	3.43	134	*e*P	Pn	07 48 47.5	+0.8
NUBE	Las Nubes	3.54	302	P	Pn	07 48 48.4	+0.2
NUBE	Las Nubes	3.54	302	S	Sn	07 49 28.4	-1.2
ABRB	Las Abras (San	3.55	124	*e*P	Pn	07 48 48.8	+0.4
QUEP	Quepos	3.59	136	S	Sn	07 49 30.0	-0.6
RESJ	San Isidro (Tu	3.59	123	*e*P	Pn	07 48 48.8	-0.1
FAME	Alcaldia de Sa	3.71	299	P	Pn	07 48 50.3	0.0
FAME	Alcaldia de Sa	3.71	299	S	Sn	07 49 31.0	-2.4
BUS1	Rivas	3.80	130	*e*P	Pn	07 48 52.9	+0.9
DRK0	Durika	4.37	129	*e*P	Pn	07 48 59.5	+0.2

IDC 18 07:51:50.0±4.2**, 39°.40N×110°.47E, h0^{km}, mb3.8**/2**, mbtmp3.7**/3**, ML2.8**/1**, Error ellipse: s-maj=81.7km s-min=24.6km az=91.0, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZDM	Lanzhou Array	6.38	240	Pg	Pb	07 53 44.9	+2.9
	baz=72,slow=15						
SONM	Songino Array	8.93	342	Pn	Pn	07 54 00.2	-0.2
	0.1nm,0.3s,baz=155,slow=11,SNR=11						
SONM				Lg	Lg	07 56 32.0	
	0.1nm,0.3s,baz=154,slow=27,SNR=3.3						
	1.6nm,0.7s						
CMAR	Chiang Mai Arr	23.14	209	P	P	07 56 57.7	-0.1
	1.7nm,0.3s,baz=22,slow=9.5,SNR=4.7						
	1.7nm,0.3s						
KURBB	Kurchatov Arra	25.02	307	P	P	07 57 16.1	+0.6
	0.4nm,0.3s,baz=106,slow=9.9,SNR=4.2						
	0.4nm,0.3s						

ASRS ***18*** *08:08:28.0±2.2, 53°.73N×91°.06E, h0^{km}, M3.1, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
IDC 18 08:08:37.8±3.8**, 53°.50N×90°.42E, h0^{km}, mbtmp3.2**/3**, ML2.5**/3**, Error ellipse: s-maj=39.9km s-min=24.3km az=30.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	3.36	280	Pn	Pn	08 09 31.1	-0.3
	0.8nm,0.3s,baz=99,slow=15,SNR=17						
ZALV				Lg	Lg	08 10 23.6	
	2.9nm,0.3s,baz=98,slow=25,SNR=12						
	4.3nm,0.6s						
KURBB	Kurchatov Arra	7.88	253	Pn	Pn	08 10 33.4	0.0
	0.1nm,0.3s,baz=64,slow=14,SNR=11						
KURBB				Sn	Sn	08 12 02.3	-0.9
	0.1nm,0.3s,baz=68,slow=24,SNR=3.6						
KURBB				Lg	Lg	08 12 46.8	
	baz=67,slow=34,SNR=2.5						
	2.3nm,0.7s						
MKAR	Makanchi Array	8.50	221	Pn	Pn	08 10 42.9	+0.8
	0.1nm,0.3s,baz=40,slow=12,SNR=6.6						
	0.5nm,0.6s						
I34MN	SONGINO INFRAS	11.63	113	I	I	09 14 40.0	
	baz=309,slow=329,SNR=0.9						

VAO ***18*** *08:10:54.2±0.7, 20°.32S×69°.50W, h45^{km}±4^{km}, mb5.3, Presumed earthquake*
SJA ***18*** *08:11:02.7±0.8, 20°.25S×69°.15W, h108^{km}±3^{km}, ML5.1, MW4.7*
NEIC ***18*** *08:11:04, 20°.45S×69°.04W, h110^{km}, Moment Tensor Solution. Duration: 1^s.1 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.21; M$_{\theta\theta}$-0.38; M$_{\phi\phi}$0.17; M$_{r\theta}$0.50; M$_{\theta\phi}$0.07; M$_{\phi r}$-1.43; Fault plane solution: M$_0$1.56000×10^{16} NP1: ϕ_s258.60000°, δ9.07000°, λ10.70000°. NP2: ϕ_s158.04000°, δ88.32000°, λ98.91000°. Principal axes: T 1.6706, Plg46.0000°, Azm77.0000°; N -0.2641, Plg9.0000°, Azm338.0000°; P -1.4065, Plg43.0000°, Azm239.0000°;*
NEIC ***18*** *08:11:04.1±2.1, 20°.24S±0°.05×69°.07W±0°.07, h95^{km}±4^{km}, mb4.8/96, Mww4.7/19, Mwr4.8(GUC) Error ellipse: s-maj=9.6km s-min=6.7km az=89.0*
NEIC ***18*** *08:11:04, 20°.25S×69°.04W, h110^{km}*
GUC ***18*** *08:11:05.3±0.8, 20°.24S×69°.16W, h94^{km}±3^{km}, ML5.0*
IDC ***18*** *08:11:05.0±0.5, 20°.11S×68°.93W, h106^{km}±3^{km}, mb4.2/14, mbtmp4.5/18, MS3.6/10, Error ellipse: s-maj=13.8km s-min=11.5km az=58.0*
ISC 18 08:11:03.4±0.4**, 20°.22S**±0°.02×**69°.11W**±0°.04**, h100^{km}**±3^{km}**, n282, σ1^s.70**/277**, mb4.7**/72**, 14C-10D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.09	333		Pn	08 11 18.7	+0.9
PB08	IPOC Station P	0.09	333	⇓*e*P	Pn	08 11 18.6	+0.9
PB08				*e*S	Sn	08 11 29.2	+0.7
PB08				IAML		08 11 29.7	
	comp=N,202µm,0.3s						
PB08	IPOC Station P	0.09	333	*e*P	Pn	08 11 18.4	+0.7
PB08				IAML		08 11 33.0	
	comp=Z,47µm,0.4s						
PX03	IPOC Station P	0.52	250	*e*P	Pn	08 11 18.9	-0.5
GO01	Chusmiza	0.56	352		Pn	08 11 21.4	+1.2
GO01	Chusmiza	0.56	352	⇓*e*P	Pn	08 11 21.2	+1.1
GO01				*e*S	Sn	08 11 33.6	+1.0
GO01				IAML		08 11 36.6	
	comp=E,173µm,0.2s						
GO01	Chusmiza	0.56	352	*e*P	Pn	08 11 21.0	+0.8
GO01				*e*S	Sn	08 11 35.3	+2.7
GO01				IAML		08 11 36.6	
	comp=Z,75µm,0.1s						
PB11	IPOC Station P	0.69	312		Pn	08 11 21.8	+1.0
PB11	IPOC Station P	0.69	312	⇑*e*P	Pn	08 11 21.6	+0.7
PB11				*e*S	Sn	08 11 34.5	+0.6
PB11	IPOC Station P	0.69	312	*e*P	Pn	08 11 21.5	+0.7
PB11				*e*S	Sn	08 11 35.3	+1.4
PB11				IAML		08 11 37.3	
	comp=Z,34µm,0.3s						
PB01	IPOC Station P	0.89	203		Pn	08 11 23.5	+0.7
PB01	IPOC Station P	0.89	203	⇑*e*P	Pn	08 11 23.3	+0.6
PB01				*e*S	Sn	08 11 38.0	+0.7
PB01				IAML		08 11 39.0	
	comp=E,78µm,0.3s						
PB01	IPOC Station P	0.89	203	*e*P	Pn	08 11 23.2	+0.6
PB01				*e*S	Sn	08 11 38.4	+1.1
PB01				IAML		08 11 39.2	
	comp=Z,18µm,0.4s						
TA02	Huaiquique	0.96	267	⇑*e*P	Pn	08 11 24.0	+0.7
TA02				*e*S	Sn	08 11 37.8	-0.6
TA02	Huaiquique	0.96	267	*e*P	Pn	08 11 24.0	+0.7

TA02				eS	Sn	08 11 39.1	+0.7
TA02				IAML		08 11 42.0	
	comp=Z,73µm,0.1s						
TA01	Diego Aracena	1.06	251		Pn	08 11 24.8	+0.3
TA01	Diego Aracena	1.06	251	⇑eP	Pn	08 11 24.7	+0.3
TA01				eS	Sn	08 11 39.9	-0.4
TA01				IAML		08 11 44.7	
	comp=E,28µm,0.3s						
TA01	Diego Aracena	1.06	251	eP	Pn	08 11 24.4	0.0
TA01				eS	Sn	08 11 40.8	+0.5
TA01				IAML		08 11 45.9	
	comp=Z,15µm,0.3s						
PATCX	Punta Patache	1.15	238		Pn	08 11 26.1	+0.6
PATCX	Punta Patache	1.15	238	⇑eP	Pn	08 11 25.9	+0.4
PATCX				eS	Sn	08 11 41.9	-0.3
PATCX				IAML		08 11 43.7	
	comp=N,48µm,0.6s						
PATCX	Punta Patache	1.15	238	eP	Pn	08 11 25.7	+0.2
PATCX				eS	Sn	08 11 43.1	+0.9
PATCX				IAML		08 11 47.5	
	comp=Z,35µm,0.5s						
PB02	IPOC Station P	1.32	214		Pn	08 11 28.3	+0.8
PB02	IPOC Station P	1.32	214	⇓eP	Pn	08 11 28.1	+0.6
PB02				eS	Sn	08 11 45.3	-0.4
PB02				IAML		08 11 49.5	
	comp=E,47µm,0.4s						
PB02	IPOC Station P	1.32	214	eP	Pn	08 11 27.9	+0.4
PB02				eS	Sn	08 11 46.7	+0.9
PB02				IAML		08 11 55.8	
	comp=Z,27µm,0.3s						
PB09	IPOC Station P	1.57	184		Pn	08 11 31.9	+1.2
PB09	IPOC Station P	1.57	184	⇓eP	Pn	08 11 31.9	+1.2
PB09				eS	Sn	08 11 52.8	+1.4
PB09	IPOC Station P	1.57	184	eP	Pn	08 11 31.7	+1.0
PB09				eS	Sn	08 11 53.5	+2.1
PB09				IAML		08 11 54.8	
	comp=Z,20µm,0.8s						
PX02	IPOC Station P	1.62	320	⇑eP	Pn	08 11 31.3	+0.1
PX02				eS	Sn	08 11 53.1	+0.8
PX02				IAML		08 11 54.4	
	comp=N,18µm,0.6s						
PB07	IPOC Station P	1.66	206		Pn	08 11 32.3	+0.4
PB07	IPOC Station P	1.66	206	⇓eP	Pn	08 11 32.0	+0.2
PB07				eS	Sn	08 11 53.2	-0.3
PB07				IAML		08 11 58.7	
	comp=E,26µm,0.7s						
PB07	IPOC Station P	1.66	206	eP	Pn	08 11 32.3	+0.4
PB07				eS	Sn	08 11 53.4	-0.1
PB07				IAML		08 11 57.0	
	comp=Z,18µm,1.1s						
PB03	IPOC Station P	1.91	198		Pn	08 11 35.4	+0.4
PB03	IPOC Station P	1.91	198	⇓eP	Pn	08 11 35.2	+0.2
PB03				IAML		08 12 05.3	
	comp=N,10µm,0.4s						
PB03	IPOC Station P	1.91	198	eP	Pn	08 11 35.2	+0.2
PB03				eS	Sn	08 11 59.7	+0.6
PB03				IAML		08 12 04.3	
	comp=Z,10µm,0.5s						
PB16	IPOC Station P	1.91	349		Pn	08 11 38.1	+2.7
PB16	IPOC Station P	1.91	349	⇑eP	Pn	08 11 37.8	+2.4
PB16				eS	Sn	08 12 02.2	+2.5
PB16	IPOC Station P	1.91	349	eP	Pn	08 11 37.9	+2.4
PB16				eS	Sn	08 12 03.4	+3.6
PB12	IPOC Station P	1.97	324		Pn	08 11 36.7	+1.0
PB12	IPOC Station P	1.97	324	⇑eP	Pn	08 11 36.5	+0.8
PB12				eS	Sn	08 12 01.4	+1.1
PB12	IPOC Station P	1.97	324	eP	Pn	08 11 36.5	+0.8
PB12				eS	Sn	08 12 01.7	+1.4
PB12				IAML		08 12 09.8	
	comp=Z,26µm,0.4s						
AP01	Chacalluta	2.18	328		Pn	08 11 39.5	+1.2
AP01	Chacalluta	2.18	328	⇓eP	Pn	08 11 39.4	+1.2
AP01				eS	Sn	08 12 05.0	+0.1
AP01	Chacalluta	2.18	328	eP	Pn	08 11 39.5	+1.2
AP01				IAML		08 12 14.4	
	comp=Z,22µm,0.2s						
PB06	IPOC Station P	2.51	190		Pn	08 11 43.1	+0.4
PB06	IPOC Station P	2.51	190	⇓eP	Pn	08 11 42.8	0.0
PB06				IAML		08 12 20.3	
	comp=N,10µm,0.6s						
PB06	IPOC Station P	2.51	190	eP	Pn	08 11 42.9	0.0
PB06				eS	Sn	08 12 15.2	+2.2
PB06				IAML		08 12 22.4	
	comp=Z,13µm,0.5s						
PB18	Visviri	2.64	352		Pn	08 11 49.0	+4.1
PB18	Visviri	2.64	352	⇑eP	Pn	08 11 48.8	+3.9
PB05	IPOC Station P	2.81	201		Pn	08 11 46.4	-0.3
PB05	IPOC Station P	2.81	201	⇓eP	Pn	08 11 45.9	-0.8
PB05	IPOC Station P	2.81	201	eP	Pn	08 11 46.2	-0.5
PB05				eS	Sn	08 12 29.6	+10
PB05				IAML		08 12 30.7	
	comp=Z,4µm,0.8s						
AF01	San Pedro de A	2.85	162		Pn	08 11 49.9	+2.4
AF01	San Pedro de A	2.85	162	⇓eP	Pn	08 11 49.8	+2.4
AF01	San Pedro de A	2.85	162	eP	Pn	08 11 49.8	+2.4
AF01				eS	Sn	08 12 33.2	+12
AF01				IAML		08 12 58.2	
	comp=Z,7µm,0.7s						
PB10	IPOC Station P	3.54	202		Pn	08 11 55.2	-1.1
PB10	IPOC Station P	3.54	202	eP	Pn	08 11 55.1	-1.3
PB10	IPOC Station P	3.54	202	eP	Pn	08 11 55.2	-1.1
PB10				eS	Sn	08 12 47.8	+10
PB10				IAML		08 12 54.1	
	comp=Z,2µm,0.7s						
YJA	Yavi	3.88	121	⇑eP	Pn	08 12 04.4	+3.1
YJA	Yavi	3.88	121	eP	Pn	08 12 04.7	+3.4
LPAZ	La Paz	4.02	14	P	Pn	08 12 07.0	+3.5
	comp=Z,549nm,0.7s,baz=190,slow=7.9,SNR=638						
LPAZ	La Paz	4.02	14		Pn	08 12 07.0	+3.5
LPAZ	La Paz	4.02	14	eP	Pn	08 12 07.0	+3.5
LPAZ	La Paz	4.02	14	eP	Pn	08 11 56.9	-6.6
PB14	IPOC Station P	4.54	195		Pn	08 12 09.4	-0.8
PB14	IPOC Station P	4.54	195	eP	Pn	08 12 10.2	+0.1
PB14				eS	Sn	08 13 14.7	+13
PB14				IAML		08 13 27.1	
	comp=Z,2µm,0.5s						
HJA	Humahuaca	4.55	131	eP	Pn	08 12 13.2	+2.9
SALTA		4.74	148	eP	Pn	08 12 16.1	+3.1
GO02	Mina Guanaco	4.94	185		Pn	08 12 15.1	-0.5
GO02	Mina Guanaco	4.94	185	eP	Pn	08 12 14.4	-1.1
GO02				IAML		08 13 39.0	
	comp=Z,2µm,0.6s						
AC01	Pan de Azucar	6.05	193		Pn	08 12 28.1	-2.3
AC02	Maricunga	6.58	180		Pn	08 12 37.3	-0.7
SIV	San Ignacio	8.72	62	P	Pn	08 13 05.4	-1.4
	comp=Z,145nm,0.6s,baz=250,slow=11,SNR=385						
SIV				S	Sn	08 14 40.6	-2.9
	comp=Z,22nm,0.7s,baz=150,slow=20,SNR=1.6						
PTLB	Pontes e Lacer	10.62	65		Pn	08 13 31.5	-1.0
PTLB	Pontes e Lacer	10.62	65	eP	Pn	08 13 28.3	-4.2
CO06	Fray Jorge	10.65	192	Pn	Pn	08 13 34.0	+1.1
CO03	El Pedregal	10.67	187		Pn	08 13 29.0	-4.2
MURT	Porto Murtinho	10.84	100	eP	Pn	08 13 32.4	-3.2
NNA	Nana	11.05	317	P	Pn	08 13 38.7	+0.2
	comp=Z,3.3nm,0.3s,baz=187,slow=9.1,SNR=3.7						
NNA				S	Sn	08 15 33.0	-7.2
	comp=Z,20nm,0.6s,baz=120,slow=11,SNR=2.3						
VILB	Vilhena	11.19	51		Pn	08 13 39.3	-0.9
VILB	Vilhena	11.19	51	eP	Pn	08 13 35.9	-4.4
CFA	Coronel Fontan	11.36	176	P	Pn	08 13 38.5	-4.0
	comp=Z,3.5nm,0.4s,baz=356,slow=12,SNR=14						
CFA				S	Sn	08 15 35.9	-12
	comp=Z,5.7nm,0.5s,baz=328,slow=14,SNR=1.7						
BDQN	Bodoquena, MS	11.60	93	eP	Pn	08 13 42.3	-3.4
CPUP	Villa Florida	12.41	122	P	Pn	08 13 55.4	-1.1
	comp=Z,13nm,1.0s,baz=303,slow=13,SNR=71						
CPUP	Villa Florida	12.41	122		Pn	08 13 55.0	-1.6
VA03	San Esteban	12.56	186		Pn	08 13 57.0	-1.5
AQDB	Aquidauana	12.58	93		Pn	08 13 57.1	-1.8
AQDB	Aquidauana	12.58	93	eP	Pn	08 13 55.7	-3.1
MT05	Renca	13.20	186		Pn	08 14 07.4	+0.5
MT03	Universidad Ad	13.28	185	Pn	Pn	08 14 10.2	+2.2
AMBA	Amambai (Brazi	13.41	104	eP	Pn	08 14 06.5	-3.2
SALV	Santo Antonio	13.46	74	eP	Pn	08 14 07.3	-3.1
VA05	Santo Domingo	13.57	189	Pn	Pn	08 14 11.4	-0.2
LMEL	Las Melosas	13.61	184		Pn	08 14 13.2	+0.8
PP1B	Ponte de Pedra	13.72	81	eP	Pn	08 14 10.3	-3.4
BO01	Tunca	14.22	187		Pn	08 14 20.2	+0.1
RPRD	Ribas do Rio P	14.46	94	eP	Pn	08 14 21.1	-2.1
PDRB	Porto dos Gac	14.66	56	eP	Pn	08 14 22.5	-3.3
PSAL	Palomas, Salto	14.97	139	eP	Pn	08 14 24.9	-4.8
C2SB	Chapadao do Su	15.41	87	eP	Pn	08 14 34.0	-1.3
ATAH	Atahualpa	15.82	324	P	Pn	08 14 40.5	-0.5
	comp=Z,1.4nm,0.5s,baz=110,slow=3.7,SNR=5.7						
CLDB	Colider	15.83	56	eP	Pn	08 14 39.3	-1.3
VA04	Juan Fernndez	15.92	211	P	Pn	08 14 42.0	+0.4
PTGB	Pitanga	16.38	109	eP	Pn	08 14 46.3	-1.2
BI02	San Fabin de	16.49	186	P	Pn	08 14 48.5	-0.2
BI02				IAmb	IAmb	08 14 51.1	
	comp=Z,35nm,0.9s						
LDASE	Londrina, Braz	17.00	104	eP	Pn	08 14 53.3	-1.8
ITAB	Concordia	17.03	117	P	Pn	08 14 55.0	-0.4
ITAB				IAmb	IAmb	08 14 57.2	
	comp=Z,104nm,0.9s						
ITAB	Concordia	17.03	117	eP	Pn	08 14 53.0	-2.4
ARAG	Araguaiana, MT	17.06	78	eP	P	08 14 55.2	-0.8
TEFE	Tefe	17.18	15	eP	Pn	08 14 53.6	-3.6
CPSB	Cacapava Do Su	17.40	129	eP	P	08 14 56.5	-3.2
ITRB	Iturama	17.64	92	eP	Pn	08 15 02.0	-0.8
NPGB	Novo Progresso	18.69	47	eP	P	08 15 12.2	-1.7
TRQA	Tornquist	18.82	162		P	08 15 15.8	+0.6
TRQA				IAmb	IAmb	08 15 16.4	
	comp=Z,37nm,0.8s						
MACA	Manacapuru-AM	18.84	27	P	Pn	08 15 15.3	-1.9
MACA	Manacapuru-AM	18.84	27	eP	P	08 15 14.1	-1.5
CNLB	Canela	18.87	122	eP	P	08 15 13.9	-2.0
SNDB	Serra Nova Dou	18.97	67	eP	P	08 15 16.3	-0.7
MCRA	Macar, Loja	18.97	325	P	Pn	08 15 18.2	-0.6
	comp=Z,24nm,0.8s						
BB19B	Bebedouro	19.28	96	eP	P	08 15 19.4	-1.0
LR03	Panguipulli	19.55	187	IAmb	IAmb	08 15 24.9	
	comp=Z,62nm,1.0s						
IPMB	Ipameri, GO	19.87	87	eP	P	08 15 25.6	-1.3
LR04	Corral	19.94	190	IAmb	IAmb	08 15 29.4	
	comp=Z,77nm,1.0s						
RCLB	Rio Claro- Sao	20.22	100	eP	P	08 15 28.9	-1.7
SPB	Sao Paulo	20.39	103	P	P	08 15 31.4	-0.9
SPB				IAmb	IAmb	08 15 32.8	
	comp=Z,29nm,0.7s						
SPB	Sao Paulo	20.39	103	eP	P	08 15 32.1	-0.2
ITTB	Itaituba	20.45	41	eP	P	08 15 31.3	-1.7
PLCA	Paso Flores	20.48	183	P	P	08 15 34.5	+1.3
	comp=Z,31nm,0.8s,baz=6.0,slow=12,SNR=37						
	comp=Z,31nm,0.8s						
PLCA	Paso Flores	20.48	183		P	08 15 34.1	+0.9
PLCA				IAmb	IAmb	08 15 35.3	
	comp=Z,40nm,0.9s						
PLCA	Paso Flores	20.48	183	eP	P	08 15 26.5	-6.8
BDFB	Brasilia	20.58	81	P	P	08 15 33.7	-0.9
	comp=Z,36nm,0.5s,baz=256,slow=11,SNR=86						
BDFB				LR	LR	08 24 50.2	
	comp=Z,183nm,21.8s,baz=227,slow=40						
	comp=Z,36nm,0.5s						
BDFB	Brasilia	20.58	81		P	08 15 34.3	-0.3
BDFB				IAmb	IAmb	08 15 38.0	
	comp=Z,70nm,1.0s						
PET01	Itanhaem-SP	20.61	105	eP	P	08 15 33.9	-0.8
VAO	Valinhos	20.77	102	P	P	08 15 35.1	-1.4
VAO	Valinhos	20.77	102	eP	P	08 15 34.8	-1.8
PTLC	Puerto Leguiza	21.02	344	P	P	08 15 35.5	-3.7
	comp=Z,15nm,0.8s						
PIAT	Ana Tenorio	21.10	334	P	P	08 15 43.2	+2.8
LL05	Los Muermos	21.44	189	P	P	08 15 43.8	+0.3
PMNB	Patos De Minas	21.45	89	eP	P	08 15 41.7	-2.2
CASC	Dorado de Casc	21.78	337	P	P	08 15 50.6	+3.2
	comp=Z,61nm,1.2s						
PARB	Paraibuna	22.03	102	eP	P	08 15 47.8	-2.2
BONI	La Bonita	22.14	337	P	P	08 15 54.2	+2.8
	comp=Z,25nm,0.9s						
OTAV	Otavalo	22.30	335	eP	P	08 15 47.0	-6.3
OTAV	Otavalo	22.30	335	P	P	08 15 56.9	+3.7
	comp=Z,18nm,0.9s						
FLF1	Flavio Alfaro-	22.36	331	P	P	08 15 55.9	+2.4
SLP01	Ubatuba-SP	22.45	102	eP	P	08 15 51.5	-3.0
FLOC	Florencia	22.60	343	P	P	08 15 56.2	+0.3
FLOC				IAmb	IAmb	08 16 35.8	
	comp=Z,33nm,1.0s						
FLOC	Florencia	22.60	343	P	P	08 15 57.6	+1.7
	comp=Z,18nm,0.9s						
CMBC	Cumbal	22.70	337	P	P	08 16 01.6	+4.2
MACC	Macarena, Meta	22.71	348	P	P	08 15 56.4	-0.6
	comp=Z,8.6nm,0.6s						
BSCB	Bom Sucesso	22.79	96	eP	P	08 15 56.1	-1.8
GCUF	Volcan Galeras	22.79	338	P	P	08 16 02.1	+3.7
	comp=Z,612nmcomp=Z,43nm,0.9s						
CRUC	La Cruz	22.98	340	P	P	08 16 05.5	+5.5
LL02	Futaleuf	23.02	185	P	P	08 15 59.8	0.0
GARC	Garzon, Huila	23.13	344	P	P	08 16 00.6	-0.8
	comp=Z,26nm,0.8s						
MAL2	Monte Alegre,	23.24	41	P	P	08 16 00.1	-2.0
MAL2				IAmb	IAmb	08 16 03.3	
	comp=Z,46nm,0.7s						
PRPB	Parauapebas	23.37	56	eP	P	08 16 01.4	-1.9
BBAC	Balboa, Cauca	23.50	339	P	P	08 16 07.1	+2.4
	comp=Z,748nmcomp=Z,54nm,0.9s						
SMTB	Santa Maria do	23.66	65	eP	P	08 16 05.3	-0.7
POPC	Popayan, Colom	23.81	341	P	P	08 16 09.8	+2.3
	comp=Z,30nm,1.2s						
URMC	La Uribe, Meta	23.89	347	P	P	08 16 09.5	+1.4
	comp=Z,8.4nm,0.8s						
BOAV	Boa Vista	24.00	22	P	P	08 16 08.6	-0.4
BOAV				IAmb	IAmb	08 16 10.2	
	comp=Z,58nm,0.7s						
BOAV	Boa Vista	24.00	22	eP	P	08 16 07.9	-1.1
DIAM	Diamantina, MG	24.09	90	eP	P	08 16 08.9	-1.0
JANB	Januaria	24.17	82	eP	P	08 16 09.4	-1.3
JAMC	Jamundi, Valle	24.45	341	P	P	08 16 14.7	+1.4
	comp=Z,421nmcomp=Z,15nm,1.2s						
PRAC	Prado	24.45	346	P	P	08 16 13.5	+0.4
	comp=Z,15nm,2.2s						
SDBA	SAO DESIDERIO	24.47	75	eP	P	08 16 12.2	-1.2
ORTC	Ortega, Tolima	24.73	345	P	P	08 16 16.0	+0.4
	comp=Z,44nm,1.1s						
DUB01	Friburgo-RJ	24.99	99	eP	P	08 16 17.9	-0.1
YOTC	Yotoco, Valle	25.08	343	P	P	08 16 19.7	+0.8
	comp=Z,12nm,0.9s						
CHIC	Chingaza	25.11	349	P	P	08 16 19.9	+0.4
	comp=Z,11nm,0.7s						
COYC	Coyhaique	25.40	185	P	P	08 16 20.7	-0.7
COYC				IAmb	IAmb	08 16 22.7	
	comp=Z,26nm,0.8s						
GUY2C	Guyana, Caldas	26.02	346	P	P	08 16 28.7	+0.9
	comp=Z,16nm,0.7s						
RUSC	La Rusia	26.24	351	P	P	08 16 30.5	+0.6
RUSC	La Rusia	26.24	351	P	P	08 16 30.4	+0.6
	comp=Z,755nmcomp=Z,63nm,0.9s						
SJMB	Sao Joao De Ma	26.36	91	eP	P	08 16 30.0	-0.4
ALF01	Guarapari-ES	26.59	96	eP	P	08 16 32.5	+0.1
BSFB	Barra de Sao F	26.66	92	eP	P	08 16 32.1	-1.0
CBOC	Ciudad Bolivar	26.80	345	P	P	08 16 34.8	+0.3
	comp=Z,21nm,0.6s						
BARC	Barichara	26.95	351	P	P	08 16 36.7	+0.8
	comp=Z,28nm,0.6s						
RIB01	Linhares ES	27.03	93	eP	P	08 16 35.7	-0.6
PTBC	PUERTO BERRIO,	27.11	348	P	P	08 16 34.3	-2.8
	comp=Z,24nm,0.8s						
TMAB	Tom-Au,PA,Br	27.12	52	eP	P	08 16 37.9	+0.6
PAMC	Pamplona, Colo	27.61	352	P	P	08 16 41.5	-0.6
	comp=Z,187nmcomp=Z,11nm,0.6s						
DBBC	Dabeiba	27.95	345	P	P	08 16 47.5	+2.8
	comp=Z,14nm,1.1s						
GUA01	Guaratinga, BA	28.02	87	eP	P	08 16 44.6	-0.7
UREC	San Jos de Ur	28.51	347	P	P	08 16 48.7	-0.8
	comp=Z,7.5nm,0.7s						
CMC01	Camacan, BA	28.57	85	eP	P	08 16 49.0	-1.1
OCAC	Ocana	28.58	351	P	P	08 16 47.8	-2.6
	comp=Z,14nm,0.5s						
APAC	Apartado, Choc	28.90	345	P	P	08 16 53.8	+0.8
	comp=Z,18nm,1.7s						
SDV	Santo Domingo	28.96	357	P	P	08 16 53.2	-0.6
SDV				IAmb	IAmb	08 17 04.2	
	comp=Z,11nm,0.9s						
SDV	Santo Domingo	28.96	357	eP	P	08 16 51.1	-2.7
MDP	Montagnes des	29.92	34	LR	LR	08 29 57.1	
	comp=Z,116nm,20.1s,baz=192,slow=38						
SJCC	San Jacinto, C	30.52	348	P	P	08 17 06.5	-0.9
NBPS	Pedro II - PI	31.19	63	eP	P	08 17 13.3	-0.1
NBTA	Tacaratu-PE	31.93	74	eP	P	08 17 15.5	-4.4
JTS	Las Juntas de	34.09	331	LR	LR	08 33 33.1	
	comp=Z,82nm,19.0s,baz=124,slow=40						
RCBR	Riachuelo	35.27	71	P	P	08 17 49.0	0.0
RCBR	Riachuelo	35.27	71	eP	P	08 17 49.2	+0.3
RPN	Rapa Nui	37.35	252	LR	LR	08 30 13.8	
	comp=Z,52nm,21.2s,baz=56,slow=31						
SJG	San Juan	38.21	5	P	P	08 18 12.6	-0.9
AOPR	Arecibo Observ	38.40	4	P	P	08 18 14.5	-0.8
HNDO	Hondo	57.38	329	IAmb	IAmb	08 20 43.4	
	comp=Z,7.5nm,0.7s						
WVT	Waverly	58.78	342	P	P	08 20 50.8	-0.3
WVT				IAmb	IAmb	08 20 52.5	
	comp=Z,10.0nm,0.8s						
SAND	Sanderson	59.16	327	P	P	08 20 55.1	+1.3
MIAR	Mount Ida	59.23	337	P	P	08 20 55.1	+0.9
MIAR				IAmb	IAmb	08 21 37.4	
	comp=Z,6.8nm,0.8s						
T47A	Sharon Grove	59.38	343	IAmb	IAmb	08 21 24.4	
	comp=Z,11nm,0.8s						
TXAR	Lajitas Array	59.48	325	P	P	08 20 57.3	+1.1
	comp=Z,0.6nm,0.5s,baz=147,slow=7.5,SNR=13						
	comp=Z,0.6nm,0.5s						
MNHN	Monahans	60.59	327	P	P	08 21 04.5	+0.7
MNHN				IAmb	IAmb	08 21 38.0	
	comp=Z,7.2nm,1.0s						
HHAR	Hobbs	60.91	337	IAmb	IAmb	08 21 31.9	
	comp=Z,13nm,1.4s						
RLO	Rose Lookout	61.21	336	IAmb	IAmb	08 21 09.6	
	comp=Z,11nm,0.9s						
FVM	French Village	61.27	341	IAmb	IAmb	08 21 10.1	
	comp=Z,19nm,1.1s						
VHRN	Van Horn	61.32	325		P	08 21 09.9	+1.1
VHRN				IAmb	IAmb	08 21 35.8	
	comp=Z,5.4nm,1.0s						
VNA3	Neumayer Olymp	61.34	161	⇑P	P	08 21 09.2	+1.0
	comp=Z,3.0nm,0.7s						
CCM	Cathedral Cave	61.59	340	P	P	08 21 10.6	+0.4
CCM				IAmb	IAmb	08 21 13.7	
	comp=Z,7.9nm,0.9s						
VNA2	Neumayer--Watz	61.91	161	⇑P	P	08 21 13.3	+1.3
	comp=Z,3.7nm,0.6s,baz=287,slow=6.1						
R40A	Maddies Statio	62.13	340	IAmb	IAmb	08 21 48.0	
	comp=Z,5.6nm,0.8s						
OK051	E0350 and S346	62.21	335	IAmb	IAmb	08 21 49.2	
	comp=Z,17nm,1.1s						
SMWD	Samnorwood	62.46	331	IAmb	IAmb	08 21 54.9	
	comp=Z,7.4nm,0.8s						
P43A	Skaggs, Pawnee	62.53	342	IAmb	IAmb	08 21 42.4	
	comp=Z,17nm,1.0s						
SNAA	Sanae	63.54	161	⇑P	P	08 21 24.1	+1.2
	comp=Z,46nm,0.6s						
SNAA	Sanae	63.54	161	P	P	08 21 24.1	+1.2
	comp=Z,2.0nm,0.7s,baz=263,slow=6.6,SNR=16						
	comp=Z,2.0nm,0.7s						
SNAA	Sanae	63.54	161	P	P	08 21 24.3	+1.4
SNAA				IAmb	IAmb	08 21 51.4	
	comp=Z,4.8nm,0.8s						
P38A	Dawn	63.76	339	IAmb	IAmb	08 21 25.9	
	comp=Z,12nm,0.5s						
TROLL	Troll, Antarti	65.26	161	⇑P	P	08 21 35.6	+1.5
	comp=Z,158nm,0.6s						
ANMO	Albuquerque	65.33	327	P	P	08 21 36.7	+1.5
TASM	ASL Pad, Albuq	65.33	327	IAmb	IAmb	08 22 15.8	
	comp=Z,3.0nm,1.0s						
TASM	ASL Pad, Albuq	65.33	327	IAmb	IAmb	08 22 21.5	
	comp=Z,2.0nm,0.8s						
L34A	Svendsen Farm,	66.82	338	IAmb	IAmb	08 21 46.1	
	comp=Z,20nm,0.9s						
WUAZ	Wupatki	68.39	324	IAmb	IAmb	08 22 35.7	
	comp=Z,6.4nm,0.9s						
DBIC	Dimbokro	68.56	74	P	P	08 21 55.4	-0.5
	comp=Z,50nm,0.7s,baz=260,slow=6.1,SNR=54						
DBIC	Dimbokro	68.56	74		P	08 21 55.6	-0.3
K30B	Basset	68.61	336	IAmb	IAmb	08 22 30.6	
	comp=Z,26nm,1.1s						
DRLN	Deer Lake	69.93	8	P	P	08 22 03.7	+0.2
QSPA	South Pole Qui	69.96	180	P	P	08 22 05.6	+1.7
	comp=Z,2.3nm,0.4s,baz=350,slow=0.7,SNR=35						
	comp=Z,2.3nm,0.4s						
QSPA	South Pole Qui	69.96	180		P	08 22 05.6	+1.7
V12A	Nelson	70.52	322	IAmb	IAmb	08 22 36.4	
	comp=Z,12nm,1.4s						
PDAR	Pinedale Array	72.92	330	P	P	08 22 22.9	+1.0
	comp=Z,0.4nm,0.6s,baz=128,slow=7.7,SNR=6.9						
PDAR				pP	pP	08 22 51.1	+2.8
	comp=Z,0.5nm,0.5s,baz=141,slow=7.0,SNR=3.3						
	comp=Z,0.4nm,0.6s						
ULM	Lac du Bonnet	74.05	343	P	P	08 22 28.1	0.0
	comp=Z,4.3nm,0.6s,baz=154,slow=6.0,SNR=7.5						
	comp=Z,4.3nm,0.6s						
ULM	Lac du Bonnet	74.05	343	IAmb	IAmb	08 23 00.9	
	comp=Z,7.6nm,0.8s						
NVAR	Mina Array Bea	74.38	322	P	P	08 22 32.0	+1.4
	comp=Z,1.4nm,0.7s,baz=164,slow=7.7,SNR=5.6						
NVAR				pP	pP	08 22 58.4	+1.6
	comp=Z,1.1nm,0.6s,baz=152,slow=6.5,SNR=3.0						
	comp=Z,1.4nm,0.7s						
SCHQ	Schefferville	74.77	1	P	P	08 22 32.6	+0.3
	comp=Z,9.9nm,0.7s,baz=188,slow=6.2,SNR=15						
	comp=Z,9.9nm,0.7s						
SCHQ	Schefferville	74.77	1	IAmb	IAmb	08 22 33.6	
	comp=Z,242nm,1.1s						
YNE	Yellowstone No	74.85	331	IAmb	IAmb	08 23 09.3	
	comp=Z,16nm,0.9s						
HLID	Hailey	75.87	328	IAmb	IAmb	08 23 15.0	
	comp=Z,7.4nm,1.0s						
TORD	Torodi Ar. Bea	77.11	71	P	P	08 22 45.7	-0.7
	comp=Z,11nm,0.4s,baz=271,slow=3.4,SNR=5.2						
TORD				pP	pP	08 23 14.2	+0.7
	comp=Z,32nm,0.9s,baz=247,slow=4.4,SNR=8.1						
	comp=Z,11nm,0.4s						
TORD	Torodi Ar. Bea	77.11	71	P	P	08 22 46.0	-0.4
TORD				IAmb	IAmb	08 23 14.8	
	comp=Z,26nm,0.9s						
VNDA	Vanda	78.07	190	P	P	08 22 53.5	+2.7
	comp=Z,1.4nm,0.6s,baz=124,slow=3.5,SNR=6.6						
	comp=Z,1.4nm,0.6s						
VNDA	Vanda	78.07	190	IAmb	IAmb	08 22 53.8	
	comp=Z,2.1nm,0.8s						
TSUM	Tsumeb	80.59	107		P	08 23 05.9	+0.3
TSUM				IAmb	IAmb	08 23 07.1	
	comp=Z,13nm,0.7s						
MDT	Midelt	81.08	50	LR	LR	08 59 55.3	
	comp=Z,33nm,18.1s,baz=257,slow=36						
KOOLE	Kule	81.72	111	IAmb	IAmb	08 23 13.3	
	comp=Z,22nm,0.8s						
EDM	Edmonton	82.53	335	IAmb	IAmb	08 23 54.2	
	comp=Z,23nm,1.2s						
KGCAE	Kacgae	83.52	112		P	08 23 21.2	+0.3
KGCAE				IAmb	IAmb	08 23 22.6	
	comp=Z,21nm,0.9s						
BOSA	Boshof	84.21	118	P	P	08 23 24.9	+0.6
	comp=Z,8.9nm,0.8s,baz=265,slow=3.6,SNR=9.6						
BOSA				LR	LR	08 57 03.9	
	comp=Z,34nm,18.5s,baz=208,slow=33						
	comp=Z,8.9nm,0.8s						
BOSA	Boshof	84.21	118	IAmb	IAmb	08 23 25.7	
	comp=Z,12nm,0.8s						
TAM	Tamanrasset	84.42	63		P	08 23 25.4	0.0
ESDC	Sonseca Array	85.06	45	P	P	08 23 28.5	+0.4
	comp=Z,3.9nm,1.0s,baz=243,slow=5.7,SNR=11						
ESDC				pP	pP	08 23 56.7	+1.1
	comp=Z,3.7nm,1.0s,baz=248,slow=5.5,SNR=3.7						
ESDC				LR	LR	08 58 03.4	
	comp=Z,26nm,18.1s,baz=256,slow=33						
	comp=Z,3.9nm,1.0s						
ESDC	Sonseca Array	85.06	45		P	08 23 28.8	+0.7
LBTB	Lobatse	85.72	115	LR	LR	09 00 39.1	
	comp=Z,24nm,18.0s,baz=212,slow=35						
YKAW1	Yellowknife Wh	89.88	341	IAmb	IAmb	08 24 31.6	
	comp=Z,8.1nm,0.9s						
YKA	Yellowknife Ar	89.92	341	P	P	08 23 52.0	+1.2
	comp=Z,3.0nm,0.8s,baz=140,slow=4.0,SNR=38						
YKA				pP	pP	08 24 18.2	+0.1
	comp=Z,3.9nm,0.7s,baz=142,slow=3.9,SNR=7.4						
YKA				sP	sP	08 24 29.6	+0.5
	comp=Z,3.3nm,0.7s,baz=141,slow=3.9,SNR=5.1						
	comp=Z,3.0nm,0.8s						
YKA	Yellowknife Ar	89.92	341	P	P	08 23 52.1	+1.3
YKAW3	Yellowknife Wh	89.98	341	IAmb	IAmb	08 24 31.0	
	comp=Z,6.7nm,0.8s						
KEST	Kesra	92.69	53	LR	LR	09 06 25.7	
	comp=Z,50nm,19.8s,baz=309,slow=36						
DAVOX	Davos/Dischmat	97.26	43	LR	LR	09 09 27.3	
	comp=Z,23nm,18.0s,baz=264,slow=36						
ASAR	Alice Springs	130.95	208	PKP	PKiKP	08 30 04.7	-0.3
	comp=Z,1.1nm,0.7s,baz=132,slow=1.7,SNR=13						
ASAR				pPKP	pPKPdf	08 30 35.1	+2.9
	comp=Z,0.5nm,0.6s,baz=124,slow=1.4,SNR=4.1						
ASAR				SKPbc	SKPbc	08 33 18.5	-1.0
	comp=Z,1.4nm,1.0s,baz=140,slow=4.3,SNR=6.5						
WRA	Warramunga Arr	133.95	211	PKP	PKiKP	08 30 10.4	-0.7
	comp=Z,0.9nm,0.7s,baz=162,slow=1.8,SNR=5.6						
WRA				SKPbc	SKPbc	08 33 30.5	+0.5
	comp=Z,1.6nm,1.0s,baz=150,slow=3.0,SNR=4.9						
BVAR	Borovoye Array	134.84	34	PKP	PKPdf	08 30 09.3	-1.1
	comp=Z,0.6nm,0.5s,baz=270,slow=0.9,SNR=3.7						

ZALV	Zalesovo Beam	140.88	24	PKhKP	PKPpre	08 30 15.5	
	comp=Z,1.6nm,0.5s,baz=225,slow=1.0,SNR=5.8						
KSH	Kashi	144.43	50	PKPbc	PKPdf	08 30 28.6	+0.2
KSH				pPKP	pPKPdf	08 30 56.8	-0.4
MKAR	Makanchi Array	144.70	35	PKP	PKPdf	08 30 27.9	-0.5
	comp=Z,5.0nm,0.6s,baz=316,slow=2.9,SNR=57						
MKAR	Makanchi Array	144.70	35		PKPdf	08 30 28.7	+0.2
HILR	Hailar Array B	149.89	348	PKP	PKPdf	08 30 37.5	+0.5
	comp=Z,3.9nm,0.3s,baz=41,slow=0.2,SNR=1.0						
HILR				PKPbc	PKiKP	08 30 43.2	+0.4
	comp=Z,2.0nm,0.4s,baz=48,slow=2.2,SNR=12						
HILR				pPKPbc	pPKPbc	08 31 11.0	+0.6
	comp=Z,4.0nm,0.4s,baz=66,slow=2.2,SNR=1.4						
MJAR	Matsushiro Arr	151.12	310	PKPbc	PKiKP	08 30 45.5	-0.3
	comp=Z,1.9nm,0.7s,baz=132,slow=0.9,SNR=4.7						
MJAR				pPKPbc	pPKPbc	08 31 14.3	+0.8
	comp=Z,3.9nm,0.9s,baz=330,slow=0.5,SNR=4.1						
SONM	Songino Array	152.21	7	PKPbc	PKiKP	08 30 48.7	+0.9
	comp=Z,1.4nm,0.4s,baz=336,slow=0.9,SNR=7.8						
GTA	Gaotai	158.63	24	eP	PKPab	08 31 25.5	+0.3
GTA				sP	sPKPdf	08 31 38.5	+8.9
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC	Hu-ho-hao-te	159.43	359	eP	PKPdf	08 30 48.9	-1.6
LSA	Lhasa	159.79	58	P	PKPab	08 31 40.9	+10
LSA				pmax	pmax		
	comp=Z,16nm,0.6s						
NJ2	Nanjing	166.23	330	eP	PKPdf	08 30 58.3	+1.1
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CMAR	Chiang Mai Arr	168.59	97	PKPab	PKPab	08 32 09.6	0.0
	comp=Z,1.0nm,0.3s,baz=248,slow=5.0,SNR=4.9						
PZH	PanZhiHua	169.53	52	PKP	PKPdf	08 30 58.5	-1.3

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*SOME **18** 08:12:13.6, 45°.03N×82°.20E, h5^{km}*

*NNC **18** 08:12:17.3±7.1, 44°.52N×82°.50E, h0^{km}, mb2.8, mpv2.4, Error ellipse: s-maj=86.4km s-min=16.9km az=117.0*

ISC 18 08:12:22.4±2.4**, 44°.6N**±0°.1×**82°.1E**±0°.2**, h10^{km}, n7, σ1^{s}64**/11**, 4C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	1.68	228	eP	Pn	08 12 52.1	+0.2
	2.0nm,0.2s						
KTMS				eS	Sg	08 13 19.5	+3.2
	8.4nm,0.2s						
MK31	Makanchi Array	2.22	4	⇑Pg	Pn	08 12 59.4	+0.1
	0.3nm,0.2s,baz=152,slow=13,SNR=19						
MK31				⇑Lg	Lg	08 13 30.5	
	0.7nm,0.2s,baz=183,slow=19,SNR=9.1						
MAKZ	Makanchi	2.23	358	⇓Pg	Pn	08 13 00.0	+0.6
	3.6nm,1.0s						
MAKZ				⇑Lg	Lg	08 13 28.3	
	5.0nm,1.1s						
PDGK	Podgornoye	2.24	237	⇓Pg	Pb	08 13 01.8	-1.2
	4.1nm,0.9s						
PDGK				⇑Lg	Lg	08 13 37.6	
	5.1nm,0.5s						
SHLS	Shalkode	2.36	234	eP	Pn	08 13 00.2	-1.1
	7.4nm,0.2s						
SHLS				eS	Sb	08 13 33.7	-0.6
	21nm,0.4s						
UZB	Uzynbulak	2.63	238	eP	Pb	08 13 09.2	-0.4
	2.6nm,0.1s						
UZB				eS	Sg	08 13 49.1	+2.3
	4.2nm,0.4s						
KPKS	Kokpek	2.68	247	eP	Pb	08 13 09.1	-1.5
	0.3nm,0.1s						
KPKS				eS	Sg	08 13 48.7	+0.2
	7.1nm,0.3s						

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*GCG **18** 08:41:09.3±0.7, 15°.58N×93°.58W, h34^{km}±138^{km}, MD4.3, ML3.7*

*MEX **18** 08:41:10.3±0.6, 15°.50N×93°.68W, h70^{km}±11^{km}, MD4.0*

ISC 18 08:41:08.0±1.2**, 15°.47N**±0°.05×**93°.66W**±0°.03**, h79^{km}**±13^{km}**, n25, σ2^{s}17**/48**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.48	61	eP	Pn	08 41 21.4	0.0
PCIG				eS	Sn	08 41 30.8	-0.6
TGIG		1.40	22	eP	Pn	08 41 32.0	0.0
TGIG				eS	Sn	08 41 48.4	-1.7
PATR	El Naranjo	1.42	104	eP	Pn	08 41 33.0	+0.6
PATR				eS	Sn	08 41 51.2	+0.4
PAVE	Pavencul	1.46	101	eP	Pn	08 41 33.8	+1.0
PAVE				eS	Sn	08 41 52.7	+1.1
THIG		1.46	112	eP	Pn	08 41 33.7	+1.0
THIG				eS	Sn	08 41 52.1	+0.7
CHUJ	Union Juarez	1.54	104	eP	Pn	08 41 34.8	+0.8
CHUJ				eS	Sn	08 41 54.6	+0.9
SMCA	Catarina	1.65	112	eP	Pn	08 41 35.3	+0.1
SMCA				eS	Sn	08 41 55.6	-0.1
SMCA				IAML		08 41 59.3	
	comp=N,215nm,0.6s						
CCIG	Comitan	1.67	61	eP	Pn	08 41 35.9	+0.2
CCIG				eS	Sn	08 41 54.7	-1.9
UXUV	UXUV	1.89	346	eP	Pn	08 41 39.5	+1.1
UXUV				eS	Sn	08 42 01.6	-0.1
CMIG	Matias Romero	1.99	324	eP	Pn	08 41 40.2	+0.5
CMIG				eS	Sn	08 42 03.3	-0.7
HUEH	Huehuetenango	2.08	94	eP	Pn	08 41 40.2	-1.0
HUEH				eS	Sn	08 42 10.1	+3.6
RTAL	Retalhuleu	2.12	116	eP	Pn	08 41 43.7	+2.3
RTAL				eS	Sn	08 42 09.0	+2.0
HUIG	Huatulco	2.38	277	eP	Pn	08 41 45.4	+0.5
HUIG				eS	Sn	08 42 09.8	-3.4
STG5	El Palmar, Qui	2.47	115	i P	Pn	08 41 43.3	-3.0
STG5				eS	Sn	08 42 08.8	-6.8
NEUV	Arroyo Zacate	3.03	318	eP	Pn	08 41 54.5	+0.7
NEUV				eS	Sn	08 42 29.0	-0.1
APG	El Apazote	3.12	98	eP	Pn	08 41 56.4	+1.3
VHO	Vista Hermosa	3.35	299	eP	Pn	08 42 01.3	+2.9
VHO				eS	Sn	08 42 37.7	+0.5
PEIG	Puerto Escondi	3.40	279	eP	Pn	08 42 00.1	+1.3
PEIG				eS	Sn	08 42 34.1	-3.9
PETF	Flores	3.92	68	eP	Pn	08 42 06.6	+0.9
PETF				eS	Sn	08 42 47.7	-2.8
PETF	Flores	3.92	68	i P	Pn	08 42 05.5	-0.2
PETF				eS	Sn	08 42 50.7	+0.1
PETF				IAML		08 42 55.3	
	comp=E,148nm,0.6s						
YOIG	Yosondua	3.98	291	eP	Pn	08 42 08.8	+1.9
YOIG				eS	Sn	08 42 52.4	-0.2
TOIG	Toxpalan	4.18	309	eP	Pn	08 42 10.1	+0.6
TOIG				eS	Sn	08 42 58.8	+1.7
TXIG	Tlaxiaco	4.32	295	eP	Pn	08 42 15.5	+3.9
TXIG				eS	Sn	08 42 59.1	-1.8
HLIG	Huajuapan de L	4.61	301	eS	Sn	08 43 07.5	-0.4
FTIG	Fresnillo de T	4.92	300	eP	Pn	08 42 21.6	+2.0
FTIG				eS	Sn	08 43 09.4	-6.0

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*IDC **18** 08:41:49.8±0.8, 6°.55N×125°.14E, h0^{km}, mb3.8/9, mbtmp3.8/9, MS3.2/10, Error ellipse: s-maj=18.2km s-min=8.9km az=124.0*

*DJA **18** 08:41:49.6±2.3, 7°N±21°×12°5E±°, h57^{km}±20^{km}, M4.8/7, mB5.1/3, mb4.9/4, MLv4.8/7, Mw(mB)4.4/3*

*NEIC **18** 08:41:52.5±1.7, 6°.62N±0°.08×125°.3E±0°.1, h16^{km}±6^{km}, mb4.2/10, Error ellipse: s-maj=21.4km s-min=7.1km az=118.0*

ISC 18 08:41:51.2±0.7**, 6°.66N**±0°.07×**125°.2E**±0°.1**, h10^{km}, n35, σ1^{s}09**/24**, mb4.0**/14**, MS3.1**/7**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.54	40	Pg	Pb	08 42 02.8	+0.1
	2µm,0.3s,baz=223,slow=2.3,SNR=88						
DAV				Lg	Lg	08 42 12.9	
	2µm,0.3s,baz=307,slow=20,SNR=9.8						
DAV				LR	LR	08 42 30.6	
	comp=Z,3µm,20.1s,baz=122,slow=60						
DAV	Davao City (W)	0.54	40	P	Pb	08 42 02.6	-0.1
DAV				S	Sb	08 42 12.4	+1.9
DAV	Davao City (W)	0.54	40	P	Pg	08 42 00.0	-1.6
SGSI	Sangihe	2.97	174	P	Pn	08 42 40.6	+2.2
GTOI	Gorontalo	6.38	200	P	Pn	08 43 25.5	+0.2
	0.3nm1µm85nm,0.7s						
MRSI	Marisa	6.96	208	P	Pn	08 43 33.2	-0.1
I39PW	PALAU INFRASON	9.28	84	I	I	09 41 50.0	
	baz=268,slow=288,SNR=0.7						
KAPI	Kappang	12.82	205	LR	LR	08 50 13.5	
	comp=Z,113nm,19.8s,baz=56,slow=40						
BATI	Baumata	16.82	185	LR	LR	08 54 04.6	
	comp=Z,50nm,20.3s,baz=2.5,slow=44						
JAY	Jayapura	17.93	120	LR	LR	08 52 46.8	
	comp=Z,48nm,18.7s,baz=230,slow=37						
MTN	Manton Dam	20.24	163	P	P	08 46 26.0	-0.8
MTN				IAmb	IAmb	08 46 52.5	
	comp=Z,14nm,1.4s						
KNRA	Kununurra	22.46	171	P	P	08 46 50.7	0.0
FITZ	Fitzroy Crossi	24.60	179	P	P	08 47 11.4	-0.4
	comp=Z,0.8nm,0.4s,baz=15,slow=16,SNR=6.8						
	comp=Z,0.8nm,0.4s						
FITZ	Fitzroy Crossi	24.60	179	P	P	08 47 10.0	-1.7
JNU	Nakatsue	26.85	11	LR	LR	08 57 28.2	
	comp=Z,52nm,20.8s,baz=128,slow=35						
WB0	Warramunga Arr	27.76	161	P	P	08 47 39.2	-1.1
WB0				IAmb	IAmb	08 48 18.9	
	comp=Z,8.4nm,1.3s						
WRAB	Tennant Creek	27.90	161	P	P	08 47 40.6	-1.0
WRAB				IAmb	IAmb	08 48 19.7	
	comp=Z,7.6nm,1.3s						
WRA	Warramunga Arr	27.91	161	P	P	08 47 40.2	-1.5
	comp=Z,1.1nm,1.0s,baz=344,slow=8.3,SNR=2.6						
	comp=Z,1.1nm,1.0s						
WRA	Warramunga Arr	27.91	161	IAmb	IAmb	08 47 44.6	
	comp=Z,0.4nm,1.2s						
WR8	Warramunga Arr	27.97	161	P	P	08 47 40.9	-1.3
WR8				IAmb	IAmb	08 48 18.5	
	comp=Z,4.5nm,1.1s						
CMAR	Chiang Mai Arr	28.17	297	P	P	08 47 45.4	+1.3
	comp=Z,0.7nm,0.3s,baz=118,slow=8.9,SNR=7.2						
CMAR				LR	LR	08 58 51.0	
	comp=Z,37nm,20.2s,baz=110,slow=36						
	comp=Z,0.7nm,0.3s						
ASAR	Alice Springs	31.30	165	P	P	08 48 12.1	+0.3
	comp=Z,1.0nm,0.8s,baz=349,slow=7.7,SNR=6.5						
	comp=Z,1.0nm,0.8s						
MJAR	Matsushiro Arr	32.03	20	LR	LR	09 02 09.0	
	comp=Z,30nm,18.3s,baz=179,slow=38						
ASAJ	Asahikawa	40.29	19	LR	LR	09 04 46.3	
	comp=Z,30nm,21.9s,baz=120,slow=34						
BBOO	Buckleboo	40.58	166	P	P	08 49 30.9	-0.1
BBOO				IAmb	IAmb	08 49 48.5	
	comp=Z,5.9nm,1.1s						
STKA	Stephens Creek	41.38	159	P	P	08 49 37.2	-0.5
	comp=Z,2.0nm,0.7s,baz=327,slow=5.9,SNR=6.5						
	comp=Z,2.0nm,0.7s						
SONM	Songino Array	44.07	342	LR	LR	09 09 31.6	
	comp=Z,66nm,19.7s,baz=130,slow=38						
MKAR	Makanchi Array	54.32	325	P	P	08 51 19.0	+1.1
	comp=Z,0.3nm,0.5s,baz=126,slow=9.2,SNR=4.2						
	comp=Z,0.3nm,0.5s						
KURBB	Kurchatov Arra	58.49	327	P	P	08 51 47.3	-0.2
	comp=Z,0.9nm,0.7s,baz=127,slow=6.3,SNR=5.6						
	comp=Z,0.9nm,0.7s						
KURK	Kurchatov	58.49	327	P	P	08 51 47.3	-0.2
KURK	Kurchatov	58.49	327	IAmb	IAmb	08 51 48.7	
	comp=Z,4.7nm,1.2s						
BVAR	Borovoye Array	64.07	327	P	P	08 52 24.8	-0.5
	comp=Z,1.4nm,0.8s,baz=116,slow=6.8,SNR=5.1						
	comp=Z,1.4nm,0.8s						
NRIK	Noril'sk	67.25	346	LR	LR	09 24 10.5	
	comp=Z,41nm,19.4s,baz=347,slow=38						
ILAR	Eielson Array	83.12	26	P	P	08 54 17.1	0.0
	comp=Z,0.2nm,0.6s,baz=240,slow=4.3,SNR=7.3						
	comp=Z,0.2nm,0.6s						
MAW	Mawson	85.97	200	LR	LR	09 31 32.4	
	comp=Z,23nm,18.4s,baz=339,slow=35						

IDC 18 08:46:48.4±1.4**, 6°.60N**×**125°.07E, h0^{km}, mb3.6**/4**, mbtmp3.6**/4**, Error ellipse: s-maj=32.2km s-min=9.9km az=127.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.69	47	Pg	Pg	08 47 00.8	-0.8
	218nm,0.3s,baz=86,slow=5.6,SNR=8.8						
DAV				Lg	Lg	08 47 11.9	
	171nm,0.3s,baz=32,slow=23,SNR=27						
FITZ	Fitzroy Crossi	24.54	179	P	P	08 52 08.9	-1.1
	2.9nm,0.7s,baz=346,slow=4.2,SNR=4.0						
	2.9nm,0.7s						
WRA	Warramunga Arr	27.91	161	P	P	08 52 41.4	+1.1
	0.5nm,0.6s,baz=339,slow=9.0,SNR=1.9						
	0.5nm,0.6s						
ASAR	Alice Springs	31.29	164	P	P	08 53 10.7	+0.2
	0.4nm,0.8s,baz=345,slow=8.6,SNR=5.0						
	0.4nm,0.8s						
MKAR	Makanchi Array	54.27	325	P	P	08 56 16.8	+0.4
	0.3nm,0.6s,baz=120,slow=8.5,SNR=2.4						
	0.3nm,0.6s						

GUC 18 08:47:36.7±0.7**, 24°.04S**×**67°.38W, h219^{km}**±6^{km}**, ML3.6, 2C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALTA		0.96	101	⇓e	Pn	08 47 58.7	-10
SALTA				i P		08 48 03.9	
AF01	San Pedro de A	1.31	326	i P	Pn	08 48 11.8	+0.8
AF01				eS	S	08 48 39.1	+1.5
GO02	Mina Guanaco	2.31	241	i P	Pn	08 48 21.5	+1.4
GO02				eS	S	08 48 56.0	+2.3
GO02				IAML		08 48 57.1	
	comp=E,221nm,0.1s						
PB06	IPOC Station P	2.42	303	i P	Pn	08 48 23.0	+1.9
PB06				eS	S	08 48 57.7	+2.1
PB06				IAML		08 49 00.3	
	comp=E,188nm,0.2s						
PB09	IPOC Station P	2.82	322	i P	Pn	08 48 27.4	+1.9
PB09				eS	S	08 49 06.1	+2.6
PB05	IPOC Station P	2.85	294	i P	Pn	08 48 28.0	+2.2
PB05				⇑eS	S	08 49 06.1	+2.0
PB05				IAML		08 49 08.8	
	comp=N,52nm,0.3s						
PB03	IPOC Station P	2.95	312	i P	Pn	08 48 28.9	+1.8
PB03				eS	S	08 49 07.9	+1.7
PB03				IAML		08 49 11.5	
	comp=E,86nm,0.1s						
PB10	IPOC Station P	2.96	280	i P	Pn	08 48 28.9	+2.0
PB10				eS	S	08 49 08.4	+2.4
PB10				IAML		08 49 13.2	
	comp=E,61nm,0.3s						
PB07	IPOC Station P	3.27	314	⇑iP	Pn	08 48 32.1	+1.5
PB07				eS	S	08 49 14.0	+1.3
PB01	IPOC Station P	3.56	326	i P	Pn	08 48 35.0	+0.9
PB01				i S	S	08 49 19.0	0.0
PB02	IPOC Station P	3.57	319	i P	Pn	08 48 35.4	+1.2
PB02				eS	S	08 49 20.2	+1.2
PATCX	Punta Patache	4.11	321	eP	Pn	08 48 41.1	+0.5
PB08	IPOC Station P	4.21	337	i P	Pn	08 48 43.6	+1.3
PB08				i S	S	08 49 34.6	+0.9

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*IDC **18** 09:08:20.8±1.0, 11°.00N×125°.84E, h0^{km}, mb4.1/9, mbtmp4.1/9, MS3.5/2, Error ellipse: s-maj=65.8km s-min=16.8km az=65.0*

*NEIC **18** 09:08:25.6±1.0, 11°.08N±0°.08×126°.0E±0°.3, h35^{km}±1^{km}, mb4.3/15, Error ellipse: s-maj=52.5km s-min=8.1km az=77.0*

ISC 18 09:08:25.1±0.8**, 11°.1N**±0°.1×**126°.0E**±0°.3**, h35^{km}, n35, σ0^{s}79**/30**, mb4.3**/17**, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TATO	Taipei	14.47	344	Pn	Pn	09 11 47.0	-0.4
JSU	Suzuyama	20.76	11	P	P	09 13 02.5	-0.6
JSU				IAmb	IAmb	09 13 31.6	
	comp=Z,25nm,1.0s						
JCJ	Chichijima	22.09	42	LR	LR	09 21 27.5	
	comp=Z,74nm,19.9s,baz=164,slow=35						
CMAR	Chiang Mai Arr	27.10	289	P	P	09 14 04.4	-0.5
	comp=Z,1.3nm,0.3s,baz=93,slow=7.3,SNR=5.1						
	comp=Z,1.3nm,0.3s						
FITZ	Fitzroy Crossi	28.98	181	P	P	09 14 20.4	-1.1
WB0	Warramunga Arr	31.75	165	P	P	09 14 45.1	-0.9
WB0				IAmb	IAmb	09 14 46.0	
	comp=Z,2.3nm,0.8s						
WRA	Warramunga Arr	31.90	165	P	P	09 14 47.4	0.0
	comp=Z,0.2nm,0.3s,baz=342,slow=8.2,SNR=1.0						
	comp=Z,0.2nm,0.3s						
WB2	Warramunga Arr	31.90	165	P	P	09 14 47.4	0.0
WB2				IAmb	IAmb	09 14 52.0	
	comp=Z,6.7nm,0.9s						
WR8	Warramunga Arr	31.95	165	P	P	09 14 47.2	-0.7
WR8				IAmb	IAmb	09 15 10.6	
	comp=Z,5.1nm,1.1s						
WR0	Warramunga Arr	31.97	165	P	P	09 14 47.3	-0.7
WR0				IAmb	IAmb	09 14 57.3	
	comp=Z,12nm,1.5s						
AS31	Alice Springs	35.38	167	P	P	09 15 18.0	+0.3
ASAR	Alice Springs	35.38	167	P	P	09 15 18.2	+0.5
	comp=Z,0.9nm,0.5s,baz=347,slow=7.0,SNR=20						
	comp=Z,0.9nm,0.5s						
ASAR	Alice Springs	35.38	167	P	P	09 15 18.7	+1.0
H11N1	WAKE ISLAND Hy	40.31	73	T	T	09 59 39.7	
	baz=265,slow=74,SNR=11						
H11N2	WAKE ISLAND Hy	40.32	73	T	T	09 59 33.7	
	baz=265,slow=74,SNR=7.2						
H11N3	WAKE ISLAND Hy	40.33	73	T	T	09 59 37.7	
	baz=265,slow=74,SNR=9.5						
BBOO	Buckleboo	44.68	168	P	P	09 16 35.7	+1.0
BBOO				IAmb	IAmb	09 17 04.0	
	comp=Z,5.0nm,1.1s						
STKA	Stephens Creek	45.25	161	P	P	09 16 40.4	+1.1
	comp=Z,1.7nm,0.6s,baz=337,slow=8.8,SNR=4.4						
	comp=Z,1.7nm,0.6s						
STKA	Stephens Creek	45.25	161	P	P	09 16 38.9	-0.3
MKAR	Makanchi Array	51.21	323	P	P	09 17 26.7	+1.6
	comp=Z,4.6nm,0.6s,baz=122,slow=8.2,SNR=39						
	comp=Z,4.6nm,0.6s						
MKAR	Makanchi Array	51.21	323		P	09 17 26.0	+0.9
MAKZ	Makanchi	51.40	322	P	P	09 17 26.7	+0.2
TOO	Toolangi	51.74	160	P	P	09 17 27.9	-1.2
TOO				IAmb	IAmb	09 17 55.5	
	comp=Z,2.1nm,1.1s						
ZAA0	Zalesovo Array	53.78	331	P	P	09 17 44.1	+0.1
ZAA0				IAmb	IAmb	09 18 02.3	
	comp=Z,1.9nm,1.1s						
ZALV	Zalesovo Beam	53.78	331	P	P	09 17 44.7	+0.7
	comp=Z,0.7nm,0.3s,baz=111,slow=8.1,SNR=4.1						
	comp=Z,0.7nm,0.3s						
ZALV	Zalesovo Beam	53.78	331	P	P	09 17 44.5	+0.6
KURK	Kurchatov	55.24	325		P	09 17 54.9	+0.3
KURK				IAmb	IAmb	09 17 57.1	
	comp=Z,6.5nm,1.1s						
KURBB	Kurchatov Arra	55.24	325	P	P	09 17 56.1	+1.4
	comp=Z,2.4nm,0.5s,baz=125,slow=6.8,SNR=19						
	comp=Z,2.4nm,0.5s						
KKAR	Karatay Array	57.47	314	P	P	09 18 10.3	-0.5
AB31	Akbulak array	66.07	319	P	P	09 19 08.4	-0.1
ABKAR	Akbulak array	66.07	319	P	P	09 19 08.3	-0.2
KDAK	Kodiak Island	76.17	33	LR	LR	10 00 18.6	
	comp=Z,36nm,18.4s,baz=220,slow=41						
ARCES	ARCESS Array B	83.34	340	P	P	09 20 49.2	+1.0
	comp=Z,3.6nm,1.0s,baz=81,slow=7.5,SNR=7.0						
	comp=Z,3.6nm,1.0s						
ARCES	ARCESS Array B	83.34	340	P	P	09 20 48.9	+0.7
FINES	FINESS Array B	85.05	332	P	P	09 20 57.2	+0.3
	comp=Z,0.7nm,0.3s,baz=74,slow=3.8,SNR=10						
	comp=Z,0.7nm,0.3s						

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*BJI **18** 09:18:18.0, 23°.26N×142°.96E, h62^{km}, mB4.9/10, mb4.7/39, Ms4.1/2, Ms7 3.8/2*

*MOS **18** 09:18:20.4±1.1, 23°.35N×142°.44E, h56^{km}, mb5.0/35, Error ellipse: s-maj=10.9km s-min=5.0km az=112.1*

*NEIC **18** 09:18:22.9±1.8, 23°.36N±0°.07×142°.6E±0°.1, h58^{km}±6^{km}, mb4.9/160, Error ellipse: s-maj=16.1km s-min=10.3km az=89.0*

*IDC **18** 09:18:26.0±0.6, 23°.37N×142°.49E, h91^{km}±4^{km}, mb4.2/26, mbtmp4.5/28, MS3.3/13, Error ellipse: s-maj=15.0km s-min=11.0km az=75.0*

*JMA **18** 09:18:28.8±0.3, 24°N±1°×14°2E±°, h125^{km}±4^{km}, MV5.2/30, IOTO ISLANDS REGION*

ISC 18 09:18:23.2±0.4**, 23°.37N**±0°.04×**142°.51E**±0°.07**, h64^{km}**±3^{km}**, h65^{km}:pP-P, n525, σ1^{s}24**/483**, mb4.8**/158**, 12C-11D, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	3.26	355	eP	Pn	09 19 14.1	+2.2
JHH2				eS	Sn	09 19 48.5	-1.0
JHH2	Haha-jima-NKT2	3.26	355	A	A	09 19 14.1	
	comp=N,10.0nm,0.4s,comp=E,12nm,0.5s						
CBIJ	Chichi jima	3.72	355	P	Pn	09 19 20.2	+2.1
CBIJ				eS	Sn	09 19 59.0	-1.7
JCJ	Chichijima	3.72	356	P	Pn	09 19 08.9	-9.3
	comp=E,893nm,0.4s,baz=254,slow=14,SNR=127						
JCJ				S	Sn	09 19 48.6	-12
	comp=E,2µm,0.4s,baz=118,slow=23,SNR=21						
JCJ	Chichijima	3.72	356		Pn	09 19 20.4	+2.2
JCJ				Sn	Sn	09 19 59.5	-1.3
JCJ	Chichijima	3.72	356	P	Pn	09 19 20.4	+2.2
GUMO	Guam	9.98	167	LR	LR	09 23 14.3	
	comp=E,156nm,18.4s,baz=348,slow=29						
JHJ2	Mitsune	9.99	347	Pn	Pn	09 20 45.4	+1.5
JHJ2	Mitsune	9.99	347	P	Pn	09 20 44.4	+0.5
	comp=E,480nm,2.0s						
JHJ2	Mitsune	9.99	347	eP	Pn	09 20 45.0	+1.1
JHJ2				eS	Sn	09 22 28.1	-6.3
JHJ	Hachijo jima 2	10.00	347	P	Pn	09 20 42.8	-1.3
	comp=E,134nm,0.9s,baz=261,slow=23,SNR=6.3						
JHJ				S	Sn	09 22 27.2	-7.5
	comp=E,58nm,0.3s,baz=253,slow=19,SNR=1.7						
BSO1	Boso 1	11.32	354	eP	Pn	09 21 00.5	-1.1
BSO3	Boso 3	11.52	352	eP	Pn	09 21 03.2	-1.4
BSO3				eS	Sn	09 23 01.9	-10
JTNC	Tanabenakahech	12.04	331	eP	Pn	09 21 13.9	+1.9
JHMK	Hamakita	12.13	341	eP	Pn	09 21 13.8	+0.7
HMMJ	Hamamatsu 2	12.18	341	eP	Pn	09 21 14.1	+0.2
JOD2	Odawara 2	12.22	347	eP	Pn	09 21 13.1	-1.3
JNY	Yasuok	12.61	342	eP	Pn	09 21 19.2	-0.6
JMN	Monobe	12.80	326	Pn	P	09 21 27.8	-3.3
JMN	Monobe	12.80	326	P	P	09 21 27.6	-3.5
	comp=E,74nm,1.7s						
INU	Inuyama	12.86	339	Pn	Pn	09 21 23.9	+0.8
INU	Inuyama	12.86	339	P	Pn	09 21 23.5	+0.5
	comp=E,48nm,0.6s						
JGF	Kuroka	12.98	341	Pn	Pn	09 21 24.6	-0.2
JGF	Kuroka	12.98	341	P	Pn	09 21 24.0	-0.8
	comp=E,114nm,1.0s						
JRY	Ryogami san	12.98	347	eP	Pn	09 21 22.3	-2.5
JRY				eS	Sn	09 23 38.1	-9.4
JHO	Hitachi	13.30	353	eP	Pn	09 21 26.6	-2.4
JOW	Kunigami	13.35	288	LR	LR	09 25 54.4	
	comp=E,163nm,21.9s,baz=322,slow=34						
JOW	Kunigami	13.35	288	Pn	P	09 21 36.2	-0.9
JOW	Kunigami	13.35	288	P	P	09 21 41.7	+4.5
	comp=E,65nm,0.7s						
MJAR	Matsushiro Arr	13.64	345	P	Pn	09 21 31.2	-2.4
	comp=E,16nm,0.6s,baz=122,slow=12,SNR=45						
MJAR	Matsushiro Arr	13.64	345	Pn	Pn	09 21 32.2	-1.5
MJAR	Matsushiro Arr	13.64	345	P	Pn	09 21 32.2	-1.5
MAJO	Matsushiro	13.64	345	Pn	Pn	09 21 31.9	-1.8
MAJO	Matsushiro	13.64	345	P	Pn	09 21 31.5	-2.2
	comp=E,54nm,0.8s						
MAJO	Matsushiro	13.64	345	deP	Pn	09 21 31.8	-1.9
MJB9	Matsu-Tunnel	13.65	345	Pn	Pn	09 21 32.7	-1.0
JNU	Nakatsue	14.11	316	P	P	09 21 42.8	-2.9
	comp=E,26nm,0.9s,baz=147,slow=9.3,SNR=9.1						
JNU				LR	LR	09 26 44.8	
	comp=E,57nm,18.2s,baz=126,slow=35						
JNU	Nakatsue	14.11	316		P	09 21 44.2	-1.5
JNU	Nakatsue	14.11	316	P	P	09 21 44.5	-1.2
	comp=E,48nm,0.9s						
JSD	Sado	15.06	347		Pn	09 21 48.2	-4.0
JSD				IAmb	IAmb	09 21 56.6	
	comp=Z,38nm,0.5s						
JSD	Sado	15.06	347	P	Pn	09 21 48.6	-3.6
	comp=Z,55nm,1.1s						
JTU	Tsushima	15.96	317	P	P	09 22 07.7	+1.6
	comp=Z,100nm,1.7s						
TJN	Taejon	18.42	318	⇑eP	Pn	09 22 34.0	0.0
ERM	Erimo	18.60	2	Pn	Pn	09 22 38.1	+2.0
ERM				IAmb	IAmb	09 22 48.5	
	comp=Z,73nm,1.1s						
ERM	Erimo	18.60	2	P	Pn	09 22 38.1	+2.0
ERM				pmax	pmax		
	comp=Z,73nm,1.1s						
KSRS	Korea Array	18.82	322	P	P	09 22 37.6	0.0
	comp=Z,30nm,0.8s,baz=131,slow=11,SNR=52						
KSRS				LR	LR	09 29 22.3	
	comp=Z,14µm,18.8s,baz=135,slow=35						
KSAR	Wonju Array Be	18.83	321		P	09 22 37.6	-0.1
KSAR	Wonju Array Be	18.83	321	P	P	09 22 37.7	-0.1
KS19	Wonju Array Si	18.88	322	P	Pn	09 22 38.8	-0.7

ASAJ	**Asahikawa**	**20.69**	**0**	P	Pn	09 23 00.7	-0.2
	comp=Z,29nm,0.7s,baz=290,slow=5.1,SNR=12						
ASAJ				LR	LR	09 31 08.1	
	comp=Z,18nm,20.2s,baz=190,slow=37						
	comp=Z,29nm,0.7s						
JKA	**Kamikawa-asahi**	**20.69**	**0**		Pn	09 22 59.9	-1.0
JKA				IAmb	IAmb	09 23 09.6	
	comp=Z,50nm,1.1s						
YUK	**Yuzh-Kuril'sk**	**20.79**	**7**	⇑*e*P	**P**	**09 22 59.3**	**+0.3**
MSHR	**Mys Shultsa**	**21.36**	**336**	⇑*e*P	**P**	**09 23 05.8**	**+0.8**
MSHR				pmax	pmax		
	comp=Z,22nm,0.9s						
VLA	**Vladivostok**	**21.57**	**338**	⇑*e*P	**P**	**09 23 06.3**	**-1.0**
VLA				pmax	pmax		
	comp=Z,37nm,0.8s						
USRK	**Ussuriysk Ar.**	**22.50**	**340**	P	**P**	**09 23 15.3**	**-2.0**
	comp=Z,15nm,0.8s,baz=138,slow=7.9,SNR=12						
NJ2	**Nanjing**	**22.62**	**298**	*e*P	**P**	**09 23 19.3**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**22.96**	**94**	T	T	09 47 19.6	
	baz=282,slow=74,SNR=11						
H11N2	**WAKE ISLAND Hy**	**22.96**	**94**	T	T	09 47 22.9	
	baz=282,slow=74,SNR=17						
DAV	**Davao City (W)**	**22.97**	**228**	P	**P**	**09 23 16.0**	**-6.5**
H11N3	**WAKE ISLAND Hy**	**22.98**	**94**	T	T	09 47 30.0	
	baz=282,slow=74,SNR=13						
H11S3	**WAKE ISLAND Hy**	**23.08**	**98**	T	T	09 47 23.9	
	baz=284,slow=75,SNR=8.6						
H11S1	**WAKE ISLAND Hy**	**23.09**	**98**	T	T	09 47 20.5	
	baz=284						
H11S2	**WAKE ISLAND Hy**	**23.10**	**98**	T	T	09 47 20.2	
	baz=284,slow=75,SNR=3.5						
YSS	**Yuzhno-Sakhali**	**23.53**	**0**		**P**	**09 23 29.3**	**+1.8**
YSS	**Yuzhno-Sakhali**	**23.53**	**0**	*e*P	**P**	**09 23 30.2**	**+2.7**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
DL2	**Dalian**	**23.57**	**316**	P	**P**	**09 23 25.9**	**-2.0**
DL2				pmax	pmax		
	comp=Z,40nm,1.1s						
MDJ	**Mudanjiang**	**23.69**	**337**	P	**P**	**09 23 29.0**	**0.0**
MDJ				pmax	pmax		
	comp=Z,13nm,1.2s						
CN2	**Changchun**	**24.75**	**330**	P	**P**	**09 23 38.9**	**+0.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TIA	**Tai'an**	**25.39**	**306**	P	**P**	**09 23 44.6**	**0.0**
TIA				pmax	pmax		
	comp=Z,29nm,1.1s						
BNX	**BinXian**	**25.46**	**335**	⇓P	**P**	**09 23 43.9**	**-1.2**
BNX				pmax	pmax		
	comp=Z,13nm,0.7s						
WHN	**Wuhan**	**26.05**	**292**	P	**P**	**09 23 54.1**	**+3.5**
HNS	**HongShan**	**27.64**	**307**	⇓P	**P**	**09 24 04.3**	**-0.5**
HNS				pmax	pmax		
	comp=Z,15nm,0.8s						
LYN	**LuoYang**	**28.45**	**300**	P	**P**	**09 24 12.8**	**+0.8**
LYN				pmax	pmax		
	comp=Z,15nm,0.9s						
RABL	**Rabaul**	**28.97**	**160**		**P**	**09 24 13.7**	**-3.1**
HEH	**HeiHe**	**29.31**	**340**	*e*P	**P**	**09 24 17.8**	**-1.7**
HEH				pmax	pmax		
	comp=Z,12nm,0.6s						
KRAI	**Karang Ratu**	**29.89**	**209**	P	**P**	**09 24 26.9**	**+2.0**
	comp=Z,16nm,0.9s						
MRSI	**Marisa**	**30.28**	**224**	P	**P**	**09 24 30.8**	**+2.4**
	comp=Z,28nm,0.8s						
HHC	**Hu-ho-hao-te**	**31.26**	**311**	*e*P	**P**	**09 24 38.0**	**+1.1**
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,170nm,5.2s						
HILR	**Hailar Array B**	**31.66**	**331**	P	**P**	**09 24 38.8**	**-1.6**
	comp=Z,1.5nm,0.4s,baz=130,slow=8.9,SNR=4.1						
	comp=Z,1.5nm,0.4s						
ZEA	**Zeya**	**32.44**	**343**	*e*P	**P**	**09 24 46.8**	**-0.2**
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
SPSI	**Sidrap Palu**	**35.08**	**222**	P	**P**	**09 25 12.4**	**+2.1**
	comp=Z,999nmcomp=Z,24nm,0.9s						
LZDM	**Lanzhou Array**	**35.76**	**300**	P	**P**	**09 25 16.6**	**+0.2**
	comp=Z,4.3nm,0.5s,baz=134,slow=8.5,SNR=8.0						
	comp=Z,4.3nm,0.5s						
KAPI	**Kappang**	**35.91**	**221**	⇑*e*P	**P**	**09 25 18.7**	**+1.2**
KAPI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH	**PanZhiHua**	**36.99**	**283**	P	**P**	**09 25 22.5**	**-4.3**
COEN	**Coen**	**37.10**	**179**	P	**P**	**09 25 26.8**	**-0.8**
	comp=Z,14nm,0.8s						
COEN	**Coen**	**37.10**	**179**	P	**P**	**09 25 28.2**	**+0.6**
COEN				IAmb	IAmb	09 25 29.8	
	comp=Z,13nm,1.0s						
SOEI	**Soe**	**37.45**	**210**	P	**P**	**09 25 30.8**	**+0.1**
SOEI				IAmb	IAmb	09 26 03.2	
	comp=Z,16nm,0.8s						
SONM	**Songino Array**	**37.66**	**319**	P	**P**	**09 25 31.1**	**-1.1**
	comp=Z,1.3nm,0.8s,baz=130,slow=6.5,SNR=4.5						
SONM				pPcP		09 28 13.7	
	comp=Z,0.5nm,0.6s,baz=118,slow=4.3,SNR=3.7						
SONM				LR	LR	09 40 32.2	
	comp=Z,40nm,21.0s,baz=40,slow=35						
	comp=Z,1.3nm,0.8s						
MTN	**Manton Dam**	**37.68**	**198**	P	**P**	**09 25 32.4**	**0.0**
	comp=Z,13nm,0.6s						
MTN	**Manton Dam**	**37.68**	**198**		**P**	**09 25 32.3**	**0.0**
EDFI	**Ende, Flores**	**37.87**	**215**	P	**P**	**09 25 34.9**	**+0.7**
	comp=Z,28nm,0.8s						
YAK	**Yakutsk**	**39.62**	**351**	P	**P**	**09 25 47.8**	**-0.4**
YAK	**Yakutsk**	**39.62**	**351**	*e*P	**P**	**09 25 48.3**	**+0.1**
YAK				*e**PP	**pP**	**09 26 03.1**	**-0.2**
YAK				*e*		09 27 20.4	
YAK				*e*		09 27 53.8	
YAK				*e*S	**S**	**09 31 48.3**	**+1.9**
YAK				*e**SS	**sS**	**09 32 13.5**	**+1.3**
YAK				*e*SSS	SSS	09 35 09.7	
YAK				*e*		09 35 50.5	
YAK				pmax	pmax		
	comp=Z,42nm,0.8s						
YAK				pmax	pmax		
	comp=N,6.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,181nm,2.7s						
YAK				pmax	pmax		
	comp=N,102nm,2.1s						
YAK				pmax	pmax		
	comp=E,70nm,1.7s						
YAK				smax	smax		
	comp=N,396nm,3.7s						
YAK				smax	smax		
	comp=E,282nm,3.7s						
SEY	**Seymchan**	**40.10**	**7**	⇑*e*P	**P**	**09 25 53.7**	**+1.5**
SEY				pmax	pmax		
	comp=Z,25nm,1.6s						
CMAR	**Chiang Mai Arr**	**40.88**	**272**	P	**P**	**09 26 00.8**	**+1.6**
	comp=Z,2.5nm,0.4s,baz=62,slow=7.8,SNR=9.4						
CMAR				LR	LR	09 41 42.0	
	comp=Z,22nm,21.0s,baz=60,slow=34						
	comp=Z,2.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**40.88**	**272**	*i* P	**P**	**09 26 01.2**	**+2.0**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KNRA	**Kununurra**	**41.07**	**200**		**P**	**09 26 01.0**	**+0.3**
KHKI	**Kahang-Kahang**	**41.08**	**223**	P	**P**	**09 26 02.5**	**+1.7**
	comp=Z,41nm,1.1s						
BLJI	**Banyuglugur**	**41.90**	**226**	P	**P**	**09 26 09.3**	**+1.8**
JAGI	**Jajag, Banyuwa**	**42.08**	**225**		**P**	**09 26 08.0**	**-1.1**
JAGI				IAmb	IAmb	09 26 10.4	
	comp=Z,23nm,0.8s						
JAGI	**Jajag, Banyuwa**	**42.08**	**225**	P	**P**	**09 26 08.1**	**-0.9**
	comp=Z,31nm,1.0s						
CTA	**Charters Tower**	**43.35**	**175**	LR	LR	09 43 23.7	
	comp=Z,39nm,21.3s,baz=224,slow=34						
WB0	**Warramunga Arr**	**43.60**	**191**		**P**	**09 26 20.0**	**-1.3**
WB0				IAmb	IAmb	09 26 23.1	
	comp=Z,23nm,1.1s						
QIS	**Mount Isa**	**43.76**	**184**	P	**P**	**09 26 23.2**	**+0.8**
	comp=Z,14nm,0.7s						
WR8	**Warramunga Arr**	**43.77**	**191**	P	**P**	**09 26 23.0**	**+0.5**
WR8	**Warramunga Arr**	**43.77**	**191**		**P**	**09 26 21.7**	**-0.9**
WR8				IAmb	IAmb	09 26 24.1	
	comp=Z,13nm,0.6s						
WRAB	**Tennant Creek**	**43.77**	**191**	P	**P**	**09 26 21.9**	**-0.7**
WRAB				IAmb	IAmb	09 26 24.1	
	comp=Z,24nm,0.8s						
WRAB	**Tennant Creek**	**43.77**	**191**	*ce*P	**P**	**09 26 22.2**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,35nm,1.0s						
WRAB	**Tennant Creek**	**43.77**	**191**	P	**P**	**09 26 22.4**	**-0.2**
WRAB				PcP	**PP**	**09 28 06.0**	**+0.3**
WRA	**Warramunga Arr**	**43.78**	**191**	P	**P**	**09 26 22.4**	**-0.2**
	comp=Z,21nm,0.8s,baz=13,slow=8.4,SNR=56						
WRA				PcP	**PcP**	**09 28 07.7**	**-0.7**
	comp=Z,1.8nm,0.6s,baz=9.1,slow=3.6,SNR=4.8						
	comp=Z,21nm,0.8s						
WRA	**Warramunga Arr**	**43.78**	**191**		**P**	**09 26 21.6**	**-1.1**
FITZ	**Fitzroy Crossi**	**44.39**	**203**		**P**	**09 26 28.2**	**+0.7**
SANVU	**Saraoutou**	**45.52**	**146**	P	**P**	**09 26 35.6**	**-0.9**
SHL	**Shillong**	**45.91**	**284**		**P**	**09 26 40.8**	**+0.9**
SHL	**Shillong**	**45.91**	**284**	P	**P**	**09 26 40.8**	**+0.9**
SHL				pmax	pmax		
	comp=Z,21nm,0.5s						
LSA	**Lhasa**	**46.08**	**289**	P	**P**	**09 26 44.2**	**+2.7**
LSA				IAmb	IAmb	09 26 44.8	
	comp=Z,10nm,0.6s						
LSA	**Lhasa**	**46.08**	**289**	P	**P**	**09 26 38.5**	**-3.0**
LSA	**Lhasa**	**46.08**	**289**	P	**P**	**09 26 44.2**	**+2.7**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BILL	**Bilibino**	**47.01**	**12**		**P**	**09 26 48.6**	**+0.9**
BILL				IAmb	IAmb	09 27 13.0	
	comp=Z,18nm,1.4s						
BILL	**Bilibino**	**47.01**	**12**	⇓*e*P	**P**	**09 26 48.5**	**+0.9**
BILL				pmax	pmax		
	comp=Z,14nm,2.2s						
AS31	**Alice Springs**	**47.50**	**191**		**P**	**09 26 51.8**	**-0.2**
ASAR	**Alice Springs**	**47.50**	**191**	P	**P**	**09 26 51.7**	**-0.3**
	comp=Z,2.8nm,0.6s,baz=16,slow=13,SNR=53						
	comp=Z,2.8nm,0.6s						
ASAR	**Alice Springs**	**47.50**	**191**	P	**P**	**09 26 51.4**	**-0.6**
TIXI	**Tiksi**	**48.93**	**354**	LR	LR	09 48 30.0	
	comp=Z,39nm,19.8s,baz=21,slow=37						
TIXI	**Tiksi**	**48.93**	**354**		**P**	**09 27 02.7**	**+0.3**
TIXI	**Tiksi**	**48.93**	**354**	P	**P**	**09 27 02.7**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WMQ	**Urumqi**	**49.05**	**308**	*e*P	**P**	**09 27 06.6**	**+2.7**
MBWA	**Marble Bar**	**49.52**	**208**	P	**P**	**09 27 08.4**	**+1.0**
	comp=Z,18nm,1.3s						
MBWA	**Marble Bar**	**49.52**	**208**		**P**	**09 27 07.6**	**+0.1**
MBWA				IAmb	IAmb	09 27 08.9	
	comp=Z,16nm,0.9s						
MBWA	**Marble Bar**	**49.52**	**208**	P	**P**	**09 27 07.1**	**-0.4**
QLP	**Quilpie**	**49.69**	**178**	P	**P**	**09 27 08.2**	**-0.5**
	comp=Z,24nm,1.0s						
PSAC2	**Pilbara Seismi**	**49.80**	**208**	P	**P**	**09 27 10.7**	**+1.1**
	comp=Z,27nm,0.9s						
PSA00	**Pilbara Seismi**	**49.83**	**208**	P	**P**	**09 27 10.9**	**+1.0**
	comp=Z,23nm,1.2s						
PSA00	**Pilbara Seismi**	**49.83**	**208**		**P**	**09 27 09.5**	**-0.4**
PSA00				IAmb	IAmb	09 27 11.3	
	comp=Z,9.8nm,0.8s						
PSA00	**Pilbara Seismi**	**49.83**	**208**		**P**	**09 27 09.6**	**-0.3**
PSA00				IAmb	IAmb	09 27 11.4	
	comp=Z,16nm,0.8s						
WRKA	**Warakurna**	**50.06**	**197**	P	**P**	**09 27 12.0**	**+0.4**
	comp=Z,11nm,0.9s						
DGZ	**Jazzator, Alta**	**50.09**	**316**	⇓*e*P	**P**	**09 27 11.6**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GAMB	**Gambell**	**50.35**	**24**	P	**P**	**09 27 14.1**	**+0.8**
	baz=239						
FALS	**False Pass**	**50.68**	**37**	P	**P**	**09 27 16.4**	**+0.5**
	baz=254						
INKA	**Innaminka**	**50.84**	**182**	IAmb	IAmb	09 27 18.3	
	comp=Z,5.9nm,0.7s						
M11K	**Mekoryuk**	**51.11**	**30**	P	**P**	**09 27 19.9**	**+0.9**
	baz=247						
ZSN	**Zaisan**	**51.43**	**313**	*e*P	**P**	**09 27 21.5**	**-0.2**
ZSN	**Zaisan**	**51.43**	**313**	*e*P	**P**	**09 27 21.5**	**-0.2**
K13K	**Kusilvak Mount**	**52.40**	**28**	P	**P**	**09 27 29.0**	**+0.3**
	baz=248						
M13K	**Dall Lake**	**52.44**	**30**	P	**P**	**09 27 29.4**	**+0.5**
	baz=250						
SDPT	**Sand Point**	**52.44**	**37**	P	**P**	**09 27 29.7**	**+0.6**
	baz=256						
ZALV	**Zalesovo Beam**	**52.52**	**321**	P	**P**	**09 27 28.2**	**-1.5**
	comp=Z,2.1nm,0.5s,baz=108,slow=7.9,SNR=2.3						
ZALV				pP	**sP**	**09 27 51.0**	**-1.4**
	comp=Z,1.2nm,0.5s,baz=113,slow=7.7,SNR=1.5						
ZALV				PcP	**PcP**	**09 28 38.8**	**-0.6**
	comp=Z,1.7nm,0.6s,baz=140,slow=4.0,SNR=2.0						
ZALV				pPcP		09 29 04.0	
	comp=Z,2.5nm,0.6s,baz=89,slow=2.9,SNR=5.2						
ZALV				LR	LR	09 49 02.9	
	comp=Z,30nm,20.8s,baz=71,slow=35						
	comp=Z,2.1nm,0.5s						
TNA	**Tin City**	**52.65**	**23**	P	**P**	**09 27 31.1**	**+0.6**
	baz=242						
CHNA	**Chernabura Isl**	**52.82**	**38**	P	**P**	**09 27 32.2**	**+0.3**
	baz=258						
L14K	**Kuka Creek**	**53.06**	**30**	P	**P**	**09 27 34.0**	**+0.5**
L14K				IAmb	IAmb	09 27 48.5	
	comp=Z,19nm,1.3s						
L14K	**Kuka Creek**	**53.06**	**30**	P	**P**	**09 27 34.2**	**+0.6**
	baz=250						
N14K	**Kuskokwak Cree**	**53.07**	**31**	P	**P**	**09 27 34.6**	**+1.0**
	baz=252						
O14K	**Tigyukauivet M**	**53.07**	**32**	P	**P**	**09 27 34.8**	**+1.2**
	baz=253						
MK31	**Makanchi Array**	**53.12**	**312**	*ce*P	**P**	**09 27 34.1**	**-0.2**
MKAR	**Makanchi Array**	**53.12**	**312**	P	**P**	**09 27 34.0**	**-0.3**
	comp=Z,4.1nm,0.4s,baz=87,slow=9.3,SNR=51						
MKAR				pP	**sP**	**09 27 56.9**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=83,slow=9.7,SNR=2.9						
MKAR				PcP	**PcP**	**09 28 41.4**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=96,slow=4.3,SNR=1.3						
MKAR				pPcP		09 29 07.2	
	comp=Z,4.0nm,0.8s,baz=84,slow=4.5,SNR=6.7						
MKAR				LR	LR	09 50 58.5	
	comp=Z,34nm,18.2s,baz=4.0,slow=37						
	comp=Z,4.1nm,0.4s						
MKAR	**Makanchi Array**	**53.12**	**312**		**P**	**09 27 34.2**	**-0.1**
MKAR	**Makanchi Array**	**53.12**	**312**	P	**P**	**09 27 34.2**	**-0.1**
ANM	**Nome**	**53.17**	**25**	P	**P**	**09 27 34.9**	**+0.6**
	baz=245						
S14K	**Fog Glacier**	**53.17**	**36**	P	**P**	**09 27 34.9**	**+0.3**
	baz=257						
J14K	**Nanvaranak Lak**	**53.19**	**28**	P	**P**	**09 27 35.3**	**+0.9**
	baz=248						
M14K	**Bethel**	**53.20**	**30**	P	**P**	**09 27 34.8**	**+0.3**
	baz=251						
MAKZ	**Makanchi**	**53.33**	**312**	P	**P**	**09 27 36.1**	**+0.2**
MAKZ	**Makanchi**	**53.33**	**312**	P	**P**	**09 27 36.1**	**+0.2**
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
L15K	**Ungalak Mounta**	**53.72**	**29**	P	**P**	**09 27 39.1**	**+0.7**
	baz=251						
O15K	**Ungalikthiuk R**	**53.76**	**33**	P	**P**	**09 27 39.4**	**+0.7**
	baz=254						
M15K	**Kasigluk River**	**53.77**	**31**	P	**P**	**09 27 39.3**	**+0.6**
	baz=252						
N15K	**Kwethluk River**	**53.90**	**31**	P	**P**	**09 27 40.1**	**+0.4**
	baz=253						
K15K	**Wolf Creek Mou**	**53.90**	**29**	P	**P**	**09 27 40.4**	**+0.7**
	baz=250						
F15K	**North Star Dit**	**53.93**	**24**	P	**P**	**09 27 40.6**	**+0.7**
	baz=245						
H16K	**Elim**	**54.44**	**26**	P	**P**	**09 27 44.2**	**+0.6**
	baz=248						
N16K	**Nishlik Lake**	**54.62**	**31**	P	**P**	**09 27 45.3**	**+0.3**
	baz=254						
J16K	**Anvik River**	**54.64**	**28**	P	**P**	**09 27 45.8**	**+0.8**
	baz=251						
L16K	**Owhat River**	**54.64**	**30**	P	**P**	**09 27 45.4**	**+0.3**
	baz=253						
M16K	**Timber Creek**	**54.68**	**31**	P	**P**	**09 27 45.8**	**+0.4**
	baz=254						
CMSA	**Cobar Meteorol**	**54.68**	**177**	P	**P**	**09 27 46.2**	**+0.5**
	comp=Z,17nm,1.2s						
O16K	**Kokwok River B**	**54.72**	**32**	P	**P**	**09 27 46.2**	**+0.6**
	baz=256						
I17K	**Unalakleet**	**54.80**	**27**	P	**P**	**09 27 46.9**	**+0.7**
	baz=250						
MEEK	**Meekatharra**	**54.83**	**206**	P	**P**	**09 27 46.6**	**-0.3**
	comp=Z,16nm,0.7s						
C16K	**Lisburne Hills**	**54.83**	**21**	IAmb	IAmb	09 27 48.1	
	comp=Z,9.2nm,0.8s						
C16K	**Lisburne Hills**	**54.83**	**21**	P	**P**	**09 27 47.3**	**+1.0**
	baz=242,SNR=6.6						
STKA	**Stephens Creek**	**54.94**	**181**	P	**P**	**09 27 47.5**	**0.0**
	comp=Z,74nm,0.7s						
STKA	**Stephens Creek**	**54.94**	**181**	P	**P**	**09 27 47.2**	**-0.4**
	comp=Z,9.4nm,0.6s,baz=0.4,slow=7.4,SNR=29						
	comp=Z,9.4nm,0.6s						
SHLS	**Shalkode**	**55.00**	**307**	*e*P	**P**	**09 27 45.5**	**-2.7**
SHLS	**Shalkode**	**55.00**	**307**	*e*P	**P**	**09 27 45.5**	**-2.7**
R17L	**Mt. Peulik Vol**	**55.17**	**35**	P	**P**	**09 27 49.4**	**+0.4**
	baz=259						
Q16K	**King Salmon**	**55.23**	**34**	P	**P**	**09 27 49.0**	**-0.3**
	baz=258						
CHIR	**Chirikof Islan**	**55.24**	**37**	P	**P**	**09 27 49.5**	**0.0**
	baz=260						
O17K	**Koliganek Bris**	**55.25**	**32**	P	**P**	**09 27 49.8**	**+0.3**
	baz=256						
L17K	**Donlin**	**55.30**	**29**	P	**P**	**09 27 50.3**	**+0.5**
	baz=254						
UZB	**Uzynbulak**	**55.32**	**307**	*e*P	**P**	**09 27 50.2**	**-0.3**
UZB	**Uzynbulak**	**55.32**	**307**	*e*P	**P**	**09 27 50.2**	**-0.3**
J17K	**VABM Dome**	**55.32**	**28**	P	**P**	**09 27 49.9**	**-0.1**
	baz=252						
D17K	**Noatak River**	**55.34**	**22**	P	**P**	**09 27 50.8**	**+0.8**
	baz=245,SNR=11						
G17K	**Kiwalik Mounta**	**55.38**	**25**	P	**P**	**09 27 51.6**	**+1.2**
	baz=249						
N17K	**Nushagak Hills**	**55.39**	**31**	P	**P**	**09 27 51.2**	**+0.7**
	baz=256						
K17K	**Iditarod**	**55.46**	**29**	P	**P**	**09 27 51.9**	**+0.9**
	baz=253						
H17K	**Granite Mounta**	**55.48**	**26**	P	**P**	**09 27 51.8**	**+0.7**
	baz=250						
M17K	**Holitna River**	**55.49**	**30**	P	**P**	**09 27 52.4**	**+1.2**
	baz=255						
E17K	**Hotham Inlet**	**55.53**	**23**	P	**P**	**09 27 52.5**	**+1.1**
	baz=247,SNR=16						
RDOG	**Red Dog Mine**	**55.55**	**22**	IAmb	IAmb	09 27 53.7	
	comp=Z,16nm,0.9s						
RDOG	**Red Dog Mine**	**55.55**	**22**	P	**P**	**09 27 52.8**	**+1.3**
	baz=245,SNR=12						
FORT	**Forrest**	**55.60**	**195**	P	**P**	**09 27 52.7**	**+0.4**
	comp=Z,44nm,0.7s						
FORT	**Forrest**	**55.60**	**195**		**P**	**09 27 52.6**	**+0.3**
C17K	**DeLong Mountai**	**55.64**	**21**	P	**P**	**09 27 53.4**	**+1.2**
	baz=245						
SATY	**Saty**	**55.77**	**307**	*e*P	**P**	**09 27 53.5**	**-0.3**
SATY	**Saty**	**55.77**	**307**	*e*P	**P**	**09 27 53.4**	**-0.3**
KURK	**Kurchatov**	**55.84**	**316**		**P**	**09 27 53.5**	**-0.3**
KURK				IAmb	IAmb	09 27 54.9	
	comp=Z,7.5nm,0.6s						
KURK	**Kurchatov**	**55.84**	**316**	*de*P	**P**	**09 27 52.8**	**-1.1**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KURK	**Kurchatov**	**55.84**	**316**	P	**P**	**09 27 53.0**	**-0.8**
KURK				pP	**pP**	**09 28 09.4**	**-0.3**
KURBB	**Kurchatov Arra**	**55.89**	**316**	P	**P**	**09 27 53.7**	**-0.5**
	comp=Z,10nm,0.6s,baz=92,slow=8.1,SNR=95						
	comp=Z,10nm,0.6s						
L18K	**Granite Mounta**	**56.05**	**30**	P	**P**	**09 27 56.6**	**+1.4**
	baz=255						
E18K	**Tukpahlearik C**	**56.10**	**23**		**P**	**09 27 56.7**	**+1.2**
E18K	**Tukpahlearik C**	**56.10**	**23**	P	**P**	**09 27 57.1**	**+1.6**
	baz=248,SNR=16						
F18K	**Selawik**	**56.15**	**24**	P	**P**	**09 27 57.0**	**+1.1**
	baz=249						
O18K	**Koktuh Hills**	**56.20**	**33**	P	**P**	**09 27 57.2**	**+0.9**
	baz=258						
BBOO	**Buckleboo**	**56.21**	**187**	P	**P**	**09 27 56.6**	**0.0**
	comp=Z,22nm,1.0s						
BBOO	**Buckleboo**	**56.21**	**187**		**P**	**09 27 56.3**	**-0.3**
NRIK	**Noril'sk**	**56.22**	**340**	P	**P**	**09 27 56.0**	**-0.2**
	comp=Z,4.8nm,0.5s,baz=113,slow=9.0,SNR=13						
NRIK				LR	LR	09 53 28.2	
	comp=Z,39nm,18.0s,baz=344,slow=37						
	comp=Z,4.8nm,0.5s						
NRIK	**Noril'sk**	**56.22**	**340**		**P**	**09 27 56.2**	**-0.1**
NRIK	**Noril'sk**	**56.22**	**340**	P	**P**	**09 27 56.2**	**-0.1**
NRIK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
M18K	**Stony River**	**56.27**	**31**	P	**P**	**09 27 58.0**	**+1.3**
	baz=256						
G18K	**Tagagawik**	**56.29**	**25**	IAmb	IAmb	09 27 58.6	
	comp=Z,13nm,1.2s						
G18K	**Tagagawik**	**56.29**	**25**	P	**P**	**09 27 57.9**	**+1.0**
	baz=251						
C18K	**Utukok River**	**56.37**	**21**	P	**P**	**09 27 58.5**	**+1.0**
	baz=247						
B18K	**Kokolik River**	**56.46**	**21**	P	**P**	**09 27 59.8**	**+1.8**
	baz=246						
HTT	**Hallett**	**56.59**	**184**	P	**P**	**09 27 59.8**	**+0.4**
	comp=Z,3.5nm,0.9s						
HTT	**Hallett**	**56.59**	**184**	P	**P**	**09 27 58.6**	**-0.8**
O19K	**Port Alsworth**	**56.71**	**32**	P	**P**	**09 28 01.2**	**+1.3**
	baz=259						
N19K	**Bonanza Creek**	**56.75**	**31**	P	**P**	**09 28 01.1**	**+0.8**
	baz=258						
MDOK	**Medeo**	**56.76**	**307**	*e*P	**P**	**09 28 00.8**	**-0.1**
MDOK	**Medeo**	**56.76**	**307**	*e*P	**P**	**09 28 00.7**	**-0.1**
Q19K	**Cape Douglas,**	**56.81**	**34**	P	**P**	**09 28 01.8**	**+1.1**
	baz=260						
AAA	**Alma-Ata**	**56.86**	**307**	*e*P	**P**	**09 28 01.1**	**-0.3**
	comp=Z,7.6nm,0.5s						
AAA	**Alma-Ata**	**56.86**	**307**	*e*P	**P**	**09 28 01.1**	**-0.3**
AAA				pmax	pmax		
	comp=Z,8.0nm,0.5s						
L19K	**White Mountain**	**56.87**	**30**	P	**P**	**09 28 02.0**	**+0.9**
	baz=257						
F19K	**Shaleruckik Mo**	**56.93**	**24**	P	**P**	**09 28 02.3**	**+0.9**
	baz=251						
J19K	**Poorman**	**56.97**	**28**	IAmb	IAmb	09 28 03.3	
	comp=Z,16nm,1.3s						
J19K	**Poorman**	**56.97**	**28**	P	**P**	**09 28 02.6**	**+0.9**
	baz=255						
G19K	**Purcell Mounta**	**56.98**	**25**	IAmb	IAmb	09 29 39.8	
	comp=Z,22nm,1.8s						
G19K	**Purcell Mounta**	**56.98**	**25**	P	**P**	**09 28 02.9**	**+1.2**
	baz=252						
A19K	**Wainwright**	**57.04**	**20**	P	**P**	**09 28 03.7**	**+1.6**
	baz=246						
H19K	**Roundabout Mou**	**57.05**	**26**	P	**P**	**09 28 03.3**	**+1.1**
	baz=253						
C19K	**Lookout Ridge**	**57.09**	**21**	IAmb	IAmb	09 28 29.5	
	comp=Z,11nm,0.7s						
C19K	**Lookout Ridge**	**57.09**	**21**	P	**P**	**09 28 03.9**	**+1.4**
	baz=248						
KDAK	**Kodiak Island**	**57.19**	**35**	P	**P**	**09 28 04.4**	**+1.1**
	baz=262						
E19K	**Redstone River**	**57.33**	**23**	IAmb	IAmb	09 28 30.9	
	comp=Z,7.7nm,0.8s						
E19K	**Redstone River**	**57.33**	**23**	P	**P**	**09 28 05.5**	**+1.3**
	baz=251						
D19K	**Kuna River**	**57.37**	**22**	IAmb	IAmb	09 28 06.4	
	comp=Z,9.9nm,0.9s						
D19K	**Kuna River**	**57.37**	**22**	P	**P**	**09 28 05.4**	**+0.9**
	baz=250						
K20K	**Telida**	**57.49**	**29**	P	**P**	**09 28 06.7**	**+1.3**
	baz=257						
M20K	**Styx River**	**57.60**	**30**	P	**P**	**09 28 07.0**	**+0.7**
	baz=259						
BOOM	**Boomskoye usch**	**57.61**	**307**		**P**	**09 28 06.7**	**-0.1**
BOOM				IAmb	IAmb	09 29 26.6	
	comp=Z,8.3nm,0.9s						
BOOM	**Boomskoye usch**	**57.61**	**307**	P	**P**	**09 28 06.7**	**-0.1**
BOOM				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YNG	**Young**	**57.62**	**174**	P	**P**	**09 28 05.8**	**-0.9**
	comp=Z,11nm,0.8s						
J20K	**Nowinta River**	**57.64**	**28**	IAmb	IAmb	09 28 08.7	
	comp=Z,13nm,1.0s						
J20K	**Nowinta River**	**57.64**	**28**	P	**P**	**09 28 07.3**	**+0.9**
	baz=256						
H20K	**Anotleneega Mo**	**57.67**	**26**	P	**P**	**09 28 07.4**	**+0.8**
	baz=255						
F20K	**Avaraart Lake**	**57.77**	**24**	IAmb	IAmb	09 28 36.1	
	comp=Z,7.7nm,0.8s						
F20K	**Avaraart Lake**	**57.77**	**24**	P	**P**	**09 28 08.0**	**+0.8**
	baz=253						
KSH	**Kashi**	**57.79**	**303**	P	**P**	**09 28 12.4**	**+4.3**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
N20K	**Mount Spurr**	**57.91**	**31**	P	**P**	**09 28 09.3**	**+0.8**
	baz=260						
SPCR	**Spurr Chakacha**	**57.91**	**31**	P	**P**	**09 28 09.1**	**+0.6**
	baz=260						
D20K	**Etivluk River**	**57.96**	**22**	P	**P**	**09 28 09.8**	**+1.2**
	baz=251,SNR=11						
E20K	**Nigu River**	**57.96**	**23**	P	**P**	**09 28 10.2**	**+1.4**
	baz=252						
MORW	**Morawa**	**58.03**	**207**	P	**P**	**09 28 10.1**	**+0.5**
	comp=Z,26nm,0.9s						

B20K	Meade River	58.21	21	P	P	09 28 11.5	+1.2
	baz=250						
SKT	Skwentna	58.37	30	P	P	09 28 12.7	+1.1
	baz=260						
BRSE	Bradley Lake S	58.41	33	P	P	09 28 13.2	+1.3
	baz=262						
G21K	Allakaket	58.47	25	P	P	09 28 13.6	+1.3
	baz=256						
SGDS	Sogindy	58.51	308	*e*P	P	09 28 12.6	-0.4
H21K	Melozitna Rive	58.54	26	IAmb	IAmb	09 28 14.9	
	comp=Z,8.4nm,1.0s						
H21K	Melozitna Rive	58.54	26	P	P	09 28 14.3	+1.5
	baz=257						
F21K	Alatna River	58.66	24	P	P	09 28 14.5	+1.0
	baz=255						
AAK	Ala-Archa	58.66	307	LR	LR	09 55 14.6	
	comp=Z,21nm,18.8s,baz=11,slow=38						
AAK	Ala-Archa	58.66	307⇑	*e*P	P	09 28 14.5	+0.3
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AAK	Ala-Archa	58.66	307	P	P	09 28 14.8	+0.6
AAK				pP	pwP	09 28 31.7	-2.5
AAK				sP	sP	09 28 39.1	+2.1
CAN	Canberra	58.70	174	P	P	09 28 14.9	+0.8
	comp=Z,19nm,2.0s						
CAN	Canberra	58.70	174	P	P	09 28 13.9	-0.2
C21K	Knifeblade Rid	58.73	22	P	P	09 28 15.1	+1.2
	baz=253						
E21K	Killik River	58.80	23	IAmb	IAmb	09 28 41.2	
	comp=Z,9.6nm,0.9s						
E21K	Killik River	58.80	23	P	P	09 28 15.4	+0.9
	baz=254,SNR=5.8						
A21K	Barrow	58.83	19	P	P	09 28 15.4	+0.8
	baz=250						
B21K	Ikpikpuk River	58.92	21	IAmb	IAmb	09 28 43.6	
	comp=Z,14nm,1.1s						
B21K	Ikpikpuk River	58.92	21	P	P	09 28 16.1	+0.9
	baz=253						
M22K	Willow	58.99	31	P	P	09 28 16.3	+0.5
	baz=262						
CUT	Chulitna	59.02	30	P	P	09 28 16.4	+0.4
	baz=261						
RC01	Rabbit Creek A	59.08	32	P	P	09 28 16.4	-0.1
	baz=262						
BLDU	Ballidu	59.11	206	P	P	09 28 17.1	0.0
	comp=Z,43nm,1.1s						
H22K	Ishtalitna Cre	59.17	26	IAmb	IAmb	09 29 03.8	
	comp=Z,26nm,1.8s						
H22K	Ishtalitna Cre	59.17	26	P	P	09 28 17.4	+0.3
	baz=258						
TRF	Thorofare Moun	59.17	29	IAmb	IAmb	09 28 18.6	
	comp=Z,11nm,0.8s						
TRF	Thorofare Moun	59.17	29	P	P	09 28 17.5	+0.1
	baz=260						
F22K	John River	59.22	24	P	P	09 28 18.6	+1.2
	baz=256						
A22K	Sinclair Lake	59.23	20	P	P	09 28 18.4	+1.0
	baz=252						
MLY	Manley	59.26	27	P	P	09 28 18.7	+0.9
	baz=259						
G22K	Bettles	59.34	25	P	P	09 28 19.1	+0.9
	baz=257,SNR=9.0						
D22K	Ayikyak River	59.38	22	P	P	09 28 19.7	+1.2
	baz=255						
PMR	Palmer	59.44	31	P	P	09 28 18.9	0.0
	baz=263						
E22K	Anaktuvuk Pass	59.50	23		P	09 28 20.7	+1.3
E22K				IAmb	IAmb	09 28 21.5	
	comp=Z,6.8nm,1.0s						
E22K	Anaktuvuk Pass	59.50	23	P	P	09 28 20.4	+1.0
	baz=256						
B22K	Teshekpuk Lake	59.52	21	IAmb	IAmb	09 28 46.2	
	comp=Z,8.8nm,0.7s						
B22K	Teshekpuk Lake	59.52	21	P	P	09 28 20.3	+0.9
	baz=253						
KLBR	Kellerberrin	59.57	204	P	P	09 28 20.1	-0.2
	comp=Z,65nm,0.7s						
BRZS	Berezniki	59.62	315	*e*P	P	09 28 20.2	-0.3
BRZS	Berezniki	59.62	315	*e*P	P	09 28 20.1	-0.4
PWL	Port Wells	59.73	32	P	P	09 28 21.6	+0.6
	baz=264						
KNK	Knik Glacier	59.73	31	P	P	09 28 21.4	+0.4
	baz=263						
MCK	McKinley	59.82	29	P	P	09 28 21.9	+0.3
	baz=262						
ARPS	Mount Arapiles	59.82	181	P	P	09 28 22.1	+0.3
	comp=Z,36nm,0.9s						
SML	Sawmill	59.84	31	P	P	09 28 21.7	-0.1
	baz=263						
I23K	Minto, Yukon-K	59.86	27	P	P	09 28 22.4	+0.6
	baz=260						
WAT1	Susitna Watana	59.87	30	P	P	09 28 22.0	0.0
	baz=262						
G23K	Bananza Creek	59.87	25	IAmb	IAmb	09 28 24.1	
	comp=Z,6.9nm,0.9s						
G23K	Bananza Creek	59.87	25	P	P	09 28 23.0	+1.0
	baz=259						
NEA2	Nenana	59.89	28	IAmb	IAmb	09 28 23.5	
	comp=Z,6.0nm,0.8s						
NEA2	Nenana	59.89	28	P	P	09 28 23.1	+1.0
	baz=261						
H23K	Yukon River	59.90	26	IAmb	IAmb	09 28 24.2	
	comp=Z,6.5nm,0.8s						
H23K	Yukon River	59.90	26	P	P	09 28 23.2	+1.0
	baz=260						
ARSB	Arslanbob	59.90	305	IAmb	IAmb	09 28 24.8	
	comp=Z,8.7nm,1.1s						
COLD	Coldfoot	59.90	25	IAmb	IAmb	09 28 25.0	
	comp=Z,6.7nm,0.8s						
COLD	Coldfoot	59.90	25	P	P	09 28 23.3	+1.2
	baz=258						
D23K	Nanushuk River	60.10	23	IAmb	IAmb	09 28 51.0	
	comp=Z,16nm,1.1s						
D23K	Nanushuk River	60.10	23	P	P	09 28 24.4	+1.0
	baz=257						
P23K	Montague Islan	60.11	33	P	P	09 28 24.4	+0.8
	baz=265						
M23K	Glacier View	60.12	31	P	P	09 28 24.1	+0.4
	baz=264						
WAT6	Susitna Watana	60.20	30	P	P	09 28 24.3	-0.1
	baz=263						
E23K	Chandalar	60.29	24	IAmb	IAmb	09 28 54.2	
	comp=Z,11nm,0.9s						
E23K	Chandalar	60.29	24	P	P	09 28 25.7	+0.9
	baz=258						
SCM	Sheep Creek Mo	60.32	31	P	P	09 28 25.7	+0.5
	baz=264						
C23K	Itkillik River	60.32	22	P	P	09 28 25.9	+1.1
	baz=256						
TOLK	Toolik Lake Re	60.42	23	IAmb	IAmb	09 28 32.2	
	comp=Z,25nm,1.7s						
TOLK	Toolik Lake Re	60.42	23	P	P	09 28 26.7	+1.0
	baz=258						
DHY	Denali Highway	60.43	29	P	P	09 28 26.8	+0.9
	baz=263						
COLA	College	60.45	27	P	P	09 28 26.6	+0.8
	baz=262						
H24K	Noodor Dome	60.58	26	IAmb	IAmb	09 28 28.6	
	comp=Z,6.8nm,0.9s						
H24K	Noodor Dome	60.58	26	P	P	09 28 27.8	+1.0
	baz=261						
POKR	Poker Plat Res	60.66	27	P	P	09 28 28.5	+1.2
	baz=262						
TOO	Toolangi	60.68	177	P	P	09 28 28.1	+0.4
	comp=Z,7.9nm,1.1s						
TOO	Toolangi	60.68	177	P	P	09 28 28.2	+0.5
TOO	Toolangi	60.68	177	P	P	09 28 28.3	+0.5
TOO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
D24K	Happy Valley	60.79	22	IAmb	IAmb	09 28 30.2	
	comp=Z,13nm,1.1s						
D24K	Happy Valley	60.79	22	P	P	09 28 29.4	+1.3
	baz=259,SNR=5.1						
F24K	Squaw Lake	60.84	24	P	P	09 28 29.6	+1.0
	baz=260						
IL31		60.84	28		P	09 28 27.9	-0.6
IL31				IAmb	IAmb	09 28 28.6	
	comp=Z,7.4nm,0.9s						
ILAR	Eielson Array	60.84	28	P	P	09 28 27.4	-1.1
	comp=Z,4.2nm,0.8s,baz=260,slow=5.8,SNR=36						
ILAR				pP	sP	09 28 52.6	+1.2
	comp=Z,3.6nm,0.8s,baz=262,slow=4.8,SNR=4.7						
	comp=Z,4.2nm,0.8s						
G24K	Hadweenzic Riv	60.87	25	P	P	09 28 29.5	+0.8
	baz=261						
C24K	Franklin Bluff	60.95	22	IAmb	IAmb	09 28 56.1	
	comp=Z,9.2nm,0.9s						
C24K	Franklin Bluff	60.95	22	P	P	09 28 30.0	+0.8
	baz=258						
NWAO	Narrogin (SRO)	60.96	204	P	P	09 28 29.8	+0.1
	comp=Z,28nm,0.9s						
NWAO	Narrogin (SRO)	60.96	204	P	P	09 28 28.8	-0.9
BVAR	Borovoye Array	61.00	319	P	P	09 28 29.5	-0.3
	comp=Z,6.3nm,0.4s,baz=90,slow=7.9,SNR=32						
BVAR				pP	sP	09 28 52.1	-0.7
	comp=Z,4.4nm,0.5s,baz=90,slow=8.6,SNR=3.5						
	comp=Z,6.3nm,0.4s						
BORK	Borovoye	61.05	319		P	09 28 29.9	-0.2
BORK				IAmb	IAmb	09 28 31.4	
	comp=Z,13nm,0.9s						
BORK	Borovoye	61.05	319	P	P	09 28 29.9	-0.2
BORK				pmax	pmax		
	comp=Z,13nm,0.9s						
BORK	Borovoye	61.05	319	P	P	09 28 29.8	-0.2
BORK				sP	sP	09 28 53.8	+0.8
PAX	Paxson	61.28	30	P	P	09 28 31.7	+0.1
	baz=265						
MANEM	Manem	61.37	301	IAmb	IAmb	09 28 35.4	
	comp=Z,14nm,0.7s						
HARP	HAARP	61.38	30	P	P	09 28 32.7	+0.4
	baz=266						
J25K	Salcha River,	61.47	28	P	P	09 28 33.1	+0.2
	baz=264						
KK31	Karatay Array	61.54	308		P	09 28 33.4	-0.3
KK31				IAmb	IAmb	09 28 35.9	
	comp=Z,8.7nm,0.8s						
KK31	Karatay Array	61.54	308	P	P	09 28 33.4	-0.3
KK31				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KKAR	Karatay Array	61.54	308		P	09 28 34.7	+1.0
KKAR	Karatay Array	61.54	308	P	P	09 28 34.7	+1.0
BMRM	Bremner River	61.56	32	P	P	09 28 34.1	+0.6
	baz=267						
RIDG	Independent Ri	61.63	29	P	P	09 28 34.6	+0.7
	baz=265						
D25K	Kavik River	61.68	22	IAmb	IAmb	09 28 36.1	
	comp=Z,10nm,0.8s						
D25K	Kavik River	61.68	22	P	P	09 28 35.3	+1.1
	baz=261,SNR=9.4						
F25K	Christian Rive	61.70	24	P	P	09 28 35.2	+0.9
	baz=263						
E25K	Arctic Village	61.80	24	IAmb	IAmb	09 29 23.1	
	comp=Z,5.8nm,0.4s						
E25K	Arctic Village	61.80	24	P	P	09 28 35.9	+0.9
	baz=262						
IUG	Iuzhnay	62.00	307	*e*P	P	09 28 36.8	-0.2
	comp=Z,9.5nm,0.9s						
IUG	Iuzhnay	62.00	307	*e*P	P	09 28 36.7	-0.2
IUG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SCRK	Sand Creek	62.02	29		P	09 28 36.8	+0.1
SCRK				IAmb	IAmb	09 28 37.4	
	comp=Z,14nm,1.0s						
SCRK	Sand Creek	62.02	29	P	P	09 28 37.0	+0.4
	baz=266						
BRLS	Borolday	62.04	308	*e*P	P	09 28 37.7	+0.6
BRLS	Borolday	62.04	308	*e*P	P	09 28 37.7	+0.6
GAR	Garm	62.21	303	IAmb	IAmb	09 28 40.0	
	comp=Z,8.1nm,0.7s						
J26L	Joseph Creek	62.24	28	IAmb	IAmb	09 29 04.0	
	comp=Z,6.7nm,0.8s						
J26L	Joseph Creek	62.24	28	P	P	09 28 38.4	+0.3
	baz=266						
L26K	Log Cabin Wild	62.25	30	P	P	09 28 38.8	+0.7
	baz=267						
C26K	Camden Bay	62.27	22	P	P	09 28 39.0	+0.9
	baz=262						
F26K	Sheenjek River	62.28	24	IAmb	IAmb	09 29 05.4	
	comp=Z,5.7nm,0.8s						
F26K	Sheenjek River	62.28	24	P	P	09 28 39.1	+0.9
	baz=264						
CHM	Chimkent	62.30	307	*e*P	P	09 28 38.8	0.0
	comp=Z,4.8nm,0.4s						
CHM	Chimkent	62.30	307	*e*P	P	09 28 38.7	0.0
CHM				pmax	pmax		
	comp=Z,5.0nm,0.4s						
MCARA	McCarthy VSAT	62.34	32	P	P	09 28 39.5	+0.8
	baz=268						
I26K	Coal Creek Min	62.47	27	P	P	09 28 40.5	+1.0
	baz=266						
C27K	Jago River	62.65	22	P	P	09 28 41.7	+1.1
	baz=263						
K27K	Chicken	62.87	29	P	P	09 28 43.0	+0.9
	baz=268						
M27K	Edge Creek, AK	62.91	30	P	P	09 28 43.2	+0.6
	baz=269						
L27K	Beaver Creek,	62.95	30	P	P	09 28 43.1	+0.3
	baz=268						
I27K	Kandik River	63.13	27	P	P	09 28 44.3	+0.4
	baz=267						
G27K	Doyon Strip	63.17	25	P	P	09 28 44.6	+0.4
	baz=267						
H27K	Steamboat Moun	63.20	26	IAmb	IAmb	09 29 11.6	
	comp=Z,8.3nm,0.8s						
H27K	Steamboat Moun	63.20	26	P	P	09 28 45.0	+0.6
	baz=267						
E27K	Coleen River	63.28	24	P	P	09 28 45.6	+0.7
	baz=266						
BVCY	Beaver Creek	63.38	30	P	P	09 28 46.4	+0.8
	baz=270						
YUK3	Moose Creek	63.57	31	P	P	09 28 47.3	+0.2
	baz=270						
D27M	Malcolm River	63.58	23	P	P	09 28 47.7	+0.8
	baz=266						
O28M	Mount Upton	63.71	32	P	P	09 28 48.5	+0.3
	baz=271						
I28M	Miner Creek	63.82	27	IAmb	IAmb	09 29 19.1	
	comp=Z,20nm,1.6s						
I28M	Miner Creek	63.82	27	P	P	09 28 49.4	+0.8
	baz=269						
F28M	Old Crow	63.91	25		P	09 28 49.5	+0.5
F28M				IAmb	IAmb	09 29 18.1	
	comp=Z,21nm,1.5s						
F28M	Old Crow	63.91	25	P	P	09 28 49.9	+1.0
	baz=268						
YUK8	Steele Glacier	63.91	32	P	P	09 28 50.0	+0.6
	baz=271						
KBL	Kabul	63.99	298		P	09 28 50.8	+0.4
KBL				IAmb	IAmb	09 28 51.9	
	comp=Z,14nm,0.8s						
KBL	Kabul	63.99	298	P	P	09 28 50.8	+0.4
KBL				pmax	pmax		
	comp=Z,14nm,0.8s						
DAWY	Dawson	64.05	29	P	P	09 28 50.9	+0.9
	baz=270						
E28M	Babbage River	64.07	24	IAmb	IAmb	09 29 17.0	
	comp=Z,12nm,1.1s						
E28M	Babbage River	64.07	24	P	P	09 28 50.7	+0.7
	baz=268						
SHAA	Shahritus	64.15	302	IAmb	IAmb	09 28 53.3	
	comp=Z,21nm,0.7s						
D28M	Stokes Point	64.38	23	P	P	09 28 52.9	+0.9
	baz=268						
YUK4	Talbot Arm	64.45	32	P	P	09 28 53.8	+0.9
	baz=272						
H29M	Whitestone	64.47	26	P	P	09 28 53.6	+0.9
	baz=270						
M29M	Somme Creek	64.50	30	P	P	09 28 53.8	+0.8
	baz=272						
I29M	Ogilvie Camp,	64.51	27	P	P	09 28 53.8	+0.8
	baz=270						
O29M	Mount Kennedy	64.53	33	P	P	09 28 54.0	+0.7
	baz=273						
L29M	L29M	64.63	30	P	P	09 28 54.8	+1.0
	baz=272						
E29M	Blow River	64.67	24	P	P	09 28 55.2	+1.3
	baz=269						
K29M	Barlow Dome	64.88	29	P	P	09 28 56.2	+0.7
	baz=272						
HYT	Haines Junctio	65.03	32	P	P	09 28 56.7	+0.1
	baz=273						
EPYK	Eagle Plains	65.14	26	P	P	09 28 57.5	+0.5
	baz=272						
N30M	Aishikik Lake	65.19	31	P	P	09 28 58.2	+0.7
	baz=273						
M30M	Minto, Yukon	65.27	30	P	P	09 28 58.7	+0.7
	baz=273						
G30M	tAoh Zraii Nji	65.32	25	P	P	09 28 59.1	+0.8
	baz=272						
I30M	Mount Dempster	65.32	27	P	P	09 28 59.0	+0.7
	baz=272						
P30M	Million Dollar	65.34	33	P	P	09 28 59.3	+0.8
	baz=274						
J30M	Hart River	65.37	28	P	P	09 28 59.5	+0.8
	baz=273						
F30M	Barrier River	65.47	25	P	P	09 28 59.8	+0.7
	baz=272						
MAYO	Mayo, Yukon	65.61	29	P	P	09 29 00.9	+0.8
	baz=274						
PLBC	Pleasant Camp	65.70	34	P	P	09 29 00.9	+0.2
	baz=275						
O30N	Mendenhall	65.72	32	P	P	09 29 01.2	+0.3
	baz=275						
N31M	Braeburn, Yuko	65.82	31	P	P	09 29 02.0	+0.5
	baz=275						
S31K	Pelican	65.91	35	P	P	09 29 02.3	+0.2
	baz=276						
G31M	Satah River	66.09	25	IAmb	IAmb	09 29 29.6	
	comp=Z,11nm,0.9s						
G31M	Satah River	66.09	25	P	P	09 29 03.7	+0.6
	baz=273,SNR=5.8						
H31M	Peel River	66.13	27	P	P	09 29 04.0	+0.6
	baz=274						
F31M	Tsiigehtchic	66.26	25	IAmb	IAmb	09 29 36.4	
	comp=Z,13nm,1.1s						
F31M	Tsiigehtchic	66.26	25	P	P	09 29 04.8	+0.6
	baz=274						
INK	Inuvik	66.29	24	P	P	09 29 04.8	+0.5
	baz=274						
M31M	Drury Creek, Y	66.41	31	P	P	09 29 05.4	+0.1
	baz=275						
SIT	Sitka	66.50	36	P	P	09 29 06.3	+0.5
	baz=277						
S32K	Killisnoo	66.85	36	P	P	09 29 08.9	+0.8
	baz=277						
P32M	Atlin	67.03	33	P	P	09 29 09.7	+0.4
	baz=277						
N32M	Quiet Lake	67.14	32	P	P	09 29 10.2	+0.2
	baz=277						
ARTI	Arti	67.66	323		P	09 29 12.6	-0.7
ARTI	Arti	67.66	323	*c i*P	P	09 29 12.7	-0.6
ARTI						09 29 36.6	
ARTI				S	S	09 38 06.5	+1.0
ARTI				SS	SS	09 42 23.7	-3.2
ARTI				pmax	pmax		
	comp=Z,11nm,0.6s						
U33K	Whale Pass	67.83	37	P	P	09 29 14.4	+0.1
	baz=279						
Q32M	Nakina River	67.85	34	P	P	09 29 14.5	-0.2
	baz=279						
AB31	Akbulak array	67.92	315		P	09 29 15.0	-0.1
AB31				IAmb	IAmb	09 29 15.7	
	comp=Z,9.9nm,0.7s						
ABKAR	Akbulak array	67.92	315	P	P	09 29 14.8	-0.3
CRAG	Craig	67.94	38	P	P	09 29 15.1	+0.1
	baz=279						
S34M	Telegraph Cree	68.61	35	P	P	09 29 19.6	+0.4
	baz=280						
A36M	Sachs Harbour	68.67	19	P	P	09 29 19.8	+0.5
	baz=280						
V35K	Ketchikan	68.81	38	P	P	09 29 20.8	+0.4
	baz=281						
T35M	Bob Quinn	69.25	36	P	P	09 29 23.6	+0.3
	baz=281						
WTLY	Watson Lake, Y	69.39	32	P	P	09 29 24.7	+0.6
	baz=281						
WRGLY	Wrigley	71.19	29	P	P	09 29 35.2	+0.3
	baz=284						
TOAD	Toad River Com	71.45	33	P	P	09 29 36.8	+0.2
	baz=284						
KOTAN	Kotaneelee Air	71.70	32	P	P	09 29 38.3	+0.2
	baz=285						
KIRV	Kirov	71.94	327	*de*P	P	09 29 39.3	-0.2
SPITS	Spitsbergen Ar	74.08	350	P	P	09 29 53.3	+1.4
	comp=Z,5.5nm,0.8s,baz=81,slow=8.9,SNR=6.6						
	comp=Z,5.5nm,0.8s						
BELG	Belogornoye	74.71	321	*ce*P	P	09 29 55.3	-0.6
BELG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YKA	Yellowknife Ar	75.27	28	P	P	09 29 58.4	-0.6
	comp=Z,1.1nm,0.6s,baz=307,slow=9.8,SNR=11						
	comp=Z,1.1nm,0.6s						
YKA	Yellowknife Ar	75.27	28	P	P	09 29 58.3	-0.7
APA	Apatity	75.59	338⇓	*e*P	P	09 29 53.8	-6.9
APA				*e*		09 32 49.8	
APA				MLR	MLR		
	comp=Z,1μm,5.8s						
KLMR	Klimovskoe	75.95	331	*e*P	P	09 30 00.5	-2.4
KLMR				*e**PP	PcP	09 30 15.1	+0.1
KLMR				pmax	pmax		
	comp=Z,11nm,1.6s						
ARCES	ARCESS Array B	77.14	341	P	P	09 30 10.0	+0.5
	comp=Z,3.1nm,0.7s,baz=68,slow=8.3,SNR=12						
	comp=Z,3.1nm,0.7s						
ARCES	ARCESS Array B	77.14	341	P	P	09 30 10.0	+0.5
AKT	Akhty	78.30	310	*e*P	P	09 30 15.7	-0.9
AKT				*e**SP	PcP	09 30 27.0	+1.2
AKT				pmax	pmax		
	comp=Z,12nm,0.7s						
VRH	Novokhopyorsk	78.56	321	*e*P	P	09 30 16.0	-1.6
VRH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
J05D	Fort Rock, OR	78.67	48	P	P	09 30 18.7	0.0
J05D				IAmb	IAmb	09 30 20.2	
	comp=Z,23nm,1.3s						
PINE	Pine Mountain	78.69	47		P	09 30 18.3	-0.5
PINE				IAmb	IAmb	09 30 20.4	
	comp=Z,25nm,1.3s						
M03C	McCloud	78.79	50	P	P	09 30 18.6	-0.7
LPSR	Galich'ya Gora	79.58	323	*e*P	P	09 30 26.0	+2.8
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
OBN	Obninsk	79.76	326	*i* P	P	09 30 24.3	+0.2
OBN				*i*		09 30 32.3	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ORV	Oroville	79.86	51	IAmb	IAmb	09 30 56.0	
	comp=Z,20nm,1.9s						
VSR	Storozhevoye	80.02	322	*e*P	P	09 30 23.4	-2.2
VSR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VORD	Divnogorie	80.05	321	*e*P	P	09 30 22.9	-2.9
VORD				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BMO	Blue Mountains	80.69	45	P	P	09 30 28.4	-1.1
KBZ	Khabaz	80.77	314	P	P	09 30 30.5	+0.7
	comp=Z,20nm,0.8s,baz=101,slow=4.4,SNR=61						
	comp=Z,20nm,0.8s						
KBZ	Khabaz	80.77	314	*d i*P	P	09 30 30.8	+1.0
KBZ				pmax	pmax		
	comp=Z,18nm,0.9s						
KIV	Kislovodsk	80.82	314	*e*P	P	09 30 30.6	+0.4
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SHA1	Shidzhatmaz	80.92	314⇓	*e*P	P	09 30 31.7	+0.7
FINES	FINESS Array B	81.41	334	P	P	09 30 32.1	-0.8
	comp=Z,3.0nm,0.5s,baz=70,slow=5.0,SNR=28						
FINES				pP	sP	09 30 57.0	+0.7
	comp=Z,34nm,1.0s,baz=56,slow=6.1,SNR=13						
	comp=Z,3.0nm,0.5s						
FINES	FINESS Array B	81.41	334	*i* P	P	09 30 32.5	-0.3
FINES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
NVAR	Mina Array Bea	82.59	51	P	P	09 30 39.6	-0.2
	comp=Z,3.8nm,0.9s,baz=263,slow=6.0,SNR=15						
	comp=Z,3.8nm,0.9s						
NVAR	Mina Array Bea	82.59	51	P	P	09 30 39.2	-0.6
GMN	Gold Mountain	83.81	52	IAmb	IAmb	09 32 19.4	
	comp=Z,7.5nm,0.5s						
CLC	China Lake	84.17	54	IAmb	IAmb	09 30 48.4	
	comp=Z,21nm,1.9s						
YHL	Hebgen Lake	84.62	43	IAmb	IAmb	09 31 18.8	
	comp=Z,11nm,1.2s						
YMR	Madison River	84.84	43	IAmb	IAmb	09 30 53.0	
	comp=Z,11nm,1.0s						
DUG	Dugway, Tooele	85.68	48	IAmb	IAmb	09 30 56.2	
	comp=Z,5.2nm,0.7s						
AK03	Malin Array Si	85.78	324	P	P	09 30 55.4	0.0
AKASG	Malin Array Be	85.79	324	P	P	09 30 54.7	-0.8
	comp=Z,0.9nm,0.5s,baz=53,slow=5.2,SNR=2.8						
	comp=Z,0.9nm,0.5s						
AKBB	Malin Array Si	85.79	324	P	P	09 30 56.3	+0.8
KIEV	Kiev	85.80	324	P	P	09 30 56.0	+0.5
AK02	Malin Array Si	85.82	324	P	P	09 30 56.1	+0.4
HWUT	Hardware Ranch	85.88	46	IAmb	IAmb	09 30 57.2	
	comp=Z,6.4nm,0.9s						
PFO	Pinyon Flats O	85.95	55	P	P	09 30 54.0	-2.8
CCUT	Cedar City	86.49	51	IAmb	IAmb	09 31 00.7	
	comp=Z,9.2nm,1.3s						
PDAR	Pinedale Array	86.64	45	P	P	09 30 60.0	-0.3
	comp=Z,0.8nm,0.8s,baz=290,slow=4.4,SNR=4.7						
	comp=Z,0.8nm,0.8s						
PDAR	Pinedale Array	86.64	45	P	P	09 30 59.5	-0.7

HFS	**Hagfors**	**86.95**	**337**	P	**P**	**09 31 01.0**	**0.0**
	comp=Z,2.2nm,0.6s,baz=79,slow=7.5,SNR=7.4						
HFS				pP	**sP**	**09 31 23.8**	**-0.7**
	comp=Z,4.8nm,0.9s,baz=42,slow=6.8,SNR=2.7						
	comp=Z,2.2nm,0.6s						
NB2	**NORSAR Subarra**	**87.17**	**339**	P	**P**	**09 31 00.7**	**-1.4**
	comp=Z,2.1nm,0.8s,baz=55,slow=4.8						
NOA	**NORSAR Array B**	**87.17**	**339**	P	**P**	**09 31 00.8**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=49,slow=4.8,SNR=4.2						
	comp=Z,0.7nm,0.7s						
SRU	**San Rafael Swe**	**87.75**	**48**	IAmb	IAmb	09 31 06.5	
	comp=Z,21nm,1.7s						
Y14A	**Wickenburg**	**88.39**	**54**	IAmb	IAmb	09 31 09.4	
	comp=Z,7.4nm,0.9s						
BR131	**Keskin Array S**	**88.75**	**313**	P	**P**	**09 31 09.1**	**-1.1**
BR131				IAmb	IAmb	09 31 36.2	
	comp=Z,5.1nm,0.9s						
BR131	**Keskin Array S**	**88.75**	**313**	⇑*e*P	**P**	**09 31 09.6**	**-0.6**
BRTR	**Keskin Array B**	**88.75**	**313**	P	**P**	**09 31 09.6**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=75,slow=4.5,SNR=6.8						
BRTR				pP	**sP**	**09 31 33.7**	**-0.2**
	comp=Z,3.4nm,0.9s,baz=76,slow=5.2,SNR=8.4						
	comp=Z,1.0nm,0.6s						
BRTR	**Keskin Array B**	**88.75**	**313**	P	**P**	**09 31 09.3**	**-0.9**
BR106	**Keskin Array S**	**88.76**	**313**	P	**P**	**09 31 09.8**	**-0.4**
	comp=Z,4.6nm,0.9s						
BR105	**Keskin Array S**	**88.77**	**313**	P	**P**	**09 31 09.8**	**-0.5**
	comp=Z,44nmcomp=Z,5.0nm,0.9s						
ANTO	**Ankara**	**89.24**	**314**	P	**P**	**09 31 12.9**	**+0.5**
BUR08	**Bucovina Ar. S**	**89.69**	**323**	P	**P**	**09 31 15.6**	**+1.2**
TASM	**ASL Pad, Albuq**	**92.63**	**50**	IAmb	IAmb	09 31 30.0	
	comp=Z,2.3nm,0.9s						
ANMO	**Albuquerque**	**92.64**	**50**		**P**	**09 31 28.7**	**+0.3**
ANMO	**Albuquerque**	**92.64**	**50**	⇓*e*P	**P**	**09 31 28.4**	**-0.1**
ANMO				pmax	pmax		
	comp=Z,18nm,3.8s						
ABQ	**Albuquerque**	**92.64**	**50**	IAmb	IAmb	09 31 57.4	
	comp=Z,14nm,1.9s						
IDI	**Anoyia**	**96.99**	**313**	LR	LR	10 20 15.6	
	comp=Z,92nm,20.5s,baz=298,slow=38						
TXAR	**Lajitas Array**	**97.57**	**54**	P	Pdif	09 31 51.7	+0.7
	comp=Z,0.3nm,0.6s,baz=285,slow=4.3,SNR=5.2						
	comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	**97.57**	**54**	P	**P**	**09 31 50.8**	**-0.2**
SNAA	**Sanae**	**127.83**	**193**	PKP	**PKPdf**	**09 37 19.9**	**-0.9**
	comp=Z,1.7nm,0.6s,baz=181,slow=6.4,SNR=12						
PLCA	**Paso Flores**	**147.31**	**130**	PKPbc	**PKPdf**	**09 37 57.9**	**+0.6**
	comp=Z,2.4nm,0.5s,baz=230,slow=4.1,SNR=13						
LPAZ	**La Paz**	**150.37**	**82**	PKP	**PKPdf**	**09 38 03.7**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=337,slow=3.1,SNR=8.2						
LPAZ				PKPbc	**PKPbc**	**09 38 08.5**	**-0.4**
	comp=Z,13nm,0.6s,baz=314,slow=2.5,SNR=40						

WEL 18 09:21:47.6±1.0**, 32°S**±17°×**18°0E**±4°2**, h451**^{km}±19^{km}**,** **mB4.1**/6**, ML4.4**/8**, MLv4.3**/6**, Mw(mB)3.1**/6**, Error ellipse: s-maj=57.9km s-min=12.0km az=108.6, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.30**	**192**	S	S	09 24 27.4	+1.4
WMGZ	**Waiomatatini S**	**5.53**	**191**	P	P	09 23 15.3	-1.7
WMGZ				S	S	09 24 29.1	-1.1
HAZ	**Te Kaha**	**5.59**	**196**	P	P	09 23 17.9	+0.2
HAZ				S	S	09 24 31.3	0.0
PKGZ	**Pakihiroa**	**5.63**	**193**	P	P	09 23 19.1	+1.0
PKGZ				S	S	09 24 32.7	+0.5
PUZ	**Puketiti**	**5.80**	**191**	P	P	09 23 21.1	+1.3
PUZ				S	S	09 24 35.6	+0.3
RUGZ	**Raukumara Rang**	**5.82**	**196**	P	P	09 23 19.3	-0.8
RUGZ				S	S	09 24 36.9	+1.2
TWGZ	**Tauwhareparae**	**5.96**	**193**	P	P	09 23 21.8	+0.4
TWGZ				S	S	09 24 38.7	+0.6
OPRZ	**Ohinepanea**	**6.03**	**204**	P	P	09 23 23.8	+1.7
MWZ	**Matawai**	**6.20**	**196**	P	P	09 23 23.5	-0.4
MWZ				S	S	09 24 42.2	-0.5
CNGZ	**Carnagh Statio**	**6.21**	**191**	P	P	09 23 25.0	+1.1
CNGZ				S	S	09 24 43.6	+0.7
URZ	**Urewera**	**6.24**	**199**	P	P	09 23 23.4	-0.7
URZ				S	S	09 24 42.8	-0.4
RIGZ	**Rimuhau**	**6.51**	**193**	P	P	09 23 27.1	0.0
RIGZ				S	S	09 24 49.8	+1.3
RAHZ	**Arahi**	**6.86**	**197**	P	P	09 23 31.1	+0.3
RAHZ				S	S	09 24 56.1	+0.8
MTHZ	**Maungataniwha**	**6.87**	**199**	P	P	09 23 32.1	+1.3
MTHZ				S	S	09 24 56.3	+0.9
BKZ	**Black Stump Fm**	**7.26**	**200**	P	P	09 23 34.0	-0.9
PXZ	**Pawanui**	**7.97**	**196**	P	P	09 23 42.5	0.0
PXZ				S	S	09 25 17.5	+0.6
TSZ	**Takapari Road**	**8.24**	**200**	P	P	09 23 44.0	-1.4
BFZ	**Birch Farm**	**8.74**	**197**	P	P	09 23 51.3	+0.5
BFZ				S	S	09 25 33.6	+1.5

ASRS ***18*** *09:22:27.0±0.7, 54°.63N×83°.72E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 18 09:22:30.6±2.3**, 54°.57N×83°.86E, h0**^{km}**, mbtmp2.4**/2**, ML2.0**/2**, Error ellipse: s-maj=18.1km s-min=10.9km az=170.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.83**	**137**	I	I	09 28 00.5	
	0.4nm,2.1s,baz=317,slow=327,SNR=7.4						
ZALV	**Zalesovo Beam**	**0.84**	**137**	Pg	Pg	09 22 45.8	-0.9
	1.2nm,0.3s,baz=324,slow=17,SNR=11						
ZALV				Lg	Lg	09 22 59.0	
	5.1nm,0.3s,baz=316,slow=28,SNR=23						
ZALV				Rg	Rg	09 23 05.2	
	3.4nm,0.3s,baz=329,slow=28,SNR=7.4						
KURBB	**Kurchatov Arra**	**5.11**	**222**	Pn	Pn	09 23 48.2	-0.2
	baz=40,slow=13,SNR=3.5						
KURBB				Lg	Lg	09 25 16.3	
	0.1nm,0.3s,baz=40,slow=29,SNR=4.4						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**7.84**	**188**	Pn	Pn	09 24 26.5	+0.5
	baz=8.7,slow=10,SNR=1.4						
	0.1nm,0.4s						

ASRS 18 09:40:31.0±1.0**, 54°.18N×87°.08E, h0**^{km}**, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

ASRS 18 09:41:19.0±1.1**, 53°.61N×87°.96E, h0**^{km}**, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

IDC ***18*** *09:51:15.8±0.7, 38°.65N×29°.21W, h0^{km}, mb4.3/24, mbtmp4.3/25, ML4.2/1, MS4.0/62, Error ellipse: s-maj=21.3km s-min=13.5km az=164.0*

MOS ***18*** *09:51:16.8±0.9, 38°.47N×29°.09W, h22^{km}, mb4.9/46, MS4.0/5, Error ellipse: s-maj=11.2km s-min=5.7km az=49.3*

SVSA ***18*** *09:51:17.5±2.1, 38°.61N×29°.14W, h5^{km}±5^{km}, ML4.7(INMG), Error ellipse: s-maj=8.9km s-min=7.5km az=40.0, #DIST_RANGE: LOCAL #IPMA_REGION: W Faial #FELT: IV (MM56) at Faial: Feteira (Horta)*

NEIC ***18*** *09:51:17.4±1.2, 38°.6N±0°.1×29°.1W±0°.1, h10^{km}±1^{km}, mb4.8/134, Error ellipse: s-maj=20.0km s-min=13.9km az=181.0*

GCMT ***18*** *09:51:21.4±0.3, 38°.61N±0°.02×28°.88W±0°.03, h22^{km}±1^{km}, MW4.9/89, Moment Tensor Solution. s16,c17; s89,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.43±.17; M$_{\theta\theta}$2.52±.13; M$_{\phi\phi}$-1.09±.08; M$_{r\theta}$1.46±.18; M$_{\theta\phi}$-0.39±.07; M$_{\phi r}$-0.63±.14; Best double couple: M$_0$2.61100×10^{16} NP1:φ$_s$67.00000°, δ33.00000°, λ-134.00000°. NP2: φ$_s$296.00000°, δ67.00000°, λ-66.00000°. Principal axes: T 3.0780, Plg19.0000°, Azm8.0000°; N -0.9350, Plg22.0000°, Azm106.0000°; P -2.1430, Plg60.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 09:51:18.4±0.6**, 38°.56N**±0°.05×**28°.99W**±0°.03**, h19**^{km}±2^{km}**, n307,** σ1^s**34**/253**, mb4.7**/141**, MS4.0**/69**, 13C-26D, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCAPE	**Capelo, Faial**	**0.13**	**75**	⇓*e*P	**Pg**	**09 51 22.4**	**-0.2**
PCAPE				*e*S	**Sg**	**09 51 26.1**	**+0.7**
PCAPE				*i* IAML		09 51 27.5	
PCAPE				*i* IAML		09 51 27.8	
PCAPE				*i* IAML		09 51 28.5	
PFCBR	**Castelo Branco**	**0.22**	**101**	⇓*e*P	**Pb**	**09 51 23.4**	**+0.2**
PFCBR				*e*S	**Sg**	**09 51 28.3**	**+1.0**
PFCBR				*i* IAML		09 51 28.6	
PFCBR				*i* IAML		09 51 29.1	
PFCBR				*i* IAML		09 51 30.7	
CALA	**Caldeira**	**0.23**	**85**	⇓*i*P	**Pb**	**09 51 23.5**	**-0.1**
CALA				*e*S	**Sg**	**09 51 28.4**	**+0.7**
CALA				*i* IAML		09 51 35.7	
CALA				*i* IAML		09 51 36.9	
CALA				*i* IAML		09 51 40.5	
PCED	**Cedros**	**0.23**	**74**	⇓*i*P	**Pb**	**09 51 23.7**	**0.0**
PCED				*e*S	**Sg**	**09 51 28.6**	**+0.8**
PCED				*i* IAML		09 51 29.5	
PCED				*i* IAML		09 51 31.4	
PCED				*i* IAML		09 51 36.2	
HOR	**Horta**	**0.28**	**97**	⇓*i*P	**Pb**	**09 51 24.5**	**-0.4**
HOR				*e*S	**Sg**	**09 51 29.9**	**+0.8**
HOR				*i* IAML		09 51 30.9	
HOR				*i* IAML		09 51 31.9	
HOR				*i* IAML		09 51 32.3	
PCAN	**Candelaria**	**0.41**	**104**	⇓*i*P	**Pg**	**09 51 26.4**	**-0.5**
PCAN				*e*S	**Sb**	**09 51 33.1**	**+0.1**
PCAN				*i* IAML		09 51 35.0	
PCAN				*i* IAML		09 51 36.2	
PCAN				*i* IAML		09 51 39.0	
PICO	**Pico**	**0.45**	**98**	⇓*i*P	**Pg**	**09 51 27.1**	**-0.5**
PICO				*e*S	**Sb**	**09 51 34.8**	**+0.7**
PICO				*i* IAML		09 51 36.0	
PICO				*i* IAML		09 51 36.6	
PICO				*i* IAML		09 51 41.2	
PPNO	**Prainha do Nor**	**0.58**	**99**	⇓*i*P	**Pb**	**09 51 29.1**	**-0.8**
PPNO				*e*S	**Sg**	**09 51 38.0**	**+0.3**
PPNO				*i* IAML		09 51 45.2	
PPNO				*i* IAML		09 51 50.3	
ROSA	**Rosais**	**0.61**	**75**	⇓*e*P	**Pb**	**09 51 29.2**	**-1.1**
ROSA				*e*S	**Sb**	**09 51 37.9**	**-0.6**
ROSA				*i* IAML		09 51 41.0	
ROSA				*i* IAML		09 51 44.6	
ROSA				*i* IAML		09 51 44.8	
PID	**Ribeirinha**	**0.69**	**100**	⇓*i*P	**Pb**	**09 51 30.5**	**-1.3**
PID				*e*S	**Sb**	**09 51 41.1**	**+0.1**
PID				*i* IAML		09 51 48.8	
PID				*i* IAML		09 51 51.4	
PID				*i* IAML		09 51 55.1	
PMAN	**Manadas**	**0.71**	**84**	⇓*e*P	**Pb**	**09 51 30.5**	**-1.6**
PMAN				*e*S	**Sb**	**09 51 41.0**	**-0.5**
PMAN				*i* IAML		09 51 46.1	
PMAN				*i* IAML		09 51 49.0	
PMAN				*i* IAML		09 51 53.9	
SRBC	**Serra Branca**	**0.88**	**57**	⇑*e*P	**Pb**	**09 51 32.8**	**-2.3**
SRBC				*e*S	**Sb**	**09 51 43.9**	**-2.6**
SRBC				*i* IAML		09 51 56.6	
SRBC				*i* IAML		09 51 57.2	
SRBC				*i* IAML		09 51 58.8	
PSCRZ	**Santa Cruz da**	**0.93**	**55**	*e*P	**Pb**	**09 51 33.5**	**-2.4**
PSCRZ				*i* IAML		09 51 46.3	
PTOPO	**Topo S. Jorge**	**0.97**	**90**	*e*S	**Sb**	**09 51 46.8**	**-2.1**
PTOPO				*i* IAML		09 51 48.5	
PTOPO				*i* IAML		09 51 48.5	
PTOPO				*i* IAML		09 51 48.6	
ADH	**Angra Heroismo**	**1.38**	**86**	*e*P	**Pn**	**09 51 40.1**	**-2.5**
ADH				*e*S	**Sn**	**09 51 57.1**	**-3.2**
ADH				*i* IAML		09 51 58.8	
ADH				*i* IAML		09 51 59.9	
ADH				*i* IAML		09 52 06.8	
PAGU	**Agualva, Azore**	**1.43**	**81**	⇑*e*P	**Pn**	**09 51 40.6**	**-2.7**
PAGU				*e*S	**Sn**	**09 51 58.2**	**-3.4**
PAGU				*i* IAML		09 51 59.4	
PAGU				*i* IAML		09 52 01.2	
PAGU				*i* IAML		09 52 02.0	
PSCM	**Serra do Cume**	**1.47**	**84**	*e*P	**Pn**	**09 51 41.4**	**-2.5**
PSCM				*e*S	**Sn**	**09 51 59.3**	**-3.4**
PSCM				*i* IAML		09 52 00.8	
PSCM				*i* IAML		09 52 01.8	
PSCM				*i* IAML		09 52 03.2	
PDA	**Ponta Delgada**	**2.75**	**106**	⇑*e*P	**Pn**	**09 51 59.6**	**-1.8**
PDA				*e*S	**Sn**	**09 52 30.7**	**-3.4**
PDA				*i* IAML		09 52 33.9	
PDA				*i* IAML		09 52 34.0	
PDA				*i* IAML		09 52 37.5	
CMLA	**Cha da Macela**	**2.84**	**105**		**Pn**	**09 52 01.5**	**-1.3**
CMLA	**Cha da Macela**	**2.84**	**105**	*e*P	**Pn**	**09 52 01.1**	**-1.7**
CMLA				*e*S	**Sn**	**09 52 32.9**	**-3.6**
CMLA				*i* IAML		09 52 36.0	
CMLA				*i* IAML		09 52 38.0	
CMLA				*i* IAML		09 52 40.1	
CMLA	**Cha da Macela**	**2.84**	**105**	P	**Pn**	**09 52 01.5**	**-1.3**
PCALD	**Caldeiras da R**	**2.86**	**104**	*e*P	**Pn**	**09 52 01.7**	**-1.4**
PCALD				*e*S	**Sn**	**09 52 34.3**	**-2.7**
PGRON	**Lagoa das Cont**	**2.96**	**104**	*e*P	**Pn**	**09 52 02.9**	**-1.4**
BART	**Pico Bartolome**	**3.11**	**103**	*e*P	**Pn**	**09 52 04.6**	**-1.9**
BART				*e*S	**Sn**	**09 52 41.3**	**-1.9**
BART				*i* IAML		09 52 49.3	
BART				*i* IAML		09 52 49.4	
BART				*i* IAML		09 52 49.7	
PSMN	**Pico do Norte,**	**3.48**	**115**	⇓*e*P	**Pn**	**09 52 08.7**	**-2.8**
PSMN				*e*S	**Sn**	**09 52 47.2**	**-4.9**
PSMN				*i* IAML		09 52 51.3	
PSMN				*i* IAML		09 52 52.7	
PSMN				*i* IAML		09 52 55.7	
PMOZ	**Porto Moniz, M**	**11.16**	**117**	Pn	**Pn**	**09 53 57.3**	**+0.2**
PMOZ	**Porto Moniz, M**	**11.16**	**117**	*e*P	**Pn**	**09 54 00.2**	**+3.1**
PMAR	**Madeira**	**11.42**	**117**	*e*P	**Pn**	**09 54 00.9**	**+0.3**
PMPST	**Porto Santo, M**	**11.63**	**114**	*e*P	**Pn**	**09 54 04.4**	**+1.0**
MACI	**Morro de la Ar**	**14.63**	**131**	Pn	**Pn**	**09 54 43.9**	**-0.7**
PFVI	**Vila Bisbo**	**15.99**	**89**	Pn	**Pn**	**09 55 03.9**	**+1.6**
PFVI				IAmb	IAmb	09 55 14.0	
	comp=Z,93nm,1.2s						
PMTG	**Montargil**	**16.19**	**82**	*e*P	**Pn**	**09 55 06.0**	**+1.2**
PMTG				IAmb	IAmb	09 55 29.9	
	comp=Z,67nm,1.4s						
PSARD	**Sardoal**	**16.21**	**80**	*e*P	**P**	**09 55 10.4**	**+2.3**
PSARD				IAmb	IAmb	09 55 12.4	
	comp=Z,68nm,1.7s						
PARRA	**Arraiolos**	**16.36**	**83**	*e*P	**P**	**09 55 12.0**	**+2.3**
PARRA				IAmb	IAmb	09 55 13.5	
	comp=Z,48nm,1.7s						
PCBR	**Castelo Branco**	**16.72**	**79**	*e*P	**P**	**09 55 16.2**	**+2.4**
PMRV	**Marv??o**	**16.81**	**80**	*e*P	**Pn**	**09 55 13.6**	**+0.8**
PMRV				*e*LQ	LQ	09 58 39.8	
PMRV				*e*LR	LR	09 59 11.1	
PMRV				IAMs_20	IAMs_20	10 00 42.8	
	comp=Z,672nm,20.0s						
ESDC	**Sonseca Array**	**19.44**	**79**	P	**Pn**	**09 55 46.0**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=283,slow=12,SNR=4.6						
ESDC				LR	LR	10 01 58.2	
	comp=Z,651nm,19.5s,baz=268,slow=33						
	comp=Z,1.4nm,0.7s						
MD01	**Midelt array s**	**20.45**	**99**	P	**P**	**09 55 55.9**	**+0.9**
MD31	**MD31**	**20.45**	**99**	P	**P**	**09 55 55.6**	**+0.7**
MDT	**Midelt**	**20.59**	**99**	LR	LR	10 02 15.5	
	comp=Z,330nm,21.6s,baz=299,slow=32						
DRLN	**Deer Lake**	**23.02**	**307**	P	**P**	**09 56 21.1**	**-1.1**
DRLN				IAmb	IAmb	09 56 31.8	
	comp=Z,38nm,1.1s						
EKA	**Eskdalemuir Ar**	**24.12**	**38**	P	**P**	**09 56 33.4**	**+0.5**
	comp=Z,8.1nm,0.9s,baz=240,slow=6.7,SNR=9.8						
EKA				LR	LR	10 04 25.5	
	comp=Z,536nm,18.1s,baz=228,slow=33						
	comp=Z,8.1nm,0.9s						
GBN	**Guysborough**	**25.00**	**296**	P	**P**	**09 56 40.5**	**-0.5**
DOU	**Dourbes**	**26.42**	**53**	*d*P	**P**	**09 56 54.3**	**+0.5**
	comp=Z,7.5nm,1.0s						
HAL	**Halifax**	**26.44**	**294**	P	**P**	**09 56 54.1**	**+0.2**
HAL	**Halifax**	**26.44**	**294**	P	**P**	**09 56 54.1**	**+0.2**
HAL				pmax	pmax		
	comp=Z,48nm,1.0s						
BORG	**Borgarnes**	**26.61**	**7**	LR	LR	10 04 35.9	
	comp=Z,656nm,20.9s,baz=187,slow=30						
BGES	**Gesves**	**26.80**	**53**	*d*P	**P**	**09 56 58.0**	**+0.9**
	comp=Z,6.3nm,1.0s						
LMN	**Caledonia Moun**	**27.34**	**297**	P	**P**	**09 57 00.9**	**-1.2**
SENIN	**Lac Senin/Sane**	**27.69**	**62**	P	**P**	**09 57 06.2**	**+0.8**
BFO	**Black Forest**	**28.55**	**58**	P	**P**	**09 57 13.9**	**+1.0**
BFO				IAmb	IAmb	09 57 14.6	
	comp=Z,10nm,0.8s						
BFO	**Black Forest**	**28.55**	**58**	P	**P**	**09 57 13.9**	**+1.0**
BFO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GGN	**Saint George**	**28.76**	**295**	P	**P**	**09 57 14.1**	**-0.6**
GGN				IAmb	IAmb	09 57 34.1	
	comp=Z,34nm,1.3s						
TUE	**Stuetta**	**29.11**	**62**		**P**	**09 57 19.3**	**+1.2**
TUE				IAmb	IAmb	09 57 21.1	
	comp=Z,13nm,0.8s						
FUORN	**Ofenpass-Fuorn**	**29.75**	**62**	P	**P**	**09 57 23.7**	**-0.1**
F64A	**Sherman**	**29.81**	**297**	P	**P**	**09 57 23.5**	**-0.6**
F64A				IAmb	IAmb	09 57 30.8	
	comp=Z,16nm,1.2s						
FETA	**Feichten**	**30.08**	**61**	*e*P	**P**	**09 57 27.9**	**+1.3**
	comp=Z,5.6nm,0.9s						
SCHQ	**Schefferville**	**30.17**	**315**	P	**P**	**09 57 26.1**	**-1.0**
	comp=Z,3.8nm,0.6s,baz=126,slow=6.8,SNR=8.1						
SCHQ				LR	LR	10 07 04.0	
	comp=Z,246nm,19.0s,baz=94,slow=32						
	comp=Z,3.8nm,0.6s						
SCHQ	**Schefferville**	**30.17**	**315**	P	**P**	**09 57 26.2**	**-1.0**
D62A	**Allapoint, All**	**30.32**	**299**	P	**P**	**09 57 27.6**	**-0.8**
D62A				IAmb	IAmb	09 57 36.0	
	comp=Z,18nm,1.4s						
SQTA	**Sankt Quirin**	**30.41**	**60**	*e*P	**P**	**09 57 30.8**	**+1.3**
	comp=Z,16nm,1.1s						
KEST	**Kesra**	**30.54**	**83**	LR	LR	10 08 19.1	
	comp=Z,242nm,21.3s,baz=357,slow=33						
WATA	**Walderalm**	**30.66**	**60**	*e*P	**P**	**09 57 33.3**	**+1.5**
	comp=Z,3.4nm,0.5s						
WTTA	**Wattenberg**	**30.70**	**60**	*e*P	**P**	**09 57 33.5**	**+1.4**
	comp=Z,15nm,0.9s						
BSEG	**Bad Segeberg**	**30.76**	**47**	P	**P**	**09 57 33.1**	**+0.8**
BSEG				pmax	pmax		
	comp=Z,22nm,1.0s						
MOX	**Moxa**	**30.94**	**54**	P	**P**	**09 57 35.4**	**+1.4**
MOX				pmax	pmax		
	comp=Z,15nm,1.1s						
SFJD	**Kangerlussuaq**	**30.99**	**344**	LR	LR	10 07 46.5	
	comp=Z,80nm,19.5s,baz=171,slow=32						
ABTA	**Abfaltersbach**	**31.30**	**61**	*e*P	**P**	**09 57 38.5**	**+1.2**
	comp=Z,12nm,1.0s						
LESA	**Schwarzleotal**	**31.41**	**60**	*e*P	**P**	**09 57 39.5**	**+1.2**
	comp=Z,4.5nm,0.9s						
KBA	**Koelnbreinsper**	**31.87**	**61**	*e*P	**P**	**09 57 43.5**	**+1.1**
	comp=Z,15nm,0.9s						
CLL	**Collm**	**31.89**	**53**	*i* P	**P**	**09 57 43.2**	**+0.8**
CLL				*e*S	**S**	**10 02 54.0**	**+1.8**
CLL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CLL				MLR	MLR		
	comp=Z,300nm,20.3s						
CLL	**Collm**	**31.89**	**53**	*i* P	**P**	**09 57 43.2**	**+0.8**
	comp=Z,10.0nm,1.2s						
CLL				*e*S	**S**	**10 02 54.0**	**+1.8**
CLL				AMS	AMS	10 09 00.0	
	comp=Z,300nm,20.3s						
FDMO	**Fiordimonte**	**31.92**	**68**		**P**	**09 57 44.2**	**+1.5**
NRCA	**Norcia**	**31.96**	**69**	P	**P**	**09 57 44.1**	**+0.9**
NRCA				IAmb	IAmb	09 57 46.8	
	comp=Z,16nm,0.9s						
BIOA	**Bad Ischl, Aus**	**32.07**	**60**	*e*P	**P**	**09 57 44.8**	**+0.8**
	comp=Z,17nm,1.1s						
KHC	**Kasperske Hory**	**32.08**	**57**	*e*P	**P**	**09 57 45.9**	**+1.9**
KHC	**Kasperske Hory**	**32.08**	**57**	*e*P	**P**	**09 57 45.9**	**+1.9**
MYKA	**Terra Mystica**	**32.08**	**62**	*e*P	**P**	**09 57 44.7**	**+0.5**
	comp=Z,3.4nm,0.6s						
GEC2	**GERESS Array S**	**32.14**	**57**	P	**P**	**09 57 45.3**	**+0.6**
GERES	**GERESS Array B**	**32.14**	**57**	P	**P**	**09 57 45.1**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=278,slow=6.8,SNR=7.4						
GERES				LR	LR	10 09 40.6	
	comp=Z,177nm,18.2s,baz=257,slow=34						
	comp=Z,1.5nm,0.8s						
SCO	**Scoresbysund**	**32.20**	**4**	P	**P**	**09 57 45.1**	**+0.3**
SCO				IAmb	IAmb	09 57 54.2	
	comp=Z,29nm,1.4s						
SCO	**Scoresbysund**	**32.20**	**4**	P	**P**	**09 57 45.1**	**+0.3**
SCO				pmax	pmax		
	comp=Z,29nm,1.4s						
KONO	**Kongsberg**	**32.22**	**36**	*ce*P	**P**	**09 57 47.1**	**+2.0**
KONO				pmax	pmax		
	comp=Z,46nm,2.5s						
ZVC	**Zvikov**	**32.49**	**56**	*e*P	P	09 57 39.1	-8.5
MOA	**Molln**	**32.49**	**59**	*e*P	**P**	**09 57 48.6**	**+0.9**
	comp=Z,21nm,0.9s						
OBKA	**Obir**	**32.70**	**62**	*e*P	**P**	**09 57 50.1**	**+0.4**
	comp=Z,14nm,0.8s						
ARSA	**Arzberg**	**33.35**	**60**	*e*P	**P**	**09 57 55.2**	**0.0**
	comp=Z,4.3nm,0.7s						
NB2	**NORSAR Subarra**	**33.52**	**35**	P	**P**	**09 57 57.9**	**+1.4**
	comp=Z,1.8nm,0.7s,baz=248,slow=9.3						
NOA	**NORSAR Array B**	**33.52**	**35**	P	**P**	**09 57 57.2**	**+0.8**
	comp=Z,4.1nm,0.9s,baz=248,slow=9.5,SNR=7.6						
	comp=Z,4.1nm,0.9s						
NORES	**NORESS Array B**	**33.54**	**35**	P	**P**	**09 57 57.7**	**+1.0**
NORES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CONA	**Conrad Observa**	**33.57**	**59**	*e*P	**P**	**09 57 57.6**	**+0.5**
	comp=Z,11nm,2.1s						
NC303	**NORSAR Array S**	**33.66**	**34**	P	**P**	**09 57 59.2**	**+1.5**
NC303				IAmb	IAmb	09 58 05.8	
	comp=Z,15nm,1.1s						
UPC	**Upice**	**33.72**	**54**	P	**P**	**09 57 59.5**	**+1.1**
UPC				pmax	pmax		
	comp=Z,15nm,1.1s						
RONA	**Rosalia, Austr**	**33.87**	**59**	*e*P	**P**	**09 57 59.8**	**+0.1**
	comp=Z,0.8nm,0.3s						
DPC	**Dobruska-Polom**	**33.91**	**55**	P	**P**	**09 58 01.4**	**+1.3**
DPC				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KRUC	**Moravsky**	**33.92**	**57**	*e*P	**P**	**09 58 00.6**	**+0.5**
VRAC	**Vranov**	**34.06**	**57**	LR	LR	10 12 04.2	
	comp=Z,132nm,18.2s,baz=266,slow=37						
VRAC	**Vranov**	**34.06**	**57**	*e*P	**P**	**09 58 01.9**	**+0.6**
KRLC	**Kraliky**	**34.20**	**55**	P	**P**	**09 58 04.0**	**+1.4**
KRLC				pmax	pmax		
	comp=Z,12nm,1.4s						
FRB	**Frobisher Bay**	**34.43**	**330**	LR	LR	10 08 00.7	
	comp=Z,250nm,21.8s,baz=98,slow=29						
MODS	**Modra-Piesok**	**34.51**	**58**	*e*P	**P**	**09 58 05.9**	**+0.7**
MODS				pmax	pmax		
	comp=Z,11nm,1.0s						
MODS	**Modra-Piesok**	**34.51**	**58**	*e*P	**P**	**09 58 05.9**	**+0.7**
BRNJ	**Basking Ridge**	**34.87**	**288**	P	**P**	**09 58 08.4**	**0.0**
BRNJ				IAmb	IAmb	09 58 23.6	
	comp=Z,30nm,1.4s						
BUD	**Budapest**	**35.72**	**60**	P	**P**	**09 58 17.0**	**+1.4**
OJC	**Ojcow**	**36.14**	**55**	P	**P**	**09 58 20.4**	**+1.2**
OJC				pmax	pmax		
	comp=Z,32nm,0.9s						
PSZ	**Piszkesteto**	**36.28**	**59**		**P**	**09 58 21.2**	**+0.7**
PSZ				IAmb	IAmb	09 58 22.6	
	comp=Z,31nm,1.5s						
PSZ	**Piszkesteto**	**36.28**	**59**	P	**P**	**09 58 21.2**	**+0.7**
PSZ				pmax	pmax		
	comp=Z,31nm,1.5s						
M57A	**Sunshine Farm,**	**36.64**	**290**	P	**P**	**09 58 24.0**	**+0.4**
MMNY	**Mt. Morris Dam**	**36.94**	**292**	P	**P**	**09 58 26.4**	**+0.4**
STHS	**Stebnicka Huta**	**37.09**	**56**	*e*P	**P**	**09 58 28.5**	**+1.1**
STHS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
STHS	**Stebnicka Huta**	**37.09**	**56**	*e*P	**P**	**09 58 28.5**	**+1.1**
TORD	**Torodi Ar. Bea**	**37.15**	**125**	P	**P**	**09 58 30.3**	**+2.2**
	comp=Z,1.2nm,1.1s,baz=349,slow=7.0,SNR=1.9						
	comp=Z,1.2nm,1.1s						
SADO	**Sadowa**	**37.48**	**296**	LR	LR	10 11 44.9	
	comp=Z,233nm,21.6s,baz=110,slow=33						
SADO	**Sadowa**	**37.48**	**296**	P	**P**	**09 58 30.6**	**-0.1**
SADO				IAmb	IAmb	09 58 33.0	
	comp=Z,38nm,1.4s						
BZS	**Buzias**	**37.68**	**63**	P	**P**	**09 58 33.7**	**+1.3**
BZS				pmax	pmax		
	comp=Z,16nm,1.1s						
SJG	**San Juan**	**38.19**	**248**	LR	LR	10 10 13.6	
	comp=Z,128nm,21.3s,baz=48,slow=30						
DRGR		**38.29**	**60**	P	**P**	**09 58 38.6**	**+1.0**
DRGR				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GZR	**Gura Zlata**	**38.52**	**63**	P	**P**	**09 58 41.2**	**+1.7**
DBIC	**Dimbokro**	**38.53**	**139**	LR	LR	10 12 38.8	
	comp=Z,123nm,19.8s,baz=348,slow=33						
DAG	**Danmarks Havn**	**38.58**	**4**	P	**P**	**09 58 40.8**	**+1.3**
DAG				pmax	pmax		

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       comp=Z,10.0nm,2.4s
PAMR   Moraine State      38.91 290    P       P        09 58 43.1 +0.3
PAMR                                   IAmb    IAmb     09 59 02.4
       comp=Z,34nm,1.4s
MDP    Montagnes des      39.63 219    LR      LR       10 11 48.1
       comp=Z,269nm,19.5s,baz=56,slow=31
BURAR  Bucovina Array     39.88  59            P        09 58 52.0 +1.1
Q54A   Coxs Mills         39.97 287    P       P        09 58 52.0 +0.4
P53A   Whipple            40.24 288    P       P        09 58 53.2 -0.7
P53A                                   IAmb    IAmb     09 58 54.4
       comp=Z,20nm,1.0s
NACGM  Naroch             40.41  47⇑iP         P        09 58 55.5 +0.5
       comp=Z,22nm,0.9s,baz=270
FINES  FINESS Array B     40.52  37    P       P        09 58 56.9 +1.0
       comp=Z,3.1nm,0.8s,baz=274,slow=8.1,SNR=5.7
FINES                                  LR      LR       10 14 41.5
       comp=Z,493nm,18.5s,baz=234,slow=35
       comp=Z,3.1nm,0.8s
FINES  FINESS Array B     40.52  37    P       P        09 58 56.2 +0.3
FIA1   FINESS Array S     40.52  37    P       P        09 58 56.8 +0.9
MLR    Muntele Rosu       40.70  62    LR      LR       10 15 52.7
       comp=Z,140nm,19.0s,baz=278,slow=36
MLR    Muntele Rosu       40.70  62    P       P        09 58 59.5 +1.7
MLR                                    pmax    pmax
       comp=Z,13nm,1.4s
P52A   Corning            40.75 289    P       P        09 58 57.5 -0.7
P52A                                   IAmb    IAmb     09 58 58.5
       comp=Z,22nm,0.9s
E46A   Sault Ste Mari     40.82 299    P       P        09 58 57.9 -0.7
E46A                                   IAmb    IAmb     09 59 07.2
       comp=Z,44nm,1.4s
VRI    Vrincioaia         41.18  61    P       P        09 59 02.8 +1.2
VRI                                    pmax    pmax
       comp=Z,10.0nm,1.0s
RDO    Rodhopi            41.37  69            P        09 59 04.5 +1.4
P51A   Williamsport       41.48 289    P       P        09 59 03.5 -0.6
P51A                                   IAmb    IAmb     09 59 04.9
       comp=Z,22nm,0.9s
KIEV   Kiev               42.11  54    P       P        09 59 09.6 +0.5
KIEV                                   IAmb    IAmb     09 59 10.3
       comp=Z,13nm,0.8s
KIEV   Kiev               42.11  54    P       P        09 59 09.6 +0.5
KIEV                                   pmax    pmax
       comp=Z,13nm,0.9s
AKASG  Malin Array Be     42.12  54    P       P        09 59 09.0 -0.2
       comp=Z,8.5nm,0.7s,baz=278,slow=8.2,SNR=17
AKASG                                  LR      LR       10 16 24.1
       comp=Z,302nm,18.1s,baz=260,slow=36
       comp=Z,8.5nm,0.7s
AKASG  Malin Array Be     42.12  54    IAmb    IAmb     09 59 14.2
       comp=Z,4.4nm,1.3s
AKBB   Malin Array Si     42.12  54    P       P        09 59 09.8 +0.6
AKBB                                   IAmb    IAmb     09 59 10.3
       comp=Z,14nm,0.8s
AKBB   Malin Array Si     42.12  54    P       P        09 59 09.8 +0.6
AKBB                                   pmax    pmax
       comp=Z,14nm,0.9s
ARCES  ARCESS Array B     42.16  25    P       P        09 59 09.6 +0.3
       comp=Z,8.9nm,0.7s,baz=245,slow=7.9,SNR=30
ARCES                                  LR      LR       10 13 27.3
       comp=Z,234nm,19.6s,baz=266,slow=32
       comp=Z,8.9nm,0.7s
ARCES  ARCESS Array B     42.16  25    P       P        09 59 09.6 +0.3
O49A   Covington          42.22 290    P       P        09 59 09.6 -0.6
S51A   Beattyville        42.44 286    P       P        09 59 12.4 +0.4
TZTN   Tazewell           42.77 285    P       P        09 59 14.5 -0.2
TZTN                                   IAmb    IAmb     09 59 17.4
       comp=Z,25nm,1.4s
TKL    Tuckaleechee C     43.24 284    LR      LR       10 17 59.7
       comp=Z,132nm,18.1s,baz=50,slow=37
T50A   Nancy              43.58 286    IAmb    IAmb     09 59 21.9
       comp=Z,19nm,1.1s
SPITS  Spitsbergen Ar     43.86  12    LR      LR       10 14 20.8
       comp=Z,81nm,19.3s,baz=244,slow=32
BLO    Bloomington        44.14 290    IAmb    IAmb     09 59 26.5
       comp=Z,18nm,0.8s
MANT   Manisa             44.36  71    P       P        09 59 27.9 +0.1
MANT                                   IAmb    IAmb     09 59 30.3
       comp=Z,9.4nm,0.9s
LVZ    Lovozero           45.06  29ceP         P        09 59 34.9 +2.2
LVZ                                    pmax    pmax
       comp=Z,67nm,2.5s
T47A   Sharon Grove       45.29 287    IAmb    IAmb     09 59 35.8
       comp=Z,21nm,1.0s
FCC    Fort Churchill     45.42 318            P        09 59 35.7 +0.1
FCC                                    IAmb    IAmb     09 59 36.8
       comp=Z,12nm,0.9s
FCC    Fort Churchill     45.42 318    P       P        09 59 35.7 +0.1
FCC                                    pmax    pmax
       comp=Z,12nm,0.9s
OBN    Obninsk            46.01  47    LR      LR       10 18 12.3
       comp=Z,299nm,20.8s,baz=194,slow=35
OBN    Obninsk            46.01  47⇑iP         P        09 59 39.8 -0.5
OBN                                 i                   09 59 46.6
OBN                                 i                   10 01 17.3
OBN                                 i                   10 01 29.4
OBN                                 i SS       SS       10 09 37.1  -12
OBN                                    pmax    pmax
       comp=Z,15nm,1.1s
OBN                                    MLR     MLR
       comp=Z,260nm,16.0s
RES    Resolute Bay       46.88 341    LR      LR       10 15 04.7
       comp=Z,63nm,21.5s,baz=4.0,slow=31
KLMR   Klimovskoe         47.00  39   eP       P        09 59 47.4 -0.6
KLMR                                   pmax    pmax
       comp=Z,16nm,1.1s
SDV    Santo Domingo      47.61 243    LR      LR       10 17 15.4
       comp=Z,68nm,20.9s,baz=64,slow=33
I37A   Lemond, Waseca     47.61 298            P        09 59 52.6 -0.4
I37A                                   IAmb    IAmb     10 00 18.6
       comp=Z,20nm,1.5s
ULM    Lac du Bonnet      47.66 307    LR      LR       10 18 23.5
       comp=Z,113nm,18.6s,baz=96,slow=34
BR131  Keskin Array S     47.69  68    P       P        09 59 54.3 +0.4
BR131  Keskin Array S     47.69  68⇓iP         P        09 59 55.2 +1.3
BRTR   Keskin Array B     47.69  68    P       P        09 59 55.1 +1.3
       comp=Z,1.8nm,0.9s,baz=261,slow=4.9,SNR=8.2
BRTR                                   LR      LR       10 20 49.4
       comp=Z,104nm,18.6s,baz=286,slow=37
       comp=Z,1.8nm,0.9s
BRTR   Keskin Array B     47.69  68            P        09 59 54.5 +0.7
LPSR   Galich'ya Gora     47.80  50   eP       P        09 59 54.1 -0.2
LPSR                                   pmax    pmax
       comp=Z,25nm,1.0s
OXF    Oxford             47.96 285            P        09 59 54.7 -1.1
OXF    Oxford             47.96 285    P       P        09 59 54.7 -1.1
OXF                                    pmax    pmax
       comp=Z,57nm,1.0s
P40A   Paris              48.07 292            P        09 59 55.7 -0.9
H10N2  ASCENSION HYDR48.09 161         T       T        10 50 55.3
       baz=345,slow=75,SNR=282
H10N3  ASCENSION HYDR48.09 161         T       T        10 50 55.8
       baz=345,slow=75,SNR=270
H10N1  ASCENSION HYDR48.10 161         T       T        10 50 57.1
       baz=345,slow=75,SNR=266
VSR    Storozhevoye       48.23  52   eP       P        09 59 52.8 -4.9
VSR                                    pmax    pmax
       comp=Z,7.0nm,0.9s
R40A   Maddies Statio     48.66 291            P        10 00 00.2 -1.0
P38A   Dawn               49.11 293    IAmb    IAmb     10 00 04.4
       comp=Z,14nm,0.9s
H10S3  ASCENSION HYDR49.12 161         T       T        10 52 15.1
       baz=235,slow=74,SNR=70
H10S2  ASCENSION HYDR49.13 161         T       T        10 52 16.3
       baz=345,slow=74,SNR=80
BNN    Bunyan             49.60  68    IAmb    IAmb     10 00 11.1
       comp=Z,7.5nm,0.9s
VRH    Novokhopyorsk      49.80  51   eP       P        10 00 09.1 -0.6
VRH                                    pmax    pmax
       comp=Z,14nm,1.2s
ECSD   EROS Data Cent     49.91 299    IAmb    IAmb     10 00 10.8
       comp=Z,12nm,1.1s
FFC    Flin Flon          50.30 314    P       P        10 00 12.9 -0.5
FFC    Flin Flon          50.30 314    P       P        10 00 13.0 -0.5
FFC                                    pmax    pmax
       comp=Z,4.0nm,0.8s
X40A   Basin Creek Fa     50.55 286    P       P        10 00 14.7 -0.9
X40A                                   IAmb    IAmb     10 00 15.2
       comp=Z,25nm,1.3s
MIAR   Mount Ida          51.09 287    IAmb    IAmb     10 00 20.1
       comp=Z,29nm,1.4s
ARPR   Arapgir-MALATY     51.31  67    IAmb    IAmb     10 00 27.6
       comp=Z,11nm,1.1s
RUSC   La Rusia           51.43 242            P        10 00 21.0 -2.0
RUSC                                   IAmb    IAmb     10 00 22.6
       comp=Z,12nm,1.1s
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MMAI   Mount Meron Ar     51.59  75    LR      LR       10 22 37.0
       comp=Z,40nm,20.5s,baz=306,slow=36
T35A   Sooner Cattle      52.30 291    IAmb    IAmb     10 00 28.1
       comp=Z,8.7nm,0.8s
KIRV   Kirov              52.31  40    P       P        10 00 27.9 -0.6
       comp=Z,6.9nm,0.7s,baz=314,slow=5.4,SNR=6.3
KIRV                                   LR      LR       10 21 15.5
       comp=Z,308nm,20.7s,baz=285,slow=34
       comp=Z,6.9nm,0.7s
KIRV   Kirov              52.31  40⇓iP         P        10 00 28.8 +0.4
KIV    Kislovodsk         52.60  60   eP       P        10 00 30.4 -0.6
KIV                                    pmax    pmax
       comp=Z,7.0nm,1.1s
KIV                                    MLR     MLR
       comp=Z,82nm,17.0s
SHA1   Shidzhatmaz        52.65  60c iP        P        10 00 32.8 +1.3
KBZ    Khabaz             52.82  60    P       P        10 00 34.8 +2.4
       comp=Z,13nm,0.9s,baz=307,slow=5.7,SNR=28
KBZ                                    LR      LR       10 23 22.2
       comp=Z,74nm,18.8s,baz=294,slow=36
       comp=Z,13nm,0.9s
KBZ    Khabaz             52.82  60⇓iP         P        10 00 34.2 +1.8
KBZ                                    pmax    pmax
       comp=Z,15nm,0.9s
BELG   Belogornoye        53.00  48⇓iP         P        10 00 33.8 +0.2
BELG                                   pmax    pmax
       comp=Z,5.0nm,1.1s
ROSC   El Rosal           53.04 242    LR      LR       10 21 38.6
       comp=Z,297nm,20.2s,baz=62,slow=34
ASF    Jabal al Asfar     53.09  75    LR      LR       10 22 56.1
       comp=Z,8µm,21.7s,baz=219,slow=36
YKA    Yellowknife Ar     54.71 325    P       P        10 00 45.4 -0.6
       comp=Z,0.2nm,0.5s,baz=61,slow=7.8,SNR=2.9
YKA                                    LR      LR       10 21 11.1
       comp=Z,154nm,18.4s,baz=76,slow=33
       comp=Z,0.2nm,0.5s
MAK    Makhachkala        56.22  59   eP       P        10 00 53.5 -3.7
MAK                                   ePPP     PPP      10 04 16.3
MAK                                   eS       S        10 08 42.0 -3.8
MAK                                   eSS      SS       10 12 30.2 -1.8
MAK                                   eSSS     SSS      10 14 49.3
MAK                                    pmax    pmax
       comp=Z,34nm,0.3s
MAK                                    MLR     MLR
       comp=Z,108nm,16.0s
BRU2   Volcan             56.43 253            P        10 00 58.5 -0.7
ABTX   Abilene, Hawle     56.48 287    P       P        10 00 57.4 -1.8
ABTX                                   IAmb    IAmb     10 00 59.7
       comp=Z,10nm,0.9s
APMT   Aspermont          56.52 288            P        10 00 58.5 -1.0
APMT                                   IAmb    IAmb     10 01 00.1
       comp=Z,6.8nm,0.7s
BRDY   Brady              56.62 286            P        10 00 59.1 -1.2
BDFB   Brasilia           56.79 202    LR      LR       10 23 15.2
       comp=Z,260nm,18.2s,baz=351,slow=34
AMTX   Amarillo           56.96 291    IAmb    IAmb     10 01 02.7
       comp=Z,10nm,0.8s
AKT    Akhty              56.98  61   eP       P        10 01 01.3 -1.5
AKT                                   e                 10 01 55.9
AKT                                    pmax    pmax
       comp=Z,7.0nm,0.8s
AKT                                    MLR     MLR
       comp=Z,80nm,7.0s
JTS    Las Juntas de      57.18 256    LR      LR       10 21 40.5
       comp=Z,188nm,21.2s,baz=58,slow=32
HERN   Volcan Telica      57.18 260    IAmb    IAmb     10 01 20.7
       comp=Z,108nm,0.4s
ARTI   Arti               57.59  41    P       P        10 01 07.5 +0.8
       comp=Z,5.4nm,0.8s,baz=269,slow=6.0,SNR=6.5
       comp=Z,5.4nm,0.8s
ARTI   Arti               57.59  41            P        10 01 07.1 +0.4
ARTI                                   IAmb    IAmb     10 01 17.1
       comp=Z,19nm,1.3s
ARTI   Arti               57.59  41d iP        P        10 01 07.4 +0.7
ARTI                                                    10 02 03.0
ARTI                                   S       S        10 09 07.2 +3.7
ARTI                                   SS      SS       10 12 51.2 -1.8
ARTI                                   pmax    pmax
       comp=Z,11nm,1.2s
SGCY   Sterling City      57.92 287    P       P        10 01 09.1 -0.4
MTO3   Montecristo        58.06 263    IAmb    IAmb     10 01 14.4
       comp=Z,16nm,1.0s
OZNA   Ozona              58.39 286    IAmb    IAmb     10 01 12.7
       comp=Z,11nm,1.0s
DRIO   Del Rio            58.74 284    IAmb    IAmb     10 01 15.0
       comp=Z,16nm,1.2s
PDAR   Pinedale Array     59.03 302    P       P        10 01 15.8 -1.5
       comp=Z,1.9nm,0.8s,baz=74,slow=6.9,SNR=13
PDAR                                   LR      LR       10 25 07.8
       comp=Z,102nm,20.9s,baz=54,slow=34
       comp=Z,1.9nm,0.8s
PDAR   Pinedale Array     59.03 302    P       P        10 01 15.2 -2.1
OTAV   Otavalo            59.20 242            P        10 01 18.8 -0.2
OTAV                                   IAmb    IAmb     10 01 19.7
       comp=Z,6.9nm,1.0s
OTAV   Otavalo            59.20 242    P       P        10 01 18.8 -0.2
OTAV                                   pmax    pmax
       comp=Z,7.0nm,1.0s
SAND   Sanderson          59.62 286    IAmb    IAmb     10 01 21.2
       comp=Z,15nm,1.2s
AKTO   Aktyubinsk         59.77  48    P       P        10 01 22.6 +0.7
       comp=Z,6.0nm,0.8s,baz=291,slow=5.1,SNR=11
       comp=Z,6.0nm,0.8s
INK    Inuvik             59.79 335    LR      LR       10 22 54.1
       comp=Z,147nm,21.2s,baz=62,slow=32
PECS   Pecos              60.23 288    IAmb    IAmb     10 01 27.1
       comp=Z,9.7nm,1.2s
ANMO   Albuquerque        60.41 293    LR      LR       10 26 18.9
       comp=Z,184nm,19.5s,baz=62,slow=35
ANMO   Albuquerque        60.41 293⇑iP         P        10 01 27.4 +0.5
ANMO                                   pmax    pmax
       comp=Z,2.0nm,1.3s
PV21   Cone Mtn., Par     60.51 298    IAmb    IAmb     10 01 29.4
       comp=Z,7.9nm,1.2s
PTLB   Pontes e Lacer     60.70 214            P        10 01 28.2 -0.3
PTLB                                   IAmb    IAmb     10 01 36.5
       comp=Z,12nm,1.3s
CMIG   Matias Romero      60.82 269    LR      LR       10 24 25.4
       comp=Z,92nm,21.0s,baz=0.0,slow=33
F30M   Barrier River      60.88 335    IAmb    IAmb     10 01 36.4
       comp=Z,15nm,1.2s
HWUT   Hardware Ranch     60.88 302    IAmb    IAmb     10 01 29.6
       comp=Z,6.7nm,1.0s
TX31   Lajitas Ar. Si     61.09 286            P        10 01 31.0 -0.4
TXAR   Lajitas Array      61.09 286    P       P        10 01 30.8 -0.6
       comp=Z,6.7nm,0.9s,baz=79,slow=7.3,SNR=48
TXAR                                   LR      LR       10 26 58.6
       comp=Z,99nm,19.5s,baz=48,slow=35
       comp=Z,6.7nm,0.9s
TXAR   Lajitas Array      61.09 286            P        10 01 31.0 -0.4
TXAR   Lajitas Array      61.09 286    P       P        10 01 31.0 -0.4
E29M   Blow River         61.15 336    P       P        10 01 30.6 -0.5
MNTX   Cornudas Mount     61.20 289            P        10 01 31.0 -1.0
MNTX                                   IAmb    IAmb     10 01 32.0
       comp=Z,8.9nm,1.3s
VHRN   Van Horn           61.35 288            P        10 01 32.6 -0.7
VHRN                                   IAmb    IAmb     10 01 34.0
       comp=Z,15nm,1.2s
NEW    Newport            61.38 310    LR      LR       10 26 27.2
       comp=Z,263nm,18.2s,baz=58,slow=34
NEW    Newport            61.38 310    IAmb    IAmb     10 01 33.3
       comp=Z,8.7nm,1.1s
NEW    Newport            61.38 310    P       P        10 01 32.8 -0.3
NEW                                    pmax    pmax
       comp=Z,9.0nm,1.1s
AB31   Akbulak array      61.41  48    P       P        10 01 33.0 -0.1
E28M   Babbage River      61.54 337    P       P        10 01 33.5 -0.3
HVU    Hansel Valley      61.60 302    IAmb    IAmb     10 01 35.0
       comp=Z,7.0nm,1.3s
TMUT   Trail Mountain     61.71 299    IAmb    IAmb     10 01 44.9
       comp=Z,6.1nm,1.2s
SIV    San Ignacio        62.04 215    LR      LR       10 25 27.2
       comp=Z,246nm,20.0s,baz=62,slow=33
PLID   Pearl Lake         62.15 307            P        10 01 38.2 -0.3
PLID                                   IAmb    IAmb     10 01 38.9
       comp=Z,9.0nm,1.2s
DUG    Dugway, Tooele     62.37 301    P       P        10 01 40.2 +0.2
NRIK   Noril'sk           62.87  21    P       P        10 01 44.1 +1.5
       comp=Z,3.4nm,0.8s,baz=307,slow=4.3,SNR=6.6
NRIK                                   LR      LR       10 30 52.0
       comp=Z,45nm,18.4s,baz=316,slow=38
       comp=Z,3.4nm,0.8s
NRIK   Noril'sk           62.87  21            P        10 01 43.6 +1.0
NRIK                                   IAmb    IAmb     10 01 45.3
       comp=Z,6.5nm,1.1s
NRIK   Noril'sk           62.87  21⇓iP         P        10 01 44.5 +1.9
DLBC   Dease Lake         63.32 325    LR      LR       10 26 31.8
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       comp=Z,147nm,18.1s,baz=83,slow=34
WUAZ   Wupatki            63.65 296    IAmb    IAmb     10 01 50.4
       comp=Z,5.8nm,1.0s
M30M   Minto, Yukon       63.94 331    P       P        10 01 49.3 -0.6
M30M                                   IAmb    IAmb     10 01 58.0
       comp=Z,9.4nm,1.3s
X16A   Lo Mia Camp, P     64.25 295    IAmb    IAmb     10 02 02.1
       comp=Z,7.3nm,1.4s
J08A   Circle Bar Ran     64.54 306    IAmb    IAmb     10 01 55.8
       comp=Z,11nm,1.0s
ATAH   Atahualpa          64.56 237    LR      LR       10 28 31.7
       comp=Z,123nm,20.6s,baz=43,slow=35
TUC    Tucson             64.85 292    P       P        10 01 55.7 -0.7
TUC                                    IAmb    IAmb     10 01 58.0
       comp=Z,10nm,1.4s
TUC    Tucson             64.85 292    P       P        10 01 55.7 -0.7
TUC                                    pmax    pmax
       comp=Z,10.0nm,1.4s
PRN    Pahroc Range       65.27 299    IAmb    IAmb     10 02 00.6
       comp=Z,6.5nm,1.1s
BORK   Borovoye           65.27  41⇓iP         P        10 02 00.0 +1.4
BORK                                   pmax    pmax
       comp=Z,6.0nm,1.2s
BVAR   Borovoye Array     65.32  41    P       P        10 02 00.3 +1.4
       comp=Z,1.4nm,0.6s,baz=294,slow=4.3,SNR=5.5
BVAR                                   LR      LR       10 31 26.0
       comp=Z,207nm,18.7s,baz=307,slow=37
       comp=Z,1.4nm,0.6s
BBB    Bella Bella        65.63 318    LR      LR       10 28 57.7
       comp=Z,112nm,18.1s,baz=72,slow=35
SCRK   Sand Creek         65.73 334    P       P        10 02 01.7 +0.1
LPAZ   La Paz             65.74 222    P       P        10 02 02.8  0.0
       comp=Z,3.4nm,0.9s,baz=21,slow=8.4,SNR=10
LPAZ                                   LR      LR       10 28 31.2
       comp=Z,182nm,19.6s,baz=34,slow=34
       comp=Z,3.4nm,0.9s
ILAR   Eielson Array      66.19 336    P       P        10 02 03.6 -0.8
       comp=Z,0.6nm,0.7s,baz=42,slow=5.8,SNR=7.5
       comp=Z,0.6nm,0.7s
COLA   College            66.43 336⇓iP         P        10 02 05.4 -0.5
COLA                                   pmax    pmax
       comp=Z,3.0nm,1.0s
C19K   Lookout Ridge      66.64 343    IAmb    IAmb     10 02 15.5
       comp=Z,9.8nm,1.4s
GWY    Greenwater Val     67.01 299    IAmb    IAmb     10 02 11.6
       comp=Z,8.2nm,1.2s
NNA    Nana               67.25 232    LR      LR       10 31 19.3
       comp=Z,76nm,18.2s,baz=28,slow=36
YBH    Yreka Blue Hor     68.06 306    LR      LR       10 31 20.5
       comp=Z,7.0nm,18.2s,baz=16,slow=35
PFO    Pinyon Flats O     68.23 296    LR      LR       10 29 58.4
       comp=Z,68nm,21.2s,baz=48,slow=34
LPIG   La Paz             68.89 284    LR      LR       10 31 14.7
       comp=Z,78nm,19.5s,baz=24,slow=35
TIXI   Tiksi              68.97   7    LR      LR       10 28 51.8
       comp=Z,40nm,19.4s,baz=18,slow=33
TIXI   Tiksi              68.97   7d iP        P        10 02 23.0 +1.2
TIXI                                   pmax    pmax
       comp=Z,3.0nm,1.0s
CPUP   Villa Florida      69.80 207    LR      LR       10 30 55.2
       comp=Z,24nm,18.9s,baz=76,slow=34
KURK   Kurchatov          70.83  40            P        10 02 34.2 +0.6
KURK   Kurchatov          70.83  40⇓iP         P        10 02 34.5 +0.9
KURK                                   pmax    pmax
       comp=Z,5.0nm,0.9s
KURBB  Kurchatov Arra     70.84  40    P       P        10 02 34.1 +0.5
       comp=Z,4.4nm,0.2s,baz=308,slow=6.3,SNR=10
KURBB                                  LR      LR       10 34 43.8
       comp=Z,119nm,18.9s,baz=177,slow=37
       comp=Z,4.4nm,0.2s
ZAA0   Zalesovo Array     71.72  35            P        10 02 38.5 -0.4
ZALV   Zalesovo Beam      71.72  35    P       P        10 02 39.4 +0.5
       comp=Z,2.6nm,0.8s,baz=308,slow=7.3,SNR=11
ZALV                                   LR      LR       10 34 38.2
       comp=Z,120nm,18.1s,baz=312,slow=36
       comp=Z,2.6nm,0.8s
ZALV   Zalesovo Beam      71.72  35    P       P        10 02 38.9  0.0
ZALV   Zalesovo Beam      71.72  35  i P       P        10 02 39.5 +0.6
ZALV                                   pmax    pmax
       comp=Z,3.0nm,0.8s
BILL   Bilibino           73.10 354⇑iP         P        10 02 49.8 +2.9
BILL                                   pmax    pmax
       comp=Z,3.0nm,1.1s
AAK    Ala-Archa          73.50  48    LR      LR       10 35 44.3
       comp=Z,162nm,18.4s,baz=319,slow=36
AAK    Ala-Archa          73.50  48⇑iP         P        10 02 48.3 -1.6
AAK                                    pmax    pmax
       comp=Z,2.0nm,1.2s
MK31   Makanchi Array     75.19  41⇑iP         P        10 03 00.4 +0.8
MKAR   Makanchi Array     75.19  41    P       P        10 03 00.1 +0.5
       comp=Z,1.9nm,0.8s,baz=322,slow=5.1,SNR=9.6
MKAR                                   LR      LR       10 36 35.9
       comp=Z,293nm,18.4s,baz=308,slow=36
       comp=Z,1.9nm,0.8s
DGZ    Jazzator, Alta     75.78  37⇑iP         P        10 03 02.2 -0.8
DGZ                                    pmax    pmax
       comp=Z,3.0nm,0.9s
KSH    Kashi              76.30  50    P       P        10 03 07.8 +1.7
KSH                                    pmax    pmax
       comp=Z,5.0nm,0.9s
KSH                                    LR      LR
       comp=N,240nm,22.7s
KSH                                    LR      LR
       comp=E,200nm,16.8s
KSH                                    LR      LR
       comp=Z,400nm,18.9s
YAK    Yakutsk            78.28  10⇓iP         P        10 03 15.9 -0.7
YAK                                    pmax    pmax
       comp=Z,6.0nm,0.9s
WMQ    Urumqi             80.01  41   eP       P        10 03 28.3 +1.7
WMQ                                    pmax    pmax
       comp=Z,12nm,0.7s
WMQ                                    LR      LR
       comp=N,280nm,15.7s
WMQ                                    LR      LR
       comp=E,330nm,14.3s
WMQ                                    LR      LR
       comp=Z,230nm,17.5s
MA2    Magadan            82.22   0    LR      LR       10 37 01.3
       comp=Z,21nm,20.6s,baz=290,slow=33
BOSA   Boshof             83.86 134    LR      LR       10 38 52.8
       comp=Z,93nm,19.3s,baz=208,slow=34
SONM   Songino Array      85.25  28    P       P        10 03 54.3 +0.4
       comp=Z,1.9nm,1.0s,baz=318,slow=5.3,SNR=7.3
SONM                                   LR      LR       10 43 06.5
       comp=Z,98nm,20.6s,baz=349,slow=36
       comp=Z,1.9nm,1.0s
ULN    Ulaanbaatar        85.47  28⇓iP         P        10 03 55.8 +0.8
ULN                                    pmax    pmax
       comp=Z,4.0nm,1.0s
SHEM   Shemya Is, Ala     86.89 346    LR      LR       10 38 34.8
       comp=Z,47nm,21.2s,baz=351,slow=33
PLCA   Paso Flores        87.58 210    LR      LR       10 41 44.7
       comp=Z,82nm,20.9s,baz=25,slow=35
PETK   Petropavlovsk-     88.52 356    LR      LR       10 42 48.5
       comp=Z,39nm,18.9s,baz=26,slow=35
HHC    Hu-ho-hao-te       93.14  29   eP       P        10 04 29.9 -1.5
HHC                                    pmax    pmax
       comp=Z,9.0nm,0.7s
HHC                                    pmax    pmax
       comp=Z,68nm,5.4s
ASAJ   Asahikawa          97.35   6    LR      LR       10 45 12.5
       comp=Z,43nm,19.3s,baz=11,slow=33
BRDH   Bariadhala         97.52  53    LR      LR       10 52 27.3
       comp=Z,143nm,19.8s,baz=336,slow=38
PZH    PanZhiHua         100.54  44    P       Pdif     10 05 05.6 +0.5
NVL    N'lazarevskaya    112.90 166  i PKIKP   PKiKP    10 09 54.9 +2.1
NVL                                   e                 10 10 41.8
NVL                                   ePPP     PPP      10 13 04.5
NVL                                   eSS      SS       10 26 27.4 +3.4
NVL                                   eSSS     SSS      10 30 39.3
NVL                                    pmax    pmax
       comp=Z,7.0nm,0.7s
NVL                                    MLR     MLR
       comp=Z,552nm,21.0s
QSPA   South Pole Qui    128.45 180    PKP     PKiKP    10 10 23.5  0.0
       comp=Z,2.2nm,0.6s,baz=244,slow=1.1,SNR=9.3
ASAR   Alice Springs     159.19  49    PKPab   PKPab    10 11 52.2 -0.5
       comp=Z,0.4nm,0.8s,baz=310,slow=4.7,SNR=3.9
```

PDG ***18*** *09:55:26.6±0.3, 41.°46N×19.°59E, h18km, ML2.6/11, Error ellipse: s-maj=1.7km s-min=2.3km az=0.0*

BEO ***18*** *09:55:27.9±0.7, 41.°43N×19.°63E, h9km±3km, ML2.4/11*

TIR ***18*** *09:55:27.1, 41.°53N×19.°62E, h7km, Ml2.3/2*

ISC 18 09:55:27.1±1.2**, 41.°48N**±0.°04×**19.°58E**±0.°03**, h7**km±9km**,**

n33,σ0^{s}86/61,8C-3D,Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.25	121	Pg	Pg	09 55 32.3	+0.3
TIR				Sg	Sg	09 55 36.4	+1.1
TIR				AML	AML	09 55 36.6	
	5.6nm,0.1s						
ULC	Ulcinj	0.55	333	⇑iPg	Pg	09 55 36.8	-0.8
ULC				iSg	Sb	09 55 47.4	+0.2
SDA	Shkodra	0.58	354	Pg	Pg	09 55 37.5	-0.7
SDA				Sg	Sg	09 55 45.4	-0.4
SDA				AML	AML	09 55 52.8	
	0.5nm,0.4s						
PHP	Peshkopia	0.68	72	Pg	Pg	09 55 39.3	-0.8
PHP				S	Sg	09 55 48.5	-0.5
DRME	Dracevica, Mon	0.77	337	ePg	Pg	09 55 41.5	-0.3
DRME				eSg	Sn	09 55 56.0	-0.3
DRME	Dracevica, Mon	0.77	337	⇑iPg	Pg	09 55 41.3	-0.5
DRME				eSg	Sb	09 55 54.4	+0.9
BUM	Brajici-Budva	0.97	328	⇓iPg	Pg	09 55 45.0	-0.7
BUM				iSg	Sn	09 56 01.4	+0.1
PDG	Podgorica	0.98	346	ePg	Pn	09 55 47.2	-0.1
PDG				eSg	Sn	09 56 02.7	+1.2
PDG	Podgorica	0.98	346	⇑iPg	Pg	09 55 45.9	0.0
PDG				iSg	Sn	09 56 02.0	+0.5
OHR	Ohrid	0.99	111	iPg	Pb	09 55 45.7	-0.9
OHR				iSg	Sn	09 56 00.9	-0.8
PVY	Plav	1.15	14	ePg	Pg	09 55 49.4	+0.2
PVY	Plav	1.15	14	⇓iPg	Pg	09 55 47.7	-1.5
PVY				iSg	Sn	09 56 07.8	+1.9
CEME	Cevo	1.18	335	⇑iPg	Pb	09 55 49.4	-0.4
CEME				eSg	Sn	09 56 07.6	+1.1
HCY	Herceg Novi	1.26	320	⇑iPg	Pn	09 55 50.8	-0.4
HCY				iSg	Sn	09 56 09.8	+1.3
NKME	Niksic	1.37	340	⇑iPg	Pn	09 55 52.5	-0.2
NKME				eSg	Sg	09 56 12.3	+1.1
KOME	Kolasin	1.37	358	ePg	Pg	09 55 54.4	+1.0
KOME				eSg	Sn	09 56 11.7	+0.4
KOME	Kolasin	1.37	358	⇑iPg	Pn	09 55 52.5	-0.3
KOME				eSg	Sg	09 56 12.9	+1.7
BEY	Berane	1.41	9	ePg	Pb	09 55 53.9	0.0
IVA	Berane	1.41	9	⇑iPg	Pn	09 55 52.3	-1.1
IVA				iSg	Sg	09 56 13.4	+0.9
SKO	Skopje	1.48	70	iPg	Pg	09 55 56.8	+1.5
TREB	Trebinje	1.54	324	ePg	Pn	09 55 54.9	-0.1
BRY	Bratogost	1.62	332	⇓iPn	Pn	09 55 55.9	-0.4
BRY				iSn	Sb	09 56 18.8	+0.6
SJES	Sjenica	1.81	9	ePg	Pb	09 56 00.9	+0.3
SJES				eSg	Sg	09 56 25.2	+0.1
SELS	Selova	2.08	33	ePn	Pn	09 56 03.1	+0.6
SELS				eSn	Sb	09 56 30.3	-1.0
BARS	Barje	2.13	50	ePn	Pn	09 56 03.9	+0.7
BARS				eSn	Sb	09 56 31.5	-1.3
IVAS	Ivanjica	2.14	11	ePn	Pn	09 56 03.5	+0.2
IVAS				eSn	Sb	09 56 32.9	-0.1
GOCS	Kraljevo Serbi	2.29	24	ePn	Pn	09 56 06.1	+0.7
GOCS				eSn	Sn	09 56 33.7	-0.3
BBLS	Lazi&#263i	2.39	357	ePn	Pb	09 56 10.0	-0.5
BBLS				eSn	Sn	09 56 36.4	0.0
GRUS	Gruza	2.55	19	ePn	Pn	09 56 09.7	+0.8
GRUS				eSn	Sb	09 56 42.6	-2.2
DIVS	Divibare	2.64	6	ePn	Pn	09 56 11.6	+1.4
DIVS				eSn	Sn	09 56 42.7	+0.2
BOVS	Bovan	2.67	35	ePn	Pn	09 56 10.7	+0.2
BOVS				eSn	Sn	09 56 43.7	+0.6
ZAGS	Zajecar	3.04	39	ePn	Pn	09 56 16.0	+0.3
ZAGS				eSn	Sn	09 56 51.8	-0.6
MORC	Moravsky Berou	8.42	351	eP	Pg	09 58 07.1	-1.1

IDC 18 09:57:30.8±3.5**,33°.72S**×**178°.30W,h0^{km},mb4.0**/2**,**
mbtmp4.0/3**,ML3.4**/1**,Error ellipse: s-maj=79.8km**
s-min=38.6km az=120.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	5.86	218	Pn	Pn	09 58 59.4	+0.6
	1.1nm,0.3s,baz=251,slow=5.9,SNR=1.8						
URZ				Sn	Sn	10 00 06.6	-0.1
	3.7nm,0.3s,baz=219,slow=4.7,SNR=11						
	15nm,0.9s						
ASAR	Alice Springs	42.78	271	P	P	10 05 30.2	-0.1
	1.4nm,0.7s,baz=109,slow=7.2,SNR=20						
	1.4nm,0.7s						
WRA	Warramunga Arr	44.07	276	P	P	10 05 40.6	-0.1
	2.1nm,0.7s,baz=118,slow=7.7,SNR=11						
	2.1nm,0.7s						
FINES	FINESS Array B	148.14	338	PKPbc	PKPbc	10 17 16.9	-0.8
	5.2nm,1.0s,baz=58,slow=3.6,SNR=2.6						

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*SOME **18** 10:32:17.3,44°.72N×82°.00E,h20^{km}*
*NNC **18** 10:32:18.9±1.1,44°.73N×81°.87E,h0^{km},mb3.7,mpv3.2,*
Error ellipse: s-maj=15.6km s-min=3.1km az=120.0,
Suspected Mining explosion.
ISC 18 10:32:15.6±1.5**,44°.66N**±0°.06×**82°.11E**±0°.10**,h0^{km},n13,**
σ0^{s}51/22**,1C-4D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	1.75	227	eP	Pg	10 32 49.4	+0.2
	0.6nm,0.1s						
KTMS				eS	Sg	10 33 12.3	+0.4
	8.8nm,0.1s						
KNOS	Konyrlen	2.12	263	Pg	Pb	10 32 54.7	-0.3
	14nm,0.4s						
KNOS				Lg	Lg	10 33 21.5	
	19nm,0.3s						
MK31	Makanchi Array	2.14	3	Pn	Pb	10 32 54.9	-0.3
	4.7nm,0.3s,baz=189,slow=14,SNR=305						
MK31				⇓Sn	Sb	10 33 22.7	+0.4
	7.0nm,0.5s,baz=186,slow=21,SNR=11						
MAKZ	Makanchi	2.15	358	⇓Pn	Pb	10 32 55.0	-0.4
	3.3nm,0.3s						
MAKZ				⇓Sn	Sb	10 33 22.8	+0.1
	8.3nm,0.3s						
PDGK	Podgornoye	2.31	236	⇑Pn	Pb	10 32 57.3	-1.0
	3.9nm,0.3s						
PDGK				⇓Sn	Sb	10 33 27.4	0.0
	16nm,0.8s						
SHLS	Shalkode	2.43	233	Pg	Pn	10 32 57.2	+0.5
	21nm,0.2s						
SHLS				Lg	Lg	10 33 25.8	
	21nm,0.5s						
SHLS	Shalkode	2.43	233	eP	Pn	10 32 57.2	+0.5
	21nm,0.2s						
SHLS				eS	Sn	10 33 25.8	-1.4
	28nm,0.2s						
TDK	Taldyqorghan	2.66	279	eP	Pb	10 33 04.1	0.0
	4.7nm,0.1s						
TDK				eS	Sb	10 33 37.4	+0.1
	24nm,0.2s						
BLB	Baldybastay	2.67	259	Pg	Pb	10 33 04.4	+0.1
	9.2nm,0.2s						
BLB				Lg	Lg	10 33 38.3	
	36nm,0.4s						
UZB	Uzynbulak	2.70	237	eP	Pb	10 33 05.1	+0.3
	1.5nm,0.1s						
UZB				eS	Sb	10 33 39.1	+0.7
	3.2nm,0.1s						
KPKS	Kokpek	2.74	245	Pg	Pb	10 33 05.2	-0.3
	0.3nm,0.1s						
KPKS				Lg	Lg	10 33 39.7	
	21nm,0.3s						
KPKS	Kokpek	2.74	245	eP	Pb	10 33 05.2	-0.3
	0.2nm,0.1s						
KPKS				eS	Sb	10 33 39.5	-0.3
	21nm,0.2s						
ARXS	Arharly	3.10	263	eP	Pb	10 33 11.4	-0.2
	4.0nm,0.2s						
ARXS				eS	Sb	10 33 49.9	-0.2
	13nm,0.6s						

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*IDC **18** 10:42:58.7±0.7,29°.72S×178°.54W,h0^{km},mb4.3/8,*
mbtmp4.3/9,ML3.9/1,Error ellipse: s-maj=22.7km
s-min=14.4km az=138.0
*NEIC **18** 10:42:59.4±1.3,29°.5S±0°.1×178°.3W±0°.1,h10^{km}±1^{km},*
mb4.6/14,Error ellipse: s-maj=27.3km s-min=7.0km
az=320.0
*GCMT **18** 10:43:03.4±0.3,29°.79S±0°.02×178°.59W±0°.02,h14^{km}±1^{km},*
MW4.8/77,Moment Tensor Solution. s19,c22; s77,c95;
Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.54±.15;
$M_{\theta\theta}$0.33±.10; $M_{\phi\phi}$1.21±.10; $M_{r\theta}$0.57±.20; $M_{\theta\phi}$1.78±.07;
$M_{\phi r}$-0.66±.18; Best double couple: $M_0$2.40100×10^{16}
NP1:ϕ_s249.00000°,δ54.00000°,λ-42.00000°. NP2:
ϕ_s7.00000°,δ58.00000°,λ-135.00000°. Principal axes: T
2.6110, Plg2.0000°, Azm127.0000°; N -0.4210,
Plg37.0000°, Azm36.0000°; P -2.1900, Plg53.0000°,
Azm221.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function
ISC 18 10:43:00.3±0.5**,29°.85S**±0°.07×**178°.49W**±0°.08**,h10^{km},n64,**
σ1^{s}70/67**,mb4.6**/18**,5C,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	0.76	40	P	Pg	10 43 15.2	+0.1
GLKZ				S	Sg	10 43 26.1	+1.0
RIZ	Raoul Island	0.77	39	P	Pg	10 43 15.0	-0.3
RIZ				S	Sg	10 43 25.9	+0.6
RAO	Raoul Island	0.77	40	Pn	Pb	10 43 15.9	0.0
	1µm,0.3s,baz=342,slow=21,SNR=19						
RAO				Sn	Sg	10 43 24.9	-0.5
	4µm,0.3s,baz=106,slow=20,SNR=18						
RAO	Raoul Island	0.77	40		Pg	10 43 08.2	-7.1
HAZ	Te Kaha	8.48	200	P	Pn	10 45 00.4	-2.7
HAZ				S	Sn	10 46 42.4	+3.6
OUZ	Omahuta	8.56	229	P	Pn	10 45 03.8	-0.6
PUZ	Puketiti	8.64	197	P	Pn	10 45 01.2	-4.2
PUZ				S	Sn	10 46 43.2	+0.3
MWZ	Matawai	9.09	200	P	Pn	10 45 10.7	-0.9
MWZ				S	Sn	10 46 57.1	+3.2
URZ	Urewera	9.15	202	Pn	Pn	10 45 13.2	+0.8
	1.3nm,0.3s,baz=350,slow=3.4,SNR=5.7						
URZ				Sn	Sn	10 46 57.0	+1.5
	2.0nm,0.3s,baz=206,slow=19,SNR=7.0						
	10.0nm,0.8s						
URZ	Urewera	9.15	202	P	Pn	10 45 10.5	-1.9
URZ				S	Sn	10 46 56.9	+1.5
TOZ	Tahuroa Road	9.32	211	Pn	Pn	10 45 19.0	+4.3
TOZ	Tahuroa Road	9.32	211	P	Pn	10 45 19.1	+4.4
BKZ	Black Stump Fm	10.17	203	P	Pn	10 45 22.0	-4.5
BKZ				S	Sn	10 47 20.0	-0.7
MCHZ	McNeill Hill	10.36	201	P	Pn	10 45 28.6	-0.4
MCHZ				S	Sn	10 47 28.0	+2.8
KWHZ	Kaweka Forest	10.43	202	S	Sn	10 47 27.7	+0.7
KAHZ	Kahuranaki	10.63	200	P	Pn	10 45 31.4	-1.3
KAHZ				S	Sn	10 47 31.8	0.0
KRHZ	Kereru	10.64	202	S	Sn	10 47 30.3	-1.9
PNHZ	Pukenui	10.95	202	S	Sn	10 47 38.6	-1.0
TSZ	Takapari Road	11.15	203	S	Sn	10 47 44.8	+0.1
DVHZ	Dannevirke	11.31	201	S	Sn	10 47 45.2	-3.2
PRWZ	Pori Road	11.60	201	S	Sn	10 47 52.9	-2.6
BFZ	Birch Farm	11.63	200	S	Sn	10 47 53.6	-2.8
DZM	Mont Dzumac	15.60	296	eP	P	10 46 57.2	+12
	227nm,25.5s						
DZM				eLR	LR	10 50 22.7	
	2µm,23.7s						
TBI	Tubuai	26.70	83	eLQ	LQ	10 54 10.3	
	3µm,24.5s						
TBI				eLR	LR	10 55 23.3	
	2µm,26.8s						
TBI				eLR	LR	10 55 28.0	
	675nm,25.0s						
PPT2	Papeete2	29.06	72	eS	S	10 53 53.2	+0.5
	37nm,27.5s						
PPT2				eLQ	LQ	10 55 03.8	
	632nm,24.0s						
PPT2				eLR	LR	10 56 25.4	
	403nm,25.2s						
PPT2				eLR	LR	10 56 31.5	
	338nm,26.8s						
TOO	Toolangi	30.80	246	P	P	10 49 17.4	+1.1
TOO				IAmb	IAmb	10 49 20.1	
	comp=Z,7.5nm,1.2s						
CTAO	Charters Tower	33.30	279	P	P	10 49 37.2	-1.1
STKA	Stephens Creek	34.20	256	P	P	10 49 45.6	-0.4
	comp=Z,5.8nm,0.8s,baz=94,slow=8.9,SNR=14						
	comp=Z,5.8nm,0.8s						
BBOO	Buckleboo	38.72	254		P	10 50 24.4	-0.2
BBOO				IAmb	IAmb	10 50 26.7	
	comp=Z,7.6nm,0.8s						
RKT	Rikitea	39.34	91	eLR	LR	11 01 02.4	
	comp=Z,2µm,37.2s						
TAOE	Nuku Hiva Isla	41.48	68	eLR	LR	11 02 08.5	
	comp=Z,224nm,24.3s						
AS31	Alice Springs	42.72	267		P	10 50 57.2	-0.7
ASAR	Alice Springs	42.72	267	P	P	10 50 56.6	-1.3
	comp=Z,3.3nm,0.7s,baz=103,slow=8.0,SNR=27						
	comp=Z,3.3nm,0.7s						
ASAR	Alice Springs	42.72	267	P	P	10 50 57.5	-0.4
WR8	Warramunga Arr	43.51	272	P	P	10 51 02.8	-1.5
WR8				IAmb	IAmb	10 51 24.1	
	comp=Z,13nm,1.1s						
WRA	Warramunga Arr	43.66	272	P	P	10 51 05.2	-0.4
	comp=Z,5.6nm,0.7s,baz=113,slow=7.9,SNR=7.3						
	comp=Z,5.6nm,0.7s						
WRA	Warramunga Arr	43.66	272	P	P	10 51 05.1	-0.4
WB0	Warramunga Arr	43.68	272	P	P	10 51 05.0	-0.7
WB0				IAmb	IAmb	10 51 13.9	
	comp=Z,8.1nm,0.8s						
FORT	Forrest	45.78	255	P	P	10 51 21.8	-0.6
FORT				IAmb	IAmb	10 51 46.1	
	comp=Z,5.4nm,0.8s						
SBA	Scott Base	48.55	184	P	P	10 51 44.7	+1.5
VNDA	Vanda	48.60	186	P	P	10 51 44.0	+0.3
	comp=Z,1.1nm,0.8s,baz=18,slow=6.9,SNR=3.7						
	comp=Z,1.1nm,0.8s						
FITZ	Fitzroy Crossi	51.94	270	P	P	10 52 10.2	+0.4
	comp=Z,8.0nm,0.8s,baz=171,slow=7.1,SNR=6.2						
	comp=Z,8.0nm,0.8s						
FITZ	Fitzroy Crossi	51.94	270	P	P	10 52 10.1	+0.4
MBWA	Marble Bar	55.87	264	P	P	10 52 37.5	-1.0
MBWA				IAmb	IAmb	10 52 37.9	
	comp=Z,9.4nm,1.0s						
QSPA	South Pole Qui	60.26	180	P	P	10 53 10.6	+1.9
	comp=Z,4.4nm,0.7s,baz=19,slow=2.6,SNR=18						
	comp=Z,4.4nm,0.7s						
QSPA	South Pole Qui	60.26	180		P	10 53 10.5	+1.7
BELA	Belgrano 2	70.39	172		P	10 54 14.1	+0.1
BELA				IAmb	IAmb	10 54 23.6	
	comp=Z,6.5nm,1.1s						
TROLL	Troll, Antarti	78.42	180	⇑P	P	10 55 01.8	+0.8
	comp=Z,476nm,0.7s						
SNAA	Sanae	78.72	179	⇑P	P	10 55 01.2	-1.3
	comp=Z,72nm,0.7s						
SNAA	Sanae	78.72	179	P	P	10 55 02.9	+0.3
	comp=Z,2.7nm,0.7s,baz=205,slow=8.5,SNR=9.1						
	comp=Z,2.7nm,0.7s						
SNAA	Sanae	78.72	179		P	10 55 02.9	+0.3
SNAA				IAmb	IAmb	10 55 03.5	
	comp=Z,6.4nm,1.0s						
VNA3	Neumayer Olymp	78.88	176	⇑P	P	10 55 03.8	+0.4
	comp=Z,11nm,0.7s						
VNA2	Neumayer--Watz	79.31	177	⇑P	P	10 55 06.6	+0.8
	comp=Z,11nm,0.8s,baz=164,slow=5.3						
VNA1	Neumayer--Stat	79.54	177	⇑P	P	10 55 07.1	+0.1
	comp=Z,9.5nm,0.8s						
H03S2	Juan Fernandez	81.12	124	T	T	12 24 53.2	
	baz=238,slow=74,SNR=754						
H03S1	Juan Fernandez	81.13	124	T	T	12 24 42.4	
	baz=238,slow=74,SNR=753						
H03S3	Juan Fernandez	81.14	124	T	T	12 24 39.6	
	baz=238,slow=74,SNR=729						
NVAR	Mina Array Bea	88.12	43	P	P	10 55 51.4	-0.1
	comp=Z,0.6nm,0.7s,baz=208,slow=8.4,SNR=5.7						
	comp=Z,0.6nm,0.7s						
FINES	FINESS Array B	144.48	340	PKP	PKPab	11 02 33.9	-0.7
	comp=Z,2.9nm,0.7s,baz=44,slow=4.4,SNR=5.9						
FINES	FINESS Array B	144.48	340		PKPab	11 02 34.4	-0.2
NOA	NORSAR Array B	148.14	351	PKPbc	PKPbc	11 02 45.7	-0.1
	comp=Z,0.9nm,0.9s,baz=26,slow=3.5,SNR=2.3						
AKASG	Malin Array Be	150.61	323	PKPbc	PKPbc	11 02 50.2	-1.9
	comp=Z,1.3nm,0.7s,baz=48,slow=2.1,SNR=4.8						
BRTR	Keskin Array B	151.97	299	PKPbc	PKiKP	11 02 57.5	+1.2
	comp=Z,0.4nm,0.5s,baz=130,slow=4.5,SNR=2.5						
TORD	Torodi Ar. Bea	163.38	181	PKPab	PKPab	11 03 54.4	-0.2
	comp=Z,1.2nm,0.3s,baz=151,slow=3.2,SNR=2.1						

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*IDC **18** 10:48:16.8±2.8,27°.59N×143°.10E,h0^{km},mb3.9/9,*
mbtmp3.8/10,ML3.0/1,Error ellipse: s-maj=111.5km
s-min=18.5km az=77.0
*NEIC **18** 10:48:19.1±0.4,27°.65N±0°.02×142°.91E±0°.09,h10^{km}±1^{km},*
mb4.3/11,Error ellipse: s-maj=13.5km s-min=3.5km
az=95.0
ISC 18 10:48:21.1±0.7**,27°.61N**±0°.08×**142°.9E**±0°.1**,h27^{km},n31,**
σ0^{s}85/30**,mb4.1**/14**,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	0.80	231	Pn	Pb	10 48 26.2	-10
	99nm,0.3s,baz=284,slow=24,SNR=45						
JCJ	Chichijima	0.80	231		Pb	10 48 35.7	-0.7
MJAR	Matsushiro Arr	9.75	337	Pn	Pn	10 50 38.7	-0.8
	0.1nm,0.3s,baz=161,slow=12,SNR=9.0						
	0.9nm,0.5s						
MJAR	Matsushiro Arr	9.75	337		Pn	10 50 38.2	-1.3
MAJO	Matsushiro	9.75	337	Pn	Pn	10 50 38.6	-1.0
MJB9	Matsu-Tunnel	9.75	337	Pn	Pn	10 50 38.8	-0.8
JSU	Suzuyama	11.49	293	Pn	Pn	10 51 03.1	-0.4
KS19	Wonju Array Si	16.03	312	Pn	Pn	10 52 02.9	-1.7
PETK	Petropavlovsk-	27.75	19	P	P	10 54 06.2	-1.0
ENH	Enshi	29.29	283	P	P	10 54 21.2	-0.1
ENH				IAmb	IAmb	10 54 30.4	
	comp=Z,3.9nm,0.9s						
MA2	Magadan	32.42	7	P	P	10 54 48.0	-0.4
SONM	Songino Array	34.78	315	P	P	10 55 10.0	+0.6
	comp=Z,0.5nm,0.6s,baz=101,slow=7.5,SNR=2.8						
	comp=Z,0.5nm,0.6s						
PMG	Port Moresby	37.03	173	P	P	10 55 28.4	-0.3
WB0	Warramunga Arr	47.81	191	P	P	10 56 56.7	+0.3
WR8	Warramunga Arr	47.97	191	P	P	10 56 58.0	+0.4
WR8				IAmb	IAmb	10 57 14.5	
	comp=Z,2.6nm,0.8s						
WRA	Warramunga Arr	47.99	191	P	P	10 56 57.5	-0.2
	comp=Z,0.6nm,0.5s,baz=12,slow=8.6,SNR=5.4						
	comp=Z,0.6nm,0.5s						
WRA	Warramunga Arr	47.99	191	P	P	10 56 56.5	-1.2
FITZ	Fitzroy Crossi	48.41	202	P	P	10 57 01.0	0.0
	comp=Z,1.0nm,0.2s,baz=352,slow=14,SNR=1.9						
	comp=Z,1.0nm,0.2s						
ZALV	Zalesovo Beam	49.51	319	P	P	10 57 09.9	+0.8
	comp=Z,0.6nm,0.4s,baz=105,slow=7.4,SNR=2.3						
	comp=Z,0.6nm,0.4s						
MKAR	Makanchi Array	50.63	309	P	P	10 57 18.3	+0.5
	comp=Z,0.2nm,0.4s,baz=82,slow=11,SNR=1.9						
	comp=Z,0.2nm,0.4s						
M16K	Timber Creek	50.91	32	P	P	10 57 19.4	-0.2
M16K				IAmb	IAmb	10 57 43.6	
	comp=Z,4.9nm,1.1s						
N17K	Nushagak Hills	51.65	33	P	P	10 57 25.1	-0.1
N17K				IAmb	IAmb	10 57 30.4	
	comp=Z,7.9nm,1.1s						
ASAR	Alice Springs	51.71	191	P	P	10 57 25.9	0.0
	comp=Z,0.2nm,0.4s,baz=10,slow=6.3,SNR=7.0						
	comp=Z,0.2nm,0.4s						
KURK	Kurchatov	53.07	314	P	P	10 57 36.3	+0.5
KURBB	Kurchatov Arra	53.13	314	P	P	10 57 36.9	+0.6
	comp=Z,1.9nm,0.6s,baz=91,slow=7.7,SNR=20						
	comp=Z,1.9nm,0.6s						
EIDS	Eidsvold	53.26	171	P	P	10 57 37.7	+0.3
BVAR	Borovoye Array	58.09	317	P	P	10 58 14.0	+2.1
	comp=Z,0.9nm,0.5s,baz=92,slow=6.9,SNR=5.1						
	comp=Z,0.9nm,0.5s						
AB31	Akbulak array	65.18	314	P	P	10 59 00.9	+1.1
AB31				IAmb	IAmb	10 59 02.1	
	comp=Z,1.4nm,1.1s						
ABKAR	Akbulak array	65.18	314	P	P	10 59 00.6	+0.8
FINES	FINESS Array B	77.76	334	P	P	11 00 15.7	+0.3
	comp=Z,2.3nm,0.8s,baz=72,slow=6.2,SNR=6.2						
	comp=Z,2.3nm,0.8s						
FINES	FINESS Array B	77.76	334	P	P	11 00 15.9	+0.5

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*NNC **18** 10:49:13.7±1.3,51°.43N×75°.21E,h0^{km},mb2.8,mpv2.4,*
Error ellipse: s-maj=41.7km s-min=8.1km az=26.0,
Suspected Mining explosion.
*IDC **18** 10:49:16.8±1.0,51°.66N×75°.42E,h0^{km},mbtmp2.7/3,*
ML2.2/3,Error ellipse: s-maj=30.5km s-min=7.6km
az=30.0
ISC 18 10:49:13.5±1.0**,51°.6N**±0°.1×**75°.11E**±0°.09**,h0^{km},n9,**
σ1^{s}51/10**,6C-2D,Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	Kurchatov Arra	2.36	113	Pn	Pn	10 49 54.3	+0.8
	0.5nm,0.3s,baz=302,slow=18,SNR=40						
KURBB				Lg	Lg	10 50 26.9	
	0.5nm,0.3s,baz=310,slow=34,SNR=11						
	1.7nm,0.4s						
KURBB	Kurchatov Arra	2.36	113	⇑Pg	Pb	10 49 56.2	-0.7
	1.6nm,0.3s						
KURBB				⇑Lg	Lg	10 50 24.8	
	9.5nm,0.6s						
KURK	Kurchatov	2.37	110	⇑Pg	Pn	10 49 54.7	+1.0
	0.6nm,0.5s						
KURK				⇓Lg	Lg	10 50 23.6	
	1.7nm,0.4s						
BVA0	Borovoye Array	3.24	298	⇑Pg	Pg	10 50 14.7	-0.9
	2.3nm,1.1s,baz=118,slow=17,SNR=5.6						
BVA0				⇓Lg	Lg	10 51 00.1	
	8.7nm,0.9s,baz=116,slow=27,SNR=6.6						
BVAR	Borovoye Array	3.24	298	Pg	Pg	10 50 15.8	+0.2
	0.1nm,0.3s,baz=116,slow=18,SNR=5.3						
BVAR				Sn	Sb	10 50 51.9	0.0
	0.1nm,0.3s,baz=109,slow=21,SNR=4.9						
BVAR				Lg	Lg	10 51 02.6	
	0.3nm,0.3s,baz=115,slow=28,SNR=9.0						
I46RU	ZALESOVO INFRA	6.35	64	I	I	11 25 40.0	
	baz=249,slow=318,SNR=2.1						
ZALV	Zalesovo Beam	6.35	64	Pn	Pn	10 50 49.4	+1.0
	0.5nm,0.3s,baz=256,slow=13,SNR=6.9						
	1.1nm,0.4s						
MK31	Makanchi Array	6.71	133	⇑Sn	Sn	10 52 07.7	-2.8
	0.5nm,0.5s						
MK31				⇑Lg	Lg	10 52 42.0	
	5.4nm,1.1s,baz=316,slow=26,SNR=3.6						
MKAR	Makanchi Array	6.71	133	Pn	Pn	10 50 55.2	+1.9
	baz=314,slow=11,SNR=1.1						
MKAR				Sn	Sn	10 52 11.2	+0.7
	0.2nm,0.3s,baz=324,slow=24,SNR=4.5						
MKAR				Lg	Lg	10 52 44.9	
	0.3nm,0.3s,baz=321,slow=28,SNR=5.2						
	0.1nm,0.3s						

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*IDC **18** 10:49:26.8±13.0,19°.47S×175°.25W,h102^{km}±114^{km},*
mb3.9/9,mbtmp4.3/9,Error ellipse: s-maj=55.4km
s-min=29.9km az=139.0
*NEIC **18** 10:49:30.2±0.6,19°.2S±0°.1×175°.4W±0°.1,h120^{km}±9^{km},*
mb4.4/17,Error ellipse: s-maj=19.3km s-min=15.8km
az=219.0
ISC 18 10:49:28.1±0.6**,19°.2S**±0°.1×**175°.6W**±0°.1**,h100^{km},n33,**
σ0^{s}80/33**,mb4.4**/16**,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	5.34	90		Pn	10 50 46.7	+1.2
AFI	Afiamalu	6.38	35	Pn	Pn	10 51 00.4	+0.8
DZM	Mont Dzumac	17.07	257	P	P	10 53 28.7	+7.8
	8.8nm,0.6s,baz=77,slow=18,SNR=10						
EIDS	Eidsvold	31.41	253	P	P	10 55 40.5	+0.7
EIDS				IAmb	IAmb	10 55 46.8	
	comp=Z,21nm,1.4s						
CTAO	Charters Tower	35.91	262	P	P	10 56 18.8	-0.1
STKA	Stephens Creek	40.41	243	P	P	10 56 56.6	0.0
	comp=Z,2.1nm,0.9s,baz=100,slow=8.2,SNR=3.9						
	comp=Z,2.1nm,0.9s						
BBOO	Buckleboo	45.18	243	P	P	10 57 35.1	0.0
WR8	Warramunga Arr	46.90	260	P	P	10 57 49.1	+0.3
WR8				IAmb	IAmb	10 57 52.5	
	comp=Z,3.2nm,0.7s						
WB0	Warramunga Arr	47.03	261	P	P	10 57 49.9	+0.1
WB0				IAmb	IAmb	10 57 51.0	
	comp=Z,6.9nm,0.7s						
AS31	Alice Springs	47.05	255	P	P	10 57 50.3	+0.3
AS31				IAmb	IAmb	10 57 52.7	
	comp=Z,4.4nm,0.7s						
ASAR	Alice Springs	47.05	255	P	P	10 57 50.4	+0.4
	comp=Z,13nm,0.6s,baz=91,slow=8.4,SNR=114						
ASAR				PcP	PcP	10 59 19.2	-1.4
	comp=Z,1.0nm,0.8s,baz=114,slow=3.5,SNR=5.2						
	comp=Z,13nm,0.6s						
ASAR	Alice Springs	47.05	255	P	P	10 57 50.1	+0.2
WRA	Warramunga Arr	47.05	260	P	P	10 57 50.0	0.0
	comp=Z,3.1nm,0.5s,baz=98,slow=8.6,SNR=27						
	comp=Z,3.1nm,0.5s						
WRA	Warramunga Arr	47.05	260	P	P	10 57 49.9	-0.1
MTN	Manton Dam	51.45	269	P	P	10 58 23.3	-0.2
KNRA	Kununurra	53.04	265	P	P	10 58 35.9	+0.6

FITZ	**Fitzroy Crossi**	**55.47**	**261**	P	**P**	**10 58 53.1**	**+0.2**
	comp=Z,2.8nm,0.8s,baz=140,slow=6.7,SNR=2.5						
	comp=Z,2.8nm,0.8s						
FITZ	**Fitzroy Crossi**	**55.47**	**261**	P	**P**	**10 58 52.8**	**-0.1**
VNDA	**Vanda**	**59.44**	**186**	P	**P**	**10 59 19.4**	**-0.4**
VNDA				IAmb	IAmb	10 59 34.1	
	comp=Z,5.8nm,1.5s						
TOLI2	**Tolitoli**	**65.58**	**280**	P	**P**	**11 00 02.3**	**+0.6**
TOLI2				IAmb	IAmb	11 00 42.1	
	comp=Z,9.9nm,1.1s						
MJAR	**Matsushiro Arr**	**70.54**	**322**	P	**P**	**11 00 32.9**	**+0.6**
	comp=Z,3.6nm,0.8s,baz=161,slow=5.9,SNR=9.0						
	comp=Z,3.6nm,0.8s						
MJAR	**Matsushiro Arr**	**70.54**	**322**	P	**P**	**11 00 32.2**	**-0.1**
MJAR				IAmb	IAmb	11 00 33.2	
	comp=Z,3.7nm,0.9s						
QSPA	**South Pole Qui**	**70.89**	**180**	P	**P**	**11 00 34.3**	**+0.1**
TPUB	**Ta-pu**	**75.20**	**301**	P	**P**	**11 00 59.9**	**-0.3**
KSRS	**Korea Array**	**77.44**	**317**	P	**P**	**11 01 14.3**	**+1.9**
	comp=Z,3.1nm,0.9s,baz=125,slow=5.0,SNR=4.9						
	comp=Z,3.1nm,0.9s						
NVAR	**Mina Array Bea**	**78.51**	**42**	P	**P**	**11 01 17.9**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=238,slow=7.6,SNR=4.5						
	comp=Z,0.6nm,0.7s						
M16K	**Timber Creek**	**81.03**	**8**	P	**P**	**11 01 31.6**	**+0.1**
L18K	**Granite Mounta**	**82.50**	**9**	P	**P**	**11 01 39.4**	**+0.3**
L18K				IAmb	IAmb	11 02 02.4	
	comp=Z,7.2nm,1.4s						
ILAR	**Eielson Array**	**86.54**	**12**	P	**P**	**11 01 58.1**	**-1.4**
	comp=Z,0.6nm,0.8s,baz=231,slow=5.0,SNR=5.5						
	comp=Z,0.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**91.83**	**289**	P	**P**	**11 02 26.8**	**+1.3**
	comp=Z,0.7nm,0.4s,baz=99,slow=4.9,SNR=5.0						
	comp=Z,0.7nm,0.4s						
ARCES	**ARCESS Array B**	**128.01**	**351**	PKP	**PKPdf**	**11 08 19.9**	**-1.7**
	comp=Z,2.2nm,0.9s,baz=30,slow=1.9,SNR=5.2						
BRTR	**Keskin Array B**	**147.57**	**315**	PKPbc	**PKPbc**	**11 09 00.1**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=101,slow=2.5,SNR=4.5						
GERES	**GERESS Array B**	**149.47**	**348**	PKPbc	**PKPbc**	**11 09 04.7**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=356,slow=9.9,SNR=4.3						

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*UCR **18** 10:57:42.8±0.9, 8°.85N×84°.13W, h4km±5km, MW4.7*
*UPA **18** 10:57:44.3±2.2, 8°.98N×84°.07W, h3km±12km, MW4.5*
*CATAC **18** 10:57:44.9±0.3, 9°N±2°×8°4W±°, h5km, M4.5/12, MLv4.5/12, Error ellipse: s-maj=5.1km s-min=2.4km az=40.2, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.32; $M_{\theta\theta}$-1.22; $M_{\phi\phi}$-0.10; $M_{r\theta}$0.61; $M_{\theta\phi}$0.96; $M_{\phi r}$-0.42; Fault plane solution: $M_0$1.75778×10^{15} NP1: ϕ_s122.70827°, δ57.78950°, λ93.37366°. NP2: ϕ_s296.39739°, δ32.36777°, λ84.66347°. Principal axes: T 1.4885, Plg76.9449°, Azm43.3235°; N 0.4508, Plg2.8540°, Azm300.9085°; P -1.9393, Plg12.7286°, Azm210.2633°; confirmed*

ISC 18 10:57:44.8±1.1**, 8°.96N**±0°.03×**84°.00W**±0°.03**, h8**km±9km**,**
n138, σ1s.10/159**, 12C-33D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCHAL	**Ojochal**	**0.38**	**69**	S	**Sb**	**10 58 00.8**	**+1.0**
OCHAL	**Ojochal**	**0.38**	**69**	P	**Pb**	**10 57 53.5**	**-0.2**
EDPE	**Pejibaye, P**	**0.47**	**65**	⇓eP	**Pb**	**10 57 54.9**	**-0.4**
QUEP	**Quepos**	**0.49**	**341**	S	**Sb**	**10 58 04.1**	**+1.0**
QUEP	**Quepos**	**0.49**	**341**	P	**Pb**	**10 57 55.1**	**-0.6**
QUEP	**Quepos**	**0.49**	**341**	eP	**Pg**	**10 57 54.6**	**+0.3**
QUEP				eS	**Sb**	**10 58 03.4**	**+0.3**
SVQ2	**Quepos**	**0.49**	**341**	eP	**Pg**	**10 57 54.4**	**+0.1**
SVQ2				eS	**Sb**	**10 58 03.6**	**+0.4**
ZEDO	**Perez Zeledon**	**0.50**	**39**	⇓eP	**Pb**	**10 57 55.5**	**-0.4**
PANP	**Palmar Norte**	**0.54**	**90**	eP	**Pb**	**10 57 55.9**	**-0.5**
SAJE	**San Jernim**	**0.62**	**52**	⇓eP	**Pb**	**10 57 57.4**	**-0.6**
SAJE				eS	**Sn**	**10 58 08.8**	**-1.5**
BUS1	**Rivas**	**0.64**	**23**	⇓eP	**Pb**	**10 57 57.8**	**-0.7**
BUS1				eS	**Sn**	**10 58 08.9**	**-2.3**
FIMO	**Fila Mora**	**0.64**	**88**	⇓eP	**Pb**	**10 57 57.9**	**-0.4**
FIMO				eS	**Sn**	**10 58 09.5**	**-1.3**
PIEC	**Cerro El Cedra**	**0.66**	**4**	⇓eP	**Pb**	**10 57 58.0**	**-0.7**
BURE	**Buenos Aires**	**0.69**	**72**	eP	**Pb**	**10 57 59.2**	**+0.1**
PICV	**PH. Pirrs**	**0.69**	**344**	eP	**Pg**	**10 57 58.0**	**-0.1**
RAZU	**San Marcos de**	**0.69**	**358**	⇓eP	**Pb**	**10 57 58.6**	**-0.7**
PITB	**Pirrs, San**	**0.69**	**358**	eP	**Pb**	**10 57 58.6**	**-0.7**
LCR2	**La Lucha 2**	**0.77**	**360**	eP	**Pb**	**10 57 59.9**	**-0.8**
DRK0	**Durika**	**0.80**	**68**	eP	**Pb**	**10 58 00.6**	**-0.5**
DRK0				eS	**Sn**	**10 58 14.2**	**-0.7**
DRK0	**Durika**	**0.80**	**68**	P	**Pb**	**10 58 00.8**	**-0.3**
DRK0	**Durika**	**0.80**	**68**	⇓eP	**Pb**	**10 58 00.5**	**-0.6**
PTJ1	**Puerto Jimnez**	**0.81**	**121**	eP	**Pb**	**10 58 00.9**	**-0.2**
PTJ1	**Puerto Jimnez**	**0.81**	**121**	S	**Sn**	**10 58 14.3**	**-0.5**
PTJ1	**Puerto Jimnez**	**0.81**	**121**	P	**Pb**	**10 58 00.9**	**-0.2**
PTJ1	**Puerto Jimnez**	**0.81**	**121**	eP	**Pg**	**10 57 59.9**	**-0.5**
EDP2	**Potrero Grande**	**0.82**	**86**	⇓eP	**Pb**	**10 58 01.1**	**-0.2**
ACOS	**Acosta**	**0.84**	**349**	eP	**Pg**	**10 58 00.7**	**-0.3**
PIRO	**Carate, Puerto**	**0.86**	**130**	eP	**Pg**	**10 58 01.2**	**-0.1**
PIRO	**Carate, Puerto**	**0.86**	**130**	P	**Pg**	**10 58 01.2**	**-0.1**
PIRO	**Carate, Puerto**	**0.86**	**130**	S	**Sn**	**10 58 14.5**	**-1.5**
PIRO	**Carate, Puerto**	**0.86**	**130**	⇑eP	**Pg**	**10 58 00.9**	**-0.4**
REPA	**Paraso**	**0.87**	**9**	eP	**Pb**	**10 58 01.6**	**-0.7**
EDAD	**Golfito**	**0.88**	**110**	eP	**Pg**	**10 58 01.0**	**-0.7**
BITO	**Garabito Jaco**	**0.90**	**317**	eP	**Pg**	**10 58 01.2**	**-0.8**
FITO	**Golfito**	**0.90**	**112**	eP	**Pg**	**10 58 01.3**	**-0.8**
TAGO	**Cartago**	**0.90**	**5**	⇓eP	**Pb**	**10 58 02.3**	**-0.5**
AMPA	**Desamparados**	**0.93**	**356**	eP	**Pg**	**10 58 02.3**	**-0.4**
PURI	**Puriscal**	**0.93**	**341**	⇑eP	**Pg**	**10 58 02.5**	**-0.2**
TRIO	**Tres Rios**	**0.94**	**0**	eP	**Pg**	**10 58 02.5**	**-0.3**
LUJA	**Lujan**	**0.96**	**356**	eP	**Pg**	**10 58 03.0**	**-0.2**
VINA	**Juan Vinas**	**0.96**	**15**	⇓eP	**Pb**	**10 58 03.3**	**-0.5**
PCAYA	**Pacayas**	**0.97**	**11**	⇓eP	**Pb**	**10 58 03.6**	**-0.4**
ECI	**Escuela Centro**	**0.97**	**357**	⇓eP	**Pg**	**10 58 03.2**	**-0.2**
SJS3	**Mercedes San J**	**0.97**	**357**	⇓eP	**Pb**	**10 58 03.5**	**-0.5**
SANTA	**Santa Ana**	**0.98**	**349**	⇓eP	**Pg**	**10 58 03.1**	**-0.5**
TURIB	**Turrialba**	**0.99**	**18**	⇓eP	**Pb**	**10 58 03.8**	**-0.5**
CORON	**Coronado**	**1.00**	**360**	⇓eP	**Pb**	**10 58 04.3**	**-0.2**
RAFA	**San Farael, Vo**	**1.01**	**11**	⇓eP	**Pb**	**10 58 04.3**	**-0.4**
VERB	**Verbena**	**1.02**	**17**	eP	**Pb**	**10 58 04.5**	**-0.3**
BELE	**Belen**	**1.02**	**350**	⇓eP	**Pg**	**10 58 03.9**	**-0.6**
VICA	**Volcano Irazu**	**1.03**	**9**	⇓eP	**Pb**	**10 58 04.7**	**-0.4**
VITO	**San Vito**	**1.03**	**98**	eP	**Pn**	**10 58 04.9**	**-0.8**
HDC	**Heredia**	**1.04**	**354**	eP	**Pg**	**10 58 04.2**	**-0.5**
VTCV	**VTCV, Calle Va**	**1.05**	**15**	⇓eP	**Pn**	**10 58 05.2**	**-0.8**
CVIMO	**Finca Echandi**	**1.06**	**3**	⇓eP	**Pb**	**10 58 05.0**	**-0.4**
CVTQ	**Turrialba Volc**	**1.06**	**13**	⇓eP	**Pn**	**10 58 05.6**	**-0.7**
CVTV	**Tajo**	**1.06**	**13**	⇓eP	**Pn**	**10 58 05.7**	**-0.7**
ABRB	**Las Abras (San**	**1.07**	**15**	⇓eP	**Pn**	**10 58 05.8**	**-0.6**
VTR0	**Volcan Turrial**	**1.07**	**13**	⇓eP	**Pn**	**10 58 05.8**	**-0.8**
ATEO	**Atenas**	**1.08**	**340**	⇑eP	**Pg**	**10 58 04.7**	**-0.8**
CVTR	**Volcan Turrial**	**1.08**	**13**	⇓eP	**Pb**	**10 58 05.7**	**-0.3**
NELY	**Ciudad Neily**	**1.09**	**107**	eP	**Pg**	**10 58 05.1**	**-0.6**
RESJ	**San Isidro (Tu**	**1.12**	**18**	⇓eP	**Pn**	**10 58 06.5**	**-0.4**
RSRNO	**Rio Sereno**	**1.14**	**97**	⇑eP	**Pn**	**10 58 06.8**	**-0.3**
ALCO	**Alturas Coton,**	**1.15**	**91**	⇓eP	**Pg**	**10 58 06.0**	**-0.9**
MLIR3	**Monte Lirio, C**	**1.18**	**98**	eP	**Pn**	**10 58 07.5**	**-0.2**
MLIR3				eS	**Sn**	**10 58 28.2**	**+4.3**
CDITO	**Canoas**	**1.18**	**109**	P	**Pg**	**10 58 06.5**	**-1.0**
CDITO	**Canoas**	**1.18**	**109**	S	**Sn**	**10 58 24.7**	**+0.8**
LCOCO	**El Coco**	**1.20**	**21**	eP	**Pn**	**10 58 07.6**	**-0.3**
RVLA	**Villa Bonita**	**1.21**	**20**	⇓eP	**Pn**	**10 58 07.9**	**-0.1**
LPPC	**Paso Canoas**	**1.23**	**110**	eP	**Pg**	**10 58 06.9**	**-1.4**
DMCAL	**E. de Neily**	**1.23**	**104**	eP	**Pg**	**10 58 07.5**	**-0.9**
VPS8	**V Poas**	**1.23**	**349**	⇑eP	**Pg**	**10 58 07.8**	**-0.7**
PILE	**Guapiles**	**1.26**	**9**	⇓eP	**Pn**	**10 58 08.9**	**+0.1**
BRU2	**Volcan**	**1.30**	**97**	eP	**Pn**	**10 58 08.9**	**-0.6**
BRU2				eS	**Sn**	**10 58 28.8**	**+1.5**
BRU2	**Volcan**	**1.30**	**97**	P	**Pg**	**10 58 09.1**	**-0.7**
BRU2	**Volcan**	**1.30**	**97**	⇓eP	**Pn**	**10 58 08.4**	**-1.1**
EGUB	**Earth Gu¡pi**	**1.31**	**18**	⇓eP	**Pg**	**10 58 09.7**	**-0.2**
LESP3	**La Esperanza,**	**1.32**	**115**	eP	**Pn**	**10 58 09.0**	**-0.6**
LESP3				eS	**Sn**	**10 58 28.4**	**+1.0**
VPL1	**V. Platanar**	**1.33**	**344**	eP	**Pn**	**10 58 08.7**	**-1.3**
BRIBI	**Bribri**	**1.34**	**61**	eP	**Pg**	**10 58 10.6**	**+0.2**
PTPM	**Petroterminale**	**1.34**	**124**	eP	**Pn**	**10 58 09.0**	**-0.8**
PTPM				eS	**Sn**	**10 58 28.2**	**+0.3**
PTPA	**Petro Terminal**	**1.35**	**124**	⇑eP	**Pn**	**10 58 08.3**	**-1.6**
VPL2	**V. Platanar**	**1.39**	**344**	eP	**Pn**	**10 58 09.6**	**-1.0**
JCR1	**Jicaral**	**1.41**	**309**	⇑eP	**Pn**	**10 58 07.5**	**-3.3**
VPL3	**V. Platanar**	**1.41**	**348**	eP	**Pn**	**10 58 10.3**	**-0.6**
LIMO3	**Limones**	**1.41**	**127**	eP	**Pn**	**10 58 10.7**	**-0.1**
CARI	**Cariari**	**1.42**	**11**	eP	**Pg**	**10 58 11.2**	**-0.8**
LMNES	**Limones**	**1.42**	**127**	eP	**Pn**	**10 58 09.1**	**-1.8**
JEFFS	**S de V. Baru**	**1.48**	**101**	eP	**Pn**	**10 58 11.3**	**-0.5**
PTAR3	**Potrerillos Ar**	**1.51**	**100**	eP	**Pn**	**10 58 12.1**	**-0.2**
PTAR3				eS	**Sg**	**10 58 33.9**	**+0.5**
BQTLY	**Boquete Panama**	**1.54**	**97**	⇑eP	**Pn**	**10 58 12.0**	**-0.7**
SOCE	**Pocosol**	**1.54**	**337**	P	**Pn**	**10 58 12.4**	**-0.2**
SOCE	**Pocosol**	**1.54**	**337**	S	**Sg**	**10 58 35.7**	**+1.4**
SOCE	**Pocosol**	**1.54**	**337**	eP	**Pn**	**10 58 11.7**	**-0.9**
BAGA3	**Bagala, Chiriq**	**1.54**	**109**	eP	**Pb**	**10 58 13.0**	**-0.6**
LNBQ3	**Los Naranjos,**	**1.55**	**96**	eP	**Pn**	**10 58 12.3**	**-0.6**
LNBQ3				eS	**Sg**	**10 58 34.4**	**-0.3**
BQSF3	**Alto Boquete,**	**1.56**	**98**	eP	**Pn**	**10 58 12.7**	**-0.3**
BQSF3				eS	**Sg**	**10 58 35.3**	**+0.2**
CNI2	**El Empalme, Bo**	**1.58**	**73**	eP	**Pg**	**10 58 13.8**	**-1.3**
CNI2				eS	**Sg**	**10 58 36.5**	**+1.0**
TRT2	**Tortugero**	**1.61**	**9**	P	**Pb**	**10 58 13.9**	**-0.8**
TRT2	**Tortugero**	**1.61**	**9**	S	**Sg**	**10 58 37.5**	**+1.1**
TRT2	**Tortugero**	**1.61**	**9**	⇑eP	**Pb**	**10 58 13.9**	**-0.8**
DVD	**David**	**1.62**	**109**	eP	**Pn**	**10 58 13.8**	**+0.1**
DVD				eS	**Sg**	**10 58 35.7**	**-1.2**
JTS	**Las Juntas de**	**1.62**	**325**	eP	**Pn**	**10 58 11.8**	**-1.9**
JTS	**Las Juntas de**	**1.62**	**325**	P	**Pn**	**10 58 14.1**	**+0.4**
JTS				S	**Sn**	**10 58 33.4**	**-1.5**
JTS	**Las Juntas de**	**1.62**	**325**	⇑eP	**Pn**	**10 58 11.3**	**-2.5**
LOCO3	**Loma Colorada,**	**1.66**	**109**	eP	**Pn**	**10 58 14.4**	**+0.2**
LOCO3				eS	**Sg**	**10 58 39.9**	**+1.8**
LOMA3	**Las Lomas, Chi**	**1.68**	**108**	eP	**Pn**	**10 58 14.5**	**+0.1**
LOMA3				eS	**Sg**	**10 58 38.0**	**-0.7**
PSOM3	**Paja de Sombre**	**1.68**	**99**	eP	**Pn**	**10 58 14.5**	**-0.1**
PSOM3				eS	**Sg**	**10 58 38.7**	**-0.2**
CHIR3	**Chiriqui UPA,**	**1.75**	**109**	eP	**Pb**	**10 58 15.8**	**-1.3**
CMARA	**Lajas Hojancha**	**1.75**	**307**	P	**Pb**	**10 58 17.8**	**+0.5**
PBNVO	**Pueblo Nuevo,**	**1.79**	**92**	⇑eP	**Pn**	**10 58 15.5**	**-0.5**
COVE	**Coope Vega, Sa**	**1.79**	**347**	P	**Pn**	**10 58 16.1**	**+0.1**
COVE	**Coope Vega, Sa**	**1.79**	**347**	S	**Sg**	**10 58 43.0**	**+0.6**
RBALA	**Bur**	**1.83**	**92**	⇑eP	**Pn**	**10 58 16.2**	**-0.4**
CHGR2	**Aguacate**	**1.83**	**91**	eP	**Pn**	**10 58 16.6**	**-0.1**
CHGR2				eS	**Sb**	**10 58 41.0**	**-0.8**
UPAL	**Upala**	**2.17**	**333**	P	**Pb**	**10 58 23.6**	**-0.7**
UPAL	**Upala**	**2.17**	**333**	S	**Sb**	**10 58 50.9**	**-0.5**
ELI1	**Hacienda Flor**	**2.27**	**318**	P	**Pn**	**10 58 24.0**	**+1.4**
ELI1	**Hacienda Flor**	**2.27**	**318**	S	**Sg**	**10 58 59.6**	**+2.0**
REME3	**Remedios, Chir**	**2.27**	**109**	eP	**Pn**	**10 58 23.5**	**+0.9**
CARN	**Rivas**	**2.67**	**326**	P	**Pn**	**10 58 30.0**	**+1.8**
MESA3	**La Mesa, Verag**	**2.90**	**106**	eP	**Pn**	**10 58 32.1**	**+0.8**
SAFE3	**Santa Fe, Vera**	**2.92**	**98**	eP	**Pn**	**10 58 33.3**	**+1.7**
GMAL	**Guarumal, Vera**	**2.99**	**113**	eP	**Pn**	**10 58 33.3**	**+0.8**
GMAL				eS	**Sn**	**10 59 10.9**	**+2.3**
SFRA3	**San Francisco,**	**3.08**	**103**	eP	**Pn**	**10 58 35.8**	**+2.1**
MARI3	**Mariato, Verag**	**3.25**	**113**	eP	**Pn**	**10 58 38.9**	**+2.8**
CRIS3	**El Cristo, Coc**	**3.42**	**102**	eP	**Pn**	**10 58 40.0**	**+1.6**
CACAO	**El Cacao, Vera**	**3.50**	**117**	eP	**Pn**	**10 58 42.8**	**+3.2**
BOAB	**BOACO BROADBAN**	**3.83**	**335**	P	**Pn**	**10 58 46.4**	**+2.2**
AZU	**Azuero**	**3.87**	**107**	eP	**Pn**	**10 58 40.5**	**-4.1**
APYN	**Apoyeque**	**3.99**	**325**	P	**Pn**	**10 58 45.3**	**-1.0**
APQ3	**Volcan Apoyequ**	**4.03**	**325**	P	**Pn**	**10 58 46.1**	**-0.7**
COPN	**Copaltepe**	**4.09**	**322**	P	**Pn**	**10 58 48.9**	**+1.2**
BCIP	**Isla Barro Col**	**4.12**	**87**	P	**Pn**	**10 58 49.5**	**+1.5**
FRIJ	**El Hiral**	**4.23**	**86**	eP	**Pn**	**10 58 50.8**	**+1.2**
GAMB1	**Gamboa**	**4.24**	**88**	eP	**Pn**	**10 58 50.7**	**+1.0**
MATN	**Matagalpa**	**4.37**	**335**	P	**Pn**	**10 58 53.4**	**+1.7**

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*NNC **18** 11:18:28.6±5.2, 50°.90N×73°.77E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=90.8km s-min=14.3km az=25.0, Suspected Mining explosion.*
*IDC **18** 11:18:34.9±1.3, 51°.24N×74°.05E, h0km, mbtmp2.8/4, ML2.1/4, Error ellipse: s-maj=36.1km s-min=9.1km az=27.0*

ISC 18 11:18:33.2±1.8**, 51°.1N**±0°.2×**73°.93E**±0°.10**, h0**km**, n10,**
σ2s.04/9**, 3C-4D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BVA0	**Borovoye Array**	**2.93**	**313**	Pg	**Pn**	**11 19 24.2**	**+3.1**
	6.9nm,0.6s,baz=140,slow=16,SNR=20						
BVA0				⇑Lg	Lg	11 20 00.4	
	20nm,0.6s,baz=119,slow=26,SNR=11						
BVAR	**Borovoye Array**	**2.93**	**313**	Pn	**Pn**	**11 19 21.8**	**+0.7**
	0.2nm,0.3s,baz=119,slow=17,SNR=16						
BVAR				Sn	**Sn**	**11 19 57.0**	**-0.1**
	0.2nm,0.3s,baz=124,slow=26,SNR=4.8						
	5.4nm,0.6s						
KURBB	**Kurchatov Arra**	**2.95**	**97**	Pn	**Pn**	**11 19 22.1**	**+0.8**
	0.2nm,0.3s,baz=284,slow=15,SNR=38						
KURBB				Lg	Lg	11 20 07.0	
	0.6nm,0.3s,baz=291,slow=32,SNR=5.5						
	6.2nm,0.7s						
KURBB	**Kurchatov Arra**	**2.95**	**97**	⇓Pg	**Pn**	**11 19 21.8**	**+0.5**
	22nm,0.8s						
KURBB				⇑Lg	Lg	11 20 06.1	
	117nm,0.7s						
KURK	**Kurchatov**	**2.99**	**95**	⇓Pg	**Pb**	**11 19 25.8**	**-1.5**
	3.5nm,0.8s						
KURK				⇓Lg	Lg	11 20 08.8	
	17nm,0.7s						
MAKZ	**Makanchi**	**6.80**	**126**	⇓Lg	Lg	11 22 04.4	
	15nm,0.7s						
MK31	**Makanchi Array**	**6.97**	**125**	⇑Lg	Lg	11 22 07.1	
	9.5nm,0.7s,baz=312,slow=26,SNR=14						
MKAR	**Makanchi Array**	**6.97**	**125**	Pn	**Pn**	**11 20 18.1**	**+1.4**
	0.1nm,0.3s,baz=303,slow=13,SNR=2.1						
MKAR				Lg	Lg	11 22 08.5	
	0.3nm,0.3s,baz=316,slow=26,SNR=6.5						
	0.7nm,0.8s						
I46RU	**ZALESOVO INFRA**	**7.24**	**62**	I	I	12 02 30.0	
	baz=248,slow=329,SNR=1.9						
ZALV	**Zalesovo Beam**	**7.24**	**62**	Pn	**Pn**	**11 20 17.9**	**-2.3**
	0.1nm,0.3s,baz=256,slow=14,SNR=1.8						
ZALV				Sn	**Sn**	**11 21 45.1**	**+2.0**
	0.2nm,0.3s,baz=253,slow=24,SNR=5.6						
	0.3nm,0.4s						

NOU 18 11:27:35.0, 13°.73S×**166°.76E, h74**km**, MLv5.3**/13**,**
Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**1.76**	**166**	P	Pn	11 28 03.3	-0.3
DVP	**Devils Point**	**4.20**	**161**	P	Pn	11 28 37.1	+0.4
SAVO	**Savo Central**	**8.19**	**303**	P	Pn	11 29 31.1	-0.1
YATNC	**Mamie plateau,**	**8.29**	**179**	P	Pn	11 29 31.6	-0.9
DZM	**Mont Dzumac**	**8.30**	**182**	P	Pn	11 29 32.6	-0.2
OUENC	**Ouen Island, N**	**8.64**	**179**	P	Pn	11 29 37.3	0.0
PINNC	**Pines Island,**	**8.86**	**176**	P	Pn	11 29 40.1	-0.2

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*UPA **18** 11:31:51.6±2.1, 8°.86N×84°.10W, h0km±20km, MW4.5*
*UCR **18** 11:31:51.8±0.9, 8°.87N×84°.13W, h9km±7km, MW4.6*
*CATAC **18** 11:31:52.6±0.4, 9°N±2°×8°4W±°, h6km±2km, M4.5/17, mb4.8/1, MLv4.4/17, Error ellipse: s-maj=5.7km s-min=2.6km az=45.9, confirmed*

ISC 18 11:31:51.9±1.3**, 8°.88N**±0°.03×**84°.10W**±0°.03**, h7**km±10km**,**
n147, σ0s.74/159**, 22C-31D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCHAL	**Ojochal**	**0.49**	**64**	S	**Sg**	**11 32 08.9**	**+1.0**
QUEP	**Quepos**	**0.55**	**353**	P	**Pg**	**11 32 02.9**	**+0.3**
QUEP	**Quepos**	**0.55**	**353**	eP	**Pg**	**11 32 02.9**	**+0.3**
QUEP				eS	**Sb**	**11 32 11.5**	**-0.7**
EDPE	**Pejibaye, P**	**0.59**	**62**	⇓iP	**Pg**	**11 32 03.2**	**-0.1**
ZEDO	**Perez Zeledon**	**0.62**	**41**	eP	**Pg**	**11 32 03.7**	**-0.3**
PANP	**Palmar Norte**	**0.63**	**83**	⇓eP	**Pg**	**11 32 04.2**	**+0.1**
PANP				eS	**Sb**	**11 32 14.6**	**+0.1**
FIMO	**Fila Mora**	**0.74**	**81**	⇓eP	**Pg**	**11 32 06.2**	**+0.1**
SAJE	**San Jernim**	**0.74**	**51**	⇓eP	**Pg**	**11 32 05.6**	**-0.6**
PICV	**PH. Pirrs**	**0.75**	**352**	eP	**Pg**	**11 32 06.4**	**+0.1**
PIEC	**Cerro El Cedra**	**0.75**	**10**	⇓eP	**Pg**	**11 32 06.2**	**-0.2**
BUS1	**Rivas**	**0.75**	**27**	⇓eP	**Pg**	**11 32 06.0**	**-0.5**
RAZU	**San Marcos de**	**0.78**	**5**	⇓eP	**Pg**	**11 32 06.8**	**-0.2**
PITB	**Pirrs, San**	**0.78**	**5**	eP	**Pg**	**11 32 06.8**	**-0.1**
BURE	**Buenos Aires**	**0.80**	**69**	eP	**Pg**	**11 32 07.2**	**-0.1**
PTJ1	**Puerto Jimnez**	**0.85**	**113**	eP	**Pb**	**11 32 09.3**	**+0.2**
PTJ1	**Puerto Jimnez**	**0.85**	**113**	S	**Sn**	**11 32 22.3**	**-0.9**
LCR2	**La Lucha 2**	**0.86**	**6**	S	**Sg**	**11 32 20.8**	**+1.0**
PIRO	**Carate, Puerto**	**0.89**	**122**	eP	**Pb**	**11 32 09.6**	**0.0**
PIRO	**Carate, Puerto**	**0.89**	**122**	P	**Pb**	**11 32 09.7**	**0.0**
PIRO	**Carate, Puerto**	**0.89**	**122**	S	**Sb**	**11 32 22.4**	**+0.7**
PIRO	**Carate, Puerto**	**0.89**	**122**	eP	**Pb**	**11 32 09.4**	**-0.2**
ACOS	**Acosta**	**0.92**	**356**	⇓eP	**Pg**	**11 32 08.9**	**-0.6**
EDP2	**Potrero Grande**	**0.92**	**81**	eP	**Pg**	**11 32 09.1**	**-0.5**
DRK0	**Durika**	**0.92**	**65**	eP	**Pg**	**11 32 08.9**	**-0.8**
DRK0	**Durika**	**0.92**	**65**	S	**Sg**	**11 32 22.1**	**+0.4**
DRK0	**Durika**	**0.92**	**65**	P	**Pg**	**11 32 08.9**	**-0.8**
DRK0	**Durika**	**0.92**	**65**	⇓eP	**Pg**	**11 32 08.7**	**-0.9**
EDAD	**Golfito**	**0.94**	**104**	eP	**Pg**	**11 32 09.2**	**-0.9**
FITO	**Golfito**	**0.96**	**105**	eP	**Pg**	**11 32 09.6**	**-0.9**
REPA	**Paraso**	**0.97**	**13**	⇓eP	**Pg**	**11 32 09.8**	**-0.7**
PURI	**Puriscal**	**0.99**	**348**	⇑eP	**Pg**	**11 32 10.7**	**-0.2**
TAGO	**Cartago**	**1.00**	**10**	⇓eP	**Pg**	**11 32 10.4**	**-0.6**
AMPA	**Desamparados**	**1.01**	**2**	eP	**Pg**	**11 32 10.5**	**-0.8**
TRIO	**Tres Rios**	**1.02**	**6**	eP	**Pg**	**11 32 10.8**	**-0.9**
LUJA	**Lujan**	**1.04**	**1**	⇓eP	**Pg**	**11 32 11.2**	**-0.8**
CENT	**San Jose**	**1.05**	**1**	eP	**Pg**	**11 32 11.7**	**-0.3**
SANTA	**Santa Ana**	**1.05**	**355**	eP	**Pg**	**11 32 11.3**	**-0.8**
ECI	**Escuela Centro**	**1.05**	**2**	eP	**Pg**	**11 32 11.4**	**-0.8**
SJS3	**Mercedes San J**	**1.05**	**2**	eP	**Pg**	**11 32 11.5**	**-0.7**
SJS	**Escuela Geolog**	**1.05**	**2**	eP	**Pg**	**11 32 11.5**	**-0.7**
MEXI	**Barrio Mexico**	**1.06**	**0**	eP	**Pg**	**11 32 11.6**	**-0.7**
LUPE	**Guadalupe**	**1.06**	**2**	⇓iP	Pg	11 32 07.6	-4.8
VINA	**Juan Vinas**	**1.07**	**19**	⇓eP	**Pg**	**11 32 11.5**	**-0.9**
PCAYA	**Pacayas**	**1.07**	**15**	⇓eP	**Pg**	**11 32 11.8**	**-0.7**
CORON	**Coronado**	**1.09**	**5**	⇓eP	**Pg**	**11 32 12.5**	**-0.4**
BELE	**Belen**	**1.09**	**355**	⇓eP	**Pg**	**11 32 12.0**	**-1.0**
TURIB	**Turrialba**	**1.10**	**21**	eP	**Pg**	**11 32 12.0**	**-1.0**
RAFA	**San Farael, Vo**	**1.11**	**15**	eP	**Pg**	**11 32 12.6**	**-0.7**
HEME	**Heredia, Merce**	**1.11**	**358**	⇓eP	**Pb**	**11 32 13.6**	**0.0**
OROT	**Orotina**	**1.11**	**338**	eP	**Pg**	**11 32 12.2**	**-1.1**
VITO	**San Vito**	**1.11**	**93**	eP	**Pg**	**11 32 13.3**	**0.0**
HDC	**Heredia**	**1.12**	**359**	⇓eP	**Pg**	**11 32 12.6**	**-0.8**
VICA	**Volcano Irazu**	**1.13**	**13**	⇓eP	**Pg**	**11 32 12.9**	**-0.7**
ATEO	**Atenas**	**1.13**	**345**	⇑eP	**Pg**	**11 32 12.8**	**-0.8**
VERB	**Verbena**	**1.13**	**20**	eP	**Pg**	**11 32 12.7**	**-0.9**
CVIMO	**Finca Echandi**	**1.15**	**7**	⇓iP	**Pg**	**11 32 13.3**	**-0.7**
VTCV	**VTCV, Calle Va**	**1.16**	**18**	⇓eP	**Pg**	**11 32 13.4**	**-0.7**
NELY	**Ciudad Neily**	**1.16**	**101**	eP	**Pg**	**11 32 13.6**	**-0.5**
CVTQ	**Turrialba Volc**	**1.17**	**16**	⇓eP	**Pg**	**11 32 13.7**	**-0.6**
CVTV	**Tajo**	**1.17**	**17**	⇓eP	**Pg**	**11 32 13.8**	**-0.6**
TCS1	**Tacares**	**1.17**	**350**	P	**Pg**	**11 32 13.9**	**-0.6**
TCS1	**Tacares**	**1.17**	**350**	eP	**Pg**	**11 32 13.7**	**-0.8**
VTR0	**Volcan Turrial**	**1.18**	**16**	⇓eP	**Pg**	**11 32 14.0**	**-0.6**
ABRB	**Las Abras (San**	**1.18**	**18**	⇓eP	**Pg**	**11 32 14.0**	**-0.6**
CVTR	**Volcan Turrial**	**1.18**	**16**	⇓eP	**Pg**	**11 32 13.9**	**-0.7**
POAS	**San Pedro de P**	**1.20**	**353**	eP	**Pg**	**11 32 14.5**	**-0.5**
RSRNO	**Rio Sereno**	**1.22**	**93**	⇑iP	**Pg**	**11 32 15.3**	**-0.1**
RSRNO				eS	**Sn**	**11 32 33.3**	**+0.9**
RSRNO	**Rio Sereno**	**1.22**	**93**	⇑eP	**Pn**	**11 32 15.4**	**-0.1**
RESJ	**San Isidro (Tu**	**1.23**	**21**	⇓eP	**Pg**	**11 32 14.7**	**-0.8**
SARCI	**Sarchi**	**1.23**	**348**	⇑eP	**Pg**	**11 32 14.8**	**-0.7**
ARZA	**Esparza**	**1.24**	**333**	eP	**Pn**	**11 32 14.9**	**-0.9**
NARAN	**Naranjo de Ala**	**1.24**	**347**	eP	**Pg**	**11 32 14.9**	**-0.9**
CDITO	**Canoas**	**1.25**	**104**	P	**Pb**	**11 32 14.8**	**-1.0**
CDITO	**Canoas**	**1.25**	**104**	S	**Sn**	**11 32 33.0**	**+0.1**
ALCO	**Alturas Coton,**	**1.25**	**87**	⇓eP	**Pg**	**11 32 14.4**	**-1.4**
PAQE	**Paquera**	**1.25**	**319**	eP	**Pg**	**11 32 16.4**	**+0.5**
RAMO	**San Ramon**	**1.26**	**343**	eP	**Pn**	**11 32 14.8**	**-1.3**
MLIR3	**Monte Lirio, C**	**1.26**	**94**	eP	**Pn**	**11 32 16.1**	**0.0**
LPPC	**Paso Canoas**	**1.29**	**105**	eP	**Pn**	**11 32 15.5**	**-0.9**
SCLRA	**Santa Clara, W**	**1.30**	**92**	⇑iP	**Pn**	**11 32 16.0**	**-0.6**
SCLRA				eS	**Sn**	**11 32 36.1**	**+1.8**
SCLRA	**Santa Clara, W**	**1.30**	**92**	⇑eP	**Pn**	**11 32 15.8**	**-0.9**
VPS8	**V Poas**	**1.30**	**354**	⇑eP	**Pn**	**11 32 16.0**	**-0.9**
DMCAL	**E. de Neily**	**1.30**	**99**	⇑eP	**Pn**	**11 32 15.9**	**-0.7**
LCOCO	**El Coco**	**1.31**	**24**	eP	**Pn**	**11 32 15.9**	**-0.8**
ZARE	**Zarcero**	**1.33**	**347**	eP	**Pn**	**11 32 16.4**	**-0.8**
IRES	**Siquirres**	**1.34**	**26**	eP	**Pn**	**11 32 16.5**	**-0.7**
PILE	**Guapiles**	**1.36**	**13**	⇑eP	**Pn**	**11 32 17.3**	**-0.2**
LESP3	**La Esperanza,**	**1.37**	**110**	eP	**Pn**	**11 32 16.8**	**-0.8**
PTPM	**Petroterminale**	**1.38**	**119**	eP	**Pn**	**11 32 17.4**	**-0.2**
PTPM				eS	**Sg**	**11 32 36.2**	**0.0**
PTPA	**Petro Terminal**	**1.39**	**119**	⇓eP	**Pn**	**11 32 17.1**	**-0.7**
BRU2	**Volcan**	**1.39**	**93**	eP	**Pn**	**11 32 17.1**	**-0.8**
BRU2				eP	**Pn**	**11 32 17.2**	**-0.7**
BRU2				eS	**Sn**	**11 32 38.7**	**+2.0**
BRU2	**Volcan**	**1.39**	**93**	P	**Pn**	**11 32 17.3**	**-0.7**
BRU2	**Volcan**	**1.39**	**93**	S	**Sg**	**11 32 36.5**	**-0.2**
BRU2	**Volcan**	**1.39**	**93**	⇓eP	**Pn**	**11 32 17.0**	**-1.0**
JCR1	**Jicaral**	**1.39**	**314**	⇑eP	**Pn**	**11 32 15.8**	**-2.1**
VPL1	**V. Platanar**	**1.40**	**349**	⇑eP	**Pn**	**11 32 16.9**	**-1.2**
EGUB	**Earth Gu¡pi**	**1.42**	**21**	eP	**Pn**	**11 32 17.9**	**-0.2**
LIMO3	**Limones**	**1.44**	**122**	eP	**Pb**	**11 32 18.9**	**-0.2**
LMNES	**Limones**	**1.45**	**122**	eP	**Pn**	**11 32 17.6**	**-1.0**
LMNES	**Limones**	**1.45**	**122**	eP	**Pn**	**11 32 17.5**	**-1.1**
VPL2	**V. Platanar**	**1.45**	**349**	⇑eP	**Pn**	**11 32 17.9**	**-0.8**
BRIBI	**Bribri**	**1.46**	**60**	eP	**Pb**	**11 32 19.3**	**-0.1**
ARTO	**Ro Cuarto**	**1.46**	**355**	eP	**Pn**	**11 32 18.2**	**-0.6**
QUEU	**Ciudad Quesada**	**1.47**	**347**	eP	**Pn**	**11 32 18.8**	**-0.2**
CARI	**Cariari**	**1.52**	**13**	⇑eP	**Pn**	**11 32 19.6**	**0.0**
JEFFS	**S de V. Baru**	**1.56**	**98**	⇑eP	**Pn**	**11 32 19.8**	**-0.4**
ITAL	**Pital**	**1.57**	**354**	eP	**Pn**	**11 32 19.8**	**-0.5**
SOCE	**Pocosol**	**1.58**	**341**	P	**Pn**	**11 32 20.3**	**-0.2**
SOCE	**Pocosol**	**1.58**	**341**	S	**Sg**	**11 32 43.2**	**+0.3**
SOCE	**Pocosol**	**1.58**	**341**	eP	**Pn**	**11 32 20.0**	**-0.5**
PTAR3	**Potrerillos Ar**	**1.59**	**97**	eP	**Pn**	**11 32 20.5**	**-0.2**
BAGA3	**Bagala, Chiriq**	**1.60**	**105**	eP	**Pb**	**11 32 21.3**	**-0.6**
BQTLY	**Boquete Panama**	**1.62**	**94**	eP	**Pn**	**11 32 20.1**	**-1.0**
BQTLY	**Boquete Panama**	**1.62**	**94**	eP	**Pn**	**11 32 20.4**	**-0.7**
LNBQ3	**Los Naranjos,**	**1.64**	**93**	eP	**Pn**	**11 32 20.3**	**-1.0**
LNBQ3				eS	**Sg**	**11 32 45.0**	**+0.4**
JTS	**Las Juntas de**	**1.64**	**329**	P	**Pn**	**11 32 19.9**	**-1.4**
JTS				S	**Sn**	**11 32 41.7**	**-1.0**
JTS	**Las Juntas de**	**1.64**	**329**	⇑eP	**Pn**	**11 32 19.5**	**-1.7**
BQSF3	**Alto Boquete,**	**1.65**	**95**	eP	**Pn**	**11 32 21.0**	**-0.4**
FORC	**Fortuna**	**1.68**	**340**	eP	**Pn**	**11 32 21.3**	**-0.5**
DVD	**David**	**1.68**	**105**	eP	**Pn**	**11 32 22.1**	**+0.2**
DVD				eS	**Sn**	**11 32 43.9**	**+0.1**
VACR	**Volcan Arenal**	**1.69**	**340**	⇑eP	**Pn**	**11 32 21.4**	**-0.5**
ARE1	**Arenal 1**	**1.69**	**339**	⇑eP	**Pn**	**11 32 21.6**	**-0.3**
VARE2	**V. Arenal**	**1.69**	**339**	⇑eP	**Pn**	**11 32 21.6**	**-0.4**
CNI2	**El Empalme, Bo**	**1.69**	**71**	eP	**Pn**	**11 32 21.8**	**-0.1**
CNI2				eS	**Sb**	**11 32 45.0**	**+0.1**
TRT2	**Tortugero**	**1.71**	**12**	P	**Pn**	**11 32 22.1**	**0.0**
TRT2	**Tortugero**	**1.71**	**12**	S	**Sn**	**11 32 44.5**	**+0.3**
TRT2	**Tortugero**	**1.71**	**12**	⇑eP	**Pn**	**11 32 22.1**	**0.0**
CEDE	**Laguna Cedeo**	**1.71**	**339**	eP	**Pn**	**11 32 21.8**	**-0.4**
LOCO3	**Loma Colorada,**	**1.72**	**106**	eP	**Pn**	**11 32 22.6**	**+0.3**
CMARA	**Lajas Hojancha**	**1.73**	**311**	P	**Pn**	**11 32 22.9**	**+0.3**
TABAC	**Tabacon**	**1.74**	**338**	eP	**Pn**	**11 32 22.5**	**-0.2**
LOMA3	**Las Lomas, Chi**	**1.74**	**105**	eP	**Pn**	**11 32 22.9**	**+0.3**
PSOM3	**Paja de Sombre**	**1.76**	**96**	eP	**Pn**	**11 32 22.6**	**-0.4**
COVE	**Coope Vega, Sa**	**1.85**	**351**	P	**Pn**	**11 32 23.8**	**-0.4**
COVE	**Coope Vega, Sa**	**1.85**	**351**	S	**Sn**	**11 32 48.5**	**+0.6**
RBALA	**Bur**	**1.92**	**90**	⇑iP	**Pn**	**11 32 24.5**	**-0.5**
RBALA				eS	**Sn**	**11 32 48.5**	**-1.0**
RBALA	**Bur**	**1.92**	**90**	⇑eP	**Pn**	**11 32 24.5**	**-0.5**
CHGR2	**Aguacate**	**1.93**	**88**	eP	**Pn**	**11 32 24.8**	**-0.4**
CHGR2				eS	**Sn**	**11 32 49.5**	**-0.3**
UPAL	**Upala**	**2.20**	**336**	P	**Pn**	**11 32 30.3**	**+1.4**
ELI1	**Hacienda Flor**	**2.27**	**321**	P	**Pn**	**11 32 30.5**	**+0.6**
ELI1	**Hacienda Flor**	**2.27**	**321**	S	**Sn**	**11 32 59.8**	**+1.6**
REME3	**Remedios, Chir**	**2.33**	**106**	eP	**Pn**	**11 32 31.7**	**+0.9**
CARN	**Rivas**	**2.69**	**329**	P	**Pn**	**11 32 36.6**	**+0.9**
MESA3	**La Mesa, Verag**	**2.97**	**104**	eP	**Pn**	**11 32 40.8**	**+1.3**
GMAL	**Guarumal, Vera**	**3.04**	**111**	eP	**Pn**	**11 32 42.0**	**+1.5**
BCIP	**Isla Barro Col**	**4.21**	**86**	P	**Pn**	**11 32 57.0**	**+0.4**
PRVC	**Isla de Provid**	**5.21**	**31**	P	**Pn**	**11 33 11.3**	**+0.9**

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*IDC **18** 11:32:37.0±0.8, 14°.97S×174°.36W, h0km, mb4.1/8, mbtmp4.1/8, Error ellipse: s-maj=34.4km s-min=20.2km az=138.0*
*NEIC **18** 11:32:58.7±0.8, 15°.11S±0°.07×174°.5W±0°.2, h178km±11km, mb4.4/26, Error ellipse: s-maj=24.4km s-min=10.4km az=82.0*
*NOU **18** 11:33:00.6, 14°.47S×173°.17W, h323km, mb4.6/9, Samoa Islands Region*

ISC 18 11:33:00.0±0.6**, 15°.08S**±0°.09×**174°.43W**±0°.10**, h200**km**,**
n82, σ1s.26/81**, mb4.2**/22**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.82**	**66**		**Pn**	**11 33 45.6**	**-2.1**
AFI	**Afiamalu**	**2.82**	**66**	P	**Pn**	**11 33 45.9**	**-1.7**
NIUE	**Niue**	**5.86**	**133**	Pn	**Pn**	**11 34 24.1**	**-1.4**
NIUE	**Niue**	**5.86**	**133**	P	**Pn**	**11 34 25.2**	**-0.2**
MSVF	**Nonsavu**	**7.69**	**249**	P	Pn	11 35 07.0	+18
OUZ	**Omahuta**	**22.76**	**206**	P	**P**	**11 37 46.9**	**+1.7**
OUZ	**Omahuta**	**22.76**	**206**	P	**P**	**11 37 46.6**	**+1.4**
WCZ	**Waipu Caves**	**23.08**	**204**	P	**P**	**11 37 47.4**	**-0.6**
KUZ	**Kuaotunu**	**23.30**	**200**	P	**P**	**11 37 50.4**	**+0.4**
KUZ	**Kuaotunu**	**23.30**	**200**	P	**P**	**11 37 49.8**	**-0.2**
WMGZ	**Waiomatatini S**	**23.52**	**194**	P	**P**	**11 37 52.2**	**+0.2**

HAZ	**Te Kaha**	**23.62**	**196**	P	**P**	**11 37 53.0**	**+0.1**
PKGZ	**Pakihiroa**	**23.65**	**195**	P	**P**	**11 37 54.1**	**+0.9**
PUZ	**Puketiti**	**23.80**	**194**	P	**P**	**11 37 54.9**	**+0.3**
MKAZ	**Moumakai**	**23.81**	**201**	P	**P**	**11 37 54.7**	**0.0**
RUGZ	**Raukumara Rang**	**23.84**	**196**	P	**P**	**11 37 56.2**	**+1.0**
TWGZ	**Tauwhareparae**	**23.97**	**195**	P	**P**	**11 37 57.0**	**+0.8**
CNGZ	**Carnagh Statio**	**24.20**	**194**	P	**P**	**11 37 58.8**	**+0.6**
MWZ	**Matawai**	**24.23**	**196**	P	**P**	**11 37 57.7**	**-0.9**
TOZ	**Tahuroa Road**	**24.26**	**200**	P	**P**	**11 37 59.4**	**+0.6**
URZ	**Urewera**	**24.27**	**196**	P	**P**	**11 37 57.6**	**-1.2**
URZ	**Urewera**	**24.27**	**196**	P	**P**	**11 37 57.5**	**-1.4**
RAGZ	**Rawiri**	**24.41**	**196**	P	**P**	**11 37 58.9**	**-1.3**
RTZ	**Ruatahuna**	**24.64**	**196**	P	**P**	**11 38 01.8**	**-0.5**
SNGZ	**Shannon Statio**	**24.70**	**196**	P	**P**	**11 38 02.7**	**-0.1**
BKZ	**Black Stump Fm**	**25.29**	**197**	P	**P**	**11 38 06.2**	**-1.9**
BKZ	**Black Stump Fm**	**25.29**	**197**	P	**P**	**11 38 05.2**	**-3.0**
TSZ	**Takapari Road**	**26.27**	**197**	P	**P**	**11 38 15.1**	**-1.8**
BFZ	**Birch Farm**	**26.77**	**196**	P	**P**	**11 38 19.9**	**-1.4**
MRZ	**Mangatainoka R**	**26.93**	**197**	P	**P**	**11 38 19.5**	**-3.3**
QRZ	**Quartz Range**	**28.05**	**201**	P	**P**	**11 38 31.6**	**-1.1**
QRZ	**Quartz Range**	**28.05**	**201**	P	**P**	**11 38 31.3**	**-1.4**
NNZ	**Nelson**	**28.11**	**200**	P	**P**	**11 38 31.2**	**-2.0**
THZ	**Tophouse**	**28.76**	**200**	P	**P**	**11 38 38.0**	**-1.1**
DSZ	**Denniston Nort**	**29.12**	**201**	P	**P**	**11 38 41.1**	**-1.2**
GVZ	**Greta Valley S**	**29.80**	**199**	P	**P**	**11 38 46.0**	**-2.2**
LTZ	**Lake Taylor**	**29.88**	**200**	P	**P**	**11 38 46.2**	**-2.7**
INZ	**Inchbonnie**	**30.11**	**201**	P	**P**	**11 38 48.0**	**-2.8**
WVZ	**Waitaha Valley**	**30.66**	**202**	P	**P**	**11 38 53.8**	**-2.0**
FOZ	**Fox Glacier**	**31.39**	**202**	P	**P**	**11 39 01.0**	**-1.2**
JCZ	**Jackson Bay**	**32.24**	**203**	P	**P**	**11 39 07.7**	**-2.0**
JCZ	**Jackson Bay**	**32.24**	**203**	P	**P**	**11 39 07.4**	**-2.3**
MLZ	**Mavora Lakes**	**33.59**	**202**	P	**P**	**11 39 20.0**	**-1.3**
EIDS	**Eidsvold**	**33.86**	**247**	P	**P**	**11 39 23.0**	**-0.8**
EIDS				IAmb	IAmb	11 39 44.0	
	comp=Z,7.5nm,1.0s						
WHZ	**Wether Hill Ro**	**34.10**	**202**	P	**P**	**11 39 24.2**	**-1.4**
ARMA	**Armidale**	**34.66**	**238**	P	**P**	**11 39 30.2**	**-0.7**
ARMA				IAmb	IAmb	11 39 55.8	
	comp=Z,6.9nm,1.1s						
CTAO	**Charters Tower**	**37.75**	**257**	P	**P**	**11 39 56.8**	**-0.2**
CTAO				IAmb	IAmb	11 40 10.8	
	comp=Z,4.9nm,0.9s						
CAN	**Canberra**	**38.45**	**232**	P	**P**	**11 40 02.1**	**-0.6**
CAN				IAmb	IAmb	11 40 24.0	
	comp=Z,9.7nm,1.1s						
COEN	**Coen**	**41.02**	**266**	P	**P**	**11 40 23.7**	**-0.3**
COEN				IAmb	IAmb	11 40 44.7	
	comp=Z,8.9nm,1.1s						
TOO	**Toolangi**	**41.91**	**230**		**P**	**11 40 30.9**	**-0.1**
STKA	**Stephens Creek**	**43.34**	**239**	P	**P**	**11 40 42.4**	**-0.2**
	comp=Z,3.6nm,0.5s,baz=66,slow=7.6,SNR=7.5						
	comp=Z,3.6nm,0.5s						
STKA	**Stephens Creek**	**43.34**	**239**		**P**	**11 40 42.1**	**-0.5**
INKA	**Innaminka**	**43.37**	**246**		**P**	**11 40 42.8**	**-0.1**
INKA				IAmb	IAmb	11 40 44.2	
	comp=Z,4.6nm,0.6s						
BBOO	**Buckleboo**	**48.12**	**239**	P	**P**	**11 41 19.6**	**-0.4**
BBOO				IAmb	IAmb	11 41 19.8	
	comp=Z,9.0nm,0.5s						
WR8	**Warramunga Arr**	**48.80**	**257**	P	**P**	**11 41 24.8**	**-0.6**
WB0	**Warramunga Arr**	**48.91**	**257**		**P**	**11 41 25.5**	**-0.8**
WRA	**Warramunga Arr**	**48.95**	**257**	P	**P**	**11 41 25.8**	**-0.7**
	comp=Z,1.4nm,0.4s,baz=89,slow=9.6,SNR=24						
	comp=Z,1.4nm,0.4s						
WRA	**Warramunga Arr**	**48.95**	**257**	P	**P**	**11 41 25.1**	**-1.5**
AS31	**Alice Springs**	**49.27**	**252**		**P**	**11 41 28.7**	**-0.2**
AS31				IAmb	IAmb	11 41 29.8	
	comp=Z,11nm,0.6s						
ASAR	**Alice Springs**	**49.27**	**252**	P	**P**	**11 41 28.6**	**-0.3**
	comp=Z,40nm,0.6s,baz=87,slow=8.0,SNR=614						
ASAR	**Alice Springs**	**49.27**	**252**		**P**	**11 41 28.9**	**-0.1**
MTN	**Manton Dam**	**52.77**	**265**	P	**P**	**11 41 54.8**	**-0.2**
MTN				IAmb	IAmb	11 41 55.5	
	comp=Z,7.7nm,1.0s						
KNRA	**Kununurra**	**54.63**	**261**	P	**P**	**11 42 08.2**	**-0.3**
KNRA				IAmb	IAmb	11 42 18.4	
	comp=Z,17nm,1.2s						
FORT	**Forrest**	**54.68**	**243**	P	**P**	**11 42 07.9**	**-0.8**
FITZ	**Fitzroy Crossi**	**57.31**	**258**	P	**P**	**11 42 27.9**	**+0.5**
	comp=Z,1.4nm,0.5s,baz=72,slow=6.4,SNR=1.8						
	comp=Z,1.4nm,0.5s						
FITZ	**Fitzroy Crossi**	**57.31**	**258**	P	**P**	**11 42 27.2**	**-0.3**
PSA00	**Pilbara Seismi**	**62.35**	**253**	P	**P**	**11 43 01.2**	**-0.6**
PSA00				IAmb	IAmb	11 43 02.1	
	comp=Z,5.2nm,0.9s						
PSA00	**Pilbara Seismi**	**62.35**	**253**	P	**P**	**11 43 01.4**	**-0.4**
PSA00				IAmb	IAmb	11 43 02.1	
	comp=Z,11nm,0.7s						
MBWA	**Marble Bar**	**62.50**	**254**	P	**P**	**11 43 02.5**	**-0.3**
SBA	**Scott Base**	**63.49**	**184**	P	**P**	**11 43 10.0**	**+1.7**
SBA				IAmb	IAmb	11 43 10.1	
	comp=Z,9.3nm,1.1s						
VNDA	**Vanda**	**63.59**	**186**	P	**P**	**11 43 10.8**	**+1.8**
	comp=Z,2.6nm,1.0s,baz=334,slow=4.1,SNR=3.8						
	comp=Z,2.6nm,1.0s						
VNDA	**Vanda**	**63.59**	**186**	P	**P**	**11 43 09.2**	**+0.2**
VNDA				IAmb	IAmb	11 43 11.0	
	comp=Z,3.1nm,1.1s						
NWAO	**Narrogin (SRO)**	**63.91**	**240**	P	**P**	**11 43 12.2**	**+0.3**
KAPI	**Kappang**	**65.38**	**271**	P	**P**	**11 43 21.2**	**-0.4**
NVAR	**Mina Array Bea**	**74.76**	**43**	P	**P**	**11 44 20.1**	**+1.6**
	comp=Z,0.5nm,0.7s,baz=236,slow=9.7,SNR=4.2						
	comp=Z,0.5nm,0.7s						
QSPA	**South Pole Qui**	**74.96**	**180**	P	**P**	**11 44 19.6**	**+0.6**
	comp=Z,5.1nm,1.0s,baz=4.7,slow=0.7,SNR=12						
	comp=Z,5.1nm,1.0s						
QSPA	**South Pole Qui**	**74.96**	**180**	P	**P**	**11 44 19.5**	**+0.4**
QSPA				IAmb	IAmb	11 44 20.7	
	comp=Z,3.7nm,0.8s						
ILAR	**Eielson Array**	**82.33**	**12**	P	**P**	**11 44 58.5**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=247,slow=5.1,SNR=5.0						
	comp=Z,0.6nm,0.9s						
PDAR	**Pinedale Array**	**82.69**	**42**	P	**P**	**11 45 02.2**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=215,slow=2.5,SNR=7.9						
	comp=Z,0.5nm,0.5s						
BELA	**Belgrano 2**	**84.45**	**172**	P	**P**	**11 45 11.1**	**+1.4**
HHC	**Hu-ho-hao-te**	**88.09**	**313**	*e*P	**P**	**11 45 30.0**	**+1.9**
HHC				pmax	pmax		
	comp=Z,11nm,0.5s						
HHC				pmax	pmax		
	comp=Z,68nm,5.3s						
BRTR	**Keskin Array B**	**145.28**	**320**	PKPbc	**PKPab**	**11 52 15.4**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=42,slow=2.3,SNR=3.6						

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*IDC **18** 11:42:41.5±1.1, 0°.86S×121°.60E, h0^{km}, mb3.5/6, mbtmp3.6/7, ML4.1/1, MS2.7/2, Error ellipse: s-maj=59.0km s-min=18.9km az=68.0*

*NEIC **18** 11:42:43.3±0.3, 0°.9S±0°.1×121°.44E±0°.08, h10^{km}±2^{km}, mb3.7/6, Error ellipse: s-maj=21.7km s-min=4.1km az=217.0*

*DJA **18** 11:42:43.8±0.3, 1°S±3°×12°2E±°, h10^{km}, M4.2/15, mB4.8/1, mb4.4/4, MLv4.1/15, Mw(mB)4.1/1*

ISC 18 11:42:43.9±1.3**, 0°.84S**±0°.06×**121°.51E**±0°.05**, h17**^{km}±8^{km}**, n33,** σ1^{s}**03**/34**, mb3.6**/7**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APSI	**Ampana**	**0.15**	**118**	P	**Pg**	**11 42 47.4**	**-0.6**
LUWI	**Luwuk**	**1.27**	**99**	Pn	**Pb**	**11 43 08.1**	**+0.6**
LUWI					**Sg**	**11 43 25.7**	**+0.5**
LUWI	**Luwuk**	**1.27**	**99**	P	**Pb**	**11 43 08.1**	**+0.6**
MRSI	**Marisa**	**1.38**	**18**	P	**Pn**	**11 43 07.4**	**-0.9**
PCI	**Palu**	**1.68**	**268**	P	**Pn**	**11 43 13.0**	**+0.5**
MPSI	**Mapaga**	**1.99**	**306**	P	**Pn**	**11 43 16.3**	**-0.5**
TOLI2	**Tolitoli**	**2.07**	**339**	Pn	**Pn**	**11 43 18.6**	**+0.7**
GTOI	**Gorontalo**	**2.10**	**46**	P	**Pn**	**11 43 18.7**	**+0.5**
TTSI	**Tana Toraja**	**2.77**	**218**	P	**Pn**	**11 43 28.6**	**+1.1**
MMSI	**Mamuju**	**3.19**	**235**	P	**Pn**	**11 43 35.0**	**+1.7**
SPSI	**Sidrap Palu**	**3.56**	**209**	P	**Pn**	**11 43 39.9**	**+1.5**
PMSI	**Majene**	**3.71**	**224**	P	**Pn**	**11 43 40.9**	**+0.5**
BNSI	**Bone**	**3.81**	**202**	P	**Pn**	**11 43 43.8**	**+2.0**
KAPI	**Kappang**	**4.50**	**203**	Pn	**Pn**	**11 43 51.1**	**-0.3**
	9.4nm,0.3s,baz=292,slow=2.6,SNR=4.5						
KAPI				Sn	**Sn**	**11 44 41.0**	**-2.5**
	8.4nm,0.3s,baz=340,slow=19,SNR=7.6						
KAPI				LR	LR	11 45 22.5	
	comp=Z,98nm,18.1s,baz=21,slow=36						
	18nm,0.3s						
SANI	**Sanana**	**4.63**	**105**	P	**Pn**	**11 43 52.9**	**-0.3**
BKSI	**Bulukumba**	**4.67**	**197**	P	**Pn**	**11 43 54.7**	**+1.1**
NLAI	**Namlea**	**6.07**	**113**	P	**Pn**	**11 44 14.5**	**+1.6**
	0.1nm25nm,0.5s						
EDFI	**Ende, Flores**	**7.86**	**179**	P	**Pn**	**11 44 38.6**	**+1.0**
DAV	**Davao City (W)**	**8.84**	**27**	LR	LR	11 48 38.0	
	comp=Z,32nm,19.8s,baz=329,slow=40						
MTN	**Manton Dam**	**15.27**	**142**		**Pn**	**11 46 17.9**	**-0.9**
MTN				IAmb	IAmb	11 46 20.0	
	comp=Z,5.2nm,1.0s						
WB0	**Warramunga Arr**	**22.65**	**147**	P	**P**	**11 47 43.8**	**-0.6**
WB0				IAmb	IAmb	11 47 58.6	
	comp=Z,2.5nm,0.9s						
WRA	**Warramunga Arr**	**22.76**	**147**	P	**P**	**11 47 45.0**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=326,slow=11,SNR=6.5						
	comp=Z,0.7nm,0.5s						
WR8	**Warramunga Arr**	**22.86**	**147**	P	**P**	**11 47 46.2**	**-0.5**
TPUB	**Ta-pu**	**24.01**	**358**	P	**P**	**11 47 57.9**	**-0.1**
AS31	**Alice Springs**	**25.68**	**153**	P	**P**	**11 48 12.6**	**-0.6**
ASAR	**Alice Springs**	**25.68**	**153**	P	**P**	**11 48 12.9**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=331,slow=9.0,SNR=8.1						
	comp=Z,0.5nm,0.6s						
ASAR	**Alice Springs**	**25.68**	**153**	P	**P**	**11 48 12.8**	**-0.4**
SONM	**Songino Array**	**50.24**	**347**	P	**P**	**11 51 40.6**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=167,slow=7.1,SNR=2.7						
	comp=Z,0.4nm,0.6s						
SONM	**Songino Array**	**50.24**	**347**	P	**P**	**11 51 38.5**	**-0.8**
SONM				IAmb	IAmb	11 52 03.3	
	comp=Z,1.0nm,1.1s						
MKAR	**Makanchi Array**	**58.56**	**329**	P	**P**	**11 52 40.8**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=132,slow=8.0,SNR=5.0						
	comp=Z,0.6nm,0.6s						
MKAR	**Makanchi Array**	**58.56**	**329**	P	**P**	**11 52 39.8**	**+0.2**
ZALV	**Zalesovo Beam**	**62.47**	**337**	P	**P**	**11 53 06.1**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=140,slow=7.0,SNR=2.8						
	comp=Z,0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**62.95**	**331**	P	**P**	**11 53 09.9**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=144,slow=6.3,SNR=2.5						
	comp=Z,0.3nm,0.7s						

GCG 18 11:49:08.6±0.4**, 14°.40N**×**91°.25W, h80**^{km}±5^{km}**, MD3.7, ML2.8, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG5	**El Palmar, Qui**	**0.09**	**270**	*e*P	Pn	11 49 21.9	+1.7
STG5				*i* S	Sn	11 49 32.7	+4.0
STG8	**El Palmar, Qui**	**0.11**	**296**	*e*P	Pn	11 49 22.8	+2.4
STG8				*i* S	Sn	11 49 34.0	+4.9
STG8				IAML		11 49 36.0	
	comp=E,321nm,0.1s						
STG2	**El Palmar, Qui**	**0.12**	**286**	*e*P	Pn	11 49 22.8	+2.5
STG2				*e*S	Sn	11 49 34.0	+5.1
ESSG	**Sabana Grande**	**0.41**	**93**	*e*P	Pn	11 49 21.8	+0.1
ESSG				*e*S	Sn	11 49 32.1	+0.7

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*MOS **18** 11:54:14.9±0.8, 43°.46N×145°.88E, h109^{km}, mb4.8/37, Error ellipse: s-maj=7.9km s-min=5.3km az=111.7*

MOS Felt (III-IV) at Yuzhno-Kuril'sk; (III) at Golovnino, Lagunnoye, Malokuril'skoye.

*BJI **18** 11:54:14.2, 43°.54N×145°.91E, h105^{km}, mB5.1/15, mb4.8/57*

*SKHL **18** 11:54:16.0±0.7, 43°.40N×146°.00E, h106^{km}±4^{km}, mb5.7/6, msha6.5/4*

*NIED **18** 11:54:16.2, 43°.41N×145°.95E, h98^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.34; $M_{\theta\theta}$0.68; $M_{\phi\phi}$1.67; $M_{r\theta}$1.85; $M_{\theta\phi}$0.61; $M_{\phi r}$2.39; Fault plane solution: $M_0$3.70000×10^{15} NP1:ϕ_s21.00000°, δ18.00000°, λ-104.00000°. NP2:ϕ_s215.00000°, δ72.00000°, λ-86.00000°.*

*NEIC **18** 11:54:16.4±1.2, 43°.47N±0°.07×145°.9E±0°.1, h102^{km}±6^{km}, mb4.6/113 Error ellipse: s-maj=12.7km s-min=9.9km az=102.0*

*JMA **18** 11:54:16.2±0.2, 43°.4N±0°.5×146°.0E±0°.9, h98^{km}±1^{km}, MD4.4/40, MV4.8/40, NEMURO REGION*

JMA Felt III J1 at NEMURO REGION .

*IDC **18** 11:54:16.1±2.0, 43°.50N×145°.89E, h104^{km}±18^{km}, mb4.2/26, mbtmp4.6/32, MS3.0/4, Error ellipse: s-maj=12.5km s-min=11.7km az=112.0*

ISC 18 11:54:15.6±0.4**, 43°.48N**±0°.04×**145°.95E**±0°.04**, h102**^{km}±2^{km}**, h101**^{km}**:pP-P, n580,** σ0^{s}**91**/572**, mb4.6**/134**, 17C-36D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.18**	**233**	⇓*i*P	**Pn**	**11 54 30.2**	**+0.3**
NEM2				⇓*e*S	**Sn**	**11 54 40.2**	**-0.4**
NEM2	**Nemuro 2**	**0.18**	**233**	A	A	11 54 30.2	
	comp=N,89nm,0.6s,comp=E,61nm,1.0s						
NMR	**Nemuro--Hokkai**	**0.19**	**236**	⇓*i*PN	**Pn**	**11 54 30.1**	**+0.2**
NMR				*e*S	**Sn**	**11 54 40.1**	**-0.5**
NMR	**Nemuro--Hokkai**	**0.19**	**236**	*i* P	**Pn**	**11 54 30.2**	**+0.3**
NMR				*e*S	**Sn**	**11 54 40.4**	**-0.2**
GLVR	**Golovnino**	**0.41**	**310**	⇓*i*PN	**Pn**	**11 54 31.5**	**+0.6**
GLVR				*e*S	**Sn**	**11 54 43.1**	**+0.8**
GLVR				pmax	pmax		
	comp=N,1μm,0.1s						
GLVR				pmax	pmax		
	comp=Z,17μm,0.1s						
GLVR				smax	smax		
	comp=N,34μm,0.3s						
GLVR				smax	smax		
	comp=E,19μm,0.2s						
GLVR	**Golovnino**	**0.41**	**310**	*i* P	**Pn**	**11 54 31.5**	**+0.6**
GLVR				AMB	AMB	11 54 32.3	
	comp=E,17μm,0.2s						
GLVR				*e*S	**Sn**	**11 54 43.1**	**+0.8**
GLVR				A	A	11 54 46.1	
	comp=E,34μm,0.2s						
GLVR				A	A	11 54 46.1	
	comp=E,19μm,0.2s						
YUK	**Yuzh-Kuril'sk**	**0.56**	**354**	*d i*PN	**Pn**	**11 54 32.5**	**+0.5**
YUK				*e*S	**Sn**	**11 54 44.5**	**+0.3**
YUK				pmax	pmax		
	comp=N,5μm,0.2s						
YUK				pmax	pmax		
	comp=E,3μm,0.2s						
YUK				pmax	pmax		
	comp=Z,27μm,0.2s						
YUK				smax	smax		
	comp=E,26μm,0.4s						
YUK				smax	smax		
	comp=N,8μm,0.2s						
YUK	**Yuzh-Kuril'sk**	**0.56**	**354**	*i* P	**Pn**	**11 54 32.5**	**+0.5**
YUK				AMB	AMB	11 54 33.2	
	comp=N,29μm,0.2s						
YUK				*e*S	**Sn**	**11 54 44.5**	**+0.3**
YUK				A	A	11 54 45.5	
	comp=N,8μm,0.3s						
YUK				A	A	11 54 45.5	
	comp=N,26μm,0.3s						
JKHN	**Kushirohamanak**	**0.70**	**236**	⇓*i*P	**Pn**	**11 54 33.4**	**+0.3**
JKHN				⇓*e*S	**Sn**	**11 54 45.9**	**-0.3**
JKHN	**Kushirohamanak**	**0.70**	**236**	A	A	11 54 33.4	
	comp=N,28nm,2.5s,comp=E,18nm,0.7s						
JNSB	**Nemuroshibetsu**	**0.75**	**294**	⇓*i*P	**Pn**	**11 54 34.3**	**+0.8**
JNSB				⇓*e*S	**Sn**	**11 54 48.4**	**+1.4**
JNSB	**Nemuroshibetsu**	**0.75**	**294**	A	A	11 54 34.3	
	comp=N,34nm,0.7s,comp=E,26nm,0.6s						
JRA	**Rausu**	**0.76**	**308**	⇓*i*P	**Pn**	**11 54 34.5**	**+1.0**
JRA				⇓S	**Sn**	**11 54 48.3**	**+1.2**
JRA	**Rausu**	**0.76**	**308**	A	A	11 54 34.5	
	comp=N,36nm,0.4s,comp=E,20nm,0.5s						
RUSJ	**Misakicho**	**0.81**	**321**	⇓*i*PN	**Pn**	**11 54 35.2**	**+1.1**
RUSJ				*e*S	**Sn**	**11 54 51.5**	**+3.5**
JNK	**Nakash**	**0.90**	**277**	⇓*i*P	**Pn**	**11 54 35.4**	**+0.3**
JNK				⇓S	**Sn**	**11 54 49.2**	**-0.5**
JNK	**Nakash**	**0.90**	**277**	A	A	11 54 35.4	
	comp=N,18nm,0.3s,comp=E,22nm,0.3s						
AKK	**Akkeshi**	**0.93**	**241**	*e*P	**Pn**	**11 54 35.4**	**+0.1**
JAK	**Akkeshi**	**1.03**	**243**	⇓*i*P	**Pn**	**11 54 36.6**	**+0.2**
JAK				⇓*e*S	**Sn**	**11 54 51.6**	**-0.5**
JAK	**Akkeshi**	**1.03**	**243**	A	A	11 54 36.6	
	comp=N,27nm,0.4s,comp=E,30nm,0.3s						
JTKR	**Abashiri--Toko**	**1.56**	**289**	⇓*i*P	**Pn**	**11 54 43.6**	**+1.0**
JTKR				⇓*e*S	**Sn**	**11 55 03.7**	**+0.6**
JTKR	**Abashiri--Toko**	**1.56**	**289**	A	A	11 54 43.6	
	comp=N,3.0nm,1.0s,comp=E,6.0nm,1.6s						
JAR	**Ashorobuto**	**1.60**	**264**	⇓*i*P	**Pn**	**11 54 44.0**	**+0.9**
JAR				⇓*e*S	**Sn**	**11 55 04.6**	**+0.6**
JAR	**Ashorobuto**	**1.60**	**264**	A	A	11 54 44.0	
	comp=N,14nm,1.0s,comp=E,18nm,2.6s						
JOB	**Onbets**	**1.65**	**250**	⇓*i*P	**Pn**	**11 54 44.4**	**+0.7**
JOB				⇓*e*S	**Sn**	**11 55 05.2**	**+0.2**
JOB	**Onbets**	**1.65**	**250**	A	A	11 54 44.4	
	comp=N,16nm,0.4s,comp=E,28nm,0.8s						
JMP	**Maruseppu**	**1.95**	**287**	⇓*i*P	**Pn**	**11 54 48.5**	**+1.0**
JMP				⇓*e*S	**Sn**	**11 55 12.8**	**+0.8**
JMP	**Maruseppu**	**1.95**	**287**	A	A	11 54 48.5	
	comp=N,3.0nm,1.4s,comp=E,10.0nm,3.2s						
JCH	**Churui**	**2.08**	**246**	⇓*i*P	**Pn**	**11 54 49.5**	**+0.3**
JCH				⇓S	**Sn**	**11 55 14.0**	**-0.9**
JCH	**Churui**	**2.08**	**246**	A	A	11 54 49.5	
	comp=N,15nm,1.0s,comp=E,8.0nm,1.7s						
KUR	**Kuril'sk**	**2.23**	**37**	*e*PN	**Pn**	**11 54 51.4**	**+0.3**
KUR				*e*S	**Sn**	**11 55 18.5**	**+0.1**
KUR				pmax	pmax		
	comp=Z,187nm,0.5s						
KUR				smax	smax		
	comp=N,2μm,0.5s						
KUR				smax	smax		
	comp=E,1μm,0.6s						
KUR	**Kuril'sk**	**2.23**	**37**	*e*P	**Pn**	**11 54 51.8**	**+0.7**
KUR				AMB	AMB	11 54 52.5	
	comp=E,190nm,0.5s						
KUR				*e*S	**Sn**	**11 55 19.3**	**+0.9**
KUR				A	A	11 55 20.8	
	comp=E,2μm,0.3s						
KUR				A	A	11 55 20.8	
	comp=E,2μm,0.3s						
JKA	**Kamikawa-asahi**	**2.51**	**286**		**Pn**	**11 54 56.5**	**+1.7**
JKA				Sn	**Sn**	**11 55 26.5**	**+1.7**
JKA	**Kamikawa-asahi**	**2.51**	**286**	*e*P	**Pn**	**11 54 56.9**	**+2.2**
ASAJ	**Asahikawa**	**2.51**	**286**	P	**Pn**	**11 54 56.9**	**+2.1**
	comp=E,1μm,0.4s,baz=111,slow=9.9,SNR=3007						
ASAJ				S	**Sn**	**11 55 27.4**	**+2.5**
	comp=E,446nm,0.6s,baz=31,slow=24,SNR=5.7						
ASAJ				LR	LR	11 55 43.4	
	comp=E,506nm,18.5s,baz=66,slow=35						
ERM	**Erimo**	**2.52**	**236**		**Pn**	**11 54 56.3**	**+1.3**
ERM				Sn	**Sn**	**11 55 25.5**	**+0.3**
ERM	**Erimo**	**2.52**	**236**	PN	**Pn**	**11 54 56.3**	**+1.3**
ERM						11 55 25.5	
JNBK	**Urakawa-nobuka**	**2.63**	**244**	A	A	11 54 57.3	
	comp=N,5.0nm,0.6s,comp=E,8.0nm,0.7s						
JIAM	**Iburiatsuma**	**3.07**	**255**	A	A	11 55 03.5	
	comp=N,11nm,1.0s,comp=E,8.0nm,1.3s						
JAHD	**Aomorihigashid**	**4.07**	**239**	A	A	11 55 16.8	
	comp=N,8.0nm,0.5s,comp=E,7.0nm,1.4s						
YSS	**Yuzhno-Sakhali**	**4.14**	**328**		**Pn**	**11 55 17.3**	**+0.7**
YSS	**Yuzhno-Sakhali**	**4.14**	**328**	*e*PN	**Pn**	**11 55 17.1**	**+0.5**
YSS				*e*S	**Sn**	**11 56 02.1**	**-1.9**
YSS				pmax	pmax		
	comp=N,40nm,0.6s						
YSS				pmax	pmax		
	comp=Z,80nm,0.6s						
YSS				pmax	pmax		
	comp=E,30nm,0.9s						
YSS				smax	smax		
	comp=N,120nm,0.6s						
YSS				smax	smax		
	comp=E,100nm,0.6s						
YSS				MLR	MLR		
	comp=Z,500nm,10.0s						
YSS				MLR	MLR		
	comp=N,300nm,9.0s						
YSS	**Yuzhno-Sakhali**	**4.14**	**328**	*e*P	**Pn**	**11 55 17.8**	**+1.2**
YSS				AMB	AMB	11 55 19.0	
	comp=N,80nm,0.6s						
YSS				*e*S	**Sn**	**11 56 03.7**	**-0.3**
UGL	**Uglegorsk**	**6.21**	**336**	⇓*e*PN	**Pn**	**11 55 46.7**	**+2.1**
UGL				*e*S	**Sn**	**11 56 55.1**	**+0.9**
UGL				pmax	pmax		
	comp=Z,346nm,0.9s						
UGL				smax	smax		
	comp=N,120nm,2.1s						
UGL				smax	smax		
	comp=E,158nm,1.1s						
UGL	**Uglegorsk**	**6.21**	**336**	*e*P	**Pn**	**11 55 47.3**	**+2.7**
UGL				AMB	AMB	11 55 47.8	
	comp=E,350nm,0.9s						
UGL				*e*S	**Sn**	**11 56 55.1**	**+0.9**
UGL				A	A	11 56 56.7	
	comp=E,120nm,0.7s						
UGL				A	A	11 56 56.7	
	comp=E,160nm,0.7s						
TEY	**Ternei**	**6.89**	**286**	⇑*e*PN	**Pn**	**11 55 54.7**	**+0.9**
TEY				pmax	pmax		
	comp=N,20nm,1.0s						
TEY				pmax	pmax		
	comp=E,20nm,1.0s						
TEY				pmax	pmax		
	comp=Z,40nm,1.0s						
TEY	**Ternei**	**6.89**	**286**	*e*P	**Pn**	**11 55 54.7**	**+0.9**
TYV	**Tymovskoe**	**7.72**	**344**	*e*PN	**Pn**	**11 56 05.0**	**-0.1**
TYV				*e*S	**Sn**	**11 57 30.9**	**+0.1**
TYV				pmax	pmax		
	comp=Z,24nm,1.1s						
TYV				pmax	pmax		
	comp=Z,300nm,3.4s						
TYV				smax	smax		
	comp=N,10.0nm,1.3s						
TYV				smax	smax		
	comp=E,21nm,1.3s						
TYV				smax	smax		
	comp=N,400nm,3.4s						
TYV				smax	smax		
	comp=E,200nm,3.4s						
TYV	**Tymovskoe**	**7.72**	**344**	*e*P	**Pn**	**11 56 06.2**	**+1.1**
TYV				AMB	AMB	11 56 09.4	
TYV				*e*S	**Sn**	**11 57 30.9**	**+0.1**
MJB9	**Matsu-Tunnel**	**9.12**	**223**	Pn	**Pn**	**11 56 24.1**	**-0.1**
MAJO	**Matsushiro**	**9.12**	**223**		**Pn**	**11 56 23.5**	**-0.7**
MAJO	**Matsushiro**	**9.12**	**223**	PN	**Pn**	**11 56 23.5**	**-0.7**
MJAR	**Matsushiro Arr**	**9.12**	**223**	P	**Pn**	**11 56 23.5**	**-0.8**
	comp=E,2.8nm,0.6s,baz=31,slow=13,SNR=8.9						
MJAR	**Matsushiro Arr**	**9.12**	**223**	Pn	**Pn**	**11 56 23.2**	**-1.0**
GRNR	**Gornyy**	**9.76**	**322**	*e*PN	**Pn**	**11 56 34.1**	**+1.3**
GRNR	**Gornyy**	**9.76**	**322**	*e*P	**Pn**	**11 56 34.1**	**+1.3**
SKR	**Severo-Kuril's**	**10.00**	**40**	*e*P	**Pn**	**11 56 37.5**	**+1.5**
USRK	**Ussuriysk Ar.**	**10.11**	**279**	P	**Pn**	**11 56 37.8**	**+0.1**
	comp=E,17nm,0.7s,baz=84,slow=15,SNR=20						
JGF	**Kuroka**	**10.28**	**223**	Pn	**Pn**	**11 56 39.0**	**-1.1**
NKL	**Nikolayevsk**	**10.29**	**342**	*e*P	**Pn**	**11 56 37.9**	**-2.1**
PAU	**Pauzhetka**	**10.85**	**39**	*e*P	**Pn**	**11 56 46.2**	**-1.4**
MDJ	**Mudanjiang**	**11.83**	**281**		**Pn**	**11 56 59.9**	**-0.8**
MDJ	**Mudanjiang**	**11.83**	**281**	P	**Pn**	**11 57 00.4**	**-0.4**
MDJ				pmax	pmax		
	comp=E,45nm,0.9s						
PETK	**Petropavlovsk-**	**12.40**	**35**	LR	LR	12 01 33.7	
	comp=E,35nm,18.3s,baz=139,slow=35						
BNX	**BinXian**	**13.40**	**286**	⇓P	**Pn**	**11 57 20.0**	**-1.5**
BNX				pmax	pmax		
	comp=E,140nm,0.8s						
HEH	**HeiHe**	**14.36**	**305**	*e*P	**Pn**	**11 57 31.8**	**-2.0**
HEH				pmax	pmax		
	comp=E,7.0nm,0.8s						
CN2	**Changchun**	**14.85**	**278**	P	**Pn**	**11 57 37.4**	**-2.7**
CN2				pmax	pmax		
	comp=E,20nm,0.7s						
KSRS	**Korea Array**	**14.97**	**252**	P	**Pn**	**11 57 40.4**	**-1.3**
	comp=E,3.1nm,0.8s,baz=60,slow=13,SNR=6.9						
ZEA	**Zeya**	**16.02**	**316**	*e*P	**P**	**11 57 56.1**	**-0.1**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZEA	**Zeya**	**16.02**	**316**	*e*P	**P**	**11 57 56.1**	**-0.1**
MA2	**Magadan**	**16.39**	**9**	LR	LR	12 03 21.2	
	comp=Z,42nm,21.3s,baz=317,slow=33						
MA2	**Magadan**	**16.39**	**9**		**P**	**11 58 00.8**	**+0.5**
MA2				IAmb	IAmb	11 58 14.8	
	comp=Z,95nm,1.5s						
MA2	**Magadan**	**16.39**	**9**	P	**P**	**11 58 00.8**	**+0.5**
MA2				pmax	pmax		
	comp=Z,95nm,1.5s						
DL2	**Dalian**	**18.84**	**264**	P	**P**	**11 58 27.5**	**+0.2**
DL2				pmax	pmax		
	comp=Z,56nm,0.8s						
HIA	**Hailar**	**18.93**	**297**		**P**	**11 58 26.8**	**-1.6**
HIA	**Hailar**	**18.93**	**297**	P	**P**	**11 58 26.8**	**-1.6**
HIA				pmax	pmax		
	comp=Z,16nm,0.8s						
HILR	**Hailar Array B**	**18.97**	**298**	P	**P**	**11 58 26.9**	**-1.8**
	comp=Z,16nm,0.3s,baz=94,slow=11,SNR=65						
SEY	**Seymchan**	**19.85**	**9**	P	**P**	**11 58 36.6**	**-1.5**
	comp=Z,4.3nm,0.7s,baz=200,slow=7.5,SNR=5.1						
YAK	**Yakutsk**	**20.92**	**338**	LR	LR	12 06 33.8	
	comp=Z,44nm,18.8s,baz=307,slow=35						
YAK	**Yakutsk**	**20.92**	**338**	P	**P**	**11 58 46.6**	**-2.9**
YAK				IAmb	IAmb	11 59 12.7	

	comp=Z,19nm,0.8s						
YAK	Yakutsk	20.92	338	eP	P	11 58 48.2	-1.4
YAK				eS	S	12 02 36.5	-0.2
YAK				e		12 02 51.1	
YAK				e*SS	sS	12 03 09.3	+0.3
YAK				e		12 10 01.6	
YAK				pmax	pmax		
	comp=Z,14nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.6s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.3s						
YAK				smax	smax		
	comp=N,253nm,3.3s						
YAK				smax	smax		
	comp=E,155nm,2.3s						
XLT	XiLinHaoTe	21.55	281	eP	P	11 58 55.1	-1.6
XLT				pP	pP	11 59 15.9	-0.4
XLT				PP	PnPn	11 59 24.1	+1.6
XLT				sP	sP	11 59 29.3	+0.3
XLT				pmax	pmax		
	comp=E,53nm,0.6s						
XLT				pmax	pmax		
	comp=E,140nm,4.6s						
BJI	Beijing	22.41	271	P	P	11 59 04.5	-1.2
BJI				pmax	pmax		
	comp=E,15nm,0.8s						
BJT	Baijiatuau	22.43	271		P	11 59 04.6	-1.2
BJT				IAmb	IAmb	11 59 06.1	
	comp=Z,24nm,0.9s						
BJT	Baijiatuau	22.43	271	P	P	11 59 04.6	-1.2
BJT				pmax	pmax		
	comp=Z,24nm,0.9s						
TIA	Tai'an	23.21	262	P	P	11 59 12.8	-0.8
TIA				pmax	pmax		
	comp=Z,33nm,1.1s						
AMKA	Amchitka	23.75	59	P	P	11 59 18.7	+0.5
AMKA				IAmb	IAmb	11 59 20.6	
	comp=Z,53nm,1.2s						
NJ2	Nanjing	24.16	251	eP	P	11 59 22.1	0.0
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HNS	HongShan	24.45	266	⇑P	P	11 59 24.8	+0.1
HNS				pmax	pmax		
	comp=Z,27nm,1.1s						
HHC	Hu-ho-hao-te	25.52	276	eP	P	11 59 34.4	-0.2
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,77nm,5.1s						
BTO	Baotou	26.71	276	eP	P	11 59 46.3	+1.0
BTO				pP	pP	12 00 10.1	+2.4
BTO				sP	sP	12 00 23.5	+3.9
BTO				PP	PnPn	12 00 35.1	+2.6
BTO				pmax	pmax		
	comp=Z,66nm,0.9s						
BTO				pmax	pmax		
	comp=Z,230nm,7.2s						
ULN	Ulaanbaatar	27.33	293		P	11 59 51.6	+0.7
ULN	Ulaanbaatar	27.33	293c	iP	P	11 59 51.2	+0.4
ULN				pmax	pmax		
	comp=Z,31nm,1.1s						
ULN	Ulaanbaatar	27.33	293	eP	P	11 59 51.2	+0.4
LYN	LuoYang	27.35	262	P	P	11 59 52.3	+1.4
LYN				pmax	pmax		
	comp=Z,16nm,0.6s						
SONM	Songino Array	27.77	293	P	P	11 59 55.3	+0.5
	comp=Z,39nm,0.7s,baz=91,slow=8.6,SNR=226						
	comp=Z,39nm,0.7s						
SONM	Songino Array	27.77	293		P	11 59 55.2	+0.5
SONM	Songino Array	27.77	293	P	P	11 59 55.3	+0.5
SONM				pmax	pmax		
	comp=Z,42nm,0.8s						
H11N2	WAKE ISLAND Hy	29.48	137	T	T	12 31 13.4	
	baz=328,slow=75,SNR=45						
H11N1	WAKE ISLAND Hy	29.50	137	T	T	12 31 15.7	
	baz=328,slow=75,SNR=1196						
H11N3	WAKE ISLAND Hy	29.50	137	T	T	12 31 15.2	
	baz=328,slow=75,SNR=912						
ZAK	Zakamensk	29.61	299	eP	P	12 00 11.0	0.0
ZAK				pmax	pmax		
	comp=Z,11nm,1.3s						
H11S1	WAKE ISLAND Hy	30.43	138	T	T	12 32 27.9	
	baz=330,slow=76,SNR=2372						
H11S3	WAKE ISLAND Hy	30.43	138	T	T	12 32 28.0	
	baz=330,slow=76,SNR=1810						
H11S2	WAKE ISLAND Hy	30.44	138	T	T	12 32 23.8	
	baz=330,slow=76,SNR=1539						
SPIA	Saint Paul Isl	30.55	48	P	P	12 00 19.9	+0.8
	baz=262						
P08K	Saint George I	30.87	49	P	P	12 00 22.2	+0.3
	baz=264						
NIKH	Nikolski High	31.10	56	P	P	12 00 23.9	-0.1
	baz=271						
GAMB	Gambell	31.43	35	P	P	12 00 27.1	+0.4
	baz=250						
UNV	Unalaska Valle	32.49	54	P	P	12 00 36.6	+0.4
	baz=271						
LZH	Lanzhou	32.91	272	eP	P	12 00 41.6	+1.4
LZH				pP	pP	12 01 05.9	+2.9
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
M11K	Mekoryuk	33.10	42	P	P	12 00 42.1	+0.7
	baz=261						
TNA	Tin City	33.55	33	P	P	12 00 46.3	+1.1
	baz=252						
K13K	Kusilvak Mount	34.09	40	P	P	12 00 50.9	+1.0
	baz=260						
FALS	False Pass	34.27	53	P	P	12 00 51.7	+0.1
	baz=272						
ANM	Nome	34.31	35	P	P	12 00 51.8	0.0
	baz=256						
GTA	Gaotai	34.48	279	eP	P	12 00 54.3	+0.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
M13K	Dall Lake	34.51	43	P	P	12 00 54.3	+0.8
	baz=264						
J14K	Nanvaranak Lak	34.73	39	P	P	12 00 56.2	+0.8
	baz=260						
F15K	North Star Dit	34.90	33	P	P	12 00 58.0	+1.1
	baz=255						
L14K	Kuka Creek	34.94	41	P	P	12 00 59.0	+1.8
	baz=263						
S12K	Black Hills	35.02	51	P	P	12 00 59.2	+1.2
	baz=272						
M14K	Bethel	35.23	42	P	P	12 01 01.4	+1.7
	baz=265						
N14K	Kuskokwak Cree	35.30	44	P	P	12 01 01.5	+1.2
	baz=266						
C16K	Lisburne Hills	35.40	29	P	P	12 01 01.3	+0.2
	baz=251						
O14K	Tigyukauivet M	35.47	45	P	P	12 01 01.8	0.0
	baz=268						
CD2	Chengdu	35.51	264	P	P	12 01 02.4	-0.1
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
K15K	Wolf Creek Mou	35.60	40	P	P	12 01 03.3	+0.4
	baz=263						
H16K	Elim	35.65	36	P	P	12 01 04.2	+0.9
	baz=259						
M15K	Kasigluk River	35.84	42	P	P	12 01 05.8	+0.8
	baz=266						
SDPT	Sand Point	35.94	52	P	P	12 01 05.4	-0.4
	baz=274						
D17K	Noatak River	36.03	30	P	P	12 01 07.4	+0.9
	baz=254						
N15K	Kwethluk River	36.11	43	P	P	12 01 07.8	+0.5
	baz=267						
J16K	Anvik River	36.15	38	P	P	12 01 08.0	+0.4
	baz=262						
I17K	Unalakleet	36.19	37	P	P	12 01 09.4	+1.5
I17K	Unalakleet	36.19	37	P	P	12 01 07.9	0.0
	baz=262						
RDOG	Red Dog Mine	36.20	30	P	P	12 01 09.5	+1.6
	baz=254						
O15K	Ungalikthiuk R	36.21	45	P	P	12 01 08.4	+0.3
	baz=269						
C17K	DeLong Mountai	36.22	29	P	P	12 01 09.1	+0.9
	baz=253						
E17K	Hotham Inlet	36.34	31	P	P	12 01 10.9	+1.7
	baz=256						
S14K	Fog Glacier	36.40	50	P	P	12 01 11.2	+1.2
	baz=273						
G17K	Kiwalik Mounta	36.47	34	P	P	12 01 10.9	+0.6
	baz=260						
CHNA	Chernabura Isl	36.49	52	P	P	12 01 11.4	+0.9
	baz=275						
L16K	Owhat River	36.50	41	P	P	12 01 11.4	+0.8
L16K				IAmb	IAmb	12 01 33.0	
	comp=Z,11nm,1.4s						
L16K	Owhat River	36.50	41	P	P	12 01 11.7	+1.1
	baz=266						
H17K	Granite Mounta	36.68	35	P	P	12 01 12.6	+0.5
	baz=261						
M16K	Timber Creek	36.71	42	P	P	12 01 13.0	+0.6
	baz=267						
N16K	Nishlik Lake	36.78	43	P	P	12 01 12.9	-0.1
	baz=268						
J17K	VABM Dome	36.84	38	P	P	12 01 14.7	+1.2
	baz=264						
E18K	Tukpahlearik C	36.88	31	P	P	12 01 14.5	+0.7
	baz=257						
B18K	Kokolik River	36.96	28	P	P	12 01 15.7	+1.4
	baz=253						
C18K	Utukok River	36.97	29		P	12 01 14.7	+0.1
C18K	Utukok River	36.97	29	P	P	12 01 15.5	+0.9
	baz=255						
F18K	Selawik	37.08	33	P	P	12 01 16.3	+0.9
	baz=259						
L17K	Donlin	37.09	40	P	P	12 01 16.2	+0.6
	baz=266						
O16K	Kokwok River B	37.10	44	P	P	12 01 16.4	+0.7
	baz=270						
K17K	Iditarod	37.13	39	P	P	12 01 16.5	+0.6
	baz=266						
G18K	Tagagawik	37.35	34	P	P	12 01 18.7	+0.9
G18K	Tagagawik	37.35	34	P	P	12 01 18.4	+0.6
	baz=261						
H18K	Honhosa River	37.37	35	P	P	12 01 18.0	+0.1
	baz=262						
M17K	Holitna River	37.46	41	P	P	12 01 19.2	+0.5
	baz=268						
O17K	Koliganek Bris	37.61	44	P	P	12 01 20.9	+0.9
	baz=270						
C19K	Lookout Ridge	37.65	29	P	P	12 01 20.4	+0.1
	baz=256						
L18K	Granite Mounta	37.85	40	P	P	12 01 22.2	+0.2
	baz=268						
Q16K	King Salmon	37.86	46	P	P	12 01 21.9	-0.1
	baz=272						
J18K	Innoko River	37.91	38	P	P	12 01 22.8	+0.3
	baz=266						
GCSA	Galena City Sc	37.94	36	P	P	12 01 23.0	+0.3
	baz=264						
G19K	Purcell Mounta	38.02	34	P	P	12 01 24.5	+1.1
	baz=262						
D19K	Kuna River	38.03	30	P	P	12 01 24.1	+0.6
	baz=258						
R17L	Mt. Peulik Vol	38.07	48	P	P	12 01 24.4	+0.5
	baz=274						
E19K	Redstone River	38.17	31	IAmb	IAmb	12 01 42.0	
	comp=Z,6.3nm,1.1s						
E19K	Redstone River	38.17	31	P	P	12 01 25.3	+0.7
	baz=260						
N18K	Kilae Creek	38.20	43	P	P	12 01 26.3	+1.3
	baz=270						
H19K	Roundabout Mou	38.21	35	IAmb	IAmb	12 01 27.0	
	comp=Z,12nm,1.1s						
H19K	Roundabout Mou	38.21	35	P	P	12 01 26.0	+1.1
	baz=264						
M18K	Stony River	38.24	41	P	P	12 01 25.3	+0.1
	baz=269						
Q17K	Contact Creek	38.28	46	P	P	12 01 26.2	+0.4
	baz=273						
J19K	Poorman	38.43	37	P	P	12 01 27.4	+0.6
	baz=266						
O18K	Koktuh Hills	38.56	44	P	P	12 01 28.4	+0.4
	baz=272						
P18K	Big Mountain,	38.57	45	P	P	12 01 29.0	+0.9
	baz=272						
ACHA	Angle Creek He	38.58	47	P	P	12 01 29.2	+1.0
ACHA				IAmb	IAmb	12 01 30.1	
	comp=Z,5.7nm,0.8s						
D20K	Etivluk River	38.62	30	P	P	12 01 28.6	+0.2
	baz=260						
CHIR	Chirikof Islan	38.64	50	P	P	12 01 28.5	-0.1
	baz=277						
F20K	Avaraart Lake	38.69	32	P	P	12 01 29.1	+0.2
	baz=262						
B20K	Meade River	38.69	27	IAmb	IAmb	12 01 37.8	
	comp=Z,20nm,1.4s						
B20K	Meade River	38.69	27	P	P	12 01 29.3	+0.4
	baz=257						
E20K	Nigu River	38.69	30	P	P	12 01 29.3	+0.2
	baz=260						
L19K	White Mountain	38.71	40	P	P	12 01 29.3	+0.1
	baz=269						
Q18K	Katmai Hardscr	38.72	46	P	P	12 01 29.2	-0.2
	baz=274						
H20K	Anotleneega Mo	38.85	35	P	P	12 01 30.7	+0.3
	baz=265						
N19K	Bonanza Creek	38.89	42	P	P	12 01 30.7	-0.2
	baz=271						
I20K	Naaghedeneel	38.97	36	P	P	12 01 31.4	+0.1
	baz=266						
O19K	Port Alsworth	38.99	43	P	P	12 01 31.5	0.0
	baz=272						
NRIK	Noril'sk	39.07	331	P	P	12 01 30.4	-1.7
	comp=Z,1.8nm,0.3s,baz=91,slow=4.5,SNR=4.5						
	comp=Z,1.8nm,0.3s						
NRIK	Noril'sk	39.07	331	⇓iP	P	12 01 32.6	+0.5
J20K	Nowinta River	39.08	37	P	P	12 01 33.6	+1.3
J20K				IAmb	IAmb	12 01 34.5	
	comp=Z,5.2nm,0.7s						
J20K	Nowinta River	39.08	37	P	P	12 01 32.2	-0.1
	baz=268						
K20K	Telida	39.09	38	P	P	12 01 33.1	+0.7
	baz=269						
A21K	Barrow	39.17	25	P	P	12 01 33.4	+0.6
	baz=256						
SII	Sitkinak Islan	39.35	49	P	P	12 01 34.6	0.0
	baz=277						
IMAR	Indian Mountai	39.36	34	P	P	12 01 35.3	+0.8
GOMU	GeErMu	39.41	277	P	P	12 01 35.0	-0.8
GOMU				pmax	pmax		
	comp=Z,18nm,0.7s						
Q19K	Cape Douglas,	39.41	45	P	P	12 01 36.0	+0.9
B21K	Ikpikpuk River	39.48	28	IAmb	IAmb	12 01 45.8	
	comp=Z,5.2nm,0.7s						
B21K	Ikpikpuk River	39.48	28	P	P	12 01 36.6	+1.1
	baz=260						
G21K	Allakaket	39.50	33	P	P	12 01 36.6	+0.9
	baz=265						
M20K	Styx River	39.52	41	P	P	12 01 37.4	+1.4
	baz=271						
P19K	Oil Pt	39.57	44	P	P	12 01 37.4	+1.0
	baz=274						
F21K	Alatna River	39.58	32	P	P	12 01 37.7	+1.3
	baz=264						
A22K	Sinclair Lake	39.62	26	P	P	12 01 38.0	+1.4
	baz=258						
H21K	Melozitna Rive	39.73	35	P	P	12 01 38.1	+0.4
	baz=267						
OHAK	Old Harbor	39.76	48	P	P	12 01 38.3	+0.3
OHAK	Old Harbor	39.76	48	P	P	12 01 38.9	+0.9
	baz=277						
DGZ	Jazzator, Alta	39.80	300	⇑iP	P	12 01 39.3	+0.7
DGZ				pmax	pmax		
	comp=Z,14nm,1.0s						
O20K	Slope Mountain	39.85	43	P	P	12 01 38.7	0.0
	baz=274						
CHUM	Lake Minchumin	39.88	37	P	P	12 01 39.2	+0.3
	baz=270						
PPLA	Purkeypile	39.94	39	P	P	12 01 41.1	+1.5
PPLA				IAmb	IAmb	12 02 07.0	
	comp=Z,24nm,1.4s						
PPLA	Purkeypile	39.94	39	P	P	12 01 39.8	+0.2
	baz=271						
N20K	Mount Spurr	39.98	42	P	P	12 01 38.9	-1.0
	baz=273						
SPCR	Spurr Chakacha	39.98	42	P	P	12 01 39.5	-0.3
	baz=273						
B22K	Teshekpuk Lake	40.01	27	P	P	12 01 40.6	+0.8
	baz=261						
D22K	Ayikyak River	40.06	30	P	P	12 01 41.3	+1.0
	baz=263						
KDAK	Kodiak Island	40.08	47	P	P	12 01 40.4	-0.1
KDAK	Kodiak Island	40.08	47	P	P	12 01 40.4	-0.1
KDAK				pmax	pmax		
	comp=Z,44nm,1.1s						
KDAK	Kodiak Island	40.08	47	P	P	12 01 41.0	+0.5
	baz=277						
Q20K	Shuyak Island	40.09	46	P	P	12 01 41.1	+0.5
	baz=276						
F22K	John River	40.10	32	P	P	12 01 41.4	+0.6
	baz=265						
SKT	Skwentna	40.27	40	P	P	12 01 42.9	+0.7
SKT				IAmb	IAmb	12 01 43.4	
	comp=Z,9.1nm,1.2s						
SKT	Skwentna	40.27	40	P	P	12 01 42.0	-0.2
	baz=272						
E22K	Anaktuvuk Pass	40.30	31		P	12 01 43.2	+0.8
E22K	Anaktuvuk Pass	40.30	31	P	P	12 01 43.4	+1.0
	baz=265						
G22K	Bettles	40.32	33	P	P	12 01 43.3	+0.8
	baz=267						
H22K	Ishtalitna Cre	40.33	34	P	P	12 01 42.6	0.0
	baz=268						
HOM	Homer	40.37	44	P	P	12 01 44.5	+1.5
	baz=275						
ZAA0	Zalesovo Array	40.47	307		P	12 01 42.8	-1.0
ZAA0				IAmb	IAmb	12 01 44.2	
	comp=Z,11nm,1.1s						
ZALV	Zalesovo Beam	40.47	307	P	P	12 01 43.0	-0.9
	comp=Z,4.9nm,0.4s,baz=90,slow=8.2,SNR=28						
ZALV				PcP	PcP	12 03 45.5	+1.0
	comp=Z,0.5nm,0.4s,baz=104,slow=5.0,SNR=2.5						
	comp=Z,4.9nm,0.4s						
ZALV	Zalesovo Beam	40.47	307	iP	P	12 01 43.2	-0.6
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KTH	Kantishna Hill	40.50	38	P	P	12 01 45.8	+1.6
KTH				IAmb	IAmb	12 01 48.5	
	comp=Z,13nm,1.0s						
MLY	Manley	40.58	36	P	P	12 01 45.4	+0.7
	baz=270						
SUA	Susitna One	40.67	41	P	P	12 01 47.0	+1.4
	baz=274						
D23K	Nanushuk River	40.78	30	P	P	12 01 46.6	+0.3
	baz=265						
TRF	Thorofare Moun	40.79	38	P	P	12 01 46.8	+0.2
	baz=272						
BRSE	Bradley Lake S	40.82	44	P	P	12 01 47.6	+0.8
	baz=276						
CUT	Chulitna	40.84	40	P	P	12 01 47.0	+0.2
	baz=273						
COLD	Coldfoot	40.85	32	P	P	12 01 47.0	+0.2
	baz=268						
C23K	Itkillik River	40.89	28	P	P	12 01 48.1	+1.0
	baz=264						
G23K	Bananza Creek	40.90	33	P	P	12 01 47.5	+0.1
	baz=268						
M22K	Willow	40.95	41	P	P	12 01 48.3	+0.6
	baz=274						
H23K	Yukon River	41.08	34	IAmb	IAmb	12 01 51.3	
	comp=Z,8.2nm,0.9s						
H23K	Yukon River	41.08	34	P	P	12 01 49.1	+0.4
	baz=270						
E23K	Chandalar	41.11	31	P	P	12 01 48.3	-0.8
	baz=267						
I23K	Minto, Yukon-K	41.16	35	P	P	12 01 49.5	+0.1
	baz=271						
TOLK	Toolik Lake Re	41.16	30	P	P	12 01 49.7	+0.2
	baz=266						
RC01	Rabbit Creek A	41.19	42	P	P	12 01 49.2	-0.5
	baz=275						
NEA2	Nenana	41.29	36	P	P	12 01 52.0	+1.5
NEA2				IAmb	IAmb	12 01 52.4	
	comp=Z,6.7nm,0.6s						
NEA2	Nenana	41.29	36	P	P	12 01 50.2	-0.3
	baz=272						
WMQ	Urumqi	41.38	291	eP	P	12 01 53.6	+2.0
WMQ				pP	pP	12 02 17.3	+2.2
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
MCK	McKinley	41.38	38	P	P	12 01 52.3	+1.0
MCK	McKinley	41.38	38	P	P	12 01 52.3	+1.0
MCK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MCK	McKinley	41.38	38	P	P	12 01 51.2	-0.1
	baz=273						
SEW	Seward	41.43	43	P	P	12 01 52.0	+0.4
	baz=276						
PMR	Palmer	41.44	41	P	P	12 01 51.7	+0.1
	baz=275						
RND	Reindeer	41.44	38	P	P	12 01 52.7	+0.9
RND	Reindeer	41.44	38	P	P	12 01 52.7	+0.9
RND				pmax	pmax		
	comp=Z,8.0nm,1.2s						
D24K	Happy Valley	41.46	29	IAmb	IAmb	12 02 02.8	
	comp=Z,4.4nm,0.6s						
D24K	Happy Valley	41.46	29	P	P	12 01 51.8	0.0
	baz=267						
C24K	Franklin Bluff	41.54	29	P	P	12 01 52.9	+0.4
	baz=266						
WAT1	Susitna Watana	41.61	39	P	P	12 01 54.0	+0.8
	baz=274						
F24K	Squaw Lake	41.75	32	P	P	12 01 54.2	-0.1
	baz=269						
H24K	Noodor Dome	41.77	34	P	P	12 01 54.0	-0.5
	baz=271						
KNK	Knik Glacier	41.77	41	P	P	12 01 54.5	0.0
	baz=276						
SML	Sawmill	41.80	41	P	P	12 01 54.4	-0.3
	baz=275						
COLA	College	41.81	36	⇓iP	P	12 01 55.1	+0.4
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
COLA	College	41.81	36	P	P	12 01 55.0	+0.4
	baz=272						
PWL	Port Wells	41.89	42	P	P	12 01 55.0	-0.5
	baz=276						
G24K	Hadweenzic Riv	41.91	33	P	P	12 01 55.3	-0.3
	baz=271						
POKR	Poker Plat Res	41.97	35	P	P	12 01 55.6	-0.4
	baz=272						
WAT6	Susitna Watana	42.00	39	P	P	12 01 56.7	+0.2
	baz=275						
M23K	Glacier View	42.08	40	P	P	12 01 57.2	+0.2
	baz=276						
DHY	Denali Highway	42.13	39	P	P	12 01 57.1	-0.4
	baz=275						
HDA	Harding Lake	42.22	37	P	P	12 01 59.0	+1.0
	baz=274						
IL31		42.22	36		P	12 01 59.1	+1.1
IL31				IAmb	IAmb	12 02 12.6	
	comp=Z,13nm,1.4s						
ILAR	Eielson Array	42.22	36	P	P	12 01 58.5	+0.5
	comp=Z,2.1nm,0.7s,baz=252,slow=4.6,SNR=36						
ILAR				PcP	PcP	12 03 49.1	-1.0
	comp=Z,0.5nm,0.5s,baz=294,slow=3.6,SNR=4.5						
	comp=Z,2.1nm,0.7s						
ILAR	Eielson Array	42.22	36	P	P	12 01 58.7	+0.6
ILAR	Eielson Array	42.22	36	P	P	12 01 58.7	+0.6
SCM	Sheep Creek Mo	42.27	40	P	P	12 01 59.4	+0.8
	baz=276						
D25K	Kavik River	42.34	29	P	P	12 01 59.6	+0.6
D25K	Kavik River	42.34	29	P	P	12 01 59.9	+0.8
	baz=269						
G25K	Bearman Lake	42.46	33	P	P	12 02 00.3	+0.4
	baz=272						
P23K	Montague Islan	42.46	43	P	P	12 01 59.9	-0.1
	baz=278						
GLI	Glacier Island	42.49	42	P	P	12 02 01.3	+1.0
	baz=277						
F25K	Christian Rive	42.62	32	P	P	12 02 02.1	+0.8
	baz=271						
E25K	Arctic Village	42.63	31	P	P	12 02 01.2	-0.2
	baz=271						
TNCH	TengChong	42.67	260	P	P	12 02 03.3	+0.9
TNCH				pmax	pmax		
	comp=Z,140nm,4.3s						
M24K	Tolsona, Glenn	42.78	40	P	P	12 02 03.5	+0.8
	baz=277						
K24K	Donnelly Dome	42.78	37	P	P	12 02 03.4	+0.8
	baz=275						
J25K	Salcha River,	42.88	36	P	P	12 02 04.3	+0.7
	baz=275						
KLU	Klutina	42.98	41	P	P	12 02 05.2	+0.9
	baz=278						
PAX	Paxson	43.00	39	P	P	12 02 05.2	+0.7
	baz=276						
Q23K	Middleton Isla	43.08	44	P	P	12 02 05.0	0.0
	baz=280						
F26K	Sheenjek River	43.18	32	P	P	12 02 06.4	+0.6
	baz=273						
HARP	HAARP	43.22	39	P	P	12 02 06.9	+0.8
	baz=277						
C27K	Jago River	43.28	29	P	P	12 02 07.3	+0.8
	baz=271						
G26K	Porcupine Rive	43.36	33	P	P	12 02 07.9	+0.7
	baz=274						
SCRK	Sand Creek	43.55	37	P	P	12 02 09.6	+0.6

SCRK	**Sand Creek**	**43.55**	**37**	P	**P**	**12 02 09.7**	**+0.7**
	baz=277						
J26L	**Joseph Creek**	**43.67**	**36**	P	**P**	**12 02 09.9**	**+0.1**
	baz=276						
BMRM	**Bremner River**	**43.68**	**41**	P	**P**	**12 02 09.5**	**-0.5**
	baz=279						
I26K	**Coal Creek Min**	**43.76**	**35**	P	**P**	**12 02 11.0**	**+0.6**
	baz=276						
MK31	**Makanchi Array**	**43.94**	**297**	*c* *i*P	**P**	**12 02 12.2**	**+0.1**
MKAR	**Makanchi Array**	**43.94**	**297**	P	**P**	**12 02 12.3**	**+0.2**
	comp=Z,14nm,0.6s,baz=79,slow=8.8,SNR=72						
	comp=Z,14nm,0.6s						
MKAR	**Makanchi Array**	**43.94**	**297**	P	**P**	**12 02 12.4**	**+0.3**
L26K	**Log Cabin Wild**	**43.96**	**38**	P	**P**	**12 02 12.2**	**+0.1**
	baz=278						
E27K	**Coleen River**	**44.12**	**31**	P	**P**	**12 02 13.8**	**+0.5**
	baz=274						
MAKZ	**Makanchi**	**44.13**	**298**		**P**	**12 02 14.0**	**+0.3**
MAKZ	**Makanchi**	**44.13**	**298**	P	**P**	**12 02 14.0**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,22nm,0.8s						
M26K	**Nabesna, AK**	**44.21**	**39**	P	**P**	**12 02 13.6**	**-0.6**
	baz=279						
G27K	**Doyon Strip**	**44.21**	**33**	P	**P**	**12 02 14.3**	**+0.2**
	baz=276						
D27M	**Malcolm River**	**44.27**	**29**	P	**P**	**12 02 14.1**	**-0.4**
	baz=274						
H27K	**Steamboat Moun**	**44.33**	**34**	P	**P**	**12 02 14.7**	**-0.3**
	baz=276						
I27K	**Kandik River**	**44.36**	**34**	P	**P**	**12 02 15.2**	**-0.1**
	baz=277						
MCARA	**McCarthy VSAT**	**44.37**	**41**	P	**P**	**12 02 15.7**	**+0.3**
	baz=280						
K27K	**Chicken**	**44.38**	**37**	IAmb	IAmb	12 02 17.5	
	comp=Z,17nm,1.2s						
K27K	**Chicken**	**44.38**	**37**	P	**P**	**12 02 16.2**	**+0.8**
	baz=278						
CRQE	**Cirque**	**44.45**	**42**	P	**P**	**12 02 15.8**	**-0.4**
	baz=281						
L27K	**Beaver Creek,**	**44.63**	**38**	IAmb	IAmb	12 02 20.0	
	comp=Z,10nm,0.8s						
L27K	**Beaver Creek,**	**44.63**	**38**	P	**P**	**12 02 16.9**	**-0.6**
	baz=279,SNR=9.8						
BCAR	**Beaver Creek A**	**44.65**	**38**		**P**	**12 02 19.3**	**+1.6**
M27K	**Edge Creek, AK**	**44.73**	**39**	IAmb	IAmb	12 02 20.9	
	comp=Z,7.8nm,0.8s						
M27K	**Edge Creek, AK**	**44.73**	**39**	P	**P**	**12 02 18.3**	**-0.1**
	baz=280						
F28M	**Old Crow**	**44.82**	**32**	P	**P**	**12 02 18.6**	**-0.3**
	baz=276						
E28M	**Babbage River**	**44.84**	**30**	P	**P**	**12 02 19.3**	**+0.3**
	baz=276						
KURK	**Kurchatov**	**44.96**	**304**	P	**P**	**12 02 20.2**	**0.0**
KURK	**Kurchatov**	**44.96**	**304**	*c* *i*P	**P**	**12 02 19.8**	**-0.3**
KURK				pmax	pmax		
	comp=Z,18nm,0.9s						
KURK	**Kurchatov**	**44.96**	**304**	*e*P	**P**	**12 02 19.8**	**-0.3**
KURBB	**Kurchatov Arra**	**45.04**	**304**	P	**P**	**12 02 20.7**	**-0.1**
	comp=Z,20nm,0.7s,baz=72,slow=8.7,SNR=8.7						
	comp=Z,20nm,0.7s						
D28M	**Stokes Point**	**45.05**	**29**	P	**P**	**12 02 21.2**	**+0.6**
	baz=276						
I28M	**Miner Creek**	**45.08**	**35**	IAmb	IAmb	12 02 23.4	
	comp=Z,7.2nm,0.8s						
I28M	**Miner Creek**	**45.08**	**35**	P	**P**	**12 02 21.6**	**+0.5**
	baz=279						
BVCY	**Beaver Creek**	**45.19**	**39**	P	**P**	**12 02 22.5**	**+0.6**
	baz=281,SNR=6.8						
CTG	**Chitna Glacier**	**45.25**	**41**	P	**P**	**12 02 23.4**	**+0.9**
	baz=282						
E29M	**Blow River**	**45.46**	**30**	P	**P**	**12 02 24.8**	**+0.9**
	baz=278						
YUK3	**Moose Creek**	**45.50**	**40**	P	**P**	**12 02 25.6**	**+1.0**
	baz=282						
DAWY	**Dawson**	**45.54**	**36**	P	**P**	**12 02 25.5**	**+0.9**
	baz=280						
H29M	**Whitestone**	**45.60**	**33**	P	**P**	**12 02 25.6**	**+0.5**
	baz=279						
G29M	**Pine Creek**	**45.62**	**32**	P	**P**	**12 02 24.8**	**-0.4**
	baz=279						
I29M	**Ogilvie Camp,**	**45.77**	**35**	IAmb	IAmb	12 02 28.5	
	comp=Z,8.2nm,0.8s						
I29M	**Ogilvie Camp,**	**45.77**	**35**	P	**P**	**12 02 26.9**	**+0.5**
	baz=280						
EPYK	**Eagle Plains**	**46.23**	**33**	P	**P**	**12 02 30.3**	**+0.3**
	baz=280						
M29M	**Somme Creek**	**46.27**	**39**	P	**P**	**12 02 30.4**	**-0.1**
	baz=283						
L29M	**L29M**	**46.28**	**38**	IAmb	IAmb	12 02 36.6	
	comp=Z,7.2nm,0.9s						
L29M	**L29M**	**46.28**	**38**	P	**P**	**12 02 30.5**	**0.0**
	baz=282						
G30M	**tAoh Zraii Nji**	**46.31**	**32**	IAmb	IAmb	12 02 32.3	
	comp=Z,4.0nm,0.5s						
G30M	**tAoh Zraii Nji**	**46.31**	**32**	P	**P**	**12 02 30.6**	**-0.1**
	baz=280						
F30M	**Barrier River**	**46.37**	**31**	IAmb	IAmb	12 02 34.5	
	comp=Z,8.0nm,1.1s						
F30M	**Barrier River**	**46.37**	**31**	P	**P**	**12 02 31.0**	**0.0**
	baz=280,SNR=21						
K29M	**Barlow Dome**	**46.39**	**37**	P	**P**	**12 02 32.2**	**+0.8**
	baz=282						
I30M	**Mount Dempster**	**46.59**	**35**	IAmb	IAmb	12 02 35.1	
	comp=Z,6.6nm,0.7s						
I30M	**Mount Dempster**	**46.59**	**35**	P	**P**	**12 02 33.5**	**+0.6**
	baz=282						
CMAR	**Chiang Mai Arr**	**46.61**	**253**	P	**P**	**12 02 34.6**	**+1.1**
	comp=Z,0.9nm,0.3s,baz=45,slow=7.6,SNR=7.0						
	comp=Z,0.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**46.61**	**253**	*i* P	**P**	**12 02 34.5**	**+1.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YUK6	**Outpost Mounta**	**46.67**	**41**	P	**P**	**12 02 33.5**	**-0.2**
	baz=284,SNR=5.9						
J30M	**Hart River**	**46.74**	**35**	P	**P**	**12 02 34.3**	**+0.1**
	baz=282						
M30M	**Minto, Yukon**	**47.00**	**38**	P	**P**	**12 02 35.6**	**-0.4**
	baz=284						
INK	**Inuvik**	**47.08**	**30**	P	**P**	**12 02 36.5**	**0.0**
	baz=281						
G31M	**Satah River**	**47.08**	**32**	P	**P**	**12 02 36.7**	**+0.1**
	baz=282						
HYT	**Haines Junctio**	**47.11**	**41**		**P**	**12 02 39.3**	**+2.2**
HYT	**Haines Junctio**	**47.11**	**41**	P	**P**	**12 02 37.5**	**+0.5**
	baz=285,SNR=6.0						
N30M	**Aishikik Lake**	**47.14**	**40**	P	**P**	**12 02 37.6**	**+0.4**
	baz=285						
MAYO	**Mayo, Yukon**	**47.15**	**37**	P	**P**	**12 02 37.7**	**+0.5**
	baz=284						
F31M	**Tsiigehtchic**	**47.17**	**31**	P	**P**	**12 02 37.5**	**+0.2**
	baz=282,SNR=8.2						
H31M	**Peel River**	**47.29**	**33**	IAmb	IAmb	12 02 40.5	
	comp=Z,8.1nm,0.8s						
H31M	**Peel River**	**47.29**	**33**	P	**P**	**12 02 38.7**	**+0.4**
	baz=283						
P29M	**Windy Craggy**	**47.31**	**42**	P	**P**	**12 02 38.9**	**+0.4**
	baz=286						
P30M	**Million Dollar**	**47.55**	**41**	P	**P**	**12 02 40.6**	**+0.2**
	baz=286						
N31M	**Braeburn, Yuko**	**47.74**	**39**	P	**P**	**12 02 41.7**	**-0.1**
	baz=286						
O30N	**Mendenhall**	**47.79**	**40**	P	**P**	**12 02 41.5**	**-0.7**
	baz=286						
PLBC	**Pleasant Camp**	**48.03**	**42**	P	**P**	**12 02 43.5**	**-0.5**
	baz=287						
M31M	**Drury Creek, Y**	**48.18**	**38**	P	**P**	**12 02 46.0**	**+0.8**
	baz=286						
WHY	**Whitehorse**	**48.39**	**40**	P	**P**	**12 02 47.0**	**+0.1**
	baz=287						
SKAG	**Skagway**	**48.53**	**42**	P	**P**	**12 02 48.9**	**+1.0**
	baz=288						
S31K	**Pelican**	**48.55**	**44**	P	**P**	**12 02 48.3**	**+0.3**
	baz=288						
R31K	**City Hall, Gus**	**48.66**	**43**	P	**P**	**12 02 49.0**	**+0.1**
	baz=288						
TARG	**Taragay, Kyrgy**	**48.89**	**293**	IAmb	IAmb	12 02 54.4	
	comp=Z,14nm,1.4s						
A36M	**Sachs Harbour**	**48.98**	**24**	P	**P**	**12 02 50.9**	**-0.2**
	baz=285						
BVAR	**Borovoye Array**	**49.00**	**309**	P	**P**	**12 02 51.9**	**+0.4**
	comp=Z,4.9nm,0.5s,baz=85,slow=9.3,SNR=27						
	comp=Z,4.9nm,0.5s						
BORK	**Borovoye**	**49.03**	**309**	P	**P**	**12 02 52.2**	**+0.3**
BORK				IAmb	IAmb	12 02 52.7	
	comp=Z,11nm,1.0s						
BORK	**Borovoye**	**49.03**	**309**	⇓*i*P	**P**	**12 02 52.1**	**+0.3**
BORK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KDJ	**Kajisay**	**49.13**	**294**	P	**P**	**12 02 52.9**	**0.0**
KDJ				IAmb	IAmb	12 02 54.2	
	comp=Z,8.5nm,0.9s						
KDJ	**Kajisay**	**49.13**	**294**	P	**P**	**12 02 52.9**	**0.0**
KDJ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
P32M	**Atlin**	**49.28**	**41**	P	**P**	**12 02 54.1**	**+0.4**
	baz=289						
SIT	**Sitka**	**49.31**	**45**	P	**P**	**12 02 54.0**	**+0.2**
	baz=290						
P33M	**Teslin, Yukon**	**49.50**	**40**	P	**P**	**12 02 55.6**	**+0.2**
	baz=289						
S32K	**Killisnoo**	**49.55**	**44**	P	**P**	**12 02 55.7**	**+0.1**
	baz=290						
ULHL	**Ulahol**	**49.70**	**294**	P	**P**	**12 02 57.8**	**+0.4**
	SNR=10						
TKM2	**Tokmak 2**	**49.83**	**295**	P	**P**	**12 02 59.0**	**+0.7**
	SNR=24						
C36M	**Paulatuk**	**50.13**	**28**	P	**P**	**12 02 59.7**	**-0.2**
	baz=288						
Q32M	**Nakina River**	**50.19**	**42**	P	**P**	**12 03 00.9**	**+0.2**
	baz=290						
KBK	**Karagaybulak**	**50.38**	**295**	P	**P**	**12 03 03.0**	**+0.6**
	SNR=8.1						
USP	**Ospenovka**	**50.40**	**296**	P	**P**	**12 03 02.9**	**+0.5**
	SNR=11						
T33K	**Petersburg**	**50.61**	**45**	P	**P**	**12 03 04.4**	**+0.7**
	baz=292						
R33M	**Jennings River**	**50.66**	**41**	P	**P**	**12 03 03.9**	**-0.3**
	baz=291						
AAK	**Ala-Archa**	**50.68**	**295**	P	**P**	**12 03 05.0**	**+0.3**
	SNR=5.0						
AAK	**Ala-Archa**	**50.68**	**295**	P	**P**	**12 03 05.1**	**+0.4**
AAK				IAmb	IAmb	12 03 05.3	
	comp=Z,5.7nm,0.5s						
AAK	**Ala-Archa**	**50.68**	**295**	*c* *i*P	**P**	**12 03 04.8**	**+0.1**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AAK	**Ala-Archa**	**50.68**	**295**	*e*P	**P**	**12 03 04.8**	**+0.1**
U33K	**Whale Pass**	**50.78**	**46**	P	**P**	**12 03 04.6**	**-0.3**
	baz=292						
CRAG	**Craig**	**51.03**	**46**	P	**P**	**12 03 06.3**	**-0.5**
	baz=292						
WRAK	**Wrangell Islan**	**51.07**	**45**	P	**P**	**12 03 07.1**	**0.0**
	baz=292						
S34M	**Telegraph Cree**	**51.12**	**43**	P	**P**	**12 03 07.7**	**+0.2**
	baz=292						
EKS2	**Erkin-Say**	**51.15**	**296**	P	**P**	**12 03 08.2**	**+0.2**
	SNR=9.3						
KSH	**Kashi**	**51.15**	**291**	P	**P**	**12 03 12.1**	**+4.0**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WTLY	**Watson Lake, Y**	**51.42**	**40**	P	**P**	**12 03 09.4**	**-0.3**
	baz=292						
DLBC	**Dease Lake**	**51.47**	**42**	P	**P**	**12 03 09.6**	**-0.6**
	baz=292						
V35K	**Ketchikan**	**51.88**	**46**	P	**P**	**12 03 13.3**	**+0.2**
	baz=294						
T35M	**Bob Quinn**	**51.92**	**44**	P	**P**	**12 03 13.9**	**+0.4**
	baz=293						
U35K	**Hyder**	**52.46**	**45**	P	**P**	**12 03 17.9**	**+0.5**
	baz=294						
WRGLY	**Wrigley**	**52.56**	**35**	P	**P**	**12 03 18.2**	**0.0**
	baz=294						
KK31	**Karatay Array**	**53.07**	**298**	P	**P**	**12 03 22.3**	**+0.1**
KK31	**Karatay Array**	**53.07**	**298**	P	**P**	**12 03 22.3**	**+0.1**
KK31				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KKAR	**Karatay Array**	**53.07**	**298**	P	**P**	**12 03 22.5**	**+0.3**
KKAR	**Karatay Array**	**53.07**	**298**	P	**P**	**12 03 22.5**	**+0.3**
KOTAN	**Kotaneelee Air**	**53.59**	**38**	P	**P**	**12 03 25.9**	**+0.2**
	baz=295						
TOAD	**Toad River Com**	**53.59**	**40**	P	**P**	**12 03 25.5**	**-0.3**
	baz=295						
ARTI	**Arti**	**54.05**	**317**	P	**P**	**12 03 28.7**	**-0.4**
ARTI	**Arti**	**54.05**	**317**	*c* *i*P	**P**	**12 03 28.5**	**-0.6**
ARTI				*PP	**pP**	**12 03 52.0**	**-1.7**
ARTI						12 04 31.2	
ARTI				S	**S**	**12 10 57.4**	**+0.1**
ARTI				SS	**SS**	**12 14 38.0**	**-1.4**
ARTI				pmax	pmax		
	comp=Z,46nm,1.1s						
KBS	**Kingsbay**	**54.91**	**350**	*e*P	pP	12 03 53.5	-6.2
NIL	**Nilore**	**56.03**	**286**		**P**	**12 03 44.2**	**+0.5**
NIL	**Nilore**	**56.03**	**286**	P	**P**	**12 03 44.2**	**+0.5**
NIL				pmax	pmax		
	comp=Z,13nm,0.8s						
CHGR	**Chuyangaron**	**56.17**	**293**		**P**	**12 03 44.5**	**-0.2**
CHGR	**Chuyangaron**	**56.17**	**293**	P	**P**	**12 03 44.5**	**-0.2**
CHGR				pmax	pmax		
	comp=Z,28nm,0.8s						
YKA	**Yellowknife Ar**	**56.51**	**33**	P	**P**	**12 03 47.3**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=304,slow=7.8,SNR=10						
	comp=Z,1.2nm,0.8s						
YKA	**Yellowknife Ar**	**56.51**	**33**	P	**P**	**12 03 46.6**	**-0.1**
AB31	**Akbulak array**	**56.55**	**308**	P	**P**	**12 03 47.8**	**+0.6**
ABKAR	**Akbulak array**	**56.55**	**308**	P	**P**	**12 03 47.6**	**+0.4**
KIRV	**Kirov**	**57.27**	**322**	⇓*i*P	**P**	**12 03 51.9**	**-0.1**
SHAA	**Shahritus**	**57.44**	**293**	P	**P**	**12 03 54.1**	**+0.4**
SHAA				IAmb	IAmb	12 03 54.4	
	comp=Z,29nm,0.5s						
KBL	**Kabul**	**58.46**	**289**	P	**P**	**12 04 00.3**	**-0.8**
KBL				IAmb	IAmb	12 04 01.3	
	comp=Z,9.4nm,0.9s						
KBL	**Kabul**	**58.46**	**289**	P	**P**	**12 04 00.3**	**-0.8**
KBL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ARCES	**ARCESS Array B**	**59.20**	**339**	P	**P**	**12 04 05.2**	**-0.1**
	comp=Z,3.9nm,0.8s,baz=40,slow=7.4,SNR=10						
	comp=Z,3.9nm,0.8s						
ARCES	**ARCESS Array B**	**59.20**	**339**	P	**P**	**12 04 05.9**	**+0.5**
ARCES	**ARCESS Array B**	**59.20**	**339**	P	**P**	**12 04 05.9**	**+0.5**
ARCES				pmax	pmax		
	comp=Z,29nm,1.5s						
KTK1	**Kautokeino**	**60.14**	**340**	*e*P	**P**	**12 04 11.6**	**-0.3**
KLMR	**Klimovskoe**	**60.19**	**327**	*e*P	**P**	**12 04 10.1**	**-2.2**
KLMR				pmax	pmax		
	comp=Z,33nm,1.3s						
JETT	**Jettan, Norway**	**60.45**	**341**	*e*P	**P**	**12 04 14.0**	**+0.1**
TRO	**Tromso**	**60.74**	**341**	*e*P	**P**	**12 04 16.0**	**+0.2**
BELG	**Belogornoye**	**61.49**	**316**	*c* *i*P	**P**	**12 04 21.2**	**0.0**
BELG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BLKN	**Baker Lake**	**62.10**	**26**	P	**P**	**12 04 25.3**	**+0.3**
BLKN				IAmb	IAmb	12 04 27.8	
	comp=Z,7.7nm,1.0s						
ILON	**Igloolik, Nuna**	**62.11**	**17**	P	**P**	**12 04 25.0**	**-0.1**
ILON				IAmb	IAmb	12 04 25.9	
	comp=Z,7.3nm,0.8s						
FAUS	**Fauske**	**63.33**	**341**	*e*P	**P**	**12 04 32.7**	**-0.5**
WB0	**Warramunga Arr**	**63.82**	**192**	P	**P**	**12 04 36.7**	**-0.2**
WB0				IAmb	IAmb	12 04 38.9	
	comp=Z,12nm,1.2s						
WRAB	**Tennant Creek**	**63.99**	**192**	⇑*i*P	**P**	**12 04 39.4**	**+1.3**
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WRA	**Warramunga Arr**	**64.00**	**192**	P	**P**	**12 04 37.7**	**-0.4**
	comp=Z,2.9nm,0.8s,baz=14,slow=6.5,SNR=7.6						
	comp=Z,2.9nm,0.8s						
WRA	**Warramunga Arr**	**64.00**	**192**	*i* P	**P**	**12 04 38.0**	**-0.1**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MOS	**Moscow**	**64.15**	**323**	*e*P	**P**	**12 04 37.9**	**-0.8**
MOS				pmax	pmax		
	comp=Z,37nm,0.7s						
SUMG	**Summit**	**64.21**	**1**	P	**P**	**12 04 40.1**	**+0.7**
SUMG	**Summit**	**64.21**	**1**	P	**P**	**12 04 40.1**	**+0.7**
SUMG				pmax	pmax		
	comp=Z,15nm,0.8s						
RAUS	**Rausandaksla**	**64.39**	**341**	*e*P	**P**	**12 04 39.6**	**-0.6**
MOR8	**Moi Rana**	**64.50**	**340**	*e*P	**P**	**12 04 39.4**	**-1.5**
FINES	**FINESS Array B**	**64.72**	**333**	P	**P**	**12 04 42.6**	**+0.2**
	comp=Z,36nm,0.6s,baz=44,slow=7.8,SNR=73						
	comp=Z,36nm,0.6s						
FINES	**FINESS Array B**	**64.72**	**333**	P	**P**	**12 04 42.7**	**+0.4**
FINES	**FINESS Array B**	**64.72**	**333**	*i* P	**P**	**12 04 42.2**	**-0.2**
FINES				pmax	pmax		
	comp=Z,37nm,0.6s						
LEIR	**Leirfjorden**	**64.87**	**341**	*e*P	**P**	**12 04 41.5**	**-1.8**
OBN	**Obninsk**	**65.01**	**323**	⇓*i*P	**P**	**12 04 44.3**	**-0.1**
OBN				*i*		12 05 10.5	
OBN				pmax	pmax		
	comp=Z,27nm,1.2s						
OBN	**Obninsk**	**65.01**	**323**	*e*P	**P**	**12 04 44.3**	**-0.1**
OBN	**Obninsk**	**65.01**	**323**	P	**P**	**12 04 44.7**	**+0.3**
	comp=Z,34nm,0.8s						
VRH	**Novokhopyorsk**	**65.14**	**318**	*e*P	**P**	**12 04 42.7**	**-2.6**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LPSR	**Galich'ya Gora**	**65.58**	**320**	*e*P	**P**	**12 04 45.8**	**-2.3**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BEKR	**Beckworth**	**66.32**	**57**		**P**	**12 04 54.4**	**+1.1**
BEKR				IAmb	IAmb	12 04 54.9	
	comp=Z,6.5nm,1.0s						
VSR	**Storozhevoye**	**66.37**	**319**	*e*P	**P**	**12 04 50.8**	**-2.4**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FFC	**Flin Flon**	**66.44**	**36**	P	**P**	**12 04 54.2**	**+0.7**
FFC				IAmb	IAmb	12 04 55.0	
	comp=Z,6.3nm,1.0s						
FFC	**Flin Flon**	**66.44**	**36**	P	**P**	**12 04 54.2**	**+0.7**
FFC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VORD	**Divnogorie**	**66.47**	**319**	*e*P	**P**	**12 04 51.6**	**-2.2**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ASAR	**Alice Springs**	**67.72**	**192**	P	**P**	**12 05 02.5**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=8.3,slow=5.7,SNR=11						
	comp=Z,1.7nm,0.6s						
ASAR	**Alice Springs**	**67.72**	**192**	P	**P**	**12 05 02.3**	**+0.3**
AKT	**Akhty**	**68.02**	**307**	*e*P	**P**	**12 05 02.3**	**-1.6**
AKT				*e**SP	**sP**	**12 05 38.3**	**-2.3**
AKT				pmax	pmax		
	comp=Z,8.0nm,0.4s						
NVAR	**Mina Array Bea**	**68.46**	**57**	P	**P**	**12 05 08.3**	**+1.4**
	comp=Z,3.2nm,0.7s,baz=289,slow=6.6,SNR=19						
	comp=Z,3.2nm,0.7s						
NVAR	**Mina Array Bea**	**68.46**	**57**	P	**P**	**12 05 08.0**	**+1.1**
MNK	**Minsk**	**69.07**	**327**	*i* P	**P**	**12 05 10.6**	**+0.5**
MNK				*i* *PP	**pP**	**12 05 35.8**	**+0.1**
MNK				*i* *SP	**sP**	**12 05 47.0**	**+0.3**
MNK				*i*		12 07 42.2	
MNK				*i* PPP	PPP	12 09 22.1	
MNK				*i* S	**S**	**12 14 09.2**	**+2.3**
MNK				*i* *SS	**sS**	**12 14 47.8**	**-2.0**
MNK				*i* SS	**SS**	**12 18 29.9**	**-3.7**
MNK				pmax	pmax		
	comp=Z,16nm,0.7s						
MNK				pmax	pmax		
	comp=N,14nm,0.8s						
MNK				pmax	pmax		
	comp=E,30nm,0.8s						
KIV	**Kislovodsk**	**69.29**	**311**		**P**	**12 05 13.0**	**+1.3**
KIV	**Kislovodsk**	**69.29**	**311**	*e*P	**P**	**12 05 10.9**	**-0.9**
KIV				pmax	pmax		
	comp=Z,45nm,1.0s						
KIV	**Kislovodsk**	**69.29**	**311**	P	**P**	**12 05 12.8**	**+1.0**
	comp=Z,50nm,0.7s						
KBZ	**Khabaz**	**69.32**	**311**	P	**P**	**12 05 13.0**	**+1.2**
	comp=Z,13nm,0.7s,baz=62,slow=4.4,SNR=38						
	comp=Z,13nm,0.7s						
KBZ	**Khabaz**	**69.32**	**311**	⇓*i*P	**P**	**12 05 12.9**	**+1.2**
SHA1	**Shidzhatmaz**	**69.45**	**311**	⇑*i*P	**P**	**12 05 12.6**	**-0.3**
NC204	**NORSAR Array S**	**69.46**	**339**		**P**	**12 05 12.7**	**+0.2**
NB2	**NORSAR Subarra**	**69.54**	**338**	P	**P**	**12 05 09.6**	**-3.3**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA	**NORSAR Array B**	**69.54**	**338**	P	**P**	**12 05 12.8**	**-0.2**
	comp=Z,12nm,0.8s,baz=33,slow=6.2,SNR=37						
	comp=Z,12nm,0.8s						
HFS	**Hagfors**	**69.60**	**337**	P	**P**	**12 05 12.8**	**-0.5**
	comp=Z,9.8nm,0.5s,baz=48,slow=6.6,SNR=52						
	comp=Z,9.8nm,0.5s						
NC602	**NORSAR Array S**	**69.70**	**338**	*e*P	**P**	**12 05 13.8**	**0.0**
NORES	**NORESS Array B**	**69.70**	**338**	P	**P**	**12 05 13.4**	**-0.5**
GRAC	**Grapevine Rang**	**69.94**	**58**	IAmb	IAmb	12 05 17.9	
	comp=Z,6.4nm,0.6s						
FURC	**Furnace Creek,**	**70.59**	**58**	IAmb	IAmb	12 05 21.7	
	comp=Z,8.6nm,0.9s						
PDAR	**Pinedale Array**	**70.75**	**49**	P	**P**	**12 05 21.6**	**+0.7**
	comp=Z,2.1nm,0.7s,baz=282,slow=2.2,SNR=25						
	comp=Z,2.1nm,0.7s						
PDAR	**Pinedale Array**	**70.75**	**49**	P	**P**	**12 05 21.4**	**+0.5**
AK03	**Malin Array Si**	**71.26**	**323**	P	**P**	**12 05 23.0**	**-0.5**
AK23	**Malin Array Si**	**71.28**	**323**	P	**P**	**12 05 23.1**	**-0.5**
AKASG	**Malin Array Be**	**71.28**	**323**	P	**P**	**12 05 23.4**	**-0.2**
	comp=Z,5.9nm,0.4s,baz=41,slow=6.1,SNR=31						
	comp=Z,5.9nm,0.4s						
AKASG	**Malin Array Be**	**71.28**	**323**	P	**P**	**12 05 23.7**	**+0.1**
AKASG	**Malin Array Be**	**71.28**	**323**	*i* P	**P**	**12 05 23.3**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.4s						
AKBB	**Malin Array Si**	**71.28**	**323**	*ce*P	**P**	**12 05 23.6**	**0.0**
AKBB	**Malin Array Si**	**71.28**	**323**	P	**P**	**12 05 23.0**	**-0.6**
KIEV	**Kiev**	**71.29**	**323**		**P**	**12 05 23.5**	**-0.2**
KIEV				IAmb	IAmb	12 05 24.2	
	comp=Z,13nm,0.8s						
KIEV	**Kiev**	**71.29**	**323**	P	**P**	**12 05 23.5**	**-0.2**
KIEV				pmax	pmax		
	comp=Z,13nm,0.8s						
KIEV	**Kiev**	**71.29**	**323**	P	**P**	**12 05 22.7**	**-1.0**
	comp=Z,71nm,0.8s						
RNPP9	**Sopachiv**	**72.17**	**325**	P	**P**	**12 05 28.4**	**-0.5**
RDMU	**Red Mountain**	**72.21**	**51**	IAmb	IAmb	12 05 31.6	
	comp=Z,9.9nm,0.8s						
ULM	**Lac du Bonnet**	**72.24**	**36**	P	**P**	**12 05 28.8**	**-0.6**
	comp=Z,2.2nm,0.6s,baz=310,slow=12,SNR=3.6						
	comp=Z,2.2nm,0.6s						
RNPP8	**Varash**	**72.24**	**325**	P	**P**	**12 05 29.6**	**+0.2**
RNPP1	**Kostyukhnivka**	**72.27**	**325**	P	**P**	**12 05 29.9**	**+0.4**
LUBAR	**Lubar, Ukraine**	**72.49**	**323**	P	**P**	**12 05 29.6**	**-1.3**
GURO	**Guroymak-BITLI**	**73.25**	**307**	IAmb	IAmb	12 05 38.6	
	comp=Z,16nm,1.1s						
HORU	**Horodok**	**73.59**	**323**	P	**P**	**12 05 37.5**	**+0.1**
PV10	**Paradox Valley**	**74.00**	**52**	IAmb	IAmb	12 05 42.4	
	comp=Z,13nm,0.9s						
PV20	**West Nyswonger**	**74.06**	**52**	IAmb	IAmb	12 05 42.4	
	comp=Z,12nm,1.1s						
PV13	**Radium Mtn., P**	**74.27**	**52**	IAmb	IAmb	12 05 44.2	
	comp=Z,12nm,1.3s						
STNU	**Starunia**	**74.80**	**324**	P	**P**	**12 05 44.5**	**+0.1**
MARD	**Mardin**	**74.81**	**307**	P	**P**	**12 05 46.1**	**+1.2**
MARD				IAmb	IAmb	12 05 47.0	
	comp=Z,19nm,1.1s						
KWP	**Kalwaria Pacla**	**74.84**	**326**	P	**P**	**12 05 45.7**	**+1.0**
	comp=Z,23nm,1.0s						
KSV	**Kosov**	**74.86**	**324**	P	**P**	**12 05 44.4**	**-0.4**
ARPR	**Arapgir-MALATY**	**74.98**	**310**	P	**P**	**12 05 46.9**	**+1.1**
ARPR				IAmb	IAmb	12 05 48.2	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**75.09**	**184**	P	**P**	**12 05 46.4**	**+0.3**
	comp=Z,2.2nm,0.7s,baz=13,slow=7.8,SNR=5.0						
	comp=Z,2.2nm,0.7s						
STKA	**Stephens Creek**	**75.09**	**184**	IAmb	IAmb	12 05 47.6	
	comp=Z,10.0nm,0.7s						
STKA	**Stephens Creek**	**75.09**	**184**	P	**P**	**12 05 46.4**	**+0.3**
STKA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BUR08	**Bucovina Ar. S**	**75.32**	**323**	IAmb	IAmb	12 05 48.8	
	comp=Z,9.6nm,0.7s						
BURAR	**Bucovina Array**	**75.33**	**323**	P	**P**	**12 05 47.9**	**+0.3**
BURAR	**Bucovina Array**	**75.33**	**323**	P	**P**	**12 05 47.9**	**+0.3**
BURAR				pmax	pmax		
	comp=Z,12nm,0.6s						
OJC	**Ojcow**	**75.55**	**328**	P	**P**	**12 05 48.6**	**-0.1**
	comp=Z,15nm,0.8s						
STHS	**Stebnicka Huta**	**75.61**	**326**	*e*P	**P**	**12 05 48.9**	**-0.2**
STHS				pmax	pmax		
	comp=Z,5.0nm,0.6s						
STHS	**Stebnicka Huta**	**75.61**	**326**	*e*P	**P**	**12 05 48.9**	**-0.2**
LANS	**Liptovska Anna**	**76.53**	**327**	*e*P	**P**	**12 05 55.1**	**+0.8**
LANS				pmax	pmax		
	comp=Z,4.0nm,0.5s						
LANS	**Liptovska Anna**	**76.53**	**327**	*e*P	**P**	**12 05 55.1**	**+0.8**
MORC	**Moravsky Berou**	**76.77**	**329**	IAmb	IAmb	12 05 57.4	
	comp=Z,6.0nm,0.9s						
MORC	**Moravsky Berou**	**76.77**	**329**	*e*P	**P**	**12 05 56.0**	**+0.3**
BR131	**Keskin Array S**	**77.09**	**313**	⇓*i*P	**P**	**12 05 58.2**	**+0.4**
BRTR	**Keskin Array B**	**77.09**	**313**	P	**P**	**12 05 57.9**	**0.0**
	comp=Z,1.3nm,0.7s,baz=60,slow=3.8,SNR=6.2						
	comp=Z,1.3nm,0.7s						
BRTR	**Keskin Array B**	**77.09**	**313**	P	**P**	**12 05 57.7**	**-0.1**
BRTR	**Keskin Array B**	**77.09**	**313**	*i* P	**P**	**12 05 58.4**	**+0.6**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BR104	**Keskin Array S**	**77.11**	**313**	P	**P**	**12 05 58.4**	**+0.6**
	comp=Z,2.1nm,0.7s						
BR105	**Keskin Array S**	**77.11**	**313**	P	**P**	**12 05 58.2**	**+0.3**
	comp=Z,3.0nm,1.1s						
CLL	**Collm**	**77.15**	**332**	P	**P**	**12 05 57.7**	**+0.1**
CLL				IAmb	IAmb	12 05 59.1	

	comp=Z,8.1nm,0.6s						
CLL	Collm	77.15	332	*i* P	P	12 05 57.5	-0.2
CLL				*i* *PP	pP	12 06 23.8	+0.1
CLL				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CLL	Collm	77.15	332	P	P	12 05 57.4	-0.2
	comp=Z,12nm,0.8s						
CLL	Collm	77.15	332	*i* pP	pP	12 06 23.8	+0.1
CLL	Collm	77.15	332	*i* P	P	12 05 57.5	-0.2
	comp=Z,9.0nm,0.6s						
CLL	Collm	77.15	332	*i* (PcP)	PcP	12 06 05.9	-2.2
JAVC	Velka Javorina	77.47	328	*e*P	P	12 06 00.9	+1.3
KRUC	Moravsky	77.79	329	*e*P	P	12 06 01.7	+0.4
EKA	Eskdalemuir Ar	78.13	343	P	P	12 06 03.9	+0.8
	comp=Z,3.1nm,0.5s,baz=24,slow=5.1,SNR=19						
	comp=Z,3.1nm,0.5s						
319A	Douglas	78.67	58	IAmb	IAmb	12 06 09.1	
	comp=Z,11nm,0.8s						
KHC	Kasperske Hory	78.77	330	⇑*i*P	P	12 06 07.1	+0.3
KHC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MPLH	Magyarpolny	78.89	327	P	P	12 06 08.0	+0.6
CONA	Conrad Observa	78.92	328	*i* P	P	12 06 09.1	+1.4
	comp=Z,7.1nm,1.5s						
RONA	Rosalia, Austr	78.94	328	*e*P	P	12 06 09.0	+1.2
	comp=Z,3.5nm,0.6s						
GERES	GERESS Array B	78.96	330	P	P	12 06 08.3	+0.4
	comp=Z,0.6nm,0.5s,baz=39,slow=8.6,SNR=5.3						
	comp=Z,0.6nm,0.5s						
RDO	Rodhopi	80.15	319	IAmb	IAmb	12 06 16.1	
	comp=Z,6.8nm,1.0s						
SOKA	Soboth	80.27	328	*e*P	P	12 06 14.6	-0.4
	comp=Z,4.0nm,0.9s						
LESA	Schwarzleotal	80.53	330	*e*P	P	12 06 16.9	+0.5
	comp=Z,5.3nm,1.0s						
KBA	Koelnbreinsper	80.58	329	*e*P	P	12 06 16.9	+0.1
	comp=Z,1.8nm,0.6s						
OBKA	Obir	80.60	328	*e*P	P	12 06 18.0	+1.2
	comp=Z,11nm,1.4s						
MNTX	Cornudas Mount	80.80	55	P	P	12 06 18.9	+0.9
MMAI	Mount Meron Ar	80.96	307	P	P	12 06 19.4	+0.5
	comp=Z,2.5nm,0.5s,baz=32,slow=4.9,SNR=5.3						
	comp=Z,2.5nm,0.5s						
SQTA	Sankt Quirin	81.23	331	*e*P	P	12 06 21.2	+1.0
	comp=Z,7.9nm,0.9s						
FETA	Feichten	81.57	331	*i* P	P	12 06 22.8	+0.8
	comp=Z,3.8nm,1.1s						
TXAR	Lajitas Array	83.53	55	P	P	12 06 33.3	+0.9
	comp=Z,3.7nm,0.7s,baz=295,slow=3.8,SNR=12						
	comp=Z,3.7nm,0.7s						
TXAR	Lajitas Array	83.53	55	P	P	12 06 33.2	+0.8
DRIO	Del Rio	85.27	53	IAmb	IAmb	12 06 42.9	
	comp=Z,7.3nm,1.1s						
QSPA	South Pole Qui	133.21	180	PKP	PKPdf	12 13 17.2	-1.0
	comp=Z,1.2nm,0.6s,baz=257,slow=5.1,SNR=4.6						
QSPA	South Pole Qui	133.21	180		PKiKP	12 13 19.1	-0.3
LPAZ	La Paz	140.37	58	PKP	PKPdf	12 13 33.3	-0.4
	comp=Z,1.3nm,0.6s,baz=205,slow=3.1,SNR=4.5						
TROLL	Troll, Antarti	146.44	200	⇑PKPbc	PKPbc	12 13 44.0	+0.3
	comp=Z,273nm,0.6s						
SNAA	Sanae	147.93	198	⇑PKPbc	PKPbc	12 13 47.9	+0.2
	comp=Z,68nm,0.8s						
SNAA	Sanae	147.93	198	PKPbc	PKPbc	12 13 47.6	0.0
	comp=Z,2.4nm,0.7s,baz=156,slow=4.3,SNR=9.6						
SNAA	Sanae	147.93	198		PKPbc	12 13 47.3	-0.3
SNAA	Sanae	147.93	198	PKP2	PKPbc	12 13 47.3	-0.3
VNA2	Neumayer--Watz	149.47	197	⇑PKPbc	PKPbc	12 13 49.6	-1.9
	comp=Z,31nm,0.2s,baz=129,slow=2.5						
VNA3	Neumayer Olymp	149.68	195	⇑PKPbc	PKPbc	12 13 52.3	+0.3
	comp=Z,4.8nm,0.8s						
VNA1	Neumayer--Stat	149.87	197	⇓P	PKiKP	12 13 54.5	+1.2
	comp=Z,4.6nm,0.9s						
PLCA	Paso Flores	152.92	97	PKPbc	PKiKP	12 14 00.7	0.0
	comp=Z,1.6nm,0.7s,baz=259,slow=5.2,SNR=4.2						
PLCA	Paso Flores	152.92	97		PKiKP	12 14 01.3	+0.7

IDC ***18*** *11:57:25.5±2.0, 2°.78S×130°.29E, h0^{km}, mb3.8/4, mbtmp3.8/6, ML3.6/2, MS2.9/1, Error ellipse: s-maj=92.4km s-min=22.1km az=71.0*

DJA ***18*** *11:57:29.4±0.3, 3°S±4°×13°0E±°, h10^{km}, M4.1/12, mb4.6/2, MLv3.9/12*

ISC 18 11:57:29.6±0.8**, 2°.82S**±0°.07×**129°.98E**±0°.05**, h25^{km}, n17, σ1^{s}84**/16**, mb3.9**/4**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.17	243	P	Pn	11 57 50.3	-0.1
KRAI	Karang Ratu	1.66	252	P	Pn	11 57 57.7	+0.6
BNDI	Bandanaira	1.69	182	P	Pn	11 57 59.3	+1.6
AAI	Ambon	1.98	244	P	Pn	11 58 03.6	+2.1
FAKI	Fak Fak	2.27	93	P	Pb	11 58 07.0	-3.0
SWI	Sorong	2.33	34	P	Pb	11 58 08.0	-2.9
NLAI	Namlea	2.90	262	P	Pn	11 58 14.7	+0.4
KMPI	Kaimana, Papua	3.82	103	P	Pn	11 58 28.9	+2.0
RKPI	Ransiki, Papua	4.39	73	P	Pn	11 58 36.8	+2.0
BAKI	Biak	6.34	75	P	Pn	11 59 03.5	+2.0
	66nm,0.6s						
KAPI	Kappang	10.43	258	LR	LR	12 04 45.5	
	comp=Z,52nm,18.5s,baz=66,slow=41						
FITZ	Fitzroy Crossi	15.77	195	Pn	Pn	12 01 10.9	+0.7
	0.1nm,0.3s,baz=40,slow=12,SNR=1.1						
	1.5nm,0.5s						
WRA	Warramunga Arr	17.55	166	P	Pn	12 01 31.2	-1.4
	0.2nm,0.3s,baz=350,slow=11,SNR=5.7						
	0.6nm,0.6s						
ASAR	Alice Springs	21.07	170	P	P	12 02 11.2	-1.1
	4.1nm,0.8s,baz=351,slow=11,SNR=25						
	4.1nm,0.8s						
CMAR	Chiang Mai Arr	37.16	306	P	P	12 04 40.1	+1.3
	0.4nm,0.4s,baz=136,slow=6.0,SNR=6.5						
	0.4nm,0.4s						
MKAR	Makanchi Array	64.75	326	P	P	12 08 06.7	+0.7
	0.3nm,0.3s,baz=114,slow=7.2,SNR=5.1						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	68.97	328	P	P	12 08 33.9	+1.2
	1.0nm,0.5s,baz=126,slow=5.7,SNR=8.9						
	1.0nm,0.5s						

LJU 18 12:04:10.6, 45°.85N×14°.68E, h0^{km}, ML0.3, 2C, Explosion, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VISS	Visnje	0.12	113	⇑*i*Pg	Pg	12 04 12.8	-0.2
VISS				IAML		12 04 15.7	
	comp=Z,3.3nm,0.1s						
GBAS	Gorenja Brezov	0.18	297	*i* Pg	Pg	12 04 14.0	-0.1
GBAS				*i* Sg	Sg	12 04 16.9	+0.4
GBAS				IAML		12 04 17.4	
	comp=Z,3.5nm,0.1s						
CEY	Cerknica	0.21	237	⇑*i*Pg	Pg	12 04 14.8	+0.2
CEY				*i* Sg	Sg	12 04 18.3	+1.0

IDC ***18*** *12:15:10.5±1.1, 6°.47N×125°.16E, h0^{km}, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=25.9km s-min=10.2km az=116.0*

ISC 18 12:15:10.8±1.4**, 7°.0N**±0°.2×**126°.3E**±0°.2**, h10^{km}, n6, σ0^{s}76**/6**, mb3.7**/5**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.68	278	Pg	Pb	12 15 24.8	+0.1
	143nm,0.3s,baz=70,slow=21,SNR=4.7						
DAV				Lg	Lg	12 15 34.6	
	254nm,0.3s,baz=237,slow=22,SNR=7.1						
WRA	Warramunga Arr	27.91	164	P	P	12 21 00.6	-0.6
	0.8nm,0.8s,baz=333,slow=8.9,SNR=3.1						
	0.8nm,0.8s						
ASAR	Alice Springs	31.36	166	P	P	12 21 31.1	-0.7
	0.5nm,0.5s,baz=347,slow=7.2,SNR=6.7						
	0.5nm,0.5s						
STKA	Stephens Creek	41.32	160	P	P	12 22 57.6	+0.9
	1.7nm,0.6s,baz=342,slow=9.1,SNR=4.7						
	1.7nm,0.6s						
MKAR	Makanchi Array	54.65	324	P	P	12 24 39.9	0.0
	0.4nm,0.6s,baz=122,slow=7.9,SNR=4.0						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	58.78	327	P	P	12 25 09.0	-0.1
	0.5nm,0.8s,baz=119,slow=8.5,SNR=5.4						
	0.5nm,0.8s						

BGR ***18*** *12:19:39.9, 23°.59S×176°.93W, h33^{km}*

GFZ ***18*** *12:19:49.6, 23°.36S×177°.13W, h154^{km}, MW5.3, Moment Tensor Solution. s53 Moment tensor: M_{rr}0.69; $M_{\theta\theta}$-0.20; $M_{\phi\phi}$-0.49; $M_{r\theta}$-0.57; $M_{\theta\phi}$-0.21; $M_{\phi r}$-0.64; Fault plane solution: NP1:ϕ_s219.00000°, δ72.00000°, λ95.00000°. NP2:ϕ_s22.00000°, δ19.00000°, λ74.00000°. Principal axes: T 1.1300, Plg63.0000°, Azm137.0000°; N -0.1100, Plg5.0000°, Azm37.0000°; P -1.0200, Plg27.0000°, Azm304.0000°;*

NOU ***18*** *12:19:53.8, 23°.68S×176°.66W, h160^{km}, mb5.3/81, South of Fiji Islands*

MOS ***18*** *12:19:54.8±1.0, 23°.44S×177°.17W, h154^{km}, mb5.4/27, Error ellipse: s-maj=8.7km s-min=7.9km az=33.5*

BJI ***18*** *12:19:54.6, 23°.03S×176°.53W, h158^{km}, mB5.3/11, mb5.1/46*

IDC ***18*** *12:19:54.2±1.3, 23°.38S×177°.17W, h140^{km}±10^{km}, mb4.8/30, mbtmp5.2/32, MS3.8/39, Error ellipse: s-maj=10.7km s-min=9.6km az=22.0*

NEIC ***18*** *12:19:55, 23°.37S×176°.70W, h140^{km}, Moment Tensor Solution. Duration: 2^{s}1 Moment tensor: Scale 10^{16}Nm; M_{rr}3.75; $M_{\theta\theta}$1.01; $M_{\phi\phi}$-4.77; $M_{r\theta}$-3.98; $M_{\theta\phi}$2.74; $M_{\phi r}$-5.46; Fault plane solution: $M_0$8.49000×10^{16} NP1: ϕ_s310.05000°, δ34.17000°, λ27.12000°. NP2: ϕ_s197.08000°, δ75.17000°, λ121.14000°. Principal axes: T 9.2117, Plg50.0000°, Azm142.0000°; N -1.7100, Plg30.0000°, Azm8.0000°; P -7.5017, Plg24.0000°, Azm264.0000°;*

NEIC ***18*** *12:19:55.4±2.4, 23°.39S±0°.10×177°.2W±0°.1, h144^{km}±4^{km}, mb5.3/502, Mww5.2/20 Error ellipse: s-maj=16.6km s-min=14.2km az=101.0*

NEIC ***18*** *12:19:55, 23°.37S×177°.13W, h140^{km}*

GCMT ***18*** *12:19:56.4±0.1, 23°.51S±0°.01×176°.84W±0°.01, h159^{km}, MW5.3/144, Moment Tensor Solution. s108,c171; s144,c239; Duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.67±.02; $M_{\theta\theta}$-0.22±.02; $M_{\phi\phi}$-0.44±.02; $M_{r\theta}$-0.68±.01; $M_{\theta\phi}$-0.33±.02; $M_{\phi r}$-0.84±.01; Best double couple: $M_0$1.27400×10^{17} NP1:ϕ_s33.00000°, δ16.00000°, λ84.00000°. NP2:ϕ_s219.00000°, δ74.00000°, λ92.00000°. Principal axes: T 1.2670, Plg61.0000°, Azm131.0000°; N 0.0140, Plg2.0000°, Azm38.0000°; P -1.2810, Plg29.0000°, Azm307.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 12:19:55.6±0.3**, 23°.55S**±0°.04×**177°.06W**±0°.04**, h154^{km}**±**2^{km}, h154^{km}:pP-P, n1253, σ1^{s}68**/1072**, mb5.3**/381**, 72C-46D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	5.72	188	P	Pn	12 21 17.0	-1.5
RIZ				S	Sn	12 22 22.6	-0.9
RAO	Raoul Island	5.73	188	S	Sn	12 22 21.7	-1.9
	3μm,0.7s,baz=84,slow=23,SNR=15						
RAO				LR	LR	12 23 13.2	
	comp=Z,1μm,19.0s,baz=12,slow=34						
RAO	Raoul Island	5.73	188	Pn	Pn	12 21 19.1	+0.5
RAO	Raoul Island	5.73	188	P	Pn	12 21 19.1	+0.5
GLKZ	Green Lake	5.74	188	P	Pn	12 21 18.0	-0.7
GLKZ				S	Sn	12 22 22.7	-1.1
MSVF	Nonsavu	7.38	321		Pn	12 21 42.5	+1.7
MSVF	Nonsavu	7.38	321	P	Pn	12 21 42.3	+1.5
	3μm,0.9s						
MSVF	Nonsavu	7.38	321	*d i*P	Pn	12 21 41.3	+0.5
NIUE	Niue	8.01	58	P	Pn	12 21 42.6	-6.5
	comp=Z,770nm,1.1s						
NIUE	Niue	8.01	58		Pn	12 21 43.9	-5.3
NIUE	Niue	8.01	58	P	Pn	12 21 43.2	-5.9
	comp=Z,768nm,1.1s						
NIUE	Niue	8.01	58	P	Pn	12 21 43.4	-5.7
NIUE				S	Sn	12 23 03.2	-15
AFI	Afiamalu	10.82	28		Pn	12 22 17.9	-8.6
AFI	Afiamalu	10.82	28	P	Pn	12 22 17.4	-9.1
AFI				S	Sn	12 24 03.0	-23
INH	Isangel	13.32	285	P	P	12 23 02.5	-0.5
	comp=Z,2μm,0.9s						
MARNC	Mare, Loyalty	13.93	276	P	P	12 23 09.4	-0.3
	comp=Z,1.9nm,1.1s						
OUZ	Omahuta	14.18	213	P	Pn	12 23 08.7	-0.9
	comp=Z,98nm,1.2s						
OUZ	Omahuta	14.18	213	P	P	12 23 12.1	-0.2
PINNC	Pines Island,	14.29	271	P	P	12 23 13.5	-0.2
	comp=Z,707nm,0.9s						
WCZ	Waipu Caves	14.41	209	P	P	12 23 15.4	+0.5
NFK	Norfolk Island	14.52	245	P	P	12 23 17.6	+1.4
	comp=Z,632nm,1.0s						
RTV	Rentapao	14.74	290	P	P	12 23 20.3	+1.6
	comp=Z,2μm,1.1s						
WMGZ	Waiomatatini S	14.74	194	P	Pn	12 23 08.1	-8.4
WMGZ				S	Sn	12 25 41.5	-19
WIAZ	Waiheke Island	14.81	205	P	P	12 23 19.4	0.0
HAZ	Te Kaha	14.83	196	P	Pn	12 23 09.8	-7.8
HAZ				S	Sn	12 25 48.0	-14
PKGZ	Pakihiroa	14.86	195	P	Pn	12 23 08.5	-10
PKGZ				S	Sn	12 25 46.4	-17
OUENC	Ouen Island, N	14.87	271	P	P	12 23 21.2	+1.1
	comp=Z,458nm,0.9s						
YATNC	Mamie plateau,	14.87	273	P	P	12 23 21.1	+0.9
	comp=Z,317nm,0.7s						
MBAZ	Motutapu North	14.88	206	P	P	12 23 21.1	+0.9
DVP	Devils Point	14.97	290	P	P	12 23 23.5	+2.2
	comp=Z,11μm,1.3s						
RVAZ	Riverhead Bore	15.01	207	P	P	12 23 20.8	-0.8
PUZ	Puketiti	15.02	194	P	Pn	12 23 13.9	-6.1
PUZ				S	Sn	12 25 47.3	-20
ETAZ	East Tamaki Re	15.03	205	P	P	12 23 23.1	+1.3
RUGZ	Raukumara Rang	15.05	196	P	Pn	12 23 12.9	-7.6
RUGZ				S	Sn	12 25 48.2	-20
MKAZ	Moumakai	15.07	205	P	P	12 23 23.1	+0.8
TWGZ	Tauwhareparae	15.18	195	P	Pn	12 23 19.9	-2.2
TWGZ				S	Sn	12 25 53.8	-17
ONTNC	Ouen Toro	15.24	271	P	P	12 23 25.8	+1.6
	comp=Z,504nm,1.1s						
AWAZ	Awhitu Peninsu	15.24	206	P	P	12 23 25.0	+0.9
OPRZ	Ohinepanea	15.26	200	P	Pn	12 23 23.3	+0.4
DZM	Mont Dzumac	15.28	272	P	P	12 23 26.5	+1.7
	comp=Z,386nm,0.8s,baz=91,slow=16,SNR=32						
DZM				LR	LR	12 27 11.7	
	comp=Z,880nm,20.1s,baz=162,slow=29						
DZM	Mont Dzumac	15.28	272	*e*P	Pn	12 23 24.1	+0.6
	comp=Z,1μm,1.1s						
DZM				*e*LR	LR	12 26 35.1	
	comp=Z,1μm,26.1s						
DZM	Mont Dzumac	15.28	272		P	12 23 25.4	+0.6
DZM	Mont Dzumac	15.28	272	P	P	12 23 26.2	+1.4
	comp=Z,736nm,0.9s						
MARZ	Manawahe	15.35	199	P	P	12 23 26.0	+0.6
CNGZ	Carnagh Statio	15.42	194	P	Pn	12 23 18.1	-6.8
MWZ	Matawai	15.44	196	P	Pn	12 23 20.9	-4.3
MWZ				S	Sn	12 26 00.6	-17
TKGZ	Te Karaka	15.46	195	P	Pn	12 23 20.3	-5.2
URZ	Urewera	15.48	197	P	Pn	12 23 25.1	-0.6
	comp=Z,47nm,0.3s,baz=265,slow=2.8,SNR=59						
URZ				S	Sn	12 26 02.9	-15
	comp=Z,42nm,0.7s,baz=292,slow=23,SNR=11						
URZ	Urewera	15.48	197	P	Pn	12 23 22.6	-3.1
	comp=Z,151nm,0.9s						
URZ	Urewera	15.48	197	P	Pn	12 23 22.4	-3.3
URZ				S	Sn	12 26 01.4	-17
TOZ	Tahuroa Road	15.50	203		P	12 23 28.6	+1.6
TOZ	Tahuroa Road	15.50	203	P	P	12 23 28.6	+1.6
KARZ	Kaharoa	15.52	200	P	P	12 23 26.8	-0.4
RAGZ	Rawiri	15.62	196	P	Pn	12 23 24.1	-3.4
RAGZ				S	Sn	12 26 05.4	-16
RRRZ	Republican Roa	15.73	199	P	Pn	12 23 27.2	-1.5
RIGZ	Rimuhau	15.73	195	P	Pn	12 23 26.9	-1.9
RIGZ				S	Sn	12 26 06.0	-18
HSRZ	Hossack Road	15.78	200	P	Pn	12 23 29.5	+0.1
PRRZ	Plateau Road	15.91	199	P	Pn	12 23 29.2	-1.8
SNGZ	Shannon Statio	15.91	196	P	Pn	12 23 27.2	-3.8
PRGZ	Paritu Road	15.91	195	P	Pn	12 23 29.7	-1.3
ALRZ	Allen Road	15.98	199	P	Pn	12 23 29.7	-2.2
WPRZ	Whakapapatarin	16.00	200	P	Pn	12 23 32.1	0.0
TLZ	Tolley Road	16.03	202	P	Pn	12 23 32.6	+0.1
RAHZ	Arahi	16.10	197	P	Pn	12 23 30.5	-2.9
RAHZ				S	S	12 26 18.2	-14
MTHZ	Maungataniwha	16.11	197	P	Pn	12 23 30.9	-2.6
MTHZ				S	S	12 26 18.0	-14
MHGZ	Mahia Peninsul	16.13	194	P	Pn	12 23 31.9	-1.7
RAR	Rarotonga	16.16	85	P	P	12 23 34.9	+0.4
	comp=Z,216nm,0.9s,baz=252,slow=7.8,SNR=16						
RAR				S	S	12 26 20.1	-14
	comp=Z,39nm,0.6s,baz=70,slow=19,SNR=3.4						
RAR	Rarotonga	16.16	85	P	Pn	12 23 27.3	-6.9
	comp=Z,206nm,1.1s						
RAR	Rarotonga	16.16	85	P	Pn	12 23 33.2	-1.0
MRHZ	Matea Rd	16.21	199	P	Pn	12 23 31.8	-2.9
MRHZ				S	S	12 26 18.6	-16
NMHZ	Naumai	16.35	197	P	Pn	12 23 32.6	-3.8
NMHZ				S	S	12 26 21.0	-17
HIZ	Hauiti	16.43	203	P	P	12 23 35.5	-1.8
	comp=Z,93nm,1.5s						
HIZ	Hauiti	16.43	203	P	Pn	12 23 38.8	+1.5
ARHZ	Aropaoanui	16.45	196	P	P	12 23 34.9	-2.6
ARHZ				S	S	12 26 24.3	-16
BKZ	Black Stump Fm	16.50	198	P	P	12 23 35.5	-2.6
BKZ	Black Stump Fm	16.50	198	P	P	12 23 32.5	-5.6
BKZ				S	S	12 26 26.0	-15
TMVZ	Te Maari	16.69	200	P	P	12 23 36.5	-3.8
TWVZ	Taurewa	16.73	201	P	P	12 23 38.1	-2.6
KWHZ	Kaweka Forest	16.76	198	P	P	12 23 38.0	-3.0
KWHZ				S	S	12 26 31.8	-16
TRVZ	Turoa	16.90	200	P	P	12 23 40.3	-2.4
KRHZ	Kereru	16.98	198	P	P	12 23 39.0	-4.3
KRHZ				S	S	12 26 32.5	-20
KAHZ	Kahuranaki	16.98	196	P	P	12 23 37.6	-5.8
KAHZ				S	S	12 26 35.3	-17
BFZ	Birch Farm	17.98	197	P	P	12 23 50.9	-3.4
	comp=Z,79nm,0.6s						
SNZO	South Karori	19.00	199	P	P	12 24 03.6	-1.8
	comp=Z,56nm,1.8s						
QRZ	Quartz Range	19.32	204	P	P	12 24 06.3	-2.5
	comp=Z,101nm,1.4s						
KHZ	Kahutara	20.37	200	P	P	12 24 16.4	-3.7
	comp=Z,112nm,2.1s						
RPZ	Rata Peaks	22.36	203	P	P	12 24 39.3	-1.7
	comp=Z,83nm,2.5s						
LHI	Lord Howe Isla	22.57	244	P	P	12 24 46.0	+2.9
	comp=Z,144nm,1.0s						
JCZ	Jackson Bay	23.54	206	P	P	12 24 49.7	-2.2
	comp=Z,99nm,1.0s						
ODZ	Otahua Downs	23.67	202	P	P	12 24 51.1	-1.9
NGOA	Tingoa Renbel	24.82	295	P	P	12 25 05.2	+1.5
	comp=Z,561nm,1.0s						
TBI	Tubuai	25.31	95	*e*P	P	12 25 07.1	-1.0
	comp=Z,2μm,31.2s						
TBI				*e*S	S	12 29 37.0	+14
	comp=Z,7μm,28.8s						
TBI				*e*LR	LR	12 31 30.3	
	comp=Z,5μm,27.0s						
SYZ	Scrubby Hill	25.48	202	P	P	12 25 08.8	-0.6
	comp=Z,123nm,1.1s						
PPT2	Papeete2	26.39	82	*e*P	P	12 25 17.0	-0.9
	comp=Z,288nm,29.5s						
PPT2				*e*S	S	12 29 53.7	+14
	comp=Z,2μm,27.0s						
PPT2				*e*LR	LR	12 31 51.1	
	comp=Z,720nm,31.5s						
PPT2				*e*LR	LR	12 31 58.9	
	comp=Z,956nm,26.8s						
PPT2				*e*LR	LR	12 32 02.4	
	comp=Z,842nm,31.5s						
PPT	Papeete	26.39	82	P	P	12 25 17.8	-0.1
	comp=Z,47nm,0.7s,baz=98,slow=6.0,SNR=8.2						
PPT				LR	LR	12 33 09.8	
	comp=Z,298nm,19.8s,baz=261,slow=30						
	comp=Z,47nm,0.7s						
PPTF	Pamatai, Papee	26.39	82	P	P	12 25 13.6	-4.4
	comp=Z,104nm,1.2s						
TIAR	Tiarei	26.60	82	*e*P	P	12 25 19.6	-0.2
	comp=Z,385nm,1.4s						
TVO	Taravao	26.62	83	*e*P	P	12 25 19.3	-0.7
	comp=Z,30nm,0.7s						
TATA	Tatamba Isabel	26.80	300	P	P	12 25 20.7	-0.9
	comp=Z,141nm,0.5s						
ARMA	Armidale	28.66	249	P	P	12 25 38.8	+0.6
ARMA	Armidale	28.66	249		P	12 25 38.7	+0.5
ARMA	Armidale	28.66	249	P	P	12 25 39.3	+1.1
	comp=Z,22nm,1.1s						
PMOR	Pomariorio Ree	28.77	78	*e*P	P	12 25 39.1	0.0
	comp=Z,88nm,1.0s						
EIDS	Eidsvold	29.02	260	P	P	12 25 42.0	+0.8
EIDS	Eidsvold	29.02	260		P	12 25 41.3	0.0
EIDS				IAmb	IAmb	12 25 43.0	
	comp=Z,48nm,0.8s						
EIDS	Eidsvold	29.02	260	P	P	12 25 42.2	+1.0
MGCD	Mangrove Creek	29.51	244	P	P	12 25 47.7	+2.2
	comp=Z,39nm,0.7s						
CNB	Canberra Magne	31.36	240	P	P	12 26 03.7	+1.9
	comp=Z,27nm,1.5s						
CNB	Canberra Magne	31.36	240	P	P	12 26 04.0	+2.2
	comp=Z,27nm,1.5s						
CAN	Canberra	31.65	240	P	P	12 26 04.7	+0.3
	comp=Z,24nm,1.6s						
CAN	Canberra	31.65	240	P	P	12 26 06.0	+1.6
CAN				IAmb	IAmb	12 26 44.7	
	comp=Z,44nm,1.2s						
CAN	Canberra	31.65	240	P	P	12 26 05.8	+1.4
	comp=Z,37nm,1.6s						
CAN	Canberra	31.65	240	P	P	12 26 06.0	+1.6
CAN				pmax	pmax		
	comp=Z,44nm,1.2s						
YNG	Young	31.93	243	P	P	12 26 07.7	+0.9
	comp=Z,18nm,0.9s						
CMSA	Cobar Meteorol	33.84	248	P	P	12 26 22.8	-0.7
	comp=Z,36nm,0.8s						
CMSA	Cobar Meteorol	33.84	248	P	P	12 26 23.1	-0.3
	comp=Z,36nm,0.8s						
TV1H	Townsville Har	33.86	270	P	P	12 26 24.6	+0.9
	comp=Z,50nm,1.1s						
CTA	Charters Tower	34.17	269	P	P	12 26 25.9	-0.5
	comp=Z,62nm,0.8s						
CTA	Charters Tower	34.17	269	P	P	12 26 27.0	+0.6
CTA	Charters Tower	34.17	269	P	P	12 26 26.7	+0.3
CTAO	Charters Tower	34.17	269	P	P	12 26 27.3	+0.9
CTAO	Charters Tower	34.17	269	P	P	12 26 27.1	+0.6
	comp=Z,57nm,0.6s						
CTAO	Charters Tower	34.17	269	P	P	12 26 27.3	+0.9
CTAO				pmax	pmax		
	comp=Z,111nm,0.6s						
CTAO	Charters Tower	34.17	269	P	P	12 26 27.0	+0.6
CTAO				x	x	12 27 04.0	
TOO	Toolangi	34.90	238	P	P	12 26 32.7	+0.2
	comp=Z,6.5nm,1.4s						
TOO	Toolangi	34.90	238	P	P	12 26 33.6	+1.1
TOO	Toolangi	34.90	238	P	P	12 26 33.6	+1.1
TOO				pmax	pmax		
	comp=Z,15nm,1.3s						
QLP	Quilpie	35.10	257	P	P	12 26 32.9	-1.4
	comp=Z,114nm,1.1s						
QLP	Quilpie	35.10	257	P	P	12 26 34.4	+0.1
	comp=Z,114nm,1.1s						
TAU	Tasmania Unive	35.15	228	P	P	12 26 34.4	-0.1
	comp=Z,31nm,2.1s						
RABL	Rabaul	35.39	298	P	P	12 26 35.9	-1.0
MTSU	Mount Surprise	36.41	271	P	P	12 26 45.8	+0.2
	comp=Z,56nm,1.1s						
PMG	Port Moresby	36.95	286	ScP	ScP	12 32 44.8	+3.9
	comp=Z,26nm,0.9s,baz=34,slow=4.7,SNR=7.3						
PMG	Port Moresby	36.95	286	P	P	12 26 50.9	+0.7
PMG	Port Moresby	36.95	286	P	P	12 26 50.2	0.0
	comp=Z,393nm,0.9s						
PMG	Port Moresby	36.95	286	P	P	12 26 49.9	-0.3
PMG	Port Moresby	36.95	286	P	P	12 26 50.9	+0.7
PMG				pmax	pmax		
	comp=Z,286nm,0.8s						
PMG	Port Moresby	36.95	286	P	P	12 26 49.7	-0.5
PMG				x	x	12 27 26.6	
STKA	Stephens Creek	37.35	248	P	P	12 26 54.0	+0.7
	comp=Z,68nm,1.0s						
STKA	Stephens Creek	37.35	248	P	P	12 26 53.5	+0.1
	comp=Z,12nm,0.6s,baz=99,slow=12,SNR=33						
STKA				PcP	PcP	12 29 10.1	+0.8
	comp=Z,6.0nm,0.7s,baz=70,slow=5.1,SNR=2.9						
STKA				LR	LR	12 40 24.0	
	comp=Z,169nm,21.7s,baz=59,slow=33						
	comp=Z,12nm,0.6s						
STKA	Stephens Creek	37.35	248	P	P	12 26 53.5	+0.1
STKA	Stephens Creek	37.35	248	P	P	12 26 53.0	-0.3
	comp=Z,3.4nm,1.0s						
STKA	Stephens Creek	37.35	248	P	P	12 26 53.5	+0.1
STKA				pmax	pmax		
	comp=Z,534nm,1.8s						
ARPS	Mount Arapiles	37.62	240	P	P	12 26 54.2	-1.4
	comp=Z,11nm,1.4s						
INKA	Innaminka	38.13	255		P	12 27 01.2	+1.2

INKA				IAmb	IAmb	12 27 40.6	
	comp=Z,72nm,1.4s						
TAOE	Nuku Hiva Isla	38.20	74⇑	*i*PKIKP	P	12 27 00.1	-0.7
	comp=Z,767nm,1.0s						
TAOE	Nuku Hiva Isla	38.20	74	P	P	12 26 55.9	-4.9
	comp=Z,457nm,1.0s						
RKT	Rikitea	38.55	98	*e*P	P	12 27 04.1	+0.6
	comp=Z,87nm,0.9s						
RKT				*e*S	S	12 33 00.2	+12
	comp=Z,1µm,31.8s						
RKT				*e*SS	SS	12 35 39.6	-4.7
	comp=Z,2µm,26.2s						
COEN	Coen	38.73	277	P	P	12 27 06.2	+1.1
COEN				IAmb	IAmb	12 27 07.7	
	comp=Z,83nm,1.0s						
COEN	Coen	38.73	277	P	P	12 27 05.5	+0.4
	comp=Z,88nm,1.0s						
MGBR	Mount Gambier	38.76	239	P	P	12 27 07.3	+2.2
MGBR				IAmb	IAmb	12 27 43.8	
	comp=Z,39nm,1.1s						
HTT	Hallett	39.67	246	P	P	12 27 11.3	-1.4
	comp=Z,14nm,0.7s						
HTT	Hallett	39.67	246	P	P	12 27 12.7	0.0
	comp=Z,34nm,0.7s						
HTT	Hallett	39.67	246	P	P	12 27 12.6	-0.1
QIS	Mount Isa	40.16	266	P	P	12 27 17.2	+0.3
	comp=Z,23nm,1.3s						
MANU	Manus Island	40.53	297	P	P	12 27 19.6	-0.4
MANU				IAmb	IAmb	12 27 20.2	
	comp=Z,68nm,1.0s						
BBOO	Buckleboo	42.05	247	P	P	12 27 31.2	-1.0
BBOO	Buckleboo	42.05	247	P	P	12 27 30.9	-1.3
	comp=Z,21nm,0.8s						
AS31	Alice Springs	44.74	260	P	P	12 27 53.3	-0.7
ASAR	Alice Springs	44.74	260	P	P	12 27 53.0	-0.9
	comp=Z,33nm,0.9s,baz=96,slow=7.4,SNR=209						
ASAR				PcP	PcP	12 29 34.1	+0.5
	comp=Z,8.7nm,0.8s,baz=114,slow=3.8,SNR=6.4						
ASAR				ScP	ScP	12 33 12.9	+1.4
	comp=Z,6.7nm,0.9s,baz=105,slow=3.5,SNR=11						
ASAR				S	S	12 34 14.0	-5.5
	comp=Z,4.9nm,1.0s,baz=100,slow=16,SNR=9.8						
ASAR				PKiKP	PKiKP	12 36 30.8	-1.8
	comp=Z,0.5nm,0.6s,baz=77,slow=1.5,SNR=4.8						
ASAR				ScS	ScS	12 37 35.5	-0.3
	comp=Z,4.0nm,0.9s,baz=108,slow=7.0,SNR=14						
ASAR				LR	LR	12 44 18.4	
	comp=Z,201nm,21.9s,baz=88,slow=33						
	comp=Z,33nm,0.9s						
ASAR	Alice Springs	44.74	260	P	P	12 27 53.4	-0.6
WR8	Warramunga Arr	44.97	265	P	P	12 27 54.6	-1.1
WR8				IAmb	IAmb	12 27 55.6	
	comp=Z,49nm,0.8s						
WB0	Warramunga Arr	45.11	265	P	P	12 27 55.5	-1.4
WRAB	Tennant Creek	45.11	265	P	P	12 27 56.1	-0.8
WRAB				IAmb	IAmb	12 27 56.7	
	comp=Z,65nm,0.8s						
WRAB	Tennant Creek	45.11	265	P	P	12 27 55.4	-1.4
	comp=Z,48nm,0.9s						
WRAB	Tennant Creek	45.11	265	P	P	12 27 56.1	-0.8
WRAB				pmax	pmax		
	comp=Z,65nm,0.8s						
WRAB	Tennant Creek	45.11	265	P	P	12 27 55.3	-1.6
WRA	Warramunga Arr	45.12	265	P	P	12 27 55.2	-1.7
	comp=Z,61nm,0.8s,baz=102,slow=8.3,SNR=194						
WRA				PcP	PcP	12 29 35.6	+0.7
	comp=Z,12nm,0.8s,baz=101,slow=3.8,SNR=4.9						
WRA				ScP	ScP	12 33 15.8	+2.7
	comp=Z,9.1nm,0.9s,baz=105,slow=4.2,SNR=11						
WRA				S	S	12 34 18.3	-6.5
	comp=Z,4.5nm,0.8s,baz=102,slow=14,SNR=9.0						
	comp=Z,61nm,0.8s						
WRA	Warramunga Arr	45.12	265	P	P	12 27 54.8	-2.1
JAY	Jayapura	45.88	291	P	P	12 28 02.3	-0.7
	comp=Z,135nm,1.0s,baz=144,slow=2.9,SNR=21						
	comp=Z,135nm,1.0s						
JAY	Jayapura	45.88	291	P	P	12 28 02.2	-0.8
	comp=Z,2µmcomp=Z,145nm,1.0s						
GENI	Genyem	46.30	290	P	P	12 28 06.0	-0.2
	comp=Z,3µmcomp=Z,214nm,0.9s						
SMPI	Sarmi	47.86	290	P	P	12 28 17.8	-0.5
	comp=Z,108nm,1.2s						
FORT	Forrest	48.95	249		P	12 28 24.7	-1.8
MTN	Manton Dam	50.12	273		P	12 28 34.0	-1.5
MTN				IAmb	IAmb	12 28 34.9	
	comp=Z,30nm,0.8s						
DRS	Darwin Rock St	50.47	273	P	P	12 28 37.3	-0.9
	comp=Z,75nm,0.7s						
BAKI	Biak	50.51	289	P	P	12 28 39.7	+1.2
DRV	Dumont d’Urvil	50.79	200	P	P	12 28 40.1	+0.4
DRV				PcP	PcP	12 29 54.6	+0.3
KNRA	Kununurra	51.38	268		P	12 28 44.5	-0.4
SAUI	Saumlaki	51.76	279		P	12 28 47.4	-0.4
SAUI	Saumlaki	51.76	279	P	P	12 28 47.9	+0.1
FAKI	Fak Fak	53.08	285		P	12 28 56.2	-1.3
FAKI	Fak Fak	53.08	285	P	P	12 28 55.9	-1.6
	comp=Z,88nm,1.1s						
FAKI	Fak Fak	53.08	285	P	P	12 28 57.0	-0.5
	comp=Z,971nmcomp=Z,87nm,1.1s						
FITZ	Fitzroy Crossi	53.54	264	LR	LR	12 49 36.8	
	comp=Z,365nm,21.7s,baz=102,slow=33						
SBA	Scott Base	54.90	184		P	12 29 13.4	+3.7
SBA	Scott Base	54.90	184	P	P	12 29 13.4	+3.7
SBA				pmax	pmax		
	comp=Z,66nm,0.9s						
SBA	Scott Base	54.90	184	P	P	12 29 13.1	+3.4
SBA				x	x	12 29 51.6	
SWI	Sorong	54.91	287	P	P	12 29 09.7	-1.0
VNDA	Vanda	54.96	185	P	P	12 29 12.2	+2.0
	comp=Z,15nm,0.9s,baz=3.7,slow=8.3,SNR=30						
VNDA				PcP	PcP	12 30 11.2	+1.2
	comp=Z,13nm,0.8s,baz=306,slow=6.0,SNR=8.1						
VNDA				LR	LR	12 49 49.7	
	comp=Z,32nm,19.1s,baz=28,slow=33						
	comp=Z,15nm,0.9s						
VNDA	Vanda	54.96	185		P	12 29 12.6	+2.4
VNDA				IAmb	IAmb	12 29 13.7	
	comp=Z,36nm,1.1s						
VNDA	Vanda	54.96	185	P	P	12 29 12.6	+2.4
VNDA				pmax	pmax		
	comp=Z,36nm,1.2s						
MSAI	Masohi	55.85	283	P	P	12 29 16.2	-1.3
	comp=Z,2µmcomp=Z,168nm,0.7s						
KRAI	Karang Ratu	56.34	282	P	P	12 29 19.8	-1.2
	comp=Z,132nm,0.9s						
AAI	Ambon	56.36	282	P	P	12 29 20.2	-0.9
	comp=Z,2µmcomp=Z,133nm,0.7s						
SOEI	Soe	57.50	273	P	P	12 29 28.6	-0.8
SOEI	Soe	57.50	273	P	P	12 29 29.9	+0.6
NLAI	Namlea	57.53	282	P	P	12 29 28.5	-0.9
	comp=Z,1µmcomp=Z,162nm,0.8s						
MEEK	Meekatharra	57.78	252	P	P	12 29 30.2	-0.9
	comp=Z,18nm,0.9s						
NWAO	Narrogin (SRO)	57.82	245	LR	LR	12 52 10.3	
	comp=Z,141nm,21.0s,baz=75,slow=34						
PSA00	Pilbara Seismi	57.87	259	P	P	12 29 30.5	-1.2
PSA00				IAmb	IAmb	12 30 10.4	
	comp=Z,29nm,1.2s						
PSA00	Pilbara Seismi	57.87	259	P	P	12 29 30.1	-1.6
PSA00				IAmb	IAmb	12 29 30.9	
	comp=Z,14nm,1.3s						
PSA00	Pilbara Seismi	57.87	259	P	P	12 29 31.3	-0.4
	comp=Z,15nm,1.0s						
BATI	Baumata	57.89	273	P	P	12 29 31.9	0.0
	comp=Z,124nm,0.7s,baz=204,slow=1.3,SNR=16						
BATI				LR	LR	12 55 06.6	
	comp=Z,211nm,18.1s,baz=142,slow=37						
	comp=Z,124nm,0.7s						
BATI	Baumata	57.89	273	P	P	12 29 32.8	+0.9
	comp=Z,1µmcomp=Z,144nm,0.8s						
MBWA	Marble Bar	58.08	259	P	P	12 29 32.1	-1.1
MBWA				IAmb	IAmb	12 29 32.2	
	comp=Z,26nm,0.9s						
MBWA	Marble Bar	58.08	259	P	P	12 29 31.8	-1.3
	comp=Z,23nm,0.9s						
BLDU	Ballidu	58.65	247	P	P	12 29 35.1	-1.9
	comp=Z,24nm,0.9s						
MUN	Mundaring	58.83	246	P	P	12 29 37.7	-0.5
	comp=Z,20nm,0.8s						
SANI	Sanana	59.05	282	P	P	12 29 39.7	-0.2
	comp=Z,142nm,0.9s						
SANI	Sanana	59.05	282	P	P	12 29 38.4	-1.5
	comp=Z,1µmcomp=Z,142nm,0.8s						
TNTI	Ternate	59.10	286	P	P	12 29 39.0	-1.2
TNTI	Ternate	59.10	286	P	P	12 29 39.5	-0.8
	comp=Z,1µmcomp=Z,134nm,1.0s						
MORW	Morawa	59.52	249	P	P	12 29 41.5	-1.4
MORW	Morawa	59.52	249	P	P	12 29 41.5	-1.4
	comp=Z,26nm,1.4s						
CCD	Concordia, Ant	59.75	195	P	P	12 29 45.3	+1.0
CCD				PcP	PcP	12 30 29.7	+0.3
MMRI	Maumere	59.78	274	P	P	12 29 43.6	-1.4
MMRI	Maumere	59.78	274	P	P	12 29 44.2	-0.7
	comp=Z,186nm,1.0s						
EDFI	Ende, Flores	60.24	273	P	P	12 29 46.6	-1.6
	comp=Z,1µmcomp=Z,196nm,1.0s						
RPN	Rapa Nui	60.65	109	P	P	12 29 52.2	+1.5
	comp=Z,152nm,0.9s,baz=287,slow=5.3,SNR=7.7						
RPN				LR	LR	12 53 00.0	
	comp=Z,32nm,19.0s,baz=233,slow=33						
	comp=Z,152nm,0.9s						
BASI	Baing, Sumba	60.72	271	P	P	12 29 52.0	+0.7
	comp=Z,2µmcomp=Z,288nm,1.2s						
WSI	Waingapu	61.17	272	P	P	12 29 53.9	-0.5
CASY	Casey	61.60	206	P	P	12 29 56.6	+0.3
LBFI	Labuhan Bajo,	61.99	273	P	P	12 29 58.3	-1.5
	comp=Z,2µmcomp=Z,167nm,1.2s						
WBSI	Waikabubak, Su	62.02	271	P	P	12 29 59.4	-0.7
	comp=Z,1µmcomp=Z,116nm,1.3s						
KKSI	Kolaka, Sulawe	62.07	278	P	P	12 30 00.1	-0.3
	comp=Z,1µmcomp=Z,30nm,0.8s						
LUWI	Luwuk	62.38	282	P	P	12 30 01.7	-0.7
LUWI	Luwuk	62.38	282	P	P	12 30 02.0	-0.4
	comp=Z,1µmcomp=Z,157nm,1.1s						
BKSI	Bulukumba	62.99	276	P	P	12 30 05.4	-1.1
	comp=Z,719nmcomp=Z,109nm,0.8s						
BNSI	Bone	63.38	277	P	P	12 30 08.4	-0.7
	comp=Z,876nmcomp=Z,94nm,1.0s						
DBNI	Kabupaten Domp	63.42	272	P	P	12 30 07.9	-1.5
	comp=Z,744nmcomp=Z,84nm,0.7s						
APSI	Ampana	63.44	281	P	P	12 30 09.7	+0.2
	comp=Z,1µmcomp=Z,86nm,1.1s						
KAPI	Kappang	63.45	276	P	P	12 30 08.4	-1.1
	comp=Z,8.9nm,0.3s,baz=88,slow=2.9,SNR=6.9						
	comp=Z,8.9nm,0.3s						
KAPI	Kappang	63.45	276	P	P	12 30 08.4	-1.1
KAPI				IAmb	IAmb	12 30 09.8	
	comp=Z,32nm,1.1s						
KAPI	Kappang	63.45	276*d*	*i*P	P	12 30 08.5	-1.1
KAPI				pmax	pmax		
	comp=Z,27nm,1.1s						
DAV	Davao City (W)	63.73	291	LR	LR	12 55 05.7	
	comp=Z,51nm,21.6s,baz=314,slow=33						
MRSI	Marisa	63.79	283	P	P	12 30 10.6	-1.2
PLAI	Plampang	63.80	272	P	P	12 30 10.3	-1.5
	comp=Z,162nm,0.8s						
PLAI	Plampang	63.80	272	P	P	12 30 10.6	-1.2
	comp=Z,1µmcomp=Z,164nm,0.8s						
SPSI	Sidrap Palu	63.86	277	P	P	12 30 10.7	-1.5
	comp=Z,4µmcomp=Z,64nm,1.1s						
JCJ	Chichijima	63.91	320	LR	LR	12 52 04.9	
	comp=Z,85nm,21.6s,baz=84,slow=30						
TTSI	Tana Toraja	64.19	278	P	P	12 30 13.5	-0.9
	comp=Z,48nm,1.1s						
TWSI	Taliwang, Sumb	64.65	271	P	P	12 30 16.5	-0.9
	comp=Z,944nmcomp=Z,95nm,1.1s						
PMSI	Majene	64.83	277	P	P	12 30 18.9	+0.3
	comp=Z,1µmcomp=Z,159nm,1.1s						
PCI	Palu	65.08	281	P	P	12 30 21.4	+1.2
	comp=Z,117nm,1.0s						
TOLI2	Tolitoli	65.11	283	P	P	12 30 18.1	-2.2
TOLI2				IAmb	IAmb	12 30 19.8	
	comp=Z,51nm,1.1s						
MMSI	Mamuju	65.17	278	P	P	12 30 20.2	-0.5
	comp=Z,40nm,1.1s						
KLNI	Mataram	65.49	271	P	P	12 30 21.8	-1.0
	comp=Z,1µmcomp=Z,89nm,0.8s						
MPSI	Mapaga	65.56	282	P	P	12 30 21.7	-1.5
	comp=Z,610nmcomp=Z,60nm,1.0s						
KHKI	Kahang-Kahang	65.96	271	P	P	12 30 26.0	+0.2
	comp=Z,62nm,1.0s						
IGBI	Denpasar	66.21	271	P	P	12 30 27.7	+0.3
QSPA	South Pole Qui	66.53	180	P	P	12 30 29.9	+1.2
	comp=Z,86nm,0.8s,baz=36,slow=2.0,SNR=223						
QSPA				LR	LR	12 58 24.8	
	comp=Z,28nm,18.2s,baz=112,slow=35						
QSPA				PKPPKP	P'P'df	12 58 51.6	-8.5
	comp=Z,0.8nm,0.3s,baz=253,slow=3.1,SNR=6.6						
	comp=Z,86nm,0.8s						
QSPA	South Pole Qui	66.53	180	P	P	12 30 30.0	+1.3
QSPA	South Pole Qui	66.53	180	P	P	12 30 30.2	+1.4
JAGI	Jajag, Banyuwa	67.25	270	P	P	12 30 32.3	-1.7
JAGI				IAmb	IAmb	12 30 34.0	
	comp=Z,67nm,1.0s						
JAGI	Jajag, Banyuwa	67.25	270	P	P	12 30 33.0	-1.0
	comp=Z,66nm,1.1s						
JAGI	Jajag, Banyuwa	67.25	270	P	P	12 30 32.7	-1.3
	comp=Z,1µmcomp=Z,65nm,1.2s						
ABJI	Asem Bagus	67.43	271	P	P	12 30 35.8	+0.7
	comp=Z,70nm,0.9s						
KMMI	Kalianget	67.96	272	P	P	12 30 38.9	+0.5
	comp=Z,1µmcomp=Z,126nm,0.9s						
GMJI	Gumukmas	67.98	270	P	P	12 30 37.5	-1.0
	comp=Z,66nm,0.9s						
BLJI	Banyuglugur	68.03	271	P	P	12 30 38.9	0.0
	comp=Z,124nm,0.7s						
BBKI	Banjar Baru	68.56	276	P	P	12 30 43.0	+0.8
GRJI	Gresik	69.37	271	P	P	12 30 47.7	+0.5
SNJI	Sawahan-Nganju	69.71	270	P	P	12 30 49.5	0.0
	comp=Z,137nm,0.9s						
SJI	Sawahan	69.72	270	P	P	12 30 48.8	-0.6
	comp=Z,2µmcomp=Z,104nm,0.9s						
JHJ	Hachijo jima 2	69.77	322	LR	LR	13 01 38.1	
	comp=Z,25nm,18.0s,baz=150,slow=36						
PKKI	Palangkaraya	69.84	277	P	P	12 30 51.1	+1.0
	comp=Z,2µmcomp=Z,244nm,0.9s						
PCJI	Pacitan	70.09	270	P	P	12 30 50.6	-1.0
NGJI	Ngawi	70.14	271	P	P	12 31 00.4	+8.5
UGM	Wanagama	70.79	270		P	12 30 54.8	-1.1
UGM	Wanagama	70.79	270	P	P	12 30 56.1	+0.2
	comp=Z,111nm,0.8s						
UGM	Wanagama	70.79	270	P	P	12 30 55.7	-0.2
	comp=Z,111nm,0.8s						
YOGI	Yogyakarta	71.04	270	P	P	12 30 57.9	+0.5
KKM	Kota Kinabalu	71.39	285	P	P	12 30 59.7	+0.1
	comp=Z,30nm,1.1s						
CTJI	Waduk Cacaban	72.36	270	P	P	12 31 05.1	-0.2
	comp=Z,108nm,0.9s						
KPJI	Karang Pucung	72.47	270	P	P	12 31 05.3	-0.6
	comp=Z,100nm,0.7s						
JOW	Kunigami	72.79	310	P	P	12 31 05.7	-1.8
	comp=Z,44nm,0.8s,baz=264,slow=3.6,SNR=5.8						
	comp=Z,44nm,0.8s						
JOW	Kunigami	72.79	310	IAmb	IAmb	12 31 09.1	
	comp=Z,68nm,1.0s						
JGF	Kuroka	72.95	322	P	P	12 31 07.2	-1.1
	comp=Z,16nm,0.9s						
MJAR	Matsushiro Arr	73.17	324	P	P	12 31 07.8	-1.6
	comp=Z,16nm,0.9s,baz=157,slow=6.1,SNR=21						
MJAR				LR	LR	13 03 10.9	
	comp=Z,25nm,19.3s,baz=146,slow=36						
	comp=Z,16nm,0.9s						
MJAR	Matsushiro Arr	73.17	324		P	12 31 07.9	-1.6
MJAR	Matsushiro Arr	73.17	324	P	P	12 31 07.9	-1.6
MJAR				pmax	pmax		
	comp=Z,12nm,1.1s						
MAJO	Matsushiro	73.17	324		P	12 31 08.3	-1.3
MAJO	Matsushiro	73.17	324*c*	*e*P	P	12 31 07.9	-1.6
MAJO				pmax	pmax		
	comp=Z,18nm,0.9s						
SBUM	Sibu	73.39	280		P	12 31 10.6	-0.7
BBJI	Bungbulang	73.60	269	P	P	12 31 11.7	-0.9
	comp=Z,71nm,0.8s						
BBJI	Bungbulang	73.60	269	P	P	12 31 11.1	-1.5
	comp=Z,71nm,0.8s						
CNJI	Cibinong	74.13	269	P	P	12 31 14.7	-0.9
	comp=Z,795nmcomp=Z,57nm,0.8s						
DBJI	Dramaga	74.77	269	P	P	12 31 19.3	0.0
	comp=Z,122nm,1.0s						
JNU	Nakatsue	75.08	317	P	P	12 31 20.7	0.0
	comp=Z,23nm,1.0s,baz=200,slow=11,SNR=6.9						
JNU				LR	LR	13 01 04.5	
	comp=Z,27nm,20.6s,baz=123,slow=33						
	comp=Z,23nm,1.0s						
JNU	Nakatsue	75.08	317	P	P	12 31 20.7	0.0
	comp=Z,36nm,1.0s						
ADK	Adak	75.11	0	P	P	12 31 19.4	-0.9
ADK	Adak	75.11	0	P	P	12 31 19.0	-1.3
	comp=Z,31nm,0.5s						
ADK	Adak	75.11	0	P	P	12 31 19.5	-0.9
ADK				pmax	pmax		
	comp=Z,363nm,1.8s						
ADK	Adak	75.11	0	P	P	12 31 19.3	-1.0
TPI	Tanjungpandan	75.41	273	P	P	12 31 22.9	-0.1
	comp=Z,34nm,0.8s						
ATKA	Atka Island	75.47	2	P	P	12 31 21.2	-1.1
TWG	Pinlang	75.76	303	IAmb	IAmb	12 31 23.7	
	comp=Z,36nm,0.6s						
YULB	Yu-li	75.90	304	P	P	12 31 24.6	-0.9
	comp=Z,28nm,0.7s						
NACB	Ninganchiao	76.11	304	IAmb	IAmb	12 31 26.7	
	comp=Z,75nm,0.9s						
SHEM	Shemya Is, Ala	76.35	354	LR	LR	12 57 38.3	
	comp=Z,57nm,20.1s,baz=132,slow=30						
TPUB	Ta-pu	76.36	303	P	P	12 31 26.9	-1.3
	comp=Z,227nm,1.1s						
BELA	Belgrano 2	76.43	172		P	12 31 28.2	+0.5
NIKH	Nikolski High	76.54	5	P	P	12 31 27.8	-0.6
	comp=Z,210nm,0.8s						
NIKH	Nikolski High	76.54	5	P	P	12 31 27.6	-0.8
	baz=188						
YHNB	Yeheng	76.55	305	IAmb	IAmb	12 31 30.0	
	comp=Z,70nm,1.0s						
ASAJ	Asahikawa	76.81	331	P	P	12 31 29.5	-0.7
	comp=Z,20nm,1.0s,baz=246,slow=10,SNR=5.2						
ASAJ				LR	LR	13 03 07.6	
	comp=Z,32nm,18.8s,baz=98,slow=34						
	comp=Z,20nm,1.0s						
KASI	Kota Agung	77.23	270	P	P	12 31 31.9	-1.4
	comp=Z,863nmcomp=Z,112nm,0.9s						
UNV	Unalaska Valle	77.62	6		P	12 31 33.7	-0.7
UNV	Unalaska Valle	77.62	6	P	P	12 31 33.6	-0.7
	baz=190						
LWLI	Liwa	77.83	270	P	P	12 31 39.2	+2.5
	comp=Z,98nm,0.7s						
MDSI	Maura Dua	77.92	270	P	P	12 31 35.0	-2.1
	comp=Z,60nm,0.9s						
PMSA	Palmer Station	78.15	156	LR	LR	12 58 50.0	
	comp=Z,45nm,19.1s,baz=250,slow=30						
PMSA	Palmer Station	78.15	156	P	P	12 31 38.5	+1.1
FALS	False Pass	78.97	8	P	P	12 31 42.1	+0.3
	baz=193						
MAW	Mawson	79.00	200	P	P	12 31 43.3	+1.3
	comp=Z,46nm,0.7s,baz=126,slow=7.1,SNR=40						
	comp=Z,46nm,0.7s						
YSS	Yuzhno-Sakhali	79.00	333	*e*P	P	12 31 43.2	+1.0
YSS				*e**PP	pwP	12 32 25.7	+2.7
YSS				*e*S	S	12 41 26.6	-1.5
YSS				*e*		12 41 50.3	
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				pmax	pmax		
	comp=Z,300nm,3.2s						
MNAI	Manna	79.09	270	IAmb	IAmb	12 31 45.1	
	comp=Z,66nm,0.8s						
PET	Petropavlovsk	79.13	345	*e*P	P	12 31 43.2	+0.5
PET				*e**SP	sP	12 32 37.3	+1.5
PET				*e*S	S	12 41 30.9	+1.7
PET				*e**SS	sS	12 42 37.1	+3.5
PET				MLR	MLR		
	comp=Z,100nm,21.0s						
EGSI	Enggano, Bengk	79.33	269	P	P	12 31 45.7	+0.9
	comp=Z,2µmcomp=Z,102nm,0.8s						
PETK	Petropavlovsk-	79.43	345	P	P	12 31 42.9	-1.5
	comp=Z,7.6nm,0.8s,baz=100,slow=7.6,SNR=17						
PETK				LR	LR	13 00 41.5	
	comp=Z,35nm,21.8s,baz=139,slow=31						
	comp=Z,7.6nm,0.8s						
PETK	Petropavlovsk-	79.43	345	P	P	12 31 43.0	-1.5
PETK	Petropavlovsk-	79.43	345	P	P	12 31 43.0	-1.5
CHNA	Chernabura Isl	79.50	10	P	P	12 31 44.5	-0.2
	baz=196						
KSI	Kapahiang	79.70	270	P	P	12 31 45.8	-1.1
	comp=Z,134nm,1.0s						
KSRS	Korea Array	79.74	319	P	P	12 31 46.5	+0.1
	comp=Z,6.6nm,1.0s,baz=148,slow=6.6,SNR=7.6						
KSRS				LR	LR	13 02 13.7	
	comp=Z,44nm,21.2s,baz=130,slow=32						
	comp=Z,6.6nm,1.0s						
SDPT	Sand Point	79.86	10	P	P	12 31 44.6	-2.0
	comp=Z,140nm,2.3s						
SDPT	Sand Point	79.86	10	P	P	12 31 46.1	-0.5
	baz=196						
S12K	Black Hills	79.97	9	P	P	12 31 46.6	-0.7
	baz=194						
CBX	Cerro Bola	80.07	48	IAmb	IAmb	12 31 50.5	
	comp=Z,158nm,2.0s						
P08K	Saint George I	80.09	4	P	P	12 31 48.2	+0.4
	baz=187						
PASC	Pasadena Art C	80.15	46	IAmb	IAmb	12 31 50.4	
	comp=Z,38nm,0.8s						
MASI	Maura Aman, Be	80.23	271	P	P	12 31 48.7	-1.0
	comp=Z,2µmcomp=Z,184nm,1.0s						
LPIG	La Paz	80.24	58	LR	LR	13 03 09.5	
	comp=Z,38nm,18.6s,baz=350,slow=32						
MWC	Mount Wilson	80.27	46	IAmb	IAmb	12 31 51.2	
	comp=Z,44nm,0.8s						
BAR	Barrett	80.28	48	IAmb	IAmb	12 31 51.6	
	comp=Z,81nm,1.9s						
SLBS	Sierra La Lagu	80.31	59		P	12 31 51.2	+1.2
SLBS	Sierra La Lagu	80.31	59	P	P	12 31 50.9	+1.0
SLBS				PcP	PcP	12 31 58.3	+1.7
SLBS				pP	pP	12 32 25.5	-1.8
MG05	Puerto Natales	80.37	142	IAmb	IAmb	12 31 52.0	
	comp=Z,59nm,0.9s						
KMPM	Mount Pierce	80.47	38	IAmb	IAmb	12 31 53.0	
	comp=Z,97nm,1.1s						
TPO	Tropico Hills	80.55	45	IAmb	IAmb	12 31 53.0	
	comp=Z,65nm,0.8s						
SPIA	Saint Paul Isl	80.62	4	P	P	12 31 51.2	+0.5
	baz=186						
MYKOM	Kota Tinggi	80.72	276	P	P	12 31 53.3	+1.1
	comp=Z,43nm,0.8s						
YUH	Yuha Desert	80.78	48	IAmb	IAmb	12 31 54.2	
	comp=Z,84nm,1.8s						
BORC	Borrego Spring	80.80	48	IAmb	IAmb	12 31 54.3	
	comp=Z,48nm,1.2s						
DNR	Dunn Ranch,Anz	80.83	47	IAmb	IAmb	12 31 54.8	
	comp=Z,52nm,1.0s						
ISA	Isabella, Lake	80.86	45	IAmb	IAmb	12 31 54.8	
	comp=Z,54nm,0.9s						
S14K	Fog Glacier	80.90	10	P	P	12 31 52.9	+0.6
	baz=196						
PFO	Pinyon Flats O	80.97	47	LR	LR	13 06 44.9	
	comp=Z,43nm,18.1s,baz=278,slow=35						
PFO	Pinyon Flats O	80.97	47		P	12 31 54.2	+0.9
PFO	Pinyon Flats O	80.97	47*c*	*i*P	P	12 31 53.7	+0.4
PFO				pmax	pmax		
	comp=Z,33nm,1.0s						
PFO	Pinyon Flats O	80.97	47	P	P	12 31 54.1	+0.9
PFO				PcP	PcP	12 31 59.6	+0.3
PFO				pP	pP	12 32 28.9	-1.8
PFO				sP	sP	12 32 45.0	-1.6
KHMM	Horse Mountain	81.00	38	IAmb	IAmb	12 32 23.9	
	comp=Z,53nm,0.9s						
O02D	Mt. Diablo Mer	81.07	39	IAmb	IAmb	12 31 57.2	
	comp=Z,38nm,1.0s						
CHIR	Chirikof Islan	81.14	12	P	P	12 31 51.3	-2.2
	comp=Z,335nm,1.7s						
CHIR	Chirikof Islan	81.14	12	P	P	12 31 54.4	+0.9
	baz=200						
MSHR	Mys Shultsa	81.29	324⇑	*e*P	P	12 31 49.5	-5.1
MSHR				pmax	pmax		
	comp=Z,46nm,1.1s						
ESPZ	Base Esperanza	81.50	157	IAmb	IAmb	12 31 57.2	
	comp=Z,70nm,1.0s						
CCCA	Chr Cany lake	81.50	45	IAmb	IAmb	12 31 58.2	
	comp=Z,77nm,1.3s						
PSTR	Posyet	81.53	324⇑	*e*P	P	12 31 53.3	-2.5
BC3	Big Chuckawall	81.68	48	IAmb	IAmb	12 31 59.6	
	comp=Z,108nm,1.7s						
O03E	Paynes Creek	81.72	39	IAmb	IAmb	12 31 59.6	
	comp=Z,122nm,1.5s						
GLA	Glamis	81.76	49	IAmb	IAmb	12 31 60.0	
	comp=Z,53nm,1.1s						
M02C	Callahan	81.83	38	IAmb	IAmb	12 32 01.2	
	comp=Z,47nm,1.2s						
TIN	Tinemaha, Big	81.86	44	IAmb	IAmb	12 32 00.0	
	comp=Z,63nm,0.9s						
L02F	Cave Junction	81.92	37	IAmb	IAmb	12 32 00.5	
	comp=Z,138nm,1.8s						
USRK	Ussuriysk Ar.	81.97	326	P	P	12 31 58.1	0.0
	comp=Z,19nm,0.9s,baz=126,slow=4.9,SNR=15						
	comp=Z,19nm,0.9s						
SII	Sitkinak Islan	82.11	13	P	P	12 31 56.8	-1.8
	comp=Z,117nm,0.8s						
SII	Sitkinak Islan	82.11	13	P	P	12 31 59.4	+0.8
	baz=201						
YBH	Yreka Blue Hor	82.14	38	LR	LR	13 01 51.9	
	comp=Z,5.2nm,18.3s,baz=311,slow=31						
TYV	Tymovskoe	82.17	336	*e*P	P	12 32 00.3	+1.3

TYV				pmax	pmax		
	comp=Z,33nm,1.5s						
TYV				pmax	pmax		
	comp=Z,400nm,3.3s						
M03C	McCloud	82.17	39	IAmb	IAmb	12 32 01.5	
	comp=Z,34nm,0.9s						
IRM	Iron Mountain	82.18	48	IAmb	IAmb	12 32 02.0	
	comp=Z,73nm,1.3s						
DSP	Deep Springs	82.22	44	IAmb	IAmb	12 32 01.9	
	comp=Z,56nm,1.5s						
HATC	Hat Creek Radi	82.26	39	IAmb	IAmb	12 32 02.1	
	comp=Z,80nm,1.1s						
AY03	Cochrane	82.26	138	IAmb	IAmb	12 32 02.7	
	comp=Z,39nm,0.8s						
PNTR	Pine Nut	82.27	41	IAmb	IAmb	12 32 02.1	
	comp=Z,56nm,0.9s						
DANC	Danby, Needles	82.29	47	IAmb	IAmb	12 32 02.5	
	comp=Z,71nm,0.9s						
BEKR	Beckworth	82.30	40	IAmb	IAmb	12 32 02.0	
	comp=Z,118nm,1.8s						
BLYC	Blythe	82.37	48	IAmb	IAmb	12 32 02.8	
	comp=Z,32nm,0.8s						
LHV	Little Huntoon	82.42	43	IAmb	IAmb	12 32 03.1	
	comp=Z,86nm,1.6s						
SHOC	Shoshone, Teco	82.44	46	IAmb	IAmb	12 32 02.7	
	comp=Z,52nm,1.0s						
NJ2	Nanjing	82.49	310	⇓P	P	12 32 02.0	+0.9
NJ2				pmax	pmax		
	comp=Z,17nm,0.8s						
214A	Organ Pipe Nat	82.56	51	IAmb	IAmb	12 32 04.0	
	comp=Z,58nm,1.5s						
NVAR	Mina Array Bea	82.66	43	P	P	12 32 02.6	+0.4
	comp=Z,11nm,0.7s,baz=222,slow=8.3,SNR=76						
NVAR				PKKPbc	PKKPbc	12 50 27.0	-0.5
	comp=Z,0.5nm,0.6s,baz=50,slow=3.7,SNR=4.1						
NVAR				PKPPKP	P'P'df	12 58 31.6	+1.2
	comp=Z,0.3nm,0.7s,baz=46,slow=4.0,SNR=3.9						
	comp=Z,11nm,0.7s						
NVAR	Mina Array Bea	82.66	43		P	12 32 03.3	+1.2
MTPC	Mountain Pass	82.67	46	IAmb	IAmb	12 32 04.5	
	comp=Z,53nm,1.2s						
L04D	Klamath Falls	82.69	38	IAmb	IAmb	12 32 05.0	
	comp=Z,92nm,1.4s						
R17L	Mt. Peulik Vol	82.72	11	P	P	12 32 02.1	+0.4
	baz=199						
WCT	Wildcat Mounta	82.73	45	IAmb	IAmb	12 32 04.6	
	comp=Z,68nm,1.8s						
NV11	Mina Array Sit	82.75	43	IAmb	IAmb	12 32 04.5	
	comp=Z,74nm,1.5s						
PAHR	Pah Rah Range	82.78	41	IAmb	IAmb	12 32 04.5	
	comp=Z,42nm,1.2s						
OHAK	Old Harbor	82.91	13	P	P	12 32 00.7	-2.0
	comp=Z,62nm,2.7s						
OHAK	Old Harbor	82.91	13	P	P	12 32 02.8	+0.2
	baz=202						
TPNV	Topopah Spring	83.07	45	IAmb	IAmb	12 32 06.4	
	comp=Z,54nm,1.4s						
V12A	Nelson	83.28	46	IAmb	IAmb	12 32 07.6	
	comp=Z,53nm,1.5s						
COYC	Coyhaique	83.33	137		P	12 32 06.6	+1.3
COYC				IAmb	IAmb	12 32 07.7	
	comp=Z,47nm,0.8s						
COYC	Coyhaique	83.33	137	P	P	12 32 07.1	+1.7
COYC				PcP	PcP	12 32 11.4	+1.9
COYC				pP	pP	12 32 43.0	0.0
Q17K	Contact Creek	83.40	11	P	P	12 32 05.2	-0.1
	baz=200						
MDJ	Mudanjiang	83.50	325	IAmb	IAmb	12 32 08.4	
	comp=Z,55nm,1.5s						
MDJ	Mudanjiang	83.50	325	P	P	12 32 06.0	0.0
MDJ				pP	pwP	12 32 48.0	+1.0
MDJ				S	SKSac	12 42 14.5	+0.6
MDJ				pmax	pmax		
	comp=Z,27nm,1.3s						
Y14A	Wickenburg	83.52	49	IAmb	IAmb	12 32 08.6	
	comp=Z,38nm,0.9s						
O14K	Tigyukauivet M	83.53	8	P	P	12 32 05.5	-0.2
	baz=195						
H03S2	Juan Fernandez	83.56	124	T	T	14 04 17.9	
	baz=245,slow=74,SNR=138						
W13A	Hualapai Mount	83.57	47	IAmb	IAmb	12 32 09.2	
	comp=Z,32nm,1.0s						
H03S1	Juan Fernandez	83.58	124	T	T	14 04 24.8	
	baz=245,slow=74,SNR=147						
KDAK	Kodiak Island	83.58	13	LR	LR	13 00 56.0	
	comp=Z,72nm,21.9s,baz=207,slow=30						
KDAK	Kodiak Island	83.58	13	P	P	12 32 05.9	-0.1
	baz=203						
H03S3	Juan Fernandez	83.58	124	T	T	14 04 19.4	
	baz=245,slow=74,SNR=142						
O15K	Ungalikthiuk R	83.65	9	P	P	12 32 06.3	-0.1
	baz=196						
Q16K	King Salmon	83.66	11	P	P	12 32 07.1	+0.7
	baz=199						
I04A	Tendick Farm,	83.66	36	IAmb	IAmb	12 32 08.8	
	comp=Z,94nm,1.7s						
ELIB	Princess Elisa	83.72	186	*d*P	P	12 32 07.2	+0.2
	comp=Z,109nm,0.8s						
H03N2	Juan Fernandez	83.72	124	T	T	14 04 26.4	
	baz=250,slow=73,SNR=86						
H03N3	Juan Fernandez	83.72	124	T	T	14 04 26.7	
	baz=250,slow=73,SNR=115						
H03N1	Juan Fernandez	83.73	124	T	T	14 04 27.7	
	baz=250,slow=73,SNR=57						
S11A	Rachel	83.80	44	IAmb	IAmb	12 32 09.8	
	comp=Z,41nm,1.1s						
K05A	Summer Lake	83.81	38	IAmb	IAmb	12 32 10.1	
	comp=Z,44nm,0.9s						
Q18K	Katmai Hardscr	83.92	11	P	P	12 32 07.9	-0.1
	baz=200						
SYO	Syowa Base	83.95	192	⇑*i*P	P	12 32 08.0	0.0
SYO	Syowa Base	83.95	192	⇑*i*PcP	PcP	12 32 11.6	-0.1
J05D	Fort Rock, OR	83.98	37	IAmb	IAmb	12 32 10.8	
	comp=Z,33nm,0.8s						
M11K	Mekoryuk	84.10	5	P	P	12 32 09.6	+0.9
	baz=190						
N14K	Kuskokwak Cree	84.12	8	P	P	12 32 09.3	+0.5
	baz=194						
TUC	Tucson	84.19	51	P	P	12 32 11.5	+1.5
TUC				IAmb	IAmb	12 32 12.6	
	comp=Z,49nm,0.8s						
TUC	Tucson	84.19	51	P	P	12 32 11.5	+1.5
TUC				pmax	pmax		
	comp=Z,49nm,0.9s						
TUC	Tucson	84.19	51	P	P	12 32 11.5	+1.5
O16K	Kokwok River B	84.30	10	P	P	12 32 09.7	0.0
	baz=198						
H04A	Detroit Lake	84.37	36	IAmb	IAmb	12 32 53.2	
	comp=Z,70nm,1.6s						
IPM	Ipoh	84.38	277	IAmb	IAmb	12 32 13.2	
	comp=Z,52nm,0.8s						
IPM	Ipoh	84.38	277	P	P	12 32 11.4	+0.1
	comp=Z,73nm,0.9s						
IPM	Ipoh	84.38	277	P	P	12 32 11.3	0.0
	comp=Z,73nm,0.9s						
Q20K	Shuyak Island	84.38	13	P	P	12 32 10.9	+0.8
	baz=203						
M13K	Dall Lake	84.41	7	P	P	12 32 11.1	+0.9
	baz=193						
Q19K	Cape Douglas,	84.43	12	P	P	12 32 11.0	+0.5
	baz=202						
PINE	Pine Mountain	84.47	37	IAmb	IAmb	12 32 13.5	
	comp=Z,94nm,1.5s						
LL02	Futaleuf	84.56	135		P	12 32 12.7	+1.0
N15K	Kwethluk River	84.57	8	P	P	12 32 11.1	+0.1
	baz=196						
P18K	Big Mountain,	84.58	11	IAmb	IAmb	12 32 11.5	
	comp=Z,35nm,1.1s						
P18K	Big Mountain,	84.58	11	P	P	12 32 12.0	+0.8
	baz=200						
I05D	Terrebonne, OR	84.60	37	IAmb	IAmb	12 32 13.6	
	comp=Z,125nm,1.9s						
O17K	Koliganek Bris	84.63	10	P	P	12 32 12.2	+0.9
	baz=198						
TROLL	Troll, Antarti	84.69	180	⇑P	P	12 32 11.9	0.0
	comp=Z,6µm,0.7s						
319A	Douglas	84.78	53	IAmb	IAmb	12 32 15.6	
	comp=Z,46nm,0.8s						
X16A	Lo Mia Camp, P	84.86	49	IAmb	IAmb	12 32 16.0	
	comp=Z,40nm,0.9s						
M14K	Bethel	84.90	7	IAmb	IAmb	12 32 14.6	
	comp=Z,24nm,0.8s						
M14K	Bethel	84.90	7	P	P	12 32 13.6	+1.0
	baz=194						
WVOR	Wild Horse Val	84.92	39	IAmb	IAmb	12 32 15.2	
	comp=Z,39nm,1.1s						
WVOR	Wild Horse Val	84.92	39	P	P	12 32 14.0	+0.6
SNAA	Sanae	84.95	178	⇑P	P	12 32 13.0	-0.1
	comp=Z,870nm,0.8s						
SNAA	Sanae	84.95	178	P	P	12 32 13.0	-0.1
	comp=Z,41nm,0.9s,baz=206,slow=5.7,SNR=90						
SNAA				PKKPbc	PKKPbc	12 50 18.5	-3.3
	comp=Z,0.7nm,0.6s,baz=0.0,slow=4.0,SNR=2.0						
SNAA				LR	LR	13 10 44.2	
	comp=Z,35nm,18.1s,baz=190,slow=36						
	comp=Z,41nm,0.9s						
SNAA	Sanae	84.95	178		P	12 32 13.3	+0.2
SNAA				IAmb	IAmb	12 32 14.3	
	comp=Z,65nm,1.0s						
SNAA	Sanae	84.95	178	*c i*P	P	12 32 12.8	-0.3
SNAA				pmax	pmax		
	comp=Z,116nm,1.7s						
M15K	Kasigluk River	85.00	8	P	P	12 32 14.3	+1.1
	baz=195						
O18K	Koktuh Hills	85.02	11	IAmb	IAmb	12 32 14.0	
	comp=Z,45nm,1.0s						
O18K	Koktuh Hills	85.02	11	P	P	12 32 14.1	+0.7
	baz=200						
N16K	Nishlik Lake	85.05	9	P	P	12 32 13.9	+0.5
	baz=197						
VNA3	Neumayer Olymp	85.05	176	⇑P	P	12 32 13.3	-0.3
	comp=Z,80nm,0.7s						
KULM	Kulim	85.05	278	P	P	12 32 14.4	-0.2
	comp=Z,31nm,0.9s						
KULM	Kulim	85.05	278	P	P	12 32 15.8	+1.2
	comp=Z,31nm,0.9s						
P19K	Oil Pt	85.19	12	P	P	12 32 14.5	+0.3
	baz=202						
CN2	Changchun	85.24	322	P	P	12 32 14.5	-0.3
CN2				pP	pwP	12 32 54.6	-1.3
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
HPIG		85.28	58	IAmb	IAmb	12 32 17.3	
	comp=Z,40nm,1.1s						
N17K	Nushagak Hills	85.33	10	P	P	12 32 15.2	+0.4
	baz=198						
U15A	North Rim	85.38	47	IAmb	IAmb	12 32 18.5	
	comp=Z,39nm,0.9s						
L14K	Kuka Creek	85.39	7	P	P	12 32 15.5	+0.4
	baz=193						
BNX	BinXian	85.41	325	⇓P	P	12 32 15.1	-0.5
BNX				pmax	pmax		
	comp=Z,17nm,0.9s						
O19K	Port Alsworth	85.50	11	P	P	12 32 15.7	+0.1
	baz=201						
VNA2	Neumayer--Watz	85.50	177	⇑P	P	12 32 15.5	-0.3
	comp=Z,68nm,0.7s,baz=164,slow=3.6						
HOM	Homer	85.50	13	P	P	12 32 16.9	+1.2
	baz=203						
SZCU	Shurtz Canyon	85.50	46	IAmb	IAmb	12 32 18.9	
	comp=Z,34nm,1.2s						
M16K	Timber Creek	85.55	9	IAmb	IAmb	12 32 19.3	
	comp=Z,70nm,1.2s						
M16K	Timber Creek	85.55	9	P	P	12 32 17.2	+1.3
	baz=197						
PSI	Prapat	85.62	275	LR	LR	13 13 20.2	
	comp=Z,74nm,18.1s,baz=156,slow=38						
PSI	Prapat	85.62	275	P	P	12 32 17.2	-0.4
N18K	Kilae Creek	85.68	10	P	P	12 32 18.2	+1.6
	baz=200						
O20K	Slope Mountain	85.70	12	P	P	12 32 17.7	+1.0
	baz=202						
VNA1	Neumayer--Stat	85.72	176	⇑P	P	12 32 17.0	+0.1
	comp=Z,109nm,0.9s						
NVL	N'lazarevskaya	85.73	183	*e*P	P	12 32 17.3	+0.4
NVL				*e*		12 35 36.0	
NVL				*e*S	S	12 42 41.3	+5.1
NVL				*e*SS	SS	12 48 26.9	+12
NVL				pmax	pmax		
	comp=Z,56nm,1.1s						
NVL				MLR	MLR		
	comp=Z,364nm,22.0s						
BRSE	Bradley Lake S	85.76	13	P	P	12 32 17.8	+0.8
	baz=204						
K13K	Kusilvak Mount	85.77	6	P	P	12 32 18.1	+1.1
	baz=192,SNR=5.6						
L15K	Ungalak Mounta	85.86	7	P	P	12 32 17.9	+0.5
	baz=194						
PKCU	Pink Cliffs	85.93	46	IAmb	IAmb	12 32 21.8	
	comp=Z,64nm,1.1s						
ELK	Elko	85.94	42	IAmb	IAmb	12 32 20.1	
	comp=Z,77nm,2.0s						
ELK	Elko	85.94	42	P	P	12 32 19.0	+0.4
GNW	Green Mountain	85.94	33	IAmb	IAmb	12 32 20.4	
	comp=Z,43nm,1.4s						
TIA	Tai'an	85.97	312	P	P	12 32 18.6	0.0
TIA				pmax	pmax		
	comp=Z,24nm,1.0s						
N19K	Bonanza Creek	86.05	11	P	P	12 32 18.5	0.0
	baz=201						
M17K	Holitna River	86.13	9	IAmb	IAmb	12 32 21.4	
	comp=Z,42nm,1.1s						
M17K	Holitna River	86.13	9	P	P	12 32 19.7	+0.9
	baz=198						
L16K	Owhat River	86.14	8	P	P	12 32 19.2	+0.4
	baz=196,SNR=7.6						
GSI	Gunungsitoli	86.26	273	IAmb	IAmb	12 32 22.9	
	comp=Z,44nm,0.9s						
GSI	Gunungsitoli	86.26	273	P	P	12 32 22.1	+1.5
	comp=Z,54nm,1.1s						
MTPU	Mount Pierson	86.35	46	IAmb	IAmb	12 32 23.6	
	comp=Z,29nm,0.9s						
SEW	Seward	86.36	13	P	P	12 32 20.8	+0.9
	baz=205						
W18A	Petrified Fore	86.42	49	IAmb	IAmb	12 32 23.4	
	comp=Z,66nm,1.5s						
K15K	Wolf Creek Mou	86.45	7	IAmb	IAmb	12 32 23.4	
	comp=Z,62nm,1.2s						
K15K	Wolf Creek Mou	86.45	7	P	P	12 32 20.7	+0.4
	baz=194						
M18K	Stony River	86.46	10	P	P	12 32 20.6	+0.3
	baz=200						
Q23K	Middleton Isla	86.46	15	P	P	12 32 21.0	+0.6
	baz=208						
121A	Cookes Peak, D	86.47	52	IAmb	IAmb	12 32 23.5	
	comp=Z,23nm,0.8s						
G08A	Pilot Rock	86.51	37	IAmb	IAmb	12 32 23.0	
	comp=Z,36nm,1.4s						
PLCA	Paso Flores	86.56	133	P	P	12 32 23.1	+1.4
	comp=Z,26nm,1.0s,baz=237,slow=4.6,SNR=21						
PLCA				LR	LR	13 01 36.9	
	comp=Z,52nm,20.5s,baz=254,slow=29						
	comp=Z,26nm,1.0s						
PLCA	Paso Flores	86.56	133	P	P	12 32 23.2	+1.5
JRQG	Juriquilla Cam	86.61	66	IAmb	IAmb	12 32 24.3	
	comp=Z,41nm,1.4s						
MXC	Moxie City	86.61	35	IAmb	IAmb	12 32 23.6	
	comp=Z,51nm,1.6s						
CAPN	Captain Cook N	86.62	12	P	P	12 32 21.7	+0.6
	baz=204						
J14K	Nanvaranak Lak	86.68	6	P	P	12 32 22.1	+0.8
	baz=192						
L17K	Donlin	86.70	9	P	P	12 32 22.4	+0.8
	baz=197						
P23K	Montague Islan	86.72	14	P	P	12 32 22.1	+0.5
	baz=207						
N20K	Mount Spurr	86.82	12	P	P	12 32 22.0	-0.2
	baz=203						
SPCR	Spurr Chakacha	86.82	12	P	P	12 32 22.2	0.0
	baz=203						
LTY	Liberty	86.84	35	IAmb	IAmb	12 32 24.3	
	comp=Z,81nm,1.8s						
HAWA	Hanford	86.89	36	IAmb	IAmb	12 32 24.8	
	comp=Z,38nm,1.4s						
L18K	Granite Mounta	87.02	9	P	P	12 32 23.6	+0.5
	baz=199						
WAH2	Wahluke Slope	87.11	35	IAmb	IAmb	12 32 25.9	
	comp=Z,51nm,1.5s						
GAMB	Gambell	87.14	2	P	P	12 32 24.2	+0.7
	baz=185						
CRAG	Craig	87.16	23	P	P	12 32 24.3	+0.5
	baz=220						
RC01	Rabbit Creek A	87.20	13	IAmb	IAmb	12 32 25.7	
	comp=Z,51nm,1.2s						
RC01	Rabbit Creek A	87.20	13	P	P	12 32 24.4	+0.4
	baz=205						
K17K	Iditarod	87.26	9	P	P	12 32 24.7	+0.4
	baz=197						
L19K	White Mountain	87.27	10	IAmb	IAmb	12 32 27.0	
	comp=Z,38nm,1.4s						
L19K	White Mountain	87.27	10	P	P	12 32 24.8	+0.5
	baz=200						
M20K	Styx River	87.28	11	P	P	12 32 24.7	+0.2
	baz=202						
PWL	Port Wells	87.29	14	P	P	12 32 24.9	+0.5
	baz=206						
SUA	Susitna One	87.34	12	IAmb	IAmb	12 32 28.1	
	comp=Z,27nm,0.8s						
SUA	Susitna One	87.34	12	P	P	12 32 25.2	+0.4
	baz=204						
KAIM	Kayak Island	87.37	16	P	P	12 32 25.4	+0.6
	baz=210						
EPH	Ephrata	87.47	35	IAmb	IAmb	12 32 27.3	
	comp=Z,42nm,1.4s						
J16K	Anvik River	87.52	7	IAmb	IAmb	12 32 28.2	
	comp=Z,47nm,1.6s						
J16K	Anvik River	87.52	7	P	P	12 32 25.6	+0.2
	baz=195						
GLI	Glacier Island	87.58	14	P	P	12 32 26.1	+0.3
	baz=207						
EYAK	Cordova Ski Ar	87.59	15	P	P	12 32 23.9	-1.9
	comp=Z,39nm,2.4s						
EYAK	Cordova Ski Ar	87.59	15	P	P	12 32 26.3	+0.4
	baz=209						
V35K	Ketchikan	87.60	24	P	P	12 32 26.4	+0.4
	baz=221						
U33K	Whale Pass	87.66	23	P	P	12 32 26.4	+0.2
	baz=220						
SKT	Skwentna	87.66	12	P	P	12 32 26.6	+0.4
	baz=203						
M22K	Willow	87.73	12	P	P	12 32 26.6	+0.2
	baz=205						
KNK	Knik Glacier	87.76	13	P	P	12 32 26.8	+0.1
	baz=206						
PMR	Palmer	87.78	13	IAmb	IAmb	12 32 27.6	
	comp=Z,65nm,1.6s						
PMR	Palmer	87.78	13	P	P	12 32 24.7	-2.0
	comp=Z,22nm,1.1s						
PMR	Palmer	87.78	13	P	P	12 32 26.9	+0.2
	baz=206						
J17K	VABM Dome	87.81	8	P	P	12 32 27.6	+0.8
	baz=197						
MNTX	Cornudas Mount	87.82	54	IAmb	IAmb	12 32 29.2	
	comp=Z,27nm,0.8s						
F10A	Beach Ranch, E	87.89	37	IAmb	IAmb	12 32 28.8	
	comp=Z,30nm,0.9s						
TXAR	Lajitas Array	87.98	57	P	P	12 32 29.2	+0.7
	comp=Z,13nm,0.8s,baz=213,slow=7.2,SNR=107						
TXAR				PKKPbc	PKKPbc	12 50 14.2	+0.2
	comp=Z,0.5nm,0.8s,baz=152,slow=3.3,SNR=4.4						
	comp=Z,13nm,0.8s						
TXAR	Lajitas Array	87.98	57		P	12 32 30.0	+1.4
TXAR	Lajitas Array	87.98	57	P	P	12 32 30.0	+1.4
PLID	Pearl Lake	88.05	38	IAmb	IAmb	12 32 30.9	
	comp=Z,45nm,1.5s						
EFI	East Falkland	88.06	147	P	P	12 32 29.7	+1.2
EFI	East Falkland	88.06	147	P	P	12 32 29.7	+1.2
EFI				pmax	pmax		
	comp=Z,107nm,1.1s						
S31K	Pelican	88.06	20	P	P	12 32 29.0	+1.0
	baz=217						
P17A	Butcher Ranch,	88.07	45	IAmb	IAmb	12 32 31.4	
	comp=Z,33nm,1.2s						
I17K	Unalakleet	88.09	7	IAmb	IAmb	12 33 10.2	
	comp=Z,38nm,1.7s						
I17K	Unalakleet	88.09	7	P	P	12 32 29.2	+1.1
	baz=195						
SML	Sawmill	88.14	13	P	P	12 32 28.7	+0.2
	baz=206						
WRAK	Wrangell Islan	88.17	23	P	P	12 32 29.0	+0.4
	baz=220						
J18K	Innoko River	88.20	9	IAmb	IAmb	12 32 31.2	
	comp=Z,27nm,1.2s						
J18K	Innoko River	88.20	9	P	P	12 32 29.1	+0.4
	baz=199						
S32K	Killisnoo	88.21	21	P	P	12 32 29.4	+0.7
	baz=218						
BMRM	Bremner River	88.23	15	P	P	12 32 29.6	+0.7
	baz=210						
HNS	HongShan	88.24	312	⇑P	P	12 32 30.3	+0.9
HNS				SKS	SKSac	12 42 42.3	-1.5
HNS				S	S	12 43 03.0	+1.8
HNS				pmax	pmax		
	comp=Z,13nm,0.8s						
B08A	Colville Reser	88.24	34	IAmb	IAmb	12 32 31.2	
	comp=Z,18nm,0.9s						
T33K	Petersburg	88.25	23	P	P	12 32 29.6	+0.6
	baz=220						
M23K	Glacier View	88.26	13	P	P	12 32 29.7	+0.7
	baz=207						
CUT	Chulitna	88.29	12	P	P	12 32 29.3	+0.2
	baz=205,SNR=5.7						
ANM	Nome	88.30	5	P	P	12 32 29.6	+0.5
	baz=191						
HEH	HeiHe	88.35	328	*e*P	P	12 32 28.5	-1.2
HEH				pmax	pmax		
	comp=Z,19nm,0.8s						
SCM	Sheep Creek Mo	88.38	14	IAmb	IAmb	12 33 07.8	
	comp=Z,49nm,1.2s						
SCM	Sheep Creek Mo	88.38	14	P	P	12 32 30.0	+0.4
	baz=207						
KLU	Klutina	88.39	14	P	P	12 32 29.9	+0.2
	baz=208						
PPLA	Purkeypile	88.39	11	P	P	12 32 29.9	+0.1
	baz=203						
CRQE	Cirque	88.42	16	P	P	12 32 30.6	+0.7
	baz=211						
LLLB	Lillooet	88.42	32		P	12 32 30.5	+0.4
LLLB				IAmb	IAmb	12 32 32.6	
	comp=Z,39nm,1.3s						
C09A	Chrisman Ranch	88.45	35	IAmb	IAmb	12 32 32.6	
	comp=Z,24nm,0.9s						
ENH	Enshi	88.46	304	P	P	12 32 30.2	-0.5
ENH				IAmb	IAmb	12 32 32.6	
	comp=Z,41nm,1.1s						
K20K	Telida	88.50	10	IAmb	IAmb	12 33 12.3	
	comp=Z,26nm,1.1s						
K20K	Telida	88.50	10	P	P	12 32 30.8	+0.7
	baz=201						
TCUT	Toone Canyon	88.54	44	IAmb	IAmb	12 32 33.8	
	comp=Z,28nm,0.9s						
R31K	City Hall, Gus	88.58	20	P	P	12 32 31.4	+0.9
	baz=217						
PINM	Pinnacle	88.61	17	P	P	12 32 30.9	+0.2
	baz=214						
PV19	Morning Glory	88.61	47	IAmb	IAmb	12 32 32.9	
	comp=Z,32nm,1.3s						
PV18	Skein Mesa, Pa	88.63	47	IAmb	IAmb	12 32 32.9	
	comp=Z,19nm,1.0s						
BSUT	Blindstream Ca	88.64	44	IAmb	IAmb	12 32 33.4	
	comp=Z,23nm,0.9s						
TASM	ASL Pad, Albuq	88.64	51	IAmb	IAmb	12 32 33.7	
	comp=Z,30nm,1.1s						
TASM	ASL Pad, Albuq	88.64	51	IAmb	IAmb	12 32 33.6	
	comp=Z,31nm,1.1s						
TASM	ASL Pad, Albuq	88.64	51	IAmb	IAmb	12 32 33.6	
	comp=Z,29nm,1.1s						
ABQ	Albuquerque	88.64	51	IAmb	IAmb	12 32 33.7	
	comp=Z,29nm,1.0s						
ANMO	Albuquerque	88.64	51	LR	LR	13 06 15.5	
	comp=Z,37nm,18.1s,baz=230,slow=31						
ANMO	Albuquerque	88.64	51		P	12 32 32.1	+0.4
ANMO				IAmb	IAmb	12 32 33.6	
	comp=Z,30nm,1.1s						
ANMO	Albuquerque	88.64	51	*c i*P	P	12 32 32.2	+0.5
ANMO				pmax	pmax		
	comp=Z,39nm,1.3s						
ANMO	Albuquerque	88.64	51	P	P	12 32 32.6	+0.9
ANMO				pP	pP	12 33 09.7	-0.1
PV20	West Nyswonger	88.64	47	IAmb	IAmb	12 32 41.3	
	comp=Z,67nm,1.7s						
H16K	Elim	88.66	6	P	P	12 32 31.4	+0.7
	baz=194						
PV16	Nyswonger Mesa	88.66	47	IAmb	IAmb	12 32 33.1	
	comp=Z,38nm,1.7s						
BJI	Beijing	88.66	315	P	P	12 32 31.6	+0.2
BJI				SKS	SKSac	12 42 42.6	-3.6
BJI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PV11	David Mesa, Pa	88.68	47	IAmb	IAmb	12 32 40.5	
	comp=Z,34nm,1.6s						
PV02	Paradox Valley	88.73	47	IAmb	IAmb	12 32 37.1	
	comp=Z,27nm,1.3s						
PV12	Saucer Basin,	88.74	47	IAmb	IAmb	12 32 38.6	
	comp=Z,61nm,1.4s						
VRDI	Verde Repeater	88.74	16	IAmb	IAmb	12 32 33.8	
	comp=Z,41nm,1.3s						
N25K	Chitina, Valde	88.79	15	IAmb	IAmb	12 33 13.8	
	comp=Z,70nm,1.6s						
N25K	Chitina, Valde	88.79	15	P	P	12 32 32.2	+0.6
	baz=210						
PECS	Pecos	88.79	55	IAmb	IAmb	12 32 34.2	
	comp=Z,33nm,1.4s						
GLB	Gilahina Butte	88.84	15	IAmb	IAmb	12 32 33.9	

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             comp=Z,43nm,1.5s
J19K   Poorman           88.86   9  IAmb     IAmb     12 33 13.8
             comp=Z,33nm,1.6s
J19K   Poorman           88.86   9  P        P        12 32 32.3 +0.5
             baz=200
M24K   Tolsona, Glenn    88.87  14  P        P        12 32 32.8 +0.9
             baz=208
GYA    Guiyang           88.90 299 ⇓P        P        12 32 34.0 +1.0
GYA                                 pmax     pmax
             comp=Z,12nm,1.2s
P29M   Windy Craggy      88.94  19  P        P        12 32 33.4 +1.1
             baz=216
WAT6   Susitna Watana    88.96  13  P        P        12 32 33.0 +0.5
             baz=207,SNR=8.5
MCARA  McCarthy VSAT     88.98  16  IAmb     IAmb     12 32 35.4
             comp=Z,41nm,1.3s
MCARA  McCarthy VSAT     88.98  16  P        P        12 32 33.0 +0.6
             baz=211
WAT1   Susitna Watana    89.02  13  P        P        12 32 32.6  0.0
             baz=206
LOGN   Logan Glacier     89.02  17  IAmb     IAmb     12 32 34.3
             comp=Z,40nm,1.2s
CTG    Chitna Glacier    89.05  17  P        P        12 32 33.3 +0.4
             baz=212,SNR=5.5
BCYI   Bear Canyon       89.10  40  IAmb     IAmb     12 32 36.5
             comp=Z,37nm,1.7s
TNA    Tin City          89.11   4  P        P        12 32 33.8 +1.0
             baz=188
O28M   Mount Upton       89.19  17  P        P        12 32 33.9 +0.2
             baz=214
H17K   Granite Mounta    89.20   7  P        P        12 32 34.4 +1.1
             baz=196
BO02   Sierra Bellavi    89.20 128  IAmb     IAmb     12 32 35.9
             comp=Z,29nm,0.9s
PLBC   Pleasant Camp     89.22  19  P        P        12 32 34.1 +0.6
             baz=217
KTH    Kantishna Hill    89.22  11  IAmb     IAmb     12 32 33.5
             comp=Z,21nm,1.0s
TRF    Thorofare Moun    89.25  12  P        P        12 32 33.3 -0.5
             baz=204,SNR=24
O29M   Mount Kennedy     89.25  18  IAmb     IAmb     12 32 35.8
             comp=Z,46nm,1.6s
O29M   Mount Kennedy     89.25  18  P        P        12 32 33.9  0.0
             baz=215
J20K   Nowinta River     89.26  10  IAmb     IAmb     12 32 36.2
             comp=Z,53nm,1.6s
J20K   Nowinta River     89.26  10  P        P        12 32 33.8 +0.2
             baz=201
CHUM   Lake Minchumin    89.28  11  P        P        12 32 33.7  0.0
             baz=203,SNR=6.9
T35M   Bob Quinn         89.35  24  P        P        12 32 33.8 -0.4
             baz=222
HARP   HAARP             89.36  14  P        P        12 32 34.0 -0.2
             baz=209
GCSA   Galena City Sc    89.40   9  P        P        12 32 34.5 +0.3
             baz=199
SAND   Sanderson         89.45  57  IAmb     IAmb     12 32 36.9
             comp=Z,41nm,1.5s
DHY    Denali Highway    89.48  13  P        P        12 32 35.6 +0.7
             baz=207
F15K   North Star Dit    89.49   5  P        P        12 32 35.0 +0.4
             baz=192
MT09   Talagante         89.53 127  IAmb     IAmb     12 32 39.0
             comp=Z,20nm,0.8s
SEY    Seymchan          89.53 347  LR       LR       13 07 08.5
             comp=Z,51nm,19.4s,baz=147,slow=32
SEY    Seymchan          89.53 347 eP        P        12 32 32.9 -2.0
SEY                                 pmax     pmax
             comp=Z,22nm,1.1s
SKAG   Skagway           89.54  20  P        P        12 32 35.6 +0.6
             baz=218
P30M   Million Dollar    89.57  19  P        P        12 32 35.2 -0.1
             baz=216
H18K   Honhosa River     89.59   8  P        P        12 32 35.8 +0.6
             baz=197
G17K   Kiwalik Mounta    89.66   7  P        P        12 32 35.8 +0.3
             baz=195
BPAW   Bear Paw Mtn.     89.71  11  P        P        12 32 36.6 +0.8
             baz=204
S34M   Telegraph Cree    89.73  23  IAmb     IAmb     12 32 38.4
             comp=Z,36nm,1.1s
S34M   Telegraph Cree    89.73  23  P        P        12 32 36.8 +0.8
             baz=221,SNR=6.8
YUK8   Steele Glacier    89.74  17  P        P        12 32 36.6 +0.4
             baz=214
MCK    McKinley          89.76  12  IAmb     IAmb     12 32 40.0
             comp=Z,20nm,0.8s
MCK    McKinley          89.76  12  P        P        12 32 36.1 +0.1
             baz=206,SNR=10.0
S22A   4UR Ranch, Cre    89.78  48  IAmb     IAmb     12 32 39.2
             comp=Z,48nm,1.5s
I20K   Naaghedeneel      89.79   9  P        P        12 32 36.4 +0.3
             baz=201
PAX    Paxson            89.79  14  P        P        12 32 36.7 +0.5
             baz=209
CMIG   Matias Romero     89.81  71  LR       LR       13 02 57.3
             comp=Z,52nm,21.4s,baz=320,slow=29
YUK6   Outpost Mounta    89.84  18  P        P        12 32 37.0 +0.3
             baz=215
M26K   Nabesna, AK       89.86  15  P        P        12 32 37.1 +0.5
             baz=211
YUK3   Moose Creek       89.97  16  P        P        12 32 37.6 +0.3
             baz=213,SNR=7.2
HYT    Haines Junctio    89.99  18  P        P        12 32 37.8 +0.5
             baz=216
PEL    Peldehue          90.05 126  IAmb     IAmb     12 32 40.0
             comp=Z,46nm,1.2s
O20A   White River Ci    90.06  46  IAmb     IAmb     12 33 09.7
             comp=Z,42nm,1.8s
MT13   San Alfonso       90.06 127  IAmb     IAmb     12 32 40.5
             comp=Z,31nm,0.9s
LMEL   Las Melosas       90.07 127  IAmb     IAmb     12 32 41.3
             comp=Z,26nm,1.2s
YUK4   Talbot Arm        90.09  17  P        P        12 32 38.9 +1.1
             baz=215
M27K   Edge Creek, AK    90.10  16  IAmb     IAmb     12 32 41.0
             comp=Z,43nm,1.1s
M27K   Edge Creek, AK    90.10  16  P        P        12 32 38.4 +0.7
             baz=212
Q32M   Nakina River      90.14  21  P        P        12 32 38.1  0.0
             baz=220
P32M   Atlin             90.15  20  P        P        12 32 38.7 +0.8
             baz=219
FXWY   Fox Creek         90.15  42  IAmb     IAmb     12 32 41.2
             comp=Z,33nm,1.4s
DLMT   Dillon            90.17  40  IAmb     IAmb     12 32 40.3
             comp=Z,26nm,1.0s
H19K   Roundabout Mou    90.20   8  IAmb     IAmb     12 32 40.5
             comp=Z,53nm,1.6s
H19K   Roundabout Mou    90.20   8  P        P        12 32 38.6 +0.7
             baz=199
SNOW   Snow King Moun    90.22  42  IAmb     IAmb     12 32 40.8
             comp=Z,30nm,1.1s
MSO    Missoula          90.23  38  IAmb     IAmb     12 32 39.5
             comp=Z,48nm,1.8s
G18K   Tagagawik         90.27   7  P        P        12 32 38.7 +0.4
             baz=197
L26K   Log Cabin Wild    90.32  15  P        P        12 32 39.4 +0.8
             baz=211
O30N   Mendenhall        90.35  19  IAmb     IAmb     12 32 40.9
             comp=Z,52nm,1.4s
O30N   Mendenhall        90.35  19  P        P        12 32 40.1 +1.3
             baz=217,SNR=5.4
H20K   Anotleneega Mo    90.38   9  P        P        12 32 39.9 +1.0
             baz=200
MOOW   Moose Ponds       90.38  42  IAmb     IAmb     12 32 41.5
             comp=Z,39nm,1.8s
LOHW   Long Hollow       90.40  42  IAmb     IAmb     12 32 41.4
             comp=Z,50nm,1.6s
BVCY   Beaver Creek      90.40  16  P        P        12 32 39.7 +0.6
             baz=213,SNR=6.0
K24K   Donnelly Dome     90.46  13  P        P        12 32 40.4 +1.1
             baz=209
NEA2   Nenana            90.51  12  P        P        12 32 40.6 +1.1
             baz=206
DLBC   Dease Lake        90.52  23  LR       LR       13 05 55.8
             comp=Z,59nm,18.9s,baz=264,slow=31
DLBC   Dease Lake        90.52  23  P        P        12 32 40.5 +0.8
             baz=222
BW06   Boulder Array     90.59  43  IAmb     IAmb     12 32 41.7
             comp=Z,18nm,0.9s
PD31   Pinedale Array    90.59  43  IAmb     IAmb     12 32 41.7
             comp=Z,19nm,1.0s
PDAR   Pinedale Array    90.59  43  P        P        12 32 40.9 +0.2
             comp=Z,9.0nm,0.8s,baz=205,slow=3.1,SNR=59
PDAR                                PKKPbc   PKKPbc   12 50 07.5 -0.9
             comp=Z,0.5nm,0.5s,baz=92,slow=3.1,SNR=5.0
             comp=Z,9.0nm,0.8s
PDAR   Pinedale Array    90.59  43           P        12 32 40.7 +0.1
RIDG   Independent Ri    90.60  14  P        P        12 32 40.9 +0.9
             baz=209
MLY    Manley            90.61  11  P        P        12 32 40.5 +0.5
             baz=204,SNR=5.2
N30M   Aishikik Lake     90.62  18  P        P        12 32 40.6 +0.5
             baz=216
WHY    Whitehorse        90.63  19  IAmb     IAmb     12 32 42.7
             comp=Z,43nm,1.3s
WHY    Whitehorse        90.63  19  P        P        12 32 40.5 +0.3
             baz=218
YPP    Pitchstone Pla    90.63  41  IAmb     IAmb     12 32 44.0
             comp=Z,29nm,1.7s
YHB    Horse Butte       90.66  41  IAmb     IAmb     12 32 43.2
             comp=Z,26nm,1.0s
OZNA   Ozona             90.66  56  IAmb     IAmb     12 32 43.5
             comp=Z,17nm,0.9s
XAN    Xi'an             90.66 307 ⇓P        P        12 32 42.1 +1.1
XAN                                 pmax     pmax
             comp=Z,36nm,0.9s
DOT    Dot Lake          90.70  14  IAmb     IAmb     12 32 42.3
             comp=Z,30nm,1.3s
G19K   Purcell Mounta    90.70   8  IAmb     IAmb     12 32 42.0
             comp=Z,21nm,1.1s
G19K   Purcell Mounta    90.70   8  P        P        12 32 40.8 +0.5
             baz=198
ZEA    Zeya              90.71 331 eP        P        12 32 41.8 +1.2
ZEA                                 pmax     pmax
             comp=Z,10.0nm,0.8s
L27K   Beaver Creek,     90.71  15  P        P        12 32 40.7 +0.2
             baz=212
BCAR   Beaver Creek A    90.72  15           P        12 32 40.5  0.0
HDA    Harding Lake      90.76  13  P        P        12 32 40.9 +0.3
             baz=208,SNR=6.7
CCB    Clear Creek Bu    90.80  12  IAmb     IAmb     12 32 41.9
             comp=Z,34nm,1.3s
F18K   Selawik           90.84   7  P        P        12 32 41.5 +0.7
             baz=196
H17A   Grant Village     90.84  41  IAmb     IAmb     12 32 44.6
             comp=Z,16nm,0.9s
H21K   Melozitna Rive    90.85  10  IAmb     IAmb     12 32 43.5
             comp=Z,34nm,1.6s
H21K   Melozitna Rive    90.85  10  P        P        12 32 41.8 +0.8
             baz=202
R33M   Jennings River    90.91  22  IAmb     IAmb     12 32 43.2
             comp=Z,19nm,1.2s
R33M   Jennings River    90.91  22  P        P        12 32 41.9 +0.3
             baz=222
P33M   Teslin, Yukon     90.92  20  P        P        12 32 42.0 +0.4
             baz=220
YNR    Norris Junctio    90.95  41  IAmb     IAmb     12 32 45.8
             comp=Z,39nm,1.5s
I23K   Minto, Yukon-K    90.96  11  IAmb     IAmb     12 32 43.3
             comp=Z,54nm,1.9s
I23K   Minto, Yukon-K    90.96  11  P        P        12 32 41.8 +0.3
             baz=205
COLA   College           91.00  12  P        P        12 32 41.2 -0.4
COLA                                IAmb     IAmb     12 32 42.6
             comp=Z,30nm,1.1s
COLA   College           91.00  12  P        P        12 32 39.8 -1.8
             comp=Z,19nm,1.4s
COLA   College           91.00  12ceP        P        12 32 40.8 -0.8
COLA                                pmax     pmax
             comp=Z,34nm,1.1s
COLA   College           91.00  12  P        P        12 32 41.9 +0.3
             baz=207
SCRK   Sand Creek        91.00  14  IAmb     IAmb     12 32 44.1
             comp=Z,49nm,2.0s
SCRK   Sand Creek        91.00  14  P        P        12 32 42.1 +0.2
             baz=210
IMAR   Indian Mountai    91.01   9  P        P        12 32 42.1 +0.4
N31M   Braeburn, Yuko    91.02  18  IAmb     IAmb     12 32 44.3
             comp=Z,45nm,1.4s
N31M   Braeburn, Yuko    91.02  18  P        P        12 32 42.3 +0.4
             baz=217
LKWY   Lake              91.03  41  IAmb     IAmb     12 32 45.7
             comp=Z,18nm,0.8s
M29M   Somme Creek       91.05  17  IAmb     IAmb     12 32 45.3
             comp=Z,18nm,1.1s
M29M   Somme Creek       91.05  17  P        P        12 32 42.1  0.0
             baz=215
E17K   Hotham Inlet      91.08   6  P        P        12 32 42.3 +0.3
             baz=194
IL31                     91.09  12  IAmb     IAmb     12 32 44.0
             comp=Z,37nm,1.6s
ILAR   Eielson Array     91.09  12  P        P        12 32 41.5 -0.6
             comp=Z,4.8nm,0.7s,baz=221,slow=5.1,SNR=55
ILAR                                PP       PP       12 36 09.8  -11
             comp=Z,1.4nm,0.9s,baz=212,slow=7.8,SNR=4.7
ILAR                                ScS      S        12 43 26.4  0.0
             comp=Z,2.7nm,1.1s,baz=214,slow=9.5,SNR=8.9
ILAR                                PKKP     PKKPdf   12 50 02.8 -1.9
             comp=Z,0.5nm,0.6s,baz=339,slow=2.7,SNR=6.2
ILAR                                LR       LR       13 05 17.0
             comp=Z,57nm,21.4s,baz=238,slow=30
             comp=Z,4.8nm,0.7s
ILAR   Eielson Array     91.09  12           P        12 32 41.9 -0.2
ILAR   Eielson Array     91.09  12  P        P        12 32 41.9 -0.2
SGCY   Sterling City     91.11  56  IAmb     IAmb     12 32 46.0
             comp=Z,24nm,0.9s
CO03   El Pedregal       91.14 124  IAmb     IAmb     12 32 46.0
             comp=Z,24nm,0.9s
J25K   Salcha River,     91.26  13  P        P        12 32 43.3 +0.3
             baz=209
F19K   Shaleruckik Mo    91.28   8  IAmb     IAmb     12 32 44.3
             comp=Z,30nm,1.3s
F19K   Shaleruckik Mo    91.28   8  P        P        12 32 43.0 +0.1
             baz=198
POKR   Poker Plat Res    91.29  12  IAmb     IAmb     12 32 44.7
             comp=Z,44nm,1.7s
POKR   Poker Plat Res    91.29  12  P        P        12 32 43.5 +0.4
             baz=207
H22K   Ishtalitna Cre    91.30  10  IAmb     IAmb     12 33 25.3
             comp=Z,15nm,1.0s
H22K   Ishtalitna Cre    91.30  10  P        P        12 32 43.5 +0.4
             baz=204
K27K   Chicken           91.48  15  IAmb     IAmb     12 33 27.2
             comp=Z,36nm,1.5s
KMI    Kunming           91.50 297  P        P        12 32 46.8 +1.5
KMI                                 pmax     pmax
             comp=Z,13nm,1.1s
YNE    Yellowstone No    91.51  41  IAmb     IAmb     12 32 47.0
             comp=Z,30nm,1.0s
E18K   Tukpahlearik C    91.53   6  IAmb     IAmb     12 32 46.3
             comp=Z,48nm,1.6s
E18K   Tukpahlearik C    91.53   6  P        P        12 32 44.6 +0.5
             baz=195
G21K   Allakaket         91.55   9  P        P        12 32 44.8 +0.6
             baz=202
H23K   Yukon River       91.55  11  P        P        12 32 44.9 +0.7
             baz=205
J26L   Joseph Creek      91.55  14  IAmb     IAmb     12 33 27.4
             comp=Z,35nm,1.2s
J26L   Joseph Creek      91.55  14  P        P        12 32 45.1 +0.7
             baz=210
N32M   Quiet Lake        91.56  20  P        P        12 32 45.0 +0.6
             baz=220
D17K   Noatak River      91.57   5  P        P        12 32 45.1 +0.8
             baz=193
M30M   Minto, Yukon      91.61  17  IAmb     IAmb     12 32 46.5
             comp=Z,16nm,1.1s
M30M   Minto, Yukon      91.61  17  P        P        12 32 44.9 +0.3
             baz=216,SNR=5.1
L29M   L29M              91.68  17  P        P        12 32 45.5 +0.5
             baz=215
F20K   Avaraart Lake     91.74   8  P        P        12 32 46.1 +1.1
             baz=200
SN07   Snyder 07         91.82  55  IAmb     IAmb     12 32 47.2
             comp=Z,18nm,0.8s
HILR   Hailar Array B    91.83 324  P        P        12 32 44.4 -1.6
             comp=Z,3.9nm,0.6s,baz=148,slow=12,SNR=5.8
             comp=Z,3.9nm,0.6s
H24K   Noodor Dome       91.86  12  P        P        12 32 46.4 +0.7
             baz=207
RDOG   Red Dog Mine      91.94   5  P        P        12 32 46.9 +0.9
             baz=193
E19K   Redstone River    91.94   8  IAmb     IAmb     12 32 47.7
             comp=Z,23nm,1.1s
E19K   Redstone River    91.94   8  P        P        12 32 46.8 +0.8
             baz=198
CMAR   Chiang Mai Arr    91.94 289  P        P        12 32 48.4 +1.2
             comp=Z,16nm,0.9s,baz=132,slow=3.3,SNR=69
CMAR                                PP       PP       12 36 27.9 -1.1
             comp=Z,2.1nm,0.8s,baz=126,slow=5.7,SNR=5.6
CMAR                                PKKPbc   PKKPbc   12 50 03.7 +0.2
             comp=Z,1.5nm,0.6s,baz=292,slow=4.3,SNR=10
             comp=Z,16nm,0.9s
CMAR   Chiang Mai Arr    91.94 289           P        12 32 48.1 +0.9
CMAR   Chiang Mai Arr    91.94 289 i P        P        12 32 48.5 +1.3
CMAR                                pmax     pmax
             comp=Z,19nm,1.0s
C16K   Lisburne Hills    91.96   4  IAmb     IAmb     12 33 27.6
             comp=Z,21nm,1.4s
C16K   Lisburne Hills    91.96   4  P        P        12 32 46.5 +0.5
             baz=191
M31M   Drury Creek, Y    91.99  19  P        P        12 32 47.0 +0.6
             baz=219
LCO    Las Campanas      91.99 123           P        12 32 48.1 +0.4
LCO    Las Campanas      91.99 123  P        P        12 32 48.1 +0.4
LCO                                 pmax     pmax
             comp=Z,29nm,0.9s
AMTX   Amarillo          92.06  53  IAmb     IAmb     12 32 48.6
             comp=Z,23nm,0.9s
CHTO   Chiang Mai        92.09 289           P        12 32 49.0 +1.1
CHTO   Chiang Mai        92.09 289  P        P        12 32 48.6 +0.8
CHTO   Chiang Mai        92.09 289  P        P        12 32 49.0 +1.1
CHTO                                pmax     pmax
             comp=Z,32nm,0.9s
PH02   Texas Public H    92.09  52  IAmb     IAmb     12 32 48.8
             comp=Z,18nm,1.0s
HHC    Hu-ho-hao-te      92.09 314 eP        P        12 32 47.8 +0.3
HHC                                 SKS      SKSac    12 43 01.5 -4.7
HHC                                 S        S        12 43 31.8 -4.9
HHC                                 pmax     pmax
             comp=Z,14nm,0.7s
HHC                                 pmax     pmax
             comp=Z,60nm,5.3s
DAWY   Dawson            92.15  16           P        12 32 47.5 +0.4
DAWY                                IAmb     IAmb     12 32 50.1
             comp=Z,18nm,1.1s
DAWY   Dawson            92.15  16  P        P        12 32 48.0 +0.8
             baz=214,SNR=7.5
BILL   Bilibino          92.15 354           P        12 32 46.3 -0.7
BILL                                IAmb     IAmb     12 32 47.6
             comp=Z,16nm,0.9s
BILL   Bilibino          92.15 354⇓eP        P        12 32 46.5 -0.5
BILL                                pmax     pmax
             comp=Z,24nm,1.3s
WTLY   Watson Lake, Y    92.18  22  IAmb     IAmb     12 32 49.8
             comp=Z,23nm,1.2s
WTLY   Watson Lake, Y    92.18  22  P        P        12 32 48.2 +0.9
             baz=223
F21K   Alatna River      92.21   9  P        P        12 32 47.7 +0.4
             baz=202
G22K   Bettles           92.22  10  P        P        12 32 47.9 +0.5
             baz=203
G23K   Bananza Creek     92.27  10  P        P        12 32 48.6 +1.0
             baz=205
C17K   DeLong Mountai    92.33   5  P        P        12 32 48.2 +0.4
             baz=193
I26K   Coal Creek Min    92.33  14  IAmb     IAmb     12 33 26.8
             comp=Z,29nm,1.5s
I26K   Coal Creek Min    92.33  14  P        P        12 32 48.5 +0.7
             baz=211
K29M   Barlow Dome       92.44  16  IAmb     IAmb     12 32 51.0
             comp=Z,48nm,1.8s
K29M   Barlow Dome       92.44  16  P        P        12 32 49.6 +1.0
             baz=216,SNR=6.5
K22A   Casper            92.45  44  IAmb     IAmb     12 32 50.4
             comp=Z,21nm,1.0s
TOAD   Toad River Com    92.56  24  P        P        12 32 49.9 +0.7
             baz=226
CFA    Coronel Fontan    92.61 126  P        P        12 32 50.5 +0.4
             comp=Z,5.4nm,0.8s,baz=241,slow=4.7,SNR=8.1
             comp=Z,5.4nm,0.8s
LIRD   Liard River Hi    92.63  23  P        P        12 32 50.1 +0.7
             baz=226
F22K   John River        92.66   9  P        P        12 32 50.5 +1.1
             baz=203
C18K   Utukok River      92.67   6  P        P        12 32 50.1 +0.7
             baz=195
MAYO   Mayo, Yukon       92.67  17  IAmb     IAmb     12 33 16.1
             comp=Z,23nm,1.0s
MAYO   Mayo, Yukon       92.67  17  P        P        12 32 50.6 +1.1
             baz=217
G24K   Hadweenzic Riv    92.70  11  P        P        12 32 50.8 +1.2
             baz=207
COLD   Coldfoot          92.71  10  P        P        12 32 51.2 +1.6
             baz=205
J29N   Klondike Camp     92.76  16  P        P        12 32 51.4 +1.4
             baz=215
E20K   Nigu River        92.83   8  P        P        12 32 51.0 +0.8
             baz=199
D19K   Kuna River        92.83   7  IAmb     IAmb     12 33 32.3
             comp=Z,21nm,1.1s
D19K   Kuna River        92.83   7  P        P        12 32 50.9 +0.7
             baz=197
PZH    PanZhiHua         92.89 298  PKP               12 44 47.8
PZH    PanZhiHua         92.89 298  P        P        12 32 51.8 +0.2
I27K   Kandik River      92.92  14  P        P        12 32 51.3 +0.7
             baz=212
CD2    Chengdu           93.15 302  P        P        12 32 56.8 +4.2
CD2                                 pmax     pmax
             comp=Z,20nm,0.8s
I28M   Miner Creek       93.17  15  IAmb     IAmb     12 33 44.2
             comp=Z,42nm,2.0s
I28M   Miner Creek       93.17  15  P        P        12 32 52.6 +0.7
             baz=214
SMWD   Samnorwood        93.21  53  IAmb     IAmb     12 32 53.8
             comp=Z,13nm,0.9s
D20K   Etivluk River     93.21   7  P        P        12 32 52.4 +0.5
             baz=199
C19K   Lookout Ridge     93.26   6  P        P        12 32 52.9 +0.7
             baz=196
E21K   Killik River      93.28   8  IAmb     IAmb     12 33 34.4
             comp=Z,16nm,1.2s
E21K   Killik River      93.28   8  P        P        12 32 53.0 +0.7
             baz=201
E22K   Anaktuvuk Pass    93.30   9  IAmb     IAmb     12 33 34.9
             comp=Z,19nm,1.2s
E22K   Anaktuvuk Pass    93.30   9  P        P        12 32 53.2 +0.8
             baz=203
B18K   Kokolik River     93.31   5  P        P        12 32 53.1 +0.8
             baz=194
J30M   Hart River        93.34  16  P        P        12 32 53.2 +0.4
             baz=217
F24K   Squaw Lake        93.36  11  IAmb     IAmb     12 32 56.1
             comp=Z,21nm,1.7s
F24K   Squaw Lake        93.36  11  P        P        12 32 53.1 +0.4
             baz=207
H27K   Steamboat Moun    93.47  14  P        P        12 32 54.2 +1.0
             baz=212
I29M   Ogilvie Camp,     93.48  15  IAmb     IAmb     12 33 35.8
             comp=Z,26nm,1.6s
I29M   Ogilvie Camp,     93.48  15  P        P        12 32 54.1 +0.9
             baz=215
E23K   Chandalar         93.56  10  P        P        12 32 54.4 +0.8
             baz=205
MTO3   Montecristo       93.59  76  IAmb     IAmb     12 34 18.0
             comp=Z,15nm,0.9s
G26K   Porcupine Rive    93.62  13  IAmb     IAmb     12 32 56.9
             comp=Z,23nm,1.3s
G26K   Porcupine Rive    93.62  13  P        P        12 32 55.1 +1.3
             baz=210
F25K   Christian Rive    93.83  12  P        P        12 32 55.9 +1.1
             baz=209
I30M   Mount Dempster    93.85  16  IAmb     IAmb     12 32 57.8
             comp=Z,26nm,1.7s
I30M   Mount Dempster    93.85  16  P        P        12 32 55.6 +0.6
             baz=217
C21K   Knifeblade Rid    93.85   8  P        P        12 32 55.8 +1.1
             baz=200
D22K   Ayikyak River     93.87   9  IAmb     IAmb     12 32 57.6
             comp=Z,24nm,1.4s
D22K   Ayikyak River     93.87   9  P        P        12 32 55.6 +0.7
             baz=202
KOTAN  Kotaneelee Air    93.88  24  P        P        12 32 55.6 +0.4
             baz=227
BMAR   Burnt Mountain    93.88  12           P        12 32 55.1 +0.1
G27K   Doyon Strip       93.94  13  P        P        12 32 56.1 +0.8
             baz=212
WHTX   Lake Whitney,     93.95  57  IAmb     IAmb     12 32 56.7
             comp=Z,22nm,1.0s
TOLK   Toolik Lake Re    94.10  10  P        P        12 32 57.0 +1.0
             baz=205
H29M   Whitestone        94.17  15  IAmb     IAmb     12 33 38.5
             comp=Z,16nm,1.3s
H29M   Whitestone        94.17  15  P        P        12 32 57.1 +0.7
             baz=215
A19K   Wainwright        94.19   5  P        P        12 32 57.5 +1.2
             baz=195
F26K   Sheenjek River    94.20  12  P        P        12 32 57.8 +1.4
             baz=210
D23K   Nanushuk River    94.23   9  IAmb     IAmb     12 32 58.8
             comp=Z,38nm,1.8s
D23K   Nanushuk River    94.23   9  P        P        12 32 57.7 +1.1
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            baz=204
AC02  Maricunga           94.25 122   IAmb     IAmb     12 33 01.9
            comp=Z,14nm,1.1s
PB14  IPOC Station P      94.29 119            P        12 32 58.6 +0.2
B21K  Ikpikpuk River      94.31   8   P        P        12 32 58.5 +1.7
            baz=201
E25K  Arctic Village      94.31  11   IAmb     IAmb     12 34 48.4
            comp=Z,9.9nm,0.7s
E25K  Arctic Village      94.31  11   P        P        12 32 57.9 +0.9
            baz=209
HKT   Hockley             94.36  59   P        P        12 32 58.7 +0.8
HKT   Hockley             94.36  59⇓eP       P        12 32 58.7 +0.8
HKT                                   pmax     pmax
            comp=Z,29nm,1.6s
B20K  Meade River         94.38   7   IAmb     IAmb     12 33 17.6
            comp=Z,10nm,0.8s
B20K  Meade River         94.38   7   P        P        12 32 58.2 +1.1
            baz=198
NNA   Nana                94.44 105   LR       LR       13 05 47.6
            comp=Z,167nm,21.0s,baz=254,slow=29
NNA   Nana                94.44 105⇓eP       P        12 32 59.5 +0.6
NNA                                   pmax     pmax
            comp=Z,24nm,1.0s
D24K  Happy Valley        94.68  10   P        P        12 32 59.6 +1.0
            baz=206
EPYK  Eagle Plains        94.69  15   P        P        12 32 59.5 +0.8
            baz=217
RSSD  Black Hills         94.75  44            P        12 32 59.3 -0.5
RSSD  Black Hills         94.75  44   P        P        12 32 59.3 -0.5
RSSD                                  pmax     pmax
            comp=Z,28nm,0.9s
F28M  Old Crow            94.99  13   P        P        12 33 00.8 +0.7
            baz=214
C23K  Itkillik River      95.04   9   P        P        12 33 00.8 +0.6
            baz=204
ATAH  Atahualpa           95.06 100   P        P        12 33 03.9 +1.7
            comp=Z,9.3nm,0.8s,baz=267,slow=5.7,SNR=10
ATAH                                  LR       LR       13 06 28.4
            comp=Z,171nm,21.6s,baz=289,slow=29
            comp=Z,9.3nm,0.8s
E27K  Coleen River        95.12  13   P        P        12 33 01.7 +1.0
            baz=212
B22K  Teshekpuk Lake      95.13   8   IAmb     IAmb     12 33 43.2
            comp=Z,40nm,1.9s
B22K  Teshekpuk Lake      95.13   8   P        P        12 33 01.4 +0.9
            baz=202
C24K  Franklin Bluff      95.22  10   P        P        12 33 02.0 +1.0
            baz=206
D25K  Kavik River         95.23  10   P        P        12 33 02.1 +0.9
            baz=208
YAK   Yakutsk             95.26 338   LR       LR       13 17 30.2
            comp=Z,24nm,18.6s,baz=108,slow=36
YAK   Yakutsk             95.26 338 eP       P        12 33 01.0 -0.3
YAK                                   pmax     pmax
            comp=Z,4.0nm,0.8s
YAK                                   pmax     pmax
            comp=N,2.0nm,0.9s
YAK                                   pmax     pmax
            comp=E,2.0nm,0.9s
PB05  IPOC Station P      95.28 118   P        P        12 33 04.4 +1.7
G30M  tAoh Zraii Nji      95.30  15   P        P        12 33 01.7 +0.2
            baz=217
LZH   Lanzhou             95.30 307 eP       P        12 33 03.3 +0.9
LZH                                   pP       pwP      12 33 45.5 +2.0
LZH                                   SKS      SKSac    12 43 22.3 -1.7
LZH                                   S        S        12 44 02.8 -2.3
LZH                                   pmax     pmax
            comp=E,21nm,1.2s
FNO   Franklin            95.37  54   IAmb     IAmb     12 33 04.1
            comp=Z,12nm,1.1s
A22K  Sinclair Lake       95.57   7   P        P        12 33 03.3 +0.7
            baz=200
A21K  Barrow              95.69   6   P        P        12 33 03.7 +0.6
            baz=199
G31M  Satah River         95.72  16   P        P        12 33 04.0 +0.7
            baz=219
E28M  Babbage River       95.89  13   IAmb     IAmb     12 33 08.5
            comp=Z,29nm,1.9s
E28M  Babbage River       95.89  13   P        P        12 33 05.0 +0.9
            baz=214
F30M  Barrier River       95.90  15   P        P        12 33 05.0 +0.7
            baz=218
C27K  Jago River          95.96  11   P        P        12 33 05.2 +0.8
            baz=211
JTS   Las Juntas de       95.96  81   LR       LR       13 10 32.0
            comp=Z,26nm,18.1s,baz=98,slow=32
JTS   Las Juntas de       95.96  81            P        12 33 06.4 +0.7
JTS   Las Juntas de       95.96  81deP       P        12 33 06.9 +1.2
JTS                                   pmax     pmax
            comp=Z,17nm,1.0s
C26K  Camden Bay          96.00  11   P        P        12 33 05.3 +0.7
            baz=210
PB03  IPOC Station P      96.03 117   P        P        12 33 07.9 +1.8
PB03                                  IAmb     IAmb     12 33 08.9
            comp=Z,18nm,1.1s
E29M  Blow River          96.06  14   P        P        12 33 05.2 +0.3
            baz=216
D27M  Malcolm River       96.14  12   IAmb     IAmb     12 33 09.1
            comp=Z,24nm,1.8s
D27M  Malcolm River       96.14  12   P        P        12 33 05.9 +0.5
            baz=213
WRGLY Wrigley             96.18  22   P        P        12 33 06.3 +0.8
            baz=228
F31M  Tsiigehtchic        96.26  15   P        P        12 33 05.9 +0.1
            baz=219
INK   Inuvik              96.98  15   LR       LR       13 12 20.6
            comp=Z,45nm,18.2s,baz=350,slow=32
PB11  IPOC Station P      97.18 115            Pdif     12 33 13.7 +2.2
PB16  IPOC Station P      97.97 114   P        Pdif     12 33 18.1 +2.5
ULN   Ulaanbaatar         98.23 319⇓eP       P        12 33 13.1 -2.3
ULN                                   pmax     pmax
            comp=Z,2.0nm,1.0s
SONM  Songino Array       98.61 318   P        Pdif     12 33 17.2 +0.1
            comp=Z,0.9nm,0.8s,baz=116,slow=3.4,SNR=5.5
SONM                                  PP       PP       12 37 13.5 -6.7
            comp=Z,2.3nm,1.0s,baz=130,slow=6.5,SNR=4.6
SONM                                  PKKPbc   PKKPbc   12 49 45.9 -1.1
            comp=Z,0.7nm,0.5s,baz=280,slow=3.3,SNR=5.7
SONM                                  LR       LR       13 15 37.4
            comp=Z,28nm,19.3s,baz=46,slow=34
            comp=Z,0.9nm,0.8s
SONM  Songino Array       98.61 318   IAmb     IAmb     12 33 25.6
            comp=Z,2.3nm,1.0s
SAIH  SAIHA               98.65 291 eP       Pdif     12 33 25.1 +7.3
SAIH                                  IAmb     IAmb     12 33 30.4
            comp=Z,5.7nm,0.9s
IMP   Imphal              98.70 293 eP       Pdif     12 33 23.9 +6.0
IMP                                   IAmb     IAmb     12 34 28.4
            comp=Z,6.9nm,1.2s
PASG  PASIGHAT            98.75 297 eP       Pdif     12 33 25.1 +7.0
PASG                                  IAmb     IAmb     12 33 35.6
            comp=Z,6.5nm,2.6s
MOKO  MOKOCHONG           98.77 295 eP       Pdif     12 33 25.4 +7.0
MOKO                                  IAmb     IAmb     12 33 45.7
KOHI  KOHIMA              98.89 294 eP       Pdif     12 33 26.2 +7.4
KOHI                                  IAmb     IAmb     12 34 24.8
            comp=Z,8.3nm,0.5s
YKA   Yellowknife Ar      98.91  25   P        P        12 33 17.7 -0.1
            comp=Z,1.1nm,0.9s,baz=245,slow=4.9,SNR=9.4
YKA                                   PP       PP       12 37 18.9 -3.0
            comp=Z,0.5nm,0.7s,baz=242,slow=7.8,SNR=4.2
YKA                                   PKKPbc   PKKPbc   12 49 43.6 -3.0
            comp=Z,1.3nm,0.7s,baz=27,slow=2.6,SNR=14
            comp=Z,1.1nm,0.9s
YKA   Yellowknife Ar      98.91  25   P        PP       12 37 18.9 -3.0
ZIRO  ZIRO                99.77 296 eP       Pdif     12 33 30.5 +7.8
ZIRO                                  IAmb     IAmb     12 33 40.5
            comp=Z,6.9nm,0.6s
LPAZ  La Paz             100.09 113   P        Pdif     12 33 26.5 +1.5
            comp=Z,6.4nm,0.8s,baz=255,slow=3.1,SNR=10
LPAZ                                  PP       PP       12 37 32.3 +0.2
            comp=Z,5.1nm,1.1s,baz=266,slow=6.8,SNR=9.1
BELO  BELONIA            100.25 291 eP       Pdif     12 33 32.2 +7.5
TEZP  TEZPUR             100.31 295 eP       Pdif     12 33 32.4 +7.4
TEZP                                  IAmb     IAmb     12 34 04.6
            comp=Z,3.7nm,0.8s
AGT   Agartala           100.65 291 eP       Pdif     12 33 34.0 +7.5
AGT                                   IAmb     IAmb     12 33 43.9
            comp=Z,4.7nm,0.9s
GUWA  GUWAHATI           101.09 294 eP       Pdif     12 33 35.5 +7.1
GUWA                                  IAmb     IAmb     12 34 20.5
            comp=Z,4.9nm,0.4s
TAWA  Tawang             101.44 295 eP       Pdif     12 33 39.8 +9.4
TAWA                                  IAmb     IAmb     12 33 48.4
            comp=Z,12nm,0.4s
ULM   Lac du Bonnet      102.38  41   PKKPbc   PKKPbc   12 49 34.4 -1.7
            comp=Z,1.0nm,0.5s,baz=90,slow=5.1,SNR=3.0
DHUB  DHUBRI             102.46 293 eP       Pdif     12 33 41.0 +6.5
DHUB                                  IAmb     IAmb     12 33 56.7
            comp=Z,7.5nm,0.6s
CAL   Calcutta           102.68 289 eP       Pdif     12 33 43.0 +7.5
GTK   Tadong             104.07 294 eP       Pdif     12 33 49.8 +7.9
GTK                                   IAmb     IAmb     12 34 05.8
            comp=Z,18nm,0.7s
JMUI  Jamui              105.30 291 eP       Pdif     12 33 53.2 +6.1
GAYA  Gaya               106.12 290 eP       Pdif     12 33 58.0 +7.2
TRD   Trivandrum         107.95 272 eP       Pdif     12 34 07.5 +8.3
ALBI  Allahabad          109.22 290 eP       Pdif     12 34 12.2 +7.7
WMQ   Urumqi             109.56 310   Pdif     Pdif     12 34 06.8 +1.0
WMQ                                   LR       LR
            comp=Z,110nm,24.2s
BRCI  Bahraich           110.06 292 eP       Pdif     12 34 14.9 +6.6
LKN   LUCKNOW            110.45 291 eP       PKiKP    12 38 18.0 +7.9
DGZ   Jazzator, Alta     111.06 316⇑iPKIKP   PKiKP    12 38 09.9 -0.9
PTH   Pithoragarh        111.80 294 eP       PKiKP    12 38 20.1 +7.3
AKL   Akola              112.04 284 eP       PKiKP    12 38 21.1 +7.8
ZALV  Zalesovo Beam      113.40 320   PKiKP    PKiKP    12 38 13.4 -1.4
            comp=Z,5.0nm,0.6s,baz=170,slow=1.1,SNR=27
NRIK  Noril'sk           113.71 337   PKiKP    PKiKP    12 38 14.1 -1.0
            comp=Z,1.5nm,0.5s,baz=86,slow=4.0,SNR=4.5
MK31  Makanchi Array     113.90 312c iPKIKP   PKiKP    12 38 14.6 -1.5
MKAR  Makanchi Array     113.90 312   PKiKP    PKiKP    12 38 14.9 -1.1
            comp=Z,1.7nm,0.4s,baz=229,slow=1.1,SNR=25
MKAR                                  PKKPbc   PKKPbc   12 48 59.3 -0.2
            comp=Z,2.1nm,0.7s,baz=267,slow=4.0,SNR=9.1
MKAR  Makanchi Array     113.90 312 i PKIKP   PKiKP    12 38 15.0 -1.1
KLP   Kalpa              113.92 295 eP       PKiKP    12 38 24.9 +7.9
NDI   New Delhi          114.09 292 eP       PKiKP    12 38 24.2 +7.2
AYAN  Aya Nagar          114.12 292 eP       PKiKP    12 38 23.2 +6.2
KUDL  Kundal             114.58 291 eP       PKiKP    12 38 24.7 +6.8
CGRH  CHANDIGARH         114.96 294 eP       PKiKP    12 38 26.6 +8.0
ALCI  Alchi Leh          115.39 298 eP       PKiKP    12 38 27.6 +7.7
UZB   Uzynbulak          115.61 308 ePKP     PKPdf    12 38 18.6 -1.2
UZB   Uzynbulak          115.61 308 ePKIKP   PKPdf    12 38 18.5 -1.2
SATY  Saty               116.05 308 ePKP     PKPdf    12 38 19.4 -1.1
SATY  Saty               116.05 308 ePKIKP   PKPdf    12 38 19.4 -1.1
TARG  Taragay, Kyrgy     116.28 306            PKPdf    12 38 21.1 -0.2
TARG  Taragay, Kyrgy     116.28 306   PKIKP    PKPdf    12 38 21.1 -0.2
BHV   Bhavnagar          116.69 283 eP       PKiKP    12 38 31.2 +9.0
KURK  Kurchatov          116.81 316            PKPdf    12 38 20.4 -1.1
KURK  Kurchatov          116.81 316d iPKIKP   PKPdf    12 38 20.4 -1.1
KURK                                  pmax     pmax
            comp=Z,13nm,1.7s
KURBB Kurchatov Arra     116.86 316   PKP      PKPdf    12 38 20.2 -1.4
            comp=Z,5.4nm,0.8s,baz=98,slow=2.0,SNR=46
KURBB                                 PP       PP       12 39 23.8 -9.1
            comp=Z,0.9nm,0.7s,baz=85,slow=2.9,SNR=4.3
KURBB                                 SKP      SKPdf    12 41 42.9 +0.2
            comp=Z,1.4nm,0.9s,baz=115,slow=3.0,SNR=4.2
KURBB                                 PKKPbc   PKKPbc   12 48 44.3 -5.0
            comp=Z,1.7nm,0.8s,baz=274,slow=4.5,SNR=7.1
MDOK  Medeo              117.04 308 ePKP     PKPdf    12 38 21.2 -1.2
MDOK  Medeo              117.04 308 ePKIKP   PKPdf    12 38 21.2 -1.2
KSH   Kashi              117.32 304   PKP      PKiKP    12 38 23.3 +0.2
BOOM  Boomskoye usch     117.76 307            PKPdf    12 38 23.6 -0.3
BOOM  Boomskoye usch     117.76 307   PKIKP    PKPdf    12 38 23.6 -0.3
AAK   Ala-Archa          118.84 307            PKPdf    12 38 25.6 -0.4
AAK   Ala-Archa          118.84 307d iPKIKP   PKPdf    12 38 25.1 -0.8
AAK                                   pmax     pmax
            comp=Z,4.0nm,1.3s
OPO   Ambohidratompo     119.85 230   PKP      PKPdf    12 38 28.6  0.0
            comp=Z,4.9nm,0.6s,baz=152,slow=1.7,SNR=5.4
KULLO Kullorsuaq         120.33  16 i P        PKPdf    12 38 26.6 -1.0
NEEM  North Greenlan     120.38  12 i P        PKPdf    12 38 27.2 -0.8
DZA   Taraz              121.19 307 ePKP     PKPdf    12 38 29.3 -0.9
DZA   Taraz              121.19 307 ePKIKP   PKPdf    12 38 29.3 -0.9
GAR   Garm               121.61 302            PKPdf    12 38 31.4 +0.1
KK31  Karatay Array      121.80 307            PKPdf    12 38 30.6 -0.8
KK31  Karatay Array      121.80 307   PKIKP    PKPdf    12 38 30.6 -0.8
KKAR  Karatay Array      121.80 307            PKPdf    12 38 30.2 -1.2
KKAR  Karatay Array      121.80 307   PKIKP    PKPdf    12 38 30.2 -1.2
BVAR  Borovoye Array     121.95 319   PKP      PKPdf    12 38 30.3 -1.1
            comp=Z,11nm,0.6s,baz=123,slow=1.1,SNR=40
BORK  Borovoye           122.00 319            PKPdf    12 38 30.7 -0.7
BORK  Borovoye           122.00 319d iPKIKP   PKPdf    12 38 30.6 -0.8
BORK                                  pmax     pmax
            comp=Z,19nm,1.7s
KBL   Kabul              122.08 297            PKiKP    12 38 32.6  0.0
KBL   Kabul              122.08 297   PKIKP    PKiKP    12 38 32.6  0.0
IUG   Iuzhnay            122.09 306 ePKP     PKPdf    12 38 31.1 -1.1
IUG   Iuzhnay            122.09 306 ePKIKP   PKPdf    12 38 31.0 -1.1
BRLS  Borolday           122.29 307 ePKP     PKPdf    12 38 31.6 -0.8
BRLS                                ePP      PP       12 40 09.2 -1.3
BRLS  Borolday           122.29 307 ePKIKP   PKPdf    12 38 31.5 -0.8
BRLS                                e                 12 40 09.1
CHM   Chimkent           122.42 306 ePKP     PKPdf    12 38 31.7 -1.0
CHM   Chimkent           122.42 306 ePKIKP   PKPdf    12 38 31.6 -1.0
CHGR  Chuyangaron        122.47 302            PKiKP    12 38 33.2  0.0
CHGR  Chuyangaron        122.47 302   PKIKP    PKiKP    12 38 33.2  0.0
SHAA  Shahritus          123.18 300            PKiKP    12 38 35.5 +1.0
BOSA  Boshof             123.85 204   PKP      PKiKP    12 38 36.3  0.0
            comp=Z,14nm,1.1s,baz=115,slow=2.1,SNR=9.5
BOSA  Boshof             123.85 204            PKiKP    12 38 36.7 +0.3
ILULI Ilulissat          124.30  20 i P        PKPdf    12 38 34.3 -1.1
SPITS Spitsbergen Ar     124.95 357   PKP      PKPdf    12 38 35.7 -0.7
            comp=Z,13nm,0.7s,baz=83,slow=2.7,SNR=15
SPB2  Spitsbergen Ar     124.95 357            PKPdf    12 38 36.5  0.0
SFJD  Kangerlussuaq      125.42  23 i P        PKPdf    12 38 36.7 -0.9
DAG   Danmarks Havn      125.67   6 i P        PKPdf    12 38 36.1 -1.8
SUMG  Summit             125.90  14            PKPdf    12 38 38.7 -0.2
SUMG  Summit             125.90  14   PKIKP    PKPdf    12 38 38.7 -0.2
PHPEN Phepeng            127.58 203            PKiKP    12 38 44.4 +0.6
ARTI  Arti               128.29 324            PKPdf    12 38 42.5 -0.9
ARTI  Arti               128.29 324 i PKIKP    PKPdf    12 38 43.3 -0.1
ARTI                                                    12 40 49.9
ARTI                                                    12 45 37.7
ARTI                                  SP       SP       12 50 38.3 -2.0
ARTI                                  SS       SS       12 57 47.9 -4.6
LPHEP Lephephe           128.32 207            PKiKP    12 38 46.0 +0.7
AB31  Akbulak array      128.87 315            PKPdf    12 38 44.4 -0.3
ABKAR Akbulak array      128.87 315            PKPdf    12 38 43.2 -1.5
LKGWB Lokgwabe           129.40 202            PKiKP    12 38 47.9 +0.4
MATP  Matopo             129.68 212   PKP      PKiKP    12 39 04.0  +16
            comp=Z,13nm,1.0s,baz=145,slow=2.2,SNR=14
KHWEE KHWEE              129.75 208            PKiKP    12 38 48.5 +0.3
KGCAE Kacgae             130.21 203            PKiKP    12 38 49.7 +0.6
KOOLE Kule               130.78 201            PKiKP    12 38 50.2 -0.1
GRTLG Ghanzi             131.94 203            PKiKP    12 38 52.5 -0.2
KIRV  Kirov              132.03 329c iPKIKP   PKPdf    12 38 49.3 -1.1
ARCES ARCESS Array B     132.07 350   PKhKP    PKPpre   12 38 42.0
            comp=Z,1.8nm,0.8s,baz=45,slow=1.4,SNR=7.3
ARCES                                 PKP      PKPdf    12 38 49.6 -0.6
            comp=Z,7.4nm,0.6s,baz=17,slow=1.1,SNR=23
ARCES                                 SKPbc    SKPbc    12 42 02.6 +0.3
            comp=Z,22nm,1.1s,baz=354,slow=6.1,SNR=8.8
KSANE Kasane             133.52 210            PKPdf    12 38 52.8 -1.8
KLMR  Klimovskoe         135.01 336 ePKIKP   PKPdf    12 38 54.8 -1.1
KLMR                                e                   12 39 37.7
KLMR                                  pmax     pmax
            comp=Z,29nm,1.4s
BELG  Belogornoye        135.55 322d iPKIKP   PKPdf    12 38 56.6 -0.6
KIBK  Kibwezi            137.22 238            PKPdf    12 39 02.1 +0.4
MAK   Makhachkala        138.57 309c iP       Pdif     12 36 13.6 -1.1
MAK                                 i                   12 39 03.3
MAK                                 e                   12 39 48.3
MAK                                 e                   12 41 52.7
MAK                                   pmax     pmax
            comp=Z,46nm,0.3s
AKT   Akhty              138.72 307 ePKIKP   PKPdf    12 39 01.8 -1.8
AKT                                   pmax     pmax
            comp=Z,16nm,1.0s
FINES FINESS Array B     138.93 343   PKhKP    PKPpre   12 38 51.9
            comp=Z,1.9nm,0.6s,baz=30,slow=3.5,SNR=9.5
FINES                                 PKP      PKPdf    12 39 01.3 -1.9
            comp=Z,4.9nm,0.6s,baz=48,slow=3.9,SNR=4.3
FINES                                 SKPbc    SKPbc    12 42 23.8  0.0
            comp=Z,6.9nm,0.8s,baz=85,slow=4.0,SNR=8.0
VRH   Novokhopyorsk      139.37 323 ePKIKP   PKPdf    12 39 00.9 -3.4
VRH                                   pmax     pmax
            comp=Z,20nm,0.6s
OBN   Obninsk            139.84 330 ePKIKP   PKPdf    12 39 04.3 -0.7
OBN                                   pmax     pmax
            comp=Z,9.0nm,1.1s
LPSR  Galich'ya Gora     140.15 326 ePKIKP   PKiKP    12 39 08.1 -0.1
LPSR                                  pmax     pmax
            comp=Z,19nm,1.1s
VSR   Storozhevoye       140.76 324 ePKIKP   PKPdf    12 39 04.3 -2.5
VSR                                   pmax     pmax
            comp=Z,10.0nm,1.0s
VORD  Divnogorie         140.82 324 ePKIKP   PKPdf    12 39 02.5 -4.4
VORD                                  pmax     pmax
            comp=Z,7.0nm,0.8s
KBZ   Khabaz             141.59 311   PKhKP    PKPpre   12 39 04.1
            comp=Z,1.8nm,0.8s,baz=294,slow=4.1,SNR=5.9
KIV   Kislovodsk         141.66 312 ePKIKP   PKPdf    12 39 05.4 -3.4
KIV                                   pmax     pmax
            comp=Z,8.0nm,1.1s
NB2   NORSAR Subarra     142.10 353   PKPdf    PKPdf    12 39 03.9 -5.1
            comp=Z,2.4nm,0.6s,baz=14,slow=1.8
NB2                                   pPKP     SKPbc    12 42 33.6 +1.3
            comp=Z,1.1nm,0.8s,baz=12,slow=2.7
NOA   NORSAR Array B     142.10 353   PKhKP    PKPpre   12 39 03.9
            comp=Z,0.7nm,0.5s,baz=50,slow=1.7,SNR=11
NOA                                   SKP      SKPdf    12 42 31.8 +2.6
            comp=Z,1.8nm,0.8s,baz=14,slow=4.2,SNR=3.7
NORES NORESS Array B     142.36 353   PKHKP    PKPpre   12 39 04.6
ERBR  Yeremizino-Bor     142.49 315 i PKIKP    PKPdf    12 39 06.2 -3.9
ERBR                                  pmax     pmax
            comp=Z,13nm,0.5s
HFS   Hagfors            142.68 351   PKhKP    PKPpre   12 39 05.3
            comp=Z,9.4nm,0.5s,baz=60,slow=3.6,SNR=45
LABN  Labinsk            142.75 314 i PKIKP    PKiKP    12 39 17.5 +3.7
LABN                                  pmax     pmax
            comp=Z,41nm,0.5s
LODK  Lodwar             142.82 242            PKPdf    12 39 08.7 -3.1
MBAR  Mbarara            143.86 232   PKP      PKPbc    12 39 11.6 -0.2
            comp=Z,7.1nm,0.4s,baz=122,slow=4.8,SNR=20
MBAR  Mbarara            143.86 232            PKPbc    12 39 12.6 +0.8
MBAR  Mbarara            143.86 232dePKIKP   PKPbc    12 39 12.4 +0.6
MNK   Minsk              143.91 335 i PKP      PKPbc    12 39 10.4 -0.1
            comp=E,18nm,0.8s
MNK                                 i PKP      PKPbc    12 39 10.4 -0.1
            comp=N,21nm,0.8s
MNK                                 i PKP      PKPbc    12 39 10.4 -0.1
            comp=Z,41nm,0.8s,baz=41
MNK                                 i PKiKP    PKiKP    12 39 15.7 -0.1
            comp=Z,24nm,0.9s
MNK                                 i pPKiKP   pPKiKP   12 39 56.1 +0.6
MNK                                 i sPKiKP   sPKiKP   12 40 12.5 +1.6
MNK                                 i PP       PP       12 42 27.4 +0.3
MNK                                 i SKP               12 42 51.8
MNK                                 i PKS      PKSdf    12 43 09.4  +22
MNK                                 i PPP      PPP      12 45 36.0
MNK                                 i SKS      SKSac    12 46 22.3 +7.4
MNK                                 i SS       SS       13 01 01.9 +4.1
MNK   Minsk              143.91 335 i PKIKP    PKPbc    12 39 10.3 -0.2
MNK                                 i                   12 39 56.1
MNK                                 i                   12 42 27.4
MNK                                 i SS       SS       13 01 01.8 +4.1
MNK                                   pmax     pmax
            comp=Z,41nm,0.8s
MNK                                   pmax     pmax
            comp=N,21nm,0.8s
NACGM Naroch             144.01 337 ePKP     PKPbc    12 39 11.3 +0.5
            comp=Z,52nm,0.9s,baz=38
STRU  Stroemstad         144.07 353 i P        PKPab    12 39 10.4 +0.1
KOPT  Kop Dagi           144.41 306            PKPdf    12 39 14.2 +0.2
PABE  Paberze            144.50 339            PKPbc    12 39 12.1 -0.1
ANN   Anapa              144.83 316 ePKIKP   PKPbc    12 39 11.5 -2.1
ANN                                   pmax     pmax
            comp=Z,70nm,0.8s
TJOU  Tjoern             144.99 352 i P        PKPbc    12 39 13.1 -0.6
HOMB  Homborsund         145.09 355 i P        PKPbc    12 39 13.8 -0.2
SNART Snartemo           145.11 356 i P        PKPbc    12 39 13.1 -1.0
BORU  Boraas             145.22 351 i P        PKPbc    12 39 13.1 -1.3
ONAU  Onsala             145.57 351 i P        PKPdf    12 39 14.5 -0.6
KPL   Plockton           145.68   8 eP       PKPdf    12 39 14.9 -0.3
SUW   Suwalki            145.99 339 ePKP     PKPab    12 39 17.6 -0.1
AK03  Malin Array Si     146.07 330   PKP      PKPdf    12 39 15.5 -0.6
AKASG Malin Array Be     146.09 330   PKPbc    PKPdf    12 39 16.3 +0.2
            comp=Z,26nm,0.5s,baz=44,slow=4.2,SNR=114
AKASG                                 SKPbc    SKiKP    12 42 42.6 +0.4
            comp=Z,8.1nm,0.8s,baz=44,slow=2.7,SNR=5.9
AKASG Malin Array Be     146.09 330            PKPdf    12 39 16.1  0.0
AKBB  Malin Array Si     146.09 330cePKP2    PKPdf    12 39 16.2  0.0
AKBB  Malin Array Si     146.09 330   PKP      PKPdf    12 39 15.5 -0.7
AK23  Malin Array Si     146.09 330   PKP      PKPdf    12 39 15.5 -0.7
AK01  Malin Array Si     146.10 330   PKP      PKPdf    12 39 15.5 -0.7
KIEV  Kiev               146.10 330            PKPdf    12 39 16.2 +0.1
KIEV  Kiev               146.10 330 ⇑P       PKPdf    12 39 13.9 -2.3
KIEV  Kiev               146.10 330   PKP2     PKPdf    12 39 16.2 +0.1
KIEV  Kiev               146.10 330   PKP      PKPdf    12 39 15.5 -0.7
AK08  Malin Array Si     146.12 330   PKP      PKPdf    12 39 15.6 -0.6
AK21  Malin Array Si     146.12 330   PKP      PKPdf    12 39 15.6 -0.6
DEL   Delary             146.16 349 i P        PKPdf    12 39 16.7 +0.6
DRUM  Mains of Drumt     146.44   5 eP       PKPdf    12 39 17.3 +0.8
MI28  Mi28,Pidlybu       146.63 331   PKP      PKPdf    12 39 16.4 -0.7
BJUU  Bjuv               146.68 350 i P        PKPdf    12 39 17.6 +0.7
LAWE  Loch Awe, Argy     146.76   8 eP       PKPbc    12 39 18.3 -0.8
INVG  Invergeldie, C     146.77   7 eP       PKPbc    12 39 18.2 -1.0
MUD   Monsted U'grnd     146.82 354 i P        PKPbc    12 39 19.4 +0.2
SIM   Simferopol'        146.85 318 ePKP2    PKPbc    12 39 20.3 +0.5
LUNU  Lund               147.03 349 i P        PKPbc    12 39 18.9 -1.0
RNPP8 Varash             147.10 333   PKP      PKPdf    12 39 17.2 -0.7
RNPP5 Staryi Chortor     147.17 333   PKP      PKPdf    12 39 17.3 -0.7
BSD   Bornholm Skovb     147.24 347 i P        PKPbc    12 39 20.4 -0.1
LUBAR Lubar, Ukraine     147.31 330   PKP      PKPdf    12 39 17.6 -0.6
EDI   Edinburgh          147.35   6 eP       PKPbc    12 39 19.9 -0.8
IDGL  Inch Island, C     147.57  11   PKPdf    PKPbc    12 39 21.3 -0.1
EKA   Eskdalemuir Ar     147.94   7   PKPbc    PKPbc    12 39 22.1 -0.3
            comp=Z,8.4nm,0.5s,baz=337,slow=2.7,SNR=32
ESK   Eskdalemuir        147.95   7 eP       PKPbc    12 39 21.6 -0.8
NEWG  New Galloway       148.03   8 eP       PKPbc    12 39 21.9 -0.6
GAL1  Galloway           148.21   8 eP       PKPbc    12 39 21.4 -1.7
SORM  Soroca             148.24 327 ⇑P       PKPbc    12 39 22.5 -0.8
SORM  Soroca             148.24 327 ⇑PKP2    PKPbc    12 39 22.5 -0.8
BZK   Bozkurt            148.31 313 ⇓P       PKPbc    12 39 23.1 -0.7
GKP   Gorka Klasztor     148.41 344 ePKP     PKiKP    12 39 24.8 -0.3
HORU  Horodok            148.42 330   PKP      PKPdf    12 39 19.5 -0.6
EDMD  Edmundbyers        148.55   5 eP       PKPbc    12 39 22.9 -1.1
BEL   Belsk              148.60 339 ePKP     PKPbc    12 39 24.6 +0.4
IGLA  Glengowla, Co      148.75  14   PKPdf    PKPbc    12 39 23.7 -0.8
ILTH  Belurgan, Co L     148.78  11   PKPdf    PKPbc    12 39 24.2 -0.3
MILM  Milestii Mici      148.79 325 ⇓P       PKPbc    12 39 23.3 -1.5
MILM  Milestii Mici      148.79 325 ⇓PKIKP   PKPbc    12 39 23.3 -1.5
FKH   Fakeheh            148.95 298 eP       PKPbc    12 39 26.3 +0.5
BEIL  Beino              149.07 298 eP       PKPbc    12 39 26.4 +0.5
BSEG  Bad Segeberg       149.16 351 ePKPbc   PKPbc    12 39 25.5 +0.1
            baz=17,slow=2.3
HWQ   Hawqa              149.32 298 eP       PKPbc    12 39 26.6 -0.1
HPK   Haverah Park       149.44   5 eP       PKPbc    12 39 26.1 -0.1
BR131 Keskin Array S     149.48 309            PKPbc    12 39 26.5 -0.5
BR131 Keskin Array S     149.48 309⇓ePKIKP   PKPdf    12 39 20.9 -1.4
BRTR  Keskin Array B     149.48 309   PKP      PKPdf    12 39 21.6 -0.7
            comp=Z,4.6nm,0.6s,baz=116,slow=2.9,SNR=8.9
BRTR                                  PKPbc    PKPbc    12 39 26.7 -0.3
            comp=Z,11nm,0.7s,baz=142,slow=4.9,SNR=48
BRTR  Keskin Array B     149.48 309            PKPdf    12 39 21.7 -0.7
BRTR                                           PKPbc    12 39 26.9  0.0
BRTR                                  PKPab    PKPab    12 39 32.1 -0.3
BR104 Keskin Array S     149.49 309   PKP      PKPdf    12 39 21.4 -0.9
BR106 Keskin Array S     149.49 309   PKP      PKPdf    12 39 21.4 -0.9
BR105 Keskin Array S     149.50 309   PKP      PKPdf    12 39 21.4 -1.0
KIRS  Kirsehir-Merke     149.50 308 ⇑P       PKPdf    12 39 22.3 -0.1
VASR  Vaslui             149.51 325 ⇑P       PKiKP    12 39 27.3 -0.4
BHL   Bhannes            149.63 297 eP       PKPbc    12 39 27.5  0.0
STNU  Starunia           149.65 331   PKP      PKPdf    12 39 21.4 -0.7
SHBL  Chebaa             149.66 296 eP       PKiKP    12 39 28.3 -0.3
QRWL  Qaraoun            149.67 297 eP       PKPbc    12 39 27.9 +0.3
KWP   Kalwaria Pacla     149.70 334 ePKP     PKPbc    12 39 27.1 +0.1
DQRL  Deir Qamar         149.73 297 eP       PKiKP    12 39 28.4 -0.2
PRAR  RASCA              149.82 328 ⇑P       PKiKP    12 39 28.1 -0.2
TLCR                     149.86 322 ⇑P       PKiKP    12 39 28.0 -0.4
GORT1 Trebel             149.93 350 ePKPbc   PKPbc    12 39 27.7 +0.3
            baz=17,slow=2.3
GIRR  Girov              149.96 327 ⇑P       PKiKP    12 39 28.2 -0.4
MMAI  Mount Meron Ar     150.00 296   PKPbc    PKiKP    12 39 29.1 -0.1
            comp=Z,43nm,0.8s,baz=76,slow=4.4,SNR=64
SCTR  Scanteiesti        150.02 324 ⇑P       PKPbc    12 39 28.1 +0.2
ANTO  Ankara             150.02 310            PKPbc    12 39 28.5 +0.3
ANTO  Ankara             150.02 310 ⇓P       PKPbc    12 39 28.0 -0.2
ANTO  Ankara             150.02 310   PKP2     PKPbc    12 39 28.5 +0.3
BURAR Bucovina Array     150.13 329 ⇑P       PKPbc    12 39 27.6 -0.6
BURAR Bucovina Array     150.13 329 ⇑PKHKP   PKPbc    12 39 27.6 -0.6
NEGRR Negrea             150.17 323 ⇑P       PKPbc    12 39 28.5 +0.3
TESR  Tescani            150.19 326 ⇓P       PKPbc    12 39 27.6 -0.7
TESR  Tescani            150.19 326   PKP      PKPdf    12 39 22.3 -0.7
MEZ   Mezhgor'ye         150.23 332   PKP      PKPdf    12 39 22.4 -0.7
CFR   Carcaliu           150.25 323 ⇑P       PKiKP    12 39 29.1  0.0
CFR   Carcaliu           150.25 323 ⇑PKIKP   PKiKP    12 39 29.1  0.0
TPGR  Topolog            150.29 322 ⇑P       PKPbc    12 39 28.0 -0.6
OJC   Ojcow              150.31 338 ePKP     PKPbc    12 39 28.6 +0.1
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OJC	Ojcow	150.31	338		PKiKP	12 39 28.9	-0.3
OJC	Ojcow	150.31	338	PKIKP	PKiKP	12 39 28.9	-0.3
RAKU	Rahkiv	150.31	331	PKP	PKPdf	12 39 22.3	-0.9
FOEL	Foel Wylfa	150.34	8	eP	PKPbc	12 39 27.6	-0.9
ONER	Baraj Valea Uz	150.44	326	⇓P	PKPbc	12 39 29.1	+0.2
STHS	Stebnicka Huta	150.45	335	ePKIKP	PKPbc	12 39 29.1	+0.3
STHS	Stebnicka Huta	150.45	335	ePKP	PKPbc	12 39 29.1	+0.3
STHS				e		12 39 37.2	
RETH	Rethem/Aller,	150.45	352	ePKPbc	PKPbc	12 39 28.7	+0.1
	baz=17,slow=2.3						
TIRR	Tirgusor	150.53	321	⇓P	PKPbc	12 39 27.4	-1.7
TIRR	Tirgusor	150.53	321	⇓PKIKP	PKPbc	12 39 27.4	-1.7
VRI	Vrincioaia	150.57	325	⇑P	PKPbc	12 39 28.7	-0.5
VRI	Vrincioaia	150.57	325	⇑PKIKP	PKPbc	12 39 28.7	-0.5
FLTG	Flechtingen	150.57	350	ePKPbc	PKPbc	12 39 28.9	0.0
	baz=17,slow=2.3						
PLOR	Plostina	150.62	325	⇑P	PKPbc	12 39 29.7	+0.3
PLOR	Plostina	150.62	325	⇑PKIKP	PKPbc	12 39 29.7	+0.3
EFOR	EFORIE	150.62	320	⇑P	PKiKP	12 39 30.0	0.0
MFTR	Murfatlar	150.69	321	⇑P	PKPbc	12 39 29.3	-0.2
HLM1	Long Mynd	150.74	7	eP	PKPbc	12 39 28.7	-0.7
NIE	Niedzica	150.80	336	ePKP	PKiKP	12 39 30.7	+0.5
MANR	Mangalia	150.80	320	⇑P	PKPbc	12 39 30.1	+0.3
TURR	Turia	150.82	326	⇓P	PKPbc	12 39 29.7	-0.1
BERU	Beregovo	150.82	332	PKP	PKPdf	12 39 23.2	-0.7
KSP	Ksiaz	150.85	342	ePKP	PKiKP	12 39 30.4	+0.2
KSP	Ksiaz	150.85	342	PKP	PKPdf	12 39 23.2	-0.7
ASSE	Asse, Remlinge	150.86	350	ePKPbc	PKPbc	12 39 29.7	+0.1
	baz=17,slow=2.3						
COVR	Voineasa-Covas	150.86	325	⇑P	PKPbc	12 39 28.2	-1.7
OZUR		150.91	326	⇓P	PKPbc	12 39 30.2	+0.2
ARCR	ARCALIA	150.91	329	⇓P	PKiKP	12 39 30.3	-0.3
BOSR	Bodos	150.99	326	⇑P	PKPbc	12 39 29.7	-0.6
OSTC	Ostas	151.13	342	⇑ePKP	PKiKP	12 39 31.2	+0.3
CHVC	Chvalec	151.15	343	ePKIKP	PKiKP	12 39 31.0	+0.1
CHVC	Chvalec	151.15	343	⇑ePKP	PKiKP	12 39 31.0	+0.1
ISR	Istrita	151.16	324	⇓P	PKPbc	12 39 30.8	+0.1
ISR	Istrita	151.16	324	⇓PKIKP	PKPbc	12 39 30.8	+0.1
CLZ	Clausthal	151.19	350	ePKPbc	PKPbc	12 39 30.7	+0.2
	baz=17,slow=2.3						
OKC	Ostrava-Krasne	151.19	339	ePKIKP	PKPbc	12 39 30.7	+0.2
OKC	Ostrava-Krasne	151.19	339	⇑ePKP	PKPbc	12 39 30.7	+0.2
DOPR	Dopca	151.20	326	⇑P	PKiKP	12 39 31.0	-0.2
CLL	Collm	151.22	347	⇑ePKIKP	PKPdf	12 39 25.0	+0.5
CLL				pmax	pmax		
	comp=Z,77nm,0.7s						
CLL	Collm	151.22	347	ePKPdf	PKPdf	12 39 25.0	+0.5
CLL				⇑iPKPbc	PKPbc	12 39 30.5	0.0
	comp=Z,77nm,0.7s						
CLL				i pPKPbc	pPKPbc	12 40 12.7	+2.6
CLL				epPKPab	sPKPdf	12 40 20.0	+0.2
CLL				eSKKSac	SKKSac	12 49 48.0	+2.4
CLL				ex	x	12 51 18.0	
CLL				eSS	SS	13 02 21.0	+1.6
CLL				ex	x	13 05 18.0	
CLL				eSSS	SSS	13 08 06.0	
STEB	Steborice	151.22	340	⇑ePKP	PKiKP	12 39 31.1	0.0
STEB				ePKPAB	PKPab	12 39 36.3	-2.7
STEB				ex	x	12 40 13.2	
UPC	Upice	151.23	343	ePKIKP	PKiKP	12 39 31.2	+0.1
UPC	Upice	151.23	343	⇑ePKP	PKiKP	12 39 31.2	+0.1
MLR	Muntele Rosu	151.23	325		PKiKP	12 39 31.5	+0.1
MLR	Muntele Rosu	151.23	325	⇓P	PKPbc	12 39 30.3	-0.6
MLR	Muntele Rosu	151.23	325	⇓PKIKP	PKPbc	12 39 30.3	-0.6
MCH1	Michaelchurch	151.24	8	eP	PKPbc	12 39 29.9	-0.6
CSS	Mathiatis	151.26	300		PKiKP	12 39 31.6	0.0
DPC	Dobruska-Polom	151.29	342	ePKIKP	PKiKP	12 39 31.4	+0.2
DPC	Dobruska-Polom	151.29	342	⇑ePKP	PKiKP	12 39 31.4	+0.2
LANS	Liptovska Anna	151.32	337	ePKP	PKiKP	12 39 32.6	+1.2
LANS				e		12 39 37.9	
KRLC	Kraliky	151.40	341	ePKIKP	PKiKP	12 39 31.5	0.0
KRLC	Kraliky	151.40	341	⇑ePKP	PKiKP	12 39 31.5	0.0
MONM	Monmouth	151.42	7	eP	PKPbc	12 39 30.2	-0.8
BRG	Berggiesshubel	151.42	345	ePKPbc	PKPbc	12 39 31.0	0.0
	baz=17,slow=2.3						
MORC	Moravsky Berou	151.43	340		PKiKP	12 39 31.8	+0.3
MORC	Moravsky Berou	151.43	340	ePKP	PKPbc	12 39 30.9	-0.2
MORC	Moravsky Berou	151.43	340	PKIKP	PKiKP	12 39 31.8	+0.3
KECS	Kecovo	151.50	335	ePKIKP	PKiKP	12 39 32.1	+0.4
KECS	Kecovo	151.50	335	ePKP	PKiKP	12 39 32.1	+0.4
CJR	Cluj-Napoca	151.54	329	⇑P	PKiKP	12 39 31.8	-0.1
CJR	Cluj-Napoca	151.54	329	⇑PKIKP	PKiKP	12 39 31.8	-0.1
NEUB	Neuenburg	151.56	348	ePKPbc	PKiKP	12 39 31.5	-0.2
	baz=17,slow=2.3						
PVCC	Panska Ves	151.59	344	ePKIKP	PKiKP	12 39 31.9	+0.1
PVCC	Panska Ves	151.59	344	⇑ePKP	PKiKP	12 39 31.9	+0.1
HSKC	Hora Svate Kat	151.79	346	⇑ePKP	PKiKP	12 39 32.3	+0.1
MARR	Marisel-Cluj	151.79	330	⇓P	PKiKP	12 39 32.5	0.0
DRGR		151.89	330	⇑P	PKPbc	12 39 32.1	-0.2
DRGR		151.89	330	⇑PKIKP	PKPbc	12 39 32.1	-0.2
ARR	Arges	152.00	326	⇑P	PKPdf	12 39 26.7	+0.8
PRU	Pruhonice	152.09	344	ePKIKP	PKPbc	12 39 32.7	+0.1
PRU				e		12 39 38.6	
PRU	Pruhonice	152.09	344	⇑ePKP	PKPbc	12 39 32.7	+0.1
PRU				ePKPAB	PKPab	12 39 38.6	-4.0
MOX	Moxa	152.13	348	ePKPbc	PKPbc	12 39 32.2	-0.4
	baz=17,slow=2.3						
VRAC	Vranov	152.14	341	⇑P	PKPbc	12 39 32.8	+0.1
VRAC	Vranov	152.14	341	ePKP	PKPbc	12 39 32.6	-0.1
VRAC	Vranov	152.14	341	⇑PKIKP	PKPbc	12 39 32.8	+0.1
PLN	Plauen	152.17	347	ePKPbc	PKPbc	12 39 32.7	0.0
	baz=17,slow=2.3						
TANN	Tannenbergstha	152.18	347	ePKPbc	PKPbc	12 39 32.8	0.0
	baz=17,slow=2.3						
JAVC	Velka Javorina	152.19	339	ePKP	PKiKP	12 39 33.4	+0.2
KRUC	Moravsky	152.41	341	ePKP	PKPbc	12 39 33.0	-0.3
MANZ	Manzenberg	152.66	347	ePKPbc	PKPbc	12 39 33.9	0.0
	baz=17,slow=2.3						
MODS	Modra-Piesok	152.74	339	ePKP	PKPbc	12 39 34.0	-0.1
MODS				e		12 39 40.3	
UCC	Uccle	152.78	358	dPKP	PKPbc	12 39 34.0	0.0
ROTZ	Rotzenmuhle	152.84	347	ePKPbc	PKPbc	12 39 34.0	-0.2
	baz=17,slow=2.3						
SRO	Srobarova	152.86	337	ePKP	PKPbc	12 39 34.4	+0.1
SRO				e		12 39 40.3	
MEM	Membach	152.89	356	dPKP	PKPbc	12 39 33.6	-0.7
GZR	Gura Zlata	152.90	328	⇑P	PKPbc	12 39 33.9	-0.7
BTNL	Ternell	152.90	356	dPKP	PKiKP	12 39 34.5	-0.1
BAND	Balkesir-Ban	153.00	314	⇑P	PKPbc	12 39 33.6	-1.3
BCLA	Clavier	153.12	357	dPKPbc	PKPbc	12 39 34.4	-0.4
BCLA				dPKPab	PKPab	12 39 46.4	-0.5
KHC	Kasperske Hory	153.13	344	PKPbc	PKiKP	12 39 35.3	+0.2
KHC	Kasperske Hory	153.13	344	ePKIKP	PKPdf	12 39 27.6	+0.2
KHC				e		12 40 20.2	
KHC	Kasperske Hory	153.13	344	ePKPDF	PKPdf	12 39 27.6	+0.2
KHC				⇑ePKP	PKPbc	12 39 35.0	+0.1
KHC				ePKPAB	PKPab	12 39 41.4	-5.7
KHC				ex	x	12 40 20.2	
KHC	Kasperske Hory	153.13	344	PKP	PKPdf	12 39 26.6	-0.8
BHOU	Houvegnez	153.14	356	dPKP	PKPab	12 39 47.5	+0.5
BGES	Gesves	153.17	357	dPKP	PKPbc	12 39 34.7	-0.3
CKRC	Cesky Krumlov	153.23	343	ePKIKP	PKiKP	12 39 35.4	+0.1
CKRC				e		12 40 17.8	
CKRC	Cesky Krumlov	153.23	343	⇑ePKP	PKiKP	12 39 35.4	+0.1
CKRC				ex	x	12 40 17.8	
BMRD	Maredsous	153.26	357	dPKP	PKiKP	12 39 35.3	+0.1
GEC2	GERESS Array S	153.36	344	ePKPbc	PKPbc	12 39 35.1	-0.4
	baz=17,slow=2.3						
GERES	GERESS Array B	153.36	344	PKP	PKPdf	12 39 27.5	-0.4
	comp=Z,1.2nm,0.7s,baz=29,slow=3.0,SNR=11						
GERES				PKPbc	PKPbc	12 39 35.5	0.0
	comp=Z,3.6nm,0.6s,baz=18,slow=2.7,SNR=22						
RCHB	Rochefort	153.39	357	dPKP	PKPbc	12 39 33.8	-1.6
HERR	Herculane	153.44	328	⇓P	PKPbc	12 39 35.0	-0.7
DOU	Dourbes	153.47	358	dPKPbc	PKiKP	12 39 35.7	0.0
CONA	Conrad Observa	153.59	340	i PKP	PKPdf	12 39 27.1	-1.1
	comp=Z,14nm,1.4s						
CONA				i PKP	PKPbc	12 39 35.6	-0.4
	comp=Z,12nm,0.7s						
RONA	Rosalia, Austr	153.65	339	i PKP	PKPdf	12 39 27.1	-1.1
	comp=Z,4.8nm,1.2s						
RONA				ePKP	PKPbc	12 39 36.1	-0.1
	comp=Z,14nm,0.6s						
MPLH	Magyarpolny	153.69	337	PKP	PKPdf	12 39 27.4	-0.8
WLF	Walferdange	153.82	355	dPKPdf	PKPdf	12 39 28.6	+0.3
MDVR	Moldovita	153.86	329	⇑P	PKPdf	12 39 28.5	-0.1
MORH	Mrgy, Hungar	154.07	335	⇑P	PKPdf	12 39 28.7	-0.1
MORH	Mrgy, Hungar	154.07	335	PKP	PKPdf	12 39 28.0	-0.8
MOA	Molln	154.13	342	ePKP	PKPdf	12 39 27.8	-1.1
	comp=Z,10nm,1.5s						
MOA				ePKP	PKiKP	12 39 37.2	0.0
	comp=Z,18nm,1.6s						
ARSA	Arzberg	154.29	340	ePKP	PKPdf	12 39 28.6	-0.6
	comp=Z,4.5nm,1.1s						
ARSA				ePKP	PKPbc	12 39 37.4	-0.1
	comp=Z,6.2nm,0.8s						
BOVS	Bovan	154.70	327	⇑P	PKPdf	12 39 30.8	+1.0
LESA	Schwarzleotal	154.94	344	i PKP	PKPdf	12 39 29.3	-0.8
	comp=Z,15nm,1.3s						
LESA				ePKP	PKPbc	12 39 38.7	-0.3
	comp=Z,9.0nm,0.9s						
SOKA	Soboth	154.96	340	i PKP	PKPdf	12 39 29.3	-0.9
	comp=Z,11nm,1.2s						
SOKA				i PKP	PKPbc	12 39 37.9	-1.1
	comp=Z,14nm,1.0s						
KBA	Koelnbreinsper	155.08	343	i PKP	PKPdf	12 39 28.8	-1.6
	comp=Z,11nm,1.3s						
KBA				ePKP	PKPab	12 39 38.7	-17
	comp=Z,9.7nm,1.0s						
OBKA	Obir	155.26	341	ePKP	PKPdf	12 39 30.1	-0.4
	comp=Z,11nm,1.2s						
OBKA				ePKP	PKPab	12 39 38.4	-18
	comp=Z,16nm,1.4s						
WATA	Walderalm	155.28	346	i PKP	PKPdf	12 39 29.8	-0.8
	comp=Z,14nm,1.2s						
WATA				i PKiKP	PKPab	12 39 39.7	-17
	comp=Z,4.0nm,0.5s						
WTTA	Wattenberg	155.34	346	ePKP	PKPdf	12 39 29.8	-1.0
	comp=Z,17nm,1.6s						
WTTA				i PKP	PKPab	12 39 38.0	-19
	comp=Z,21nm,0.9s						
SQTA	Sankt Quirin	155.47	346	i PKP	PKPdf	12 39 30.1	-0.8
	comp=Z,5.9nm,0.8s						
SQTA				ePKP	PKPab	12 39 40.4	-17
	comp=Z,7.8nm,1.0s						
ABTA	Abfaltersbach	155.61	344	i PKP	PKPdf	12 39 30.0	-1.1
	comp=Z,14nm,1.0s						
DAVA	Damuels	155.67	348	ePKP	PKPdf	12 39 30.5	-0.7
	comp=Z,22nm,1.6s						
FETA	Feichten	155.76	347	i PKP	PKPdf	12 39 31.1	-0.2
	comp=Z,16nm,1.1s						
EDA	Edea	159.14	201		PKPdf	12 39 36.2	-0.1
EDA					PKPab	12 40 13.3	-0.4
DBIC	Dimbokro	161.62	155	PKP	PKPdf	12 39 38.0	-1.0
	comp=Z,5.7nm,0.7s,baz=220,slow=1.8,SNR=9.2						
DBIC				PKPab	PKPab	12 40 25.1	+0.7
	comp=Z,16nm,0.9s,baz=221,slow=4.2,SNR=11						
DBIC	Dimbokro	161.62	155		PKPdf	12 39 38.9	-0.1
DBIC					PKPab	12 40 25.1	+0.7
DBIC	Dimbokro	161.62	155	PKIKP	PKPdf	12 39 38.9	-0.1
DBIC						12 40 25.2	
ESBB	Sonseca Array	162.90	18		PKPab	12 40 30.8	+1.2
ESDC	Sonseca Array	162.90	18	PKP	PKPdf	12 39 38.8	-0.9
	comp=Z,2.6nm,1.1s,baz=348,slow=4.2,SNR=6.6						
ESDC				PKPab	PKPab	12 40 29.3	-0.3
	comp=Z,7.0nm,1.1s,baz=333,slow=3.8,SNR=9.5						
ESDC	Sonseca Array	162.90	18	PKPab	PKPab	12 40 30.5	+0.9
MDT	Midelt	168.63	34	PKPab	PKPab	12 40 54.9	-0.2
	comp=Z,5.8nm,0.9s,baz=308,slow=6.4,SNR=4.3						
TORD	Torodi Ar. Bea	169.58	173	PKP	PKPdf	12 39 44.6	-0.9
	comp=Z,10nm,0.9s,baz=16,slow=2.0,SNR=8.7						
TORD				PKPab	PKPab	12 41 00.1	+0.7
	comp=Z,27nm,0.9s,baz=170,slow=3.7,SNR=16						
TAM	Tamanrasset	177.50	253		PKPab	12 41 36.5	+1.4
TAM	Tamanrasset	177.50	253	PKP2	PKPab	12 41 36.5	+1.4

DJA 18 12:22:41.4±0.4, 9°S±3°×12°4E±°, h86^{km}±6^{km}, M3.6/11, mB5.1/1, mb4.2/5, MLv3.3/11, Mw(mB)4.5/1, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	0.88	180	P	Pn	12 23 01.4	+1.8
BATI	Baumata	1.45	204	P	Pn	12 23 06.9	+0.5
BATI				S	Sn	12 23 26.3	+1.0
EDFI	Ende, Flores	2.54	272	P	Pn	12 23 20.7	-0.1
WSI	Waingapu	3.99	258	P	Pn	12 23 40.6	+0.3
PLAI	Plampang	6.41	270	P	Pn	12 24 12.3	-0.9
	0.1nm15nm,1.2s						
AAI	Ambon	6.46	37	P	Pn	12 24 14.7	+0.7
	0.2nm2µm22nm,0.4s						
MSAI	Masohi	7.19	41	P	Pn	12 24 25.0	+1.1
	16nm,0.4s						

VAO ***18*** *12:24:29.7±0.8, 15°.59S×74°.09W, h10^{km}, mb4.6, Presumed earthquake*

NEIC ***18*** *12:24:58.5±1.6, 15°.47S±0°.07×72°.44W±0°.10, h129^{km}±10^{km}, mb4.6/9, Error ellipse: s-maj=13.9km s-min=9.7km az=71.0*

IDC ***18*** *12:24:59.2±1.3, 14°.84S×72°.09W, h133^{km}±21^{km}, mb3.7/2, mbtmp4.0/7, Error ellipse: s-maj=31.7km s-min=10.2km az=28.0*

ISC 18 12:24:56.8±0.6, 15°.21S±0°.06×72°.28W±0°.06, h114^{km}, n58, σ1^{s}.99/59, mb4.6/5, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB18	Visviri	3.58	132		Pn	12 25 55.5	+4.4
AP01	Chacalluta	3.65	150		Pn	12 25 52.6	+1.0
PB12	IPOC Station P	3.87	151		Pn	12 25 54.5	-0.1
PB16	IPOC Station P	4.09	140		Pn	12 25 59.8	+1.8
LPAZ	La Paz	4.14	106	P	Pn	12 26 01.8	+3.1
	84nm,0.4s,baz=282,slow=9.0,SNR=291						
LPAZ				S	Sn	12 26 48.8	+2.2
	25nm,0.7s,baz=176,slow=18,SNR=1.5						
LPAZ	La Paz	4.14	106		Pn	12 26 01.6	+3.0
LPAZ	La Paz	4.14	106	eP	Pn	12 25 57.0	-1.7
PB11	IPOC Station P	5.18	151		Pn	12 26 11.4	-0.8
GO01	Chusmiza	5.33	147		Pn	12 26 15.4	+0.9
NNA	Nana	5.47	305	P	Pn	12 26 18.6	+2.5
	306nm,0.3s,baz=130,slow=11,SNR=127						
NNA				S	Sn	12 27 19.9	+2.1
	72nm,0.3s,baz=222,slow=23,SNR=3.7						
NNA	Nana	5.47	305		Pn	12 26 18.7	+2.6
HMBC	Humberstone	5.54	156		Pn	12 26 15.7	-1.4
TA01	Diego Aracena	5.69	160		Pn	12 26 18.1	-0.9
PB08	IPOC Station P	5.74	149		Pn	12 26 20.0	0.0
PATCX	Punta Patache	5.94	160		Pn	12 26 21.2	-1.3
PB01	IPOC Station P	6.38	156		Pn	12 26 28.0	-0.4
PB02	IPOC Station P	6.49	160		Pn	12 26 28.9	-1.0
PB07	IPOC Station P	6.87	161		Pn	12 26 34.1	-1.0
PB09	IPOC Station P	7.16	157		Pn	12 26 38.7	-0.4
PB03	IPOC Station P	7.21	161		Pn	12 26 38.2	-1.6
PB05	IPOC Station P	7.86	166		Pn	12 26 46.3	-2.1
PB06	IPOC Station P	7.89	161		Pn	12 26 47.0	-1.9
ATAH	Atahualpa	10.01	323	P	Pn	12 27 18.9	+0.9
	1.9nm,0.3s,baz=151,slow=6.9,SNR=6.2						
ATAH				S	Sn	12 29 04.9	-3.8
	3.7nm,0.5s,baz=128,slow=19,SNR=2.0						
SIV	San Ignacio	10.83	96	P	Pn	12 27 27.9	-0.8
	8.8nm,0.7s,baz=273,slow=11,SNR=31						
SIV				S	Sn	12 29 24.5	-3.5
	2.7nm,0.7s,baz=338,slow=19,SNR=1.7						
PTLB	Pontes e Lacer	12.68	93		Pn	12 27 56.1	+3.0
PTLB	Pontes e Lacer	12.68	93	eP	Pn	12 27 52.9	-0.2
LCO	Las Campanas	13.82	174	Pn	Pn	12 28 05.5	-2.6
TEFE	Tefe	13.85	34	eP	Pn	12 28 05.9	-2.5
PDRB	Porto dos Gac	15.54	79	eP	Pn	12 28 30.8	+0.9
CO02	Combarbal	15.97	176	Pn	Pn	12 28 32.2	-2.8
CO02				IAmb	IAmb	12 28 55.3	
	comp=Z,32nm,1.4s						
SALV	Santo Antonio	16.00	95	eP	Pn	12 28 35.7	+0.3
MACA	Manacapuru-AM	16.55	45		P	12 28 44.0	+1.2
MACA	Manacapuru-AM	16.55	45	eP	Pn	12 28 40.4	-1.9
AQDB	Aquidauana	16.63	111		Pn	12 28 42.8	-0.4
AQDB				IAmb	IAmb	12 28 43.9	
	comp=Z,25nm,1.3s						
CFA	Coronel Fontan	16.74	168	P	P	12 28 48.0	+3.2
	comp=Z,1.1nm,0.5s,baz=330,slow=8.9,SNR=4.2						
PP1B	Ponte de Pedra	16.86	101	eP	Pn	12 28 46.2	+0.1
CPUP	Villa Florida	17.81	131	P	Pn	12 28 58.2	+0.8
	comp=Z,1.5nm,0.8s,baz=320,slow=10,SNR=12						
CPUP	Villa Florida	17.81	131		Pn	12 28 57.6	+0.1
AMBA	Amambai (Brazi	18.05	118	eP	P	12 28 56.9	-2.4
NPGB	Novo Progresso	18.47	66	eP	P	12 29 04.6	+0.7
C2SB	Chapadao do Su	18.93	104	eP	P	12 29 08.7	-0.2
ITTB	Itaituba	19.52	58	eP	P	12 29 15.8	+0.4
SNDB	Serra Nova Dou	20.65	84	eP	P	12 29 29.5	+1.9
PSAL	Palomas, Salto	20.74	142	eP	P	12 29 20.7	-7.7
BOAV	Boa Vista	21.01	35	P	P	12 29 33.0	+1.6
BOAV	Boa Vista	21.01	35	eP	P	12 29 28.5	-2.9
PTGB	Pitanga	21.20	120	eP	P	12 29 31.7	-1.9
ITRB	Iturama	21.38	105	eP	P	12 29 35.2	-0.2
ITAB	Concordia	22.23	126	P	P	12 29 44.9	+0.6
ITAB				IAmb	IAmb	12 29 50.3	
	comp=Z,45nm,1.2s						
CPSB	Cacapava Do Su	22.98	134	eP	P	12 29 43.7	-8.0
IPMB	Ipameri, GO	23.23	100	eP	P	12 29 51.5	-2.7
BDFB	Brasilia	23.40	94	P	P	12 29 55.6	-0.3
	comp=Z,3.6nm,0.5s,baz=273,slow=12,SNR=5.1						
	comp=Z,3.6nm,0.5s						
SDV	Santo Domingo	23.99	4	P	P	12 30 04.0	+2.8
SDV				IAmb	IAmb	12 30 10.3	
	comp=Z,31nm,1.4s						
SDV	Santo Domingo	23.99	4	eP	P	12 29 48.9	-12
PLCA	Paso Flores	25.48	177	P	P	12 30 18.6	+4.2
	comp=Z,1.5nm,0.7s,baz=342,slow=8.5,SNR=3.5						
	comp=Z,1.5nm,0.7s						
JANB	Januaria	27.00	93	eP	P	12 30 28.2	-0.1
PMSA	Palmer Station	49.84	175	P	P	12 33 36.1	-1.7
RLMT	Red Lodge	68.78	333	P	P	12 35 47.4	-1.4
RLMT				IAmb	IAmb	12 35 51.0	
	comp=Z,14nm,0.9s						

IDC ***18*** *12:35:17.0±0.9, 58°.58S×24°.85W, h0^{km}, mb4.2/4, mbtmp4.2/5, ML4.1/1, Error ellipse: s-maj=72.6km s-min=26.6km az=81.0*

NEIC ***18*** *12:35:22.4±0.7, 58°.7S±0°.1×25°.0W±0°.4, h35^{km}±2^{km}, mb4.6/11, Error ellipse: s-maj=41.4km s-min=6.8km az=60.0*

ISC 18 12:35:20.9±0.8, 58°.7S±0°.1×24°.8W±0°.2, h28^{km}, n35, σ0^{s}.71/32, mb4.5/9, 7C-1D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	7.79	299		Pn	12 37 12.9	+0.7
VNA1	Neumayer--Stat	13.90	157	⇑P	Pn	12 38 34.9	-0.7
	comp=Z,4.3nm,0.2s						
VNA1				⇓S	Sn	12 40 59.0	-10
VNA3	Neumayer Olymp	14.11	160	⇑P	Pn	12 38 37.4	-1.1
	comp=Z,4.9nm,0.2s						
VNA3				⇑S	Sn	12 41 01.4	-12
VNA2	Neumayer--Watz	14.30	156	⇑P	Pn	12 38 40.4	-0.7
	comp=Z,3.0nm,0.2s,baz=318,slow=14						
VNA2				⇑S	Sn	12 41 06.1	-12
	baz=31,slow=26						
SNAA	Sanae	15.84	154	⇑P	Pn	12 39 01.2	-0.4
	comp=Z,39nm,0.2s						
SNAA	Sanae	15.84	154	Pn	Pn	12 39 01.4	-0.2
	comp=Z,0.7nm,0.3s,baz=0.2,slow=9.8,SNR=43						
SNAA				Sn	Sn	12 41 41.6	-15
	comp=Z,0.1nm,0.3s,baz=357,slow=19,SNR=2.1						
	comp=Z,2.5nm,0.4s						
SNAA	Sanae	15.84	154		Pn	12 39 01.5	-0.2
TROLL	Troll, Antarti	17.35	151	⇑P	Pn	12 39 21.4	+0.7
	comp=Z,43nm,0.1s						
BELA	Belgrano 2	19.59	186	P	P	12 39 46.3	-0.1
MG02	Cerro Sombrero	25.30	264	P	P	12 40 43.8	-0.8
QSPA	South Pole Qui	31.59	180	P	P	12 41 41.6	+0.7
	comp=Z,1.8nm,0.5s,baz=205,slow=3.1,SNR=8.0						
	comp=Z,1.8nm,0.5s						
QSPA	South Pole Qui	31.59	180	P	P	12 41 40.8	-0.1
QSPA				IAmb	IAmb	12 41 45.3	
	comp=Z,2.4nm,0.9s						
LR04	Corral	35.85	280	P	P	12 42 16.9	-1.0
BI05	Punta Hualpn	38.10	283	P	P	12 42 36.8	-0.3
BI05				IAmb	IAmb	12 42 59.6	
	comp=Z,25nm,0.9s						
BO02	Sierra Bellavi	38.42	288	P	P	12 42 39.5	-0.4
BO02				IAmb	IAmb	12 43 16.8	
	comp=Z,14nm,1.3s						
MT02	Curacav	39.83	289	P	P	12 42 50.9	-0.6
MT02				IAmb	IAmb	12 43 22.6	
	comp=Z,50nm,1.5s						
AC05	El Transito	43.04	294	P	P	12 43 18.2	+0.2
AC05				IAmb	IAmb	12 43 41.7	
	comp=Z,11nm,1.1s						
SBA	Scott Base	43.56	184	P	P	12 43 22.4	+0.8
SBA				IAmb	IAmb	12 43 41.0	
	comp=Z,37nm,1.5s						
VNDA	Vanda	44.02	182	P	P	12 43 26.7	+1.5
	comp=Z,1.7nm,0.6s,baz=194,slow=5.5,SNR=9.5						
	comp=Z,1.7nm,0.6s						
VNDA	Vanda	44.02	182	P	P	12 43 25.8	+0.5
VNDA				IAmb	IAmb	12 43 27.0	
	comp=Z,2.4nm,0.8s						
H04S2	CROZET ISLANDS	45.39	110	T	T	13 33 13.5	
	baz=226,slow=75,SNR=8.7						
H04S3	CROZET ISLANDS	45.40	110	T	T	13 33 08.5	
	baz=226,slow=75,SNR=8.8						
H04S1	CROZET ISLANDS	45.40	110	T	T	13 33 16.3	
	baz=226,slow=75,SNR=9.2						
STKA	Stephens Creek	89.11	168	P	P	12 48 13.8	+0.5
	comp=Z,1.3nm,0.7s,baz=180,slow=4.9,SNR=3.5						
	comp=Z,1.3nm,0.7s						
ASAR	Alice Springs	96.11	160	P	P	12 48 45.9	0.0
	comp=Z,0.4nm,0.6s,baz=184,slow=3.6,SNR=7.0						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	96.11	160	P	P	12 48 45.7	-0.2
PDAR	Pinedale Array	122.77	299	PKP	PKPdf	12 54 13.0	-0.4
	comp=Z,0.2nm,0.5s,baz=190,slow=3.1,SNR=2.6						
NVAR	Mina Array Bea	123.53	290	PKP	PKiKP	12 54 16.0	+0.7
	comp=Z,0.7nm,0.7s,baz=157,slow=3.1,SNR=4.4						
FINES	FINESS Array B	126.10	27	PKP	PKiKP	12 54 19.1	-0.2
	comp=Z,1.7nm,1.0s,baz=126,slow=4.9,SNR=3.6						
ARCES	ARCESS Array B	132.89	22	PKP	PKiKP	12 54 32.1	-0.6
	comp=Z,2.0nm,0.8s,baz=270,slow=0.9,SNR=3.7						
YKA	Yellowknife Ar	138.94	315	PKP	PKiKP	12 54 44.0	-1.2
	comp=Z,1.5nm,0.8s,baz=136,slow=1.5,SNR=17						
YKA	Yellowknife Ar	138.94	315		PKiKP	12 54 44.1	-1.1
SONM	Songino Array	149.55	89	PKPbc	PKiKP	12 55 07.6	-0.1
	comp=Z,0.8nm,0.7s,baz=220,slow=3.4,SNR=4.7						
ILAR	Eielson Array	152.76	307	PKPbc	PKiKP	12 55 13.8	+0.3
	comp=Z,3.5nm,0.9s,baz=146,slow=7.0,SNR=18						
F25K	Christian Rive	152.87	314	PKPbc	PKiKP	12 55 14.8	+1.0

VIE 18 12:36:30.6±0.2, 47°.84N×16°.03E, h0^{km}, ml0.8/3, Error ellipse: s-maj=2.1km s-min=1.4km az=49.0 10 km W of Bad Fischau Suspected Mining explosion., Austria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CONA	Conrad Observa	0.14	307	i Pg	Pg	12 36 33.0	-0.3
	0.4nm,0.1s						
CONA				eSg	Sg	12 36 35.6	+0.6
	2.6nm,0.2s						
RONA	Rosalia, Austr	0.23	128	i Pg	Pg	12 36 34.8	-0.2
	1.0nm,0.1s						
RONA				eSg	Sg	12 36 38.8	+0.7
	1.4nm,0.1s						

NOU ***18*** *12:38:44.8, 38°.35S×177°.72E, h8^{km}, MLv4.1/6, North Island, New Zealand*

WEL ***18*** *12:38:58.5±0.4, 39°S±3°×17°7E±°, h41^{km}±4^{km}, M3.0/38, ML3.0/40, MLv3.0/38, Error ellipse: s-maj=3.5km s-min=3.1km az=38.5, confirmed*

ISC 18 12:38:59.0±1.4, 38°.86S±0°.03×176°.64E±0°.03, h54^{km}±7^{km}, n106, σ1^{s}.00/118, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTHZ	Maungataniwha	0.16	88	P	Pn	12 39 07.1	-0.6
MTHZ				S	Sn	12 39 13.9	+0.1
MRHZ	Matea Rd	0.17	278	P	Pn	12 39 07.0	-0.7
MRHZ				S	Sn	12 39 13.4	-0.6
NMHZ	Naumai	0.27	151	P	Pn	12 39 08.5	+0.1
NMHZ				S	Sn	12 39 16.8	+1.7
BKZ	Black Stump Fm	0.33	200	P	Pn	12 39 07.9	-0.9
BKZ	Black Stump Fm	0.33	200	P	Pn	12 39 08.2	-0.6
BKZ				S	Sn	12 39 15.8	-0.1
RAHZ	Arahi	0.36	100	P	Pn	12 39 08.9	-0.1
RAHZ				S	Sn	12 39 17.4	+1.1
RTZ	Ruatahuna	0.36	48	P	Pn	12 39 08.5	-0.6
RTZ				S	Sn	12 39 16.4	0.0
ALRZ	Allen Road	0.37	322	P	Pn	12 39 08.8	-0.4
ALRZ				S	Sn	12 39 16.7	+0.1
MUGZ	Murupara	0.39	16	P	Pn	12 39 08.7	-0.7
MUGZ				S	Sn	12 39 15.9	-0.9
PRRZ	Plateau Road	0.41	332	P	Pn	12 39 09.0	-0.5
PRRZ				S	Sn	12 39 16.7	-0.3
ARHZ	Aropaoanui	0.49	145	P	Pn	12 39 10.7	+0.3
ARHZ				S	Sn	12 39 21.0	+2.3
WPRZ	Whakapapatarin	0.50	312	P	Pn	12 39 10.0	-0.5
WHHZ	Waihua	0.52	115	P	Pn	12 39 10.8	+0.1
RRRZ	Republican Roa	0.53	350	P	Pn	12 39 10.3	-0.6

RRRZ				S	Sn	12 39 19.3	-0.1
HRRZ	Handcock Road	0.54	329	P	Pn	12 39 10.6	-0.5
HRRZ				S	Sn	12 39 20.4	+0.6
SNGZ	Shannon Statio	0.56	82	P	Pn	12 39 11.3	+0.1
WHTZ	Whakaora	0.56	290	P	Pn	12 39 11.2	-0.1
MCHZ	McNeill Hill	0.59	175	P	Pn	12 39 12.2	+0.6
KWHZ	Kaweka Forest	0.59	196	P	Pn	12 39 11.6	-0.1
RITZ	Rihia Road	0.62	259	P	Pn	12 39 11.8	-0.2
HSRZ	Hossack Road	0.62	331	P	Pn	12 39 11.7	-0.3
TARZ	Mount Tarawera	0.63	351	P	Pn	12 39 11.9	-0.3
HLRZ	Highlands Stat	0.64	340	P	Pn	12 39 12.7	+0.4
RATZ	Rangitukua	0.67	269	P	Pn	12 39 12.3	-0.4
URZ	Urewera	0.70	32	P	Pn	12 39 12.1	-0.9
RAGZ	Rawiri	0.71	60	P	Pn	12 39 12.8	-0.3
WATZ	Wairara	0.72	282	P	Pn	12 39 12.8	-0.4
KUTZ	Kaahu Road	0.73	300	P	Pn	12 39 13.0	-0.4
KATZ	Kakaramea	0.74	261	P	Pn	12 39 13.5	-0.1
EDRZ	Edgecumbe	0.75	6	P	Pn	12 39 14.0	+0.3
UTU	Utuhina	0.76	333	P	Pn	12 39 13.5	-0.2
TMVZ	Te Maari	0.77	250	P	Pn	12 39 13.5	-0.4
ETVZ	East Tongariro	0.77	249	P	Pn	12 39 13.5	-0.5
OMRZ	Omania	0.78	345	P	Pn	12 39 13.3	-0.6
NTVZ	North Tongarir	0.79	252	P	Pn	12 39 13.8	-0.4
KRVZ	Karewarewa	0.81	253	P	Pn	12 39 14.0	-0.4
KRHZ	Kereru	0.81	195	P	Pn	12 39 14.4	0.0
OTVZ	Oturere	0.81	248	P	Pn	12 39 14.2	-0.4
KNZ	Kokohu	0.83	102	P	Pn	12 39 14.4	-0.1
NGRZ	Ngongotaha	0.83	335	P	Pn	12 39 14.6	-0.1
NNVZ	North Ngauruho	0.84	251	P	Pn	12 39 14.5	-0.4
SNVZ	South Ngauruho	0.84	247	P	Pn	12 39 14.5	-0.4
WTVZ	West Tongariro	0.85	252	P	Pn	12 39 14.7	-0.3
NGZ	Ngauruhoe	0.87	248	P	Pn	12 39 14.8	-0.4
TUVZ	Tukino	0.87	241	P	Pn	12 39 14.8	-0.4
CKHZ	Cape Kidnapper	0.87	157	P	Pn	12 39 14.8	-0.4
MARZ	Manawahe	0.87	2	P	Pn	12 39 15.2	0.0
MWZ	Matawai	0.87	54	P	Pn	12 39 14.6	-0.6
MOVZ	Moawhango	0.88	231	P	Pn	12 39 14.6	-0.7
KARZ	Kaharoa	0.89	340	P	Pn	12 39 14.8	-0.6
RIGZ	Rimuhau	0.89	81	P	Pn	12 39 15.2	-0.3
COVZ	Chateau Observ	0.92	248	P	Pn	12 39 15.4	-0.4
WHVZ	Whangaehu Hut	0.92	242	P	Pn	12 39 15.4	-0.5
FWVZ	Far West T-bar	0.93	244	P	Pn	12 39 15.6	-0.5
MAVZ	Matarangi	0.93	244	P	Pn	12 39 15.6	-0.6
KAHZ	Kahuranaki	0.95	169	P	Pn	12 39 15.9	-0.3
TRVZ	Turoa	0.95	242	P	Pn	12 39 15.9	-0.6
TWVZ	Taurewa	0.96	257	P	Pn	12 39 15.7	-0.6
PRGZ	Paritu Road	0.98	94	P	Pn	12 39 15.9	-0.7
TLZ	Tolley Road	1.01	301	P	Pn	12 39 16.5	-0.5
OPRZ	Ohinepanea	1.01	356	P	Pn	12 39 16.1	-0.9
MHGZ	Mahia Peninsul	1.03	107	P	Pn	12 39 16.6	-0.7
TKGZ	Te Karaka	1.04	67	P	Pn	12 39 18.4	+1.1
MTVZ	Mangateitei	1.05	239	P	Pn	12 39 17.1	-0.5
PKVZ	Pokaka	1.09	246	P	Pn	12 39 17.6	-0.5
PNHZ	Pukenui	1.11	198	P	Pn	12 39 17.8	-0.6
TGRZ	Tauranga	1.16	345	P	Pn	12 39 16.1	-2.9
PXZ	Pawanui	1.19	172	P	Pn	12 39 18.3	-1.0
RUGZ	Raukumara Rang	1.21	43	P	Pn	12 39 19.1	-0.6
WPHZ	Waipukurau	1.22	187	P	Pn	12 39 18.8	-1.0
TWGZ	Tauwhareparae	1.25	58	P	Pn	12 39 20.7	+0.4
CNGZ	Carnagh Statio	1.29	74	P	Pn	12 39 21.5	+0.9
TSZ	Takapari Road	1.31	203	P	Pn	12 39 20.2	-0.8
PRHZ	Porangahau	1.41	180	P	Pn	12 39 21.0	-1.3
HAZ	Te Kaha	1.42	40	P	Pn	12 39 21.3	-1.2
HIZ	Hauiti	1.43	283	P	Pn	12 39 22.7	0.0
HIZ	Hauiti	1.43	283	P	Pn	12 39 22.7	0.0
TOZ	Tahuroa Road	1.44	321	P	Pn	12 39 22.3	-0.4
DVHZ	Dannevirke	1.48	194	P	Pn	12 39 21.8	-1.6
VRZ	Vera Road	1.49	259	P	Pn	12 39 23.5	+0.1
PUZ	Puketiti	1.50	59	P	Pn	12 39 24.5	+1.0
PKGZ	Pakihiroa	1.51	49	P	Pn	12 39 23.4	-0.2
WAZ	Wanganui	1.56	234	P	Pn	12 39 24.8	+0.3
ANWZ	Angora Road	1.60	184	P	Pn	12 39 23.5	-1.5
POWZ	Post Office Ro	1.67	203	P	Pn	12 39 25.6	-0.4
OHWZ	Ohakea	1.69	217	P	Pn	12 39 26.4	+0.3
WMGZ	Waiomatatini S	1.74	54	P	Pn	12 39 26.6	-0.2
PRWZ	Pori Road	1.77	197	P	Pn	12 39 26.4	-0.9
LREZ	Lake Rotokare	1.84	250	P	Pn	12 39 28.6	+0.5
BFZ	Birch Farm	1.85	189	P	Pn	12 39 26.3	-2.0
BFZ	Birch Farm	1.85	189	P	Pn	12 39 26.1	-2.2
DREZ	Durham Road	1.92	259	P	Pn	12 39 30.8	+1.4
MRZ	Mangatainoka R	1.98	204	P	Pn	12 39 28.1	-2.0
PREZ	Palmer Road	1.99	255	P	Pn	12 39 31.9	+1.7
TIWZ	Tintock	2.00	197	P	Pn	12 39 28.4	-2.0
KHEZ	Kahui Hut	2.09	257	P	Pn	12 39 33.1	+1.5
KHEZ	Kahui Hut	2.09	257	P	Pn	12 39 33.0	+1.4
PKE	Pukeiti	2.09	260	P	Pn	12 39 33.0	+1.4
MKAZ	Moumakai	2.10	326	P	Pn	12 39 31.5	-0.2
HOWZ	Holdsworth Sta	2.21	203	P	Pn	12 39 30.9	-2.4
OGWZ	Otaki Gorge	2.26	209	P	Pn	12 39 32.1	-1.8
TMWZ	Te Maipa	2.32	194	P	Pn	12 39 32.0	-2.7
MTW	Mount Morrison	2.46	200	P	Pn	12 39 33.8	-2.8
CAW	Cannon Point	2.55	208	P	Pn	12 39 35.8	-2.1
SNZO	South Karori	2.86	211	P	Pn	12 39 44.4	+2.3
QRZ	Quartz Range	3.72	237	P	Pn	12 39 55.5	+1.6

DJA 18 12:42:44.7±0.4**, 10°S**±4°×**11°8E**±°**, h10^{km}, M3.8**/13**, mb4.2**/3**, MLv3.7**/13**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	1.00	12	P	Pg	12 43 03.8	-0.2
TWSI	Taliwang, Sumb	1.26	328	P	Pn	12 43 07.1	-1.3
DBNI	Kabupaten Domp	1.50	30	P	Pn	12 43 11.8	+0.1
DBNI				S	Sn	12 43 30.7	-0.6
WBSI	Waikabubak, Su	1.81	85	P	Pn	12 43 14.4	-1.6
KLNI	Mataram	2.00	314	P	Pn	12 43 18.4	-0.2
KHKI	Kahang-Kahang	2.40	307	P	Pn	12 43 25.4	+1.3
DNP	Denpasar	2.58	296	P	Pn	12 43 28.1	+1.6
IGBI	Denpasar	2.58	292	P	Pn	12 43 25.5	-1.0
LBFI	Labuhan Bajo,	2.65	60	P	Pn	12 43 27.5	-0.1
WSI	Waingapu	2.70	87	P	Pg	12 43 35.0	-1.5
RTBI	Rangdo, Negare	2.91	297	P	Pn	12 43 31.2	0.0
BASI	Baing, Sumba	3.00	98	P	Pn	12 43 32.3	0.0
JAGI	Jajag, Banyuwa	3.62	291	P	Pn	12 43 40.0	-0.9
EDFI	Ende, Flores	4.21	76	P	Pn	12 43 49.8	+0.7
GMJI	Gumukmas	4.34	290	P	Pn	12 43 50.2	-0.6
BKSI	Bulukumba	5.13	30	P	Pn	12 44 03.0	+1.3
	0.1nm18nm,0.7s						
SNJI	Sawahan-Nganju	6.08	289	P	Pn	12 44 15.5	+0.7
PCJI	Pacitan	6.51	284	P	Pn	12 44 19.7	-0.9

IDC 18 12:55:43.7±62.0**, 18°.00S**×**179°.07W, h0^{km}, mb4.0**/3**,**
mbtmp4.0/3**, Error ellipse: s-maj=1136.0km**
s-min=165.6km az=79.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	38.04	241	P	P	13 03 04.7	+0.7
	0.6nm,0.4s,baz=99,slow=13,SNR=2.2						
	0.6nm,0.4s						
WRA	Warramunga Arr	44.00	260	P	P	13 03 53.0	-0.2
	1.3nm,0.5s,baz=97,slow=7.7,SNR=11						
	1.3nm,0.5s						
ASAR	Alice Springs	44.16	254	P	P	13 03 54.0	-0.6
	2.1nm,0.8s,baz=90,slow=7.7,SNR=52						
	2.1nm,0.8s						

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*IDC **18** 13:03:51.7±1.4, 5°.40S×131°.30E, h0^{km}, mb3.7/4,*
mbtmp3.8/8, ML3.8/4, Error ellipse: s-maj=49.7km
s-min=21.2km az=78.0

*DJA **18** 13:03:59.8±0.2, 5°S±3°×13°1E±°, h100^{km}±5^{km}, M4.2/14,*
mb4.1/10, mB4.7/1, MLv4.3/14, Mw(mB)3.9/1

ISC 18 13:03:58.9±0.7**, 5°.44S**±0°.06×**131°.14E**±0°.07**, h68^{km}, n31,**
σ**1^{s}78**/31**, mb3.6**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	1.53	307	P	Pn	13 04 25.6	+1.4
BNDI	Bandanaira	1.53	307	P	Pn	13 04 25.5	+1.4
BNDI				S	Sn	13 04 45.0	+1.7
SAUI	Saumlaki	2.53	176	P	Pn	13 04 40.5	+2.8
SAUI	Saumlaki	2.53	176	P	Pn	13 04 39.9	+2.2
FAKI	Fak Fak	2.74	24	P	Pn	13 04 40.9	+0.3
MSAI	Masohi	3.03	313	P	Pn	13 04 45.5	+1.0
KMPI	Kaimana, Papua	3.11	55	P	Pn	13 04 47.2	+1.6
AAI	Ambon	3.41	301	P	Pn	13 04 50.8	+1.1
KRAI	Karang Ratu	3.45	308	P	Pn	13 04 52.4	+2.1
SWI	Sorong	4.55	2	P	Pn	13 05 04.8	-0.5
NLAI	Namlea	4.58	298	P	Pn	13 05 07.8	+2.1
RKPI	Ransiki, Papua	4.95	38	P	Pn	13 05 11.4	+0.7
MWPI	Manokwari, Pap	5.34	33	P	Pn	13 05 17.6	+1.5
SANI	Sanana	6.14	303	P	Pn	13 05 29.2	+2.1
SANI	Sanana	6.14	303	P	Pn	13 05 28.4	+1.3
	0.1nm23nm,0.5s						
DRS	Darwin Rock St	6.95	182	P	Pn	13 05 40.2	+2.1
SOEI	Soe	8.04	237	P	Pn	13 05 54.6	+1.4
	31nm,1.0s						
BATI	Baumata	8.79	237	Pn	Pn	13 06 03.6	+0.3
	3.4nm,0.3s,baz=27,slow=7.4,SNR=3.9						
	24nm,0.9s						
BATI	Baumata	8.79	237	P	Pn	13 06 05.2	+1.9
	22nm,0.8s						
DBNI	Kabupaten Domp	13.09	256	P	Pn	13 07 02.3	+0.3
	5.3nm,1.1s						
FITZ	Fitzroy Crossi	13.68	203	Pn	Pn	13 07 07.3	-2.5
	0.2nm,0.3s,baz=24,slow=12,SNR=1.9						
FITZ				Sn	Sn	13 09 30.1	-10
	1.0nm,0.3s,baz=217,slow=17,SNR=6.9						
	1.1nm,0.3s						
COEN	Coen	14.57	126	P	Pn	13 07 20.6	-0.9
WRA	Warramunga Arr	14.75	168	Pn	Pn	13 07 20.5	-3.4
	0.4nm,0.3s,baz=350,slow=13,SNR=7.0						
WRA				Sn	Sn	13 09 55.5	-11
	0.3nm,0.3s,baz=341,slow=21,SNR=5.0						
	0.9nm,0.5s						
KHKI	Kahang-Kahang	15.69	258	P	P	13 07 35.7	-3.0
	13nm,1.2s						
QIS	Mount Isa	17.13	152	P	P	13 07 54.2	-0.5
ASAR	Alice Springs	18.31	172	P	Pn	13 08 06.9	-1.5
	0.3nm,0.3s,baz=2.6,slow=10,SNR=20						
ASAR				S	Sn	13 11 18.8	-14
	0.9nm,0.6s,baz=357,slow=27,SNR=5.9						
	0.8nm,0.8s						
PSA00	Pilbara Seismi	19.41	213	P	Pn	13 08 20.3	-1.1
STKA	Stephens Creek	28.06	161	P	P	13 09 45.5	+1.5
	0.6nm,0.5s,baz=335,slow=14,SNR=1.5						
	0.6nm,0.5s						
SONM	Songino Array	57.35	340	P	P	13 13 41.1	+1.0
	0.4nm,0.5s,baz=165,slow=6.0,SNR=3.0						
	0.4nm,0.5s						
MKAR	Makanchi Array	67.56	326	P	P	13 14 49.6	+1.4
	0.4nm,0.3s,baz=112,slow=6.8,SNR=4.1						
	0.4nm,0.3s						
KURBB	Kurchatov Arra	71.79	328	P	P	13 15 17.8	+3.7
	0.2nm,0.6s,baz=126,slow=4.8,SNR=2.0						
	0.2nm,0.6s						

NNC 18 13:09:00.6±2.5**, 50°.05N**×**87°.75E, h0^{km}, mb3.5, mpv3.1,**
9C-3D, Error ellipse: s-maj=18.4km s-min=11.5km
az=78.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	Makanchi Array	4.88	230	⇑Pn	Pn	13 10 15.9	+0.7
	1.5nm,0.5s,baz=55,slow=13,SNR=36						
MK31				⇑Sn	Sn	13 11 14.6	+2.2
	0.4nm,0.3s,baz=56,slow=16,SNR=5.0						
MK31				⇑Lg	Lg	13 11 34.1	
	2.1nm,0.5s,baz=60,slow=30,SNR=5.4						
MAKZ	Makanchi	5.03	232	⇑Pn	Pn	13 10 17.2	-0.1
	9.8nm,1.2s						
MAKZ				⇓Sn	Sn	13 11 16.4	+0.3
	1.7nm,0.8s						
MAKZ				⇓Lg	Lg	13 11 38.9	
	3.9nm,0.7s						
KURK	Kurchatov	5.88	280	⇑Pn	Pn	13 10 28.6	-0.2
	0.6nm,0.8s						
KURK				⇓Sn	Sn	13 11 38.3	+1.4
	1.2nm,1.2s						
KURK				⇑Lg	Lg	13 12 05.9	
	2.7nm,0.9s						
KURBB	Kurchatov Arra	5.93	279	⇑Pn	Pn	13 10 28.9	-0.7
	1.1nm,0.7s						
KURBB				⇑Sn	Sn	13 11 39.5	+1.3
	2.7nm,0.6s						
KURBB				⇑Lg	Lg	13 12 09.6	
	7.0nm,0.7s						

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*MOS **18** 13:24:39.8±1.5, 43°.99N×39°.85E, h8^{km}, mb3.8/3, Error*
ellipse: s-maj=5.8km s-min=4.9km az=106.7

*IDC **18** 13:24:39.7±0.7, 43°.96N×39°.76E, h0^{km}, mb3.6/5,*
mbtmp3.8/12, ML3.7/6, MS3.7/1, Error ellipse:
s-maj=12.1km s-min=7.4km az=177.0

*TIF **18** 13:24:40.6, 43°.99N×39°.88E, h4^{km}±2^{km}*

ISC 18 13:24:41.2±0.9**, 44°.00N**±0°.03×**39°.83E**±0°.02**, h16^{km}**±6^{km}**,**
n58, σ**1^{s}84**/74**, mb3.5**/8**, 12C-10D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUZR	Guzeripl'	0.21	90	⇑*i*PG	Pg	13 24 46.4	+0.2
GUZR				*i* S	Sg	13 24 49.2	-0.4
MRNR	Maryino	0.26	256	*e*PG	Pg	13 24 45.7	-1.2
MRNR				*e*		13 24 49.4	
MRNR				smax	smax		
	comp=N,16µm,0.3s						
GOYR	Goytkh	0.41	308	*e*PG	Pg	13 24 49.2	-0.3
GOYR				*e*		13 24 56.8	
GOYR				smax	smax		
	comp=N,4µm,0.4s						
SOC	Sochi	0.42	191	*d i*PG	Pg	13 24 49.5	-0.2
SOC				*e*		13 24 56.5	
SOC				pmax	pmax		
	comp=Z,2µm,0.5s						
RPOR	Krasnaya Polya	0.44	133	*e*PG	Pg	13 24 49.7	-0.3
RPOR				*e*		13 24 55.8	
RPOR				smax	smax		
	comp=N,6µm,0.6s						
VSLR	Vesyoloye	0.56	164	*d i*PG	Pg	13 24 52.2	0.0
VSLR				*i* S	Sb	13 25 01.8	+1.5
VSLR				pmax	pmax		
	comp=Z,2µm,0.6s						
LABN	Labinsk	0.91	45	*e*PG	Pn	13 25 00.4	+1.1
LABN				*e*		13 25 13.9	
LABN				smax	smax		
	comp=E,5µm,0.8s						
GRYR	Gornoye	0.92	82	⇓*i*PG	Pb	13 24 59.1	+0.3
GRYR				*e*S	Sn	13 25 13.1	+0.6
ARXR	Arkhyz	1.14	112	*e*PG	Pb	13 25 02.8	+0.3
ARXR				*e*		13 25 18.8	
ARXR				smax	smax		
	comp=N,2µm,0.4s						
SPGR	Shapsug	1.46	301	*e*PG	Pg	13 25 09.3	0.0
SPGR				*e*		13 25 31.1	
DOMR	Dombai	1.48	118	*i* PG	Pn	13 25 08.1	+0.8
DOMR				*e*S	Sg	13 25 29.0	-0.1
SRGR	Sergiyevskiy	1.50	342	⇑*i*PG	Pg	13 25 10.3	+0.3
SRGR				*e*S	Sg	13 25 30.5	+1.0
NVNR	Nevinnomyssk	1.66	67	*i* PN	Pb	13 25 11.3	0.0
NVNR				*i* S	Sg	13 25 33.8	-0.7
ERBR	Yeremizino-Bor	1.78	15	*e*PN	Pg	13 25 14.8	-0.6
ERBR				*e*		13 25 39.2	
ERBR				smax	smax		
	comp=N,2µm,0.6s						
GLDR	Gladkovskiy	1.80	304	*e*PN	Pb	13 25 13.6	-0.1
GLDR				*e*S	Sg	13 25 38.1	-1.0
ANN	Anapa	1.89	296	*e*PN	Pg	13 25 16.8	-0.7
ANN				*e*		13 25 49.4	
ANN				pmax	pmax		
	comp=Z,27nm,0.2s						
ANN				smax	smax		
	comp=N,167nm,0.6s						
SUKR	Sukko	1.90	296	*e*PN	Pb	13 25 15.5	+0.2
SUKR				*e*S	Sb	13 25 40.8	+2.1
SHA1	Shidzhatmaz	2.06	96	⇓*i*PN	Pb	13 25 18.2	-0.2
SHA1				*e*S	Sb	13 25 45.0	+1.1
KVAR	Kislovodsk Arr	2.07	90	Pn	Pb	13 25 19.1	+0.6
	comp=N,114nm,0.4s,baz=270,slow=8.1						
KVAR				Lg	Lg	13 25 45.7	
	baz=180,slow=0.0						
NEUR	Neytrino	2.21	108	⇑*e*PN	Pn	13 25 15.4	-2.0
KBZ	Khabaz	2.24	96	Pn	Pb	13 25 20.9	-0.3
	comp=N,15nm,0.3s,baz=308,slow=9.3,SNR=196						
KBZ				Lg	Lg	13 25 50.4	
	comp=N,12nm,0.3s,baz=82,slow=12,SNR=3.7						
	comp=N,49nm,0.4s						
KBZ	Khabaz	2.24	96	⇑*i*PN	Pb	13 25 20.8	-0.4
KBZ				*e*S	Sb	13 25 49.4	+0.8
PYA1	Pyatigorsk	2.36	87	*ce*PN	Pn	13 25 18.6	-0.7
GOF	Gofitskoye	2.53	64	*ce*PN	Pg	13 25 33.1	+3.3
GOF				*e*S	Sg	13 26 04.5	+1.9
NCK	Nalchik	2.78	99	⇓*e*PN	Pn	13 25 23.1	-1.9
ALIG	Mtskhetisjvari	3.38	123	P	Pn	13 25 37.0	+3.7
ALIG	Mtskhetisjvari	3.38	123	PN	Pn	13 25 37.0	+3.7
CHRG	Chargali	4.09	112	P	Pb	13 25 48.5	-4.3
DVE	Vedeno	4.70	101	⇓*e*PN	Pn	13 25 51.0	-0.5
DVE				*i* S	Sn	13 26 44.7	-1.0
DVE				pmax	pmax		
	comp=Z,14nm,0.5s						
BTLR	Botlikh	4.85	104	⇑*e*PN	Pn	13 25 51.3	-2.3
BR131	Keskin Array S	6.29	229	*ce*P	Pn	13 26 13.8	+0.5
BRTR	Keskin Array B	6.29	229	Pn	Pn	13 26 14.6	+1.2
	comp=Z,0.9nm,0.3s,baz=52,slow=11,SNR=12						
BRTR				Sn	Sn	13 27 27.2	+2.3
	baz=36,slow=18						
	comp=Z,1.6nm,0.3s						
BRTR	Keskin Array B	6.29	229	*i* P	Pn	13 26 14.8	+1.5
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
DRN	Derbent	6.54	105	*ce*P	Pn	13 26 13.8	-2.8
VORD	Divnogorie	6.98	357	*e*P	Pn	13 26 24.8	+2.1
VORD				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VSR	Storozhevoye	7.24	357	*e*P	Pn	13 26 26.9	+0.7
VSR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
VRH	Novokhopyorsk	7.32	9	*e*P	Pn	13 26 27.1	-0.2
VRH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AKASG	Malin Array Be	9.83	317	Pn	Pn	13 27 00.6	-1.1
	comp=Z,2.1nm,0.3s,baz=120,slow=14,SNR=6.2						
AKASG				Sn	Sn	13 28 46.0	-5.6
	comp=Z,0.8nm,0.3s,baz=127,slow=24,SNR=1.8						
	comp=Z,0.5nm,0.3s						
AKASG	Malin Array Be	9.83	317	*i* P	Pn	13 27 04.6	+2.9
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BELG	Belogornoye	9.88	29	Pn	Pn	13 27 02.6	+0.3
	comp=Z,1.5nm,0.3s,baz=226,slow=22,SNR=6.5						
BELG				Sn	Sn	13 28 48.5	-4.3
	comp=Z,1.0nm,0.3s,baz=38,slow=19,SNR=2.6						
	comp=Z,3.5nm,0.3s						
AKTO	Aktyubinsk	13.92	56	Pn	Pn	13 27 55.4	-2.3
	comp=Z,0.6nm,0.3s,baz=260,slow=9.4,SNR=6.5						
AKTO				Sn	Sn	13 30 23.1	-8.7
	comp=Z,0.3nm,0.3s,baz=44,slow=21,SNR=6.1						
	comp=Z,1.4nm,0.3s						
AKTO	Aktyubinsk	13.92	56	⇓P	Pn	13 27 56.4	-1.3
	comp=Z,1.9nm,0.6s						
AKTO				⇓S	Sn	13 30 28.0	-3.8
	comp=Z,2.7nm,0.8s						
AKTO	Aktyubinsk	13.92	56	P	Pn	13 27 56.4	-1.3
AKTO				S	Sn	13 30 28.0	-3.8
AB31	Akbulak array	14.77	62	⇑P	Pn	13 28 08.1	-1.2
	comp=Z,0.9nm,0.5s,baz=251,slow=13,SNR=24						
AB31				⇓S	Sn	13 30 42.3	-10
	comp=Z,0.8nm,0.5s,baz=248,slow=25						
AB31	Akbulak array	14.77	62	P	Pn	13 28 08.1	-1.2
KLMR	Klimovskoe	16.89	359	*e*P	Pn	13 28 36.4	-0.1
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ARTI	Arti	17.10	37	P	P	13 28 41.3	+0.3
FINES	FINESS Array B	19.28	340	P	P	13 29 04.3	-0.6
	comp=Z,0.4nm,0.3s,baz=153,slow=13,SNR=8.7						
	comp=Z,4.8nm,1.0s						
FINES	FINESS Array B	19.28	340	*i* P	Pn	13 29 06.8	+0.9
FINES				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BORK	Borovoye	21.99	55	⇑*e*P	P	13 29 35.7	+1.4
BORK				pmax	pmax		
	comp=Z,6.0nm,2.6s						
BVAR	Borovoye Array	22.02	55	P	P	13 29 36.1	+1.4
	comp=Z,0.5nm,0.5s,baz=252,slow=4.4,SNR=3.6						
	comp=Z,0.5nm,0.5s						
HFS	Hagfors	22.55	325	P	P	13 29 40.6	+0.4
	comp=Z,2.2nm,0.6s,baz=120,slow=14,SNR=7.3						
	comp=Z,2.2nm,0.6s						
AAK	Ala-Archa	25.16	81	⇑*e*P	P	13 30 07.1	+1.4
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ARCES	ARCESS Array B	26.63	349	P	P	13 30 19.1	+0.5
	comp=Z,4.9nm,1.2s,baz=170,slow=9.2,SNR=1.6						
	comp=Z,4.9nm,1.2s						
KURBB	Kurchatov Arra	26.83	62	P	P	13 30 22.9	+2.4
	comp=Z,0.3nm,0.4s,baz=271,slow=9.4,SNR=4.2						
	comp=Z,0.3nm,0.4s						
KURK	Kurchatov	26.89	62	⇓*e*P	P	13 30 22.4	+1.4
KURK				pmax	pmax		
	comp=Z,3.0nm,1.5s						
MKAR	Makanchi Array	29.69	69	P	P	13 30 48.9	+2.8
	comp=Z,0.3nm,0.4s,baz=280,slow=8.7,SNR=2.2						
	comp=Z,0.3nm,0.4s						
TORD	Torodi Ar. Bea	44.81	239	LR	LR	13 55 36.7	
	comp=Z,82nm,18.0s,baz=214,slow=42						

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*JMA **18** 13:44:43.0±0.1, 24°N±2°×123°.0E±0°.6, h47^{km}±1^{km},*
MV2.5/13, NW OFF ISHIGAKIJIMA IS

*TAP **18** 13:44:43.2, 24°.28N×122°.89E, h36^{km}, ML3.0, C*

ISC 18 13:44:43.1±1.4**, 24°.21N**±0°.03×**122°.98E**±0°.02**, h34^{km}**±2^{km}**,**
n84, σ**1^{s}48**/143**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.24	353	*i* P	Pn	13 44 50.5	+0.7
JYNG				*e*S	Sb	13 44 55.8	+0.7
YOJ	Yonaguni jima	0.25	7	*i* P	Pn	13 44 50.6	+0.6
YOJ				*i* S	Sb	13 44 56.0	+0.7
YOJ	Yonaguni jima	0.25	7	P	Pn	13 44 50.5	+0.5
YOJ				S	Sb	13 44 55.9	+0.7
EOS3	EOS3	0.61	277	*e*P	Pn	13 44 55.2	+0.1
EOS4	EOS4	0.61	262	*e*P	Pn	13 44 55.9	+1.0
IRIF	Iriomote-Funau	0.70	80	P	Pn	13 44 56.3	-0.2
IRIF				S	Sn	13 45 06.3	+0.1
HATJ	Hateruma jima	0.77	101	*e*P	Pn	13 44 58.0	+0.4
JKRS	Kuro-shima	0.94	88	P	Pn	13 45 00.9	+1.0
JKRS				S	Sn	13 45 12.6	+0.4
JIJ	Ishigaki jima	1.07	82	P	Pn	13 45 01.4	-0.3
JIJ				S	Sn	13 45 14.8	-0.7
ESAO	Su ao	1.10	290	*e*S	Sn	13 45 14.2	-1.9
TWC	Suao	1.10	291	P	Pn	13 45 00.7	-1.5
TWC				S	Sn	13 45 13.1	-3.1
ENA	Nanau	1.15	281	*e*P	Pn	13 45 01.9	-0.9
ENA				*e*S	Sn	13 45 15.4	-2.0
TWB1	Santiao Chiao	1.20	312	*e*P	Pn	13 45 01.4	-2.1
TWB1				*e*S	Sn	13 45 15.2	-3.5
NDS	Dongshan	1.23	290	*e*P	Pn	13 45 03.1	-0.8
NDS				S	Sn	13 45 17.5	-1.7
NACB	Ninganchiao	1.26	269	*e*P	Pn	13 45 04.1	-0.3
NACB				*e*S	Sn	13 45 19.6	-0.5
JISG	Ishigakijimahi	1.27	73	P	Pn	13 45 04.1	-0.4
JISG				*e*S	Sn	13 45 20.1	-0.3
TIPB	Shuangxi	1.29	306	P	Pn	13 45 03.6	-1.2
TIPB				*e*S	Sn	13 45 18.1	-2.9
TWE	Neicheng	1.30	293	P	Pn	13 45 04.2	-0.6
TWE				S	Sn	13 45 19.0	-2.0
SXI1	Grass Mountain	1.33	312	*e*P	Pn	13 45 04.3	-1.1
SXI1				S	Sn	13 45 19.8	-2.3
ENTT	Nioudou	1.36	289	*e*P	Pn	13 45 05.7	0.0
ENTT				*e*S	Sn	13 45 21.6	-0.9
SHUL	Shoufeng	1.36	252	*e*P	Pn	13 45 05.4	-0.3
SHUL				*e*S	Sn	13 45 22.0	-0.6
LATG	Datong	1.36	284	P	Pn	13 45 06.1	+0.2
LATG				S	Sn	13 45 22.3	-0.5
ETLH	Xiulin Townshi	1.37	270	*e*P	Pn	13 45 05.6	-0.2
ETLH				*e*S	Sn	13 45 22.5	-0.3
ETM	Tongmen	1.38	260	*e*P	Pn	13 45 05.7	-0.3
ETM				*e*S	Sn	13 45 19.9	-3.1
FUSB	Fushanzhiwuyua	1.38	294	*e*P	Pn	13 45 06.0	-0.1
FUSB				*e*S	Sn	13 45 21.4	-1.8
LXIB	Xiulin Townshi	1.44	263	*e*P	Pn	13 45 06.8	-0.2
LXIB				*e*S	Sn	13 45 24.1	-0.7
NWLT	Wulai	1.46	293	*e*P	Pn	13 45 07.1	0.0
NWLT				*e*S	Sn	13 45 23.0	-2.0
ESL	Shilin	1.47	255	*e*P	Pn	13 45 06.4	-0.8
ESL				*e*S	Sn	13 45 24.0	-1.2
NNSB	Datong	1.47	279	*e*P	Pn	13 45 07.5	+0.2
NNSB				*e*S	Sn	13 45 25.5	0.0
NNS	Nan Shan	1.48	279	*e*S	Sn	13 45 25.8	+0.1
YHNB	Yeheng	1.53	288	*e*P	Pn	13 45 08.3	+0.2
YHNB				*e*S	Sn	13 45 26.5	-0.4
NSK	Sanguang	1.55	288	*e*P	Pn	13 45 09.1	+0.7
NSK				*e*S	Sn	13 45 25.4	-1.9
WHF	Hehuan Shan	1.57	268	*e*P	Pn	13 45 09.1	+0.2
WHF				*e*S	Sn	13 45 27.4	-0.9
FUSS	Fushou	1.58	272	*e*P	Pn	13 45 09.6	+0.6

HGSD	Ruisui	1.59	244	P	Pn	13 45 08.1	-0.8
HGSD				eS	Sn	13 45 26.9	-1.4
JTJ	Tarama	1.63	74	eP	Pn	13 45 09.4	0.0
JTJ				S	Sn	13 45 28.9	-0.3
TWT	Tachien	1.65	272	eP	Pn	13 45 11.1	+1.3
EHYH	Wanrong	1.66	245	P	Pn	13 45 09.5	-0.3
TDCB	Techi	1.66	272	eP	Pn	13 45 10.4	+0.4
OWD	Renai	1.67	262	eP	Pn	13 45 10.0	-0.1
OWD				eS	Sn	13 45 28.6	-1.7
EHY	Hungye	1.67	246	eP	Pn	13 45 09.3	-0.6
EHY				eS	Sn	13 45 29.4	-0.8
WUSB	Renai	1.71	263	eP	Pn	13 45 11.0	+0.3
WUSB				eS	Sn	13 45 30.6	-0.9
KSHI	Guanxi Townshi	1.74	289	eS	Sn	13 45 34.3	+2.5
VWDT	VWDT	1.74	255	eP	Pn	13 45 11.2	+0.3
VWDT				eS	Sn	13 45 31.1	-0.8
YULB	Yu-li	1.74	242	eP	Pn	13 45 10.5	-0.4
YULB				S	Sn	13 45 31.0	-1.0
NFF	Wufeng Townshi	1.75	284	eP	Pn	13 45 12.2	+1.1
NFF				eS	Sn	13 45 33.9	+1.7
TWF1	Yuli	1.76	241	P	Pn	13 45 11.1	-0.1
TWF1				eS	Sn	13 45 31.8	-0.7
CHKH	Chenggong	1.77	235	eS	Sn	13 45 30.7	-2.0
LIOB	Emei	1.84	284	eP	Pn	13 45 13.7	+1.4
FULB	Fuli	1.84	237	eP	Pn	13 45 11.4	-0.9
FULB				S	Sn	13 45 33.3	-1.2
CHKT	Chengkung	1.85	234	eS	Sn	13 45 32.2	-2.4
WHP	Taichung City	1.86	273	eP	Pn	13 45 14.3	+1.7
WHP				eS	Sn	13 45 36.2	+1.2
SMLT	Sun Moon Lake	1.93	261	eP	Pn	13 45 14.4	+0.8
SMLT				eS	Sn	13 45 37.7	+1.0
EHD	Haiduan	1.94	237	P	Pn	13 45 11.4	-2.2
EHD				eS	Sn	13 45 33.6	-3.3
ECS	Chishang	1.96	236	eS	Sn	13 45 37.6	+0.3
TYC	Yuchr	1.96	262	eP	Pn	13 45 16.0	+2.1
WHYT	Xinyi Township	2.01	256	eP	Pn	13 45 15.7	+1.1
WHYT				eS	Sn	13 45 39.9	+1.2
ELDTW	Lidau	2.06	241	eP	Pn	13 45 14.9	-0.6
JIRB	Irabujima	2.09	72	eP	Pn	13 45 15.8	0.0
JIRB				S	Sn	13 45 39.5	-1.1
WJS	Zhushan	2.09	260	eP	Pn	13 45 17.7	+2.0
WJS				eS	Sn	13 45 43.2	+2.5
TCU	Taichung	2.10	269	eS	Sn	13 45 43.2	+2.3
ALS	Alishan	2.11	251	eP	Pn	13 45 17.1	+0.8
ALS				eS	Sn	13 45 40.7	-0.8
WNT	Mingjian	2.12	262	eP	Pn	13 45 18.3	+2.2
WNT				eS	Sn	13 45 43.8	+2.4
CHN5	Tsauling	2.19	254	eP	Pn	13 45 18.6	+1.4
CHN5				eS	Sn	13 45 45.0	+1.8
TWGBT	Beinan	2.23	232	eP	Pn	13 45 17.3	-0.4
TWGBT				eS	Sn	13 45 40.9	-3.0
TWG	Pinlang	2.23	232	eS	Sn	13 45 42.0	-2.0
STYH	Taoyuan	2.27	243	eP	Pn	13 45 18.7	+0.5
STYH				eS	Sn	13 45 45.0	0.0
WDLH	Douliu	2.29	257	eP	Pn	13 45 20.2	+1.7
WDLH				eS	Sn	13 45 47.6	+2.1
WCKO	Fanlu	2.31	251	eP	Pn	13 45 20.2	+1.5
WCKO				eS	Sn	13 45 47.6	+1.7
TPUB	Ta-pu	2.33	248	eP	Pn	13 45 20.7	+1.6
TPUB				eS	Sn	13 45 48.2	+1.6
WTP	Ta-pu	2.37	247	P	Pn	13 45 21.4	+1.8
WTP				eS	Sn	13 45 49.7	+2.1
CHY	Chiayi	2.44	254	eS	Sn	13 45 51.2	+2.0
ECL	Taimali	2.46	230	eS	Sn	13 45 47.3	-2.3
CHN1	Nanshi	2.47	246	eP	Pn	13 45 23.2	+2.3
CHN1				eS	Sn	13 45 52.8	+2.9
SGST	Jiashian	2.47	243	eP	Pn	13 45 22.0	+1.1
SGST				eS	Sn	13 45 51.7	+1.8
TWK	Hsinying	2.47	248	eP	Pn	13 45 23.1	+2.1
TWK				eS	Sn	13 45 52.4	+2.4
SNST	Tainan City	2.48	247	eP	Pn	13 45 23.1	+2.0
SNST				eS	Sn	13 45 51.9	+1.7
LYUB	Lan-yu	2.54	211	eP	Pn	13 45 20.6	-1.3
LYUB				eS	Sn	13 45 47.9	-3.9
SSD	Sandimen	2.60	236	eP	Pn	13 45 24.6	+1.8
EAST	Anshuo	2.67	228	eP	Pn	13 45 23.7	-0.1
MASBT	Mashibuluo	2.68	234	eP	Pn	13 45 25.0	+1.1
MASBT				eS	Sn	13 45 55.4	+0.3
SCZT	Fangliau	2.84	230	eP	Pn	13 45 26.9	+0.9
PHUB	P'eng-hu	3.19	258	eS	Sn	13 46 07.0	-0.8
PTMZ	Houxiangcun	3.61	284	eS	Sn	13 46 14.9	-3.1

BGSI ***18*** *13:46:26.6±2.2, 26°.79S×31°.05E, h0^{km}±139^{km}, ML3.2*
PRE ***18*** *13:46:43.4±1.2, 26°.04S×29°.38E, h0^{km}, ML2.7, Suspected explosion*
IDC ***18*** *13:46:45.7±6.3, 25°.95S×29°.21E, h0^{km}, mb3.3/1, mbtmp3.1/2, ML2.6/1, Error ellipse: s-maj=122.5km s-min=25.7km az=124.0*
BUL ***18*** *13:46:50.6±1.7, 26°.01S×29°.32E, h10^{km}, MD3.2*
ISC 18 13:46:43.8±0.8**, 26°.03S**±0°.03×**29°.38E**±0°.03**, h0**^{km}**, n24,** σ**1ˢ.73**/42**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRLN	Carolina, Mapu	0.58	87	eP	Pg	13 46 54.7	-0.3
CRLN				eS	Sg	13 47 02.6	0.0
CRLN				IAML		13 47 08.6	
	comp=Z,558nm,0.6s						
HRAO	HartRAO	1.53	275	eP	Pg	13 47 13.6	+0.4
HRAO				eS	Sn	13 47 33.9	+0.7
HRAO				IAML		13 47 37.0	
	comp=Z,140nm,0.2s						
PILG	Pilgrimsrest,	1.63	48	eP	Pn	13 47 14.0	0.0
PILG				eS	Sb	13 47 36.1	0.0
PILG				IAML		13 47 37.7	
	comp=Z,105nm,0.2s						
NWCL	Newcastle	1.76	165	eP	Pb	13 47 16.5	-0.6
NWCL				eS	Sn	13 47 38.6	-0.4
NWCL				IAML		13 47 45.5	
	comp=Z,79nm,0.6s						
PRYS	Parys	2.02	243	eP	Pn	13 47 19.1	-0.2
PRYS				eS	Sn	13 47 46.1	+0.8
PRYS				IAML		13 47 51.0	
	comp=Z,87nm,0.5s						
HOED	Hoedspruit, Li	2.14	41	eP	Pn	13 47 21.8	+0.9
HOED				eS	Sn	13 47 48.4	+0.2
HOED				IAML		13 47 52.4	
	comp=Z,64nm,0.2s						
LEPH	Lephalale, Lim	2.59	326	eP	Pn	13 47 27.4	+0.2
LEPH				eS	Sn	13 47 59.0	-0.5
LEPH				IAML		13 48 07.0	
	comp=Z,49nm,0.5s						
SNKL	Senekal, Frees	2.65	212	eP	Pn	13 47 28.6	+0.5
SNKL				eS	Sn	13 48 01.1	0.0
SNKL				IAML		13 48 19.0	
	comp=Z,33nm,0.3s						
LBTB	Lobatse	3.56	286	eP	Pn	13 47 40.6	+0.1
LBTB				eS	Sn	13 48 23.2	-0.2
LBTB				IAML		13 48 38.6	
	comp=Z,26nm,0.6s						
LBTB	Lobatse	3.56	286	i P	Pb	13 47 44.9	-2.9
LBTB				i S	Sn	13 48 25.1	+1.7
MUSN	Musina, Limpop	3.75	7	eP	Pn	13 47 44.1	+1.1
MUSN				eS	Sn	13 48 28.3	+0.3
MUSN				IAML		13 48 40.6	
	comp=Z,29nm,0.7s						
MUSN	Musina, Limpop	3.75	7	i P	Pb	13 47 48.8	-2.2
MUSN				i S	Sn	13 48 30.4	+2.4
MREMI	Moremi	3.87	333	i P	Pn	13 47 44.4	-0.3
MREMI				IAML		13 48 48.3	
	comp=N,96nm,0.2s						
MAKGR	Makgori	4.13	272	i P	Pn	13 47 50.3	+2.0
MAKGR				i S	Sb	13 48 52.4	+4.4
MAKGR				IAML		13 48 58.1	
	comp=E,93nm,0.5s						
LPHEP	Lephephe	4.16	309	i P	Pn	13 47 50.7	+2.0
LPHEP				i S	Sg	13 48 54.8	-2.7
BOSA	Boshof	4.48	234	Pn	Pn	13 47 53.0	-0.2
	comp=E,0.2nm,0.3s,baz=55,slow=15,SNR=1.5						
BOSA				Pg	Pg	13 48 07.7	-2.0
	comp=E,1.2nm,0.3s,baz=58,slow=18,SNR=14						
BOSA				Lg	Lg	13 49 05.7	
	comp=E,3.7nm,0.3s,baz=338,slow=20,SNR=11						
	comp=E,1.0nm,0.5s						
BOSA	Boshof	4.48	234	eP	Pn	13 47 53.1	0.0
BOSA				eS	Sn	13 48 45.0	-1.0
BOSA				IAML		13 49 13.9	
	comp=Z,12nm,0.4s						
BOSA	Boshof	4.48	234	i P	Pn	13 47 57.5	+4.3
BOSA				i S	Sn	13 48 47.0	+0.9
BROLN	Tlhalogang	5.25	339	i P	Pn	13 48 04.0	+0.2
BROLN				IAML		13 48 49.2	
	comp=N,18nm,5.0s						
MATP	Matopo	5.64	352	Pn	Pb	13 48 26.5	+3.2
	comp=N,0.7nm,0.3s,baz=160,slow=12,SNR=19						
MATP				Sn	Sb	13 49 28.8	-2.7
	comp=N,1.1nm,0.3s,baz=92,slow=20,SNR=4.6						
MATP				Lg	Lg	13 49 53.9	
	comp=N,1.9nm,0.3s,baz=269,slow=18,SNR=5.9						
MATP	Matopo	5.64	352	i P	Pn	13 48 14.4	+5.3
MATP				i S	Sn	13 49 14.4	-0.2
BLWY	Bulawayo	5.91	353	i P	Pn	13 48 15.5	+2.7
BLWY				i S	Sn	13 49 19.1	-2.1
I35NA	TSUMEB INFRASO	12.84	300	I	I	14 59 10.0	
	baz=128,slow=304,SNR=8.4						
TORD	Torodi Ar. Bea	47.35	322	P	P	13 55 20.3	+0.5
	comp=N,0.4nm,0.9s,baz=121,slow=5.9,SNR=1.9						
	comp=N,0.4nm,0.9s						

GUC 18 13:48:02.0±0.7**, 18°.04S**×**69°.77W, h130**^{km}±3^{km}**, ML3.7, 2C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.39	140	eP	Pn	13 48 21.0	-0.2
PB16				i S	Sn	13 48 35.2	-0.5
PB16				IAML		13 48 36.0	
	comp=N,2μm,0.3s						
PB18	Visviri	0.52	32	eP	Pn	13 48 22.3	+0.4
PB18				i S	Sn	13 48 36.8	0.0
AP01	Chacalluta	0.64	239	⇑iP	Pn	13 48 21.5	-0.4
AP01				eS	Sn	13 48 36.5	-0.5
AP01				IAML		13 48 37.8	
	comp=E,3μm,0.4s						
PB12	IPOC Station P	0.78	223	⇑iP	Pn	13 48 22.4	-0.7
PB12				i S	Sn	13 48 38.1	-1.1
PB12				IAML		13 48 39.6	
	comp=N,2μm,0.2s						
PX02	IPOC Station P	1.01	204	eP	Pn	13 48 23.5	-1.6
PX02				i S	Sn	13 48 40.9	-1.7
GO01	Chusmiza	1.71	162	⇓iP	Pn	13 48 33.2	+0.2
GO01				eS	Sn	13 48 56.9	+0.2
GO01				IAML		13 49 01.2	
	comp=N,1μm,0.1s						
PB11	IPOC Station P	1.72	176	⇓iP	Pn	13 48 32.3	-0.5
PB11				eS	Sn	13 48 55.3	-1.0
PB11				IAML		13 48 56.5	
	comp=E,818nm,0.3s						
PB08	IPOC Station P	2.17	165	⇓iP	Pn	13 48 38.6	+0.1
PB08				eS	Sn	13 49 05.8	-0.6
PB08				IAML		13 49 07.0	
	comp=E,390nm,0.4s						
TA01	Diego Aracena	2.54	189	eP	Pn	13 48 41.3	-1.4
TA01				eS	Sn	13 49 09.5	-4.6
PATCX	Punta Patache	2.79	187	eP	Pn	13 48 45.1	-0.9
PATCX				i S	Sn	13 49 14.2	-5.7
PB01	IPOC Station P	3.00	175	eP	Pn	13 48 47.8	-0.9
PB01				eS	Sn	13 49 21.4	-3.5
PB02	IPOC Station P	3.27	182	eP	Pn	13 48 51.1	-1.1
PB02				eS	Sn	13 49 27.4	-3.7
PB03	IPOC Station P	3.99	180	eP	Pn	13 49 00.5	-1.3
PB03				i S	Sn	13 49 43.3	-4.9

IDC ***18*** *14:09:10.6±0.6, 33°.48N×71°.59E, h0^{km}, mb4.4/23, mbtmp4.5/28, ML4.3/5, MS3.6/16, Error ellipse: s-maj=15.3km s-min=13.4km az=25.0*
NNC ***18*** *14:09:14.7±7.6, 33°.85N×70°.84E, h0^{km}, mb4.6, Error ellipse: s-maj=85.1km s-min=57.8km az=143.0*
MOS ***18*** *14:09:16.1±0.9, 33°.67N×71°.61E, h47^{km}, mb4.7/14, Error ellipse: s-maj=7.3km s-min=4.4km az=97.2*
BJI ***18*** *14:09:17.0, 33°.75N×71°.64E, h48^{km}, mB4.4/5, mb4.4/24, ML4.3/1, Ms4.0/6, Ms7 3.7/6*
NEIC ***18*** *14:09:17.3±1.4, 33°.59N±0°.07×71°.63E±0°.05, h46^{km}±6^{km}, mb4.5/52, Error ellipse: s-maj=10.7km s-min=6.2km az=191.0*
NDI ***18*** *14:09:19.8±1.1, 33°.57N×71°.63E, h50^{km}, ML4.4, MW4.4, mb4.5(NEIC)*
ISC 18 14:09:16.0±0.4**, 33°.54N**±0°.04×**71°.60E**±0°.03**, h35**^{km}**, n211,** σ**1ˢ.71**/230**, mb4.5**/53**, MS3.5**/15**, 15C-11D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIL	Nilore	1.39	85		Pn	14 09 41.0	+2.1
NIL				Sn	Sn	14 09 59.6	+3.6
NIL	Nilore	1.39	85	P	Pn	14 09 41.0	+2.1
NIL						14 09 59.6	
KBL	Kabul	2.34	296		Pn	14 09 53.9	+1.7
KBL				Sn	Sn	14 10 22.6	+2.7
KBL	Kabul	2.34	296	P	Pn	14 09 53.9	+1.7
KBL						14 10 22.6	
SRNI	Srinagar	2.72	78	eP	Pn	14 10 00.2	+2.4
SRNI				eS	Sn	14 10 30.8	+0.9
SRNI				IAML		14 10 38.2	
	comp=E,7μm,0.4s						
SRNI				IAML		14 10 40.9	
	comp=N,7μm,0.3s						
JMU	Jammu	2.82	105	eP	Pn	14 10 02.1	+2.6
JMU				eS	Sn	14 10 32.9	-0.2
JMU				IAML		14 10 43.2	
	comp=E,5μm,0.6s						
JMU				IAML		14 10 44.6	
	comp=N,3μm,0.5s						
MANEM	Manem	3.99	1		Pn	14 10 16.9	+2.0
MANEM				Sn	Sn	14 10 58.0	-2.6
TLWR	Talawar	4.00	112	eP	Pn	14 10 17.9	+3.1
TLWR				eS	Sn	14 11 00.3	-0.2
TLWR				IAML		14 11 27.3	
	comp=N,406nm,0.2s						
TLWR				IAML		14 11 28.8	
	comp=E,372nm,0.5s						
DHRM	DHARAMSHALA	4.16	107	eP	Pn	14 10 20.4	+3.2
DHRM				eS	Sn	14 11 04.5	-0.3
DHRM				IAML		14 11 12.0	
	comp=N,944nm,0.5s						
DHRM				IAML		14 11 12.2	
	comp=E,1μm,0.4s						
BHK	Bhakra	4.58	117	eP	Pn	14 10 31.3	+8.3
BHK				IAML		14 11 20.9	
	comp=E,901nm,0.3s						
BHK				IAML		14 11 21.4	
	comp=N,867nm,0.3s						
BHK				eS	Sn	14 11 22.6	+7.5
ALCI	Alchi Leh	4.70	80	eP	Pn	14 10 27.9	+3.2
ALCI				eS	Sn	14 11 16.5	-1.7
ALCI				IAML		14 11 41.5	
	comp=N,167nm,0.6s						
ALCI				IAML		14 11 42.1	
	comp=E,167nm,0.3s						
SHAA	Shahritus	4.91	326	Sn	Sn	14 11 25.6	+2.7
SMLA	Simla	5.29	116	eP	Pn	14 10 35.8	+3.2
SMLA				eS	Sn	14 11 32.3	-0.1
SMLA				IAML		14 11 35.1	
	comp=N,795nm,0.8s						
SMLA				IAML		14 11 36.8	
	comp=E,607nm,0.6s						
CHGR	Chuyangaron	5.47	340		Pn	14 10 35.6	+0.5
CHGR	Chuyangaron	5.47	340	P	Pn	14 10 35.6	+0.5
GAR	Garm	5.54	350		Pn	14 10 38.0	+1.8
BKNR	BIKANER	5.69	165	eP	Pn	14 10 39.1	+1.0
DRK	Karamyk	5.93	2		Pn	14 10 42.9	+1.3
DRK	Karamyk	5.93	2	P	Pn	14 10 42.9	+1.3
KLP	Kalpa	5.96	108	eP	Pn	14 10 45.3	+3.2
KLP				eS	Sn	14 11 46.4	-3.0
KLP				IAML		14 12 37.1	
	comp=N,784nm,0.9s						
KLP				IAML		14 12 37.3	
	comp=E,892nm,0.6s						
DDI	Dehra Dun	6.36	119	eP	Pn	14 10 49.9	+2.6
DDI				eS	Sn	14 11 56.8	-2.0
DDI				IAML		14 12 40.0	
	comp=N,1μm,0.6s						
DDI				IAML		14 12 41.9	
	comp=E,1μm,0.7s						
KSH	Kashi	6.92	29	P	Pn	14 10 52.6	-2.5
KSH				S	Sn	14 12 05.5	-7.2
KSH				smax	smax		
	comp=E,210nm,0.6s						
KSH				smax	smax		
	comp=E,180nm,0.5s						
JOSI	Joshimath	7.38	112	eP	Pn	14 11 03.8	+2.3
HRA	Herat	7.82	279		Pn	14 11 08.6	+1.2
LGTI	Lohaghat	8.34	117	eP	Pn	14 11 17.1	+1.4
UCH	Uchtor	8.97	14	P	Pn	14 11 25.1	+1.6
	SNR=44						
UDPR	Udaipur	9.12	168	eP	Pn	14 11 28.2	+3.0
EKS2	Erkin-Say	9.26	10	P	Pn	14 11 29.9	+2.8
	SNR=27						
AAK	Ala-Archa	9.36	13	P	Pn	14 11 30.7	+2.1
	SNR=27						
AAK	Ala-Archa	9.36	13	Pn	Pn	14 11 30.6	+2.1
	comp=E,4.8nm,0.3s,baz=184,slow=6.7,SNR=59						
AAK				Sn	Sn	14 13 12.2	-0.4
	comp=E,0.6nm,0.3s,baz=270,slow=8.1,SNR=1.7						
AAK				LR	LR	14 15 24.3	
	comp=E,320nm,21.8s,baz=205,slow=40						
	comp=E,17nm,0.5s						
AAK	Ala-Archa	9.36	13		Pn	14 11 29.5	+1.0
AAK	Ala-Archa	9.36	13	⇑P	Pn	14 11 29.8	+1.3
	comp=E,6.0nm,0.5s						
AAK				⇑S	Sn	14 13 12.6	-0.1
	comp=E,30nm,1.2s						
AAK	Ala-Archa	9.36	13	ceP	Pn	14 11 29.8	+1.3
AAK				pmax	pmax		
	comp=Z,18nm,0.7s						
KBK	Karagaybulak	9.47	15	P	Pn	14 11 34.1	+4.1
	SNR=12						
TARG	Taragay, Kyrgy	9.54	29		Pn	14 11 31.6	+0.4
TARG	Taragay, Kyrgy	9.54	29	P	Pn	14 11 31.6	+0.4
FRU1	Bishkek	9.55	14	Pn	Pn	14 11 33.4	+2.3
FRU1	Bishkek	9.55	14	P	Pn	14 11 33.4	+2.3
BOOM	Boomskoye usch	9.56	20		Pn	14 11 32.6	+1.3
BOOM	Boomskoye usch	9.56	20	P	Pn	14 11 32.6	+1.3
KK31	Karatay Array	9.58	355		Pn	14 11 31.6	+0.2
KK31	Karatay Array	9.58	355	⇑P	Pn	14 11 32.0	+0.6
	comp=Z,12nm,0.3s,baz=185,slow=13,SNR=120						
KK31				⇓S	Sn	14 13 17.4	-0.5
	comp=Z,9.7nm,0.4s,baz=187,slow=30						
KK31	Karatay Array	9.58	355	P	Pn	14 11 31.6	+0.2
KKAR	Karatay Array	9.58	355		Pn	14 11 31.9	+0.4
KKAR	Karatay Array	9.58	355	P	Pn	14 11 31.9	+0.4
KDJ	Kajisay	9.64	26		Pn	14 11 33.1	+0.7
KDJ	Kajisay	9.64	26	P	Pn	14 11 33.1	+0.7
WUS	Wushi	9.75	36		Pn	14 11 34.3	+0.4
CHMS	Chumysh	9.76	14	P	Pn	14 11 35.6	+1.7
	SNR=6.6						
TKM2	Tokmak 2	9.88	17	P	Pn	14 11 37.2	+1.6
	SNR=17						
PRZ	Przheval'sk	10.41	29		Pn	14 11 43.6	+0.7
PRZ	Przheval'sk	10.41	29	P	Pn	14 11 43.6	+0.7
BHPL	Bhopal	11.47	152	eP	Pn	14 11 59.7	+2.3
PDGK	Podgornoye	11.56	30	⇑P	Pn	14 11 58.5	-0.1
	comp=Z,10nm,0.7s						
PDGK				⇓S	Sn	14 14 13.6	+7.1
	comp=Z,19nm,0.9s						
PDGK	Podgornoye	11.56	30	P	Pn	14 11 58.5	-0.1
PDGK				S	Sn	14 14 13.6	+7.1
MAKZ	Makanchi	15.42	28		Pn	14 12 49.4	-1.5
MAKZ	Makanchi	15.42	28	P	Pn	14 12 49.4	-1.5
MAKZ				pmax	pmax		
	comp=Z,16nm,0.9s						
MK31	Makanchi Array	15.53	28	⇑P	P	14 12 55.4	-0.9
	comp=Z,5.5nm,0.6s,baz=204,slow=11,SNR=14						
MK31	Makanchi Array	15.53	28	⇓iP	Pn	14 12 52.7	+0.4
MKAR	Makanchi Array	15.53	28	Pn	Pn	14 12 53.1	+0.8
	comp=Z,1.0nm,0.3s,baz=205,slow=12,SNR=25						
MKAR				LR	LR	14 19 20.3	
	comp=Z,260nm,18.4s,baz=222,slow=39						
	comp=Z,4.5nm,0.7s						
WMQ	Urumqi	16.20	46	eP	Pn	14 13 00.8	-0.1
WMQ				S	Sn	14 15 57.6	-1.9
WMQ				pmax	pmax		
	comp=Z,15nm,1.1s						
LSA	Lhasa	17.09	98	P	Pn	14 13 09.2	-3.4
LSA	Lhasa	17.09	98	P	Pn	14 13 09.2	-3.4
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HYB	Hyderabad	17.23	157	eP	P	14 13 16.1	+0.8
KURBB	Kurchatov Arra	17.81	15	P	Pn	14 13 20.2	-0.7
	comp=Z,1.0nm,0.3s,baz=205,slow=11,SNR=68						
	comp=Z,29nm,0.8s						
KURBB	Kurchatov Arra	17.81	15	⇑P	Pn	14 13 20.8	-0.1
	comp=Z,39nm,0.7s						
KURBB	Kurchatov Arra	17.81	15	P	Pn	14 13 20.8	-0.1
KURK	Kurchatov	17.92	15		Pn	14 13 19.5	-2.8
KURK				IAmb	IAmb	14 13 24.4	
	comp=Z,32nm,0.8s						
KURK	Kurchatov	17.92	15	⇓P	Pn	14 13 20.8	-1.4
	comp=Z,16nm,1.0s						
KURK	Kurchatov	17.92	15	⇑eP	Pn	14 13 21.3	-0.9
KURK				pmax	pmax		
	comp=Z,47nm,1.0s						
AB31	Akbulak array	17.93	335		Pn	14 13 20.0	-2.5
AB31	Akbulak array	17.93	335	⇑P	Pn	14 13 20.0	-2.5
	comp=Z,4.3nm,0.5s,baz=146,slow=12,SNR=141						
AB31	Akbulak array	17.93	335	P	Pn	14 13 20.0	-2.5
ABKAR	Akbulak array	17.93	335		Pn	14 13 19.6	-2.8
LKRN	Lenkeran, Azer	19.12	292	P	Pn	14 13 37.7	+0.7
SHL	Shillong	19.33	109		P	14 13 35.1	-3.5
SHL				IAmb	IAmb	14 13 47.4	
	comp=Z,14nm,0.8s						
SHL	Shillong	19.33	109	P	P	14 13 35.1	-3.5
SHL				pmax	pmax		
	comp=Z,14nm,0.8s						
BVA0	Borovoye Array	19.49	358	⇑P	P	14 13 39.7	-0.2
	comp=Z,16nm,0.8s,baz=160,slow=10,SNR=30						
BVA0	Borovoye Array	19.49	358	P	P	14 13 39.7	-0.2
BVAR	Borovoye Array	19.49	358	P	P	14 13 40.2	+0.3
	comp=Z,0.4nm,0.3s,baz=162,slow=10,SNR=52						
BVAR				LR	LR	14 21 43.9	
	comp=Z,158nm,21.6s,baz=179,slow=38						
	comp=Z,17nm,0.6s						
BORK	Borovoye	19.52	358		P	14 13 38.9	-1.2
BORK				IAmb	IAmb	14 13 47.9	
	comp=Z,13nm,0.6s						
BORK	Borovoye	19.52	358	ceP	P	14 13 40.0	-0.1
BORK				pmax	pmax		
	comp=Z,22nm,1.3s						
AKTO	Aktyubinsk	19.61	333	P	P	14 13 40.8	-0.4
	comp=Z,1.7nm,0.3s,baz=149,slow=8.2,SNR=31						
AKTO				LR	LR	14 22 10.1	
	comp=Z,191nm,18.6s,baz=99,slow=40						
	comp=Z,14nm,0.6s						
AKTO	Aktyubinsk	19.61	333	⇑P	P	14 13 40.2	-1.0
	comp=Z,8.5nm,0.6s						
DGZ	Jazzator, Alta	19.95	31	d iP	Pn	14 13 46.7	-0.2
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AKT	Akhty	20.48	300	eP	P	14 13 51.3	+0.4
AKT				e		14 14 10.5	
AKT				pmax	pmax		
	comp=Z,17nm,0.6s						
MNGR	Mingechevir, A	20.79	297	P	P	14 13 55.0	+1.0
SEKA	Sheki	20.80	299	P	P	14 13 54.8	+0.5
MAK	Makhachkala	21.07	304	c iP	P	14 13 56.9	-0.1
MAK				e*SP	sP	14 14 14.7	+3.5
MAK				eS	S	14 17 50.2	+0.6
MAK				e*SS	sS	14 18 08.6	+4.0
MAK				pmax	pmax		
	comp=Z,62nm,0.3s						
MAK				MLR	MLR		
	comp=Z,108nm,15.0s						
GANJ	Ganja	21.33	297	P	P	14 14 00.9	+1.0
NAX	Nakhchivan	21.72	292	P	P	14 14 05.7	+1.5
ZAA0	Zalesovo Array	22.45	21		P	14 14 10.6	-1.2
ZAA0				IAmb	IAmb	14 14 29.3	
	comp=Z,20nm,0.8s						
ZALV	Zalesovo Beam	22.45	21	P	P	14 14 11.1	-0.7
	comp=Z,15nm,0.5s,baz=215,slow=10,SNR=66						
ZALV				LR	LR	14 23 48.4	
	comp=Z,126nm,18.3s,baz=244,slow=39						
	comp=Z,15nm,0.5s						
ZALV	Zalesovo Beam	22.45	21		P	14 14 10.6	-1.2
GTA	Gaotai	23.38	67	eP	P	14 14 23.1	+1.4
GTA				pP	pP	14 14 29.8	-1.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NCK	Nalchik	23.96	303	⇓eP	P	14 14 29.3	+2.3
NCK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
GURO	Guroymak-BITLI	24.36	290	P	P	14 14 30.5	-0.4
KBZ	Khabaz	24.51	303	P	P	14 14 31.6	-0.4
	comp=Z,2.8nm,0.7s,baz=113,slow=6.2,SNR=12						
	comp=Z,2.8nm,0.7s						
KBZ	Khabaz	24.51	303	eP	P	14 14 32.5	+0.6
KBZ				pmax	pmax		

	comp=Z,3.0nm,0.7s						
ARTI	**Arti**	**24.60**	**342**	LR	LR	14 25 21.8	
	comp=Z,296nm,18.9s,baz=168,slow=39						
ARTI	**Arti**	**24.60**	**342**		**P**	**14 14 32.6**	**0.0**
ARTI				IAmb	IAmb	14 14 35.0	
	comp=Z,13nm,0.7s						
ARTI	**Arti**	**24.60**	**342**	*d i*P	**P**	**14 14 32.9**	**+0.3**
ARTI						14 15 04.8	
ARTI				S	**S**	**14 18 51.9**	**+0.7**
ARTI				SS	**SnSn**	**14 19 38.4**	**+0.2**
ARTI				pmax	pmax		
	comp=Z,12nm,0.8s						
SHA1	**Shidzhatmaz**	**24.68**	**303**	⇑*e*P	**P**	**14 14 34.7**	**+0.9**
KIV	**Kislovodsk**	**24.71**	**303**	*e*P	**P**	**14 14 34.5**	**+0.5**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,37nm,15.0s						
RAYN	**Ar Rayn**	**24.94**	**253**		**P**	**14 14 36.2**	**0.0**
RAYN	**Ar Rayn**	**24.94**	**253**	P	**P**	**14 14 36.2**	**0.0**
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MARD	**Mardin**	**25.34**	**287**	P	**P**	**14 14 40.0**	**+0.3**
MARD				IAmb	IAmb	14 14 42.5	
	comp=Z,10nm,0.6s						
BELG	**Belogornoye**	**25.54**	**325**	*ce*P	**P**	**14 14 41.6**	**+0.4**
BELG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KOPT	**Kop Dagi**	**25.65**	**294**	P	**P**	**14 14 41.9**	**-0.8**
KOPT				IAmb	IAmb	14 14 48.8	
	comp=Z,8.8nm,0.8s						
PZH	**PanZhiHua**	**26.96**	**97**	P	**P**	**14 14 55.5**	**+1.0**
PALK	**Pallekele**	**27.47**	**160**	LR	LR	14 26 15.5	
	comp=Z,204nm,19.1s,baz=331,slow=37						
CHTO	**Chiang Mai**	**28.48**	**114**		**P**	**14 15 05.7**	**-2.3**
CHTO				IAmb	IAmb	14 15 16.5	
	comp=Z,12nm,1.3s						
CHTO	**Chiang Mai**	**28.48**	**114**	P	**P**	**14 15 05.7**	**-2.3**
CHTO				pmax	pmax		
	comp=Z,12nm,1.3s						
CMAR	**Chiang Mai Arr**	**28.69**	**115**	P	**P**	**14 15 09.9**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=296,slow=9.7,SNR=18						
CMAR				LR	LR	14 29 30.3	
	comp=Z,42nm,18.5s,baz=305,slow=42						
	comp=Z,1.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**28.69**	**115**		**P**	**14 15 08.1**	**-1.8**
CMAR	**Chiang Mai Arr**	**28.69**	**115**	*e*P	**P**	**14 15 10.8**	**+0.9**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KIRV	**Kirov**	**29.12**	**336**	*de*P	**P**	**14 15 13.3**	**+0.1**
SONM	**Songino Array**	**29.72**	**51**	P	**P**	**14 15 20.7**	**+1.8**
	comp=Z,0.7nm,0.5s,baz=248,slow=10,SNR=4.1						
SONM				LR	LR	14 28 53.4	
	comp=Z,135nm,19.1s,baz=192,slow=40						
	comp=Z,0.7nm,0.5s						
BR131	**Keskin Array S**	**30.91**	**293**		**P**	**14 15 29.1**	**-0.5**
BR131				IAmb	IAmb	14 15 31.0	
	comp=Z,7.2nm,0.7s						
BR131	**Keskin Array S**	**30.91**	**293**	*d i*P	**P**	**14 15 30.3**	**+0.8**
BRTR	**Keskin Array B**	**30.91**	**293**	P	**P**	**14 15 29.9**	**+0.3**
	comp=Z,6.7nm,0.8s,baz=102,slow=9.0,SNR=35						
BRTR				LR	LR	14 30 15.6	
	comp=Z,30nm,19.6s,baz=319,slow=41						
	comp=Z,6.7nm,0.8s						
BRTR	**Keskin Array B**	**30.91**	**293**		**P**	**14 15 28.9**	**-0.6**
BRTR	**Keskin Array B**	**30.91**	**293**	*e*P	**P**	**14 15 30.4**	**+0.9**
BRTR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**32.44**	**65**	*e*P	**P**	**14 15 44.4**	**+1.4**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,43nm,6.9s						
OBN	**Obninsk**	**32.53**	**322**	*e*P	**P**	**14 15 43.6**	**+0.2**
OBN				*i*		14 16 53.6	
OBN				pmax	pmax		
	comp=Z,11nm,0.9s						
OBN				MLR	MLR		
	comp=Z,90nm,18.0s						
KLMR	**Klimovskoe**	**34.31**	**333**	*e*P	**P**	**14 15 56.6**	**-2.2**
KLMR				*e*		14 17 12.9	
KLMR				pmax	pmax		
	comp=Z,23nm,1.7s						
AKASG	**Malin Array Be**	**35.23**	**312**	P	**P**	**14 16 06.8**	**-0.1**
	comp=Z,2.4nm,0.6s,baz=91,slow=6.9,SNR=9.3						
	comp=Z,2.4nm,0.6s						
AKASG	**Malin Array Be**	**35.23**	**312**	*e*P	**P**	**14 16 07.3**	**+0.4**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AKBB	**Malin Array Si**	**35.23**	**312**	⇓*e*P	**P**	**14 16 07.3**	**+0.4**
XLT	**XiLinHaoTe**	**35.83**	**60**	*e*P	P	14 16 06.3	-5.9
XLT				sP	sP	14 16 28.8	+1.9
XLT				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MLR	**Muntele Rosu**	**36.72**	**303**	LR	LR	14 33 22.9	
	comp=Z,48nm,19.7s,baz=72,slow=40						
NRIK	**Noril'sk**	**36.95**	**9**	P	**P**	**14 16 21.6**	**+0.3**
	comp=Z,6.9nm,0.7s,baz=189,slow=5.7,SNR=11						
	comp=Z,6.9nm,0.7s						
NRIK	**Noril'sk**	**36.95**	**9**		**P**	**14 16 20.8**	**-0.6**
NRIK	**Noril'sk**	**36.95**	**9**	*e*P	**P**	**14 16 22.0**	**+0.7**
NRIK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BURAR	**Bucovina Array**	**37.36**	**306**	P	**P**	**14 16 25.2**	**0.0**
BURAR	**Bucovina Array**	**37.36**	**306**	P	**P**	**14 16 25.2**	**0.0**
BURAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NJ2	**Nanjing**	**39.48**	**79**	*e*P	**P**	**14 16 43.8**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
IPM	**Ipoh**	**39.84**	**130**	P	**P**	**14 16 45.2**	**-1.0**
FIA1	**FINESS Array S**	**40.23**	**328**	P	**P**	**14 16 48.4**	**-0.5**
FINES	**FINESS Array B**	**40.23**	**328**	P	**P**	**14 16 48.9**	**-0.1**
	comp=Z,5.7nm,0.7s,baz=118,slow=9.3,SNR=15						
FINES				LR	LR	14 34 51.6	
	comp=Z,189nm,18.0s,baz=182,slow=38						
	comp=Z,5.7nm,0.7s						
LVZ	**Lovozero**	**40.39**	**339**	P	**P**	**14 16 49.4**	**-0.9**
LVZ	**Lovozero**	**40.39**	**339**	P	**P**	**14 16 49.4**	**-0.9**
LVZ				pmax	pmax		
	comp=Z,47nm,1.4s						
MORC	**Moravsky Berou**	**42.56**	**309**	P	**P**	**14 17 09.5**	**+1.2**
MORC	**Moravsky Berou**	**42.56**	**309**	P	**P**	**14 17 09.5**	**+1.2**
MORC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
VADS	**Vadso**	**43.25**	**340**	*e*P	**P**	**14 17 14.0**	**+0.4**
KEV	**Kevo**	**43.73**	**339**	P	**P**	**14 17 17.4**	**0.0**
KEV	**Kevo**	**43.73**	**339**	P	**P**	**14 17 17.4**	**0.0**
KEV				pmax	pmax		
	comp=Z,47nm,1.4s						
TIP	**Timpagrande**	**43.96**	**294**	P	**P**	**14 17 19.7**	**0.0**
ARA0	**ARCESS Array S**	**44.06**	**339**	*e*P	**P**	**14 17 20.6**	**+0.4**
ARCES	**ARCESS Array B**	**44.06**	**339**	P	**P**	**14 17 20.1**	**0.0**
	comp=Z,13nm,0.7s,baz=109,slow=8.5,SNR=45						
ARCES				LR	LR	14 37 28.2	
	comp=Z,94nm,19.7s,baz=108,slow=38						
	comp=Z,13nm,0.7s						
ARCES	**ARCESS Array B**	**44.06**	**339**		**P**	**14 17 19.9**	**-0.2**
ARCES	**ARCESS Array B**	**44.06**	**339**	*e*P	**P**	**14 17 20.3**	**+0.2**
ARCES				pmax	pmax		
	comp=Z,13nm,0.7s						
KTK1	**Kautokeino**	**44.52**	**337**	*e*P	**P**	**14 17 23.7**	**0.0**
GERES	**GERESS Array B**	**45.08**	**308**	P	**P**	**14 17 29.7**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=96,slow=6.0,SNR=5.7						
	comp=Z,0.9nm,0.8s						
GERES	**GERESS Array B**	**45.08**	**308**	*e*P	**P**	**14 17 30.1**	**+1.5**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HAMF	**Hammerfest**	**45.16**	**340**	*e*P	**P**	**14 17 29.6**	**+0.9**
JETT	**Jettan, Norway**	**45.67**	**337**	*e*P	**P**	**14 17 33.2**	**+0.3**
HFS	**Hagfors**	**45.71**	**324**	P	**P**	**14 17 33.4**	**0.0**
	comp=Z,7.2nm,0.6s,baz=108,slow=9.7,SNR=22						
HFS				LR	LR	14 38 29.5	
	comp=Z,100nm,18.3s,baz=62,slow=38						
	comp=Z,7.2nm,0.6s						
YAK	**Yakutsk**	**46.12**	**34**	P	**P**	**14 17 36.0**	**-0.5**
	comp=Z,6.8nm,0.4s,baz=73,slow=2.0,SNR=5.0						
	comp=Z,6.8nm,0.4s						
YAK	**Yakutsk**	**46.12**	**34**	*e*P	**P**	**14 17 36.9**	**+0.4**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,1.0nm,0.6s						
YAK				pmax	pmax		
	comp=E,1.0nm,0.9s						
TRO	**Tromso**	**46.17**	**337**	*e*P	**P**	**14 17 36.9**	**+0.1**
MOR8	**Moi Rana**	**46.64**	**332**	*e*P	**P**	**14 17 39.9**	**-0.7**
FAUS	**Fauske**	**46.66**	**334**	*e*P	**P**	**14 17 40.6**	**0.0**
NC405	**NORSAR Array S**	**46.82**	**325**	P	**P**	**14 17 41.4**	**-0.7**
STEI	**Steigen**	**46.84**	**334**	*e*P	**P**	**14 17 41.5**	**-0.5**
NORES	**NORESS Array B**	**46.85**	**324**	P	**P**	**14 17 43.2**	**+0.9**
RAUS	**Rausandaksla**	**46.87**	**332**	*e*P	**P**	**14 17 42.1**	**-0.2**
NC303	**NORSAR Array S**	**47.00**	**325**	P	**P**	**14 17 43.0**	**-0.4**
NB201	**NORSAR Array S**	**47.02**	**325**	P	**P**	**14 17 42.8**	**-0.8**
NB2	**NORSAR Subarra**	**47.05**	**325**	P	**P**	**14 17 43.4**	**-0.5**
	comp=Z,3.2nm,0.7s,baz=99,slow=7.9						
NB2	**NORSAR Subarra**	**47.05**	**325**	P	**P**	**14 17 43.4**	**-0.5**
	baz=99,slow=7.9						
NOA	**NORSAR Array B**	**47.05**	**325**	P	**P**	**14 17 43.2**	**-0.7**
	comp=Z,5.1nm,0.8s,baz=97,slow=7.8,SNR=18						
NOA				LR	LR	14 39 41.5	
	comp=Z,48nm,18.1s,baz=115,slow=39						
	comp=Z,5.1nm,0.8s						
LEIR	**Leirfjorden**	**47.15**	**332**	*e*P	**P**	**14 17 44.5**	**0.0**
VAGH	**Vaagaholmen**	**47.24**	**333**	*e*P	**P**	**14 17 45.9**	**+0.7**
TIXI	**Tiksi**	**48.34**	**21**		**P**	**14 17 53.1**	**-0.5**
TIXI				IAmb	IAmb	14 18 08.5	
	comp=Z,6.3nm,1.1s						
TIXI	**Tiksi**	**48.34**	**21**	⇓*e*P	**P**	**14 17 53.6**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,11nm,2.5s						
SPB2	**Spitsbergen Ar**	**50.47**	**347**	P	**P**	**14 18 10.3**	**+0.4**
SPA0	**Spitsbergen Ar**	**50.48**	**347**	*e*P	**P**	**14 18 10.7**	**+0.8**
SPITS	**Spitsbergen Ar**	**50.48**	**347**	P	**P**	**14 18 10.5**	**+0.6**
	comp=Z,23nm,1.1s,baz=116,slow=9.5,SNR=9.4						
	comp=Z,23nm,1.1s						
KEST	**Kesra**	**50.49**	**291**	P	**P**	**14 18 12.4**	**+1.6**
	comp=Z,7.5nm,0.8s,baz=10,slow=3.6,SNR=5.3						
	comp=Z,7.5nm,0.8s						
KEST	**Kesra**	**50.49**	**291**	P	**P**	**14 18 11.6**	**+0.8**
ESDC	**Sonseca Array**	**59.31**	**300**	P	**P**	**14 19 14.2**	**-0.2**
	comp=Z,2.6nm,0.7s,baz=60,slow=7.4,SNR=14						
	comp=Z,2.6nm,0.7s						
ESDC	**Sonseca Array**	**59.31**	**300**	P	**P**	**14 19 13.8**	**-0.6**
TORD	**Torodi Ar. Bea**	**66.18**	**270**	P	**P**	**14 19 59.3**	**-1.1**
	comp=Z,2.0nm,0.6s,baz=49,slow=6.6,SNR=3.9						
	comp=Z,2.0nm,0.6s						
C16K	**Lisburne Hills**	**70.07**	**19**	P	**P**	**14 20 22.7**	**-1.3**
C19K	**Lookout Ridge**	**71.00**	**17**	P	**P**	**14 20 29.9**	**+0.2**
C19K				IAmb	IAmb	14 20 58.0	
	comp=Z,10.0nm,1.5s						
D19K	**Kuna River**	**71.81**	**17**	P	**P**	**14 20 34.2**	**-0.4**
D19K				IAmb	IAmb	14 20 35.3	
	comp=Z,4.2nm,0.8s						
POIN	**Pond Inlet**	**71.98**	**351**	P	**P**	**14 20 34.6**	**-0.9**
POIN				IAmb	IAmb	14 20 38.6	
	comp=Z,6.0nm,1.2s						
E22K	**Anaktuvuk Pass**	**73.58**	**16**	P	**P**	**14 20 44.4**	**-0.8**
E22K				IAmb	IAmb	14 20 51.2	
	comp=Z,8.3nm,1.5s						
TOLK	**Toolik Lake Re**	**73.65**	**15**	P	**P**	**14 20 45.5**	**-0.1**
TOLK				IAmb	IAmb	14 20 46.3	
	comp=Z,3.4nm,0.7s						
A36M	**Sachs Harbour**	**74.10**	**5**		**P**	**14 20 48.2**	**+0.2**
DBIC	**Dimbokro**	**75.06**	**268**	P	**P**	**14 20 53.5**	**-1.1**
	comp=Z,4.1nm,0.8s,baz=89,slow=4.8,SNR=6.1						
	comp=Z,4.1nm,0.8s						
DBIC	**Dimbokro**	**75.06**	**268**	P	**P**	**14 20 53.4**	**-1.2**
BMAR	**Burnt Mountain**	**75.69**	**14**	P	**P**	**14 20 57.8**	**+0.4**
BOSA	**Boshof**	**75.82**	**221**	P	**P**	**14 20 59.2**	**+0.5**
	comp=Z,2.1nm,0.5s,baz=12,slow=7.0,SNR=5.5						
BOSA				LR	LR	14 56 36.0	
	comp=Z,31nm,18.4s,baz=202,slow=38						
	comp=Z,2.1nm,0.5s						
BOSA	**Boshof**	**75.82**	**221**	P	**P**	**14 20 58.8**	**0.0**
E29M	**Blow River**	**76.02**	**11**	P	**P**	**14 20 59.2**	**0.0**
E29M				IAmb	IAmb	14 21 01.1	
	comp=Z,8.4nm,1.2s						
C36M	**Paulatuk**	**76.77**	**6**		**P**	**14 21 02.9**	**-0.5**
ILAR	**Eielson Array**	**77.48**	**16**	P	**P**	**14 21 06.9**	**-0.6**
	comp=Z,1.6nm,1.0s,baz=320,slow=4.1,SNR=11						
	comp=Z,1.6nm,1.0s						
G31M	**Satah River**	**77.92**	**10**	P	**P**	**14 21 09.5**	**-0.4**
G31M				IAmb	IAmb	14 21 10.0	
	comp=Z,3.3nm,0.8s						
DAWY	**Dawson**	**79.68**	**13**	P	**P**	**14 21 19.3**	**-0.4**
DAWY				IAmb	IAmb	14 21 20.1	
	comp=Z,3.0nm,0.8s						
WRA	**Warramunga Arr**	**80.02**	**122**	P	**P**	**14 21 21.7**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=319,slow=4.8,SNR=5.9						
	comp=Z,1.4nm,0.7s						
WB2	**Warramunga Arr**	**80.03**	**122**	P	**P**	**14 21 19.9**	**-2.2**
WR8	**Warramunga Arr**	**80.14**	**122**	P	**P**	**14 21 21.4**	**-1.3**
WR8				IAmb	IAmb	14 21 42.1	
	comp=Z,7.1nm,1.3s						
AS31	**Alice Springs**	**82.16**	**125**	P	**P**	**14 21 33.0**	**-0.5**
ASAR	**Alice Springs**	**82.16**	**125**	P	**P**	**14 21 33.1**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=306,slow=5.3,SNR=18						
	comp=Z,1.1nm,0.5s						
ASAR	**Alice Springs**	**82.16**	**125**	P	**P**	**14 21 32.4**	**-1.1**
WRGLY	**Wrigley**	**82.81**	**7**	P	**P**	**14 21 35.3**	**-0.9**
YKAW3	**Yellowknife Wh**	**84.10**	**3**		**P**	**14 21 42.6**	**-0.3**
YKAW3				IAmb	IAmb	14 21 47.6	
	comp=Z,3.7nm,0.9s						
YKA	**Yellowknife Ar**	**84.17**	**3**	P	**P**	**14 21 43.1**	**-0.1**
	comp=Z,2.8nm,0.7s,baz=344,slow=5.4,SNR=33						
	comp=Z,2.8nm,0.7s						
YKAW1	**Yellowknife Wh**	**84.18**	**3**		**P**	**14 21 42.8**	**-0.5**

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*KOLA **18** 14:12:31.0, 81°.47N×0°.30E, h0^{km}, ML2.2, Error ellipse: s-maj=68.5km s-min=22.7km az=50.0, Arctic Ocean,Knipovich ridge, north*

*BER **18** 14:12:31.4±3.4, 81°.01N×2°.72W, h23^{km}±45^{km}, Mw3.2, ML1.8(DNK), Confirmed Earthquake*

*FCIAR **18** 14:12:31.0, 81°.04N×1°.55W, h10^{km}, station ZFI2 has station magnitude of 3.50*

*DNK **18** 14:12:31.1±2.4, 81°.05N×2°.45W, h36^{km}±22^{km}, ML1.8, Presumed earthquake*

ISC 18 14:12:25.0±1.1**, 81°.04N**±0°.07×**3°.08W**±0°.04**, h10^{km}, n19, σ3^{s}.25**/35**, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOR	**Nord**	**2.14**	**292**	*e*P	**Pn**	**14 13 05.2**	**+4.6**
NOR	**Nord**	**2.14**	**292**	*e*P	**Pn**	**14 13 04.7**	**+4.1**
NOR				*i* S	**Sn**	**14 13 28.6**	**+1.5**
NOR				IAML		14 13 33.8	
	comp=Z,8.9nm,0.4s						
KBS	**Kingsbay**	**3.37**	**121**	P	**Pn**	**14 13 19.1**	**+1.7**
KBS				S	**Sn**	**14 13 53.5**	**-3.8**
KBS	**Kingsbay**	**3.37**	**121**	*e*P	**Pn**	**14 13 19.4**	**+1.9**
KBS				IAML		14 13 21.6	
	comp=Z,11nm,0.2s						
KBS				*e*S	**Sn**	**14 13 53.6**	**-3.8**
KBS	**Kingsbay**	**3.37**	**121**	*i* P	**Pn**	**14 13 19.3**	**+1.9**
KBS				*i* S	**Sn**	**14 13 53.4**	**-4.0**
BRBB	**Barentsburg B**	**4.29**	**125**	P	**Pn**	**14 13 33.7**	**+3.5**
BRBB				S	**Sn**	**14 14 23.2**	**+2.9**
BRBB	**Barentsburg B**	**4.29**	**125**	*e*	**Pn**	**14 13 34.3**	**+4.1**
SPA0	**Spitsbergen Ar**	**4.52**	**119**	*e*P	**Pn**	**14 13 35.7**	**+2.4**
SPA0				*e*S	**Sn**	**14 14 24.8**	**-1.0**
SPA0	**Spitsbergen Ar**	**4.52**	**119**	*e*P	**Pn**	**14 13 35.9**	**+2.6**
SPA0				*e*S	**Sn**	**14 14 24.3**	**-1.5**
SPA0				IAML		14 14 48.5	
	comp=Z,3.8nm,0.8s						
SPITS	**Spitsbergen Ar**	**4.52**	**119**	P	**Pn**	**14 13 35.9**	**+2.6**
SPITS				S	**Sn**	**14 14 24.4**	**-1.5**
DAG	**Danmarks Havn**	**5.21**	**223**	*e*P	**Pn**	**14 13 46.1**	**+3.3**
DAG				*e*S	**Sn**	**14 14 40.5**	**-2.3**
DAG	**Danmarks Havn**	**5.21**	**223**	*i* P	**Pn**	**14 13 46.0**	**+3.3**
DAG				*i* S	**Sn**	**14 14 39.9**	**-2.9**
DAG				IAML		14 14 42.7	
	comp=Z,3.6nm,0.6s						
HSPB	**Hornsund (broa**	**5.36**	**129**	P	**Pn**	**14 13 48.0**	**+3.2**
HSPB	**Hornsund (broa**	**5.36**	**129**	*e*P	**Pn**	**14 13 47.7**	**+3.0**
HSPB				*e*S	**Sn**	**14 14 45.2**	**-1.2**
HSPB	**Hornsund (broa**	**5.36**	**129**	*e*P	**Pn**	**14 13 47.8**	**+3.0**
HSPB				IAML		14 14 45.1	
	comp=Z,2.4nm,1.0s						
HSPB				*e*S	**Sn**	**14 14 45.5**	**-0.9**
DBG	**Daneborg**	**7.64**	**217**	*e*P	**Pn**	**14 14 18.9**	**+2.8**
DBG				*e*S	**Sn**	**14 15 37.8**	**-4.7**
DBG	**Daneborg**	**7.64**	**217**	*i* P	**Pn**	**14 14 19.5**	**+3.4**
DBG				*i* S	**Sn**	**14 15 37.9**	**-4.6**
DBG				IAML		14 15 52.6	
	comp=Z,3.1nm,1.0s						
ZFI2	**Zemlya Franca-**	**7.80**	**66**	*e*P	**Pn**	**14 14 20.8**	**+2.5**
ZFI2				*e*S	**Sn**	**14 15 42.2**	**-4.3**
	comp=Z,12nm,4.2s						
OMEGA	**Omega**	**7.83**	**67**	*e*P	**Pn**	**14 14 20.9**	**+2.3**
OMEGA				S	**Sn**	**14 15 42.3**	**-4.8**

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*IDC **18** 14:18:27.4±0.8, 6°.54N×125°.19E, h0^{km}, mb4.0/9, mbtmp4.0/9, MS3.0/8, Error ellipse: s-maj=17.5km s-min=8.8km az=122.0*

*NEIC **18** 14:18:29.3±1.0, 6°.58N±0°.06×125°.22E±0°.08, h10^{km}±1^{km}, mb4.5/18, Error ellipse: s-maj=16.4km s-min=3.4km az=305.0*

*DJA **18** 14:18:29.4±0.8, 7°N±24°×12°5E±°, h10^{km}±27^{km}, M4.7/6, mb5.0/4, mB5.0/3, MLv4.6/6, Mw(mB)4.3/3*

ISC 18 14:18:28.9±0.6**, 6°.58N**±0°.06×**125°.22E**±0°.09**, h10^{km}, n50, σ0^{s}.77**/43**, mb4.4**/19**, MS2.8**/7**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.61**	**36**	Pg	**Pb**	**14 18 41.5**	**-0.2**
	446nm,0.3s,baz=254,slow=0.5,SNR=31						
DAV				Lg	Lg	14 18 48.2	
	2µm,0.3s,baz=248,slow=19,SNR=21						
DAV				LR	LR	14 19 09.7	
	comp=Z,2µm,20.9s,baz=136,slow=65						
DAV	**Davao City (W)**	**0.61**	**36**		**Pb**	**14 18 40.9**	**-0.8**
DAV	**Davao City (W)**	**0.61**	**36**	P	**Pb**	**14 18 41.7**	**0.0**
DAV	**Davao City (W)**	**0.61**	**36**	P	**Pb**	**14 18 42.0**	**+0.3**
SGSI	**Sangihe**	**2.89**	**174**	P	**Pn**	**14 19 17.5**	**+2.5**
SGSI				S	**Sb**	**14 19 54.7**	**-1.2**
TNTI	**Ternate**	**6.15**	**160**	Pn	**Pn**	**14 19 59.5**	**-0.4**
GTOI	**Gorontalo**	**6.30**	**201**	P	**Pn**	**14 20 02.6**	**+0.7**
	0.4nm1µm123nm,0.6s						
MRSI	**Marisa**	**6.88**	**208**	P	**Pn**	**14 20 10.2**	**+0.2**
MRSI				S	**Sn**	**14 21 28.3**	**-0.1**
TOLI2	**Tolitoli**	**7.00**	**219**	Pn	**Pn**	**14 20 11.3**	**-0.3**
I39PW	**PALAU INFRASON**	**9.31**	**84**	I	I	15 16 20.0	
	baz=268,slow=293,SNR=0.5						
KAPI	**Kappang**	**12.74**	**205**	LR	LR	14 26 50.1	
	comp=Z,44nm,21.5s,baz=57,slow=40						
MTN	**Manton Dam**	**20.17**	**163**	P	**P**	**14 23 04.0**	**+0.3**
JOW	**Kunigami**	**20.36**	**8**	LR	LR	14 29 56.9	
	comp=Z,44nm,22.0s,baz=144,slow=34						
GUMO	**Guam**	**20.55**	**69**	LR	LR	14 32 49.1	
	comp=Z,28nm,18.3s,baz=73,slow=42						
KNRA	**Kununurra**	**22.39**	**171**	P	**P**	**14 23 27.1**	**-0.5**
KNRA				IAmb	IAmb	14 23 29.5	
	comp=Z,17nm,0.8s						
FITZ	**Fitzroy Crossi**	**24.52**	**179**	P	**P**	**14 23 48.3**	**-0.4**
JNU	**Nakatsue**	**26.93**	**11**	LR	LR	14 35 23.0	
	comp=Z,25nm,19.3s,baz=143,slow=38						
COEN	**Coen**	**27.09**	**139**	P	**P**	**14 24 11.6**	**-0.5**
COEN				IAmb	IAmb	14 24 15.4	
	comp=Z,17nm,1.2s						
WB0	**Warramunga Arr**	**27.69**	**161**	P	**P**	**14 24 16.6**	**-0.9**
WB0				IAmb	IAmb	14 24 47.7	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**27.84**	**161**	P	**P**	**14 24 18.2**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=340,slow=9.5,SNR=4.6						
	comp=Z,1.4nm,0.7s						
WRA	**Warramunga Arr**	**27.84**	**161**	P	**P**	**14 24 17.3**	**-1.5**
CMAR	**Chiang Mai Arr**	**28.19**	**297**	P	**P**	**14 24 22.5**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=126,slow=6.9,SNR=5.6						
	comp=Z,0.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**28.19**	**297**	P	**P**	**14 24 22.8**	**+0.8**
JHJ	**Hachijo jima 2**	**29.68**	**25**	LR	LR	14 34 18.2	
	comp=Z,15nm,21.1s,baz=258,slow=32						
AS31	**Alice Springs**	**31.23**	**165**	P	**P**	**14 24 48.2**	**-0.7**
ASAR	**Alice Springs**	**31.23**	**165**	P	**P**	**14 24 48.5**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=354,slow=8.5,SNR=30						
	comp=Z,1.2nm,0.6s						
ASAR	**Alice Springs**	**31.23**	**165**	P	**P**	**14 24 48.1**	**-0.8**
INKA	**Innaminka**	**37.27**	**157**	P	**P**	**14 25 41.3**	**+0.2**
INKA				IAmb	IAmb	14 25 42.0	
	comp=Z,2.8nm,0.6s						
ASAJ	**Asahikawa**	**40.38**	**19**	LR	LR	14 40 13.1	
	comp=Z,26nm,21.5s,baz=96,slow=32						
BBOO	**Buckleboo**	**40.50**	**166**	P	**P**	**14 26 08.0**	**-0.2**
BBOO				IAmb	IAmb	14 26 09.3	
	comp=Z,9.5nm,0.6s						
STKA	**Stephens Creek**	**41.31**	**159**	P	**P**	**14 26 15.2**	**+0.4**
	comp=Z,4.8nm,0.7s,baz=339,slow=8.9,SNR=14						
	comp=Z,4.8nm,0.7s						
SONM	**Songino Array**	**44.14**	**342**	LR	LR	14 45 03.9	
	comp=Z,42nm,18.3s,baz=104,slow=36						
TOO	**Toolangi**	**47.82**	**158**	P	**P**	**14 27 08.0**	**+1.2**
TOO				IAmb	IAmb	14 27 17.4	
	comp=Z,5.3nm,1.4s						
DZM	**Mont Dzumac**	**49.41**	**126**	P	**P**	**14 27 20.3**	**+0.8**
MKAR	**Makanchi Array**	**54.38**	**325**	P	**P**	**14 27 57.4**	**+1.4**
	comp=Z,1.3nm,0.6s,baz=124,slow=8.2,SNR=9.7						
	comp=Z,1.3nm,0.6s						
MKAR	**Makanchi Array**	**54.38**	**325**	P	**P**	**14 27 56.5**	**+0.5**
ZALV	**Zalesovo Beam**	**57.39**	**333**	P	**P**	**14 28 16.4**	**-1.1**
	comp=Z,0.8nm,0.7s,baz=88,slow=14,SNR=3.9						
	comp=Z,0.8nm,0.7s						
KURBB	**Kurchatov Arra**	**58.55**	**327**	P	**P**	**14 28 25.8**	**+0.2**
	comp=Z,2.5nm,0.7s,baz=124,slow=6.5,SNR=20						
	comp=Z,2.5nm,0.7s						
BVAR	**Borovoye Array**	**64.13**	**327**	P	**P**	**14 29 03.2**	**-0.2**
	comp=Z,1.7nm,0.9s,baz=116,slow=10,SNR=7.7						
	comp=Z,1.7nm,0.9s						
TCW	**Tory Channel**	**65.38**	**141**	P	**P**	**14 29 11.6**	**-0.1**
BKZ	**Black Stump Fm**	**65.69**	**138**	P	**P**	**14 29 13.9**	**0.0**
AB31	**Akbulak array**	**69.01**	**320**	P	**P**	**14 29 34.3**	**-0.4**
AB31				IAmb	IAmb	14 29 35.1	
	comp=Z,1.3nm,0.8s						
ABKAR	**Akbulak array**	**69.01**	**320**	P	**P**	**14 29 34.0**	**-0.7**
SPIA	**Saint Paul Isl**	**70.85**	**31**	P	**P**	**14 29 45.6**	**-0.3**
CASY	**Casey**	**73.45**	**186**	P	**P**	**14 30 00.8**	**-0.3**
CASY				IAmb	IAmb	14 30 27.8	
	comp=Z,13nm,1.4s						
F15K	**North Star Dit**	**75.92**	**24**	P	**P**	**14 30 15.4**	**-0.2**
F15K				IAmb	IAmb	14 30 22.3	
	comp=Z,8.6nm,1.4s						
M16K	**Timber Creek**	**77.42**	**29**	P	**P**	**14 30 24.4**	**+0.2**
D19K	**Kuna River**	**79.04**	**21**	P	**P**	**14 30 32.7**	**-0.4**
D19K				IAmb	IAmb	14 30 35.9	
	comp=Z,7.0nm,1.4s						
ILAR	**Eielson Array**	**83.20**	**26**	P	**P**	**14 30 54.0**	**-1.2**
	comp=Z,0.4nm,0.7s,baz=233,slow=4.9,SNR=8.7						
	comp=Z,0.4nm,0.7s						
PPT	**Papeete**	**87.42**	**108**	LR	LR	15 04 13.2	
	comp=Z,17nm,20.1s,baz=309,slow=31						

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*IDC **18** 14:26:58.3±0.8, 6°.52N×125°.09E, h0^{km}, mb3.7/9, mbtmp3.7/9, MS2.6/4, Error ellipse: s-maj=18.2km s-min=9.7km az=128.0*

ISC 18 14:26:59.7±0.9**, 6°.6N**±0°.1×**125°.2E**±0°.1**, h10^{km}, n15, σ0^{s}.80**/11**, mb3.7**/9**, MS2.5**/3**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.60**	**37**	Pg	**Pg**	**14 27 11.1**	**-0.2**
	240nm,0.3s,baz=77,slow=2.5,SNR=12						
DAV				Lg	Lg	14 27 23.5	
	388nm,0.3s,baz=73,slow=17,SNR=9.7						
DAV				LR	LR	14 27 40.7	
	comp=Z,902nm,20.0s,baz=133,slow=58						
DAV	**Davao City (W)**	**0.60**	**37**	P	**Pn**	**14 27 14.0**	**-0.3**
I39PW	**PALAU INFRASON**	**9.31**	**84**	I	I	15 28 50.0	
	baz=267,slow=283,SNR=0.5						
KAPI	**Kappang**	**12.75**	**205**	LR	LR	14 35 20.3	
	comp=Z,34nm,20.8s,baz=74,slow=40						
JOW	**Kunigami**	**20.34**	**8**	LR	LR	14 40 32.3	
	comp=Z,24nm,19.0s,baz=189,slow=40						
WRA	**Warramunga Arr**	**27.85**	**161**	P	**P**	**14 32 50.2**	**+0.5**
	0.4nm,0.5s,baz=328,slow=10,SNR=1.1						
	0.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**28.18**	**297**	P	**P**	**14 32 52.3**	**-0.4**
	0.3nm,0.5s,baz=117,slow=8.3,SNR=4.1						
CMAR				LR	LR	14 45 08.4	
	comp=Z,10.0nm,19.6s,baz=115,slow=39						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**31.25**	**165**	P	**P**	**14 33 19.2**	**-0.6**
	0.4nm,0.6s,baz=348,slow=7.6,SNR=12						
	0.4nm,0.6s						
MJAR	**Matsushiro Arr**	**32.09**	**20**	LR	LR	14 44 57.6	
	comp=Z,11nm,21.9s,baz=248,slow=34						
STKA	**Stephens Creek**	**41.32**	**159**	P	**P**	**14 34 45.8**	**0.0**
	1.1nm,0.6s,baz=318,slow=8.7,SNR=4.8						
	1.1nm,0.6s						
MKAR	**Makanchi Array**	**54.36**	**325**	P	**P**	**14 36 28.2**	**+1.4**
	0.7nm,0.9s,baz=125,slow=7.2,SNR=4.2						
	0.7nm,0.9s						
ZALV	**Zalesovo Beam**	**57.37**	**333**	P	**P**	**14 36 47.2**	**-0.9**
	0.4nm,0.3s,baz=149,slow=12,SNR=3.5						

	0.4nm,0.3s						
KURBB	Kurchatov Arra	58.53	327	P	P	14 36 56.2	-0.1
	1.1nm,0.6s,baz=123,slow=6.6,SNR=7.8						
	1.1nm,0.6s						
BVAR	Borovoye Array	64.12	327	P	P	14 37 34.1	-0.1
	0.8nm,0.8s,baz=117,slow=8.5,SNR=4.9						
	0.8nm,0.8s						
ILAR	Eielson Array	83.19	26	P	P	14 39 27.1	+1.2
	0.5nm,1.0s,baz=246,slow=5.1,SNR=4.6						
	0.5nm,1.0s						

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*JMA **18** 14:28:59.7±0.2, 24°N±2°×122°.8E±0°.5, h84km±1km, MV1.8/10, NW OFF ISHIGAKIJIMA IS*

*TAP **18** 14:29:00.1, 24°.66N×122°.74E, h80km, ML2.8, D*

ISC 18 14:28:59.8±1.4, **24°.62N**±0°.05×**122°.78E**±0°.03, **h83**km±9km, **n63, σ0s.94**/89, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	0.26	126	eP	Pn	14 29 12.6	+0.4
YOJ				eS	Sn	14 29 22.0	+0.6
YOJ	Yonaguni jima	0.26	126	eP	Pn	14 29 12.2	0.0
EOS3	EOS3	0.54	232	eP	Pn	14 29 14.6	+0.6
EOS3				eS	Sn	14 29 26.1	+1.6
EOS2	EOS2	0.54	248	eP	Pn	14 29 14.5	+0.5
EOS4	EOS4	0.65	220	eP	Pn	14 29 15.9	+1.2
EOS4				eS	Sn	14 29 27.1	+1.1
TWC	Suao	0.85	270	eP	Pn	14 29 16.8	-0.4
TWC				eS	Sn	14 29 27.1	-3.2
NTC	Toucheng	0.89	285	eS	Sn	14 29 30.3	-0.9
IRIF	Iriomote-Funau	0.91	108	eP	Pn	14 29 17.7	-0.3
IRIF				eS	Sn	14 29 31.4	-0.2
TIPB	Shuangxi	0.94	292	eP	Pn	14 29 18.5	+0.2
SXI1	Grass Mountain	0.95	300	eP	Pn	14 29 18.9	+0.5
ENA	Nanau	0.96	259	eP	Pn	14 29 18.8	+0.2
ENA				eS	Sn	14 29 30.4	-2.2
NWF	Wu-fen Shan	1.01	297	eP	Pn	14 29 18.8	-0.5
WFSB	Wu-fen Shan	1.01	297	eP	Pn	14 29 18.8	-0.4
TWE	Neicheng	1.02	276	P	Pn	14 29 19.5	+0.3
TNOU	National Taiwa	1.05	300	eS	Sn	14 29 33.0	-1.5
FUSB	Fushanzhiwuyua	1.09	278	eP	Pn	14 29 20.7	+0.5
FUSB				eS	Sn	14 29 35.6	+0.1
ENTT	Nioudou	1.10	271	eP	Pn	14 29 21.2	+1.0
ENTT				eS	Sn	14 29 35.8	+0.1
LATG	Datong	1.14	266	P	Pn	14 29 21.3	+0.5
LATG				eS	Sn	14 29 35.9	-0.8
ETL	Fush Village	1.15	247	eP	Pn	14 29 20.6	-0.2
NACB	Ninganchiao	1.17	248	eP	Pn	14 29 20.8	-0.2
NACB				i S	Sn	14 29 36.2	-0.7
NWLT	Wulai	1.17	278	eP	Pn	14 29 21.8	+0.7
JKRS	Kuro-shima	1.18	108	eP	Pn	14 29 21.5	+0.3
JKRS				eS	Sn	14 29 37.6	+0.3
TWD	Chiawan	1.20	244	eS	Sn	14 29 37.3	-0.5
ZUZH	Zhuzihu	1.24	296	eP	Pn	14 29 22.5	+0.5
ZUZH				eS	Sn	14 29 38.3	-0.5
ETLH	Xiulin Townshi	1.25	251	P	Pn	14 29 21.9	-0.2
ETLH				eS	Sn	14 29 38.1	-0.9
JIJ	Ishigaki jima	1.27	101	eP	Pn	14 29 22.1	-0.2
JIJ				eS	Sn	14 29 38.5	-0.7
YHNB	Yeheng	1.28	273	P	Pn	14 29 23.2	+0.7
YHNB				eS	Sn	14 29 39.4	-0.1
NNSB	Datong	1.28	262	eP	Pn	14 29 22.8	+0.2
NNSB				eS	Sn	14 29 39.4	-0.4
NNS	Nan Shan	1.29	262	eP	Pn	14 29 22.5	-0.2
NSK	Sanguang	1.29	273	eP	Pn	14 29 23.3	+0.7
NSK				eS	Sn	14 29 40.2	+0.3
LXIB	Xiulin Townshi	1.38	245	eP	Pn	14 29 23.2	-0.7
JISG	Ishigakijimahi	1.40	91	eP	Pn	14 29 24.0	+0.2
JISG				eS	Sn	14 29 41.6	-0.4
FUSS	Fushou	1.45	256	eP	Pn	14 29 24.9	+0.1
WHF	Hehuan Shan	1.46	251	eP	Pn	14 29 25.0	0.0
NFF	Wufeng Townshi	1.51	271	eP	Pn	14 29 25.8	+0.4
TDCB	Techi	1.52	256	eP	Pn	14 29 26.3	+0.7
TDCB				eS	Sn	14 29 44.5	-0.7
EGFH	Guangfu	1.56	233	eS	Sn	14 29 44.6	-1.1
LIOB	Emei	1.60	271	eP	Pn	14 29 27.1	+0.5
OWD	Renai	1.60	246	eP	Pn	14 29 26.4	-0.3
NSTT	Nanjuang	1.62	271	eP	Pn	14 29 27.3	+0.6
NSTT				eS	Sn	14 29 47.7	+0.6
WUSB	Renai	1.64	248	eP	Pn	14 29 27.4	+0.3
WUSB				eS	Sn	14 29 47.0	-0.8
HGSD	Ruisui	1.67	228	eP	Pn	14 29 26.9	-0.5
WHP	Taichung City	1.70	259	P	Pn	14 29 29.5	+1.6
EHYH	Wanrong	1.72	230	eS	Sn	14 29 47.9	-1.7
VWDT	VWDT	1.73	240	eP	Pn	14 29 28.4	+0.3
VWDT				eS	Sn	14 29 49.1	-0.6
JTJ	Tarama	1.75	89	eP	Pn	14 29 28.8	+0.4
JTJ				eS	Sn	14 29 50.6	+0.3
WCS	Beigang Elemen	1.79	252	eP	Pn	14 29 29.1	+0.1
TWQ1	Liyutan	1.85	262	eP	Pn	14 29 29.4	-0.3
TWF1	Yuli	1.85	227	eS	Sn	14 29 50.7	-2.0
SMLT	Sun Moon Lake	1.86	247	eP	Pn	14 29 31.2	+1.2
WHYT	Xinyi Township	1.98	243	eP	Pn	14 29 32.4	+0.8
EHD	Haiduan	2.05	225	eP	Pn	14 29 30.2	-2.3
ALS	Alishan	2.12	239	eP	Pn	14 29 34.7	+1.1
ALS				eS	Sn	14 29 59.5	+0.2
ELDTW	Lidau	2.15	229	eP	Pn	14 29 33.9	0.0
CHN5	Tsauling	2.17	243	eP	Pn	14 29 35.5	+1.3
CHN5				eS	Sn	14 30 01.9	+1.5
STYH	Taoyuan	2.33	232	P	Pn	14 29 37.5	+1.3
STYH				eS	Sn	14 30 04.6	+0.5
TPUB	Ta-pu	2.36	237	eS	Sn	14 30 06.5	+1.6
WTP	Ta-pu	2.41	236	eP	Pn	14 29 38.4	+1.2
CHN1	Nanshi	2.51	236	eS	Sn	14 30 09.5	+1.2
SSD	Sandimen	2.71	227	eP	Pn	14 29 42.9	+1.7
MASBT	Mashibuluo	2.80	225	eP	Pn	14 29 43.1	+0.6
LYUB	Lan-yu	2.83	203	eP	Pn	14 29 40.8	-2.1
EAST	Anshuo	2.84	219	eP	Pn	14 29 43.3	+0.2

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*IDC **18** 14:37:22.1±4.6, 13°.20S×166°.97E, h223km±41km, mb3.3/6, mbtmp3.9/7, Error ellipse: s-maj=28.7km s-min=23.9km az=35.0*

ISC 18 14:37:17.8±1.1, **12°.97S**±0°.10×**167°.0E**±0°.2, **h180**km, **n8, σ1s.41**/9, **mb3.7**/6, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	9.06	183	P	Pn	14 39 27.5	+2.3
	6.2nm,0.7s,baz=345,slow=20,SNR=1.5						
DZM				S	Sn	14 41 05.2	-1.3
	9.0nm,0.9s,baz=90,slow=20,SNR=2.0						
WRA	Warramunga Arr	32.02	253	P	P	14 43 26.8	-0.8
	0.2nm,0.6s,baz=91,slow=13,SNR=12						
	0.2nm,0.6s						
ASAR	Alice Springs	33.07	246	P	P	14 43 36.0	-0.7
	0.7nm,0.5s,baz=76,slow=10,SNR=22						
	0.7nm,0.5s						
CMAR	Chiang Mai Arr	73.98	294	P	P	14 48 35.3	+1.2
	0.5nm,0.9s,baz=125,slow=3.2,SNR=4.5						
	0.5nm,0.9s						
QSPA	South Pole Qui	77.05	180	P	P	14 48 49.3	-1.6
	2.6nm,0.6s,baz=304,slow=0.8,SNR=29						
	2.6nm,0.6s						
ILAR	Eielson Array	84.95	18	P	P	14 49 32.0	-0.3
	1.1nm,0.6s,baz=238,slow=5.3,SNR=19						
	1.1nm,0.6s						
MKAR	Makanchi Array	95.74	317	P	P	14 50 23.6	+0.2
	0.3nm,0.6s,baz=99,slow=7.4,SNR=2.2						
	0.3nm,0.6s						
ARCES	ARCESS Array B	118.49	346	PKP	PKPdf	14 55 43.3	-0.2
	6.4nm,1.1s,baz=86,slow=1.5,SNR=5.7						

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*AFAD **18** 14:37:56.6, 35°.21N×26°.82E, h10km±2km, ML2.5*

*ISK **18** 14:37:57.2, 35°.47N×26°.21E, h6km, ML2.7/9*

*THE **18** 14:37:58.7, 35°N±12°×2°6E±1°5, h22km±11km, M2.7/5, MLh2.7/5*

*ATH **18** 14:37:58.4, 35°.30N×26°.29E, h32km±1km, ML2.8/7, Manual Solution by E.Daskalaki First location: 2019/12/18 14:39:09, This location: 2019/12/18 14:54:24 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 18 14:37:58.3±0.9, **35°.33N**±0°.05×**26°.32E**±0°.03, **h31**km±8km, **n54, σ0s.82**/69, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIT2	Siteia	0.21	233	P	Pb	14 38 04.6	-0.2
SIT2				S	Sb	14 38 09.2	0.0
ZKR	Zakros	0.23	200	P	Pb	14 38 04.6	-0.4
ZKR				S	Sb	14 38 09.6	-0.1
ZKR	Zakros	0.23	200	Pg	Pb	14 38 04.6	-0.4
ZKR				Sg	Sb	14 38 09.9	+0.3
ZKR	Zakros	0.23	200	P	Pb	14 38 04.5	-0.6
ZKR				S	Sb	14 38 09.5	-0.1
NPS	Neapolis	0.58	263	P	Pb	14 38 09.5	-0.6
NPS				S	Sb	14 38 18.1	0.0
NPS	Neapolis	0.58	263	P	Pb	14 38 09.4	-0.6
NPS				S	Sb	14 38 17.9	-0.2
IACM	Heraklion	1.02	269	S	Sn	14 38 30.5	+0.9
IDI	Anoyia	1.17	268	P	Pn	14 38 18.5	0.0
IDI	Anoyia	1.17	268	Pn	Pn	14 38 18.5	0.0
IDI				Sn	Sn	14 38 34.2	+0.8
IDI	Anoyia	1.17	268	P	Pn	14 38 18.5	0.0
IDI				S	Sb	14 38 33.2	-1.6
ASTA	Astypalaia	1.21	1	P	Pn	14 38 19.5	+0.4
ASTA				S	Sb	14 38 35.5	-0.5
THERA	Ancient Thera,	1.24	327	P	Pn	14 38 19.3	-0.2
THERA	Ancient Thera,	1.24	327	P	Pn	14 38 19.6	+0.1
THERA				S	Sn	14 38 35.6	+0.5
THR6	Thira Island,	1.26	324	P	Pn	14 38 19.7	-0.1
THR6	Thira Island,	1.26	324	P	Pn	14 38 20.3	+0.5
THR8	Santorini-Mono	1.27	328	P	Pn	14 38 20.2	+0.3
THR9	Santorini-Faro	1.28	323	P	Pn	14 38 20.8	+0.7
SNT5	Nea Kammeni, S	1.30	325	P	Pn	14 38 20.7	+0.4
SNT5	Nea Kammeni, S	1.30	325	P	Pn	14 38 20.8	+0.5
THR3	Thira Island,	1.31	326	P	Pn	14 38 20.6	+0.3
THR3	Thira Island,	1.31	326	P	Pn	14 38 20.9	+0.5
THR5	Thira Island,	1.34	324	P	Pn	14 38 21.2	+0.4
THR5	Thira Island,	1.34	324	P	Pn	14 38 21.2	+0.4
SAP3	Santorini-Thir	1.35	325	P	Pn	14 38 21.6	+0.6
SAP3				S	Sb	14 38 38.9	-1.1
NISR	Nisiros	1.44	27	P	Pn	14 38 23.0	+0.9
YAZI	Mula-Dat§a-	1.63	34	P	Pn	14 38 25.2	+0.3
YAZI				S	Sb	14 38 47.5	-0.5
ARG	Arkhangelos	1.72	59	Pn	Pb	14 38 28.3	-0.9
DAT	Datca	1.73	36	P	Pn	14 38 27.5	+1.2
DAT				S	Sb	14 38 50.4	-0.4
DAT	Datca	1.73	36	Pn	Pn	14 38 27.9	+1.6
VAM	Vamos	1.73	273	P	Pn	14 38 25.8	-0.4
APE	Apeiranthos	1.84	340	P	Pn	14 38 28.3	+0.5
APE	Apeiranthos	1.84	340	Pn	Pn	14 38 28.2	+0.3
APE	Apeiranthos	1.84	340	P	Pn	14 38 28.1	+0.2
APE				S	Sn	14 38 50.6	+0.4
GVD	Gavdhos	1.89	256	Pn	Pn	14 38 30.3	+1.9
GVD	Gavdhos	1.89	256	P	Pn	14 38 28.4	0.0
BODT	Bodrum	1.91	25	Pn	Pn	14 38 29.7	+1.1
IMMV	Iera Moni Meta	1.91	275	Pn	Pn	14 38 29.9	+1.2
IMMV	Iera Moni Meta	1.91	275	P	Pn	14 38 29.0	+0.3
TURN	Turunc	2.13	47	P	Pn	14 38 31.8	+0.2
TURN				S	Sn	14 38 59.5	+2.5
TURN				i IAML		14 39 04.0	
	comp=E,35nm,0.5s						
TURN				i IAML		14 39 08.0	
	comp=N,42nm,0.7s						
FETY	Fethiye	2.59	59	P	Pn	14 38 27.8	-10
IZZE	Mula-Seydike	2.61	64	P	Pn	14 38 38.1	-0.2
IZZE				S	Sn	14 39 07.7	-1.3
IZZE				i IAML		14 39 34.0	
	comp=N,36nm,0.4s						
KTHA	Kythira Island	2.80	290	Pn	Pn	14 38 41.4	+0.5
KTHA	Kythira Island	2.80	290	P	Pn	14 38 40.8	-0.1
AKAS	Kas	2.82	70	P	Pn	14 38 39.5	-1.9
AKAS				i IAML		14 39 24.0	
	comp=N,31nm,0.4s						
AKAS				i IAML		14 39 46.0	
	comp=E,26nm,0.7s						
DNZT	Denizli-Tavas-	2.93	48	P	Pn	14 38 44.5	+1.8
DNZT				i IAML		14 39 29.0	
	comp=N,29nm,0.8s						
DNZT				i IAML		14 39 36.0	
	comp=E,20nm,0.8s						
ESEN	Aydn-Nazilli	2.96	33	P	Pn	14 38 42.8	-0.3
TAVA	DENIZLI_Tavas	2.99	44	P	Pn	14 38 44.0	+0.4
TAVA				i IAML		14 39 31.0	
	comp=E,20nm,0.8s						
KNIK	Mula-Seydike	3.04	59	P	Pn	14 38 44.9	+0.5
CHOS	Chios island	3.06	356	P	Pn	14 38 45.6	+1.1
VLI	Veliai	3.07	298	P	Pn	14 38 44.5	-0.1
KARY	Karystos	3.09	331	P	Pn	14 38 45.4	+0.5
GOLH	Golhisar	3.24	53	P	Pn	14 38 47.5	+0.4
GOLH				i IAML		14 39 40.0	
	comp=N,44nm,1.3s						
GOLH				i IAML		14 39 43.0	
	comp=E,41nm,0.7s						
KIRA	zmir-Kiraz	3.31	30	P	Pn	14 38 50.1	+2.0
KIRA				i IAML		14 39 38.0	
	comp=N,11nm,0.9s						
KARB	zmir-Karabur	3.33	1	P	Pn	14 38 47.7	-0.5
KARB				i IAML		14 39 47.0	
	comp=E,12nm,1.1s						

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*IDC **18** 14:40:54.8±0.8, 38°.69N×29°.26W, h0km, mb3.9/16, mbtmp3.9/17, ML4.2/1, MS3.6/15, Error ellipse: s-maj=27.0km s-min=16.3km az=157.0*

*SVSA **18** 14:40:56.5±1.6, 38°.60N×29°.15W, h7km±11km, ML4.5(INMG), Error ellipse: s-maj=9.9km s-min=5.6km az=82.0, #DIST_RANGE: LOCAL #IPMA_REGION: W Faial #FELT: IV (MM56) at Faial: Cedros (Horta)*

ISC 18 14:40:58.3±0.8, **38°.60N**±0°.06×**28°.88W**±0°.05, **h24**km±4km, **n54, σ1s.41**/57, **mb3.9**/15, **MS3.6**/14, **4C-12D, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCAPE	Capelo, Faial	0.04	93	⇓iP	Pb	14 41 01.4	-1.0
PCAPE				eS	Sb	14 41 05.1	-0.1
PCAPE				i IAML		14 41 06.4	
PCAPE				i IAML		14 41 06.8	
PCAPE				i IAML		14 41 06.9	
CALA	Caldeira	0.14	97	⇓iP	Pb	14 41 02.5	-0.8
CALA				eS	Sb	14 41 07.1	+0.4
CALA				i IAML		14 41 08.6	
CALA				i IAML		14 41 10.0	
CALA				i IAML		14 41 10.2	
PCED	Cedros	0.14	78	⇓iP	Pb	14 41 02.8	-0.5
PCED				eS	Sb	14 41 07.4	+0.8
PCED				i IAML		14 41 07.8	
PCED				i IAML		14 41 08.0	
PCED				i IAML		14 41 10.2	
PFCBR	Castelo Branco	0.15	121	⇓iP	Pb	14 41 02.4	-0.9
PFCBR				eS	Sb	14 41 07.1	+0.5
PFCBR				i IAML		14 41 07.4	
PFCBR				i IAML		14 41 07.6	
PFCBR				i IAML		14 41 08.9	
HOR	Horta	0.21	110	⇓iP	Pb	14 41 03.5	-0.5
HOR				eS	Sb	14 41 08.5	+0.7
HOR				i IAML		14 41 09.5	
HOR				i IAML		14 41 09.7	
HOR				i IAML		14 41 10.3	
PCAN	Candelaria	0.34	113	⇓iP	Pb	14 41 05.4	-0.5
PCAN				eS	Sn	14 41 11.9	-1.9
PCAN				i IAML		14 41 12.7	
PCAN				i IAML		14 41 12.9	
PCAN				i IAML		14 41 13.7	
PICO	Pico	0.37	105	⇓iP	Pb	14 41 06.1	-0.3
PICO				eS	Sn	14 41 13.6	-1.1
PICO				i IAML		14 41 15.2	
PICO				i IAML		14 41 15.3	
PICO				i IAML		14 41 15.9	
PPNO	Prainha do Nor	0.50	105	⇓iP	Pb	14 41 08.1	-0.5
PPNO				eS	Sn	14 41 17.0	-1.0
PPNO				i IAML		14 41 20.5	
PPNO				i IAML		14 41 22.4	
ROSA	Rosais	0.52	76	⇓eP	Pb	14 41 08.2	-0.5
ROSA				eS	Sb	14 41 16.5	+0.6
ROSA				i IAML		14 41 18.2	
ROSA				i IAML		14 41 19.1	
ROSA				i IAML		14 41 19.9	
PID	Ribeirinha	0.62	104	⇓iP	Pb	14 41 09.5	-1.0
PID				i IAML		14 41 14.8	
PID				eS	Sn	14 41 19.4	-1.4
PID				i IAML		14 41 20.4	
PID				i IAML		14 41 20.4	
PID				i IAML		14 41 20.5	
PMAN	Manadas	0.62	87	⇑eP	Pb	14 41 09.7	-0.8
PMAN				eS	Sb	14 41 19.6	+0.7
PMAN				i IAML		14 41 23.6	
PMAN				i IAML		14 41 23.6	
PMAN				i IAML		14 41 24.1	
SRBC	Serra Branca	0.79	56	⇑iP	Pb	14 41 11.7	-1.7
SRBC				eS	Sb	14 41 23.3	-0.4
SRBC				i IAML		14 41 29.4	
SRBC				i IAML		14 41 30.1	
SRBC				i IAML		14 41 30.6	
PGRA	Graciosa	0.82	58	⇑iP	Pb	14 41 12.2	-1.8
PGRA				eS	Sb	14 41 23.7	-1.0
PGRA				i IAML		14 41 25.6	
PGRA				i IAML		14 41 27.9	
PGRA				i IAML		14 41 30.2	
PSCRZ	Santa Cruz da	0.84	54	⇑iP	Pb	14 41 12.4	-1.7
PSCRZ				i IAML		14 41 27.4	
ADH	Angra Heroismo	1.29	87	⇓iP	Pn	14 41 19.1	-1.8
ADH				eS	Sn	14 41 35.8	-1.6
ADH				i IAML		14 41 36.8	
ADH				i IAML		14 41 37.6	
ADH				i IAML		14 41 37.9	
PAGU	Agualva, Azore	1.34	82	⇓eP	Pn	14 41 19.7	-1.8
PAGU				eS	Sn	14 41 37.0	-1.6
PAGU				i IAML		14 41 37.9	
PAGU				i IAML		14 41 38.9	
PAGU				i IAML		14 41 39.7	
PSCM	Serra do Cume	1.39	85	eP	Pn	14 41 20.1	-2.0
PSCM				eS	Sn	14 41 38.3	-1.4
PSCM				i IAML		14 41 39.7	
PSCM				i IAML		14 41 39.8	
PSCM				i IAML		14 41 40.6	
PDA	Ponta Delgada	2.68	108	eP	Pn	14 41 38.5	-1.4
PDA				eS	Sn	14 42 09.8	-1.6
PDA				i IAML		14 42 12.1	
PDA				i IAML		14 42 12.2	
PDA				i IAML		14 42 12.4	
CMLA	Cha da Macela	2.77	106	eP	Pn	14 41 39.9	-1.4
CMLA				eS	Sn	14 42 12.2	-1.8
CMLA				i IAML		14 42 18.6	
CMLA				i IAML		14 42 22.3	
CMLA				i IAML		14 42 22.4	
BART	Pico Bartolome	3.04	105	eS	Sn	14 42 19.6	-1.0
BART				i IAML		14 42 26.8	
BART				i IAML		14 42 28.0	
BART				i IAML		14 42 28.0	
PSMN	Pico do Norte,	3.42	117	eP	Pn	14 41 48.0	-2.1
PSMN				eS	Sn	14 42 26.9	-2.9
PSMN				i IAML		14 42 29.4	
PSMN				i IAML		14 42 31.2	
PSMN				i IAML		14 42 31.4	
PMOZ	Porto Moniz, M	11.11	118	eP	Pn	14 43 41.8	+6.1
PMAR	Madeira	11.36	117	eP	Pn	14 43 42.4	+3.2
ESDC	Sonseca Array	19.35	79	P	Pn	14 45 26.0	+2.8
	0.1nm,0.3s,baz=281,slow=12,SNR=4.3						
ESDC				LR	LR	14 51 54.8	
	comp=Z,123nm,18.4s,baz=266,slow=34						
	1.4nm,0.9s						
MDT	Midelt	20.51	99	LR	LR	14 51 52.6	
	comp=Z,109nm,19.3s,baz=231,slow=32						
EKA	Eskdalemuir Ar	24.04	37	P	P	14 46 12.4	+1.2
	3.7nm,0.9s,baz=224,slow=7.8,SNR=4.4						
	3.7nm,0.9s						
BORG	Borgarnes	26.56	7	LR	LR	14 54 04.8	
	comp=Z,150nm,19.9s,baz=227,slow=30						
DAVOX	Davos/Dischmat	29.40	61	P	P	14 47 02.4	+2.6
	2.9nm,0.7s,baz=319,slow=15,SNR=4.7						
	2.9nm,0.7s						
GERES	GERESS Array B	32.05	57	P	P	14 47 24.4	+1.3
	0.4nm,0.5s,baz=270,slow=8.3,SNR=4.6						
	0.4nm,0.5s						
NOA	NORSAR Array B	33.44	35	P	P	14 47 36.0	+1.0
	1.0nm,0.9s,baz=262,slow=12,SNR=2.4						
NOA				LR	LR	15 00 10.5	
	comp=Z,77nm,18.4s,baz=250,slow=34						
	1.0nm,0.9s						
HFS	Hagfors	34.24	37	LR	LR	15 00 47.1	
	comp=Z,94nm,18.3s,baz=254,slow=35						
TORD	Torodi Ar. Bea	37.10	125	P	P	14 48 10.4	+3.5
	0.3nm,0.7s,baz=341,slow=7.9,SNR=1.1						
	0.3nm,0.7s						
MDP	Montagnes des	39.72	219	LR	LR	15 01 34.9	
	comp=Z,103nm,18.1s,baz=82,slow=31						
FINES	FINESS Array B	40.44	37	P	P	14 48 36.4	+2.0
	2.3nm,0.7s,baz=236,slow=9.8,SNR=1.8						
FINES				LR	LR	15 04 12.3	
	comp=Z,101nm,19.0s,baz=4.5,slow=34						
	2.3nm,0.7s						
AKASG	Malin Array Be	42.03	54	P	P	14 48 47.3	-0.3
	2.5nm,0.7s,baz=275,slow=8.2,SNR=5.2						
AKASG				LR	LR	15 05 07.7	
	comp=Z,62nm,20.0s,baz=250,slow=34						
	2.5nm,0.7s						
ARCES	ARCESS Array B	42.09	25	P	P	14 48 48.8	+0.9
	2.2nm,0.5s,baz=249,slow=8.7,SNR=16						
	2.2nm,0.5s						
H10N2	ASCENSION HYDR	48.09	161	T	T	15 40 42.7	
	baz=345,slow=75,SNR=203						
H10N3	ASCENSION HYDR	48.10	161	T	T	15 40 43.3	
	baz=345,slow=75,SNR=206						
H10N1	ASCENSION HYDR	48.11	161	T	T	15 40 44.1	
	baz=345,slow=75,SNR=184						
H10S3	ASCENSION HYDR	49.13	161	T	T	15 42 00.5	
	baz=344,slow=74,SNR=33						
H10S2	ASCENSION HYDR	49.14	161	T	T	15 42 01.5	
	baz=236,slow=74,SNR=39						
KBZ	Khabaz	52.73	60	P	P	14 50 13.3	+2.4
	4.0nm,0.9s,baz=300,slow=6.5,SNR=11						
	4.0nm,0.9s						
BELG	Belogornoye	52.91	48	LR	LR	15 13 07.8	
	comp=Z,139nm,18.4s,baz=289,slow=36						
BDFB	Brasilia	56.86	202	LR	LR	15 13 01.4	
	comp=Z,73nm,18.2s,baz=291,slow=34						
ARTI	Arti	57.51	41	LR	LR	15 16 20.5	
	comp=Z,50nm,18.1s,baz=303,slow=37						
PDAR	Pinedale Array	59.08	302	P	P	14 50 54.9	-1.9
	0.4nm,0.6s,baz=92,slow=8.8,SNR=2.5						
	0.4nm,0.6s						
TXAR	Lajitas Array	61.16	286	P	P	14 51 09.9	-1.1
	1.6nm,0.8s,baz=80,slow=7.3,SNR=14						
	1.6nm,0.8s						
BVAR	Borovoye Array	65.23	41	P	P	14 51 39.0	+1.5
	0.5nm,0.6s,baz=310,slow=5.4,SNR=4.0						
BVAR				LR	LR	15 18 09.0	
	comp=Z,34nm,21.2s,baz=312,slow=34						
	0.5nm,0.6s						
LPAZ	La Paz	65.82	222	P	P	14 51 41.7	-0.8
	1.0nm,0.7s,baz=42,slow=7.1,SNR=3.6						
	1.0nm,0.7s						
KURBB	Kurchatov Arra	70.75	40	P	P	14 52 12.6	+0.3
	0.4nm,0.4s,baz=310,slow=6.2,SNR=6.1						
	0.4nm,0.4s						
ZALV	Zalesovo Beam	71.64	35	P	P	14 52 17.5	-0.1
	0.7nm,0.6s,baz=297,slow=7.5,SNR=4.2						
ZALV				LR	LR	15 23 03.7	
	comp=Z,32nm,18.8s,baz=287,slow=35						
	0.7nm,0.6s						
AAK	Ala-Archa	73.41	49	LR	LR	15 26 51.1	
	comp=Z,40nm,18.1s,baz=338,slow=38						
MKAR	Makanchi Array	75.11	42	P	P	14 52 39.2	+0.9
	0.8nm,0.9s,baz=327,slow=6.4,SNR=2.6						
MKAR				LR	LR	15 26 06.1	
	comp=Z,54nm,18.9s,baz=334,slow=36						
	0.8nm,0.9s						
QSPA	South Pole Qui	128.48	180	PKP	PKPdf	15 00 01.5	-0.5
	2.1nm,1.0s,baz=191,slow=2.4,SNR=7.6						

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*BER **18** 14:51:15.7±4.3, 76°.17N×7°.31E, h10km, Mw4.1, ML2.9(NAO), Confirmed Earthquake*

*IDC **18** 14:51:17.7±1.9, 76°.14N×8°.56E, h0km, mb3.2/1, mbtmp3.6/4, ML3.2/3, MS2.9/3, Error ellipse: s-maj=27.7km s-min=11.5km az=81.0*

*FCIAR **18** 14:51:19.0, 76°.12N×8°.66E, h10km, station OMEGA has station magnitude of 3.40*

*KOLA **18** 14:51:21.6, 75°.87N×8°.30E, h0km, ML2.1, Error ellipse: s-maj=102.1km s-min=40.6km az=40.0, Greenland sea, Knipovich ridge, south*

*NAO **18** 14:51:21.3±0.0, 76°.26N×9°.16E, h15km, ML2.9*

*DNK **18** 14:51:23.6±3.8, 76°.67N×5°.25E, h34km±66km, ML1.8, Presumed earthquake*

ISC 18 14:51:10.8±1.7, **76°.07N**±0°.04×**7°.17E**±0°.05, **h26**km±15km, **n51, σ2s.04**/59, **1C, Svalbard region**

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

HSPB	**Hornsund (broa**	**2.17**	**60**	Pn	**Pb**	**14 51 49.4**	**0.0**
HSPB				Sg	**Sn**	**14 52 12.3**	**+1.1**
HSPB	**Hornsund (broa**	**2.17**	**60**	P	**Pb**	**14 51 49.2**	**-0.1**
HSPB				S	**Sn**	**14 52 10.0**	**-1.2**
HSPB	**Hornsund (broa**	**2.17**	**60**	*e*P	**Pb**	**14 51 49.5**	**+0.2**
HSPB				*e*S	**Sn**	**14 52 11.7**	**+0.5**
HSPB	**Hornsund (broa**	**2.17**	**60**	*e*P	**Pb**	**14 51 49.7**	**+0.4**
HSPB				*e*S	**Sn**	**14 52 12.3**	**+1.1**
HSPB				IAML		14 52 13.7	
	comp=Z,16nm,0.2s						
BRBB	**Barentsburg B**	**2.58**	**35**	Pn	**Pb**	**14 51 55.2**	**-1.0**
BRBB	**Barentsburg B**	**2.58**	**35**	P	**Pb**	**14 51 55.1**	**-1.0**
BRBB				S	**Sn**	**14 52 19.1**	**-2.1**
BRBB	**Barentsburg B**	**2.58**	**35**	*e*P	**Pb**	**14 51 55.3**	**-1.0**
BRBB				*e*S	**Sn**	**14 52 20.8**	**-0.3**
SPA0	**Spitsbergen Ar**	**2.95**	**40**	Pn	**Pb**	**14 52 01.3**	**-1.3**
	baz=216,slow=16						
SPA0				Sn	**Sn**	**14 52 32.6**	**+2.1**
	baz=224,slow=28						
SPA0	**Spitsbergen Ar**	**2.95**	**40**	⇑*i*P	**Pb**	**14 52 01.2**	**-1.4**
SPA0				*i* S	**Sn**	**14 52 32.8**	**+2.3**
SPA0	**Spitsbergen Ar**	**2.95**	**40**	Pn	**Pb**	**14 52 01.3**	**-1.3**
	baz=216,slow=16						
SPA0				Sn	**Sn**	**14 52 32.6**	**+2.1**
	baz=224,slow=28						
SPITS	**Spitsbergen Ar**	**2.95**	**40**	Pn	**Pb**	**14 52 01.4**	**-1.3**
	baz=218,slow=16						
SPITS				Sn	**Sn**	**14 52 32.1**	**+1.6**
	baz=219,slow=25 comp=Z,6.4nm,0.3s						
SPITS	**Spitsbergen Ar**	**2.95**	**40**	P	**Pb**	**14 52 01.1**	**-1.6**
SPITS				S	**Sn**	**14 52 32.4**	**+1.8**
KBS	**Kingsbay**	**3.05**	**18**	Pn	**Pb**	**14 52 02.8**	**-1.5**
KBS	**Kingsbay**	**3.05**	**18**	P	**Pb**	**14 52 02.0**	**-2.3**
KBS				S	**Sn**	**14 52 32.6**	**-0.3**
KBS	**Kingsbay**	**3.05**	**18**	*e*P	**Pb**	**14 52 01.9**	**-2.4**
KBS				*e*S	**Sn**	**14 52 32.9**	**-0.1**
KBS				IAML		14 52 35.5	
	comp=Z,6.0nm,0.2s						
KBS	**Kingsbay**	**3.05**	**18**	*i* P	**Pb**	**14 52 02.8**	**-1.5**
BJO1	**Bjornoya**	**3.40**	**112**	*e*P	**Pb**	**14 52 09.0**	**-1.3**
BJO1				*e*S	**Sn**	**14 52 43.1**	**+1.6**
BJO1				IAML		14 52 45.3	
	comp=Z,35nm,0.6s						
BEA1	**Bear Island, N**	**3.41**	**112**	Pn	**Pb**	**14 52 08.5**	**-1.9**
	baz=318,slow=11						
BEA1				Sn	**Sn**	**14 52 43.1**	**+1.5**
	baz=305,slow=22						
BEAR	**Bear Island, N**	**3.41**	**112**	Pn	**Pb**	**14 52 08.5**	**-1.9**
	baz=318,slow=11						
BEAR				Sn	**Sn**	**14 52 43.1**	**+1.4**
	baz=305,slow=22						
HOPEN	**Hopen**	**4.26**	**75**	Pn	Pb	14 52 19.4	-5.5
HOPEN	**Hopen**	**4.26**	**75**	*e*P	Pb	14 52 19.1	-5.8
HOPEN				*e*S	**Sn**	**14 53 02.5**	**-0.2**
HOPEN				IAML		14 53 07.4	
	comp=Z,33nm,0.6s						
DAG	**Danmarks Havn**	**6.09**	**289**	*e*P	**Pn**	**14 52 42.4**	**+3.4**
DAG				*e*S	**Sn**	**14 53 44.7**	**-3.0**
DAG	**Danmarks Havn**	**6.09**	**289**	*i* P	**Pn**	**14 52 42.0**	**+3.0**
DAG				*e*S	Sn	14 53 37.6	-10
DAG				IAML		14 53 49.7	
	comp=Z,3.8nm,0.3s						
NOR	**Nord**	**7.14**	**331**	*e*P	**Pn**	**14 52 56.2**	**+2.9**
NOR				*e*S	**Sn**	**14 54 12.8**	**-0.6**
NOR	**Nord**	**7.14**	**331**	*i* P	**Pn**	**14 52 56.3**	**+2.9**
DBG	**Daneborg**	**7.19**	**269**	*e*P	**Pn**	**14 52 57.9**	**+3.8**
DBG				*e*S	**Sn**	**14 54 11.3**	**-3.5**
DBG	**Daneborg**	**7.19**	**269**	*i* P	**Pn**	**14 52 58.1**	**+4.0**
DBG				*i* S	**Sn**	**14 54 11.7**	**-3.1**
DBG				IAML		14 54 12.1	
	comp=Z,2.9nm,1.1s						
TRO	**Tromso**	**7.32**	**146**	Pn	Pn	14 53 05.4	+10
TRO	**Tromso**	**7.32**	**146**	Pn	Pn	14 53 05.4	+10
KIF	**Kilpisjarvi**	**8.17**	**143**	Pn	Pn	14 53 15.2	+7.7
KIF	**Kilpisjarvi**	**8.17**	**143**	Pn	Pn	14 53 15.2	+7.7
ARA0	**ARCESS Array S**	**8.47**	**131**	Pn	Pn	14 53 17.8	+6.2
	baz=328,slow=11						
ARA0				Sn	**Sn**	**14 54 45.1**	**-1.0**
	baz=335,slow=22						
ARA0	**ARCESS Array S**	**8.47**	**131**	Pn	Pn	14 53 17.8	+6.2
	baz=328,slow=11						
ARA0				Sn	**Sn**	**14 54 45.1**	**-1.0**
	baz=335,slow=22						
ARCES	**ARCESS Array B**	**8.47**	**131**	Pn	Pn	14 53 17.5	+5.9
	comp=Z,0.5nm,0.3s,baz=330,slow=10,SNR=17						
ARCES				Sn	**Sn**	**14 54 46.2**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=331,slow=18,SNR=8.4						
ARCES				LR	LR	14 56 47.7	
	comp=Z,58nm,18.7s,baz=287,slow=40 comp=Z,1.4nm,0.4s						
ARCES	**ARCESS Array B**	**8.47**	**131**	P	Pn	14 53 17.8	+6.2
ARCES				S	**Sn**	**14 54 45.5**	**-0.7**
KTK1	**Kautokeino**	**8.54**	**138**	Pn	Pn	14 53 19.9	+7.4
KTK1	**Kautokeino**	**8.54**	**138**	Pn	Pn	14 53 19.9	+7.4
VADS	**Vadso**	**8.73**	**122**	Pn	Pn	14 53 21.2	+6.0
VADS				Sn	**Sn**	**14 54 52.0**	**-0.6**
VADS	**Vadso**	**8.73**	**122**	P	Pn	14 53 21.6	+6.5
VADS				S	**Sn**	**14 54 52.0**	**-0.6**
VADS	**Vadso**	**8.73**	**122**	Pn	Pn	14 53 21.2	+6.0
VADS				Sn	**Sn**	**14 54 52.0**	**-0.6**
ZFI2	**Zemlya Franca-**	**9.17**	**41**	*e*P	Pn	14 53 26.4	+5.3
ZFI2				*e*S	**Sn**	**14 55 01.5**	**-1.8**
OMEGA	**Omega**	**9.18**	**41**	*e*P	Pn	14 53 26.6	+5.3
OMEGA				*e*S	**Sn**	**14 55 01.5**	**-2.0**
	comp=Z,11nm,2.0s						
SCO	**Scoresbysund**	**9.97**	**251**	*i* P	Pn	14 53 38.0	+5.9
SCO	**Scoresbysund**	**9.97**	**251**	*i* P	Pn	14 53 38.0	+5.9
TERR	**Teriberka**	**10.69**	**116**	S	**Sn**	**14 55 36.7**	**-3.8**
APA0	**Apatity Array**	**11.56**	**124**	S	**Sn**	**14 55 59.0**	**-2.9**
KVDA	**Kovda**	**12.32**	**126**	P	Pn	14 54 09.8	+5.4
KVDA				S	**Sn**	**14 56 17.2**	**-3.3**
FINES	**FINESS Array B**	**16.06**	**146**	Pn	**P**	**14 55 01.1**	**+3.5**
	comp=Z,0.2nm,0.3s,baz=351,slow=14,SNR=4.7 comp=Z,6.5nm,1.1s						
NRIK	**Noril'sk**	**22.87**	**64**	LR	LR	15 06 23.5	
	comp=Z,34nm,19.1s,baz=2.5,slow=40						
VRAC	**Vranov**	**27.13**	**166**	LR	LR	15 06 45.6	
	comp=Z,23nm,18.3s,baz=314,slow=34						
ILAR	**Eielson Array**	**38.44**	**342**	P	P	14 58 39.5	+10
	comp=Z,0.3nm,0.7s,baz=21,slow=8.4,SNR=4.8 comp=Z,0.3nm,0.7s						

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*JMA **18** 15:12:42.8±0.7, 45°N±4°×15°0E±°, h30km, MV3.7/11, KURILE ISLANDS REGION*

SKHL 18 15:12:41.6±0.7**, 45°.10N×150°.10E, h50**km±7km**, mb4.3**/2**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.58**	**276**	*e*P	Pn	15 13 07.1	-0.1
KUR				AMB	AMB	15 13 08.0	
	90nm,0.2s						
KUR				*e*S	Sn	15 13 25.7	-0.9
KUR				A	A	15 13 27.7	
	240nm,0.2s						
KUR				A	A	15 13 27.7	
	90nm,0.2s						
SHO	**Shikotan**	**2.64**	**243**	*e*P	Pn	15 13 29.8	+8.1
SHO				*e*S	Sn	15 13 58.4	+5.9
NEM2	**Nemuro 2**	**3.58**	**243**	*e*P	Pn	15 13 35.5	+1.0
NEM2				*e*S	Sn	15 14 14.2	-1.3
NMR	**Nemuro--Hokkai**	**3.59**	**243**	*e*P	Pn	15 13 35.2	+0.6
NMR				*e*S	Sn	15 14 15.3	-0.4
JRA	**Rausu**	**3.75**	**254**	*e*P	Pn	15 13 39.7	+2.9
JNK	**Nakash**	**4.15**	**250**	*e*P	Pn	15 13 45.0	+2.7
AKK	**Akkeshi**	**4.32**	**243**	*e*P	Pn	15 13 45.4	+0.6
AKK				*e*S	Sn	15 14 35.0	+1.1
JAK	**Akkeshi**	**4.43**	**244**	*e*P	Pn	15 13 46.9	+0.7
JAK				*e*S	Sn	15 14 34.0	-2.3
JTKR	**Abashiri--Toko**	**4.57**	**258**	*e*P	Pn	15 13 51.0	+2.9
JAR	**Ashorobuto**	**4.90**	**251**	*e*P	Pn	15 13 55.7	+3.1
JOB	**Onbets**	**5.03**	**246**	*e*P	Pn	15 13 55.9	+1.6
JOB				*e*S	Sn	15 14 49.2	-1.9
JCH	**Churui**	**5.47**	**245**	*e*P	Pn	15 14 02.2	+1.8
JCH				*e*S	Sn	15 15 00.6	-1.4
JNBK	**Urakawa-nobuka**	**6.03**	**245**	*e*P	Pn	15 14 09.4	+1.3
JNBK				*e*S	Sn	15 15 14.6	-1.1
JANG	**Nango**	**7.89**	**236**	*e*S	Sn	15 15 57.5	-4.0

IDC 18 15:16:15.3±1.6**, 18°.98N×120°.66E, h0**km**, mb3.9**/5**, mbtmp3.9**/5**, Error ellipse: s-maj=122.1km s-min=26.1km az=66.0, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**37.17**	**172**	P	P	15 23 27.9	-0.3
	2.4nm,0.9s,baz=4.4,slow=9.8,SNR=6.2 2.4nm,0.9s						
WRA	**Warramunga Arr**	**40.94**	**160**	P	P	15 23 59.5	-0.4
	0.5nm,0.7s,baz=341,slow=8.4,SNR=2.4 0.5nm,0.7s						
ASAR	**Alice Springs**	**44.31**	**162**	P	P	15 24 27.4	+0.2
	0.5nm,0.5s,baz=343,slow=6.8,SNR=17 0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**44.42**	**330**	P	P	15 24 27.6	-0.1
	0.7nm,0.6s,baz=139,slow=6.8,SNR=4.0 0.7nm,0.6s						
CTA	**Charters Tower**	**46.23**	**146**	P	P	15 24 42.4	-0.1
	5.6nm,1.0s,baz=321,slow=6.5,SNR=2.5 5.6nm,1.0s						

IDC 18 15:31:21.9±19.0**, 12°.40S×167°.27E, h177**km±169km**, mb3.7**/4**, mbtmp4.1**/4**, Error ellipse: s-maj=145.2km s-min=51.4km az=138.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.45**	**252**	P	P	15 37 35.5	-0.1
	0.6nm,0.6s,baz=84,slow=8.9,SNR=1.6 0.6nm,0.6s						
ASAR	**Alice Springs**	**33.56**	**246**	P	P	15 37 45.2	0.0
	1.1nm,0.6s,baz=68,slow=10,SNR=31 1.1nm,0.6s						
ILAR	**Eielson Array**	**84.33**	**18**	P	P	15 43 33.5	0.0
	2.7nm,0.6s,baz=232,slow=5.0,SNR=62 2.7nm,0.6s						
MKAR	**Makanchi Array**	**95.52**	**317**	P	P	15 44 26.6	-0.1
	0.8nm,0.8s,baz=103,slow=5.2,SNR=3.9 0.8nm,0.8s						
ARCES	**ARCESS Array B**	**118.01**	**346**	PKP	PKPdf	15 49 46.7	-0.2
	0.5nm,0.4s,baz=39,slow=1.8,SNR=8.5						

DJA 18 15:33:46.1±0.3**, 8°S**±3°×**10°9E**±°**, h10**km**, M3.8**/20**, mb4.1**/6**, MLv3.7**/20**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOGI	**Yogyakarta**	**1.08**	**53**	P	Pg	15 34 06.4	-0.5
YOGI				S	Sg	15 34 19.7	-1.3
UGM	**Wanagama**	**1.22**	**63**	P	Pn	15 34 08.6	-0.7
KPJI	**Karang Pucung**	**1.23**	**337**	P	Pg	15 34 09.9	+0.2
CTJI	**Waduk Cacaban**	**1.47**	**351**	P	Pb	15 34 13.3	-0.3
SMRI	**Semarang**	**1.74**	**36**	P	Pn	15 34 16.8	+0.4
PCJI	**Pacitan**	**1.76**	**81**	P	Pn	15 34 16.5	-0.2
BBJI	**Bungbulang**	**2.02**	**300**	P	Pn	15 34 20.5	+0.2
NGJI	**Ngawi**	**2.30**	**62**	P	Pn	15 34 24.4	+0.3
SNJI	**Sawahan-Nganju**	**2.42**	**74**	P	Pn	15 34 26.2	+0.4
LEM	**Lembang**	**2.42**	**312**	P	Pn	15 34 26.0	+0.1
SJI	**Sawahan**	**2.44**	**73**	P	Pn	15 34 26.2	+0.1
CNJI	**Cibinong**	**2.54**	**297**	P	Pn	15 34 27.3	-0.2
TBJI	**Tambak Boyo**	**2.91**	**56**	P	Pn	15 34 32.8	+0.3
DBJI	**Dramaga**	**3.26**	**306**	P	Pn	15 34 37.3	-0.1
GRJI	**Gresik**	**3.40**	**63**	P	Pn	15 34 39.3	0.0
GMJI	**Gumukmas**	**3.99**	**87**	P	Pn	15 34 47.5	+0.2
JAGI	**Jajag, Banyuwa**	**4.68**	**90**	P	Pn	15 34 57.0	+0.1
KMMI	**Kalianget**	**4.72**	**73**	P	Pn	15 34 56.8	-0.6
RTBI	**Rangdo, Negare**	**5.46**	**90**	P	Pn	15 35 07.6	-0.1
	0.1nm17nm,0.9s						
TPI	**Tanjungpandan**	**5.94**	**343**	P	Pn	15 35 14.7	+0.5
	0.0nm8.6nm,1.4s						
TWSI	**Taliwang, Sumb**	**7.38**	**93**	P	Pn	15 35 33.4	-0.6
	0.0nm9.0nm,0.7s						
MNAI	**Manna**	**7.61**	**302**	P	Pn	15 35 37.4	+0.2
EGSI	**Enggano, Bengk**	**7.74**	**293**	P	Pn	15 35 37.8	-1.1
	19nm,1.1s						
PLAI	**Plampang**	**8.27**	**93**	P	Pn	15 35 47.2	+1.0
	14nm,1.0s						
DBNI	**Kabupaten Domp**	**8.80**	**91**	P	Pn	15 35 53.4	0.0
WBSI	**Waikabubak, Su**	**9.92**	**98**	P	Pn	15 36 08.0	-0.9

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*IDC **18** 15:43:27.6±1.7, 2°.26S×99°.46E, h0km, mb4.1/10, mbtmp4.1/10, MS3.3/4, Error ellipse: s-maj=66.7km s-min=16.2km az=57.0*

*NEIC **18** 15:43:29.4±1.5, 2°.23S±0°.08×99°.32E±0°.09, h10km±1km, mb4.4/11, Error ellipse: s-maj=17.7km s-min=11.5km az=235.0*

*DJA **18** 15:43:30.6±0.9, 2°S±3°×9°9E±°, h17km±10km, M4.3/13, mB4.5/2, mb4.4/2, MLv4.2/13, Mw(mB)3.7/2*

ISC 18 15:43:31.6±0.7**, 2°.24S**±0°.06×**99°.37E**±0°.07**, h30**km**, n63, σ0.93**/50**, mb4.3**/17**, MS3.2**/4**, 1D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.82**	**130**	P	**Pn**	**15 43 46.2**	**-1.0**
SISI	**Saibi**	**0.95**	**342**	P	**Pn**	**15 43 48.8**	**-0.1**
PDSI	**Padang**	**1.71**	**40**	P	**Pn**	**15 43 58.8**	**-0.6**
PDSI				S	**Sn**	**15 44 19.8**	**-0.4**
PPI	**Padang Panjang**	**2.04**	**30**	P	**Pn**	**15 44 03.8**	**-0.2**
PPI				S	**Sn**	**15 44 28.6**	**+0.1**
KRJI	**Kerinci**	**2.09**	**86**	P	**Pn**	**15 44 02.1**	**-2.7**
PBSI	**Pulau Batu**	**2.43**	**333**	P	**Pn**	**15 44 09.3**	**0.0**
MASI	**Maura Aman, Be**	**3.00**	**108**	P	**Pn**	**15 44 17.7**	**+0.5**
MNSI	**Mandailing Nat**	**3.02**	**4**	P	**Pn**	**15 44 17.0**	**-0.4**
BKNI	**Bangkinang**	**3.04**	**33**	Pn	**Pn**	**15 44 17.0**	**-0.8**
BKNI	**Bangkinang**	**3.04**	**33**	P	**Pn**	**15 44 16.9**	**-0.8**
KSI	**Kapahiang**	**3.51**	**114**	P	**Pn**	**15 44 24.7**	**+0.5**
SBSI	**Sibolga**	**3.79**	**353**	P	**Pn**	**15 44 24.9**	**-3.2**
GSI	**Gunungsitoli**	**3.95**	**333**	Pn	**Pn**	**15 44 29.0**	**-1.2**
MNAI	**Manna**	**4.15**	**121**	Pn	**Pn**	**15 44 32.6**	**-0.5**
MNAI	**Manna**	**4.15**	**121**	P	**Pn**	**15 44 33.2**	**+0.2**
EGSI	**Enggano, Bengk**	**4.24**	**137**	P	**Pn**	**15 44 33.3**	**-0.9**
MDSI	**Maura Dua**	**5.29**	**115**	P	**Pn**	**15 44 49.7**	**+1.0**
KLSI		**5.88**	**115**	P	**Pn**	**15 44 57.7**	**+1.0**
MYKOM	**Kota Tinggi**	**6.00**	**48**	Pn	**Pn**	**15 44 58.3**	**-0.2**
IPM	**Ipoh**	**6.87**	**14**	Pn	**Pn**	**15 45 11.3**	**+0.8**
KULM	**Kulim**	**7.58**	**10**	Pn	**Pn**	**15 45 19.9**	**-0.3**
KKM	**Kota Kinabalu**	**18.72**	**64**	P	**Pn**	**15 47 47.8**	**-0.9**
CMAR	**Chiang Mai Arr**	**20.57**	**359**	P	**P**	**15 48 08.8**	**+0.6**
	2.1nm,0.9s,baz=187,slow=9.1,SNR=14						
CMAR				LR	LR	15 56 48.9	
	comp=Z,70nm,18.6s,baz=0.0,slow=39 2.1nm,0.9s						
CMAR	**Chiang Mai Arr**	**20.57**	**359**	P	Pn	15 48 10.7	+0.2
H08S2	**Diego Garcia H**	**27.30**	**258**	T	T	16 17 49.6	
	baz=80,slow=76,SNR=139						
H08S3	**Diego Garcia H**	**27.31**	**258**	T	T	16 17 46.1	
	baz=80,slow=76,SNR=728						
H08S1	**Diego Carcia H**	**27.32**	**258**	T	T	16 17 47.0	
	baz=80,slow=76,SNR=110						
H01W3	**Cape Leeuwin H**	**35.27**	**159**	T	T	16 27 34.2	
	baz=335,slow=76,SNR=60						
H01W2	**Cape Leeuwin H**	**35.28**	**159**	T	T	16 27 35.2	
	baz=335,slow=76,SNR=70						
H01W1	**Cape Leeuwin H**	**35.28**	**159**	T	T	16 27 37.9	
	baz=335,slow=76,SNR=62						
WB0	**Warramunga Arr**	**38.40**	**120**	P	**P**	**15 50 50.6**	**-0.1**
WB0				IAmb	IAmb	15 51 00.9	
	comp=Z,5.2nm,1.0s						
WRA	**Warramunga Arr**	**38.42**	**120**	P	**P**	**15 50 49.3**	**-1.5**
	comp=Z,2.1nm,0.9s,baz=302,slow=9.0,SNR=7.9 comp=Z,2.1nm,0.9s						
WRA	**Warramunga Arr**	**38.42**	**120**	P	**P**	**15 50 51.0**	**+0.1**
WR8	**Warramunga Arr**	**38.56**	**120**	P	**P**	**15 50 51.5**	**-0.5**
WR8				IAmb	IAmb	15 50 53.4	
	comp=Z,9.3nm,1.2s						
AS31	**Alice Springs**	**39.62**	**125**	P	**P**	**15 51 00.3**	**-0.6**
ASAR	**Alice Springs**	**39.62**	**125**	P	**P**	**15 51 01.3**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=298,slow=7.5,SNR=17 comp=Z,0.7nm,0.5s						
ASAR	**Alice Springs**	**39.62**	**125**	P	**P**	**15 51 00.8**	**-0.1**
KSRS	**Korea Array**	**47.54**	**31**	P	**P**	**15 52 04.1**	**-0.3**
	comp=Z,2.5nm,0.9s,baz=230,slow=7.7,SNR=4.6 comp=Z,2.5nm,0.9s						
XLT	**XiLinHaoTe**	**48.31**	**16**	*e*P	**P**	**15 52 10.1**	**-0.3**
XLT				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SHAA	**Shahritus**	**49.05**	**327**	P	**P**	**15 52 14.8**	**-1.4**
SHAA				IAmb	IAmb	15 52 29.2	
	comp=Z,12nm,1.2s						
STKA	**Stephens Creek**	**49.46**	**131**	P	**P**	**15 52 19.2**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=316,slow=8.7,SNR=4.2						
STKA				LR	LR	16 13 02.7	
	comp=Z,61nm,21.6s,baz=69,slow=36 comp=Z,1.5nm,0.7s						
STKA	**Stephens Creek**	**49.46**	**131**	P	**P**	**15 52 20.3**	**+0.9**
AAK	**Ala-Archa**	**50.00**	**336**	LR	LR	16 17 06.0	
	comp=Z,30nm,18.4s,baz=158,slow=40						
SONM	**Songino Array**	**50.24**	**6**	P	**P**	**15 52 25.9**	**+0.8**
	comp=Z,4.8nm,0.8s,baz=188,slow=9.0,SNR=19 comp=Z,4.8nm,0.8s						
SONM	**Songino Array**	**50.24**	**6**	P	**P**	**15 52 26.2**	**+1.1**
SONM				IAmb	IAmb	15 52 27.5	
	comp=Z,4.0nm,0.9s						
ULN	**Ulaanbaatar**	**50.34**	**7**	P	**P**	**15 52 27.3**	**+1.4**
ULN				IAmb	IAmb	15 52 27.7	
	comp=Z,4.3nm,0.8s						
MKAR	**Makanchi Array**	**51.09**	**345**	P	**P**	**15 52 32.6**	**+1.2**
	comp=Z,2.8nm,0.7s,baz=153,slow=8.2,SNR=19 comp=Z,2.8nm,0.7s						
MKAR	**Makanchi Array**	**51.09**	**345**	P	**P**	**15 52 32.2**	**+0.8**
JHJ	**Hachijo jima 2**	**51.87**	**44**	LR	LR	16 13 37.7	
	comp=Z,13nm,20.6s,baz=10,slow=35						
BNX	**BinXian**	**53.84**	**24**	⇓P	**P**	**15 52 51.8**	**0.0**
BNX				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KURBB	**Kurchatov Arra**	**55.60**	**344**	P	**P**	**15 53 05.4**	**+0.9**
	comp=Z,0.7nm,0.2s,baz=164,slow=6.8,SNR=6.9 comp=Z,0.7nm,0.2s						
ZAA0	**Zalesovo Array**	**57.29**	**350**	P	**P**	**15 53 16.8**	**+0.4**
ZAA0				IAmb	IAmb	15 53 18.0	
	comp=Z,6.8nm,0.9s						
ZALV	**Zalesovo Beam**	**57.29**	**350**	P	**P**	**15 53 16.7**	**+0.3**
	comp=Z,6.2nm,0.8s,baz=174,slow=5.1,SNR=26 comp=Z,6.2nm,0.8s						
BVAR	**Borovoye Array**	**60.19**	**340**	P	**P**	**15 53 37.0**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=144,slow=8.5,SNR=8.1 comp=Z,1.4nm,0.7s						
H04N2	**CROZET ISLANDS**	**60.24**	**216**	T	T	16 58 52.7	
	baz=59,slow=75,SNR=2651						
H04N1	**CROZET ISLANDS**	**60.25**	**216**	T	T	16 58 53.2	
	baz=59,slow=75,SNR=2537						
H04N3	**CROZET ISLANDS**	**60.26**	**216**	T	T	16 58 55.2	
	baz=59,slow=75,SNR=1510						
H04S1	**CROZET ISLANDS**	**60.53**	**216**	T	T	16 59 23.5	
	baz=57,slow=75,SNR=113						
H04S3	**CROZET ISLANDS**	**60.54**	**216**	T	T	16 59 23.6	
	baz=57,slow=75,SNR=167						
H04S2	**CROZET ISLANDS**	**60.55**	**216**	T	T	16 59 22.7	
	baz=57,slow=75,SNR=116						
AB31	**Akbulak array**	**61.55**	**332**	P	**P**	**15 53 46.0**	**+0.1**
AB31				IAmb	IAmb	15 53 47.2	
	comp=Z,2.0nm,0.9s						
ABKAR	**Akbulak array**	**61.55**	**332**	P	**P**	**15 53 46.0**	**+0.1**
TXAR	**Lajitas Array**	**145.27**	**37**	PKPbc	**PKPdf**	**16 03 08.0**	**+0.7**
	comp=Z,3.1nm,0.8s,baz=282,slow=1.2,SNR=32						

IDC 18 15:46:14.9±2.7**, 6°.22N×124°.71E, h0**km**, mb3.6**/4**, mbtmp3.6**/4**, MS3.3**/5**, Error ellipse: s-maj=319.3km s-min=23.7km az=65.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.21**	**46**	P	Pg	15 46 32.0	-6.1
FITZ	**Fitzroy Crossi**	**24.18**	**178**	LR	LR	16 03 07.6	
	comp=Z,48nm,20.4s,baz=348,slow=42						
PMG	**Port Moresby**	**27.23**	**125**	LR	LR	16 03 05.9	
	comp=Z,38nm,19.6s,baz=340,slow=37						
WRA	**Warramunga Arr**	**27.67**	**160**	P	P	15 52 04.4	-0.3
	1.1nm,0.9s,baz=337,slow=8.5,SNR=2.1 1.1nm,0.9s						
ASAR	**Alice Springs**	**31.03**	**163**	P	P	15 52 34.8	+0.2
	0.3nm,0.4s,baz=344,slow=7.1,SNR=8.6 0.3nm,0.4s						
PALK	**Pallekele**	**43.70**	**274**	LR	LR	16 16 37.8	
	comp=Z,20nm,18.1s,baz=55,slow=42						
MKAR	**Makanchi Array**	**54.37**	**325**	P	P	15 55 44.0	+0.4
	0.2nm,0.4s,baz=107,slow=6.4,SNR=4.4 0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**57.47**	**333**	LR	LR	16 23 28.6	
	comp=Z,31nm,18.7s,baz=64,slow=39						
KURBB	**Kurchatov Arra**	**58.57**	**327**	P	P	15 56 12.7	-0.6
	0.3nm,0.3s,baz=122,slow=6.7,SNR=1.5 0.3nm,0.3s						
BELG	**Belogornoye**	**77.22**	**322**	LR	LR	16 34 30.5	
	comp=Z,84nm,19.3s,baz=95,slow=38						

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*NEIC **18** 16:04:39.9±2.3, 11°.0S±0°.1×34°.3E±0°.1, h10km±2km, mb4.2/8, Error ellipse: s-maj=25.1km s-min=15.0km az=129.0*

*IDC **18** 16:04:43.1±1.6, 11°.48S×34°.57E, h0km, mb3.6/4, mbtmp3.8/5, ML4.6/1, MS3.3/4, Error ellipse: s-maj=51.3km s-min=31.4km az=118.0*

ISC 18 16:04:44.9±0.8**, 11°.40S**±0°.08×**34°.3E**±0°.1**, h10**km**, n32, σ2.23**/33**, mb3.9**/3**, Malawi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIBK	**Kibwezi**	**9.73**	**23**	Pn	Pn	16 06 54.9	-10
BLWY	**Bulawayo**	**10.28**	**212**	*i* P	**Pn**	**16 07 16.0**	**+3.2**
BLWY	**Bulawayo**	**10.28**	**212**	*i* P	**Pn**	**16 07 16.2**	**+3.4**
KSANE	**Kasane**	**10.91**	**233**	Pn	**Pn**	**16 07 19.8**	**-1.6**
MBAR	**Mbarara**	**11.31**	**341**	LR	LR	16 11 39.6	
	comp=Z,114nm,19.1s,baz=184,slow=36						
MUSN	**Musina, Limpop**	**11.64**	**201**	*i* P	**Pn**	**16 07 34.9**	**+3.6**
MUSN	**Musina, Limpop**	**11.64**	**201**	*i* P	**Pn**	**16 07 34.8**	**+3.6**
MUSN				*i* S	**Sn**	**16 09 42.9**	**+1.6**
BROLN	**Tlhalogang**	**11.75**	**214**	*i* P	**Pn**	**16 07 34.3**	**+1.5**
BROLN				*i* S	**Sn**	**16 09 44.4**	**+0.3**
BROLN				IAML		16 11 19.7	
	comp=N,48nm,1.2s						
PHDHD	**Phuduhudu**	**12.85**	**226**	Pn	**Pn**	**16 07 47.6**	**-0.3**
MREMI	**Moremi**	**12.90**	**210**	*i* P	**Pn**	**16 07 50.5**	**+1.9**
MREMI				*i* S	**Sn**	**16 10 09.7**	**-2.7**
KHWEE	**KHWEE**	**13.50**	**218**	*i* P	**Pn**	**16 07 56.6**	**-0.1**
LPHEP	**Lephephe**	**14.37**	**213**	Pn	**Pn**	**16 08 09.1**	**+0.4**
LPHEP	**Lephephe**	**14.37**	**213**	*i* P	**Pn**	**16 08 09.1**	**+0.4**
LPHEP				*i* S	**Sn**	**16 10 44.2**	**-4.1**
ABPO	**Ambohimpanom**	**14.56**	**123**	Pn	**Pn**	**16 08 08.8**	**-2.5**
VOI	**Vohitsoka**	**15.85**	**133**	P	**Pn**	**16 08 28.9**	**+0.5**
VOI				IAmb	IAmb	16 09 00.0	
	comp=Z,20nm,1.3s						
LBTB	**Lobatse**	**15.87**	**210**	Pn	**Pn**	**16 08 27.6**	**-1.0**
GRTLG	**Ghanzi**	**16.00**	**230**	Pn	**Pn**	**16 08 26.0**	**-4.3**
KGCAE	**Kacgae**	**16.23**	**224**	Pn	**Pn**	**16 08 31.7**	**-1.6**
KGCAE				IAmb	IAmb	16 09 00.3	
	comp=Z,19nm,1.1s						
KOOLE	**Kule**	**17.73**	**228**		**Pn**	**16 08 49.8**	**-2.4**
TSUM	**Tsumeb**	**17.91**	**242**	LR	LR	16 15 58.1	
	comp=Z,102nm,19.0s,baz=144,slow=37						
TSUM	**Tsumeb**	**17.91**	**242**		**Pn**	**16 08 50.5**	**-3.9**
TSUM	**Tsumeb**	**17.91**	**242**	*i* P	**Pn**	**16 08 55.0**	**+0.6**
TSUM	**Tsumeb**	**17.91**	**242**	*i* P	**P**	**16 08 57.5**	**+2.5**
BOSA	**Boshof**	**19.11**	**205**	P	**P**	**16 09 08.4**	**+0.2**
	comp=Z,1.1nm,0.3s,baz=22,slow=13,SNR=21						
BOSA				LR	LR	16 15 44.4	
	comp=Z,50nm,19.3s,baz=28,slow=34 comp=Z,3.9nm,0.3s						
BOSA	**Boshof**	**19.11**	**205**	P	**P**	**16 09 06.7**	**-1.5**
BOSA				IAmb	IAmb	16 09 09.6	
	comp=Z,20nm,1.2s						
BOSA	**Boshof**	**19.11**	**205**	*i* P	**Pn**	**16 09 10.4**	**+1.4**
BOSA	**Boshof**	**19.11**	**205**	*i* P	**P**	**16 09 07.8**	**-0.4**
BOSA				*i* S	**Sn**	**16 12 42.9**	**-0.4**
TORD	**Torodi Ar. Bea**	**40.54**	**306**	P	**P**	**16 12 25.9**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=117,slow=7.9,SNR=2.0 comp=Z,0.3nm,0.5s						
GERES	**GERESS Array B**	**62.70**	**345**	P	**P**	**16 15 11.1**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=159,slow=6.3,SNR=3.7 comp=Z,0.2nm,0.5s						
BRDH	**Bariadhala**	**65.56**	**59**	LR	LR	16 40 17.6	
	comp=Z,34nm,21.4s,baz=181,slow=33						
BVAR	**Borovoye Array**	**71.20**	**22**	P	**P**	**16 16 04.4**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=218,slow=11,SNR=4.7 comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**72.04**	**32**	P	**P**	**16 16 07.8**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=213,slow=6.5,SNR=4.4 comp=Z,0.7nm,0.7s						

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*IDC **18** 16:26:30.0±6.7, 21°.65N×143°.31E, h282km±69km, mb3.3/9, mbtmp4.0/10, Error ellipse: s-maj=38.6km s-min=12.5km az=85.0*

ISC 18 16:26:26.5±1.0**, 21°.7N**±0°.1×**143°.4E**±0°.3**, h250**km**, n11, σ1.62**/11**, mb3.7**/9**, Mariana Islands region**

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

JCJ	Chichijima	5.44	349	P	Pn	16 27 44.4	-3.3
	79nm,0.6s,baz=285,slow=23,SNR=9.1						
MJAR	Matsushiro Arr	15.42	344	P	Pn	16 29 54.2	+2.5
	0.8nm,0.3s,baz=161,slow=7.9,SNR=7.5						
HILR	Hailar Array B	33.46	332	P	P	16 32 42.3	+0.1
	1.0nm,0.5s,baz=122,slow=7.0,SNR=2.7						
	1.0nm,0.5s						
WRA	Warramunga Arr	42.34	193	P	P	16 33 56.4	0.0
	2.5nm,0.7s,baz=6.5,slow=8.6,SNR=35						
	2.5nm,0.7s						
ASAR	Alice Springs	46.05	192	P	P	16 34 25.7	0.0
	0.7nm,0.5s,baz=16,slow=11,SNR=27						
	0.7nm,0.5s						
STKA	Stephens Creek	53.33	182	P	P	16 35 19.4	-0.9
	0.8nm,0.4s,baz=350,slow=15,SNR=4.2						
	0.8nm,0.4s						
KURBB	Kurchatov Arra	57.60	317	P	P	16 35 51.1	+0.7
	0.4nm,0.5s,baz=94,slow=7.4,SNR=8.9						
	0.4nm,0.5s						
ILAR	Eielson Array	61.94	27	P	P	16 36 20.4	+0.8
	0.3nm,0.7s,baz=256,slow=4.8,SNR=5.3						
	0.3nm,0.7s						
BVAR	Borovoye Array	62.74	319	P	P	16 36 25.4	+0.3
	0.7nm,0.3s,baz=91,slow=7.6,SNR=5.0						
	0.7nm,0.3s						
ARCES	ARCESS Array B	78.94	342	P	P	16 38 03.5	+1.4
	2.3nm,0.8s,baz=43,slow=2.3,SNR=5.3						
	2.3nm,0.8s						
FINES	FINESS Array B	83.22	335	P	P	16 38 24.5	-0.1
	2.9nm,0.9s,baz=132,slow=2.8,SNR=3.7						
	2.9nm,0.9s						

IDC 18 16:32:54.3±2.0**, 6°.94S×129°.59E, h0km, mb3.9**/1**,**
mbtmp3.3/3**, ML3.2**/2**, Error ellipse: s-maj=119.6km**
s-min=31.2km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.72	161	Pn	Pn	16 36 09.6	-0.7
	0.2nm,0.3s,baz=339,slow=13,SNR=7.9						
WRA				Sn	Sn	16 38 32.6	-11
	0.1nm,0.3s,baz=331,slow=24,SNR=1.9						
	0.3nm,0.5s						
ASAR	Alice Springs	17.14	166	P	Pn	16 36 56.0	+0.6
	0.1nm,0.3s,baz=348,slow=13,SNR=8.5						
ASAR				S	Sn	16 40 02.6	-4.2
	0.2nm,0.7s,baz=327,slow=38,SNR=4.5						
	0.1nm,0.3s						
MKAR	Makanchi Array	67.95	327	P	P	16 43 55.1	0.0
	0.4nm,0.4s,baz=115,slow=8.0,SNR=11						
	0.4nm,0.4s						

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*IDC **18** 16:43:26.2±7.7, 7°.76S×127°.82E, h184km±82km, mb2.9/2,*
mbtmp3.9/6, Error ellipse: s-maj=84.5km s-min=22.8km
az=39.0
ISC 18 16:43:26.3±1.2**, 8°.01S**±0°.09×**127°.94E**±0°.08**, h200km, n11,**
σ**2s.84**/14**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.33	90	P	Pn	16 44 17.5	-2.4
BNDI	Bandanaira	3.98	30	P	Pn	16 44 21.0	-6.8
SOEI	Soe	4.02	244	P	Pn	16 44 28.7	+0.2
BATI	Baumata	4.75	242	P	Pn	16 44 37.7	+0.1
	17nm,0.4s,baz=239,slow=1.0,SNR=8.0						
BATI				S	Sn	16 45 33.8	0.0
	72nm,0.3s,baz=201,slow=20,SNR=12						
DRS	Darwin Rock St	5.27	147	P	Pn	16 44 45.7	+1.5
PLAI	Plampang	10.09	265	P	Pn	16 45 44.7	-2.0
FITZ	Fitzroy Crossi	10.28	192	P	Pn	16 45 50.4	+1.3
	2.9nm,0.4s,baz=22,slow=12,SNR=25						
FITZ				S	Sn	16 47 42.9	-1.0
	7.8nm,0.4s,baz=266,slow=16,SNR=7.2						
WRA	Warramunga Arr	13.39	153	P	P	16 46 32.2	+0.8
	3.1nm,0.7s,baz=326,slow=13,SNR=29						
WRA				S	S	16 48 54.4	-3.6
	6.0nm,0.5s,baz=333,slow=22,SNR=14						
ASAR	Alice Springs	16.59	160	P	Pn	16 47 12.7	+4.9
	7.2nm,0.6s,baz=341,slow=11,SNR=173						
ASAR				S	S	16 50 04.0	-6.0
	1.0nm,0.7s,baz=331,slow=18,SNR=4.5						
MKAR	Makanchi Array	67.97	328	P	P	16 54 03.4	-0.3
	0.3nm,0.6s,baz=136,slow=8.7,SNR=1.9						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	72.32	329	P	P	16 54 30.1	+0.1
	0.2nm,0.7s,baz=111,slow=5.0,SNR=1.4						
	0.2nm,0.7s						

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*NEIC **18** 16:46:02.4±0.9, 5°.67N±0°.06×126°.3E±0°.1, h82km±8km,*
mb4.4/30, Error ellipse: s-maj=16.8km s-min=7.2km
az=72.0
*IDC **18** 16:46:03.5±1.3, 5°.69N×126°.33E, h96km±10km, mb3.8/18,*
mbtmp4.1/19, MS2.7/7, Error ellipse: s-maj=28.2km
s-min=10.4km az=76.0
*DJA **18** 16:46:03.0±0.3, 6°N±3°×12°7E±°, h80km±3km, M4.5/39,*
mb4.6/39, mB5.0/13, MLv4.8/13, Mw(mB)4.3/13
ISC 18 16:46:03.6±0.4**, 5°.67N**±0°.04×**126°.44E**±0°.07**, h100km, n132,**
σ**1s.42**/127**, mb4.3**/37**, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.64	328	P	Pn	16 46 30.3	-1.3
	250nm,0.4s,baz=156,slow=5.9,SNR=3.7						
DAV				S	Sn	16 46 50.5	-2.4
	375nm,0.4s,baz=102,slow=20,SNR=6.5						
DAV	Davao City (W)	1.64	328	Pn	Pn	16 46 27.1	-4.5
DAV				Sn	Sn	16 46 49.1	-3.8
DAV	Davao City (W)	1.64	328	P	Pn	16 46 35.2	+3.6
DAV	Davao City (W)	1.64	328	P	Pn	16 46 30.1	-1.5
DAV				S	Sn	16 46 50.1	-2.8
SGSI	Sangihe	2.17	205	P	Pn	16 46 37.6	-0.8
SGSI				S	Sn	16 47 03.1	-1.9
TNTI	Ternate	4.95	169	Pn	Pn	16 47 14.5	-1.2
TNTI					Sn	16 48 09.1	-2.6
TNTI	Ternate	4.95	169	P	Pn	16 47 14.9	-0.8
TNTI	Ternate	4.95	169	P	Pn	16 47 14.8	-0.9
GTOI	Gorontalo	6.06	215	P	Pn	16 47 29.5	-1.3
	0.4nm1μm100nm,0.8s						
MRSI	Marisa	6.84	221	P	Pn	16 47 41.2	-0.2
TOLI2	Tolitoli	7.24	232	Pn	Pn	16 47 44.4	-2.5
LUWI	Luwuk	7.61	209	Pn	Pn	16 47 53.9	+2.1
LUWI	Luwuk	7.61	209	P	Pn	16 47 53.3	+1.5
LUWI	Luwuk	7.61	209	P	Pn	16 47 53.9	+2.1
SANI	Sanana	7.68	183	P	Pn	16 47 50.2	-2.6
SANI	Sanana	7.68	183	P	Pn	16 47 49.1	-3.7
	0.3nm2μm49nm,1.2s						
APSI	Ampana	8.10	216	P	Pn	16 48 01.4	+2.9
	884nm81nm,1.2s						
MPSI	Mapaga	8.41	231	P	Pn	16 48 05.5	+2.8
	17nm,0.7s						
NLAI	Namlea	8.87	176	P	Pn	16 48 06.6	-2.4
KRAI	Karang Ratu	9.13	168	P	Pn	16 48 12.1	-0.5
	763nm17nm,0.4s						
FAKI	Fak Fak	10.31	146	Pn	Pn	16 48 27.8	-0.8
TTSI	Tana Toraja	10.89	218	P	Pn	16 48 37.4	+0.9
	548nm48nm,1.1s						
MMSI	Mamuju	11.20	222	P	Pn	16 48 43.8	+3.0
	373nm38nm,0.7s						
SPSI	Sidrap Palu	11.66	215	P	Pn	16 48 47.4	+0.5
	24nm,0.7s						
BNSI	Bone	11.83	212	P	Pn	16 48 51.7	+2.5
	23nm,0.6s						
KAPI	Kappang	12.54	212	P	Pn	16 48 58.0	-0.5
	23nm,0.8s,baz=44,slow=3.6,SNR=8.0						
KAPI				LR	LR	16 53 59.6	
	comp=Z,14nm,19.8s,baz=56,slow=38						
KAPI	Kappang	12.54	212	Pn	Pn	16 48 56.3	-2.2
KAPI	Kappang	12.54	212	P	Pn	16 48 59.2	+0.7
KAPI	Kappang	12.54	212	P	Pn	16 48 57.6	-0.9
	17nm,1.0s						
BKSI	Bulukumba	12.61	210	P	Pn	16 48 58.9	-0.5
	14nm,1.2s						
SBUM	Sibu	14.54	258	P	P	16 49 29.9	+1.5
SBUM	Sibu	14.54	258	P	P	16 49 30.0	+1.6
MMRI	Maumere	14.81	196		Pn	16 49 29.0	+0.9
MMRI	Maumere	14.81	196	P	Pn	16 49 26.9	-1.2
	45nm,1.2s						
EDFI	Ende, Flores	15.08	198	P	Pn	16 49 31.8	+0.2
	31nm,0.8s						
SOEI	Soe	15.47	188	P	Pn	16 49 37.7	+1.2
SOEI				IAmb	IAmb	16 49 56.0	
	comp=Z,31nm,0.8s						
LBFI	Labuhan Bajo,	15.50	205	P	Pn	16 49 36.4	-0.3
	comp=Z,422nmcomp=Z,47nm,0.9s						
GENI	Genyem	15.97	121	P	P	16 49 45.4	+1.1
	comp=Z,28nm,1.5s						
BATI	Baumata	16.01	190	P	P	16 49 44.3	-0.4
	comp=Z,59nm,0.5s,baz=337,slow=3.6,SNR=12						
BATI				LR	LR	16 56 07.8	
	comp=Z,33nm,19.9s,baz=227,slow=38						
BATI	Baumata	16.01	190	P	P	16 49 44.4	-0.3
DBNI	Kabupaten Domp	16.24	210	P	Pn	16 49 44.9	-1.1
	comp=Z,11nm,0.8s						
WSI	Waingapu	16.42	202	P	Pn	16 49 47.8	-0.4
WBSI	Waikabubak, Su	16.75	205	P	Pn	16 49 50.4	-1.9
	comp=Z,34nm,0.6s						
PLAI	Plampang	16.79	211	P	P	16 49 56.3	+3.0
PLAI	Plampang	16.79	211	P	Pn	16 49 52.2	-0.6
BASI	Baing, Sumba	16.83	200	P	P	16 49 54.2	+0.5
	comp=Z,62nm,1.3s						
TWSI	Taliwang, Sumb	17.19	214	P	P	16 49 58.8	+1.0
	comp=Z,36nm,0.8s						
KLNI	Mataram	17.39	216	P	P	16 50 00.1	+0.2
	comp=Z,33nm,0.4s						
KHKI	Kahang-Kahang	17.64	218	P	Pn	16 50 04.2	+1.1
	comp=Z,17nm,1.1s						
KMMI	Kalianget	17.74	225	P	Pn	16 50 06.8	+2.5
	comp=Z,19nm,0.9s						
IGBI	Denpasar	18.27	218	P	Pn	16 50 11.9	+1.2
	comp=Z,38nm,0.5s						
JAGI	Jajag, Banyuwa	18.64	221	P	P	16 50 13.6	-0.1
JAGI				IAmb	IAmb	16 50 29.8	
	comp=Z,12nm,0.8s						
JAGI	Jajag, Banyuwa	18.64	221	P	P	16 50 14.3	+0.6
	comp=Z,15nm,0.4s						
GMJI	Gumukmas	18.97	223	P	Pn	16 50 19.6	+0.6
MTN	Manton Dam	18.97	166	P	P	16 50 16.2	-1.0
SJI	Sawahan	19.79	228	P	P	16 50 27.6	+1.3
	comp=Z,8.0nm,0.5s						
SNJI	Sawahan-Nganju	19.82	228	P	Pn	16 50 29.2	0.0
	comp=Z,18nm,0.8s						
SMRI	Semarang	20.36	232	P	P	16 50 31.9	-0.5
SMRI	Semarang	20.36	232	P	P	16 50 34.2	+1.8
	comp=Z,42nm,0.8s						
PCJI	Pacitan	20.53	228	P	P	16 50 35.8	+1.6
	comp=Z,20nm,1.0s						
TPI	Tanjungpandan	20.55	246	P	P	16 50 35.5	+1.1
	comp=Z,20nm,0.8s						
UGM	Wanagama	20.84	230	P	P	16 50 40.1	+2.6
	comp=Z,33nm,1.4s						
KNRA	Kununurra	21.33	174	P	P	16 50 42.5	-0.2
CTJI	Waduk Cacaban	21.34	234	P	P	16 50 43.7	+0.9
	comp=Z,20nm,0.5s						
KPJI	Karang Pucung	21.73	234	P	P	16 50 48.6	+1.6
BBJI	Bungbulang	22.84	235	P	P	16 50 58.6	-0.1
FITZ	Fitzroy Crossi	23.63	182	P	P	16 51 05.0	-0.9
	comp=Z,2.7nm,0.5s,baz=340,slow=11,SNR=2.3						
	comp=Z,2.7nm,0.5s						
FITZ	Fitzroy Crossi	23.63	182	P	P	16 51 06.1	+0.3
WB0	Warramunga Arr	26.46	163	P	P	16 51 32.6	+1.2
WB0				IAmb	IAmb	16 51 37.8	
	comp=Z,9.1nm,0.7s						
WRAB	Tennant Creek	26.60	163	P	P	16 51 31.2	-1.5
WRAB				IAmb	IAmb	16 52 01.2	
	comp=Z,16nm,1.4s						
WRA	Warramunga Arr	26.61	163	P	P	16 51 34.2	+1.3
	comp=Z,3.4nm,0.6s,baz=347,slow=8.9,SNR=4.0						
	comp=Z,3.4nm,0.6s						
WRA	Warramunga Arr	26.61	163	P	P	16 51 31.4	-1.5
NJ2	Nanjing	27.19	346	*e*P	P	16 51 38.4	+0.5
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MBWA	Marble Bar	27.46	194	P	P	16 51 40.1	-0.4
MBWA				IAmb	IAmb	16 51 41.9	
	comp=Z,19nm,1.1s						
PSI	Prapat	27.59	265	LR	LR	17 04 10.9	
	comp=Z,19nm,18.8s,baz=181,slow=40						
PSA00	Pilbara Seismi	27.83	193	P	P	16 51 43.1	-0.7
CMAR	Chiang Mai Arr	29.69	298	P	P	16 51 59.2	-1.1
	comp=Z,0.4nm,0.6s,baz=136,slow=5.3,SNR=4.2						
CMAR				LR	LR	17 05 07.1	
	comp=Z,10nm,18.6s,baz=320,slow=39						
	comp=Z,0.4nm,0.6s						
CMAR	Chiang Mai Arr	29.69	298	P	P	16 51 58.7	-1.6
ASAR	Alice Springs	30.05	166	P	P	16 52 04.5	+1.1
	comp=Z,1.4nm,0.5s,baz=343,slow=7.5,SNR=4.7						
	comp=Z,1.4nm,0.5s						
PZH	PanZhiHua	31.38	314	P	P	16 52 16.4	+1.1
KSRS	Korea Array	31.67	2	LR	LR	17 07 27.9	
	comp=Z,6.3nm,18.3s,baz=115,slow=41						
MJAR	Matsushiro Arr	32.57	18	P	P	16 52 25.9	+0.5
	comp=Z,1.2nm,0.8s,baz=190,slow=8.6,SNR=4.1						
MJAR				LR	LR	17 08 37.8	
	comp=Z,14nm,18.1s,baz=186,slow=42						
	comp=Z,1.2nm,0.8s						
HNS	HongShan	33.35	343	⇓P	P	16 52 34.3	+2.1
HNS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MORW	Morawa	35.95	196	P	P	16 52 54.4	-0.3
INKA	Innaminka	35.97	158	P	P	16 52 55.6	+0.7
INKA				IAmb	IAmb	16 52 59.0	
	comp=Z,2.0nm,0.7s						
HHC	Hu-ho-hao-te	37.48	341	*e*P	P	16 53 06.9	-0.8
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,4.6s						
USRK	Ussuriysk Ar.	38.69	6	P	P	16 53 17.7	+0.1
	comp=Z,1.4nm,0.6s,baz=214,slow=8.3,SNR=5.4						
	comp=Z,1.4nm,0.6s						
MDJ	Mudanjiang	38.89	4	P	P	16 53 19.9	+0.5
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.2s						
EIDS	Eidsvold	39.05	143	P	P	16 53 21.0	+0.1
XLT	XiLinHaoTe	39.16	348	*e*P	P	16 53 22.8	+1.1
XLT				sP	pP	16 53 45.6	+1.0
XLT				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BBOO	Buckleboo	39.34	167	P	P	16 53 23.5	+0.2
BBOO				IAmb	IAmb	16 53 33.3	
	comp=Z,12nm,1.2s						
NWAO	Narrogin (SRO)	39.37	192	P	P	16 53 23.2	-0.2
STKA	Stephens Creek	40.03	160	P	P	16 53 29.7	+0.8
	comp=Z,4.1nm,0.5s,baz=325,slow=9.7,SNR=11						
	comp=Z,4.1nm,0.5s						
STKA	Stephens Creek	40.03	160	P	P	16 53 29.2	+0.2
ASAJ	Asahikawa	40.84	18	LR	LR	17 14 22.0	
	comp=Z,18nm,18.1s,baz=171,slow=42						
H11S3	WAKE ISLAND Hy	41.25	68	T	T	17 37 48.7	
	baz=257,slow=75,SNR=7.8						
H11S1	WAKE ISLAND Hy	41.27	68	T	T	17 37 48.5	
	baz=257,slow=75,SNR=5.5						
H11S2	WAKE ISLAND Hy	41.27	68	T	T	17 37 42.9	
	baz=257,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	41.72	67	T	T	17 38 27.3	
	baz=255,slow=75,SNR=5.0						
H11N2	WAKE ISLAND Hy	41.73	67	T	T	17 38 25.0	
	baz=255						
H11N3	WAKE ISLAND Hy	41.74	67	T	T	17 38 24.8	
	baz=255,slow=75,SNR=4.7						
ARMA	Armidale	43.24	148	P	P	16 53 55.5	+0.2
ARMA				IAmb	IAmb	16 54 00.3	
	comp=Z,14nm,1.3s						
SONM	Songino Array	45.38	341	P	P	16 54 13.8	+1.5
	comp=Z,0.8nm,0.6s,baz=153,slow=8.0,SNR=5.2						
	comp=Z,0.8nm,0.6s						
SONM	Songino Array	45.38	341	P	P	16 54 11.9	-0.3
PETK	Petropavlovsk-	53.76	23	P	P	16 55 16.1	+0.5
MKAR	Makanchi Array	55.82	325	P	P	16 55 30.1	-0.5
	comp=Z,0.9nm,0.5s,baz=117,slow=7.3,SNR=20						
	comp=Z,0.9nm,0.5s						
MKAR	Makanchi Array	55.82	325	P	P	16 55 29.9	-0.7
ZALV	Zalesovo Beam	58.75	333	P	P	16 55 52.0	+1.1
	comp=Z,0.8nm,0.5s,baz=116,slow=10,SNR=5.4						
	comp=Z,0.8nm,0.5s						
ZALV	Zalesovo Beam	58.75	333	P	P	16 55 50.8	-0.2
KURBB	Kurchatov Arra	59.97	327	P	P	16 55 58.7	-0.7
	comp=Z,0.9nm,0.6s,baz=128,slow=7.1,SNR=15						
	comp=Z,0.9nm,0.6s						
KURK	Kurchatov	59.97	327	P	P	16 55 58.4	-1.1
KURK				IAmb	IAmb	16 56 08.4	
	comp=Z,2.5nm,0.8s						
BVAR	Borovoye Array	65.56	327	P	P	16 56 36.5	0.0
	comp=Z,1.0nm,0.5s,baz=158,slow=9.6,SNR=4.7						
	comp=Z,1.0nm,0.5s						
NRIK	Noril'sk	68.49	346	P	P	16 56 55.6	+0.8
	comp=Z,2.7nm,0.6s,baz=126,slow=6.4,SNR=10						
	comp=Z,2.7nm,0.6s						
NRIK	Noril'sk	68.49	346	P	P	16 56 55.1	+0.3
NRIK				IAmb	IAmb	16 56 56.0	
	comp=Z,3.6nm,0.8s						
AB31	Akbulak array	70.48	320	P	P	16 57 05.9	-1.6
ABKAR	Akbulak array	70.48	320	P	P	16 57 06.4	-1.0
C18K	Utukok River	78.36	21	P	P	16 57 52.8	0.0
C18K				IAmb	IAmb	16 58 08.0	
	comp=Z,6.2nm,1.4s						
C19K	Lookout Ridge	79.04	21	P	P	16 57 57.7	+1.2
C19K				IAmb	IAmb	16 57 59.3	
	comp=Z,11nm,1.4s						
D19K	Kuna River	79.43	21	P	P	16 57 59.5	+0.9
D19K				IAmb	IAmb	16 58 19.1	
	comp=Z,6.4nm,1.4s						
B22K	Teshekpuk Lake	81.37	20	P	P	16 58 09.8	+1.0
KBZ	Khabaz	81.45	313	P	P	16 58 09.3	-0.6
	comp=Z,0.9nm,0.7s,baz=61,slow=10,SNR=3.9						
	comp=Z,0.9nm,0.7s						
L22K	Petersville	81.67	28	P	P	16 58 10.6	-0.1
L22K				IAmb	IAmb	16 58 17.6	
	comp=Z,6.3nm,1.1s						
C23K	Itkillik River	82.28	20	P	P	16 58 14.5	+0.8
C23K				IAmb	IAmb	16 58 16.3	
	comp=Z,3.7nm,0.8s						
ILAR	Eielson Array	83.49	26	P	P	16 58 18.9	-1.1
	comp=Z,1.0nm,0.9s,baz=245,slow=5.6,SNR=7.5						
	comp=Z,1.0nm,0.9s						
ILAR	Eielson Array	83.49	26	P	P	16 58 20.4	+0.3
BMAR	Burnt Mountain	84.41	23	P	P	16 58 25.5	+0.7
K27K	Chicken	85.60	26	P	P	16 58 32.3	+1.7
I28M	Miner Creek	86.40	25	P	P	16 58 36.2	+1.4
I28M				IAmb	IAmb	16 58 38.7	
	comp=Z,4.4nm,1.4s						
SPITS	Spitsbergen Ar	88.54	349	P	P	16 58 44.8	+0.1
	comp=Z,1.4nm,0.5s,baz=96,slow=12,SNR=5.1						
	comp=Z,1.4nm,0.5s						
ARCES	ARCESS Array B	88.55	340	P	P	16 58 43.0	-1.8
	comp=Z,2.0nm,0.7s,baz=79,slow=6.4,SNR=9.0						
	comp=Z,2.0nm,0.7s						
ARCES	ARCESS Array B	88.55	340	P	P	16 58 43.9	-0.9
FINES	FINESS Array B	90.00	332	P	P	16 58 51.2	-0.5
	comp=Z,2.5nm,0.9s,baz=113,slow=3.6,SNR=3.4						
	comp=Z,2.5nm,0.9s						

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*IDC **18** 17:02:23.2±2.5, 5°.86S×147°.18E, h90km±22km, mb3.9/10,*
mbtmp4.3/13, MS3.0/4, Error ellipse: s-maj=24.6km
s-min=12.0km az=103.0
*NEIC **18** 17:02:24.1±1.5, 5°.98S±0°.06×147°.15E±0°.10, h83km±7km,*
mb4.5/27, Error ellipse: s-maj=13.9km s-min=9.1km
az=98.0
ISC 18 17:02:22.7±0.5**, 5°.95S**±0°.05×**147°.13E**±0°.08**, h78km, n72,**
σ**1s.24**/72**, mb4.4**/20**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.43	180	P	Pn	17 03 14.3	+0.4
	142nm,0.3s,baz=333,slow=6.7,SNR=323						
PMG				S	Sn	17 03 53.8	+0.3
	99nm,0.3s,baz=25,slow=5.8,SNR=4.2						
PMG	Port Moresby	3.43	180	P	Pn	17 03 14.4	+0.4
PMG	Port Moresby	3.43	180	P	Pn	17 03 14.3	+0.4
MANU	Manus Island	3.89	3		Pn	17 03 21.6	+1.5
RABL	Rabaul	5.31	71		Pn	17 03 40.3	+0.8
JAY	Jayapura	7.26	298	P	Pn	17 04 10.0	+3.8
	6.4nm,0.5s,baz=104,slow=6.3,SNR=6.4						
COEN	Coen	8.86	206		Pn	17 04 28.4	+0.5
COEN	Coen	8.86	206	P	Pn	17 04 29.1	+1.1
COEN	Coen	8.86	206	S	Sn	17 06 03.8	-2.4
MTSU	Mount Surprise	12.42	193	P	Pn	17 05 17.8	+1.3
TATA	Tatamba Isabel	12.80	102	P	P	17 05 29.3	-0.4
CTA	Charters Tower	14.08	183	P	Pn	17 05 41.1	+2.6
	3.2nm,0.4s,baz=348,slow=15,SNR=15						
CTA	Charters Tower	14.08	183	P	Pn	17 05 40.9	+2.4
CTAO	Charters Tower	14.08	183	P	Pn	17 05 41.0	+2.4
CTAO	Charters Tower	14.08	183	P	Pn	17 05 41.0	+2.4
QIS	Mount Isa	16.25	206	P	Pn	17 06 07.7	+1.3
MTN	Manton Dam	17.20	245	Pn	Pn	17 06 16.4	-1.6
WB0	Warramunga Arr	18.50	221	P	P	17 06 33.2	+0.5
WB0				IAmb	IAmb	17 06 36.3	
	comp=Z,28nm,0.7s						
WR0	Warramunga Arr	18.54	220	P	P	17 06 33.4	+0.1
WR0				IAmb	IAmb	17 06 37.0	
	comp=Z,18nm,0.6s						
WR8	Warramunga Arr	18.56	220		P	17 06 34.0	+0.5
WR8				IAmb	IAmb	17 06 37.2	
	comp=Z,16nm,0.6s						
WRAB	Tennant Creek	18.64	221	P	P	17 06 34.5	+0.2
WRAB	Tennant Creek	18.64	221	P	P	17 06 34.8	+0.4
WB2	Warramunga Arr	18.65	221	P	P	17 06 34.6	+0.1
WRA	Warramunga Arr	18.66	221	P	P	17 06 34.8	+0.2
	comp=Z,20nm,0.5s,baz=40,slow=11,SNR=76						
WRA				PcP	PcP	17 11 00.5	+0.2
	comp=Z,1.5nm,0.6s,baz=34,slow=1.7,SNR=5.4						
WRA	Warramunga Arr	18.66	221		P	17 06 33.4	-1.2
EIDS	Eidsvold	19.68	169		P	17 06 46.8	+1.2
EIDS				IAmb	IAmb	17 06 49.8	
	comp=Z,21nm,1.2s						
EIDS	Eidsvold	19.68	169	P	Pn	17 06 47.2	-0.5
KNRA	Kununurra	20.45	240	P	P	17 06 54.5	+0.5
KNRA				IAmb	IAmb	17 07 23.6	
	comp=Z,23nm,1.1s						
QLP	Quilpie	20.70	187	P	P	17 06 57.9	+1.2
AS31	Alice Springs	21.73	215		P	17 07 08.6	+0.9
AS31				IAmb	IAmb	17 07 10.5	
	comp=Z,12nm,0.3s						
ASAR	Alice Springs	21.73	215	P	P	17 07 08.6	+0.8
	comp=Z,9.8nm,0.5s,baz=51,slow=9.0,SNR=525						
ASAR				S	S	17 11 04.3	+0.2
	comp=Z,0.6nm,0.4s,baz=31,slow=22,SNR=4.2						
ASAR				LR	LR	17 16 17.3	
	comp=Z,24nm,19.4s,baz=11,slow=38						
	comp=Z,9.8nm,0.5s						
INKA	Innaminka	22.50	195		P	17 07 16.4	+0.4
INKA				IAmb	IAmb	17 07 17.0	
	comp=Z,13nm,0.7s						
BATI	Baumata	23.61	258	P	P	17 07 27.7	+0.7
	comp=Z,8.0nm,0.5s,baz=97,slow=2.6,SNR=5.1						
	comp=Z,8.0nm,0.5s						
FITZ	Fitzroy Crossi	24.20	238	P	P	17 07 33.5	+1.3
	comp=Z,35nm,0.5s,baz=53,slow=8.5,SNR=204						
FITZ	Fitzroy Crossi	24.20	238		P	17 07 33.2	+1.0
FITZ				IAmb	IAmb	17 07 35.4	
	comp=Z,7.3nm,0.6s						
FITZ	Fitzroy Crossi	24.20	238	P	P	17 07 32.9	+0.7
ARMA	Armidale	24.70	171	P	P	17 07 37.4	+0.7
ARMA				IAmb	IAmb	17 07 40.0	
	comp=Z,8.1nm,0.6s						
ARMA	Armidale	24.70	171	P	P	17 07 37.4	+0.7
CMSA	Cobar Meteorol	25.49	183	P	P	17 07 44.6	+0.9
STKA	Stephens Creek	26.31	191	P	P	17 07 51.4	+0.3
	comp=Z,5.8nm,0.7s,baz=6.7,slow=8.8,SNR=15						
STKA				LR	LR	17 19 55.6	
	comp=Z,23nm,19.8s,baz=22,slow=40						
	comp=Z,5.8nm,0.7s						
STKA	Stephens Creek	26.31	191		P	17 07 51.1	0.0
STKA	Stephens Creek	26.31	191	P	P	17 07 51.5	+0.3
HTT	Hallett	28.39	195	P	P	17 08 10.9	+1.1
BBOO	Buckleboo	28.65	200	P	P	17 08 12.1	0.0
BBOO				IAmb	IAmb	17 08 21.1	
	comp=Z,12nm,1.2s						
BBOO	Buckleboo	28.65	200	P	P	17 08 12.8	+0.8
FORT	Forrest	30.51	214	P	P	17 08 27.5	-1.1
FORT				IAmb	IAmb	17 08 30.4	
	comp=Z,5.5nm,0.8s						
MBWA	Marble Bar	30.55	238	P	P	17 08 27.4	-1.6
MBWA				IAmb	IAmb	17 08 38.4	
	comp=Z,15nm,1.1s						
PSA00	Pilbara Seismi	30.63	237	P	P	17 08 30.2	+0.5
MEEK	Meekatharra	34.09	230	P	P	17 09 01.1	+1.1
MORW	Morawa	37.30	228	P	P	17 09 27.9	+0.4
KLBR	Kellerberrin	37.50	223	P	P	17 09 29.7	+0.6
BLDU	Ballidu	37.66	226	P	P	17 09 31.2	+0.7
JGF	Kuroka	42.34	348	P	P	17 10 10.1	+0.9
MJAR	Matsushiro Arr	43.09	349	P	P	17 10 14.4	-0.7
	comp=Z,1.7nm,0.7s,baz=176,slow=8.1,SNR=4.6						
	comp=Z,1.7nm,0.7s						
MJAR	Matsushiro Arr	43.09	349	IAmb	IAmb	17 10 15.6	
	comp=Z,4.3nm,1.2s						
MAJO	Matsushiro	43.09	349	P	P	17 10 15.7	+0.5
MJB9	Matsu-Tunnel	43.09	349	P	P	17 10 16.8	+1.6
MJB9				IAmb	IAmb	17 10 54.0	
	comp=Z,19nm,1.5s						
KSRS	Korea Array	46.76	339	LR	LR	17 27 49.8	
	comp=Z,10nm,20.1s,baz=120,slow=33						
PETK	Petropavlovsk-	59.51	7	P	P	17 12 17.9	+0.3
HILR	Hailar Array B	60.20	340	P	P	17 12 21.8	-0.7

```
        comp=Z,1.7nm,0.5s,baz=136,slow=8.5,SNR=4.2
        comp=Z,1.7nm,0.5s
SONM  Songino Array      64.43 331  P      P       17 12 49.8  -1.0
        comp=Z,0.9nm,0.7s,baz=160,slow=7.9,SNR=4.2
        comp=Z,0.9nm,0.7s
VNDA  Vanda              71.95 177  P      P       17 13 38.0  +0.7
        comp=Z,1.2nm,0.9s,baz=354,slow=9.7,SNR=1.8
        comp=Z,1.2nm,0.9s
VNDA  Vanda              71.95 177  IAmb   IAmb    17 13 41.2
        comp=Z,7.7nm,1.4s
L14K  Kuka Creek         77.48  22  P      P       17 14 09.7  +0.3
L14K                                IAmb   IAmb    17 14 22.1
        comp=Z,13nm,1.2s
MKAR  Makanchi Array     77.55 320  P      P       17 14 07.6  -2.6
        comp=Z,0.2nm,0.4s,baz=101,slow=7.7,SNR=4.0
ZALV  Zalesovo Beam      79.04 328  P      P       17 14 16.2  -2.0
        comp=Z,0.9nm,0.5s,baz=121,slow=6.5,SNR=5.7
ZALV                                LR     LR      17 51 35.8
        comp=Z,19nm,18.1s,baz=32,slow=37
        comp=Z,0.9nm,0.5s
QSPA  South Pole Qui     84.02 180  P      P       17 14 44.3  -0.2
        comp=Z,1.0nm,0.5s,baz=200,slow=0.8,SNR=25
        comp=Z,1.0nm,0.5s
ILAR  Eielson Array      85.38  23  P      P       17 14 48.5  -2.7
        comp=Z,1.3nm,0.6s,baz=254,slow=4.6,SNR=22
        comp=Z,1.3nm,0.6s
GERES GERESS Array B    121.94 326  PKP    PKPdf   17 21 07.7  -0.6
        comp=Z,0.5nm,0.5s,baz=76,slow=5.6,SNR=4.4
TORD  Torodi Ar. Bea    145.21 284  PKPbc  PKPbc   17 21 50.5  -1.6
        comp=Z,1.6nm,0.7s,baz=60,slow=5.5,SNR=7.0
TORD  Torodi Ar. Bea    145.21 284         PKPbc   17 21 51.1  -1.1
BDFB  Brasilia          153.82 145  PKPbc  PKPbc   17 22 13.5  -0.6
        comp=Z,3.5nm,0.5s,baz=227,slow=2.0,SNR=5.7
```

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*IDC **18** 17:24:07.5±1.1, 5.°59N×125.°97E, h0^{km}, mb3.3/6, mbtmp3.3/6, Error ellipse: s-maj=54.5km s-min=21.3km az=64.0*

ISC 18 17:24:21.3±1.1**, 5.°4N**±0.°2×**125.°8E**±0.°3**, h116**^{km}**, n6, σ1^{s}02**/6**, mb3.1**/6**, Mindanao**

```
Code  Station Name        Δ°   AZ°   Phase ID           Time      Res
                                    Op     ISC        h  m  s     ISC
WRA   Warramunga Arr     26.55 162  P      P       17 29 48.2  -0.3
        0.2nm,0.5s,baz=344,slow=8.6,SNR=1.3
        0.2nm,0.5s
CMAR  Chiang Mai Arr     29.21 299  P      P       17 30 12.8  +0.5
        0.1nm,0.4s,baz=121,slow=5.9,SNR=4.6
        0.1nm,0.4s
ASAR  Alice Springs      29.95 165  P      P       17 30 18.9  +0.1
        0.2nm,0.5s,baz=338,slow=6.9,SNR=10
        0.2nm,0.5s
MKAR  Makanchi Array     55.65 325  P      P       17 33 43.8  -1.6
        0.3nm,0.5s,baz=116,slow=7.3,SNR=6.9
        0.3nm,0.5s
KURBB Kurchatov Arra     59.83 327  P      P       17 34 14.9  +0.4
        0.2nm,0.7s,baz=131,slow=5.2,SNR=1.8
        0.2nm,0.7s
ILAR  Eielson Array      84.03  25  P      P       17 36 39.0  +0.3
        0.3nm,0.9s,baz=272,slow=5.6,SNR=4.6
        0.3nm,0.9s
```

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*IDC **18** 17:35:01.2±1.5, 32.°63S×178.°28W, h0^{km}, mb4.2/2, mbtmp4.2/3, ML4.0/1, MS3.4/3, Error ellipse: s-maj=54.3km s-min=28.6km az=134.0*

*WEL **18** 17:35:02.4±0.9, 32°S±11°×17°9W±3°0, h12^{km}, M4.5/7, mB4.8/3, ML4.7/12, MLv4.5/7, Mw(mB)4.0/3, Error ellipse: s-maj=41.2km s-min=4.0km az=110.0, confirmed*

*NEIC **18** 17:35:04.2±1.5, 32.°60S±0.°08×178.°3W±0.°2, h10^{km}±1^{km}, mb4.4/11, Error ellipse: s-maj=24.9km s-min=11.4km az=74.0*

ISC 18 17:35:02.5±1.0**, 32.°60S**±0.°08×**178.°2W**±0.°2**, h10**^{km}**, n48, σ1^{s}69**/58**, mb4.4**/9**, 2C, South of Kermadec Islands**

```
Code  Station Name        Δ°   AZ°   Phase ID           Time      Res
                                    Op     ISC        h  m  s     ISC
GLKZ  Green Lake          3.33   4  P      Pn      17 35 53.0  -1.7
GLKZ                                S      Sn      17 36 31.0  -3.3
MXZ   Matakaoa Point      5.73 209  Pn     Pn      17 36 27.4  -0.2
MXZ   Matakaoa Point      5.73 209  P      Pn      17 36 28.4  +0.8
MXZ                                 S      Sn      17 37 33.4   0.0
WMGZ  Waiomatatini S      5.91 207  P      Pn      17 36 25.0  -5.1
WMGZ                                S      Sn      17 37 39.1  +1.3
PKGZ  Pakihiroa           6.08 209  P      Pn      17 36 30.4  -2.0
HAZ   Te Kaha             6.12 212  P      Pn      17 36 33.3  +0.4
HAZ                                 S      Sn      17 37 44.1  +1.2
PUZ   Puketiti            6.19 207  P      Pn      17 36 33.5  -0.5
PUZ                                 S      Sn      17 37 43.1  -1.7
RUGZ  Raukumara Rang      6.34 211  P      Pn      17 36 36.5  +0.5
RUGZ                                S      Sn      17 37 48.7  +0.2
TWGZ  Tauwhareparae       6.39 208  S      Sn      17 37 48.3  -1.4
CNGZ  Carnagh Statio      6.57 206  P      Pn      17 36 36.5  -2.6
CNGZ                                S      Sn      17 37 54.9  +0.8
TKGZ  Te Karaka           6.67 208  S      Sn      17 37 53.9  -2.6
MWZ   Matawai             6.71 210  P      Pn      17 36 41.5  +0.4
MWZ                                 S      Sn      17 37 57.8  +0.1
URZ   Urewera             6.83 213  Pn     Pn      17 36 42.2  -0.5
        3.0nm,0.3s,baz=266,slow=5.8,SNR=12
URZ                                 Sn     Sn      17 37 58.6  -2.0
        4.6nm,0.3s,baz=106,slow=23,SNR=10
        7.1nm,0.3s
URZ   Urewera             6.83 213  P      Pn      17 36 42.3  -0.5
URZ                                 S      Sn      17 37 59.3  -1.2
RIGZ  Rimuhau             6.93 207  P      Pn      17 36 45.6  +1.4
RIGZ                                S      Sn      17 38 02.3  -0.8
RTZ   Ruatahuna           7.18 212         Pn      17 36 47.8  +0.2
RTZ   Ruatahuna           7.18 212  P      Pn      17 36 48.7  +1.1
RTZ                                 S      Sn      17 38 07.9  -1.4
TOZ   Tahuroa Road        7.28 224  Pn     Pn      17 36 47.9  -1.0
OUZ   Omahuta             7.33 247  P      Pn      17 36 55.3  +5.8
MTHZ  Maungataniwha       7.44 212  P      Pn      17 36 52.8  +1.7
MTHZ                                S      Sn      17 38 16.9  +1.3
BKZ   Black Stump Fm      7.85 212  Pn     Pn      17 36 55.9  -0.9
BKZ   Black Stump Fm      7.85 212  P      Pn      17 36 57.9  +1.1
BKZ                                 S      Sn      17 38 21.6  -4.1
BFZ   Birch Farm          9.23 207  P      Pn      17 37 15.7  +0.1
BFZ                                 S      Sn      17 38 52.0  -7.4
MRZ   Mangatainoka R      9.48 210  Pn     Pn      17 37 18.6  -0.5
THZ   Tophouse           11.58 215  Pn     Pn      17 37 48.4  +0.5
DZM   Mont Dzumac        17.21 304  LR     LR      17 44 46.6
        comp=Z,231nm,18.1s,baz=179,slow=34
EIDS  Eidsvold           27.78 277  P      P       17 40 51.0  -0.6
EIDS                                IAmb   IAmb    17 40 54.9
        comp=Z,9.6nm,1.1s
CTA   Charters Tower     34.07 283  LR     LR      17 53 20.1
        comp=Z,32nm,20.9s,baz=55,slow=32
CTAO  Charters Tower     34.07 283  P      P       17 41 50.0  +2.8
INKA  Innaminka          35.69 267  P      P       17 42 03.5  +2.4
INKA                                IAmb   IAmb    17 42 04.6
        comp=Z,1.5nm,0.8s
AS31  Alice Springs      42.89 269  P      P       17 43 01.4   0.0
ASAR  Alice Springs      42.89 269  P      P       17 43 01.4  +0.1
        comp=Z,1.8nm,0.6s,baz=113,slow=8.4,SNR=36
        comp=Z,1.8nm,0.6s
WR8   Warramunga Arr     43.94 275  P      P       17 43 09.9   0.0
WR8                                 IAmb   IAmb    17 43 22.4
        comp=Z,7.2nm,1.2s
WRAB  Tennant Creek      44.07 275  P      P       17 43 11.1  +0.2
WRAB                                IAmb   IAmb    17 43 29.0
        comp=Z,10nm,1.4s
WRA   Warramunga Arr     44.08 275  P      P       17 43 10.3  -0.7
        comp=Z,0.9nm,0.3s,baz=117,slow=8.2,SNR=24
        comp=Z,0.9nm,0.3s
WB0   Warramunga Arr     44.11 275  P      P       17 43 11.0  -0.2
FORT  Forrest            45.38 257  P      P       17 43 20.7  -0.6
FORT                                IAmb   IAmb    17 43 32.5
        comp=Z,5.1nm,0.9s
FITZ  Fitzroy Crossi     52.24 272  P      P       17 44 14.1   0.0
FITZ                                IAmb   IAmb    17 44 18.6
        comp=Z,4.1nm,1.4s
KAPI  Kappang            63.88 281  LR     LR      18 12 43.0
        comp=Z,20nm,19.4s,baz=94,slow=36
SNAA  Sanae              75.97 178  P      P       17 46 51.5  +2.3
SNAA                                IAmb   IAmb    17 46 55.2
        comp=Z,4.9nm,1.3s
VNA3  Neumayer Olymp     76.12 176 ⇑P      P       17 47 01.5   +11
VNA2  Neumayer--Watz     76.56 177 ⇑P      P       17 47 04.0   +12
        baz=156,slow=5.4
KURK  Kurchatov         122.45 313         PKPdf   17 53 57.4  -0.2
KURBB Kurchatov Arra    122.48 313  PKP    PKPdf   17 53 57.4  -0.2
        comp=Z,0.2nm,0.3s,baz=114,slow=1.9,SNR=4.1
BVAR  Borovoye Array    127.86 315  PKP    PKiKP   17 54 08.1  -0.3
        comp=Z,0.3nm,0.4s,baz=80,slow=1.6,SNR=3.8
FINES FINESS Array B    147.15 339  PKPbc  PKPbc   17 54 45.4  +0.3
        comp=Z,7.9nm,0.9s,baz=64,slow=4.4,SNR=7.1
NOA   NORSAR Array B    150.90 351  PKPbc  PKiKP   17 54 55.4  +0.2
        comp=Z,0.4nm,0.8s,baz=9.9,slow=2.4,SNR=3.6
NOA                                 PKPab  PKPab   17 55 01.7  -0.3
        comp=Z,1.4nm,0.9s,baz=11,slow=2.7,SNR=3.3
BRTR  Keskin Array B    153.45 295  PKPbc  PKPbc   17 55 01.1  -0.2
        comp=Z,0.7nm,0.6s,baz=108,slow=2.7,SNR=3.9
BRTR                                PKPab  PKPab   17 55 11.6  -2.0
        comp=Z,0.7nm,0.7s,baz=143,slow=4.5,SNR=3.8
```

IDC 18 17:38:15.8±1.8**, 1.°30N**×**125.°89E, h0**^{km}**, mb3.7**/4**, mbtmp3.7**/4**, Error ellipse: s-maj=199.1km s-min=21.3km az=65.0, Northern Molucca Sea**

```
Code  Station Name        Δ°   AZ°   Phase ID           Time      Res
                                    Op     ISC        h  m  s     ISC
WRA   Warramunga Arr     22.68 159  P      P       17 43 18.2  -0.9
        0.9nm,0.3s,baz=337,slow=10,SNR=6.5
        0.9nm,0.3s
ASAR  Alice Springs      26.01 163  P      P       17 43 51.2  +0.5
        0.6nm,0.5s,baz=341,slow=10,SNR=12
        0.6nm,0.5s
MKAR  Makanchi Array     59.08 326  P      P       17 48 18.3  +0.3
        0.5nm,0.5s,baz=119,slow=8.0,SNR=7.4
        0.5nm,0.5s
KURBB Kurchatov Arra     63.34 328  P      P       17 48 46.5  -0.3
        0.4nm,0.5s,baz=130,slow=6.0,SNR=5.4
        0.4nm,0.5s
```

WEL 18 17:38:24.3±1.1**, 33°S**±16°×**17°9E**±2°0**, h374**^{km}±31^{km}**, M4.1**/8**, mB4.5**/3**, ML4.0**/6**, MLv4.2**/8**, Mw(mB)3.7**/3**, Error ellipse: s-maj=26.2km s-min=20.2km az=78.5, confirmed, South of Kermadec Islands**

```
Code  Station Name        Δ°   AZ°   Phase ID           Time      Res
                                    Op     ISC        h  m  s     ISC
MXZ   Matakaoa Point      4.61 190  P      Pn      17 39 41.6  +0.8
MXZ                                 S      S       17 40 43.0  +0.2
WMGZ  Waiomatatini S      4.85 188  P      Pn      17 39 42.9  -0.4
WMGZ                                S      S       17 40 48.5  +1.1
HAZ   Te Kaha             4.89 194  P      Pn      17 39 44.2  +0.5
HAZ                                 S      S       17 40 50.2  +2.1
PKGZ  Pakihiroa           4.94 191  P      Pn      17 39 45.1  +0.8
PKGZ                                S      S       17 40 49.7  +0.5
RUGZ  Raukumara Rang      5.11 194  P      Pn      17 39 46.6  +0.4
RUGZ                                S      S       17 40 52.5  -0.2
PUZ   Puketiti            5.11 189  P      Pn      17 39 42.0  -4.2
PUZ                                 S      S       17 40 52.6  -0.1
OUZ   Omahuta             5.21 243  P      Pn      17 39 46.4  -0.8
TWGZ  Tauwhareparae       5.26 191  P      Pn      17 39 48.1  +0.4
TWGZ                                S      S       17 40 56.8  +1.3
MWZ   Matawai             5.50 195  P      Pn      17 39 51.4  +1.1
MWZ                                 S      S       17 41 00.9  +0.7
URZ   Urewera             5.52 198  P      Pn      17 39 50.2  -0.4
URZ                                 S      S       17 41 01.0  +0.3
CNGZ  Carnagh Statio      5.53 189  P      Pn      17 39 51.1  +0.5
CNGZ                                S      S       17 40 58.5  -2.3
TKGZ  Te Karaka           5.54 192  P      Pn      17 39 51.3  +0.6
TKGZ                                S      S       17 41 01.0  +0.1
RAGZ  Rawiri              5.68 195  P      Pn      17 39 52.8  +0.5
RIGZ  Rimuhau             5.81 192  P      Pn      17 39 53.6  -0.2
RIGZ                                S      S       17 41 07.2  +0.7
RTZ   Ruatahuna           5.89 198  P      Pn      17 39 55.5  +0.7
RAHZ  Arahi               6.15 196  P      Pn      17 39 57.7  +0.1
RAHZ                                S      S       17 41 14.0  +0.5
MRHZ  Matea Rd            6.25 201  P      Pn      17 39 58.9  +0.2
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*IDC **18** 17:39:04.1±2.2, 21.°76S×68.°27W, h91^{km}±20^{km}, mb4.1/12, mbtmp4.4/16, MS3.1/1, Error ellipse: s-maj=17.9km s-min=14.2km az=86.0*

*SJA **18** 17:39:05.0±0.6, 21.°80S×68.°50W, h141^{km}±3^{km}, ML4.5, MW4.3*

*GUC **18** 17:39:07.6±0.8, 21.°81S×68.°52W, h128^{km}±5^{km}, ML4.5*

*NEIC **18** 17:39:07.1±1.7, 21.°80S±0.°05×68.°48W±0.°08, h119^{km}±2^{km}, mb4.5/24, Mwr4.5(GUC), Error ellipse: s-maj=11.0km s-min=7.2km az=76.0*

*VAO **18** 17:39:08.2±1.2, 21.°67S×68.°16W, h124^{km}±6^{km}, mb5.0, Presumed earthquake*

ISC 18 17:39:06.1±0.6**, 21.°79S**±0.°03×**68.°43W**±0.°04**, h120**^{km}±5^{km}**, n164, σ1^{s}41**/183**, mb4.4**/17**, 9C-5D, Chile-Bolivia border region**

```
Code  Station Name        Δ°   AZ°   Phase ID           Time      Res
                                    Op     ISC        h  m  s     ISC
PB09  IPOC Station P      0.76 269         Pn      17 39 26.8  +0.7
PB09  IPOC Station P      0.76 269⇑iP      Pn      17 39 27.3  +1.2
PB09                                eS     Sn      17 39 42.4  +1.1
PB09                                 IAML          17 39 45.4
        comp=E,4µm,0.4s
PB09  IPOC Station P      0.76 269  eP     Pn      17 39 27.2  +1.1
PB09                                eS     Sn      17 39 43.8  +2.5
PB09                                 IAML          17 39 49.1
        comp=Z,4µm,0.5s
AF01  San Pedro de A      1.18 169         Pn      17 39 31.6  +1.2
AF01  San Pedro de A      1.18 169  eP     Pn      17 39 32.1  +1.8
AF01  San Pedro de A      1.18 169  eP     Pn      17 39 31.4  +1.1
AF01                                 IAML          17 40 13.9
        comp=Z,6µm,1.1s
PB01  IPOC Station P      1.24 307         Pn      17 39 31.3  +0.6
PB01  IPOC Station P      1.24 307⇑iP      Pn      17 39 31.5  +0.8
PB01                                eS     Sn      17 39 50.3  +1.0
PB01                                 IAML          17 39 51.9
        comp=N,11µm,0.5s
PB01  IPOC Station P      1.24 307  eP     Pn      17 39 31.4  +0.8
PB01                                eS     Sn      17 39 50.8  +1.5
PB01                                 IAML          17 39 52.3
        comp=Z,9µm,0.2s
PB03  IPOC Station P      1.26 258         Pn      17 39 31.2  +0.2
PB03  IPOC Station P      1.26 258⇑iP      Pn      17 39 31.6  +0.6
PB03                                eS     Sn      17 39 50.0  +0.1
PB03                                 IAML          17 39 51.3
        comp=E,4µm,0.2s
PB03  IPOC Station P      1.26 258  eP     Pn      17 39 31.5  +0.4
PB03                                eS     Sn      17 39 50.8  +0.9
PB03                                 IAML          17 39 50.8
        comp=Z,2µm,0.5s
PB07  IPOC Station P      1.36 272         Pn      17 39 31.9  -0.2
PB07  IPOC Station P      1.36 272  eP     Pn      17 39 32.7  +0.6
PB07                                eS     Sn      17 39 53.6  +1.7
PB07                                 IAML          17 39 54.5
        comp=Z,4µm,0.4s
PB06  IPOC Station P      1.40 229         Pn      17 39 32.6   0.0
PB06  IPOC Station P      1.40 229⇑iP      Pn      17 39 33.3  +0.7
PB06                                eS     Sn      17 39 53.5  +0.8
PB06                                 IAML          17 39 54.5
        comp=E,4µm,0.5s
PB06  IPOC Station P      1.40 229  eP     Pn      17 39 33.2  +0.7
PB06                                eS     Sn      17 39 54.1  +1.4
PB06                                 IAML          17 39 55.7
        comp=Z,2µm,0.8s
PB02  IPOC Station P      1.45 289         Pn      17 39 33.2  +0.2
PB02  IPOC Station P      1.45 289⇑iP      Pn      17 39 33.6  +0.6
PB02                                eS     Sn      17 39 53.9  +0.4
PB02                                 IAML          17 39 55.0
        comp=N,11µm,0.3s
PB02  IPOC Station P      1.45 289  eP     Pn      17 39 33.6  +0.6
PB02                                eS     Sn      17 39 54.6  +1.2
PB02                                 IAML          17 39 55.9
        comp=Z,12µm,0.4s
PB08  IPOC Station P      1.77 337         Pn      17 39 38.7  +1.5
PATCX Punta Patache       1.88 301         Pn      17 39 38.0  -0.2
PATCX Punta Patache       1.88 301  i P    Pn      17 39 38.7  +0.5
PATCX                               eS     Sn      17 40 02.9  +0.3
PATCX                                IAML          17 40 05.4
        comp=E,13µm,0.3s
PATCX Punta Patache       1.88 301  eP     Pn      17 39 38.9  +0.7
PATCX                               eS     Sn      17 39 57.7  -4.9
PATCX                                IAML          17 40 05.1
        comp=Z,8µm,0.5s
PB05  IPOC Station P      1.96 237         Pn      17 39 39.0  -0.2
PB05  IPOC Station P      1.96 237⇑iP      Pn      17 39 39.1   0.0
PB05                                eS     Sn      17 40 03.9  -0.5
PB05                                 IAML          17 40 05.8
        comp=N,1µm,0.4s
PB05  IPOC Station P      1.96 237  eP     Pn      17 39 39.4  +0.2
PB05                                eS     Sn      17 40 02.1  -2.3
HMBC  Humberstone         2.03 317         Pn      17 39 39.5  -0.6
HMBC  Humberstone         2.03 317  i P    Pn      17 39 40.4  +0.2
HMBC                                eS     Sn      17 40 06.2  +0.1
HMBC                                 IAML          17 40 07.6
        comp=E,12µm,0.4s
HMBC  Humberstone         2.03 317  eP     Pn      17 39 40.3  +0.2
HMBC                                eS     Sn      17 40 06.5  +0.5
HMBC                                 IAML          17 40 07.6
        comp=Z,8µm,0.4s
TA01  Diego Aracena       2.04 306         Pn      17 39 40.1   0.0
TA01  Diego Aracena       2.04 306  eP     Pn      17 39 40.3  +0.2
TA01                                eS     Sn      17 40 05.9  -0.2
TA01                                 IAML          17 40 08.0
        comp=N,7µm,0.2s
TA01  Diego Aracena       2.04 306  eP     Pn      17 39 40.2  +0.2
TA01                                eS     Sn      17 40 06.5  +0.5
TA01                                 IAML          17 40 08.6
        comp=Z,3µm,1.1s
TA02  Huaiquique          2.19 313  eP     Pn      17 39 42.1  +0.1
TA02                                eS     Sn      17 40 10.7  +1.1
TA02                                 IAML          17 40 13.4
        comp=Z,2µm,0.3s
GO01  Chusmiza            2.23 341         Pn      17 39 44.1  +1.2
GO01  Chusmiza            2.23 341⇓iP      Pn      17 39 44.3  +1.4
GO01                                eS     Sn      17 40 13.6  +2.5
GO01                                 IAML          17 40 16.8
        comp=E,4µm,0.1s
GO01  Chusmiza            2.23 341  eP     Pn      17 39 44.4  +1.4
GO01                                eS     Sn      17 40 13.6  +2.5
GO01                                 IAML          17 40 17.8
        comp=Z,1µm,0.3s
PB11  IPOC Station P      2.32 330         Pn      17 39 43.7  -0.1
PB11  IPOC Station P      2.32 330⇓iP      Pn      17 39 44.4  +0.6
PB11                                eS     Sn      17 40 13.0  +0.3
PB11  IPOC Station P      2.32 330  eP     Pn      17 39 42.6  -1.2
PB11                                eS     Sn      17 40 13.3  +0.7
PB11                                 IAML          17 40 14.8
        comp=Z,3µm,0.8s
PB10  IPOC Station P      2.61 228         Pn      17 39 46.2  -1.1
PB10  IPOC Station P      2.61 228⇑eP      Pn      17 39 47.1  -0.2
PB10  IPOC Station P      2.61 228  eP     Pn      17 39 47.7  +0.3
PB10                                eS     Sn      17 40 21.1  +2.0
YJA   Yavi                2.73  99  i P    Pn      17 39 51.9  +2.6
YJA   Yavi                2.73  99  eP     Pn      17 39 52.1  +2.8
YJA                                 eS     Sn      17 40 21.7  -0.7
SALTA                     3.09 142⇓eP      Pn      17 39 56.3  +2.2
SALTA                     3.09 142  eP     Pn      17 39 51.2  -2.9
SALTA                               eP             17 39 51.6
SALTA                               eP             17 39 56.7
PX02  IPOC Station P      3.27 329  eP     Pn      17 39 54.7  -1.3
PB14  IPOC Station P      3.36 212         Pn      17 39 56.9  -0.6
PB14  IPOC Station P      3.36 212  eP     Pn      17 39 57.0  -0.5
PB14                                eS     Sn      17 40 36.1  -1.0
PB14                                 IAML          17 40 47.9
        comp=Z,618nm,0.4s
GO02  Mina Guanaco        3.53 197         Pn      17 39 59.1  -0.5
GO02  Mina Guanaco        3.53 197⇑iP      Pn      17 39 59.2  -0.5
GO02  Mina Guanaco        3.53 197  eP     Pn      17 39 59.5  -0.1
GO02                                eS     Sn      17 40 41.6  +0.6
GO02                                 IAML          17 41 06.8
        comp=Z,712nm,0.4s
PB16  IPOC Station P      3.58 343         Pn      17 40 01.4  +0.7
PB16  IPOC Station P      3.58 343⇓iP      Pn      17 40 01.7  +1.1
PB16                                 IAML          17 40 53.8
        comp=N,558nm,0.9s
PB16  IPOC Station P      3.58 343  eP     Pn      17 40 02.1  +1.4
PB16                                eS     Sn      17 40 31.7   -11
PB12  IPOC Station P      3.63 330         Pn      17 39 59.4  -1.4
PB12  IPOC Station P      3.63 330⇑eP      Pn      17 39 59.7  -1.1
PB12                                eS     Sn      17 40 34.7  -8.4
PB12                                 IAML          17 40 54.0
        comp=E,967nm,0.2s
PB12  IPOC Station P      3.63 330  eP     Pn      17 39 59.9  -0.9
PB12                                eS     Sn      17 40 30.4   -13
PB12                                 IAML          17 41 09.3
        comp=Z,614nm,0.7s
AP01  Chacalluta          3.85 332         Pn      17 40 02.7  -1.0
AP01  Chacalluta          3.85 332  eP     Pn      17 40 02.9  -0.7
AP01  Chacalluta          3.85 332  eP     Pn      17 40 03.9  +0.2
AP01                                eS     Sn      17 40 31.1   -17
AP01                                 IAML          17 40 55.9
        comp=Z,756nm,0.2s
AZAP  Zapla               3.93 129  eP     Pn      17 40 06.3  +1.3
SLA   San Lorenzo         3.97 138⇓eP      Pn      17 40 07.8  +2.4
PB18  Visviri             4.29 346         Pn      17 40 09.3  -0.8
AC01  Pan de Azucar       4.77 204         Pn      17 40 14.1  -2.0
AC01  Pan de Azucar       4.77 204  eP     Pn      17 40 04.7   -11
AC02  Maricunga           5.07 187         Pn      17 40 20.1  -0.3
AC02  Maricunga           5.07 187  IAML           17 41 37.1
        comp=Z,342nm,0.8s
LPAZ  La Paz              5.48   3  P      Pn      17 40 28.5  +2.4
        comp=Z,21nm,0.4s,baz=283,slow=1.8,SNR=85
LPAZ                                S      Sn      17 41 25.1  -3.2
        comp=Z,16nm,0.6s,baz=157,slow=9.2,SNR=3.6
LPAZ  La Paz              5.48   3         Pn      17 40 28.1  +2.0
LPAZ  La Paz              5.48   3  eP     Pn      17 40 28.8  +2.7
AC06  Mina Casimiro       5.82 197         Pn      17 40 27.1  -3.0
AC05  El Transito         7.21 193         Pn      17 40 46.0  -3.1
LCO   Las Campanas        7.48 195         Pn      17 40 48.6  -4.2
SIV   San Ignacio         9.04  52  P      Pn      17 41 10.9  -2.8
        comp=Z,63nm,0.3s,baz=237,slow=11,SNR=373
CO03  El Pedregal         9.24 192         Pn      17 41 12.5  -3.8
CFA   Coronel Fontan      9.78 179  P      Pn      17 41 20.2  -3.4
        comp=Z,3.7nm,0.3s,baz=334,slow=13,SNR=14
PTLB  Pontes e Lacer     10.83  56         Pn      17 41 35.1  -2.6
PTLB  Pontes e Lacer     10.83  56  eP     Pn      17 41 35.3  -2.5
BDQN  Bodoquena, MS      10.98  85  eP     Pn      17 41 37.0  -2.8
CPUP  Villa Florida      11.10 116  P      Pn      17 41 39.2  -2.2
        comp=Z,0.6nm,0.8s,baz=296,slow=17,SNR=4.0
VILB  Vilhena            11.78  43         Pn      17 41 49.0  -1.4
VILB  Vilhena            11.78  43  eP     Pn      17 41 48.7  -1.8
AQDB  Aquidauana         11.95  86  eP     Pn      17 41 49.8  -2.8
AMBA  Amambai (Brazi     12.48  98  eP     Pn      17 41 57.8  -1.8
NNA   Nana               12.64 319  P      Pn      17 42 02.9  +1.2
        comp=Z,3.3nm,0.3s,baz=174,slow=10,SNR=1.3
BO01  Tunca              12.77 190         Pn      17 42 03.5  +0.1
BO02  Sierra Bellavi     13.12 189  Pn     Pn      17 42 08.8  +0.9
PP1B  Ponte de Pedra     13.42  74  eP     Pn      17 42 10.8  -1.0
RPRD  Ribas do Rio P     13.80  87  eP     Pn      17 42 15.8  -1.0
C2SB  Chapadao do Su     14.93  81  eP     P       17 42 33.1  -0.6
PDRB  Porto dos Gac      15.09  50  eP     Pn      17 42 31.1  -1.9
PTGB  Pitanga            15.32 104  eP     P       17 42 37.1  -0.9
CPSB  Cacapava Do Su     15.95 126  eP     Pn      17 42 42.9  -0.9
LDASE Londrina, Braz     16.07  99  eP     Pn      17 42 44.8  -0.5
CLDB  Colider            16.25  50  eP     P       17 42 47.9  -0.6
ARAG  Araguaiana, MT     16.85  72  eP     P       17 42 54.4  -0.5
ITRB  Iturama            17.02  86  eP     Pn      17 42 56.8  -0.2
TEFE  Tefe               18.54  12  eP     P       17 43 12.9  -0.6
BB19B Bebedouro          18.54  91  eP     P       17 43 13.3  -0.3
PLCA  Paso Flores        18.97 185  P      Pn      17 43 19.1  -1.1
        comp=Z,3.9nm,0.7s,baz=2.2,slow=8.2,SNR=6.3
PLCA                                LR     LR      17 51 05.2
        comp=Z,57nm,19.7s,baz=24,slow=38
PLCA  Paso Flores        18.97 185  IAmb   IAmb    17 43 22.3
        comp=Z,17nm,1.4s
SNDB  Serra Nova Dou     19.06  62  eP     P       17 43 18.4  -0.9
NPGB  Novo Progresso     19.34  43  eP     P       17 43 20.3  -2.0
RCLB  Rio Claro- Sao     19.37  96  eP     P       17 43 21.7  -0.9
IPMB  Ipameri, GO        19.38  82  eP     P       17 43 21.9  -0.8
SPB   Sao Paulo          19.45  99  eP     P       17 43 22.8  -0.6
PET01 Itanhaem-SP        19.62 101  eP     P       17 43 25.1  -0.1
VAO   Valinhos           19.88  98         P       17 43 27.5  -0.7
VAO   Valinhos           19.88  98  eP     P       17 43 27.6  -0.5
MACA  Manacapuru-AM      19.98  23  eP     P       17 43 27.8  -1.5
BDFB  Brasilia           20.27  76  P      P       17 43 30.9  -1.5
        comp=Z,11nm,0.5s,baz=243,slow=12,SNR=13
        comp=Z,11nm,0.5s
BDFB  Brasilia           20.27  76         P       17 43 30.9  -1.5
BDFB                                IAmb   IAmb    17 43 33.6
        comp=Z,34nm,1.3s
PMNB  Patos De Minas     20.89  85  eP     P       17 43 37.3  -1.7
PARB  Paraibuna          21.11  99  eP     P       17 43 40.3  -1.1
ITTB  Itaituba           21.25  37  eP     P       17 43 41.0  -1.8
SLP01 Ubatuba-SP         21.54  99  eP     P       17 43 44.7  -1.4
BSCB  Bom Sucesso        22.03  92  eP     P       17 43 50.5  -0.7
DIAM  Diamantina, MG     23.50  86  eP     P       17 44 03.0  -2.6
PRPB  Parauapebas        23.77  52  eP     P       17 44 05.8  -1.9
SMTB  Santa Maria do     23.81  61  eP     P       17 44 07.0  -1.2
JANB  Januaria           23.82  78  eP     P       17 44 06.5  -1.8
MAL2  Monte Alegre,      24.05  37         P       17 44 10.5  +0.2
DUB01 Friburgo-RJ        24.16  96  eP     P       17 44 10.9  -0.4
SDBA  SAO DESIDERIO      24.31  71  eP     P       17 44 12.0  -0.7
CAM01 Campos-RJ          24.84  95  eP     P       17 44 18.0  +0.5
BOAV  Boa Vista          25.25  19         P       17 44 21.7  +0.6
BOAV  Boa Vista          25.25  19  eP     P       17 44 21.9  +0.7
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SJMB  Sao Joao De Ma   25.73  88  eP     P       17 44 25.1 -0.4
RIB01 Linhares ES      26.35  90  eP     P       17 44 30.4 -0.7
GUA01 Guaratinga, BA   27.50  84  eP     P       17 44 41.3 -0.1
MDP   Montagnes des    30.88  32  P      P       17 45 10.5 -0.8
      comp=Z,30nm,1.0s,baz=202,slow=6.1,SNR=4.3
      comp=Z,30nm,1.0s
ESQI  Esquipulas       41.54 329  P      P       17 46 42.6 +0.6
TXAR  Lajitas Array    61.12 325  P      P       17 49 08.5 +0.6
      comp=Z,0.3nm,0.6s,baz=151,slow=8.8,SNR=4.9
      comp=Z,0.3nm,0.6s
SNAA  Sanae            61.86 161  P      P       17 49 13.5 +1.2
      comp=Z,1.5nm,0.7s,baz=289,slow=6.9,SNR=6.5
      comp=Z,1.5nm,0.7s
SNAA  Sanae            61.86 161  IAmb   IAmb    17 49 35.9
      comp=Z,5.8nm,1.3s
DBIC  Dimbokro         68.39  73  P      P       17 49 55.3  0.0
      comp=Z,22nm,0.7s,baz=258,slow=6.3,SNR=27
      comp=Z,22nm,0.7s
DBIC  Dimbokro         68.39  73  P      P       17 49 55.2  0.0
QSPA  South Pole Qui   68.41 180  P      P       17 49 56.5 +1.8
      comp=Z,3.7nm,0.6s,baz=257,slow=0.1,SNR=34
      comp=Z,3.7nm,0.6s
QSPA  South Pole Qui   68.41 180  P      P       17 49 56.4 +1.7
QSPA                              IAmb   IAmb    17 49 57.3
      comp=Z,3.7nm,0.7s
BATG  Bathurst New B   68.77   2  P      P       17 49 58.1 +1.2
BC3   Big Chuckawall   71.04 320  P      P       17 50 12.8 +1.5
BC3                               IAmb   IAmb    17 50 14.7
      comp=Z,6.5nm,1.0s
KNB   Kanab            71.92 324  P      P       17 50 17.1 +0.6
KNB                               IAmb   IAmb    17 50 20.6
      comp=Z,13nm,1.1s
GWY   Greenwater Val   73.51 321  P      P       17 50 25.3 -0.7
PDAR  Pinedale Array   74.58 330  P      P       17 50 33.6 +1.5
      comp=Z,0.5nm,0.5s,baz=143,slow=7.0,SNR=5.4
      comp=Z,0.5nm,0.5s
NVAR  Mina Array Bea   76.00 322  P      P       17 50 42.2 +1.9
      comp=Z,0.3nm,0.2s,baz=143,slow=5.2,SNR=5.0
      comp=Z,0.3nm,0.2s
YNE   Yellowstone No   76.52 331  IAmb   IAmb    17 51 24.3
      comp=Z,7.1nm,1.1s
TORD  Torodi Ar. Bea   77.03  70  P      P       17 50 46.2 -0.2
      comp=Z,12nm,0.6s,baz=268,slow=4.3,SNR=71
      comp=Z,12nm,0.6s
TORD  Torodi Ar. Bea   77.03  70  IAmb   IAmb    17 50 48.4
      comp=Z,7.3nm,0.7s
HLID  Hailey           77.53 328  IAmb   IAmb    17 50 52.3
      comp=Z,3.3nm,0.8s
TSUM  Tsumeb           79.53 107  P      P       17 51 01.4 +1.1
TSUM                              IAmb   IAmb    17 51 01.8
      comp=Z,8.1nm,0.8s
KOOLE Kule             80.56 111  P      P       17 51 06.5 +0.6
KOOLE                             IAmb   IAmb    17 51 08.2
      comp=Z,14nm,1.1s
MD01  Midelt array s   81.51  50  P      P       17 51 11.1 +0.6
BOSA  Boshof           82.92 118  P      P       17 51 18.6 +0.6
      comp=Z,2.4nm,0.6s,baz=276,slow=4.5,SNR=9.2
      comp=Z,2.4nm,0.6s
BOSA  Boshof           82.92 118  IAmb   IAmb    17 51 22.0
      comp=Z,14nm,1.3s
ESDC  Sonseca Array    85.72  44  P      P       17 51 32.6 +0.9
      comp=Z,2.5nm,1.0s,baz=232,slow=4.1,SNR=5.6
      comp=Z,2.5nm,1.0s
ESDC  Sonseca Array    85.72  44  IAmb   IAmb    17 51 33.8
      comp=Z,2.9nm,1.1s
YKA   Yellowknife Ar   91.61 340  P      P       17 52 00.2 +1.2
      comp=Z,0.8nm,0.8s,baz=140,slow=3.9,SNR=9.6
      comp=Z,0.8nm,0.8s
ASAR  Alice Springs   129.87 207  PKP    PKiKP   17 58 03.0  0.0
      comp=Z,0.9nm,0.7s,baz=128,slow=1.9,SNR=13
WRA   Warramunga Arr  132.93 210  PKP    PKiKP   17 58 09.2  0.0
      comp=Z,1.0nm,0.6s,baz=150,slow=1.9,SNR=8.4
ZALV  Zalesovo Beam   142.02  26  PKP    PKiKP   17 58 25.9 -0.7
      comp=Z,1.0nm,0.6s,baz=277,slow=2.5,SNR=5.2
MKAR  Makanchi Array  145.60  37  PKPbc  PKiKP   17 58 32.2 -2.0
      comp=Z,2.5nm,0.8s,baz=328,slow=4.3,SNR=14
SONM  Songino Array   153.68   8  PKPab  PKPab   17 59 06.0 +2.0
      comp=Z,0.6nm,0.6s,baz=290,slow=1.6,SNR=2.0
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*IGIL **18** 17:39:28.6, 34.°42N×14.°91W, h10^{km}*
*MDD **18** 17:39:29.0±0.6, 34.°37N×14.°81W, h40^{km}, Mb4.6/11, M_mb4.1/13, Error ellipse: s-maj=7.6km s-min=3.3km az=128.0*
*INMG **18** 17:39:32.5±2.3, 34.°21N×14.°74W, h53^{km}±14^{km}, ML2.9, Error ellipse: s-maj=8.2km s-min=4.4km az=137.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NE Porto Santo (Madeira)*
*CNRM **18** 17:39:37.5, 34.°37N×14.°09W, h77^{km}*
ISC 18 17:39:24.3±1.0**, 34.°30N**±0.°06×**14.°76W**±0.°05**, h10^{km}, n86, σ2^{s}78**/94**, 12C, Madeira Islands region**

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Code  Station Name      Δ°   AZ°    Phase ID         Time     Res
                                    Op     ISC      h  m  s   ISC
PMPST Porto Santo, M    1.79 228⇑eP     Pn       17 39 57.3 +2.1
PMPST                            eS     Sn       17 40 16.0 -2.0
PMPST                            i IAML          17 40 16.6
PMPST                            i IAML          17 40 18.0
PMPST                            i IAML          17 40 18.4
PMPS  Porto Santo       1.80 227⇑eP     Pn       17 39 57.5 +2.1
PMPS                             eS     Sn       17 40 16.7 -1.6
PMPS                             i IAML          17 40 18.9
PMAR  Madeira           2.39 230 eP     Pn       17 40 05.7 +2.0
PMAR                             eS     Sn       17 40 31.0 -2.1
PMAR                             i IAML          17 40 34.7
PMAR                             i IAML          17 40 35.3
PMAR                             i IAML          17 40 35.7
FUL   Funchal           2.43 228 eP     Pn       17 40 06.2 +2.2
FUL                              eS     Sn       17 40 31.4 -2.3
FUL                              i IAML          17 40 31.5
FUL                              i IAML          17 40 31.7
FUL                              i IAML          17 40 41.9
PMOZ  Porto Moniz, M    2.51 235 eP     Pn       17 40 08.2 +3.0
PMOZ                             eS     Sn       17 40 34.5 -1.5
PMOZ                             i IAML          17 40 41.3
CDLV  Cueva Verdes      5.24 167  P     Pn       17 40 45.0 +2.4
CDLV                            ⇑i IVmb_VC       17 40 51.2
      533nm,SNR=0.8
CDLV                              S     Sn       17 41 37.3 -5.8
PFVI  Vila Bisbo        5.59  58  P     Pn       17 40 49.3 +1.8
PFVI                              S     Sn       17 41 45.4 -6.5
PFVI  Vila Bisbo        5.59  58 eP     Pn       17 40 50.0 +2.5
PFVI                             eS     Sn       17 41 46.4 -5.5
PFVI                             i IAML          17 41 48.5
PFVI                             i IAML          17 41 49.8
PFVI                             i IAML          17 41 51.9
PFVI  Vila Bisbo        5.59  58  P     Pn       17 40 50.2 +2.7
PFVI  Vila Bisbo        5.59  58  S     Sn       17 41 49.4 -2.5
MORF  Marmelete         5.80  57 eP     Pn       17 40 53.1 +2.7
MORF  Marmelete         5.80  57 eP     Pn       17 40 53.1 +2.7
MORF                             eS     Sn       17 41 53.1 -3.8
MORF                             i IAML          17 41 54.9
MORF                             i IAML          17 41 56.8
MORF                             i IAML          17 42 01.2
PTEO  Sao Teotonio      5.87  55 eP     Pn       17 40 54.2 +2.9
PTEO                             eS     Sn       17 41 53.2 -5.4
PTEO                             i IAML          17 41 56.0
PTEO                             i IAML          17 42 01.0
PTEO                             i IAML          17 42 02.2
CFTV  Fuerteventura     5.89 174  P     Pn       17 40 52.5 +0.8
CFTV                            ⇑i IVmb_VC       17 40 55.5
      270nm,SNR=1.2
CFTV                              S     Sn       17 41 50.4 -8.9
SRHM  Skhour des Reh    6.02 106  P     Pn       17 40 57.5 +4.0
SRHM  Skhour des Reh    6.02 106  S     Sn       17 41 59.9 -2.5
CGIN  Giniginamar, F    6.10 174  P     Pn       17 40 56.1 +1.6
CGIN                            ⇑i IVmb_VC       17 40 58.7
      235nm,SNR=0.7
CGIN                              S     Sn       17 41 56.7 -7.6
CROM  Garafia, La Pa    6.13 207  P     Pn       17 40 56.4 +1.2
CROM                              S     Sn       17 41 56.3 -9.2
CMIR  El Paso, La Pa    6.18 206  P     Pn       17 40 56.9 +1.2
CMIR                              S     Sn       17 41 56.3  -10
AVE   Averroes          6.19  97  S     Sn       17 42 03.4 -3.3
AVE                               P     Pn       17 40 59.1 +3.4
AVE   Averroes          6.19  97  S     Sn       17 42 03.2 -3.5
TBT   Taburiente        6.21 207  P     Pn       17 40 56.9 +0.8
TBT                             ⇑i IVmb_VC       17 40 58.2
      399nm,SNR=1.1
TBT                               S     Sn       17 41 56.9  -10
PBDV  Barranco-do-Ve    6.28  60  P     Pn       17 40 59.1 +2.2
PBDV                              S     Sn       17 42 04.1 -4.7
PBDV  Barranco-do-Ve    6.28  60 eP     Pn       17 41 00.1 +3.1
PBDV                             eS     Sn       17 42 04.9 -3.9
PBDV                             i IAML          17 42 08.8
PBDV                             i IAML          17 42 11.6
PBDV                             i IAML          17 42 12.2
MESJ  Messejana         6.37  54 eP     Pn       17 41 00.5 +2.4
MESJ  Messejana         6.37  54 eP     Pn       17 41 00.6 +2.4
MESJ                             eS     Sn       17 42 05.9 -5.0
MESJ                             i IAML          17 42 10.9
MESJ                             i IAML          17 42 11.7
MESJ                             i IAML          17 42 20.5
PCVE  Castro Verde      6.38  57  P     Pn       17 41 00.2 +1.8
PCVE                              S     Sn       17 42 04.5 -6.9
PCVE  Castro Verde      6.38  57 eP     Pn       17 41 01.3 +2.9
PCVE                             eS     Sn       17 42 06.8 -4.6
PCVE                             i IAML          17 42 10.1
PCVE                             i IAML          17 42 10.5
PCVE                             i IAML          17 42 11.0
PMAFR Mafra             6.40  42 eP     Pn       17 41 00.9 +2.2
PMAFR                            eS     Sn       17 42 04.9 -6.9
PMAFR                            i IAML          17 42 05.9
PMAFR                            i IAML          17 42 08.0
PMAFR                            i IAML          17 42 10.0
PVAQ  Vaqueiros         6.50  60 eP     Pn       17 41 02.9 +2.9
PVAQ                             eS     Sn       17 42 08.4 -5.9
PVAQ                             i IAML          17 42 14.5
PVAQ                             i IAML          17 42 16.0
PVAQ                             i IAML          17 42 17.3
PVAQ  Vaqueiros         6.50  60  P     Pn       17 41 02.9 +2.9
PVAQ  Vaqueiros         6.50  60  S     Sn       17 42 11.0 -3.3
OUK   Oukaimeden        6.57 116  P     Pn       17 41 05.5 +4.3
OUK   Oukaimeden        6.57 116  S     Sn       17 42 14.5 -1.9
MOE   Montemor          6.67  49 eP     Pn       17 41 04.8 +2.5
MOE                              eS     Sn       17 42 13.1 -5.3
MOE                              i IAML          17 42 20.8
MOE                              i IAML          17 42 21.4
MOE                              i IAML          17 42 26.9
PBEJ  Beja              6.70  54 eP     Pn       17 41 05.6 +2.8
PBEJ                             eS     Sn       17 42 12.8 -6.3
PBEJ                             i IAML          17 42 17.5
EGRO  El Granado        6.73  59  P     Pn       17 41 05.8 +2.7
EGRO                              S     Sn       17 42 14.3 -5.5
EGRO  El Granado        6.73  59  P     Pn       17 41 06.1 +3.0
EGRO                              S     Sn       17 42 15.1 -4.7
EVO   Evora             6.89  50  P     Pn       17 41 07.2 +1.9
EVO                               S     Sn       17 42 17.5 -6.2
EVO   Evora             6.89  50 eP     Pn       17 41 08.4 +3.2
EVO                              eS     Sn       17 42 17.4 -6.4
EVO                              i IAML          17 42 21.2
EVO                              i IAML          17 42 23.5
EVO                              i IAML          17 42 24.2
PARRA Arraiolos         7.04  48 eP     Pn       17 41 10.2 +2.8
PARRA                            eS     Sn       17 42 21.6 -5.9
PARRA                            i IAML          17 42 25.0
PARRA                            i IAML          17 42 25.0
PARRA                            i IAML          17 42 29.1
PSBE  So Bento          7.07  41 eP     Pn       17 41 11.1 +3.4
PSBE                             eS     Sn       17 42 23.0 -5.1
PMTG  Montargil         7.09  46 eP     Pn       17 41 10.6 +2.6
PMTG                             eS     Sn       17 42 21.9 -6.7
PMTG                             i IAML          17 42 24.1
PMTG                             i IAML          17 42 25.6
PMTG                             i IAML          17 42 28.1
TIO   Tiouine           7.16 116  P     Pn       17 41 13.5 +4.4
TIO                               S     Sn       17 42 28.3 -2.3
TIO   Tiouine           7.16 116  P     Pn       17 41 13.6 +4.4
PBAR  Barrancos         7.34  56  P     Pn       17 41 13.5 +2.0
PBAR                              S     Sn       17 42 27.3 -7.6
PBAR  Barrancos         7.34  56 eP     Pn       17 41 14.1 +2.6
PBAR                             eS     Sn       17 42 27.8 -7.1
PBAR                             i IAML          17 42 32.6
PBAR                             i IAML          17 42 34.3
PBAR                             i IAML          17 42 34.6
RSA   Sarsar            7.39  83  P     Pn       17 41 14.9 +2.6
RSA   Sarsar            7.39  83  S     Sn       17 42 32.5 -3.8
EMIN  Mina Concepcio    7.41  60  P     Pn       17 41 14.2 +1.8
EMIN                              S     Sn       17 42 28.7 -7.9
EMIN  Mina Concepcio    7.41  60  P     Pn       17 41 15.0 +2.5
EMIN                            ⇑i IVmb_VC       17 41 15.5
      331nm,SNR=2.0
EMIN                              S     Sn       17 42 29.6 -7.0
TISM  Timmit            7.44 108  P     Pn       17 41 15.6 +2.7
TISM  Timmit            7.44 108  S     Sn       17 42 34.6 -2.8
PSARD Sardoal           7.48  43 eP     Pn       17 41 15.1 +1.7
PSARD                            eS     Sn       17 42 31.3 -6.9
PSARD                            i IAML          17 42 35.6
PSARD                            i IAML          17 42 38.8
PSARD                            i IAML          17 42 42.0
OUZM  OUZ               7.54 114  P     Pn       17 41 18.1 +3.6
OUZM  OUZ               7.54 114  S     Sn       17 42 36.4 -3.7
PCAS  Casmilo, Conde    7.61  39 eP     Pn       17 41 18.5 +3.3
PCAS                             eS     Sn       17 42 35.4 -6.2
PCAS                             i IAML          17 42 39.8
EBAD  Badajoz           7.66  52  P     Pn       17 41 17.8 +1.9
EBAD                              S     Sn       17 42 35.7 -7.0
EBAD  Badajoz           7.66  52  P     Pn       17 41 18.2 +2.3
EBAD                            ⇑i IVmb_VC       17 41 18.5
      202nm,SNR=1.1
EBAD                              S     Sn       17 42 35.0 -7.7
ESPR  Espera            7.69  68  P     Pn       17 41 17.4 +1.1
ESPR                              S     Sn       17 42 38.2 -5.4
ESPR  Espera            7.69  68  P     Pn       17 41 18.7 +2.4
ESPR                            ⇑i IVmb_VC       17 41 21.9
      314nm,SNR=2.0
ESPR                              S     Sn       17 42 37.3 -6.2
PMRV  Marv??o           7.81  47 eP     Pn       17 41 19.7 +1.7
PMRV                             eS     Sn       17 42 39.0 -7.5
PMRV                             i IAML          17 42 40.8
PMRV                             i IAML          17 42 43.1
PMRV                             i IAML          17 42 44.0
ECEU  Ceuta             7.85  76  P     Pn       17 41 21.8 +3.3
PCBR  Castelo Branco    8.03  44 eP     Pn       17 41 22.8 +1.9
PCBR                             eS     Sn       17 42 44.7 -7.0
PCBR                             i IAML          17 42 48.4
PCBR                             i IAML          17 42 50.1
IFR   Ifrane            8.04  93  P     Pn       17 41 24.4 +3.1
IFR                               S     Sn       17 42 44.8 -7.6
LCRM  LCR               8.24  91  P     Pn       17 41 26.3 +2.2
LCRM  LCR               8.24  91  S     Sn       17 42 51.7 -5.6
PVIS  Viseu             8.41  38 eS     Sn       17 42 51.9 -9.4
ECAB  El Cabril         8.44  61  P     Pn       17 41 28.3 +1.7
ECAB                              S     Sn       17 42 54.3 -7.6
ECAB  El Cabril         8.44  61  P     Pn       17 41 28.0 +1.4
ECAB                            ⇑i IVmb_VC       17 41 30.1
      149nm,SNR=1.1
ECAB                              S     Sn       17 42 54.1 -7.9
EMIJ  Mijas             8.46  72  P     Pn       17 41 28.4 +1.6
EMIJ                              S     Sn       17 42 56.4 -6.0
MD31  MD31              8.46  97  P     Pn       17 41 29.9 +2.9
MD31  MD31              8.46  97  S     Sn       17 42 58.8 -3.9
MDT   Midelt            8.60  97  P     Pn       17 41 32.3 +3.4
MDT   Midelt            8.60  97  S     Sn       17 43 01.6 -4.4
GOLM  Goulmima          8.63 105  P     Pn       17 41 32.9 +3.6
GOLM  Goulmima          8.63 105  S     Sn       17 43 05.6 -1.3
POLO  Lamas de Olo      8.96  36 eP     Pn       17 41 37.7 +3.9
POLO                             eS     Sn       17 43 04.9  -10
EADA  Adamuz            9.09  62  P     Pn       17 41 37.1 +1.6
EADA                              S     Sn       17 43 11.2 -6.7
EADA  Adamuz            9.09  62  P     Pn       17 41 37.2 +1.8
EADA                            ⇑i IVmb_VC       17 41 42.4
      138nm,SNR=0.9
EADA                              S     Sn       17 43 10.5 -7.3
EGOR  Sierra Gorda,     9.10  69  P     Pn       17 41 39.6 +3.8
ELGU  Los Guajares,     9.42  71  P     Pn       17 41 42.6 +2.5
EQTA  Presa de Quent    9.64  69  P     Pn       17 41 45.6 +2.4
PAB   San Pablo         9.84  55  P     Pn       17 41 46.5 +0.6
PAB                               S     Sn       17 43 27.3 -9.2
PSIM  Granatula de C    9.93  60  P     Pn       17 41 48.0 +0.8
PSIM                              S     Sn       17 43 30.4 -8.3
ESDC  Sonseca Array    10.16  55  P     Pn       17 41 52.3 +2.0
ESDC                            ⇑i IVmb_VC       17 41 57.5
      106nm,SNR=0.8
```

IDC 18 18:29:47.7±2.6**, 6.°60S**×**152.°24E, h0^{km}, mb3.6**/2**, mbtmp3.7**/3**, ML1.8**/1**, Error ellipse: s-maj=103.2km s-min=38.4km az=136.0, New Britain region**

```
Code  Station Name      Δ°   AZ°    Phase ID         Time     Res
                                    Op     ISC      h  m  s   ISC
PMG   Port Moresby      5.75 241  Pn     Pn       18 31 14.6 +0.2
      1.8nm,0.3s,baz=319,slow=11,SNR=6.3
PMG                               Sn     Sn       18 32 20.9 -0.2
      0.9nm,0.3s,baz=198,slow=20,SNR=2.6
      3.7nm,0.3s
WRA   Warramunga Arr   21.86 231  P      P        18 34 43.3 +1.0
      1.4nm,0.7s,baz=57,slow=9.9,SNR=9.5
      1.4nm,0.7s
ASAR  Alice Springs    24.46 224  P      P        18 35 08.3 -0.3
      1.1nm,0.5s,baz=56,slow=9.1,SNR=43
      1.1nm,0.5s
TORD  Torodi Ar. Bea  150.28 285  PKPbc  PKPbc    18 49 41.4 -0.6
      0.6nm,0.3s,baz=69,slow=3.8,SNR=6.9
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*IDC **18** 18:38:56.8±1.4, 13.°34N×90.°77W, h0^{km}, mb3.8/2, mbtmp3.7/4, ML3.9/2, MS3.5/1, Error ellipse: s-maj=38.8km s-min=22.3km az=66.0*
*GCG **18** 18:38:59.8±1.5, 13.°39N×91.°05W, h46^{km}±46^{km}, MD4.0, ML3.6*
*CATAC **18** 18:38:59.4±0.5, 13˚N±2˚×9˚1W±˚, h9^{km}±2^{km}, M4.0/23, MLv4.0/23, Error ellipse: s-maj=5.6km s-min=2.6km az=27.0, confirmed*
*SNET **18** 18:39:01.0±1.0, 13.°50N×90.°80W, h10^{km}±15^{km}, ML3.9*
*NEIC **18** 18:39:02.5±1.8, 13.°46N±0.°06×90.°85W±0.°06, h35^{km}±2^{km}, mb4.1/5, Error ellipse: s-maj=13.2km s-min=7.7km az=223.0*
ISC 18 18:39:02.1±1.1**, 13.°41N**±0.°07×**90.°91W**±0.°05**, h53^{km}**±10^{km}**, n98, σ1^{s}29**/102**, mb4.0**/5**, 1C-4D, Near coast of Guatemala**

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Code  Station Name      Δ°   AZ°    Phase ID         Time     Res
                                    Op     ISC      h  m  s   ISC
ESSJ  San Jos, E        0.43  69⇑eP     Pn       18 39 12.6 -0.1
ESSJ                             eS     Sn       18 39 22.2 +1.8
ESSG  Sabana Grande     0.97   5 eP     Pn       18 39 17.2 -2.5
ESSG                              IAML           18 39 50.8
      comp=Z,985nm,0.7s
FAME  Alcaldia de Sa    0.97  64  P     Pn       18 39 17.2 -2.3
FAME  Alcaldia de Sa    0.97  64  S     Sn       18 39 30.0 -2.4
STG5  El Palmar, Qui    1.07 337 eP     Pn       18 39 24.3 +3.3
STG5                             eS     Sn       18 39 38.4 +3.4
STG8  El Palmar, Qui    1.12 338 eP     Pn       18 39 23.9 +2.2
STG8                              IAML           18 39 46.2
      comp=Z,734nm,0.1s
NUBE  Las Nubes         1.21  66 eP     Pn       18 39 20.8 -2.1
NUBE  Las Nubes         1.21  66  P     Pn       18 39 20.7 -2.1
NUBE  Las Nubes         1.21  66  S     Sn       18 39 36.6 -1.6
CEVE  Cerro Verde       1.32  71 eP     Pn       18 39 22.8 -1.6
CEVE  Cerro Verde       1.32  71  P     Pn       18 39 22.9 -1.6
CEVE  Cerro Verde       1.32  71  S     Sn       18 39 40.6 -0.5
RTR   El Retiro         1.32  68 eP     Pn       18 39 23.1 -1.4
SBLS  San Blas          1.32  71 eP     Pn       18 39 22.7 -1.8
RTAL  Retalhuleu        1.34 326  Pn    Pn       18 39 22.6 -1.9
SNJE  San Jose          1.35  70 eP     Pn       18 39 23.0 -1.8
RBDL  Robledal          1.38  59 eP     Pn       18 39 24.0 -1.2
UNIC  Universidad Ca    1.44  67  P     Pn       18 39 24.6 -1.3
UNIC  Universidad Ca    1.44  67  S     Sn       18 39 42.5 -1.3
JAYA  Jayaque - finc    1.44  80 eP     Pn       18 39 24.3 -1.7
JAYA  Jayaque - finc    1.44  80⇓eP     Pn       18 39 24.3 -1.7
JAYA                             eS     Sn       18 39 42.9 -1.1
JAYA  Jayaque - finc    1.44  80  P     Pn       18 39 24.3 -1.7
JAYA  Jayaque - finc    1.44  80  S     Sn       18 39 43.8 -0.2
CEDA  San Andres        1.53  75  S     Sn       18 39 45.9 +0.1
LALI  Alcalda de L      1.55  87 eP     Pn       18 39 26.4 -0.9
LALI  Alcalda de L      1.55  87  P     Pn       18 39 26.1 -1.2
LALI  Alcalda de L      1.55  87  S     Sn       18 39 46.5 +0.2
PMON  Piamonte          1.58  79 eP     Pn       18 39 26.1 -1.8
PMON  Piamonte          1.58  79  P     Pn       18 39 26.6 -1.2
PMON  Piamonte          1.58  79  S     Sn       18 39 48.1 +0.8
BOQS  Boqueron          1.62  78 eP     Pn       18 39 27.4 -1.1
APG   El Apazote        1.64  15  Pn    Pn       18 39 28.7 -0.1
      comp=Z,3.6nm,0.3s,baz=182,slow=13,SNR=62
APG                               Sn    Sn       18 39 49.5 +0.5
      comp=Z,3.4nm,0.3s,baz=64,slow=22,SNR=13
APG   El Apazote        1.64  15⇓iP     Pn       18 39 28.4 -0.4
APG                              i S    Sn       18 39 50.1 +1.1
UEES  Universidad Ev    1.66  79  P     Pn       18 39 27.7 -1.2
UEES  Universidad Ev    1.66  79  S     Sn       18 39 49.1  0.0
UTEC  Universidad Te    1.69  80  S     Sn       18 39 51.3 +1.4
PANCS Alcalda de        1.70  83  S     Sn       18 39 49.5 -0.5
PANCS Alcalda de        1.70  83  P     Pn       18 39 28.8 -0.6
LOMA  Loma Larga        1.71  82  P     Pn       18 39 28.5 -1.1
LOMA  Loma Larga        1.71  82  S     Sn       18 39 50.9 +0.5
IGN   Direccin Gen      1.72  80  S     Sn       18 39 51.1 +0.5
IGN   Direccin Gen      1.72  80  P     Pn       18 39 28.9 -0.9
LFU   La Fuente         1.78  79 eP     Pn       18 39 30.1 -0.5
MTO3  Montecristo       1.80  57  Pn    Pn       18 39 29.5 -1.5
MTO3  Montecristo       1.80  57 eP     Pn       18 39 30.3 -0.7
MTO3  Montecristo       1.80  57  P     Pn       18 39 30.3 -0.7
MTO3  Montecristo       1.80  57  S     Sn       18 39 53.1 +0.3
QUIS  Sacapulas         1.88 355⇓eP     Pn       18 39 32.4 +0.5
QUIS                             eS     Sn       18 39 56.6 +2.0
QUIS                              IAML           18 40 03.3
      comp=Z,398nm,0.6s
ESQI  Esquipulas        1.91  53        Pn       18 39 31.6 -0.7
ESQI  Esquipulas        1.91  53 eP     Pn       18 39 32.0 -0.2
ESQI  Esquipulas        1.91  53  P     Pn       18 39 32.1 -0.2
ESQI  Esquipulas        1.91  53  S     Sn       18 39 55.7 +0.4
ZAFR2 Estanzuela, Za    1.91  52⇓eP     Pn       18 39 33.5 +1.3
PAVA  Las Pavas         1.94  81  P     Pn       18 39 32.7 -0.1
PAVA  Las Pavas         1.94  81  S     Sn       18 39 57.6 +1.4
HUEH  Huehuetenango     1.98 343  Pn    Pn       18 39 32.0 -1.5
HUEH  Huehuetenango     1.98 343 eP     Pn       18 39 33.7 +0.2
HUEH                             eS     Sn       18 39 55.2 -2.0
HUEH                              IAML           18 40 09.7
      comp=Z,743nm,0.5s
HUEH  Huehuetenango     1.98 343  P     Pn       18 39 33.4  0.0
HUEH  Huehuetenango     1.98 343  S     Sn       18 39 56.9 -0.4
LLGN  La Laguna         2.05  68  P     Pn       18 39 33.5 -0.8
LLGN  La Laguna         2.05  68  S     Sn       18 40 00.3 +1.5
TECO  Alcaldia de Te    2.08  86  P     Pn       18 39 34.3 -0.3
TECO  Alcaldia de Te    2.08  86  S     Sn       18 40 00.8 +1.5
UESV  Universidad de    2.08  84  S     Sn       18 40 00.2 +0.8
UESV  Universidad de    2.08  84  P     Pn       18 39 33.1 -1.5
SCLA  Alcaldia de Sa    2.14  82 eP     Pn       18 39 35.2 -0.3
SCLA  Alcaldia de Sa    2.14  82  P     Pn       18 39 35.4 -0.1
SCLA  Alcaldia de Sa    2.14  82  S     Sn       18 40 02.3 +1.3
PACA  Pacayal           2.52  88  S     Sn       18 40 11.7 +1.3
PACA  Pacayal           2.52  88  P     Pn       18 39 41.4 +0.7
LCND  La Caada          2.94  92  P     Pn       18 39 45.0 -1.4
CNCH  Conchagua         3.00  92  P     Pn       18 39 46.8 -0.5
CNCH  Conchagua         3.00  92  S     Sn       18 40 23.3 +1.2
CSGN  Cosiguina Volc    3.29  97  P     Pn       18 39 51.0 -0.3
CSGN                              S     Sn       18 40 29.7 +0.4
POTN  Potosi Cosigui    3.34  97  S     Sn       18 40 31.8 +1.5
TGUH  Tegucigalpa,Un    3.59  79        Pn       18 39 52.8 -2.6
PETF  Flores            3.63  16  Pn    Pn       18 39 55.6 -0.2
CRIN  San Cristobal     3.83 100  Pn    Pn       18 39 57.4 -1.2
HERN  Volcan Telica     4.06 101  Pn    Pn       18 40 01.0 -0.8
CNGN  Cerro Negro       4.21 102  Pn    Pn       18 40 03.3 -0.5
BOAB  BOACO BROADBAN5.20 100            Pn       18 40 16.2 -1.2
CMIG  Matias Romero     5.30 314  Pn    Pn       18 40 19.5 +0.7
      comp=Z,2.4nm,0.3s,baz=127,slow=10,SNR=7.5
CMIG                              Sn    Sn       18 41 16.2 -2.4
      comp=Z,1.8nm,0.3s,baz=133,slow=19,SNR=3.7
      comp=Z,6.3nm,0.5s
SIUN  Universidad Ur    5.98  86  Pn    Pn       18 40 27.4 -0.6
JUD3  Juan Diaz 3       6.17 121        Pn       18 40 31.3 +0.5
JTS   Las Juntas de     6.61 117  Lg    Lg       18 42 18.7
      comp=Z,0.7nm,0.3s,baz=61,slow=22,SNR=5.7
JTS   Las Juntas de     6.61 117        Pn       18 40 36.0 -0.7
TEIG  Tepich            7.23  20  Pn    Pn       18 40 45.9 +0.6
TXAR  Lajitas Array    19.77 325  P     Pn       18 43 30.2 +0.2
      comp=Z,0.1nm,0.3s,baz=140,slow=10,SNR=8.1
      comp=Z,0.9nm,0.7s
TXAR  Lajitas Array    19.77 325  P     Pn       18 43 29.4 -0.6
VHRN  Van Horn         21.62 325        P        18 43 49.6 +1.6
VHRN                              IAmb  IAmb     18 43 50.5
      comp=Z,4.9nm,0.8s
MNTX  Cornudas Mount   22.54 326        P        18 43 58.2 +0.5
MNTX                              IAmb  IAmb     18 44 00.6
      comp=Z,4.4nm,0.8s
121A  Cookes Peak, D   24.50 324  P     P        18 44 18.6 +1.9
BNM   Barren Site      25.10 328  P     P        18 44 23.6 +1.4
CLC   China Lake       32.77 318  P     P        18 45 30.4 +0.2
CLC                               IAmb  IAmb     18 45 32.5
      comp=Z,4.7nm,0.9s
SADO  Sadowa           32.83  16  LR    LR       18 59 48.2
      comp=Z,72nm,18.0s,baz=348,slow=38
NVAR  Mina Array Bea   34.79 321  P     P        18 45 51.4 +3.4
      comp=Z,1.0nm,0.6s,baz=140,slow=8.0,SNR=5.7
      comp=Z,1.0nm,0.6s
```

SIV	San Ignacio	41.52	134	P	P	18 46 45.4	+0.8
	comp=Z,0.8nm,0.5s,baz=287,slow=14,SNR=4.3						
	comp=Z,0.8nm,0.5s						
CMAR	Chiang Mai Arr	146.88	343	PKPbc	PKiKP	18 58 40.0	-2.1
	comp=Z,1.0nm,0.6s,baz=341,slow=3.7,SNR=11						

RSNC 18 18:42:04.3±0.0**,7°N**±1°×**7°.3W**±°**,h148^{km}**±1^{km}**,M2.6,ML2.3, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.21	194	P	Pn	18 42 24.2	-0.5
BARC				S	Sn	18 42 39.2	-1.0
BRJC	Barrancabermej	0.63	286	P	Pn	18 42 25.9	-0.3
BRJC				S	Sn	18 42 42.4	-0.4
PAMC	Pamplona, Colo	0.69	39	P	Pn	18 42 26.8	-0.3
PAMC				S	Sn	18 42 44.2	-0.2
RUSC	La Rusia	0.90	177	P	Pn	18 42 28.1	-0.6
RUSC				S	Sn	18 42 46.7	-0.5
PTBC	PUERTO BERRIO,	1.34	259	P	Pn	18 42 30.9	-1.2
PTBC				S	Sn	18 42 52.0	-1.3
OCAC	Ocana	1.44	353	P	Pn	18 42 33.2	-0.1
OCAC				S	Sn	18 42 55.1	-0.4
SPBC	San Pablo de B	1.48	219	P	Pn	18 42 33.1	-0.5
SPBC				S	Sn	18 42 55.1	-0.9
NORC	Norcasia	2.12	235	P	Pn	18 42 40.4	-0.4
NORC				S	Sn	18 43 08.2	-0.7
CHIC	Chingaza	2.24	196	P	Pn	18 42 42.2	-0.4
CHIC				S	Sn	18 43 11.8	-0.2
ROSC	El Rosal	2.28	211	P	Pn	18 42 44.2	+1.1
ROSC				S	Sn	18 43 12.6	-0.2
ROSC	El Rosal	2.28	211	P	Sn	18 43 12.7	-0.1
HELC	Santa Helena	2.46	256	P	Pn	18 42 45.3	+0.1
HELC				S	Sn	18 43 18.7	+2.1
UREC	San Jos de Ur	2.56	292	P	Pn	18 42 44.0	-2.1
UREC				S	Sn	18 43 14.9	-3.5
GUY2C	Guyana, Caldas	2.72	235	P	Pn	18 42 48.4	-0.1
GUY2C				S	Sn	18 43 22.8	+0.2
VILC	Villavicencio,	2.73	192	P	Pn	18 42 48.1	-0.2
VILC				S	Sn	18 43 22.1	-0.2
PTGC	Puerto Gaitan,	2.77	159	P	Pn	18 42 47.1	-1.6
CBOC	Ciudad Bolivar	3.01	252	P	Pn	18 42 52.0	+0.1
CBOC				S	Sn	18 43 26.6	-2.1
DBBC	Dabeiba	3.06	274	P	Pn	18 42 51.8	-0.7
DBBC				S	Sn	18 43 28.9	-0.9
PRAC	Prado	3.53	210	P	Pn	18 42 58.0	-0.5
PRAC				S	Sn	18 43 40.3	-0.2
ORTC	Ortega, Tolima	3.56	216	P	Pn	18 42 58.6	-0.3
ORTC				S	Sn	18 43 41.0	-0.2
SJCC	San Jacinto, C	3.69	327	P	Pn	18 42 58.1	-2.4
SJCC				S	Sn	18 43 40.0	-4.1
URMC	La Uribe, Meta	3.74	199	P	Pn	18 43 00.7	-0.6
URMC				S	Sn	18 43 45.0	-0.5

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*VAO **18** 18:44:39.1±1.0,30°.61S×71°.85W,h10^{km},mb4.7, Presumed earthquake*

*SJA **18** 18:44:48.0±0.8,30°.01S×71°.46W,h31^{km}±2^{km},ML4.4, MW4.4*

*GUC **18** 18:44:49.7±0.8,30°.02S×71°.26W,h52^{km}±3^{km},ML4.5*

*NEIC **18** 18:44:50.8,30°.02S×71°.37W,h41^{km}*

*IDC **18** 18:44:50.4±0.5,30°.12S×71°.28W,h46^{km}±4^{km},mb4.1/8, mbtmp4.3/11,MS3.4/5,Error ellipse: s-maj=19.2km s-min=15.6km az=96.0*

*NEIC **18** 18:44:51.1±1.6,30°.03S±0°.04×71°.3W±0°.1,h45^{km}±5^{km}, mb4.5/11,Mwr4.3/31,Mwr4.4(GUC),Error ellipse: s-maj=12.9km s-min=5.2km az=105.0,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.51; $M_{\theta\theta}$0.11; $M_{\phi\phi}$-3.62; $M_{r\theta}$0.67; $M_{\theta\phi}$0.42; $M_{\phi r}$-1.14; Fault plane solution: $M_0$3.83000×10^{15} NP1:ϕ_s2.27000°, δ36.36000°,λ103.79000°. NP2:ϕ_s165.32000°,δ54.85000°, λ80.05000°. Principal axes: T 3.7892, Plg78.0000°, Azm41.0000°; N 0.0792, Plg8.0000°, Azm171.0000°; P -3.8685, Plg9.0000°, Azm262.0000°;*

ISC 18 18:44:50.4±0.5**,30°.00S**±0°.02×**71°.40W**±0°.04**,h46^{km}**±4^{km}**, h46^{km}:pP-P,n154,**σ**1^{s}69**/178**,mb4.5**/13**,MS3.6**/3**,7C-8D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.16	59		Pn	18 44 58.2	+0.1
CO05	La Serena	0.16	59	⇑iP	Pn	18 44 58.6	+0.5
CO05				i S	Sn	18 45 04.2	+0.6
CO05				IAML		18 45 04.7	
	comp=E,195µm,0.4s						
GO04	Tololo Observa	0.55	108		Pn	18 45 01.7	-0.5
GO04	Tololo Observa	0.55	108	eP	Pn	18 45 01.8	-0.5
GO04	Tololo Observa	0.55	108	eP	Pn	18 45 01.2	-1.0
GO04				eS	Sn	18 45 10.2	-0.5
CO06	Fray Jorge	0.70	197		Pn	18 45 04.2	+0.2
CO06	Fray Jorge	0.70	197	⇑iP	Pn	18 45 04.4	+0.4
CO06				i S	Sn	18 45 14.5	+0.7
CO06				IAML		18 45 17.9	
	comp=N,25µm,0.3s						
CO03	El Pedregal	1.03	144		Pn	18 45 08.1	-0.5
CO01	Juntas del Tor	1.13	89		Pn	18 45 09.9	-0.2
CO01	Juntas del Tor	1.13	89	⇓iP	Pn	18 45 10.2	+0.1
CO01				i S	Sn	18 45 24.2	-0.4
CO01	Juntas del Tor	1.13	89	eP	Pn	18 45 10.2	+0.1
CO01				eS	Sn	18 45 27.3	+2.7
LCO	Las Campanas	1.16	32		Pn	18 45 10.3	-0.1
LCO	Las Campanas	1.16	32	eP	Pn	18 45 09.6	-0.9
LCO				eS	Sn	18 45 25.1	-0.2
LCO	Las Campanas	1.16	32	eP	Pn	18 45 10.4	-0.1
LCO				eS	Sn	18 45 26.7	+1.4
LCO				IAML		18 45 30.3	
	comp=Z,10µm,0.3s						
CO02	Combarbal	1.24	164		Pn	18 45 11.2	-0.2
CO02	Combarbal	1.24	164	⇓iP	Pn	18 45 11.4	-0.1
CO02	Combarbal	1.24	164	eP	Pn	18 45 10.7	-0.8
CO02				eS	Sn	18 45 26.8	-0.4
CO02				IAML		18 45 27.6	
	comp=Z,7µm,0.3s						
AC05	El Transito	1.52	40		Pn	18 45 15.6	+0.4
AC05	El Transito	1.52	40	⇓iP	Pn	18 45 16.1	+0.8
AC05				i S	Sn	18 45 34.5	+0.5
AC05				IAML		18 45 38.4	
	comp=N,12µm,0.3s						
AC05	El Transito	1.52	40	eP	Pn	18 45 16.1	+0.8
AC05				eS	Sn	18 45 36.7	+2.8
AC05				IAML		18 45 38.3	
	comp=Z,4µm,0.2s						
AROD	Rodeo	1.68	96	eP	Pn	18 45 19.1	+1.6
AC04	Llanos de Chal	1.81	9		Pn	18 45 20.2	+0.9
AC04	Llanos de Chal	1.81	9	eP	Pn	18 45 20.1	+0.9
AC04	Llanos de Chal	1.81	9	eP	Pn	18 45 20.5	+1.3
AC04				eS	Sn	18 45 48.7	+7.7
AC04				IAML		18 45 49.1	
	comp=Z,5µm,0.5s						
ACDV	Cuesta del Vie	1.98	95	eP	Pn	18 45 24.0	+2.4
CO04	Los Peladeros	2.06	170	⇓iP	Pn	18 45 23.3	+0.4
CO04				eS	Sn	18 45 48.0	+0.4
ACCO	Cerro Coronel	2.10	107	eP	Pn	18 45 26.0	+2.7
VA06	Catapilco	2.55	178		Pn	18 45 29.4	+0.2
VA06	Catapilco	2.55	178	eP	Pn	18 45 30.2	+0.9
AGUA	GUANDACOL	2.58	79	eP	Pn	18 45 27.7	-2.0
AGUA				IAML		18 46 14.5	
	comp=Z,2µm,0.4s						
GO03	Copiapo	2.61	23		Pn	18 45 30.9	+0.8
GO03	Copiapo	2.61	23	eP	Pn	18 45 31.2	+1.1
GO03	Copiapo	2.61	23	eP	Pn	18 45 31.4	+1.3
GO03				eS	Sn	18 46 02.8	+2.1
GO03				IAML		18 46 18.4	
	comp=Z,2µm,0.7s						
AC06	Mina Casimiro	2.79	19		Pn	18 45 33.5	+0.9
AC06	Mina Casimiro	2.79	19	eP	Pn	18 45 33.1	+0.5
RTLL	Cerro Villicun	2.84	118	eP	Pn	18 45 35.1	+1.8
RTLL	Cerro Villicun	2.84	118	eP	Pn	18 45 34.9	+1.5
RTLL				eS	Sn	18 46 12.3	+5.9
RTLL				IAML		18 46 29.2	
	comp=Z,2µm,0.7s						
VA03	San Esteban	2.84	165		Pn	18 45 34.2	+0.8
VA03	San Esteban	2.84	165	eP	Pn	18 45 34.3	+0.8
VA03	San Esteban	2.84	165	eP	Pn	18 45 35.1	+1.7
VA03				eS	Sn	18 46 08.2	+1.8
VA03				IAML		18 46 30.4	
	comp=Z,2µm,0.6s						
SJA	San Juan	2.88	123	eP	Pn	18 45 30.3	-3.5
SJA				eS	Sn	18 46 20.3	+13
SJA				IAML		18 46 27.3	
	comp=Z,1µm,0.7s						
ROCH	El Roble	2.98	174	eP	Pn	18 45 36.5	+1.1
ROC1	El Roble	2.98	174	eP	Pn	18 45 34.9	-0.5
ROC1				eS	Sn	18 46 11.9	+1.9
VA01	Torpederas	3.02	184		Pn	18 45 35.6	0.0
VA01	Torpederas	3.02	184	eP	Pn	18 45 35.6	0.0
VA01	Torpederas	3.02	184	eP	Pn	18 45 36.0	+0.4
VA01				eS	Sn	18 46 15.5	+4.9
VA01				IAML		18 46 42.3	
	comp=Z,545nm,0.6s						
VCA	Vinchina	3.06	66	⇓eP	Pn	18 45 39.9	+3.5
VCA	Vinchina	3.06	66	eP	Pn	18 45 39.9	+3.5
VCA				eS	Sn	18 46 15.9	+4.0
VCA				IAML		18 46 30.7	
	comp=Z,3µm,0.9s						
CFA	Coronel Fontan	3.15	121	P	Pn	18 45 39.0	+1.5
	comp=Z,92nm,0.3s,baz=312,slow=14,SNR=96						
CFA				S	Sn	18 46 15.7	+1.7
	comp=Z,177nm,0.5s,baz=274,slow=17,SNR=4.6						
CFA				LR	LR	18 47 03.2	
	comp=Z,175nm,20.3s,baz=22,slow=44						
CFA	Coronel Fontan	3.15	121	eP	Pn	18 45 39.0	+1.5
CFA				eS	Sn	18 45 57.5	-16
CFA				IAML		18 46 24.7	
	comp=Z,545nm,0.8s						
PEL	Peldehue	3.19	169		Pn	18 45 38.4	+0.3
PEL	Peldehue	3.19	169	eP	Pn	18 45 39.3	+1.2
PEL	Peldehue	3.19	169	eP	Pn	18 45 35.0	-3.1
PEL				eS	Sn	18 46 22.5	+7.6
PEL				IAML		18 46 35.1	
	comp=Z,1µm,1.3s						
MT02	Curacav	3.25	176		Pn	18 45 39.5	+0.6
MT02	Curacav	3.25	176	eP	Pn	18 45 39.5	+0.6
MT02	Curacav	3.25	176	eP	Pn	18 45 39.7	+0.8
MT02				eS	Sn	18 45 59.7	-17
MT02				IAML		18 46 30.0	
	comp=Z,759nm,0.9s						
MT10	Hacienda Santa	3.34	168	eP	Pn	18 45 41.4	+1.1
ASAL	Salagasta	3.39	140	eP	Pn	18 45 38.2	-2.6
ASAL				eS	Sn	18 46 35.7	+16
MT05	Renca	3.42	171		Pn	18 45 41.9	+0.6
MT05	Renca	3.42	171	eP	Pn	18 45 43.6	+2.3
MT05	Renca	3.42	171	eP	Pn	18 45 38.6	-2.7
MT05				IAML		18 46 57.5	
	comp=Z,900nm,1.1s						
MT14	Cerro Cal¡n	3.46	168	eP	Pn	18 45 44.0	+2.1
AVFE	Valle Fertil	3.47	102	eP	Pn	18 45 43.6	+1.6
AVFE				IAML		18 46 42.2	
	comp=Z,591nm,0.5s						
MT16	CCHEN	3.49	168		Pn	18 45 43.1	+0.9
MT16	CCHEN	3.49	168	eP	Pn	18 45 44.6	+2.3
MT04	Ro Olivares	3.56	163	eP	Pn	18 45 45.5	+2.2
MT04	Ro Olivares	3.56	163	eS	Sn	18 46 28.7	+4.5
MT04				IAML		18 46 40.6	
	comp=Z,783nm,0.6s						
MT03	Universidad Ad	3.56	168		Pn	18 45 44.7	+1.4
MT03	Universidad Ad	3.56	168	eP	Pn	18 45 44.0	+0.8
MT03	Universidad Ad	3.56	168	eP	Pn	18 45 42.9	-0.3
MT03				IAML		18 46 45.3	
	comp=Z,956nm,0.5s						
MT08	Bocatoma Ro	3.63	161	eP	Pn	18 45 46.8	+2.5
VA05	Santo Domingo	3.65	183		Pn	18 45 43.9	-0.4
VA05	Santo Domingo	3.65	183	eP	Pn	18 45 44.1	-0.2
MT15	Las Vizcachas	3.66	168	eP	Pn	18 45 46.5	+1.9
AC02	Maricunga	3.74	33		Pn	18 45 46.9	+0.9
AC02	Maricunga	3.74	33	eP	Pn	18 45 47.2	+1.2
MT09	Talagante	3.78	175	eP	Pn	18 45 47.6	+1.4
MT13	San Alfonso	3.85	166	eP	Pn	18 45 49.1	+1.9
MT13	San Alfonso	3.85	166	eS	Sn	18 46 34.7	+3.5
MT01	Popeta	3.85	178	eP	Pn	18 45 48.0	+0.9
AC01	Pan de Azucar	3.91	11	eP	Pn	18 45 47.0	-0.9
LMEL	Las Melosas	3.96	165	eP	Pn	18 45 50.6	+1.8
LMEL	Las Melosas	3.96	165	IAML		18 46 53.5	
	comp=Z,539nm,0.5s						
BO01	Tunca	4.38	177	eP	Pn	18 45 55.5	+1.1
BO02	Sierra Bellavi	4.80	174	eP	Pn	18 46 02.3	+2.0
BO02				IAML		18 47 27.2	
	comp=Z,356nm,0.5s						
CYA	Choya	5.13	74	⇓eP	Pn	18 46 05.3	+0.6
TCA	Tanti	6.01	104	⇓eP	Pn	18 46 16.5	-0.4
H03N1	Juan Fernandez	7.26	240	P	Pn	18 46 33.6	0.0
	baz=112,slow=18,SNR=279						
H03N1				T	T	18 54 05.1	
	baz=65,slow=72,SNR=4185						
H03N2	Juan Fernandez	7.27	240	P	Pn	18 46 33.8	0.0
	baz=112,slow=18,SNR=283						
H03N2				T	T	18 54 06.3	
	baz=65,slow=72,SNR=3247						
H03N3	Juan Fernandez	7.28	240	P	Pn	18 46 33.7	-0.2
	baz=112,slow=18,SNR=231						
H03N3				T	T	18 54 03.2	
	baz=65,slow=72,SNR=2255						
VA04	Juan Fernndez	7.29	238		Pn	18 46 33.5	-0.8
VA04	Juan Fernndez	7.29	238	eP	Pn	18 46 33.7	-0.6
H03S3	Juan Fernandez	7.43	237	P	Pn	18 46 35.2	-0.8
	baz=39,slow=19,SNR=90						
H03S1	Juan Fernandez	7.44	237	P	Pn	18 46 34.8	-1.2
	baz=39,slow=19,SNR=63						
H03S2	Juan Fernandez	7.45	237	P	Pn	18 46 35.0	-1.3
	baz=39,slow=19,SNR=88						
PLCA	Paso Flores	10.73	177	P	Pn	18 47 23.5	+2.1
	comp=Z,1.0nm,0.5s,baz=90,slow=4.0,SNR=2.3						
PLCA				LR	LR	18 51 45.3	
	comp=Z,135nm,18.3s,baz=336,slow=39						
PSAL	Palomas, Salto	11.94	99	eP	Pn	18 47 32.7	-5.2
CPUP	Villa Florida	12.94	77	P	Pn	18 47 50.8	-0.8
	comp=Z,0.6nm,0.4s,baz=269,slow=7.4,SNR=7.2						
CPUP	Villa Florida	12.94	77		Pn	18 47 50.0	-1.6
LPAZ	La Paz	13.98	13	P	Pn	18 48 09.2	+2.8
	comp=Z,4.0nm,0.5s,baz=193,slow=7.3,SNR=16						
LPAZ	La Paz	13.98	13		Pn	18 48 08.3	+2.0
LPAZ	La Paz	13.98	13	eP	Pn	18 48 07.2	+0.8
AMBA	Amambai (Brazi	16.29	68	eP	Pn	18 48 36.5	+0.6
SIV	San Ignacio	16.86	36	P	Pn	18 48 44.8	+1.5
	comp=Z,9.2nm,0.6s,baz=213,slow=11,SNR=33						
PTLB	Pontes e Lacer	18.36	41		P	18 49 01.0	-0.2
PTLB	Pontes e Lacer	18.36	41	eP	P	18 49 01.3	+0.2
SALV	Santo Antonio	20.12	49	eP	P	18 49 19.9	-0.5
ITRB	Iturama	21.64	67	eP	P	18 49 36.0	-0.8
PDRB	Porto dos Gac	22.82	40	eP	P	18 49 49.4	-0.1
BDFB	Brasilia	25.79	62	P	P	18 50 16.4	-0.9
	comp=Z,8.5nm,0.5s,baz=234,slow=8.4,SNR=13						
BDFB				pP	pP	18 50 29.0	-0.5
	comp=Z,4.3nm,0.7s,baz=240,slow=21,SNR=2.2						
	comp=Z,8.5nm,0.5s						
BDFB	Brasilia	25.79	62		P	18 50 16.5	-0.9
BDFB				IAmb	IAmb	18 50 17.1	
	comp=Z,10nm,0.6s						
SNDB	Serra Nova Dou	25.89	50	eP	P	18 50 16.9	-1.1
JANB	Januaria	29.01	65	eP	P	18 50 45.1	-1.0
BOAV	Boa Vista	33.85	20	eP	P	18 51 26.9	-1.7
PMSA	Palmer Station	35.09	175	LR	LR	19 04 21.8	
	comp=Z,94nm,18.8s,baz=334,slow=34						
RUSC	La Rusia	35.73	357	P	P	18 51 44.5	-0.8
NBPS	Pedro II - PI	38.07	54	eP	P	18 52 04.0	-0.8
MDP	Montagnes des	39.27	30	LR	LR	19 10 36.6	
	comp=Z,63nm,20.9s,baz=308,slow=39						
VNA3	Neumayer Olymp	52.87	159	⇑P	P	18 54 00.8	-0.2
	comp=Z,1.5nm,0.7s						
VNA2	Neumayer--Watz	53.50	158	⇑P	P	18 54 05.2	-0.5
	comp=Z,2.6nm,0.5s,baz=278,slow=6.3						
VNA2				⇓pP	pP	18 54 21.0	+2.3
	baz=166,slow=31						
SNAA	Sanae	55.09	159	⇑P	P	18 54 17.0	-0.3
	comp=Z,104nm,0.9s						
SNAA	Sanae	55.09	159	P	P	18 54 17.0	-0.3
	comp=Z,4.2nm,0.8s,baz=283,slow=8.1,SNR=21						
	comp=Z,4.2nm,0.8s						
SNAA	Sanae	55.09	159	P	P	18 54 17.1	-0.3
SNAA				IAmb	IAmb	18 54 17.5	
	comp=Z,4.4nm,0.8s						
TROLL	Troll, Antarti	56.80	159	⇑P	P	18 54 29.3	-0.3
	comp=Z,127nm,0.7s						
TROLL				⇑pP	pP	18 54 41.3	-1.5
QSPA	South Pole Qui	60.22	180	P	P	18 54 53.7	+0.2
	comp=Z,3.4nm,0.9s,baz=165,slow=0.8,SNR=14						
QSPA				pP	pP	18 55 06.2	-0.5
	comp=Z,3.3nm,0.7s,baz=143,slow=2.6,SNR=6.8						
	comp=Z,3.4nm,0.9s						
QSPA	South Pole Qui	60.22	180	P	P	18 54 54.1	+0.6
BRDY	Brady	66.36	334	P	P	18 55 34.1	-0.3
BRDY				IAmb	IAmb	18 55 36.3	
	comp=Z,3.8nm,0.8s						
SAND	Sanderson	66.42	331		P	18 55 35.1	+0.2
SAND				IAmb	IAmb	18 55 37.5	
	comp=Z,8.9nm,1.1s						
TXAR	Lajitas Array	66.55	329	P	P	18 55 37.3	+1.6
	comp=Z,1.0nm,0.5s,baz=155,slow=8.4,SNR=14						
TXAR				pP	pP	18 55 50.0	+1.3
	comp=Z,0.6nm,0.7s,baz=148,slow=10,SNR=5.1						
	comp=Z,1.0nm,0.5s						
TX31	Lajitas Ar. Si	66.55	329		P	18 55 36.2	+0.5
TX31				IAmb	IAmb	18 56 09.9	
	comp=Z,5.4nm,1.5s						
ANMO	Albuquerque	72.57	330	LR	LR	19 23 45.0	
	comp=Z,59nm,18.7s,baz=104,slow=32						
DBIC	Dimbokro	73.41	72	P	P	18 56 17.6	-0.4
	comp=Z,4.0nm,0.6s,baz=243,slow=6.6,SNR=14						
DBIC				pP	pP	18 56 33.0	+1.4
	comp=Z,3.6nm,0.5s,baz=234,slow=7.2,SNR=3.9						
	comp=Z,4.0nm,0.6s						
DBIC	Dimbokro	73.41	72	IAmb	IAmb	18 56 18.4	
	comp=Z,4.3nm,0.6s						
PDAR	Pinedale Array	80.47	333	P	P	18 56 57.9	+0.5
	comp=Z,0.5nm,0.6s,baz=143,slow=8.3,SNR=6.0						
	comp=Z,0.5nm,0.6s						
BOSA	Boshof	81.45	118	P	P	18 57 01.9	-1.1
	comp=Z,2.5nm,0.7s,baz=238,slow=3.7,SNR=5.9						
BOSA				pP	pP	18 57 15.5	-1.2
	comp=Z,5.1nm,0.9s,baz=284,slow=3.6,SNR=3.1						
	comp=Z,2.5nm,0.7s						
TORD	Torodi Ar. Bea	82.34	70	P	P	18 57 07.2	-0.5
	comp=Z,4.8nm,0.8s,baz=292,slow=3.9,SNR=23						
	comp=Z,4.8nm,0.8s						
TORD	Torodi Ar. Bea	82.34	70	IAmb	IAmb	18 57 08.1	
	comp=Z,5.9nm,1.1s						
ASAR	Alice Springs	121.36	207	PKP	PKPdf	19 03 37.7	-1.4
	comp=Z,0.6nm,0.7s,baz=144,slow=1.8,SNR=7.7						
ASAR				pPKP	pPKPdf	19 03 51.5	-1.8
	comp=Z,0.7nm,1.1s,baz=122,slow=2.1,SNR=3.8						
WRA	Warramunga Arr	124.50	210	PKP	PKPdf	19 03 44.2	-0.9
	comp=Z,1.1nm,0.5s,baz=151,slow=2.0,SNR=12						
WRA				pPKP	pPKPdf	19 03 58.4	-0.9
	comp=Z,0.4nm,0.5s,baz=156,slow=1.9,SNR=1.9						
KBZ	Khabaz	126.97	56	PKP	PKPdf	19 03 48.5	-0.4
	comp=Z,1.1nm,0.8s,baz=155,slow=4.0,SNR=3.9						
BVAR	Borovoye Array	143.92	39	PKP	PKPbc	19 04 19.1	+1.0
	comp=Z,0.9nm,0.6s,baz=262,slow=1.0,SNR=4.9						
SHAA	Shahritus	145.73	66		PKPdf	19 04 23.1	-0.8
KK31	Karatay Array	147.01	56		PKPdf	19 04 26.9	+1.1
GAR	Garm	147.39	64		PKPdf	19 04 27.2	+0.5
KURBB	Kurchatov Arra	149.51	39	PKPbc	PKPbc	19 04 34.6	+0.4
	comp=Z,4.2nm,0.5s,baz=304,slow=3.1,SNR=56						
KURK	Kurchatov	149.51	39		PKPbc	19 04 34.0	-0.2
NIL	Nilore	149.84	74		PKPbc	19 04 35.1	-0.5
AAK	Ala-Archa	149.97	56		PKPbc	19 04 36.5	+0.7
ZAA0	Zalesovo Array	150.52	29		PKPbc	19 04 36.2	-0.3
ZALV	Zalesovo Beam	150.52	29	PKPbc	PKPbc	19 04 37.1	+0.6
	comp=Z,17nm,0.7s,baz=300,slow=3.3,SNR=70						
ZALV				pPKPbc	pPKPbc	19 04 51.1	+0.4
	comp=Z,3.6nm,0.5s,baz=316,slow=2.9,SNR=6.4						
ZALV	Zalesovo Beam	150.52	29		PKPbc	19 04 36.2	-0.3
TARG	Taragay, Kyrgy	152.58	56	PKPbc	PKPbc	19 04 41.8	-0.4
MKAR	Makanchi Array	153.61	43	PKP	PKPdf	19 04 34.2	-1.7
	comp=Z,0.4nm,0.8s,baz=284,slow=9.9,SNR=3.5						
MKAR				PKPbc	PKPbc	19 04 43.5	-0.3
	comp=Z,1.3nm,0.7s,baz=309,slow=2.8,SNR=8.8						
MKAR				pPKPbc	PKPab	19 04 57.2	+0.8
	comp=Z,1.8nm,0.8s,baz=287,slow=3.7,SNR=6.9						
MKAR	Makanchi Array	153.61	43	PKPbc	PKPbc	19 04 43.2	-0.6

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*IDC **18** 18:45:16.9±0.7,2°.07S×139°.24E,h0^{km},mb4.0/10, mbtmp4.1/12,ML4.2/2,MS3.1/7,Error ellipse: s-maj=18.5km s-min=12.0km az=30.0*

*DJA **18** 18:45:19.1±0.6,2°S±8°×13°9E±°,h10^{km},M4.7/7,mB5.5/1, mb4.9/3,MLv4.6/7,Mw(mB)5.0/1*

*NEIC **18** 18:45:22.6±1.8,2°.11S±0°.06×139°.24E±0°.06,h36^{km}±6^{km}, mb4.4/34,Error ellipse: s-maj=9.3km s-min=8.8km az=58.0*

ISC 18 18:45:21.2±0.5**,2°.08S**±0°.05×**139°.17E**±0°.05**,h29^{km},n70,** σ1^{s}**34**/63**,mb4.4**/22**,MS2.9**/5**,Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.47	280	P	Pb	18 45 30.3	-0.8
GENI	Genyem	1.12	117	P	Pn	18 45 40.8	-0.2
GENI				S	Sn	18 45 56.7	+1.3
JAY	Jayapura	1.59	106	Pg	Pn	18 45 46.6	-0.9
	24nm,0.3s,baz=250,slow=7.4,SNR=176						
JAY				Lg	Lg	18 46 04.5	
	42nm,0.3s,baz=159,slow=15,SNR=6.8						
JAY				LR	LR	18 46 24.6	
	comp=Z,809nm,19.6s,baz=342,slow=44						
JAY	Jayapura	1.59	106	P	Pn	18 45 46.3	-1.2
JAY				S	Sn	18 46 07.6	+0.4
WAMI	Wamena	1.86	194	P	Pb	18 45 57.2	+2.7
SRPI	Serui, Papua	2.94	274	P	Pn	18 46 06.9	+0.9
BAKI	Biak	3.19	286	P	Pn	18 46 11.0	+1.6
FAKI	Fak Fak	6.97	263	Pn	Pn	18 47 02.7	+1.2
FAKI				Sn	Sn	18 48 20.3	+0.6
FAKI	Fak Fak	6.97	263	P	Pn	18 47 03.0	+1.6
	0.2nm69nm,1.2s						
SAUI	Saumlaki	9.79	233		Pn	18 47 41.0	+0.8
SAUI	Saumlaki	9.79	233	P	Pn	18 47 43.5	+3.3
PMG	Port Moresby	10.78	133	LR	LR	18 53 17.6	
	comp=Z,223nm,19.8s,baz=348,slow=45						
MTN	Manton Dam	13.34	216		Pn	18 48 28.5	-0.2
LUWI	Luwuk	16.43	273		Pn	18 49 09.5	-0.3
LUWI				IAmb	IAmb	18 49 43.1	
	comp=Z,35nm,1.0s						
SOEI	Soe	16.66	242		Pn	18 49 12.7	-0.2
SOEI				IAmb	IAmb	18 49 32.8	
	comp=Z,44nm,0.9s						
BATI	Baumata	17.40	242	Pn	Pn	18 49 22.6	+0.5
	comp=Z,0.9nm,0.3s,baz=111,slow=3.4,SNR=4.8						
	comp=Z,28nm,0.9s						
WB0	Warramunga Arr	18.19	195	P	Pn	18 49 31.2	-0.6
WR8	Warramunga Arr	18.35	194		P	18 49 33.7	+0.1
WRAB	Tennant Creek	18.36	195	P	P	18 49 32.6	-1.1
WRAB				IAmb	IAmb	18 49 43.6	
	comp=Z,13nm,0.7s						
WRA	Warramunga Arr	18.38	195	P	P	18 49 32.9	-1.0
	comp=Z,0.8nm,0.3s,baz=18,slow=12,SNR=20						
WRA				S	Sn	18 52 57.3	-1.3
	comp=Z,1.3nm,0.7s,baz=5.6,slow=23,SNR=3.5						
	comp=Z,5.7nm,0.7s						
WRA	Warramunga Arr	18.38	195	P	P	18 49 34.4	+0.5
TOLI2	Tolitoli	18.66	280	P	P	18 49 38.1	+1.1
TOLI2				IAmb	IAmb	18 49 43.0	
	comp=Z,13nm,0.9s						
KAPI	Kappang	19.60	261	LR	LR	18 59 17.0	
	comp=Z,33nm,20.1s,baz=82,slow=43						
FITZ	Fitzroy Crossi	20.73	219	P	P	18 49 59.5	-0.1
	comp=Z,5.0nm,1.0s,baz=42,slow=8.6,SNR=10						
FITZ				S	S	18 53 43.4	-6.4
	comp=Z,21nm,0.8s,baz=165,slow=10,SNR=12						
FITZ				LR	LR	18 58 53.6	
	comp=Z,47nm,19.0s,baz=24,slow=39						
	comp=Z,5.0nm,1.0s						
FITZ	Fitzroy Crossi	20.73	219	IAmb	IAmb	18 50 08.4	
	comp=Z,5.0nm,1.4s						
FITZ					S	18 53 47.0	-2.9
AS31	Alice Springs	22.06	193		P	18 50 13.5	-0.4
ASAR	Alice Springs	22.06	193	P	P	18 50 13.7	-0.3
	comp=Z,4.4nm,0.5s,baz=21,slow=9.9,SNR=39						
ASAR				S	S	18 54 15.2	-0.8
	comp=Z,1.7nm,1.0s,baz=16,slow=24,SNR=5.1						
	comp=Z,4.4nm,0.5s						
ASAR	Alice Springs	22.06	193		P	18 50 12.5	-1.5
KKM	Kota Kinabalu	24.30	290	P	P	18 50 37.0	+0.4
EIDS	Eidsvold	25.85	155	P	P	18 50 50.3	-0.1
EIDS				IAmb	IAmb	18 50 55.2	
	comp=Z,13nm,1.1s						
MBWA	Marble Bar	26.81	224	P	P	18 50 59.4	+0.2
MBWA				IAmb	IAmb	18 51 30.7	
	comp=Z,15nm,1.1s						
PSA00	Pilbara Seismi	27.01	223	P	P	18 51 00.1	-0.9
PSA00	Pilbara Seismi	27.01	223	P	P	18 51 00.6	-0.4
PSA00				IAmb	IAmb	18 51 09.9	
	comp=Z,14nm,1.0s						
JCJ	Chichijima	29.15	6	LR	LR	19 01 23.9	
	comp=Z,28nm,20.5s,baz=279,slow=33						
STKA	Stephens Creek	29.73	176	P	P	18 51 25.1	0.0
	comp=Z,1.8nm,0.8s,baz=20,slow=13,SNR=4.3						
	comp=Z,1.8nm,0.8s						
STKA	Stephens Creek	29.73	176	IAmb	IAmb	18 51 33.6	

	comp=Z,40nm,1.4s						
FORT	Forrest	30.43	199	P	P	18 51 32.1	+0.9
BBOO	Buckleboo	30.71	185	P	P	18 51 33.9	+0.2
BBOO				IAmb	IAmb	18 51 37.0	
	comp=Z,5.7nm,0.8s						
H11S3	WAKE ISLAND Hy	33.93	52	T	T	19 27 40.2	
	baz=235,slow=75,SNR=54						
H11S2	WAKE ISLAND Hy	33.94	52	T	T	19 27 44.5	
	baz=235,slow=75,SNR=38						
H11S1	WAKE ISLAND Hy	33.94	52	T	T	19 27 41.5	
	baz=235,slow=75,SNR=48						
MORW	Morawa	34.72	217	P	P	18 52 08.9	0.0
H11N1	WAKE ISLAND Hy	34.78	50	T	T	19 28 48.0	
	baz=233,slow=75,SNR=5.7						
H11N2	WAKE ISLAND Hy	34.79	50	T	T	19 28 49.1	
	baz=233,slow=75,SNR=7.6						
H11N3	WAKE ISLAND Hy	34.79	50	T	T	19 28 49.5	
	baz=233,slow=75,SNR=5.3						
JHJ	Hachijo jima 2	35.01	1	LR	LR	19 05 11.4	
	comp=Z,36nm,19.1s,baz=340,slow=34						
NWAO	Narrogin (SRO)	36.96	212		P	18 52 28.3	+0.3
GSI	Gunungsitoli	41.72	274	P	P	18 53 07.2	-0.9
GSI				IAmb	IAmb	18 53 08.5	
	comp=Z,9.4nm,0.7s						
CM31	Chiang Mai Arr	44.53	299	P	P	18 53 30.4	-0.3
CM31				IAmb	IAmb	18 53 31.8	
	comp=Z,4.4nm,0.9s						
CMAR	Chiang Mai Arr	44.53	299	P	P	18 53 31.4	+0.6
	comp=Z,1.6nm,0.6s,baz=118,slow=6.4,SNR=20						
CMAR				LR	LR	19 12 49.1	
	comp=Z,7.1nm,20.1s,baz=150,slow=37						
	comp=Z,1.6nm,0.6s						
CMAR	Chiang Mai Arr	44.53	299	P	P	18 53 29.5	-1.2
CHTO	Chiang Mai	44.67	300	P	P	18 53 32.1	+0.3
CHTO				IAmb	IAmb	18 53 40.0	
	comp=Z,3.3nm,1.1s						
SONM	Songino Array	57.35	334	P	P	18 55 08.1	+1.2
	comp=Z,0.3nm,0.4s,baz=147,slow=8.1,SNR=2.2						
	comp=Z,0.3nm,0.4s						
YAK	Yakutsk	64.34	355		P	18 55 55.1	+1.1
AIS	Amsterdam Isla	66.52	229	P	P	18 56 08.8	+0.2
MKAR	Makanchi Array	69.57	322	P	P	18 56 28.5	+0.9
	comp=Z,1.1nm,0.6s,baz=96,slow=8.6,SNR=12						
	comp=Z,1.1nm,0.6s						
MAKZ	Makanchi	69.77	322	P	P	18 56 29.7	+0.9
MAKZ				IAmb	IAmb	18 56 35.4	
	comp=Z,6.8nm,1.1s						
KDJ	Kajisay	71.03	316	P	P	18 56 36.9	+0.1
KDJ				IAmb	IAmb	18 56 41.4	
	comp=Z,3.3nm,0.9s						
ZALV	Zalesovo Beam	71.62	330	P	P	18 56 40.2	+0.3
	comp=Z,0.5nm,0.5s,baz=117,slow=8.3,SNR=2.1						
	comp=Z,0.5nm,0.5s						
KURK	Kurchatov	73.47	325	P	P	18 56 51.6	+0.6
KURK	Kurchatov	73.47	325	IAmb	IAmb	18 56 52.3	
	comp=Z,3.3nm,0.8s						
KURBB	Kurchatov Arra	73.48	325	P	P	18 56 51.6	+0.5
	comp=Z,0.6nm,0.2s,baz=112,slow=5.6,SNR=5.1						
	comp=Z,0.6nm,0.2s						
GAR	Garm	75.03	311	P	P	18 57 00.5	0.0
GAR				IAmb	IAmb	18 57 11.5	
	comp=Z,5.4nm,1.0s						
CHGR	Chuyangaron	75.81	311	P	P	18 57 04.7	-0.3
BVAR	Borovoye Array	79.06	325	P	P	18 57 23.4	+0.7
	comp=Z,2.6nm,0.7s,baz=113,slow=8.7,SNR=15						
	comp=Z,2.6nm,0.7s						
BORK	Borovoye	79.11	325	P	P	18 57 23.5	+0.6
BORK				IAmb	IAmb	18 57 24.5	
	comp=Z,3.2nm,0.8s						
AB31	Akbulak array	84.54	320	P	P	18 57 50.7	-0.9
AB31				IAmb	IAmb	18 57 53.1	
	comp=Z,4.1nm,1.2s						
ILAR	Eielson Array	85.07	24	P	P	18 57 52.3	-1.7
	comp=Z,0.5nm,0.8s,baz=258,slow=7.5,SNR=4.6						
	comp=Z,0.5nm,0.8s						
QSPA	South Pole Qui	87.87	180	LR	LR	19 38 17.0	
	comp=Z,36nm,19.0s,baz=80,slow=36						
LPAZ	La Paz	147.44	125	PKPbc	PKPdf	19 05 03.5	+1.8
	comp=Z,3.9nm,0.3s,baz=305,slow=2.9,SNR=3.9						

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*IDC **18** 18:48:50.9±8.8, 3°.89N×123°.41E, h516^{km}±115^{km}, mb3.0/6, mbtmp4.0/7, Error ellipse: s-maj=137.2km s-min=20.5km az=59.0*

*NEIC **18** 18:48:50.7±1.1, 4°.0N±0°.1×123°.6E±0°.2, h512^{km}±12^{km}, mb4.2/13, Error ellipse: s-maj=35.9km s-min=11.5km az=61.0*

ISC 18 18:48:50.1±1.0**, 4°.0N**±0°.1×**123°.5E**±0°.2**, h500**^{km}**, n26, σ1^{s}10**/24**, mb4.0**/11**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	5.01	129	P	P	18 50 17.0	-0.2
LUWI	Luwuk	5.01	188	P	P	18 50 17.9	+0.7
KKM	Kota Kinabalu	7.53	286	P	P	18 50 43.6	+1.8
FAKI	Fak Fak	11.11	128	P	P	18 51 21.9	+2.5
SOEI	Soe	13.64	177	P	P	18 51 46.5	+0.2
BATI	Baumata	14.06	179	P	P	18 51 51.1	+0.5
	8.6nm,0.4s,baz=339,slow=3.7,SNR=5.1						
MTN	Manton Dam	18.34	156	P	P	18 52 33.1	-0.6
FITZ	Fitzroy Crossi	22.01	175	P	P	18 53 06.2	-0.8
	4.1nm,0.9s,baz=4.4,slow=9.8,SNR=1.7						
	4.1nm,0.9s						
FITZ	Fitzroy Crossi	22.01	175	IAmb	IAmb	18 53 48.8	
	comp=Z,5.3nm,0.9s						
WB0	Warramunga Arr	25.90	156	P	P	18 53 40.0	-1.6
WB0				IAmb	IAmb	18 53 56.5	
	comp=Z,6.1nm,0.8s						
WRA	Warramunga Arr	26.03	156	P	P	18 53 42.0	-0.9
	comp=Z,0.7nm,0.3s,baz=334,slow=9.7,SNR=8.6						
	comp=Z,0.7nm,0.3s						
AS31	Alice Springs	29.27	160	P	P	18 54 10.8	-0.5
ASAR	Alice Springs	29.27	160	P	P	18 54 10.8	-0.5
	comp=Z,0.5nm,0.3s,baz=337,slow=7.8,SNR=9.2						
	comp=Z,0.5nm,0.3s						
ASAR	Alice Springs	29.27	160	P	P	18 54 09.9	-1.4
MORW	Morawa	33.60	192	P	P	18 54 47.1	-1.2
MORW				IAmb	IAmb	18 55 09.9	
	comp=Z,28nm,1.5s						
FORT	Forrest	34.81	173	P	P	18 54 57.8	-0.7
FORT				IAmb	IAmb	18 55 24.8	
	comp=Z,6.5nm,1.0s						
NWAO	Narrogin (SRO)	37.15	189	P	P	18 55 17.4	-0.5
BBOO	Buckleboo	38.46	163	P	P	18 55 28.6	+0.1
BBOO				IAmb	IAmb	18 56 11.1	
	comp=Z,5.8nm,1.1s						
STKA	Stephens Creek	39.58	155	P	P	18 55 37.9	+0.2
	comp=Z,0.9nm,0.4s,baz=350,slow=8.6,SNR=4.6						
	comp=Z,0.9nm,0.4s						
STKA	Stephens Creek	39.58	155	IAmb	IAmb	18 55 38.6	
	comp=Z,15nm,1.0s						
MKAR	Makanchi Array	55.56	327	P	P	18 57 37.8	+0.1
	comp=Z,0.6nm,0.3s,baz=120,slow=8.3,SNR=10.0						
	comp=Z,0.6nm,0.3s						
MKAR	Makanchi Array	55.56	327	P	P	18 57 37.0	-0.7
MAKZ	Makanchi	55.74	327	P	P	18 57 38.3	-0.6
MAKZ				IAmb	IAmb	18 57 48.0	
	comp=Z,6.3nm,1.2s						
KDJ	Kajisay	56.05	320	P	P	18 57 41.1	-0.3
KURBB	Kurchatov Arra	59.83	329	P	P	18 58 05.1	-1.6
	comp=Z,0.3nm,0.5s,baz=124,slow=6.5,SNR=1.2						
	comp=Z,0.3nm,0.5s						
KURK	Kurchatov	59.84	329	P	P	18 58 05.1	-1.6

IDC 18 18:52:00.5±98.0**, 23°.49S**×**176°.18W, h0**^{km}**, mb3.7**/3**, mbtmp3.7**/3**, Error ellipse: s-maj=1819.0km s-min=199.7km az=88.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	38.12	248	P	P	18 59 21.2	-0.2
	2.0nm,0.9s,baz=66,slow=10.0,SNR=3.0						
	2.0nm,0.9s						
ASAR	Alice Springs	45.55	259	P	P	19 00 22.4	0.0
	0.3nm,0.5s,baz=102,slow=7.0,SNR=5.3						
	0.3nm,0.5s						
WRA	Warramunga Arr	45.93	264	P	P	19 00 25.1	-0.2
	0.7nm,0.5s,baz=102,slow=7.9,SNR=22						
	0.7nm,0.5s						

SJA 18 19:00:02.0±0.7**, 38°.13S**×**68°.61W, h3**^{km}**, ML3.6, MW3.7, Southern Argentina**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CANA	Caviahue	1.95	276	*e*P	Pn	19 00 36.9	+0.7
CANA				*i* S	Sb	19 01 02.2	-0.8
EDS3	Malargue	2.44	345	*e*P	Pn	19 00 44.1	+1.2
EDS3				*i* S	Sg	19 01 20.5	+0.2
BI02	San Fabin de	2.58	304	*e*P	Pn	19 00 45.3	+0.6
BI02				*e*S	Sb	19 01 21.5	+0.5
BI02				IAML		19 01 28.9	
	comp=Z,226nm,0.5s						
GO06	Curarrehue	2.67	236	*i* P	Pb	19 00 48.6	-1.8
GO06				*i* S	Sb	19 01 21.4	-2.1
GO06				IAML		19 01 29.0	
	comp=Z,127nm,0.5s						
PLCA	Paso Flores	3.00	209	*e*P	Pn	19 00 50.0	-0.6
PLCA				*e*S	Sb	19 01 32.4	-0.8
PLCA				IAML		19 01 45.1	
	comp=Z,140nm,0.6s						
PLCA				IAML		19 01 45.2	
	comp=Z,287nm,0.6s						
ML02	Panimavida	3.26	316	*e*P	Pg	19 01 05.7	+1.1
ML02				*i* S	Sg	19 01 44.7	-2.1
ML02				IAML		19 01 55.3	
	comp=Z,98nm,0.4s						
LR03	Panguipulli	3.28	242	*i* P	Pg	19 01 03.8	-1.0
LR03				*i* S	Sb	19 01 43.6	+2.6
LR03				IAML		19 01 52.5	
	comp=N,291nm,0.8s						
RFA	San Rafael	3.35	2	*e*P	Pn	19 00 56.2	+0.9
RFA				*e*S	Sg	19 01 49.5	-0.2
RFA				IAML		19 02 03.6	
	comp=Z,298nm,0.6s						
RFA				IAML		19 02 03.6	
	comp=Z,171nm,0.6s						
BO02	Sierra Bellavi	3.76	332	*e*P	Pb	19 01 10.4	+1.4
BO02				IAML		19 02 10.2	
	comp=Z,74nm,0.5s						
GO05	Hualane	4.10	318	*i* P	Pb	19 01 17.6	+2.7
GO05				*e*S	Sb	19 02 09.1	+4.2
GO05				IAML		19 02 20.4	
	comp=Z,35nm,0.6s						
LR04	Corral	4.14	244	*i* S	Sn	19 01 58.3	+3.4

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*SOME **18** 19:08:17.8, 40°.02N×77°.95E, h5^{km}*

*NNC **18** 19:08:18.9±1.6, 40°.04N×78°.02E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=10.9km s-min=10.1km az=9.0*

*KRNET **18** 19:08:19.1±0.1, 40°.02N×77°.86E, mb3.2*

ISC 18 19:08:20.4±2.3**, 39°.9N**±0°.1×**77°.98E**±0°.06**, h10**^{km}**, n40, σ1^{s}54**/60**, 11C-9D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	Taragay, Kyrgy	1.83	356	⇑*e*P	Pn	19 08 50.9	-1.5
TARG				⇑*i*S	Sn	19 09 14.5	-1.3
JNKS	Jany-Kuch	2.12	304	⇑*e*P	Pn	19 08 56.0	-0.2
JNKS				⇑*i*S	Sn	19 09 22.5	-0.2
KDJ	Kajisay	2.31	345	⇓*e*P	Pn	19 08 58.7	0.0
KDJ				⇓*i*S	Sn	19 09 27.3	0.0
PRZ	Przheval'sk	2.60	7	⇑*e*P	Pn	19 09 03.1	+0.4
PRZ				⇑*e*S	Sn	19 09 35.3	+0.8
ULHL	Ulahol	2.69	331	⇑*e*P	Pn	19 09 03.6	-0.3
ULHL				⇑*i*S	Sn	19 09 36.2	-0.4
BOOM	Boomskoye usch	3.01	330	⇑*i*P	Pn	19 09 08.4	0.0
BOOM				⇑*i*S	Sn	19 09 44.1	-0.5
SATY	Saty	3.17	6	Pg	Pb	19 09 15.5	-1.5
	5.3nm,0.2s						
SATY				Lg	Lg	19 09 57.5	
	18nm,0.3s						
TNSS	Tian-Shan	3.23	346	Pg	Pb	19 09 16.5	-1.6
	5.9nm,0.3s						
TNSS				Lg	Lg	19 09 58.6	
	9.9nm,0.6s						
TNSS	Tian-Shan	3.23	346	*e*P	Pb	19 09 16.5	-1.6
	5.9nm,0.3s						
TNSS				*e*S	Sb	19 09 58.8	+1.2
	13nm,0.6s						
IZV	Izvestkoviy	3.30	342	Pg	Pb	19 09 16.9	-2.2
	8.9nm,0.3s						
IZV				Lg	Lg	19 09 59.7	
	29nm,0.6s						
IZV	Izvestkoviy	3.30	342	*e*P	Pb	19 09 16.9	-2.2
	8.9nm,0.2s						
IZV				*e*S	Sb	19 09 59.7	+0.3
	41nm,0.5s						
SALK	Salom-Alik	3.33	288	⇓*e*P	Pn	19 09 13.4	+0.7
SALK				⇓*e*S	Sn	19 09 52.1	-0.2
MDOK	Medeo	3.33	348	Pg	Pb	19 09 18.3	-1.5
	13nm,0.3s						
MDOK				Lg	Lg	19 10 02.0	
	16nm,0.5s						
UZB	Uzynbulak	3.34	13	Pg	Pb	19 09 18.0	-1.8
	4.6nm,0.3s						
UZB				Lg	Lg	19 10 01.6	
	12nm,0.6s						
UZB	Uzynbulak	3.34	13	*e*P	Pb	19 09 18.0	-1.8
	1.5nm,0.1s						
UZB				*e*S	Sb	19 10 01.6	+1.1
	12nm,0.9s						
KOTS	Kotyrbulak	3.39	349	Pg	Pb	19 09 18.9	-1.9
	4.8nm,0.2s						
KOTS				Lg	Lg	19 10 03.3	
	31nm,0.4s						
KOTS	Kotyrbulak	3.39	349	*e*P	Pb	19 09 18.9	-1.9
	4.8nm,0.2s						
KOTS				*e*S	Sb	19 10 03.3	+1.2
	31nm,0.4s						
ARLS	Aral	3.39	306	⇓*e*P	Pn	19 09 13.4	-0.2
ARLS				⇓*e*S	Sn	19 09 53.2	-0.8
KNDC	Almaty	3.40	347	⇓Pg	Pn	19 09 14.3	+0.7
	15nm,0.6s						
KNDC				⇓Lg	Lg	19 10 02.2	
	24nm,0.6s						
MTBS	Maitube	3.43	341	Pg	Pb	19 09 19.9	-1.4
	9.5nm,0.4s						
MTBS				Lg	Lg	19 10 04.6	
	19nm,0.4s						
MTBS	Maitube	3.43	341	*e*P	Pb	19 09 19.9	-1.4
	9.5nm,0.4s						
MTBS				*e*S	Sb	19 10 04.6	+1.5
	19nm,0.4s						
SHLS	Shalkode	3.44	18	Pg	Pb	19 09 21.4	-0.1
	8.0nm,0.4s						
SHLS				Lg	Lg	19 10 07.2	
	24nm,0.5s						
SHLS	Shalkode	3.44	18	*e*P	Pb	19 09 21.4	-0.1
	8.0nm,0.4s						
SHLS				*e*S	Sb	19 10 07.2	+3.8
	24nm,0.5s						
KST	Kastek	3.49	335	Pg	Pb	19 09 20.9	-1.4
	3.0nm,0.2s						
KST				Lg	Lg	19 10 06.6	
	12nm,0.4s						
KST	Kastek	3.49	335	*e*P	Pb	19 09 20.9	-1.4
	3.0nm,0.2s						
KST				*e*S	Sb	19 10 06.6	+1.8
	12nm,0.4s						
KURS	Kuram	3.59	2	Pg	Pb	19 09 22.2	-1.8
	6.4nm,0.4s						
KURS				Lg	Lg	19 10 08.8	
	8.4nm,0.6s						
KPKS	Kokpek	3.60	8	Pg	Pb	19 09 22.6	-1.6
	0.8nm,0.2s						
KPKS				Lg	Lg	19 10 09.8	
	7.1nm,0.3s						
KPKS	Kokpek	3.60	8	*e*P	Pb	19 09 22.6	-1.6
	0.2nm,0.1s						
KPKS				*e*S	Sb	19 10 09.5	+1.4
	19nm,0.2s						
PDGK	Podgornoye	3.61	18	⇑Pg	Pb	19 09 21.6	-2.8
	2.9nm,0.5s						
PDGK				⇓Lg	Lg	19 10 05.0	
	12nm,0.7s						
DGS	Degeres	3.73	334	Pg	Pb	19 09 24.9	-1.5
	3.7nm,0.4s						
DGS				Lg	Lg	19 10 13.2	
	9.5nm,0.4s						
KTBS	Karatobe	3.93	346	Pg	Pb	19 09 28.7	-1.1
	6.1nm,0.2s						
KTBS				Lg	Lg	19 10 19.9	
	0.2nm,0.1s						
CHKK	Chushkaly	4.02	350	Pg	Pb	19 09 29.4	-2.0
	6.5nm,0.3s						
CHKK				Lg	Lg	19 10 21.6	
	16nm,0.2s						
CHKK	Chushkaly	4.02	350	*e*P	Pb	19 09 29.7	-1.6
	0.4nm,0.0s						
CHKK				*e*S	Sb	19 10 21.6	+1.6
	16nm,0.2s						
KRBS	Karabastau	4.17	336	Pg	Pb	19 09 32.3	-1.6
	3.8nm,0.2s						
KRBS				Lg	Lg	19 10 26.1	
	3.4nm,0.5s						
KUU	Kurty	4.17	343	*e*P	Pb	19 09 32.4	-1.6
	1.1nm,0.1s						
KUU				*e*S	Sb	19 10 25.9	+1.5
	6.1nm,0.0s						
BLB	Baldybastay	4.21	5	Pg	Pb	19 09 33.2	-1.5
	2.7nm,0.2s						
BLB				Lg	Lg	19 10 27.9	
	9.5nm,0.4s						
ARXS	Arharly	4.31	359	Pg	Pb	19 09 34.9	-1.5
	2.0nm,0.4s						
ARXS				Lg	Lg	19 10 30.2	
	9.9nm,0.7s						
ARXS	Arharly	4.31	359	*e*P	Pb	19 09 34.9	-1.5
	0.8nm,0.2s						
ARXS				*e*S	Sb	19 10 30.6	+2.2
	11nm,0.4s						
KNOS	Konyrlen	4.54	11	Pg	Pb	19 09 40.7	+0.4
	3.4nm,0.5s						
KNOS				Lg	Lg	19 10 40.7	
	5.2nm,0.5s						
MRKS	Merke	4.57	310	*e*P	Pb	19 09 40.1	-0.7
	0.2nm,0.2s						
MRKS				*e*S	Sb	19 10 39.5	+3.6
	6.7nm,0.5s						

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*NIED **18** 19:15:33.5, 40°.81N×139°.88E, h13^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.84; M$_{θθ}$-0.55; M$_{φφ}$-0.30; M$_{rθ}$-0.72; M$_{θφ}$1.63; M$_{φr}$-0.53; Fault plane solution: M$_{0}$1.99000×10^{14} NP1: φ$_{s}$171.00000°, δ61.00000°, λ152.00000°. NP2: φ$_{s}$275.00000°, δ66.00000°, λ33.00000°.*

*JMA **18** 19:15:33.5±0.1, 40°.8N±0°.2×139°.9E±0°.3, h13^{km}, MV3.7/38, W OFF AOMORI PREF*

JMA Felt I J1 at W OFF AOMORI PREF .

*IDC **18** 19:15:37.0±2.2, 40°.80N×139°.65E, h43^{km}±22^{km}, mb3.5/2, mbtmp3.4/5, ML2.9/3, MS2.6/1, Error ellipse: s-maj=44.0km s-min=17.2km az=100.0*

ISC 18 19:15:32.7±1.4**, 40°.82N**±0°.03×**139°.85E**±0°.06**, h11**^{km}±11^{km}**, n15, σ1^{s}04**/23**, 9D, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIW	Iwasaki	0.25	152	⇓P	Pb	19 15 38.6	-0.7
JIW				⇓S	Sg	19 15 42.1	+0.8
JHHS	Hirosakihyakuz	0.42	113	*i* P	Pb	19 15 41.6	-0.6
JHHS				S	Sg	19 15 47.6	+1.1
JSI2	Shiura 2	0.49	60	⇓P	Pb	19 15 42.6	-0.7
JSI2				⇓*e*S	Sg	19 15 49.0	+0.3
JNTW	Noshirotokiwa	0.59	156	*i* P	Pb	19 15 44.8	-0.3
JNTW				S	Sb	19 15 53.4	-0.1
JOMM	Oshimamatsumae	0.72	10	*i* P	Pb	19 15 47.1	-0.2
JOMM				S	Sb	19 15 56.6	-0.6
JSR	Shiriuchi	0.83	31	⇓*i*P	Pb	19 15 48.9	-0.3
JSR				⇓S	Sb	19 16 00.2	-0.2
JAH	Hinai	0.87	136	*i* P	Pg	19 15 49.3	-0.1
JAH				S	Sg	19 16 00.4	-0.3
JTM	Tenmabayashi	0.93	91	⇓P	Pg	19 15 49.8	-0.7
JTM				⇓S	Sg	19 16 01.2	-1.4
JOT	Ohata	1.07	58	⇓*i*P	Pg	19 15 52.6	-0.6
ASAJ	Asahikawa	3.88	31	P	Pn	19 16 35.1	+2.8
	0.8nm,0.3s,baz=211,slow=18,SNR=7.4						
	1.5nm,0.3s						
MJAR	Matsushiro Arr	4.46	197	P	Pn	19 16 42.5	+2.2
	0.1nm,0.3s,baz=9.3,slow=15,SNR=6.1						
MJAR				S	Sn	19 17 31.7	-0.5
	0.9nm,0.4s,baz=174,slow=10.0,SNR=5.3						
	0.7nm,0.3s						
USRK	Ussuriysk Ar.	6.72	303	P	Pn	19 17 11.2	0.0
	0.8nm,0.3s,baz=108,slow=15,SNR=8.4						
	0.5nm,0.3s						
JCJ	Chichijima	13.82	171	LR	LR	19 23 59.3	
	comp=Z,23nm,18.7s,baz=48,slow=36						
WRA	Warramunga Arr	60.66	186	P	P	19 25 43.1	-0.8
	1.2nm,0.5s,baz=5.8,slow=6.8,SNR=12						
	1.2nm,0.5s						
ASAR	Alice Springs	64.39	186	P	P	19 26 08.6	-0.1
	0.3nm,0.7s,baz=20,slow=11,SNR=5.8						
	0.3nm,0.7s						

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*IDC **18** 19:37:39.3±1.5, 31°.29N×104°.09E, h0^{km}, mb3.5/4, mbtmp3.5/6, ML3.2/2, MS3.0/1, Error ellipse: s-maj=44.7km s-min=23.2km az=58.0*

ISC 18 19:37:41.3±1.6**, 31°.4N**±0°.2×**104°.1E**±0°.2**, h14**^{km}**, n7, σ1^{s}49**/6**, mb3.5**/3**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LZDM	Lanzhou Array	4.60	356	Pn	Pn	19 38 49.3	-1.5
	baz=190,slow=16						
	2.2nm,0.3s						
SONM	Songino Array	16.55	5	Pn	Pn	19 41 34.2	+1.1
	baz=179,slow=11,SNR=4.7						
	0.8nm,0.9s						
KSRS	Korea Array	20.56	66	P	P	19 42 19.8	+0.2
	1.5nm,0.8s,baz=262,slow=11,SNR=3.5						
	1.5nm,0.8s						
MKAR	Makanchi Array	22.78	319	P	P	19 42 43.5	0.0
	1.0nm,0.8s,baz=129,slow=11,SNR=5.7						
	1.0nm,0.8s						
ZALV	Zalesovo Beam	26.49	334	P	P	19 43 19.8	+1.8
	0.7nm,0.6s,baz=139,slow=11,SNR=4.0						
	0.7nm,0.6s						
ASAJ	Asahikawa	32.71	56	LR	LR	19 57 53.5	
	comp=Z,24nm,19.4s,baz=354,slow=37						
WRA	Warramunga Arr	58.69	146	P	P	19 47 38.2	-0.4
	0.5nm,0.6s,baz=339,slow=6.9,SNR=6.7						
	0.5nm,0.6s						

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*IDC **18** 19:42:51.4±1.7, 3°.38S×129°.03E, h0^{km}, mb3.8/4, mbtmp3.7/5, ML3.4/1, Error ellipse: s-maj=95.1km s-min=23.6km az=65.0*

*DJA **18** 19:42:54.1±1.9, 3°S±5°×13°0E±°, h18^{km}±18^{km}, M3.5/11, MLv3.5/11*

ISC 18 19:42:49.5±0.7**, 2°.79S**±0°.05×**130°.18E**±0°.06**, h10**^{km}**, n15, σ1^{s}38**/17**, mb3.8**/4**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	1.36	246	P	Pn	19 43 14.7	0.0
MSAI				S	Sb	19 43 31.2	-1.5
BNDI	Bandanaira	1.74	189	P	Pg	19 43 23.8	+0.8
KRAI	Karang Ratu	1.86	253	P	Pn	19 43 21.8	+0.4
FAKI	Fak Fak	2.07	94	P	Pg	19 43 30.5	+1.2
AAI	Ambon	2.17	246	P	Pn	19 43 26.1	+0.3
SWI	Sorong	2.20	30	P	Pg	19 43 32.5	+0.8
SWI				S	Sg	19 44 01.1	+0.8
NLAI	Namlea	3.10	262	P	Pn	19 43 38.7	+0.1
KMPI	Kaimana, Papua	3.63	104	P	Pb	19 43 52.6	-1.2
SANI	Sanana	4.25	280	P	Pn	19 43 52.6	-1.8
MWPI	Manokwari, Pap	4.28	65	P	Pb	19 44 02.0	-2.9
WRA	Warramunga Arr	17.53	167	P	Pn	19 46 53.2	-1.0
	0.2nm,0.3s,baz=338,slow=12,SNR=11						
	0.6nm,0.7s						
ASAR	Alice Springs	21.07	170	P	P	19 47 34.1	+0.1
	5.0nm,0.8s,baz=349,slow=9.6,SNR=45						
	5.0nm,0.8s						
CMAR	Chiang Mai Arr	37.30	306	P	P	19 50 02.6	+0.4
	0.3nm,0.3s,baz=133,slow=6.8,SNR=6.6						
	0.3nm,0.3s						
MKAR	Makanchi Array	64.84	326	P	P	19 53 30.7	+1.9
	0.2nm,0.5s,baz=116,slow=8.4,SNR=4.1						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	69.05	328	P	P	19 53 57.3	+1.8
	0.8nm,0.5s,baz=128,slow=5.2,SNR=9.2						
	0.8nm,0.5s						

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*IDC **18** 19:46:24.9±3.5, 2°.90S×139°.05E, h71^{km}±50^{km}, mb3.1/3, mbtmp3.7/5, ML3.7/2, Error ellipse: s-maj=46.8km s-min=21.9km az=122.0*

ISC 18 19:46:23.2±1.1**, 2°.9S**±0°.2×**139°.0E**±0°.1**, h46**^{km}**, n6, σ1^{s}25**/7**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	1.77	79	P	Pn	19 46 50.5	-0.9

	11nm,0.4s,baz=238,slow=11,SNR=18						
JAY				S	Sn	19 47 14.4	+1.7
	12nm,0.4s,baz=100,slow=18,SNR=2.8						
BATI	Baumata	16.86	244	P	Pn	19 50 17.4	+1.2
	0.8nm,0.3s,baz=96,slow=4.1,SNR=5.0						
	13nm,0.8s						
WRA	Warramunga Arr	17.58	195	P	Pn	19 50 24.4	-0.6
	0.2nm,0.3s,baz=17,slow=12,SNR=6.4						
	0.7nm,0.7s						
FITZ	Fitzroy Crossi	20.01	220	P	P	19 50 52.9	+0.6
	2.4nm,0.9s,baz=40,slow=17,SNR=1.4						
	2.4nm,0.9s						
ASAR	Alice Springs	21.27	193	P	P	19 51 05.4	-0.5
	0.4nm,0.7s,baz=16,slow=11,SNR=5.5						
	0.4nm,0.7s						
MKAR	Makanchi Array	70.05	322	P	P	19 57 30.1	-0.4
	0.5nm,0.9s,baz=134,slow=6.2,SNR=2.4						
	0.5nm,0.9s						

WEL 18 19:48:39.2±1.3, 34°S±27°×17°8E±3°2, h232^{km}±47^{km}, M3.9/4, ML3.8/6, MLv3.9/4, Error ellipse: s-maj=51.4km s-min=19.7km az=129.1, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.21	183	P	Pn	19 49 32.7	-0.2
MXZ				S	S	19 50 14.8	-0.5
HAZ	Te Kaha	3.45	189	P	Pn	19 49 34.9	-0.7
WMGZ	Waiomatatini S	3.46	181	P	Pn	19 49 35.8	0.0
WMGZ				S	S	19 50 20.5	0.0
PKGZ	Pakihiroa	3.53	185	P	Pn	19 49 37.0	+0.5
PKGZ				S	S	19 50 23.7	+1.8
RUGZ	Raukumara Rang	3.67	190	P	Pn	19 49 38.4	0.0
RUGZ				S	S	19 50 24.9	-0.1
PUZ	Puketiti	3.72	183	P	Pn	19 49 38.5	-0.4
PUZ				S	S	19 50 25.2	-0.8
TWGZ	Tauwhareparae	3.84	186	P	Pn	19 49 40.7	+0.4
TWGZ				S	S	19 50 30.5	+1.9
MWZ	Matawai	4.05	191	P	Pn	19 49 43.3	+0.4
MWZ				S	S	19 50 33.9	+0.8
URZ	Urewera	4.06	196	P	Pn	19 49 43.0	+0.1
URZ				S	S	19 50 34.9	+1.8
CNGZ	Carnagh Statio	4.13	183	P	Pn	19 49 43.8	+0.1
CNGZ				S	S	19 50 35.9	+1.1
BKZ	Black Stump Fm	5.07	198	P	Pn	19 49 55.5	+0.2
BKZ				S	S	19 50 54.2	-1.4

*BER **18** 20:18:37.6±2.4, 70.°97N×8.°08W, h27^{km}±6^{km}, ML3.3, Mw4.0, ML1.7(DNK), Confirmed Earthquake*
*DNK **18** 20:18:37.1±1.6, 70.°98N×8.°44W, h32^{km}±9^{km}, ML1.7, Presumed earthquake*
ISC 18 20:18:33.3±1.1, **71.°01N**±0.°09×**7.°65W**±0.°08, **h46**^{km}±15^{km}, **n26, σ2.^{s}75**/38, **3D, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNE	Jan Mayen East	0.21	265	⇓iP	Pn	20 18 40.9	-0.3
JNE				eS	Sn	20 18 45.2	-1.6
JNE				IAML		20 18 45.7	
	comp=Z,5μm,0.2s						
JNW	Jan Mayen West	0.26	275	⇓iP	Pn	20 18 41.4	-0.2
JNW				eS	Sn	20 18 46.0	-1.5
JNW				IAML		20 18 46.2	
	comp=Z,7μm,0.2s						
JMIC	Jan Mayen	0.28	266	eP	Pn	20 18 41.8	-0.1
JMIC				eS	Sn	20 18 46.6	-1.2
JMIC				IAML		20 18 47.1	
	comp=Z,3μm,0.3s						
JMIC	Jan Mayen	0.28	266	⇓iP	Pn	20 18 41.7	-0.1
JMIC				i S	Sn	20 18 46.6	-1.2
JMI	Jan Mayen	0.36	258	i P	Pn	20 18 43.3	+0.7
JMI				eS	Sn	20 18 49.5	+0.2
JMI				IAML		20 18 51.7	
	comp=Z,2μm,0.3s						
DBG	Daneborg	5.00	317	eP	Pn	20 19 47.5	+1.8
DBG				eS	Sn	20 20 40.1	-2.0
DBG	Daneborg	5.00	317	i P	Pn	20 19 47.3	+1.6
DBG				i S	Sn	20 20 38.8	-3.4
DBG				IAML		20 20 41.7	
	comp=Z,4.0nm,0.3s						
DAG	Danmarks Havn	6.54	337	eP	Pn	20 20 08.6	+2.0
DAG				eS	Sn	20 21 16.9	-2.8
DAG	Danmarks Havn	6.54	337	i P	Pn	20 20 08.0	+1.3
DAG				i S	Sn	20 21 16.0	-3.7
DAG				IAML		20 21 20.7	
	comp=Z,2.6nm,0.2s						
STEI	Steigen	8.58	100	eP	Pn	20 20 36.8	+2.1
VAGH	Vaagaholmen	8.65	109	eP	Pn	20 20 39.2	+3.5
VAGH				eS	Sn	20 22 08.8	-3.0
VAGH				IAML		20 22 10.5	
	comp=Z,3.3nm,0.6s						
HSPB	Hornsund (broa	8.70	36	eP	Pn	20 20 40.3	+4.0
STOK	Stokkvaagen	8.84	112	eP	Pn	20 20 40.6	+2.5
STOK				eS	Sn	20 22 12.3	-3.9
STOK				IAML		20 22 17.5	
	comp=Z,4.6nm,0.4s						
FAUS	Fauske	8.90	103	eP	Pn	20 20 42.7	+3.7
LEIR	Leirfjorden	9.01	113	eP	Pn	20 20 43.2	+2.6
LEIR				eS	Sn	20 22 16.0	-4.5
LEIR				IAML		20 22 23.1	
	comp=Z,3.4nm,0.6s						
TRO	Tromso	9.03	86	eP	Pn	20 20 42.0	+1.1
RAUS	Rausandaksla	9.08	110	eP	Pn	20 20 44.5	+3.0
RAUS				eS	Sn	20 22 19.0	-3.2
RAUS				IAML		20 22 22.9	
	comp=Z,4.0nm,0.5s						
KBS	Kingsbay	9.36	23	eP	Pn	20 20 48.7	+3.4
KBS	Kingsbay	9.36	23	i P	Pn	20 20 47.9	+2.6
SPA0	Spitsbergen Ar	9.51	31	eP	Pn	20 20 52.2	+4.8
JETT	Jettan, Norway	9.54	85	eP	Pn	20 20 49.9	+2.0
NSS	Namsos	9.82	122	eP	Pn	20 20 54.3	+2.6
NSS				eS	Sn	20 22 34.6	-5.8
NSS				IAML		20 22 43.5	
	comp=Z,3.7nm,0.4s						
KIF	Kilpisjarvi	9.89	88	eP	Pn	20 20 55.1	+2.5
SALU	Saltoluokta	9.93	99	eP	Pn	20 20 56.8	+3.6
NOR	Nord	10.84	353	eP	Pn	20 21 08.4	+2.9
NOR	Nord	10.84	353	i P	Pn	20 21 07.0	+1.5

*JSN **18** 20:20:47.9±0.8, 18.°04N×76.°14W, h0^{km}±15^{km}, MD3.6*
*SSNC **18** 20:20:49.4±1.5, 18.°07N×76.°18W, h5^{km}, MD3.3, ML3.0, MW2.9*
ISC 18 20:20:47.0±1.8, **18.°26N**±0.°07×**76.°13W**±0.°05, **h16**^{km}±12^{km}, **n16, σ1.^{s}21**/32, **1D, Jamaica region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTDJ	Mount Denham	1.34	269	eP	Pb	20 21 12.1	+0.3
MTDJ				eS	Sn	20 21 28.2	-0.5
MTDJ				IAML		20 21 34.8	
	comp=Z,668nm,0.2s						
MTDJ				IAML		20 21 34.9	
	721nm,0.2s						
MCJ	Malvern	1.52	257	⇓iP	Pb	20 21 14.7	-0.2
CHIV	Chivirico	1.73	351	eP	Pb	20 21 19.2	+0.8
CHIV				eS	Sg	20 21 42.1	-0.5
CHIV				IAML		20 21 44.1	
	comp=N,72nm,0.1s						
CHIV				IAML		20 21 46.3	
	comp=E,60nm,0.1s						
MARVS	Santiago de Cu	1.74	7	eP	Pg	20 21 20.0	-0.5
MARVS				eS	Sg	20 21 42.8	-0.4
MARVS				IAML		20 21 48.3	
	comp=E,27nm,0.1s						
RCC	Rio Carpintero	1.77	13	eP	Pg	20 21 20.4	-0.7
RCC				eS	Sg	20 21 44.5	+0.4
RCC				IAML		20 21 47.9	
	comp=N,15nm,0.1s						
RCC				IAML		20 21 51.3	
	comp=E,15nm,0.1s						
GTBY	Guantanamo Bay	1.92	30	eP	Pg	20 21 24.7	+0.9
GTBY				eS	Sg	20 21 51.9	+3.2
GTBY				IAML		20 21 53.3	
	comp=E,61nm,0.1s						
GTBY				IAML		20 21 55.4	
	comp=E,38nm,0.1s						
LMGC	Las Mercedes	1.97	335	eP	Pb	20 21 22.3	-0.3
LMGC				eS	Sb	20 21 47.5	+0.5
LMGC				IAML		20 21 49.4	
	comp=N,131nm,0.1s						
LMGC				IAML		20 21 51.0	
	comp=E,73nm,0.1s						
YAR	Yar	2.11	354	eP	Pb	20 21 24.9	0.0
YAR				eS	Sb	20 21 52.1	+1.2
YAR				IAML		20 21 53.6	
	comp=N,25nm,0.1s						
YAR				IAML		20 21 53.9	
	comp=E,32nm,0.1s						
PINC	Pinares de May	2.24	8	eP	Pb	20 21 26.7	-0.4
PINC				eS	Sb	20 21 54.5	0.0
PINC				IAML		20 21 57.6	
	comp=N,135nm,0.1s						
PINC				IAML		20 21 57.9	
	comp=E,88nm,0.1s						
QMBU	Quimbuelo	2.29	33	eP	Pb	20 21 27.7	-0.4
QMBU				eS	Sb	20 21 56.9	+0.7
QMBU				IAML		20 22 03.5	
	comp=E,95nm,0.1s						
QMBU				IAML		20 22 04.1	
	comp=N,112nm,0.2s						
NMDO	Nuevo Mundo	2.53	25	eP	Pb	20 21 31.1	-0.9
NMDO				eS	Sb	20 22 04.1	+1.1
NMDO				IAML		20 22 11.2	
	comp=N,38nm,0.2s						
NMDO				IAML		20 22 12.2	
	comp=E,57nm,0.2s						
HLGC	Holguin	2.62	1	eP	Pb	20 21 33.5	-0.1
HLGC				eP	Pg	20 21 34.3	-2.9
HLGC				eS	Sb	20 22 08.1	+2.6
HLGC				IAML		20 22 11.7	
	comp=E,14nm,0.2s						
HLGC				IAML		20 22 17.9	
	comp=N,44nm,0.4s						
MASC	Masc	2.62	43	eP	Pb	20 21 32.4	-1.1
MASC				eS	Sb	20 22 04.6	-0.9
MASC				IAML		20 22 12.4	
	comp=N,72nm,0.2s						
MASC				IAML		20 22 14.2	
	comp=E,95nm,0.2s						
MOAC	Moa	2.63	25	eP	Pb	20 21 32.6	-1.2
MOAC				eS	Sb	20 22 05.8	0.0
MOAC				IAML		20 22 12.5	
	comp=N,44nm,0.1s						
MOAC				IAML		20 22 14.4	
	comp=E,24nm,0.1s						
CBCY	The Bluff, Cay	3.73	294	eP	Pn	20 21 44.6	+0.5
CBCY				eS	Sn	20 22 25.9	-1.8
CBCY				IAML		20 22 29.2	
	comp=N,19nm,0.2s						
CBCY				IAML		20 22 30.7	
	comp=E,17nm,0.2s						
LCCY	Blossom Villag	3.99	291	eP	Pn	20 21 48.6	+1.0
LCCY				eS	Sn	20 22 33.9	-0.2
LCCY				IAML		20 22 36.1	
	comp=E,35nm,0.3s						
LCCY				IAML		20 22 37.5	
	comp=N,29nm,0.2s						

*JMA **18** 20:25:50.7±1.3, 47°N±6°×15°3E±°, h30^{km}, MD5.3/18, MV5.5/18, KURILE ISLANDS REGION*
*NIED **18** 20:25:50.7, 46.°70N×153.°24E, h30^{km}, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}2.75; $M_{\theta\theta}$-3.00; $M_{\phi\phi}$0.25; $M_{r\theta}$1.28; $M_{\theta\phi}$-0.48; $M_{\phi r}$-0.20; Fault plane solution: $M_0$3.19000×10^{16} NP1: ϕ_s253.00000°, δ34.00000°, λ77.00000°. NP2: ϕ_s89.00000°, δ57.00000°, λ99.00000°.*
*MOS **18** 20:25:52.8±1.1, 46.°74N×152.°83E, h68^{km}, mb4.8/22 Error ellipse: s-maj=8.0km s-min=5.0km az=69.2*
*SKHL **18** 20:25:54.9±0.6, 46.°70N×153.°00E, h75^{km}±5^{km}, mb5.7/8*
*GCMT **18** 20:25:55.8±0.3, 46.°74N±0.°03×152.°88E±0.°03, h58^{km}±3^{km}, MW4.8/86, Moment Tensor Solution. s14,c16; s86,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.62±.17; $M_{\theta\theta}$-1.99±.12; $M_{\phi\phi}$1.37±.12; $M_{r\theta}$1.16±.08; $M_{\theta\phi}$-0.15±.09; $M_{\phi r}$-0.93±.06; Best double couple: $M_0$2.30100×10^{16} NP1: ϕ_s226.00000°, δ46.00000°, λ14.00000°. NP2: ϕ_s126.00000°, δ80.00000°, λ135.00000°. Principal axes: T 2.1610, Plg38.0000°, Azm75.0000°; N 0.2830, Plg44.0000°, Azm296.0000°; P -2.4410, Plg22.0000°, Azm183.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **18** 20:25:57.8±1.6, 46.°95N±0.°08×152.°66E±0.°09, h79^{km}±5^{km}, mb4.9/280 Error ellipse: s-maj=11.5km s-min=8.7km az=207.0*
*IDC **18** 20:25:57.7±2.2, 46.°92N×152.°65E, h82^{km}±19^{km}, mb4.0/34, mbtmp4.4/39, MS3.7/69, Error ellipse: s-maj=13.7km s-min=9.6km az=151.0*
ISC 18 20:25:56.4±0.5, **46.°74N**±0.°05×**152.°84E**±0.°04, **h75**^{km}±3^{km}, **h77**^{km}**:pP-P, n659, σ1.^{s}52**/523, **mb4.8**/194, **20C-20D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.78	248c	iPN	Pn	20 26 50.1	-2.1
KUR				eS	Sn	20 27 33.9	-1.6
KUR				pmax	pmax		
	comp=Z,1μm,0.9s						
KUR				pmax	pmax		
	comp=E,327nm,1.0s						
KUR				pmax	pmax		
	comp=N,300nm,0.4s						
KUR				smax	smax		
	comp=E,4μm,0.5s						
KUR				smax	smax		
	comp=N,2μm,0.4s						
KUR	Kuril'sk	3.78	248	i P	Pn	20 26 52.1	-0.1
KUR				AMB	AMB	20 26 52.8	
	comp=N,2μm,0.6s						
KUR				eS	Sn	20 27 33.1	-2.4
KUR				A	A	20 27 47.1	
	comp=N,4μm,0.6s						
KUR				A	A	20 27 47.1	
	comp=N,5μm,0.6s						
SKR	Severo-Kuril’s	4.50	28	ePN	Pn	20 26 59.8	-2.3
SKR				eS	Sn	20 27 51.9	-1.2
SKR				pmax	pmax		
	comp=Z,458nm,0.6s						
SKR				smax	smax		
	comp=N,683nm,0.6s						
SKR				smax	smax		
	comp=E,1μm,0.7s						
SKR				MLR	MLR		
	comp=Z,1μm,12.0s						
SKR	Severo-Kuril’s	4.50	28	eP	Pn	20 27 00.5	-1.6
SKR				AMB	AMB	20 27 04.1	
	comp=Z,500nm,0.4s						
SKR				eS	Sn	20 27 50.2	-2.9
PAU	Pauzhetka	5.40	27	eP	Pn	20 27 12.8	-1.5
PAU				AMB	AMB	20 27 23.7	
	comp=Z,450nm,0.5s						
PAU				eS	Sn	20 28 10.7	-4.4
PAU				A	A	20 28 27.0	
	comp=Z,640nm,0.5s						
PAU				A	A	20 28 27.0	
	comp=Z,650nm,0.5s						
YUK	Yuzh-Kuril'sk	5.61	244c	iPN	Pn	20 27 16.5	-0.7
YUK				i S	Sn	20 28 20.1	-0.1
YUK				pmax	pmax		
	comp=Z,875nm,0.4s						
YUK				pmax	pmax		
	comp=N,155nm,0.2s						
YUK				pmax	pmax		
	comp=E,265nm,0.2s						
YUK				smax	smax		
	comp=N,4μm,0.6s						
YUK				smax	smax		
	comp=E,2μm,0.4s						
YUK	Yuzh-Kuril'sk	5.61	244	i P	Pn	20 27 17.5	+0.3
YUK				AMB	AMB	20 27 18.8	
	comp=E,1μm,0.3s						
YUK				i S	Sn	20 28 20.1	-0.1
YUK				A	A	20 28 31.4	
	comp=E,3μm,0.7s						
YUK				A	A	20 28 31.4	
	comp=E,3μm,0.7s						
RUSJ	Misakicho	5.96	247	ePN	Pn	20 27 22.0	+0.1
RUSJ				eS	Sn	20 28 28.6	-0.1
GLVR	Golovnino	5.98	243	ePN	Pn	20 27 21.2	-1.0
GLVR				eS	Sn	20 28 28.8	-0.4
GLVR				pmax	pmax		
	comp=Z,798nm,0.4s						
GLVR				pmax	pmax		
	comp=N,251nm,0.2s						
GLVR				smax	smax		
	comp=E,920nm,0.3s						
GLVR				smax	smax		
	comp=N,2μm,0.5s						
GLVR	Golovnino	5.98	243	eP	Pn	20 27 21.2	-1.0
GLVR				AMB	AMB	20 27 24.8	
	comp=N,800nm,0.3s						
GLVR				eS	Sn	20 28 28.8	-0.4
GLVR				A	A	20 28 50.3	
	comp=N,2μm,0.4s						
GLVR				A	A	20 28 50.3	
	comp=N,920nm,0.4s						
NEM2	Nemuro 2	6.05	239	⇓P	Pn	20 27 20.4	-2.8
NEM2				⇓eS	Sn	20 28 26.9	-4.2
NMR	Nemuro--Hokkai	6.06	239	⇓iPN	Pn	20 27 20.4	-2.9
NMR	Nemuro--Hokkai	6.06	239	i P	Pn	20 27 20.4	-2.9
NMR				eS	Sn	20 28 27.0	-4.2
JRA	Rausu	6.12	246	P	Pn	20 27 24.0	-0.2
JNSB	Nemuroshibetsu	6.27	245	A	A	20 27 23.5	
	comp=N,6.0nm,4.5s,comp=E,5.0nm,1.7s						
JNK	Nakash	6.55	244	P	Pn	20 27 29.1	-1.0
AKK	Akkeshi	6.79	240	eP	Pn	20 27 30.6	-2.7
JTKR	Abashiri--Toko	6.88	249	⇓P	Pn	20 27 34.4	0.0
JAK	Akkeshi	6.89	240	P	Pn	20 27 32.0	-2.6
JAK				S	Sn	20 28 46.8	-4.7
YSS	Yuzhno-Sakhali	6.92	275		Pn	20 27 33.9	-1.2
YSS				Sn	Sn	20 28 50.4	-1.9
YSS	Yuzhno-Sakhali	6.92	275	ePN	Pn	20 27 35.4	+0.3
YSS				eS	Sn	20 28 52.8	+0.5
YSS				pmax	pmax		
	comp=Z,300nm,2.5s						
YSS				pmax	pmax		
	comp=N,200nm,4.2s						
YSS				pmax	pmax		
	comp=E,400nm,4.5s						
YSS				pmax	pmax		
	comp=Z,130nm,0.8s						
YSS				smax	smax		
	comp=N,110nm,0.6s						
YSS				smax	smax		
	comp=E,180nm,0.6s						
YSS				MLR	MLR		
	comp=N,300nm,16.0s						
YSS	Yuzhno-Sakhali	6.92	275	eP	Pn	20 27 35.8	+0.7
YSS				AMB	AMB	20 27 37.9	
	comp=N,150nm,0.8s						
YSS				eS	Sn	20 28 52.5	+0.2
YSS				A	A	20 28 53.4	
	comp=N,110nm,0.5s						
YSS				A	A	20 28 53.4	
	comp=N,160nm,0.5s						
PEA0B	Petropavlovsk-	7.10	24		Pn	20 27 35.9	-1.7
PEA0B	Petropavlovsk-	7.10	24d	iPN	Pn	20 27 36.4	-1.2
PETK	Petropavlovsk-	7.10	24	P	Pn	20 27 35.8	-1.8
	comp=N,66nm,0.9s,baz=180,slow=12,SNR=37						
PETK				LR	LR	20 30 20.3	
	comp=N,1μm,21.9s,baz=218,slow=38						
PETK	Petropavlovsk-	7.10	24		Pn	20 27 35.0	-2.5
JAR	Ashorobuto	7.29	245	P	Pn	20 27 39.4	-0.7
JAR				eS	Sn	20 29 02.0	+0.6
PET	Petropavlovsk	7.32	29		Pn	20 27 38.5	-2.0
PET	Petropavlovsk	7.32	29	ePN	Pn	20 27 38.7	-1.8
PET				pmax	pmax		
	comp=Z,97nm,1.0s						
PET				MLR	MLR		
	comp=Z,900nm,19.0s						
PET	Petropavlovsk	7.32	29	eP	Pn	20 27 40.2	-0.3
PET				AMB	AMB	20 27 46.3	
	comp=Z,70nm,0.5s						
PET				eS	Sn	20 28 57.8	-4.2
JOB	Onbets	7.46	242	eP	Pn	20 27 40.5	-2.0
JOB				eS	Sn	20 29 02.7	-2.9
UGL	Uglegorsk	7.61	292	eP	Pn	20 27 46.1	+1.6
JKA	Kamikawa-asahi	7.67	254		Pn	20 27 45.5	+0.2
JKA	Kamikawa-asahi	7.67	254	eP	Pn	20 27 46.6	+1.3
ASAJ	Asahikawa	7.67	254	P	Pn	20 27 46.6	+1.3
	comp=Z,60nm,0.4s,baz=84,slow=21,SNR=89						
ASAJ				LR	LR	20 30 36.1	
	comp=Z,633nm,20.4s,baz=58,slow=37						
JKK2	Kamakawa 2	7.67	252	P	Pn	20 27 45.9	+0.6
JWK2	Keihoku	7.75	263	P	Pn	20 27 49.8	+3.4
TYV	Tymovskoe	7.89	305	ePN	Pn	20 27 52.4	+4.1
TYV				eS	Sn	20 29 21.2	+5.3
TYV				pmax	pmax		
	comp=Z,27nm,0.9s						
TYV				pmax	pmax		
	comp=Z,500nm,3.3s						
TYV				smax	smax		
	comp=E,800nm,3.4s						
TYV				smax	smax		
	comp=N,22nm,1.0s						
TYV				smax	smax		
	comp=E,34nm,1.0s						
TYV	Tymovskoe	7.89	305	eP	Pn	20 27 50.4	+2.1
TYV				eS	Sn	20 29 12.5	-3.4
JCH	Churui	7.91	242	P	Pn	20 27 46.0	-2.7
JCH				eS	Sn	20 29 11.7	-4.9
JAB	Ashibetsu	8.18	251	P	Pn	20 27 53.1	+0.9
ERM	Erimo	8.39	239		Pn	20 27 53.4	-1.8
ERM	Erimo	8.39	239	PN	Pn	20 27 53.4	-1.8
JNBK	Urakawa-nobuka	8.47	242	P	Pn	20 27 53.2	-3.1
JNBK	Urakawa-nobuka	8.47	242	A	A	20 27 53.2	
	comp=N,4.0nm,1.9s,comp=E,4.0nm,1.9s						
OKH	Okha	9.32	321	eP	Pn	20 28 09.1	+1.4
NKL	Nikolayevsk	10.12	314	eP	Pn	20 28 18.7	0.0
JANG	Nango	10.39	236	P	Pn	20 28 17.0	-5.4
JANG				eS	Sn	20 30 06.7	-10
JTH	Tanohata	10.49	234	eP	Pn	20 28 17.9	-5.9
JTH				eS	Sn	20 30 07.5	-12
TEY	Ternei	11.45	267	ePN	Pn	20 28 39.9	+3.1
MA2	Magadan	12.92	355	P	Pn	20 28 55.7	-1.0
	comp=E,27nm,0.5s,baz=167,slow=13,SNR=26						
MA2				LR	LR	20 33 32.3	
	comp=E,532nm,21.4s,baz=174,slow=36						
MA2	Magadan	12.92	355		Pn	20 28 55.1	-1.6
MA2	Magadan	12.92	355	⇓ePN	Pn	20 28 55.5	-1.2
MA2	Magadan	12.92	355	eP	Pn	20 28 55.5	-1.2
USRK	Ussuriysk Ar.	14.85	268	P	Pn	20 29 20.2	-1.8
	comp=E,6.2nm,0.7s,baz=72,slow=12,SNR=8.9						
MJA0	Matsu Arr-Jizo	14.90	232	eP	Pn	20 29 19.3	-3.6
MJB9	Matsu-Tunnel	14.92	232		Pn	20 29 19.6	-3.5
MAJO	Matsushiro	14.93	232		Pn	20 29 18.8	-4.4
MAJO	Matsushiro	14.93	232c	eP	Pn	20 29 19.3	-3.9
MJAR	Matsushiro Arr	14.93	232	P	Pn	20 29 19.4	-3.8
	comp=E,9.2nm,0.5s,baz=26,slow=14,SNR=27						
SHEM	Shemya Is, Ala	14.97	59	P	Pn	20 29 22.4	-1.1
	comp=E,84nm,0.8s,baz=107,slow=0.8,SNR=10						
SHEM				LR	LR	20 34 16.0	
	comp=E,183nm,21.2s,baz=296,slow=33						
SMY	Shemya	14.97	59	Pn	Pn	20 29 22.7	-0.9
SMY	Shemya	14.97	59	P	Pn	20 29 22.7	-0.9
JGF	Kuroka	16.08	232		Pn	20 29 34.9	-3.0
SEY	Seymchan	16.23	359	P	P	20 29 39.1	-2.1
	comp=E,3.1nm,0.3s,baz=180,slow=12,SNR=17						
SEY				LR	LR	20 36 35.3	
	comp=E,439nm,18.6s,baz=168,slow=40						
SEY	Seymchan	16.23	359	eP	P	20 29 39.7	-1.6
SEY				pmax	pmax		
	comp=Z,22nm,1.5s						
SEY	Seymchan	16.23	359	eP	P	20 29 39.7	-1.6
MDJ	Mudanjiang	16.38	271		Pn	20 29 39.6	-1.9
MDJ	Mudanjiang	16.38	271	P	Pn	20 29 40.1	-1.4
MDJ				S	S	20 32 56.5	+5.9
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MDJ				LR	LR		
	comp=N,430nm,17.2s						
MDJ				LR	LR		
	comp=E,380nm,21.3s						
MDJ				LR	LR		
	comp=Z,580nm,21.3s						
INU	Inuyama	16.46	232		Pn	20 29 41.0	-1.5
JHJ	Hachijo jima 2	16.86	221	LR	LR	20 35 52.8	
	comp=Z,144nm,21.1s,baz=50,slow=35						
HEH	HeiHe	17.19	291	eP	P	20 29 51.4	-0.5
HEH				pmax	pmax		
	comp=Z,22nm,1.1s						
BNX	BinXian	17.61	276	⇑P	P	20 29 58.1	+1.5
BNX				pmax	pmax		
	comp=Z,6.0nm,1.2s						

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ZEA   Zeya              17.74 303 eP     P      20 30 08.6 +11
ZEA                               pmax   pmax
        comp=Z,10.0nm,1.1s
JMN   Monobe            19.39 235 P      P      20 30 16.9 +0.7
CN2   Changchun         19.46 271 P      P      20 30 16.8 -0.2
CN2                               pmax   pmax
        comp=Z,10.0nm,0.7s
CN2                               pmax   pmax
        comp=Z,500nm,4.0s
CN2                               LR     LR
        comp=N,300nm,14.0s
CN2                               LR     LR
        comp=E,300nm,14.0s
CN2                               LR     LR
        comp=Z,500nm,17.0s
YAK   Yakutsk           20.23 328 P      P      20 30 24.3 -0.8
        comp=Z,24nm,0.8s,baz=130,slow=0.7,SNR=13
YAK                               LR     LR     20 37 54.7
        comp=Z,190nm,20.8s,baz=119,slow=36
        comp=Z,24nm,0.8s
YAK   Yakutsk           20.23 328        Pn     20 30 24.7 -2.9
YAK   Yakutsk           20.23 328 eP     Pn     20 30 25.3 -2.3
YAK                               e*PP   pwP    20 30 42.0 +2.1
YAK                               eS     Sn     20 34 09.5 -5.3
YAK                               e             20 34 34.8
YAK                               e*SS   sS     20 34 36.2 +4.7
YAK                               e             20 41 46.6
YAK                               pmax   pmax
        comp=Z,31nm,1.9s
YAK                               pmax   pmax
        comp=N,5.0nm,1.0s
YAK                               pmax   pmax
        comp=E,8.0nm,1.1s
YAK                               smax   smax
        comp=N,476nm,3.3s
YAK                               smax   smax
        comp=E,347nm,2.9s
YAK   Yakutsk           20.23 328 eP     Pn     20 30 25.3 -2.3
KSRS  Korea Array       20.61 252 P      P      20 30 29.9 +0.5
        comp=E,10.0nm,0.7s,baz=57,slow=10,SNR=17
KSRS                              LR     LR     20 38 21.3
        comp=E,197nm,18.8s,baz=55,slow=36
        comp=E,10.0nm,0.7s
KS19  Wonju Array Si    20.62 252 P      P      20 30 30.1 +0.6
JCJ   Chichijima        21.34 207 LR     LR     20 39 52.4
        comp=E,60nm,19.6s,baz=4.0,slow=39
JNU   Nakatsue          21.55 239 P      P      20 30 39.4 -0.2
        comp=E,26nm,0.9s,baz=283,slow=1.6,SNR=15
JNU                               LR     LR     20 40 05.5
        comp=E,143nm,19.1s,baz=78,slow=39
        comp=E,26nm,0.9s
JNU   Nakatsue          21.55 239        P      20 30 39.8 +0.2
HILR  Hailar Array B    22.16 289 P      P      20 30 44.4 -1.6
        comp=E,0.9nm,0.3s,baz=93,slow=7.8,SNR=2.9
        comp=E,0.9nm,0.3s
BILL  Bilibino          22.45  13 P      P      20 30 49.0 +0.2
BILL  Bilibino          22.45  13⇑eP     P      20 30 49.9 +1.1
BILL                              pmax   pmax
        comp=Z,9.0nm,1.3s
BILL  Bilibino          22.45  13 eP     P      20 30 49.9 +1.1
SPIA  Saint Paul Isl    24.73  51 P      P      20 31 12.9 +2.5
        baz=262
P08K  Saint George I    25.02  53 P      P      20 31 15.0 +1.9
        baz=263
GAMB  Gambell           25.94  36 P      P      20 31 22.3 +1.0
        baz=246
M11K  Mekoryuk          27.37  45 P      P      20 31 36.4 +2.2
        baz=259
TIXI  Tiksi             27.43 344 LR     LR     20 42 33.3
        comp=Z,274nm,21.5s,baz=193,slow=37
TIXI  Tiksi             27.43 344⇑eP     P      20 31 32.7 -1.9
TIXI                              pmax   pmax
        comp=Z,23nm,3.3s
JOW   Kunigami          27.77 233 LR     LR     20 43 21.3
        comp=Z,173nm,21.2s,baz=246,slow=38
TNA   Tin City          28.14  34 P      P      20 31 42.1 +1.0
        baz=248
FALS  False Pass        28.41  57 P      P      20 31 46.7 +3.2
        baz=272
K13K  Kusilvak Mount    28.43  42 P      P      20 31 44.6 +1.0
        baz=258
M13K  Dall Lake         28.77  46 P      P      20 31 48.4 +1.7
        baz=262
ANM   Nome              28.81  37        P      20 31 47.4 +0.4
ANM                               IAmb   IAmb   20 31 49.0
        comp=Z,90nm,2.0s
ANM   Nome              28.81  37 P      P      20 31 47.4 +0.4
ANM                               pmax   pmax
        comp=Z,90nm,2.0s
ANM   Nome              28.81  37 P      P      20 31 48.4 +1.4
        baz=252
J14K  Nanvaranak Lak    29.11  41 P      P      20 31 50.7 +1.1
        baz=258
L14K  Kuka Creek        29.24  44 P      P      20 31 52.2 +1.5
        baz=261
H11N2 WAKE ISLAND Hy    29.30 152 T      T      21 03 11.5
        baz=340,slow=76,SNR=6226
H11N1 WAKE ISLAND Hy    29.31 152 T      T      21 03 16.9
        baz=340,slow=76,SNR=4528
H11N3 WAKE ISLAND Hy    29.31 152 T      T      21 03 12.2
        baz=340,slow=76,SNR=4879
F15K  North Star Dit    29.47  35 P      P      20 31 53.8 +1.0
        baz=251
M14K  Bethel            29.50  45 P      P      20 31 54.2 +1.1
        baz=263
N14K  Kuskokwak Cree    29.54  47 P      P      20 31 54.6 +1.2
        baz=264
O14K  Tigyukauivet M    29.69  48 P      P      20 31 56.5 +1.7
        baz=266
L15K  Ungalak Mounta    29.86  43 P      P      20 31 57.1 +0.8
        baz=262
K15K  Wolf Creek Mou    29.94  42 P      P      20 31 58.2 +1.2
        baz=260
SDPT  Sand Point        30.07  56 P      P      20 32 01.7 +3.4
        baz=274
M15K  Kasigluk River    30.11  45 P      P      20 31 59.7 +1.1
        baz=264
H16K  Elim              30.13  37 P      P      20 31 59.3 +0.7
        baz=256
C16K  Lisburne Hills    30.16  30        P      20 31 57.4 -1.5
C16K                              IAmb   IAmb   20 31 59.9
        comp=Z,19nm,0.8s
C16K  Lisburne Hills    30.16  30 P      P      20 31 59.3 +0.4
        baz=246,SNR=11
N15K  Kwethluk River    30.36  46 P      P      20 32 02.2 +1.5
        baz=266
H11S1 WAKE ISLAND Hy    30.38 153 T      T      21 04 39.3
        baz=340,slow=76,SNR=3888
H11S3 WAKE ISLAND Hy    30.39 153 T      T      21 04 31.8
        baz=340,slow=76,SNR=4458
H11S2 WAKE ISLAND Hy    30.40 153 T      T      21 04 35.9
        baz=340,slow=76,SNR=4419
O15K  Ungalikthiuk R    30.42  48 P      P      20 32 02.9 +1.6
        baz=268
J16K  Anvik River       30.54  40 P      P      20 32 03.3 +1.0
        baz=260
I17K  Unalakleet        30.61  39 P      P      20 32 03.8 +0.9
        baz=259
ULN   Ulaanbaatar       30.73 289        P      20 32 04.8 +0.5
ULN   Ulaanbaatar       30.73 289 i P    P      20 32 06.5 +2.2
D17K  Noatak River      30.73  31 P      P      20 32 04.8 +0.9
        baz=250,SNR=11
L16K  Owhat River       30.81  43 P      P      20 32 05.7 +1.0
        baz=264
RDOG  Red Dog Mine      30.92  31        P      20 32 05.7 +0.1
RDOG                              IAmb   IAmb   20 32 07.0
        comp=Z,16nm,0.7s
RDOG  Red Dog Mine      30.92  31 P      P      20 32 06.5 +0.9
        baz=249,SNR=6.8
C17K  DeLong Mountai    30.98  30 P      P      20 32 06.9 +0.7
        baz=248,SNR=9.7
E17K  Hotham Inlet      30.98  33 P      P      20 32 07.1 +1.0
        baz=252,SNR=30
M16K  Timber Creek      30.99  45 P      P      20 32 06.1 -0.2
M16K  Timber Creek      30.99  45 P      P      20 32 07.7 +1.4
        baz=265
G17K  Kiwalik Mounta    31.00  36 P      P      20 32 07.3 +1.0
        baz=256,SNR=7.0
N16K  Nishlik Lake      31.04  46 P      P      20 32 07.9 +1.2
        baz=266
SONM  Songino Array     31.16 289 P      P      20 32 08.1  0.0
        comp=Z,0.6nm,0.8s,baz=88,slow=8.6,SNR=7.1
SONM                              LR     LR     20 45 34.4
        comp=Z,152nm,18.4s,baz=48,slow=38
        comp=Z,0.6nm,0.8s
SONM  Songino Array     31.16 289 IAmb   IAmb   20 32 15.0
        comp=Z,3.6nm,1.3s
SONM  Songino Array     31.16 289 eP     P      20 32 14.3 +6.2
SONM                              pmax   pmax
        comp=Z,1.0nm,0.4s
H17K  Granite Mounta    31.17  37        P      20 32 07.1 -0.7
H17K  Granite Mounta    31.17  37 P      P      20 32 08.3 +0.5
        baz=258,SNR=6.7
J17K  VABM Dome         31.23  40        P      20 32 08.6 +0.2
J17K  VABM Dome         31.23  40 P      P      20 32 09.9 +1.5
        baz=261,SNR=5.1
O16K  Kokwok River B    31.33  48 P      P      20 32 10.3 +1.1
        baz=268
L17K  Donlin            31.42  43 P      P      20 32 11.4 +1.4
        baz=264
K17K  Iditarod          31.48  42 P      P      20 32 12.0 +1.4
        baz=263
E18K  Tukpahlearik C    31.54  32 P      P      20 32 11.8 +0.7
        baz=253
F18K  Selawik           31.67  34 P      P      20 32 13.2 +1.0
        baz=255,SNR=11
C18K  Utukok River      31.73  30 IAmb   IAmb   20 32 13.9
        comp=Z,23nm,0.9s
C18K  Utukok River      31.73  30 P      P      20 32 12.9 +0.2
        baz=250,SNR=17
M17K  Holitna River     31.75  44 IAmb   IAmb   20 32 15.2
        comp=Z,34nm,0.9s
M17K  Holitna River     31.75  44 P      P      20 32 14.6 +1.6
        baz=266,SNR=6.7
B18K  Kokolik River     31.78  29 P      P      20 32 14.0 +0.9
        baz=249,SNR=8.5
N17K  Nushagak Hills    31.82  46 P      P      20 32 15.1 +1.5
        baz=268
O17K  Koliganek Bris    31.84  47 P      P      20 32 15.3 +1.6
        baz=269
H18K  Honhosa River     31.86  37 IAmb   IAmb   20 32 47.0
        comp=Z,43nm,1.9s
H18K  Honhosa River     31.86  37 P      P      20 32 15.0 +1.1
        baz=259
G18K  Tagagawik         31.89  36 IAmb   IAmb   20 32 15.8
        comp=Z,14nm,0.8s
G18K  Tagagawik         31.89  36 P      P      20 32 15.1 +0.9
        baz=258,SNR=12
Q16K  King Salmon       32.06  49 P      P      20 32 17.4 +1.8
        baz=271
L18K  Granite Mounta    32.17  43 P      P      20 32 17.8 +1.1
        baz=265
J18K  Innoko River      32.29  40 P      P      20 32 18.7 +1.0
        baz=263,SNR=5.6
A19K  Wainwright        32.33  27 P      P      20 32 19.1 +1.2
        baz=248,SNR=12
C19K  Lookout Ridge     32.43  30 IAmb   IAmb   20 32 20.4
        comp=Z,21nm,0.9s
C19K  Lookout Ridge     32.43  30 P      P      20 32 19.6 +0.7
        baz=252,SNR=18
F19K  Shaleruckik Mo    32.45  34 P      P      20 32 19.4 +0.4
        baz=257
N18K  Kilae Creek       32.47  46 IAmb   IAmb   20 32 21.7
        comp=Z,24nm,1.0s
N18K  Kilae Creek       32.47  46 P      P      20 32 20.7 +1.4
        baz=269,SNR=5.8
Q17K  Contact Creek     32.47  50 P      P      20 32 20.2 +0.8
        baz=272
M18K  Stony River       32.53  44 P      P      20 32 20.6 +0.8
        baz=267
G19K  Purcell Mounta    32.57  35 P      P      20 32 20.6 +0.5
        baz=259
H19K  Roundabout Mou    32.71  37 P      P      20 32 22.0 +0.7
        baz=260,SNR=15
D19K  Kuna River        32.75  31 IAmb   IAmb   20 32 23.1
        comp=Z,28nm,0.8s
D19K  Kuna River        32.75  31 P      P      20 32 22.1 +0.4
        baz=254,SNR=20
P18K  Big Mountain,     32.78  48 P      P      20 32 22.8 +0.7
        baz=271
O18K  Koktuh Hills      32.79  47 P      P      20 32 23.7 +1.5
        baz=270
E19K  Redstone River    32.80  33 IAmb   IAmb   20 32 23.8
        comp=Z,20nm,0.8s
E19K  Redstone River    32.80  33 P      P      20 32 22.9 +0.7
        baz=257,SNR=16
J19K  Poorman           32.84  40 IAmb   IAmb   20 32 23.7
        comp=Z,13nm,0.8s
J19K  Poorman           32.84  40 P      P      20 32 23.2 +0.7
        baz=264
Q18K  Katmai Hardscr    32.92  49 P      P      20 32 24.3 +1.0
        baz=272
L19K  White Mountain    33.03  43 P      P      20 32 25.1 +0.9
        baz=267
N19K  Bonanza Creek     33.16  45 P      P      20 32 26.9 +1.5
        baz=270
O19K  Port Alsworth     33.24  47 P      P      20 32 28.0 +2.1
        baz=271
F20K  Avaraart Lake     33.29  34 P      P      20 32 26.5 +0.2
        baz=259
D20K  Etivluk River     33.34  31 P      P      20 32 27.4 +0.6
        baz=255,SNR=35
H20K  Anotleneega Mo    33.35  37 P      P      20 32 27.9 +1.0
        baz=262,SNR=11
E20K  Nigu River        33.38  32 P      P      20 32 28.3 +1.1
        baz=256
K20K  Telida            33.47  41 P      P      20 32 29.0 +1.0
        baz=266
J20K  Nowinta River     33.51  39 IAmb   IAmb   20 32 30.1
        comp=Z,21nm,1.2s
J20K  Nowinta River     33.51  39 P      P      20 32 28.9 +0.7
        baz=265,SNR=7.1
SII   Sitkinak Islan    33.51  53 P      P      20 32 30.7 +2.3
        baz=276
B20K  Meade River       33.52  28 P      P      20 32 28.9 +0.6
        baz=253
GUMO  Guam              33.72 194 LR     LR     20 47 44.3
        comp=Z,78nm,18.1s,baz=4.0,slow=39
M20K  Styx River        33.83  44 IAmb   IAmb   20 32 48.1
        comp=Z,27nm,1.6s
M20K  Styx River        33.83  44 P      P      20 32 32.6 +1.4
        baz=269
IMAR  Indian Mountai    33.89  36 P      P      20 32 31.5 -0.1
G21K  Allakaket         34.06  35 IAmb   IAmb   20 32 34.8
        comp=Z,18nm,0.9s
G21K  Allakaket         34.06  35 P      P      20 32 33.6 +0.5
        baz=262,SNR=14
O20K  Slope Mountain    34.09  47 P      P      20 32 35.6 +2.1
        baz=272
C21K  Knifeblade Rid    34.09  30 P      P      20 32 34.1 +0.8
        baz=257
A21K  Barrow            34.10  26 P      P      20 32 33.7 +0.4
        baz=252,SNR=7.0
F21K  Alatna River      34.18  34 P      P      20 32 34.7 +0.6
        baz=261
E21K  Killik River      34.22  32 IAmb   IAmb   20 32 35.9
        comp=Z,18nm,1.1s
E21K  Killik River      34.22  32 P      P      20 32 34.9 +0.4
        baz=259
H21K  Melozitna Rive    34.23  37 IAmb   IAmb   20 32 36.3
        comp=Z,23nm,1.0s
H21K  Melozitna Rive    34.23  37 P      P      20 32 35.9 +1.4
        baz=264
KDAK  Kodiak Island     34.26  51 LR     LR     20 45 58.7
        comp=Z,175nm,21.9s,baz=244,slow=35
KDAK  Kodiak Island     34.26  51 P      P      20 32 36.0 +1.2
        baz=276
B21K  Ikpikpuk River    34.26  30 P      P      20 32 35.7 +1.0
        baz=256
N20K  Mount Spurr       34.27  45 P      P      20 32 36.3 +1.3
        baz=271
SPCR  Spurr Chakacha    34.27  45 P      P      20 32 36.5 +1.5
        baz=271
CHUM  Lake Minchumin    34.29  40 P      P      20 32 36.2 +1.2
        baz=267
PPLA  Purkeypile        34.30  42 P      P      20 32 36.7 +1.4
        baz=268
SPU   Mount Spurr       34.34  45 IAmb   IAmb   20 32 37.9
        comp=Z,15nm,1.1s
STLK  Strandline Lak    34.45  44 P      P      20 32 37.1 +0.6
STLK                              IAmb   IAmb   20 32 38.7
        comp=Z,11nm,0.9s
A22K  Sinclair Lake     34.51  27 P      P      20 32 37.8 +1.0
        baz=254
SKT   Skwentna          34.59  43 P      P      20 32 39.0 +1.4
        baz=270
F22K  John River        34.72  34 P      P      20 32 39.7 +0.9
        baz=262
D22K  Ayikyak River     34.77  31 IAmb   IAmb   20 32 41.0
        comp=Z,9.7nm,0.8s
D22K  Ayikyak River     34.77  31 P      P      20 32 40.0 +0.8
        baz=259
B22K  Teshekpuk Lake    34.84  29 P      P      20 32 40.2 +0.5
        baz=256,SNR=22
H22K  Ishtalitna Cre    34.84  36 IAmb   IAmb   20 32 41.9
        comp=Z,10.0nm,0.9s
H22K  Ishtalitna Cre    34.84  36 P      P      20 32 40.8 +1.0
        baz=265,SNR=9.3
G22K  Bettles           34.90  35 P      P      20 32 40.6 +0.4
        baz=263
E22K  Anaktuvuk Pass    34.96  33 P      P      20 32 41.5 +0.6
        baz=261,SNR=28
SUA   Susitna One       34.97  44 P      P      20 32 42.3 +1.2
        baz=272
MLY   Manley            35.04  38 IAmb   IAmb   20 32 43.6
        comp=Z,11nm,0.9s
MLY   Manley            35.04  38 P      P      20 32 42.7 +1.2
        baz=267
TRF   Thorofare Moun    35.17  41 P      P      20 32 43.8 +1.0
        baz=269
CUT   Chulitna          35.18  43 P      P      20 32 43.6 +0.9
        baz=271
COLD  Coldfoot          35.45  34 IAmb   IAmb   20 32 46.6
        comp=Z,12nm,0.9s
COLD  Coldfoot          35.45  34 P      P      20 32 46.1 +1.1
        baz=264,SNR=8.1
G23K  Bananza Creek     35.46  35 IAmb   IAmb   20 32 46.8
        comp=Z,13nm,1.0s
G23K  Bananza Creek     35.46  35 P      P      20 32 46.1 +1.0
        baz=265,SNR=5.6
D23K  Nanushuk River    35.50  31 IAmb   IAmb   20 32 47.4
        comp=Z,17nm,1.0s
D23K  Nanushuk River    35.50  31 P      P      20 32 46.3 +0.8
        baz=261
H23K  Yukon River       35.59  37 IAmb   IAmb   20 32 48.5
        comp=Z,18nm,1.0s
H23K  Yukon River       35.59  37 P      P      20 32 47.5 +1.3
        baz=267
I23K  Minto, Yukon-K    35.63  38 P      P      20 32 47.7 +1.2
        baz=268
C23K  Itkillik River    35.67  30 P      P      20 32 47.5 +0.6
        baz=260,SNR=21
NEA2  Nenana            35.73  39 IAmb   IAmb   20 32 49.1
        comp=Z,13nm,0.9s
NEA2  Nenana            35.73  39 P      P      20 32 48.7 +1.2
        baz=269
PMR   Palmer            35.74  44 P      P      20 32 49.0 +1.5
        baz=273
E23K  Chandalar         35.76  33 P      P      20 32 48.8 +1.0
        baz=264,SNR=19
MCK   McKinley          35.78  40        P      20 32 48.0 +0.1
MCK                               IAmb   IAmb   20 32 49.8
        comp=Z,26nm,1.3s
MCK   McKinley          35.78  40 P      P      20 32 48.0 +0.1
MCK                               pmax   pmax
        comp=Z,26nm,1.3s
MCK   McKinley          35.78  40 P      P      20 32 48.7 +0.8
        baz=270,SNR=6.4
RND   Reindeer          35.82  41 IAmb   IAmb   20 32 49.4
        comp=Z,16nm,1.0s
TOLK  Toolik Lake Re    35.85  32 P      P      20 32 49.5 +1.1
        baz=263,SNR=11
WAT1  Susitna Watana    35.96  42 P      P      20 32 50.1 +0.6
        baz=272
KNK   Knik Glacier      36.07  44 P      P      20 32 51.1 +0.7
        baz=274
SML   Sawmill           36.11  44        P      20 32 50.9 +0.2
SML   Sawmill           36.11  44 P      P      20 32 51.5 +0.8
        baz=273,SNR=8.8
WRH   Wood River Hil    36.16  39 IAmb   IAmb   20 32 53.9
        comp=Z,12nm,1.0s
E24K  Your Creek        36.19  33 P      P      20 32 52.3 +0.9
        baz=265
D24K  Happy Valley      36.19  31 IAmb   IAmb   20 32 52.8
        comp=Z,18nm,0.7s
D24K  Happy Valley      36.19  31 P      P      20 32 52.2 +0.9
        baz=263
COLA  College           36.26  38 P      P      20 32 52.1 +0.2
COLA  College           36.26  38ceP     P      20 32 51.0 -0.9
COLA                              pmax   pmax
        comp=Z,24nm,1.0s
COLA  College           36.26  38 P      P      20 32 52.8 +0.9
        baz=270
COLA  College           36.26  38 P      P      20 32 53.1 +1.1
COLA                              pP     pP     20 33 08.2 -0.9
H24K  Noodor Dome       36.27  37 IAmb   IAmb   20 32 54.4
        comp=Z,20nm,1.2s
H24K  Noodor Dome       36.27  37 P      P      20 32 53.6 +1.5
        baz=268,SNR=7.3
CCB   Clear Creek Bu    36.28  39 IAmb   IAmb   20 32 53.7
        comp=Z,21nm,1.4s
C24K  Franklin Bluff    36.31  30 P      P      20 32 52.9 +0.6
        baz=262,SNR=10
F24K  Squaw Lake        36.37  34 P      P      20 32 53.9 +1.0
        baz=266,SNR=8.4
M23K  Glacier View      36.40  44 P      P      20 32 55.2 +2.0
        baz=274
POKR  Poker Plat Res    36.44  38 P      P      20 32 54.8 +1.3
        baz=270,SNR=8.8
G24K  Hadweenzic Riv    36.47  35 P      P      20 32 54.8 +1.1
        baz=268,SNR=9.0
DHY   Denali Highway    36.49  41 IAmb   IAmb   20 32 55.3
        comp=Z,16nm,1.1s
DHY   Denali Highway    36.49  41 P      P      20 32 54.7 +0.5
        baz=272,SNR=6.1
SCM   Sheep Creek Mo    36.58  44 P      P      20 32 56.1 +1.2
        baz=274
HDA   Harding Lake      36.65  39 IAmb   IAmb   20 32 56.3
        comp=Z,10nm,0.7s
HDA   Harding Lake      36.65  39 P      P      20 32 56.0 +0.7
        baz=271
ILAR  Eielson Array     36.67  39 P      P      20 32 55.6 +0.2
        comp=Z,6.6nm,0.9s,baz=261,slow=6.9,SNR=55
ILAR                              LR     LR     20 49 57.3
        comp=Z,141nm,19.7s,baz=262,slow=39
        comp=Z,6.6nm,0.9s
ILAR  Eielson Array     36.67  39        P      20 32 54.9 -0.6
P23K  Montague Islan    36.71  47 P      P      20 32 56.9 +1.1
        baz=277
GLI   Glacier Island    36.77  45 P      P      20 32 56.9 +0.5
        baz=276
G25K  Bearman Lake      37.02  35 P      P      20 32 59.7 +1.4
        baz=269
D25K  Kavik River       37.08  31 IAmb   IAmb   20 33 00.4
        comp=Z,17nm,0.8s
D25K  Kavik River       37.08  31 P      P      20 32 59.7 +0.8
        baz=265
M24K  Tolsona, Glenn    37.10  43 P      P      20 33 00.8 +1.6
        baz=275
ENH   Enshi             37.18 259 P      P      20 32 58.3 -1.9
K24K  Donnelly Dome     37.18  40 IAmb   IAmb   20 33 00.7
        comp=Z,20nm,0.8s
K24K  Donnelly Dome     37.18  40 P      P      20 33 00.7 +0.8
        baz=273,SNR=6.3
F25K  Christian Rive    37.23  34 P      P      20 33 01.6 +1.4
        baz=268,SNR=6.0
KLU   Klutina           37.28  44 IAmb   IAmb   20 33 06.7
        comp=Z,17nm,0.9s
KLU   Klutina           37.28  44 P      P      20 33 02.2 +1.4
        baz=276
E25K  Arctic Village    37.28  33 IAmb   IAmb   20 33 03.0
        comp=Z,23nm,1.4s
E25K  Arctic Village    37.28  33 P      P      20 33 02.1 +1.4
        baz=267
J25K  Salcha River,     37.33  39 P      P      20 33 01.0 -0.1
        baz=272
PAX   Paxson            37.37  42 P      P      20 33 03.1 +1.6
        baz=274
HARP  HAARP             37.55  42 P      P      20 33 04.6 +1.6
        baz=275
RIDG  Independent Ri    37.60  40 P      P      20 33 04.1 +0.7
        baz=274
BMAR  Burnt Mountain    37.63  34        P      20 33 04.8 +1.2
C26K  Camden Bay        37.64  30 P      P      20 33 04.9 +1.4
        baz=266
LZH   Lanzhou           37.70 272 eP     P      20 33 14.3 +10
LZH                               pP     pP     20 33 19.0 -3.0
LZH                               pmax   pmax
        comp=Z,19nm,1.7s
F26K  Sheenjek River    37.80  34 IAmb   IAmb   20 33 08.1
        comp=Z,38nm,1.9s
F26K  Sheenjek River    37.80  34 P      P      20 33 06.8 +1.8
        baz=269,SNR=6.4
N25K  Chitina, Valde    37.90  44 P      P      20 33 06.8 +0.9
        baz=277
G26K  Porcupine Rive    37.94  35 IAmb   IAmb   20 33 08.7
        comp=Z,16nm,0.9s
G26K  Porcupine Rive    37.94  35 P      P      20 33 08.1 +1.9
        baz=271,SNR=7.9
DOT   Dot Lake          37.95  40 IAmb   IAmb   20 34 31.5
        comp=Z,8.5nm,0.8s
SCRK  Sand Creek        37.96  40 IAmb   IAmb   20 33 08.5
        comp=Z,36nm,1.8s
```

SCRK	**Sand Creek**	**37.96**	**40**	P	**P**	**20 33 06.7**	**+0.2**
	baz=274,SNR=6.5						
BMRM	**Bremner River**	**37.97**	**45**	P	**P**	**20 33 07.7**	**+1.1**
	baz=278						
C27K	**Jago River**	**38.03**	**31**	IAmb	IAmb	20 33 08.9	
	comp=Z,39nm,1.5s						
C27K	**Jago River**	**38.03**	**31**	P	**P**	**20 33 07.6**	**+0.7**
	baz=267						
J26L	**Joseph Creek**	**38.11**	**39**	P	**P**	**20 33 08.5**	**+0.8**
	baz=274						
I26K	**Coal Creek Min**	**38.24**	**38**	P	**P**	**20 33 10.3**	**+1.6**
	baz=273						
L26K	**Log Cabin Wild**	**38.33**	**41**	IAmb	IAmb	20 33 11.8	
	comp=Z,9.5nm,0.8s						
L26K	**Log Cabin Wild**	**38.33**	**41**	P	**P**	**20 33 11.3**	**+1.8**
	baz=276,SNR=5.2						
M26K	**Nabesna, AK**	**38.56**	**42**	IAmb	IAmb	20 33 14.0	
	comp=Z,20nm,0.9s						
M26K	**Nabesna, AK**	**38.56**	**42**	P	**P**	**20 33 13.3**	**+1.8**
	baz=277,SNR=8.0						
MCARA	**McCarthy VSAT**	**38.67**	**44**	P	**P**	**20 33 14.5**	**+2.2**
	baz=278						
NRIK	**Noril'sk**	**38.67**	**329**	LR	LR	20 49 46.0	
	comp=Z,98nm,18.2s,baz=73,slow=37						
CRQE	**Cirque**	**38.73**	**45**	P	**P**	**20 33 15.3**	**+2.3**
	baz=279,SNR=6.2						
E27K	**Coleen River**	**38.77**	**33**	P	**P**	**20 33 14.4**	**+1.3**
	baz=271						
G27K	**Doyon Strip**	**38.78**	**35**	P	**P**	**20 33 15.3**	**+2.0**
	baz=273						
GTA	**Gaotai**	**38.79**	**279**	*e*P	**P**	**20 33 15.1**	**+1.4**
GTA				pP	pP	20 33 20.5	-11
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
K27K	**Chicken**	**38.80**	**40**	P	**P**	**20 33 14.6**	**+1.2**
	baz=276						
H27K	**Steamboat Moun**	**38.86**	**36**	IAmb	IAmb	20 33 16.0	
	comp=Z,12nm,0.9s						
H27K	**Steamboat Moun**	**38.86**	**36**	P	**P**	**20 33 15.6**	**+1.6**
	baz=274,SNR=9.5						
I27K	**Kandik River**	**38.87**	**37**	P	**P**	**20 33 15.0**	**+1.0**
	baz=274						
D27M	**Malcolm River**	**38.99**	**31**	IAmb	IAmb	20 33 17.1	
	comp=Z,16nm,1.1s						
D27M	**Malcolm River**	**38.99**	**31**	P	**P**	**20 33 16.2**	**+1.1**
	baz=270						
L27K	**Beaver Creek,**	**39.01**	**41**	IAmb	IAmb	20 33 17.3	
	comp=Z,14nm,0.8s						
L27K	**Beaver Creek,**	**39.01**	**41**	P	**P**	**20 33 16.8**	**+1.5**
	baz=277,SNR=12						
BCAR	**Beaver Creek A**	**39.03**	**41**		**P**	**20 33 16.2**	**+0.8**
M27K	**Edge Creek, AK**	**39.08**	**42**	IAmb	IAmb	20 33 18.5	
	comp=Z,18nm,0.9s						
M27K	**Edge Creek, AK**	**39.08**	**42**	P	**P**	**20 33 17.6**	**+1.7**
	baz=278,SNR=7.6						
F28M	**Old Crow**	**39.44**	**34**	P	**P**	**20 33 20.0**	**+1.3**
	baz=273,SNR=5.7						
E28M	**Babbage River**	**39.52**	**32**	IAmb	IAmb	20 33 21.7	
	comp=Z,22nm,1.4s						
E28M	**Babbage River**	**39.52**	**32**	P	**P**	**20 33 20.6**	**+1.3**
	baz=272						
BVCY	**Beaver Creek**	**39.54**	**42**	P	**P**	**20 33 21.1**	**+1.5**
	baz=279,SNR=6.8						
CTG	**Chitna Glacier**	**39.54**	**44**	P	**P**	**20 33 21.3**	**+1.5**
	baz=280,SNR=7.5						
I28M	**Miner Creek**	**39.58**	**37**	IAmb	IAmb	20 33 21.9	
	comp=Z,15nm,0.8s						
I28M	**Miner Creek**	**39.58**	**37**	P	**P**	**20 33 21.2**	**+1.2**
	baz=276,SNR=12						
D28M	**Stokes Point**	**39.79**	**31**	P	**P**	**20 33 22.8**	**+1.3**
	baz=272						
YUK3	**Moose Creek**	**39.83**	**43**	P	**P**	**20 33 23.8**	**+1.6**
	baz=280						
DAWY	**Dawson**	**39.97**	**39**	P	**P**	**20 33 24.6**	**+1.5**
	baz=278						
O28M	**Mount Upton**	**40.13**	**44**	IAmb	IAmb	20 33 26.9	
	comp=Z,17nm,0.9s						
O28M	**Mount Upton**	**40.13**	**44**	P	**P**	**20 33 26.1**	**+1.3**
	baz=281						
E29M	**Blow River**	**40.14**	**33**	IAmb	IAmb	20 33 27.0	
	comp=Z,17nm,1.0s						
E29M	**Blow River**	**40.14**	**33**	P	**P**	**20 33 26.0**	**+1.6**
	baz=274,SNR=15						
H29M	**Whitestone**	**40.14**	**36**	IAmb	IAmb	20 33 27.0	
	comp=Z,11nm,0.9s						
H29M	**Whitestone**	**40.14**	**36**	P	**P**	**20 33 25.7**	**+1.1**
	baz=276,SNR=6.0						
G29M	**Pine Creek**	**40.21**	**35**	IAmb	IAmb	20 33 27.8	
	comp=Z,20nm,0.9s						
G29M	**Pine Creek**	**40.21**	**35**	P	**P**	**20 33 26.7**	**+1.6**
	baz=276,SNR=7.8						
YUK8	**Steele Glacier**	**40.24**	**44**	P	**P**	**20 33 27.1**	**+1.4**
	baz=281						
I29M	**Ogilvie Camp,**	**40.26**	**37**	IAmb	IAmb	20 33 27.4	
	comp=Z,12nm,0.8s						
I29M	**Ogilvie Camp,**	**40.26**	**37**	P	**P**	**20 33 26.7**	**+1.1**
	baz=277,SNR=9.8						
M29M	**Somme Creek**	**40.64**	**42**	IAmb	IAmb	20 33 31.2	
	comp=Z,10nm,0.8s						
M29M	**Somme Creek**	**40.64**	**42**	P	**P**	**20 33 30.4**	**+1.6**
	baz=281,SNR=5.4						
L29M	**L29M**	**40.67**	**41**	IAmb	IAmb	20 33 31.7	
	comp=Z,20nm,0.8s						
L29M	**L29M**	**40.67**	**41**	P	**P**	**20 33 30.7**	**+1.8**
	baz=280,SNR=12						
CD2	**Chengdu**	**40.69**	**265**	P	**P**	**20 33 29.9**	**+0.4**
CD2				pmax	pmax		
	comp=Z,40nm,0.8s						
YUK4	**Talbot Arm**	**40.76**	**43**	P	**P**	**20 33 31.6**	**+1.7**
	baz=282						
EPYK	**Eagle Plains**	**40.78**	**36**	IAmb	IAmb	20 33 32.0	
	comp=Z,19nm,1.1s						
EPYK	**Eagle Plains**	**40.78**	**36**	P	**P**	**20 33 31.2**	**+1.4**
	baz=278,SNR=5.1						
K29M	**Barlow Dome**	**40.82**	**39**	IAmb	IAmb	20 33 32.0	
	comp=Z,31nm,1.6s						
K29M	**Barlow Dome**	**40.82**	**39**	P	**P**	**20 33 31.5**	**+1.3**
	baz=280						
G30M	**tAoh Zraii Nji**	**40.91**	**35**	IAmb	IAmb	20 33 32.7	
	comp=Z,50nm,1.9s						
G30M	**tAoh Zraii Nji**	**40.91**	**35**	P	**P**	**20 33 31.9**	**+1.1**
	baz=277,SNR=5.6						
F30M	**Barrier River**	**41.00**	**34**	IAmb	IAmb	20 33 34.4	
	comp=Z,29nm,1.1s						
F30M	**Barrier River**	**41.00**	**34**	P	**P**	**20 33 32.9**	**+1.3**
	baz=277,SNR=9.7						
O29M	**Mount Kennedy**	**41.01**	**45**	P	**P**	**20 33 33.4**	**+1.5**
	baz=283						
I30M	**Mount Dempster**	**41.09**	**37**	IAmb	IAmb	20 33 34.4	
	comp=Z,23nm,0.8s						
I30M	**Mount Dempster**	**41.09**	**37**	P	**P**	**20 33 33.8**	**+1.3**
	baz=279,SNR=17						
J30M	**Hart River**	**41.21**	**38**	IAmb	IAmb	20 34 50.9	
	comp=Z,21nm,1.6s						
J30M	**Hart River**	**41.21**	**38**	P	**P**	**20 33 34.8**	**+1.4**
	baz=280						
M30M	**Minto, Yukon**	**41.37**	**41**	P	**P**	**20 33 36.4**	**+1.7**
	baz=282						
HYT	**Haines Junctio**	**41.41**	**44**		**P**	**20 33 37.0**	**+1.8**
HYT				IAmb	IAmb	20 33 37.7	
	comp=Z,12nm,0.9s						
HYT	**Haines Junctio**	**41.41**	**44**	P	**P**	**20 33 36.8**	**+1.6**
	baz=283						
N30M	**Aishikik Lake**	**41.47**	**43**	P	**P**	**20 33 37.2**	**+1.7**
	baz=283						
MAYO	**Mayo, Yukon**	**41.57**	**40**	P	**P**	**20 33 37.0**	**+0.6**
MAYO	**Mayo, Yukon**	**41.57**	**40**	P	**P**	**20 33 38.2**	**+1.8**
	baz=281						
P29M	**Windy Craggy**	**41.58**	**46**	P	**P**	**20 33 38.9**	**+2.5**
	baz=284						
G31M	**Satah River**	**41.67**	**35**		**P**	**20 33 37.7**	**+0.6**
G31M				IAmb	IAmb	20 33 38.3	
	comp=Z,24nm,1.2s						
G31M	**Satah River**	**41.67**	**35**	P	**P**	**20 33 37.9**	**+0.9**
	baz=279,SNR=5.9						
INK	**Inuvik**	**41.76**	**32**	LR	LR	20 51 37.1	
	comp=Z,117nm,19.5s,baz=260,slow=37						
INK	**Inuvik**	**41.76**	**32**	IAmb	IAmb	20 33 39.7	
	comp=Z,16nm,0.9s						
INK	**Inuvik**	**41.76**	**32**	P	**P**	**20 33 38.7**	**+1.0**
	baz=278,SNR=12						
F31M	**Tsiigehtchic**	**41.80**	**34**	IAmb	IAmb	20 33 40.0	
	comp=Z,17nm,1.0s						
F31M	**Tsiigehtchic**	**41.80**	**34**	P	**P**	**20 33 39.0**	**+0.9**
	baz=279,SNR=11						
H31M	**Peel River**	**41.83**	**36**	IAmb	IAmb	20 33 40.4	
	comp=Z,15nm,0.9s						
H31M	**Peel River**	**41.83**	**36**	P	**P**	**20 33 39.5**	**+1.1**
	baz=280,SNR=6.0						
P30M	**Million Dollar**	**41.84**	**45**	P	**P**	**20 33 40.7**	**+2.2**
	baz=284						
N31M	**Braeburn, Yuko**	**42.07**	**43**	P	**P**	**20 33 42.8**	**+2.3**
	baz=284						
O30N	**Mendenhall**	**42.10**	**44**	P	**P**	**20 33 43.0**	**+2.4**
	baz=284						
ZALV	**Zalesovo Beam**	**42.47**	**306**	P	**P**	**20 33 41.6**	**-2.0**
	comp=Z,0.3nm,0.4s,baz=59,slow=6.3,SNR=4.7						
ZALV				PcP	**PcP**	**20 35 33.5**	**-1.7**
	comp=Z,1.3nm,0.7s,baz=56,slow=3.7,SNR=5.4						
	comp=Z,0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**42.47**	**306**	*e*P	**P**	**20 33 47.2**	**+3.5**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
M31M	**Drury Creek, Y**	**42.55**	**41**	IAmb	IAmb	20 33 46.9	
	comp=Z,14nm,0.9s						
M31M	**Drury Creek, Y**	**42.55**	**41**	P	**P**	**20 33 46.4**	**+2.1**
	baz=284,SNR=6.3						
WHY	**Whitehorse**	**42.70**	**44**	P	**P**	**20 33 47.9**	**+2.2**
	baz=285						
S31K	**Pelican**	**42.78**	**48**	P	**P**	**20 33 48.9**	**+2.8**
	baz=287						
P32M	**Atlin**	**43.56**	**45**	P	**P**	**20 33 54.2**	**+1.7**
	baz=287						
P33M	**Teslin, Yukon**	**43.81**	**44**		**P**	**20 33 56.0**	**+1.5**
P33M				IAmb	IAmb	20 33 57.9	
	comp=Z,30nm,1.1s						
P33M	**Teslin, Yukon**	**43.81**	**44**	P	**P**	**20 33 56.3**	**+1.8**
	baz=287,SNR=8.8						
A36M	**Sachs Harbour**	**43.94**	**26**	P	**P**	**20 33 56.7**	**+1.4**
	baz=281,SNR=15						
QIZ	**Qiongzhong**	**44.67**	**247**	P	**P**	**20 34 03.9**	**+2.1**
QIZ				S	**S**	**20 40 34.0**	**+1.3**
QIZ				pmax	pmax		
	comp=Z,14nm,2.0s						
QIZ				LR	LR		
	comp=N,130nm,13.7s						
QIZ				LR	LR		
	comp=E,110nm,11.0s						
QIZ				LR	LR		
	comp=Z,120nm,16.5s						
PZH	**PanZhiHua**	**44.83**	**262**	P	**P**	**20 34 02.8**	**-0.3**
C36M	**Paulatuk**	**44.92**	**30**	P	**P**	**20 34 03.8**	**+0.7**
	baz=285,SNR=9.0						
R33M	**Jennings River**	**44.95**	**45**	IAmb	IAmb	20 34 07.0	
	comp=Z,15nm,0.9s						
R33M	**Jennings River**	**44.95**	**45**	P	**P**	**20 34 06.1**	**+2.4**
	baz=289,SNR=5.2						
S34M	**Telegraph Cree**	**45.37**	**47**	P	**P**	**20 34 09.6**	**+2.7**
	baz=291						
WTLY	**Watson Lake, Y**	**45.75**	**43**	IAmb	IAmb	20 34 12.9	
	comp=Z,9.3nm,0.8s						
WTLY	**Watson Lake, Y**	**45.75**	**43**	P	**P**	**20 34 12.1**	**+2.2**
	baz=290						
DAV	**Davao City (W)**	**45.93**	**219**	LR	LR	20 53 15.8	
	comp=Z,54nm,20.8s,baz=24,slow=36						
V35K	**Ketchikan**	**46.06**	**50**	P	**P**	**20 34 16.0**	**+3.6**
	baz=293						
MK31	**Makanchi Array**	**46.78**	**297**⇓	*e*P	**P**	**20 34 16.7**	**-1.4**
MKAR	**Makanchi Array**	**46.78**	**297**	P	**P**	**20 34 16.8**	**-1.4**
	comp=Z,0.7nm,0.5s,baz=66,slow=6.8,SNR=10						
MKAR				LR	LR	20 55 10.1	
	comp=Z,97nm,19.0s,baz=52,slow=38						
	comp=Z,0.7nm,0.5s						
MKAR	**Makanchi Array**	**46.78**	**297**	*e*P	**P**	**20 34 17.0**	**-1.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	**Kurchatov**	**47.22**	**304**	P	**P**	**20 34 20.2**	**-1.2**
KURK	**Kurchatov**	**47.22**	**304**⇑	*e*P	**P**	**20 34 20.1**	**-1.3**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	**Kurchatov**	**47.22**	**304**	*e*P	**P**	**20 34 20.1**	**-1.3**
LIRD	**Liard River Hi**	**47.27**	**43**	P	**P**	**20 34 24.3**	**+2.5**
	baz=293						
KURBB	**Kurchatov Arra**	**47.31**	**303**	P	**P**	**20 34 20.2**	**-1.9**
	comp=Z,1.3nm,0.5s,baz=70,slow=8.5,SNR=5.3						
	comp=Z,1.3nm,0.5s						
TOAD	**Toad River Com**	**47.91**	**44**	P	**P**	**20 34 29.2**	**+2.4**
	baz=294,SNR=8.5						
KOTAN	**Kotaneelee Air**	**47.95**	**42**	P	**P**	**20 34 28.6**	**+1.6**
	baz=294						
BBB	**Bella Bella**	**49.27**	**53**	LR	LR	20 57 09.0	
	comp=Z,28nm,18.2s,baz=250,slow=38						
LSA	**Lhasa**	**50.09**	**273**	IAmb	IAmb	20 34 46.8	
	comp=Z,5.2nm,0.6s						
LSA	**Lhasa**	**50.09**	**273**	P	**P**	**20 34 40.8**	**-3.5**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LSA	**Lhasa**	**50.09**	**273**	P	**P**	**20 34 45.7**	**+1.4**
LSA				pP	**pP**	**20 35 01.5**	**-1.0**
JAY	**Jayapura**	**50.20**	**196**	LR	LR	20 57 54.1	
	comp=Z,28nm,18.5s,baz=289,slow=38						
BVAR	**Borovoye Array**	**50.72**	**309**	P	**P**	**20 34 48.8**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=78,slow=4.9,SNR=1.8						
BVAR				PcP	**PcP**	**20 36 03.4**	**-0.9**
	comp=Z,1.3nm,0.5s,baz=72,slow=4.7,SNR=4.2						
BVAR				LR	LR	20 57 56.6	
	comp=Z,72nm,20.1s,baz=58,slow=38						
	comp=Z,0.5nm,0.4s						
BORK	**Borovoye**	**50.75**	**309**⇓	*e*P	**P**	**20 34 49.5**	**+1.1**
BORK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
YKAW3	**Yellowknife Wh**	**51.01**	**37**	P	**P**	**20 34 50.5**	**+0.4**
YKAW3				IAmb	IAmb	20 34 51.9	
	comp=Z,35nm,1.9s						
YKA	**Yellowknife Ar**	**51.04**	**37**	P	**P**	**20 34 50.5**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=300,slow=8.2,SNR=16						
YKA				PcP	**PcP**	**20 36 05.0**	**-0.3**
	comp=Z,1.1nm,0.8s,baz=296,slow=4.4,SNR=5.4						
YKA				LR	LR	20 58 22.4	
	comp=Z,93nm,20.4s,baz=53,slow=38						
	comp=Z,2.0nm,0.8s						
YKA	**Yellowknife Ar**	**51.04**	**37**	*e*P	**P**	**20 34 51.3**	**+0.8**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CHTO	**Chiang Mai**	**51.93**	**256**		**P**	**20 34 58.4**	**+0.7**
CHTO				IAmb	IAmb	20 34 59.5	
	comp=Z,7.7nm,0.8s						
CHTO	**Chiang Mai**	**51.93**	**256**	P	**P**	**20 34 58.4**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CHTO	**Chiang Mai**	**51.93**	**256**	P	**P**	**20 34 58.5**	**+0.9**
SHL	**Shillong**	**52.18**	**268**		**P**	**20 34 59.5**	**-0.2**
SHL				IAmb	IAmb	20 35 17.6	
	comp=Z,10nm,0.7s						
SHL	**Shillong**	**52.18**	**268**	P	**P**	**20 34 59.5**	**-0.2**
SHL				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**52.19**	**256**	P	**P**	**20 35 00.7**	**+1.1**
	comp=Z,3.3nm,0.7s,baz=36,slow=7.4,SNR=41						
CMAR				LR	LR	20 59 08.2	
	comp=Z,87nm,19.6s,baz=55,slow=38						
	comp=Z,3.3nm,0.7s						
SPITS	**Spitsbergen Ar**	**52.59**	**350**	P	**P**	**20 34 59.3**	**-2.5**
	comp=Z,12nm,1.0s,baz=67,slow=8.0,SNR=6.1						
SPITS				LR	LR	20 58 44.5	
	comp=Z,75nm,19.0s,baz=30,slow=38						
	comp=Z,12nm,1.0s						
LLLB	**Lillooet**	**53.45**	**52**	P	**P**	**20 35 08.1**	**-0.4**
LLLB				IAmb	IAmb	20 35 10.6	
	comp=Z,9.7nm,0.9s						
AAK	**Ala-Archa**	**53.67**	**296**	LR	LR	20 58 59.6	
	comp=Z,61nm,18.1s,baz=50,slow=37						
AAK	**Ala-Archa**	**53.67**	**296**	P	**P**	**20 35 09.4**	**-1.0**
AAK	**Ala-Archa**	**53.67**	**296**⇓	*e*P	**P**	**20 35 09.1**	**-1.3**
AAK				pmax	pmax		
	comp=Z,6.0nm,2.5s						
AAK	**Ala-Archa**	**53.67**	**296**	*e*P	**P**	**20 35 09.1**	**-1.3**
TULEG	**Thule**	**54.17**	**11**	IAmb	IAmb	20 35 13.0	
	comp=Z,13nm,0.9s						
BRDH	**Bariadhala**	**54.25**	**266**	LR	LR	21 00 55.9	
	comp=Z,93nm,18.2s,baz=274,slow=39						
ARTI	**Arti**	**55.00**	**317**	LR	LR	21 00 39.0	
	comp=Z,72nm,19.1s,baz=48,slow=38						
PMG	**Port Moresby**	**56.12**	**187**	LR	LR	20 55 29.1	
	comp=Z,46nm,20.2s,baz=328,slow=32						
BLKN	**Baker Lake**	**56.96**	**29**		**P**	**20 35 33.6**	**+0.2**
BLKN				IAmb	IAmb	20 36 24.5	
	comp=Z,25nm,1.6s						
F07A	**Phinny Hill Vi**	**57.13**	**56**	IAmb	IAmb	20 35 37.6	
	comp=Z,12nm,0.8s						
NEW	**Newport**	**57.33**	**53**	P	**P**	**20 35 35.1**	**-1.3**
	comp=Z,3.4nm,0.7s,baz=313,slow=8.1,SNR=4.7						
	comp=Z,3.4nm,0.7s						
NEW	**Newport**	**57.33**	**53**	IAmb	IAmb	20 35 38.4	
	comp=Z,17nm,1.3s						
KIRV	**Kirov**	**57.67**	**323**	LR	LR	21 03 23.1	
	comp=Z,85nm,19.5s,baz=27,slow=39						
E09A	**Wood Farm, Sta**	**57.78**	**55**	IAmb	IAmb	20 35 41.7	
	comp=Z,12nm,0.9s						
ARCES	**ARCESS Array B**	**57.80**	**341**	P	**P**	**20 35 37.1**	**-2.3**
	comp=Z,2.9nm,1.0s,baz=33,slow=9.2,SNR=5.0						
ARCES				LR	LR	21 03 39.1	
	comp=Z,106nm,20.2s,baz=42,slow=39						
	comp=Z,2.9nm,1.0s						
ARCES	**ARCESS Array B**	**57.80**	**341**	*e*P	**P**	**20 35 42.2**	**+2.8**
ARCES				pmax	pmax		
	comp=Z,6.0nm,1.1s						
G08A	**Pilot Rock**	**58.03**	**56**	IAmb	IAmb	20 35 43.9	
	comp=Z,8.2nm,1.0s						
AB31	**Akbulak array**	**58.29**	**310**		**P**	**20 35 41.1**	**-1.9**
GAR	**Garm**	**58.35**	**295**	IAmb	IAmb	20 35 56.1	
	comp=Z,15nm,1.4s						
AKTO	**Aktyubinsk**	**58.59**	**312**	LR	LR	21 03 14.3	
	comp=Z,172nm,18.9s,baz=86,slow=38						
F10A	**Beach Ranch, E**	**58.61**	**55**	IAmb	IAmb	20 35 48.2	
	comp=Z,27nm,1.9s						
BMO	**Blue Mountains**	**59.23**	**56**	IAmb	IAmb	20 35 51.8	
	comp=Z,7.1nm,0.9s						
KAPI	**Kappang**	**59.27**	**219**	LR	LR	21 03 00.7	
	comp=Z,18nm,19.7s,baz=28,slow=38						
CHGR	**Chuyangaron**	**59.28**	**295**		**P**	**20 35 49.9**	**-0.3**
CHGR	**Chuyangaron**	**59.28**	**295**	P	**P**	**20 35 49.9**	**-0.3**
CHGR				pmax	pmax		
	comp=Z,33nm,1.7s						
MSO	**Missoula**	**59.92**	**52**	IAmb	IAmb	20 35 56.7	
	comp=Z,14nm,0.9s						
WVOR	**Wild Horse Val**	**59.92**	**59**	IAmb	IAmb	20 35 57.3	
	comp=Z,13nm,1.1s						
WVOR	**Wild Horse Val**	**59.92**	**59**	P	**P**	**20 35 56.6**	**+2.0**
WVOR				pmax	pmax		
	comp=Z,14nm,2.2s						
BEKR	**Beckworth**	**60.46**	**62**	IAmb	IAmb	20 36 00.6	
	comp=Z,6.5nm,1.0s						
SUMG	**Summit**	**60.72**	**4**		**P**	**20 35 59.0**	**-0.9**
SUMG	**Summit**	**60.72**	**4**	P	**P**	**20 35 59.0**	**-0.9**
SUMG				pmax	pmax		
	comp=Z,38nm,1.0s						
FFC	**Flin Flon**	**60.87**	**40**		**P**	**20 36 01.0**	**+0.3**
FFC				IAmb	IAmb	20 36 02.4	
	comp=Z,16nm,1.3s						
FFC	**Flin Flon**	**60.87**	**40**	P	**P**	**20 36 01.0**	**+0.3**
FFC				pmax	pmax		
	comp=Z,16nm,1.3s						
FFC	**Flin Flon**	**60.87**	**40**	P	**P**	**20 36 01.4**	**+0.7**
MFID	**Camas Ranch**	**60.95**	**56**		**P**	**20 36 01.9**	**+0.3**
MFID				IAmb	IAmb	20 36 04.0	
	comp=Z,6.9nm,0.9s						
PAHR	**Pah Rah Range**	**61.15**	**62**	IAmb	IAmb	20 36 05.5	
	comp=Z,24nm,1.7s						
FCC	**Fort Churchill**	**61.37**	**33**		**P**	**20 36 03.8**	**-0.2**
FCC	**Fort Churchill**	**61.37**	**33**	P	**P**	**20 36 03.8**	**-0.2**
FCC				pmax	pmax		
	comp=Z,53nm,2.0s						
EGMT	**Eagleton**	**61.41**	**49**		**P**	**20 36 05.4**	**+0.8**
HLID	**Hailey**	**61.67**	**56**		**P**	**20 36 07.7**	**+1.2**
LHV	**Little Huntoon**	**62.59**	**62**	IAmb	IAmb	20 36 15.8	
	comp=Z,25nm,1.4s						
NVAR	**Mina Array Bea**	**62.60**	**62**	P	**P**	**20 36 14.7**	**+1.8**
	comp=Z,1.9nm,0.6s,baz=300,slow=7.0,SNR=14						
NVAR				LR	LR	21 01 25.4	
	comp=Z,29nm,19.3s,baz=285,slow=34						
	comp=Z,1.9nm,0.6s						
YHL	**Hebgen Lake**	**62.66**	**53**	IAmb	IAmb	20 36 15.2	
	comp=Z,7.2nm,0.9s						
YHB	**Horse Butte**	**62.71**	**53**	IAmb	IAmb	20 36 16.1	
	comp=Z,13nm,1.0s						
YMR	**Madison River**	**62.89**	**53**	IAmb	IAmb	20 36 40.0	
	comp=Z,11nm,1.2s						
ELK	**Elko**	**62.97**	**58**	P	**P**	**20 36 17.0**	**+1.7**
	comp=Z,1.7nm,0.8s,baz=322,slow=10,SNR=8.1						
ELK				LR	LR	21 00 30.7	
	comp=Z,32nm,21.6s,baz=309,slow=33						
	comp=Z,1.7nm,0.8s						
YNR	**Norris Junctio**	**63.02**	**53**	IAmb	IAmb	20 36 19.3	
	comp=Z,15nm,1.4s						
LKWY	**Lake**	**63.27**	**53**	IAmb	IAmb	20 36 21.0	
	comp=Z,8.6nm,0.9s						
H17A	**Grant Village**	**63.28**	**53**	IAmb	IAmb	20 36 21.4	
	comp=Z,12nm,1.0s						
PSI	**Prapat**	**63.91**	**244**	LR	LR	21 05 09.3	
	comp=Z,23nm,21.7s,baz=16,slow=37						
DGMT	**Dagmar**	**63.95**	**46**	IAmb	IAmb	20 36 23.2	
	comp=Z,19nm,0.8s						
FINES	**FINESS Array B**	**63.97**	**335**	P	**P**	**20 36 20.4**	**-0.8**
	comp=Z,6.9nm,0.7s,baz=32,slow=7.8,SNR=22						
FINES				LR	LR	21 06 49.0	
	comp=Z,98nm,18.4s,baz=71,slow=38						
	comp=Z,6.9nm,0.7s						
LAO	**LASA Array**	**64.11**	**49**	IAmb	IAmb	20 36 25.0	
	comp=Z,17nm,0.8s						
HWUT	**Hardware Ranch**	**64.54**	**56**	IAmb	IAmb	20 36 28.1	
	comp=Z,19nm,1.4s						
DUG	**Dugway, Tooele**	**64.74**	**58**	IAmb	IAmb	20 36 29.4	
	comp=Z,12nm,1.1s						
DUG	**Dugway, Tooele**	**64.74**	**58**	P	**P**	**20 36 28.5**	**+1.7**
DUG				pmax	pmax		
	comp=Z,12nm,1.1s						
TPNV	**Topopah Spring**	**64.80**	**62**	IAmb	IAmb	20 36 29.9	
	comp=Z,31nm,1.7s						
BW06	**Boulder Array**	**64.90**	**54**	IAmb	IAmb	20 36 30.0	
	comp=Z,9.2nm,0.8s						
PD31	**Pinedale Array**	**64.90**	**54**	IAmb	IAmb	20 36 30.0	
	comp=Z,9.2nm,0.8s						
PDAR	**Pinedale Array**	**64.90**	**54**	P	**P**	**20 36 29.1**	**+1.2**
	comp=Z,6.3nm,0.8s,baz=298,slow=1.5,SNR=57						
PDAR				LR	LR	21 04 51.2	
	comp=Z,21nm,20.5s,baz=330,slow=36						
	comp=Z,6.3nm,0.8s						
GWY	**Greenwater Val**	**65.04**	**63**	IAmb	IAmb	20 36 31.1	
	comp=Z,24nm,1.7s						
QSM	**Queen of Sheba**	**65.06**	**63**	IAmb	IAmb	20 36 31.2	
	comp=Z,25nm,1.8s						
FRB	**Frobisher Bay**	**65.12**	**19**	LR	LR	21 10 14.4	
	comp=Z,113nm,18.1s,baz=326,slow=41						
SFJD	**Kangerlussuaq**	**65.19**	**10**	LR	LR	21 05 39.5	
	comp=Z,138nm,20.7s,baz=349,slow=37						
OBN	**Obninsk**	**65.21**	**325**	LR	LR	21 07 13.0	
	comp=Z,91nm,19.0s,baz=11,slow=38						
P18A	**Preston Nutter**	**66.59**	**57**	IAmb	IAmb	20 38 43.0	
	comp=Z,9.9nm,0.7s						
K22A	**Casper**	**66.65**	**52**	IAmb	IAmb	20 36 41.5	
	comp=Z,8.9nm,0.8s						
ULM	**Lac du Bonnet**	**66.65**	**41**	P	**P**	**20 36 38.8**	**0.0**
	comp=Z,2.3nm,0.6s,baz=338,slow=11,SNR=3.9						
ULM				LR	LR	21 06 54.4	
	comp=Z,49nm,20.1s,baz=7.0,slow=37						
	comp=Z,2.3nm,0.6s						
CTA	**Charters Tower**	**66.78**	**187**	LR	LR	21 02 55.2	
	comp=Z,19nm,20.6s,baz=34,slow=33						
SRU	**San Rafael Swe**	**66.78**	**57**	IAmb	IAmb	20 36 42.1	
	comp=Z,14nm,0.9s						
PFO	**Pinyon Flats O**	**66.86**	**65**	LR	LR	21 04 55.3	
	comp=Z,37nm,18.8s,baz=282,slow=35						
RSSD	**Black Hills**	**66.97**	**50**		**P**	**20 36 41.5**	**+0.3**
RSSD				IAmb	IAmb	20 36 42.8	
	comp=Z,14nm,0.8s						
RSSD	**Black Hills**	**66.97**	**50**	P	**P**	**20 36 41.5**	**+0.3**
RSSD				pmax	pmax		
	comp=Z,14nm,0.8s						
RSSD	**Black Hills**	**66.97**	**50**	P	**P**	**20 36 42.1**	**+0.9**
CBX	**Cerro Bola**	**67.59**	**66**	IAmb	IAmb	20 36 46.5	
	comp=Z,10.0nm,0.6s						
PV21	**Cone Mtn., Par**	**68.04**	**57**	IAmb	IAmb	20 36 50.2	
	comp=Z,10nm,0.9s						
PV22	**Blue Mesa, Par**	**68.17**	**57**	IAmb	IAmb	20 36 50.8	
	comp=Z,12nm,1.0s						
NB2	**NORSAR Subarra**	**68.18**	**341**	P	**P**	**20 36 47.3**	**-1.0**
	comp=Z,2.8nm,0.6s,baz=27,slow=6.5						
NOA	**NORSAR Array B**	**68.18**	**341**	P	**P**	**20 36 47.6**	**-0.6**
	comp=Z,5.3nm,0.7s,baz=28,slow=6.0,SNR=21						
NOA				LR	LR	21 10 36.9	
	comp=Z,70nm,19.3s,baz=20,slow=39						
	comp=Z,5.3nm,0.7s						
NOA	**NORSAR Array B**	**68.18**	**341**	*e*P	**P**	**20 36 47.6**	**-0.6**
NOA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PV17	**East Wray Mesa**	**68.24**	**57**	IAmb	IAmb	20 36 51.3	
	comp=Z,16nm,0.8s						
PV16	**Nyswonger Mesa**	**68.25**	**57**	IAmb	IAmb	20 39 15.6	
	comp=Z,20nm,1.0s						
PV03	**Paradox Valley**	**68.33**	**57**	IAmb	IAmb	20 39 13.4	
	comp=Z,12nm,0.5s						
NORES	**NORESS Array B**	**68.38**	**341**	P	**P**	**20 36 48.4**	**-1.0**

HFS	Hagfors	68.40	339	P	P	20 36 49.1	-0.5
	comp=Z,6.8nm,0.5s,baz=52,slow=5.8,SNR=31						
HFS				LR	LR	21 09 15.5	
	comp=Z,100nm,18.5s,baz=66,slow=38						
	comp=Z,6.8nm,0.5s						
PV13	Radium Mtn., P	68.41	57	IAmb	IAmb	20 39 11.4	
	comp=Z,26nm,1.0s						
WRA	Warramunga Arr	68.44	199	P	P	20 36 51.1	+0.9
	comp=Z,2.3nm,0.7s,baz=18,slow=6.3,SNR=3.6						
	comp=Z,2.3nm,0.7s						
PV01	Paradox Valley	68.57	57	IAmb	IAmb	20 39 04.3	
	comp=Z,16nm,1.1s						
BORG	Borgarnes	68.76	357	LR	LR	21 05 58.8	
	comp=Z,39nm,21.2s,baz=349,slow=35						
MNK	Minsk	68.91	329	*i* P	P	20 36 52.3	-0.6
MNK				*i* *PP	pP	20 37 08.6	-3.3
MNK				*i* *SP	PcP	20 37 13.4	-3.4
MNK				*i*		20 37 15.8	
MNK				*i*		20 39 25.1	
MNK				*i* PPP	PPP	20 41 05.8	
MNK				*i* S	S	20 45 53.3	+2.3
MNK				*i* *SS	sS	20 46 21.5	-1.5
MNK				*i* SS	SS	20 50 21.0	+4.5
MNK				pmax	pmax		
	comp=E,9.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,7.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,11nm,0.8s						
FITZ	Fitzroy Crossi	69.04	208	P	P	20 36 53.7	-0.3
	comp=Z,4.1nm,0.8s,baz=31,slow=5.9,SNR=2.4						
FITZ				LR	LR	21 06 17.4	
	comp=Z,14nm,21.4s,baz=5.0,slow=35						
	comp=Z,4.1nm,0.8s						
ISCO	Idaho Springs	69.10	54	P	P	20 36 55.4	+0.7
DZM	Mont Dzumac	69.58	167	LR	LR	21 00 21.9	
	comp=Z,62nm,21.6s,baz=12,slow=30						
KIV	Kislovodsk	70.67	314	*e*P	P	20 37 02.6	-1.4
KIV				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,60nm,18.0s						
KBZ	Khabaz	70.73	314	P	P	20 37 04.2	0.0
	comp=Z,2.3nm,0.9s,baz=94,slow=4.9,SNR=6.4						
KBZ				LR	LR	21 12 45.2	
	comp=Z,80nm,18.5s,baz=28,slow=40						
	comp=Z,2.3nm,0.9s						
KBZ	Khabaz	70.73	314	*e*P	P	20 37 06.5	+2.3
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ECSD	EROS Data Cent	71.03	46	IAmb	IAmb	20 37 07.2	
	comp=Z,12nm,1.0s						
AK03	Malin Array Si	71.43	326	P	P	20 37 06.8	-1.5
AK23	Malin Array Si	71.44	326	P	P	20 37 07.1	-1.3
AKASG	Malin Array Be	71.45	326	P	P	20 37 07.1	-1.3
	comp=Z,3.7nm,0.4s,baz=36,slow=6.3,SNR=17						
AKASG				LR	LR	21 11 00.1	
	comp=Z,87nm,18.3s,baz=46,slow=38						
	comp=Z,3.7nm,0.4s						
AKASG	Malin Array Be	71.45	326	P	P	20 37 07.1	-1.3
AKASG				pmax	pmax		
	comp=Z,5.0nm,1.3s						
AKBB	Malin Array Si	71.45	326		P	20 37 07.0	-1.4
AKBB				IAmb	IAmb	20 37 08.3	
	comp=Z,9.1nm,0.8s						
AKBB	Malin Array Si	71.45	326	*de*P	P	20 37 07.4	-1.0
AKBB	Malin Array Si	71.45	326	P	P	20 37 06.7	-1.7
AK04	Malin Array Si	71.46	326	P	P	20 37 06.9	-1.6
AK21	Malin Array Si	71.46	326	P	P	20 37 06.9	-1.6
AK22	Malin Array Si	71.46	326	P	P	20 37 06.2	-2.3
KIEV	Kiev	71.46	326		P	20 37 06.9	-1.6
KIEV	Kiev	71.46	326	⇓P	P	20 37 07.4	-1.1
KIEV	Kiev	71.46	326	⇓P	P	20 37 07.4	-1.1
KIEV	Kiev	71.46	326	P	P	20 37 07.6	-0.9
KIEV				PcP	PcP	20 37 27.2	-0.5
KIEV				sP	pP	20 37 31.0	+3.4
AK01	Malin Array Si	71.46	326	P	P	20 37 07.0	-1.5
T25A	Trinidad	71.63	55	IAmb	IAmb	20 37 59.3	
	comp=Z,12nm,0.5s						
ANMO	Albuquerque	72.00	58	LR	LR	21 05 09.7	
	comp=Z,40nm,22.0s,baz=324,slow=33						
ASAR	Alice Springs	72.14	198	P	P	20 37 14.7	+1.9
	comp=Z,3.4nm,0.7s,baz=14,slow=4.9,SNR=17						
ASAR				LR	LR	21 07 16.4	
	comp=Z,22nm,21.6s,baz=354,slow=34						
	comp=Z,3.4nm,0.7s						
ASAR	Alice Springs	72.14	198		P	20 37 14.1	+1.3
ASAR	Alice Springs	72.14	198	P	P	20 37 14.1	+1.3
PALK	Pallekele	72.51	262	LR	LR	21 11 19.1	
	comp=Z,34nm,20.6s,baz=52,slow=38						
LUBAR	Lubar, Ukraine	72.64	326	P	P	20 37 14.1	-1.5
SCHQ	Schefferville	73.39	23	P	P	20 37 19.7	-0.3
	comp=Z,3.8nm,0.9s,baz=305,slow=12,SNR=1.7						
SCHQ				LR	LR	21 11 48.6	
	comp=Z,56nm,20.0s,baz=303,slow=38						
	comp=Z,3.8nm,0.9s						
KMPD	K-Podol'skiy	74.24	326	P	P	20 37 24.3	-0.7
KMPD				P	P	20 37 23.6	-1.4
INKA	Innaminka	74.93	191	P	P	20 37 30.8	+1.8
STHS	Stebnicka Huta	75.43	330	*e*P	P	20 37 31.6	-0.3
STHS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
STHS	Stebnicka Huta	75.43	330	*e*P	P	20 37 31.6	-0.3
SMWD	Samnorwood	75.43	54	IAmb	IAmb	20 40 06.3	
	comp=Z,14nm,0.8s						
BURAR	Bucovina Array	75.49	326		P	20 37 31.5	-0.9
BURAR				IAmb	IAmb	20 37 33.0	
	comp=Z,8.9nm,0.7s						
BURAR	Bucovina Array	75.49	326	⇑P	P	20 37 32.3	-0.1
BURAR	Bucovina Array	75.49	326	⇑P	P	20 37 32.3	-0.1
P38A	Dawn	75.63	47	IAmb	IAmb	20 37 33.8	
	comp=Z,13nm,1.0s						
TESR	Tescani	75.85	325	⇓P	P	20 37 33.7	-0.6
TRSU	Trosnyk	75.94	328	P	P	20 37 34.5	-0.2
DKNS	Dickens	76.10	56	IAmb	IAmb	20 38 27.6	
	comp=Z,13nm,0.8s						
T35A	Sooner Cattle	76.12	51	IAmb	IAmb	20 37 37.0	
	comp=Z,16nm,1.0s						
STEB	Steborice	76.15	332	*e*P	P	20 37 36.0	+0.1
DPC	Dobruska-Polom	76.25	333	*e*P	P	20 37 36.3	-0.3
DPC	Dobruska-Polom	76.25	333	*e*P	P	20 37 36.3	-0.3
ODBI	Odobesti	76.30	324	⇑P	P	20 37 38.0	+1.1
EKA	Eskdalemuir Ar	76.31	346	P	P	20 37 36.7	0.0
	comp=Z,1.6nm,0.7s,baz=26,slow=5.5,SNR=3.4						
	comp=Z,1.6nm,0.7s						
KRLC	Kraliky	76.34	333	*e*P	P	20 37 37.1	0.0
KRLC	Kraliky	76.34	333	*e*P	P	20 37 37.1	0.0
VRI	Vrincioaia	76.35	324	⇓P	P	20 37 37.6	+0.5
VRI	Vrincioaia	76.35	324	⇓P	P	20 37 37.6	+0.5
MORC	Moravsky Berou	76.36	332	⇑P	P	20 37 37.5	+0.3
MORC	Moravsky Berou	76.36	332	⇑P	P	20 37 37.5	+0.3
CLL	Collm	76.40	335	*i* P	P	20 37 36.1	-1.2
CLL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CLL	Collm	76.40	335	P	P	20 37 36.3	-1.0
	comp=Z,10nm,1.0s						
CLL	Collm	76.40	335	*i* P	P	20 37 36.1	-1.2
	comp=Z,10.0nm,1.0s						
CLL				*e*sP	sP	20 38 08.0	+3.5
TPGR	Topolog	76.48	323	⇓P	P	20 37 37.8	-0.1
WMOK	Wichita Mounta	76.51	53	IAmb	IAmb	20 40 27.1	
	comp=Z,10nm,0.9s						
WMOK	Wichita Mounta	76.51	53	P	P	20 37 37.3	-1.0
WMOK				pmax	pmax		
	comp=Z,12nm,2.8s						
MAUC	Maruska	76.63	332	*e*P	P	20 37 38.6	-0.1
APMT	Aspermont	76.81	55	IAmb	IAmb	20 39 59.3	
	comp=Z,32nm,1.5s						
MLR	Muntele Rosu	76.97	325	LR	LR	21 14 22.1	
	comp=Z,85nm,18.3s,baz=38,slow=38						
MLR	Muntele Rosu	76.97	325	P	P	20 37 40.4	-0.4
MLR	Muntele Rosu	76.97	325	⇑P	P	20 37 41.4	+0.6
MLR	Muntele Rosu	76.97	325	⇑P	P	20 37 41.4	+0.6
EFOR	EFORIE	77.02	322	⇓P	P	20 37 39.6	-1.3
VRAC	Vranov	77.07	332	LR	LR	21 15 50.7	
	comp=Z,133nm,18.3s,baz=21,slow=39						
LPIG	La Paz	77.30	68	LR	LR	21 09 11.6	
	comp=Z,24nm,20.3s,baz=23,slow=34						
TREC	Trest	77.44	333	*e*P	P	20 37 43.3	+0.1
TREC	Trest	77.44	333	*e*P	P	20 37 43.3	+0.1
ARR	Arges	77.58	325	⇓P	P	20 37 44.9	+0.7
TXAR	Lajitas Array	77.66	60	P	P	20 37 46.1	+1.2
	comp=Z,4.6nm,0.8s,baz=290,slow=3.7,SNR=9.9						
	comp=Z,4.6nm,0.8s						
TXAR	Lajitas Array	77.66	60	P	P	20 37 46.0	+1.0
ZVC	Zvikov	77.71	334	*e*P	P	20 37 43.6	-1.1
SIRR	Siria	77.95	328	⇑P	P	20 37 45.7	-0.5
SADO	Sadowa	78.01	35	LR	LR	21 13 48.9	
	comp=Z,101nm,19.2s,baz=24,slow=37						
KHC	Kasperske Hory	78.17	334	*e*P	P	20 37 47.4	+0.1
KHC				*e*		20 37 59.6	
KHC	Kasperske Hory	78.17	334	*e*P	P	20 37 47.4	+0.1
KHC				*e*PCP	PcP	20 37 59.6	+3.0
BR131	Keskin Array S	78.27	317	P	P	20 37 47.7	-0.5
BR131	Keskin Array S	78.27	317	P	P	20 37 47.7	-0.5
BR131				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRTR	Keskin Array B	78.27	317	P	P	20 37 47.6	-0.6
	comp=Z,1.8nm,0.8s,baz=65,slow=5.1,SNR=12						
	comp=Z,1.8nm,0.8s						
BRTR	Keskin Array B	78.27	317	*e*P	P	20 37 48.6	+0.4
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BR106	Keskin Array S	78.27	317	P	P	20 37 48.1	-0.1
	comp=Z,2.1nm,0.8s						
BR104	Keskin Array S	78.28	317	P	P	20 37 47.8	-0.4
	comp=Z,3.0nm,1.0s						
BR105	Keskin Array S	78.28	317	P	P	20 37 47.9	-0.4
	comp=Z,4.4nm,1.0s						
GERES	GERESS Array B	78.38	334	P	P	20 37 47.5	-1.1
	comp=Z,1.0nm,0.7s,baz=29,slow=6.1,SNR=8.3						
GERES				LR	LR	21 14 53.3	
	comp=Z,99nm,20.4s,baz=53,slow=38						
	comp=Z,1.0nm,0.7s						
GERES	GERESS Array B	78.38	334	*e*P	P	20 37 48.0	-0.6
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CONA	Conrad Observa	78.52	332	*i* P	P	20 37 49.5	+0.1
	comp=Z,3.2nm,1.0s						
BZS	Buzias	78.52	327	⇓P	P	20 37 48.6	-0.6
BZS	Buzias	78.52	327	⇓P	P	20 37 48.6	-0.6
RONA	Rosalia, Austr	78.58	332	*i* P	P	20 37 49.6	0.0
	comp=Z,8.0nm,1.1s						
KIRS	Kirsehir-Merke	78.60	316	⇑P	P	20 37 50.1	+0.2
MPLH	Magyarpolny	78.63	331	P	P	20 37 49.3	-0.5
	comp=Z,25nm,1.1s						
STKA	Stephens Creek	78.91	190	LR	LR	21 14 24.0	
	comp=Z,25nm,19.3s,baz=34,slow=37						
MORH	Mrgy, Hungar	79.08	330	⇑P	P	20 37 51.1	-1.2
ARSA	Arzberg	79.22	332	*e*P	P	20 37 53.2	+0.1
	comp=Z,3.6nm,1.2s						
DRIO	Del Rio	79.40	58	IAmb	IAmb	20 37 56.0	
	comp=Z,12nm,0.9s						
BIOA	Bad Ischl, Aus	79.43	333	*e*P	P	20 37 54.4	+0.2
	comp=Z,0.4nm,0.4s						
SOKA	Soboth	79.89	332	*i* P	P	20 37 56.2	-0.6
	comp=Z,12nm,1.4s						
LESA	Schwarzleotal	79.96	334	*i* P	P	20 37 57.3	+0.1
	comp=Z,4.4nm,0.8s						
KBA	Koelnbreinsper	80.07	333	*i* P	P	20 37 58.4	+0.5
	comp=Z,11nm,1.0s						
BOVS	Bovan	80.17	326	⇑P	P	20 37 56.4	-1.8
WATA	Walderalm	80.37	334	*e*P	P	20 37 59.3	-0.1
	comp=Z,6.7nm,1.0s						
BFO	Black Forest	80.39	337	P	P	20 37 58.9	-0.5
BFO				sP	pP	20 38 22.4	+3.6
WTTA	Wattenberg	80.42	334	*i* P	P	20 37 59.5	-0.3
	comp=Z,7.3nm,0.9s						
SQTA	Sankt Quirin	80.58	335	*i* P	P	20 38 00.9	+0.3
	comp=Z,10nm,1.1s						
DAVOX	Davos/Dischmat	81.37	335	LR	LR	21 19 36.2	
	comp=Z,50nm,20.2s,baz=68,slow=40						
CSS	Mathiatis	82.19	314		P	20 38 07.8	-1.4
CSS	Mathiatis	82.19	314	P	P	20 38 08.9	-0.3
PPT	Papeete	82.30	126	LR	LR	21 09 20.4	
	comp=Z,48nm,19.0s,baz=80,slow=32						
PPT2	Papeete2	82.32	126	*e*LR	LR	21 03 34.3	
	comp=Z,108nm,29.2s						
PPT2				*e*LR	LR	21 03 38.2	
	comp=Z,55nm,24.5s						
ELL	Elmali	82.41	317		P	20 38 09.8	-0.6
ELL	Elmali	82.41	317	P	P	20 38 09.8	-0.6
ELL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MMAI	Mount Meron Ar	82.68	311	P	P	20 38 11.4	-0.4
	comp=Z,3.5nm,0.7s,baz=21,slow=4.8,SNR=9.3						
MMAI				LR	LR	21 20 04.5	
	comp=Z,68nm,18.4s,baz=28,slow=39						
	comp=Z,3.5nm,0.7s						
BALJ	Balqa	83.29	311	IAmb	IAmb	20 38 16.2	
	comp=Z,12nm,0.8s						
TKL	Tuckaleechee C	83.50	43	P	P	20 38 15.1	-0.9
	comp=Z,5.9nm,0.8s,baz=115,slow=5.9,SNR=4.0						
TKL				LR	LR	21 15 02.3	
	comp=Z,87nm,21.8s,baz=349,slow=35						
	comp=Z,5.9nm,0.8s						
RAYN	Ar Rayn	84.26	298	⇑P	P	20 38 20.5	+0.5
URZ	Urewera	87.37	161	LR	LR	21 11 23.5	
	comp=Z,52nm,19.5s,baz=342,slow=31						
ESDC	Sonseca Array	91.51	342	LR	LR	21 25 32.4	
	comp=Z,44nm,18.4s,baz=14,slow=39						
MDT	Midelt	98.24	341	LR	LR	21 28 40.6	
	comp=Z,41nm,19.3s,baz=40,slow=38						
H03N2	Juan Fernandez	138.94	90	T	T	23 20 41.1	
	baz=308,slow=77,SNR=37						
H03N1	Juan Fernandez	138.95	90	T	T	23 20 39.7	
	baz=308,slow=77,SNR=68						
H03N3	Juan Fernandez	138.95	90	T	T	23 20 41.6	
	baz=308,slow=77,SNR=32						
BDFB	Brasilia	144.46	36	PKP	PKPab	20 45 21.8	-1.0
	comp=Z,6.5nm,0.9s,baz=271,slow=1.9,SNR=6.8						
PLCA	Paso Flores	148.39	95	PKPbc	PKPdf	20 45 33.0	+2.8
	comp=Z,5.9nm,1.0s,baz=268,slow=2.2,SNR=5.0						
CPUP	Villa Florida	148.63	60	PKPbc	PKPbc	20 45 35.0	+0.2
	comp=Z,0.7nm,0.6s,baz=343,slow=6.6,SNR=6.6						
CPUP	Villa Florida	148.63	60	PKP2	PKPbc	20 45 35.0	+0.2

DJA ***18*** *20:32:23.7±0.2, 7°S±2°×12°0E±°, h560*^{km}*±2*^{km}*, M3.9/26, mb4.0/22, mB4.5/8, MLv4.2/26, Mw(mB)3.7/8*

IDC ***18*** *20:32:24.1±0.8, 7°.35S×120°.17E, h572*^{km}*±7*^{km}*, mb3.4/9, mbtmp4.4/13, Error ellipse: s-maj=50.1km s-min=9.7km az=60.0*

NEIC ***18*** *20:32:24.1±1.8, 7°.3S±0°.1×120°.2E±0°.2, h569*^{km}*±10*^{km}*, mb4.3/18, Error ellipse: s-maj=23.2km s-min=14.8km az=65.0*

ISC 18 20:32:23.4±0.5, **7°.36S**±0°.06×**120°.25E**±0°.06, **h563**^{km}±6^{km}, **n116**, σ1^{s}**14**/127, **mb4.1**/17, **Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBFI	Labuhan Bajo,	1.17	198	P	P	20 33 31.0	-0.4
LBFI				S	S	20 34 23.9	-2.8
EDFI	Ende, Flores	1.98	134	P	P	20 33 33.5	-0.9
BKSI	Bulukumba	2.03	356	P	P	20 33 35.7	+1.2
BKSI				S	S	20 34 32.0	-0.2
DBNI	Kabupaten Domp	2.23	239	P	P	20 33 36.2	+0.8
DBNI				S	S	20 34 33.0	-0.9
WSI	Waingapu	2.30	179	P	P	20 33 36.8	+1.1
WSI				S	S	20 34 33.3	-1.2
MMRI	Maumere	2.34	123		P	20 33 35.3	-0.6
MMRI	Maumere	2.34	123	P	P	20 33 35.6	-0.3
MMRI	Maumere	2.34	123	P	P	20 33 35.8	-0.1
MMRI				S	S	20 34 32.9	-1.9
KAPI	Kappang	2.38	348	P	P	20 33 38.4	+2.2
	79nm,0.5s,baz=170,slow=2.9,SNR=50						
KAPI				S	S	20 34 37.4	+2.2
	24nm,0.8s,baz=268,slow=23,SNR=14						
KAPI	Kappang	2.38	348		P	20 33 38.0	+1.9
KAPI	Kappang	2.38	348	P	P	20 33 37.6	+1.5
KAPI	Kappang	2.38	348	P	P	20 33 38.2	+2.1
KAPI				S	S	20 34 37.1	+1.9
WBSI	Waikabubak, Su	2.42	201	P	P	20 33 36.9	+0.5
WBSI				S	S	20 34 33.7	-2.0
PLAI	Plampang	2.85	239	P	P	20 33 39.9	+1.3
PLAI	Plampang	2.85	239	S	S	20 34 39.4	-0.5
PLAI	Plampang	2.85	239	P	P	20 33 39.7	+1.1
PLAI				S	S	20 34 38.4	-1.5
BASI	Baing, Sumba	2.86	174	P	P	20 33 40.3	+1.6
BASI				S	S	20 34 39.8	-0.2
BNSI	Bone	2.94	357	P	P	20 33 41.1	+1.9
BNSI				S	S	20 34 43.0	+2.2
SPSI	Sidrap Palu	3.41	352	P	P	20 33 43.9	+1.8
SPSI				S	S	20 34 47.5	+1.4
KKSI	Kolaka, Sulawe	3.46	24	P	P	20 33 43.6	+1.1
KKSI				S	S	20 34 47.2	+0.4
TWSI	Taliwang, Sumb	3.61	247	P	P	20 33 44.6	+1.2
TWSI				S	S	20 34 46.9	-1.7
PMSI	Majene	4.06	341	P	P	20 33 48.4	+1.7
PMSI				S	S	20 34 56.0	+1.5
KLNI	Mataram	4.25	255	P	P	20 33 49.1	+1.0
TTSI	Tana Toraja	4.31	354	P	P	20 33 49.9	+1.4
BATI	Baumata	4.40	130	P	P	20 33 50.4	+1.2
	258nm,0.4s,baz=300,slow=1.1,SNR=54						
BATI				S	S	20 34 52.1	-7.2
	142nm,0.5s,baz=336,slow=4.8,SNR=4.6						
BATI	Baumata	4.40	130	P	P	20 33 50.0	+0.8
SOEI	Soe	4.63	121	P	P	20 33 51.0	-0.2
SOEI	Soe	4.63	121	P	P	20 33 51.5	+0.4
SOEI	Soe	4.63	121	S	S	20 35 02.1	-0.6
SOEI	Soe	4.63	121	P	P	20 33 51.6	+0.4
MMSI	Mamuju	4.83	344	P	P	20 33 54.6	+1.9
IGBI	Denpasar	5.26	254	P	P	20 33 56.8	+0.6
RTBI	Rangdo, Negare	5.37	258	P	P	20 33 58.5	+1.3
JAGI	Jajag, Banyuwa	6.14	259		P	20 34 03.2	-0.8
JAGI	Jajag, Banyuwa	6.14	259	P	P	20 34 03.7	-0.3
JAGI	Jajag, Banyuwa	6.14	259	P	P	20 34 03.7	-0.3
	0.2nm841nm14nm,0.5s						
BBKI	Banjar Baru	6.63	305	P	P	20 34 10.9	+2.4
LUWI	Luwuk	6.76	22	P	P	20 34 06.2	-3.4
LUWI	Luwuk	6.76	22	P	P	20 34 10.5	+0.8
	0.1nm828nm26nm,0.8s						
GMJI	Gumukmas	6.81	262	P	P	20 34 10.1	0.0
MPSI	Mapaga	7.65	357	P	P	20 34 19.2	+1.0
SANI	Sanana	7.78	48	P	P	20 34 19.4	0.0
SANI	Sanana	7.78	48	S	S	20 35 53.2	-1.2
SANI	Sanana	7.78	48	P	P	20 34 19.3	-0.1
	0.1nm34nm,0.7s						
NLAI	Namlea	7.95	59	P	P	20 34 22.1	+1.0
	1µm69nm,0.9s						
MRSI	Marisa	7.96	12	P	P	20 34 21.5	+0.3
	584nm81nm,0.9s						
MTKI	Muara Teweh, K	8.31	320	P	P	20 34 25.5	+0.8
	57nm,0.7s						
GTOI	Gorontalo	8.40	19	P	P	20 34 26.6	+1.1
	58nm,0.8s						
TOLI2	Tolitoli	8.43	4		P	20 34 25.0	-0.8
TOLI2	Tolitoli	8.43	4	P	P	20 34 25.6	-0.2
TOLI2	Tolitoli	8.43	4	S	S	20 36 05.3	-0.8
SNJI	Sawahan-Nganju	8.43	267	P	P	20 34 27.5	+1.5
PCJI	Pacitan	9.03	264	P	P	20 34 31.7	-0.1
FITZ	Fitzroy Crossi	11.90	154	P	P	20 35 01.9	+1.0
	19nm,0.6s,baz=347,slow=7.2,SNR=40						
FITZ	Fitzroy Crossi	11.90	154		P	20 35 01.5	+0.6
FITZ	Fitzroy Crossi	11.90	154	P	P	20 35 01.6	+0.7
MTN	Manton Dam	12.02	118	P	P	20 35 01.9	-0.2
BBJI	Bungbulang	12.50	269	P	P	20 35 06.8	-0.5
BBJI	Bungbulang	12.50	269	P	P	20 35 06.8	-0.5
	7.4nm,0.8s						
SBUM	Sibu	12.62	320	P	P	20 35 09.2	+0.9
SBUM	Sibu	12.62	320	P	P	20 35 09.7	+1.3
SBUM	Sibu	12.62	320	P	P	20 35 09.6	+1.2
	14nm,0.9s						
FAKI	Fak Fak	12.73	70	P	P	20 35 09.5	-0.1
FAKI	Fak Fak	12.73	70	P	P	20 35 07.1	-2.5
	22nm,1.0s						
CNJI	Cibinong	13.02	269	P	P	20 35 11.9	-0.6
	7.3nm,0.6s						
TPI	Tanjungpandan	13.35	289	P	P	20 35 16.7	+0.7
	7.9nm,1.1s						
MBWA	Marble Bar	13.73	182	P	P	20 35 19.6	-0.1
MBWA	Marble Bar	13.73	182	P	P	20 35 20.9	+1.2
KKM	Kota Kinabalu	13.91	343	P	P	20 35 20.8	-0.9
KKM	Kota Kinabalu	13.91	343	P	P	20 35 21.1	-0.7
KKM	Kota Kinabalu	13.91	343	P	P	20 35 20.9	-0.9
	23nm,1.3s						
PSA00	Pilbara Seismi	14.14	182		P	20 35 24.2	+0.3
PSA00	Pilbara Seismi	14.14	182		P	20 35 24.6	+0.8
PSA00	Pilbara Seismi	14.14	182	P	P	20 35 24.7	+0.8
KASI	Kota Agung	15.76	276	P	P	20 35 38.9	-1.3
	12nm,1.0s						
WB0	Warramunga Arr	18.45	133	P	P	20 36 05.1	+0.3
WRA	Warramunga Arr	18.52	134	P	P	20 36 05.5	+0.1
	13nm,0.8s,baz=309,slow=11,SNR=71						
WRAB	Tennant Creek	18.52	134	P	P	20 36 05.7	+0.2
WRAB	Tennant Creek	18.52	134	P	P	20 36 06.1	+0.6
WB1	Warramunga Ar.	18.54	134	P	P	20 36 06.2	+0.6
WR8	Warramunga Arr	18.65	134	P	P	20 36 07.3	+0.7
MEEK	Meekatharra	19.24	184	P	P	20 36 13.0	+1.1
AS31	Alice Springs	20.85	143	P	P	20 36 26.7	+0.1
AS31				IAmb	IAmb	20 36 31.6	
	comp=Z,2.9nm,0.3s						
ASAR	Alice Springs	20.85	143	P	P	20 36 27.4	+0.8
	comp=Z,4.8nm,0.7s,baz=320,slow=8.7,SNR=51						
ASAR				PcP	PcP	20 40 10.2	-0.1
	comp=Z,0.6nm,0.5s,baz=319,slow=1.6,SNR=6.2						
	comp=Z,4.8nm,0.7s						
ASAR	Alice Springs	20.85	143	P	P	20 36 27.1	+0.6
QIS	Mount Isa	22.87	127	P	P	20 36 45.3	+0.6
BLDU	Ballidu	23.38	188	P	P	20 36 50.0	+1.0
FORT	Forrest	24.42	164	P	P	20 36 59.1	+0.9
FORT				IAmb	IAmb	20 37 00.7	
	comp=Z,4.4nm,0.6s						
BBOO	Buckleboo	29.27	152	P	P	20 37 41.4	+0.7
BBOO				IAmb	IAmb	20 37 42.0	
	comp=Z,8.1nm,0.6s						
BBOO	Buckleboo	29.27	152	P	P	20 37 41.5	+0.7
HTT	Hallett	31.18	149	P	P	20 37 59.0	+1.8
STKA	Stephens Creek	31.48	144	P	P	20 38 00.9	+1.2
	comp=Z,4.5nm,0.5s,baz=320,slow=9.1,SNR=12						
	comp=Z,4.5nm,0.5s						
STKA	Stephens Creek	31.48	144	IAmb	IAmb	20 38 01.6	
	comp=Z,20nm,0.6s						
STKA	Stephens Creek	31.48	144	P	P	20 38 01.2	+1.5
CMAR	Chiang Mai Arr	33.17	321	PcP	PcP	20 40 41.2	+0.9
	comp=Z,0.4nm,0.6s,baz=160,slow=3.4,SNR=4.2						
SONM	Songino Array	56.30	349	P	P	20 41 11.2	-0.1
	comp=Z,0.7nm,0.4s,baz=165,slow=8.5,SNR=8.9						
	comp=Z,0.7nm,0.4s						
SONM	Songino Array	56.30	349	IAmb	IAmb	20 41 17.4	
	comp=Z,0.1nm,0.4s						
KSH	Kashi	62.05	322	P	P	20 41 50.1	+0.3
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR	Makanchi Array	63.59	332	P	P	20 41 59.8	+0.4
	comp=Z,3.8nm,0.7s,baz=149,slow=7.1,SNR=32						
	comp=Z,3.8nm,0.7s						
MANEM	Manem	63.61	318		P	20 42 00.5	+0.5
MANEM				IAmb	IAmb	20 42 01.5	
	comp=Z,8.4nm,0.6s						
DRK	Karamyk	64.62	320	IAmb	IAmb	20 42 07.5	
	comp=Z,6.2nm,0.6s						
AAK	Ala-Archa	64.86	324	P	P	20 42 08.3	+0.5
GAR	Garm	65.31	319	P	P	20 42 10.5	-0.1
GAR				IAmb	IAmb	20 42 10.8	
	comp=Z,3.7nm,0.4s						
KKAR	Karatay Array	67.49	323	P	P	20 42 22.4	-1.4
ZAA0	Zalesovo Array	67.97	338	IAmb	IAmb	20 42 26.2	
	comp=Z,3.4nm,0.8s						
ZALV	Zalesovo Beam	67.97	338	P	P	20 42 25.6	-0.8
	comp=Z,2.5nm,0.4s,baz=138,slow=4.6,SNR=14						
	comp=Z,2.5nm,0.4s						
ZALV	Zalesovo Beam	67.97	338	P	P	20 42 25.3	-1.1
KURBB	Kurchatov Arra	68.07	333	P	P	20 42 26.7	-0.4
	comp=Z,1.2nm,0.6s,baz=147,slow=5.0,SNR=8.3						
	comp=Z,1.2nm,0.6s						
KURK	Kurchatov	68.09	333	P	P	20 42 27.0	-0.3
KURK				IAmb	IAmb	20 42 27.8	
	comp=Z,3.6nm,0.9s						
BVAR	Borovoye Array	73.45	331	P	P	20 42 57.8	-1.0
	comp=Z,1.1nm,0.6s,baz=146,slow=8.2,SNR=4.7						
	comp=Z,1.1nm,0.6s						
ABKAR	Akbulak array	76.95	324	P	P	20 43 17.7	-0.6
AKTO	Aktyubinsk	78.60	325	P	P	20 43 26.8	-0.4
	comp=Z,2.0nm,0.7s,baz=138,slow=2.6,SNR=6.6						
	comp=Z,2.0nm,0.7s						
RAYN	Ar Rayn	79.11	296	P	P	20 43 31.1	+0.5
ARPR	Arapgir-MALATY	88.36	310		P	20 44 15.8	-0.2
ARPR				IAmb	IAmb	20 44 29.4	
	comp=Z,5.5nm,0.8s						
BOSA	Boshof	90.88	241	P	P	20 44 27.1	-0.9
	comp=Z,3.3nm,1.0s,baz=135,slow=10.0,SNR=3.6						
	comp=Z,3.3nm,1.0s						
BOSA	Boshof	90.88	241	IAmb	IAmb	20 44 59.4	
	comp=Z,11nm,1.3s						

IDC 18 20:40:40.3±16.0, **6°.56S**×**129°.68E**, **h109**^{km}±169^{km}, **mb3.5**/1, **mbtmp3.7**/4, **ML3.6**/3, **Error ellipse: s-maj=126.4km s-min=59.5km az=39.0**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	12.13	199	P	Pn	20 43 30.6	+1.1

	0.2nm,0.3s,baz=17,slow=8.8,SNR=8.0						
	1.1nm,0.3s						
WRA	Warramunga Arr	14.06	162	P	Pn	20 43 52.8	-1.9
	0.3nm,0.3s,baz=342,slow=13,SNR=11						
WRA				S	Sn	20 46 20.9	-8.9
	0.5nm,0.3s,baz=336,slow=22,SNR=2.5						
	0.3nm,0.5s						
ASAR	Alice Springs	17.49	167	P	Pn	20 44 37.5	0.0
	0.2nm,0.3s,baz=339,slow=9.2,SNR=15						
ASAR				S	Sn	20 47 44.0	-8.6
	0.4nm,0.7s,baz=356,slow=28,SNR=3.5						
	0.7nm,0.5s						
MKAR	Makanchi Array	67.68	327	P	P	20 51 25.9	0.0
	0.5nm,0.4s,baz=116,slow=8.2,SNR=14						
	0.5nm,0.4s						

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*IDC **18** 20:58:28.2±2.6, 21°.30S×68°.90W, h94km±23km, mb3.3/3, mbtmp3.9/6, Error ellipse: s-maj=33.3km s-min=27.3km az=87.0*

*SJA **18** 20:58:28.8±0.7, 21°.13S×69°.02W, h123km±3km, ML3.9, MW3.8*

*NEIC **18** 20:58:29.8±1.8, 21°.16S±0°.05×68°.88W±0°.09, h104km±5km, mb4.0/4, ML4.0(GUC), Error ellipse: s-maj=12.3km s-min=6.3km az=99.0*

*GUC **18** 20:58:30.6±0.6, 21°.13S×68°.95W, h111km±3km, ML4.0*

*VAO **18** 20:58:37.0±1.1, 20°.78S×68°.08W, h121km±7km, mb4.1, Presumed earthquake*

ISC 18 20:58:29.0±0.7**, 21°.15S**±0°.03×**68°.97W**±0°.05**, h122**km±6km**, n101, σ1s.61**/119**, 11C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	IPOC Station P	0.49	282		Pn	20 58 47.2	+0.1
PB01	IPOC Station P	0.49	282	⇑*i*P	Pn	20 58 47.2	+0.1
PB01				*i* S	Sn	20 59 00.1	-0.8
PB01	IPOC Station P	0.49	282	*e*P	Pn	20 58 47.2	+0.1
PB01				*e*S	Sn	20 59 00.2	-0.6
PB09	IPOC Station P	0.69	201		Pn	20 58 49.3	+0.7
PB09	IPOC Station P	0.69	201	*e*P	Pn	20 58 49.4	+0.7
PB09				*i* S	Sn	20 59 03.8	+0.3
PB09	IPOC Station P	0.69	201	*e*P	Pn	20 58 49.3	+0.7
PB09				*e*S	Sn	20 59 04.2	+0.7
PB09				IAML		20 59 07.1	
	comp=Z,2µm,0.5s						
PB02	IPOC Station P	0.88	259		Pn	20 58 49.7	-0.4
PB02	IPOC Station P	0.88	259	⇑*i*P	Pn	20 58 50.7	+0.6
PB02				*i* S	Sn	20 59 06.0	-0.1
PB02	IPOC Station P	0.88	259	*e*P	Pn	20 58 50.0	-0.1
PB02				*e*S	Sn	20 59 06.4	+0.3
PX03	IPOC Station P	0.96	320	*e*P	Pn	20 58 50.5	-0.5
PB08	IPOC Station P	1.02	350		Pn	20 58 51.9	+0.1
PB08	IPOC Station P	1.02	350	*e*P	Pn	20 58 52.3	+0.5
PB08				*i* S	Sn	20 59 08.7	-0.2
PB08				IAML		20 59 10.1	
	comp=E,5µm,0.6s						
PB08	IPOC Station P	1.02	350	*e*P	Pn	20 58 52.3	+0.5
PB08				*e*S	Sn	20 59 09.2	+0.3
PB08				IAML		20 59 09.7	
	comp=Z,2µm,0.6s						
PB07	IPOC Station P	1.03	236		Pn	20 58 51.7	+0.1
PB07	IPOC Station P	1.03	236	⇑*i*P	Pn	20 58 52.1	+0.5
PB07				*i* S	Sn	20 59 08.8	+0.1
PB07				IAML		20 59 11.9	
	comp=E,2µm,0.5s						
PB07	IPOC Station P	1.03	236	*e*P	Pn	20 58 52.1	+0.5
PB07				*e*S	Sn	20 59 09.5	+0.8
PB07				IAML		20 59 10.7	
	comp=Z,2µm,0.5s						
PATCX	Punta Patache	1.15	286		Pn	20 58 53.1	+0.4
PATCX	Punta Patache	1.15	286	⇑*i*P	Pn	20 58 53.4	+0.6
PATCX				*i* S	Sn	20 59 10.6	-0.1
PATCX				IAML		20 59 12.8	
	comp=N,9µm,0.2s						
PATCX	Punta Patache	1.15	286	*e*P	Pn	20 58 52.7	-0.1
PATCX				*e*S	Sn	20 59 11.5	+0.7
PATCX				IAML		20 59 12.5	
	comp=Z,3µm,0.3s						
PB03	IPOC Station P	1.15	219		Pn	20 58 53.0	+0.1
PB03	IPOC Station P	1.15	219	⇑*i*P	Pn	20 58 53.5	+0.6
PB03				*i* S	Sn	20 59 10.9	-0.1
PB03				IAML		20 59 12.1	
	comp=E,3µm,0.2s						
PB03	IPOC Station P	1.15	219	*e*P	Pn	20 58 53.3	+0.4
PB03				*e*S	Sn	20 59 11.2	+0.2
PB03				IAML		20 59 13.0	
	comp=Z,2µm,0.1s						
HMBC	Humberstone	1.22	315		Pn	20 58 53.4	-0.2
HMBC	Humberstone	1.22	315	⇑*e*P	Pn	20 58 53.6	0.0
HMBC				*e*S	Sn	20 59 11.7	-0.4
HMBC	Humberstone	1.22	315	*e*P	Pn	20 58 52.9	-0.7
HMBC				IAML		20 59 12.5	
	comp=Z,4µm,0.5s						
TA01	Diego Aracena	1.27	297		Pn	20 58 54.0	+0.1
TA01	Diego Aracena	1.27	297	⇑*i*P	Pn	20 58 54.1	+0.2
TA01				*i* S	Sn	20 59 12.3	-0.6
TA01				IAML		20 59 14.0	
	comp=N,6µm,0.5s						
TA01	Diego Aracena	1.27	297	*e*P	Pn	20 58 54.1	+0.2
TA01				*e*S	Sn	20 59 12.9	+0.1
TA01				IAML		20 59 13.8	
	comp=Z,2µm,0.4s						
TA02	Huaiquique	1.39	309	⇓*e*P	Pn	20 58 55.5	+0.2
TA02				*e*S	Sn	20 59 14.9	-0.4
TA02	Huaiquique	1.39	309	*e*P	Pn	20 58 55.5	+0.2
TA02				*e*S	Sn	20 59 15.2	0.0
TA02				IAML		20 59 20.0	
	comp=Z,1µm,0.3s						
GO01	Chusmiza	1.49	352		Pn	20 58 57.6	+0.7
GO01	Chusmiza	1.49	352	*e*P	Pn	20 58 57.4	+0.5
GO01				*i* S	Sn	20 59 18.4	+0.3
GO01	Chusmiza	1.49	352	*e*P	Pn	20 58 57.5	+0.7
GO01				*e*S	Sn	20 59 19.2	+1.2
GO01				IAML		20 59 21.2	
	comp=Z,814nm,0.7s						
PB11	IPOC Station P	1.52	335		Pn	20 58 57.3	+0.4
PB11	IPOC Station P	1.52	335	*e*P	Pn	20 58 57.2	+0.2
PB11				*i* S	Sn	20 59 17.9	-0.3
PB11				IAML		20 59 19.5	
	comp=E,2µm,0.5s						
PB11	IPOC Station P	1.52	335	*e*P	Pn	20 58 57.2	+0.2
PB11				*e*S	Sn	20 59 18.2	0.0
PB11				IAML		20 59 19.8	
	comp=Z,689nm,0.2s						
PB06	IPOC Station P	1.65	200		Pn	20 58 59.2	+0.8
PB06	IPOC Station P	1.65	200	⇑*i*P	Pn	20 58 59.4	+1.0
PB06				*i* S	Sn	20 59 21.4	+0.6
PB06				IAML		20 59 23.7	
	comp=E,1µm,0.3s						
PB06	IPOC Station P	1.65	200	*e*P	Pn	20 58 59.4	+1.0
PB06				*e*S	Sn	20 59 22.2	+1.4
PB06				IAML		20 59 27.9	
	comp=Z,1µm,0.5s						
AF01	San Pedro de A	1.94	158	*e*P	Pn	20 59 05.5	+3.4
AF01				*e*S	Sn	20 59 25.5	-1.8
AF01				*e*S		20 59 25.9	
AF01				IAML		20 59 51.1	
	comp=Z,564nm,1.4s						
PB05	IPOC Station P	2.04	214		Pn	20 59 03.3	+0.1
PB05	IPOC Station P	2.04	214	⇑*e*P	Pn	20 59 03.8	+0.6
PB05	IPOC Station P	2.04	214	*e*P	Pn	20 59 03.8	+0.6
PB05				*e*S	Sn	20 59 29.2	-0.2
PB05				IAML		20 59 31.6	
	comp=Z,421nm,0.4s						
PB10	IPOC Station P	2.77	212		Pn	20 59 12.4	+0.1
PB10	IPOC Station P	2.77	212	⇑*e*P	Pn	20 59 12.5	+0.1
PB10	IPOC Station P	2.77	212	*e*P	Pn	20 59 12.4	+0.1
PB10				*e*S	Sn	20 59 34.3	-11
PB10				IAML		20 59 45.2	
	comp=Z,155nm,0.4s						
PB12	IPOC Station P	2.83	333		Pn	20 59 12.5	-0.7
PB12	IPOC Station P	2.83	333	*e*P	Pn	20 59 12.5	-0.7
PB12	IPOC Station P	2.83	333	*e*P	Pn	20 59 12.6	-0.6
PB12				*e*S	Sn	20 59 36.0	-11
PB12				IAML		21 00 07.6	
	comp=Z,150nm,0.7s						
PB16	IPOC Station P	2.84	350		Pn	20 59 14.9	+1.1
PB16	IPOC Station P	2.84	350	⇑*e*P	Pn	20 59 14.9	+1.1
PB16	IPOC Station P	2.84	350	*e*P	Pn	20 59 15.2	+1.3
PB16				*e*S	Sn	20 59 45.7	-2.6
AP01	Chacalluta	3.05	335	*e*P	Pn	20 59 16.2	+0.2
AP01				IAML		21 00 12.7	
	comp=Z,290nm,0.2s						
PB18	Visviri	3.57	352	*e*P	Pn	20 59 28.6	+5.2
PB14	IPOC Station P	3.70	201		Pn	20 59 24.3	-0.6
PB14	IPOC Station P	3.70	201	*e*P	Pn	20 59 24.5	-0.4
PB14	IPOC Station P	3.70	201	*e*P	Pn	20 59 24.6	-0.4
PB14				*e*S	Sn	21 00 05.8	-2.4
PB14				IAML		21 00 30.8	
	comp=Z,110nm,0.4s						
HJA	Humahuaca	3.89	122	*e*P	Pn	20 59 30.7	+3.3
GO02	Mina Guanaco	4.04	188		Pn	20 59 29.4	+0.1
GO02	Mina Guanaco	4.04	188	*e*P	Pn	20 59 29.7	+0.4
GO02	Mina Guanaco	4.04	188	*e*S	Sn	20 59 57.1	-19
GO02				IAML		21 00 49.1	
	comp=Z,177nm,0.6s						
LPAZ	La Paz	4.90	10	P	Pn	20 59 43.6	+2.4
	comp=Z,7.7nm,0.4s,baz=192,slow=5.3,SNR=24						
LPAZ				S	Sn	21 00 30.2	-7.1
	comp=Z,12nm,1.0s,baz=202,slow=13,SNR=5.0						
LPAZ	La Paz	4.90	10		Pn	20 59 42.7	+1.5
LPAZ	La Paz	4.90	10	*e*P	Pn	20 59 43.6	+2.4
LPAZ				*e*S	Sn	21 00 25.5	-12
LPAZ	La Paz	4.90	10	*e*P	Pn	20 59 43.4	+2.2
AC01	Pan de Azucar	5.20	196		Pn	20 59 43.2	-1.4
AC01	Pan de Azucar	5.20	196	*e*P	Pn	20 59 43.2	-1.4
AC01				*e*S	Sn	21 00 40.2	-3.3
AC01				IAML		21 01 23.1	
	comp=Z,46nm,0.7s						
AC05	El Transito	7.75	189		Pn	21 00 17.3	-1.8
SIV	San Ignacio	9.08	57	P	Pn	21 00 34.8	-2.3
	comp=Z,21nm,0.6s,baz=244,slow=8.5,SNR=78						
CFA	Coronel Fontan	10.43	177	P	Pn	21 00 52.9	-2.5
	comp=Z,0.7nm,0.3s,baz=349,slow=16,SNR=7.7						
CFA				S	Sn	21 02 43.0	-7.4
	comp=Z,0.8nm,0.5s,baz=248,slow=19,SNR=1.6						
PTLB	Pontes e Lacer	10.92	60		Pn	21 01 00.3	-1.6
PTLB	Pontes e Lacer	10.92	60	*e*P	Pn	21 00 57.5	-4.4
BDQN	Bodoquena, MS	11.45	89	*e*P	Pn	21 01 06.4	-2.6
VILB	Vilhena	11.69	47		Pn	21 01 12.2	0.0
VILB	Vilhena	11.69	47	*e*P	Pn	21 01 09.4	-2.8
CPUP	Villa Florida	11.84	118	*e*P	Pn	21 01 15.2	+1.1
PP1B	Ponte de Pedra	13.76	78	*e*P	Pn	21 01 35.2	-3.9
H03N1	Juan Fernandez	15.09	214	T	T	21 17 30.6	
	baz=34,slow=72,SNR=5.7						
H03N2	Juan Fernandez	15.10	214	T	T	21 17 31.2	
	baz=34,slow=72,SNR=5.6						
H03N3	Juan Fernandez	15.10	214	T	T	21 17 30.3	
	baz=34,slow=72,SNR=6.0						
SNDB	Serra Nova Dou	19.23	64	*e*P	P	21 02 41.9	-1.9
NPGB	Novo Progresso	19.23	45	*e*P	P	21 02 43.2	-0.7
PLCA	Paso Flores	19.57	184	P	Pn	21 02 52.5	+2.6
	comp=Z,2.0nm,0.7s,baz=353,slow=13,SNR=4.8						
PLCA	Paso Flores	19.57	184	IAmb	IAmb	21 03 33.5	
	comp=Z,14nm,1.3s						
BDFB	Brasilia	20.62	78	P	P	21 02 59.9	+1.0
	comp=Z,2.4nm,0.4s,baz=255,slow=10,SNR=3.0						
	comp=Z,2.4nm,0.4s						
BDFB	Brasilia	20.62	78	IAmb	IAmb	21 03 11.3	
	comp=Z,7.4nm,1.1s						
ITTB	Itaituba	21.06	39	*e*P	P	21 03 02.7	-0.9
SMTB	Santa Maria do	23.96	63	*e*P	P	21 03 32.7	+0.4
JANB	Januaria	24.19	80	*e*P	P	21 03 35.2	+0.8
BOAV	Boa Vista	24.82	20	*e*P	P	21 03 41.4	+1.4
RCBR	Riachuelo	35.47	69	P	P	21 05 14.9	+0.8
TXAR	Lajitas Array	60.31	325	P	P	21 08 27.4	+2.3
	comp=Z,0.1nm,0.5s,baz=147,slow=5.8,SNR=2.2						
	comp=Z,0.1nm,0.5s						
TORD	Torodi Ar. Bea	77.29	70	P	P	21 10 13.2	+2.6
	comp=Z,0.8nm,0.6s,baz=262,slow=4.4,SNR=3.7						
	comp=Z,0.8nm,0.6s						
TORD	Torodi Ar. Bea	77.29	70	IAmb	IAmb	21 10 16.4	
	comp=Z,2.1nm,1.3s						
H11S2	WAKE ISLAND Hy	127.78	277	T	T	23 37 20.0	
	baz=102,slow=75,SNR=7.9						
H11S1	WAKE ISLAND Hy	127.78	277	T	T	23 37 23.2	
	baz=102,slow=75,SNR=7.0						
H11S3	WAKE ISLAND Hy	127.79	277	T	T	23 37 21.2	
	baz=102,slow=75,SNR=4.6						
H11N3	WAKE ISLAND Hy	127.85	279	T	T	23 37 24.7	
	baz=101,slow=74,SNR=3.3						
H11N2	WAKE ISLAND Hy	127.86	279	T	T	23 37 27.4	
	baz=101,slow=74,SNR=3.8						
H11N1	WAKE ISLAND Hy	127.86	279	T	T	23 37 26.0	
	baz=101						
MKAR	Makanchi Array	145.38	36	PKPbc	PKiKP	21 17 55.2	-1.3
	comp=Z,0.8nm,0.7s,baz=308,slow=4.7,SNR=5.5						

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*NIED **18** 21:04:16.1, 24°.16N×126°.09E, h72km, MW3.8, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁴Nm; M_{rr}5.22; $M_{\theta\theta}$-5.24; $M_{\phi\phi}$0.02; $M_{r\theta}$0.16; $M_{\theta\phi}$-3.40; $M_{\phi r}$2.24; Fault plane solution: $M_0$6.59000×10¹⁴ NP1: ϕ_s266.00000°, δ44.00000°, λ124.00000°. NP2: ϕ_s43.00000°, δ55.00000°, λ61.00000°.*

JMA 18 21:04:16.1±0.1**, 24°N**±1°×**126°.1E**±0°.7**, h72**km±2km**, MV3.5**/17**, NEAR MIYAKOJIMA ISLAND, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOGS	Gusukube	0.86	314	P	Pn	21 04 33.2	+0.1
JOGS				*e*S	Sn	21 04 45.9	+0.2
JMJ2	Miyako jima3	0.90	310	P	Pn	21 04 33.7	+0.2
JMJ2				*e*S	Sn	21 04 46.6	+0.1
JIRB	Irabujima	1.07	309	P	Pn	21 04 35.8	+0.2
JIKM	Ikemajima	1.08	315	P	Pn	21 04 36.0	+0.3
JTJ	Tarama	1.35	291	*i* P	Pn	21 04 39.5	+0.3
JTJ				S	Sn	21 04 56.9	+0.3
JISG	Ishigakijimahi	1.68	285	P	Pn	21 04 43.7	+0.2
JIJ	Ishigaki jima	1.79	277	P	Pn	21 04 45.4	+0.4
JKRS	Kuro-shima	1.90	273	P	Pn	21 04 47.3	+0.8
IRIF	Iriomote-Funau	2.16	275	P	Pn	21 04 50.6	+0.6
JKE	Kume jima 2	2.25	16	*e*P	Pn	21 04 51.8	+0.7
JKE				*e*S	Sn	21 05 18.4	+0.5
JNTH	Nagotoyohara	2.93	36	*e*P	Pn	21 05 01.2	+0.9
JNTH				*e*S	Sn	21 05 34.2	-0.3
JOW	Kunigami	3.31	36	*e*P	Pn	21 05 06.8	+1.1
JOW				*e*S	Sn	21 05 43.5	-0.3
JIH	Iheya	3.33	30	*e*P	Pn	21 05 06.6	+0.8
JYRO	Yoronjima	3.56	36	*e*P	Pn	21 05 09.8	+0.8
JYRO				*e*S	Sn	21 05 48.1	-1.7

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*CATAC **18** 21:22:08.8±0.4, 13°N±2°×8°9W±°, h30km±2km, M3.5/23, MLv3.5/23, Error ellipse: s-maj=6.0km s-min=2.4km az=28.9, confirmed*

*SNET **18** 21:22:09.0±0.6, 13°.07N×88°.99W, h56km±10km, ML3.5*

ISC 18 21:22:09.4±1.4**, 13°.02N**±0°.07×**89°.02W**±0°.04**, h50**km±15km**, n69, σ0s.51**/76**, 4D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.55	328	*e*P	Pn	21 22 21.2	-0.1
LALI				*e*S	Sn	21 22 29.7	0.0
LALI	Alcalda de L	0.55	328	P	Pn	21 22 21.1	-0.2
TECO	Alcaldia de Te	0.56	25	⇓*i*P	Pn	21 22 21.1	-0.4
TECO				*e*S	Sn	21 22 30.1	0.0
TECO	Alcaldia de Te	0.56	25	P	Pn	21 22 21.1	-0.4
PANCS	Alcalda de	0.60	346	S	Sn	21 22 30.9	-0.3
PANCS	Alcalda de	0.60	346	P	Pn	21 22 21.5	-0.6
LOMA	Loma Larga	0.64	347	P	Pn	21 22 22.0	-0.5
LOMA	Loma Larga	0.64	347	S	Sn	21 22 32.0	+0.1
UESV	Universidad de	0.65	21	P	Pn	21 22 22.3	-0.3
UESV	Universidad de	0.65	21	S	Sn	21 22 32.4	+0.3
PAVA	Las Pavas	0.69	7	*e*P	Pn	21 22 23.0	-0.2
PAVA	Las Pavas	0.69	7	P	Pn	21 22 22.9	-0.2
PAVA	Las Pavas	0.69	7	S	Sn	21 22 33.5	+0.3
TECA	Tecapa	0.69	47	⇓*i*P	Pn	21 22 23.0	-0.3
UTEC	Universidad Te	0.70	346	S	Sn	21 22 33.2	0.0
IGN	Direccin Gen	0.70	348	S	Sn	21 22 33.5	+0.2
IGN	Direccin Gen	0.70	348	P	Pn	21 22 23.2	-0.1
UEES	Universidad Ev	0.72	343	*e*P	Pn	21 22 23.9	+0.3
UEES	Universidad Ev	0.72	343	P	Pn	21 22 23.2	-0.4
UEES	Universidad Ev	0.72	343	S	Sn	21 22 34.4	+0.6
LFU	La Fuente	0.73	353	*e*P	Pn	21 22 23.4	-0.2
SCLA	Alcaldia de Sa	0.73	23	*e*P	Pn	21 22 23.6	-0.1
SCLA	Alcaldia de Sa	0.73	23	P	Pn	21 22 23.7	-0.1
SCLA	Alcaldia de Sa	0.73	23	S	Sn	21 22 35.2	+1.1
PMON	Piamonte	0.74	338	⇓*e*P	Pn	21 22 23.5	-0.3
PMON	Piamonte	0.74	338	P	Pn	21 22 23.6	-0.3
PMON	Piamonte	0.74	338	S	Sn	21 22 34.3	0.0
BOQS	Boqueron	0.75	341	*e*P	Pn	21 22 23.9	-0.2
JAYA	Jayaque - finc	0.75	327	*e*P	Pn	21 22 23.7	-0.3
JAYA				*e*S	Sn	21 22 34.6	0.0
PACA	Pacayal	0.81	57	*e*P	Pn	21 22 24.7	-0.1
PACA	Pacayal	0.81	57	P	Pn	21 22 24.8	-0.1
PACA	Pacayal	0.81	57	S	Sn	21 22 37.2	+1.2
LCY	Lacayo	0.81	61	⇓*e*P	Pn	21 22 24.5	-0.3
RANC	El Ranchito	0.82	60	*e*P	Pn	21 22 24.7	-0.3
CEDA	San Andres	0.86	335	S	Sn	21 22 37.3	+0.4
CNRM	Centro Naciona	0.94	61	P	Pn	21 22 26.1	-0.3
CNRM	Centro Naciona	0.94	61	S	Sn	21 22 40.1	+1.2
CEVE	Cerro Verde	0.99	324	*e*P	Pn	21 22 27.4	+0.1
CEVE	Cerro Verde	0.99	324	P	Pn	21 22 27.2	0.0
CEVE	Cerro Verde	0.99	324	S	Sn	21 22 41.0	+0.6
SBLS	San Blas	1.00	324	*e*P	Pn	21 22 27.7	+0.3
SBLS				*e*P		21 22 28.0	
UNIC	Universidad Ca	1.08	332	S	Sn	21 22 43.3	+1.0
UNIC	Universidad Ca	1.08	332	P	Pn	21 22 28.2	-0.1
LLGN	La Laguna	1.14	4	P	Pn	21 22 28.8	-0.3
LLGN	La Laguna	1.14	4	S	Sn	21 22 43.8	+0.1
LCND	La Caada	1.14	75	*e*P	Pn	21 22 28.8	-0.3
LCND	La Caada	1.14	75	P	Pn	21 22 28.7	-0.3
NUBE	Las Nubes	1.14	320	*e*P	Pn	21 22 29.1	-0.2
NUBE	Las Nubes	1.14	320	P	Pn	21 22 29.1	-0.2
NUBE	Las Nubes	1.14	320	S	Sn	21 22 44.1	+0.2
CNCH	Conchagua	1.19	78	*e*P	Pn	21 22 29.3	-0.6
CNCH	Conchagua	1.19	78	P	Pn	21 22 29.4	-0.4
CNCH	Conchagua	1.19	78	S	Sn	21 22 45.5	+0.6
RBDL	Robledal	1.26	329	*e*P	Pn	21 22 30.8	0.0
FAME	Alcaldia de Sa	1.26	310	S	Sn	21 22 46.5	-0.1
FAME	Alcaldia de Sa	1.26	310	P	Pn	21 22 30.7	0.0
MTO3	Montecristo	1.41	347	P	Pn	21 22 32.7	-0.3
MTO3	Montecristo	1.41	347	S	Sn	21 22 50.8	+0.3
CSGN	Cosiguina Volc	1.43	92	P	Pn	21 22 32.5	-0.5
CSGN				S	Sn	21 22 52.2	+1.4
POTN	Potosi Cosigui	1.48	91	P	Pn	21 22 33.4	-0.3
ESQI	Esquipulas	1.56	349	S	Sn	21 22 53.7	-0.3
ESQI	Esquipulas	1.56	349	P	Pn	21 22 34.9	0.0
TGUH	Tegucigalpa,Un	1.99	59	P	Pn	21 22 40.3	-0.5
PKGN	Cerro Pekin	2.03	100	P	Pn	21 22 42.1	+0.9
PKGN				S	Sn	21 23 06.4	+1.1
POLN	Al Sur del Vol	2.19	100	P	Pn	21 22 42.8	-0.6
POLN				S	Sn	21 23 07.9	-1.4
YUSH	Yuscaran	2.32	66	P	Pn	21 22 44.7	-0.6
COPN	Copaltepe	2.52	109	P	Pn	21 22 47.9	0.0
LIMN	Finca el Limon	2.59	89	P	Pn	21 22 48.1	-0.9
LIMN				S	Sn	21 23 19.2	-0.1
RCVN	Varillal2	2.81	78	P	Pn	21 22 51.1	-0.9

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*NEIC **18** 21:26:34.7±2.2, 76°.04N±0°.05×8°.0E±0°.3, h10km±1km, mb4.4/12, Error ellipse: s-maj=12.0km s-min=6.0km az=126.0*

*KOLA **18** 21:26:35.5, 75°.86N×10°.65E, h0km, ML2.1, Error ellipse: s-maj=34.6km s-min=30.2km az=140.0, Greenland sea*

*NAO **18** 21:26:36.3±2.2, 76°.28N×8°.01E, h17km±23km, ML3.1*

*IDC **18** 21:26:39.5±0.7, 75°.89N×7°.29E, h0km, mb3.8/9, mbtmp3.8/12, ML3.1/3, MS3.5/31, Error ellipse: s-maj=16.8km s-min=13.5km az=53.0*

*DNK **18** 21:26:41.7±2.6, 76°.32N×5°.46E, h15km, ML2.5, Presumed earthquake*

*FCIAR **18** 21:26:41.0, 75°.81N×8°.35E, h10km, station SPA0 has station magnitude of 3.11*

ISC 18 21:26:35.5±1.7**, 76°.07N**±0°.04×**7°.80E**±0°.04**, h16**km±11km**, n123, σ3s.02**/106**, mb4.1**/13**, MS3.5**/25**, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSPB	Hornsund (broa	2.04	59	Pn	Pn	21 27 06.9	-2.2
HSPB				Sn	Sn	21 27 29.9	-4.2
HSPB	Hornsund (broa	2.04	59	P	Pn	21 27 06.8	-2.3
HSPB				S	Sn	21 27 26.1	-8.1
HSPB	Hornsund (broa	2.04	59	*e*P	Pn	21 27 06.7	-2.4
HSPB				*e*S	Sn	21 27 30.6	-3.6
HSPB	Hornsund (broa	2.04	59	*e*P	Pg	21 27 15.1	+0.5
HSPB	Hornsund (broa	2.04	59	Pn	Pn	21 27 06.9	-2.2
HSPB				Sn	Sn	21 27 29.9	-4.2
BRBA	Barentsburg A	2.47	33	*e*P	Pg	21 27 21.6	-1.1
BRBA	Barentsburg A	2.47	33	*e*P	Pn	21 27 14.8	-0.2
BRBB	Barentsburg B	2.49	32	S	Sn	21 27 46.0	+0.7
BRBB	Barentsburg B	2.49	32	*e*P	Pn	21 27 14.9	-0.4
SPA0	Spitsbergen Ar	2.86	38	Pn	Pn	21 27 19.2	-1.2
	baz=221,slow=14						
SPA0	Spitsbergen Ar	2.86	38	*e*P	Pn	21 27 19.1	-1.4
SPA0				*e*S	Sn	21 27 52.8	-1.6
SPA0	Spitsbergen Ar	2.86	38	Pn	Pn	21 27 19.2	-1.2
	baz=221,slow=14						
SPA0				IAML		21 27 43.2	
	comp=Z,22nm,1.2s						
SPB2	Spitsbergen Ar	2.86	38		Pn	21 27 19.0	-1.4
SPITS	Spitsbergen Ar	2.86	38	Pn	Pb	21 27 26.4	+0.4
	baz=198,slow=14						
SPITS				Sn	Sb	21 28 00.6	-0.2
	baz=220,slow=24						
	comp=Z,7.4nm,0.3s						
SPITS	Spitsbergen Ar	2.86	38	P	Pn	21 27 19.0	-1.4
SPITS				S	Sn	21 27 52.5	-1.9
KBS	Kingsbay	3.01	15		Pn	21 27 22.0	-0.4
KBS	Kingsbay	3.01	15	Pn	Pn	21 27 21.5	-0.9
KBS	Kingsbay	3.01	15	S	Sb	21 28 03.0	-2.1
KBS	Kingsbay	3.01	15	*e*P	Pn	21 27 21.3	-1.1
KBS	Kingsbay	3.01	15	*e*P	Pb	21 27 27.2	-1.4
BEA1	Bear Island, N	3.26	113	Pn	Pn	21 27 24.4	-1.5
	baz=296,slow=18						
BEAR	Bear Island, N	3.27	113	Pn	Pn	21 27 24.4	-1.6
	baz=296,slow=18						
HOPEN	Hopen	4.12	76	Pn	Pn	21 27 34.7	-2.9
HOPEN				Sn	Sn	21 28 20.8	-4.5
HOPEN	Hopen	4.12	76	*e*P	Pn	21 27 36.2	-1.4
DAG	Danmarks Havn	6.24	289	*e*	Pn	21 27 56.7	-10
DAG				*e*P	Pn	21 28 07.6	+0.9
DAG				*e*		21 29 04.5	
DAG				*e*S	Sn	21 29 11.3	-6.2
DAG	Danmarks Havn	6.24	289	*e*P	Pn	21 28 05.6	-1.1
DAG				*e*S	Sn	21 29 03.9	-14
DAG				IAML		21 29 13.6	
	comp=Z,26nm,0.3s						
HAMF	Hammerfest	7.08	132	*e*P	Pn	21 28 20.9	+2.7
HAMF				*e*S	Sn	21 29 33.5	-4.7
NOR	Nord	7.21	331	*e*P	Pn	21 28 19.4	-0.7
NOR				*e*		21 28 24.2	
NOR	Nord	7.21	331	*e*P	Pn	21 28 17.4	-2.7
TRO	Tromso	7.24	148	*e*	Pn	21 28 17.9	-2.6
TRO				*e*P	Pn	21 28 25.6	+5.2
DBG	Daneborg	7.34	270	Pn	Pn	21 28 21.6	-0.3
DBG				Sn	Sn	21 29 38.7	-6.1
DBG	Daneborg	7.34	270	*e*	Pn	21 28 14.5	-7.4
DBG				*e*P	Pn	21 28 21.4	-0.5
DBG				*e*		21 29 29.0	
DBG				Sn	Sn	21 29 38.7	-6.1
DBG	Daneborg	7.34	270	*e*P	Pn	21 28 20.5	-1.4
DBG				*e*S	Sn	21 29 32.1	-13
DBG				IAML		21 29 41.9	
	comp=Z,9.6nm,0.6s						
JETT	Jettan, Norway	7.51	144	Pn	Pn	21 28 27.9	+3.7
JETT	Jettan, Norway	7.51	144	*e*	Pn	21 28 21.9	-2.4
JETT				*e*P	Pn	21 28 28.4	+4.2
KIF	Kilpisjarvi	8.07	145	*e*	Pn	21 28 29.2	-2.6
KIF				*e*P	Pn	21 28 36.3	+4.4
ARCES	ARCESS Array B	8.35	133	Pn	Pn	21 28 38.5	+2.8
	comp=Z,0.1nm,0.3s,baz=334,slow=12,SNR=8.8						
ARCES				Sn	Sn	21 30 04.9	-4.6
	comp=Z,0.7nm,0.3s,baz=329,slow=20,SNR=7.2						
ARCES				LR	LR	21 31 58.0	
	comp=Z,192nm,21.8s,baz=341,slow=38						
	comp=Z,3.2nm,0.6s						
ARCES	ARCESS Array B	8.35	133		Pn	21 28 33.5	-2.2
ARCES	ARCESS Array B	8.35	133	P	Pn	21 28 39.1	+3.4
ARCES				S	Sn	21 30 05.8	-3.8
ARA0	ARCESS Array S	8.35	133	Pn	Pn	21 28 37.6	+1.9
	baz=322,slow=12						
ARA0				Sn	Sn	21 30 05.0	-4.6
	baz=335,slow=28						
ARA0	ARCESS Array S	8.35	133	*e*	Pn	21 28 32.5	-3.2
ARA0				*e*P	Pn	21 28 39.3	+3.5
ARA0				Sn	Sn	21 30 05.0	-4.6
	baz=335,slow=28						
KTK1	Kautokeino	8.43	139	*e*P	Pn	21 28 41.0	+4.2
KEV	Kevo	8.44	129	Pn	Pn	21 28 36.8	-0.1
KEV	Kevo	8.44	129	*e*	Pn	21 28 33.4	-3.5
KEV				*e*P	Pn	21 28 40.1	+3.3
STEI	Steigen	8.49	161	*e*P	Pn	21 28 42.6	+5.1
VADS	Vadso	8.60	123	P	Pn	21 28 43.3	+4.2

VADS				S	**Sn**	**21 30 12.8**	**-2.8**
VADS	**Vadso**	**8.60**	**123**	*e*P	Pn	21 28 43.2	+4.1
KOVU	**Salmi**	**8.72**	**148**	*e*P	Pn	21 28 47.1	+6.4
HEF	**Hetta**	**9.05**	**140**	*e*P	Pn	21 28 49.3	+4.0
ZFI2	**Zemlya Franca-**	**9.07**	**41**	P	**Pn**	**21 28 45.4**	**-0.1**
ZFI2				S	**Sn**	**21 30 23.0**	**-4.1**
OMEGA	**Omega**	**9.08**	**41**	*e*P	**Pn**	**21 28 45.2**	**-0.5**
OMEGA				*e*S	**Sn**	**21 30 22.7**	**-4.6**
LANU	**Lannavaara**	**9.13**	**144**	*e*P	Pn	21 28 51.7	+5.3
SALU	**Saltoluokta**	**9.33**	**154**	*e*P	Pn	21 28 55.7	+6.6
SCO	**Scoresbysund**	**10.11**	**252**	Pn	**Pn**	**21 28 59.9**	**+0.1**
SCO	**Scoresbysund**	**10.11**	**252**	*e*P	**Pn**	**21 28 56.5**	**-3.2**
SCO				*e*S	Sn	21 30 35.6	-17
SCO	**Scoresbysund**	**10.11**	**252**	*e*P	**Pn**	**21 28 56.5**	**-3.2**
SCO				*e*S	Sn	21 30 35.6	-17
TERR	**Teriberka**	**10.55**	**116**	P	**Pn**	**21 29 09.5**	**+3.7**
TERR				S	**Sn**	**21 30 58.7**	**-4.6**
APA0	**Apatity Array**	**11.43**	**125**	Pn	**Pn**	**21 29 16.5**	**-1.3**
	baz=338,slow=18						
APA0	**Apatity Array**	**11.43**	**125**	P	**Pn**	**21 29 21.1**	**+3.3**
APA0				S	**Sn**	**21 31 19.6**	**-5.3**
APA0	**Apatity Array**	**11.43**	**125**	Pn	**Pn**	**21 29 16.5**	**-1.3**
	baz=338,slow=18						
LVZ	**Lovozero**	**11.52**	**121**	Pn	**Pn**	**21 29 18.9**	**-0.2**
KVDA	**Kovda**	**12.20**	**127**	P	**Pn**	**21 29 31.6**	**+3.3**
KVDA				S	**Sn**	**21 31 39.2**	**-4.5**
SUMG	**Summit**	**12.68**	**278**	Pn	**Pn**	**21 29 35.7**	**+0.4**
SUMG	**Summit**	**12.68**	**278**	*e*P	Pn	21 29 30.7	-4.6
SUMG	**Summit**	**12.68**	**278**	*e*P	Pn	21 29 30.7	-4.6
BORG	**Borgarnes**	**14.71**	**235**	LR	LR	21 34 14.9	
	comp=Z,124nm,19.3s,baz=15,slow=31						
NOA	**NORSAR Array B**	**15.15**	**174**	Pn	P	21 30 20.4	+6.8
	baz=352,slow=12,SNR=3.8						
NOA				LR	LR	21 35 30.2	
	comp=Z,92nm,18.7s,baz=350,slow=35						
FIA1	**FINESS Array S**	**15.97**	**147**	Pn	**Pn**	**21 30 17.2**	**-1.9**
FINES	**FINESS Array B**	**15.97**	**147**	Pn	**P**	**21 30 24.2**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=340,slow=7.8,SNR=5.0						
FINES				LR	LR	21 36 14.0	
	comp=Z,194nm,21.6s,baz=0.0,slow=36						
	comp=Z,3.5nm,0.8s						
FINES	**FINESS Array B**	**15.97**	**147**		**Pn**	**21 30 15.7**	**-3.5**
HFS	**Hagfors**	**16.14**	**169**	LR	LR	21 35 41.5	
	comp=Z,140nm,20.2s,baz=14,slow=34						
LSH	**Leshukonskoye**	**16.48**	**112**	*e*P	**Pn**	**21 30 25.8**	**+0.3**
	comp=Z,108nm,3.9s						
LSH				S	Sn	21 33 15.5	-12
TULEG	**Thule**	**16.99**	**309**	Pn	**Pn**	**21 30 30.3**	**-1.8**
KLMR	**Klimovskoe**	**18.76**	**127**	*e*P	**Pn**	**21 30 54.8**	**+1.0**
	comp=Z,37nm,2.0s						
SFJD	**Kangerlussuaq**	**19.61**	**274**	LR	LR	21 37 38.9	
	comp=Z,234nm,18.1s,baz=44,slow=34						
POIN	**Pond Inlet**	**21.39**	**305**		**P**	**21 31 22.6**	**+0.7**
POIN				IAmb	IAmb	21 31 34.2	
	comp=Z,19nm,1.4s						
PABE	**Paberze**	**21.52**	**154**		**P**	**21 31 21.7**	**-1.6**
NRIK	**Noril'sk**	**22.73**	**65**	P	P	21 31 45.7	+9.5
	comp=Z,6.4nm,0.9s,baz=329,slow=8.3,SNR=6.0						
NRIK				LR	LR	21 43 09.4	
	comp=Z,56nm,18.6s,baz=338,slow=43						
	comp=Z,6.4nm,0.9s						
NRIK	**Noril'sk**	**22.73**	**65**		**P**	**21 31 37.5**	**+1.2**
NRIK				IAmb	IAmb	21 31 51.6	
	comp=Z,11nm,1.1s						
KIRV	**Kirov**	**22.88**	**117**	LR	LR	21 40 59.3	
	comp=Z,160nm,19.5s,baz=331,slow=38						
RES	**Resolute Bay**	**22.90**	**318**	LR	LR	21 40 51.2	
	comp=Z,101nm,18.5s,baz=99,slow=37						
SUW	**Suwalki**	**22.91**	**156**	P	**P**	**21 31 37.8**	**-0.5**
OBN	**Obninsk**	**23.64**	**136**	P	**P**	**21 31 42.4**	**-3.0**
OJC	**Ojcow**	**26.39**	**163**	P	**P**	**21 32 10.8**	**+0.1**
FRB	**Frobisher Bay**	**26.57**	**285**	LR	LR	21 42 05.0	
	comp=Z,299nm,18.5s,baz=63,slow=35						
AKASG	**Malin Array Be**	**26.85**	**149**	LR	LR	21 42 31.8	
	comp=Z,100nm,21.7s,baz=358,slow=36						
ARTI	**Arti**	**26.89**	**108**	LR	LR	21 43 51.9	
	comp=Z,89nm,18.8s,baz=337,slow=38						
ARTI	**Arti**	**26.89**	**108**	P	**P**	**21 32 14.1**	**-1.0**
ARTI				IAmb	IAmb	21 32 42.1	
	comp=Z,9.9nm,1.1s						
VRAC	**Vranov**	**27.10**	**167**	LR	LR	21 42 20.1	
	comp=Z,95nm,18.0s,baz=334,slow=35						
GERES	**GERESS Array B**	**27.43**	**172**	LR	LR	21 42 03.0	
	comp=Z,88nm,18.6s,baz=4.0,slow=34						
BELG	**Belogornoye**	**28.27**	**124**	LR	LR	21 44 41.0	
	comp=Z,121nm,19.2s,baz=283,slow=38						
TIXI	**Tiksi**	**28.28**	**35**	LR	LR	21 43 04.8	
	comp=Z,34nm,20.6s,baz=340,slow=35						
DAVOX	**Davos/Dischmat**	**29.40**	**177**	LR	LR	21 43 50.5	
	comp=Z,92nm,18.7s,baz=76,slow=35						
MLR	**Muntele Rosu**	**31.62**	**155**	LR	LR	21 45 36.5	
	comp=Z,102nm,18.2s,baz=4.5,slow=36						
AKTO	**Aktyubinsk**	**32.33**	**113**	LR	LR	21 47 01.6	
	comp=Z,110nm,19.3s,baz=158,slow=38						
BVAR	**Borovoye Array**	**32.80**	**98**	LR	LR	21 49 18.3	
	comp=Z,80nm,20.3s,baz=335,slow=41						
SCHQ	**Schefferville**	**34.06**	**275**	LR	LR	21 45 42.9	
	comp=Z,125nm,18.8s,baz=50,slow=34						
D19K	**Kuna River**	**35.39**	**351**	P	**P**	**21 33 31.1**	**+1.2**
D19K				IAmb	IAmb	21 33 45.5	
	comp=Z,3.8nm,1.1s						
ZALV	**Zalesovo Beam**	**35.44**	**83**	P	P	21 33 39.1	+8.7
	comp=Z,0.9nm,0.9s,baz=312,slow=13,SNR=4.8						
ZALV				PcP	**PcP**	**21 36 07.0**	**+7.5**
	comp=Z,0.4nm,0.5s,baz=350,slow=5.0,SNR=2.0						
ZALV				LR	LR	21 50 58.4	
	comp=Z,54nm,19.8s,baz=330,slow=41						
	comp=Z,0.9nm,0.9s						
E22K	**Anaktuvuk Pass**	**35.46**	**347**	P	**P**	**21 33 32.1**	**+1.6**
BMAR	**Burnt Mountain**	**35.70**	**342**	P	**P**	**21 33 33.6**	**+1.1**
KBZ	**Khabaz**	**35.71**	**134**	LR	LR	21 48 42.2	
	comp=Z,78nm,19.7s,baz=338,slow=37						
E19K	**Redstone River**	**36.40**	**350**	P	**P**	**21 33 39.6**	**+1.2**
ESDC	**Sonseca Array**	**36.87**	**195**	P	P	21 33 48.3	+5.5
	comp=Z,2.0nm,1.1s,baz=1.8,slow=8.5,SNR=5.2						
	comp=Z,2.0nm,1.1s						
YKA	**Yellowknife Ar**	**36.97**	**319**	P	P	21 33 49.8	+6.5
	comp=Z,0.4nm,0.9s,baz=7.7,slow=9.5,SNR=7.1						
YKA				PcP	**PcP**	**21 36 11.2**	**+7.3**
	comp=Z,1.1nm,1.2s,baz=20,slow=2.3,SNR=4.3						
	comp=Z,0.4nm,0.9s						
KURBB	**Kurchatov Arra**	**36.98**	**92**	P	P	21 33 51.0	+7.5
	comp=Z,0.8nm,0.9s,baz=340,slow=7.4,SNR=6.3						
KURBB				LR	LR	21 51 44.0	
	comp=Z,176nm,20.5s,baz=178,slow=41						
	comp=Z,0.8nm,0.9s						
BRTR	**Keskin Array B**	**38.21**	**147**	LR	LR	21 51 10.8	
	comp=Z,60nm,18.1s,baz=3.5,slow=39						
ILAR	**Eielson Array**	**38.49**	**343**	P	P	21 34 04.8	+8.7
	comp=Z,1.6nm,1.0s,baz=3.9,slow=6.3,SNR=11						
	comp=Z,1.6nm,1.0s						
ILAR	**Eielson Array**	**38.49**	**343**	P	**P**	**21 33 57.2**	**+1.0**
MKAR	**Makanchi Array**	**41.46**	**90**	P	P	21 34 29.7	+8.7
	comp=Z,0.9nm,0.9s,baz=339,slow=6.5,SNR=3.6						
MKAR				LR	LR	21 54 28.6	
	comp=Z,134nm,21.1s,baz=340,slow=40						
	comp=Z,0.9nm,0.9s						
MKAR	**Makanchi Array**	**41.46**	**90**	P	**P**	**21 34 21.4**	**+0.4**
AAK	**Ala-Archa**	**43.49**	**100**	LR	LR	21 56 31.7	
	comp=Z,49nm,18.3s,baz=339,slow=41						
MMAI	**Mount Meron Ar**	**45.05**	**147**	LR	LR	21 55 45.2	
	comp=Z,33nm,20.1s,baz=354,slow=39						
EIL	**Elat**	**48.28**	**148**	LR	LR	21 56 06.9	
	comp=Z,48nm,18.5s,baz=48,slow=37						
LZDM	**Lanzhou Array**	**56.84**	**75**	LR	LR	22 04 13.7	
	comp=Z,70nm,19.2s,baz=45,slow=40						
TORD	**Torodi Ar. Bea**	**63.00**	**187**	P	**P**	**21 37 05.8**	**+4.6**
	comp=Z,2.8nm,1.1s,baz=360,slow=7.9,SNR=5.3						
	comp=Z,2.8nm,1.1s						
BRDH	**Bariadhala**	**66.68**	**90**	LR	LR	22 12 10.3	
	comp=Z,54nm,19.4s,baz=329,slow=41						
TX31	**Lajitas Ar. Si**	**66.70**	**298**		**P**	**21 37 25.6**	**+0.2**
TX31				IAmb	IAmb	21 37 32.7	
	comp=Z,5.6nm,1.2s						
TXAR	**Lajitas Array**	**66.70**	**298**	P	P	21 37 30.7	+5.3
	comp=Z,1.4nm,1.0s,baz=35,slow=3.6,SNR=8.2						
	comp=Z,1.4nm,1.0s						
TXAR	**Lajitas Array**	**66.70**	**298**	P	**P**	**21 37 25.3**	**-0.1**
DBIC	**Dimbokro**	**69.71**	**193**	P	**P**	**21 37 44.9**	**+0.7**
DBIC				IAmb	IAmb	21 37 50.3	
	comp=Z,9.0nm,1.4s						
ASAR	**Alice Springs**	**121.21**	**60**	PKP	**PKiKP**	**21 45 32.4**	**+5.4**
	comp=Z,0.4nm,0.6s,baz=346,slow=2.2,SNR=3.5						
SNAA	**Sanae**	**147.67**	**186**	PKPbc	**PKPab**	**21 46 23.4**	**+3.8**
	comp=Z,2.7nm,1.0s,baz=311,slow=4.6,SNR=4.7						

NEIC 18 21:35:15.8±1.5,45°.14N±0°.05×106°.87W±0°.05,h0^{km}±1^{km}, ML3.2/54,Error ellipse: s-maj=10.1km s-min=3.0km az=209.0

IDC 18 21:35:17.1±1.2,44°.90N×106°.82W,h0^{km},mbtmp3.8/2, ML3.5/2,Error ellipse: s-maj=57.3km s-min=8.7km az=136.0

ISC 18 21:35:16.4±1.1,**45°.19N**±0°.06×**106°.85W**±0°.06,**h0**^{km}**,n41, σ0^{s}.81**/40,**Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAO	**LASA Array**	**1.56**	**16**		**Pg**	**21 35 46.1**	**-0.2**
RLMT	**Red Lodge**	**1.71**	**269**		**Pn**	**21 35 47.5**	**-0.2**
RLMT				IAML		21 36 14.9	
	184nm,0.6s						
RLMT				IAML		21 36 20.7	
	189nm,0.8s						
YNE	**Yellowstone No**	**2.24**	**266**	Pn	**Pn**	**21 35 55.1**	**+0.1**
YNE				IAML		21 36 32.8	
	comp=E,199nm,0.6s						
YNE				IAML		21 36 41.6	
	comp=N,120nm,0.6s						
RSSD	**Black Hills**	**2.27**	**117**		**Pn**	**21 35 56.8**	**+1.4**
RSSD	**Black Hills**	**2.27**	**117**		**Pb**	**21 35 57.0**	**-1.4**
YMP	**Mirror Lake Pl**	**2.39**	**260**	Pn	**Pn**	**21 35 57.0**	**-0.1**
K22A	**Casper**	**2.55**	**175**		**Pn**	**21 35 59.4**	**+0.3**
LKWY	**Lake**	**2.60**	**257**		**Pn**	**21 36 01.0**	**+1.1**
LKWY				IAML		21 36 55.4	
	comp=N,141nm,1.6s						
LKWY				IAML		21 36 58.4	
	comp=N,80nm,2.0s						
YNR	**Norris Junctio**	**2.76**	**261**		**Pn**	**21 36 02.9**	**+0.8**
YNR				IAML		21 36 43.0	
	comp=N,87nm,0.5s						
YNR				IAML		21 36 50.6	
	comp=E,61nm,1.2s						
H17A	**Grant Village**	**2.77**	**255**		**Pn**	**21 36 02.8**	**+0.6**
H17A				IAML		21 36 44.8	
	comp=N,69nm,0.8s						
YHH	**Holmes Hill**	**2.87**	**263**		**Pn**	**21 36 03.7**	**+0.1**
YFT	**Old Faithful**	**2.93**	**257**		**Pn**	**21 36 04.6**	**+0.2**
YPP	**Pitchstone Pla**	**2.96**	**253**		**Pn**	**21 36 06.5**	**+1.5**
YPP				IAML		21 37 11.9	
	comp=E,55nm,2.6s						
YMR	**Madison River**	**2.97**	**261**		**Pn**	**21 36 06.1**	**+1.2**
YMR				IAML		21 37 01.5	
	comp=N,117nm,2.5s						
YMR				IAML		21 37 11.0	
	comp=E,118nm,1.1s						
YHL	**Hebgen Lake**	**3.09**	**265**		**Pn**	**21 36 06.8**	**+0.1**
YHL				IAML		21 37 00.3	
	comp=N,95nm,2.0s						
YHL				IAML		21 37 05.9	
	comp=E,98nm,1.3s						
BW06	**Boulder Array**	**3.11**	**220**		**Pn**	**21 36 07.6**	**+0.7**
BW06				IAML		21 36 57.6	
	comp=E,54nm,1.1s						
BW06				IAML		21 37 02.7	
	comp=E,51nm,0.6s						
PD31	**Pinedale Array**	**3.11**	**220**		**Pn**	**21 36 07.4**	**+0.5**
PDAR	**Pinedale Array**	**3.11**	**220**	Pn	**Pn**	**21 36 07.9**	**+1.0**
	comp=E,5.0nm,0.3s,baz=50,slow=17,SNR=127						
PDAR				Lg	Lg	21 36 47.7	
	comp=E,11nm,0.3s,baz=47,slow=30,SNR=5.3						
	comp=E,5.2nm,0.3s						
PDAR	**Pinedale Array**	**3.11**	**220**		**Pn**	**21 36 07.3**	**+0.3**
YHB	**Horse Butte**	**3.12**	**263**		**Pn**	**21 36 07.6**	**+0.6**
YHB				IAML		21 37 01.3	
	comp=E,80nm,2.2s						
LOHW	**Long Hollow**	**3.12**	**241**		**Pn**	**21 36 06.7**	**-0.3**
LOHW				IAML		21 37 02.2	
	comp=E,48nm,2.0s						
LOHW				IAML		21 37 54.1	
	comp=E,48nm,4.7s						
MOOW	**Moose Ponds**	**3.14**	**244**	Pn	**Pn**	**21 36 06.8**	**-0.5**
FXWY	**Fox Creek**	**3.37**	**244**		**Pn**	**21 36 12.3**	**+1.8**
BOZ	**Bozeman (W)**	**3.39**	**279**		**Pn**	**21 36 10.5**	**-0.2**
BOZ				IAML		21 37 06.5	
	comp=E,50nm,2.1s						
EGMT	**Eagleton**	**3.47**	**326**		**Pn**	**21 36 12.6**	**+0.8**
DGMT	**Dagmar**	**3.75**	**28**		**Pn**	**21 36 17.2**	**+1.7**
LRM	**Limekiln Ridge**	**3.99**	**281**		**Pn**	**21 36 18.7**	**-0.3**
DLMT	**Dillon**	**4.06**	**274**		**Pn**	**21 36 19.5**	**-0.3**
LYMT	**Lyon Mountain**	**4.18**	**297**		**Pn**	**21 36 21.8**	**+0.1**
MCMT	**McKenzie Canyo**	**4.27**	**267**		**Pn**	**21 36 22.6**	**-0.3**
BPMT	**Black Pine Rid**	**4.78**	**287**		**Pn**	**21 36 29.6**	**-0.2**
O20A	**White River Ci**	**5.16**	**192**		**Pn**	**21 36 34.5**	**-0.4**
MSO	**Missoula**	**5.21**	**291**		**Pn**	**21 36 35.5**	**0.0**
BSUT	**Blindstream Ca**	**5.47**	**213**		**Pn**	**21 36 40.2**	**+0.8**
HVU	**Hansel Valley**	**5.49**	**234**	Pn	**Pn**	**21 36 41.0**	**+1.4**
JTMT	**Jette**	**5.74**	**299**		**Pn**	**21 36 42.9**	**0.0**
P18A	**Preston Nutter**	**6.10**	**206**		**Pn**	**21 36 49.0**	**+0.9**
SRU	**San Rafael Swe**	**6.66**	**205**		**Pn**	**21 36 55.3**	**-0.3**
PV21	**Cone Mtn., Par**	**6.81**	**194**		**Pn**	**21 36 57.5**	**-0.2**
I10CA	**LAC DU BONNET**	**8.85**	**52**	I	I	22 31 10.0	
	baz=233,slow=246,SNR=2.0						
ULM	**Lac du Bonnet**	**8.96**	**52**	Pn	**Pn**	**21 37 27.8**	**+0.8**
	comp=E,1.2nm,0.3s,baz=239,slow=11,SNR=12						
ULM				Lg	Lg	21 39 58.1	
	comp=E,0.4nm,0.3s,baz=189,slow=11,SNR=3.0						
	comp=E,3.5nm,0.3s						

BJI 18 21:52:01.9,58°.83N×137°.30W,h9^{km},mB5.3/17,mb4.8/55, Ms5.1/39,Ms7 4.8/36

NEIC 18 21:52:04.0±1.5,58°.48N±0°.04×137°.76W±0°.05,h6^{km}±3^{km}, Error ellipse: s-maj=5.5km s-min=3.7km az=203.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.89; M$_{\theta\theta}$-0.58; M$_{\phi\phi}$-1.31; M$_{r\theta}$-0.89; M$_{\theta\phi}$2.13; M$_{\phi r}$-1.21; Fault plane solution: M$_0$3.10000×10^{16} NP1: ϕ_s171.58000°,δ60.02000°,λ135.29000°. NP2: ϕ_s287.90000°,δ52.45000°,λ39.06000°. Principal axes: T 3.0667, Plg52.0000°, Azm136.0000°; N 0.0692, Plg38.0000°, Azm325.0000°; P -3.1358, Plg4.0000°, Azm231.0000°;

AEIC 18 21:52:04.4±1.6,58°.54N±0°.03×137°.70W±0°.05,h2^{km}±3^{km}, ML5.2,mb5.3/153(NEIC),ML5.4/98(NEIC), Mwr4.9/179(NEIC),Mww5.1/75(NEIC) Error ellipse: s-maj=5.2km s-min=2.8km az=223.0

MOS 18 21:52:04.0±0.9,58°.58N×137°.73W,h17^{km},mb5.4/69, MS4.5/6,Error ellipse: s-maj=10.5km s-min=4.4km az=105.0

NEIC 18 21:52:05,58°.56N×137°.67W,h2^{km}

NEIC 18 21:52:05,58°.46N×137°.67W,h24^{km},Moment Tensor Solution. Duration: 1^{s}.9 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.10; M$_{\theta\theta}$-0.72; M$_{\phi\phi}$-1.38; M$_{r\theta}$-1.56; M$_{\theta\phi}$3.35; M$_{\phi r}$-2.66; Fault plane solution: M$_0$4.92000×10^{16} NP1: ϕ_s282.79000°,δ52.25000°,λ28.27000°. NP2: ϕ_s174.57000°,δ68.01000°,λ138.68000°. Principal axes: T 5.1990, Plg44.0000°, Azm132.0000°; N -0.6220, Plg44.0000°, Azm331.0000°; P -4.5770, Plg10.0000°, Azm232.0000°;

NEIC 18 21:52:05,58°.56N×137°.67W,h24^{km}

ANF 18 21:52:05.6±0.8,58°.48N×137°.71W,h18^{km}±6^{km},ML5.7/46, Error ellipse: s-maj=1.8km s-min=1.2km az=173.0

IDC 18 21:52:07.7±0.3,58°.62N×137°.67W,h26^{km}±1^{km},mb4.4/34, mbtmp4.6/41,ML4.2/6,MS4.4/72,Error ellipse: s-maj=11.1km s-min=6.6km az=44.0

GCMT 18 21:52:09.4±0.2,58°.65N±0°.01×137°.82W±0°.02,h32^{km}, MW5.2/125,Moment Tensor Solution. s58,c76; s125,c192; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.40±.20; M$_{\theta\theta}$-1.12±.15; M$_{\phi\phi}$-2.28±.15; M$_{r\theta}$-1.35±.19; M$_{\theta\phi}$5.28±.10; M$_{\phi r}$-2.34±.19; Best double couple: M$_0$6.59200×10^{16} NP1:ϕ_s282.00000°,δ57.00000°, λ31.00000°. NP2:ϕ_s173.00000°,δ64.00000°,λ142.00000°. Principal axes: T 6.1010, Plg44.0000°, Azm135.0000°; N 0.9820, Plg46.0000°, Azm324.0000°; P -7.0840, Plg5.0000°, Azm229.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

BGR 18 21:52:16.7,60°.37N×141°.83W,h33^{km},mb5.2,Ms4.5

ISC 18 21:52:05.9±0.3,**58°.51N**±0°.02×**137°.65W**±0°.02,**h19**^{km}, **h19**^{km}**:pP-P,n980,σ1^{s}.69**/1007,**mb5.2**/222,**MS4.5**/90, **35C-32D,Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
S31K	**Pelican**	**0.93**	**125**		**Pb**	**21 52 22.4**	**-0.9**
S31K					**Sb**	**21 52 36.0**	**+0.8**
S31K	**Pelican**	**0.93**	**125**	P	**Pb**	**21 52 22.5**	**-0.8**
	baz=303,SNR=1000						
S31K				S	**Sb**	**21 52 35.9**	**+0.7**
	baz=303						
S31K				S	**Sb**	**21 52 35.9**	**+0.7**
	baz=303						
R31K	**City Hall, Gus**	**1.01**	**94**		**Pb**	**21 52 24.6**	**-0.1**
R31K					**Sn**	**21 52 38.9**	**+0.3**
R31K	**City Hall, Gus**	**1.01**	**94**	P	**Pb**	**21 52 24.5**	**-0.2**
	baz=272,SNR=75						
R31K				S	**Sn**	**21 52 38.9**	**+0.3**
	baz=272						
P29M	**Windy Craggy**	**1.13**	**358**		**Pn**	**21 52 25.4**	**-1.3**
P29M					**Sb**	**21 52 39.9**	**-1.2**
P29M				IAML		21 52 41.8	
	comp=N,127µm,0.4s						
P29M	**Windy Craggy**	**1.13**	**358**	P	**Pn**	**21 52 25.6**	**-1.1**
	baz=178						
P29M				S	**Sb**	**21 52 40.0**	**-1.2**
	baz=178						
PLBC	**Pleasant Camp**	**1.16**	**34**		**Pn**	**21 52 26.8**	**-0.4**
PLBC					**Sb**	**21 52 42.5**	**+0.4**
YKU2	**Yakutat**	**1.45**	**315**	Pn	**Pn**	**21 52 30.9**	**-0.2**
YKU2					**Sb**	**21 52 50.0**	**-0.5**
YKU2	**Yakutat**	**1.45**	**315**	P	**Pn**	**21 52 31.1**	**0.0**
BESE	**Bessie Mountai**	**1.47**	**86**	Pn	**Pn**	**21 52 31.2**	**-0.2**
BESE					**Sb**	**21 52 51.9**	**+1.0**
SKAG	**Skagway**	**1.54**	**50**	Pn	**Pn**	**21 52 32.4**	**+0.2**
SKAG					**Sb**	**21 52 53.0**	**+0.3**
SKAG	**Skagway**	**1.54**	**50**	P	**Pb**	**21 52 33.4**	**-0.3**
SKAG	**Skagway**	**1.54**	**50**	P	**Pn**	**21 52 32.5**	**+0.2**
	baz=230,SNR=1000						
SKAG				S	**Sb**	**21 52 53.0**	**+0.3**
	baz=230						
P30M	**Million Dollar**	**1.66**	**12**		**Pn**	**21 52 34.1**	**0.0**
P30M					**Sn**	**21 52 55.1**	**+0.2**
P30M				IAML		21 52 57.4	
	comp=E,35µm,1.1s						
P30M	**Million Dollar**	**1.66**	**12**	P	**Pn**	**21 52 34.1**	**0.0**
	baz=192						
P30M				S	**Sb**	**21 52 56.3**	**-0.1**
	baz=192						
JIS	**Juneau Island**	**1.73**	**96**		**Pn**	**21 52 35.2**	**+0.2**
JIS					**Sb**	**21 53 00.4**	**+1.9**
JIS	**Juneau Island**	**1.73**	**96**	P	**Pn**	**21 52 35.9**	**+0.9**
JIS	**Juneau Island**	**1.73**	**96**	S	**Sb**	**21 53 00.2**	**+1.7**
BCPM	**Bancas Point**	**1.77**	**326**	Pn	**Pn**	**21 52 33.4**	**-2.2**
BCPM				IAML		21 53 05.0	
	comp=N,34µm,0.6s						
BCPM				IAML		21 53 10.4	
	comp=E,35µm,0.9s						
O29M	**Mount Kennedy**	**1.86**	**346**		**Pn**	**21 52 36.6**	**-0.3**
O29M				IAML		21 53 02.5	
	comp=N,40µm,0.7s						
O29M	**Mount Kennedy**	**1.86**	**346**	P	**Pn**	**21 52 36.8**	**-0.1**
	baz=165,SNR=1000						
O29M				S	**Sb**	**21 53 01.3**	**-1.1**
	baz=165						
SIT	**Sitka**	**1.91**	**138**	Pn	**Pn**	**21 52 36.0**	**-1.4**
SIT	**Sitka**	**1.91**	**138**	P	**Pn**	**21 52 37.4**	**0.0**
SIT	**Sitka**	**1.91**	**138**	S	**Sg**	**21 53 05.8**	**-1.7**
SIT	**Sitka**	**1.91**	**138**	P	**Pn**	**21 52 36.0**	**-1.4**
SIT	**Sitka**	**1.91**	**138**	P	**Pn**	**21 52 36.1**	**-1.4**
	baz=319,SNR=327						
SIT				Sb	**Sb**	**21 53 04.4**	**+0.8**
	baz=319						
S32K	**Killisnoo**	**1.94**	**121**	Pn	**Pn**	**21 52 37.1**	**-0.7**
S32K				IAML		21 53 10.7	
	comp=E,20µm,0.7s						
S32K	**Killisnoo**	**1.94**	**121**	P	**Pn**	**21 52 37.2**	**-0.6**
	baz=302,SNR=416						
S32K				Sb	**Sb**	**21 53 05.0**	**+0.6**
	baz=302						
S32K				Sb	**Sb**	**21 53 05.0**	**+0.6**
	baz=302						
YUK7	**Dusty Glacier**	**2.05**	**353**		**Pn**	**21 52 39.7**	**+0.1**
YUK7					**Sb**	**21 53 06.6**	**-1.2**
PINM	**Pinnacle**	**2.08**	**321**	P	**Pn**	**21 52 39.6**	**-0.3**
	baz=140,SNR=377						
PINM				Sb	**Sg**	**21 53 11.5**	**-1.3**
	baz=140						
PCA	**Pinnacle**	**2.08**	**321**	Pn	**Pn**	**21 52 38.4**	**-1.5**
SAMH	**Samovar Hills**	**2.29**	**317**		**Pn**	**21 52 43.3**	**+0.6**
P32M	**Atlin**	**2.31**	**60**	Pn	**Pn**	**21 52 43.0**	**+0.1**
P32M				IAML		21 53 17.9	
	comp=N,16µm,0.8s						
P32M	**Atlin**	**2.31**	**60**	P	**Pn**	**21 52 43.1**	**+0.1**
	baz=242,SNR=892						
P32M				Sb	**Sb**	**21 53 17.3**	**+2.3**
	baz=242						
HYT	**Haines Junctio**	**2.33**	**2**	Pn	**Pn**	**21 52 43.2**	**-0.1**
HYT				IAML		21 53 16.2	
	comp=E,26µm,0.8s						
HYT				IAML		21 53 18.5	
	comp=N,27µm,0.7s						
HYT	**Haines Junctio**	**2.33**	**2**	P	**Pn**	**21 52 43.3**	**0.0**
	baz=182,SNR=1000						
HYT				Sb	**Sb**	**21 53 15.9**	**+0.2**
	baz=182						
CHX	**Chaix Hills**	**2.37**	**313**		**Pn**	**21 52 44.0**	**+0.2**
CHX					**Sb**	**21 53 16.4**	**-0.5**
O30N	**Mendenhall**	**2.41**	**19**	Pn	**Pn**	**21 52 44.5**	**+0.2**
O30N				IAML		21 53 25.5	
	comp=E,26µm,1.1s						
O30N	**Mendenhall**	**2.41**	**19**	P	**Pn**	**21 52 44.7**	**+0.4**
	baz=199,SNR=1000						
O30N				Sb	**Sb**	**21 53 19.0**	**+1.1**
	baz=199						
YUK6	**Outpost Mounta**	**2.47**	**352**		**Sb**	**21 53 18.1**	**-1.9**
YUK6	**Outpost Mounta**	**2.47**	**352**	P	**Pn**	**21 52 45.5**	**+0.1**
	baz=172,SNR=269						
YUK6				Sb	**Sb**	**21 53 21.4**	**+1.5**
	baz=172						
WHY	**Whitehorse**	**2.58**	**32**	Pn	**Pn**	**21 52 47.1**	**+0.4**
WHY				IAML		21 53 25.9	
	comp=N,28µm,0.6s						
WHY				IAML		21 53 27.7	
	comp=E,27µm,0.7s						
WHY	**Whitehorse**	**2.58**	**32**	P	**Pn**	**21 52 47.1**	**+0.4**
	baz=214,SNR=1000						
WHY				Sb	**Sb**	**21 53 25.1**	**+2.1**
	baz=214						
O28M	**Mount Upton**	**2.61**	**331**		**Pn**	**21 52 46.8**	**-0.6**
O28M				IAML		21 53 36.3	
	comp=E,12µm,1.1s						
O28M	**Mount Upton**	**2.61**	**331**	P	**Pn**	**21 52 46.6**	**-0.8**
	baz=150,SNR=87						
O28M				Sb	**Sb**	**21 53 25.1**	**+1.0**
	baz=150						
YAH	**Yahtse**	**2.80**	**313**		**Pn**	**21 52 49.0**	**-0.9**
YAH				IAML		21 53 52.5	
	comp=E,16µm,1.1s						
YAH				IAML		21 53 52.6	
	comp=N,18µm,1.4s						
Q32M	**Nakina River**	**2.84**	**78**		**Pn**	**21 52 50.7**	**+0.3**
Q32M				IAML		21 53 41.4	
	comp=N,16µm,1.0s						
Q32M				IAML		21 53 42.9	
	comp=E,21µm,1.3s						
Q32M	**Nakina River**	**2.84**	**78**	P	**Pn**	**21 52 50.6**	**+0.1**
	baz=262						
Q32M				Sb	**Sg**	**21 53 35.3**	**-1.9**
	baz=262						
LOGN	**Logan Glacier**	**2.88**	**325**		**Pn**	**21 52 50.4**	**-0.6**
LOGN				IAML		21 53 40.0	
	comp=E,14µm,1.0s						
LOGN				IAML		21 53 41.8	
	comp=N,10µm,0.9s						
YUK4	**Talbot Arm**	**2.89**	**350**	P	**Pn**	**21 52 53.0**	**+1.9**
	baz=171,SNR=156						
CYK	**Cape Yakataga**	**2.94**	**305**		**Pn**	**21 52 52.1**	**+0.6**
N30M	**Aishikik Lake**	**2.98**	**5**		**Pn**	**21 52 52.5**	**+0.3**
N30M				IAML		21 53 43.6	
	comp=N,9µm,0.8s						
N30M	**Aishikik Lake**	**2.98**	**5**	P	**Pn**	**21 52 52.5**	**+0.3**
	baz=186						
N30M				Sb	**Sb**	**21 53 36.0**	**+1.7**
	baz=186						
YUK8	**Steele Glacier**	**2.98**	**340**		**Pn**	**21 52 52.3**	**-0.1**
YUK8	**Steele Glacier**	**2.98**	**340**	P	**Pn**	**21 52 51.9**	**-0.5**
	baz=159,SNR=80						
YUK8				Sb	**Sb**	**21 53 36.7**	**+1.9**

```
       baz=159
P33M  Teslin, Yukon      3.01  53  Pn    Pn    21 52 52.7 +0.2
P33M                               IAML        21 53 41.7
       comp=N,8µm,0.8s
P33M  Teslin, Yukon      3.01  53  P     Pn    21 52 52.8 +0.2
       baz=236,SNR=243
P33M                               Sb    Sb    21 53 38.4 +3.2
       baz=236
GRNC  Granite Creek      3.06 319  Pn    Pn    21 52 52.4 -1.0
GRNC                               IAML        21 53 44.8
       comp=N,9µm,0.9s
CTGM  Chitina Glacie     3.09 324  Pn    Pn    21 52 53.3 -0.6
CTGM                               IAML        21 53 45.7
       comp=N,8µm,1.2s
CTGM                               IAML        21 53 47.4
       comp=E,11µm,1.0s
CTG   Chitna Glacier     3.10 324  P     Pn    21 52 53.2 -0.7
       baz=142,SNR=111
CTG                                Sb    Sb    21 53 39.8 +2.0
       baz=142
N31M  Braeburn, Yuko     3.13  17  Pn    Pn    21 52 54.9 +0.6
N31M  Braeburn, Yuko     3.13  17  P     Pn    21 52 54.8 +0.6
       baz=198,SNR=91
N31M                               Sb    Sb    21 53 41.7 +2.9
       baz=198
SNH   Sunshine Point     3.14 304  Pn    Pn    21 52 53.7 -0.8
BARN  Barnard Glacie     3.27 323  Pn    Pn    21 52 56.0 -0.3
BARN                               IAML        21 53 50.4
       comp=N,7µm,0.8s
BARN                               IAML        21 53 54.7
       comp=E,8µm,1.1s
KIAG  Kiagna River       3.40 317        Pn    21 52 57.4 -0.7
U33K  Whale Pass         3.43 132  Pn    Pn    21 52 57.8 -0.5
U33K                               IAML        21 54 09.3
       comp=E,5µm,1.0s
U33K  Whale Pass         3.43 132  P     Pn    21 52 57.5 -0.8
       baz=315,SNR=15
U33K                               Sb    Sb    21 53 48.7 +1.4
       baz=315
U33K                               Sb    Sb    21 53 48.7 +1.4
       baz=315
TGL   Tana Glacier       3.47 313  Pn    Pn    21 52 58.2 -0.7
TGL                                IAML        21 54 09.5
       comp=N,7µm,1.0s
BALM  Baldy              3.48 319        Pn    21 52 58.4 -0.7
S34M  Telegraph Cree     3.50  97  Pn    Pn    21 52 59.5 +0.2
S34M                               IAML        21 53 59.9
       comp=N,8µm,0.8s
S34M                               IAML        21 54 03.5
       comp=E,8µm,0.7s
S34M  Telegraph Cree     3.50  97  P     Pn    21 52 59.5 +0.2
       baz=281,SNR=48
N32M  Quiet Lake         3.52  39        Pn    21 52 59.9 +0.4
N32M  Quiet Lake         3.52  39  P     Pn    21 52 59.9 +0.4
       baz=222
N32M                               Sb    Sb    21 53 54.4 +4.6
       baz=222
WRAK  Wrangell Islan     3.55 124        Pn    21 52 59.2 -0.7
WRAK                               IAML        21 54 12.3
       comp=E,5µm,0.8s
WRAK                               IAML        21 54 14.4
       comp=E,6µm,1.0s
WRAK  Wrangell Islan     3.55 124  P     Pn    21 52 59.2 -0.7
       baz=308,SNR=18
CRQE  Cirque             3.57 311  P     Pn    21 53 00.3  0.0
       baz=128,SNR=44
CRQE                               Sb    Sb    21 53 53.2 +1.9
       baz=128
YUK3  Moose Creek        3.57 338        Pn    21 53 00.8 +0.4
YUK3  Moose Creek        3.57 338  P     Pn    21 53 00.9 +0.5
       baz=156,SNR=46
YUK3                               Sb    Sb    21 53 55.1 +3.6
       baz=156
R33M  Jennings River     3.57  73        Pn    21 53 00.9 +0.4
R33M                               IAML        21 54 05.4
       comp=E,5µm,1.2s
R33M                               IAML        21 54 07.5
       comp=N,10µm,1.8s
R33M  Jennings River     3.57  73  P     Pn    21 53 00.5 +0.1
       baz=257,SNR=137
R33M                               Sb    Sb    21 53 55.6 +4.1
       baz=257
CRQM  Cirque             3.59 311        Pn    21 52 59.6 -1.1
CRQM                               IAML        21 54 13.6
       comp=E,11µm,1.0s
CRQM                               IAML        21 54 18.9
       comp=N,12µm,1.1s
BERG  Berg Lake          3.62 304        Pn    21 52 59.4 -1.6
PTPK  Patty Peak         3.62 320        Pn    21 53 01.1 -0.1
YUK2  White River        3.66 335        Pn    21 53 01.3 -0.2
KAIM  Kayak Island       3.76 295  Pn    Pn    21 53 01.1 -1.7
KAIM                               IAML        21 54 17.6
       comp=N,8µm,0.8s
KAIM                               IAML        21 54 27.4
       comp=E,9µm,1.1s
KAIM  Kayak Island       3.76 295  P     Pn    21 53 01.9 -0.9
       baz=110
KAIM                               Sb    Sb    21 54 00.4 +3.6
       baz=110
CRAG  Craig              3.92 139  P     Pn    21 53 05.0 -0.1
CRAG  Craig              3.92 139  S     Sn    21 53 55.3 +4.8
CRAG  Craig              3.92 139  P     Pn    21 53 03.8 -1.3
       baz=322,SNR=9.7
MCARA McCarthy VSAT      3.96 319        Pn    21 53 05.3 -0.3
MCARA                              IAML        21 54 31.2
       comp=E,7µm,1.1s
MCARA                              IAML        21 54 43.8
       comp=N,8µm,1.0s
MCARA McCarthy VSAT      3.96 319  P     Pn    21 53 05.4 -0.1
       baz=135,SNR=71
MCARA                              Sb    Sb    21 54 03.6 +1.3
       baz=135
M29M  Somme Creek        3.97 355  P     Pn    21 53 06.7 +0.8
       baz=174,SNR=197
M29M                               Sb    Sb    21 54 05.2 +2.3
       baz=174
VRDI  Verde Repeater     4.00 315  Pn    Pn    21 53 05.8 -0.6
VRDI                               IAML        21 54 31.7
       comp=N,4µm,0.9s
M31M  Drury Creek, Y     4.05  22  P     Pn    21 53 07.5 +0.7
       baz=205,SNR=117
M31M                               Sb    Sb    21 54 09.7 +4.6
       baz=205
RAGM  Ragged Mountai     4.05 301        Pn    21 53 04.7 -2.2
M30M  Minto, Yukon       4.11   6  P     Pn    21 53 08.0 +0.3
       baz=186,SNR=98
M30M                               Sb    Sb    21 54 11.8 +5.1
       baz=186
GOAT  Goat Mountain      4.16 303        Pn    21 53 06.8 -1.6
BVCY  Beaver Creek       4.23 339  P     Pn    21 53 09.3  0.0
       baz=157,SNR=27
BVCY                               Sb    Sb    21 54 15.7 +5.3
       baz=157
T35M  Bob Quinn          4.25 108        Pn    21 53 09.6  0.0
T35M                               IAML        21 54 26.5
       comp=N,5µm,1.0s
T35M  Bob Quinn          4.25 108  P     Pn    21 53 09.7 +0.1
       baz=293,SNR=28
GLB   Gilahina Butte     4.27 316  Pn    Pn    21 53 09.1 -0.8
BMRM  Bremner River      4.30 308  Pn    Pn    21 53 08.8 -1.5
BMRM                               IAML        21 54 32.8
       comp=E,6µm,1.1s
BMRM  Bremner River      4.30 308  P     Pn    21 53 09.2 -1.2
       baz=123,SNR=19
M27K  Edge Creek, AK     4.40 333        Pn    21 53 12.0 +0.3
M27K                               IAML        21 54 31.8
       comp=N,3µm,1.2s
M27K                               IAML        21 54 49.6
       comp=E,3µm,1.3s
M27K  Edge Creek, AK     4.40 333  P     Pn    21 53 12.7 +0.9
       baz=150,SNR=29
M27K                               Sb    Sb    21 54 20.0 +4.8
       baz=150
M27K                               Sb    Sb    21 54 20.0 +4.8
       baz=150
V35K  Ketchikan          4.59 131  Pn    Pn    21 53 13.6 -0.6
V35K                               IAML        21 54 38.2
       comp=E,2µm,1.5s
V35K  Ketchikan          4.59 131  P     Pn    21 53 13.2 -1.1
       baz=316,SNR=14
MID   Middleton Isla     4.59 285  Pn    Pn    21 53 13.3 -1.0
Q23K  Middleton Isla     4.60 285  P     Pn    21 53 14.0 -0.4
       baz=99
EYAK  Cordova Ski Ar     4.61 300        Pn    21 53 13.2 -1.3
EYAK  Cordova Ski Ar     4.61 300  P     Pn    21 53 15.2 +0.8
EYAK  Cordova Ski Ar     4.61 300  P     Pn    21 53 13.5 -1.0
       baz=114,SNR=9.5
L29M  L29M               4.63 357        Pn    21 53 15.4 +0.6
L29M                               IAML        21 54 35.7
       comp=N,6µm,0.7s
L29M  L29M               4.63 357  P     Pn    21 53 15.7 +0.9
       baz=177,SNR=229
L29M                               Sb    Sb    21 54 27.3 +5.6
       baz=177
N25K  Chitina, Valde     4.67 315  P     Pn    21 53 15.7 +0.3
       baz=129,SNR=55
M26K  Nabesna, AK        4.72 328  P     Pn    21 53 16.2 +0.1
       baz=144,SNR=24
M26K                               Sb    Sb    21 54 29.9 +5.5
       baz=144
M26K                               Sb    Sb    21 54 29.9 +5.5
       baz=144
WTLY  Watson Lake, Y     4.81  67  Sb    Sb    21 54 33.3 +6.2
       baz=254
WACK  Wrangell Chich     4.82 319        Pn    21 53 18.8 +1.1
U35K  Hyder              4.89 119  Pn    Pn    21 53 18.9 +0.5
U35K  Hyder              4.89 119  P     Pn    21 53 18.9 +0.5
       baz=305,SNR=76
BCAR  Beaver Creek A     5.00 338  Pn    Pn    21 53 19.3 -0.7
L27K  Beaver Creek,      5.01 338  P     Pn    21 53 20.0  0.0
       baz=154,SNR=20
L27K                               Sb    Sb    21 54 38.5 +5.8
       baz=154
BC01  Beaver Creek A     5.01 338        Pn    21 53 19.3 -0.7
KLU   Klutina            5.12 309  P     Pn    21 53 21.5 -0.1
       baz=123,SNR=63
MAYO  Mayo, Yukon        5.18   9        Pn    21 53 23.3 +1.0
MAYO  Mayo, Yukon        5.18   9  P     Pn    21 53 23.2 +0.9
       baz=190,SNR=19
MAYO                               Sb    Sg    21 54 45.5 -6.4
       baz=190
P23K  Montague Islan     5.22 291        Pn    21 53 21.7 -1.3
P23K                               IAML        21 55 11.8
       comp=N,1µm,1.1s
P23K  Montague Islan     5.22 291  P     Pn    21 53 21.9 -1.0
       baz=103
L26K  Log Cabin Wild     5.33 331  P     Pn    21 53 24.9 +0.5
       baz=146,SNR=42
L26K                               Sb    Sb    21 54 48.9 +7.1
       baz=146
L26K                               Sb    Sb    21 54 48.9 +7.1
       baz=146
GLI   Glacier Island     5.34 300  P     Pn    21 53 22.9 -1.7
       baz=113,SNR=6.4
MENT  Mentasta           5.35 329  P     Pn    21 53 27.9 +3.2
       comp=N,832nm,0.8s
K29M  Barlow Dome        5.36   1        Pn    21 53 25.8 +0.9
K29M                               IAML        21 54 54.2
       comp=E,3µm,1.0s
K29M                               IAML        21 54 58.4
       comp=N,2µm,1.1s
K29M  Barlow Dome        5.36   1  P     Pn    21 53 25.9 +1.0
       baz=181,SNR=326
K29M                               Sb    Sg    21 54 50.5 -7.2
       baz=181
HARP  HAARP              5.39 320        Pn    21 53 26.1 +0.9
HARP  HAARP              5.39 320  P     Pn    21 53 26.0 +0.8
       baz=134,SNR=67
HARP                               Sb    Sb    21 54 49.6 +6.0
       baz=134
HARP                               Sb    Sb    21 54 49.6 +6.0
       baz=134
M24K  Tolsona, Glenn     5.57 314  P     Pn    21 53 28.3 +0.6
       baz=127,SNR=108
M24K                               Sb    Sb    21 54 53.4 +4.7
       baz=127
DAWY  Dawson             5.64 352  Pn    Pn    21 53 29.2 +0.5
DAWY  Dawson             5.64 352  P     Pn    21 53 29.4 +0.7
       baz=171,SNR=362
DAWY                               Sb    Sb    21 54 56.9 +6.0
       baz=171
RUBB  Prince Rupert      5.86 132        Pn    21 53 32.0 +0.3
SCM   Sheep Creek Mo     5.87 309  P     Pn    21 53 32.0 +0.1
       baz=121,SNR=42
SCM                                Sb    Sb    21 55 00.6 +3.1
       baz=121
PAX   Paxson             5.89 323  P     Pn    21 53 32.5 +0.3
       baz=136,SNR=41
PAX                                Sb    Sb    21 55 04.2 +6.0
       baz=136
PWL   Port Wells         5.91 298        Pn    21 53 30.4 -1.9
PWL   Port Wells         5.91 298  P     Pn    21 53 30.8 -1.5
       baz=110,SNR=19
K27K  Chicken            5.94 341        Pn    21 53 32.4 -0.3
K27K  Chicken            5.94 341  P     Pn    21 53 32.9 +0.2
       baz=157
K27K                               Sb    Sb    21 55 07.0 +7.6
       baz=157
K27K                               Sb    Sb    21 55 07.0 +7.6
       baz=157
J29N  Klondike Camp      5.97 358  P     Pn    21 53 34.0 +0.7
       baz=177,SNR=57
M23K  Glacier View       6.01 307  P     Pn    21 53 34.1 +0.3
       baz=119,SNR=39
DIB   Dawson Inlet,      6.06 149  Pn    Pn    21 53 32.8 -1.6
J30M  Hart River         6.12   5        Pn    21 53 36.2 +0.9
J30M  Hart River         6.12   5  P     Pn    21 53 36.3 +0.9
       baz=186,SNR=99
KNK   Knik Glacier       6.16 303        Pn    21 53 34.5 -1.3
KNK   Knik Glacier       6.16 303  P     Pn    21 53 35.2 -0.6
       baz=114,SNR=30
MOBC  Moresby Island     6.25 147  Pn    Pn    21 53 35.9 -1.2
SEW   Seward             6.25 290  P     Pn    21 53 35.6 -1.4
       baz=100
SML   Sawmill            6.28 306  P     Pn    21 53 37.1 -0.4
       baz=118,SNR=35
SCRK  Sand Creek         6.28 334  P     Pn    21 53 37.6  0.0
       baz=148,SNR=30
RIDG  Independent Ri     6.30 329  P     Pn    21 53 37.9 +0.1
       baz=144,SNR=6.2
BNAB  Bonilla            6.38 139        Pn    21 53 38.4 -0.3
WAT6  Susitna Watana     6.44 314        Pn    21 53 39.5 -0.3
WAT6  Susitna Watana     6.44 314  P     Pn    21 53 40.0 +0.3
       baz=125,SNR=130
O22K  Cooper Landing     6.46 293  P     Pn    21 53 38.8 -1.1
       baz=103
TOAD  Toad River Com     6.49  82  P     Pn    21 53 40.7 +0.4
       baz=272,SNR=35
GHO   Glory Hole Cre     6.51 305  Pn    Pn    21 53 40.0 -0.7
PMR   Palmer             6.53 303  P     Pn    21 53 41.3 +0.5
       comp=N,376nm,0.7s
PMR   Palmer             6.53 303  P     Pn    21 53 40.6 -0.2
       baz=114,SNR=22
DHY   Denali Highway     6.61 318  P     Pn    21 53 42.8 +0.8
       baz=130,SNR=122
K24K  Donnelly Dome      6.61 327  P     Pn    21 53 42.7 +0.8
       baz=140,SNR=21
RC01  Rabbit Creek A     6.63 298  P     Pn    21 53 41.2 -1.0
       baz=108,SNR=41
J26L  Joseph Creek       6.65 337  P     Pn    21 53 43.2 +0.7
       baz=152,SNR=28
SLKM  Skilak Lake        6.71 293  Pn    Pn    21 53 41.3 -2.0
I30M  Mount Dempster     6.77   5        Pn    21 53 45.6 +1.4
I30M  Mount Dempster     6.77   5  P     Pn    21 53 45.6 +1.4
       baz=186,SNR=416
BRSE  Bradley Lake S     6.85 286        Pn    21 53 43.6 -1.7
BRSE  Bradley Lake S     6.85 286  P     Pn    21 53 44.5 -0.8
       baz=95,SNR=8.9
BRSE                               S     Sn    21 55 01.5 -1.2
       baz=95
WAT1  Susitna Watana     6.89 314        Pn    21 53 46.4 +0.6
WAT1  Susitna Watana     6.89 314  P     Pn    21 53 46.0 +0.2
       baz=125
I29M  Ogilvie Camp,      6.89 358        Pn    21 53 46.6 +0.8
I29M  Ogilvie Camp,      6.89 358  P     Pn    21 53 46.6 +0.8
       baz=177,SNR=64
BRLK  Bradley Lake       6.93 286        Pn    21 53 45.7 -0.6
M22K  Willow             7.03 303  P     Pn    21 53 47.8 +0.1
       baz=113,SNR=26
I28M  Miner Creek        7.05 352  P     Pn    21 53 49.3 +1.2
       baz=170,SNR=209
KOTAN Kotaneelee Air     7.15  71  P     Pn    21 53 50.3 +0.9
       baz=262,SNR=34
J25K  Salcha River,      7.15 332  P     Pn    21 53 49.3 -0.1
       baz=146,SNR=20
SUA   Susitna One        7.21 300  P     Pn    21 53 49.9 -0.3
       baz=109,SNR=22
HG4B  Hotspring          7.23 147  Pn    Pn    21 53 49.6 -0.8
I26K  Coal Creek Min     7.30 342  P     Pn    21 53 52.1 +0.8
       baz=157
HOM   Homer              7.30 285  P     Pn    21 53 51.2 -0.3
       baz=94
RND   Reindeer           7.34 317        Pn    21 53 52.7 +0.7
RND   Reindeer           7.34 317  P     Pn    21 53 52.7 +0.7
CUT   Chulitna           7.36 307  P     Pn    21 53 53.0 +0.8
       baz=117,SNR=289
I27K  Kandik River       7.36 347  P     Pn    21 53 53.1 +0.8
       baz=164,SNR=56
HDA   Harding Lake       7.41 327  P     Pn    21 53 53.2 +0.4
       baz=139,SNR=16
H31M  Peel River         7.49  11        Pn    21 53 54.6 +0.6
H31M  Peel River         7.49  11  P     Pn    21 53 54.4 +0.4
       baz=193,SNR=60
MCK   McKinley           7.57 319  P     Pn    21 53 55.3 +0.2
       baz=129,SNR=40
ILAR  Eielson Array      7.67 329  Pn    Pn    21 53 55.8 -0.6
       comp=N,0.7nm,0.3s,baz=152,slow=13,SNR=60
ILAR                               Lg    Lg    21 56 05.4
       comp=N,8.2nm,0.3s,baz=119,slow=26,SNR=6.4
       comp=N,4.6nm,0.6s
ILAR  Eielson Array      7.67 329  Pn    Pn    21 53 55.7 -0.7
SYI   Shuyak Island      7.71 277        Pn    21 53 55.6 -1.5
Q20K  Shuyak Island      7.71 277  P     Pn    21 53 56.7 -0.4
       baz=85
SKT   Skwentna           7.73 303  P     Pn    21 53 57.0 -0.4
       baz=111,SNR=23
H29M  Whitestone         7.75 358  P     Pn    21 53 57.6  0.0
       baz=177,SNR=16
N20K  Mount Spurr        7.81 296  P     Pn    21 53 57.5 -1.0
       baz=104,SNR=13
N20K                               S     Sn    21 55 30.0 +3.6
       baz=104
N20K                               S     Sn    21 55 30.0 +3.6
       baz=104
SPCR  Spurr Chakacha     7.81 296  P     Pn    21 53 57.6 -0.9
       baz=104,SNR=13
O20K  Slope Mountain     7.83 288        Pn    21 53 58.0 -0.7
O20K  Slope Mountain     7.83 288  P     Pn    21 53 58.2 -0.5
       baz=96
TRF   Thorofare Moun     7.89 314  P     Pn    21 54 00.5 +0.9
       baz=124,SNR=666
SPBG  Spurr Blockage     7.90 297        Pn    21 53 58.8 -1.0
EPYK  Eagle Plains       7.91   3        Pn    21 54 00.4 +0.7
EPYK  Eagle Plains       7.91   3  P     Pn    21 54 00.4 +0.7
       baz=184,SNR=34
KDAK  Kodiak Island      7.94 271  Pn    Pn    21 53 58.0 -2.1
       comp=N,14nm,0.3s,baz=356,slow=3.1,SNR=102
KDAK                               Sn    Sn    21 55 27.0 -2.3
       baz=199,slow=18
KDAK                               LR    LR    21 57 13.7
       comp=N,4µm,18.6s,baz=71,slow=39
       comp=N,87nm,0.7s
KDAK  Kodiak Island      7.94 271 deP    Pn    21 53 57.7 -2.4
KDAK  Kodiak Island      7.94 271  P     Pn    21 53 58.0 -2.1
       baz=79
RED   Redoubt Volcan     7.94 290        Pn    21 53 58.6 -1.6
H27K  Steamboat Moun     7.96 349  P     Pn    21 54 01.8 +1.3
       baz=165,SNR=30
RDJH  Redoubt Jeurge     7.98 292        Pn    21 53 59.4 -1.4
COLA  College            8.01 327  P     Pn    21 54 04.7 +3.6
       comp=N,88nm,1.0s
COLA  College            8.01 327⇓eP     Pn    21 54 01.4 +0.3
COLA                               pmax  pmax
       comp=Z,10.0nm,0.6s
IVE   Iliamna Volcan     8.02 287        Pn    21 54 00.5 -0.9
ILSW  Iliamna Southw     8.08 287        Pn    21 54 00.8 -1.4
POKR  Poker Plat Res     8.08 329  P     Pn    21 54 01.5 -0.6
       baz=141
P19K  Oil Pt             8.11 285        Pn    21 54 02.0 -0.6
P19K  Oil Pt             8.11 285  P     Pn    21 54 02.2 -0.4
       baz=92,SNR=7.8
P19K                               S     Sn    21 55 33.4 -0.3
       baz=92
P19K                               S     Sn    21 55 33.4 -0.3
       baz=92
NEA2  Nenana             8.18 323  P     Pn    21 54 03.5 +0.1
       baz=133,SNR=132
Q19K  Cape Douglas,      8.34 280  Pn    Pn    21 54 04.0 -1.7
Q19K  Cape Douglas,      8.34 280  P     Pn    21 54 04.9 -0.8
       baz=86
BBB   Bella Bella        8.34 135  Pn    Pn    21 54 06.4 +0.8
       comp=Z,4.1nm,0.3s,baz=326,slow=14,SNR=15
BBB                                Lg    Lg    21 56 25.5
       comp=Z,4.0nm,0.3s,baz=230,slow=17,SNR=3.5
BBB                                LR    LR    21 57 17.4
       comp=Z,3µm,19.3s,baz=312,slow=37
       comp=Z,203nm,1.0s
BBB   Bella Bella        8.34 135        Pn    21 54 05.4 -0.2
PPLA  Purkeypile         8.37 308  P     Pn    21 54 06.2 -0.1
       baz=116,SNR=62
WRGLY Wrigley            8.38  50  Pn    Pn    21 54 06.2 +0.1
WRGLY Wrigley            8.38  50  P     Pn    21 54 07.1 +1.0
       baz=242,SNR=18
M20K  Styx River         8.42 300  P     Pn    21 54 04.6 -2.2
       baz=107
OHAK  Old Harbor         8.44 268        Pn    21 54 04.6 -2.4
OHAK  Old Harbor         8.44 268  P     Pn    21 54 05.1 -1.9
OHAK  Old Harbor         8.44 268  P     Pn    21 54 04.8 -2.2
       baz=75,SNR=11
G29M  Pine Creek         8.44 359  P     Pn    21 54 06.8 -0.2
       baz=179
BPAW  Bear Paw Mtn.      8.51 317        Pn    21 54 07.9 -0.1
BPAW  Bear Paw Mtn.      8.51 317  P     Pn    21 54 07.9 -0.1
       baz=126,SNR=19
G30M  tAoh Zraii Nji     8.53   4        Pn    21 54 08.9 +0.6
G30M  tAoh Zraii Nji     8.53   4  P     Pn    21 54 08.6 +0.2
       baz=185,SNR=46
G27K  Doyon Strip        8.53 349  P     Pn    21 54 09.9 +1.6
       baz=166,SNR=41
G31M  Satah River        8.59   9        Pn    21 54 09.8 +0.8
G31M  Satah River        8.59   9  P     Pn    21 54 09.5 +0.5
       baz=192,SNR=102
I23K  Minto, Yukon-K     8.65 325  P     Pn    21 54 10.0 +0.1
       baz=135,SNR=53
H24K  Noodor Dome        8.76 331  P     Pn    21 54 12.1 +0.7
       baz=142,SNR=19
N19K  Bonanza Creek      8.83 292  P     Pn    21 54 10.9 -1.5
       baz=98
KAHG  Katmai Hook Gl     8.85 277        Pn    21 54 11.9 -0.8
CHUM  Lake Minchumin     8.89 313        Pn    21 54 13.1  0.0
CHUM  Lake Minchumin     8.89 313  P     Pn    21 54 13.1  0.0
       baz=121,SNR=77
G26K  Porcupine Rive     8.93 344  P     Pn    21 54 14.2 +0.5
       baz=159,SNR=16
R18K  Karluk             8.96 271        Pn    21 54 12.6 -1.6
R18K  Karluk             8.96 271  P     Pn    21 54 12.3 -1.9
       baz=77
MLY   Manley             9.00 322  P     Pn    21 54 14.9 +0.1
       baz=131,SNR=40
KAHC  Katmai Hardscr     9.07 278        Pn    21 54 14.2 -1.5
Q18K  Katmai Hardscr     9.07 278  P     Pn    21 54 15.2 -0.6
       baz=84,SNR=13
SII   Sitkinak Islan     9.11 265  Pn    Pn    21 54 14.1 -2.1
SII   Sitkinak Islan     9.11 265  P     Pn    21 54 14.5 -1.7
       comp=Z,470nm,0.6s
SII   Sitkinak Islan     9.11 265  P     Pn    21 54 14.2 -2.1
       baz=71
O18K  Koktuh Hills       9.11 286        Pn    21 54 15.1 -1.2
O18K  Koktuh Hills       9.11 286  P     Pn    21 54 15.3 -1.0
       baz=91
P18K  Big Mountain,      9.13 283  P     Pn    21 54 15.5 -1.0
       baz=88
F31M  Tsiigehtchic       9.14  10  P     Pn    21 54 16.7 +0.1
       baz=193,SNR=19
KAKN  Katmai Knife C     9.14 276        Pn    21 54 15.4 -1.4
G25K  Bearman Lake       9.15 338  P     Pn    21 54 17.0 +0.3
       baz=151
F30M  Barrier River      9.18   4  P     Pn    21 54 17.5 +0.4
       baz=186,SNR=76
H23K  Yukon River        9.20 328  P     Pn    21 54 17.4  0.0
       baz=138
F28M  Old Crow           9.20 355        Pn    21 54 18.3 +0.9
F28M  Old Crow           9.20 355  P     Pn    21 54 18.4 +1.0
       baz=173,SNR=40
MGLS  Mageik Landsli     9.22 275        Pn    21 54 16.2 -1.6
KABU  Katmai Buttres     9.27 276        Pn    21 54 16.9 -1.5
L19K  White Mountain     9.28 301  P     Pn    21 54 17.6 -1.0
       baz=106,SNR=22
CAHL  Cahill             9.31 275        Pn    21 54 17.6 -1.5
K20K  Telida             9.34 308  P     Pn    21 54 18.6 -0.8
       baz=114
G24K  Hadweenzic Riv     9.37 335  P     Pn    21 54 19.3 -0.5
       baz=147,SNR=10
ANCK  Angle Creek        9.39 276        Pn    21 54 18.8 -1.3
KJL   Kejulik            9.45 275        Pn    21 54 19.4 -1.5
BMAR  Burnt Mountain     9.49 344  Pn    Pn    21 54 21.7 +0.3
N18K  Kilae Creek        9.50 291  P     Pn    21 54 19.7 -1.9
       baz=96,SNR=6.3
M18K  Stony River        9.58 296  P     Pn    21 54 20.6 -1.9
       baz=100,SNR=15
CNTC  Contact Creek      9.58 276        Pn    21 54 21.1 -1.6
```

Q17K	Contact Creek	9.58	276	P	Pn	21 54 20.7	-2.1
	baz=81						
F26K	Sheenjek River	9.67	345		Pn	21 54 24.3	+0.3
F26K	Sheenjek River	9.67	345	P	Pn	21 54 23.3	-0.6
	baz=159						
J20K	Nowinta River	9.73	313	P	Pn	21 54 24.1	-0.7
	baz=118,SNR=63						
H22K	Ishtalitna Cre	9.78	325	P	Pn	21 54 25.8	+0.5
	baz=133,SNR=16						
PHC	Port Hardy	9.80	138		Pn	21 54 27.1	+1.5
F25K	Christian Rive	9.80	342	P	Pn	21 54 26.3	+0.6
	baz=155,SNR=18						
E27K	Coleen River	9.88	351	P	Pn	21 54 27.0	+0.3
	baz=168,SNR=29						
PLK3	Peulik 3	9.89	273		Pn	21 54 26.8	-0.2
Q16K	King Salmon	9.92	279	P	Pn	21 54 27.0	-0.3
	baz=83						
E29M	Blow River	9.92	359		Pn	21 54 27.9	+0.6
E29M	Blow River	9.92	359	P	Pn	21 54 27.3	0.0
	baz=179,SNR=42						
PLK4	Peulik 4	9.95	273		Pn	21 54 25.9	-1.9
R17L	Mt. Peulik Vol	9.95	273	P	Pn	21 54 27.0	-0.8
	baz=77						
G23K	Bananza Creek	9.99	331	P	Pn	21 54 28.2	-0.1
	baz=140,SNR=15						
INK	Inuvik	10.01	9	Pn	Pn	21 54 28.6	+0.2
	comp=Z,0.6nm,0.3s,baz=192,slow=14,SNR=40						
INK				Sn	Sn	21 56 14.3	-5.7
	comp=Z,1.6nm,0.3s,baz=136,slow=30,SNR=3.7						
INK				Lg	Lg	21 57 12.1	
	comp=Z,4.2nm,0.3s,baz=115,slow=29,SNR=3.7						
	comp=Z,21nm,0.7s						
INK	Inuvik	10.01	9	P	Pn	21 54 28.2	-0.2
	baz=192,SNR=25						
O17K	Koliganek Bris	10.07	286		Pn	21 54 27.7	-1.6
O17K	Koliganek Bris	10.07	286	P	Pn	21 54 27.9	-1.4
	baz=89,SNR=14						
H21K	Melozitna Rive	10.07	322	P	Pn	21 54 29.2	-0.1
	baz=129,SNR=46						
CHIR	Chirikof Islan	10.12	262	Pn	Pn	21 54 28.2	-1.8
CHIR	Chirikof Islan	10.12	262	P	Pn	21 54 28.8	-1.2
	baz=68						
L18K	Granite Mounta	10.12	300	P	Pn	21 54 28.3	-1.8
	baz=103,SNR=18						
N17K	Nushagak Hills	10.13	290	P	Pn	21 54 28.0	-2.1
	baz=93,SNR=7.5						
F24K	Squaw Lake	10.15	337	P	Pn	21 54 30.8	+0.3
	baz=148,SNR=32						
I20K	Naaghedeneel	10.16	315	P	Pn	21 54 30.3	-0.3
	baz=121						
E28M	Babbage River	10.17	356	P	Pn	21 54 30.5	-0.2
	baz=174						
J19K	Poorman	10.23	310	P	Pn	21 54 31.0	-0.6
	baz=115,SNR=58						
E25K	Arctic Village	10.28	343	Pn	Pn	21 54 33.1	+1.0
E25K	Arctic Village	10.28	343	P	Pn	21 54 32.8	+0.6
	baz=156,SNR=16						
M17K	Holitna River	10.33	295	P	Pn	21 54 31.2	-1.7
	baz=98,SNR=13						
COLD	Coldfoot	10.44	332	P	Pn	21 54 33.8	-0.5
	baz=141,SNR=43						
J18K	Innoko River	10.49	306	P	Pn	21 54 34.1	-1.0
	baz=110,SNR=84						
G22K	Bettles	10.54	329	P	Pn	21 54 35.6	-0.2
	baz=137						
IMAR	Indian Mountai	10.58	322	Pn	Pn	21 54 36.4	+0.1
O16K	Kokwok River B	10.58	285		Pn	21 54 35.7	-0.7
O16K	Kokwok River B	10.58	285	P	Pn	21 54 35.4	-0.9
	baz=87						
H20K	Anotleneega Mo	10.68	318	P	Pn	21 54 37.4	-0.3
	baz=123,SNR=42						
G21K	Allakaket	10.84	324	P	Pn	21 54 39.4	-0.4
	baz=130,SNR=50						
L17K	Donlin	10.85	298	P	Pn	21 54 38.8	-1.1
	baz=101,SNR=11						
D27M	Malcolm River	10.88	354	P	Pn	21 54 40.9	+0.5
	baz=171						
D28M	Stokes Point	10.88	358	P	Pn	21 54 41.0	+0.6
	baz=177,SNR=26						
N16K	Nishlik Lake	10.91	289	P	Pn	21 54 39.3	-1.6
	baz=92,SNR=14						
E23K	Chandalar	10.97	336	P	Pn	21 54 42.2	+0.6
	baz=145,SNR=16						
K17K	Iditarod	10.97	301	P	Pn	21 54 40.2	-1.4
	baz=104,SNR=22						
M16K	Timber Creek	11.02	292	P	Pn	21 54 40.7	-1.7
	baz=94						
GCSA	Galena City Sc	11.05	312	P	Pn	21 54 42.3	-0.4
	baz=116,SNR=16						
F22K	John River	11.15	330	P	Pn	21 54 44.4	+0.3
	baz=137						
H19K	Roundabout Mou	11.25	317		Pn	21 54 45.7	+0.3
H19K	Roundabout Mou	11.25	317	P	Pn	21 54 44.7	-0.7
	baz=120,SNR=177						
F21K	Alatna River	11.30	327	P	Pn	21 54 45.4	-0.8
	baz=133,SNR=13						
L16K	Owhat River	11.33	296	P	Pn	21 54 44.8	-1.8
	baz=97,SNR=13						
TOLK	Toolik Lake Re	11.44	338	P	Pn	21 54 47.8	-0.4
	baz=147,SNR=27						
C27K	Jago River	11.47	349	P	Pn	21 54 47.6	-0.8
	baz=164						
J17K	VABM Dome	11.48	304	P	Pn	21 54 47.6	-1.0
	baz=106,SNR=19						
O15K	Ungalikthiuk R	11.50	283	P	Pn	21 54 47.7	-1.1
	baz=84,SNR=7.9						
D25K	Kavik River	11.50	344		Pn	21 54 51.2	+2.3
D25K	Kavik River	11.50	344	P	Pn	21 54 48.9	+0.1
	baz=157						
E22K	Anaktuvuk Pass	11.53	333	P	Pn	21 54 49.3	-0.1
	baz=140,SNR=42						
N15K	Kwethluk River	11.57	288	P	Pn	21 54 49.3	-0.6
	baz=89						
D24K	Happy Valley	11.74	340	P	Pn	21 54 52.3	+0.2
	baz=150						
G19K	Purcell Mounta	11.79	319	P	Pn	21 54 52.1	-0.8
	baz=122						
H18K	Honhosa River	11.79	313	P	Pn	21 54 52.3	-0.6
	baz=115,SNR=30						
M15K	Kasigluk River	11.86	290	P	Pn	21 54 52.6	-1.2
	baz=91						
F20K	Avaraart Lake	11.86	324		Pn	21 54 54.2	+0.5
F20K	Avaraart Lake	11.86	324	P	Pn	21 54 53.7	-0.1
	baz=128						
C26K	Camden Bay	11.87	348	P	Pn	21 54 54.1	+0.2
	baz=161						
D23K	Nanushuk River	11.94	337	P	Pn	21 54 55.2	+0.3
	baz=145						
YKA	Yellowknife Ar	12.01	61	Pn	Pn	21 54 55.0	-0.8
	comp=Z,1.3nm,0.3s,baz=264,slow=14,SNR=44						
YKA				Sn	Sn	21 57 03.0	-6.0
	comp=Z,1.7nm,0.3s,baz=269,slow=24,SNR=3.7						
YKA				Lg	Lg	21 58 17.6	
	comp=Z,1.0nm,0.3s,baz=110,slow=18,SNR=3.9						
YKA				LR	LR	22 00 23.9	
	comp=Z,738nm,18.8s,baz=263,slow=41						
	comp=Z,9.6nm,0.8s						
YKA	Yellowknife Ar	12.01	61	Pn	Pn	21 54 55.8	0.0
YKA	Yellowknife Ar	12.01	61	P	Pn	21 54 55.8	0.0
S14K	Fog Glacier	12.01	269	P	Pn	21 54 54.8	-1.2
	baz=70						
YKAW3	Yellowknife Wh	12.02	61	Pn	Pn	21 54 56.2	+0.3
YKAW1	Yellowknife Wh	12.06	61	Pn	Pn	21 54 56.4	-0.2
LLLB	Lillooet	12.07	124	Pn	Pn	21 54 58.7	+1.9
J16K	Anvik River	12.12	303	P	Pn	21 54 56.1	-1.2
	baz=103,SNR=14						
C24K	Franklin Bluff	12.22	342	P	Pn	21 54 57.9	-0.7
	baz=152						
G18K	Tagagawik	12.23	316	P	Pn	21 54 58.0	-0.8
	baz=118,SNR=54						
L15K	Ungalak Mounta	12.29	295	P	Pn	21 54 57.8	-1.8
	baz=95,SNR=8.7						
E21K	Killik River	12.30	331	P	Pn	21 55 00.1	+0.3
	baz=136						
I17K	Unalakleet	12.31	306	P	Pn	21 54 59.5	-0.4
	baz=106,SNR=17						
D22K	Ayikyak River	12.31	334	P	Pn	21 54 59.0	-1.0
	baz=140,SNR=19						
H17K	Granite Mounta	12.31	311	P	Pn	21 54 59.1	-0.9
	baz=111,SNR=28						
C36M	Paulatuk	12.37	23	Pn	Pn	21 54 59.8	-0.8
C36M	Paulatuk	12.37	23	P	Pn	21 54 59.6	-1.0
	baz=215,SNR=30						
K15K	Wolf Creek Mou	12.37	298	P	Pn	21 54 58.8	-1.9
	baz=97,SNR=23						
N14K	Kuskokwak Cree	12.38	287	P	Pn	21 55 00.3	-0.6
	baz=86						
F19K	Shaleruckik Mo	12.39	321	P	Pn	21 54 60.0	-1.1
	baz=123						
M14K	Bethel	12.48	291	P	Pn	21 55 01.0	-1.3
	baz=90						
CLRS	Cowichan Lake	12.56	135	Pn	Pn	21 55 03.1	-0.3
E19K	Redstone River	12.57	324	P	Pn	21 55 03.3	-0.3
	baz=126,SNR=30						
CHNA	Chernabura Isl	12.60	262	P	Pn	21 55 03.8	-0.1
	comp=Z,346nm,0.9s						
CHNA	Chernabura Isl	12.60	262	P	Pn	21 55 02.3	-1.6
	baz=64,SNR=12						
CNBA	Chernabura Isl	12.60	262	Pn	Pn	21 55 02.3	-1.6
C23K	Itkillik River	12.65	339	P	Pn	21 55 04.4	-0.2
	baz=148,SNR=8.7						
E20K	Nigu River	12.77	328	P	Pn	21 55 06.0	-0.2
	baz=131						
G17K	Kiwalik Mounta	12.81	313	P	Pn	21 55 06.1	-0.7
	baz=113,SNR=23						
L14K	Kuka Creek	12.84	293	P	Pn	21 55 05.8	-1.3
	baz=92,SNR=13						
SDPT	Sand Point	12.84	266		Pn	21 55 07.4	+0.2
SDPT	Sand Point	12.84	266	P	Pn	21 55 08.2	+1.0
	comp=Z,300nm,1.1s						
SDPT	Sand Point	12.84	266	P	Pn	21 55 06.0	-1.2
	baz=67						
F18K	Selawik	12.92	318	P	Pn	21 55 07.6	-0.6
	baz=119,SNR=18						
C21K	Knifeblade Rid	13.02	332	P	Pn	21 55 08.9	-0.8
	baz=137,SNR=14						
H16K	Elim	13.16	308	P	Pn	21 55 10.5	-1.1
	baz=107,SNR=12						
M13K	Dall Lake	13.18	289	P	Pn	21 55 10.6	-1.2
	baz=87						
D20K	Etivluk River	13.19	329	P	Pn	21 55 11.4	-0.5
	baz=132,SNR=62						
B21K	Ikpikpuk River	13.32	334	P	Pn	21 55 14.4	+0.7
	baz=138						
J14K	Nanvaranak Lak	13.36	299		Pn	21 55 12.5	-1.7
J14K	Nanvaranak Lak	13.36	299	P	Pn	21 55 13.5	-0.7
	baz=97,SNR=15						
F17K	Baldwin Pennin	13.42	316	P	Pn	21 55 15.2	+0.2
	baz=115						
D19K	Kuna River	13.47	326	P	Pn	21 55 15.8	+0.1
	baz=128,SNR=33						
S12K	Black Hills	13.54	269	Pn	Pn	21 55 15.9	-0.8
S12K	Black Hills	13.54	269	P	Pn	21 55 14.9	-1.8
	baz=68						
B22K	Teshekpuk Lake	13.62	337	P	Pn	21 55 17.6	-0.2
	baz=143,SNR=30						
E18K	Tukpahlearik C	13.65	320	P	Pn	21 55 16.8	-1.4
	baz=120,SNR=27						
K13K	Kusilvak Mount	13.80	296	P	Pn	21 55 18.4	-1.9
	baz=93						
E17K	Hotham Inlet	13.90	318	P	Pn	21 55 20.7	-1.0
	baz=117,SNR=27						
PNT	Penticton	14.01	123	P	Pn	21 55 26.5	+3.2
B20K	Meade River	14.21	332	P	Pn	21 55 23.5	-2.4
	baz=135						
C19K	Lookout Ridge	14.27	327	P	Pn	21 55 25.2	-1.4
	baz=127,SNR=29						
A36M	Sachs Harbour	14.44	16	Pn	Pn	21 55 27.7	-1.3
A36M	Sachs Harbour	14.44	16	P	Pn	21 55 26.3	-2.6
	baz=207,SNR=21						
F15K	North Star Dit	14.45	311	P	Pn	21 55 27.7	-1.4
	baz=107,SNR=6.6						
ANM	Nome	14.46	306	Pn	Pn	21 55 28.0	-1.2
ANM	Nome	14.46	306	P	Pn	21 55 28.0	-1.2
ANM	Nome	14.46	306	P	Pn	21 55 27.6	-1.7
	baz=102,SNR=13						
A22K	Sinclair Lake	14.46	337	P	Pn	21 55 27.3	-2.0
	baz=141						
C18K	Utukok River	14.48	324	P	Pn	21 55 28.2	-1.4
	baz=123,SNR=41						
FALS	False Pass	14.59	267	P	Pn	21 55 28.0	-3.0
	baz=65						
EDM	Edmonton	14.59	101	Pn	Pn	21 55 30.8	-0.3
EDM	Edmonton	14.59	101	P	Pn	21 55 30.8	-0.3
M11K	Mekoryuk	14.59	290	P	Pn	21 55 29.4	-1.7
	baz=85						
D17K	Noatak River	14.62	319	P	Pn	21 55 30.3	-1.1
	baz=117,SNR=10						
D05A	Enumclaw	14.72	134		Pn	21 55 33.7	+0.8
RDOG	Red Dog Mine	14.72	321		Pn	21 55 32.5	-0.4
RDOG	Red Dog Mine	14.72	321	P	Pn	21 55 31.2	-1.6
	baz=118,SNR=15						
C17K	DeLong Mountai	15.01	322	P	Pn	21 55 34.8	-2.0
	baz=119						
A21K	Barrow	15.05	336	P	Pn	21 55 35.8	-1.4
	baz=139						
B18K	Kokolik River	15.06	326	P	Pn	21 55 36.2	-1.2
	baz=124,SNR=25						
A19K	Wainwright	15.35	329	P	Pn	21 55 39.1	-2.1
	baz=128						
C16K	Lisburne Hills	15.64	320	P	Pn	21 55 41.2	-3.6
	baz=115,SNR=25						
TNA	Tin City	15.72	309		Pn	21 55 45.9	-0.1
TNA	Tin City	15.72	309	P	Pn	21 55 43.6	-2.4
	baz=103						
NEW	Newport	15.90	121	Pn	P	21 55 50.8	-1.3
	comp=Z,0.6nm,0.3s,baz=328,slow=12,SNR=46						
NEW				Lg	Lg	22 00 23.7	
	comp=Z,0.1nm,0.3s,baz=23,slow=10,SNR=4.1						
NEW				LR	LR	22 02 34.9	
	comp=Z,2µm,18.3s,baz=314,slow=39						
	comp=Z,64nm,1.0s						
NEW	Newport	15.90	121		Pn	21 55 50.0	+1.5
NEW				IAmb	IAmb	21 55 56.1	
	comp=Z,220nm,1.4s						
NEW	Newport	15.90	121	P	Pn	21 55 50.0	+1.5
NEW				pmax	pmax		
	comp=Z,220nm,1.4s						
AKUT	Akutan	16.14	266	Pn	Pn	21 55 52.5	+1.1
AKUT	Akutan	16.14	266	P	Pn	21 55 51.4	0.0
HAWA	Hanford	16.33	130		P	21 55 55.7	-1.1
UNV	Unalaska Valle	16.65	266		Pn	21 55 57.6	-0.3
UNV	Unalaska Valle	16.65	266	P	Pn	21 55 55.6	-2.4
	baz=62						
GAMB	Gambell	17.11	302	P	Pn	21 56 01.1	-2.6
	baz=92						
P08K	Saint George I	17.14	277	P	Pn	21 56 01.7	-2.3
	baz=70						
SPIA	Saint Paul Isl	17.31	280	P	Pn	21 56 03.7	-2.5
	baz=72						
WIFE	Three Sisters-	17.46	139		P	21 56 09.0	-0.5
JTMT	Jette	17.58	118	P	P	21 56 10.9	+0.2
NIKH	Nikolski High	18.31	266	P	P	21 56 19.5	+0.9
	comp=Z,406nm,1.0s						
NIKH	Nikolski High	18.31	266	P	Pn	21 56 18.0	-0.5
	baz=60						
MSO	Missoula	18.41	119	P	Pn	21 56 21.1	+1.1
MSO				IAmb	IAmb	21 56 24.1	
	comp=Z,161nm,1.2s						
BMO	Blue Mountains	18.49	129		Pn	21 56 22.0	+1.0
BMO	Blue Mountains	18.49	129	P	Pn	21 56 22.0	+1.0
BMO				pmax	pmax		
	comp=Z,88nm,0.9s						
BPMT	Black Pine Rid	18.93	119	P	Pn	21 56 27.1	+0.6
YBH	Yreka Blue Hor	19.25	144	P	Pn	21 56 32.0	+1.8
	comp=Z,2.6nm,1.0s,baz=357,slow=3.9,SNR=27						
YBH				LR	LR	22 02 44.4	
	comp=Z,94nm,20.7s,baz=314,slow=33						
YBH	Yreka Blue Hor	19.25	144		Pn	21 56 30.5	+0.4
YBH	Yreka Blue Hor	19.25	144	P	Pn	21 56 30.5	+0.4
YBH				pmax	pmax		
	comp=Z,96nm,1.3s						
EGMT	Eagleton	19.56	110		Pn	21 56 33.4	-0.4
EGMT				IAmb	IAmb	21 56 35.1	
	comp=Z,138nm,0.8s						
FFC	Flin Flon	19.83	86	P	P	21 56 35.4	+0.1
FFC	Flin Flon	19.83	86	P	P	21 56 35.4	+0.1
FFC				pmax	pmax		
	comp=Z,101nm,1.2s						
M03C	McCloud	19.85	144	P	P	21 56 36.3	+0.6
M03C				IAmb	IAmb	21 56 42.4	
	comp=Z,247nm,1.7s						
WVOR	Wild Horse Val	20.01	135	P	Pn	21 56 40.4	+1.2
WVOR				pmax	pmax		
	comp=Z,39nm,1.2s						
DLMT	Dillon	20.13	120	P	P	21 56 39.6	+0.9
DLMT				IAmb	IAmb	21 56 43.6	
	comp=Z,135nm,1.0s						
KMRM	Mail Ridge	20.35	148	P	P	21 56 41.3	+0.2
KMRM				IAmb	IAmb	21 56 48.9	
	comp=Z,287nm,1.4s						
BOZ	Bozeman (W)	20.40	118	P	P	21 56 42.1	+0.4
BOZ				IAmb	IAmb	21 56 48.2	
	comp=Z,127nm,0.9s						
BOZ	Bozeman (W)	20.40	118	P	P	21 56 42.1	+0.4
BOZ				pmax	pmax		
	comp=Z,127nm,0.9s						
BLKN	Baker Lake	20.45	56	P	P	21 56 42.3	+0.5
BCYI	Bear Canyon	20.59	123	P	P	21 56 44.8	+1.0
BCYI				IAmb	IAmb	21 56 47.6	
	comp=Z,232nm,1.3s						
YHL	Hebgen Lake	21.17	119	P	P	21 56 50.4	+0.3
YHL				IAmb	IAmb	21 56 56.3	
	comp=Z,130nm,1.3s						
YHH	Holmes Hill	21.37	118	P	P	21 56 52.6	+0.3
ATKA	Atka Island	21.50	269	P	P	21 56 53.1	-0.2
ATKA	Atka Island	21.50	269	P	P	21 56 54.6	+1.3
	comp=Z,430nm,0.9s						
DGMT	Dagmar	22.06	102	P	P	21 56 59.8	+0.4
DGMT				IAmb	IAmb	21 57 04.3	
	comp=Z,168nm,1.2s						
FCC	Fort Churchill	22.38	71	P	P	21 57 03.0	+0.3
FCC				IAmb	IAmb	21 57 18.8	
	comp=Z,105nm,1.1s						
FCC	Fort Churchill	22.38	71	P	P	21 57 03.0	+0.3
FCC				pmax	pmax		
	comp=Z,105nm,1.1s						
RES	Resolute Bay	22.64	28	LR	LR	22 06 40.8	
	comp=Z,2µm,18.4s,baz=249,slow=39						
RES	Resolute Bay	22.64	28	P	P	21 57 05.6	+0.3
RES				IAmb	IAmb	21 57 23.9	
	comp=Z,143nm,1.6s						
RES	Resolute Bay	22.64	28	P	P	21 57 05.6	+0.3
RES				pmax	pmax		
	comp=Z,143nm,1.6s						
ELK	Elko	22.76	132	LR	LR	22 06 20.7	
	comp=Z,2µm,20.3s,baz=320,slow=37						
ELK	Elko	22.76	132	P	P	21 57 09.5	+2.3
HVU	Hansel Valley	22.90	126	P	P	21 57 10.6	+2.1
HVU				IAmb	IAmb	21 57 13.6	
	comp=Z,131nm,1.0s						
HVU	Hansel Valley	22.90	126	P	P	21 57 10.6	+2.1
HVU				pmax	pmax		
	comp=Z,131nm,1.0s						
PD31	Pinedale Array	23.53	120	P	P	21 57 15.6	+0.7
PD31				IAmb	IAmb	21 57 18.7	
	comp=Z,145nm,1.6s						
PDAR	Pinedale Array	23.53	120	P	P	21 57 16.6	+1.7
	comp=Z,16nm,0.9s,baz=319,slow=6.5,SNR=60						
PDAR				LR	LR	22 06 51.0	
	comp=Z,925nm,21.6s,baz=308,slow=37						
	comp=Z,16nm,0.9s						
PDAR	Pinedale Array	23.53	120	P	P	21 57 15.9	+1.0
NVAR	Mina Array Bea	23.67	140	P	P	21 57 18.1	+1.7
	comp=Z,25nm,0.8s,baz=312,slow=8.5,SNR=108						
NVAR				PcP	PcP	22 01 01.1	+0.9
	comp=Z,3.4nm,0.8s,baz=318,slow=1.3,SNR=4.3						
NVAR				pPcP		22 01 10.1	
	comp=Z,3.6nm,0.8s,baz=280,slow=2.6,SNR=5.1						
NVAR				LR	LR	22 05 51.2	
	comp=Z,1µm,20.4s,baz=331,slow=35						
	comp=Z,25nm,0.8s						
NVAR	Mina Array Bea	23.67	140	P	P	21 57 17.5	+1.2
Q09A	Carvers	23.70	137	P	P	21 57 17.6	+1.0
Q09A				IAmb	IAmb	21 57 20.7	
	comp=Z,66nm,1.0s						
MDPB	Devils Postpil	24.14	142	P	P	21 57 21.3	+0.5
DUG	Dugway, Tooele	24.20	128	P	P	21 57 22.8	+1.5
DUG				pmax	pmax		
	comp=Z,187nm,1.2s						
SAO	San Andreas Ge	24.21	147	P	P	21 57 21.5	+0.3
PMPB	Monarch Peak	24.91	146	P	P	21 57 28.2	+0.6
E28A	Huff	25.10	102	P	P	21 57 29.9	+0.8
RSSD	Black Hills	25.13	110	P	P	21 57 30.5	+0.8
RSSD				IAmb	IAmb	21 57 33.9	
	comp=Z,107nm,1.0s						
RSSD	Black Hills	25.13	110	P	P	21 57 30.5	+0.8
RSSD				pmax	pmax		
	comp=Z,107nm,1.0s						
ULM	Lac du Bonnet	25.32	91	P	P	21 57 32.5	+1.3
	comp=Z,23nm,0.8s,baz=292,slow=9.6,SNR=30						
ULM				LR	LR	22 07 27.0	
	comp=Z,1µm,19.4s,baz=308,slow=36						
	comp=Z,23nm,0.8s						
ULM	Lac du Bonnet	25.32	91	P	P	21 57 31.8	+0.7
ULM				IAmb	IAmb	21 57 34.3	
	comp=Z,180nm,1.6s						
ULM	Lac du Bonnet	25.32	91	*ce*P	P	21 57 31.2	+0.1
CWC	Cottonwood Cre	25.55	141	P	P	21 57 34.5	+1.0
CWC				IAmb	IAmb	21 57 37.1	
	comp=Z,32nm,0.9s						
TPNV	Topopah Spring	25.71	138	P	P	21 57 35.7	+0.7
TPNV	Topopah Spring	25.71	138	P	P	21 57 35.7	+0.7
TPNV				pmax	pmax		
	comp=Z,193nm,1.6s						
ILON	Igloolik, Nuna	25.79	42	P	P	21 57 35.4	+0.3
ILON				IAmb	IAmb	21 57 57.1	
	comp=Z,40nm,1.0s						
BILL	Bilibino	26.00	315	P	P	21 57 36.7	-0.4
BILL				IAmb	IAmb	21 57 47.4	
	comp=Z,118nm,1.4s						
BILL	Bilibino	26.00	315	⇑*e*P	P	21 57 35.9	-1.2
BILL				pmax	pmax		
	comp=Z,19nm,1.5s						
EPLO	Experimental L	26.79	90	P	P	21 57 44.9	+0.5
EPLO				IAmb	IAmb	21 57 46.9	
	comp=Z,61nm,1.2s						
POIN	Pond Inlet	26.95	35	P	P	21 57 46.7	+1.1
POIN				IAmb	IAmb	21 58 20.0	
	comp=Z,31nm,0.9s						
SHEM	Shemya Is, Ala	27.35	279	LR	LR	22 08 10.8	
	comp=Z,404nm,20.2s,baz=118,slow=35						
U15A	North Rim	27.65	132	P	P	21 57 53.1	+0.6
ISCO	Idaho Springs	27.69	118	P	P	21 57 54.1	+1.2
ISCO	Idaho Springs	27.69	118	P	P	21 57 54.1	+1.2
ISCO				pmax	pmax		
	comp=Z,21nm,1.1s						
MVCO	Mesa Verde	28.53	125	P	P	21 58 00.7	+0.3
PFO	Pinyon Flats O	28.67	141	LR	LR	22 09 48.0	
	comp=Z,755nm,18.7s,baz=327,slow=37						
PFO	Pinyon Flats O	28.67	141	P	P	21 58 01.2	-0.3
PFO	Pinyon Flats O	28.67	141	*ce*P	P	21 58 02.3	+0.8
PFO				pmax	pmax		
	comp=Z,17nm,1.0s						
WUAZ	Wupatki	28.80	131	P	P	21 58 03.3	+0.5
WUAZ				IAmb	IAmb	21 58 06.0	
	comp=Z,57nm,1.1s						
S22A	4UR Ranch, Cre	28.81	123	P	P	21 58 03.4	+0.5
EYMN	Ely	29.01	91	P	P	21 58 04.8	+0.5
EYMN				IAmb	IAmb	21 58 06.8	
	comp=Z,59nm,0.8s						
ECSD	EROS Data Cent	29.15	102	P	P	21 58 05.9	+0.3
ECSD				IAmb	IAmb	21 58 07.6	
	comp=Z,41nm,1.2s						
TULEG	Thule	29.32	26	P	P	21 58 07.2	+0.4
CBX	Cerro Bola	29.79	142	P	P	21 58 12.2	+0.7
CBX				IAmb	IAmb	21 58 14.9	
	comp=Z,50nm,0.9s						
ESJX	Sierra Juarez	30.31	142	P	P	21 58 16.8	+0.7
T25A	Trinidad	30.40	120	P	P	21 58 17.2	+0.3
ANMO	Albuquerque	31.32	125	LR	LR	22 11 26.6	
	comp=Z,713nm,20.8s,baz=312,slow=37						
ANMO	Albuquerque	31.32	125	P	P	21 58 26.1	+1.0
ANMO	Albuquerque	31.32	125	*ce*P	P	21 58 26.7	+1.6
ANMO				pmax	pmax		
	comp=Z,14nm,0.9s						
Y22A	Socorro	31.97	127	P	P	21 58 32.5	+1.7
Y22A				IAmb	IAmb	21 58 34.2	
	comp=Z,52nm,1.1s						
FRB	Frobisher Bay	32.26	51	LR	LR	22 12 15.2	
	comp=Z,684nm,18.5s,baz=292,slow=38						
SEY	Seymchan	32.95	308	LR	LR	22 13 16.7	
	comp=Z,1µm,19.2s,baz=66,slow=39						
SEY	Seymchan	32.95	308	*e*P	P	21 58 44.8	+6.0
SEY				pmax	pmax		
	comp=Z,26nm,1.3s						
JFWS	Jewell Farm	33.02	97	P	P	21 58 40.0	+0.3
JFWS	Jewell Farm	33.02	97	P	P	21 58 40.0	+0.3
JFWS				pmax	pmax		
	comp=Z,75nm,1.0s						
OK038	West end E0370	33.59	114	P	P	21 58 45.3	+0.7
MNTX	Cornudas Mount	34.57	127	P	P	21 58 54.0	+0.8
MNTX				IAmb	IAmb	21 58 56.6	
	comp=Z,60nm,1.5s						
WMOK	Wichita Mounta	34.97	116	P	P	21 58 57.2	+0.5
WMOK	Wichita Mounta	34.97	116	P	P	21 58 57.2	+0.5
WMOK				pmax	pmax		
	comp=Z,20nm,1.0s						

POST	**Post**	**35.10**	**121**	P	**P**	**21 58 57.9**	**0.0**
POST				IAmb	IAmb	21 59 00.4	
	comp=Z,61nm,1.0s						
MA2	**Magadan**	**35.21**	**303**	LR	LR	22 15 12.5	
	comp=Z,922nm,18.0s,baz=66,slow=39						
MA2	**Magadan**	**35.21**	**303**	⇓eP	**P**	**21 58 56.9**	**-1.5**
MA2				pmax	pmax		
	comp=Z,11nm,1.0s						
HDIL	**Hopedale**	**35.21**	**99**	P	**P**	**21 58 58.5**	**-0.1**
HDIL				IAmb	IAmb	21 59 00.3	
	comp=Z,59nm,1.1s						
PEA0B	**Petropavlovsk-**	**35.46**	**290**	P	**P**	**21 58 60.0**	**-0.7**
PEA0B	**Petropavlovsk-**	**35.46**	**290**	P	**P**	**21 59 00.0**	**-0.7**
PEA0B				pmax	pmax		
	comp=Z,138nm,1.6s						
PETK	**Petropavlovsk-**	**35.46**	**290**	P	**P**	**21 59 00.6**	**-0.1**
	comp=Z,4.3nm,0.8s,baz=70,slow=12,SNR=2.4						
PETK				LR	LR	22 14 51.8	
	comp=Z,285nm,20.4s,baz=66,slow=38						
	comp=Z,4.3nm,0.8s						
PETK	**Petropavlovsk-**	**35.46**	**290**	P	**P**	**21 59 00.3**	**-0.4**
PETK	**Petropavlovsk-**	**35.46**	**290**	P	**P**	**21 59 00.3**	**-0.4**
MGMO	**Mountain Grove**	**36.25**	**106**	P	**P**	**21 59 06.7**	**-0.9**
TIXI	**Tiksi**	**37.14**	**328**	LR	LR	22 18 05.8	
	comp=Z,514nm,18.0s,baz=31,slow=42						
TIXI	**Tiksi**	**37.14**	**328**	P	**P**	**21 59 15.0**	**+0.3**
TIXI				IAmb	IAmb	21 59 23.9	
	comp=Z,55nm,1.1s						
TIXI	**Tiksi**	**37.14**	**328**	⇑eP	**P**	**21 59 15.5**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TXAR	**Lajitas Array**	**37.35**	**126**	P	**P**	**21 59 19.1**	**+1.9**
	comp=Z,5.4nm,0.7s,baz=331,slow=6.9,SNR=61						
TXAR				LR	LR	22 15 23.4	
	comp=Z,605nm,20.3s,baz=330,slow=37						
	comp=Z,5.4nm,0.7s						
TXAR	**Lajitas Array**	**37.35**	**126**	P	**P**	**21 59 18.0**	**+0.9**
TXAR	**Lajitas Array**	**37.35**	**126**	P	**P**	**21 59 18.0**	**+0.9**
SCHQ	**Schefferville**	**37.44**	**64**	P	**P**	**21 59 18.2**	**+0.7**
	comp=Z,7.3nm,0.9s,baz=292,slow=6.9,SNR=4.8						
SCHQ				LR	LR	22 15 09.9	
	comp=Z,1µm,19.6s,baz=310,slow=37						
	comp=Z,7.3nm,0.9s						
SFJD	**Kangerlussuaq**	**37.50**	**40**	LR	LR	22 15 28.9	
	comp=Z,1µm,18.1s,baz=304,slow=37						
SADO	**Sadowa**	**37.56**	**85**	LR	LR	22 15 07.6	
	comp=Z,910nm,19.9s,baz=323,slow=37						
MIAR	**Mount Ida**	**37.65**	**110**	P	**P**	**21 59 19.5**	**0.0**
MIAR				IAmb	IAmb	21 59 21.5	
	comp=Z,44nm,1.1s						
MIAR	**Mount Ida**	**37.65**	**110**	P	**P**	**21 59 19.5**	**0.0**
MIAR				pmax	pmax		
	comp=Z,44nm,1.1s						
JCT	**Junction City**	**38.05**	**121**	P	**P**	**21 59 22.8**	**-0.2**
JCT	**Junction City**	**38.05**	**121**	P	**P**	**21 59 22.8**	**-0.2**
JCT				pmax	pmax		
	comp=Z,40nm,1.5s						
SUMG	**Summit**	**38.16**	**29**	P	**P**	**21 59 24.2**	**+0.3**
SUMG	**Summit**	**38.16**	**29**	P	**P**	**21 59 24.2**	**+0.3**
SUMG				pmax	pmax		
	comp=Z,20nm,1.0s						
WCI	**Wyandotte Cave**	**38.49**	**99**	P	**P**	**21 59 25.8**	**-0.8**
WCI	**Wyandotte Cave**	**38.49**	**99**	P	**P**	**21 59 25.8**	**-0.8**
WCI				pmax	pmax		
	comp=Z,44nm,1.2s						
HPIG		**38.65**	**131**	P	**P**	**21 59 28.5**	**+0.3**
ACSO	**Alum Creek Sta**	**38.74**	**94**	P	**P**	**21 59 28.7**	**+0.1**
ACSO				IAmb	IAmb	21 59 30.8	
	comp=Z,46nm,0.9s						
TRQ	**Mont Tremblant**	**38.97**	**80**	P	**P**	**21 59 30.6**	**0.0**
TRQ				IAmb	IAmb	21 59 56.4	
	comp=Z,117nm,1.7s						
WVT	**Waverly**	**39.30**	**102**	P	**P**	**21 59 33.3**	**-0.1**
WVT	**Waverly**	**39.30**	**102**	P	**P**	**21 59 33.3**	**-0.1**
WVT				pmax	pmax		
	comp=Z,14nm,0.9s						
LPIG	**La Paz**	**39.49**	**139**	LR	LR	22 16 14.9	
	comp=Z,377nm,18.2s,baz=350,slow=37						
LDAQ	**Lac Daran**	**39.51**	**75**	P	**P**	**21 59 35.3**	**+0.1**
LDAQ				IAmb	IAmb	21 59 38.6	
	comp=Z,115nm,1.6s						
DAG	**Danmarks Havn**	**39.68**	**18**	P	**P**	**21 59 35.8**	**-0.2**
DAG				pmax	pmax		
	comp=Z,28nm,1.1s						
OXF	**Oxford**	**39.76**	**106**	P	**P**	**21 59 36.9**	**-0.3**
OXF				IAmb	IAmb	21 59 46.9	
	comp=Z,81nm,0.9s						
OXF	**Oxford**	**39.76**	**106**	P	**P**	**21 59 36.9**	**-0.3**
OXF				pmax	pmax		
	comp=Z,81nm,0.9s						
LMQ	**La Malbaie**	**40.25**	**75**	P	**P**	**21 59 41.2**	**0.0**
LMQ				IAmb	IAmb	21 59 44.2	
	comp=Z,111nm,1.9s						
SWET	**Sewanee**	**40.98**	**101**	P	**P**	**21 59 46.7**	**-0.7**
SWET				IAmb	IAmb	21 59 56.8	
	comp=Z,73nm,1.5s						
BINY	**Binghamton**	**41.00**	**86**	P	**P**	**21 59 48.3**	**+0.9**
BINY				IAmb	IAmb	21 59 50.1	
	comp=Z,108nm,1.4s						
SSPA	**Standing Stone**	**41.12**	**89**	P	**P**	**21 59 48.7**	**+0.3**
SSPA				IAmb	IAmb	21 59 50.8	
	comp=Z,66nm,1.1s						
TKL	**Tuckaleechee C**	**41.76**	**99**	LR	LR	22 18 00.2	
	comp=Z,2µm,18.9s,baz=332,slow=37						
YAK	**Yakutsk**	**42.35**	**316**	LR	LR	22 19 50.4	
	comp=Z,514nm,18.8s,baz=58,slow=39						
YAK	**Yakutsk**	**42.35**	**316**	P	**P**	**21 59 58.4**	**+0.2**
YAK	**Yakutsk**	**42.35**	**316**	eP	P	22 00 05.6	+7.4
YAK				e*PP	sP	22 00 10.1	+3.9
YAK				e		22 01 43.6	
YAK				e		22 01 59.2	
YAK				ePPP	PPP	22 02 13.4	
YAK				e		22 10 08.0	
YAK				pmax	pmax		
	comp=Z,58nm,0.9s						
YAK				pmax	pmax		
	comp=N,18nm,0.9s						
YAK				pmax	pmax		
	comp=E,28nm,1.0s						
YAK				pmax	pmax		
	comp=Z,292nm,3.5s						
YAK				pmax	pmax		
	comp=N,141nm,2.2s						
YAK				pmax	pmax		
	comp=E,178nm,3.0s						
YAK				MLR	MLR		
	comp=Z,409nm,20.0s						
YAK				MLR	MLR		
	comp=N,403nm,18.0s						
YAK				MLR	MLR		
	comp=E,258nm,15.0s						
BATG	**Bathurst New B**	**42.59**	**73**	P	**P**	**22 00 00.8**	**+0.5**
KSCT	**Kent School, K**	**42.64**	**84**	P	**P**	**22 00 01.6**	**+0.8**
KSCT				IAmb	IAmb	22 00 03.5	
	comp=Z,36nm,0.9s						
TYV	**Tymovskoe**	**44.12**	**296**	eP	P	22 00 19.5	+6.9
TYV				pmax	pmax		
	comp=Z,26nm,0.9s						
TYV				pmax	pmax		
	comp=Z,400nm,5.4s						
LMN	**Caledonia Moun**	**44.20**	**73**	P	**P**	**22 00 13.6**	**+0.3**
DRLN	**Deer Lake**	**45.42**	**65**	P	**P**	**22 00 24.0**	**+0.9**
DRLN				IAmb	IAmb	22 00 41.2	
	comp=Z,81nm,1.5s						
JMIC	**Jan Mayen**	**45.93**	**21**	LR	LR	22 20 12.8	
	comp=Z,307nm,20.9s,baz=286,slow=37						
JRQG	**Juriquilla Cam**	**46.32**	**128**	P	**P**	**22 00 31.4**	**+0.7**
JRQG				IAmb	IAmb	22 00 33.9	
	comp=Z,30nm,1.5s						
YSS	**Yuzhno-Sakhali**	**46.77**	**292**	eP	**P**	**22 00 35.5**	**+1.9**
YSS				eS	**S**	**22 07 25.9**	**+3.6**
YSS				pmax	pmax		
	comp=Z,60nm,0.9s						
YSS				MLR	MLR		
	comp=N,400nm,14.0s						
YSS				MLR	MLR		
	comp=E,600nm,15.0s						
GRNR	**Gornyy**	**47.06**	**300**	⇓iP	P	22 00 44.1	+8.2
GRNR				pmax	pmax		
	comp=N,20nm,1.1s						
GRNR				pmax	pmax		
	comp=Z,60nm,0.8s						
GRNR				MLR	MLR		
	comp=E,570nm,15.0s						
GRNR				MLR	MLR		
	comp=Z,760nm,14.0s						
NRIK	**Noril'sk**	**48.36**	**340**	P	**P**	**22 00 45.6**	**0.0**
	comp=Z,7.3nm,0.9s,baz=56,slow=6.2,SNR=9.3						
NRIK				LR	LR	22 23 54.6	
	comp=Z,430nm,19.3s,baz=46,slow=40						
	comp=Z,7.3nm,0.9s						
NRIK	**Noril'sk**	**48.36**	**340**	P	**P**	**22 00 45.4**	**-0.3**
NRIK	**Noril'sk**	**48.36**	**340**	deP	**P**	**22 00 45.7**	**0.0**
NRIK				pmax	pmax		
	comp=Z,12nm,1.1s						
ASAJ	**Asahikawa**	**48.88**	**290**	LR	LR	22 22 27.5	
	comp=Z,243nm,20.6s,baz=30,slow=37						
ZEA	**Zeya**	**48.93**	**308**	eP	P	22 00 58.3	+8.0
ZEA				pmax	pmax		
	comp=E,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,50nm,0.8s						
ZEA				MLR	MLR		
	comp=E,400nm,14.0s						
ERM	**Erimo**	**50.14**	**288**	P	**P**	**22 00 59.3**	**-0.3**
ERM	**Erimo**	**50.14**	**288**	P	**P**	**22 00 59.3**	**-0.3**
ERM				pmax	pmax		
	comp=Z,253nm,1.9s						
BOD	**Bodaibo**	**50.91**	**319**	eP	P	22 01 11.9	+6.6
BOD				pmax	pmax		
	comp=Z,111nm,1.4s						
HEH	**HeiHe**	**51.42**	**305**	eP	**P**	**22 01 08.5**	**-0.7**
HEH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HEH				LR	LR		
	comp=Z,600nm,12.7s						
HEH				LR	LR		
	comp=Z,530nm,13.5s						
HEH				LR	LR		
	comp=Z,730nm,17.5s						
ARCES	**ARCESS Array B**	**51.68**	**7**	P	**P**	**22 01 09.2**	**-1.7**
	comp=Z,3.3nm,0.8s,baz=359,slow=8.2,SNR=4.1						
ARCES				LR	LR	22 22 36.7	
	comp=Z,145nm,21.9s,baz=331,slow=36						
	comp=Z,3.3nm,0.8s						
ARCES	**ARCESS Array B**	**51.68**	**7**	P	**P**	**22 01 09.9**	**-0.9**
ARCES	**ARCESS Array B**	**51.68**	**7**	P	**P**	**22 01 10.0**	**-0.9**
CMIG	**Matias Romero**	**51.89**	**124**	P	**P**	**22 01 14.4**	**+1.4**
	comp=Z,17nm,0.8s,baz=338,slow=6.9,SNR=12						
CMIG				LR	LR	22 26 29.9	
	comp=Z,278nm,18.3s,baz=352,slow=40						
	comp=Z,17nm,0.8s						
TEIG	**Tepich**	**52.16**	**116**	P	**P**	**22 01 15.6**	**+0.6**
USRK	**Ussuriysk Ar.**	**53.92**	**297**	pP	pP	22 01 35.8	+2.1
	comp=Z,6.5nm,0.5s,baz=35,slow=7.9,SNR=5.8						
MDJ	**Mudanjiang**	**54.71**	**299**	P	P	22 01 41.3	+7.8
MDJ				S	**S**	**22 09 10.6**	**-2.0**
MDJ				pmax	pmax		
	comp=Z,20nm,0.9s						
MDJ				LR	LR		
	comp=N,590nm,12.4s						
MDJ				LR	LR		
	comp=E,470nm,19.9s						
MDJ				LR	LR		
	comp=Z,820nm,16.5s						
BNX	**BinXian**	**54.84**	**301**	⇓P	**P**	**22 01 35.4**	**+1.0**
BNX				pP	**sP**	**22 01 42.6**	**0.0**
BNX				pmax	pmax		
	comp=Z,10.0nm,1.9s						
HILR	**Hailar Array B**	**55.16**	**309**	P	**P**	**22 01 37.9**	**+1.1**
	comp=Z,8.0nm,0.9s,baz=77,slow=7.8,SNR=7.1						
HILR				pP	**sP**	**22 01 45.2**	**+0.4**
	comp=Z,65nm,0.8s,baz=62,slow=7.1,SNR=11						
HILR				LR	LR	22 27 04.8	
	comp=Z,1µm,19.8s,baz=75,slow=38						
	comp=Z,8.0nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**55.52**	**250**	T	T	23 01 08.9	
	baz=32,slow=76						
H11N3	**WAKE ISLAND Hy**	**55.53**	**250**	T	T	23 01 08.2	
	baz=32,slow=76						
H11N1	**WAKE ISLAND Hy**	**55.54**	**250**	T	T	23 01 11.3	
	baz=32,slow=76						
CIT	**Chita**	**55.62**	**315**	eP	**P**	**22 01 37.9**	**-2.2**
CIT				e		22 01 49.3	
CIT				pmax	pmax		
	comp=Z,176nm,1.6s						
APG	**El Apazote**	**55.68**	**121**	P	**P**	**22 01 41.8**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=159,slow=9.8,SNR=6.4						
	comp=Z,1.1nm,0.8s						
ESQI	**Esquipulas**	**56.58**	**120**	P	**P**	**22 01 47.4**	**0.0**
H11S1	**WAKE ISLAND Hy**	**56.66**	**250**	T	T	23 02 31.7	
	baz=31,slow=76,SNR=6045						
H11S2	**WAKE ISLAND Hy**	**56.67**	**250**	T	T	23 02 32.7	
	baz=31,slow=76,SNR=1766						
H11S3	**WAKE ISLAND Hy**	**56.68**	**250**	T	T	23 02 36.1	
	baz=31,slow=76,SNR=2825						
MAJO	**Matsushiro**	**56.79**	**287**	⇑eP	**P**	**22 01 48.9**	**+0.3**
MAJO				pmax	pmax		
	comp=Z,29nm,1.8s						
MJAR	**Matsushiro Arr**	**56.79**	**287**	P	**P**	**22 01 50.3**	**+1.7**
	comp=Z,1.8nm,0.8s,baz=4.1,slow=7.2,SNR=4.2						
MJAR				pP	**sP**	**22 01 56.9**	**+0.2**
	comp=Z,8.4nm,0.9s,baz=12,slow=7.2,SNR=9.8						
MJAR				LR	LR	22 28 29.6	
	comp=Z,140nm,18.3s,baz=34,slow=38						
	comp=Z,1.8nm,0.8s						
MJAR	**Matsushiro Arr**	**56.79**	**287**	P	**P**	**22 01 48.4**	**-0.2**
MJAR	**Matsushiro Arr**	**56.79**	**287**	P	**P**	**22 01 48.4**	**-0.2**
MJAR				pmax	pmax		
	comp=Z,16nm,1.3s						
CN2	**Changchun**	**57.22**	**301**	P	**P**	**22 01 50.3**	**-1.2**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
CN2				LR	LR		
	comp=Z,500nm,17.0s						
CN2				LR	LR		
	comp=Z,400nm,17.0s						
CN2				LR	LR		
	comp=Z,600nm,17.0s						
TGUH	**Tegucigalpa,Un**	**57.97**	**118**	P	**P**	**22 01 57.0**	**-0.3**
TGUH				IAmb	IAmb	22 02 12.3	
	comp=Z,30nm,0.9s						
NC303	**NORSAR Array S**	**58.19**	**17**	P	**P**	**22 01 58.5**	**+0.4**
NC303				IAmb	IAmb	22 02 41.2	
	comp=Z,21nm,1.1s						
NB2	**NORSAR Subarra**	**58.34**	**17**	P	**P**	**22 01 58.9**	**-0.3**
	comp=Z,19nm,1.4s,baz=342,slow=7.4						
NOA	**NORSAR Array B**	**58.34**	**17**	P	**P**	**22 01 58.8**	**-0.4**
	comp=Z,6.8nm,1.1s,baz=344,slow=6.9,SNR=9.1						
NOA				pP	**sP**	**22 02 07.1**	**-0.3**
	comp=Z,3.3nm,0.7s,baz=344,slow=7.2,SNR=7.9						
NOA				LR	LR	22 28 05.5	
	comp=Z,271nm,19.0s,baz=335,slow=37						
	comp=Z,6.8nm,1.1s						
JHJ	**Hachijo jima 2**	**58.68**	**283**	LR	LR	22 29 58.9	
	comp=Z,38nm,18.1s,baz=92,slow=39						
IRK	**Irkutsk**	**58.72**	**321**	eP	P	22 02 09.8	+7.9
IRK				pmax	pmax		
	comp=Z,62nm,1.4s						
MTDJ	**Mount Denham**	**59.12**	**106**	P	**P**	**22 02 05.1**	**-0.1**
TLY	**Talaya**	**59.40**	**321**	P	**P**	**22 02 06.9**	**+0.3**
TLY				IAmb	IAmb	22 02 16.7	
	comp=Z,35nm,1.1s						
TLY	**Talaya**	**59.40**	**321**	⇑eP	**P**	**22 02 08.0**	**+1.4**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SIUN	**Universidad Ur**	**59.44**	**116**	P	**P**	**22 02 07.9**	**+0.6**
SIUN				IAmb	IAmb	22 02 09.2	
	comp=Z,15nm,0.9s						
HFS	**Hagfors**	**59.58**	**16**	P	**P**	**22 02 07.6**	**-0.2**
	comp=Z,4.1nm,0.8s,baz=72,slow=4.8,SNR=6.4						
HFS				pP	**sP**	**22 02 15.6**	**-0.3**
	comp=Z,4.4nm,0.7s,baz=46,slow=4.3,SNR=3.8						
HFS				LR	LR	22 28 37.6	
	comp=Z,358nm,18.4s,baz=328,slow=37						
	comp=Z,4.1nm,0.8s						
FIA1	**FINESS Array S**	**59.72**	**9**	P	**P**	**22 02 07.6**	**-1.0**
FINES	**FINESS Array B**	**59.72**	**9**	P	**P**	**22 02 08.1**	**-0.5**
	comp=Z,2.8nm,0.6s,baz=1.1,slow=7.6,SNR=8.1						
FINES				pP	**sP**	**22 02 16.0**	**-0.8**
	comp=Z,7.6nm,0.6s,baz=1.9,slow=9.3,SNR=6.9						
FINES				LR	LR	22 29 55.8	
	comp=Z,113nm,19.6s,baz=1.0,slow=38						
	comp=Z,2.8nm,0.6s						
FINES	**FINESS Array B**	**59.72**	**9**	P	**P**	**22 02 07.6**	**-1.0**
FINES	**FINESS Array B**	**59.72**	**9**	P	**P**	**22 02 07.6**	**-1.0**
BOAB	**BOACO BROADBAN**	**60.12**	**117**	P	**P**	**22 02 11.0**	**-1.0**
MOY	**Mondy**	**60.28**	**322**	eP	**P**	**22 02 14.4**	**+1.6**
MOY				pmax	pmax		
	comp=Z,112nm,1.7s						
ZAK	**Zakamensk**	**60.62**	**320**	eP	P	22 02 22.7	+7.5
ZAK				pmax	pmax		
	comp=Z,22nm,1.7s						
EKA	**Eskdalemuir Ar**	**60.77**	**28**	P	**P**	**22 02 15.9**	**-0.1**
	comp=Z,4.5nm,0.7s,baz=330,slow=6.4,SNR=7.7						
EKA				LR	LR	22 30 08.6	
	comp=Z,697nm,18.8s,baz=4.5,slow=38						
	comp=Z,4.5nm,0.7s						
KLMR	**Klimovskoe**	**60.96**	**2**	eP	**P**	**22 02 15.2**	**-1.9**
KLMR				pmax	pmax		
	comp=Z,64nm,1.0s						
KSRS	**Korea Array**	**61.11**	**295**	P	**P**	**22 02 19.3**	**+0.8**
	comp=Z,2.3nm,0.7s,baz=53,slow=6.4,SNR=6.0						
KSRS				pP	**sP**	**22 02 27.3**	**+0.7**
	comp=Z,23nm,0.8s,baz=32,slow=6.5,SNR=30						
KSRS				LR	LR	22 28 47.1	
	comp=Z,314nm,21.8s,baz=35,slow=36						
	comp=Z,2.3nm,0.7s						
KSAR	**Wonju Array Be**	**61.14**	**295**	P	**P**	**22 02 18.5**	**-0.2**
KSAR	**Wonju Array Be**	**61.14**	**295**	P	**P**	**22 02 18.5**	**-0.2**
XLT	**XiLinHaoTe**	**61.20**	**308**	eP	P	22 02 27.3	+8.2
XLT				pP	sP	22 02 31.9	+4.6
XLT				pmax	pmax		
	comp=Z,41nm,0.8s						
ULN	**Ulaanbaatar**	**61.43**	**316**	P	**P**	**22 02 20.7**	**-0.1**
ULN	**Ulaanbaatar**	**61.43**	**316**	P	**P**	**22 02 21.4**	**+0.6**
ULN	**Ulaanbaatar**	**61.43**	**316**	ceP	**P**	**22 02 21.1**	**+0.3**
ULN				pmax	pmax		
	comp=Z,13nm,1.7s						
SONM	**Songino Array**	**61.70**	**317**	P	**P**	**22 02 23.9**	**+1.4**
	comp=Z,6.3nm,1.0s,baz=39,slow=8.6,SNR=24						
SONM				pP	**sP**	**22 02 31.9**	**+1.2**
	comp=Z,51nm,0.9s,baz=36,slow=9.6,SNR=70						
SONM				LR	LR	22 31 49.9	
	comp=Z,584nm,18.6s,baz=10,slow=39						
	comp=Z,6.3nm,1.0s						
SONM	**Songino Array**	**61.70**	**317**	P	**P**	**22 02 22.3**	**-0.2**
SONM	**Songino Array**	**61.70**	**317**	P	**P**	**22 02 22.3**	**-0.2**
SONM				pmax	pmax		
	comp=Z,69nm,1.0s						
JCJ	**Chichijima**	**62.26**	**277**	LR	LR	22 26 30.9	
	comp=Z,108nm,21.9s,baz=9.0,slow=33						
KNGR	**Kungurtug, Tuv**	**62.30**	**324**	⇓eP	**P**	**22 02 26.9**	**+0.4**
KNGR				pmax	pmax		
	comp=Z,15nm,1.2s						
JTS	**Las Juntas de**	**62.34**	**118**	LR	LR	22 32 03.2	
	comp=Z,354nm,20.8s,baz=344,slow=38						
ZAA0	**Zalesovo Array**	**62.77**	**333**	P	**P**	**22 02 28.9**	**-0.4**
ZALV	**Zalesovo Beam**	**62.77**	**333**	P	**P**	**22 02 28.5**	**-0.9**
	comp=Z,4.7nm,0.8s,baz=16,slow=6.5,SNR=20						
ZALV				pP	**sP**	**22 02 37.2**	**-0.3**
	comp=Z,63nm,0.8s,baz=22,slow=7.1,SNR=108						
ZALV				LR	LR	22 33 36.6	
	comp=Z,264nm,18.3s,baz=16,slow=40						
	comp=Z,4.7nm,0.8s						
ZALV	**Zalesovo Beam**	**62.77**	**333**	P	**P**	**22 02 28.8**	**-0.6**
ZALV	**Zalesovo Beam**	**62.77**	**333**	i P	**P**	**22 02 28.8**	**-0.6**
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DL2	**Dalian**	**62.86**	**301**	P	**P**	**22 02 26.0**	**-4.2**
DL2				S	**S**	**22 10 53.1**	**-5.4**
DL2				pmax	pmax		
	comp=Z,69nm,1.0s						
DL2				pmax	pmax		
	comp=Z,410nm,3.8s						
DL2				LR	LR		
	comp=N,820nm,19.3s						
DL2				LR	LR		
	comp=E,820nm,20.5s						
DL2				LR	LR		
	comp=Z,760nm,22.8s						
KIRV	**Kirov**	**63.12**	**356**	LR	LR	22 32 12.0	
	comp=Z,133nm,20.6s,baz=9.9,slow=38						
KIRV	**Kirov**	**63.12**	**356**	ceP	**P**	**22 02 31.4**	**-0.2**
JNU	**Nakatsue**	**63.16**	**290**	LR	LR	22 32 29.8	
	comp=Z,140nm,18.1s,baz=22,slow=38						
SVE	**Sverdlovsk**	**64.09**	**349**	eP	**P**	**22 02 37.9**	**-0.2**
SVE				pmax	pmax		
	comp=Z,15nm,1.2s						
BJI	**Beijing**	**64.33**	**305**	P	**P**	**22 02 40.8**	**+0.9**
BJI				sP	**sP**	**22 02 47.8**	**-0.3**
BJI				S	**S**	**22 11 13.9**	**-2.9**
BJI				pmax	pmax		
	comp=Z,3.0nm,1.2s						
BJI				LR	LR		
	comp=Z,140nm,14.8s						
BJI				LR	LR		
	comp=Z,97nm,16.5s						
BJI				LR	LR		
	comp=Z,180nm,13.4s						
ARTI	**Arti**	**64.74**	**350**	LR	LR	22 32 50.1	
	comp=Z,160nm,21.4s,baz=14,slow=38						
ARTI	**Arti**	**64.74**	**350**	P	**P**	**22 02 41.9**	**-0.4**
ARTI	**Arti**	**64.74**	**350**	c iP	**P**	**22 02 41.9**	**-0.4**
ARTI						22 03 16.7	
ARTI				S	**S**	**22 11 23.6**	**+2.2**
ARTI				SS	**SS**	**22 15 30.8**	**-0.5**
ARTI				pmax	pmax		
	comp=Z,110nm,0.7s						
BSEG	**Bad Segeberg**	**64.96**	**20**	eP	**P**	**22 02 45.0**	**+1.2**
	comp=Z,23nm,1.6s,baz=346,slow=6.3						
SJG	**San Juan**	**65.08**	**96**	LR	LR	22 32 42.4	
	comp=Z,167nm,19.4s,baz=322,slow=37						
PABE	**Paberze**	**65.38**	**11**	P	**P**	**22 02 46.6**	**+0.1**
HHC	**Hu-ho-hao-te**	**65.59**	**309**	eP	**P**	**22 02 47.8**	**-0.5**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,260nm,4.9s						
HHC				LR	LR		
	comp=Z,370nm,16.2s						
HHC				LR	LR		
	comp=Z,480nm,17.0s						
HHC				LR	LR		
	comp=Z,830nm,16.2s						
RETH	**Rethem/Aller,**	**65.92**	**21**	eP	**P**	**22 02 51.3**	**+1.3**
	comp=Z,12nm,1.1s,baz=346,slow=6.3						
DGZ	**Jazzator, Alta**	**66.01**	**330**	⇑eP	**P**	**22 02 50.0**	**-0.9**
DGZ				pmax	pmax		
	comp=Z,13nm,1.6s						
MOS	**Moscow**	**66.04**	**3**	eP	**P**	**22 02 49.4**	**-1.4**
MOS				pmax	pmax		
	comp=Z,84nm,1.0s						
BTO	**Baotou**	**66.43**	**310**	eP	**P**	**22 02 52.3**	**-1.3**
BTO				pP	**pP**	**22 02 57.0**	**-2.6**
BTO				sP	**sP**	**22 02 59.1**	**-2.8**
BTO				pmax	pmax		
	comp=Z,15nm,1.5s						
BTO				pmax	pmax		
	comp=Z,98nm,4.3s						
BTO				LR	LR		
	comp=Z,3µm,18.0s						
BTO				LR	LR		
	comp=Z,1µm,19.8s						
BTO				LR	LR		
	comp=Z,3µm,17.3s						
BORK	**Borovoye**	**66.51**	**342**	P	**P**	**22 02 53.5**	**-0.3**
BORK	**Borovoye**	**66.51**	**342**	deP	**P**	**22 02 53.6**	**-0.3**
BORK				pmax	pmax		
	comp=Z,15nm,1.3s						
BVAR	**Borovoye Array**	**66.52**	**342**	P	**P**	**22 02 54.2**	**+0.3**
	comp=Z,3.8nm,0.9s,baz=36,slow=7.9,SNR=13						
BVAR				pP	**sP**	**22 03 01.2**	**-0.9**
	comp=Z,12nm,0.7s,baz=359,slow=5.9,SNR=24						
BVAR				LR	LR	22 37 52.7	
	comp=Z,258nm,18.3s,baz=18,slow=41						
	comp=Z,3.8nm,0.9s						
OBN	**Obninsk**	**66.64**	**4**	LR	LR	22 34 37.4	
	comp=Z,136nm,20.2s,baz=292,slow=38						
OBN	**Obninsk**	**66.64**	**4**	P	**P**	**22 02 54.8**	**+0.3**
OBN	**Obninsk**	**66.64**	**4**	eP	**P**	**22 02 54.8**	**+0.3**
OBN				i		22 03 01.7	
OBN				pmax	pmax		
	comp=Z,35nm,1.3s						
OBN				MLR	MLR		
	comp=Z,189nm,16.0s						
FLTG	**Flechtingen**	**66.66**	**20**	eP	**P**	**22 02 55.2**	**+0.4**
	comp=Z,27nm,1.5s,baz=346,slow=6.3						
UCC	**Uccle**	**66.72**	**25**	dP	**P**	**22 02 56.3**	**+1.1**
BUG	**Bochum--Univer**	**66.74**	**23**	eP	**P**	**22 02 55.9**	**+0.6**
	comp=Z,32nm,1.4s,baz=346,slow=6.3						
MNK	**Minsk**	**66.74**	**9**	i P	**P**	**22 02 55.3**	**0.0**
MNK				i *PP	**sP**	**22 03 04.3**	**+0.8**
MNK				i		22 03 20.8	
MNK				i S	**S**	**22 11 48.9**	**+3.0**
MNK				i *SS	**sS**	**22 12 02.7**	**+7.0**
MNK				i PS	**PnS**	**22 12 22.2**	**+15**

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MNK                                pmax    pmax
       comp=N,7.0nm,0.8s
MNK                                pmax    pmax
       comp=E,22nm,0.8s
MNK                                pmax    pmax
       comp=Z,18nm,0.7s
MNK                                MLR     MLR
       comp=N,517nm,18.0s
MNK                                MLR     MLR
       comp=E,618nm,18.0s
MNK                                MLR     MLR
       comp=Z,375nm,17.0s
SUW    Suwalki            66.77  12 eP     P       22 02 56.0 +0.6
SUW    Suwalki            66.77  12  P     P       22 02 55.0 -0.4
SUW    Suwalki            66.77  12  P     P       22 02 55.0 -0.4
CLZ    Clausthal          66.97  21 eP     P       22 02 57.9 +1.0
       comp=Z,32nm,1.4s,baz=346,slow=6.3
TIA    Tai'an             67.10 302  P     P       22 03 06.3 +8.4
TIA                                pmax    pmax
       comp=Z,22nm,1.4s
TIA                                AMB     AMB
       comp=Z,200nm,4.9s
TAOE   Nuku Hiva Isla     67.16 183 eLR    LR      22 23 01.4
       comp=Z,302nm,26.0s
HNS    HongShan           67.17 305 ⇑P     P       22 02 58.5 +0.3
HNS                                pmax    pmax
       comp=Z,13nm,1.1s
HNS                                LR      LR
       comp=Z,470nm,17.1s
HNS                                LR      LR
       comp=Z,310nm,17.0s
HNS                                LR      LR
       comp=Z,510nm,17.0s
KURK   Kurchatov          67.17 336  P     P       22 02 57.5 -0.6
KURK   Kurchatov          67.17 336deP     P       22 02 57.8 -0.3
KURK                               pmax    pmax
       comp=Z,15nm,1.3s
KASTN  Kahler Asten       67.20  22 eP     P       22 03 00.7 +2.4
       comp=Z,55nm,2.0s,baz=346,slow=6.3
KURBB  Kurchatov Arra     67.28 336  P     P       22 02 58.3 -0.5
       comp=Z,5.5nm,1.0s,baz=23,slow=5.8,SNR=21
KURBB                              pP      sP      22 03 06.9 -0.1
       comp=Z,49nm,0.8s,baz=26,slow=6.0,SNR=107
KURBB                              LR      LR      22 34 33.9
       comp=Z,398nm,21.2s,baz=162,slow=38
       comp=Z,5.5nm,1.0s
BTNL   Ternell            67.31  24 dP     P       22 03 01.0 +2.0
       comp=Z,12nm,1.2s
NEUB   Neuenburg          67.83  20 eP     P       22 03 03.0 +0.8
       comp=Z,21nm,1.0s,baz=346,slow=6.3
CLL    Collm              67.95  19 i P    P       22 03 03.3 +0.3
CLL                                 i              22 03 13.2
CLL                                 eS     S       22 12 05.0 +4.5
CLL                                pmax    pmax
       comp=Z,26nm,1.8s
CLL                                MLR     MLR
       comp=Z,300nm,19.6s
MOX    Moxa               68.34  20 eP     P       22 03 06.1 +0.6
       comp=Z,16nm,1.1s,baz=346,slow=6.3
MOX                                 eL     L       22 33 48.0
       comp=Z,242nm,19.5s
PLN    Plauen             68.59  20 eP     P       22 03 07.6 +0.5
       comp=Z,3.7nm,1.1s,baz=346,slow=6.3
TANN   Tannenbergstha     68.72  20 eP     P       22 03 08.4 +0.5
       comp=Z,32nm,2.0s,baz=346,slow=6.3
KSP    Ksiaz              68.95  17 eP     P       22 03 10.5 +1.3
CHVC   Chvalec            69.16  18 eP     P       22 03 18.0 +7.4
CHVC   Chvalec            69.16  18 eP     P       22 03 18.0 +7.4
GRF    Grafenberg Arr     69.18  21 eL     L       22 35 02.2
       comp=Z,291nm,18.7s
OSTC   Ostas              69.21  17 eP     P       22 03 11.1 +0.2
OSTC   Ostas              69.21  17 eP     P       22 03 11.1 +0.2
LPSR   Galich'ya Gora     69.22   2 eP     P       22 03 10.3 -0.5
LPSR                               pmax    pmax
       comp=Z,29nm,2.0s
BELG   Belogornoye        69.38 357ceP     P       22 03 11.0 -0.8
BELG                               pmax    pmax
       comp=Z,7.0nm,1.0s
DPC    Dobruska-Polom     69.43  17 eP     P       22 03 13.1 +0.8
DPC                                 e              22 03 21.7
DPC    Dobruska-Polom     69.43  17 eP     P       22 03 13.1 +0.8
DPC                                 ex     x       22 03 21.7
JOW    Kunigami           69.59 288  LR    LR      22 34 00.8
       comp=Z,99nm,21.9s,baz=324,slow=36
RNPP9  Sopachiv           69.62  11  P     P       22 03 12.4 -1.0
RNPP8  Varash             69.69  11  P     P       22 03 12.9 -0.9
KRLC   Kraliky            69.77  17 eP     P       22 03 15.1 +0.7
KRLC                                e              22 03 23.5
KRLC   Kraliky            69.77  17 eP     P       22 03 15.1 +0.7
KRLC                                ex     x       22 03 23.5
NJ2    Nanjing            69.79 298 eP     P       22 03 15.6 +0.9
NJ2                                pmax    pmax
       comp=Z,8.0nm,0.5s
RNPP5  Staryi Chortor     69.80  11  P     P       22 03 13.6 -0.9
ZVC    Zvikov             69.96  19 eP     P       22 03 19.4 +3.9
ZVC                                 ex     x       22 03 25.2
MK31   Makanchi Array     70.01 332⇑eP     P       22 03 14.8 -1.1
MKAR   Makanchi Array     70.01 332  P     P       22 03 15.2 -0.7
       comp=Z,2.4nm,0.7s,baz=43,slow=5.8,SNR=17
MKAR                               pP      sP      22 03 23.6 -0.6
       comp=Z,26nm,0.7s,baz=47,slow=6.6,SNR=73
MKAR                               LR      LR      22 35 37.9
       comp=Z,246nm,21.4s,baz=2.0,slow=37
       comp=Z,2.4nm,0.7s
MKAR   Makanchi Array     70.01 332  P     P       22 03 14.8 -1.1
MKAR   Makanchi Array     70.01 332  P     P       22 03 14.8 -1.1
STEB   Steborice          70.06  17 eP     P       22 03 16.4 +0.3
STEB                                ex     x       22 03 24.1
OJC    Ojcow              70.07  15 eP     P       22 03 25.5 +9.3
OJC    Ojcow              70.07  15  P     P       22 03 16.2  0.0
OJC    Ojcow              70.07  15  P     P       22 03 16.2  0.0
MAKZ   Makanchi           70.07 332  P     P       22 03 15.5 -0.8
MAKZ   Makanchi           70.07 332  P     P       22 03 15.5 -0.8
MAKZ                               pmax    pmax
       comp=Z,59nm,0.9s
KHC    Kasperske Hory     70.15  20  P     P       22 03 17.3 +0.5
KHC                                IAmb    IAmb    22 03 27.2
       comp=Z,23nm,1.4s
KHC    Kasperske Hory     70.15  20deP     P       22 03 18.0 +1.2
KHC                                pmax    pmax
       comp=Z,17nm,1.3s
KHC    Kasperske Hory     70.15  20 eP     P       22 03 17.5 +0.7
KHC                                 ex     x       22 03 26.4
KHC    Kasperske Hory     70.15  20  P     P       22 03 15.8 -1.0
       comp=Z,10nm,1.0s
MORC   Moravsky Berou     70.18  17  P     P       22 03 17.1 +0.2
MORC   Moravsky Berou     70.18  17 eP     P       22 03 18.0 +1.1
MORC   Moravsky Berou     70.18  17  P     P       22 03 17.1 +0.2
MORC                               pmax    pmax
       comp=Z,20nm,1.5s
MI28   Mi28,Pidlybu       70.27  10  P     P       22 03 16.4 -0.9
GEC2   GERESS Array S     70.45  20  P     P       22 03 18.6 -0.1
GERES  GERESS Array B     70.45  20  P     P       22 03 18.9 +0.3
       comp=Z,2.3nm,0.9s,baz=5.7,slow=5.4,SNR=9.7
GERES                              pP      sP      22 03 27.2 +0.3
       comp=Z,1.9nm,0.7s,baz=335,slow=5.9,SNR=7.2
GERES                              LR      LR      22 36 42.9
       comp=Z,194nm,18.1s,baz=336,slow=38
       comp=Z,2.3nm,0.9s
VRAC   Vranov             70.49  18  LR    LR      22 34 23.3
       comp=Z,170nm,21.5s,baz=340,slow=36
VRAC   Vranov             70.49  18 ⇑P     P       22 03 18.8 +0.1
VRAC   Vranov             70.49  18 eP     P       22 03 19.2 +0.4
AK21   Malin Array Si     70.53   9  P     P       22 03 18.1 -0.9
SDV    Santo Domingo      70.54 105  P     P       22 03 20.0 +0.3
       comp=Z,13nm,0.8s,baz=28,slow=3.1,SNR=11
SDV                                pP      sP      22 03 28.9 +0.9
       comp=Z,14nm,0.9s,baz=15,slow=3.8,SNR=4.9
SDV                                LR      LR      22 35 41.6
       comp=Z,699nm,21.6s,baz=338,slow=37
       comp=Z,13nm,0.8s
SDV    Santo Domingo      70.54 105  P     P       22 03 19.0 -0.7
SDV                                IAmb    IAmb    22 03 21.5
       comp=Z,22nm,1.0s
SDV    Santo Domingo      70.54 105 eP     P       22 03 20.1 +0.3
LYN    LuoYang            70.54 305 ⇓P     P       22 03 20.1 +0.8
LYN                                sP      sP      22 03 27.9 +0.4
LYN                                pmax    pmax
       comp=Z,53nm,1.2s
LYN                                pmax    pmax
       comp=Z,350nm,3.8s
LYN                                LR      LR
       comp=Z,460nm,15.1s
LYN                                LR      LR
       comp=Z,280nm,16.1s
LYN                                LR      LR
       comp=Z,500nm,17.7s
AK22   Malin Array Si     70.55   9  P     P       22 03 18.2 -0.9
AK23   Malin Array Si     70.56   9  P     P       22 03 18.2 -0.9
AK20   Malin Array Si     70.57   9  P     P       22 03 18.3 -0.9
VSR    Storozhevoye       70.61   2 eP     P       22 03 23.7 +4.3
VSR                                pmax    pmax
       comp=Z,20nm,0.8s
MAUC   Maruska            70.62  17 eP     P       22 03 20.4 +0.8
MAUC                                ex     x       22 03 28.1
AKASG  Malin Array Be     70.62   9  P     P       22 03 18.9 -0.6
       comp=Z,7.7nm,0.7s,baz=355,slow=6.0,SNR=22
AKASG                              pP      sP      22 03 27.6 -0.1
       comp=Z,35nm,0.6s,baz=353,slow=5.8,SNR=44
AKASG                              LR      LR      22 37 47.2
       comp=Z,184nm,18.7s,baz=358,slow=39
       comp=Z,7.7nm,0.7s
AKASG  Malin Array Be     70.62   9  P     P       22 03 19.4 -0.2
AKASG                              IAmb    IAmb    22 03 28.5
       comp=Z,32nm,1.5s
AKASG  Malin Array Be     70.62   9 i P    P       22 03 19.2 -0.3
AKASG                              pmax    pmax
       comp=Z,8.0nm,0.7s
AKBB   Malin Array Si     70.62   9ceP     P       22 03 18.7 -0.8
AKBB   Malin Array Si     70.62   9  P     P       22 03 18.6 -0.9
AK17   Malin Array Si     70.63   9  P     P       22 03 18.6 -0.9
KIEV   Kiev               70.63   9  P     P       22 03 18.8 -0.8
KIEV   Kiev               70.63   9 ⇑P     P       22 03 18.9 -0.6
KIEV   Kiev               70.63   9  P     P       22 03 18.8 -0.8
KIEV                               pmax    pmax
       comp=Z,66nm,0.8s
KIEV   Kiev               70.63   9  P     P       22 03 18.6 -1.0
       comp=Z,374nm,0.8s
AK01   Malin Array Si     70.63   9  P     P       22 03 18.7 -0.9
VRH    Novokhopyorsk      70.65   0 eP     P       22 03 19.3 -0.4
VRH                                pmax    pmax
       comp=Z,25nm,1.4s
AKTO   Aktyubinsk         70.67 349  LR    LR      22 38 54.0
       comp=Z,135nm,18.5s,baz=288,slow=40
KRUC   Moravsky           70.69  18 eP     P       22 03 20.0  0.0
VORD   Divnogorie         70.86   2 eP     P       22 03 25.9 +5.0
VORD                               pmax    pmax
       comp=Z,30nm,0.9s
NIE    Niedzica           70.92  15 eP     P       22 03 23.4 +2.0
JAVC   Velka Javorina     71.09  17 eP     P       22 03 23.6 +1.1
RETA   Reutte             71.21  22 i pP   P       22 03 23.5 +0.3
       comp=Z,8.0nm,1.5s
LUBAR  Lubar, Ukraine     71.27  10  P     P       22 03 22.6 -0.9
WMQ    Urumqi             71.33 327 eP     P       22 03 22.9 -1.1
WMQ                                pP      sP      22 03 32.8 +0.5
WMQ                                pmax    pmax
       comp=Z,29nm,0.7s
WMQ                                LR      LR
       comp=Z,390nm,17.3s
WMQ                                LR      LR
       comp=Z,500nm,17.3s
WMQ                                LR      LR
       comp=Z,220nm,17.3s
GTA    Gaotai             71.37 316  P     P       22 03 24.6 +0.2
GTA                                sP      sP      22 03 32.5 -0.2
GTA                                pmax    pmax
       comp=Z,13nm,1.1s
GTA                                LR      LR
       comp=Z,560nm,15.9s
GTA                                LR      LR
       comp=Z,330nm,15.1s
GTA                                LR      LR
       comp=Z,790nm,17.1s
MODS   Modra-Piesok       71.50  17 eP     P       22 03 25.5 +0.6
MODS                               pmax    pmax
       comp=Z,33nm,1.2s
MODS   Modra-Piesok       71.50  17 eP     P       22 03 25.5 +0.6
MOA    Molln              71.51  20 i pP   P       22 03 26.7 +1.6
       comp=Z,6.3nm,1.1s
WATA   Walderalm          71.51  22 i pP   P       22 03 26.5 +1.4
       comp=Z,27nm,1.5s,SNR=6.0
SQTA   Sankt Quirin       71.55  22 i pP   P       22 03 27.1 +1.7
       comp=Z,14nm,1.5s
BIOA   Bad Ischl, Aus     71.55  20 i pP   P       22 03 26.0 +0.8
       comp=Z,12nm,1.5s
SENIN  Lac Senin/Sane     71.56  25  P     P       22 03 25.5 -0.1
SENIN                              IAmb    IAmb    22 04 10.3
       comp=Z,24nm,1.2s
WTTA   Wattenberg         71.59  22 i pP   P       22 03 26.7 +1.0
       comp=Z,20nm,1.4s
AB31   Akbulak array      71.63 348  P     P       22 03 25.7  0.0
ABKAR  Akbulak array      71.63 348  P     P       22 03 25.5 -0.2
LESA   Schwarzleotal      71.63  21 epP    P       22 03 26.4 +0.6
       comp=Z,8.9nm,1.2s
FETA   Feichten           71.64  22 i pP   P       22 03 26.5 +0.5
       comp=Z,11nm,1.4s
DAVOX  Davos/Dischmat     71.70  23  LR    LR      22 37 15.4
       comp=Z,281nm,18.2s,baz=268,slow=38
CONA   Conrad Observa     71.71  18 i pP   P       22 03 27.1 +0.8
       comp=Z,21nm,1.6s,SNR=6.6
HORU   Horodok            71.85  11  P     P       22 03 26.0 -1.0
TUE    Stuetta            71.89  23  P     P       22 03 28.2 +0.6
FUORN  Ofenpass-Fuorn     71.94  23  P     P       22 03 27.7 -0.2
FUORN                              IAmb    IAmb    22 03 37.8
       comp=Z,43nm,1.6s
RONA   Rosalia, Austr     72.00  18 i pP   P       22 03 29.6 +1.6
       comp=Z,10nm,1.5s
KBA    Koelnbreinsper     72.09  20 epP    P       22 03 29.8 +1.1
       comp=Z,26nm,1.7s,SNR=5.6
STNU   Starunia           72.14  12  P     P       22 03 27.8 -1.0
ROSC   El Rosal           72.17 111  P     P       22 03 30.8 +1.0
       comp=Z,21nm,0.8s,baz=154,slow=3.8,SNR=6.2
ROSC                               LR      LR      22 37 58.0
       comp=Z,303nm,20.4s,baz=5.6,slow=38
       comp=Z,21nm,0.8s
ROSC   El Rosal           72.17 111  P     P       22 03 29.6 -0.2
ROSC                               IAmb    IAmb    22 03 45.1
       comp=Z,37nm,1.2s
ROSC   El Rosal           72.17 111  P     P       22 03 29.6 -0.2
ROSC                               pmax    pmax
       comp=Z,37nm,1.2s
MUKU   Mukachevo          72.18  14  P     P       22 03 28.1 -0.9
MEZ    Mezhgor'ye         72.22  13  P     P       22 03 28.7 -0.5
ABTA   Abfaltersbach      72.25  21 i pP   P       22 03 31.3 +1.7
       comp=Z,17nm,1.8s
ARSA   Arzberg            72.31  19  P     P       22 03 30.0 +0.2
ARSA   Arzberg            72.31  19 i pP   P       22 03 31.0 +1.2
       comp=Z,9.4nm,1.2s
PSZ    Piszkesteto        72.34  16  P     P       22 03 30.1 +0.1
PSZ                                IAmb    IAmb    22 03 40.4
       comp=Z,29nm,1.1s
PSZ    Piszkesteto        72.34  16 ⇑P     P       22 03 30.9 +0.9
PSZ    Piszkesteto        72.34  16  P     P       22 03 30.1 +0.1
PSZ                                pmax    pmax
       comp=Z,29nm,1.1s
BERU   Beregovo           72.39  14  P     P       22 03 29.3 -0.9
XAN    Xi'an              72.49 307 ⇓P     P       22 03 38.6 +7.5
XAN                                pP      sP      22 03 43.8 +4.4
XAN                                S       SKiKP   22 13 12.0 +7.3
XAN                                pmax    pmax
       comp=Z,46nm,1.1s
XAN                                LR      LR
       comp=N,600nm,19.3s
XAN                                LR      LR
       comp=E,640nm,18.5s
XAN                                LR      LR
       comp=Z,710nm,18.5s
KMPD   K-Podol'skiy       72.50  11  P     P       22 03 30.1 -0.7
KMPD                                P      P       22 03 30.1 -0.7
KORU   Korolevo           72.53  13  P     P       22 03 30.3 -0.7
MYKA   Terra Mystica      72.58  20 i pP   P       22 03 32.5 +1.0
       comp=Z,9.8nm,1.8s
KSV    Kosov              72.59  12  P     P       22 03 30.7 -0.8
NSLU   Nyzhne Selyshc     72.64  12  P     P       22 03 30.3 -1.4
MPLH   Magyarpolny        72.71  17  P     P       22 03 31.5 -0.7
       comp=Z,53nm,1.4s
LZH    Lanzhou            72.77 312 eP     P       22 03 33.3 +0.4
LZH                                sP      sP      22 03 41.8 +0.6
LZH                                pmax    pmax
       comp=Z,18nm,1.3s
LZH                                LR      LR
       comp=Z,920nm,15.5s
LZH                                LR      LR
       comp=Z,720nm,16.1s
LZH                                LR      LR
       comp=Z,1µm,15.5s
SOKA   Soboth             72.78  19 epP    P       22 03 34.2 +1.6
       comp=Z,14nm,1.5s
RAKU   Rahkiv             72.78  13  P     P       22 03 30.8 -1.8
OBKA   Obir               72.86  20 i pP   P       22 03 33.7 +0.5
       comp=Z,12nm,1.0s
LZDM   Lanzhou Array      72.94 312  P     P       22 03 34.5 +0.4
       comp=Z,0.8nm,0.3s,baz=29,slow=3.4,SNR=5.8
LZDM                               pP      sP      22 03 42.9 +0.4
       comp=Z,17nm,0.8s,baz=38,slow=2.6,SNR=8.5
LZDM                               LR      LR      22 38 59.8
       comp=Z,937nm,18.1s,baz=20,slow=39
       comp=Z,0.8nm,0.3s
SORM   Soroca             73.10  10 ⇓P     P       22 03 34.5 +0.1
WHN    Wuhan              73.12 301  P     P       22 03 33.9 -0.9
WHN                                sP      sP      22 03 43.0 -0.1
BUR08  Bucovina Ar. S     73.27  12  P     P       22 03 35.2 -0.4
BURAR  Bucovina Array     73.30  12  P     P       22 03 35.4 -0.4
BURAR                              IAmb    IAmb    22 03 45.8
       comp=Z,13nm,0.7s
BURAR  Bucovina Array     73.30  12  P     P       22 03 35.3 -0.5
BURAR                              pmax    pmax
       comp=Z,13nm,0.7s
BAL3X  Bal3x, Balta       73.40   9  P     P       22 03 35.5 -0.7
MORH   Mrgy, Hungar       73.82  17 ⇓P     P       22 03 39.9 +1.2
MORH   Mrgy, Hungar       73.82  17  P     P       22 03 38.0 -0.7
       comp=Z,8.9nm,1.9s
DRGR                      73.82  14 ⇑P     P       22 03 39.8 +1.0
MARR   Marisel-Cluj       73.98  14 ⇓P     P       22 03 40.6 +0.8
OTAV   Otavalo            74.20 117  P     P       22 03 42.0 +0.1
OTAV   Otavalo            74.20 117  P     P       22 03 42.0 +0.1
OTAV                               pmax    pmax
       comp=Z,18nm,1.2s
OTAV   Otavalo            74.20 117 eP     P       22 03 42.9 +1.0
SIRR   Siria              74.20  15 ⇑P     P       22 03 42.0 +1.1
MILM   Milestii Mici      74.34  10 ⇓P     P       22 03 43.1 +1.3
FLOC   Florencia          74.35 114  P     P       22 03 41.7 -0.6
FLOC                               IAmb    IAmb    22 03 43.9
       comp=Z,70nm,1.3s
TESR   Tescani            74.54  11 ⇓P     P       22 03 44.3 +1.4
TESR   Tescani            74.54  11  P     P       22 03 42.2 -0.8
       comp=Z,23nm,1.3s
ONER   Baraj Valea Uz     74.69  11 ⇑P     P       22 03 45.1 +1.2
BZS    Buzias             74.83  15 ⇓P     P       22 03 45.9 +1.3
ESBB   Sonseca Array      74.85  35  P     P       22 03 45.3 +0.4
ESBB                               IAmb    IAmb    22 05 36.4
       comp=Z,54nm,1.8s
ESDC   Sonseca Array      74.85  35  P     P       22 03 45.6 +0.7
       comp=Z,7.8nm,0.9s,baz=330,slow=5.6,SNR=23
ESDC                               pP      sP      22 03 52.8 -0.4
       comp=Z,9.1nm,0.9s,baz=329,slow=5.5,SNR=12
       comp=Z,7.8nm,0.9s
ESDC   Sonseca Array      74.85  35  P     P       22 03 44.9  0.0
PAB    San Pablo          74.85  36  P     P       22 03 45.2 +0.2
PAB                                IAmb    IAmb    22 04 59.8
       comp=Z,32nm,1.4s
PAB    San Pablo          74.85  36  P     P       22 03 45.2 +0.2
PAB                                pmax    pmax
       comp=Z,32nm,1.5s
OZUR                      74.86  12 ⇑P     P       22 03 45.9 +1.0
TURR   Turia              74.93  12 ⇑P     P       22 03 46.3 +1.1
DOPR   Dopca              74.95  12 ⇓P     P       22 03 46.6 +1.3
PRZ    Przheval'sk        75.00 333  P     P       22 03 45.9  0.0
PRZ    Przheval'sk        75.00 333  P     P       22 03 45.9  0.0
PRZ                                pmax    pmax
       comp=Z,72nm,0.8s
GHRR                      75.07  11 ⇓P     P       22 03 47.5 +1.5
USP    Ospenovka          75.13 336  P     P       22 03 46.8 +0.3
       SNR=9.2
VRI    Vrincioaia         75.19  11 ⇑P     P       22 03 48.5 +1.8
VRI    Vrincioaia         75.19  11  P     P       22 03 46.0 -0.7
       comp=Z,31nm,1.2s
PLOR   Plostina           75.20  11 ⇑P     P       22 03 48.2 +1.4
GZR    Gura Zlata         75.20  14 ⇓P     P       22 03 48.1 +1.3
TKM2   Tokmak 2           75.23 335  P     P       22 03 47.5 +0.3
       SNR=20
CHMS   Chumysh            75.33 336  P     P       22 03 48.1 +0.5
       SNR=14
ARR    Arges              75.45  13 ⇓P     P       22 03 49.9 +1.6
MLR    Muntele Rosu       75.48  12  LR    LR      22 38 49.1
       comp=Z,168nm,18.8s,baz=360,slow=37
MLR    Muntele Rosu       75.48  12  P     P       22 03 48.8 +0.2
MLR    Muntele Rosu       75.48  12 ⇓P     P       22 03 50.9 +2.4
MLR    Muntele Rosu       75.48  12  P     P       22 03 48.8 +0.2
MLR                                pmax    pmax
       comp=Z,10.0nm,0.7s
MLR    Muntele Rosu       75.48  12  P     P       22 03 47.2 -1.3
       comp=Z,16nm,0.8s
ENH    Enshi              75.50 305  P     P       22 03 47.8 -1.0
BISRR  Bisoca             75.50  11  P     P       22 03 48.4 -0.2
       comp=Z,69nm,0.9s
SCTR   Scanteiesti        75.50  10 ⇑P     P       22 03 51.1 +2.6
FRU1   Bishkek            75.54 336  P     P       22 03 49.1 +0.3
FRU1   Bishkek            75.54 336  P     P       22 03 49.1 +0.3
FRU1                               pmax    pmax
       comp=Z,119nm,1.0s
KBK    Karagaybulak       75.62 336  P     P       22 03 49.8 +0.4
       SNR=14
MDVR   Moldovita          75.66  15 ⇑P     P       22 03 52.3 +2.8
ULHL   Ulahol             75.73 335  P     P       22 03 58.9 +8.8
       SNR=9.3
AAK    Ala-Archa          75.73 336  P     P       22 03 50.5 +0.4
       SNR=9.2
AAK    Ala-Archa          75.73 336  LR    LR      22 39 44.8
       comp=Z,237nm,21.4s,baz=16,slow=38
AAK    Ala-Archa          75.73 336  P     P       22 03 50.1  0.0
AAK    Ala-Archa          75.73 336ceP     P       22 03 50.4 +0.4
AAK                                pmax    pmax
       comp=Z,23nm,1.7s
CNSH   ChangSha           75.77 301  P     P       22 03 58.3 +8.0
CNSH                               pmax    pmax
       comp=Z,28nm,0.9s
TARG   Taragay, Kyrgy     75.86 333  P     P       22 03 50.8 -0.4
TARG                               IAmb    IAmb    22 04 13.4
       comp=Z,30nm,1.0s
TARG   Taragay, Kyrgy     75.86 333  P     P       22 03 50.8 -0.4
TARG                               pmax    pmax
       comp=Z,30nm,1.0s
EKS2   Erkin-Say          75.86 337  P     P       22 03 51.4 +0.6
       SNR=23
CFR    Carcaliu           76.01  10 ⇓P     P       22 03 53.0 +1.6
GOMU   GeErMu             76.01 319  P     P       22 03 51.5 -0.5
GOMU                               pP      pP      22 03 54.6 -3.5
GOMU                               sP      sP      22 03 59.3 -1.0
GOMU                               S       S       22 13 33.9 -0.4
GOMU                               pmax    pmax
       comp=Z,6.0nm,1.0s
GOMU                               LR      LR
       comp=Z,270nm,10.7s
GOMU                               LR      LR
       comp=Z,89nm,10.3s
GOMU                               LR      LR
       comp=Z,380nm,10.8s
TLCR                      76.06  10 ⇓P     P       22 03 54.0 +2.3
KKAR   Karatay Array      76.08 339  P     P       22 03 51.5 -0.4
KKAR   Karatay Array      76.08 339  P     P       22 03 51.5 -0.4
UCH    Uchtor             76.12 336  P     P       22 04 02.0 +9.3
       SNR=8.0
PPT2   Papeete2           76.45 192 eLR    LR      22 27 28.1
       comp=Z,198nm,22.8s
PPT2                               eLR     LR      22 27 29.3
       comp=Z,256nm,22.2s
VLAD   Vladila            76.78  13 ⇓P     P       22 03 58.5 +2.8
CICN   Ciocanesti         76.87  11 ⇑P     P       22 03 59.2 +3.0
ARSB   Arslanbob          77.31 337  P     P       22 03 58.7 -0.3
ARSB                               IAmb    IAmb    22 04 10.0
       comp=Z,42nm,1.0s
ARSB   Arslanbob          77.31 337  P     P       22 03 58.7 -0.3
ARSB                               pmax    pmax
       comp=Z,42nm,1.0s
PDG    Podgorica          77.61  17 ⇓P     P       22 04 04.8 +4.4
KIV    Kislovodsk         77.90 360  P     P       22 04 01.7 -0.5
KIV    Kislovodsk         77.90 360 ⇑P     P       22 04 05.8 +3.6
KIV    Kislovodsk         77.90 360 eP     P       22 04 01.8 -0.4
KIV                                pmax    pmax
       comp=Z,37nm,1.0s
KIV                                MLR     MLR
       comp=Z,89nm,19.0s
SHA1   Shidzhatmaz        78.12 360ceP     P       22 04 03.8 +0.2
KBZ    Khabaz             78.13 360  P     P       22 04 03.8 +0.5
       comp=Z,4.1nm,1.0s,baz=241,slow=6.7,SNR=9.7
KBZ                                pP      sP      22 04 11.9 +0.4
       comp=Z,21nm,0.8s,baz=336,slow=2.7,SNR=34
KBZ                                LR      LR      22 42 37.0
       comp=Z,89nm,20.9s,baz=356,slow=39
       comp=Z,4.1nm,1.0s
KBZ    Khabaz             78.13 360deP     P       22 04 03.7 +0.5
KBZ                                pmax    pmax
       comp=Z,5.0nm,1.0s
KSH    Kashi              78.39 334  P     P       22 04 07.8 +2.8
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KSH				PcP	PcP	22 04 16.3	+2.0
KSH				pmax	pmax		
	comp=Z,18nm,1.0s						
KSH				LR	LR		
	comp=Z,360nm,18.9s						
KSH				LR	LR		
	comp=Z,230nm,13.7s						
KSH				LR	LR		
	comp=Z,530nm,18.2s						
MAK	Makhachkala	78.81	356	eP	P	22 04 01.7	-5.3
MAK				eS	S	22 13 58.8	-4.8
MAK				pmax	pmax		
	comp=Z,28nm,0.3s						
OHR	Ohrid	79.13	16	i P	P	22 04 07.0	-1.9
VAY	Valandovo	79.18	15	i P	P	22 04 09.4	+0.3
RDO	Rodhopi	79.72	13	P	P	22 04 11.9	-0.2
RDO				IAmb	IAmb	22 04 22.1	
	comp=Z,32nm,0.9s						
GYA	Guiyang	80.03	305	⇓P	P	22 04 14.3	+0.2
GYA				S	S	22 14 13.5	-3.8
GYA				pmax	pmax		
	comp=Z,17nm,1.0s						
GYA				pmax	pmax		
	comp=Z,69nm,3.1s						
GYA				LR	LR		
	comp=Z,130nm,5.1s						
GYA				LR	LR		
	comp=Z,130nm,4.2s						
GYA				LR	LR		
	comp=Z,110nm,5.8s						
AKT	Akhty	80.28	356	eP	P	22 04 14.9	-0.4
AKT				e		22 04 22.5	
AKT				e		22 07 19.2	
AKT				pmax	pmax		
	comp=Z,15nm,1.9s						
TIP	Timpagrande	80.36	20	⇓P	P	22 04 21.5	+5.8
CHGR	Chuyangaron	80.64	339	P	P	22 04 17.4	+0.1
CHGR	Chuyangaron	80.64	339	P	P	22 04 17.4	+0.1
CHGR				pmax	pmax		
	comp=Z,225nm,0.9s						
ATAH	Atahualpa	80.72	120	P	P	22 04 19.4	+1.2
	comp=Z,9.8nm,0.9s,baz=324,slow=3.3,SNR=10						
ATAH				LR	LR	22 41 26.6	
	comp=Z,362nm,20.6s,baz=344,slow=37						
	comp=Z,9.8nm,0.9s						
MD01	Midelt array s	80.85	39	P	P	22 04 18.1	-0.4
MDUB	Mudurnu	80.95	9	P	P	22 04 18.7	-0.2
BOAV	Boa Vista	81.25	100	P	P	22 04 20.8	+0.2
BOAV				IAmb	IAmb	22 04 22.7	
	comp=Z,29nm,1.3s						
BOAV	Boa Vista	81.25	100	eP	P	22 04 21.6	+1.0
RKT	Rikitea	81.34	178	eLR	LR	22 29 41.2	
	comp=Z,2µm,26.0s						
ANTO	Ankara	81.66	7	P	P	22 04 22.1	-0.4
ANTO				IAmb	IAmb	22 04 32.7	
	comp=Z,34nm,0.9s						
ANTO	Ankara	81.66	7	P	P	22 04 22.2	-0.4
ANTO				pmax	pmax		
	comp=Z,34nm,1.0s						
BR131	Keskin Array S	81.86	7	P	P	22 04 23.3	-0.5
BR131				IAmb	IAmb	22 04 33.3	
	comp=Z,17nm,0.9s						
BR131	Keskin Array S	81.86	7	P	P	22 04 23.3	-0.5
BR131				pmax	pmax		
	comp=Z,17nm,0.9s						
BRTR	Keskin Array B	81.86	7	P	P	22 04 24.1	+0.3
	comp=Z,2.7nm,0.9s,baz=345,slow=2.9,SNR=15						
BRTR				pP	sP	22 04 32.4	+0.3
	comp=Z,12nm,0.9s,baz=8.5,slow=3.0,SNR=32						
BRTR				LR	LR	22 42 53.8	
	comp=Z,100nm,21.6s,baz=342,slow=37						
	comp=Z,2.7nm,0.9s						
BRTR	Keskin Array B	81.86	7	P	P	22 04 23.3	-0.5
BRTR	Keskin Array B	81.86	7	i P	P	22 04 23.7	-0.1
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PZH	PanZhiHua	82.05	309	P	P	22 04 24.4	-0.5
PZH				S	S	22 14 40.8	+2.4
PZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PZH				pmax	pmax		
	comp=Z,110nm,4.9s						
PZH				LR	LR		
	comp=Z,200nm,20.2s						
PZH				LR	LR		
	comp=Z,300nm,21.2s						
PZH				LR	LR		
	comp=Z,310nm,19.6s						
TBI	Tubuai	82.13	191	eLR	LR	22 30 03.0	
	comp=Z,976nm,24.2s						
KEST	Kesra	82.15	27	P	P	22 04 25.6	+0.4
	comp=Z,7.0nm,0.9s,baz=316,slow=4.7,SNR=3.9						
KEST				pP	sP	22 04 34.1	+0.6
	comp=Z,16nm,0.8s,baz=316,slow=2.8,SNR=8.2						
KEST				LR	LR	22 41 26.5	
	comp=Z,256nm,19.5s,baz=316,slow=36						
	comp=Z,7.0nm,0.9s						
KEST	Kesra	82.15	27	P	P	22 04 25.1	-0.1
KEST				IAmb	IAmb	22 05 04.4	
	comp=Z,37nm,1.2s						
KIRS	Kirsehir-Merke	82.47	7	⇑P	P	22 04 32.8	+6.0
ARPR	Arapgir-MALATY	82.70	3	P	P	22 04 28.2	0.0
ARPR				IAmb	IAmb	22 04 39.0	
	comp=Z,29nm,1.0s						
MDP	Montagnes des	83.07	92	LR	LR	22 40 28.7	
	comp=Z,207nm,21.1s,baz=326,slow=35						
ALCI	Alchi Leh	83.15	332	eP	P	22 04 18.8	-12
ALCI				IAmb	IAmb	22 04 41.3	
	comp=Z,21nm,1.0s						
LSA	Lhasa	83.18	319	P	P	22 04 31.0	-0.2
LSA				IAmb	IAmb	22 04 42.0	
	comp=Z,21nm,0.9s						
LSA	Lhasa	83.18	319	P	P	22 04 28.0	-3.2
LSA	Lhasa	83.18	319	P	P	22 04 31.0	-0.2
LSA				pmax	pmax		
	comp=Z,21nm,0.9s						
GURO	Guroymak-BITLI	83.30	0	P	P	22 04 30.9	-0.4
GURO				IAmb	IAmb	22 04 41.7	
	comp=Z,37nm,1.7s						
SRNI	Srinagar	83.88	333	eP	P	22 04 21.4	-12
SRNI				IAmb	IAmb	22 04 44.7	
	comp=Z,15nm,0.9s						
TGY	Tagaytay City	83.96	287	LR	LR	22 42 30.7	
	comp=Z,75nm,20.7s,baz=292,slow=36						
ELL	Elmali	84.53	10	P	P	22 04 36.5	-1.1
ELL				IAmb	IAmb	22 04 46.8	
	comp=Z,14nm,0.9s						
ELL	Elmali	84.53	10	P	P	22 04 36.5	-1.1
ELL				pmax	pmax		
	comp=Z,15nm,0.9s						
GAZ	Gaziantep	84.58	4	P	P	22 04 37.7	-0.1
GAZ				IAmb	IAmb	22 04 47.9	
	comp=Z,22nm,0.8s						
NIL	Nilore	84.62	335	P	P	22 04 37.6	-0.4
NIL	Nilore	84.62	335	P	P	22 04 37.6	-0.4
NIL				pmax	pmax		
	comp=Z,104nm,1.0s						
KBL	Kabul	84.65	338	P	P	22 04 37.1	-1.2
KBL	Kabul	84.65	338	P	P	22 04 37.1	-1.2
KBL				pmax	pmax		
	comp=Z,38nm,0.9s						
ARG	Arkhangelos	84.89	12	P	P	22 04 37.5	-1.7
ARG	Arkhangelos	84.89	12	P	P	22 04 37.5	-1.7
ARG				pmax	pmax		
	comp=Z,50nm,0.8s						
IDI	Anoyia	85.42	14	LR	LR	22 47 32.0	
	comp=Z,101nm,18.2s,baz=330,slow=39						
NNA	Nana	85.70	121	LR	LR	22 42 45.6	
	comp=Z,101nm,21.8s,baz=328,slow=35						
HRA	Herat	85.97	344	P	P	22 04 44.1	-0.8
HRA				IAmb	IAmb	22 04 55.1	
	comp=Z,29nm,1.5s						
JOSI	Joshimath	85.99	328	eP	P	22 04 35.9	-9.2
JOSI				IAmb	IAmb	22 04 55.0	
	comp=Z,30nm,1.3s						
BHK	Bhakra	86.00	331	eP	P	22 04 31.1	-14
BHK				IAmb	IAmb	22 04 54.8	
	comp=Z,13nm,0.6s						
SMLA	Simla	86.09	331	eP	P	22 04 32.9	-12
CSS	Mathiatis	86.58	7	P	P	22 04 46.6	-1.0
CSS				IAmb	IAmb	22 05 00.9	
	comp=Z,33nm,1.2s						
DDI	Dehra Dun	86.62	330	eP	P	22 04 36.4	-12
DDI				IAmb	IAmb	22 04 58.0	
	comp=Z,22nm,0.8s						
SHL	Shillong	86.70	317	P	P	22 04 47.1	-1.5
SHL				IAmb	IAmb	22 04 57.2	
	comp=Z,31nm,0.9s						
SHL	Shillong	86.70	317	eP	P	22 04 35.2	-13
SHL				IAmb	IAmb	22 04 57.5	
	comp=Z,27nm,1.0s						
SHL	Shillong	86.70	317	P	P	22 04 47.1	-1.5
SHL				pmax	pmax		
	comp=Z,31nm,0.9s						
LGTI	Lohaghat	86.94	328	eP	P	22 04 37.9	-11
LGTI				IAmb	IAmb	22 04 59.0	
	comp=Z,21nm,0.9s						
TKRD	Thakurdwara	87.52	329	eP	P	22 04 39.9	-12
MERT	Meerut	87.99	329	eP	P	22 04 42.4	-12
MERT				IAmb	IAmb	22 04 49.2	
	comp=Z,13nm,0.2s						
RTK	Rohtak	88.28	331	eP	P	22 04 44.3	-12
RTK				IAmb	IAmb	22 05 05.1	
	comp=Z,15nm,0.8s						
NDI	New Delhi	88.40	330	eP	P	22 04 44.3	-12
NDI				IAmb	IAmb	22 05 05.7	
	comp=Z,23nm,1.2s						
MMAI	Mount Meron Ar	88.64	6	P	P	22 04 56.3	-1.3
	comp=Z,2.7nm,0.9s,baz=300,slow=9.5,SNR=4.6						
MMAI				pP	sP	22 05 06.0	0.0
	comp=Z,6.8nm,1.0s,baz=295,slow=14,SNR=5.8						
	comp=Z,2.7nm,0.9s						
KUDL	Kundal	89.10	330	eP	P	22 04 47.5	-12
KUDL				IAmb	IAmb	22 05 09.4	
	comp=Z,24nm,1.2s						
JMUI	Jamui	89.25	321	eP	P	22 04 48.3	-12
JMUI				IAmb	IAmb	22 05 50.7	
	comp=Z,27nm,0.5s						
ITTB	Itaituba	89.47	99	eP	P	22 05 01.3	-0.3
GAYA	Gaya	89.69	322	eP	P	22 04 51.6	-11
GAYA				IAmb	IAmb	22 05 11.6	
	comp=Z,16nm,0.8s						
CHTO	Chiang Mai	90.06	308	P	P	22 05 03.6	-0.8
CHTO				IAmb	IAmb	22 05 13.6	
	comp=Z,23nm,0.9s						
CHTO	Chiang Mai	90.06	308	P	P	22 05 04.2	-0.2
CHTO	Chiang Mai	90.06	308	P	P	22 05 03.6	-0.8
CHTO				pmax	pmax		
	comp=Z,23nm,1.0s						
CMAR	Chiang Mai Arr	90.37	308	P	P	22 05 06.2	+0.3
	comp=Z,11nm,1.0s,baz=4.6,slow=5.6,SNR=69						
CMAR				pP	sP	22 05 14.8	+0.6
	comp=Z,32nm,0.9s,baz=34,slow=3.9,SNR=22						
CMAR				LR	LR	22 47 41.1	
	comp=Z,193nm,21.1s,baz=40,slow=37						
	comp=Z,11nm,1.0s						
CMAR	Chiang Mai Arr	90.37	308	P	P	22 05 05.8	-0.1
CMAR	Chiang Mai Arr	90.37	308	i P	P	22 05 06.1	+0.2
CMAR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
JHNI	Jhansi	91.08	328	eP	P	22 04 56.8	-12
JHNI				IAmb	IAmb	22 05 17.8	
	comp=Z,29nm,1.3s						
NPGB	Novo Progresso	91.94	100	eP	P	22 05 12.4	-0.6
DZM	Mont Dzumac	92.58	230	eLR	LR	22 34 58.0	
	comp=Z,201nm,23.2s						
LPAZ	La Paz	93.49	116	LR	LR	22 53 03.6	
	comp=Z,139nm,18.5s,baz=320,slow=39						
LPAZ	La Paz	93.49	116	P	P	22 05 19.8	-1.1
LPAZ	La Paz	93.49	116	eP	P	22 05 19.4	-1.4
SIV	San Ignacio	96.65	110	LR	LR	22 53 31.2	
	comp=Z,469nm,18.2s,baz=329,slow=38						
RAYN	Ar Rayn	98.24	357	P	P	22 05 41.7	-0.2
RAYN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
VJD	Vijayawada	98.90	323	eP	P	22 05 33.2	-12
VJD				IAmb	IAmb	22 05 39.6	
	comp=Z,8.5nm,0.5s						
CTA	Charters Tower	99.91	248	LR	LR	22 49 54.2	
	comp=Z,67nm,18.0s,baz=33,slow=35						
SALM	Salem	104.25	324	eP	Pdif	22 05 55.6	-13
SALM				IAmb	IAmb	22 06 18.0	
	comp=Z,18nm,1.3s						
KOD	Kodaikanal	105.81	324	eP	Pdif	22 06 03.6	-12
KOD				IAmb	IAmb	22 06 13.0	
	comp=Z,17nm,1.1s						
KGCAE	Kacgae	141.56	31		PKPdf	22 11 35.1	-0.6
LBTB	Lobatse	144.49	27		PKPab	22 11 38.9	-0.2
LBTB	Lobatse	144.49	27	PKIKP	PKPab	22 11 38.9	-0.2
BOSA	Boshof	147.85	29	PKPbc	PKPbc	22 11 48.9	-0.4
	comp=Z,13nm,0.9s,baz=323,slow=1.5,SNR=11						
BOSA				pPKPbc	sPKPbc	22 11 58.0	+0.3
	comp=Z,6.6nm,0.6s,baz=352,slow=3.5,SNR=4.3						
BOSA	Boshof	147.85	29		PKPdf	22 11 46.5	+0.2
BOSA	Boshof	147.85	29	PKIKP	PKPdf	22 11 46.5	+0.2
QSPA	South Pole Qui	148.32	180	PKPbc	PKPbc	22 11 49.4	+0.1
	comp=Z,43nm,0.9s,baz=76,slow=0.6,SNR=98						
QSPA				pPKPbc	sPKPbc	22 11 58.2	+0.4
	comp=Z,55nm,0.9s,baz=112,slow=2.2,SNR=14						
QSPA	South Pole Qui	148.32	180		PKPbc	22 11 49.0	-0.3
SUR	Sutherland	150.09	39	PKPbc	PKPbc	22 11 54.0	-1.0
VNA3	Neumayer Olymp	155.49	142	⇑P	PKPdf	22 12 04.0	+7.6
	comp=Z,7.0nm,0.8s						
VNA2	Neumayer--Watz	156.25	141	⇑P	PKPdf	22 12 06.1	+8.7
	comp=Z,5.2nm,0.7s,baz=303,slow=3.9						
SNAA	Sanae	157.59	144	⇑P	PKPdf	22 12 06.9	+7.7
	comp=Z,39nm,0.9s						

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*KOLA **18** 21:58:35.2, 76°.18N×8°.79E, h0^{km}, ML1.9, Greenland sea,Knipovich ridge, middle*

BER 18 21:58:35.5±0.9**, 76°.01N×8°.14E, h10^{km}, Mw3.2, Confirmed Earthquake, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSPB	Hornsund (broa	2.00	56	P	Pn	21 59 07.1	-2.2
HSPB				S	Sn	21 59 30.8	-3.5
HSPB	Hornsund (broa	2.00	56	eP	Pn	21 59 07.3	-2.0
HSPB				IAML		21 59 09.8	
	comp=Z,2.5nm,0.2s						
HSPB				eS	Sn	21 59 31.0	-3.3
BRBB	Barentsburg B	2.50	30	P	Pn	21 59 14.9	-1.2
BRBB	Barentsburg B	2.50	30	eP	Pn	21 59 15.0	-1.2
SPA0	Spitsbergen Ar	2.86	36	eP	Pn	21 59 19.7	-1.4
SPA0				eS	Sn	21 59 51.8	-3.6
SPA0				IAML		22 00 02.9	
	comp=Z,5.3nm,0.5s						
SPITS	Spitsbergen Ar	2.86	36	P	Pn	21 59 19.4	-1.6
SPITS				S	Sn	21 59 52.3	-3.2
KBS	Kingsbay	3.05	14	P	Pn	21 59 21.1	-2.6
KBS				S	Sn	21 59 55.9	-4.2
KBS	Kingsbay	3.05	14	eP	Pn	21 59 21.2	-2.5
KBS				IAML		21 59 22.4	
	comp=Z,4.1nm,0.3s						
ARCES	ARCESS Array B	8.25	133	P	Pn	22 00 30.9	-4.0
ARCES				S	Sn	22 01 57.5	-11
VADS	Vadso	8.50	123	P	Pn	22 00 34.9	-3.5
VADS				S	Sn	22 02 04.0	-10

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*BJI **18** 22:11:01.3, 5°.47S×152°.43E, h63^{km}, mB5.1/10, mb4.8/52, Ms4.9/12, Ms7 4.7/11*

*DJA **18** 22:11:04.9±0.8, 5°S±4°×15°2E±°, h62^{km}±7^{km}, M5.3/32, mb5.1/32, mB5.5/8, MLv5.8/1, Mw(mB)4.9/8*

*NEIC **18** 22:11:05.4±1.2, 5°.38S±0°.06×152°.12E±0°.10, h62^{km}±7^{km}, mb5.0/74, Error ellipse: s-maj=14.4km s-min=8.8km az=100.0*

*IDC **18** 22:11:07.3±2.4, 5°.39S×151°.90E, h77^{km}±21^{km}, mb4.3/20, mbtmp4.6/21, MS3.7/17, Error ellipse: s-maj=16.9km s-min=10.9km az=113.0*

ISC 18 22:11:04.1±0.3**, 5°.33S**±0°.04×**152°.03E**±0°.05**, h50^{km}, n250,** σ**1^{s}58**/247**, mb5.0**/106**, MS3.9**/19**, 1C-5D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.14	7		Pn	22 11 25.5	+1.7
RABL				Sn	Sn	22 11 42.6	+4.3
MANU	Manus Island	5.68	305	Pn	Pn	22 12 28.3	+2.3
PMG	Port Moresby	6.30	230	P	Pn	22 12 37.4	+3.0
	346nm,0.8s,baz=44,slow=7.6,SNR=73						
PMG				S	Sn	22 13 43.9	-1.3
	290nm,0.6s,baz=31,slow=15,SNR=4.6						
PMG	Port Moresby	6.30	230	Pn	Pn	22 12 36.7	+2.2
PMG	Port Moresby	6.30	230	P	Pn	22 12 38.1	+3.6
PMG	Port Moresby	6.30	230	S	Sn	22 13 49.2	+4.0
PMG	Port Moresby	6.30	230	P	Pn	22 12 37.1	+2.6
PMG	Port Moresby	6.30	230	S	Sn	22 13 49.0	+3.8
PMG	Port Moresby	6.30	230	P	Pn	22 12 37.8	+3.3
TATA	Tatamba Isabel	8.30	112	P	Pn	22 13 01.9	0.0
NGOA	Tingoa Renbel	10.07	128	P	Pn	22 13 29.9	+3.8
JAY	Jayapura	11.64	283	LR	LR	22 17 47.6	
	comp=Z,420nm,21.5s,baz=96,slow=35						
COEN	Coen	12.23	225	P	Pn	22 13 57.4	+1.7
COEN	Coen	12.23	225	Pn	Pn	22 13 56.2	+0.6
COEN	Coen	12.23	225	P	Pn	22 13 57.1	+1.4
SMPI	Sarmi	13.70	284	P	Pn	22 14 17.4	+1.6
MTSU	Mount Surprise	14.79	210	P	P	22 14 37.9	+2.7
CTA	Charters Tower	15.71	200	LR	LR	22 20 27.2	
	comp=Z,110nm,18.6s,baz=32,slow=36						
SANVU	Saraoutou	17.98	125		Pn	22 15 08.9	-1.7
QIS	Mount Isa	19.36	217	P	Pn	22 15 26.9	-0.3
	comp=Z,84nm,0.8s						
QIS	Mount Isa	19.36	217	P	Pn	22 15 27.6	+0.4
FAKI	Fak Fak	19.87	276	P	P	22 15 31.6	+0.2
KDU	Kakadu	20.64	248	P	P	22 15 40.2	+0.5
	comp=Z,135nm,1.0s						
SAUI	Saumlaki	20.75	262	P	P	22 15 41.8	+0.9
SAUI	Saumlaki	20.75	262	P	P	22 15 42.1	+1.2
SWI	Sorong	21.20	281	P	P	22 15 44.7	-1.1
	comp=Z,58nm,1.1s						
DZM	Mont Dzumac	21.71	141	P	P	22 15 52.1	+0.9
	comp=Z,11nm,0.6s,baz=330,slow=9.5,SNR=9.8						
DZM				LR	LR	22 23 13.6	
	comp=Z,196nm,20.6s,baz=310,slow=33						
	comp=Z,11nm,0.6s						
DZM	Mont Dzumac	21.71	141	eS	S	22 19 47.0	-2.1
	comp=Z,83nm,25.4s						
DZM				eLR	LR	22 20 52.4	
	comp=Z,556nm,24.6s						
DZM	Mont Dzumac	21.71	141	P	P	22 15 50.0	-1.2
DZM				IAmb	IAmb	22 16 08.2	
	comp=Z,206nm,2.0s						
DZM	Mont Dzumac	21.71	141	P	P	22 15 52.3	+1.0
MTN	Manton Dam	21.93	249	P	P	22 15 54.6	+1.1
	comp=Z,130nm,0.9s						
MTN	Manton Dam	21.93	249	P	P	22 15 53.3	-0.2
MTN				IAmb	IAmb	22 15 57.5	
	comp=Z,105nm,0.9s						
DRS	Darwin Rock St	22.02	250	P	P	22 15 54.8	+0.3
WB0	Warramunga Arr	22.37	229	P	P	22 15 57.8	-0.5
WB0				IAmb	IAmb	22 16 00.9	
	comp=Z,63nm,0.7s						
QLP	Quilpie	22.41	199	P	P	22 15 58.0	-0.5
	comp=Z,49nm,1.3s						
WRAB	Tennant Creek	22.50	228	P	P	22 15 59.2	-0.5
WRAB				IAmb	IAmb	22 16 02.1	
	comp=Z,74nm,0.7s						
WRAB	Tennant Creek	22.50	228	P	P	22 15 59.8	+0.1
WRA	Warramunga Arr	22.52	228	P	P	22 15 59.7	-0.1
	comp=Z,71nm,0.7s,baz=53,slow=10.0,SNR=118						
WRA				PcP	PcP	22 19 52.7	+0.2
	comp=Z,3.4nm,0.7s,baz=50,slow=2.3,SNR=4.9						
WRA				S	S	22 20 00.4	-3.3
	comp=Z,11nm,1.2s,baz=55,slow=18,SNR=8.5						
	comp=Z,71nm,0.7s						
WRA	Warramunga Arr	22.52	228	P	P	22 15 58.7	-1.1
KRAI	Karang Ratu	23.65	274	P	P	22 16 10.8	-0.4
INKA	Innaminka	24.74	204	P	P	22 16 19.6	-1.4
KNRA	Kununurra	25.05	244	P	P	22 16 23.9	-0.1
	comp=Z,100nm,0.7s						
KNRA	Kununurra	25.05	244	P	P	22 16 23.8	-0.1
KNRA				IAmb	IAmb	22 16 28.8	
	comp=Z,70nm,0.7s						
AS31	Alice Springs	25.24	222	P	P	22 16 25.5	-0.2
AS31				IAmb	IAmb	22 16 28.6	
	comp=Z,15nm,0.5s						
ASAR	Alice Springs	25.24	222	P	P	22 16 25.8	+0.1
	comp=Z,21nm,0.6s,baz=58,slow=8.7,SNR=157						
ASAR				PcP	PcP	22 19 58.4	+0.1
	comp=Z,1.7nm,0.7s,baz=66,slow=3.2,SNR=3.7						
ASAR				LR	LR	22 26 48.3	
	comp=Z,62nm,18.3s,baz=42,slow=38						
	comp=Z,21nm,0.6s						
SANI	Sanana	26.19	276	P	P	22 16 33.8	-0.5
	comp=Z,36nm,0.6s						
CMSA	Cobar Meteorol	26.74	192	P	P	22 16 40.4	+1.3
	comp=Z,12nm,1.2s						
CMSA	Cobar Meteorol	26.74	192	P	P	22 16 40.0	+0.9
SOEI	Soe	27.86	259	P	P	22 16 49.9	+0.4
SOEI	Soe	27.86	259	P	P	22 16 49.7	+0.2
	comp=Z,68nm,0.9s						
STKA	Stephens Creek	28.16	199	P	P	22 16 47.2	-4.6
STKA	Stephens Creek	28.16	199	P	P	22 16 51.3	-0.5
	comp=Z,4.9nm,0.6s,baz=27,slow=14,SNR=12						
	comp=Z,4.9nm,0.6s						
STKA	Stephens Creek	28.16	199	P	P	22 16 51.0	-0.8
STKA				IAmb	IAmb	22 16 51.9	
	comp=Z,22nm,0.8s						
BATI	Baumata	28.51	258	LR	LR	22 30 23.7	
	comp=Z,465nm,21.9s,baz=112,slow=41						
BATI	Baumata	28.51	258	P	P	22 16 55.5	+0.4
FITZ	Fitzroy Crossi	28.73	242	LR	LR	22 29 26.3	
	comp=Z,165nm,18.5s,baz=49,slow=38						
FITZ	Fitzroy Crossi	28.73	242	P	P	22 16 56.3	-0.8
DAV	Davao City (W)	29.13	295	LR	LR	22 26 52.3	
	comp=Z,118nm,21.6s,baz=78,slow=32						
LUWI	Luwuk	29.51	277	P	P	22 17 03.8	-0.2
MMRI	Maumere	29.75	262	P	P	22 17 05.7	-0.4
MMRI	Maumere	29.75	262	P	P	22 17 06.3	+0.2
WRKA	Warakurna	30.04	227	P	P	22 17 07.4	-1.2
	comp=Z,11nm,0.8s						
EDFI	Ende, Flores	30.29	262	P	P	22 17 10.3	-0.8
	comp=Z,21nm,0.8s						
HTT	Hallett	30.50	202	P	P	22 17 12.5	-0.1
BBOO	Buckleboo	31.14	207	P	P	22 17 17.4	-0.8
BBOO	Buckleboo	31.14	207	P	P	22 17 17.8	-0.4
KAPI	Kappang	32.14	269	LR	LR	22 32 06.2	
	comp=Z,59nm,20.4s,baz=82,slow=39						
WBSI	Waikabubak, Su	32.63	260	P	P	22 17 31.1	-0.5
FORT	Forrest	33.89	219	P	P	22 17 41.8	-0.5
PLAI	Plampang	34.16	262	P	P	22 17 44.5	-0.3
PLAI	Plampang	34.16	262	P	P	22 17 43.4	-1.4
	comp=Z,23nm,0.8s						
MBWA	Marble Bar	35.04	240	P	P	22 17 51.8	-0.6
	comp=Z,26nm,0.7s						
MBWA	Marble Bar	35.04	240	P	P	22 17 52.0	-0.3
MBWA				IAmb	IAmb	22 17 53.0	
	comp=Z,27nm,0.9s						
MBWA	Marble Bar	35.04	240	P	P	22 17 53.1	+0.7
MBWA	Marble Bar	35.04	240	P	P	22 17 52.3	-0.1
PSAC2	Pilbara Seismi	35.05	240	P	P	22 17 51.8	-0.7
	comp=Z,22nm,0.8s						
PSA00	Pilbara Seismi	35.10	240	P	P	22 17 52.1	-0.8
	comp=Z,28nm,0.8s						
PSA00	Pilbara Seismi	35.10	240	P	P	22 17 52.1	-0.8
PSA00				IAmb	IAmb	22 17 54.1	
	comp=Z,38nm,1.1s						
PSA00	Pilbara Seismi	35.10	240	P	P	22 17 52.7	-0.2
PSAB3	Pilbara Seismi	35.10	240	P	P	22 17 51.8	-1.1
	comp=Z,33nm,1.1s						
PSAC1	Pilbara Seismi	35.12	240	P	P	22 17 52.2	-0.8
	comp=Z,27nm,0.8s						
JAGI	Jajag, Banyuwa	37.72	263	P	P	22 18 13.7	-1.6
JAGI				IAmb	IAmb	22 18 14.5	
	comp=Z,18nm,0.9s						
JAGI	Jajag, Banyuwa	37.72	263	P	P	22 18 13.9	-1.4
	comp=Z,18nm,1.0s						
MEEK	Meekatharra	38.27	233	P	P	22 18 19.7	-0.2
JOW	Kunigami	39.38	325	P	P	22 18 28.2	-0.9
SNJI	Sawahan-Nganju	40.07	264	P	P	22 18 36.2	+1.0
	comp=Z,21nm,0.8s						
GIRL	Giralia	40.34	241	P	P	22 18 36.4	-0.7
PCJI	Pacitan	40.65	264	P	P	22 18 39.3	-0.5
MORW	Morawa	41.41	231	P	P	22 18 45.0	-0.9
MORW				IAmb	IAmb	22 18 46.5	
	comp=Z,16nm,0.8s						
MORW	Morawa	41.41	231	P	P	22 18 45.6	-0.3
BLDU	Ballidu	41.65	229	P	P	22 18 46.4	-1.4
NACB	Ninganchiao	41.71	316	P	P	22 18 48.9	+0.6
YHNB	Yeheng	42.18	316	P	P	22 18 53.8	+1.5
NWAO	Narrogin (SRO)	42.47	225	LR	LR	22 37 23.1	
	comp=Z,97nm,18.5s,baz=244,slow=37						
NWAO	Narrogin (SRO)	42.47	225	P	P	22 18 55.0	+0.5
KPJI	Karang Pucung	42.87	265	P	P	22 18 58.3	+0.3
	comp=Z,575nmcomp=Z,29nm,0.8s						
JNU	Nakatsue	43.19	334	P	P	22 19 00.1	-0.1
MJAR	Matsushiro Arr	43.62	344	PcP	PcP	22 20 50.3	-0.2
	comp=Z,1.3nm,0.6s,baz=157,slow=3.9,SNR=5.7						
BBJI	Bungbulang	44.14	265	P	P	22 19 07.5	-0.8
BBJI	Bungbulang	44.14	265	P	P	22 19 07.3	-1.0
	comp=Z,27nm,0.7s						
CNJI	Cibinong	44.66	265	P	P	22 19 11.3	-1.0

	comp=Z,39nm,0.9s						
KASI	Kota Agung	47.31	267	P	P	22 19 32.0	-1.2
	comp=Z,17nm,0.9s						
MDSI	Maura Dua	47.67	269	P	P	22 19 34.9	-1.2
	comp=Z,707nmcomp=Z,15nm,1.0s						
QIZ	Qiongzhong	48.08	301	P	P	22 19 38.6	-0.5
QIZ				S	S	22 26 37.3	+2.9
QIZ				LR	LR		
	comp=Z,190nm,15.9s						
QIZ				LR	LR		
	comp=Z,230nm,17.0s						
QIZ				LR	LR		
	comp=Z,250nm,17.0s						
KSRS	Korea Array	48.13	334	P	P	22 19 38.9	-0.3
	comp=Z,1.9nm,0.8s,baz=150,slow=6.2,SNR=4.8						
	comp=Z,1.9nm,0.8s						
NJ2	Nanjing	48.78	322	*e*P	P	22 19 46.3	+2.0
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
PDSI	Padang	51.66	273	P	P	22 20 05.1	-1.4
	comp=Z,25nm,0.6s						
PPI	Padang Panjang	51.77	274	P	P	22 20 06.7	-0.6
	comp=Z,21nm,0.7s						
KULM	Kulim	52.38	281	P	P	22 20 10.5	-1.3
KULM				IAmb	IAmb	22 20 11.8	
	comp=Z,13nm,0.9s						
USRK	Ussuriysk Ar.	52.51	342	P	P	22 20 12.2	0.0
	comp=Z,1.8nm,0.8s,baz=125,slow=17,SNR=4.7						
	comp=Z,1.8nm,0.8s						
MDJ	Mudanjiang	53.65	340	P	P	22 20 21.0	+0.4
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ENH	Enshi	53.96	314	P	P	22 20 22.8	-0.3
ENH				IAmb	IAmb	22 20 24.5	
	comp=Z,33nm,1.3s						
ENH	Enshi	53.96	314	P	P	22 20 23.3	+0.2
ENH				pP	pP	22 20 38.9	+1.6
GYA	Guiyang	54.11	308	⇑P	P	22 20 27.9	+3.5
GYA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GSI	Gunungsitoli	54.78	275	P	P	22 20 28.5	-1.0
GSI				IAmb	IAmb	22 20 28.7	
	comp=Z,16nm,1.1s						
GSI				PcP	PcP	22 21 31.8	+0.3
GSI	Gunungsitoli	54.78	275	P	P	22 20 29.4	0.0
KCSI	Kotacane, Aceh	54.90	278	P	P	22 20 31.6	+1.3
	comp=Z,254nmcomp=Z,8.3nm,0.9s						
HNS	HongShan	54.91	324	⇓P	P	22 20 30.6	+0.7
HNS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BNX	BinXian	55.39	339	⇓P	P	22 20 31.6	-1.6
BNX				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MLSI	Meulaboh, Aceh	56.37	279	P	P	22 20 40.5	-0.3
KMI	Kunming	56.65	305	P	P	22 20 44.3	+1.4
KMI				pmax	pmax		
	comp=Z,15nm,1.1s						
KMI				LR	LR		
	comp=Z,390nm,17.9s						
KMI				LR	LR		
	comp=Z,320nm,15.9s						
KMI				LR	LR		
	comp=Z,310nm,15.9s						
CM31	Chiang Mai Arr	57.41	296	P	P	22 20 48.1	0.0
CM31				IAmb	IAmb	22 20 50.1	
	comp=Z,11nm,0.8s						
CMAR	Chiang Mai Arr	57.41	296	P	P	22 20 49.1	+1.1
	comp=Z,5.1nm,0.7s,baz=129,slow=5.5,SNR=33						
	comp=Z,5.1nm,0.7s						
CMAR	Chiang Mai Arr	57.41	296	P	P	22 20 48.1	0.0
CHTO	Chiang Mai	57.52	296	P	P	22 20 48.8	-0.1
CHTO				IAmb	IAmb	22 20 50.5	
	comp=Z,29nm,1.7s						
CHTO	Chiang Mai	57.52	296	P	P	22 20 49.7	+0.8
CHTO	Chiang Mai	57.52	296	P	P	22 20 48.8	-0.1
PZH	PanZhiHua	58.05	306	P	P	22 20 55.3	+2.7
PPT2	Papeete2	58.30	107	*e*LR	LR	22 37 51.4	
	comp=Z,69nm,23.2s						
PETK	Petropavlovsk-	58.42	4	P	P	22 20 55.1	+0.6
	comp=Z,7.3nm,1.1s,baz=165,slow=6.1,SNR=4.1						
	comp=Z,7.3nm,1.1s						
PETK	Petropavlovsk-	58.42	4	P	P	22 20 54.2	-0.2
CD2	Chengdu	58.50	311	P	P	22 20 56.3	+0.7
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CD2				LR	LR		
	comp=Z,560nm,14.6s						
CD2				LR	LR		
	comp=Z,680nm,16.5s						
CD2				LR	LR		
	comp=Z,540nm,16.5s						
XLT	XiLinHaoTe	58.74	330	*e*P	P	22 20 57.1	+0.1
XLT				pmax	pmax		
	comp=Z,22nm,0.8s						
HHC	Hu-ho-hao-te	59.03	325	*e*P	P	22 21 00.1	+0.9
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,79nm,6.0s						
TBI	Tubuai	59.04	114	*e*LR	LR	22 38 10.2	
	comp=Z,1µm,32.0s						
HEH	HeiHe	59.31	342	*e*P	P	22 21 00.1	-0.6
HEH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BTO	Baotou	59.77	324	*e*P	P	22 21 06.3	+2.1
BTO				pmax	pmax		
	comp=Z,23nm,0.9s						
BTO				pmax	pmax		
	comp=Z,290nm,4.9s						
TNCH	TengChong	60.11	303	P	P	22 21 07.1	+0.1
TNCH				pmax	pmax		
	comp=Z,21nm,0.9s						
TNCH				pmax	pmax		
	comp=Z,160nm,4.3s						
LZH	Lanzhou	61.08	316	*e*P	P	22 21 14.3	+1.0
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				LR	LR		
	comp=Z,920nm,13.7s						
LZH				LR	LR		
	comp=Z,720nm,13.4s						
LZH				LR	LR		
	comp=Z,1µm,13.1s						
LZDM	Lanzhou Array	61.11	316	P	P	22 21 14.8	+1.0
	comp=Z,8.6nm,0.7s,baz=149,slow=6.4,SNR=16						
	comp=Z,8.6nm,0.7s						
PASG	PASIGHAT	63.90	305	*e*P	P	22 21 29.3	-2.9
PASG				IAmb	IAmb	22 21 33.4	
	comp=Z,8.4nm,0.6s						
IMP	Imphal	63.91	301	*e*P	P	22 21 28.8	-3.6
IMP				IAmb	IAmb	22 22 30.4	
	comp=Z,3.4nm,0.4s						
MOKO	MOKOCHONG	63.94	303	*e*P	P	22 21 29.9	-2.8
MOKO				IAmb	IAmb	22 21 32.6	
	comp=Z,21nm,1.2s						
SAIH	SAIHA	63.98	298	*e*P	P	22 21 30.4	-2.5
SAIH				IAmb	IAmb	22 21 35.1	
	comp=Z,31nm,0.8s						
KOHI	KOHIMA	64.08	302	*e*P	P	22 21 29.6	-3.9
KOHI				IAmb	IAmb	22 21 59.1	
	comp=Z,8.9nm,1.0s						
TEZP	TEZPUR	65.49	302	*e*P	P	22 21 39.4	-3.1
SHL	Shillong	65.92	301	P	P	22 21 44.6	-0.9
SHL				IAmb	IAmb	22 21 46.3	
	comp=Z,29nm,1.0s						
AGT	Agartala	65.93	299	*e*P	P	22 21 42.1	-3.3
AGT				IAmb	IAmb	22 22 00.0	
	comp=Z,28nm,0.2s						
ULN	Ulaanbaatar	66.04	329	P	P	22 21 45.6	-0.3
ULN	Ulaanbaatar	66.04	329	P	P	22 21 46.9	+1.0
	comp=Z,35nm,1.0s						
GUWA	GUWAHATI	66.28	301	*e*P	P	22 21 44.6	-3.0
GUWA				IAmb	IAmb	22 21 48.0	
	comp=Z,9.8nm,0.9s						
SONM	Songino Array	66.37	328	P	P	22 21 48.5	+0.6
	comp=Z,5.2nm,0.6s,baz=148,slow=4.6,SNR=39						
	comp=Z,5.2nm,0.6s						
SONM	Songino Array	66.37	328	P	P	22 21 48.2	+0.3
TAWA	Tawang	66.60	303	*e*P	P	22 21 46.5	-3.6
TAWA				IAmb	IAmb	22 21 52.9	
	comp=Z,22nm,0.8s						
DHUB	DHUBRI	67.67	301	*e*P	P	22 21 53.5	-3.0
DHUB				IAmb	IAmb	22 21 57.0	
	comp=Z,11nm,0.9s						
LSA	Lhasa	67.91	305	P	P	22 21 58.8	+0.3
LSA				IAmb	IAmb	22 22 00.2	
	comp=Z,10nm,0.8s						
LSA	Lhasa	67.91	305	P	P	22 21 54.9	-3.6
LSA				pmax	pmax		
	comp=Z,13nm,0.8s						
LSA	Lhasa	67.91	305	P	P	22 21 59.4	+0.9
LSA				pP	pP	22 22 15.9	+2.9
GTK	Tadong	69.26	302	*e*P	P	22 22 02.7	-3.8
GTK				IAmb	IAmb	22 22 07.8	
	comp=Z,12nm,0.6s						
GAYA	Gaya	71.45	298	*e*P	P	22 22 16.6	-3.2
GAYA				IAmb	IAmb	22 22 20.6	
	comp=Z,6.6nm,1.0s						
VIS	Vishakhapatnam	71.53	291	*e*P	P	22 22 16.9	-3.5
VIS				IAmb	IAmb	22 22 22.4	
	comp=Z,14nm,0.9s						
VNDA	Vanda	72.33	178	P	P	22 22 24.3	+0.2
VNDA				IAmb	IAmb	22 22 47.8	
	comp=Z,26nm,1.9s						
O14K	Tigyukauivet M	74.24	23	P	P	22 22 35.8	+0.2
PLK4	Peulik 4	75.24	26	P	P	22 22 41.4	-0.1
WMQ	Urumqi	75.61	318	*e*P	P	22 22 43.8	-0.2
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
HYB	Hyderabad	75.94	289	*e*P	P	22 22 45.9	-0.4
OHAK	Old Harbor	76.37	27	P	P	22 22 48.0	+0.1
KDAK	Kodiak Island	77.00	27	LR	LR	22 51 17.5	
	comp=Z,116nm,21.5s,baz=209,slow=31						
Q19K	Cape Douglas,	77.16	26	P	P	22 22 52.2	-0.1
JOSI	Joshimath	77.76	303	*e*P	P	22 22 53.0	-3.5
JOSI				IAmb	IAmb	22 22 58.1	
	comp=Z,24nm,0.7s						
TIXI	Tiksi	78.32	353	P	P	22 22 58.8	+0.3
CNPM	China Poot	78.53	26	P	P	22 23 00.3	+0.4
AYAN	Aya Nagar	79.37	300	*e*P	P	22 23 01.9	-3.3
AYAN				IAmb	IAmb	22 23 05.9	
	comp=Z,14nm,0.5s						
SLKM	Skilak Lake	79.47	25	P	P	22 23 05.3	+0.2
SUA	Susitna One	79.75	24	P	P	22 23 06.3	-0.4
SUA				IAmb	IAmb	22 23 07.5	
	comp=Z,16nm,0.9s						
SMLA	Simla	79.89	303	*e*P	P	22 23 04.5	-3.5
SMLA				IAmb	IAmb	22 23 08.4	
	comp=Z,16nm,1.2s						
GOA	Goa	80.11	287	*e*P	P	22 23 06.2	-3.3
GOA				IAmb	IAmb	22 23 35.1	
	comp=Z,12nm,0.2s						
MK31	Makanchi Array	80.22	319	P	P	22 23 09.3	-0.1
MKAR	Makanchi Array	80.22	319	P	P	22 23 09.3	-0.1
	comp=Z,6.9nm,0.9s,baz=108,slow=5.8,SNR=33						
	comp=Z,6.9nm,0.9s						
MKAR	Makanchi Array	80.22	319	P	P	22 23 09.5	0.0
MAKZ	Makanchi	80.43	319	P	P	22 23 10.4	-0.1
MAKZ				IAmb	IAmb	22 23 11.5	
	comp=Z,10nm,0.9s						
MAKZ	Makanchi	80.43	319	P	P	22 23 10.6	0.0
MAKZ				PcP	PcP	22 23 17.0	-0.5
PWL	Port Wells	80.45	25	P	P	22 23 10.8	+0.4
PWL				IAmb	IAmb	22 23 11.8	
	comp=Z,25nm,0.6s						
ALCI	Alchi Leh	80.56	306	*e*P	P	22 23 08.2	-3.8
ALCI				IAmb	IAmb	22 23 13.2	
	comp=Z,18nm,1.0s						
WUS	Wushi	80.71	313	P	P	22 23 12.8	+0.4
IMAR	Indian Mountai	81.14	20	P	P	22 23 14.4	+0.5
ZAA0	Zalesovo Array	81.17	327	P	P	22 23 13.6	-0.7
ZALV	Zalesovo Beam	81.17	327	P	P	22 23 13.6	-0.7
	comp=Z,4.8nm,0.5s,baz=111,slow=6.0,SNR=25						
	comp=Z,4.8nm,0.5s						
MCK	McKinley	81.65	23	P	P	22 23 16.1	-0.6
MCK				IAmb	IAmb	22 23 17.3	
	comp=Z,10nm,0.8s						
TARG	Taragay, Kyrgy	81.87	313		P	22 23 19.1	+0.2
DHY	Denali Highway	81.93	24	P	P	22 23 18.6	+0.3
DHY				IAmb	IAmb	22 24 38.6	
	comp=Z,34nm,1.6s						
KDJ	Kajisay	82.42	314	P	P	22 23 21.3	-0.1
KDJ				IAmb	IAmb	22 23 23.5	
	comp=Z,14nm,1.2s						
CCB	Clear Creek Bu	82.53	22	P	P	22 23 20.7	-0.5
GLB	Gilahina Butte	82.67	26	P	P	22 23 22.1	0.0
GLB				IAmb	IAmb	22 23 37.3	
	comp=Z,20nm,1.2s						
KSH	Kashi	82.70	311	P	P	22 23 25.0	+2.1
KSH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
IL31		82.94	22		P	22 23 22.7	-0.6
IL31				IAmb	IAmb	22 23 23.3	
	comp=Z,6.7nm,0.7s						
ILAR	Eielson Array	82.94	22	P	P	22 23 22.6	-0.8
	comp=Z,5.6nm,0.6s,baz=247,slow=5.4,SNR=88						
	comp=Z,5.6nm,0.6s						
BOOM	Boomskoye usch	83.40	314		P	22 23 26.4	-0.1
BOOM				IAmb	IAmb	22 23 28.2	
	comp=Z,12nm,1.2s						
NIL	Nilore	83.64	305		P	22 23 27.4	-0.4
NIL				IAmb	IAmb	22 23 29.0	
	comp=Z,17nm,0.8s						
KURK	Kurchatov	83.71	322	P	P	22 23 26.8	-0.9
KURBB	Kurchatov Arra	83.74	322	P	P	22 23 27.1	-0.7
	comp=Z,4.0nm,0.9s,baz=111,slow=4.4,SNR=22						
	comp=Z,4.0nm,0.9s						
TKM2	Tokmak 2	83.74	314	P	P	22 23 28.6	+0.3
	SNR=7.4						
KBK	Karagaybulak	84.15	314	P	P	22 23 30.7	+0.4
	SNR=5.7						
BCAR	Beaver Creek A	84.21	25	P	P	22 23 30.9	+0.9
CHMS	Chumysh	84.37	314	P	P	22 23 31.9	+0.6
	SNR=8.8						
UCH	Uchtor	84.37	313	P	P	22 23 32.9	+1.0
	SNR=14						
AAK	Ala-Archa	84.47	314	P	P	22 23 31.9	-0.1
AAK				IAmb	IAmb	22 23 33.5	
	comp=Z,7.6nm,0.9s						
AAK	Ala-Archa	84.47	314	P	P	22 23 32.5	+0.6
USP	Ospenovka	84.60	314	P	P	22 23 32.9	+0.4
	SNR=13						
QSPA	South Pole Qui	84.63	180	P	P	22 23 32.0	-0.2
	comp=Z,2.0nm,0.8s,baz=338,slow=2.5,SNR=4.7						
	comp=Z,2.0nm,0.8s						
QSPA	South Pole Qui	84.63	180	P	P	22 23 31.9	-0.4
QSPA				IAmb	IAmb	22 25 21.7	
	comp=Z,27nm,1.9s						
EKS2	Erkin-Say	85.00	314	P	P	22 23 35.4	+0.8
	SNR=13						
BHUJ	Bhuj	85.11	294	*e*P	P	22 23 32.0	-3.3
BHUJ				IAmb	IAmb	22 23 36.5	
	comp=Z,31nm,2.1s						
ARSB	Arslanbob	85.31	312		P	22 23 36.0	-0.1
DRK	Karamyk	85.85	310	P	P	22 23 38.9	-0.2
DRK				IAmb	IAmb	22 23 40.6	
	comp=Z,11nm,1.2s						
NRIK	Noril'sk	86.22	341	P	P	22 23 38.8	-1.0
	comp=Z,3.2nm,0.5s,baz=162,slow=2.4,SNR=7.6						
	comp=Z,3.2nm,0.5s						
NRIK	Noril'sk	86.22	341		P	22 23 39.1	-0.7
NRIK				IAmb	IAmb	22 23 41.2	
	comp=Z,14nm,1.5s						
GAR	Garm	86.91	309		P	22 23 43.3	-0.7
GAR				IAmb	IAmb	22 23 45.6	
	comp=Z,18nm,1.4s						
M31M	Drury Creek, Y	87.11	27	P	P	22 23 44.8	+0.4
M31M				IAmb	IAmb	22 24 05.5	
	comp=Z,26nm,1.8s						
Q32M	Nakina River	87.22	30	P	P	22 23 46.0	+0.8
KK31	Karatay Array	87.44	314		P	22 23 46.0	-0.4
KK31				IAmb	IAmb	22 23 48.3	
	comp=Z,13nm,1.4s						
KKAR	Karatay Array	87.44	314	P	P	22 23 46.7	+0.3
BBB	Bella Bella	87.98	37	LR	LR	22 55 16.6	
	comp=Z,33nm,20.4s,baz=188,slow=30						
BVAR	Borovoye Array	89.20	323	P	P	22 23 53.0	-1.5
	comp=Z,2.9nm,0.6s,baz=111,slow=5.7,SNR=19						
	comp=Z,2.9nm,0.6s						
BORK	Borovoye	89.25	323	P	P	22 23 53.6	-1.1
SYO	Syowa Base	92.91	199	⇓*e*P	P	22 24 11.2	-0.2
SYO	Syowa Base	92.91	199	⇓*e*PcP	PcP	22 24 12.6	+0.6
NVAR	Mina Array Bea	93.02	52	P	P	22 24 14.1	+1.3
	comp=Z,0.6nm,0.6s,baz=270,slow=4.4,SNR=3.5						
NVAR				LR	LR	22 58 07.0	
	comp=Z,82nm,21.9s,baz=278,slow=30						
	comp=Z,0.6nm,0.6s						
PFO	Pinyon Flats O	94.17	57	LR	LR	22 56 55.2	
	comp=Z,76nm,21.8s,baz=240,slow=29						
NEW	Newport	94.50	42	LR	LR	23 02 13.6	
	comp=Z,29nm,20.1s,baz=116,slow=32						
RPN	Rapa Nui	95.25	118	LR	LR	22 59 24.5	
	comp=Z,31nm,21.8s,baz=163,slow=30						
ELIB	Princess Elisa	96.10	194	*d*P	P	22 24 25.7	-0.5
	comp=Z,1.0nm,1.0s						
YKA	Yellowknife Ar	96.25	28	P	P	22 24 27.6	+0.8
	comp=Z,0.6nm,0.7s,baz=276,slow=5.4,SNR=13						
YKA				LR	LR	23 13 12.9	
	comp=Z,40nm,18.1s,baz=323,slow=39						
	comp=Z,0.6nm,0.7s						
PDAR	Pinedale Array	99.77	48	P	Pdif	22 24 45.0	+1.6
	comp=Z,0.2nm,0.6s,baz=318,slow=1.9,SNR=2.3						
PDAR				LR	LR	23 01 52.5	
	comp=Z,48nm,21.5s,baz=247,slow=30						
	comp=Z,0.2nm,0.6s						
CLL	Collm	122.94	331	*e*PKPdf	PKiKP	22 29 56.0	+0.9
CLL				*e*PP	PP	22 31 32.0	-1.6
RONA	Rosalia, Austr	123.35	326	*e*pPKP	PKiKP	22 29 59.3	+3.3
	comp=Z,0.4nm,0.3s						
CONA	Conrad Observa	123.46	326	*i* PKiKP	PKiKP	22 29 56.9	+0.6
	comp=Z,0.8nm,0.5s						
ARSA	Arzberg	124.03	326	*e*PKiKP	PKiKP	22 29 57.8	+0.4
	comp=Z,3.5nm,1.1s						
GERES	GERESS Array B	124.10	328	PKP	PKiKP	22 29 57.4	-0.2
	comp=Z,1.6nm,0.6s,baz=68,slow=2.6,SNR=14						
MOA	Molln	124.39	327	*e*PKiKP	PKiKP	22 29 58.4	+0.3
	comp=Z,6.1nm,1.2s						
SOKA	Soboth	124.63	325	*e*PKiKP	PKiKP	22 30 00.1	+1.4
	comp=Z,4.3nm,1.1s						
OBKA	Obir	125.00	325	*e*pPKiKP	PKiKP	22 30 05.1	+5.6
	comp=Z,12nm,1.5s						
LESA	Schwarzleotal	125.50	327	*e*PKiKP	PKiKP	22 30 01.5	+1.1
	comp=Z,3.2nm,0.7s						
WTTA	Wattenberg	126.16	327	*e*pPKP	PKiKP	22 30 03.9	+2.1
	comp=Z,14nm,1.6s						
SQTA	Sankt Quirin	126.42	328	*e*pPKP	PKiKP	22 30 04.0	+1.7
	comp=Z,3.7nm,1.0s						
FETA	Feichten	126.80	328	*e*pPKP	PKiKP	22 30 06.1	+3.0
	comp=Z,2.4nm,0.7s						
DAVA	Damuels	127.08	328	*e*pPKP	PKiKP	22 30 06.7	+3.0
	comp=Z,5.6nm,1.1s						
TORD	Torodi Ar. Bea	149.73	287	PKPbc	PKPbc	22 30 49.1	-0.4
	comp=Z,11nm,0.7s,baz=64,slow=4.3,SNR=32						
BDFB	Brasilia	151.22	137	PKPbc	PKiKP	22 30 53.8	+0.1
	comp=Z,1.0nm,0.3s,baz=153,slow=2.8,SNR=3.8						
DBIC	Dimbokro	156.97	274	PKPab	PKPab	22 31 24.9	-0.7
	comp=Z,3.9nm,0.7s,baz=124,slow=5.9,SNR=7.0						

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*SNET **18** 22:29:22.0±0.4, 14°.09N×91°.38W, h55^{km}±3^{km}, ML3.9*

*GCG **18** 22:29:22.1±0.6, 14°.11N×91°.41W, h51^{km}±11^{km}, MD3.9, ML4.2*

ISC 18 22:29:19.4±2.1**, 13°.88N**±0°.09×**91°.41W**±0°.07**, h73**^{km}±15^{km}**, n18,** σ**2^{s}.48**/29**, 3D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG5	El Palmar, Qui	0.53	7	*e*P	Pn	22 29 34.9	+2.0
STG5				*e*S	Sn	22 29 44.4	+1.6
STG2	El Palmar, Qui	0.56	4	*e*P	Pn	22 29 35.8	+2.5
STG2				*e*S	Sn	22 29 46.2	+2.8
STG8	El Palmar, Qui	0.57	6	⇓*e*P	Pn	22 29 35.8	+2.2
STG8				*e*S	Sn	22 29 46.3	+2.4
STG8				IAML		22 29 47.6	
	comp=N,5µm,0.1s						
RTAL	Retalhuleu	0.70	337	*e*P	Pn	22 29 34.1	-0.5
RTAL				*e*S	Sn	22 29 42.9	-2.9
ESSG	Sabana Grande	0.76	48	⇓*e*P	Pn	22 29 35.1	-0.2
ESSG				*e*S	Sn	22 29 45.1	-1.9
ESSJ	San Jos, E	0.94	109	*e*P	Pn	22 29 34.9	-2.4
ESSJ				*i* S	Sn	22 29 46.4	-4.3
FG16	Alotenango, Sa	0.96	66	*e*P	Pn	22 29 36.2	-1.7
FG16				*e*S	Sn	22 29 46.3	-5.2
FG16				IAML		22 29 49.8	
	comp=E,20µm,0.4s						
PCG5	San Vicente Pa	1.06	71	*e*P	Pn	22 29 37.4	-1.6
PCG5				*e*S	Sn	22 29 49.6	-4.0
GCG4	OSOP	1.11	50	*e*P	Pn	22 29 40.9	+1.3
GCG4				*e*S	Sn	22 29 54.1	-0.6
SMCA	Catarina	1.17	327	*e*P	Pn	22 29 39.7	-0.5
SMCA				*e*S	Sn	22 29 52.7	-3.0
QUIS	Sacapulas	1.44	12	*e*P	Pn	22 29 44.7	+0.9
QUIS				*e*S	Sn	22 30 01.5	-0.8
APG	El Apazote	1.45	39	⇓*e*P	Pn	22 29 44.3	+0.2
APG				*e*S	Sn	22 30 03.3	+0.7
NUBE	Las Nubes	1.59	89	*e*P	Pn	22 29 47.7	+1.9
RBDL	Robledal	1.69	82	*e*P	Pn	22 29 48.9	+1.7
CEVE	Cerro Verde	1.74	91	*e*P	Pn	22 29 50.5	+2.7
SBLS	San Blas	1.74	91	*e*P	Pn	22 29 50.5	+2.7
JAYA	Jayaque - finc	1.92	96	*e*P	Pn	22 29 52.6	+2.4
JAYA	Jayaque - finc	1.92	96	*e*S	Sn	22 30 15.7	+2.1

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*IDC **18** 22:35:11.7±17.0, 16°.71S×178°.83W, h418^{km}±191^{km}, mb3.4/6, mbtmp4.2/6, Error ellipse: s-maj=92.7km s-min=44.1km az=168.0*

ISC 18 22:35:10.1±1.4**, 16°.7S**±0°.6×**178°.8W**±0°.4**, h400**^{km}**, n7,** σ**0^{s}.55**/7**, mb3.6**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.88	240	P	P	22 41 58.7	-0.4
	2.6nm,0.6s,baz=90,slow=11,SNR=8.0						
	2.6nm,0.6s						
WRA	Warramunga Arr	44.46	258	P	P	22 42 44.2	+0.2
	1.1nm,0.5s,baz=92,slow=8.2,SNR=45						
	1.1nm,0.5s						
ASAR	Alice Springs	44.74	253	P	P	22 42 46.4	+0.2
	14nm,0.5s,baz=88,slow=8.1,SNR=219						
	14nm,0.5s						
ILAR	Eielson Array	84.78	13	P	P	22 46 59.8	-0.4
	0.3nm,0.4s,baz=224,slow=5.7,SNR=9.7						
	0.3nm,0.4s						
TXAR	Lajitas Array	85.69	58	P	P	22 47 05.7	+0.1
	0.9nm,0.7s,baz=219,slow=6.2,SNR=8.7						
	0.9nm,0.7s						
PDAR	Pinedale Array	86.74	44	P	P	22 47 10.4	-0.1
	0.4nm,0.5s,baz=209,slow=3.6,SNR=6.7						
	0.4nm,0.5s						
GERES	GERESS Array B	146.31	345	PKPbc	PKPdf	22 54 03.7	+0.9
	0.6nm,0.6s,baz=1.5,slow=3.4,SNR=4.5						

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*IDC **18** 22:38:52.7±1.4, 25°.06S×111°.99W, h0^{km}, mb3.9/6, mbtmp3.9/7, ML3.8/1, MS3.7/6, Error ellipse: s-maj=54.4km s-min=24.3km az=61.0*

ISC 18 22:38:55.0±1.2**, 25°.1S**±0°.2×**111°.8W**±0°.3**, h12**^{km}**, n18,** σ**1^{s}.30**/10**, mb4.0**/6**, MS3.8**/6**, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	3.00	133	Pn	Pn	22 39 42.0	-0.4
	10nm,0.3s,baz=315,slow=14,SNR=4.1						
RPN				Sn	Sn	22 40 17.2	-1.1
	11nm,0.3s,baz=352,slow=18,SNR=4.1						
RPN				T	T	22 42 52.9	
	165nm,0.6s,baz=285,slow=20,SNR=6.2						
	32nm,0.5s						
H03N2	Juan Fernandez	29.76	114	T	T	23 16 27.8	
	baz=282,slow=75,SNR=12						
H03N3	Juan Fernandez	29.77	114	T	T	23 16 28.3	
	baz=282,slow=75,SNR=12						
H03N1	Juan Fernandez	29.78	114	T	T	23 16 27.7	
	baz=282,slow=75,SNR=14						
PPT	Papeete	35.88	275	LR	LR	22 55 16.5	
	comp=Z,47nm,20.8s,baz=106,slow=28						
ATAH	Atahualpa	36.58	66	LR	LR	22 57 01.1	
	comp=Z,156nm,18.9s,baz=40,slow=30						
PLCA	Paso Flores	37.61	125	LR	LR	22 56 50.1	
	comp=Z,122nm,19.0s,baz=331,slow=28						
LPAZ	La Paz	41.65	87	P	P	22 46 46.2	+1.9
	1.2nm,0.6s,baz=251,slow=9.1,SNR=5.2						
	1.2nm,0.6s						
RAR	Rarotonga	44.09	265	LR	LR	23 01 24.6	
	comp=Z,30nm,19.9s,baz=200,slow=31						
BDFB	Brasilia	60.08	94	LR	LR	23 11 19.3	
	comp=Z,140nm,21.6s,baz=251,slow=32						
NVAR	Mina Array Bea	63.50	354	P	P	22 49 25.8	+0.5
	0.7nm,0.7s,baz=188,slow=6.7,SNR=4.5						
	0.7nm,0.7s						
TKL	Tuckaleechee C	66.00	25	LR	LR	23 15 35.0	
	comp=Z,66nm,18.3s,baz=310,slow=33						
PDAR	Pinedale Array	67.57	2	P	P	22 49 49.2	-2.3
	0.9nm,0.8s,baz=179,slow=6.2,SNR=6.8						
	0.9nm,0.8s						
SNAA	Sanae	72.12	162	P	P	22 50 19.8	+0.7
	2.1nm,1.1s,baz=258,slow=10.0,SNR=3.7						
	2.1nm,1.1s						

ULM	Lac du Bonnet	76.34	10	P	P	22 50 42.9	-0.8
	1.4nm,0.5s,baz=198,slow=9.6,SNR=3.8						
	1.4nm,0.5s						
YKA	Yellowknife Ar	87.33	359	P	P	22 51 41.5	+0.3
	0.4nm,0.7s,baz=183,slow=4.3,SNR=5.6						
	0.4nm,0.7s						
BRTR	Keskin Array B	147.62	55	PKPbc	PKPdf	22 58 37.4	+0.4
	0.3nm,0.7s,baz=281,slow=0.7,SNR=1.9						
KURBB	Kurchatov Arra	153.30	345	PKPbc	PKPbc	22 58 52.6	-0.2
	0.2nm,0.4s,baz=7.0,slow=2.3,SNR=1.7						

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*IDC **18** 22:39:13.2±0.7, 31°.43S×76°.57E, h0^{km}, mb4.1/13, mbtmp4.1/13, MS3.7/16, Error ellipse: s-maj=30.2km s-min=19.6km az=90.0*

*NEIC **18** 22:39:14.9±1.3, 31°.5S±0°.1×76°.7E±0°.2, h10^{km}±1^{km}, mb4.6/15, Error ellipse: s-maj=25.2km s-min=22.0km az=119.0*

ISC 18 22:39:14.8±0.6**, 31°.5S**±0°.1×**76°.7E**±0°.2**, h10^{km}, n57, σ0^{s}.61**/35**, mb4.4**/20**, MS3.8**/16**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H04N2	CROZET ISLANDS	24.17	226	T	T	23 09 30.5	
	baz=62,slow=74,SNR=5706						
H04N1	CROZET ISLANDS	24.18	226	T	T	23 09 29.4	
	baz=62,slow=74						
H04N3	CROZET ISLANDS	24.19	226	T	T	23 09 27.2	
	baz=62,slow=74,SNR=5190						
H04S1	CROZET ISLANDS	24.44	224	T	T	23 09 50.2	
	baz=60,slow=76,SNR=64						
H04S3	CROZET ISLANDS	24.45	224	T	T	23 09 51.3	
	baz=60,slow=76,SNR=111						
H04S2	CROZET ISLANDS	24.45	224	T	T	23 09 53.9	
	baz=60,slow=76,SNR=78						
OPO	Ambohidratompo	29.52	289	LR	LR	22 54 00.1	
	comp=Z,79nm,20.6s,baz=352,slow=30						
H01W2	Cape Leeuwin H	31.44	106	T	T	23 18 35.9	
	baz=266,slow=74,SNR=75						
H01W3	Cape Leeuwin H	31.44	106	T	T	23 18 40.3	
	baz=266,slow=74,SNR=85						
H01W1	Cape Leeuwin H	31.45	106	T	T	23 18 37.1	
	baz=266,slow=74,SNR=67						
NWAO	Narrogin (SRO)	34.23	103	LR	LR	22 56 16.2	
	comp=Z,186nm,21.8s,baz=100,slow=30						
MATP	Matopo	44.37	272	LR	LR	23 03 30.8	
	comp=Z,196nm,19.0s,baz=91,slow=33						
LPHEP	Lephephe	45.48	267	P	P	22 47 35.7	+1.2
LPHEP				IAmb	IAmb	22 48 04.5	
	comp=Z,14nm,1.4s						
MAKGR	Makgori	45.52	263	P	P	22 47 34.7	-0.2
FITZ	Fitzroy Crossi	46.07	85	LR	LR	23 03 45.1	
	comp=Z,161nm,21.9s,baz=260,slow=32						
KAPI	Kappang	48.18	66	LR	LR	23 07 12.9	
	comp=Z,82nm,19.0s,baz=261,slow=35						
BATI	Baumata	48.31	75	LR	LR	23 06 48.2	
	comp=Z,64nm,19.5s,baz=280,slow=34						
ASAR	Alice Springs	50.86	96	P	P	22 48 16.0	-0.1
	comp=Z,1.0nm,0.8s,baz=251,slow=6.3,SNR=9.4						
ASAR				LR	LR	23 07 55.4	
	comp=Z,94nm,18.8s,baz=271,slow=34						
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	50.86	96	P	P	22 48 15.8	-0.2
WRA	Warramunga Arr	52.71	92	P	P	22 48 30.4	+0.6
	comp=Z,2.2nm,1.1s,baz=245,slow=7.6,SNR=3.8						
	comp=Z,2.2nm,1.1s						
WB0	Warramunga Arr	52.83	92	P	P	22 48 30.7	-0.1
WB0				IAmb	IAmb	22 48 52.0	
	comp=Z,10.0nm,1.4s						
MBAR	Mbarara	53.14	296	LR	LR	23 08 43.5	
	comp=Z,135nm,18.3s,baz=354,slow=33						
CMAR	Chiang Mai Arr	54.05	26	P	P	22 48 40.8	+1.3
	comp=Z,0.4nm,0.3s,baz=203,slow=6.6,SNR=6.4						
CMAR				LR	LR	23 08 59.9	
	comp=Z,28nm,19.3s,baz=170,slow=33						
	comp=Z,0.4nm,0.3s						
CMAR	Chiang Mai Arr	54.05	26	P	P	22 48 39.4	-0.1
SNAA	Sanae	57.18	202	P	P	22 49 01.7	+0.2
	comp=Z,1.3nm,0.7s,baz=131,slow=10,SNR=6.3						
	comp=Z,1.3nm,0.7s						
SNAA	Sanae	57.18	202	P	P	22 49 01.2	-0.4
SNAA				IAmb	IAmb	22 49 10.0	
	comp=Z,3.2nm,1.0s						
QSPA	South Pole Qui	58.69	180	P	P	22 49 12.8	+0.5
	comp=Z,3.9nm,0.9s,baz=286,slow=2.9,SNR=9.2						
	comp=Z,3.9nm,0.9s						
QSPA	South Pole Qui	58.69	180	P	P	22 49 11.8	-0.5
QSPA				IAmb	IAmb	22 49 20.5	
	comp=Z,6.1nm,1.0s						
DAV	Davao City (W)	60.41	59	LR	LR	23 13 43.0	
	comp=Z,31nm,21.1s,baz=310,slow=34						
CTA	Charters Tower	62.78	98	LR	LR	23 16 28.7	
	comp=Z,54nm,18.5s,baz=236,slow=36						
KBL	Kabul	66.04	353	P	P	22 50 02.2	+0.4
KBL				IAmb	IAmb	22 50 12.6	
	comp=Z,5.4nm,1.1s						
PMG	Port Moresby	68.55	88	LR	LR	23 19 24.9	
	comp=Z,176nm,18.2s,baz=229,slow=35						
MANEM	Manem	68.80	356	P	P	22 50 18.8	-0.5
MANEM				IAmb	IAmb	22 50 19.9	
	comp=Z,5.9nm,0.7s						
GAR	Garm	70.35	355	P	P	22 50 28.2	-0.5
GAR				IAmb	IAmb	22 50 29.0	
	comp=Z,5.1nm,1.0s						
LZDM	Lanzhou Array	71.70	23	P	P	22 50 37.6	+0.4
	comp=Z,1.8nm,0.5s,baz=201,slow=7.9,SNR=5.6						
	comp=Z,1.8nm,0.5s						
WUS	Wushi	72.33	2	P	P	22 50 40.1	-0.5
WUS				IAmb	IAmb	22 50 53.0	
	comp=Z,3.7nm,1.0s						
ARSB	Arslanbob	72.50	357	P	P	22 50 41.9	+0.3
AAK	Ala-Archa	73.76	358	LR	LR	23 19 36.6	
	comp=Z,56nm,21.5s,baz=184,slow=33						
KK31	Karatay Array	74.41	355		P	22 50 53.4	+0.7
KKAR	Karatay Array	74.41	355		P	22 50 53.4	+0.7
MKAR	Makanchi Array	78.06	4	P	P	22 51 12.8	-0.5
	comp=Z,2.3nm,0.9s,baz=187,slow=6.6,SNR=12						
	comp=Z,2.3nm,0.9s						
MKAR	Makanchi Array	78.06	4	P	P	22 51 12.5	-0.9
BRTR	Keskin Array B	81.30	328	P	P	22 51 30.8	-0.5
	comp=Z,0.6nm,0.8s,baz=151,slow=7.9,SNR=5.6						
	comp=Z,0.6nm,0.8s						
ABKAR	Akbulak array	81.72	349	P	P	22 51 32.7	-0.4
KURBB	Kurchatov Arra	81.74	1	P	P	22 51 32.6	-0.5
	comp=Z,0.8nm,0.7s,baz=200,slow=5.2,SNR=7.2						
	comp=Z,0.8nm,0.7s						
KURK	Kurchatov	81.83	1	P	P	22 51 33.0	-0.6
AKTO	Aktyubinsk	83.19	348	P	P	22 51 41.2	+0.5
	comp=Z,0.7nm,0.6s,baz=162,slow=7.1,SNR=2.3						
	comp=Z,0.7nm,0.6s						
SONM	Songino Array	83.33	20	P	P	22 51 42.3	+0.6
	comp=Z,1.1nm,0.8s,baz=195,slow=5.2,SNR=6.6						
	comp=Z,1.1nm,0.8s						
SONM	Songino Array	83.33	20	P	P	22 51 41.7	0.0
KSRS	Korea Array	83.62	39	LR	LR	23 29 26.9	
	comp=Z,19nm,18.1s,baz=10.0,slow=36						
BVAR	Borovoye Array	84.30	356	P	P	22 51 46.9	+0.5
	comp=Z,1.1nm,0.8s,baz=148,slow=8.7,SNR=7.1						
	comp=Z,1.1nm,0.8s						
BORK	Borovoye	84.33	356	P	P	22 51 46.7	+0.2
BORK				IAmb	IAmb	22 51 47.8	
	comp=Z,3.1nm,0.9s						
ZAA0	Zalesovo Array	85.35	5		P	22 51 50.4	-1.2
ZAA0				IAmb	IAmb	22 51 52.3	
	comp=Z,5.2nm,0.9s						
ZALV	Zalesovo Beam	85.35	5	P	P	22 51 51.5	0.0
	comp=Z,3.2nm,0.6s,baz=197,slow=4.3,SNR=19						
ZALV				LR	LR	23 29 47.5	
	comp=Z,30nm,18.1s,baz=215,slow=36						
	comp=Z,3.2nm,0.6s						
ZALV	Zalesovo Beam	85.35	5		P	22 51 50.9	-0.7
DBIC	Dimbokro	86.25	280	LR	LR	23 27 58.6	
	comp=Z,53nm,19.2s,baz=164,slow=34						
YKA	Yellowknife Ar	148.11	10	PKPbc	PKPbc	22 58 59.0	-0.9
	comp=Z,0.8nm,0.9s,baz=322,slow=4.4,SNR=6.2						

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*JSN **18** 23:08:29.6±1.0, 18°.06N×76°.12W, h0^{km}±30^{km}, MD3.1*

*SSNC **18** 23:08:31.3±1.8, 18°.12N×76°.19W, h5^{km}±11^{km}, MD2.8, ML2.0*

ISC 18 23:08:32.1±1.7**, 18°.2N**±0°.1×**76°.29W**±0°.07**, h14^{km}**±17^{km}**, n10, σ0^{s}.79**/18**, 1C, Jamaica region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GWJ	Greenwich	0.45	249	i P	Pg	23 08 40.7	-0.5
STH	Stony Hill	0.52	252	⇑iP	Pg	23 08 42.2	-0.3
MTDJ	Mount Denham	1.19	270	eP	Pn	23 08 54.1	-0.3
MTDJ				eS	Sg	23 09 11.7	+1.1
MTDJ				IAML		23 09 14.7	
	56nm,0.1s						
MTDJ				IAML		23 09 14.8	
	comp=Z,41nm,0.2s						
CHIV	Chivirico	1.73	356	eS	Sn	23 09 23.7	0.0
CHIV				eS	Sb	23 09 24.6	-0.8
CHIV				IAML		23 09 26.0	
	comp=N,7.8nm,0.1s						
CHIV				IAML		23 09 27.4	
	comp=E,7.1nm,0.1s						
MARVS	Santiago de Cu	1.79	12	eP	Pn	23 09 02.1	-0.4
MARVS				eS	Sn	23 09 26.1	+1.0
MARVS				IAML		23 09 28.7	
	comp=N,4.5nm,0.1s						
MARVS				IAML		23 09 30.2	
	comp=E,3.0nm,0.1s						
RCC	Rio Carpintero	1.83	18	eP	Pn	23 09 02.5	-0.7
RCC				eS	Sn	23 09 26.2	0.0
RCC				IAML		23 09 28.8	
	comp=N,2.0nm,0.1s						
RCC				IAML		23 09 34.2	
	comp=E,2.5nm,0.1s						
LMGC	Las Mercedes	1.94	340	eP	Pn	23 09 04.5	-0.2
LMGC				eS	Sn	23 09 29.8	+1.0
LMGC				IAML		23 09 31.7	
	comp=E,11nm,0.0s						
LMGC				IAML		23 09 34.0	
	comp=N,20nm,0.1s						
GTBY	Guantanamo Bay	2.01	33	eP	Pn	23 09 07.0	+1.3
GTBY				eS	Sb	23 09 34.2	+0.7
GTBY				IAML		23 09 36.2	
	comp=N,7.9nm,0.1s						
GTBY				IAML		23 09 36.8	
	comp=N,5.9nm,0.1s						
PINC	Pinares de May	2.29	12	eP	Pn	23 09 08.7	-0.7
PINC				eS	Sn	23 09 36.7	-0.6
PINC				IAML		23 09 39.7	
	comp=E,12nm,0.1s						
PINC				IAML		23 09 40.3	
	comp=N,15nm,0.1s						
QMBU	Quimbuelo	2.40	35	eP	Pn	23 09 10.5	-0.4
QMBU				eS	Sn	23 09 39.7	-0.5
QMBU				IAML		23 09 45.9	
	comp=E,15nm,0.2s						
QMBU				IAML		23 09 46.0	
	comp=N,11nm,0.2s						

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*NOU **18** 23:28:17.9, 37°.54S×176°.58E, h247^{km}, MLv3.7/12, North Island, New Zealand*

*WEL **18** 23:28:23.4±1.2, 37°S±8°×17°6E±°, h190^{km}±11^{km}, M2.9/13, ML2.4/8, MLv2.9/13, Error ellipse: s-maj=12.0km s-min=7.0km az=32.9, confirmed*

ISC 18 23:28:16.1±2.0**, 37°.49S**±0°.07×**176°.49E**±0°.07**, h248^{km}**±11^{km}**, n132, σ2^{s}.13**/135**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPRZ	Ohinepanea	0.35	171	P	Pn	23 28 49.4	+1.1
KMRZ	Kaimai	0.56	231	P	Pn	23 28 50.4	+1.5
TARZ	Mount Tarawera	0.74	179	P	Pn	23 28 51.8	+2.1
TOZ	Tahuroa Road	0.82	253	P	Pn	23 28 51.6	+1.7
RRRZ	Republican Roa	0.84	179	P	Pn	23 28 51.8	+1.8
URZ	Urewera	0.91	147	P	Pn	23 28 51.4	+1.1
URZ	Urewera	0.91	147	P	Pn	23 28 51.4	+1.1
URZ				S	S	23 29 13.8	-3.6
KUZ	Kuaotunu	0.97	320	P	Pn	23 28 52.1	+1.4
KUZ	Kuaotunu	0.97	320	P	Pn	23 28 51.4	+0.7
PRRZ	Plateau Road	1.01	184	P	Pn	23 28 52.7	+1.8
RUGZ	Raukumara Rang	1.05	117	P	Pn	23 28 51.9	+0.6
RUGZ				S	S	23 29 15.1	-4.0
HAZ	Te Kaha	1.06	105	P	Pn	23 28 52.4	+1.2
HAZ				S	S	23 29 16.0	-2.8
ALRZ	Allen Road	1.07	186	P	Pn	23 28 53.2	+2.0
TLZ	Tolley Road	1.12	222	P	Pn	23 28 53.6	+1.9
MKAZ	Moumakai	1.13	290	P	Pn	23 28 53.5	+1.9
MWZ	Matawai	1.17	136	P	Pn	23 28 53.4	+1.4
RTZ	Ruatahuna	1.19	161	P	Pn	23 28 53.7	+1.6
RTZ				S	S	23 29 17.7	-2.8
RAGZ	Rawiri	1.24	144	P	Pn	23 28 54.6	+2.2
RAGZ				S	S	23 29 19.0	-2.1
WIAZ	Waiheke Island	1.29	303	P	Pn	23 28 54.6	+1.9
PKGZ	Pakihiroa	1.32	107	P	Pn	23 28 55.1	+2.2
MRHZ	Matea Rd	1.34	182	P	Pn	23 28 55.0	+1.9
WATZ	Wairara	1.35	206	P	Pn	23 28 55.7	+2.6
TWGZ	Tauwhareparae	1.36	120	P	Pn	23 28 55.8	+2.6
TWGZ				S	S	23 29 21.9	-0.6
MTHZ	Maungataniwha	1.38	168	P	Pn	23 28 55.2	+1.8
TKGZ	Te Karaka	1.43	132	P	Pn	23 28 55.9	+2.2
TKGZ				S	S	23 29 20.9	-2.4
MXZ	Matakaoa Point	1.45	93	P	Pn	23 28 56.0	+2.3
MXZ	Matakaoa Point	1.45	93	P	Pn	23 28 56.1	+2.3
SNGZ	Shannon Statio	1.45	153	P	Pn	23 28 56.1	+2.2
MBAZ	Motutapu North	1.46	299	P	Pn	23 28 56.2	+2.3
RATZ	Rangitukua	1.48	202	P	Pn	23 28 56.4	+2.3
GRZ	Great Barrier	1.49	326	P	Pn	23 28 56.2	+2.0
RAHZ	Arahi	1.50	162	P	Pn	23 28 56.7	+2.5
PUZ	Puketiti	1.52	113	P	Pn	23 28 56.2	+1.9
RITZ	Rihia Road	1.56	198	P	Pn	23 28 57.4	+2.7
WMGZ	Waiomatatini S	1.56	103	P	Pn	23 28 57.0	+2.4
RIGZ	Rimuhau	1.57	141	P	Pn	23 28 57.3	+2.5
ABAZ	Army Bay	1.60	303	P	Pn	23 28 57.2	+2.3
KATZ	Kakaramea	1.60	203	P	Pn	23 28 57.5	+2.4
NMHZ	Naumai	1.62	171	P	Pn	23 28 58.2	+3.0
HIZ	Hauiti	1.64	231	P	Pn	23 28 57.7	+2.4
HIZ	Hauiti	1.64	231	P	Pn	23 28 57.7	+2.4
BKZ	Black Stump Fm	1.67	180	P	Pn	23 28 57.1	+1.6
BKZ	Black Stump Fm	1.67	180	P	Pn	23 28 57.3	+1.8
CNGZ	Carnagh Statio	1.68	127	P	Pn	23 28 58.8	+3.2
WHHZ	Waihua	1.69	160	P	Pn	23 28 58.1	+2.5
NTVZ	North Tongarir	1.72	201	P	Pn	23 28 58.5	+2.4
KRVZ	Karewarewa	1.73	202	P	Pn	23 28 58.4	+2.2
TMVZ	Te Maari	1.73	201	P	Pn	23 28 58.3	+2.2
ETVZ	East Tongariro	1.75	200	P	Pn	23 28 58.7	+2.4
WTVZ	West Tongariro	1.77	203	P	Pn	23 28 58.6	+2.2
NNVZ	North Ngauruho	1.77	203	P	Pn	23 28 59.0	+2.5
TWVZ	Taurewa	1.78	207	P	Pn	23 28 58.8	+2.3
OTVZ	Oturere	1.79	201	P	Pn	23 28 59.0	+2.4
KNZ	Kokohu	1.79	149	P	Pn	23 28 58.9	+2.4
PRGZ	Paritu Road	1.80	143	P	Pn	23 28 59.2	+2.6
ARHZ	Aropaoanui	1.81	167	P	Pn	23 28 59.3	+2.7
SNVZ	South Ngauruho	1.82	201	P	Pn	23 28 59.3	+2.4
NGZ	Ngauruhoe	1.82	202	P	Pn	23 28 59.4	+2.5
TUVZ	Tukino	1.89	200	P	Pn	23 28 59.9	+2.4
MAVZ	Matarangi	1.91	202	P	Pn	23 29 00.4	+2.5
WHVZ	Whangaehu Hut	1.92	201	P	Pn	23 29 00.0	+2.2
KWHZ	Kaweka Forest	1.93	181	P	Pn	23 29 00.2	+2.5
TRVZ	Turoa	1.95	202	P	Pn	23 29 00.4	+2.3
MCHZ	McNeill Hill	1.95	175	P	Pn	23 29 00.6	+2.7
WNVZ	Wahianoa	1.96	201	P	Pn	23 29 00.2	+2.0
MOVZ	Moawhango	2.00	197	P	Pn	23 29 00.1	+1.8
MHGZ	Mahia Peninsul	2.00	146	P	Pn	23 29 01.0	+2.7
PKVZ	Pokaka	2.00	206	P	Pn	23 29 00.8	+2.4
MTVZ	Mangateitei	2.05	203	P	Pn	23 29 01.2	+2.4
VRZ	Vera Road	2.12	219	P	Pn	23 29 02.6	+3.2
KRHZ	Kereru	2.15	182	P	Pn	23 29 02.0	+2.3
CKHZ	Cape Kidnapper	2.21	168	P	Pn	23 29 02.9	+2.6
KAHZ	Kahuranaki	2.32	173	P	Pn	23 29 03.9	+2.6
WCZ	Waipu Caves	2.32	311	P	Pn	23 29 04.4	+3.0
PNHZ	Pukenui	2.43	185	P	Pn	23 29 04.4	+2.0
WAZ	Wanganui	2.54	207	P	Pn	23 29 06.1	+2.5
PXZ	Pawanui	2.55	174	P	Pn	23 29 05.7	+2.1
LREZ	Lake Rotokare	2.56	219	P	Pn	23 29 06.9	+3.2
WPHZ	Waipukurau	2.57	181	P	Pn	23 29 06.0	+2.2
TSZ	Takapari Road	2.59	189	P	Pn	23 29 06.0	+1.9
PKE	Pukeiti	2.60	228	P	Pn	23 29 08.0	+3.9
PREZ	Palmer Road	2.60	224	P	Pn	23 29 08.2	+4.0
KHEZ	Kahui Hut	2.65	226	P	Pn	23 29 08.4	+3.7
KHEZ	Kahui Hut	2.65	226	P	Pn	23 29 08.4	+3.7
NBEZ	Newall Road No	2.71	229	P	Pn	23 29 07.5	+2.2
PRHZ	Porangahau	2.77	178	P	Pn	23 29 07.9	+2.0
DVHZ	Dannevirke	2.81	185	P	Pn	23 29 08.1	+1.7
POWZ	Post Office Ro	2.95	191	P	Pn	23 29 09.8	+2.0
PRWZ	Pori Road	3.08	187	P	Pn	23 29 11.5	+2.3
BFZ	Birch Farm	3.19	183	P	Pn	23 29 12.0	+1.6
BFZ	Birch Farm	3.19	183	P	Pn	23 29 12.1	+1.6
MRZ	Mangatainoka R	3.24	192	P	Pn	23 29 12.4	+1.4
OUZ	Omahuta	3.26	313	P	Pn	23 29 14.4	+3.1
OUZ	Omahuta	3.26	313	P	Pn	23 29 14.7	+3.4
TIWZ	Tintock	3.31	188	P	Pn	23 29 13.9	+2.1
CPWZ	Castlepoint	3.42	184	P	Pn	23 29 15.6	+2.6
OGWZ	Otaki Gorge	3.47	197	P	Pn	23 29 15.2	+1.6
HOWZ	Holdsworth Sta	3.48	192	P	Pn	23 29 14.1	+0.3
KIW	Kapiti Island	3.58	200	P	Pn	23 29 16.0	+1.2
TMWZ	Te Maipa	3.64	187	P	Pn	23 29 17.3	+1.8
MTW	Mount Morrison	3.74	191	P	Pn	23 29 17.8	+1.1
CAW	Cannon Point	3.77	197	P	Pn	23 29 18.4	+1.3
DUWZ	D'Urville Isla	3.86	210	P	Pn	23 29 19.1	+1.1
TRWZ	Traveller	3.95	189	P	Pn	23 29 20.6	+1.5
PAWZ	Paruwai Farm	3.97	192	P	Pn	23 29 20.5	+1.2
MSWZ	Moikau Station	4.03	193	P	Pn	23 29 21.1	+1.0
SNZO	South Karori	4.05	199	P	Pn	23 29 21.5	+1.2
TCW	Tory Channel	4.09	204	P	Pn	23 29 21.9	+1.2
BHW	Baring Head	4.10	197	P	Pn	23 29 21.9	+1.0
TUWZ	Tuamarina	4.39	206	P	Pn	23 29 26.3	+2.0
NNZ	Nelson	4.43	212	P	Pn	23 29 25.6	+0.8
TKNZ	Takaka Hill	4.47	217	P	Pn	23 29 26.3	+1.0
QRZ	Quartz Range	4.53	222	P	Pn	23 29 27.6	+1.6
QRZ	Quartz Range	4.53	222	P	Pn	23 29 27.3	+1.3
BSWZ	Blackbirch Sta	4.67	205	P	Pn	23 29 29.4	+1.7
MRNZ	Matariki Terra	4.85	215	P	Pn	23 29 31.0	+1.2
THZ	Tophouse	5.08	212	P	Pn	23 29 34.1	+1.4
KHZ	Kahutara	5.41	204	P	Pn	23 29 38.1	+1.4
KHZ	Kahutara	5.41	204	P	Pn	23 29 38.0	+1.3
DSZ	Denniston Nort	5.58	219	P	Pn	23 29 39.4	+0.6
GVZ	Greta Valley S	6.07	205	P	Pn	23 29 46.2	+1.3
LTZ	Lake Taylor	6.19	210	P	Pn	23 29 47.8	+1.3
OXZ	Oxford	6.74	209	P	Pn	23 29 53.7	+0.4
OKCZ	Okains Bay	6.75	202	P	Pn	23 29 54.6	+1.2
MQZ	McQueen's Vall	6.86	204	P	Pn	23 29 54.8	+0.1
MHCZ	Mount Hutt	7.10	210	P	Pn	23 29 58.7	+0.9
WACZ	Wakanui South	7.34	207	P	Pn	23 30 02.4	+1.5
ARCZ	Arundel	7.60	210	P	Pn	23 30 05.5	+1.3
FOZ	Fox Glacier	7.88	218	P	Pn	23 30 09.2	+1.5
TMZ	Timaru	8.03	209	P	Pn	23 30 11.1	+1.4
ODZ	Otahua Downs	8.73	208	P	Pn	23 30 20.3	+1.9
ODZ	Otahua Downs	8.73	208	P	Pn	23 30 20.3	+1.9

RSNC 18 23:36:37.1±0.0**, 9°N**±1°×**7°3W**±°**, h1^{km}**±2^{km}**, M2.7, mb7.0, ML2.4, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCAC	Ocana	0.55	168	P	Pg	23 36 47.7	+0.1
OCAC				S	Sg	23 36 56.0	+1.2
ARGC	Ariguani, Magd	1.34	323	P	Pg	23 37 00.5	-2.3
ARGC				S	Sg	23 37 18.7	-1.5
PAMC	Pamplona, Colo	1.60	153	P	Pn	23 37 05.7	-1.3
PAMC				S	Sn	23 37 27.2	-1.4
SJCC	San Jacinto, C	2.05	303	P	Pn	23 37 11.3	-1.5
SJCC				S	Sn	23 37 37.3	-1.8
BARC	Barichara	2.19	174	P	Pn	23 37 15.7	+0.8
BARC				S	Sb	23 37 44.8	-0.6
UREC	San Jos de Ur	2.32	244	P	Pn	23 37 14.4	-2.1
UREC				S	Sn	23 37 45.2	-0.4
PTBC	PUERTO BERRIO,	2.45	205	P	Pn	23 37 15.5	-2.7
PTBC				S	Sn	23 37 49.9	+1.1
SDV	Santo Domingo	2.77	88	P	Pn	23 37 21.6	-1.2
SDV				S	Sn	23 37 56.1	-0.9
RUSC	La Rusia	2.89	173	P	Pn	23 37 24.9	+0.2
RUSC				S	Sb	23 38 04.0	-1.8
SPBC	San Pablo de B	3.17	192	P	Pn	23 37 27.5	-0.8
SPBC				S	Sn	23 38 07.6	+0.8
URIC	Uribia, Colomb	3.23	26	P	Pn	23 37 25.0	-4.0
URIC				S	Sn	23 38 07.8	-0.3
DBBC	Dabeiba	3.26	238	P	Pn	23 37 27.7	-1.8
DBBC				S	Sn	23 38 09.3	+0.2
HELC	Santa Helena	3.31	219	P	Pn	23 37 29.0	-1.4
HELC				S	Sn	23 38 11.2	+0.6
NORC	Norcasia	3.50	204	P	Pn	23 37 32.8	0.0
NORC				S	Sn	23 38 12.9	-2.0
CAPC	Capurgana	3.88	268	P	Pn	23 37 32.8	-5.1
CAPC				S	Sn	23 38 17.6	-6.6
CHIC	Chingaza	4.13	184	P	Pn	23 37 40.6	-1.2
CHIC				S	Sn	23 38 31.1	+0.1
PRAC	Prado	5.24	196	P	Pn	23 37 57.5	+0.8
	6.7nm,1.7s						
PRAC				S	Sn	23 38 57.2	-0.6
	6.7nm,1.7s						
URMC	La Uribe, Meta	5.58	190	P	Pn	23 38 01.4	0.0
	6.7nm,0.7s						
URMC				S	Sn	23 39 07.4	+1.2
	6.7nm,0.7s						

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*IDC **18** 23:37:33.5±16.0, 30°.85N×49°.87E, h0^{km}, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=305.8km s-min=51.7km az=11.0*

*TEH **18** 23:37:38.1, 31°.00N×50°.16E, h16^{km}±14^{km}*

*OMAN **18** 23:37:47.3±0.3, 30°.24N×50°.55E, h10^{km}, mb4.0/4, Error ellipse: s-maj=4.9km s-min=2.7km az=359.0*

ISC 18 23:37:36.8±0.8**, 30°.86N**±0°.04×**50°.23E**±0°.05**, h10^{km}, n65, σ2^{s}.57**/106**, mb3.8**/5**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABEH	Behbahan	0.26	175	Pg	Pn	23 37 46.3	-0.4
ABEH				Sg	Sb	23 37 52.9	+4.8
KLNJ	Kolanjah	1.18	83	Pg	Pn	23 38 00.9	+1.2
ZNGN	Zangian	1.36	23	Pg	Pn	23 38 02.3	+0.1
IBRJ	Brojen	1.37	40	Pg	Pn	23 38 02.9	+0.8
JHBN	Jahan bin	1.42	15	Pg	Pn	23 38 02.7	-0.1
AHWZ	Ahwaz	1.44	289	Pg	Pn	23 38 03.2	+0.4
AHWZ				Sg	Sn	23 38 22.8	+1.0
KAZ2	Kazeron-Fars-I	1.76	135	Pn	Pg	23 38 11.6	+1.1
IPIR	Pirpir	1.90	17	Pg	Pn	23 38 11.4	+1.8
IRAM	Ramesheh	2.07	62	Pn	Pb	23 38 14.8	+0.2
SHI	Shiraz	2.32	121	Pn	Pb	23 38 19.6	+0.8
DSBU	Dashti - Bushe	2.65	160	Pn	Pb	23 38 23.9	-0.4
ANAR	Anarak	3.77	51	Pn	Pn	23 38 37.4	+2.3
ISFB	Sefidab	3.87	26	Pn	Pn	23 38 38.0	+1.6
IQOM	Qom	4.03	10	Pn	Pn	23 38 39.6	+0.8
HAGD	Aghdareh	4.05	347	Pn	Pn	23 38 39.2	+0.1
IBZA	Bozab	4.11	332	Pn	Pn	23 38 40.0	0.0
IVRN	Varamin	4.31	17	Pn	Pn	23 38 43.6	+1.1
SNQR	Sonqor, Kerman	4.54	332	Pn	Pn	23 38 45.6	-0.3
IBAF	Bafgh	4.63	80	Pn	Pn	23 38 49.9	+2.9
HGHA	Hamedan- Ghaye	4.75	346	Pn	Pn	23 38 49.0	+0.3
SAKB	Bahrain	4.87	177	P	Pn	23 38 53.2	+3.1
SAKB				P	Pn	23 38 53.2	+3.1
SAKB				S	Sn	23 39 47.7	+1.1
IDMV	Damavand	4.94	17	Pn	Pn	23 38 52.0	+0.7
IDHR	Dehrash	5.01	321	Pn	Pn	23 38 52.4	+0.2
ILAS	Lasjerd	5.06	26	Pn	Pn	23 38 54.0	+1.1
IFIR	Firoozkooh	5.21	23	Pn	Pn	23 38 56.1	+1.0
KHGB	Koh Gabri	5.41	94	Pn	Pn	23 39 00.4	+2.7
IGZV	Ghazvin	5.51	360	Pn	Pn	23 38 59.8	+0.7
IPRN	Peran	5.65	18	Pn	Pn	23 39 02.2	+1.3
MZPU	Pul - Mazandar	5.67	11	Pn	Pn	23 39 02.7	+1.4
KRM1	Kerman Provinc	6.08	92	Pn	Pn	23 39 10.0	+3.1
SMRA	Abu-Samra	6.12	175	P	Pn	23 39 09.2	+2.0
SMRA				P	Pn	23 39 09.2	+2.0
SMRA				S	Sn	23 40 13.2	-4.0
SMRA				S	Sn	23 40 13.2	-4.0
TRNA	Turayna	6.17	172	P	Pn	23 39 10.2	+2.4
	SNR=20						
TRNA				P	Pn	23 39 10.2	+2.4
	SNR=20						
JRN	Qarnain Island	6.34	158	P	Pn	23 39 15.8	+5.5
JRN				S	Sn	23 40 22.6	-0.1
IGLO	Ghaloghah	6.38	27	Pn	Pn	23 39 12.6	+1.6
TKDS	Koohdasht(Taba	6.45	63	Pn	Pn	23 39 14.5	+2.5
SLWR	Sila	6.89	169	P	Pn	23 39 19.6	+1.8
SLWR				P	Pn	23 39 19.6	+1.8
SLWR				S	Sn	23 40 32.5	-3.8
SHME	Shamm	7.08	131	P	Pn	23 39 22.1	+1.7
SHME				P	Pn	23 39 22.1	+1.7
SHME				S	Sn	23 40 38.6	-2.3
SHME				S	Sn	23 40 38.6	-2.3
TAPT	Tabas- Tapeh t	7.08	54	Pn	Pn	23 39 22.6	+2.1
BANOM	Banah	7.27	131	P	Pn	23 39 24.3	+1.2
BANOM				P	Pn	23 39 24.3	+1.2
BANOM				S	Sn	23 40 43.2	-2.5
BANOM				S	Sn	23 40 43.2	-2.5
NAZ	Nazwa, Dubai	7.57	139	P	Pn	23 39 30.5	+3.3
NAZ				P	Pn	23 39 30.5	+3.3
NAZ				S	Sn	23 40 51.1	-2.0
NAZ				S	Sn	23 40 51.1	-2.0

MASF	Masafi	7.57	135	P	Pn	23 39 30.6	+3.3
MASF				P	Pn	23 39 30.6	+3.3
MASF				S	Sn	23 40 51.4	-1.9
MASF				S	Sn	23 40 51.4	-1.9
UOSS	Minazif	7.92	137	P	Pn	23 39 32.7	+0.7
UOSS				S	Sn	23 40 57.5	-4.2
HATD	Hatta, Dubai	7.97	138	P	Pn	23 39 34.8	+2.2
HATD				S	Sn	23 40 59.8	-3.1
ASHO	Ashiyiah	8.03	139	P	Pn	23 39 35.4	+1.8
ASHO				S	Sn	23 41 00.4	-4.2
MZR	Muzera	8.35	159	P	Pn	23 39 39.5	+1.6
MZR				S	Sn	23 41 09.7	-2.6
ALNE	Al Ain	8.37	143	P	Pn	23 39 40.0	+1.9
ALNE				S	Sn	23 41 10.9	-1.8
SOHO	SOHO	8.73	139	P	Pn	23 39 43.4	+0.3
SOHO				S	Sn	23 41 17.3	-4.4
ARQ	Araqi	9.36	142	P	Pn	23 39 54.2	+2.4
ARQ				S	Sn	23 41 32.8	-4.3
HOQ	Hoqain	9.61	137	P	Pn	23 39 55.8	+0.6
HOQ				S	Sn	23 41 37.3	-5.9
BSY	Bisya	10.20	141	P	Pn	23 40 04.3	+0.9
BSY				S	Sn	23 41 52.9	-5.0
SMDO	Samad	10.44	136	P	Pn	23 40 07.1	+0.4
SMDO				S	Sn	23 41 59.9	-3.9
WSAR	Wadi Sarin	10.66	133	P	Pn	23 40 10.9	+1.3
WSAR				S	Sn	23 42 04.8	-4.3
JMDO	Jabal Madar	11.00	138	P	Pn	23 40 17.0	+2.7
	SNR=12						
JMDO				P	Pn	23 40 17.0	+2.7
	SNR=12						
JMDO				S	Sn	23 42 11.5	-6.0
WBK	Wadi Bani Khal	11.34	134	P	Pn	23 40 21.0	+2.2
WBK				S	Sn	23 42 22.4	-3.2
JLN	Jalan Bani Buh	11.95	134	P	Pn	23 40 28.7	+1.5
JLN				S	Sn	23 42 35.1	-5.6
MHTO	MHTO	12.05	143	P	Pn	23 40 28.9	+0.3
MHTO				S	Sn	23 42 35.2	-7.8
DOK	Doka	12.69	163	P	Pn	23 40 38.3	+0.9
	SNR=9.4						
DOK				P	Pn	23 40 38.3	+0.9
	SNR=9.4						
DQM	DQM	12.73	147	P	Pn	23 40 38.2	+0.3
DQM				S	Sn	23 42 54.2	-5.6
ABTO	Aybut	13.74	168	P	Pn	23 40 50.9	-0.8
DMTO	DMTO	13.77	161	P	Pn	23 40 52.0	-0.2
	SNR=5.9						
DMTO				P	Pn	23 40 52.0	-0.2
	SNR=5.9						
BVAR	Borovoye Array	26.57	28	P	P	23 43 14.8	0.0
	1.0nm,0.4s,baz=231,slow=6.5,SNR=9.6						
	1.0nm,0.4s						
KURBB	Kurchatov Arra	28.87	39	P	P	23 43 35.6	+0.3
	0.3nm,0.5s,baz=239,slow=9.4,SNR=3.2						
	0.3nm,0.5s						
MKAR	Makanchi Array	29.36	48	P	P	23 43 40.5	+0.7
	0.5nm,0.5s,baz=245,slow=9.4,SNR=7.5						
	0.5nm,0.5s						
ZALV	Zalesovo Beam	33.88	37	P	P	23 44 18.9	-0.6
	0.6nm,0.4s,baz=246,slow=10,SNR=4.5						
	0.6nm,0.4s						
FINES	FINESS Array B	34.44	340	P	P	23 44 21.7	-2.5
	2.0nm,0.7s,baz=140,slow=8.7,SNR=1.5						
	2.0nm,0.7s						

IDC ***18*** *23:40:04.7±2.2, 22°.21S×68°.50W, h100^{km}±21^{km}, mb3.6/4, mbtmp4.0/7, Error ellipse: s-maj=30.5km s-min=19.9km az=94.0*

NEIC ***18*** *23:40:07.0±0.9, 22°.02S±0°.04×68°.72W±0°.07, h122^{km}±6^{km}, mb4.1/8, ML4.1(GUC), Error ellipse: s-maj=9.1km s-min=6.1km az=76.0*

SJA ***18*** *23:40:06.9±0.7, 21°.96S×68°.85W, h130^{km}±4^{km}, ML3.9, MW3.9*

GUC ***18*** *23:40:08.1±0.8, 22°.01S×68°.70W, h116^{km}±4^{km}, ML4.1*

VAO ***18*** *23:40:13.3±1.6, 21°.69S×68°.06W, h140^{km}±9^{km}, mb4.3, Presumed earthquake*

ISC 18 23:40:06.2±0.6**, 22°.03S**±0°.03×**68°.71W**±0°.04**, h126**^{km}±6^{km}**, n105,** σ1.^{s}**23**/133**, mb3.8**/3**, 6C-9D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.55	295	Pn	Pn	23 40 25.6	+0.3
PB09				Sn	Sn	23 40 39.1	-0.6
PB09	IPOC Station P	0.55	295	⇑iP	Pn	23 40 25.8	+0.5
PB09				iS	Sn	23 40 39.5	-0.2
PB09				IAML		23 40 42.0	
	comp=E,4μm,0.2s						
PB09	IPOC Station P	0.55	295	iP	Pn	23 40 25.9	+0.5
PB09				iS	Sn	23 40 40.6	+0.9
PB09				IAML		23 40 44.1	
	comp=Z,3μm,0.7s						
PB03	IPOC Station P	0.97	269		Pn	23 40 29.1	+0.5
PB03					Sn	23 40 45.4	-0.2
PB03	IPOC Station P	0.97	269	⇑iP	Pn	23 40 29.3	+0.7
PB03				iS	Sn	23 40 45.7	+0.1
PB03				IAML		23 40 47.8	
	comp=N,3μm,0.2s						
PB03	IPOC Station P	0.97	269	iP	Pn	23 40 29.5	+0.9
PB03				iS	Sn	23 40 45.5	-0.1
PB03				IAML		23 40 47.9	
	comp=Z,4μm,0.2s						
AF01	San Pedro de A	1.04	152	Pn	Pn	23 40 30.1	+0.6
AF01				Sn	Sn	23 40 47.5	+0.4
AF01	San Pedro de A	1.04	152	⇓iP	Pn	23 40 30.1	+0.6
AF01				iS	Sn	23 40 47.7	+0.6
AF01				IAML		23 41 03.1	
	comp=N,8μm,0.7s						
AF01	San Pedro de A	1.04	152	iP	Pn	23 40 30.0	+0.6
AF01				IAML		23 41 10.4	
	comp=Z,3μm,0.8s						
PB06	IPOC Station P	1.04	230		Pn	23 40 29.9	+0.6
PB06				Sn	Sn	23 40 47.4	+0.5
PB06	IPOC Station P	1.04	230	⇑iP	Pn	23 40 30.3	+1.0
PB06				iS	Sn	23 40 47.6	+0.7
PB06				IAML		23 40 48.5	
	comp=N,4μm,0.3s						
PB06	IPOC Station P	1.04	230	iP	Pn	23 40 30.3	+1.0
PB06				iS	Sn	23 40 48.1	+1.3
PB06				IAML		23 40 49.5	
	comp=Z,2μm,0.2s						
PB07	IPOC Station P	1.13	285		Pn	23 40 30.5	+0.3
PB07	IPOC Station P	1.13	285	⇑iP	Pn	23 40 30.9	+0.7
PB07				iS	Sn	23 40 48.8	+0.3
PB07				IAML		23 40 49.9	
	comp=N,6μm,0.2s						
PB07	IPOC Station P	1.13	285	iP	Pn	23 40 31.1	+0.9
PB07				iS	Sn	23 40 45.8	-2.6
PB07				IAML		23 40 49.9	
	comp=Z,4μm,0.4s						
PB01	IPOC Station P	1.22	324		Pn	23 40 31.1	+0.1
PB01	IPOC Station P	1.22	324	⇓iP	Pn	23 40 31.2	+0.1
PB01				iS	Sn	23 40 49.3	-0.6
PB01				IAML		23 40 50.5	
	comp=N,3μm,0.3s						
PB01	IPOC Station P	1.22	324	iP	Pn	23 40 31.6	+0.5
PB01				iS	Sn	23 40 49.2	-0.8
PB01				IAML		23 40 52.1	
	comp=Z,2μm,0.2s						
PB02	IPOC Station P	1.31	303		Pn	23 40 32.4	+0.3
PB02	IPOC Station P	1.31	303	⇑iP	Pn	23 40 32.6	+0.6
PB02				iS	Sn	23 40 51.4	-0.3
PB02				IAML		23 40 52.4	
	comp=N,5μm,0.3s						
PB02	IPOC Station P	1.31	303	iP	Pn	23 40 32.7	+0.6
PB02				iS	Sn	23 40 50.7	-0.9
PB02				IAML		23 40 53.7	
	comp=Z,4μm,0.2s						
PB05	IPOC Station P	1.60	239		Pn	23 40 36.1	+0.8
PB05	IPOC Station P	1.60	239	⇑iP	Pn	23 40 36.2	+0.9
PB05				eS	Sn	23 40 57.9	+0.4
PB05	IPOC Station P	1.60	239	⇓iP	Pn	23 40 36.3	+1.0
PB05				iS	Sn	23 40 58.6	+1.0
PB05				IAML		23 40 59.7	
	comp=Z,425nm,0.2s						
PATCX	Punta Patache	1.81	312		Pn	23 40 38.0	+0.3
PATCX	Punta Patache	1.81	312	⇓iP	Pn	23 40 37.9	+0.3
PATCX				eS	Sn	23 41 01.5	-0.2
PATCX				IAML		23 41 05.6	
	comp=E,2μm,0.2s						
PX03	IPOC Station P	1.83	332	eP	Pn	23 40 37.6	-0.4
PB08	IPOC Station P	1.93	348		Pn	23 40 40.3	+0.8
PB08	IPOC Station P	1.93	348	⇓iP	Pn	23 40 40.5	+1.0
PB08				iS	Sn	23 41 05.4	+0.5
PB08	IPOC Station P	1.93	348	iP	Pn	23 40 40.2	+0.8
PB08				IAML		23 41 09.0	
	comp=Z,234nm,0.1s						
TA01	Diego Aracena	2.00	317		Pn	23 40 39.9	-0.1
TA01	Diego Aracena	2.00	317	⇓iP	Pn	23 40 39.8	-0.1
TA01				iS	Sn	23 41 05.2	-0.6
TA01				IAML		23 41 07.4	
	comp=N,2μm,0.4s						
TA01	Diego Aracena	2.00	317	iP	Pn	23 40 39.9	-0.1
TA01				IAML		23 41 07.7	
	comp=Z,594nm,0.6s						
HMBC	Humberstone	2.06	328		Pn	23 40 40.6	-0.2
HMBC	Humberstone	2.06	328	⇓iP	Pn	23 40 40.7	-0.2
HMBC				iS	Sn	23 41 06.2	-1.2
HMBC	Humberstone	2.06	328	iP	Pn	23 40 40.8	-0.2
HMBC				iS	Sn	23 41 06.1	-1.3
HMBC				IAML		23 41 11.6	
	comp=Z,1μm,0.3s						
TA02	Huaiquique	2.20	323	eP	Pn	23 40 42.3	-0.1
TA02				eS	Sn	23 41 09.7	-0.5
TA02				IAML		23 41 13.1	
	comp=N,2μm,0.1s						
TA02	Huaiquique	2.20	323	IAML		23 41 15.5	
	comp=Z,552nm,0.1s						
PB10	IPOC Station P	2.25	229		Pn	23 40 43.6	+0.4
PB10	IPOC Station P	2.25	229	eP	Pn	23 40 43.5	+0.4
PB10				iS	Sn	23 41 10.4	-0.9
PB10	IPOC Station P	2.25	229	iP	Pn	23 40 44.0	+0.9
PB10				iS	Sn	23 41 12.1	+0.8
PB10				IAML		23 41 22.0	
	comp=Z,250nm,0.4s						
GO01	Chusmiza	2.40	349		Pn	23 40 46.0	+0.6
GO01	Chusmiza	2.40	349	⇓iP	Pn	23 40 46.0	+0.6
GO01				eS	Sn	23 41 15.9	+0.5
GO01				IAML		23 41 17.9	
	comp=N,1μm,0.1s						
GO01	Chusmiza	2.40	349	iP	Pn	23 40 46.2	+0.8
GO01				iS	Sn	23 41 15.4	0.0
GO01				IAML		23 41 18.2	
	comp=Z,280nm,0.7s						
PB11	IPOC Station P	2.43	338		Pn	23 40 45.2	-0.3
PB11	IPOC Station P	2.43	338	⇓iP	Pn	23 40 45.2	-0.3
PB11				iS	Sn	23 41 14.5	-1.1
PB11				IAML		23 41 17.3	
	comp=E,936nm,0.2s						
PB11	IPOC Station P	2.43	338	iP	Pn	23 40 45.2	-0.3
PB11				IAML		23 41 24.0	
	comp=Z,441nm,0.2s						
YJA	Yavi	2.97	93	eP	Pn	23 40 54.5	+1.8
PB14	IPOC Station P	3.01	211		Pn	23 40 53.6	+0.4
PB14	IPOC Station P	3.01	211	eP	Pn	23 40 53.6	+0.4
PB14	IPOC Station P	3.01	211	iP	Pn	23 40 53.9	+0.8
PB14				IAML		23 41 41.6	
	comp=Z,343nm,0.3s						
SALTA		3.08	135	eP	Pn	23 40 56.0	+1.8
GO02	Mina Guanaco	3.22	194		Pn	23 40 56.4	+0.6
GO02	Mina Guanaco	3.22	194	eP	Pn	23 40 56.5	+0.6
GO02	Mina Guanaco	3.22	194	IAML		23 42 01.6	
	comp=Z,356nm,0.6s						
PB12	IPOC Station P	3.73	336		Pn	23 41 01.0	-1.4
PB12	IPOC Station P	3.73	336	eP	Pn	23 41 00.7	-1.6
PB12	IPOC Station P	3.73	336	iP	Pn	23 41 00.4	-1.9
PB12				IAML		23 42 08.7	
	comp=Z,124nm,0.7s						
PB16	IPOC Station P	3.75	348		Pn	23 41 03.4	+0.2
PB16	IPOC Station P	3.75	348	eP	Pn	23 41 03.7	+0.5
PB16	IPOC Station P	3.75	348	iP	Pn	23 41 03.8	+0.6
PB16				IAML		23 42 16.6	
	comp=Z,72nm,0.7s						
AC01	Pan de Azucar	4.45	202		Pn	23 41 11.3	-0.5
AC01	Pan de Azucar	4.45	202	IAML		23 42 18.3	
	comp=Z,147nm,0.7s						
PB18	Visviri	4.48	351		Pn	23 41 15.0	+2.2
AC02	Maricunga	4.80	184		Pn	23 41 17.8	+0.8
AC06	Mina Casimiro	5.51	195		Pn	23 41 26.9	+0.9
LPAZ	La Paz	5.74	6	P	Pn	23 41 31.8	+2.0
	comp=Z,4.7nm,0.3s,baz=197,slow=2.0,SNR=42						
LPAZ	La Paz	5.74	6		Pn	23 41 31.3	+1.5
LPAZ	La Paz	5.74	6	eP	Pn	23 41 31.7	+1.9
AC05	El Transito	6.92	191		Pn	23 41 43.6	-1.6
SIV	San Ignacio	9.39	52	P	Pn	23 42 15.0	-3.5
	comp=Z,7.6nm,0.5s,baz=236,slow=10,SNR=47						
SIV				S	Sn	23 43 52.1	-10
	comp=Z,1.2nm,0.6s,baz=0.0,slow=20,SNR=1.8						
CFA	Coronel Fontan	9.54	178	P	Pn	23 42 18.2	-2.2
	comp=Z,1.1nm,0.3s,baz=351,slow=12,SNR=6.9						
CFA				S	Sn	23 43 58.6	-7.3
	comp=Z,1.6nm,0.4s,baz=195,slow=13,SNR=2.3						
PTLB	Pontes e Lacer	11.18	56		Pn	23 42 39.8	-2.7
PTLB	Pontes e Lacer	11.18	56	eP	Pn	23 42 40.0	-2.4
VILB	Vilhena	12.14	43		Pn	23 42 53.4	-1.7
VILB	Vilhena	12.14	43	eP	Pn	23 42 53.6	-1.5
SALV	Santo Antonio	13.74	66	eP	Pn	23 43 14.6	-1.2
PDRB	Porto dos Gac	15.45	50	eP	Pn	23 43 35.6	-1.8
PTGB	Pitanga	15.52	103	eP	P	23 43 40.8	+0.9
ITAB	Concordia	15.94	112		Pn	23 43 44.5	+1.1
CLDB	Colider	16.61	50	eP	Pn	23 43 50.4	-1.4
TRQA	Tornquist	16.99	162		P	23 43 56.9	+0.9
ARAG	Araguaiana, MT	17.18	71	eP	P	23 43 57.5	-0.8
BB19B	Bebedouro	18.80	91	eP	P	23 44 15.8	-0.2
SNDB	Serra Nova Dou	19.41	62	eP	P	23 44 21.7	-1.0
IPMB	Ipameri, GO	19.68	82	eP	P	23 44 24.8	-0.8
NPGB	Novo Progresso	19.70	43	eP	P	23 44 24.4	-1.4
VAO	Valinhos	20.11	97	P	P	23 44 29.4	-0.9
VAO				IAmb	IAmb	23 44 30.4	
	comp=Z,14nm,0.7s						
VAO	Valinhos	20.11	97	eP	P	23 44 30.1	-0.2
MACA	Manacapuru-AM	20.31	24	P	P	23 44 31.2	-1.2
BDFB	Brasilia	20.58	76	P	P	23 44 34.1	-1.3
	comp=Z,3.0nm,0.5s,baz=255,slow=13,SNR=4.6						
	comp=Z,3.0nm,0.5s						
BDFB	Brasilia	20.58	76	P	P	23 44 34.1	-1.3
BDFB				IAmb	IAmb	23 44 36.9	
	comp=Z,6.1nm,1.1s						
ITTB	Itaituba	21.60	37	eP	P	23 44 45.3	-0.9
PRPB	Parauapebas	24.12	52	eP	P	23 45 09.7	-0.9
JANB	Januaria	24.13	77	eP	P	23 45 09.9	-0.7
SMTB	Santa Maria do	24.16	60	eP	P	23 45 10.4	-0.5
MAL2	Monte Alegre,	24.40	37	P	P	23 45 13.6	+0.6
BOAV	Boa Vista	25.56	19	P	P	23 45 24.4	+0.9
BOAV				IAmb	IAmb	23 45 31.9	
	comp=Z,3.4nm,1.2s						
GUA01	Guaratinga, BA	27.79	84	eP	P	23 45 44.1	+0.5
NBIT	Itapeh - BA	28.62	81	eP	P	23 45 50.0	-0.9
TXAR	Lajitas Array	61.17	325	P	P	23 50 09.4	+1.7
	comp=Z,0.2nm,0.6s,baz=150,slow=6.9,SNR=2.0						
	comp=Z,0.2nm,0.6s						
DBIC	Dimbokro	68.71	73	P	P	23 50 57.5	+0.8
	comp=Z,1.6nm,0.6s,baz=252,slow=9.4,SNR=3.7						
	comp=Z,1.6nm,0.6s						
DBIC	Dimbokro	68.71	73	P	P	23 50 56.9	+0.2
DBIC				IAmb	IAmb	23 51 12.7	
	comp=Z,3.4nm,0.9s						
TORD	Torodi Ar. Bea	77.36	70	P	P	23 51 48.5	+0.8
	comp=Z,1.7nm,0.5s,baz=242,slow=3.1,SNR=12						
	comp=Z,1.7nm,0.5s						
MKAR	Makanchi Array	145.95	37	PKPbc	PKPab	23 59 33.6	+1.9
	comp=Z,0.5nm,0.9s,baz=329,slow=1.7,SNR=2.1						

KRNET ***18*** *23:40:17.2±0.1, 41°.60N×78°.14E, h18^{km}, mb2.2*

SOME ***18*** *23:40:18.2, 41°.58N×78°.00E, h5^{km}*

NNC ***18*** *23:40:19.8±5.3, 41°.56N×78°.06E, h0^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=40.4km s-min=17.6km az=178.0*

ISC 18 23:40:19.5±1.6**, 41°.63N**±0°.06×**78°.00E**±0°.03**, h7**^{km}±10^{km}**, n23,** σ1.^{s}**25**/44**, 8C-8D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	0.18	304	⇑iP	Pg	23 40 23.0	-0.3
TARG				⇑iS	Sg	23 40 27.1	+1.1
KDJ	Kajisay	0.79	309	⇓iP	Pg	23 40 34.2	-0.6
KDJ				⇓iS	Sg	23 40 46.2	+1.1
PRZ	Przheval'sk	0.90	19	⇓eP	Pg	23 40 34.5	-2.4
PRZ				⇓eS	Sg	23 40 47.2	-1.5
ULHL	Ulahol	1.45	296	⇑iP	Pn	23 40 45.6	-0.8
ULHL				⇑iS	Sn	23 41 06.3	+0.5
TNSS	Tian-Shan	1.61	331	eP	Pb	23 40 49.3	-0.5
	0.1nm,0.1s						
TNSS				eS	Sb	23 41 11.2	+0.7
	0.7nm,0.2s						
UZB	Uzynbulak	1.69	26	eP	Pb	23 40 50.4	-0.7
	0.6nm,0.1s						
UZB				eS	Sg	23 41 13.1	-0.9
	1.9nm,0.1s						
KOTS	Kotyrbulak	1.73	338	eP	Pb	23 40 51.7	-0.1
	3.1nm,0.1s						
KOTS				eS	Sg	23 41 15.4	+0.1
	13nm,0.1s						
IZV	Izvestkoviy	1.74	324	P	Pg	23 40 52.4	-0.5
	1.2nm,0.1s						
IZV				S	Sg	23 41 16.8	+1.2
	5.4nm,0.1s						
IZV	Izvestkoviy	1.74	324	eP	Pg	23 40 52.4	-0.5
	1.2nm,0.1s						
IZV				eS	Sg	23 41 16.8	+1.2
	3.9nm,0.1s						
BOOM	Boomskoye usch	1.76	300	⇓eP	Pb	23 40 51.4	-0.8
BOOM				⇓iS	Sg	23 41 16.1	0.0
KNDC	Almaty	1.76	335	⇓Pn	Pb	23 40 51.3	-0.9
	10nm,0.3s						
KNDC				⇑Sn	Sg	23 41 19.2	+3.0
	2.4nm,0.3s						
JNKS	Jany-Kuch	1.86	253	⇑eP	Pn	23 40 52.3	+0.3
JNKS				⇑eS	Sg	23 41 18.2	-1.1
SHLS	Shalkode	1.87	35	eP	Pg	23 40 56.9	+1.5
	1.3nm,0.2s						
SHLS				eS	Sg	23 41 24.4	+4.8
	5.4nm,0.3s						
MTBS	Maitube	1.90	323	eP	Pb	23 40 55.1	+0.5
	0.2nm,0.0s						
MTBS				eS	Sg	23 41 21.1	+0.6
	2.3nm,0.1s						
KPKS	Kokpek	1.90	15	eP	Pb	23 40 54.2	-0.5
KPKS				eS	Sg	23 41 19.5	-1.2
	2.5nm,0.2s						
PDGK	Podgornoye	2.02	32	⇑P	Pg	23 40 58.5	+0.1
	1.8nm,0.9s						
PDGK				⇓S	Sb	23 41 22.0	-0.1
	3.6nm,0.9s						
KST	Kastek	2.07	314	Pg	Pb	23 40 58.0	+0.5
KST				Lg	Lg	23 41 26.1	
KST	Kastek	2.07	314	eP	Pb	23 40 58.0	+0.5
	0.4nm,0.1s						
KST				eS	Sg	23 41 26.3	+0.3
	5.0nm,0.3s						
DGS	Degeres	2.31	315	Pg	Pb	23 41 01.9	+0.4
	1.1nm,0.4s						
DGS				Lg	Lg	23 41 33.1	
	6.4nm,0.3s						
DGS	Degeres	2.31	315	eP	Pb	23 41 01.9	+0.4
	0.4nm,0.1s						
DGS				eS	Sg	23 41 33.0	-0.6
	6.6nm,0.2s						
CHKK	Chushkaly	2.35	342	eP	Pb	23 41 02.8	+0.6
	1.3nm,0.1s						
CHKK				eS	Sg	23 41 34.4	-0.5
	10nm,0.3s						
ARXS	Arharly	2.59	357	eP	Pb	23 41 06.7	+0.4
	1.6nm,0.3s						
ARXS				eS	Sg	23 41 41.0	-1.5
	9.5nm,0.4s						
KRBS	Karabastau	2.69	321	eP	Pb	23 41 08.8	+0.9
	0.3nm,0.1s						
KRBS				eS	Sg	23 41 44.7	-1.1
	0.8nm,0.3s						

IDC ***18*** *23:40:50.3±1.3, 29°.24S×178°.67W, h0^{km}, mb4.3/3, mbtmp4.3/3, MS3.6/7, Error ellipse: s-maj=163.6km s-min=13.5km az=179.0*

ISC 18 23:40:54.4±1.0**, 29°.7S**±0°.2×**178°.5W**±0°.2**, h35**^{km}**, n14,** σ0.^{s}**44**/8**, mb4.4**/5**, MS3.5**/6**, 2C-1D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.68	47	Pn	Pn	23 41 07.7	+0.1
	285nm,0.3s,baz=339,slow=21,SNR=5.1						
RAO				Sn	Sn	23 41 16.9	0.0
	565nm,0.3s,baz=50,slow=22,SNR=9.9						
RAO				LR	LR	23 41 29.4	
	comp=Z,1μm,18.5s,baz=96,slow=60						
DZM	Mont Dzumac	15.54	296	LR	LR	23 49 03.0	
	comp=Z,284nm,19.6s,baz=182,slow=32						
CTA	Charters Tower	33.27	279	LR	LR	23 58 29.1	
	comp=Z,103nm,19.9s,baz=212,slow=32						
STKA	Stephens Creek	34.22	256	P	P	23 47 37.5	+0.6
	3.8nm,0.7s,baz=96,slow=8.6,SNR=6.0						
	3.8nm,0.7s						
PMG	Port Moresby	37.93	295	LR	LR	00 00 21.5	
	comp=Z,80nm,19.5s,baz=164,slow=31						
ASAR	Alice Springs	42.73	266	P	P	23 48 48.0	-0.5
	3.1nm,1.0s,baz=106,slow=7.8,SNR=15						
	3.1nm,1.0s						
WRA	Warramunga Arr	43.65	272	P	P	23 48 55.6	-0.3
	5.2nm,0.9s,baz=110,slow=7.9,SNR=10						
	5.2nm,0.9s						
VNDA	Vanda	48.73	186	LR	LR	00 07 00.7	
	comp=Z,46nm,18.2s,baz=199,slow=32						
BATI	Baumata	57.14	277	LR	LR	00 15 11.4	
	comp=Z,115nm,18.3s,baz=124,slow=36						
KAPI	Kappang	63.07	280	LR	LR	00 19 35.7	
	comp=Z,20nm,18.1s,baz=115,slow=37						
DAV	Davao City (W)	64.95	295	LR	LR	00 18 01.0	
	comp=Z,36nm,21.0s,baz=232,slow=34						
TROLL	Troll, Antarti	78.55	180	⇓P	P	23 52 52.3	+0.3
	comp=Z,159nm,0.7s						
VNA3	Neumayer Olymp	79.01	176	⇑P	P	23 52 54.1	-0.3
	comp=Z,4.3nm,0.8s						
VNA2	Neumayer--Watz	79.44	177	⇑P	P	23 52 56.4	-0.3
	comp=Z,4.0nm,0.8s,baz=176,slow=5.6						

IDC ***19*** *00:01:18.9±0.9, 6°.37N×125°.32E, h0^{km}, mb3.6/8, mbtmp3.6/8, Error ellipse: s-maj=27.1km s-min=9.5km az=104.0*

DJA ***19*** *00:01:21.1±2.1, 7°N±18°×12°5E±°, h67^{km}±24^{km}, M4.7/6, mB4.9/3, mb4.9/6, MLv4.6/6, Mw(mB)4.2/3*

ISC 19 00:01:20.2±0.7**, 6°.36N**±0°.04×**125°.5E**±0°.2**, h10**^{km}**, n16,** σ1.^{s}**63**/14**, mb3.6**/8**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.70	4	Pg	Pg	00 01 33.4	-0.4
	800nm,0.3s,baz=196,slow=0.7,SNR=33						
DAV				Lg	Lg	00 01 43.9	
	731nm,0.3s,baz=233,slow=20,SNR=9.7						
DAV	Davao City (W)	0.70	4	P	Pg	00 01 33.1	-0.8
DAV				S	Sg	00 01 42.8	-0.3
DAV	Davao City (W)	0.70	4	P	Pg	00 01 32.0	-1.9
SGSI	Sangihe	2.66	180	P	Pg	00 02 08.7	-2.6
GTOI	Gorontalo	6.22	204	P	Pn	00 02 53.9	+1.7
	0.3nm1μm64nm,0.5s						
MRSI	Marisa	6.86	212	P	Pn	00 03 03.0	+2.1
LUWI	Luwuk	7.86	201	P	Pn	00 03 19.7	+5.1
	51nm,0.6s						
APSI	Ampana	8.20	208	P	Pn	00 03 24.3	+4.9
WRA	Warramunga Arr	27.54	162	P	P	00 07 07.1	-0.3
	0.4nm,0.7s,baz=332,slow=9.9,SNR=5.1						
	0.4nm,0.7s						
ASAR	Alice Springs	30.95	165	P	P	00 07 40.3	+2.7
	0.3nm,0.5s,baz=342,slow=9.2,SNR=3.2						
	0.3nm,0.5s						
USRK	Ussuriysk Ar.	38.11	8	P	P	00 08 39.1	-0.2
	3.6nm,0.7s,baz=177,slow=8.7,SNR=5.0						
	3.6nm,0.7s						
STKA	Stephens Creek	41.00	159	P	P	00 09 04.6	+1.0
	0.9nm,0.5s,baz=325,slow=14,SNR=2.9						
	0.9nm,0.5s						
MKAR	Makanchi Array	54.73	325	P	P	00 10 47.8	-2.1
	0.3nm,0.8s,baz=124,slow=7.1,SNR=4.0						
	0.3nm,0.8s						
KURBB	Kurchatov Arra	58.89	327	P	P	00 11 19.0	-0.4
	0.5nm,0.7s,baz=122,slow=7.2,SNR=11						
	0.5nm,0.7s						
BVAR	Borovoye Array	64.48	327	P	P	00 11 58.2	+1.1
	0.8nm,0.8s,baz=102,slow=4.7,SNR=4.4						
	0.8nm,0.8s						
ILAR	Eielson Array	83.25	26	P	P	00 13 45.8	-1.0
	0.3nm,0.8s,baz=270,slow=5.1,SNR=4.0						
	0.3nm,0.8s						

UCR 19 00:16:21.2±1.7**, 6°.65N**×**82°.39W, h35**^{km}±46^{km}**, MW3.5, 2C-3D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMNES	Limones	1.51	342	eP	Pn	00 16 45.1	-0.7

GMAL	Guarumal, Vera	1.59	46	⇓iP	Pn	00 16 46.5	-0.4
GMAL				eS	Sn	00 17 06.5	+0.2
PTPA	Petro Terminal	1.61	343	eP	Pn	00 16 47.1	0.0
PTPA				eS	Sn	00 17 06.4	-0.3
PIRO	Carate, Puerto	1.98	332	eP	Pn	00 16 50.9	-1.3
PIRO				eS	Sn	00 17 15.8	0.0
JEFFS	S de V. Baru	2.01	356	eP	Pn	00 16 52.7	0.0
DMCAL	E. de Neily	2.04	349	eP	Pn	00 16 53.0	-0.2
DMCAL				eS	Sn	00 17 18.5	+1.0
EDAD	Golfito	2.13	339	eP	Pn	00 16 53.2	-1.1
EDAD				eS	Sn	00 17 19.3	-0.3
BRU2	Volcan	2.15	352	eP	Pn	00 16 55.4	+0.7
BRU2				eS	Sn	00 17 21.9	+1.7
RBALA	Bur	2.22	6	eP	Pn	00 16 56.4	+0.8
PBNVO	Pueblo Nuevo,	2.23	5	eP	Pn	00 16 56.0	+0.3
KKNTU	Kakintº	2.25	15	eP	Pn	00 16 56.0	+0.1
ALCO	Alturas Coton,	2.32	349	eP	Pn	00 16 57.3	+0.2
ALCO				eS	Sn	00 17 25.7	+1.1
AZU	Azuero	2.38	62	⇓iP	Pn	00 16 57.5	-0.3
EDP2	Potrero Grande	2.47	342	⇓iP	Pn	00 16 59.8	+0.7
EDP2				eS	Sn	00 17 30.4	+2.3
FIMO	Fila Mora	2.51	338	eP	Pn	00 16 59.9	+0.2
FIMO				eS	Sn	00 17 30.5	+1.4
DRK0	Durika	2.73	342	⇑iP	Pn	00 17 02.5	-0.2
EDPE	Pejibaye, P	2.75	335	⇑iP	Pn	00 17 03.0	+0.1
SAJE	San Jernim	2.90	338	eP	Pn	00 17 05.3	+0.3
BUS1	Rivas	3.18	335	eP	Pn	00 17 09.5	+0.3
PIEC	Cerro El Cedra	3.33	332	eP	Pn	00 17 11.5	+0.4
BCIP	Isla Barro Col	3.55	45	eP	Pn	00 17 15.0	+1.1
VTCV	VTCV, Calle Va	3.56	338	eP	Pn	00 17 15.3	+1.1
ABRB	Las Abras (San	3.58	339	eP	Pn	00 17 15.4	+0.9
LCOCO	El Coco	3.60	341	eP	Pn	00 17 16.4	+1.9
VICA	Volcano Irazu	3.61	337	eP	Pn	00 17 15.8	+0.7
JTS	Las Juntas de	4.41	325	eP	Pn	00 17 26.3	+0.5
VARE2	V. Arenal	4.43	329	eP	Pn	00 17 27.5	+1.5

MOS ***19*** *00:19:20.3±1.6, 37°.22N×24°.63W, h18^{km}, mb4.6/15, Error ellipse: s-maj=13.9km s-min=9.2km az=57.6*

IDC ***19*** *00:19:21.0±1.1, 37°.42N×24°.76W, h0^{km}, mb4.0/15, mbtmp4.0/15, MS3.4/26, Error ellipse: s-maj=31.1km s-min=18.6km az=1.0*

SVSA ***19*** *00:19:23.4±2.4, 37°.34N×24°.69W, h2^{km}±71^{km}, ML4.3(INMG), Error ellipse: s-maj=70.1km s-min=7.4km az=98.0, #DIST_RANGE: LOCAL #IPMA_REGION: Fossa da Povoao #FELT: III (MM56) at S.Miguel:. Retorta (Povoao)*

NEIC ***19*** *00:19:23.1±0.9, 37°.5N±0°.1×24°.73W±0°.10, h10^{km}±1^{km}, mb4.5/12, Error ellipse: s-maj=26.5km s-min=4.3km az=207.0*

ISC 19 00:19:21.0±1.5**, 37°.35N**±0°.04×**24°.82W**±0°.05**, h5**^{km}±10^{km}**, n102, σ1^{s}.57**/91**, mb4.4**/30**, MS3.4**/26**, 16C-3D, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSMN	Pico do Norte,	0.40	209	eP	Pb	00 19 31.4	+0.8
PSMN				eS	Sb	00 19 37.7	+0.7
PSMN				i IAML		00 19 45.6	
PSMN				i IAML		00 19 46.4	
PSMN				i IAML		00 19 46.9	
BART	Pico Bartolome	0.51	327	eP	Pb	00 19 33.3	+0.8
BART				eS	Sb	00 19 40.7	+0.5
BART				i IAML		00 19 41.0	
BART				i IAML		00 19 41.6	
BART				i IAML		00 19 43.0	
PGRON	Lagoa das Cont	0.61	313	eP	Pb	00 19 34.8	+0.7
PGRON				eS	Sb	00 19 43.6	+0.5
PGRON				i IAML		00 19 45.8	
PGRON				i IAML		00 19 46.3	
PGRON				i IAML		00 19 46.7	
PCALD	Caldeiras da R	0.69	310	eP	Pb	00 19 36.0	+0.5
PCALD				eS	Sb	00 19 46.0	+0.5
CMLA	Cha da Macela	0.69	306		Pb	00 19 36.3	+0.6
CMLA					Sb	00 19 45.6	+0.1
CMLA	Cha da Macela	0.69	306	eP	Pb	00 19 36.2	+0.6
CMLA				eS	Sb	00 19 46.0	+0.5
CMLA				i IAML		00 19 47.6	
CMLA				i IAML		00 19 47.9	
CMLA				i IAML		00 19 48.7	
CMLA	Cha da Macela	0.69	306	eP	Pb	00 19 36.2	+0.6
CMLA				eS	Sb	00 19 46.0	+0.5
PRIG	Ribeira Grande	0.73	309	eP	Pb	00 19 36.7	+0.6
PRIG				eS	Sb	00 19 47.3	+0.9
PRIG				i IAML		00 19 48.1	
PRIG				i IAML		00 19 48.6	
PRIG				i IAML		00 19 49.6	
PDA	Ponta Delgada	0.78	301	eP	Pg	00 19 37.5	+1.5
PDA				eS	Sb	00 19 48.3	+0.4
PDA				i IAML		00 19 49.1	
PDA				i IAML		00 19 49.4	
PDA				i IAML		00 19 50.1	
PDA	Ponta Delgada	0.78	301	eP	Pg	00 19 37.4	+1.5
PDA				eS	Sb	00 19 48.4	+0.5
PSCM	Serra do Cume	2.26	307	eP	Pn	00 19 58.6	-0.4
PSCM				eS	Sn	00 20 24.7	-2.6
PSCM				i IAML		00 20 26.4	
PSCM				i IAML		00 20 27.6	
PSCM				i IAML		00 20 28.1	
ADH	Angra Heroismo	2.31	305	eP	Pn	00 19 59.6	-0.1
ADH				eS	Sn	00 20 25.6	-2.9
ADH				i IAML		00 20 27.2	
ADH				i IAML		00 20 29.0	
ADH				i IAML		00 20 29.2	
PAGU	Agualva, Azore	2.34	308	eP	Pn	00 19 59.9	-0.3
PAGU				eS	Sn	00 20 26.7	-2.6
PAGU				i IAML		00 20 28.7	
PAGU				i IAML		00 20 29.4	
PAGU				i IAML		00 20 29.8	
PPNO	Prainha do Nor	2.94	293	eS	Sn	00 20 41.5	-2.8
PPNO				i IAML		00 20 43.2	
PPNO				i IAML		00 20 43.2	
ROSA	Rosais	3.03	298	eP	Pn	00 20 09.7	+0.1
ROSA				eS	Sn	00 20 43.1	-3.1
ROSA				i IAML		00 20 45.2	
ROSA				i IAML		00 20 45.3	
ROSA				i IAML		00 20 45.6	
PICO	Pico	3.07	293	eP	Pn	00 20 10.9	+0.6
PICO				eS	Sn	00 20 44.5	-3.0
PICO				i IAML		00 20 46.9	
PICO				i IAML		00 20 47.5	
PICO				i IAML		00 20 48.2	
CALA	Caldeira	3.30	293	eP	Pn	00 20 13.5	0.0
CALA				eS	Sn	00 20 50.1	-3.1
CALA				i IAML		00 20 52.9	
CALA				i IAML		00 20 58.8	
CALA				i IAML		00 21 00.3	
PMAR	Madeira	7.96	123	eP	Pn	00 21 16.8	-0.7
PMAR	Madeira	7.96	123	eS	Sn	00 22 37.1	-11
PMPST	Porto Santo, M	8.15	119	eP	Pn	00 21 20.7	+0.7
PMPS	Porto Santo	8.16	119	eP	Pn	00 21 19.4	-0.7
ESDC	Sonseca Array	16.49	76	Pn	P	00 23 15.6	-0.2
	0.1nm,0.3s,baz=278,slow=11,SNR=9.7						
ESDC				LR	LR	00 28 33.5	
	comp=Z,86nm,18.4s,baz=278,slow=34						
MD01	Midelt array s	17.01	99	Pn	Pn	00 23 20.0	+0.2
MD31	MD31	17.01	99		Pn	00 23 20.2	+0.5
CEST	Esterri de Car	20.62	67	P	P	00 24 00.2	-1.1
CORI	Orista	21.16	69	P	P	00 24 06.4	-0.5
CORI				IAmb	IAmb	00 24 11.4	
	comp=Z,51nm,1.5s						
EKA	Eskdalemuir Ar	23.22	32	P	P	00 24 27.9	-0.9
	comp=Z,2.7nm,0.9s,baz=241,slow=7.2,SNR=4.3						
EKA				LR	LR	00 31 37.3	
	comp=Z,121nm,20.5s,baz=194,slow=32						
	comp=Z,2.7nm,0.9s						
SENIN	Lac Senin/Sane	25.41	59	P	P	00 24 50.1	+0.5
SENIN				IAmb	IAmb	00 25 04.7	
	comp=Z,12nm,1.5s						
DAVOX	Davos/Dischmat	27.24	59	LR	LR	00 34 48.0	
	comp=Z,108nm,18.9s,baz=264,slow=34						
BORG	Borgarnes	27.51	3	LR	LR	00 32 35.7	
	comp=Z,110nm,21.2s,baz=192,slow=29						
GERES	GERESS Array B	30.07	55	P	P	00 25 31.5	+0.3
	comp=Z,0.5nm,0.7s,baz=281,slow=9.9,SNR=4.3						
GERES				LR	LR	00 37 04.2	
	comp=Z,39nm,18.4s,baz=256,slow=36						
	comp=Z,0.5nm,0.7s						
KONO	Kongsberg	31.32	34	⇓eP	P	00 25 41.7	-0.3
KONO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
VRAC	Vranov	32.01	55	LR	LR	00 37 44.5	
	comp=Z,38nm,18.6s,baz=260,slow=35						
NOA	NORSAR Array B	32.71	32	LR	LR	00 37 30.0	
	comp=Z,75nm,21.6s,baz=235,slow=33						
SFJD	Kangerlussuaq	33.12	342	LR	LR	00 35 46.8	
	comp=Z,170nm,18.4s,baz=171,slow=30						
HFS	Hagfors	33.37	35	LR	LR	00 38 21.7	
	comp=Z,65nm,19.2s,baz=252,slow=34						
TORD	Torodi Ar. Bea	33.78	129	P	P	00 26 04.5	+0.5
	comp=Z,1.2nm,0.7s,baz=327,slow=9.9,SNR=6.3						
	comp=Z,1.2nm,0.7s						
TORD	Torodi Ar. Bea	33.78	129	P	P	00 26 04.4	+0.5
MLR	Muntele Rosu	38.38	61	LR	LR	00 42 52.6	
	comp=Z,32nm,18.3s,baz=248,slow=37						
FINES	FINESS Array B	39.52	36	LR	LR	00 40 44.2	
	comp=Z,53nm,18.9s,baz=236,slow=32						
APE	Apeiranthos	39.71	75	⇑eP	P	00 26 50.2	-4.1
AKASG	Malin Array Be	40.20	53	LR	LR	00 43 15.8	
	comp=Z,44nm,19.9s,baz=289,slow=36						
AKBB	Malin Array Si	40.20	53	⇓eP	P	00 26 56.4	-1.8
SJG	San Juan	40.91	254	LR	LR	00 40 44.7	
	comp=Z,25nm,19.6s,baz=258,slow=31						
MDP	Montagnes des	40.94	225	LR	LR	00 42 05.7	
	comp=Z,48nm,18.3s,baz=136,slow=33						
ARCES	ARCESS Array B	41.88	24	P	P	00 27 11.3	-0.5
	comp=Z,5.1nm,1.0s,baz=263,slow=7.1,SNR=4.6						
ARCES				LR	LR	00 43 13.0	
	comp=Z,45nm,19.0s,baz=285,slow=34						
	comp=Z,5.1nm,1.0s						
ARCES	ARCESS Array B	41.88	24	eP	P	00 27 12.0	+0.1
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
OBN	Obninsk	44.46	46	⇑eP	P	00 27 32.5	-0.3
OBN				e		00 27 36.2	
OBN				e		00 29 12.3	
OBN				e		00 29 17.0	
OBN				ePPP	PPP	00 29 51.9	
OBN				SS	SS	00 37 27.0	+0.2
OBN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
OBN				MLR	MLR		
	comp=Z,92nm,17.0s						
LVZ	Lovozero	44.57	28	⇑iP	P	00 27 32.0	-1.6
LVZ				pmax	pmax		
	comp=Z,31nm,1.4s						
BR131	Keskin Array S	45.08	68	⇑eP	P	00 27 35.1	-3.1
BRTR	Keskin Array B	45.08	68	P	P	00 27 37.4	-0.9
	comp=Z,0.6nm,0.8s,baz=297,slow=6.3,SNR=4.0						
BRTR				LR	LR	00 46 49.5	
	comp=Z,20nm,19.3s,baz=279,slow=37						
	comp=Z,0.6nm,0.8s						
H10N2	ASCENSION HYDR	45.97	166	T	T	01 16 27.5	
	baz=348,slow=75,SNR=160						
H10N3	ASCENSION HYDR	45.98	166	T	T	01 16 28.3	
	baz=348,slow=75,SNR=187						
H10N1	ASCENSION HYDR	45.99	166	T	T	01 16 28.9	
	baz=348,slow=75,SNR=184						
H10S3	ASCENSION HYDR	47.04	166	T	T	01 17 55.8	
	baz=231,slow=74,SNR=123						
H10S2	ASCENSION HYDR	47.05	166	T	T	01 17 53.5	
	baz=349,slow=74,SNR=148						
SDV	Santo Domingo	50.09	247	LR	LR	00 45 16.6	
	comp=Z,65nm,20.9s,baz=76,slow=31						
SHA1	Shidzhatmaz	50.40	60	⇑eP	P	00 28 15.1	-4.4
KBZ	Khabaz	50.56	60	P	P	00 28 21.3	+0.8
	comp=Z,1.7nm,0.9s,baz=0.0,slow=8.1,SNR=5.3						
	comp=Z,1.7nm,0.9s						
KBZ	Khabaz	50.56	60	⇑eP	P	00 28 16.6	-3.8
KBZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NEUR	Neytrino	50.57	61	⇑eP	P	00 28 16.9	-3.9
NEUR				pmax	pmax		
	comp=Z,3.0nm,1.7s						
KIRV	Kirov	51.09	40	LR	LR	00 49 30.2	
	comp=Z,82nm,19.5s,baz=277,slow=36						
KIRV	Kirov	51.09	40	⇑eP	P	00 28 22.3	-1.9
BELG	Belogornoye	51.34	48	⇑eP	P	00 28 21.6	-4.5
BELG				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ROSC	El Rosal	55.51	247	LR	LR	00 49 21.5	
	comp=Z,70nm,21.0s,baz=49,slow=32						
ARTI	Arti	56.32	42	LR	LR	00 52 46.1	
	comp=Z,85nm,19.9s,baz=282,slow=36						
ARTI	Arti	56.32	42	d iP	P	00 29 02.6	0.0
ARTI						00 29 54.8	
ARTI						00 31 09.1	
ARTI				S	S	00 36 59.5	+6.4
ARTI				SS	SS	00 40 42.0	+2.8
ARTI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BDFB	Brasilia	57.06	207	LR	LR	00 51 19.4	
	comp=Z,44nm,18.3s,baz=37,slow=34						
YKA	Yellowknife Ar	57.56	327	P	P	00 29 11.9	+0.7
	comp=Z,1.0nm,0.8s,baz=69,slow=6.1,SNR=8.9						
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	57.56	327	eP	P	00 29 11.6	+0.4
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AKTO	Aktyubinsk	58.13	48	LR	LR	00 55 34.7	
	comp=Z,61nm,18.0s,baz=256,slow=37						
JTS	Las Juntas de	60.15	260	LR	LR	00 54 42.5	
	comp=Z,38nm,18.1s,baz=52,slow=35						
PDAR	Pinedale Array	62.45	304	P	P	00 29 44.9	-0.6
	comp=Z,1.1nm,0.8s,baz=72,slow=9.5,SNR=6.5						
	comp=Z,1.1nm,0.8s						
PDAR	Pinedale Array	62.45	304	P	P	00 29 46.4	+0.9
NRIK	Noril'sk	62.80	22	P	P	00 29 47.9	+0.9
	comp=Z,1.6nm,0.8s,baz=292,slow=2.4,SNR=4.0						
	comp=Z,1.6nm,0.8s						
NRIK	Noril'sk	62.80	22	eP	P	00 29 49.2	+2.2
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
F30M	Barrier River	63.33	336	P	P	00 29 51.5	+0.9
BORK	Borovoye	63.99	42	⇑eP	P	00 29 55.6	+0.4
BORK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BVAR	Borovoye Array	64.04	42	P	P	00 29 55.6	+0.1
	comp=Z,0.6nm,0.6s,baz=328,slow=5.1,SNR=4.1						
	comp=Z,0.6nm,0.6s						
TX31	Lajitas Ar. Si	64.59	288		P	00 30 01.1	+1.4
TXAR	Lajitas Array	64.59	288	P	P	00 30 01.2	+1.6
	comp=Z,2.6nm,0.8s,baz=76,slow=7.2,SNR=24						
	comp=Z,2.6nm,0.8s						
NEW	Newport	64.65	312	LR	LR	00 54 35.9	
	comp=Z,25nm,20.5s,baz=40,slow=33						
E27K	Coleen River	64.77	338	P	P	00 30 01.2	+1.0
E27K				IAmb	IAmb	00 30 02.1	
	comp=Z,4.4nm,0.9s						
LPAZ	La Paz	67.14	226	LR	LR	00 56 33.2	
	comp=Z,34nm,18.4s,baz=40,slow=33						
KURK	Kurchatov	69.60	41		P	00 30 30.8	-0.2
KURK				IAmb	IAmb	00 30 32.1	
	comp=Z,2.6nm,0.8s						
KURK	Kurchatov	69.60	41	⇑eP	P	00 30 31.3	+0.3
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURBB	Kurchatov Arra	69.60	41	P	P	00 30 31.4	+0.4
	comp=Z,1.7nm,0.2s,baz=309,slow=6.3,SNR=7.6						
	comp=Z,1.7nm,0.2s						
CPUP	Villa Florida	70.33	211	LR	LR	00 58 22.5	
	comp=Z,18nm,20.3s,baz=77,slow=33						
ZAA0	Zalesovo Array	70.79	36	P	P	00 30 38.1	-0.1
ZAA0				IAmb	IAmb	00 30 39.6	
	comp=Z,4.8nm,0.9s						
ZALV	Zalesovo Beam	70.79	36	P	P	00 30 38.8	+0.6
	comp=Z,3.6nm,0.8s,baz=312,slow=7.0,SNR=17						
	comp=Z,3.6nm,0.8s						
ZALV	Zalesovo Beam	70.79	36		P	00 30 37.8	-0.4
MK31	Makanchi Array	73.86	43	⇑eP	P	00 30 57.0	+0.2
MKAR	Makanchi Array	73.86	43	P	P	00 30 57.2	+0.4
	comp=Z,1.7nm,0.7s,baz=308,slow=5.3,SNR=14						
	comp=Z,1.7nm,0.7s						
MKAR	Makanchi Array	73.86	43	P	P	00 30 56.9	+0.1
DGZ	Jazzator, Alta	74.72	39	⇑eP	P	00 31 01.2	-0.7
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KNGR	Kungurtug, Tuv	78.81	33	⇑eP	P	00 31 25.0	+0.1
KNGR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
YAK	Yakutsk	78.83	12	⇑eP	P	00 31 22.2	-2.4
YAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SONM	Songino Array	84.68	31	P	P	00 31 56.7	+0.7
	comp=Z,2.8nm,0.9s,baz=308,slow=5.1,SNR=10						
	comp=Z,2.8nm,0.9s						
SONM	Songino Array	84.68	31	P	P	00 31 56.2	+0.2
SONM				IAmb	IAmb	00 31 57.6	
	comp=Z,3.4nm,1.0s						
SONM	Songino Array	84.68	31	eP	P	00 31 56.8	+0.8
SONM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ULN	Ulaanbaatar	84.92	30		P	00 31 57.9	+0.7
ULN	Ulaanbaatar	84.92	30	⇑eP	P	00 31 56.8	-0.4
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s						

MOS ***19*** *00:23:39.2±0.7, 36°.28N×140°.81E, h90^{km}, mb4.5/19, Error ellipse: s-maj=11.3km s-min=6.5km az=120.4*

NEIC ***19*** *00:23:40.9±1.7, 36°.26N±0°.06×140°.78E±0°.08, h85^{km}±7^{km}, mb4.6/38, Error ellipse: s-maj=9.8km s-min=8.0km az=47.0*

IDC ***19*** *00:23:41.9±1.7, 36°.17N×140°.60E, h95^{km}±15^{km}, mb3.9/19, mbtmp4.2/22, MS2.5/3, Error ellipse: s-maj=19.1km s-min=9.8km az=72.0*

NIED ***19*** *00:23:42.0, 36°.29N×140°.67E, h89^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.08; $M_{\theta\theta}$-0.17; $M_{\phi\phi}$1.25; $M_{r\theta}$0.73; $M_{\theta\phi}$0.19; $M_{\phi r}$0.61; Fault plane solution: $M_0$1.52000×10^{15} NP1: ϕ_s345.00000°, δ34.00000°, λ-131.00000°. NP2: ϕ_s212.00000°, δ65.00000°, λ-66.00000°.*

JMA ***19*** *00:23:42.0±0.1, 36°.3N±0°.3×140°.7E±0°.6, h89^{km}, MD4.1/38, MV4.3/38, E OFF IBARAKI PREF*

JMA Felt III J1 at E OFF IBARAKI PREF .

ISC 19 00:23:40.7±0.6**, 36°.28N**±0°.04×**140°.70E**±0°.05**, h84**^{km}±4^{km}**, n182, σ1^{s}.38**/172**, mb4.4**/56**, 13C-21D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHYU	Hitachinakayam	0.11	301	⇓iP	Pn	00 23 54.6	+1.9
JHYU				⇓S	Sn	00 24 03.9	+2.2
JHYU	Hitachinakayam	0.11	301	A	A	00 23 54.6	
	comp=N,61nm,0.2s,comp=E,69nm,0.3s						
JHO	Hitachi	0.34	342	⇓P	Pn	00 23 55.6	+1.9
JHO				⇓S	Sn	00 24 05.5	+2.1
JIHU	Itakohorinouch	0.35	204	P	Pn	00 23 56.1	+2.3
JIHU				S	Sn	00 24 07.4	+4.0
JIHU	Itakohorinouch	0.35	204	A	A	00 23 56.1	
	comp=N,47nm,0.8s,comp=E,79nm,0.8s						
JYT	Yasato	0.41	262	⇓P	Pn	00 23 56.0	+1.8
JYT				⇓S	Sn	00 24 06.1	+1.9
JYT	Yasato	0.41	262	A	A	00 23 56.0	
	comp=N,52nm,0.5s,comp=E,49nm,0.4s						
JCAJ	Choshiashikaji	0.58	167	A	A	00 23 57.4	
	comp=N,21nm,0.3s,comp=E,25nm,0.6s						
JSMT	Sammumatsuo	0.67	198	A	A	00 23 58.2	
	comp=N,16nm,3.2s,comp=E,31nm,2.3s						
ONAJ	Iwakimizuishiy	0.82	5	A	A	00 23 59.8	
	comp=N,18nm,0.3s,comp=E,27nm,0.3s						
JSB	Shiboa	0.93	318	A	A	00 24 00.8	
	comp=N,17nm,1.1s,comp=E,21nm,1.0s						
TOK	Tokyo	0.97	232	A	A	00 24 01.2	
	comp=N,14nm,0.3s,comp=E,20nm,0.5s						
JCCN	Chibachonan	0.97	203	A	A	00 24 01.4	
	comp=N,10.0nm,2.0s,comp=E,12nm,2.2s						
JAG	Ashikaga	1.02	278	⇓P	Pn	00 24 02.0	+1.7
JAG				⇓S	Sn	00 24 17.0	+2.2
JAG	Ashikaga	1.02	278	A	A	00 24 02.0	
	comp=N,23nm,0.3s,comp=E,22nm,0.9s						
JFK	Kawauchi	1.09	7	⇓P	Pn	00 24 02.4	+1.3
JFK				⇓S	Sn	00 24 17.7	+1.3
JKT	Katashina	1.27	293	eP	Pn	00 24 05.2	+1.9
JKT	Katashina	1.27	293	A	A	00 24 05.2	
	comp=N,12nm,0.2s,comp=E,15nm,0.4s						
JFY	Yanaizu	1.38	325	⇓P	Pn	00 24 06.3	+1.6
JFY	Yanaizu	1.38	325	A	A	00 24 06.3	
	comp=N,4.0nm,1.2s,comp=E,3.0nm,1.7s						
JMST	Minamisoumatoc	1.45	6	A	A	00 24 07.3	
	comp=N,7.0nm,1.1s,comp=E,9.0nm,0.4s						
JRY	Ryogami san	1.48	260	i P	Pn	00 24 07.4	+1.4
JRY				S	Sn	00 24 26.5	+1.4
BSO3	Boso 3	1.49	186	P	Pn	00 24 07.2	+1.4
BSO3				eS	Sn	00 24 27.2	+2.5
JMM	Marumori	1.58	3	⇓iP	Pn	00 24 08.7	+1.5
JMM				⇓eS	Sn	00 24 28.8	+1.5
JUON	Uonuma	1.61	305	P	Pn	00 24 09.3	+1.7
BSO1	Boso 1	1.64	172	eP	Pn	00 24 08.7	+1.2
JOD2	Odawara 2	1.66	233	⇓P	Pn	00 24 09.2	+0.9
JOD2	Odawara 2	1.66	233	A	A	00 24 09.2	
	comp=N,4.0nm,2.2s,comp=E,4.0nm,0.5s						
JYAR	Yonezawaarcadi	1.69	345	A	A	00 24 10.3	
	comp=N,6.0nm,1.5s,comp=E,7.0nm,1.4s						
JHTM	Izuhatsuma	1.91	227	A	A	00 24 13.2	
	comp=N,8.0nm,1.6s,comp=E,8.0nm,0.4s						
MJAR	Matsushiro Arr	2.03	278	P	Pn	00 24 14.6	+1.5
	comp=E,97nm,0.3s,baz=117,slow=10,SNR=206						
MJAR				S	Sn	00 24 35.5	-2.3
	comp=E,96nm,0.4s,baz=296,slow=34,SNR=5.9						
MJAR				LR	LR	00 24 57.7	
	comp=E,185nm,18.9s,baz=76,slow=38						
MJAR	Matsushiro Arr	2.03	278	Pn	Pn	00 24 14.5	+1.4
MAJO	Matsushiro	2.03	278		Pn	00 24 15.1	+2.0
MAJO				Sn	Sn	00 24 40.4	+2.5
MAJO	Matsushiro	2.03	278	c iP	Pn	00 24 15.0	+1.9
MJB9	Matsu-Tunnel	2.03	278		Pn	00 24 16.0	+2.8
MJB9				Sn	Sn	00 24 39.7	+1.8
JOU	Okura	2.08	359	A	A	00 24 15.7	
	comp=N,3.0nm,1.1s,comp=E,3.0nm,1.0s						
SHZ3	Shizuoka 3	2.37	240	A	A	00 24 19.3	
	comp=N,5.0nm,1.4s,comp=E,5.0nm,1.1s						
JSG	Sagara	2.61	233		Pn	00 24 21.6	+0.8
JSD	Sado	2.62	313		Pn	00 24 21.8	+0.9
JGF	Kuroka	2.80	257		Pn	00 24 25.7	+2.3
JGF				Sn	Sn	00 24 57.4	+1.1
INU	Inuyama	3.14	254		Pn	00 24 29.8	+1.9
JHJ	Hachijo jima 2	3.25	194	P	Pn	00 24 30.1	+0.6
	comp=E,180nm,0.3s,baz=135,slow=22,SNR=14						
JHJ				S	Sn	00 25 05.1	-2.0
	comp=E,623nm,0.3s,baz=63,slow=22,SNR=13						
JHJ2	Mitsune	3.25	193	Pn	Pn	00 24 29.7	+0.3
ERM	Erimo	6.03	18	Pn	Pn	00 25 06.7	-0.6
ERM	Erimo	6.03	18	P	Pn	00 25 06.7	-0.6
JMN	Monobe	6.15	247		Pn	00 25 09.9	+0.9
ASAJ	Asahikawa	7.96	10	P	Pn	00 25 31.9	-1.7
	comp=E,6.0nm,0.3s,baz=214,slow=11,SNR=4.7						
ASAJ				S	Sn	00 26 58.0	-3.8
	comp=E,7.4nm,0.5s,baz=11,slow=19,SNR=4.0						
JKA	Kamikawa-asahi	7.96	10		Pn	00 25 31.8	-1.7
JNU	Nakatsue	8.68	252	P	Pn	00 25 45.0	+1.5
	comp=E,17nm,0.7s,baz=77,slow=3.0,SNR=7.2						
JNU				LR	LR	00 29 16.7	
	comp=E,42nm,21.6s,baz=73,slow=39						
JNU	Nakatsue	8.68	252	Pn	Pn	00 25 45.0	+1.5
JCJ	Chichijima	9.25	172	P	Pn	00 25 37.0	-14
	comp=E,27nm,0.3s,baz=300,slow=22,SNR=9.4						
JCJ				S	Sn	00 27 10.8	-23
	comp=E,52nm,0.3s,baz=289,slow=22,SNR=6.6						
JCJ				LR	LR	00 29 38.1	
	comp=E,60nm,20.2s,baz=24,slow=39						
JCJ	Chichijima	9.25	172	Pn	Pn	00 25 48.3	-2.9
KSRS	Korea Array	10.31	280	P	Pn	00 26 09.3	+3.8
	comp=E,5.8nm,0.6s,baz=91,slow=14,SNR=15						
KSRS				LR	LR	00 30 03.5	
	comp=E,14nm,21.2s,baz=90,slow=37						
USRK	Ussuriysk Ar.	10.33	323	P	Pn	00 26 06.9	+1.0
	comp=E,9.1nm,0.6s,baz=126,slow=12,SNR=17						
KSAR	Wonju Array Be	10.34	280	Pn	Pn	00 26 06.1	+0.1
KSAR	Wonju Array Be	10.34	280	P	Pn	00 26 06.1	+0.1
YSS	Yuzhno-Sakhali	10.77	8	eP	Pn	00 26 02.2	-10
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
BNX	BinXian	13.77	317	⇑P	Pn	00 26 51.3	-0.8
BNX				pmax	pmax		
	comp=Z,9.0nm,1.1s						
NJ2	Nanjing	18.56	263	eP	P	00 27 51.6	+0.8
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
BJI	Beijing	19.63	288	P	P	00 28 02.5	+0.1
BJI				pP	pP	00 28 17.0	-2.1
BJI				sP	sP	00 28 27.6	-2.1
BJI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZEA	Zeya	19.82	336	eP	P	00 28 04.8	+0.5
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HILR	Hailar Array B	20.19	318	P	P	00 28 06.2	-2.3

	comp=Z,3.7nm,0.5s,baz=119,slow=12,SNR=12						
XLT	**XiLinHaoTe**	**20.27**	**300**	*e*P	**P**	**00 28 07.1**	**-2.3**
XLT				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HNS	**HongShan**	**20.82**	**281**	⇓P	**P**	**00 28 12.6**	**-2.7**
HNS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LYN	**LuoYang**	**23.05**	**274**	*e*P	**P**	**00 28 35.1**	**-3.7**
LYN				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC	**Hu-ho-hao-te**	**23.18**	**290**	*e*P	**P**	**00 28 40.8**	**+0.6**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
YAK	**Yakutsk**	**26.68**	**348**	⇑*i*P	**P**	**00 29 12.4**	**+0.9**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ENH	**Enshi**	**26.70**	**266**	P	**P**	**00 29 10.4**	**-1.7**
ENH				IAmb	IAmb	00 29 11.7	
	comp=Z,17nm,0.6s						
ULN	**Ulaanbaatar**	**27.31**	**306**	⇓*i*P	**P**	**00 29 18.1**	**+0.6**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SEY	**Seymchan**	**27.64**	**12**	⇓*i*P	**P**	**00 29 19.8**	**-0.2**
SEY				pmax	pmax		
	comp=Z,7.0nm,1.3s						
SONM	**Songino Array**	**27.74**	**305**	P	**P**	**00 29 21.7**	**+0.4**
	comp=Z,3.2nm,0.5s,baz=104,slow=8.7,SNR=26						
	comp=Z,3.2nm,0.5s						
SONM	**Songino Array**	**27.74**	**305**	P	**P**	**00 29 20.8**	**-0.5**
H11N2	**WAKE ISLAND Hy**	**28.27**	**119**	T	T	00 59 35.2	
	baz=313,slow=75,SNR=20						
H11N1	**WAKE ISLAND Hy**	**28.28**	**119**	T	T	00 59 35.8	
	baz=313,slow=75,SNR=29						
H11N3	**WAKE ISLAND Hy**	**28.29**	**119**	T	T	00 59 35.7	
	baz=313,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**28.95**	**121**	T	T	01 00 22.5	
	baz=313,SNR=111						
H11S3	**WAKE ISLAND Hy**	**28.95**	**121**	T	T	01 00 28.6	
	baz=313,slow=74,SNR=42						
H11S2	**WAKE ISLAND Hy**	**28.97**	**121**	T	T	01 00 29.8	
	baz=313,slow=74,SNR=45						
GYA	**Guiyang**	**30.54**	**261**	P	**P**	**00 29 45.1**	**-1.2**
GYA				pmax	pmax		
	comp=Z,19nm,0.7s						
GTA	**Gaotai**	**32.24**	**288**	*e*P	**P**	**00 30 00.6**	**-0.6**
GTA				pP	pP	00 30 19.6	-1.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TIXI	**Tiksi**	**35.97**	**354**	⇓*i*P	**P**	**00 30 32.1**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DGZ	**Jazzator, Alta**	**40.37**	**307**	⇑*i*P	**P**	**00 31 10.2**	**-0.1**
DGZ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZAA0	**Zalesovo Array**	**42.00**	**313**		**P**	**00 31 22.8**	**-0.5**
ZAA0				IAmb	IAmb	00 31 24.1	
	comp=Z,4.2nm,0.7s						
ZALV	**Zalesovo Beam**	**42.00**	**313**	P	**P**	**00 31 23.2**	**-0.1**
	comp=Z,4.3nm,0.5s,baz=97,slow=7.1,SNR=18						
	comp=Z,4.3nm,0.5s						
ZALV	**Zalesovo Beam**	**42.00**	**313**		**P**	**00 31 23.0**	**-0.3**
ZALV	**Zalesovo Beam**	**42.00**	**313**	*i* P	**P**	**00 31 23.6**	**+0.3**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.5s						
NRIK	**Noril'sk**	**43.71**	**336**	⇑*i*P	**P**	**00 31 37.3**	**+0.4**
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MK31	**Makanchi Array**	**44.04**	**303**	*c i*P	**P**	**00 31 40.2**	**+0.3**
MKAR	**Makanchi Array**	**44.04**	**303**	P	**P**	**00 31 40.0**	**+0.1**
	comp=Z,5.3nm,0.7s,baz=90,slow=9.8,SNR=43						
	comp=Z,5.3nm,0.7s						
MAKZ	**Makanchi**	**44.25**	**303**		**P**	**00 31 41.7**	**+0.1**
MAKZ	**Makanchi**	**44.25**	**303**	P	**P**	**00 31 41.7**	**+0.1**
KURK	**Kurchatov**	**45.95**	**309**		**P**	**00 31 54.7**	**-0.2**
KURK	**Kurchatov**	**45.95**	**309**	*c i*P	**P**	**00 31 54.8**	**-0.2**
KURK				pmax	pmax		
	comp=Z,16nm,1.0s						
KURBB	**Kurchatov Arra**	**46.02**	**308**	P	**P**	**00 31 55.5**	**0.0**
	comp=Z,9.7nm,0.6s,baz=85,slow=7.9,SNR=45						
	comp=Z,9.7nm,0.6s						
WUS	**Wushi**	**47.34**	**296**		**P**	**00 32 06.6**	**+0.5**
WUS				IAmb	IAmb	00 32 10.2	
	comp=Z,7.7nm,0.8s						
TARG	**Taragay, Kyrgy**	**48.22**	**297**		**P**	**00 32 14.1**	**+0.8**
TARG				IAmb	IAmb	00 32 18.1	
	comp=Z,6.9nm,0.9s						
TARG	**Taragay, Kyrgy**	**48.22**	**297**	P	**P**	**00 32 14.1**	**+0.8**
TARG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
E22K	**Anaktuvuk Pass**	**48.53**	**28**	P	**P**	**00 32 16.1**	**+1.3**
E22K				IAmb	IAmb	00 32 17.1	
	comp=Z,6.9nm,1.4s						
H22K	**Ishtalitna Cre**	**48.55**	**31**	P	**P**	**00 32 16.2**	**+1.2**
KDJ	**Kajisay**	**48.57**	**297**	P	**P**	**00 32 15.7**	**0.0**
KDJ				IAmb	IAmb	00 32 24.2	
	comp=Z,6.6nm,0.9s						
KDJ	**Kajisay**	**48.57**	**297**	P	**P**	**00 32 15.7**	**0.0**
KDJ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BOOM	**Boomskoye usch**	**49.36**	**298**	P	**P**	**00 32 22.6**	**+0.9**
BOOM				IAmb	IAmb	00 32 33.3	
	comp=Z,4.4nm,1.2s						
BOOM	**Boomskoye usch**	**49.36**	**298**	P	**P**	**00 32 22.6**	**+0.9**
BOOM				pmax	pmax		
	comp=Z,4.0nm,1.2s						
WRH	**Wood River Hil**	**49.92**	**32**	P	**P**	**00 32 25.6**	**+0.2**
H24K	**Noodor Dome**	**49.99**	**31**	P	**P**	**00 32 26.8**	**+0.8**
COLA	**College**	**50.02**	**32**	⇑*i*P	**P**	**00 32 26.2**	**+0.1**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
COEN	**Coen**	**50.02**	**177**	P	**P**	**00 32 26.7**	**0.0**
COEN				IAmb	IAmb	00 32 27.6	
	comp=Z,6.7nm,0.7s						
KSH	**Kashi**	**50.19**	**294**	P	**P**	**00 32 31.9**	**+3.9**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AAK	**Ala-Archa**	**50.34**	**299**	P	**P**	**00 32 29.2**	**+0.1**
AAK	**Ala-Archa**	**50.34**	**299**	⇑*i*P	**P**	**00 32 32.0**	**+2.8**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
IL31		**50.43**	**32**	P	**P**	**00 32 29.9**	**+0.7**
IL31				IAmb	IAmb	00 32 30.9	
	comp=Z,2.7nm,0.7s						
ILAR	**Eielson Array**	**50.43**	**32**	P	**P**	**00 32 30.2**	**+0.9**
	comp=Z,2.2nm,0.7s,baz=268,slow=5.9,SNR=36						
	comp=Z,2.2nm,0.7s						
ILAR	**Eielson Array**	**50.43**	**32**	P	**P**	**00 32 29.7**	**+0.4**
BVAR	**Borovoye Array**	**50.66**	**313**	P	**P**	**00 32 31.1**	**-0.1**
	comp=Z,2.3nm,0.5s,baz=73,slow=6.9,SNR=14						
	comp=Z,2.3nm,0.5s						
BORK	**Borovoye**	**50.69**	**313**		**P**	**00 32 31.1**	**-0.3**
BORK				IAmb	IAmb	00 32 36.0	
	comp=Z,10.0nm,1.2s						
BORK	**Borovoye**	**50.69**	**313**	⇑*i*P	**P**	**00 32 31.4**	**0.0**
BORK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SCRK	**Sand Creek**	**51.74**	**33**	P	**P**	**00 32 39.5**	**+0.3**
SCRK				IAmb	IAmb	00 32 57.0	
	comp=Z,7.8nm,1.5s						
KNRA	**Kununurra**	**52.90**	**194**	P	**P**	**00 32 47.6**	**-0.5**
KK31	**Karatay Array**	**53.01**	**300**		**P**	**00 32 48.8**	**0.0**
KK31				IAmb	IAmb	00 32 50.0	
	comp=Z,3.8nm,0.9s						
KK31	**Karatay Array**	**53.01**	**300**	P	**P**	**00 32 48.8**	**0.0**
KK31				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KKAR	**Karatay Array**	**53.01**	**300**		**P**	**00 32 49.4**	**+0.6**
KKAR	**Karatay Array**	**53.01**	**300**	P	**P**	**00 32 49.4**	**+0.6**
MANEM	**Manem**	**54.02**	**293**		**P**	**00 32 56.7**	**0.0**
MANEM				IAmb	IAmb	00 33 20.0	
	comp=Z,10nm,0.9s						
EPYK	**Eagle Plains**	**54.46**	**29**	P	**P**	**00 33 00.4**	**+1.3**
EPYK				IAmb	IAmb	00 33 01.5	
	comp=Z,6.8nm,0.7s						
GAR	**Garm**	**54.51**	**296**		**P**	**00 33 00.1**	**+0.2**
GAR				IAmb	IAmb	00 33 04.8	
	comp=Z,6.6nm,0.9s						
SVE	**Sverdlovsk**	**55.33**	**319**	*e*P	**P**	**00 33 06.1**	**+0.7**
CHGR	**Chuyangaron**	**55.47**	**296**		**P**	**00 33 06.3**	**-0.5**
CHGR	**Chuyangaron**	**55.47**	**296**	P	**P**	**00 33 06.4**	**-0.5**
CHGR				pmax	pmax		
	comp=Z,14nm,0.8s						
FITZ	**Fitzroy Crossi**	**55.93**	**197**	P	**P**	**00 33 09.5**	**-0.6**
WB0	**Warramunga Arr**	**56.06**	**187**		**P**	**00 33 10.2**	**-0.8**
WRAB	**Tennant Creek**	**56.23**	**187**	⇑*i*P	**P**	**00 33 11.8**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WRA	**Warramunga Arr**	**56.24**	**187**	P	**P**	**00 33 11.2**	**-1.1**
	comp=Z,5.9nm,0.6s,baz=346,slow=8.0,SNR=50						
	comp=Z,5.9nm,0.6s						
WRA	**Warramunga Arr**	**56.24**	**187**	P	**P**	**00 33 11.0**	**-1.3**
WRA	**Warramunga Arr**	**56.24**	**187**	*i* P	**P**	**00 33 11.5**	**-0.8**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
SHAA	**Shahritus**	**56.64**	**295**		**P**	**00 33 15.8**	**+0.6**
SHAA				IAmb	IAmb	00 33 20.7	
	comp=Z,13nm,0.9s						
ARTI	**Arti**	**56.65**	**319**		**P**	**00 33 14.5**	**-0.3**
ARTI	**Arti**	**56.65**	**319**	*d i*P	**P**	**00 33 14.7**	**-0.1**
ARTI						00 34 09.1	
ARTI				S	**S**	**00 41 04.8**	**+4.4**
ARTI				SS	**SS**	**00 44 52.6**	**+4.0**
ARTI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
AB31	**Akbulak array**	**57.99**	**310**		**P**	**00 33 24.1**	**-0.2**
AB31				IAmb	IAmb	00 33 31.0	
	comp=Z,2.9nm,0.6s						
ABKAR	**Akbulak array**	**57.99**	**310**		**P**	**00 33 24.2**	**-0.1**
AS31	**Alice Springs**	**59.97**	**187**		**P**	**00 33 37.7**	**-0.5**
ASAR	**Alice Springs**	**59.97**	**187**	P	**P**	**00 33 38.0**	**-0.3**
	comp=Z,3.7nm,0.8s,baz=11,slow=6.6,SNR=30						
	comp=Z,3.7nm,0.8s						
ASAR	**Alice Springs**	**59.97**	**187**		**P**	**00 33 37.7**	**-0.6**
ASAR	**Alice Springs**	**59.97**	**187**	P	**P**	**00 33 37.7**	**-0.6**
MBWA	**Marble Bar**	**60.48**	**203**	P	**P**	**00 33 40.6**	**-1.1**
BELG	**Belogornoye**	**63.96**	**317**	⇑*i*P	**P**	**00 34 05.1**	**+0.4**
BELG				pmax	pmax		
	comp=Z,17nm,0.9s						
ARCES	**ARCESS Array B**	**64.50**	**339**	P	**P**	**00 34 08.4**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=60,slow=4.8,SNR=4.0						
	comp=Z,0.7nm,0.5s						
YKA	**Yellowknife Ar**	**64.74**	**30**	P	**P**	**00 34 10.3**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=297,slow=7.7,SNR=3.7						
	comp=Z,0.3nm,0.6s						
FORT	**Forrest**	**67.76**	**192**	P	**P**	**00 34 29.0**	**-0.2**
FORT				IAmb	IAmb	00 34 29.8	
	comp=Z,7.8nm,0.7s						
STKA	**Stephens Creek**	**67.81**	**179**	P	**P**	**00 34 29.6**	**+0.1**
	comp=Z,1.6nm,0.5s,baz=359,slow=8.4,SNR=4.2						
	comp=Z,1.6nm,0.5s						
STKA	**Stephens Creek**	**67.81**	**179**	P	**P**	**00 34 29.4**	**-0.1**
STKA				IAmb	IAmb	00 34 37.4	
	comp=Z,11nm,0.8s						
FIA1	**FINESS Array S**	**69.21**	**332**	P	**P**	**00 34 37.4**	**-0.6**
FINES	**FINESS Array B**	**69.21**	**332**	P	**P**	**00 34 37.6**	**-0.3**
	comp=Z,2.6nm,0.6s,baz=58,slow=5.9,SNR=12						
	comp=Z,2.6nm,0.6s						
FINES	**FINESS Array B**	**69.21**	**332**	P	**P**	**00 34 37.8**	**-0.2**
FINES	**FINESS Array B**	**69.21**	**332**	P	**P**	**00 34 37.8**	**-0.2**
KBZ	**Khabaz**	**70.95**	**311**	P	**P**	**00 34 49.8**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=334,slow=4.7,SNR=5.0						
	comp=Z,1.1nm,0.7s						
KBZ	**Khabaz**	**70.95**	**311**	⇓*i*P	**P**	**00 34 49.6**	**+0.7**
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KIV	**Kislovodsk**	**70.96**	**311**	P	**P**	**00 34 49.3**	**+0.2**
KIV				IAmb	IAmb	00 34 50.9	
	comp=Z,5.1nm,0.8s						
KIV	**Kislovodsk**	**70.96**	**311**	*e*P	**P**	**00 34 49.4**	**+0.2**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
NC405	**NORSAR Array S**	**74.44**	**337**	P	**P**	**00 35 09.7**	**+0.3**
NC405				IAmb	IAmb	00 35 21.4	
	comp=Z,14nm,1.3s						
HFS	**Hagfors**	**74.53**	**336**	P	**P**	**00 35 09.6**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=52,slow=5.7,SNR=1.3						
	comp=Z,1.4nm,0.7s						
AKASG	**Malin Array Be**	**74.54**	**322**	P	**P**	**00 35 09.7**	**-0.3**
	comp=Z,1.3nm,0.5s,baz=48,slow=6.0,SNR=5.8						
	comp=Z,1.3nm,0.5s						
NB2	**NORSAR Subarra**	**74.65**	**337**	P	**P**	**00 35 10.3**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=40,slow=6.2						
NOA	**NORSAR Array B**	**74.65**	**337**	P	**P**	**00 35 10.9**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=52,slow=6.7,SNR=5.6						
	comp=Z,1.3nm,0.7s						
BURAR	**Bucovina Array**	**78.54**	**321**	P	**P**	**00 35 32.6**	**-0.2**
PDAR	**Pinedale Array**	**78.60**	**45**	P	**P**	**00 35 34.5**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=294,slow=1.9,SNR=4.4						
	comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	**78.60**	**45**	P	**P**	**00 35 33.5**	**0.0**
BR131	**Keskin Array S**	**78.92**	**311**	⇓*i*P	**P**	**00 35 35.1**	**0.0**
BRTR	**Keskin Array B**	**78.92**	**311**	P	**P**	**00 35 35.4**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=106,slow=3.1,SNR=4.6						
	comp=Z,0.5nm,0.6s						
BRTR	**Keskin Array B**	**78.92**	**311**	P	**P**	**00 35 34.9**	**-0.2**
BRTR	**Keskin Array B**	**78.92**	**311**	*ce*P	**P**	**00 35 35.2**	**+0.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
STHS	**Stebnicka Huta**	**79.24**	**325**	*e*P	**P**	**00 35 35.2**	**-1.3**
STHS	**Stebnicka Huta**	**79.24**	**325**	*e*P	**P**	**00 35 35.2**	**-1.3**
RAYN	**Ar Rayn**	**80.41**	**292**	P	**P**	**00 35 42.7**	**-0.7**
RAYN				IAmb	IAmb	00 35 44.5	
	comp=Z,4.7nm,1.3s						
RAYN	**Ar Rayn**	**80.41**	**292**	P	**P**	**00 35 42.7**	**-0.7**
RAYN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
TXAR	**Lajitas Array**	**91.03**	**52**	P	**P**	**00 36 36.9**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=284,slow=2.4,SNR=8.1						
	comp=Z,0.6nm,0.7s						
TXAR	**Lajitas Array**	**91.03**	**52**	P	**P**	**00 36 36.2**	**+0.2**
TXAR	**Lajitas Array**	**91.03**	**52**	P	**P**	**00 36 36.2**	**+0.2**
H03N2	**Juan Fernandez**	**147.51**	**97**	T	T	03 28 38.5	
	baz=291,slow=76,SNR=30						
H03N3	**Juan Fernandez**	**147.52**	**97**	T	T	03 28 47.5	
	baz=291,slow=76,SNR=30						
H03N1	**Juan Fernandez**	**147.53**	**97**	T	T	03 28 39.7	
	baz=291,slow=76,SNR=40						
LPAZ	**La Paz**	**147.56**	**60**	PKPbc	**PKPbc**	**00 43 17.0**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=343,slow=1.1,SNR=5.3						
LPAZ	**La Paz**	**147.56**	**60**	PKP2	**PKPbc**	**00 43 17.0**	**+0.6**

NOU ***19*** *00:29:38.3, 42.˚05S×174.˚47E, h11km, MLv4.0/12, Off E. Coast of S. Island, N.Z.*

WEL ***19*** *00:29:39.8±0.4, 42˚S±3˚×17˚4E±˚, h10km±2km, M3.2/16, ML3.3/17, MLv3.2/16, Error ellipse: s-maj=4.0km s-min=2.6km az=144.0, confirmed*

ISC 19 00:29:37.9±1.1**, 41.˚95S**±0.˚03×**174.˚28E**±0.˚03**, h11**km±8km**,**
n58,σ**1.˚02**/71**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WDFS	**Ward Fire Stat**	**0.16**	**320**	P	**Pb**	**00 29 42.0**	**-0.9**
CMWZ	**Cape Campbell**	**0.21**	**347**	P	**Pb**	**00 29 43.2**	**-0.5**
KEKS	**Kekerengu Vall**	**0.22**	**269**	P	**Pb**	**00 29 43.7**	**-0.2**
KEKS				S	**Sg**	**00 29 47.7**	**+2.0**
SDNS	**Seddon**	**0.31**	**340**	P	**Pb**	**00 29 44.6**	**-0.8**
SDNS				S	**Sg**	**00 29 48.9**	**+0.7**
SEDS	**Seddon Fire St**	**0.32**	**332**	P	**Pg**	**00 29 44.3**	**0.0**
SEDS				S	**Sg**	**00 29 47.9**	**-0.6**
BSWZ	**Blackbirch Sta**	**0.38**	**308**	P	**Pg**	**00 29 44.9**	**-0.6**
TUWZ	**Tuamarina**	**0.58**	**334**	P	**Pb**	**00 29 49.5**	**-0.5**
TUWZ				S	**Sg**	**00 29 56.0**	**-0.8**
BHW	**Baring Head**	**0.70**	**39**	P	**Pn**	**00 29 54.4**	**+0.7**
BHW				S	**Sn**	**00 30 05.9**	**+1.4**
SNZO	**South Karori**	**0.72**	**27**	P	**Pn**	**00 29 53.0**	**-0.9**
SNZO	**South Karori**	**0.72**	**27**	S	**Sn**	**00 30 04.1**	**-0.7**
KHZ	**Kahutara**	**0.72**	**230**	P	**Pn**	**00 29 54.3**	**+0.4**
KHZ	**Kahutara**	**0.72**	**230**	S	**Sn**	**00 30 04.7**	**-0.2**
KHZ	**Kahutara**	**0.72**	**230**	P	**Pn**	**00 29 54.4**	**+0.5**
TCW	**Tory Channel**	**0.74**	**360**	P	**Pb**	**00 29 52.2**	**-0.5**
TCW				S	**Sg**	**00 30 01.8**	**-0.1**
WEL	**Wellington**	**0.76**	**29**	P	**Pn**	**00 29 54.6**	**+0.1**
WEL				S	**Sn**	**00 30 07.1**	**+1.1**
MSWZ	**Moikau Station**	**0.90**	**54**	P	**Pn**	**00 29 57.9**	**+1.4**
MSWZ				S	**Sn**	**00 30 12.3**	**+2.8**
NNZ	**Nelson**	**1.00**	**317**	P	**Pb**	**00 29 55.9**	**-1.2**
CAW	**Cannon Point**	**1.03**	**35**	P	**Pn**	**00 29 59.5**	**+1.2**
CAW				S	**Sn**	**00 30 14.4**	**+1.8**
PAWZ	**Paruwai Farm**	**1.03**	**57**	P	**Pn**	**00 29 59.5**	**+1.2**
THZ	**Tophouse**	**1.04**	**280**	P	**Pb**	**00 29 57.6**	**-0.3**
THZ				S	**Sb**	**00 30 10.5**	**-1.2**
DUWZ	**D'Urville Isla**	**1.18**	**347**	P	**Pb**	**00 29 59.5**	**-0.8**
DUWZ				S	**Sb**	**00 30 14.8**	**-0.8**
KIW	**Kapiti Island**	**1.19**	**24**	P	**Pg**	**00 30 01.4**	**+0.6**
KIW				S	**Sn**	**00 30 18.0**	**+1.4**
TRWZ	**Traveller**	**1.19**	**63**	P	**Pg**	**00 30 01.5**	**+0.7**
MTW	**Mount Morrison**	**1.21**	**50**	P	**Pg**	**00 30 01.8**	**+0.6**
MRNZ	**Matariki Terra**	**1.27**	**295**	P	**Pb**	**00 30 01.5**	**-0.2**
OGWZ	**Otaki Gorge**	**1.32**	**31**	P	**Pg**	**00 30 03.3**	**+0.1**
TKNZ	**Takaka Hill**	**1.35**	**312**	P	**Pb**	**00 30 02.6**	**-0.6**
TKNZ				S	**Sb**	**00 30 18.9**	**-1.6**
GVZ	**Greta Valley S**	**1.37**	**222**	P	**Pg**	**00 30 04.3**	**+0.1**
HOWZ	**Holdsworth Sta**	**1.41**	**42**	P	**Pg**	**00 30 04.2**	**-0.7**
TMWZ	**Te Maipa**	**1.48**	**56**	P	**Pg**	**00 30 05.2**	**-1.0**
MRZ	**Mangatainoka R**	**1.62**	**38**	P	**Pb**	**00 30 07.2**	**-0.6**
LTZ	**Lake Taylor**	**1.70**	**240**	P	**Pb**	**00 30 08.5**	**-0.7**
AMCZ	**Amberley**	**1.71**	**224**	P	**Pb**	**00 30 08.5**	**-0.8**
QRZ	**Quartz Range**	**1.73**	**310**	P	**Pb**	**00 30 09.1**	**-0.6**
QRZ	**Quartz Range**	**1.73**	**310**	P	**Pb**	**00 30 09.1**	**-0.6**
DSZ	**Denniston Nort**	**1.86**	**276**	P	**Pb**	**00 30 11.0**	**-0.9**
PRWZ	**Pori Road**	**1.89**	**43**	P	**Pb**	**00 30 10.7**	**-1.7**
POWZ	**Post Office Ro**	**1.92**	**36**	P	**Pb**	**00 30 11.6**	**-1.3**
BFZ	**Birch Farm**	**1.95**	**50**	P	**Pb**	**00 30 11.5**	**-1.9**
OKCZ	**Okains Bay**	**1.98**	**206**	P	**Pb**	**00 30 12.4**	**-1.6**
MQZ	**McQueen's Vall**	**2.12**	**214**	P	**Pn**	**00 30 13.0**	**-0.2**
AKCZ	**Akaroa Harbour**	**2.17**	**207**	P	**Pn**	**00 30 14.9**	**+1.0**
INZ	**Inchbonnie**	**2.24**	**249**	P	**Pb**	**00 30 17.9**	**-0.4**
WAZ	**Wanganui**	**2.26**	**14**	P	**Pb**	**00 30 19.1**	**+0.5**
TSZ	**Takapari Road**	**2.28**	**34**	P	**Pn**	**00 30 16.0**	**+0.5**
RACZ	**Rakaia**	**2.37**	**221**	P	**Pn**	**00 30 17.4**	**+0.8**
LREZ	**Lake Rotokare**	**2.49**	**2**	P	**Pb**	**00 30 22.3**	**-0.3**
PNHZ	**Pukenui**	**2.50**	**36**	P	**Pn**	**00 30 18.7**	**+0.2**
MHCZ	**Mount Hutt**	**2.54**	**231**	P	**Pn**	**00 30 19.3**	**+0.2**
KHEZ	**Kahui Hut**	**2.66**	**356**	P	**Pb**	**00 30 24.6**	**-1.0**
KHEZ	**Kahui Hut**	**2.66**	**356**	S	**Sb**	**00 30 57.0**	**-1.3**
WACZ	**Wakanui South**	**2.68**	**221**	P	**Pn**	**00 30 21.3**	**+0.4**
KAHZ	**Kahuranaki**	**2.92**	**43**	P	**Pn**	**00 30 24.0**	**-0.2**
RPZ	**Rata Peaks**	**2.95**	**232**	P	**Pn**	**00 30 25.0**	**+0.3**
BKZ	**Black Stump Fm**	**3.25**	**32**	P	**Pn**	**00 30 28.5**	**-0.4**
HIZ	**Hauiti**	**3.46**	**8**	P	**Pn**	**00 30 33.7**	**+2.0**
ODZ	**Otahua Downs**	**4.07**	**219**	P	**Pn**	**00 30 40.4**	**+0.4**
JCZ	**Jackson Bay**	**4.55**	**240**	P	**Pn**	**00 30 48.7**	**+2.0**

PDG ***19*** *00:30:54.8±0.1, 43.˚23N×18.˚00E, h14km, ML2.8/13, Error ellipse: s-maj=0.1km s-min=0.1km az=90.0*

BEO ***19*** *00:30:55.6±0.3, 43.˚21N×18.˚00E, h13km±2km, ML2.4/11*

RHSSO ***19*** *00:30:56.1±0.5, 43.˚18N×18.˚05E, h8km, ML2.5/3*

VIE ***19*** *00:30:58.2±1.8, 43.˚37N×18.˚02E, h10km, mb2.5/2, ml2.2/3, Error ellipse: s-maj=27.2km s-min=12.9km az=53.0 61 km SSW of Sarajevo*

ISC 19 00:30:55.4±1.0**, 43.˚21N**±0.˚02×**18.˚01E**±0.˚02**, h9**km±8km**,**
n57,σ**1.˚18**/104**, 2C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	**Ston**	**0.41**	**214**	*e*Pg	**Pg**	**00 31 02.9**	**-0.5**
STON				Sg	**Sg**	**00 31 09.4**	**+0.6**
STON	**Ston**	**0.41**	**214**	*e*Pg	**Pg**	**00 31 03.1**	**-0.3**
STON				*e*Sg	**Sg**	**00 31 09.9**	**+1.1**
KLINJ	**Klinje**	**0.42**	**96**	*e*Pg	**Pg**	**00 31 03.4**	**-0.3**
KLINJ				*e*Sg	**Sg**	**00 31 10.1**	**+0.9**
BRY	**Bratogost**	**0.50**	**129**	*e*Pg	**Pg**	**00 31 04.6**	**-0.4**
BRY				*i* Sg	**Sg**	**00 31 12.8**	**+1.2**
DBRK	**Dubrovnik**	**0.55**	**170**	*e*Pg	**Pg**	**00 31 05.8**	**-0.2**
DBRK				Sg	**Sg**	**00 31 14.1**	**+0.8**
TREB	**Trebinje**	**0.55**	**153**	⇑*i*Pg	**Pg**	**00 31 05.3**	**-0.8**
TREB				*e*Sg	**Sg**	**00 31 13.9**	**+0.5**
TREB	**Trebinje**	**0.55**	**153**	*e*Pg	**Pg**	**00 31 05.4**	**-0.7**
TREB				*e*Sg	**Sg**	**00 31 15.2**	**+1.8**
UPM	**Unac-Piva**	**0.65**	**91**	*e*Pg	**Pg**	**00 31 07.3**	**-0.7**
UPM				*i* Sg	**Sg**	**00 31 17.8**	**+1.2**
RICI	**Ricice**	**0.70**	**294**	*e*Pg	**Pg**	**00 31 07.9**	**-1.0**
RICI				Sg	**Sg**	**00 31 17.7**	**-0.3**
MAKA	**Makarska**	**0.73**	**276**	*e*Pg	**Pg**	**00 31 08.2**	**-1.2**
MAKA				Sg	**Sg**	**00 31 19.3**	**+0.4**
NKME	**Niksic**	**0.82**	**122**	*e*Pg	**Pg**	**00 31 10.4**	**-0.8**
NKME				*e*Sg	**Sb**	**00 31 23.7**	**+0.7**
HCY	**Herceg Novi**	**0.84**	**155**	*e*Pg	**Pg**	**00 31 10.8**	**-0.8**
HCY				*i* Sg	**Sb**	**00 31 24.6**	**+1.0**
LSTV	**Lastovo**	**0.93**	**242**	*e*Pg	**Pb**	**00 31 11.6**	**-2.2**
LSTV				Sg	**Sg**	**00 31 25.0**	**-0.5**
CEME	**Cevo**	**0.94**	**135**	*e*Pg	**Pg**	**00 31 12.6**	**-0.9**
CEME				*e*Sg	**Sn**	**00 31 27.9**	**-0.5**
PLE	**Pljevlja**	**1.01**	**83**	*e*Pg	**Pb**	**00 31 14.7**	**-0.4**
PLE	**Pljevlja**	**1.01**	**83**	*e*Pg	**Pb**	**00 31 13.7**	**-1.4**
PLE				*i* Sg	**Sn**	**00 31 29.8**	**-0.5**
BUM	**Brajici-Budva**	**1.12**	**144**	⇑*i*Pg	**Pb**	**00 31 15.9**	**-1.0**
BUM				*i* Sg	**Sn**	**00 31 33.8**	**+1.0**
HVAR	**Hvar**	**1.14**	**269**	*e*Pg	**Pb**	**00 31 15.4**	**-1.8**
HVAR				Sg	**Sb**	**00 31 31.4**	**-0.8**
KOME	**Kolasin**	**1.16**	**108**	*e*Pg	**Pb**	**00 31 16.6**	**-1.0**
KOME	**Kolasin**	**1.16**	**108**	*e*Pg	**Pb**	**00 31 16.7**	**-0.9**
KOME				*e*Sg	**Sn**	**00 31 35.2**	**+1.3**
PDG	**Podgorica**	**1.20**	**130**	*e*Pg	**Pn**	**00 31 17.3**	**-1.0**
PDG				*e*Sg	**Sg**	**00 31 35.5**	**+1.4**
PDG	**Podgorica**	**1.20**	**130**	*e*Pg	**Pn**	**00 31 17.5**	**-0.8**
PDG				*i* Sg	**Sg**	**00 31 36.7**	**+2.6**
BBLS	**Lazi&#263i**	**1.21**	**57**	*e*Pg	**Pn**	**00 31 17.7**	**-0.8**
BBLS				*e*Sg	**Sn**	**00 31 35.0**	**0.0**
DRME	**Dracevica, Mon**	**1.34**	**139**	*e*Pg	**Pn**	**00 31 20.1**	**-0.2**
DRME	**Dracevica, Mon**	**1.34**	**139**	*e*Pg	**Pn**	**00 31 20.0**	**-0.2**
DRME				*e*Sg	**Sg**	**00 31 41.0**	**+2.5**
KIJV	**Kijevo**	**1.41**	**305**	*e*Pn	**Pb**	**00 31 21.8**	**0.0**
KIJV				Sn	**Sg**	**00 31 42.5**	**+1.8**
BEY	**Berane**	**1.42**	**103**	*e*Pg	**Pn**	**00 31 21.7**	**+0.3**
IVA	**Berane**	**1.42**	**103**	*e*Pg	**Pn**	**00 31 21.4**	**0.0**
IVA				*i* Sg	**Sg**	**00 31 42.6**	**+1.5**
SJES	**Sjenica**	**1.43**	**87**	*e*Pg	**Pn**	**00 31 22.1**	**+0.4**
SJES				*e*Sg	**Sg**	**00 31 41.8**	**+0.3**
ULC	**Ulcinj**	**1.54**	**143**	*e*Pg	**Pn**	**00 31 23.3**	**+0.2**
ULC				*i* Sg	**Sg**	**00 31 45.8**	**+0.8**
PVY	**Plav**	**1.56**	**113**	*e*Pg	**Pb**	**00 31 24.9**	**+0.5**
PVY	**Plav**	**1.56**	**113**	*e*Pg	**Pn**	**00 31 23.4**	**0.0**
PVY				*i* Sg	**Sg**	**00 31 46.0**	**+0.5**
IVAS	**Ivanjica**	**1.60**	**76**	*e*Pg	**Pn**	**00 31 23.1**	**-0.8**
IVAS				*e*Sg	**Sb**	**00 31 45.4**	**-0.1**
BLY	**Banja Luka**	**1.65**	**339**	*e*Pn	**Pn**	**00 31 25.2**	**+0.7**
BLY				*e*Sn	**Sg**	**00 31 48.3**	**-0.1**
BLY	**Banja Luka**	**1.65**	**339**	*e*Pg	**Pb**	**00 31 26.0**	**+0.1**
BLY				*e*Sg	**Sg**	**00 31 50.6**	**+2.2**
DIVS	**Divibare**	**1.69**	**58**	*e*Pg	**Pn**	**00 31 24.5**	**-0.6**
DIVS				*e*Sg	**Sg**	**00 31 49.8**	**+0.2**
TEKS	**Tekeris**	**1.73**	**39**	*e*Pn	**Pn**	**00 31 24.4**	**-1.2**
TEKS				*e*Sn	**Sn**	**00 31 47.9**	**+0.1**
ZIRJ	**Zirje**	**1.78**	**285**	*e*Pn	**Pn**	**00 31 26.6**	**+0.3**
ZIRJ				Sn	**Sb**	**00 31 50.4**	**-0.2**
MORI	**Morici**	**1.80**	**292**	*e*Pn	**Pn**	**00 31 27.1**	**+0.5**
MORI				Sn	**Sb**	**00 31 51.8**	**+0.8**
TRUS	**Trudelj**	**2.01**	**59**	*e*Pn	**Pn**	**00 31 29.5**	**0.0**
GRUS	**Gruza**	**2.08**	**70**	*e*Pn	**Pn**	**00 31 30.8**	**+0.4**
GOCS	**Kraljevo Serbi**	**2.12**	**80**	*e*Pn	**Pn**	**00 31 30.8**	**-0.2**
GOCS				*e*Sn	**Sn**	**00 31 56.0**	**-1.4**
SELS	**Selova**	**2.27**	**89**	*e*Pn	**Pn**	**00 31 33.4**	**+0.3**
SELS				*e*Sn	**Sn**	**00 32 02.8**	**+1.6**
DUGI	**Dugi Otok**	**2.28**	**291**	*e*Pn	**Pn**	**00 31 34.9**	**+1.7**
DUGI				Sn	**Sb**	**00 32 03.7**	**-1.3**
FRGS	**Fruska Gora**	**2.34**	**33**	*e*Pn	**Pn**	**00 31 33.1**	**-0.9**
AVAS	**Avala Beograd**	**2.34**	**50**	*e*Pn	**Pn**	**00 31 32.8**	**-1.2**
PLIT	**Plitvice**	**2.40**	**315**	*e*Pn	**Pn**	**00 31 36.3**	**+1.5**
PLIT				Sn	**Sn**	**00 32 06.0**	**+1.7**
VIRC	**Vir**	**2.40**	**298**	*e*Pn	**Pn**	**00 31 36.5**	**+1.7**
VIRC				Sn	**Sb**	**00 32 06.3**	**-2.0**
NVLJ	**Novalja**	**2.64**	**302**	*e*Pn	**Pn**	**00 31 39.9**	**+1.7**
NVLJ				Sn	**Sn**	**00 32 12.3**	**+2.1**
BOVS	**Bovan**	**2.72**	**80**	*e*Pn	**Pn**	**00 31 39.5**	**+0.2**
RABC	**Rab**	**2.79**	**305**	*e*Pn	**Pn**	**00 31 41.7**	**+1.5**
RABC				Sn	**Sn**	**00 32 15.4**	**+1.4**
BARS	**Barje**	**2.82**	**97**	*e*Pn	**Pn**	**00 31 41.5**	**+0.9**
BARS				*e*Sn	**Sn**	**00 32 14.7**	**+0.1**
MORH	**Mrgy, Hungar**	**3.04**	**8**	*e*Pn	**Pn**	**00 31 44.9**	**+1.4**
MORH				*e*Sn	**Sn**	**00 32 21.2**	**+1.2**
ZAPS	**Zavoj**	**3.38**	**87**	*e*Pn	**Pn**	**00 31 48.9**	**+0.6**
ZAPS				*e*Sn	**Sn**	**00 32 25.8**	**-2.7**
SOKA	**Soboth**	**4.06**	**330**	*e*Pn	**Pn**	**00 31 58.2**	**+0.5**
	0.9nm,0.3s						
SOKA				*e*Sn	**Sn**	**00 32 44.9**	**-0.5**
	1.5nm,0.5s						
OBKA	**Obir**	**4.11**	**324**	*i* Pn	**Pn**	**00 31 59.5**	**+1.1**
	2.4nm,0.5s						
OBKA				*e*Sn	**Sn**	**00 32 43.2**	**-3.5**
	3.0nm,0.6s						
ARSA	**Arzberg**	**4.40**	**337**	*i* Pn	**Pn**	**00 32 04.3**	**+1.9**
	1.4nm,0.3s						
ARSA				*e*Sn	**Sn**	**00 32 55.6**	**+1.9**

*IDC **19** 00:33:03.5±0.7, 1°.59S×67°.68E, h0^{km}, mb4.2/15, mbtmp4.2/15, MS3.7/38, Error ellipse: s-maj=20.0km s-min=17.5km az=24.0*

*NEIC **19** 00:33:04.9±1.4, 1°.6S±0°.1×67°.80E±0°.09, h10^{km}±1^{km}, mb4.7/52, Error ellipse: s-maj=19.9km s-min=13.5km az=159.0*

ISC 19 00:33:05.6±0.5**, 1°.56S**±0°.09×**67°.73E**±0°.07**, h17^{km}, n125, σ1^{s}.13**/94**, mb4.6**/42**, MS3.7**/38**, 6C-1D, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAAM	Kaadhehdhoo	5.64	69	Pn	Pn	00 34 26.0	-2.8
MSEY	Mahe Island	12.62	256	Pn	Pn	00 36 03.5	-1.0
PALK	Pallekele	15.64	56	LR	LR	00 41 28.5	
	comp=Z,489nm,19.6s,baz=231,slow=32						
OPO	Ambohidratompo	26.30	229	LR	LR	00 46 44.6	
	comp=Z,209nm,18.6s,baz=194,slow=31						
ATD	Arta Tunnel	27.94	298	P	P	00 38 56.1	+0.6
ATD				IAmb	IAmb	00 38 59.7	
	comp=Z,19nm,1.3s						
FURI	Furi	30.76	290	LR	LR	00 50 28.7	
	comp=Z,111nm,19.7s,baz=138,slow=34						
FURI	Furi	30.76	290	P	P	00 39 20.7	-0.1
PSI	Prapat	31.48	82	LR	LR	00 50 02.9	
	comp=Z,174nm,20.4s,baz=233,slow=32						
LODK	Lodwar	32.73	279		P	00 39 38.3	+0.4
BRDH	Bariadhala	33.52	43	LR	LR	00 55 06.9	
	comp=Z,232nm,18.3s,baz=194,slow=39						
NIL	Nilore	35.41	8	P	P	00 40 00.8	0.0
NIL				IAmb	IAmb	00 40 14.4	
	comp=Z,9.2nm,0.9s						
SHL	Shillong	35.69	39	P	P	00 40 02.9	-0.6
KBL	Kabul	35.93	2	P	P	00 40 05.9	+0.4
KBL				IAmb	IAmb	00 40 19.2	
	comp=Z,19nm,1.4s						
HRA	Herat	36.13	352		P	00 40 06.2	-1.0
CMAR	Chiang Mai Arr	36.58	56	P	P	00 40 12.9	+1.9
	comp=Z,1.2nm,0.3s,baz=239,slow=8.4,SNR=12						
CMAR				LR	LR	00 53 32.2	
	comp=Z,102nm,21.2s,baz=240,slow=34						
	comp=Z,1.2nm,0.3s						
CMAR	Chiang Mai Arr	36.58	56	P	P	00 40 10.8	-0.3
CHTO	Chiang Mai	36.76	55	P	P	00 40 12.0	-0.6
CHTO				IAmb	IAmb	00 40 26.2	
	comp=Z,10nm,1.0s						
MBAR	Mbarara	37.00	271	LR	LR	00 52 33.5	
	comp=Z,91nm,18.6s,baz=74,slow=32						
MBAR	Mbarara	37.00	271	P	P	00 40 14.6	-0.3
MBAR				IAmb	IAmb	00 40 33.0	
	comp=Z,16nm,1.5s						
LSA	Lhasa	38.30	34	P	P	00 40 25.9	-0.1
LSA				IAmb	IAmb	00 40 35.8	
	comp=Z,22nm,1.2s						
MANEM	Manem	39.08	5		P	00 40 32.3	+0.1
MANEM				IAmb	IAmb	00 40 45.6	
	comp=Z,47nm,1.3s						
GAR	Garm	40.43	3		P	00 40 43.3	0.0
GAR				IAmb	IAmb	00 40 55.9	
	comp=Z,29nm,1.2s						
DRK	Karamyk	41.01	5	P	P	00 40 48.5	+0.2
DRK				IAmb	IAmb	00 41 00.5	
	comp=Z,16nm,1.2s						
LSZ	Lusaka	41.32	249	LR	LR	00 56 04.5	
	comp=Z,281nm,19.4s,baz=91,slow=34						
LSZ	Lusaka	41.32	249		P	00 40 50.9	0.0
LSZ				IAmb	IAmb	00 40 53.3	
	comp=Z,29nm,1.4s						
KSH	Kashi	41.57	10	P	P	00 40 50.3	-2.4
KSH				pP	pP	00 40 56.3	-0.8
KSH				pmax	pmax		
	comp=Z,6.0nm,1.5s						
MATP	Matopo	42.64	241	LR	LR	00 55 41.5	
	comp=Z,103nm,18.4s,baz=52,slow=32						
PZH	PanZhiHua	43.07	47	P	P	00 41 06.6	+1.5
WUS	Wushi	43.82	13		P	00 41 11.1	+0.2
EIL	Elat	44.10	317	LR	LR	00 58 00.2	
	comp=Z,45nm,18.4s,baz=3.0,slow=34						
AAK	Ala-Archa	44.42	7		P	00 41 15.1	-0.6
AAK				IAmb	IAmb	00 41 19.3	
	comp=Z,13nm,1.5s						
BOOM	Boomskoye usch	44.47	9	P	P	00 41 15.6	-0.6
KK31	Karatay Array	44.53	3	P	P	00 41 16.1	-0.3
KKAR	Karatay Array	44.53	3	P	P	00 41 16.0	-0.5
KSANE	Kasane	44.80	246	P	P	00 41 18.8	-0.3
KSANE				IAmb	IAmb	00 41 20.7	
	comp=Z,18nm,1.5s						
MMAI	Mount Meron Ar	45.97	321	P	P	00 41 30.1	+2.0
	comp=Z,1.5nm,0.8s,baz=146,slow=10,SNR=2.2						
MMAI				LR	LR	00 59 49.5	
	comp=Z,52nm,18.3s,baz=114,slow=35						
	comp=Z,1.5nm,0.8s						
MARD	Mardin	46.04	330	P	P	00 41 29.0	+0.3
MARD				IAmb	IAmb	00 41 37.0	
	comp=Z,5.5nm,0.7s						
GURO	Guroymak-BITLI	46.41	332	P	P	00 41 31.3	-0.2
LBTB	Lobatse	46.85	237	LR	LR	00 58 36.0	
	comp=Z,131nm,19.5s,baz=62,slow=33						
GAZ	Gaziantep	47.81	327	P	P	00 41 42.2	-0.3
GAZ				IAmb	IAmb	00 41 50.5	
	comp=Z,8.6nm,1.2s						
KOPT	Kop Dagi	48.30	332	P	P	00 41 46.7	+0.3
KOPT				IAmb	IAmb	00 41 59.9	
	comp=Z,16nm,1.5s						
WMQ	Urumqi	48.59	19	*e*P	P	00 41 50.8	+2.4
WMQ				LR	LR		
	comp=Z,190nm,21.7s						
BOSA	Boshof	48.61	232	P	P	00 41 48.9	0.0
	comp=Z,3.5nm,0.9s,baz=63,slow=9.0,SNR=4.6						
BOSA				LR	LR	00 59 29.4	
	comp=Z,175nm,19.6s,baz=24,slow=33						
	comp=Z,3.5nm,0.9s						
BOSA	Boshof	48.61	232	P	P	00 41 48.8	-0.1
BOSA				IAmb	IAmb	00 41 54.8	
	comp=Z,10nm,1.1s						
ARPR	Arapgir-MALATY	48.64	329		P	00 41 49.2	+0.2
BNN	Bunyan	49.77	327		P	00 41 57.0	-0.6
BNN				IAmb	IAmb	00 42 05.7	
	comp=Z,10nm,1.1s						
MKAR	Makanchi Array	49.83	13	P	P	00 41 58.1	+0.4
	comp=Z,0.8nm,0.9s,baz=146,slow=2.4,SNR=4.5						
	comp=Z,0.8nm,0.9s						
MKAR	Makanchi Array	49.83	13	P	P	00 41 57.4	-0.3
KBZ	Khabaz	50.28	337	P	P	00 42 01.7	+0.6
	comp=Z,5.8nm,1.1s,baz=155,slow=2.7,SNR=7.9						
	comp=Z,5.8nm,1.1s						
TOKA	Tokat	50.51	329	P	P	00 42 02.0	-1.1
KIV	Kislovodsk	50.55	337	P	P	00 42 01.9	-1.4
KIV				IAmb	IAmb	00 42 27.4	
	comp=Z,15nm,1.3s						
ENH	Enshi	50.84	48	P	P	00 42 04.3	-1.3
AB31	Akbulak array	51.06	353	P	P	00 42 06.4	-0.5
ABKAR	Akbulak array	51.06	353	P	P	00 42 06.5	-0.4
BR131	Keskin Array S	51.59	327	P	P	00 42 10.5	-0.9
BR131				IAmb	IAmb	00 42 13.5	
	comp=Z,8.9nm,1.1s						
BRTR	Keskin Array B	51.59	327	P	P	00 42 11.6	+0.2
	comp=Z,3.7nm,1.1s,baz=144,slow=8.6,SNR=17						
	comp=Z,3.7nm,1.1s						
BRTR	Keskin Array B	51.59	327	P	P	00 42 10.7	-0.7
ELL	Elmali	51.82	321	P	P	00 42 12.7	-0.3
ELL				IAmb	IAmb	00 42 33.4	
	comp=Z,12nm,1.2s						
TSUM	Tsumeb	52.10	247	LR	LR	01 02 19.5	
	comp=Z,186nm,19.3s,baz=57,slow=34						
ANTO	Ankara	52.16	326	P	P	00 42 15.1	-0.3
ANTO				IAmb	IAmb	00 42 19.4	
	comp=Z,15nm,1.4s						
XAN	Xi'an	52.44	44	⇑P	P	00 42 19.8	+2.2
XAN				pP	pwP	00 42 28.8	+2.2
XAN				pmax	pmax		
	comp=Z,15nm,1.6s						
KURBB	Kurchatov Arra	52.80	9	LR	LR	01 03 56.8	
	comp=Z,79nm,21.3s,baz=174,slow=35						
KURK	Kurchatov	52.90	9	P	P	00 42 20.2	-0.4
MDUB	Mudurnu	53.47	326	P	P	00 42 23.9	-1.2
BORK	Borovoye	54.45	2	P	P	00 42 31.9	-0.1
BORK				IAmb	IAmb	00 42 43.9	
	comp=Z,8.4nm,1.4s						
WHN	Wuhan	54.64	50	P	P	00 42 35.8	+2.0
BATI	Baumata	56.22	101	LR	LR	01 05 51.3	
	comp=Z,67nm,21.0s,baz=242,slow=35						
BTO	Baotou	56.94	38	*e*P	P	00 42 50.1	-0.1
BTO				pP	pP	00 42 54.5	-0.1
BTO				sP	sP	00 42 57.3	+1.0
BTO				pmax	pmax		
	comp=Z,12nm,0.7s						
BTO				pmax	pmax		
	comp=Z,260nm,4.2s						
ZAA0	Zalesovo Array	57.11	12	P	P	00 42 50.4	-0.6
ZALV	Zalesovo Beam	57.11	12	P	P	00 42 50.8	-0.2
	comp=Z,0.8nm,0.3s,baz=204,slow=7.0,SNR=7.8						
	comp=Z,0.8nm,0.3s						
ZALV	Zalesovo Beam	57.11	12	P	P	00 42 50.5	-0.6
EDA	Edea	57.79	275	P	P	00 42 55.9	-0.7
HHC	Hu-ho-hao-te	58.03	38	*e*P	P	00 42 59.9	+1.9
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HNS	HongShan	58.21	43	⇓P	P	00 43 01.8	+2.7
ARTI	Arti	58.26	354	LR	LR	01 08 15.0	
	comp=Z,49nm,18.5s,baz=180,slow=36						
DAV	Davao City (W)	58.35	81	LR	LR	01 08 53.2	
	comp=Z,49nm,18.7s,baz=309,slow=37						
NJ2	Nanjing	58.77	51	*e*P	P	00 43 03.0	-0.1
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.9s						
FITZ	Fitzroy Crossi	59.11	110	LR	LR	01 07 07.1	
	comp=Z,39nm,18.6s,baz=328,slow=35						
SONM	Songino Array	59.61	29	P	P	00 43 10.3	+1.5
	comp=Z,4.9nm,1.1s,baz=220,slow=6.2,SNR=22						
	comp=Z,4.9nm,1.1s						
SONM	Songino Array	59.61	29	P	P	00 43 08.4	-0.4
ULN	Ulaanbaatar	59.95	30	P	P	00 43 11.7	+0.6
ULN				IAmb	IAmb	00 43 31.7	
	comp=Z,8.4nm,1.4s						
AKASG	Malin Array Be	61.54	333	P	P	00 43 20.4	-1.3
	comp=Z,0.2nm,0.3s,baz=135,slow=5.6,SNR=6.2						
	comp=Z,0.2nm,0.3s						
KIRV	Kirov	61.70	349	LR	LR	01 09 58.3	
	comp=Z,48nm,20.9s,baz=210,slow=36						
STHS	Stebnicka Huta	64.59	328	*e*P	P	00 43 44.3	+2.2
JOW	Kunigami	64.72	59	LR	LR	01 10 37.3	
	comp=Z,36nm,21.1s,baz=130,slow=35						
MAW	Mawson	66.00	182	LR	LR	01 06 29.1	
	comp=Z,72nm,20.2s,baz=360,slow=30						
TORD	Torodi Ar. Bea	67.08	285	P	P	00 44 00.6	+1.8
	comp=Z,1.8nm,1.2s,baz=76,slow=5.6,SNR=5.8						
	comp=Z,1.8nm,1.2s						
TORD	Torodi Ar. Bea	67.08	285	P	P	00 43 58.9	+0.1
WRA	Warramunga Arr	67.51	111	P	P	00 44 02.1	+0.7
	comp=Z,5.0nm,1.0s,baz=280,slow=5.9,SNR=12						
	comp=Z,5.0nm,1.0s						
WRA	Warramunga Arr	67.51	111	P	P	00 43 59.8	-1.6
WRAB	Tennant Creek	67.52	111	P	P	00 43 59.9	-1.6
ASAR	Alice Springs	67.60	115	P	P	00 44 02.3	+0.3
	comp=Z,1.9nm,0.9s,baz=284,slow=5.4,SNR=12						
ASAR				LR	LR	01 08 54.8	
	comp=Z,22nm,21.3s,baz=282,slow=32						
	comp=Z,1.9nm,0.9s						
ASAR	Alice Springs	67.60	115	P	P	00 44 00.2	-1.8
HILR	Hailar Array B	67.66	34	P	P	00 44 03.4	+1.6
	comp=Z,3.2nm,0.7s,baz=224,slow=8.3,SNR=5.7						
	comp=Z,3.2nm,0.7s						
KSRS	Korea Array	67.72	48	LR	LR	01 15 17.6	
	comp=Z,51nm,19.9s,baz=260,slow=37						
GERES	GERESS Array B	68.43	325	LR	LR	01 13 31.3	
	comp=Z,30nm,19.8s,baz=74,slow=36						
JNU	Nakatsue	68.64	54	LR	LR	01 15 48.9	
	comp=Z,63nm,18.3s,baz=243,slow=37						
CLL	Collm	70.04	327	*e*P	P	00 44 17.0	+0.5
FINES	FINESS Array B	70.42	340	LR	LR	01 16 23.9	
	comp=Z,37nm,19.3s,baz=241,slow=37						
SENIN	Lac Senin/Sane	71.21	320	P	P	00 44 22.7	-1.4
NRIK	Noril'sk	72.03	7	LR	LR	01 17 21.0	
	comp=Z,48nm,18.9s,baz=186,slow=37						
DBIC	Dimbokro	72.90	277	P	P	00 44 34.4	-0.1
	comp=Z,5.1nm,1.0s,baz=154,slow=3.7,SNR=3.8						
DBIC				LR	LR	01 16 34.7	
	comp=Z,54nm,18.3s,baz=148,slow=36						
	comp=Z,5.1nm,1.0s						
DBIC	Dimbokro	72.90	277	P	P	00 44 32.5	-2.0
DBIC				IAmb	IAmb	00 44 42.1	
	comp=Z,9.7nm,1.2s						
INKA	Innaminka	74.26	118	P	P	00 44 41.6	-0.7
MJAR	Matsushiro Arr	75.35	52	LR	LR	01 18 10.8	
	comp=Z,51nm,21.4s,baz=263,slow=36						
ARCES	ARCESS Array B	76.41	346	LR	LR	01 19 12.7	
	comp=Z,37nm,21.0s,baz=106,slow=36						
JCJ	Chichijima	76.90	62	LR	LR	01 14 24.1	
	comp=Z,16nm,20.7s,baz=177,slow=32						
CTA	Charters Tower	78.69	110	LR	LR	01 16 24.3	
	comp=Z,29nm,21.0s,baz=224,slow=33						
ASAJ	Asahikawa	80.26	45	LR	LR	01 24 48.1	
	comp=Z,21nm,18.1s,baz=147,slow=39						
TROLL	Troll, Antarti	81.03	197	⇑P	P	00 45 22.5	+3.1
	comp=Z,158nm,0.8s						
SNAA	Sanae	82.48	198	⇑P	P	00 45 27.3	+0.3
	comp=Z,44nm,0.8s						
SNAA	Sanae	82.48	198	LR	LR	01 15 41.0	
	comp=Z,59nm,18.2s,baz=26,slow=31						
SNAA	Sanae	82.48	198	P	P	00 45 27.6	+0.6
TIXI	Tiksi	82.69	16	LR	LR	01 24 15.0	
	comp=Z,81nm,18.4s,baz=192,slow=37						
TIXI	Tiksi	82.69	16	P	P	00 45 27.4	-0.5
VNA2	Neumayer--Watz	83.69	199	⇑P	P	00 45 34.2	+1.0
	comp=Z,4.5nm,0.8s,baz=66,slow=5.7						
VNA1	Neumayer--Stat	83.91	199	⇑P	P	00 45 36.1	+1.9
	comp=Z,3.4nm,0.8s						
VNA3	Neumayer Olymp	84.48	198	⇑P	P	00 45 38.2	+0.9
	comp=Z,6.7nm,0.9s						
QSPA	South Pole Qui	88.44	180	P	P	00 45 57.5	+0.7
	comp=Z,2.2nm,0.8s,baz=288,slow=3.9,SNR=4.2						
	comp=Z,2.2nm,0.8s						
QSPA	South Pole Qui	88.44	180	P	P	00 45 57.3	+0.5
SEY	Seymchan	88.94	27	LR	LR	01 27 10.9	
	comp=Z,104nm,18.2s,baz=228,slow=36						
PETK	Petropavlovsk-	91.22	37	LR	LR	01 28 52.0	
	comp=Z,70nm,19.4s,baz=68,slow=37						
SAND	Sanderson	150.16	342	PKPbc	PKPbc	00 52 55.2	-1.2
TXAR	Lajitas Array	151.19	344	PKPbc	PKiKP	00 52 59.4	-0.1
	comp=Z,1.2nm,0.9s,baz=103,slow=1.1,SNR=8.7						
TXAR	Lajitas Array	151.19	344		PKPbc	00 52 58.1	-0.9

ROM 19 01:26:34.8±0.1**, 42°.646N**±0°.004×**13°.269E**±0°.005**, h11^{km}, ML0.9**/8**, Error ellipse: s-maj=0.5km s-min=0.4km az=178.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	SAN MARTINO	0.05	107	P	Pg	01 26 37.5	+0.5
SMA1				S	Sg	01 26 39.2	+0.4
SMA1				AML	AML		
	comp=E,296µm,0.2s						
SMA1				AML	AML		
	comp=N,134µm,1.1s						
SMA1				AML	AML		
	comp=E,296µm,0.2s						
SMA1				AML	AML		
	comp=N,133µm,0.2s						
RM33	Pellescritta (	0.14	196	P	Pg	01 26 38.8	+0.6
RM33				S	Sg	01 26 41.4	+0.9
RM33				AML	AML		
	comp=N,22µm,0.2s						
MTRA	Matera	0.15	40	P	Pg	01 26 38.7	+0.5
MTRA				S	Sg	01 26 41.2	+0.5
CAMP	Campotosto	0.15	137	P	Pg	01 26 38.6	+0.3
CAMP				S	Sg	01 26 41.7	+0.9
LNSS	Leonessa	0.17	256	P	Pg	01 26 39.2	+0.5
LNSS				S	Sg	01 26 42.1	+0.8
NRCA	Norcia	0.22	329	P	Pg	01 26 39.9	+0.4
NRCA				S	Sg	01 26 43.4	+0.7
NRCA				AML	AML		
	comp=E,91µm,0.1s						
NRCA				AML	AML		
	comp=N,60µm,0.1s						
NRCA				AML	AML		
	comp=E,78µm,0.1s						
NRCA				AML	AML		
	comp=E,91µm,0.1s						
NRCA				AML	AML		
	comp=N,60µm,0.1s						
TERO	Teramo	0.25	95	P	Pg	01 26 40.5	+0.6
TERO				S	Sg	01 26 44.4	+1.0
TERO				AML	AML		
	comp=E,21µm,1.2s						
TERO				AML	AML		
	comp=N,36µm,0.6s						
TERO				AML	AML		
	comp=E,15µm,0.1s						
TERO				AML	AML		
	comp=N,29µm,0.1s						
MMO1	Montemonaco	0.26	10	P	Pg	01 26 40.7	+0.5
MMO1				S	Sg	01 26 44.9	+1.2
MC2	Monte Cornacci	0.27	348	P	Pg	01 26 41.1	+0.6
MC2				S	Sb	01 26 46.0	-0.6

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*TIR **19** 01:27:32.4, 41°.62N×19°.45E, h34^{km}±2^{km}, Ml2.6/7*

*PDG **19** 01:27:33.3±0.0, 41°.63N×19°.59E, h9^{km}, ML2.5/13, Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*

*BEO **19** 01:27:34.1±0.6, 41°.59N×19°.54E, h13^{km}±3^{km}, ML2.4/5*

ISC 19 01:27:32.8±1.0**, 41°.58N**±0°.02×**19°.51E**±0°.02**, h10^{km}**±9^{km}**, n60, σ0^{s}.83**/95**, 13C-8D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.35	130	Pg	Pg	01 27 39.7	-0.1
TIR				Sg	Sg	01 27 44.4	-0.1
TIR				AML	AML	01 27 45.3	
	3.3nm,0.4s						
TIR				AML	AML	01 27 48.6	
	2.5nm,0.3s						
ULC	Ulcinj	0.43	333	*e*Pg	Pg	01 27 41.3	-0.1
ULC				*i* Sg	Sb	01 27 48.1	-1.1
SDA	Shkodra	0.47	359	Pg	Pg	01 27 41.8	-0.3
SDA				Sg	Sb	01 27 50.3	-0.1
SDA				AML	AML	01 28 01.8	
	0.7nm,0.5s						
DRME	Dracevica, Mon	0.66	338	*e*Pg	Pg	01 27 45.1	-0.4
DRME				*e*Sg	Sb	01 27 56.5	+0.9
DRME	Dracevica, Mon	0.66	338	⇑*i*Pg	Pg	01 27 45.2	-0.3
DRME				*e*Sg	Sb	01 27 55.3	-0.3
PHP	Peshkopia	0.71	81	Pg	Pg	01 27 45.3	-1.2
PHP				Sg	Sb	01 27 56.8	-0.3
PHP				AML	AML	01 28 03.7	
	1.3nm,0.5s						
BUM	Brajici-Budva	0.86	328	⇑*i*Pg	Pg	01 27 49.0	-0.3
BUM				*i* Sg	Sn	01 28 02.6	-1.0
PDG	Podgorica	0.87	348	Pg	Pg	01 27 49.1	-0.6
PDG				Sg	Sn	01 28 03.8	-0.1
PDG	Podgorica	0.87	348	⇑P	Pg	01 27 48.7	-0.9
PDG				⇓S	Sg	01 28 00.3	-0.7
PDG	Podgorica	0.87	348	*e*Pg	Pg	01 27 49.7	+0.1
PDG				*e*Sg	Sn	01 28 03.5	-0.4
PDG	Podgorica	0.87	348	*e*Pg	Pg	01 27 48.9	-0.7
PDG				*i* Sg	Sb	01 28 02.3	+0.5
CEME	Cevo	1.06	336	*e*Pg	Pb	01 27 52.7	-0.7
CEME				*e*Sg	Sn	01 28 09.2	+0.4
PVY	Plav	1.07	18	*e*Pg	Pg	01 27 52.7	-0.7
PVY	Plav	1.07	18	⇑*i*Pg	Pg	01 27 51.8	-1.6
PVY				*i* Sg	Sb	01 28 07.8	+0.2
OHR	Ohrid	1.08	115	*i* Pg	Pb	01 27 52.6	-0.9
OHR				*i* Sg	Sn	01 28 09.9	+0.8
VLO	Vlora	1.11	181	Pg	Pb	01 27 53.1	-1.0
VLO				Sg	Sn	01 28 10.0	+0.3
VLO				AML	AML	01 28 21.2	
	1.2nm,0.3s						
HCY	Herceg Novi	1.15	319	*e*Pg	Pb	01 27 54.7	-0.1
HCY				*i* Sg	Sn	01 28 12.9	+2.0
NKME	Niksic	1.26	341	*e*Pg	Pn	01 27 56.1	-0.4
NKME				*e*Sg	Sg	01 28 15.4	+2.0
KOME	Kolasin	1.27	0	*e*Pg	Pg	01 27 57.4	+0.1
KOME	Kolasin	1.27	0	⇑*i*Pg	Pn	01 27 55.9	-0.9
KOME				*e*Sg	Sg	01 28 15.2	+1.4
BEY	Berane	1.32	12	*e*Pg	Pn	01 27 57.0	-0.5
IVA	Berane	1.32	12	*e*Pg	Pn	01 27 56.7	-0.8
IVA				*i* Sg	Sg	01 28 16.6	+1.1
KBN	Korca	1.36	134	Pn	Pn	01 27 57.5	-0.4
KBN				Sn	Sg	01 28 17.5	+1.0
TREB	Trebinje	1.43	323	*e*Pg	Pb	01 27 59.4	-0.1
TREB				*e*Sg	Sg	01 28 20.6	+1.8
SKO	Skopje	1.50	74	*i* Pg	Pb	01 28 00.7	-0.1
SKO				*i* Sg	Sg	01 28 22.7	+1.7
BRY	Bratogost	1.51	332	*e*Pg	Pb	01 28 00.8	-0.2
BRY				*i* Sg	Sg	01 28 23.5	+2.2
NEST	Nestorio	1.65	134	Pn	Pb	01 28 03.1	-0.2
NEST				Sn	Sg	01 28 26.5	+0.7
NEST				AML	AML	01 28 29.1	
	0.2nm,0.7s						
NEST				AML	AML	01 28 36.5	
	0.2nm,1.1s						
UPM	Unac-Piva	1.69	345	*e*Pn	Pb	01 28 03.5	-0.5
UPM				*i* Sn	Sg	01 28 27.4	+0.4
SJES	Sjenica	1.72	11	*e*Pg	Pb	01 28 04.5	-0.1
SJES				*e*Sg	Sg	01 28 28.7	+0.6
PLE	Pljevlja	1.75	357	*e*Pg	Pb	01 28 05.3	+0.1
PLE	Pljevlja	1.75	357	*e*Pn	Pb	01 28 04.3	-0.9
PLE				*i* Sn	Sg	01 28 28.8	-0.4
STON	Ston	1.86	315	*e*Pn	Pb	01 28 07.0	0.0
STON				*e*Sg	Sg	01 28 31.9	-0.8
NOCI	Noci	2.01	248	Pn	Pn	01 28 06.0	-0.7
NOCI				Sn	Sn	01 28 32.7	+0.8
NOCI				AML	AML	01 28 44.8	
	0.4nm,0.5s						
SELS	Selova	2.03	35	*e*Pn	Pn	01 28 07.9	+0.8
SELS				*e*Sn	Sn	01 28 32.6	+0.1
IVAS	Ivanjica	2.05	13	*e*Pn	Pn	01 28 08.4	+0.9
BARS	Barje	2.11	53	*e*Pn	Pn	01 28 08.9	+0.6
BARS				*e*Sn	Sn	01 28 35.2	+0.6
IGT	Igoumenitsa	2.14	163	Pn	Pn	01 28 09.0	+0.4
GOCS	Kraljevo Serbi	2.23	26	*e*Pn	Pn	01 28 10.7	+0.8
GOCS				*e*Sn	Sn	01 28 35.9	-1.6
BBLS	Lazi&#263i	2.29	358	*e*Pn	Pb	01 28 13.2	-1.1
MATE	Matera	2.31	247	⇓P	Pb	01 28 13.7	-0.9
MATE				⇑S	Sn	01 28 40.9	+1.5
BOSS	Bosilegrad	2.40	66	*e*Pn	Pn	01 28 12.2	+0.1
GRUS	Gruza	2.48	21	*e*Pn	Pn	01 28 13.5	+0.3
DIVS	Divibare	2.54	8	*e*Pn	Pn	01 28 14.6	+0.4
BOVS	Bovan	2.62	38	⇓P	Pn	01 28 15.7	+0.6
BOVS				⇓S	Sn	01 28 47.4	+0.4
BOVS	Bovan	2.62	38	*e*Pn	Pn	01 28 15.6	+0.4
ZAPS	Zavoj	2.87	53	*e*Pn	Pn	01 28 19.9	+1.2
VTS	Vitosha	2.96	68	*e*Pn	Pn	01 28 20.8	+0.8
ZAGS	Zajecar	3.00	41	*e*Pn	Pn	01 28 21.5	+1.0
SRS	Serrai	3.11	97	*e*Pn	Pn	01 28 22.6	+0.7
MDVR	Moldovita	3.58	26	⇓S	Sn	01 29 10.3	-0.6
MDVR	Moldovita	3.58	26	*e*Pn	Pn	01 28 28.8	+0.3
MDVR	Moldovita	3.58	26	⇑P	Pn	01 28 28.9	+0.3
HERR	Herculane	3.93	32	⇑P	Pn	01 28 33.5	+0.4
BZS	Buzias	4.32	20	⇑P	Pn	01 28 38.8	+0.3
BZS				⇓S	Sn	01 29 27.9	-1.0
GZR	Gura Zlata	4.49	31	⇑S	Sn	01 29 32.7	-0.7
GZR	Gura Zlata	4.49	31	⇑P	Pn	01 28 41.6	+0.6
MORH	Mrgy, Hungar	4.68	353	⇓P	Pn	01 28 43.6	+0.2
SIRR	Siria	4.94	18	⇓S	Sn	01 29 43.6	-0.6
SIRR	Siria	4.94	18	⇑P	Pn	01 28 46.8	-0.2
MLR	Muntele Rosu	6.10	48	⇑P	Pn	01 29 04.1	+1.0

IDC 19 01:39:13.6±3.2**, 31°.32S**×**177°.46W, h0^{km}, mb3.8**/2**, mbtmp3.8**/3**, ML3.2**/1**, Error ellipse: s-maj=76.8km s-min=47.7km az=124.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.23	211	Pn	Pn	01 41 14.0	-0.3
	0.3nm,0.3s,baz=274,slow=4.4,SNR=1.6						
URZ				Sn	Sn	01 42 44.9	-3.1
	0.9nm,0.3s,baz=329,slow=23,SNR=7.0						
	3.0nm,0.6s						
ASAR	Alice Springs	43.53	268	P	P	01 47 19.5	+0.2
	0.6nm,0.5s,baz=106,slow=7.5,SNR=9.8						
	0.6nm,0.5s						
WRA	Warramunga Arr	44.60	273	P	P	01 47 27.4	-0.4
	0.8nm,0.4s,baz=112,slow=8.1,SNR=16						
	0.8nm,0.4s						
FINES	FINESS Array B	146.17	340	PKPbc	PKPdf	01 58 54.2	+0.2
	5.1nm,1.0s,baz=48,slow=4.1,SNR=5.0						

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*IDC **19** 01:53:02.3±1.9, 10°.27N×126°.95E, h0^{km}, mb4.0/8, mbtmp4.0/8, MS2.9/1, Error ellipse: s-maj=190.0km s-min=20.8km az=68.0*

ISC 19 01:53:08.8±1.8**, 10°.1N**±0°.5×**12°6E**±°**, h42^{km}, n9, σ0^{s}.56**/8**, mb4.1**/8**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.81	165	P	P	01 59 21.1	+0.2
	0.6nm,1.0s,baz=357,slow=7.8,SNR=1.5						
	0.6nm,1.0s						
ASAR	Alice Springs	34.30	168	P	P	01 59 51.3	-0.1
	0.2nm,0.4s,baz=340,slow=8.4,SNR=4.3						
	0.2nm,0.4s						

YAK	Yakutsk	51.92	2	LR	LR	02 27 38.3	
	comp=Z,9.8nm,18.1s,baz=112,slow=40						
MKAR	Makanchi Array	52.31	323	P	P	02 02 16.9	+0.6
	1.4nm,0.6s,baz=125,slow=8.3,SNR=20						
	1.4nm,0.6s						
ZALV	Zalesovo Beam	54.90	331	P	P	02 02 34.9	-0.2
	0.6nm,0.3s,baz=121,slow=6.1,SNR=4.4						
	0.6nm,0.3s						
KURBB	Kurchatov Arra	56.35	325	P	P	02 02 46.0	+0.3
	1.2nm,0.6s,baz=124,slow=7.0,SNR=12						
	1.2nm,0.6s						
BVAR	Borovoye Array	61.95	325	P	P	02 03 24.3	0.0
	0.7nm,0.7s,baz=108,slow=4.8,SNR=3.8						
	0.7nm,0.7s						
ARCES	ARCESS Array B	84.45	340	P	P	02 05 37.2	+0.4
	5.4nm,1.1s,baz=74,slow=5.0,SNR=3.5						
	5.4nm,1.1s						
FINES	FINESS Array B	86.16	332	P	P	02 05 44.5	-0.9
	6.8nm,1.0s,baz=65,slow=4.7,SNR=4.8						
	6.8nm,1.0s						

AZER ***19*** *02:38:35.8, 40°.96N×48°.39E, h9^{km}, ml2.7*
TIF ***19*** *02:38:35.8, 40°.72N×48°.42E, h11^{km}±3^{km}*
MOS ***19*** *02:38:36.1±0.6, 40°.89N×48°.43E, h33^{km}, mb3.5/1, Error ellipse: s-maj=12.8km s-min=5.2km az=120.7*
DRS ***19*** *02:38:38.5, 40°.97N×48°.26E, h30^{km}*
ISC 19 02:38:37.7±1.1**, 40°.96N**±0°.02×**48°.40E**±0°.02**, h4**^{km}±9^{km}**, n71, σ0^s.99**/118**, 1D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PQL	Pirkuli	0.22	139	P	Pg	02 38 41.5	-0.5
PQL				S	Sg	02 38 45.2	+0.2
IML	Ismayilli	0.23	226	P	Pg	02 38 42.6	+0.3
IML				S	Sg	02 38 46.7	+1.4
XNQ	Khinaliq	0.29	317	P	Pg	02 38 43.7	+0.2
XNQ				S	Sg	02 38 48.5	+1.1
SIZA	Siyzn	0.39	72	P	Pg	02 38 45.5	+0.2
SIZA				S	Sb	02 38 51.9	-1.8
QUBA	Quba, Azerbaij	0.40	10	P	Pb	02 38 46.7	-0.8
QUBA				S	Sb	02 38 54.1	0.0
ATGJ	Altiaghaj	0.42	103	P	Pg	02 38 45.2	-0.6
ATGJ				S	Sb	02 38 52.5	-1.9
QBL	Gabala	0.43	269	P	Pg	02 38 46.1	+0.1
QBL				S	Sb	02 38 54.0	-0.8
QSAR	Qusar	0.57	349	P	Pb	02 38 49.5	-0.7
QSAR				S	Sb	02 38 58.3	-0.5
GBS	Qobustan	0.59	136	P	Pb	02 38 49.8	-0.8
GBS				S	Sb	02 39 00.5	+1.2
KDMR	Kurdemir	0.60	196	P	Pg	02 38 49.6	+0.3
KDMR				S	Sb	02 39 00.8	+1.1
KSMR	Kasumkent	0.68	342	*i* Pg	Pb	02 38 51.5	-0.7
	49nm,0.1s						
KSMR				*e*Sg	Sb	02 39 01.3	-0.7
	835nm,0.4s						
KSMR	Kasumkent	0.68	342	⇓*i*PG	Pb	02 38 51.5	-0.7
KSMR				*e*S	Sb	02 39 01.3	-0.7
AKT	Akhty	0.73	316	*i* Pg	Pg	02 38 51.6	-0.1
	125nm,0.2s						
AKT				*e*Sg	Sb	02 39 02.3	-1.1
	583nm,0.3s						
AKT	Akhty	0.73	316	*i* PG	Pg	02 38 51.7	-0.1
AKT				pmax	pmax		
	comp=Z,88nm,0.3s						
ZRD	Zardab	0.87	219	P	Pb	02 38 54.9	-0.5
ZRD				S	Sn	02 39 09.7	-0.2
SEKA	Sheki	0.95	286	P	Pg	02 38 55.2	-0.7
SEKA				S	Sb	02 39 10.0	+0.4
SEKA	Sheki	0.95	286	PG	Pg	02 38 55.1	-0.7
MNGR	Mingechevir, A	1.02	260	P	Pg	02 38 57.5	+0.2
MNGR				S	Sn	02 39 13.8	+0.4
MNGR	Mingechevir, A	1.02	260	PG	Pg	02 38 57.4	+0.2
DRN	Derbent	1.07	357	*i* PG	Pb	02 38 58.5	-0.4
SAAT	Saatly	1.09	179	P	Pg	02 38 58.0	-0.7
SAAT				S	Sb	02 39 14.1	+0.3
ALIB	&Aumlli-Bayram	1.10	155	P	Pn	02 39 01.7	+1.8
ALIB				S	Sn	02 39 18.4	+2.9
GOBA	Gobu	1.15	118	P	Pn	02 39 02.1	+1.5
BRDA	Brd	1.16	234	P	Pg	02 38 59.2	-0.7
BRDA				S	Sn	02 39 18.1	+1.1
NDR	Nardaran	1.26	107	P	Pn	02 39 02.5	+0.4
NDR				S	Sn	02 39 21.7	+2.2
AGDM	Agdam	1.30	230	P	Pn	02 39 01.5	-1.2
AGDM				Sn	Sn	02 39 21.3	+0.8
URKR	Urkarakh	1.34	335	*e*Pg	Pn	02 39 02.6	-0.8
	comp=Z,26nm,0.2s						
URKR				*e*Sg	Sn	02 39 21.8	+0.1
	comp=Z,60nm,0.3s						
URKR	Urkarakh	1.34	335	*e*PG	Pn	02 39 02.5	-0.8
URKR				*e*S	Sn	02 39 21.8	+0.1
BLQ	Beylaqan	1.39	208	Pn	Pn	02 39 02.5	-1.4
BLQ				Sn	Sg	02 39 22.6	+0.1
ZKTA	Zakatala	1.50	297	Pn	Pn	02 39 05.6	+0.1
ZKTA				Sn	Sg	02 39 28.6	+2.5
KMKR	Kumukh	1.53	321	*e*Pg	Pb	02 39 06.4	-0.3
	comp=Z,36nm,0.2s						
KMKR				*e*Sg	Sg	02 39 27.9	+1.0
	comp=Z,104nm,0.2s						
KMKR	Kumukh	1.53	321	*e*PG	Pb	02 39 06.4	-0.3
KMKR				*e*S	Sg	02 39 27.9	+1.0
VSHL	Vashlovani	1.54	281	P	Pb	02 39 06.4	-0.4
SGKR	Sergokala	1.60	340	*e*PN	Pb	02 39 07.1	-0.8
SGKR				*e*S	Sg	02 39 29.1	-0.1
GANJ	Ganja	1.61	260	Pn	Pn	02 39 05.9	-1.1
GANJ				Sn	Sn	02 39 27.3	-0.9
GANJ	Ganja	1.61	260	PN	Pn	02 39 05.8	-1.1
QRD	Qoradiz	1.71	209	Pn	Pn	02 39 07.2	-1.1
QRD				Sn	Sn	02 39 31.0	+0.5
GLBA	Clilabad	1.71	180	Pn	Pn	02 39 07.3	-1.0
GLBA				Sn	Sb	02 39 31.7	+0.1
TLTR	Tlyarata	1.92	307	*e*Pg	Pn	02 39 12.0	+0.6
	comp=Z,9.0nm,0.6s						
TLTR				*e*Sg	Sb	02 39 38.0	+0.2
	comp=Z,7.0nm,0.5s						
TLTR	Tlyarata	1.92	307	*e*PN	Pn	02 39 12.0	+0.6
ARKR	Arakani	1.95	328	*e*Pg	Pb	02 39 12.5	-1.4
	comp=Z,13nm,0.5s						
ARKR	Arakani	1.95	328	*e*PN	Pb	02 39 12.5	-1.4
ARKR				*e*S	Sg	02 39 39.3	-1.2
GDB	GEDABAY	2.02	264	Pn	Pn	02 39 11.8	-1.0
GDB				Sn	Sn	02 39 38.3	-0.3
XNZR	Khunzakh	2.03	322	*e*Pg	Pn	02 39 13.0	+0.1
	comp=Z,11nm,0.4s						
XNZR				*e*Sg	Sb	02 39 40.3	-0.7
	comp=Z,12nm,0.5s						
HNZR	Khunzah	2.04	322	*e*PN	Pn	02 39 13.0	0.0
HNZR				*e*S	Sb	02 39 40.3	-0.9
YRD	Yardimli	2.04	184	Pn	Pn	02 39 11.5	-1.6
YRD				Sn	Sn	02 39 38.8	-0.3
MAK	Makhachkala	2.11	342	*e*PN	Pn	02 39 14.7	+0.9
MAK				*e*S	Sb	02 39 42.9	-0.2
MAK				pmax	pmax		
	comp=Z,48nm,0.2s						
MAK				smax	smax		
	comp=E,82nm,0.5s						
MAK				smax	smax		
	comp=E,111nm,0.6s						
MAK				MLR	MLR		
	comp=Z,69nm,7.0s						
UNCR	Uncukul	2.13	326	*e*Pg	Pn	02 39 14.9	+0.8
	comp=Z,15nm,0.4s						
UNCR	Uncukul	2.13	326	*e*PN	Pn	02 39 14.9	+0.8
UNCR				*e*S	Sb	02 39 44.0	+0.3
KRNR	Karanay	2.18	330	*e*Pg	Pn	02 39 15.5	+0.7
	comp=Z,9.0nm,0.5s						
KRNR	Karanay	2.18	330	*e*PN	Pn	02 39 15.5	+0.7
KRNR				*e*S	Sb	02 39 45.0	-0.1
LKRN	Lenkeran, Azer	2.26	173	Pn	Pn	02 39 14.7	-1.2
LKRN				Sn	Sn	02 39 45.2	+1.0
LKRN	Lenkeran, Azer	2.26	173	PN	Pn	02 39 14.7	-1.2
QZX	Qazax, Azerbai	2.30	274	Pn	Pn	02 39 16.4	0.0
QZX				Sn	Sn	02 39 46.4	+1.2
LRK	Lerik	2.31	181	Pn	Pn	02 39 15.7	-1.0
LRK				Sn	Sn	02 39 46.2	+0.5
DGRG	David-gareji	2.34	283	P	Pn	02 39 18.3	+1.3
DGRG	David-gareji	2.34	283	PN	Pn	02 39 18.3	+1.3
BTLR	Botlikh	2.36	317	*e*Pn	Pn	02 39 18.3	+1.0
	comp=Z,9.0nm,0.4s						
BTLR	Botlikh	2.36	317	*i* PN	Pb	02 39 19.1	-1.7
ASTR	Astara	2.41	173	Pn	Pn	02 39 16.7	-1.3
ASTR				Sn	Sn	02 39 48.0	+0.1
DVE	Vedeno	2.62	320	*e*Pn	Pn	02 39 21.4	+0.5
	comp=Z,11nm,0.5s						
DVE	Vedeno	2.62	320	*i* PN	Pn	02 39 21.3	+0.4
SBZ	Shahbuz	2.68	235	Pg	Pb	02 39 24.5	-1.8
SBZ				Sg	Sb	02 40 00.1	+0.5
ORD	Ordubad	2.75	223	Pn	Pn	02 39 22.2	-0.4
ORD				Sn	Sn	02 39 57.9	+1.6
NAX	Nakhchivan	2.85	232	Pg	Pn	02 39 25.9	+1.7
NAX				Sg	Sb	02 40 05.0	+0.4
CHRG	Chargali	2.94	299	P	Pn	02 39 27.6	+2.2
ALIG	Mtskhetisjvari	3.75	289	P	Pn	02 39 37.5	+1.1
ALIG	Mtskhetisjvari	3.75	289	PN	Pn	02 39 37.5	+1.1
NCK	Nalchik	4.38	307	*i* PN	Pn	02 39 45.0	0.0
KBZ	Khabaz	4.93	306	*i* PN	Pn	02 39 53.5	+1.0
KIV	Kislovodsk	5.18	307	*e*PN	Pn	02 39 56.0	-0.1
KIV				pmax	pmax		
	comp=Z,3.0nm,1.1s						

IDC 19 02:44:00.8±12.0**, 24°.80S**×**179°.03E, h343**^{km}±135^{km}**, mb3.0**/3**, mbtmp3.9**/4**, Error ellipse: s-maj=57.7km s-min=33.0km az=19.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	13.52	186	P	P	02 46 59.4	+0.1
	10nm,0.5s,baz=3.7,slow=2.0,SNR=11						
URZ				S	S	02 49 26.9	-0.3
	3.8nm,0.8s,baz=66,slow=20,SNR=0.9						
ASAR	Alice Springs	41.02	262	P	P	02 51 11.9	0.0
	0.6nm,0.7s,baz=91,slow=7.1,SNR=6.3						
	0.6nm,0.7s						
WRA	Warramunga Arr	41.47	267	P	P	02 51 15.3	-0.2
	1.0nm,0.5s,baz=104,slow=7.9,SNR=13						
	1.0nm,0.5s						
TXAR	Lajitas Array	91.66	58	P	P	02 56 29.9	-0.1
	0.2nm,0.8s,baz=205,slow=9.6,SNR=1.9						
	0.2nm,0.8s						

JMA ***19*** *03:07:43.9±0.1, 23°.9N±0°.7×122°.3E±0°.3, h33^{km}±3^{km}, MV3.1/12, TAIWAN REGION*
TAP ***19*** *03:07:44.1, 24°.00N×122°.35E, h25^{km}, ML3.7, C*
ISC 19 03:07:43.5±1.0**, 23°.95N**±0°.02×**122°.32E**±0°.02**, h19**^{km}±2^{km}**, n116, σ0^s.65**/194**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS4	EOS4	0.17	359	*e*P	Pg	03 07 48.8	+1.1
EOS4				*e*S	Sg	03 07 52.2	+1.6
EOS3	EOS3	0.33	360	*e*P	Pb	03 07 51.7	+0.8
EOS3				*e*S	Sb	03 07 57.0	+1.2
EOS2	EOS2	0.47	350	*e*P	Pn	03 07 54.3	-0.9
EOS2				*e*S	Sn	03 08 01.4	-1.6
EAHA	Aohua	0.65	305	*e*P	Pn	03 07 57.4	-0.4
EAHA				*e*S	Sn	03 08 07.0	-0.5
HWA	Hwalien	0.66	272	P	Pn	03 07 57.2	-0.6
HWA				*e*S	Sn	03 08 07.1	-0.5
TEYL	Yanliau Villag	0.67	263	P	Pg	03 07 57.4	+0.7
TEYL				S	Sn	03 08 07.1	-0.8
ETL	Fush Village	0.67	288	*e*P	Pg	03 07 57.2	+0.4
TWD	Chiawan	0.67	281	P	Pg	03 07 56.9	+0.1
TWD				S	Sg	03 08 06.4	+0.5
NACB	Ninganchiao	0.70	288	P	Pg	03 07 57.3	0.0
NACB				S	Sg	03 08 07.3	+0.7
ENA	Nanau	0.71	312	*e*P	Pn	03 07 58.1	-0.5
SHUL	Shoufeng	0.71	257	P	Pg	03 07 58.0	+0.4
SHUL				*e*S	Sn	03 08 08.3	-0.8
TEGC	Jichi Village	0.76	251	P	Pg	03 07 58.8	+0.5
TEGC				*e*S	Sg	03 08 09.2	+0.8
JYNG	Yonagunijimaku	0.76	49	*e*P	Pn	03 07 59.1	-0.1
JYNG				*e*S	Sn	03 08 10.6	+0.5
ESAO	Su ao	0.76	325	*e*P	Pn	03 07 58.8	-0.4
ESAO				*e*S	Sb	03 08 07.9	-0.1
ETM	Tongmen	0.76	271	*i* P	Pb	03 07 58.1	0.0
ETM				*e*S	Sg	03 08 09.3	+0.8
TWC	Suao	0.78	327	P	Pb	03 07 58.2	-0.3
TWC				*e*S	Sg	03 08 08.9	-0.4
ETLH	Xiulin Townshi	0.81	288	*i* P	Pb	03 07 59.1	+0.1
ETLH				S	Sg	03 08 10.1	0.0
YOJ	Yonaguni jima	0.81	51	*e*P	Pn	03 07 59.7	-0.2
YOJ				S	Sg	03 08 09.7	-0.4
YOJ	Yonaguni jima	0.81	51	*e*P	Pn	03 08 00.0	+0.1
ESL	Shilin	0.82	260	*e*P	Pb	03 07 58.8	-0.5
ESL				*e*S	Sb	03 08 10.5	+0.5
LXIB	Xiulin Townshi	0.83	275	P	Pb	03 07 59.4	-0.1
LXIB				*e*S	Sg	03 08 11.1	+0.1
EGFH	Guangfu	0.86	251	*e*P	Pb	03 08 00.1	+0.1
EGFH				*e*S	Sg	03 08 12.3	+0.4
NDS	Dongshan	0.87	321	*e*P	Pg	03 08 00.4	-0.2
NDS				*e*S	Sn	03 08 13.6	+0.6
LATG	Datong	0.93	309	*e*P	Pn	03 08 01.4	-0.3
HGSD	Ruisui	0.94	241	*e*P	Pb	03 08 01.1	-0.1
HGSD				*e*S	Sb	03 08 12.2	-1.1
EGS		0.96	338	*e*P	Pb	03 08 00.4	-1.1
TWE	Neicheng	0.97	322	P	Pg	03 08 02.4	0.0
TWE				*e*S	Sn	03 08 15.3	-0.1
ENTT	Nioudou	0.97	315	*e*P	Pg	03 08 02.2	-0.2
ENTT				*e*S	Sn	03 08 15.8	+0.3
NNSB	Datong	0.98	299	*i* P	Pb	03 08 02.0	+0.1
NNSB				S	Sb	03 08 15.0	+0.4
WHF	Hehuan Shan	0.98	281	*e*P	Pb	03 08 01.9	-0.3
WHF				*e*S	Sb	03 08 14.2	-0.8
NNS	Nan Shan	0.99	299	P	Pn	03 08 02.4	-0.2
NNS				S	Sn	03 08 16.3	+0.1
EHYH	Wanrong	1.00	243	*e*P	Pb	03 08 02.2	-0.1
EHYH				*e*S	Sb	03 08 15.6	+0.5
EHY	Hungye	1.02	244	*e*P	Pb	03 08 02.3	-0.2
ECBN	Changbin	1.02	232	S	Sb	03 08 15.6	0.0
FUSS	Fushou	1.03	287	P	Pb	03 08 03.0	+0.1
FUSS				*e*S	Sb	03 08 16.3	+0.3
FUSB	Fushanzhiwuyua	1.04	320	*e*P	Pg	03 08 03.6	-0.2
FUSB				*e*S	Sn	03 08 17.0	-0.4
OWD	Renai	1.05	270	P	Pb	03 08 02.9	-0.3
OWD				S	Sb	03 08 16.2	-0.4
TWT	Tachien	1.09	286	*e*P	Pg	03 08 04.4	-0.3
TWT				*e*S	Sg	03 08 19.1	+0.1
YULB	Yu-li	1.09	239	*e*P	Pn	03 08 03.5	-0.4
YULB				S	Sb	03 08 17.5	-0.2
TWB1	Santiao Chiao	1.09	344	*e*P	Pn	03 08 03.9	0.0
VWDT	VWDT	1.10	260	P	Pn	03 08 03.8	-0.1
VWDT				S	Sb	03 08 18.3	+0.5
WUSB	Renai	1.10	272	P	Pn	03 08 03.9	-0.2
WUSB				*e*S	Sn	03 08 18.6	-0.2
TDCB	Techi	1.10	286	*e*P	Pn	03 08 04.1	-0.1
TDCB				*e*S	Sn	03 08 18.9	-0.1
NWLT	Wulai	1.11	318	P	Pb	03 08 04.5	+0.3
NWLT				*e*S	Sn	03 08 19.0	+0.1
TIPB	Shuangxi	1.11	336	*e*P	Pg	03 08 04.9	-0.2
TIPB				*e*S	Sn	03 08 18.5	-0.4
TWF1	Yuli	1.11	238	P	Pn	03 08 03.7	-0.4
TWF1				S	Sb	03 08 18.2	-0.1
YHNB	Yeheng	1.12	310	P	Pb	03 08 04.4	+0.1
YHNB				*e*S	Sb	03 08 18.6	0.0
NSK	Sanguang	1.14	310	P	Pb	03 08 04.6	0.0
CHKH	Chenggong	1.14	228	*e*P	Pb	03 08 04.8	+0.2
FULB	Fuli	1.21	232	*e*P	Pn	03 08 05.4	0.0
SXI1	Grass Mountain	1.21	340	*i* P	Pb	03 08 05.6	-0.2
SXI1				S	Sn	03 08 21.2	-0.2
WFSB	Wu-fen Shan	1.22	336	*e*P	Pb	03 08 06.1	+0.1
WFSB				S	Sg	03 08 22.2	-0.9
CHKT	Chengkung	1.22	226	*e*S	Sb	03 08 19.1	-2.3
TWA	Mucha	1.22	327	P	Pg	03 08 07.0	-0.2
NHDH	Xindian Distri	1.24	324	*e*P	Pg	03 08 07.1	-0.4
NFF	Wufeng Townshi	1.29	302	*i* P	Pg	03 08 07.8	-0.6
TNOU	National Taiwa	1.29	337	*e*S	Sb	03 08 23.4	-0.1
WHP	Taichung City	1.30	285	*e*P	Pb	03 08 07.5	+0.1
WHP				*e*S	Sb	03 08 23.9	+0.2
EHD	Haiduan	1.30	232	*e*P	Pn	03 08 04.6	-2.1
SMLT	Sun Moon Lake	1.30	267	P	Pn	03 08 07.0	+0.2
SMLT				*e*S	Sn	03 08 23.9	+0.1
ECS	Chishang	1.32	230	S	Sb	03 08 24.9	+0.6
KSHI	Guanxi Townshi	1.33	308	P	Pg	03 08 08.5	-0.7
TYC	Yuchr	1.34	268	*e*P	Pn	03 08 07.6	+0.4
HATJ	Hateruma jima	1.36	85	*e*S	Sb	03 08 25.8	+0.3
WHYT	Xinyi Township	1.37	260	*e*P	Pb	03 08 08.4	-0.1
WHYT				S	Sb	03 08 26.7	+1.0
YM01	YM01	1.37	330	*e*P	Pb	03 08 08.1	-0.5
YM01				*e*S	Sb	03 08 26.5	+0.7
LIOB	Emei	1.38	300	P	Pg	03 08 09.4	-0.7
LIOB				S	Sg	03 08 27.2	-0.9
NSTT	Nanjuang	1.38	300	*e*P	Pb	03 08 09.3	+0.6
NSTT				*e*S	Sb	03 08 26.9	+0.9
ZUZH	Zhuzihu	1.40	330	*e*P	Pb	03 08 09.1	0.0
ZUZH				*e*S	Sb	03 08 27.1	+0.6
YM08	YM08	1.40	332	*e*P	Pb	03 08 08.8	-0.2
TWS1	Kuangyinshan	1.41	324	P	Pb	03 08 09.3	+0.1
TWS1				S	Sg	03 08 28.3	-0.8
ELDTW	Lidau	1.42	238	*e*S	Sn	03 08 25.5	-1.1
NCUH	Zhongli	1.45	315	*i* P	Pb	03 08 09.8	-0.1
NCUH				S	Sg	03 08 29.3	-1.0
ALS	Alishan	1.46	253	*e*P	Pb	03 08 09.8	-0.4
ALS				*e*S	Sn	03 08 28.2	+0.4
WJS	Zhushan	1.46	265	*e*P	Pg	03 08 11.8	0.0
TWQ1	Liyutan	1.47	286	*e*P	Pb	03 08 10.7	+0.4
TWQ1				*e*S	Sb	03 08 29.7	+1.1
HSN	Hsinchu	1.49	305	*e*P	Pb	03 08 10.5	-0.1
HSN				*e*S	Sb	03 08 30.5	+1.2
NSY	Sanyi	1.50	288	*e*P	Pb	03 08 11.6	+0.8
NSY				*e*S	Sg	03 08 31.1	-0.9
WNT	Mingjian	1.50	267	*e*P	Pb	03 08 11.2	+0.4
WNT				*e*S	Sb	03 08 30.6	+1.2
NMLH	Miaoli	1.51	293	*e*P	Pb	03 08 11.3	+0.3
NMLH				*e*S	Sg	03 08 31.6	-0.8
TCU	Taichung	1.52	278	P	Pb	03 08 11.7	+0.7
TCU				*e*S	Sg	03 08 31.8	-0.8
CHN5	Tsauling	1.55	257	*e*P	Pb	03 08 11.8	+0.2
CHN5				*e*S	Sb	03 08 31.2	+0.3
JKRS	Kuro-shima	1.57	79	*e*S	Sb	03 08 31.2	-0.3
TWGBT	Beinan	1.60	225	*e*P	Pn	03 08 10.8	-0.1
TWGBT				*e*S	Sn	03 08 30.3	-0.9
TWG	Pinlang	1.61	226	*e*S	Sn	03 08 30.2	-1.0
TTN	Taitung	1.61	222	*e*S	Sn	03 08 31.1	-0.1
WCHH	Zhanghua	1.62	275	*e*P	Pb	03 08 12.9	+0.2
WCHH				*e*S	Sb	03 08 34.4	+1.6
STYH	Taoyuan	1.62	242	*e*P	Pn	03 08 11.7	+0.7
STYH				*e*S	Sn	03 08 31.7	+0.3
WCH1	Changhua City	1.63	275	*e*S	Sg	03 08 35.4	-0.6
WDLH	Douliu	1.65	261	P	Pb	03 08 13.2	-0.2
WDLH				*e*S	Sb	03 08 35.5	+1.6
WCKO	Fanlu	1.65	252	P	Pb	03 08 13.2	-0.2
WCKO				*e*S	Sb	03 08 33.6	-0.3
TPUB	Ta-pu	1.68	248	*e*P	Pb	03 08 13.3	-0.6
TPUB				*e*S	Sb	03 08 35.8	+1.1
PCYT	Pengchaiyu	1.68	352	P	Pn	03 08 12.3	+0.3
CHN4	Tsaushan	1.69	250	*e*P	Pb	03 08 14.3	+0.2
CHN4				*e*S	Sb	03 08 35.5	+0.4
JIJ	Ishigaki jima	1.71	76	*e*P	Pn	03 08 13.1	+0.7
JIJ				*e*S	Sb	03 08 34.4	-1.3
WTP	Ta-pu	1.72	246	*e*P	Pb	03 08 14.6	+0.1
WTP				*e*S	Sb	03 08 35.6	-0.1
CHY	Chiayi	1.80	256	*e*S	Sb	03 08 38.5	+0.5
CHN1	Nanshi	1.81	245	*e*P	Pb	03 08 16.1	0.0
CHN1				*e*S	Sb	03 08 39.0	+0.5
TWK	Hsinying	1.81	248	*e*P	Pb	03 08 15.9	-0.3
TWK				*e*S	Sb	03 08 39.1	+0.5
SGST	Jiashian	1.81	242	*e*S	Sb	03 08 38.8	+0.2
SNST	Tainan City	1.82	247	*e*P	Pb	03 08 16.4	+0.1
SNST				*e*S	Sb	03 08 39.4	+0.6
JISG	Ishigakijimahi	1.92	70	*e*P	Pn	03 08 15.6	+0.4
JISG				*e*S	Sn	03 08 39.2	+0.3
WSF	Szhu	1.95	261	*e*S	Sb	03 08 42.4	+0.1
SSD	Sandimen	1.96	233	*e*P	Pb	03 08 18.4	-0.3
SSD				*e*S	Sb	03 08 41.9	-0.9
WSL	Shuilin Townsh	1.96	258	*e*P	Pn	03 08 17.1	+1.3
WSL				*e*S	Sb	03 08 42.3	-0.5
CHN8	Yiju	2.03	253	*e*P	Pb	03 08 18.3	-1.4
CHN8				*e*S	Sb	03 08 44.3	-0.3
LAY	Lan-yu	2.03	201	*e*P	Pn	03 08 17.7	+0.9
MASBT	Mashibuluo	2.05	230	*e*P	Pn	03 08 18.4	+1.5
MASBT				*e*S	Sn	03 08 42.5	+0.5
TSCK	Chigu Township	2.20	249	*e*S	Sn	03 08 47.5	+1.6
SLIU	Shizi	2.23	219	*e*P	Pn	03 08 19.7	+0.2
TSEB	Hengchuen, Pin	2.43	213	*e*S	Sn	03 08 52.0	+0.6
TWKBT	Hengchun	2.44	215	*e*P	Pn	03 08 20.9	-1.4
TWKBT				*e*S	Sn	03 08 51.0	-0.7
WDGT	Dungji	2.54	255	*e*P	Pn	03 08 24.6	+0.9
WDGT				*e*S	Sn	03 08 54.2	+0.1
PHUB	P'eng-hu	2.56	261	P	Pn	03 08 24.8	+0.9
PHUB				S	Sn	03 08 55.4	+0.8
PNG	Penghu	2.56	262	*e*P	Pn	03 08 25.1	+1.0
PTMZ	Houxiangcun	3.11	291	*e*P	Pn	03 08 31.7	+0.2

IDC ***19*** *03:30:53.1±3.0, 22°.17S×69°.06W, h0^{km}, mb3.6/2, mbtmp3.9/4, ML4.1/2, Error ellipse: s-maj=57.7km s-min=54.0km az=74.0*
SJA ***19*** *03:31:08.3±0.8, 21°.10S×68°.90W, h124^{km}±4^{km}, ML3.7, MW3.7*
GUC ***19*** *03:31:10.7±0.7, 21°.10S×68°.88W, h111^{km}±2^{km}, ML3.7*
ISC 19 03:31:09.4±0.9**, 21°.11S**±0°.03×**68°.91W**±0°.06**, h120**^{km}±7^{km}**, n42, σ0^s.89**/72**, 2C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	IPOC Station P	0.54	277	*i* P	Pn	03 31 27.6	-0.2
PB01				*e*S	Sn	03 31 40.6	-1.0
PB01				IAML		03 31 41.0	
	comp=N,3µm,0.3s						
PB01	IPOC Station P	0.54	277	*e*P	Pn	03 31 27.5	-0.2
PB01				*e*S	Sn	03 31 41.1	-0.5
PB01				IAML		03 31 43.5	
	comp=Z,1µm,0.1s						
PB09	IPOC Station P	0.75	204	⇓*i*P	Pn	03 31 29.8	+0.3
PB09				*i* S	Sn	03 31 44.7	+0.1
PB09				IAML		03 31 47.5	
	comp=E,1µm,0.2s						
PB09	IPOC Station P	0.75	204	*e*P	Pn	03 31 29.8	+0.3
PB09				*e*S	Sn	03 31 45.4	+0.8
PB09				IAML		03 31 47.0	
	comp=Z,1µm,0.2s						
PB02	IPOC Station P	0.94	257	*i* P	Pn	03 31 31.4	+0.4
PB02				*e*S	Sn	03 31 47.1	-0.3
PB02				IAML		03 31 48.8	
	comp=E,6µm,0.2s						
PB02	IPOC Station P	0.94	257	*e*P	Pn	03 31 31.4	+0.4
PB02				*e*S	Sn	03 31 48.0	+0.6
PB02				IAML		03 31 49.2	
	comp=Z,4µm,0.2s						
PB08	IPOC Station P	0.99	347	*i* P	Pn	03 31 32.1	+0.3
PB08				*e*S	Sn	03 31 48.4	-0.3
PB08				IAML		03 31 49.3	
	comp=E,2µm,0.2s						
PB08	IPOC Station P	0.99	347	*e*P	Pn	03 31 31.4	-0.4
PB08				*e*S	Sn	03 31 49.0	+0.3
PB08				IAML		03 31 50.0	
	comp=Z,677nm,0.2s						
PB07	IPOC Station P	1.10	236	*i* P	Pn	03 31 32.9	+0.2
PB07				*e*S	Sn	03 31 50.6	+0.3
PB07				IAML		03 31 51.9	
	comp=E,1µm,0.2s						
PB07	IPOC Station P	1.10	236	*e*P	Pn	03 31 32.3	-0.4
PB07				*e*S	Sn	03 31 51.0	+0.7
PB07				IAML		03 31 51.5	
	comp=Z,960nm,0.1s						
PATCX	Punta Patache	1.20	284	*i* P	Pn	03 31 33.9	+0.3
PATCX				*e*S	Sn	03 31 52.1	+0.3
PATCX				IAML		03 31 53.7	
	comp=E,4µm,0.3s						
PATCX	Punta Patache	1.20	284	*e*P	Pn	03 31 34.0	+0.5
PATCX				IAML		03 31 54.1	
	comp=Z,1µm,0.5s						
PB03	IPOC Station P	1.22	220	*i* P	Pn	03 31 34.4	+0.4
PB03				*e*S	Sn	03 31 52.6	0.0
PB03				IAML		03 31 53.6	
	comp=E,1µm,0.2s						
PB03	IPOC Station P	1.22	220	*e*P	Pn	03 31 33.8	-0.2
PB03				*e*S	Sn	03 31 52.6	0.0
PB03				IAML		03 31 56.6	
	comp=Z,749nm,0.1s						
HMBC	Humberstone	1.23	312	⇑*i*P	Pn	03 31 34.0	0.0
HMBC				*i* S	Sn	03 31 52.1	-0.5
HMBC	Humberstone	1.23	312	*e*P	Pn	03 31 33.4	-0.7
HMBC				*e*S	Sn	03 31 52.5	-0.2
HMBC				IAML		03 31 53.0	
	comp=Z,1µm,0.3s						
TA01	Diego Aracena	1.30	294	⇑*i*P	Pn	03 31 34.8	+0.2
TA01				*i* S	Sn	03 31 53.3	-0.5
TA01				IAML		03 31 55.0	
	comp=E,1µm,0.4s						
TA01	Diego Aracena	1.30	294	*e*P	Pn	03 31 34.9	+0.2
TA01				*e*S	Sn	03 31 54.3	+0.5
TA01				IAML		03 31 55.0	

	comp=Z,507nm,0.2s						
TA02	**Huaiquique**	**1.41**	**306**	i P	**Pn**	**03 31 36.0**	**+0.1**
TA02	**Huaiquique**	**1.41**	**306**	eP	**Pn**	**03 31 36.2**	**+0.3**
TA02				IAML		03 31 59.9	
	comp=Z,900nm,0.1s						
GO01	**Chusmiza**	**1.46**	**349**	i P	**Pn**	**03 31 36.8**	**-0.1**
GO01				eS	**Sn**	**03 31 58.6**	**+0.9**
GO01				IAML		03 31 59.9	
	comp=N,2µm,0.1s						
GO01	**Chusmiza**	**1.46**	**349**	eP	**Pn**	**03 31 36.6**	**-0.3**
GO01				eS	**Sn**	**03 31 59.0**	**+1.3**
GO01				IAML		03 31 59.5	
	comp=Z,565nm,0.6s						
PB11	**IPOC Station P**	**1.51**	**332**	i P	**Pn**	**03 31 37.1**	**0.0**
PB11				i S	**Sn**	**03 31 57.9**	**-0.4**
PB11				IAML		03 31 58.9	
	comp=E,1µm,0.2s						
PB11	**IPOC Station P**	**1.51**	**332**	eP	**Pn**	**03 31 37.2**	**0.0**
PB11				eS	**Sn**	**03 31 58.5**	**+0.3**
PB11				IAML		03 31 59.1	
	comp=Z,645nm,0.2s						
PB06	**IPOC Station P**	**1.71**	**201**	i P	**Pn**	**03 31 40.2**	**+0.8**
PB06				eS	**Sn**	**03 32 03.1**	**+0.8**
PB06				IAML		03 32 06.3	
	comp=E,960nm,0.4s						
PB06	**IPOC Station P**	**1.71**	**201**	eP	**Pn**	**03 31 40.3**	**+0.8**
PB06				eS	**Sn**	**03 32 03.7**	**+1.3**
PB06				IAML		03 32 05.2	
	comp=Z,699nm,0.5s						
AF01	**San Pedro de A**	**1.96**	**160**	eP	**Pn**	**03 31 42.0**	**-0.6**
AF01				eS	**Sn**	**03 32 06.3**	**-1.7**
AF01				IAML		03 32 30.3	
	comp=Z,449nm,0.5s						
PB05	**IPOC Station P**	**2.11**	**214**	i P	**Pn**	**03 31 44.8**	**+0.4**
PB05				i S	**Sn**	**03 32 08.7**	**-2.5**
PB05				IAML		03 32 12.0	
	comp=N,286nm,0.1s						
PB05	**IPOC Station P**	**2.11**	**214**	eP	**Pn**	**03 31 44.8**	**+0.4**
PB05				eS	**Sn**	**03 32 11.3**	**+0.1**
PB05				IAML		03 32 12.3	
	comp=Z,233nm,0.8s						
PB16	**IPOC Station P**	**2.81**	**348**⇓	i P	**Pn**	**03 31 54.8**	**+0.9**
PB16				i S	**Sn**	**03 32 29.2**	**+1.3**
PB16				IAML		03 32 32.1	
	comp=E,109nm,0.3s						
PB16	**IPOC Station P**	**2.81**	**348**	eP	**Pn**	**03 31 54.9**	**+1.0**
PB16				eS	Sn	03 32 16.1	-12
PB12	**IPOC Station P**	**2.82**	**331**	i P	**Pn**	**03 31 52.4**	**-1.0**
PB12				i S	**Sn**	**03 32 25.5**	**-1.8**
PB12				IAML		03 32 31.6	
	comp=E,214nm,0.3s						
PB12	**IPOC Station P**	**2.82**	**331**	eP	**Pn**	**03 31 52.4**	**-1.0**
PB12				eS	**Sn**	**03 32 26.9**	**-0.4**
PB12				IAML		03 32 27.6	
	comp=Z,115nm,0.3s						
PB10	**IPOC Station P**	**2.84**	**212**	eP	**Pn**	**03 31 53.6**	**0.0**
PB10				eS	Sn	03 32 14.6	-13
PB14	**IPOC Station P**	**3.76**	**201**	eP	**Pn**	**03 32 06.2**	**+0.1**
PB14				eS	**Sn**	**03 32 48.6**	**-1.4**
PB14				IAML		03 33 05.1	
	comp=Z,67nm,0.4s						
GO02	**Mina Guanaco**	**4.09**	**189**	eP	**Pn**	**03 32 11.3**	**+0.9**
GO02				eS	Sn	03 32 40.5	-17
GO02				IAML		03 33 03.1	
	comp=Z,90nm,0.5s						
LPAZ	**La Paz**	**4.85**	**9**	Pn	**Pn**	**03 32 23.0**	**+2.1**
	comp=Z,1.6nm,0.3s,baz=160,slow=5.3,SNR=27						
	comp=Z,3.0nm,0.3s						
LPAZ	**La Paz**	**4.85**	**9**	eP	**Pn**	**03 32 23.1**	**+2.1**
SIV	**San Ignacio**	**9.01**	**57**	Pn	**Pn**	**03 33 13.8**	**-2.8**
	comp=Z,0.3nm,0.3s,baz=237,slow=9.5,SNR=53						
	comp=Z,7.2nm,0.4s						
BDFB	**Brasilia**	**20.55**	**78**	P	**P**	**03 35 39.0**	**+0.2**
	comp=Z,2.0nm,0.5s,baz=277,slow=9.8,SNR=6.3						
	comp=Z,2.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**77.22**	**70**	P	**P**	**03 42 51.5**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=250,slow=6.1,SNR=4.5						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**145.31**	**36**	PKPbc	**PKiKP**	**03 50 35.4**	**-1.6**
	comp=Z,1.1nm,0.8s,baz=306,slow=4.1,SNR=5.5						

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*TAP **19** 03:51:54.7, 24°.85N×122°.00E, h91^{km}, ML3.9, A*
*JMA **19** 03:51:55.0±0.3, 24°.8N±0°.9×122°.0E±0°.6, h88^{km}±2^{km},*
MV3.0/12, TAIWAN REGION
ISC 19 03:51:54.7±1.2**, 24°.85N**±0°.03×**122°.01E**±0°.02**, h93**^{km}±4^{km}**,**
n160, σ0ˢ.63/295**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		**0.07**	**270**	P	**Pn**	**03 52 07.7**	**0.0**
EGS				S	**Sn**	**03 52 17.1**	**-0.3**
NTC	**Toucheng**	**0.16**	**273**	eP	**Pn**	**03 52 07.9**	**0.0**
NTC				eS	**Sn**	**03 52 16.7**	**-1.0**
TWB1	**Santiao Chiao**	**0.16**	**355**	i P	**Pn**	**03 52 07.9**	**0.0**
TWB1				i S	**Sn**	**03 52 17.0**	**-0.7**
TIPB	**Shuangxi**	**0.21**	**308**	i P	**Pn**	**03 52 08.0**	**-0.1**
TIPB				i S	**Sn**	**03 52 17.3**	**-0.8**
ILA	**Ilan**	**0.25**	**251**	eP	**Pn**	**03 52 07.7**	**-0.5**
ILA				eS	**Sn**	**03 52 17.8**	**-0.4**
SXI1	**Grass Mountain**	**0.27**	**335**	i P	**Pn**	**03 52 08.3**	**-0.2**
SXI1				S	**Sn**	**03 52 18.2**	**-0.5**
TWC	**Suao**	**0.27**	**211**	eP	**Pn**	**03 52 08.2**	**-0.2**
TWC				eS	**Sn**	**03 52 17.5**	**-0.9**
NWF	**Wu-fen Shan**	**0.30**	**318**	i P	**Pn**	**03 52 08.5**	**-0.1**
NWF				i S	**Sn**	**03 52 18.5**	**-0.4**
WFSB	**Wu-fen Shan**	**0.30**	**318**	i P	**Pn**	**03 52 08.5**	**0.0**
WFSB				i S	**Sn**	**03 52 18.4**	**-0.3**
ESAO	**Su ao**	**0.31**	**209**	P	**Pn**	**03 52 09.0**	**+0.5**
ESAO				eS	**Sn**	**03 52 18.9**	**+0.1**
TWE	**Neicheng**	**0.33**	**248**	i P	**Pn**	**03 52 08.7**	**0.0**
TWE				eS	**Sn**	**03 52 18.6**	**-0.4**
NDS	**Dongshan**	**0.34**	**231**	P	**Pn**	**03 52 09.0**	**+0.4**
NDS				S	**Sn**	**03 52 19.5**	**+0.5**
TNOU	**National Taiwa**	**0.37**	**325**	i P	**Pn**	**03 52 08.8**	**-0.1**
TNOU				S	**Sn**	**03 52 18.9**	**-0.4**
FUSB	**Fushanzhiwuyua**	**0.39**	**257**	i P	**Pn**	**03 52 09.1**	**0.0**
FUSB				S	**Sn**	**03 52 20.3**	**+0.6**
TWA	**Mucha**	**0.41**	**289**	i P	**Pn**	**03 52 09.0**	**-0.1**
TWA				S	**Sn**	**03 52 19.3**	**-0.5**
NHY	**Taipei**	**0.44**	**296**	eP	**Pn**	**03 52 09.4**	**+0.1**
NHY				eS	**Sn**	**03 52 20.3**	**+0.2**
ENTT	**Nioudou**	**0.45**	**243**	i P	**Pn**	**03 52 10.0**	**+0.6**
ENTT				eS	**Sn**	**03 52 20.9**	**+0.6**
NHDH	**Xindian Distri**	**0.45**	**285**	i P	**Pn**	**03 52 09.5**	**+0.1**
NHDH				S	**Sn**	**03 52 19.9**	**-0.4**
NWLT	**Wulai**	**0.46**	**262**	i P	**Pn**	**03 52 09.4**	**-0.1**
NWLT				S	**Sn**	**03 52 20.2**	**-0.3**
EOS2	**EOS2**	**0.47**	**154**	i P	**Pn**	**03 52 09.9**	**+0.5**
EOS2				i S	**Sn**	**03 52 21.0**	**+0.7**
ENA	**Nanau**	**0.48**	**210**	P	**Pn**	**03 52 10.0**	**+0.4**
ENA				S	**Sn**	**03 52 21.1**	**+0.4**
TATO	**Taipei**	**0.49**	**286**	P	**Pn**	**03 52 09.5**	**-0.1**
TATO	**Taipei**	**0.49**	**286**	P	**Pn**	**03 52 09.8**	**+0.1**
TATO				S	**Sn**	**03 52 20.7**	**-0.1**
TAP	**Taipei**	**0.49**	**293**	eP	**Pn**	**03 52 09.8**	**+0.2**
TAP				eS	**Sn**	**03 52 21.2**	**+0.4**
YM01	**YM01**	**0.50**	**307**	i P	**Pn**	**03 52 09.7**	**-0.1**
YM01				i S	**Sn**	**03 52 20.2**	**-0.8**
YM08	**YM08**	**0.51**	**312**	P	**Pn**	**03 52 09.7**	**-0.1**
ZUZH	**Zhuzihu**	**0.52**	**307**	i P	**Pn**	**03 52 10.0**	**0.0**
ZUZH				eS	**Sn**	**03 52 20.4**	**-1.0**
BACT	**New Taipei Cit**	**0.53**	**287**	eP	**Pn**	**03 52 10.5**	**+0.5**
LATG	**Datong**	**0.53**	**235**	i P	**Pn**	**03 52 10.7**	**+0.5**
LATG				i S	**Sn**	**03 52 21.7**	**+0.1**
ANP	**Anpu**	**0.56**	**308**	eP	**Pn**	**03 52 10.3**	**0.0**
TWY	**Chenhua**	**0.56**	**319**	eP	**Pn**	**03 52 10.6**	**+0.3**
TWY				eS	**Sn**	**03 52 22.1**	**+0.2**
EAHA	**Aohua**	**0.57**	**205**	eP	**Pn**	**03 52 10.2**	**-0.1**
EAHA				eS	**Sn**	**03 52 22.3**	**+0.5**
NSM	**Shimen**	**0.58**	**319**	eP	**Pn**	**03 52 10.8**	**+0.5**
NSM				eS	**Sn**	**03 52 22.7**	**+0.6**
TWS1	**Kuangyinshan**	**0.59**	**296**	i P	**Pn**	**03 52 10.8**	**+0.3**
TWS1				S	**Sn**	**03 52 22.4**	**+0.2**
NTST	**Danshui**	**0.60**	**302**	P	**Pn**	**03 52 10.5**	**0.0**
NTST				S	**Sn**	**03 52 22.4**	**+0.1**
YHNB	**Yeheng**	**0.60**	**253**	P	**Pn**	**03 52 10.5**	**-0.1**
YHNB	**Yeheng**	**0.60**	**253**	i P	**Pn**	**03 52 10.7**	**+0.1**
YHNB				i S	**Sn**	**03 52 22.1**	**-0.5**
NSK	**Sanguang**	**0.61**	**254**	i P	**Pn**	**03 52 10.8**	**+0.1**
NSK				i S	**Sn**	**03 52 22.3**	**-0.4**
EOS3	**EOS3**	**0.62**	**153**	i P	**Pn**	**03 52 11.2**	**+0.6**
EOS3				eS	**Sn**	**03 52 23.2**	**+0.7**
NTY	**Taoyuan**	**0.66**	**284**	P	**Pn**	**03 52 11.7**	**+0.6**
NTY				eS	**Sn**	**03 52 23.8**	**+0.5**
NNS	**Nan Shan**	**0.70**	**235**	i P	**Pn**	**03 52 12.1**	**+0.5**
NNS				S	**Sn**	**03 52 24.3**	**0.0**
NNSB	**Datong**	**0.70**	**234**	i P	**Pn**	**03 52 11.9**	**+0.3**
NNSB				i S	**Sn**	**03 52 24.1**	**-0.1**
NNSH	**Datong**	**0.70**	**234**	P	**Pn**	**03 52 11.9**	**+0.3**
NNSH				S	**Sn**	**03 52 24.1**	**-0.2**
NCU	**National Centr**	**0.75**	**280**	eP	**Pn**	**03 52 11.1**	**-0.9**
NCU				S	**Sn**	**03 52 24.6**	**-0.3**
NCUH	**Zhongli**	**0.76**	**279**	i P	**Pn**	**03 52 12.6**	**+0.6**
NCUH				i S	**Sn**	**03 52 25.7**	**+0.8**
KSHI	**Guanxi Townshi**	**0.76**	**265**	eP	**Pn**	**03 52 12.6**	**+0.6**
KSHI				i S	**Sn**	**03 52 25.8**	**+0.9**
NACB	**Ninganchiao**	**0.77**	**209**	P	**Pn**	**03 52 11.3**	**-0.8**
NACB	**Ninganchiao**	**0.77**	**209**	i P	**Pn**	**03 52 11.6**	**-0.5**
NACB				eS	**Sn**	**03 52 25.5**	**+0.4**
ETL	**Fush Village**	**0.77**	**207**	eP	**Pn**	**03 52 11.8**	**-0.4**
ETL				eS	**Sn**	**03 52 25.4**	**+0.1**
EOS4	**EOS4**	**0.78**	**158**	eP	**Pn**	**03 52 11.8**	**0.0**
EOS4				eS	**Sn**	**03 52 24.7**	**+0.1**
PCYT	**Pengchaiyu**	**0.78**	**4**	eP	**Pn**	**03 52 12.7**	**+0.4**
PCYT				eS	**Sn**	**03 52 25.9**	**+0.4**
ETLH	**Xiulin Townshi**	**0.79**	**217**	P	**Pn**	**03 52 12.3**	**-0.2**
ETLH				eS	**Sn**	**03 52 25.3**	**-0.5**
NFF	**Wufeng Townshi**	**0.83**	**255**	i P	**Pn**	**03 52 12.9**	**0.0**
NFF				i S	**Sn**	**03 52 26.1**	**-0.4**
NJD	**Zhudong**	**0.84**	**263**	P	**Pn**	**03 52 13.3**	**+0.5**
NJD				eS	**Sn**	**03 52 27.0**	**+0.5**
TWD	**Chiawan**	**0.85**	**206**	P	**Pn**	**03 52 12.3**	**-0.6**
TWD				eS	**Sn**	**03 52 26.6**	**0.0**
NHW	**Xinwu Township**	**0.88**	**281**	eP	**Pn**	**03 52 13.6**	**+0.3**
NHW				eS	**Sn**	**03 52 28.0**	**+0.7**
HSN1	**Hsinchu**	**0.90**	**266**	eP	**Pn**	**03 52 13.9**	**+0.4**
HSN1				eS	**Sn**	**03 52 28.0**	**+0.5**
FUSS	**Fushou**	**0.91**	**230**	i P	**Pn**	**03 52 14.5**	**+0.5**
FUSS				S	**Sn**	**03 52 28.4**	**+0.1**
LIOB	**Emei**	**0.92**	**258**	i P	**Pn**	**03 52 14.0**	**+0.2**
LIOB				S	**Sn**	**03 52 28.0**	**0.0**
SBCB	**Hsinchu**	**0.93**	**267**	eP	**Pn**	**03 52 14.2**	**+0.4**
SBCB				eS	**Sn**	**03 52 28.5**	**+0.3**
NSTT	**Nanjuang**	**0.94**	**257**	i P	**Pn**	**03 52 14.1**	**+0.1**
NSTT				i S	**Sn**	**03 52 27.9**	**-0.4**
HWA	**Hwalien**	**0.94**	**203**	eP	**Pn**	**03 52 13.8**	**-0.1**
HWA				eS	**Sn**	**03 52 29.2**	**+0.9**
JYNG	**Yonagunijimaku**	**0.94**	**114**	P	**Pn**	**03 52 13.8**	**-0.1**
JYNG				eS	**Sn**	**03 52 27.8**	**-0.6**
HSN	**Hsinchu**	**0.94**	**268**	eP	**Pn**	**03 52 13.9**	**0.0**
HSN				eS	**Sn**	**03 52 27.7**	**-0.7**
TWT	**Tachien**	**0.96**	**232**	i P	**Pn**	**03 52 15.3**	**+1.0**
TWT				i S	**Sn**	**03 52 29.9**	**+0.9**
WHF	**Hehuan Shan**	**0.97**	**224**	i P	**Pn**	**03 52 15.0**	**+0.2**
WHF				i S	**Sn**	**03 52 29.7**	**0.0**
TDCB	**Techi**	**0.97**	**233**	i P	**Pn**	**03 52 15.1**	**+0.6**
TDCB				i S	**Sn**	**03 52 29.5**	**+0.3**
LXIB	**Xiulin Townshi**	**0.98**	**213**	eP	**Pn**	**03 52 13.8**	**-0.8**
LXIB				eS	**Sn**	**03 52 29.0**	**-0.4**
ETM	**Tongmen**	**0.99**	**208**	eP	**Pn**	**03 52 13.7**	**-0.9**
ETM				eS	**Sn**	**03 52 28.9**	**-0.6**
YOJ	**Yonaguni jima**	**0.99**	**112**	P	**Pn**	**03 52 14.3**	**-0.2**
YOJ	**Yonaguni jima**	**0.99**	**112**	P	**Pn**	**03 52 14.4**	**-0.1**
YOJ				eS	**Sn**	**03 52 30.4**	**+1.0**
YOJ	**Yonaguni jima**	**0.99**	**112**	P	**Pn**	**03 52 14.4**	**-0.1**
YOJ				eS	**Sn**	**03 52 28.5**	**-0.9**
TEYL	**Yanliau Villag**	**1.04**	**201**	P	**Pn**	**03 52 14.8**	**-0.3**
TEYL				S	**Sn**	**03 52 30.0**	**-0.3**
NJN	**Zhunan**	**1.04**	**261**	eP	**Pn**	**03 52 15.4**	**+0.3**
NJN				eS	**Sn**	**03 52 30.3**	**-0.1**
WHP	**Taichung City**	**1.12**	**240**	i P	**Pn**	**03 52 16.8**	**+0.7**
WHP				S	**Sn**	**03 52 32.4**	**+0.3**
SHUL	**Shoufeng**	**1.13**	**201**	eP	**Pn**	**03 52 15.9**	**-0.1**
SHUL				eS	**Sn**	**03 52 32.3**	**+0.2**
NMLH	**Miaoli**	**1.15**	**255**	P	**Pn**	**03 52 16.8**	**+0.5**
NMLH				S	**Sn**	**03 52 32.4**	**-0.2**
ESL	**Shilin**	**1.15**	**207**	P	**Pn**	**03 52 16.9**	**+0.5**
ESL				S	**Sn**	**03 52 33.3**	**+0.6**
OWD	**Renai**	**1.17**	**221**	P	**Pn**	**03 52 16.7**	**0.0**
OWD				eS	**Sn**	**03 52 32.8**	**-0.3**
WUSB	**Renai**	**1.17**	**224**	i P	**Pn**	**03 52 17.3**	**+0.5**
WUSB				i S	**Sn**	**03 52 33.5**	**+0.2**
NSY	**Sanyi**	**1.21**	**250**	P	**Pn**	**03 52 17.9**	**+0.8**
NSY				S	**Sn**	**03 52 34.6**	**+0.7**
TWQ1	**Liyutan**	**1.23**	**246**	eP	**Pn**	**03 52 17.5**	**+0.2**
TWQ1				eS	**Sn**	**03 52 34.5**	**+0.2**
WPL	**Puli Township**	**1.27**	**229**	eP	**Pn**	**03 52 18.5**	**+0.8**
WPL				eS	**Sn**	**03 52 35.7**	**+0.6**
WCS	**Beigang Elemen**	**1.27**	**232**	P	**Pn**	**03 52 18.3**	**+0.5**
WCS				S	**Sn**	**03 52 35.2**	**+0.1**
DPDB	**Guoxing**	**1.27**	**231**	eP	**Pn**	**03 52 18.4**	**+0.5**
DPDB				eS	**Sn**	**03 52 34.8**	**-0.6**
EGFH	**Guangfu**	**1.28**	**204**	eP	**Pn**	**03 52 17.9**	**-0.1**
VWDT	**VWDT**	**1.34**	**216**	i P	**Pn**	**03 52 19.1**	**+0.5**
VWDT				i S	**Sn**	**03 52 36.6**	**-0.1**
SMLT	**Sun Moon Lake**	**1.39**	**227**	i P	**Pn**	**03 52 19.9**	**+0.5**
SMLT				S	**Sn**	**03 52 39.2**	**+1.2**
TCU	**Taichung**	**1.40**	**240**	eP	**Pn**	**03 52 19.7**	**+0.4**
TCU				eS	**Sn**	**03 52 37.4**	**-0.5**
TYC	**Yuchr**	**1.41**	**228**	i P	**Pn**	**03 52 19.8**	**+0.4**
TYC				S	**Sn**	**03 52 38.7**	**+0.7**
WWF	**Wufeng**	**1.43**	**236**	eP	**Pn**	**03 52 20.1**	**+0.3**
WWF				eS	**Sn**	**03 52 39.7**	**+1.0**
HGSD	**Ruisui**	**1.45**	**202**	P	**Pn**	**03 52 19.7**	**-0.2**
HGSD				S	**Sn**	**03 52 39.2**	**+0.2**
EHY	**Hungye**	**1.47**	**205**	eP	**Pn**	**03 52 18.7**	**-1.6**
EHY				eS	**Sn**	**03 52 37.2**	**-2.4**
EHYH	**Wanrong**	**1.47**	**204**	eP	**Pn**	**03 52 19.0**	**-1.3**
EHYH				eS	**Sn**	**03 52 38.8**	**-0.9**
WCHH	**Zhanghua**	**1.52**	**240**	P	**Pn**	**03 52 21.1**	**+0.3**
WCHH				S	**Sn**	**03 52 40.5**	**-0.2**
WCH1	**Changhua City**	**1.54**	**240**	eS	**Sn**	**03 52 41.2**	**+0.2**
WNT	**Mingjian**	**1.54**	**232**	eP	**Pn**	**03 52 21.4**	**+0.3**
WNT				eS	**Sn**	**03 52 41.3**	**+0.2**
WJS	**Zhushan**	**1.55**	**229**	eP	**Pn**	**03 52 21.6**	**+0.4**
WJS				eS	**Sn**	**03 52 41.9**	**+0.6**
WHYT	**Xinyi Township**	**1.55**	**223**	P	**Pn**	**03 52 22.1**	**+0.7**
WHYT				eS	**Sn**	**03 52 42.9**	**+1.4**
WYL	**Yuanlin Townsh**	**1.57**	**236**	eS	**Sn**	**03 52 41.9**	**+0.1**
YULB	**Yu-li**	**1.58**	**204**	P	**Pn**	**03 52 21.7**	**0.0**
YULB	**Yu-li**	**1.58**	**204**	S	**Sn**	**03 52 40.2**	**-1.9**
YULB	**Yu-li**	**1.58**	**204**	eP	**Pn**	**03 52 21.8**	**0.0**
YULB				eS	**Sn**	**03 52 42.1**	**-0.1**
TWF1	**Yuli**	**1.62**	**204**	eP	**Pn**	**03 52 20.6**	**-1.5**
TWF1				eS	**Sn**	**03 52 43.1**	**+0.1**
YUS	**Yu-Shan**	**1.66**	**216**	P	**Pn**	**03 52 23.9**	**+0.8**
YUS				eS	**Sn**	**03 52 43.9**	**-0.6**
ALS	**Alishan**	**1.72**	**220**	P	**Pn**	**03 52 24.6**	**+0.8**
ALS				eS	**Sn**	**03 52 46.8**	**+1.1**
CHN5	**Tsauling**	**1.73**	**225**	P	**Pn**	**03 52 24.2**	**+0.5**
CHN5				S	**Sn**	**03 52 46.2**	**+0.5**
CHKH	**Chenggong**	**1.74**	**199**	eP	**Pn**	**03 52 23.6**	**0.0**
CHKH				eS	**Sn**	**03 52 45.8**	**+0.2**
WGK	**Gukeng**	**1.75**	**229**	eP	**Pn**	**03 52 24.3**	**+0.5**
WGK				eS	**Sn**	**03 52 45.9**	**0.0**
FULB	**Fuli**	**1.76**	**202**	P	**Pn**	**03 52 24.1**	**+0.1**
FULB				S	**Sn**	**03 52 46.0**	**-0.3**
WDLH	**Douliu**	**1.77**	**230**	P	**Pn**	**03 52 24.4**	**+0.5**
WDLH				S	**Sn**	**03 52 46.6**	**+0.4**
RLNB	**Erlin**	**1.78**	**238**	eP	**Pn**	**03 52 24.5**	**+0.4**
RLNB				eS	**Sn**	**03 52 46.3**	**-0.1**
HATJ	**Hateruma jima**	**1.82**	**115**	eP	**Pn**	**03 52 24.4**	**-0.3**
HATJ				eS	**Sn**	**03 52 47.0**	**-0.4**
CHKT	**Chengkung**	**1.83**	**199**	eP	**Pn**	**03 52 25.5**	**+0.6**
CHKT				eS	**Sn**	**03 52 47.8**	**0.0**
EHD	**Haiduan**	**1.84**	**204**	eP	**Pn**	**03 52 23.5**	**-1.4**
ELDTW	**Lidau**	**1.88**	**209**	eP	**Pn**	**03 52 26.0**	**+0.4**
ELDTW				eS	**Sn**	**03 52 49.5**	**+0.4**
ECS	**Chishang**	**1.88**	**203**	eP	**Pn**	**03 52 25.9**	**+0.4**
ECS				eS	**Sn**	**03 52 48.5**	**-0.6**
WCKO	**Fanlu**	**1.90**	**223**	eP	**Pn**	**03 52 25.9**	**+0.2**
WCKO				eS	**Sn**	**03 52 49.8**	**+0.5**
CHN2	**Minshiung**	**1.91**	**227**	eS	**Sn**	**03 52 50.3**	**+0.7**
JKRS	**Kuro-shima**	**1.92**	**108**	eP	**Pn**	**03 52 26.3**	**+0.3**
JKRS				eS	**Sn**	**03 52 49.6**	**-0.2**
CHN4	**Tsaushan**	**1.97**	**221**	P	**Pn**	**03 52 27.0**	**+0.3**
CHN4				eS	**Sn**	**03 52 51.7**	**+0.7**
CHY	**Chiayi**	**1.97**	**227**	P	**Pn**	**03 52 26.9**	**+0.2**
CHY				S	**Sn**	**03 52 51.1**	**+0.1**
TPUB	**Ta-pu**	**1.99**	**220**	P	**Pn**	**03 52 27.5**	**+0.6**
TPUB	**Ta-pu**	**1.99**	**220**	S	**Sn**	**03 52 50.6**	**-0.8**
TPUB	**Ta-pu**	**1.99**	**220**	P	**Pn**	**03 52 27.4**	**+0.5**
TPUB				eS	**Sn**	**03 52 52.0**	**+0.6**
JIJ	**Ishigaki jima**	**2.00**	**103**	eP	**Pn**	**03 52 27.2**	**+0.2**
JIJ				eS	**Sn**	**03 52 50.1**	**-1.7**
STYH	**Taoyuan**	**2.01**	**214**	eP	**Pn**	**03 52 28.3**	**+1.1**
STYH				eS	**Sn**	**03 52 53.0**	**+1.1**
WSF	**Szhu**	**2.02**	**234**	eS	**Sn**	**03 52 52.3**	**+0.1**
STYT	**Tauyuan**	**2.03**	**215**	eP	**Pn**	**03 52 28.5**	**+1.1**
STYT				eS	**Sn**	**03 52 53.2**	**+0.8**
WTP	**Ta-pu**	**2.04**	**219**	eP	**Pn**	**03 52 28.1**	**+0.5**
WTP				eS	**Sn**	**03 52 53.5**	**+0.9**
WSL	**Shuilin Townsh**	**2.09**	**231**	P	**Pn**	**03 52 28.4**	**+0.2**
WSL				S	**Sn**	**03 52 53.7**	**-0.1**
TWK	**Hsinying**	**2.10**	**222**	eP	**Pn**	**03 52 29.0**	**+0.7**
TWK				eS	**Sn**	**03 52 54.7**	**+0.7**
JISG	**Ishigakijimahi**	**2.11**	**97**	eP	**Pn**	**03 52 28.7**	**+0.2**
JISG				eS	**Sn**	**03 52 54.1**	**-0.2**
SNST	**Tainan City**	**2.13**	**221**	eS	**Sn**	**03 52 54.8**	**+0.2**
CHN1	**Nanshi**	**2.13**	**220**	eP	**Pn**	**03 52 29.4**	**+0.6**
CHN1				eS	**Sn**	**03 52 55.3**	**+0.4**
SGST	**Jiashian**	**2.19**	**217**	eP	**Pn**	**03 52 29.9**	**+0.4**
SGST				eS	**Sn**	**03 52 56.3**	**+0.2**
TWG	**Pinlang**	**2.19**	**203**	eP	**Pn**	**03 52 30.2**	**+0.6**
TWG				eS	**Sn**	**03 52 55.9**	**-0.3**
TWGBT	**Beinan**	**2.19**	**203**	P	**Pn**	**03 52 28.8**	**-0.7**
TWGBT	**Beinan**	**2.19**	**203**	eP	**Pn**	**03 52 29.9**	**+0.4**
TWGBT				eS	**Sn**	**03 52 56.0**	**-0.1**
CHN8	**Yiju**	**2.22**	**228**	eS	**Sn**	**03 52 56.9**	**+0.2**
TTN	**Taitung**	**2.23**	**201**	eS	**Sn**	**03 52 56.5**	**-0.5**
MATB	**Ma-tsu**	**2.27**	**305**	P	**Pn**	**03 52 30.9**	**+0.3**
MATB				eS	**Sn**	**03 52 57.8**	**-0.2**
SSD	**Sandimen**	**2.44**	**211**	eP	**Pn**	**03 52 34.3**	**+1.4**
SSD				eS	**Sn**	**03 53 03.0**	**+0.9**
JTJ	**Tarama**	**2.46**	**94**	eS	**Sn**	**03 53 02.6**	**+0.1**
MASBT	**Mashibuluo**	**2.55**	**210**	eP	**Pn**	**03 52 35.8**	**+1.5**
MASBT				eS	**Sn**	**03 53 05.3**	**+0.6**
PHUB	**P'eng-hu**	**2.59**	**240**	eP	**Pn**	**03 52 34.0**	**-0.7**
PHUB				eS	**Sn**	**03 53 04.1**	**-1.5**
PTMZ	**Houxiangcun**	**2.63**	**275**	eP	**Pn**	**03 52 35.4**	**+0.2**
PTMZ				eS	**Sn**	**03 53 05.9**	**-0.5**
LYJJ	**Jianjiangzhen**	**2.64**	**310**	eP	**Pn**	**03 52 35.8**	**+0.3**
LYJJ				eS	**Sn**	**03 53 06.3**	**-0.5**
XPSS	**Dashiqiu**	**2.64**	**322**	eP	**Pn**	**03 52 36.2**	**+0.7**
WDGT	**Dungji**	**2.66**	**234**	eS	**Sn**	**03 53 06.6**	**-0.7**
EAST	**Anshuo**	**2.67**	**204**	eP	**Pn**	**03 52 37.7**	**+1.7**
EAST				eS	**Sn**	**03 53 07.2**	**-0.4**
SCZT	**Fangliau**	**2.77**	**208**	eP	**Pn**	**03 52 38.2**	**+0.9**
SCZT				eS	**Sn**	**03 53 10.2**	**+0.2**
LAY	**Lan-yu**	**2.83**	**189**	eP	**Pn**	**03 52 36.6**	**-1.4**
LAY				eS	**Sn**	**03 53 10.2**	**-1.0**
LYUB	**Lan-yu**	**2.86**	**188**	eP	**Pn**	**03 52 36.6**	**-1.8**
LYUB				eS	**Sn**	**03 53 11.8**	**-0.1**
VCHM	**Qimei**	**2.86**	**236**	eP	**Pn**	**03 52 38.7**	**+0.2**
VCHM				eS	**Sn**	**03 53 12.0**	**-0.1**
MHZQ	**Yeshan**	**2.96**	**296**	eP	**Pn**	**03 52 39.7**	**-0.1**
JMJ	**Miyako jima 2**	**2.99**	**90**	eP	**Pn**	**03 52 41.8**	**+1.7**
JMJ				eS	**Sn**	**03 53 16.2**	**+1.0**
KNMB	**Chin-men Tao**	**3.31**	**264**	eP	**Pn**	**03 52 44.2**	**-0.3**
KNMB				eS	**Sn**	**03 53 21.9**	**-1.1**
AXDP	**Jialang**	**3.67**	**272**	eP	**Pn**	**03 52 49.4**	**+0.1**
AXDP				eS	**Sn**	**03 53 29.3**	**-2.2**
ZPLA	**Ao Xicun**	**3.98**	**258**	eP	**Pn**	**03 52 53.9**	**+0.3**
ZPLA				eS	**Sn**	**03 53 36.8**	**-2.4**

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*MDD **19** 04:07:15.9±0.7, 37°.06N×13°.59W, h28^{km}, Mb4.5/14,*
M_mb4.0/14, Error ellipse: s-maj=6.0km s-min=4.4km
az=89.0
*IGIL **19** 04:07:18.0, 37°.06N×13°.59W, h31^{km}, ML2.2*
*INMG **19** 04:07:19.3±1.3, 37°.02N×13°.64W, h45^{km}±17^{km}, ML2.6,*
Error ellipse: s-maj=7.4km s-min=4.9km az=88.0,
#DIST_RANGE: REGIONAL #IPMA_REGION: Josephine
ISC 19 04:07:20.3±2.8**, 37°.17N**±0°.06×**12°.8W**±0°.1**, h10**^{km}**, n64,**
σ2ˢ.85/115**, 12C, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**3.17**	**89**	P	**Pn**	**04 08 11.6**	**+1.3**
PFVI				S	**Sn**	**04 08 50.7**	**+2.5**
PFVI	**Vila Bisbo**	**3.17**	**89**⇑	eP	**Pn**	**04 08 12.4**	**+2.1**
PFVI				eS	**Sb**	**04 08 52.1**	**-3.4**
PFVI				i IAML		04 08 55.4	
PFVI				i IAML		04 08 55.8	
PTEO	**Sao Teotonio**	**3.27**	**82**	eP	**Pn**	**04 08 14.0**	**+2.4**
PTEO				eS	**Sn**	**04 08 54.0**	**+3.4**
PTEO				i IAML		04 08 54.7	
PMAFR	**Mafra**	**3.30**	**56**	P	**Pn**	**04 08 14.0**	**+2.0**
PMAFR				S	**Sb**	**04 08 55.8**	**-3.3**
PMAFR	**Mafra**	**3.30**	**56**	eP	**Pn**	**04 08 14.4**	**+2.3**
PMAFR				eS	**Sb**	**04 08 55.6**	**-3.5**
PMAFR				i IAML		04 08 59.5	
PMAFR				i IAML		04 09 08.0	
MORF	**Marmelete**	**3.31**	**86**	eP	**Pn**	**04 08 14.4**	**+2.2**
MORF				eS	**Sn**	**04 08 55.5**	**+3.9**
MORF				IAML		04 08 58.4	
	comp=E,7.8nm,0.2s						
MORF	**Marmelete**	**3.31**	**86**	eP	**Pn**	**04 08 14.5**	**+2.2**
MORF				eS	**Sn**	**04 08 55.1**	**+3.4**
MORF				i IAML		04 09 01.9	
MESJ	**Messejana**	**3.70**	**78**	eP	**Pn**	**04 08 19.8**	**+2.2**
MESJ				eS	**Sn**	**04 09 04.8**	**+3.5**
MESJ				IAML		04 09 08.1	
	comp=N,3.8nm,0.1s						
MESJ	**Messejana**	**3.70**	**78**	eP	**Pn**	**04 08 19.9**	**+2.4**
MESJ				eS	**Sb**	**04 09 07.0**	**-3.7**
MOE	**Montemor**	**3.77**	**68**⇑	eP	**Pn**	**04 08 20.9**	**+2.4**
MOE				eS	**Sn**	**04 09 07.1**	**+4.2**
MOE				i IAML		04 09 09.0	
MOE				i IAML		04 09 10.4	
PCVE	**Castro Verde**	**3.82**	**82**	S	**Sn**	**04 09 06.7**	**+2.6**
PCVE				P	**Pn**	**04 08 20.9**	**+1.7**
PCVE	**Castro Verde**	**3.82**	**82**	eP	**Pn**	**04 08 21.5**	**+2.4**
PCVE				eS	**Sn**	**04 09 07.1**	**+3.0**
PCVE				i IAML		04 09 12.1	
PCVE				i IAML		04 09 15.5	
PBDV	**Barranco-do-Ve**	**3.88**	**87**	P	**Pn**	**04 08 21.5**	**+1.4**
PBDV				S	**Sb**	**04 09 11.4**	**-4.7**
PBDV	**Barranco-do-Ve**	**3.88**	**87**	eP	**Pn**	**04 08 23.0**	**+2.8**
PBDV				eS	**Sb**	**04 09 11.6**	**-4.5**
PSBE	**So Bento**	**3.92**	**52**	eP	**Pn**	**04 08 22.5**	**+1.9**
PSBE				eS	**Sn**	**04 09 10.9**	**+4.2**
PSBE				i IAML		04 09 15.4	
PBEJ	**Beja**	**4.01**	**76**	eP	**Pn**	**04 08 24.9**	**+3.1**
PBEJ				eS	**Sb**	**04 09 15.0**	**-4.6**
EVO	**Evora**	**4.02**	**69**	P	**Pn**	**04 08 23.8**	**+1.8**
EVO				S	**Sn**	**04 09 11.7**	**+2.5**
EVO	**Evora**	**4.02**	**69**	eP	**Pn**	**04 08 24.2**	**+2.2**
EVO				eS	**Sn**	**04 09 13.3**	**+4.1**
EVO				i IAML		04 09 16.7	
EVO				i IAML		04 09 17.4	
PVAQ	**Vaqueiros**	**4.06**	**85**	eP	**Pn**	**04 08 25.2**	**+2.8**
PVAQ				eS	**Sn**	**04 09 14.6**	**+4.6**
PVAQ				i IAML		04 09 17.4	
PVAQ				i IAML		04 09 22.0	
PMTG	**Montargil**	**4.07**	**61**	eP	**Pn**	**04 08 24.6**	**+2.0**
PMTG				eS	**Sn**	**04 09 15.5**	**+5.1**
PMTG				i IAML		04 09 17.8	
PARRA	**Arraiolos**	**4.10**	**65**	eP	**Pn**	**04 08 25.0**	**+1.9**
PARRA				eS	**Sn**	**04 09 14.7**	**+3.6**
PARRA				i IAML		04 09 17.2	
PARRA				i IAML		04 09 17.3	
PARRA				i IAML		04 09 19.9	
EGRO	**El Granado**	**4.25**	**84**	P	**Pn**	**04 08 26.9**	**+1.8**
EGRO				S	**Sn**	**04 09 19.3**	**+4.5**
EGRO	**El Granado**	**4.25**	**84**	P	**Pn**	**04 08 27.6**	**+2.5**
EGRO				⇑ i IVmb_VC		04 08 35.0	
	comp=N,425nm,SNR=1.6						
EGRO				S	**Sn**	**04 09 17.5**	**+2.7**
PSARD	**Sardoal**	**4.38**	**55**	eP	**Pn**	**04 08 29.0**	**+2.1**
PSARD				eS	**Sn**	**04 09 22.1**	**+4.2**
PSARD				i IAML		04 09 24.0	
PSARD				i IAML		04 09 24.3	
PCAS	**Casmilo, Conde**	**4.43**	**48**	eP	**Pn**	**04 08 29.1**	**+1.6**
PCAS				eS	**Sn**	**04 09 23.1**	**+3.9**
PCAS				i IAML		04 09 24.2	
PCAS				i IAML		04 09 26.5	
PBAR	**Barrancos**	**4.68**	**76**	P	**Pn**	**04 08 33.0**	**+2.0**
PBAR				S	**Sn**	**04 09 29.6**	**+4.2**

PBAR	Barrancos	4.68	76	eP	Pn	04 08 34.1	+3.2
PBAR				eS	Sn	04 09 29.9	+4.6
PBAR				i IAML		04 09 32.0	
PBAR				i IAML		04 09 32.9	
PMRV	Marv??o	4.81	60	eP	Pn	04 08 35.0	+2.1
PMRV				eS	Sn	04 09 32.2	+3.6
PMRV				i IAML		04 09 33.7	
PMRV				i IAML		04 09 34.1	
PMRV				i IAML		04 09 34.5	
EBAD	Badajoz	4.84	69	P	Pn	04 08 34.0	+0.8
EBAD				S	Sn	04 09 32.5	+3.3
EBAD	Badajoz	4.84	69	P	Pn	04 08 34.2	+1.0
EBAD				⇑iIVmb_VC		04 08 36.6	
	comp=N,349nm,SNR=1.8						
EBAD				S	Sn	04 09 31.3	+2.1
EMIN	Mina Concepcio	4.91	81	P	Pn	04 08 36.5	+2.4
EMIN				S	Sn	04 09 33.3	+2.3
EMIN	Mina Concepcio	4.91	81	P	Pn	04 08 36.6	+2.4
EMIN				⇑iIVmb_VC		04 08 37.3	
	comp=N,228nm,SNR=1.7						
EMIN				S	Sn	04 09 33.3	+2.3
PCBR	Castelo Branco	4.95	56	eP	Pn	04 08 37.1	+2.4
PCBR				eS	Sn	04 09 36.5	+4.4
PCBR				i IAML		04 09 38.7	
PCBR				i IAML		04 09 39.5	
PVIS	Viseu	5.21	46	eP	Pn	04 08 39.3	+0.9
PVIS				eS	Sn	04 09 40.9	+2.4
MTE	Manteigas	5.22	50	eP	Pn	04 08 40.3	+1.8
ESPR	Espera	5.56	91	P	Pn	04 08 45.1	+2.0
ESPR				S	Sn	04 09 50.8	+3.6
ESPR	Espera	5.56	91	P	Pn	04 08 45.8	+2.7
ESPR				⇑iIVmb_VC		04 08 47.6	
	comp=N,242nm,SNR=1.3						
ESPR				S	Sn	04 09 50.5	+3.4
PVRL	Vila Real	5.69	42	eS	Sn	04 09 52.1	+1.8
PVRL				i IAML		04 09 53.5	
PVRL				i IAML		04 09 53.5	
POLO	Lamas de Olo	5.72	41	eS	Sn	04 09 51.4	+0.4
POLO				i IAML		04 09 52.6	
POLO				i IAML		04 09 54.2	
POLO				i IAML		04 09 54.9	
AVE	Averroes	5.86	130	S	Sn	04 09 51.0	-3.4
EZAM	Zamans	5.89	31	S	Sn	04 09 50.9	-4.4
ECAB	El Cabril	5.93	79	P	Pn	04 08 49.5	+1.4
ECAB				S	Sn	04 09 58.8	+2.6
ECAB	El Cabril	5.93	79	P	Pn	04 08 50.8	+2.6
ECAB				⇑iIVmb_VC		04 08 52.7	
	comp=N,168nm,SNR=1.4						
ECAB				S	Sn	04 09 58.2	+2.1
PGAV	Gavieira, Arco	5.93	35	eS	Sn	04 09 55.7	-0.6
PGAV				i IAML		04 09 56.5	
PGAV				i IAML		04 09 57.1	
PGAV				i IAML		04 09 58.4	
ELOB	Lobios	5.95	37	P	Pn	04 08 46.1	-2.5
ELOB				S	Sn	04 09 55.9	-0.9
MVO	Moncorvo	6.00	47	eP	Pn	04 08 50.5	+1.3
MVO				eS	Sn	04 09 58.9	+0.9
MVO				i IAML		04 10 01.3	
MVO				i IAML		04 10 01.9	
MVO				i IAML		04 10 02.5	
CIBOR	Castaar de Ib	6.29	65	P	Pn	04 08 54.8	+1.6
CIBOR				S	Sn	04 10 06.5	+1.4
EMIJ	Mijas	6.46	93	P	Pn	04 08 56.9	+1.3
STS	Santiago	6.57	28	P	Pn	04 08 55.6	-1.4
STS				S	Sn	04 10 08.6	-3.4
EADA	Adamuz	6.60	79	P	Pn	04 08 58.8	+1.4
EADA				S	Sn	04 10 15.7	+3.0
EADA	Adamuz	6.60	79	P	Pn	04 09 00.1	+2.7
EADA				⇑iIVmb_VC		04 09 05.6	
	comp=N,171nm,SNR=1.3						
EADA				S	Sn	04 10 16.3	+3.6
ECAL	Calabor	6.68	43	S	Sn	04 10 16.0	+1.2
ECAL	Calabor	6.68	43	S	Sn	04 10 14.8	+0.1
EAGO	Agolada(Pontev	6.69	31	P	Pn	04 08 57.8	-0.8
EAGO				S	Sn	04 10 10.2	-4.6
PAB	San Pablo	7.05	68	P	Pn	04 09 06.0	+2.4
PAB				⇑iIVmb_VC		04 09 09.2	
	comp=N,152nm,SNR=1.1						
PAB				S	Sn	04 10 24.6	+0.7
IFR	Ifrane	7.25	118	P	Pn	04 09 06.7	+0.1
IFR				S	Sn	04 10 23.8	-5.2
PSIM	Granatula de C	7.33	74	P	Pn	04 09 08.2	+0.8
PSIM				S	Sn	04 10 33.2	+2.5
ELGU	Los Guajares,	7.34	90	P	Pn	04 09 09.2	+1.5
ELGU				⇑iIVmb_VC		04 09 17.7	
	comp=N,115nm,SNR=1.5						
EQTA	Presa de Quent	7.47	87	P	Pn	04 09 10.6	+1.2
EQTA				S	Sn	04 10 33.8	-0.4
GUD	Guadarrama	7.58	60	P	Pn	04 09 10.9	0.0
GUD				S	Sn	04 10 37.3	+0.3
TIO	Tiouine	7.74	142	P	Pn	04 09 10.3	-2.8
TIO				S	Sn	04 10 33.5	-7.4
EQES	Quesada	7.76	82	P	Pn	04 09 14.9	+1.5
EQES				⇑iIVmb_VC		04 09 15.4	
	comp=N,163nm,SNR=1.1						
EQES				S	Sn	04 10 42.2	+0.8
ETOB	Tobarra	9.01	77	P	Pn	04 09 30.3	-0.2
ETOB				⇑iIVmb_VC		04 09 34.5	
	comp=N,148nm,SNR=1.0						
CMIR	El Paso, La Pa	9.46	208	S	Sn	04 10 52.6	-31

IDC 19 04:28:09.8±1.4**, 53°.13N**×**85°.41E, h0^{km}, mbtmp2.6**/2**, ML2.3**/2**, Error ellipse: s-maj=13.6km s-min=8.3km az=97.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.90	337	I	I	04 33 10.0	
	0.2nm,0.8s,baz=158,slow=332,SNR=22						
ZALV	Zalesovo Beam	0.90	337	Pg	Pg	04 28 27.3	+0.4
	0.2nm,0.3s,baz=153,slow=19,SNR=3.6						
ZALV				Lg	Lg	04 28 39.0	
	1.1nm,0.3s,baz=154,slow=30,SNR=21						
KURBB	Kurchatov Arra	4.94	242	Pn	Pn	04 29 26.2	+1.0
	baz=59,slow=13,SNR=4.5						
KURBB				Lg	Lg	04 30 43.3	
	baz=61,slow=29,SNR=7.3 0.3nm,0.4s						
MKAR	Makanchi Array	6.65	199	Pn	Pn	04 29 50.2	+1.6
	0.1nm,0.3s,baz=22,slow=12,SNR=6.6						
MKAR				Sn	Sn	04 31 05.2	+0.1
	baz=19,slow=27,SNR=1.8						
MKAR				Lg	Lg	04 31 37.9	
	0.1nm,0.3s,baz=19,slow=31,SNR=6.8 0.4nm,0.4s						

SOME ***19*** *04:48:41.3, 40°.58N×83°.80E, h20^{km}*

IDC ***19*** *04:48:56.7±1.8, 41°.37N×83°.43E, h0^{km}, mb4.2/1, mbtmp3.7/3, ML2.7/2, MS2.8/5, Error ellipse: s-maj=29.0km s-min=18.8km az=64.0*

NNC ***19*** *04:48:58.6±2.2, 41°.11N×83°.31E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=17.1km s-min=9.1km az=2.0*

ISC 19 04:48:59.1±1.5**, 41°.23N**±0°.07×**83°.34E**±0°.05**, h10^{km}, n43, σ2^s.08**/54**, 6C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	3.13	316	Pg	Pn	04 49 49.8	+1.2
	13nm,0.6s						
KTMS				Lg	Lg	04 50 39.2	
	46nm,0.6s						
KTMS	Ketmen	3.13	316	eP	Pn	04 49 49.8	+1.2
	13nm,0.6s						
KTMS				eS	Sg	04 50 39.2	-0.4
	46nm,0.6s						
SHLS	Shalkode	3.46	305	Pg	Pn	04 49 50.8	-2.4
	35nm,0.5s						
SHLS				Lg	Lg	04 50 40.9	
	345nm,0.8s						
SHLS	Shalkode	3.46	305	eP	Pn	04 49 50.8	-2.4
	35nm,0.5s						
SHLS				eS	Sb	04 50 40.9	-1.9
	345nm,0.8s						
PDGK	Podgornoye	3.54	308	⇓Pn	Pn	04 49 55.8	+1.5
	9.8nm,0.9s						
PDGK				⇑Pg	Pg	04 50 05.7	-1.2
	31nm,1.0s						
PDGK				⇓Lg	Lg	04 50 51.8	
	249nm,0.9s						
UZB	Uzynbulak	3.74	302	Pg	Pn	04 50 00.3	+3.4
	7.7nm,0.4s						
UZB				Lg	Lg	04 50 57.0	
	129nm,0.8s						
UZB	Uzynbulak	3.74	302	eP	Pn	04 50 00.3	+3.4
	7.7nm,0.4s						
UZB				eS	Sg	04 50 57.0	-2.0
	129nm,0.8s						
SATY	Saty	4.10	298	Pg	Pb	04 50 07.6	-3.8
	13nm,0.4s						
SATY				Lg	Lg	04 51 09.5	
	120nm,0.7s						
KNOS	Konyrlen	4.37	317	Pg	Pb	04 50 13.1	-3.0
	23nm,0.6s						
KNOS				Lg	Lg	04 51 19.4	
	48nm,0.8s						
KURS	Kuram	4.45	302	Pg	Pb	04 50 13.0	-4.2
	13nm,1.0s						
KURS				Lg	Lg	04 51 19.3	
	54nm,0.8s						
BLB	Baldybastay	4.59	310	Pg	Pb	04 50 20.0	+0.3
	33nm,0.8s						
BLB				Lg	Lg	04 51 31.3	
	68nm,0.8s						
KAPS	Kapalarasan	4.99	326	Pg	Pb	04 50 28.5	+2.1
	18nm,0.8s						
KAPS				Lg	Lg	04 51 45.8	
	56nm,0.6s						
ARXS	Arharly	5.04	308	Pg	Pb	04 50 28.2	+0.8
	5.8nm,0.8s						
ARXS				Lg	Lg	04 51 45.2	
	48nm,0.5s						
ARXS	Arharly	5.04	308	eP	Pb	04 50 28.2	+0.8
	5.8nm,0.8s						
ARXS				eS	Sg	04 51 45.2	+4.5
	48nm,0.5s						
KOTS	Kotyrbulak	5.04	295	Pg	Pb	04 50 26.6	-0.8
	12nm,0.6s						
KOTS				Lg	Lg	04 51 42.5	
	117nm,0.6s						
KOTS	Kotyrbulak	5.04	295	eP	Pb	04 50 26.6	-0.8
	12nm,0.6s						
KOTS				eS	Sg	04 51 42.5	+1.7
	117nm,0.6s						
MDOK	Medeo	5.06	294	Pg	Pb	04 50 27.3	-0.4
	4.6nm,0.3s						
MDOK				Lg	Lg	04 51 43.5	
	52nm,0.9s						
TNSS	Tian-Shan	5.08	293	Pg	Pb	04 50 27.4	-0.9
	2.2nm,0.7s						
TNSS				Lg	Lg	04 51 43.8	
	12nm,1.2s						
TNSS	Tian-Shan	5.08	293	eP	Pb	04 50 27.4	-0.9
	2.2nm,0.7s						
TNSS				eS	Sg	04 51 43.8	+1.5
	12nm,1.2s						
TDK	Taldyqorghan	5.22	318	Pg	Pb	04 50 31.4	+1.0
TDK				Lg	Lg	04 51 50.3	
	148nm,0.5s						
TDK	Taldyqorghan	5.22	318	eP	Pb	04 50 31.4	+1.0
TDK				eS	Sg	04 51 50.3	+3.8
	148nm,0.5s						
IZV	Izvestkoviy	5.32	292	Pg	Pb	04 50 31.4	-0.8
	8.4nm,0.6s						
IZV				Lg	Lg	04 51 50.4	
	50nm,0.8s						
IZV	Izvestkoviy	5.32	292	eP	Pb	04 50 31.4	-0.8
	8.4nm,0.6s						
IZV				eS	Sg	04 51 50.4	+0.7
	50nm,0.8s						
MTBS	Maitube	5.47	293	Pg	Pb	04 50 34.7	-0.1
	4.8nm,0.7s						
MTBS				Lg	Lg	04 51 55.9	
	33nm,0.7s						
MTBS	Maitube	5.47	293	eP	Pb	04 50 34.7	-0.1
	4.8nm,0.7s						
MTBS				eS	Sg	04 51 55.9	+1.2
	33nm,0.7s						
KTBS	Karatobe	5.51	299	Pg	Pb	04 50 35.3	-0.1
	6.2nm,0.9s						
KTBS				Lg	Lg	04 51 57.0	
	0.4nm,0.4s						
MK31	Makanchi Array	5.61	353	Pn	Pn	04 50 25.2	+2.7
	1.5nm,0.7s,baz=179,slow=12,SNR=4.7						
MK31				⇑Pg	Pg	04 50 44.7	-1.8
	8.4nm,0.7s,baz=173,slow=15,SNR=20						
MK31				⇑Lg	Lg	04 52 01.2	
	28nm,0.6s,baz=176,slow=26,SNR=4.2						
MKAR	Makanchi Array	5.61	353	Pn	Pn	04 50 23.6	+1.0
	0.2nm,0.3s,baz=172,slow=12,SNR=4.2						
MKAR				Pg	Pb	04 50 35.0	-2.1
	0.6nm,0.3s,baz=175,slow=14,SNR=8.6						
MKAR				Sn	Sn	04 51 27.7	+0.6
	2.4nm,0.3s,baz=176,slow=23,SNR=5.7						
MKAR				LR	LR	04 52 59.9	
	comp=Z,81nm,20.2s,baz=169,slow=44						
MAKZ	Makanchi	5.66	350	⇑Pg	Pg	04 50 45.4	-2.0
	6.2nm,0.9s						
MAKZ				⇓Lg	Lg	04 52 01.8	
	48nm,1.1s						
DGS	Degeres	5.97	292	Pg	Pb	04 50 43.1	-0.1
	3.9nm,0.4s						
DGS				Lg	Lg	04 52 10.9	
	39nm,0.8s						
KRBS	Karabastau	6.18	296	Pg	Pb	04 50 48.8	+2.0
	2.4nm,0.6s						
KRBS				Lg	Lg	04 52 20.2	
	16nm,0.9s						
ZSN	Zaisan	6.31	9	Pg	Pb	04 50 50.8	+1.9
	5.2nm,0.3s						
ZSN				Lg	Lg	04 52 24.3	
	96nm,0.8s						
ZSN	Zaisan	6.31	9	eP	Pb	04 50 50.8	+1.9
	5.2nm,0.3s						
ZSN				eS	Sg	04 52 24.2	+2.7
	96nm,0.8s						
AAK	Ala-Archa	6.75	285	Pg	Pb	04 51 00.3	+3.8
	0.4nm,0.3s,baz=198,slow=6.1,SNR=4.1						
AAK				Lg	Lg	04 52 34.1	
	0.3nm,0.3s,baz=271,slow=11,SNR=6.4						
AAK				LR	LR	04 53 29.2	
	comp=Z,41nm,18.5s,baz=117,slow=40						
AAK	Ala-Archa	6.75	285	⇑Lg	Lg	04 52 33.8	
	30nm,1.0s						
MRKS	Merke	7.69	285	Pg	Pb	04 51 14.0	+1.5
	3.2nm,0.7s						
MRKS				Lg	Lg	04 53 03.5	
	8.0nm,0.8s						
KK31	Karatay Array	9.71	285	⇑Lg	Lg	04 54 08.2	
	5.7nm,0.8s,baz=91,slow=26,SNR=4.3						
KURBB	Kurchatov Arra	9.97	342	Pn	Pn	04 51 20.6	-1.7
	0.1nm,0.3s,baz=161,slow=11,SNR=1.8						
KURBB				LR	LR	04 55 41.3	
	comp=Z,52nm,19.0s,baz=165,slow=41 0.4nm,0.3s						
KURBB	Kurchatov Arra	9.97	342	⇓Lg	Lg	04 54 17.8	
	22nm,0.7s						
KURK	Kurchatov	10.03	343	⇓Pn	Pn	04 51 26.0	+2.9
	1.3nm,0.8s						
KURK				⇓Lg	Lg	04 54 19.6	
	8.3nm,1.0s						
ZALV	Zalesovo Beam	12.76	4	Pn	Pn	04 51 57.1	-3.2
	0.4nm,0.3s,baz=191,slow=14,SNR=3.9						
ZALV				Sn	Sn	04 54 21.6	-0.8
	0.4nm,0.3s,baz=181,slow=23,SNR=3.2						
ZALV				LR	LR	04 57 18.0	
	comp=Z,51nm,19.8s,baz=236,slow=40						
BVAR	Borovoye Array	14.70	328	LR	LR	04 58 32.4	
	comp=Z,72nm,20.4s,baz=129,slow=39						
CMAR	Chiang Mai Arr	26.34	145	P	P	04 54 35.2	0.0
	1.1nm,0.3s,baz=321,slow=10,SNR=4.1 1.1nm,0.3s						

BJI ***19*** *04:49:36.7, 26°.13S×178°.62E, h617^{km}, mB5.4/28, mb5.0/60*

NEIC ***19*** *04:49:38.9±1.8, 26°.29S±0°.09×178°.38E±0°.09, h616^{km}±3^{km}, mb5.3/500, Mwb5.7/19, Mww5.6/15, Error ellipse: s-maj=12.7km s-min=12.0km az=209.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-3.94; M$_{\theta\theta}$4.40; M$_{\phi\phi}$-0.46; M$_{r\theta}$-1.93; M$_{\theta\phi}$0.47; M$_{\phi r}$0.75; Fault plane solution: M$_0$4.70000×10^{17} NP1:ϕ_s96.92000°, δ58.21000°, λ-75.82000°. NP2:ϕ_s251.30000°, δ34.51000°, λ-111.57000°. Principal axes: T 4.8435, Plg12.0000°, Azm177.0000°; N -0.3091, Plg12.0000°, Azm269.0000°; P -4.5344, Plg73.0000°, Azm43.0000°;*

GFZ ***19*** *04:49:38.4, 26°.28S×178°.33E, h652^{km}, MW5.6, Moment Tensor Solution. s31 Moment tensor: M$_{rr}$-2.58; M$_{\theta\theta}$2.71; M$_{\phi\phi}$-0.13; M$_{r\theta}$-1.53; M$_{\theta\phi}$-0.07; M$_{\phi r}$0.12; Fault plane solution: NP1:ϕ_s93.00000°, δ60.00000°, λ-87.00000°. NP2:ϕ_s270.00000°, δ30.00000°, λ-92.00000°. Principal axes: T 3.1200, Plg15.0000°, Azm182.0000°; N -0.1300, Plg1.0000°, Azm272.0000°; P -3.0000, Plg75.0000°, Azm7.0000°;*

NOU ***19*** *04:49:38.6, 26°.28S×178°.51E, h624^{km}, ML5.0/136, South of Fiji Islands*

NEIC ***19*** *04:49:38.9, 26°.30S×178°.40E, h616^{km}*

IDC ***19*** *04:49:39.0±0.5, 26°.29S×178°.35E, h622^{km}±5^{km}, mb4.5/34, mbtmp5.4/36, Error ellipse: s-maj=8.2km s-min=6.8km az=13.0*

NEIC ***19*** *04:49:39.5, 26°.27S×178°.38E, h610^{km}*

NEIC ***19*** *04:49:39.5, 26°.07S×178°.61E, h610^{km}, Moment Tensor Solution. Duration: 3^s.1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-2.32; M$_{\theta\theta}$2.03; M$_{\phi\phi}$0.29; M$_{r\theta}$-1.58; M$_{\theta\phi}$-0.76; M$_{\phi r}$0.14; Fault plane solution: M$_0$2.81000×10^{17} NP1: ϕ_s298.75000°, δ28.76000°, λ-75.29000°. NP2: ϕ_s102.08000°, δ62.27000°, λ-97.93000°. Principal axes: T 2.7864, Plg17.0000°, Azm198.0000°; N 0.0511, Plg7.0000°, Azm106.0000°; P -2.8375, Plg72.0000°, Azm354.0000°;*

GCMT ***19*** *04:49:40.9±0.1, 26°.18S±0°.01×178°.30E±0°.02, h635^{km}±1^{km}, MW5.6/129, Moment Tensor Solution. s129,c221; Duration: 1^s.6 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-2.78±.04; M$_{\theta\theta}$3.22±.07; M$_{\phi\phi}$-0.44±.07; M$_{r\theta}$-1.64±.07; M$_{\theta\phi}$-0.13±.07; M$_{\phi r}$0.17±.07; Best double couple: M$_0$3.42600×10^{17} NP1:ϕ_s269.00000°, δ31.00000°, λ-94.00000°. NP2:ϕ_s94.00000°, δ59.00000°, λ-88.00000°. Principal axes: T 3.6460, Plg14.0000°, Azm182.0000°; N -0.4450, Plg2.0000°, Azm273.0000°; P -3.2050, Plg75.0000°, Azm11.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 19 04:49:38.6±0.3**, 26°.36S**±0°.04×**178°.48E**±0°.03**, h623^{km}**±2^{km}**, h624^{km}:pP-P, n1248, σ1^s.17**/1199**, mb5.3**/365**, 49C-53D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	4.28	133	P	P	04 51 06.0	-1.6
RAO	Raoul Island	4.30	133	P	P	04 51 08.8	+1.1
	2µm,0.2s,baz=236,slow=0.2,SNR=33						
RAO				S	S	04 52 23.7	+3.3
	1µm,0.3s,baz=119,slow=23,SNR=6.6						
RAO	Raoul Island	4.30	133		P	04 51 09.2	+1.5
GLKZ	Green Lake	4.30	133	P	P	04 51 08.8	+1.1
MSVF	Nonsavu	8.59	357		P	04 51 42.3	-2.2
MSVF	Nonsavu	8.59	357	P	P	04 51 42.5	-2.1
NFK	Norfolk Island	9.72	252	P	P	04 51 56.6	+1.5
	comp=Z,453nm,1.1s						
OUZ	Omahuta	9.78	204	P	P	04 51 58.3	+2.8
OUZ	Omahuta	9.78	204	P	P	04 51 58.0	+2.5
WCZ	Waipu Caves	10.19	199	P	P	04 52 02.3	+2.8
GRZ	Great Barrier	10.19	194	P	P	04 52 01.4	+1.8
KUZ	Kuaotunu	10.62	192	P	P	04 52 04.8	+1.1
KUZ	Kuaotunu	10.62	192	P	P	04 52 05.6	+1.9
PINNC	Pines Island,	10.72	288		P	04 52 05.0	0.0
PINNC	Pines Island,	10.72	288	P	P	04 52 04.9	0.0
MARNC	Mare, Loyalty	10.72	295		P	04 52 05.0	-0.1
MARNC	Mare, Loyalty	10.72	295	P	P	04 52 04.6	-0.4
MARNC	Mare, Loyalty	10.72	295	P	S	04 54 06.8	+1.7
MYRZ	Mayor Island	11.05	189	P	P	04 52 10.4	+2.4
MKAZ	Moumakai	11.08	194	P	P	04 52 10.1	+1.9
MXZ	Matakaoa Point	11.17	181		P	04 52 07.0	-2.1
MXZ	Matakaoa Point	11.17	181	P	P	04 52 07.4	-1.7
MXZ	Matakaoa Point	11.17	181	P	P	04 52 06.9	-2.2
MXZ				S	S	04 54 07.1	-5.5
OUENC	Ouen Island, N	11.31	288	P	P	04 52 11.1	+0.3
HAZ	Te Kaha	11.38	183	P	P	04 52 09.0	-2.1
HAZ				S	S	04 54 09.5	-6.7
YATNC	Mamie plateau,	11.41	290	P	P	04 52 11.4	-0.4
WMGZ	Waiomatatini S	11.43	180	P	P	04 52 09.7	-1.9
WMGZ				S	S	04 54 11.3	-5.8
PKGZ	Pakihiroa	11.48	182	P	P	04 52 10.2	-1.9
PKGZ				S	S	04 54 13.2	-4.8
OPRZ	Ohinepanea	11.57	188	P	P	04 52 13.9	+1.0
RUGZ	Raukumara Rang	11.59	183	P	P	04 52 10.9	-2.4
TOZ	Tahuroa Road	11.62	192		P	04 52 14.9	+1.5
TOZ	Tahuroa Road	11.62	192	P	P	04 52 15.1	+1.7
PUZ	Puketiti	11.68	181	S	S	04 54 15.7	-5.9
ONTNC	Ouen Toro	11.69	288	P	P	04 52 14.5	+0.1
DZM	Mont Dzumac	11.79	289	P	P	04 52 15.9	+0.4
	comp=Z,107nm,0.6s,baz=11,slow=24,SNR=144						
DZM				S	S	04 54 23.9	-0.1
	comp=Z,62nm,1.1s,baz=124,slow=18,SNR=3.3						
DZM				ScP	ScP	04 59 42.2	+1.9
	comp=Z,17nm,0.6s,baz=134,slow=4.5,SNR=11						
DZM	Mont Dzumac	11.79	289	eP	P	04 52 15.2	-0.3
	comp=Z,364nm,1.0s						
DZM				eS	S	04 54 24.0	-0.1
	comp=Z,282nm,1.6s						
DZM	Mont Dzumac	11.79	289	P	P	04 52 14.4	-1.0
DZM					S	04 54 23.4	-0.6
DZM					ScP	04 59 41.7	+1.3
DZM	Mont Dzumac	11.79	289	P	P	04 52 15.2	-0.3
TWGZ	Tauwhareparae	11.79	182	P	P	04 52 13.6	-1.6
EDRZ	Edgecumbe	11.80	187	P	P	04 52 15.6	+0.3
URZ	Urewera	11.92	185	P	P	04 52 14.2	-2.1
	comp=Z,193nm,0.4s,baz=266,slow=4.1,SNR=176						
URZ				S	S	04 54 20.5	-5.2
	comp=Z,65nm,0.4s,baz=178,slow=23,SNR=7.3						
URZ	Urewera	11.92	185	P	P	04 52 14.3	-2.1
URZ	Urewera	11.92	185	P	P	04 52 14.8	-1.5
URZ				S	S	04 54 20.5	-5.2
MWZ	Matawai	11.97	184	P	P	04 52 14.8	-2.1
MWZ				S	S	04 54 21.7	-5.0
CNGZ	Carnagh Statio	12.09	181	P	P	04 52 16.2	-1.8
CNGZ				S	S	04 54 25.7	-3.0
TLZ	Tolley Road	12.19	191	P	P	04 52 20.9	+1.9
RTZ	Ruatahuna	12.29	186	P	P	04 52 17.9	-2.1
HIZ	Hauiti	12.50	193	P	P	04 52 23.9	+2.0
HIZ	Hauiti	12.50	193	P	P	04 52 23.7	+1.8
HIZ	Hauiti	12.50	193	P	P	04 52 23.6	+1.7
KNZ	Kokohu	12.64	183	P	P	04 52 21.3	-2.0
KNZ				S	S	04 54 33.2	-5.3
BKZ	Black Stump Fm	12.88	187	P	P	04 52 23.5	-2.2
BKZ	Black Stump Fm	12.88	187	P	P	04 52 23.8	-1.9
BKZ	Black Stump Fm	12.88	187	P	P	04 52 24.3	-1.4
NIUE	Niue	12.91	58	P	P	04 52 25.9	-0.4
	comp=Z,755nm,0.9s						
NIUE	Niue	12.91	58	P	P	04 52 24.8	-1.5
NIUE	Niue	12.91	58	P	P	04 52 26.5	+0.2
NIUE	Niue	12.91	58	P	P	04 52 26.5	+0.2
NGZ	Ngauruhoe	13.01	190	P	P	04 52 26.8	-0.2
VRZ	Vera Road	13.11	193	P	P	04 52 30.1	+2.2
KHEZ	Kahui Hut	13.43	195	P	P	04 52 34.2	+3.1
PWZ	Pawanui	13.70	185	P	P	04 52 32.8	-0.7
PXZ	Pawanui	13.70	185	P	P	04 52 31.9	-1.7
KOUNC	Koumac, New Ca	14.25	291	P	P	04 52 40.0	+0.9
BFZ	Birch Farm	14.40	187	P	P	04 52 38.4	-1.8
BFZ	Birch Farm	14.40	187	P	P	04 52 38.6	-1.6
MRZ	Mangatainoka R	14.47	189	P	P	04 52 38.8	-1.9
SANVU	Saraoutou	15.12	314	P	P	04 52 46.0	-1.1
SANVU	Saraoutou	15.12	314	P	P	04 52 46.5	-0.6
TCW	Tory Channel	15.22	192	P	P	04 52 46.6	-1.0
SNZO	South Karori	15.24	191	P	P	04 52 46.5	-1.2
SNZO	South Karori	15.24	191	P	P	04 52 48.0	+0.3
QRZ	Quartz Range	15.25	197	P	P	04 52 48.5	+0.6
QRZ	Quartz Range	15.25	197	P	P	04 52 49.4	+1.5
MSWZ	Moikau Station	15.25	189	P	P	04 52 47.0	-0.9
BHW	Baring Head	15.30	190	P	P	04 52 47.4	-0.9
TKNZ	Takaka Hill	15.34	196	P	P	04 52 48.9	+0.2
AFI	Afiamalu	15.38	38	P	P	04 52 47.4	-2.1
AFI	Afiamalu	15.38	38	P	P	04 52 47.5	-2.1
AFI	Afiamalu	15.38	38	P	P	04 52 47.1	-2.4
NNZ	Nelson	15.41	195	P	P	04 52 48.5	-0.8
TUWZ	Tuamarina	15.49	193	P	P	04 52 50.4	+0.3
MRNZ	Matariki Terra	15.73	196	P	P	04 52 52.8	+0.5
CMWZ	Cape Campbell	15.75	192	P	P	04 52 53.0	+0.6
BSWZ	Blackbirch Sta	15.78	193	P	P	04 52 52.1	-0.6
KHZ	Kahutara	16.52	193	P	P	04 52 59.4	-0.1
OXZ	Oxford	17.72	196	P	P	04 53 09.7	-0.8
FUNA	Funafuti	17.75	2	P	P	04 53 08.9	-2.2
FUNA	Funafuti	17.75	2	P	P	04 53 10.8	-0.3
LHI	Lord Howe Isla	17.75	249	P	P	04 53 13.1	+2.2
	comp=Z,585nm,0.8s						
LHI	Lord Howe Isla	17.75	249	P	P	04 53 11.6	+0.7

CTZ	Chatham Island	17.79	168	P	P	04 53 12.9	+1.9
CTZ	Chatham Island	17.79	168	P	P	04 53 13.7	+2.7
RPZ	Rata Peaks	18.34	197	P	P	04 53 16.6	+0.6
FOZ	Fox Glacier	18.53	200	P	P	04 53 17.8	+0.1
JCZ	Jackson Bay	19.34	202	P	P	04 53 26.2	+1.0
ODZ	Otahua Downs	19.68	197	P	P	04 53 27.6	-0.6
WKZ	Wanaka	19.94	200	P	P	04 53 30.1	-0.4
RAR	Rarotonga	20.54	80	P	P	04 53 36.8	+0.6
	comp=Z,43nm,0.7s,baz=244,slow=10,SNR=7.0						
	comp=Z,43nm,0.7s						
RAR	Rarotonga	20.54	80	P	P	04 53 37.1	+0.9
RAR	Rarotonga	20.54	80	P	P	04 53 36.3	+0.1
MLZ	Mavora Lakes	20.71	201	P	P	04 53 38.1	+0.7
DCZ	Deep Cove	21.12	203	P	P	04 53 41.7	+0.7
WHZ	Wether Hill Ro	21.23	201	P	P	04 53 42.7	+0.6
SYZ	Scrubby Hill	21.46	198	P	P	04 53 44.6	+0.5
HURO	Huro Makira	22.26	312	P	P	04 53 50.4	-1.2
GC1S	Gold Coast 1 S	22.26	260	P	P	04 53 52.5	+1.0
AUWSH	Wavell State H	22.71	262	P	P	04 53 56.7	+1.2
NGOA	Tingoa Renbel	22.77	307	P	P	04 53 56.1	0.0
TW1H	Toowoomba 1 Ha	23.65	261	P	P	04 54 05.3	+1.4
ARMA	Armidale	23.95	254	P	P	04 54 08.0	+1.4
	comp=Z,109nm,1.0s						
ARMA	Armidale	23.95	254	P	P	04 54 07.9	+1.4
ARMA	Armidale	23.95	254	P	P	04 54 08.2	+1.7
AUKHS	Kincumber High	24.49	247	P	P	04 54 12.7	+1.6
AUPHS	Peel High Scho	24.62	252	P	P	04 54 13.6	+1.2
EIDS	Eidsvold	24.66	266	P	P	04 54 13.1	+0.4
	comp=Z,230nm,0.8s						
EIDS	Eidsvold	24.66	266	P	P	04 54 13.2	+0.4
EIDS	Eidsvold	24.66	266	P	P	04 54 13.0	+0.2
MGCD	Mangrove Creek	24.68	247	P	P	04 54 14.6	+1.8
	comp=Z,248nm,0.6s						
MGCD	Mangrove Creek	24.68	247	P	P	04 54 14.8	+2.0
RIV	Riverview	24.74	246	P	P	04 54 15.0	+1.7
	comp=Z,210nm,0.9s						
RIV	Riverview	24.74	246	P	P	04 54 14.5	+1.2
SYDH	Sydney Hard Ro	25.07	246	P	P	04 54 18.3	+2.1
WOLH	Wollongong Har	25.08	245	P	P	04 54 18.2	+1.9
AUNRC	North Rockhamp	25.52	271	P	P	04 54 20.7	+0.4
AUUHS	Ulladulla High	25.60	243	P	P	04 54 22.4	+1.6
CNB	Canberra Magne	26.47	243	P	P	04 54 30.3	+1.7
	comp=Z,135nm,0.8s						
CNB	Canberra Magne	26.47	243	P	P	04 54 30.3	+1.7
AUDCS	Dubbo College	26.64	250	P	P	04 54 31.0	+1.0
AUDAR	Daramalan Coll	26.64	243	P	P	04 54 31.5	+1.4
AUMHS	Melrose High S	26.70	243	P	P	04 54 32.2	+1.6
AUMTS	Mt Stromlo	26.77	243	P	P	04 54 32.7	+1.5
CAN	Canberra	26.77	243	P	P	04 54 32.4	+1.2
	comp=Z,138nm,0.8s						
CAN	Canberra	26.77	243	P	P	04 54 32.7	+1.5
CAN	Canberra	26.77	243	P	P	04 54 32.6	+1.4
MILA	Mila	27.04	240	P	P	04 54 35.0	+1.5
	comp=Z,105nm,0.8s						
YNG	Young	27.08	246	P	P	04 54 35.1	+1.3
	comp=Z,139nm,0.8s						
AULRC	Lightning Ridg	27.10	256	P	P	04 54 34.9	+0.8
AUSMG	Snowy Mountain	27.31	241	P	P	04 54 37.6	+1.7
TARA	Tarawa	28.07	348	P	P	04 54 42.2	-0.5
GLAD	Gladstone	29.08	232	P	P	04 54 52.8	+1.7
CMSA	Cobar Meteorol	29.09	252	P	P	04 54 51.6	+0.2
	comp=Z,145nm,0.9s						
CMSA	Cobar Meteorol	29.09	252	P	P	04 54 51.5	+0.2
TBI	Tubuai	29.20	91	*e*P	P	04 54 54.3	+2.0
	comp=Z,325nm,0.8s						
TBI				*e*S	S	04 59 01.2	-1.8
	comp=Z,2µm,30.8s						
TBI				*e*sS	sS	05 01 59.5	-4.0
	comp=Z,3µm,27.5s						
CORO	Coronation Par	29.86	232	P	P	04 54 59.8	+2.1
TOO	Toolangi	30.00	240	P	P	04 55 00.2	+1.2
	comp=Z,68nm,1.0s						
TOO	Toolangi	30.00	240	P	P	04 55 00.4	+1.4
TOO				IAmb	IAmb	04 55 01.2	
	comp=Z,44nm,0.8s						
TV1H	Townsville Har	30.00	277	P	P	04 54 59.5	+0.3
MOO	Moorlands	30.18	230	P	P	04 55 01.9	+1.4
	comp=Z,134nm,1.1s						
MOO	Moorlands	30.18	230	P	P	04 55 02.0	+1.5
CTA	Charters Tower	30.22	275	P	P	04 55 01.1	+0.1
	comp=Z,104nm,0.8s						
CTA	Charters Tower	30.22	275	P	P	04 55 01.2	+0.1
	comp=Z,99nm,0.3s,baz=97,slow=10,SNR=240						
CTA				ScP	ScP	05 00 25.5	-0.4
	comp=Z,20nm,0.9s,baz=109,slow=4.2,SNR=7.0						
	comp=Z,99nm,0.3s						
CTA	Charters Tower	30.22	275	P	P	04 55 01.3	+0.2
CTAO	Charters Tower	30.22	275	P	P	04 55 01.3	+0.2
CTAO	Charters Tower	30.22	275	P	P	04 55 01.3	+0.2
CTAO	Charters Tower	30.22	275	P	P	04 55 00.9	-0.2
CTAO				PcP	PcP	04 57 39.6	-2.0
TAU	Tasmania Unive	30.27	229	P	P	04 55 02.8	+1.6
TAU	Tasmania Unive	30.27	229	P	P	04 55 02.6	+1.4
MLBS	Spotswood, Mel	30.51	240	P	P	04 55 04.9	+1.5
QLP	Quilpie	30.61	262	P	P	04 55 04.2	-0.2
	comp=Z,170nm,0.8s						
QLP	Quilpie	30.61	262	P	P	04 55 04.4	0.0
AUBRN	Burnie High Sc	30.63	233	P	P	04 55 06.6	+2.3
PAE	Paea	30.78	80	*e*P	P	04 55 06.5	+0.6
	comp=Z,64nm,1.4s						
PPT2	Papeete2	30.81	80	*e*S	S	04 59 21.3	-6.7
	comp=Z,372nm,33.5s						
PPT2				*e*sS	sS	05 02 30.4	+0.3
	comp=Z,1µm,26.2s						
PPT2				*e*LR	LR	05 04 00.6	
	comp=Z,157nm,23.8s						
PPT2				*e*LR	LR	05 04 03.0	
	comp=Z,135nm,22.2s						
PPT	Papeete	30.82	80	P	P	04 55 08.2	+1.9
	comp=Z,92nm,0.9s,baz=206,slow=4.8,SNR=10						
	comp=Z,92nm,0.9s						
PPTF	Pamatai, Papee	30.82	80	P	P	04 55 07.5	+1.1
PPTF	Pamatai, Papee	30.82	80	P	P	04 55 08.2	+1.8
TIAR	Tiarei	31.03	80	*e*P	P	04 55 10.0	+2.0
	comp=Z,1µm,1.6s						
TVO	Taravao	31.03	81	*e*P	P	04 55 09.1	+1.0
	comp=Z,34nm,0.7s						
BRAT	Ballarat	31.21	240	P	P	04 55 10.9	+1.6
AUMTC	Mt Clear Colle	31.26	240	P	P	04 55 11.4	+1.7
STKA	Stephens Creek	32.59	251	P	P	04 55 21.4	+0.4
	comp=Z,412nm,1.0s						
STKA	Stephens Creek	32.59	251	P	P	04 55 21.6	+0.5
	comp=Z,45nm,0.6s,baz=96,slow=11,SNR=101						
STKA				ScP	ScP	05 00 35.4	+1.6
	comp=Z,16nm,0.8s,baz=96,slow=3.7,SNR=7.0						
	comp=Z,45nm,0.6s						
STKA	Stephens Creek	32.59	251	P	P	04 55 21.6	+0.5
STKA					ScP	05 00 33.8	0.0
STKA	Stephens Creek	32.59	251	P	P	04 55 21.6	+0.5
MTSU	Mount Surprise	32.59	277	P	P	04 55 21.3	0.0
	comp=Z,159nm,0.9s						
MTSU	Mount Surprise	32.59	277	P	P	04 55 21.8	+0.5
ARPS	Mount Arapiles	32.73	242	P	P	04 55 22.7	+0.5
	comp=Z,91nm,1.1s						
PMOR	Pomariorio Ree	33.32	77	*e*P	P	04 55 29.2	+1.8
	comp=Z,233nm,1.1s						
VAH	Vaihoa	33.46	77	*e*P	P	04 55 30.2	+1.7
	comp=Z,2.0nm,0.9s						
INKA	Innaminka	33.55	259	P	P	04 55 30.0	+0.8
INKA				IAmb	IAmb	04 55 31.2	
	comp=Z,68nm,0.9s						
PMG	Port Moresby	34.11	294	P	P	04 55 33.6	-0.4
	comp=Z,106nm,0.8s,baz=110,slow=6.3,SNR=25						
	comp=Z,106nm,0.8s						
PMG	Port Moresby	34.11	294	P	P	04 55 33.2	-0.7
PMG	Port Moresby	34.11	294	P	P	04 55 33.8	-0.2
PMG	Port Moresby	34.11	294	P	P	04 55 33.7	-0.2
	comp=Z,1µmcomp=Z,149nm,0.9s						
PMG	Port Moresby	34.11	294	P	P	04 55 32.8	-1.2
PMG				x	x	04 57 11.8	
AUMBR	Murray Bridge	34.62	246	P	P	04 55 38.2	+0.2
HTT	Hallett	34.86	249	P	P	04 55 40.1	0.0
	comp=Z,107nm,0.9s						
HTT	Hallett	34.86	249	P	P	04 55 40.0	0.0
AUJCS	Jamestown Cent	35.12	249	P	P	04 55 42.4	+0.3
AUMAR	Marden Senior	35.14	246	P	P	04 55 42.3	0.0
COEN	Coen	35.25	284	P	P	04 55 43.3	-0.2
	comp=Z,175nm,0.9s						
COEN	Coen	35.25	284	P	P	04 55 43.2	-0.2
COEN				IAmb	IAmb	04 55 45.1	
	comp=Z,117nm,0.9s						
COEN	Coen	35.25	284	P	P	04 55 43.5	+0.1
PTPS	Port Pirie	35.63	249	P	P	04 55 46.8	+0.5
WHYH	Whyalla	35.98	249	P	P	04 55 49.4	+0.2
QIS	Mount Isa	36.03	271	P	P	04 55 49.4	-0.4
	comp=Z,105nm,1.1s						
QIS	Mount Isa	36.03	271	P	P	04 55 49.4	-0.4
XMAS	Kiritimati	36.58	43	P	P	04 55 55.6	+1.3
XMAS	Kiritimati	36.58	43	P	P	04 55 55.4	+1.1
BBOO	Buckleboo	37.26	250	P	P	04 55 59.4	-0.3
	comp=Z,163nm,1.0s						
BBOO	Buckleboo	37.26	250	P	P	04 55 59.0	-0.6
BBOO	Buckleboo	37.26	250	P	P	04 55 59.1	-0.6
AUCAS	Cummins Area S	37.53	247	P	P	04 56 01.6	-0.2
PATS	Pohnpei	38.37	327	P	P	04 56 08.4	-0.4
MANU	Manus Island	38.44	304	P	P	04 56 09.0	-0.4
MANU				IAmb	IAmb	04 56 10.1	
	comp=Z,95nm,0.8s						
AS31	Alice Springs	40.34	264	P	P	04 56 24.3	-0.2
ASAR	Alice Springs	40.34	264	P	P	04 56 24.3	-0.2
	comp=Z,88nm,0.4s,baz=92,slow=7.6,SNR=864						
ASAR				ScP	ScP	05 01 03.2	+0.1
	comp=Z,7.1nm,0.8s,baz=110,slow=4.2,SNR=4.7						
ASAR				S	S	05 01 47.8	-1.7
	comp=Z,16nm,0.9s,baz=98,slow=17,SNR=6.9						
ASAR				PKiKP	PKiKP	05 05 18.4	-1.3
	comp=Z,4.1nm,0.9s,baz=104,slow=4.6,SNR=6.5						
	comp=Z,88nm,0.4s						
WR8	Warramunga Arr	40.79	270	P	P	04 56 27.2	-0.8
WRAB	Tennant Creek	40.93	269	P	P	04 56 28.4	-0.8
WRAB	Tennant Creek	40.93	269	P	P	04 56 28.3	-0.9
WRAB	Tennant Creek	40.93	269	P	P	04 56 28.1	-1.1
WRA	Warramunga Arr	40.94	269	P	P	04 56 28.8	-0.5
	comp=Z,161nm,0.8s,baz=104,slow=7.8,SNR=362						
WRA				PcP	PcP	04 58 14.5	+0.4
	comp=Z,6.5nm,0.6s,baz=113,slow=3.6,SNR=6.9						
WRA				ScP	ScP	05 01 06.8	+1.4
	comp=Z,12nm,0.9s,baz=105,slow=4.4,SNR=5.8						
WRA				S	S	05 01 54.0	-4.1
	comp=Z,5.1nm,0.8s,baz=99,slow=16,SNR=15						
WRA				PKiKP	PKiKP	05 05 19.2	-1.1
	comp=Z,0.9nm,0.4s,baz=90,slow=0.7,SNR=7.8						
	comp=Z,161nm,0.8s						
WRA	Warramunga Arr	40.94	269	P	P	04 56 27.7	-1.6
WRA					pP	04 58 12.8	-0.8
WRA					ScP	05 01 06.5	+1.0
WRA					S	05 01 54.9	-3.2
WB0	Warramunga Arr	40.94	270	P	P	04 56 28.4	-0.9
RKT	Rikitea	42.22	96	*e*P	P	04 56 41.5	+2.3
	comp=Z,32nm,0.8s						
RKT				*e*S	S	05 02 16.5	+0.2
	comp=Z,2µm,30.5s						
RKT				*e*sS	ScS	05 05 31.5	-0.1
	comp=Z,1µm,32.0s						
RKT				*e*LQ	LQ	05 07 28.1	
	comp=Z,554nm,23.8s						
RKT				*e*LR	LR	05 09 18.1	
	comp=Z,1µm,26.8s						
TAOE	Nuku Hiva Isla	42.87	74⇑	*i*P	P	04 56 46.4	+2.0
	comp=Z,455nm,1.0s						
TAOE	Nuku Hiva Isla	42.87	74	P	P	04 56 46.4	+2.0
TAOE	Nuku Hiva Isla	42.87	74	P	P	04 56 46.5	+2.0
JAY	Jayapura	43.31	297	P	P	04 56 47.1	-0.7
	comp=Z,50nm,0.7s,baz=146,slow=3.2,SNR=13						
	comp=Z,50nm,0.7s						
JAY	Jayapura	43.31	297	P	P	04 56 47.3	-0.5
	comp=Z,936nmcomp=Z,67nm,0.9s						
GENI	Genyem	43.69	296	P	P	04 56 50.1	-0.6
GENI	Genyem	43.69	296	P	P	04 56 51.0	+0.3
	comp=Z,3µmcomp=Z,260nm,0.8s						
FORT	Forrest	44.21	252	P	P	04 56 53.8	-0.7
SMPI	Sarmi	45.22	296	P	P	04 57 01.6	-0.8
DRV	Dumont d'Urvil	46.77	200	P	P	04 57 13.8	+0.5
SRPI	Serui, Papua	47.30	294	P	P	04 57 17.3	-0.8
	comp=Z,279nm,0.8s						
KNRA	Kununurra	47.37	273	P	P	04 57 17.2	-1.3
BAKI	Biak	47.80	295	P	P	04 57 22.9	+1.1
SAUI	Saumlaki	48.33	283	P	P	04 57 25.4	-0.3
SAUI	Saumlaki	48.33	283	P	P	04 57 26.6	+0.9
SAUI	Saumlaki	48.33	283	P	P	04 57 26.0	+0.3
KMPI	Kaimana, Papua	48.43	290	P	P	04 57 25.9	-0.5
	comp=Z,240nm,0.9s						
FITZ	Fitzroy Crossi	49.32	268	P	P	04 57 33.0	0.0
	comp=Z,127nm,0.8s,baz=126,slow=7.1,SNR=93						
FITZ				pP	pP	04 59 23.7	0.0
	comp=Z,7.3nm,0.6s,baz=99,slow=14,SNR=1.5						
FITZ				S	S	05 03 53.4	-1.7
	comp=Z,4.9nm,0.9s,baz=286,slow=23,SNR=3.3						
	comp=Z,127nm,0.8s						
FITZ	Fitzroy Crossi	49.32	268	P	P	04 57 32.7	-0.3
FITZ					pP	04 59 23.5	-0.2
FAKI	Fak Fak	50.05	290	P	P	04 57 37.4	-1.0
FAKI				IAmb	IAmb	04 57 38.8	
	comp=Z,82nm,1.0s						
FAKI	Fak Fak	50.05	290	P	P	04 57 37.8	-0.5
FAKI	Fak Fak	50.05	290	P	P	04 57 37.6	-0.7
	comp=Z,1µmcomp=Z,98nm,0.9s						
OVEH	Oceanview Est	51.69	32	P	P	04 57 51.1	+0.9
OVEH				IAmb	IAmb	04 57 52.0	
	comp=Z,287nm,1.1s						
VNDA	Vanda	51.83	185	P	P	04 57 51.9	+1.8
	comp=Z,20nm,0.5s,baz=2.8,slow=8.0,SNR=115						
	comp=Z,20nm,0.5s						
VNDA	Vanda	51.83	185	P	P	04 57 51.7	+1.6
SBA	Scott Base	51.85	183	P	P	04 57 53.2	+2.9
SBA				IAmb	IAmb	04 57 54.5	
	comp=Z,107nm,0.8s						
SWI	Sorong	51.99	291	P	P	04 57 51.9	-0.3
DES	Desert	52.03	32	P	P	04 57 53.0	+0.6
PWH	Poliokeawe Pal	52.06	32	P	P	04 57 53.6	+1.0
CPK	Cone Peak	52.11	32	P	P	04 57 54.0	+1.0
HUH	Hualalai	52.12	31	P	P	04 57 54.2	+0.9
HUH				IAmb	IAmb	04 57 55.1	
	comp=Z,157nm,1.0s						
PUH	Pauahi	52.14	32	P	P	04 57 53.5	+0.2
UWE	Uwekahuna	52.15	32	P	P	04 57 53.5	+0.2
BYL	Byron's Ledge	52.15	32	P	P	04 57 53.8	+0.4
HATHI	Halema'uma'u T	52.16	32	IAmb	IAmb	04 57 54.5	
	comp=Z,130nm,0.8s						
HMH	Humu'ula Sheep	52.21	32	P	P	04 57 55.2	+1.2
POHA	Pohakuloa	52.32	31	P	P	04 57 55.0	+0.3
POHA	Pohakuloa	52.32	31	P	P	04 57 54.7	0.0
POHA	Pohakuloa	52.32	31	P	P	04 57 54.9	+0.2
MSAI	Masohi	52.65	287	P	P	04 57 56.9	-0.1
KLBR	Kellerberrin	52.80	249	P	P	04 57 57.5	-0.3
NWAO	Narrogin (SRO)	53.00	247	P	P	04 57 58.4	-0.8
NWAO	Narrogin (SRO)	53.00	247	P	P	04 57 59.1	-0.1
AAI	Ambon	53.11	286	P	P	04 57 59.7	-0.5
	comp=Z,2µmcomp=Z,89nm,0.7s						
KRAI	Karang Ratu	53.12	287	P	P	04 57 58.6	-1.7
	comp=Z,2µmcomp=Z,80nm,0.8s						
MEEK	Meekatharra	53.13	255	P	P	04 57 58.9	-1.4
PSA00	Pilbara Seismi	53.41	262	P	P	04 58 00.4	-1.9
PSA00	Pilbara Seismi	53.41	262	P	P	04 58 01.2	-1.1
PSA00				IAmb	IAmb	04 58 02.2	
	comp=Z,58nm,1.1s						
PSA00	Pilbara Seismi	53.41	262	P	P	04 58 01.2	-1.1
MBWA	Marble Bar	53.64	262	P	P	04 58 03.0	-0.9
MBWA				IAmb	IAmb	04 58 04.5	
	comp=Z,124nm,1.2s						
MBWA				PcP	PcP	04 58 59.3	-0.7
MBWA	Marble Bar	53.64	262	P	P	04 58 03.2	-0.7
MBWA	Marble Bar	53.64	262	P	P	04 58 02.5	-1.4
MBWA				PcP	PcP	04 58 58.8	-1.2
MBWA				pP	pP	04 59 57.8	0.0
SOEI	Soe	53.74	277	P	P	04 58 04.2	-0.6
SOEI	Soe	53.74	277	P	P	04 58 06.0	+1.2
SOEI	Soe	53.74	277	P	P	04 58 05.6	+0.8
	comp=Z,2µmcomp=Z,282nm,0.9s						
BLDU	Ballidu	53.87	250	P	P	04 58 04.5	-0.9
MUN	Mundaring	54.02	248	P	P	04 58 06.3	-0.1
BATI	Baumata	54.09	277	P	P	04 58 07.8	+0.7
	comp=Z,1µmcomp=Z,154nm,0.9s						
NLAI	Namlea	54.28	286	P	P	04 58 08.2	-0.2
	comp=Z,2µmcomp=Z,171nm,1.4s						
MORW	Morawa	54.77	252	P	P	04 58 11.4	-0.3
MORW				PcP	PcP	04 59 06.8	+2.5
MORW	Morawa	54.77	252	P	P	04 58 11.1	-0.6
SANI	Sanana	55.84	287	P	P	04 58 18.0	-1.2
SANI	Sanana	55.84	287	P	P	04 58 18.5	-0.7
	comp=Z,2µmcomp=Z,171nm,0.8s						
MMRI	Maumere	56.03	278	P	P	04 58 20.1	-0.5
MMRI				IAmb	IAmb	04 58 21.3	
	comp=Z,368nm,1.5s						
MMRI	Maumere	56.03	278	P	P	04 58 20.9	+0.4
MMRI	Maumere	56.03	278	P	P	04 58 20.6	+0.1
	comp=Z,3µmcomp=Z,157nm,1.2s						
TNTI	Ternate	56.13	290	P	P	04 58 19.9	-1.3
TNTI	Ternate	56.13	290	P	P	04 58 20.5	-0.8
	comp=Z,107nm,1.1s						
EDFI	Ende, Flores	56.47	277	P	P	04 58 23.0	-0.7
	comp=Z,1µmcomp=Z,147nm,1.0s						
BASI	Baing, Sumba	56.83	275	P	P	04 58 26.5	+0.5
	comp=Z,3µmcomp=Z,320nm,1.0s						
CASY	Casey	57.31	206	P	P	04 58 28.6	+0.2
CASY				IAmb	IAmb	04 58 29.6	
	comp=Z,154nm,0.8s						
CASY	Casey	57.31	206	P	P	04 58 28.5	+0.2
CASY				pP	pP	05 00 26.5	+2.1
WSI	Waingapu	57.31	275	P	P	04 58 29.6	+0.3
WBSI	Waikabubak, Su	58.14	275	P	P	04 58 34.5	-0.4
	comp=Z,1µmcomp=Z,103nm,1.1s						
LBFI	Labuhan Bajo,	58.19	276	P	P	04 58 34.5	-0.7
LUWI	Luwuk	59.11	286	P	P	04 58 40.8	-0.6
LUWI				IAmb	IAmb	04 58 42.4	
	comp=Z,171nm,0.9s						
LUWI	Luwuk	59.11	286	P	P	04 58 41.1	-0.3
	comp=Z,216nm,0.9s						
DBNI	Kabupaten Domp	59.58	276	P	P	04 58 44.0	-0.5
	comp=Z,85nm,0.8s						
GTOI	Gorontalo	59.76	288	P	P	04 58 46.2	+0.5
	comp=Z,1µmcomp=Z,133nm,0.7s						
BNSI	Bone	59.82	281	P	P	04 58 46.1	0.0
	comp=Z,2µmcomp=Z,140nm,1.3s						
KAPI	Kappang	59.85	280	P	P	04 58 45.9	-0.3
KAPI	Kappang	59.85	280	P	P	04 58 46.8	+0.5
KAPI	Kappang	59.85	280	P	P	04 58 46.1	-0.2
PLAI	Plampang	59.92	275	P	P	04 58 46.3	-0.4
PLAI	Plampang	59.92	275	P	P	04 58 46.0	-0.7
APSI	Ampana	60.15	285	P	P	04 58 48.6	+0.4
	comp=Z,98nm,0.9s						
SPSI	Sidrap Palu	60.32	281	P	P	04 58 47.8	-1.6
	comp=Z,1µmcomp=Z,75nm,0.8s						
MRSI	Marisa	60.60	287	P	P	04 58 49.9	-1.3
	comp=Z,974nmcomp=Z,61nm,0.8s						
TTSI	Tana Toraja	60.71	282	P	P	04 58 52.0	+0.1
	comp=Z,44nm,0.9s						
TWSI	Taliwang, Sumb	60.76	275	P	P	04 58 52.0	-0.2
	comp=Z,1µmcomp=Z,113nm,1.1s						
PMSI	Majene	61.29	281	P	P	04 58 56.1	+0.4
	comp=Z,146nm,1.0s						
KLNI	Mataram	61.60	275	P	P	04 58 56.9	-0.8
MMSI	Mamuju	61.68	282	P	P	04 58 58.1	-0.1
	comp=Z,825nmcomp=Z,83nm,0.8s						
PCI	Palu	61.73	284	P	P	04 58 59.2	+0.7
	comp=Z,195nm,1.2s						
TOLI2	Tolitoli	61.91	287	P	P	04 58 58.1	-1.6
TOLI2	Tolitoli	61.91	287	P	P	04 58 58.7	-1.0
KHKI	Kahang-Kahang	62.06	275	P	P	04 59 00.8	+0.1
	comp=Z,1µmcomp=Z,128nm,1.1s						
IGBI	Denpasar	62.28	274	P	P	04 59 02.0	-0.1
MPSI	Mapaga	62.29	285	P	P	04 59 01.1	-1.0
	comp=Z,54nm,0.9s						
RTBI	Rangdo, Negare	62.61	274	P	P	04 59 03.7	-0.6
	comp=Z,2µmcomp=Z,122nm,1.0s						
JAGI	Jajag, Banyuwa	63.32	274	P	P	04 59 07.3	-1.4
JAGI				IAmb	IAmb	04 59 08.8	
	comp=Z,126nm,0.9s						
JAGI	Jajag, Banyuwa	63.32	274	P	P	04 59 07.5	-1.2
JAGI	Jajag, Banyuwa	63.32	274	P	P	04 59 07.9	-0.8
	comp=Z,2µmcomp=Z,152nm,0.9s						
ABJI	Asem Bagus	63.53	274	P	P	04 59 10.1	0.0
	comp=Z,100nm,1.0s						
JCJ	Chichijima	63.61	324	P	P	04 58 57.0	-13
	comp=Z,33nm,0.5s,baz=114,slow=20,SNR=2.0						
QSPA	South Pole Qui	63.73	180	P	P	04 59 12.4	+1.7
	comp=Z,200nm,0.6s,baz=16,slow=1.0,SNR=495						
	comp=Z,200nm,0.6s						
QSPA	South Pole Qui	63.73	180	P	P	04 59 12.4	+1.7
QSPA	South Pole Qui	63.73	180	P	P	04 59 12.2	+1.5
QSPA				pP	pP	05 01 12.5	+1.7
GMJI	Gumukmas	64.03	274	P	P	04 59 12.4	-0.9
	comp=Z,1µmcomp=Z,104nm,0.9s						
KMMI	Kalianget	64.09	275	P	P	04 59 14.4	+0.8
	comp=Z,2µmcomp=Z,207nm,0.9s						
BLJI	Banyuglugur	64.12	274	P	P	04 59 13.6	-0.2
	comp=Z,1µmcomp=Z,148nm,0.8s						
BBKI	Banjar Baru	64.91	279	P	P	04 59 18.0	-0.8
	comp=Z,123nm,1.2s						
GRJI	Gresik	65.48	274	P	P	04 59 23.0	+0.7
SNJI	Sawahan-Nganju	65.75	273	P	P	04 59 24.7	+0.5
	comp=Z,1µmcomp=Z,110nm,1.0s						
SJI	Sawahan	65.76	273	P	P	04 59 24.6	+0.4
	comp=Z,37nm,0.8s						
PCJI	Pacitan	66.10	273	P	P	04 59 26.5	+0.3
	comp=Z,3µmcomp=Z,211nm,0.9s						
UGM	Wanagama	66.80	273	P	P	04 59 30.1	-0.5
UGM				IAmb	IAmb	04 59 32.1	
	comp=Z,122nm,1.4s						
UGM	Wanagama	66.80	273	P	P	04 59 30.9	+0.3
UGM	Wanagama	66.80	273	P	P	04 59 30.7	+0.1
	comp=Z,54nm,1.2s						
YOGI	Yogyakarta	67.05	273	P	P	04 59 31.6	-0.4
	comp=Z,179nm,1.3s						
KKM	Kota Kinabalu	68.35	289	P	P	04 59 39.5	-0.4
KKM				IAmb	IAmb	04 59 41.0	
	comp=Z,102nm,1.3s						
KKM	Kota Kinabalu	68.35	289	P	P	04 59 40.3	+0.3
KKM	Kota Kinabalu	68.35	289	P	P	04 59 40.0	0.0
	comp=Z,1µmcomp=Z,69nm,1.6s						
CTJI	Waduk Cacaban	68.39	273	P	P	04 59 40.5	+0.4
	comp=Z,137nm,0.9s						
KPJI	Karang Pucung	68.48	272	P	P	04 59 40.2	-0.5
	comp=Z,64nm,1.2s						
BBJI	Bungbulang	69.57	272	P	P	04 59 46.2	-1.1
BBJI	Bungbulang	69.57	272	P	P	04 59 46.4	-0.9
	comp=Z,59nm,0.9s						
SBUM	Sibu	70.00	283	P	P	04 59 49.2	-0.5
SBUM	Sibu	70.00	283	P	P	04 59 49.7	0.0
SBUM	Sibu	70.00	283	P	P	04 59 49.6	-0.1
CNJI	Cibinong	70.10	272	P	P	04 59 49.5	-0.8
	comp=Z,700nmcomp=Z,63nm,1.1s						
DBJI	Dramaga	70.76	272	P	P	04 59 54.1	-0.2
	comp=Z,222nm,1.3s						
TPI	Tanjungpandan	71.62	276	P	P	04 59 59.4	+0.2
	comp=Z,735nmcomp=Z,61nm,0.9s						
JOW	Kunigami	71.65	314	P	P	04 59 58.1	-1.0
	comp=Z,22nm,0.6s,baz=123,slow=12,SNR=5.8						
	comp=Z,22nm,0.6s						
JOW	Kunigami	71.65	314	P	P	04 59 58.3	-0.7
JOW				IAmb	IAmb	05 02 38.2	
	comp=Z,144nm,1.5s						
INU	Inuyama	72.83	325	P	P	05 00 05.4	-0.2
JGF	Kuroka	72.85	326	P	P	05 00 04.8	-1.0
JGF	Kuroka	72.85	326	P	P	05 00 04.9	-1.0
MJAR	Matsushiro Arr	73.17	327	P	P	05 00 06.7	-0.9
	comp=Z,16nm,0.6s,baz=162,slow=6.1,SNR=33						
	comp=Z,16nm,0.6s						
MJAR	Matsushiro Arr	73.17	327	P	P	05 00 07.0	-0.6
MAJO	Matsushiro	73.18	327	P	P	05 00 07.1	-0.5
MAJO	Matsushiro	73.18	327	P	P	05 00 07.1	-0.5
MAJO	Matsushiro	73.18	327	P	P	05 00 06.6	-1.0
MAJO				PcP	PcP	05 00 20.2	+0.1
MAJO				pP	pP	05 02 12.4	-0.2
MJB9	Matsu-Tunnel	73.18	327	P	P	05 00 07.8	+0.2
KASI	Kota Agung	73.23	272	P	P	05 00 07.5	-0.9
	comp=Z,973nmcomp=Z,113nm,1.0s						
KLSI		73.38	273	P	P	05 00 08.1	-1.2
	comp=Z,1µmcomp=Z,78nm,1.0s						
JSU	Suzuyama	73.57	319	P	P	05 00 09.2	-0.8
LWLI	Liwa	73.84	272	P	P	05 00 11.9	-0.1
	comp=Z,257nm,1.0s						
MDSI	Maura Dua	73.96	273	P	P	05 00 11.1	-1.5
	comp=Z,1µmcomp=Z,166nm,0.9s						
TWGBT	Beinan	74.00	306	P	P	05 00 10.8	-1.7
BELA	Belgrano 2	74.17	173	P	P	05 00 13.6	+0.9
BELA				IAmb	IAmb	05 00 14.3	
	comp=Z,82nm,0.6s						
JSD	Sado	74.34	328	P	P	05 00 14.1	0.0
JNU	Nakatsue	74.49	320	P	P	05 00 14.4	-0.7
	comp=Z,26nm,0.7s,baz=206,slow=1.2,SNR=25						
	comp=Z,26nm,0.7s						
JNU	Nakatsue	74.49	320	P	P	05 00 14.7	-0.5
JNU	Nakatsue	74.49	320	P	P	05 00 14.6	-0.5
TPUB	Ta-pu	74.62	306	P	P	05 00 14.2	-1.8
TPUB				IAmb	IAmb	05 01 11.5	
	comp=Z,105nm,1.4s						
MAW	Mawson	74.97	201	P	P	05 00 16.6	-0.6
	comp=Z,42nm,0.5s,baz=98,slow=6.0,SNR=21						
	comp=Z,42nm,0.5s						
MNAI	Manna	75.11	273	P	P	05 00 18.7	-0.3
	comp=Z,133nm,0.8s						
EGSI	Enggano, Bengk	75.29	271	P	P	05 00 19.9	-0.1
	comp=Z,111nm,1.0s						

DSRI	Dabo	75.38	277	P	P	05 00 21.0	+0.5
	comp=Z,2µmcomp=Z,74nm,1.0s						
KSI	Kapahiang	75.75	273	P	P	05 00 22.1	-0.5
MASI	Maura Aman, Be	76.29	273	P	P	05 00 25.0	-0.5
BTDF	Bukit Timah Da	76.93	278	P	P	05 00 29.4	+0.4
MYKOM	Kota Tinggi	77.06	279	P	P	05 00 29.4	-0.2
MYKOM				IAmb	IAmb	05 00 31.1	
	comp=Z,72nm,1.0s						
MYKOM	Kota Tinggi	77.06	279	P	P	05 00 29.6	-0.1
MYKOM	Kota Tinggi	77.06	279	P	P	05 00 30.1	+0.4
	comp=Z,918nmcomp=Z,77nm,1.3s						
PMSA	Palmer Station	77.19	157	P	P	05 00 31.0	+1.6
PMSA	Palmer Station	77.19	157	eP	P	05 00 31.7	+2.3
PMSA	Palmer Station	77.19	157	P	P	05 00 31.2	+1.8
PMSA				PcP	PcP	05 00 38.9	+1.9
AMKA	Amchitka	77.40	1	P	P	05 00 30.2	-0.4
AMKA				IAmb	IAmb	05 00 31.2	
	comp=Z,80nm,0.9s						
JKA	Kamikawa-asahi	77.45	334	P	P	05 00 31.6	+0.5
ASAJ	Asahikawa	77.45	334	P	P	05 00 32.3	+1.3
	comp=Z,25nm,0.6s,baz=244,slow=6.8,SNR=12						
	comp=Z,25nm,0.6s						
KIWB	Kanaga Island	77.97	3	P	P	05 00 33.4	-0.2
ADK	Adak	78.02	3	P	P	05 00 33.8	-0.1
ADK	Adak	78.02	3	P	P	05 00 33.7	-0.1
PPSI	Pulau Pagai	78.45	273	P	P	05 00 38.4	+1.3
	comp=Z,2µmcomp=Z,101nm,1.0s						
ATKA	Atka Island	78.49	5	P	P	05 00 36.2	-0.1
ATKA	Atka Island	78.49	5	P	P	05 00 36.3	0.0
TJN	Taejon	78.83	320	P	P	05 00 38.6	0.0
TJN				IAmb	IAmb	05 00 39.0	
	comp=Z,171nm,1.1s						
PDSI	Padang	78.86	275	P	P	05 00 38.5	-0.9
KSRS	Korea Array	79.27	321	P	P	05 00 40.9	0.0
	comp=Z,12nm,0.7s,baz=136,slow=5.5,SNR=28						
	comp=Z,12nm,0.7s						
KSAR	Wonju Array Be	79.28	321	P	P	05 00 40.9	0.0
NIKH	Nikolski High	79.76	8	P	P	05 00 42.8	-0.2
	baz=192						
YSS	Yuzhno-Sakhali	79.79	336	P	P	05 00 44.2	+0.9
YSS				IAmb	IAmb	05 00 45.5	
	comp=Z,87nm,1.0s						
YSS	Yuzhno-Sakhali	79.79	336	P	P	05 00 44.7	+1.4
YSS	Yuzhno-Sakhali	79.79	336	P	P	05 00 44.3	+0.9
SYO	Syowa Base	80.31	194	⇑iP	P	05 00 45.8	0.0
SYO	Syowa Base	80.31	194	⇓ePcP	PcP	05 00 51.6	+1.0
MNSI	Mandailing Nat	80.41	276	P	P	05 00 46.4	-1.0
	comp=Z,25nm,0.7s						
QIZ	Qiongzhong	80.44	297	P	P	05 00 47.8	+0.4
QIZ				sP	sP	05 03 56.0	-1.9
QIZ				S	S	05 10 05.0	+0.9
QIZ				sS	sS	05 13 55.1	+1.9
QIZ				pmax	pmax		
	comp=Z,23nm,0.9s						
QIZ				pmax	pmax		
	comp=Z,200nm,6.7s						
ELIB	Princess Elisa	80.46	188	dP	P	05 00 47.3	+0.5
	comp=Z,93nm,0.6s						
ELIB				dpP	pwP	05 03 00.7	+0.4
ESPZ	Base Esperanza	80.48	158	P	P	05 00 48.4	+1.6
ESPZ				IAmb	IAmb	05 00 49.5	
	comp=Z,126nm,1.1s						
MG05	Puerto Natales	80.59	143	P	P	05 00 49.2	+1.6
IPM	Ipoh	80.80	280	P	P	05 00 49.0	-0.3
IPM	Ipoh	80.80	280	P	P	05 00 49.5	+0.1
IPM	Ipoh	80.80	280	P	P	05 00 49.1	-0.3
UNV	Unalaska Valle	80.92	9	P	P	05 00 48.9	-0.1
UNV				IAmb	IAmb	05 00 49.4	
	comp=Z,109nm,1.1s						
UNV	Unalaska Valle	80.92	9	P	P	05 00 48.8	-0.2
	baz=194						
PEA0B	Petropavlovsk-	81.18	347	P	P	05 00 50.9	+0.5
PEA0B				IAmb	IAmb	05 00 52.0	
	comp=Z,190nm,1.4s						
PETK	Petropavlovsk-	81.18	347	P	P	05 00 50.0	-0.4
	comp=Z,35nm,0.6s,baz=126,slow=6.4,SNR=85						
	comp=Z,35nm,0.6s						
PBSI	Pulau Batu	81.19	274	P	P	05 00 52.1	+0.7
	comp=Z,78nm,1.1s						
NJ2	Nanjing	81.26	312	eP	P	05 00 53.3	+2.0
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KULM	Kulim	81.50	280	P	P	05 00 52.9	-0.1
KULM	Kulim	81.50	280	P	P	05 00 53.2	+0.2
KULM	Kulim	81.50	280	P	P	05 00 52.8	-0.2
TROLL	Troll, Antarti	81.86	181	⇑P	P	05 00 54.7	+0.7
	comp=Z,9µm,0.5s						
PSI	Prapat	81.90	277	P	P	05 00 53.9	-1.3
USRK	Ussuriysk Ar.	82.10	328	P	P	05 00 55.6	+0.3
	comp=Z,30nm,0.7s,baz=129,slow=3.2,SNR=29						
	comp=Z,30nm,0.7s						
UBPT	Khong Chiam	82.11	291	P	P	05 00 56.7	+0.7
SNAA	Sanae	82.23	180	⇑P	P	05 00 55.9	+0.1
	comp=Z,1µm,0.5s						
SNAA	Sanae	82.23	180	P	P	05 00 56.0	+0.3
	comp=Z,48nm,0.5s,baz=204,slow=5.4,SNR=491						
SNAA				pP	pP	05 03 06.5	+1.5
	comp=Z,14nm,1.1s,baz=203,slow=6.1,SNR=3.7						
SNAA				S	SKSac	05 10 16.1	-1.5
	comp=Z,1.8nm,0.8s,baz=271,slow=18,SNR=6.8						
	comp=Z,48nm,0.5s						
SNAA	Sanae	82.23	180	P	P	05 00 56.6	+0.9
SNAA				IAmb	IAmb	05 00 57.1	
	comp=Z,61nm,0.7s						
FALS	False Pass	82.37	10	P	P	05 00 55.9	-0.4
	baz=196						
GSI	Gunungsitoli	82.43	275	P	P	05 00 58.0	+0.3
GSI				IAmb	IAmb	05 00 59.6	
	comp=Z,102nm,1.0s						
GSI	Gunungsitoli	82.43	275	P	P	05 00 58.4	+0.7
GSI	Gunungsitoli	82.43	275	P	P	05 00 58.3	+0.6
	comp=Z,127nm,1.1s						
VNA3	Neumayer Olymp	82.50	177	⇑P	P	05 00 57.2	+0.2
	comp=Z,190nm,0.8s						
AY03	Cochrane	82.81	139	P	P	05 01 01.0	+2.0
VNA2	Neumayer--Watz	82.90	178	⇑P	P	05 00 59.4	+0.4
	comp=Z,81nm,0.6s,baz=174,slow=5.0						
CHNA	Chernabura Isl	83.03	13	P	P	05 00 59.7	0.0
	baz=200						
CNSH	ChangSha	83.09	306	P	P	05 01 00.3	-0.3
CNSH				pmax	pmax		
	comp=Z,25nm,1.8s						
VNA1	Neumayer--Stat	83.14	178	⇑P	P	05 01 00.3	+0.1
	comp=Z,41nm,0.8s						
KCSI	Kotacane, Aceh	83.25	277	P	P	05 01 00.7	-1.1
P08K	Saint George I	83.25	7	P	P	05 00 60.0	-0.7
	baz=191						
SDPT	Sand Point	83.35	12	P	P	05 01 01.0	-0.2
	baz=199						
GULI	GuiLin	83.39	302	P	P	05 00 58.1	-4.1
GULI				pmax	pmax		
	comp=Z,34nm,1.1s						
S12K	Black Hills	83.41	11	P	P	05 01 01.4	-0.1
	baz=198						
WHN	Wuhan	83.43	309	⇓P	P	05 01 02.1	-0.1
WHN				pmax	pmax		
	comp=Z,82nm,0.8s						
MDJ	Mudanjiang	83.56	327	P	P	05 01 01.9	-0.7
MDJ	Mudanjiang	83.56	327	P	P	05 01 02.5	0.0
MDJ				sP	sP	05 04 13.8	-0.4
MDJ				S	S	05 10 36.6	+2.6
MDJ				pmax	pmax		
	comp=Z,49nm,1.3s						
MDJ	Mudanjiang	83.56	327	P	P	05 01 03.3	+0.8
SPIA	Saint Paul Isl	83.75	6	P	P	05 01 03.9	+0.8
	baz=190						
DL2	Dalian	83.89	319	P	P	05 01 07.8	+3.5
DL2				pP	pP	05 03 16.6	+2.4
DL2				sP	sP	05 04 15.5	-0.5
DL2				eS	S	05 10 46.1	+8.7
DL2				pmax	pmax		
	comp=Z,40nm,1.2s						
DL2				pmax	pmax		
	comp=Z,380nm,5.5s						
COYC	Coyhaique	83.99	138	P	P	05 01 06.1	+1.2
COYC				IAmb	IAmb	05 01 08.6	
	comp=Z,54nm,1.0s						
COYC	Coyhaique	83.99	138	P	P	05 01 06.9	+2.0
SNSI	Sinabang, Aceh	84.04	276	P	P	05 01 06.4	+0.7
	comp=Z,2µmcomp=Z,123nm,1.3s						
AY01	Puyuhuapi	84.25	137	P	P	05 01 07.5	+1.4
S14K	Fog Glacier	84.41	12	P	P	05 01 06.9	+0.4
	baz=200						
SAO	San Andreas Ge	84.47	44	P	P	05 01 07.5	+0.3
SAO				IAmb	IAmb	05 01 10.0	
	comp=Z,55nm,1.0s						
PKD	Bear Valley Ra	84.54	45	P	P	05 01 08.2	+0.6
PKD				IAmb	IAmb	05 01 11.8	
	comp=Z,62nm,0.9s						
LL07	Hotel Espejo d	84.56	135	P	P	05 01 08.5	+0.8
CCX	Cicese	84.70	51	P	P	05 01 08.9	+0.5
CCX				IAmb	IAmb	05 01 11.4	
	comp=Z,84nm,1.0s						
MHC	Mount Hamilton	84.71	44	P	P	05 01 09.9	+1.3
MHC				IAmb	IAmb	05 01 11.4	
	comp=Z,88nm,1.1s						
SNY	Shenyang	84.72	322	⇑P	P	05 01 08.3	+0.1
SNY				pP	pP	05 03 16.8	-1.7
SNY				pmax	pmax		
	comp=Z,20nm,0.9s						
CHIR	Chirikof Islan	84.78	14	P	P	05 01 08.8	+0.6
	baz=203						
MLSI	Meulaboh, Aceh	84.80	277	P	P	05 01 08.4	-1.0
	comp=Z,105nm,1.1s						
CVS	Carmenet Viney	84.84	43	P	P	05 01 09.7	+0.7
OSI	Osito Audit: C	84.92	47	P	P	05 01 09.7	+0.2
OSI				IAmb	IAmb	05 01 12.3	
	comp=Z,58nm,1.0s						
GDXM	Geysers	84.93	42	P	P	05 01 10.1	+0.6
GDXM				IAmb	IAmb	05 01 12.7	
	comp=Z,62nm,1.1s						
TIA	Tai'an	84.95	315	P	P	05 01 09.8	+0.2
TIA				pmax	pmax		
	comp=Z,42nm,0.9s						
CBX	Cerro Bola	84.96	50	P	P	05 01 10.4	+0.6
CBX				IAmb	IAmb	05 01 12.2	
	comp=Z,60nm,0.8s						
CPE	Camp Elliot	84.99	50	P	P	05 01 11.0	+1.2
CPE				IAmb	IAmb	05 01 12.4	
	comp=Z,70nm,1.1s						
PASC	Pasadena Art C	85.01	48	P	P	05 01 10.4	+0.5
KCPM	Cahto Peak	85.03	41	P	P	05 01 11.9	+1.9
KCPM				IAmb	IAmb	05 01 13.0	
	comp=Z,86nm,0.9s						
DCMP	DeCamp, Califo	85.03	41	P	P	05 01 10.4	+0.5
VTX	Valle De La Tr	85.04	51	P	P	05 01 11.7	+1.5
VTX				IAmb	IAmb	05 01 13.4	
	comp=Z,74nm,1.0s						
CN2	Changchun	85.06	325	eP	P	05 01 08.4	-1.5
CN2				pmax	pmax		
	comp=Z,60nm,1.0s						
MWC	Mount Wilson	85.13	48	P	P	05 01 11.2	+0.5
LPIG	La Paz	85.14	60	P	P	05 01 12.4	+1.7
	comp=Z,16nm,0.3s,baz=143,slow=1.2,SNR=6.2						
	comp=Z,16nm,0.3s						
BAR	Barrett	85.16	50	IAmb	IAmb	05 01 13.6	
	comp=Z,103nm,1.6s						
DPP	Dos Picos Cty	85.16	50	P	P	05 01 11.6	+0.9
DPP				IAmb	IAmb	05 01 13.2	
	comp=Z,87nm,1.0s						
KMPM	Mount Pierce	85.19	40	P	P	05 01 11.7	+1.0
SLBS	Sierra La Lagu	85.20	61	P	P	05 01 12.2	+1.1
SLBS				IAmb	IAmb	05 01 14.4	
	comp=Z,106nm,1.1s						
ESJX	Sierra Juarez	85.28	51	IAmb	IAmb	05 01 14.8	
	comp=Z,174nm,1.6s						
LL02	Futaleuf	85.39	136	IAmb	IAmb	05 01 15.0	
	comp=Z,65nm,0.9s						
TPO	Tropico Hills	85.40	47	IAmb	IAmb	05 01 14.6	
	comp=Z,107nm,1.2s						
VES	Vestal, Richgr	85.41	46	IAmb	IAmb	05 01 13.9	
	comp=Z,98nm,1.2s						
BNX	BinXian	85.44	327	⇓P	P	05 01 10.9	-0.7
BNX				pmax	pmax		
	comp=Z,35nm,0.8s						
YUH	Yuha Desert	85.66	50	IAmb	IAmb	05 01 16.1	
	comp=Z,66nm,1.2s						
BORC	Borrego Spring	85.68	50	IAmb	IAmb	05 01 16.0	
	comp=Z,87nm,1.0s						
DNR	Dunn Ranch,Anz	85.70	49	IAmb	IAmb	05 01 16.4	
	comp=Z,70nm,1.2s						
ISA	Isabella, Lake	85.70	47	IAmb	IAmb	05 01 15.9	
	comp=Z,72nm,0.9s						
KHMM	Horse Mountain	85.71	40	IAmb	IAmb	05 01 15.9	
	comp=Z,59nm,1.0s						
SII	Sitkinak Islan	85.78	15	P	P	05 01 13.5	+0.5
	baz=204						
SUTB	Sutter Butte	85.81	42	IAmb	IAmb	05 01 15.2	
	comp=Z,58nm,0.8s						
PFO	Pinyon Flats O	85.85	49	P	P	05 01 15.5	+1.5
	comp=Z,20nm,0.9s,baz=271,slow=3.6,SNR=24						
	comp=Z,20nm,0.9s						
PFO	Pinyon Flats O	85.85	49	P	P	05 01 14.8	+0.7
PFO				IAmb	IAmb	05 01 16.9	
	comp=Z,60nm,1.4s						
KHBM	Hayfork Bally	85.87	40	IAmb	IAmb	05 01 17.1	
	comp=Z,70nm,1.1s						
LRMC	Laurel Mtn Rad	86.12	47	IAmb	IAmb	05 01 17.3	
	comp=Z,40nm,0.9s						
R17L	Mt. Peulik Vol	86.30	13	P	P	05 01 15.9	+0.5
	baz=202						
WSHM	Spangler Hills	86.31	47	IAmb	IAmb	05 01 18.6	
	comp=Z,45nm,1.0s						
CCCA	Chr Cany lake	86.35	47	IAmb	IAmb	05 01 18.5	
	comp=Z,53nm,0.9s						
CLC	China Lake	86.37	47	IAmb	IAmb	05 01 18.9	
	comp=Z,55nm,1.0s						
MDPB	Devils Postpil	86.50	45	IAmb	IAmb	05 01 19.8	
	comp=Z,47nm,1.2s						
GSC	Goldstone, Bar	86.59	48	IAmb	IAmb	05 01 20.1	
	comp=Z,61nm,1.1s						
OHAK	Old Harbor	86.59	15	IAmb	IAmb	05 01 18.4	
	comp=Z,51nm,1.0s						
OHAK	Old Harbor	86.59	15	P	P	05 01 17.1	+0.3
OHAK	Old Harbor	86.59	15	P	P	05 01 17.4	+0.6
	baz=205						
L02F	Cave Junction	86.61	39	IAmb	IAmb	05 01 20.6	
	comp=Z,115nm,1.2s						
GLA	Glamis	86.65	51	IAmb	IAmb	05 01 21.1	
	comp=Z,105nm,1.1s						
TIN	Tinemaha, Big	86.69	46	IAmb	IAmb	05 01 20.5	
	comp=Z,63nm,0.9s						
ENH	Enshi	86.75	306	IAmb	IAmb	05 01 20.6	
	comp=Z,46nm,1.0s						
PIX	Pinacate	86.78	52	IAmb	IAmb	05 01 21.2	
	comp=Z,75nm,0.9s						
GYA	Guiyang	86.83	301	P	P	05 01 19.3	+0.4
GYA				pmax	pmax		
	comp=Z,16nm,1.2s						
YBH	Yreka Blue Hor	86.85	40	P	P	05 01 20.4	+1.9
	comp=Z,3.1nm,0.9s,baz=184,slow=5.7,SNR=40						
	comp=Z,3.1nm,0.9s						
YBH	Yreka Blue Hor	86.85	40	P	P	05 01 19.4	+0.9
YBH				IAmb	IAmb	05 01 21.6	
	comp=Z,73nm,1.1s						
K02D	Willamette Mer	86.93	39	IAmb	IAmb	05 01 22.0	
	comp=Z,96nm,1.1s						
O14K	Tigyukauivet M	86.93	10	P	P	05 01 18.2	-0.1
	baz=198						
QSM	Queen of Sheba	86.94	47	IAmb	IAmb	05 01 21.5	
	comp=Z,117nm,1.7s						
Q17K	Contact Creek	86.98	13	P	P	05 01 18.7	-0.1
	baz=203						
LYN	LuoYang	87.04	311	P	P	05 01 20.0	+0.5
LYN				sP	sP	05 04 31.3	-0.9
LYN				S	S	05 11 10.8	+3.3
LYN				pmax	pmax		
	comp=Z,67nm,1.7s						
LYN				pmax	pmax		
	comp=Z,660nm,4.0s						
DSP	Deep Springs	87.05	46	IAmb	IAmb	05 01 22.2	
	comp=Z,65nm,1.3s						
IRM	Iron Mountain	87.05	50	IAmb	IAmb	05 01 22.9	
	comp=Z,111nm,1.4s						
O15K	Ungalikthiuk R	87.09	11	P	P	05 01 19.0	-0.1
	baz=200						
DANC	Danby, Needles	87.17	49	IAmb	IAmb	05 01 23.2	
	comp=Z,99nm,1.1s						
GWY	Greenwater Val	87.20	47	IAmb	IAmb	05 01 22.7	
	comp=Z,61nm,1.4s						
Q16K	King Salmon	87.21	13	P	P	05 01 19.9	+0.3
	baz=202						
HNS	HongShan	87.21	314	⇓P	P	05 01 20.8	+0.6
HNS				sP	sP	05 04 31.1	-1.9
HNS				S	S	05 11 14.4	+5.4
HNS				sS	sS	05 15 04.3	+0.4
HNS				pmax	pmax		
	comp=Z,48nm,1.8s						
GRAC	Grapevine Rang	87.21	46	IAmb	IAmb	05 01 23.2	
	comp=Z,92nm,1.1s						
113A	Mohawk Valley,	87.23	51	IAmb	IAmb	05 01 23.6	
	comp=Z,83nm,1.3s						
FURC	Furnace Creek,	87.23	47	IAmb	IAmb	05 01 22.9	
	comp=Z,51nm,1.3s						
LHV	Little Huntoon	87.23	45	IAmb	IAmb	05 01 23.2	
	comp=Z,87nm,1.2s						
BLYC	Blythe	87.25	50	IAmb	IAmb	05 01 23.6	
	comp=Z,66nm,1.3s						
KDAK	Kodiak Island	87.26	15	P	P	05 01 20.3	+0.3
	baz=206						
SHOC	Shoshone, Teco	87.29	48	IAmb	IAmb	05 01 23.2	
	comp=Z,114nm,1.3s						
M11K	Mekoryuk	87.33	8	P	P	05 01 21.3	+1.1
	baz=194						
RYN	Ryan	87.45	44	IAmb	IAmb	05 01 24.0	
	comp=Z,81nm,1.5s						
214A	Organ Pipe Nat	87.46	52	IAmb	IAmb	05 01 24.9	
	comp=Z,77nm,1.1s						
NVAR	Mina Array Bea	87.47	45	P	P	05 01 22.8	+1.1
	comp=Z,32nm,1.0s,baz=221,slow=7.3,SNR=124						
	comp=Z,32nm,1.0s						
NVAR	Mina Array Bea	87.47	45	P	P	05 01 22.3	+0.7
N14K	Kuskokwak Cree	87.50	10	IAmb	IAmb	05 01 22.7	
	comp=Z,51nm,0.6s						
N14K	Kuskokwak Cree	87.50	10	P	P	05 01 21.6	+0.6
	baz=198,SNR=6.7						
Q18K	Katmai Hardscr	87.52	14	P	P	05 01 21.3	+0.1
	baz=204						
PLCA	Paso Flores	87.53	135	P	P	05 01 24.2	+2.3
	comp=Z,29nm,1.1s,baz=222,slow=5.0,SNR=25						
	comp=Z,29nm,1.1s						
PLCA	Paso Flores	87.53	135	IAmb	IAmb	05 01 25.6	
	comp=Z,71nm,1.3s						
PLCA	Paso Flores	87.53	135	eP	P	05 01 24.6	+2.6
PLCA	Paso Flores	87.53	135	P	P	05 01 23.8	+1.8
MTPC	Mountain Pass	87.53	48	IAmb	IAmb	05 01 24.9	
	comp=Z,65nm,1.2s						
NV11	Mina Array Sit	87.56	45	IAmb	IAmb	05 01 24.5	
	comp=Z,66nm,1.1s						
PAHR	Pah Rah Range	87.56	43	IAmb	IAmb	05 01 24.5	
	comp=Z,74nm,1.1s						
WCT	Wildcat Mounta	87.58	47	IAmb	IAmb	05 01 24.7	
	comp=Z,77nm,1.6s						
BBOR	Butler Butte	87.61	39	IAmb	IAmb	05 01 24.7	
	comp=Z,43nm,1.0s						
M13K	Dall Lake	87.73	9	P	P	05 01 23.0	+1.0
	baz=196						
O16K	Kokwok River B	87.79	12	P	P	05 01 21.6	-0.8
	baz=201						
EFI	East Falkland	87.85	149	P	P	05 01 24.6	+1.6
BJT	Baijiatuau	87.86	317	P	P	05 01 23.8	+0.6
BJI	Beijing	87.87	317	P	P	05 01 23.5	+0.3
BJI				SKS	SKSac	05 10 54.4	+1.6
BJI				S	S	05 11 15.5	+0.5
BJI				pmax	pmax		
	comp=Z,14nm,1.5s						
BJI				pmax	pmax		
	comp=Z,200nm,4.1s						
TPNV	Topopah Spring	87.91	47	IAmb	IAmb	05 01 26.4	
	comp=Z,60nm,1.1s						
N15K	Kwethluk River	87.99	11	P	P	05 01 24.3	+1.0
	baz=199						
Q20K	Shuyak Island	88.05	15	P	P	05 01 24.1	+0.5
	baz=206						
Q19K	Cape Douglas,	88.06	14	P	P	05 01 23.7	0.0
	baz=205						
V12A	Nelson	88.14	48	IAmb	IAmb	05 01 27.6	
	comp=Z,46nm,1.1s						
O17K	Koliganek Bris	88.14	12	P	P	05 01 23.3	-0.7
	baz=202						
P18K	Big Mountain,	88.16	13	P	P	05 01 23.6	-0.5
	baz=204						
M14K	Bethel	88.25	9	IAmb	IAmb	05 01 29.5	
	comp=Z,28nm,0.8s						
M14K	Bethel	88.25	9	P	P	05 01 24.9	+0.4
	baz=198						
M15K	Kasigluk River	88.39	10	P	P	05 01 25.5	+0.4
	baz=199						
Y14A	Wickenburg	88.41	51	IAmb	IAmb	05 01 28.6	
	comp=Z,41nm,1.0s						
W13A	Hualapai Mount	88.44	49	IAmb	IAmb	05 01 29.2	
	comp=Z,43nm,1.1s						
N16K	Nishlik Lake	88.50	11	P	P	05 01 26.7	+1.0
	baz=200						
O18K	Koktuh Hills	88.58	13	P	P	05 01 25.9	-0.1
	baz=204,SNR=10						
MA2	Magadan	88.62	346	P	P	05 01 26.0	-0.2
	comp=Z,25nm,0.8s,baz=117,slow=4.5,SNR=5.9						
	comp=Z,25nm,0.8s						
MA2	Magadan	88.62	346	P	P	05 01 26.1	-0.2
MA2				IAmb	IAmb	05 01 26.4	
	comp=Z,35nm,0.9s						
S11A	Rachel	88.64	46	IAmb	IAmb	05 01 29.6	
	comp=Z,74nm,1.3s						
HEH	HeiHe	88.67	330	eP	P	05 01 26.8	+0.1
HEH				sP	sP	05 04 40.6	+0.9
HEH				S	S	05 11 23.1	+1.3
HEH				pmax	pmax		
	comp=Z,21nm,1.3s						
HEH				pmax	pmax		
	comp=Z,490nm,5.8s						
L14K	Kuka Creek	88.71	9	IAmb	IAmb	05 01 28.3	
	comp=Z,83nm,1.3s						
L14K	Kuka Creek	88.71	9	P	P	05 01 27.1	+0.5
	baz=197,SNR=7.3						
P19K	Oil Pt	88.81	14	P	P	05 01 27.0	-0.1
	baz=205,SNR=5.0						
N17K	Nushagak Hills	88.83	12	P	P	05 01 27.7	+0.5
	baz=202						
WIFE	Three Sisters-	88.83	39	IAmb	IAmb	05 01 30.5	
	comp=Z,57nm,1.0s						
TIY	Taiyuan	88.86	314	P	P	05 01 28.6	+0.6
TIY				S	S	05 11 28.0	+3.6
TIY				pmax	pmax		
	comp=Z,50nm,0.5s						
TIY				pmax	pmax		
	comp=Z,340nm,3.5s						
M16K	Timber Creek	88.98	11	IAmb	IAmb	05 01 30.1	
	comp=Z,34nm,0.9s						
M16K	Timber Creek	88.98	11	P	P	05 01 29.0	+1.1
	baz=200						
K13K	Kusilvak Mount	89.03	8	IAmb	IAmb	05 01 30.0	
	comp=Z,42nm,1.1s						
K13K	Kusilvak Mount	89.03	8	P	P	05 01 28.8	+0.8
	baz=195						
O19K	Port Alsworth	89.08	13	P	P	05 01 28.1	-0.2
	baz=204,SNR=21						
TUC	Tucson	89.09	53	P	P	05 01 30.1	+0.9
TUC				IAmb	IAmb	05 01 32.8	
	comp=Z,53nm,1.1s						
TUC	Tucson	89.09	53	P	P	05 01 31.4	+2.2
CMAR	Chiang Mai Arr	89.11	291	P	P	05 01 30.4	+0.9
	comp=Z,6.1nm,0.9s,baz=136,slow=3.3,SNR=28						
CMAR				pP	pP	05 03 42.8	+1.4
	comp=Z,1.6nm,0.3s,baz=118,slow=2.8,SNR=2.8						
CMAR				PP	PP	05 05 08.1	-3.7
	comp=Z,1.6nm,0.3s,baz=130,slow=6.1,SNR=4.7						
CMAR				PKKPbc	PKKPbc	05 19 04.5	+1.9
	comp=Z,3.1nm,0.7s,baz=305,slow=2.7,SNR=13						
	comp=Z,6.1nm,0.9s						
CMAR	Chiang Mai Arr	89.11	291	P	P	05 01 29.5	0.0
CMAR					pP	05 03 39.8	-1.5
HOM	Homer	89.17	15	P	P	05 01 29.2	+0.4
	baz=207						
XAN	Xi'an	89.19	309	⇓P	P	05 01 29.9	+0.3
XAN				pmax	pmax		
	comp=Z,39nm,1.2s						
XAN	Xi'an	89.19	309	⇑P	P	05 01 30.4	+0.8
XAN				S	S	05 11 28.3	+0.9
XAN				pmax	pmax		
	comp=Z,42nm,1.0s						
XAN				pmax	pmax		
	comp=Z,350nm,4.5s						
L15K	Ungalak Mounta	89.21	9	P	P	05 01 29.0	+0.1
	baz=198						
KMI	Kunming	89.21	299	⇓P	P	05 01 30.8	+0.7
KMI				pP	pP	05 03 42.8	+0.8
KMI				pmax	pmax		
	comp=Z,31nm,1.4s						
KMI				pmax	pmax		
	comp=Z,190nm,3.7s						
N18K	Kilae Creek	89.21	12	P	P	05 01 28.7	-0.3
	baz=203						
BI02	San Fabin de	89.26	131	IAmb	IAmb	05 01 33.0	
	comp=Z,44nm,1.1s						
CHTO	Chiang Mai	89.27	291	P	P	05 01 30.0	-0.2
CHTO				IAmb	IAmb	05 01 32.8	
	comp=Z,71nm,1.6s						
CHTO	Chiang Mai	89.27	291	P	P	05 01 31.2	+1.0

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CHTO  Chiang Mai        89.27 291  P       P       05 01 30.6 +0.4
I05D  Terrebonne, OR    89.28  39  IAmb    IAmb    05 01 32.3
      comp=Z,87nm,1.4s
BRSE  Bradley Lake S    89.45  15  P       P       05 01 30.2 +0.1
      baz=207,SNR=8.4
L16K  Owhat River       89.55  10  IAmb    IAmb    05 01 32.1
      comp=Z,32nm,0.9s
L16K  Owhat River       89.55  10  P       P       05 01 31.2 +0.7
      baz=200
M17K  Holitna River     89.60  11  P       P       05 01 31.7 +0.9
      baz=202
N19K  Bonanza Creek     89.61  13  IAmb    IAmb    05 01 31.3
      comp=Z,56nm,1.1s
N19K  Bonanza Creek     89.61  13  P       P       05 01 30.2 -0.7
      baz=204
ML02  Panimavida        89.64 130  IAmb    IAmb    05 01 34.5
      comp=Z,42nm,0.9s
WVOR  Wild Horse Val    89.66  41  IAmb    IAmb    05 01 34.3
      comp=Z,55nm,1.0s
319A  Douglas           89.69  55  IAmb    IAmb    05 01 35.6
      comp=Z,58nm,0.9s
HOOD  Mount Hood Mea    89.72  38  IAmb    IAmb    05 01 35.3
      comp=Z,41nm,1.2s
X16A  Lo Mia Camp, P    89.75  51  IAmb    IAmb    05 01 35.4
      comp=Z,49nm,1.0s
K15K  Wolf Creek Mou    89.79   9  IAmb    IAmb    05 01 33.6
      comp=Z,79nm,1.3s
K15K  Wolf Creek Mou    89.79   9  P       P       05 01 32.2 +0.6
      baz=198,SNR=8.2
LCMT  Little Creek M    89.93  48  IAmb    IAmb    05 01 35.8
      comp=Z,51nm,0.9s
J14K  Nanvaranak Lak    89.95   8  P       P       05 01 32.8 +0.5
      baz=196
M18K  Stony River       89.97  12  P       P       05 01 32.9 +0.5
      baz=203
SEW   Seward            90.08  15  P       P       05 01 33.0 +0.1
      baz=208
L17K  Donlin            90.14  11  P       P       05 01 34.1 +0.9
      baz=201
CCUT  Cedar City        90.15  48  IAmb    IAmb    05 01 37.2
      comp=Z,57nm,1.0s
GAMB  Gambell           90.16   4  P       P       05 01 34.1 +0.8
      baz=189
HPIG                    90.18  60  IAmb    IAmb    05 01 37.0
      comp=Z,28nm,0.8s
G06A  Carlson Farm,     90.23  38  IAmb    IAmb    05 01 35.7
      comp=Z,28nm,1.0s
Q23K  Middleton Isla    90.27  17  P       P       05 01 34.3 +0.5
      baz=211
XLT   XiLinHaoTe        90.27 320  eP      P       05 01 33.9 -0.5
XLT                                pmax    pmax
      comp=Z,20nm,1.2s
J08A  Circle Bar Ran    90.31  41  IAmb    IAmb    05 01 36.5
      comp=Z,41nm,1.2s
SPR3  Spring Creek 3    90.33  46  IAmb    IAmb    05 01 37.1
      comp=Z,46nm,1.2s
O22K  Cooper Landing    90.34  15  P       P       05 01 34.2  0.0
      baz=208
SZCU  Shurtz Canyon     90.36  48  IAmb    IAmb    05 01 38.0
      comp=Z,58nm,1.0s
PSUT  Pine Spring       90.37  47  IAmb    IAmb    05 01 37.6
      comp=Z,34nm,1.0s
WUAZ  Wupatki           90.39  50  IAmb    IAmb    05 01 38.0
      comp=Z,41nm,1.0s
N20K  Mount Spurr       90.43  14  P       P       05 01 33.9 -0.8
      baz=206,SNR=14
SPCR  Spurr Chakacha    90.43  14  P       P       05 01 33.9 -0.7
      baz=206,SNR=9.9
SPU   Mount Spurr       90.45  14  IAmb    IAmb    05 01 34.8
      comp=Z,28nm,1.0s
P23K  Montague Islan    90.49  16  P       P       05 01 34.9 +0.1
      baz=210
L18K  Granite Mounta    90.49  11  IAmb    IAmb    05 01 36.5
      comp=Z,28nm,0.9s
L18K  Granite Mounta    90.49  11  P       P       05 01 35.6 +0.7
      baz=202,SNR=10
GNW   Green Mountain    90.53  35  IAmb    IAmb    05 01 37.7
      comp=Z,51nm,1.3s
BO02  Sierra Bellavi    90.61 130  IAmb    IAmb    05 01 39.1
      comp=Z,44nm,1.1s
PZH   PanZhiHua         90.67 299  P       P       05 01 37.3 +0.6
K17K  Iditarod          90.68  10  IAmb    IAmb    05 01 37.3
      comp=Z,28nm,1.1s
K17K  Iditarod          90.68  10  P       P       05 01 36.2 +0.5
      baz=201
ELK   Elko              90.74  44  IAmb    IAmb    05 01 39.1
      comp=Z,40nm,1.1s
STLK  Strandline Lak    90.78  14  IAmb    IAmb    05 01 36.1
      comp=Z,31nm,0.9s
L19K  White Mountain    90.79  12  P       P       05 01 36.8 +0.5
      baz=204,SNR=19
X18A  Snowflake         90.86  52  IAmb    IAmb    05 01 40.2
      comp=Z,27nm,1.0s
M20K  Styx River        90.86  13  IAmb    IAmb    05 01 36.3
      comp=Z,27nm,1.2s
M20K  Styx River        90.86  13  P       P       05 01 35.8 -0.8
      baz=205
J16K  Anvik River       90.87   9  IAmb    IAmb    05 01 38.2
      comp=Z,48nm,1.1s
J16K  Anvik River       90.87   9  P       P       05 01 37.1 +0.5
      baz=199
RC01  Rabbit Creek A    90.88  15  P       P       05 01 36.5 -0.1
      baz=208,SNR=15
SUA   Susitna One       90.98  14  P       P       05 01 36.9 -0.4
      baz=207,SNR=20
PWL   Port Wells        91.01  16  P       P       05 01 37.2  0.0
      baz=210,SNR=8.5
MT09  Talagante         91.01 129  P       P       05 01 38.9 +0.6
MT09                               IAmb    IAmb    05 01 40.7
      comp=Z,55nm,1.1s
BBB   Bella Bella       91.07  30  P       P       05 01 39.1 +1.4
      comp=Z,35nm,1.1s,baz=220,slow=6.6,SNR=3.2
      comp=Z,35nm,1.1s
BO04  La Punta          91.16 129  IAmb    IAmb    05 01 46.3
      comp=Z,82nm,2.0s
G08A  Pilot Rock        91.20  39  IAmb    IAmb    05 01 40.9
      comp=Z,24nm,1.0s
HHC   Hu-ho-hao-te      91.20 316  eP      P       05 01 39.6 +0.8
HHC                                S       S       05 11 45.5 +0.4
HHC                                pmax    pmax
      comp=Z,23nm,1.2s
HHC                                pmax    pmax
      comp=Z,39nm,6.6s
J17K  VABM Dome         91.20  10  IAmb    IAmb    05 01 39.1
      comp=Z,19nm,0.8s
J17K  VABM Dome         91.20  10  P       P       05 01 38.7 +0.6
      baz=200
KAIM  Kayak Island      91.21  18  P       P       05 01 38.5 +0.3
      baz=213
MXC   Moxie City        91.25  37  IAmb    IAmb    05 01 41.1
      comp=Z,27nm,1.1s
SKT   Skwentna          91.28  14  IAmb    IAmb    05 01 38.2
      comp=Z,15nm,0.6s
SKT   Skwentna          91.28  14  P       P       05 01 37.4 -1.1
      baz=207,SNR=10.0
CD2   Chengdu           91.29 304  P       P       05 01 39.5 +0.1
CD2                                S       S       05 11 46.1 -0.2
CD2                                pmax    pmax
      comp=Z,40nm,1.3s
CD2                                pmax    pmax
      comp=Z,460nm,4.1s
W18A  Petrified Fore    91.31  51  IAmb    IAmb    05 01 42.1
      comp=Z,43nm,1.2s
GLI   Glacier Island    91.33  16  P       P       05 01 38.7  0.0
      baz=211,SNR=6.3
TCRU  Three Creeks R    91.34  47  IAmb    IAmb    05 01 42.6
      comp=Z,44nm,1.0s
M22K  Willow            91.38  14  P       P       05 01 38.8  0.0
      baz=208
EYAK  Cordova Ski Ar    91.38  17  P       P       05 01 38.9  0.0
      baz=212
MT05  Renca             91.40 129  IAmb    IAmb    05 01 42.8
      comp=Z,46nm,1.1s
I17K  Unalakleet        91.43   9  P       P       05 01 39.6 +0.6
      baz=199
KNK   Knik Glacier      91.46  15  IAmb    IAmb    05 01 40.4
      comp=Z,45nm,1.0s
KNK   Knik Glacier      91.46  15  P       P       05 01 39.4 +0.1
      baz=209,SNR=9.4
PMR   Palmer            91.46  15  P       P       05 01 38.9 -0.4
PMR   Palmer            91.46  15  P       P       05 01 39.0 -0.3
      baz=209,SNR=13
E07A  Sunnyside         91.47  37  IAmb    IAmb    05 01 42.4
      comp=Z,56nm,1.3s
ANM   Nome              91.50   7  P       P       05 01 39.7 +0.3
      baz=194
MT03  Universidad Ad    91.50 129  IAmb    IAmb    05 01 43.2
      comp=Z,32nm,1.1s
MT13  San Alfonso       91.52 129  IAmb    IAmb    05 01 43.7
      comp=Z,35nm,0.9s
LMEL  Las Melosas       91.52 129  IAmb    IAmb    05 01 44.5
      comp=Z,26nm,1.1s
MT16  CCHEN             91.53 129  IAmb    IAmb    05 01 43.3
      comp=Z,45nm,1.1s
HAWA  Hanford           91.55  38  IAmb    IAmb    05 01 42.6
      comp=Z,38nm,1.2s
PEL   Peldehue          91.57 128  IAmb    IAmb    05 01 43.5
      comp=Z,53nm,1.1s
J18K  Innoko River      91.65  11  P       P       05 01 40.3 +0.1
      baz=202
SIT   Sitka             91.75  23  P       P       05 01 41.1 +0.4
      baz=220
WAH2  Wahluke Slope     91.75  37  IAmb    IAmb    05 01 44.1
      comp=Z,29nm,1.3s
HILR  Hailar Array B    91.83 326  P       P       05 01 40.4 -0.9
      comp=Z,4.5nm,0.8s,baz=116,slow=10,SNR=6.6
      comp=Z,4.5nm,0.8s
SML   Sawmill           91.83  15  IAmb    IAmb    05 01 48.2
      comp=Z,22nm,1.0s
SML   Sawmill           91.83  15  P       P       05 01 40.8 -0.3
      baz=210
DIV   Divide            91.87  16  IAmb    IAmb    05 01 42.4
      comp=Z,33nm,0.9s
CUT   Chulitna          91.93  14  P       P       05 01 41.0 -0.4
      baz=208,SNR=12
L22K  Petersville       91.93  14  IAmb    IAmb    05 01 41.6
      comp=Z,38nm,1.0s
EPT   El Paso           91.93  55  IAmb    IAmb    05 01 45.0
      comp=Z,22nm,0.8s
H16K  Elim              91.94   8  P       P       05 01 41.3 -0.1
      baz=197
DUG   Dugway, Tooele    91.96  46  IAmb    IAmb    05 01 44.6
      comp=Z,30nm,1.3s
PPLA  Purkeypile        91.96  13  P       P       05 01 40.4 -1.4
      baz=206
M23K  Glacier View      91.97  15  P       P       05 01 41.4 -0.2
      baz=210,SNR=6.8
K20K  Telida            92.02  12  IAmb    IAmb    05 01 42.3
      comp=Z,20nm,0.8s
K20K  Telida            92.02  12  P       P       05 01 41.7 -0.2
      baz=204
BTO   Baotou            92.04 315  eP      P       05 01 46.4 +3.8
BTO                                pP      pP      05 03 57.4 +2.3
BTO                                pmax    pmax
      comp=Z,23nm,1.1s
BTO                                pmax    pmax
      comp=Z,380nm,5.8s
BMRM  Bremner River     92.04  17  IAmb    IAmb    05 01 43.2
      comp=Z,29nm,0.8s
BMRM  Bremner River     92.04  17  P       P       05 01 42.2 +0.2
      baz=213,SNR=7.5
G15K  Niukluk           92.06   7  P       P       05 01 42.3 +0.3
      baz=196
SCM   Sheep Creek Mo    92.09  15  P       P       05 01 42.5 +0.2
      baz=210,SNR=14
EPH   Ephrata           92.10  37  IAmb    IAmb    05 01 45.0
      comp=Z,20nm,1.1s
S31K  Pelican           92.13  22  P       P       05 01 42.2 -0.2
      baz=220
KLU   Klutina           92.15  16  IAmb    IAmb    05 01 43.6
      comp=Z,22nm,0.9s
KLU   Klutina           92.15  16  P       P       05 01 42.8 +0.2
      baz=212
TNA   Tin City          92.22   6  P       P       05 01 43.1 +0.4
      baz=192
CRQE  Cirque            92.26  18  P       P       05 01 43.4 +0.2
      baz=214
F14K  Arctic Creek      92.28   6  P       P       05 01 43.4 +0.4
      baz=194
J19K  Poorman           92.33  11  P       P       05 01 43.5 +0.3
      baz=203
S32K  Killisnoo         92.33  23  P       P       05 01 43.2 -0.2
      baz=221
TGL   Tana Glacier      92.34  18  IAmb    IAmb    05 01 44.9
      comp=Z,42nm,1.2s
Q16A  Castle Valley     92.34  47  IAmb    IAmb    05 01 47.9
      comp=Z,34nm,1.0s
E09A  Wood Farm, Sta    92.39  38  IAmb    IAmb    05 01 46.3
      comp=Z,45nm,1.8s
H17K  Granite Mounta    92.53   9  IAmb    IAmb    05 01 45.4
      comp=Z,29nm,1.4s
H17K  Granite Mounta    92.53   9  P       P       05 01 44.0 -0.2
      baz=199,SNR=5.1
PINM  Pinnacle          92.54  19  P       P       05 01 44.6 +0.2
      baz=216
VRDI  Verde Repeater    92.56  17  IAmb    IAmb    05 01 45.9
      comp=Z,25nm,1.1s
N25K  Chitina, Valde    92.58  17  IAmb    IAmb    05 01 45.9
      comp=Z,20nm,0.8s
N25K  Chitina, Valde    92.58  17  P       P       05 01 44.8 +0.2
      baz=213,SNR=8.9
F10A  Beach Ranch, E    92.58  39  IAmb    IAmb    05 01 48.7
      comp=Z,20nm,0.8s
VHRN  Van Horn          92.58  57  IAmb    IAmb    05 01 48.1
      comp=Z,24nm,1.2s
M24K  Tolsona, Glenn    92.61  16  P       P       05 01 44.8 +0.1
      baz=211
MPU   Maple Canyon      92.63  46  IAmb    IAmb    05 01 47.9
      comp=Z,31nm,1.0s
G16K  Koyuk River       92.65   8  IAmb    IAmb    05 01 46.1
      comp=Z,29nm,1.1s
G16K  Koyuk River       92.65   8  P       P       05 01 45.3 +0.6
      baz=197
GLB   Gilahina Butte    92.65  17  IAmb    IAmb    05 01 46.0
      comp=Z,23nm,0.8s
WAT6  Susitna Watana    92.65  15  P       P       05 01 44.6 -0.4
      baz=210,SNR=7.4
WAT1  Susitna Watana    92.68  14  P       P       05 01 44.7 -0.3
      baz=209
F15K  North Star Dit    92.69   7  P       P       05 01 45.0 +0.1
      baz=195
J20K  Nowinta River     92.75  12  IAmb    IAmb    05 01 46.4
      comp=Z,72nm,1.8s
J20K  Nowinta River     92.75  12  P       P       05 01 45.4 +0.2
      baz=204
MCARA McCarthy VSAT     92.81  17  IAmb    IAmb    05 01 47.6
      comp=Z,46nm,1.1s
MCARA McCarthy VSAT     92.81  17  P       P       05 01 46.0 +0.5
      baz=214,SNR=7.0
GCSA  Galena City Sc    92.81  10  P       P       05 01 45.5 +0.1
      baz=202
CO03  El Pedregal       92.81 126  IAmb    IAmb    05 01 49.2
      comp=Z,31nm,1.2s
CHUM  Lake Minchumin    92.83  12  P       P       05 01 44.6 -0.9
      baz=206
TRF   Thorofare Moun    92.85  13  P       P       05 01 45.2 -0.7
      baz=208
HVU   Hansel Valley     92.86  44  IAmb    IAmb    05 01 48.7
      comp=Z,50nm,1.2s
TX31  Lajitas Ar. Si    92.89  59  IAmb    IAmb    05 01 49.6
      comp=Z,32nm,1.1s
TXAR  Lajitas Array     92.89  59  P       P       05 01 48.1 +1.3
      comp=Z,17nm,1.0s,baz=213,slow=5.6,SNR=102
TXAR                               PKKPbc  PKKPdf  05 18 52.1 +0.5
      comp=Z,0.2nm,0.5s,baz=57,slow=2.9,SNR=5.4
      comp=Z,17nm,1.0s
TXAR  Lajitas Array     92.89  59  P       P       05 01 47.6 +0.8
U35K  Hyder             92.89  26  P       P       05 01 46.0  0.0
      baz=225
LOGN  Logan Glacier     92.91  19  IAmb    IAmb    05 01 55.0
      comp=Z,20nm,1.0s
BARN  Barnard Glacie    92.92  18  IAmb    IAmb    05 01 47.2
      comp=Z,19nm,0.9s
CTU   Camp Tracy        92.92  46  IAmb    IAmb    05 01 48.9
      comp=Z,42nm,1.1s
P17A  Butcher Ranch,    92.92  47  IAmb    IAmb    05 01 49.4
      comp=Z,35nm,1.0s
CTG   Chitna Glacier    92.93  18  P       P       05 01 46.3  0.0
      baz=216
CTGM  Chitina Glacie    92.93  18  IAmb    IAmb    05 01 47.6
      comp=Z,32nm,1.1s
P29M  Windy Craggy      92.94  21  P       P       05 01 46.9 +0.7
      baz=218
H18K  Honhosa River     92.96  10  P       P       05 01 46.0 -0.1
      baz=201
G17K  Kiwalik Mounta    92.97   9  P       P       05 01 46.2 +0.1
      baz=199
O28M  Mount Upton       93.10  19  P       P       05 01 47.3 +0.1
      baz=216
HARP  HAARP             93.11  16  P       P       05 01 47.0 +0.1
      baz=212
DHY   Denali Highway    93.16  15  P       P       05 01 46.9 -0.4
      baz=210
O29M  Mount Kennedy     93.21  20  P       P       05 01 47.5 -0.1
      baz=218
I20K  Naaghedeneel      93.26  11  P       P       05 01 47.0 -0.4
      baz=204
BPAW  Bear Paw Mtn.     93.29  13  P       P       05 01 46.5 -1.1
      baz=207
PV05  Paradox Valley    93.29  49  IAmb    IAmb    05 01 51.0
      comp=Z,27nm,1.1s
P18A  Preston Nutter    93.33  47  IAmb    IAmb    05 01 51.0
      comp=Z,17nm,0.9s
MCK   McKinley          93.39  14  IAmb    IAmb    05 01 50.1
      comp=Z,34nm,1.0s
MCK   McKinley          93.39  14  P       P       05 01 47.5 -0.6
      baz=209
PV17  East Wray Mesa    93.48  49  IAmb    IAmb    05 01 51.5
      comp=Z,27nm,1.4s
PV18  Skein Mesa, Pa    93.50  49  IAmb    IAmb    05 01 51.4
      comp=Z,32nm,1.1s
PV20  West Nyswonger    93.51  49  IAmb    IAmb    05 01 54.5
      comp=Z,31nm,1.2s
PV13  Radium Mtn., P    93.52  49  IAmb    IAmb    05 01 51.6
      comp=Z,20nm,1.2s
PAX   Paxson            93.52  16  P       P       05 01 48.4 -0.4
      baz=212
PV23  Carpenter Ridg    93.54  49  IAmb    IAmb    05 01 51.8
      comp=Z,25nm,0.9s
TASM  ASL Pad, Albuq    93.54  53  IAmb    IAmb    05 01 51.9
      comp=Z,11nm,1.0s
ANMO  Albuquerque       93.54  53  P       P       05 01 50.1 +0.3
PV11  David Mesa, Pa    93.55  49  IAmb    IAmb    05 01 51.8
      comp=Z,23nm,1.2s
P30M  Million Dollar    93.56  21  P       P       05 01 49.5 +0.5
      baz=219
H19K  Roundabout Mou    93.61  10  IAmb    IAmb    05 01 50.5
      comp=Z,62nm,1.8s
H19K  Roundabout Mou    93.61  10  P       P       05 01 48.5 -0.5
      baz=202
G18K  Tagagawik         93.62   9  P       P       05 01 48.8 -0.3
      baz=200,SNR=7.8
YUK8  Steele Glacier    93.64  19  P       P       05 01 50.1 +0.4
      baz=217,SNR=5.4
M26K  Nabesna, AK       93.66  17  IAmb    IAmb    05 01 50.8
      comp=Z,18nm,1.1s
M26K  Nabesna, AK       93.66  17  P       P       05 01 49.6 +0.1
      baz=214,SNR=5.9
PV22  Blue Mesa, Par    93.73  49  IAmb    IAmb    05 01 52.5
      comp=Z,15nm,1.1s
PV07  Paradox Valley    93.78  49  IAmb    IAmb    05 01 52.1
      comp=Z,16nm,1.1s
YUK6  Outpost Mounta    93.78  20  P       P       05 01 50.5 +0.2
      baz=218
F17K  Baldwin Pennin    93.79   8  IAmb    IAmb    05 01 51.1
      comp=Z,30nm,0.9s
F17K  Baldwin Pennin    93.79   8  P       P       05 01 50.2 +0.4
      baz=198
LCO   Las Campanas      93.80 125  P       P       05 01 52.0 +0.7
LCO                                IAmb    IAmb    05 01 53.5
      comp=Z,14nm,0.9s
LZH   Lanzhou           93.81 308  eP      P       05 01 51.8 +0.9
LZH                                pP      pP      05 04 03.3 -0.2
LZH                                sS      sS      05 16 07.6 -0.3
LZH                                pmax    pmax
      comp=Z,20nm,1.2s
H20K  Anotleneega Mo    93.83  11  P       P       05 01 50.3 +0.2
      baz=204
YUK3  Moose Creek       93.83  18  P       P       05 01 50.5  0.0
      baz=216,SNR=13
PV15  Paradox Valley    93.84  49  IAmb    IAmb    05 01 52.9
      comp=Z,20nm,1.1s
LZDM  Lanzhou Array     93.85 308  P       P       05 01 52.0 +0.7
      comp=Z,0.9nm,0.3s,baz=313,slow=2.8,SNR=5.2
      comp=Z,0.9nm,0.3s
S34M  Telegraph Cree    93.90  24  P       P       05 01 51.2 +0.6
      baz=224
M27K  Edge Creek, AK    93.92  17  P       P       05 01 51.2 +0.5
      baz=215,SNR=9.0
MENT  Mentasta          93.92  16  IAmb    IAmb    05 01 51.9
      comp=Z,25nm,1.2s
MENT  Mentasta          93.92  16  P       P       05 01 51.1 +0.5
HYT   Haines Junctio    93.94  20  P       P       05 01 51.3 +0.4
      baz=219
G19K  Purcell Mounta    94.08  10  IAmb    IAmb    05 01 52.5
      comp=Z,14nm,1.0s
G19K  Purcell Mounta    94.08  10  P       P       05 01 51.4 +0.1
      baz=202,SNR=10
L26K  Log Cabin Wild    94.09  16  IAmb    IAmb    05 01 52.7
      comp=Z,21nm,1.3s
L26K  Log Cabin Wild    94.09  16  P       P       05 01 51.8 +0.4
      baz=214,SNR=7.7
NEA2  Nenana            94.11  13  P       P       05 01 50.8 -0.6
      baz=209
CFA   Coronel Fontan    94.14 128  P       P       05 01 54.0 +1.4
      comp=Z,3.4nm,0.8s,baz=250,slow=4.6,SNR=14
      comp=Z,3.4nm,0.8s
F18K  Selawik           94.15   9  P       P       05 01 51.2 -0.2
      baz=200
K24K  Donnelly Dome     94.16  15  P       P       05 01 51.6  0.0
      baz=212
MLY   Manley            94.17  13  IAmb    IAmb    05 01 51.7
      comp=Z,18nm,1.2s
MLY   Manley            94.17  13  P       P       05 01 50.7 -1.0
      baz=208
AC05  El Transito       94.20 125  IAmb    IAmb    05 01 55.6
      comp=Z,23nm,1.1s
P32M  Atlin             94.22  22  P       P       05 01 51.6 -0.5
      baz=222
BVCY  Beaver Creek      94.24  18  P       P       05 01 52.3 +0.2
      baz=216,SNR=13
Q32M  Nakina River      94.25  23  P       P       05 01 52.4  0.0
      baz=223
RIDG  Independent Ri    94.32  15  IAmb    IAmb    05 01 53.4
      comp=Z,20nm,1.0s
RIDG  Independent Ri    94.32  15  P       P       05 01 52.4 -0.1
      baz=213,SNR=6.1
E17K  Hotham Inlet      94.33   8  P       P       05 01 52.7 +0.4
      baz=198
O30N  Mendenhall        94.34  21  P       P       05 01 52.4 -0.1
      baz=220
H21K  Melozitna Rive    94.34  12  P       P       05 01 52.4  0.0
      baz=206
SAND  Sanderson         94.36  59  IAmb    IAmb    05 01 55.3
      comp=Z,19nm,1.1s
HDA   Harding Lake      94.41  14  IAmb    IAmb    05 01 54.3
      comp=Z,14nm,0.6s
HDA   Harding Lake      94.41  14  P       P       05 01 52.2 -0.5
      baz=211
CCB   Clear Creek Bu    94.43  14  IAmb    IAmb    05 01 53.0
      comp=Z,28nm,1.1s
DOT   Dot Lake          94.44  16  IAmb    IAmb    05 01 53.9
      comp=Z,26nm,1.2s
IMAR  Indian Mountai    94.47  11  P       P       05 01 52.6 -0.4
L27K  Beaver Creek,     94.51  17  P       P       05 01 52.9 -0.4
      baz=215
MNHN  Monahans          94.52  57  IAmb    IAmb    05 01 56.0
      comp=Z,33nm,2.0s
BCAR  Beaver Creek A    94.53  17  P       P       05 01 53.6 +0.3
I23K  Minto, Yukon-K    94.54  13  P       P       05 01 52.7 -0.6
      baz=209
BILL  Bilibino          94.55 355  P       P       05 01 53.7 +0.4
BILL                               IAmb    IAmb    05 01 54.0
      comp=Z,16nm,1.2s
N30M  Aishikik Lake     94.57  20  P       P       05 01 53.3 -0.3
      baz=219
COLA  College           94.62  14  P       P       05 01 52.4 -1.3
COLA  College           94.62  14  P       P       05 01 52.8 -0.8
COLA  College           94.62  14  P       P       05 01 52.9 -0.8
      baz=210
F19K  Shaleruckik Mo    94.63   9  IAmb    IAmb    05 01 54.1
      comp=Z,11nm,0.8s
F19K  Shaleruckik Mo    94.63   9  P       P       05 01 53.6  0.0
      baz=201
WHY   Whitehorse        94.64  21  P       P       05 01 54.2 +0.2
      baz=221
S22A  4UR Ranch, Cre    94.67  50  IAmb    IAmb    05 01 57.4
      comp=Z,22nm,1.2s
SCRK  Sand Creek        94.73  16  P       P       05 01 54.3  0.0
      baz=213
IL31                    94.74  14  IAmb    IAmb    05 01 54.6
      comp=Z,20nm,1.2s
ILAR  Eielson Array     94.74  14  P       P       05 01 53.6 -0.6
      comp=Z,7.6nm,0.9s,baz=219,slow=4.7,SNR=41
ILAR                               pP      pP      05 04 06.8 -0.5
      comp=Z,6.8nm,1.2s,baz=258,slow=6.1,SNR=4.7
ILAR                               PP      PP      05 05 51.8 -2.6
      comp=Z,2.7nm,0.9s,baz=228,slow=7.2,SNR=5.0
ILAR                               PKiKP   PKiKP   05 06 31.6 -0.4
      comp=Z,0.7nm,0.5s,baz=279,slow=2.9,SNR=12
ILAR                               PKKPbc  PKKPdf  05 18 46.0 -3.6
      comp=Z,0.6nm,1.1s,baz=12,slow=2.2,SNR=4.4
      comp=Z,7.6nm,0.9s
ILAR  Eielson Array     94.74  14  P       P       05 01 53.3 -0.9
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ILAR					pP	05 04 05.7	-1.6
D17K	Noatak River	94.78	7	P	P	05 01 54.9	+0.6
	baz=197						
E18K	Tukpahlearik C	94.80	8	IAmb	IAmb	05 01 55.8	
	comp=Z,18nm,0.8s						
E18K	Tukpahlearik C	94.80	8	P	P	05 01 54.9	+0.5
	baz=199						
H22K	Ishtalitna Cre	94.82	12	IAmb	IAmb	05 01 55.6	
	comp=Z,14nm,1.0s						
H22K	Ishtalitna Cre	94.82	12	P	P	05 01 54.6	0.0
	baz=207						
O20A	White River Ci	94.91	47	IAmb	IAmb	05 01 57.1	
	comp=Z,15nm,1.1s						
POKR	Poker Plat Res	94.92	14	P	P	05 01 54.1	-1.0
	baz=210						
M29M	Somme Creek	94.94	19	P	P	05 01 55.8	+0.4
	baz=218,SNR=7.0						
MSO	Missoula	94.94	40	IAmb	IAmb	05 04 44.9	
	comp=Z,29nm,2.0s						
J25K	Salcha River,	94.94	15	P	P	05 01 55.0	-0.2
	baz=212						
P33M	Teslin, Yukon	94.99	22	P	P	05 01 55.4	-0.2
	baz=223						
N31M	Braeburn, Yuko	94.99	20	P	P	05 01 55.8	+0.3
	baz=220						
G21K	Allakaket	95.00	11	P	P	05 01 55.4	+0.1
	baz=205						
SNOW	Snow King Moun	95.02	44	IAmb	IAmb	05 01 59.6	
	comp=Z,13nm,0.9s						
H23K	Yukon River	95.11	13	P	P	05 01 56.3	+0.4
	baz=209						
C16K	Lisburne Hills	95.11	6	IAmb	IAmb	05 01 57.2	
	comp=Z,26nm,1.4s						
C16K	Lisburne Hills	95.11	6	P	P	05 01 56.3	+0.6
	baz=195						
F20K	Avaraart Lake	95.13	10	IAmb	IAmb	05 01 57.2	
	comp=Z,13nm,1.1s						
F20K	Avaraart Lake	95.13	10	P	P	05 01 56.2	+0.3
	baz=203						
RDOG	Red Dog Mine	95.14	7	P	P	05 01 56.4	+0.4
	baz=197						
K27K	Chicken	95.25	16	P	P	05 01 57.0	+0.5
	baz=215						
J26L	Joseph Creek	95.27	16	IAmb	IAmb	05 01 58.3	
	comp=Z,28nm,1.1s						
J26L	Joseph Creek	95.27	16	P	P	05 01 57.3	+0.6
	baz=214						
DRIO	Del Rio	95.28	60	IAmb	IAmb	05 01 59.5	
	comp=Z,24nm,1.0s						
E19K	Redstone River	95.29	9	IAmb	IAmb	05 01 58.0	
	comp=Z,26nm,1.1s						
E19K	Redstone River	95.29	9	P	P	05 01 57.0	+0.4
	baz=202						
PDAR	Pinedale Array	95.40	45	P	P	05 01 58.3	+0.2
	comp=Z,3.4nm,0.8s,baz=204,slow=2.8,SNR=24						
PDAR				PP	PP	05 05 52.0	-8.3
	comp=Z,0.8nm,0.9s,baz=256,slow=12,SNR=2.6						
	comp=Z,3.4nm,0.8s						
PDAR	Pinedale Array	95.40	45	P	P	05 01 57.7	-0.4
H24K	Noodor Dome	95.45	13	P	P	05 01 57.7	+0.2
	baz=210						
YHL	Hebgen Lake	95.49	42	IAmb	IAmb	05 02 03.1	
	comp=Z,28nm,1.5s						
C17K	DeLong Mountai	95.52	7	P	P	05 01 58.1	+0.4
	baz=197						
M30M	Minto, Yukon	95.52	19	P	P	05 01 58.2	+0.3
	baz=219,SNR=5.4						
L29M	L29M	95.56	18	IAmb	IAmb	05 01 59.9	
	comp=Z,22nm,1.1s						
L29M	L29M	95.56	18	P	P	05 01 58.6	+0.6
	baz=218						
F21K	Alatna River	95.65	11	P	P	05 01 58.6	+0.3
	baz=205						
HBVL	Hebbronville	95.75	63	IAmb	IAmb	05 02 02.7	
	comp=Z,30nm,1.2s						
G23K	Bananza Creek	95.80	12	P	P	05 01 59.3	+0.3
	baz=208						
C18K	Utukok River	95.90	7	IAmb	IAmb	05 02 00.8	
	comp=Z,19nm,1.3s						
C18K	Utukok River	95.90	7	P	P	05 01 59.4	-0.1
	baz=198						
M31M	Drury Creek, Y	95.96	20	P	P	05 01 59.9	+0.1
	baz=221						
DAWY	Dawson	95.97	17	IAmb	IAmb	05 02 01.2	
	comp=Z,15nm,1.1s						
DAWY	Dawson	95.97	17	P	P	05 01 60.0	+0.1
	baz=217						
I26K	Coal Creek Min	96.04	15	P	P	05 02 00.4	+0.4
	baz=214						
F22K	John River	96.12	11	P	P	05 02 00.8	+0.4
	baz=206						
D19K	Kuna River	96.14	8	IAmb	IAmb	05 02 01.8	
	comp=Z,20nm,1.1s						
D19K	Kuna River	96.14	8	P	P	05 02 00.6	+0.1
	baz=201						
E20K	Nigu River	96.18	9	P	P	05 02 01.0	+0.3
	baz=203						
COLD	Coldfoot	96.22	12	P	P	05 02 01.5	+0.7
	baz=208						
G24K	Hadweenzic Riv	96.28	13	P	P	05 02 01.6	+0.5
	baz=210						
K29M	Barlow Dome	96.30	18	P	P	05 02 02.0	+0.6
	baz=219,SNR=8.0						
WTLY	Watson Lake, Y	96.32	24	P	P	05 02 02.0	+0.5
	baz=226						
B18K	Kokolik River	96.52	7	P	P	05 02 02.7	+0.6
	baz=198						
C19K	Lookout Ridge	96.52	8	IAmb	IAmb	05 02 04.0	
	comp=Z,18nm,1.1s						
C19K	Lookout Ridge	96.52	8	P	P	05 02 02.7	+0.5
	baz=200						
D20K	Etivluk River	96.54	9	IAmb	IAmb	05 02 03.3	
	comp=Z,18nm,1.1s						
D20K	Etivluk River	96.54	9	P	P	05 02 02.9	+0.6
	baz=202						
I27K	Kandik River	96.65	16	P	P	05 02 03.4	+0.5
	baz=216						
E21K	Killik River	96.68	10	P	P	05 02 03.5	+0.5
	baz=205						
GO02	Mina Guanaco	96.71	122	IAmb	IAmb	05 02 07.1	
	comp=Z,13nm,1.1s						
RLMT	Red Lodge	96.79	43	IAmb	IAmb	05 05 05.8	
	comp=Z,26nm,2.0s						
TOAD	Toad River Com	96.80	26	P	P	05 02 04.3	+0.7
	baz=229						
F24K	Squaw Lake	96.91	12	P	P	05 02 04.4	+0.5
	baz=210,SNR=6.5						
I28M	Miner Creek	96.94	16	P	P	05 02 04.2	-0.1
	baz=217,SNR=5.4						
E23K	Chandalar	97.06	12	P	P	05 02 04.8	+0.1
	baz=209						
H27K	Steamboat Moun	97.19	15	P	P	05 02 05.6	+0.3
	baz=216						
J30M	Hart River	97.20	18	P	P	05 02 05.6	+0.2
	baz=220						
C21K	Knifeblade Rid	97.21	9	P	P	05 02 05.5	+0.3
	baz=204						
G26K	Porcupine Rive	97.27	14	IAmb	IAmb	05 02 08.9	
	comp=Z,15nm,1.1s						
G26K	Porcupine Rive	97.27	14	P	P	05 02 06.1	+0.6
	baz=214						
D22K	Ayikyak River	97.28	10	IAmb	IAmb	05 02 07.3	
	comp=Z,12nm,0.9s						
D22K	Ayikyak River	97.28	10	P	P	05 02 06.2	+0.7
	baz=206						
I29M	Ogilvie Camp,	97.28	17	IAmb	IAmb	05 02 06.6	
	comp=Z,16nm,1.5s						
I29M	Ogilvie Camp,	97.28	17	P	P	05 02 06.1	+0.4
	baz=218						
A19K	Wainwright	97.40	7	P	P	05 02 06.8	+0.8
	baz=198						
F25K	Christian Rive	97.42	13	P	P	05 02 07.1	+0.8
	baz=212						
TOLK	Toolik Lake Re	97.58	11	P	P	05 02 07.7	+0.7
	baz=209						
G27K	Doyon Strip	97.63	15	P	P	05 02 07.9	+0.7
	baz=216						
B21K	Ikpikpuk River	97.66	9	P	P	05 02 08.2	+1.0
	baz=204						
B20K	Meade River	97.67	8	P	P	05 02 07.9	+0.7
	baz=202						
D23K	Nanushuk River	97.68	11	P	P	05 02 08.3	+1.0
	baz=208						
I30M	Mount Dempster	97.69	18	P	P	05 02 08.4	+0.8
	baz=220						
F26K	Sheenjek River	97.81	14	P	P	05 02 08.9	+1.0
	baz=213,SNR=5.4						
E25K	Arctic Village	97.88	13	P	P	05 02 09.1	+0.8
	baz=212						
H29M	Whitestone	97.94	16	P	P	05 02 09.4	+0.8
	baz=218						
SONM	Songino Array	98.07	320	PP	PP	05 06 21.8	+1.7
	comp=Z,1.1nm,0.8s,baz=123,slow=7.1,SNR=4.3						
SONM				PKKPbc	PKKPbc	05 18 40.9	+0.4
	comp=Z,1.8nm,0.8s,baz=287,slow=2.8,SNR=8.3						
GTA	Gaotai	98.20	310	*e*P	P	05 02 11.5	+0.9
GTA				pmax	pmax		
	comp=Z,10.0nm,1.7s						
C23K	Itkillik River	98.47	10	P	P	05 02 11.6	+0.8
	baz=208						
EPYK	Eagle Plains	98.48	17	P	P	05 02 11.7	+0.7
	baz=220						
B22K	Teshekpuk Lake	98.49	9	P	P	05 02 11.5	+0.7
	baz=205						
G29M	Pine Creek	98.58	16	P	P	05 02 11.8	+0.4
	baz=219						
C24K	Franklin Bluff	98.69	11	P	P	05 02 12.6	+0.8
	baz=210						
F28M	Old Crow	98.69	15	P	P	05 02 12.2	+0.3
	baz=217						
D25K	Kavik River	98.75	12	P	P	05 02 12.4	+0.2
	baz=212						
E27K	Coleen River	98.77	14	P	P	05 02 12.6	+0.4
	baz=216						
A22K	Sinclair Lake	98.88	9	P	P	05 02 13.0	+0.3
	baz=204						
A21K	Barrow	98.97	8	P	P	05 02 12.9	0.0
	baz=203						
G30M	tAoh Zraii Nji	99.08	16	P	Pdif	05 02 14.3	+0.7
	baz=220						
C27K	Jago River	99.52	13	P	Pdif	05 02 16.3	+0.8
	baz=214						
C26K	Camden Bay	99.53	12	P	Pdif	05 02 16.5	+1.0
	baz=213						
G31M	Satah River	99.54	17	P	Pdif	05 02 16.0	+0.4
	baz=222						
E28M	Babbage River	99.56	14	P	Pdif	05 02 16.2	+0.5
	baz=218						
F30M	Barrier River	99.67	16	P	Pdif	05 02 16.7	+0.5
	baz=221						
D27M	Malcolm River	99.76	14	P	Pdif	05 02 17.2	+0.6
	baz=216						
E29M	Blow River	99.76	15	P	Pdif	05 02 17.0	+0.4
	baz=219						
F31M	Tsiigehtchic	100.06	17	P	Pdif	05 02 18.4	+0.5
	baz=222						
WRGLY	Wrigley	100.30	23	P	Pdif	05 02 19.2	+0.2
	baz=231						
D28M	Stokes Point	100.31	14	P	Pdif	05 02 19.4	+0.5
	baz=218						
INK	Inuvik	100.76	16	P	Pdif	05 02 20.9	0.0
	baz=223						
YKA	Yellowknife Ar	103.17	26	Pdiff	Pdif	05 02 31.0	-0.8
	comp=Z,0.3nm,0.5s,baz=240,slow=4.7,SNR=2.2						
YKA				PKiKP	PKiKP	05 06 46.5	-0.6
	comp=Z,0.6nm,0.4s,baz=241,slow=2.4,SNR=12						
YKA	Yellowknife Ar	103.17	26		Pdif	05 02 30.8	-1.0
TIXI	Tiksi	103.58	346	PKiKP	PKiKP	05 06 46.6	-1.0
	comp=Z,2.0nm,0.4s,baz=99,slow=3.6,SNR=6.2						
C36M	Paulatuk	103.98	18	P	Pdif	05 02 35.3	0.0
	baz=231						
A36M	Sachs Harbour	105.35	16	P	PKiKP	05 06 49.6	-1.2
	baz=231						
HYB	Hyderabad	106.21	282	*e*PKiKP	PKiKP	05 06 54.6	+0.5
HYB				*e*PP	PP	05 07 19.4	-0.9
HYB				*e*pPKiKP	pPKiKP	05 09 15.1	-0.7
ULM	Lac du Bonnet	107.15	42	PKiKP	PKiKP	05 06 54.2	-0.6
	comp=Z,2.2nm,0.4s,baz=262,slow=2.4,SNR=3.6						
ULM				PP	PP	05 07 25.1	-1.4
	comp=Z,4.7nm,0.9s,baz=230,slow=7.7,SNR=3.4						
WMQ	Urumqi	108.28	310	Pdif	Pdif	05 02 56.0	+0.9
TKL	Tuckaleechee C	110.78	60	PKiKP	PKiKP	05 07 01.5	-0.7
	comp=Z,3.9nm,0.7s,baz=148,slow=3.2,SNR=4.2						
SDV	Santo Domingo	112.57	91	PKiKP	PKiKP	05 07 05.8	-0.7
	comp=Z,4.5nm,0.7s,baz=20,slow=1.9,SNR=6.6						
MKAR	Makanchi Array	112.79	312	Pdiff	Pdif	05 03 17.6	+2.6
	comp=Z,0.5nm,0.5s,baz=92,slow=7.2,SNR=5.9						
MKAR				PKiKP	PKiKP	05 07 05.0	-0.8
	comp=Z,1.8nm,0.5s,baz=209,slow=1.2,SNR=37						
MKAR				PKKPbc	PKKPbc	05 17 55.5	-0.5
	comp=Z,2.1nm,0.6s,baz=282,slow=2.7,SNR=18						
MKAR				SKKPbc	SKKPbc	05 20 39.9	-3.5
	comp=Z,1.0nm,0.6s,baz=281,slow=4.1,SNR=6.6						
ZALV	Zalesovo Beam	112.96	320	PKiKP	PKiKP	05 07 04.7	-1.0
	comp=Z,2.7nm,0.5s,baz=135,slow=1.5,SNR=15						
UZB	Uzynbulak	114.13	308	*e*PKiKP	PKPdf	05 07 08.0	-0.6
SATY	Saty	114.55	308	*e*PKP	PKPdf	05 07 08.8	-0.5
NRIK	Noril'sk	114.71	337	PKP	PKPdf	05 07 08.5	-0.2
	comp=Z,5.9nm,0.5s,baz=108,slow=2.6,SNR=9.9						
NRIK	Noril'sk	114.71	337		PKPdf	05 07 08.1	-0.5
KSH	Kashi	115.48	303	PKP	PKiKP	05 07 11.8	+0.5
MDOK	Medeo	115.54	307	*e*PKP	PKPdf	05 07 10.8	-0.5
TNSS	Tian-Shan	115.59	307	*e*PKP	PKPdf	05 07 10.9	-0.8
KURK	Kurchatov	116.02	316		PKPdf	05 07 10.8	-0.9
KURBB	Kurchatov Arra	116.05	316	PKP	PKPdf	05 07 11.1	-0.7
	comp=Z,6.5nm,0.2s,baz=106,slow=1.9,SNR=19						
KURBB				PP	PP	05 08 28.6	-0.3
	comp=Z,1.8nm,0.2s,baz=99,slow=6.5,SNR=6.9						
KURBB				PKKPbc	PKKPbc	05 17 46.2	+1.2
	comp=Z,3.3nm,0.8s,baz=281,slow=4.1,SNR=15						
AAK	Ala-Archa	117.26	306		PKPdf	05 07 13.5	-1.1
ILON	Igloolik, Nuna	117.81	23		PKPdf	05 07 13.5	-1.1
BDFB	Brasilia	118.47	127	PKP	PKiKP	05 07 17.9	+0.1
	comp=Z,5.0nm,0.4s,baz=219,slow=1.8,SNR=17						
BDFB				SKP	SKPdf	05 09 55.5	+0.4
	comp=Z,3.3nm,0.7s,baz=202,slow=5.4,SNR=3.4						
BDFB	Brasilia	118.47	127		PKPdf	05 07 17.1	-0.6
ITTB	Itaituba	119.32	112	*e*P	PKPdf	05 07 18.8	-0.4
BOSA	Boshof	119.60	207	PKP	PKiKP	05 07 20.2	+0.5
	comp=Z,5.4nm,0.8s,baz=211,slow=2.6,SNR=10						
BOSA				PP	PP	05 08 48.3	-3.8
	comp=Z,3.4nm,0.8s,baz=185,slow=8.0,SNR=4.0						
BOSA				PKKPbc	PKKPbc	05 17 32.1	-1.2
	comp=Z,2.5nm,0.3s,baz=288,slow=3.2,SNR=7.3						
DZA	Taraz	119.60	306	*e*PKP	PKPdf	05 07 18.6	-0.4
BRZS	Berezniki	119.67	314	*e*PKP	PKPdf	05 07 18.8	-0.1
KBL	Kabul	119.72	296		PKPdf	05 07 18.8	-0.9
SJG	San Juan	120.13	84		PKPdf	05 07 19.7	-0.9
KKAR	Karatay Array	120.23	306		PKPdf	05 07 19.2	-0.9
HUMP	Col San Antoni	120.41	84		PKPdf	05 07 20.5	-0.7
IUG	Iuzhnay	120.43	305	*e*PKP	PKPdf	05 07 20.2	-0.5
BRLS	Borolday	120.71	306	*e*PKP	PKPdf	05 07 20.7	-0.4
SJMB	Sao Joao De Ma	120.92	135	*e*P	PKPdf	05 07 21.7	-0.5
BVAR	Borovoye Array	121.35	318	PKP	PKPdf	05 07 21.7	-0.2
	comp=Z,18nm,0.4s,baz=140,slow=1.4,SNR=83						
BVAR				PKKPbc	PKKPbc	05 17 26.1	-0.2
	comp=Z,0.7nm,0.4s,baz=286,slow=2.7,SNR=4.0						
BORK	Borovoye	121.39	318		PKPdf	05 07 21.2	-0.8
MAL2	Monte Alegre,	121.89	111		PKPdf	05 07 24.3	+0.1
LBTB	Lobatse	122.61	209	PKP	PKPdf	05 07 25.1	-0.3
	comp=Z,3.3nm,0.6s,baz=135,slow=3.1,SNR=6.6						
LBTB				PKKPbc	PKKPbc	05 17 20.3	-2.0
	comp=Z,0.7nm,0.4s,baz=293,slow=7.7,SNR=3.6						
SDBA	SAO DESIDERIO	122.87	127	*e*P	PKPdf	05 07 26.1	0.0
PRPB	Parauapebas	123.11	118	*e*P	PKiKP	05 07 26.9	+0.1
SMTB	Santa Maria do	123.20	122	*e*P	PKiKP	05 07 27.1	+0.1
CMC01	Camacan, BA	124.46	134	*e*P	PKPdf	05 07 29.1	+0.1
NBIT	Itapeh - BA	124.83	134	*e*P	PKPdf	05 07 29.7	-0.1
MATP	Matopo	125.13	215	PKP	PKiKP	05 07 47.0	+16
	comp=Z,9.9nm,0.9s,baz=164,slow=3.2,SNR=12						
SCHQ	Schefferville	125.24	40	PKP	PKPdf	05 07 28.9	-0.4
	comp=Z,23nm,0.9s,baz=281,slow=2.4,SNR=14						
SCHQ	Schefferville	125.24	40		PKPdf	05 07 28.7	-0.7
BATG	Bathurst New B	125.87	49		PKPdf	05 07 30.7	-0.1
KGCAE	Kacgae	125.95	207		PKiKP	05 07 32.4	-0.1
LMN	Caledonia Moun	126.70	51		PKPdf	05 07 31.9	-0.5
TMAB	Tom-Au,PA,Br	126.73	115	*e*P	PKiKP	05 07 34.3	+0.3
SPA0	Spitsbergen Ar	127.46	355	*e*P	PKPdf	05 07 33.2	+0.2
SPITS	Spitsbergen Ar	127.46	355	PKP	PKPdf	05 07 32.7	-0.3
	comp=Z,16nm,0.5s,baz=91,slow=5.0,SNR=76						
SPB2	Spitsbergen Ar	127.46	355		PKiKP	05 07 33.4	-0.3
ABKAR	Akbulak array	127.92	313		PKPdf	05 07 34.1	-0.5
ARTI	Arti	128.12	322		PKPdf	05 07 34.9	+0.1
LSZ	Lusaka	129.53	218	PKP	PKiKP	05 07 39.8	0.0
	comp=Z,6.3nm,0.7s,baz=155,slow=2.7,SNR=10						
LSZ				SKPab	SKPbc	05 10 04.3	+0.5
	comp=Z,17nm,0.6s,baz=156,slow=3.1,SNR=27						
LSZ	Lusaka	129.53	218		PKiKP	05 07 39.9	+0.2
SUMG	Summit	129.58	14		PKiKP	05 07 38.2	-0.2
NBTA	Tacaratu-PE	129.96	130	*e*P	PKPdf	05 07 39.5	-0.1
NBPS	Pedro II - PI	130.72	122	*e*P	PKiKP	05 07 41.9	-0.3
TSUM	Tsumeb	131.06	204	PKP	PKPdf	05 07 42.1	+0.4
	comp=Z,8.8nm,0.9s,baz=78,slow=1.0,SNR=9.3						
TSUM				SKPbc	SKPbc	05 10 07.5	-1.9
	comp=Z,3.2nm,0.6s,baz=153,slow=6.1,SNR=11						
TSUM	Tsumeb	131.06	204		PKiKP	05 07 42.5	-0.3
NBMO	Morrinhos-CE	132.49	123	*e*P	PKiKP	05 07 45.1	-0.5
NBPV	Pedro Velho	133.80	130	*e*P	PKPdf	05 07 47.5	+0.7
ARCES	ARCESS Array B	133.99	347	PKhKP	PKPpre	05 07 31.7	
	comp=Z,1.5nm,0.6s,baz=30,slow=2.6,SNR=12						
ARCES				PKP	PKPdf	05 07 45.4	-0.1
	comp=Z,12nm,0.6s,baz=54,slow=1.7,SNR=8.6						
ARCES				SKPbc	SKPbc	05 10 18.6	+1.2
	comp=Z,29nm,0.9s,baz=32,slow=3.1,SNR=15						
ARCES				PKKP	PKKPdf	05 17 32.1	-2.8
	comp=Z,1.7nm,0.8s,baz=205,slow=3.2,SNR=7.1						
ARCES				SKKPbc	SKKPbc	05 19 27.3	-6.8
	comp=Z,4.0nm,1.1s,baz=193,slow=3.7,SNR=3.7						
ARCES	ARCESS Array B	133.99	347		PKPdf	05 07 45.5	0.0
STEI	Steigen	137.18	351	*e*	PKPpre	05 07 41.0	
LOF	Lofoten	137.23	352	*e*	PKPpre	05 07 43.6	
MOR8	Moi Rana	138.94	350	*e*	PKPpre	05 07 46.5	
LEIR	Leirfjorden	139.19	351	*e*	PKPpre	05 07 47.9	
KBZ	Khabaz	140.25	308	PKhKP	PKPpre	05 07 51.9	
	comp=Z,1.3nm,0.6s,baz=125,slow=2.2,SNR=4.6						
KBZ				SKPab	SKPab	05 10 49.1	-0.7
	comp=Z,3.0nm,0.7s,baz=76,slow=4.2,SNR=4.1						
KBZ				SKKPbc	SKKPbc	05 19 09.4	+0.4
	comp=Z,1.4nm,0.7s,baz=194,slow=4.2,SNR=3.9						
FINES	FINESS Array B	140.30	340	PKhKP	PKPpre	05 07 49.8	
	comp=Z,16nm,0.4s,baz=46,slow=5.1,SNR=186						
FINES				SKPbc	SKiKP	05 10 37.3	-0.7
	comp=Z,11nm,0.7s,baz=38,slow=2.5,SNR=4.8						
FINES				SKPab	SKPab	05 10 48.5	-0.9
	comp=Z,10nm,0.8s,baz=90,slow=5.7,SNR=4.9						
FINES				SKKPbc	SKKPab	05 19 07.9	-1.9
	comp=Z,2.5nm,0.6s,baz=119,slow=1.7,SNR=4.5						
NSS	Namsos	140.85	351	*e*	PKPpre	05 07 51.8	
KOPT	Kop Dagi	142.63	302		PKPdf	05 08 01.6	-0.9
MOL	Molde	143.29	353	*e*P	PKPbc	05 08 01.2	-0.1
DOMB	Dombas	143.62	352	*e*P	PKPbc	05 08 01.7	-0.7
AKN	Aaknes	143.74	353	*e*P	PKPbc	05 08 02.6	-0.1
NB2	NORSAR Subarra	144.26	349	PKP	PKPdf	05 08 03.4	-1.0
	comp=Z,122nm,0.8s,baz=16,slow=3.2						
NB2				SKKP	SKKPab	05 18 52.2	0.0
	comp=Z,1.3nm,0.7s,baz=190,slow=4.4						
NB2	NORSAR Subarra	144.26	349	PKP	PKPdf	05 08 03.4	-1.0
	baz=16,slow=3.2						
NOA	NORSAR Array B	144.26	349	PKP	PKPdf	05 08 03.1	-1.3
	comp=Z,24nm,0.9s,baz=58,slow=2.6,SNR=235						
NOA				SKPbc	SKiKP	05 10 47.0	+0.8
	comp=Z,2.1nm,0.5s,baz=15,slow=2.5,SNR=3.4						
NOA				SKKPbc	SKKPab	05 18 51.5	-0.6
	comp=Z,3.4nm,0.9s,baz=205,slow=4.0,SNR=5.8						
FOO	Floro	144.49	355	*e*P	PKPbc	05 08 04.9	0.0
HFS	Hagfors	144.65	347	PKP	PKPdf	05 08 05.0	0.0
	comp=Z,109nm,0.3s,baz=64,slow=3.4,SNR=1380						
HFS				SKPbc	SKiKP	05 10 47.0	0.0
	comp=Z,7.8nm,0.7s,baz=59,slow=6.9,SNR=3.9						
HFS				SKKPbc	SKKPab	05 18 50.0	-0.4
	comp=Z,4.8nm,0.8s,baz=202,slow=3.2,SNR=5.7						
HYA	Hoyanger	144.81	354	*e*P	PKPbc	05 08 05.9	0.0
SKAR	Skarslia	145.04	352	*e*P	PKPbc	05 08 06.5	-0.3
SUE	Sulen	145.05	355	*e*P	PKPbc	05 08 06.7	0.0
OSL	Oslo	145.39	349	*e*P	PKPbc	05 08 07.5	-0.2
PABE	Paberze	145.48	334		PKPbc	05 08 07.9	-0.2
ASK	Askoy	145.58	354	*e*P	PKPbc	05 08 08.1	-0.1
BER	Bergen	145.66	354	*e*PKPdf	PKPdf	05 08 07.4	+0.8
KONO	Kongsberg	145.84	350		PKPbc	05 08 08.7	-0.3
KONO	Kongsberg	145.84	350	*e*P	PKPbc	05 08 09.0	0.0
ODD1	Odda	145.99	353	*e*P	PKPbc	05 08 09.6	+0.1
AK03	Malin Array Si	146.21	324	PKP	PKPdf	05 08 07.2	-0.7
AKASG	Malin Array Be	146.22	324	PKP	PKPdf	05 08 07.0	-0.9
	comp=Z,30nm,0.6s,baz=46,slow=3.6,SNR=80						
AKASG				PKPbc	PKPbc	05 08 10.0	-0.3
	comp=Z,30nm,0.6s,baz=45,slow=3.8,SNR=61						
AKASG				SKKPbc	SKKPbc	05 18 41.4	-4.0
	comp=Z,0.8nm,0.6s,baz=249,slow=3.9,SNR=4.6						
AKASG	Malin Array Be	146.22	324		PKPbc	05 08 09.3	-1.0
AKBB	Malin Array Si	146.22	324	PKP	PKPdf	05 08 07.2	-0.7
AK01	Malin Array Si	146.23	324	PKP	PKPdf	05 08 07.2	-0.8
KIEV	Kiev	146.23	324		PKPdf	05 08 09.0	+1.1
KIEV	Kiev	146.23	324	⇑P	PKPbc	05 08 09.5	-0.9
KIEV	Kiev	146.23	324	PKP	PKPdf	05 08 07.2	-0.8
LRW	Lerwick	146.24	360	*e*P	PKPbc	05 08 09.2	-0.8
BLS5	Blasjo	146.49	353	*e*P	PKPbc	05 08 11.2	+0.4
KMY	Karmoy	146.83	354	*e*P	PKPbc	05 08 11.9	+0.3
SUW	Suwalki	146.89	333	*e*PKP	PKPbc	05 08 11.8	-0.2
MI28	Mi28,Pidlybu	146.89	326	PKP	PKPdf	05 08 07.4	-1.7
BZK	Bozkurt	147.02	307	⇑P	PKPbc	05 08 13.4	+0.7
HOMB	Homborsund	147.33	350	*e*P	PKPbc	05 08 13.2	+0.2
MMAI	Mount Meron Ar	147.37	291	PKPbc	PKiKP	05 08 15.0	-0.6
	comp=Z,16nm,0.4s,baz=79,slow=4.3,SNR=70						
LUBAR	Lubar, Ukraine	147.44	324	PKP	PKPdf	05 08 09.0	-1.0
SNART	Snartemo	147.45	351	*e*P	PKPbc	05 08 13.5	+0.2
RNPP9	Sopachiv	147.47	328	PKP	PKPdf	05 08 09.0	-1.0
RNPP8	Varash	147.54	328	PKP	PKPdf	05 08 09.1	-1.0
RNPP5	Staryi Chortor	147.59	327	PKP	PKPdf	05 08 09.2	-1.0
KIRS	Kirsehir-Merke	147.80	302	⇓P	PKPbc	05 08 15.0	0.0
BIGH	Upper Bighouse	147.84	2	*e*P	PKPbc	05 08 13.3	-1.0
BRTR	Keskin Array B	147.87	303	PKP	PKPdf	05 08 10.3	-0.9
	comp=Z,15nm,0.9s,baz=128,slow=2.0,SNR=17						
BRTR				PKPbc	PKPbc	05 08 15.0	-0.2
	comp=Z,9.8nm,0.5s,baz=147,slow=2.9,SNR=48						
BRTR	Keskin Array B	147.87	303		PKPbc	05 08 14.8	-0.4
BR104	Keskin Array S	147.87	303	PKP	PKPdf	05 08 09.9	-1.3
BR106	Keskin Array S	147.88	303	PKP	PKPdf	05 08 09.9	-1.4
BR105	Keskin Array S	147.89	303	PKP	PKPdf	05 08 09.9	-1.4
LEWI	Lewis, Hebride	148.01	5	*e*P	PKPbc	05 08 14.5	-0.2
SORM	Soroca	148.11	321	⇓P	PKPbc	05 08 15.1	-0.2
ANTO	Ankara	148.47	304		PKPdf	05 08 12.3	+0.2
ANTO					PKPbc	05 08 16.9	+0.2
ANTO	Ankara	148.47	304	⇓P	PKPbc	05 08 16.8	+0.2
MILM	Milestii Mici	148.47	319	⇓P	PKPbc	05 08 14.6	-1.7
HORU	Horodok	148.56	324	PKP	PKPdf	05 08 10.8	-1.1
MCD	Coleburn Disti	148.77	2	*e*P	PKPbc	05 08 15.9	-0.8
KPL	Plockton	148.90	4	*e*P	PKPbc	05 08 16.5	-0.4
KMPD	K-Podol'skiy	148.92	323	PKP	PKPdf	05 08 11.4	-1.0
R9F13	Warsaw-Wawer	149.04	333	*e*PKPdf	PKPbc	05 08 17.6	+0.2
DRBR	Darabani	149.04	322	⇓P	PKPbc	05 08 17.2	-0.4
VASR	Vaslui	149.22	319	⇓P	PKPbc	05 08 18.2	+0.2
TLCR		149.30	316	⇑P	PKiKP	05 08 18.7	-0.4
VLDR	Vladesti	149.44	317	⇑P	PKiKP	05 08 19.5	+0.2
JURR	Jurilovca	149.46	315	⇑P	PKPbc	05 08 18.5	-0.1
DRUM	Mains of Drumt	149.46	1	*e*P	PKPbc	05 08 17.6	-0.7
BEL	Belsk	149.47	332	*e*PKP	PKiKP	05 08 19.1	-0.1
BIR	Birlad	149.51	318	⇑P	PKiKP	05 08 19.5	0.0
VARL	Varlezi	149.56	317	⇓P	PKiKP	05 08 19.5	-0.1
SCTR	Scanteiesti	149.58	317	⇑P	PKiKP	05 08 19.7	0.0
SAHE	Sakarya_HENDEK	149.61	307	⇓P	PKPbc	05 08 18.9	-0.3
GKP	Gorka Klasztor	149.70	338	*e*PKP	PKiKP	05 08 19.5	-0.1
TPGR	Topolog	149.70	315	⇓P	PKiKP	05 08 19.7	-0.3
NEGRR	Negrea	149.72	317	⇑P	PKiKP	05 08 19.9	0.0
CFR	Carcaliu	149.73	316	⇓P	PKPbc	05 08 19.5	+0.2
PRAR	RASCA	149.73	321	⇓P	PKPbc	05 08 19.5	+0.2
GHRR		149.74	318	⇓P	PKiKP	05 08 20.2	+0.3
SCHLR	Schela	149.78	317	⇑P	PKiKP	05 08 20.2	+0.2
IZVR	Izvoarele	149.78	317	⇓P	PKiKP	05 08 20.1	0.0
TUDR		149.82	317	⇓P	PKiKP	05 08 20.9	+0.8
TIRR	Tirgusor	149.89	315	⇑P	PKPbc	05 08 19.8	+0.1
INVG	Invergeldie, C	149.90	3	*e*P	PKPbc	05 08 18.9	-0.5
EFOR	EFORIE	149.92	314	⇓P	PKiKP	05 08 20.4	0.0
TESR	Tescani	149.96	319	⇓P	PKPbc	05 08 19.4	-0.5
LAWE	Loch Awe, Argy	149.99	4	*e*P	PKPbc	05 08 19.4	-0.2
PANC	Panciu	150.00	318	⇑P	PKiKP	05 08 20.6	+0.2
MANR	Mangalia	150.06	313	⇓P	PKiKP	05 08 21.2	+0.5
TSMN	Mangalia Port-	150.06	313	⇓P	PKiKP	05 08 21.4	+0.7
BURAR	Bucovina Array	150.15	322		PKPdf	05 08 15.0	+0.5
BURAR					PKiKP	05 08 21.1	+0.1
BURAR	Bucovina Array	150.15	322	⇓P	PKiKP	05 08 21.5	+0.6
KWP	Kalwaria Pacla	150.17	328	*e*PKP	PKiKP	05 08 20.7	-0.1
ONER	Baraj Valea Uz	150.20	319	⇑P	PKiKP	05 08 21.4	+0.4
VRI	Vrincioaia	150.25	318	⇓P	PKPbc	05 08 20.4	-0.2
PLOR	Plostina	150.30	318	⇑P	PKPbc	05 08 20.2	-0.5
GRER		150.35	317	⇓P	PKiKP	05 08 22.2	+1.0
BISRR	Bisoca	150.42	318	⇑P	PKiKP	05 08 21.8	+0.3
EDI	Edinburgh	150.44	2	*e*P	PKPbc	05 08 19.9	-0.7
COVR	Voineasa-Covas	150.57	319	⇓P	PKPbc	05 08 20.9	-0.4
TURR	Turia	150.57	319	⇓P	PKiKP	05 08 21.6	-0.1
OZUR		150.69	319	⇓P	PKiKP	05 08 21.8	-0.2
MLR	Muntele Rosu	150.91	318	⇑P	PKPbc	05 08 22.3	+0.1
IDGL	Inch Island, C	150.98	7	PKPdf	PKPbc	05 08 21.9	0.0
IDGL	Inch Island, C	150.98	7	*e*P	PKPbc	05 08 21.5	-0.4
DOPR	Dopca	150.99	319	⇓P	PKiKP	05 08 22.8	+0.2
STHS	Stebnicka Huta	151.01	329	*e*PKP	PKiKP	05 08 22.5	0.0
STHS				*e*		05 08 33.4	

EKA	Eskdalemuir Ar	151.03	2	PKP	PKPdf	05 08 15.8	+0.3
	comp=Z,1.2nm,0.5s,baz=306,slow=1.6,SNR=7.1						
EKA				PKPbc	PKPbc	05 08 21.8	-0.2
	comp=Z,21nm,0.4s,baz=334,slow=2.5,SNR=173						
EKA				PKPab	PKPab	05 08 32.1	-0.5
	comp=Z,11nm,0.5s,baz=14,slow=2.6,SNR=8.5						
ESK	Eskdalemuir	151.04	2	*e*P	PKPbc	05 08 21.3	-0.7
BSEG	Bad Segeberg	151.09	345	*e*PKPbc	PKPab	05 08 32.8	-0.1
	baz=28,slow=4.4						
OJC	Ojcow	151.09	331	*e*PKP	PKPdf	05 08 15.3	-0.5
PRD	Provadia	151.12	313	*i* P	PKPbc	05 08 22.7	+0.1
NEWG	New Galloway	151.20	3	*e*P	PKPbc	05 08 21.8	-0.6
GAL1	Galloway	151.43	4	*e*P	PKPbc	05 08 21.7	-1.2
NIE	Niedzica	151.45	329	*e*PKP	PKPdf	05 08 17.2	+0.9
EDMD	Edmundbyers	151.56	1	*e*P	PKPbc	05 08 22.5	-0.7
CJR	Cluj-Napoca	151.57	322	⇓P	PKiKP	05 08 23.9	+0.1
MESR	Meseseni	151.66	323	⇑P	PKiKP	05 08 23.9	0.0
GORT1	Trebel	151.72	344	*e*PKPbc	PKPab	05 08 35.2	-0.3
	baz=28,slow=4.4						
BAND	Balkesir-Ban	151.75	307	⇑P	PKPbc	05 08 23.9	-0.2
MARR	Marisel-Cluj	151.86	323	⇓P	PKPbc	05 08 24.3	0.0
HUMR	Humele	152.00	317	⇓P	PKPbc	05 08 23.9	-0.6
DRGR		152.01	323	⇑P	PKiKP	05 08 24.7	0.0
KSP	Ksiaz	152.02	336	*e*PKP	PKPdf	05 08 17.7	+0.6
KECS	Kecovo	152.03	328	*e*PKP	PKPab	05 08 37.6	+0.5
OKC	Ostrava-Krasne	152.08	332	⇑*e*PKP	PKiKP	05 08 24.9	+0.2
OKC				*e*PKPAB	PKPab	05 08 37.3	0.0
ILTH	Belurgan, Co L	152.13	6	PKPdf	PKPbc	05 08 23.8	-0.6
STEB	Steborice	152.16	333	⇑*e*PKP	PKiKP	05 08 25.1	+0.3
STEB				*e*PKPAB	PKPab	05 08 37.5	-0.1
LOT	Lotru	152.22	320	⇑P	PKPbc	05 08 24.6	-0.5
OSTC	Ostas	152.28	335	*e*PKPDF	PKPdf	05 08 17.7	+0.2
OSTC				⇑*e*PKP	PKiKP	05 08 25.4	+0.3
CHVC	Chvalec	152.31	336	⇑*e*PKP	PKiKP	05 08 25.4	+0.2
FLTG	Flechtingen	152.34	343	*e*PKPbc	PKPab	05 08 37.3	-0.9
	baz=28,slow=4.4						
IGLA	Glengowla, Co	152.34	10	PKPdf	PKPbc	05 08 24.6	-0.3
IGLA	Glengowla, Co	152.34	10	*e*P	PKPbc	05 08 24.3	-0.6
MORC	Moravsky Berou	152.38	333	⇑P	PKiKP	05 08 25.5	+0.1
MORC	Moravsky Berou	152.38	333	*e*PKP	PKPdf	05 08 17.4	-0.3
MORC				*e*		05 08 25.4	
MORC				*e*		05 10 46.0	
UPC	Upice	152.39	335	⇑*e*PKP	PKiKP	05 08 25.6	+0.3
DPC	Dobruska-Polom	152.40	335	⇑*e*PKP	PKiKP	05 08 25.4	0.0
KRLC	Kraliky	152.45	334	⇑*e*PKP	PKiKP	05 08 25.6	+0.1
MAUC	Maruska	152.57	332	*e*PKPDF	PKPdf	05 08 18.4	+0.4
MAUC				⇑*e*PKP	PKiKP	05 08 26.4	+0.6
PVL	Pavlikeni	152.59	314	*i* P	PKiKP	05 08 26.6	+0.7
PSZ	Piszkesteto	152.70	328	⇑P	PKiKP	05 08 26.3	+0.2
CLL	Collm	152.74	340	*i* PKPdf	PKPdf	05 08 17.7	-0.4
	comp=Z,35nm,1.5s						
CLL				⇓*i*PKPbc	PKiKP	05 08 26.0	0.0
	comp=Z,97nm,1.2s						
CLL				*i* PKPab	PKPab	05 08 39.9	-0.1
	comp=Z,46nm,0.5s						
CLL				*e*pPKPbc	pPKPbc	05 10 46.0	-0.9
CLL				*i* pPKPab	pPKPab	05 10 52.4	-2.1
CLL				*e*SKPdf	SKPdf	05 10 54.0	+0.7
CLL				*e*x	x	05 11 03.0	
GZR	Gura Zlata	152.82	321	⇑P	PKPbc	05 08 26.3	-0.1
PVCC	Panska Ves	152.90	337	*e*PKPDF	PKPdf	05 08 19.2	+0.8
PVCC				*e*PKPAB	PKPab	05 08 40.9	+0.2
DSB	Dublin	152.90	6	PKPdf	PKPbc	05 08 25.8	-0.4
SIRR	Siria	152.91	323	⇑P	PKPbc	05 08 26.3	-0.2
JAVC	Velka Javorina	153.03	331	*e*PKP	PKPdf	05 08 19.4	+0.7
JAVC				*e*		05 08 28.1	
JAVC				*e*		05 08 42.8	
VRAC	Vranov	153.13	333	*e*PKP	PKPdf	05 08 18.3	-0.5
VRAC				*e*		05 08 26.7	
VRAC				*e*		05 08 41.7	
VRAC				*e*		05 10 47.0	
HERR	Herculane	153.33	320	⇓P	PKPbc	05 08 26.9	-0.5
PRA	Prague	153.33	337	⇑*e*PKP	PKiKP	05 08 27.4	+0.2
BZS	Buzias	153.34	322	⇑P	PKPbc	05 08 27.2	-0.2
PRU	Pruhonice	153.36	337	⇑*e*PKP	PKiKP	05 08 27.3	0.0
MPEP	Malo Peshtene	153.38	316	*i* P	PKPbc	05 08 27.3	-0.2
KRUC	Moravsky	153.40	333	*e*PKP	PKPdf	05 08 18.7	-0.5
KRUC				*e*		05 08 27.3	
KRUC				*e*		05 08 42.6	
KRUC				*e*		05 10 47.1	
FOEL	Foel Wylfa	153.47	2	*e*P	PKPbc	05 08 26.9	-0.5
SRO	Srobarova	153.52	329	*e*PKP	PKiKP	05 08 28.3	+0.6
SRO				*e*		05 08 44.1	
PGB	Panagyurishte	153.53	314	*i* P	PKPab	05 08 43.2	-0.6
MODS	Modra-Piesok	153.57	331	*e*PKP	PKPdf	05 08 19.8	+0.3
MODS				*e*		05 08 28.8	
MODS				*e*		05 08 44.4	
TANN	Tannenbergstha	153.69	340	*e*PKPbc	PKPab	05 08 44.1	-0.1
	baz=28,slow=4.4						
IWEX	Carrickbyrne,	153.72	7	PKPdf	PKPbc	05 08 27.0	-0.9
PLN	Plauen	153.72	340	*e*PKPbc	PKPab	05 08 44.1	-0.2
	baz=28,slow=4.4						
MDVR	Moldovita	153.79	321	⇑P	PKPbc	05 08 28.1	-0.3
BLSH	Balsha	153.92	315	*i* P	PKiKP	05 08 34.8	+6.0
ZVC	Zvikov	153.94	336	⇑*e*PKP	PKPbc	05 08 28.3	-0.2
PLNA	Plana	154.03	315	*i* P	PKiKP	05 08 30.4	+1.3
UBBA	Unterbreizbach	154.03	343	*e*PKPbc	PKPab	05 08 45.0	-0.4
	baz=28,slow=4.4						
VTS	Vitosha	154.07	315	*i* P	PKPab	05 08 47.0	+0.7
MANZ	Manzenberg	154.18	340	*e*PKPbc	PKPab	05 08 46.1	-0.2
	baz=28,slow=4.4						
MMB	Musomishta	154.27	312	*i* P	PKPbc	05 08 30.2	+0.7
ROTZ	Rotzenmuhle	154.34	339	*e*PKPbc	PKPab	05 08 47.0	+0.1
	baz=28,slow=4.4						
CKRC	Cesky Krumlov	154.41	335	*e*PKPDF	PKPdf	05 08 20.3	-0.3
CKRC				⇑*e*PKP	PKPbc	05 08 29.6	0.0
KHC	Kasperske Hory	154.42	337	*e*PKPDF	PKPdf	05 08 20.0	-0.6
KHC				⇑*e*PKP	PKPbc	05 08 29.6	0.0
KHC				*e*PKPAB	PKPab	05 08 47.4	+0.1
KHC				*e*x	x	05 09 43.9	
BOVS	Bovan	154.46	318	⇓P	PKiKP	05 08 29.7	-0.1
MORH	Mrgy, Hungar	154.50	326	⇓P	PKPbc	05 08 29.8	+0.1
RONA	Rosalia, Austr	154.51	331	*i* PKP	PKPab	05 08 48.4	+0.7
	comp=Z,51nm,1.9s						
CONA	Conrad Observa	154.51	332	*i* PKP	PKPdf	05 08 20.4	-0.5
	comp=Z,10.0nm,1.2s						
CONA				*i* PKP	PKPab	05 08 48.0	+0.1
	comp=Z,51nm,1.6s						
KKB	Krupnik	154.53	314	*i* P	PKPab	05 08 48.3	+0.2
GEC2	GERESS Array S	154.62	336	*e*PKPbc	PKPab	05 08 47.7	-0.6
	baz=28,slow=4.4						
GERES	GERESS Array B	154.62	336	PKP	PKPdf	05 08 20.6	-0.4
	comp=Z,2.5nm,0.9s,baz=49,slow=4.4,SNR=14						
GERES				PKPbc	PKiKP	05 08 30.1	0.0
	comp=Z,2.6nm,0.5s,baz=298,slow=4.2,SNR=14						
GERES				PKPab	PKPab	05 08 48.2	0.0
	comp=Z,4.3nm,0.5s,baz=48,slow=4.2,SNR=4.0						
WET	Wettzell	154.65	338	*e*PKPbc	PKPab	05 08 48.3	0.0
	baz=28,slow=4.4						
APE	Apeiranthos	154.72	302	⇑P	PKPab	05 08 47.2	-1.9
EDA	Edea	154.92	208		PKPdf	05 08 22.1	-0.3
BEBN	Eben Emael	154.99	349	*d*PKP	PKPab	05 08 49.3	-0.3
BTNL	Ternell	155.11	348	*d*PKPdf	PKPdf	05 08 21.6	+0.1
BTNL				*d*PKP	PKPab	05 08 49.3	-0.9
MEM	Membach	155.11	349	*d*PKP	PKPab	05 08 49.7	-0.4
UCC	Uccle	155.19	351	*d*PKPdf	PKPdf	05 08 21.5	0.0
ARSA	Arzberg	155.19	332	*i* PKP	PKPdf	05 08 20.9	-0.8
	comp=Z,9.0nm,1.3s						
ARSA				*i* PKP	PKPab	05 08 50.4	-0.3
	comp=Z,18nm,1.3s						
BSTI	Sart Tilman	155.21	349	*d*PKP	PKPab	05 08 50.2	-0.4
MOA	Molln	155.22	334	*i* PKP	PKPdf	05 08 21.0	-0.7
	comp=Z,11nm,1.5s						
MOA				*i* PKP	PKPab	05 08 50.8	0.0
	comp=Z,22nm,1.3s						
BHOU	Houvegnez	155.35	348	*d*PKP	PKPab	05 08 51.3	+0.1
BGES	Gesves	155.48	350	*d*PKP	PKPab	05 08 50.8	-0.9
BIOA	Bad Ischl, Aus	155.60	335	*i* PKP	PKPdf	05 08 21.3	-1.0
	comp=Z,8.1nm,1.1s						
BIOA				*i* PKP	PKPab	05 08 52.4	0.0
	comp=Z,40nm,1.3s						
BMRD	Maredsous	155.61	350	*d*PKP	PKPab	05 08 51.9	-0.4
RCHB	Rochefort	155.68	349	*d*PKP	PKPab	05 08 52.2	-0.4
DOU	Dourbes	155.84	350	*d*PKP	PKPab	05 08 52.5	-0.8
SOKA	Soboth	155.84	331	*i* PKP	PKPdf	05 08 22.3	-0.4
	comp=Z,14nm,1.4s						
SOKA				*i* PKP	PKPab	05 08 53.3	-0.3
	comp=Z,9.1nm,0.6s,SNR=6.1						
WLF	Walferdange	155.99	348	*d*PKPdf	PKPdf	05 08 22.8	+0.2
WLF				*d*PKP	PKPab	05 08 54.2	+0.2
GOLS	Golise	156.09	330	*i* PKPab	PKPab	05 08 54.2	-0.4
STU	Stuttgart	156.12	342	*e*PKPbc	PKPab	05 08 54.4	-0.2
	baz=28,slow=4.4						
LESA	Schwarzleotal	156.18	336	*i* PKP	PKPdf	05 08 22.5	-0.6
	comp=Z,16nm,1.2s						
LESA				*e*PKP	PKPab	05 08 54.7	-0.3
	comp=Z,19nm,1.0s						
OBKA	Obir	156.18	332	*i* PKP	PKPdf	05 08 23.0	-0.1
	comp=Z,2.8nm,0.7s						
OBKA				*i* PKP	PKPab	05 08 54.0	-1.1
	comp=Z,9.5nm,0.8s						
KBA	Koelnbreinsper	156.21	334	*i* PKP	PKPdf	05 08 21.3	-1.9
	comp=Z,13nm,1.5s						
KBA				*e*PKP	PKPab	05 08 53.4	-1.9
	comp=Z,8.3nm,1.1s						
MYKA	Terra Mystica	156.46	333	*e*PKP	PKPdf	05 08 24.0	+0.6
	comp=Z,2.8nm,0.6s						
MYKA				*i* PKP	PKPab	05 08 55.4	-0.8
	comp=Z,13nm,0.5s,SNR=6.9						
LJU	Ljubljana	156.56	331	*i* PKPdf	PKPdf	05 08 23.2	-0.3
LJU				*i*		05 08 34.5	
LJU				*i* PKPab	PKPab	05 08 55.9	-0.7
LJU				*e*		05 09 52.3	
PDG	Podgorica	156.63	319	⇑P	PKPab	05 08 56.9	-0.2
BOJS	Bojanci	156.65	329	*i* PKPdf	PKPdf	05 08 23.7	+0.1
BOJS				*i*		05 08 35.0	
WATA	Walderalm	156.65	337	*i* PKP	PKPdf	05 08 23.4	-0.4
	comp=Z,17nm,1.2s						
WATA				*i* PKP	PKPab	05 08 56.3	-0.9
	comp=Z,10nm,0.6s						
WTTA	Wattenberg	156.69	337	*i* PKP	PKPdf	05 08 23.4	-0.5
	comp=Z,24nm,1.6s						
WTTA				*i* PKP	PKPab	05 08 57.0	-0.4
	comp=Z,11nm,0.7s						
BFO	Black Forest	156.75	343		PKPab	05 08 57.4	0.0
RETA	Reutte	156.80	339	*i* PKP	PKPdf	05 08 24.7	+0.8
	comp=Z,4.5nm,0.8s						
RETA				*e*PKP	PKPab	05 08 58.0	+0.3
	comp=Z,17nm,0.7s,SNR=5.2						
ABTA	Abfaltersbach	156.81	335	*i* PKP	PKPdf	05 08 23.0	-0.9
	comp=Z,12nm,1.6s						
ABTA				*e*PKP	PKPab	05 08 56.9	-0.8
	comp=Z,17nm,0.9s,SNR=9.1						
SQTA	Sankt Quirin	156.88	338	*i* PKP	PKPdf	05 08 23.6	-0.5
	comp=Z,13nm,1.6s						
SQTA				*i* PKP	PKPab	05 08 58.2	+0.1
	comp=Z,19nm,0.6s,SNR=7.0						
FETA	Feichten	157.21	338	*i* PKP	PKPdf	05 08 24.2	-0.3
	comp=Z,9.6nm,1.3s						
FETA				*i* PKP	PKPab	05 08 59.7	+0.1
	comp=Z,24nm,1.2s,SNR=4.8						
FETA	Feichten	157.21	338	*i* P	PKPab	05 08 59.7	+0.1
	comp=Z,24nm,1.2s,SNR=4.8						
DAVA	Damuels	157.25	340	*i* PKP	PKPdf	05 08 24.6	0.0
	comp=Z,10nm,1.2s						
DAVA				*i* PKP	PKPab	05 08 59.7	-0.1
	comp=Z,19nm,0.6s						
DBIC	Dimbokro	160.16	170	PKP	PKPdf	05 08 28.7	0.0
	comp=Z,15nm,0.9s,baz=121,slow=1.9,SNR=11						
DBIC				PKPab	PKPab	05 09 13.8	+0.9
	comp=Z,12nm,0.8s,baz=202,slow=4.9,SNR=9.4						
BBTS	Babate	161.76	127	PKPab	PKPab	05 09 21.4	+1.2
	baz=260,slow=0.0						
PVIS	Viseu	164.73	19	*e*PKPdf	PKPdf	05 08 35.6	+3.2
PVIS				*e*PKPab	PKPab	05 09 33.3	+0.7
PSBE	So Bento	165.54	23	*e*PKPdf	PKPdf	05 08 34.4	+1.3
PCBR	Castelo Branco	165.66	19	*e*PKPdf	PKPdf	05 08 34.3	+1.1
PMRV	Marv??o	166.07	19	*e*PKPdf	PKPdf	05 08 34.7	+1.2
PARRA	Arraiolos	166.42	22	*e*PKPab	PKPab	05 09 39.8	-0.3
TORD	Torodi Ar. Bea	166.51	194	PKP	PKPdf	05 08 34.4	-0.1
	comp=Z,8.8nm,0.9s,baz=18,slow=2.6,SNR=29						
TORD				PKPab	PKPab	05 09 41.4	+0.5
	comp=Z,21nm,0.9s,baz=138,slow=3.1,SNR=21						
TORD	Torodi Ar. Bea	166.51	194		PKPab	05 09 41.6	+0.7
ESDC	Sonseca Array	166.56	8	PKP	PKPdf	05 08 34.0	+0.1
	comp=Z,2.8nm,1.0s,baz=14,slow=1.5,SNR=8.5						
ESDC				PKPab	PKPab	05 09 40.5	-0.2
	comp=Z,8.3nm,1.0s,baz=347,slow=4.3,SNR=16						
ESDC	Sonseca Array	166.56	8		PKPdf	05 08 32.3	-1.6
ESDC					PKPab	05 09 40.6	-0.2
EVO	Evora	166.69	23	*e*PKPdf	PKPdf	05 08 34.8	+0.9
KEST	Kesra	166.82	318	PKPab	PKPab	05 09 42.9	+0.7
	comp=Z,5.0nm,0.8s,baz=87,slow=0.7,SNR=8.2						
PBEJ	Beja	167.19	23	*e*PKPdf	PKPdf	05 08 35.4	+1.0
PBAR	Barrancos	167.33	20	*e*PKPdf	PKPdf	05 08 35.1	+0.6
TAM	Tamanrasset	172.68	242		PKPdf	05 08 38.9	+0.8
MD01	Midelt array s	172.93	23	PKPdf	PKPdf	05 08 38.7	+0.8
MD01					PKPab	05 10 09.7	+0.4
MD31	MD31	172.93	23	PKPdf	PKPdf	05 08 38.6	+0.7
MDT	Midelt	173.03	22	PKP	PKPdf	05 08 39.1	+1.2
	comp=Z,14nm,1.0s,baz=66,slow=1.1,SNR=10						
MDT				PKPab	PKPab	05 10 10.4	+0.7
	comp=Z,20nm,1.0s,baz=346,slow=5.2,SNR=16						

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*NEIC **19** 04:50:34.9±1.8, 26°.2S±0°.1×178°.43E±0°.08, h613^{km}±7^{km}, mb4.9/32, Error ellipse: s-maj=16.8km s-min=8.8km az=153.0*

*IDC **19** 04:50:35.5±1.6, 26°.24S×178°.36E, h622^{km}±18^{km}, mb4.2/22, mbtmp5.2/23, Error ellipse: s-maj=16.1km s-min=13.5km az=50.0*

ISC 19 04:50:33.5±0.4**, 26°.21S**±0°.07×**178°.41E**±0°.09**, h600**^{km}**, n152,** σ0^{s}**88**/154**, mb4.8**/36**, 4C-3D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	4.45	134	P	P	04 52 05.2	+3.1
	2µm,0.5s,baz=86,slow=22,SNR=4.9						
RAO	Raoul Island	4.45	134	P	P	04 52 04.7	+2.6
MSVF	Nonsavu	8.44	358	P	P	04 52 38.5	+1.2
MARNC	Mare, Loyalty	10.60	294	P	P	04 52 59.3	+1.1
PINNC	Pines Island,	10.61	287	P	P	04 53 00.6	+2.2
DZM	Mont Dzumac	11.67	288	P	P	04 53 11.3	+2.1
TOZ	Tahuroa Road	11.75	191	P	P	04 53 11.2	+1.7
CTA	Charters Tower	30.14	275	P	P	04 55 57.9	+1.3
	86nm,0.4s,baz=97,slow=10,SNR=19						
	86nm,0.4s						
CTA	Charters Tower	30.14	275	P	P	04 55 57.9	+1.3
CTAO	Charters Tower	30.14	275	P	P	04 55 57.5	+0.9
STKA	Stephens Creek	32.57	251	P	P	04 56 16.4	-0.7
	12nm,0.5s,baz=96,slow=8.7,SNR=3.3						
	12nm,0.5s						
STKA	Stephens Creek	32.57	251	P	P	04 56 16.6	-0.5
PMG	Port Moresby	33.99	294	P	P	04 56 29.7	+0.6
	49nm,0.8s,baz=108,slow=6.6,SNR=4.8						
	49nm,0.8s						
PMG	Port Moresby	33.99	294	P	P	04 56 29.8	+0.6
ASAR	Alice Springs	40.29	264	P	P	04 57 20.7	+0.2
	46nm,0.5s,baz=91,slow=7.3,SNR=14						
	46nm,0.5s						
ASAR	Alice Springs	40.29	264	P	P	04 57 20.2	-0.3
WRA	Warramunga Arr	40.87	269	P	P	04 57 24.6	-0.5
	42nm,0.5s,baz=106,slow=7.9,SNR=14						
	42nm,0.5s						
WRA	Warramunga Arr	40.87	269	P	P	04 57 24.7	-0.4
JAY	Jayapura	43.18	297	P	P	04 57 42.9	-0.3
	23nm,0.5s,baz=208,slow=8.2,SNR=6.2						
	23nm,0.5s						
JAY	Jayapura	43.18	297	P	P	04 57 42.9	-0.3
DRV	Dumont d'Urvil	46.90	200	P	P	04 58 10.0	-0.7
DRV				PcP	PcP	04 59 30.4	-0.5
FITZ	Fitzroy Crossi	49.26	268	P	P	04 58 29.4	+0.4
	49nm,0.5s,baz=145,slow=7.4,SNR=12						
	49nm,0.5s						
FITZ	Fitzroy Crossi	49.26	268	P	P	04 58 29.0	0.0
VNDA	Vanda	51.97	185	P	P	04 58 48.4	+0.7
	11nm,0.7s,baz=36,slow=1.7,SNR=3.8						
	11nm,0.7s						
VNDA	Vanda	51.97	185	P	P	04 58 48.1	+0.4
VNDA	Vanda	51.97	185	P	P	04 58 48.2	+0.5
CCD	Concordia, Ant	56.14	195	P	P	04 59 17.2	-0.1
TOLI2	Tolitoli	61.80	287	P	P	04 59 54.4	-1.3
QSPA	South Pole Qui	63.88	180	P	P	05 00 09.0	+0.7
	47nm,0.5s,baz=258,slow=0.4,SNR=6.1						
	47nm,0.5s						
QSPA	South Pole Qui	63.88	180	P	P	05 00 09.0	+0.7
QSPA				IAmb	IAmb	05 00 09.7	
	comp=Z,52nm,0.8s						
QSPA	South Pole Qui	63.88	180	P	P	05 00 08.8	+0.5
SBUM	Sibu	69.90	283		P	05 00 45.8	-0.1
JOW	Kunigami	71.50	314	P	P	05 00 54.4	-0.6
	comp=Z,17nm,0.6s,baz=11,slow=26,SNR=3.8						
	comp=Z,17nm,0.6s						
JOW	Kunigami	71.50	314	P	P	05 00 54.8	-0.2
JGF	Kuroka	72.69	326		P	05 01 01.2	-0.5
JGF				IAmb	IAmb	05 01 01.9	
	comp=Z,18nm,0.7s						
MJAR	Matsushiro Arr	73.01	327	P	P	05 01 03.0	-0.5
	comp=Z,12nm,0.7s,baz=162,slow=6.1,SNR=10						
	comp=Z,12nm,0.7s						
MJAR	Matsushiro Arr	73.01	327	P	P	05 01 03.0	-0.5
MAJO	Matsushiro	73.01	327		P	05 01 03.2	-0.3
MJB9	Matsu-Tunnel	73.01	327	P	P	05 01 04.1	+0.5
JNU	Nakatsue	74.33	320	P	P	05 01 10.2	-0.9
	comp=Z,19nm,0.7s,baz=241,slow=0.3,SNR=5.7						
	comp=Z,19nm,0.7s						
JNU	Nakatsue	74.33	320	P	P	05 01 10.3	-0.7
JNU				IAmb	IAmb	05 01 20.8	
	comp=Z,75nm,1.4s						
MYKOM	Kota Tinggi	76.97	279		P	05 01 25.9	-0.2
MYKOM				IAmb	IAmb	05 01 26.9	
	comp=Z,42nm,1.0s						
JKA	Kamikawa-asahi	77.29	334	P	P	05 01 28.7	+1.7
JKA				IAmb	IAmb	05 01 29.8	
	comp=Z,47nm,1.0s						
ASAJ	Asahikawa	77.29	334	P	P	05 01 29.1	+2.1
	comp=Z,26nm,0.8s,baz=237,slow=5.3,SNR=5.9						
	comp=Z,26nm,0.8s						
ADK	Adak	77.87	3	P	P	05 01 30.0	0.0
KSRS	Korea Array	79.11	321	P	P	05 01 37.6	+0.7
	comp=Z,8.4nm,0.7s,baz=137,slow=6.0,SNR=9.3						
	comp=Z,8.4nm,0.7s						
KSRS	Korea Array	79.11	321	P	P	05 01 37.6	+0.7
YSS	Yuzhno-Sakhali	79.62	336		P	05 01 40.5	+1.2
YSS				IAmb	IAmb	05 01 41.8	
	comp=Z,79nm,1.1s						
YSS	Yuzhno-Sakhali	79.62	336	P	P	05 01 40.8	+1.5
YSS				PcP	PcP	05 01 45.9	+1.1
SYO	Syowa Base	80.44	194	⇓*e*P	P	05 01 42.5	-0.9
SYO	Syowa Base	80.44	194	⇑*e*pP	pP	05 03 49.3	+1.4
IPM	Ipoh	80.70	280		P	05 01 45.4	-0.5
IPM				IAmb	IAmb	05 01 46.2	
	comp=Z,23nm,0.9s						
PETK	Petropavlovsk-	81.01	348	P	P	05 01 47.4	+1.0
	comp=Z,24nm,0.7s,baz=112,slow=7.3,SNR=7.9						
	comp=Z,24nm,0.7s						
PETK	Petropavlovsk-	81.01	348	P	P	05 01 46.6	+0.1
USRK	Ussuriysk Ar.	81.94	328	P	P	05 01 52.1	+0.7
	comp=Z,23nm,0.8s,baz=127,slow=2.6,SNR=9.0						
	comp=Z,23nm,0.8s						
USRK	Ussuriysk Ar.	81.94	328	P	P	05 01 52.1	+0.7
TROLL	Troll, Antarti	82.01	181	⇑P	P	05 01 50.9	-0.7
	comp=Z,2µm,0.5s						
GSI	Gunungsitoli	82.35	275		P	05 01 53.5	-0.7
GSI				IAmb	IAmb	05 01 55.4	
	comp=Z,40nm,0.7s						
SNAA	Sanae	82.39	180	⇑P	P	05 01 52.6	-0.7
	comp=Z,245nm,0.5s						
SNAA	Sanae	82.39	180	P	P	05 01 52.7	-0.7
	comp=Z,12nm,0.6s,baz=177,slow=9.7,SNR=2.3						
	comp=Z,12nm,0.6s						
SNAA	Sanae	82.39	180	P	P	05 01 52.8	-0.6
SNAA				IAmb	IAmb	05 03 11.3	
	comp=Z,60nm,1.5s						
VNA3	Neumayer Olymp	82.65	177	⇑P	P	05 01 53.9	-0.8
	comp=Z,28nm,0.7s						
VNA2	Neumayer--Watz	83.05	178	⇓P	P	05 01 55.9	-0.7
	comp=Z,14nm,0.5s,baz=184,slow=5.4						
MDJ	Mudanjiang	83.39	327		P	05 01 59.0	+0.3
MDJ				IAmb	IAmb	05 02 01.1	
	comp=Z,45nm,1.2s						
MDJ	Mudanjiang	83.39	327	P	P	05 01 59.3	+0.7
MDJ				PcP	PcP	05 02 01.9	+0.4
ENH	Enshi	86.61	306	P	P	05 02 14.5	-0.1
ENH				IAmb	IAmb	05 02 15.7	
	comp=Z,34nm,0.9s						
ENH	Enshi	86.61	306	P	P	05 02 14.4	-0.1
NVAR	Mina Array Bea	87.40	45	P	P	05 02 19.3	+0.9
	comp=Z,7.3nm,1.1s,baz=224,slow=7.1,SNR=4.0						
	comp=Z,7.3nm,1.1s						
NVAR	Mina Array Bea	87.40	45		P	05 02 18.1	-0.2
O19K	Port Alsworth	88.94	13	P	P	05 02 24.0	-0.6
CMAR	Chiang Mai Arr	88.99	291	P	P	05 02 27.4	+1.5
	comp=Z,5.4nm,0.9s,baz=133,slow=3.7,SNR=8.3						
	comp=Z,5.4nm,0.9s						
CMAR	Chiang Mai Arr	88.99	291		P	05 02 26.0	+0.1
ILSW	Iliamna Southw	89.00	14	P	P	05 02 24.8	-0.3
XAN	Xi'an	89.04	309	P	P	05 02 26.8	+0.9
SLKM	Skilak Lake	90.12	15	P	P	05 02 30.3	+0.1
L19K	White Mountain	90.66	12	P	P	05 02 32.6	0.0
SUA	Susitna One	90.85	14		P	05 02 33.5	-0.2
MTPU	Mount Pierson	91.15	48	P	P	05 02 37.1	+1.1
MTPU				IAmb	IAmb	05 02 38.8	
	comp=Z,12nm,0.9s						
J18K	Innoko River	91.51	11	P	P	05 02 36.5	0.0
J18K				IAmb	IAmb	05 02 37.7	
	comp=Z,12nm,0.8s						
HILR	Hailar Array B	91.66	326	P	P	05 02 37.0	-0.6
	comp=Z,3.1nm,0.7s,baz=148,slow=8.7,SNR=4.4						
	comp=Z,3.1nm,0.7s						
HILR	Hailar Array B	91.66	326	P	P	05 02 37.0	-0.6
L22K	Petersville	91.79	14	P	P	05 02 37.3	-0.6
L22K				IAmb	IAmb	05 02 37.9	
	comp=Z,13nm,0.8s						
TRF	Thorofare Moun	92.72	14	P	P	05 02 41.9	-0.3
TRF				IAmb	IAmb	05 02 43.1	
	comp=Z,13nm,0.7s						
LZDM	Lanzhou Array	93.70	308	P	P	05 02 48.5	+0.9
	comp=Z,1.0nm,0.3s,baz=103,slow=5.2,SNR=3.6						
	comp=Z,1.0nm,0.3s						
LZDM	Lanzhou Array	93.70	308	P	P	05 02 48.5	+0.9
ILAR	Eielson Array	94.61	14	P	P	05 02 50.0	-0.7
	comp=Z,2.0nm,0.7s,baz=222,slow=4.9,SNR=5.1						
	comp=Z,2.0nm,0.7s						
ILAR	Eielson Array	94.61	14	P	P	05 02 49.7	-0.9
MKAR	Makanchi Array	112.64	312	Pdiff	Pdif	05 04 10.7	-0.7
	comp=Z,0.8nm,0.7s,baz=80,slow=7.3,SNR=5.0						
MKAR				PKiKP	PKiKP	05 08 00.8	-1.8
	comp=Z,1.2nm,0.5s,baz=155,slow=0.7,SNR=4.1						
ZALV	Zalesovo Beam	112.80	320	PKiKP	PKiKP	05 08 01.0	-1.6
	comp=Z,1.7nm,0.6s,baz=158,slow=1.7,SNR=4.8						
KURK	Kurchatov	115.86	316		PKPdf	05 08 07.1	-1.5
KURBB	Kurchatov Arra	115.90	316	PKP	PKPdf	05 08 06.5	-2.1
	comp=Z,1.4nm,0.3s,baz=100,slow=2.0,SNR=7.2						
KBL	Kabul	119.59	296		PKPdf	05 08 15.9	-0.7
BOSA	Boshof	119.70	207	PKP	PKPdf	05 08 15.7	-1.2
	comp=Z,2.9nm,0.8s,baz=31,slow=5.9,SNR=3.2						
BOSA	Boshof	119.70	207		PKPdf	05 08 15.8	-1.2
BVAR	Borovoye Array	121.19	318	PKP	PKPdf	05 08 18.0	-0.8
	comp=Z,7.0nm,0.4s,baz=130,slow=1.6,SNR=10						
BVAR	Borovoye Array	121.19	318		PKPdf	05 08 18.0	-0.8
BORK	Borovoye	121.23	318		PKPdf	05 08 17.7	-1.2
SPITS	Spitsbergen Ar	127.30	355	PKP	PKPdf	05 08 29.7	-0.2
	comp=Z,7.6nm,0.6s,baz=82,slow=6.0,SNR=4.4						
SPITS	Spitsbergen Ar	127.30	355		PKPdf	05 08 29.7	-0.2
LSZ	Lusaka	129.61	218	PKP	PKPdf	05 08 35.2	-1.0
	comp=Z,2.2nm,0.4s,baz=110,slow=1.6,SNR=3.5						
LSZ	Lusaka	129.61	218		PKPdf	05 08 35.0	-1.2
ARCES	ARCESS Array B	133.82	347	PKhKP	PKPpre	05 08 35.5	
	comp=Z,2.6nm,0.4s,baz=64,slow=2.1,SNR=1.9						
ARCES				PKP	PKPdf	05 08 41.8	-0.6
	comp=Z,4.5nm,0.7s,baz=56,slow=1.5,SNR=4.4						
ARCES	ARCESS Array B	133.82	347		PKPdf	05 08 41.7	-0.6
FINES	FINESS Array B	140.13	340	PKhKP	PKPpre	05 08 47.0	
	comp=Z,11nm,0.4s,baz=40,slow=4.4,SNR=4.7						
KOPT	Kop Dagi	142.50	302		PKPdf	05 08 58.1	-1.4
MARD	Mardin	142.59	298		PKPdf	05 08 57.0	-2.6
NOA	NORSAR Array B	144.10	349	PKP	PKPbc	05 09 00.2	-0.8
	comp=Z,18nm,0.7s,baz=25,slow=3.4,SNR=6.9						
NOA	NORSAR Array B	144.10	349		PKPbc	05 09 00.2	-0.8
HFS	Hagfors	144.49	347	PKP	PKPdf	05 09 01.4	-0.6
	comp=Z,34nm,0.3s,baz=64,slow=3.1,SNR=18						
HFS	Hagfors	144.49	347		PKPdf	05 09 01.4	-0.6
KONO	Kongsberg	145.68	350	PKPdf	PKPdf	05 09 04.4	+0.5
AKASG	Malin Array Be	146.06	324	PKPbc	PKPdf	05 09 06.2	+1.3
	comp=Z,34nm,0.8s,baz=46,slow=3.7,SNR=13						
AKASG	Malin Array Be	146.06	324	PKPdf	PKPdf	05 09 04.8	-0.1
BALJ	Balqa	147.07	289		PKPbc	05 09 10.1	-0.3
MMAI	Mount Meron Ar	147.25	291	PKPbc	PKPbc	05 09 11.4	+0.5
	comp=Z,36nm,0.7s,baz=77,slow=3.7,SNR=11						
MMAI	Mount Meron Ar	147.25	291		PKPbc	05 09 11.4	+0.5
BRTR	Keskin Array B	147.73	304	PKPbc	PKPbc	05 09 11.4	-0.7
	comp=Z,8.8nm,0.6s,baz=134,slow=3.6,SNR=7.4						
BRTR	Keskin Array B	147.73	304		PKPbc	05 09 11.3	-0.7
CSS	Mathiatis	148.82	295		PKPbc	05 09 14.3	-0.4
EKA	Eskdalemuir Ar	150.88	2	PKPbc	PKPbc	05 09 17.9	-0.9
	comp=Z,3.2nm,0.4s,baz=347,slow=3.0,SNR=5.5						
EKA	Eskdalemuir Ar	150.88	2		PKPbc	05 09 17.9	-0.9
AKAS	Kas	151.62	298		PKPbc	05 09 20.5	-0.8
OSTC	Ostas	152.11	335	*e*pPKP	PKPbc	05 09 21.9	+0.1
DPC	Dobruska-Polom	152.24	335	*e*pPKP	PKPbc	05 09 22.2	+0.1
KRLC	Kraliky	152.28	334	*e*pPKP	PKPbc	05 09 22.0	-0.2
MAUC	Maruska	152.41	332	*e*pPKP	PKPbc	05 09 23.2	+0.7
CLL	Collm	152.58	340	*i* PKPab	PKPab	05 09 36.0	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,27nm,0.7s						
CLL	Collm	152.58	340	⇓*i*PKPbc	PKPbc	05 09 22.5	-0.2
	comp=Z,27nm,0.9s						
CKRC	Cesky Krumlov	154.25	335	*e*pPKP	PKiKP	05 09 26.4	0.0
KHC	Kasperske Hory	154.25	337	*e*pPKP	PKiKP	05 09 26.6	+0.2
GERES	GERESS Array B	154.45	336	PKPbc	PKiKP	05 09 26.6	-0.3
	comp=Z,1.8nm,0.7s,baz=46,slow=3.9,SNR=3.7						
GERES				PKPab	PKPab	05 09 44.5	0.0
	comp=Z,3.1nm,0.6s,baz=38,slow=6.8,SNR=5.8						
GERES	GERESS Array B	154.45	336		PKiKP	05 09 26.6	-0.3
GERES					PKPab	05 09 44.5	0.0
MOA	Molln	155.06	334	*e*P	PKPab	05 09 47.1	0.0
	comp=Z,7.1nm,1.1s						
BIOA	Bad Ischl, Aus	155.43	335	*i* P	PKPab	05 09 48.9	+0.2
	comp=Z,12nm,1.1s						
OBKA	Obir	156.01	332	*e*P	PKPab	05 09 51.1	-0.3
	comp=Z,8.8nm,1.0s						
KBA	Koelnbreinsper	156.05	334	*e*P	PKPab	05 09 51.3	-0.3
	comp=Z,6.1nm,0.9s						
PDG	Podgorica	156.47	319		PKPab	05 09 53.2	-0.1
WATA	Walderalm	156.48	337	*e*P	PKPab	05 09 53.6	+0.2
	comp=Z,5.5nm,0.6s						
WTTA	Wattenberg	156.53	337	*e*P	PKPab	05 09 53.3	-0.4
	comp=Z,22nm,1.6s						
BFO	Black Forest	156.59	343		PKPab	05 09 53.8	+0.1
RETA	Reutte	156.63	339	*e*P	PKPab	05 09 54.0	0.0
	comp=Z,9.9nm,0.8s						
ABTA	Abfaltersbach	156.64	335	*e*P	PKPab	05 09 53.6	-0.5
	comp=Z,17nm,1.1s						
SQTA	Sankt Quirin	156.71	338	*e*P	PKPab	05 09 54.4	0.0
	comp=Z,10nm,0.7s						
STAL	STALIGIAL	156.97	334		PKPab	05 09 54.1	-1.3
FETA	Feichten	157.05	338	*e*P	PKPab	05 09 56.3	+0.4
	comp=Z,9.1nm,1.1s						
DAVA	Damuels	157.09	340	*e*P	PKPab	05 09 55.6	-0.5
	comp=Z,5.0nm,0.5s						
SENIN	Lac Senin/Sane	158.67	343		PKPab	05 10 03.0	-0.1
ESDC	Sonseca Array	166.42	8	PKPab	PKPab	05 10 36.9	-0.2
	comp=Z,4.2nm,1.1s,baz=3.4,slow=4.7,SNR=4.4						
ESDC	Sonseca Array	166.42	8		PKPab	05 10 36.7	-0.4
TORD	Torodi Ar. Bea	166.65	194	PKP	PKPdf	05 09 30.9	-0.9
	comp=Z,2.3nm,0.9s,baz=150,slow=2.1,SNR=2.8						
MDT	Midelt	172.91	21	PKP	PKPdf	05 09 35.3	+0.2
	comp=Z,3.0nm,0.9s,baz=213,slow=4.7,SNR=2.7						
MDT	Midelt	172.91	21		PKPdf	05 09 35.3	+0.2

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*IDC **19** 04:52:31.9±5.6, 41°.86N×19°.83E, h0^{km}, mb3.5/2, mbtmp3.5/4, ML2.7/2, Error ellipse: s-maj=105.1km s-min=19.5km az=38.0*
*TIR **19** 04:52:32.4, 41°.62N×19°.53E, h37^{km}±3^{km}, Ml2.9/8*
*THE **19** 04:52:33.0, 42°N±50°×1°9E±6°6, h13^{km}, M2.7/6, MLh2.7/6*
*PDG **19** 04:52:33.6±0.1, 41°.60N×19°.53E, h10^{km}, MD3.4/5, ML3.4/13, Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*
*BEO **19** 04:52:34.9±0.6, 41°.62N×19°.60E, h17^{km}±3^{km}, ML3.2/6*
ISC 19 04:52:32.5±1.0, **41°.55N**±0°.02×**19°.53E**±0°.02, **h18**^{km}±3^{km}, **n101**, σ**1^{s}45**/140, **9C-8D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.32	128	Pg	Pg	04 52 38.7	-0.8
TIR				AML	AML	04 52 43.3	
	4.4nm,0.2s						
TIR				Sg	Sg	04 52 44.1	-0.1
TIR				AML	AML	04 52 44.2	
	3.4nm,0.2s						
ULC	Ulcinj	0.47	333	*e*Pg	Pg	04 52 41.4	-0.7
ULC				*i* Sg	Sb	04 52 48.3	-0.6
SDA	Shkodra	0.51	357	Pg	Pg	04 52 41.8	-0.9
SDA				Sg	Sb	04 52 50.4	+0.6
SDA				AML	AML	04 52 53.5	
	2.2nm,0.2s						
SDA				AML	AML	04 52 57.6	
	2.3nm,0.3s						
DRME	Dracevica, Mon	0.69	338	*e*Pg	Pb	04 52 46.3	+0.3
DRME				*e*Sg	Sn	04 52 59.5	+1.9
DRME	Dracevica, Mon	0.69	338	*e*Pg	Pg	04 52 45.5	-0.6
DRME				*e*Sg	Sb	04 52 55.6	+0.5
PHP	Peshkopia	0.70	78	Pg	Pg	04 52 44.9	-1.4
PHP				Sg	Sb	04 52 55.9	+0.5
PHP				AML	AML	04 53 01.1	
	3.1nm,0.7s						
BUM	Brajici-Budva	0.89	328	*e*Pg	Pb	04 52 49.3	-0.2
BUM				*i* Sg	Sn	04 53 02.7	+0.1
PDG	Podgorica	0.91	347	Pg	Pb	04 52 49.1	-0.6
PDG				Sg	Sn	04 53 05.1	+2.2
PDG	Podgorica	0.91	347	⇓P	Pn	04 52 50.6	+0.3
PDG				⇑S	Sg	04 53 02.1	-0.1
PDG	Podgorica	0.91	347	*e*Pg	Pb	04 52 49.6	-0.1
PDG				*e*Sg	Sn	04 53 03.5	+0.6
PDG	Podgorica	0.91	347	*e*Pg	Pb	04 52 49.3	-0.4
PDG				*i* Sg	Sn	04 53 02.9	0.0
OHR	Ohrid	1.05	114	*i* Pg	Pb	04 52 52.3	+0.1
OHR				*i* Sg	Sn	04 53 09.4	+2.8
VLO	Vlora	1.08	181	Pg	Pn	04 52 53.5	+0.8
VLO				Sg	Sg	04 53 08.6	+1.0
VLO				AML	AML	04 53 16.4	
	3.1nm,0.5s						
PVY	Plav	1.09	17	*e*Pg	Pb	04 52 52.9	-0.1
PVY	Plav	1.09	17	*e*Pg	Pb	04 52 52.9	-0.1
PVY				*i* Sg	Sn	04 53 09.2	+1.4
CEME	Cevo	1.10	336	*e*Pg	Pb	04 52 53.0	0.0
CEME				*e*Sg	Sn	04 53 09.6	+1.8
HCY	Herceg Novi	1.19	320	⇓*i*Pg	Pb	04 52 54.8	+0.3
HCY				*i* Sg	Sg	04 53 12.8	+1.8
NKME	Niksic	1.29	341	*e*Pg	Pb	04 52 56.6	+0.3
NKME				*e*Sg	Sg	04 53 16.1	+1.7
KOME	Kolasin	1.30	360	*e*Pg	Pb	04 52 56.8	+0.2
KOME				*e*Sg	Sg	04 53 14.4	-0.4
KOME	Kolasin	1.30	360	*e*Pg	Pb	04 52 56.7	+0.2
KOME				*e*Sg	Sg	04 53 16.4	+1.6
KBN	Korca	1.32	134	Sg	Sg	04 53 16.3	+0.9
KBN				AML	AML	04 53 26.7	
	1.0nm,1.0s						
KBN	Korca	1.32	134	P	Pg	04 52 58.2	+0.1
KBN				S	Sg	04 53 16.3	+0.9
BEY	Berane	1.35	11	*e*Pg	Pb	04 52 57.1	-0.2
IVA	Berane	1.35	11	*e*Pg	Pb	04 52 57.5	+0.2
IVA				*i* Sg	Sg	04 53 18.0	+1.7
TREB	Trebinje	1.46	324	*e*Pn	Pb	04 52 58.8	-0.4
TREB	Trebinje	1.46	324	*e*Pg	Pb	04 52 59.7	+0.5
SKO	Skopje	1.49	73	*i* Pg	Pb	04 53 00.5	+0.9
SKO				*i* Sg	Sg	04 53 22.0	+1.2
BRY	Bratogost	1.54	332	*e*Pg	Pb	04 53 01.1	+0.5
BRY				*i* Sg	Sg	04 53 23.8	+1.4
NEST	Nestorio	1.61	134	Pn	Pb	04 53 02.4	+0.6
NEST				Sn	Sg	04 53 25.0	+0.4
NEST				AML	AML	04 53 38.7	
	0.5nm,1.2s						
UPM	Unac-Piva	1.72	345	*e*Pn	Pb	04 53 04.0	+0.3
UPM				*i* Sn	Sg	04 53 28.0	0.0
SJES	Sjenica	1.75	11	*e*Pg	Pb	04 53 04.4	+0.3
SJES				*e*Sg	Sb	04 53 26.1	+0.4
KLINJ	Klinje	1.77	337	*e*Pn	Pb	04 53 04.0	-0.4
PLE	Pljevlja	1.79	357	*e*Pn	Pb	04 53 05.0	+0.2
PLE				*i* Sn	Sg	04 53 29.7	-0.4
STON	Ston	1.90	315	*e*Pn	Pb	04 53 07.2	+0.6
STON				*e*Sn	Sb	04 53 28.9	-1.0
NOCI	Noci	2.01	249	Sn	Sn	04 53 28.1	-2.0
SELS	Selova	2.04	35	*e*Pn	Pb	04 53 07.8	-1.3
SELS				*e*Sn	Sb	04 53 33.0	-1.2
RUDO	Rudo	2.07	357	*e*Pn	Pn	04 53 08.0	+1.6
IVAS	Ivanjica	2.08	13	*e*Pn	Pn	04 53 07.8	+1.3
IVAS				*e*Sn	Sb	04 53 34.0	-1.3
IGT	Igoumenitsa	2.10	163	Pn	Pn	04 53 08.4	+1.6
IGT				Sn	Sb	04 53 35.5	-0.4
IGT				AML	AML	04 53 58.4	
	0.3nm,0.7s						
IGT	Igoumenitsa	2.10	163	P	Pn	04 53 07.7	+0.9
BARS	Barje	2.12	52	*e*Pn	Pn	04 53 08.5	+1.5
GOCS	Kraljevo Serbi	2.25	26	*e*Pn	Pn	04 53 10.5	+1.7
GOCS				*e*Sn	Sn	04 53 37.1	+1.0
VAY	Valandovo	2.30	95	*i* Pn	Pn	04 53 11.4	+1.9
VAY				*i* Sn	Sb	04 53 41.0	-0.4
MATE	Matera	2.31	248	⇓S	Sb	04 53 43.1	+1.2
BOSS	Bosilegrad	2.39	66	*e*Pn	Pn	04 53 12.6	+1.8
GRUS	Gruza	2.50	20	*e*Pn	Pn	04 53 14.3	+2.1
DIVS	Divibare	2.57	7	*e*Pn	Pn	04 53 14.7	+1.4
BOVS	Bovan	2.63	37	⇓P	Pb	04 53 16.8	-2.4
BOVS	Bovan	2.63	37	*e*Pn	Pn	04 53 16.0	+1.9
BOVS				*e*Sn	Sn	04 53 45.6	+0.1
KKB	Krupnik	2.71	83	P	Pn	04 53 17.1	+1.9
KKB	Krupnik	2.71	83	*i* P	Pn	04 53 17.6	+2.4
TSLK	Tsoukalades, L	2.85	162	S	Sn	04 53 51.2	+0.3
ZAPS	Zavoj	2.87	52	*e*Pn	Pn	04 53 19.4	+2.0
ZAPS				*e*Sn	Sn	04 53 51.3	-0.2
LKD2	Lefkada island	2.89	162	P	Pn	04 53 18.1	+0.5
VTS	Vitosha	2.96	68	P	Pn	04 53 21.1	+2.4
VTS	Vitosha	2.96	68	*i* P	Pn	04 53 20.9	+2.2
VTS	Vitosha	2.96	68	*e*Pn	Pn	04 53 20.9	+2.2
NYDR	Nydri-Lefkada	2.97	162	P	Pn	04 53 19.1	+0.4
TEKS	Tekeris	3.00	360	*e*Pn	Pn	04 53 20.1	+0.9
ZAGS	Zajecar	3.02	40	*e*Pn	Pn	04 53 20.9	+1.6
ZAGS				*e*Sn	Sn	04 53 54.9	-0.1
PLNA	Plana	3.05	71	*i* P	Pn	04 53 22.8	+2.9
BLSH	Balsha	3.08	64	*e*P	Pb	04 53 25.1	-1.6
MMB	Musomishta	3.17	89	*e*P	Pn	04 53 24.3	+2.8
KUBS	Kucevo	3.27	28	*e*Pn	Pn	04 53 22.8	0.0
KUBS				*e*Sn	Sn	04 54 00.5	-0.7
MPEP	Malo Peshtene	3.60	58	*e*P	Pg	04 53 38.7	-2.8
MDVR	Moldovita	3.61	26	⇑P	Pn	04 53 29.2	+1.7
FRGS	Fruska Gora	3.62	3	*e*Pn	Pn	04 53 28.5	+0.9
BLY	Banja Luka	3.63	333	*e*Pn	Pn	04 53 25.9	-1.9
HERR	Herculane	3.94	31	⇓P	Pn	04 53 33.4	+1.3
HERR				⇑S	Sn	04 54 18.8	+1.0
BZS	Buzias	4.34	20	⇑P	Pn	04 53 39.0	+1.4
GZR	Gura Zlata	4.51	30	⇑P	Pn	04 53 41.9	+2.0
MORH	Mrgy, Hungar	4.71	352	*e*Pn	Pn	04 53 42.6	0.0
MORH	Mrgy, Hungar	4.71	352	⇓P	Pn	04 53 43.4	+0.8
SIRR	Siria	4.96	17	⇑P	Pn	04 53 48.0	+1.9
ARR	Arges	5.33	42	⇑P	Pn	04 53 54.0	+2.8
DRGR		5.72	22	⇓P	Pn	04 53 58.3	+1.7
SOKA	Soboth	6.07	329	*i* Pn	Pn	04 54 02.3	+1.0
	0.5nm,0.3s						
MLR	Muntele Rosu	6.11	48	⇑P	Pn	04 54 05.1	+3.2
OBKA	Obir	6.12	326	*i* Pn	Pn	04 54 03.1	+1.0
	0.4nm,0.1s						
ARSA	Arzberg	6.38	335	*i* Pn	Pn	04 54 09.9	+4.3
	1.0nm,0.3s						
RONA	Rosalia, Austr	6.57	341	*i* Pn	Pn	04 54 09.4	+1.2
	0.4nm,0.2s						
MYKA	Terra Mystica	6.62	322	*i* Pn	Pn	04 54 09.8	+1.0
	0.8nm,0.3s						
PLOR	Plostina	6.72	48	⇓P	Pn	04 54 13.1	+2.9
VRI	Vrincioaia	6.77	48	⇑P	Pn	04 54 14.3	+3.4
CONA	Conrad Observa	6.89	339	*e*Pn	Pn	04 54 14.4	+1.7
	0.5nm,0.4s						
MODS	Modra-Piesok	7.01	348	*e*SN	Sn	04 55 31.4	-2.0
KBA	Koelnbreinsper	7.09	323	*e*Pn	Pn	04 54 17.1	+1.7
	1.0nm,0.4s						
ABTA	Abfaltersbach	7.24	318	*i* Pn	Pn	04 54 19.4	+1.9
	0.3nm,0.2s						
MOA	Molln	7.33	331	*e*Pn	Pn	04 54 20.0	+1.4
	0.7nm,0.3s						
BIOA	Bad Ischl, Aus	7.44	328	*e*Pn	Pn	04 54 21.1	+1.0
	0.8nm,0.3s						
LESA	Schwarzleotal	7.65	323	*i* Pn	Pn	04 54 24.2	+1.2
	0.5nm,0.2s						
WTTA	Wattenberg	8.04	318	*i* Pn	Pn	04 54 30.6	+2.2
	0.7nm,0.2s						
WATA	Walderalm	8.11	318	*e*Pn	Pn	04 54 32.1	+2.6
	1.6nm,0.3s						
SQTA	Sankt Quirin	8.22	316	*e*Pn	Pn	04 54 32.0	+1.0
	0.6nm,0.3s						
FETA	Feichten	8.35	314	*e*Pn	Pn	04 54 34.3	+1.5
	0.4nm,0.3s						
GERES	GERESS Array B	8.38	333	Pn	Pn	04 54 33.2	+0.2
	baz=150,slow=14,SNR=2.8						
GERES				Sn	Sn	04 56 05.1	-2.0
	0.1nm,0.3s,baz=140,slow=23,SNR=5.5						
	0.3nm,0.5s						
RETA	Reutte	8.63	316	*e*Pn	Pn	04 54 36.1	-0.4
	1.0nm,0.2s						
DAVA	Damuels	8.97	313	*e*Pn	Pn	04 54 42.8	+1.5
	0.5nm,0.3s						
FINES	FINESS Array B	20.32	9	P	P	04 57 06.7	-0.6
	0.2nm,0.3s,baz=182,slow=12,SNR=5.8						
	2.0nm,0.7s						
ZALV	Zalesovo Beam	44.08	51	P	P	05 00 38.4	-0.7
	0.5nm,0.5s,baz=266,slow=8.7,SNR=2.5						
	0.5nm,0.5s						
MKAR	Makanchi Array	44.26	61	P	P	05 00 39.6	-1.2
	0.3nm,0.5s,baz=282,slow=7.4,SNR=3.9						
	0.3nm,0.5s						

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*IDC **19** 04:55:19.6±1.5, 30°.71N×142°.61E, h0^{km}, mb3.9/5, mbtmp3.9/6, ML2.8/1, Error ellipse: s-maj=41.3km s-min=30.7km az=79.0*
*NEIC **19** 04:55:21.5±1.4, 30°.9N±0°.1×142°.8E±0°.2, h10^{km}±1^{km}, mb4.7/12, Error ellipse: s-maj=26.0km s-min=18.5km az=71.0*
*NIED **19** 04:55:23.5, 30°.90N×142°.35E, h30^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.20; $M_{\theta\theta}$-0.36; $M_{\phi\phi}$-3.84; $M_{r\theta}$-3.92; $M_{\theta\phi}$1.12; $M_{\phi r}$5.79; Fault plane solution: $M_0 8.15000\times10^{14}$ NP1: ϕ_s176.00000°, δ17.00000°, λ116.00000°. NP2: ϕ_s329.00000°, δ75.00000°, λ82.00000°.*
*JMA **19** 04:55:23.5±0.2, 30°.9N±0°.9×14°2E±°, h30^{km}, MV4.1/19, NEAR TORISHIMA IS*
ISC 19 04:55:24.6±0.7, **30°.85N**±0°.06×**142°.6E**±0°.1, **h37**^{km}, **n32**, σ**1^{s}73**/33, **mb4.4**/10, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.76	186	*e*P	Pn	04 56 21.9	+1.9
CBIJ				*e*S	Sn	04 57 01.4	-1.6
BSO1	Boso 1	4.04	340	*e*P	Pn	04 56 23.6	+0.3
BSO1				*e*S	Sn	04 57 09.4	+0.3
BSO3	Boso 3	4.33	336	*e*S	Sn	04 57 15.9	-0.6
JOD2	Odawara 2	5.31	327	*e*P	Pn	04 56 41.8	+0.5
JHO	Hitachi	6.00	344	*e*P	Pn	04 56 51.6	+0.9
JRY	Ryogami san	6.02	330	*e*S	Sn	04 57 57.7	-1.1
JAG	Ashikaga	6.16	335	*e*S	Sn	04 57 58.3	-3.8
JFK	Kawauchi	6.66	348	*e*S	Sn	04 58 10.2	-4.3
MJAR	Matsushiro Arr	6.77	328	Pn	Pn	04 57 01.4	+0.1
	0.2nm,0.3s,baz=149,slow=11,SNR=8.7						
	3.4nm,0.7s						
MJAR	Matsushiro Arr	6.77	328		Pn	04 57 00.7	-0.6
JMK	Ichinoseki	8.17	352	*e*S	Sn	04 58 47.9	-3.5
TWG	Pinlang	20.82	253	P	Pn	05 00 05.6	+0.2
TWG				IAmb	IAmb	05 00 11.3	
	comp=Z,44nm,0.6s						
MKAR	Makanchi Array	48.46	307	P	P	05 04 04.1	+0.7
	comp=Z,0.6nm,0.8s,baz=93,slow=6.2,SNR=2.5						
	comp=Z,0.6nm,0.8s						
MKAR	Makanchi Array	48.46	307	P	P	05 04 04.5	+1.1
E19K	Redstone River	50.51	26	P	P	05 04 16.2	-2.5
E19K				IAmb	IAmb	05 04 17.7	
	comp=Z,7.4nm,1.3s						
KURK	Kurchatov	50.70	312	P	P	05 04 20.8	+0.6
KURBB	Kurchatov Arra	50.76	312	P	P	05 04 21.1	+0.4
	comp=Z,0.7nm,0.2s,baz=86,slow=7.7,SNR=4.2						
	comp=Z,0.7nm,0.2s						
WB0	Warramunga Arr	50.95	190	P	P	05 04 20.0	-2.4
WB0				IAmb	IAmb	05 04 28.9	
	comp=Z,7.4nm,1.1s						
WRA	Warramunga Arr	51.13	190	P	P	05 04 23.1	-0.7
	comp=Z,1.1nm,0.7s,baz=7.3,slow=7.4,SNR=2.3						
	comp=Z,1.1nm,0.7s						
WRA	Warramunga Arr	51.13	190	P	P	05 04 21.6	-2.2
ILAR	Eielson Array	54.25	30	P	P	05 04 47.7	+1.3
	comp=Z,0.9nm,0.9s,baz=249,slow=5.3,SNR=3.0						
	comp=Z,0.9nm,0.9s						
M24K	Tolsona, Glenn	54.50	33	P	P	05 04 48.3	0.0
E27K	Coleen River	56.48	26	P	P	05 05 03.0	+0.6
E27K				IAmb	IAmb	05 05 20.6	
	comp=Z,5.8nm,1.4s						
KKAR	Karatay Array	57.26	304	P	P	05 05 09.6	+1.2
H29M	Whitestone	57.79	28	P	P	05 05 11.5	-0.2
H29M				IAmb	IAmb	05 05 12.0	
	comp=Z,12nm,1.4s						
CHGR	Chuyangaron	59.41	299	P	P	05 05 23.7	+0.2
CHGR				IAmb	IAmb	05 05 25.2	
	comp=Z,8.1nm,1.1s						
ARTI	Arti	61.84	321	P	P	05 05 41.5	+1.9
	comp=Z,2.3nm,0.7s,baz=53,slow=5.4,SNR=3.8						
	comp=Z,2.3nm,0.7s						
AB31	Akbulak array	62.80	313	P	P	05 05 47.3	+1.1
ABKAR	Akbulak array	62.80	313	P	P	05 05 47.1	+0.9
LHI	Lord Howe Isla	63.96	164	P	P	05 05 54.6	+0.7
BLKN	Baker Lake	74.68	23	P	P	05 07 01.8	+1.9
VA05	Santo Domingo	150.98	105		PKPdf	05 15 06.3	-1.4

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*SCB **19** 05:00:47.6±1.4, 17°.25S×69°.56W, h163^{km}±15^{km}, MB4.3, ML2.4/2, Error ellipse: s-maj=13.6km s-min=8.3km az=2.0*
*GUC **19** 05:00:48.6±0.8, 17°.41S×69°.64W, h168^{km}±5^{km}, ML3.1*
ISC 19 05:00:45.4±2.5, **17°.21S**±0°.09×**69°.7W**±0°.1, **h181**^{km}±15^{km}, **n25**, σ**1^{s}40**/34, **2C, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB18	Visviri	0.42	155	*e*P	Pn	05 01 12.2	+1.5
PB16	IPOC Station P	1.13	173	*e*P	Pn	05 01 16.3	+1.4
PB16				*e*S	Sn	05 01 37.5	-0.3
PB16	IPOC Station P	1.13	173	Pg	Pn	05 01 16.4	+1.5
BBOD	La Paz, Gloria	1.17	61	Pg	Pn	05 01 15.8	+0.7
AP01	Chacalluta	1.33	209	*e*P	Pn	05 01 16.5	+0.6
AP01				*e*S	Sn	05 01 38.8	-0.7
AP01				IAML		05 01 39.2	
	comp=N,382nm,0.2s						
BBOJ	La Paz, Jacaqu	1.43	81	Pg	Pn	05 01 18.3	+1.0
PB12	IPOC Station P	1.54	204	*e*P	Pn	05 01 18.8	+0.9
PB12				*e*S	Sn	05 01 41.5	-1.6
PB12				IAML		05 01 43.1	
	comp=N,147nm,0.2s						
BBOE	La Paz, Chanca	1.65	77	Pg	Pn	05 01 20.8	+1.2
LPAZ	La Paz	1.73	58	Pg	Pn	05 01 21.2	+0.8
LPAZ				⇑Sg	Sn	05 01 45.7	-1.6
LPAZ				IAML		05 01 45.7	
	comp=N,7.9nm,0.5s						
BBOB	La Paz, Bander	1.81	54	Pg	Pn	05 01 22.0	+0.9
SOEO	Opoqueri	2.16	129	Pg	Pn	05 01 25.7	+0.9
GO01	Chusmiza	2.49	170	*e*P	Pn	05 01 30.0	+1.4
GO01				*e*S	Sn	05 02 02.0	-0.2
GO01				IAML		05 02 08.5	
	comp=N,127nm,0.1s						
GO01	Chusmiza	2.49	170	Pg	Pn	05 01 29.9	+1.4
PB11	IPOC Station P	2.54	180	⇑*e*P	Pn	05 01 29.8	+1.0
PB11				*e*S	Sn	05 02 01.0	-1.7
PB11				IAML		05 02 03.2	
	comp=N,47nm,0.5s						
PB11	IPOC Station P	2.54	180	Pg	Pn	05 01 29.8	+1.0
PB11				Sg	Sn	05 02 01.6	-1.1
PB11				IAML		05 02 04.1	
	comp=N,45nm,0.2s						
PB08	IPOC Station P	2.96	171	*e*P	Pn	05 01 35.6	+1.6
PB08				*e*S	Sn	05 02 10.6	-1.4
PB08				IAML		05 02 14.0	
	comp=E,51nm,0.1s						
PB08	IPOC Station P	2.96	171	Pg	Pn	05 01 35.6	+1.6
TA01	Diego Aracena	3.38	188	*e*P	Pn	05 01 39.2	+0.5
TA01				IAML		05 02 18.4	
	comp=N,22nm,0.3s						
SOET	ToroToro	3.78	104	Pg	Pn	05 01 44.4	+0.3
PB01	IPOC Station P	3.82	178	*e*P	Pn	05 01 45.3	+0.9
PB01				*e*S	Sn	05 02 27.1	-3.5
PB01	IPOC Station P	3.82	178	Pg	Pn	05 01 45.8	+1.4
PB02	IPOC Station P	4.10	183	Pg	Pn	05 01 49.5	+1.6
PB09	IPOC Station P	4.58	175	Pg	Pn	05 01 55.5	+1.3
PB06	IPOC Station P	5.47	179	Pg	Pn	05 02 06.4	+0.7
MOCB	Mochara	5.54	137	Pg	Pn	05 02 08.6	+1.8

IDC 19 05:12:50.1±32.0, **27°.98S**×**177°.32W**, **h0**^{km}, **mb4.0**/3, **mbtmp4.0**/3, **MS3.7**/12, **Error ellipse: s-maj=581.4km s-min=37.9km az=77.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.37	202	Pn	Pg	05 13 16.3	-0.2
	637nm,0.3s,baz=64,slow=16,SNR=17						
RAO				Sn	Sg	05 13 27.2	-7.1
	1µm,0.3s,baz=24,slow=20,SNR=6.4						
RAO				LR	LR	05 13 50.8	
	comp=Z,3µm,18.8s,baz=78,slow=44						
URZ	Urewera	11.26	203	LR	LR	05 18 24.2	
	comp=Z,529nm,20.8s,baz=26,slow=30						
DZM	Mont Dzumac	15.84	288	LR	LR	05 21 31.5	
	comp=Z,484nm,18.0s,baz=177,slow=33						
DZM	Mont Dzumac	15.84	288	*e*P	P	05 16 43.7	+5.1
	105nm,26.9s						
DZM				*e*LR	LR	05 20 21.1	
	589nm,23.2s						
RAR	Rarotonga	17.31	71	LR	LR	05 22 46.8	
	comp=Z,149nm,18.4s,baz=263,slow=34						
CTA	Charters Tower	34.09	275	LR	LR	05 31 39.3	
	comp=Z,221nm,18.8s,baz=55,slow=33						
STKA	Stephens Creek	35.67	254	P	P	05 19 51.7	+1.6
	3.3nm,0.9s,baz=100,slow=12,SNR=3.7						
	3.3nm,0.9s						
PMG	Port Moresby	38.18	292	LR	LR	05 33 14.9	
	comp=Z,129nm,19.4s,baz=154,slow=32						
ASAR	Alice Springs	43.89	264	P	P	05 20 57.3	-1.4
	1.0nm,0.9s,baz=98,slow=8.9,SNR=6.4						
	1.0nm,0.9s						
WRA	Warramunga Arr	44.66	269	P	P	05 21 04.9	0.0
	2.2nm,0.8s,baz=110,slow=7.7,SNR=5.2						
	2.2nm,0.8s						
JAY	Jayapura	47.37	295	LR	LR	05 38 34.9	
	comp=Z,72nm,21.1s,baz=208,slow=33						
BATI	Baumata	57.97	275	LR	LR	05 47 29.7	
	comp=Z,249nm,19.2s,baz=113,slow=36						
RPN	Rapa Nui	59.53	107	LR	LR	05 43 33.1	
	comp=Z,31nm,20.6s,baz=352,slow=31						
KAPI	Kappang	63.80	279	LR	LR	05 51 35.6	
	comp=Z,10nm,19.1s,baz=72,slow=36						
MAW	Mawson	74.78	200	LR	LR	05 56 07.5	
	comp=Z,43nm,18.7s,baz=63,slow=35						
PFO	Pinyon Flats O	84.13	47	LR	LR	05 56 10.9	
	comp=Z,40nm,19.3s,baz=250,slow=31						
PDAR	Pinedale Array	93.97	43	LR	LR	06 06 51.3	
	comp=Z,21nm,18.7s,baz=33,slow=34						

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*NEIC **19** 05:19:30.6±1.0, 23°.8N±0°.1×127°.05E±0°.10, h10^{km}±1^{km}, mb4.5/11, Error ellipse: s-maj=19.8km s-min=11.1km az=142.0*
*IDC **19** 05:19:37.1±0.8, 25°.01N×126°.27E, h0^{km}, mb4.1/20, mbtmp4.1/21, ML3.4/1, MS3.5/9, Error ellipse: s-maj=22.1km s-min=17.4km az=72.0*
*NIED **19** 05:19:40.9, 24°.97N×126°.38E, h81^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.57; $M_{\theta\theta}$3.73; $M_{\phi\phi}$-2.16; $M_{r\theta}$0.54; $M_{\theta\phi}$3.76; $M_{\phi r}$-0.03; Fault plane solution: $M_0 4.81000\times10^{15}$ NP1: ϕ_s19.00000°, δ83.00000°, λ-178.00000°. NP2: ϕ_s289.00000°, δ88.00000°, λ-7.00000°.*
*JMA **19** 05:19:40.9±0.2, 25°N±2°×12°6E±°, h81^{km}±3^{km}, MD4.6/20, MV4.2/20, NEAR MIYAKOJIMA ISLAND*
ISC 19 05:19:42.0±0.7, **24°.91N**±0°.08×**126°.47E**±0°.06, **h38**^{km}±2^{km}, **n101**, σ**1^{s}40**/78, **mb4.2**/28, **MS3.8**/7, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	Gusukube	0.98	262	P	Pn	05 19 59.3	+0.1
JOGS				S	Sn	05 20 12.8	+1.0
JOGS	Gusukube	0.98	262	A	A	05 19 59.3	
	comp=N,54nm,1.5s,comp=E,33nm,1.1s						
JMJ2	Miyako jima3	1.05	261	P	Pn	05 19 59.9	-0.3
JMJ2				*e*S	Sn	05 20 14.3	+0.7
JMJ2	Miyako jima3	1.05	261	A	A	05 19 59.9	
	comp=N,38nm,2.1s,comp=E,29nm,1.3s						
JMJ	Miyako jima 2	1.07	265	P	Pn	05 20 00.3	-0.2
JMJ	Miyako jima 2	1.07	265	P	Sb	05 20 15.8	+1.7
JIKM	Ikemajima	1.11	271	P	Pn	05 20 00.6	-0.4
JIKM	Ikemajima	1.11	271	A	A	05 20 00.6	
	comp=N,36nm,2.9s,comp=E,33nm,2.2s						
JIRB	Irabujima	1.18	266	P	Pn	05 20 01.4	-0.6
JIRB				*e*S	Sn	05 20 17.6	+0.8
JIRB	Irabujima	1.18	266	A	A	05 20 01.4	
	comp=N,26nm,3.0s,comp=E,30nm,1.2s						
JKE	Kume jima 2	1.44	11	P	Pn	05 20 05.3	-0.3
JKE				*e*S	Sn	05 20 23.7	+0.6
JKE	Kume jima 2	1.44	11	A	A	05 20 05.3	
	comp=N,7.0nm,2.6s,comp=E,15nm,4.4s						
JTJ	Tarama	1.63	261	P	Pn	05 20 07.4	-0.7
JTJ	Tarama	1.63	261	A	A	05 20 07.4	
	comp=N,16nm,1.1s,comp=E,21nm,3.0s						
JJT3	Tamagusuku3	1.71	44	A	A	05 20 09.5	
	comp=N,21nm,1.7s,comp=E,22nm,2.7s						
JAGN	Aguni-jima	1.81	22	*e*S	Sn	05 20 31.3	-1.0
JAGN	Aguni-jima	1.81	22	A	A	05 20 31.3	
	comp=N,11nm,1.4s,comp=E,11nm,1.5s						
JISG	Ishigakijimahi	1.99	261	P	Pn	05 20 12.6	-0.5
JNTH	Nagotoyohara	2.13	41	*e*P	Pn	05 20 14.6	-0.3
JIJ	Ishigaki jima	2.19	256	P	Pn	05 20 14.8	-1.0
JIJ	Ishigaki jima	2.19	256	A	A	05 20 14.8	

	comp=N,6.0nm,4.2s,comp=E,6.0nm,1.0s						
JKRS	Kuro-shima	2.34	254	*e*P	Pn	05 20 18.0	+0.1
JKRS	Kuro-shima	2.34	254	A	A	05 20 18.0	
	comp=N,23nm,2.3s,comp=E,21nm,2.1s						
JIH	Iheya	2.51	32	A	A	05 20 20.3	
	comp=N,4.0nm,2.1s,comp=E,5.0nm,3.7s						
JOW	Kunigami	2.51	40	Pn	Pn	05 20 21.1	+0.8
	comp=E,14nm,0.3s,baz=130,slow=23,SNR=45						
JOW				Sn	Sn	05 21 02.0	+12
	comp=E,82nm,0.3s,baz=145,slow=22,SNR=5.6						
	comp=E,29nm,0.3s						
JOW	Kunigami	2.51	40		Pn	05 20 20.9	+0.7
JOW	Kunigami	2.51	40	P	Pn	05 20 21.5	+1.2
JOW	Kunigami	2.51	40	P	Pn	05 20 21.1	+0.8
JOW	Kunigami	2.51	40	A	A	05 20 21.1	
	comp=N,5.0nm,4.7s,comp=E,5.0nm,2.8s						
IRIF	Iriomote-Funau	2.56	258	A	A	05 20 20.2	
	comp=N,8.0nm,5.3s,comp=E,7.0nm,1.9s						
HATJ	Hateruma jima	2.57	251	A	A	05 20 20.5	
	comp=N,16nm,1.8s,comp=E,14nm,4.0s						
JYRO	Yoronjima	2.76	40	P	Pn	05 20 24.5	+0.8
JOKE	Okinoerabujima	3.09	37	*e*P	Pn	05 20 28.7	+0.6
YOJ	Yonaguni jima	3.18	263		Pn	05 20 28.3	-1.1
YOJ	Yonaguni jima	3.18	263	P	Pn	05 20 28.0	-1.4
YOJ	Yonaguni jima	3.18	263	*e*P	Pn	05 20 29.2	-0.2
JYNG	Yonagunijimaku	3.24	263	*e*P	Pn	05 20 27.8	-2.4
JTK	Tokunoshima	3.63	37	*e*P	Pn	05 20 35.5	-0.1
NACB	Ninganchiao	4.50	262		Pn	05 20 45.9	-1.8
NACB	Ninganchiao	4.50	262	P	Pn	05 20 45.8	-1.8
TATO	Taipei	4.52	272	Pn	Pn	05 20 48.1	+0.1
YHNB	Yeheng	4.64	268		Pn	05 20 49.6	+0.1
YULB	Yu-li	4.96	253		Pn	05 20 51.2	-2.8
YULB	Yu-li	4.96	253	P	Pn	05 20 50.9	-3.1
TWGBT	Beinan	5.36	248	P	Pn	05 20 56.3	-3.1
TWG	Pinlang	5.36	248		Pn	05 20 56.3	-3.1
TPUB	Ta-pu	5.57	255		Pn	05 21 01.5	-0.9
TPUB	Ta-pu	5.57	255	P	Pn	05 21 00.7	-1.7
KNMB	Chin-men Tao	7.37	268	Pn	Pn	05 21 25.7	-1.3
JNU	Nakatsue	9.05	24	Pn	Pn	05 21 46.1	-3.9
INCN	Inchon	12.54	1	Pn	Pn	05 22 36.8	-1.0
KSRS	Korea Array	12.57	5	Pn	Pn	05 22 43.5	+5.4
	comp=E,0.1nm,0.3s,baz=171,slow=16,SNR=2.5						
KS19	Wonju Array Si	12.61	5	Pn	Pn	05 22 39.2	+0.5
JCJ	Chichijima	14.30	78	LR	LR	05 27 18.1	
	comp=E,61nm,19.5s,baz=298,slow=32						
JCJ	Chichijima	14.30	78	Pn	Pn	05 22 43.7	-18
MJAR	Matsushiro Arr	15.36	38	Pn	P	05 23 22.0	+1.9
	comp=E,0.1nm,0.3s,baz=190,slow=12,SNR=1.8						
DAV	Davao City (W)	17.76	183	LR	LR	05 30 25.3	
	comp=E,84nm,21.6s,baz=317,slow=36						
YSS	Yuzhno-Sakhali	25.55	26	P	P	05 25 04.7	-2.4
YSS				IAmb	IAmb	05 25 11.0	
	comp=Z,13nm,0.9s						
CMAR	Chiang Mai Arr	26.34	261	P	P	05 25 14.2	-0.5
	comp=Z,0.9nm,0.3s,baz=70,slow=10.0,SNR=6.9						
	comp=Z,0.9nm,0.3s						
SONM	Songino Array	27.86	330	P	P	05 25 26.7	-1.3
	comp=Z,3.2nm,0.4s,baz=146,slow=11,SNR=19						
SONM				LR	LR	05 37 56.1	
	comp=Z,107nm,19.5s,baz=100,slow=40						
	comp=Z,3.2nm,0.4s						
SONM	Songino Array	27.86	330	P	P	05 25 30.4	+2.3
KULM	Kulim	31.54	236	P	P	05 25 51.0	-10
KULM				IAmb	IAmb	05 26 05.4	
	comp=Z,7.6nm,1.0s						
MYKOM	Kota Tinggi	31.70	227		P	05 25 49.4	-13
GSI	Gunungsitoli	36.46	234	P	P	05 26 33.3	-10
GSI				IAmb	IAmb	05 26 41.6	
	comp=Z,7.2nm,0.9s						
PETK	Petropavlovsk-	36.65	32	LR	LR	05 42 45.9	
	comp=Z,56nm,18.4s,baz=173,slow=38						
MKAR	Makanchi Array	41.26	313	P	P	05 27 22.0	-1.4
	comp=Z,1.3nm,0.4s,baz=100,slow=9.5,SNR=23						
	comp=Z,1.3nm,0.4s						
MKAR	Makanchi Array	41.26	313	P	P	05 27 22.3	-1.1
MAKZ	Makanchi	41.47	313		P	05 27 24.3	-0.9
ZAA0	Zalesovo Array	42.36	324	IAmb	IAmb	05 27 31.2	
	comp=Z,2.8nm,0.6s						
ZAA0					P	05 27 31.3	-1.0
ZALV	Zalesovo Beam	42.36	324	P	P	05 27 30.6	-1.7
	comp=Z,2.8nm,0.5s,baz=117,slow=8.6,SNR=9.9						
	comp=Z,2.8nm,0.5s						
ZALV	Zalesovo Beam	42.36	324	P	P	05 27 31.1	-1.2
KURK	Kurchatov	44.71	318		P	05 27 50.4	-0.9
KURK				IAmb	IAmb	05 27 50.5	
	comp=Z,6.2nm,0.4s						
KURBB	Kurchatov Arra	44.74	318	P	P	05 27 50.3	-1.1
	comp=Z,2.8nm,0.4s,baz=108,slow=9.9,SNR=11						
	comp=Z,2.8nm,0.4s						
WRA	Warramunga Arr	45.23	170	P	P	05 27 56.8	+1.1
	comp=Z,1.7nm,0.8s,baz=349,slow=8.8,SNR=6.2						
	comp=Z,1.7nm,0.8s						
AAK	Ala-Archa	45.94	306	LR	LR	05 50 31.4	
	comp=Z,95nm,18.5s,baz=86,slow=41						
TATA	Tatamba Isabel	46.37	131	S	S	05 34 48.6	-1.3
CTA	Charters Tower	48.69	155	LR	LR	05 47 36.2	
	comp=Z,34nm,21.9s,baz=22,slow=34						
ASAR	Alice Springs	48.82	171	P	P	05 28 25.4	+1.7
	comp=Z,0.4nm,0.4s,baz=352,slow=7.0,SNR=8.6						
	comp=Z,0.4nm,0.4s						
NRIK	Noril'sk	50.03	343	P	P	05 28 32.7	+0.3
	comp=Z,1.1nm,0.3s,baz=117,slow=12,SNR=3.6						
	comp=Z,1.1nm,0.3s						
BVAR	Borovoye Array	50.22	319	P	P	05 28 33.2	-0.8
	comp=Z,0.9nm,0.3s,baz=99,slow=9.6,SNR=6.5						
	comp=Z,0.9nm,0.3s						
BORK	Borovoye	50.26	319	P	P	05 28 33.6	-0.8
BORK				IAmb	IAmb	05 28 35.3	
	comp=Z,4.1nm,1.1s						
EIDS	Eidsvold	55.36	153		P	05 28 55.0	-17
AB31	Akbulak array	56.40	314		P	05 29 19.7	+0.2
AB31				IAmb	IAmb	05 29 21.1	
	comp=Z,2.7nm,0.8s						
ABKAR	Akbulak array	56.40	314		P	05 29 19.3	-0.2
AKTO	Aktyubinsk	57.64	315	P	P	05 29 28.3	0.0
	comp=Z,1.6nm,0.7s,baz=67,slow=5.7,SNR=4.1						
	comp=Z,1.6nm,0.7s						
ILAR	Eielson Array	66.34	28	P	P	05 30 26.9	+0.4
	comp=Z,0.3nm,0.5s,baz=259,slow=4.7,SNR=7.4						
	comp=Z,0.3nm,0.5s						
KBZ	Khabaz	68.77	309	P	P	05 30 42.0	-0.1
	comp=Z,1.1nm,0.6s,baz=50,slow=4.7,SNR=4.7						
KBZ				LR	LR	06 03 12.0	
	comp=Z,52nm,19.9s,baz=42,slow=38						
	comp=Z,1.1nm,0.6s						
SPITS	Spitsbergen Ar	69.79	348	P	P	05 30 47.6	-0.3
	comp=Z,9.4nm,1.0s,baz=90,slow=1.4,SNR=4.1						
	comp=Z,9.4nm,1.0s						
ARCES	ARCESS Array B	70.65	339	P	P	05 30 52.6	-0.7
	comp=Z,1.4nm,0.8s,baz=69,slow=6.6,SNR=4.3						
	comp=Z,1.4nm,0.8s						
INK	Inuvik	70.72	23	P	P	05 30 57.8	+4.1
	comp=Z,2.0nm,0.5s,baz=283,slow=9.2,SNR=11						
FINES	FINESS Array B	73.23	330	P	P	05 31 08.6	-0.2
	comp=Z,2.0nm,0.7s,baz=64,slow=6.7,SNR=13						
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	73.23	330	P	P	05 31 08.8	-0.1
AKASG	Malin Array Be	75.50	319	P	P	05 31 21.8	-0.5
	comp=Z,0.3nm,0.3s,baz=66,slow=6.3,SNR=2.0						
	comp=Z,0.3nm,0.3s						
BRTR	Keskin Array B	76.58	308	P	P	05 31 28.9	+0.1
	comp=Z,0.4nm,0.4s,baz=46,slow=5.3,SNR=3.7						
	comp=Z,0.4nm,0.4s						
BRTR	Keskin Array B	76.58	308	P	P	05 31 27.1	-1.8
HFS	Hagfors	79.24	332	P	P	05 31 43.0	0.0
	comp=Z,0.7nm,0.4s,baz=80,slow=10,SNR=1.6						
	comp=Z,0.7nm,0.4s						
NB2	NORSAR Subarra	79.79	333	P	P	05 31 46.0	0.0
	comp=Z,1.4nm,0.8s,baz=59,slow=5.6						
NOA	NORSAR Array B	79.79	333	P	P	05 31 46.0	0.0
	comp=Z,1.0nm,0.9s,baz=52,slow=6.0,SNR=2.3						
	comp=Z,1.0nm,0.9s						
YKA	Yellowknife Ar	80.38	24	P	P	05 31 50.5	+1.3
	comp=Z,0.7nm,0.5s,baz=322,slow=9.5,SNR=9.4						
	comp=Z,0.7nm,0.5s						
GERES	GERESS Array B	85.28	322	LR	LR	06 15 45.7	
	comp=Z,72nm,19.3s,baz=38,slow=40						
EKA	Eskdalemuir Ar	89.27	334	LR	LR	06 19 24.9	
	comp=Z,45nm,21.2s,baz=48,slow=40						

IDC 19 05:29:46.2±2.9**, 53°.65N×86°.93E, h0^{km}, mbtmp2.9**/2**, ML2.4**/2**, Error ellipse: s-maj=27.8km s-min=15.8km az=65.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.29	284	I	I	05 36 50.0	
	baz=102,slow=346,SNR=6.5						
ZALV	Zalesovo Beam	1.29	284	Pg	Pg	05 30 09.6	-1.3
	0.8nm,0.3s,baz=107,slow=17,SNR=10.0						
ZALV				Lg	Lg	05 30 28.0	
	1.0nm,0.3s,baz=107,slow=29,SNR=12						
KURBB	Kurchatov Arra	6.00	243	Pn	Pn	05 31 17.3	+1.2
	baz=60,slow=13,SNR=1.1						
	0.4nm,0.2s						
MKAR	Makanchi Array	7.48	205	Pn	Pn	05 31 37.7	+1.2
	0.2nm,0.3s,baz=26,slow=13,SNR=5.4						
	0.2nm,0.3s						

*IDC **19** 05:34:01.6±1.6, 8°.35S×159°.05E, h0^{km}, mb4.1/7, mbtmp4.0/7, Error ellipse: s-maj=61.5km s-min=22.1km az=123.0*

*NEIC **19** 05:34:17.3±0.6, 8°.5S±0°.2×158°.7E±0°.1, h111^{km}±12^{km}, mb4.1/16, Error ellipse: s-maj=29.7km s-min=8.5km az=215.0*

ISC 19 05:34:15.1±0.7**, 8°.45S**±0°.10×**158°.87E**±0°.09**, h111^{km}, n37, σ1^{s}39**/31**, mb4.0**/13**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TATA	Tatamba Isabel	0.93	86	P	Pn	05 34 32.9	-2.7
SAVO	Savo Central	1.16	127	P	Pn	05 34 35.0	-3.1
ALEG	Aligegeo Malai	1.83	100	P	Pn	05 34 45.1	-0.9
NGOA	Tingoa Renbel	3.30	159	P	Pn	05 35 02.9	-2.2
HURO	Huro Makira	3.60	124	P	Pn	05 35 08.3	-0.8
LUES	Luesalemba Tem	7.29	108	P	Pn	05 35 56.7	-2.2
SANVU	Saraoutou	10.71	131	Pn	Pn	05 36 48.5	+3.1
COEN	Coen	16.33	249	P	Pn	05 37 57.0	-1.1
EIDS	Eidsvold	18.39	203		P	05 38 21.5	0.0
EIDS				IAmb	IAmb	05 38 42.7	
	comp=Z,16nm,1.4s						
ARMA	Armidale	22.88	196	P	P	05 39 09.9	+0.5
ARMA				IAmb	IAmb	05 39 12.0	
	comp=Z,7.7nm,0.7s						
INKA	Innaminka	25.72	219	P	P	05 39 34.7	-0.5
INKA				IAmb	IAmb	05 39 38.4	
	comp=Z,2.9nm,0.6s						
WR8	Warramunga Arr	26.20	242	P	P	05 39 39.3	-0.4
WR8				IAmb	IAmb	05 39 41.4	
	comp=Z,9.9nm,1.2s						
WB0	Warramunga Arr	26.23	242	P	P	05 39 39.2	-0.7
WB0				IAmb	IAmb	05 39 40.9	
	comp=Z,7.4nm,1.2s						
WRAB	Tennant Creek	26.32	242	P	P	05 39 40.4	-0.4
WRA	Warramunga Arr	26.34	242	P	P	05 39 41.3	+0.4
	comp=Z,2.3nm,0.8s,baz=67,slow=9.3,SNR=8.7						
	comp=Z,2.3nm,0.8s						
WRA	Warramunga Arr	26.34	242	P	P	05 39 40.2	-0.8
H11S3	WAKE ISLAND Hy	27.86	16	T	T	06 08 47.5	
	baz=195,slow=76,SNR=33						
H11S2	WAKE ISLAND Hy	27.87	16	T	T	06 08 45.4	
	baz=195,slow=76,SNR=39						
H11S1	WAKE ISLAND Hy	27.88	16	T	T	06 08 46.3	
	baz=195,slow=76,SNR=37						
AS31	Alice Springs	28.28	235	P	P	05 39 58.5	+0.2
ASAR	Alice Springs	28.29	235	P	P	05 39 58.2	-0.1
	comp=Z,1.6nm,0.5s,baz=63,slow=9.4,SNR=20						
	comp=Z,1.6nm,0.5s						
ASAR	Alice Springs	28.29	235	P	P	05 39 57.7	-0.6
STKA	Stephens Creek	28.31	212	P	P	05 39 59.6	+1.2
	comp=Z,2.1nm,0.5s,baz=28,slow=17,SNR=5.9						
	comp=Z,2.1nm,0.5s						
STKA	Stephens Creek	28.31	212	P	P	05 39 59.8	+1.4
H11N1	WAKE ISLAND Hy	29.08	16	T	T	06 10 18.1	
	baz=196,slow=76,SNR=100						
H11N3	WAKE ISLAND Hy	29.09	16	T	T	06 10 18.4	
	baz=196,slow=76,SNR=9.7						
H11N2	WAKE ISLAND Hy	29.10	16	T	T	06 10 18.7	
	baz=196,slow=76,SNR=75						
TOO	Toolangi	31.42	201	P	P	05 40 25.8	0.0
TOO				IAmb	IAmb	05 40 50.0	
	comp=Z,4.8nm,1.1s						
BBOO	Buckleboo	32.15	218	P	P	05 40 31.5	-0.8
FITZ	Fitzroy Crossi	33.68	250	P	P	05 40 45.0	-0.7
FITZ				IAmb	IAmb	05 41 20.5	
	comp=Z,4.1nm,1.4s						
FORT	Forrest	36.33	228	P	P	05 41 08.3	0.0
VNDA	Vanda	69.06	179	P	P	05 45 10.1	+1.6
SONM	Songino Array	72.66	326	P	P	05 45 32.3	+1.5
	comp=Z,2.3nm,0.7s,baz=133,slow=6.8,SNR=12						
	comp=Z,2.3nm,0.7s						
SONM	Songino Array	72.66	326	P	P	05 45 32.4	+1.6
SONM				IAmb	IAmb	05 45 33.2	
	comp=Z,2.5nm,0.8s						
ILAR	Eielson Array	83.35	20	P	P	05 46 28.9	-0.5
	comp=Z,0.2nm,0.5s,baz=246,slow=5.1,SNR=8.6						
	comp=Z,0.2nm,0.5s						
MKAR	Makanchi Array	87.04	318	P	P	05 46 48.3	+0.1
	comp=Z,0.6nm,0.8s,baz=89,slow=5.1,SNR=2.7						
	comp=Z,0.6nm,0.8s						
YKA	Yellowknife Ar	95.83	28	P	P	05 47 29.0	+0.4
	comp=Z,0.2nm,0.7s,baz=266,slow=4.7,SNR=4.4						
	comp=Z,0.2nm,0.7s						

*SOME **19** 05:39:17.6, 41°.07N×83°.52E, h10^{km}*

*NNC **19** 05:39:21.3±0.9, 41°.18N×83°.41E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=7.9km s-min=5.5km az=1.0*

ISC 19 05:39:20.6±2.5**, 41°.2N**±0°.1×**83°.40E**±0°.07**, h10^{km}, n35, σ2^{s}92**/46**, 7C-1D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	3.18	316	Pg	Pb	05 40 18.8	+1.6
	15nm,0.4s						
KTMS				Lg	Lg	05 41 03.0	
	33nm,0.5s						
KTMS	Ketmen	3.18	316	*e*P	Pb	05 40 18.8	+1.6
	15nm,0.4s						
KTMS				*e*S	Sg	05 41 03.0	+0.4
	33nm,0.5s						
SHLS	Shalkode	3.51	305	Pg	Pb	05 40 20.7	-2.2
	29nm,0.3s						
SHLS				Lg	Lg	05 41 06.3	
	209nm,0.5s						
SHLS	Shalkode	3.51	305	*e*P	Pb	05 40 20.7	-2.2
	29nm,0.3s						
SHLS				*e*S	Sb	05 41 06.3	+0.7
	209nm,0.5s						
PDGK	Podgornoye	3.59	307	⇑Pn	Pn	05 40 19.1	+2.7
	3.1nm,0.5s						
PDGK				⇑Pg	Pg	05 40 26.8	-2.5
	15nm,0.8s						
PDGK				⇓Lg	Lg	05 41 16.0	
	65nm,0.5s						
UZB	Uzynbulak	3.79	302	Pg	Pb	05 40 29.9	+2.3
	6.0nm,0.4s						
UZB				Lg	Lg	05 41 22.2	
	90nm,0.4s						
UZB	Uzynbulak	3.79	302	*e*P	Pb	05 40 29.9	+2.3
	6.0nm,0.4s						
UZB				*e*S	Sg	05 41 22.2	0.0
	90nm,0.4s						
SATY	Saty	4.15	298	Pg	Pg	05 40 36.9	-3.1
	5.9nm,0.3s						
SATY				Lg	Lg	05 41 34.3	
	65nm,0.5s						
KPKS	Kokpek	4.16	304	Pg	Pg	05 40 36.9	-3.3
	0.7nm,0.4s						
KPKS				Lg	Lg	05 41 33.5	
	48nm,0.5s						
KPKS	Kokpek	4.16	304	*e*P	Pg	05 40 36.9	-3.3
	0.7nm,0.4s						
KPKS				*e*S	Sg	05 41 33.5	-0.6
	48nm,0.5s						
KNOS	Konyrlen	4.42	317	Pg	Pg	05 40 42.1	-3.1
	17nm,0.5s						
KNOS				Lg	Lg	05 41 42.7	
	23nm,0.5s						
KURS	Kuram	4.49	302	Pg	Pg	05 40 43.2	-3.5
	13nm,1.1s						
KURS				Lg	Lg	05 41 44.8	
	25nm,0.8s						
BLB	Baldybastay	4.63	310	Pg	Pg	05 40 45.9	-3.4
	20nm,0.5s						
BLB				Lg	Lg	05 41 49.6	
	27nm,0.3s						
KAPS	Kapalarasan	5.03	325	Pg	Pg	05 40 53.4	-3.5
	12nm,0.4s						
KAPS				Lg	Lg	05 42 02.3	
	24nm,0.2s						
ARXS	Arharly	5.08	308	Pg	Pg	05 40 53.8	-4.2
	4.0nm,0.5s						
ARXS				Lg	Lg	05 42 03.1	
	28nm,0.4s						
ARXS	Arharly	5.08	308	*e*P	Pg	05 40 53.8	-4.2
	4.0nm,0.5s						
ARXS				*e*S	Sg	05 42 03.1	-0.6
	28nm,0.4s						
KOTS	Kotyrbulak	5.09	295	Pg	Pg	05 40 54.1	-3.9
	6.4nm,0.3s						
KOTS				Lg	Lg	05 42 03.5	
	57nm,0.6s						
KOTS	Kotyrbulak	5.09	295	*e*P	Pg	05 40 54.1	-3.9
	6.4nm,0.3s						
KOTS				*e*S	Sg	05 42 03.5	-0.5
	57nm,0.6s						
MDOK	Medeo	5.11	295	Pg	Pg	05 40 54.2	-4.1
	4.2nm,0.4s						
MDOK				Lg	Lg	05 42 03.8	
	21nm,0.6s						
TNSS	Tian-Shan	5.13	293	Pg	Pg	05 40 56.3	-2.6
	2.0nm,0.4s						
TNSS				Lg	Lg	05 42 07.4	
	4.9nm,0.7s						
TNSS	Tian-Shan	5.13	293	*e*P	Pg	05 40 56.3	-2.6
	2.0nm,0.4s						
TNSS				*e*S	Sg	05 42 07.4	+1.9
	4.9nm,0.7s						
TDK	Taldyqorghan	5.26	318	Pg	Pg	05 40 59.0	-2.4
	35nm,0.3s						
TDK				Lg	Lg	05 42 12.1	
	41nm,0.4s						
TDK	Taldyqorghan	5.26	318	*e*P	Pg	05 40 59.0	-2.4
	35nm,0.3s						
TDK				*e*S	Sg	05 42 12.1	+2.6
	41nm,0.4s						
IZV	Izvestkoviy	5.37	292	Pg	Pg	05 41 00.3	-3.1
	4.4nm,0.4s						
IZV				Lg	Lg	05 42 14.1	
	28nm,0.6s						
IZV	Izvestkoviy	5.37	292	*e*P	Pg	05 41 00.3	-3.1
	4.4nm,0.4s						
IZV				*e*S	Sg	05 42 14.1	+1.2
	28nm,0.6s						
MTBS	Maitube	5.52	293	Pg	Pg	05 41 02.9	-3.4
	3.1nm,0.3s						
MTBS				Lg	Lg	05 42 18.8	
	13nm,0.5s						
MTBS	Maitube	5.52	293	*e*P	Pg	05 41 02.9	-3.4
	3.1nm,0.3s						
MTBS				*e*S	Sg	05 42 18.8	+0.9
	13nm,0.5s						
KTBS	Karatobe	5.56	299	Pg	Pg	05 41 04.3	-2.7
	3.6nm,0.5s						
KTBS				Lg	Lg	05 42 21.0	
	0.5nm,0.2s						
MK31	Makanchi Array	5.63	352	⇑Pn	Pn	05 40 47.5	+3.1
	0.2nm,0.3s,baz=191,slow=14,SNR=8.7						
MK31				⇑Pg	Pg	05 41 03.9	-4.5
	4.6nm,0.7s,baz=166,slow=14,SNR=9.6						
MK31				⇑Lg	Lg	05 42 20.7	
	17nm,0.7s						
MAKZ	Makanchi	5.69	350	⇑Lg	Lg	05 42 20.7	
	2.2nm,0.5s						
DGS	Degeres	6.02	292	Pg	Pg	05 41 12.4	-3.3
	3.9nm,0.6s						
DGS				Lg	Lg	05 42 34.8	
	19nm,0.8s						
KRBS	Karabastau	6.23	296	Pg	Pg	05 41 16.5	-3.4
	1.6nm,0.3s						
KRBS				Lg	Lg	05 42 42.0	
	8.2nm,0.6s						
ZSN	Zaisan	6.32	9	Pg	Pg	05 41 18.1	-3.5
	6.4nm,0.3s						
ZSN				Lg	Lg	05 42 44.8	
	17nm,0.6s						
ZSN	Zaisan	6.32	9	*e*P	Pg	05 41 18.1	-3.5
	6.4nm,0.3s						
ZSN				*e*S	Sg	05 42 44.8	+1.4
	17nm,0.6s						
AAK	Ala-Archa	6.79	285	⇑Lg	Lg	05 42 58.0	
	4.2nm,0.6s						

RSNC 19 05:49:05.5±0.8**, 6°N**±4°×**8°0W**±°**, h0^{km}, M2.8, mb4.5, ML2.4, MLv3.4, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOLC	Bahia Solano	2.33	74	P	Pn	05 49 43.2	-2.0
PIZC	Pizarro, Choco	2.37	105	P	Pn	05 49 44.4	-1.2
PTAC	Punta Ardita,	2.42	49	P	Pn	05 49 45.3	-1.0
PLMC	San Jos del P	3.43	101	P	Pn	05 49 59.7	-0.6
BCIP	Isla Barro Col	3.58	357	P	Pn	05 50 02.7	+0.4
YOTC	Yotoco, Valle	3.66	115	P	Pn	05 50 02.5	-1.0
JAMC	Jamundi, Valle	3.79	128	P	Pn	05 50 03.8	-1.6
POPC	Popayan, Colom	4.23	135	P	Pn	05 50 09.7	-1.8
BBAC	Balboa, Cauca	4.27	146	P	Pn	05 50 10.2	-1.8
ORTC	Ortega, Tolima	4.70	110	P	Pn	05 50 19.5	+1.7
GCUF	Volcan Galeras	4.89	152	P	Pn	05 50 22.0	+1.1
PRAC	Prado	5.10	111	P	Pn	05 50 24.8	+1.5

*CNRM **19** 05:51:01.3, 36°.70N×7°.64W, h11^{km}, ML2.6*

*MDD **19** 05:51:04.5±0.4, 36°.82N×7°.64W, h28^{km}±3^{km}, mb_Lg3.1/30, Error ellipse: s-maj=2.8km s-min=2.3km az=49.0*

*SFS **19** 05:51:04.6, 36°.80N×7°.64W, h30^{km}, ML3.1/16, ML3.3/16, MLv3.0/16*

*IGIL **19** 05:51:05.2, 36°.82N×7°.64W, h26^{km}, ML2.4*

*INMG **19** 05:51:05.2±1.4, 36°.83N×7°.61W, h24^{km}±2^{km}, ML2.3, Error ellipse: s-maj=2.9km s-min=1.7km az=53.0, #DIST_RANGE: LOCAL #IPMA_REGION: Golfo de Cadiz*

ISC 19 05:51:02.4±1.1**, 36°.80N**±0°.03×**7°.58W**±0°.02**, h26^{km}**±12^{km}**, n88, σ1^{s}49**/151**, 7D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EXAYA	Ayamonte	0.44	18	Pg	Pn	05 51 13.8	+0.8
EXAYA				Sg	Sn	05 51 20.0	-0.2
PBDV	Barranco-do-Ve	0.52	327	S	Sn	05 51 21.7	-0.6
PBDV				P	Pn	05 51 14.8	+0.7
PBDV	Barranco-do-Ve	0.52	327	⇓*e*Pg	Pn	05 51 14.9	+0.7
PBDV				*e*Sg	Sn	05 51 22.0	-0.3
PBDV				*i* IAML		05 51 22.7	
PBDV				*i* IAML		05 51 22.8	
PBDV				*i* IAML		05 51 23.0	
PVAQ	Vaqueiros	0.61	349	⇓*i*Pg	Pn	05 51 16.2	+0.8
PVAQ				*e*Sg	Sn	05 51 24.2	-0.1
PVAQ				*i* IAML		05 51 24.6	
PVAQ				*i* IAML		05 51 24.9	
PVAQ				*i* IAML		05 51 25.1	
PVAQ	Vaqueiros	0.61	349	P	Pb	05 51 14.8	+0.3
PVAQ	Vaqueiros	0.61	349	S	Sn	05 51 24.9	+0.5
EXHU	Huelva	0.70	47	Sg	Sn	05 51 27.6	+1.0
EGRO	El Granado	0.73	6	S	Sn	05 51 27.6	+0.2
EGRO				P	Pn	05 51 17.9	+0.8
EGRO	El Granado	0.73	6	⇓Pg	Pn	05 51 18.2	+1.1
EGRO				⇓Pg	Pn	05 51 18.2	+1.1
EGRO				Sg	Sn	05 51 27.5	0.0
EGRO				Sg	Sb	05 51 27.7	+1.5
EGRO				*i* IVmb_Lg		05 51 28.9	
PCVE	Castro Verde	0.91	336	P	Pn	05 51 20.4	+1.0
PCVE				S	Sb	05 51 31.5	+0.3
PCVE	Castro Verde	0.91	336	*e*P	Pn	05 51 20.4	+1.0
PCVE				*e*S	Sn	05 51 32.0	+0.3
PCVE				*i* IAML		05 51 32.2	
PCVE				*i* IAML		05 51 32.2	
PCVE				*i* IAML		05 51 32.8	
MORF	Marmelete	1.00	301	*e*P	Pn	05 51 21.1	+0.4
MORF				*e*S	Sb	05 51 32.9	-0.8
MORF				IAML		05 51 34.5	
	comp=N,166nm,0.2s						
MORF	Marmelete	1.00	301	*e*P	Pn	05 51 21.1	+0.4
MORF				*e*S	Sb	05 51 33.0	-0.8
MORF				*i* IAML		05 51 33.7	
MORF				*i* IAML		05 51 34.2	
MORF				*i* IAML		05 51 34.5	
PFVI	Vila Bisbo	1.05	289	P	Pn	05 51 21.7	+0.2
PFVI				S	Sb	05 51 33.8	-1.6
PFVI	Vila Bisbo	1.05	289	*e*P	Pb	05 51 22.1	+0.1
PFVI				*e*S	Sb	05 51 34.3	-1.1
PFVI				*i* IAML		05 51 34.5	
PFVI				*i* IAML		05 51 35.1	

PFVI				*i* IAML		05 51 39.6	
PFVI	Vila Bisbo	1.05	289	P	Pn	05 51 21.2	-0.3
PFVI	Vila Bisbo	1.05	289	S	Sn	05 51 36.5	+1.2
MESJ	Messejana	1.16	334	*e*P	Pb	05 51 23.8	+0.1
MESJ				*e*S	Sn	05 51 37.4	-0.4
MESJ				IAML		05 51 40.9	
	comp=N,29nm,0.1s						
MESJ	Messejana	1.16	334	⇓*i*P	Pb	05 51 23.8	+0.1
MESJ				*e*S	Sn	05 51 37.4	-0.4
MESJ				*i* IAML		05 51 39.3	
MESJ				*i* IAML		05 51 43.3	
MESJ				*i* IAML		05 51 43.5	
PTEO	Sao Teotonio	1.18	309	*e*P	Pb	05 51 24.1	0.0
PTEO				*e*S	Sn	05 51 38.1	-0.3
PTEO				*i* IAML		05 51 38.6	
PTEO				*i* IAML		05 51 38.6	
PTEO				*i* IAML		05 51 38.8	
EMIN	Mina Concepcio	1.20	37	P	Pn	05 51 24.3	+0.8
EMIN				S	Sn	05 51 38.5	-0.5
EMIN	Mina Concepcio	1.20	37	Pn	Pn	05 51 24.5	+1.0
EMIN				Sn	Sn	05 51 37.3	-1.7
EMIN				*i* IVmb_Lg		05 51 43.6	
PBEJ	Beja	1.24	349	*e*P	Pn	05 51 25.0	+1.0
PBEJ				*e*S	Sn	05 51 39.6	-0.4
ESPR	Espera	1.38	87	P	Pn	05 51 27.5	+1.6
ESPR				S	Sn	05 51 44.6	+1.2
ESPR	Espera	1.38	87	Pn	Pb	05 51 27.8	+0.2
ESPR				Sn	Sn	05 51 44.9	+1.6
ESPR				*i* IVmb_Lg		05 51 45.9	
PBAR	Barrancos	1.44	17	P	Pn	05 51 27.7	+1.0
PBAR				S	Sn	05 51 45.9	+1.2
PBAR	Barrancos	1.44	17	*e*Pn	Pn	05 51 27.7	+1.0
PBAR				*e*Sn	Sn	05 51 45.5	+0.8
PBAR				*i* IAML		05 51 55.9	
PBAR				*i* IAML		05 51 56.7	
PBAR				*i* IAML		05 51 57.9	
EJIF	Jimena Fronter	1.73	101	Pn	Pn	05 51 32.8	+2.0
EJIF				Sn	Sn	05 51 53.4	+1.4
EVO	Evora	1.76	349	P	Pn	05 51 32.3	+1.1
EVO	Evora	1.76	349	⇓*e*Pn	Pn	05 51 32.3	+1.1
EVO				*e*Sn	Sn	05 51 53.2	+0.5
EVO				*i* IAML		05 52 03.3	
EVO				*i* IAML		05 52 03.9	
MOE	Montemor	1.82	341	*e*Pn	Pn	05 51 33.2	+1.1
MOE				*e*Sn	Sn	05 51 54.8	+0.5
MOE				*i* IAML		05 52 05.9	
MOE				*i* IAML		05 52 06.1	
MOE				*i* IAML		05 52 10.2	
EBAD	Badajoz	2.00	13	P	Pn	05 51 34.7	+0.2
EBAD				S	Sn	05 51 57.9	-0.8
EBAD	Badajoz	2.00	13	Pn	Pn	05 51 35.1	+0.6
EBAD				Sn	Sn	05 51 58.3	-0.4
EBAD				*i* IVmb_Lg		05 51 59.5	
PARRA	Arraiolos	2.04	350	*e*Pn	Pn	05 51 36.1	+1.1
PARRA				*e*Sn	Sn	05 51 59.9	+0.2
PARRA				*i* IAML		05 52 01.6	
PARRA				*e*Sg	Sb	05 52 08.3	+4.5
PARRA				*i* IAML		05 52 11.0	
PARRA				*i* IAML		05 52 12.5	
ECAB	El Cabril	2.14	53	P	Pn	05 51 37.3	+0.9
ECAB	El Cabril	2.14	53	Pn	Pn	05 51 37.8	+1.4
ECAB				Sn	Sn	05 52 00.7	-1.3
ECAB				*i* IVmb_Lg		05 52 01.7	
EXCBR	El Cabril	2.14	53	Sn	Sn	05 52 01.3	-0.8
EMIJ	Mijas	2.27	95	P	Pn	05 51 39.4	+1.3
EMIJ	Mijas	2.27	95	Pn	Pn	05 51 39.8	+1.7
EMIJ				Pn	Pb	05 51 40.1	-2.5
EMIJ				Sn	Sn	05 52 05.8	+0.6
EMIJ				Sn	Sb	05 52 05.9	-4.3
EMIJ				*i* IVmb_Lg		05 52 09.0	
PMTG	Montargil	2.32	347	*e*Pn	Pn	05 51 39.9	+1.0
PMTG				*e*Sn	Sn	05 52 06.4	-0.2
PMTG				*i* IAML		05 52 07.3	
PMTG				*i* IAML		05 52 07.7	
PMTG				*i* IAML		05 52 19.3	
PMAFR	Mafra	2.54	328	P	Pn	05 51 42.6	+0.7
PMAFR				S	Sn	05 52 12.0	+0.1
PMAFR	Mafra	2.54	328	*e*Pn	Pn	05 51 43.2	+1.3
PMAFR				*e*Sn	Sn	05 52 12.5	+0.6
PMAFR				*i* IAML		05 52 17.6	
PMAFR				*i* IAML		05 52 20.6	
PMRV	Marv??o	2.63	3	*e*Pn	Pn	05 51 44.0	+0.9
PMRV				*e*Sn	Sn	05 52 13.2	-0.9
PMRV				*i* IAML		05 52 14.3	
PMRV				*i* IAML		05 52 14.7	
EADA	Adamuz	2.75	59	P	Pn	05 51 46.1	+1.3
EADA				S	Sn	05 52 17.0	-0.2
EADA	Adamuz	2.75	59	Pn	Pn	05 51 46.1	+1.3
EADA				Sn	Sn	05 52 17.1	0.0
EADA				*i* IVmb_Lg		05 52 18.8	
EGOR	Sierra Gorda,	2.79	83	P	Pn	05 51 48.5	+3.0
EGOR				S	Sn	05 52 19.8	+1.4
EGOR	Sierra Gorda,	2.79	83	Pn	Pn	05 51 47.3	+1.8
EGOR				Sn	Sn	05 52 18.4	0.0
EGOR				*i* IVmb_Lg		05 52 27.9	
PSARD	Sardoal	2.83	351	⇓*e*Pn	Pn	05 51 47.1	+1.2
PSARD				*e*Sn	Sn	05 52 18.6	-0.6
PSARD				*i* IAML		05 52 19.5	
PSARD				*i* IAML		05 52 19.7	
PSARD				*i* IAML		05 52 20.2	
PSBE	So Bento	2.87	341	*e*Pn	Pn	05 51 47.9	+1.4
PSBE				*e*Sn	Sn	05 52 20.4	+0.2
ELGU	Los Guajares,	3.17	88	P	Pn	05 51 53.2	+2.6
ELGU	Los Guajares,	3.17	88	Pn	Pn	05 51 53.3	+2.7
ELGU				Sn	Sn	05 52 27.1	-0.5
ELGU				*i* IVmb_Lg		05 52 33.3	
CIBOR	Castaar de Ib	3.30	30	Pn	Pn	05 51 53.0	+0.7
CIBOR				Sn	Sn	05 52 29.2	-1.5
PCAS	Casmilo, Conde	3.33	348	*e*Pn	Pn	05 51 54.1	+1.4
PCAS				*e*Sn	Sn	05 52 30.7	-0.7
EQTA	Presa de Quent	3.33	82	P	Pn	05 51 55.3	+2.4
EQTA				S	Sn	05 52 32.2	+0.5
EQUE	Quentar	3.33	82	Pn	Pn	05 51 54.9	+2.0
EQUE				Sn	Sn	05 52 31.7	-0.1
EQUE				*i* IVmb_Lg		05 52 38.4	
PALE	Palemas	3.35	117	P	Pn	05 51 53.3	+0.3
PALE	Palemas	3.35	117	S	Sn	05 52 33.9	+2.0
AVE	Averroes	3.50	178	P	Pn	05 51 55.5	+0.4
AVE				S	Sn	05 52 34.7	-0.9
MTE	Manteigas	3.59	0	*e*Pn	Pn	05 51 57.3	+0.9
PSIM	Granatula de C	3.63	55	Pn	Pn	05 51 58.2	+1.2
PSIM				Sn	Sn	05 52 37.9	-1.2
EQES	Quesada	3.73	73	Pn	Pn	05 51 59.7	+1.4
EQES				Sn	Sn	05 52 40.7	-0.8
EQES				*i* IVmb_Lg		05 52 43.9	
PAB	San Pablo	3.74	42	Pn	Pn	05 51 59.8	+1.4
PAB				Sn	Sn	05 52 38.8	-2.9
PAB				Sn	Sb	05 52 38.8	-14
PAB				*i* IVmb_Lg		05 52 40.1	
IFR	Ifrane	3.84	148	P	Pn	05 52 01.4	+1.4
IFR				S	Sn	05 52 41.3	-3.1
ESDC	Sonseca Array	4.04	44	Sn	Sn	05 52 45.3	-3.7
ESDC				*i* IVmb_Lg		05 53 08.7	
ESBB	Sonseca Array	4.04	44	Sn	Sn	05 52 46.1	-2.9
MVO	Moncorvo	4.38	5	*e*Pn	Pn	05 52 08.0	+0.7
MVO				*e*Sn	Sn	05 52 54.2	-3.1
MVO				*i* IAML		05 52 56.8	
MD31	MD31	4.56	149	P	Pn	05 52 10.3	+0.6
MD31	MD31	4.56	149	S	Sn	05 53 02.8	+0.9
POLO	Lamas de Olo	4.57	358	*e*Pn	Pn	05 52 10.7	+0.8
POLO				*e*Sn	Sn	05 53 00.3	-1.9
MDT	Midelt	4.67	148	P	Pn	05 52 11.9	+0.6
MDT	Midelt	4.67	148	S	Sn	05 53 05.6	+1.0
GUD	Guadarrama	4.68	34	Pn	Pn	05 52 13.0	+1.6
GUD				Sn	Sn	05 53 02.7	-2.2
GUD				*i* IVmb_Lg		05 53 13.1	
ELOB	Lobios	5.07	356	Pn	Pn	05 52 17.5	+0.7
ELOB				Sn	Sn	05 53 11.0	-3.5
ELOB				*i* IVmb_Lg		05 53 14.8	
ETOB	Tobarra	5.12	67	P	Pn	05 52 17.8	+0.4
ETOB				S	Sn	05 53 12.6	-3.1
ETOB	Tobarra	5.12	67	Pn	Pn	05 52 18.0	+0.6
ETOB				Sn	Sn	05 53 13.5	-2.2
ETOB				*i* IVmb_Lg		05 53 17.9	
TISM	Timmit	5.16	169	P	Pn	05 52 17.0	-0.8
TISM	Timmit	5.16	169	S	Sn	05 53 17.2	+0.7
ECAL	Calabor	5.17	7	P	Pn	05 52 18.5	+0.4
ECAL	Calabor	5.17	7	Pn	Pn	05 52 19.2	+1.0
ECAL				Sn	Sn	05 53 14.1	-2.9
ECAL				*i* IVmb_Lg		05 54 03.4	
PGAV	Gavieira, Arco	5.18	354	*e*Pn	Pn	05 52 19.0	+0.6
OUK	Oukaimeden	5.59	183	P	Pn	05 52 23.0	-1.1
OUK	Oukaimeden	5.59	183	S	Sn	05 53 27.4	-0.2
TIO	Tiouine	5.87	177	S	Sn	05 53 29.6	-4.6
TIO	Tiouine	5.87	177	P	Pn	05 52 27.0	-0.7
TIO	Tiouine	5.87	177	S	Sn	05 53 34.6	+0.4
OUZM	OUZ	5.92	173	P	Pn	05 52 29.8	+1.3
OUZM	OUZ	5.92	173	S	Sn	05 53 37.6	+2.1
EAGO	Agolada(Pontev	6.01	356	Pn	Pn	05 52 30.5	+1.0
EAGO				Sn	Sn	05 53 33.4	-4.0
EAGO				*i* IVmb_Lg		05 53 55.8	

VIE ***19*** *05:53:49.3±1.1, 51°.55N×16°.40E, h0*^{km}*, mb2.6/1, ml2.4/1, Error ellipse: s-maj=7.5km s-min=6.6km az=162.0   66 km NW of Wroclaw Suspected Mining induced.*

PRU ***19*** *05:53:52.1, 51°.49N×16°.15E, h0*^{km}

ISC 19 05:53:48.9±1.5**, 51°.61N**±0°.07×**16°.21E**±0°.04**, h0**^{km}**, n20, σ1ˢ30**/36**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.77	176	*e*Pg	Pg	05 54 04.0	+0.5
KSP				*e*Sg	Sg	05 54 13.6	+0.1
CHVC	Chvalec	1.03	186	*e*PG	Pg	05 54 09.0	+0.5
CHVC				*e*SG	Sg	05 54 21.8	0.0
	comp=Z,20nm,0.6s						
OSTC	Ostas	1.05	180	*e*PG	Pb	05 54 09.6	-0.4
OSTC				*e*SG	Sg	05 54 22.0	-0.7
UPC	Upice	1.11	187	*e*PG	Pg	05 54 10.2	+0.1
UPC				*e*SG	Sg	05 54 24.1	-0.4
	comp=Z,27nm,0.6s						
DPC	Dobruska-Polom	1.26	177	*e*PG	Pg	05 54 12.9	-0.1
DPC				*e*SG	Sg	05 54 28.4	-1.0
PVCC	Panska Ves	1.50	224	*e*PG	Pn	05 54 17.3	+0.3
PVCC				*e*SG	Sn	05 54 36.6	-0.6
	comp=Z,36nm,0.5s						
KRLC	Kraliky	1.58	166	*e*PG	Pn	05 54 17.8	-0.3
KRLC				*e*SG	Sn	05 54 38.5	-0.8
PRU	Pruhonice	1.94	214	*e*PG	Pb	05 54 24.8	-0.2
PRU				*e*SG	Sb	05 54 49.6	-0.1
STEB	Steborice	1.95	149	*e*PG	Pg	05 54 25.6	-0.6
STEB				*e*SG	Sb	05 54 50.3	+0.3
HSKC	Hora Svate Kat	2.02	241	*e*PG	Pb	05 54 26.4	0.0
HSKC				*e*SG	Sb	05 54 51.8	-0.3
MORC	Moravsky Berou	2.02	155	*e*PN	Pn	05 54 23.5	-0.7
MORC				*e*SG	Sn	05 54 49.7	-0.5
CLL	Collm	2.03	263	*i* Pg	Pg	05 54 27.7	0.0
CLL				*i* x	x	05 54 29.8	
CLL				*e*Sg	Sb	05 54 53.0	+0.6
	comp=Z,12nm,0.8s						
OKC	Ostrava-Krasne	2.16	144	*e*SG	Sg	05 54 57.9	-0.3
	comp=Z,12nm,0.5s						
VRAC	Vranov	2.31	174	*e*PN	Pn	05 54 28.1	-0.2
VRAC				*e*SG	Sb	05 55 00.1	-0.5
MAUC	Maruska	2.47	155	*e*SG	Sg	05 55 08.4	+0.2
KRUC	Moravsky	2.55	177	*e*PN	Pn	05 54 31.6	+0.1
KRUC				*e*SG	Sb	05 55 08.3	+0.9
KHC	Kasperske Hory	3.00	215	*e*PG	Pb	05 54 43.4	+0.3
KHC				*e*SG	Sb	05 55 22.6	+2.3
MODS	Modra-Piesok	3.31	168	*e*SG	Sg	05 55 41.2	+6.0
CONA	Conrad Observa	3.69	184	*i* Pn	Pn	05 54 45.7	-1.5
	comp=Z,1.0nm,0.4s						
CONA				Sg	Sg	05 55 45.9	-1.5
	comp=Z,2.3nm,0.5s						
STHS	Stebnicka Huta	3.89	122	*e*SG	Sg	05 55 55.5	+1.7

IDC ***19*** *05:56:23.7±1.0, 6°.44N×125°.20E, h0*^{km}*, mb3.9/5, mbtmp3.9/5, MS3.0/4, Error ellipse: s-maj=28.7km s-min=13.6km az=100.0*

DJA ***19*** *05:56:25.5±0.5, 7°N±5°×12°5E±°, h10*^{km}*, M4.8/8, mB5.2/6, mb5.0/6, MLv4.8/8, Mw(mB)4.5/6*

NEIC ***19*** *05:56:26.7±1.4, 6°.61N±0°.07×125°.21E±0°.10, h10*^{km}*±1*^{km}*, mb4.5/15, Error ellipse: s-maj=19.5km s-min=5.8km az=126.0*

ISC 19 05:56:25.7±0.7**, 6°.61N**±0°.07×**125°.2E**±0°.1**, h10**^{km}**, n38, σ1ˢ20**/34**, mb4.4**/12**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.57	37	Pg	Pg	05 56 37.3	+0.5
	1µm,0.3s,baz=174,slow=1.4,SNR=60						
DAV				LR	LR	05 57 07.7	
	comp=Z,2µm,20.6s,baz=318,slow=60						
DAV	Davao City (W)	0.57	37		Pg	05 56 38.0	+1.2
DAV	Davao City (W)	0.57	37	P	Pg	05 56 37.0	+0.2
DAV	Davao City (W)	0.57	37	P	Pg	05 56 34.0	-2.8
SGSI	Sangihe	2.92	174	P	Pn	05 57 11.4	-0.8
GTOI	Gorontalo	6.33	201	P	Pn	05 57 58.1	-1.1
MRSI	Marisa	6.92	208	P	Pn	05 58 07.2	0.0
	0.6nm1µm104nm,0.6s						
TOLI2	Tolitoli	7.04	219		Pn	05 58 06.8	-2.0
LUWI	Luwuk	7.99	198	Pn	Pn	05 58 22.8	+0.9
LUWI	Luwuk	7.99	198	P	Pn	05 58 23.6	+1.7
	1µm68nm,0.9s						
APSI	Ampana	8.28	206	P	Pn	05 58 27.2	+1.3
	1µm55nm,0.7s						
KAPI	Kappang	12.78	205	LR	LR	06 04 45.2	
	comp=Z,58nm,19.1s,baz=74,slow=40						
BATI	Baumata	16.78	185	LR	LR	06 08 25.0	
	comp=Z,55nm,20.2s,baz=359,slow=43						
MTN	Manton Dam	20.20	163	P	P	06 00 60.0	-0.8
MTN				IAmb	IAmb	06 01 11.3	
	comp=Z,28nm,1.4s						
JOW	Kunigami	20.32	8	LR	LR	06 08 07.3	
	comp=Z,36nm,20.8s,baz=125,slow=34						
KNRA	Kununurra	22.42	171	P	P	06 01 24.1	-0.5
KNRA				IAmb	IAmb	06 01 29.3	
	comp=Z,9.1nm,0.6s						
FITZ	Fitzroy Crossi	24.55	179	P	P	06 01 44.4	-1.4
COEN	Coen	27.10	139	P	P	06 02 09.9	+1.0
COEN				IAmb	IAmb	06 02 30.6	
	comp=Z,12nm,1.1s						
WB0	Warramunga Arr	27.72	161	P	P	06 02 14.6	+0.2
WB0				IAmb	IAmb	06 02 33.3	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	27.86	161	P	P	06 02 14.4	-1.3
	comp=Z,0.6nm,0.4s,baz=330,slow=11,SNR=8.5						
	comp=Z,0.6nm,0.4s						
WRA	Warramunga Arr	27.86	161	P	P	06 02 14.0	-1.8
WR8	Warramunga Arr	27.93	161	P	P	06 02 16.3	0.0
WR8				IAmb	IAmb	06 02 29.5	
	comp=Z,14nm,1.4s						
CMAR	Chiang Mai Arr	28.19	297	LR	LR	06 13 21.4	
	comp=Z,34nm,21.7s,baz=95,slow=36						
CMAR	Chiang Mai Arr	28.19	297	P	P	06 02 18.9	+0.2
PSA00	Pilbara Seismi	28.50	191	P	P	06 02 21.6	+0.2
ASAR	Alice Springs	31.26	165	P	P	06 02 43.3	-2.6
	comp=Z,0.6nm,0.5s,baz=344,slow=6.9,SNR=12						
	comp=Z,0.6nm,0.5s						
ASAR	Alice Springs	31.26	165	P	P	06 02 46.6	+0.8
CTAO	Charters Tower	33.64	143	P	P	06 03 06.8	0.0
FORT	Forrest	37.27	176	P	P	06 03 38.5	+0.7
FORT				IAmb	IAmb	06 03 42.7	
	comp=Z,5.7nm,0.6s						
STKA	Stephens Creek	41.33	159	P	P	06 04 10.2	-1.5
	comp=Z,4.4nm,0.6s,baz=336,slow=9.5,SNR=10						
	comp=Z,4.4nm,0.6s						
STKA	Stephens Creek	41.33	159	P	P	06 04 13.3	+1.5
CAN	Canberra	47.34	153	P	P	06 05 00.2	+0.3
TOO	Toolangi	47.85	158	P	P	06 05 03.4	-0.4
TOO				IAmb	IAmb	06 05 20.2	
	comp=Z,4.7nm,1.2s						
MKAR	Makanchi Array	54.36	325	P	P	06 05 53.8	+1.1
	comp=Z,0.3nm,0.6s,baz=126,slow=7.8,SNR=6.1						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	54.36	325	P	P	06 05 51.9	-0.8
MAKZ	Makanchi	54.55	325	P	P	06 05 54.3	+0.3
NIL	Nilore	55.01	307	P	P	06 05 58.0	+0.3
NIL				IAmb	IAmb	06 05 59.8	
	comp=Z,10nm,1.1s						
KURBB	Kurchatov Arra	58.53	327	P	P	06 06 22.6	+0.4
	comp=Z,0.9nm,0.8s,baz=124,slow=6.5,SNR=4.1						
	comp=Z,0.9nm,0.8s						

BJI ***19*** *06:21:30.0, 40°.43N×142°.29E, h67*^{km}*, mB5.2/39, mb5.3/91, Ms4.4/81, Ms7 4.3/79*

MOS ***19*** *06:21:30.8±0.9, 40°.56N×142°.06E, h46*^{km}*, mb5.8/77, Error ellipse: s-maj=5.4km s-min=3.7km az=103.4*

BGR ***19*** *06:21:32.8, 40°.97N×142°.97E, h33*^{km}*, mb5.4, Ms4.5*

NEIC ***19*** *06:21:33.6, 40°.56N×142°.06E, h50*^{km}

JMA ***19*** *06:21:33.4±0.1, 40°.5N±0°.4×142°.2E±0°.9, h50*^{km}*±1*^{km}*, MD5.5/34, MW5.2/34, E OFF AOMORI PREF*

JMA Felt V J1 at E OFF AOMORI PREF .

NEIC ***19*** *06:21:33.6, 40°.46N×142°.19E, h50*^{km}*, Moment Tensor Solution.   Duration: 1ˢ9   Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*-6.67;* $M_{\theta\theta}$*5.20;* $M_{\phi\phi}$*1.47;* $M_{r\theta}$*0.63;* $M_{\theta\phi}$*0.90;* $M_{\phi r}$*-0.23;   Fault plane solution:* M_0*6.17000×10*^{16}*   NP1:*ϕ_s*74.66000°, δ42.37000°, λ-93.82000°.   NP2:*ϕ_s*259.82000°, δ47.74000°, λ-86.52000°.   Principal axes: T 5.4284, Plg3.0000°, Azm347.0000°; N 1.2800, Plg3.0000°, Azm77.0000°; P -6.7085, Plg86.0000°, Azm211.0000°;*

NIED ***19*** *06:21:33.4, 40°.51N×142°.18E, h50*^{km}*, MW5.1, Moment Tensor Solution.   s3   Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*-5.63;* $M_{\theta\theta}$*5.41;* $M_{\phi\phi}$*0.22;* $M_{r\theta}$*0.66;* $M_{\theta\phi}$*-1.51;* $M_{\phi r}$*-0.96;   Fault plane solution:* M_0*5.85000×10*^{16}*   NP1:*ϕ_s*97.00000°, δ41.00000°, λ-102.00000°.   NP2:*ϕ_s*293.00000°, δ50.00000°, λ-80.00000°.*

NEIC ***19*** *06:21:33.4±1.7, 40°.56N±0°.05×142°.07E±0°.08, h49*^{km}*±4*^{km}*, mb5.5/833, Mww5.1/19 Error ellipse: s-maj=9.5km s-min=7.5km az=117.0*

IDC ***19*** *06:21:34.5±1.1, 40°.54N×142°.00E, h62*^{km}*±10*^{km}*, mb5.1/34, mbtmp5.4/43, MS4.2/69, Error ellipse: s-maj=9.5km s-min=7.3km az=91.0*

GCMT ***19*** *06:21:35.6±0.2, 40°.63N±0°.01×142°.08E±0°.02, h54*^{km}*, MW5.2/107, Moment Tensor Solution.   s82,c126; s107,c172;   Duration: 0   Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*-6.79±.16;* $M_{\theta\theta}$*6.55±.11;* $M_{\phi\phi}$*0.24±.12;* $M_{r\theta}$*0.13±.10;* $M_{\theta\phi}$*-1.42±.10;* $M_{\phi r}$*0.29±.09;   Best double couple:* M_0*6.83000×10*^{16}*   NP1:*ϕ_s*105.00000°, δ45.00000°, λ-86.00000°.   NP2:*ϕ_s*280.00000°, δ45.00000°, λ-94.00000°.   Principal axes: T 6.8550, Plg0.0000°, Azm12.0000°; N -0.0510, Plg3.0000°, Azm282.0000°; P -6.8040, Plg87.0000°, Azm108.0000°;   nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

GFZ ***19*** *06:21:35.6, 40°.50N×142°.06E, h52*^{km}*, MW5.0, Moment Tensor Solution.   s26   Moment tensor:* M_{rr}*-4.43;* $M_{\theta\theta}$*3.83;* $M_{\phi\phi}$*0.60;* $M_{r\theta}$*0.52;* $M_{\theta\phi}$*-0.18;* $M_{\phi r}$*-0.53; Fault plane solution: NP1:*ϕ_s*88.00000°, δ41.00000°, λ-97.00000°.   NP2:*ϕ_s*279.00000°, δ49.00000°, λ-82.00000°.   Principal axes: T 3.8800, Plg4.0000°, Azm4.0000°; N 0.6400, Plg5.0000°, Azm94.0000°; P -4.5200, Plg83.0000°, Azm239.0000°;*

ISC 19 06:21:33.1±0.2**, 40°.54N**±0°.02×**142°.09E**±0°.03**, h53**^{km}±1^{km}**, h53**^{km}**:pP-P, n1885, σ1ˢ40**/1576**, mb5.5**/682**, MS4.3**/92**, 60C-110D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKEN	Kujiedanarisaw	0.44	221	P	Pn	06 21 44.5	+0.6
JKEN				*e*S	Sn	06 21 51.8	+0.2
JKEN	Kujiedanarisaw	0.44	221	A	A	06 21 44.5	
	comp=N,2µm,0.5s,comp=E,1µm,0.7s						
JANG	Nango	0.46	250	P	Pn	06 21 45.0	+0.8
JANG				*e*S	Sn	06 21 53.0	+0.9
JANG	Nango	0.46	250	A	A	06 21 45.0	
	comp=N,384nm,0.7s,comp=E,370nm,0.6s						
JTH	Tanohata	0.62	196	P	Pn	06 21 46.0	0.0
JTH				*e*S	Sn	06 21 54.7	-0.7
JTH	Tanohata	0.62	196	A	A	06 21 46.0	
	comp=N,373nm,1.6s,comp=E,183nm,1.2s						
JARK	Aomorirokkasho	0.72	311	⇓*i*P	Pn	06 21 48.0	+0.8
JARK				⇓*e*S	Sn	06 21 57.9	+0.4
JARK	Aomorirokkasho	0.72	311	A	A	06 21 48.0	
	comp=N,745nm,1.1s,comp=E,405nm,1.1s						
JKZ	Kuzumaki	0.80	227	P	Pn	06 21 49.2	+0.9
JKZ				S	Sn	06 22 00.8	+1.4
JKZ	Kuzumaki	0.80	227	A	A	06 21 49.2	
	comp=N,1µm,0.5s,comp=E,437nm,0.8s						
JTM	Tenmabayashi	0.81	288		Pn	06 21 50.1	+1.7
JTM				Sn	Sn	06 22 00.5	+0.9
JTM	Tenmabayashi	0.81	288	⇓*i*P	Pn	06 21 49.3	+0.9
JTM				⇓*e*S	Sn	06 22 00.6	+0.9
JTM	Tenmabayashi	0.81	288	A	A	06 21 49.3	
	comp=N,165nm,1.9s,comp=E,142nm,1.2s						
JAHD	Aomorihigashid	0.92	322	A	A	06 21 51.1	
	comp=N,539nm,0.8s,comp=E,494nm,1.4s						
MIYJ	Miyakonagasawa	0.98	192	A	A	06 21 51.0	
	comp=N,201nm,0.9s,comp=E,178nm,0.6s						
JOT	Ohata	1.15	317	*i* P	Pn	06 21 53.7	+0.7
JOT				*e*S	Sn	06 22 08.5	+0.8
JOT	Ohata	1.15	317	A	A	06 21 53.7	
	comp=N,82nm,2.6s,comp=E,67nm,0.8s						
JAH	Hinai	1.16	253	P	Pn	06 21 54.3	+1.2
JAH				S	Sn	06 22 09.7	+1.8
JAH	Hinai	1.16	253	A	A	06 21 54.3	
	comp=N,290nm,0.7s,comp=E,313nm,0.4s						
JSZI	Iwateshizukuis	1.18	228	A	A	06 21 54.4	
	comp=N,200nm,2.2s,comp=E,308nm,1.8s						
JOM	Ohasama	1.22	210	*i* P	Pn	06 21 54.7	+0.8
JOM	Ohasama	1.22	210	A	A	06 21 54.7	
	comp=N,197nm,0.3s,comp=E,219nm,0.7s						
JHHS	Hirosakihyakuz	1.32	276	A	A	06 21 56.9	
	comp=N,133nm,0.7s,comp=E,188nm,1.0s						
JSI2	Shiura 2	1.37	293	A	A	06 21 57.8	
	comp=N,310nm,0.9s,comp=E,352nm,0.8s						
OFUJ	Ofunato	1.49	193	A	A	06 21 58.2	
	comp=N,81nm,1.5s,comp=E,88nm,2.2s						
JNTW	Noshirotokiwa	1.49	260	A	A	06 21 59.3	
	comp=N,413nm,0.8s,comp=E,296nm,2.9s						
JKB	Kayabe	1.57	330	A	A	06 22 00.3	
	comp=N,85nm,0.9s,comp=E,53nm,1.2s						
JKB	Kayabe	1.57	330	P	Pn	06 21 59.4	+0.8
JIW	Iwasaki	1.58	273	A	A	06 22 00.7	
	comp=N,56nm,1.2s,comp=E,51nm,1.9s						
JIW	Iwasaki	1.58	273	⇓P	Pn	06 22 00.1	+1.3
JRG	Rokugo	1.59	225	P	Pn	06 22 00.2	+1.3
JRG	Rokugo	1.59	225	A	A	06 22 00.2	
	comp=N,180nm,1.0s,comp=E,145nm,0.8s						
JSR	Shiriuchi	1.60	309	A	A	06 22 01.0	
	comp=N,70nm,0.9s,comp=E,42nm,2.6s						
JSR	Shiriuchi	1.60	309	P	Pn	06 22 00.1	+1.1
ERM	Erimo	1.68	28		Pn	06 22 01.2	+1.1
ERM	Erimo	1.68	28	P	Pn	06 22 01.8	+1.7
ERM	Erimo	1.68	28	S	Sn	06 22 25.2	+4.6
ERM	Erimo	1.68	28	P	Pn	06 22 01.2	+1.1
JEM	Erimo	1.69	28	P	Pn	06 22 01.9	+1.7
JEM	Erimo	1.69	28	S	Sn	06 22 25.3	+4.7
JEM	Erimo	1.69	28	A	A	06 22 00.9	
	comp=N,47nm,1.2s,comp=E,47nm,3.8s						
JEM	Erimo	1.69	28	P	Pn	06 22 01.2	+1.0
JMK	Ichinoseki	1.72	203	A	A	06 22 01.7	
	comp=N,59nm,3.1s,comp=E,75nm,1.5s						
JMK	Ichinoseki	1.72	203	P	Pn	06 22 01.4	+0.8
JYW	Yuwa	1.75	236	A	A	06 22 02.7	
	comp=N,196nm,1.5s,comp=E,167nm,0.9s						
JKMT	Kesennumamotoy	1.79	196	A	A	06 22 02.5	
	comp=N,47nm,2.3s,comp=E,69nm,0.8s						
JNBK	Urakawa-nobuka	1.81	16	A	A	06 22 03.0	
	comp=N,110nm,3.3s,comp=E,141nm,1.1s						
JNBK	Urakawa-nobuka	1.81	16	P	Pn	06 22 03.4	+1.5
JSHD	Hidakashinhida	1.89	9	A	A	06 22 04.3	
	comp=N,132nm,2.5s,comp=E,128nm,1.1s						
JTHR	Tokachihiroo	1.98	27	A	A	06 22 05.1	
	comp=N,59nm,1.3s,comp=E,47nm,1.9s						
JYM2	Yakumo 2	2.04	321	A	A	06 22 07.1	
	comp=N,49nm,1.6s,comp=E,38nm,5.1s						
JYM2	Yakumo 2	2.04	321	P	Pn	06 22 06.4	+1.4
JNB	Noboribetsu	2.08	338	A	A	06 22 07.5	
	comp=N,28nm,1.1s,comp=E,41nm,0.9s						
JNB	Noboribetsu	2.08	338	P	Pn	06 22 06.2	+0.6
JIAM	Iburiatsuma	2.09	357	A	A	06 22 07.3	
	comp=N,206nm,0.8s,comp=E,154nm,1.3s						
JYK	Kaneyama	2.09	220	A	A	06 22 07.3	
	comp=N,88nm,1.3s,comp=E,85nm,2.2s						
JYK	Kaneyama	2.09	220	P	Pn	06 22 07.0	+1.3
JOFO	Osakifurukawao	2.13	206	A	A	06 22 07.7	
	comp=N,186nm,1.9s,comp=E,200nm,3.6s						
JIO	Ouri	2.15	196	A	A	06 22 07.8	
	comp=N,42nm,1.2s,comp=E,61nm,1.0s						
JIO	Ouri	2.15	196	P	Pn	06 22 07.1	+0.5
JYYZ	Yamagatayuza	2.25	228	A	A	06 22 09.7	
	comp=N,101nm,1.7s,comp=E,66nm,1.5s						
JBT2	Biratori 2	2.25	5	A	A	06 22 09.4	
	comp=N,50nm,3.4s,comp=E,54nm,1.3s						
JBT2	Biratori 2	2.25	5	P	Pn	06 22 09.4	+1.6
JIKH	Ishinomakikobu	2.27	192	A	A	06 22 09.4	

	comp=N,36nm,0.7s,comp=E,51nm,1.9s						
JCH	**Churui**	**2.29**	**24**	A	A	06 22 09.6	
	comp=N,53nm,3.4s,comp=E,59nm,2.4s						
JCH	**Churui**	**2.29**	**24**	P	**Pn**	**06 22 09.5**	**+1.1**
JEW	**Eniwo**	**2.35**	**349**	A	A	06 22 11.2	
	comp=N,91nm,1.0s,comp=E,90nm,1.6s						
JEW	**Eniwo**	**2.35**	**349**	P	**Pn**	**06 22 10.7**	**+1.4**
JTB	**Tobi-shima**	**2.36**	**236**	A	A	06 22 11.4	
	comp=N,41nm,4.5s,comp=E,45nm,2.6s						
JOG3	**Oga3**	**2.38**	**256**	A	A	06 22 04.3	
	comp=N,56nm,1.3s,comp=E,84nm,1.1s						
JOU	**Okura**	**2.43**	**207**	A	A	06 22 11.9	
	comp=N,92nm,1.2s,comp=E,87nm,1.7s						
JOU	**Okura**	**2.43**	**207**	P	**Pn**	**06 22 11.4**	**+1.0**
JOSM	**Okushiri--Mats**	**2.50**	**309**	P	**Pn**	**06 22 12.0**	**+0.7**
JHST	**Hiyamasetana**	**2.51**	**319**	A	A	06 22 13.8	
	comp=N,27nm,3.0s,comp=E,29nm,2.7s						
JHST	**Hiyamasetana**	**2.51**	**319**	P	**Pn**	**06 22 13.1**	**+1.6**
JSH	**Shimam**	**2.60**	**325**	A	A	06 22 15.1	
	comp=N,10.0nm,1.3s,comp=E,21nm,5.4s						
JSH	**Shimam**	**2.60**	**325**	P	**Pn**	**06 22 13.9**	**+1.2**
JFR	**Furan**	**2.65**	**8**	A	A	06 22 15.1	
	comp=N,42nm,1.0s,comp=E,29nm,0.8s						
JFR	**Furan**	**2.65**	**8**	P	**Pn**	**06 22 14.6**	**+1.2**
JYA	**Atsumi**	**2.67**	**224**	A	A	06 22 15.6	
	comp=N,112nm,0.8s,comp=E,107nm,1.4s						
JYA	**Atsumi**	**2.67**	**224**	P	**Pn**	**06 22 15.2**	**+1.6**
JOB	**Onbets**	**2.70**	**28**	A	A	06 22 15.4	
	comp=N,53nm,1.8s,comp=E,58nm,2.5s						
JOB	**Onbets**	**2.70**	**28**	P	**Pn**	**06 22 14.8**	**+0.8**
JISS	**Ishikarishitsu**	**2.78**	**350**	A	A	06 22 17.2	
	comp=N,80nm,2.4s,comp=E,47nm,1.8s						
JYS	**Shirataka**	**2.79**	**215**	A	A	06 22 17.1	
	comp=N,109nm,1.6s,comp=E,107nm,2.1s						
JYS	**Shirataka**	**2.79**	**215**	P	**Pn**	**06 22 16.9**	**+1.6**
JMM	**Marumori**	**2.85**	**201**	A	A	06 22 17.7	
	comp=N,36nm,1.8s,comp=E,56nm,2.5s						
JMM	**Marumori**	**2.85**	**201**	P	**Pn**	**06 22 16.6**	**+0.5**
JMST	**Minamisoumatoc**	**2.96**	**199**	A	A	06 22 19.2	
	comp=N,55nm,0.9s,comp=E,52nm,2.6s						
JAB	**Ashibetsu**	**2.97**	**2**	A	A	06 22 19.7	
	comp=N,87nm,2.7s,comp=E,53nm,1.4s						
JAW	**Awa shima**	**3.02**	**227**	P	**Pn**	**06 22 20.0**	**+1.5**
JYAR	**Yonezawaarcadi**	**3.02**	**211**	A	A	06 22 20.3	
	comp=N,123nm,1.1s,comp=E,111nm,0.9s						
JAR	**Ashorobuto**	**3.03**	**24**	A	A	06 22 20.1	
	comp=N,25nm,1.9s,comp=E,27nm,1.2s						
JAR	**Ashorobuto**	**3.03**	**24**	P	**Pn**	**06 22 18.7**	**+0.1**
JAK	**Akkeshi**	**3.14**	**38**	A	A	06 22 21.4	
	comp=N,38nm,1.6s,comp=E,47nm,4.8s						
JAK	**Akkeshi**	**3.14**	**38**	P	**Pn**	**06 22 19.6**	**-0.5**
JHR	**Hokuryu**	**3.22**	**355**	A	A	06 22 23.3	
	comp=N,34nm,2.0s,comp=E,37nm,2.0s						
JHR	**Hokuryu**	**3.22**	**355**	P	**Pn**	**06 22 22.9**	**+1.8**
JOTO	**OTAMA OYAMA**	**3.27**	**205**	A	A	06 22 23.7	
	comp=N,67nm,1.1s,comp=E,75nm,1.0s						
JFK	**Kawauchi**	**3.30**	**197**	A	A	06 22 24.0	
	comp=N,29nm,2.3s,comp=E,43nm,2.7s						
JKK2	**Kamakawa 2**	**3.37**	**8**	P	**Pn**	**06 22 24.7**	**+1.5**
JKHN	**Kushirohamanak**	**3.43**	**41**	A	A	06 22 25.4	
	comp=N,44nm,1.5s,comp=E,38nm,1.6s						
JNS	**Sasagawa**	**3.46**	**219**	A	A	06 22 26.7	
	comp=N,14nm,2.3s,comp=E,10.0nm,3.3s						
JNS	**Sasagawa**	**3.46**	**219**	P	**Pn**	**06 22 26.2**	**+1.7**
ONAJ	**Iwakimizuishiy**	**3.57**	**197**	A	A	06 22 27.8	
	comp=N,35nm,1.2s,comp=E,43nm,1.0s						
JMP	**Maruseppu**	**3.59**	**15**	A	A	06 22 28.3	
	comp=N,19nm,2.2s,comp=E,15nm,3.7s						
JMP	**Maruseppu**	**3.59**	**15**	P	**Pn**	**06 22 27.2**	**+0.9**
ASAJ	**Asahikawa**	**3.60**	**6**	P	**Pn**	**06 22 28.3**	**+2.0**
	comp=E,1µm,0.3s,baz=220,slow=11,SNR=1361						
ASAJ				S	**Sn**	**06 23 08.8**	**+1.3**
	comp=E,5µm,0.9s,baz=170,slow=13,SNR=8.0						
ASAJ	**Asahikawa**	**3.60**	**6**	P	**Pn**	**06 22 27.9**	**+1.6**
ASAJ	**Asahikawa**	**3.60**	**6**	A	A	06 22 28.5	
	comp=N,19nm,4.2s,comp=E,17nm,1.7s						
ASAJ	**Asahikawa**	**3.60**	**6**	P	**Pn**	**06 22 27.8**	**+1.4**
JKA	**Kamikawa-asahi**	**3.60**	**6**		**Pn**	**06 22 27.9**	**+1.6**
JNK	**Nakash**	**3.62**	**32**	P	**Pn**	**06 22 25.8**	**-0.9**
JFY	**Yanaizu**	**3.63**	**211**	A	A	06 22 29.0	
	comp=N,18nm,2.9s,comp=E,21nm,3.1s						
JFFD	**Fukushimafurud**	**3.64**	**200**	A	A	06 22 28.9	
	comp=N,22nm,0.7s,comp=E,22nm,1.7s						
JTKR	**Abashiri--Toko**	**3.69**	**21**	A	A	06 22 29.5	
	comp=N,13nm,1.9s,comp=E,11nm,2.1s						
JTKR	**Abashiri--Toko**	**3.69**	**21**	P	**Pn**	**06 22 27.9**	**+0.4**
JSS	**Shosan**	**3.87**	**358**	A	A	06 22 32.4	
	comp=N,17nm,2.8s,comp=E,20nm,3.6s						
JSD	**Sado**	**3.88**	**231**		**Pn**	**06 22 31.9**	**+1.7**
JSD	**Sado**	**3.88**	**231**	P	**Pn**	**06 22 32.4**	**+2.2**
JSD	**Sado**	**3.88**	**231**	S	**Sn**	**06 23 16.5**	**+2.1**
JSD	**Sado**	**3.88**	**231**	P	**Pn**	**06 22 31.9**	**+1.7**
JNSB	**Nemuroshibetsu**	**3.90**	**33**	A	A	06 22 32.2	
	comp=N,30nm,3.0s,comp=E,30nm,1.5s						
NMR	**Nemuro--Hokkai**	**3.92**	**43**	⇑*i*P	**Pn**	**06 22 29.5**	**-1.3**
NMR				*e*S	**Sn**	**06 23 11.5**	**-4.0**
NEM2	**Nemuro 2**	**3.93**	**43**	P	**Pn**	**06 22 29.4**	**-1.4**
JSB	**Shiboa**	**3.94**	**206**	A	A	06 22 33.2	
	comp=N,59nm,1.3s,comp=E,60nm,1.5s						
JIZZ	**Izumozaki**	**3.99**	**222**	A	A	06 22 34.1	
	comp=N,39nm,4.6s,comp=E,39nm,2.8s						
JIZZ	**Izumozaki**	**3.99**	**222**	P	**Pn**	**06 22 34.3**	**+2.7**
JUON	**Uonuma**	**4.08**	**216**	P	**Pn**	**06 22 35.1**	**+2.2**
JRA	**Rausu**	**4.08**	**33**	A	A	06 22 34.7	
	comp=N,13nm,1.6s,comp=E,13nm,3.2s						
GLVR	**Golovnino**	**4.09**	**37**	*e*P	**Pn**	**06 22 32.9**	**-0.2**
GLVR				*e*S	**Sn**	**06 23 17.7**	**-2.0**
GLVR				pmax	pmax		
	comp=Z,2µm,0.6s						
GLVR				pmax	pmax		
	comp=E,240nm,0.1s						
GLVR				smax	smax		
	comp=N,8µm,0.6s						
GLVR				smax	smax		
	comp=E,5µm,0.6s						
JHO	**Hitachi**	**4.09**	**197**	A	A	06 22 35.2	
	comp=N,27nm,0.9s,comp=E,18nm,1.2s						
RUSJ	**Misakicho**	**4.27**	**32**	⇑*i*P	**Pn**	**06 22 35.6**	**+0.1**
RUSJ				*e*S	**Sn**	**06 23 24.3**	**+0.3**
JHYU	**Hitachinakayam**	**4.35**	**196**	A	A	06 22 38.8	
	comp=N,24nm,1.4s,comp=E,24nm,1.7s						
YUK	**Yuzh-Kuril'sk**	**4.48**	**37**	*e*P	**Pn**	**06 22 37.5**	**-0.9**
YUK				*i* S	**Sn**	**06 23 26.4**	**-2.8**
YUK				pmax	pmax		
	comp=Z,3µm,0.4s						
YUK				pmax	pmax		
	comp=N,2µm,0.5s						
YUK				pmax	pmax		
	comp=E,1µm,0.5s						
YUK				smax	smax		
	comp=N,9µm,0.4s						
YUK				smax	smax		
	comp=E,3µm,0.5s						
YUK				MLR	MLR		
	comp=Z,6µm,18.0s						
YUK				MLR	MLR		
	comp=N,5µm,10.0s						
JYT	**Yasato**	**4.55**	**200**	A	A	06 22 41.6	
	comp=N,24nm,1.1s,comp=E,24nm,1.4s						
JAG	**Ashikaga**	**4.59**	**208**	A	A	06 22 42.4	
	comp=N,14nm,2.3s,comp=E,17nm,4.4s						
JAG	**Ashikaga**	**4.59**	**208**	P	**Pn**	**06 22 41.8**	**+1.7**
JJN	**Nakama**	**4.60**	**223**	A	A	06 22 42.7	
	comp=N,16nm,2.6s,comp=E,16nm,1.7s						
JIHU	**Itakohorinouch**	**4.72**	**196**	A	A	06 22 44.0	
	comp=N,102nm,2.5s,comp=E,75nm,1.2s						
JGK	**Kuni**	**4.80**	**215**	A	A	06 22 45.4	
	comp=N,24nm,3.0s,comp=E,20nm,3.8s						
JSZ	**Suzu**	**4.80**	**232**	P	**Pn**	**06 22 44.9**	**+2.1**
JHG	**Hegura jima**	**4.83**	**238**	P	**Pn**	**06 22 45.3**	**+2.1**
JCAJ	**Choshiashikaji**	**4.90**	**192**	A	A	06 22 46.4	
	comp=N,31nm,2.4s,comp=E,23nm,0.9s						
MJB9	**Matsu-Tunnel**	**5.01**	**219**		**Pn**	**06 22 49.6**	**+3.8**
MAJO	**Matsushiro**	**5.01**	**219**		**Pn**	**06 22 48.4**	**+2.6**
MAJO	**Matsushiro**	**5.01**	**219**	P	**Pn**	**06 22 48.5**	**+2.6**
MAJO	**Matsushiro**	**5.01**	**219**	*c i*P	**Pn**	**06 22 48.4**	**+2.6**
MAT	**Matsushiro**	**5.01**	**219**	P	**Pn**	**06 22 48.4**	**+2.6**
MJAR	**Matsushiro Arr**	**5.01**	**219**	P	**Pn**	**06 22 48.3**	**+2.5**
	comp=E,950nm,0.6s,baz=26,slow=13,SNR=468						
MJAR	**Matsushiro Arr**	**5.01**	**219**		**Pn**	**06 22 48.8**	**+3.0**
MJAR	**Matsushiro Arr**	**5.01**	**219**	P	**Pn**	**06 22 48.8**	**+3.0**
JSMT	**Sammumatsuo**	**5.05**	**195**	A	A	06 22 48.6	
	comp=N,62nm,1.9s,comp=E,59nm,1.7s						
TOK	**Tokyo**	**5.18**	**201**	A	A	06 22 50.4	
	comp=N,57nm,3.4s,comp=E,58nm,0.9s						
JCCN	**Chibachonan**	**5.35**	**196**	A	A	06 22 52.7	
	comp=N,43nm,2.9s,comp=E,54nm,1.9s						
JSGW	**Sagamiharawaka**	**5.42**	**206**	A	A	06 22 54.0	
	comp=N,15nm,2.1s,comp=E,10.0nm,1.4s						
JKUC	**kamogawauchiur**	**5.57**	**196**	A	A	06 22 55.8	
	comp=N,32nm,1.8s,comp=E,32nm,1.6s						
JOD2	**Odawara 2**	**5.77**	**205**	A	A	06 22 58.8	
	comp=N,21nm,1.9s,comp=E,15nm,1.1s						
BSO3	**Boso 3**	**5.86**	**193**	P	**Pn**	**06 22 56.4**	**-0.7**
TEY	**Ternei**	**6.04**	**320**	⇑*e*P	**Pn**	**06 23 00.6**	**+0.8**
TEY				pmax	pmax		
	comp=N,120nm,0.6s						
TEY				pmax	pmax		
	comp=E,40nm,0.6s						
TEY				pmax	pmax		
	comp=Z,130nm,0.6s						
JHTM	**Izuhatsuma**	**6.08**	**205**	A	A	06 23 03.1	
	comp=N,24nm,2.4s,comp=E,24nm,1.5s						
JNY	**Yasuok**	**6.15**	**214**	A	A	06 23 04.2	
	comp=N,11nm,1.5s,comp=E,11nm,5.9s						
JGF	**Kuroka**	**6.18**	**219**		**Pn**	**06 23 03.4**	**+1.6**
JGF	**Kuroka**	**6.18**	**219**	P	**Pn**	**06 23 05.2**	**+3.4**
	comp=E,1µm,0.8s						
JIM2	**Oshima 3**	**6.18**	**201**	A	A	06 23 04.4	
	comp=N,20nm,2.3s,comp=E,21nm,1.4s						
SHZ3	**Shizuoka 3**	**6.26**	**211**	A	A	06 23 05.7	
	comp=N,13nm,1.5s,comp=E,13nm,2.5s						
KUR	**Kuril'sk**	**6.33**	**40**	*c i*P	**Pn**	**06 23 02.5**	**-1.2**
KUR				*i* S	**Sn**	**06 24 10.5**	**-4.1**
KUR				pmax	pmax		
	comp=Z,980nm,0.5s						
KUR				pmax	pmax		
	comp=N,207nm,0.3s						
KUR				pmax	pmax		
	comp=E,218nm,0.3s						
KUR				smax	smax		
	comp=E,1µm,0.6s						
KUR				smax	smax		
	comp=N,740nm,0.4s						
KUR				smax	smax		
	comp=N,5µm,4.3s						
KUR				smax	smax		
	comp=E,8µm,4.3s						
JIZS	**Izushimoda**	**6.34**	**205**	A	A	06 23 06.7	
	comp=N,13nm,2.9s,comp=E,11nm,1.4s						
JIZS	**Izushimoda**	**6.34**	**205**	P	**Pn**	**06 23 03.4**	**-0.6**
YSS	**Yuzhno-Sakhali**	**6.43**	**4**		**Pn**	**06 23 06.4**	**+1.3**
YSS	**Yuzhno-Sakhali**	**6.43**	**4**	P	**Pn**	**06 23 06.8**	**+1.6**
	comp=E,834nm,1.2s						
YSS	**Yuzhno-Sakhali**	**6.43**	**4**	S	**Sn**	**06 24 19.2**	**+2.0**
	comp=E,834nm,1.2s						
YSS	**Yuzhno-Sakhali**	**6.43**	**4**	*e*P	**Pn**	**06 23 06.5**	**+1.3**
YSS				*e*S	**Sn**	**06 24 17.6**	**+0.4**
YSS				pmax	pmax		
	comp=Z,30nm,0.6s						
YSS				MLR	MLR		
	comp=Z,2µm,14.0s						
YSS				MLR	MLR		
	comp=N,2µm,15.0s						
YSS				MLR	MLR		
	comp=E,2µm,15.0s						
INU	**Inuyama**	**6.54**	**219**		**Pn**	**06 23 08.6**	**+1.9**
INU	**Inuyama**	**6.54**	**219**	P	**Pn**	**06 23 10.7**	**+3.9**
	comp=E,1µm,0.8s						
JSG	**Sagara**	**6.62**	**209**		**Pn**	**06 23 09.8**	**+2.1**
JSG	**Sagara**	**6.62**	**209**	P	**Pn**	**06 23 11.4**	**+3.6**
	comp=E,3µm,0.7s						
JKY	**Yasaka**	**7.37**	**231**	P	**Pn**	**06 23 22.1**	**+4.1**
JWT	**Wachi**	**7.44**	**227**	P	**Pn**	**06 23 22.8**	**+3.8**
JHJ	**Hachijo jima 2**	**7.63**	**195**	P	**Pn**	**06 23 20.8**	**-0.8**
	comp=E,281nm,0.4s,baz=234,slow=3.7,SNR=12						
JHJ				S	**Sn**	**06 24 40.0**	**-6.7**
	comp=E,681nm,0.6s,baz=13,slow=22,SNR=5.7						
JHJ2	**Mitsune**	**7.63**	**194**		**Pn**	**06 23 20.9**	**-0.7**
JHJ2	**Mitsune**	**7.63**	**194**	P	**Pn**	**06 23 21.1**	**-0.5**
	comp=E,1µm,0.5s						
VLA	**Vladivostok**	**8.04**	**292**	⇓*e*P	**Pn**	**06 23 29.7**	**+2.5**
VLA				pmax	pmax		
	comp=Z,231nm,0.8s						
USRK	**Ussuriysk Ar.**	**8.32**	**299**	P	**Pn**	**06 23 33.6**	**+2.6**
	comp=Z,286nm,0.7s,baz=107,slow=15,SNR=80						
USRK				S	**Sn**	**06 25 10.8**	**+7.3**
	comp=Z,38nm,0.8s,baz=117,slow=28,SNR=4.1						
JAD	**Aida**	**8.40**	**231**	P	**Pn**	**06 23 35.5**	**+3.4**
MSHR	**Mys Shultsa**	**8.45**	**288**	⇑*e*P	**Pn**	**06 23 34.0**	**+1.3**
MSHR				pmax	pmax		
	comp=Z,58nm,0.8s						
UGL	**Uglegorsk**	**8.54**	**360**	⇓*e*P	**Pn**	**06 23 34.2**	**+0.2**
UGL				S	**Sn**	**06 25 15.0**	**+6.2**
UGL				pmax	pmax		
	comp=Z,134nm,0.9s						
UGL				smax	smax		
	comp=E,174nm,0.9s						
UGL				smax	smax		
	comp=N,170nm,0.9s						
PSTR	**Posyet**	**8.71**	**288**	*ce*P	**Pn**	**06 23 37.8**	**+1.4**
JMN	**Monobe**	**9.44**	**227**		**Pn**	**06 23 47.0**	**+0.6**
JMN	**Monobe**	**9.44**	**227**	P	**Pn**	**06 23 49.0**	**+2.6**
	comp=N,202nm,0.8s						
MDJ	**Mudanjiang**	**10.07**	**298**		**Pn**	**06 23 57.3**	**+2.2**
MDJ	**Mudanjiang**	**10.07**	**298**	P	**Pn**	**06 23 59.0**	**+4.0**
MDJ				sP		06 24 16.8	
MDJ				S	Sn	06 25 58.9	+12
MDJ				PcS	**PcS**	**06 33 29.8**	**-5.0**
MDJ				pmax	pmax		
	comp=N,140nm,1.1s						
MDJ				pmax	pmax		
	comp=N,770nm,3.5s						
MDJ				LR	LR		
	comp=N,2µm,16.0s						
MDJ				LR	LR		
	comp=N,1µm,17.8s						
MDJ				LR	LR		
	comp=N,2µm,20.0s						
MDJ	**Mudanjiang**	**10.07**	**298**	P	**Pn**	**06 23 59.0**	**+4.0**
	comp=N,248nm,1.1s						
TYV	**Tymovskoe**	**10.34**	**2**	*e*P	**Pn**	**06 23 59.1**	**+0.6**
TYV				*e*S	**Sn**	**06 25 53.1**	**+0.3**
TYV				pmax	pmax		
	comp=Z,500nm,4.6s						
TYV				pmax	pmax		
	comp=Z,131nm,0.7s						
TYV				smax	smax		
	comp=N,45nm,1.3s						
TYV				smax	smax		
	comp=E,40nm,1.3s						
TYV				smax	smax		
	comp=N,800nm,4.2s						
TYV				smax	smax		
	comp=E,1µm,4.2s						
TYV				MLR	MLR		
	comp=N,3µm,16.0s						
GRNR	**Gornyy**	**10.97**	**341**	⇓*i*P	**Pn**	**06 24 08.4**	**+1.2**
GRNR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KSRS	**Korea Array**	**11.44**	**259**	P	**Pn**	**06 24 16.5**	**+2.8**
	comp=Z,30nm,0.8s,baz=68,slow=13,SNR=44						
KSRS				S	**Sn**	**06 26 26.6**	**+6.7**
	comp=Z,73nm,0.8s,baz=72,slow=24,SNR=10						
KSRS				LR	LR	06 28 12.4	
	comp=Z,2µm,20.9s,baz=70,slow=35						
KS19	**Wonju Array Si**	**11.47**	**259**		**Pn**	**06 24 17.4**	**+3.3**
KSAR	**Wonju Array Be**	**11.48**	**259**		**Pn**	**06 24 15.1**	**+0.9**
KSAR	**Wonju Array Be**	**11.48**	**259**	P	**Pn**	**06 24 15.1**	**+0.9**
JNU	**Nakatsue**	**11.63**	**234**	P	**Pn**	**06 24 17.8**	**+1.4**
	comp=Z,62nm,0.7s,baz=49,slow=8.6,SNR=19						
JNU				LR	LR	06 28 38.2	
	comp=Z,2µm,20.5s,baz=60,slow=37						
JNU	**Nakatsue**	**11.63**	**234**		**Pn**	**06 24 17.6**	**+1.2**
JNU	**Nakatsue**	**11.63**	**234**	P	**Pn**	**06 24 19.5**	**+3.1**
	comp=Z,181nm,1.0s						
JTU	**Tsushima**	**11.72**	**243**	P	**Pn**	**06 24 21.1**	**+3.6**
	comp=Z,196nm,1.0s						
BNX	**BinXian**	**11.91**	**301**	⇑P	**Pn**	**06 24 21.9**	**+1.8**
BNX				S	**Sn**	**06 26 31.3**	**-0.1**
BNX				pmax	pmax		
	comp=Z,25nm,0.8s						
BNX				LR	LR		
	comp=Z,490nm,12.7s						
BNX				LR	LR		
	comp=Z,820nm,15.1s						
BNX				LR	LR		
	comp=Z,1µm,14.5s						
TJN	**Taejon**	**12.26**	**255**		**Pn**	**06 24 24.7**	**-0.2**
TJN	**Taejon**	**12.26**	**255**	P	**Pn**	**06 24 27.7**	**+2.8**
	comp=Z,745nm,1.0s						
TJN	**Taejon**	**12.26**	**255**	⇑*e*P	**Pn**	**06 24 27.8**	**+2.8**
CN2	**Changchun**	**12.77**	**290**	*e*P	**Pn**	**06 24 34.3**	**+2.5**
CN2				*e*S	**Sn**	**06 26 54.5**	**+2.2**
CN2				pmax	pmax		
	comp=Z,20nm,1.4s						
CN2				pmax	pmax		
	comp=Z,100nm,4.0s						
CN2				LR	LR		
	comp=Z,500nm,14.0s						
CN2				LR	LR		
	comp=Z,800nm,14.0s						
CN2				LR	LR		
	comp=Z,1µm,18.6s						
JSU	**Suzuyama**	**13.02**	**230**	Pn	**Pn**	**06 24 34.6**	**-0.7**
JSU	**Suzuyama**	**13.02**	**230**	P	**Pn**	**06 24 37.1**	**+1.8**
	comp=Z,124nm,1.2s						
OKH	**Okha**	**13.03**	**2**	*de*P	**Pn**	**06 24 34.9**	**-0.4**
OKH				*e*S	**Sn**	**06 27 01.0**	**+2.4**
OKH				pmax	pmax		
	comp=Z,200nm,15.9s						
OKH				smax	smax		
	comp=N,200nm,15.2s						
OKH				smax	smax		
	comp=E,200nm,11.0s						
OKH				MLR	MLR		
	comp=N,500nm,16.0s						
OKH				MLR	MLR		
	comp=E,1µm,16.0s						
JCJ	**Chichijima**	**13.41**	**180**	P	Pn	06 24 24.7	-16
	comp=E,83nm,0.4s,baz=288,slow=14,SNR=13						
JCJ				S	Sn	06 26 41.2	-27
	comp=E,188nm,0.6s,baz=45,slow=21,SNR=5.2						
JCJ	**Chichijima**	**13.41**	**180**		**Pn**	**06 24 36.6**	**-4.0**
JCJ	**Chichijima**	**13.41**	**180**	P	**Pn**	**06 24 43.5**	**+2.9**
	comp=E,387nm,0.7s						
SNY	**Shenyang**	**14.00**	**281**	⇑P	**Pn**	**06 24 50.4**	**+1.8**
SNY				pmax	pmax		
	comp=E,18nm,0.8s						
SNY				pmax	pmax		
	comp=E,310nm,3.5s						
SNY				LR	LR		
	comp=E,150nm,7.9s						
SNY				LR	LR		
	comp=E,710nm,16.4s						
SNY				LR	LR		
	comp=E,1µm,20.4s						
HEH	**HeiHe**	**14.14**	**318**	*e*P	**Pn**	**06 24 48.8**	**-1.6**
HEH				sP	P	06 25 06.4	+10
HEH				S	**Sn**	**06 27 22.5**	**-3.1**
HEH				pmax	pmax		
	comp=E,34nm,0.6s						
HEH				pmax	pmax		
	comp=E,340nm,4.9s						
HEH				LR	LR		
	comp=E,860nm,17.2s						
HEH				LR	LR		
	comp=E,1µm,16.9s						
HEH				LR	LR		
	comp=E,2µm,16.5s						
DL2	**Dalian**	**15.83**	**271**	P	**Pn**	**06 25 13.1**	**+0.8**
DL2				pP	**pP**	**06 25 23.5**	**-3.6**
DL2				sP	**sP**	**06 25 34.4**	**+0.6**
DL2				S	**Sn**	**06 28 08.8**	**+2.1**
DL2				pmax	pmax		
	comp=E,470nm,1.3s						
DL2				pmax	pmax		
	comp=E,570nm,5.6s						
DL2				LR	LR		
	comp=E,560nm,17.1s						
DL2				LR	LR		
	comp=E,670nm,18.5s						
DL2				LR	LR		
	comp=E,980nm,19.9s						
PEA0B	**Petropavlovsk-**	**16.45**	**35**	Pn	**Pn**	**06 25 18.6**	**-1.6**
PEA0B	**Petropavlovsk-**	**16.45**	**35**	⇑*e*P	**Pn**	**06 25 20.2**	**0.0**
PETK	**Petropavlovsk-**	**16.45**	**35**	P	**Pn**	**06 25 19.6**	**-0.6**
	comp=E,12nm,0.6s,baz=245,slow=9.4,SNR=3.8						
PETK				PcP	**PcP**	**06 30 10.2**	**+0.9**
	comp=E,14nm,0.8s,baz=166,slow=1.1,SNR=4.5						
PETK				LR	LR	06 31 50.3	
	comp=E,788nm,18.3s,baz=217,slow=37						
PETK	**Petropavlovsk-**	**16.45**	**35**		**Pn**	**06 25 17.7**	**-2.5**
ZEA	**Zeya**	**16.57**	**328**	*e*P	**Pn**	**06 25 20.6**	**-1.1**
ZEA				*e*S	Sn	06 28 12.3	-12
ZEA				pmax	pmax		
	comp=N,30nm,0.7s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,60nm,0.7s						
ZEA				smax	smax		
	comp=N,300nm,12.6s						
ZEA				MLR	MLR		
	comp=Z,600nm,13.0s						
PET	**Petropavlovsk**	**16.82**	**37**	Pn	**Pn**	**06 25 23.7**	**-1.0**
PET	**Petropavlovsk**	**16.82**	**37**	*e*P	**P**	**06 25 27.9**	**+1.7**
PET				*e*S	**Sn**	**06 28 25.3**	**-5.3**
PET				MLR	MLR		
	comp=Z,600nm,14.0s						
JOW	**Kunigami**	**17.83**	**224**	LR	LR	06 32 41.1	
	comp=Z,2µm,21.9s,baz=56,slow=38						
HIA	**Hailar**	**18.02**	**306**	P	**P**	**06 25 38.1**	**-1.4**
HIA	**Hailar**	**18.02**	**306**	P	**P**	**06 25 37.6**	**-1.9**
	comp=Z,53nm,0.8s						
HIA	**Hailar**	**18.02**	**306**	P	**P**	**06 25 38.1**	**-1.4**
HIA				pmax	pmax		
	comp=Z,65nm,1.1s						
HILR	**Hailar Array B**	**18.12**	**307**	P	**P**	**06 25 39.1**	**-1.5**
	comp=Z,95nm,0.5s,baz=114,slow=12,SNR=190						
HILR				PcP	**PcP**	**06 30 13.2**	**+1.1**
	comp=Z,5.1nm,0.6s,baz=107,slow=1.5,SNR=1.4						
HILR				LR	LR	06 33 05.4	
	comp=Z,938nm,18.4s,baz=80,slow=38						
SSE	**Sheshan**	**19.35**	**247**	P	**P**	**06 25 54.9**	**+0.7**
SSE				S	**S**	**06 29 28.8**	**-1.4**
SSE				pmax	pmax		
	comp=Z,57nm,1.0s						
SSE				LR	LR		
	comp=Z,340nm,13.6s						
SSE				LR	LR		
	comp=Z,290nm,13.2s						
XLT	**XiLinHaoTe**	**19.52**	**288**	*e*P	**P**	**06 25 55.1**	**-1.0**
XLT				pP	pP	06 26 06.5	-1.5
XLT				pmax	pmax		
	comp=Z,97nm,0.7s						
XLT				LR	LR		
	comp=Z,520nm,17.3s						
XLT				LR	LR		
	comp=Z,500nm,23.6s						
BJI	**Beijing**	**19.75**	**277**	P	**P**	**06 25 56.8**	**-1.7**
BJI				pP	**pP**	**06 26 09.4**	**-1.1**
BJI				sP	**sP**	**06 26 17.0**	**-0.2**
BJI				S	**S**	**06 29 31.8**	**-6.4**
BJI				pmax	pmax		
	comp=Z,71nm,0.8s						
BJI				pmax	pmax		
	comp=Z,170nm,3.7s						
BJI				LR	LR		
	comp=Z,220nm,14.3s						
BJI				LR	LR		
	comp=Z,240nm,19.5s						
BJI				LR	LR		
	comp=Z,380nm,20.6s						
BJT	**Baijiatuau**	**19.76**	**277**	P	**P**	**06 25 57.5**	**-1.1**
BJT	**Baijiatuau**	**19.76**	**277**	P	**P**	**06 25 57.2**	**-1.4**
	comp=Z,140nm,0.7s						
BJT	**Baijiatuau**	**19.76**	**277**	P	**P**	**06 25 57.5**	**-1.1**
BJT				pmax	pmax		
	comp=Z,121nm,0.9s						
MA2	**Magadan**	**19.83**	**13**	P	**P**	**06 25 58.1**	**-1.0**
	comp=Z,23nm,0.5s,baz=198,slow=10,SNR=14						
MA2				LR	LR	06 33 52.9	
	comp=Z,779nm,20.9s,baz=204,slow=37						
MA2	**Magadan**	**19.83**	**13**		**P**	**06 25 58.6**	**-0.5**
MA2	**Magadan**	**19.83**	**13**	P	**Pn**	**06 26 00.5**	**-0.6**
	comp=Z,139nm,1.4s						
MA2	**Magadan**	**19.83**	**13**	⇓*e*P	**P**	**06 26 00.0**	**+0.9**
MA2				pmax	pmax		
	comp=Z,234nm,2.5s						
TIA	**Tai'an**	**20.02**	**266**	P	**P**	**06 26 00.4**	**-1.0**
TIA				pP	**pP**	**06 26 11.8**	**-1.6**
TIA				S	**S**	**06 29 39.3**	**-4.2**
TIA				pmax	pmax		
	comp=Z,200nm,0.8s						
TIA				pmax	pmax		
	comp=Z,400nm,4.0s						
TIA				LR	LR		

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         comp=Z,570nm,13.5s
TIA                                LR      LR
         comp=Z,710nm,20.2s
TIA                                LR      LR
         comp=Z,1µm,24.1s
NJ2    Nanjing           20.51 253 ⇑P      P       06 26 05.6  -1.1
NJ2                                sP      sP      06 26 28.4  +2.8
NJ2                                pmax    pmax
         comp=Z,22nm,0.5s
NJ2                                pmax    pmax
         comp=Z,360nm,3.6s
NJ2                                LR      LR
         comp=Z,590nm,17.1s
NJ2                                LR      LR
         comp=Z,850nm,22.7s
NJ2                                LR      LR
         comp=Z,950nm,21.3s
JMJ    Miyako jima 2     21.05 227  P      P       06 26 13.7  +1.1
         comp=Z,5µm,0.8s
HNS    HongShan          21.48 270 ⇓P      P       06 26 14.3  -2.9
HNS                                pP      sP      06 26 34.9  -1.1
HNS                                S       S       06 30 08.1  -4.4
HNS                                SS      Sn      06 30 47.6  +25
HNS                                pmax    pmax
         comp=Z,93nm,1.3s
HNS                                LR      LR
         comp=Z,360nm,15.1s
HNS                                LR      LR
         comp=Z,260nm,13.5s
HNS                                LR      LR
         comp=Z,550nm,14.3s
CIT    Chita             22.67 310 eP      P       06 26 26.4  -3.4
CIT                                e               06 26 37.2
CIT                                e               06 26 47.0
CIT                                e               06 26 57.6
CIT                                e               06 27 12.0
CIT                                eS      S       06 30 27.4  -6.6
CIT                                e               06 31 34.8
CIT                                pmax    pmax
         comp=Z,343nm,1.4s
YAK    Yakutsk           22.80 345  LR     LR      06 35 26.7
         comp=Z,378nm,19.7s,baz=140,slow=36
YAK    Yakutsk           22.80 345         P       06 26 29.1  -1.9
YAK                                IAmb    IAmb    06 26 35.7
         comp=Z,179nm,0.8s
YAK    Yakutsk           22.80 345 eP      P       06 26 28.5  -2.5
YAK                                e*PP    sP      06 26 48.2  -1.3
YAK                                eS      S       06 30 31.5  -4.4
YAK                                e*SS    Sn      06 30 52.8  -1.2
YAK                                pmax    pmax
         comp=Z,42nm,0.9s
YAK                                pmax    pmax
         comp=E,3.0nm,0.9s
YAK                                pmax    pmax
         comp=N,18nm,1.1s
YAK                                smax    smax
         comp=N,2µm,3.0s
YAK                                smax    smax
         comp=E,658nm,1.2s
HHC    Hu-ho-hao-te      23.09 281⇑iP      P       06 26 32.3  -2.0
HHC                                pmax    pmax
         comp=E,46nm,1.0s
TIY    Taiyuan           23.13 273 eP      P       06 26 33.8  -0.8
TIY                                S       S       06 30 40.1  -1.9
TIY                                pmax    pmax
         comp=E,49nm,0.7s
TIY                                LR      LR
         comp=E,330nm,17.2s
TIY                                LR      LR
         comp=E,340nm,23.7s
TIY                                LR      LR
         comp=E,480nm,28.2s
TATO   Taipei            23.17 234  P      P       06 26 35.2  +0.1
TATO   Taipei            23.17 234  P      P       06 26 34.6  -0.4
TATO   Taipei            23.17 234  P      P       06 26 34.4  -0.7
         comp=E,430nm,1.1s
SEY    Seymchan          23.26  12  LR     LR      06 36 03.4
         comp=E,854nm,20.9s,baz=216,slow=37
SEY    Seymchan          23.26  12 eP      P       06 26 34.9  -0.7
SEY                                e               06 26 59.6
SEY                                eS      S       06 30 36.9  -6.6
SEY                                pmax    pmax
         comp=Z,131nm,1.1s
YHNB   Yeheng            23.46 234         P       06 26 35.1  -2.9
YHNB                               IAmb    IAmb    06 26 42.0
         comp=Z,168nm,1.3s
YHNB   Yeheng            23.46 234  P      P       06 26 35.4  -2.6
         comp=Z,121nm,1.2s
NACB   Ninganchiao       23.70 233         P       06 26 36.5  -3.5
NACB   Ninganchiao       23.70 233  P      P       06 26 36.6  -3.5
         comp=Z,51nm,0.9s
LYN    LuoYang           24.16 265  P      P       06 26 41.1  -3.1
LYN                                PP      PnPn    06 27 17.8  +2.0
LYN                                S       S       06 30 59.9  +1.3
LYN                                pmax    pmax
         comp=Z,80nm,0.9s
LYN                                pmax    pmax
         comp=Z,130nm,6.9s
LYN                                LR      LR
         comp=Z,650nm,12.4s
LYN                                LR      LR
         comp=Z,630nm,14.1s
LYN                                LR      LR
         comp=Z,860nm,12.4s
BTO    Baotou            24.29 281 eP      P       06 26 44.4  -1.1
BTO                                pP      pP      06 26 59.0  +0.1
BTO                                sP      sP      06 27 06.1  +0.9
BTO                                PP      PnPn    06 27 21.4  +3.8
BTO                                S       S       06 30 55.8  -5.0
BTO                                sS      sS      06 31 20.4  -2.7
BTO                                SS      SnSn    06 31 53.8  +6.3
BTO                                pmax    pmax
         comp=Z,280nm,0.8s
BTO                                pmax    pmax
         comp=Z,610nm,6.5s
BTO                                LR      LR
         comp=Z,730nm,15.0s
BTO                                LR      LR
         comp=Z,1µm,22.4s
BTO                                LR      LR
         comp=Z,2µm,23.5s
SSLB   Suanglung         24.37 233  P      P       06 26 44.0  -2.3
SSLB   Suanglung         24.37 233  P      P       06 26 45.2  -1.1
         comp=Z,98nm,0.8s
YULB   Yu-li             24.46 232         P       06 26 45.1  -2.0
YULB   Yu-li             24.46 232  P      P       06 26 45.7  -1.3
         comp=Z,74nm,0.7s
WHN    Wuhan             24.58 255 ⇑P      P       06 26 47.5  -0.6
WHN                                pP      pP      06 27 01.0  -0.5
WHN                                pmax    pmax
         comp=Z,470nm,1.4s
WHN                                LR      LR
         comp=Z,2µm,13.5s
WHN                                LR      LR
         comp=Z,1µm,13.7s
WHN                                LR      LR
         comp=Z,4µm,18.6s
SMY    Shemya            24.91  50  P      P       06 26 50.4  -0.5
SMY    Shemya            24.91  50  P      P       06 26 50.4  -0.5
SMY                                pmax    pmax
         comp=Z,420nm,1.1s
TPUB   Ta-pu             24.93 233         P       06 26 49.5  -1.9
TPUB                               IAmb    IAmb    06 26 52.9
         comp=Z,88nm,0.7s
TPUB   Ta-pu             24.93 233  P      P       06 26 49.3  -2.1
         comp=Z,156nm,0.7s
BOD    Bodaibo           24.94 323 eP      P       06 26 49.4  -1.7
BOD                                pmax    pmax
         comp=Z,273nm,0.9s
TWGBT  Beinan            25.03 231  P      P       06 26 52.3  +0.1
         comp=Z,138nm,0.8s
TWG    Pinlang           25.03 231  P      P       06 26 52.8  +0.6
TWG                                IAmb    IAmb    06 26 59.7
         comp=Z,98nm,0.6s
QZH    Quanzhou          25.04 239⇓iP      P       06 26 52.3  +0.1
QZH                                S       S       06 31 10.8  -1.9
QZH                                pmax    pmax
         comp=Z,160nm,1.0s
KNMB   Chin-men Tao      25.50 238  P      P       06 26 56.2  -0.2
KNMB                               IAmb    IAmb    06 27 03.8
         comp=Z,115nm,0.8s
ULN    Ulaanbaatar       25.99 298  P      P       06 27 01.6  +0.7
ULN    Ulaanbaatar       25.99 298         P       06 27 00.8  -0.1
ULN    Ulaanbaatar       25.99 298  P      P       06 27 00.1  -0.8
         comp=Z,147nm,0.7s
ULN    Ulaanbaatar       25.99 298d iP     P       06 27 00.2  -0.7
ULN                                pmax    pmax
         comp=Z,26nm,0.7s
SONM   Songino Array     26.43 298  P      P       06 27 04.5  -0.4
         comp=Z,25nm,0.6s,baz=98,slow=8.9,SNR=80
SONM                               PcP     PcP     06 30 29.3  +0.4
         comp=Z,4.0nm,0.8s,baz=144,slow=1.9,SNR=4.4
SONM                               LR      LR      06 37 44.7
         comp=Z,701nm,21.2s,baz=100,slow=37
         comp=Z,25nm,0.6s
SONM   Songino Array     26.43 298         P       06 27 05.0  +0.1
SONM   Songino Array     26.43 298  P      P       06 27 05.0  +0.1
SONM                               pmax    pmax
         comp=Z,29nm,0.7s
CNSH   ChangSha          26.91 252  P      P       06 27 09.0  -0.2
CNSH                               S       S       06 31 42.9  +0.6
CNSH                               pmax    pmax
         comp=Z,58nm,1.5s
CNSH                               LR      LR
         comp=Z,660nm,22.0s
CNSH                               LR      LR
         comp=Z,380nm,18.6s
CNSH                               LR      LR
         comp=Z,620nm,21.3s
GUMO   Guam              26.95 174  LR     LR      06 38 24.3
         comp=Z,314nm,20.7s,baz=354,slow=38
XAN    Xi'an             27.06 267 ⇑P      P       06 27 09.0  -1.6
XAN                                S       S       06 31 40.8  -3.9
XAN                                pmax    pmax
         comp=Z,67nm,1.1s
XAN                                pmax    pmax
         comp=Z,280nm,4.4s
XAN                                LR      LR
         comp=Z,490nm,13.7s
XAN                                LR      LR
         comp=Z,500nm,19.9s
XAN                                LR      LR
         comp=Z,770nm,19.9s
IRK    Irkutsk           28.26 307 eP      P       06 27 20.3  -0.8
IRK                                pmax    pmax
         comp=Z,95nm,1.7s
ENH    Enshi             28.33 259  P      P       06 27 21.0  -0.9
ENH                                IAmb    IAmb    06 27 23.4
         comp=Z,116nm,0.7s
TLY    Talaya            28.57 306  P      P       06 27 23.9  +0.1
TLY    Talaya            28.57 306         P       06 27 23.9  +0.1
TLY    Talaya            28.57 306d iP     P       06 27 23.9  +0.1
TLY                                pmax    pmax
         comp=Z,48nm,1.0s
ZAK    Zakamensk         28.65 303 eP      P       06 27 23.5  -1.1
ZAK                                e               06 30 31.3
ZAK                                pmax    pmax
         comp=Z,54nm,1.4s
ZAK                                pmax    pmax
         comp=Z,16nm,1.5s
H11N2  WAKE ISLAND Hy    29.66 127  T      T       06 58 31.7
         baz=318,slow=75,SNR=2919
H11N1  WAKE ISLAND Hy    29.67 127  T      T       06 58 30.5
         baz=318,slow=75,SNR=1126
H11N3  WAKE ISLAND Hy    29.68 127  T      T       06 58 27.8
         baz=318,slow=75,SNR=3945
LZH    Lanzhou           30.17 274 eP      P       06 27 37.5  -0.8
LZH                                sP      sP      06 28 04.0  +5.8
LZH                                PcP     PcP     06 30 39.8  +1.4
LZH                                S       S       06 32 32.9  -0.9
LZH                                pmax    pmax
         comp=Z,20nm,1.3s
LZH                                pmax    pmax
         comp=Z,310nm,4.5s
LZH                                LR      LR
         comp=Z,460nm,13.4s
LZH                                LR      LR
         comp=Z,470nm,13.1s
LZH                                LR      LR
         comp=Z,620nm,13.7s
ADK    Adak              30.31  54  P      P       06 27 39.5  +0.3
ADK    Adak              30.31  54  P      P       06 27 39.5  +0.3
ADK                                pmax    pmax
         comp=Z,69nm,1.1s
LZDM   Lanzhou Array     30.33 274  P      P       06 27 38.8  -1.1
         comp=Z,11nm,0.5s,baz=110,slow=3.5,SNR=15
LZDM                               PcP     PcP     06 30 39.7  +0.7
         comp=Z,8.2nm,0.7s,baz=63,slow=3.5,SNR=2.2
         comp=Z,11nm,0.5s
GULI   GuiLin            30.46 250  P      P       06 27 35.9  -4.9
GULI                               pmax    pmax
         comp=Z,93nm,1.1s
H11S1  WAKE ISLAND Hy    30.48 129  T      T       06 59 41.8
         baz=321,slow=76,SNR=1560
H11S3  WAKE ISLAND Hy    30.49 129  T      T       06 59 38.2
         baz=321,slow=76,SNR=1026
H11S2  WAKE ISLAND Hy    30.50 129  T      T       06 59 43.3
         baz=321,slow=76,SNR=1058
BILL   Bilibino          30.53  18         P       06 27 41.6  +0.7
BILL   Bilibino          30.53  18⇑eP      P       06 27 41.4  +0.5
BILL                               pmax    pmax
         comp=Z,78nm,1.7s
BILL   Bilibino          30.53  18  P      P       06 27 41.4  +0.5
BILL                               PcP     PcP     06 30 40.0  +1.5
ATKA   Atka Island       31.87  54  P      P       06 27 52.5  -0.3
ATKA                               IAmb    IAmb    06 27 53.9
         comp=Z,141nm,1.2s
TIXI   Tiksi             31.89 352  LR     LR      06 42 29.5
         comp=Z,293nm,18.3s,baz=200,slow=39
TIXI   Tiksi             31.89 352         P       06 27 51.6  -1.2
TIXI   Tiksi             31.89 352⇑eP      P       06 27 52.2  -0.6
TIXI                               pmax    pmax
         comp=Z,36nm,1.7s
GTA    Gaotai            32.19 282 ⇓P      P       06 27 55.9  -0.1
GTA                                pP      pP      06 28 08.0  -1.6
GTA                                PcP     PcP     06 30 44.8  +1.1
GTA                                S       S       06 33 06.4  +1.1
GTA                                sS      sS      06 33 27.9  -0.1
GTA                                PcS     PcS     06 34 29.3  +0.6
GTA                                pmax    pmax
         comp=Z,42nm,0.8s
GTA                                pmax    pmax
         comp=Z,220nm,7.6s
GTA                                LR      LR
         comp=Z,300nm,16.3s
GTA                                LR      LR
         comp=Z,690nm,18.7s
GTA                                LR      LR
         comp=Z,870nm,19.9s
KNGR   Kungurtug, Tuv    32.34 303deP      P       06 27 58.1  +0.9
KNGR                               pmax    pmax
         comp=Z,68nm,1.0s
CD2    Chengdu           32.35 265  P      P       06 27 55.9  -1.5
CD2                                PcP     PcP     06 30 44.3  +0.1
CD2                                S       S       06 33 06.6  -1.1
CD2                                pmax    pmax
         comp=Z,60nm,0.8s
CD2                                pmax    pmax
         comp=Z,200nm,3.5s
CD2                                LR      LR
         comp=Z,990nm,18.4s
CD2                                LR      LR
         comp=Z,940nm,19.0s
CD2                                LR      LR
         comp=Z,640nm,17.8s
GYA    Guiyang           32.47 255 ⇑P      P       06 27 58.1  -0.5
GYA                                pP      pP      06 28 12.8  +0.6
GYA                                PcP     PcP     06 30 45.3  +0.7
GYA                                S       S       06 33 04.6  -5.2
GYA                                pmax    pmax
         comp=Z,100nm,0.7s
GYA                                LR      LR
         comp=Z,510nm,16.5s
GYA                                LR      LR
         comp=Z,610nm,16.3s
GYA                                LR      LR
         comp=Z,950nm,19.9s
SPIA   Saint Paul Isl    34.66  45  P      P       06 28 17.4  +0.2
         baz=262
QIZ    Qiongzhong        34.95 242  P      P       06 28 21.6  +1.5
QIZ    Qiongzhong        34.95 242  P      P       06 28 20.5  +0.5
QIZ                                PP      PP      06 29 40.0  -0.1
QIZ                                S       S       06 33 49.6  +1.6
QIZ                                sS      sS      06 34 12.6  +1.8
QIZ                                pmax    pmax
         comp=Z,43nm,1.0s
QIZ                                LR      LR
         comp=Z,290nm,18.0s
QIZ                                LR      LR
         comp=Z,350nm,21.2s
QIZ                                LR      LR
         comp=Z,450nm,22.0s
QIZ    Qiongzhong        34.95 242  P      P       06 28 21.6  +1.5
         comp=Z,50nm,0.8s
P08K   Saint George I    34.97  46  P      P       06 28 19.8   0.0
         baz=264
NIKH   Nikolski High     35.15  53  P      P       06 28 21.3  -0.2
         baz=269
GAMB   Gambell           35.48  34  P      P       06 28 24.5  +0.4
         baz=252
PZH    PanZhiHua         36.11 260  P      P       06 28 29.4  -0.7
PZH                                pmax    pmax
         comp=Z,80nm,0.7s
PZH                                pmax    pmax
         comp=Z,110nm,5.1s
PZH                                LR      LR
         comp=Z,240nm,18.8s
PZH                                LR      LR
         comp=Z,310nm,15.3s
PZH                                LR      LR
         comp=Z,300nm,17.8s
KMI    Kunming           36.13 257 ⇓P      P       06 28 30.1  -0.3
KMI                                PcP     PcP     06 30 54.8  -0.5
KMI                                pmax    pmax
         comp=Z,58nm,0.9s
KMI                                LR      LR
         comp=Z,430nm,20.2s
KMI                                LR      LR
         comp=Z,460nm,19.3s
KMI                                LR      LR
         comp=Z,680nm,22.9s
UNV    Unalaska Valle    36.56  51  P      P       06 28 33.7  +0.2
         baz=270
GOMU   GeErMu            36.97 279  P      P       06 28 35.9  -1.7
GOMU                               S       S       06 34 25.1  +5.7
GOMU                               pmax    pmax
         comp=Z,39nm,0.7s
GOMU                               LR      LR
         comp=Z,280nm,16.3s
GOMU                               LR      LR
         comp=Z,230nm,16.9s
GOMU                               LR      LR
         comp=Z,570nm,16.9s
M11K   Mekoryuk          37.21  40  P      P       06 28 39.3  +0.4
         baz=262
TNA    Tin City          37.57  32         P       06 28 42.0  +0.1
TNA                                IAmb    IAmb    06 29 01.2
         comp=Z,47nm,1.1s
TNA    Tin City          37.57  32  P      P       06 28 43.1  +1.2
         baz=253,SNR=6.1
K13K   Kusilvak Mount    38.18  38  IAmb   IAmb    06 29 06.3
         comp=Z,76nm,1.0s
K13K   Kusilvak Mount    38.18  38  P      P       06 28 48.6  +1.5
         baz=261
F14K   Arctic Creek      38.19  32  P      P       06 28 48.6  +1.5
         baz=255
FALS   False Pass        38.36  49  P      P       06 28 49.8  +1.1
         baz=271
ANM    Nome              38.36  34         P       06 28 49.3  +0.7
ANM                                IAmb    IAmb    06 29 08.1
         comp=Z,79nm,0.9s
ANM    Nome              38.36  34  P      P       06 28 49.3  +0.7
ANM                                pmax    pmax
         comp=Z,79nm,0.9s
ANM    Nome              38.36  34  P      P       06 28 49.9  +1.3
         baz=257,SNR=17
M13K   Dall Lake         38.62  40  P      P       06 28 50.8  +0.1
         baz=264
J14K   Nanvaranak Lak    38.82  37  P      P       06 28 53.2  +0.8
         baz=261
DGZ    Jazzator, Alta    38.86 302d iP     P       06 28 54.3  +1.1
DGZ                                pmax    pmax
         comp=Z,240nm,0.9s
F15K   North Star Dit    38.92  32  P      P       06 28 54.2  +0.9
         baz=256,SNR=10
G15K   Niukluk           39.02  33  P      P       06 28 55.7  +1.7
         baz=258
L14K   Kuka Creek        39.04  39  IAmb   IAmb    06 29 13.8
         comp=Z,94nm,1.0s
L14K   Kuka Creek        39.04  39  P      P       06 28 55.8  +1.6
         baz=264,SNR=5.3
S12K   Black Hills       39.12  48  P      P       06 28 55.6  +0.6
         baz=271
M14K   Bethel            39.33  40  IAmb   IAmb    06 29 16.1
         comp=Z,76nm,0.8s
M14K   Bethel            39.33  40  P      P       06 28 58.2  +1.5
         baz=265
TNCH   TengChong         39.34 260 ⇓P      P       06 28 58.0  +0.5
TNCH                               pP      pP      06 29 11.5  +0.2
TNCH                               sP      sP      06 29 19.1  +1.5
C16K   Lisburne Hills    39.35  28  P      P       06 28 57.5  +0.7
         baz=253
N14K   Kuskokwak Cree    39.41  41  P      P       06 28 58.4  +1.1
         baz=266
O14K   Tigyukauivet M    39.59  42  P      P       06 28 59.7  +0.9
         baz=268
L15K   Ungalak Mounta    39.64  39  P      P       06 29 00.5  +1.2
         baz=264
K15K   Wolf Creek Mou    39.69  38  IAmb   IAmb    06 29 19.2
         comp=Z,67nm,1.1s
K15K   Wolf Creek Mou    39.69  38  P      P       06 29 00.6  +1.0
         baz=264,SNR=5.8
H16K   Elim              39.70  34  P      P       06 29 01.0  +1.2
         baz=260,SNR=28
G16K   Koyuk River       39.79  33  IAmb   IAmb    06 29 20.1
         comp=Z,88nm,1.2s
G16K   Koyuk River       39.79  33  P      P       06 29 01.6  +1.1
         baz=259
WMQ    Urumqi            39.83 293 ⇓P      P       06 29 02.1  +0.9
WMQ                                PcP     PcP     06 31 07.1  +0.8
WMQ                                pmax    pmax
         comp=Z,210nm,1.1s
WMQ                                pmax    pmax
         comp=Z,140nm,3.7s
WMQ                                LR      LR
         comp=Z,480nm,10.1s
WMQ                                LR      LR
         comp=Z,430nm,14.1s
WMQ                                LR      LR
         comp=Z,290nm,23.8s
WMQ    Urumqi            39.83 293  P      P       06 29 01.8  +0.6
WMQ                                pP      pP      06 29 14.7  -0.3
M15K   Kasigluk River    39.95  40  P      P       06 29 03.1  +1.2
         baz=266
D17K   Noatak River      40.01  29  P      P       06 29 03.2  +0.9
         baz=256
ZAA0   Zalesovo Array    40.02 309         P       06 29 02.2  -0.4
ZALV   Zalesovo Beam     40.02 309  P      P       06 29 02.2  -0.3
         comp=Z,141nm,0.6s,baz=92,slow=8.3,SNR=493
ZALV                               PcP     PcP     06 31 06.9  +0.3
         comp=Z,44nm,0.5s,baz=101,slow=2.8,SNR=17
ZALV                               ScP     ScP     06 34 50.8  -0.2
         comp=Z,1.6nm,0.7s,baz=64,slow=3.4,SNR=2.1
ZALV                               LR      LR      06 46 25.6
         comp=Z,556nm,19.6s,baz=78,slow=37
         comp=Z,141nm,0.6s
ZALV   Zalesovo Beam     40.02 309         P       06 29 02.9  +0.3
ZALV   Zalesovo Beam     40.02 309 i P     P       06 29 02.4  -0.1
ZALV                               pmax    pmax
         comp=Z,142nm,0.6s
SDPT   Sand Point        40.03  48  P      P       06 29 02.5  -0.1
         baz=273
RDOG   Red Dog Mine      40.16  29  P      P       06 29 04.1  +0.5
         baz=256
C17K   DeLong Mountai    40.17  28  P      P       06 29 04.2  +0.5
         baz=255,SNR=26
N15K   Kwethluk River    40.22  41  IAmb   IAmb    06 29 23.5
         comp=Z,72nm,0.9s
N15K   Kwethluk River    40.22  41  P      P       06 29 04.9  +0.8
         baz=268
J16K   Anvik River       40.22  36  P      P       06 29 04.5  +0.4
         baz=263
I17K   Unalakleet        40.26  35  P      P       06 29 03.6  -0.7
         baz=263
O15K   Ungalikthiuk R    40.32  42  P      P       06 29 05.3  +0.4
         baz=269
E17K   Hotham Inlet      40.34  30  P      P       06 29 06.1  +1.1
         baz=258
NRIK   Noril'sk          40.34 333  P      P       06 29 05.1  +0.1
         comp=Z,23nm,0.6s,baz=110,slow=9.6,SNR=36
NRIK                               S       S       06 35 05.5  -3.2
         comp=Z,28nm,1.0s,baz=77,slow=20,SNR=16
NRIK                               LR      LR      06 46 50.1
         comp=Z,1µm,20.4s,baz=106,slow=38
         comp=Z,23nm,0.6s
NRIK   Noril'sk          40.34 333         P       06 29 04.5  -0.5
NRIK   Noril'sk          40.34 333d iP     P       06 29 04.5  -0.5
NRIK                               pmax    pmax
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      comp=Z,51nm,1.1s
F17K  Baldwin Pennin    40.44  31    P      P      06 29 06.6 +0.8
      baz=259
G17K  Kiwalik Mounta    40.51  33    P      P      06 29 08.2 +1.7
      baz=261,SNR=47
UBPT  Khong Chiam       40.54 242    P      P      06 29 07.4 +0.2
      comp=Z,130nm,1.0s
CHNA  Chernabura Isl    40.57  49    P      P      06 29 07.5 +0.4
      baz=274
L16K  Owhat River       40.60  39    P      P      06 29 07.7 +0.5
      baz=266
H17K  Granite Mounta    40.73  34    IAmb   IAmb   06 29 27.8
      comp=Z,61nm,0.8s
H17K  Granite Mounta    40.73  34    P      P      06 29 10.2 +1.9
      baz=262,SNR=25
M16K  Timber Creek      40.81  40    IAmb   IAmb   06 29 28.1
      comp=Z,117nm,1.6s
M16K  Timber Creek      40.81  40    P      P      06 29 10.7 +1.7
      baz=268
E18K  Tukpahlearik C    40.88  30    P      P      06 29 10.5 +1.1
      baz=259
N16K  Nishlik Lake      40.89  41    P      P      06 29 11.3 +1.7
      baz=268,SNR=7.4
B18K  Kokolik River     40.89  27    P      P      06 29 10.6 +1.1
      baz=255
J17K  VABM Dome         40.92  36    IAmb   IAmb   06 29 29.6
      comp=Z,110nm,1.2s
J17K  VABM Dome         40.92  36    P      P      06 29 11.6 +1.7
      baz=265,SNR=14
C18K  Utukok River      40.92  28    P      P      06 29 10.1 +0.2
      baz=257,SNR=40
ZSN   Zaisan            40.93 299   eP      P      06 29 10.8 +0.6
      comp=Z,40nm,0.5s
ZSN   Zaisan            40.93 299   eP      P      06 29 10.8 +0.6
ZSN                                  pmax   pmax
      comp=Z,40nm,0.5s
F18K  Selawik           41.09  31    P      P      06 29 12.7 +1.5
      baz=260
L17K  Donlin            41.18  38    P      P      06 29 13.8 +1.7
      baz=267,SNR=5.1
O16K  Kokwok River B    41.21  42    P      P      06 29 14.0 +1.7
      baz=270
K17K  Iditarod          41.22  37    IAmb   IAmb   06 29 32.0
      comp=Z,95nm,0.9s
K17K  Iditarod          41.22  37    P      P      06 29 14.1 +1.8
      baz=266,SNR=11
A19K  Wainwright        41.35  26    P      P      06 29 14.4 +1.2
      baz=255
G18K  Tagagawik         41.39  32    IAmb   IAmb   06 29 32.7
      comp=Z,107nm,0.8s
G18K  Tagagawik         41.39  32    P      P      06 29 15.0 +1.3
      baz=262,SNR=50
H18K  Honhosa River     41.41  33    IAmb   IAmb   06 29 33.1
      comp=Z,110nm,0.8s
H18K  Honhosa River     41.41  33    P      P      06 29 15.5 +1.6
      baz=263
KKM   Kota Kinabalu     41.43 221           P      06 29 15.2 +0.5
KKM                                  IAmb   IAmb   06 29 16.7
      comp=Z,69nm,1.0s
KKM   Kota Kinabalu     41.43 221    P      P      06 29 15.8 +1.1
      comp=Z,72nm,1.4s
KKM   Kota Kinabalu     41.43 221    P      P      06 29 16.1 +1.4
      comp=Z,72nm,1.4s
M17K  Holitna River     41.56  39    IAmb   IAmb   06 29 34.7
      comp=Z,80nm,0.8s
M17K  Holitna River     41.56  39    P      P      06 29 17.1 +1.9
      baz=268,SNR=6.4
C19K  Lookout Ridge     41.59  27    P      P      06 29 16.2 +0.8
      baz=258
N17K  Nushagak Hills    41.67  40    P      P      06 29 16.8 +0.8
      baz=270
O17K  Koliganek Bris    41.72  42    P      P      06 29 16.9 +0.5
      baz=271
F19K  Shaleruckik Mo    41.87  31    IAmb   IAmb   06 29 36.9
      comp=Z,200nm,1.6s
F19K  Shaleruckik Mo    41.87  31    P      P      06 29 18.5 +1.0
      baz=262
L18K  Granite Mounta    41.94  38    P      P      06 29 20.0 +1.8
      baz=268,SNR=6.6
Q16K  King Salmon       41.97  43    P      P      06 29 19.9 +1.4
      baz=272
J18K  Innoko River      41.98  36    P      P      06 29 19.3 +0.7
      baz=267,SNR=9.8
D19K  Kuna River        42.00  28    IAmb   IAmb   06 29 40.0
      comp=Z,88nm,1.0s
D19K  Kuna River        42.00  28    P      P      06 29 19.6 +0.9
      baz=260
GCSA  Galena City Sc    42.00  34    P      P      06 29 19.6 +1.0
      baz=265,SNR=9.1
G19K  Purcell Mounta    42.05  32    P      P      06 29 20.3 +1.2
      baz=264,SNR=38
E19K  Redstone River    42.16  30    IAmb   IAmb   06 29 31.4
      comp=Z,50nm,0.7s
E19K  Redstone River    42.16  30    P      P      06 29 21.1 +1.2
      baz=262
H19K  Roundabout Mou    42.25  33    P      P      06 29 22.4 +1.7
      baz=265
N18K  Kilae Creek       42.31  40    IAmb   IAmb   06 29 40.5
      comp=Z,55nm,0.8s
N18K  Kilae Creek       42.31  40    P      P      06 29 22.9 +1.6
      baz=271,SNR=8.4
M18K  Stony River       42.34  39    P      P      06 29 22.9 +1.5
      baz=270
SWI   Sorong            42.37 196    P      P      06 29 23.0 +0.8
      comp=Z,108nm,0.8s
Q17K  Contact Creek     42.39  44    P      P      06 29 22.7 +0.6
      baz=273
SMPI  Sarmi             42.44 185    P      P      06 29 24.9 +2.2
      comp=Z,2µmcomp=Z,208nm,1.1s
J19K  Poorman           42.50  35    IAmb   IAmb   06 29 41.7
      comp=Z,90nm,0.9s
J19K  Poorman           42.50  35    P      P      06 29 24.2 +1.5
      baz=267,SNR=24
LSA   Lhasa             42.52 272    IAmb   IAmb   06 29 27.3
      comp=Z,67nm,1.0s
LSA   Lhasa             42.52 272    P      P      06 29 20.4 -3.5
LSA                                  S      S      06 35 36.0 -6.8
LSA                                  LR     LR
      comp=Z,170nm,15.8s
LSA                                  LR     LR
      comp=Z,320nm,18.2s
LSA   Lhasa             42.52 272    P      P      06 29 25.2 +1.3
D20K  Etivluk River     42.58  28    IAmb   IAmb   06 29 43.1
      comp=Z,77nm,1.0s
D20K  Etivluk River     42.58  28    P      P      06 29 24.3 +0.9
      baz=261
B20K  Meade River       42.61  26    IAmb   IAmb   06 29 38.2
      comp=Z,59nm,0.7s
B20K  Meade River       42.61  26    P      P      06 29 24.4 +0.9
      baz=259
E20K  Nigu River        42.67  29    P      P      06 29 25.3 +1.2
      baz=262
O18K  Koktuh Hills      42.67  41    P      P      06 29 24.7 +0.5
      baz=272
P18K  Big Mountain,     42.68  42    P      P      06 29 25.2 +0.9
      baz=273
F20K  Avaraart Lake     42.69  31    P      P      06 29 25.4 +1.2
      baz=264
CHIR  Chirikof Islan    42.74  47    P      P      06 29 25.5 +0.8
      baz=276
CHTO  Chiang Mai        42.75 253    P      P      06 29 25.5 +0.2
CHTO                                 S      S      06 35 44.1 -1.4
CHTO  Chiang Mai        42.75 253           P      06 29 25.6 +0.3
CHTO                                 IAmb   IAmb   06 29 26.8
      comp=Z,78nm,0.8s
CHTO  Chiang Mai        42.75 253    P      P      06 29 25.8 +0.5
      comp=Z,72nm,0.9s
CHTO  Chiang Mai        42.75 253    P      P      06 29 25.4 +0.1
      comp=Z,1µmcomp=Z,120nm,0.9s
CHTO  Chiang Mai        42.75 253    P      P      06 29 25.7 +0.3
CHTO                                 pmax   pmax
      comp=Z,78nm,0.8s
CHTO  Chiang Mai        42.75 253    P      P      06 29 25.8 +0.5
CHTO                                 pP     pP     06 29 39.9 +0.6
CHTO                                 PcP    PcP    06 31 16.0 -0.1
MK31  Makanchi Array    42.79 299 d iP      P      06 29 25.3 -0.1
MK31                                 pmax   pmax
      comp=Z,120nm,0.6s
MKAR  Makanchi Array    42.79 299    P      P      06 29 25.6 +0.2
      comp=Z,95nm,0.6s,baz=84,slow=9.7,SNR=854
MKAR                                 PcP    PcP    06 31 16.1 +0.2
      comp=Z,10nm,0.5s,baz=57,slow=2.4,SNR=3.1
MKAR                                 S      S      06 35 43.3 -2.3
      comp=Z,3.0nm,1.0s,baz=68,slow=16,SNR=3.1
MKAR                                 LR     LR     06 48 13.2
      comp=Z,489nm,19.9s,baz=72,slow=37
      comp=Z,95nm,0.6s
L19K  White Mountain    42.80  38    P      P      06 29 26.3 +1.1
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      baz=270
Q18K  Katmai Hardscr    42.83  43    P      P      06 29 26.5 +0.9
      baz=274,SNR=5.3
JAY   Jayapura          42.86 182    LR     LR     06 47 01.7
      comp=Z,174nm,20.9s,baz=344,slow=36
JAY   Jayapura          42.86 182    P      P      06 29 27.1 +0.9
      comp=Z,52nm,1.2s
H20K  Anotleneega Mo    42.90  33    P      P      06 29 27.6 +1.6
      baz=266,SNR=34
GENI  Genyem            42.96 183    P      P      06 29 28.2 +1.3
      comp=Z,153nm,0.8s
GENI  Genyem            42.96 183    P      P      06 29 28.3 +1.3
      comp=Z,155nm,0.8s
CM31  Chiang Mai Arr    42.98 252    P      P      06 29 27.8 +0.6
      SNR=20
CM31  Chiang Mai Arr    42.98 252    P      P      06 29 27.9 +0.7
CMAR  Chiang Mai Arr    42.98 252    P      P      06 29 28.0 +0.8
      comp=Z,20nm,0.6s,baz=48,slow=6.4,SNR=109
CMAR                                 PcP    PcP    06 31 17.4 +0.6
      comp=Z,8.6nm,0.8s,baz=14,slow=2.8,SNR=5.7
CMAR                                 LR     LR     06 47 45.6
      comp=Z,274nm,21.1s,baz=55,slow=37
      comp=Z,20nm,0.6s
CMAR  Chiang Mai Arr    42.98 252           P      06 29 27.5 +0.3
CMAR  Chiang Mai Arr    42.98 252  i P      P      06 29 27.8 +0.6
CMAR                                 pmax   pmax
      comp=Z,21nm,0.6s
MAKZ  Makanchi          42.99 299           P      06 29 27.5 +0.5
MAKZ                                 IAmb   IAmb   06 29 29.5
      comp=Z,128nm,0.8s
MAKZ  Makanchi          42.99 299    P      P      06 29 27.5 +0.5
MAKZ                                 pmax   pmax
      comp=Z,129nm,0.8s
N19K  Bonanza Creek     43.00  40    P      P      06 29 28.3 +1.3
      baz=272
I20K  Naaghedeneel      43.03  34    IAmb   IAmb   06 29 46.6
      comp=Z,145nm,1.1s
I20K  Naaghedeneel      43.03  34    P      P      06 29 28.3 +1.3
      baz=268
A21K  Barrow            43.05  24    P      P      06 29 27.6 +0.6
      baz=258,SNR=35
O19K  Port Alsworth     43.10  41           P      06 29 29.3 +1.7
O19K  Port Alsworth     43.10  41    P      P      06 29 29.2 +1.6
      baz=273,SNR=5.7
J20K  Nowinta River     43.15  35    IAmb   IAmb   06 29 47.4
      comp=Z,71nm,0.8s
J20K  Nowinta River     43.15  35    P      P      06 29 29.8 +1.8
      baz=268,SNR=16
K20K  Telida            43.17  36    P      P      06 29 29.8 +1.6
      baz=269,SNR=11
C21K  Knifeblade Rid    43.30  28    P      P      06 29 30.4 +1.2
      baz=262
GTOI  Gorontalo         43.33 208    P      P      06 29 30.1 +0.1
      comp=Z,1µmcomp=Z,94nm,1.1s
IMAR  Indian Mountai    43.40  32    P      P      06 29 31.6 +1.7
B21K  Ikpikpuk River    43.42  27    IAmb   IAmb   06 30 02.3
      comp=Z,59nm,0.8s
B21K  Ikpikpuk River    43.42  27    P      P      06 29 31.4 +1.3
      baz=262
SII   Sitkinak Islan    43.46  46    P      P      06 29 30.8 +0.2
      baz=276
E21K  Killik River      43.51  29    P      P      06 29 31.6 +0.8
      baz=264
A22K  Sinclair Lake     43.51  25    P      P      06 29 31.8 +1.0
      baz=260
Q19K  Cape Douglas,     43.52  43    P      P      06 29 32.0 +0.9
      baz=274
G21K  Allakaket         43.52  32    IAmb   IAmb   06 29 50.3
      comp=Z,84nm,0.9s
G21K  Allakaket         43.52  32    P      P      06 29 32.5 +1.4
      baz=266
F21K  Alatna River      43.58  31    P      P      06 29 32.5 +1.0
      baz=266,SNR=14
M20K  Styx River        43.62  38    P      P      06 29 32.9 +1.0
      baz=272
P19K  Oil Pt            43.68  42    P      P      06 29 32.6 +0.2
      baz=274
TOLI2 Tolitoli          43.75 212    IAmb   IAmb   06 29 36.3
      comp=Z,132nm,1.7s
TOLI2 Tolitoli          43.75 212    P      P      06 29 33.3  0.0
      comp=Z,44nm,1.5s
H21K  Melozitna Rive    43.77  33    IAmb   IAmb   06 29 52.2
      comp=Z,99nm,1.0s
H21K  Melozitna Rive    43.77  33    P      P      06 29 34.5 +1.5
      baz=268,SNR=28
OHAK  Old Harbor        43.87  45    P      P      06 29 34.3 +0.5
      comp=Z,75nm,0.7s
OHAK  Old Harbor        43.87  45    P      P      06 29 34.3 +0.5
      baz=276
MRSI  Marisa            43.88 210    P      P      06 29 35.0 +0.7
      comp=Z,2µmcomp=Z,255nm,1.2s
B22K  Teshekpuk Lake    43.92  26    IAmb   IAmb   06 29 53.0
      comp=Z,145nm,1.6s
B22K  Teshekpuk Lake    43.92  26    P      P      06 29 34.8 +0.7
      baz=263,SNR=22
CHUM  Lake Minchumin    43.95  36    P      P      06 29 36.6 +2.1
      baz=270,SNR=12
D22K  Ayikyak River     44.02  28    P      P      06 29 36.4 +1.4
      baz=265
PPLA  Purkeypile        44.03  37    IAmb   IAmb   06 29 56.0
      comp=Z,191nm,1.4s
PPLA  Purkeypile        44.03  37    P      P      06 29 36.9 +1.7
      baz=272,SNR=11
SHL   Shillong          44.07 266    P      P      06 29 35.9 -0.2
      SNR=25
SHL   Shillong          44.07 266   eP      P      06 29 33.7 -2.4
SHL                                  IAmb   IAmb   06 29 41.4
      comp=Z,39nm,0.5s
N20K  Mount Spurr       44.09  39    P      P      06 29 37.3 +1.6
      baz=273
SPCR  Spurr Chakacha    44.09  39    P      P      06 29 37.5 +1.8
      baz=273,SNR=8.5
F22K  John River        44.10  30    P      P      06 29 37.4 +1.7
      baz=267
FAKI  Fak Fak           44.17 194           P      06 29 36.7  0.0
FAKI                                 IAmb   IAmb   06 29 38.1
      comp=Z,102nm,1.0s
FAKI  Fak Fak           44.17 194    P      P      06 29 37.1 +0.4
      comp=Z,99nm,1.2s
FAKI  Fak Fak           44.17 194    P      P      06 29 36.9 +0.2
      comp=Z,1µmcomp=Z,99nm,1.2s
KDAK  Kodiak Island     44.19  44           P      06 29 37.2 +0.8
KDAK                                 IAmb   IAmb   06 29 54.4
      comp=Z,105nm,0.8s
KDAK  Kodiak Island     44.19  44 d iP      P      06 29 36.5 +0.1
KDAK                                 pmax   pmax
      comp=Z,68nm,0.9s
KDAK  Kodiak Island     44.19  44    P      P      06 29 37.1 +0.7
      baz=276
Q20K  Shuyak Island     44.20  43    P      P      06 29 37.4 +0.9
      baz=276
SYI   Shuyak Island     44.20  43    P      P      06 29 37.0 +0.5
KURK  Kurchatov         44.26 305    P      P      06 29 37.0  0.0
KURK                                 S      S      06 36 04.8 -1.9
KURK  Kurchatov         44.26 305           P      06 29 37.1  0.0
KURK  Kurchatov         44.26 305 d iP      P      06 29 36.9 -0.2
KURK                                 pmax   pmax
      comp=Z,350nm,1.0s
KURK  Kurchatov         44.26 305    P      P      06 29 37.1  0.0
KURK                                 pP     pP     06 29 51.1  0.0
KURK                                 PcP    PP     06 31 21.2 +0.4
E22K  Anaktuvuk Pass    44.28  29    IAmb   IAmb   06 29 56.8
      comp=Z,55nm,0.8s
E22K  Anaktuvuk Pass    44.28  29    P      P      06 29 38.2 +1.1
      baz=266
KURBB Kurchatov Arra    44.33 305    P      P      06 29 37.6  0.0
      comp=Z,236nm,0.7s,baz=80,slow=8.5,SNR=1103
KURBB                                PcP    PcP    06 31 20.7 -0.2
      comp=Z,43nm,0.7s,baz=84,slow=3.4,SNR=9.4
KURBB                                S      S      06 35 58.4 -9.5
      comp=Z,1.7nm,0.7s,baz=79,slow=15,SNR=4.6
KURBB                                LR     LR     06 48 51.3
      comp=Z,224nm,18.6s,baz=144,slow=37
      comp=Z,236nm,0.7s
KURBB Kurchatov Arra    44.33 305    P      P      06 29 36.7 -1.0
H22K  Ishtalitna Cre    44.36  33    IAmb   IAmb   06 29 58.4
      comp=Z,53nm,0.8s
H22K  Ishtalitna Cre    44.36  33    P      P      06 29 39.6 +1.9
      baz=269,SNR=20
SKT   Skwentna          44.37  38    P      P      06 29 38.4 +0.6
      baz=273
HOM   Homer             44.48  42    P      P      06 29 39.4 +0.7
      baz=275
BPAW  Bear Paw Mtn.     44.54  35    P      P      06 29 40.3 +1.1
      baz=271,SNR=7.8
KTH   Kantishna Hill    44.58  36    IAmb   IAmb   06 29 59.0
      comp=Z,132nm,1.0s
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MLY   Manley            44.63  34    IAmb   IAmb   06 29 58.8
      comp=Z,72nm,1.1s
MLY   Manley            44.63  34    P      P      06 29 41.8 +1.8
      baz=271,SNR=14
CAPN  Captain Cook N    44.63  40    P      P      06 29 40.8 +1.0
      baz=275
KMPI  Kaimana, Papua    44.65 192    P      P      06 29 41.3 +0.8
CNPM  China Poot        44.70  42           P      06 29 42.1 +1.6
CNPM                                 IAmb   IAmb   06 29 59.3
      comp=Z,67nm,0.8s
D23K  Nanushuk River    44.75  28    P      P      06 29 42.3 +1.6
      baz=267
SUA   Susitna One       44.77  39    IAmb   IAmb   06 30 01.2
      comp=Z,73nm,0.8s
SUA   Susitna One       44.77  39    P      P      06 29 42.7 +1.5
      baz=274,SNR=8.2
MPSI  Mapaga            44.81 212    P      P      06 29 42.4 +0.6
      comp=Z,803nmcomp=Z,43nm,0.7s
C23K  Itkillik River    44.83  27    P      P      06 29 42.5 +1.2
      baz=266,SNR=26
BRLK  Bradley Lake      44.85  41    IAmb   IAmb   06 30 01.2
      comp=Z,67nm,0.7s
COLD  Coldfoot          44.86  31    P      P      06 29 43.0 +1.3
      baz=269,SNR=23
SANI  Sanana            44.86 203    P      P      06 29 41.7 -0.5
      comp=Z,104nm,0.7s
SANI  Sanana            44.86 203    P      P      06 29 41.2 -1.0
      comp=Z,1µmcomp=Z,105nm,1.0s
TRF   Thorofare Moun    44.87  36    P      P      06 29 42.9 +0.9
      baz=273
G23K  Bananza Creek     44.92  31    IAmb   IAmb   06 30 01.1
      comp=Z,72nm,1.0s
G23K  Bananza Creek     44.92  31    P      P      06 29 43.8 +1.6
      baz=270,SNR=47
BRSE  Bradley Lake S    44.93  41    P      P      06 29 44.1 +1.8
      baz=276,SNR=5.8
CUT   Chulitna          44.94  38    P      P      06 29 44.1 +1.8
      baz=274
LUWI  Luwuk             44.97 208    P      P      06 29 43.2 +0.1
      comp=Z,72nm,0.7s
LUWI  Luwuk             44.97 208    P      P      06 29 41.7 -1.4
      comp=Z,3µmcomp=Z,71nm,0.6s
M22K  Willow            45.05  38    P      P      06 29 44.5 +1.3
      baz=274
E23K  Chandalar         45.10  30    P      P      06 29 45.1 +1.4
      baz=269,SNR=45
H23K  Yukon River       45.12  33    P      P      06 29 45.7 +1.9
      baz=271
TOLK  Toolik Lake Re    45.13  29    P      P      06 29 45.2 +1.3
      baz=268,SNR=7.9
I23K  Minto, Yukon-K    45.21  34    IAmb   IAmb   06 30 04.8
      comp=Z,150nm,1.5s
I23K  Minto, Yukon-K    45.21  34    P      P      06 29 46.2 +1.8
      baz=272,SNR=10
APSI  Ampana            45.26 209    P      P      06 29 45.1 -0.3
      comp=Z,153nm,1.2s
RC01  Rabbit Creek A    45.29  39    IAmb   IAmb   06 30 03.4
      comp=Z,51nm,0.8s
RC01  Rabbit Creek A    45.29  39    P      P      06 29 46.2 +1.1
      baz=276,SNR=7.8
MSAI  Masohi            45.30 199    P      P      06 29 47.0 +1.3
      comp=Z,98nm,0.7s
NEA2  Nenana            45.35  34    IAmb   IAmb   06 30 08.4
      comp=Z,62nm,0.8s
NEA2  Nenana            45.35  34    P      P      06 29 46.8 +1.2
      baz=273,SNR=16
O22K  Cooper Landing    45.36  40    P      P      06 29 46.5 +0.8
      baz=276
KRAI  Karang Ratu       45.41 199    P      P      06 29 48.1 +1.6
      comp=Z,4µmcomp=Z,217nm,0.9s
D24K  Happy Valley      45.42  28    IAmb   IAmb   06 29 48.3
      comp=Z,66nm,0.8s
D24K  Happy Valley      45.42  28    P      P      06 29 47.2 +1.1
      baz=268
MCK   McKinley          45.46  36    IAmb   IAmb   06 30 05.1
      comp=Z,72nm,0.9s
MCK   McKinley          45.46  36    P      P      06 29 47.4 +0.9
      baz=274,SNR=14
C24K  Franklin Bluff    45.49  27    IAmb   IAmb   06 29 48.6
      comp=Z,75nm,0.8s
C24K  Franklin Bluff    45.49  27    P      P      06 29 47.6 +1.1
      baz=268
RND   Reindeer          45.52  36    IAmb   IAmb   06 30 06.0
      comp=Z,148nm,1.3s
PMR   Palmer            45.53  39    P      P      06 29 47.7 +0.7
      comp=Z,42nm,0.7s
PMR   Palmer            45.53  39    P      P      06 29 48.0 +1.0
      baz=276,SNR=6.2
SEW   Seward            45.53  41    IAmb   IAmb   06 30 00.6
      comp=Z,51nm,0.8s
SEW   Seward            45.53  41    P      P      06 29 47.6 +0.5
      baz=277
GHO   Glory Hole Cre    45.62  38    IAmb   IAmb   06 30 01.5
      comp=Z,72nm,0.7s
PDGK  Podgornoye        45.68 295    P      P      06 29 47.2 -1.5
WAT1  Susitna Watana    45.70  37    P      P      06 29 48.9 +0.5
      baz=275
F24K  Squaw Lake        45.76  30    P      P      06 29 50.2 +1.4
      baz=271,SNR=23
SHLS  Shalkode          45.76 295 ⇓ iP      P      06 29 47.0 -2.3
      comp=Z,40nm,0.6s
SHLS  Shalkode          45.76 295 d iP      P      06 29 47.0 -2.3
SHLS                                 pmax   pmax
      comp=Z,40nm,0.6s
H24K  Noodor Dome       45.80  33    IAmb   IAmb   06 30 09.0
      comp=Z,133nm,1.4s
H24K  Noodor Dome       45.80  33    P      P      06 29 51.2 +2.0
      baz=272
BRDH  Bariadhala        45.86 263    LR     LR     06 51 39.0
      comp=Z,222nm,19.8s,baz=24,slow=39
COLA  College           45.86  34    P      P      06 29 50.2 +0.7
COLA                                 IAmb   IAmb   06 30 08.7
      comp=Z,75nm,0.9s
COLA  College           45.86  34    P      P      06 29 50.7 +1.1
      comp=Z,50nm,1.1s
COLA  College           45.86  34 d iP      P      06 29 50.3 +0.7
COLA                                 pmax   pmax
      comp=Z,25nm,1.1s
COLA  College           45.86  34    P      P      06 29 50.5 +0.9
      baz=273
KNK   Knik Glacier      45.87  39    IAmb   IAmb   06 30 09.5
      comp=Z,106nm,1.4s
KNK   Knik Glacier      45.87  39    P      P      06 29 50.3 +0.5
      baz=276
TDK   Taldyqorghan      45.89 298 ⇓ iP      P      06 29 50.5 +0.3
      comp=Z,43nm,0.6s
TDK   Taldyqorghan      45.89 298 d iP      P      06 29 50.4 +0.3
TDK                                  pmax   pmax
      comp=Z,43nm,0.6s
SML   Sawmill           45.89  38    IAmb   IAmb   06 30 21.7
      comp=Z,62nm,0.8s
SML   Sawmill           45.89  38    P      P      06 29 50.7 +0.7
      baz=276,SNR=9.7
CCB   Clear Creek Bu    45.90  34           P      06 29 49.5 -0.4
CCB                                  IAmb   IAmb   06 30 11.0
      comp=Z,65nm,1.4s
G24K  Hadweenzic Riv    45.94  31    IAmb   IAmb   06 30 09.9
      comp=Z,105nm,1.1s
G24K  Hadweenzic Riv    45.94  31    P      P      06 29 52.0 +1.8
      baz=272,SNR=28
PWL   Port Wells        46.00  40    IAmb   IAmb   06 30 08.9
      comp=Z,63nm,0.9s
PWL   Port Wells        46.00  40    P      P      06 29 51.5 +0.8
      baz=277,SNR=6.1
POKR  Poker Plat Res    46.02  34    P      P      06 29 52.8 +1.9
      baz=274,SNR=19
UZB   Uzynbulak         46.06 295 ⇓ iP      P      06 29 51.7 -0.1
UZB   Uzynbulak         46.06 295 d iP      P      06 29 51.6 -0.1
WAT6  Susitna Watana    46.09  37    P      P      06 29 52.2 +0.6
      baz=276,SNR=6.2
M23K  Glacier View      46.18  38    P      P      06 29 53.0 +0.8
      baz=276
DHY   Denali Highway    46.21  36    IAmb   IAmb   06 30 10.5
      comp=Z,44nm,0.9s
DHY   Denali Highway    46.21  36    P      P      06 29 53.2 +0.6
      baz=276,SNR=17
BNDI  Bandanaira        46.21 197    P      P      06 29 53.1 +0.2
IL31                    46.28  34    IAmb   IAmb   06 30 11.3
      comp=Z,69nm,0.9s
ILAR  Eielson Array     46.28  34    P      P      06 29 53.8 +0.8
      comp=Z,14nm,0.8s,baz=266,slow=6.1,SNR=143
ILAR                                 LR     LR     06 52 19.1
      comp=Z,224nm,18.5s,baz=278,slow=40
      comp=Z,14nm,0.8s
ILAR  Eielson Array     46.28  34    P      P      06 29 53.2 +0.3
HDA   Harding Lake      46.28  35    IAmb   IAmb   06 30 11.1
      comp=Z,52nm,0.9s
HDA   Harding Lake      46.28  35    P      P      06 29 53.5 +0.6
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	baz=275,SNR=17						
D25K	Kavik River	46.30	28	IAmb	IAmb	06 29 55.1	
	comp=Z,34nm,0.7s						
D25K	Kavik River	46.30	28	P	P	06 29 54.1	+1.0
	baz=270						
SCM	Sheep Creek Mo	46.36	38	IAmb	IAmb	06 30 12.5	
	comp=Z,63nm,0.8s						
SCM	Sheep Creek Mo	46.36	38	P	P	06 29 54.7	+1.0
	baz=277,SNR=5.2						
G25K	Bearman Lake	46.48	31	P	P	06 29 56.3	+1.9
	baz=273,SNR=14						
SATY	Saty	46.52	295	⇓ *i*P	P	06 29 55.4	+0.1
SATY	Saty	46.52	295	*d* *i*P	P	06 29 55.3	0.0
SBUM	Sibu	46.54	223		P	06 29 55.3	-0.1
SBUM	Sibu	46.54	223	P	P	06 29 55.4	-0.1
	comp=Z,14nm,0.6s						
SBUM	Sibu	46.54	223	P	P	06 29 56.0	+0.5
P23K	Montague Islan	46.57	41	P	P	06 29 56.4	+1.1
	baz=278						
GLI	Glacier Island	46.59	39	IAmb	IAmb	06 30 13.6	
	comp=Z,40nm,0.8s						
GLI	Glacier Island	46.59	39	P	P	06 29 55.8	+0.3
	baz=278						
WUS	Wushi	46.60	292	P	P	06 29 56.6	+0.7
WUS				PcP	PcP	06 31 29.2	0.0
F25K	Christian Rive	46.61	30	IAmb	IAmb	06 30 16.3	
	comp=Z,49nm,1.1s						
F25K	Christian Rive	46.61	30	P	P	06 29 57.5	+2.0
	baz=273,SNR=34						
E25K	Arctic Village	46.62	29	P	P	06 29 57.5	+1.9
	baz=272,SNR=30						
PRZ	Przheval'sk	46.72	294	IAmb	IAmb	06 29 59.0	
	comp=Z,72nm,0.9s						
C26K	Camden Bay	46.80	27	P	P	06 29 58.6	+1.7
	baz=271,SNR=30						
K24K	Donnelly Dome	46.85	35	IAmb	IAmb	06 30 15.7	
	comp=Z,96nm,1.0s						
K24K	Donnelly Dome	46.85	35	P	P	06 29 58.2	+0.7
	baz=276						
M24K	Tolsona, Glenn	46.87	38	IAmb	IAmb	06 30 36.9	
	comp=Z,68nm,0.8s						
M24K	Tolsona, Glenn	46.87	38	P	P	06 29 58.6	+0.9
	baz=277,SNR=5.8						
J25K	Salcha River,	46.94	34	P	P	06 29 59.0	+0.8
	baz=276						
BMAR	Burnt Mountain	47.03	30	P	P	06 30 00.3	+1.5
KLU	Klutina	47.07	39	IAmb	IAmb	06 30 18.3	
	comp=Z,59nm,1.0s						
KLU	Klutina	47.07	39	P	P	06 30 00.0	+0.8
	baz=278,SNR=11						
PAX	Paxson	47.09	36	P	P	06 30 00.6	+1.2
	baz=277						
F26K	Sheenjek River	47.18	30	P	P	06 30 02.2	+2.2
	baz=274,SNR=117						
Q23K	Middleton Isla	47.19	41	P	P	06 30 02.1	+2.1
	baz=280						
DIV	Divide	47.20	39	IAmb	IAmb	06 30 18.8	
	comp=Z,56nm,0.9s						
CHKK	Chushkaly	47.22	297	*e*P	P	06 30 00.7	+0.1
CHKK	Chushkaly	47.22	297	*e*P	P	06 30 00.7	+0.1
C27K	Jago River	47.23	27	IAmb	IAmb	06 30 03.0	
	comp=Z,60nm,0.8s						
C27K	Jago River	47.23	27	P	P	06 30 02.0	+1.7
	baz=273						
RIDG	Independent Ri	47.27	35	P	P	06 30 02.5	+1.7
	baz=277,SNR=6.3						
EYAK	Cordova Ski Ar	47.30	40	IAmb	IAmb	06 30 20.5	
	comp=Z,61nm,0.9s						
EYAK	Cordova Ski Ar	47.30	40	P	P	06 30 02.4	+1.5
	comp=Z,59nm,1.0s						
EYAK	Cordova Ski Ar	47.30	40	P	P	06 30 02.3	+1.4
	baz=279,SNR=5.1						
HARP	HAARP	47.30	37	P	P	06 30 02.5	+1.6
	baz=278,SNR=12						
G26K	Porcupine Rive	47.38	31	P	P	06 30 03.9	+2.4
	baz=275,SNR=50						
TARG	Taragay, Kyrgy	47.40	294	IAmb	IAmb	06 30 08.6	
	comp=Z,65nm,0.7s						
MDOK	Medeo	47.42	296	*e*P	P	06 30 02.6	+0.3
MDOK	Medeo	47.42	296	*e*P	P	06 30 02.6	+0.3
SHBG	Sahibganj	47.48	269	*e*P	P	06 30 00.9	-1.9
AAA	Alma-Ata	47.49	296	*e*P	P	06 30 02.7	-0.1
	comp=Z,57nm,0.9s						
AAA	Alma-Ata	47.49	296	*e*P	P	06 30 02.6	-0.1
AAA				pmax	pmax		
	comp=Z,57nm,0.9s						
TNSS	Tian-Shan	47.53	296	*e*P	P	06 30 03.2	-0.3
TNSS	Tian-Shan	47.53	296	*e*P	P	06 30 03.1	-0.4
SCRK	Sand Creek	47.62	35		P	06 30 04.5	+1.0
SCRK				IAmb	IAmb	06 30 21.8	
	comp=Z,86nm,1.1s						
SCRK	Sand Creek	47.62	35	P	P	06 30 04.0	+0.5
	baz=278,SNR=30						
DOT	Dot Lake	47.63	35	IAmb	IAmb	06 30 21.7	
	comp=Z,63nm,1.3s						
N25K	Chitina, Valde	47.68	38	IAmb	IAmb	06 30 06.9	
	comp=Z,122nm,1.9s						
N25K	Chitina, Valde	47.68	38	P	P	06 30 05.1	+1.1
	baz=279						
KDJ	Kajisay	47.69	294	IAmb	IAmb	06 30 07.4	
	comp=Z,44nm,0.6s						
J26L	Joseph Creek	47.73	34	P	P	06 30 05.6	+1.3
	baz=277						
BMRM	Bremner River	47.78	39	P	P	06 30 06.0	+1.3
	baz=280,SNR=6.7						
I26K	Coal Creek Min	47.80	33	P	P	06 30 05.8	+1.0
	baz=277						
MENT	Mentasta	47.88	36	IAmb	IAmb	06 30 27.8	
	comp=Z,55nm,1.0s						
MENT	Mentasta	47.88	36	P	P	06 30 07.0	+1.5
	comp=Z,63nm,1.1s						
TTSI	Tana Toraja	47.92	211	P	P	06 30 07.4	+1.2
L26K	Log Cabin Wild	48.04	36	P	P	06 30 07.8	+1.2
	baz=279,SNR=22						
KAIM	Kayak Island	48.06	40	P	P	06 30 08.1	+1.3
	baz=281						
E27K	Coleen River	48.10	29	P	P	06 30 08.8	+1.7
	baz=276,SNR=40						
BRZS	Berezniki	48.13	306	*e*P	P	06 30 07.4	-0.1
BRZS	Berezniki	48.13	306	*e*P	P	06 30 07.4	-0.1
MTKI	Muara Teweh, K	48.14	218	P	P	06 30 08.7	+0.8
	comp=Z,137nm,0.8s						
D27M	Malcolm River	48.22	28	IAmb	IAmb	06 30 10.8	
	comp=Z,32nm,0.9s						
D27M	Malcolm River	48.22	28	P	P	06 30 09.8	+1.8
	baz=275,SNR=35						
G27K	Doyon Strip	48.23	31	IAmb	IAmb	06 30 28.8	
	comp=Z,140nm,1.8s						
G27K	Doyon Strip	48.23	31	P	P	06 30 09.8	+1.8
	baz=277,SNR=17						
KKSI	Kolaka, Sulawe	48.28	208	P	P	06 30 09.5	+0.6
	comp=Z,94nm,0.6s						
VRDI	Verde Repeater	48.29	39	IAmb	IAmb	06 30 28.0	
	comp=Z,35nm,0.9s						
M26K	Nabesna, AK	48.30	37	IAmb	IAmb	06 30 28.4	
	comp=Z,75nm,1.2s						
M26K	Nabesna, AK	48.30	37	P	P	06 30 10.3	+1.6
	baz=280,SNR=14						
ULHL	Ulahol	48.30	295	P	P	06 30 09.5	+0.3
	SNR=18						
H27K	Steamboat Moun	48.35	32	IAmb	IAmb	06 30 30.1	
	comp=Z,77nm,1.1s						
H27K	Steamboat Moun	48.35	32	P	P	06 30 11.1	+2.1
	baz=278,SNR=22						
I27K	Kandik River	48.40	33	P	P	06 30 11.9	+2.4
	baz=278						
K27K	Chicken	48.44	35	P	P	06 30 11.2	+1.5
	baz=279						
MCARA	McCarthy VSAT	48.47	38	P	P	06 30 11.8	+1.9
	baz=281,SNR=9.6						
TKM2	Tokmak 2	48.50	296	P	P	06 30 11.4	+0.7
	SNR=197						
CRQE	Cirque	48.55	39	P	P	06 30 12.1	+1.4
	baz=281,SNR=10						
BVA0	Borovoye Array	48.66	310	*i* P	P	06 30 11.0	-0.6
BVAR	Borovoye Array	48.66	310	P	P	06 30 11.8	+0.3
	comp=Z,135nm,0.4s,baz=81,slow=7.6,SNR=111						
BVAR				PcP	PcP	06 31 36.5	+0.4
	comp=Z,52nm,0.8s,baz=66,slow=3.6,SNR=7.3						
BVAR				S	S	06 37 08.5	-1.2
	comp=Z,6.2nm,0.9s,baz=73,slow=11,SNR=6.2						
BVAR				LR	LR	06 51 52.1	
	comp=Z,489nm,18.0s,baz=75,slow=37						
	comp=Z,135nm,0.4s						
TGL	Tana Glacier	48.68	39	IAmb	IAmb	06 30 31.0	
	comp=Z,58nm,1.0s						
BORK	Borovoye	48.70	310		P	06 30 12.4	+0.6
BORK	Borovoye	48.70	310	*d* *i*P	P	06 30 12.0	+0.2
BORK				pmax	pmax		
	comp=Z,97nm,0.6s						
BORK	Borovoye	48.70	310	P	P	06 30 12.2	+0.4
BORK				sP	sP	06 30 31.6	-0.6
BORK				PcP	PcP	06 31 36.6	+0.4
L27K	Beaver Creek,	48.71	36	IAmb	IAmb	06 30 31.5	
	comp=Z,74nm,1.1s						
L27K	Beaver Creek,	48.71	36	P	P	06 30 13.6	+1.7
	baz=280						
BCAR	Beaver Creek A	48.73	36	P	P	06 30 12.9	+0.8
SPSI	Sidrap Palu	48.78	210	P	P	06 30 12.4	-0.4
	comp=Z,2µmcomp=Z,75nm,1.3s						
E28M	Babbage River	48.81	29	IAmb	IAmb	06 30 15.4	
	comp=Z,41nm,0.8s						
E28M	Babbage River	48.81	29	P	P	06 30 14.4	+1.9
	baz=277						
F28M	Old Crow	48.81	30	IAmb	IAmb	06 30 32.4	
	comp=Z,69nm,1.0s						
F28M	Old Crow	48.81	30	P	P	06 30 14.6	+2.0
	baz=278,SNR=39						
M27K	Edge Creek, AK	48.82	37	IAmb	IAmb	06 30 32.3	
	comp=Z,58nm,1.0s						
M27K	Edge Creek, AK	48.82	37	P	P	06 30 14.4	+1.6
	baz=281,SNR=12						
STKI	Sintang	48.95	222	P	P	06 30 14.9	+0.7
	comp=Z,103nm,0.6s						
SGDS	Sogindy	48.97	297	*e*P	P	06 30 14.2	0.0
D28M	Stokes Point	49.00	28	P	P	06 30 15.5	+1.6
	baz=277						
KBK	Karagaybulak	49.04	296	P	P	06 30 15.5	+0.6
	SNR=86						
CHMS	Chumysh	49.05	296	P	P	06 30 14.9	+0.1
	SNR=13						
BNSI	Bone	49.05	210	P	P	06 30 15.6	+0.7
	comp=Z,1µmcomp=Z,162nm,1.1s						
I28M	Miner Creek	49.12	33	IAmb	IAmb	06 30 28.4	
	comp=Z,28nm,0.7s						
I28M	Miner Creek	49.12	33	P	P	06 30 16.6	+1.6
	baz=280,SNR=26						
USP	Ospenovka	49.12	297	P	P	06 30 15.4	+0.1
	SNR=43						
BARN	Barnard Glacie	49.18	39	IAmb	IAmb	06 30 30.8	
	comp=Z,48nm,0.7s						
GRNC	Granite Creek	49.20	39	IAmb	IAmb	06 30 35.0	
	comp=Z,73nm,0.9s						
FRU1	Bishkek	49.20	296	IAmb	IAmb	06 30 21.7	
	comp=Z,65nm,0.8s						
BVCY	Beaver Creek	49.27	37	P	P	06 30 17.9	+1.7
	baz=282,SNR=20						
YAH	Yahtse	49.28	40	IAmb	IAmb	06 30 35.7	
	comp=Z,61nm,0.9s						
SAUI	Saumlaki	49.29	194	P	P	06 30 17.6	+0.9
SAUI	Saumlaki	49.29	194	P	P	06 30 18.2	+1.5
	comp=Z,107nm,0.7s						
SAUI	Saumlaki	49.29	194	P	P	06 30 17.6	+0.9
	comp=Z,183nm,1.3s						
CTG	Chitna Glacier	49.35	39	P	P	06 30 18.4	+1.5
	baz=282,SNR=7.5						
CTGM	Chitina Glacie	49.35	39	IAmb	IAmb	06 30 31.4	
	comp=Z,45nm,0.6s						
AAK	Ala-Archa	49.36	296	P	P	06 30 17.5	+0.2
	SNR=33						
AAK	Ala-Archa	49.36	296	LR	LR	06 52 31.8	
	comp=Z,389nm,21.5s,baz=70,slow=38						
AAK	Ala-Archa	49.36	296	P	P	06 30 17.1	-0.1
AAK	Ala-Archa	49.36	296		P	06 30 17.1	-0.1
AAK				IAmb	IAmb	06 30 22.8	
	comp=Z,35nm,0.8s						
AAK	Ala-Archa	49.36	296	*i* P	P	06 30 17.5	+0.2
	SNR=44						
AAK	Ala-Archa	49.36	296	*d* *i*P	P	06 30 17.2	-0.1
AAK				pmax	pmax		
	comp=Z,25nm,0.8s						
E29M	Blow River	49.44	29	P	P	06 30 19.5	+2.2
	baz=279,SNR=77						
UCH	Uchtor	49.50	295	P	P	06 30 19.2	+0.5
	SNR=22						
KSH	Kashi	49.53	292	P	P	06 30 22.6	+4.0
KSH				S	S	06 37 29.5	+7.0
KSH				pmax	pmax		
	comp=Z,42nm,0.9s						
KSH				pmax	pmax		
	comp=Z,230nm,5.3s						
KSH				LR	LR		
	comp=Z,350nm,14.8s						
KSH				LR	LR		
	comp=Z,390nm,18.2s						
KSH				LR	LR		
	comp=Z,610nm,17.9s						
YUK3	Moose Creek	49.59	38	P	P	06 30 20.0	+1.3
	baz=282,SNR=9.5						
DAWY	Dawson	49.60	34	P	P	06 30 19.6	+1.0
	baz=281						
BOK	Bokaro	49.60	268	*e*P	P	06 30 17.5	-1.6
BOK				IAmb	IAmb	06 30 20.7	
	comp=Z,37nm,1.0s						
H29M	Whitestone	49.62	32	IAmb	IAmb	06 30 53.0	
	comp=Z,39nm,0.8s						
H29M	Whitestone	49.62	32	P	P	06 30 20.7	+2.0
	baz=280,SNR=10						
G29M	Pine Creek	49.63	31	P	P	06 30 21.0	+2.2
	baz=280,SNR=21						
KAPI	Kappang	49.75	210	LR	LR	06 51 31.3	
	comp=Z,124nm,21.3s,baz=35,slow=36						
KAPI	Kappang	49.75	210	P	P	06 30 20.6	+0.4
KAPI				S	S	06 37 25.2	-0.4
KAPI	Kappang	49.75	210		P	06 30 20.3	+0.1
KAPI	Kappang	49.75	210	P	P	06 30 20.3	+0.1
	comp=Z,59nm,1.2s						
KAPI	Kappang	49.75	210	P	P	06 30 20.3	+0.1
	comp=Z,59nm,1.2s						
KAPI	Kappang	49.75	210	*d* *i*P	P	06 30 20.2	0.0
KAPI				pmax	pmax		
	comp=Z,111nm,1.3s						
I29M	Ogilvie Camp,	49.80	33	P	P	06 30 21.8	+1.6
	baz=281,SNR=21						
EKS2	Erkin-Say	49.84	296	P	P	06 30 21.1	+0.2
	SNR=42						
PMG	Port Moresby	49.91	173	P	P	06 30 21.9	+0.5
	comp=Z,11nm,0.4s,baz=335,slow=12,SNR=5.5						
	comp=Z,11nm,0.4s						
PMG	Port Moresby	49.91	173	P	P	06 30 21.5	+0.1
PMG				IAmb	IAmb	06 31 04.5	
	comp=Z,33nm,0.9s						
PMG	Port Moresby	49.91	173	P	P	06 30 21.7	+0.3
PMG	Port Moresby	49.91	173	*de*P	P	06 30 21.3	-0.1
PMG				pmax	pmax		
	comp=Z,13nm,0.7s						
O28M	Mount Upton	49.94	39	P	P	06 30 22.4	+0.8
	baz=283						
YUK8	Steele Glacier	50.02	38	P	P	06 30 22.6	+0.4
	baz=283						
J29N	Klondike Camp	50.02	34	P	P	06 30 23.3	+1.4
	baz=282						
PINM	Pinnacle	50.07	40	P	P	06 30 23.0	+0.7
	baz=284						
EPYK	Eagle Plains	50.25	31	P	P	06 30 25.2	+1.7
	baz=282,SNR=36						
G30M	tAoh Zraii Nji	50.32	30	P	P	06 30 25.7	+1.7
	baz=282,SNR=37						
L29M	L29M	50.35	36	P	P	06 30 26.3	+1.9
	baz=283,SNR=40						
M29M	Somme Creek	50.36	36	P	P	06 30 26.2	+1.7
	baz=283,SNR=10						
F30M	Barrier River	50.36	30	P	P	06 30 26.3	+2.0
	baz=281,SNR=49						
BBKI	Banjar Baru	50.39	216	P	P	06 30 24.5	-0.6
K29M	Barlow Dome	50.45	35	IAmb	IAmb	06 30 44.8	
	comp=Z,56nm,0.9s						
K29M	Barlow Dome	50.45	35	P	P	06 30 26.6	+1.4
	baz=283,SNR=25						
YUK4	Talbot Arm	50.53	38	P	P	06 30 27.6	+1.6
	baz=284,SNR=9.9						
I30M	Mount Dempster	50.63	33	P	P	06 30 28.2	+1.8
	baz=283,SNR=56						
YUK6	Outpost Mounta	50.77	38	P	P	06 30 29.4	+1.6
	baz=285						
DGPR	DIGLIPUR	50.79	252	*e*P	P	06 30 26.7	-1.5
DGPR				IAmb	IAmb	06 30 29.3	
	comp=Z,34nm,0.7s						
J30M	Hart River	50.79	33	IAmb	IAmb	06 30 47.8	
	comp=Z,145nm,1.9s						
J30M	Hart River	50.79	33	P	P	06 30 29.1	+1.4
	baz=283,SNR=12						
O29M	Mount Kennedy	50.83	39	IAmb	IAmb	06 30 48.2	
	comp=Z,53nm,1.1s						
O29M	Mount Kennedy	50.83	39	P	P	06 30 30.1	+2.0
	baz=285,SNR=9.3						
PTH	Pithoragarh	50.88	278	*e*P	P	06 30 27.1	-1.9
PTH				IAmb	IAmb	06 30 32.0	
	comp=Z,26nm,1.1s						
JOSI	Joshimath	50.89	279	*e*P	P	06 30 27.4	-1.7
JOSI				IAmb	IAmb	06 30 35.8	
	comp=Z,39nm,0.6s						
ALCI	Alchi Leh	50.93	285	*e*P	P	06 30 27.5	-2.0
ALCI				IAmb	IAmb	06 30 33.7	
	comp=Z,37nm,1.1s						
INK	Inuvik	51.05	28	LR	LR	06 53 22.5	
	comp=Z,407nm,21.2s,baz=264,slow=37						
INK	Inuvik	51.05	28	IAmb	IAmb	06 30 48.4	
	comp=Z,61nm,0.9s						
INK	Inuvik	51.05	28	P	P	06 30 30.8	+1.4
	baz=283,SNR=23						
LGTI	Lohaghat	51.06	278	*e*P	P	06 30 29.4	-1.0
LGTI				IAmb	IAmb	06 30 33.7	
	comp=Z,33nm,0.1s						
M30M	Minto, Yukon	51.08	36	IAmb	IAmb	06 30 49.7	
	comp=Z,40nm,1.0s						
M30M	Minto, Yukon	51.08	36	P	P	06 30 31.9	+2.1
	baz=285,SNR=14						
KULM	Kulim	51.08	238	IAmb	IAmb	06 30 32.1	
	comp=Z,73nm,0.9s						
KULM	Kulim	51.08	238	P	P	06 30 31.1	+0.8
	comp=Z,88nm,0.9s						
KULM	Kulim	51.08	238	P	P	06 30 31.1	+0.8
	comp=Z,707nmcomp=Z,88nm,0.9s						
G31M	Satah River	51.08	30	IAmb	IAmb	06 30 48.7	
	comp=Z,60nm,0.8s						
G31M	Satah River	51.08	30	P	P	06 30 30.9	+1.3
	baz=283,SNR=24						
F31M	Tsiigehtchic	51.16	30	P	P	06 30 31.4	+1.2
	baz=283,SNR=32						
HYT	Haines Junctio	51.20	38	P	P	06 30 33.1	+2.2
	baz=285,SNR=49						
MAYO	Mayo, Yukon	51.22	35	IAmb	IAmb	06 31 23.9	
	comp=Z,52nm,0.7s						
MAYO	Mayo, Yukon	51.22	35	P	P	06 30 32.7	+1.9
	baz=284,SNR=9.2						
N30M	Aishikik Lake	51.23	37	P	P	06 30 32.7	+1.8
	baz=285						
H31M	Peel River	51.32	32	P	P	06 30 33.2	+1.7
	baz=284,SNR=58						
KLP	Kalpa	51.40	281	*e*P	P	06 30 31.1	-1.9
DZA	Taraz	51.41	297	*e*P	P	06 30 32.8	+0.2
	comp=Z,44nm,0.7s						
DZA	Taraz	51.41	297	*e*P	P	06 30 32.8	+0.2
DZA				pmax	pmax		
	comp=Z,44nm,0.7s						
P29M	Windy Craggy	51.41	40	P	P	06 30 34.5	+2.1
	baz=286						
IPM	Ipoh	51.45	237	IAmb	IAmb	06 30 34.1	
	comp=Z,42nm,0.9s						
IPM	Ipoh	51.45	237	P	P	06 30 33.0	-0.1
	comp=Z,59nm,1.1s						
IPM	Ipoh	51.45	237	P	P	06 30 33.0	-0.1
	comp=Z,610nmcomp=Z,59nm,1.1s						
P30M	Million Dollar	51.66	39	P	P	06 30 36.3	+2.1
	baz=286						
BWNR	Bhubaneshwar	51.67	264	*e*P	P	06 30 33.1	-1.6
BWNR				IAML		06 30 35.5	
	comp=Z,33nm,0.6s						
MYKOM	Kota Tinggi	51.80	232	IAmb	IAmb	06 30 37.0	
	comp=Z,31nm,0.8s						
MYKOM	Kota Tinggi	51.80	232	P	P	06 30 36.7	+1.0
	comp=Z,54nm,1.0s						
MYKOM	Kota Tinggi	51.80	232	P	P	06 30 36.2	+0.5
	comp=Z,701nmcomp=Z,54nm,1.0s						
N31M	Braeburn, Yuko	51.83	37	P	P	06 30 37.3	+1.9
	baz=286,SNR=18						
O30N	Mendenhall	51.88	38	IAmb	IAmb	06 30 55.5	
	comp=Z,38nm,0.9s						
O30N	Mendenhall	51.88	38	P	P	06 30 37.9	+2.0
	baz=287,SNR=11						
KK31	Karatay Array	51.89	298	P	P	06 30 35.9	-0.2
KK31				IAmb	IAmb	06 30 36.9	
	comp=Z,71nm,1.1s						
KK31	Karatay Array	51.89	298	P	P	06 30 35.9	-0.2
KK31				pmax	pmax		
	comp=Z,71nm,1.1s						
KKAR	Karatay Array	51.89	298	P	P	06 30 35.8	-0.3
KKAR	Karatay Array	51.89	298	P	P	06 30 35.8	-0.3
TPRI	Tanjung Pinang	52.09	231	P	P	06 30 38.1	+0.2
BTDF	Bukit Timah Da	52.18	232	P	P	06 30 39.5	+0.9
	comp=Z,60nm,0.9s						
BTDF	Bukit Timah Da	52.18	232	P	P	06 30 39.4	+0.9
	comp=Z,60nm,0.9s						
MMRI	Maumere	52.24	205	P	P	06 30 38.5	-0.5
MMRI	Maumere	52.24	205	P	P	06 30 39.1	+0.2
	comp=Z,191nm,0.8s						
MMRI	Maumere	52.24	205	P	P	06 30 38.7	-0.2
M31M	Drury Creek, Y	52.26	36	IAmb	IAmb	06 30 57.6	
	comp=Z,46nm,1.1s						
M31M	Drury Creek, Y	52.26	36	P	P	06 30 40.2	+1.6
	baz=287,SNR=19						
BRLS	Borolday	52.37	298	*e*P	P	06 30 41.1	+1.3
BRLS	Borolday	52.37	298	*e*P	P	06 30 41.0	+1.3
SMLA	Simla	52.40	281	*e*P	P	06 30 38.5	-1.5
WHY	Whitehorse	52.48	38	P	P	06 30 42.4	+2.0
WHY				IAmb	IAmb	06 30 43.3	
	comp=Z,44nm,0.7s						
WHY	Whitehorse	52.48	38	P	P	06 30 42.0	+1.6
	baz=288,SNR=13						
DRK	Karamyk	52.49	293	P	P	06 30 40.1	-0.8
DRK	Karamyk	52.49	293	P	P	06 30 40.1	-0.8
DRK				pmax	pmax		
	comp=Z,65nm,0.5s						
DHRM	DHARAMSHALA	52.51	283	*e*P	P	06 30 39.4	-1.7
DHRM				IAmb	IAmb	06 30 45.5	
	comp=Z,32nm,0.9s						
EDFI	Ende, Flores	52.53	206	P	P	06 30 39.6	-1.6
	comp=Z,729nmcomp=Z,80nm,0.8s						
IUG	Iuzhnay	52.59	297	⇓ *i*P	P	06 30 41.7	+0.2
	comp=Z,78nm,1.2s						
IUG	Iuzhnay	52.59	297	*d* *i*P	P	06 30 41.7	+0.2
IUG				pmax	pmax		
	comp=Z,78nm,1.2s						
SKAG	Skagway	52.64	40	P	P	06 30 42.8	+1.4
	baz=288						
S31K	Pelican	52.66	42	P	P	06 30 42.2	+0.6
	baz=288						
SOEI	Soe	52.68	202	P	P	06 30 41.8	-0.6
SOEI	Soe	52.68	202	P	P	06 30 41.7	-0.6
	comp=Z,361nm,1.0s						
SOEI	Soe	52.68	202	P	P	06 30 41.6	-0.7
R31K	City Hall, Gus	52.77	41	P	P	06 30 43.4	+1.1
	baz=289						
CHM	Chimkent	52.81	297	*e*P	P	06 30 43.3	+0.2
	comp=Z,25nm,0.6s						
CHM	Chimkent	52.81	297	*e*P	P	06 30 43.2	+0.2
CHM				pmax	pmax		
	comp=Z,25nm,0.6s						
A36M	Sachs Harbour	52.83	23	IAmb	IAmb	06 31 06.8	
	comp=Z,72nm,0.9s						
A36M	Sachs Harbour	52.83	23	P	P	06 30 44.0	+1.5
	baz=287,SNR=22						
BHK	Bhakra	52.86	282	*e*P	P	06 30 38.7	-4.7
BHK				IAmb	IAmb	06 30 47.6	
	comp=Z,38nm,0.6s						
TLWR	Talawar	52.90	283	*e*P	P	06 30 42.1	-1.6
SVE	Sverdlovsk	52.91	317	*c* *i*P	P	06 30 44.1	+0.7
SVE				*e*S	S	06 38 09.0	+0.7
SVE				pmax	pmax		
	comp=Z,141nm,0.9s						
SVE				MLR	MLR		
	comp=Z,723nm,15.0s						
MERT	Meerut	53.05	279	*e*P	P	06 30 42.9	-2.0
N32M	Quiet Lake	53.17	37	IAmb	IAmb	06 31 04.5	
	comp=Z,33nm,0.8s						
N32M	Quiet Lake	53.17	37	P	P	06 30 46.5	+1.1
	baz=289						
DSRI	Dabo	53.19	230	P	P	06 30 46.9	+0.9
BATI	Baumata	53.29	203	LR	LR	06 52 27.9	
	comp=Z,124nm,21.8s,baz=48,slow=35						
BATI	Baumata	53.29	203	P	P	06 30 46.3	-0.3
TPI	Tanjungpandan	53.35	225	P	P	06 30 47.1	0.0
	comp=Z,964nmcomp=Z,91nm,1.1s						
BLSP	Bilaspur	53.38	269	*e*P	P	06 30 46.0	-1.4
BLSP				IAmb	IAmb	06 30 50.5	
	comp=Z,30nm,0.8s						
P32M	Atlin	53.38	39	IAmb	IAmb	06 31 06.6	
	comp=Z,46nm,1.2s						
P32M	Atlin	53.38	39	P	P	06 30 47.5	+0.6
	baz=289						

MANEM	Manem	53.42	291	IAmb	IAmb	06 31 00.7	
	comp=Z,218nm,1.3s						
SIT	Sitka	53.42	42	P	P	06 30 48.0	+0.9
	baz=290						
JIS	Juneau Island	53.49	41	P	P	06 30 50.2	+2.6
	comp=Z,66nm,1.0s						
DBNI	Kabupaten Domp	53.50	210	P	P	06 30 46.9	-1.3
	comp=Z,29nm,0.7s						
LHMI	Lhok Sumawe	53.56	241	P	P	06 30 48.6	-0.1
NDI	New Delhi	53.59	279	eP	P	06 30 47.7	-1.2
NDI				IAmb	IAmb	06 30 52.1	
	comp=Z,32nm,0.5s						
P33M	Teslin, Yukon	53.60	38	IAmb	IAmb	06 31 08.5	
	comp=Z,111nm,1.4s						
P33M	Teslin, Yukon	53.60	38	P	P	06 30 50.6	+2.0
	baz=289,SNR=21						
NPLP	NPLP New Delhi	53.65	279	eP	P	06 30 47.6	-1.7
NPLP				IAmb	IAmb	06 30 52.7	
	comp=Z,38nm,0.4s						
S32K	Killisnoo	53.66	42	P	P	06 30 49.9	+0.9
	baz=290						
PPBI	Pangkal Pinang	53.68	227	P	P	06 30 50.9	+1.3
DRS	Darwin Rock St	53.71	194	P	P	06 30 49.4	-0.3
	comp=Z,81nm,0.8s						
AYAN	Aya Nagar	53.76	279	eP	P	06 30 48.5	-1.6
AYAN				IAmb	IAmb	06 30 52.9	
	comp=Z,38nm,0.7s						
KMMI	Kalianget	53.97	215	P	P	06 30 51.6	0.0
	comp=Z,61nm,1.1s						
PLAI	Plampang	54.00	210	P	P	06 30 50.0	-1.9
	comp=Z,86nm,0.8s						
PLAI	Plampang	54.00	210	P	P	06 30 49.4	-2.5
	comp=Z,688nmcomp=Z,87nm,0.8s						
C36M	Paulatuk	54.04	26	IAmb	IAmb	06 31 09.1	
	comp=Z,61nm,1.1s						
C36M	Paulatuk	54.04	26	P	P	06 30 52.5	+1.0
	baz=290,SNR=19						
RAGD	RAYAGADA	54.05	265	eP	P	06 30 50.9	-1.5
RAGD				IAmb	IAmb	06 30 54.3	
	comp=Z,27nm,1.3s						
MTN	Manton Dam	54.07	193	P	P	06 30 51.6	-0.7
PSI	Prapat	54.08	238	LR	LR	06 55 35.6	
	comp=Z,82nm,18.9s,baz=41,slow=38						
PSI	Prapat	54.08	238	P	P	06 30 52.5	-0.1
	comp=Z,31nm,0.9s						
NIL	Nilore	54.08	286	P	P	06 30 53.5	+1.1
NIL	Nilore	54.08	286	P	P	06 30 53.5	+1.1
NIL				pmax	pmax		
	comp=Z,193nm,0.8s						
WBSI	Waikabubak, Su	54.15	208	P	P	06 30 50.2	-2.8
	comp=Z,39nm,0.6s						
COEN	Coen	54.22	179	P	P	06 30 53.7	+0.3
COEN				IAmb	IAmb	06 30 54.9	
	comp=Z,54nm,0.9s						
COEN	Coen	54.22	179	P	P	06 30 53.5	+0.1
	comp=Z,76nm,0.9s						
ARTI	Arti	54.23	317	LR	LR	06 56 30.2	
	comp=Z,556nm,19.2s,baz=70,slow=39						
ARTI	Arti	54.23	317	P	P	06 30 53.2	+0.1
ARTI	Arti	54.23	317	d iP	P	06 30 53.2	+0.1
ARTI				*PP	pP	06 31 07.2	-0.2
ARTI						06 31 55.9	
ARTI						06 32 53.1	
ARTI				S	S	06 38 27.4	+1.2
ARTI				SS	SS	06 42 07.1	-1.0
ARTI				pmax	pmax		
	comp=Z,178nm,0.8s						
ARTI				MLR	MLR		
	comp=Z,783nm,17.0s						
ARTI	Arti	54.23	317	P	P	06 30 53.2	+0.1
ARTI				pP	pP	06 31 07.3	-0.2
ARTI				PcP	PcP	06 31 56.7	-0.1
JHNI	Jhansi	54.23	275	eP	P	06 30 51.8	-1.8
JHNI				IAmb	IAmb	06 30 53.8	
	comp=Z,34nm,0.3s						
TWSI	Taliwang, Sumb	54.27	211	P	P	06 30 52.3	-1.5
	comp=Z,989nmcomp=Z,90nm,0.9s						
KCSI	Kotacane, Aceh	54.28	239	P	P	06 30 52.3	-1.7
Q32M	Nakina River	54.29	40	P	P	06 30 55.8	+2.0
	baz=291						
KLNI	Mataram	54.30	212	P	P	06 30 53.7	-0.3
	comp=Z,4µmcomp=Z,147nm,1.3s						
SRBI	Singaraja	54.36	213	P	P	06 30 54.7	+0.3
	comp=Z,1µmcomp=Z,97nm,1.2s						
KUDL	Kundal	54.42	279	eP	P	06 30 53.0	-1.9
KUDL				IAmb	IAmb	06 30 58.9	
	comp=Z,21nm,0.4s						
KHKI	Kahang-Kahang	54.45	213	P	P	06 30 55.2	+0.1
	comp=Z,2µmcomp=Z,243nm,1.1s						
ABJI	Asem Bagus	54.52	215	P	P	06 30 55.2	-0.4
	comp=Z,74nm,0.9s						
MLSI	Meulaboh, Aceh	54.63	241	P	P	06 30 55.5	-1.0
	comp=Z,160nm,0.8s						
BKNI	Bangkinang	54.66	234	P	P	06 30 57.0	+0.3
BKNI	Bangkinang	54.66	234	P	P	06 30 57.8	+1.0
	comp=Z,284nm,1.1s						
BKNI	Bangkinang	54.66	234	P	P	06 30 57.7	+1.0
JMBI	JAMBI	54.66	230	P	P	06 30 58.2	+1.5
CHGR	Chuyangaron	54.69	293	P	P	06 30 56.7	-0.2
CHGR	Chuyangaron	54.69	293	P	P	06 30 56.7	-0.2
CHGR				pmax	pmax		
	comp=Z,232nm,1.0s						
R33M	Jennings River	54.76	39	IAmb	IAmb	06 31 17.4	
	comp=Z,61nm,1.4s						
R33M	Jennings River	54.76	39	P	P	06 30 59.3	+2.2
	baz=291,SNR=10						
RTBI	Rangdo, Negare	54.81	214	P	P	06 30 56.9	-0.9
	comp=Z,174nm,0.9s						
TPTI		54.86	240	P	P	06 30 55.8	-2.4
U33K	Whale Pass	54.90	43	P	P	06 31 00.1	+2.2
	baz=292						
CRAG	Craig	55.14	44	P	P	06 31 01.4	+1.7
	baz=292						
WRAK	Wrangell Islan	55.18	42	P	P	06 31 02.1	+2.2
	baz=292						
S34M	Telegraph Cree	55.23	40	P	P	06 31 02.1	+1.8
	baz=292,SNR=7.1						
GMJI	Gumukmas	55.29	215	P	P	06 31 00.1	-1.1
	comp=Z,32nm,1.1s						
NGJI	Ngawi	55.39	218	P	P	06 31 02.3	+0.4
	comp=Z,56nm,1.4s						
WTLY	Watson Lake, Y	55.51	37	P	P	06 31 04.0	+1.6
	baz=292						
SJI	Sawahan	55.57	217	P	P	06 31 01.2	-2.1
	comp=Z,2µmcomp=Z,74nm,1.0s						
SMRI	Semarang	55.59	219	P	P	06 31 03.5	+0.1
	comp=Z,144nm,1.1s						
SMRI	Semarang	55.59	219	P	P	06 31 03.8	+0.4
	comp=Z,147nm,1.1s						
SNJI	Sawahan-Nganju	55.61	217	P	P	06 31 03.8	+0.1
	comp=Z,66nm,1.0s						
GUNA	GUNA	55.65	275	eP	P	06 31 02.0	-1.8
PPI	Padang Panjang	55.67	234	P	P	06 31 03.6	-0.4
SHAA	Shahritus	55.92	293	P	P	06 31 06.1	+0.4
SHAA				IAmb	IAmb	06 31 10.6	
	comp=Z,162nm,0.7s						
PDSI	Padang	55.98	233	P	P	06 31 05.2	-1.1
	comp=Z,4µmcomp=Z,25nm,0.6s						
V35K	Ketchikan	55.99	43	P	P	06 31 06.8	+1.0
	baz=294						
T35M	Bob Quinn	56.03	41	IAmb	IAmb	06 31 26.8	
	comp=Z,57nm,1.0s						
T35M	Bob Quinn	56.03	41	P	P	06 31 07.9	+1.7
	baz=293,SNR=10.0						
SNSI	Sinabang, Aceh	56.06	240	P	P	06 31 07.6	+0.8
	comp=Z,5µmcomp=Z,180nm,1.1s						
GSI	Gunungsitoli	56.08	238	P	P	06 31 06.7	-0.3
GSI	Gunungsitoli	56.08	238	P	P	06 31 07.3	+0.3
	comp=Z,129nm,1.4s						
GSI	Gunungsitoli	56.08	238	P	P	06 31 06.5	-0.5
	comp=Z,2µmcomp=Z,128nm,1.4s						
AB31	Akbulak array	56.13	309	P	P	06 31 07.2	+0.3
AB31	Akbulak array	56.13	309	i P	P	06 31 06.1	-0.8
ABKAR	Akbulak array	56.13	309	P	P	06 31 06.8	-0.1
CTJI	Waduk Cacaban	56.17	220	P	P	06 31 06.8	-0.7
	comp=Z,201nm,1.1s						
PCJI	Pacitan	56.24	218	P	P	06 31 07.4	-0.6
	comp=Z,31nm,1.0s						
NGP	Nagpur	56.29	270	eP	P	06 31 06.9	-1.6
NGP				IAmb	IAmb	06 31 09.0	
	comp=Z,21nm,0.8s						
UGM	Wanagama	56.30	219	IAmb	IAmb	06 31 07.8	
	comp=Z,56nm,0.8s						
UGM	Wanagama	56.30	219	P	P	06 31 07.2	-1.3
	comp=Z,83nm,1.0s						
UGM	Wanagama	56.30	219	P	P	06 31 06.9	-1.6
	comp=Z,83nm,0.9s						
KRJI	Kerinci	56.31	231	P	P	06 31 08.3	-0.4
	comp=Z,189nm,1.4s						
YOGI	Yogyakarta	56.33	219	P	P	06 31 08.0	-0.7
	comp=Z,212nm,1.4s						
BHPL	Bhopal	56.35	273	eP	P	06 31 07.1	-1.8
BHPL				IAmb	IAmb	06 31 09.5	
	comp=Z,34nm,1.7s						
KLSI		56.55	226	P	P	06 31 09.8	-0.4
	comp=Z,1µmcomp=Z,134nm,1.3s						
KPJI	Karang Pucung	56.58	221	P	P	06 31 09.2	-1.2
	comp=Z,1µmcomp=Z,159nm,1.1s						
WRGLY	Wrigley	56.61	33	P	P	06 31 11.9	+1.8
	baz=295,SNR=12						
KLI	Kotabumi	56.62	226	P	P	06 31 10.3	-0.4
PBSI	Pulau Batu	56.67	236	P	P	06 31 10.5	-0.6
	comp=Z,107nm,1.5s						
MDSI	Maura Dua	56.69	227	P	P	06 31 10.8	-0.4
	comp=Z,83nm,1.2s						
MASI	Maura Aman, Be	56.70	230	P	P	06 31 11.3	-0.1
KBL	Kabul	56.71	289	P	P	06 31 11.2	-0.3
	SNR=52						
KBL	Kabul	56.71	289	P	P	06 31 11.0	-0.5
KBL	Kabul	56.71	289	P	P	06 31 11.0	-0.5
KBL				pmax	pmax		
	comp=Z,114nm,0.9s						
AJM	Ajmer	56.73	278	eP	P	06 31 09.9	-1.6
AJM				IAmb	IAmb	06 31 15.6	
	comp=Z,23nm,1.2s						
AKTO	Aktyubinsk	56.76	310	LR	LR	06 56 59.4	
	comp=Z,348nm,18.6s,baz=122,slow=38						
AKTO	Aktyubinsk	56.76	310	P	P	06 31 10.3	-1.1
NRDN	NARMADA NAGAR	56.84	273	eP	P	06 31 10.8	-1.6
NRDN				IAmb	IAmb	06 31 18.4	
	comp=Z,42nm,0.6s						
LIRD	Liard River Hi	57.05	38	P	P	06 31 15.1	+1.9
	baz=295,SNR=25						
UBSI	University, Be	57.18	229	P	P	06 31 14.7	0.0
	comp=Z,107nm,0.8s						
LWLI	Liwa	57.19	227	P	P	06 31 13.2	-1.7
	comp=Z,68nm,0.5s						
SPA0	Spitsbergen Ar	57.20	349	eP	P	06 31 13.6	-0.5
SPB2	Spitsbergen Ar	57.20	349	IAmb	IAmb	06 31 30.4	
	comp=Z,65nm,1.2s						
SPITS	Spitsbergen Ar	57.20	349	P	P	06 31 14.7	+0.6
	comp=Z,11nm,0.6s,baz=75,slow=9.7,SNR=27						
SPITS				PcP	PcP	06 32 08.4	+0.4
	comp=Z,3.6nm,0.4s,baz=84,slow=5.9,SNR=4.2						
SPITS				LR	LR	07 00 21.5	
	comp=Z,103nm,18.2s,baz=26,slow=41						
	comp=Z,11nm,0.6s						
SPITS	Spitsbergen Ar	57.20	349	P	P	06 31 14.8	+0.7
SPITS				pmax	pmax		
	comp=Z,92nm,1.4s						
KNRA	Kununurra	57.28	195	P	P	06 31 15.7	+0.4
KBS	Kingsbay	57.30	350	deP	P	06 31 15.5	+0.7
KBS				pmax	pmax		
	comp=Z,118nm,2.5s						
KBS	Kingsbay	57.30	350	i P	P	06 31 15.7	+0.9
BBJI	Bungbulang	57.33	222	P	P	06 31 13.2	-2.6
	comp=Z,18nm,0.8s						
BBJI	Bungbulang	57.33	222	P	P	06 31 13.2	-2.6
KASI	Kota Agung	57.37	226	P	P	06 31 14.2	-1.8
	comp=Z,50nm,0.9s						
CNJI	Cibinong	57.46	222	P	P	06 31 13.8	-2.9
NOR	Nord	57.59	356	i P	P	06 31 16.8	-0.1
NOR				IAmb	IAmb	06 31 17.5	
	comp=Z,18nm,0.8s						
KOTAN	Kotaneelee Air	57.67	36	P	P	06 31 19.5	+1.8
	baz=296						
TOAD	Toad River Com	57.69	38	P	P	06 31 19.7	+1.9
	baz=296,SNR=15						
PPSI	Pulau Pagai	57.72	232	P	P	06 31 18.0	-0.5
	comp=Z,2µmcomp=Z,194nm,1.0s						
KIRV	Kirov	57.80	322	LR	LR	06 59 32.5	
	comp=Z,230nm,18.8s,baz=54,slow=39						
KIRV	Kirov	57.80	322	d iP	P	06 31 18.8	+0.3
AKL	Akola	58.11	271	eP	P	06 31 20.0	-1.3
AKL				IAmb	IAmb	06 31 23.0	
	comp=Z,26nm,1.9s						
HSPB	Hornsund (broa	58.14	348	eP	P	06 31 21.8	+1.2
MTSU	Mount Surprise	58.40	178	P	P	06 31 23.5	+0.3
	comp=Z,36nm,0.9s						
UDPR	Udaipur	58.43	277	eP	P	06 31 21.9	-1.7
EGSI	Enggano, Bengk	58.47	228	P	P	06 31 22.2	-1.5
	comp=Z,96nm,0.9s						
HYB	Hyderabad	58.88	267	eP	P	06 31 26.3	-0.4
HYB				esP	sP	06 31 46.4	-0.9
HYB				ePcP	PcP	06 32 16.2	+0.6
HYB				ePP	PP	06 33 37.1	-0.1
RES	Resolute Bay	59.09	15	LR	LR	07 00 04.3	
	comp=Z,170nm,20.2s,baz=330,slow=39						
RES	Resolute Bay	59.09	15	P	P	06 31 27.8	+0.5
RES	Resolute Bay	59.09	15	P	P	06 31 27.8	+0.5
LVZ	Lovozero	59.15	335	P	P	06 31 27.6	-0.2
LVZ	Lovozero	59.15	335	ceP	P	06 31 27.7	-0.1
LVZ				pmax	pmax		
	comp=Z,13nm,0.8s						
LVZ	Lovozero	59.15	335	P	P	06 31 27.6	-0.2
	comp=Z,28nm,1.3s						
LVZ				pP	pP	06 31 42.7	+0.3
	comp=Z,28nm,1.3s						
BBB	Bella Bella	59.22	46	LR	LR	06 55 09.2	
	comp=Z,90nm,21.6s,baz=268,slow=34						
JASL	Jaisalmer	59.26	281	eP	P	06 31 28.0	-1.2
JASL				IAmb	IAmb	06 31 29.5	
	comp=Z,42nm,1.0s						
VADS	Vadso	59.49	339	eP	P	06 31 30.3	+0.2
TV1H	Townsville Har	59.65	175	P	P	06 31 32.6	+0.9
	comp=Z,28nm,1.4s						
LATR	Latur	59.82	269	eP	P	06 31 31.9	-1.3
LATR				IAmb	IAmb	06 31 33.1	
	comp=Z,36nm,1.2s						
ADZR	Andozero	59.97	330	d iP	P	06 31 33.6	+0.1
ADZR				e		06 33 45.9	
ADZR				eS	S	06 39 38.8	-2.7
ADZR				pmax	pmax		
	comp=Z,51nm,0.6s						
FITZ	Fitzroy Crossi	60.31	198	P	P	06 31 36.3	0.0
	comp=Z,42nm,0.9s,baz=12,slow=6.7,SNR=36						
FITZ				LR	LR	06 56 45.3	
	comp=Z,49nm,21.1s,baz=12,slow=35						
	comp=Z,42nm,0.9s						
FITZ	Fitzroy Crossi	60.31	198	P	P	06 31 36.8	+0.6
SANVU	Saraoutou	60.39	152	P	P	06 31 37.8	+1.0
SANVU	Saraoutou	60.39	152	P	P	06 31 37.2	+0.3
	comp=Z,361nm,0.8s						
WB0	Warramunga Arr	60.42	188	P	P	06 31 36.5	-0.6
CTA	Charters Tower	60.44	175	P	P	06 31 37.1	0.0
	comp=Z,13nm,0.6s,baz=351,slow=7.5,SNR=21						
	comp=Z,13nm,0.6s						
CTA	Charters Tower	60.44	175	P	P	06 31 36.9	-0.2
	comp=Z,0.9nm,1.2s						
CTAO	Charters Tower	60.44	175	P	P	06 31 37.2	0.0
CTAO				IAmb	IAmb	06 31 38.0	
	comp=Z,87nm,1.6s						
CTAO	Charters Tower	60.44	175	P	P	06 31 36.9	-0.2
	comp=Z,11nm,1.2s						
CTAO	Charters Tower	60.44	175	P	P	06 31 37.2	0.0
CTAO				pmax	pmax		
	comp=Z,87nm,1.7s						
YKAW3	Yellowknife Wh	60.49	31	IAmb	IAmb	06 31 55.9	
	comp=Z,80nm,1.6s						
YKA	Yellowknife Ar	60.53	31	P	P	06 31 38.2	+0.9
	comp=Z,14nm,0.9s,baz=309,slow=10,SNR=24						
YKA				LR	LR	07 00 00.0	
	comp=Z,149nm,19.9s,baz=269,slow=38						
YKA				PKPPKP	P'P'bc	07 00 46.6	-26
	comp=Z,0.4nm,0.7s,baz=200,slow=1.6,SNR=6.8						
	comp=Z,14nm,0.9s						
WRAB	Tennant Creek	60.59	188	P	P	06 31 37.0	-1.2
	comp=Z,50nm,1.1s						
WRAB	Tennant Creek	60.59	188	d iP	P	06 31 37.0	-1.2
WRAB				pmax	pmax		
	comp=Z,57nm,0.9s						
WRAB	Tennant Creek	60.59	188	P	P	06 31 37.3	-0.8
WRAB				pP	pP	06 31 52.1	-0.7
YKAW1	Yellowknife Wh	60.59	31	IAmb	IAmb	06 31 56.6	
	comp=Z,40nm,1.2s						
WR8	Warramunga Arr	60.59	188	P	P	06 31 37.4	-0.8
WRA	Warramunga Arr	60.60	188	P	P	06 31 37.7	-0.6
	comp=Z,54nm,0.7s,baz=7.8,slow=6.8,SNR=137						
WRA				PKP2bc	P'P'bc	07 01 06.3	+3.9
	comp=Z,4.8nm,1.1s,baz=206,slow=2.3,SNR=7.5						
	comp=Z,54nm,0.7s						
WRA	Warramunga Arr	60.60	188	P	P	06 31 36.5	-1.7
WB1	Warramunga Ar.	60.61	188	P	P	06 31 37.6	-0.8
	comp=Z,97nm,0.9s						
QIS	Mount Isa	60.82	183	P	P	06 31 39.1	-0.7
	comp=Z,57nm,1.0s						
ARA0	ARCESS Array S	60.91	339	eP	P	06 31 40.0	+0.1
ARCES	ARCESS Array B	60.91	339	P	P	06 31 40.3	+0.4
	comp=Z,5.8nm,0.4s,baz=58,slow=8.1,SNR=103						
ARCES				LR	LR	07 00 19.2	
	comp=Z,216nm,21.9s,baz=49,slow=38						
	comp=Z,5.8nm,0.4s						
ARCES	ARCESS Array B	60.91	339	P	P	06 31 40.3	+0.4
ARCES	ARCESS Array B	60.91	339	P	P	06 31 40.3	+0.4
ARCES				pmax	pmax		
	comp=Z,136nm,1.9s						
KLMR	Klimovskoe	61.10	327	eP	P	06 31 39.1	-2.1
KLMR				e*PP	pP	06 31 54.0	-1.8
KLMR				e		06 33 54.5	
KLMR				pmax	pmax		
	comp=Z,141nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,517nm,16.0s						
BHV	Bhavnagar	61.21	275	eP	P	06 31 41.0	-1.5
BHV				IAmb	IAmb	06 31 42.9	
	comp=Z,39nm,0.6s						
TULEG	Thule	61.56	8	IAmb	IAmb	06 31 45.0	
	comp=Z,220nm,1.8s						
TULEG	Thule	61.56	8	i P	P	06 31 43.9	-0.3
TULEG				IAmb	IAmb	06 31 44.8	
	comp=Z,37nm,0.8s						
BELG	Belogornoye	61.62	316	LR	LR	07 01 17.6	
	comp=Z,521nm,19.1s,baz=70,slow=39						
BELG	Belogornoye	61.62	316	d iP	P	06 31 44.7	-0.2
BELG				pmax	pmax		
	comp=Z,23nm,0.9s						
HRA	Herat	61.63	292	IAmb	IAmb	06 31 46.5	
	comp=Z,30nm,0.7s						
POO	Poona	61.80	271	eP	P	06 31 45.1	-1.6
KTK1	Kautokeino	61.87	339	eP	P	06 31 46.8	+0.4
NEEM	North Greenlan	62.01	3	i P	P	06 31 48.0	+0.4
NEEM				IAmb	IAmb	06 31 49.2	
	comp=Z,77nm,1.2s						
JETT	Jettan, Norway	62.26	340	eP	P	06 31 48.6	-0.3
KAD	Karad	62.27	270	eP	P	06 31 48.3	-1.5
KAD				IAmb	IAmb	06 31 50.5	
	comp=Z,26nm,0.6s						
DAG	Danmarks Havn	62.34	355	i P	P	06 31 49.6	+0.3
DAG				IAmb	IAmb	06 31 50.2	
	comp=Z,48nm,0.7s						
TRO	Tromso	62.58	341	eP	P	06 31 51.2	+0.2
SALM	Salem	62.73	262	eP	P	06 31 51.5	-1.5
SALM				IAmb	IAmb	06 31 54.1	
	comp=Z,23nm,0.8s						
GOA	Goa	63.64	268	eP	P	06 31 57.2	-1.6
GOA				IAmb	IAmb	06 31 59.1	
	comp=Z,30nm,1.2s						
PALK	Pallekele	63.67	256	LR	LR	07 02 26.8	
	comp=Z,148nm,19.2s,baz=53,slow=39						
PALK	Pallekele	63.67	256	P	P	06 31 59.3	+0.1
PALK	Pallekele	63.67	256	P	P	06 31 59.1	+0.1
PALK	Pallekele	63.67	256	P	P	06 31 59.2	+0.1
PALK				pmax	pmax		
	comp=Z,155nm,1.8s						
AUNRC	North Rockhamp	64.04	171	P	P	06 32 01.5	+0.3
	comp=Z,57nm,1.2s						
KOD	Kodaikanal	64.16	261	eP	P	06 32 00.7	-1.9
KOD				IAmb	IAmb	06 32 03.8	
	comp=Z,27nm,1.1s						
ASAR	Alice Springs	64.32	188	P	P	06 32 02.8	-0.4
	comp=Z,44nm,0.7s,baz=11,slow=6.3,SNR=418						
ASAR				LR	LR	06 59 47.0	
	comp=Z,210nm,21.7s,baz=355,slow=36						
ASAR				PKPPKP	P'P'df	07 00 50.2	+3.2
	comp=Z,1.5nm,0.8s,baz=156,slow=3.2,SNR=5.5						
	comp=Z,44nm,0.7s						
ASAR	Alice Springs	64.32	188	P	P	06 32 02.5	-0.6
STEI	Steigen	64.74	340	eP	P	06 32 05.2	-0.1
MOS	Moscow	64.77	323	eP	P	06 32 03.3	-2.4
MOS				e		06 32 35.6	
MOS				pmax	pmax		
	comp=Z,129nm,1.4s						
MBWA	Marble Bar	64.81	203	P	P	06 32 06.0	-0.3
MBWA	Marble Bar	64.81	203	P	P	06 32 06.2	-0.1
MBWA	Marble Bar	64.81	203	P	P	06 32 06.0	-0.3
	comp=Z,62nm,1.1s						
MBWA	Marble Bar	64.81	203	P	P	06 32 05.7	-0.6
DBG	Daneborg	64.83	355	i P	P	06 32 05.2	-0.6
DBG				IAmb	IAmb	06 32 06.6	
	comp=Z,30nm,1.3s						
LOF	Lofoten	65.02	341	eP	P	06 32 07.1	0.0
FAUS	Fauske	65.14	340	eP	P	06 32 08.1	+0.2
PSA00	Pilbara Seismi	65.17	203	P	P	06 32 08.2	-0.4
PSA00				IAmb	IAmb	06 32 09.0	
	comp=Z,28nm,0.8s						
PSA00	Pilbara Seismi	65.17	203	IAmb	IAmb	06 32 09.1	
	comp=Z,54nm,0.9s						
PSA00	Pilbara Seismi	65.17	203	P	P	06 32 07.7	-0.9
	comp=Z,73nm,1.2s						
D05A	Enumclaw	65.18	48	IAmb	IAmb	06 32 50.4	
	comp=Z,60nm,1.2s						
VRH	Novokhopyorsk	65.36	317	eP	P	06 32 07.3	-2.3
VRH				eS	S	06 40 47.0	-2.4
VRH				pmax	pmax		
	comp=Z,170nm,0.6s						
VRH				smax	smax		
	comp=N,600nm,4.9s						
OBN	Obninsk	65.62	323	P	P	06 32 11.0	-0.1
OBN	Obninsk	65.62	323	d iP	P	06 32 11.1	-0.1
OBN				e*PP	pP	06 32 24.0	-1.9
OBN				i *SP	sP	06 32 32.4	+0.5
OBN						06 32 41.0	
OBN				i S	S	06 40 51.9	-0.6
OBN				*SS	sS	06 41 25.0	+8.0
OBN				i SS	SS	06 45 13.5	+7.2
OBN				pmax	pmax		
	comp=Z,201nm,1.7s						
OBN				MLR	MLR		
	comp=Z,340nm,17.0s						
ILON	Igloolik, Nuna	65.75	16	IAmb	IAmb	06 32 12.3	
	comp=Z,38nm,1.1s						
LPSR	Galich'ya Gora	65.97	319	eP	P	06 32 12.5	-1.0
LPSR				pmax	pmax		
	comp=Z,120nm,0.9s						
FIA1	FINESS Array S	65.97	332	P	P	06 32 13.3	0.0
FINES	FINESS Array B	65.97	332	P	P	06 32 13.7	+0.3
	comp=Z,59nm,0.7s,baz=50,slow=7.1,SNR=113						
FINES				LR	LR	07 02 57.7	
	comp=Z,585nm,20.9s,baz=52,slow=38						
	comp=Z,59nm,0.7s						
FINES	FINESS Array B	65.97	332	P	P	06 32 13.4	+0.1
BLKN	Baker Lake	65.97	24	IAmb	IAmb	06 32 14.5	
	comp=Z,48nm,0.8s						
G04A	Mulino	65.99	50	IAmb	IAmb	06 32 41.3	
	comp=Z,60nm,0.9s						
EIDS	Eidsvold	66.10	171	P	P	06 32 15.4	+0.9
EIDS	Eidsvold	66.10	171	P	P	06 32 14.6	+0.1
	comp=Z,33nm,0.7s						
VAGH	Vaagaholmen	66.15	340	eP	P	06 32 14.4	0.0
RAUS	Rausandaksla	66.17	340	eP	P	06 32 14.5	-0.1
H04D	Lebanon	66.22	51	IAmb	IAmb	06 32 21.8	
	comp=Z,119nm,1.5s						
MOR8	Moi Rana	66.27	339	eP	P	06 32 14.0	-1.2
NOUC	Port Laguerre	66.27	155	P	P	06 32 17.1	+1.5
NOUC				sP	sP	06 32 37.1	+0.9
UPNV	Upernavik	66.27	6	i P	P	06 32 14.5	-0.6
UPNV				IAmb	IAmb	06 32 15.8	
	comp=Z,52nm,1.3s						
DZM	Mont Dzumac	66.29	155	eP	P	06 32 16.9	+1.0
	comp=Z,157nm,1.3s						
DZM				eS	S	06 40 58.3	-3.1
	comp=Z,137nm,27.8s						
DZM				eSS	SS	06 45 19.5	+0.5
	comp=Z,120nm,28.9s						
DZM				eLR	LR	06 52 14.4	
	comp=Z,808nm,22.8s						
DZM	Mont Dzumac	66.29	155	P	P	06 32 18.1	+2.2
	comp=Z,64nm,1.1s						
EDM	Edmonton	66.29	39	IAmb	IAmb	06 32 34.2	
	comp=Z,36nm,0.8s						
I03D	Drain, OR	66.32	52	IAmb	IAmb	06 32 19.2	
	comp=Z,70nm,1.0s						
VORR	Voronezh	66.37	319	eP	P	06 32 14.2	-1.9
VORR				pmax	pmax		
	comp=Z,130nm,1.0s						
HOOD	Mount Hood Mea	66.41	50	IAmb	IAmb	06 32 19.4	
	comp=Z,71nm,1.0s						

EPH	**Ephrata**	**66.44**	**47**	IAmb	IAmb	06 32 18.6	
	comp=Z,38nm,1.1s						
H04A	**Detroit Lake**	**66.46**	**51**	IAmb	IAmb	06 32 19.4	
	comp=Z,58nm,1.1s						
STOK	**Stokkvaagen**	**66.52**	**340**	*e*P	**P**	**06 32 16.4**	**-0.4**
G05A	**Wamic**	**66.65**	**50**	IAmb	IAmb	06 32 44.3	
	comp=Z,41nm,0.9s						
VSR	**Storozhevoye**	**66.66**	**318**	*e*P	**P**	**06 32 15.9**	**-2.0**
VSR				pmax	pmax		
	comp=Z,100nm,0.8s						
LEIR	**Leirfjorden**	**66.67**	**340**	*e*P	**P**	**06 32 17.7**	**0.0**
K02D	**Willamette Mer**	**66.69**	**53**	IAmb	IAmb	06 32 22.4	
	comp=Z,45nm,1.0s						
MAK	**Makhachkala**	**66.74**	**307**	*e*P	**P**	**06 32 17.4**	**-1.2**
MAK				*e**PP	**pP**	**06 32 33.8**	**+0.5**
MAK				*e*		06 34 41.8	
MAK				*e*PPP	PPP	06 36 21.0	
MAK				*e*S	**S**	**06 41 04.9**	**-1.5**
MAK				*e**SS	**sS**	**06 41 31.9**	**+0.6**
MAK				*e*SSS	SSS	06 48 26.7	
MAK				pmax	pmax		
	comp=Z,55nm,0.5s						
MAK				MLR	MLR		
	comp=Z,140nm,17.0s						
VORD	**Divnogorie**	**66.74**	**318**	*e*P	**P**	**06 32 15.9**	**-2.6**
VORD				pmax	pmax		
	comp=Z,90nm,1.0s						
E07A	**Sunnyside**	**66.75**	**48**	IAmb	IAmb	06 32 21.3	
	comp=Z,53nm,1.3s						
JMIC	**Jan Mayen**	**66.79**	**350**	LR	LR	07 03 09.4	
	comp=Z,85nm,18.3s,baz=332,slow=37						
WAH2	**Wahluke Slope**	**66.80**	**48**	IAmb	IAmb	06 32 37.7	
	comp=Z,23nm,0.7s						
QLP	**Quilpie**	**66.80**	**178**	P	**P**	**06 32 18.7**	**-0.3**
	comp=Z,94nm,0.8s						
C09A	**Chrisman Ranch**	**66.92**	**46**	IAmb	IAmb	06 32 38.9	
	comp=Z,50nm,1.0s						
MSVF	**Nonsavu**	**66.92**	**143**	P	**P**	**06 32 21.4**	**+1.4**
MSVF				IAmb	IAmb	06 32 23.3	
	comp=Z,41nm,1.1s						
MSVF	**Nonsavu**	**66.92**	**143**	P	**P**	**06 32 21.6**	**+1.6**
	comp=Z,62nm,1.2s						
MSVF	**Nonsavu**	**66.92**	**143**	P	**P**	**06 32 21.4**	**+1.4**
MSVF				pmax	pmax		
	comp=Z,41nm,1.1s						
HAWA	**Hanford**	**67.02**	**48**	IAmb	IAmb	06 32 22.9	
	comp=Z,48nm,1.4s						
WIFE	**Three Sisters-**	**67.03**	**51**	IAmb	IAmb	06 32 23.5	
	comp=Z,64nm,1.3s						
KSXB	**Camp Six Broad**	**67.04**	**54**	IAmb	IAmb	06 32 23.7	
	comp=Z,55nm,1.1s						
L02F	**Cave Junction**	**67.07**	**54**	IAmb	IAmb	06 32 23.6	
	comp=Z,32nm,0.9s						
F07A	**Phinny Hill Vi**	**67.08**	**49**	IAmb	IAmb	06 32 24.1	
	comp=Z,39nm,1.0s						
SUMG	**Summit**	**67.19**	**0**	IAmb	IAmb	06 32 23.6	
	comp=Z,69nm,0.9s						
SUMG	**Summit**	**67.19**	**0**	*i* P	**P**	**06 32 22.4**	**+1.0**
SUMG				IAmb	IAmb	06 32 23.4	
	comp=Z,69nm,0.9s						
NEW	**Newport**	**67.28**	**45**	LR	LR	07 00 33.9	
	comp=Z,104nm,21.6s,baz=309,slow=35						
NEW	**Newport**	**67.28**	**45**	IAmb	IAmb	06 32 24.2	
	comp=Z,50nm,1.2s						
NEW	**Newport**	**67.28**	**45**	P	**P**	**06 32 23.0**	**+1.0**
AKT	**Akhty**	**67.44**	**306**	*i* P	**P**	**06 32 23.1**	**-0.1**
AKT				*e*		06 32 49.9	
AKT				*e*		06 34 50.4	
AKT				*e*PPP	PPP	06 36 33.6	
AKT				*e*S	**S**	**06 41 16.6**	**+1.4**
AKT				pmax	pmax		
	comp=Z,95nm,0.8s						
AKT				MLR	MLR		
	comp=Z,465nm,18.0s						
KHMM	**Horse Mountain**	**67.67**	**55**	IAmb	IAmb	06 32 28.0	
	comp=Z,77nm,1.2s						
KMPM	**Mount Pierce**	**67.69**	**55**	IAmb	IAmb	06 32 28.1	
	comp=Z,46nm,0.9s						
NUUG	**Nuugaatsiaq**	**67.70**	**5**	*i* P	**P**	**06 32 24.4**	**+0.2**
NUUG				IAmb	IAmb	06 32 29.1	
	comp=Z,24nm,0.9s						
PINE	**Pine Mountain**	**67.70**	**51**	IAmb	IAmb	06 32 28.0	
	comp=Z,74nm,0.9s						
VSU	**Vasula**	**67.71**	**329**	*d i*P	**P**	**06 32 23.5**	**-1.0**
VSU				pmax	pmax		
	comp=Z,97nm,1.7s						
E09A	**Wood Farm, Sta**	**67.73**	**47**	IAmb	IAmb	06 32 27.3	
	comp=Z,69nm,1.2s						
J05D	**Fort Rock, OR**	**67.82**	**52**	IAmb	IAmb	06 32 28.6	
	comp=Z,52nm,1.0s						
K04D	**Chiloquin, OR**	**67.89**	**52**	IAmb	IAmb	06 32 28.8	
	comp=Z,64nm,0.9s						
M02C	**Callahan**	**67.92**	**54**	IAmb	IAmb	06 32 29.5	
	comp=Z,33nm,0.9s						
GOF	**Gofitskoye**	**68.17**	**311**	*d i*P	**P**	**06 32 28.2**	**+0.6**
GOF				*e*S	**S**	**06 41 24.5**	**+0.9**
NSS	**Namsos**	**68.20**	**339**	*e*P	**P**	**06 32 26.9**	**-0.5**
N02D	**Trinity Center**	**68.25**	**54**	IAmb	IAmb	06 32 31.4	
	comp=Z,41nm,0.8s						
NIAQ	**Niaqornat**	**68.40**	**6**	*i* P	**P**	**06 32 28.6**	**+0.1**
NIAQ				IAmb	IAmb	06 32 30.9	
	comp=Z,79nm,1.2s						
M03C	**McCloud**	**68.44**	**54**	IAmb	IAmb	06 32 49.3	
	comp=Z,72nm,1.0s						
KCPM	**Cahto Peak**	**68.45**	**56**	IAmb	IAmb	06 32 32.4	
	comp=Z,41nm,0.8s						
SAATT	**Saattut**	**68.52**	**5**	*i* P	**P**	**06 32 30.5**	**+1.2**
SAATT				IAmb	IAmb	06 32 30.7	
	comp=Z,88nm,1.1s						
SCO	**Scoresbysund**	**68.69**	**354**	IAmb	IAmb	06 32 32.3	
	comp=Z,29nm,1.0s						
SCO	**Scoresbysund**	**68.69**	**354**	*i* P	**P**	**06 32 31.2**	**+0.8**
SCO				IAmb	IAmb	06 32 32.5	
	comp=Z,22nm,0.9s						
GUDG	**Gudauri**	**68.85**	**308**	P	**P**	**06 32 32.5**	**+0.3**
KIV	**Kislovodsk**	**69.03**	**310**	P	**P**	**06 32 33.7**	**+0.6**
KIV				S	**S**	**06 41 31.9**	**-2.2**
KIV	**Kislovodsk**	**69.03**	**310**	P	**P**	**06 32 33.9**	**+0.7**
KIV	**Kislovodsk**	**69.03**	**310**	⇓P	**P**	**06 32 33.8**	**+0.7**
KIV	**Kislovodsk**	**69.03**	**310**	*i* P	**P**	**06 32 33.8**	**+0.7**
	SNR=24						
KIV	**Kislovodsk**	**69.03**	**310**	*e*P	**P**	**06 32 33.4**	**+0.3**
KIV				*e*S	**S**	**06 41 34.1**	**+0.1**
KIV				pmax	pmax		
	comp=Z,344nm,1.0s						
KIV				MLR	MLR		
	comp=Z,287nm,17.0s						
KIV	**Kislovodsk**	**69.03**	**310**	P	**P**	**06 32 33.8**	**+0.7**
	comp=Z,3µmcomp=Z,336nm,1.0s						
KIV	**Kislovodsk**	**69.03**	**310**	P	**P**	**06 32 33.9**	**+0.7**
KBZ	**Khabaz**	**69.04**	**310**	P	**P**	**06 32 33.6**	**+0.6**
	comp=Z,104nm,0.8s,baz=56,slow=5.5,SNR=256						
KBZ				PcP	**PcP**	**06 33 00.8**	**+3.9**
	comp=Z,25nm,0.8s,baz=350,slow=0.2,SNR=3.5						
KBZ				LR	LR	07 08 15.9	
	comp=Z,230nm,18.3s,baz=38,slow=41						
	comp=Z,104nm,0.8s						
KBZ	**Khabaz**	**69.04**	**310**	*d i*P	**P**	**06 32 33.6**	**+0.6**
KBZ				pmax	pmax		
	comp=Z,99nm,0.9s						
TBLG	**Delisi**	**69.12**	**307**	P	**P**	**06 32 30.5**	**-3.1**
SHA1	**Shidzhatmaz**	**69.17**	**310**	*d i*P	**P**	**06 32 34.9**	**+0.7**
O03E	**Paynes Creek**	**69.21**	**54**	IAmb	IAmb	06 32 53.5	
	comp=Z,88nm,1.1s						
ERBR	**Yeremizino-Bor**	**69.23**	**313**	*e*P	**P**	**06 32 34.3**	**+0.1**
ERBR				*e**PP	**pP**	**06 32 50.0**	**+0.9**
ERBR				*e*S	**S**	**06 41 35.1**	**-1.1**
ERBR				pmax	pmax		
	comp=Z,254nm,0.8s						
LABN	**Labinsk**	**69.75**	**312**	*e*P	**P**	**06 32 37.7**	**+0.3**
LABN				*e**PP	**pP**	**06 32 52.9**	**+0.7**
LABN				*e*S	**S**	**06 41 42.1**	**-0.2**
LABN				pmax	pmax		
	comp=Z,229nm,0.8s						
SUTB	**Sutter Butte**	**69.84**	**55**	IAmb	IAmb	06 32 39.9	
	comp=Z,87nm,1.6s						
MSO	**Missoula**	**69.86**	**45**	IAmb	IAmb	06 32 40.1	
	comp=Z,57nm,1.2s						
WVOR	**Wild Horse Val**	**69.86**	**51**	P	**P**	**06 32 39.6**	**+1.3**
MNK	**Minsk**	**69.90**	**325**	*i* P	**P**	**06 32 38.6**	**+0.5**
	comp=E,52nm,0.8s						
MNK				*i* P	**P**	**06 32 38.6**	**+0.5**
	comp=N,49nm,1.0s						
MNK				*i* P	**P**	**06 32 38.6**	**+0.5**
	comp=Z,141nm,0.8s,baz=48						
MNK				*i* pP	**pP**	**06 32 54.2**	**+1.2**
MNK				*i* sP	**PcP**	**06 33 02.8**	**+2.4**
MNK				*i* PP	**PP**	**06 35 13.7**	**+1.0**
MNK				*i* PPP	PPP	06 36 56.5	
MNK				*i* S	**S**	**06 41 45.4**	**+1.7**
MNK				*i* sS	**SKiKP**	**06 42 19.6**	**-0.3**
MNK				*i* SS	**SS**	**06 46 15.5**	**+3.1**
MNK				*i* SSS	SSS	06 49 27.8	
MNK				*i* LQ	LQ	06 58 39.3	
MNK				*i* LR	LR	07 02 56.8	
MNK				*i* LRM	MLR	07 05 33.7	
	comp=Z,358nm,21.5s						
MNK				*i* LRM	MLR	07 06 47.8	
	comp=E,693nm,26.3s						
MNK				*i* LRM	MLR	07 06 54.6	
	comp=N,584nm,20.0s						
MNK	**Minsk**	**69.90**	**325**	*i* P	**P**	**06 32 38.6**	**+0.5**
MNK				*i* *PP	**pP**	**06 32 54.2**	**+1.2**
MNK				*i* *SP	**PcP**	**06 33 02.7**	**+2.4**
MNK				*i*		06 35 13.7	
MNK				*i* PPP	PPP	06 36 56.5	
MNK				*i* S	**S**	**06 41 45.4**	**+1.7**
MNK				*i* *SS	**SKiKP**	**06 42 19.5**	**-0.3**
MNK				*i* SS	**SS**	**06 46 15.5**	**+3.1**
MNK				pmax	pmax		
	comp=N,49nm,1.0s						
MNK				pmax	pmax		
	comp=Z,141nm,0.8s						
MNK				pmax	pmax		
	comp=E,52nm,0.8s						
MNK				MLR	MLR		
	comp=Z,358nm,21.0s						
MNK				MLR	MLR		
	comp=E,693nm,26.0s						
MNK				MLR	MLR		
	comp=N,584nm,20.0s						
NACGM	**Naroch**	**70.10**	**326**	⇓*i*P	**P**	**06 32 39.6**	**+0.2**
	comp=Z,194nm,0.8s,baz=47						
MEEK	**Meekatharra**	**70.30**	**202**	P	**P**	**06 32 40.0**	**-0.9**
	comp=Z,30nm,1.6s						
FFC	**Flin Flon**	**70.49**	**34**	P	**P**	**06 32 42.1**	**+0.3**
FFC				IAmb	IAmb	06 33 00.4	
	comp=Z,42nm,0.8s						
FFC	**Flin Flon**	**70.49**	**34**	P	**P**	**06 32 42.1**	**+0.3**
FFC				pmax	pmax		
	comp=Z,42nm,0.9s						
WSAR	**Wadi Sarin**	**70.49**	**284**	P	**P**	**06 32 42.7**	**+0.3**
JLN	**Jalan Bani Buh**	**70.56**	**283**	P	**P**	**06 32 43.1**	**+0.4**
BANOM	**Banah**	**70.61**	**288**	P	**P**	**06 32 43.2**	**+0.2**
BANOM	**Banah**	**70.61**	**288**	*i* P	**P**	**06 32 43.0**	**0.0**
	SNR=21						
WBK	**Wadi Bani Khal**	**70.62**	**283**	P	**P**	**06 32 43.8**	**+0.7**
FCC	**Fort Churchill**	**70.64**	**27**	IAmb	IAmb	06 32 44.0	
	comp=Z,106nm,1.5s						
SHME	**Shamm**	**70.65**	**288**	P	**P**	**06 32 43.4**	**+0.1**
SHME	**Shamm**	**70.65**	**288**	*i* P	**P**	**06 32 43.3**	**+0.1**
	SNR=16						
BIDO	**Bidbid**	**70.70**	**285**	P	**P**	**06 32 44.0**	**+0.5**
MPK	**Martis Peak**	**70.90**	**54**	IAmb	IAmb	06 32 48.2	
	comp=Z,115nm,1.3s						
MFID	**Camas Ranch**	**70.91**	**49**	IAmb	IAmb	06 32 47.3	
	comp=Z,82nm,1.6s						
MOL	**Molde**	**70.96**	**340**	*e*P	**P**	**06 32 44.9**	**+0.5**
NC405	**NORSAR Array S**	**70.96**	**337**	P	**P**	**06 32 44.6**	**+0.1**
NC405				IAmb	IAmb	06 32 45.3	
	comp=Z,61nm,0.6s						
SOC	**Sochi**	**70.97**	**311**	*e*P	**P**	**06 32 45.1**	**+0.2**
SOC				*e*S	**S**	**06 41 51.8**	**-4.7**
SOC				pmax	pmax		
	comp=Z,58nm,0.6s						
SOC				MLR	MLR		
	comp=Z,192nm,18.0s						
NC303	**NORSAR Array S**	**70.97**	**337**	IAmb	IAmb	06 32 45.9	
	comp=Z,69nm,1.0s						
DOMB	**Dombas**	**70.98**	**339**	*e*P	**P**	**06 32 44.9**	**+0.2**
SMDO	**Samad**	**71.03**	**284**	P	**P**	**06 32 45.9**	**+0.2**
MSFE	**Esma-Masafi**	**71.05**	**287**	*i* P	**P**	**06 32 45.8**	**+0.1**
	SNR=7.5						
PAHR	**Pah Rah Range**	**71.05**	**54**	IAmb	IAmb	06 32 48.0	
	comp=Z,42nm,0.9s						
HFS	**Hagfors**	**71.12**	**336**	P	**P**	**06 32 45.6**	**+0.1**
	comp=Z,43nm,0.6s,baz=46,slow=6.4,SNR=164						
HFS				LR	LR	07 08 19.7	
	comp=Z,228nm,18.1s,baz=46,slow=40						
	comp=Z,43nm,0.6s						
ARMA	**Armidale**	**71.15**	**171**	P	**P**	**06 32 46.6**	**+0.6**
	comp=Z,23nm,1.4s						
NB2	**NORSAR Subarra**	**71.17**	**337**	P	**P**	**06 32 45.7**	**-0.1**
	comp=Z,51nm,0.7s,baz=36,slow=6.5						
NB2	**NORSAR Subarra**	**71.17**	**337**	P	**P**	**06 32 45.7**	**-0.1**
	baz=36,slow=6.5						
NOA	**NORSAR Array B**	**71.17**	**337**	P	**P**	**06 32 45.8**	**-0.1**
	comp=Z,40nm,0.6s,baz=38,slow=6.1,SNR=180						
NOA				PP	**PP**	**06 35 26.2**	**+2.8**
	comp=Z,2.7nm,0.7s,baz=45,slow=8.7,SNR=3.3						
NOA				LR	LR	07 08 04.5	
	comp=Z,162nm,18.8s,baz=45,slow=39						
	comp=Z,40nm,0.6s						
HOQ	**Hoqain**	**71.26**	**285**	P	**P**	**06 32 46.9**	**-0.1**
HOQ				P	**P**	**06 32 48.0**	**+1.0**
	SNR=6.0						
UOSS	**Minazif**	**71.26**	**287**	P	**P**	**06 32 46.9**	**-0.1**
UOSS	**Minazif**	**71.26**	**287**	P	**P**	**06 32 47.1**	**+0.2**
UOSS				IAmb	IAmb	06 32 47.7	
	comp=Z,68nm,0.8s						
UOSS	**Minazif**	**71.26**	**287**	*i* P	**P**	**06 32 46.8**	**-0.2**
	SNR=19						
NBO00	**NORSAR Array S**	**71.30**	**337**	P	**P**	**06 32 47.0**	**+0.4**
NBO00				IAmb	IAmb	06 32 47.8	
	comp=Z,76nm,0.8s						
NC602	**NORSAR Array S**	**71.31**	**337**	IAmb	IAmb	06 32 49.4	
	comp=Z,138nm,1.9s						
NC602	**NORSAR Array S**	**71.31**	**337**	*e*P	**P**	**06 32 46.4**	**-0.2**
EGMT	**Eagleton**	**71.31**	**42**	IAmb	IAmb	06 32 49.0	
	comp=Z,86nm,1.1s						
HATD	**Hatta, Dubai**	**71.39**	**287**	P	**P**	**06 32 47.8**	**+0.1**
	SNR=7.0						
HATD	**Hatta, Dubai**	**71.39**	**287**	*i* P	**P**	**06 32 48.0**	**+0.3**
	SNR=18						
JMDO	**Jabal Madar**	**71.40**	**284**	P	**P**	**06 32 48.0**	**+0.2**
NAO01	**NORSAR Array S**	**71.42**	**337**	IAmb	IAmb	06 32 48.2	
	comp=Z,40nm,0.7s						
AKN	**Aaknes**	**71.43**	**340**	*e*P	**P**	**06 32 48.1**	**+0.8**
ANN	**Anapa**	**71.50**	**313**	*e*P	**P**	**06 32 47.2**	**-0.8**
ANN				*e**PP	**pP**	**06 33 02.0**	**-0.9**
ANN				*e*S	**S**	**06 42 00.4**	**-2.1**
ANN				pmax	pmax		
	comp=Z,213nm,1.7s						
ANN				MLR	MLR		
	comp=Z,577nm,22.0s						
SOHO	**SOHO**	**71.50**	**286**	P	**P**	**06 32 48.3**	**-0.1**
SOHO	**SOHO**	**71.50**	**286**	*i* P	**P**	**06 32 48.4**	**-0.1**
	SNR=17						
DLMT	**Dillon**	**71.51**	**46**	IAmb	IAmb	06 33 07.7	
	comp=Z,72nm,0.8s						
ASHO	**Ashiyiah**	**71.52**	**287**	P	**P**	**06 32 50.0**	**+1.4**
	SNR=6.7						
ASHO	**Ashiyiah**	**71.52**	**287**	*i* P	**P**	**06 32 48.7**	**+0.1**
	SNR=16						
NAZ	**Nazwa, Dubai**	**71.63**	**287**	P	**P**	**06 32 49.1**	**-0.1**
AUPHS	**Peel High Scho**	**71.74**	**172**	P	**P**	**06 32 50.3**	**+0.8**
	comp=Z,27nm,1.2s						
CMSA	**Cobar Meteorol**	**71.79**	**177**	P	**P**	**06 32 50.2**	**+0.5**
	comp=Z,24nm,1.7s						
FAQ	**Al Faqa, Dubai**	**71.83**	**287**	P	**P**	**06 32 50.1**	**-0.3**
FAQ	**Al Faqa, Dubai**	**71.83**	**287**	P	**P**	**06 32 50.2**	**-0.2**
AK03	**Malin Array Si**	**71.84**	**322**	P	**P**	**06 32 49.8**	**-0.2**
BSY	**Bisya**	**71.84**	**285**	P	**P**	**06 32 50.7**	**+0.2**
	SNR=5.6						
AKASG	**Malin Array Be**	**71.86**	**322**	P	**P**	**06 32 50.0**	**-0.1**
	comp=Z,72nm,0.6s,baz=47,slow=6.0,SNR=236						
AKASG				LR	LR	07 07 55.9	
	comp=Z,319nm,18.4s,baz=42,slow=39						
	comp=Z,72nm,0.6s						
AKASG	**Malin Array Be**	**71.86**	**322**	P	**P**	**06 32 50.3**	**+0.2**
AKASG	**Malin Array Be**	**71.86**	**322**	P	**P**	**06 32 50.3**	**+0.2**
AKASG				pmax	pmax		
	comp=Z,123nm,1.0s						
AKBB	**Malin Array Si**	**71.86**	**322**	*d i*P	**P**	**06 32 49.9**	**-0.2**
AKBB	**Malin Array Si**	**71.86**	**322**	P	**P**	**06 32 49.9**	**-0.2**
KIEV	**Kiev**	**71.87**	**322**	P	**P**	**06 32 50.2**	**0.0**
KIEV	**Kiev**	**71.87**	**322**	⇑P	**P**	**06 32 49.9**	**-0.2**
KIEV	**Kiev**	**71.87**	**322**	*i* P	**P**	**06 32 50.1**	**-0.1**
	SNR=9.2						
KIEV	**Kiev**	**71.87**	**322**	P	**P**	**06 32 50.2**	**0.0**
KIEV				pmax	pmax		
	comp=Z,106nm,0.9s						
KIEV	**Kiev**	**71.87**	**322**	P	**P**	**06 32 49.6**	**-0.6**
	comp=Z,577nm,0.9s						
KIEV	**Kiev**	**71.87**	**322**	P	**P**	**06 32 50.0**	**-0.1**
KIEV				pP	**pP**	**06 33 04.9**	**-0.2**
KIEV				sP	**sP**	**06 33 10.6**	**-0.4**
AK04	**Malin Array Si**	**71.87**	**322**	P	**P**	**06 32 49.9**	**-0.3**
BOZ	**Bozeman (W)**	**71.88**	**45**	IAmb	IAmb	06 32 52.8	
	comp=Z,50nm,0.8s						
ARQ	**Araqi**	**71.99**	**286**	P	**P**	**06 32 51.5**	**+0.2**
	SNR=7.6						
STKA	**Stephens Creek**	**72.05**	**180**	P	**P**	**06 32 51.8**	**+0.5**
	comp=Z,6.8nm,0.8s,baz=336,slow=7.9,SNR=16						
STKA				LR	LR	07 05 59.9	
	comp=Z,108nm,20.6s,baz=20,slow=37						
	comp=Z,6.8nm,0.8s						
STKA	**Stephens Creek**	**72.05**	**180**	P	**P**	**06 32 51.4**	**+0.1**
	comp=Z,3.5nm,0.9s						
ASUD	**Al Ashush, Dub**	**72.09**	**287**	P	**P**	**06 32 52.0**	**+0.1**
	SNR=5.2						
ASUD	**Al Ashush, Dub**	**72.09**	**287**	*i* P	**P**	**06 32 52.3**	**+0.4**
	SNR=9.2						
ALNE	**Al Ain**	**72.12**	**287**	P	**P**	**06 32 52.0**	**-0.2**
	SNR=7.6						
ALNE	**Al Ain**	**72.12**	**287**	*i* P	**P**	**06 32 52.2**	**+0.1**
	SNR=20						
FORT	**Forrest**	**72.14**	**193**	P	**P**	**06 32 52.1**	**+0.3**
OSL	**Oslo**	**72.19**	**337**	*e*P	**P**	**06 32 52.3**	**+0.4**
SUW	**Suwalki**	**72.23**	**327**	*e*P	**P**	**06 32 52.3**	**0.0**
SKAR	**Skarslia**	**72.30**	**338**	*e*P	**P**	**06 32 53.3**	**+0.6**
MHTO	**MHTO**	**72.33**	**283**	P	**P**	**06 32 53.4**	**+0.1**
	SNR=17						
SFJD	**Kangerlussuaq**	**72.36**	**5**	LR	LR	07 05 43.1	
	comp=Z,298nm,21.2s,baz=344,slow=37						
SFJD	**Kangerlussuaq**	**72.36**	**5**	P	**P**	**06 32 53.3**	**+0.6**
SFJD				IAmb	IAmb	06 32 54.3	
	comp=Z,52nm,1.2s						
SFJD	**Kangerlussuaq**	**72.36**	**5**	P	**P**	**06 32 53.3**	**+0.6**
SFJD				pmax	pmax		
	comp=Z,52nm,1.2s						
SFJD	**Kangerlussuaq**	**72.36**	**5**	*i* P	**P**	**06 32 52.8**	**+0.1**
SFJD				IAmb	IAmb	06 32 53.9	
	comp=Z,35nm,0.9s						
AJN	**Ajban**	**72.38**	**287**	P	**P**	**06 32 53.2**	**-0.4**
FOO	**Floro**	**72.43**	**340**	*e*P	**P**	**06 32 53.4**	**+0.2**
MI28	**Mi28,Pidlybu**	**72.43**	**323**	P	**P**	**06 32 52.5**	**-1.0**
HYA	**Hoyanger**	**72.49**	**339**	*e*P	**P**	**06 32 54.3**	**+0.7**
NVAR	**Mina Array Bea**	**72.50**	**54**	P	**P**	**06 32 55.9**	**+1.4**
	comp=Z,23nm,0.9s,baz=288,slow=6.0,SNR=94						
NVAR				LR	LR	07 04 40.1	
	comp=Z,52nm,18.3s,baz=329,slow=36						
	comp=Z,23nm,0.9s						
NVAR	**Mina Array Bea**	**72.50**	**54**	P	**P**	**06 32 56.2**	**+1.7**
YHL	**Hebgen Lake**	**72.60**	**46**	IAmb	IAmb	06 33 14.6	
	comp=Z,41nm,0.9s						
YHB	**Horse Butte**	**72.66**	**46**	IAmb	IAmb	06 33 14.8	
	comp=Z,50nm,0.9s						
KOPT	**Kop Dagi**	**72.72**	**308**	IAmb	IAmb	06 32 58.9	
	comp=Z,103nm,1.2s						
KONO	**Kongsberg**	**72.77**	**337**	P	**P**	**06 32 56.1**	**+0.8**
KONO				IAmb	IAmb	06 32 56.5	
	comp=Z,35nm,0.8s						
KONO	**Kongsberg**	**72.77**	**337**	*e*P	**P**	**06 32 55.8**	**+0.5**
KONO	**Kongsberg**	**72.77**	**337**	*ce*P	**P**	**06 32 55.9**	**+0.6**
KONO				pmax	pmax		
	comp=Z,13nm,1.0s						
STRU	**Stroemstad**	**72.78**	**336**	*i* P	**P**	**06 32 55.6**	**+0.3**
RNPP9	**Sopachiv**	**72.90**	**324**	P	**P**	**06 32 56.7**	**+0.4**
ELK	**Elko**	**72.91**	**51**	P	**P**	**06 32 58.4**	**+1.5**
YNM	**Yellowstone No**	**72.94**	**45**	IAmb	IAmb	06 33 03.2	
	comp=Z,80nm,1.4s						
SUE	**Sulen**	**72.96**	**340**	*e*P	**P**	**06 32 57.0**	**+0.6**
RNPP8	**Varash**	**72.97**	**324**	P	**P**	**06 32 56.9**	**+0.2**
YFT	**Old Faithful**	**73.05**	**46**	IAmb	IAmb	06 33 18.5	
	comp=Z,34nm,0.8s						
LUBAR	**Lubar, Ukraine**	**73.08**	**322**	P	**P**	**06 32 57.1**	**-0.3**
BBOO	**Buckleboo**	**73.19**	**185**	P	**P**	**06 32 58.6**	**+0.5**
BBOO	**Buckleboo**	**73.19**	**185**	P	**P**	**06 32 58.1**	**0.0**
	comp=Z,21nm,0.8s						
SIM	**Simferopol'**	**73.21**	**315**	*e*P	**P**	**06 32 58.5**	**+0.3**
H17A	**Grant Village**	**73.23**	**46**	IAmb	IAmb	06 33 03.4	
	comp=Z,95nm,1.2s						
FRB	**Frobisher Bay**	**73.25**	**14**	LR	LR	07 09 49.4	
	comp=Z,182nm,18.1s,baz=318,slow=40						
DQM	**DQM**	**73.29**	**282**	P	**P**	**06 32 58.9**	**-0.2**
WHYH	**Whyalla**	**73.32**	**184**	P	**P**	**06 32 59.7**	**+0.9**
	comp=Z,36nm,0.9s						
ASK	**Askoy**	**73.33**	**339**	*e*P	**P**	**06 32 59.5**	**+0.9**
MORW	**Morawa**	**73.35**	**204**	P	**P**	**06 32 59.2**	**+0.2**
MORW				IAmb	IAmb	06 32 59.8	
	comp=Z,48nm,0.8s						
MORW	**Morawa**	**73.35**	**204**	P	**P**	**06 32 58.7**	**-0.4**
	comp=Z,69nm,1.3s						
BER	**Bergen**	**73.37**	**339**	*e*P	**P**	**06 32 59.7**	**+0.9**
BORU	**Boraas**	**73.38**	**334**	*i* P	**P**	**06 32 59.2**	**+0.2**
ODD1	**Odda**	**73.41**	**338**	*e*P	**P**	**06 32 59.9**	**+0.7**
TJOU	**Tjoern**	**73.44**	**335**	*i* P	**P**	**06 32 59.5**	**+0.2**
AUJCS	**Jamestown Cent**	**73.44**	**183**	P	**P**	**06 33 00.5**	**+1.0**
	comp=Z,34nm,1.1s						
RLMT	**Red Lodge**	**73.46**	**44**	IAmb	IAmb	06 33 02.5	
	comp=Z,70nm,1.5s						
VES	**Vestal, Richgr**	**73.60**	**57**	IAmb	IAmb	06 33 02.3	
	comp=Z,42nm,0.9s						
HTT	**Hallett**	**73.66**	**183**	P	**P**	**06 33 01.9**	**+1.1**
	comp=Z,45nm,1.2s						
MZWR	**Madinat Zayed**	**73.67**	**287**	P	**P**	**06 33 00.3**	**-1.0**
DGMT	**Dagmar**	**73.79**	**39**	IAmb	IAmb	06 33 03.3	
	comp=Z,156nm,1.5s						
ONAU	**Onsala**	**73.85**	**334**	*i* P	**P**	**06 33 01.4**	**-0.3**
BLS5	**Blasjo**	**73.87**	**338**	*e*P	**P**	**06 33 02.8**	**+0.9**
DEL	**Delary**	**73.92**	**333**	*i* P	**P**	**06 33 01.7**	**-0.5**
GRAC	**Grapevine Rang**	**73.97**	**55**	IAmb	IAmb	06 33 05.5	
	comp=Z,35nm,0.6s						
LAO	**LASA Array**	**74.00**	**42**	IAmb	IAmb	06 33 05.2	
	comp=Z,65nm,1.1s						
SORM	**Soroca**	**74.03**	**320**	⇓P	**P**	**06 33 03.0**	**+0.1**
SORM	**Soroca**	**74.03**	**320**	⇓P	**P**	**06 33 03.0**	**+0.1**
HOMB	**Homborsund**	**74.22**	**337**	*e*P	**P**	**06 33 04.3**	**+0.5**
HOMB	**Homborsund**	**74.22**	**337**	*i* P	**P**	**06 33 03.9**	**0.0**
BORG	**Borgarnes**	**74.25**	**353**	LR	LR	07 05 35.7	
	comp=Z,41nm,21.1s,baz=348,slow=36						
MZR	**Muzera**	**74.42**	**287**	P	**P**	**06 33 05.1**	**-0.6**
	SNR=5.9						
MZR	**Muzera**	**74.42**	**287**	*i* P	**P**	**06 33 05.2**	**-0.5**
	SNR=14						
SHMA	**Al-Shehemyia**	**74.49**	**291**	P	**P**	**06 33 05.2**	**-0.8**
BJUU	**Bjuv**	**74.53**	**333**	*i* P	**P**	**06 33 06.2**	**+0.5**
SNART	**Snartemo**	**74.55**	**337**	*e*P	**P**	**06 33 06.7**	**+0.9**
SNART	**Snartemo**	**74.55**	**337**	*i* P	**P**	**06 33 06.3**	**+0.5**
SPR3	**Spring Creek 3**	**74.56**	**52**	IAmb	IAmb	06 33 09.9	
	comp=Z,75nm,1.7s						
S11A	**Rachel**	**74.56**	**54**	IAmb	IAmb	06 33 28.5	
	comp=Z,65nm,1.1s						
BLDU	**Ballidu**	**74.60**	**203**	P	**P**	**06 33 06.2**	**-0.1**
	comp=Z,54nm,1.0s						
FURC	**Furnace Creek,**	**74.61**	**55**	IAmb	IAmb	06 33 09.1	
	comp=Z,40nm,0.8s						
BSD	**Bornholm Skovb**	**74.61**	**332**	*i* P	**P**	**06 33 06.3**	**+0.1**
BSD				IAmb	IAmb	06 33 07.0	
	comp=Z,88nm,1.1s						
KMPD	**K-Podol'skiy**	**74.64**	**322**	P	**P**	**06 33 06.5**	**0.0**
KMPD				P	**P**	**06 33 05.8**	**-0.7**
TPNV	**Topopah Spring**	**74.69**	**54**	IAmb	IAmb	06 33 27.0	
	comp=Z,44nm,1.0s						
SAKB	**Bahrain**	**74.72**	**291**	P	**P**	**06 33 06.4**	**-1.0**
LUNU	**Lund**	**74.73**	**333**	*i* P	**P**	**06 33 07.2**	**+0.3**
TPO	**Tropico Hills**	**74.75**	**57**	IAmb	IAmb	06 33 10.0	
	comp=Z,146nm,1.6s						
BEL	**Belsk**	**74.81**	**327**	*e*P	**P**	**06 33 08.6**	**+1.1**
PDAR	**Pinedale Array**	**74.86**	**46**	P	**P**	**06 33 08.9**	**+0.7**
	comp=Z,13nm,0.8s,baz=272,slow=2.5,SNR=109						
	comp=Z,13nm,0.8s						
PDAR	**Pinedale Array**	**74.86**	**46**	P	**P**	**06 33 09.1**	**+0.9**
QSM	**Queen of Sheba**	**74.93**	**56**	IAmb	IAmb	06 33 10.8	
	comp=Z,92nm,1.4s						
GOET	**G??ttrup**	**75.01**	**335**	*i* P	**P**	**06 33 09.1**	**+0.7**
GOET				IAmb	IAmb	06 33 10.1	
	comp=Z,130nm,0.7s						
COP	**Copenhagen**	**75.04**	**333**	*i* P	**P**	**06 33 09.5**	**+0.8**
COP				IAmb	IAmb	06 33 09.9	
	comp=Z,133nm,0.7s						
NUUK	**Nuuk**	**75.05**	**6**	*i* P	**P**	**06 33 09.2**	**+0.7**
NUUK				IAmb	IAmb	06 33 10.2	
	comp=Z,118nm,1.1s						
SLWR	**Sila**	**75.06**	**289**	P	**P**	**06 33 08.8**	**-0.6**
AUMAR	**Marden Senior**	**75.12**	**183**	P	**P**	**06 33 08.8**	**-0.4**

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      comp=Z,39nm,1.7s
GKP   Gorka Klasztor    75.17 329 eP    P     06 33 10.2 +0.8
GKP   Gorka Klasztor    75.17 329  P    P     06 33 10.3 +0.8
KLBR  Kellerberrin      75.22 201  P    P     06 33 10.0 +0.1
      comp=Z,127nm,0.8s
BZK   Bozkurt           75.24 313  IAmb IAmb  06 33 11.6
      comp=Z,74nm,0.7s
BZK   Bozkurt           75.24 313 ⇑P    P     06 33 11.1 +1.1
VASR  Vaslui            75.33 320 ⇓P    P     06 33 11.5 +0.9
MUD   Monsted U'grnd    75.50 335 i P   P     06 33 12.2 +0.9
MUD                                IAmb IAmb  06 33 12.7
      comp=Z,45nm,0.7s
PRAR  RASCA             75.59 321 ⇑P    P     06 33 11.9 -0.2
KWP   Kalwaria Pacla    75.60 324 eP    P     06 33 13.1 +1.1
KWP   Kalwaria Pacla    75.60 324  P    P     06 33 12.8 +0.8
KWP   Kalwaria Pacla    75.60 324  P    P     06 33 12.8 +0.8
BIR   Birlad            75.68 319 ⇓P    P     06 33 14.1 +1.5
BIR   Birlad            75.68 319 ⇓P    P     06 33 14.1 +1.5
GIRR  Girov             75.75 320 ⇑P    P     06 33 13.5 +0.6
VARL  Varlezi           75.82 319 ⇓P    P     06 33 14.1 +0.7
TLCR                    75.83 318 ⇑P    P     06 33 14.1 +0.7
TLCR                    75.83 318 ⇑P    P     06 33 14.1 +0.7
SHAO  Shalim            75.89 282  P    P     06 33 13.9 -0.3
SHAO  Shalim            75.89 282 i P   P     06 33 14.2  0.0
      SNR=8.2
BURAR Bucovina Array    75.90 322  P    P     06 33 14.5 +0.5
BURAR Bucovina Array    75.90 322 ⇓P    P     06 33 14.4 +0.5
BURAR Bucovina Array    75.90 322 ⇓P    P     06 33 14.4 +0.5
SCTR  Scanteiesti       75.91 319 ⇑P    P     06 33 14.6 +0.7
GHRR                    75.93 319 ⇓P    P     06 33 15.3 +1.4
TCRU  Three Creeks R    75.93  51  IAmb IAmb  06 33 34.4
      comp=Z,88nm,1.9s
ILGA  Ilgaz             76.00 312  IAmb IAmb  06 33 17.2
      comp=Z,82nm,0.9s
NEGRR Negrea            76.06 319 ⇓P    P     06 33 15.5 +0.7
JURR  Jurilovca         76.09 318 ⇑P    P     06 33 15.6 +0.7
CFR   Carcaliu          76.18 318 ⇓P    P     06 33 15.6 +0.2
CFR   Carcaliu          76.18 318 ⇓P    P     06 33 15.6 +0.2
PANC  Panciu            76.19 319 ⇓P    P     06 33 16.8 +1.3
BNN   Bunyan            76.23 309  IAmb IAmb  06 33 17.9
      comp=Z,66nm,0.8s
ONER  Baraj Valea Uz    76.24 320 ⇓P    P     06 33 17.0 +1.3
TPGR  Topolog           76.26 318 ⇑P    P     06 33 16.3 +0.4
ULM   Lac du Bonnet     76.30  34  P    P     06 33 15.9 -0.1
      comp=Z,13nm,0.6s,baz=314,slow=5.8,SNR=26
ULM                                LR   LR    07 10 27.3
      comp=Z,134nm,18.4s,baz=345,slow=38
      comp=Z,13nm,0.6s
ULM   Lac du Bonnet     76.30  34deP    P     06 33 15.8 -0.2
RDMU  Red Mountain      76.31  48  IAmb IAmb  06 33 18.9
      comp=Z,61nm,0.8s
ODBI  Odobesti          76.31 319 ⇑P    P     06 33 17.3 +1.1
V12A  Nelson            76.34  55  IAmb IAmb  06 33 19.3
      comp=Z,72nm,1.6s
P17A  Butcher Ranch,    76.37  50  IAmb IAmb  06 33 19.3
      comp=Z,36nm,0.8s
STHS  Stebnicka Huta    76.40 325 eP    P     06 33 17.2 +0.6
STHS                               pmax pmax
      comp=Z,41nm,0.7s
STHS  Stebnicka Huta    76.40 325 eP    P     06 33 17.2 +0.6
VRI   Vrincioaia        76.41 319 ⇑P    P     06 33 18.1 +1.4
VRI   Vrincioaia        76.41 319 ⇑P    P     06 33 18.1 +1.4
OJC   Ojcow             76.43 326 eP    P     06 33 17.6 +0.9
OJC   Ojcow             76.43 326  P    P     06 33 17.3 +0.5
PLOR  Plostina          76.45 320 ⇑P    P     06 33 18.1 +1.1
PLOR  Plostina          76.45 320 ⇑P    P     06 33 18.1 +1.1
GAZ   Gaziantep         76.51 307  P    P     06 33 18.6 +1.0
TIRR  Tirgusor          76.54 318  P    P     06 33 17.6 +0.1
TIRR                               IAmb IAmb  06 33 18.9
      comp=Z,42nm,0.8s
TIRR  Tirgusor          76.54 318 ⇑P    P     06 33 18.1 +0.7
TIRR  Tirgusor          76.54 318 ⇑P    P     06 33 18.1 +0.7
P18A  Preston Nutter    76.55  49  IAmb IAmb  06 33 20.6
      comp=Z,54nm,1.4s
DMTO  DMTO              76.58 282  P    P     06 33 17.2 -0.9
K22A  Casper            76.59  45  IAmb IAmb  06 33 19.8
      comp=Z,52nm,1.2s
DNR   Dunn Ranch,Anz    76.60  57  IAmb IAmb  06 33 20.2
      comp=Z,35nm,0.7s
NWAO  Narrogin (SRO)    76.62 201  LR   LR    07 07 00.9
      comp=Z,48nm,21.6s,baz=312,slow=36
NWAO  Narrogin (SRO)    76.62 201  P    P     06 33 18.1 +0.3
NWAO  Narrogin (SRO)    76.62 201  P    P     06 33 18.1 +0.3
      comp=Z,34nm,1.4s
NWAO  Narrogin (SRO)    76.62 201  P    P     06 33 18.4 +0.6
      comp=Z,34nm,1.4s
NWAO  Narrogin (SRO)    76.62 201  P    P     06 33 18.1 +0.3
NWAO                               pmax pmax
      comp=Z,181nm,1.7s
NWAO  Narrogin (SRO)    76.62 201  P    P     06 33 17.4 -0.4
NWAO                               PcP  PcP   06 33 29.8 +0.7
TURR  Turia             76.62 320 ⇓P    P     06 33 19.5 +1.5
DOK   Doka              76.63 283  P    P     06 33 17.7 -0.7
      SNR=6.1
BMR   Baia Mare         76.66 322  P    P     06 33 19.4 +1.3
COVR  Voineasa-Covas    76.68 320 ⇓P    P     06 33 19.4 +1.1
PFO   Pinyon Flats O    76.68  57  LR   LR    07 00 57.2
      comp=Z,136nm,21.6s,baz=276,slow=31
PFO   Pinyon Flats O    76.68  57  P    P     06 33 18.6 -0.1
PFO   Pinyon Flats O    76.68  57deP    P     06 33 19.3 +0.7
PFO                                pmax pmax
      comp=Z,30nm,0.9s
OZUR                    76.70 320 ⇓P    P     06 33 19.8 +1.4
MFTR  Murfatlar         76.73 317 ⇓P    P     06 33 19.3 +0.7
SRU   San Rafael Swe    76.73  50  IAmb IAmb  06 33 21.1
      comp=Z,39nm,0.8s
E28A  Huff              76.81  39  IAmb IAmb  06 33 37.9
      comp=Z,34nm,0.9s
NIE   Niedzica          76.81 325 eP    P     06 33 20.4 +1.4
RSSD  Black Hills       76.88  43  P    P     06 33 19.9 +0.2
RSSD                               IAmb IAmb  06 33 39.3
      comp=Z,68nm,1.4s
RSSD  Black Hills       76.88  43  P    P     06 33 19.9 +0.2
RSSD                               pmax pmax
      comp=Z,68nm,1.4s
MANR  Mangalia          76.90 317 ⇓P    P     06 33 20.4 +0.9
NEHR  Nehoiu            76.93 319 ⇑P    P     06 33 20.8 +1.1
BR131 Keskin Array S    76.93 311  P    P     06 33 19.7 -0.2
      SNR=17
BR131 Keskin Array S    76.93 311  IAmb IAmb  06 33 22.3
      comp=Z,150nm,1.9s
BR131 Keskin Array S    76.93 311d iP   P     06 33 20.0  0.0
BRTR  Keskin Array B    76.93 311  P    P     06 33 20.3 +0.3
      comp=Z,16nm,0.7s,baz=83,slow=3.8,SNR=84
BRTR                               LR   LR    07 12 15.2
      comp=Z,110nm,20.7s,baz=37,slow=40
      comp=Z,16nm,0.7s
BRTR  Keskin Array B    76.93 311  P    P     06 33 19.8 -0.2
DOPR  Dopca             76.99 320 ⇓P    P     06 33 21.4 +1.4
MLR   Muntele Rosu      77.06 320  LR   LR    07 11 32.9
      comp=Z,211nm,19.2s,baz=46,slow=39
MLR   Muntele Rosu      77.06 320  IAmb IAmb  06 33 23.0
      comp=Z,81nm,1.3s
MLR   Muntele Rosu      77.06 320 ⇑P    P     06 33 21.5 +1.0
MLR   Muntele Rosu      77.06 320 ⇑P    P     06 33 21.5 +1.0
ICOR  Ion Corvin        77.09 318 ⇓P    P     06 33 21.8 +1.2
KIRS  Kirsehir-Merke    77.17 311 ⇓P    P     06 33 21.8 +0.5
BSEG  Bad Segeberg      77.18 333 eP    P     06 33 21.6 +0.8
      comp=Z,36nm,0.9s,baz=35,slow=5.4
PSN   Preselentsi       77.26 317 i P   P     06 33 22.1 +0.6
RBK   Rabkut            77.27 282  P    P     06 33 21.0 -1.0
MESR  Meseseni          77.30 322 ⇑P    P     06 33 23.1 +1.4
CJR   Cluj-Napoca       77.31 322 ⇑P    P     06 33 22.8 +1.0
CJR   Cluj-Napoca       77.31 322 ⇑P    P     06 33 22.8 +1.0
ANTO  Ankara            77.32 312  P    P     06 33 22.4 +0.3
ANTO                               IAmb IAmb  06 33 23.7
      comp=Z,62nm,0.8s
ANTO  Ankara            77.32 312 ⇓P    P     06 33 22.7 +0.7
ANTO  Ankara            77.32 312 ⇓P    P     06 33 22.7 +0.7
ANTO  Ankara            77.32 312  P    P     06 33 22.5 +0.4
ANTO                               sP   sP    06 33 42.0 -1.0
WHFO  Wadi Hawf         77.33 283  P    P     06 33 21.3 -1.1
KSP   Ksiaz             77.41 328 eP    P     06 33 23.2 +1.0
KSP   Ksiaz             77.41 328  P    P     06 33 22.9 +0.7
OKC   Ostrava-Krasne    77.42 327 eP    P     06 33 23.2 +0.9
OKC   Ostrava-Krasne    77.42 327 eP    P     06 33 23.2 +0.9
KECS  Kecovo            77.43 325 eP    P     06 33 22.9 +0.5
KECS                               pmax pmax
      comp=Z,25nm,0.9s
KECS  Kecovo            77.43 325 eP    P     06 33 22.9 +0.5
U15A  North Rim         77.45  53  IAmb IAmb  06 33 26.1
      comp=Z,62nm,1.2s
STEB  Steborice         77.50 327 eP    P     06 33 23.6 +0.8
MARR  Marisel-Cluj      77.56 322 ⇓P    P     06 33 24.2 +0.9
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EPLO  Experimental L    77.65  33  IAmb IAmb  06 33 42.2
      comp=Z,57nm,1.0s
OSTC  Ostas             77.66 328 eP    P     06 33 24.7 +1.0
OSTC  Ostas             77.66 328 eP    P     06 33 24.7 +1.0
DRGR                    77.67 322 ⇑P    P     06 33 24.4 +0.5
DRGR                    77.67 322 ⇑P    P     06 33 24.4 +0.5
CHVC  Chvalec           77.70 328 eP    P     06 33 24.8 +0.9
CHVC  Chvalec           77.70 328 eP    P     06 33 24.8 +0.9
MORC  Moravsky Berou    77.72 327  IAmb IAmb  06 33 25.9
      comp=Z,74nm,0.9s
MORC  Moravsky Berou    77.72 327 ⇓P    P     06 33 24.8 +0.8
MORC  Moravsky Berou    77.72 327 eP    P     06 33 24.7 +0.7
MORC  Moravsky Berou    77.72 327 ⇓P    P     06 33 24.8 +0.8
BRAT  Ballarat          77.73 178  P    P     06 33 25.4 +1.5
      comp=Z,26nm,0.9s
TNR   Turnu Rosu        77.76 321 ⇓P    P     06 33 25.3 +0.9
TNR   Turnu Rosu        77.76 321 ⇓P    P     06 33 25.3 +0.9
AGMN  Agassiz Nation    77.77  35  P    P     06 33 24.2 -0.1
DPC   Dobruska-Polom    77.78 328 eP    P     06 33 25.5 +1.1
DPC   Dobruska-Polom    77.78 328 eP    P     06 33 25.5 +1.1
UPC   Upice             77.78 328 eP    P     06 33 25.3 +1.0
UPC   Upice             77.78 328 eP    P     06 33 25.3 +1.0
ARR   Arges             77.79 320 ⇓P    P     06 33 26.1 +1.5
TOO   Toolangi          77.79 177  P    P     06 33 25.6 +1.2
TOO   Toolangi          77.79 177  P    P     06 33 25.6 +1.2
TOO                                pmax pmax
      comp=Z,10.0nm,0.9s
KRLC  Kraliky           77.80 327 eP    P     06 33 25.5 +1.0
KRLC  Kraliky           77.80 327 eP    P     06 33 25.5 +1.0
BLYC  Blythe            77.82  56  IAmb IAmb  06 33 27.3
      comp=Z,36nm,0.9s
MAUC  Maruska           77.91 326 eP    P     06 33 26.2 +1.1
PV21  Cone Mtn., Par    78.00  49  IAmb IAmb  06 33 28.4
      comp=Z,44nm,0.8s
ABTO  Aybut             78.03 283  P    P     06 33 25.5 -0.8
      SNR=5.1
GLA   Glamis            78.08  57  IAmb IAmb  06 33 28.8
      comp=Z,40nm,0.9s
PV14  Lion Creek, Pa    78.10  49  IAmb IAmb  06 33 28.9
      comp=Z,46nm,1.0s
PSZ   Piszkesteto       78.12 324  IAmb IAmb  06 33 28.4
      comp=Z,65nm,0.9s
PSZ   Piszkesteto       78.12 324 ⇑P    P     06 33 27.8 +1.5
PSZ   Piszkesteto       78.12 324 ⇑P    P     06 33 27.8 +1.5
PV22  Blue Mesa, Par    78.12  49  IAmb IAmb  06 33 29.0
      comp=Z,39nm,0.9s
LOT   Lotru             78.15 321 ⇓P    P     06 33 27.2 +0.5
PV04  Paradox Valley    78.15  49  IAmb IAmb  06 33 29.3
      comp=Z,43nm,1.0s
FLTG  Flechtingen       78.16 332 eP    P     06 33 26.4  0.0
      comp=Z,59nm,0.7s,baz=35,slow=5.4
PV17  East Wray Mesa    78.20  50  IAmb IAmb  06 33 29.5
      comp=Z,60nm,0.8s
PV16  Nyswonger Mesa    78.20  49  IAmb IAmb  06 33 29.6
      comp=Z,40nm,0.9s
HUMR  Humele            78.22 319 ⇑P    P     06 33 27.5 +0.6
PV11  David Mesa, Pa    78.23  49  IAmb IAmb  06 33 29.8
      comp=Z,43nm,0.9s
DEV   Deva              78.25 321  P    P     06 33 28.5 +1.5
PV18  Skein Mesa, Pa    78.25  49  IAmb IAmb  06 33 29.8
      comp=Z,70nm,0.8s
PV05  Paradox Valley    78.25  50  IAmb IAmb  06 33 30.0
      comp=Z,60nm,0.9s
PV12  Saucer Basin,     78.26  49  IAmb IAmb  06 33 34.6
      comp=Z,34nm,0.8s
IVI   Ivigtut           78.27   5  IAmb IAmb  06 33 28.1
      comp=Z,55nm,1.0s
IVI   Ivigtut           78.27   5 i P   P     06 33 27.0 +0.3
IVI                                IAmb IAmb  06 33 28.4
      comp=Z,70nm,1.1s
PV03  Paradox Valley    78.28  49  IAmb IAmb  06 33 29.9
      comp=Z,31nm,0.9s
BRG   Berggiesshubel    78.31 329 eP    P     06 33 27.6 +0.4
      comp=Z,23nm,0.8s,baz=35,slow=5.4
CLL   Collm             78.32 330  IAmb IAmb  06 33 28.5
      comp=Z,50nm,0.8s
CLL   Collm             78.32 330⇓iP    P     06 33 27.4 +0.1
CLL                               e*PP  pP    06 33 43.0 +0.6
CLL                                pmax pmax
      comp=Z,58nm,1.0s
CLL   Collm             78.32 330 eP    P     06 33 27.4 +0.1
      comp=Z,50nm,0.8s,baz=35,slow=5.4
PVCC  Panska Ves        78.34 329 eP    P     06 33 28.0 +0.6
PVCC  Panska Ves        78.34 329 eP    P     06 33 28.0 +0.6
PV13  Radium Mtn., P    78.36  50  IAmb IAmb  06 33 30.5
      comp=Z,55nm,1.0s
JAVC  Velka Javorina    78.37 326 eP    P     06 33 29.1 +1.4
KUQ   Kuujjuuaa         78.46  16  IAmb IAmb  06 33 28.9
      comp=Z,32nm,0.7s
VRAC  Vranov            78.47 327  LR   LR    07 11 14.3
      comp=Z,364nm,19.4s,baz=25,slow=38
VRAC  Vranov            78.47 327 ⇓P    P     06 33 29.1 +0.9
VRAC  Vranov            78.47 327 eP    P     06 33 29.1 +0.9
VRAC  Vranov            78.47 327 ⇓P    P     06 33 29.1 +0.9
RETH  Rethem/Aller,     78.49 333 eP    P     06 33 28.7 +0.6
      comp=Z,33nm,0.8s,baz=35,slow=5.4
RICC  Richard           78.51 329 eP    P     06 33 29.9 +1.6
PV01  Paradox Valley    78.52  49  IAmb IAmb  06 33 31.2
      comp=Z,74nm,1.7s
ASSE  Asse, Remlinge    78.52 332 eP    P     06 33 28.8 +0.5
      comp=Z,31nm,1.1s,baz=35,slow=5.4
SIRR  Siria             78.55 322 ⇑P    P     06 33 30.0 +1.3
WUAZ  Wupatki           78.61  53  IAmb IAmb  06 33 32.2
      comp=Z,38nm,1.0s
BORA  Eskisehir         78.62 313  IAmb IAmb  06 33 30.7
      comp=Z,39nm,0.9s
SZH   Strazhitsa        78.63 318 i P   P     06 33 29.6 +0.4
GZR   Gura Zlata        78.67 321 ⇓P    P     06 33 29.8 +0.4
GZR   Gura Zlata        78.67 321 ⇓P    P     06 33 29.8 +0.4
HSKC  Hora Svate Kat    78.72 330 eP    P     06 33 29.9 +0.4
SMOL  Smolenice         78.73 326 eP    P     06 33 31.3 +1.7
SMOL                               pmax pmax
      comp=Z,24nm,1.0s
KRUC  Moravsky          78.75 327 eP    P     06 33 30.3 +0.6
PRU   Pruhonice         78.77 329 eP    P     06 33 30.7 +0.9
PRU   Pruhonice         78.77 329 eP    P     06 33 30.7 +0.9
KPL   Plockton          78.78 343 eP    P     06 33 30.4 +0.7
KPL                                IAmb IAmb  06 33 31.4
      comp=Z,85nm,0.6s
BUD   Budapest          78.83 325  P    P     06 33 31.8 +1.6
CLZ   Clausthal         78.86 332 eP    P     06 33 31.0 +0.7
      comp=Z,41nm,0.8s,baz=35,slow=5.4
NEUB  Neuenburg         78.86 331 eP    P     06 33 30.6 +0.3
      comp=Z,60nm,0.8s,baz=35,slow=5.4
SRO   Srobarova         78.89 325 eP    P     06 33 32.4 +1.9
SRO                                pmax pmax
      comp=Z,90nm,1.0s
SRO   Srobarova         78.89 325 eP    P     06 33 32.4 +1.9
VLAD  Vladila           78.89 319 ⇑P    P     06 33 31.3 +0.7
JMB   Yambol            78.90 317 i P   P     06 33 31.3 +0.7
MODS  Modra-Piesok      78.91 326 eP    P     06 33 32.0 +1.4
MODS                               pmax pmax
      comp=Z,106nm,1.1s
MODS  Modra-Piesok      78.91 326 eP    P     06 33 32.0 +1.4
TREC  Trest             78.94 328 eP    P     06 33 31.5 +0.7
TREC  Trest             78.94 328 eP    P     06 33 31.5 +0.7
ISCO  Idaho Springs     79.05  47  IAmb IAmb  06 33 34.4
      comp=Z,78nm,1.8s
ISCO  Idaho Springs     79.05  47  P    P     06 33 33.1 +1.2
BZS   Buzias            79.05 322 ⇓P    P     06 33 31.8 +0.4
BZS   Buzias            79.05 322 ⇓P    P     06 33 31.8 +0.4
SUSD  Miller            79.20  40  IAmb IAmb  06 33 51.4
      comp=Z,79nm,0.9s
HERR  Herculane         79.22 321 ⇓P    P     06 33 32.6 +0.2
INVG  Invergeldie, C    79.24 342 eP    P     06 33 32.7 +0.5
INVG                               IAmb IAmb  06 33 33.8
      comp=Z,24nm,0.8s
TANN  Tannenbergstha    79.25 330 eP    P     06 33 32.6 +0.2
      comp=Z,11nm,0.8s,baz=35,slow=5.4
GTTG  Gottingen         79.25 332 eP    P     06 33 32.9 +0.5
      comp=Z,30nm,0.8s,baz=35,slow=5.4
PLN   Plauen            79.30 330 eP    P     06 33 33.0 +0.3
      comp=Z,6.0nm,0.8s,baz=35,slow=5.4
X16A  Lo Mia Camp, P    79.31  54  IAmb IAmb  06 33 36.3
      comp=Z,63nm,1.5s
ZVC   Zvikov            79.35 328 eP    P     06 33 33.8 +0.8
MOX   Moxa              79.38 330 eP    P     06 33 33.4 +0.3
      comp=Z,21nm,0.8s,baz=35,slow=5.4
MOX                               eL    L     07 11 00.3
      comp=Z,208nm,21.1s
PUNG  Punghina          79.41 320 ⇑P    P     06 33 33.5 +0.1
F33A  5 Mile Ranch,     79.42  37  IAmb IAmb  06 33 34.6
      comp=Z,61nm,1.3s
BAND  Balkesir-Ban      79.58 315 ⇓P    P     06 33 35.0 +0.5
VALD  Valchedram        79.60 320 i P   P     06 33 35.4 +1.0
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MDVR  Moldovita         79.63 321 ⇓P    P     06 33 34.8 +0.2
MPEP  Malo Peshtene     79.69 319 i P   P     06 33 35.7 +0.7
LAWE  Loch Awe, Argy    79.71 342 eP    P     06 33 35.5 +0.7
LAWE                               IAmb IAmb  06 33 36.3
      comp=Z,43nm,0.6s
MANZ  Manzenberg        79.72 330 eP    P     06 33 35.5 +0.4
      comp=Z,16nm,1.4s,baz=35,slow=5.4
SOP   Sopron            79.75 326  P    P     06 33 36.7 +1.5
CKRC  Cesky Krumlov     79.79 328 eP    P     06 33 36.0 +0.6
CKRC  Cesky Krumlov     79.79 328 eP    P     06 33 36.0 +0.6
RAYN  Ar Rayn           79.82 292  P    P     06 33 35.9 -0.2
RAYN  Ar Rayn           79.82 292  P    P     06 33 35.8 -0.2
RAYN  Ar Rayn           79.82 292 i P   P     06 33 35.9 -0.2
      SNR=26
RAYN  Ar Rayn           79.82 292 ⇓P    P     06 33 36.2 +0.1
RAYN  Ar Rayn           79.82 292  P    P     06 33 35.8 -0.2
RAYN                               pP   pP    06 33 49.9 -1.3
KHC   Kasperske Hory    79.84 329  IAmb IAmb  06 33 37.6
      comp=Z,60nm,0.8s
KHC   Kasperske Hory    79.84 329 eP    P     06 33 36.3 +0.6
KHC                               e           06 33 51.3
KHC   Kasperske Hory    79.84 329 eP    P     06 33 36.3 +0.6
KHC                               epP   pP    06 33 51.3 +0.5
UBBA  Unterbreizbach    79.84 331 eP    P     06 33 35.7 +0.3
      comp=Z,14nm,0.9s,baz=35,slow=5.4
RONA  Rosalia, Austr    79.84 326 i P   P     06 33 37.2 +1.4
      comp=Z,41nm,0.7s,SNR=16
CONA  Conrad Observa    79.85 327 i P   P     06 33 37.1 +1.3
      comp=Z,32nm,0.9s,SNR=11
ROTZ  Rotzenmuhle       79.86 330 eP    P     06 33 36.5 +0.7
      comp=Z,14nm,1.3s,baz=35,slow=5.4
PGBU  Glenifferbraes    79.90 342 eP    P     06 33 36.8 +1.0
EYMN  Ely               79.92  33  IAmb IAmb  06 33 54.9
      comp=Z,44nm,1.1s
EKA   Eskdalemuir Ar    80.01 341  P    P     06 33 37.1 +0.7
      comp=Z,21nm,0.5s,baz=26,slow=4.8,SNR=92
EKA                                LR   LR    07 13 35.9
      comp=Z,80nm,18.6s,baz=20,slow=39
      comp=Z,21nm,0.5s
ISP   Isparta           80.01 312ceP    P     06 33 38.1 +1.2
ISP                                pmax pmax
      comp=Z,34nm,1.3s
GEC2  GERESS Array S    80.01 328 eP    P     06 33 37.0 +0.3
      comp=Z,42nm,1.1s,baz=35,slow=5.4
GERES GERESS Array B    80.01 328  P    P     06 33 37.4 +0.7
      comp=Z,16nm,0.8s,baz=28,slow=6.0,SNR=40
GERES                              LR   LR    07 12 19.6
      comp=Z,320nm,19.8s,baz=38,slow=38
      comp=Z,16nm,0.8s
ESK   Eskdalemuir       80.03 341  P    P     06 33 36.9 +0.3
ESK                                IAmb IAmb  06 33 38.0
      comp=Z,45nm,0.7s
ESK   Eskdalemuir       80.03 341 eP    P     06 33 37.2 +0.7
ESK                                IAmb IAmb  06 33 37.9
      comp=Z,33nm,0.6s
ESK   Eskdalemuir       80.03 341  P    P     06 33 36.9 +0.3
ESK                                pmax pmax
      comp=Z,45nm,0.7s
214A  Organ Pipe Nat    80.08  56  IAmb IAmb  06 33 39.7
      comp=Z,67nm,1.6s
KASTN Kahler Asten      80.09 332 eP    P     06 33 37.0  0.0
      comp=Z,27nm,1.0s,baz=35,slow=5.4
PGB   Panagyurishte     80.09 318 i P   P     06 33 38.0 +0.8
WET   Wettzell          80.10 329 eP    P     06 33 37.9 +0.8
      comp=Z,47nm,0.9s,baz=35,slow=5.4
EDMD  Edmundbyers       80.15 340 eP    P     06 33 37.5 +0.3
EDMD                               IAmb IAmb  06 33 38.7
      comp=Z,22nm,0.7s
K30B  Basset            80.17  41  IAmb IAmb  06 33 57.2
      comp=Z,89nm,1.1s
BEO   Beograd           80.19 322  P    P     06 33 40.9 +3.3
BALB  Balikesir         80.21 314  IAmb IAmb  06 33 39.2
      comp=Z,55nm,0.9s
BLSH  Balsha            80.29 319 i P   P     06 33 39.4 +1.1
BUG   Bochum--Univer    80.29 333 eP    P     06 33 38.0  0.0
      comp=Z,47nm,1.0s,baz=35,slow=5.4
ALN   Alexandroupoli    80.29 316  IAmb IAmb  06 33 39.8
      comp=Z,69nm,1.2s
GRA1  Grafenberg Arr    80.30 330  IAmb IAmb  06 33 40.1
      comp=Z,75nm,0.8s
GRF   Grafenberg Arr    80.30 330 eP    P     06 33 38.9 +0.8
      comp=Z,84nm,0.9s,baz=35,slow=5.4
GRF                               eL    L     07 11 19.3
      comp=Z,228nm,20.4s
CSS   Mathiatis         80.33 308  IAmb IAmb  06 33 39.6
      comp=Z,61nm,0.6s
MMAI  Mount Meron Ar    80.37 305  P    P     06 33 39.3 +0.4
      comp=Z,32nm,0.8s,baz=41,slow=7.7,SNR=45
MMAI                               LR   LR    07 13 12.1
      comp=Z,198nm,20.6s,baz=38,slow=39
      comp=Z,32nm,0.8s
RDO   Rodhopi           80.38 317  P    P     06 33 40.1 +1.4
RZN   Rozhen            80.40 318  P    P     06 33 39.8 +0.8
RZN   Rozhen            80.40 318 i P   P     06 33 39.8 +0.8
BOVS  Bovan             80.48 321 ⇓P    P     06 33 39.1 -0.1
VTS   Vitosha           80.48 319  P    P     06 33 40.8 +1.3
VTS   Vitosha           80.48 319 i P   P     06 33 40.2 +0.8
PLNA  Plana             80.49 319 i P   P     06 33 40.6 +1.1
ARSA  Arzberg           80.52 326 i P   P     06 33 40.3 +0.9
      comp=Z,14nm,0.6s,SNR=6.0
MOA   Molln             80.58 327 i P   P     06 33 40.9 +1.2
      comp=Z,8.6nm,0.7s
MANT  Manisa            80.65 313  IAmb IAmb  06 33 41.6
      comp=Z,52nm,1.0s
GAL1  Galloway          80.81 341 eP    P     06 33 41.1 +0.3
GAL1                               IAmb IAmb  06 33 41.8
      comp=Z,74nm,0.6s
HPK   Haverah Park      80.84 339 eP    P     06 33 41.8 +0.9
HPK                                IAmb IAmb  06 33 42.8
      comp=Z,46nm,0.6s
BALJ  Balqa             80.84 304  IAmb IAmb  06 33 43.1
      comp=Z,69nm,0.8s
GADA  Gvkgeada          80.88 316  P    P     06 33 41.3 -0.1
TNS   Taunus Mts        80.89 332 eP    P     06 33 41.5 +0.1
      comp=Z,24nm,0.9s,baz=35,slow=5.4
CLGH  Cloghs, Cushen    80.95 342 eP    P     06 33 42.2 +0.7
CLGH                               IAmb IAmb  06 33 43.5
      comp=Z,83nm,0.9s
BIOA  Bad Ischl, Aus    80.96 328 i P   P     06 33 42.6 +0.9
      comp=Z,28nm,0.5s,SNR=8.9
MMB   Musomishta        81.01 318  P    P     06 33 43.5 +1.4
MMB   Musomishta        81.01 318 i P   P     06 33 42.7 +0.6
ELL   Elmali            81.11 311  IAmb IAmb  06 33 43.8
      comp=Z,56nm,0.7s
KKB   Krupnik           81.11 319  P    P     06 33 44.1 +1.5
KKB   Krupnik           81.11 319 i P   P     06 33 43.4 +0.8
TUC   Tucson            81.12  55  P    P     06 33 44.0 +1.0
TUC   Tucson            81.12  55  P    P     06 33 44.0 +1.0
TUC                                pmax pmax
      comp=Z,40nm,1.4s
PERS  Pernice           81.18 326 i P   P     06 33 43.5 +0.5
SOKA  Soboth            81.18 326 i P   P     06 33 43.7 +0.7
      comp=Z,55nm,0.7s,SNR=23
KSCO  Kaye Shedlock'    81.24  45  IAmb IAmb  06 33 46.0
      comp=Z,68nm,1.2s
IDGL  Inch Island, C    81.28 343  P    P     06 33 43.9 +0.7
IDGL  Inch Island, C    81.28 343 eP    P     06 33 44.2 +1.0
IDGL                               IAmb IAmb  06 33 45.3
      comp=Z,54nm,0.8s
LBWR  Ladybower, Pea    81.36 339 eP    P     06 33 44.6 +0.9
LBWR                               IAmb IAmb  06 33 45.7
      comp=Z,106nm,0.8s
BTNL  Ternell           81.40 333 dP    P     06 33 44.0  0.0
      comp=Z,17nm,0.9s
SRS   Serrai            81.41 318  P    P     06 33 44.4 +0.2
GHAJ  Ghor Haditha      81.42 304  IAmb IAmb  06 33 46.0
      comp=Z,81nm,1.1s
MEM   Membach           81.42 333 dP    P     06 33 44.1  0.0
      comp=Z,31nm,1.0s
FUR   Furstenfeldbru    81.52 329 eP    P     06 33 45.4 +0.7
      comp=Z,103nm,0.8s,baz=35,slow=5.4
OBKA  Obir              81.52 326 i P   P     06 33 45.2 +0.4
      comp=Z,35nm,0.6s,SNR=7.7
LESA  Schwarzleotal     81.56 328 i P   P     06 33 45.9 +0.9
      comp=Z,17nm,0.5s,SNR=9.1
KBA   Koelnbreinsper    81.57 327 i P   P     06 33 45.9 +0.7
      comp=Z,25nm,0.6s,SNR=12
T25A  Trinidad          81.59  48  IAmb IAmb  06 33 47.6
      comp=Z,55nm,1.0s
BSTI  Sart Tilman       81.59 334 dP    P     06 33 45.0 +0.1
BHOU  Houvegnez         81.64 333 dP    P     06 33 45.4 +0.2
      comp=Z,13nm,0.9s
AKAS  Kas               81.64 311  IAmb IAmb  06 34 03.4
      comp=Z,49nm,0.7s
ELMS  Elmsett, Ipswi    81.74 337 eP    P     06 33 46.3 +0.6
YER   Yerkesik          81.76 312  P    P     06 33 47.0 +0.8
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VAY	**Valandovo**	**81.78**	**319**	*i* P	**P**	**06 33 46.6**	**+0.5**
MYKA	**Terra Mystica**	**81.80**	**327**	*i* P	**P**	**06 33 46.0**	**-0.3**
	comp=Z,22nm,0.5s,SNR=11						
RAR	**Rarotonga**	**81.81**	**127**	LR	LR	07 01 14.0	
	comp=Z,146nm,21.4s,baz=272,slow=29						
STU	**Stuttgart**	**81.82**	**331**	IAmb	IAmb	06 33 47.7	
	comp=Z,63nm,0.8s						
STU	**Stuttgart**	**81.82**	**331**	P	**P**	**06 33 46.9**	**+0.7**
BCLA	**Clavier**	**81.82**	**334**	*d*P	**P**	**06 33 46.1**	**-0.1**
	comp=Z,21nm,0.9s						
SCHQ	**Schefferville**	**81.83**	**16**	P	**P**	**06 33 46.9**	**+0.7**
	comp=Z,24nm,0.7s,baz=346,slow=5.0,SNR=32						
SCHQ				LR	LR	07 12 19.4	
	comp=Z,183nm,21.6s,baz=326,slow=37						
	comp=Z,24nm,0.7s						
BGNE	**Belgrade**	**81.84**	**41**	IAmb	IAmb	06 34 05.0	
	comp=Z,73nm,0.9s						
SKO	**Skopje**	**81.86**	**320**	*i* P	**P**	**06 33 47.8**	**+1.3**
LJU	**Ljubljana**	**81.90**	**326**	*i* P	**P**	**06 33 46.6**	**-0.1**
BGES	**Gesves**	**81.92**	**334**	*d*P	**P**	**06 33 46.9**	**+0.1**
	comp=Z,18nm,0.9s						
TASM	**ASL Pad, Albuq**	**81.94**	**51**	IAmb	IAmb	06 33 50.2	
	comp=Z,50nm,1.2s						
TASM	**ASL Pad, Albuq**	**81.94**	**51**	IAmb	IAmb	06 33 50.2	
	comp=Z,52nm,1.2s						
TASM	**ASL Pad, Albuq**	**81.94**	**51**	IAmb	IAmb	06 33 50.2	
	comp=Z,50nm,1.2s						
TASM	**ASL Pad, Albuq**	**81.94**	**51**	IAmb	IAmb	06 33 50.2	
	comp=Z,51nm,1.2s						
ANMO	**Albuquerque**	**81.94**	**51**	P	**P**	**06 33 48.7**	**+1.3**
ANMO				IAmb	IAmb	06 33 50.2	
	comp=Z,49nm,1.1s						
ANMO	**Albuquerque**	**81.94**	**51**	*ce*P	**P**	**06 33 49.0**	**+1.6**
ANMO				pmax	pmax		
	comp=Z,55nm,1.3s						
ANMO	**Albuquerque**	**81.94**	**51**	P	**P**	**06 33 49.0**	**+1.6**
ABQ	**Albuquerque**	**81.95**	**51**	IAmb	IAmb	06 33 50.2	
	comp=Z,49nm,1.1s						
ILTH	**Belurgan, Co L**	**81.97**	**342**	P	**P**	**06 33 47.7**	**+0.8**
BOJS	**Bojanci**	**82.01**	**325**	*i* P	**P**	**06 33 47.4**	**+0.1**
RCHB	**Rochefort**	**82.07**	**334**	*d*P	**P**	**06 33 47.1**	**-0.4**
	comp=Z,21nm,1.2s						
WATA	**Walderalm**	**82.08**	**329**	*i* P	**P**	**06 33 47.9**	**+0.1**
	comp=Z,18nm,0.6s,SNR=7.2						
CHOS	**Chios island**	**82.10**	**315**	P	**P**	**06 33 48.5**	**+0.5**
BMRD	**Maredsous**	**82.10**	**334**	*d*P	**P**	**06 33 47.3**	**-0.4**
	comp=Z,33nm,0.9s						
WTTA	**Wattenberg**	**82.11**	**328**	*i* P	**P**	**06 33 48.7**	**+0.7**
	comp=Z,27nm,0.6s						
WLF	**Walferdange**	**82.17**	**333**	*d*P	**P**	**06 33 48.0**	**0.0**
ABTA	**Abfaltersbach**	**82.17**	**328**	*i* P	**P**	**06 33 48.3**	**0.0**
	comp=Z,5.6nm,0.3s,SNR=5.5						
FOEL	**Foel Wylfa**	**82.22**	**340**	*e*P	**P**	**06 33 49.2**	**+0.9**
FOEL				IAmb	IAmb	06 33 51.9	
	comp=Z,105nm,0.7s						
RETA	**Reutte**	**82.27**	**329**	*i* P	**P**	**06 33 49.6**	**+0.9**
	comp=Z,66nm,0.7s,SNR=6.8						
L34A	**Svendsen Farm,**	**82.30**	**40**	IAmb	IAmb	06 33 51.8	
	comp=Z,28nm,0.6s						
SQTA	**Sankt Quirin**	**82.31**	**329**	*i* P	**P**	**06 33 49.5**	**+0.5**
	comp=Z,24nm,0.6s						
DOU	**Dourbes**	**82.33**	**334**	*d*P	**P**	**06 33 48.9**	**0.0**
	comp=Z,12nm,1.3s						
HLM1	**Long Mynd**	**82.47**	**339**	*e*P	**P**	**06 33 49.5**	**0.0**
HLM1				IAmb	IAmb	06 33 51.9	
	comp=Z,17nm,0.8s						
ARG	**Arkhangelos**	**82.50**	**312**	IAmb	IAmb	06 33 51.4	
	comp=Z,62nm,0.8s						
BFO	**Black Forest**	**82.51**	**331**	P	**P**	**06 33 50.1**	**+0.3**
BFO				IAmb	IAmb	06 33 51.1	
	comp=Z,84nm,1.3s						
BFO	**Black Forest**	**82.51**	**331**	P	**P**	**06 33 50.1**	**+0.3**
BFO				pmax	pmax		
	comp=Z,84nm,1.3s						
BFO	**Black Forest**	**82.51**	**331**	*e*P	**P**	**06 33 50.0**	**+0.1**
	comp=Z,82nm,1.3s,baz=35,slow=5.4						
PHP	**Peshkopia**	**82.56**	**320**	P	**P**	**06 33 51.1**	**+0.8**
FETA	**Feichten**	**82.67**	**329**	*i* P	**P**	**06 33 51.1**	**+0.2**
	comp=Z,22nm,0.7s						
AOS	**Alonnisos**	**82.69**	**316**	P	**P**	**06 33 51.2**	**+0.3**
319A	**Douglas**	**82.70**	**55**	IAmb	IAmb	06 33 53.8	
	comp=Z,58nm,1.0s						
DSB	**Dublin**	**82.70**	**342**	P	**P**	**06 33 51.3**	**+0.6**
LIT	**Litokhoron**	**82.72**	**318**	P	**P**	**06 33 51.5**	**+0.3**
DAVA	**Damuels**	**82.78**	**329**	*i* P	**P**	**06 33 51.8**	**+0.3**
	comp=Z,52nm,0.8s,SNR=10						
OHR	**Ohrid**	**82.82**	**319**	*i* P	**P**	**06 33 52.1**	**+0.4**
121A	**Cookes Peak, D**	**82.82**	**53**	IAmb	IAmb	06 33 54.8	
	comp=Z,43nm,1.0s						
EIL	**Elat**	**82.91**	**303**	LR	LR	07 15 28.3	
	comp=Z,116nm,19.3s,baz=57,slow=39						
NEO	**Neokhori**	**82.93**	**317**	P	**P**	**06 33 52.4**	**+0.2**
STRD	**Stroud**	**82.94**	**339**	*e*P	**P**	**06 33 52.6**	**+0.7**
CBKS	**Cedar Bluff**	**82.94**	**44**	IAmb	IAmb	06 33 53.9	
	comp=Z,58nm,1.1s						
KZN	**Kozani**	**82.94**	**318**	P	**P**	**06 33 51.8**	**-0.5**
MCH1	**Michaelchurch**	**82.97**	**339**	*e*P	**P**	**06 33 52.7**	**+0.6**
MCH1				IAmb	IAmb	06 33 53.9	
	comp=Z,55nm,0.7s						
KYMI	**Kymi, Euboea I**	**82.97**	**316**	P	**P**	**06 33 52.5**	**+0.1**
HMNX	**Herstmonceux**	**83.02**	**337**	*e*P	**P**	**06 33 53.6**	**+1.2**
RTBA	**Rita Blanca**	**83.03**	**47**	IAmb	IAmb	06 33 54.7	
	comp=Z,53nm,1.2s						
ECH	**Echery**	**83.03**	**332**	IAmb	IAmb	06 33 53.7	
	comp=Z,33nm,0.8s						
ECH	**Echery**	**83.03**	**332**	P	**P**	**06 33 52.5**	**0.0**
MONM	**Monmouth**	**83.06**	**339**	*e*P	**P**	**06 33 53.2**	**+0.7**
MONM				IAmb	IAmb	06 33 54.4	
	comp=Z,42nm,0.7s						
KBN	**Korca**	**83.19**	**319**	P	**P**	**06 33 54.0**	**+0.3**
DAVOX	**Davos/Dischmat**	**83.20**	**329**	LR	LR	07 16 08.2	
	comp=Z,197nm,18.7s,baz=80,slow=39						
TAU	**Tasmania Unive**	**83.20**	**176**	P	**P**	**06 33 53.9**	**+0.8**
TAU				IAmb	IAmb	06 33 55.3	
	comp=Z,40nm,0.9s						
TAU	**Tasmania Unive**	**83.20**	**176**	P	**P**	**06 33 53.9**	**+0.8**
TAU				pmax	pmax		
	comp=Z,40nm,0.9s						
NEST	**Nestorio**	**83.22**	**319**	P	**P**	**06 33 54.2**	**+0.4**
IGLA	**Glengowla, Co**	**83.23**	**343**	P	**P**	**06 33 54.5**	**+1.1**
APE	**Apeiranthos**	**83.34**	**314**	P	**P**	**06 33 53.6**	**-0.7**
APE	**Apeiranthos**	**83.34**	**314**	⇑P	**P**	**06 33 53.7**	**-0.7**
APE	**Apeiranthos**	**83.34**	**314**	⇑P	**P**	**06 33 53.7**	**-0.7**
RSBS	**Rosebush, Pemb**	**83.47**	**340**	*e*P	**P**	**06 33 55.2**	**+0.5**
RSBS				IAmb	IAmb	06 33 56.0	
	comp=Z,20nm,0.7s						
ATAL	**Atalanti**	**83.49**	**316**	P	**P**	**06 33 54.7**	**-0.4**
N35A	**Tabor**	**83.50**	**40**	IAmb	IAmb	06 33 56.5	
	comp=Z,49nm,0.8s						
LKR	**Lokris**	**83.53**	**316**	P	**P**	**06 33 54.5**	**-0.9**
IWEX	**Carrickbyrne,**	**83.60**	**341**	P	**P**	**06 33 56.3**	**+1.0**
AGG	**Agios Georgios**	**83.61**	**317**	P	**P**	**06 33 55.2**	**-0.6**
AXAR	**Agios Charalam**	**83.63**	**317**	P	**P**	**06 33 54.3**	**-1.5**
TOZ	**Tahuroa Road**	**83.69**	**154**	IAmb	IAmb	06 33 58.8	
	comp=Z,46nm,0.9s						
VILL	**Villia**	**83.73**	**316**	P	**P**	**06 33 55.4**	**-1.0**
R32A	**Long Quarter,**	**83.77**	**44**	IAmb	IAmb	06 33 57.5	
	comp=Z,56nm,1.4s						
SCIA	**State Center**	**83.86**	**38**	IAmb	IAmb	06 33 58.6	
	comp=Z,95nm,1.3s						
PRMD	**Pramanda**	**83.86**	**318**	P	**P**	**06 33 57.9**	**+0.9**
THERA	**Ancient Thera,**	**83.88**	**313**	P	**P**	**06 33 54.9**	**-2.2**
JAN	**Janina**	**83.89**	**318**	P	**P**	**06 33 58.5**	**+1.4**
TETR	**Tetrakomo, Epi**	**83.91**	**318**	P	**P**	**06 33 57.8**	**+0.5**
EPT	**El Paso**	**84.13**	**53**	IAmb	IAmb	06 34 00.6	
	comp=Z,38nm,1.1s						
ANX	**Ano Chora**	**84.14**	**317**	P	**P**	**06 33 58.3**	**-0.3**
KALE	**Kalithea**	**84.18**	**317**	P	**P**	**06 33 57.8**	**-0.9**
SERG	**Sergoula**	**84.20**	**317**	P	**P**	**06 33 57.9**	**-0.9**
PH02	**Texas Public H**	**84.23**	**48**	IAmb	IAmb	06 34 01.2	
	comp=Z,52nm,1.0s						
AMPL	**Ampelaki**	**84.26**	**318**	P	**P**	**06 33 59.3**	**+0.2**
EFP	**Efpalio**	**84.27**	**317**	P	**P**	**06 33 58.4**	**-0.7**
KSU1	**Kansas State U**	**84.35**	**42**	IAmb	IAmb	06 34 02.0	
	comp=Z,46nm,1.3s						
KEK	**Kerkira**	**84.38**	**319**	P	**P**	**06 33 59.1**	**-0.5**
GUR	**Goura**	**84.41**	**316**	P	**P**	**06 33 59.5**	**-0.4**
KLV	**Kalavryta, Ach**	**84.43**	**317**	P	**P**	**06 33 58.3**	**-1.7**
SENIN	**Lac Senin/Sane**	**84.53**	**330**	IAmb	IAmb	06 34 01.7	
	comp=Z,38nm,0.9s						
NPS	**Neapolis**	**84.60**	**313**	P	**P**	**06 33 59.7**	**-1.1**
TSLK	**Tsoukalades, L**	**84.62**	**318**	P	**P**	**06 34 01.1**	**+0.2**
LKD2	**Lefkada island**	**84.64**	**318**	P	**P**	**06 34 01.1**	**+0.1**
NYDR	**Nydri-Lefkada**	**84.68**	**318**	P	**P**	**06 34 00.9**	**-0.2**
N38A	**Joes South For**	**84.72**	**39**	IAmb	IAmb	06 34 03.2	
	comp=Z,39nm,0.9s						
AXS	**Araxos**	**84.72**	**317**	P	**P**	**06 34 01.2**	**-0.2**
AMTX	**Amarillo**	**84.74**	**48**	IAmb	IAmb	06 34 03.8	
	comp=Z,60nm,1.0s						
ZCCA	**Zocca**	**84.75**	**327**	IAmb	IAmb	06 34 04.0	
	comp=Z,47nm,0.9s						
EVGI	**Lefkada island**	**84.77**	**318**	P	**P**	**06 34 02.0**	**+0.4**
MSTX	**Muleshoe**	**84.78**	**49**	IAmb	IAmb	06 34 04.2	
	comp=Z,43nm,0.9s						
VAL	**Valentia**	**84.80**	**343**	P	**P**	**06 34 02.7**	**+1.2**
VLX	**Vlachokerasia**	**84.81**	**316**	P	**P**	**06 34 01.2**	**-0.8**
MNTX	**Cornudas Mount**	**84.86**	**52**	IAmb	IAmb	06 34 04.4	
	comp=Z,30nm,1.1s						
NOKA	**Waynoka**	**84.97**	**45**	IAmb	IAmb	06 34 04.6	
	comp=Z,68nm,1.1s						
IDI	**Anoyia**	**84.99**	**313**	P	**P**	**06 34 01.8**	**-1.1**
KAN08	**Anthony NE Sta**	**85.05**	**44**	IAmb	IAmb	06 34 04.6	
	comp=Z,68nm,1.1s						
MATE	**Matera**	**85.16**	**321**	⇓P	**P**	**06 34 03.4**	**-0.1**
CAMP	**Campotosto**	**85.18**	**325**	IAmb	IAmb	06 34 05.1	
	comp=Z,58nm,1.0s						
ITM	**Ithomi**	**85.20**	**316**	P	**P**	**06 34 03.2**	**-0.6**
DMLN	**Damoulianata-K**	**85.21**	**318**	P	**P**	**06 34 03.9**	**+0.1**
VAM	**Vamos**	**85.28**	**314**	P	**P**	**06 34 04.5**	**+0.3**
BKZ	**Black Stump Fm**	**85.32**	**154**	IAmb	IAmb	06 34 05.4	
	comp=Z,48nm,1.3s						
ORTH	**Orthonies,Zaky**	**85.33**	**317**	P	**P**	**06 34 04.3**	**-0.2**
IMMV	**Iera Moni Meta**	**85.36**	**314**	P	**P**	**06 34 04.1**	**-0.6**
INTR	**Introdacqua**	**85.38**	**324**	IAmb	IAmb	06 34 06.1	
	comp=Z,61nm,1.0s						
L42A	**Oliver, Polo**	**85.41**	**36**	IAmb	IAmb	06 34 04.9	
	comp=Z,26nm,1.0s						
P38A	**Dawn**	**85.48**	**40**	IAmb	IAmb	06 34 06.6	
	comp=Z,72nm,1.4s						
CESX	**Cesi**	**85.48**	**325**	IAmb	IAmb	06 34 05.7	
	comp=Z,44nm,1.1s						
PYL	**PYLOS**	**85.51**	**316**	P	**P**	**06 34 05.4**	**+0.1**
VHRN	**Van Horn**	**85.75**	**53**	IAmb	IAmb	06 34 09.0	
	comp=Z,43nm,1.2s						
PPT	**Papeete**	**85.75**	**117**	LR	LR	07 03 56.8	
	comp=Z,210nm,21.9s,baz=262,slow=30						
PPT2	**Papeete2**	**85.76**	**117**	*e*PKP2	**P**	**06 34 06.4**	**-0.4**
	comp=Z,55nm,25.2s						
PPT2	**Papeete2**	**85.76**	**117**	*e*S	**S**	**06 44 35.2**	**-0.4**
	comp=Z,92nm,30.2s						
PPT2	**Papeete2**	**85.76**	**117**	*e*LR	LR	07 01 03.1	
	comp=Z,401nm,27.2s						
PPT2				*e*LR	LR	07 01 09.1	
	comp=Z,464nm,23.0s						
BNI	**Bardonecchia**	**85.87**	**330**	IAmb	IAmb	06 34 08.5	
	comp=Z,29nm,0.9s						
N41A	**Harden Midland**	**85.90**	**37**	IAmb	IAmb	06 34 09.1	
	comp=Z,30nm,0.9s						
PECS	**Pecos**	**86.00**	**52**	IAmb	IAmb	06 34 10.0	
	comp=Z,38nm,1.0s						
DKNS	**Dickens**	**86.06**	**48**	IAmb	IAmb	06 34 10.8	
	comp=Z,23nm,0.7s						
OK051	**E0350 and S346**	**86.19**	**44**	IAmb	IAmb	06 34 10.4	
	comp=Z,47nm,1.1s						
OK048	**Pawnee Station**	**86.20**	**44**	IAmb	IAmb	06 34 10.4	
	comp=Z,51nm,1.1s						
ODSA	**Odessa**	**86.24**	**50**	IAmb	IAmb	06 34 11.1	
	comp=Z,61nm,1.2s						
WMOK	**Wichita Mounta**	**86.47**	**46**	IAmb	IAmb	06 34 11.8	
	comp=Z,22nm,0.9s						
SSB	**Saint Sauveur**	**86.48**	**331**	IAmb	IAmb	06 34 11.5	
	comp=Z,29nm,0.9s						
SSB	**Saint Sauveur**	**86.48**	**331**	P	**P**	**06 34 10.7**	**+0.7**
SSB	**Saint Sauveur**	**86.48**	**331**	P	**P**	**06 34 10.5**	**+0.5**
SN07	**Snyder 07**	**86.50**	**49**	IAmb	IAmb	06 34 12.1	
	comp=Z,79nm,1.6s						
TAOE	**Nuku Hiva Isla**	**86.53**	**105**	*e*PKP2	**P**	**06 34 11.9**	**+1.2**
	comp=Z,42nm,29.5s						
TAOE	**Nuku Hiva Isla**	**86.53**	**105**	*e*S	**S**	**06 44 38.5**	**-4.8**
	comp=Z,47nm,30.6s						
TAOE	**Nuku Hiva Isla**	**86.53**	**105**	*e*LR	LR	07 01 37.1	
	comp=Z,216nm,21.5s						
MNHN	**Monahans**	**86.68**	**51**	IAmb	IAmb	06 34 13.3	
	comp=Z,74nm,1.8s						
APMT	**Aspermont**	**86.76**	**48**	IAmb	IAmb	06 34 13.3	
	comp=Z,54nm,1.2s						
FNO	**Franklin**	**86.83**	**45**	IAmb	IAmb	06 34 13.8	
	comp=Z,59nm,1.8s						
DEOK	**Depew**	**86.87**	**44**	IAmb	IAmb	06 34 13.8	
	comp=Z,51nm,1.1s						
LPIG	**La Paz**	**87.01**	**61**	LR	LR	07 06 42.6	
	comp=Z,34nm,21.4s,baz=312,slow=31						
LDAQ	**Lac Daran**	**87.05**	**22**	IAmb	IAmb	06 34 13.3	
	comp=Z,25nm,0.8s						
R40A	**Maddies Statio**	**87.14**	**40**	IAmb	IAmb	06 34 14.6	
	comp=Z,35nm,0.9s						
SGCY	**Sterling City**	**87.22**	**49**	IAmb	IAmb	06 34 15.7	
	comp=Z,43nm,0.9s						
KHZ	**Kahutara**	**87.34**	**157**	P	**P**	**06 34 15.8**	**+2.0**
	comp=Z,32nm,2.1s						
SADO	**Sadowa**	**87.36**	**28**	LR	LR	07 15 48.9	
	comp=Z,199nm,20.7s,baz=348,slow=37						
WTFS	**Witchita Falls**	**87.36**	**47**	IAmb	IAmb	06 34 16.0	
	comp=Z,43nm,1.2s						
RLO	**Rose Lookout**	**87.39**	**43**	IAmb	IAmb	06 34 15.9	
	comp=Z,62nm,1.5s						
U38A	**Gravette**	**87.51**	**42**	IAmb	IAmb	06 34 16.4	
	comp=Z,35nm,1.1s						
SLBS	**Sierra La Lagu**	**87.53**	**61**	P	**P**	**06 34 17.5**	**+2.0**
SLBS				IAmb	IAmb	06 34 18.4	
	comp=Z,32nm,1.1s						
ABTX	**Abilene, Hawle**	**87.55**	**48**	IAmb	IAmb	06 34 17.3	
	comp=Z,36nm,1.1s						
TX31	**Lajitas Ar. Si**	**87.58**	**53**	IAmb	IAmb	06 34 18.5	
	comp=Z,35nm,1.1s						
TXAR	**Lajitas Array**	**87.58**	**53**	P	**P**	**06 34 16.4**	**+0.6**
	comp=Z,21nm,1.0s,baz=298,slow=2.7,SNR=80						
TXAR				PKKPbc	**PKKPbc**	**06 52 04.3**	**+2.0**
	comp=Z,0.5nm,0.6s,baz=150,slow=4.5,SNR=12						
	comp=Z,21nm,1.0s						
TXAR	**Lajitas Array**	**87.58**	**53**	P	**P**	**06 34 16.7**	**+1.0**
TXAR	**Lajitas Array**	**87.58**	**53**	P	**P**	**06 34 16.7**	**+1.0**
LMQ	**La Malbaie**	**87.69**	**21**	IAmb	IAmb	06 34 16.8	
	comp=Z,37nm,0.9s						
CCM	**Cathedral Cave**	**87.82**	**39**	P	**P**	**06 34 16.6**	**0.0**
CCM	**Cathedral Cave**	**87.82**	**39**	P	**P**	**06 34 16.6**	**0.0**
CCM				pmax	pmax		
	comp=Z,59nm,1.0s						
CCM	**Cathedral Cave**	**87.82**	**39**	P	**P**	**06 34 16.8**	**+0.2**
HHAR	**Hobbs**	**87.86**	**42**	IAmb	IAmb	06 34 17.9	
	comp=Z,25nm,1.1s						
MGMO	**Mountain Grove**	**88.03**	**41**	IAmb	IAmb	06 34 18.6	
	comp=Z,31nm,0.9s						
HPIG		**88.05**	**56**	IAmb	IAmb	06 34 20.2	
	comp=Z,29nm,1.1s						
PLPT	**Palo Pinto**	**88.16**	**47**	IAmb	IAmb	06 34 20.1	
	comp=Z,24nm,1.1s						
FVM	**French Village**	**88.27**	**39**	IAmb	IAmb	06 34 20.2	
	comp=Z,30nm,0.9s						
P46A	**Rosedale**	**88.44**	**36**	IAmb	IAmb	06 34 20.9	
	comp=Z,38nm,0.9s						
FW06	**Azle**	**88.46**	**47**	IAmb	IAmb	06 34 21.4	
	comp=Z,24nm,0.9s						
MNTQ	**Montreal, Queb**	**88.57**	**24**	IAmb	IAmb	06 35 11.1	
	comp=Z,32nm,1.3s						
VAE	**Valguarnera**	**88.76**	**321**	LR	LR	07 21 08.8	
	comp=Z,181nm,19.9s,baz=56,slow=40						
JCT	**Junction City**	**89.04**	**50**	IAmb	IAmb	06 34 24.0	
	comp=Z,26nm,0.7s						
CGM3	**Cape Girardeau**	**89.18**	**39**	IAmb	IAmb	06 34 24.5	
	comp=Z,47nm,1.5s						
WHTX	**Lake Whitney,**	**89.25**	**47**	IAmb	IAmb	06 34 25.3	
	comp=Z,59nm,1.4s						
P48A	**Milroy**	**89.35**	**35**	IAmb	IAmb	06 34 25.1	
	comp=Z,51nm,1.4s						
LCAR	**Lake Charles**	**89.43**	**40**	IAmb	IAmb	06 34 25.7	
	comp=Z,60nm,1.5s						
ATD	**Arta Tunnel**	**89.50**	**285**	P	**P**	**06 34 25.9**	**+0.9**
ACSO	**Alum Creek Sta**	**89.75**	**33**	IAmb	IAmb	06 34 27.1	
	comp=Z,39nm,0.9s						
X40A	**Basin Creek Fa**	**89.82**	**43**	IAmb	IAmb	06 34 27.9	
	comp=Z,35nm,1.0s						
TBI	**Tubuai**	**89.88**	**121**	*e*LR	LR	07 02 50.4	
	comp=Z,1µm,26.8s						
VT1	**Waterbury**	**89.89**	**24**	IAmb	IAmb	06 34 28.5	
	comp=Z,27nm,0.9s						
PAOC	**Oil Creek Stat**	**89.97**	**30**	IAmb	IAmb	06 34 27.7	
	comp=Z,31nm,0.7s						
CEST	**Esterri de Car**	**89.98**	**332**	IAmb	IAmb	06 34 28.4	
	comp=Z,24nm,0.9s						
WCI	**Wyandotte Cave**	**89.98**	**36**	P	**P**	**06 34 27.4**	**+0.6**
WCI				IAmb	IAmb	06 34 28.4	
	comp=Z,24nm,0.9s						
WCI	**Wyandotte Cave**	**89.98**	**36**	P	**P**	**06 34 27.4**	**+0.6**
WCI				pmax	pmax		
	comp=Z,24nm,0.9s						
HICK	**Hickman**	**89.99**	**39**	P	**P**	**06 34 27.0**	**+0.2**
HNDO	**Hondo**	**90.05**	**50**	IAmb	IAmb	06 34 28.9	
	comp=Z,20nm,1.0s						
435B	**Jarrell**	**90.09**	**48**	IAmb	IAmb	06 34 28.9	
	comp=Z,23nm,0.9s						
J59A	**Piesco**	**90.10**	**26**	IAmb	IAmb	06 34 28.4	
	comp=Z,19nm,0.8s						
N53A	**Lisbon**	**90.13**	**31**	IAmb	IAmb	06 34 29.7	
	comp=Z,49nm,1.2s						
237A	**Washetta, Mont**	**90.16**	**46**	IAmb	IAmb	06 34 29.5	
	comp=Z,39nm,1.4s						
L56A	**Greenwood**	**90.22**	**28**	IAmb	IAmb	06 34 28.9	
	comp=Z,25nm,0.7s						
P51A	**Williamsport**	**90.35**	**33**	IAmb	IAmb	06 34 29.6	
	comp=Z,35nm,1.1s						
P52A	**Corning**	**90.60**	**33**	IAmb	IAmb	06 34 30.8	
	comp=Z,38nm,1.2s						
Z41A	**Richland Creek**	**90.80**	**43**	IAmb	IAmb	06 34 32.7	
	comp=Z,32nm,1.0s						
R50A	**Paris**	**90.81**	**35**	IAmb	IAmb	06 34 32.2	
	comp=Z,44nm,1.4s						
O54A	**Avella**	**90.84**	**31**	IAmb	IAmb	06 35 07.8	
	comp=Z,21nm,0.9s						
833A	**Chaparral WMA,**	**90.88**	**51**	IAmb	IAmb	06 34 33.2	
	comp=Z,23nm,1.0s						
WVT	**Waverly**	**90.99**	**38**	P	**P**	**06 34 31.7**	**+0.2**
WVT				IAmb	IAmb	06 34 33.0	
	comp=Z,18nm,0.9s						
WVT	**Waverly**	**90.99**	**38**	P	**P**	**06 34 31.7**	**+0.2**
WVT				pmax	pmax		
	comp=Z,18nm,0.9s						
EF02	**Christine**	**91.05**	**50**	IAmb	IAmb	06 34 34.2	
	comp=Z,40nm,0.8s						
HNVL	**Huntsville, TX**	**91.29**	**47**	IAmb	IAmb	06 34 34.7	
	comp=Z,18nm,0.8s						
SSPA	**Standing Stone**	**91.40**	**29**	P	**P**	**06 34 34.3**	**+1.0**
T50A	**Nancy**	**91.63**	**36**	IAmb	IAmb	06 34 35.9	
	comp=Z,33nm,1.1s						
HKT	**Hockley**	**91.70**	**47**	P	**P**	**06 34 34.8**	**0.0**
HKT				IAmb	IAmb	06 34 37.6	
	comp=Z,28nm,1.6s						
HKT	**Hockley**	**91.70**	**47**	P	**P**	**06 34 34.8**	**0.0**
HKT				pmax	pmax		
	comp=Z,28nm,1.6s						
V48A	**Smith Brothers**	**91.78**	**38**	IAmb	IAmb	06 34 36.5	
	comp=Z,27nm,1.1s						
KEST	**Kesra**	**92.55**	**323**	P	**P**	**06 34 38.6**	**-0.2**
	comp=Z,5.2nm,0.5s,baz=20,slow=1.9,SNR=10						
KEST				LR	LR	07 20 23.5	
	comp=Z,269nm,20.6s,baz=20,slow=38						
	comp=Z,5.2nm,0.5s						
TZTN	**Tazewell**	**92.60**	**35**	IAmb	IAmb	06 34 41.1	
	comp=Z,30nm,1.1s						
SWET	**Sewanee**	**92.62**	**38**	IAmb	IAmb	06 34 40.0	
	comp=Z,18nm,0.8s						
X48A	**Hartselle**	**92.72**	**39**	IAmb	IAmb	06 34 40.2	
	comp=Z,16nm,0.7s						
M65A	**Busby, Falmout**	**93.05**	**24**	P	**P**	**06 34 42.8**	**+1.9**
	baz=336						
CPCT	**Cooper Cave**	**93.08**	**36**	IAmb	IAmb	06 34 42.4	
	comp=Z,21nm,0.9s						
TKL	**Tuckaleechee C**	**93.24**	**36**	LR	LR	07 20 08.3	
	comp=Z,128nm,18.4s,baz=342,slow=38						
TKL	**Tuckaleechee C**	**93.24**	**36**	IAmb	IAmb	06 34 43.3	
	comp=Z,20nm,0.9s						
Z47A	**Carrollton**	**93.25**	**40**	IAmb	IAmb	06 34 43.2	
	comp=Z,27nm,1.0s						
LRAL	**Lakeview Retre**	**93.90**	**40**	IAmb	IAmb	06 36 02.9	
	comp=Z,51nm,1.9s						
ESDC	**Sonseca Array**	**94.37**	**334**	P	**P**	**06 34 47.2**	**+0.2**
	comp=Z,4.1nm,0.6s,baz=17,slow=4.2,SNR=31						
ESDC				LR	LR	07 23 49.7	
	comp=Z,146nm,18.6s,baz=14,slow=40						
	comp=Z,4.1nm,0.6s						
ESDC	**Sonseca Array**	**94.37**	**334**	P	**P**	**06 34 46.9**	**-0.2**
Y52A	**Lilburn**	**94.61**	**37**	IAmb	IAmb	06 34 49.6	
	comp=Z,12nm,0.7s						
250A	**Grady**	**95.12**	**40**	IAmb	IAmb	06 34 52.0	
	comp=Z,25nm,0.8s						
RKT	**Rikitea**	**99.59**	**112**	*e*LR	LR	07 07 32.7	
	comp=Z,650nm,24.2s						
TORD	**Torodi Ar. Bea**	**115.19**	**317**	PKP	**PKiKP**	**06 40 07.5**	**-1.4**
	comp=Z,3.5nm,0.4s,baz=15,slow=5.0,SNR=4.1						
TORD				PP	**PP**	**06 41 03.0**	**-5.8**
	comp=Z,4.2nm,0.7s,baz=24,slow=8.9,SNR=6.4						
VNDA	**Vanda**	**118.42**	**175**	PKP	**PKPdf**	**06 40 12.5**	**-0.7**
	comp=Z,2.5nm,0.8s,baz=321,slow=4.9,SNR=9.3						
VNDA	**Vanda**	**118.42**	**175**		**PKiKP**	**06 40 13.4**	**+0.2**
VNDA	**Vanda**	**118.42**	**175**	PKIKP	**PKiKP**	**06 40 13.4**	**+0.2**
SDV	**Santo Domingo**	**122.30**	**39**		**PKiKP**	**06 40 23.4**	**+0.4**
SDV	**Santo Domingo**	**122.30**	**39**	*e*P	**PKPdf**	**06 40 22.6**	**-0.2**
MAW	**Mawson**	**122.91**	**207**	PKP	**PKiKP**	**06 40 22.4**	**+0.1**
	comp=Z,7.0nm,0.6s,baz=116,slow=3.5,SNR=8.6						
MAW				PKKPbc	**PKKPbc**	**06 50 15.3**	**+0.1**
	comp=Z,3.9nm,0.8s,baz=230,slow=11,SNR=5.0						
ROSC	**El Rosal**	**123.85**	**45**	PKP	**PKiKP**	**06 40 27.0**	**+0.7**
	comp=Z,14nm,0.6s,baz=126,slow=16,SNR=8.4						
DBIC	**Dimbokro**	**124.04**	**319**	PKP	**PKPdf**	**06 40 25.6**	**-0.3**
	comp=Z,11nm,0.7s,baz=37,slow=2.9,SNR=21						
DBIC				PKKPab	**PKKPab**	**06 50 11.8**	**-1.4**
	comp=Z,5.7nm,1.1s,baz=147,slow=4.2,SNR=3.9						
DBIC	**Dimbokro**	**124.04**	**319**	PKIKP	**PKPdf**	**06 40 25.7**	**-0.2**
LPHEP	**Lephephe**	**124.39**	**267**		**PKiKP**	**06 40 27.1**	**+0.4**
OTAV	**Otavalo**	**125.21**	**53**		**PKiKP**	**06 40 29.6**	**+0.5**
OTAV	**Otavalo**	**125.21**	**53**	PKIKP	**PKiKP**	**06 40 29.6**	**+0.5**
OTAV	**Otavalo**	**125.21**	**53**	*e*P	**PKPdf**	**06 40 28.8**	**0.0**
LBTB	**Lobatse**	**125.50**	**266**		**PKiKP**	**06 40 29.3**	**+0.4**
LBTB	**Lobatse**	**125.50**	**266**	PKIKP	**PKiKP**	**06 40 29.3**	**+0.4**
BOSA	**Boshof**	**127.65**	**262**	PKP	**PKPdf**	**06 40 31.8**	**-0.7**
	comp=Z,5.9nm,0.8s,baz=104,slow=1.5,SNR=10						
BOSA	**Boshof**	**127.65**	**262**		**PKiKP**	**06 40 33.7**	**+0.6**
BOSA	**Boshof**	**127.65**	**262**	PKIKP	**PKiKP**	**06 40 33.7**	**+0.6**
TSUM	**Tsumeb**	**128.29**	**277**		**PKPdf**	**06 40 34.3**	**+0.3**
QSPA	**South Pole Qui**	**130.27**	**180**	PKP	**PKPdf**	**06 40 35.1**	**-1.1**
	comp=Z,5.9nm,0.6s,baz=252,slow=0.5,SNR=17						
QSPA	**South Pole Qui**	**130.27**	**180**		**PKPdf**	**06 40 36.0**	**-0.3**
NVL	**N'lazarevskaya**	**140.72**	**204**	*e*PKHKP	PKPpre	06 40 49.2	
NVL				pmax	pmax		
	comp=Z,23nm,1.1s						
TROLL	**Troll, Antarti**	**142.71**	**199**	⇑P	**PKPdf**	**06 40 54.6**	**-4.6**
	comp=Z,1µm,0.7s						
NBPS	**Pedro II - PI**	**143.88**	**6**	*e*P	PKPbc	06 41 01.1	+0.3
PRPB	**Parauapebas**	**144.16**	**20**	*e*P	PKPbc	06 41 01.5	0.0
SNAA	**Sanae**	**144.24**	**198**	⇑P	**PKPab**	**06 40 59.8**	**0.0**
	comp=Z,842nm,0.4s						
SNAA	**Sanae**	**144.24**	**198**	PKP	PKPbc	06 41 00.0	-0.2
	comp=Z,33nm,0.5s,baz=191,slow=2.7,SNR=454						
SNAA	**Sanae**	**144.24**	**198**		PKPbc	06 41 00.3	+0.1
LPAZ	**La Paz**	**144.38**	**56**	PKP	**PKPab**	**06 41 02.5**	**0.0**
	comp=Z,19nm,0.7s,baz=348,slow=4.5,SNR=69						
LPAZ	**La Paz**	**144.38**	**56**		PKPbc	06 41 03.1	+0.2
LPAZ	**La Paz**	**144.38**	**56**	*e*P	PKPbc	06 41 03.0	+0.1
NBPA	**Parau_RN**	**145.36**	**359**	*e*P	**PKPdf**	**06 41 05.4**	**0.0**
RCBR	**Riachuelo**	**145.40**	**356**	*e*P	**PKPbc**	**06 41 03.5**	**-2.0**
VNA2	**Neumayer--Watz**	**145.82**	**197**	⇑P	**PKPdf**	**06 41 04.5**	**0.0**
	comp=Z,99nm,0.6s,baz=118,slow=2.7						
NBPV	**Pedro Velho**	**145.95**	**355**	*e*P	**PKPbc**	**06 41 06.9**	**-0.2**
VNA3	**Neumayer Olymp**	**146.08**	**196**	⇑P	**PKPdf**	**06 41 04.5**	**-0.5**
	comp=Z,71nm,0.7s						
VNA1	**Neumayer--Stat**	**146.22**	**197**	⇑P	**PKPdf**	**06 41 05.5**	**+0.4**
	comp=Z,100nm,0.9s						
VILB	**Vilhena**	**146.27**	**42**	*e*P	**PKPbc**	**06 41 08.2**	**0.0**
CLDB	**Colider**	**146.49**	**33**	*e*P	**PKPdf**	**06 41 07.7**	**+0.3**
PDRB	**Porto dos Gac**	**146.75**	**35**	*e*P	**PKPdf**	**06 41 06.7**	**-1.0**
SMTB	**Santa Maria do**	**147.30**	**18**	*e*P	**PKPdf**	**06 41 07.5**	**-1.2**
NBTA	**Tacaratu-PE**	**148.72**	**0**	*e*P	**PKPdf**	**06 41 12.2**	**+1.2**
PTLB	**Pontes e Lacer**	**148.93**	**43**	*e*P	**PKPdf**	**06 41 12.1**	**+0.8**
SNDB	**Serra Nova Dou**	**149.20**	**26**	*e*P	**PKPdf**	**06 41 10.5**	**-1.3**
LCO	**Las Campanas**	**150.88**	**77**		**PKiKP**	**06 41 21.0**	**+0.3**
LCO	**Las Campanas**	**150.88**	**77**	PKIKP	**PKiKP**	**06 41 21.0**	**+0.3**
SALV	**Santo Antonio**	**151.00**	**37**	*e*P	**PKPdf**	**06 41 15.1**	**+0.6**
PMSA	**Palmer Station**	**151.42**	**157**		**PKiKP**	**06 41 20.3**	**0.0**
ARAG	**Araguaiana, MT**	**152.47**	**30**	*e*P	**PKPdf**	**06 41 18.1**	**+1.4**
PP1B	**Ponte de Pedra**	**152.85**	**38**	*e*P	**PKPdf**	**06 41 17.7**	**+0.4**
BDFB	**Brasilia**	**153.69**	**22**	PKP	**PKPdf**	**06 41 19.7**	**+1.0**
	comp=Z,9.2nm,1.1s,baz=37,slow=8.1,SNR=6.5						
BDFB				PKPbc	**PKiKP**	**06 41 26.8**	**+0.2**
	comp=Z,16nm,0.9s,baz=266,slow=0.6,SNR=17						
BDFB				PKPab	**PKPab**	**06 41 39.6**	**+0.4**
	comp=Z,17nm,0.7s,baz=252,slow=4.9,SNR=13						
BDFB	**Brasilia**	**153.69**	**22**		**PKiKP**	**06 41 27.6**	**+1.0**
BDFB					**sPKPdf**	**06 41 40.4**	**+0.1**

PLCA	Paso Flores	155.31	101	PKP	PKPdf	06 41 20.4	+0.2
	comp=Z,3.3nm,1.0s,baz=345,slow=4.8,SNR=3.7						
PLCA				PKPbc	pPKPdf	06 41 30.3	-5.8
	comp=Z,6.5nm,0.8s,baz=229,slow=2.2,SNR=11						
PLCA				PKPab	PKPab	06 41 45.9	+0.2
	comp=Z,6.0nm,0.9s,baz=248,slow=3.1,SNR=5.9						
CPUP	Villa Florida	158.54	55	PKP	PKPdf	06 41 24.1	-0.6
	comp=Z,1.0nm,0.9s,baz=350,slow=2.9,SNR=5.1						
CPUP				PKPab	PKPab	06 42 00.1	+0.2
	comp=Z,2.6nm,1.1s,baz=350,slow=2.5,SNR=7.8						

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*NIED **19** 06:25:11.4, 26°.07N×128°.47E, h48^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.92; $M_{\theta\theta}$0.26; $M_{\phi\phi}$1.67; $M_{r\theta}$1.46; $M_{\theta\phi}$6.45; $M_{\phi r}$1.80; Fault plane solution: $M_0$6.76000×10^{14} NP1:ϕ_s88.00000°, δ79.00000°, λ8.00000°. NP2:ϕ_s356.00000°, δ82.00000°, λ169.00000°.*

JMA 19 06:25:11.4±0.3, **26°N**±1°×**12°8E**±°, **h48**^{km}±3^{km}, **MV3.9**/16, **NEAR OKINAWAJIMA ISLAND, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNTH	Nagotoyohara	0.60	318	P	Pn	06 25 23.5	-0.3
JNTH				eS	Sn	06 25 32.5	-0.2
JJT3	Tamagusuku3	0.62	277	i P	Pn	06 25 24.1	+0.1
JJT3				eS	Sn	06 25 33.7	+0.6
JOW	Kunigami	0.78	347	P	Pn	06 25 26.3	+0.2
JOW				eS	Sn	06 25 37.3	+0.5
JYRO	Yoronjima	0.95	359	i P	Pn	06 25 28.6	+0.2
JYRO				eS	Sn	06 25 40.8	-0.1
JIH	Iheya	1.06	335	eP	Pn	06 25 30.7	+0.8
JAGN	Aguni-jima	1.22	295	P	Pn	06 25 32.9	+0.9
JOKE	Okinoerabujima	1.29	4	P	Pn	06 25 33.5	+0.4
JOKE				eS	Sn	06 25 49.5	+0.3
JKE	Kume jima 2	1.53	280	P	Pn	06 25 36.4	0.0
JKE				eS	Sn	06 25 55.0	-0.1
JTK	Tokunoshima	1.76	14	P	Pn	06 25 39.7	+0.2
JTK				eS	Sn	06 26 00.3	-0.4
JAMN	Amaminishikomi	2.25	16	eP	Pn	06 25 46.3	+0.1
JAMN				eS	Sn	06 26 12.5	-0.3
JAM	Amami Oshima	2.54	23	eP	Pn	06 25 49.9	-0.3
JAM				eS	Sn	06 26 18.5	-1.3
JKDJ	Kitadaitoujima	2.55	92	P	Pn	06 25 47.3	-3.0
JKDJ				eS	Sn	06 26 13.8	-6.2
JZK	Kikaishima	2.60	31	P	Pn	06 25 51.9	+0.9
JZK				eS	Sn	06 26 22.0	+0.6

IDC 19 06:27:11.4±6.5, **27°.48S×23°.12E, h0**^{km}**, mbtmp2.0**/1, **ML1.7**/1, **Error ellipse: s-maj=46.0km s-min=42.1km az=29.0, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I47ZA	BOSHOF INFRASO	2.19	122	I	I	06 39 40.0	
	0.2nm,0.8s,baz=301,slow=319,SNR=5.4						
BOSA	Boshof	2.20	121	Pn	Pn	06 27 49.0	-0.4
	0.1nm,0.3s,baz=300,slow=17,SNR=1.5						
BOSA				Pg	Pb	06 27 52.1	-0.1
	0.1nm,0.3s,baz=298,slow=18,SNR=1.5						
BOSA				Lg	Lg	06 28 21.4	
	0.7nm,0.3s,baz=214,slow=20,SNR=12						
	1.4nm,0.7s						
I35NA	TSUMEB INFRASO	9.69	327	I	I	07 23 50.0	
	baz=153,slow=319,SNR=3.0						

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*PDG **19** 06:30:50.5±0.1, 44°.16N×15°.89E, h10^{km}, ML3.5/13, Error ellipse: s-maj=0.9km s-min=0.9km az=0.0*

*VIE **19** 06:30:52.7±1.8, 44°.20N×16°.08E, h10^{km}, mb2.8/17, ml2.9/17, Error ellipse: s-maj=17.0km s-min=12.9km az=80.0 82 km NNW of Split*

*BEO **19** 06:30:52.1±0.3, 44°.14N×16°.00E, h0^{km}, ML3.1/18*

*RHSSO **19** 06:30:53.0±0.7, 44°.20N×16°.08E, h7^{km}±4^{km}, ML3.0/5*

ISC 19 06:30:52.0±1.1, **44°.19N**±0°.02×**16°.05E**±0°.02, **h4**^{km}±9^{km}, **n78,** σ1^{s}.**19**/141, **2C-2D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIJV	Kijevo	0.32	126	ePg	Pg	06 30 58.4	+0.3
KIJV				Sg	Sg	06 31 03.6	+1.4
UDBI	Udbina	0.39	329	ePg	Pg	06 30 59.9	+0.3
UDBI				Sg	Sg	06 31 05.2	+0.5
MORI	Morici	0.41	217	i Pg	Pg	06 30 59.1	-0.6
MORI				Sg	Sg	06 31 05.1	+0.1
ZIRJ	Zirje	0.61	209	ePg	Pg	06 31 02.5	-1.1
ZIRJ				Sg	Sg	06 31 11.9	+0.3
VIRC	Vir	0.72	278	ePg	Pg	06 31 05.1	-0.7
VIRC				Sg	Sg	06 31 15.6	+0.5
DUGI	Dugi Otok	0.74	255	ePg	Pg	06 31 05.2	-1.0
DUGI				Sg	Sg	06 31 16.1	+0.4
NVLJ	Novalja	0.92	294	ePg	Pg	06 31 09.8	+0.2
NVLJ				Sg	Sg	06 31 22.1	+0.6
BLY	Banja Luka	0.99	55	⇑iPg	Pg	06 31 10.3	-0.6
BLY				eSg	Sg	06 31 23.2	-0.5
BLY	Banja Luka	0.99	55	ePg	Pg	06 31 10.8	-0.1
BLY				eSg	Sb	06 31 25.4	+0.4
RICI	Ricice	1.05	131	ePg	Pg	06 31 11.6	-0.5
RICI				Sg	Sb	06 31 26.8	0.0
RABC	Rab	1.06	302	ePg	Pg	06 31 12.2	-0.1
RABC				Sg	Sg	06 31 27.0	+0.9
MAKA	Makarska	1.15	142	ePg	Pg	06 31 12.8	-1.1
MAKA				Sg	Sg	06 31 28.9	+0.1
BOJS	Bojanci	1.43	337	ePg	Pn	06 31 18.8	+0.2
BOJS				eSg	Sn	06 31 37.9	0.0
LSTV	Lastovo	1.55	156	ePn	Pn	06 31 19.7	-0.6
LSTV				Sn	Sn	06 31 40.3	-0.5
RIY	Rijeka	1.59	316	ePg	Pn	06 31 21.2	+0.4
RIY				eSg	Sg	06 31 43.9	+0.9
STON	Ston	1.79	137	ePn	Pn	06 31 23.6	+0.1
STON				Sn	Sn	06 31 46.5	0.0
STON	Ston	1.79	137	ePg	Pn	06 31 23.9	+0.4
STON				eSg	Sb	06 31 48.2	+0.3
CEY	Cerknica	1.93	324	ePg	Pb	06 31 27.8	+0.1
CEY				eSg	Sb	06 31 52.8	+0.7
SKDS	Skadanscina	1.98	314	ePg	Pb	06 31 28.1	-0.5
SKDS				eSg	Sb	06 31 54.4	+0.8
KLINJ	Klinje	2.11	118	ePn	Pn	06 31 28.8	+0.8
KLINJ				eSn	Sn	06 31 54.4	-0.3
DBRK	Dubrovnik	2.16	134	ePn	Pn	06 31 29.4	+0.7
DBRK				Sn	Sn	06 31 56.3	+0.5
BRY	Bratogost	2.22	125	ePn	Pn	06 31 29.6	-0.1
BRY				i Sn	Sb	06 32 00.0	-0.7
TREB	Trebinje	2.23	130	ePn	Pn	06 31 30.9	+1.2
TREB				eSn	Sn	06 31 58.3	+0.6
TREB	Trebinje	2.23	130	ePg	Pn	06 31 30.9	+1.2
TREB				eSg	Sb	06 32 01.5	+0.7
UPM	Unac-Piva	2.30	114	ePn	Pn	06 31 30.7	0.0
UPM				i Sn	Sb	06 32 02.0	-0.8
BEHE	Becsehely	2.34	12	ePn	Pn	06 31 32.0	+0.9
BEHE				eSn	Sn	06 32 00.5	+0.2
BBLS	Lazi&#263i	2.44	96	ePn	Pn	06 31 33.8	+1.1
BBLS				eSn	Sb	06 32 05.6	-1.4
RUDO	Rudo	2.47	102	ePn	Pn	06 31 33.2	+0.2
RUDO				eSn	Sn	06 32 03.5	-0.1
RUDO	Rudo	2.47	102	ePg	Pb	06 31 35.8	-1.1
RUDO				eSg	Sb	06 32 08.8	+1.2
HCY	Herceg Novi	2.50	133	ePn	Pn	06 31 33.2	-0.1
HCY				i Sn	Sb	06 32 06.2	-2.2
TEKS	Tekeris	2.52	81	ePn	Pn	06 31 33.9	+0.2
OBKA	Obir	2.55	336	ePn	Pn	06 31 34.6	+0.5
	5.5nm,0.3s,SNR=5.4						
OBKA				eSn	Sn	06 32 06.9	+1.3
	95nm,0.6s						
NKME	Niksic	2.55	123	ePn	Pn	06 31 34.0	-0.1
NKME				eSn	Sb	06 32 07.7	-2.3
PLE	Pljevlja	2.57	108	ePn	Pn	06 31 34.7	+0.3
PLE				i Sn	Sb	06 32 08.7	-1.9
SOKA	Soboth	2.59	344	ePn	Pn	06 31 34.6	0.0
	2.4nm,0.2s						
SOKA				eSn	Sb	06 32 09.3	-1.8
	9.0nm,0.4s						
CEME	Cevo	2.66	127	ePn	Pn	06 31 35.6	0.0
CEME				eSn	Sb	06 32 10.5	-2.7
AQU	L'Aquila	2.66	227	ePn	Pn	06 31 37.0	+1.3
AQU				eSn	Sn	06 32 09.1	+0.7
MORH	Mrgy, Hungar	2.73	41	ePn	Pn	06 31 36.5	0.0
MORH				eSn	Sn	06 32 10.1	+0.1
MORH	Mrgy, Hungar	2.73	41	ePn	Pn	06 31 37.0	+0.5
BUM	Brajici-Budva	2.81	131	ePn	Pn	06 31 37.5	-0.2
BUM				i Sn	Sn	06 32 13.8	+1.8
DIVS	Divibare	2.84	90	ePn	Pn	06 31 39.6	+1.5
FRGS	Fruska Gora	2.85	69	ePn	Pb	06 31 41.9	-1.5
FRGS				eSn	Sb	06 32 17.8	-0.9
KOME	Kolasin	2.86	117	ePn	Pn	06 31 39.8	+1.4
KOME	Kolasin	2.86	117	ePn	Pn	06 31 38.5	+0.1
KOME				eSn	Sn	06 32 15.5	+2.3
PDG	Podgorica	2.93	126	ePn	Pn	06 31 39.3	+0.1
PDG				i Sn	Sn	06 32 16.9	+2.1
MYKA	Terra Mystica	2.97	326	ePn	Pn	06 31 41.5	+1.6
	2.7nm,0.3s						
MYKA				eSn	Sn	06 32 17.4	+1.4
	9.1nm,0.5s						
SJES	Sjenica	3.00	107	ePn	Pn	06 31 41.5	+1.2
SJES				eSn	Sn	06 32 18.9	+2.2
IVAS	Ivanjica	3.03	100	ePn	Pn	06 31 41.5	+0.8
IVAS				eSn	Sn	06 32 17.4	-0.1
DRME	Dracevica, Mon	3.05	130	ePn	Pn	06 31 41.5	+0.6
DRME	Dracevica, Mon	3.05	130	⇓iPn	Pn	06 31 40.8	-0.1
DRME				eSn	Sn	06 32 19.6	+1.8
ARSA	Arzberg	3.08	353	i Pn	Pn	06 31 40.6	-0.8
	2.1nm,0.5s,SNR=4.9						
ARSA				eSn	Sn	06 32 21.4	+2.7
	3.5nm,0.4s						
BEY	Berane	3.09	114	ePg	Pb	06 31 46.1	-1.4
IVA	Berane	3.09	114	ePn	Pn	06 31 41.7	+0.1
IVA				i Sn	Sn	06 32 21.3	+2.3
TRUS	Trudelj	3.14	88	ePn	Pn	06 31 42.9	+0.8
ULC	Ulcinj	3.23	132	⇑iPn	Pn	06 31 43.4	0.0
ULC				i Sn	Sn	06 32 24.0	+1.6
PVY	Plav	3.27	118	ePn	Pn	06 31 46.5	+2.5
PVY	Plav	3.27	118	ePn	Pn	06 31 44.3	+0.3
PVY				i Sn	Sn	06 32 25.2	+1.8
GRUS	Gruza	3.38	94	ePn	Pn	06 31 46.1	+0.6
KBA	Koelnbreinsper	3.45	328	ePn	Pn	06 31 46.7	0.0
	1.2nm,0.4s						
KBA				eSn	Sn	06 32 28.8	+0.8
	3.7nm,0.3s						
RONA	Rosalia, Austr	3.51	3	i Pn	Pn	06 31 47.4	0.0
	4.0nm,0.4s						
RONA				eSn	Sn	06 32 29.5	+0.1
	3.7nm,0.3s						
GOCS	Kraljevo Serbi	3.55	99	ePn	Pn	06 31 48.8	+1.0
GOCS				eSn	Sn	06 32 30.5	+0.3
ABTA	Abfaltersbach	3.57	317	ePn	Pn	06 31 50.1	+2.0
	0.9nm,0.2s						
ABTA				i Sn	Sn	06 32 33.0	+2.3
	25nm,0.8s						
CONA	Conrad Observa	3.74	358	i Pn	Pn	06 31 50.5	0.0
	5.5nm,0.4s						
CONA				eSn	Sn	06 32 33.1	-1.9
	6.3nm,0.4s						
SELS	Selova	3.81	103	ePn	Pn	06 31 52.8	+1.5
MOA	Molln	3.86	342	i Pn	Pn	06 31 53.2	+1.1
	8.4nm,0.5s,SNR=6.8						
MOA				i Sn	Sn	06 32 38.7	+0.7
	6.4nm,0.4s						
VRSS	Vrsac	3.88	74	ePn	Pn	06 31 52.7	+0.4
BIOA	Bad Ischl, Aus	3.88	335	ePn	Pn	06 31 51.6	-0.8
	1.7nm,0.2s						
BIOA				eSn	Sn	06 32 38.2	-0.2
	11nm,0.6s						
LESA	Schwarzleotal	4.00	325	i Pn	Pn	06 31 54.4	+0.4
	5.9nm,0.3s,SNR=9.7						
LESA				i Sn	Sn	06 32 41.0	-0.4
	2.6nm,0.4s						
BOVS	Bovan	4.13	96	ePn	Pn	06 31 56.2	+0.5
BOVS				eSn	Sn	06 32 45.9	+1.5
MODS	Modra-Piesok	4.27	11	ePN	Pn	06 31 58.5	+0.8
MODS				eSN	Sn	06 32 43.3	-4.7
WTTA	Wattenberg	4.36	316	i Pn	Pn	06 32 00.2	+1.2
	4.1nm,0.3s,SNR=4.7						
WTTA				i Sn	Sn	06 32 49.9	-0.4
	5.9nm,0.4s						
BARS	Barje	4.42	106	ePn	Pn	06 32 00.9	+1.2
WATA	Walderalm	4.43	317	i Pn	Pn	06 32 00.8	+0.7
	2.6nm,0.2s						
WATA				eSn	Sn	06 32 54.3	+2.1
	5.0nm,0.3s						
SQTA	Sankt Quirin	4.54	314	i Pn	Pn	06 32 02.2	+0.6
	3.9nm,0.4s						
SQTA				eSn	Sb	06 33 03.7	-3.7
	5.1nm,0.3s						
FETA	Feichten	4.68	309	ePn	Pn	06 32 03.8	+0.2
	0.1nm,0.1s						
FETA				eSn	Sb	06 33 10.2	-1.2
	3.5nm,0.6s						
ZAPS	Zavoj	4.86	99	ePn	Pn	06 32 06.5	+0.6
BISRR	Bisoca	7.70	76	⇓P	Pg	06 33 19.6	+0.3
NEF	NEVSHA	8.19	93	i P	Pg	06 33 31.3	+2.6

RSNC 19 06:41:18.9±0.0, **7°N**±1°×**7°3W**±°, **h145**^{km}±1^{km}, **M3.2, mb3.2, mB4.8, ML2.9, MLv3.6, Mw(mB)4.1, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.24	181	P	Pn	06 41 38.7	-0.3
BARC				S	Sn	06 41 53.3	-0.9
BRJC	Barrancabermej	0.58	284	P	Pn	06 41 40.2	+0.1
BRJC				S	Sn	06 41 56.6	+0.4
PAMC	Pamplona, Colo	0.69	43	P	Pn	06 41 41.4	0.0
PAMC				S	Sn	06 41 58.0	-0.5
RUSC	La Rusia	0.94	174	P	Pn	06 41 42.6	-0.7
RUSC				S	Sn	06 42 01.2	-0.6
PTBC	PUERTO BERRIO,	1.30	257	P	Pn	06 41 45.2	-0.8
PTBC				S	Sn	06 42 05.7	-1.0
OCAC	Ocana	1.41	354	P	Pn	06 41 46.5	-0.8
OCAC				S	Sn	06 42 08.0	-1.0
SPBC	San Pablo de B	1.47	217	P	Pn	06 41 47.6	-0.3
SPBC				S	Sn	06 42 08.6	-1.4
CHIC	Chingaza	2.25	194	P	Pn	06 41 56.8	-0.4
CHIC				S	Sn	06 42 25.7	-0.9
ROSC	El Rosal	2.28	210	P	Pn	06 41 58.5	+1.0
ROSC				S	Sn	06 42 27.2	+0.1
CVER	Cruz Verde, Cu	2.46	201	P	Pn	06 41 59.9	+0.1
CVER				S	Sn	06 42 31.2	0.0
UREC	San Jos de Ur	2.51	292	P	Pn	06 41 58.6	-1.3
UREC				S	Sn	06 42 29.0	-2.5
GUY2C	Guyana, Caldas	2.70	234	P	Pn	06 42 03.8	+1.1
VILC	Villavicencio,	2.75	191	P	Pn	06 42 02.6	-0.5
VILC				S	Sn	06 42 35.6	-1.5
RECRC	Villamaria, Ca	2.85	229	P	Pn	06 42 06.3	+1.6
RECRC				S	Sn	06 42 41.4	+1.4
NIZA	Niza - Manizal	2.88	232	P	Pn	06 42 05.4	+0.6
NIZA				S	Sn	06 42 40.7	+0.4
CBOC	Ciudad Bolivar	2.97	251	P	Pn	06 42 06.5	+0.6
CBOC				S	Sn	06 42 40.1	-2.1
DBBC	Dabeiba	3.01	274	P	Pn	06 42 06.3	0.0
DBBC				S	Sn	06 42 41.2	-1.8
ARGC	Ariguani, Magd	3.19	341	P	Pn	06 42 08.5	0.0
ARGC				S	Sn	06 42 46.1	-0.8
ANIL	Santa Ana	3.21	224	P	Pn	06 42 10.2	+1.1
ANIL				S	Sn	06 42 47.9	+0.1
SDV	Santo Domingo	3.25	51	P	Pn	06 42 08.1	-1.3
SDV				S	Sn	06 42 44.6	-3.9
PRAC	Prado	3.53	209	P	Pn	06 42 12.1	-0.9
PRAC				S	Sn	06 42 55.1	+0.2
APAC	Apartado, Choc	3.54	288	P	Pn	06 42 12.5	-0.5
APAC				S	Sn	06 42 52.5	-2.4
ORTC	Ortega, Tolima	3.56	215	P	Pn	06 42 13.2	-0.1
ORTC				S	Sn	06 42 55.5	0.0
PLMC	San Jos del P	3.63	238	P	Pn	06 42 14.6	+0.3
PLMC				S	Sn	06 42 56.2	-1.0
SJCC	San Jacinto, C	3.63	327	P	Pn	06 42 12.2	-2.1
SJCC				S	Sn	06 42 54.0	-3.3
LCBC	Los crdobas,	3.75	303	P	Pn	06 42 15.4	-0.3
LCBC				S	Sn	06 42 59.5	-0.3
URMC	La Uribe, Meta	3.75	199	P	Pn	06 42 15.7	-0.2
URMC				S	Sn	06 42 59.0	-1.2
YOTC	Yotoco, Valle	4.23	228	P	Pn	06 42 21.8	-0.5
YOTC				S	Sn	06 43 11.2	-0.3
CAPC	Capurgana	4.51	294	P	Pn	06 42 24.3	-1.4
CAPC				S	Sn	06 43 13.8	-3.9
PTAC	Punta Ardita,	4.61	274	P	Pn	06 42 26.3	-0.7
PTAC				S	Sn	06 43 19.4	-0.6
MACC	Macarena, Meta	4.70	188	P	Pn	06 42 25.8	-2.6
MACC				S	Sn	06 43 17.5	-4.9
URIC	Uribia, Colomb	4.98	14	P	Pn	06 42 28.9	-3.1
URIC				S	Sn	06 43 24.6	-4.4
JAMC	Jamundi, Valle	5.00	224	P	Pn	06 42 30.8	-1.7
	0.0nm4.8nm,1.0s						
JAMC				S	Sn	06 43 27.4	-2.4
	0.0nm4.8nm,1.0s						
GARC	Garzon, Huila	5.16	207	P	Pn	06 42 33.5	-1.1
GARC				S	Sn	06 43 30.2	-3.4
POPC	Popayan, Colom	5.50	219	P	Pn	06 42 38.8	-0.4
	3.2nm,1.4s						
POPC				S	Sn	06 43 39.7	-2.2
	3.2nm,1.4s						
FLOC	Florencia	5.77	205	P	Pn	06 42 41.9	-0.6
	2.4nm,1.1s						
FLOC				S	Sn	06 43 47.6	-0.3
	2.4nm,1.1s						
BBAC	Balboa, Cauca	6.26	221	P	Pn	06 42 49.6	+0.2
BBAC				S	Sn	06 43 58.6	-1.5

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*NEIC **19** 06:43:50.8±1.8, 58°.48N±0°.02×137°.76W±0°.04, h10^{km}±1^{km}, Error ellipse: s-maj=3.7km s-min=3.0km az=221.0*

*AEIC **19** 06:43:50.6±1.8, 58°.44N±0°.03×137°.76W±0°.05, h12^{km}±5^{km}, ML3.8, mb3.9/2(NEIC), ML3.9/118(NEIC), Error ellipse: s-maj=5.8km s-min=2.3km az=218.0*

*ANF **19** 06:43:51.4±0.3, 58°.54N×137°.66W, h5^{km}±2^{km}, ML4.2/37, Error ellipse: s-maj=2.0km s-min=1.2km az=29.0*

ISC 19 06:43:50.2±1.2, **58°.50N**±0°.03×**137°.77W**±0°.03, **h6**^{km}±10^{km}, **n268,** σ1^{s}.**15**/310, **Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
S31K	Pelican	0.97	123		Pg	06 44 09.1	+0.2
S31K	Pelican	0.97	123		Sg	06 44 21.8	+0.3
S31K					Sb	06 44 22.4	-0.1
S31K					Sn	06 44 22.9	-1.5
S31K	Pelican	0.97	123	IAML		06 44 23.3	
	comp=E,2μm,0.5s						
S31K				IAML		06 44 23.7	
	comp=N,3μm,0.6s						
S31K	Pelican	0.97	123	P	Pb	06 44 09.2	-0.2
	baz=304,SNR=80						
S31K				S	Sb	06 44 22.7	+0.2
	baz=304						
S31K				S	Sb	06 44 22.7	+0.2
	baz=304						
R31K	City Hall, Gus	1.07	94		Pb	06 44 11.1	+0.1
R31K					Sb	06 44 25.4	+0.1
R31K					Sg	06 44 25.5	+0.9
R31K	City Hall, Gus	1.07	94	P	Pb	06 44 11.1	+0.1
	baz=274,SNR=15						
R31K				S	Sb	06 44 25.2	-0.1
	baz=274						
P29M	Windy Craggy	1.14	1		Pg	06 44 12.0	0.0
P29M					Pb	06 44 12.2	0.0
P29M					Sg	06 44 26.3	-0.5
P29M					Sb	06 44 26.4	-0.9
P29M	Windy Craggy	1.14	1	P	Pg	06 44 12.1	+0.1
	baz=180						
P29M				S	Sg	06 44 26.2	-0.5
	baz=180						
PLBC	Pleasant Camp	1.21	36		Pg	06 44 13.2	-0.1
PLBC					Sg	06 44 28.4	-0.6
YKU2	Yakutat	1.42	317	Pn	Pg	06 44 17.4	+0.1
YKU2	Yakutat	1.42	317		Sg	06 44 37.0	+1.4
YKU2	Yakutat	1.42	317	P	Pg	06 44 17.9	+0.6
BESE	Bessie Mountai	1.53	86		Pn	06 44 17.9	-0.2
BESE				Sn	Sn	06 44 37.8	-0.6
BESE				IAML		06 44 39.5	
	comp=E,3μm,0.7s						
SKAG	Skagway	1.59	52		Pn	06 44 19.3	+0.4
SKAG	Skagway	1.59	52		Sn	06 44 39.6	-0.1
SKAG					Sb	06 44 40.3	0.0
SKAG	Skagway	1.59	52	P	Pn	06 44 19.1	+0.2
SKAG	Skagway	1.59	52	P	Pn	06 44 19.0	+0.2
	baz=232,SNR=158						
SKAG				S	Sb	06 44 40.1	-0.2
	baz=232						
P30M	Million Dollar	1.68	14		Pn	06 44 20.5	+0.3
P30M					Pb	06 44 21.3	-0.3
P30M					Sn	06 44 42.2	+0.2
P30M					Sb	06 44 43.2	+0.2
P30M	Million Dollar	1.68	14	IAML		06 44 43.5	
	comp=E,1μm,1.0s						
P30M				IAML		06 44 44.3	
	comp=N,1μm,0.3s						
P30M	Million Dollar	1.68	14	P	Pn	06 44 20.5	+0.3
	baz=194						
P30M				S	Sb	06 44 42.6	-0.5
	baz=194						
BCPM	Bancas Point	1.75	328		Pn	06 44 20.9	-0.2
BCPM				Sn	Sg	06 44 45.6	-0.7
BCPM				IAML		06 44 51.2	
	comp=E,2μm,0.2s						
BCPM				IAML		06 44 51.2	
	comp=N,2μm,0.4s						
JIS	Juneau Island	1.80	96		Pn	06 44 21.0	-0.7
JIS					Sb	06 44 46.6	+0.5
JIS	Juneau Island	1.80	96	P	Pb	06 44 23.3	-0.1
O29M	Mount Kennedy	1.86	348		Pb	06 44 23.7	-0.9
O29M				IAML		06 44 49.1	
	comp=N,2μm,0.2s						
O29M	Mount Kennedy	1.86	348		Sb	06 44 47.9	-0.2
O29M	Mount Kennedy	1.86	348	P	Pn	06 44 22.9	+0.3
	baz=166						
O29M				S	Sb	06 44 47.7	-0.5
	baz=166						
SIT	Sitka	1.95	137		Pn	06 44 22.8	-0.9
SIT				IAML		06 44 55.6	
	comp=E,684nm,0.7s						
SIT	Sitka	1.95	137	P	Pn	06 44 23.2	-0.5
SIT	Sitka	1.95	137	P	Pn	06 44 22.7	-1.0
	baz=319,SNR=27						
SIT				Sb	Sg	06 44 52.9	+0.1
	baz=319						
S32K	Killisnoo	1.99	120		Pn	06 44 24.0	-0.3
S32K				IAML		06 44 57.1	
	comp=E,785nm,0.7s						
S32K	Killisnoo	1.99	120	P	Pn	06 44 23.9	-0.3
	baz=302,SNR=28						
S32K				Sb	Sg	06 44 53.3	-0.7
	baz=302						
S32K				Sb	Sg	06 44 53.3	-0.7
	baz=302						
PINM	Pinnacle	2.05	323	P	Pn	06 44 25.1	-0.1
	baz=140						
PINM				S	Sb	06 44 53.7	+0.1
	baz=140						
PCA	Pinnacle	2.05	323		Pn	06 44 25.6	+0.4
YUK7	Dusty Glacier	2.05	355		Pn	06 44 26.4	+1.0
YUK7					Sb	06 44 53.0	-0.7
SAMH	Samovar Hills	2.25	318		Pn	06 44 28.9	+1.0
SAMH					Pn	06 44 29.4	+1.4
CHX	Chaix Hills	2.33	314		Pb	06 44 32.5	-0.1
HYT	Haines Junctio	2.34	3		Pn	06 44 30.3	+1.0
HYT				IAML		06 45 05.0	
	comp=N,1μm,0.7s						
HYT	Haines Junctio	2.34	3		Sb	06 45 02.1	+0.2
HYT	Haines Junctio	2.34	3	P	Pn	06 44 29.9	+0.6
	baz=183,SNR=57						
HYT				Sb	Sb	06 45 02.2	+0.2
	baz=183						
P32M	Atlin	2.37	61		Pn	06 44 29.8	+0.2
P32M	Atlin	2.37	61		Sb	06 45 04.0	+1.3
P32M	Atlin	2.37	61	P	Pn	06 44 29.6	+0.1
	baz=243,SNR=42						
P32M				Sb	Sb	06 45 03.5	+0.9
	baz=243						
O30N	Mendenhall	2.44	20		Pn	06 44 31.4	+0.9
O30N				IAML		06 45 06.7	
	comp=N,745nm,0.6s						
O30N	Mendenhall	2.44	20		Sb	06 45 05.4	+0.7
O30N	Mendenhall	2.44	20	P	Pn	06 44 31.1	+0.6
	baz=201,SNR=104						
O30N				Sb	Sb	06 45 05.4	+0.7
	baz=201						
YUK6	Outpost Mounta	2.47	353		Pn	06 44 31.8	+0.6
YUK6					Pn	06 44 32.3	+1.1
YUK6	Outpost Mounta	2.47	353	P	Pn	06 44 31.7	+0.5
	baz=172,SNR=23						
O28M	Mount Upton	2.59	333	IAML		06 45 14.0	
	comp=N,400nm,0.5s						
O28M				IAML		06 45 20.5	
	comp=E,419nm,0.7s						
O28M	Mount Upton	2.59	333		Pn	06 44 33.1	+0.2
O28M					Pn	06 44 34.1	+1.2
O28M	Mount Upton	2.59	333	P	Pn	06 44 33.1	+0.2
	baz=150						
O28M				Sb	Sg	06 45 11.5	-1.9

	baz=150						
WHY	Whitehorse	2.62	33		Pn	06 44 33.8	+0.7
WHY	Whitehorse	2.62	33	P	Pn	06 44 33.6	+0.5
	baz=215,SNR=120						
WHY				Sb	Sb	06 45 11.4	+1.3
	baz=215						
YUK5	Granite Creek	2.65	359		Pn	06 44 34.8	+1.3
YUK5					Sb	06 45 12.4	+1.6
YAH	Yahtse	2.76	314		Pn	06 44 36.7	+1.6
YAH				IAML		06 45 26.2	
	comp=N,451nm,1.1s						
YAH				IAML		06 45 38.8	
	comp=E,395nm,0.9s						
LOGN	Logan Glacier	2.85	326		Pn	06 44 37.3	+0.9
LOGN				IAML		06 45 26.7	
	comp=E,294nm,1.0s						
LOGN				IAML		06 45 27.9	
	comp=N,367nm,0.8s						
YUK4	Talbot Arm	2.89	352	P	Pn	06 44 39.5	+2.6
	baz=172,SNR=28						
CYK	Cape Yakataga	2.90	305		Pn	06 44 37.5	+0.8
Q32M	Nakina River	2.91	78		Pn	06 44 37.8	+0.7
Q32M				IAML		06 45 27.6	
	comp=N,351nm,0.9s						
Q32M				IAML		06 45 29.2	
	comp=E,444nm,1.1s						
Q32M	Nakina River	2.91	78	P	Pn	06 44 37.2	+0.1
	baz=263						
YUK8	Steele Glacier	2.97	341		Pn	06 44 38.9	+0.9
YUK8					Pn	06 44 39.1	+1.0
YUK8	Steele Glacier	2.97	341	P	Pn	06 44 38.8	+0.7
	baz=159,SNR=26						
YUK8				Sb	Sg	06 45 23.7	-1.9
	baz=159						
N30M	Aishikik Lake	2.99	6	IAML		06 45 25.2	
	comp=N,558nm,0.5s						
N30M	Aishikik Lake	2.99	6	P	Pn	06 44 39.0	+0.8
	baz=186,SNR=20						
N30M				Sb	Sb	06 45 22.5	+1.8
	baz=186						
GRNC	Granite Creek	3.02	320		Pn	06 44 39.4	+0.7
CTGM	Chitina Glacie	3.06	325		Pn	06 44 41.0	+1.8
CTGM				IAML		06 45 32.7	
	comp=N,223nm,0.7s						
CTGM				IAML		06 45 33.0	
	comp=E,285nm,1.1s						
CTG	Chitna Glacier	3.07	325	P	Pn	06 44 39.8	+0.6
	baz=142,SNR=77						
P33M	Teslin, Yukon	3.07	54		Pn	06 44 39.4	+0.2
P33M	Teslin, Yukon	3.07	54	P	Pn	06 44 39.2	0.0
	baz=237,SNR=100						
BARK	Barkley Ridge	3.08	310		Pn	06 44 40.4	+1.1
T33K	Petersburg	3.09	121		Pn	06 44 39.1	-0.2
SNH	Sunshine Point	3.10	305		Pn	06 44 41.5	+1.9
SNH				IAML		06 45 48.4	
	comp=E,508nm,1.2s						
N31M	Braeburn, Yuko	3.16	18		Pn	06 44 41.5	+1.0
N31M	Braeburn, Yuko	3.16	18	P	Pn	06 44 41.4	+0.9
	baz=199,SNR=29						
N31M				Sb	Sb	06 45 28.1	+2.5
	baz=199						
BARN	Barnard Glacie	3.24	324		Pn	06 44 42.9	+1.2
BARN				IAML		06 45 36.6	
	comp=N,259nm,0.5s						
BARN				IAML		06 45 39.1	
	comp=E,271nm,0.6s						
KIAG	Kiagna River	3.37	318		Pn	06 44 44.1	+0.8
KHIT	Khitrov Hills	3.41	307		Pn	06 44 44.3	+0.4
KHIT					Pn	06 44 44.6	+0.7
TGL	Tana Glacier	3.43	314		Pn	06 44 45.3	+1.2
TGL				IAML		06 45 51.8	
	comp=N,218nm,0.9s						
TGL				IAML		06 45 52.6	
	comp=E,193nm,0.9s						
BALM	Baldy	3.44	320		Pn	06 44 44.9	+0.5
BALM					Pb	06 44 45.4	-6.2
U33K	Whale Pass	3.47	131		Pn	06 44 44.2	-0.4
CRQE	Cirque	3.52	312	P	Pn	06 44 46.9	+1.4
	baz=128						
CRQM	Cirque	3.55	312		Pn	06 44 46.4	+0.6
CRQM				IAML		06 45 57.4	
	comp=E,296nm,1.2s						
CRQM				IAML		06 46 05.7	
	comp=N,371nm,1.0s						
YUK3	Moose Creek	3.56	339		Pn	06 44 46.5	+0.5
YUK3					Pn	06 44 47.0	+0.9
YUK3	Moose Creek	3.56	339	P	Pn	06 44 47.2	+1.2
	baz=156,SNR=21						
S34M	Telegraph Cree	3.56	97		Pn	06 44 46.0	+0.1
S34M				IAML		06 45 45.0	
	comp=E,327nm,0.4s						
S34M				IAML		06 45 47.6	
	comp=N,379nm,0.3s						
S34M	Telegraph Cree	3.56	97	P	Pn	06 44 45.8	-0.1
	baz=282						
N32M	Quiet Lake	3.56	40		Pn	06 44 46.4	+0.3
N32M					Pn	06 44 46.5	+0.5
N32M	Quiet Lake	3.56	40	P	Pn	06 44 46.3	+0.3
	baz=223						
PTPK	Patty Peak	3.59	321		Pn	06 44 47.5	+1.0
WRAK	Wrangell Islan	3.59	123		Pn	06 44 45.4	-0.9
WRAK				IAML		06 45 49.9	
	comp=N,201nm,0.7s						
WRAK				IAML		06 45 57.3	
	comp=N,212nm,0.5s						
WRAK	Wrangell Islan	3.59	123	P	Pn	06 44 46.7	+0.3
	baz=308						
NICHA	Nichawak Mount	3.62	301		Pn	06 44 47.3	+0.6
R33M	Jennings River	3.64	73	IAML		06 45 46.0	
	comp=N,257nm,0.8s						
R33M	Jennings River	3.64	73		Pn	06 44 47.1	0.0
R33M					Pn	06 44 47.3	+0.2
R33M	Jennings River	3.64	73	P	Pn	06 44 47.3	+0.2
	baz=258						
KAIM	Kayak Island	3.71	296		Pn	06 44 48.3	+0.4
KAIM	Kayak Island	3.71	296	IAML		06 46 57.4	
	comp=E,330nm,2.8s						
MCARA	McCarthy VSAT	3.92	320		Pn	06 44 52.6	+1.7
MCARA				IAML		06 46 05.7	
	comp=E,254nm,0.5s						
MCARA				IAML		06 46 30.6	
	comp=N,200nm,1.0s						
MCARA	McCarthy VSAT	3.92	320	P	Pn	06 44 52.4	+1.5
	baz=135,SNR=35						
CRAG	Craig	3.96	138	Pn	Pn	06 44 50.6	-0.7
CRAG	Craig	3.96	138	P	Pn	06 44 50.6	-0.7
VRDI	Verde Repeater	3.96	316		Pn	06 44 52.3	+0.7
VRDI				IAML		06 46 17.9	
	comp=N,114nm,0.9s						
M29M	Somme Creek	3.98	355		Pn	06 44 53.4	+1.7
M29M				IAML		06 46 01.4	
	comp=E,168nm,0.8s						
M29M				IAML		06 46 08.4	
	comp=N,125nm,0.7s						
M29M	Somme Creek	3.98	355	P	Pn	06 44 53.1	+1.4
	baz=174,SNR=9.8						
RAGM	Ragged Mountai	4.00	301	Pn	Pn	06 44 53.0	+1.0
M31M	Drury Creek, Y	4.08	23		Pn	06 44 54.4	+1.3
M31M				IAML		06 45 59.5	
	comp=N,265nm,0.5s						
M31M	Drury Creek, Y	4.08	23	P	Pn	06 44 54.3	+1.3
	baz=205,SNR=11						
GOAT	Goat Mountain	4.11	304		Pn	06 44 53.9	+0.4
GOAT					Pn	06 44 54.1	+0.6
M30M	Minto, Yukon	4.12	6		Pn	06 44 54.5	+0.8
M30M				IAML		06 46 00.2	
	comp=E,216nm,1.1s						
M30M				IAML		06 46 01.0	
	comp=N,133nm,0.8s						
M30M	Minto, Yukon	4.12	6	P	Pn	06 44 54.5	+0.8
	baz=187,SNR=7.6						
BVCY	Beaver Creek	4.22	340	P	Pn	06 44 56.6	+1.6
	baz=157						
GLB	Gilahina Butte	4.24	317		Pn	06 44 55.9	+0.7
BMRM	Bremner River	4.25	309		Pn	06 44 56.0	+0.5
BMRM				IAML		06 46 10.6	
	comp=N,189nm,0.9s						
BMRM				IAML		06 46 20.2	
	comp=E,163nm,0.7s						
BMRM	Bremner River	4.25	309	P	Pn	06 44 57.3	+1.8
	baz=123,SNR=7.9						
T35M	Bob Quinn	4.31	107		Pn	06 44 55.9	-0.3
T35M					Pn	06 44 56.2	0.0
T35M	Bob Quinn	4.31	107	IAML		06 46 14.6	
	comp=E,200nm,1.2s						
T35M				IAML		06 46 24.1	
	comp=N,167nm,0.5s						
T35M	Bob Quinn	4.31	107	P	Pn	06 44 56.5	+0.3
	baz=294						
M27K	Edge Creek, AK	4.38	334		Pn	06 44 57.9	+0.6
M27K					Pn	06 44 58.4	+1.2
M27K	Edge Creek, AK	4.38	334	IAML		06 46 21.1	
	comp=N,85nm,1.3s						
EYAK	Cordova Ski Ar	4.55	300	Pn	Pn	06 45 00.2	+0.7
EYAK	Cordova Ski Ar	4.55	300	P	Pn	06 45 00.3	+0.8
N25K	Chitina, Valde	4.63	315		Pn	06 45 02.4	+1.7
N25K	Chitina, Valde	4.63	315	P	Pn	06 45 02.1	+1.4
	baz=129,SNR=11						
L29M	L29M	4.63	358		Pn	06 45 02.1	+1.5
L29M	L29M	4.63	358	P	Pn	06 45 02.2	+1.5
	baz=177,SNR=11						
V35K	Ketchikan	4.63	131		Pn	06 45 00.1	-0.5
M26K	Nabesna, AK	4.69	329		Pn	06 45 02.4	+0.9
M26K	Nabesna, AK	4.69	329	P	Pn	06 45 02.8	+1.3
	baz=144						
DIV	Divide	4.83	307	Pn	Pn	06 45 05.6	+2.3
DIV				IAML		06 46 24.8	
	comp=N,87nm,0.5s						
HIN	Hinchinbrook I	4.85	297	Pn	Pn	06 45 04.1	+0.5
HIN				IAML		06 46 28.1	
	comp=E,165nm,2.8s						
HIN				IAML		06 46 34.8	
	comp=N,155nm,1.3s						
U35K	Hyder	4.94	118		Pn	06 45 04.5	-0.4
U35K	Hyder	4.94	118	P	Pn	06 45 05.6	+0.8
	baz=305						
FID	Port Fidalgo	4.96	301	Pn	Pn	06 45 07.5	+2.4
FID				IAML		06 46 24.4	
	comp=E,54nm,2.2s						
FID				IAML		06 46 42.5	
	comp=N,52nm,1.4s						
BCAR	Beaver Creek A	4.99	339	Pn	Pn	06 45 06.3	+0.8
BC01	Beaver Creek A	4.99	338		Pn	06 45 06.0	+0.4
L27K	Beaver Creek,	4.99	338	P	Pn	06 45 06.3	+0.8
	baz=155						
KLU	Klutina	5.08	310		Pn	06 45 08.1	+1.3
KLU				IAML		06 46 35.4	
	comp=E,63nm,0.7s						
KLU				IAML		06 46 38.4	
	comp=N,64nm,0.5s						
KLU	Klutina	5.08	310	P	Pn	06 45 08.3	+1.5
	baz=123,SNR=9.5						
P23K	Montague Islan	5.17	291	Pn	Pn	06 45 09.5	+1.5
P23K				IAML		06 47 32.4	
	comp=N,129nm,3.4s						
P23K	Montague Islan	5.17	291	P	Pn	06 45 09.2	+1.3
	baz=103						
MAYO	Mayo, Yukon	5.20	9	P	Pn	06 45 09.3	+0.9
	baz=191						
GLI	Glacier Island	5.29	301		Pn	06 45 09.9	+0.2
GLI					Pn	06 45 10.5	+0.9
GLI	Glacier Island	5.29	301	IAML		06 46 23.8	
	comp=N,54nm,3.6s						
GLI				IAML		06 46 54.5	
	comp=E,61nm,3.1s						
GLI	Glacier Island	5.29	301	P	Pn	06 45 10.6	+0.9
	baz=113						
L26K	Log Cabin Wild	5.30	331		Pn	06 45 11.1	+1.3
L26K				IAML		06 46 53.6	
	comp=E,59nm,0.5s						
L26K				IAML		06 47 07.3	
	comp=N,53nm,0.5s						
L26K	Log Cabin Wild	5.30	331	P	Pn	06 45 11.2	+1.4
	baz=146						
HARP	HAARP	5.36	320		Pn	06 45 11.8	+1.2
HARP					Pn	06 45 12.4	+1.9
K29M	Barlow Dome	5.37	1		Pn	06 45 12.6	+1.8
K29M	Barlow Dome	5.37	1	P	Pn	06 45 12.4	+1.6
	baz=181,SNR=22						
M24K	Tolsona, Glenn	5.53	314	Pn	Pn	06 45 15.0	+2.1
M24K	Tolsona, Glenn	5.53	314	P	Pn	06 45 14.9	+2.0
	baz=127,SNR=8.0						
DAWY	Dawson	5.64	353	Pn	Pn	06 45 16.0	+1.5
DAWY	Dawson	5.64	353	P	Pn	06 45 15.6	+1.1
	baz=171,SNR=26						
SCM	Sheep Creek Mo	5.83	309		Pn	06 45 18.4	+1.3
SCM					Pn	06 45 19.1	+2.1
SCM	Sheep Creek Mo	5.83	309	P	Pn	06 45 19.1	+2.1
	baz=121,SNR=7.8						
PWL	Port Wells	5.85	298		Pn	06 45 18.7	+1.3
PWL	Port Wells	5.85	298	P	Pn	06 45 18.3	+0.9
	baz=109						
PAX	Paxson	5.86	323	Pn	Pn	06 45 19.8	+2.2
PAX	Paxson	5.86	323	P	Pn	06 45 19.5	+1.9
	baz=136						
K27K	Chicken	5.93	341		Pn	06 45 18.9	+0.5
K27K					Pn	06 45 19.2	+0.8
K27K	Chicken	5.93	341	P	Pn	06 45 19.4	+1.1
	baz=158						
M23K	Glacier View	5.97	308	P	Pn	06 45 21.0	+2.0
	baz=119						
DOT	Dot Lake	6.00	332	Pn	Pn	06 45 19.6	+0.2
DIB	Dawson Inlet,	6.08	148	Pn	Pn	06 45 20.2	-0.3
KNK	Knik Glacier	6.11	303		Pn	06 45 22.4	+1.4
KNK	Knik Glacier	6.11	303	P	Pn	06 45 21.9	+0.9
	baz=114						
J30M	Hart River	6.14	6		Pn	06 45 23.2	+1.8
J30M	Hart River	6.14	6	P	Pn	06 45 22.9	+1.5
	baz=187						
SEW	Seward	6.20	290	Pn	Pn	06 45 22.7	+0.7
SML	Sawmill	6.23	307		Pn	06 45 24.8	+2.2
SML	Sawmill	6.23	307	P	Pn	06 45 24.6	+2.0
	baz=118,SNR=8.3						
SCRK	Sand Creek	6.26	334		Pn	06 45 23.9	+0.8
SCRK	Sand Creek	6.26	334	P	Pn	06 45 24.0	+1.0
	baz=148						
WAT6	Susitna Watana	6.40	314	P	Pn	06 45 26.5	+1.5
	baz=125,SNR=9.7						
GHO	Glory Hole Cre	6.46	305		Pn	06 45 27.1	+1.2
PMR	Palmer	6.48	303		Pn	06 45 27.6	+1.6
PMR	Palmer	6.48	303	P	Pn	06 45 27.7	+1.8
PMR	Palmer	6.48	303	P	Pn	06 45 27.8	+1.8
	baz=114,SNR=5.2						
TOAD	Toad River Com	6.55	82	P	Pn	06 45 28.2	+1.2
	baz=272						
DHY	Denali Highway	6.57	318	P	Pn	06 45 29.4	+2.0
	baz=130						
RC01	Rabbit Creek A	6.57	298		Pn	06 45 27.9	+0.7
RC01	Rabbit Creek A	6.57	298	P	Pn	06 45 29.3	+2.1
	baz=108						
K24K	Donnelly Dome	6.58	327	P	Pn	06 45 28.8	+1.4
	baz=140						
J26L	Joseph Creek	6.63	338	P	Pn	06 45 29.3	+1.2
	baz=153						
SLKM	Skilak Lake	6.65	293	Pn	Pn	06 45 28.8	+0.5
I30M	Mount Dempster	6.78	5		Pn	06 45 32.6	+2.4
I30M	Mount Dempster	6.78	5	P	Pn	06 45 32.3	+2.1
	baz=186,SNR=17						
WAT1	Susitna Watana	6.85	314	P	Pn	06 45 32.9	+1.9
	baz=125						
BRLK	Bradley Lake	6.87	286	Pn	Pn	06 45 32.6	+1.3
I29M	Ogilvie Camp,	6.90	358	P	Pn	06 45 33.7	+2.0
	baz=178						
M22K	Willow	6.98	303	P	Pn	06 45 33.7	+1.0
	baz=112						
CNPM	China Poot	7.03	284	Pn	Pn	06 45 33.8	+0.2
I28M	Miner Creek	7.05	353	Pn	Pn	06 45 35.9	+2.1
I28M	Miner Creek	7.05	353	P	Pn	06 45 36.0	+2.1
	baz=171						
J25K	Salcha River,	7.13	333		Pn	06 45 35.5	+0.7
J25K	Salcha River,	7.13	333	P	Pn	06 45 35.6	+0.8
	baz=146						
SUA	Susitna One	7.16	300	Pn	Pn	06 45 36.9	+1.5
SUA	Susitna One	7.16	300	P	Pn	06 45 36.8	+1.5
	baz=109						
I26K	Coal Creek Min	7.29	342	Pn	Pn	06 45 38.4	+1.4
I26K	Coal Creek Min	7.29	342	P	Pn	06 45 38.5	+1.5
	baz=157						
CUT	Chulitna	7.31	308		Pn	06 45 38.2	+0.8
CUT	Chulitna	7.31	308	P	Pn	06 45 39.6	+2.3
	baz=117,SNR=9.3						
HDA	Harding Lake	7.38	327	P	Pn	06 45 39.2	+0.9
	baz=139						
H31M	Peel River	7.51	11		Pn	06 45 40.7	+0.6
H31M	Peel River	7.51	11	P	Pn	06 45 41.4	+1.3
	baz=194						
L22K	Petersville	7.58	308		Pn	06 45 43.2	+2.2
SYI	Shuyak Island	7.65	277		Pn	06 45 42.1	+0.2
STLK	Strandline Lak	7.66	299	Pn	Pn	06 45 43.8	+1.6
SPU	Mount Spurr	7.68	297		Pn	06 45 42.7	+0.2
SKT	Skwentna	7.68	303		Pn	06 45 43.9	+1.5
SKT	Skwentna	7.68	303	P	Pn	06 45 44.6	+2.1
	baz=111						
RDT	Redoubt	7.72	292		Pn	06 45 43.3	+0.2
H29M	Whitestone	7.76	358	P	Pn	06 45 45.1	+1.7
	baz=178						
WRH	Wood River Hil	7.76	325		Pn	06 45 45.2	+1.8
CCB	Clear Creek Bu	7.80	326	Pn	Pn	06 45 45.2	+1.2
TRF	Thorofare Moun	7.85	315		Pn	06 45 47.3	+2.4
TRF	Thorofare Moun	7.85	315	P	Pn	06 45 47.1	+2.2
	baz=124,SNR=39						
EPYK	Eagle Plains	7.92	3	P	Pn	06 45 47.3	+1.6
	baz=184						
ILS	Iliamna Low So	7.98	287		Pn	06 45 46.9	+0.3
ILSW	Iliamna Southw	8.02	287	Pn	Pn	06 45 48.0	+0.8
P19K	Oil Pt	8.05	285	Pn	Pn	06 45 49.3	+1.8
P19K	Oil Pt	8.05	285	P	Pn	06 45 49.1	+1.6
	baz=92						
KTH	Kantishna Hill	8.14	314		Pn	06 45 51.2	+2.4
NEA2	Nenana	8.14	323		Pn	06 45 50.3	+1.5
NEA2	Nenana	8.14	323	P	Pn	06 45 50.1	+1.4
	baz=133,SNR=5.8						
Q19K	Cape Douglas,	8.28	280	Pn	Pn	06 45 52.3	+1.7
PPLA	Purkeypile	8.33	308		Pn	06 45 51.8	+0.4
M20K	Styx River	8.37	300		Pn	06 45 52.2	+0.3
M20K	Styx River	8.37	300	P	Pn	06 45 53.8	+1.9
	baz=107						
OHAK	Old Harbor	8.37	268	Pn	Pn	06 45 51.6	-0.3
OHAK	Old Harbor	8.37	268	P	Pn	06 45 51.4	-0.5
OHAK	Old Harbor	8.37	268	P	Pn	06 45 51.8	-0.1
	baz=75						
G29M	Pine Creek	8.45	359		Pn	06 45 53.5	+0.6
BPAW	Bear Paw Mtn.	8.48	317		Pn	06 45 53.9	+0.6
G30M	tAoh Zraii Nji	8.55	4		Pn	06 45 55.5	+1.1
G30M	tAoh Zraii Nji	8.55	4	P	Pn	06 45 55.4	+1.1
	baz=185						
G31M	Satah River	8.61	9		Pn	06 45 56.7	+1.6
G31M	Satah River	8.61	9	P	Pn	06 45 56.4	+1.4
	baz=192						
N19K	Bonanza Creek	8.77	292	Pn	Pn	06 45 58.1	+0.7
CHUM	Lake Minchumin	8.85	314	P	Pn	06 45 59.6	+1.3
	baz=121,SNR=12						
KARR	Katmai Rainbow	8.87	277		Pn	06 45 58.7	0.0
KAWH	Katmai	8.93	277		Pn	06 46 00.3	+0.6
MLY	Manley	8.97	322	P	Pn	06 46 02.0	+1.9
	baz=131						
KAKN	Katmai Knife C	9.08	276		Pn	06 46 01.9	+0.2
F31M	Tsiigehtchic	9.16	10	Pn	Pn	06 46 04.0	+1.4
F31M	Tsiigehtchic	9.16	10	P	Pn	06 46 03.8	+1.1
	baz=193						
F30M	Barrier River	9.20	5	P	Pn	06 46 04.5	+1.4
	baz=186						
ACHA	Angle Creek He	9.23	276	Pn	Pn	06 46 05.3	+1.6
K20K	Telida	9.30	308	P	Pn	06 46 06.9	+2.3
	baz=114						
BMAR	Burnt Mountain	9.48	344	Pn	Pn	06 46 08.3	+1.2
BM01	Burnt Mountain	9.49	344		Pn	06 46 08.0	+0.8
F26K	Sheenjek River	9.67	345	P	Pn	06 46 09.1	-0.5
	baz=160						
J20K	Nowinta River	9.69	313	P	Pn	06 46 11.1	+1.2
	baz=118						
H21K	Melozitna Rive	10.04	322	P	Pn	06 46 15.9	+1.2
	baz=129						
F24K	Squaw Lake	10.14	337	P	Pn	06 46 16.7	+0.6
	baz=148						
E28M	Babbage River	10.18	356	P	Pn	06 46 17.9	+1.3
	baz=175						
J19K	Poorman	10.19	310	P	Pn	06 46 18.5	+1.7
	baz=115						
IMAR	Indian Mountai	10.55	322	Pn	Pn	06 46 22.9	+1.3
G21K	Allakaket	10.81	325	P	Pn	06 46 26.4	+1.1
	baz=131						
D27M	Malcolm River	10.88	354		Pn	06 46 27.5	+1.3
D27M	Malcolm River	10.88	354	P	Pn	06 46 26.9	+0.6
	baz=171						
K17K	Iditarod	10.92	301	P	Pn	06 46 27.3	+0.6
	baz=104						
H19K	Roundabout Mou	11.22	317	P	Pn	06 46 31.7	+0.9
	baz=120						
YKA	Yellowknife Ar	12.07	61	Pn	Pn	06 46 41.1	-1.3
YKAW3	Yellowknife Wh	12.08	61	Pn	Pn	06 46 42.8	+0.2
YKAW1	Yellowknife Wh	12.12	61	Pn	Pn	06 46 43.8	+0.6
A36M	Sachs Harbour	14.47	16		Pn	06 47 14.9	-0.2
HLID	Hailey	20.80	126	P	P	06 48 32.2	+0.2
HLID				IAmb	IAmb	06 48 36.1	
	comp=Z,2.6nm,0.8s						
RLMT	Red Lodge	21.92	115	P	P	06 48 42.8	-1.3
RLMT				IAmb	IAmb	06 48 54.8	
	comp=Z,7.5nm,0.8s						

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*NNC **19** 06:52:44.2±0.6, 51°.76N×74°.28E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=29.3km s-min=4.4km az=29.0, Suspected Mining explosion.*

*IDC **19** 06:52:45.6±0.9, 51°.85N×74°.44E, h0^{km}, mbtmp2.8/4, ML2.3/4, Error ellipse: s-maj=30.7km s-min=7.8km az=30.0*

ISC 19 06:52:45.2±1.2**, 51°.92N**±0°.10×**74°.54E**±0°.07**, h0**^{km}**, n11,** σ**0**^{s}**.86**/14**, 3C-9D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BVA0	Borovoye Array	2.77	295	⇓Pn	Pn	06 53 29.5	-1.3
	6.6nm,0.9s,baz=170,slow=69,SNR=29						
BVA0				⇑Lg	Lg	06 54 07.3	
	12nm,0.6s,baz=114,slow=28,SNR=13						
BVAR	Borovoye Array	2.77	295	Pn	Pn	06 53 30.4	-0.4
	0.4nm,0.3s,baz=118,slow=16,SNR=25						
BVAR				Sn	Sn	06 54 05.0	+0.2
	1.0nm,0.3s,baz=115,slow=27,SNR=20						
	3.9nm,0.5s						
KURBB	Kurchatov Arra	2.83	116	Pn	Pn	06 53 32.2	+0.6
	0.3nm,0.3s,baz=299,slow=14,SNR=12						
KURBB				Lg	Lg	06 54 14.1	
	0.5nm,0.3s,baz=298,slow=30,SNR=13						
	0.9nm,0.4s						
KURBB	Kurchatov Arra	2.83	116	⇓Pn	Pn	06 53 32.0	+0.4
	4.7nm,0.6s						
KURBB				⇓Lg	Lg	06 54 16.3	
	62nm,0.8s						
KURK	Kurchatov	2.83	114	⇓Pn	Pn	06 53 31.8	+0.1
KURK				⇓Lg	Lg	06 54 15.8	
	9.5nm,0.8s						
BRVK	Borovoye	2.84	295	⇓Pn	Pn	06 53 30.4	-1.4
	2.1nm,0.6s						
BRVK				⇓Lg	Lg	06 54 09.5	
I46RU	ZALESOVO INFRA	6.54	68	I	I	07 33 10.0	
	baz=254,slow=315,SNR=2.7						
ZALV	Zalesovo Beam	6.54	68	Pn	Pn	06 54 24.2	+1.7
	0.2nm,0.3s,baz=259,slow=12,SNR=7.5						
ZALV				Sn	Sn	06 55 37.0	-0.8
	0.6nm,0.3s,baz=250,slow=24,SNR=7.4						
	1.3nm,0.6s						
MAKZ	Makanchi	7.05	134	⇓Sn	Sn	06 55 50.3	-0.2
	1.5nm,0.6s						
MAKZ				⇓Lg	Lg	06 56 28.4	
	4.7nm,0.8s						
MK31	Makanchi Array	7.21	132	Pn	Pn	06 54 31.4	-0.4
	2.2nm,0.9s,baz=326,slow=13,SNR=5.8						
MK31				⇑Sn	Sn	06 55 54.0	-0.3
	0.5nm,0.5s,baz=147,slow=84,SNR=4.3						
MK31				⇑Lg	Lg	06 56 33.9	
	2.9nm,0.7s,baz=317,slow=26,SNR=4.4						
MKAR	Makanchi Array	7.21	132	Pn	Pn	06 54 31.7	-0.1
	0.1nm,0.3s,baz=321,slow=12,SNR=6.1						
MKAR				Sn	Sn	06 55 54.3	0.0
	0.2nm,0.3s,baz=320,slow=25,SNR=5.3						
MKAR				Lg	Lg	06 56 30.2	
	0.4nm,0.3s,baz=318,slow=28,SNR=6.1						
	0.2nm,0.4s						

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*TIR **19** 06:53:13.6, 41°.57N×19°.48E, h15^{km}±3^{km}, Ml2.7/4*

*THE **19** 06:53:14.4, 42°N±65°×1°9E±5°5, h13^{km}, M2.5/4, MLh2.5/4*

*PDG **19** 06:53:14.3±0.0, 41°.59N×19°.46E, h10^{km}, ML2.6/13, Error ellipse: s-maj=0.1km s-min=0.1km az=0.0*

*BEO **19** 06:53:15.0±0.6, 41°.59N×19°.59E, h7^{km}±4^{km}, ML2.5/13*

ISC 19 06:53:14.4±1.0**, 41°.59N**±0°.02×**19°.49E**±0°.03**, h9**^{km}±9^{km}**, n60,** σ**1**^{s}**.00**/89**, 9C-5D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.37	131	Pg	Pg	06 53 21.0	-0.6
TIR				Sg	Sg	06 53 26.2	-0.3
TIR				AML	AML	06 53 27.0	
	6.1nm,0.4s						

TIR				AML	AML	06 53 27.8	
	5.2nm,0.4s						
ULC	Ulcinj	0.42	334	⇑iPg	Pg	06 53 21.9	-0.7
ULC				i Sg	Sg	06 53 28.6	+0.5
SDA	Shkodra	0.46	1	Pg	Pg	06 53 23.2	-0.2
SDA				Sg	Sg	06 53 30.5	+0.9
SDA				AML	AML	06 53 32.7	
	0.9nm,0.4s						
DRME	Dracevica, Mon	0.64	339	ePg	Pg	06 53 26.1	-0.7
DRME	Dracevica, Mon	0.64	339	ePg	Pg	06 53 26.1	-0.7
DRME				eSg	Sb	06 53 36.1	-0.7
PHP	Peshkopia	0.72	82	Pg	Pg	06 53 26.9	-1.3
PHP				Sg	Sg	06 53 38.3	+0.7
PHP				AML	AML	06 53 43.4	
	0.8nm,0.4s						
BUM	Brajici-Budva	0.84	328	ePg	Pg	06 53 29.8	-0.8
BUM				i Sg	Sb	06 53 42.8	+0.2
PDG	Podgorica	0.86	348	Pg	Pg	06 53 30.8	-0.2
PDG				Sg	Sn	06 53 44.7	-0.6
PDG	Podgorica	0.86	348	⇑P	Pn	06 53 31.9	-0.7
PDG				⇑S	Sn	06 53 46.7	+1.5
PDG	Podgorica	0.86	348	ePg	Pg	06 53 31.0	+0.1
PDG				eSg	Sb	06 53 43.4	+0.4
PDG	Podgorica	0.86	348	ePg	Pg	06 53 30.2	-0.7
PDG				i Sg	Sn	06 53 43.6	-1.7
CEME	Cevo	1.05	336	⇑iPg	Pb	06 53 33.6	-1.1
CEME				eSg	Sn	06 53 49.9	-0.2
PVY	Plav	1.06	19	ePg	Pb	06 53 33.2	-1.8
PVY	Plav	1.06	19	ePg	Pb	06 53 34.1	-0.9
PVY				i Sg	Sn	06 53 51.0	+0.5
OHR	Ohrid	1.09	115	i Pg	Pb	06 53 34.3	-1.1
OHR				i Sg	Sn	06 53 51.5	+0.4
HCY	Herceg Novi	1.14	319	⇓iPg	Pb	06 53 35.1	-1.1
HCY				i Sg	Sn	06 53 52.6	+0.5
NKME	Niksic	1.24	341	ePg	Pn	06 53 37.2	-0.8
NKME				eSg	Sg	06 53 56.7	+2.3
KOME	Kolasin	1.26	1	ePg	Pg	06 53 39.1	+0.5
KOME	Kolasin	1.26	1	⇑iPg	Pn	06 53 37.6	-0.6
KOME				eSg	Sg	06 53 57.4	+2.4
BEY	Berane	1.32	13	ePg	Pb	06 53 39.0	-0.3
IVA	Berane	1.32	13	ePg	Pn	06 53 38.8	-0.2
IVA				i Sg	Sg	06 53 59.4	+2.6
KBN	Korca	1.37	134	S	Sg	06 54 01.1	+2.6
TREB	Trebinje	1.41	323	ePg	Pb	06 53 40.3	-0.6
TREB				eSg	Sg	06 54 00.9	+1.1
BRY	Bratogost	1.49	332	⇑iPg	Pb	06 53 41.6	-0.7
BRY				i Sg	Sg	06 54 04.1	+1.7
SKO	Skopje	1.51	75	i Pg	Pb	06 53 42.7	+0.3
SKO				i Sg	Sg	06 54 03.7	+0.9
NEST	Nestorio	1.66	134	Pn	Pb	06 53 44.8	-0.4
NEST				Sn	Sg	06 54 07.7	-0.1
NEST				AML	AML	06 54 16.0	
	0.3nm,0.5s						
NEST	Nestorio	1.66	134	P	Pb	06 53 44.7	-0.4
NEST				S	Sg	06 54 08.7	+0.9
UPM	Unac-Piva	1.67	345	ePn	Pb	06 53 44.6	-0.8
UPM				i Sn	Sg	06 54 08.4	+0.3
SJES	Sjenica	1.71	12	ePg	Pb	06 53 46.5	+0.5
SJES				eSg	Sg	06 54 09.8	+0.4
PLE	Pljevlja	1.74	358	ePn	Pb	06 53 45.7	-0.9
PLE				i Sn	Sg	06 54 10.4	0.0
STON	Ston	1.85	315	ePn	Pb	06 53 47.2	-1.1
PENT	Pentalofos	1.87	138	P	Pb	06 53 47.9	-0.8
NOCI	Noci	2.00	247	Pn	Pn	06 53 49.0	+0.7
SELS	Selova	2.03	36	ePg	Pn	06 53 49.2	+0.5
SELS				eSg	Sb	06 54 16.1	-0.6
RUDO	Rudo	2.03	357	ePg	Pg	06 53 52.9	-0.4
RUDO				eSg	Sg	06 54 18.9	-0.7
IVAS	Ivanjica	2.05	14	ePn	Pn	06 53 49.8	+0.8
BARS	Barje	2.12	54	ePn	Pn	06 53 50.8	+0.9
IGT	Igoumenitsa	2.15	162	Pn	Pn	06 53 49.9	-0.4
IGT				Sn	Sn	06 54 15.8	-1.4
IGT	Igoumenitsa	2.15	162	P	Pn	06 53 50.3	0.0
IGT	Igoumenitsa	2.15	162	ePn	Pn	06 53 50.4	0.0
GOCS	Kraljevo Serbi	2.22	27	ePn	Pn	06 53 52.2	+0.8
BBLS	Lazi&#263i	2.28	358	ePn	Pb	06 53 53.7	-2.0
MATE	Matera	2.31	247	⇓P	Pb	06 53 57.0	+1.0
PRMD	Pramanda	2.39	149	P	Pn	06 53 55.0	+1.3
BOSS	Bosilegrad	2.40	67	ePn	Pn	06 53 54.2	+0.3
GRUS	Gruza	2.47	21	ePn	Pn	06 53 55.5	+0.8
DIVS	Divibare	2.54	8	ePn	Pn	06 53 55.3	-0.4
BOVS	Bovan	2.62	38	⇓P	Pn	06 53 58.5	+1.7
BOVS				⇑S	Sn	06 54 29.4	+0.8
BOVS	Bovan	2.62	38	ePn	Pn	06 53 57.2	+0.4
TRUS	Trudelj	2.72	14	ePn	Pn	06 53 59.6	+1.4
TEKS	Tekeris	2.96	1	ePn	Pn	06 54 01.5	0.0
VTS	Vitosha	2.97	68	ePn	Pn	06 54 02.3	+0.5
ZAGS	Zajecar	3.00	41	ePn	Pn	06 54 03.1	+1.0
BORS2	Bor- Borsko je	3.12	36	ePn	Pn	06 54 01.6	-2.0
MDVR	Moldovita	3.58	26	⇓P	Pn	06 54 11.3	+1.3
MDVR	Moldovita	3.58	26	ePn	Pn	06 54 10.0	-0.1
HERR	Herculane	3.92	32	⇑P	Pn	06 54 15.6	+0.8
BZS	Buzias	4.31	20	⇑P	Pn	06 54 19.9	-0.2
GZR	Gura Zlata	4.49	31	⇓P	Pn	06 54 23.7	+1.1
GZR	Gura Zlata	4.49	31	ePn	Pn	06 54 23.1	+0.5

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*ASRS **19** 07:00:17.0±0.7, 53°.96N×86°.55E, h0^{km}, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 19 07:00:19.3±2.5**, 53°.94N×86°.47E, h0**^{km}**, mbtmp2.9**/2**, ML2.8**/2**, Error ellipse: s-maj=21.0km s-min=12.6km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.98	271	I	I	07 06 10.0	
	baz=89,slow=344,SNR=3.2						
ZALV	Zalesovo Beam	0.98	271	Pg	Pg	07 00 37.5	-0.6
	1.1nm,0.3s,baz=92,slow=16,SNR=12						
ZALV				Lg	Lg	07 00 51.3	
	2.9nm,0.3s,baz=89,slow=26,SNR=16						
KURBB	Kurchatov Arra	5.90	239	Pn	Pn	07 01 50.0	+2.1
	0.2nm,0.3s,baz=56,slow=13,SNR=5.1						
	0.6nm,0.3s						
MKAR	Makanchi Array	7.64	202	Pn	Pn	07 02 12.1	+0.3
	0.2nm,0.3s,baz=24,slow=13,SNR=8.9						
	0.2nm,0.3s						

ROM 19 07:03:39.9±0.1**, 43°.311N**±0°.003×**12°.698E**±0°.003**, h10**^{km}**, ML0.8**/10**, Error ellipse: s-maj=0.3km s-min=0.2km az=326.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FOSV	Fossato di Vic	0.05	110	P	Pg	07 03 42.1	+0.2
FOSV				S	Sg	07 03 43.5	+0.1
ATSC	Scheggia e Pas	0.11	356	P	Pg	07 03 43.4	+0.7
ATSC				S	Sg	07 03 45.5	+0.7
ATCC	AVT- Casa Cast	0.13	199	P	Pg	07 03 43.5	+0.6
ATCC				S	Sg	07 03 46.1	+1.0
ATCC				AML	AML		
	comp=E,120µm,0.2s						
ATCC				AML	AML		
	comp=N,118µm,0.1s						
MURB	Monte Urbino	0.14	249	P	Pg	07 03 43.7	+0.6
MURB				S	Sg	07 03 46.1	+0.9
MURB				AML	AML		
	comp=E,47µm,0.7s						
MURB				AML	AML		
	comp=N,33µm,1.2s						
SSFR	Montelago di S	0.14	26	P	Pg	07 03 43.9	+0.7
SSFR				S	Sg	07 03 46.2	+0.8
ATBU	Serra di Buran	0.20	326	P	Pg	07 03 44.4	+0.3
TB01	Gubbio	0.20	290	P	Pg	07 03 44.8	+0.6
TB01				S	Sg	07 03 48.5	+1.4
FRON	Frontone	0.21	6	P	Pg	07 03 44.9	+0.7
TB02	Pietralunga	0.22	286	P	Pg	07 03 45.2	+0.8
TB02				S	Sg	07 03 49.0	+1.5
ATVO	AVT- Monte Val	0.22	289	P	Pg	07 03 45.1	+0.6
ATVO				S	Sg	07 03 49.0	+1.3
ATVO				AML	AML		
	comp=E,34µm,0.1s						
ATVO				AML	AML		
	comp=N,29µm,0.0s						
PIEI	Pieia	0.25	332	P	Pg	07 03 45.7	+0.6
PIEI				S	Sb	07 03 50.1	-1.0
PIEI				AML	AML		
	comp=E,14µm,2.3s						
PIEI				AML	AML		
	comp=N,12µm,1.6s						
EL6	Elcito	0.29	86	P	Pg	07 03 46.4	+0.5
EL6				S	Sb	07 03 51.4	-0.9
EL6				AML	AML		
	comp=E,39µm,4.0s						
EL6				AML	AML		
	comp=N,40µm,1.5s						

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*PDG **19** 07:04:29.9±0.0, 43°.29N×18°.04E, h12^{km}, ML2.0/8, Error ellipse: s-maj=0.2km s-min=0.2km az=0.0*

*RHSSO **19** 07:04:30.8±0.6, 43°.28N×18°.08E, h8^{km}, ML1.9/2*

BEO 19 07:04:31.2±0.6**, 43°.14N×18°.03E, h24**^{km}±5^{km}**, ML1.6**/5**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STON	Ston	0.36	223	ePg	Pb	07 04 32.2	-6.8
STON				Sg	Sb	07 04 39.1	-5.3
STON	Ston	0.36	223	Sg	Sn	07 04 46.7	-0.6
STON	Ston	0.36	223	ePg	Pb	07 04 39.1	0.0
STON				eSg	Sn	07 04 47.2	-0.1
KLINJ	Klinje	0.41	86	ePg	Pb	07 04 38.1	-1.8
KLINJ				eSg	Sb	07 04 44.8	-1.0
BRY	Bratogost	0.44	122	ePg	Pb	07 04 39.9	-0.6
BRY				i Sg	Sn	07 04 48.4	-1.1
DBRK	Dubrovnik	0.48	170	ePg	Pb	07 04 35.0	-5.9
DBRK				Sg	Sb	07 04 41.6	-6.0
DBRK	Dubrovnik	0.48	170	Sg	Sn	07 04 51.7	+1.6
TREB	Trebinje	0.48	151	ePg	Pb	07 04 41.5	+0.4
TREB				eSg	Sn	07 04 50.6	+0.3
TREB	Trebinje	0.48	151	ePg	Pb	07 04 41.3	+0.2
TREB				eSg	Sn	07 04 50.9	+0.6
RICI	Ricice	0.75	299	Sg	Sb	07 04 54.6	-0.7
MAKA	Makarska	0.76	282	Sg	Sb	07 04 55.8	+0.3
HCY	Herceg Novi	0.77	154	ePg	Pn	07 04 46.6	0.0
HCY				i Sg	Sn	07 05 00.9	+3.5
NKME	Niksic	0.77	119	ePg	Pb	07 04 45.7	-0.3
NKME				eSg	Sn	07 04 59.1	+1.6
CEME	Cevo	0.88	132	ePg	Pn	07 04 48.1	0.0
CEME				eSg	Sn	07 05 03.7	+3.5
LSTV	Lastovo	0.92	247	Sg	Sn	07 05 03.3	+2.4
BUM	Brajici-Budva	1.05	143	ePg	Pb	07 04 51.6	+0.9
BUM				i Sg	Sn	07 05 10.0	+5.6
RUDO	Rudo	1.09	63	ePg	Pn	07 04 48.6	-2.3
RUDO				eSg	Sb	07 05 02.2	-2.9
HVAR	Hvar	1.16	272	Sg	Sb	07 05 08.5	+1.4
BBLS	Lazi&#263i	1.23	53	ePg	Pn	07 04 52.4	-0.6
BBLS				eSg	Sb	07 05 11.7	+2.3
DRME	Dracevica, Mon	1.28	138	ePg	Pn	07 04 52.5	-1.0
DRME	Dracevica, Mon	1.28	138	ePg	Pb	07 04 55.6	+1.1
DRME				eSg	Sb	07 05 17.1	+6.6
SJES	Sjenica	1.42	84	ePg	Pn	07 04 56.0	+0.3
SJES				eSg	Sb	07 05 16.1	+1.2
KIJV	Kijevo	1.47	307	ePn	Pn	07 04 56.5	+0.3
KIJV				Sn	Sb	07 05 17.4	+1.4
ULC	Ulcinj	1.48	142	ePn	Pb	07 04 59.1	+1.1
ULC				i Sn	Sb	07 05 22.2	+5.9
PVY	Plav	1.52	110	ePg	Pb	07 04 59.3	+0.6
PVY	Plav	1.52	110	ePg	Pb	07 04 58.7	0.0
PVY				i Sg	Sb	07 05 21.5	+3.9
IVAS	Ivanjica	1.61	73	ePn	Pn	07 04 58.1	0.0
IVAS				eSn	Sb	07 05 19.4	-0.7
BLY	Banja Luka	1.72	339	eSn	Sn	07 05 20.6	-0.3
MORI	Morici	1.84	294	ePn	Pb	07 05 02.9	-1.3
MORI				Sn	Sb	07 05 26.2	-0.5

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*IDC **19** 07:10:57.1±1.0, 6°.56N×125°.13E, h0^{km}, mb3.8/6, mbtmp3.8/6, Error ellipse: s-maj=24.8km s-min=14.5km az=111.0*

*NEIC **19** 07:10:58.7±0.7, 6°.59N±0°.08×125°.3E±0°.1, h10^{km}±1^{km}, mb4.4/11, Error ellipse: s-maj=23.2km s-min=8.3km az=122.0*

ISC 19 07:10:57.9±0.7**, 6°.59N**±0°.08×**125°.2E**±0°.1**, h10**^{km}**, n20, σ0**^{s}**.96**/20**, mb4.3**/13**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.59	36	Pg	Pg	07 11 09.7	+0.3
	525nm,0.3s,baz=254,slow=3.1,SNR=22						
DAV				LR	LR	07 11 39.6	
	comp=Z,1µm,21.8s,baz=344,slow=63						
DAV	Davao City (W)	0.59	36	P	Pg	07 11 07.0	-2.4
TOLI2	Tolitoli	7.02	219	Pn	Pn	07 12 39.7	-1.3
KNRA	Kununurra	22.40	171	P	P	07 15 57.1	+0.3
KNRA				IAmb	IAmb	07 15 59.9	
	comp=Z,19nm,1.2s						
KULM	Kulim	24.48	268	P	P	07 16 17.3	-0.3
KULM				IAmb	IAmb	07 17 00.7	
	comp=Z,17nm,1.3s						
FITZ	Fitzroy Crossi	24.53	179	P	P	07 16 18.0	+0.1
COEN	Coen	27.09	139	P	P	07 16 40.7	-0.4
COEN				IAmb	IAmb	07 17 18.3	
	comp=Z,17nm,1.3s						
WB0	Warramunga Arr	27.70	161	P	P	07 16 46.8	+0.3
WB0				IAmb	IAmb	07 17 18.5	
	comp=Z,10nm,1.4s						
WRA	Warramunga Arr	27.84	161	P	P	07 16 47.9	0.0
	comp=Z,0.9nm,0.6s,baz=339,slow=8.7,SNR=2.1						
	comp=Z,0.9nm,0.6s						
WRA	Warramunga Arr	27.84	161	P	P	07 16 47.0	-0.9
CHTO	Chiang Mai	28.33	298	P	P	07 16 52.6	+0.3
CHTO				IAmb	IAmb	07 16 59.8	
	comp=Z,2.2nm,0.7s						
PSA00	Pilbara Seismi	28.48	191	P	P	07 16 53.3	-0.2
ASAR	Alice Springs	31.24	165	P	P	07 17 18.6	+0.6
	comp=Z,0.5nm,0.6s,baz=348,slow=9.2,SNR=9.4						
	comp=Z,0.5nm,0.6s						
BBOO	Buckleboo	40.51	166	P	P	07 18 37.5	+0.2
STKA	Stephens Creek	41.31	159	P	P	07 18 44.6	+0.7
	comp=Z,1.4nm,0.8s,baz=333,slow=16,SNR=2.8						
	comp=Z,1.4nm,0.8s						
MKAR	Makanchi Array	54.37	325	P	P	07 20 25.2	+0.1
	comp=Z,0.6nm,0.8s,baz=116,slow=8.5,SNR=5.1						
	comp=Z,0.6nm,0.8s						
KURBB	Kurchatov Arra	58.54	327	P	P	07 20 54.8	+0.2
	comp=Z,0.9nm,0.2s,baz=127,slow=5.8,SNR=7.4						
	comp=Z,0.9nm,0.2s						
D19K	Kuna River	79.02	21	P	P	07 23 02.5	+0.5
D19K				IAmb	IAmb	07 23 03.5	
	comp=Z,4.4nm,1.4s						
L22K	Petersville	81.42	28	P	P	07 23 15.5	+0.4
L22K				IAmb	IAmb	07 23 19.8	
	comp=Z,9.6nm,1.5s						
ILAR	Eielson Array	83.18	26	P	P	07 23 26.5	+2.3
	comp=Z,0.3nm,0.8s,baz=225,slow=5.0,SNR=3.6						
	comp=Z,0.3nm,0.8s						

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*IDC **19** 07:15:16.0±2.5, 21°.53S×70°.76W, h0^{km}, mb3.6/1, mbtmp3.4/3, ML3.4/2, MS3.2/2, Error ellipse: s-maj=64.4km s-min=49.5km az=49.0*

*SJA **19** 07:15:20.9±0.8, 21°.20S×70°.04W, h35^{km}±2^{km}, ML4.0, MW4.0*

*NEIC **19** 07:15:22.6±1.7, 21°.208S±0°.008×70°.08W±0°.06, h30^{km}±7^{km}, mb3.9/4, ML4.1(GUC), Error ellipse: s-maj=7.5km s-min=1.1km az=93.0*

*GUC **19** 07:15:23.0±0.8, 21°.20S×70°.02W, h37^{km}±2^{km}, ML4.1*

ISC 19 07:15:22.6±0.9**, 21°.19S**±0°.02×**70°.05W**±0°.04**, h33**^{km}±3^{km}**, n81, σ1**^{s}**.10**/102**, 3C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB02	IPOC Station P	0.19	132		Pb	07 15 29.4	+0.1
PB02				Sg	Sb	07 15 33.9	+0.2
PB02	IPOC Station P	0.19	132	⇑iP	Pb	07 15 29.5	+0.3
PB02				eS	Sb	07 15 34.2	+0.5
PB02				IAML		07 15 35.7	
	comp=N,64µm,0.3s						
PB02	IPOC Station P	0.19	132	eP	Pb	07 15 29.3	+0.1
PB02				IAML		07 15 38.2	
	comp=Z,30µm,0.2s						
PATCX	Punta Patache	0.38	345		Pb	07 15 31.2	-0.3
PB01	IPOC Station P	0.54	74		Pn	07 15 33.3	-0.7
PB01				Sg	Sn	07 15 40.6	-1.4
PB01	IPOC Station P	0.54	74	⇑iP	Pn	07 15 33.2	-0.9
PB01				eS	Sn	07 15 40.7	-1.3
PB01				IAML		07 15 42.2	
	comp=E,12µm,0.1s						
PB01	IPOC Station P	0.54	74	eP	Pn	07 15 33.1	-0.9
PB01				eS	Sn	07 15 41.3	-0.8
PB01				IAML		07 15 42.4	
	comp=Z,7µm,0.2s						
PB07	IPOC Station P	0.55	164		Pn	07 15 33.8	-0.4
PB07				Sg	Sn	07 15 41.8	-0.7
PB07	IPOC Station P	0.55	164	⇑iP	Pn	07 15 33.7	-0.6
PB07				eS	Sn	07 15 41.8	-0.7
PB07				IAML		07 15 43.6	
	comp=E,27µm,0.2s						
PB07	IPOC Station P	0.55	164	eP	Pn	07 15 33.5	-0.8
PB07				eS	Sb	07 15 42.3	+0.1
PB07				IAML		07 15 43.4	
	comp=Z,15µm,0.2s						
TA01	Diego Aracena	0.64	349		Pn	07 15 34.7	-0.5
TA01	Diego Aracena	0.64	349	⇓iP	Pn	07 15 34.5	-0.8
TA01				eS	Sn	07 15 43.6	-0.6
TA01	Diego Aracena	0.64	349	eP	Pn	07 15 33.8	-1.4
TA01				IAML		07 15 45.4	
	comp=Z,4µm,0.6s						
PX03	IPOC Station P	0.88	26	eP	Pn	07 15 37.5	-1.1
PB03	IPOC Station P	0.90	162		Pn	07 15 38.7	-0.3
PB03				Sn	Sn	07 15 50.3	-0.6
PB03	IPOC Station P	0.90	162	eP	Pn	07 15 38.5	-0.4
PB03				IAML		07 15 52.3	
	comp=N,5µm,0.1s						
PB03	IPOC Station P	0.90	162	eP	Pn	07 15 38.6	-0.4
PB03				eS	Sn	07 15 50.5	-0.4
PB03				IAML		07 15 51.6	
	comp=Z,5µm,0.2s						
TA02	Huaiquique	0.92	355	eP	Pn	07 15 38.5	-0.6
TA02	Huaiquique	0.92	355	eP	Pn	07 15 38.7	-0.5
TA02				eS	Sb	07 15 53.0	+1.0
TA02				IAML		07 15 53.7	
	comp=Z,5µm,0.1s						
PB09	IPOC Station P	0.96	129		Pb	07 15 40.4	-0.5
PB09				Sn	Sb	07 15 53.2	-0.2
PB09	IPOC Station P	0.96	129	⇓iP	Pn	07 15 40.0	+0.1
PB09				eS	Sb	07 15 52.9	-0.5
PB09				IAML		07 15 54.8	
	comp=E,7µm,0.1s						
PB09	IPOC Station P	0.96	129	eP	Pn	07 15 39.8	-0.1
PB09				IAML		07 15 54.6	
	comp=Z,4µm,0.2s						
PB08	IPOC Station P	1.34	39		Pn	07 15 46.2	+0.9
PB08				Sn	Sn	07 16 03.2	+1.1
PB08	IPOC Station P	1.34	39	⇓iP	Pn	07 15 45.8	+0.5
PB08				eS	Sn	07 16 03.0	+0.9
PB08				IAML		07 16 05.6	
	comp=E,4µm,0.1s						
PB08	IPOC Station P	1.34	39	eP	Pn	07 15 45.3	0.0
PB08				eS	Sb	07 16 04.0	-0.3
PB08				IAML		07 16 06.3	
	comp=Z,2µm,0.1s						
PB11	IPOC Station P	1.47	14		Pn	07 15 47.9	+1.0
PB11	IPOC Station P	1.47	14	⇓iP	Pn	07 15 47.3	+0.4
PB11				eS	Sn	07 16 06.2	+1.1
PB11				IAML		07 16 09.6	
	comp=N,6µm,0.3s						
PB11	IPOC Station P	1.47	14	eP	Pn	07 15 47.4	+0.4
PB11				eS	Sb	07 16 07.1	-0.7
PB11				IAML		07 16 08.8	
	comp=Z,3µm,0.5s						
PB06	IPOC Station P	1.57	164		Pn	07 15 48.9	+0.6
PB06	IPOC Station P	1.57	164	⇓iP	Pn	07 15 48.5	+0.2
PB06				IAML		07 16 14.1	
	comp=N,3µm,0.3s						
PB06	IPOC Station P	1.57	164	eP	Pn	07 15 48.1	-0.2
PB06				eS	Sb	07 16 11.2	+0.5
PB06				IAML		07 16 12.2	
	comp=Z,2µm,0.2s						
PB05	IPOC Station P	1.66	185		Pn	07 15 50.4	+0.9
PB05	IPOC Station P	1.66	185	eP	Pn	07 15 49.4	-0.1
PB05				IAML		07 16 14.9	
	comp=E,2µm,0.3s						
PB05	IPOC Station P	1.66	185	eP	Pn	07 15 49.8	+0.3
PB05				eS	Sb	07 16 15.7	+2.4
PB05				IAML		07 16 19.4	
	comp=Z,1µm,0.5s						
GO01	Chusmiza	1.71	28		Pn	07 15 52.0	+1.5
GO01	Chusmiza	1.71	28	eP	Pn	07 15 51.3	+0.8
GO01				IAML		07 16 16.0	
	comp=E,8µm,0.2s						
GO01	Chusmiza	1.71	28	eP	Pn	07 15 50.9	+0.4
GO01				eS	Sb	07 16 14.7	-0.5
GO01				IAML		07 16 16.1	
	comp=Z,2µm,0.2s						
PB10	IPOC Station P	2.36	191		Pn	07 15 59.1	+0.1
PB10	IPOC Station P	2.36	191	eP	Pn	07 15 58.9	-0.1
PB10				IAML		07 16 42.7	
	comp=E,498nm,0.5s						
PB10	IPOC Station P	2.36	191	eP	Pn	07 15 59.1	+0.1
PB10				eS	Sb	07 16 32.7	-0.4
AF01	San Pedro de A	2.46	136		Pb	07 16 05.0	-1.4
AF01	San Pedro de A	2.46	136	eP	Pb	07 16 04.5	-1.9
AF01	San Pedro de A	2.46	136	eP	Pn	07 16 01.2	+0.5
AF01				IAML		07 17 00.7	
	comp=Z,2µm,0.6s						
PB12	IPOC Station P	2.58	354		Pn	07 16 03.1	+1.0
PB12	IPOC Station P	2.58	354	i P	Pn	07 16 02.6	+0.5
PB12				IAML		07 16 43.7	
	comp=E,687nm,0.2s						
PB12	IPOC Station P	2.58	354	eP	Pn	07 16 03.0	+0.9
PB12				eS	Sn	07 16 30.3	-2.1
PB12				IAML		07 16 43.8	
	comp=Z,508nm,0.8s						
AP01	Chacalluta	2.82	354		Pn	07 16 03.8	-1.5
AP01	Chacalluta	2.82	354	eP	Pn	07 16 06.8	+1.5
AP01				IAML		07 16 54.4	
	comp=N,2µm,0.2s						
AP01	Chacalluta	2.82	354	eP	Pn	07 16 07.3	+2.0
AP01				eS	Sn	07 16 39.7	+1.6
AP01				IAML		07 16 58.1	
	comp=Z,803nm,0.2s						
PB16	IPOC Station P	2.89	10		Pn	07 16 08.4	+1.7
PB16	IPOC Station P	2.89	10	eP	Pn	07 16 08.7	+2.0
PB16	IPOC Station P	2.89	10	eP	Pn	07 16 08.8	+2.0
PB16				IAML		07 17 02.8	
	comp=Z,297nm,0.5s						
PB14	IPOC Station P	3.44	185		Pn	07 16 13.5	-0.6
PB14	IPOC Station P	3.44	185	eP	Pn	07 16 13.2	-0.9
PB14	IPOC Station P	3.44	185	eP	Pn	07 16 14.3	+0.2
PB14				eS	Sb	07 17 03.9	-0.4
PB14				IAML		07 17 14.3	
	comp=Z,200nm,0.5s						
GO02	Mina Guanaco	3.98	174		Pn	07 16 23.0	+1.5
GO02	Mina Guanaco	3.98	174	eP	Pn	07 16 23.4	+1.9
GO02				eS	Sb	07 17 22.5	+2.6
GO02				IAML		07 17 36.3	
	comp=Z,265nm,0.3s						
AC01	Pan de Azucar	4.96	186		Pn	07 16 33.5	-1.3
AC01	Pan de Azucar	4.96	186	eP	Pn	07 16 33.3	-1.5
AC01	Pan de Azucar	4.96	186	eP	Pn	07 16 33.5	-1.3
AC01				IAML		07 17 59.2	
	comp=Z,81nm,0.9s						
LPAZ	La Paz	5.20	21	Pn	Pn	07 16 43.6	+4.9
	comp=Z,1.3nm,0.3s,baz=199,slow=8.6,SNR=27						
LPAZ				LR	LR	07 19 15.0	
	comp=Z,53nm,20.2s,baz=130,slow=41						
	comp=Z,4.6nm,0.4s						
LPAZ	La Paz	5.20	21	Pn	Pn	07 16 44.1	+5.4
AC02	Maricunga	5.68	172		Pn	07 16 46.1	+1.0
GO03	Copiapo	6.38	182	Pn	Pn	07 16 54.0	-0.2
AC04	Llanos de Chal	7.04	187	Pn	Pn	07 17 00.4	-3.0
LCO	Las Campanas	7.81	184	Pn	Pn	07 17 13.0	-1.1
CO01	Juntas del Tor	8.75	180	Pn	Pn	07 17 26.4	-0.6
VILB	Vilhena	12.47	51	Pn	Pn	07 18 18.2	+0.3
MT09	Talagante	12.56	184	Pn	Pn	07 18 18.2	-0.9
CPUP	Villa Florida	12.72	116	Pn	Pn	07 18 24.6	+3.5
	baz=286,slow=7.4,SNR=3.4						
	comp=Z,0.3nm,0.7s						
BO04	La Punta	12.76	182	Pn	Pn	07 18 20.1	-1.6
H03N1	Juan Fernandez	14.52	211	T	T	07 33 08.7	
	baz=34,slow=72,SNR=227						
H03N2	Juan Fernandez	14.52	211	T	T	07 33 05.9	
	baz=34,slow=72,SNR=224						
H03N3	Juan Fernandez	14.53	211	T	T	07 33 05.9	
	baz=34,slow=72,SNR=61						
ITAB	Concordia	17.41	114	P	Pn	07 19 22.2	-0.7
ITAB				IAmb	IAmb	07 19 45.4	
	comp=Z,9.7nm,1.1s						
TRQA	Tornquist	18.20	159	P	Pn	07 19 31.3	-1.3
RUSC	La Rusia	27.08	353	P	P	07 21 02.2	-0.6
ELK	Elko	74.57	326	LR	LR	07 58 10.7	
	comp=Z,73nm,21.2s,baz=214,slow=35						
VNDA	Vanda	76.97	190	P	P	07 27 11.7	+0.3

VNDA				IAmb	IAmb	07 27 29.1	
	comp=Z,1.7nm,1.1s						
YKA	Yellowknife Ar	90.55	341	P	P	07 28 20.1	-0.7
	comp=Z,0.2nm,0.7s,baz=145,slow=4.1,SNR=5.3						
	comp=Z,0.2nm,0.7s						
MKAR	Makanchi Array	146.00	35	PKPbc	PKPbc	07 34 58.6	-0.3
	comp=Z,0.6nm,0.7s,baz=351,slow=2.5,SNR=4.3						

*HEL **19** 07:15:47.7±0.0, 70°.11N×25°.71E, h10^{km}, ML1.0, ML0.7(BER), Confirmed Earthquake*

*BER **19** 07:15:47.8±2.4, 70°.12N×25°.78E, h0^{km}±9^{km}, ML0.7, ML1.0(HEL)*

ISC 19 07:15:46.5±1.2**, 70°.13N**±0°.04×**25°.74E**±0°.03**, h8**^{km}±10^{km}**, n16,** σ**0^{s}.90**/28**, Northern Norway**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEV	Kevo	0.58	130	eP	Pg	07 15 58.1	+0.5
KEV				eS	Sg	07 16 05.1	0.0
KEV	Kevo	0.58	130	eP	Pg	07 15 58.0	+0.5
KEV				eS	Sg	07 16 05.2	+0.1
ARA0	ARCESS Array S	0.60	188	eP	Pg	07 15 58.2	+0.1
ARA0				eS	Sg	07 16 05.2	-0.8
ARA0				IAML		07 16 06.4	
	comp=Z,4.5nm,0.1s						
ARA0	ARCESS Array S	0.60	188	eP	Pg	07 15 58.1	0.0
ARA0				eS	Sg	07 16 05.8	-0.1
HAMF	Hammerfest	0.86	308	eS	Sg	07 16 14.7	+0.4
HAMF	Hammerfest	0.86	308	i S	Sg	07 16 14.7	+0.4
VADS	Vadso	1.24	89	eP	Pg	07 16 09.6	-0.6
VADS				eS	Sg	07 16 25.4	-0.8
VADS	Vadso	1.24	89	eP	Pg	07 16 09.6	-0.6
VADS				eS	Sg	07 16 25.6	-0.6
KTK1	Kautokeino	1.43	219	eP	Pn	07 16 12.3	-0.3
KTK1				eS	Sb	07 16 29.9	-1.6
KTK1				IAML		07 16 38.4	
	comp=Z,2.1nm,0.8s						
KTK1	Kautokeino	1.43	219	eP	Pn	07 16 12.3	-0.3
KTK1				eS	Sb	07 16 29.9	-1.6
KTK1				IAML		07 16 38.4	
	comp=Z,2.1nm,0.8s						
HEF	Hetta	1.88	204	eP	Pn	07 16 20.7	+1.8
HEF				eS	Sn	07 16 42.9	+0.1
HEF	Hetta	1.88	204	eP	Pn	07 16 20.4	+1.5
HEF				eS	Sn	07 16 42.9	+0.1
HEF				MSG		07 16 43.6	
	comp=Z,0.6nm,0.2s						
RAJF	Raja-Jooseppi	1.90	150	eP	Pn	07 16 20.6	+1.5
RAJF				eS	Sn	07 16 42.9	-0.2
RAJF	Raja-Jooseppi	1.90	150	eP	Pn	07 16 20.6	+1.5
RAJF				eS	Sn	07 16 42.9	-0.2
KIF	Kilpisjarvi	2.07	239	eP	Pn	07 16 21.9	+0.4
KIF				eS	Sn	07 16 47.9	+0.6
KIF	Kilpisjarvi	2.07	239	MSG		07 16 49.9	
	comp=Z,0.7nm,0.2s						

*SDD **19** 07:23:03.6±1.3, 17°.99N×67°.50W, h15^{km}±16^{km}, MD3.0, ML3.1, MW2.9, Presumed earthquake*

*NEIC **19** 07:23:04.9±1.2, 18°.03N±0°.06×67°.42W±0°.04, h40^{km}±5^{km}, ML2.7/22, Md2.4/15(RSPR), Error ellipse: s-maj=10.8km s-min=3.1km az=210.0*

*OSPL **19** 07:23:04.7±0.3, 18°.05N×67°.52W, h31^{km}±3^{km}, ML2.3, Presumed earthquake*

*RSPR **19** 07:23:05.5, 18°.02N×67°.46W, h36^{km}±2^{km}, MD2.4/15*

ISC 19 07:23:02.7±1.3**, 17°.99N**±0°.05×**67°.49W**±0°.03**, h26**^{km}±12^{km}**, n56,** σ**0^{s}.41**/70**, 13C-11D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRPR	Cabo Rojo, PR	0.36	87		Pn	07 23 12.8	+0.5
CRPR					Sn	07 23 18.6	0.0
CRPR	Cabo Rojo, PR	0.36	87	IAML		07 23 19.5	
	369nm,0.4s						
CRPR				IAML		07 23 19.7	
	331nm,0.4s						
CRPR	Cabo Rojo, PR	0.36	87	⇓eP	Pn	07 23 12.9	+0.5
CRPR	Cabo Rojo, PR	0.36	87	eS	Sn	07 23 18.9	+0.2
CRPR	Cabo Rojo, PR	0.36	87	i P	Pn	07 23 12.8	+0.5
CRPR				eS	Sn	07 23 18.8	+0.2
CRPR				IAML		07 23 19.6	
	comp=Z,251nm,0.1s						
IDE	Isla Desecheo	0.40	2		Pn	07 23 13.7	+0.8
IDE					Sn	07 23 20.3	+0.7
IDE	Isla Desecheo	0.40	2	⇑eP	Pn	07 23 13.7	+0.8
IDE	Isla Desecheo	0.40	2	eS	Sn	07 23 20.3	+0.7
PRSN	Puerto Rico Se	0.40	55		Pn	07 23 12.9	0.0
PRSN					Sn	07 23 19.1	-0.5
PRSN	Puerto Rico Se	0.40	55	IAML		07 23 20.9	
	comp=Z,606nm,0.2s						
PRSN				IAML		07 23 20.9	
	comp=Z,782nm,0.2s						
PRSN	Puerto Rico Se	0.40	55	⇑eP	Pn	07 23 12.9	0.0
PRSN	Puerto Rico Se	0.40	55	eS	Sn	07 23 19.1	-0.5
MLPR	Magueyes Islan	0.42	92	⇓eP	Pn	07 23 13.6	+0.4
MLPR	Magueyes Islan	0.42	92	eS	Sn	07 23 20.3	+0.1
LSP	Las Mesas	0.43	64		Pn	07 23 13.4	+0.1
LSP					Sn	07 23 20.4	+0.1
LSP	Las Mesas	0.43	64	⇑eP	Pn	07 23 13.4	+0.1
LSP	Las Mesas	0.43	64	eS	Sn	07 23 20.4	+0.1
GBPR	Guanica, Bosqu	0.58	91		Pn	07 23 15.8	+0.4
GBPR					Sn	07 23 24.1	0.0
GBPR	Guanica, Bosqu	0.58	91	⇓eP	Pn	07 23 15.8	+0.4
GBPR	Guanica, Bosqu	0.58	91	eS	Sn	07 23 24.1	0.0
AGPR	Aguadilla, PR	0.60	37	Pn	Pb	07 23 15.0	+0.4
AGPR				IAML		07 23 23.6	
	comp=Z,474nm,0.2s						
AGPR				IAML		07 23 23.6	
	comp=Z,567nm,0.2s						
AGPR	Aguadilla, PR	0.60	37	⇓eP	Pn	07 23 15.3	-0.4
AGPR	Aguadilla, PR	0.60	37	eS	Sb	07 23 23.2	+0.5
AGPR	Aguadilla, PR	0.60	37	⇑iP	Pb	07 23 14.4	-0.2
AGPR				ePg	Pn	07 23 15.2	-0.4
AGPR				⇓eSg	Sb	07 23 23.1	+0.4
AGPR				IAML		07 23 24.0	
	comp=N,4µm,0.2s						
AGPR	Aguadilla, PR	0.60	37	i P	Pn	07 23 15.2	-0.4
AGPR				eS	Sb	07 23 23.1	+0.3
AGPR				IAML		07 23 23.6	
	comp=Z,177nm,0.2s						
UUPR	Utuado, UPR, P	0.78	70		Pb	07 23 17.8	+0.1
UUPR					Sb	07 23 27.4	-0.5
UUPR	Utuado, UPR, P	0.78	70	⇓eP	Pb	07 23 17.8	+0.1
UUPR	Utuado, UPR, P	0.78	70	eS	Sb	07 23 27.4	-0.5
AOPR	Arecibo Observ	0.79	63		Pb	07 23 17.6	-0.2
AOPR					Sn	07 23 28.9	-0.3
AOPR				IAML		07 23 29.5	
	comp=E,639nm,0.3s						
AOPR				IAML		07 23 29.5	
	comp=N,361nm,0.2s						
AOPR	Arecibo Observ	0.79	63	⇓eP	Pb	07 23 17.7	-0.2
AOPR	Arecibo Observ	0.79	63	eS	Sb	07 23 27.6	-0.5
AOPR	Arecibo Observ	0.79	63	⇑ePg	Pb	07 23 17.6	-0.2
AOPR				⇓eSg	Sb	07 23 27.2	-0.9
AOPR				IAML		07 23 29.6	
	comp=N,2µm,0.3s						
OBIP	Obispado Ponce	0.84	86		Pn	07 23 19.0	+0.1
OBIP					Sb	07 23 30.1	+0.4
OBIP	Obispado Ponce	0.84	86	⇓eP	Pn	07 23 19.1	+0.2
OBIP	Obispado Ponce	0.84	86	eS	Sb	07 23 30.0	+0.4
EMPR	Esperanza - Ma	1.03	62		Pb	07 23 22.0	0.0
EMPR					Sn	07 23 35.2	0.0
EMPR	Esperanza - Ma	1.03	62	IAML		07 23 37.1	
	comp=N,474nm,0.4s						
EMPR	Esperanza - Ma	1.03	62	⇑eP	Pb	07 23 22.0	0.0
EMPR	Esperanza - Ma	1.03	62	eS	Sn	07 23 35.2	0.0
ECPR	Experimental S	1.12	73	Pn	Pn	07 23 22.8	0.0
ECPR	Experimental S	1.12	73	⇑eP	Pn	07 23 23.1	+0.3
ECPR	Experimental S	1.12	73	eS	Sn	07 23 37.0	-0.5
SJG	San Juan	1.28	84		Pn	07 23 25.5	+0.5
SJG				IAML		07 23 43.7	
	comp=N,78nm,0.3s						
SJG	San Juan	1.28	84	⇓eP	Pb	07 23 25.9	-0.3
SJG	San Juan	1.28	84	eS	Sn	07 23 41.2	-0.1
SJG	San Juan	1.28	84	i P	Pn	07 23 25.5	+0.5
SJG				IAML		07 23 43.1	
	comp=Z,43nm,0.2s						
HIDR	Higuey Centro	1.31	298	⇑iP	Pn	07 23 25.5	+0.1
HIDR				IAML		07 23 51.7	
	comp=N,150nm,0.3s						
GCPR	Guaynabo City	1.38	76		Pn	07 23 26.7	+0.4
GCPR					Sn	07 23 43.0	-0.6
GCPR				IAML		07 23 45.5	
	comp=N,68nm,0.4s						
GCPR	Guaynabo City	1.38	76	⇓eP	Pn	07 23 26.7	+0.4
GCPR	Guaynabo City	1.38	76	eS	Sn	07 23 43.1	-0.6
HUMP	Col San Antoni	1.57	84	Pn	Pn	07 23 29.4	+0.4
HUMP				IAML		07 23 50.0	
	comp=N,54nm,0.2s						
HUMP				IAML		07 23 51.3	
	comp=N,52nm,0.2s						
HUMP	Col San Antoni	1.57	84	⇑eP	Pn	07 23 29.6	+0.6
HUMP	Col San Antoni	1.57	84	eS	Sn	07 23 47.9	-0.6
MIDR	Miches	1.78	304	⇑ePg	Pb	07 23 34.4	-0.3
MIDR				⇑eSg	Sb	07 23 56.0	-0.6
MIDR				IAML		07 24 09.3	
	comp=N,24nm,1.7s						
DR12	Loma Pena Alta	1.96	294	Pn	Pb	07 23 37.6	-0.3
HATOM	Hato Mayor del	1.96	294	⇑ePg	Pb	07 23 37.7	-0.2
HATOM				⇑eSg	Sb	07 24 02.1	+0.2
HATOM				IAML		07 24 10.7	
	comp=N,131nm,0.3s						

*ASRS **19** 07:59:37.0±1.3, 53°.58N×87°.68E, h0^{km}, M3.0, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*IDC **19** 07:59:38.8±2.9, 53°.61N×87°.87E, h0^{km}, mbtmp3.1/2, ML2.9/2, Error ellipse: s-maj=26.0km s-min=15.9km az=60.0*

*NNC **19** 07:59:40.0±2.4, 53°.50N×87°.69E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=20.9km s-min=12.5km az=68.0, Suspected Mining explosion.*

ISC 19 07:59:39.6±3.4**, 53°.6N**±0°.1×**87°.7E**±0°.2**, h0**^{km}**, n8,** σ**1^{s}.09**/10**, 4C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.73	282	I	I	08 09 45.0	
	0.1nm,1.0s,baz=100,slow=350,SNR=11						
ZAA0	Zalesovo Array	1.73	282	⇓Pn	Pb	08 00 11.3	-0.9
	0.2nm,0.2s						
ZAA0				⇑Sn	Sg	08 00 36.6	+1.6
	2.1nm,0.4s						
ZALV	Zalesovo Beam	1.73	282	Pn	Pn	08 00 11.1	+0.3
	2.0nm,0.3s,baz=104,slow=13,SNR=18						
ZALV				Lg	Lg	08 00 37.3	
	4.2nm,0.3s,baz=103,slow=25,SNR=8.0						
KURK	Kurchatov	6.29	246	⇓Lg	Lg	08 02 58.7	
	1.7nm,0.7s						
KURBB	Kurchatov Arra	6.39	246	Pn	Pn	08 01 15.2	+0.3
	0.1nm,0.3s,baz=61,slow=13,SNR=4.4						
KURBB				Lg	Lg	08 03 05.5	
	0.1nm,0.3s,baz=60,slow=31,SNR=6.0						
	0.4nm,0.3s						
KURBB	Kurchatov Arra	6.39	246	⇓Pn	Pn	08 01 15.4	+0.5
	3.1nm,0.9s						
KURBB				⇑Sn	Sn	08 02 27.3	-1.2
	2.8nm,0.6s						
KURBB				⇑Lg	Lg	08 03 02.9	
	7.6nm,0.7s						
MK31	Makanchi Array	7.67	209	⇑Pn	Pn	08 01 33.1	+0.6
	0.7nm,0.6s,baz=22,slow=10,SNR=20						
MK31				⇓Sn	Sn	08 02 58.8	-1.3
	0.4nm,0.5s,baz=22,slow=10,SNR=20						
MKAR	Makanchi Array	7.67	209	Pn	Pn	08 01 33.5	+1.0
	0.5nm,0.3s,baz=30,slow=14,SNR=16						
MKAR				Sn	Sn	08 03 00.3	+0.2
	0.2nm,0.3s,baz=33,slow=29,SNR=4.3						
	0.6nm,0.3s						

*ASRS **19** 08:05:13.0±0.5, 53°.49N×87°.47E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 19 08:05:16.7±3.3**, 53°.51N**×**87°.42E, h0**^{km}**, mbtmp2.7**/2**, ML2.5**/2**, Error ellipse: s-maj=31.4km s-min=17.3km az=63.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.60	287	I	I	08 14 20.0	
	baz=104,slow=345,SNR=8.5						
ZALV	Zalesovo Beam	1.60	287	Pg	Pn	08 05 44.4	-2.0
	1.3nm,0.3s,baz=105,slow=15,SNR=10.0						
ZALV				Lg	Lg	08 06 08.3	
	0.5nm,0.3s,baz=110,slow=26,SNR=3.0						
KURBB	Kurchatov Arra	6.20	246	Pn	Pn	08 06 50.5	+1.1
	0.1nm,0.3s,baz=62,slow=14,SNR=4.2						
	0.4nm,0.4s						
MKAR	Makanchi Array	7.48	208	Pn	Pn	08 07 08.2	+1.1
	0.1nm,0.3s,baz=26,slow=14,SNR=2.3						
	0.2nm,0.4s						

*IDC **19** 08:15:11.7±4.2, 9°.38S×112°.84E, h0^{km}, mb3.2/3, mbtmp3.3/3, Error ellipse: s-maj=257.2km s-min=27.3km az=48.0*

*DJA **19** 08:15:20.6±0.4, 9°S±5°×11°3E±°, h10^{km}, M3.6/17, mb3.5/1, MLv3.7/17*

ISC 19 08:15:20.7±1.2**, 9°.2S**±0°.1×**113°.50E**±0°.05**, h35**^{km}**, n22,** σ**2^{s}.68**/22**, mb3.1**/3**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GMJI	Gumukmas	0.90	357	P	Pn	08 15 37.2	+0.4
JAGI	Jajag, Banyuwa	0.95	43	P	Pn	08 15 38.3	+0.7
BLJI	Banyuglugur	1.42	4	P	Pn	08 15 46.4	+2.3
ABJI	Asem Bagus	1.55	28	P	Pn	08 15 48.8	+3.0
RTBI	Rangdo, Negare	1.59	64	P	Pn	08 15 47.8	+1.3
IGBI	Denpasar	1.67	78	P	Pn	08 15 49.5	+2.1
KMMI	Kalianget	2.16	12	P	Pn	08 15 56.6	+2.4
SNJI	Sawahan-Nganju	2.21	309	P	Pn	08 15 57.8	+2.8
SJI	Sawahan	2.23	310	P	Pn	08 15 56.9	+1.6
KHKI	Kahang-Kahang	2.24	69	P	Pn	08 15 57.7	+2.4
PCJI	Pacitan	2.49	293	P	Pn	08 16 00.4	+1.6
KLNI	Mataram	2.67	74	P	Pn	08 16 02.7	+1.4
NGJI	Ngawi	2.70	312	P	Pn	08 16 06.2	+4.6
UGM	Wanagama	3.20	293	P	Pn	08 16 10.1	+1.6
TWSI	Taliwang, Sumb	3.37	83	P	Pn	08 16 12.4	+1.5
PLAI	Plampang	4.24	86	P	Pn	08 16 27.1	+4.2
DBNI	Kabupaten Domp	4.80	82	P	Pn	08 16 34.7	+4.1
KPJI	Karang Pucung	4.88	292	P	Pn	08 16 34.0	+2.4
BBJI	Bungbulang	6.03	286	P	Pn	08 16 49.8	+2.2
WRA	Warramunga Arr	22.81	120	P	P	08 20 20.7	0.0
	0.6nm,0.9s,baz=294,slow=12,SNR=1.7						
	0.6nm,0.9s						
ASAR	Alice Springs	24.26	129	P	P	08 20 34.5	-0.2
	0.2nm,0.5s,baz=299,slow=9.8,SNR=3.5						
	0.2nm,0.5s						
MKAR	Makanchi Array	62.28	336	P	P	08 25 35.0	-4.3
	0.3nm,0.4s,baz=155,slow=7.6,SNR=6.6						
	0.3nm,0.4s						

*TIR **19** 08:22:29.2, 41°.50N×19°.47E, h5^{km}±1^{km}, Md2.9/4, Ml2.4/4*

*BEO **19** 08:22:31.3±0.6, 41°.53N×19°.58E, h8^{km}±3^{km}, ML2.3/12*

*PDG **19** 08:22:32.8±0.0, 41°.65N×19°.46E, h13^{km}, ML2.3/11, Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*

ISC 19 08:22:30.2±1.1**, 41°.52N**±0°.03×**19°.50E**±0°.03**, h6**^{km}±10^{km}**, n37,** σ**0^{s}.69**/59**, 2C-1D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.33	122	Pg	Pg	08 22 36.2	-0.4
TIR				Sg	Sg	08 22 40.9	+0.1
TIR				AML	AML	08 22 42.4	
	2.7nm,0.3s						
ULC	Ulcinj	0.48	337	ePg	Pg	08 22 39.6	+0.1
ULC				i Sg	Sg	08 22 45.6	-0.2
SDA	Shkodra	0.53	0	Pg	Pg	08 22 40.0	-0.5
SDA				Sg	Sg	08 22 48.3	+0.9
SDA				AMd		08 23 35.8	
DRME	Dracevica, Mon	0.71	341	ePg	Pg	08 22 43.8	0.0
DRME	Dracevica, Mon	0.71	341	ePg	Pg	08 22 43.7	0.0
DRME				eSg	Sg	08 22 52.8	-0.2
PHP	Peshkopia	0.73	77	Pg	Pg	08 22 42.6	-1.6
PHP				Sg	Sg	08 22 53.3	-0.3
PHP				AML	AML	08 22 56.5	
	0.6nm,0.3s						
PHP				AMd		08 23 26.4	
BUM	Brajici-Budva	0.90	330	⇓iPg	Pg	08 22 47.3	-0.2
BUM				i Sg	Sg	08 22 59.6	+0.4
PDG	Podgorica	0.93	349	Pg	Pg	08 22 47.5	-0.5
PDG				Sg	Sb	08 23 01.5	+0.2
PDG				AMd		08 23 40.1	
PDG	Podgorica	0.93	349	ePg	Pb	08 22 49.1	+0.4
PDG				eSg	Sn	08 23 02.3	-1.2
PDG	Podgorica	0.93	349	ePg	Pg	08 22 47.7	-0.3
PDG				i Sg	Sg	08 23 00.3	+0.3
OHR	Ohrid	1.06	112	i Pg	Pg	08 22 50.4	-0.2
OHR				i Sg	Sn	08 23 07.7	+0.8
CEME	Cevo	1.11	337	ePg	Pb	08 22 51.1	-0.8
CEME				eSg	Sb	08 23 06.6	-0.1
PVY	Plav	1.13	18	ePg	Pn	08 22 52.6	-0.1
PVY	Plav	1.13	18	ePg	Pg	08 22 51.7	-0.1
PVY				i Sg	Sn	08 23 07.6	-1.0
HCY	Herceg Novi	1.19	321	ePg	Pb	08 22 52.7	-0.5
HCY				i Sg	Sn	08 23 09.7	-0.3
NKME	Niksic	1.31	342	⇑iPg	Pn	08 22 54.7	-0.5
NKME				eSg	Sg	08 23 13.2	+0.9
KBN	Korca	1.32	132	Sg	Sb	08 23 13.5	+0.7
KBN				AML	AML	08 23 17.9	
	0.4nm,0.5s						
KOME	Kolasin	1.33	1	ePg	Pb	08 22 55.6	0.0
KOME	Kolasin	1.33	1	ePg	Pn	08 22 54.9	-0.6
KOME				eSg	Sg	08 23 14.0	+1.0
BEY	Berane	1.38	12	ePg	Pn	08 22 55.0	-1.2
IVA	Berane	1.38	12	ePg	Pb	08 22 56.3	-0.2
IVA				i Sg	Sg	08 23 16.2	+1.6
TREB	Trebinje	1.47	325	ePg	Pb	08 22 57.9	-0.1
TREB				eSg	Sb	08 23 17.2	+0.3
BRY	Bratogost	1.55	333	⇑iPg	Pb	08 22 59.2	-0.3
BRY				i Sg	Sg	08 23 20.7	+0.6
SJES	Sjenica	1.77	11	ePg	Pb	08 23 03.8	+0.5
SJES				eSg	Sb	08 23 26.2	+0.4
STON	Ston	1.90	316	ePn	Pb	08 23 04.6	-0.7
STON				eSn	Sb	08 23 28.3	-1.0
NOCI	Noci	1.98	249	Pn	Pb	08 23 06.2	-0.4
NOCI				Sn	Sb	08 23 33.4	+1.8
NOCI				AML	AML	08 23 35.3	
	0.1nm,0.2s						
NOCI				AMd		08 24 16.4	
SELS	Selova	2.08	35	ePg	Pn	08 23 06.2	+0.5
SELS				eSg	Sb	08 23 34.8	+0.3
IGT	Igoumenitsa	2.08	162	ePn	Pn	08 23 05.6	-0.1
IVAS	Ivanjica	2.11	13	ePn	Pn	08 23 06.9	+0.7
BARS	Barje	2.15	52	ePn	Pn	08 23 06.5	-0.2
GOCS	Kraljevo Serbi	2.28	26	ePn	Pn	08 23 09.7	+1.2
BBLS	Lazi&#263i	2.34	358	ePn	Pn	08 23 10.5	+1.1
BOSS	Bosilegrad	2.43	65	ePn	Pn	08 23 10.3	-0.2
GRUS	Gruza	2.53	20	ePn	Pn	08 23 11.9	0.0
DIVS	Divibare	2.60	8	ePn	Pn	08 23 13.2	+0.3
BOVS	Bovan	2.67	37	ePn	Pn	08 23 14.3	+0.5
ZAPS	Zavoj	2.91	52	ePn	Pn	08 23 18.0	+0.9

*JMA **19** 08:26:13.8±0.3, 42°N±2°×13°4E±°, h532^{km}, MV3.7/26, SEA OF JAPAN*

*IDC **19** 08:26:13.6±0.7, 41°.81N×133°.00E, h487^{km}±7^{km}, mb3.2/11, mbtmp4.1/18, Error ellipse: s-maj=15.2km s-min=10.0km az=62.0*

ISC 19 08:26:13.3±0.6**, 41°.83N**±0°.08×**133°.30E**±0°.06**, h500**^{km}**, n38,** σ**1^{s}.50**/47**, mb3.7**/11**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
USRK	Ussuriysk Ar.	2.55	338	P	P	08 27 20.4	-0.9
	56nm,0.7s,baz=115,slow=7.2,SNR=78						
USRK				S	S	08 28 14.5	-2.3
	9.3nm,0.9s,baz=152,slow=13,SNR=4.3						
JOSM	Okushiri--Mats	4.61	85	eP	P	08 27 37.7	+0.9
JHST	Hiyamasetana	4.92	81	P	P	08 27 41.1	+1.6
JIW	Iwasaki	5.21	102	eP	P	08 27 42.9	+0.8
JSI2	Shiura 2	5.40	96	eP	P	08 27 44.7	+0.8
JOT	Ohata	5.82	92	P	P	08 27 48.2	+0.4
KSRS	Korea Array	6.03	225	P	P	08 27 49.4	-0.5
	10nm,0.4s,baz=40,slow=9.9,SNR=44						
JANG	Nango	6.37	101	P	P	08 27 52.7	-0.5
JANG				eS	S	08 29 11.1	-3.9
JHR	Hokuryu	6.48	70	eP	P	08 27 56.1	+1.9
MJAR	Matsushiro Arr	6.51	143	P	P	08 27 55.3	+0.5
	1.1nm,0.5s,baz=334,slow=11,SNR=3.2						
JRBN	Rebuntou	6.68	55	eP	P	08 27 57.1	+1.0
JMK	Ichinoseki	6.69	113	P	P	08 27 56.0	-0.5
JMK				eS	S	08 29 17.4	-3.5
JBT2	Biratori 2	6.78	79	P	P	08 27 58.0	+0.7
JBT2				eS	S	08 29 21.0	-1.4
JHS	Saijyo	6.83	181	P	P	08 27 58.6	+0.7
JFR	Furan	7.00	76	P	P	08 28 00.1	+0.7
JFR				eS	S	08 29 24.9	-1.4
JNBK	Urakawa-nobuka	7.05	83	P	P	08 27 59.9	0.0
ASAJ	Asahikawa	7.19	68	P	P	08 28 02.4	+1.2
	10nm,0.5s,baz=247,slow=6.5,SNR=21						
JKK2	Kamakawa 2	7.23	70	eP	P	08 28 02.7	+1.0
JKK2				S	S	08 29 29.7	-1.0
JCH	Churui	7.51	81	P	P	08 28 04.7	+0.1
JCH				eS	S	08 29 32.1	-3.7
JAR	Ashorobuto	7.86	76	P	P	08 28 08.7	+0.5
JAR				S	S	08 29 40.3	-2.2
JIE	Ise	7.90	159	eP	P	08 28 09.5	+0.8
JTKR	Abashiri--Toko	8.07	71	eP	P	08 28 11.3	+1.0
JAK	Akkeshi	8.51	78	P	P	08 28 15.5	+0.7
JAK				eS	S	08 29 52.5	-2.3
JNU	Nakatsue	8.91	193	P	P	08 28 19.5	+0.2
	11nm,0.8s,baz=359,slow=12,SNR=5.8						
JTO	Tosashimizu	8.97	183	eP	P	08 28 20.2	+0.3
HILR	Hailar Array B	12.21	314	P	P	08 28 52.0	-1.9
	1.4nm,0.4s,baz=118,slow=14,SNR=6.7						
SONM	Songino Array	19.95	297	P	P	08 30 11.4	0.0
	1.4nm,0.3s,baz=115,slow=8.6,SNR=10						
ZALV	Zalesovo Beam	34.03	308	P	P	08 32 13.9	-0.8
	1.0nm,0.3s,baz=108,slow=10.0,SNR=5.7						
	1.0nm,0.3s						
MKAR	Makanchi Array	36.31	296	P	P	08 32 33.2	-0.6
	1.8nm,0.6s,baz=84,slow=10,SNR=16						
	1.8nm,0.6s						
KURBB	Kurchatov Arra	38.11	303	P	P	08 32 48.0	-0.6
	6.2nm,0.6s,baz=82,slow=8.5,SNR=31						
	6.2nm,0.6s						
BVAR	Borovoye Array	42.69	308	P	P	08 33 24.6	-0.6
	0.7nm,0.3s,baz=85,slow=9.3,SNR=7.8						
	0.7nm,0.3s						
ILAR	Eielson Array	48.93	34	P	P	08 34 15.7	+3.0
	0.6nm,0.5s,baz=288,slow=8.7,SNR=15						
	0.6nm,0.5s						
WRA	Warramunga Arr	61.47	179	P	P	08 35 41.7	+0.9
	1.2nm,0.7s,baz=360,slow=6.8,SNR=9.9						
	1.2nm,0.7s						
FINES	FINESS Array B	61.55	329	P	P	08 35 41.5	+0.7
	4.0nm,0.9s,baz=90,slow=5.7,SNR=4.2						
	4.0nm,0.9s						
ASAR	Alice Springs	65.17	179	P	P	08 36 06.1	+1.5
	0.7nm,0.5s,baz=359,slow=7.6,SNR=19						
	0.7nm,0.5s						
AKASG	Malin Array Be	66.60	318	P	P	08 36 12.7	-0.5
	0.8nm,0.4s,baz=52,slow=6.2,SNR=4.7						
	0.8nm,0.4s						
HFS	Hagfors	67.02	332	P	P	08 36 15.9	+0.3
	1.6nm,0.8s,baz=86,slow=6.5,SNR=5.5						
	1.6nm,0.8s						
STKA	Stephens Creek	73.74	173	P	P	08 36 56.6	+0.8
	1.0nm,0.4s,baz=317,slow=12,SNR=7.5						
	1.0nm,0.4s						

*IDC **19** 08:41:18.2±1.0, 59°.76S×26°.29W, h0^{km}, mb4.0/4, mbtmp4.1/5, ML4.4/1, MS3.5/2, Error ellipse: s-maj=48.7km s-min=29.1km az=35.0*

*NEIC **19** 08:41:24.4±1.0, 59°.7S±0°.1×26°.2W±0°.3, h35^{km}±2^{km}, mb4.5/23, Error ellipse: s-maj=24.8km s-min=18.5km az=89.0*

ISC 19 08:41:23.8±0.7**, 59°.8S**±0°.1×**26°.2W**±0°.1**, h35**^{km}**, n41,** σ**0^{s}.64**/36**, mb4.5**/15**, 5C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	13.19	153	⇑P	Pn	08 44 27.6	-0.6
	comp=Z,8.0nm,0.2s						
VNA3	Neumayer Olymp	13.34	156	⇑P	Pn	08 44 29.8	-0.6
	comp=Z,6.7nm,0.1s						
VNA2	Neumayer--Watz	13.59	153	⇑P	Pn	08 44 33.3	-0.5
	comp=Z,3.7nm,0.2s,baz=310,slow=14						
SNAA	Sanae	15.18	151	⇑P	Pn	08 44 54.3	-1.0
	comp=Z,58nm,0.2s						
SNAA	Sanae	15.18	151	Pn	Pn	08 44 54.6	-0.7
	comp=Z,1.5nm,0.3s,baz=46,slow=15,SNR=48						

SNAA				Sn	Sn	08 47 28.7	-13
	comp=Z,0.3nm,0.3s,baz=317,slow=22,SNR=4.6						
	comp=Z,3.1nm,0.3s						
SNAA	**Sanae**	**15.18**	**151**		**Pn**	**08 44 54.7**	**-0.5**
TROLL	**Troll, Antarti**	**16.74**	**149**	⇑P	**Pn**	**08 45 15.5**	**+0.3**
	comp=Z,100nm,0.2s						
PMSA	**Palmer Station**	**18.09**	**238**		**Pn**	**08 45 32.0**	**+0.1**
PMSA				IAmb	IAmb	08 46 16.2	
	comp=Z,29nm,1.4s						
EFI	**East Falkland**	**19.50**	**280**	P	**P**	**08 45 47.1**	**-0.5**
MG02	**Cerro Sombrero**	**24.50**	**267**	P	**P**	**08 46 38.8**	**-0.5**
GO09	**Cerro Castillo**	**26.94**	**268**	P	**P**	**08 47 00.8**	**-0.7**
QSPA	**South Pole Qui**	**30.48**	**180**	LR	LR	08 59 45.1	
	comp=Z,53nm,18.8s,baz=204,slow=36						
QSPA	**South Pole Qui**	**30.48**	**180**	P	**P**	**08 47 33.8**	**+0.8**
TRQA	**Tornquist**	**31.38**	**298**	P	**P**	**08 47 41.6**	**+0.5**
TRQA				IAmb	IAmb	08 48 18.8	
	comp=Z,8.6nm,1.2s						
PLCA	**Paso Flores**	**33.30**	**285**	P	**P**	**08 47 57.5**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=133,slow=6.7,SNR=4.2						
	comp=Z,0.8nm,0.6s						
PLCA	**Paso Flores**	**33.30**	**285**	P	**P**	**08 47 58.1**	**+0.2**
BO02	**Sierra Bellavi**	**38.12**	**291**	P	**P**	**08 48 39.8**	**+0.6**
BO02				IAmb	IAmb	08 49 19.9	
	comp=Z,8.2nm,1.4s						
BO04	**La Punta**	**38.69**	**292**	P	**P**	**08 48 43.8**	**-0.2**
BO04				IAmb	IAmb	08 48 59.5	
	comp=Z,17nm,1.4s						
MT09	**Talagante**	**39.05**	**291**	P	**P**	**08 48 46.9**	**-0.2**
MT09				IAmb	IAmb	08 48 57.9	
	comp=Z,16nm,1.3s						
MT01	**Popeta**	**39.10**	**291**	P	**P**	**08 48 46.7**	**-0.7**
MT01				IAmb	IAmb	08 49 12.7	
	comp=Z,19nm,1.4s						
MT02	**Curacav**	**39.54**	**292**	P	**P**	**08 48 51.5**	**+0.4**
MT02				IAmb	IAmb	08 49 30.1	
	comp=Z,26nm,1.4s						
VA03	**San Esteban**	**39.68**	**293**	P	**P**	**08 48 52.6**	**+0.3**
VA03				IAmb	IAmb	08 48 56.5	
	comp=Z,7.9nm,0.8s						
CO06	**Fray Jorge**	**41.93**	**293**	P	**P**	**08 49 12.1**	**+1.3**
AC05	**El Transito**	**42.86**	**296**	P	**P**	**08 49 19.0**	**+0.5**
AC05				IAmb	IAmb	08 50 01.1	
	comp=Z,16nm,1.3s						
H04S2	**CROZET ISLANDS**	**45.67**	**110**	T	T	09 39 11.2	
	baz=225,slow=75,SNR=4.5						
H04S3	**CROZET ISLANDS**	**45.68**	**110**	T	T	09 39 14.5	
	baz=225,slow=75,SNR=7.7						
H04S1	**CROZET ISLANDS**	**45.69**	**110**	T	T	09 39 13.4	
	baz=225,slow=75,SNR=4.7						
GO02	**Mina Guanaco**	**45.72**	**300**	P	**P**	**08 49 42.0**	**+0.3**
GO02				IAmb	IAmb	08 49 43.1	
	comp=Z,3.5nm,0.6s						
PB07	**IPOC Station P**	**48.86**	**302**	P	**P**	**08 50 06.3**	**+0.3**
PB07				IAmb	IAmb	08 50 06.9	
	comp=Z,5.2nm,0.6s						
GO01	**Chusmiza**	**50.39**	**304**	P	**P**	**08 50 18.2**	**+0.3**
PB16	**IPOC Station P**	**51.71**	**304**	P	**P**	**08 50 27.6**	**-0.4**
PB16				IAmb	IAmb	08 50 50.8	
	comp=Z,3.3nm,1.0s						
LPAZ	**La Paz**	**52.97**	**307**	P	**P**	**08 50 37.5**	**0.0**
	comp=Z,0.7nm,0.3s,baz=78,slow=4.9,SNR=8.3						
	comp=Z,0.7nm,0.3s						
LPAZ	**La Paz**	**52.97**	**307**	P	**P**	**08 50 37.4**	**0.0**
EDA	**Edea**	**69.50**	**39**	P	**P**	**08 52 28.4**	**-0.1**
EDA				IAmb	IAmb	08 52 58.5	
	comp=Z,7.0nm,1.3s						
WHZ	**Wether Hill Ro**	**74.07**	**190**	P	**P**	**08 52 56.4**	**+0.7**
TORD	**Torodi Ar. Bea**	**76.07**	**28**	P	**P**	**08 53 07.9**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=180,slow=4.6,SNR=2.5						
	comp=Z,0.7nm,0.4s						
STKA	**Stephens Creek**	**88.15**	**170**	LR	LR	09 28 11.1	
	comp=Z,38nm,20.9s,baz=20,slow=32						
ASAR	**Alice Springs**	**95.29**	**162**	P	**P**	**08 54 44.4**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=182,slow=4.4,SNR=5.2						
	comp=Z,0.4nm,0.6s						
ARCES	**ARCESS Array B**	**134.19**	**23**	PKP	**PKPdf**	**09 00 35.5**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=264,slow=0.8,SNR=6.3						
SONM	**Songino Array**	**150.26**	**92**	PKPbc	**PKPbc**	**09 01 10.1**	**-0.1**
	comp=Z,2.2nm,0.9s,baz=220,slow=3.1,SNR=6.1						
ILAR	**Eielson Array**	**152.85**	**306**	PKPbc	**PKPbc**	**09 01 13.3**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=144,slow=2.5,SNR=8.0						

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*NNC **19** 08:41:52.3±2.4, 37°.82N×72°.13E, h187^{km}±35^{km}, mb2.7, mpv3.5, Error ellipse: s-maj=27.2km s-min=14.6km az=16.0*

ISC 19 08:41:46.6±1.1**, 37°.42N**±0°.08×**72°.3E**±0°.1**, h176^{km}, n16, σ1ˢ93**/23**, 3C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**5.10**	**19**	P	**Pn**	**08 43 03.4**	**+1.4**
	SNR=10						
ALCI	**Alchi Leh**	**5.11**	**127**	*e*P	**Pn**	**08 43 04.5**	**+2.3**
ALCI				*e*S	**Sn**	**08 44 01.5**	**-0.1**
ALCI				IAML		08 44 03.9	
	comp=N,25nm,0.4s						
ALCI				IAML		08 44 05.6	
	comp=E,32nm,0.5s						
EKS2	**Erkin-Say**	**5.36**	**12**	P	**Pn**	**08 43 06.6**	**+1.4**
	SNR=13						
AAK	**Ala-Archa**	**5.48**	**17**	P	**Pn**	**08 43 08.4**	**+1.7**
	SNR=16						
AAK	**Ala-Archa**	**5.48**	**17**	⇑P	**Pn**	**08 43 08.0**	**+1.3**
	comp=E,2.6nm,0.4s						
AAK				⇑S	**Sn**	**08 44 08.6**	**-1.2**
	comp=E,12nm,0.6s						
TSSA	**Tissa**	**5.56**	**144**	*e*P	**Pn**	**08 43 10.1**	**+2.1**
TSSA				*e*S	**Sn**	**08 44 10.7**	**-1.3**
TSSA				IAML		08 44 13.7	
	comp=E,101nm,0.4s						
TSSA				IAML		08 44 14.9	
	comp=N,122nm,0.2s						
KBK	**Karagaybulak**	**5.61**	**21**	P	**Pn**	**08 43 10.8**	**+2.2**
	SNR=8.0						
ULHL	**Ulahol**	**5.70**	**31**	P	**Pn**	**08 43 10.5**	**+0.8**
	SNR=10						
KK31	**Karatay Array**	**5.83**	**347**	⇑P	**Pn**	**08 43 12.0**	**+0.8**
	comp=N,2.9nm,0.3s,baz=163,slow=9.7,SNR=17						
KK31				S	**Sn**	**08 44 14.8**	**-3.2**
	comp=N,7.6nm,0.3s,baz=190,slow=27,SNR=15						
CHMS	**Chumysh**	**5.88**	**18**	P	**Pn**	**08 43 13.4**	**+1.5**
	SNR=6.9						
TKM2	**Tokmak 2**	**6.05**	**24**	P	**Pn**	**08 43 15.6**	**+1.3**
	SNR=8.6						
DHRM	**DHARAMSHALA**	**6.13**	**146**	*e*P	**Pn**	**08 43 17.2**	**+1.8**
DHRM				*e*S	**Sn**	**08 44 24.6**	**-0.7**
DHRM				IAML		08 44 27.5	
	comp=N,99nm,0.3s						
DHRM				IAML		08 44 28.9	
	comp=E,95nm,0.8s						
SMLA	**Simla**	**7.46**	**146**	*e*P	**Pn**	**08 43 34.1**	**+1.3**
SMLA				*e*S	**Sn**	**08 44 53.0**	**-3.8**
SMLA				IAML		08 44 56.6	
	comp=N,48nm,0.6s						
SMLA				IAML		08 44 57.1	
	comp=E,63nm,0.6s						
KLP	**Kalpa**	**7.67**	**138**	*e*P	**Pn**	**08 43 36.9**	**+1.1**
KLP				*e*S	**Sn**	**08 44 58.5**	**-3.5**
KLP				IAML		08 45 01.9	
	comp=N,27nm,0.5s						
KLP				IAML		08 45 03.3	
	comp=E,37nm,0.5s						
AB31	**Akbulak array**	**14.82**	**327**	P	**Pn**	**08 45 07.2**	**-0.3**
	comp=E,1.0nm,0.5s,baz=130,slow=11,SNR=18						
AKTO	**Aktyubinsk**	**16.54**	**326**	⇓P	**Pn**	**08 45 29.0**	**+0.7**
	comp=E,1.7nm,0.6s						

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*IDC **19** 08:50:31.3±1.0, 45°.72N×81°.78E, h0^{km}, mb3.7/6, mbtmp3.7/11, ML3.2/5, MS3.0/1, Error ellipse: s-maj=14.7km s-min=8.8km az=117.0*
*NNC **19** 08:50:32.8±0.4, 45°.86N×81°.53E, h0^{km}, mb4.5, mpv4.3, Error ellipse: s-maj=6.9km s-min=1.6km az=124.0*
*SOME **19** 08:50:34.6, 45°.78N×81°.52E, h20^{km}, MS3.5*
*MOS **19** 08:50:34.4±1.0, 45°.94N×81°.24E, h14^{km}, mb4.4/1, Error ellipse: s-maj=11.6km s-min=5.7km az=72.9*

ISC 19 08:50:34.1±0.5**, 45°.82N**±0°.03×**81°.50E**±0°.03**, h10^{km}, n87, σ2ˢ51**/124**, mb3.6**/5**, 14C-8D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAKZ	**Makanchi**	**1.04**	**18**	⇑P	**Pg**	**08 50 52.2**	**-2.0**
	49nm,0.3s						
MAKZ				⇓S	**Sg**	**08 51 05.4**	**-2.4**
	120nm,0.5s						
MAKZ	**Makanchi**	**1.04**	**18**	PG	**Pg**	**08 50 52.6**	**-1.6**
MAKZ						08 51 05.3	
MK31	**Makanchi Array**	**1.12**	**29**	⇓P	**Pg**	**08 50 53.8**	**-1.8**
	24nm,0.2s,baz=208,slow=18,SNR=1541						
MK31				⇓S	**Sg**	**08 51 08.1**	**-2.1**
	98nm,0.3s,baz=204,slow=30,SNR=12						
MK31	**Makanchi Array**	**1.12**	**29**	PG	**Pg**	**08 50 53.6**	**-2.0**
MK31				S	**Sg**	**08 51 08.0**	**-2.1**
MKAR	**Makanchi Array**	**1.12**	**29**	Pg	**Pg**	**08 50 53.8**	**-1.8**
	46nm,0.3s,baz=203,slow=17,SNR=1058						
MKAR				Lg	Lg	08 51 08.3	
	88nm,0.3s,baz=206,slow=28,SNR=18						
KAPS	**Kapalarasan**	**1.60**	**251**	P	**Pg**	**08 51 04.1**	**-0.7**
	341nm,0.2s						
KAPS				S	**Sg**	**08 51 25.8**	**+0.3**
	1µm,0.3s						
KNOS	**Konyrlen**	**2.20**	**229**	Pg	**Pb**	**08 51 14.2**	**+0.2**
	175nm,0.3s						
KNOS				Lg	Lg	08 51 42.5	
	548nm,0.3s						
TDK	**Taldyqorghan**	**2.33**	**251**	Pg	**Pg**	**08 51 17.1**	**-1.6**
	308nm,0.5s						
TDK				Lg	Lg	08 51 47.9	
	2µm,0.5s						
TDK	**Taldyqorghan**	**2.33**	**251**	*e*P	**Pg**	**08 51 17.1**	**-1.6**
	308nm,0.5s						
TDK				*e*S	**Sg**	**08 51 47.9**	**-1.0**
	2µm,0.5s						
KTMS	**Ketmen**	**2.51**	**200**	Pg	**Pb**	**08 51 18.7**	**-0.6**
	38nm,0.3s						
KTMS				Lg	Lg	08 51 49.1	
	204nm,0.3s						
KTMS	**Ketmen**	**2.51**	**200**	*e*P	**Pb**	**08 51 18.7**	**-0.6**
	38nm,0.3s						
KTMS				*e*S	**Sb**	**08 51 49.1**	**-1.2**
	204nm,0.3s						
BLB	**Baldybastay**	**2.75**	**232**	Pg	**Pb**	**08 51 23.9**	**+0.4**
	216nm,0.3s						
BLB				Lg	Lg	08 51 59.5	
	848nm,0.5s						
ZSN	**Zaisan**	**2.84**	**54**	Pg	**Pb**	**08 51 25.0**	**+0.2**
	45nm,0.4s						
ZSN				Lg	Lg	08 52 01.1	
	235nm,0.6s						
ZSN	**Zaisan**	**2.84**	**54**	*e*P	**Pb**	**08 51 25.0**	**+0.2**
	45nm,0.4s						
ZSN				*e*S	**Sb**	**08 52 01.1**	**+1.5**
	235nm,0.6s						
PDGK	**Podgornoye**	**2.87**	**211**	⇓Pn	**Pn**	**08 51 22.1**	**+2.0**
	99nm,0.7s						
PDGK				⇑Lg	Lg	08 52 05.6	
	364nm,0.6s						
PDGK	**Podgornoye**	**2.87**	**211**	PN	**Pn**	**08 51 22.0**	**+2.0**
SHLS	**Shalkode**	**3.03**	**209**	Pg	**Pb**	**08 51 26.5**	**-1.7**
	212nm,0.4s						
SHLS				Lg	Lg	08 52 04.2	
	670nm,0.5s						
SHLS	**Shalkode**	**3.03**	**209**	*e*P	**Pb**	**08 51 26.5**	**-1.7**
	212nm,0.4s						
SHLS				*e*S	**Sb**	**08 52 04.2**	**-1.2**
	670nm,0.5s						
ARXS	**Arharly**	**3.06**	**240**	Pg	**Pb**	**08 51 29.4**	**+0.7**
	89nm,0.5s						
ARXS				Lg	Lg	08 52 08.9	
	566nm,0.6s						
ARXS	**Arharly**	**3.06**	**240**	*e*P	**Pb**	**08 51 29.4**	**+0.7**
	89nm,0.5s						
ARXS				*e*S	**Sb**	**08 52 08.9**	**+2.8**
	566nm,0.6s						
KPKS	**Kokpek**	**3.09**	**222**	Pg	**Pb**	**08 51 30.4**	**+1.1**
KPKS				Lg	Lg	08 52 10.3	
	962nm,0.4s						
KPKS	**Kokpek**	**3.09**	**222**	*e*P	**Pb**	**08 51 30.4**	**+1.1**
KPKS				*e*S	**Sb**	**08 52 10.3**	**+3.2**
	962nm,0.4s						
UZB	**Uzynbulak**	**3.21**	**214**	Pg	**Pb**	**08 51 32.2**	**+1.1**
	47nm,0.6s						
UZB				Lg	Lg	08 52 14.1	
	231nm,0.5s						
UZB	**Uzynbulak**	**3.21**	**214**	*e*P	**Pb**	**08 51 32.2**	**+1.1**
	47nm,0.6s						
UZB				*e*S	**Sb**	**08 52 14.1**	**+3.8**
	231nm,0.5s						
KURS	**Kuram**	**3.33**	**227**	Pg	**Pb**	**08 51 34.4**	**+1.2**
	41nm,0.5s						
KURS				Lg	Lg	08 52 17.2	
	187nm,0.5s						
SATY	**Saty**	**3.54**	**220**	Pg	**Pb**	**08 51 38.2**	**+1.4**
	93nm,0.4s						
SATY				Lg	Lg	08 52 24.0	
	507nm,0.5s						
CHKK	**Chushkaly**	**3.76**	**240**	*e*P	**Pg**	**08 51 43.5**	**-2.6**
	56nm,0.3s						
CHKK				*e*S	**Sg**	**08 52 32.8**	**-2.1**
	289nm,0.3s						
KTBS	**Karatobe**	**4.03**	**240**	Pg	**Pb**	**08 51 47.2**	**+2.1**
	66nm,0.7s						
KTBS				Lg	Lg	08 52 39.6	
	136nm,0.5s						
KOTS	**Kotyrbulak**	**4.06**	**232**	Pg	**Pb**	**08 51 47.8**	**+2.0**
	50nm,0.5s						
KOTS				Lg	Lg	08 52 40.7	
	233nm,0.5s						
KOTS	**Kotyrbulak**	**4.06**	**232**	*e*P	**Pb**	**08 51 47.8**	**+2.0**
	50nm,0.5s						
KOTS				*e*S	**Sg**	**08 52 40.7**	**-3.9**
	233nm,0.5s						
KUU	**Kurty**	**4.14**	**244**	*e*P	**Pb**	**08 51 49.5**	**+2.4**
	46nm,0.3s						
KUU				*e*S	**Sg**	**08 52 43.0**	**-4.1**
	221nm,0.3s						
MDOK	**Medeo**	**4.15**	**232**	Pg	**Pb**	**08 51 49.4**	**+2.1**
	39nm,0.5s						
MDOK				Lg	Lg	08 52 43.0	
	89nm,0.6s						
KNDC	**Almaty**	**4.16**	**233**	⇓Pg	**Pg**	**08 51 51.7**	**-2.0**
	62nm,0.5s						
KNDC				⇑Lg	Lg	08 52 46.9	
	155nm,0.8s						
TNSS	**Tian-Shan**	**4.29**	**231**	Pg	**Pb**	**08 51 52.2**	**+2.4**
	10nm,0.5s						
TNSS				Lg	Lg	08 52 48.2	
	18nm,0.5s						
TNSS	**Tian-Shan**	**4.29**	**231**	*e*P	**Pb**	**08 51 52.1**	**+2.4**
	10nm,0.5s						
TNSS				*e*S	**Sg**	**08 52 48.2**	**-3.5**
	18nm,0.5s						
IZV	**Izvestkoviy**	**4.47**	**233**	Pg	**Pb**	**08 51 55.4**	**+2.6**
	37nm,0.5s						
IZV				Lg	Lg	08 52 53.0	
	160nm,0.5s						
IZV	**Izvestkoviy**	**4.47**	**233**	*e*P	**Pb**	**08 51 55.4**	**+2.6**
	37nm,0.5s						
IZV				*e*S	**Sg**	**08 52 53.0**	**-4.6**
	160nm,0.5s						
MTBS	**Maitube**	**4.52**	**235**	Pg	**Pb**	**08 51 55.3**	**+1.8**
	27nm,0.5s						
MTBS				Lg	Lg	08 52 53.5	
	197nm,0.3s						
MTBS	**Maitube**	**4.52**	**235**	*e*P	**Pb**	**08 51 55.3**	**+1.8**
	27nm,0.5s						
MTBS				*e*S	**Sb**	**08 52 53.5**	**+5.5**
	197nm,0.3s						
KRBS	**Karabastau**	**4.66**	**245**	Pg	**Pb**	**08 51 58.7**	**+2.7**
	20nm,0.8s						
KRBS				Lg	Lg	08 52 59.3	
	38nm,0.5s						
SEM	**Semipalatinsk**	**4.67**	**350**	Pg	**Pg**	**08 51 59.7**	**-3.8**
	25nm,0.4s						
SEM				Lg	Lg	08 53 01.1	
	107nm,0.4s						
SEM	**Semipalatinsk**	**4.67**	**350**	*e*P	**Pg**	**08 51 59.7**	**-3.8**
	25nm,0.4s						
SEM				*e*S	**Sg**	**08 53 01.1**	**-2.9**
	107nm,0.4s						
WMQ	**Urumqi**	**4.84**	**112**	Pn	**Pn**	**08 51 51.0**	**+4.0**
WMQ				Sn	**Sn**	**08 52 45.4**	**+2.3**
WMQ				smax	smax		
	comp=N,86nm,0.9s						
WMQ				smax	smax		
	comp=E,54nm,0.7s						
DGS	**Degeres**	**4.84**	**240**	Pg	**Pb**	**08 52 01.7**	**+2.7**
	comp=E,26nm,0.3s						
DGS				Lg	Lg	08 53 04.5	
	comp=E,135nm,0.5s						
KST	**Kastek**	**4.84**	**237**	Pg	**Pb**	**08 52 02.4**	**+3.4**
	comp=E,37nm,0.4s						
KST				Lg	Lg	08 53 05.8	
	comp=E,82nm,0.7s						
KST	**Kastek**	**4.84**	**237**	*e*P	**Pb**	**08 52 02.4**	**+3.4**
	comp=E,37nm,0.4s						
KST				*e*S	**Sg**	**08 53 05.8**	**-3.6**
	comp=E,82nm,0.7s						
KURBB	**Kurchatov Arra**	**5.20**	**339**	Pn	**Pn**	**08 51 52.8**	**+0.8**
	comp=E,0.5nm,0.3s,baz=135,slow=20,SNR=18						
KURBB				Sn	**Sn**	**08 52 53.7**	**+1.8**
	comp=E,1.5nm,0.3s,baz=152,slow=22,SNR=7.1						
KURBB				Lg	Lg	08 53 16.7	
	comp=E,3.8nm,0.3s,baz=169,slow=30,SNR=8.3						
	comp=E,1.2nm,0.3s						
KURBB	**Kurchatov Arra**	**5.20**	**339**	⇑Pn	**Pn**	**08 51 52.9**	**+1.0**
	comp=E,6.2nm,0.7s						
KURBB				⇑Pg	**Pb**	**08 52 06.1**	**+1.0**
	comp=E,14nm,0.5s						
KURBB				⇑Lg	Lg	08 53 16.4	
	comp=E,237nm,0.6s						
KURBB	**Kurchatov Arra**	**5.20**	**339**	PN	**Pn**	**08 51 52.9**	**+1.0**
KURK	**Kurchatov**	**5.27**	**340**	⇓Pn	**Pn**	**08 51 53.1**	**+0.4**
	comp=E,0.4nm,0.3s						
KURK				⇑Pg	**Pb**	**08 52 06.0**	**-0.2**
	comp=E,3.0nm,0.6s						
KURK				⇓Lg	Lg	08 53 15.4	
	comp=E,130nm,0.8s						
KURK	**Kurchatov**	**5.27**	**340**	PN	**Pn**	**08 51 53.8**	**+1.0**
TUNR	**Tungur**	**5.42**	**35**	PN	**Pn**	**08 51 57.5**	**+2.5**
TUNR						08 52 15.3	
TUNR				S	**Sn**	**08 53 01.1**	**+3.7**
TUNR						08 53 22.3	
SGDS	**Sogindy**	**5.44**	**247**	Pg	**Pg**	**08 52 16.7**	**-1.6**
	comp=E,11nm,0.2s						
SGDS				Lg	Lg	08 53 30.3	
	comp=E,60nm,0.6s						
UKR	**Ust'-Kan**	**5.57**	**22**	PN	**Pn**	**08 52 00.1**	**+3.1**
UKR				S	**Sn**	**08 53 04.1**	**+3.0**
DGZ	**Jazzator, Alta**	**5.58**	**44**	PN	**Pn**	**08 52 00.1**	**+2.9**
DGZ						08 52 16.0	
DGZ				S	**Sn**	**08 53 05.4**	**+4.0**
DGZ						08 53 28.0	
AAK	**Ala-Archa**	**5.95**	**240**	Pn	**Pn**	**08 52 04.8**	**+2.4**
	comp=E,1.3nm,0.3s,baz=87,slow=7.5,SNR=11						
AAK				Lg	Lg	08 53 39.1	
	comp=E,2.5nm,0.3s,baz=159,slow=22,SNR=6.2						
	comp=E,2.7nm,0.3s						
AAK	**Ala-Archa**	**5.95**	**240**	⇑Pn	**Pn**	**08 52 03.9**	**+1.4**
	comp=E,23nm,0.9s						
AAK				⇓Pg	**Pb**	**08 52 22.0**	**+4.0**
	comp=E,46nm,0.4s						
AAK				⇑Lg	Lg	08 53 43.1	
	comp=E,237nm,0.6s						
CHBI	**Chibit, Altay**	**6.03**	**40**	PN	**Pn**	**08 52 07.0**	**+3.6**
CHBI						08 52 26.3	
CHBI				S	**Sn**	**08 53 14.6**	**+2.0**
CHBI						08 53 42.2	
AKAR	**Aktash**	**6.09**	**40**	PN	**Pn**	**08 52 07.6**	**+3.3**
AKAR				S	**Sn**	**08 53 18.7**	**+4.7**
ELDR	**Elanda**	**6.20**	**28**	PN	**Pn**	**08 52 08.2**	**+2.5**
ELDR						08 52 27.3	
ELDR				S	**Sn**	**08 53 20.6**	**+4.0**
CUR	**Chagan-Uzun**	**6.29**	**45**	PN	**Pn**	**08 52 09.5**	**+2.6**
CUR				S	**Sn**	**08 53 22.3**	**+3.5**
CUR						08 53 49.7	
ULGR	**Ulagan, Altay**	**6.46**	**40**	PN	**Pn**	**08 52 11.8**	**+2.5**
ULGR				S	**Sn**	**08 53 26.2**	**+3.1**
ULGR						08 53 53.7	
MRKS	**Merke**	**6.69**	**246**	Pg	**Pg**	**08 52 38.6**	**-3.4**
	comp=E,9.6nm,0.6s						
MRKS				Lg	Lg	08 54 07.5	
	comp=E,43nm,0.4s						
MRKS	**Merke**	**6.69**	**246**	*e*P	**Pg**	**08 52 38.6**	**-3.4**
	comp=E,9.6nm,0.6s						
MRKS				*e*S	**Sg**	**08 54 07.5**	**-1.1**
	comp=E,43nm,0.4s						
ARTR	**Artybash**	**7.10**	**30**	PN	**Pn**	**08 52 20.5**	**+2.6**
ARTR				S	**Sn**	**08 53 39.5**	**+0.9**
BRZS	**Berezniki**	**7.25**	**308**	Pg	**Pg**	**08 52 49.9**	**-2.8**
	comp=E,1.3nm,0.3s						
BRZS				Lg	Lg	08 54 27.4	
	comp=E,18nm,0.5s						
BRZS	**Berezniki**	**7.25**	**308**	*e*P	**Pg**	**08 52 49.9**	**-2.8**
	comp=E,1.3nm,0.3s						
BRZS				*e*S	**Sg**	**08 54 27.4**	**+0.9**
	comp=E,18nm,0.5s						
KSH	**Kashi**	**7.50**	**215**	Pn	Pb	08 52 37.0	-7.3
KSH				Sn	**Sg**	**08 54 30.5**	**-4.1**
KSH				smax	smax		
	comp=N,25nm,1.1s						
KSH				smax	smax		
	comp=E,16nm,1.0s						
KK31	**Karatay Array**	**8.32**	**255**	⇑Pn	**Pn**	**08 52 35.2**	**+0.4**
	comp=E,2.9nm,0.3s,baz=66,slow=12,SNR=29						
KK31				Sn	**Sn**	**08 54 11.8**	**+3.2**
	comp=E,5.7nm,0.6s,baz=62,slow=24,SNR=5.0						
KK31				⇑Lg	Lg	08 54 59.3	
	comp=E,28nm,0.6s,baz=66,slow=29,SNR=6.2						
KK31	**Karatay Array**	**8.32**	**255**	P	**Pn**	**08 52 35.1**	**+0.4**
KK31						08 54 08.7	
ZALV	**Zalesovo Beam**	**8.42**	**14**	Pn	**Pn**	**08 52 36.6**	**+0.6**
	comp=E,1.0nm,0.3s,baz=201,slow=14,SNR=17						
ZALV				Sn	**Sn**	**08 54 08.2**	**-2.7**
	comp=E,1.9nm,0.3s,baz=202,slow=18,SNR=6.8						
ZALV				Lg	Lg	08 54 56.2	
	comp=E,1.6nm,0.3s,baz=200,slow=24,SNR=6.0						
	comp=E,3.5nm,0.4s						
IUG	**Iuzhnay**	**9.05**	**250**	Pg	Pn	08 53 22.7	+38
	comp=E,23nm,1.1s						
BVA0	**Borovoye Array**	**10.21**	**319**	⇑Pn	**Pn**	**08 53 00.5**	**-0.1**
	comp=E,2.3nm,1.1s,baz=78,slow=39,SNR=8.8						
BVA0				⇑Sn	**Sn**	**08 54 53.7**	**-1.4**
	comp=E,6.1nm,0.8s						
BVA0	**Borovoye Array**	**10.21**	**319**	P	**Pn**	**08 53 00.5**	**-0.1**
BVA0						08 54 53.6	
BVAR	**Borovoye Array**	**10.21**	**319**	Pn	**Pn**	**08 53 01.4**	**+0.8**
	comp=E,0.1nm,0.3s,baz=130,slow=16,SNR=7.6						
BVAR				Sn	Sn	08 55 04.4	+9.3
	comp=E,0.1nm,0.3s,baz=148,slow=16,SNR=3.8						
	comp=E,1.1nm,0.3s						
AB31	**Akbulak array**	**14.95**	**291**	⇑Pn	**Pn**	**08 54 02.2**	**-3.1**
	comp=E,2.3nm,0.7s,baz=95,slow=13,SNR=24						
AB31	**Akbulak array**	**14.95**	**291**	P	**Pn**	**08 54 02.2**	**-3.1**
AKTO	**Aktyubinsk**	**16.32**	**295**	Pn	**Pn**	**08 54 21.4**	**-1.8**
	comp=E,0.2nm,0.3s,baz=98,slow=13,SNR=4.0						
AKTO				Sn	**Sn**	**08 57 16.8**	**-7.4**
	comp=E,0.1nm,0.3s,baz=149,slow=18,SNR=2.1						
	comp=E,1.1nm,0.5s						
SONM	**Songino Array**	**17.14**	**74**	Pn	**P**	**08 54 36.8**	**+1.4**
	comp=E,0.1nm,0.3s,baz=261,slow=9.8,SNR=4.4						
NRIK	**Noril'sk**	**23.79**	**5**	LR	LR	09 05 31.7	
	comp=E,32nm,18.5s,baz=342,slow=38						
CMAR	**Chiang Mai Arr**	**30.88**	**146**	P	**P**	**08 56 47.1**	**-3.5**
	comp=E,1.3nm,0.3s,baz=12,slow=4.5,SNR=10.0						
	comp=E,1.3nm,0.3s						
HFS	**Hagfors**	**41.32**	**315**	P	**P**	**08 58 18.6**	**-0.9**
	comp=E,1.2nm,0.7s,baz=67,slow=11,SNR=1.7						
	comp=E,1.2nm,0.7s						
NOA	**NORSAR Array B**	**42.34**	**317**	P	**P**	**08 58 27.1**	**-0.7**
	comp=E,0.4nm,0.4s,baz=77,slow=8.2,SNR=4.0						
	comp=E,0.4nm,0.4s						
CLL	**Collm**	**44.17**	**303**	*e*P	**P**	**08 58 44.0**	**+1.3**
ILAR	**Eielson Array**	**63.46**	**21**	P	**P**	**09 01 02.9**	**-0.8**
	comp=E,0.3nm,0.7s,baz=329,slow=5.9,SNR=4.6						
	comp=E,0.3nm,0.7s						
YKA	**Yellowknife Ar**	**71.27**	**8**	P	**P**	**09 01 53.2**	**+0.2**
	comp=E,0.2nm,0.6s,baz=336,slow=11,SNR=4.7						
	comp=E,0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**73.61**	**272**	P	**P**	**09 02 08.2**	**+0.4**
	comp=E,0.6nm,0.7s,baz=31,slow=5.3,SNR=1.5						
	comp=E,0.6nm,0.7s						

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*ASRS **19** 09:00:05.0±0.5, 53°.56N×87°.67E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 19 09:00:05.8±3.2**, 53°.57N×87°.71E, h0^{km}, mbtmp2.6**/2**, ML2.4**/2**, Error ellipse: s-maj=30.9km s-min=18.3km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.76**	**284**	I	I	09 10 00.0	
	baz=100,slow=347,SNR=9.9						
ZALV	**Zalesovo Beam**	**1.76**	**284**	Pn	Pn	09 00 37.7	+0.2

	0.9nm,0.3s,baz=98,slow=15,SNR=11						
ZALV				Lg	Lg	09 01 01.4	
	1.8nm,0.3s,baz=103,slow=28,SNR=9.3						
KURBB	**Kurchatov Arra**	**6.38**	**246**	Pn	Pn	09 01 41.5	+0.6
	baz=58,slow=13,SNR=5.1						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**7.62**	**209**	Pn	Pn	09 01 59.1	+1.0
	0.1nm,0.3s,baz=30,slow=13,SNR=2.0						
	0.1nm,0.3s						

IDC 19 09:09:55.0±6.6, 30°.31S×178°.56W, h55^{km}±46^{km}, mb3.5/2, mbtmp3.7/2, MS3.3/2, Error ellipse: s-maj=98.2km s-min=29.1km az=147.0

ISC 19 09:09:59.7±1.0, 29°.1S±0°.6×178°.6W±0°.2, h100^{km}, n8, σ2^s.09/7, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.66**	**107**	P	**Pn**	**09 10 15.5**	**-1.2**
	639nm,0.4s,baz=162,slow=16,SNR=3.4						
RAO				S	**Sn**	**09 10 30.7**	**+1.1**
	1µm,0.2s,baz=144,slow=17,SNR=10						
DZM	**Mont Dzumac**	**15.15**	**294**	LR	LR	09 18 32.1	
	comp=Z,87nm,18.1s,baz=0.0,slow=33						
ASAR	**Alice Springs**	**42.64**	**266**	P	**P**	**09 17 45.6**	**-0.9**
	0.5nm,0.5s,baz=101,slow=7.9,SNR=5.9						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**43.51**	**271**	P	**P**	**09 17 54.2**	**+0.7**
	1.0nm,0.6s,baz=112,slow=8.2,SNR=9.3						
	1.0nm,0.6s						
PMSA	**Palmer Station**	**73.71**	**156**	LR	LR	09 48 06.3	
	comp=Z,23nm,18.3s,baz=279,slow=32						
KURBB	**Kurchatov Arra**	**119.76**	**314**	PKP	**PKiKP**	**09 28 40.8**	**+3.0**
	0.2nm,0.2s,baz=126,slow=1.8,SNR=4.3						
FINES	**FINESS Array B**	**143.70**	**340**	PKP	**PKPdf**	**09 29 22.4**	**+0.1**
	4.4nm,0.7s,baz=57,slow=5.1,SNR=8.7						
AKASG	**Malin Array Be**	**149.90**	**324**	PKPbc	**PKPab**	**09 29 41.8**	**-2.0**
	1.2nm,0.6s,baz=50,slow=2.5,SNR=2.1						

ASRS 19 09:29:31.0±0.9, 53°.53N×87°.66E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.

IDC 19 09:29:34.1±3.1, 53°.56N×87°.70E, h0^{km}, mbtmp2.5/2, ML2.3/2, Error ellipse: s-maj=30.5km s-min=17.5km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.75**	**284**	I	I	09 39 20.0	
	baz=100,slow=348,SNR=3.1						
ZALV	**Zalesovo Beam**	**1.75**	**284**	Pn	Pn	09 30 05.1	-0.6
	0.4nm,0.3s,baz=101,slow=16,SNR=7.7						
ZALV				Lg	Lg	09 30 29.0	
	1.4nm,0.3s,baz=104,slow=27,SNR=9.6						
KURBB	**Kurchatov Arra**	**6.37**	**246**	Pn	Pn	09 31 11.0	+2.0
	baz=62,slow=14,SNR=2.8						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**7.61**	**209**	Pn	Pn	09 31 26.7	+0.5
	0.1nm,0.3s,baz=29,slow=13,SNR=5.3						
	0.2nm,0.4s						

IDC 19 09:35:18.1±2.6, 53°.79N×86°.60E, h0^{km}, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=23.4km s-min=13.5km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.07**	**279**	I	I	09 41 50.0	
	baz=97,slow=350,SNR=2.6						
ZALV	**Zalesovo Beam**	**1.07**	**279**	Pg	Pg	09 35 37.2	-1.4
	1.1nm,0.3s,baz=102,slow=16,SNR=14						
ZALV				Lg	Lg	09 35 53.8	
	1.4nm,0.3s,baz=102,slow=27,SNR=8.1						
KURBB	**Kurchatov Arra**	**5.89**	**241**	Pn	Pn	09 36 48.0	+1.5
	0.1nm,0.3s,baz=56,slow=14,SNR=10.0						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.53**	**203**	Pn	Pn	09 37 09.7	+0.6
	0.1nm,0.3s,baz=22,slow=13,SNR=6.0						
	0.1nm,0.3s						

IDC 19 09:36:42.0±4.7, 36°.43N×71°.39E, h232^{km}±41^{km}, mb3.2/6, mbtmp3.9/11, Error ellipse: s-maj=38.4km s-min=23.0km az=22.0

NEIC 19 09:36:42.8±1.7, 36°.53N±0°.04×71°.25E±0°.09, h237^{km}±8^{km}, mb4.1/4, Error ellipse: s-maj=11.6km s-min=2.7km az=66.0

NNC 19 09:36:46.6±3.5, 36°.85N×71°.22E, h228^{km}±34^{km}, mb2.9, mpv4.1, Error ellipse: s-maj=32.7km s-min=19.5km az=11.0

ISC 19 09:36:41.8±0.7, 36°.46N±0°.06×71°.35E±0°.06, h237^{km}, n56, σ1^s.42/65, mb3.4/6, 5C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANEM	**Manem**	**1.11**	**14**		**Pn**	**09 37 17.6**	**+1.2**
GAR	**Garm**	**2.66**	**342**		**Pn**	**09 37 30.0**	**+0.1**
KBL	**Kabul**	**2.69**	**225**		**Pn**	**09 37 30.4**	**0.0**
CHGR	**Chuyangaron**	**2.80**	**322**		**Pn**	**09 37 30.7**	**-0.6**
SHAA	**Shahritus**	**2.81**	**294**		**Pn**	**09 37 30.5**	**-0.9**
DRK	**Karamyk**	**3.03**	**7**		**Pn**	**09 37 35.0**	**+0.9**
NIL	**Nilore**	**3.21**	**150**		**Pn**	**09 37 38.0**	**+2.1**
BTK	**Batken**	**3.61**	**353**	Pn	**Pn**	**09 37 42.2**	**+1.7**
JMU	**Jammu**	**4.66**	**141**	*e*P	**Pn**	**09 37 54.0**	**-0.1**
JMU				*e*S	**S**	**09 38 49.7**	**-1.7**
JMU				IAML		09 38 54.0	
	comp=N,228nm,0.5s						
JMU				IAML		09 38 55.7	
	comp=E,264nm,0.2s						
ARSB	**Arslanbob**	**5.02**	**14**		**Pn**	**09 37 57.9**	**+0.5**
ALCI	**Alchi Leh**	**5.27**	**114**	*e*P	**Pn**	**09 38 00.6**	**-0.3**
ALCI				*e*S	**S**	**09 38 59.9**	**-3.8**
ALCI				IAML		09 39 05.6	
	comp=E,181nm,0.6s						
ALCI				IAML		09 39 06.1	
	comp=N,189nm,0.8s						
DHRM	**DHARAMSHALA**	**5.87**	**134**	*e*P	**Pn**	**09 38 09.4**	**+1.1**
DHRM				*e*S	**S**	**09 39 15.7**	**-1.4**
DHRM				IAML		09 39 17.9	
	comp=E,589nm,0.6s						
DHRM				IAML		09 39 18.6	
	comp=N,571nm,0.6s						
UCH	**Uchtor**	**6.25**	**22**	P	**Pn**	**09 38 14.3**	**+1.1**
	SNR=196						
EKS2	**Erkin-Say**	**6.47**	**16**	P	**Pn**	**09 38 16.8**	**+1.2**
	SNR=17						
AAK	**Ala-Archa**	**6.63**	**21**	P	**Pn**	**09 38 19.1**	**+1.5**
	SNR=49						
AAK	**Ala-Archa**	**6.63**	**21**	P	**Pn**	**09 38 19.0**	**+1.4**
	comp=N,48nm,0.3s,baz=171,slow=4.0,SNR=82						
AAK				S	**S**	**09 39 33.0**	**-1.2**
	comp=N,28nm,0.8s,baz=351,slow=20,SNR=6.4						
AAK	**Ala-Archa**	**6.63**	**21**		**Pn**	**09 38 18.9**	**+1.2**
AAK	**Ala-Archa**	**6.63**	**21**	⇓P	**Pn**	**09 38 18.8**	**+1.1**
	comp=N,5.0nm,0.3s						
AAK				⇑S	**S**	**09 39 32.3**	**-1.9**
	comp=N,25nm,0.9s						
KK31	**Karatay Array**	**6.66**	**355**		**Pn**	**09 38 17.9**	**0.0**
KK31	**Karatay Array**	**6.66**	**355**	⇓P	**Pn**	**09 38 17.5**	**-0.4**
	comp=N,3.9nm,0.2s,baz=178,slow=12,SNR=101						
KK31				⇓S	**S**	**09 39 30.1**	**-4.8**
	comp=N,34nm,0.4s,baz=186,slow=18,SNR=22						
KKAR	**Karatay Array**	**6.66**	**355**		**Pn**	**09 38 18.0**	**0.0**
KBK	**Karagaybulak**	**6.78**	**23**	P	**Pn**	**09 38 21.2**	**+1.6**
	SNR=14						
ULHL	**Ulahol**	**6.91**	**32**	P	**Pn**	**09 38 22.2**	**+1.0**
	SNR=8.9						
BOOM	**Boomskoye usch**	**6.99**	**29**		**Pn**	**09 38 23.3**	**+1.1**
CHMS	**Chumysh**	**7.03**	**21**	P	**Pn**	**09 38 23.8**	**+1.1**
	SNR=14						
SMLA	**Simla**	**7.19**	**136**	*e*P	**Pn**	**09 38 26.2**	**+1.4**
SMLA				*e*S	**S**	**09 39 45.7**	**-1.5**
SMLA				IAML		09 39 49.6	
	comp=N,143nm,0.4s						
SMLA				IAML		09 39 50.8	
	comp=E,143nm,0.6s						
USP	**Ospenovka**	**7.21**	**19**	P	**Pn**	**09 38 25.9**	**+0.9**
	SNR=15						
TKM2	**Tokmak 2**	**7.23**	**26**	P	**Pn**	**09 38 26.5**	**+1.1**
	SNR=76						
KDJ	**Kajisay**	**7.24**	**37**		**Pn**	**09 38 26.4**	**+0.9**
TARG	**Taragay, Kyrgy**	**7.27**	**42**		**Pn**	**09 38 26.6**	**+0.6**
HNLY	**HANLEY**	**7.28**	**118**	*e*P	**Pn**	**09 38 27.0**	**+0.6**
HNLY				*e*S	**S**	**09 39 47.6**	**-2.5**
HNLY				IAML		09 39 54.3	
	comp=E,15nm,0.9s						
HNLY				IAML		09 39 56.0	
	comp=N,14nm,0.9s						
HRA	**Herat**	**7.72**	**257**	Pn	**Pn**	**09 38 31.2**	**-0.5**
WUS	**Wushi**	**7.75**	**50**		**Pn**	**09 38 32.0**	**+0.1**
JOSI	**Joshimath**	**9.03**	**128**	*e*P	**Pn**	**09 38 50.1**	**+1.6**
JOSI				*e*S	**S**	**09 40 26.9**	**-3.7**
JOSI				IAML		09 40 32.6	
	comp=E,63nm,0.5s						
JOSI				IAML		09 40 33.1	
	comp=N,76nm,0.5s						
MAKZ	**Makanchi**	**13.02**	**34**		**Pn**	**09 39 38.0**	**-0.2**
MAKZ	**Makanchi**	**13.02**	**34**	⇑P	**Pn**	**09 39 38.7**	**+0.5**
	comp=N,7.9nm,0.5s						
MK31	**Makanchi Array**	**13.16**	**35**	⇑P	**Pn**	**09 39 40.9**	**+1.0**
	comp=N,0.6nm,0.3s,baz=218,slow=15,SNR=17						
MKAR	**Makanchi Array**	**13.16**	**35**	P	**Pn**	**09 39 40.4**	**+0.5**
	comp=N,1.1nm,0.5s,baz=218,slow=15,SNR=12						
KURBB	**Kurchatov Arra**	**15.07**	**18**	P	**P**	**09 40 02.8**	**-0.1**
	comp=N,0.3nm,0.3s,baz=211,slow=11,SNR=4.5						
KURK	**Kurchatov**	**15.18**	**18**	P	**P**	**09 40 02.8**	**-1.3**
AB31	**Akbulak array**	**15.25**	**330**		**P**	**09 40 04.1**	**-0.8**
AB31				IAmb	IAmb	09 40 07.9	
	comp=Z,7.2nm,1.0s						
AB31	**Akbulak array**	**15.25**	**330**	⇑P	**Pn**	**09 40 06.6**	**+1.3**
	comp=Z,0.8nm,0.3s,baz=143,slow=11,SNR=24						
ABKAR	**Akbulak array**	**15.25**	**330**		**P**	**09 40 03.5**	**-1.4**
BVA0	**Borovoye Array**	**16.57**	**358**	P	**Pn**	**09 40 22.2**	**+1.2**
	comp=Z,0.1nm,0.7s,baz=160,slow=9.7,SNR=13						
BVAR	**Borovoye Array**	**16.57**	**358**	P	**Pn**	**09 40 21.2**	**+0.2**
	comp=Z,2.7nm,0.5s,baz=148,slow=11,SNR=16						
BORK	**Borovoye**	**16.60**	**358**		**Pn**	**09 40 21.6**	**+0.3**
BORK				IAmb	IAmb	09 40 24.6	
	comp=Z,3.7nm,0.5s						
AKTO	**Aktyubinsk**	**16.95**	**330**	P	**Pn**	**09 40 25.1**	**-0.4**
	comp=Z,14nm,0.5s,baz=136,slow=10,SNR=18						
AKTO	**Aktyubinsk**	**16.95**	**330**	⇑P	**Pn**	**09 40 24.7**	**-0.8**
	comp=Z,6.8nm,0.6s						
ZALV	**Zalesovo Beam**	**19.83**	**24**	P	**P**	**09 40 55.9**	**+1.3**
	comp=Z,0.9nm,0.4s,baz=219,slow=11,SNR=3.5						
SHL	**Shillong**	**20.64**	**116**	P	**P**	**09 41 05.8**	**+2.1**
BRTR	**Keskin Array B**	**29.72**	**288**	P	**P**	**09 42 27.0**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=92,slow=10,SNR=3.3						
	comp=Z,0.5nm,0.6s						
FINES	**FINESS Array B**	**37.67**	**326**	P	**P**	**09 43 34.4**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=120,slow=11,SNR=4.1						
	comp=Z,1.3nm,0.6s						
ARCES	**ARCESS Array B**	**41.29**	**338**	P	**P**	**09 44 05.2**	**+1.5**
	comp=Z,1.4nm,0.8s,baz=116,slow=8.2,SNR=3.6						
	comp=Z,1.4nm,0.8s						
HFS	**Hagfors**	**43.27**	**322**	P	**P**	**09 44 20.3**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=96,slow=12,SNR=6.0						
	comp=Z,0.9nm,0.3s						
NOA	**NORSAR Array B**	**44.58**	**323**	P	**P**	**09 44 30.4**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=98,slow=7.8,SNR=3.7						
	comp=Z,0.6nm,0.6s						
ASAR	**Alice Springs**	**84.00**	**125**	P	**P**	**09 48 45.9**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=310,slow=5.1,SNR=6.1						
	comp=Z,0.2nm,0.5s						

IPEC 19 09:44:29.4±0.2, 51°.60N×16°.09E, h1^{km}, ML3.1/6, Error ellipse: s-maj=2.9km s-min=1.4km az=74.0

IDC 19 09:44:29.8±0.7, 51°.63N×15°.84E, h0^{km}, mbtmp3.3/6, ML2.8/6, Error ellipse: s-maj=12.5km s-min=7.1km az=111.0

DNK 19 09:44:29.3±1.7, 51°.71N×15°.82E, h0^{km}±95^{km}, ML2.9, Presumed earthquake

VIE 19 09:44:29.3±0.9, 51°.59N×15°.86E, h0^{km}, mb2.9/7, ml3.3/8, ms3.9/1, Error ellipse: s-maj=6.3km s-min=4.9km az=24.0 97 km NW of Wroclaw Suspected Mining induced.

BGR 19 09:44:30.4±0.4, 51°.56N×15°.98E, h1^{km}, ML3.2/15, Error ellipse: s-maj=4.4km s-min=2.2km az=16.0

UPP 19 09:44:31.0±2.9, 51°.66N×15°.24E, h0^{km}, ML2.5, Presumed earthquake

PRU 19 09:44:31.8, 51°.53N×15°.96E, h0^{km}

ISC 19 09:44:27.4±0.7, 51°.67N±0°.03×15°.99E±0°.02, h0^{km}, n71, σ1^s.40/142, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.85**	**167**	*e*Pg	**Pb**	**09 44 44.6**	**-0.5**
KSP				*e*Sg	**Sg**	**09 44 55.0**	**+0.1**
KSP	**Ksiaz**	**0.85**	**167**	*e*Pg	**Pb**	**09 44 44.7**	**-0.5**
KSP				*e*Sg	**Sg**	**09 44 55.0**	**+0.1**
CHVC	**Chvalec**	**1.09**	**178**	*e*PG	**Pb**	**09 44 49.4**	**+0.3**
CHVC				*e*SG	**Sg**	**09 45 02.6**	**+0.2**
	comp=Z,200nm,0.5s						
OSTC	**Ostas**	**1.13**	**173**	*e*PG	**Pb**	**09 44 50.1**	**+0.3**
OSTC				*e*SG	**Sg**	**09 45 04.0**	**+0.4**
	comp=Z,175nm,0.4s						
UPC	**Upice**	**1.17**	**179**	*e*PG	**Pb**	**09 44 50.5**	**0.0**
UPC				*e*SG	**Sg**	**09 45 05.2**	**+0.3**
	comp=Z,258nm,0.4s						
DPC	**Dobruska-Polom**	**1.34**	**171**	*e*PG	**Pg**	**09 44 53.4**	**+0.3**
DPC				*e*SG	**Sg**	**09 45 10.1**	**-0.4**
	comp=Z,152nm,0.7s						
DPC	**Dobruska-Polom**	**1.34**	**171**	*e*Pg	**Pg**	**09 44 53.4**	**+0.3**
DPC				*e*Pn	**Pb**	**09 44 53.7**	**+0.2**
DPC				*e*Sg	**Sg**	**09 45 10.2**	**-0.3**
PVCC	**Panska Ves**	**1.45**	**218**	*e*PG	**Pb**	**09 44 56.0**	**+0.6**
PVCC				*e*SG	**Sn**	**09 45 15.4**	**+0.7**
	comp=Z,461nm,0.6s						
BRG	**Berggiesshubel**	**1.51**	**239**	*e*Pn	**Pb**	**09 44 56.5**	**+0.1**
BRG				*e*Pg	**Pg**	**09 44 57.5**	**+1.1**
BRG				*e*Sg	**Sn**	**09 45 16.6**	**+0.4**
PIVO	**Bartosovice**	**1.53**	**166**	*e*Pg	**Pn**	**09 44 56.0**	**-0.1**
	baz=349						
PIVO				*e*Sg	**Sg**	**09 45 14.7**	**-1.9**
	115nm,0.2s,baz=349						
KRLC	**Kraliky**	**1.68**	**162**	*e*PG	**Pg**	**09 44 59.6**	**0.0**
KRLC				*e*SG	**Sn**	**09 45 20.7**	**+0.4**
	comp=Z,169nm,0.4s						
FBE	**Freiberg**	**1.82**	**247**	*e*Pn	**Pg**	**09 45 02.1**	**-0.1**
FBE				*e*Pg	**Pb**	**09 45 03.3**	**+1.8**
FBE				*e*Sg	**Sg**	**09 45 27.0**	**+1.3**
RYBC	**Ceska Rybna**	**1.87**	**178**	*e*Pn	**Pn**	**09 45 01.1**	**+0.4**
	baz=0.4						
RYBC				*e*Sg	**Sn**	**09 45 25.6**	**+0.6**
	104nm,0.2s,baz=0.4						
CLL	**Collm**	**1.90**	**260**	*e*Pn	**Pn**	**09 45 01.7**	**+0.6**
CLL				*e*Sg	**Sg**	**09 45 30.4**	**+2.0**
CLL	**Collm**	**1.90**	**260**	*i* Pn	**Pn**	**09 45 01.7**	**+0.6**
	comp=Z,28nm,0.6s						
CLL				*i* Pg	**Pg**	**09 45 04.9**	**+1.1**
CLL				*i* x	x	09 45 08.7	
CLL				*e*x	x	09 45 26.0	
CLL				*e*Sg	**Sg**	**09 45 29.0**	**+0.5**
	comp=Z,64nm,0.5s						
PRU	**Pruhonice**	**1.92**	**209**	*e*PG	**Pb**	**09 45 03.8**	**+0.5**
PRU				*e*SG	**Sb**	**09 45 28.2**	**+0.4**
	comp=Z,84nm,0.5s						
HSKC	**Hora Svate Kat**	**1.93**	**237**	*e*PG	**Pg**	**09 45 04.2**	**-0.2**
HSKC				*e*SG	**Sg**	**09 45 29.4**	**0.0**
	comp=Z,132nm,0.4s						
STEB	**Steborice**	**2.08**	**146**	*e*PG	**Pb**	**09 45 06.7**	**+0.7**
STEB				*e*SG	**Sg**	**09 45 33.9**	**-0.2**
	comp=Z,259nm,0.7s						
MORC	**Moravsky Berou**	**2.14**	**152**	*e*Pn	**Pn**	**09 45 04.8**	**+0.3**
	baz=334						
MORC				*e*Sg	**Sb**	**09 45 33.4**	**-0.8**
	comp=Z,135nm,0.7s,baz=334						
MORC	**Moravsky Berou**	**2.14**	**152**	*e*Pn	**Pn**	**09 45 04.9**	**+0.5**
MORC				*e*Sg	**Sb**	**09 45 34.9**	**+0.6**
OKC	**Ostrava-Krasne**	**2.29**	**142**	*e*PG	**Pg**	**09 45 11.4**	**0.0**
OKC	**Ostrava-Krasne**	**2.29**	**142**	*e*Sg	**Sb**	**09 45 39.4**	**+0.8**
VRAC	**Vranov**	**2.40**	**170**	*e*Pn	**Pn**	**09 45 08.7**	**+0.7**
	baz=352						
VRAC				*e*Sg	**Sb**	**09 45 42.0**	**+0.4**
	comp=Z,105nm,0.9s,baz=352						
TREC	**Trest**	**2.40**	**188**	*e*PG	**Pg**	**09 45 12.7**	**-0.8**
TREC				*e*SG	**Sg**	**09 45 43.5**	**-1.1**
ZVC	**Zvikov**	**2.51**	**208**	*e*SG	**Sg**	**09 45 47.2**	**-0.9**
TANN	**Tannenbergstha**	**2.56**	**242**	*e*Pn	**Pn**	**09 45 11.3**	**+1.1**
TANN				*e*Sg	**Sg**	**09 45 49.6**	**+0.1**
WERD	**Werda**	**2.63**	**244**	*e*Pn	**Pn**	**09 45 12.0**	**+0.9**
WERD				*e*Sg	**Sg**	**09 45 52.0**	**+0.2**
KRUC	**Moravsky**	**2.63**	**174**	*e*Pn	**Pn**	**09 45 11.9**	**+0.8**
	baz=356						
KRUC				*e*Sg	**Sb**	**09 45 49.2**	**+1.0**
	comp=Z,102nm,1.0s,baz=356						
OJC	**Ojcow**	**2.82**	**120**	*e*Pn	**Pn**	**09 45 15.2**	**+1.5**
OJC				*e*Pg	**Pg**	**09 45 22.3**	**+0.9**
OJC				*e*Sg	**Sg**	**09 45 58.6**	**+0.7**
MOX	**Moxa**	**2.94**	**251**	*e*Pn	**Pn**	**09 45 16.4**	**+1.0**
MOX				*e*Sg	**Sg**	**09 46 02.6**	**+0.9**
KHC	**Kasperske Hory**	**2.98**	**212**	*e*PN	**Pn**	**09 45 17.2**	**+1.3**
KHC				*e*PG	**Pb**	**09 45 23.0**	**+1.7**
KHC				*e*SN	**Sn**	**09 45 51.7**	**-0.6**
KHC				*e*SG	**Sg**	**09 46 01.7**	**-1.3**
	comp=Z,52nm,0.6s						
MANZ	**Manzenberg**	**2.98**	**237**	*e*Pn	**Pn**	**09 45 17.0**	**+1.0**
MANZ				*e*Sg	**Sg**	**09 46 03.4**	**+0.1**
JAVC	**Velka Javorina**	**3.02**	**158**	*e*PN	**Pn**	**09 45 17.0**	**+0.4**
JAVC	**Velka Javorina**	**3.02**	**158**	*e*Pn	**Pn**	**09 45 16.9**	**+0.4**
	baz=340						
CKRC	**Cesky Krumlov**	**3.05**	**201**	*e*PG	**Pg**	**09 45 24.5**	**-1.4**
CKRC				*e*SG	**Sg**	**09 46 04.3**	**-1.2**
	comp=Z,37nm,0.5s						
ROTZ	**Rotzenmuhle**	**3.07**	**233**	*e*Pn	**Pn**	**09 45 18.3**	**+1.1**
ROTZ				*e*Pg	**Pg**	**09 45 25.7**	**-0.5**
ROTZ				*e*Sg	**Sg**	**09 46 05.2**	**-0.7**
GEC2	**GERESS Array S**	**3.19**	**208**	*e*Pn	**Pn**	**09 45 20.0**	**+1.1**
GERES	**GERESS Array B**	**3.19**	**208**	Pn	**Pn**	**09 45 19.9**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=30,slow=14,SNR=30						
GERES				Pg	**Pb**	**09 45 26.2**	**+1.3**
	comp=Z,1.0nm,0.3s,baz=25,slow=16,SNR=41						
GERES				Lg	Lg	09 46 05.7	
	comp=Z,0.7nm,0.3s,baz=29,slow=27,SNR=5.9						
	comp=Z,3.6nm,0.4s						
WET	**Wettzell**	**3.22**	**219**	*e*Sg	**Sg**	**09 46 10.0**	**-0.8**
MODS	**Modra-Piesok**	**3.41**	**165**	*e*PN	**Pn**	**09 45 23.2**	**+1.4**
MODS				*e*PG	**Pg**	**09 45 33.4**	**+0.7**
MODS				*e*SG	**Sg**	**09 46 17.3**	**+0.5**
CLZ	**Clausthal**	**3.49**	**275**	*e*Pn	**Pn**	**09 45 25.3**	**+2.3**
BSD	**Bornholm Skovb**	**3.51**	**350**	*i* P	**Pn**	**09 45 24.6**	**+1.5**
BSD				*i* S	**Sn**	**09 46 04.8**	**-0.5**
BSD				IAML		09 46 29.6	
	comp=Z,15nm,0.9s						
CONA	**Conrad Observa**	**3.75**	**181**	*i* Pn	**Pn**	**09 45 28.0**	**+1.4**
	comp=Z,2.1nm,0.2s,SNR=6.3						
CONA				*e*Sg	**Sg**	**09 46 28.2**	**+0.3**
	comp=Z,51nm,0.6s						
RONA	**Rosalia, Austr**	**3.98**	**177**	*e*Pn	**Pn**	**09 45 31.1**	**+1.4**
	comp=Z,1.3nm,0.2s						
RONA				Sg	**Sg**	**09 46 34.9**	**-0.5**
	comp=Z,30nm,0.5s						
MOA	**Molln**	**3.99**	**197**	*i* Pn	**Pn**	**09 45 30.9**	**+1.0**
	comp=Z,5.1nm,0.3s,SNR=5.6						
MOA				*e*Sg	**Sg**	**09 46 35.2**	**-0.3**
	comp=Z,29nm,0.5s						
STHS	**Stebnicka Huta**	**4.04**	**122**	*e*PN	**Pn**	**09 45 31.8**	**+1.2**
STHS				*e*PG	**Pg**	**09 45 45.4**	**+0.5**
STHS				*e*SG	**Sg**	**09 46 40.3**	**+3.1**
LUNU	**Lund**	**4.24**	**340**	P	**Pn**	**09 45 35.1**	**+1.8**
LUNU				S	**Sn**	**09 46 22.9**	**-0.5**
LUNU	**Lund**	**4.24**	**340**	*i* P	**Pn**	**09 45 34.6**	**+1.4**
LUNU				P	**Pn**	**09 45 35.1**	**+1.8**
LUNU				*e*S	**Sn**	**09 46 22.0**	**-1.4**
LUNU				S	**Sn**	**09 46 22.9**	**-0.5**
BIOA	**Bad Ischl, Aus**	**4.27**	**202**	*i* Pn	**Pn**	**09 45 35.6**	**+1.9**
	comp=Z,2.8nm,0.2s						
BIOA				*e*Sg	**Sg**	**09 46 42.9**	**-1.6**
	comp=Z,43nm,0.4s						
KECS	**Kecovo**	**4.31**	**136**	*e*PN	**Pn**	**09 45 36.0**	**+1.8**
KECS				*e*PG	**Pg**	**09 45 52.0**	**+2.0**
KECS				*e*SG	**Sg**	**09 46 50.0**	**+4.1**
ARSA	**Arzberg**	**4.44**	**184**	*e*Pn	**Pn**	**09 45 38.4**	**+2.4**
	comp=Z,0.6nm,0.2s						
ARSA				Sg	**Sg**	**09 46 50.0**	**0.0**
	comp=Z,33nm,0.7s						
BJUU	**Bjuv**	**4.74**	**339**	P	**Pn**	**09 45 40.7**	**+0.6**
BJUU				S	**Sn**	**09 46 35.2**	**-0.5**
BJUU	**Bjuv**	**4.74**	**339**	*i* P	**Pn**	**09 45 40.6**	**+0.4**
BJUU				P	**Pn**	**09 45 40.7**	**+0.6**
BJUU				*i* S	**Sn**	**09 46 34.6**	**-1.2**
BJUU				S	**Sn**	**09 46 35.2**	**-0.5**
LESA	**Schwarzleotal**	**4.77**	**208**	*e*Pn	**Pn**	**09 45 42.0**	**+1.4**
	comp=Z,0.1nm,0.1s						
LESA				*e*Sg	**Sg**	**09 46 59.1**	**-1.5**
	comp=Z,8.8nm,0.4s						
KBA	**Koelnbreinsper**	**4.91**	**202**	Pn	**Pn**	**09 45 44.0**	**+1.3**
	comp=Z,1.1nm,0.2s,SNR=6.5						
KBA				*e*Sg	**Sg**	**09 47 03.7**	**-1.5**
	comp=Z,15nm,0.5s						
DEL	**Delary**	**4.96**	**346**	P	**Pn**	**09 45 44.1**	**+0.9**
DEL				S	**Sn**	**09 46 40.0**	**-1.2**
DEL	**Delary**	**4.96**	**346**	P	**Pn**	**09 45 44.1**	**+0.9**
DEL				*i* P	**Pn**	**09 45 44.3**	**+1.2**
DEL				*i* S	**Sn**	**09 46 38.9**	**-2.3**
DEL				S	**Sn**	**09 46 40.0**	**-1.2**
OBKA	**Obir**	**5.25**	**191**	*i* Pn	**Pn**	**09 45 48.2**	**+0.9**
	comp=Z,0.9nm,0.2s						
OBKA				*e*Sg	**Sg**	**09 47 16.1**	**0.0**
	comp=Z,9.0nm,0.8s						
FETA	**Feichten**	**5.79**	**218**	*e*Pn	**Pn**	**09 45 56.4**	**+1.8**
	comp=Z,1.1nm,0.4s						
FETA				Sg	**Sg**	**09 47 31.9**	**-1.3**
	comp=Z,3.2nm,0.5s						
EKSU	**Eksjoe**	**5.92**	**356**	P	**Pn**	**09 45 58.2**	**+1.9**
EKSU	**Eksjoe**	**5.92**	**356**	P	**Pn**	**09 45 58.2**	**+1.9**
LNKU	**Linkoeping**	**6.57**	**358**	P	**Pn**	**09 46 06.8**	**+1.7**
LNKU	**Linkoeping**	**6.57**	**358**	P	**Pn**	**09 46 06.8**	**+1.7**
FKPU	**Falk**	**6.63**	**350**	P	**Pn**	**09 46 08.2**	**+2.2**
FKPU	**Falk**	**6.63**	**350**	P	**Pn**	**09 46 08.2**	**+2.2**
NACGM	**Naroch**	**7.23**	**59**	*e*P	**Pn**	**09 46 11.1**	**-3.3**
	comp=Z,7.0nm,0.7s,baz=248						
AKASG	**Malin Array Be**	**8.38**	**91**	Pn	**Pn**	**09 46 29.9**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=279,slow=12,SNR=2.2						
AKASG				Sn	**Sn**	**09 48 01.3**	**-3.9**
	comp=Z,1.0nm,0.3s,baz=276,slow=23,SNR=3.4						
	comp=Z,0.2nm,0.2s						
HFS	**Hagfors**	**8.58**	**352**	Pn	**Pn**	**09 46 32.9**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=160,slow=14,SNR=5.5						
HFS				Sn	**Sn**	**09 48 05.8**	**-4.3**
	comp=Z,0.1nm,0.3s,baz=172,slow=33,SNR=1.4						
	comp=Z,3.1nm,0.8s						
NOA	**NORSAR Array B**	**9.75**	**346**	Pn	**Pn**	**09 46 49.3**	**+0.4**
	baz=171,slow=17,SNR=4.1						
	comp=Z,0.1nm,0.4s						
FINES	**FINESS Array B**	**11.25**	**26**	Pn	**Pn**	**09 47 09.7**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=218,slow=12,SNR=8.4						
FINES				Sn	**Sn**	**09 49 08.4**	**-7.1**
	comp=Z,0.3nm,0.3s,baz=217,slow=22,SNR=4.1						
	comp=Z,4.5nm,0.9s						
EKA	**Eskdalemuir Ar**	**11.96**	**295**	Pn	**Pn**	**09 47 18.4**	**-0.7**
	baz=103,slow=14						
	comp=Z,0.8nm,0.6s						

IDC 19 09:45:26.0±2.8, 53°.75N×86°.74E, h0^{km}, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=26.0km s-min=14.4km az=61.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.16**	**281**	I	I	09 52 20.0	
	baz=98,slow=347,SNR=5.4						
ZALV	**Zalesovo Beam**	**1.16**	**281**	Pg	Pg	09 45 47.8	-0.3
	1.2nm,0.3s,baz=103,slow=14,SNR=9.5						
ZALV				Lg	Lg	09 46 03.6	
	1.3nm,0.3s,baz=99,slow=26,SNR=6.5						
KURBB	**Kurchatov Arra**	**5.94**	**241**	Pn	Pn	09 46 56.4	+1.2
	0.1nm,0.3s,baz=59,slow=14,SNR=4.4						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.53**	**204**	Pn	Pn	09 47 17.9	+0.9
	0.2nm,0.3s,baz=25,slow=14,SNR=7.5						
	0.3nm,0.3s						

BER 19 10:00:28.0±1.7, 67°.59N×26°.97E, h0^{km}, ML1.2, Suspected explosion

UPP 19 10:00:29.0±1.0, 67°.69N×26°.57E, h0^{km}, ML1.9, Presumed earthquake

HEL 19 10:00:26.8±0.1, 67°.71N×26°.96E, h0^{km}, ML1.8, Suspected explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAJF	**Raja-Jooseppi**	**0.92**	**33**	PB	Pg	10 00 44.1	-0.3
RAJF				SB	Sb	10 00 58.1	-0.3
VRF	**Varrio**	**1.01**	**87**	PB	Pg	10 00 45.7	-0.5
VRF				MSG		10 00 57.7	
	comp=Z,7.4nm,0.2s						

VRF				SB	Sg	10 00 58.7	-0.5
RNF	**Rovaniemi**	**1.17**	**199**	PB	Pg	10 00 48.2	-0.9
	baz=22						
RNF				SG	Sg	10 01 04.2	-0.1
KLF	**Kolari**	**1.25**	**249**	PG	Pg	10 00 49.6	-1.1
	baz=63						
KLF				MSG		10 01 04.7	
	comp=Z,5.8nm,0.2s						
KLF				SB	Sg	10 01 06.5	-0.3
HEF	**Hetta**	**1.42**	**301**	*e*P	Pn	10 00 53.2	-0.7
HEF				*e*S	Sb	10 01 12.8	0.0
HEF	**Hetta**	**1.42**	**301**	PN	Pn	10 00 53.1	-0.7
HEF				MSG		10 01 09.6	
	comp=Z,5.3nm,0.2s						
HEF				SN	Sb	10 01 12.8	0.0
PAJU	**Pajala**	**1.64**	**247**	P	Pn	10 00 56.4	-0.5
PAJU				S	Sn	10 01 18.3	-0.3
PAJU	**Pajala**	**1.64**	**247**	PG	Pn	10 00 56.5	-0.3
PAJU				SN	Sn	10 01 18.4	-0.2
OLKF	**Oulanka, Finla**	**1.69**	**144**	PG	Pn	10 00 57.1	-0.5
OLKF				MSG		10 01 17.3	
	comp=Z,14nm,0.2s						
RANF	**Ranua**	**1.71**	**182**	PG	Pn	10 00 57.2	-0.6
	baz=5.0						
KTK1	**Kautokeino**	**1.90**	**315**	*e*P	Pn	10 01 01.1	+0.7
KTK1				*e*S	Sb	10 01 26.1	-0.4
KTK1				IAML		10 01 29.9	
	comp=Z,3.1nm,0.2s						
KTK1	**Kautokeino**	**1.90**	**315**	PG	Pn	10 01 01.1	+0.7
KTK1				SG	Sb	10 01 27.0	+0.5
ARA0	**ARCESS Array S**	**1.91**	**344**	*e*P	Pn	10 01 01.4	+0.9
ARA0				*e*S	Sb	10 01 26.6	-0.2
ARA0				IAML		10 01 28.1	
	comp=Z,4.1nm,0.1s						
ARA0	**ARCESS Array S**	**1.91**	**344**	PG	Pn	10 01 01.4	+0.8
ARA0				SG	Sb	10 01 26.8	0.0
LANU	**Lannavaara**	**1.91**	**282**	P	Pn	10 01 00.5	0.0
LANU	**Lannavaara**	**1.91**	**282**	PG	Pn	10 01 00.6	0.0
	baz=96						
LANU				SG	Sb	10 01 27.3	+0.5
MASU	**Masugnsbyn**	**1.92**	**265**	P	Pn	10 01 01.0	+0.3
TOF	**Tornio**	**1.94**	**214**	PG	Pn	10 01 01.5	+0.5
	baz=35						
TOF				MSG		10 01 24.6	
	comp=Z,4.5nm,0.2s						
KEV	**Kevo**	**2.05**	**0**	PG	Pn	10 01 03.2	+0.7
KEV				SG	Sb	10 01 30.3	-0.6
ERTU	**Ertsjaerv**	**2.19**	**240**	P	Pn	10 01 05.3	+0.9
ERTU	**Ertsjaerv**	**2.19**	**240**	PG	Pn	10 01 05.2	+0.7
	baz=56						
KALU	**Kalix**	**2.34**	**219**	P	Pn	10 01 07.4	+0.9
KALU	**Kalix**	**2.34**	**219**	PB	Pn	10 01 07.4	+0.9
KALU				SG	Sb	10 01 38.8	-0.4
KU1	**Kurvinen**	**2.39**	**153**	PN	Pn	10 01 04.4	-2.7
KUA	**Kurravaara**	**2.52**	**279**	P	Pn	10 01 09.8	+0.8
	baz=87						
DUNU	**Dundret**	**2.54**	**259**	P	Pn	10 01 09.5	+0.3
KOVU	**Salmi**	**2.61**	**284**	P	Pn	10 01 11.1	+0.8
	baz=125						
KIF	**Kilpisjarvi**	**2.62**	**302**	*e*P	Pn	10 01 09.8	-0.6
KIF	**Kilpisjarvi**	**2.62**	**302**	PB	Pn	10 01 12.3	+1.9
KIF				MSG		10 01 44.8	
	comp=Z,1.7nm,0.2s						
KIF				SG	Sb	10 01 47.7	+0.4
RATU	**Laukkuluspa**	**2.80**	**276**	P	Pn	10 01 13.5	+0.6
HARU	**Harads**	**2.82**	**239**	P	Pn	10 01 13.3	+0.3
NIKU	**Nikkaluokta**	**3.01**	**277**	P	Pn	10 01 16.4	+0.7
SALU	**Saltoluokta**	**3.26**	**268**	*e*P	Pn	10 01 19.8	+0.6
OBF0	**Syolatti, Pyha**	**3.41**	**200**	PN	Pn	10 01 19.6	-1.6

IDC ***19*** *10:00:28.5±3.7, 64°.57N×32°.16E, h0^{km}, mbtmp3.2/4, ML2.4/4, Error ellipse: s-maj=50.6km s-min=13.1km az=99.0*

HEL ***19*** *10:00:31.1±0.2, 64°.66N×30°.76E, h0^{km}, ML2.1, Suspected explosion*

ISC 19 10:00:30.8±1.1**, 64°.72N**±0°.03×**30°.82E**±0°.06**, h0^{km}, n42, σ1ˢ.47**/52**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.63**	**218**	PG	**Pg**	**10 00 41.5**	**-1.4**
RMF				MSG		10 00 49.3	
	comp=Z,33nm,0.2s						
KU1	**Kurvinen**	**1.00**	**328**	PG	**Pg**	**10 00 49.7**	**-0.2**
KU6	**Riekki**	**1.37**	**344**	PG	**Pg**	**10 00 56.4**	**-0.5**
	baz=164						
KU6				MSG		10 01 13.9	
	comp=Z,17nm,0.2s						
KU6				SG	**Sb**	**10 01 14.8**	**-0.4**
MSF	**Maaselka**	**1.41**	**329**	PG	**Pn**	**10 00 57.0**	**-0.7**
	baz=152						
MSF				SN	**Sn**	**10 01 17.1**	**+0.1**
KU2	**Taivalkoski**	**1.48**	**314**	PG	**Pn**	**10 00 57.9**	**-0.7**
KU2				SN	**Sn**	**10 01 18.8**	**+0.2**
OLKF	**Oulanka, Finla**	**1.72**	**340**	PG	**Pg**	**10 01 04.4**	**+0.8**
OLKF				MSG		10 01 23.7	
	comp=Z,14nm,0.2s						
OLKF				SN	**Sg**	**10 01 27.3**	**+1.5**
JOF	**Joensuu**	**1.82**	**173**	*e*P	**Pn**	**10 01 03.5**	**+0.2**
JOF	**Joensuu**	**1.82**	**173**	PG	**Pn**	**10 01 02.7**	**-0.6**
JOF				SN	**Sb**	**10 01 28.3**	**+0.2**
NIF	**Nilsia**	**1.88**	**226**	PG	**Pn**	**10 01 03.6**	**-0.5**
	baz=40						
NIF				MSG		10 01 25.3	
	comp=Z,12nm,0.2s						
OUL	**Oulu**	**2.13**	**282**	PN	**Pn**	**10 01 08.8**	**+1.3**
OUL	**Oulu**	**2.13**	**282**	PG	**Pn**	**10 01 08.8**	**+1.3**
OUL				SG	**Sn**	**10 01 36.0**	**+1.3**
RANF	**Ranua**	**2.13**	**309**	PG	**Pb**	**10 01 10.3**	**+0.1**
	baz=123						
RANF				SG	**Sb**	**10 01 37.8**	**+0.6**
OBF4	**Vikkela, Lumij**	**2.45**	**275**	MSG		10 01 55.2	
	comp=Z,4.3nm,0.2s						
OBF4	**Vikkela, Lumij**	**2.45**	**275**	PG	**Pn**	**10 01 13.5**	**+1.6**
	baz=94						
OBF4				MSG		10 01 42.9	
	comp=Z,9.2nm,0.2s						
OBF4	**Vikkela, Lumij**	**2.45**	**275**	PN	**Pn**	**10 01 13.5**	**+1.6**
OBF4	**Vikkela, Lumij**	**2.45**	**275**	SN	**Sb**	**10 01 47.5**	**+1.2**
OUF	**Merijarvi**	**2.65**	**265**	PN	**Pn**	**10 01 14.9**	**+0.2**
OUF				MSG		10 01 48.6	
	comp=Z,18nm,0.2s						
OUF				SG	**Sb**	**10 01 50.9**	**-1.2**
RNF	**Rovaniemi**	**2.75**	**316**	SG	**Sb**	**10 01 56.2**	**+1.3**
OBF0	**Syolatti, Pyha**	**2.85**	**269**	PB	**Pn**	**10 01 17.9**	**+0.6**
OBF0				MSG		10 01 54.0	
	comp=Z,9.0nm,0.2s						
OBF0				SG	**Sb**	**10 01 57.5**	**-0.1**
OBF0	**Syolatti, Pyha**	**2.85**	**269**	SN	**Sb**	**10 01 57.5**	**-0.1**
SUF	**Sumiainen**	**2.89**	**228**	PB	**Pn**	**10 01 19.6**	**+1.6**
SUF				MSG		10 01 54.3	
	comp=Z,4.4nm,0.2s						
TOF	**Tornio**	**3.04**	**300**	PG	**Pb**	**10 01 26.7**	**+1.0**
TOF				MSG		10 02 00.8	
	comp=Z,3.9nm,0.2s						
TOF				SG	**Sb**	**10 02 04.4**	**+1.1**
VRF	**Varrio**	**3.08**	**351**	MSG		10 02 03.3	
	comp=Z,4.6nm,0.2s						
VRF				SG	**Sg**	**10 02 08.2**	**-1.5**
OBF8	**Ulkokalla**	**3.21**	**266**	PN	**Pn**	**10 01 24.5**	**+2.2**
OBF8	**Ulkokalla**	**3.21**	**266**	PB	**Pn**	**10 01 24.5**	**+2.2**
RUF	**Ruokolahti**	**3.41**	**195**	PN	**Pn**	**10 01 25.9**	**+0.7**
KEF	**Keuruu**	**3.70**	**229**	*e*P	**Pn**	**10 01 31.4**	**+2.3**
KEF	**Keuruu**	**3.70**	**229**	PB	**Pn**	**10 01 30.8**	**+1.8**
	baz=45						
KLF	**Kolari**	**3.77**	**315**	SG	**Sg**	**10 02 28.8**	**-3.0**
FINES	**FINESS Array B**	**3.93**	**215**	Pn	**Pn**	**10 01 32.2**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=40,slow=13,SNR=9.4						
FINES				Lg	Lg	10 02 30.9	
	comp=Z,1.5nm,0.3s,baz=43,slow=29,SNR=10						
	comp=Z,4.2nm,1.0s						
VAF	**Ylistaro**	**3.98**	**249**	*e*P	**Pn**	**10 01 34.3**	**+1.5**
VAF	**Ylistaro**	**3.98**	**249**	PN	**Pn**	**10 01 33.7**	**+0.9**
	baz=59						
ERTU	**Ertsjaerv**	**4.02**	**301**	PN	**Pn**	**10 01 34.7**	**+1.2**
BURU	**Burvik**	**4.06**	**272**	PG	**Pn**	**10 01 34.9**	**+0.9**
BURU	**Burvik**	**4.06**	**272**	PN	**Pn**	**10 01 34.9**	**+0.9**
UMAU	**Umeaa**	**4.50**	**264**	PN	**Pn**	**10 01 38.5**	**-1.5**
UMAU	**Umeaa**	**4.50**	**264**	PN	**Pn**	**10 01 38.5**	**-1.5**
HEF	**Hetta**	**4.68**	**326**	SG	**Sg**	**10 02 55.7**	**-5.1**
ARCES	**ARCESS Array B**	**5.26**	**339**	Pn	**Pn**	**10 01 51.2**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=153,slow=14,SNR=6.2						
ARCES				Sn	**Sn**	**10 02 51.3**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=152,slow=23,SNR=2.3						
ARCES				Lg	Lg	10 03 12.4	
	comp=Z,0.5nm,0.3s,baz=157,slow=28,SNR=8.8						
	comp=Z,0.6nm,0.2s						
RAF	**Rauma**	**5.56**	**232**	*e*P	**Pn**	**10 01 57.9**	**+3.3**
HFS	**Hagfors**	**9.16**	**248**	Pn	**Pn**	**10 02 44.5**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=53,slow=12,SNR=10						
	comp=Z,0.6nm,0.3s						
NOA	**NORSAR Array B**	**9.66**	**257**	Pn	**Pn**	**10 02 51.0**	**+0.1**
	baz=68,slow=13,SNR=6.5						
	comp=Z,0.2nm,0.3s						

IDC ***19*** *10:01:48.3±8.0, 3°.36S×144°.65E, h0^{km}, mb4.3/3, mbtmp4.3/5, ML4.3/1, MS3.2/5, Error ellipse: s-maj=118.9km s-min=45.1km az=24.0*

NEIC ***19*** *10:01:57.1±1.9, 3°.5S±0°.1×145°.01E±0°.09, h73^{km}±18^{km}, mb4.1/13, Error ellipse: s-maj=14.9km s-min=13.3km az=169.0*

ISC 19 10:01:53.5±1.0**, 3°.57S**±0°.09×**144°.8E**±0°.1**, h22^{km}, n25, σ1ˢ.31**/21**, mb4.3**/5**, MS3.2**/3**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.02**	**60**		**Pn**	**10 02 39.8**	**-0.3**
JAY	**Jayapura**	**4.17**	**284**	LR	LR	10 04 22.9	
	comp=Z,133nm,19.7s,baz=20,slow=38						
PMG	**Port Moresby**	**6.27**	**158**	Pn	**Pn**	**10 03 25.0**	**+0.2**
	9.8nm,0.5s,baz=356,slow=8.4,SNR=5.1						
PMG				Sn	**Sn**	**10 04 36.4**	**+0.7**
	0.2nm,0.3s,baz=131,slow=20,SNR=1.6						
PMG				LR	LR	10 06 17.2	
	comp=Z,224nm,19.1s,baz=356,slow=41						
COEN	**Coen**	**10.44**	**188**	Pn	**Pn**	**10 04 25.5**	**+3.5**
MTN	**Manton Dam**	**16.31**	**235**	Pn	**P**	**10 05 43.2**	**-1.0**
MTN				IAmb	IAmb	10 06 08.1	
	comp=Z,15nm,1.4s						
WB0	**Warramunga Arr**	**19.01**	**211**	P	**P**	**10 06 14.2**	**+0.3**
WB0				IAmb	IAmb	10 06 33.0	
	comp=Z,13nm,1.4s						
WR8	**Warramunga Arr**	**19.11**	**211**	P	**P**	**10 06 15.0**	**-0.1**
WRAB	**Tennant Creek**	**19.17**	**211**	P	**Pn**	**10 06 16.2**	**-0.5**
WRAB				IAmb	IAmb	10 06 17.3	
	comp=Z,5.7nm,0.7s						
WRA	**Warramunga Arr**	**19.18**	**211**	P	**P**	**10 06 16.2**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=30,slow=11,SNR=46						
	comp=Z,3.0nm,0.4s						
WRA	**Warramunga Arr**	**19.18**	**211**	P	**P**	**10 06 14.7**	**-1.2**
KNRA	**Kununurra**	**19.80**	**232**	P	**P**	**10 06 22.6**	**-0.1**
KNRA				IAmb	IAmb	10 06 55.4	
	comp=Z,24nm,1.4s						
AS31	**Alice Springs**	**22.56**	**207**	P	**P**	**10 06 52.7**	**+0.3**
ASAR	**Alice Springs**	**22.56**	**207**	P	**P**	**10 06 52.8**	**+0.3**
	comp=Z,4.7nm,0.6s,baz=32,slow=9.9,SNR=117						
ASAR				LR	LR	10 16 30.0	
	comp=Z,96nm,20.2s,baz=26,slow=39						
	comp=Z,4.7nm,0.6s						
ASAR	**Alice Springs**	**22.56**	**207**	P	**P**	**10 06 52.4**	**-0.1**
FITZ	**Fitzroy Crossi**	**23.64**	**231**	P	**P**	**10 07 02.2**	**-1.1**
	comp=Z,19nm,0.5s,baz=46,slow=9.1,SNR=90						
	comp=Z,19nm,0.5s						
FITZ	**Fitzroy Crossi**	**23.64**	**231**	P	**P**	**10 07 02.6**	**-0.8**
FITZ				IAmb	IAmb	10 07 04.0	
	comp=Z,4.5nm,0.7s						
TOLI2	**Tolitoli**	**24.40**	**281**	P	**P**	**10 07 12.2**	**+1.6**
TOLI2				IAmb	IAmb	10 07 24.0	
	comp=Z,11nm,1.1s						
STKA	**Stephens Creek**	**28.31**	**186**	P	**P**	**10 07 43.9**	**-1.8**
	comp=Z,1.2nm,0.7s,baz=16,slow=7.4,SNR=3.1						
STKA				LR	LR	10 21 34.6	
	comp=Z,32nm,18.6s,baz=26,slow=42						
	comp=Z,1.2nm,0.7s						
MBWA	**Marble Bar**	**29.96**	**232**	P	**P**	**10 07 58.9**	**-1.5**
BBOO	**Buckleboo**	**30.21**	**195**	P	**P**	**10 08 00.3**	**-2.2**
BBOO				IAmb	IAmb	10 08 07.3	
	comp=Z,10nm,1.1s						
FORT	**Forrest**	**31.32**	**208**	P	**P**	**10 08 12.1**	**-0.2**
H11N1	**WAKE ISLAND Hy**	**31.77**	**42**	T	T	10 41 18.3	
	baz=225,slow=76,SNR=6.4						
H11N2	**WAKE ISLAND Hy**	**31.78**	**42**	T	T	10 41 19.5	
	baz=225,slow=76,SNR=5.7						
H11N3	**WAKE ISLAND Hy**	**31.78**	**42**	T	T	10 41 21.5	
	baz=225,slow=76,SNR=4.9						
AKTO	**Aktyubinsk**	**90.64**	**320**	LR	LR	10 56 03.8	
	comp=Z,27nm,19.7s,baz=184,slow=36						

IDC ***19*** *10:11:48.9±0.8, 6°.51N×125°.21E, h0^{km}, mb4.0/8, mbtmp4.0/8, MS3.1/18, Error ellipse: s-maj=21.5km s-min=9.1km az=115.0*

NEIC ***19*** *10:11:51.5±1.2, 6°.63N±0°.04×125°.25E±0°.06, h10^{km}±1^{km}, mb4.6/31, Error ellipse: s-maj=10.3km s-min=7.1km az=279.0*

DJA ***19*** *10:11:53.2±0.6, 7°N±3°×12°5E±°, h17^{km}±6^{km}, M4.8/19, mb4.7/19, mB5.2/6, MLv4.9/7, Mw(mB)4.7/6*

ISC 19 10:11:51.6±0.5**, 6°.60N**±0°.05×**125°.34E**±0°.08**, h10^{km}, n89, σ1ˢ.61**/63**, mb4.4**/34**, MS3.0**/16**, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.52**	**27**	Pg	**Pg**	**10 12 01.7**	**+0.1**
	1µm,0.3s,baz=243,slow=2.1,SNR=81						
DAV				Lg	Lg	10 12 11.5	
	1µm,0.3s,baz=73,slow=20,SNR=9.0						
DAV				LR	LR	10 12 30.1	
	comp=Z,4µm,21.1s,baz=320,slow=62						
DAV	**Davao City (W)**	**0.52**	**27**	P	**Pg**	**10 12 01.8**	**+0.1**
DAV	**Davao City (W)**	**0.52**	**27**	P	**Pg**	**10 11 59.0**	**-2.7**
SGSI	**Sangihe**	**2.91**	**176**	P	**Pb**	**10 12 41.5**	**-2.0**
GTOI	**Gorontalo**	**6.37**	**202**	P	**Pn**	**10 13 25.6**	**+0.1**
MRSI	**Marisa**	**6.97**	**209**	P	**Pn**	**10 13 33.6**	**-0.2**
	0.5nm100nm,0.8s						
TOLI2	**Tolitoli**	**7.10**	**220**		**Pn**	**10 13 32.0**	**-3.6**
LUWI	**Luwuk**	**8.02**	**199**	Pn	**Pn**	**10 13 48.2**	**+0.1**
LUWI	**Luwuk**	**8.02**	**199**	P	Pn	10 13 53.6	+5.4
	1µm97nm,0.9s						
APSI	**Ampana**	**8.32**	**206**	P	Pn	10 13 58.0	+5.6
	55nm,0.6s						
TGY	**Tagaytay City**	**8.62**	**330**	LR	LR	10 17 11.0	
	comp=Z,198nm,19.6s,baz=102,slow=37						
SANI	**Sanana**	**8.62**	**176**	P	**Pn**	**10 13 57.2**	**+0.7**
	38nm,0.8s						
NLAI	**Namlea**	**9.93**	**170**	P	**Pn**	**10 14 17.0**	**+2.5**
	46nm,0.9s						
KRAI	**Karang Ratu**	**10.32**	**163**	P	**Pn**	**10 14 22.9**	**+3.1**
	22nm,0.6s						
TTSI	**Tana Toraja**	**11.06**	**210**	P	Pn	10 14 38.8	+8.9
FAKI	**Fak Fak**	**11.71**	**144**	Pn	**Pn**	**10 14 38.2**	**-0.6**
SBUM	**Sibu**	**13.71**	**253**		**Pn**	**10 15 04.7**	**-1.5**
SBUM	**Sibu**	**13.71**	**253**	P	**Pn**	**10 15 08.9**	**+2.7**
KLNI	**Mataram**	**17.54**	**212**	P	**P**	**10 16 00.6**	**+3.1**
	1µm59nm,1.0s						
JAY	**Jayapura**	**17.81**	**120**	LR	LR	10 21 31.8	
	comp=Z,70nm,21.6s,baz=310,slow=33						
SNJI	**Sawahan-Nganju**	**19.69**	**224**	P	**Pn**	**10 16 26.5**	**+3.8**
	19nm,1.5s						
MTN	**Manton Dam**	**20.16**	**163**		**P**	**10 16 26.8**	**+0.5**
JOW	**Kunigami**	**20.31**	**8**	LR	LR	10 24 29.2	
	comp=Z,53nm,20.4s,baz=228,slow=37						
GUMO	**Guam**	**20.43**	**69**	LR	LR	10 23 16.3	
	comp=Z,31nm,20.3s,baz=94,slow=33						
KNRA	**Kununurra**	**22.40**	**171**		**P**	**10 16 50.8**	**+0.5**
KNRA				IAmb	IAmb	10 16 56.0	
	comp=Z,22nm,0.9s						
MDSI	**Maura Dua**	**23.83**	**243**	P	**P**	**10 17 05.2**	**+0.1**
IPM	**Ipoh**	**24.29**	**266**	P	**P**	**10 17 07.3**	**-2.2**
	comp=Z,15nm,1.5s						
FITZ	**Fitzroy Crossi**	**24.55**	**179**	P	**P**	**10 17 10.9**	**-0.7**
JCJ	**Chichijima**	**25.92**	**36**	LR	LR	10 25 38.5	
	comp=Z,39nm,21.5s,baz=52,slow=32						
NJ2	**Nanjing**	**26.03**	**347**	*e*P	**P**	**10 17 25.0**	**0.0**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PSI	**Prapat**	**26.59**	**263**	LR	LR	10 28 09.6	
	comp=Z,51nm,20.8s,baz=34,slow=37						
JNU	**Nakatsue**	**26.88**	**10**	LR	LR	10 29 09.5	
	comp=Z,23nm,19.2s,baz=93,slow=38						
PMG	**Port Moresby**	**26.94**	**126**	LR	LR	10 28 47.2	
	comp=Z,35nm,21.9s,baz=295,slow=38						
PMG	**Port Moresby**	**26.94**	**126**		**P**	**10 17 33.4**	**0.0**
COEN	**Coen**	**27.03**	**139**	P	**P**	**10 17 34.7**	**+0.5**
COEN				IAmb	IAmb	10 17 39.2	
	comp=Z,30nm,1.3s						
WB0	**Warramunga Arr**	**27.68**	**161**		**P**	**10 17 39.5**	**-0.5**
WB0				IAmb	IAmb	10 18 02.3	
	comp=Z,10nm,1.1s						
WRAB	**Tennant Creek**	**27.82**	**162**	P	**P**	**10 17 40.0**	**-1.3**
WRA	**Warramunga Arr**	**27.83**	**162**	P	**P**	**10 17 39.5**	**-1.8**
	comp=Z,1.5nm,0.5s,baz=329,slow=11,SNR=13						
	comp=Z,1.5nm,0.5s						
WRA	**Warramunga Arr**	**27.83**	**162**	IAmb	IAmb	10 17 44.7	
	comp=Z,0.3nm,1.1s						
WR8	**Warramunga Arr**	**27.89**	**161**	P	**P**	**10 17 40.8**	**-1.0**
WR8				IAmb	IAmb	10 18 18.5	
	comp=Z,5.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**28.28**	**297**	P	**P**	**10 17 43.3**	**-2.2**
	comp=Z,0.8nm,0.3s,baz=111,slow=8.8,SNR=4.8						
CMAR				LR	LR	10 29 44.0	
	comp=Z,30nm,18.2s,baz=90,slow=38						
	comp=Z,0.8nm,0.3s						
CHTO	**Chiang Mai**	**28.41**	**298**	P	**P**	**10 17 46.8**	**+0.2**
	comp=Z,5.7nm,1.4s						
JHJ	**Hachijo jima 2**	**29.60**	**25**	LR	LR	10 29 14.6	
	comp=Z,39nm,20.0s,baz=212,slow=35						
PZH	**PanZhiHua**	**29.95**	**314**	P	**P**	**10 18 01.3**	**+1.0**
KSRS	**Korea Array**	**30.80**	**4**	LR	LR	10 30 29.1	
	comp=Z,32nm,22.0s,baz=185,slow=36						
AS31	**Alice Springs**	**31.23**	**165**		**P**	**10 18 10.5**	**-0.9**
ASAR	**Alice Springs**	**31.23**	**165**	P	**P**	**10 18 10.2**	**-1.3**
	comp=Z,1.6nm,0.6s,baz=341,slow=6.8,SNR=18						
	comp=Z,1.6nm,0.6s						
ASAR	**Alice Springs**	**31.23**	**165**	P	**P**	**10 18 10.8**	**-0.7**
MJAR	**Matsushiro Arr**	**32.04**	**20**	LR	LR	10 31 39.3	
	comp=Z,36nm,18.9s,baz=190,slow=37						
HNS	**HongShan**	**32.15**	**344**	⇑P	**P**	**10 18 21.3**	**+1.9**
CTA	**Charters Tower**	**33.57**	**143**	LR	LR	10 32 11.5	
	comp=Z,28nm,18.2s,baz=254,slow=36						
BJI	**Beijing**	**34.29**	**347**	P	**P**	**10 18 39.3**	**+1.2**
BJI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**36.26**	**342**	*e*P	**P**	**10 18 55.1**	**0.0**
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
SHL	**Shillong**	**37.09**	**304**		**P**	**10 19 00.1**	**-2.5**
SHL				IAmb	IAmb	10 19 05.4	
	comp=Z,15nm,1.3s						
INKA	**Innaminka**	**37.25**	**157**	P	**P**	**10 19 03.4**	**-0.1**
FORT	**Forrest**	**37.26**	**176**	P	**P**	**10 19 03.2**	**-0.4**
FORT				IAmb	IAmb	10 19 12.2	
	comp=Z,8.8nm,1.1s						
USRK	**Ussuriysk Ar.**	**37.90**	**8**	P	**P**	**10 19 07.7**	**-1.2**
	comp=Z,5.8nm,0.9s,baz=186,slow=9.9,SNR=7.0						
	comp=Z,5.8nm,0.9s						
MDJ	**Mudanjiang**	**38.05**	**5**	P	**P**	**10 19 10.5**	**+0.4**
MDJ				S	**S**	**10 25 04.8**	**+2.2**
MDJ				SS	**SnSn**	**10 27 46.8**	**+1.5**
MDJ	**Mudanjiang**	**38.05**	**5**	ScS	ScS	10 29 21.8	-0.8
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MDJ				LR	LR		
	comp=N,420nm,4.1s						
MDJ				LR	LR		
	comp=E,270nm,4.9s						
MDJ				LR	LR		
	comp=Z,340nm,4.4s						
GTA	**Gaotai**	**39.94**	**329**	*e*P	**P**	**10 19 29.3**	**+3.0**
GTA				pP	sP	10 19 33.1	+2.5
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ASAJ	**Asahikawa**	**40.31**	**19**	LR	LR	10 34 31.1	
	comp=Z,34nm,21.7s,baz=137,slow=34						
BBOO	**Buckleboo**	**40.50**	**166**	P	**P**	**10 19 30.2**	**-0.6**
BBOO				IAmb	IAmb	10 19 36.1	
	comp=Z,18nm,1.2s						
STKA	**Stephens Creek**	**41.29**	**159**	P	**P**	**10 19 36.2**	**-1.1**
	comp=Z,2.3nm,0.6s,baz=324,slow=9.3,SNR=5.2						
	comp=Z,2.3nm,0.6s						
STKA	**Stephens Creek**	**41.29**	**159**		**P**	**10 19 37.6**	**+0.2**
SONM	**Songino Array**	**44.15**	**342**	P	**P**	**10 20 01.6**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=152,slow=6.5,SNR=4.0						
SONM				LR	LR	10 39 05.2	
	comp=Z,40nm,19.2s,baz=244,slow=37						
	comp=Z,0.5nm,0.7s						
KSH	**Kashi**	**55.05**	**314**	P	**P**	**10 21 23.4**	**-0.5**
KSH				pmax	pmax		
	comp=Z,5.0nm,1.5s						
MA2	**Magadan**	**56.29**	**15**	LR	LR	10 48 54.1	
	comp=Z,15nm,18.1s,baz=132,slow=39						
AAK	**Ala-Archa**	**57.32**	**317**		**P**	**10 21 38.1**	**-1.9**
AAK				IAmb	IAmb	10 21 45.0	
	comp=Z,4.3nm,1.1s						
KURBB	**Kurchatov Arra**	**58.59**	**327**	P	**P**	**10 21 47.8**	**-0.8**
	comp=Z,0.7nm,0.3s,baz=126,slow=6.4,SNR=1.8						
	comp=Z,0.7nm,0.3s						
KURK	**Kurchatov**	**58.59**	**327**	P	**P**	**10 21 47.8**	**-0.8**
KURK	**Kurchatov**	**58.59**	**327**	IAmb	IAmb	10 22 25.4	
	comp=Z,3.8nm,1.1s						
GAR	**Garm**	**58.98**	**312**		**P**	**10 21 50.0**	**-1.7**
KK31	**Karatay Array**	**60.20**	**316**	P	**P**	**10 21 57.8**	**-2.2**
KKAR	**Karatay Array**	**60.20**	**316**		**P**	**10 21 57.3**	**-2.7**
BVAR	**Borovoye Array**	**64.17**	**327**	P	**P**	**10 22 28.4**	**+2.0**
	comp=Z,0.4nm,0.5s,baz=110,slow=8.4,SNR=3.9						
AB31	**Akbulak array**	**69.06**	**320**		**P**	**10 22 56.7**	**-1.0**
AB31				IAmb	IAmb	10 22 59.5	
	comp=Z,4.7nm,1.2s						
ABKAR	**Akbulak array**	**69.06**	**320**	P	**P**	**10 22 56.8**	**-0.9**
KIRV	**Kirov**	**77.06**	**329**	LR	LR	10 59 21.2	
	comp=Z,31nm,19.4s,baz=335,slow=37						
C19K	**Lookout Ridge**	**78.55**	**21**		**P**	**10 23 52.9**	**-0.2**
C19K				IAmb	IAmb	10 24 02.2	
	comp=Z,6.6nm,1.1s						
D19K	**Kuna River**	**78.96**	**21**	IAmb	IAmb	10 24 01.3	
	comp=Z,8.4nm,1.4s						
B20K	**Meade River**	**79.56**	**20**	IAmb	IAmb	10 24 40.1	
	comp=Z,4.6nm,0.8s						
B21K	**Ikpikpuk River**	**80.38**	**20**	IAmb	IAmb	10 24 07.6	
	comp=Z,14nm,1.4s						
E22K	**Anaktuvuk Pass**	**81.24**	**22**	IAmb	IAmb	10 24 17.3	
	comp=Z,6.1nm,1.2s						
C23K	**Itkillik River**	**81.78**	**20**	IAmb	IAmb	10 24 20.3	
	comp=Z,14nm,1.5s						
MCK	**McKinley**	**82.22**	**27**	P	**P**	**10 24 12.7**	**-0.2**
ILAR	**Eielson Array**	**83.12**	**26**	P	**P**	**10 24 15.9**	**-1.6**
	comp=Z,0.5nm,0.7s,baz=231,slow=4.8,SNR=7.9						
	comp=Z,0.5nm,0.7s						
I27K	**Kandik River**	**85.30**	**25**		**P**	**10 24 28.0**	**-0.6**
I28M	**Miner Creek**	**86.01**	**25**	IAmb	IAmb	10 24 37.3	
	comp=Z,5.7nm,1.0s						
NOA	**NORSAR Array B**	**95.61**	**333**	LR	LR	11 13 21.9	
	comp=Z,12nm,18.2s,baz=245,slow=39						

IDC ***19*** *10:13:53.1±9.9, 20°.70S×179°.02W, h690^{km}±133^{km}, mb2.8/6, mbtmp3.8/6, Error ellipse: s-maj=130.7km s-min=43.8km az=158.0*

ISC 19 10:13:49.7±2.1**, 20°.6S**±0°.8×**178°.9W**±0°.4**, h645^{km}, n7, σ0ˢ.70**/7**, mb3.3**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.63**	**257**	P	**P**	**10 21 00.2**	**+0.2**
	1.9nm,0.5s,baz=98,slow=7.8,SNR=22						
	1.9nm,0.5s						
WRA	**Warramunga Arr**	**43.71**	**262**	P	**P**	**10 21 00.9**	**+0.3**
	0.5nm,0.3s,baz=97,slow=8.8,SNR=22						
	0.5nm,0.3s						
NVAR	**Mina Array Bea**	**81.73**	**44**	P	**P**	**10 25 03.7**	**+0.4**
	0.4nm,0.6s,baz=227,slow=7.9,SNR=4.9						
	0.4nm,0.6s						
TXAR	**Lajitas Array**	**87.87**	**58**	P	**P**	**10 25 32.9**	**0.0**
	0.4nm,0.8s,baz=235,slow=4.4,SNR=3.8						
	0.4nm,0.8s						
ILAR	**Eielson Array**	**88.65**	**13**	P	**P**	**10 25 35.5**	**-0.1**
	0.1nm,0.4s,baz=204,slow=4.9,SNR=4.4						
	0.1nm,0.4s						
PDAR	**Pinedale Array**	**89.67**	**44**	P	**P**	**10 25 41.5**	**+0.4**
	0.4nm,0.6s,baz=205,slow=3.1,SNR=4.5						
	0.4nm,0.6s						
AKASG	**Malin Array Be**	**142.71**	**330**	PKP	**PKPdf**	**10 32 09.8**	**-1.2**
	1.1nm,0.5s,baz=43,slow=4.6,SNR=4.6						

NNC ***19*** *10:15:32.9±1.0, 51°.53N×75°.61E, h0^{km}, mb3.2, mpv2.7, Error ellipse: s-maj=49.1km s-min=6.2km az=26.0, Suspected Mining explosion.*

IDC ***19*** *10:15:35.2±1.1, 51°.43N×75°.75E, h0^{km}, mbtmp2.7/3, ML2.0/3, Error ellipse: s-maj=31.4km s-min=8.6km az=29.0*

ISC 19 10:15:34.7±1.1**, 51°.3N**±0°.1×**75°.57E**±0°.07**, h0^{km}, n11,**

σ0ˢ.57/8, 4C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	1.98	108	Pg	Pn	10 16 10.2	+0.6
	0.7nm,0.3s,baz=299,slow=18,SNR=9.8						
KURBB				Lg	Lg	10 16 35.9	
	0.9nm,0.3s,baz=297,slow=32,SNR=8.9						
KURBB	Kurchatov Arra	1.98	108	⇑Pg	Pb	10 16 11.0	-0.7
	8.9nm,0.5s						
KURBB				⇑Lg	Lg	10 16 38.1	
	24nm,0.3s						
KURK	Kurchatov	2.01	105	⇑Pg	Pn	10 16 10.5	+0.7
	1.1nm,0.5s						
KURK				⇓Lg	Lg	10 16 36.5	
	2.6nm,0.3s						
BVA0	Borovoye Array	3.64	301	⇓Lg	Lg	10 17 25.6	
	7.4nm,1.0s,baz=114,slow=29,SNR=5.7						
BVAR	Borovoye Array	3.64	301	Pn	Pn	10 16 32.5	+0.2
	0.1nm,0.3s,baz=109,slow=13,SNR=2.8						
BVAR				Sn	Sn	10 17 16.2	+0.4
	0.2nm,0.3s,baz=111,slow=20,SNR=6.9						
BVAR				Lg	Lg	10 17 25.6	
	0.2nm,0.3s,baz=109,slow=26,SNR=6.9						
	0.5nm,0.4s						
BRVK	Borovoye	3.71	301	⇑Lg	Lg	10 17 26.4	
	1.8nm,0.5s						
MAKZ	Makanchi	6.15	134	⇓Lg	Lg	10 18 51.9	
	3.6nm,0.9s						
ZALV	Zalesovo Beam	6.23	61	Pn	Pn	10 17 08.0	+0.1
	0.4nm,0.3s,baz=254,slow=14,SNR=5.8						
	1.1nm,0.4s						
I46RU	ZALESOVO INFRA	6.23	61	I	I	10 52 40.0	
	baz=247,slow=319,SNR=1.6						
MK31	Makanchi Array	6.30	133	⇓Lg	Lg	10 18 56.9	
	1.4nm,0.5s,baz=320,slow=25,SNR=2.7						
MKAR	Makanchi Array	6.30	133	Pn	Pn	10 17 09.1	+0.2
	0.1nm,0.3s,baz=325,slow=12,SNR=2.0						
MKAR				Sn	Sn	10 18 21.6	+0.1
	0.1nm,0.3s,baz=324,slow=21,SNR=2.4						
	0.2nm,0.4s						

HEL 19 10:16:05.2±0.5, 60°.97N×28°.96E, h0km, ML1.2, Suspected explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUF	Ruokolahti	0.45	359	PG	Pg	10 16 13.3	-0.6
	baz=179						
RUF				SG	Sg	10 16 19.1	-0.6
VJF	Virojoki	0.82	238	PG	Pg	10 16 20.1	-0.7
VJF				MSG		10 16 30.6	
	comp=Z,2.9nm,0.2s						
VJF				SB	Sg	10 16 31.7	+0.3
FIA0	FINESS Array S	1.48	290	PN	Pn	10 16 32.2	-0.8
FIA0				MSG		10 16 49.5	
	comp=Z,2.0nm,0.2s						
FIA0				SN	Sn	10 16 53.8	+0.9
PVF	Pernaja	1.58	256	PG	Pn	10 16 33.2	-1.3
PVF				MSG		10 16 52.6	
	comp=Z,2.2nm,0.2s						
SUF	Sumiainen	2.20	324	PG	Pb	10 16 44.9	-1.0
SUF				MSG		10 17 10.5	
	comp=Z,0.5nm,0.2s						
JOF	Joensuu	2.25	29	SB	Sn	10 17 12.7	+0.8
NIF	Nilsia	2.48	348	PG	Pb	10 16 49.3	-1.4
	baz=171						
NIF				MSG		10 17 18.5	
	comp=Z,0.5nm,0.2s						

IDC 19 10:25:49.4±6.2, 36°.23N×71°.00E, h197km±49km, mb3.2/4, mbtmp3.8/9, MS3.6/1, Error ellipse: s-maj=57.7km s-min=27.4km az=43.0

NNC 19 10:25:57.6±4.6, 36°.98N×70°.70E, h186km±67km, mb2.9, mpv3.7, Error ellipse: s-maj=46.4km s-min=29.2km az=25.0

ISC 19 10:25:49.8±1.4, 36°.5N±0°.1×71°.0E±0°.1, h188km, n14, σ1ˢ.92/16, mb3.2/3, 2C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.65	357	P	Pn	10 27 26.5	+1.2
	7.0nm,0.6s,baz=178,slow=12,SNR=26						
KK31				⇑S	Sn	10 28 36.3	-4.7
	14nm,0.7s,baz=186,slow=19,SNR=15						
AAK	Ala-Archa	6.75	23	P	Pn	10 27 29.3	+2.6
	3.6nm,0.3s,baz=202,slow=6.4,SNR=21						
AAK				S	Sn	10 28 41.6	-1.9
	4.8nm,0.7s,baz=307,slow=23,SNR=9.7						
AAK	Ala-Archa	6.75	23	⇑P	Pn	10 27 28.9	+2.2
	3.5nm,0.7s						
AAK				⇓S	Sn	10 28 42.9	-0.6
	4.2nm,0.7s						
MKAR	Makanchi Array	13.34	36	P	P	10 28 54.5	-0.5
	1.3nm,0.7s,baz=221,slow=9.5,SNR=4.5						
AB31	Akbulak array	15.12	331	P	P	10 29 16.2	+1.7
	1.0nm,0.5s,baz=152,slow=12,SNR=22						
KURBB	Kurchatov Arra	15.18	19	P	P	10 29 15.7	+0.5
	1.3nm,0.2s,baz=208,slow=12,SNR=1.7						
BVAR	Borovoye Array	16.58	359	P	Pn	10 29 31.9	+0.5
	0.7nm,0.5s,baz=155,slow=11,SNR=4.4						
AKTO	Aktyubinsk	16.81	330	P	P	10 29 34.0	+0.8
	2.1nm,0.6s,baz=141,slow=6.9,SNR=7.4						
AKTO	Aktyubinsk	16.81	330	⇓P	P	10 29 33.8	+0.5
	2.9nm,1.1s						
ZALV	Zalesovo Beam	19.97	24	P	P	10 30 07.8	+0.4
	2.2nm,0.4s,baz=222,slow=11,SNR=11						
	2.2nm,0.4s						
ARCES	ARCESS Array B	41.18	338	P	P	10 33 15.8	+0.4
	5.3nm,1.0s,baz=108,slow=6.9,SNR=13						
	5.3nm,1.0s						
VAE	Valguarnera	44.61	289	LR	LR	10 58 47.3	
	comp=Z,67nm,19.1s,baz=166,slow=44						
YKA	Yellowknife Ar	81.30	3	P	P	10 37 44.6	0.0
	0.1nm,0.5s,baz=338,slow=8.9,SNR=5.5						
	0.1nm,0.5s						
ASAR	Alice Springs	84.24	125	P	P	10 37 58.2	-2.2
	0.4nm,0.8s,baz=304,slow=5.1,SNR=4.9						
	0.4nm,0.8s						

IDC 19 10:25:52.0±1.9, 5°.98S×130°.18E, h0km, mb3.6/2, mbtmp3.8/5, ML3.9/3, Error ellipse: s-maj=89.6km s-min=25.5km az=79.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.83	200	Pn	Pn	10 28 57.1	+1.3
	0.6nm,0.3s,baz=21,slow=9.8,SNR=46						
FITZ				Sn	Sn	10 31 08.3	-11
	0.3nm,0.3s,baz=60,slow=20,SNR=1.6						
	1.2nm,0.3s						
WRA	Warramunga Arr	14.46	164	Pn	Pn	10 29 16.2	-1.8
	0.5nm,0.3s,baz=346,slow=12,SNR=23						
WRA				Sn	Sn	10 31 46.6	-13
	0.8nm,0.3s,baz=325,slow=23,SNR=7.1						
	1.3nm,0.6s						
ASAR	Alice Springs	17.95	169	P	Pn	10 30 03.4	+0.2
	0.6nm,0.3s,baz=348,slow=12,SNR=62						
ASAR				S	Sn	10 33 12.7	-11
	0.4nm,0.4s,baz=357,slow=28,SNR=5.9						
	2.3nm,0.5s						
SONM	Songino Array	57.54	341	P	P	10 35 43.9	+0.5
	0.4nm,0.6s,baz=133,slow=6.1,SNR=2.2						
	0.4nm,0.6s						
MKAR	Makanchi Array	67.48	327	P	P	10 36 49.4	-0.4
	0.4nm,0.5s,baz=144,slow=5.4,SNR=4.8						
	0.4nm,0.5s						

NEIC 19 10:36:40.0±1.5, 10°.9S±0°.1×164°.5E±0°.2, h72km±12km, mb4.2/8, Error ellipse: s-maj=24.9km s-min=16.7km az=81.0

IDC 19 10:36:41.9±11.0, 11°.00S×164°.45E, h94km±115km, mb3.2/3, mbtmp3.7/4, ML3.8/1, MS3.2/2, Error ellipse: s-maj=83.5km s-min=32.1km az=154.0

ISC 19 10:36:35.6±1.3, 10°.8S±0°.1×164°.4E±0°.1, h29km, n14, σ1ˢ.33/16, mb4.0/7, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	5.38	149		Pn	10 37 55.3	+1.3
SANVU				Sn	Sn	10 38 53.7	-1.4
DZM	Mont Dzumac	11.38	170	P	Pn	10 39 18.7	+2.2
	0.7nm,0.3s,baz=18,slow=7.6,SNR=17						
DZM				S	Sn	10 41 22.3	-0.4
	6.4nm,0.9s,baz=127,slow=20,SNR=1.4						
DZM				LR	LR	10 43 11.2	
	comp=Z,166nm,18.2s,baz=8.0,slow=35						
	3.2nm,0.5s						
DZM	Mont Dzumac	11.38	170		Pn	10 39 18.0	+1.6
DZM				Sn	Sn	10 41 20.4	-2.3
PMG	Port Moresby	17.00	273	LR	LR	10 46 25.6	
	comp=Z,63nm,21.6s,baz=328,slow=34						
CTAO	Charters Tower	19.73	240	P	P	10 41 02.8	-0.3
WR8	Warramunga Arr	30.15	249	P	P	10 42 43.5	+0.1
WR8				IAmb	IAmb	10 43 21.2	
	comp=Z,11nm,1.5s						
WB0	Warramunga Arr	30.21	249	P	P	10 42 43.7	-0.2
WB0				IAmb	IAmb	10 42 44.4	
	comp=Z,7.3nm,1.4s						
WRAB	Tennant Creek	30.29	249	P	P	10 42 44.9	+0.3
WRAB				IAmb	IAmb	10 43 01.1	
	comp=Z,8.3nm,1.4s						
WB2	Warramunga Arr	30.29	249	P	P	10 42 43.5	-1.1
WRA	Warramunga Arr	30.30	249	P	P	10 42 46.1	+1.4
	comp=Z,0.6nm,0.6s,baz=77,slow=8.8,SNR=3.0						
	comp=Z,0.6nm,0.6s						
ASAR	Alice Springs	31.70	242	P	P	10 42 55.5	-1.5
	comp=Z,0.3nm,0.9s,baz=69,slow=8.7,SNR=6.5						
	comp=Z,0.3nm,0.9s						
BBOO	Buckleboo	34.02	226	P	P	10 43 17.2	+0.1
FITZ	Fitzroy Crossi	38.13	254	P	P	10 43 52.3	-0.3
FITZ				IAmb	IAmb	10 44 23.0	
	comp=Z,3.2nm,1.4s						
ILAR	Eielson Array	83.72	19	P	P	10 49 00.8	-0.6
	comp=Z,0.6nm,0.7s,baz=231,slow=4.6,SNR=8.6						
	comp=Z,0.6nm,0.7s						

IDC 19 10:46:39.2±8.9, 10°.37N×62°.26W, h0km, mb3.4/4, mbtmp3.4/5, ML3.1/1, Error ellipse: s-maj=197.7km s-min=48.7km az=148.0

FUNV 19 10:47:11.0, 10°.21N×64°.19W, h5km, MW2.8

ISC 19 10:46:53.7±1.9, 10°.1N±0°.2×63°.4W±0°.1, h100km, n11, σ1ˢ.35/8, mb3.4/4, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCRV	Puerto La Cruz	1.23	272	eP	Pn	10 47 18.2	+1.5
PCRV				eS	Sn	10 47 23.3	-11
TACV	Tcata	3.58	270	eP	Pn	10 47 54.8	+7.5
TACV				eS	Sn	10 48 29.8	+0.9
CACV	CAICARA DEL OR	4.02	231	eS	Sn	10 48 38.7	-0.7
BENV	Beln	4.15	268	eP	Pn	10 48 02.3	+7.3
BENV				eS	Sn	10 48 42.5	0.0
TURV	Turiamo	4.39	275	eS	Sn	10 48 47.4	-0.9
TEPV	Terepaima	5.72	269	eP	Pn	10 48 24.6	+8.4
TEPV				eS	Sn	10 49 18.7	-1.9
SDV	Santo Domingo	7.25	261	Pn	Pn	10 48 41.8	+4.5
	2.3nm,0.3s,baz=58,slow=11,SNR=8.6						
SDV				Sn	Sn	10 50 10.0	+12
	1.4nm,0.3s,baz=255,slow=21,SNR=7.1						
	2.3nm,0.4s						
TXAR	Lajitas Array	42.18	303	P	P	10 54 41.0	+4.1
	0.3nm,0.8s,baz=116,slow=7.4,SNR=4.9						
	0.3nm,0.8s						
PDAR	Pinedale Array	51.66	317	P	P	10 55 52.1	+1.4
	0.2nm,0.5s,baz=119,slow=7.5,SNR=2.7						
	0.2nm,0.5s						
YKA	Yellowknife Ar	63.83	336	P	P	10 57 14.1	-1.0
	0.3nm,0.7s,baz=112,slow=6.1,SNR=5.2						
	0.3nm,0.7s						
ILAR	Eielson Array	78.13	334	P	P	10 58 41.9	+0.2
	0.4nm,0.7s,baz=93,slow=4.9,SNR=6.7						
	0.4nm,0.7s						

TAP 19 10:48:12.4, 23°.46N×120°.63E, h11km, ML1.9, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WCKO	Fanlu	0.03	226	i P	Pg	10 48 15.0	+0.5
WCKO				i S	Sg	10 48 16.8	+0.8
CHN4	Tsaushan	0.11	197	i S	Sg	10 48 18.8	+1.4
CHN5	Tsauling	0.14	18	i S	Sg	10 48 19.5	+1.1
TPUB	Ta-pu	0.16	179	S	Sg	10 48 19.7	+1.2
ALS	Alishan	0.17	72	S	Sg	10 48 20.8	+1.6
CHY	Chiayi	0.19	282	S	Sg	10 48 21.1	+1.7
WTP	Ta-pu	0.21	183	S	Sg	10 48 21.5	+1.5
TWK	Hsinying	0.23	214	S	Sg	10 48 22.2	+1.6
WDLH	Douliu	0.24	340	eS	Sg	10 48 23.2	+2.3
SNST	Tainan City	0.27	207	eP	Pb	10 48 18.7	-0.5
SNST				eS	Sb	10 48 23.1	-0.7
CHN1	Nanshi	0.29	199	eP	Pb	10 48 19.2	-0.4
CHN1				eS	Sb	10 48 24.0	-0.4
YUS	Yu-Shan	0.30	84	eP	Pb	10 48 19.8	-0.3
YUS				eS	Sb	10 48 25.0	-0.2
WHYT	Xinyi Township	0.31	41	eP	Pb	10 48 19.6	-0.5
WHYT				eS	Sb	10 48 24.7	-0.5
STYH	Taoyuan	0.32	155	eP	Pg	10 48 19.3	+0.5
STYH				eS	Sb	10 48 24.4	-0.9
WJS	Zhushan	0.37	14	eS	Sb	10 48 26.9	0.0
WSL	Shuilin Townsh	0.37	280	eS	Sb	10 48 27.0	+0.1
SGST	Jiashian	0.38	186	eS	Sb	10 48 26.4	-0.6
SSLB	Suanglung	0.44	42	eP	Pb	10 48 21.8	-0.5
SSLB				eS	Sb	10 48 28.6	-0.3
ELDTW	Lidau	0.45	127	eP	Pb	10 48 21.9	-0.4
ELDTW				eS	Sb	10 48 28.5	-0.6
TYC	Yuchr	0.49	25	eS	Sb	10 48 30.9	+0.6
YULB	Yu-li	0.62	96	eP	Pb	10 48 25.2	-0.1
YULB				eS	Sb	10 48 33.6	-0.3
EHY	Hungye	0.64	86	eP	Pb	10 48 25.9	+0.4
EHY				eS	Sb	10 48 34.5	0.0
EHYH	Wanrong	0.66	87	eP	Pb	10 48 26.0	+0.1
EHYH				eS	Sb	10 48 35.1	0.0
WUSB	Renai	0.69	40	eP	Pb	10 48 26.5	-0.1
WUSB				eS	Sb	10 48 36.0	-0.2
OWD	Renai	0.70	45	eP	Pb	10 48 26.5	-0.3
OWD				eS	Sb	10 48 36.3	-0.3
HGSD	Ruisui	0.73	87	eP	Pn	10 48 28.0	-0.6
MASBT	Mashibuluo	0.84	180	eP	Pb	10 48 29.2	+0.1
WHP	Taichung City	0.86	20	eP	Pn	10 48 30.6	0.0

NEIC 19 10:58:35.5±2.5, 23°.75S±0°.10×179°.8W±0°.1, h493km±6km, mb4.8/248, Error ellipse: s-maj=15.6km s-min=14.1km az=123.0

IDC 19 10:58:37.0±1.6, 23°.73S×179°.95W, h511km±15km, mb3.9/20, mbtmp4.8/22, Error ellipse: s-maj=13.1km s-min=11.2km az=80.0

NOU 19 10:58:38.1, 23°.67S×179°.93W, h530km, mb4.7/61, South of Fiji Islands

GCMT 19 10:58:40.5±0.6, 23°.79S±0°.06×179°.97E±0°.05, h549km±3km, MW5.1/50, Moment Tensor Solution. s50,c72; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.40±.31; $M_{\theta\theta}$-1.60±.60; $M_{\phi\phi}$-2.81±.50; $M_{r\theta}$0.98±.69; $M_{\theta\phi}$-4.00±.49; $M_{\phi r}$-1.95±.63; Best double couple: $M_0$5.93500×10^{16} NP1:ϕ_s67.00000°, δ47.00000°, λ130.00000°. NP2: ϕ_s196.00000°, δ56.00000°, λ55.00000°. Principal axes: T 5.5510, Plg61.0000°, Azm48.0000°; N 0.7590, Plg28.0000°, Azm217.0000°; P -6.3200, Plg5.0000°, Azm310.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function

ISC 19 10:58:37.5±0.5, 23°.76S±0°.05×179°.95W±0°.05, h523km±5km, n399, σ1ˢ.29/320, mb4.8/170, 28C-14D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	5.77	162	P	P	11 00 14.1	+1.5
GLKZ				S	S	11 01 29.3	-1.2
MSVF	Nonsavu	6.28	342	P	P	11 00 13.5	-4.3
MSVF	Nonsavu	6.28	342	P	P	11 00 18.3	+0.5
	56nm,0.7s						
MSVF	Nonsavu	6.28	342	S	S	11 01 39.6	0.0
	56nm,0.7s						
NIUE	Niue	10.43	65		P	11 00 53.3	-6.4
NIUE	Niue	10.43	65	P	P	11 00 59.6	-0.1
	460nm,0.9s						
NIUE	Niue	10.43	65	S	S	11 02 57.7	+1.1
	460nm,0.9s						
NIUE	Niue	10.43	65	P	P	11 00 59.4	-0.3
NIUE				S	S	11 02 58.0	+1.4
INH	Isangel	10.87	291	P	P	11 01 06.2	+2.0
MARNC	Mare, Loyalty	11.33	279		P	11 01 09.7	+0.6
MARNC	Mare, Loyalty	11.33	279	P	P	11 01 09.7	+0.6
	1.1nm,1.2s						
MARNC	Mare, Loyalty	11.33	279	S	S	11 03 15.1	+1.2
	1.1nm,1.2s						
MARNC	Mare, Loyalty	11.33	279	P	P	11 01 09.9	+0.8
PINNC	Pines Island,	11.65	273		P	11 01 13.8	+1.4
PINNC	Pines Island,	11.65	273	P	P	11 01 14.3	+1.9
	214nm,0.8s						
PINNC	Pines Island,	11.65	273	S	S	11 03 21.3	+1.4
	214nm,0.8s						
PINNC	Pines Island,	11.65	273	P	P	11 01 14.5	+2.1
OUENC	Ouen Island, N	12.23	274	P	P	11 01 20.7	+2.2
	93nm,1.3s						
OUENC	Ouen Island, N	12.23	274	S	S	11 03 32.4	+1.3
	93nm,1.3s						
OUENC	Ouen Island, N	12.23	274	P	P	11 01 20.5	+2.0
YATNC	Mamie plateau,	12.25	275	P	P	11 01 20.0	+1.3
	38nm,2.0s						
RTV	Rentapao	12.39	296	P	P	11 01 20.7	+0.5
	619nm,1.5s						
AFI	Afiamalu	12.48	40	P	P	11 01 18.1	-3.1
AFI	Afiamalu	12.48	40	P	P	11 01 19.8	-1.5
	32nm,1.5s						
DVP	Devils Point	12.62	296	P	P	11 01 23.1	+0.5
	2μm,0.8s						
DZM	Mont Dzumac	12.65	275	P	P	11 01 23.8	+0.8
	13nm,0.6s,baz=216,slow=19,SNR=15						
DZM	Mont Dzumac	12.65	275		P	11 01 24.2	+1.1
DZM	Mont Dzumac	12.65	275	P	P	11 01 23.9	+0.8
	40nm,1.7s						
DZM	Mont Dzumac	12.65	275	P	P	11 01 26.8	+3.7
OUZ	Omahuta	12.72	205	P	P	11 01 25.3	+1.8
	34nm,2.0s						
OUZ	Omahuta	12.72	205	P	P	11 01 25.2	+1.8
WCZ	Waipu Caves	13.10	201	P	P	11 01 29.8	+2.4
KUZ	Kuaotunu	13.47	195	P	P	11 01 33.2	+2.0
	25nm,1.1s						
KUZ	Kuaotunu	13.47	195	P	P	11 01 32.8	+1.6
HAZ	Te Kaha	14.09	187	P	P	11 01 38.4	+0.7
HAZ				S	S	11 04 03.6	-2.5
PKGZ	Pakihiroa	14.16	186	P	P	11 01 39.3	+0.8
PUZ	Puketiti	14.35	186	P	P	11 01 37.9	-2.5
TOZ	Tahuroa Road	14.46	195	P	P	11 01 43.9	+2.3
TWGZ	Tauwhareparae	14.48	187	P	P	11 01 40.8	-1.1
TWGZ				S	S	11 04 07.9	-5.9
SANVU	Saraoutou	14.65	302	P	P	11 01 42.4	-1.5
SANVU	Saraoutou	14.65	302	P	P	11 01 42.3	-1.6
	78nm,0.9s						
SANVU	Saraoutou	14.65	302	P	P	11 01 43.0	-0.9
URZ	Urewera	14.67	189	P	P	11 01 42.3	-1.4
	17nm,0.6s,baz=33,slow=2.3,SNR=20						
URZ				S	S	11 04 11.0	-6.3
	16nm,0.7s,baz=11,slow=23,SNR=7.7						
URZ	Urewera	14.67	189	P	P	11 01 42.8	-1.0
	32nm,0.6s						
URZ	Urewera	14.67	189	P	P	11 01 42.4	-1.4
MWZ	Matawai	14.69	188	P	P	11 01 45.2	+1.2
MWZ				S	S	11 04 16.5	-1.3
CNGZ	Carnagh Statio	14.76	186	P	P	11 01 46.7	+2.0
TLZ	Tolley Road	15.03	194	P	P	11 01 50.4	+2.9
RTZ	Ruatahuna	15.04	189	P	P	11 01 45.8	-1.9
HIZ	Hauiti	15.36	196	P	P	11 01 53.6	+2.6
	53nm,1.3s						
HIZ	Hauiti	15.36	196	P	P	11 01 55.7	+4.7
RATZ	Rangitukua	15.49	193	P	P	11 01 52.6	+0.2
BKZ	Black Stump Fm	15.65	190	P	P	11 01 55.0	+0.9
BKZ	Black Stump Fm	15.65	190	P	P	11 01 53.4	-0.6
VRZ	Vera Road	15.96	195	P	P	11 02 00.1	+2.9
KRHZ	Kereru	16.14	190	P	P	11 01 57.6	-1.3
KAHZ	Kahuranaki	16.21	189	P	P	11 01 59.0	-0.7
PXZ	Pawanui	16.44	189	P	P	11 02 01.6	-0.3
TSZ	Takapari Road	16.61	191	P	P	11 02 01.8	-1.8
BFZ	Birch Farm	17.17	190	P	P	11 02 07.4	-1.6
BFZ	Birch Farm	17.17	190	P	P	11 02 07.5	-1.4
MRZ	Mangatainoka R	17.27	192	P	P	11 02 07.8	-2.0
KHZ	Kahutara	19.38	195	P	P	11 02 31.1	+2.1
	60nm,0.6s						
NGOA	Tingoa Renbel	22.55	299	P	P	11 02 57.6	-0.5
	184nm,1.3s						
TATA	Tatamba Isabel	24.69	305	P	P	11 03 15.7	-1.4
	36nm,0.9s						
ARMA	Armidale	26.12	249	P	P	11 03 31.2	+1.5
ARMA	Armidale	26.12	249	P	P	11 03 31.4	+1.7
	23nm,0.7s						
EIDS	Eidsvold	26.38	261	P	P	11 03 32.8	+0.9
EIDS	Eidsvold	26.38	261	P	P	11 03 32.3	+0.3
	44nm,0.7s						
CNB	Canberra Magne	28.96	240	P	P	11 03 55.8	+1.2
	55nm,2.9s						
AULRC	Lightning Ridg	29.17	252	P	P	11 03 52.6	-3.8
CAN	Canberra	29.25	240	P	P	11 03 58.2	+1.1
CAN	Canberra	29.25	240	P	P	11 03 57.8	+0.7
	65nm,1.3s						
ALOT	Alotau	31.21	290	P	P	11 04 14.5	+0.3
	13μm,0.5s						
TV1H	Townsville Har	31.22	272	P	P	11 04 15.1	+0.9
	35nm,1.1s						
TV1H	Townsville Har	31.22	272	P	P	11 04 14.9	+0.7
CMSA	Cobar Meteorol	31.31	248	P	P	11 04 15.2	+0.4
	32nm,0.8s						
CTA	Charters Tower	31.52	270	P	P	11 04 17.4	+0.6
	72nm,0.5s,baz=93,slow=10.0,SNR=176						
	72nm,0.5s						
CTA	Charters Tower	31.52	270	P	P	11 04 17.1	+0.3
	3.7nm,0.6s						
CTAO	Charters Tower	31.52	270		P	11 04 17.7	+1.0
CTAO	Charters Tower	31.52	270	P	P	11 04 17.1	+0.3
	46nm,0.6s						
CTAO	Charters Tower	31.52	270	P	P	11 04 17.0	+0.3
CTAO				PcP	PcP	11 06 52.2	-1.6
QLP	Quilpie	32.48	257	P	P	11 04 25.3	+0.5
	62nm,1.1s						
QLP	Quilpie	32.48	257	P	P	11 04 24.8	0.0
TOO	Toolangi	32.56	237	P	P	11 04 26.4	+0.9
TAU	Tasmania Unive	33.06	227	P	P	11 04 30.9	+1.4
	31nm,0.5s						
MTSU	Mount Surprise	33.78	273	P	P	11 04 36.7	+0.7
	55nm,0.6s						
MTSU	Mount Surprise	33.78	273	P	P	11 04 36.2	+0.2
PMG	Port Moresby	34.49	289	P	P	11 04 41.9	0.0
	59nm,0.8s,baz=73,slow=5.4,SNR=17						
	59nm,0.8s						
PMG	Port Moresby	34.49	289	P	P	11 04 42.1	+0.1
PMG	Port Moresby	34.49	289	P	P	11 04 42.0	0.0
	83nm,1.0s						
PMG	Port Moresby	34.49	289	P	P	11 04 42.1	+0.1
PMG	Port Moresby	34.49	289	P	P	11 04 42.1	+0.1
	921nm82nm,1.0s						
STKA	Stephens Creek	34.82	248	P	P	11 04 44.9	+0.4
	7.0nm,0.8s,baz=88,slow=9.8,SNR=11						
	7.0nm,0.8s						
STKA	Stephens Creek	34.82	248	P	P	11 04 44.8	+0.3
STKA				IAmb	IAmb	11 04 45.9	
	comp=Z,41nm,1.1s						
STKA	Stephens Creek	34.82	248	P	P	11 04 44.9	+0.4
	comp=Z,2.3nm,1.0s						
INKA	Innaminka	35.52	255	P	P	11 04 50.2	-0.2
COEN	Coen	36.14	279	P	P	11 04 55.6	0.0
COEN				IAmb	IAmb	11 04 58.6	
	comp=Z,17nm,0.8s						
COEN	Coen	36.14	279	P	P	11 04 56.0	+0.3
	comp=Z,25nm,1.2s						
COEN	Coen	36.14	279	P	P	11 04 56.6	+0.9
HTT	Hallett	37.17	246	P	P	11 05 03.9	-0.1
	comp=Z,18nm,0.8s						
QIS	Mount Isa	37.51	267	P	P	11 05 07.0	+0.1
	comp=Z,14nm,1.7s						
QIS	Mount Isa	37.51	267	P	P	11 05 06.7	-0.2
BBOO	Buckleboo	39.54	247	P	P	11 05 22.4	-0.8
BBOO	Buckleboo	39.54	247	P	P	11 05 22.9	-0.3
	comp=Z,15nm,1.2s						
AS31	Alice Springs	42.10	260	P	P	11 05 43.6	-0.2
ASAR	Alice Springs	42.10	260	P	P	11 05 43.5	-0.3
	comp=Z,14nm,0.7s,baz=101,slow=6.9,SNR=170						
ASAR				ScP	ScP	11 10 28.6	+1.4
	comp=Z,6.1nm,0.6s,baz=110,slow=4.3,SNR=30						
ASAR				S	S	11 11 23.4	-2.2
	comp=Z,1.2nm,0.8s,baz=95,slow=16,SNR=5.8						
	comp=Z,14nm,0.7s						
ASAR	Alice Springs	42.10	260	P	P	11 05 43.9	0.0
WR0	Warramunga Arr	42.28	266	P	P	11 05 44.5	-0.6
WR0				IAmb	IAmb	11 05 44.9	
	comp=Z,15nm,0.6s						
WR8	Warramunga Arr	42.31	266		P	11 05 44.7	-0.8
WR8				IAmb	IAmb	11 05 45.1	
	comp=Z,16nm,0.6s						
WB2	Warramunga Arr	42.45	266	P	P	11 05 46.0	-0.5

WB0	Warramunga Arr	42.46	266		P	11 05 46.0	-0.6
WRAB	Tennant Creek	42.46	266	P	P	11 05 45.5	-1.1
WRAB				IAmb	IAmb	11 05 46.3	
	comp=Z,19nm,0.6s						
WRAB	Tennant Creek	42.46	266	P	P	11 05 45.9	-0.7
	comp=Z,20nm,1.0s						
WRAB	Tennant Creek	42.46	266	P	P	11 05 45.3	-1.3
WRAB	Tennant Creek	42.46	266	P	P	11 05 45.6	-1.0
WRAB				PcP	PcP	11 07 28.9	+1.3
WRA	Warramunga Arr	42.46	266	P	P	11 05 45.8	-0.9
	comp=Z,22nm,0.6s,baz=103,slow=8.5,SNR=196						
WRA				ScP	ScP	11 10 31.4	+2.8
	comp=Z,7.0nm,0.9s,baz=101,slow=4.3,SNR=12						
WRA				S	S	11 11 26.7	-4.1
	comp=Z,3.8nm,0.9s,baz=102,slow=14,SNR=7.3						
	comp=Z,22nm,0.6s						
WRA	Warramunga Arr	42.46	266		P	11 05 45.0	-1.7
JAY	Jayapura	43.51	293	P	P	11 05 54.5	-0.4
	comp=Z,36nm,1.1s						
FORT	Forrest	46.41	249	P	P	11 06 16.3	-0.6
FORT				IAmb	IAmb	11 06 17.2	
	comp=Z,22nm,0.6s						
MTN	Manton Dam	47.49	274	P	P	11 06 24.5	-0.8
DRS	Darwin Rock St	47.85	275	P	P	11 06 27.5	-0.5
	comp=Z,26nm,0.5s						
BAKI	Biak	48.10	291	P	P	11 06 29.6	-0.3
	comp=Z,83nm,1.2s						
KNRA	Kununurra	48.74	270	P	P	11 06 34.5	-0.1
DHH	Diamond Head	49.68	27	P	P	11 06 42.5	+1.2
SWI	Sorong	52.45	288	P	P	11 07 01.4	-0.3
	comp=Z,978nmcomp=Z,71nm,0.9s						
VNDA	Vanda	54.52	185	P	P	11 07 17.1	+1.7
	comp=Z,2.0nm,0.8s,baz=37,slow=12,SNR=3.5						
VNDA				PcP	PcP	11 08 11.4	+0.7
	comp=Z,2.1nm,0.7s,baz=345,slow=3.7,SNR=6.9						
	comp=Z,2.0nm,0.8s						
SOEI	Soe	54.88	275	IAmb	IAmb	11 07 30.3	
	comp=Z,58nm,1.1s						
SOEI	Soe	54.88	275	P	P	11 07 19.5	+0.4
	comp=Z,49nm,1.2s						
MEEK	Meekatharra	55.20	253	P	P	11 07 20.9	-0.2
	comp=Z,12nm,1.7s						
MBWA	Marble Bar	55.44	260	P	P	11 07 22.1	-0.7
	comp=Z,8.1nm,1.1s						
BLDU	Ballidu	56.12	248	P	P	11 07 26.7	-0.7
	comp=Z,19nm,1.1s						
EDFI	Ende, Flores	57.61	275	P	P	11 07 37.4	-0.6
	comp=Z,28nm,0.9s						
WSI	Waingapu	58.54	273	P	P	11 07 43.9	-0.2
CCD	Concordia, Ant	58.87	195	P	P	11 07 46.4	+0.5
CCD				PcP	PcP	11 08 28.9	+0.5
DBNI	Kabupaten Domp	60.80	273	P	P	11 07 59.0	-0.2
	comp=Z,19nm,0.5s						
PLAI	Plampang	61.16	273	P	P	11 08 00.9	-0.7
	comp=Z,57nm,0.7s						
PLAI	Plampang	61.16	273	P	P	11 08 01.2	-0.4
	comp=Z,57nm,0.6s						
TOLI2	Tolitoli	62.59	285	P	P	11 08 10.2	-0.7
TOLI2	Tolitoli	62.59	285	P	P	11 08 11.1	+0.2
	comp=Z,18nm,1.1s						
MPSI	Mapaga	63.02	283	P	P	11 08 13.3	-0.4
	comp=Z,14nm,0.7s						
QSPA	South Pole Qui	66.32	180	P	P	11 08 35.3	+1.5
	comp=Z,12nm,0.6s,baz=34,slow=1.8,SNR=31						
	comp=Z,12nm,0.6s						
QSPA	South Pole Qui	66.32	180	IAmb	IAmb	11 08 35.7	
	comp=Z,16nm,0.8s						
QSPA	South Pole Qui	66.32	180	P	P	11 08 35.3	+1.5
PCJI	Pacitan	67.44	271	P	P	11 08 41.1	-0.4
	comp=Z,42nm,0.6s						
KPJI	Karang Pucung	69.83	271	P	P	11 08 55.7	-0.2
	comp=Z,9.8nm,0.5s						
BBJI	Bungbulang	70.95	270	P	P	11 09 01.2	-1.4
	comp=Z,15nm,0.7s						
BBJI	Bungbulang	70.95	270	P	P	11 09 01.3	-1.4
MJAR	Matsushiro Arr	71.81	326	P	P	11 09 07.6	+0.5
	comp=Z,6.2nm,0.8s,baz=161,slow=5.9,SNR=13						
	comp=Z,6.2nm,0.8s						
MJAR	Matsushiro Arr	71.81	326		P	11 09 06.8	-0.3
MAJO	Matsushiro	71.81	326	P	P	11 09 07.9	+0.8
JNU	Nakatsue	73.45	319	P	P	11 09 16.6	-0.1
	comp=Z,8.4nm,0.9s,baz=82,slow=14,SNR=2.2						
	comp=Z,8.4nm,0.9s						
ATKA	Atka Island	75.80	4	P	P	11 09 29.4	+0.1
	comp=Z,93nm,2.8s						
MAW	Mawson	77.90	200	P	P	11 09 41.3	+0.6
	comp=Z,5.4nm,0.6s,baz=137,slow=9.6,SNR=9.1						
	comp=Z,5.4nm,0.6s						
UNV	Unalaska Valle	78.15	8	P	P	11 09 41.9	-0.2
	comp=Z,89nm,0.8s						
KSRS	Korea Array	78.17	320	P	P	11 09 43.9	+1.2
	comp=Z,2.4nm,0.7s,baz=137,slow=5.2,SNR=7.3						
	comp=Z,2.4nm,0.7s						
PETK	Petropavlovsk-	78.98	346	P	P	11 09 47.1	+0.5
	comp=Z,7.3nm,0.7s,baz=116,slow=7.4,SNR=7.1						
	comp=Z,7.3nm,0.7s						
NJ2	Nanjing	80.61	311	eP	P	11 09 57.4	+1.8
NJ2				pmax	pmax		
	comp=Z,270nm,0.6s						
USRK	Ussuriysk Ar.	80.67	327	P	P	11 09 56.9	+1.2
	comp=Z,4.3nm,0.7s,baz=348,slow=0.9,SNR=5.1						
	comp=Z,4.3nm,0.7s						
MHC	Mount Hamilton	81.86	43	IAmb	IAmb	11 10 04.9	
	comp=Z,20nm,1.0s						
VTX	Valle De La Tr	82.31	51	IAmb	IAmb	11 10 07.5	
	comp=Z,30nm,1.2s						
MNRC	McLaughlin Min	82.31	42	IAmb	IAmb	11 10 07.6	
	comp=Z,32nm,1.1s						
MWC	Mount Wilson	82.33	48	IAmb	IAmb	11 11 51.0	
	comp=Z,58nm,1.8s						
DPP	Dos Picos Cty	82.40	49	IAmb	IAmb	11 10 07.2	
	comp=Z,21nm,0.9s						
ESJX	Sierra Juarez	82.53	50	IAmb	IAmb	11 10 09.0	
	comp=Z,34nm,1.3s						
VES	Vestal, Richgr	82.59	46	IAmb	IAmb	11 10 07.8	
	comp=Z,33nm,1.0s						
TPO	Tropico Hills	82.60	47	IAmb	IAmb	11 10 08.5	
	comp=Z,52nm,1.4s						
SLBS	Sierra La Lagu	82.69	60	P	P	11 10 05.7	-0.9
SLBS				IAmb	IAmb	11 10 09.0	
	comp=Z,17nm,0.8s						
ISA	Isabella, Lake	82.89	46	IAmb	IAmb	11 10 09.9	
	comp=Z,25nm,0.9s						
BORC	Borrego Spring	82.91	49	IAmb	IAmb	11 10 10.2	
	comp=Z,38nm,1.3s						
KHBM	Hayfork Bally	82.97	40	IAmb	IAmb	11 10 10.6	
	comp=Z,16nm,0.8s						
CMB	Columbia Colle	83.07	43	IAmb	IAmb	11 10 10.4	
	comp=Z,25nm,1.0s						
PFO	Pinyon Flats O	83.08	49	P	P	11 10 09.4	+1.0
ELIB	Princess Elisa	83.21	187	dP	P	11 10 07.7	-0.8
	comp=Z,4.6nm,1.1s						
ORV	Oroville	83.31	42	IAmb	IAmb	11 10 11.6	
	comp=Z,17nm,0.9s						
N02D	Trinity Center	83.47	40	IAmb	IAmb	11 10 13.4	
	comp=Z,34nm,1.2s						
WSHM	Spangler Hills	83.50	47	IAmb	IAmb	11 10 12.8	
	comp=Z,18nm,1.0s						
CCCA	Chr Cany lake	83.55	47	IAmb	IAmb	11 10 13.3	
	comp=Z,27nm,1.0s						
CLC	China Lake	83.56	46	IAmb	IAmb	11 10 13.1	
	comp=Z,25nm,1.0s						
O03E	Paynes Creek	83.58	41	IAmb	IAmb	11 10 13.1	
	comp=Z,32nm,1.1s						
M02C	Callahan	83.65	39	IAmb	IAmb	11 10 14.3	
	comp=Z,46nm,1.4s						
MDPB	Devils Postpil	83.66	44	IAmb	IAmb	11 10 13.8	
	comp=Z,24nm,1.1s						
OHAK	Old Harbor	83.73	14	P	P	11 10 11.8	+1.0
BC3	Big Chuckawall	83.80	49	IAmb	IAmb	11 10 15.0	
	comp=Z,40nm,1.5s						
GSC	Goldstone, Bar	83.80	47	IAmb	IAmb	11 10 14.3	
	comp=Z,19nm,1.0s						
TIN	Tinemaha, Big	83.86	45	IAmb	IAmb	11 10 14.8	
	comp=Z,28nm,1.0s						
GLA	Glamis	83.90	50	P	P	11 10 13.3	+0.9
YBH	Yreka Blue Hor	83.95	39	IAmb	IAmb	11 10 15.5	
	comp=Z,21nm,1.1s						
BNX	BinXian	84.07	326	⇓P	P	11 10 13.3	+0.5
BNX				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TIA	Tai'an	84.17	314	P	P	11 10 15.0	+1.4
TIA				PcP	PcP	11 10 17.4	+1.2
TIA				pmax	pmax		
	comp=Z,16nm,1.1s						
PNTR	Pine Nut	84.19	43	IAmb	IAmb	11 10 16.5	
	comp=Z,33nm,1.0s						
DSP	Deep Springs	84.22	45	IAmb	IAmb	11 10 16.5	
	comp=Z,19nm,1.2s						
IRM	Iron Mountain	84.29	49	IAmb	IAmb	11 10 17.3	
	comp=Z,35nm,1.3s						
LHV	Little Huntoon	84.39	44	IAmb	IAmb	11 10 18.1	
	comp=Z,38nm,1.5s						
DANC	Danby, Needles	84.39	48	IAmb	IAmb	11 10 17.7	
	comp=Z,34nm,1.0s						
GRAC	Grapevine Rang	84.39	46	IAmb	IAmb	11 10 17.5	
	comp=Z,15nm,0.9s						
TROLL	Troll, Antarti	84.47	181	⇑P	P	11 10 14.5	-0.2
	comp=Z,719nm,0.5s						
SHOC	Shoshone, Teco	84.49	47	IAmb	IAmb	11 10 17.6	
	comp=Z,22nm,1.1s						
BLYC	Blythe	84.49	50	IAmb	IAmb	11 10 18.2	
	comp=Z,18nm,1.0s						
113A	Mohawk Valley,	84.50	51	IAmb	IAmb	11 10 18.2	
	comp=Z,20nm,1.1s						
NVAR	Mina Array Bea	84.62	44	P	P	11 10 17.1	+1.1
	comp=Z,6.0nm,0.8s,baz=222,slow=7.5,SNR=39						
	comp=Z,6.0nm,0.8s						
NVAR	Mina Array Bea	84.62	44		P	11 10 16.5	+0.4
PAHR	Pah Rah Range	84.70	42	IAmb	IAmb	11 10 18.6	
	comp=Z,21nm,1.3s						
214A	Organ Pipe Nat	84.75	52	IAmb	IAmb	11 10 19.7	
	comp=Z,17nm,1.1s						
SNAA	Sanae	84.80	179	⇑P	P	11 10 15.4	-0.9
	comp=Z,90nm,0.6s						
SNAA	Sanae	84.80	179	⇑P	P	11 10 15.9	-0.3
	comp=Z,2.7nm,0.6s,baz=199,slow=8.5,SNR=27						
	comp=Z,2.7nm,0.6s						
SNAA	Sanae	84.80	179	IAmb	IAmb	11 10 16.4	
	comp=Z,4.3nm,0.6s						
VNA3	Neumayer Olymp	85.01	177	⇑P	P	11 10 16.8	-0.4
	comp=Z,6.6nm,0.7s						
VNA2	Neumayer--Watz	85.43	178	⇑P	P	11 10 19.2	0.0
	comp=Z,9.1nm,0.6s,baz=176,slow=3.9						
K05A	Summer Lake	85.62	39	IAmb	IAmb	11 10 23.6	
	comp=Z,24nm,1.0s						
VNA1	Neumayer--Stat	85.67	177	⇑P	P	11 10 20.0	-0.3
	comp=Z,7.1nm,1.0s						
J05D	Fort Rock, OR	85.77	39	IAmb	IAmb	11 10 24.2	
	comp=Z,26nm,0.9s						
PINE	Pine Mountain	86.25	38		P	11 10 24.9	+1.1
LL02	Futaleuf	86.27	136	P	P	11 10 24.8	+1.0
LL02				IAmb	IAmb	11 10 26.0	
	comp=Z,24nm,1.2s						
ILSW	Iliamna Southw	86.28	13	P	P	11 10 23.5	+0.1
TUC	Tucson	86.40	52		P	11 10 26.0	+1.4
TUC				IAmb	IAmb	11 10 28.0	
	comp=Z,25nm,1.0s						
TUC	Tucson	86.40	52	P	P	11 10 26.5	+2.0
WVOR	Wild Horse Val	86.77	41	IAmb	IAmb	11 10 28.8	
	comp=Z,22nm,1.1s						
G06A	Carlson Farm,	87.31	37	IAmb	IAmb	11 10 30.9	
	comp=Z,20nm,1.0s						
KNB	Kanab	87.43	48	IAmb	IAmb	11 10 32.2	
	comp=Z,22nm,1.2s						
GNW	Green Mountain	87.59	35	IAmb	IAmb	11 10 32.3	
	comp=Z,28nm,1.2s						
WUAZ	Wupatki	87.63	49	IAmb	IAmb	11 10 33.2	
	comp=Z,16nm,1.2s						
HPIG		87.65	59	IAmb	IAmb	11 10 33.1	
	comp=Z,14nm,1.0s						
RC01	Rabbit Creek A	88.02	14	P	P	11 10 31.2	-0.2
F07A	Phinny Hill Vi	88.11	37	IAmb	IAmb	11 10 34.6	
	comp=Z,19nm,1.1s						
X18A	Snowflake	88.13	51	IAmb	IAmb	11 10 35.0	
	comp=Z,7.9nm,0.7s						
SUA	Susitna One	88.13	14		P	11 10 32.2	+0.2
PWL	Port Wells	88.14	15	IAmb	IAmb	11 10 33.0	
	comp=Z,16nm,0.9s						
MXC	Moxie City	88.32	37	IAmb	IAmb	11 10 35.6	
	comp=Z,14nm,0.9s						
PLCA	Paso Flores	88.33	134	P	P	11 10 34.5	+0.9
	comp=Z,1.1nm,0.7s,baz=211,slow=9.8,SNR=3.5						
	comp=Z,1.1nm,0.7s						
MTPU	Mount Pierson	88.40	47	IAmb	IAmb	11 10 37.5	
	comp=Z,26nm,1.2s						
LTY	Liberty	88.54	36	IAmb	IAmb	11 10 35.7	
	comp=Z,10nm,0.7s						
KNK	Knik Glacier	88.59	15	IAmb	IAmb	11 10 35.4	
	comp=Z,16nm,0.9s						
PMR	Palmer	88.60	14		P	11 10 34.3	+0.3
121A	Cookes Peak, D	88.70	54	IAmb	IAmb	11 10 38.2	
	comp=Z,9.5nm,0.9s						
BMO	Blue Mountains	88.97	39	IAmb	IAmb	11 10 38.5	
	comp=Z,22nm,1.6s						
L22K	Petersville	89.08	13		P	11 10 35.9	-0.4
L22K				IAmb	IAmb	11 10 36.7	
	comp=Z,16nm,0.9s						
EPH	Ephrata	89.18	36	IAmb	IAmb	11 10 39.4	
	comp=Z,25nm,1.4s						
K20K	Telida	89.20	11	IAmb	IAmb	11 10 37.5	
	comp=Z,13nm,1.1s						
KMI	Kunming	89.24	298	P	P	11 10 37.1	-1.1
KMI				pmax	pmax		
	comp=Z,16nm,1.3s						
D08A	Wollman Farm,	89.36	37	IAmb	IAmb	11 10 40.4	
	comp=Z,13nm,0.9s						
E09A	Wood Farm, Sta	89.47	37	IAmb	IAmb	11 10 40.5	
	comp=Z,16nm,1.1s						
CMAR	Chiang Mai Arr	89.52	290	P	P	11 10 40.8	+1.4
	comp=Z,1.3nm,0.3s,baz=143,slow=3.2,SNR=11						
	comp=Z,1.3nm,0.3s						
Q16A	Castle Valley	89.54	47	IAmb	IAmb	11 10 43.0	
	comp=Z,15nm,1.0s						
MPU	Maple Canyon	89.80	46	IAmb	IAmb	11 10 42.9	
	comp=Z,14nm,1.0s						
BI02	San Fabin de	89.87	130	P	P	11 10 41.6	+0.8
BI02				IAmb	IAmb	11 10 42.9	
	comp=Z,8.1nm,0.8s						
PLID	Pearl Lake	89.87	40	IAmb	IAmb	11 10 42.6	
	comp=Z,26nm,1.6s						
B08A	Colville Reser	89.92	36		P	11 10 40.8	+0.2
B08A				IAmb	IAmb	11 10 42.1	
	comp=Z,9.6nm,1.1s						
J20K	Nowinta River	89.94	11	IAmb	IAmb	11 10 41.5	
	comp=Z,18nm,1.4s						
HLID	Hailey	89.96	41	IAmb	IAmb	11 10 43.6	
	comp=Z,14nm,1.1s						
KTH	Kantishna Hill	89.97	13	IAmb	IAmb	11 10 41.1	
	comp=Z,8.5nm,0.9s						
Y22A	Socorro	89.98	53	IAmb	IAmb	11 10 44.0	
	comp=Z,14nm,1.1s						
LLLB	Lillooet	90.00	33	IAmb	IAmb	11 10 43.0	
	comp=Z,9.0nm,1.0s						
TRF	Thorofare Moun	90.01	13	IAmb	IAmb	11 10 41.2	
	comp=Z,12nm,0.9s						
BARN	Barnard Glacie	90.02	18	P	P	11 10 41.8	+0.9
MNTX	Cornudas Mount	90.09	55	IAmb	IAmb	11 10 44.4	
	comp=Z,10nm,1.0s						
P17A	Butcher Ranch,	90.11	46	IAmb	IAmb	11 10 44.5	
	comp=Z,18nm,1.1s						
TX31	Lajitas Ar. Si	90.32	58	IAmb	IAmb	11 10 45.8	
	comp=Z,14nm,1.1s						
TXAR	Lajitas Array	90.32	58	P	P	11 10 44.6	+1.7
	comp=Z,6.8nm,0.8s,baz=213,slow=6.5,SNR=75						
TXAR				PKKPbc	PKKPbc	11 28 10.0	+1.0
	comp=Z,0.2nm,0.6s,baz=40,slow=3.9,SNR=5.2						
	comp=Z,6.8nm,0.8s						
HHC	Hu-ho-hao-te	90.35	315	eP	P	11 10 43.5	+0.6
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PV05	Paradox Valley	90.51	48	IAmb	IAmb	11 10 46.3	
	comp=Z,9.8nm,1.0s						
P18A	Preston Nutter	90.52	46	IAmb	IAmb	11 10 46.2	
	comp=Z,10.0nm,1.0s						
PZH	PanZhiHua	90.66	299	P	P	11 10 45.3	+0.7
HWUT	Hardware Ranch	90.68	44	IAmb	IAmb	11 10 46.2	
	comp=Z,9.5nm,0.9s						
PV10	Paradox Valley	90.70	48	IAmb	IAmb	11 10 47.7	
	comp=Z,15nm,1.1s						
PV19	Morning Glory	90.70	48	IAmb	IAmb	11 10 46.1	
	comp=Z,10nm,1.1s						
PV18	Skein Mesa, Pa	90.72	48	IAmb	IAmb	11 10 46.7	
	comp=Z,10nm,0.9s						
PV20	West Nyswonger	90.73	48	IAmb	IAmb	11 10 46.2	
	comp=Z,17nm,1.2s						
PV16	Nyswonger Mesa	90.75	48	IAmb	IAmb	11 10 49.4	
	comp=Z,13nm,1.6s						
PV23	Carpenter Ridg	90.75	48	IAmb	IAmb	11 10 49.5	
	comp=Z,12nm,0.9s						
PV02	Paradox Valley	90.82	48	IAmb	IAmb	11 10 49.2	
	comp=Z,19nm,1.2s						
PV12	Saucer Basin,	90.83	48	P	P	11 10 44.6	-0.7
TASM	ASL Pad, Albuq	90.83	52	IAmb	IAmb	11 10 47.6	
	comp=Z,12nm,1.1s						
TASM	ASL Pad, Albuq	90.83	52	IAmb	IAmb	11 10 47.5	
	comp=Z,11nm,1.1s						
TASM	ASL Pad, Albuq	90.83	52	IAmb	IAmb	11 10 47.5	
	comp=Z,12nm,1.1s						
TASM	ASL Pad, Albuq	90.83	52	IAmb	IAmb	11 10 47.5	
	comp=Z,12nm,1.2s						
ABQ	Albuquerque	90.83	52	IAmb	IAmb	11 10 47.6	
	comp=Z,9.9nm,1.1s						
ANMO	Albuquerque	90.83	52		P	11 10 44.8	-0.5
ANMO				IAmb	IAmb	11 10 47.5	
	comp=Z,11nm,1.1s						
PV22	Blue Mesa, Par	90.95	48	IAmb	IAmb	11 10 47.8	
	comp=Z,9.2nm,1.1s						
S34M	Telegraph Cree	90.96	24	IAmb	IAmb	11 10 48.1	
	comp=Z,12nm,1.0s						
F17K	Baldwin Pennin	91.03	7	IAmb	IAmb	11 10 47.1	
	comp=Z,7.9nm,0.9s						
RDMU	Red Mountain	91.44	46	IAmb	IAmb	11 10 49.9	
	comp=Z,8.2nm,1.0s						
CCB	Clear Creek Bu	91.58	13		P	11 10 47.4	-0.4
CCB				IAmb	IAmb	11 12 47.3	
	comp=Z,11nm,1.4s						
BCAR	Beaver Creek A	91.64	16	P	P	11 10 48.7	+0.5
SAND	Sanderson	91.80	58	IAmb	IAmb	11 10 51.6	
	comp=Z,9.9nm,1.0s						
ILAR	Eielson Array	91.89	14	P	P	11 10 48.5	-0.7
	comp=Z,1.4nm,0.8s,baz=215,slow=5.4,SNR=12						
	comp=Z,1.4nm,0.8s						
S22A	4UR Ranch, Cre	91.91	49	IAmb	IAmb	11 10 52.8	
	comp=Z,11nm,1.0s						
E18K	Tukpahlearik C	92.05	7	IAmb	IAmb	11 10 51.4	
	comp=Z,7.2nm,0.9s						
SNOW	Snow King Moun	92.16	43	IAmb	IAmb	11 10 53.3	
	comp=Z,15nm,1.5s						
LOHW	Long Hollow	92.33	43	IAmb	IAmb	11 12 28.4	
	comp=Z,14nm,1.6s						
C16K	Lisburne Hills	92.39	5		P	11 10 50.0	-1.4
J26L	Joseph Creek	92.40	15	IAmb	IAmb	11 10 53.4	
	comp=Z,11nm,1.0s						
PDAR	Pinedale Array	92.56	44	P	P	11 10 53.5	+0.4
	comp=Z,3.3nm,0.8s,baz=195,slow=2.8,SNR=22						
PDAR				PP	PP	11 14 40.8	-3.3
	comp=Z,0.7nm,1.0s,baz=226,slow=8.0,SNR=4.6						
	comp=Z,3.3nm,0.8s						
PDAR	Pinedale Array	92.56	44	P	P	11 10 53.4	+0.3
YHL	Hebgen Lake	92.61	42	IAmb	IAmb	11 13 14.0	
	comp=Z,25nm,1.9s						
L29M	L29M	92.66	18	IAmb	IAmb	11 10 54.8	
	comp=Z,8.9nm,0.9s						
DAWY	Dawson	93.08	17		P	11 10 55.3	+0.5
K29M	Barlow Dome	93.41	17	IAmb	IAmb	11 10 57.4	
	comp=Z,15nm,1.6s						
HNDO	Hondo	93.84	60	IAmb	IAmb	11 11 01.3	
	comp=Z,10.0nm,1.0s						
E25K	Arctic Village	95.05	12	IAmb	IAmb	11 11 05.0	
	comp=Z,12nm,1.6s						
SONM	Songino Array	97.03	319	PKKPbc	PKKPbc	11 27 51.2	-1.2
	comp=Z,0.4nm,0.5s,baz=343,slow=1.5,SNR=3.8						
YKA	Yellowknife Ar	100.22	25	P	Pdif	11 11 25.9	-0.9
	comp=Z,0.2nm,0.7s,baz=255,slow=4.5,SNR=3.8						
ZALV	Zalesovo Beam	111.87	321	PKiKP	PKiKP	11 16 11.2	-1.3
	comp=Z,0.8nm,0.4s,baz=85,slow=2.3,SNR=5.2						
MKAR	Makanchi Array	112.09	313	PKiKP	PKiKP	11 16 12.7	-0.6
	comp=Z,1.2nm,0.6s,baz=224,slow=1.9,SNR=8.3						
MKAR				PKKPab	PKKPab	11 27 16.8	+1.1
	comp=Z,0.6nm,0.6s,baz=265,slow=3.2,SNR=5.6						
KURK	Kurchatov	115.13	317		PKPdf	11 16 18.5	-0.4
KURBB	Kurchatov Arra	115.18	316	PKP	PKPdf	11 16 18.0	-1.0
	comp=Z,1.7nm,0.5s,baz=99,slow=1.9,SNR=16						
KKAR	Karatay Array	119.82	307		PKPdf	11 16 27.7	-0.5
BVAR	Borovoye Array	120.37	319	PKP	PKPdf	11 16 28.6	-0.3
	comp=Z,3.3nm,0.4s,baz=120,slow=1.0,SNR=18						
BORK	Borovoye	120.41	319		PKPdf	11 16 28.1	-0.9
SCHQ	Schefferville	122.34	39	PKP	PKPdf	11 16 31.4	-1.2
	comp=Z,2.9nm,0.8s,baz=135,slow=2.9,SNR=2.1						
BOSA	Boshof	122.55	206	PKP	PKiKP	11 16 34.3	-0.1
	comp=Z,3.0nm,0.7s,baz=153,slow=1.9,SNR=5.2						
SPITS	Spitsbergen Ar	124.98	356	PKP	PKPdf	11 16 37.2	0.0
	comp=Z,8.1nm,0.7s,baz=57,slow=3.1,SNR=6.3						
KIRV	Kirov	130.83	328	SKPbc	SKPbc	11 19 23.9	-0.1
	comp=Z,22nm,0.8s,baz=138,slow=3.3,SNR=9.7						
ARCES	ARCESS Array B	131.76	348	PKP	PKPdf	11 16 49.2	-1.1
	comp=Z,2.3nm,0.4s,baz=66,slow=1.2,SNR=18						
BELG	Belogornoye	134.06	321	SKPab	SKPbc	11 19 36.2	+0.9
	comp=Z,30nm,1.0s,baz=123,slow=2.7,SNR=8.9						
FINES	FINESS Array B	138.33	342	PKhKP	PKPpre	11 16 50.6	
	comp=Z,1.8nm,0.8s,baz=30,slow=5.9,SNR=4.2						
FINES				PKP	PKPdf	11 17 03.1	+0.5
	comp=Z,1.6nm,0.4s,baz=58,slow=1.8,SNR=9.4						
FINES				SKPbc	SKPbc	11 19 48.8	+1.0
	comp=Z,4.5nm,1.1s,baz=134,slow=4.0,SNR=6.5						
NB2	NORSAR Subarra	141.95	351	PKP	PKPdf	11 17 05.0	-4.3
	comp=Z,4.6nm,0.8s,baz=16,slow=3.2						
NOA	NORSAR Array B	141.95	351	PKhKP	PKPpre	11 17 05.4	
	comp=Z,5.1nm,0.8s,baz=16,slow=4.6,SNR=13						
HFS	Hagfors	142.42	349	PKhKP	PKPpre	11 17 06.2	
	comp=Z,12nm,0.4s,baz=64,slow=3.4,SNR=117						
KONO	Kongsberg	143.51	352		PKPbc	11 17 10.7	+0.1
AK03	Malin Array Si	144.87	327	PKP	PKPdf	11 17 14.4	-0.2
AKASG	Malin Array Be	144.88	327	PKP	PKPdf	11 17 14.5	-0.1
	comp=Z,5.8nm,0.4s,baz=48,slow=4.5,SNR=14						
AKBB	Malin Array Si	144.88	327	PKP	PKPdf	11 17 14.5	-0.1
AK23	Malin Array Si	144.89	328	PKP	PKPdf	11 17 14.5	-0.1
AK01	Malin Array Si	144.89	327	PKP	PKPdf	11 17 14.6	0.0
KIEV	Kiev	144.89	327	⇓P	PKPpre	11 17 02.1	
AK22	Malin Array Si	144.92	328	PKP	PKPdf	11 17 14.5	-0.2
SUW	Suwalki	145.16	336	ePKP	PKPdf	11 17 16.0	+0.1
MI28	Mi28,Pidlybu	145.48	329	PKP	PKPdf	11 17 15.9	+0.3
LUBAR	Lubar, Ukraine	146.10	327	PKP	PKPdf	11 17 17.8	-0.9
SORM	Soroca	146.92	324	⇓P	PKPbc	11 17 21.1	+0.1
ILGA	Ilgaz	147.02	310		PKPbc	11 17 22.4	+0.4
HORU	Horodok	147.22	327	PKP	PKPdf	11 17 18.6	0.0
KIRS	Kirsehir-Merke	147.52	306	⇑P	PKPbc	11 17 23.6	+0.6
BR131	Keskin Array S	147.53	307		PKPbc	11 17 22.3	-0.8
BRTR	Keskin Array B	147.53	307	PKPbc	PKPbc	11 17 22.6	-0.5
	comp=Z,3.3nm,0.7s,baz=143,slow=5.4,SNR=11						
BRTR	Keskin Array B	147.53	307	PKPdf	PKPdf	11 17 20.0	+0.3
BRTR					PKPbc	11 17 23.3	+0.2
BR104	Keskin Array S	147.54	307	PKP	PKPdf	11 17 20.0	+0.4
BR106	Keskin Array S	147.54	307	PKP	PKPdf	11 17 19.8	+0.1
BR105	Keskin Array S	147.55	307	PKP	PKPdf	11 17 19.9	+0.2
MMAI	Mount Meron Ar	147.69	295	PKPbc	PKiKP	11 17 24.9	-0.2
	comp=Z,12nm,0.5s,baz=76,slow=3.5,SNR=21						
BEL	Belsk	147.77	336	ePKP	PKPbc	11 17 23.4	+0.3
EKA	Eskdalemuir Ar	148.38	4	PKPbc	PKPbc	11 17 24.2	-0.3
	comp=Z,2.5nm,0.3s,baz=343,slow=2.6,SNR=30						
CFR	Carcaliu	148.76	320	⇓P	PKPbc	11 17 26.2	+0.4
TPGR	Topolog	148.76	319	⇓P	PKiKP	11 17 26.7	-0.2
TESR	Tescani	148.82	323	⇑P	PKPbc	11 17 26.1	+0.2
BURAR	Bucovina Array	148.88	326	PKPdf	PKPdf	11 17 23.6	+2.1
BURAR					PKiKP	11 17 27.2	0.0
BURAR	Bucovina Array	148.88	326	⇓P	PKPbc	11 17 26.5	+0.3
TIRR	Tirguzor	148.98	319	⇓P	PKiKP	11 17 26.9	-0.4
ONER	Baraj Valea Uz	149.07	323	⇑P	PKiKP	11 17 27.5	0.0
VRI	Vrincioaia	149.17	322	⇑P	PKiKP	11 17 26.8	0.0
MANR	Mangalia	149.22	317	⇑P	PKPbc	11 17 27.1	+0.2
OJC	Ojcow	149.43	335	ePKP	PKPbc	11 17 27.4	+0.2
TURR	Turia	149.45	323	⇑P	PKPbc	11 17 27.9	+0.4
STHS	Stebnicka Huta	149.47	332	ePKP	PKPbc	11 17 27.5	+0.1
OZUR		149.55	323	⇓P	PKPbc	11 17 27.5	-0.2
NEHR	Nehoiu	149.68	322	⇓P	PKiKP	11 17 27.8	-0.3
MLR	Muntele Rosu	149.83	322	⇓P	PKiKP	11 17 29.0	-0.3
DOPR	Dopca	149.85	324	⇓P	PKPbc	11 17 28.2	-0.2
NIE	Niedzica	149.86	333	ePKP	PKPbc	11 17 29.6	+0.6
KSP	Ksiaz	150.18	339	ePKP	PKPbc	11 17 30.0	+0.4
CJR	Cluj-Napoca	150.31	326	⇓P	PKPbc	11 17 29.9	-0.2
STEB	Steborice	150.43	337	⇑ePKP	PKiKP	11 17 30.1	0.0
OSTC	Ostas	150.45	339	⇑ePKP	PKiKP	11 17 30.8	+0.6
UPC	Upice	150.56	339	⇑ePKP	PKiKP	11 17 30.6	+0.2
MARR	Marisel-Cluj	150.57	327	⇓P	PKPbc	11 17 30.2	-0.1
DPC	Dobruska-Polom	150.59	339	⇑ePKP	PKiKP	11 17 30.9	+0.4
DPC				ePKPAB	PKPab	11 17 40.3	+1.1
ARR	Arges	150.64	323	⇓P	PKPbc	11 17 29.3	-1.1
MORC	Moravsky Berou	150.64	337	⇑P	PKPbc	11 17 30.0	-0.1
MORC	Moravsky Berou	150.64	337	ePKP	PKiKP	11 17 30.3	+0.1
KRLC	Kraliky	150.66	338	⇑ePKP	PKiKP	11 17 31.0	+0.3
DRGR		150.70	327	⇑P	PKPbc	11 17 30.5	0.0
CLL	Collm	150.74	343	⇑iPKPbc	PKiKP	11 17 30.6	-0.1
	comp=Z,30nm,0.9s						
CLL				i PKPab	PKPab	11 17 39.6	-0.1
	comp=Z,8.0nm,0.8s						
CLL				i (pPKPab)		11 19 36.9	
	comp=Z,13nm,1.0s						
MAUC	Maruska	150.88	336	⇑ePKP	PKiKP	11 17 31.5	+0.5
PVCC	Panska Ves	150.99	341	⇑ePKP	PKiKP	11 17 31.6	+0.3

JAVC	Velka Javorina	151.35	335	*e*PKP	PKiKP	11 17 33.1	+0.9
VRAC	Vranov	151.38	337	PKPab	PKPab	11 17 43.8	+1.4
	comp=Z,1.8nm,0.4s,baz=64,slow=3.8,SNR=4.8						
VRAC	Vranov	151.38	337	*e*PKP	PKiKP	11 17 32.1	0.0
VRAC				*e*		11 17 43.7	
PRU	Pruhonice	151.47	340	⇑*e*PKP	PKiKP	11 17 32.3	0.0
SIRR	Siria	151.58	328	⇑P	PKiKP	11 17 32.5	-0.1
GZR	Gura Zlata	151.62	325	⇑P	PKPbc	11 17 32.6	0.0
KRUC	Moravsky	151.65	337	*e*PKP	PKPbc	11 17 32.4	0.0
KRUC				*e*		11 17 44.3	
MODS	Modra-Piesok	151.90	335	*e*PKP	PKiKP	11 17 33.8	+0.6
MODS				*e*		11 17 46.3	
BZS	Buzias	152.06	327	⇑P	PKPbc	11 17 33.2	-0.2
HERR	Herculane	152.15	325	⇑P	PKPbc	11 17 32.7	-1.0
KHC	Kasperske Hory	152.53	341	⇑*e*PKP	PKiKP	11 17 34.7	+0.1
CKRC	Cesky Krumlov	152.57	339	⇑*e*PKP	PKiKP	11 17 35.0	+0.4
GERES	GERESS Array B	152.74	340	PKPbc	PKPbc	11 17 34.7	-0.3
	comp=Z,2.5nm,0.8s,baz=20,slow=3.3,SNR=9.2						
GERES				PKPab	PKPab	11 17 48.0	-0.3
	comp=Z,0.4nm,0.4s,baz=30,slow=5.5,SNR=4.1						
CONA	Conrad Observa	152.80	336	*i* PKP	PKPbc	11 17 34.9	-0.2
	comp=Z,3.9nm,0.8s						
CONA				*i* PKP	PKPab	11 17 49.6	+1.0
	comp=Z,4.8nm,0.7s						
RONA	Rosalia, Austr	152.83	336	*i* PKP	PKiKP	11 17 35.2	0.0
	comp=Z,2.1nm,0.4s						
RONA				*e*PKP	PKPab	11 17 49.7	+1.0
	comp=Z,5.8nm,0.7s						
ARSA	Arzberg	153.49	336	*e*PKP	PKPab	11 17 51.8	+0.3
	comp=Z,0.8nm,0.3s						
WTTA	Wattenberg	154.78	341	*i* PKP	PKPab	11 17 51.0	-6.2
	comp=Z,12nm,1.4s						
SQTA	Sankt Quirin	154.94	342	*e*PKP	PKPab	11 17 58.7	+0.8
	comp=Z,6.3nm,0.9s						
ABTA	Abfaltersbach	154.97	339	*e*PKP	PKPdf	11 17 30.1	-0.4
	comp=Z,1.1nm,0.5s						
DAVA	Damuels	155.24	344	*i* PKP	PKPab	11 17 59.7	+0.5
	comp=Z,11nm,0.9s						
DAVOX	Davos/Dischmat	155.71	343	PKPab	PKPab	11 18 02.0	+0.8
	comp=Z,7.4nm,0.8s,baz=49,slow=2.9,SNR=10						
FUORN	Ofenpass-Fuorn	155.75	343	PKPdf	PKPdf	11 17 32.4	+0.6
FUORN					PKPab	11 18 01.6	+0.1
DBIC	Dimbokro	162.36	164	PKP	PKPdf	11 17 38.5	-1.5
	comp=Z,3.2nm,0.6s,baz=254,slow=3.9,SNR=4.9						
DBIC				PKPab	PKPab	11 18 31.1	+0.4
	comp=Z,2.8nm,0.7s,baz=213,slow=5.7,SNR=4.3						
ESDC	Sonseca Array	163.77	11	PKPab	PKPab	11 18 36.4	-0.1
	comp=Z,5.4nm,1.1s,baz=344,slow=3.0,SNR=8.3						

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*CNRM **19** 11:01:23.0, 36°.68N×7°.51W, h13^{km}, ML2.3*
*IGIL **19** 11:01:26.8, 36°.80N×7°.68W, h26^{km}, ML2.1*
*SFS **19** 11:01:26.7, 36°.84N×7°.59W, h29^{km}, ML2.8/12, ML2.4/15, MLv2.3/15*
*INMG **19** 11:01:26.8±1.5, 36°.83N×7°.63W, h26^{km}±4^{km}, ML2.2, Error ellipse: s-maj=3.5km s-min=3.4km az=19.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Golfo de Cadiz*
*MDD **19** 11:01:27.6±0.7, 36°.95N×7°.63W, h35^{km}±2^{km}, mb_Lg2.8/15, Error ellipse: s-maj=5.7km s-min=3.1km az=6.0*
ISC 19 11:01:24.2±1.2**, 36°.85N**±0°.03×**7°.55W**±0°.02**, h21**^{km}±5^{km}**, n71, σ1^{s}.44**/113**, 1C-6D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EXAYA	Ayamonte	0.39	18	Pg	Pn	11 01 35.6	+1.0
EXAYA				Sg	Sn	11 01 41.4	0.0
PBDV	Barranco-do-Ve	0.49	322	Pg	Pn	11 01 36.5	+0.3
PBDV				Sg	Sn	11 01 43.4	-0.7
PBDV	Barranco-do-Ve	0.49	322	⇓*i*P	Pn	11 01 36.5	+0.3
PBDV				*e*S	Sn	11 01 43.4	-0.7
PBDV				*i* IAML		11 01 44.4	
PBDV				*i* IAML		11 01 44.4	
PBDV				*i* IAML		11 01 44.5	
PVAQ	Vaqueiros	0.56	346	⇓*i*P	Pn	11 01 37.8	+0.7
PVAQ				*e*S	Sn	11 01 45.9	+0.1
PVAQ				*i* IAML		11 01 46.2	
PVAQ				*i* IAML		11 01 46.4	
PVAQ				*i* IAML		11 01 46.7	
PVAQ	Vaqueiros	0.56	346	P	Pn	11 01 37.4	+0.3
PVAQ	Vaqueiros	0.56	346	S	Sn	11 01 47.7	+1.9
EXHU	Huelva	0.65	50	Sg	Sn	11 01 49.3	+1.4
EGRO	El Granado	0.68	5	Pg	Pn	11 01 39.7	+1.0
EGRO				Sg	Sn	11 01 49.0	+0.3
EGRO	El Granado	0.68	5	Pg	Pn	11 01 39.6	+1.0
EGRO				Pg	Pn	11 01 39.7	+1.0
EGRO				Sg	Sb	11 01 47.5	+1.1
EGRO				Sg	Sn	11 01 47.7	-1.0
EGRO				*i* IVmb_Lg		11 01 50.4	
PCVE	Castro Verde	0.87	334	Pn	Pn	11 01 42.0	+0.7
PCVE				Sn	Sn	11 01 53.2	-0.1
PCVE	Castro Verde	0.87	334	*e*P	Pn	11 01 42.0	+0.7
PCVE				*e*S	Sn	11 01 53.4	+0.1
PCVE				*i* IAML		11 01 53.7	
PCVE				*i* IAML		11 01 54.2	
PCVE				*i* IAML		11 01 54.6	
MORF	Marmelete	0.99	297	*e*P	Pn	11 01 42.7	-0.2
MORF				*e*S	Sb	11 01 54.4	-0.9
MORF				IAML		11 01 55.3	
	comp=N,88nm,0.1s						
MORF	Marmelete	0.99	297	*e*P	Pn	11 01 42.8	-0.2
MORF				*e*S	Sb	11 01 54.5	-0.8
MORF				*i* IAML		11 01 55.2	
MORF				*i* IAML		11 01 56.0	
MORF				*i* IAML		11 01 56.0	
PFVI	Vila Bisbo	1.06	286	Pn	Pn	11 01 43.9	+0.1
PFVI				Sn	Sb	11 01 55.8	-1.5
PFVI	Vila Bisbo	1.06	286	*e*P	Pb	11 01 43.6	-0.2
PFVI				*e*S	Sb	11 01 55.6	-1.6
PFVI				*i* IAML		11 01 55.8	
PFVI				*i* IAML		11 01 56.3	
PFVI				*i* IAML		11 01 56.3	
PFVI	Vila Bisbo	1.06	286	P	Pn	11 01 44.7	+0.9
PFVI	Vila Bisbo	1.06	286	S	Sn	11 02 00.4	+2.4
MESJ	Messejana	1.12	332	*e*P	Pb	11 01 45.4	+0.5
MESJ				*e*S	Sb	11 01 58.9	-0.1
MESJ				IAML		11 02 00.1	
	comp=E,14nm,0.1s						
MESJ	Messejana	1.12	332	⇓*i*P	Pb	11 01 45.4	+0.5
MESJ				*e*S	Sb	11 01 59.1	+0.1
MESJ				*i* IAML		11 02 02.4	
MESJ				*i* IAML		11 02 09.2	
MESJ				*i* IAML		11 02 12.8	
EMIN	Mina Concepcio	1.15	37	Pn	Pb	11 01 46.0	+0.6
EMIN				Sn	Sb	11 01 59.6	-0.2
EMIN	Mina Concepcio	1.15	37	Pn	Pb	11 01 46.0	+0.6
EMIN				Sg	Sn	11 02 00.6	+0.3
EMIN				*i* IVmb_Lg		11 02 04.3	
PTEO	Sao Teotonio	1.16	307	⇓*e*P	Pb	11 01 45.6	0.0
PTEO				*e*S	Sb	11 01 59.1	-1.1
PTEO				*i* IAML		11 01 60.0	
PTEO				*i* IAML		11 02 00.3	
PTEO				*i* IAML		11 02 00.4	
PBEJ	Beja	1.20	348	⇑*i*P	Pb	11 01 46.7	+0.5
ESPR	Espera	1.36	89	Pn	Pb	11 01 49.6	+0.6
ESPR				Sn	Sb	11 02 06.0	+0.1
PBAR	Barrancos	1.38	17	Pn	Pb	11 01 49.3	0.0
PBAR				Sn	Sb	11 02 06.8	+0.3
PBAR	Barrancos	1.38	17	*e*P	Pb	11 01 49.3	0.0
PBAR				*e*S	Sb	11 02 09.1	+2.6
PBAR				*i* IAML		11 02 11.7	
PBAR				*i* IAML		11 02 18.2	
PBAR				*i* IAML		11 02 18.2	
EVO	Evora	1.71	348	Pn	Pn	11 01 53.8	+1.0
EVO				Sn	Sb	11 02 15.7	-0.4
EVO	Evora	1.71	348	*e*P	Pn	11 01 53.9	+1.0
EVO				*e*S	Sn	11 02 14.8	+0.6
EVO				*i* IAML		11 02 26.7	
EBAD	Badajoz	1.94	12	Pn	Pn	11 01 56.7	+0.6
EBAD	Badajoz	1.94	12	Pn	Pn	11 01 56.4	+0.3
EBAD				Sn	Sn	11 02 17.8	-2.1
EBAD				*i* IVmb_Lg		11 02 29.7	
PARRA	Arraiolos	2.00	349	⇓*e*P	Pn	11 01 57.7	+0.9
PARRA				*e*S	Sn	11 02 21.0	-0.2
PARRA				*i* IAML		11 02 21.8	
PARRA				*i* IAML		11 02 23.0	
PARRA				*i* IAML		11 02 24.0	
PESTR	Estremoz	2.01	359	Pn	Pn	11 01 58.0	+1.0
ECAB	El Cabril	2.09	54	Pn	Pn	11 01 59.2	+1.2
ECAB				Sn	Sn	11 02 21.9	-1.6
ECAB	El Cabril	2.09	54	Pn	Pn	11 01 59.0	+0.9
ECAB				Sn	Sn	11 02 22.3	-1.2
ECAB				*i* IVmb_Lg		11 02 29.1	
EXCBR	El Cabril	2.09	54	Sn	Sn	11 02 22.8	-0.7
PMTG	Montargil	2.27	347	*e*P	Pn	11 02 01.5	+0.9
PMTG				*e*S	Sn	11 02 28.3	+0.3
PMTG				*i* IAML		11 02 30.0	
PMTG				*i* IAML		11 02 40.5	
PMTG				*i* IAML		11 02 41.0	
PMAFR	Mafra	2.50	327	Pn	Pn	11 02 04.7	+0.9
PMAFR	Mafra	2.50	327	*e*P	Pn	11 02 04.8	+0.9
PMAFR				*e*S	Sn	11 02 33.9	+0.1
PMAFR				*i* IAML		11 02 37.8	
PMRV	Marv??o	2.57	3	*e*P	Pn	11 02 05.6	+0.9
PMRV				*e*S	Sn	11 02 35.2	-0.2
PMRV				*i* IAML		11 02 36.1	
PMRV				*i* IAML		11 02 36.1	
PMRV				*i* IAML		11 02 39.1	
EADA	Adamuz	2.70	60	Pn	Pn	11 02 07.9	+1.3
EADA				Sn	Sn	11 02 37.2	-1.4
EADA	Adamuz	2.70	60	Pn	Pn	11 02 07.7	+1.2
EADA				Sn	Sn	11 02 37.3	-1.4
EADA				*i* IVmb_Lg		11 02 44.3	
PSARD	Sardoal	2.78	350	⇓*i*P	Pn	11 02 08.7	+1.1
PSARD				*e*S	Sn	11 02 40.4	-0.2
PSARD				*i* IAML		11 02 40.9	
PSARD				*i* IAML		11 02 41.1	
PSARD				*i* IAML		11 02 41.8	
PCBR	Castelo Branco	2.98	1	*e*P	Pn	11 02 11.3	+1.0
PCBR				*e*S	Sn	11 02 44.7	-0.8
PCBR				*i* IAML		11 02 45.7	
PCBR				*i* IAML		11 02 45.9	
PCBR				*i* IAML		11 02 46.0	
ELGU	Los Guajares,	3.15	89	Sn	Sn	11 02 50.2	+0.5
ELGU	Los Guajares,	3.15	89	Sn	Sn	11 02 50.7	+1.0
ELGU				*i* IVmb_Lg		11 02 55.0	
CIBOR	Castaar de Ib	3.24	30	Pn	Pn	11 02 14.5	+0.6
CIBOR				Sn	Sn	11 02 49.4	-2.5
PCAS	Casmilo, Conde	3.28	347	*e*P	Pn	11 02 15.7	+1.2
PCAS				*e*S	Sn	11 02 53.3	+0.4
EPLA	Plasencia	3.41	19	Sn	Sn	11 02 53.5	-2.5
EPLA				*i* IVmb_Lg		11 03 02.3	
MTE	Manteigas	3.54	0	*e*P	Pn	11 02 18.9	+0.8
PAB	San Pablo	3.69	42	Pn	Pn	11 02 21.3	+1.2
PAB				Sn	Sn	11 03 00.1	-2.9
PAB				*i* IVmb_Lg		11 03 02.2	
EQES	Quesada	3.69	74	Sn	Sn	11 03 02.9	-0.3
EQES				*i* IVmb_Lg		11 03 11.2	
PVIS	Viseu	3.87	356	*e*P	Pn	11 02 23.4	+0.9
IFR	Ifrane	3.88	148	Pn	Pn	11 02 23.5	+0.7
MVO	Moncorvo	4.32	5	*e*P	Pn	11 02 29.6	+0.7
MVO				*e*S	Sn	11 03 16.0	-2.6
SRHM	Skhour des Reh	4.38	184	P	Pn	11 02 30.5	+0.8
SRHM	Skhour des Reh	4.38	184	S	Sn	11 03 23.6	+3.5
POLO	Lamas de Olo	4.52	358	*e*P	Pn	11 02 32.2	+0.7
POLO				*e*S	Sn	11 03 22.1	-1.3
POLO				*i* IAML		11 03 23.5	
POLO				*i* IAML		11 03 28.3	
MD31	MD31	4.59	149	P	Pn	11 02 30.2	-2.4
MD31	MD31	4.59	149	S	Sn	11 03 22.2	-3.1
GUD	Guadarrama	4.62	34	Pn	Pn	11 02 34.5	+1.5
GUD				Sn	Sn	11 03 22.6	-3.5
GUD				*i* IVmb_Lg		11 03 33.9	
MDT	Midelt	4.70	148	P	Pn	11 02 31.7	-2.4
MDT	Midelt	4.70	148	S	Sn	11 03 25.6	-2.5
PBRG	Braganca	4.98	7	*e*P	Pn	11 02 38.6	+0.7
ELOB	Lobios	5.02	356	Pn	Pn	11 02 38.6	+0.1
ELOB				Sn	Sn	11 03 29.6	-6.3
ELOB				*i* IVmb_Lg		11 03 46.0	
ETOB	Tobarra	5.08	68	Sn	Sn	11 03 35.2	-2.2
ETOB				*i* IVmb_Lg		11 03 36.6	
TISM	Timmit	5.20	170	P	Pn	11 02 37.9	-2.9
TISM	Timmit	5.20	170	S	Sn	11 03 37.1	-3.1
OUK	Oukaimeden	5.64	183	P	Pn	11 02 45.6	-1.6
OUK	Oukaimeden	5.64	183	S	Sn	11 03 50.7	-0.8
OUZM	OUZ	5.97	173	P	Pn	11 02 50.5	-0.9
OUZM	OUZ	5.97	173	S	Sn	11 03 59.1	-0.1

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*NAO **19** 11:03:30.4, 35°.08N×24°.47E, h33^{km}, MB3.6*
*IDC **19** 11:03:55.3±1.3, 37°.86N×20°.98E, h0^{km}, mb3.8/7, mbtmp3.8/8, ML0.9/1, MS3.1/2, Error ellipse: s-maj=26.5km s-min=23.9km az=47.0*
*THE **19** 11:03:56.4, 38°N±2°×2°1E±°, h0^{km}±2^{km}, M3.4/15, MLh3.4/15*
*ATH **19** 11:03:56.3, 37°.77N×21°.03E, h21^{km}±1^{km}, ML3.4/12, Manual Solution by A.Moschou First location: 2019/12/19 11:04:53, This location: 2020/10/07 08:26:14 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
ISC 19 11:03:56.4±1.0**, 37°.82N**±0°.02×**21°.02E**±0°.02**, h12**^{km}±7^{km}**, n53, σ0^{s}.93**/70**, mb3.8**/6**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTHK	Lithakia	0.18	234	P	Pb	11 04 01.0	-0.7
LTHK				S	Sg	11 04 04.6	+1.4
ORTH	Orthonies,Zaky	0.26	278	P	Pb	11 04 03.2	+0.1
ORTH				S	Sb	11 04 07.7	+0.2
RLS	Riolos of Patr	0.43	55	P	Pg	11 04 05.0	+0.2
RLS				S	Sb	11 04 11.8	-0.4
AXS	Araxos	0.47	36	P	Pb	11 04 06.5	-0.1
AXS				S	Sb	11 04 14.0	+0.4
VLS	Valsamata	0.50	317	P	Pb	11 04 06.4	-0.7
VLS				S	Sb	11 04 14.3	0.0
DRO	Drossia	0.56	76	P	Pb	11 04 07.7	-0.5
DRO				S	Sb	11 04 16.1	-0.1
VSK1	VASILIKIADES	0.69	329	P	Pb	11 04 09.7	-0.7
AST1	Astakos	0.72	4	P	Pb	11 04 10.8	-0.2
FSK	Fiskardo	0.74	331	P	Pb	11 04 10.8	-0.4
FSK	Fiskardo	0.74	331	P	Pb	11 04 10.9	-0.2
PVO	Paravola	0.89	26	P	Pn	11 04 14.5	-0.3
PVO	Paravola	0.89	26	P	Pn	11 04 14.1	-0.7
PVO				S	Sn	11 04 26.8	-0.9
KLV	Kalavryta, Ach	0.92	75	P	Pb	11 04 14.5	+0.1
KLV	Kalavryta, Ach	0.92	75	P	Pg	11 04 13.8	-0.3
KLV				S	Sg	11 04 26.1	-0.1
EFP	Efpalio	0.93	49	P	Pb	11 04 14.3	0.0
EFP				S	Sb	11 04 26.7	+0.1
NYDR	Nydri-Lefkada	0.93	344	P	Pb	11 04 14.1	-0.3
DRAG	Dragano-Lefkad	0.93	338	P	Pg	11 04 13.9	-0.5
ITM	Ithomi	0.96	131	P	Pb	11 04 15.0	+0.1
ITM	Ithomi	0.96	131	P	Pg	11 04 14.2	-0.6
ITM				S	Sg	11 04 25.3	-2.1
SERG	Sergoula	1.01	54	S	Sn	11 04 32.4	+1.8
TSLK	Tsoukalades, L	1.05	344	P	Pg	11 04 16.3	-0.3
ANX	Ano Chora	1.05	42	P	Pn	11 04 17.0	-0.1
ANX	Ano Chora	1.05	42	P	Pn	11 04 16.7	-0.4
ANX				S	Sg	11 04 30.2	-0.1
GUR	Goura	1.05	83	P	Pn	11 04 17.1	0.0
GUR	Goura	1.05	83	P	Pb	11 04 16.2	-0.4
GUR				S	Sb	11 04 29.3	-1.1
KALE	Kalithea	1.05	57	S	Sn	11 04 33.9	+2.2
KALE	Kalithea	1.05	57	P	Pb	11 04 16.3	-0.2
KALE				S	Sg	11 04 30.8	+0.5
PYL	PYLOS	1.08	148	P	Pg	11 04 17.0	-0.3
PYL	PYLOS	1.08	148	P	Pb	11 04 16.1	-1.0
PYL				S	Sb	11 04 29.3	-1.9
AMPL	Ampelaki	1.11	8	P	Pg	11 04 17.6	-0.2
VLX	Vlachokerasia	1.17	112	P	Pg	11 04 19.0	+0.2
MAKR	Makrakomi, Fth	1.48	36	P	Pg	11 04 24.6	-0.2
MAKR	Makrakomi, Fth	1.48	36	P	Pg	11 04 24.1	-0.6
MAKR				S	Sb	11 04 42.3	-0.3
TETR	Tetrakomo, Epi	1.54	7	P	Pg	11 04 25.1	-0.8
TETR	Tetrakomo, Epi	1.54	7	P	Pb	11 04 25.0	+0.1
TETR				S	Sn	11 04 42.9	-0.8
LTK	Loutraki	1.55	82	P	Pb	11 04 25.1	+0.1
LTK	Loutraki	1.55	82	P	Pn	11 04 24.0	+0.1
LTK				S	Sn	11 04 42.0	-2.0
AXAR	Agios Charalam	1.60	53	P	Pb	11 04 25.4	-0.5
AXAR				S	Sn	11 04 43.9	-1.2
IGT	Igoumenitsa	1.80	343	P	Pb	11 04 28.5	-0.7
OHR	Ohrid	3.29	357	*i* Pn	Pb	11 04 51.4	-3.4
VAY	Valandovo	3.70	18	*i* Pn	Pb	11 05 03.9	+2.3
IDI	Anoyia	4.01	128	Pn	Pn	11 04 59.5	+1.8
	0.4nm,0.3s,baz=322,slow=17,SNR=2.2						
IDI				Sn	Sn	11 05 45.1	+0.4
	1.4nm,0.3s,baz=316,slow=10,SNR=4.3						
	2.5nm,0.5s						
GERES	GERESS Array B	12.24	337	LR	LR	11 12 57.3	
	comp=Z,79nm,20.7s,baz=232,slow=44						
AKASG	Malin Array Be	14.14	22	Pn	P	11 07 23.4	-0.7
	0.5nm,0.3s,baz=212,slow=8.7,SNR=4.3						
ESDC	Sonseca Array	19.56	283	LR	LR	11 15 33.2	
	comp=Z,60nm,18.1s,baz=246,slow=36						
HFS	Hagfors	22.82	351	P	P	11 08 59.2	+0.3
	3.1nm,0.6s,baz=163,slow=11,SNR=8.2						
	3.1nm,0.6s						
EKA	Eskdalemuir Ar	23.95	325	P	P	11 09 10.9	+0.6
	1.7nm,0.5s,baz=130,slow=9.5,SNR=7.6						
	1.7nm,0.5s						
NB2	NORSAR Subarra	24.05	348	P	P	11 09 11.7	+0.5
	comp=Z,0.7nm,0.7s,baz=156,slow=9.3						
NOA	NORSAR Array B	24.05	348	P	P	11 09 11.1	-0.2
	comp=Z,1.0nm,0.8s,baz=158,slow=8.9,SNR=4.3						
	comp=Z,1.0nm,0.8s						
TORD	Torodi Ar. Bea	30.00	220	P	P	11 10 05.7	+0.7
	comp=Z,0.6nm,0.6s,baz=34,slow=10,SNR=1.5						
	comp=Z,0.6nm,0.6s						
KURBB	Kurchatov Arra	42.13	53	P	P	11 11 48.6	+0.2
	comp=Z,0.6nm,0.3s,baz=279,slow=8.7,SNR=7.0						
	comp=Z,0.6nm,0.3s						
MKAR	Makanchi Array	45.15	58	P	P	11 12 13.3	+0.5
	comp=Z,0.5nm,0.5s,baz=272,slow=8.0,SNR=6.8						
	comp=Z,0.5nm,0.5s						
ZALV	Zalesovo Beam	45.64	48	P	P	11 12 17.5	+1.0
	comp=Z,1.7nm,0.6s,baz=269,slow=9.8,SNR=8.0						
	comp=Z,1.7nm,0.6s						

HEL 19 11:06:47.7±0.2**, 63°.85N×20°.13E, h0**^{km}**, ML1.1, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UMAU	Umeaa	0.24	81	PG	Pg	11 06 51.5	-0.8
	baz=257						
UMAU				SG	Sg	11 06 54.8	-0.7
HUSU	Husum	0.65	219	PB	Pg	11 07 00.3	+0.2
HUSU				SG	Sg	11 07 08.0	-0.6
BURU	Burvik	0.92	36	PG	Pg	11 07 04.7	-0.6
BURU				SB	Sg	11 07 17.0	-0.1
VAF	Ylistaro	1.40	124	PG	Pn	11 07 12.7	-1.7
	baz=302						
VAF				MSG		11 07 29.7	
	comp=Z,0.6nm,0.2s						
VAF				SG	Sg	11 07 31.0	-1.5
HEMU	Hemsoen	1.51	220	PG	Pn	11 07 14.3	-1.6
	baz=37						
HEMU				SN	Sg	11 07 35.2	-0.9
OUF	Merijarvi	2.08	73	MSG		11 07 49.6	
	comp=Z,0.8nm,0.2s						
OUF				SG	Sb	11 07 52.0	-0.8
KPF	Kankaanpaa	2.21	155	PG	Pb	11 07 27.6	-0.8
KPF				MSG		11 07 53.0	
	comp=Z,0.7nm,0.2s						
KPF				SG	Sb	11 07 55.8	-0.4
KEF	Keuruu	2.74	126	MSG		11 08 08.3	
	comp=Z,0.5nm,0.2s						
KEF				SG	Sb	11 08 10.2	-1.4
RAF	Rauma	2.93	164	MSG		11 08 14.0	
	comp=Z,0.7nm,0.2s						
KU2	Taivalkoski	3.94	58	SN	Sn	11 08 33.5	-2.6
MEF	Metsahovi	4.16	149	PB	Pb	11 07 57.0	-4.6

JMA 19 11:09:58.1±0.1**, 36°.9N**±0°.4×**141°.0E**±0°.7**, h53**^{km}±1^{km}**, MV0.5**/19**, E OFF IBARAKI PREF, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.30	321	P	Pn	11 10 07.3	-0.2
ONAJ				*e*S	Sn	11 10 14.2	-0.1
JFFD	Fukushimafurud	0.44	300	P	Pn	11 10 08.9	0.0
JFFD				*e*S	Sn	11 10 16.6	0.0
JFK	Kawauchi	0.51	346	*e*S	Sn	11 10 17.7	-0.4

UPP 19 11:25:39.7±0.1**, 64°.28N×20°.30E, h0**^{km}**, ML2.0, Suspected explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ODEU	Stanfors	0.22	55	P	Pg	11 25 44.0	+0.1
ODEU				S	Sg	11 25 47.5	+0.7
ODEU	Stanfors	0.22	55	P	Pg	11 25 44.4	+0.4
	baz=242						
ODEU				S	Sg	11 25 47.5	+0.8
UMAU	Umeaa	0.43	157	P	Pg	11 25 48.0	+0.1
UMAU	Umeaa	0.43	157	P	Pg	11 25 48.4	+0.4
BURU	Burvik	0.56	57	P	Pg	11 25 50.3	-0.1
BURU	Burvik	0.56	57	P	Pg	11 25 50.5	+0.2
HUSU	Husum	1.06	207	P	Pg	11 25 59.4	-0.6
SJUU	Sjulsmark	1.35	24	P	Pg	11 26 04.9	-0.6

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*JMA **19** 11:53:58.3±0.8, 46°N±5°×15°1E±°, h30^{km}, MV4.1/8, KURILE ISLANDS REGION*
SKHL 19 11:54:01.4±0.6**, 45°.20N×150°.80E, h52**^{km}±4^{km}**, mb4.4**/3**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.07	272	*e*P	Pn	11 54 32.9	-0.8
KUR				AMB	AMB	11 54 34.3	
	90nm,0.5s						
KUR				*e*S	Sn	11 54 57.0	-1.3
KUR				A	A	11 55 00.9	
	240nm,0.4s						
KUR				A	A	11 55 00.9	
	110nm,0.4s						
YUK	Yuzh-Kuril'sk	3.71	253	*e*P	Pn	11 54 56.6	+0.4
YUK				AMB	AMB	11 54 57.9	
	100nm,0.6s						
YUK				*e*S	Sn	11 55 39.8	+1.2
YUK				A	A	11 55 42.9	
	130nm,0.5s						
YUK				A	A	11 55 42.9	
	120nm,0.5s						
NEM2	Nemuro 2	4.07	245	*e*P	Pn	11 55 01.8	+0.8
NEM2				*e*S	Sn	11 55 48.6	+1.3
NMR	Nemuro--Hokkai	4.08	245	*e*P	Pn	11 55 02.3	+1.2
NMR				*e*S	Sn	11 55 47.5	0.0
JNK	Nakash	4.65	252	*e*P	Pn	11 55 11.1	+2.1
AKK	Akkeshi	4.81	245	*e*P	Pn	11 55 12.2	+0.9
AKK				*e*S	Sn	11 56 06.1	+0.4
JAK	Akkeshi	4.92	246	*e*P	Pn	11 55 13.5	+0.8
JTKR	Abashiri--Toko	5.07	258	*e*P	Pn	11 55 17.6	+2.8
JAR	Ashorobuto	5.40	252	*e*P	Pn	11 55 22.0	+2.7
JAR				*e*S	Sn	11 56 23.7	+3.7
JOB	Onbets	5.52	248	*e*S	Sn	11 56 24.7	+1.7
JCH	Churui	5.96	247	*e*P	Pn	11 55 28.4	+1.4
JCH				*e*S	Sn	11 56 34.4	+0.4

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*BJI **19** 11:55:30.7, 18°.53N×145°.97E, h217^{km}, mB5.0/39, mb5.0/88*
*NEIC **19** 11:55:32.1, 18°.66N×145°.82E, h200^{km}, Moment Tensor Solution. Duration: 3^{s}.1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.00; M$_{\theta\theta}$-1.27; M$_{\phi\phi}$-0.73; M$_{r\theta}$-2.70; M$_{\theta\phi}$0.18; M$_{\phi r}$0.42; Fault plane solution: M$_0$3.25000×10^{17} NP1: φ$_s$105.71000°, δ15.73000°, λ95.60000°. NP2: φ$_s$279.89000°, δ74.35000°, λ88.43000°. Principal axes: T 3.5380, Plg61.0000°, Azm188.0000°; N -0.6899, Plg2.0000°, Azm280.0000°; P -2.8481, Plg29.0000°, Azm11.0000°;*
*IPGP **19** 11:55:32.0, 18°.55N×145°.61E, h193^{km}, Mw5.7, Fault plane solution: NP1: φ$_s$127.00000°, δ18.00000°, λ118.00000°. NP2: φ$_s$278.00000°, δ74.00000°, λ81.00000°.*
*NEIC **19** 11:55:32.5±2.3, 18°.58N±0°.06×145°.61E±0°.08, h186^{km}±1^{km}, mb5.5/711, Mwb5.5/50, Mww5.6/58, Error ellipse: s-maj=13.9km s-min=10.4km az=73.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.67; M$_{\theta\theta}$-1.00; M$_{\phi\phi}$-0.67; M$_{r\theta}$-2.19; M$_{\theta\phi}$-0.03; M$_{\phi r}$0.02; Fault plane solution: M$_0$2.63000×10^{17} NP1: φ$_s$269.89000°, δ74.32000°, λ90.80000°. NP2: φ$_s$86.94000°, δ15.70000°, λ87.16000°. Principal axes: T 2.8976, Plg61.0000°, Azm181.0000°; N -0.6659, Plg1.0000°, Azm90.0000°; P -2.2318, Plg29.0000°, Azm359.0000°;*
*NEIC **19** 11:55:32.1, 18°.56N×145°.61E, h200^{km}*

NEIC ***19*** *11:55:32.9,18°.55N×145°.61E,h191^{km}*

DJA ***19*** *11:55:33.7±0.7,19°N±2°×14°6E±°,h212^{km}±7^{km},M5.7/145, mB6.1/127,mb6.0/145,Mw(mB)5.8/127,MwMwp5.3/58, Mwp5.5/58*

GFZ ***19*** *11:55:34.9,18°.49N×145°.61E,h218^{km},MW5.6,Moment Tensor Solution. s149 Moment tensor: M$_{rr}$1.90; M$_{\theta\theta}$-1.40; M$_{\phi\phi}$-0.50; M$_{r\theta}$-2.72; M$_{\theta\phi}$0.54; M$_{\phi r}$0.05; Fault plane solution: NP1:ϕ_s124.00000°,δ18.00000°, λ117.00000°. NP2:ϕ_s276.00000°,δ74.00000°,λ81.00000°. Principal axes: T 3.4400, Plg60.0000°, Azm173.0000°; N -0.4100, Plg8.0000°, Azm278.0000°; P -3.0300, Plg28.0000°, Azm13.0000°;*

GCMT ***19*** *11:55:34.5±0.1,18°.50N±0°.01×145°.65E±0°.01, h196^{km},MW5.7/157,Moment Tensor Solution. s133,c239; s157,c305; Duration: 1^{s}7 Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.48±.04; M$_{\theta\theta}$-2.58±.05; M$_{\phi\phi}$0.10±.05; M$_{r\theta}$-3.20±.04; M$_{\theta\phi}$0.22±.05; M$_{\phi r}$0.29±.04; Best double couple: M$_0$4.09500×10^{17} NP1:ϕ_s94.00000°,δ19.00000°, λ89.00000°. NP2:ϕ_s275.00000°,δ71.00000°,λ90.00000°. Principal axes: T 4.0360, Plg64.0000°, Azm185.0000°; N 0.1170, Plg0.0000°, Azm95.0000°; P -4.1540, Plg26.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***19*** *11:55:35.2±0.9,18°.55N×145°.46E,h236^{km},mb5.3/49 Error ellipse: s-maj=7.3km s-min=4.2km az=110.3*

IDC ***19*** *11:55:36.3±0.8,18°.54N×145°.48E,h235^{km}±7^{km},mb4.9/36, mbtmp5.5/39,Error ellipse: s-maj=8.5km s-min=5.3km az=79.0*

ISC 19 11:55:32.9±0.3**,18°.55N**±0°.03×**145°.60E**±0°.03**,h206**^{km}±1^{km}**, h207**^{km}**:pP-P,n1493,**σ**1^{s}70**/1370**,mb5.5**/649**,16C-22D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DPSS	**Saipan**	**3.29**	**177**		**Pn**	**11 56 24.6**	**-1.8**
GUMO	**Guam**	**4.98**	**188**	P	**Pn**	**11 56 47.0**	**-0.3**
	3μm,0.8s,baz=320,slow=5.0,SNR=59						
GUMO				S	**S**	**11 57 45.3**	**-0.3**
	1μm,0.3s,baz=350,slow=24,SNR=7.2						
JCJ	**Chichijima**	**9.07**	**340**	P	Pn	11 57 27.2	-13
	187nm,0.4s,baz=290,slow=21,SNR=42						
JCJ				S	S	11 59 04.4	-18
	2μm,0.7s,baz=94,slow=23,SNR=11						
JCJ	**Chichijima**	**9.07**	**340**		**Pn**	**11 57 39.5**	**-0.6**
JCJ	**Chichijima**	**9.07**	**340**	P	**Pn**	**11 57 39.9**	**-0.2**
	797nm,0.9s						
JHJ2	**Mitsune**	**15.40**	**341**	P	**P**	**11 59 01.1**	**+1.2**
JHJ2	**Mitsune**	**15.40**	**341**	P	**P**	**11 59 02.3**	**+2.4**
	806nm,0.8s						
JHJ2	**Mitsune**	**15.40**	**341**	S	**S**	**12 01 53.8**	**+3.3**
	806nm,0.8s						
JHJ	**Hachijo jima 2**	**15.42**	**341**	P	**P**	**11 59 01.3**	**+1.2**
	178nm,0.3s,baz=264,slow=19,SNR=13						
JHJ				S	**S**	**12 01 50.5**	**-0.4**
	770nm,0.9s,baz=107,slow=18,SNR=6.5						
PATS	**Pohnpei**	**16.99**	**132**	P	**Pn**	**11 59 18.6**	**-0.3**
	comp=Z,2μm,0.9s						
PATS	**Pohnpei**	**16.99**	**132**		**Pn**	**11 59 18.9**	**-0.1**
PATS	**Pohnpei**	**16.99**	**132**	P	**Pn**	**11 59 18.8**	**-0.1**
	comp=Z,2μm,0.9s						
PATS	**Pohnpei**	**16.99**	**132**	S	**S**	**12 02 23.7**	**-0.5**
	comp=Z,2μm,0.9s						
JSG	**Sagara**	**17.36**	**339**	P	**Pn**	**11 59 22.5**	**-0.7**
JSG	**Sagara**	**17.36**	**339**	P	**Pn**	**11 59 23.8**	**+0.6**
	comp=Z,938nm,0.8s						
JSG	**Sagara**	**17.36**	**339**	S	**S**	**12 02 34.8**	**+3.5**
	comp=Z,938nm,0.8s						
JOW	**Kunigami**	**17.97**	**300**	P	**Pn**	**11 59 31.8**	**+1.4**
	comp=Z,865nm,0.9s,baz=137,slow=10,SNR=140						
JOW				S	**S**	**12 02 45.2**	**+1.6**
	comp=Z,20nm,0.9s,baz=49,slow=20,SNR=1.3						
JOW	**Kunigami**	**17.97**	**300**		**Pn**	**11 59 31.1**	**+0.7**
JOW	**Kunigami**	**17.97**	**300**	P	**Pn**	**11 59 32.0**	**+1.6**
	comp=Z,1μm,1.0s						
INU	**Inuyama**	**18.39**	**337**		**P**	**11 59 33.3**	**+0.8**
INU	**Inuyama**	**18.39**	**337**	P	**P**	**11 59 33.7**	**+1.2**
	comp=Z,399nm,1.0s						
JMN	**Monobe**	**18.39**	**328**	P	**Pn**	**11 59 34.1**	**-1.2**
JMN	**Monobe**	**18.39**	**328**	P	**Pn**	**11 59 35.1**	**-0.2**
	comp=Z,521nm,1.4s						
JMN	**Monobe**	**18.39**	**328**	S	**S**	**12 02 55.3**	**+3.3**
	comp=Z,521nm,1.4s						
JGF	**Kuroka**	**18.49**	**338**		**P**	**11 59 34.5**	**+0.8**
JGF	**Kuroka**	**18.49**	**338**	P	**P**	**11 59 35.0**	**+1.3**
	comp=Z,766nm,0.8s						
JGF	**Kuroka**	**18.49**	**338**	S	**S**	**12 02 56.3**	**+2.5**
	comp=Z,766nm,0.8s						
JSU	**Suzuyama**	**18.81**	**316**	P	**Pn**	**11 59 39.3**	**-0.9**
	comp=Z,173nm,0.9s						
JSU	**Suzuyama**	**18.81**	**316**	S	**S**	**12 03 02.3**	**+2.2**
	comp=Z,173nm,0.9s						
MJAR	**Matsushiro Arr**	**19.07**	**342**	P	**P**	**11 59 40.6**	**+0.7**
	comp=Z,199nm,0.8s,baz=173,slow=11,SNR=250						
MJAR				S	**S**	**12 03 03.2**	**-2.0**
	comp=Z,82nm,1.0s,baz=171,slow=16,SNR=7.1						
MJAR	**Matsushiro Arr**	**19.07**	**342**	P	**P**	**11 59 40.3**	**+0.3**
MAJO	**Matsushiro**	**19.07**	**342**		**P**	**11 59 40.7**	**+0.7**
MAJO	**Matsushiro**	**19.07**	**342**	P	**P**	**11 59 40.6**	**+0.7**
	comp=Z,588nm,0.8s						
MAJO	**Matsushiro**	**19.07**	**342**	⇑*i*P	**P**	**11 59 40.2**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,289nm,0.6s						
MJB9	**Matsu-Tunnel**	**19.08**	**342**	P	**Pn**	**11 59 41.7**	**-1.6**
JNU	**Nakatsue**	**19.62**	**321**	P	**P**	**11 59 47.2**	**+1.3**
	comp=Z,87nm,1.1s,baz=99,slow=7.0,SNR=16						
JNU	**Nakatsue**	**19.62**	**321**	P	**P**	**11 59 47.5**	**+1.6**
JMJ	**Miyako jima 2**	**19.86**	**292**	P	**Pn**	**11 59 51.2**	**-1.6**
	comp=Z,3μm,0.9s						
H11S3	**WAKE ISLAND Hy**	**20.00**	**87**	T	T	12 21 13.8	
	baz=274,slow=74,SNR=6.0						
H11S1	**WAKE ISLAND Hy**	**20.01**	**87**	T	T	12 21 09.0	
	baz=274,slow=74,SNR=6.3						
H11S2	**WAKE ISLAND Hy**	**20.02**	**87**	T	T	12 21 07.3	
	baz=274,slow=74,SNR=8.8						
H11N1	**WAKE ISLAND Hy**	**20.15**	**83**	T	T	12 21 14.1	
	baz=266,slow=74,SNR=11						
H11N2	**WAKE ISLAND Hy**	**20.16**	**83**	T	T	12 21 14.6	
	baz=266,slow=74,SNR=9.9						
H11N3	**WAKE ISLAND Hy**	**20.17**	**83**	T	T	12 21 15.5	
	baz=266,slow=74,SNR=12						
JSD	**Sado**	**20.45**	**343**		**P**	**11 59 55.1**	**+0.5**
JSD	**Sado**	**20.45**	**343**	P	**P**	**11 59 54.9**	**+0.2**
	comp=Z,212nm,0.9s						
JSD	**Sado**	**20.45**	**343**	S	**S**	**12 03 34.1**	**+2.1**
	comp=Z,212nm,0.9s						
MANU	**Manus Island**	**20.53**	**175**		**P**	**11 59 55.6**	**-0.2**
JAY	**Jayapura**	**21.48**	**193**	P	**P**	**12 00 05.3**	**-0.4**
	comp=Z,304nm,0.8s,baz=340,slow=4.2,SNR=56						
	comp=Z,304nm,0.8s						
JAY	**Jayapura**	**21.48**	**193**	P	**P**	**12 00 06.2**	**+0.5**
	comp=Z,6μmcomp=Z,457nm,1.3s						
JTU	**Tsushima**	**21.48**	**321**	P	**P**	**12 00 08.4**	**+3.0**
	comp=Z,123nm,1.0s						
SMPI	**Sarmi**	**21.50**	**199**	P	**P**	**12 00 07.2**	**+1.3**
	comp=Z,22μmcomp=Z,1μm,2.1s						
GENI	**Genyem**	**21.68**	**195**	P	**P**	**12 00 08.3**	**+0.7**
	comp=Z,1μm,1.1s						
GENI	**Genyem**	**21.68**	**195**	P	**P**	**12 00 08.9**	**+1.3**
	comp=Z,14μmcomp=Z,1μm,1.1s						
BAKI	**Biak**	**21.72**	**206**	P	**P**	**12 00 10.8**	**+2.7**
	comp=Z,18μmcomp=Z,1μm,1.4s						
YOJ	**Yonaguni jima**	**21.81**	**290**	P	**P**	**12 00 08.8**	**-0.1**
YOJ	**Yonaguni jima**	**21.81**	**290**	P	**P**	**12 00 10.7**	**+1.8**
	comp=Z,238nm,1.2s						
YOJ	**Yonaguni jima**	**21.81**	**290**	P	**P**	**12 00 08.8**	**-0.1**
SRPI	**Serui, Papua**	**22.28**	**205**	P	**P**	**12 00 15.2**	**+1.8**
	comp=Z,5μmcomp=Z,14μmcomp=Z,1μm,1.1s						
MWPI	**Manokwari, Pap**	**22.44**	**212**	P	**P**	**12 00 16.5**	**+1.6**
	comp=Z,16μmcomp=Z,1μm,0.8s						
DAV	**Davao City (W)**	**22.58**	**242**	P	**P**	**12 00 17.3**	**+1.2**
	comp=Z,565nm,0.6s,baz=53,slow=4.5,SNR=11						
	comp=Z,565nm,0.6s						
DAV	**Davao City (W)**	**22.58**	**242**	P	**P**	**12 00 18.2**	**+2.1**
DAV	**Davao City (W)**	**22.58**	**242**		**P**	**12 00 18.3**	**+2.1**
DAV	**Davao City (W)**	**22.58**	**242**	P	**P**	**12 00 18.5**	**+2.3**
	comp=Z,916nm,0.8s						
DAV	**Davao City (W)**	**22.58**	**242**	P	**P**	**12 00 18.0**	**+1.8**
	comp=Z,10μmcomp=Z,916nm,0.8s						
RKPI	**Ransiki, Papua**	**22.88**	**211**	P	**P**	**12 00 20.1**	**+1.2**
	comp=Z,8μmcomp=Z,6μmcomp=Z,214nm,0.7s						
NACB	**Ninganchiao**	**23.03**	**288**	IAmb	IAmb	12 00 24.4	
	comp=Z,148nm,0.9s						
NACB	**Ninganchiao**	**23.03**	**288**	P	**P**	**12 00 21.9**	**+1.7**
	comp=Z,213nm,1.1s						
YULB	**Yu-li**	**23.19**	**286**	P	**P**	**12 00 23.1**	**+1.5**
	comp=Z,230nm,0.9s						
TATO	**Taipei**	**23.27**	**290**	P	**P**	**12 00 25.3**	**+3.0**
TATO				S	**S**	**12 04 22.6**	**+3.5**
TATO	**Taipei**	**23.27**	**290**	P	**P**	**12 00 23.3**	**+1.0**
TATO				IAmb	IAmb	12 00 27.4	
	comp=Z,194nm,0.9s						
TATO	**Taipei**	**23.27**	**290**	P	**P**	**12 00 25.6**	**+3.3**
	comp=Z,270nm,1.0s						
WAMI	**Wamena**	**23.30**	**198**	P	**P**	**12 00 26.0**	**+3.4**
	comp=Z,7μmcomp=Z,9μmcomp=Z,734nm,0.8s						
YHNB	**Yeheng**	**23.31**	**289**	P	**P**	**12 00 24.2**	**+1.4**
	comp=Z,543nm,0.9s						
TWGBT	**Beinan**	**23.32**	**285**	P	**P**	**12 00 24.1**	**+1.3**
	comp=Z,268nm,0.9s						
ERM	**Erimo**	**23.48**	**355**	P	**P**	**12 00 24.7**	**+0.7**
ERM	**Erimo**	**23.48**	**355**	P	**P**	**12 00 26.3**	**+2.3**
	comp=Z,755nm,0.9s						
ERM	**Erimo**	**23.48**	**355**	P	**P**	**12 00 24.7**	**+0.7**
ERM				pmax	pmax		
	comp=Z,403nm,0.9s						
JEM	**Erimo**	**23.49**	**355**	P	**P**	**12 00 26.4**	**+2.4**
	comp=Z,433nm,0.9s						
RABL	**Rabaul**	**23.50**	**163**	P	**P**	**12 00 24.4**	**-0.1**
SSLB	**Suanglung**	**23.55**	**287**	P	**P**	**12 00 26.8**	**+1.8**
SSLB	**Suanglung**	**23.55**	**287**	P	**P**	**12 00 26.6**	**+1.7**
	comp=Z,442nm,0.9s						
TPUB	**Ta-pu**	**23.78**	**286**	P	**P**	**12 00 27.8**	**+0.7**
	comp=Z,208nm,0.9s						
SWI	**Sorong**	**23.89**	**218**	P	**P**	**12 00 28.7**	**+0.7**
	comp=Z,6μmcomp=Z,381nm,0.9s						
TJN	**Taejon**	**23.95**	**322**	P	**P**	**12 00 29.9**	**+1.5**
	comp=Z,536nm,0.9s						
TJN	**Taejon**	**23.95**	**322**	⇑*i*P	**P**	**12 00 29.6**	**+1.2**
TGY	**Tagaytay City**	**24.07**	**263**	P	**P**	**12 00 31.1**	**+1.4**
	comp=Z,1μm,0.6s,baz=146,slow=3.7,SNR=38						
KSRS	**Korea Array**	**24.38**	**324**	P	**P**	**12 00 32.3**	**0.0**
	comp=Z,58nm,0.7s,baz=146,slow=8.6,SNR=76						
KSRS				ScP	**ScP**	**12 07 22.1**	**-2.9**
	comp=Z,15nm,0.9s,baz=134,slow=2.7,SNR=15						
	comp=Z,58nm,0.7s						
KSAR	**Wonju Array Be**	**24.40**	**324**	P	**P**	**12 00 32.8**	**+0.4**
KSAR	**Wonju Array Be**	**24.40**	**324**	P	**P**	**12 00 32.8**	**+0.4**
KS19	**Wonju Array Si**	**24.45**	**324**	IAmb	IAmb	12 01 17.6	
	comp=Z,253nm,1.2s						
SGSI	**Sangihe**	**24.57**	**235**	P	**P**	**12 00 35.4**	**+1.2**
	comp=Z,5μmcomp=Z,768nm,0.8s						
KMPI	**Kaimana, Papua**	**24.99**	**209**	P	**P**	**12 00 39.1**	**+1.1**
	comp=Z,7μmcomp=Z,8μmcomp=Z,684nm,1.1s						
FAKI	**Fak Fak**	**25.06**	**213**	P	**P**	**12 00 39.2**	**+0.6**
FAKI	**Fak Fak**	**25.06**	**213**	P	**P**	**12 00 38.7**	**+0.1**
	comp=Z,240nm,0.9s						
FAKI	**Fak Fak**	**25.06**	**213**	P	**P**	**12 00 39.0**	**+0.4**
	comp=Z,7μmcomp=Z,5μmcomp=Z,238nm,0.9s						
INCN	**Inchon**	**25.14**	**323**	P	**P**	**12 00 40.4**	**+1.2**
INCN	**Inchon**	**25.14**	**323**	P	**P**	**12 00 40.6**	**+1.5**
INCN				IAmb	IAmb	12 01 23.8	
	comp=Z,116nm,1.1s						
INCN	**Inchon**	**25.14**	**323**	P	**P**	**12 00 41.8**	**+2.7**
	comp=Z,91nm,1.9s						
INCN	**Inchon**	**25.14**	**323**	P	**P**	**12 00 40.6**	**+1.5**
INCN				pmax	pmax		
	comp=Z,116nm,1.2s						
TNTI	**Ternate**	**25.14**	**227**	P	**P**	**12 00 39.9**	**+0.5**
	comp=Z,94nm,1.6s						
TNTI	**Ternate**	**25.14**	**227**	P	**P**	**12 00 40.2**	**+0.8**
SSE	**Sheshan**	**25.37**	**304**	P	**P**	**12 00 42.5**	**+1.2**
SSE				pP	**pP**	**12 01 21.6**	**+0.6**
SSE				S	**S**	**12 04 54.8**	**+2.5**
SSE				pmax	pmax		
	comp=Z,60nm,1.0s						
SSE				LR	LR		
	comp=Z,1μm,17.2s						
ASAJ	**Asahikawa**	**25.62**	**355**	P	**P**	**12 00 45.5**	**+2.1**
ASAJ				pmax	pmax		
	comp=Z,262nm,0.7s						
QZH	**Quanzhou**	**25.85**	**289**	P	**P**	**12 00 47.0**	**+1.3**
QZH				PP	**PnPn**	**12 01 35.8**	**-0.9**
QZH				S	**S**	**12 05 00.3**	**+0.3**
QZH				pmax	pmax		
	comp=Z,190nm,1.0s						
KNMB	**Chin-men Tao**	**25.97**	**288**	P	**P**	**12 00 47.7**	**+1.0**
KNMB				IAmb	IAmb	12 00 55.5	
	comp=Z,92nm,1.1s						
KUR	**Kuril'sk**	**26.68**	**4**	*ce*P	**P**	**12 00 54.0**	**+1.2**
KUR				pmax	pmax		
	comp=Z,692nm,1.0s						
VLA	**Vladivostok**	**27.10**	**338**	*di*P	**P**	**12 00 58.0**	**+1.4**
VLA				pmax	pmax		
	comp=Z,77nm,0.9s						
MSAI	**Masohi**	**27.25**	**219**	P	**P**	**12 00 59.0**	**+0.7**
	comp=Z,5μmcomp=Z,6μmcomp=Z,279nm,0.8s						
TEY	**Ternei**	**27.46**	**346**	*e*P	**P**	**12 01 02.2**	**+2.4**
KRAI	**Karang Ratu**	**27.55**	**220**	P	**P**	**12 01 02.0**	**+1.0**
	comp=Z,5μmcomp=Z,4μmcomp=Z,197nm,0.8s						
NJ2	**Nanjing**	**27.58**	**304**	*e*P	**P**	**12 01 04.5**	**+3.5**
NJ2				pP	**pP**	**12 01 40.9**	**-0.5**
NJ2				S	**S**	**12 05 31.3**	**+4.3**
NJ2				sS	sS	12 06 49.9	+10
NJ2				SS	SS	12 07 13.1	-20
NJ2				pmax	pmax		
	comp=Z,16nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,400nm,4.5s						
BNDI	**Bandanaira**	**27.65**	**216**	P	**P**	**12 01 02.1**	**+0.3**
	comp=Z,449nm,0.8s						
BNDI	**Bandanaira**	**27.65**	**216**	P	**P**	**12 01 02.4**	**+0.6**
	comp=Z,4μmcomp=Z,6μmcomp=Z,446nm,0.8s						
PMG	**Port Moresby**	**27.82**	**177**	P	**P**	**12 01 03.5**	**+0.2**
PMG	**Port Moresby**	**27.82**	**177**	P	**P**	**12 01 02.6**	**-0.7**
	comp=Z,186nm,0.9s						
PMG	**Port Moresby**	**27.82**	**177**	P	**P**	**12 01 01.9**	**-1.4**
	comp=Z,5μmcomp=Z,3μmcomp=Z,186nm,0.9s						
PMG	**Port Moresby**	**27.82**	**177**	P	**P**	**12 01 03.5**	**+0.2**
PMG				pmax	pmax		
	comp=Z,205nm,1.0s						
AAI	**Ambon**	**27.96**	**220**	P	**P**	**12 01 04.9**	**+0.3**
	comp=Z,3μmcomp=Z,276nm,1.0s						
USRK	**Ussuriysk Ar.**	**28.01**	**339**	P	**P**	**12 01 05.7**	**+1.0**
	comp=Z,39nm,0.8s,baz=148,slow=8.3,SNR=40						
	comp=Z,39nm,0.8s						
SANI	**Sanana**	**28.13**	**225**	P	**P**	**12 01 05.2**	**-0.8**
	comp=Z,67nm,0.9s						
SANI	**Sanana**	**28.13**	**225**	P	**P**	**12 01 05.3**	**-0.8**
NLAI	**Namlea**	**28.29**	**222**	P	**P**	**12 01 08.5**	**+1.0**
	comp=Z,5μmcomp=Z,2μmcomp=Z,143nm,0.8s						
YSS	**Yuzhno-Sakhali**	**28.43**	**356**	P	**P**	**12 01 09.7**	**+1.3**
YSS	**Yuzhno-Sakhali**	**28.43**	**356**	P	**P**	**12 01 09.1**	**+0.8**
	comp=Z,262nm,0.9s						
YSS	**Yuzhno-Sakhali**	**28.43**	**356**	⇓*e*P	**P**	**12 01 09.4**	**+1.1**
YSS				*e*		12 02 20.9	
YSS				*e*S	**S**	**12 05 40.6**	**+0.6**
YSS				pmax	pmax		
	comp=Z,190nm,0.7s						
YSS				pmax	pmax		
	comp=Z,700nm,5.1s						
YSS				smax	smax		
	comp=N,800nm,8.0s						
YSS				smax	smax		
	comp=E,900nm,6.2s						
GTOI	**Gorontalo**	**28.43**	**234**	P	**P**	**12 01 09.8**	**+1.0**
	comp=E,4μmcomp=E,2μmcomp=E,137nm,1.0s						
DL2	**Dalian**	**29.06**	**319**	P	**P**	**12 01 18.3**	**+4.3**
DL2				pP	**pwP**	**12 02 00.3**	**+0.7**
DL2				pmax	pmax		
	comp=E,72nm,0.9s						
DL2				pmax	pmax		
	comp=E,350nm,5.5s						
MDJ	**Mudanjiang**	**29.24**	**336**	P	**P**	**12 01 17.8**	**+2.2**
MDJ				pP	pP	12 01 57.6	+1.2
MDJ				S	**S**	**12 05 52.6**	**-0.3**
MDJ				PcS	**PcS**	**12 08 01.6**	**+1.4**
MDJ				pmax	pmax		
	comp=E,24nm,0.9s						
MDJ	**Mudanjiang**	**29.24**	**336**	P	**P**	**12 01 17.8**	**+2.2**
	comp=E,22nm,0.7s						
MRSI	**Marisa**	**29.36**	**235**	P	**P**	**12 01 18.1**	**+1.1**
	comp=E,3μmcomp=E,5μmcomp=E,552nm,1.0s						
LUWI	**Luwuk**	**29.71**	**232**	P	**P**	**12 01 19.7**	**-0.3**
	comp=E,558nm,0.9s						
LUWI	**Luwuk**	**29.71**	**232**	P	**P**	**12 01 20.0**	**-0.1**
	comp=E,5μmcomp=E,553nm,0.9s						
TOLI2	**Tolitoli**	**29.89**	**237**	P	**P**	**12 01 23.0**	**+1.3**
TOLI2	**Tolitoli**	**29.89**	**237**	P	**P**	**12 01 22.4**	**+0.8**
	comp=E,408nm,1.2s						
SAUI	**Saumlaki**	**29.90**	**209**	P	**P**	**12 01 23.7**	**+2.0**
	comp=E,912nm,0.9s						
SAUI	**Saumlaki**	**29.90**	**209**	P	**P**	**12 01 23.7**	**+2.0**
	comp=E,4μmcomp=E,9μmcomp=E,908nm,0.9s						
TATA	**Tatamba Isabel**	**30.21**	**151**	P	**P**	**12 01 24.1**	**-0.3**
	comp=E,174nm,1.5s						
CN2	**Changchun**	**30.35**	**330**	*e*P	**P**	**12 01 25.5**	**+0.1**
CN2				PP	**sP**	**12 02 30.8**	**+1.2**
CN2				PcP	**PcP**	**12 04 18.3**	**-1.9**
CN2				*e*S	**S**	**12 06 07.4**	**-2.9**
CN2				pmax	pmax		
	comp=E,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=E,100nm,4.0s						
CN2				LR	LR		
	comp=E,700nm,14.0s						
CN2				LR	LR		
	comp=E,1μm,14.0s						
CN2				LR	LR		
	comp=E,900nm,15.1s						
GZH	**Guangzhou**	**30.45**	**284**	P	**P**	**12 01 26.9**	**+0.4**
GZH				S	**S**	**12 06 10.3**	**-2.0**
GZH				pmax	pmax		
	comp=E,60nm,0.9s						
GZH				LR	LR		
	comp=E,830nm,12.4s						
GZH				LR	LR		
	comp=E,640nm,10.5s						
APSI	**Ampana**	**30.47**	**233**	P	**P**	**12 01 26.9**	**+0.2**
	comp=E,3μmcomp=E,246nm,1.3s						
UGL	**Uglegorsk**	**30.59**	**355**	*e*P	**P**	**12 01 29.2**	**+1.8**
UGL				pmax	pmax		
	comp=Z,2μm,2.5s						
UGL				pmax	pmax		
	comp=Z,600nm,0.9s						
TIA	**Tai'an**	**30.64**	**311**	P	**P**	**12 01 30.3**	**+2.3**
TIA				S	**S**	**12 06 12.6**	**-2.4**
TIA				ScP	**ScP**	**12 07 41.1**	**-3.1**
TIA				pmax	pmax		
	comp=Z,26nm,0.8s						
TIA				LR	LR		
	comp=Z,1μm,12.3s						
TIA				LR	LR		
	comp=Z,1μm,15.2s						
TIA				LR	LR		
	comp=Z,1μm,18.1s						
WHN	**Wuhan**	**30.73**	**299**	P	**P**	**12 01 30.6**	**+1.7**
WHN				pP	**pwP**	**12 02 13.1**	**-1.8**
WHN				S	**S**	**12 06 18.9**	**+2.4**
WHN				LR	LR		
	comp=Z,3μm,12.4s						
SAVO	**Savo Central**	**30.89**	**152**	P	**P**	**12 01 29.1**	**-1.3**
	comp=Z,98nm,0.9s						
BNX	**BinXian**	**31.03**	**335**	⇓P	**P**	**12 01 32.4**	**+1.1**
BNX				S	**S**	**12 06 17.3**	**-3.6**
BNX				pmax	pmax		
	comp=Z,39nm,0.7s						
BNX				pmax	pmax		
	comp=Z,340nm,9.0s						
BNX				LR	LR		
	comp=Z,870nm,12.4s						
BNX				LR	LR		
	comp=Z,1μm,13.2s						
BNX				LR	LR		
	comp=Z,830nm,13.1s						
MPSI	**Mapaga**	**31.05**	**237**	P	**P**	**12 01 33.1**	**+1.2**
	comp=Z,3μmcomp=Z,328nm,0.9s						
KKM	**Kota Kinabalu**	**31.22**	**250**	P	**P**	**12 01 35.2**	**+1.8**
KKM	**Kota Kinabalu**	**31.22**	**250**	P	**P**	**12 01 35.3**	**+1.8**
	comp=Z,815nm,0.8s						
KKM	**Kota Kinabalu**	**31.22**	**250**	P	**P**	**12 01 35.5**	**+2.0**
	comp=Z,6μmcomp=Z,815nm,0.8s						
TARAI	**Tarakan**	**31.32**	**244**	P	**P**	**12 01 35.4**	**+1.2**
	comp=Z,963nm,0.8s						
CNSH	**ChangSha**	**31.40**	**294**	P	**P**	**12 01 37.3**	**+2.5**
CNSH				S	**S**	**12 06 30.0**	**+3.0**
CNSH				pmax	pmax		
	comp=Z,20nm,0.6s						
CNSH				LR	LR		
	comp=Z,2μm,9.8s						
CNSH				LR	LR		
	comp=Z,880nm,13.5s						
CNSH				LR	LR		
	comp=Z,880nm,11.7s						
PCI	**Palu**	**31.86**	**235**	P	**P**	**12 01 40.3**	**+1.3**
TYV	**Tymovskoe**	**32.33**	**357**	*e*P	**P**	**12 01 43.4**	**+0.8**
TYV				*e*S	**S**	**12 06 43.9**	**+3.1**
TYV				pmax	pmax		
	comp=Z,1μm,2.5s						
TYV				pmax	pmax		
	comp=Z,214nm,1.1s						
TYV				smax	smax		
	comp=N,142nm,2.0s						
TYV				smax	smax		
	comp=E,91nm,2.0s						
TYV				smax	smax		
	comp=N,1μm,3.4s						
TYV				smax	smax		
	comp=E,900nm,3.4s						
COEN	**Coen**	**32.39**	**184**	P	**P**	**12 01 43.4**	**-0.1**
	comp=Z,172nm,0.8s						
COEN	**Coen**	**32.39**	**184**	IAmb	IAmb	12 01 45.7	
	comp=Z,114nm,0.8s						
COEN	**Coen**	**32.39**	**184**	P	**P**	**12 01 43.4**	**-0.1**
	comp=Z,172nm,0.8s						
KKSI	**Kolaka, Sulawe**	**32.66**	**229**	P	**P**	**12 01 47.9**	**+2.0**
	comp=Z,3μmcomp=Z,4μmcomp=Z,351nm,0.9s						
HNS	**HongShan**	**32.91**	**311**	⇓P	**P**	**12 01 48.0**	**+0.2**
HNS				pP	**pwP**	**12 02 32.9**	**-1.1**
HNS				PP	**PP**	**12 03 09.0**	**+2.4**
HNS				S	**S**	**12 06 49.3**	**-0.8**
HNS				ScP	**ScP**	**12 07 48.9**	**-2.9**
HNS				pmax	pmax		
	comp=Z,79nm,0.9s						
HNS				LR	LR		
	comp=Z,2μm,15.1s						
HNS				LR	LR		
	comp=Z,840nm,16.7s						
GRNR	**Gornyy**	**32.97**	**349**	⇓*i*P	**P**	**12 01 49.0**	**+0.8**
GRNR				pmax	pmax		
	comp=Z,20nm,0.5s						
HURO	**Huro Makira**	**33.01**	**150**	P	**P**	**12 01 50.1**	**+1.2**
	comp=Z,210nm,0.7s						
NGOA	**Tingoa Renbel**	**33.14**	**153**	P	**P**	**12 01 49.9**	**-0.1**
	comp=Z,307nm,0.8s						
SKR	**Severo-Kuril's**	**33.14**	**12**	*e*P	P	12 01 56.8	+7.2
SKR				*e*S	**S**	**12 06 52.3**	**-1.1**
SKR				pmax	pmax		
	comp=Z,3μm,4.6s						
SKR				MLR	MLR		
	comp=Z,4μm,16.0s						
BJT	**Baijiatuau**	**33.17**	**316**	P	**P**	**12 01 51.3**	**+1.2**
	comp=Z,53nm,1.4s						
BJI	**Beijing**	**33.18**	**316**	P	**P**	**12 01 50.0**	**-0.1**
BJI				PP	**PnPn**	**12 03 08.8**	**+0.1**
BJI				S	**S**	**12 06 52.4**	**-1.9**
BJI				ScP	**ScP**	**12 07 53.3**	**+0.6**
BJI				pmax	pmax		
	comp=Z,23nm,1.2s						
BJI				pmax	pmax		
	comp=Z,79nm,5.6s						
BJI				LR	LR		
	comp=Z,310nm,16.3s						
BJI				LR	LR		
	comp=Z,420nm,16.8s						
BJI				LR	LR		
	comp=Z,510nm,16.1s						
TTSI	**Tana Toraja**	**33.24**	**232**	P	**P**	**12 01 52.5**	**+1.6**
GULI	**GuiLin**	**33.30**	**288**	P	**P**	**12 01 48.3**	**-3.1**
GULI				S	**S**	**12 06 55.3**	**-1.2**
GULI				SS	**SS**	**12 09 16.0**	**-7.1**
GULI				pmax	pmax		
	comp=Z,89nm,1.0s						
GULI				pmax	pmax		
	comp=Z,200nm,4.2s						
GULI				LR	LR		
	comp=Z,590nm,10.0s						
GULI				LR	LR		
	comp=Z,1μm,10.2s						
GULI				LR	LR		
	comp=Z,1μm,9.6s						
LYN	**LuoYang**	**33.46**	**305**	P	**P**	**12 01 55.1**	**+2.4**
LYN				pP	pP	12 02 33.8	0.0
LYN				PP	**PP**	**12 03 14.8**	**+2.0**
LYN				S	**S**	**12 06 56.5**	**-2.3**

LYN				ScP	**ScP**	**12 07 51.3**	**-2.5**
LYN				sS	sS	12 08 18.3	+5.8
LYN				pmax	pmax		
	comp=Z,46nm,1.1s						
KDU	**Kakadu**	**33.63**	**204**	P	**P**	**12 01 54.7**	**+0.5**
	comp=Z,149nm,0.8s						
MMSI	**Mamuju**	**33.70**	**234**	P	**P**	**12 01 56.4**	**+1.5**
	comp=Z,3µmcomp=Z,262nm,0.7s						
QIZ	**Qiongzhong**	**33.82**	**277**	P	**P**	**12 01 57.0**	**+1.1**
QIZ				S	**S**	**12 07 08.5**	**+3.8**
QIZ				pmax	pmax		
	comp=Z,70nm,0.9s						
QIZ				pmax	pmax		
	comp=Z,300nm,3.0s						
QIZ				LR	LR		
	comp=Z,940nm,16.2s						
QIZ				LR	LR		
	comp=Z,560nm,15.1s						
QIZ				LR	LR		
	comp=Z,770nm,16.3s						
QIZ	**Qiongzhong**	**33.82**	**277**	P	**P**	**12 01 58.5**	**+2.6**
	comp=Z,82nm,1.0s						
QIZ	**Qiongzhong**	**33.82**	**277**	P	**P**	**12 01 58.3**	**+2.4**
QIZ				pP	**pP**	**12 02 35.7**	**-1.3**
QIZ				sP	**sP**	**12 02 57.6**	**-2.5**
SPSI	**Sidrap Palu**	**33.88**	**231**	P	**P**	**12 01 57.9**	**+1.4**
	comp=Z,2µmcomp=Z,6µmcomp=Z,711nm,0.9s						
BNSI	**Bone**	**33.93**	**230**	P	**P**	**12 01 59.1**	**+2.3**
	comp=Z,3µmcomp=Z,10µmcomp=Z,910nm,1.1s						
DRS	**Darwin Rock St**	**34.02**	**206**	P	**P**	**12 01 57.7**	**+0.1**
	comp=Z,243nm,0.7s						
PMSI	**Majene**	**34.22**	**233**	P	**P**	**12 02 01.9**	**+2.5**
	comp=Z,5µmcomp=Z,393nm,0.7s						
MTN	**Manton Dam**	**34.30**	**206**	P	**P**	**12 02 00.1**	**+0.1**
	comp=Z,566nm,1.1s,comp=Z,0.0nm						
MTN	**Manton Dam**	**34.30**	**206**	P	**P**	**12 02 00.5**	**+0.5**
BKB	**Balikpapan**	**34.41**	**238**	P	**P**	**12 02 03.0**	**+2.0**
	comp=Z,873nm,0.9s						
BKB	**Balikpapan**	**34.41**	**238**	P	**P**	**12 02 03.5**	**+2.5**
	comp=Z,3µmcomp=Z,9µmcomp=Z,873nm,0.9s						
KAPI	**Kappang**	**34.60**	**230**	P	**P**	**12 02 04.1**	**+1.5**
KAPI	**Kappang**	**34.60**	**230**	P	**P**	**12 02 03.9**	**+1.3**
KAPI	**Kappang**	**34.60**	**230**	P	**P**	**12 02 04.2**	**+1.6**
	comp=Z,251nm,1.1s						
KAPI	**Kappang**	**34.60**	**230**	P	**P**	**12 02 03.6**	**+1.0**
	comp=Z,2µmcomp=Z,251nm,1.1s						
KAPI	**Kappang**	**34.60**	**230**	P	**P**	**12 02 03.9**	**+1.3**
KAPI				pmax	pmax		
	comp=Z,275nm,0.8s						
KAPI	**Kappang**	**34.60**	**230**	P	**P**	**12 02 03.8**	**+1.1**
HEH	**HeiHe**	**34.81**	**339**	*e*P	**P**	**12 02 03.5**	**-0.5**
HEH				S	**S**	**12 07 14.8**	**-4.4**
HEH				ScP	**ScP**	**12 07 54.3**	**-4.0**
HEH				pmax	pmax		
	comp=Z,91nm,1.1s						
SOEI	**Soe**	**35.13**	**219**	P	**P**	**12 02 06.6**	**-0.7**
	comp=Z,588nm,0.8s						
SOEI	**Soe**	**35.13**	**219**	P	**P**	**12 02 06.1**	**-1.2**
	comp=Z,2µmcomp=Z,4µmcomp=Z,585nm,0.8s						
XLT	**XiLinHaoTe**	**35.39**	**322**	*e*P	**P**	**12 02 09.6**	**+0.4**
XLT				pP	pwP	12 02 55.3	-0.1
XLT				PP	**PnPn**	**12 03 37.1**	**+1.5**
XLT				PcP	**PcP**	**12 04 34.3**	**-0.1**
XLT				S	**S**	**12 07 26.0**	**-2.3**
XLT				ScP	**ScP**	**12 07 59.3**	**-1.4**
XLT				sS	sS	12 08 45.4	+3.0
XLT				pmax	pmax		
	comp=Z,24nm,1.3s						
XLT				LR	LR		
	comp=Z,65nm,17.2s						
XLT				LR	LR		
	comp=Z,590nm,17.0s						
XLT				LR	LR		
	comp=Z,710nm,15.0s						
MMRI	**Maumere**	**35.51**	**222**	P	**P**	**12 02 10.8**	**+0.4**
	comp=Z,578nm,1.6s						
MMRI	**Maumere**	**35.51**	**222**	P	**P**	**12 02 11.3**	**+0.9**
	comp=Z,3µmcomp=Z,7µmcomp=Z,585nm,1.5s						
PEA0B	**Petropavlovsk-**	**35.76**	**12**	P	**P**	**12 02 14.2**	**+2.2**
PEA0B	**Petropavlovsk-**	**35.76**	**12**	⇑*i*P	**P**	**12 02 14.2**	**+2.2**
PETK	**Petropavlovsk-**	**35.76**	**12**	P	**P**	**12 02 13.2**	**+1.2**
	comp=Z,90nm,0.8s,baz=193,slow=7.6,SNR=47						
PETK				ScP	**ScP**	**12 07 58.1**	**-3.6**
	comp=Z,7.2nm,0.6s,baz=164,slow=5.7,SNR=5.5						
	comp=Z,90nm,0.8s						
PETK	**Petropavlovsk-**	**35.76**	**12**	P	**P**	**12 02 13.1**	**+1.0**
BATI	**Baumata**	**35.84**	**219**	P	**P**	**12 02 13.7**	**+0.4**
	comp=Z,4µmcomp=Z,523nm,0.7s						
MTKI	**Muara Teweh, K**	**35.86**	**241**	P	**P**	**12 02 15.3**	**+1.9**
	comp=Z,791nm,0.7s						
PET	**Petropavlovsk**	**35.88**	**13**	P	**P**	**12 02 09.4**	**-3.7**
PET	**Petropavlovsk**	**35.88**	**13**	P	**P**	**12 02 15.5**	**+2.4**
	comp=Z,1µm,1.0s						
PET	**Petropavlovsk**	**35.88**	**13**	*e*P	**P**	**12 02 15.0**	**+2.0**
PET				*e*S	**S**	**12 07 35.2**	**-0.1**
PET				pmax	pmax		
	comp=Z,298nm,1.1s						
PET				pmax	pmax		
	comp=Z,200nm,12.8s						
PET				MLR	MLR		
	comp=Z,800nm,17.0s						
PET	**Petropavlovsk**	**35.88**	**13**	P	**P**	**12 02 15.1**	**+2.0**
	comp=Z,260nm,1.0s						
EDFI	**Ende, Flores**	**35.95**	**223**	P	**P**	**12 02 13.6**	**-0.6**
	comp=Z,2µmcomp=Z,3µmcomp=Z,158nm,0.7s						
XAN	**Xi'an**	**36.10**	**303**	⇑P	**P**	**12 02 16.1**	**+0.8**
XAN				S	**S**	**12 07 40.9**	**+1.5**
XAN				pmax	pmax		
	comp=Z,24nm,1.0s						
XAN				pmax	pmax		
	comp=Z,220nm,8.4s						
XAN				LR	LR		
	comp=Z,2µm,15.8s						
XAN				LR	LR		
	comp=Z,2µm,13.4s						
XAN				LR	LR		
	comp=Z,2µm,17.2s						
SBUM	**Sibu**	**36.40**	**248**	P	**P**	**12 02 20.5**	**+2.6**
SBUM	**Sibu**	**36.40**	**248**	P	**P**	**12 02 20.0**	**+2.0**
	comp=Z,424nm,1.1s						
SBUM	**Sibu**	**36.40**	**248**	P	**P**	**12 02 19.6**	**+1.6**
	comp=Z,4µmcomp=Z,424nm,1.1s						
MTSU	**Mount Surprise**	**36.47**	**182**	P	**P**	**12 02 19.1**	**+0.6**
	comp=Z,233nm,0.7s						
HHC	**Hu-ho-hao-te**	**36.64**	**315**	*e*P	**P**	**12 02 21.4**	**+1.5**
HHC				S	**S**	**12 07 44.0**	**-3.5**
HHC				pmax	pmax		
	comp=Z,18nm,1.1s						
HHC				pmax	pmax		
	comp=Z,79nm,5.7s						
GYA	**Guiyang**	**36.71**	**290**	⇓P	**P**	**12 02 23.0**	**+2.3**
GYA				pP	pP	12 03 02.5	+0.2
GYA				PP	**PnPn**	**12 03 52.8**	**+1.2**
GYA				PcP	**PcP**	**12 04 39.3**	**+0.6**
GYA				S	**S**	**12 07 50.6**	**+1.6**
GYA				pmax	pmax		
	comp=Z,33nm,0.9s						
GYA				LR	LR		
	comp=Z,2µm,10.9s						
LBFI	**Labuhan Bajo,**	**36.94**	**226**	P	**P**	**12 02 22.7**	**+0.2**
	comp=Z,4µmcomp=Z,571nm,0.7s						
HIA	**Hailar**	**37.05**	**332**	P	**P**	**12 02 24.0**	**+0.9**
	comp=Z,65nm,0.8s						
HILR	**Hailar Array B**	**37.26**	**332**	P	**P**	**12 02 24.6**	**-0.2**
	comp=Z,57nm,0.8s,baz=136,slow=11,SNR=40						
HILR				PcP	**PcP**	**12 04 39.6**	**-0.2**
	comp=Z,8.9nm,0.3s,baz=105,slow=4.9,SNR=3.3						
HILR				ScP	**ScP**	**12 08 04.6**	**-2.8**
	comp=Z,31nm,0.8s,baz=144,slow=5.6,SNR=12						
	comp=Z,57nm,0.8s						
PKKI	**Palangkaraya**	**37.35**	**240**	P	**P**	**12 02 26.9**	**+0.9**
	comp=Z,3µmcomp=Z,11µmcomp=Z,1µm,1.0s						
BBKI	**Banjar Baru**	**37.36**	**237**	P	**P**	**12 02 27.0**	**+0.9**
	comp=Z,5µmcomp=Z,289nm,1.1s						
WSI	**Waingapu**	**37.54**	**224**	P	**P**	**12 02 26.5**	**-1.0**
	comp=Z,12µmcomp=Z,1µm,0.8s						
BTO	**Baotou**	**37.59**	**313**	*e*P	**P**	**12 02 29.8**	**+2.0**
BTO				pP	**pwP**	**12 03 12.9**	**-2.1**
BTO				sP	**sP**	**12 03 36.3**	**+3.7**
BTO				PP	**PnPn**	**12 04 05.0**	**+3.3**
BTO				S	**S**	**12 08 03.8**	**+2.0**
BTO				sS	**sS**	**12 09 20.3**	**+4.0**
BTO				pmax	pmax		
	comp=Z,76nm,1.2s						
BTO				pmax	pmax		
	comp=Z,470nm,8.4s						
BTO				LR	LR		
	comp=Z,2µm,15.1s						
BTO				LR	LR		
	comp=Z,2µm,17.5s						
BTO				LR	LR		
	comp=Z,2µm,14.3s						
TV1H	**Townsville Har**	**37.59**	**178**	P	**P**	**12 02 27.5**	**-0.3**
	comp=Z,85nm,0.6s						
BASI	**Baing, Sumba**	**37.77**	**223**	P	**P**	**12 02 28.6**	**-0.9**
	comp=Z,2µmcomp=Z,9µmcomp=Z,906nm,0.6s						
ZEA	**Zeya**	**37.88**	**342**	*e*P	**P**	**12 02 29.4**	**-0.6**
ZEA				*e*S	**S**	**12 08 02.7**	**-2.9**
ZEA				pmax	pmax		
	comp=N,10.0nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.3s						
ZEA				smax	smax		
	comp=E,200nm,13.6s						
DBNI	**Kabupaten Domp**	**38.04**	**227**	P	**P**	**12 02 31.7**	**-0.1**
	comp=E,91nm,0.8s						
WBSI	**Waikabubak, Su**	**38.12**	**225**	P	**P**	**12 02 31.0**	**-1.5**
	comp=E,6µmcomp=E,924nm,0.7s						
CTA	**Charters Tower**	**38.40**	**179**	P	**P**	**12 02 35.0**	**+0.4**
	comp=E,1.9nm,0.8s						
CTA	**Charters Tower**	**38.40**	**179**	P	**P**	**12 02 33.7**	**-0.9**
CTAO	**Charters Tower**	**38.40**	**179**	P	**P**	**12 02 35.0**	**+0.4**
CTAO	**Charters Tower**	**38.40**	**179**	P	**P**	**12 02 34.9**	**+0.3**
	comp=E,23nm,0.8s						
CTAO	**Charters Tower**	**38.40**	**179**	P	**P**	**12 02 35.1**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,68nm,1.0s						
CTAO	**Charters Tower**	**38.40**	**179**	P	**P**	**12 02 34.4**	**-0.3**
CTAO				x	x	12 03 19.5	
UBPT	**Khong Chiam**	**38.48**	**271**	P	**P**	**12 02 38.0**	**+2.6**
PLAI	**Plampang**	**38.65**	**228**	P	**P**	**12 02 36.8**	**0.0**
	comp=Z,448nm,0.8s						
PLAI	**Plampang**	**38.65**	**228**	P	**P**	**12 02 36.7**	**0.0**
	comp=Z,5µmcomp=Z,439nm,0.8s						
TWSI	**Taliwang, Sumb**	**39.22**	**229**	P	**P**	**12 02 41.4**	**-0.1**
QIS	**Mount Isa**	**39.30**	**189**	P	**P**	**12 02 42.0**	**-0.2**
	comp=Z,181nm,1.1s						
PBKI	**Pangkalan Bun**	**39.51**	**241**	P	P	12 02 54.0	+10
KLNI	**Mataram**	**39.56**	**230**	P	**P**	**12 02 45.0**	**+0.6**
CD2	**Chengdu**	**39.73**	**296**	P	**P**	**12 02 46.8**	**+1.1**
CD2				pP	pP	12 03 27.6	-0.3
CD2				S	**S**	**12 08 32.4**	**-1.6**
CD2				SS	**SS**	**12 11 30.8**	**-7.8**
CD2				pmax	pmax		
	comp=Z,50nm,0.7s						
CD2				pmax	pmax		
	comp=Z,370nm,6.9s						
CD2				LR	LR		
	comp=Z,2µm,9.5s						
CD2				LR	LR		
	comp=Z,2µm,10.8s						
CD2				LR	LR		
	comp=Z,2µm,13.3s						
WRAB	**Tennant Creek**	**39.80**	**197**	P	**P**	**12 02 47.0**	**+0.8**
WRAB	**Tennant Creek**	**39.80**	**197**	P	**P**	**12 02 46.5**	**+0.2**
	comp=Z,561nm,1.0s						
WRAB	**Tennant Creek**	**39.80**	**197**	*c* *i*P	**P**	**12 02 46.7**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,712nm,1.0s						
WRA	**Warramunga Arr**	**39.81**	**197**	P	**P**	**12 02 46.5**	**+0.2**
	comp=Z,521nm,0.9s,baz=23,slow=9.1,SNR=489						
WRA				PcP	**PcP**	**12 04 48.2**	**-0.1**
	comp=Z,10nm,0.4s,baz=18,slow=3.2,SNR=5.0						
WRA				ScP	**ScP**	**12 08 15.6**	**-2.0**
	comp=Z,14nm,0.8s,baz=18,slow=4.1,SNR=8.0						
WRA				S	**S**	**12 08 33.7**	**-1.5**
	comp=Z,28nm,1.2s,baz=21,slow=14,SNR=5.6						
WRA	**Warramunga Arr**	**39.81**	**197**	P	**P**	**12 02 47.4**	**+1.0**
WRA				IAmb	IAmb	12 02 48.4	
	comp=Z,122nm,1.1s						
KHKI	**Kahang-Kahang**	**39.88**	**230**	P	**P**	**12 02 48.8**	**+1.8**
SANVU	**Saraoutou**	**39.92**	**146**	P	**P**	**12 02 47.6**	**+0.4**
SANVU	**Saraoutou**	**39.92**	**146**	P	**P**	**12 02 47.2**	**-0.1**
	comp=Z,461nm,1.2s						
KMI	**Kunming**	**40.19**	**287**	⇑P	**P**	**12 02 51.6**	**+1.8**
KMI				pP	pP	12 03 31.5	-0.6
KMI				PcP	**PcP**	**12 04 50.8**	**+1.0**
KMI				ScS	ScS	12 12 34.5	+0.4
KMI				pmax	pmax		
	comp=Z,43nm,1.1s						
KMI				pmax	pmax		
	comp=Z,270nm,3.4s						
KMI				LR	LR		
	comp=Z,790nm,11.6s						
KMI				LR	LR		
	comp=Z,830nm,10.5s						
KMI				LR	LR		
	comp=Z,520nm,13.8s						
KMMI	**Kalianget**	**40.25**	**234**	P	**P**	**12 02 52.2**	**+2.1**
	comp=Z,3µmcomp=Z,6µmcomp=Z,519nm,1.2s						
DNP	**Denpasar**	**40.38**	**231**	P	**P**	**12 02 51.5**	**+0.4**
RTBI	**Rangdo, Negare**	**40.43**	**231**	P	**P**	**12 02 52.9**	**+1.3**
IGBI	**Denpasar**	**40.52**	**230**	P	**P**	**12 02 53.1**	**+0.8**
ABJI	**Asem Bagus**	**40.53**	**233**	P	**P**	**12 02 54.2**	**+1.9**
	comp=Z,3µmcomp=Z,5µmcomp=Z,392nm,0.9s						
LZH	**Lanzhou**	**40.65**	**304**	*e*P	**P**	**12 02 54.5**	**+1.2**
LZH				pP	pP	12 03 36.3	+0.7
LZH				S	**S**	**12 08 46.8**	**-1.0**
LZH				SS	**SS**	**12 11 55.1**	**-1.8**
LZH				ScS	**ScS**	**12 12 30.3**	**-6.1**
LZH				pmax	pmax		
	comp=Z,91nm,1.3s						
LZH				pmax	pmax		
	comp=Z,240nm,4.5s						
LZH				LR	LR		
	comp=Z,5µm,13.6s						
LZH				LR	LR		
	comp=Z,4µm,12.9s						
LZH				LR	LR		
	comp=Z,3µm,12.6s						
SHEM	**Shemya Is, Ala**	**40.71**	**26**	P	**P**	**12 02 55.6**	**+2.3**
	comp=Z,78nm,0.4s,baz=6.4,slow=4.0,SNR=10						
	comp=Z,78nm,0.4s						
SHEM	**Shemya Is, Ala**	**40.71**	**26**	IAmb	IAmb	12 02 57.1	
	comp=Z,170nm,0.9s						
SMY	**Shemya**	**40.71**	**26**	P	**P**	**12 02 52.9**	**-0.4**
SMY	**Shemya**	**40.71**	**26**	P	**P**	**12 02 52.9**	**-0.4**
SMY				pmax	pmax		
	comp=Z,257nm,1.1s						
LZDM	**Lanzhou Array**	**40.74**	**304**	P	**P**	**12 02 55.7**	**+1.5**
	comp=Z,71nm,0.5s,baz=145,slow=8.2,SNR=106						
	comp=Z,71nm,0.5s						
BLJI	**Banyuglugur**	**40.98**	**233**	P	**P**	**12 02 57.9**	**+1.9**
	comp=Z,9µmcomp=Z,1µm,0.9s						
JAGI	**Jajag, Banyuwa**	**41.03**	**232**	P	**P**	**12 02 55.7**	**-0.7**
	comp=Z,539nm,1.0s						
JAGI	**Jajag, Banyuwa**	**41.03**	**232**	P	**P**	**12 02 55.8**	**-0.7**
	comp=Z,2µmcomp=Z,4µmcomp=Z,533nm,1.0s						
PZH	**PanZhiHua**	**41.12**	**289**	P	**P**	**12 02 59.0**	**+1.8**
PZH				pP	**pP**	**12 03 39.5**	**-0.3**
PZH				S	**S**	**12 08 55.6**	**+0.7**
PZH				SS	**SS**	**12 12 05.9**	**-0.3**
PZH				pmax	pmax		
	comp=Z,40nm,0.8s						
PZH				pmax	pmax		
	comp=Z,230nm,4.9s						
MA2	**Magadan**	**41.15**	**4**	ScP	**ScP**	**12 08 19.1**	**-3.1**
	comp=Z,9.8nm,0.7s,baz=159,slow=8.8,SNR=3.6						
MA2	**Magadan**	**41.15**	**4**	P	**P**	**12 02 58.4**	**+1.7**
MA2				IAmb	IAmb	12 02 58.9	
	comp=Z,156nm,1.1s						
MA2	**Magadan**	**41.15**	**4**	P	**P**	**12 02 58.3**	**+1.5**
	comp=Z,161nm,0.7s						
MA2	**Magadan**	**41.15**	**4**	⇑*i*P	**P**	**12 02 58.5**	**+1.7**
MA2				pmax	pmax		
	comp=Z,84nm,0.9s						
MA2	**Magadan**	**41.15**	**4**	P	**P**	**12 02 58.1**	**+1.3**
	comp=Z,156nm,0.7s						
GRJI	**Gresik**	**41.32**	**235**	P	**P**	**12 03 01.3**	**+2.5**
FITZ	**Fitzroy Crossi**	**41.36**	**209**	P	**P**	**12 03 00.6**	**+1.5**
FITZ				IAmb	IAmb	12 03 01.2	
	comp=Z,94nm,0.8s						
FITZ	**Fitzroy Crossi**	**41.36**	**209**	P	**P**	**12 02 59.7**	**+0.7**
	comp=Z,1µm,0.8s						
GMJI	**Gumukmas**	**41.43**	**233**	P	**P**	**12 03 00.5**	**+0.8**
	comp=Z,3µmcomp=Z,354nm,0.9s						
TBJI	**Tambak Boyo**	**41.75**	**236**	P	**P**	**12 03 03.3**	**+1.0**
	comp=Z,3µmcomp=Z,6µmcomp=Z,515nm,1.1s						
CIT	**Chita**	**41.80**	**331**	*e*P	**P**	**12 03 04.4**	**+2.1**
CIT				*e*		12 04 44.8	
CIT				pmax	pmax		
	comp=Z,82nm,1.1s						
AUNRC	**North Rockhamp**	**41.92**	**173**	P	**P**	**12 03 02.8**	**-0.6**
	comp=Z,352nm,0.6s						
AMKA	**Amchitka**	**42.18**	**31**	IAmb	IAmb	12 03 09.1	
	comp=Z,160nm,1.0s						
DVP	**Devils Point**	**42.34**	**147**	P	**P**	**12 03 07.2**	**+0.3**
	comp=Z,4µm,0.9s						
SJI	**Sawahan**	**42.38**	**235**	P	**P**	**12 03 08.9**	**+1.4**
NGJI	**Ngawi**	**42.39**	**236**	P	**P**	**12 03 10.2**	**+2.7**
	comp=Z,4µmcomp=Z,335nm,1.6s						
SNJI	**Sawahan-Nganju**	**42.41**	**235**	P	**P**	**12 03 09.6**	**+1.8**
	comp=Z,3µmcomp=Z,9µmcomp=Z,837nm,0.6s						
GD1S	**Gladstone Soft**	**42.48**	**172**	P	**P**	**12 03 08.9**	**+0.9**
	comp=Z,152nm,0.5s						
ULN	**Ulaanbaatar**	**42.83**	**322**	P	**P**	**12 03 11.0**	**+0.2**
ULN				S	**S**	**12 09 23.3**	**+3.8**
ULN	**Ulaanbaatar**	**42.83**	**322**	P	**P**	**12 03 11.5**	**+0.7**
ULN	**Ulaanbaatar**	**42.83**	**322**	P	**P**	**12 03 10.4**	**-0.4**
	comp=Z,105nm,0.8s						
ULN	**Ulaanbaatar**	**42.83**	**322**	⇑*i*P	**P**	**12 03 11.5**	**+0.7**
ULN				pmax	pmax		
	comp=Z,15nm,0.8s						
ULN	**Ulaanbaatar**	**42.83**	**322**	P	**P**	**12 03 11.1**	**+0.3**
ULN				pP	**pP**	**12 03 52.8**	**-1.0**
TPI	**Tanjungpandan**	**42.93**	**244**	P	**P**	**12 03 12.4**	**+0.6**
	comp=Z,2µmcomp=Z,6µmcomp=Z,621nm,1.0s						
KOUNC	**Koumac, New Ca**	**42.96**	**154**	P	**P**	**12 03 12.6**	**+0.7**
	comp=Z,403nm,1.5s						
SMRI	**Semarang**	**43.00**	**237**	P	**P**	**12 03 14.2**	**+1.8**
	comp=Z,756nm,1.3s						
SMRI	**Semarang**	**43.00**	**237**	P	**P**	**12 03 14.1**	**+1.7**
	comp=Z,8µmcomp=Z,755nm,1.3s						
PCJI	**Pacitan**	**43.12**	**235**	P	**P**	**12 03 14.0**	**+0.7**
	comp=Z,11µmcomp=Z,1µm,0.8s						
SONM	**Songino Array**	**43.20**	**322**	P	**P**	**12 03 14.1**	**+0.3**
	comp=Z,15nm,0.6s,baz=135,slow=9.6,SNR=58						
SONM				PcP	**PcP**	**12 04 59.1**	**-0.1**
	comp=Z,20nm,0.8s,baz=127,slow=4.9,SNR=2.5						
SONM				ScP	**ScP**	**12 08 28.7**	**-2.2**
	comp=Z,5.4nm,0.9s,baz=139,slow=3.9,SNR=5.8						
	comp=Z,15nm,0.6s						
SONM	**Songino Array**	**43.20**	**322**	P	**P**	**12 03 14.4**	**+0.6**
SONM	**Songino Array**	**43.20**	**322**	P	**P**	**12 03 14.4**	**+0.6**
SONM						12 04 59.1	
SONM				pmax	pmax		
	comp=Z,31nm,0.8s						
UGM	**Wanagama**	**43.46**	**236**	P	**P**	**12 03 16.8**	**+0.7**
	comp=Z,597nm,0.9s						
UGM	**Wanagama**	**43.46**	**236**	P	**P**	**12 03 16.2**	**+0.1**
	comp=Z,7µmcomp=Z,600nm,0.8s						
AS31	**Alice Springs**	**43.48**	**196**	P	**P**	**12 03 16.4**	**+0.4**
ASAR	**Alice Springs**	**43.48**	**196**	P	**P**	**12 03 16.1**	**0.0**
	comp=Z,27nm,0.4s,baz=17,slow=6.9,SNR=326						
ASAR				PcP	**PcP**	**12 05 00.5**	**+0.2**
	comp=Z,23nm,0.8s,baz=36,slow=3.4,SNR=7.4						
ASAR				ScP	**ScP**	**12 08 30.4**	**-1.7**
	comp=Z,8.8nm,0.7s,baz=16,slow=5.1,SNR=6.2						
ASAR				S	**S**	**12 09 25.4**	**-3.7**
	comp=Z,7.0nm,0.8s,baz=23,slow=19,SNR=7.3						
	comp=Z,27nm,0.4s						
ASAR	**Alice Springs**	**43.48**	**196**	P	**P**	**12 03 17.0**	**+0.9**
ASAR	**Alice Springs**	**43.48**	**196**	P	**P**	**12 03 17.0**	**+0.9**
ASAR						12 05 00.5	
YOGI	**Yogyakarta**	**43.58**	**236**	P	**P**	**12 03 18.3**	**+1.3**
TPRI	**Tanjung Pinang**	**43.93**	**251**	P	**P**	**12 03 21.5**	**+1.7**
	comp=Z,9µmcomp=Z,600nm,0.9s						
PPBI	**Pangkal Pinang**	**43.94**	**246**	P	**P**	**12 03 21.2**	**+1.3**
EIDS	**Eidsvold**	**43.98**	**173**	P	**P**	**12 03 19.2**	**-0.7**
	comp=Z,57nm,0.8s						
CTJI	**Waduk Cacaban**	**43.98**	**238**	P	**P**	**12 03 20.6**	**+0.4**
	comp=Z,5µmcomp=Z,529nm,1.0s						
TNCH	**TengChong**	**44.02**	**287**	P	**P**	**12 03 21.8**	**+1.1**
TNCH				pP	pP	12 04 03.8	+0.1
TNCH				PcP	**PcP**	**12 05 03.4**	**+0.9**
TNCH				S	**S**	**12 09 39.1**	**+1.7**
TNCH				SS	**ScS**	**12 12 54.5**	**-3.2**
TNCH				pmax	pmax		
	comp=Z,67nm,0.6s						
TNCH				pmax	pmax		
	comp=Z,260nm,3.7s						
CHTO	**Chiang Mai**	**44.10**	**278**	P	**P**	**12 03 22.8**	**+1.6**
CHTO				S	**S**	**12 09 41.6**	**+3.3**
CHTO	**Chiang Mai**	**44.10**	**278**	P	**P**	**12 03 22.5**	**+1.4**
CHTO	**Chiang Mai**	**44.10**	**278**	P	**P**	**12 03 22.5**	**+1.4**
	comp=Z,18nm,1.1s						
CHTO	**Chiang Mai**	**44.10**	**278**	P	**P**	**12 03 22.5**	**+1.4**
CHTO	**Chiang Mai**	**44.10**	**278**	P	**P**	**12 03 22.5**	**+1.4**
CHTO				pmax	pmax		
	comp=Z,18nm,0.8s						
CM31	**Chiang Mai Arr**	**44.14**	**278**	P	**P**	**12 03 24.1**	**+2.6**
	SNR=29						
CM31				S	**S**	**12 09 42.6**	**+3.6**
CMAR	**Chiang Mai Arr**	**44.14**	**278**	P	**P**	**12 03 23.1**	**+1.5**
	comp=Z,39nm,0.7s,baz=69,slow=6.9,SNR=256						
CMAR				ScP	**ScP**	**12 08 32.9**	**-2.3**
	comp=Z,1.8nm,0.7s,baz=85,slow=4.4,SNR=1.9						
	comp=Z,39nm,0.7s						
CMAR	**Chiang Mai Arr**	**44.14**	**278**	P	**P**	**12 03 23.6**	**+2.0**
CMAR	**Chiang Mai Arr**	**44.14**	**278**	*i* P	**P**	**12 03 23.5**	**+2.0**
CMAR				pmax	pmax		
	comp=Z,43nm,0.7s						
MYKOM	**Kota Tinggi**	**44.17**	**253**	P	**P**	**12 03 23.9**	**+2.2**
MYKOM	**Kota Tinggi**	**44.17**	**253**	P	**P**	**12 03 24.0**	**+2.3**
	comp=Z,1µm,1.0s						
MYKOM	**Kota Tinggi**	**44.17**	**253**	P	**P**	**12 03 23.2**	**+1.5**
	comp=Z,9µmcomp=Z,1µm,1.0s						
KPJI	**Karang Pucung**	**44.38**	**238**	P	**P**	**12 03 23.9**	**+0.6**
	comp=Z,7µmcomp=Z,918nm,1.0s						
INH	**Isangel**	**44.42**	**147**	P	**P**	**12 03 24.0**	**+0.5**
	comp=Z,1µm,0.9s						
ADK	**Adak**	**44.50**	**33**	P	**P**	**12 03 25.7**	**+1.9**
ADK	**Adak**	**44.50**	**33**	P	**P**	**12 03 25.9**	**+2.1**
	comp=Z,171nm,1.3s						
ADK	**Adak**	**44.50**	**33**	P	**P**	**12 03 25.7**	**+1.9**
ADK				pmax	pmax		
	comp=Z,418nm,1.1s						
DSRI	**Dabo**	**44.51**	**249**	P	**P**	**12 03 26.1**	**+1.7**
	comp=Z,2µmcomp=Z,5µmcomp=Z,416nm,1.0s						
GTA	**Gaotai**	**44.56**	**308**	*e*P	**P**	**12 03 26.1**	**+1.4**
GTA				pP	pP	12 04 08.1	+0.4
GTA				PcP	**PcP**	**12 05 04.4**	**+0.3**
GTA				ScP	**ScP**	**12 08 34.8**	**-1.9**
GTA				S	**S**	**12 09 43.9**	**-0.9**
GTA				ScS	**ScS**	**12 12 58.6**	**-2.0**
GTA				pmax	pmax		
	comp=Z,15nm,0.9s						
GTA				LR	LR		
	comp=Z,2µm,15.5s						
GTA				LR	LR		
	comp=Z,1µm,15.9s						
GTA				LR	LR		
	comp=Z,2µm,16.3s						
SEY	**Seymchan**	**44.59**	**4**	*e*P	**P**	**12 03 24.8**	**+0.4**
SEY				*e*		12 05 05.0	
SEY				*e*SS	SS	12 12 53.4	-16
SEY				pmax	pmax		
	comp=Z,68nm,0.9s						
YAK	**Yakutsk**	**44.85**	**349**	ScP	**ScP**	**12 08 33.4**	**-3.7**
	comp=Z,51nm,0.8s,baz=0.2,slow=0.8,SNR=6.2						
YAK				S	**S**	**12 09 43.6**	**-4.3**
	comp=Z,16nm,0.5s,baz=178,slow=23,SNR=6.6						
YAK	**Yakutsk**	**44.85**	**349**	P	**P**	**12 03 26.2**	**-0.1**
YAK	**Yakutsk**	**44.85**	**349**	*e*P	**P**	**12 03 26.4**	**0.0**
YAK				*e*		12 05 09.0	
YAK				*e*		12 05 16.0	
YAK				*e*S	**S**	**12 09 50.0**	**+2.1**
YAK				*e*		12 12 56.2	
YAK				pmax	pmax		
	comp=Z,178nm,0.9s						
YAK				pmax	pmax		
	comp=N,88nm,1.3s						
YAK				pmax	pmax		
	comp=E,11nm,0.9s						
YAK				pmax	pmax		
	comp=Z,88nm,1.3s						
YAK				pmax	pmax		
	comp=N,70nm,1.6s						
YAK				pmax	pmax		
	comp=E,335nm,3.3s						
YAK				smax	smax		
	comp=E,86nm,1.4s						
YAK				smax	smax		
	comp=N,622nm,3.1s						
QLP	**Quilpie**	**44.88**	**182**	P	**P**	**12 03 25.9**	**-1.2**
	comp=N,333nm,0.7s						
GSTR	**Great Sitkin T**	**44.94**	**33**	P	**P**	**12 03 28.4**	**+1.0**
NOUC	**Port Laguerre**	**45.19**	**152**	P	**P**	**12 03 30.2**	**+0.6**

NOUC				PcP	PcP	12 05 07.6	+1.4
DZM	Mont Dzumac	45.23	152	eP	P	12 03 29.6	-0.4
	comp=N,1µm,1.1s						
DZM				eS	S	12 09 59.4	+5.0
	comp=N,399nm,27.5s						
DZM				eSS	SS	12 13 18.1	-2.8
	comp=N,848nm,27.2s						
DZM	Mont Dzumac	45.23	152	P	P	12 03 30.3	+0.3
	comp=N,572nm,1.1s						
YATNC	Mamie plateau,	45.42	152	P	P	12 03 32.4	+1.0
	comp=N,224nm,0.8s						
ONTNC	Ouen Toro	45.44	152	P	P	12 03 31.2	-0.3
ONTNC	Ouen Toro	45.44	152	P	P	12 03 32.3	+0.8
MARNC	Mare, Loyalty	45.44	150	IAmb	IAmb	12 03 32.9	
	comp=Z,197nm,0.9s						
BBJI	Bungbulang	45.49	239	P	P	12 03 31.2	-1.0
	comp=Z,215nm,0.9s						
BBJI	Bungbulang	45.49	239	P	P	12 03 31.0	-1.2
	comp=Z,218nm,0.9s						
PMBI	Palembang	45.50	246	P	P	12 03 33.8	+1.6
	comp=Z,630nm,0.9s						
OUENC	Ouen Island, N	45.71	152	P	P	12 03 34.1	+0.5
	comp=Z,493nm,0.9s						
IPM	Ipoh	45.71	258	P	P	12 03 35.4	+1.5
	comp=Z,560nm,0.9s						
IPM	Ipoh	45.71	258	P	P	12 03 35.3	+1.4
	comp=Z,5µmcomp=Z,560nm,0.9s						
DBJI	Dramaga	45.71	241	P	P	12 03 34.2	+0.3
	comp=Z,274nm,0.7s						
KULM	Kulim	45.77	259	P	P	12 03 36.3	+2.0
	comp=Z,648nm,0.9s						
KULM	Kulim	45.77	259	P	P	12 03 36.6	+2.3
	comp=Z,5µmcomp=Z,648nm,0.9s						
CNJI	Cibinong	45.82	239	P	P	12 03 33.8	-0.9
	comp=Z,238nm,0.9s						
JMBI	JAMBI	45.87	249	P	P	12 03 37.8	+2.7
	comp=Z,2µm,1.4s						
ATKA	Atka Island	45.96	34	P	P	12 03 37.2	+1.9
ATKA	Atka Island	45.96	34	P	P	12 03 37.3	+2.0
	comp=Z,363nm,0.8s						
SBJI	Serang	45.99	242	P	P	12 03 36.9	+0.9
	comp=Z,12µmcomp=Z,1µm,1.1s						
SKJI	Sukabumi	46.12	240	P	P	12 03 36.8	-0.3
	comp=Z,2µmcomp=Z,6µmcomp=Z,640nm,0.7s						
PINNC	Pines Island,	46.15	152	P	P	12 03 37.9	+0.8
PINNC	Pines Island,	46.15	152	P	P	12 03 37.5	+0.5
	comp=Z,347nm,0.8s						
ZAK	Zakamensk	46.21	323	eP	P	12 03 36.8	-0.6
ZAK				pmax	pmax		
	comp=Z,24nm,1.3s						
TW1H	Toowoomba 1 Ha	46.23	172	P	P	12 03 38.0	+0.3
	comp=Z,129nm,0.8s						
AUWSH	Wavell State H	46.24	171	P	P	12 03 38.1	+0.4
	comp=Z,127nm,0.8s						
BLSI	Bandar Lampung	46.33	243	P	P	12 03 40.1	+1.4
KLI	Kotabumi	46.40	244	P	P	12 03 39.3	+0.1
	comp=Z,6µmcomp=Z,439nm,0.7s						
KLSI		46.42	244	P	P	12 03 40.0	+0.6
	comp=Z,2µmcomp=Z,8µmcomp=Z,637nm,0.8s						
IRK	Irkutsk	46.58	326	eP	P	12 03 39.4	-0.7
IRK				pmax	pmax		
	comp=Z,64nm,1.9s						
TLY	Talaya	46.63	325	P	P	12 03 40.7	+0.1
TLY				S	S	12 10 13.7	0.0
TLY	Talaya	46.63	325	P	P	12 03 40.9	+0.3
MDSI	Maura Dua	46.79	245	P	P	12 03 43.2	+1.0
	comp=Z,3µmcomp=Z,167nm,1.0s						
MBWA	Marble Bar	46.90	214	P	P	12 03 44.0	+1.1
MBWA	Marble Bar	46.90	214	P	P	12 03 43.6	+0.7
MBWA	Marble Bar	46.90	214	P	P	12 03 43.3	+0.4
	comp=Z,238nm,0.8s						
KASI	Kota Agung	47.05	243	P	P	12 03 43.4	-0.8
GC1S	Gold Coast 1 S	47.06	170	P	P	12 03 44.7	+0.7
	comp=Z,129nm,0.8s						
LWLI	Liwa	47.16	244	P	P	12 03 46.7	+1.4
PSA00	Pilbara Seismi	47.17	213	P	P	12 03 45.9	+0.8
PSA00	Pilbara Seismi	47.17	213	P	P	12 03 46.2	+1.1
PSA00				IAmb	IAmb	12 03 47.2	
	comp=Z,356nm,1.1s						
PSA00	Pilbara Seismi	47.17	213	P	P	12 03 46.0	+0.9
	comp=Z,355nm,1.2s						
BKNI	Bangkinang	47.33	253	P	P	12 03 48.5	+2.0
	comp=Z,662nm,0.8s						
BKNI	Bangkinang	47.33	253	P	P	12 03 48.4	+2.0
	comp=Z,2µmcomp=Z,5µmcomp=Z,663nm,0.8s						
KSI	Kapahiang	47.75	247	P	P	12 03 50.2	+0.5
AULRC	Lightning Ridg	47.75	177	P	P	12 03 48.1	-1.2
	comp=Z,292nm,0.7s						
MNAI	Manna	47.78	246	P	P	12 03 49.5	-0.4
	comp=Z,1µm,1.2s						
MNAI	Manna	47.78	246	P	P	12 03 48.6	-1.3
	comp=Z,11µmcomp=Z,1µm,1.1s						
MASI	Maura Aman, Be	47.81	248	P	P	12 03 51.0	+0.8
GOMU	GeErMu	47.85	302	P	P	12 03 51.3	+0.7
GOMU				S	S	12 10 33.8	+1.7
GOMU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GOMU				LR	LR		
	comp=Z,540nm,15.2s						
GOMU				LR	LR		
	comp=Z,250nm,15.0s						
GOMU				LR	LR		
	comp=Z,520nm,15.9s						
KOHI	KOHIMA	47.99	288	eP	P	12 03 53.3	+1.8
KOHI				IAmb	IAmb	12 04 03.7	
	comp=Z,94nm,1.0s						
KRJI	Kerinci	48.01	249	P	P	12 03 53.3	+1.5
UBSI	University, Be	48.08	247	P	P	12 03 51.9	-0.3
MOY	Mondy	48.09	324	eP	P	12 03 52.6	+0.7
MOY				pmax	pmax		
	comp=Z,26nm,2.6s						
MSVF	Nonsavu	48.14	137	P	P	12 03 54.4	+1.7
MSVF				IAmb	IAmb	12 03 55.6	
	comp=Z,198nm,1.2s						
MSVF	Nonsavu	48.14	137	P	P	12 03 54.7	+2.0
	comp=Z,172nm,1.5s						
MSVF	Nonsavu	48.14	137	P	P	12 03 54.4	+1.7
MSVF				pmax	pmax		
	comp=Z,198nm,1.3s						
MSVF	Nonsavu	48.14	137	P	P	12 03 54.3	+1.7
MSVF				PcP	PcP	12 05 19.0	+2.2
PPI	Padang Panjang	48.24	252	P	P	12 03 54.1	+0.6
	comp=Z,3µmcomp=Z,278nm,0.8s						
PSI	Prapat	48.28	257	P	P	12 03 56.5	+2.6
	comp=Z,3µmcomp=Z,358nm,0.9s						
TSI	Tuntungan	48.35	258	P	P	12 03 56.4	+2.1
	comp=Z,299nm,0.9s						
PDSI	Padang	48.38	251	P	P	12 03 54.1	-0.5
	comp=Z,3µmcomp=Z,412nm,0.7s						
MNSI	Mandailing Nat	48.46	254	P	P	12 03 56.5	+1.4
XMI	Christmas Isla	48.79	237	P	P	12 03 57.5	-0.1
	comp=Z,2µm,0.8s						
ARMA	Armidale	49.03	173	P	P	12 03 59.6	+0.4
	comp=Z,69nm,0.9s						
KCSI	Kotacane, Aceh	49.08	258	P	P	12 04 01.7	+1.9
	comp=Z,173nm,1.1s						
TEZP	TEZPUR	49.13	289	eP	P	12 04 00.5	+0.5
TEZP				IAmb	IAmb	12 04 26.0	
	comp=Z,63nm,0.4s						
NIKH	Nikolski High	49.19	35	P	P	12 04 01.2	+1.1
	baz=243						
SAIH	SAIHA	49.23	284	eP	P	12 04 02.2	+1.1
SAIH				IAmb	IAmb	12 04 08.1	
	comp=Z,59nm,0.3s						
LHMI	Lhok Sumawe	49.25	261	P	P	12 04 03.9	+2.8
	comp=Z,632nm,0.8s						
LHMI	Lhok Sumawe	49.25	261	P	P	12 04 04.6	+3.5
	comp=Z,2µmcomp=Z,6µmcomp=Z,634nm,0.8s						
PPSI	Pulau Pagai	49.61	250	P	P	12 04 03.3	-0.5
	comp=Z,11µmcomp=Z,1µm,1.0s						
AUPHS	Peel High Scho	49.62	174	P	P	12 04 03.4	-0.2
	comp=Z,156nm,0.9s						
TPTI		49.72	258	P	P	12 04 05.6	+0.9
	comp=Z,65nm,0.6s						
CMSA	Cobar Meteorol	49.80	180	P	P	12 04 04.2	-0.7
	comp=Z,109nm,0.8s						
SISI	Saibi	49.80	252	P	P	12 04 04.7	-0.5
TAWA	Tawang	49.93	291	eP	P	12 04 08.2	+1.7
TAWA				IAmb	IAmb	12 04 10.5	
	comp=Z,95nm,0.9s						
PBSI	Pulau Batu	49.99	254	P	P	12 04 08.0	+1.3
	comp=Z,5µmcomp=Z,541nm,0.8s						
SHL	Shillong	50.00	288	P	P	12 04 06.9	0.0
	SNR=8.0						
SHL	Shillong	50.00	288	eP	P	12 04 07.4	+0.6
MLSI	Meulaboh, Aceh	50.09	260	P	P	12 04 08.1	+0.7
	comp=Z,135nm,0.9s						
GSI	Gunungsitoli	50.09	256	P	P	12 04 08.4	+0.9
	comp=Z,2µm,0.9s						
GSI	Gunungsitoli	50.09	256	P	P	12 04 08.0	+0.5
GUWA	GUWAHATI	50.14	289	eP	P	12 04 09.8	+2.2
GUWA				IAmb	IAmb	12 04 11.1	
STKA	Stephens Creek	50.28	184	P	P	12 04 08.1	-0.5
	comp=Z,49nm,0.6s,baz=352,slow=8.0,SNR=70						
STKA				S	S	12 11 00.4	-4.7
	comp=Z,5.1nm,0.9s,baz=152,slow=19,SNR=3.5						
	comp=Z,49nm,0.6s						
STKA	Stephens Creek	50.28	184	P	P	12 04 08.0	-0.5
STKA	Stephens Creek	50.28	184	P	P	12 04 07.7	-0.8
	comp=Z,14nm,0.8s						
SPIA	Saint Paul Isl	50.52	29	P	P	12 04 12.2	+2.2
	baz=239						
LSA	Lhasa	50.52	293	IAmb	IAmb	12 05 05.4	
	comp=Z,244nm,1.5s						
LSA	Lhasa	50.52	293	P	P	12 04 08.3	-2.8
LSA	Lhasa	50.52	293	P	P	12 04 13.0	+2.0
P08K	Saint George I	50.55	30	P	P	12 04 12.2	+1.9
	baz=240						
AUDCS	Dubbo College	50.57	177	P	P	12 04 10.3	-0.4
	comp=Z,85nm,0.7s						
DGPR	DIGLIPUR	50.80	272	eP	P	12 04 11.0	-1.8
DGPR				IAmb	IAmb	12 04 14.7	
	comp=Z,66nm,0.8s						
SNSI	Sinabang, Aceh	50.83	258	P	P	12 04 15.0	+2.0
	comp=Z,3µmcomp=Z,369nm,0.9s						
UNV	Unalaska Valle	50.83	35	IAmb	IAmb	12 04 15.1	
	comp=Z,165nm,0.8s						
UNV	Unalaska Valle	50.83	35	P	P	12 04 14.1	+1.7
	comp=Z,227nm,0.9s						
UNV	Unalaska Valle	50.83	35	P	P	12 04 14.5	+2.1
	baz=245,SNR=8.7						
BILL	Bilibino	51.19	10	P	P	12 04 16.3	+1.5
BILL				IAmb	IAmb	12 04 19.1	
	comp=Z,179nm,0.9s						
BILL	Bilibino	51.19	10	d iP	P	12 04 16.1	+1.3
BILL				pmax	pmax		
	comp=Z,142nm,0.9s						
BILL	Bilibino	51.19	10	P	P	12 04 16.4	+1.5
BILL				pP	pP	12 04 57.7	-1.9
AKUT	Akutan	51.35	34	P	P	12 04 18.1	+1.9
	comp=Z,463nm,0.8s						
CMBY	CAMPBELL BAY	51.51	264	eP	P	12 04 20.4	+2.3
CMBY				IAmb	IAmb	12 04 22.3	
	comp=Z,67nm,0.7s						
DHUB	DHUBRI	51.67	289	eP	P	12 04 21.6	+2.5
DHUB				IAmb	IAmb	12 04 25.9	
	comp=Z,88nm,0.9s						
WHYH	Whyalla	51.86	189	P	P	12 04 20.4	+0.2
	comp=Z,136nm,0.9s						
FORT	Forrest	51.86	199	P	P	12 04 20.5	+0.2
FORT				IAmb	IAmb	12 04 23.9	
	comp=Z,106nm,0.7s						
BBOO	Buckleboo	51.88	190	P	P	12 04 20.0	-0.3
BBOO				IAmb	IAmb	12 04 22.7	
	comp=Z,114nm,0.8s						
BBOO	Buckleboo	51.88	190	P	P	12 04 20.1	-0.3
	comp=Z,156nm,1.0s						
AUJCS	Jamestown Cent	51.89	187	P	P	12 04 20.5	0.0
	comp=Z,95nm,1.1s						
PTPS	Port Pirie	51.94	188	P	P	12 04 21.4	+0.6
	comp=Z,147nm,0.8s						
MEEK	Meekatharra	52.00	211	P	P	12 04 22.0	+0.6
	comp=Z,138nm,1.0s						
HTT	Hallett	52.08	187	P	P	12 04 22.3	+0.4
	comp=Z,116nm,0.9s						
HTT	Hallett	52.08	187	P	P	12 04 22.0	+0.1
SYDH	Sydney Hard Ro	52.25	175	P	P	12 04 23.4	+0.4
	comp=Z,94nm,0.6s						
KIP	Kipapa	52.83	77	P	P	12 04 29.4	+1.7
KIP				IAmb	IAmb	12 04 31.8	
	comp=Z,217nm,1.4s						
KIP	Kipapa	52.83	77	P	P	12 04 30.3	+2.6
	comp=Z,45nm,1.5s						
KIP	Kipapa	52.83	77	P	P	12 04 29.4	+1.7
KIP				pmax	pmax		
	comp=Z,217nm,1.4s						
GTK	Tadong	52.84	291	eP	P	12 04 29.7	+1.8
GTK				IAmb	IAmb	12 04 31.5	
	comp=Z,66nm,0.9s						
FALS	False Pass	52.90	34	P	P	12 04 29.3	+1.7
	comp=Z,679nm,0.7s						
FALS	False Pass	52.90	34	P	P	12 04 28.6	+1.0
	baz=248,SNR=7.6						
WOLH	Wollongong Har	52.90	175	P	P	12 04 28.7	+0.9
	comp=Z,112nm,0.8s						
AFI	Afiamalu	52.96	125	P	P	12 04 30.3	+1.5
AFI				IAmb	IAmb	12 04 31.0	
	comp=Z,93nm,0.8s						
AFI	Afiamalu	52.96	125	P	P	12 04 29.6	+0.9
	comp=Z,58nm,0.9s						
AFI	Afiamalu	52.96	125	P	P	12 04 30.3	+1.5
AFI				pmax	pmax		
	comp=Z,93nm,0.8s						
AUMAR	Marden Senior	53.55	187	P	P	12 04 33.1	+0.5
	comp=Z,66nm,0.9s						
AUDAR	Daramalan Coll	53.60	176	P	P	12 04 33.8	+0.8
	comp=Z,100nm,1.1s						
GAMB	Gambell	53.63	22	IAmb	IAmb	12 04 36.0	
	comp=Z,89nm,1.0s						
GAMB	Gambell	53.63	22	P	P	12 04 34.6	+1.8
	baz=233,SNR=7.2						
AUMTS	Mt Stromlo	53.67	177	P	P	12 04 34.3	+0.8
	comp=Z,94nm,1.0s						
CAN	Canberra	53.67	177	P	P	12 04 34.3	+0.8
	comp=Z,127nm,1.0s						
CAN	Canberra	53.67	177	P	P	12 04 33.8	+0.3
CAN	Canberra	53.67	177	P	P	12 04 33.7	+0.3
CAN				pP	pP	12 05 16.6	-2.2
CNB	Canberra Magne	53.68	176	P	P	12 04 34.6	+1.0
	comp=Z,82nm,1.1s						
AUMHS	Melrose High S	53.71	176	P	P	12 04 34.6	+0.8
	comp=Z,76nm,1.0s						
AUMBR	Murray Bridge	53.72	186	P	P	12 04 34.1	+0.3
	comp=Z,95nm,1.2s						
AUUHS	Ulladulla High	53.81	175	P	P	12 04 35.3	+0.9
	comp=Z,142nm,1.0s						
SHBG	Sahibganj	53.83	288	eP	P	12 04 37.0	+2.1
S12K	Black Hills	53.93	34	P	P	12 04 36.5	+1.4
	baz=248,SNR=8.8						
M11K	Mekoryuk	53.95	27	P	P	12 04 37.4	+2.3
	baz=241						
TIXI	Tiksi	54.01	354	P	P	12 04 35.4	-0.1
TIXI	Tiksi	54.01	354	i P	P	12 04 35.3	-0.1
WMQ	Urumqi	54.34	311	eP	P	12 04 40.8	+2.4
WMQ				PcP	PcP	12 05 38.8	-0.9
WMQ				S	S	12 12 01.3	+1.1
WMQ				ScS	ScS	12 14 04.8	-1.8
WMQ				pmax	pmax		
	comp=Z,43nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,94nm,3.7s						
WMQ				LR	LR		
	comp=Z,1µm,17.1s						
WMQ				LR	LR		
	comp=Z,800nm,18.5s						
WMQ				LR	LR		
	comp=Z,450nm,18.5s						
SDPT	Sand Point	54.65	34	P	P	12 04 42.1	+1.8
SDPT	Sand Point	54.65	34	P	P	12 04 41.6	+1.3
	baz=250,SNR=14						
AUSMG	Snowy Mountain	54.74	177	P	P	12 04 41.6	+0.3
	comp=Z,50nm,1.4s						
CNBA	Chernabura Isl	54.95	35	IAmb	IAmb	12 04 45.9	
	comp=Z,78nm,0.7s						
CHNA	Chernabura Isl	54.96	35	P	P	12 04 45.0	+2.5
	comp=Z,126nm,0.8s						
CHNA	Chernabura Isl	54.96	35	P	P	12 04 44.3	+1.8
	baz=251						
JMUI	Jamui	55.16	288	eP	P	12 04 46.7	+2.2
HPAH	Hawaii Prepara	55.18	78	IAmb	IAmb	12 04 48.1	
	comp=Z,127nm,1.0s						
M13K	Dall Lake	55.22	28	P	P	12 04 47.0	+2.7
	baz=244,SNR=23						
OVEH	Oceanview Est	55.26	79	IAmb	IAmb	12 04 49.7	
	comp=Z,233nm,1.3s						
MORW	Morawa	55.28	212	P	P	12 04 44.8	-0.3
	comp=Z,254nm,0.9s						
K13K	Kusilvak Mount	55.35	26	P	P	12 04 47.7	+2.5
	baz=242,SNR=51						
S14K	Fog Glacier	55.46	34	P	P	12 04 47.7	+1.5
	baz=250,SNR=5.7						
DGZ	Jazzator, Alta	55.57	318	d iP	P	12 04 48.2	+1.0
DGZ				pmax	pmax		
	comp=Z,51nm,0.9s						
BOK	Bokaro	55.59	287	eP	P	12 04 49.9	+2.3
BOK				IAmb	IAmb	12 04 56.7	
	comp=Z,82nm,0.4s						
O14K	Tigyukauivet M	55.69	30	IAmb	IAmb	12 04 50.9	
	comp=Z,94nm,1.1s						
O14K	Tigyukauivet M	55.69	30	P	P	12 04 49.6	+1.9
	baz=247						
N14K	Kuskokwak Cree	55.77	29	P	P	12 04 50.4	+2.2
	baz=246,SNR=17						
STCH	Steam Cracks	55.82	79	P	P	12 04 51.6	+2.2
BRAT	Ballarat	55.82	182	P	P	12 04 48.9	+0.1
	comp=Z,48nm,0.7s						
AUMTC	Mt Clear Colle	55.88	182	P	P	12 04 49.6	+0.4
	comp=Z,114nm,0.9s						
JOKA	Jonika Flow	55.92	79	P	P	12 04 52.1	+2.1
L14K	Kuka Creek	55.92	27	IAmb	IAmb	12 04 52.8	
	comp=Z,125nm,1.0s						
L14K	Kuka Creek	55.92	27	P	P	12 04 51.5	+2.3
	baz=244,SNR=22						
M14K	Bethel	55.98	28	P	P	12 04 52.1	+2.4
	baz=245,SNR=28						
TNA	Tin City	55.99	21	P	P	12 04 51.4	+1.7
	baz=236,SNR=11						
GAYA	Gaya	56.07	288	eP	P	12 04 52.8	+1.8
J14K	Nanvaranak Lak	56.19	25	IAmb	IAmb	12 04 54.6	
	comp=Z,119nm,1.1s						
J14K	Nanvaranak Lak	56.19	25	P	P	12 04 53.2	+2.1
	baz=242,SNR=20						
BLDU	Ballidu	56.23	210	P	P	12 04 52.2	+0.3
	comp=Z,294nm,0.8s						
O15K	Ungalikthiuk R	56.35	30	P	P	12 04 54.3	+2.0
	baz=248						
ANM	Nome	56.37	23	IAmb	IAmb	12 04 55.7	
	comp=Z,62nm,0.9s						
ANM	Nome	56.37	23	P	P	12 04 54.3	+1.9
	baz=239,SNR=24						
F14K	Arctic Creek	56.50	22	P	P	12 04 55.2	+1.9
	baz=238						
M15K	Kasigluk River	56.53	28	P	P	12 04 55.1	+1.5
	baz=246						
KLBR	Kellerberrin	56.56	209	P	P	12 04 54.6	+0.4
	comp=Z,583nm,1.0s						
L15K	Ungalak Mounta	56.58	27	P	P	12 04 55.6	+1.6
	baz=245						
N15K	Kwethluk River	56.60	29	P	P	12 04 56.4	+2.3
	baz=247,SNR=28						
K15K	Wolf Creek Mou	56.83	26	IAmb	IAmb	12 04 59.1	
	comp=Z,98nm,0.9s						
K15K	Wolf Creek Mou	56.83	26	P	P	12 04 57.8	+2.2
	baz=245						
ZSN	Zaisan	56.84	315	eP	P	12 04 56.4	+0.3
ZSN				eS	S	12 12 35.2	+2.0
ZSN	Zaisan	56.84	315	eP	P	12 04 56.4	+0.3
ZSN				eS	S	12 12 35.1	+2.0
COCO	West Island	56.97	241	P	P	12 04 59.4	+2.1
COCO	West Island	56.97	241	P	P	12 04 58.5	+1.1
COCO	West Island	56.97	241	P	P	12 04 59.4	+2.1
	comp=Z,304nm,0.8s						
COCO	West Island	56.97	241	P	P	12 04 59.1	+1.8
	comp=Z,3µmcomp=Z,304nm,0.8s						
COCO	West Island	56.97	241	P	P	12 04 58.5	+1.1
COCO				pmax	pmax		
	comp=Z,392nm,0.8s						
COCO	West Island	56.97	241	P	P	12 04 58.9	+1.6
COCO				PcP	PcP	12 05 51.2	+1.0
G15K	Niukluk	57.08	23	P	P	12 04 59.0	+1.6
	baz=240						
F15K	North Star Dit	57.22	22	IAmb	IAmb	12 05 01.6	
	comp=Z,54nm,0.9s						
F15K	North Star Dit	57.22	22	P	P	12 05 00.2	+1.8
	baz=239,SNR=28						
N16K	Nishlik Lake	57.32	29	P	P	12 05 01.3	+2.1
	baz=248						
O16K	Kokwok River B	57.32	30	IAmb	IAmb	12 05 02.3	
	comp=Z,134nm,1.1s						
O16K	Kokwok River B	57.32	30	P	P	12 05 01.1	+1.9
	baz=250,SNR=16						
CHIR	Chirikof Islan	57.42	35	P	P	12 05 01.5	+1.6
	baz=254						
M16K	Timber Creek	57.44	28	IAmb	IAmb	12 05 03.2	
	comp=Z,69nm,0.9s						
M16K	Timber Creek	57.44	28	P	P	12 05 01.8	+1.8
	baz=248						
L16K	Owhat River	57.47	28	IAmb	IAmb	12 05 03.1	
	comp=Z,48nm,0.8s						
L16K	Owhat River	57.47	28	P	P	12 05 01.8	+1.6
	baz=247						
R17L	Mt. Peulik Vol	57.55	33	P	P	12 05 02.4	+1.6
	baz=252						
PLK4	Peulik 4	57.55	33	IAmb	IAmb	12 05 03.3	
	comp=Z,104nm,0.8s						
H16K	Elim	57.59	24	P	P	12 05 02.4	+1.4
	baz=242,SNR=22						
MUN	Mundaring	57.60	210	P	P	12 05 02.0	+0.5
	comp=Z,216nm,1.0s						
MUN	Mundaring	57.60	210	P	P	12 05 01.9	+0.5
J16K	Anvik River	57.64	26	IAmb	IAmb	12 05 04.9	
	comp=Z,67nm,0.7s						
J16K	Anvik River	57.64	26	P	P	12 05 03.6	+2.3
	baz=245						
Q16K	King Salmon	57.72	32	P	P	12 05 03.6	+1.7
	baz=252						
I17K	Unalakleet	57.86	25	IAmb	IAmb	12 05 06.4	
	comp=Z,74nm,0.8s						
I17K	Unalakleet	57.86	25	P	P	12 05 05.1	+2.3
	baz=244,SNR=39						
O17K	Koliganek Bris	57.86	30	P	P	12 05 04.8	+1.9
	baz=250						
G16K	Koyuk River	57.90	23	IAmb	IAmb	12 05 07.0	
	comp=Z,123nm,2.0s						
G16K	Koyuk River	57.90	23	P	P	12 05 04.4	+1.3
	baz=242						
NWAO	Narrogin (SRO)	57.92	208	P	P	12 05 04.7	+1.0
NWAO	Narrogin (SRO)	57.92	208	P	P	12 05 04.6	+0.9
NWAO	Narrogin (SRO)	57.92	208	P	P	12 05 04.2	+0.5
	comp=Z,280nm,1.1s						
NWAO	Narrogin (SRO)	57.92	208	P	P	12 05 04.6	+0.9
NWAO				pmax	pmax		
	comp=Z,341nm,1.1s						
Q17K	Contact Creek	57.98	32	P	P	12 05 05.7	+1.8
	baz=253						
N17K	Nushagak Hills	58.07	29	IAmb	IAmb	12 05 08.1	
	comp=Z,85nm,0.8s						
N17K	Nushagak Hills	58.07	29	P	P	12 05 06.8	+2.4
	baz=250,SNR=24						
ZAA0	Zalesovo Array	58.08	323	IAmb	IAmb	12 05 55.9	
	comp=Z,48nm,0.8s						
ZALV	Zalesovo Beam	58.08	323	P	P	12 05 04.0	-0.5
	comp=Z,38nm,0.7s,baz=112,slow=8.2,SNR=83						
ZALV				PcP	PcP	12 05 53.7	-0.2
	comp=Z,54nm,0.8s,baz=115,slow=5.5,SNR=8.8						
ZALV				ScP	ScP	12 09 30.7	-3.7
	comp=Z,12nm,1.0s,baz=119,slow=5.2,SNR=3.9						
	comp=Z,38nm,0.7s						
ZALV	Zalesovo Beam	58.08	323	P	P	12 05 03.9	-0.7
ZALV	Zalesovo Beam	58.08	323	i P	P	12 05 04.0	-0.5
ZALV				pmax	pmax		
	comp=Z,37nm,0.7s						
XMAS	Kiritimati	58.12	99	P	P	12 05 06.6	+1.1
L17K	Donlin	58.15	27	P	P	12 05 07.3	+2.4
	baz=248,SNR=24						
M17K	Holitna River	58.26	28	IAmb	IAmb	12 05 09.4	
	comp=Z,82nm,0.9s						
M17K	Holitna River	58.26	28	P	P	12 05 08.0	+2.3
	baz=249,SNR=16						
J17K	VABM Dome	58.31	26	IAmb	IAmb	12 05 09.7	
	comp=Z,91nm,1.0s						
J17K	VABM Dome	58.31	26	P	P	12 05 08.4	+2.4
	baz=246,SNR=40						
C16K	Lisburne Hills	58.34	19	IAmb	IAmb	12 05 10.2	
	comp=Z,65nm,0.8s						
C16K	Lisburne Hills	58.34	19	P	P	12 05 07.5	+1.4
	baz=237,SNR=68						
K17K	Iditarod	58.37	27	P	P	12 05 08.8	+2.4
	baz=248						
SII	Sitkinak Islan	58.39	34	P	P	12 05 08.6	+1.9
	baz=255,SNR=9.5						
MK31	Makanchi Array	58.50	314	i P	P	12 05 08.1	+0.5
MK31				pmax	pmax		
	comp=Z,21nm,0.5s						
MKAR	Makanchi Array	58.50	314	P	P	12 05 07.8	+0.1
	comp=Z,24nm,0.5s,baz=89,slow=7.0,SNR=244						
MKAR				ScP	ScP	12 09 33.4	-3.1
	comp=Z,6.7nm,0.9s,baz=77,slow=5.6,SNR=4.1						
MKAR				PKP2bc	P'P'bc	12 34 55.1	-1.3
	comp=Z,3.4nm,0.8s,baz=260,slow=2.0,SNR=7.4						

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      comp=Z,24nm,0.5s
MKAR  Makanchi Array  58.50 314  P       P        12 05 07.9 +0.3
MKAR  Makanchi Array  58.50 314  P       P        12 05 07.9 +0.3
RAGD  RAYAGADA        58.50 282 eP       P        12 05 09.9 +1.8
R18K  Karluk          58.51  33  P       P        12 05 09.2 +1.8
      baz=254
Q18K  Katmai Hardscr  58.53  32  P       P        12 05 07.9 +0.2
      baz=253,SNR=19
G17K  Kiwalik Mounta  58.58  23  P       P        12 05 09.6 +1.8
      baz=244,SNR=44
H17K  Granite Mounta  58.62  24  P       P        12 05 09.9 +1.9
      baz=245
P18K  Big Mountain,   58.64  31  P       P        12 05 10.5 +2.1
      baz=252
AUHAR St Anne's Scho  58.67 209  P       P        12 05 09.6 +0.8
      comp=Z,430nm,1.2s
MAKZ  Makanchi        58.71 314  P       P        12 05 09.9 +0.8
MAKZ                             IAmb    IAmb     12 06 00.5
      comp=Z,68nm,1.1s
MAKZ  Makanchi        58.71 314  P       P        12 05 09.9 +0.8
MAKZ                             pmax    pmax
      comp=Z,68nm,1.1s
MAKZ  Makanchi        58.71 314  P       P        12 05 09.8 +0.6
MAKZ                             pP      pP       12 05 53.1  -1.6
N18K  Kilae Creek     58.73  29  IAmb    IAmb     12 05 12.4
      comp=Z,67nm,0.8s
N18K  Kilae Creek     58.73  29  P       P        12 05 11.0 +2.0
      baz=251,SNR=21
D17K  Noatak River    58.77  20  P       P        12 05 10.9 +1.9
      baz=240,SNR=73
F17K  Baldwin Pennin  58.79  22  IAmb    IAmb     12 05 13.7
      comp=Z,89nm,0.7s
F17K  Baldwin Pennin  58.79  22  P       P        12 05 10.6 +1.4
      baz=242
O18K  Koktuh Hills    58.79  30  P       P        12 05 11.2 +1.9
      baz=252,SNR=9.3
L18K  Granite Mounta  58.89  28  IAmb    IAmb     12 05 13.6
      comp=Z,49nm,0.8s
L18K  Granite Mounta  58.89  28  P       P        12 05 12.3 +2.3
      baz=250,SNR=28
E17K  Hotham Inlet    58.89  21  P       P        12 05 11.8 +1.9
      baz=242
RDOG  Red Dog Mine    59.00  20  IAmb    IAmb     12 05 15.2
      comp=Z,60nm,0.8s
RDOG  Red Dog Mine    59.00  20  P       P        12 05 12.3 +1.6
      baz=240,SNR=23
M18K  Stony River     59.02  29  P       P        12 05 12.5 +1.6
      baz=251,SNR=17
OHAK  Old Harbor      59.03  34  P       P        12 05 13.1 +2.1
      comp=Z,99nm,0.7s
OHAK  Old Harbor      59.03  34  P       P        12 05 12.6 +1.5
      baz=256,SNR=12
ALBI  Allahabad       59.09 289 eP       P        12 05 14.0 +2.0
ALBI                             IAmb    IAmb     12 05 22.5
      comp=Z,87nm,0.7s
C17K  DeLong Mountai  59.13  20  P       P        12 05 13.2 +1.7
      baz=240,SNR=49
RAO   Raoul Island    59.14 143  P       P        12 05 12.5 +0.3
      comp=Z,299nm,0.3s,baz=102,slow=20,SNR=2.5
RAO   Raoul Island    59.14 143  IAmb    IAmb     12 05 13.6
      comp=Z,513nm,0.9s
RAO   Raoul Island    59.14 143  P       P        12 05 12.5 +0.3
RAO                              pmax    pmax
      comp=Z,513nm,0.9s
BLSP  Bilaspur        59.24 285 eP       P        12 05 15.4 +2.2
BLSP                             IAmb    IAmb     12 05 19.4
      comp=Z,82nm,1.1s
GLAD  Gladstone       59.27 178  P       P        12 05 13.5 +0.7
      comp=Z,71nm,1.0s
Q19K  Cape Douglas,   59.29  32  IAmb    IAmb     12 05 35.2
      comp=Z,72nm,0.9s
Q19K  Cape Douglas,   59.29  32  P       P        12 05 14.6 +1.7
      baz=254
H18K  Honhosa River   59.30  24  P       P        12 05 14.3 +1.5
      baz=246,SNR=44
J18K  Innoko River    59.32  26  IAmb    IAmb     12 05 16.0
      comp=Z,108nm,1.6s
J18K  Innoko River    59.32  26  P       P        12 05 14.6 +1.6
      baz=249,SNR=14
O19K  Port Alsworth   59.32  30  P       P        12 05 14.8 +1.8
      baz=253,SNR=19
AUALB St Joseph's Co  59.40 206  P       P        12 05 14.6 +0.8
      comp=Z,194nm,1.9s
N19K  Bonanza Creek   59.43  30  IAmb    IAmb     12 05 17.7
      comp=Z,68nm,0.8s
N19K  Bonanza Creek   59.43  30  P       P        12 05 15.8 +2.0
      baz=252,SNR=29
F18K  Selawik         59.43  22  P       P        12 05 15.2 +1.6
      baz=244,SNR=29
E18K  Tukpahlearik C  59.47  21  P       P        12 05 15.7 +1.8
      baz=243,SNR=54
G18K  Tagagawik       59.50  23  IAmb    IAmb     12 05 18.3
      comp=Z,79nm,0.8s
G18K  Tagagawik       59.50  23  P       P        12 05 15.4 +1.2
      baz=246
KDAK  Kodiak Island   59.54  33  P       P        12 05 16.0 +1.5
      comp=Z,43nm,0.6s,baz=241,slow=0.9,SNR=27
      comp=Z,43nm,0.6s
KDAK  Kodiak Island   59.54  33  P       P        12 05 16.4 +1.9
KDAK                             IAmb    IAmb     12 05 17.3
      comp=Z,54nm,0.8s
KDAK  Kodiak Island   59.54  33⇑iP       P        12 05 16.5 +2.0
KDAK                             pmax    pmax
      comp=Z,84nm,1.0s
KDAK  Kodiak Island   59.54  33  P       P        12 05 16.3 +1.9
      baz=256
L19K  White Mountain  59.68  28  P       P        12 05 17.3 +1.8
      baz=251,SNR=9.1
P19K  Oil Pt          59.69  31  P       P        12 05 16.6 +1.0
      baz=254,SNR=5.9
OUZ   Omahuta         59.71 154  P       P        12 05 17.2 +1.3
      comp=Z,129nm,1.5s
GCSA  Galena City Sc  59.73  25  P       P        12 05 16.9 +1.3
      baz=248,SNR=8.6
ILSW  Iliamna Southw  59.83  31  IAmb    IAmb     12 05 19.2
      comp=Z,130nm,1.6s
Q20K  Shuyak Island   59.84  32  P       P        12 05 17.5 +1.0
      baz=256,SNR=9.0
C18K  Utukok River    59.85  20  IAmb    IAmb     12 05 20.5
      comp=Z,49nm,0.7s
C18K  Utukok River    59.85  20  P       P        12 05 17.9 +1.4
      baz=241,SNR=68
J19K  Poorman         59.96  26  P       P        12 05 19.0 +1.7
      baz=250,SNR=39
B18K  Kokolik River   60.01  19  P       P        12 05 19.5 +2.0
      baz=240,SNR=59
PTH   Pithoragarh     60.03 294 eP       P        12 05 20.8 +2.1
RED   Redoubt Volcan  60.12  30  IAmb    IAmb     12 05 20.4
      comp=Z,110nm,1.3s
LGTI  Lohaghat        60.16 294 eP       P        12 05 21.5 +3.2
G19K  Purcell Mounta  60.19  23  IAmb    IAmb     12 05 23.1
      comp=Z,71nm,0.8s
G19K  Purcell Mounta  60.19  23  P       P        12 05 20.4 +1.6
      baz=247
H19K  Roundabout Mou  60.19  24  IAmb    IAmb     12 05 23.0
      comp=Z,96nm,0.8s
H19K  Roundabout Mou  60.19  24  P       P        12 05 20.8 +2.0
      baz=248
F19K  Shaleruckik Mo  60.21  22  P       P        12 05 18.9  0.0
      baz=246
PDGK  Podgornoye      60.23 310  P       P        12 05 19.7  0.0
SHLS  Shalkode        60.24 310 eP       P        12 05 17.6  -2.2
SHLS  Shalkode        60.24 310 eP       P        12 05 17.6  -2.2
M20K  Styx River      60.37  29  IAmb    IAmb     12 05 24.5
      comp=Z,212nm,1.7s
M20K  Styx River      60.37  29  P       P        12 05 22.1 +1.9
      baz=253
WUS   Wushi           60.38 307  IAmb    IAmb     12 06 13.5
      comp=Z,155nm,1.6s
K20K  Telida          60.40  27  P       P        12 05 22.2 +1.8
      baz=251
HOM   Homer           60.47  31  P       P        12 05 21.1 +0.3
      baz=256
JOSI  Joshimath       60.51 295 eP       P        12 05 23.5 +1.6
JOSI                             IAmb    IAmb     12 05 31.0
      comp=Z,52nm,0.8s
UZB   Uzynbulak       60.56 310 eP       P        12 05 22.1 +0.1
UZB                             eS       S        12 13 23.0 +1.5
UZB   Uzynbulak       60.56 310 eP       P        12 05 22.0 +0.1
UZB                             eS       S        12 13 23.0 +1.5
C19K  Lookout Ridge   60.58  20  P       P        12 05 23.4 +2.0
      baz=243,SNR=145
SPCR  Spurr Chakacha  60.60  29  P       P        12 05 23.1 +1.3
      baz=254,SNR=6.0
N20K  Mount Spurr     60.60  29  P       P        12 05 22.7 +0.9
      baz=254
J20K  Nowinta River   60.63  26  P       P        12 05 24.2 +2.3
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      baz=251,SNR=74
CNPM  China Poot      60.64  31  P       P        12 05 23.4 +1.4
A19K  Wainwright      60.64  18  P       P        12 05 23.9 +2.1
      baz=241,SNR=60
E19K  Redstone River  60.66  22  IAmb    IAmb     12 05 25.9
      comp=Z,207nm,1.6s
E19K  Redstone River  60.66  22  P       P        12 05 23.7 +1.7
      baz=246,SNR=47
SPU   Mount Spurr     60.67  29  P       P        12 05 18.5  -3.7
MOO   Moorlands       60.70 179  P       P        12 05 23.2 +0.7
      comp=Z,96nm,1.6s
I20K  Naaghedeneel    60.71  25  P       P        12 05 24.5 +2.2
      baz=250,SNR=17
H20K  Anotleneega Mo  60.79  24  P       P        12 05 24.8 +1.9
      baz=250,SNR=46
D19K  Kuna River      60.79  21  IAmb    IAmb     12 05 25.8
      comp=Z,181nm,1.5s
D19K  Kuna River      60.79  21  P       P        12 05 24.5 +1.6
      baz=245,SNR=79
BRLK  Bradley Lake    60.87  31  IAmb    IAmb     12 05 28.0
      comp=Z,69nm,0.7s
BRSE  Bradley Lake S  60.94  31  P       P        12 05 24.6 +0.6
      baz=257,SNR=12
CAPN  Captain Cook N  60.98  30  P       P        12 05 25.8 +1.6
      baz=256
SATY  Saty            61.01 309 eP       P        12 05 25.0  0.0
SATY                            eS       S        12 13 28.8 +1.6
SATY  Saty            61.01 309 eP       P        12 05 25.0  0.0
SATY                            eS       S        12 13 28.8 +1.6
F20K  Avaraart Lake   61.04  23  P       P        12 05 26.2 +1.7
      baz=248,SNR=41
TDK   Taldyqorghan    61.07 312 eP       P        12 05 25.4 +0.2
      comp=Z,38nm,0.7s
TDK   Taldyqorghan    61.07 312 eP       P        12 05 25.4 +0.2
TDK                              pmax    pmax
      comp=Z,38nm,0.7s
PPLA  Purkeypile      61.08  28  IAmb    IAmb     12 05 29.1
      comp=Z,144nm,1.3s
PPLA  Purkeypile      61.08  28  P       P        12 05 26.3 +1.3
      baz=254,SNR=18
SKT   Skwentna        61.12  29  IAmb    IAmb     12 05 33.9
      comp=Z,41nm,0.6s
SKT   Skwentna        61.12  29  P       P        12 05 25.7 +0.5
      baz=255,SNR=25
TAU   Tasmania Unive  61.17 179  P       P        12 05 26.0 +0.3
TAU                              IAmb    IAmb     12 05 26.7
      comp=Z,56nm,0.8s
TAU   Tasmania Unive  61.17 179  P       P        12 05 25.9 +0.3
      comp=Z,83nm,1.6s
TAU   Tasmania Unive  61.17 179  P       P        12 05 26.0 +0.3
TAU                              pmax    pmax
      comp=Z,56nm,0.8s
CHUM  Lake Minchumin  61.31  26  P       P        12 05 28.3 +2.0
      baz=253,SNR=48
KURK  Kurchatov       61.32 318  P       P        12 05 26.5  -0.1
KURK  Kurchatov       61.32 318  P       P        12 05 26.8 +0.1
KURK                             IAmb    IAmb     12 06 18.0
      comp=Z,151nm,1.2s
KURK  Kurchatov       61.32 318 i P      P        12 05 26.1  -0.6
KURK                             pmax    pmax
      comp=Z,18nm,0.9s
KURK  Kurchatov       61.32 318  P       P        12 05 26.8 +0.1
KURK                             pP      pP       12 06 11.2  -1.6
KURK                             x       x        12 06 16.7
KURK                             sP      sP       12 06 31.7  -3.1
E20K  Nigu River      61.34  21  P       P        12 05 28.3 +1.7
      baz=247,SNR=104
SUA   Susitna One     61.35  29  IAmb    IAmb     12 06 09.6
      comp=Z,89nm,1.0s
SUA   Susitna One     61.35  29  P       P        12 05 28.0 +1.1
      baz=256,SNR=19
SLKM  Skilak Lake     61.37  30  IAmb    IAmb     12 06 08.8
      comp=Z,91nm,0.9s
KURBB Kurchatov Arra  61.37 318  P       P        12 05 26.6  -0.4
      comp=Z,42nm,0.4s,baz=93,slow=7.4,SNR=338
KURBB                            S       S        12 13 27.1  -4.0
      comp=Z,7.1nm,1.0s,baz=95,slow=11,SNR=6.2
KURBB                            PKPPKP  P'P'df   12 34 38.5  -1.8
      comp=Z,2.0nm,0.9s,baz=281,slow=3.0,SNR=9.2
      comp=Z,42nm,0.4s
D20K  Etivluk River   61.38  21  P       P        12 05 28.5 +1.6
      baz=246,SNR=199
GRZ   Great Barrier   61.38 153  P       P        12 05 28.7 +1.4
IMAR  Indian Mountai  61.40  24  P       P        12 05 28.6 +1.7
ABAZ  Army Bay        61.41 153  P       P        12 05 29.3 +2.0
TARG  Taragay, Kyrgy  61.44 308  IAmb    IAmb     12 06 21.9
      comp=Z,92nm,1.1s
MBAZ  Motutapu North  61.58 153  P       P        12 05 33.7 +5.2
WTAZ  Waiatarua       61.58 154  P       P        12 05 30.6 +2.0
O22K  Cooper Landing  61.60  31  P       P        12 05 29.6 +1.2
      baz=257,SNR=26
SEW   Seward          61.65  31  P       P        12 05 29.7 +1.1
      baz=258,SNR=9.8
H21K  Melozitna Rive  61.66  24  P       P        12 05 30.4 +1.7
      baz=251,SNR=35
G21K  Allakaket       61.67  23  IAmb    IAmb     12 05 32.8
      comp=Z,174nm,1.7s
G21K  Allakaket       61.67  23  P       P        12 05 30.6 +1.8
      baz=250,SNR=41
M22K  Willow          61.71  29  P       P        12 05 29.5 +0.5
      baz=256,SNR=9.1
NRIK  Noril'sk        61.72 340  P       P        12 05 28.8  -0.2
      comp=Z,100nm,0.6s,baz=110,slow=8.1,SNR=112
NRIK                             ScP     ScP      12 09 45.6  -4.6
      comp=Z,8.4nm,0.8s,baz=117,slow=5.0,SNR=4.2
NRIK                             S       S        12 13 33.1  -1.9
      comp=Z,14nm,0.9s,baz=18,slow=23,SNR=24
      comp=Z,100nm,0.6s
NRIK  Noril'sk        61.72 340  P       P        12 05 29.1 +0.1
NRIK  Noril'sk        61.72 340d iP      P        12 05 28.8  -0.2
NRIK                             pmax    pmax
      comp=Z,62nm,0.9s
RC01  Rabbit Creek A  61.73  30  P       P        12 05 29.8 +0.6
      baz=257,SNR=27
B20K  Meade River     61.74  19  P       P        12 05 30.8 +1.7
      baz=245
CUT   Chulitna        61.80  28  P       P        12 05 30.1 +0.4
      baz=256,SNR=13
KTH   Kantishna Hill  61.81  27  IAmb    IAmb     12 05 34.3
      comp=Z,118nm,1.0s
DDI   Dehra Dun       61.82 295 eP       P        12 05 31.8 +1.3
KDJ   Kajisay         61.91 308  IAmb    IAmb     12 06 24.5
      comp=Z,132nm,1.1s
KUZ   Kuaotunu        61.91 153  P       P        12 05 31.5 +0.8
      comp=Z,110nm,1.4s
KUZ   Kuaotunu        61.91 153  P       P        12 05 31.5 +0.8
F21K  Alatna River    61.92  23  P       P        12 05 31.9 +1.5
      baz=250,SNR=13
BPAW  Bear Paw Mtn.   61.93  26  P       P        12 05 32.0 +1.4
      baz=254,SNR=37
JHNI  Jhansi          61.94 289 eP       P        12 05 33.7 +2.0
JHNI                             IAmb    IAmb     12 05 41.0
      comp=Z,63nm,0.3s
MKAZ  Moumakai        61.98 153  P       P        12 05 32.4 +1.2
MDOK  Medeo           62.01 310 eP       P        12 05 31.7  0.0
MDOK                            eS       S        12 13 41.2 +1.4
MDOK  Medeo           62.01 310 eP       P        12 05 31.6  0.0
MDOK                            eS       S        12 13 41.1 +1.4
CHKK  Chushkaly       62.06 310 eP       P        12 05 31.9  0.0
CHKK  Chushkaly       62.06 310 eP       P        12 05 31.8  0.0
TRF   Thorofare Moun  62.06  27  IAmb    IAmb     12 05 35.1
      comp=Z,102nm,1.0s
TRF   Thorofare Moun  62.06  27  P       P        12 05 32.1 +0.5
      baz=255,SNR=38
TNSS  Tian-Shan       62.08 309 eP       P        12 05 32.3  -0.1
TNSS  Tian-Shan       62.08 309 eP       P        12 05 32.3  -0.1
AAA   Alma-Ata        62.10 310 eP       P        12 05 32.3 +0.1
      comp=Z,45nm,1.0s
AAA   Alma-Ata        62.10 310 eP       P        12 05 32.3 +0.1
AAA                              pmax    pmax
      comp=Z,45nm,1.0s
PMR   Palmer          62.13  29  P       P        12 05 32.6 +0.7
      comp=Z,80nm,1.4s
PMR   Palmer          62.13  29  P       P        12 05 32.5 +0.7
      baz=257,SNR=25
C21K  Knifeblade Rid  62.16  20  P       P        12 05 33.9 +1.9
      baz=248,SNR=25
E21K  Killik River    62.17  21  IAmb    IAmb     12 05 35.9
      comp=Z,40nm,0.8s
E21K  Killik River    62.17  21  P       P        12 05 32.6 +0.5
      baz=249
ALCI  Alchi Leh       62.21 299 eP       P        12 05 35.9 +2.5
ALCI                             IAmb    IAmb     12 06 01.5
      comp=Z,40nm,0.8s
NGP   Nagpur          62.23 285 eP       P        12 05 35.9 +2.6
H22K  Ishtalitna Cre  62.29  24  P       P        12 05 34.8 +1.9
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      baz=253,SNR=28
PWL   Port Wells      62.35  30  P       P        12 05 34.6 +1.2
      baz=258,SNR=26
B21K  Ikpikpuk River  62.40  20  IAmb    IAmb     12 05 39.2
      comp=Z,42nm,0.8s
B21K  Ikpikpuk River  62.40  20  P       P        12 05 35.2 +1.7
      baz=248
KNK   Knik Glacier    62.41  30  P       P        12 05 34.5 +0.8
      baz=258,SNR=32
A21K  Barrow          62.47  18  P       P        12 05 35.6 +1.6
      baz=245,SNR=51
F22K  John River      62.49  23  P       P        12 05 36.0 +1.8
      baz=251
SMLA  Simla           62.50 296 eP       P        12 05 38.0 +3.1
KUU   Kurty           62.53 310 eP       P        12 05 35.1 +0.2
KUU   Kurty           62.53 310 eP       P        12 05 35.1 +0.2
SML   Sawmill         62.55  29  P       P        12 05 36.1 +1.4
      baz=258,SNR=52
ULHL  Ulahol          62.60 309  P       P        12 05 37.2 +1.5
      SNR=9.2
P23K  Montague Islan  62.64  31  P       P        12 05 37.4 +2.1
      baz=260,SNR=6.6
TOZ   Tahuroa Road    62.65 154  IAmb    IAmb     12 05 37.0
      comp=Z,72nm,1.1s
TOZ   Tahuroa Road    62.65 154  P       P        12 05 37.0 +1.4
RND   Reindeer        62.67  27  IAmb    IAmb     12 05 39.7
      comp=Z,51nm,0.8s
WAT1  Susitna Watana  62.67  28  P       P        12 05 36.3 +0.8
      baz=257
JMIU  JAMIA UNIVERSI  62.69 293 eP       P        12 05 38.9 +2.7
MCK   McKinley        62.72  27  P       P        12 05 36.2 +0.5
      baz=256,SNR=19
NDI   New Delhi       62.74 293 eP       P        12 05 38.9 +2.3
D22K  Ayikyak River   62.77  21  P       P        12 05 38.1 +2.1
      baz=250
A22K  Sinclair Lake   62.82  18  P       P        12 05 37.9 +1.6
      baz=247,SNR=65
E22K  Anaktuvuk Pass  62.82  22  IAmb    IAmb     12 05 41.0
      comp=Z,69nm,0.8s
E22K  Anaktuvuk Pass  62.82  22  P       P        12 05 38.1 +1.6
      baz=251
BOOM  Boomskoye usch  62.83 309  IAmb    IAmb     12 06 30.5
      comp=Z,78nm,1.1s
M23K  Glacier View    62.83  29  P       P        12 05 37.5 +0.9
      baz=258,SNR=24
NEA2  Nenana          62.87  26  IAmb    IAmb     12 05 41.7
      comp=Z,46nm,0.8s
NEA2  Nenana          62.87  26  P       P        12 05 37.6 +0.8
      baz=256,SNR=32
KSH   Kashi           62.88 305  P       P        12 05 41.6 +4.1
KSH                              S       S        12 13 54.3 +3.6
KSH                              ScS     ScS      12 15 10.6 +0.5
KSH                              pmax    pmax
      comp=Z,20nm,0.8s
KSH                              pmax    pmax
      comp=Z,170nm,6.9s
KSH                              LR      LR
      comp=Z,430nm,14.4s
KSH                              LR      LR
      comp=Z,390nm,18.9s
KSH                              LR      LR
      comp=Z,700nm,16.2s
I23K  Minto, Yukon-K  62.89  25  IAmb    IAmb     12 05 41.3
      comp=Z,66nm,0.7s
I23K  Minto, Yukon-K  62.89  25  P       P        12 05 38.4 +1.6
      baz=255,SNR=49
GLI   Glacier Island  62.95  30  IAmb    IAmb     12 05 40.7
      comp=Z,68nm,0.8s
GLI   Glacier Island  62.95  30  P       P        12 05 38.2 +0.8
      baz=259,SNR=10
TGRZ  Tauranga        62.97 153  P       P        12 05 40.3 +2.6
WAT6  Susitna Watana  62.98  28  P       P        12 05 38.5 +0.8
      baz=258,SNR=50
H23K  Yukon River     62.99  25  IAmb    IAmb     12 05 42.0
      comp=Z,61nm,0.8s
H23K  Yukon River     62.99  25  P       P        12 05 39.2 +1.6
      baz=254
SCM   Sheep Creek Mo  63.02  29  P       P        12 05 39.3 +1.4
      baz=259,SNR=42
B22K  Teshekpuk Lake  63.05  19  IAmb    IAmb     12 05 41.4
      comp=Z,68nm,0.7s
B22K  Teshekpuk Lake  63.05  19  P       P        12 05 39.0 +1.3
      baz=248,SNR=66
HIZ   Hauiti          63.05 155  P       P        12 05 40.2 +1.9
G23K  Bananza Creek   63.05  24  IAmb    IAmb     12 05 42.0
      comp=Z,47nm,0.8s
G23K  Bananza Creek   63.05  24  P       P        12 05 39.9 +1.9
      baz=254,SNR=44
TKM2  Tokmak 2        63.07 309  P       P        12 05 39.3 +0.5
      SNR=42
BHK   Bhakra          63.11 296 eP       P        12 05 38.0  -1.0
BHK                              IAmb    IAmb     12 05 40.6
      comp=Z,20nm,0.5s
DHRM  DHARAMSHALA     63.12 297 eP       P        12 05 41.9 +2.6
DHRM                             IAmb    IAmb     12 05 49.5
      comp=Z,26nm,0.6s
COLD  Coldfoot        63.13  23  P       P        12 05 40.3 +1.8
      baz=253,SNR=65
TSSA  Tissa           63.19 298 eP       P        12 05 42.1 +2.4
OPRZ  Ohinepanea      63.20 153  P       P        12 05 40.9 +1.7
GUNA  GUNA            63.21 289 eP       P        12 05 41.7 +2.0
GUNA                             IAmb    IAmb     12 05 47.7
      comp=Z,32nm,0.4s
WRH   Wood River Hil  63.25  26  IAmb    IAmb     12 05 43.2
      comp=Z,33nm,0.7s
DHY   Denali Highway  63.25  28  IAmb    IAmb     12 05 46.4
      comp=Z,37nm,0.8s
DHY   Denali Highway  63.25  28  P       P        12 05 40.0 +0.5
      baz=258,SNR=32
NGRZ  Ngongotaha      63.26 153  P       P        12 05 41.9 +2.2
NBEZ  Newall Road No  63.30 156  P       P        12 05 45.1 +5.3
OMRZ  Omania          63.34 153  P       P        12 05 42.1 +1.9
BHPL  Bhopal          63.35 287 eP       P        12 05 43.0 +2.2
BHPL                             IAmb    IAmb     12 05 49.6
      comp=Z,71nm,0.1s
HYB   Hyderabad       63.43 281 eP       P        12 05 43.7 +2.4
HYB                              IVmB_BB          12 05 44.3
      comp=Z,1µm,0.4s
HYB                             epP      pP       12 06 26.4  -1.1
HYB                             esP      sP       12 06 46.1  -3.2
HYB                             eS       S        12 14 00.8 +2.8
HYB                              IVMs_BB IVMs_BB  12 18 36.7
      comp=Z,736nm,14.1s
KUDL  Kundal          63.44 293 eP       P        12 05 43.6 +2.5
COLA  College         63.44  26  P       P        12 05 41.7 +1.2
COLA                             IAmb    IAmb     12 05 45.8
      comp=Z,53nm,0.7s
COLA  College         63.44  26  P       P        12 05 42.1 +1.6
      comp=Z,40nm,0.7s
COLA  College         63.44  26  P       P        12 05 41.7 +1.2
COLA                             pmax    pmax
      comp=Z,53nm,0.7s
COLA  College         63.44  26  P       P        12 05 41.1 +0.6
      baz=257
HLRZ  Highlands Stat  63.45 153  P       P        12 05 43.3 +2.3
HSRZ  Hossack Road    63.45 153  P       P        12 05 42.7 +1.7
D23K  Nanushuk River  63.48  21  IAmb    IAmb     12 05 45.2
      comp=Z,61nm,0.8s
D23K  Nanushuk River  63.48  21  P       P        12 05 43.0 +2.3
      baz=252,SNR=56
VRZ   Vera Road       63.53 155  P       P        12 05 43.0 +1.6
EYAK  Cordova Ski Ar  63.54  31  IAmb    IAmb     12 05 45.6
      comp=Z,77nm,0.9s
EYAK  Cordova Ski Ar  63.54  31  P       P        12 05 43.3 +2.1
      comp=Z,77nm,1.4s
EYAK  Cordova Ski Ar  63.54  31  P       P        12 05 43.1 +1.9
      baz=261,SNR=10
KBK   Karagaybulak    63.55 309  P       P        12 05 43.0 +1.1
      SNR=16
E23K  Chandalar       63.59  22  IAmb    IAmb     12 05 50.3
      comp=Z,85nm,0.8s
E23K  Chandalar       63.59  22  P       P        12 05 43.8 +2.3
      baz=253,SNR=79
RRRZ  Republican Roa  63.59 153  P       P        12 05 44.6 +2.8
M24K  Tolsona, Glenn  63.61  29  IAmb    IAmb     12 06 06.8
      comp=Z,58nm,0.8s
M24K  Tolsona, Glenn  63.61  29  P       P        12 05 43.5 +1.8
      baz=260,SNR=9.4
KLU   Klutina         63.62  30  IAmb    IAmb     12 05 46.5
      comp=Z,63nm,0.8s
KLU   Klutina         63.62  30  P       P        12 05 43.4 +1.6
      baz=260,SNR=26
DIV   Divide          63.63  30  IAmb    IAmb     12 05 53.7
      comp=Z,57nm,1.0s
H24K  Noodor Dome     63.66  25  IAmb    IAmb     12 05 45.8
      comp=Z,57nm,0.7s
H24K  Noodor Dome     63.66  25  P       P        12 05 43.7 +1.7
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      baz=256,SNR=61
HAZ   Te Kaha           63.66 152  P        P       12 05 41.7  -0.6
POKR  Poker Plat Res    63.67  26  P        P       12 05 42.5  +0.5
      baz=257,SNR=16
PRRZ  Plateau Road      63.68 153  P        P       12 05 43.9  +1.6
NRDN  NARMADA NAGAR     63.68 287  eP       P       12 05 45.0  +2.2
HDA   Harding Lake      63.72  27  IAmb     IAmb    12 05 46.1
      comp=Z,63nm,0.8s
HDA   Harding Lake      63.72  27  P        P       12 05 42.3  -0.1
      baz=258,SNR=75
RATZ  Rangitukua        63.73 154  P        P       12 05 44.4  +1.7
TOLK  Toolik Lake Re    63.77  22  P        P       12 05 44.5  +1.9
      baz=253,SNR=62
SGDS  Sogindy           63.77 310  eP       P       12 05 43.4  +0.2
C23K  Itkillik River    63.78  20  P        P       12 05 44.5  +1.9
      baz=252,SNR=114
URZ   Urewera           63.78 153  P        P       12 05 41.9  -1.1
      comp=Z,39nm,0.5s,baz=257,slow=2.5,SNR=24
      comp=Z,39nm,0.5s
URZ   Urewera           63.78 153  P        P       12 05 42.6  -0.4
      comp=Z,60nm,0.6s
URZ   Urewera           63.78 153  P        P       12 05 42.8  -0.3
RUGZ  Raukumara Rang    63.79 152  P        P       12 05 43.6  +0.3
IL31                    63.82  26  IAmb     IAmb    12 05 45.6
      comp=Z,63nm,0.8s
ILAR  Eielson Array     63.82  26  P        P       12 05 42.8  -0.3
      comp=Z,44nm,0.8s,baz=248,slow=5.0,SNR=432
ILAR                               S        S       12 13 57.0  -4.2
      comp=Z,1.1nm,1.0s,baz=256,slow=11,SNR=4.1
ILAR                               PKPPKP   P'P'df  12 34 23.9   -12
      comp=Z,0.7nm,0.9s,baz=21,slow=2.7,SNR=4.8
      comp=Z,44nm,0.8s
ILAR  Eielson Array     63.82  26  P        P       12 05 43.4  +0.4
ILAR  Eielson Array     63.82  26  P        P       12 05 43.4  +0.4
WTVZ  West Tongariro    63.86 154  P        P       12 05 45.1  +1.4
USP   Ospenovka         63.87 310  P        P       12 05 44.4  +0.6
      SNR=20
NNVZ  North Ngauruho    63.88 154  P        P       12 05 45.3  +1.4
PKGZ  Pakihiroa         63.89 152  P        P       12 05 44.0  +0.2
UCH   Uchtor            63.89 309  P        P       12 05 46.0  +1.6
      SNR=6.6
AAK   Ala-Archa         63.89 309  P        P       12 05 45.0  +0.9
      SNR=12
AAK   Ala-Archa         63.89 309  P        P       12 05 44.9  +0.8
AAK   Ala-Archa         63.89 309  P        P       12 05 45.0  +0.9
AAK   Ala-Archa         63.89 309 i P       P       12 05 45.0  +0.9
      SNR=16
AAK   Ala-Archa         63.89 309 i P       P       12 05 44.8  +0.8
AAK                                pmax     pmax
      comp=Z,45nm,0.5s
COVZ  Chateau Observ    63.91 154  P        P       12 05 45.1  +1.1
PALK  Pallekele         63.96 269  P        P       12 05 47.4  +2.6
PALK  Pallekele         63.96 269  P        P       12 05 45.7  +0.9
PALK  Pallekele         63.96 269  P        P       12 05 45.6  +0.8
PALK  Pallekele         63.96 269  P        P       12 05 45.7  +0.9
PALK                               pmax     pmax
      comp=Z,32nm,1.0s
FWVZ  Far West T-bar    63.96 154  P        P       12 05 45.5  +1.0
MRHZ  Matea Rd          63.97 154  P        P       12 05 44.3   0.0
WMGZ  Waiomatatini S    64.00 151  P        P       12 05 44.4  -0.1
G24K  Hadweenzic Riv    64.03  24  IAmb     IAmb    12 05 51.0
      comp=Z,36nm,0.7s
G24K  Hadweenzic Riv    64.03  24  P        P       12 05 46.2  +1.9
      baz=256,SNR=32
MWZ   Matawai           64.03 152  P        P       12 05 44.5  -0.2
RAGM  Ragged Mountai    64.05  31  IAmb     IAmb    12 05 49.0
      comp=Z,93nm,1.0s
F24K  Squaw Lake        64.07  23  IAmb     IAmb    12 05 49.4
      comp=Z,39nm,0.8s
F24K  Squaw Lake        64.07  23  P        P       12 05 46.5  +1.9
      baz=255,SNR=69
PAX   Paxson            64.08  28  IAmb     IAmb    12 05 48.2
      comp=Z,64nm,0.7s
PAX   Paxson            64.08  28  P        P       12 05 46.1  +1.2
      baz=260,SNR=73
TWGZ  Tauwhareparae     64.10 152  P        P       12 05 46.7  +1.6
K24K  Donnelly Dome     64.10  27  IAmb     IAmb    12 05 47.9
      comp=Z,51nm,0.6s
K24K  Donnelly Dome     64.10  27  P        P       12 05 46.0  +1.1
      baz=259,SNR=30
KAIM  Kayak Island      64.11  32  P        P       12 05 45.8  +0.8
      baz=262
HARP  HAARP             64.13  29  P        P       12 05 46.4  +1.3
      baz=260,SNR=36
PUZ   Puketiti          64.14 152  P        P       12 05 45.0  -0.4
QRZ   Quartz Range      64.15 158  P        P       12 05 46.3  +0.9
QRZ   Quartz Range      64.15 158  P        P       12 05 46.4  +1.0
WAZ   Wanganui          64.16 155  P        P       12 05 47.5  +2.0
BMRM  Bremner River     64.16  31  IAmb     IAmb    12 05 52.4
      comp=Z,117nm,1.0s
BMRM  Bremner River     64.16  31  P        P       12 05 47.0  +1.6
      baz=262,SNR=26
MTHZ  Maungataniwha     64.16 153  P        P       12 05 45.5  -0.1
MOVZ  Moawhango        64.17 154  P        P       12 05 45.8  +0.1
D24K  Happy Valley      64.18  21  P        P       12 05 47.1  +1.9
      baz=254
AKL   Akola             64.19 284  eP       P       12 05 48.7  +2.6
AKL                                IAmb     IAmb    12 05 50.7
      comp=Z,38nm,0.6s
TKGZ  Te Karaka         64.26 152  P        P       12 05 46.1   0.0
N25K  Chitina, Valde    64.26  30  IAmb     IAmb    12 05 50.0
      comp=Z,53nm,0.7s
N25K  Chitina, Valde    64.26  30  P        P       12 05 46.8  +0.8
      baz=261,SNR=23
BKZ   Black Stump Fm    64.28 154  P        P       12 05 46.1  -0.2
BKZ                                IAmb     IAmb    12 05 46.8
      comp=Z,76nm,0.8s
BKZ   Black Stump Fm    64.28 154  P        P       12 05 45.9  -0.4
      comp=Z,127nm,1.1s
BKZ   Black Stump Fm    64.28 154  P        P       12 05 46.8  +0.5
JMU   Jammu             64.30 298  eP       P       12 05 48.8  +2.4
JMU                                IAmb     IAmb    12 06 02.5
      comp=Z,54nm,0.7s
SNGZ  Shannon Statio    64.32 153  P        P       12 05 46.5  -0.1
RAHZ  Arahi             64.32 153  P        P       12 05 47.3  +0.7
NMHZ  Naumai            64.35 153  P        P       12 05 47.9  +1.0
C24K  Franklin Bluff    64.38  21  IAmb     IAmb    12 05 50.3
      comp=Z,91nm,1.1s
C24K  Franklin Bluff    64.38  21  P        P       12 05 47.9  +1.4
      baz=254,SNR=48
EKS2  Erkin-Say         64.42 309  P        P       12 05 49.1  +1.6
      SNR=12
J25K  Salcha River,     64.43  27  IAmb     IAmb    12 05 49.1
      comp=Z,44nm,0.6s
J25K  Salcha River,     64.43  27  P        P       12 05 47.2  +0.2
      baz=259,SNR=73
RIGZ  Rimuhau           64.44 153  P        P       12 05 48.0  +0.7
CNGZ  Carnagh Statio    64.45 152  P        P       12 05 47.5  +0.1
KWHZ  Kaweka Forest     64.47 154  P        P       12 05 48.0  +0.5
RIDG  Independent Ri    64.50  28  P        P       12 05 48.5  +1.0
      baz=260,SNR=75
WHHZ  Waihua            64.52 153  P        P       12 05 48.7  +0.9
ARHZ  Aropaoanui        64.57 153  P        P       12 05 47.6  -0.6
G25K  Bearman Lake      64.57  24  P        P       12 05 49.6  +1.8
      baz=257
MCHZ  McNeill Hill      64.60 154  P        P       12 05 49.1  +0.8
GLB   Gilahina Butte    64.61  30  IAmb     IAmb    12 05 53.1
      comp=Z,86nm,0.9s
KRHZ  Kereru            64.63 154  P        P       12 05 48.3  -0.2
DUWZ  D’Urville Isla    64.65 157  P        P       12 05 49.6  +1.0
MRNZ  Matariki Terra    64.74 158  P        P       12 05 48.9  -0.3
VRDI  Verde Repeater    64.75  30  IAmb     IAmb    12 05 53.4
      comp=Z,64nm,0.8s
NNZ   Nelson            64.81 157  P        P       12 05 49.2  -0.4
TSZ   Takapari Road     64.81 155  P        P       12 05 49.9  +0.2
DOT   Dot Lake          64.83  28  P        P       12 05 50.9  +1.3
DOT                                IAmb     IAmb    12 05 53.6
      comp=Z,79nm,0.7s
CRQE  Cirque            64.87  31  P        P       12 05 52.1  +2.1
      baz=263,SNR=29
MENT  Mentasta          64.87  28  P        P       12 05 51.7  +1.8
MENT  Mentasta          64.87  28  P        P       12 05 51.6  +1.7
      comp=Z,37nm,0.8s
SCRK  Sand Creek        64.91  27  IAmb     IAmb    12 05 53.9
      comp=Z,53nm,0.7s
SCRK  Sand Creek        64.91  27  P        P       12 05 50.9  +0.7
      baz=261,SNR=60
F25K  Christian Rive    64.93  23  P        P       12 05 52.2  +2.0
      baz=258,SNR=68
KAHZ  Kahuranaki        64.97 154  P        P       12 05 51.3  +0.5
MCARA McCarthy VSAT     64.98  30  P        P       12 05 52.1  +1.6
      baz=263,SNR=29
TGL   Tana Glacier      65.00  31  IAmb     IAmb    12 05 55.1
      comp=Z,60nm,0.9s
WPHZ  Waipukurau        65.01 154  P        P       12 05 51.9  +0.9
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L26K  Log Cabin Wild    65.05  28  IAmb     IAmb    12 05 55.6
      comp=Z,42nm,0.7s
L26K  Log Cabin Wild    65.05  28  P        P       12 05 52.5  +1.5
      baz=262,SNR=48
D25K  Kavik River       65.06  21  P        P       12 05 52.8  +1.8
      baz=256,SNR=131
E25K  Arctic Village    65.07  23  IAmb     IAmb    12 05 55.4
      comp=Z,54nm,1.0s
E25K  Arctic Village    65.07  23  P        P       12 05 53.2  +2.2
      baz=257,SNR=41
ARSB  Arslanbob         65.07 308  IAmb     IAmb    12 06 45.4
      comp=Z,118nm,1.2s
BRZS  Berezniki         65.08 317  eP       P       12 05 51.9  +0.4
BRZS  Berezniki         65.08 317  eP       P       12 05 51.8  +0.4
THZ   Tophouse          65.11 158  IAmb     IAmb    12 05 55.6
      comp=Z,86nm,0.8s
THZ   Tophouse          65.11 158  P        P       12 05 51.5  -0.2
M26K  Nabesna, AK       65.12  29  P        P       12 05 52.5  +0.9
      baz=262,SNR=14
TCW   Tory Channel      65.14 156  P        P       12 05 52.1  +0.3
OGWZ  Otaki Gorge       65.14 156  P        P       12 05 51.9  +0.1
PXZ   Pawanui           65.16 154  P        P       12 05 51.9   0.0
MRZ   Mangatainoka R    65.17 155  P        P       12 05 51.5  -0.5
J26L  Joseph Creek      65.18  27  IAmb     IAmb    12 05 57.5
      comp=Z,66nm,0.7s
J26L  Joseph Creek      65.18  27  P        P       12 05 52.9  +1.0
      baz=261,SNR=76
TUWZ  Tuamarina         65.20 157  P        P       12 06 00.9  +8.8
PRHZ  Porangahau        65.26 154  P        P       12 05 52.5  -0.1
BMAR  Burnt Mountain    65.29  24  P        P       12 05 55.1  +2.6
CAW   Cannon Point      65.35 156  P        P       12 05 53.8  +0.6
ANWZ  Angora Road       65.36 154  P        P       12 05 49.3  -3.9
SNZO  South Karori      65.39 156  P        P       12 05 53.0  -0.3
WEL   Wellington        65.39 156  P        P       12 05 51.4  -2.0
BSWZ  Blackbirch Sta    65.42 157  P        P       12 05 55.2  +1.6
BFZ   Birch Farm        65.45 155  IAmb     IAmb    12 05 55.4
      comp=Z,100nm,0.9s
BFZ   Birch Farm        65.45 155  P        P       12 05 53.7  -0.1
      comp=Z,112nm,0.8s
BFZ   Birch Farm        65.45 155  P        P       12 05 54.2  +0.4
I26K  Coal Creek Min    65.48  26  P        P       12 05 53.7   0.0
      baz=261
YAH   Yahtse            65.49  31  IAmb     IAmb    12 05 58.7
      comp=Z,90nm,0.8s
G26K  Porcupine Rive    65.51  24  IAmb     IAmb    12 05 58.6
      comp=Z,94nm,1.1s
G26K  Porcupine Rive    65.51  24  P        P       12 05 55.9  +2.1
      baz=260,SNR=56
F26K  Sheenjek River    65.51  23  IAmb     IAmb    12 05 58.8
      comp=Z,90nm,1.1s
F26K  Sheenjek River    65.51  23  P        P       12 05 55.8  +1.9
      baz=259
GRNC  Granite Creek     65.52  31  IAmb     IAmb    12 05 59.0
      comp=Z,92nm,0.8s
NIL   Nilore            65.52 299  P        P       12 05 56.2  +1.6
NIL   Nilore            65.52 299  P        P       12 05 55.7  +1.1
NIL   Nilore            65.52 299  P        P       12 05 55.7  +1.1
NIL                                pmax     pmax
      comp=Z,133nm,0.9s
BHW   Baring Head       65.53 156  P        P       12 05 54.9  +0.6
MTW   Mount Morrison    65.56 156  P        P       12 05 55.5  +1.0
M27K  Edge Creek, AK    65.64  29  P        P       12 05 56.4  +1.4
      baz=263,SNR=16
TMWZ  Te Maipa          65.67 155  P        P       12 05 54.9  -0.3
MSWZ  Moikau Station    65.69 156  P        P       12 05 55.9  +0.6
C26K  Camden Bay        65.70  21  P        P       12 05 57.6  +2.6
      baz=257
PAWZ  Paruwai Farm      65.72 156  P        P       12 05 55.6  +0.1
L27K  Beaver Creek,     65.74  28  IAmb     IAmb    12 05 59.1
      comp=Z,40nm,0.7s
L27K  Beaver Creek,     65.74  28  P        P       12 05 56.5  +1.0
      baz=263,SNR=68
CTG   Chitna Glacier    65.74  31  P        P       12 05 57.4  +1.8
      baz=264,SNR=28
CTGM  Chitina Glacie    65.75  31  IAmb     IAmb    12 06 00.6
      comp=Z,78nm,0.8s
BCAR  Beaver Creek A    65.76  28  P        P       12 05 57.2  +1.6
TRWZ  Traveller         65.84 156  P        P       12 05 57.9  +1.6
LOGN  Logan Glacier     65.89  31  IAmb     IAmb    12 06 01.5
      comp=Z,68nm,0.8s
KHZ   Kahutara          65.91 158  P        P       12 05 55.5  -1.1
C27K  Jago River        66.05  21  IAmb     IAmb    12 06 01.3
      comp=Z,82nm,1.3s
C27K  Jago River        66.05  21  P        P       12 05 59.0  +1.7
      baz=258,SNR=55
BVCY  Beaver Creek      66.11  29  P        P       12 05 59.2  +1.4
      baz=264,SNR=26
I27K  Kandik River      66.16  26  P        P       12 05 59.8  +1.7
      baz=262,SNR=22
OXZ   Oxford            66.19 159  IAmb     IAmb    12 05 57.9
      comp=Z,104nm,0.8s
OXZ   Oxford            66.19 159  P        P       12 05 56.7  -1.7
KOD   Kodaikanal        66.19 273  eP       P       12 06 01.4  +1.9
KOD                                IAmb     IAmb    12 06 04.1
      comp=Z,96nm,0.2s
PCA   Pinnacle          66.20  32  IAmb     IAmb    12 06 02.9
      comp=Z,107nm,1.1s
DZA   Taraz             66.20 309  eP       P       12 05 59.0  +0.2
DZA   Taraz             66.20 309  eP       P       12 05 59.0  +0.2
PINM  Pinnacle          66.21  32  P        P       12 06 00.1  +1.5
      baz=266
RPZ   Rata Peaks        66.21 160  P        P       12 05 57.4  -1.2
GVZ   Greta Valley S    66.21 158  P        P       12 05 57.7  -0.9
YUK3  Moose Creek       66.24  30  P        P       12 06 00.4  +1.5
      baz=265,SNR=29
H27K  Steamboat Moun    66.28  25  IAmb     IAmb    12 06 03.3
      comp=Z,85nm,0.9s
H27K  Steamboat Moun    66.28  25  P        P       12 06 00.6  +1.7
      baz=262,SNR=118
O28M  Mount Upton       66.29  31  IAmb     IAmb    12 06 04.4
      comp=Z,109nm,0.8s
O28M  Mount Upton       66.29  31  P        P       12 06 01.2  +1.9
      baz=266,SNR=38
G27K  Doyon Strip       66.31  24  P        P       12 06 00.8  +1.7
      baz=262,SNR=24
MANEM Manem             66.38 304  IAmb     IAmb    12 06 04.0
      comp=Z,88nm,0.9s
UDPR  Udaipur           66.46 289  eP       P       12 06 03.5  +2.8
BCPM  Bancas Point      66.51  32  IAmb     IAmb    12 06 04.9
      comp=Z,56nm,0.8s
BVAR  Borovoye Array    66.53 320  P        P       12 06 01.0  +0.4
      comp=Z,70nm,0.5s,baz=95,slow=7.8,SNR=69
BVAR                               S        S       12 14 32.0  -2.6
      comp=Z,24nm,1.1s,baz=96,slow=9.1,SNR=11
BVAR                               PKPPKP   P'P'df  12 34 22.1   -10
      comp=Z,0.8nm,0.7s,baz=299,slow=3.0,SNR=4.5
      comp=Z,70nm,0.5s
BVAR  Borovoye Array    66.53 320  P        P       12 06 01.0  +0.4
BVAR                               S        S       12 14 32.0  -2.6
YUK8  Steele Glacier    66.53  31  P        P       12 06 02.8  +2.0
      baz=266,SNR=32
LBZ   Lake Benmore      66.54 161  P        P       12 06 00.4  -0.3
LBZ   Lake Benmore      66.54 161  P        P       12 05 59.3  -1.4
E27K  Coleen River      66.54  23  P        P       12 06 02.0  +1.5
      baz=261
BORK  Borovoye          66.57 320  P        P       12 06 01.6  +0.7
BORK  Borovoye          66.57 320d iP       P       12 06 00.9   0.0
BORK                               pmax     pmax
      comp=Z,46nm,0.9s
BORK  Borovoye          66.57 320  P        P       12 06 00.9   0.0
BORK                               pP       pP      12 06 46.7  -1.0
DCZ   Deep Cove         66.65 164  P        P       12 06 01.4  +0.1
DCZ                                IAmb     IAmb    12 06 02.2
      comp=Z,70nm,0.8s
DCZ   Deep Cove         66.65 164  P        P       12 06 00.4  -0.8
MQZ   McQueen’s Vall    66.73 159  IAmb     IAmb    12 06 01.6
      comp=Z,114nm,1.3s
MQZ   McQueen’s Vall    66.73 159  P        P       12 06 00.4  -1.4
KK31  Karatay Array     66.79 310  P        P       12 06 03.2  +0.7
KK31                               IAmb     IAmb    12 06 55.8
      comp=Z,111nm,1.2s
KK31  Karatay Array     66.79 310  P        P       12 06 03.2  +0.7
KK31                               pmax     pmax
      comp=Z,111nm,1.2s
KKAR  Karatay Array     66.79 310  P        P       12 06 03.3  +0.8
KKAR  Karatay Array     66.79 310  P        P       12 06 03.3  +0.8
TMZ   Timaru            66.79 160  P        P       12 06 01.4  -0.8
MLZ   Mavora Lakes      66.82 163  IAmb     IAmb    12 06 02.7
      comp=Z,57nm,0.9s
MLZ   Mavora Lakes      66.82 163  P        P       12 06 02.1  -0.3
I28M  Miner Creek       66.83  26  IAmb     IAmb    12 06 07.5
      comp=Z,47nm,0.8s
I28M  Miner Creek       66.83  26  P        P       12 06 03.4  +1.0
      baz=264,SNR=62
DAWY  Dawson            66.93  27  P        P       12 06 04.8  +1.7
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DAWY  Dawson            66.93  27  P        P       12 06 04.7  +1.7
      baz=265,SNR=53
D27M  Malcolm River     66.93  22  IAmb     IAmb    12 06 07.2
      comp=Z,49nm,0.8s
D27M  Malcolm River     66.93  22  P        P       12 06 04.9  +2.0
      baz=261,SNR=74
EAZ   Earnscleugh       67.04 162  P        P       12 06 04.1  +0.3
O29M  Mount Kennedy     67.06  32  IAmb     IAmb    12 06 58.7
      comp=Z,141nm,1.2s
O29M  Mount Kennedy     67.06  32  P        P       12 06 06.3  +2.3
      baz=267,SNR=25
YUK4  Talbot Arm        67.08  30  P        P       12 06 06.6  +2.5
      baz=267,SNR=50
F28M  Old Crow          67.11  24  P        P       12 06 05.8  +1.8
      baz=263,SNR=52
YUK6  Outpost Mounta    67.19  31  P        P       12 06 07.2  +2.3
      baz=267,SNR=16
IUG   Iuzhnay           67.22 309  eP       P       12 06 05.5  +0.2
IUG   Iuzhnay           67.22 309  eP       P       12 06 05.5  +0.2
M29M  Somme Creek       67.23  29  IAmb     IAmb    12 06 09.8
      comp=Z,52nm,0.7s
M29M  Somme Creek       67.23  29  P        P       12 06 07.0  +2.0
      baz=266
WHZ   Wether Hill Ro    67.26 163  IAmb     IAmb    12 06 08.1
      comp=Z,60nm,0.8s
WHZ   Wether Hill Ro    67.26 163  P        P       12 06 03.6  -1.5
ODZ   Otahua Downs      67.27 161  P        P       12 06 04.3  -0.9
GAR   Garm              67.30 305  IAmb     IAmb    12 06 33.0
      comp=Z,59nm,0.8s
E28M  Babbage River     67.36  23  IAmb     IAmb    12 06 10.6
      comp=Z,98nm,1.4s
E28M  Babbage River     67.36  23  P        P       12 06 07.6  +2.0
      baz=263,SNR=65
L29M  L29M              67.42  29  IAmb     IAmb    12 06 12.1
      comp=Z,78nm,0.7s
L29M  L29M              67.42  29  P        P       12 06 08.2  +2.1
      baz=266
P29M  Windy Craggy      67.45  32  IAmb     IAmb    12 06 11.4
      comp=Z,84nm,0.9s
P29M  Windy Craggy      67.45  32  P        P       12 06 08.8  +2.5
      baz=268
J29N  Klondike Camp     67.47  27  IAmb     IAmb    12 06 10.5
      comp=Z,46nm,0.7s
J29N  Klondike Camp     67.47  27  P        P       12 06 08.0  +1.5
      baz=266
I29M  Ogilvie Camp,     67.50  26  P        P       12 06 07.7  +1.1
      baz=265,SNR=48
KAD   Karad             67.52 282  eP       P       12 06 09.9  +2.4
KAD                                IAmb     IAmb    12 06 10.9
      comp=Z,89nm,0.8s
H29M  Whitestone        67.55  25  IAmb     IAmb    12 06 12.5
      comp=Z,67nm,1.1s
H29M  Whitestone        67.55  25  P        P       12 06 08.0  +1.2
      baz=265
POO   Poona             67.56 283  eP       P       12 06 09.4  +1.7
HYT   Haines Junctio    67.61  31  IAmb     IAmb    12 06 12.9
      comp=Z,88nm,0.9s
HYT   Haines Junctio    67.61  31  P        P       12 06 09.3  +1.9
      baz=268,SNR=52
D28M  Stokes Point      67.73  22  P        P       12 06 09.7  +1.9
      baz=263,SNR=64
K29M  Barlow Dome       67.74  28  IAmb     IAmb    12 06 14.8
      comp=Z,65nm,1.1s
K29M  Barlow Dome       67.74  28  P        P       12 06 10.1  +2.0
      baz=267,SNR=62
G29M  Pine Creek        67.75  24  P        P       12 06 09.8  +1.8
      baz=265
TUZ   Tuapeka           67.79 162  P        P       12 06 09.0  +0.6
N30M  Aishikik Lake     67.83  30  P        P       12 06 10.6  +1.9
      baz=268,SNR=36
P30M  Million Dollar    67.86  32  P        P       12 06 10.9  +2.0
      baz=269
E29M  Blow River        67.93  23  P        P       12 06 11.0  +1.8
      baz=264
M30M  Minto, Yukon      68.01  29  IAmb     IAmb    12 06 13.0
      comp=Z,131nm,1.8s
M30M  Minto, Yukon      68.01  29  P        P       12 06 11.7  +1.9
      baz=268,SNR=27
APZ   The Paps          68.14 164  P        P       12 06 10.9  +0.2
SYZ   Scrubby Hill      68.18 163  P        P       12 06 10.2  -0.7
S31K  Pelican           68.21  34  P        P       12 06 12.8  +1.8
      baz=270
EPYK  Eagle Plains      68.23  25  IAmb     IAmb    12 06 14.6
      comp=Z,55nm,0.6s
EPYK  Eagle Plains      68.23  25  P        P       12 06 12.5  +1.4
      baz=266,SNR=46
J30M  Hart River        68.30  27  P        P       12 06 13.1  +1.4
      baz=268
O30N  Mendenhall        68.30  31  P        P       12 06 13.3  +1.7
      baz=269,SNR=9.8
I30M  Mount Dempster    68.31  26  P        P       12 06 12.9  +1.2
      baz=267,SNR=41
MAYO  Mayo, Yukon       68.45  28  P        P       12 06 14.6  +2.1
      baz=268,SNR=13
N31M  Braeburn, Yuko    68.46  30  IAmb     IAmb    12 06 17.4
      comp=Z,60nm,0.8s
N31M  Braeburn, Yuko    68.46  30  P        P       12 06 14.8  +2.3
      baz=269,SNR=22
G30M  tAoh Zraii Nji    68.46  24  IAmb     IAmb    12 06 17.8
      comp=Z,97nm,1.4s
G30M  tAoh Zraii Nji    68.46  24  P        P       12 06 13.4  +0.9
      baz=267
R31K  City Hall, Gus    68.47  34  P        P       12 06 14.1  +1.5
      baz=270
JASL  Jaisalmer         68.53 292  eP       P       12 06 16.5  +2.9
JASL                               IAmb     IAmb    12 06 37.6
      comp=Z,76nm,1.0s
F30M  Barrier River     68.67  24  P        P       12 06 15.5  +1.8
      baz=267,SNR=76
SKAG  Skagway           68.67  33  P        P       12 06 16.4  +2.5
      comp=Z,58nm,1.2s
SKAG  Skagway           68.67  33  P        P       12 06 15.9  +2.1
      baz=270,SNR=19
SIT   Sitka             68.72  35  P        P       12 06 16.1  +2.0
      baz=271
KBL   Kabul             68.87 301  P        P       12 06 16.6  +0.8
      SNR=36
KBL                                S        S       12 15 02.6  -0.9
KBL   Kabul             68.87 301  P        P       12 06 16.5  +0.6
KBL                                IAmb     IAmb    12 06 18.6
      comp=Z,93nm,0.9s
KBL   Kabul             68.87 301  P        P       12 06 16.5  +0.6
KBL                                pmax     pmax
      comp=Z,93nm,1.0s
WHY   Whitehorse        68.89  31  IAmb     IAmb    12 06 19.6
      comp=Z,67nm,1.0s
WHY   Whitehorse        68.89  31  P        P       12 06 16.5  +1.2
      baz=270,SNR=20
BESE  Bessie Mountai    68.93  34  IAmb     IAmb    12 06 20.4
      comp=Z,56nm,0.8s
S32K  Killisnoo         69.11  35  P        P       12 06 18.5  +2.0
      baz=272
M31M  Drury Creek, Y    69.12  30  P        P       12 06 18.2  +1.6
      baz=270,SNR=26
H31M  Peel River        69.17  26  IAmb     IAmb    12 06 26.7
      comp=Z,57nm,0.9s
H31M  Peel River        69.17  26  P        P       12 06 18.2  +1.3
      baz=269
SHAA  Shahritus         69.18 304  IAmb     IAmb    12 07 11.2
      comp=Z,87nm,0.8s
JIS   Juneau Island     69.19  34  P        P       12 06 19.5  +2.5
      comp=Z,72nm,1.2s
G31M  Satah River       69.23  25  P        P       12 06 18.4  +1.2
      baz=268,SNR=76
F31M  Tsiigehtchic      69.45  24  P        P       12 06 19.4  +0.9
      baz=269,SNR=17
P32M  Atlin             69.50  32  IAmb     IAmb    12 06 23.2
      comp=Z,206nm,1.9s
P32M  Atlin             69.50  32  P        P       12 06 20.5  +1.5
      baz=272,SNR=11
INK   Inuvik            69.55  23  P        P       12 06 20.1  +1.0
      baz=269,SNR=50
N32M  Quiet Lake        69.76  31  IAmb     IAmb    12 06 24.5
      comp=Z,171nm,1.6s
N32M  Quiet Lake        69.76  31  P        P       12 06 22.4  +1.8
      baz=272,SNR=16
P33M  Teslin, Yukon     69.92  32  P        P       12 06 23.5  +1.9
      baz=272,SNR=11
U33K  Whale Pass        69.97  36  P        P       12 06 22.5  +0.6
      baz=274
CRAG  Craig             70.01  37  P        P       12 06 22.9  +0.8
      baz=274
T33K  Petersburg        70.02  35  P        P       12 06 24.5  +2.3
      baz=273
Q32M  Nakina River      70.26  33  P        P       12 06 26.3  +2.4
      baz=273,SNR=9.4
WRAK  Wrangell Islan    70.38  36  IAmb     IAmb    12 06 35.2
      comp=Z,81nm,1.3s
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WRAK	Wrangell Islan	70.38	36	P	P	12 06 26.7	+2.3
	baz=274						
V35K	Ketchikan	70.88	37	P	P	12 06 29.2	+1.8
	baz=275						
R33M	Jennings River	70.91	33	P	P	12 06 29.4	+1.8
	baz=274,SNR=13						
S34M	Telegraph Cree	70.93	34	P	P	12 06 30.0	+2.3
	baz=274,SNR=16						
T35M	Bob Quinn	71.49	35	IAmb	IAmb	12 06 35.5	
	comp=Z,159nm,1.9s						
T35M	Bob Quinn	71.49	35	P	P	12 06 34.0	+2.9
	baz=276,SNR=10						
WTLY	Watson Lake, Y	71.94	32	IAmb	IAmb	12 06 38.0	
	comp=Z,162nm,1.7s						
WTLY	Watson Lake, Y	71.94	32	P	P	12 06 36.0	+2.3
	baz=276,SNR=19						
SVE	Sverdlovsk	71.95	325	*e*P	P	12 06 34.4	+0.6
SVE				*e*S	S	12 15 37.1	-0.7
SVE				pmax	pmax		
	comp=Z,27nm,1.0s						
A36M	Sachs Harbour	72.25	19	P	P	12 06 36.5	+1.2
	baz=275,SNR=138						
C36M	Paulatuk	72.92	22	IAmb	IAmb	12 06 42.1	
	comp=Z,103nm,0.7s						
C36M	Paulatuk	72.92	22	P	P	12 06 40.1	+0.8
	baz=277,SNR=47						
PPT	Papeete	73.14	116	P	P	12 06 43.9	+2.5
	comp=Z,105nm,0.9s,baz=23,slow=3.0,SNR=14						
	comp=Z,105nm,0.9s						
PPT2	Papeete2	73.14	116	*e*P	P	12 06 30.6	-11
	comp=Z,185nm,25.5s						
PPT2				*e*S	SKiKP	12 15 51.3	-1.1
	comp=Z,194nm,24.8s						
PPT2				*e*SS	SS	12 20 40.2	+1.4
	comp=Z,404nm,24.0s						
PPT2				*e*LQ	LQ	12 26 10.5	
	comp=Z,322nm,22.2s						
PPT2				*e*LR	LR	12 29 29.5	
	comp=Z,288nm,23.8s						
PPT2				*e*LR	LR	12 29 35.0	
	comp=Z,350nm,23.2s						
PPTF	Pamatai, Papee	73.15	116	P	P	12 06 43.3	+1.7
PPTF	Pamatai, Papee	73.15	116	P	P	12 06 44.4	+2.8
	comp=Z,162nm,1.0s						
PAE	Paea	73.17	116	*e*P	P	12 06 44.1	+2.5
	comp=Z,49nm,1.2s						
ARTI	Arti	73.24	325	P	P	12 06 40.8	-0.5
ARTI	Arti	73.24	325	*d* *i*P	P	12 06 41.3	-0.1
ARTI						12 06 55.4	
ARTI				S	S	12 15 54.4	+2.0
ARTI				pmax	pmax		
	comp=Z,29nm,0.7s						
ARTI	Arti	73.24	325	P	P	12 06 40.9	-0.4
ARTI				pP	pP	12 07 27.3	-1.7
TIAR	Tiarei	73.33	115	*e*P	P	12 06 45.1	+2.6
	comp=Z,374nm,1.1s						
LIRD	Liard River Hi	73.38	32	P	P	12 06 44.1	+2.0
	baz=278,SNR=8.3						
AB31	Akbulak array	73.39	317	*e*P	P	12 06 41.6	-0.8
ABKAR	Akbulak array	73.39	317	P	P	12 06 41.8	-0.6
PMOR	Pomariorio Ree	73.49	112	*e*P	P	12 06 45.6	+2.1
	comp=Z,612nm,1.3s						
TVO	Taravao	73.51	116	*e*P	P	12 06 46.4	+2.8
	comp=Z,108nm,1.3s						
HOLB	Holberg	73.56	41	IAmb	IAmb	12 06 47.1	
	comp=Z,89nm,0.9s						
VAH	Vaihoa	73.83	113	*e*P	P	12 06 47.3	+1.9
	comp=Z,2.0nm,0.9s						
TOAD	Toad River Com	73.90	33	P	P	12 06 47.4	+2.1
	baz=279,SNR=23						
WRGLY	Wrigley	74.05	28	IAmb	IAmb	12 06 59.9	
	comp=E,107nm,0.8s						
WRGLY	Wrigley	74.05	28	P	P	12 06 47.3	+1.3
	baz=279,SNR=40						
KOTAN	Kotaneelee Air	74.29	31	P	P	12 06 49.0	+1.6
	baz=280,SNR=20						
AKTO	Aktyubinsk	74.42	318	P	P	12 06 47.4	-0.9
TBI	Tubuai	75.83	121	*e*P	P	12 06 59.5	+2.7
	comp=E,262nm,0.8s						
TBI				*e*S	S	12 16 25.9	+3.7
	comp=E,809nm,28.2s						
TBI	Tubuai	75.83	121	*e*LQ	LQ	12 27 36.8	
	comp=E,2µm,24.8s						
TBI				*e*LR	LR	12 30 43.9	
	comp=E,1µm,32.0s						
TBI				*e*LR	LR	12 30 44.9	
	comp=E,702nm,25.5s						
PGC	Sidney	76.93	43	IAmb	IAmb	12 07 08.9	
	comp=Z,67nm,1.0s						
NLWA	Neilton Lookou	76.94	44	IAmb	IAmb	12 07 07.4	
	comp=Z,117nm,1.0s						
B04A	Port Angeles	77.03	44	IAmb	IAmb	12 07 07.1	
	comp=Z,77nm,1.0s						
WISH	Wishkah	77.07	44	IAmb	IAmb	12 07 09.1	
	comp=Z,110nm,0.9s						
RADR	Rader Ridge	77.21	45	IAmb	IAmb	12 07 08.4	
	comp=Z,132nm,1.1s						
A04D	Lummi Island	77.39	43	IAmb	IAmb	12 07 11.9	
	comp=Z,96nm,1.0s						
NGCH	Negor - Chabah	77.44	293	P	P	12 07 07.0	+1.1
KIRV	Kirov	77.54	328	*d* *i*P	P	12 07 05.8	+0.1
GNW	Green Mountain	77.59	44	IAmb	IAmb	12 07 10.7	
	comp=Z,116nm,1.0s						
F04D	Rainier, OR	77.82	45	IAmb	IAmb	12 07 14.5	
	comp=Z,119nm,1.2s						
G03D	McMinnville, O	77.86	46	IAmb	IAmb	12 07 12.0	
	comp=Z,98nm,1.0s						
TAOE	Nuku Hiva Isla	78.11	104	*e*P	P	12 07 11.4	+1.6
	comp=Z,270nm,1.1s						
YKAW3	Yellowknife Wh	78.14	28	IAmb	IAmb	12 07 12.6	
	comp=Z,59nm,0.8s						
YKA	Yellowknife Ar	78.17	28	P	P	12 07 09.5	+0.4
	comp=Z,38nm,0.8s,baz=292,slow=6.3,SNR=211						
YKA				S	S	12 16 39.3	-6.8
	comp=Z,3.6nm,1.2s,baz=286,slow=10.0,SNR=5.0						
YKA				PKKPbc	PKKPbc	12 26 02.1	-6.2
	comp=Z,0.3nm,0.8s,baz=64,slow=1.4,SNR=3.7						
YKA				PKPPKP	P'P'df	12 34 03.6	-7.5
	comp=Z,3.4nm,1.4s,baz=78,slow=1.2,SNR=7.4						
	comp=Z,38nm,0.8s						
YKA	Yellowknife Ar	78.17	28	P	P	12 07 10.4	+1.2
YKA	Yellowknife Ar	78.17	28	P	P	12 07 10.4	+1.2
I03D	Drain, OR	78.17	48	IAmb	IAmb	12 07 13.3	
	comp=Z,94nm,1.1s						
K02D	Willamette Mer	78.19	49	IAmb	IAmb	12 09 54.1	
	comp=Z,62nm,0.7s						
YKAW1	Yellowknife Wh	78.22	28	IAmb	IAmb	12 07 13.1	
	comp=Z,68nm,0.8s						
ALE	Alert	78.27	4	P	P	12 07 11.0	+1.6
ALE				pP	pP	12 07 57.1	-1.0
ALE				sP	sP	12 08 15.9	-3.7
H04D	Lebanon	78.39	47	IAmb	IAmb	12 07 14.7	
	comp=Z,74nm,1.1s						
L02F	Cave Junction	78.40	49	IAmb	IAmb	12 08 05.7	
	comp=Z,103nm,1.2s						
KMPM	Mount Pierce	78.43	51	IAmb	IAmb	12 08 05.1	
	comp=Z,142nm,0.9s						
KHMM	Horse Mountain	78.60	51	IAmb	IAmb	12 08 05.7	
	comp=Z,127nm,1.0s						
H04A	Detroit Lake	78.73	47	IAmb	IAmb	12 07 15.8	
	comp=Z,78nm,1.0s						
KMRM	Mail Ridge	78.78	51	IAmb	IAmb	12 08 19.6	
	comp=Z,85nm,1.1s						
I04A	Tendick Farm,	78.80	48	IAmb	IAmb	12 07 16.8	
	comp=Z,109nm,1.0s						
HOOD	Mount Hood Mea	78.93	46	IAmb	IAmb	12 07 20.4	
	comp=Z,77nm,0.8s						
KCPM	Cahto Peak	79.01	52	IAmb	IAmb	12 08 07.6	
	comp=Z,136nm,0.9s						
LTY	Liberty	79.08	44	IAmb	IAmb	12 07 17.5	
	comp=Z,72nm,1.0s						
YBH	Yreka Blue Hor	79.12	50	IAmb	IAmb	12 07 18.7	
	comp=Z,60nm,0.9s						
WIFE	Three Sisters-	79.15	47	IAmb	IAmb	12 07 18.7	
	comp=Z,102nm,1.0s						
G05A	Wamic	79.18	46	IAmb	IAmb	12 08 08.0	
	comp=Z,80nm,1.2s						
L04D	Klamath Falls	79.29	49	IAmb	IAmb	12 07 19.2	
	comp=Z,100nm,1.0s						
SPA0	Spitsbergen Ar	79.30	351	*e*P	P	12 07 16.5	+1.4
SPITS	Spitsbergen Ar	79.30	351	P	P	12 07 15.1	-0.1
	comp=Z,11nm,0.6s,baz=84,slow=7.6,SNR=29						
SPITS				PKKPbc	PKKPbc	12 26 02.5	-3.8
	comp=Z,12nm,1.0s,baz=64,slow=3.4,SNR=5.2						
	comp=Z,11nm,0.6s						
SPITS	Spitsbergen Ar	79.30	351	P	P	12 07 15.9	+0.8
SPITS				pmax	pmax		
	comp=Z,115nm,1.4s						
KBS	Kingsbay	79.42	352	P	P	12 07 16.4	+0.6
KBS	Kingsbay	79.42	352	*e*P	P	12 07 16.2	+0.5
KBS	Kingsbay	79.42	352	⇓*i*P	P	12 07 16.5	+0.8
KBS				pmax	pmax		
	comp=Z,32nm,0.8s						
KBS	Kingsbay	79.42	352	P	P	12 07 16.0	+0.3
MXC	Moxie City	79.51	44	IAmb	IAmb	12 07 20.2	
	comp=Z,66nm,1.0s						
B08A	Colville Reser	79.65	42	IAmb	IAmb	12 07 20.5	
	comp=Z,71nm,0.9s						
EPH	Ephrata	79.76	44	IAmb	IAmb	12 07 20.9	
	comp=Z,88nm,1.0s						
J05D	Fort Rock, OR	79.76	48	IAmb	IAmb	12 07 22.0	
	comp=Z,146nm,1.0s						
JLN	Jalan Bani Buh	79.81	290	P	P	12 07 19.7	+0.8
E07A	Sunnyside	79.81	44	IAmb	IAmb	12 07 21.8	
	comp=Z,69nm,0.9s						
GDXM	Geysers	79.83	53	IAmb	IAmb	12 08 12.2	
	comp=Z,75nm,1.1s						
WAH2	Wahluke Slope	79.95	44	IAmb	IAmb	12 07 22.3	
	comp=Z,91nm,0.8s						
HAWA	Hanford	80.07	44	IAmb	IAmb	12 07 23.1	
	comp=Z,68nm,1.0s						
WBK	Wadi Bani Khal	80.07	291	P	P	12 07 21.1	+0.7
	SNR=5.2						
MNRC	McLaughlin Min	80.08	52	IAmb	IAmb	12 08 15.0	
	comp=Z,113nm,0.9s						
K05A	Summer Lake	80.16	48	IAmb	IAmb	12 07 24.2	
	comp=Z,142nm,0.9s						
O03E	Paynes Creek	80.17	51	IAmb	IAmb	12 07 23.5	
	comp=Z,97nm,1.0s						
WSAR	Wadi Sarin	80.20	291	P	P	12 07 22.1	+1.1
CVS	Carmenet Viney	80.21	53	IAmb	IAmb	12 08 13.5	
	comp=Z,92nm,1.0s						
BELG	Belogornoye	80.26	322	*c* *i*P	P	12 07 20.4	-0.3
BELG				pmax	pmax		
	comp=Z,13nm,0.9s						
HATC	Hat Creek Radi	80.28	50	IAmb	IAmb	12 07 24.5	
	comp=Z,121nm,1.1s						
D08A	Wollman Farm,	80.28	44	IAmb	IAmb	12 07 24.1	
	comp=Z,74nm,1.0s						
BIDO	Bidbid	80.57	292	P	P	12 07 24.3	+1.4
	SNR=7.4						
ORV	Oroville	80.60	52	IAmb	IAmb	12 07 25.7	
	comp=Z,66nm,1.0s						
SMDO	Samad	80.76	291	P	P	12 07 24.8	+0.7
ADZR	Andozero	80.86	335	*e*P	P	12 07 22.4	-1.2
ADZR				*e*S	S	12 17 11.3	-3.0
ADZR				pmax	pmax		
	comp=Z,30nm,0.7s						
JMDO	Jabal Madar	80.91	291	P	P	12 07 25.6	+0.8
	SNR=5.3						
E09A	Wood Farm, Sta	80.95	44	IAmb	IAmb	12 08 18.0	
	comp=Z,61nm,0.9s						
NEW	Newport	81.09	42	P	P	12 07 26.8	+1.5
MHC	Mount Hamilton	81.11	54	IAmb	IAmb	12 08 20.4	
	comp=Z,79nm,1.1s						
VADS	Vadso	81.16	342	*e*P	P	12 07 25.1	0.0
HOQ	Hoqain	81.27	292	P	P	12 07 27.2	+0.6
	SNR=11						
MHTO	MHTO	81.42	289	P	P	12 07 28.1	+0.7
	SNR=24						
BANOM	Banah	81.49	294	P	P	12 07 29.0	+1.2
BANOM	Banah	81.49	294	*i* P	P	12 07 28.9	+1.1
	SNR=26						
KLMR	Klimovskoe	81.54	332	*e*P	P	12 07 25.9	-1.4
KLMR				pmax	pmax		
	comp=Z,45nm,0.9s						
SHME	Shamm	81.59	295	P	P	12 07 29.8	+1.6
	SNR=6.0						
SHME	Shamm	81.59	295	*i* P	P	12 07 29.5	+1.2
	SNR=18						
BSY	Bisya	81.60	291	P	P	12 07 29.2	+0.7
	SNR=11						
MDH	Madha	81.67	294	P	P	12 07 29.2	+0.5
MDH	Madha	81.67	294	*i* P	P	12 07 30.0	+1.3
	SNR=7.5						
J08A	Circle Bar Ran	81.67	47	IAmb	IAmb	12 08 23.1	
	comp=Z,99nm,1.1s						
EDM	Edmonton	81.76	37	IAmb	IAmb	12 07 32.1	
	comp=Z,70nm,1.0s						
MASF	Masafi	81.77	294	P	P	12 07 30.7	+1.4
	SNR=12						
MSFE	Esma-Masafi	81.77	294	*i* P	P	12 07 30.6	+1.3
	SNR=26						
BBGB	Big Mountain B	81.79	54	IAmb	IAmb	12 08 24.1	
	comp=Z,85nm,0.9s						
SOHO	SOHO	81.80	293	P	P	12 07 30.4	+1.1
SOHO	SOHO	81.80	293	*i* P	P	12 07 30.2	+0.8
	SNR=68						
HULI	Fort Hunter Li	81.80	55	IAmb	IAmb	12 08 22.8	
	comp=Z,97nm,0.9s						
WVOR	Wild Horse Val	81.84	48	IAmb	IAmb	12 08 22.3	
	comp=Z,73nm,1.1s						
WVOR	Wild Horse Val	81.84	48	P	P	12 07 31.0	+1.6
UOSS	Minazif	81.85	294	P	P	12 07 30.7	+1.0
UOSS	Minazif	81.85	294	P	P	12 07 30.5	+0.8
UOSS	Minazif	81.85	294	*i* P	P	12 07 30.5	+0.8
	SNR=32						
UOSS	Minazif	81.85	294	P	P	12 07 30.2	+0.6
UOSS				PcP	PcP	12 07 34.8	0.0
UOSS				x	x	12 08 34.9	
CMB	Columbia Colle	81.86	53	IAmb	IAmb	12 08 22.5	
	comp=Z,58nm,0.8s						
HATD	Hatta, Dubai	81.95	293	P	P	12 07 31.0	+0.8
	SNR=13						
HATD	Hatta, Dubai	81.95	293	*i* P	P	12 07 30.6	+0.4
	SNR=40						
ARQ	Araqi	82.03	292	P	P	12 07 31.9	+1.2
	SNR=14						
KEV	Kevo	82.05	342	P	P	12 07 29.2	-0.6
KEV				IAmb	IAmb	12 08 22.1	
	comp=Z,97nm,1.4s						
KEV	Kevo	82.05	342	P	P	12 07 29.2	-0.6
KEV				pmax	pmax		
	comp=Z,97nm,1.4s						
ASHO	Ashiyiah	82.05	293	P	P	12 07 31.8	+0.9
	SNR=18						
ASHO	Ashiyiah	82.05	293	*i* P	P	12 07 31.7	+0.9
	SNR=42						
PMPB	Monarch Peak	82.08	55	IAmb	IAmb	12 08 42.8	
	comp=Z,120nm,1.4s						
DQM	DQM	82.11	288	P	P	12 07 32.2	+1.1
	SNR=7.1						
PAHR	Pah Rah Range	82.12	51	IAmb	IAmb	12 07 34.5	
	comp=Z,74nm,1.0s						
PNTR	Pine Nut	82.14	52	IAmb	IAmb	12 07 34.5	
	comp=Z,117nm,0.8s						
NAZ	Nazwa, Dubai	82.31	294	P	P	12 07 32.9	+0.9
NAZ	Nazwa, Dubai	82.31	294	*i* P	P	12 07 32.2	+0.2
	SNR=7.4						
PKD	Bear Valley Ra	82.36	55	IAmb	IAmb	12 08 26.4	
	comp=Z,69nm,0.8s						
FAQ	Al Faqa, Dubai	82.44	293	P	P	12 07 33.5	+0.8
FAQ	Al Faqa, Dubai	82.44	293	*i* P	P	12 07 33.1	+0.3
	SNR=9.2						
HAMF	Hammerfest	82.48	343	*e*P	P	12 07 31.9	-0.1
ALNE	Al Ain	82.50	293	P	P	12 07 34.0	+1.0
	SNR=7.7						
ALNE	Al Ain	82.50	293	*i* P	P	12 07 34.1	+1.0
	SNR=19						
ARA0	ARCESS Array S	82.61	342	*e*P	P	12 07 32.2	-0.5
ARCES	ARCESS Array B	82.61	342	P	P	12 07 32.3	-0.4
	comp=Z,28nm,0.8s,baz=84,slow=8.1,SNR=37						
ARCES				S	S	12 17 30.4	-1.7
	comp=Z,6.8nm,0.9s,baz=355,slow=12,SNR=4.0						
ARCES				PKKPbc	PKKPdf	12 25 51.9	+4.2
	comp=Z,3.2nm,0.9s,baz=232,slow=2.2,SNR=7.2						
	comp=Z,28nm,0.8s						
ARCES	ARCESS Array B	82.61	342	P	P	12 07 32.5	-0.2
ARCES	ARCESS Array B	82.61	342	P	P	12 07 32.5	-0.2
ASUD	Al Ashush, Dub	82.71	293	P	P	12 07 35.0	+0.9
ASUD	Al Ashush, Dub	82.71	293	*i* P	P	12 07 35.2	+1.1
	SNR=7.4						
TULEG	Thule	82.88	8	IAmb	IAmb	12 07 37.0	
	comp=Z,134nm,1.1s						
AJN	Ajban	83.02	293	P	P	12 07 36.6	+0.9
AJN	Ajban	83.02	293	*i* P	P	12 07 36.2	+0.4
	SNR=8.8						
RYN	Ryan	83.08	52	IAmb	IAmb	12 07 39.2	
	comp=Z,89nm,1.0s						
LHV	Little Huntoon	83.21	52	P	P	12 07 39.5	+3.1
LHV	Little Huntoon	83.21	52	IAmb	IAmb	12 07 40.6	
	comp=Z,69nm,0.9s						
NV09	Mina Array Sit	83.28	52	P	P	12 07 39.7	+2.6
MAK	Makhachkala	83.30	313	*e*P	P	12 07 35.1	-1.7
MAK				*e*S	SKSac	12 17 35.8	-3.6
MAK				*e**SS	sS	12 19 05.4	+0.2
MAK				*e*SS	SS	12 23 08.1	-1.2
MAK				pmax	pmax		
	comp=Z,176nm,1.2s						
MAK				MLR	MLR		
	comp=Z,472nm,17.0s						
NV08	Mina Array Sit	83.30	52	P	P	12 07 39.3	+2.2
NVAR	Mina Array Bea	83.31	52	P	P	12 07 38.6	+1.4
	comp=Z,94nm,0.8s,baz=265,slow=5.7,SNR=454						
NVAR				PKKPbc	PKKPbc	12 25 56.9	+0.7
	comp=Z,1.0nm,0.8s,baz=130,slow=2.5,SNR=5.4						
	comp=Z,94nm,0.8s						
NVAR	Mina Array Bea	83.31	52	P	P	12 07 38.8	+1.6
UMZA	Um Al Zommool	83.41	292	P	P	12 07 38.6	+0.9
NV11	Mina Array Sit	83.42	52	P	P	12 07 39.9	+2.2
NV11	Mina Array Sit	83.42	52	IAmb	IAmb	12 08 30.9	
	comp=Z,77nm,0.9s						
MFID	Camas Ranch	83.49	46	IAmb	IAmb	12 08 31.5	
	comp=Z,80nm,0.9s						
VES	Vestal, Richgr	83.52	55	IAmb	IAmb	12 08 30.4	
	comp=Z,101nm,1.0s						
KTK1	Kautokeino	83.57	342	*e*P	P	12 07 37.1	-0.5
AKT	Akhty	83.62	312	*e*P	P	12 07 36.4	-2.2
AKT				*e*S	SKSac	12 17 38.9	-3.0
AKT				pmax	pmax		
	comp=Z,86nm,0.9s						
DSP	Deep Springs	83.89	53	IAmb	IAmb	12 08 33.5	
	comp=Z,79nm,1.3s						
JETT	Jettan, Norway	84.04	343	*e*P	P	12 07 40.1	0.0
VRH	Novokhopyorsk	84.11	322	*e*P	P	12 07 35.0	-5.7
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MZWR	Madinat Zayed	84.23	293	P	P	12 07 42.4	+0.5
DVE	Vedeno	84.26	313	⇓*i*P	P	12 07 41.8	+0.1
DVE				pmax	pmax		
	comp=Z,72nm,1.0s						
TRO	Tromso	84.39	344	*e*P	P	12 07 41.0	-0.8
SHAO	Shalim	84.40	287	P	P	12 07 43.5	+0.7
GMN	Gold Mountain	84.45	53	IAmb	IAmb	12 07 45.9	
	comp=Z,54nm,0.8s						
TPO	Tropico Hills	84.49	55	IAmb	IAmb	12 08 36.5	
	comp=Z,77nm,1.0s						
MOS	Moscow	84.54	327	*e*P	P	12 07 44.9	+2.2
MOS				*e*		12 17 42.7	
JRN	Qarnain Island	84.76	294	P	P	12 07 44.9	+0.4
ELK	Elko	84.79	49	IAmb	IAmb	12 08 38.4	
	comp=Z,72nm,1.0s						
ELK	Elko	84.79	49	P	P	12 07 46.2	+1.5
MZR	Muzera	84.81	292	P	P	12 07 45.8	+1.0
	SNR=14						
MZR	Muzera	84.81	292	*i* P	P	12 07 45.1	+0.4
	SNR=32						
MWC	Mount Wilson	84.83	56	IAmb	IAmb	12 08 37.7	
	comp=Z,76nm,1.2s						
CCCA	Chr Cany lake	84.95	54	IAmb	IAmb	12 08 38.6	
	comp=Z,54nm,0.9s						
BLKN	Baker Lake	84.95	23	IAmb	IAmb	12 07 45.9	
	comp=Z,47nm,0.5s						
DLMT	Dillon	84.99	44	IAmb	IAmb	12 07 49.0	
	comp=Z,85nm,1.3s						
FURC	Furnace Creek,	85.02	53	IAmb	IAmb	12 08 38.9	
	comp=Z,69nm,1.1s						
GHWR	Ruwais	85.04	293	P	P	12 07 46.8	+0.9
DRV	Dumont d'Urvil	85.06	182	P	P	12 07 44.2	-0.7
WCT	Wildcat Mounta	85.09	53	IAmb	IAmb	12 07 49.0	
	comp=Z,70nm,1.0s						
DMTO	DMTO	85.10	287	P	P	12 07 46.8	+0.4
LPSR	Galich'ya Gora	85.15	324	*e*P	P	12 07 41.8	-4.1
LPSR				pmax	pmax		
	comp=Z,40nm,0.8s						
TPNV	Topopah Spring	85.33	53	P	P	12 07 49.0	+1.7
TPNV	Topopah Spring	85.33	53	IAmb	IAmb	12 07 50.2	
	comp=Z,67nm,0.8s						
TPNV	Topopah Spring	85.33	53	P	P	12 07 49.0	+1.7
TPNV				pmax	pmax		
	comp=Z,67nm,0.9s						
OBN	Obninsk	85.35	327	⇓*e*P	P	12 07 47.2	+0.4
OBN				*i* S	SKSac	12 17 47.6	-4.4
OBN				SSS	SSS	12 27 15.0	
OBN				pmax	pmax		
	comp=Z,14nm,1.0s						
OBN				MLR	MLR		
	comp=Z,341nm,16.0s						
VORR	Voronezh	85.37	323	*e*P	P	12 07 43.4	-3.6
VORR				pmax	pmax		
	comp=Z,40nm,0.8s						
S11A	Rachel	85.47	52	IAmb	IAmb	12 08 41.4	
	comp=Z,75nm,0.9s						
DOK	Doka	85.57	288	P	P	12 07 48.7	+0.1
	SNR=11						
VSR	Storozhevoye	85.58	323	*e*P	P	12 07 44.0	-4.0
VSR				pmax	pmax		
	comp=Z,30nm,0.8s						
VORD	Divnogorie	85.61	323	*e*P	P	12 07 43.4	-4.8
VORD				pmax	pmax		
	comp=Z,30nm,0.9s						
EGMT	Eagleton	85.80	41	IAmb	IAmb	12 07 52.4	
	comp=Z,79nm,1.1s						
RBK	Rabkut	85.84	287	P	P	12 07 50.7	+0.6
SLWR	Sila	86.03	294	P	P	12 07 52.2	+1.4
SPR3	Spring Creek 3	86.05	50	IAmb	IAmb	12 08 44.6	
	comp=Z,70nm,1.2s						
SHMA	Al-Shehemyia	86.10	296	P	P	12 07 52.0	+0.9
WHFO	Wadi Hawf	86.11	287	P	P	12 07 51.0	-0.3
YHB	Horse Butte	86.14	44	IAmb	IAmb	12 07 54.9	
	comp=Z,96nm,1.1s						
DNR	Dunn Ranch,Anz	86.17	56	IAmb	IAmb	12 08 46.3	
	comp=Z,74nm,1.1s						
HVU	Hansel Valley	86.17	47	IAmb	IAmb	12 08 44.9	
	comp=Z,83nm,1.2s						
KBZ	Khabaz	86.18	315	P	P	12 07 50.3	-0.8
	comp=Z,17nm,0.9s,baz=141,slow=1.4,SNR=34						
	comp=Z,17nm,0.9s						
KBZ	Khabaz	86.18	315	⇓*i*P	P	12 07 50.3	-0.8
KBZ				pmax	pmax		
	comp=Z,20nm,0.9s						
TRNA	Turayna	86.24	295	P	P	12 07 51.5	-0.3
KIV	Kislovodsk	86.24	315	P	P	12 07 52.5	+0.9
KIV	Kislovodsk	86.24	315	*e*P	P	12 07 50.2	-1.4
KIV				*e*		12 17 57.2	
KIV				*e*SS	SS	12 23 53.9	+1.3
KIV				pmax	pmax		
	comp=Z,16nm,1.0s						
KIV	Kislovodsk	86.24	315	P	P	12 07 52.3	+0.7
	comp=Z,16nm,1.0s						
PFO	Pinyon Flats O	86.28	56	P	P	12 07 53.1	+1.0
PFO	Pinyon Flats O	86.28	56	P	P	12 07 53.1	+1.0
PFO				pmax	pmax		
	comp=Z,53nm,1.1s						
YMR	Madison River	86.32	44	IAmb	IAmb	12 07 55.9	
	comp=Z,96nm,1.1s						
SHA1	Shidzhatmaz	86.34	315	⇓*i*P	P	12 07 52.1	-0.1
YNM	Yellowstone No	86.47	44	IAmb	IAmb	12 07 57.8	
	comp=Z,109nm,1.1s						
YFT	Old Faithful	86.49	44	IAmb	IAmb	12 08 48.0	
	comp=Z,49nm,0.9s						
YNR	Norris Junctio	86.49	44	IAmb	IAmb	12 07 58.6	
	comp=Z,124nm,1.2s						
STEI	Steigen	86.53	343	*e*P	P	12 07 51.5	-0.8
PSUT	Pine Spring	86.56	51	IAmb	IAmb	12 07 59.0	
	comp=Z,71nm,1.0s						
SMRA	Abu-Samra	86.57	295	P	P	12 07 53.1	-0.3
ABTO	Aybut	86.71	287	P	P	12 07 54.0	-0.3
	SNR=8.4						
DUG	Dugway, Tooele	86.72	49	IAmb	IAmb	12 08 47.3	
	comp=Z,60nm,1.0s						
LKWY	Lake	86.73	44	IAmb	IAmb	12 08 49.2	
	comp=Z,130nm,1.7s						
DANC	Danby, Needles	86.78	55	IAmb	IAmb	12 08 47.8	
	comp=Z,84nm,1.0s						
V12A	Nelson	86.81	53	IAmb	IAmb	12 07 57.8	
	comp=Z,82nm,1.0s						
YMP	Mirror Lake Pl	86.82	44	IAmb	IAmb	12 08 54.9	
	comp=Z,96nm,1.1s						
FAUS	Fauske	86.89	343	*e*P	P	12 07 53.1	-1.0
FIA1	FINESS Array S	86.98	335	IAmb	IAmb	12 07 53.7	
	comp=Z,66nm,1.0s						
FINES	FINESS Array B	86.98	335	P	P	12 07 53.0	-1.7
	comp=Z,18nm,0.4s,baz=61,slow=4.6,SNR=131						
	comp=Z,18nm,0.4s						
FINES	FINESS Array B	86.98	335	P	P	12 07 53.0	-1.7
BC3	Big Chuckawall	87.06	56	IAmb	IAmb	12 08 49.1	
	comp=Z,63nm,1.1s						
HWUT	Hardware Ranch	87.07	47	IAmb	IAmb	12 08 49.0	
	comp=Z,70nm,1.0s						

ESJX	Sierra Juarez	87.23	57	IAmb	IAmb	12 08 50.2	
	comp=Z,70nm,1.3s						
RLMT	Red Lodge	87.25	43	IAmb	IAmb	12 08 51.3	
	comp=Z,48nm,0.7s						
FFC	Flin Flon	87.27	32	P	P	12 07 57.4	+1.2
FFC	Flin Flon	87.27	32	P	P	12 07 57.4	+1.2
FFC				pmax	pmax		
	comp=Z,151nm,0.9s						
FFC	Flin Flon	87.27	32	P	P	12 07 57.3	+1.2
FFC				pP	pP	12 08 44.0	-1.8
NEE2	Needles Airpor	87.32	54	IAmb	IAmb	12 07 59.4	
	comp=Z,48nm,0.9s						
TCUT	Toone Canyon	87.37	47	IAmb	IAmb	12 08 50.3	
	comp=Z,43nm,0.9s						
BLYC	Blythe	87.75	55	IAmb	IAmb	12 08 52.5	
	comp=Z,54nm,1.2s						
RKT	Rikitea	87.89	115	*e*P	P	12 08 02.6	+3.0
	comp=Z,72nm,0.9s						
RKT	Rikitea	87.89	115	*e*S	SKSac	12 18 16.6	+8.0
	comp=Z,2µm,30.8s						
RKT				*e*SS	SS	12 24 12.7	-5.5
	comp=Z,2µm,42.8s						
RKT				*e*LQ	LQ	12 31 31.4	
	comp=Z,2µm,29.8s						
RKT				*e*LR	LR	12 36 13.3	
	comp=Z,527nm,23.0s						
RAUS	Rausandaksla	87.91	342	*e*P	P	12 07 57.8	-1.1
VAGH	Vaagaholmen	87.92	343	*e*P	P	12 07 58.1	-0.8
MOR8	Moi Rana	87.98	342	*e*P	P	12 07 56.7	-2.6
PDAR	Pinedale Array	88.00	45	P	P	12 08 00.6	+0.3
	comp=Z,3.8nm,0.4s,baz=210,slow=1.1,SNR=110						
PDAR				PKKPbc	PKKPbc	12 25 42.7	-2.7
	comp=Z,1.1nm,0.8s,baz=102,slow=5.8,SNR=5.9						
	comp=Z,3.8nm,0.4s						
PDAR	Pinedale Array	88.00	45	P	P	12 08 01.1	+0.8
SOC	Sochi	88.36	316	*e*P	P	12 08 00.3	-1.3
SOC				*e*S	SKSac	12 18 08.8	-2.1
SOC				*e*SSS	SSS	12 27 53.4	
SOC				pmax	pmax		
	comp=Z,22nm,0.8s						
Q16A	Castle Valley	88.37	49	IAmb	IAmb	12 08 55.8	
	comp=Z,76nm,1.1s						
LEIR	Leirfjorden	88.41	343	*e*P	P	12 07 59.5	-1.8
SFX	San Felipe	88.45	58	IAmb	IAmb	12 08 55.7	
	comp=Z,99nm,1.1s						
P17A	Butcher Ranch,	88.47	49	IAmb	IAmb	12 08 55.9	
	comp=Z,66nm,1.2s						
U15A	North Rim	88.49	52	IAmb	IAmb	12 08 06.2	
	comp=Z,59nm,1.0s						
LAO	LASA Array	88.53	41	IAmb	IAmb	12 08 56.8	
	comp=Z,70nm,0.9s						
CASY	Casey	88.57	193	P	P	12 08 02.5	+0.7
SRU	San Rafael Swe	88.76	49	IAmb	IAmb	12 08 06.0	
	comp=Z,50nm,0.9s						
FCC	Fort Churchill	88.84	27	IAmb	IAmb	12 08 05.4	
	comp=Z,71nm,0.9s						
Y14A	Wickenburg	88.86	55	IAmb	IAmb	12 08 06.9	
	comp=Z,58nm,0.8s						
RDMU	Red Mountain	88.86	47	IAmb	IAmb	12 08 58.4	
	comp=Z,48nm,0.9s						
DGMT	Dagmar	88.97	39	IAmb	IAmb	12 08 06.4	
	comp=Z,34nm,0.9s						
SUMG	Summit	89.06	1	IAmb	IAmb	12 08 07.6	
	comp=Z,49nm,1.3s						
PIX	Pinacate	89.37	57	IAmb	IAmb	12 09 00.0	
	comp=Z,63nm,1.5s						
214A	Organ Pipe Nat	89.74	56	IAmb	IAmb	12 08 11.8	
	comp=Z,67nm,1.0s						
NSS	Namsos	89.88	342	*e*P	P	12 08 06.8	-1.4
O20A	White River Ci	89.97	47	IAmb	IAmb	12 08 12.7	
	comp=Z,56nm,1.1s						
MNK	Minsk	90.03	329	*i* P	P	12 08 08.8	-0.3
MNK				*i*		12 11 45.7	
MNK				*i* PPP	PPP	12 13 42.7	
MNK				*i* S	SKSac	12 18 19.9	-0.3
MNK				*i* *SS	pS	12 19 48.0	+0.8
MNK				*i* SS	SS	12 24 52.4	+5.8
MNK				*i* SSS	SSS	12 28 29.1	
MNK				pmax	pmax		
	comp=N,30nm,0.9s						
MNK				pmax	pmax		
	comp=Z,86nm,0.8s						
MNK				pmax	pmax		
	comp=E,62nm,0.8s						
MNK				MLR	MLR		
	comp=N,1µm,24.0s						
MNK				MLR	MLR		
	comp=E,751nm,19.0s						
MNK				MLR	MLR		
	comp=Z,186nm,16.0s						
PV21	Cone Mtn., Par	90.09	49	IAmb	IAmb	12 09 04.2	
	comp=Z,82nm,0.9s						
PV05	Paradox Valley	90.20	50	IAmb	IAmb	12 08 13.6	
	comp=Z,69nm,1.1s						
PV17	East Wray Mesa	90.22	49	IAmb	IAmb	12 09 05.8	
	comp=Z,83nm,1.0s						
PV22	Blue Mesa, Par	90.24	49	IAmb	IAmb	12 08 13.0	
	comp=Z,45nm,1.2s						
PV03	Paradox Valley	90.31	49	IAmb	IAmb	12 09 05.1	
	comp=Z,67nm,1.0s						
PV13	Radium Mtn., P	90.36	49	IAmb	IAmb	12 09 05.3	
	comp=Z,55nm,0.9s						
PV07	Paradox Valley	90.38	49	IAmb	IAmb	12 09 06.4	
	comp=Z,38nm,1.0s						
PV15	Paradox Valley	90.53	49	IAmb	IAmb	12 09 06.2	
	comp=Z,41nm,1.0s						
PV01	Paradox Valley	90.56	49	IAmb	IAmb	12 09 06.2	
	comp=Z,45nm,0.8s						
W18A	Petrified Fore	90.91	52	IAmb	IAmb	12 08 18.7	
	comp=Z,58nm,1.1s						
X18A	Snowflake	90.98	53	IAmb	IAmb	12 08 17.1	
	comp=Z,34nm,1.0s						
MVCO	Mesa Verde	90.98	50	IAmb	IAmb	12 08 19.2	
	comp=Z,69nm,1.3s						
RSSD	Black Hills	91.06	42	P	P	12 08 15.2	+0.8
RSSD				IAmb	IAmb	12 08 19.7	
	comp=Z,36nm,1.1s						
RSSD	Black Hills	91.06	42	P	P	12 08 15.2	+0.8
RSSD				pmax	pmax		
	comp=Z,36nm,1.1s						
TUC	Tucson	91.20	55	P	P	12 08 15.6	+0.4
TUC				IAmb	IAmb	12 09 09.6	
	comp=Z,59nm,1.3s						
TUC	Tucson	91.20	55	P	P	12 08 15.6	+0.4
TUC				pmax	pmax		
	comp=Z,59nm,1.3s						
AKASG	Malin Array Be	91.38	325	P	P	12 08 13.4	-2.0
	comp=Z,1.7nm,0.5s,baz=50,slow=5.4,SNR=8.5						
AKASG				PKKPbc	PKKPdf	12 25 33.7	+1.1
	comp=Z,0.9nm,0.4s,baz=266,slow=2.7,SNR=4.5						
	comp=Z,1.7nm,0.5s						
AKASG	Malin Array Be	91.38	325	P	P	12 08 13.4	-2.0
AKASG				pmax	pmax		
	comp=Z,7.0nm,1.2s						
AKBB	Malin Array Si	91.38	325	⇓*i*P	P	12 08 14.7	-0.7
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SIM	Simferopol'	91.38	319	*e*P	P	12 08 15.7	+0.1
SIM				S	SKSac	12 18 28.0	-0.4
SIM				SP	SPn	12 20 12.0	+4.6
SIM				pmax	pmax		
	comp=Z,26nm,0.8s						
SIM				pmax	pmax		
	comp=Z,60nm,8.2s						
SIM				smax	smax		
	comp=E,160nm,10.0s						
SIM				pmax	pmax		
	comp=Z,100nm,9.9s						
KIEV	Kiev	91.39	325	P	P	12 08 14.4	-1.1
KIEV	Kiev	91.39	325	P	P	12 08 14.4	-1.1
KIEV				pmax	pmax		
	comp=Z,21nm,1.5s						
AK10	Malin Array Si	91.41	325	P	P	12 08 16.4	+0.8
RAYN	Ar Rayn	91.56	295	P	P	12 08 16.3	-0.7
RAYN	Ar Rayn	91.56	295	P	P	12 08 16.4	-0.5
RAYN				IAmb	IAmb	12 08 17.2	
	comp=Z,36nm,0.8s						
RAYN	Ar Rayn	91.56	295	*i* P	P	12 08 16.2	-0.7
	SNR=36						
RAYN	Ar Rayn	91.56	295	P	P	12 08 16.4	-0.5
RAYN				pmax	pmax		
	comp=Z,36nm,0.9s						
ISCO	Idaho Springs	91.94	47	IAmb	IAmb	12 08 22.5	
	comp=Z,38nm,1.0s						
ISCO	Idaho Springs	91.94	47	P	P	12 08 20.3	+1.6
S22A	4UR Ranch, Cre	91.97	49	IAmb	IAmb	12 08 22.1	
	comp=Z,46nm,1.1s						
NC405	NORSAR Array S	92.46	339	IAmb	IAmb	12 10 45.0	
	comp=Z,75nm,1.7s						
HFS	Hagfors	92.49	338	P	P	12 08 18.5	-1.9
	comp=Z,8.4nm,0.3s,baz=85,slow=3.1,SNR=60						
HFS				PKKP	PKKPdf	12 25 30.7	0.0
	comp=Z,1.6nm,0.4s,baz=180,slow=2.7,SNR=16						
	comp=Z,8.4nm,0.3s						
NC204	NORSAR Array S	92.65	340	IAmb	IAmb	12 11 34.0	
	comp=Z,74nm,1.6s						
NB2	NORSAR Subarra	92.68	340	P	P	12 08 19.3	-2.0
	comp=Z,8.7nm,0.8s,baz=46,slow=4.4						
NB2	NORSAR Subarra	92.68	340	P	P	12 08 19.3	-2.0
	baz=46,slow=4.4						
NOA	NORSAR Array B	92.68	340	P	P	12 08 19.3	-2.0
	comp=Z,3.5nm,0.7s,baz=38,slow=5.0,SNR=12						
NOA				PP	PP	12 12 02.5	-2.8
	comp=Z,2.5nm,0.9s,baz=47,slow=8.3,SNR=5.5						
	comp=Z,3.5nm,0.7s						
319A	Douglas	92.74	56	IAmb	IAmb	12 08 25.9	
	comp=Z,29nm,0.9s						
ULM	Lac du Bonnet	92.78	34	P	P	12 08 22.2	+0.2
	comp=Z,38nm,0.9s,baz=307,slow=4.9,SNR=46						
	comp=Z,38nm,0.9s						
ULM	Lac du Bonnet	92.78	34	IAmb	IAmb	12 08 23.7	
	comp=Z,44nm,0.9s						
TASM	ASL Pad, Albuq	93.43	52	IAmb	IAmb	12 09 20.1	
	comp=Z,33nm,1.1s						
TASM	ASL Pad, Albuq	93.43	52	IAmb	IAmb	12 09 20.1	
	comp=Z,33nm,1.1s						
TASM	ASL Pad, Albuq	93.43	52	IAmb	IAmb	12 08 28.8	
	comp=Z,31nm,1.1s						
TASM	ASL Pad, Albuq	93.43	52	IAmb	IAmb	12 08 28.8	
	comp=Z,31nm,1.1s						
ANMO	Albuquerque	93.43	52	P	P	12 08 26.8	+1.2
ANMO				IAmb	IAmb	12 09 20.1	
	comp=Z,34nm,1.1s						
ANMO	Albuquerque	93.43	52	⇓*i*P	P	12 08 27.3	+1.7
ANMO				pmax	pmax		
	comp=Z,32nm,1.1s						
ABQ	Albuquerque	93.43	52	IAmb	IAmb	12 08 28.8	
	comp=Z,31nm,1.1s						
121A	Cookes Peak, D	93.44	54	IAmb	IAmb	12 09 20.8	
	comp=Z,33nm,0.9s						
Y22A	Socorro	93.48	53	IAmb	IAmb	12 09 20.4	
	comp=Z,30nm,1.1s						
AGMN	Agassiz Nation	93.86	36	IAmb	IAmb	12 08 28.6	
	comp=Z,31nm,0.9s						
T25A	Trinidad	93.96	49	IAmb	IAmb	12 09 22.9	
	comp=Z,32nm,1.0s						
BR131	Keskin Array S	94.15	314	P	P	12 08 27.3	-1.3
	SNR=7.9						
BRTR	Keskin Array B	94.15	314	P	P	12 08 27.1	-1.6
	comp=Z,8.4nm,0.8s,baz=87,slow=3.0,SNR=30						
BRTR				PKKPbc	PKKPbc	12 25 29.1	-0.7
	comp=Z,1.3nm,0.6s,baz=216,slow=3.9,SNR=6.3						
	comp=Z,8.4nm,0.8s						
BR104	Keskin Array S	94.16	314	P	P	12 08 28.0	-0.7
	comp=Z,85nmcomp=Z,11nm,0.9s						
BR106	Keskin Array S	94.16	314	P	P	12 08 28.0	-0.7
	comp=Z,78nmcomp=Z,12nm,0.9s						
BR105	Keskin Array S	94.17	314	P	P	12 08 28.0	-0.8
	comp=Z,85nmcomp=Z,13nm,0.8s						
EPLO	Experimental L	94.25	34	IAmb	IAmb	12 08 30.3	
	comp=Z,39nm,1.1s						
KSCO	Kaye Shedlock’	94.36	47	IAmb	IAmb	12 08 32.7	
	comp=Z,33nm,0.9s						
F33A	5 Mile Ranch,	94.96	38	IAmb	IAmb	12 08 33.8	
	comp=Z,38nm,1.0s						
SLBS	Sierra La Lagu	95.21	63	P	P	12 08 35.1	+1.3
SLBS				IAmb	IAmb	12 09 28.6	
	comp=Z,33nm,0.9s						
BURAR	Bucovina Array	95.27	324	P	P	12 08 32.0	-1.5
KWP	Kalwaria Pacla	95.44	327	P	P	12 08 33.7	-0.5
	comp=Z,19nm,1.6s						
MNTX	Cornudas Mount	95.64	54	IAmb	IAmb	12 09 29.4	
	comp=Z,18nm,0.9s						
ECSD	EROS Data Cent	95.90	40	IAmb	IAmb	12 08 39.0	
	comp=Z,21nm,1.0s						
MMAI	Mount Meron Ar	95.95	308	P	P	12 08 35.6	-1.4
	comp=Z,1.1nm,0.3s,baz=49,slow=9.0,SNR=5.6						
	comp=Z,1.1nm,0.3s						
VNDA	Vanda	96.34	176	P	P	12 08 37.4	-0.1
	comp=Z,4.0nm,0.9s,baz=329,slow=7.1,SNR=6.8						
	comp=Z,4.0nm,0.9s						
CBKS	Cedar Bluff	96.43	46	IAmb	IAmb	12 08 40.5	
	comp=Z,19nm,0.8s						
PH02	Texas Public H	96.53	49	IAmb	IAmb	12 09 33.8	
	comp=Z,30nm,1.3s						
AMTX	Amarillo	96.96	50	IAmb	IAmb	12 09 35.8	
	comp=Z,30nm,0.9s						
L34A	Svendsen Farm,	97.00	42	IAmb	IAmb	12 08 42.8	
	comp=Z,22nm,0.8s						
R32A	Long Quarter,	97.32	46	IAmb	IAmb	12 08 46.6	
	comp=Z,56nm,1.8s						
SPMN	Marine on St.	97.33	37	IAmb	IAmb	12 08 44.0	
	comp=Z,19nm,0.9s						
ODSA	Odessa	97.61	53	IAmb	IAmb	12 08 46.5	
	comp=Z,15nm,1.0s						
I37A	Lemond, Waseca	97.68	39	IAmb	IAmb	12 08 46.7	
	comp=Z,32nm,1.1s						
SMWD	Samnorwood	97.89	49	IAmb	IAmb	12 09 39.3	
	comp=Z,14nm,1.0s						
POST	Post	97.95	51	IAmb	IAmb	12 09 40.0	
	comp=Z,21nm,0.9s						
TX31	Lajitas Ar. Si	98.00	56	IAmb	IAmb	12 09 50.0	
	comp=Z,22nm,1.6s						
TXAR	Lajitas Array	98.00	56	P	Pdif	12 08 47.1	+0.8
	comp=Z,15nm,1.3s,baz=282,slow=3.2,SNR=16						
TXAR				PKiKP	PKiKP	12 13 17.8	-0.8
	comp=Z,0.9nm,0.6s,baz=279,slow=0.9,SNR=9.2						
TXAR				PKKP	PKKPdf	12 25 20.1	-0.9
	comp=Z,2.3nm,0.8s,baz=139,slow=4.1,SNR=19						
	comp=Z,15nm,1.3s						
TXAR	Lajitas Array	98.00	56	P	Pdif	12 08 47.5	+1.2
DKNS	Dickens	98.09	51	IAmb	IAmb	12 09 40.1	
	comp=Z,20nm,1.0s						
G40A	Rib Lake	98.78	36	IAmb	IAmb	12 08 51.1	
	comp=Z,18nm,0.9s						
APMT	Aspermont	98.84	51	IAmb	IAmb	12 09 45.7	
	comp=Z,52nm,1.8s						
CLL	Collm	99.03	332	*e*P	Pdif	12 08 49.0	-1.2
CLL				*e*		12 12 55.0	
CLL				*e*		12 19 05.0	
CLL	Collm	99.03	332	*e*Pdif	Pdif	12 08 49.0	-1.2
CLL				*e*PP	PP	12 12 55.0	+0.7
CLL				*e*pPP		12 13 43.0	
CLL				*e*sPP		12 14 06.0	
CLL				*e*PPPP		12 16 36.0	
CLL				*e*SKSac	SKSac	12 19 05.0	-3.6
CLL				*e*pS	pS	12 21 01.0	-6.8
CLL				*e*SP	SP	12 21 30.0	+0.7
CLL				*e*PPS	PPS	12 22 36.0	
CLL				*e*SS	SS	12 26 57.0	+3.0
CLL				*e*sSS		12 28 18.0	
CLL				*e*(SSS)		12 31 18.0	
GERES	GERESS Array B	100.44	330	P	Pdif	12 08 55.0	-1.7
	comp=Z,1.9nm,0.8s,baz=42,slow=6.1,SNR=11						
GERES				PP	PP	12 13 04.9	-0.2
	comp=Z,1.2nm,0.9s,baz=59,slow=8.0,SNR=3.7						
GERES				PKKPbc	PKKPbc	12 25 11.1	-1.9
	comp=Z,2.4nm,0.7s,baz=222,slow=1.8,SNR=11						
JCT	Junction City	100.45	53	P	Pdif	12 08 58.3	+1.2
EKA	Eskdalemuir Ar	101.77	342	P	Pdif	12 09 02.2	-0.2
	comp=Z,2.3nm,0.8s,baz=0.0,slow=2.5,SNR=3.9						
EKA				PP	PP	12 13 09.3	-5.4
	comp=Z,1.4nm,0.6s,baz=51,slow=10,SNR=5.3						
EKA				PKKPbc	PKKPbc	12 25 06.2	-3.2
	comp=Z,2.0nm,0.8s,baz=220,slow=2.2,SNR=3.6						
SCHQ	Schefferville	101.85	18	P	Pdif	12 09 03.0	+0.2
	comp=Z,4.7nm,1.0s,baz=282,slow=11,SNR=4.0						
SCHQ				PP	PP	12 13 15.9	+0.5
	comp=Z,3.6nm,0.8s,baz=315,slow=8.6,SNR=2.4						
SYO	Syowa Base	112.90	202	⇓*e*Pdiff	Pdif	12 09 53.4	+2.0
SYO	Syowa Base	112.90	202	⇓*e*pPdiff	pPdif	12 10 39.9	-1.4
ESDC	Sonseca Array	115.48	334	PKP	PKiKP	12 13 49.5	-1.2
	comp=Z,0.5nm,0.4s,baz=358,slow=2.6,SNR=3.1						
ESDC				PP	PP	12 14 54.7	+0.4
	comp=Z,4.3nm,0.9s,baz=28,slow=7.7,SNR=12						
ESDC				PKKPbc	PKKPbc	12 24 24.4	-1.3
	comp=Z,1.7nm,0.8s,baz=240,slow=3.9,SNR=5.1						
ESDC				PKKPab	PKKPab	12 24 31.7	-1.2
	comp=Z,5.8nm,0.9s,baz=219,slow=5.0,SNR=16						
ELIB	Princess Elisa	117.27	197	*d*PKPdf	PKPdf	12 13 52.8	-0.4
LSZ	Lusaka	120.28	263		PKiKP	12 14 00.7	+0.1
LSZ	Lusaka	120.28	263	PKIKP	PKiKP	12 14 00.7	+0.1
NVL	N'lazarevskaya	121.05	196	*i* PKIKP	PKPdf	12 13 58.9	-1.4
NVL				*e*		12 15 29.5	
NVL				*e*SS	SS	12 31 48.2	+0.1
NVL				*e*SSS	SSS	12 36 18.8	
NVL				pmax	pmax		
	comp=Z,14nm,1.1s						
MD01	Midelt array s	121.54	331		PKPdf	12 14 02.3	-0.4
TROLL	Troll, Antarti	122.42	193	⇑PKPdf	PKPdf	12 14 02.5	-0.6
	comp=Z,1µm,0.9s						
JTS	Las Juntas de	122.49	64		PKPdf	12 14 03.6	-1.2
JTS	Las Juntas de	122.49	64	PKIKP	PKPdf	12 14 03.6	-1.2
SNAA	Sanae	123.76	191	⇑PKPdf	PKPdf	12 14 04.3	-1.2
	comp=Z,263nm,0.6s						
SNAA	Sanae	123.76	191	PKP	PKPdf	12 14 04.5	-1.1
	comp=Z,15nm,0.9s,baz=200,slow=4.9,SNR=35						
SNAA				PP	PP	12 15 46.9	-4.1
	comp=Z,6.5nm,1.0s,baz=178,slow=7.8,SNR=3.8						
SNAA	Sanae	123.76	191		PKPdf	12 14 05.0	-0.5
SNAA	Sanae	123.76	191	PKIKP	PKPdf	12 14 05.0	-0.5
BOSA	Boshof	124.89	248	PKP	PKPdf	12 14 08.8	-0.2
	comp=Z,7.1nm,1.0s,baz=123,slow=4.0,SNR=6.4						
BOSA				PKKPbc	PKKPbc	12 23 51.8	+1.4
	comp=Z,3.0nm,0.8s,baz=298,slow=2.9,SNR=3.5						
VNA2	Neumayer--Watz	125.20	191	⇑PKPdf	PKPdf	12 14 07.8	-0.5
	comp=Z,38nm,0.7s,baz=113,slow=1.9						
VNA3	Neumayer Olymp	125.30	190	⇑PKPdf	PKPdf	12 14 07.6	-0.9
	comp=Z,25nm,0.8s						
VNA1	Neumayer--Stat	125.59	190	⇑PKPdf	PKPdf	12 14 08.4	-0.6
	comp=Z,20nm,0.9s						
TORD	Torodi Ar. Bea	132.48	309	PKP	PKPdf	12 14 20.7	-3.0
	comp=Z,1.4nm,0.3s,baz=38,slow=2.8,SNR=1.8						
TORD				SKPab	SKPbc	12 17 27.9	-3.5
	comp=Z,17nm,0.8s,baz=39,slow=4.1,SNR=7.2						
ROSC	El Rosal	134.31	63	PKP	PKPdf	12 14 27.6	-0.2
	comp=Z,24nm,0.4s,baz=62,slow=12,SNR=6.9						
COYC	Coyhaique	138.80	139		PKPdf	12 14 35.7	+1.1
DBIC	Dimbokro	141.57	308	PKhKP	PKPpre	12 14 33.6	
	comp=Z,8.7nm,0.4s,baz=75,slow=3.1,SNR=38						
DBIC				SKP	SKPdf	12 17 50.2	-5.5
	comp=Z,17nm,0.7s,baz=54,slow=3.0,SNR=7.3						
PLCA	Paso Flores	141.97	133	PKhKP	PKPpre	12 14 36.0	
	comp=Z,9.1nm,0.4s,baz=247,slow=2.8,SNR=30						
PLCA				SKPbc	SKPbc	12 17 57.6	-1.1
	comp=Z,7.7nm,0.9s,baz=313,slow=4.6,SNR=3.4						
HOPE	Hope Point	144.29	178		PKPab	12 14 42.3	-0.3
HOPE	Hope Point	144.29	178	PKIKP	PKPab	12 14 42.3	-0.3
LCO	Las Campanas	145.31	114		PKPab	12 14 47.9	+0.2
LCO	Las Campanas	145.31	114	PKP2	PKPab	12 14 47.9	+0.2
BOAV	Boa Vista	146.93	54	PKPdf	PKPdf	12 14 49.1	-0.7
LPAZ	La Paz	147.76	91	PKP	PKPdf	12 14 52.5	+0.6
	comp=Z,175nm,0.9s,baz=322,slow=1.9,SNR=93						
LPAZ				PKPbc	PKiKP	12 14 56.0	-0.8
	comp=Z,175nm,0.9s,baz=15,slow=6.6,SNR=95						
TRQA	Tornquist	149.08	135		PKPdf	12 14 52.0	-0.8
TRQA				PKPbc	PKPbc	12 14 57.2	+0.1
TRQA				PKPab	PKPab	12 15 03.1	+1.1
TRQA	Tornquist	149.08	135	PKHKP	PKPdf	12 14 52.0	-0.8
CPUP	Villa Florida	157.46	114	PKP	PKPdf	12 15 04.8	-0.3
	comp=Z,2.7nm,0.9s,baz=350,slow=2.5,SNR=13						
CPUP				PKPab	PKPab	12 15 38.9	+1.1
	comp=Z,17nm,0.9s,baz=267,slow=5.4,SNR=41						
BDFB	Brasilia	166.67	80	PKP	PKPdf	12 15 14.8	+0.1
	comp=Z,18nm,1.0s,baz=209,slow=0.6,SNR=15						
BDFB				PKPab	PKPab	12 16 20.0	+1.4
	comp=Z,9.6nm,0.5s,baz=291,slow=5.3,SNR=7.6						

JMA 19 11:57:35.8±0.1**,36°.9N**±0°.3×**141°.2E**±0°.6**,h50^{km},MV1.1**/25**,**
E OFF FUKUSHIMA PREF,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	0.36	302	P	Pn	11 57 45.5	-0.1
ONAJ				*e*S	Sn	11 57 52.5	-0.1
JFK	Kawauchi	0.52	332	P	Pn	11 57 47.1	-0.2
JFK				S	Sn	11 57 55.3	-0.3
JFFD	Fukushimafurud	0.53	290	P	Pn	11 57 47.4	0.0
JFFD				*e*S	Sn	11 57 55.6	-0.2
JMM	Marumori	1.01	342	*e*P	Pn	11 57 53.8	+0.3

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*IDC **19** 12:07:53.3±0.6, 32°.44N×87°.08E, h0^{km}, mb4.4/22, mbtmp4.4/25, ML3.9/3, MS3.9/9, Error ellipse: s-maj=18.7km s-min=12.3km az=41.0*

*NEIC **19** 12:07:55.5±2.2, 32°.47N±0°.06×86°.95E±0°.06, h10^{km}±1^{km}, mb4.9/116, Error ellipse: s-maj=11.2km s-min=8.2km az=160.0*

*MOS **19** 12:07:55.4±1.2, 32°.62N×87°.11E, h21^{km}, mb5.0/32, MS4.3/6, Error ellipse: s-maj=8.0km s-min=3.6km az=116.7*

*BJI **19** 12:07:56.0, 32°.48N×87°.23E, h10^{km}, mB5.1/16, mb4.5/48, Ms4.7/37, Ms7 4.5/35*

*GCMT **19** 12:07:58.5±0.4, 32°.50N±0°.03×87°.15E±0°.03, h28^{km}±1^{km}, MW5.0/64, Moment Tensor Solution. s15,c17; s64,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.00±.37; M$_{\theta\theta}$-1.08±.21; M$_{\phi\phi}$4.08±.22; M$_{r\theta}$1.30±.42; M$_{\theta\phi}$0.10±.15; M$_{\phi r}$0.42±.28; Best double couple: M$_{0}$3.89100×10^{16} NP1:φ$_{s}$337.00000°,δ47.00000°,λ-127.00000°. NP2: φ$_{s}$205.00000°,δ54.00000°,λ-57.00000°. Principal axes: T 4.1110, Plg4.0000°, Azm272.0000°; N -0.4410, Plg26.0000°, Azm4.0000°; P -3.6700, Plg63.0000°, Azm174.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NDI **19** 12:08:26.5±0.6, 32°.50N×86°.94E, h10^{km}, ML4.6, MW4.5, mb4.9(NEIC)*

ISC 19 12:07:55.0±0.4**,32°.45N**±0°.05×**86°.98E**±0°.04**,h10^{km},n491,**
σ1^{s}.24/459**,mb4.8**/127**,MS4.3**/19**,17C-6D,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
LSA	Lhasa	4.51	126		Pn	12 09 07.2	+3.4
LSA	Lhasa	4.51	126	Pn	Pn	12 09 08.8	+5.0
LSA				Sn	Sb	12 10 09.4	+0.3
LSA				smax	smax		
	comp=N,84nm,1.2s						
LSA				smax	smax		
	comp=E,99nm,1.3s						
LSA	Lhasa	4.51	126	P	Pn	12 09 07.2	+3.4
SHL	Shillong	8.09	147		Pn	12 09 54.8	+2.1
SHL	Shillong	8.09	147	P	Pn	12 09 54.8	+2.1
MORE	Moreh	10.41	140	Pn	Pn	12 10 25.8	+1.3
WUS	Wushi	10.72	327		Pn	12 10 28.4	-0.3
KSH	Kashi	11.36	311	P	Pn	12 10 42.3	+4.8
KSH				S	Sn	12 13 01.6	+17
KSH				pmax	pmax		
	comp=E,5.0nm,0.9s						
KSH				pmax	pmax		
	comp=E,310nm,4.8s						
KSH				LR	LR		
	comp=E,1µm,12.4s						
KSH				LR	LR		
	comp=E,2µm,11.7s						
KSH				LR	LR		
	comp=E,2µm,8.9s						
WMQ	Urumqi	11.37	3	*e*P	Pn	12 10 40.3	+2.8
WMQ				sP		12 10 47.4	
WMQ				PP	PnPn	12 10 50.8	+5.4
WMQ				pmax	pmax		
	comp=E,12nm,0.9s						
WMQ				LR	LR		
	comp=E,2µm,10.5s						
WMQ				LR	LR		
	comp=E,620nm,9.1s						
WMQ				LR	LR		
	comp=E,620nm,14.3s						
NIL	Nilore	11.58	280		Pn	12 10 41.4	+1.0
NIL	Nilore	11.58	280	P	Pn	12 10 41.4	+1.0
TARG	Taragay, Kyrgy	11.80	324		Pn	12 10 44.5	+0.8
TARG	Taragay, Kyrgy	11.80	324	P	Pn	12 10 44.5	+0.8
PRZ	Przheval'sk	12.11	328		Pn	12 10 49.0	+1.3
PRZ	Przheval'sk	12.11	328	P	Pn	12 10 49.0	+1.3
SHLS	Shalkode	12.22	333	*e*P	Pn	12 10 47.1	-2.2
SHLS	Shalkode	12.22	333	*e*P	Pn	12 10 47.0	-2.2
UZB	Uzynbulak	12.39	332	*e*P	Pn	12 10 51.6	+0.1
UZB				*e*S	Sn	12 13 10.2	+0.5
UZB	Uzynbulak	12.39	332	*e*P	Pn	12 10 51.6	+0.1
UZB				*e*S	Sn	12 13 10.2	+0.5
KDJ	Kajisay	12.41	324		Pn	12 10 52.8	+0.9
KDJ	Kajisay	12.41	324	P	Pn	12 10 52.8	+0.9
SATY	Saty	12.57	330	*e*P	Pn	12 10 54.1	+0.1

SATY				*e*S	**Sn**	**12 13 14.9**	**+0.8**
SATY	**Saty**	**12.57**	**330**	*e*P	**Pn**	**12 10 54.1**	**+0.1**
SATY				*e*S	**Sn**	**12 13 14.9**	**+0.8**
TNSS	**Tian-Shan**	**13.21**	**326**	*e*P	**Pn**	**12 11 03.1**	**+0.2**
TNSS	**Tian-Shan**	**13.21**	**326**	*e*P	**Pn**	**12 11 03.1**	**+0.2**
MDOK	**Medeo**	**13.26**	**327**	*e*P	**Pn**	**12 11 03.8**	**+0.4**
MDOK	**Medeo**	**13.26**	**327**	*e*P	**Pn**	**12 11 03.8**	**+0.4**
BOOM	**Boomskoye usch**	**13.30**	**322**		**Pn**	**12 11 05.1**	**+1.1**
BOOM	**Boomskoye usch**	**13.30**	**322**	P	**Pn**	**12 11 05.1**	**+1.1**
AAA	**Alma-Ata**	**13.35**	**326**	*e*P	**Pn**	**12 11 05.2**	**+0.5**
AAA	**Alma-Ata**	**13.35**	**326**	*e*P	**Pn**	**12 11 05.1**	**+0.5**
MANEM	**Manem**	**13.53**	**296**		**Pn**	**12 11 07.6**	**+0.4**
DRK	**Karamyk**	**14.14**	**304**	Pn	**Pn**	**12 11 15.9**	**+0.2**
DRK	**Karamyk**	**14.14**	**304**	P	**Pn**	**12 11 15.9**	**+0.2**
AAK	**Ala-Archa**	**14.18**	**319**	Pn	**P**	**12 11 20.8**	**-2.7**
	comp=E,0.1nm,0.3s,baz=153,slow=13,SNR=5.5						
AAK				LR	LR	12 16 55.6	
	comp=E,390nm,19.4s,baz=173,slow=38						
AAK	**Ala-Archa**	**14.18**	**319**		**Pn**	**12 11 16.8**	**+0.8**
AAK	**Ala-Archa**	**14.18**	**319**	*i* P	**Pn**	**12 11 16.8**	**+0.8**
TDK	**Taldyqorghan**	**14.20**	**334**	*e*P	**Pn**	**12 11 15.8**	**-0.3**
	comp=E,16nm,0.5s						
TDK	**Taldyqorghan**	**14.20**	**334**	*e*P	**Pn**	**12 11 15.8**	**-0.3**
TDK				pmax	pmax		
	comp=Z,16nm,0.5s						
LZDM	**Lanzhou Array**	**14.27**	**71**	Pn	**Pn**	**12 11 19.4**	**+2.0**
	baz=230,slow=9.0						
LZH	**Lanzhou**	**14.41**	**71**	*e*P	**Pn**	**12 11 19.3**	**+0.1**
LZH				sP	P	12 11 27.6	+1.4
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
MK31	**Makanchi Array**	**14.77**	**347**	*i* P	**Pn**	**12 11 21.9**	**-2.0**
MKAR	**Makanchi Array**	**14.77**	**347**	Pn	**Pn**	**12 11 23.5**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=149,slow=14,SNR=3.9						
	comp=Z,4.0nm,0.9s						
MKAR	**Makanchi Array**	**14.77**	**347**		**Pn**	**12 11 22.4**	**-1.6**
MAKZ	**Makanchi**	**14.84**	**346**		**Pn**	**12 11 23.9**	**-1.0**
MAKZ	**Makanchi**	**14.84**	**346**	P	**Pn**	**12 11 23.9**	**-1.0**
GAR	**Garm**	**15.02**	**300**		**Pn**	**12 11 27.9**	**+0.5**
ZSN	**Zaisan**	**15.07**	**354**	*e*P	**Pn**	**12 11 26.8**	**-1.1**
	comp=Z,22nm,1.0s						
ZSN	**Zaisan**	**15.07**	**354**	*e*P	**Pn**	**12 11 26.8**	**-1.1**
ZSN				pmax	pmax		
	comp=Z,22nm,1.0s						
KBL	**Kabul**	**15.11**	**283**		**Pn**	**12 11 25.4**	**-3.4**
KBL	**Kabul**	**15.11**	**283**	P	**Pn**	**12 11 25.4**	**-3.4**
KBL				pmax	pmax		
	comp=Z,31nm,1.0s						
KMI	**Kunming**	**15.62**	**114**	P	**Pn**	**12 11 34.8**	**-0.7**
KMI				pmax	pmax		
	comp=Z,16nm,1.0s						
KMI				LR	LR		
	comp=Z,1μm,13.4s						
KMI				LR	LR		
	comp=Z,730nm,12.3s						
KMI				LR	LR		
	comp=Z,880nm,8.0s						
CHGR	**Chuyangaron**	**15.76**	**298**	Pn	**Pn**	**12 11 37.0**	**-0.2**
CHGR	**Chuyangaron**	**15.76**	**298**	P	**Pn**	**12 11 37.0**	**-0.2**
CHGR				pmax	pmax		
	comp=Z,31nm,1.0s						
IUG	**Iuzhnay**	**16.57**	**311**	*e*P	**P**	**12 11 49.0**	**-1.2**
IUG	**Iuzhnay**	**16.57**	**311**	*e*P	**P**	**12 11 48.9**	**-1.2**
KK31	**Karatay Array**	**16.78**	**314**		**Pn**	**12 11 50.9**	**+0.8**
KK31	**Karatay Array**	**16.78**	**314**	P	**Pn**	**12 11 50.9**	**+0.8**
KK31				pmax	pmax		
	comp=Z,28nm,1.4s						
KKAR	**Karatay Array**	**16.78**	**314**		**P**	**12 11 51.4**	**-0.9**
KKAR	**Karatay Array**	**16.78**	**314**	P	**P**	**12 11 51.4**	**-0.9**
HYB	**Hyderabad**	**16.79**	**209**	*e*P	**P**	**12 11 52.8**	**+0.2**
DGZ	**Jazzator, Alta**	**17.24**	**1**	*i* P	**Pn**	**12 11 54.0**	**-1.9**
CHTO	**Chiang Mai**	**17.32**	**139**		**P**	**12 11 58.8**	**+0.4**
CHTO	**Chiang Mai**	**17.32**	**139**	P	**P**	**12 11 58.8**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,88nm,2.0s						
CM31	**Chiang Mai Arr**	**17.61**	**139**	P	**Pn**	**12 12 01.3**	**+0.7**
CMAR	**Chiang Mai Arr**	**17.61**	**139**	P	**Pn**	**12 11 59.5**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=326,slow=14,SNR=14						
	comp=Z,2.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**17.61**	**139**	P	**Pn**	**12 12 00.8**	**+0.2**
CMAR	**Chiang Mai Arr**	**17.61**	**139**	P	**Pn**	**12 12 00.8**	**+0.2**
GYA	**Guiyang**	**18.14**	**104**	P	**Pn**	**12 12 06.0**	**-1.3**
GYA				pmax	pmax		
	comp=Z,19nm,0.8s						
XAN	**Xi'an**	**18.42**	**79**	⇓P	**P**	**12 12 10.3**	**-0.2**
XAN				pP	sP	12 12 18.3	+1.5
XAN				pmax	pmax		
	comp=Z,14nm,1.3s						
KURBB	**Kurchatov Arra**	**19.20**	**343**	P	**P**	**12 12 19.2**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=160,slow=10,SNR=40						
KURBB				PcP	**PcP**	**12 16 41.9**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=161,slow=1.4,SNR=4.0						
KURBB				LR	LR	12 20 59.2	
	comp=Z,607nm,19.6s,baz=161,slow=41						
	comp=Z,32nm,0.9s						
KURK	**Kurchatov**	**19.27**	**344**		**PcP**	**12 16 41.9**	**-0.3**
KURK	**Kurchatov**	**19.27**	**344**		**P**	**12 12 18.5**	**-1.1**
KURK	**Kurchatov**	**19.27**	**344**	*i* P	**P**	**12 12 17.3**	**-2.3**
ENH	**Enshi**	**19.34**	**90**	P	**P**	**12 12 21.5**	**+0.8**
KNGR	**Kungurtug, Tuv**	**19.75**	**20**	P	**P**	**12 12 23.8**	**-1.2**
KNGR				pmax	pmax		
	comp=Z,30nm,1.1s						
BTO	**Baotou**	**20.19**	**60**	*e*P	Pn	12 12 31.9	+0.1
BTO				pP	sP	12 12 36.0	-0.2
BTO				sP	pP	12 12 38.9	+4.7
BTO				PP	**PnPn**	**12 12 51.0**	**+4.7**
BTO				S	**S**	**12 16 12.0**	**-4.5**
BTO				sS	Sn	12 16 15.3	-3.8
BTO				SS	**SnSn**	**12 16 40.5**	**+7.0**
BTO				pmax	pmax		
	comp=Z,15nm,0.9s						
BTO				pmax	pmax		
	comp=Z,610nm,9.3s						
BTO				LR	LR		
	comp=Z,2μm,13.1s						
BTO				LR	LR		
	comp=Z,1μm,12.6s						
BTO				LR	LR		
	comp=Z,2μm,14.4s						
HRA	**Herat**	**20.73**	**282**		Pn	12 12 38.1	-0.1
SONM	**Songino Array**	**21.28**	**38**	P	**P**	**12 12 42.0**	**+0.4**
	comp=Z,9.6nm,1.0s,baz=233,slow=12,SNR=22						
	comp=Z,9.6nm,1.0s						
SONM	**Songino Array**	**21.28**	**38**	P	**P**	**12 12 41.8**	**+0.2**
SONM	**Songino Array**	**21.28**	**38**	P	**P**	**12 12 42.0**	**+0.4**
LYN	**LuoYang**	**21.35**	**77**	*e*P	**P**	**12 12 45.1**	**+2.8**
LYN				pP	sP	12 12 49.3	+0.7
LYN				pmax	pmax		
	comp=Z,32nm,1.1s						
LYN				pmax	pmax		
	comp=Z,680nm,7.3s						
LYN				LR	LR		
	comp=Z,630nm,8.6s						
LYN				LR	LR		
	comp=Z,2μm,10.0s						
LYN				LR	LR		
	comp=Z,3μm,13.4s						
HHC	**Hu-ho-hao-te**	**21.38**	**60**	*e*P	**P**	**12 12 42.4**	**-0.4**
HHC				sP	pP	12 12 48.5	+1.3
HHC				pmax	pmax		
	comp=Z,17nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,6.6s						
TIY	**Taiyuan**	**21.46**	**69**	*e*P	**P**	**12 12 45.9**	**+2.3**
TIY				S	**S**	**12 16 37.9**	**-3.7**
TIY				pmax	pmax		
	comp=Z,31nm,0.5s						
TIY				pmax	pmax		
	comp=Z,350nm,9.6s						
TIY				LR	LR		
	comp=Z,710nm,9.6s						
TIY				LR	LR		
	comp=Z,930nm,10.0s						
TIY				LR	LR		
	comp=Z,1μm,10.8s						
ZAA0	**Zalesovo Array**	**21.55**	**357**	P	**P**	**12 12 43.9**	**-0.4**
ZALV	**Zalesovo Beam**	**21.55**	**357**	P	**P**	**12 12 44.1**	**-0.2**
	comp=Z,11nm,0.9s,baz=172,slow=11,SNR=11						
ZALV				LR	LR	12 21 39.9	
	comp=Z,95nm,18.4s,baz=150,slow=38						
	comp=Z,11nm,0.9s						
ZALV	**Zalesovo Beam**	**21.55**	**357**	P	**P**	**12 12 43.1**	**-1.2**
ZAK	**Zakamensk**	**21.61**	**29**	*e*P	**P**	**12 12 44.0**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,45nm,1.5s						
ULN	**Ulaanbaatar**	**21.64**	**39**		**P**	**12 12 45.1**	**-0.5**
ULN	**Ulaanbaatar**	**21.64**	**39**	*i* P	**P**	**12 12 43.7**	**-1.9**
ULN				pmax	pmax		
	comp=Z,26nm,1.0s						
GULI	**GuiLin**	**21.66**	**103**	P	**P**	**12 12 45.6**	**-0.2**
GULI				pmax	pmax		
	comp=Z,18nm,1.1s						
MOY	**Mondy**	**21.77**	**24**	*e*P	**P**	**12 12 47.9**	**+1.0**
MOY				pmax	pmax		
	comp=Z,68nm,2.0s						
TLY	**Talaya**	**22.76**	**27**	P	**P**	**12 12 55.8**	**-1.5**
TLY	**Talaya**	**22.76**	**27**	*i* P	**P**	**12 12 53.5**	**-3.8**
TLY				pmax	pmax		
	comp=Z,24nm,1.5s						
HNS	**HongShan**	**23.23**	**70**	⇑P	**P**	**12 13 03.3**	**+1.0**
HNS				pmax	pmax		
	comp=Z,25nm,1.1s						
HNS				LR	LR		
	comp=Z,580nm,9.2s						
HNS				LR	LR		
	comp=Z,2μm,10.4s						
HNS				LR	LR		
	comp=Z,2μm,10.4s						
IRK	**Irkutsk**	**23.44**	**27**	*e*P	**P**	**12 13 03.3**	**-1.0**
IRK				pmax	pmax		
	comp=Z,62nm,2.0s						
BVAR	**Borovoye Array**	**23.79**	**335**	P	**P**	**12 13 08.5**	**+0.7**
	comp=Z,7.2nm,0.9s,baz=148,slow=8.7,SNR=8.5						
BVAR				PcP	**PcP**	**12 16 51.6**	**+0.6**
	comp=Z,2.4nm,0.9s,baz=153,slow=1.0,SNR=3.6						
	comp=Z,7.2nm,0.9s						
BORK	**Borovoye**	**23.84**	**335**	P	**P**	**12 13 08.9**	**+0.8**
BORK	**Borovoye**	**23.84**	**335**	*i* P	**P**	**12 13 08.0**	**-0.1**
BORK				pmax	pmax		
	comp=Z,22nm,1.1s						
QIZ	**Qiongzhong**	**24.48**	**118**	P	**P**	**12 13 13.6**	**-0.9**
QIZ				S	**S**	**12 17 35.3**	**+0.5**
QIZ				LR	LR		
	comp=Z,410nm,13.7s						
QIZ				LR	LR		
	comp=Z,440nm,13.3s						
QIZ				LR	LR		
	comp=Z,650nm,9.7s						
TIA	**Tai'an**	**25.13**	**73**	P	**P**	**12 13 21.0**	**+0.8**
TIA				sP	**sP**	**12 13 26.4**	**-0.3**
TIA				pmax	pmax		
	comp=Z,14nm,1.0s						
XLT	**XiLinHaoTe**	**25.45**	**55**	*e*P	**P**	**12 13 22.8**	**-0.3**
XLT				pP	pP	12 13 27.1	-0.6
XLT				sP	sP	12 13 30.8	+1.2
XLT				SS	**SnSn**	**12 18 46.8**	**+4.6**
XLT				LR	LR		
	comp=Z,87nm,12.6s						
XLT				LR	LR		
	comp=Z,490nm,12.6s						
XLT				LR	LR		
	comp=Z,490nm,12.5s						
PALK	**Pallekele**	**25.72**	**194**	LR	LR	12 23 35.6	
	comp=Z,224nm,19.7s,baz=62,slow=37						
AB31	**Akbulak array**	**26.25**	**318**	P	**P**	**12 13 31.1**	**+0.9**
ABKAR	**Akbulak array**	**26.25**	**318**	P	**P**	**12 13 31.4**	**+1.2**
NJ2	**Nanjing**	**26.91**	**82**	*e*P	**P**	**12 13 36.1**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
SVE	**Sverdlovsk**	**30.39**	**331**	*e*P	**P**	**12 14 08.2**	**+1.2**
SVE				pmax	pmax		
	comp=Z,43nm,1.1s						
ARTI	**Arti**	**31.06**	**329***c*	*i*P	**P**	**12 14 12.8**	**-0.1**
ARTI						12 15 09.6	
ARTI				S	**S**	**12 19 18.9**	**+1.0**
ARTI				SS	**ScP**	**12 20 53.5**	**+2.2**
ARTI				pmax	pmax		
	comp=Z,18nm,1.0s						
CN2	**Changchun**	**32.05**	**58**	*e*P	**P**	**12 14 21.4**	**-0.4**
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
AKT	**Akhty**	**32.40**	**297**	*e*P	**P**	**12 14 24.5**	**-0.6**
AKT				pmax	pmax		
	comp=Z,20nm,1.0s						
AKT				MLR	MLR		
	comp=Z,143nm,8.0s						
MAK	**Makhachkala**	**32.68**	**300**	*e*P	P	12 14 20.8	-6.5
MAK				pmax	pmax		
	comp=Z,42nm,0.4s						
MAK				MLR	MLR		
	comp=Z,836nm,14.0s						
BNX	**BinXian**	**33.70**	**55**	⇑P	**P**	**12 14 36.3**	**0.0**
BNX				pmax	pmax		
	comp=Z,12nm,1.2s						
KSRS	**Korea Array**	**33.74**	**70**	P	**P**	**12 14 36.5**	**-0.1**
	comp=Z,2.0nm,0.8s,baz=275,slow=9.5,SNR=4.4						
	comp=Z,2.0nm,0.8s						
BELG	**Belogornoye**	**34.65**	**317**	*i* P	**P**	**12 14 44.0**	**-0.4**
BELG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HEH	**HeiHe**	**34.66**	**47**	*e*P	**P**	**12 14 41.9**	**-2.6**
HEH				pmax	pmax		
	comp=Z,6.0nm,1.2s						
HEH				LR	LR		
	comp=N,290nm,11.4s						
HEH				LR	LR		
	comp=E,970nm,10.6s						
HEH				LR	LR		
	comp=Z,1μm,12.4s						
ZEA	**Zeya**	**35.63**	**41**	*e*P	**P**	**12 14 53.4**	**+0.6**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA				MLR	MLR		
	comp=Z,500nm,9.0s						
KIV	**Kislovodsk**	**36.25**	**301**	*e*P	**P**	**12 15 00.8**	**+2.4**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,61nm,16.0s						
KIRV	**Kirov**	**36.30**	**327**	*i* P	**P**	**12 14 58.0**	**-0.5**
USRK	**Ussuriysk Ar.**	**36.78**	**58**	P	**P**	**12 15 01.1**	**-1.8**
	comp=Z,8.4nm,1.0s,baz=266,slow=9.2,SNR=9.1						
	comp=Z,8.4nm,1.0s						
NRIK	**Noril'sk**	**36.94**	**0**	P	**P**	**12 15 03.2**	**-0.6**
	comp=Z,13nm,0.8s,baz=175,slow=17,SNR=4.4						
	comp=Z,13nm,0.8s						
NRIK	**Noril'sk**	**36.94**	**0**	IAmb	IAmb	12 15 04.8	
	comp=Z,18nm,0.9s						
NRIK	**Noril'sk**	**36.94**	**0**	*i* P	**P**	**12 15 00.5**	**-3.3**
NRIK				pmax	pmax		
	comp=Z,22nm,0.9s						
YAK	**Yakutsk**	**40.20**	**30**	*i* P	**P**	**12 15 28.5**	**-2.7**
YAK				pmax	pmax		
	comp=Z,16nm,1.0s						
GRNR	**Gornyy**	**40.40**	**48**	⇓*i*P	**P**	**12 15 32.6**	**-0.5**
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GRNR				MLR	MLR		
	comp=N,200nm,13.0s						
GRNR				MLR	MLR		
	comp=Z,530nm,13.0s						
MOS	**Moscow**	**41.25**	**319**	*e*P	**P**	**12 15 40.6**	**+0.6**
MOS				pmax	pmax		
	comp=Z,63nm,1.1s						
OBN	**Obninsk**	**41.70**	**318**	⇓*e*P	**P**	**12 15 43.2**	**-0.5**
OBN				e*SP	**sP**	**12 15 50.6**	**+0.3**
OBN						12 17 41.0	
OBN				S	**S**	**12 22 07.0**	**+6.7**
OBN				SSS	SSS	12 25 49.0	
OBN				pmax	pmax		
	comp=Z,16nm,0.5s						
OBN				MLR	MLR		
	comp=Z,136nm,17.0s						
KLMR	**Klimovskoe**	**41.80**	**327**	*e*P	**P**	**12 15 42.9**	**-1.6**
KLMR				*e*		12 17 20.5	
KLMR				pmax	pmax		
	comp=Z,34nm,1.2s						
MJAR	**Matsushiro Arr**	**42.02**	**70**	P	**P**	**12 15 45.9**	**-0.8**
	comp=Z,7.0nm,1.0s,baz=285,slow=9.0,SNR=9.3						
MJAR				LR	LR	12 34 21.0	
	comp=Z,196nm,19.7s,baz=220,slow=38						
	comp=Z,7.0nm,1.0s						
MJAR	**Matsushiro Arr**	**42.02**	**70**		**P**	**12 15 46.3**	**-0.3**
MJAR	**Matsushiro Arr**	**42.02**	**70**	P	**P**	**12 15 46.3**	**-0.3**
MJAR				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BALJ	**Balqa**	**43.06**	**284**	IAmb	IAmb	12 15 58.2	
	comp=Z,18nm,0.8s						
BR131	**Keskin Array S**	**43.18**	**295**	*i* P	**P**	**12 15 56.8**	**+0.6**
BRTR	**Keskin Array B**	**43.18**	**295**	P	**P**	**12 15 57.6**	**+1.5**
	comp=Z,1.9nm,1.0s,baz=93,slow=6.2,SNR=4.2						
BRTR				LR	LR	12 37 50.3	
	comp=Z,167nm,20.6s,baz=54,slow=42						
	comp=Z,1.9nm,1.0s						
BR106	**Keskin Array S**	**43.19**	**295**	P	**P**	**12 15 57.4**	**+1.1**
	comp=Z,3.0nm,1.0s						
EIL	**Elat**	**44.30**	**281**	LR	LR	12 37 33.3	
	comp=Z,356nm,20.5s,baz=225,slow=40						
ASAJ	**Asahikawa**	**44.41**	**58**	LR	LR	12 34 34.5	
	comp=Z,183nm,20.2s,baz=300,slow=36						
TOLI2	**Tolitoli**	**44.54**	**128**	P	**P**	**12 16 07.0**	**-0.2**
TOLI2				IAmb	IAmb	12 16 15.0	
	comp=Z,14nm,1.0s						
TIXI	**Tiksi**	**45.10**	**17**	P	**P**	**12 16 10.3**	**-0.6**
TIXI				IAmb	IAmb	12 16 12.9	
	comp=Z,31nm,1.4s						
TIXI	**Tiksi**	**45.10**	**17**	*i* P	**P**	**12 16 08.4**	**-2.5**
TIXI				pmax	pmax		
	comp=Z,47nm,2.1s						
AK09	**Malin Array Si**	**45.62**	**311**	P	**P**	**12 16 16.2**	**+0.9**
AK08	**Malin Array Si**	**45.63**	**311**	P	**P**	**12 16 16.3**	**+0.8**
AK10	**Malin Array Si**	**45.64**	**311**	P	**P**	**12 16 16.4**	**+0.9**
AKASG	**Malin Array Be**	**45.66**	**311**	P	**P**	**12 16 16.6**	**+0.9**
	comp=Z,7.9nm,0.8s,baz=83,slow=7.4,SNR=19						
	comp=Z,7.9nm,0.8s						
AKASG	**Malin Array Be**	**45.66**	**311**	IAmb	IAmb	12 16 22.9	
	comp=Z,5.5nm,1.1s						
AKASG	**Malin Array Be**	**45.66**	**311**	*i* P	**P**	**12 16 16.3**	**+0.7**
AKASG				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AKBB	**Malin Array Si**	**45.66**	**311**		**P**	**12 16 15.4**	**-0.2**
AKBB				IAmb	IAmb	12 16 17.9	
	comp=Z,19nm,1.1s						
AKBB	**Malin Array Si**	**45.66**	**311**	*i* P	**P**	**12 16 15.5**	**-0.1**
AKBB				pmax	pmax		
	comp=Z,21nm,1.0s						
AKBB	**Malin Array Si**	**45.66**	**311**	P	**P**	**12 16 16.5**	**+0.9**
AK03	**Malin Array Si**	**45.66**	**311**	P	**P**	**12 16 16.5**	**+0.9**
AK01	**Malin Array Si**	**45.66**	**311**	P	**P**	**12 16 16.6**	**+0.9**
KIEV	**Kiev**	**45.66**	**311**	P	**P**	**12 16 16.1**	**+0.4**
KIEV				IAmb	IAmb	12 16 17.9	
	comp=Z,16nm,1.0s						
KIEV	**Kiev**	**45.66**	**311**	⇑P	**P**	**12 16 16.8**	**+1.1**
KIEV	**Kiev**	**45.66**	**311**	⇑P	**P**	**12 16 16.8**	**+1.1**
KIEV	**Kiev**	**45.66**	**311**	P	**P**	**12 16 16.5**	**+0.8**
	comp=Z,77nm,1.5s						
AK02	**Malin Array Si**	**45.67**	**311**	P	**P**	**12 16 16.6**	**+0.9**
TPGR	**Topolog**	**46.45**	**303**	⇓P	**P**	**12 16 24.5**	**+2.6**
LUBAR	**Lubar, Ukraine**	**46.60**	**310**	P	**P**	**12 16 23.3**	**+0.2**
MNK	**Minsk**	**46.60**	**316**	*i* P	**P**	**12 16 23.4**	**+0.3**
	comp=E,27nm,0.9s						
MNK				*i* P	**P**	**12 16 23.4**	**+0.3**
	comp=N,52nm,1.1s						
MNK				*i* P	**P**	**12 16 23.4**	**+0.3**
	comp=Z,33nm,1.0s,baz=93						
MNK				*i* PP	**PP**	**12 18 13.6**	**+1.2**
MNK				*i* PPP	PPP	12 18 55.8	
MNK				*i* S	**S**	**12 23 13.6**	**+1.8**
MNK				*i* SS	ScS	12 25 54.2	-24
MNK				*i* SSS	SSS	12 28 10.4	
MNK				*i* LQ	LQ	12 31 25.8	
MNK				*i* LRM	MLR	12 38 02.9	
	comp=E,312nm,17.8s						
MNK				*i* LRM	MLR	12 38 02.9	
	comp=N,132nm,15.6s						
MNK				*i* LRM	MLR	12 38 02.9	
	comp=Z,241nm,16.3s						
MNK	**Minsk**	**46.60**	**316**	*i* P	**P**	**12 16 23.3**	**+0.3**
MNK				*i*		12 18 13.5	
MNK				*i* PPP	PPP	12 18 55.7	
MNK				*i* S	**S**	**12 23 13.6**	**+1.8**
MNK				pmax	pmax		
	comp=Z,33nm,1.0s						
MNK				pmax	pmax		
	comp=N,52nm,1.1s						
MNK				pmax	pmax		
	comp=E,27nm,0.9s						
MNK				MLR	MLR		
	comp=Z,241nm,16.0s						
MNK				MLR	MLR		
	comp=N,132nm,16.0s						
MNK				MLR	MLR		
	comp=E,312nm,18.0s						
CFR	**Carcaliu**	**46.62**	**304**	⇑P	**P**	**12 16 24.6**	**+1.4**
CFR	**Carcaliu**	**46.62**	**304**	⇑P	**P**	**12 16 24.7**	**+1.4**
MI28	**Mi28,Pidlybu**	**46.64**	**312**	P	**P**	**12 16 23.4**	**0.0**
NACGM	**Naroch**	**47.26**	**317**	*e*P	**P**	**12 16 29.7**	**+1.5**
	comp=Z,34nm,1.0s,baz=92						
HORU	**Horodok**	**47.49**	**309**	P	**P**	**12 16 30.9**	**+0.8**
KMPD	**K-Podol'skiy**	**47.50**	**308**	P	**P**	**12 16 30.9**	**+0.8**
KMPD				P	**P**	**12 16 30.5**	**+0.4**
VRI	**Vrincioaia**	**47.53**	**305**	⇑P	**P**	**12 16 33.2**	**+2.7**
VRI	**Vrincioaia**	**47.53**	**305**	⇑P	**P**	**12 16 33.2**	**+2.7**
PLOR	**Plostina**	**47.59**	**305**	⇑P	**P**	**12 16 33.8**	**+2.9**
PLOR	**Plostina**	**47.59**	**305**	⇑P	**P**	**12 16 33.8**	**+2.9**
RNPP9	**Sopachiv**	**47.76**	**312**	P	**P**	**12 16 33.1**	**+1.0**
RNPP5	**Staryi Chortor**	**47.76**	**312**	P	**P**	**12 16 32.9**	**+0.8**
JCJ	**Chichijima**	**47.78**	**81**	LR	LR	12 37 28.2	
	comp=Z,69nm,18.8s,baz=330,slow=37						
MLR	**Muntele Rosu**	**48.12**	**304**	⇑P	**P**	**12 16 38.1**	**+2.9**
MLR	**Muntele Rosu**	**48.12**	**304**	P	**P**	**12 16 37.9**	**+2.7**
MLR				pmax	pmax		
	comp=Z,42nm,1.2s						
OZUR		**48.16**	**305**	⇓P	**P**	**12 16 38.1**	**+2.7**
FINES	**FINESS Array B**	**48.25**	**326**	P	**P**	**12 16 35.4**	**-0.3**
	comp=Z,5.9nm,0.9s,baz=96,slow=7.2,SNR=4.6						
	comp=Z,5.9nm,0.9s						
KSV	**Kosov**	**48.45**	**308**	P	**P**	**12 16 38.0**	**+0.5**
STNU	**Starunia**	**48.79**	**309**	P	**P**	**12 16 41.2**	**+1.1**
PABE	**Paberze**	**48.90**	**318**	P	**P**	**12 16 41.4**	**+0.6**
KWP	**Kalwaria Pacla**	**49.88**	**310**	P	**P**	**12 16 49.5**	**+1.0**
	comp=Z,20nm,1.2s						
MARR	**Marisel-Cluj**	**49.93**	**306**	⇑P	**P**	**12 16 51.4**	**+2.4**
BERU	**Beregovo**	**50.06**	**308**	P	**P**	**12 16 50.9**	**+1.1**
ARCES	**ARCESS Array B**	**50.07**	**336**	P	**P**	**12 16 50.3**	**+0.7**
	comp=Z,5.9nm,0.9s,baz=51,slow=6.4,SNR=5.0						
	comp=Z,5.9nm,0.9s						
ARCES	**ARCESS Array B**	**50.07**	**336**	P	**P**	**12 16 50.3**	**+0.7**
ARCES				pmax	pmax		
	comp=Z,159nm,2.0s						
DRGR		**50.19**	**306**	⇑P	**P**	**12 16 52.9**	**+1.9**
DRGR		**50.19**	**306**	P	**P**	**12 16 52.9**	**+1.9**
STHS	**Stebnicka Huta**	**50.85**	**310**	*e*P	**P**	**12 16 55.2**	**-0.6**
MDVR	**Moldovita**	**51.19**	**304**	⇑P	**P**	**12 16 58.2**	**-0.2**
BOVS	**Bovan**	**51.39**	**302**	⇓P	**P**	**12 17 00.9**	**+0.9**
MORC	**Moravsky Berou**	**53.19**	**311**	IAmb	IAmb	12 17 15.7	
	comp=Z,13nm,1.3s						
MORC	**Moravsky Berou**	**53.19**	**311**	⇑P	**P**	**12 17 11.3**	**-2.0**
MORC	**Moravsky Berou**	**53.19**	**311**	*e*P	**P**	**12 17 14.8**	**+1.5**
MORC	**Moravsky Berou**	**53.19**	**311**	⇑P	**P**	**12 17 11.3**	**-2.0**
VRAC	**Vranov**	**53.88**	**310**	*e*P	**P**	**12 17 19.8**	**+1.5**
DPC	**Dobruska-Polom**	**53.88**	**312**	*e*P	**P**	**12 17 20.1**	**+1.7**
DPC	**Dobruska-Polom**	**53.88**	**312**	*e*P	**P**	**12 17 20.1**	**+1.7**
DPC	**Dobruska-Polom**	**53.88**	**312**	P	**P**	**12 17 19.6**	**+1.2**
	comp=Z,16nm,1.0s						
KRUC	**Moravsky**	**54.05**	**310**	*e*P	**P**	**12 17 20.6**	**+1.1**
KRUC	**Moravsky**	**54.05**	**310**	P	**P**	**12 17 21.6**	**+2.1**
KRUC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HFS	**Hagfors**	**54.27**	**324**	P	**P**	**12 17 21.7**	**+0.7**
	comp=Z,7.9nm,0.7s,baz=96,slow=6.0,SNR=9.0						
	comp=Z,7.9nm,0.7s						
RONA	**Rosalia, Austr**	**54.36**	**308**	*i* P	**P**	**12 17 22.9**	**+1.0**
	comp=Z,8.3nm,1.0s						
CONA	**Conrad Observa**	**54.60**	**309**	*i* P	**P**	**12 17 24.4**	**+0.7**
	comp=Z,12nm,1.0s						
ARSA	**Arzberg**	**54.96**	**308**	*e*P	**P**	**12 17 27.1**	**+0.9**
	comp=Z,8.0nm,1.3s						
NC602	**NORSAR Array S**	**55.28**	**325**	P	**P**	**12 17 28.3**	**0.0**
NC602				IAmb	IAmb	12 17 29.6	
	comp=Z,20nm,1.1s						
NORES	**NORESS Array B**	**55.28**	**325**	P	**P**	**12 17 28.9**	**+0.6**
NORES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRG	**Berggiesshubel**	**55.29**	**313**	P	**P**	**12 17 29.8**	**+1.3**
BRG				pmax	pmax		
	comp=Z,11nm,1.0s						
NC303	**NORSAR Array S**	**55.32**	**325**	P	**P**	**12 17 28.8**	**+0.3**
NB2	**NORSAR Subarra**	**55.41**	**325**	P	**P**	**12 17 28.9**	**-0.4**
	comp=Z,3.8nm,0.8s,baz=84,slow=7.4						
NB2	**NORSAR Subarra**	**55.41**	**325**	P	**P**	**12 17 29.2**	**-0.1**
NOA	**NORSAR Array B**	**55.41**	**325**	P	**P**	**12 17 29.6**	**+0.4**
	comp=Z,8.4nm,0.9s,baz=84,slow=7.2,SNR=13						
	comp=Z,8.4nm,0.9s						
SOKA	**Soboth**	**55.41**	**307**	*i* P	**P**	**12 17 30.5**	**+0.9**
	comp=Z,14nm,1.2s						

NC204	NORSAR Array S	55.61	325	P	P	12 17 30.6	-0.1
MOA	Molln	55.67	309	*e*P	P	12 17 32.2	+0.9
	comp=Z,9.2nm,1.1s						
CLL	Collm	55.79	313	*i* P	P	12 17 32.7	+0.6
CLL				pmax	pmax		
	comp=Z,14nm,1.3s						
CLL	Collm	55.79	313	P	P	12 17 33.0	+0.9
	comp=Z,9.2nm,2.0s						
CLL	Collm	55.79	313	*i* P	P	12 17 32.7	+0.6
	comp=Z,14nm,1.3s						
GEC2	GERESS Array S	55.83	310	IAmb	IAmb	12 17 34.9	
	comp=Z,15nm,1.1s						
GEC2	GERESS Array S	55.83	310	P	P	12 17 34.2	+1.6
GEC2				pmax	pmax		
	comp=Z,14nm,1.3s						
GERES	GERESS Array B	55.83	310	P	P	12 17 33.8	+1.3
	comp=Z,4.8nm,0.9s,baz=76,slow=6.1,SNR=16						
	comp=Z,4.8nm,0.9s						
KHC	Kasperske Hory	55.85	310	*e*P	P	12 17 35.6	+3.0
KHC	Kasperske Hory	55.85	310	*e*P	P	12 17 35.6	+3.0
BILL	Bilibino	56.37	26	*i* P	P	12 17 35.1	-0.9
BILL				pmax	pmax		
	comp=Z,15nm,1.5s						
LESA	Schwarzleotal	56.81	309	*i* P	P	12 17 40.4	+0.8
	comp=Z,15nm,1.7s						
WTTA	Wattenberg	57.54	309	*e*P	P	12 17 45.0	+0.2
	comp=Z,10nm,1.1s						
FETA	Feichten	58.20	309	*i* P	P	12 17 49.7	+0.3
	comp=Z,11nm,1.5s						
DAVA	Damuels	58.69	309	*e*P	P	12 17 52.4	-0.4
	comp=Z,11nm,0.9s						
EKA	Eskdalemuir Ar	64.08	321	P	P	12 18 28.7	-0.3
	comp=Z,7.3nm,0.9s,baz=75,slow=6.4,SNR=5.6						
	comp=Z,7.3nm,0.9s						
C16K	Lisburne Hills	66.42	23	P	P	12 18 44.6	+0.7
	baz=298,SNR=11						
A19K	Wainwright	66.78	20	P	P	12 18 47.2	+1.0
	baz=301						
B18K	Kokolik River	67.00	21	P	P	12 18 48.6	+1.0
	baz=301,SNR=9.8						
C17K	DeLong Mountai	67.02	22	P	P	12 18 48.6	+0.8
	baz=300,SNR=6.6						
RDOG	Red Dog Mine	67.32	22	P	P	12 18 50.1	+0.4
	baz=301						
A21K	Barrow	67.40	18	P	P	12 18 50.6	+0.5
	baz=305						
F14K	Arctic Creek	67.43	26	P	P	12 18 50.3	-0.1
	baz=299						
D17K	Noatak River	67.45	23	P	P	12 18 51.2	+0.8
	baz=301,SNR=12						
C18K	Utukok River	67.56	22	P	P	12 18 51.9	+0.7
	baz=302,SNR=11						
C19K	Lookout Ridge	67.80	21	IAmb	IAmb	12 18 58.3	
	comp=Z,10nm,0.9s						
C19K	Lookout Ridge	67.80	21	P	P	12 18 53.7	+0.9
	baz=303,SNR=8.3						
F15K	North Star Dit	67.92	25	P	P	12 18 54.2	+0.7
	baz=300						
B20K	Meade River	68.00	19	P	P	12 18 54.5	+0.6
	baz=305						
A22K	Sinclair Lake	68.02	18	P	P	12 18 54.6	+0.6
	baz=306						
E17K	Hotham Inlet	68.19	23	P	P	12 18 55.6	+0.4
	baz=302						
ANM	Nome	68.23	26	P	P	12 18 56.1	+0.6
	baz=300						
E18K	Tukpahlearik C	68.41	23	P	P	12 18 56.9	+0.4
	baz=303,SNR=15						
G15K	Niukluk	68.50	26	P	P	12 18 57.4	+0.3
	baz=301						
D19K	Kuna River	68.59	21	P	P	12 18 58.1	+0.4
	baz=304,SNR=9.8						
F17K	Baldwin Pennin	68.72	24	P	P	12 18 59.1	+0.7
	baz=303						
SUMG	Summit	68.81	345	P	P	12 18 59.4	0.0
SUMG	Summit	68.81	345	P	P	12 18 59.4	0.0
SUMG				pmax	pmax		
	comp=Z,41nm,1.4s						
B22K	Teshekpuk Lake	68.83	18	IAmb	IAmb	12 19 03.9	
	comp=Z,11nm,1.1s						
B22K	Teshekpuk Lake	68.83	18	P	P	12 18 59.5	+0.4
	baz=308,SNR=5.4						
G16K	Koyuk River	68.90	25	P	P	12 19 00.1	+0.5
	baz=302						
D20K	Etivluk River	68.91	21	P	P	12 19 00.2	+0.5
	baz=306,SNR=9.6						
WB0	Warramunga Arr	68.94	132	P	P	12 18 59.7	-0.8
B21K	Ikpikpuk River	68.95	19	IAmb	IAmb	12 19 01.6	
	comp=Z,15nm,1.2s						
B21K	Ikpikpuk River	68.95	19	P	P	12 19 00.3	+0.5
	baz=307						
WRA	Warramunga Arr	69.04	132	P	P	12 19 01.2	+0.1
	comp=Z,9.3nm,1.0s,baz=327,slow=5.9,SNR=16						
	comp=Z,9.3nm,1.0s						
WRA	Warramunga Arr	69.04	132	P	P	12 19 01.2	+0.1
WRA				pmax	pmax		
	comp=Z,1.0nm,1.7s						
WRAB	Tennant Creek	69.04	132	P	P	12 19 00.9	-0.2
WRAB	Tennant Creek	69.04	132	P	P	12 19 00.9	-0.2
WRAB				pmax	pmax		
	comp=Z,16nm,1.1s						
F18K	Selawik	69.17	23	P	P	12 19 01.9	+0.7
	baz=304,SNR=9.1						
C21K	Knifeblade Rid	69.18	20	P	P	12 19 01.9	+0.5
	baz=307,SNR=5.7						
E20K	Nigu River	69.31	21	P	P	12 19 02.9	+0.6
	baz=306,SNR=9.7						
H16K	Elim	69.35	25	P	P	12 19 03.0	+0.6
	baz=302						
G17K	Kiwalik Mounta	69.44	24	P	P	12 19 03.4	+0.4
	baz=303						
E19K	Redstone River	69.46	22	IAmb	IAmb	12 19 04.1	
	comp=Z,11nm,1.0s						
E19K	Redstone River	69.46	22	P	P	12 19 03.4	+0.3
	baz=306,SNR=6.2						
F19K	Shaleruckik Mo	69.65	22	P	P	12 19 04.1	-0.1
	baz=305						
E21K	Killik River	69.85	20	P	P	12 19 05.8	+0.3
	baz=308						
J14K	Nanvaranak Lak	69.86	28	P	P	12 19 06.0	+0.5
	baz=302						
C23K	Itkillik River	69.90	18	P	P	12 19 06.2	+0.5
	baz=310,SNR=8.8						
G18K	Tagagawik	69.91	23	P	P	12 19 05.9	0.0
	baz=305						
D22K	Ayikyak River	69.95	19	IAmb	IAmb	12 19 11.2	
	comp=Z,9.2nm,0.9s						
D22K	Ayikyak River	69.95	19	P	P	12 19 06.7	+0.6
	baz=309						
M11K	Mekoryuk	70.01	30	P	P	12 19 06.6	+0.1
	baz=300						
H17K	Granite Mounta	70.02	25	IAmb	IAmb	12 19 08.5	
	comp=Z,11nm,0.9s						
H17K	Granite Mounta	70.02	25	P	P	12 19 07.0	+0.5
	baz=304						
F20K	Avaraart Lake	70.18	22	IAmb	IAmb	12 19 08.7	
	comp=Z,9.1nm,1.1s						
F20K	Avaraart Lake	70.18	22	P	P	12 19 07.7	+0.2
	baz=307,SNR=6.9						
G19K	Purcell Mounta	70.28	23	IAmb	IAmb	12 19 09.2	
	comp=Z,13nm,1.1s						
G19K	Purcell Mounta	70.28	23	P	P	12 19 08.6	+0.4
	baz=306						
I17K	Unalakleet	70.33	26	P	P	12 19 08.9	+0.5
	baz=304						
H18K	Honhosa River	70.43	24	IAmb	IAmb	12 19 14.2	
	comp=Z,9.2nm,0.9s						
H18K	Honhosa River	70.43	24	P	P	12 19 09.1	0.0
	baz=305						
D23K	Nanushuk River	70.45	19	IAmb	IAmb	12 19 11.6	
	comp=Z,28nm,1.9s						
D23K	Nanushuk River	70.45	19	P	P	12 19 09.2	+0.1
	baz=311						
C24K	Franklin Bluff	70.47	18	IAmb	IAmb	12 19 09.9	
	comp=Z,6.8nm,0.9s						
C24K	Franklin Bluff	70.47	18	P	P	12 19 09.6	+0.4
	baz=312						
E22K	Anaktuvuk Pass	70.67	20	IAmb	IAmb	12 19 11.8	
	comp=Z,11nm,1.2s						
E22K	Anaktuvuk Pass	70.67	20	P	P	12 19 10.5	-0.1
	baz=310						
J16K	Anvik River	70.70	26	P	P	12 19 11.1	+0.3
	baz=304						
F21K	Alatna River	70.76	21	IAmb	IAmb	12 19 12.7	
	comp=Z,12nm,1.1s						
F21K	Alatna River	70.76	21	P	P	12 19 11.5	+0.4
	baz=309						
ESDC	Sonseca Array	70.80	305	P	P	12 19 11.2	-0.7
	comp=Z,1.9nm,0.9s,baz=69,slow=7.7,SNR=5.0						
	comp=Z,1.9nm,0.9s						
ESDC	Sonseca Array	70.80	305	IAmb	IAmb	12 19 38.6	
	comp=Z,16nm,2.0s						
D24K	Happy Valley	70.82	18	IAmb	IAmb	12 19 16.3	
	comp=Z,7.8nm,0.9s						
D24K	Happy Valley	70.82	18	P	P	12 19 11.4	0.0
	baz=312						
H19K	Roundabout Mou	70.86	23	IAmb	IAmb	12 19 13.7	
	comp=Z,18nm,1.2s						
H19K	Roundabout Mou	70.86	23	P	P	12 19 12.2	+0.5
	baz=307						
K15K	Wolf Creek Mou	70.90	27	P	P	12 19 12.3	+0.3
	baz=304						
L14K	Kuka Creek	70.96	29	P	P	12 19 12.6	+0.3
	baz=303						
TOLK	Toolik Lake Re	70.97	19	IAmb	IAmb	12 19 17.1	
	comp=Z,10nm,0.9s						
TOLK	Toolik Lake Re	70.97	19	P	P	12 19 12.7	+0.3
	baz=312,SNR=7.5						
F22K	John River	70.97	20	P	P	12 19 12.8	+0.5
	baz=310						
GCSA	Galena City Sc	71.18	24	P	P	12 19 14.1	+0.5
	baz=307						
J17K	VABM Dome	71.20	26	P	P	12 19 14.1	+0.4
	baz=305						
G21K	Allakaket	71.20	22	IAmb	IAmb	12 19 14.8	
	comp=Z,7.5nm,0.9s						
G21K	Allakaket	71.20	22	P	P	12 19 14.0	+0.3
	baz=309						
L15K	Ungalak Mounta	71.26	28	P	P	12 19 14.5	+0.3
	baz=304						
C26K	Camden Bay	71.28	17	P	P	12 19 14.6	+0.4
	baz=315						
D25K	Kavik River	71.34	18	IAmb	IAmb	12 19 16.0	
	comp=Z,7.9nm,1.0s						
D25K	Kavik River	71.34	18	P	P	12 19 14.9	+0.3
	baz=314,SNR=8.2						
E23K	Chandalar	71.34	19	IAmb	IAmb	12 19 17.8	
	comp=Z,14nm,1.6s						
E23K	Chandalar	71.34	19	P	P	12 19 15.0	+0.3
	baz=312						
H20K	Anotleneega Mo	71.40	23	P	P	12 19 15.5	+0.5
	baz=308						
IMAR	Indian Mountai	71.46	22	P	P	12 19 14.4	-0.9
ASAR	Alice Springs	71.56	135	P	P	12 19 16.6	+0.1
	comp=Z,7.3nm,0.9s,baz=321,slow=6.1,SNR=20						
	comp=Z,7.3nm,0.9s						
ASAR	Alice Springs	71.56	135	P	P	12 19 15.8	-0.8
M14K	Bethel	71.58	29	P	P	12 19 16.5	+0.4
	baz=304						
COLD	Coldfoot	71.73	20	P	P	12 19 17.4	+0.5
	baz=312,SNR=6.8						
C27K	Jago River	71.79	17	IAmb	IAmb	12 19 22.4	
	comp=Z,9.5nm,0.8s						
C27K	Jago River	71.79	17	P	P	12 19 17.8	+0.6
	baz=316,SNR=6.5						
K17K	Iditarod	71.88	26	P	P	12 19 18.0	+0.1
	baz=306						
H21K	Melozitna Rive	71.97	22	P	P	12 19 18.8	+0.4
	baz=310						
I20K	Naaghedeneel	71.97	23	P	P	12 19 19.2	+0.9
	baz=309						
J18K	Innoko River	72.01	25	P	P	12 19 19.1	+0.4
	baz=307						
L16K	Owhat River	72.03	27	P	P	12 19 20.0	+1.3
	baz=305						
J19K	Poorman	72.08	24	IAmb	IAmb	12 19 21.3	
	comp=Z,19nm,1.2s						
J19K	Poorman	72.08	24	P	P	12 19 19.6	+0.6
	baz=308						
G23K	Bananza Creek	72.13	21	IAmb	IAmb	12 19 20.9	
	comp=Z,12nm,1.2s						
G23K	Bananza Creek	72.13	21	P	P	12 19 20.2	+0.8
	baz=312						
M15K	Kasigluk River	72.13	29	P	P	12 19 19.9	+0.5
	baz=305						
F24K	Squaw Lake	72.19	19	IAmb	IAmb	12 19 27.5	
	comp=Z,24nm,1.9s						
F24K	Squaw Lake	72.19	19	P	P	12 19 20.1	+0.3
	baz=313						
L17K	Donlin	72.23	27	P	P	12 19 20.5	+0.5
	baz=306						
H22K	Ishtalitna Cre	72.26	22	P	P	12 19 20.5	+0.4
	baz=311						
E25K	Arctic Village	72.40	18	P	P	12 19 21.6	+0.6
	baz=315						
J20K	Nowinta River	72.47	24	IAmb	IAmb	12 19 23.5	
	comp=Z,20nm,1.3s						
J20K	Nowinta River	72.47	24	P	P	12 19 21.8	+0.4
	baz=309						
D27M	Malcolm River	72.72	16	P	P	12 19 23.3	+0.3
	baz=319						
F25K	Christian Rive	72.76	19	P	P	12 19 23.7	+0.6
	baz=315						
L18K	Granite Mounta	72.78	26	P	P	12 19 23.4	+0.1
	baz=308						
H23K	Yukon River	72.87	21	IAmb	IAmb	12 19 25.3	
	comp=Z,8.6nm,1.2s						
H23K	Yukon River	72.87	21	P	P	12 19 24.3	+0.5
	baz=312						
G24K	Hadweenzic Riv	72.88	20	P	P	12 19 24.3	+0.5
	baz=314						
M17K	Holitna River	73.00	27	P	P	12 19 25.1	+0.5
	baz=307						
K20K	Telida	73.02	24	IAmb	IAmb	12 19 26.9	
	comp=Z,19nm,1.2s						
K20K	Telida	73.02	24	P	P	12 19 25.3	+0.6
	baz=309						
N16K	Nishlik Lake	73.03	28	P	P	12 19 25.5	+0.6
	baz=306						
F26K	Sheenjek River	73.08	18	P	P	12 19 25.8	+0.7
	baz=316						
BMAR	Burnt Mountain	73.16	18		P	12 19 25.9	+0.3
D28M	Stokes Point	73.17	15	P	P	12 19 26.4	+1.0
	baz=321,SNR=5.5						
G25K	Bearman Lake	73.22	19	P	P	12 19 25.7	-0.1
	baz=315						
CHUM	Lake Minchumin	73.28	23	P	P	12 19 26.7	+0.5
	baz=311						
H24K	Noodor Dome	73.36	21	IAmb	IAmb	12 20 00.7	
	comp=Z,29nm,2.0s						
H24K	Noodor Dome	73.36	21	P	P	12 19 26.6	-0.1
	baz=314						
O15K	Ungalikthiuk R	73.37	30	P	P	12 19 26.7	-0.2
	baz=306						
E27K	Coleen River	73.37	17	IAmb	IAmb	12 19 31.6	
	comp=Z,10nm,1.1s						
E27K	Coleen River	73.37	17	P	P	12 19 26.4	-0.4
	baz=318						
I23K	Minto, Yukon-K	73.39	22	P	P	12 19 26.9	+0.1
	baz=313						
A36M	Sachs Harbour	73.44	10	P	P	12 19 27.4	+0.4
	baz=332,SNR=7.6						
L19K	White Mountain	73.48	26	IAmb	IAmb	12 19 29.8	
	comp=Z,15nm,1.1s						
L19K	White Mountain	73.48	26	P	P	12 19 27.5	0.0
	baz=309						
E28M	Babbage River	73.55	16	P	P	12 19 27.8	+0.1
	baz=320,SNR=6.4						
BPAW	Bear Paw Mtn.	73.58	23	P	P	12 19 27.9	-0.1
	baz=312						
N17K	Nushagak Hills	73.63	28	P	P	12 19 28.2	-0.1
	baz=308						
G26K	Porcupine Rive	73.73	19	P	P	12 19 28.6	-0.2
	baz=317						
O16K	Kokwok River B	73.83	29	P	P	12 19 29.3	-0.2
	baz=307						
NEA2	Nenana	73.86	22	P	P	12 19 29.6	0.0
	baz=313						
PPLA	Purkeypile	73.97	24	P	P	12 19 31.0	+0.5
PPLA	Purkeypile	73.97	24	P	P	12 19 30.6	+0.1
	baz=311						
POKR	Poker Plat Res	74.00	21	P	P	12 19 30.4	-0.1
	baz=314						
N18K	Kilae Creek	74.04	27	P	P	12 19 30.5	-0.2
	baz=308						
COLA	College	74.04	21	P	P	12 19 30.7	+0.1
	baz=314						
E29M	Blow River	74.10	16	IAmb	IAmb	12 19 36.0	
	comp=Z,8.5nm,0.8s						
E29M	Blow River	74.10	16	P	P	12 19 30.7	-0.3
	baz=322						
F28M	Old Crow	74.23	17	IAmb	IAmb	12 19 33.3	
	comp=Z,16nm,1.4s						
F28M	Old Crow	74.23	17	P	P	12 19 32.0	+0.2
	baz=320						
M20K	Styx River	74.30	25	P	P	12 19 32.4	+0.1
	baz=310						
G27K	Doyon Strip	74.39	18	P	P	12 19 33.0	+0.3
	baz=319						
S12K	Black Hills	74.40	33	P	P	12 19 32.7	-0.2
	baz=305						
ILAR	Eielson Array	74.41	21	P	P	12 19 32.2	-0.6
	comp=Z,2.7nm,0.9s,baz=299,slow=5.2,SNR=17						
ILAR				PP	PP	12 22 17.8	-0.7
	comp=Z,3.4nm,0.9s,baz=306,slow=8.0,SNR=19						
	comp=Z,2.7nm,0.9s						
ILAR	Eielson Array	74.41	21	P	P	12 19 32.8	0.0
ILAR	Eielson Array	74.41	21	P	P	12 19 32.8	0.0
N19K	Bonanza Creek	74.49	27	P	P	12 19 33.1	-0.4
	baz=310						
MCK	McKinley	74.49	22	P	P	12 19 32.3	-1.1
	baz=313						
POIN	Pond Inlet	74.62	355	P	P	12 19 34.1	+0.2
POIN				IAmb	IAmb	12 19 34.7	
	comp=Z,13nm,1.0s						
HDA	Harding Lake	74.65	21	P	P	12 19 33.4	-0.8
	baz=315						
SKT	Skwentna	74.81	25	P	P	12 19 34.8	-0.4
	baz=312						
O18K	Koktuh Hills	74.82	28	P	P	12 19 35.1	-0.2
	baz=309						
H27K	Steamboat Moun	74.87	18	P	P	12 19 35.6	+0.1
	baz=319						
O19K	Port Alsworth	74.95	27	P	P	12 19 35.8	-0.1
	baz=310						
CUT	Chulitna	74.96	24	P	P	12 19 36.0	-0.1
	baz=313						
J25K	Salcha River,	74.98	21	P	P	12 19 35.8	-0.4
	baz=316						
Q16K	King Salmon	74.98	29	P	P	12 19 35.8	-0.3
	baz=308						
STLK	Strandline Lak	75.02	25	IAmb	IAmb	12 19 41.7	
	comp=Z,11nm,1.1s						
I26K	Coal Creek Min	75.11	19	IAmb	IAmb	12 21 15.9	
	comp=Z,6.4nm,0.6s						
I26K	Coal Creek Min	75.11	19	P	P	12 19 37.1	+0.2
	baz=318						
INK	Inuvik	75.13	14	P	P	12 19 36.7	-0.2
	baz=325						
F30M	Barrier River	75.20	16	P	P	12 19 37.9	+0.6
F30M				IAmb	IAmb	12 19 38.4	
	comp=Z,13nm,1.0s						
F30M	Barrier River	75.20	16	P	P	12 19 37.3	0.0
	baz=324						
G29M	Pine Creek	75.23	17	P	P	12 19 36.9	-0.7
	baz=322						
WAT1	Susitna Watana	75.25	23	P	P	12 19 36.8	-0.9
	baz=314						
I27K	Kandik River	75.32	19	IAmb	IAmb	12 19 39.8	
	comp=Z,9.4nm,1.2s						
I27K	Kandik River	75.32	19	P	P	12 19 37.9	-0.2
	baz=319						
SUA	Susitna One	75.43	25	P	P	12 19 38.9	0.0
	baz=312						
K24K	Donnelly Dome	75.44	21	IAmb	IAmb	12 19 42.7	
	comp=Z,14nm,0.9s						
K24K	Donnelly Dome	75.44	21	P	P	12 19 38.0	-0.9
	baz=316						
M22K	Willow	75.45	24	P	P	12 19 38.2	-0.6
	baz=313						
DHY	Denali Highway	75.46	22	P	P	12 19 39.2	+0.1
DHY				IAmb	IAmb	12 19 40.9	
	comp=Z,29nm,2.0s						
DHY	Denali Highway	75.46	22	P	P	12 19 37.8	-1.3
	baz=315						
J26L	Joseph Creek	75.59	20	P	P	12 19 38.1	-1.7
	baz=318						
G30M	tAoh Zraii Nji	75.61	16	IAmb	IAmb	12 19 40.8	
	comp=Z,12nm,1.1s						
G30M	tAoh Zraii Nji	75.61	16	P	P	12 19 39.1	-0.7
	baz=323						
WAT6	Susitna Watana	75.69	23	P	P	12 19 39.2	-1.2
	baz=315						
RIDG	Independent Ri	75.77	21	P	P	12 19 39.5	-1.3
RIDG	Independent Ri	75.77	21	P	P	12 19 40.3	-0.5
	baz=317						
F31M	Tsiigehtchic	75.80	15	IAmb	IAmb	12 19 41.8	
	comp=Z,26nm,1.6s						
F31M	Tsiigehtchic	75.80	15	P	P	12 19 40.3	-0.4
	baz=325						
SCRK	Sand Creek	75.86	21		P	12 19 41.2	-0.1
SCRK				IAmb	IAmb	12 19 45.8	
	comp=Z,11nm,1.2s						
SCRK	Sand Creek	75.86	21	P	P	12 19 40.6	-0.7
	baz=317						
I28M	Miner Creek	75.89	18	P	P	12 19 40.8	-0.7
	baz=320						
PMR	Palmer	75.91	24	P	P	12 19 40.8	-0.6
	baz=314						
EPYK	Eagle Plains	75.98	17	P	P	12 19 41.2	-0.7
	baz=323						
C36M	Paulatuk	75.98	11	IAmb	IAmb	12 19 42.4	
	comp=Z,15nm,1.1s						
C36M	Paulatuk	75.98	11	P	P	12 19 41.0	-0.7
	baz=333						
SML	Sawmill	76.03	24	P	P	12 19 42.1	-0.2
SML	Sawmill	76.03	24	P	P	12 19 42.1	-0.2
SML				pmax	pmax		
	comp=Z,37nm,1.4s						
SML	Sawmill	76.03	24	P	P	12 19 41.6	-0.6
	baz=314						
RC01	Rabbit Creek A	76.04	25	P	P	12 19 41.0	-1.3
	baz=313						
DOT	Dot Lake	76.08	21	P	P	12 19 41.8	-0.7
DOT				IAmb	IAmb	12 21 32.6	
	comp=Z,22nm,1.9s						
G31M	Satah River	76.11	16	IAmb	IAmb	12 19 46.8	
	comp=Z,11nm,0.8s						
G31M	Satah River	76.11	16	P	P	12 19 41.0	-1.5
	baz=325						
PAX	Paxson	76.14	22	P	P	12 19 42.0	-0.9
	baz=316						
M23K	Glacier View	76.25	24	P	P	12 19 42.8	-0.7
	baz=315						
KNK	Knik Glacier	76.26	24	P	P	12 19 42.6	-1.0
	baz=314						
SCM	Sheep Creek Mo	76.35	23	P	P	12 19 44.5	+0.4
SCM	Sheep Creek Mo	76.35	23	P	P	12 19 44.5	+0.4
SCM				pmax	pmax		
	comp=Z,83nm,1.9s						
I29M	Ogilvie Camp,	76.39	18	P	P	12 19 43.2	-1.0
	baz=322						
O22K	Cooper Landing	76.47	25	P	P	12 19 43.2	-1.5
	baz=313						
BRSE	Bradley Lake S	76.60	26	P	P	12 19 43.7	-1.8
	baz=313						
HARP	HAARP	76.66	22	P	P	12 19 44.7	-1.1
	baz=317						
PWL	Port Wells	76.70	24	P	P	12 19 45.0	-1.0
	baz=314						
L26K	Log Cabin Wild	76.76	21	P	P	12 19 45.2	-1.1
	baz=318						
SEW	Seward	76.82	25	P	P	12 19 45.8	-0.9
	baz=314						
I30M	Mount Dempster	76.99	17	IAmb	IAmb	12 19 52.4	
	comp=Z,7.7nm,0.9s						
I30M	Mount Dempster	76.99	17	P	P	12 19 46.9	-0.8
	baz=323						
H31M	Peel River	77.01	16	IAmb	IAmb	12 20 02.2	
	comp=Z,11nm,1.1s						
H31M	Peel River	77.01	16	P	P	12 19 46.9	-0.9
	baz=325						
KLU	Klutina	77.07	23	P	P	12 19 47.4	-0.8
	baz=316						
DAWY	Dawson	77.11	19	P	P	12 19 47.4	-0.9
	baz=321						
L27K	Beaver Creek,	77.19	21	P	P	12 19 47.8	-1.0
	baz=319						
BCAR	Beaver Creek A	77.20	21	P	P	12 19 48.4	-0.5
KDAK	Kodiak Island	77.21	28	P	P	12 19 48.1	-0.8
	baz=312						
CHIR	Chirikof Islan	77.22	31	P	P	12 19 48.3	-0.7
	baz=310						
OHAK	Old Harbor	77.29	29	P	P	12 19 48.1	-1.3
	baz=311						
M26K	Nabesna, AK	77.33	21	P	P	12 19 48.4	-1.2
	baz=318						
SII	Sitkinak Islan	77.36	30	P	P	12 19 48.7	-1.1
	baz=311						
N25K	Chitina, Valde	77.42	23	P	P	12 19 48.6	-1.5
	baz=317						
J30M	Hart River	77.52	18	P	P	12 19 49.6	-1.1
	baz=324						
P23K	Montague Islan	77.63	25	P	P	12 19 49.6	-1.6

	baz=315						
M27K	Edge Creek, AK	77.71	21	P	P	12 19 50.0	-1.8
	baz=319						
K29M	Barlow Dome	77.80	19	P	P	12 19 52.5	+0.2
K29M	Barlow Dome	77.80	19	P	P	12 19 51.1	-1.2
	baz=323						
EYAK	Cordova Ski Ar	77.81	24	P	P	12 19 51.6	-0.6
	baz=316						
MCARA	McCarthy VSAT	78.09	22	P	P	12 19 53.3	-0.5
	baz=318						
L29M	L29M	78.22	19	P	P	12 19 53.8	-0.7
	baz=322						
M29M	Somme Creek	78.65	20	P	P	12 19 56.3	-0.7
	baz=322						
CTG	Chitna Glacier	78.94	22	P	P	12 19 57.8	-0.8
	baz=320						
M30M	Minto, Yukon	79.01	19	P	P	12 19 58.4	-0.5
	baz=323						
N30M	Aishikik Lake	79.83	20	P	P	12 20 03.2	-0.2
	baz=323						
M31M	Drury Creek, Y	79.97	18	P	P	12 20 03.9	-0.2
	baz=325						
N31M	Braeburn, Yuko	80.18	19	P	P	12 20 05.0	-0.3
	baz=324						
HYT	Haines Junctio	80.22	20	P	P	12 20 05.5	-0.1
	baz=323						
O29M	Mount Kennedy	80.31	21	P	P	12 20 05.4	-0.8
	baz=322						
O30N	Mendenhall	80.67	20	P	P	12 20 07.6	-0.3
	baz=324						
WRGLY	Wrigley	81.61	13	P	P	12 20 13.5	+0.8
	baz=334						
SKAG	Skagway	81.97	20	P	P	12 20 15.5	+0.8
	baz=325						
P33M	Teslin, Yukon	82.05	19	P	P	12 20 15.7	+0.4
	baz=327						
STKA	Stephens Creek	82.19	136	P	P	12 20 15.6	-0.6
	comp=Z,4.0nm,1.0s,baz=275,slow=17,SNR=4.0						
	comp=Z,4.0nm,1.0s						
WTLY	Watson Lake, Y	83.19	17	P	P	12 20 21.3	+0.1
	baz=330						
R33M	Jennings River	83.25	18	P	P	12 20 21.0	-0.6
	baz=328						
YKAW3	Yellowknife Wh	83.74	10	IAmb	IAmb	12 20 24.5	
	comp=Z,9.3nm,1.2s						
YKA	Yellowknife Ar	83.81	10	P	P	12 20 22.8	-1.5
	comp=Z,2.1nm,0.9s,baz=338,slow=5.3,SNR=11						
	comp=Z,2.1nm,0.9s						
YKA	Yellowknife Ar	83.81	10	*i* P	P	12 20 23.8	-0.4
YKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YKAW1	Yellowknife Wh	83.83	10	IAmb	IAmb	12 20 25.0	
	comp=Z,13nm,1.2s						
BOSA	Boshof	84.39	231	P	P	12 20 26.3	-1.5
	comp=Z,2.6nm,0.8s,baz=198,slow=1.9,SNR=3.3						
	comp=Z,2.6nm,0.8s						
BOSA	Boshof	84.39	231	P	P	12 20 26.3	-1.5
BOSA				pmax	pmax		
	comp=Z,62nm,2.0s						
TOAD	Toad River Com	85.17	16	P	P	12 20 30.9	-0.3
	baz=333						
TXAR	Lajitas Array	117.73	10	PKP	PKPdf	12 26 41.6	-0.4
	comp=Z,1.4nm,1.1s,baz=318,slow=1.7,SNR=4.3						
CPUP	Villa Florida	148.41	272	PKPbc	PKPbc	12 27 41.6	-0.5
	comp=Z,0.9nm,0.8s,baz=344,slow=2.3,SNR=6.0						

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*IDC **19** 12:23:33.6±3.2, 7°.41S×128°.84E, h136^{km}±34^{km}, mb4.1/15, mbtmp4.5/19, Error ellipse: s-maj=29.2km s-min=18.5km az=58.0*

*NEIC **19** 12:23:34.7±2.1, 7°.40S±0°.08×128°.82E±0°.04, h142^{km}±9^{km}, mb4.5/29, Error ellipse: s-maj=12.0km s-min=3.8km az=156.0*

*DJA **19** 12:23:34.6±0.2, 7°S±2°×12°9E±°, h146^{km}±4^{km}, M4.6/28, mb4.7/28, mB5.2/14, MLv4.8/19, Mw(mB)4.5/14*

ISC 19 12:23:33.3±0.4, **7°.44S**±0°.05×**128°.76E**±0°.05, **h131**^{km}, **n109**, σ**1^{s}.79**/108, **mb4.5**/31, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.57	102		Pn	12 24 16.2	+1.8
SAUI	Saumlaki	2.57	102	P	Pn	12 24 16.7	+2.3
SAUI	Saumlaki	2.57	102	P	Pn	12 24 16.0	+1.6
SAUI				S	Sn	12 24 47.7	+1.6
BNDI	Bandanaira	3.11	21	P	Pn	12 24 22.9	+1.5
BNDI	Bandanaira	3.11	21	P	Pn	12 24 22.8	+1.4
AAI	Ambon	3.77	351	P	Pn	12 24 32.0	+1.9
MSAI	Masohi	4.07	2	P	Pn	12 24 38.2	+4.2
KRAI	Karang Ratu	4.11	355	P	Pn	12 24 37.9	+3.3
SOEI	Soe	5.01	242		Pn	12 24 49.0	+2.4
SOEI	Soe	5.01	242	P	Pn	12 24 50.3	+3.7
SOEI	Soe	5.01	242	P	Pn	12 24 50.0	+3.4
	3.5nm3µm188nm,0.5s						
DRS	Darwin Rock St	5.39	157	P	Pn	12 24 53.5	+1.9
FAKI	Fak Fak	5.67	38		Pn	12 24 54.2	-1.3
FAKI	Fak Fak	5.67	38	P	Pn	12 24 54.4	-1.1
FAKI	Fak Fak	5.67	38	P	Pn	12 24 54.2	-1.3
	1.2nm39nm,0.4s						
BATI	Baumata	5.74	241	P	Pn	12 24 58.7	+2.3
	233nm,0.3s,baz=288,slow=0.6,SNR=42						
BATI				S	Sn	12 25 59.6	-1.6
	569nm,0.4s,baz=107,slow=22,SNR=20						
BATI	Baumata	5.74	241	P	Pn	12 24 58.6	+2.2
MTN	Manton Dam	5.86	157		Pn	12 24 59.1	+1.2
SANI	Sanana	6.03	333	P	Pn	12 25 02.8	+2.6
KMPI	Kaimana, Papua	6.19	53	P	Pn	12 25 01.7	-0.7
	2µm139nm,0.5s						
MMRI	Maumere	6.57	259		Pn	12 25 10.1	+2.6
MMRI	Maumere	6.57	259	P	Pn	12 25 10.5	+3.0
MMRI	Maumere	6.57	259	P	Pn	12 25 10.3	+2.8
	0.5nm2µm104nm,0.5s						
SWI	Sorong	6.99	21	P	Pn	12 25 13.0	-0.2
	0.4nm1µm54nm,0.4s						
EDFI	Ende, Flores	7.12	259	P	Pn	12 25 18.3	+3.2
	0.2nm40nm,0.7s						
RKPI	Ransiki, Papua	7.99	43	P	Pn	12 25 26.2	-0.4
	143nm,0.6s						
KNRA	Kununurra	8.19	180		Pn	12 25 29.9	+0.6
MWPI	Manokwari, Pap	8.34	39	P	Pn	12 25 32.0	+0.7
	104nm,1.2s						
BASI	Baing, Sumba	8.55	251	P	Pn	12 25 35.5	+1.3
	3µm90nm,0.5s						
WSI	Waingapu	8.66	255	P	Pn	12 25 36.2	+0.5
LBFI	Labuhan Bajo,	8.85	263	P	Pn	12 25 40.3	+2.1
	752nm67nm,1.1s						
BNSI	Bone	9.12	289	P	Pn	12 25 45.3	+3.4
	38nm,1.0s						
KAPI	Kappang	9.28	285	P	Pn	12 25 48.2	+4.2
	8.2nm,0.4s,baz=170,slow=1.4,SNR=1.6						
KAPI	Kappang	9.28	285	P	Pn	12 25 49.0	+5.0
WBSI	Waikabubak, Su	9.52	256	P	Pn	12 25 48.1	+0.8
BAKI	Biak	9.60	50	P	Pn	12 25 48.8	+0.5
	79nm,0.7s						
DBNI	Kabupaten Domp	10.40	263	P	Pn	12 26 01.3	+2.2
	29nm,0.5s						
PLAI	Plampang	10.96	262	P	Pn	12 26 06.2	-0.3
PLAI	Plampang	10.96	262	P	Pn	12 26 06.3	-0.3
	1µm54nm,0.5s						
FITZ	Fitzroy Crossi	11.02	196	P	Pn	12 26 06.6	-0.7
	5.7nm,0.3s,baz=27,slow=11,SNR=126						
FITZ				S	Sn	12 28 01.4	-7.5
	34nm,0.4s,baz=105,slow=18,SNR=9.8						
FITZ	Fitzroy Crossi	11.02	196	P	Pn	12 26 06.1	-1.2
TOLI2	Tolitoli	11.64	317	P	Pn	12 26 13.1	-2.5
TWSI	Taliwang, Sumb	11.83	263	P	Pn	12 26 18.5	+0.4
	16nm,0.6s						
KLNI	Mataram	12.59	265	P	Pn	12 26 28.8	+0.9
	26nm,0.7s						
KHKI	Kahang-Kahang	13.06	265	P	Pn	12 26 37.1	+3.0
	22nm,0.8s						
WB0	Warramunga Arr	13.42	157		Pn	12 26 36.9	-1.7
IGBI	Denpasar	13.55	263	P	Pn	12 26 42.0	+1.7
WRAB	Tennant Creek	13.55	157		Pn	12 26 39.0	-1.4
WRAB	Tennant Creek	13.55	157	P	Pn	12 26 38.6	-1.7
WRA	Warramunga Arr	13.55	157	P	Pn	12 26 38.5	-1.9
	5.3nm,0.6s,baz=334,slow=13,SNR=114						
WRA				S	Sn	12 28 57.3	-13
	38nm,0.6s,baz=336,slow=22,SNR=17						
WR8	Warramunga Arr	13.63	156		Pn	12 26 39.7	-1.7
GMJI	Gumukmas	15.20	266	P	Pn	12 27 01.7	+0.5
	14nm,0.6s						
COEN	Coen	15.57	116		P	12 27 06.4	-0.8
COEN				IAmb	IAmb	12 27 19.6	
	comp=Z,21nm,1.1s						
MBWA	Marble Bar	16.20	212	Pn	Pn	12 27 12.7	-0.7
PSA00	Pilbara Seismi	16.48	211		P	12 27 18.6	+1.3
PSA00				IAmb	IAmb	12 27 25.0	
	comp=Z,13nm,0.7s						
SNJI	Sawahan-Nganju	16.86	268	P	P	12 27 22.8	+1.1
	comp=Z,28nm,0.5s						
AS31	Alice Springs	16.87	164	P	Pn	12 27 23.4	+1.7
ASAR	Alice Springs	16.87	164	P	Pn	12 27 22.3	+0.5
	comp=Z,3.7nm,0.5s,baz=343,slow=9.7,SNR=133						
ASAR				S	Sn	12 30 17.7	-12
	comp=Z,3.2nm,0.7s,baz=335,slow=19,SNR=5.6						
ASAR	Alice Springs	16.87	164	P	Pn	12 27 23.4	+1.6
PCJI	Pacitan	17.44	266	P	P	12 27 26.5	-1.4
	comp=Z,40nm,0.6s						
UGM	Wanagama	18.08	267	P	Pn	12 27 37.0	+0.6
KKM	Kota Kinabalu	18.33	317	P	Pn	12 27 40.3	+0.9
CTA	Charters Tower	21.11	128	P	P	12 28 10.7	+3.0
	comp=Z,3.1nm,0.9s,baz=285,slow=12,SNR=2.5						
FORT	Forrest	23.23	182	P	P	12 28 30.5	+1.6
MORW	Morawa	24.63	208	P	P	12 28 44.7	+3.0
MORW				IAmb	IAmb	12 29 12.4	
	comp=Z,24nm,1.4s						
BBOO	Buckleboo	26.14	166	P	P	12 28 57.0	+1.8
BBOO				IAmb	IAmb	12 28 59.6	
	comp=Z,24nm,1.5s						
STKA	Stephens Creek	27.10	155	P	P	12 29 05.1	+1.2
	comp=Z,0.6nm,0.3s,baz=310,slow=16,SNR=1.6						
	comp=Z,0.6nm,0.3s						
STKA	Stephens Creek	27.10	155	IAmb	IAmb	12 29 40.8	
	comp=Z,29nm,1.2s						
NWAO	Narrogin (SRO)	27.53	201	P	P	12 29 09.1	+1.4
JOW	Kunigami	34.07	359	P	P	12 30 04.8	-0.4
CMAR	Chiang Mai Arr	39.09	312	P	P	12 30 47.8	-0.2
	comp=Z,1.0nm,0.4s,baz=143,slow=7.2,SNR=14						
	comp=Z,1.0nm,0.4s						
JNU	Nakatsue	40.39	3	P	P	12 30 57.4	-1.2
KSRS	Korea Array	44.66	359	P	P	12 31 32.9	-0.1
	comp=Z,4.7nm,0.6s,baz=177,slow=9.2,SNR=23						
	comp=Z,4.7nm,0.6s						
KS19	Wonju Array Si	44.71	359	P	P	12 31 33.0	-0.4
KS19				IAmb	IAmb	12 31 39.2	
	comp=Z,31nm,1.3s						
LZH	Lanzhou	49.23	333	*e*P	P	12 32 08.9	+0.2
LZH				pP	pP	12 32 18.6	-19
LZH				pmax	pmax		
	comp=Z,23nm,1.6s						
USRK	Ussuriysk Ar.	51.48	3	P	P	12 32 24.2	-1.0
	comp=Z,4.2nm,0.4s,baz=186,slow=7.6,SNR=16						
	comp=Z,4.2nm,0.4s						
GTA	Gaotai	53.78	332	P	P	12 32 43.3	+0.9
GTA				pP	pP	12 32 47.1	-25
GTA				pmax	pmax		
	comp=Z,16nm,0.6s						
HILR	Hailar Array B	57.30	353	P	P	12 33 06.9	-0.5
	comp=Z,1.1nm,0.4s,baz=158,slow=8.5,SNR=1.2						
	comp=Z,1.1nm,0.4s						
ULN	Ulaanbaatar	58.31	343	P	P	12 33 15.5	+0.9
ULN				IAmb	IAmb	12 33 16.8	
	comp=Z,2.8nm,0.5s						
SONM	Songino Array	58.48	342	P	P	12 33 16.1	+0.4
	comp=Z,2.4nm,0.8s,baz=160,slow=8.8,SNR=12						
	comp=Z,2.4nm,0.8s						
SONM	Songino Array	58.48	342	P	P	12 33 16.6	+0.9
PEA0B	Petropavlovsk-	65.13	19	P	P	12 33 59.6	-0.3
PETK	Petropavlovsk-	65.13	19	P	P	12 33 59.6	-0.3
	comp=Z,4.5nm,0.7s,baz=170,slow=4.2,SNR=4.3						
	comp=Z,4.5nm,0.7s						
PETK	Petropavlovsk-	65.13	19	P	P	12 33 59.8	-0.2
WUS	Wushi	66.35	321	P	P	12 34 08.7	+0.5
WUS				IAmb	IAmb	12 34 49.1	
	comp=Z,8.4nm,1.4s						
KSH	Kashi	67.52	318	P	P	12 34 16.0	+0.3
KSH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MKAR	Makanchi Array	67.93	327	P	P	12 34 17.7	-0.2
	comp=Z,8.2nm,0.5s,baz=116,slow=8.6,SNR=158						
	comp=Z,8.2nm,0.5s						
MKAR	Makanchi Array	67.93	327		P	12 34 17.9	0.0
MAKZ	Makanchi	68.10	327		P	12 34 19.1	0.0
MAKZ				IAmb	IAmb	12 34 54.8	
	comp=Z,11nm,1.1s						
KDJ	Kajisay	68.14	321	IAmb	IAmb	12 34 21.0	
	comp=Z,4.9nm,0.9s						
YAK	Yakutsk	69.27	0	P	P	12 34 25.4	-0.4
AAK	Ala-Archa	70.09	320		P	12 34 31.9	+0.3
AAK				IAmb	IAmb	12 34 33.1	
	comp=Z,6.7nm,0.8s						
ZAA0	Zalesovo Array	71.44	334	P	P	12 34 38.0	-1.2
ZAA0				IAmb	IAmb	12 34 54.7	
	comp=Z,5.9nm,0.9s						
ZALV	Zalesovo Beam	71.44	334	P	P	12 34 38.3	-0.9
	comp=Z,5.2nm,0.6s,baz=294,slow=1.5,SNR=6.0						
	comp=Z,5.2nm,0.6s						
ZALV	Zalesovo Beam	71.44	334	P	P	12 34 38.5	-0.7
KURBB	Kurchatov Arra	72.25	329	P	P	12 34 44.3	+0.2
	comp=Z,11nm,0.6s,baz=129,slow=5.1,SNR=108						
	comp=Z,11nm,0.6s						
KURK	Kurchatov	72.26	329		P	12 34 43.9	-0.3
BVAR	Borovoye Array	77.78	328	P	P	12 35 15.8	-0.1
	comp=Z,1.9nm,0.4s,baz=111,slow=7.1,SNR=15						
	comp=Z,1.9nm,0.4s						
BORK	Borovoye	77.83	328		P	12 35 15.9	-0.3
TIXI	Tiksi	78.92	0		P	12 35 20.6	-1.2
TIXI				IAmb	IAmb	12 35 21.3	
	comp=Z,7.8nm,0.6s						
NRIK	Noril'sk	81.69	346	P	P	12 35 36.5	-0.1
	comp=Z,1.2nm,0.3s,baz=148,slow=9.5,SNR=2.7						
	comp=Z,1.2nm,0.3s						
NRIK	Noril'sk	81.69	346	IAmb	IAmb	12 35 37.0	
	comp=Z,2.3nm,0.9s						
ABKAR	Akbulak array	82.09	322		P	12 35 38.7	-0.4
AKTO	Aktyubinsk	83.67	323	P	P	12 35 47.5	+0.2
	comp=Z,3.0nm,0.6s,baz=100,slow=6.9,SNR=7.8						
	comp=Z,3.0nm,0.6s						
ARTI	Arti	85.51	328	P	P	12 35 55.2	-1.2
	comp=Z,3.6nm,0.6s,baz=126,slow=3.4,SNR=6.8						
	comp=Z,3.6nm,0.6s						
ARTI	Arti	85.51	328	P	P	12 35 55.7	-0.7
C18K	Utukok River	89.75	20	P	P	12 36 15.7	-0.8
C18K				IAmb	IAmb	12 36 20.0	
	comp=Z,4.8nm,1.3s						
D19K	Kuna River	90.77	21	P	P	12 36 20.9	-0.3
D19K				IAmb	IAmb	12 36 43.6	
	comp=Z,7.2nm,1.5s						
ILAR	Eielson Array	94.27	25	P	P	12 36 35.5	-1.9
	comp=Z,0.4nm,0.8s,baz=270,slow=3.6,SNR=4.3						
	comp=Z,0.4nm,0.8s						

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*GCG **19** 12:35:26.4±0.9, 13°.52N×91°.52W, h18^{km}±5^{km}, MD4.9, ML5.6*

*CATAC **19** 12:35:29.4±0.3, 14°N±1°×9°1W±°, h6^{km}±2^{km}, M5.9/31, mb6.2/24, mB6.3/23, MLv5.9/31, Mw(mB)6.0/23, MwMwp5.5/11, Mwp5.7/11, Error ellipse: s-maj=4.0km s-min=2.7km az=69.4, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}4.54; $M_{\theta\theta}$-3.84; $M_{\phi\phi}$-0.70; $M_{r\theta}$1.15; $M_{\theta\phi}$1.79; $M_{\phi r}$-0.35; Fault plane solution: $M_0$4.74988×10^{17} NP1:ϕ_s112.42628°, δ52.30076°, λ87.62921°. NP2:ϕ_s296.29949°, δ37.76265°, λ93.06373°. Principal axes: T 4.6949, Plg82.4864°, Azm9.5002°; N 0.1082, Plg1.8756°, Azm113.8766°; P -4.8030, Plg7.2731°, Azm204.1160°; confirmed*

*SNET **19** 12:35:29.4±1.9, 13°.61N×91°.39W, h35^{km}, ML5.6*

*NEIC **19** 12:35:31.3±2.9, 13°.74N±0°.06×91°.23W±0°.08, h21^{km}±1^{km}, mb5.4/751, Ms_20 5.5/458, Mwb5.7/130, Mww5.9/85, Error ellipse: s-maj=14.9km s-min=8.3km az=237.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}3.81; $M_{\theta\theta}$-3.06; $M_{\phi\phi}$-0.75; $M_{r\theta}$1.80; $M_{\theta\phi}$1.52; $M_{\phi r}$-0.73; Fault plane solution: $M_0$4.28000×10^{17} NP1: ϕ_s298.46000°, δ31.54000°, λ93.41000°. NP2: ϕ_s114.46000°, δ58.52000°, λ87.91000°. Principal axes: T 4.2758, Plg76.0000°, Azm18.0000°; N 0.0040, Plg2.0000°, Azm116.0000°; P -4.2799, Plg13.0000°, Azm206.0000°;*

*IPGP **19** 12:35:32.0, 13°.69N×91°.31W, h26^{km}, Mw5.8, Fault plane solution: NP1:ϕ_s313.00000°, δ32.00000°, λ92.00000°. NP2:ϕ_s130.00000°, δ58.00000°, λ88.00000°.*

*NEIC **19** 12:35:32.7, 13°.70N×91°.26W, h30^{km}, Moment Tensor Solution. Duration: 4^{s}.4 Moment tensor: Scale 10^{17}Nm; M_{rr}6.94; $M_{\theta\theta}$-5.10; $M_{\phi\phi}$-1.83; $M_{r\theta}$3.61; $M_{\theta\phi}$2.73; $M_{\phi r}$-1.05; Fault plane solution: $M_0$7.77000×10^{17} NP1: ϕ_s305.22000°, δ31.12000°, λ100.19000°. NP2: ϕ_s113.36000°, δ59.42000°, λ83.90000°. Principal axes: T 7.9439, Plg75.0000°, Azm7.0000°; N -0.3672, Plg5.0000°, Azm116.0000°; P -7.5767, Plg14.0000°, Azm208.0000°;*

*NEIC **19** 12:35:32.6, 13°.74N×91°.26W, h29^{km}*

*GFZ **19** 12:35:32.4, 13°.70N×91°.19W, h28^{km}, MW5.9, Moment Tensor Solution. s24 Moment tensor: M_{rr}5.36; $M_{\theta\theta}$-4.13; $M_{\phi\phi}$-1.23; $M_{r\theta}$5.50; $M_{\theta\phi}$2.11; $M_{\phi r}$-1.68; Fault plane solution: NP1:ϕ_s110.00000°, δ69.00000°, λ85.00000°. NP2:ϕ_s305.00000°, δ22.00000°, λ104.00000°. Principal axes: T 7.9300, Plg66.0000°, Azm10.0000°; N -0.2200, Plg5.0000°, Azm112.0000°; P -7.7100, Plg24.0000°, Azm204.0000°;*

*NEIC **19** 12:35:32.7, 13°.70N×91°.26W, h30^{km}*

*GCMT **19** 12:35:34.3±0.1, 13°.52N±0°.01×91°.57W±0°.01, h29^{km}, MW5.9/153, Moment Tensor Solution. s152,c313; s153,c476; Duration: 2^{s}.2 Moment tensor: Scale 10^{18} Nm; M_{rr}0.71±.01; $M_{\theta\theta}$-0.57±.01; $M_{\phi\phi}$-0.14±.01; $M_{r\theta}$0.45±.01; $M_{\theta\phi}$0.28±.00; $M_{\phi r}$-0.31±.01; Best double couple: $M_0$0.88900×10^{18} NP1:ϕ_s291.00000°, δ27.00000°, λ81.00000°. NP2:ϕ_s121.00000°, δ64.00000°, λ94.00000°. Principal axes: T 0.8940, Plg71.0000°, Azm41.0000°; N -0.0080, Plg4.0000°, Azm299.0000°; P -0.8850, Plg19.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*IDC **19** 12:35:35.2±1.7, 13°.91N×90°.95W, h64^{km}±14^{km}, mb4.7/27, mbtmp5.0/29, MS5.3/61 Error ellipse: s-maj=17.0km s-min=9.3km az=58.0*

*MOS **19** 12:35:35.4±1.5, 13°.85N×91°.00W, h61^{km}, mb5.5/31, MS5.4/10, Error ellipse: s-maj=9.4km s-min=5.1km az=111.5*

ISC 19 12:35:30.0±0.4, **13°.62N**±0°.03×**91°.39W**±0°.03, **h25**^{km}±2^{km}, **n1536**, σ**1^{s}.78**/1074, **mb5.4**/372, **MS5.5**/321, **12C-6D**, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG2	El Palmar, Qui	0.81	1	*e*P	Pn	12 35 48.5	+2.6
STG8	El Palmar, Qui	0.82	3	*e*P	Pn	12 35 48.6	+2.5
STG8				IAML		12 36 19.3	
	comp=E,73µm,0.3s						
ESSJ	San Jos, E	0.87	94	*e*P	Pb	12 35 42.9	-3.5
ESSG	Sabana Grande	0.93	36	*e*P	Pb	12 35 45.9	-1.7
ESSG				IAML		12 36 03.4	
	comp=E,112µm,0.5s						
RTAL	Retalhuleu	0.94	342		Pb	12 35 47.2	-0.4
RTAL	Retalhuleu	0.94	342	*e*P	Pb	12 35 46.7	-1.0
RTAL				*e*S	Sn	12 36 01.9	+1.6
RTAL	Retalhuleu	0.94	342	P	Pb	12 35 46.2	-1.5
RTAL	Retalhuleu	0.94	342	S	Sn	12 36 00.7	+0.4
FG16	Alotenango, Sa	1.07	53	*e*P	Pn	12 35 46.6	-3.0
FG16				*i* S	Sn	12 36 04.2	+0.4
FG16				IAML		12 36 11.2	
	comp=N,415µm,0.3s						
PCG5	San Vicente Pa	1.15	59	*e*P	Pn	12 35 47.6	-3.0
SOKI	Kika Raxquin	1.19	360	*e*P	Pn	12 35 50.0	-1.4
SOKI				IAML		12 36 37.2	
	comp=N,119µm,0.8s						
QUEO	Labor Ovalle	1.25	355	*e*P	Pn	12 35 51.2	-0.8
GCG4	OSOP	1.27	41	*e*P	Pn	12 35 51.9	-0.4
GCG4				IAML		12 36 14.9	
	comp=N,59µm,0.4s						
FAME	Alcaldia de Sa	1.36	81	P	Pn	12 35 51.0	-2.3
FAME	Alcaldia de Sa	1.36	81	S	Sn	12 36 10.5	0.0
SMCA	Catarina	1.39	332	*e*P	Pn	12 35 51.7	-2.1
SMCA				*i* S	Sn	12 36 10.0	-1.4
SMCA				IAML		12 36 25.1	
	comp=N,18µm,0.5s						
NUBE	Las Nubes	1.59	80	*e*P	Pn	12 35 54.9	-1.8
NUBE				*e*S	Sn	12 36 14.6	-2.0
NUBE	Las Nubes	1.59	80	*e*P	Pn	12 35 54.7	-2.0
NUBE	Las Nubes	1.59	80	⇓P	Pn	12 35 54.7	-2.0
NUBE	Las Nubes	1.59	80	S	Sn	12 36 16.6	+0.1
APG	El Apazote	1.64	33	P	Pn	12 35 57.6	+0.2
	comp=N,2µm,0.7s,baz=181,slow=11,SNR=492						
HUEH	Huehuetenango	1.69	356		Pn	12 35 58.5	+0.4
HUEH	Huehuetenango	1.69	356	*e*P	Pn	12 35 58.8	+0.8
HUEH	Huehuetenango	1.69	356	*e*P	Pn	12 35 58.2	+0.2
HUEH				IAML		12 36 40.7	
	comp=E,87µm,0.6s						
HUEH	Huehuetenango	1.69	356	P	Pn	12 35 58.1	0.0
HUEH	Huehuetenango	1.69	356	S	Sb	12 36 20.4	-1.0
RTR	El Retiro	1.72	81	*e*P	Pn	12 35 57.0	-1.4
RBDL	Robledal	1.73	73	*e*P	Pn	12 35 57.9	-0.6
CEVE	Cerro Verde	1.73	83	*e*P	Pn	12 35 57.5	-1.1
CEVE				*e*S	Sn	12 36 19.0	-1.1
CEVE	Cerro Verde	1.73	83	P	Pn	12 35 57.6	-1.1
SBLS	San Blas	1.73	83	*e*P	Pn	12 35 56.9	-1.8
SNJE	San Jose	1.75	82	*e*P	Pn	12 35 57.2	-1.7
UNIC	Universidad Ca	1.83	79	*e*P	Pn	12 35 58.4	-1.5
UNIC	Universidad Ca	1.83	79	S	Sb	12 36 23.5	-1.8
UNIC	Universidad Ca	1.83	79	P	Pn	12 35 58.5	-1.3
JAYA	Jayaque - finc	1.89	89	*e*P	Pn	12 35 59.5	-1.3
JAYA	Jayaque - finc	1.89	89	*e*P	Pn	12 35 58.9	-1.9
JAYA				*e*S	Sn	12 36 23.3	-0.6
CEDA	San Andres	1.95	85	*e*P	Pn	12 36 00.6	-0.9
CEDA	San Andres	1.95	85	S	Sb	12 36 26.8	-2.0
CEDA	San Andres	1.95	85	P	Pn	12 36 01.1	-0.4
LALI	Alcalda de L	2.02	94	*e*P	Pn	12 36 01.6	-0.8
LALI				*i* S	Sn	12 36 27.4	+0.6
LALI				IAML		12 36 38.7	
	comp=N,9µm,0.3s						
LALI	Alcalda de L	2.02	94	⇓P	Pn	12 36 01.8	-0.6
LALI	Alcalda de L	2.02	94	S	Sn	12 36 28.5	+1.7
PMON	Piamonte	2.02	87	⇑P	Pn	12 36 01.3	-1.3
PMON	Piamonte	2.02	87	S	Sn	12 36 28.2	+1.1
BOQS	Boqueron	2.06	87	*e*P	Pn	12 36 02.0	-1.1
AVCB	Coban	2.07	27	*e*P	Pn	12 36 02.8	-0.5
AVCB				IAML		12 36 59.0	
	comp=E,167µm,0.6s						
QUEZ	Alcaldia de Qu	2.07	84	*e*P	Pn	12 36 01.8	-1.3
UEES	Universidad Ev	2.10	87	P	Pn	12 36 02.6	-0.9
UEES	Universidad Ev	2.10	87	S	Sn	12 36 30.5	+1.6
MTO3	Montecristo	2.12	68		Pn	12 36 03.5	-0.4
MTO3	Montecristo	2.12	68	*e*P	Pn	12 36 03.3	-0.6
MTO3	Montecristo	2.12	68	S	Sb	12 36 31.6	-2.2
MTO3	Montecristo	2.12	68	P	Pn	12 36 03.6	-0.4
UTEC	Universidad Te	2.13	88	S	Sn	12 36 31.5	+1.7
UTEC	Universidad Te	2.13	88	P	Pn	12 36 04.0	-0.1
PANCS	Alcalda de	2.15	90	P	Pn	12 36 04.1	-0.2
PANCS	Alcalda de	2.15	90	S	Sn	12 36 30.7	+0.5
LOMA	Loma Larga	2.16	89	*e*P	Pn	12 36 03.1	-1.4
LOMA	Loma Larga	2.16	89	P	Pn	12 36 04.6	+0.1
LOMA	Loma Larga	2.16	89	S	Sn	12 36 30.9	+0.4
IGN	Direccin Gen	2.16	87	P	Pn	12 36 06.1	+1.6
IGN	Direccin Gen	2.16	87	S	Sn	12 36 32.1	+1.6
UDBS	Universidad Do	2.18	87	S	Sn	12 36 32.2	+1.4
UDBS	Universidad Do	2.18	87	P	Pn	12 36 04.5	-0.1
ESQI	Esquipulas	2.20	65		Pn	12 36 04.9	0.0
ESQI	Esquipulas	2.20	65	*e*P	Pn	12 36 04.3	-0.7
ESQI	Esquipulas	2.20	65	S	Sn	12 36 32.9	+1.4
ESQI	Esquipulas	2.20	65	⇓P	Pn	12 36 04.8	-0.2
ZAFR2	Estanzuela, Za	2.20	64	*e*P	Pn	12 36 05.8	+0.9
PAVA	Las Pavas	2.39	88	S	Sn	12 36 37.8	+1.7
PAVA	Las Pavas	2.39	88	⇓P	Pn	12 36 07.4	-0.2
LLGN	La Laguna	2.44	77	S	Sn	12 36 39.3	+1.9
LLGN	La Laguna	2.44	77	P	Pn	12 36 08.7	+0.4
UESV	Universidad de	2.53	89	P	Pn	12 36 10.9	+1.4
UESV	Universidad de	2.53	89	S	Sn	12 36 41.3	+1.6
TECO	Alcaldia de Te	2.54	92	P	Pn	12 36 09.3	-0.4
TECO	Alcaldia de Te	2.54	92	S	Sn	12 36 41.9	+2.1
SCLA	Alcaldia de Sa	2.59	88	⇑P	Pn	12 36 10.1	-0.2
SCLA	Alcaldia de Sa	2.59	88	S	Sn	12 36 42.6	+1.5
CNRM	Centro Naciona	3.14	92	S	Sn	12 36 56.2	+1.7
CNRM	Centro Naciona	3.14	92	P	Pn	12 36 19.2	+1.4
IZABA	Izabal, Puerto	3.43	52	P	Pn	12 36 22.6	+0.8
CNCH	Conchagua	3.48	95	P	Pn	12 36 23.6	+0.9
CNCH	Conchagua	3.48	95	S	Sn	12 37 04.6	+1.5
PETF	Flores	3.59	24		Pn	12 36 25.4	+1.4
PETF	Flores	3.59	24	*e*P	Pn	12 36 25.3	+1.3
PETF	Flores	3.59	24	P	Pn	12 36 25.2	+1.2
CSGN	Cosiguina Volc	3.79	99	P	Pn	12 36 26.4	-0.4
CSGN				S	Sn	12 37 12.4	+1.7
POTN	Potosi Cosigui	3.83	99	P	Pn	12 36 28.8	+1.4
POTN				S	Sn	12 37 13.5	+1.8
TGUH	Tegucigalpa,Un	4.03	83		Pn	12 36 29.7	-0.4
TGUH	Tegucigalpa,Un	4.03	83	P	Pn	12 36 30.0	-0.2
CRIN	San Cristobal	4.33	102		Pn	12 36 36.3	+2.0
CRIN	San Cristobal	4.33	102	P	Pn	12 36 36.2	+2.0

CRIN	San Cristobal	4.33	102	P	Pn	12 36 37.1	+2.8
PKGN	Cerro Pekin	4.41	102	P	Pn	12 36 35.2	0.0
YUSH	Yuscaran	4.43	85	P	Pn	12 36 35.3	-0.4
QUEN	Al S del Volca	4.54	103	P	Pn	12 36 38.7	+1.5
HERN	Volcan Telica	4.56	102		Pn	12 36 36.7	-0.7
TELN	Telica	4.56	102	P	Pn	12 36 37.2	-0.3
POLN	Al Sur del Vol	4.57	102	P	Pn	12 36 37.4	-0.1
CNGA	Al SSO del Vol	4.71	103	P	Pn	12 36 39.2	-0.3
CNGN	Cerro Negro	4.71	103		Pn	12 36 38.6	-0.8
CNGN	Cerro Negro	4.71	103	P	Pn	12 36 39.5	0.0
OCON	Estacion meteo	4.78	89	P	Pn	12 36 41.2	+0.7
LEVN	Ruinas Leon Vi	4.81	104	P	Pn	12 36 42.7	+1.9
CMIG	Matias Romero	4.82	316	P	Pn	12 36 40.6	-0.3
	comp=E,43nm,0.4s,baz=129,slow=10,SNR=62						
CMIG				S	Sn	12 37 38.1	+2.1
	comp=E,676nm,0.5s,baz=104,slow=12,SNR=4.2						
CMIG				LR	LR	12 39 03.9	
	comp=E,54µm,21.2s,baz=130,slow=42						
MOMN	Momotombo	4.88	104	P	Pn	12 36 41.4	-0.4
COPN	Copaltepe	4.90	106	P	Pn	12 36 41.4	-0.6
LIMN	Finca el Limon	4.92	96	P	Pn	12 36 41.7	-0.8
LIMN				S	Sn	12 37 39.3	+0.5
MOM2	El Cardon	4.93	103	P	Pn	12 36 42.1	-0.3
RCFN	Al S de San Ju	5.04	90	P	Pn	12 36 45.1	+0.9
RCFN				S	Sn	12 37 42.5	+0.8
RCVN	Varillal2	5.06	90	P	Pn	12 36 44.0	-0.3
APQ2	Apoyeque	5.14	105	P	Pn	12 36 47.3	+2.0
TISN	Laguna Tiscapa	5.21	106	P	Pn	12 36 46.0	-0.3
USIM	UNAN	5.21	106		Pn	12 36 47.0	+0.7
UNAN	Cigeo UNAN	5.22	106	P	Pn	12 36 47.2	+0.8
MGAN	Managua	5.23	106		Pn	12 36 48.0	+1.4
MGAN	Managua	5.23	106	P	Pn	12 36 48.0	+1.4
MGAN	Managua	5.23	106	P	Pn	12 36 48.2	+1.6
SCIG	Sabancuy	5.32	2	P	Pn	12 36 49.4	+1.7
MAS3	Al N del Volca	5.33	107	P	Pn	12 36 48.9	+0.9
SABN	Sabanita	5.37	107	P	Pn	12 36 48.6	+0.1
MATN	Matagalpa	5.37	97	P	Pn	12 36 47.3	-1.3
MATN	Matagalpa	5.37	97	S	Sn	12 37 50.5	+0.8
NANN	Nandasmo	5.41	107	P	Pn	12 36 51.1	+2.0
BOAB	BOACO BROADBAN	5.70	101		Pn	12 36 52.0	-1.1
BOAB	BOACO BROADBAN	5.70	101	P	Pn	12 36 52.0	-1.1
LCRUZ	La Cruz	6.17	114	*e*P	Pn	12 37 01.1	+1.5
CARN	Rivas	6.23	112	P	Pn	12 37 01.7	+1.4
CARN	Rivas	6.23	112	*e*P	Pn	12 37 05.0	+4.7
ELI1	Hacienda Flor	6.43	117	P	Pn	12 37 04.2	+1.0
ELI1	Hacienda Flor	6.43	117	*e*P	Pn	12 37 06.9	+3.7
SIUN	Universidad Ur	6.43	88		Pn	12 37 03.3	+0.1
SIUN	Universidad Ur	6.43	88	P	Pn	12 37 05.2	+2.0
ALIBA	Liberia Airpor	6.46	117	*e*P	Pn	12 37 05.3	+1.8
LAPC	Finca la Perla	6.48	115	*e*P	Pn	12 37 05.2	+1.4
BUAI	Buenos Aires	6.52	114	*e*P	Pn	12 37 07.8	+3.4
DELF	Filadelfia	6.53	118	*e*P	Pn	12 37 07.6	+3.2
PEJA	Penjamo Buenos	6.53	114	*e*P	Pn	12 37 05.8	+1.3
VRLE	La Escondida,	6.53	115	*e*P	Pn	12 37 07.0	+2.4
VORI	VORI	6.54	115	*e*P	Pn	12 37 09.6	+4.8
GPS3	Bodega del ICE	6.55	115	*e*P	Pn	12 37 10.4	+5.6
GPS1	Guardaparques	6.55	115	*e*P	Pn	12 37 09.1	+4.2
GPS2	Hotel Rincn d	6.56	115	*e*P	Pn	12 37 06.9	+1.9
JUD3	Juan Diaz 3	6.68	120		Pn	12 37 07.9	+1.2
JUD3	Juan Diaz 3	6.68	120	*e*P	Pn	12 37 08.3	+1.7
CLARA	Aguas Claras	6.70	114	*e*P	Pn	12 37 08.0	+1.2
MESS	Mesas	6.70	115	*e*P	Pn	12 37 08.3	+1.4
COLC	Colonia	6.73	115	*e*P	Pn	12 37 10.5	+3.3
HORNC	Hornillas	6.73	115	*e*P	Pn	12 37 09.1	+1.8
BAGA	Bagaces	6.74	116	*e*P	Pn	12 37 09.2	+1.9
VMAR	Armenia, Volca	6.75	114	*e*P	Pn	12 37 09.6	+2.1
PLVR	Palo Verde	6.75	118	*e*P	Pn	12 37 09.3	+1.7
CUI	Cuipilapa	6.77	115	*e*P	Pn	12 37 08.3	+0.5
NICO	Nicoya	6.78	120	*e*P	Pn	12 37 10.4	+2.6
UPAL	Upala	6.80	113	*e*P	Pn	12 37 10.9	+2.7
MOTZ	Rio Naranjo	6.84	115	*e*P	Pn	12 37 11.1	+2.4
CMARA	Lajas Hojancha	6.85	121	P	Pn	12 37 08.6	-0.4
CMARA	Lajas Hojancha	6.85	121	*e*P	Pn	12 37 11.2	+2.2
TENO	El Achiote	6.91	114	*e*P	Pn	12 37 12.2	+2.4
TIMP	Tierras Morena	6.93	115	*e*P	Pn	12 37 11.4	+1.4
CNAS	Canas	6.93	117	*e*P	Pn	12 37 13.7	+3.7
INVE	Universidad In	6.94	116	*e*P	Pn	12 37 13.1	+3.0
QUEB	Quebradon, Cot	7.02	114	*e*P	Pn	12 37 13.4	+2.2
TILA	Tilaran	7.02	116	*e*P	Pn	12 37 13.9	+2.6
JTS	Las Juntas de	7.12	117	P	Pn	12 37 13.2	+0.6
	comp=E,125nm,0.6s,baz=299,slow=7.0,SNR=64						
JTS				S	Sn	12 38 28.8	-4.0
	comp=E,206nm,0.4s,baz=54,slow=19,SNR=1.2						
JTS				LR	LR	12 40 00.0	
	comp=E,32µm,19.7s,baz=296,slow=38						
JTS	Las Juntas de	7.12	117		Pn	12 37 15.5	+2.9
JTS	Las Juntas de	7.12	117	*i* P	Pn	12 37 14.0	+1.4
JTS	Las Juntas de	7.12	117	P	Pn	12 37 13.5	+0.9
JTS	Las Juntas de	7.12	117	*e*P	Pn	12 37 15.1	+2.5
TABAC	Tabacon	7.19	115	*e*P	Pn	12 37 16.7	+3.2
JCR1	Jicaral	7.20	121	*e*P	Pn	12 37 14.8	+1.1
TEIG	Tepich	7.21	24	P	Pn	12 37 15.5	+1.7
	comp=E,0.1nm,0.5s,baz=311,slow=24,SNR=3.2						
TEIG	Tepich	7.21	24		Pn	12 37 15.0	+1.2
TEIG	Tepich	7.21	24	P	Pn	12 37 15.1	+1.3
TEIG	Tepich	7.21	24	P	Pn	12 37 18.6	+4.8
	comp=E,214µmcomp=E,118µmcomp=E,10µm,0.7s						
CASO	Castillo	7.24	115	*e*P	Pn	12 37 14.8	+0.5
ARE1	Arenal 1	7.25	115	*e*P	Pn	12 37 15.0	+0.6
VARE2	V. Arenal	7.25	115	*e*P	Pn	12 37 15.3	+0.9
CEDE	Laguna Cedeo	7.25	115	*e*P	Pn	12 37 17.6	+3.1
VACR	Volcan Arenal	7.28	115	*e*P	Pn	12 37 17.0	+2.2
FORC	Fortuna	7.29	115	*e*P	Pn	12 37 17.3	+2.4
SOCE	Pocosol	7.37	115	*e*P	Pn	12 37 18.3	+2.2
ARZA	Esparza	7.51	118	*e*P	Pn	12 37 20.5	+2.6
RAMO	San Ramon	7.64	117	*e*P	Pn	12 37 24.4	+4.6
VPL1	V. Platanar	7.65	115	*e*P	Pn	12 37 21.1	+1.0
PALD	Palmares	7.68	117	*e*P	Pn	12 37 22.5	+2.1
ARTO	Ro Cuarto	7.74	114	*e*P	Pn	12 37 27.3	+6.1
ATEO	Atenas	7.76	117	*e*P	Pn	12 37 24.9	+3.5
VPS8	V Poas	7.79	115	*e*P	Pn	12 37 25.8	+3.7
BILN	Bilwi Airport	7.80	86		Pn	12 37 22.1	+0.2
BILN	Bilwi Airport	7.80	86	P	Pn	12 37 22.9	+1.0
BILN	Bilwi Airport	7.80	86	*e*P	Pn	12 37 22.8	+0.9
BELE	Belen	7.93	116	*e*P	Pn	12 37 27.2	+3.4
TLIG	Tlapa	7.94	300	P	Pn	12 37 26.3	+2.3
HDC	Heredia	7.98	116	*e*P	Pn	12 37 26.7	+2.2
HDC	Heredia	7.98	116	*e*P	Pn	12 37 26.8	+2.2
ACOS	Acosta	8.04	117	*e*P	Pn	12 37 28.9	+3.6
LUJA	Lujan	8.05	116	*e*P	Pn	12 37 29.5	+4.0
ECI	Escuela Centro	8.07	116	*e*P	Pn	12 37 29.8	+4.1
AMPA	Desamparados	8.08	117	*e*P	Pn	12 37 28.7	+2.9
TRT2	Tortugero	8.09	111	P	Pn	12 37 26.8	+1.0
TRT2	Tortugero	8.09	111	S	Sn	12 38 58.2	+1.7
TRT2	Tortugero	8.09	111	*e*P	Pn	12 37 24.0	-1.8
CORON	Coronado	8.09	116	*e*P	Pn	12 37 30.5	+4.4
CVIMO	Finca Echandi	8.12	115	*e*P	Pn	12 37 28.8	+2.3
CARI	Cariari	8.16	113	*e*P	Pn	12 37 28.0	+1.1
PILE	Guapiles	8.18	114	*e*P	Pn	12 37 32.2	+5.1
PITB	Pirrs, San	8.22	118	*e*P	Pn	12 37 31.3	+3.4
VICA	Volcano Irazu	8.23	115	*e*P	Pn	12 37 30.2	+2.1
RAFA	San Farael, Vo	8.27	115	*e*P	Pn	12 37 32.5	+3.8
CVTR	Volcan Turrial	8.29	115	*e*P	Pn	12 37 29.1	+0.1
PCAYA	Pacayas	8.29	116	*e*P	Pn	12 37 32.6	+3.8
CVTV	Tajo	8.30	115	*e*P	Pn	12 37 31.5	+2.4
ABRB	Las Abras (San	8.33	115	*e*P	Pn	12 37 32.9	+3.5
VTCV	VTCV, Calle Va	8.33	115	*e*P	Pn	12 37 32.5	+3.1
EGUB	Earth Gu¡pi	8.36	113	*e*P	Pn	12 37 31.8	+2.2
RESJ	San Isidro (Tu	8.38	114	*e*P	Pn	12 37 32.4	+2.3
RVLA	Villa Bonita	8.40	114	*e*P	Pn	12 37 32.9	+2.8
TURIB	Turrialba	8.40	115	*e*P	Pn	12 37 33.0	+2.8
LCOCO	El Coco	8.44	114	*e*P	Pn	12 37 32.4	+1.7
IRES	Siquirres	8.48	114	*e*P	Pn	12 37 33.0	+1.7
BUS1	Rivas	8.51	118	*e*P	Pn	12 37 34.3	+2.2
SAJE	San Jernim	8.82	118	*e*P	Pn	12 37 38.2	+2.2
OCHAL	Ojochal	8.83	120	P	Pn	12 37 38.6	+2.5
EDPE	Pejibaye, P	8.86	119	*e*P	Pn	12 37 38.8	+2.3
BURE	Buenos Aires	9.05	118	*e*P	Pn	12 37 42.3	+3.2
PANP	Palmar Norte	9.06	120	*e*P	Pn	12 37 41.4	+2.2
DRK0	Durika	9.09	118	P	Pn	12 37 41.3	+1.6
DRK0	Durika	9.09	118	*e*P	Pn	12 37 40.9	+1.2
FIMO	Fila Mora	9.13	119	*e*P	Pn	12 37 42.4	+2.1
EDP2	Potrero Grande	9.27	119	*e*P	Pn	12 37 45.4	+3.3
BRIBI	Bribri	9.29	114	*e*P	Pn	12 37 46.0	+3.5
PTJ1	Puerto Jimnez	9.41	122	S	Sn	12 39 31.3	+2.1
PIRO	Carate, Puerto	9.46	122		Pn	12 37 47.5	+2.8
PIRO	Carate, Puerto	9.46	122	P	Pn	12 37 47.0	+2.3
PIRO	Carate, Puerto	9.46	122	*e*P	Pn	12 37 46.9	+2.3
EDAD	Golfito	9.46	121	*e*P	Pn	12 37 47.4	+2.6
FITO	Golfito	9.49	121	*e*P	Pn	12 37 48.0	+2.9
ALCO	Alturas Coton,	9.59	118	*e*P	Pn	12 37 46.8	+0.1
RSRNO	Rio Sereno	9.64	119	*e*P	Pn	12 37 52.3	+5.1
NELY	Ciudad Neily	9.65	120	*e*P	Pn	12 37 50.0	+2.7
SCLRA	Santa Clara, W	9.70	119	*e*P	Pn	12 37 51.4	+3.3
PRVC	Isla de Provid	9.76	90		Pn	12 37 49.7	+0.9
DMCAL	E. de Neily	9.77	119	*e*P	Pn	12 37 51.0	+2.0
BRU2	Volcan	9.79	118		Pn	12 37 51.3	+1.9
BRU2	Volcan	9.79	118	*e*P	Pn	12 37 50.2	+0.8
PTPA	Petro Terminal	9.95	122	*e*P	Pn	12 37 53.8	+2.4
JEFFS	S de V. Baru	9.99	119	*e*P	Pn	12 37 52.5	+0.5
BQTLY	Boquete Panama	10.01	118	*e*P	Pn	12 37 54.5	+2.2
LMNES	Limones	10.02	122	*e*P	Pn	12 37 54.9	+2.6
PBNVO	Pueblo Nuevo,	10.18	117	*e*P	Pn	12 37 56.0	+1.4
RBALA	Bur	10.21	117	*e*P	Pn	12 37 57.1	+2.1
SOR	Soroa	12.10	40		Pn	12 38 23.7	+2.8
SOR	Soroa	12.10	40	P	Pn	12 38 23.7	+2.8
BCIP	Isla Barro Col	12.16	110		Pn	12 38 22.3	+0.6
BCIP	Isla Barro Col	12.16	110	P	Pn	12 38 22.3	+0.6
BCIP	Isla Barro Col	12.16	110	P	Pn	12 38 24.2	+2.5
	comp=E,9µmcomp=E,4µmcomp=E,250nm,0.9s						
AZU	Azuero	12.37	117	*e*P	Pn	12 38 27.5	+3.0
MTDJ	Mount Denham	14.09	69		Pn	12 38 51.0	+2.9
MTDJ	Mount Denham	14.09	69	*i* P	P	12 38 51.9	-3.8
PAYG	Puerto Ayora	14.25	175	Pn	Pn	12 38 52.4	+2.1
PAYG	Puerto Ayora	14.25	175	P	P	12 38 57.4	+0.1
	comp=E,21µmcomp=E,6µmcomp=E,122nm,1.3s						
CAPC	Capurgana	14.64	108	P	P	12 39 06.0	+4.3
STH	Stony Hill	14.71	71	*i* P	Pn	12 38 56.8	+0.2
GWJ	Greenwich	14.79	71	*i* P	Pn	12 38 59.9	+2.3
PTAC	Punta Ardita,	14.83	114	P	Pn	12 38 57.9	-0.2
	comp=E,2µmcomp=E,102nm,0.9s						
APAC	Apartado, Choc	15.62	110	P	P	12 39 13.2	+0.6
	comp=E,13µmcomp=E,3µmcomp=E,185nm,1.2s						
061Z	Ochoppi	15.66	37	lAmb	lAmb	12 39 15.3	
	comp=Z,207nm,0.8s						
CHIV	Chivirico	15.66	64		Pn	12 39 10.7	+1.5
CHIV				lAmb	lAmb	12 39 14.4	
	comp=Z,62nm,1.1s						
735A	Kenedy	16.29	340	P	P	12 39 20.7	+0.9
SJCC	San Jacinto, C	16.30	101	P	Pn	12 39 17.5	+0.1
	comp=Z,9µmcomp=Z,3µmcomp=Z,207nm,1.0s						
DBBC	Dabeiba	16.31	112	P	P	12 39 19.4	-0.9
EF02	Christine	16.47	337	P	P	12 39 23.1	+1.2
EF02				lAmb	lAmb	12 39 28.3	
	comp=Z,48nm,0.7s						
EF04	Eagle Ford 04	16.61	340	P	P	12 39 22.6	-0.8
UREC	San Jos de Ur	16.64	109	P	P	12 39 24.0	+0.1
	comp=Z,12µmcomp=Z,2µmcomp=Z,109nm,1.6s						
HKT	Hockley	16.76	347	P	P	12 39 26.4	+1.4
HKT	Hockley	16.76	347	P	P	12 39 26.4	+1.4
HKT				pmax	pmax		
	comp=Z,100nm,1.3s						
GTBY	Guantanamo Bay	16.80	66	P	P	12 39 26.1	+0.6
MLDN	Muldoon	16.92	343	P	P	12 39 28.4	+1.6
CBOC	Ciudad Bolivar	17.00	115	P	P	12 39 29.5	+1.5
	comp=Z,11µmcomp=Z,10µmcomp=Z,236nm,1.5s						
441A	DeRidder	17.13	355	lAmb	lAmb	12 39 38.2	
	comp=Z,305nm,1.1s						
NMDO	Nuevo Mundo	17.13	64		P	12 39 28.9	-0.3
DWPF	Disney Wildern	17.14	31	P	P	12 39 30.1	+0.8
DWPF				lAmb	lAmb	12 39 34.8	
	comp=Z,457nm,1.7s						
PLMC	San Jos del P	17.23	119	P	P	12 39 30.3	-0.3
	comp=Z,11µmcomp=Z,6µmcomp=Z,240nm,0.8s						
HELC	Santa Helena	17.28	114	P	P	12 39 32.9	+1.6
	comp=Z,12µmcomp=Z,4µmcomp=Z,144nm,1.2s						
HNVL	Huntsville, TX	17.46	348	P	P	12 39 33.6	+0.7
656A	Willston	17.69	26	lAmb	lAmb	12 39 42.5	
	comp=Z,375nm,0.9s						
553A	Crawfordville	17.70	20	P	P	12 39 38.1	+2.7
346A	Big Creek Wild	17.77	5	P	P	12 39 39.0	+2.8
346A				lAmb	lAmb	12 39 44.2	
	comp=Z,487nm,1.0s						
JAMC	Jamundi, Valle	17.84	124	P	P	12 39 40.0	+2.6
	comp=Z,10µmcomp=Z,2µmcomp=Z,116nm,1.0s						
DRIO	Del Rio	17.90	333		P	12 39 38.7	+1.0
BRAL	Brewton	17.91	12	P	P	12 39 39.6	+1.8
435B	Jarrell	18.01	343		P	12 39 40.8	+1.9
PTBC	PUERTO BERRIO,	18.09	111	P	P	12 39 43.0	+3.0
	comp=Z,8µmcomp=Z,3µmcomp=Z,116nm,0.8s						
BBAC	Balboa, Cauca	18.13	128	P	P	12 39 43.6	+3.0
	comp=Z,13µmcomp=Z,4µmcomp=Z,197nm,1.0s						
POPC	Popayan, Colom	18.25	126	P	P	12 39 45.6	+3.7
	comp=Z,14µmcomp=Z,5µmcomp=Z,240nm,1.3s						
CMBC	Cumbal	18.42	132	P	Pn	12 39 48.5	+4.4
CUSE	Cuicocha Este	18.46	135	P	Pn	12 39 48.0	+3.4
	comp=Z,3µmcomp=Z,87nm,0.7s						
OTAV	Otavalo	18.47	135		Pn	12 39 45.2	+0.4
OTAV	Otavalo	18.47	135	P	Pn	12 39 45.2	+0.4
OTAV				pmax	pmax		
	comp=Z,55nm,1.3s						
OTAV	Otavalo	18.47	135	*e*P	P	12 39 44.8	+0.2
OTAV	Otavalo	18.47	135	P	Pn	12 39 46.8	+2.0
	comp=Z,10µmcomp=Z,2µmcomp=Z,67nm,1.3s						
VBMS	Vicksburg	18.53	2	lAmb	lAmb	12 39 50.1	
	comp=Z,206nm,0.9s						
OCAC	Ocana	18.53	105	P	P	12 39 44.9	0.0
	comp=Z,9µmcomp=Z,3µmcomp=Z,128nm,0.6s						
ORTC	Ortega, Tolima	18.64	120	P	Pn	12 39 50.3	+3.9
	comp=Z,12µmcomp=Z,9µmcomp=Z,306nm,0.8s						
HPIG		18.81	317		Pn	12 39 49.5	+0.9
SPBC	San Pablo de B	18.81	113	P	Pn	12 39 51.7	+3.1
	comp=Z,19µmcomp=Z,4µmcomp=Z,111nm,1.1s						
250A	Grady	18.86	14		Pn	12 39 50.7	+1.7
BRDY	Brady	18.92	340		P	12 39 49.2	+0.3
ROSC	El Rosal	18.96	116	P	Pn	12 39 52.7	+2.0
	comp=Z,169nm,0.8s,baz=99,slow=1.2,SNR=51						
ROSC	El Rosal	18.96	116	P	Pn	12 39 52.3	+1.6
ROSC				lAmb	lAmb	12 39 57.8	
	comp=Z,301nm,1.1s						
ROSC	El Rosal	18.96	116	P	Pn	12 39 52.3	+1.6
ROSC				pmax	pmax		
	comp=Z,301nm,1.1s						
ROSC	El Rosal	18.96	116	P	Pn	12 39 55.8	+5.1
	comp=Z,17µmcomp=Z,10µmcomp=Z,346nm,1.4s						
BONI	La Bonita	18.97	133	P	Pn	12 39 53.8	+3.2
	comp=Z,11µmcomp=Z,3µmcomp=Z,153nm,1.2s						
143A	Socs Landing,	18.99	360	lAmb	lAmb	12 39 54.6	
	comp=Z,228nm,0.9s						
SAND	Sanderson	19.04	330		Pn	12 39 50.9	-0.3
PRAC	Prado	19.04	120	P	Pn	12 39 53.9	+2.6
	comp=Z,13µmcomp=Z,9µmcomp=Z,319nm,1.3s						
146A	Union	19.05	6	lAmb	lAmb	12 39 56.4	
	comp=Z,227nm,1.1s						
WHTX	Lake Whitney,	19.11	344		Pn	12 39 53.0	+1.1
TIGA	Tifton	19.13	21	lAmb	lAmb	12 40 03.4	
	comp=Z,284nm,0.8s						
BARC	Barichara	19.23	110	P	Pn	12 39 58.0	+4.2
	comp=Z,2µmcomp=Z,2µmcomp=Z,165nm,0.9s						
CVER	Cruz Verde, Cu	19.33	116	P	Pn	12 39 57.7	+2.5
	comp=Z,11µmcomp=Z,360nm,0.9s						
TXAR	Lajitas Array	19.34	326	P	Pn	12 39 54.8	0.0
	comp=Z,35nm,0.8s,baz=153,slow=12,SNR=126						
TXAR				LR	LR	12 48 49.0	
	comp=Z,4µm,19.9s,baz=124,slow=41						
TXAR	Lajitas Array	19.34	326		Pn	12 39 55.0	+0.2
TXAR	Lajitas Array	19.34	326	P	Pn	12 39 55.0	+0.2
GARC	Garzon, Huila	19.40	124	P	Pn	12 39 57.0	+1.2
	comp=Z,13µmcomp=Z,19µmcomp=Z,97nm,0.7s						
PAMC	Pamplona, Colo	19.41	107	P	Pn	12 39 56.7	+0.6
	comp=Z,2µmcomp=Z,201nm,0.8s						
OZNA	Ozona	19.41	334	P	Pn	12 39 55.7	0.0
OZNA				lAmb	lAmb	12 40 00.9	
	comp=Z,300nm,1.2s						
H06E1	SOCORRO T-PHAS	19.44	288	T	T	13 00 02.1	
	SNR=1706						
H06S1	SOCORRO T	19.46	288	T	T	13 00 05.0	
	SNR=170						
CHIC	Chingaza	19.58	116	P	Pn	12 39 59.8	+1.7
	comp=Z,13µmcomp=Z,6µmcomp=Z,417nm,1.1s						
RUSC	La Rusia	19.60	111	P	P	12 39 57.1	+0.1
RUSC				lAmb	lAmb	12 40 04.5	
	comp=Z,147nm,0.9s						
RUSC	La Rusia	19.60	111	P	Pn	12 39 59.4	+0.9
	comp=Z,12µmcomp=Z,3µmcomp=Z,187nm,1.5s						
FLOC	Florencia	19.64	126	P	P	12 39 57.8	+0.9
FLOC	Florencia	19.64	126	P	Pn	12 39 59.2	+0.7
	comp=Z,12µmcomp=Z,7µmcomp=Z,588nm,1.5s						
Z47A	Carrollton	19.72	8	lAmb	lAmb	12 40 13.9	
	comp=Z,176nm,0.9s						
LRAL	Lakeview Retre	19.73	11	P	P	12 39 58.3	+0.5
Z38A	Mt. Pleasant	19.82	351	lAmb	lAmb	12 40 06.5	
	comp=Z,124nm,0.8s						
VILC	Villavicencio,	19.86	117	P	Pn	12 40 02.3	+1.1
	comp=Z,392nmcomp=Z,2µmcomp=Z,254nm,0.8s						
152A	Waverly Hall	19.91	17	lAmb	lAmb	12 40 08.9	
	comp=Z,156nm,0.8s						
COHC	Cochancay	20.01	142	P	Pn	12 40 02.6	-0.2
SDDR	Presa de Saban	20.01	72	P	P	12 40 01.4	+0.3
WLAR	White Oak Lake	20.04	356	lAmb	lAmb	12 40 06.0	
	comp=Z,133nm,0.8s						
FW06	Azle	20.07	345	lAmb	lAmb	12 40 12.4	
	comp=Z,142nm,0.9s						
PLPT	Palo Pinto	20.12	343	lAmb	lAmb	12 40 18.4	
	comp=Z,122nm,0.6s						
SLBS	Sierra La Lagu	20.20	302	P	Pn	12 40 07.2	+2.0
CCAR	Cane Creek	20.21	359	lAmb	lAmb	12 40 19.8	
	comp=Z,146nm,0.9s						
SGCY	Sterling City	20.27	335	P	P	12 40 04.1	+0.3
SGCY				lAmb	lAmb	12 40 09.2	
	comp=Z,291nm,0.8s						
Z35A	Perchaven, San	20.33	346	P	Pn	12 40 06.2	-0.3
Z35A				lAmb	lAmb	12 40 20.3	
	comp=Z,99nm,0.7s						
ABTX	Abilene, Hawle	20.36	340	P	P	12 40 05.0	+0.3
ABTX				lAmb	lAmb	12 40 09.3	
	comp=Z,137nm,0.8s						
SC01	Santiago de lo	20.63	71	P	P	12 40 08.7	+1.0
Y49A	Blount Mountai	20.65	12	lAmb	lAmb	12 40 11.7	
	comp=Z,137nm,0.9s						
LPIG	La Paz	20.69	303	P	Pn	12 40 12.4	+1.8
	comp=Z,131nm,1.0s,baz=152,slow=2.3,SNR=16						
	comp=Z,131nm,1.0s						
MACC	Macarena, Meta	20.76	122	P	P	12 40 10.2	+1.0
	comp=Z,11µmcomp=Z,4µmcomp=Z,232nm,0.7s						
OXF	Oxford	20.87	5	lAmb	lAmb	12 40 29.3	
	comp=Z,256nm,1.0s						
SDV	Santo Domingo	20.89	101	P	P	12 40 07.5	-3.2
	comp=Z,48nm,0.6s,baz=293,slow=7.1,SNR=64						
SDV				LR	LR	12 49 38.1	
	comp=Z,7µm,18.6s,baz=286,slow=41						
	comp=Z,48nm,0.6s						
SDV	Santo Domingo	20.89	101		P	12 40 09.6	-1.2
SDV				lAmb	lAmb	12 40 13.9	
	comp=Z,95nm,0.7s						
SDV	Santo Domingo	20.89	101	*e*P	P	12 40 09.7	-1.1
MIAR	Mount Ida	20.92	355	lAmb	lAmb	12 40 27.9	
	comp=Z,166nm,1.3s						
MIAR	Mount Ida	20.92	355	P	Pn	12 40 12.3	-1.1
MIAR				pmax	pmax		
	comp=Z,149nm,0.9s						
GOGA	Godfrey	20.98	19	lAmb	lAmb	12 40 30.0	
	comp=Z,144nm,1.1s						
GOGA	Godfrey	20.98	19	P	Pn	12 40 12.8	-1.2
GOGA				pmax	pmax		
	comp=Z,283nm,1.1s						
ODSA	Odessa	21.06	333	lAmb	lAmb	12 40 17.3	
	comp=Z,315nm,1.1s						
WTFS	Witchita Falls	21.06	343	lAmb	lAmb	12 40 21.3	
	comp=Z,105nm,0.9s						
X48A	Hartselle	21.11	10	P	P	12 40 13.2	+0.4
X48A				lAmb	lAmb	12 40 29.8	
	comp=Z,136nm,0.9s						
APMT	Aspermont	21.16	339	lAmb	lAmb	12 40 22.1	
	comp=Z,216nm,1.1s						
VHRN	Van Horn	21.18	326	lAmb	lAmb	12 40 19.0	
	comp=Z,222nm,1.0s						
PTLC	Puerto Leguiza	21.19	128	P	P	12 40 18.1	+4.3
	comp=Z,12µmcomp=Z,5µmcomp=Z,364nm,0.9s						
PTGC	Puerto Gaitan,	21.19	114	P	P	12 40 18.0	+4.2
	comp=Z,11µmcomp=Z,1µm,0.8s						
Y52A	Lilburn	21.22	17	P	P	12 40 13.8	-0.2
Y52A				lAmb	lAmb	12 40 29.9	
	comp=Z,167nm,0.8s						
POST	Post	21.44	336	lAmb	lAmb	12 40 20.6	
	comp=Z,141nm,0.8s						
PLAL	Pickwick Lake	21.48	7	P	P	12 40 17.4	+0.8
GUVC	San Jose del G	21.57	119	P	P	12 40 21.0	+3.1
WHAR	Wooly Hollow	21.59	358	lAmb	lAmb	12 40 22.3	
	comp=Z,150nm,0.9s						
X34A	Smith Ranch, M	21.68	346	lAmb	lAmb	12 40 29.0	
	comp=Z,154nm,1.1s						
DKNS	Dickens	21.75	338	lAmb	lAmb	12 40 29.9	
	comp=Z,119nm,0.7s						
HBAR	Harrisburg	21.85	2	lAmb	lAmb	12 40 39.0	
	comp=Z,277nm,1.0s						
SWET	Sewanee	22.06	12	lAmb	lAmb	12 40 27.3	
	comp=Z,137nm,0.8s						
WMOK	Wichita Mounta	22.06	344	P	P	12 40 24.7	+1.7
WMOK				pmax	pmax		
	comp=Z,96nm,1.3s						
HODGE	Hodges	22.13	20	lAmb	lAmb	12 40 41.6	
	comp=Z,104nm,0.8s						
W50A	Signal Mountai	22.17	13	lAmb	lAmb	12 40 46.4	
	comp=Z,139nm,0.8s						
W52A	Murphy	22.41	16	lAmb	lAmb	12 40 47.6	
	comp=Z,221nm,0.9s						
TUL3	Leonard	22.54	351	lAmb	lAmb	12 40 50.4	
	comp=Z,107nm,1.0s						
CPCT	Cooper Cave	22.60	15	lAmb	lAmb	12 40 52.7	
	comp=Z,86nm,0.8s						
BG3	Lake Jocassee	22.61	18	lAmb	lAmb	12 40 32.2	
	comp=Z,102nm,1.0s						
Y57A	Sumter	22.63	24	lAmb	lAmb	12 40 41.2	
	comp=Z,134nm,0.7s						
Y57A				IAMs_20	IAMs_20	12 49 46.7	
	comp=Z,14µm,19.0s						
WVT	Waverly	22.64	8	P	P	12 40 28.3	-0.8
WVT	Waverly	22.64	8	P	P	12 40 28.3	-0.8
WVT				pmax	pmax		
	comp=Z,85nm,1.0s						
UTMT	University of	22.74	5	lAmb	lAmb	12 40 52.7	
	comp=Z,194nm,0.8s						
MSTX	Muleshoe	22.74	335	lAmb	lAmb	12 40 36.1	
	comp=Z,154nm,0.8s						
PAULI	Pauline	22.81	21	lAmb	lAmb	12 40 53.9	
	comp=Z,124nm,1.1s						
Y58A	Scranton	22.83	26	lAmb	lAmb	12 40 42.0	
	comp=Z,168nm,0.9s						
HICK	Hickman	22.90	4	lAmb	lAmb	12 40 51.3	
	comp=Z,159nm,0.8s						
TKL	Tuckaleechee C	22.99	16	P	P	12 40 31.1	-1.7
	comp=Z,55nm,0.5s,baz=191,slow=11,SNR=49						
TKL				LR	LR	12 50 09.2	
	comp=Z,12µm,21.5s,baz=181,slow=39						
	comp=Z,55nm,0.5s						
TKL	Tuckaleechee C	22.99	16	lAmb	lAmb	12 40 54.1	
	comp=Z,207nm,1.1s						
PBMO	Poplar Bluff	23.07	2	lAmb	lAmb	12 40 36.6	
	comp=Z,214nm,1.1s						
BIRD	Birdtown, Kers	23.15	23	lAmb	lAmb	12 40 55.7	
	comp=Z,86nm,0.8s						
OK048	Pawnee Station	23.24	349	lAmb	lAmb	12 40 48.0	
	comp=Z,91nm,1.0s						
KMSC	Kings Mountain	23.27	21	lAmb	lAmb	12 40 57.6	
	comp=Z,102nm,0.8s						
V53A	Saluda	23.27	18	lAmb	lAmb	12 40 60.0	
	comp=Z,126nm,1.0s						
OK051	E0350 and S346	23.30	349	lAmb	lAmb	12 40 38.7	
	comp=Z,138nm,1.1s						
U49A	Red Boiling Sp	23.34	11	lAmb	lAmb	12 40 52.1	
	comp=Z,114nm,0.9s						
ELIS	Ellis County	23.48	344	lAmb	lAmb	12 41 03.3	
	comp=Z,136nm,1.2s						
X58A	Rowland	23.52	26	IAMs_20	IAMs_20	12 50 23.5	
	comp=Z,13µm,18.0s						
CROK	Carrier	23.54	347	lAmb	lAmb	12 40 51.4	
	comp=Z,120nm,0.9s						
Y60A	Bolivia	23.55	28	IAMs_20	IAMs_20	12 50 59.2	
	comp=Z,13µm,18.0s						
T47A	Sharon Grove	23.58	9	lAmb	lAmb	12 41 03.0	
	comp=Z,119nm,0.9s						
BLOK	Blackwell	23.62	348	lAmb	lAmb	12 40 42.3	
	comp=Z,70nm,0.7s						
PH02	Texas Public H	23.67	338	lAmb	lAmb	12 40 47.8	
	comp=Z,51nm,0.8s						
TZTN	Tazewell	23.88	16	lAmb	lAmb	12 41 04.9	
	comp=Z,196nm,1.0s						
NOKA	Waynoka	23.89	345	lAmb	lAmb	12 40 48.2	
	comp=Z,108nm,0.8s						
V55A	Taylorsville	23.95	21	lAmb	lAmb	12 41 06.3	
	comp=Z,152nm,1.0s						
T50A	Nancy	24.03	13	lAmb	lAmb	12 41 05.7	
	comp=Z,111nm,0.9s						
S44A	Carbondale	24.05	4	lAmb	lAmb	12 40 45.9	
	comp=Z,120nm,0.7s						
121A	Cookes Peak, D	24.06	324	lAmb	lAmb	12 40 51.8	
	comp=Z,180nm,1.1s						
SIUC	Southern Illin	24.07	4	lAmb	lAmb	12 40 46.1	
	comp=Z,111nm,0.8s						
319A	Douglas	24.13	320	lAmb	lAmb	12 40 52.1	
	comp=Z,195nm,0.9s						
ATAH	Atahualpa	24.33	147	P	P	12 40 49.0	+2.7

	comp=Z,71nm,0.8s,baz=350,slow=6.5,SNR=44						
ATAH				LR	LR	12 49 05.0	
	comp=Z,15µm,18.5s,baz=330,slow=33						
	comp=Z,71nm,0.8s						
CCM	**Cathedral Cave**	**24.33**	**0**		**P**	**12 40 43.7**	**-2.0**
CCM	**Cathedral Cave**	**24.33**	**0**	P	**P**	**12 40 43.7**	**-2.0**
CCM				pmax	pmax		
	comp=Z,222nm,0.8s						
W59A	**Clinton**	**24.43**	**26**	IAMs_20	IAMs_20	12 50 51.4	
	comp=Z,13µm,20.0s						
SJG	**San Juan**	**24.68**	**76**	P	**P**	**12 40 46.6**	**-2.5**
	comp=Z,26nm,0.4s,baz=260,slow=7.4,SNR=10						
SJG				LR	LR	12 51 40.3	
	comp=Z,11µm,18.7s,baz=328,slow=40						
	comp=Z,26nm,0.4s						
SJG	**San Juan**	**24.68**	**76**	P	**P**	**12 40 48.0**	**-1.1**
SJG	**San Juan**	**24.68**	**76**	P	**P**	**12 40 48.0**	**-1.1**
SJG				pmax	pmax		
	comp=Z,40nm,0.7s						
SJG				MLR	MLR		
	comp=Z,11µm,18.0s						
V58A	**Windy Hill, Pi**	**24.69**	**24**	IAmb	IAmb	12 40 60.0	
	comp=Z,111nm,0.8s						
U56A	**King**	**24.69**	**22**	IAmb	IAmb	12 41 20.0	
	comp=Z,72nm,0.7s						
RTBA	**Rita Blanca**	**24.89**	**338**	IAmb	IAmb	12 40 55.8	
	comp=Z,102nm,0.9s						
S51A	**Beattyville**	**24.91**	**15**	IAmb	IAmb	12 41 14.9	
	comp=Z,114nm,0.8s						
WCI	**Wyandotte Cave**	**24.92**	**10**		**P**	**12 40 49.2**	**-1.8**
WCI	**Wyandotte Cave**	**24.92**	**10**	P	**P**	**12 40 49.2**	**-1.8**
WCI				pmax	pmax		
	comp=Z,177nm,0.9s						
OLIL	**Olney**	**25.18**	**6**	IAmb	IAmb	12 41 20.3	
	comp=Z,123nm,1.1s						
R49A	**Shelbyville**	**25.18**	**12**	IAmb	IAmb	12 41 25.8	
	comp=Z,122nm,1.0s						
ANMO	**Albuquerque**	**25.22**	**330**	LR	LR	12 52 18.5	
	comp=Z,4µm,18.8s,baz=131,slow=40						
ANMO	**Albuquerque**	**25.22**	**330**		**P**	**12 40 54.6**	**+0.6**
ANMO	**Albuquerque**	**25.22**	**330**	*ce*P	**P**	**12 40 54.7**	**+0.6**
ANMO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TASM	**ASL Pad, Albuq**	**25.22**	**330**	IAmb	IAmb	12 41 00.1	
	comp=Z,54nm,0.8s						
TASM	**ASL Pad, Albuq**	**25.22**	**330**	IAmb	IAmb	12 41 00.1	
	comp=Z,54nm,0.8s						
TASM	**ASL Pad, Albuq**	**25.22**	**330**	IAmb	IAmb	12 41 00.1	
	comp=Z,56nm,0.8s						
Q44A	**Meyer Farm, Va**	**25.27**	**4**	IAmb	IAmb	12 41 27.6	
	comp=Z,95nm,1.0s						
R50A	**Paris**	**25.35**	**13**	IAmb	IAmb	12 41 28.3	
	comp=Z,119nm,0.9s						
BLA	**Blacksburg**	**25.45**	**21**	IAmb	IAmb	12 41 30.0	
	comp=Z,102nm,0.8s						
R32A	**Long Quarter,**	**25.54**	**347**	IAmb	IAmb	12 41 02.6	
	comp=Z,49nm,0.7s						
S54A	**Dingess, Beckl**	**25.70**	**19**	IAmb	IAmb	12 41 28.7	
	comp=Z,252nm,1.8s						
TUC	**Tucson**	**25.70**	**320**		**P**	**12 41 00.0**	**+1.7**
TUC				IAmb	IAmb	12 41 05.9	
	comp=Z,94nm,0.9s						
TUC	**Tucson**	**25.70**	**320**	P	**P**	**12 41 00.0**	**+1.7**
TUC				pmax	pmax		
	comp=Z,94nm,0.9s						
TUC				MLR	MLR		
	comp=Z,19µm,19.0s						
BLO	**Bloomington**	**25.81**	**9**	IAmb	IAmb	12 41 33.4	
	comp=Z,94nm,0.8s						
P38A	**Dawn**	**25.97**	**356**	IAmb	IAmb	12 41 04.8	
	comp=Z,84nm,0.9s						
P43A	**Skaggs, Pawnee**	**25.97**	**3**	IAmb	IAmb	12 41 36.7	
	comp=Z,62nm,0.8s						
P46A	**Rosedale**	**26.16**	**7**	IAmb	IAmb	12 41 39.1	
	comp=Z,138nm,0.9s						
P48A	**Milroy**	**26.27**	**10**	IAmb	IAmb	12 41 38.3	
	comp=Z,103nm,0.8s						
T59A	**Double "B" Far**	**26.34**	**26**	IAmb	IAmb	12 41 05.4	
	comp=Z,70nm,0.9s						
Q52A	**Bidwell**	**26.50**	**16**	IAmb	IAmb	12 41 28.5	
	comp=Z,125nm,1.0s						
R55A	**Marlinton**	**26.52**	**20**	IAmb	IAmb	12 41 43.5	
	comp=Z,86nm,1.0s						
P51A	**Williamsport**	**26.79**	**14**	IAmb	IAmb	12 41 47.8	
	comp=Z,132nm,0.8s						
214A	**Organ Pipe Nat**	**26.79**	**316**	IAmb	IAmb	12 41 14.2	
	comp=Z,71nm,0.9s						
SFIN	**Lafayette**	**26.92**	**7**	IAmb	IAmb	12 41 50.0	
	comp=Z,69nm,0.9s						
Q54A	**Coxs Mills**	**26.93**	**18**	IAmb	IAmb	12 41 49.2	
	comp=Z,57nm,0.8s						
O48B	**Farmland**	**27.09**	**11**	IAmb	IAmb	12 41 47.7	
	comp=Z,107nm,0.9s						
P52A	**Corning**	**27.16**	**16**	IAmb	IAmb	12 41 50.8	
	comp=Z,78nm,0.8s						
N35A	**Tabor**	**27.39**	**353**	IAmb	IAmb	12 41 51.9	
	comp=Z,85nm,0.8s						
ACSO	**Alum Creek Sta**	**27.52**	**14**	IAmb	IAmb	12 41 52.3	
	comp=Z,161nm,1.1s						
X16A	**Lo Mia Camp, P**	**27.54**	**322**	IAmb	IAmb	12 41 32.5	
	comp=Z,52nm,0.9s						
N47A	**Urbana**	**27.61**	**9**	IAmb	IAmb	12 42 01.5	
	comp=Z,72nm,1.0s						
O52A	**Adamsville**	**27.70**	**16**	IAmb	IAmb	12 41 17.9	
	comp=Z,81nm,0.9s						
MVCO	**Mesa Verde**	**28.02**	**330**	IAmb	IAmb	12 41 24.4	
	comp=Z,104nm,0.9s						
O54A	**Avella**	**28.17**	**18**	IAmb	IAmb	12 42 13.9	
	comp=Z,88nm,0.8s						
SCIA	**State Center**	**28.22**	**357**	IAmb	IAmb	12 41 51.8	
	comp=Z,61nm,1.1s						
WUAZ	**Wupatki**	**28.27**	**324**	IAmb	IAmb	12 41 28.8	
	comp=Z,88nm,0.9s						
WUAZ				IAMs_20	IAMs_20	12 54 14.3	
	comp=Z,11µm,19.0s						
N51A	**Ashland**	**28.31**	**15**	IAmb	IAmb	12 42 13.3	
	comp=Z,96nm,1.2s						
L42A	**Oliver, Polo**	**28.32**	**3**	IAmb	IAmb	12 42 09.2	
	comp=Z,54nm,0.9s						
L40A	**Anamosa**	**28.34**	**0**	IAmb	IAmb	12 41 24.0	
	comp=Z,73nm,1.0s						
L34A	**Svendsen Farm,**	**28.57**	**352**	IAmb	IAmb	12 42 23.5	
	comp=Z,66nm,0.8s						
N53A	**Lisbon**	**28.61**	**17**	IAmb	IAmb	12 42 07.8	
	comp=Z,67nm,0.9s						
M50A	**Fremont**	**28.62**	**13**	IAmb	IAmb	12 42 09.5	
	comp=Z,47nm,0.8s						
GDHS	**Morne Mazeau,**	**28.73**	**81**	IAMs_20	IAMs_20	12 51 55.0	
	comp=Z,10µm,20.0s						
ANWB	**Willy Bob**	**28.78**	**78**	IAMs_20	IAMs_20	12 54 16.0	
	comp=Z,11µm,18.0s						
GLA	**Glamis**	**28.81**	**316**	IAMs_20	IAMs_20	12 54 24.2	
	comp=Z,10µm,19.0s						
CBE	**Ff, Capester**	**28.88**	**81**	IAMs_20	IAMs_20	12 51 59.8	
	comp=Z,13µm,20.0s						
ISCO	**Idaho Springs**	**28.92**	**337**	P	**P**	**12 41 30.1**	**+2.7**
ISCO				pmax	pmax		
	comp=Z,24nm,0.9s						
PV13	**Radium Mtn., P**	**28.93**	**331**	IAmb	IAmb	12 41 33.2	
	comp=Z,126nm,1.2s						
PV05	**Paradox Valley**	**29.00**	**330**	IAmb	IAmb	12 41 32.9	
	comp=Z,125nm,1.1s						
ABD	**La Joyeuse, An**	**29.01**	**81**	IAMs_20	IAMs_20	12 52 23.1	
	comp=Z,10µm,19.0s						
PV03	**Paradox Valley**	**29.02**	**331**	IAmb	IAmb	12 41 33.2	
	comp=Z,78nm,1.1s						
PV11	**David Mesa, Pa**	**29.06**	**331**	IAmb	IAmb	12 41 35.0	
	comp=Z,69nm,0.9s						
PV17	**East Wray Mesa**	**29.09**	**331**	IAmb	IAmb	12 41 33.7	
	comp=Z,72nm,1.0s						
PV16	**Nyswonger Mesa**	**29.09**	**331**	IAmb	IAmb	12 41 33.9	
	comp=Z,100nm,1.2s						
PV19	**Morning Glory**	**29.12**	**331**	IAmb	IAmb	12 41 34.0	
	comp=Z,133nm,1.2s						
PV20	**West Nyswonger**	**29.14**	**331**	IAmb	IAmb	12 41 34.1	
	comp=Z,128nm,1.1s						
PV04	**Paradox Valley**	**29.15**	**331**	IAmb	IAmb	12 41 36.0	
	comp=Z,70nm,0.9s						
M52A	**Chesterland**	**29.16**	**16**	IAmb	IAmb	12 41 30.5	
	comp=Z,70nm,0.9s						
PV14	**Lion Creek, Pa**	**29.19**	**331**	IAmb	IAmb	12 41 34.6	
	comp=Z,60nm,1.1s						
MAGL	**Barre de l’ile**	**29.19**	**82**	IAMs_20	IAMs_20	12 52 08.2	
	comp=Z,12µm,20.0s						
JFWS	**Jewell Farm**	**29.20**	**2**	IAmb	IAmb	12 42 33.0	
	comp=Z,60nm,1.0s						
PV22	**Blue Mesa, Par**	**29.21**	**331**	IAmb	IAmb	12 41 34.7	
	comp=Z,48nm,0.9s						
NNA	**Nana**	**29.25**	**150**	LR	LR	12 51 02.6	
	comp=Z,7µm,21.1s,baz=320,slow=32						
NNA	**Nana**	**29.25**	**150**	*ce*P	**P**	**12 41 33.1**	**+2.9**
NNA				pmax	pmax		
	comp=Z,29nm,1.3s						
SVN	**Savane Anatole**	**29.31**	**84**	IAMs_20	IAMs_20	12 52 50.6	
	comp=Z,10µm,19.0s						
AAM	**Ann Arbor**	**29.35**	**12**	IAmb	IAmb	12 42 31.5	
	comp=Z,53nm,0.9s						
SSPA	**Standing Stone**	**29.39**	**21**		**P**	**12 41 31.6**	**+0.3**
BIM	**Bigot**	**29.42**	**85**	IAMs_20	IAMs_20	12 52 53.4	
	comp=Z,10µm,19.0s						
BC3	**Big Chuckawall**	**29.59**	**316**	IAmb	IAmb	12 41 39.1	
	comp=Z,118nm,1.1s						
ILAM	**Ilet Lapin Mar**	**29.60**	**84**	IAMs_20	IAMs_20	12 52 60.0	
	comp=Z,13µm,19.0s						
PAOC	**Oil Creek Stat**	**29.60**	**18**	IAmb	IAmb	12 42 32.4	
	comp=Z,55nm,0.9s						
MPOM	**Morne Pois Mar**	**29.62**	**85**	IAMs_20	IAMs_20	12 53 00.7	
	comp=Z,10µm,20.0s						
IRM	**Iron Mountain**	**29.69**	**318**	IAMs_20	IAMs_20	12 54 00.4	
	comp=Z,10µm,20.0s						
K30B	**Basset**	**29.81**	**348**	IAmb	IAmb	12 42 25.4	
	comp=Z,74nm,1.3s						
J47A	**Sunmer**	**30.05**	**10**	IAmb	IAmb	12 42 42.4	
	comp=Z,38nm,0.8s						
DANC	**Danby, Needles**	**30.14**	**318**	IAMs_20	IAMs_20	12 55 20.2	
	comp=Z,11µm,19.0s						
KNB	**Kanab**	**30.15**	**324**	IAmb	IAmb	12 41 44.4	
	comp=Z,85nm,1.1s						
PFO	**Pinyon Flats O**	**30.24**	**315**	LR	LR	12 55 28.3	
	comp=Z,7µm,18.3s,baz=127,slow=39						
PFO	**Pinyon Flats O**	**30.24**	**315**		**P**	**12 41 40.6**	**+1.7**
PFO	**Pinyon Flats O**	**30.24**	**315**	*i* P	**P**	**12 41 40.7**	**+1.7**
M57A	**Sunshine Farm,**	**30.28**	**22**	IAmb	IAmb	12 41 40.7	
	comp=Z,43nm,0.9s						
I37A	**Lemond, Waseca**	**30.34**	**357**	IAmb	IAmb	12 42 27.1	
	comp=Z,71nm,1.3s						
LCMT	**Little Creek M**	**30.39**	**324**	IAmb	IAmb	12 41 47.8	
	comp=Z,44nm,0.8s						
SRU	**San Rafael Swe**	**30.50**	**330**	IAmb	IAmb	12 41 46.2	
	comp=Z,51nm,1.1s						
Q16A	**Castle Valley**	**30.67**	**329**	IAmb	IAmb	12 41 48.3	
	comp=Z,82nm,1.0s						
SZCU	**Shurtz Canyon**	**30.71**	**325**	IAmb	IAmb	12 41 49.4	
	comp=Z,83nm,0.9s						
BRNJ	**Basking Ridge**	**30.72**	**26**	IAmb	IAmb	12 41 53.6	
	comp=Z,43nm,0.8s						
CCUT	**Cedar City**	**30.84**	**325**	IAmb	IAmb	12 41 51.3	
	comp=Z,71nm,1.0s						
L56A	**Greenwood**	**30.84**	**20**	IAmb	IAmb	12 41 54.0	
	comp=Z,37nm,0.8s						
L56A				IAMs_20	IAMs_20	12 54 53.8	
	comp=Z,9µm,19.0s						
P17A	**Butcher Ranch,**	**30.88**	**330**	IAmb	IAmb	12 41 49.6	
	comp=Z,99nm,0.9s						
TMUT	**Trail Mountain**	**30.98**	**329**	IAmb	IAmb	12 41 54.1	
	comp=Z,60nm,0.9s						
I49A	**Point Hope**	**31.09**	**12**	IAmb	IAmb	12 41 46.6	
	comp=Z,94nm,0.9s						
MMNY	**Mt. Morris Dam**	**31.26**	**19**	IAmb	IAmb	12 42 45.1	
	comp=Z,63nm,0.9s						
PAL	**Palisades**	**31.26**	**26**	IAMs_20	IAMs_20	12 55 07.8	
	comp=Z,9µm,19.0s						
SUSD	**Miller**	**31.39**	**350**	IAmb	IAmb	12 41 56.8	
	comp=Z,59nm,0.9s						
N62A	**Caumsett State**	**31.39**	**27**	IAMs_20	IAMs_20	12 55 47.2	
	comp=Z,8µm,18.0s						
BINY	**Binghamton**	**31.45**	**22**	IAmb	IAmb	12 41 50.5	
	comp=Z,52nm,1.1s						
SHOC	**Shoshone, Teco**	**31.49**	**319**	IAMs_20	IAMs_20	12 56 22.0	
	comp=Z,12µm,19.0s						
SPMN	**Marine on St.**	**31.52**	**358**	IAmb	IAmb	12 42 07.0	
	comp=Z,39nm,0.6s						
TEFE	**Tefe**	**31.54**	**121**	*e*P	**P**	**12 41 50.7**	**+0.3**
WSPT	**Westport, CT**	**31.65**	**26**	IAMs_20	IAMs_20	12 56 03.0	
	comp=Z,7µm,18.0s						
MWC	**Mount Wilson**	**31.69**	**315**	IAmb	IAmb	12 41 57.6	
	comp=Z,70nm,1.4s						
K57A	**Scipio Center**	**31.73**	**21**	IAmb	IAmb	12 41 57.9	
	comp=Z,60nm,0.7s						
K57A				IAMs_20	IAMs_20	12 55 29.2	
	comp=Z,8µm,18.0s						
J55A	**Hilton**	**31.77**	**19**	IAmb	IAmb	12 41 53.3	
	comp=Z,43nm,0.9s						
J55A				IAMs_20	IAMs_20	12 54 47.4	
	comp=Z,11µm,22.0s						
L59A	**Walton**	**31.80**	**23**	IAmb	IAmb	12 41 58.6	
	comp=Z,43nm,0.7s						
PSUT	**Pine Spring**	**31.80**	**325**	IAmb	IAmb	12 41 58.8	
	comp=Z,77nm,0.9s						
QSM	**Queen of Sheba**	**31.91**	**319**	IAmb	IAmb	12 41 59.3	
	comp=Z,61nm,1.1s						
KSCT	**Kent School, K**	**32.04**	**26**	IAmb	IAmb	12 42 26.0	
	comp=Z,112nm,1.4s						
TPNV	**Topopah Spring**	**32.13**	**321**	IAMs_20	IAMs_20	12 56 10.2	
	comp=Z,10µm,20.0s						
F42A	**Maple Grove Fa**	**32.15**	**4**	IAmb	IAmb	12 42 00.5	
	comp=Z,24nm,0.6s						
LRMC	**Laurel Mtn Rad**	**32.15**	**317**	IAMs_20	IAMs_20	12 56 40.8	
	comp=Z,9µm,18.0s						
FURC	**Furnace Creek,**	**32.22**	**319**	IAMs_20	IAMs_20	12 56 54.4	
	comp=Z,8µm,18.0s						
RSSD	**Black Hills**	**32.26**	**343**		**P**	**12 41 57.5**	**+0.7**
RSSD	**Black Hills**	**32.26**	**343**	P	**P**	**12 41 57.5**	**+0.7**
RSSD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CLC	**China Lake**	**32.29**	**318**	IAmb	IAmb	12 42 02.6	
	comp=Z,49nm,1.1s						
OSI	**Osito Audit: C**	**32.36**	**315**	IAMs_20	IAMs_20	12 56 12.6	
	comp=Z,9µm,19.0s						
M63A	**Gales Ferry**	**32.41**	**28**	IAMs_20	IAMs_20	12 55 12.4	
	comp=Z,9µm,21.0s						
DUG	**Dugway, Tooele**	**32.46**	**329**	IAmb	IAmb	12 42 03.9	
	comp=Z,50nm,1.1s						
DUG				IAMs_20	IAMs_20	12 57 11.4	
	comp=Z,9µm,19.0s						
DUG	**Dugway, Tooele**	**32.46**	**329**	P	**P**	**12 42 00.8**	**+2.3**
DUG				pmax	pmax		
	comp=Z,49nm,1.0s						
BOAV	**Boa Vista**	**32.49**	**107**		**P**	**12 41 56.7**	**-2.2**
BOAV				IAmb	IAmb	12 42 01.2	
	comp=Z,44nm,0.9s						
BOAV	**Boa Vista**	**32.49**	**107**	*e*P	**P**	**12 41 57.5**	**-1.3**
J57A	**Williamstown**	**32.50**	**21**	IAmb	IAmb	12 42 04.5	
	comp=Z,41nm,0.6s						
PECO	**Prince Edward**	**32.63**	**19**	IAmb	IAmb	12 42 12.0	
	comp=Z,46nm,0.8s						
SADO	**Sadowa**	**32.75**	**16**	LR	LR	12 56 02.8	
	comp=Z,9µm,20.7s,baz=212,slow=38						
ISA	**Isabella, Lake**	**32.78**	**317**	IAMs_20	IAMs_20	12 56 58.6	
	comp=Z,8µm,19.0s						
TRY	**Troy**	**32.80**	**24**	IAmb	IAmb	12 42 13.0	
	comp=Z,39nm,0.8s						
TRY				IAMs_20	IAMs_20	12 55 56.9	
	comp=Z,9µm,20.0s						
E38A	**The Farm, Brul**	**32.88**	**360**	IAmb	IAmb	12 42 02.9	
	comp=Z,69nm,1.0s						
DELO	**Deloro Mine**	**32.96**	**18**	IAmb	IAmb	12 42 03.9	
	comp=Z,75nm,0.9s						
PDAR	**Pinedale Array**	**33.01**	**335**	P	**P**	**12 42 02.3**	**-1.0**
	comp=Z,9.0nm,1.0s,baz=128,slow=9.5,SNR=30						
PDAR				PcP	**PcP**	**12 44 48.5**	**+1.6**
	comp=Z,5.0nm,0.8s,baz=82,slow=4.0,SNR=7.3						
PDAR				PKiKP	**PKiKP**	**12 52 12.6**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=91,slow=3.8,SNR=6.2						
PDAR				LR	LR	12 57 56.8	
	comp=Z,3µm,20.9s,baz=138,slow=41						
	comp=Z,9.0nm,1.0s						
PDAR	**Pinedale Array**	**33.01**	**335**	P	**P**	**12 42 04.2**	**+0.9**
BGU	**Big Grassy Mou**	**33.12**	**329**	IAmb	IAmb	12 42 11.4	
	comp=Z,66nm,0.8s						
E46A	**Sault Ste Mari**	**33.18**	**9**	IAmb	IAmb	12 42 04.5	
	comp=Z,36nm,1.0s						
VES	**Vestal, Richgr**	**33.29**	**317**	IAMs_20	IAMs_20	12 57 15.1	
	comp=Z,7µm,18.0s						
BUKO	**Buck Lake**	**33.31**	**15**	IAmb	IAmb	12 42 06.7	
	comp=Z,85nm,1.0s						
TIN	**Tinemaha, Big**	**33.44**	**319**	IAMs_20	IAMs_20	12 57 41.9	
	comp=Z,8µm,18.0s						
DSP	**Deep Springs**	**33.47**	**320**	IAmb	IAmb	12 42 13.4	
	comp=Z,39nm,1.1s						
HRV	**Adam Dziewonsk**	**33.51**	**27**	IAMs_20	IAMs_20	12 55 54.5	
	comp=Z,8µm,20.0s						
WES	**Weston**	**33.51**	**27**	IAMs_20	IAMs_20	12 55 44.7	
	comp=Z,9µm,20.0s						
BCX	**Boston College**	**33.54**	**28**	IAMs_20	IAMs_20	12 56 30.4	
	comp=Z,10µm,21.0s						
NCB	**Newcomb**	**33.63**	**23**	IAmb	IAmb	12 42 19.6	
	comp=Z,34nm,0.8s						
J61A	**Chester**	**33.76**	**25**	IAMs_20	IAMs_20	12 57 10.4	
	comp=Z,9µm,18.0s						
E28A	**Huff**	**33.77**	**348**	IAmb	IAmb	12 43 08.0	
	comp=Z,50nm,1.1s						
LONY	**Lake Ozonia**	**34.06**	**22**	IAmb	IAmb	12 42 23.4	
	comp=Z,50nm,0.8s						
ELK	**Elko**	**34.13**	**327**	LR	LR	12 57 56.3	
	comp=Z,8µm,20.6s,baz=150,slow=39						
ELK	**Elko**	**34.13**	**327**	IAmb	IAmb	12 42 19.9	
	comp=Z,56nm,0.8s						
ELK				IAMs_20	IAMs_20	12 57 44.5	
	comp=Z,8µm,21.0s						
ELK	**Elko**	**34.13**	**327**	P	**P**	**12 42 15.1**	**+2.0**
LOHW	**Long Hollow**	**34.14**	**335**	IAmb	IAmb	12 42 17.4	
	comp=Z,50nm,1.1s						
WBO	**Williamsburg**	**34.15**	**21**	IAmb	IAmb	12 42 14.0	
	comp=Z,46nm,0.9s						
HNH	**Hanover**	**34.17**	**25**	IAMs_20	IAMs_20	12 56 56.1	
	comp=Z,7µm,19.0s						
EYMN	**Ely**	**34.22**	**360**	IAmb	IAmb	12 42 14.2	
	comp=Z,39nm,1.0s						
MDPB	**Devils Postpil**	**34.33**	**319**	IAmb	IAmb	12 42 21.0	
	comp=Z,61nm,1.1s						
PKD	**Bear Valley Ra**	**34.33**	**316**	IAMs_20	IAMs_20	12 57 15.7	
	comp=Z,9µm,20.0s						
NVAR	**Mina Array Bea**	**34.33**	**321**	P	**P**	**12 42 16.1**	**+1.2**
	comp=Z,74nm,0.9s,baz=134,slow=7.7,SNR=64						
NVAR				PcP	**PcP**	**12 44 52.2**	**+1.5**
	comp=Z,19nm,0.8s,baz=138,slow=3.9,SNR=8.0						
NVAR				PKiKP	**PKiKP**	**12 52 15.6**	**+1.3**
	comp=Z,0.9nm,0.8s,baz=118,slow=4.0,SNR=4.4						
NVAR				LR	LR	12 57 57.8	
	comp=Z,7µm,19.1s,baz=132,slow=39						
NVAR	**Mina Array Bea**	**34.33**	**321**	P	**P**	**12 42 16.4**	**+1.5**
VT1	**Waterbury**	**34.50**	**24**	IAMs_20	IAMs_20	12 56 58.7	
	comp=Z,10µm,19.0s						
RYN	**Ryan**	**34.59**	**321**	IAmb	IAmb	12 42 23.2	
	comp=Z,38nm,1.0s						
MACA	**Manacapuru-AM**	**34.73**	**116**		**P**	**12 42 19.0**	**+0.6**
MACA	**Manacapuru-AM**	**34.73**	**116**	*e*P	**P**	**12 42 19.0**	**+0.6**
LBNH	**Lisbon**	**34.76**	**25**	IAMs_20	IAMs_20	12 57 14.7	
	comp=Z,8µm,18.0s						
HULI	**Fort Hunter Li**	**34.85**	**315**	IAMs_20	IAMs_20	12 57 40.4	
	comp=Z,7µm,20.0s						
TBO	**Thunder Bay**	**34.96**	**2**	IAmb	IAmb	12 42 20.6	
	comp=Z,51nm,1.0s						
YNE	**Yellowstone No**	**35.06**	**337**	IAmb	IAmb	12 42 27.8	
	comp=Z,36nm,1.0s						
YMR	**Madison River**	**35.15**	**335**	IAmb	IAmb	12 42 27.2	
	comp=Z,60nm,1.0s						
MNTQ	**Montreal, Queb**	**35.16**	**22**	IAmb	IAmb	12 42 23.0	
	comp=Z,59nm,0.9s						
SAO	**San Andreas Ge**	**35.39**	**316**	IAMs_20	IAMs_20	12 58 18.7	
	comp=Z,8µm,20.0s						
SAO	**San Andreas Ge**	**35.39**	**316**	P	**P**	**12 42 27.8**	**+4.0**
CMB	**Columbia Colle**	**35.40**	**319**	IAmb	IAmb	12 42 29.3	
	comp=Z,43nm,1.1s						
TRQ	**Mont Tremblant**	**35.46**	**20**	IAmb	IAmb	12 42 34.2	
	comp=Z,45nm,1.2s						
PNTR	**Pine Nut**	**35.54**	**321**	IAmb	IAmb	12 42 34.0	
	comp=Z,58nm,0.8s						
HLID	**Hailey**	**35.79**	**331**	IAmb	IAmb	12 42 32.7	
	comp=Z,73nm,1.0s						
HLID				IAMs_20	IAMs_20	12 59 23.2	
	comp=Z,7µm,19.0s						
MHC	**Mount Hamilton**	**35.83**	**317**	IAMs_20	IAMs_20	12 58 35.4	
	comp=Z,8µm,19.0s						
BCYI	**Bear Canyon**	**35.90**	**333**	IAmb	IAmb	12 42 38.0	
	comp=Z,77nm,1.0s						
WVL	**Waterville**	**35.98**	**27**	IAMs_20	IAMs_20	12 57 50.9	
	comp=Z,7µm,20.0s						
BOZ	**Bozeman (W)**	**36.18**	**336**	P	**P**	**12 42 34.0**	**+3.3**
JRSC	**Jasper Ridge**	**36.27**	**316**	IAMs_20	IAMs_20	12 58 46.9	
	comp=Z,7µm,19.0s						
DGMT	**Dagmar**	**36.33**	**346**	IAmb	IAmb	12 42 35.5	
	comp=Z,40nm,1.0s						
MFID	**Camas Ranch**	**36.36**	**329**	IAmb	IAmb	12 42 40.5	
	comp=Z,86nm,0.9s						
DLMT	**Dillon**	**36.39**	**335**	IAmb	IAmb	12 42 37.8	
	comp=Z,98nm,1.0s						
PKME	**Peaks-Kenny Pk**	**36.69**	**26**	IAMs_20	IAMs_20	12 58 23.8	
	comp=Z,7µm,19.0s						
ULM	**Lac du Bonnet**	**36.71**	**355**	P	**P**	**12 42 34.3**	**-0.6**
	comp=Z,36nm,0.9s,baz=167,slow=9.1,SNR=32						
ULM				PcP	**PcP**	**12 44 56.6**	**-0.5**
	comp=Z,7.5nm,0.8s,baz=135,slow=5.7,SNR=1.8						
ULM				LR	LR	13 01 03.2	
	comp=Z,3µm,18.5s,baz=174,slow=42						
	comp=Z,36nm,0.9s						
ULM	**Lac du Bonnet**	**36.71**	**355**	IAmb	IAmb	12 42 35.4	
	comp=Z,34nm,0.8s						
CVS	**Carmenet Viney**	**36.92**	**318**	IAMs_20	IAMs_20	12 59 21.2	
	comp=Z,7µm,19.0s						
FARB	**Farallon Islan**	**36.94**	**316**	IAMs_20	IAMs_20	12 58 33.6	
	comp=Z,7µm,20.0s						
MCCM	**Marconi Confer**	**37.09**	**317**	IAMs_20	IAMs_20	12 59 12.7	
	comp=Z,8µm,18.0s						
WVOR	**Wild Horse Val**	**37.13**	**326**	IAMs_20	IAMs_20	13 00 10.1	
	comp=Z,8µm,18.0s						
WVOR	**Wild Horse Val**	**37.13**	**326**	P	**P**	**12 42 41.0**	**+2.2**
WVOR				pmax	pmax		
	comp=Z,153nm,0.9s						
G65A	**Princeton**	**37.41**	**28**	IAmb	IAmb	12 43 18.1	
	comp=Z,169nm,1.5s						
EGMT	**Eagleton**	**37.54**	**340**	IAmb	IAmb	12 42 46.4	
	comp=Z,58nm,1.0s						
LPAZ	**La Paz**	**37.58**	**142**	P	**P**	**12 42 43.8**	**+0.5**
	comp=Z,19nm,0.8s,baz=327,slow=6.5,SNR=45						
LPAZ				LR	LR	12 58 02.2	
	comp=Z,7µm,21.0s,baz=320,slow=36						
	comp=Z,19nm,0.8s						
LPAZ	**La Paz**	**37.58**	**142**	P	**P**	**12 42 43.7**	**+0.4**
LPAZ	**La Paz**	**37.58**	**142**	*e*P	**P**	**12 42 43.7**	**+0.4**
O03E	**Paynes Creek**	**37.62**	**321**	IAmb	IAmb	12 42 47.6	
	comp=Z,72nm,0.9s						
O03E				IAMs_20	IAMs_20	13 00 13.4	
	comp=Z,8µm,18.0s						
E62A	**Clayton Lake**	**37.68**	**25**	IAMs_20	IAMs_20	12 58 45.9	
	comp=Z,7µm,19.0s						
HOPS	**Hopland Field**	**37.68**	**318**	IAMs_20	IAMs_20	12 58 48.2	
	comp=Z,8µm,19.0s						
PLID	**Pearl Lake**	**37.69**	**331**	IAMs_20	IAMs_20	13 00 32.4	
	comp=Z,6µm,19.0s						
HATC	**Hat Creek Radi**	**37.72**	**322**	IAmb	IAmb	12 43 11.8	
	comp=Z,94nm,1.1s						
HATC				IAMs_20	IAMs_20	13 00 32.0	
	comp=Z,7µm,18.0s						
PB18	**Visviri**	**37.81**	**145**	IAmb	IAmb	12 43 25.8	
	comp=Z,70nm,1.0s						
PB18				IAMs_20	IAMs_20	12 57 44.4	
	comp=Z,7µm,21.0s						
AP01	**Chacalluta**	**37.97**	**146**	IAMs_20	IAMs_20	12 56 57.7	
	comp=Z,9µm,21.0s						
LMQ	**La Malbaie**	**38.12**	**23**	IAmb	IAmb	12 42 47.8	
	comp=Z,49nm,0.8s						
MSO	**Missoula**	**38.12**	**335**	IAmb	IAmb	12 42 51.0	
	comp=Z,50nm,1.0s						
BMO	**Blue Mountains**	**38.14**	**330**	IAmb	IAmb	12 42 50.8	
	comp=Z,67nm,1.0s						
BMO				IAMs_20	IAMs_20	13 00 15.5	
	comp=Z,7µm,20.0s						
BMO	**Blue Mountains**	**38.14**	**330**	P	**P**	**12 42 47.8**	**+0.6**
O02D	**Mt. Diablo Mer**	**38.16**	**320**	IAMs_20	IAMs_20	12 59 09.9	
	comp=Z,8µm,19.0s						
PB12	**IPOC Station P**	**38.18**	**147**	P	**P**	**12 42 49.3**	**+1.5**
PB12				IAmb	IAmb	12 43 03.9	
	comp=Z,102nm,1.5s						
D62A	**Allapoint, All**	**38.24**	**25**	IAMs_20	IAMs_20	12 59 02.9	
	comp=Z,6µm,20.0s						
KCPM	**Cahto Peak**	**38.39**	**319**	IAMs_20	IAMs_20	12 59 02.0	
	comp=Z,6µm,19.0s						
M03C	**McCloud**	**38.40**	**322**	IAmb	IAmb	12 43 07.8	
	comp=Z,58nm,1.0s						
PB16	**IPOC Station P**	**38.40**	**145**	P	**P**	**12 42 49.9**	**-0.2**
PB16				IAMs_20	IAMs_20	12 58 25.0	
	comp=Z,8µm,19.0s						
KHBM	**Hayfork Bally**	**38.71**	**320**	IAMs_20	IAMs_20	12 59 19.3	
	comp=Z,7µm,19.0s						
KMRM	**Mail Ridge**	**38.77**	**319**	IAMs_20	IAMs_20	12 59 27.7	
	comp=Z,9µm,20.0s						
M02C	**Callahan**	**38.91**	**321**	IAMs_20	IAMs_20	13 00 38.5	
	comp=Z,6µm,19.0s						
YBH	**Yreka Blue Hor**	**39.02**	**322**	LR	LR	13 00 55.9	
	comp=Z,424nm,19.4s,baz=128,slow=39						
L04D	**Klamath Falls**	**39.08**	**323**	IAmb	IAmb	12 43 05.2	
	comp=Z,67nm,1.0s						

MDP	**Montagnes des**	**39.11**	**99**	LR	LR	12 59 53.7	
	comp=Z,7µm,21.4s,baz=298,slow=38						
KHMM	**Horse Mountain**	**39.15**	**320**	IAMs_20	IAMs_20	13 00 31.4	
	comp=Z,8µm,18.0s						
PINE	**Pine Mountain**	**39.29**	**326**	IAmb	IAmb	12 43 03.3	
	comp=Z,100nm,0.8s						
JCC	**Jacoby Creek,**	**39.31**	**320**	IAMs_20	IAMs_20	12 59 37.1	
	comp=Z,7µm,20.0s						
PB11	**IPOC Station P**	**39.48**	**147**	IAmb	IAmb	12 43 10.8	
	comp=Z,60nm,0.9s						
PB11				IAMs_20	IAMs_20	12 57 01.7	
	comp=Z,6µm,22.0s						
GO01	**Chusmiza**	**39.65**	**146**	IAmb	IAmb	12 43 17.6	
	comp=Z,99nm,1.4s						
ITTB	**Itaituba**	**39.65**	**114**	*e*P	**P**	**12 42 58.4**	**-1.7**
HMBC	**Humberstone**	**39.78**	**147**	IAmb	IAmb	12 44 18.6	
	comp=Z,41nm,0.4s						
HMBC				IAMs_20	IAMs_20	12 57 04.8	
	comp=Z,7µm,22.0s						
TA01	**Diego Aracena**	**39.87**	**148**	IAMs_20	IAMs_20	12 58 56.1	
	comp=Z,6µm,19.0s						
PB08	**IPOC Station P**	**40.06**	**146**	P	**P**	**12 43 05.5**	**+1.7**
PB08	**IPOC Station P**	**40.06**	**146**	IAMs_20	IAMs_20	12 59 22.0	
	comp=Z,6µm,19.0s						
PATCX	**Punta Patache**	**40.09**	**148**	IAmb	IAmb	12 43 16.6	
	comp=Z,72nm,1.1s						
PATCX				IAMs_20	IAMs_20	12 59 04.1	
	comp=Z,6µm,19.0s						
I04A	**Tendick Farm,**	**40.11**	**325**	IAmb	IAmb	12 43 11.0	
	comp=Z,82nm,0.9s						
KBO	**Bosley Butte**	**40.22**	**321**	IAMs_20	IAMs_20	13 02 14.2	
	comp=Z,6µm,20.0s						
HAWA	**Hanford**	**40.33**	**330**	IAMs_20	IAMs_20	13 02 46.5	
	comp=Z,5µm,18.0s						
NEW	**Newport**	**40.59**	**334**	LR	LR	13 02 53.4	
	comp=Z,6µm,18.9s,baz=135,slow=40						
NEW	**Newport**	**40.59**	**334**	IAMs_20	IAMs_20	13 02 33.1	
	comp=Z,6µm,19.0s						
NEW	**Newport**	**40.59**	**334**	P	**P**	**12 43 09.9**	**+2.3**
NEW				pmax	pmax		
	comp=Z,34nm,0.9s						
PB02	**IPOC Station P**	**40.64**	**148**	IAMs_20	IAMs_20	12 59 38.6	
	comp=Z,6µm,19.0s						
VILB	**Vilhena**	**40.66**	**129**	P	**P**	**12 43 08.4**	**0.0**
VILB				IAmb	IAmb	12 43 20.6	
	comp=Z,119nm,0.9s						
VILB	**Vilhena**	**40.66**	**129**	*e*P	**P**	**12 43 08.7**	**+0.3**
H04D	**Lebanon**	**40.76**	**325**	IAmb	IAmb	12 43 13.0	
	comp=Z,122nm,0.9s						
PB07	**IPOC Station P**	**40.98**	**149**	IAmb	IAmb	12 44 05.1	
	comp=Z,41nm,0.6s						
PB07				IAMs_20	IAMs_20	12 59 48.7	
	comp=Z,5µm,19.0s						
COR	**Corvallis**	**41.11**	**325**	IAMs_20	IAMs_20	13 02 24.4	
	comp=Z,7µm,19.0s						
COR	**Corvallis**	**41.11**	**325**	P	**P**	**12 43 16.2**	**+4.4**
NPGB	**Novo Progresso**	**41.25**	**118**	*e*P	**P**	**12 43 10.6**	**-2.8**
PB03	**IPOC Station P**	**41.32**	**149**	IAMs_20	IAMs_20	12 59 59.6	
	comp=Z,6µm,19.0s						
PB09	**IPOC Station P**	**41.37**	**148**	IAMs_20	IAMs_20	12 59 42.9	
	comp=Z,5µm,18.0s						
PB05	**IPOC Station P**	**41.77**	**150**	IAmb	IAmb	12 44 10.8	
	comp=Z,38nm,0.6s						
FFC	**Flin Flon**	**41.84**	**351**	P	**P**	**12 43 17.2**	**-0.5**
FFC	**Flin Flon**	**41.84**	**351**	P	**P**	**12 43 17.2**	**-0.5**
FFC				pmax	pmax		
	comp=Z,21nm,0.9s						
SIV	**San Ignacio**	**42.01**	**133**	LR	LR	13 00 13.5	
	comp=Z,9µm,19.4s,baz=327,slow=35						
PDRB	**Porto dos Gac**	**42.55**	**125**	*e*P	**P**	**12 43 23.2**	**-0.8**
AF01	**San Pedro de A**	**42.87**	**148**	IAMs_20	IAMs_20	13 00 43.8	
	comp=Z,5µm,19.0s						
CLDB	**Colider**	**42.89**	**123**	*e*P	**P**	**12 43 26.1**	**-0.6**
PTLB	**Pontes e Lacer**	**43.04**	**131**	P	**P**	**12 43 27.8**	**-0.1**
PTLB	**Pontes e Lacer**	**43.04**	**131**	*e*P	**P**	**12 43 26.5**	**-1.4**
EDM	**Edmonton**	**43.18**	**341**	IAmb	IAmb	12 43 31.1	
	comp=Z,53nm,0.5s						
PB14	**IPOC Station P**	**43.19**	**152**	P	**P**	**12 43 30.1**	**+0.7**
PB14	**IPOC Station P**	**43.19**	**152**	P	**P**	**12 43 28.1**	**-1.2**
PB14				IAmb	IAmb	12 43 31.6	
	comp=Z,41nm,0.7s						
NLWA	**Neilton Lookou**	**43.20**	**328**	IAMs_20	IAMs_20	13 03 53.5	
	comp=Z,6µm,18.0s						
B04A	**Port Angeles**	**43.45**	**329**	P	**P**	**12 43 32.4**	**+1.6**
B04A				IAmb	IAmb	12 43 41.0	
	comp=Z,86nm,0.8s						
GO02	**Mina Guanaco**	**44.02**	**151**	IAmb	IAmb	12 43 39.2	
	comp=Z,41nm,0.8s						
RPN	**Rapa Nui**	**44.09**	**203**	LR	LR	12 57 23.1	
	comp=Z,7µm,18.7s,baz=44,slow=29						
AC01	**Pan de Azucar**	**44.41**	**153**	IAMs_20	IAMs_20	12 58 12.8	
	comp=Z,5µm,20.0s						
DRLN	**Deer Lake**	**45.12**	**31**	P	**P**	**12 43 42.5**	**-1.7**
DRLN				IAmb	IAmb	12 43 53.0	
	comp=Z,30nm,0.8s						
SCHQ	**Schefferville**	**45.37**	**20**	P	**P**	**12 43 42.8**	**-3.4**
	comp=Z,117nm,0.9s,baz=213,slow=6.2,SNR=41						
	comp=Z,117nm,0.9s						
AC06	**Mina Casimiro**	**45.57**	**153**	IAmb	IAmb	12 43 50.3	
	comp=Z,33nm,0.8s						
AC06				IAMs_20	IAMs_20	12 58 45.4	
	comp=Z,5µm,21.0s						
AC02	**Maricunga**	**45.67**	**152**	IAmb	IAmb	12 44 06.4	
	comp=Z,57nm,1.0s						
CBB	**Campbell River**	**45.67**	**330**	IAmb	IAmb	12 43 56.2	
	comp=Z,67nm,1.0s						
PRPB	**Parauapebas**	**45.72**	**113**	*e*P	**P**	**12 43 48.6**	**-0.9**
TMAB	**Tom-Au,PA,Br**	**45.78**	**107**	*e*P	**P**	**12 43 48.1**	**-1.9**
GO03	**Copiapo**	**45.82**	**153**	IAMs_20	IAMs_20	12 59 03.2	
	comp=Z,5µm,20.0s						
SALV	**Santo Antonio**	**45.90**	**129**	*e*P	**P**	**12 43 47.7**	**-3.1**
LCO	**Las Campanas**	**46.87**	**155**	P	**P**	**12 43 59.4**	**+0.9**
LCO				IAmb	IAmb	12 44 10.9	
	comp=Z,62nm,0.9s						
LCO	**Las Campanas**	**46.87**	**155**	P	**P**	**12 43 59.4**	**+0.9**
LCO				pmax	pmax		
	comp=Z,62nm,0.9s						
AC05	**El Transito**	**46.89**	**154**	IAmb	IAmb	12 44 01.4	
	comp=Z,45nm,0.8s						
AC05				IAMs_20	IAMs_20	12 59 22.5	
	comp=Z,4µm,20.0s						
SNDB	**Serra Nova Dou**	**47.20**	**121**	*e*P	**P**	**12 44 00.4**	**-0.7**
CO05	**La Serena**	**47.45**	**156**	IAMs_20	IAMs_20	12 59 06.5	
	comp=Z,5µm,20.0s						
PP1B	**Ponte de Pedra**	**47.55**	**130**	*e*P	**P**	**12 44 04.3**	**+0.6**
KUQ	**Kuujjuuaa**	**47.66**	**16**	P	**P**	**12 44 02.8**	**-1.1**
KUQ				IAmb	IAmb	12 44 04.4	
	comp=Z,57nm,0.9s						
CO06	**Fray Jorge**	**47.97**	**157**	IAMs_20	IAMs_20	12 59 20.2	
	comp=Z,5µm,20.0s						
BDQN	**Bodoquena, MS**	**48.03**	**134**	*e*P	**P**	**12 44 07.3**	**0.0**
H03N2	**Juan Fernandez**	**48.29**	**166**	T	T	13 35 42.8	
	baz=347,slow=76,SNR=45						
H03N1	**Juan Fernandez**	**48.29**	**166**	T	T	13 35 46.2	
	baz=347,slow=76,SNR=68						
H03N3	**Juan Fernandez**	**48.30**	**166**	T	T	13 35 42.8	
	baz=347,slow=76,SNR=47						
BBB	**Bella Bella**	**48.38**	**330**	LR	LR	13 06 17.6	
	comp=Z,2µm,18.0s,baz=136,slow=38						
CO03	**El Pedregal**	**48.48**	**156**	IAmb	IAmb	12 44 24.2	
	comp=Z,55nm,0.9s						
CO03				IAMs_20	IAMs_20	12 59 56.8	
	comp=Z,5µm,20.0s						
VA04	**Juan Fernndez**	**48.50**	**166**	IAMs_20	IAMs_20	12 59 34.9	
	comp=Z,6µm,20.0s						
CO02	**Combarbal**	**48.69**	**157**	IAMs_20	IAMs_20	12 59 43.2	
	comp=Z,5µm,21.0s						
AQDB	**Aquidauana**	**48.78**	**133**	IAmb	IAmb	12 44 24.2	
	comp=Z,31nm,0.9s						
AQDB	**Aquidauana**	**48.78**	**133**	*e*P	**P**	**12 44 11.3**	**-1.8**
ARAG	**Araguaiana, MT**	**48.80**	**125**	*e*P	**P**	**12 44 10.7**	**-2.7**
SMTB	**Santa Maria do**	**48.88**	**115**	*e*P	**P**	**12 44 11.7**	**-2.4**
VA06	**Catapilco**	**49.79**	**158**	IAmb	IAmb	12 44 22.4	
	comp=Z,40nm,0.8s						
VA06				IAMs_20	IAMs_20	13 00 14.4	
	comp=Z,5µm,21.0s						
C2SB	**Chapadao do Su**	**49.80**	**129**	*e*P	**P**	**12 44 20.7**	**-0.2**
VA01	**Torpederas**	**50.07**	**158**	IAMs_20	IAMs_20	13 00 22.1	
	comp=Z,5µm,20.0s						
CFA	**Coronel Fontan**	**50.16**	**154**	LR	LR	13 01 31.8	
	comp=Z,2µm,20.5s,baz=350,slow=31						
RPRD	**Ribas do Rio P**	**50.22**	**132**	*e*P	**P**	**12 44 24.4**	**+0.2**
VA03	**San Esteban**	**50.25**	**157**	IAMs_20	IAMs_20	13 00 39.5	
	comp=Z,5µm,20.0s						
MT02	**Curacav**	**50.47**	**158**	IAMs_20	IAMs_20	13 00 34.5	
	comp=Z,5µm,21.0s						
PEL	**Peldehue**	**50.53**	**157**	IAMs_20	IAMs_20	13 00 58.3	
	comp=Z,5µm,19.0s						
PEL	**Peldehue**	**50.53**	**157**	P	**P**	**12 44 27.7**	**+1.3**
PEL				pmax	pmax		
	comp=Z,36nm,0.9s						
VA05	**Santo Domingo**	**50.66**	**159**	IAMs_20	IAMs_20	13 00 38.5	
	comp=Z,5µm,21.0s						
RUBB	**Prince Rupert**	**50.72**	**332**	IAmb	IAmb	12 44 32.0	
	comp=Z,50nm,0.9s						
BLKN	**Baker Lake**	**50.73**	**357**	IAmb	IAmb	12 44 29.0	
	comp=Z,89nm,2.0s						
MT05	**Renca**	**50.74**	**158**	IAMs_20	IAMs_20	13 01 02.6	
	comp=Z,4µm,20.0s						
MT16	**CCHEN**	**50.85**	**157**	IAMs_20	IAMs_20	13 00 57.9	
	comp=Z,4µm,20.0s						
AMBA	**Amambai (Brazi**	**50.89**	**135**	*e*P	**P**	**12 44 29.5**	**+0.3**
MT03	**Universidad Ad**	**50.91**	**157**	IAmb	IAmb	12 44 42.8	
	comp=Z,72nm,1.1s						
MT03				IAMs_20	IAMs_20	13 01 00.2	
	comp=Z,4µm,20.0s						
MT01	**Popeta**	**50.97**	**158**	IAMs_20	IAMs_20	13 00 48.9	
	comp=Z,5µm,21.0s						
MT09	**Talagante**	**50.99**	**158**	IAMs_20	IAMs_20	13 00 50.3	
	comp=Z,5µm,21.0s						
MT08	**Bocatoma Ro**	**51.05**	**157**	IAmb	IAmb	12 44 43.7	
	comp=Z,46nm,0.9s						
MT08				IAMs_20	IAMs_20	13 01 06.8	
	comp=Z,5µm,20.0s						
MT13	**San Alfonso**	**51.22**	**157**	IAMs_20	IAMs_20	13 01 10.3	
	comp=Z,4µm,20.0s						
BO04	**La Punta**	**51.32**	**158**	IAMs_20	IAMs_20	13 01 01.0	
	comp=Z,5µm,20.0s						
LMEL	**Las Melosas**	**51.34**	**157**	IAmb	IAmb	12 44 46.4	
	comp=Z,54nm,1.1s						
LMEL				IAMs_20	IAMs_20	13 01 14.5	
	comp=Z,4µm,20.0s						
YKAW1	**Yellowknife Wh**	**51.49**	**347**	IAmb	IAmb	12 44 34.8	
	comp=Z,48nm,0.9s						
BO01	**Tunca**	**51.51**	**158**	IAmb	IAmb	12 44 46.9	
	comp=Z,45nm,1.1s						
BO01				IAMs_20	IAMs_20	13 01 15.0	
	comp=Z,5µm,20.0s						
YKA	**Yellowknife Ar**	**51.53**	**346**	P	**P**	**12 44 31.3**	**-2.0**
	comp=Z,26nm,0.8s,baz=155,slow=5.3,SNR=49						
YKA				PcP	**PcP**	**12 45 47.9**	**+0.7**
	comp=Z,1.8nm,0.5s,baz=158,slow=3.2,SNR=4.3						
YKA				LR	LR	13 11 03.3	
	comp=Z,3µm,18.2s,baz=153,slow=42						
YKA				PKPPKP	P'P'df	13 15 04.0	-11
	comp=Z,0.5nm,1.1s,baz=352,slow=2.9,SNR=3.5						
	comp=Z,26nm,0.8s						
YKAW3	**Yellowknife Wh**	**51.59**	**347**	IAmb	IAmb	12 44 36.1	
	comp=Z,50nm,0.9s						
U35K	**Hyder**	**51.61**	**333**	P	**P**	**12 44 34.7**	**+0.6**
	baz=129						
TOAD	**Toad River Com**	**51.70**	**338**	P	**P**	**12 44 35.4**	**+0.5**
	baz=136,SNR=26						
CPUP	**Villa Florida**	**51.72**	**140**	P	**P**	**12 44 34.4**	**-0.9**
	comp=Z,3.8nm,0.8s,baz=319,slow=8.5,SNR=28						
CPUP				LR	LR	13 08 05.1	
	comp=Z,2µm,18.2s,baz=326,slow=38						
	comp=Z,3.8nm,0.8s						
CPUP	**Villa Florida**	**51.72**	**140**	*e*P	**P**	**12 44 35.2**	**-0.1**
BDFB	**Brasilia**	**51.82**	**123**	P	**P**	**12 44 35.7**	**-0.7**
	comp=Z,25nm,0.9s,baz=297,slow=6.9,SNR=22						
BDFB				LR	LR	13 07 50.8	
	comp=Z,3µm,19.7s,baz=305,slow=38						
	comp=Z,25nm,0.9s						
V35K	**Ketchikan**	**51.95**	**332**	IAmb	IAmb	12 44 41.8	
	comp=Z,91nm,1.0s						
V35K	**Ketchikan**	**51.95**	**332**	P	**P**	**12 44 39.1**	**+2.4**
	baz=127,SNR=9.0						
BO02	**Sierra Bellavi**	**51.98**	**158**	IAMs_20	IAMs_20	13 01 30.4	
	comp=Z,5µm,20.0s						
ITRB	**Iturama**	**52.23**	**129**	*e*P	**P**	**12 44 39.9**	**+0.7**
KOTAN	**Kotaneelee Air**	**52.24**	**340**	P	**P**	**12 44 40.4**	**+1.6**
	baz=138,SNR=20						
T35M	**Bob Quinn**	**52.38**	**334**	IAmb	IAmb	12 44 45.0	
	comp=Z,41nm,0.9s						
T35M	**Bob Quinn**	**52.38**	**334**	P	**P**	**12 44 42.0**	**+2.1**
	baz=130,SNR=11						
LIRD	**Liard River Hi**	**52.42**	**338**	P	**P**	**12 44 41.9**	**+1.8**
	baz=136,SNR=10						
FRB	**Frobisher Bay**	**52.55**	**13**	LR	LR	13 08 12.7	
	comp=Z,4µm,19.2s,baz=208,slow=38						
ML02	**Panimavida**	**52.63**	**160**	IAmb	IAmb	12 45 08.8	
	comp=Z,104nm,1.2s						
ML02				IAMs_20	IAMs_20	13 01 46.8	
	comp=Z,5µm,20.0s						
NBPS	**Pedro II - PI**	**52.70**	**106**	*e*P	**P**	**12 44 42.3**	**-0.7**
CRAG	**Craig**	**52.73**	**332**	P	**P**	**12 44 46.3**	**+3.9**
CRAG	**Craig**	**52.73**	**332**	P	**P**	**12 44 44.6**	**+2.1**
	baz=126,SNR=5.8						
SDBA	**SAO DESIDERIO**	**52.85**	**117**	*e*P	**P**	**12 44 43.2**	**-0.8**
IPMB	**Ipameri, GO**	**52.92**	**125**	*e*P	**P**	**12 44 44.2**	**-0.3**
WRAK	**Wrangell Islan**	**52.94**	**333**	IAmb	IAmb	12 44 48.1	
	comp=Z,36nm,0.8s						
WRAK	**Wrangell Islan**	**52.94**	**333**	P	**P**	**12 44 45.8**	**+1.8**
	baz=127						
U33K	**Whale Pass**	**53.11**	**332**	IAmb	IAmb	12 44 50.1	
	comp=Z,72nm,1.0s						
U33K	**Whale Pass**	**53.11**	**332**	P	**P**	**12 44 47.6**	**+2.4**
	baz=126,SNR=5.1						
TAOE	**Nuku Hiva Isla**	**53.30**	**248**	*e*P	P	12 44 42.9	-4.5
	comp=Z,366nm,24.7s						
TAOE	**Nuku Hiva Isla**	**53.30**	**248**	*e*PP	**PP**	**12 46 46.0**	**-1.9**
	comp=Z,136nm,25.1s						
TAOE				*e*S	**S**	**12 52 14.9**	**-3.0**
	comp=Z,3µm,25.1s						
TAOE				*e*SS	**SS**	**12 55 53.7**	**-4.5**
	comp=Z,1µm,26.0s						
TAOE				*e*LQ	LQ	12 58 00.5	
	comp=Z,2µm,27.4s						
TAOE				*e*LR	LR	13 00 13.9	
	comp=Z,6µm,24.9s						
S34M	**Telegraph Cree**	**53.35**	**335**	IAmb	IAmb	12 44 51.7	
	comp=Z,46nm,0.9s						
S34M	**Telegraph Cree**	**53.35**	**335**	P	**P**	**12 44 49.2**	**+2.2**
	baz=129,SNR=15						
T33K	**Petersburg**	**53.45**	**333**	P	**P**	**12 44 49.3**	**+1.6**
	baz=126,SNR=6.6						
BI02	**San Fabin de**	**53.50**	**160**	IAmb	IAmb	12 44 51.3	
	comp=Z,120nm,1.8s						
BI02				IAMs_20	IAMs_20	13 02 02.7	
	comp=Z,5µm,20.0s						
NBMO	**Morrinhos-CE**	**53.65**	**105**	*e*P	**P**	**12 44 49.9**	**0.0**
WTLY	**Watson Lake, Y**	**53.89**	**338**	P	**P**	**12 44 52.0**	**+1.1**
	baz=133,SNR=33						
LDASE	**Londrina, Braz**	**53.91**	**133**	*e*P	**P**	**12 44 51.1**	**-0.5**
PTGB	**Pitanga**	**54.08**	**135**	*e*P	**P**	**12 44 52.5**	**-0.4**
R33M	**Jennings River**	**54.23**	**336**	IAmb	IAmb	12 44 59.2	
	comp=Z,58nm,0.9s						
R33M	**Jennings River**	**54.23**	**336**	P	**P**	**12 44 54.5**	**+0.9**
	baz=130						
BB19B	**Bebedouro**	**54.42**	**129**	*e*P	**P**	**12 44 56.0**	**+0.7**
WRGLY	**Wrigley**	**54.42**	**343**	IAmb	IAmb	12 44 57.4	
	comp=Z,63nm,1.2s						
WRGLY	**Wrigley**	**54.42**	**343**	P	**P**	**12 44 56.2**	**+1.5**
	baz=140,SNR=15						
Q32M	**Nakina River**	**54.47**	**335**	P	**P**	**12 44 56.5**	**+1.1**
	baz=128,SNR=24						
S32K	**Killisnoo**	**54.55**	**333**	P	**P**	**12 44 57.3**	**+1.6**
	baz=125						
JANB	**Januaria**	**54.61**	**120**	*e*P	**P**	**12 44 57.0**	**+0.2**
PMNB	**Patos De Minas**	**54.63**	**125**	*e*P	**P**	**12 44 57.4**	**+0.4**
SIT	**Sitka**	**54.65**	**332**	P	**P**	**12 44 56.5**	**+0.1**
	baz=124						
JIS	**Juneau Island**	**54.94**	**334**	P	**P**	**12 45 02.3**	**+3.8**
PSAL	**Palomas, Salto**	**55.04**	**144**	*e*P	**P**	**12 44 58.4**	**-1.3**
P32M	**Atlin**	**55.45**	**335**	IAmb	IAmb	12 45 07.2	
	comp=Z,49nm,0.8s						
P32M				IAMs_20	IAMs_20	13 12 32.1	
	comp=Z,3µm,18.0s						
P32M	**Atlin**	**55.45**	**335**	P	**P**	**12 45 02.9**	**+0.7**
	baz=127,SNR=16						
P33M	**Teslin, Yukon**	**55.47**	**336**	P	**P**	**12 45 02.5**	**0.0**
P33M				IAmb	IAmb	12 45 05.8	
	comp=Z,30nm,0.9s						
P33M				IAMs_20	IAMs_20	13 12 19.8	
	comp=Z,4µm,21.0s						
P33M	**Teslin, Yukon**	**55.47**	**336**	P	**P**	**12 45 02.6**	**0.0**
	baz=129,SNR=14						
S31K	**Pelican**	**55.56**	**333**	P	**P**	**12 45 04.5**	**+1.4**
	baz=124,SNR=5.6						
ITAB	**Concordia**	**55.69**	**137**	IAmb	IAmb	12 45 15.3	
	comp=Z,54nm,1.1s						
ITAB	**Concordia**	**55.69**	**137**	*e*P	**P**	**12 45 02.3**	**-2.1**
RCLB	**Rio Claro- Sao**	**55.95**	**129**	*e*P	**P**	**12 45 10.3**	**+3.9**
SKAG	**Skagway**	**56.03**	**335**	P	**P**	**12 45 10.0**	**+3.6**
SKAG	**Skagway**	**56.03**	**335**	P	**P**	**12 45 07.6**	**+1.2**
	baz=126						
RKT	**Rikitea**	**56.15**	**230**	*e*S	**S**	**12 52 53.8**	**-1.9**
	comp=Z,7µm,28.8s						
RKT				*e*LQ	LQ	12 59 15.6	
	comp=Z,13µm,34.2s						
RKT				*e*LR	LR	13 01 32.6	
	comp=Z,17µm,25.2s						
N32M	**Quiet Lake**	**56.16**	**337**	P	**P**	**12 45 08.0**	**+0.5**
	baz=129						
WHY	**Whitehorse**	**56.56**	**336**	IAmb	IAmb	12 45 13.7	
	comp=Z,54nm,0.9s						
WHY	**Whitehorse**	**56.56**	**336**	P	**P**	**12 45 11.5**	**+1.2**
	baz=127,SNR=14						
SPB	**Sao Paulo**	**56.71**	**130**	IAMs_20	IAMs_20	13 09 55.3	
	comp=Z,4µm,19.0s						
VAO	**Valinhos**	**56.72**	**130**	IAmb	IAmb	12 45 17.4	
	comp=Z,52nm,1.0s						
VAO	**Valinhos**	**56.72**	**130**	*e*P	**P**	**12 45 12.3**	**+0.4**
DIAM	**Diamantina, MG**	**56.75**	**123**	*e*P	**P**	**12 45 12.7**	**+0.4**
CPSB	**Cacapava Do Su**	**57.01**	**141**	*e*P	**P**	**12 45 13.9**	**+0.1**
P30M	**Million Dollar**	**57.09**	**335**	P	**P**	**12 45 14.9**	**+0.9**
	baz=124						
O30N	**Mendenhall**	**57.10**	**336**	IAMs_20	IAMs_20	13 13 47.0	
	comp=Z,3µm,18.0s						
O30N	**Mendenhall**	**57.10**	**336**	P	**P**	**12 45 14.9**	**+0.8**
	baz=125,SNR=24						
P29M	**Windy Craggy**	**57.14**	**334**	IAMs_20	IAMs_20	13 12 22.5	
	comp=Z,4µm,20.0s						
P29M	**Windy Craggy**	**57.14**	**334**	P	**P**	**12 45 15.1**	**+0.7**
	baz=123						
NBPA	**Parau_RN**	**57.22**	**106**	*e*P	**P**	**12 45 14.9**	**-0.7**
BSCB	**Bom Sucesso**	**57.28**	**126**	*e*P	**P**	**12 45 16.2**	**+0.3**
M31M	**Drury Creek, Y**	**57.31**	**338**	IAmb	IAmb	12 45 19.1	
	comp=Z,31nm,1.0s						
M31M				IAMs_20	IAMs_20	13 12 56.2	
	comp=Z,5µm,22.0s						
M31M	**Drury Creek, Y**	**57.31**	**338**	P	**P**	**12 45 16.5**	**+1.0**
	baz=128,SNR=17						
N31M	**Braeburn, Yuko**	**57.40**	**337**	P	**P**	**12 45 16.8**	**+0.6**
	baz=126,SNR=26						
PLCA	**Paso Flores**	**57.43**	**161**	P	**P**	**12 45 17.1**	**+0.5**
	comp=Z,14nm,0.9s,baz=321,slow=7.9,SNR=19						
PLCA				LR	LR	13 05 12.1	
	comp=Z,6µm,18.3s,baz=359,slow=31						
	comp=Z,14nm,0.9s						
PLCA	**Paso Flores**	**57.43**	**161**	P	**P**	**12 45 17.2**	**+0.6**
PLCA				IAmb	IAmb	12 45 19.3	
	comp=Z,91nm,1.7s						
PLCA	**Paso Flores**	**57.43**	**161**	P	**P**	**12 45 17.2**	**+0.6**
PLCA				pmax	pmax		
	comp=Z,91nm,1.7s						
PLCA	**Paso Flores**	**57.43**	**161**	*e*P	**P**	**12 45 15.2**	**-1.4**
NBTA	**Tacaratu-PE**	**57.55**	**110**	*e*P	**P**	**12 45 16.2**	**-1.7**
HYT	**Haines Junctio**	**57.70**	**335**	P	**P**	**12 45 19.4**	**+1.0**
	baz=124,SNR=8.0						
O29M	**Mount Kennedy**	**57.86**	**334**	IAmb	IAmb	12 45 23.6	
	comp=Z,32nm,1.1s						
O29M				IAMs_20	IAMs_20	13 12 48.2	
	comp=Z,4µm,20.0s						
O29M	**Mount Kennedy**	**57.86**	**334**	P	**P**	**12 45 20.5**	**+1.0**
	baz=122,SNR=8.8						
N30M	**Aishikik Lake**	**57.90**	**336**	IAmb	IAmb	12 45 23.8	
	comp=Z,55nm,1.0s						
N30M				IAMs_20	IAMs_20	13 12 23.0	
	comp=Z,3µm,19.0s						
N30M	**Aishikik Lake**	**57.90**	**336**	P	**P**	**12 45 20.4**	**+0.7**
	baz=125,SNR=21						
YUK6	**Outpost Mounta**	**58.12**	**335**	P	**P**	**12 45 22.1**	**+0.6**
	baz=123,SNR=7.7						
BCPM	**Bancas Point**	**58.12**	**334**	IAMs_20	IAMs_20	13 12 14.7	
	comp=Z,3µm,20.0s						
TRQA	**Tornquist**	**58.34**	**153**	P	**P**	**12 45 22.3**	**-0.7**
TRQA				IAmb	IAmb	12 45 24.8	
	comp=Z,70nm,1.6s						
TRQA	**Tornquist**	**58.34**	**153**	P	**P**	**12 45 22.3**	**-0.7**
TRQA				pmax	pmax		
	comp=Z,70nm,1.6s						
RCBR	**Riachuelo**	**58.37**	**106**	P	**P**	**12 45 23.6**	**-0.2**
RCBR	**Riachuelo**	**58.37**	**106**	IAMs_20	IAMs_20	13 11 06.6	
	comp=Z,4µm,21.0s						
RCBR	**Riachuelo**	**58.37**	**106**	P	**P**	**12 45 23.6**	**-0.2**
RCBR				pmax	pmax		
	comp=Z,155nm,1.2s						
RCBR				MLR	MLR		
	comp=Z,4µm,21.0s						
RCBR	**Riachuelo**	**58.37**	**106**	*e*P	**P**	**12 45 23.6**	**-0.2**
LL01	**San Ignacio de**	**58.40**	**164**	P	**P**	**12 45 23.4**	**+0.1**
M30M	**Minto, Yukon**	**58.43**	**337**	IAMs_20	IAMs_20	13 14 51.9	
	comp=Z,3µm,20.0s						
M30M	**Minto, Yukon**	**58.43**	**337**	P	**P**	**12 45 23.9**	**+0.5**
	baz=126,SNR=15						
YUK4	**Talbot Arm**	**58.46**	**335**	P	**P**	**12 45 24.6**	**+0.8**
	baz=123,SNR=11						
PINM	**Pinnacle**	**58.46**	**334**	P	**P**	**12 45 24.6**	**+0.9**
	baz=121						
MAYO	**Mayo, Yukon**	**58.71**	**338**	P	**P**	**12 45 26.1**	**+0.9**
	baz=127,SNR=15						
O28M	**Mount Upton**	**58.79**	**334**	IAMs_20	IAMs_20	13 14 50.3	
	comp=Z,4µm,20.0s						
O28M	**Mount Upton**	**58.79**	**334**	P	**P**	**12 45 27.0**	**+0.9**
	baz=121						
CMC01	**Camacan, BA**	**58.84**	**118**	*e*P	**P**	**12 45 26.3**	**-0.6**
YUK8	**Steele Glacier**	**58.88**	**335**	P	**P**	**12 45 27.0**	**+0.2**
	baz=122,SNR=24						
M29M	**Somme Creek**	**58.99**	**337**	IAMs_20	IAMs_20	13 15 40.5	
	comp=Z,4µm,19.0s						
M29M	**Somme Creek**	**58.99**	**337**	P	**P**	**12 45 27.2**	**-0.2**
	baz=124,SNR=95						
SJMB	**Sao Joao De Ma**	**58.99**	**122**	*e*P	**P**	**12 45 28.9**	**+1.0**
NBPV	**Pedro Velho**	**59.15**	**106**	*e*P	**P**	**12 45 29.3**	**+0.2**
GUA01	**Guaratinga, BA**	**59.15**	**119**	*e*P	**P**	**12 45 30.3**	**+1.3**
LOGN	**Logan Glacier**	**59.16**	**334**	IAmb	IAmb	12 45 38.5	
	comp=Z,33nm,1.0s						
LOGN				IAMs_20	IAMs_20	13 13 00.3	
	comp=Z,4µm,21.0s						
L29M	**L29M**	**59.24**	**337**	IAmb	IAmb	12 46 20.6	
	comp=Z,50nm,0.9s						
L29M	**L29M**	**59.24**	**337**	P	**P**	**12 45 29.7**	**+0.7**
	baz=124						
YAH	**Yahtse**	**59.24**	**334**	IAMs_20	IAMs_20	13 12 35.3	
	comp=Z,4µm,20.0s						
LL02	**Futaleuf**	**59.30**	**163**	P	**P**	**12 45 29.5**	**-0.1**
LL02				IAmb	IAmb	12 45 49.3	
	comp=Z,45nm,1.1s						
BSFB	**Barra de Sao F**	**59.33**	**122**	*e*P	**P**	**12 45 31.3**	**+1.0**
CTGM	**Chitina Glacie**	**59.37**	**334**	IAmb	IAmb	12 45 42.8	
	comp=Z,35nm,1.1s						
CTGM				IAMs_20	IAMs_20	13 13 06.0	
	comp=Z,4µm,21.0s						
CTG	**Chitna Glacier**	**59.37**	**334**	P	**P**	**12 45 30.3**	**+0.2**
	baz=120,SNR=6.0						
C36M	**Paulatuk**	**59.39**	**347**	IAMs_20	IAMs_20	13 15 59.3	
	comp=Z,3µm,19.0s						
C36M	**Paulatuk**	**59.39**	**347**	P	**P**	**12 45 30.3**	**+0.4**
	baz=142,SNR=5.7						
YUK3	**Moose Creek**	**59.42**	**335**	P	**P**	**12 45 30.4**	**-0.1**
	baz=121,SNR=19						
GRNC	**Granite Creek**	**59.43**	**334**	IAMs_20	IAMs_20	13 12 54.6	
	comp=Z,4µm,20.0s						
K29M	**Barlow Dome**	**59.44**	**338**	IAmb	IAmb	12 46 21.1	
	comp=Z,31nm,1.1s						
K29M				IAMs_20	IAMs_20	13 15 16.8	
	comp=Z,4µm,19.0s						
K29M	**Barlow Dome**	**59.44**	**338**	P	**P**	**12 45 30.7**	**+0.3**
	baz=125,SNR=10						
J30M	**Hart River**	**59.45**	**339**	P	**P**	**12 45 30.7**	**+0.2**
	baz=127,SNR=9.4						
BARN	**Barnard Glacie**	**59.55**	**334**	IAmb	IAmb	12 46 22.2	
	comp=Z,43nm,1.0s						
H31M	**Peel River**	**59.57**	**341**	P	**P**	**12 45 31.2**	**0.0**
	baz=130,SNR=5.2						
POIN	**Pond Inlet**	**59.59**	**5**	P	**P**	**12 45 30.2**	**-0.9**
SFJD	**Kangerlussuaq**	**59.70**	**17**	LR	LR	13 12 10.3	
	comp=Z,6µm,18.3s,baz=220,slow=37						
I30M	**Mount Dempster**	**59.86**	**340**	IAmb	IAmb	12 45 36.2	
	comp=Z,33nm,1.0s						
I30M				IAMs_20	IAMs_20	13 13 59.9	
	comp=Z,3µm,22.0s						
I30M	**Mount Dempster**	**59.86**	**340**	P	**P**	**12 45 33.3**	**-0.1**
	baz=127,SNR=22						
TGL	**Tana Glacier**	**59.90**	**334**	IAMs_20	IAMs_20	13 16 01.1	
	comp=Z,3µm,18.0s						
BVCY	**Beaver Creek**	**59.91**	**336**	P	**P**	**12 45 34.2**	**+0.6**
	baz=121,SNR=26						
RIB01	**Linhares ES**	**59.94**	**122**	*e*P	**P**	**12 45 34.6**	**+0.2**
CRQE	**Cirque**	**60.01**	**334**	P	**P**	**12 45 35.6**	**+1.1**

	baz=118,SNR=15						
CRQM	**Cirque**	**60.03**	**334**	IAMs_20	IAMs_20	13 16 04.1	
	comp=Z,3μm,18.0s						
J29N	**Klondike Camp**	**60.04**	**339**	IAMs_20	IAMs_20	13 15 56.3	
	comp=Z,4μm,19.0s						
J29N	**Klondike Camp**	**60.04**	**339**	P	**P**	**12 45 35.6**	**+1.0**
	baz=125						
CAM01	**Campos-RJ**	**60.18**	**125**	*e*P	**P**	**12 45 36.6**	**+0.6**
KAIM	**Kayak Island**	**60.22**	**332**	P	**P**	**12 45 35.6**	**-0.1**
	baz=116						
AY01	**Puyuhuapi**	**60.23**	**165**	P	**P**	**12 45 36.5**	**+0.6**
AY01				IAmb	IAmb	12 45 38.1	
	comp=Z,36nm,0.8s						
DAWY	**Dawson**	**60.25**	**338**	P	**P**	**12 45 35.8**	**-0.1**
	baz=124,SNR=17						
G31M	**Satah River**	**60.27**	**342**	P	**P**	**12 45 36.3**	**+0.4**
	baz=130,SNR=15						
MCARA	**McCarthy VSAT**	**60.29**	**334**	P	**P**	**12 45 37.1**	**+1.0**
	baz=119,SNR=24						
M27K	**Edge Creek, AK**	**60.29**	**336**	IAmb	IAmb	12 45 40.2	
	comp=Z,43nm,0.9s						
M27K				IAMs_20	IAMs_20	13 14 04.1	
	comp=Z,4μm,20.0s						
M27K	**Edge Creek, AK**	**60.29**	**336**	P	**P**	**12 45 37.6**	**+1.2**
	baz=120,SNR=18						
ALF01	**Guarapari-ES**	**60.31**	**123**	*e*P	**P**	**12 45 37.8**	**+0.9**
VRDI	**Verde Repeater**	**60.39**	**334**	IAmb	IAmb	12 45 41.2	
	comp=Z,46nm,0.9s						
F31M	**Tsiigehtchic**	**60.45**	**343**	IAmb	IAmb	12 45 39.5	
	comp=Z,42nm,1.1s						
F31M	**Tsiigehtchic**	**60.45**	**343**	P	**P**	**12 45 37.0**	**-0.2**
	baz=131,SNR=17						
I29M	**Ogilvie Camp,**	**60.60**	**339**	IAmb	IAmb	12 45 40.7	
	comp=Z,28nm,1.0s						
I29M	**Ogilvie Camp,**	**60.60**	**339**	P	**P**	**12 45 38.6**	**+0.3**
	baz=125,SNR=18						
BCAR	**Beaver Creek A**	**60.62**	**336**	P	**P**	**12 45 37.5**	**-0.9**
L27K	**Beaver Creek,**	**60.63**	**336**	P	**P**	**12 45 37.8**	**-0.7**
	baz=121,SNR=31						
GLB	**Gilahina Butte**	**60.65**	**334**	IAMs_20	IAMs_20	13 13 20.8	
	comp=Z,3μm,22.0s						
EPYK	**Eagle Plains**	**60.68**	**341**	P	**P**	**12 45 39.0**	**+0.2**
	baz=128,SNR=8.4						
M26K	**Nabesna, AK**	**60.77**	**335**	IAmb	IAmb	12 45 43.2	
	comp=Z,37nm,0.9s						
M26K				IAMs_20	IAMs_20	13 13 42.6	
	comp=Z,4μm,21.0s						
M26K	**Nabesna, AK**	**60.77**	**335**	P	**P**	**12 45 39.5**	**0.0**
	baz=119						
BMRM	**Bremner River**	**60.77**	**333**	P	**P**	**12 45 39.6**	**+0.1**
	baz=117,SNR=19						
INK	**Inuvik**	**60.97**	**343**	LR	LR	13 18 00.4	
	comp=Z,4μm,19.0s,baz=136,slow=42						
INK	**Inuvik**	**60.97**	**343**	P	**P**	**12 45 39.0**	**-1.6**
INK				IAmb	IAmb	12 45 43.0	
	comp=Z,42nm,0.9s						
INK	**Inuvik**	**60.97**	**343**	P	**P**	**12 45 39.0**	**-1.6**
INK				pmax	pmax		
	comp=Z,42nm,0.9s						
INK	**Inuvik**	**60.97**	**343**	P	**P**	**12 45 40.1**	**-0.5**
	baz=132,SNR=26						
N25K	**Chitina, Valde**	**61.06**	**334**	IAMs_20	IAMs_20	13 16 48.4	
	comp=Z,3μm,19.0s						
N25K	**Chitina, Valde**	**61.06**	**334**	P	**P**	**12 45 41.5**	**0.0**
	baz=117,SNR=68						
RES	**Resolute Bay**	**61.08**	**359**	LR	LR	13 14 53.3	
	comp=Z,5μm,19.2s,baz=172,slow=39						
EYAK	**Cordova Ski Ar**	**61.09**	**333**	IAMs_20	IAMs_20	13 16 17.6	
	comp=Z,4μm,20.0s						
EYAK	**Cordova Ski Ar**	**61.09**	**333**	P	**P**	**12 45 43.9**	**+2.3**
EYAK	**Cordova Ski Ar**	**61.09**	**333**	P	**P**	**12 45 42.4**	**+0.7**
	baz=115,SNR=13						
H29M	**Whitestone**	**61.12**	**340**	IAmb	IAmb	12 45 44.6	
	comp=Z,24nm,1.1s						
H29M	**Whitestone**	**61.12**	**340**	P	**P**	**12 45 42.3**	**+0.5**
	baz=126,SNR=9.7						
F30M	**Barrier River**	**61.16**	**342**	IAmb	IAmb	12 45 44.3	
	comp=Z,42nm,0.8s						
F30M	**Barrier River**	**61.16**	**342**	P	**P**	**12 45 42.6**	**+0.5**
	baz=129,SNR=23						
I28M	**Miner Creek**	**61.21**	**339**	P	**P**	**12 45 43.0**	**+0.5**
	baz=124,SNR=12						
L26K	**Log Cabin Wild**	**61.21**	**336**	IAmb	IAmb	12 45 46.1	
	comp=Z,33nm,1.0s						
L26K	**Log Cabin Wild**	**61.21**	**336**	P	**P**	**12 45 43.3**	**+0.8**
	baz=119,SNR=21						
MENT	**Mentasta**	**61.32**	**336**	IAmb	IAmb	12 45 46.2	
	comp=Z,25nm,0.9s						
MENT	**Mentasta**	**61.32**	**336**	P	**P**	**12 45 45.3**	**+2.1**
G29M	**Pine Creek**	**61.42**	**341**	P	**P**	**12 45 44.1**	**+0.3**
	baz=126,SNR=20						
COYC	**Coyhaique**	**61.45**	**165**	P	**P**	**12 45 45.1**	**+0.9**
KLU	**Klutina**	**61.57**	**334**	P	**P**	**12 45 45.3**	**+0.3**
	baz=116,SNR=36						
P23K	**Montague Islan**	**61.61**	**332**	P	**P**	**12 45 45.6**	**+0.5**
	baz=114,SNR=9.6						
HARP	**HAARP**	**61.65**	**335**	P	**P**	**12 45 45.9**	**+0.5**
	baz=117,SNR=21						
A36M	**Sachs Harbour**	**61.73**	**349**	P	**P**	**12 45 44.9**	**-0.9**
	baz=142,SNR=20						
DOT	**Dot Lake**	**61.80**	**336**	IAMs_20	IAMs_20	13 15 41.8	
	comp=Z,4μm,20.0s						
GLI	**Glacier Island**	**61.83**	**333**	P	**P**	**12 45 46.5**	**-0.1**
	baz=114						
I27K	**Kandik River**	**61.88**	**339**	IAmb	IAmb	12 45 50.9	
	comp=Z,46nm,0.9s						
I27K				IAMs_20	IAMs_20	13 16 09.3	
	comp=Z,4μm,21.0s						
I27K	**Kandik River**	**61.88**	**339**	P	**P**	**12 45 46.8**	**-0.2**
	baz=122,SNR=33						
SCRK	**Sand Creek**	**61.93**	**337**	IAmb	IAmb	12 45 51.1	
	comp=Z,28nm,1.0s						
SCRK	**Sand Creek**	**61.93**	**337**	P	**P**	**12 45 47.2**	**-0.2**
	baz=119,SNR=17						
M24K	**Tolsona, Glenn**	**61.95**	**334**	P	**P**	**12 45 47.9**	**+0.4**
	baz=116,SNR=19						
J26L	**Joseph Creek**	**62.02**	**337**	IAmb	IAmb	12 45 51.7	
	comp=Z,55nm,1.0s						
J26L	**Joseph Creek**	**62.02**	**337**	P	**P**	**12 45 48.4**	**+0.4**
	baz=120,SNR=45						
PAX	**Paxson**	**62.04**	**335**	IAmb	IAmb	12 45 51.4	
	comp=Z,51nm,1.0s						
PAX				IAMs_20	IAMs_20	13 16 59.3	
	comp=Z,3μm,20.0s						
PAX	**Paxson**	**62.04**	**335**	P	**P**	**12 45 48.1**	**-0.1**
	baz=117,SNR=43						
RIDG	**Independent Ri**	**62.15**	**336**	P	**P**	**12 45 49.5**	**+0.6**
	baz=118,SNR=21						
H27K	**Steamboat Moun**	**62.19**	**339**	IAmb	IAmb	12 45 52.3	
	comp=Z,49nm,1.1s						
H27K	**Steamboat Moun**	**62.19**	**339**	P	**P**	**12 45 49.7**	**+0.7**
	baz=122,SNR=28						
E29M	**Blow River**	**62.27**	**342**	IAmb	IAmb	12 45 52.6	
	comp=Z,38nm,1.1s						
I26K	**Coal Creek Min**	**62.28**	**338**	IAmb	IAmb	12 45 52.6	
	comp=Z,24nm,1.1s						
I26K				IAMs_20	IAMs_20	13 15 36.2	
	comp=Z,3μm,21.0s						
I26K	**Coal Creek Min**	**62.28**	**338**	P	**P**	**12 45 49.6**	**+0.1**
	baz=120						
SCM	**Sheep Creek Mo**	**62.33**	**334**	P	**P**	**12 45 50.1**	**0.0**
	baz=114,SNR=23						
PWL	**Port Wells**	**62.38**	**332**	IAMs_20	IAMs_20	13 17 20.4	
	comp=Z,3μm,19.0s						
PWL	**Port Wells**	**62.38**	**332**	P	**P**	**12 45 50.3**	**0.0**
	baz=113,SNR=12						
F28M	**Old Crow**	**62.41**	**341**	P	**P**	**12 45 50.5**	**0.0**
	baz=125,SNR=80						
M23K	**Glacier View**	**62.48**	**334**	P	**P**	**12 45 51.4**	**+0.3**
	baz=114,SNR=32						
G27K	**Doyon Strip**	**62.54**	**340**	P	**P**	**12 45 51.5**	**+0.1**
	baz=122,SNR=18						
K24K	**Donnelly Dome**	**62.55**	**336**	IAMs_20	IAMs_20	13 16 35.5	
	comp=Z,4μm,20.0s						
K24K	**Donnelly Dome**	**62.55**	**336**	P	**P**	**12 45 51.9**	**+0.4**
	baz=117,SNR=33						
SEW	**Seward**	**62.60**	**331**	IAMs_20	IAMs_20	13 13 34.4	
	comp=Z,3μm,20.0s						
SEW	**Seward**	**62.60**	**331**	P	**P**	**12 45 51.9**	**+0.2**
	baz=112,SNR=15						
KNK	**Knik Glacier**	**62.65**	**333**	P	**P**	**12 45 52.6**	**+0.4**
	baz=113,SNR=32						
PMOR	**Pomariorio Ree**	**62.72**	**245**	*e*SS	SS	12 58 32.0	+5.9
	comp=Z,3μm,24.7s						
PMOR				*e*LR	LR	13 04 33.5	
	comp=Z,3μm,21.5s						
SML	**Sawmill**	**62.75**	**333**	P	**P**	**12 45 53.3**	**+0.4**
	baz=114,SNR=22						
J25K	**Salcha River,**	**62.76**	**337**	IAmb	IAmb	12 45 56.3	
	comp=Z,43nm,0.9s						
J25K	**Salcha River,**	**62.76**	**337**	P	**P**	**12 45 53.1**	**+0.2**
	baz=118						
WAT6	**Susitna Watana**	**62.81**	**334**	P	**P**	**12 45 53.2**	**-0.2**
	baz=114,SNR=60						
O22K	**Cooper Landing**	**62.86**	**332**	IAMs_20	IAMs_20	13 12 53.4	
	comp=Z,3μm,22.0s						
O22K	**Cooper Landing**	**62.86**	**332**	P	**P**	**12 45 53.6**	**0.0**
	baz=112,SNR=10						
DHY	**Denali Highway**	**62.87**	**335**	IAmb	IAmb	12 46 42.4	
	comp=Z,28nm,1.0s						
DHY	**Denali Highway**	**62.87**	**335**	P	**P**	**12 45 53.9**	**+0.1**
	baz=115,SNR=5.8						
E28M	**Babbage River**	**62.88**	**342**	IAmb	IAmb	12 45 56.0	
	comp=Z,36nm,1.1s						
E28M				IAMs_20	IAMs_20	13 16 04.5	
	comp=Z,3μm,20.0s						
E28M	**Babbage River**	**62.88**	**342**	P	**P**	**12 45 52.6**	**-1.0**
	baz=126,SNR=28						
AY03	**Cochrane**	**62.90**	**166**	IAmb	IAmb	12 45 57.1	
	comp=Z,48nm,1.2s						
PMR	**Palmer**	**63.02**	**333**	P	**P**	**12 45 56.2**	**+1.7**
PMR	**Palmer**	**63.02**	**333**	P	**P**	**12 45 54.1**	**-0.4**
	baz=113,SNR=29						
BRSE	**Bradley Lake S**	**63.07**	**331**	P	**P**	**12 45 54.9**	**-0.2**
	baz=110,SNR=36						
D28M	**Stokes Point**	**63.08**	**343**	P	**P**	**12 45 54.6**	**-0.2**
	baz=127						
RC01	**Rabbit Creek A**	**63.09**	**332**	P	**P**	**12 45 54.5**	**-0.6**
	baz=112,SNR=65						
SLKM	**Skilak Lake**	**63.10**	**332**	IAMs_20	IAMs_20	13 12 57.8	
	comp=Z,3μm,20.0s						
CNPM	**China Poot**	**63.24**	**330**	IAMs_20	IAMs_20	13 12 41.4	
	comp=Z,3μm,21.0s						
WAT1	**Susitna Watana**	**63.26**	**334**	P	**P**	**12 45 55.7**	**-0.5**
	baz=114						
E27K	**Coleen River**	**63.28**	**341**	IAmb	IAmb	12 45 59.3	
	comp=Z,41nm,1.0s						
E27K	**Coleen River**	**63.28**	**341**	P	**P**	**12 45 56.6**	**+0.4**
	baz=123,SNR=33						
HDA	**Harding Lake**	**63.28**	**336**	P	**P**	**12 45 55.6**	**-0.7**
	baz=116,SNR=24						
G26K	**Porcupine Rive**	**63.34**	**340**	IAmb	IAmb	12 45 59.5	
	comp=Z,30nm,0.9s						
G26K				IAMs_20	IAMs_20	13 17 11.6	
	comp=Z,3μm,20.0s						
G26K	**Porcupine Rive**	**63.34**	**340**	P	**P**	**12 45 56.1**	**-0.5**
	baz=120,SNR=24						
KDAK	**Kodiak Island**	**63.34**	**328**	LR	LR	13 14 53.3	
	comp=Z,2μm,19.6s,baz=105,slow=37						
KDAK	**Kodiak Island**	**63.34**	**328**	P	**P**	**12 45 58.8**	**+2.0**
KDAK	**Kodiak Island**	**63.34**	**328**	P	**P**	**12 45 58.8**	**+2.0**
KDAK				pmax	pmax		
	comp=Z,79nm,1.0s						
KDAK	**Kodiak Island**	**63.34**	**328**	P	**P**	**12 45 57.1**	**+0.3**
	baz=108						
ILAR	**Eielson Array**	**63.42**	**337**	P	**P**	**12 45 56.6**	**-0.6**
	comp=Z,59nm,1.0s,baz=129,slow=4.5,SNR=79						
ILAR				LR	LR	13 15 55.7	
	comp=Z,5μm,20.9s,baz=114,slow=38						
	comp=Z,59nm,1.0s						
ILAR	**Eielson Array**	**63.42**	**337**	P	**P**	**12 45 56.4**	**-0.8**
HOM	**Homer**	**63.48**	**330**	P	**P**	**12 45 57.5**	**-0.1**
	baz=109,SNR=6.4						
Q20K	**Shuyak Island**	**63.50**	**329**	P	**P**	**12 45 58.0**	**+0.2**
	baz=108,SNR=8.1						
M22K	**Willow**	**63.51**	**333**	P	**P**	**12 45 57.7**	**-0.1**
	baz=112,SNR=14						
OHAK	**Old Harbor**	**63.54**	**328**	P	**P**	**12 46 01.8**	**+3.7**
OHAK	**Old Harbor**	**63.54**	**328**	P	**P**	**12 45 58.0**	**-0.1**
	baz=107,SNR=8.6						
CAPN	**Captain Cook N**	**63.62**	**332**	P	**P**	**12 45 58.2**	**-0.3**
	baz=110,SNR=7.7						
FYU	**Fort Yukon**	**63.64**	**339**	IAmb	IAmb	12 46 44.0	
	comp=Z,30nm,1.1s						
D27M	**Malcolm River**	**63.68**	**342**	IAmb	IAmb	12 46 01.9	
	comp=Z,26nm,1.1s						
D27M	**Malcolm River**	**63.68**	**342**	P	**P**	**12 45 59.2**	**+0.3**
	baz=124,SNR=6.3						
SUA	**Susitna One**	**63.69**	**333**	P	**P**	**12 45 58.4**	**-0.8**
SUA	**Susitna One**	**63.69**	**333**	P	**P**	**12 45 58.8**	**-0.4**
	baz=111,SNR=18						
CCB	**Clear Creek Bu**	**63.72**	**336**	IAmb	IAmb	12 46 37.8	
	comp=Z,21nm,0.9s						
CCB				IAMs_20	IAMs_20	13 15 30.4	
	comp=Z,4μm,21.0s						
WRH	**Wood River Hil**	**63.75**	**336**	IAmb	IAmb	12 46 02.2	
	comp=Z,36nm,0.9s						
WRH				IAMs_20	IAMs_20	13 15 18.4	
	comp=Z,3μm,21.0s						
POKR	**Poker Plat Res**	**63.78**	**337**	P	**P**	**12 45 59.8**	**+0.2**
	baz=116,SNR=12						
MCK	**McKinley**	**63.78**	**335**	IAMs_20	IAMs_20	13 17 53.3	
	comp=Z,4μm,20.0s						
MCK	**McKinley**	**63.78**	**335**	P	**P**	**12 45 59.3**	**-0.4**
	baz=114,SNR=30						
CUT	**Chulitna**	**63.82**	**334**	P	**P**	**12 46 00.2**	**+0.4**
	baz=112,SNR=42						
SII	**Sitkinak Islan**	**63.83**	**327**	P	**P**	**12 45 60.0**	**-0.1**
	baz=106						
COLA	**College**	**63.83**	**337**	P	**P**	**12 45 59.3**	**-0.5**
COLA	**College**	**63.83**	**337**	IAMs_20	IAMs_20	13 15 56.5	
	comp=Z,4μm,21.0s						
COLA	**College**	**63.83**	**337**	P	**P**	**12 46 00.5**	**+0.6**
COLA	**College**	**63.83**	**337**	P	**P**	**12 45 59.7**	**-0.1**
COLA				pmax	pmax		
	comp=Z,66nm,0.9s						
COLA	**College**	**63.83**	**337**	P	**P**	**12 45 59.7**	**-0.1**
	baz=115						
F26K	**Sheenjek River**	**63.84**	**340**	IAmb	IAmb	12 46 03.4	
	comp=Z,46nm,1.1s						
F26K	**Sheenjek River**	**63.84**	**340**	P	**P**	**12 46 00.3**	**+0.3**
	baz=120,SNR=43						
BMAR	**Burnt Mountain**	**63.84**	**340**	P	**P**	**12 45 59.3**	**-0.7**
G25K	**Bearman Lake**	**64.04**	**339**	P	**P**	**12 46 01.5**	**+0.3**
	baz=118,SNR=11						
L22K	**Petersville**	**64.08**	**334**	IAmb	IAmb	12 46 04.4	
	comp=Z,44nm,0.8s						
NEA2	**Nenana**	**64.19**	**336**	IAmb	IAmb	12 46 05.1	
	comp=Z,48nm,1.0s						
NEA2	**Nenana**	**64.19**	**336**	P	**P**	**12 46 01.6**	**-0.7**
	baz=114,SNR=50						
SKT	**Skwentna**	**64.22**	**333**	IAMs_20	IAMs_20	13 13 57.1	
	comp=Z,3μm,21.0s						
SKT	**Skwentna**	**64.22**	**333**	P	**P**	**12 46 01.5**	**-1.0**
	baz=110,SNR=79						
Q19K	**Cape Douglas,**	**64.22**	**329**	P	**P**	**12 46 02.3**	**-0.3**
	baz=107,SNR=12						
TRF	**Thorofare Moun**	**64.23**	**335**	IAMs_20	IAMs_20	13 16 10.1	
	comp=Z,3μm,21.0s						
TRF	**Thorofare Moun**	**64.23**	**335**	P	**P**	**12 46 01.8**	**-0.9**
	baz=112,SNR=46						
P19K	**Oil Pt**	**64.24**	**330**	P	**P**	**12 46 02.5**	**-0.2**
	baz=108,SNR=6.8						
R18K	**Karluk**	**64.24**	**328**	P	**P**	**12 46 02.4**	**-0.2**
	baz=106						
N20K	**Mount Spurr**	**64.26**	**332**	P	**P**	**12 46 02.7**	**-0.1**
	baz=110						
SPCR	**Spurr Chakacha**	**64.26**	**332**	P	**P**	**12 46 02.7**	**-0.1**
	baz=110,SNR=25						
H24K	**Noodor Dome**	**64.26**	**338**	IAmb	IAmb	12 46 05.9	
	comp=Z,50nm,1.0s						
H24K	**Noodor Dome**	**64.26**	**338**	P	**P**	**12 46 02.8**	**+0.1**
	baz=116,SNR=39						
F25K	**Christian Rive**	**64.28**	**340**	P	**P**	**12 46 03.1**	**+0.2**
	baz=119,SNR=59						
CHIR	**Chirikof Islan**	**64.42**	**326**	P	**P**	**12 46 04.5**	**+0.6**
	baz=104						
G24K	**Hadweenzic Riv**	**64.50**	**339**	IAmb	IAmb	12 46 07.7	
	comp=Z,43nm,1.1s						
G24K				IAMs_20	IAMs_20	13 19 36.5	
	comp=Z,3μm,20.0s						
G24K	**Hadweenzic Riv**	**64.50**	**339**	P	**P**	**12 46 04.7**	**+0.5**
	baz=116						
E25K	**Arctic Village**	**64.52**	**340**	IAmb	IAmb	12 46 07.9	
	comp=Z,32nm,1.1s						
E25K				IAMs_20	IAMs_20	13 18 15.1	
	comp=Z,3μm,19.0s						
E25K	**Arctic Village**	**64.52**	**340**	P	**P**	**12 46 04.6**	**+0.2**
	baz=119,SNR=24						
I23K	**Minto, Yukon-K**	**64.53**	**337**	IAMs_20	IAMs_20	13 15 53.9	
	comp=Z,4μm,21.0s						
I23K	**Minto, Yukon-K**	**64.53**	**337**	P	**P**	**12 46 03.7**	**-0.8**
	baz=114,SNR=65						
KTH	**Kantishna Hill**	**64.53**	**335**	IAMs_20	IAMs_20	13 16 19.1	
	comp=Z,3μm,21.0s						
C27K	**Jago River**	**64.70**	**342**	IAmb	IAmb	12 46 08.7	
	comp=Z,30nm,0.9s						
C27K	**Jago River**	**64.70**	**342**	P	**P**	**12 46 04.9**	**-0.7**
	baz=122,SNR=29						
BPAW	**Bear Paw Mtn.**	**64.76**	**335**	IAMs_20	IAMs_20	13 19 18.2	
	comp=Z,3μm,19.0s						
BPAW	**Bear Paw Mtn.**	**64.76**	**335**	P	**P**	**12 46 05.3**	**-0.7**
	baz=112,SNR=27						
Q18K	**Katmai Hardscr**	**64.82**	**329**	P	**P**	**12 46 06.1**	**-0.6**
	baz=106,SNR=16						
PPLA	**Purkeypile**	**64.83**	**334**	IAMs_20	IAMs_20	13 18 57.1	
	comp=Z,3μm,21.0s						
PPLA	**Purkeypile**	**64.83**	**334**	P	**P**	**12 46 05.8**	**-0.9**
	baz=110,SNR=17						
ACHA	**Angle Creek He**	**64.87**	**328**	IAmb	IAmb	12 46 12.0	
	comp=Z,49nm,1.1s						
H23K	**Yukon River**	**64.88**	**337**	P	**P**	**12 46 06.4**	**-0.4**
	baz=114,SNR=12						
M20K	**Styx River**	**64.90**	**333**	IAMs_20	IAMs_20	13 15 16.1	
	comp=Z,3μm,21.0s						
M20K	**Styx River**	**64.90**	**333**	P	**P**	**12 46 06.2**	**-0.9**
	baz=109,SNR=59						
O19K	**Port Alsworth**	**64.92**	**331**	P	**P**	**12 46 05.6**	**-1.5**
	baz=107,SNR=26						
F24K	**Squaw Lake**	**65.01**	**339**	IAmb	IAmb	12 46 13.8	
	comp=Z,20nm,0.9s						
F24K				IAMs_20	IAMs_20	13 19 20.9	
	comp=Z,3μm,21.0s						
F24K	**Squaw Lake**	**65.01**	**339**	P	**P**	**12 46 06.6**	**-1.1**
	baz=116,SNR=24						
TIAR	**Tiarei**	**65.04**	**243**	*e*P	**P**	**12 46 09.4**	**+0.8**
	comp=Z,122nm,1.1s						
TIAR	**Tiarei**	**65.04**	**243**	*e*LR	LR	13 05 41.1	
	comp=Z,4μm,22.2s						
TVO	**Taravao**	**65.05**	**243**	*e*LR	LR	13 05 41.1	
	comp=Z,1μm,23.3s						
P18K	**Big Mountain,**	**65.14**	**330**	IAmb	IAmb	12 46 13.3	
	comp=Z,46nm,0.9s						
P18K	**Big Mountain,**	**65.14**	**330**	P	**P**	**12 46 07.6**	**-1.0**
	baz=106						
Q17K	**Contact Creek**	**65.17**	**328**	P	**P**	**12 46 08.6**	**-0.3**
	baz=105						
N19K	**Bonanza Creek**	**65.19**	**331**	P	**P**	**12 46 08.2**	**-0.8**
	baz=107,SNR=90						
C26K	**Camden Bay**	**65.21**	**342**	P	**P**	**12 46 08.7**	**-0.1**
	baz=120						
CHUM	**Lake Minchumin**	**65.23**	**335**	P	**P**	**12 46 08.0**	**-1.0**
	baz=111						
PPT	**Papeete**	**65.25**	**243**	LR	LR	13 07 38.1	
	comp=Z,4μm,18.1s,baz=60,slow=29						
R17L	**Mt. Peulik Vol**	**65.25**	**328**	P	**P**	**12 46 08.9**	**-0.5**
	baz=104						
O18K	**Koktuh Hills**	**65.25**	**330**	P	**P**	**12 46 08.9**	**-0.4**
	baz=106,SNR=16						
PPT2	**Papeete2**	**65.25**	**243**	*e*P	**P**	**12 46 06.3**	**-3.7**
	comp=Z,353nm,26.2s						
PPT2	**Papeete2**	**65.25**	**243**	*e*PP	**PP**	**12 48 27.9**	**-6.0**
	comp=Z,201nm,30.5s						
PPT2				*e*S	**S**	**12 54 51.0**	**-1.5**
	comp=Z,2μm,24.5s						
PPT2				*e*SS	**SS**	**12 59 09.2**	**+3.4**
	comp=Z,777nm,30.5s						
PPT2				*e*LQ	LQ	13 03 01.7	
	comp=Z,3μm,29.0s						
PPT2				*e*LR	LR	13 05 44.0	
	comp=Z,4μm,22.2s						
PPT2				*e*LR	LR	13 05 49.8	
	comp=Z,4μm,21.5s						
PAE	**Paea**	**65.29**	**243**	*e*P	**P**	**12 46 10.5**	**+0.4**
	comp=Z,37nm,1.4s						
PAE				*e*S	**S**	**12 54 51.2**	**-1.5**
	comp=Z,334nm,23.3s						
PAE	**Paea**	**65.29**	**243**	*e*LR	LR	13 05 47.5	
	comp=Z,1μm,22.9s						
D25K	**Kavik River**	**65.36**	**341**	P	**P**	**12 46 09.6**	**-0.3**
	baz=119,SNR=46						
G23K	**Bananza Creek**	**65.42**	**338**	IAmb	IAmb	12 46 13.7	
	comp=Z,34nm,0.9s						
G23K	**Bananza Creek**	**65.42**	**338**	P	**P**	**12 46 09.7**	**-0.6**
	baz=114,SNR=31						
H22K	**Ishtalitna Cre**	**65.60**	**337**	IAmb	IAmb	12 46 14.1	
	comp=Z,42nm,0.9s						
H22K	**Ishtalitna Cre**	**65.60**	**337**	P	**P**	**12 46 10.7**	**-0.7**
	baz=112,SNR=28						
Q16K	**King Salmon**	**65.66**	**329**	P	**P**	**12 46 11.5**	**-0.4**
	baz=104,SNR=12						
COLD	**Coldfoot**	**65.69**	**339**	IAmb	IAmb	12 46 16.0	
	comp=Z,47nm,1.0s						
COLD				IAMs_20	IAMs_20	13 18 17.5	
	comp=Z,3μm,18.0s						
COLD	**Coldfoot**	**65.69**	**339**	P	**P**	**12 46 11.6**	**-0.5**
	baz=114,SNR=42						
L19K	**White Mountain**	**65.77**	**333**	P	**P**	**12 46 11.6**	**-1.0**
	baz=107,SNR=23						
K20K	**Telida**	**65.79**	**334**	P	**P**	**12 46 12.1**	**-0.6**
	baz=109,SNR=69						
N18K	**Kilae Creek**	**65.81**	**331**	P	**P**	**12 46 12.1**	**-0.8**
	baz=106,SNR=26						
E23K	**Chandalar**	**65.84**	**340**	IAmb	IAmb	12 46 22.3	
	comp=Z,46nm,0.9s						
E23K				IAMs_20	IAMs_20	13 19 48.8	
	comp=Z,3μm,20.0s						
E23K	**Chandalar**	**65.84**	**340**	P	**P**	**12 46 12.8**	**-0.2**
	baz=115,SNR=51						
M18K	**Stony River**	**66.00**	**332**	P	**P**	**12 46 13.6**	**-0.5**
	baz=106,SNR=40						
D24K	**Happy Valley**	**66.05**	**341**	IAmb	IAmb	12 46 17.4	
	comp=Z,31nm,1.1s						
D24K	**Happy Valley**	**66.05**	**341**	P	**P**	**12 46 14.1**	**-0.2**
	baz=116						
H21K	**Melozitna Rive**	**66.06**	**337**	IAmb	IAmb	12 46 16.8	
	comp=Z,32nm,0.9s						
H21K				IAMs_20	IAMs_20	13 18 23.3	
	comp=Z,3μm,19.0s						
H21K	**Melozitna Rive**	**66.06**	**337**	P	**P**	**12 46 14.2**	**-0.2**
	baz=111,SNR=20						
TOLK	**Toolik Lake Re**	**66.07**	**340**	P	**P**	**12 46 13.8**	**-0.7**
TOLK				IAmb	IAmb	12 46 17.6	
	comp=Z,27nm,0.9s						
TOLK	**Toolik Lake Re**	**66.07**	**340**	P	**P**	**12 46 14.5**	**0.0**
	baz=115,SNR=17						
J20K	**Nowinta River**	**66.09**	**335**	IAmb	IAmb	12 46 17.3	
	comp=Z,56nm,1.1s						
J20K				IAMs_20	IAMs_20	13 19 57.8	
	comp=Z,3μm,20.0s						
J20K	**Nowinta River**	**66.09**	**335**	P	**P**	**12 46 14.5**	**0.0**
	baz=109,SNR=26						
O17K	**Koliganek Bris**	**66.15**	**330**	P	**P**	**12 46 15.3**	**+0.3**
	baz=104						
XMAS	**Kiritimati**	**66.25**	**266**	IAMs_20	IAMs_20	13 07 11.1	
	comp=Z,4μm,20.0s						
C24K	**Franklin Bluff**	**66.27**	**341**	P	**P**	**12 46 16.1**	**+0.5**
	baz=117,SNR=27						
N17K	**Nushagak Hills**	**66.39**	**331**	P	**P**	**12 46 15.8**	**-0.8**
	baz=104,SNR=27						
I20K	**Naaghedeneel**	**66.42**	**335**	IAMs_20	IAMs_20	13 15 42.1	
	comp=Z,3μm,21.0s						
I20K	**Naaghedeneel**	**66.42**	**335**	P	**P**	**12 46 16.2**	**-0.5**
	baz=109,SNR=29						
SUMG	**Summit**	**66.44**	**15**	P	**P**	**12 46 16.2**	**-1.0**
SUMG	**Summit**	**66.44**	**15**	IAmb	IAmb	12 46 19.1	
	comp=Z,33nm,0.8s						
SUMG	**Summit**	**66.44**	**15**	P	**P**	**12 46 14.8**	**-2.4**
SUMG				pmax	pmax		
	comp=Z,33nm,0.8s						
F22K	**John River**	**66.51**	**339**	P	**P**	**12 46 17.3**	**+0.1**
	baz=112,SNR=40						
IMAR	**Indian Mountai**	**66.54**	**337**	P	**P**	**12 46 17.8**	**+0.4**
D23K	**Nanushuk River**	**66.58**	**340**	IAmb	IAmb	12 46 21.5	
	comp=Z,30nm,1.1s						
D23K	**Nanushuk River**	**66.58**	**340**	P	**P**	**12 46 18.0**	**+0.3**
	baz=114						
L18K	**Granite Mounta**	**66.60**	**332**	P	**P**	**12 46 17.8**	**-0.1**
	baz=106,SNR=34						
O16K	**Kokwok River B**	**66.60**	**329**	P	**P**	**12 46 17.8**	**-0.2**
	baz=103,SNR=13						
E22K	**Anaktuvuk Pass**	**66.62**	**339**	IAmb	IAmb	12 46 21.2	
	comp=Z,51nm,0.9s						
E22K				IAMs_20	IAMs_20	13 19 22.9	
	comp=Z,3μm,20.0s						
E22K	**Anaktuvuk Pass**	**66.62**	**339**	P	**P**	**12 46 17.5**	**-0.5**
	baz=113						
G21K	**Allakaket**	**66.63**	**337**	IAmb	IAmb	12 46 21.1	
	comp=Z,45nm,0.8s						
G21K	**Allakaket**	**66.63**	**337**	P	**P**	**12 46 16.9**	**-1.1**
	baz=110,SNR=46						
J19K	**Poorman**	**66.64**	**334**	P	**P**	**12 46 17.7**	**-0.5**
	baz=107,SNR=36						
S14K	**Fog Glacier**	**66.67**	**326**	P	**P**	**12 46 17.7**	**-0.9**

	baz=101						
M17K	Holitna River	66.73	331	P	P	12 46 17.7	-1.0
	baz=105						
H20K	Anotleneega Mo	66.81	336	P	P	12 46 17.8	-1.4
	baz=109,SNR=33						
F21K	Alatna River	66.87	338	IAMs_20	IAMs_20	13 18 08.0	
	comp=Z,4µm,20.0s						
F21K	Alatna River	66.87	338	P	P	12 46 19.0	-0.6
	baz=111,SNR=42						
C23K	Itkillik River	66.92	341	P	P	12 46 19.0	-0.8
	baz=115,SNR=36						
J18K	Innoko River	66.96	334	IAmb	IAmb	12 46 41.6	
	comp=Z,26nm,0.9s						
J18K	Innoko River	66.96	334	P	P	12 46 18.9	-1.2
	baz=106						
SDPT	Sand Point	67.02	325	P	P	12 46 19.9	-0.8
	baz=99						
N16K	Nishlik Lake	67.13	330	P	P	12 46 21.0	-0.4
	baz=103						
D22K	Ayikyak River	67.21	340	IAmb	IAmb	12 46 29.5	
	comp=Z,22nm,0.9s						
D22K	Ayikyak River	67.21	340	P	P	12 46 21.5	-0.2
	baz=112,SNR=16						
L17K	Donlin	67.31	332	P	P	12 46 22.4	0.0
	baz=104,SNR=17						
M16K	Timber Creek	67.35	331	P	P	12 46 22.8	+0.1
	baz=103,SNR=10						
O15K	Ungalikthiuk R	67.38	329	IAmb	IAmb	12 46 25.4	
	comp=Z,49nm,0.9s						
O15K	Ungalikthiuk R	67.38	329	P	P	12 46 21.8	-1.1
	baz=102,SNR=5.6						
GCSA	Galena City Sc	67.39	335	P	P	12 46 21.9	-0.9
	baz=106						
H19K	Roundabout Mou	67.44	336	P	P	12 46 22.0	-1.2
	baz=107,SNR=58						
K17K	Iditarod	67.45	333	P	P	12 46 22.0	-1.3
	baz=104,SNR=23						
E21K	Killik River	67.48	339	IAmb	IAmb	12 46 26.5	
	comp=Z,28nm,0.8s						
E21K				IAMs_20	IAMs_20	13 19 19.4	
	comp=Z,3µm,19.0s						
E21K	Killik River	67.48	339	P	P	12 46 22.6	-0.9
	baz=111						
F20K	Avaraart Lake	67.64	338	IAmb	IAmb	12 46 27.3	
	comp=Z,35nm,0.9s						
F20K	Avaraart Lake	67.64	338	P	P	12 46 24.2	-0.1
	baz=108,SNR=25						
TBI	Tubuai	67.64	237	*e*P	P	12 46 25.8	+0.7
	comp=Z,1µm,26.0s						
TBI	Tubuai	67.64	237	*e*PP	PP	12 48 53.9	-0.7
	comp=Z,527nm,27.5s						
TBI				*e*S	S	12 55 17.7	-3.4
	comp=Z,5µm,25.2s						
TBI				*e*SS	SS	12 59 35.4	-7.2
	comp=Z,4µm,34.5s						
TBI				*e*LQ	LQ	13 03 25.7	
	comp=Z,5µm,29.2s						
TBI				*e*LR	LR	13 06 51.4	
	comp=Z,21µm,26.2s						
TBI				*e*LR	LR	13 06 52.9	
	comp=Z,5µm,27.0s						
N15K	Kwethluk River	67.71	330	IAmb	IAmb	12 46 28.3	
	comp=Z,41nm,0.9s						
N15K	Kwethluk River	67.71	330	P	P	12 46 25.0	0.0
	baz=102,SNR=5.6						
L16K	Owhat River	67.75	331	P	P	12 46 25.1	-0.1
	baz=103						
G19K	Purcell Mounta	67.88	336	IAmb	IAmb	12 46 29.1	
	comp=Z,54nm,1.1s						
G19K				IAMs_20	IAMs_20	13 17 49.4	
	comp=Z,3µm,21.0s						
G19K	Purcell Mounta	67.88	336	P	P	12 46 26.0	0.0
	baz=107,SNR=34						
J17K	VABM Dome	67.96	333	IAmb	IAmb	12 46 29.1	
	comp=Z,30nm,0.9s						
J17K	VABM Dome	67.96	333	P	P	12 46 26.3	-0.2
	baz=104,SNR=12						
B22K	Teshekpuk Lake	68.00	341	P	P	12 46 27.0	+0.3
	baz=112,SNR=24						
C21K	Knifeblade Rid	68.01	340	P	P	12 46 26.7	-0.1
	baz=110,SNR=9.2						
M15K	Kasigluk River	68.11	330	P	P	12 46 27.6	+0.1
	baz=101						
H18K	Honhosa River	68.11	335	IAmb	IAmb	12 46 30.9	
	comp=Z,51nm,0.9s						
H18K	Honhosa River	68.11	335	P	P	12 46 27.0	-0.4
	baz=105,SNR=26						
O14K	Tigyukauivet M	68.12	329	P	P	12 46 27.2	-0.3
	baz=100						
B21K	Ikpikpuk River	68.12	340	IAmb	IAmb	12 46 30.2	
	comp=Z,28nm,0.9s						
B21K	Ikpikpuk River	68.12	340	P	P	12 46 28.0	+0.7
	baz=111,SNR=26						
E20K	Nigu River	68.19	339	P	P	12 46 27.8	-0.1
	baz=109						
E19K	Redstone River	68.32	338	IAmb	IAmb	12 46 57.6	
	comp=Z,24nm,1.0s						
E19K				IAMs_20	IAMs_20	13 19 35.4	
	comp=Z,4µm,22.0s						
E19K	Redstone River	68.32	338	P	P	12 46 27.6	-1.1
	baz=107,SNR=16						
F19K	Shaleruckik Mo	68.34	337	P	P	12 46 27.7	-1.1
	baz=106						
G18K	Tagagawik	68.42	336	IAmb	IAmb	12 46 33.0	
	comp=Z,65nm,1.4s						
G18K	Tagagawik	68.42	336	P	P	12 46 29.5	+0.1
	baz=105						
N14K	Kuskokwak Cree	68.45	329	P	P	12 46 29.3	-0.3
	baz=100						
D20K	Etivluk River	68.49	339	IAMs_20	IAMs_20	13 19 58.6	
	comp=Z,3µm,19.0s						
D20K	Etivluk River	68.49	339	P	P	12 46 29.6	-0.2
	baz=108,SNR=55						
J16K	Anvik River	68.61	333	P	P	12 46 31.1	+0.6
	baz=102,SNR=27						
FALS	False Pass	68.63	324	P	P	12 46 33.7	+2.9
FALS	False Pass	68.63	324	P	P	12 46 30.5	-0.3
	baz=97						
L15K	Ungalak Mounta	68.68	331	P	P	12 46 31.5	+0.5
	baz=101,SNR=38						
H17K	Granite Mounta	68.69	335	IAmb	IAmb	12 46 35.6	
	comp=Z,49nm,1.0s						
H17K				IAMs_20	IAMs_20	13 18 04.1	
	comp=Z,3µm,22.0s						
H17K	Granite Mounta	68.69	335	P	P	12 46 31.3	+0.2
	baz=104,SNR=34						
A22K	Sinclair Lake	68.73	342	P	P	12 46 31.4	+0.2
	baz=111,SNR=28						
M14K	Bethel	68.73	330	P	P	12 46 32.0	+0.7
	baz=100,SNR=36						
I17K	Unalakleet	68.78	334	IAMs_20	IAMs_20	13 16 38.5	
	comp=Z,2µm,22.0s						
I17K	Unalakleet	68.78	334	P	P	12 46 32.0	+0.4
	baz=103,SNR=17						
K15K	Wolf Creek Mou	68.82	332	P	P	12 46 31.7	-0.2
	baz=101,SNR=23						
D19K	Kuna River	68.95	339	IAmb	IAmb	12 47 00.3	
	comp=Z,28nm,0.9s						
D19K	Kuna River	68.95	339	P	P	12 46 32.5	-0.1
	baz=107,SNR=18						
F18K	Selawik	69.00	337	P	P	12 46 33.2	+0.3
	baz=105,SNR=9.0						
B20K	Meade River	69.08	340	P	P	12 46 32.4	-1.0
	baz=108,SNR=68						
G17K	Kiwalik Mounta	69.13	335	P	P	12 46 33.7	-0.1
	baz=103,SNR=14						
L14K	Kuka Creek	69.18	331	P	P	12 46 33.3	-0.8
	baz=100						
BORG	Borgarnes	69.29	26	LR	LR	13 17 41.0	
	comp=Z,2µm,18.0s,baz=265,slow=37						
A21K	Barrow	69.34	342	P	P	12 46 34.2	-0.7
	baz=109,SNR=16						
M13K	Dall Lake	69.35	330	P	P	12 46 34.4	-0.8
	baz=99						
E18K	Tukpahlearik C	69.56	337	P	P	12 46 35.4	-1.0
	baz=104,SNR=12						
F17K	Baldwin Pennin	69.58	336	IAmb	IAmb	12 47 02.6	
	comp=Z,22nm,0.9s						
F17K				IAMs_20	IAMs_20	13 17 53.4	
	comp=Z,2µm,21.0s						
F17K	Baldwin Pennin	69.58	336	P	P	12 46 36.6	+0.1
	baz=103						
H16K	Elim	69.60	334	P	P	12 46 36.8	+0.1
	baz=101,SNR=30						
C19K	Lookout Ridge	69.63	339	IAmb	IAmb	12 46 40.6	
	comp=Z,45nm,1.0s						
C19K	Lookout Ridge	69.63	339	P	P	12 46 37.5	+0.6
	baz=106,SNR=26						
G16K	Koyuk River	69.80	335	IAmb	IAmb	12 46 41.1	
	comp=Z,22nm,0.9s						
G16K				IAMs_20	IAMs_20	13 18 48.3	
	comp=Z,2µm,19.0s						
G16K	Koyuk River	69.80	335	P	P	12 46 37.4	-0.4
	baz=102						
J14K	Nanvaranak Lak	69.83	332	IAMs_20	IAMs_20	13 22 58.0	
	comp=Z,2µm,21.0s						
J14K	Nanvaranak Lak	69.83	332	P	P	12 46 38.0	-0.1
	baz=100						
E17K	Hotham Inlet	69.95	337	P	P	12 46 38.8	0.0
	baz=103						
C18K	Utukok River	70.08	339	IAmb	IAmb	12 46 42.4	
	comp=Z,32nm,0.9s						
C18K	Utukok River	70.08	339	P	P	12 46 39.1	-0.5
	baz=104,SNR=25						
K13K	Kusilvak Mount	70.21	331	P	P	12 46 40.1	-0.4
	baz=98,SNR=7.4						
UNV	Unalaska Valle	70.33	323	P	P	12 46 45.0	+3.6
UNV	Unalaska Valle	70.33	323	P	P	12 46 41.3	-0.1
	baz=94						
G15K	Niukluk	70.42	334	P	P	12 46 41.4	-0.3
	baz=100						
A19K	Wainwright	70.42	340	P	P	12 46 41.2	-0.4
	baz=104,SNR=36						
B18K	Kokolik River	70.46	339	P	P	12 46 40.9	-1.0
	baz=104						
D17K	Noatak River	70.56	337	P	P	12 46 41.4	-1.1
	baz=102,SNR=12						
RDOG	Red Dog Mine	70.56	338	IAMs_20	IAMs_20	13 22 36.8	
	comp=Z,3µm,20.0s						
RDOG	Red Dog Mine	70.56	338	P	P	12 46 41.9	-0.7
	baz=102,SNR=5.3						
C17K	DeLong Mountai	70.75	338	P	P	12 46 43.8	+0.1
	baz=102,SNR=25						
F15K	North Star Dit	70.79	335	IAmb	IAmb	12 46 48.0	
	comp=Z,65nm,1.1s						
F15K				IAMs_20	IAMs_20	13 23 22.2	
	comp=Z,3µm,20.0s						
F15K	North Star Dit	70.79	335	P	P	12 46 44.3	+0.3
	baz=100,SNR=18						
ANM	Nome	70.92	334	P	P	12 46 43.7	-1.1
	baz=98,SNR=9.3						
F14K	Arctic Creek	71.45	335	P	P	12 46 47.5	-0.5
	baz=98						
C16K	Lisburne Hills	71.50	338	IAmb	IAmb	12 46 51.4	
	comp=Z,34nm,0.9s						
C16K				IAMs_20	IAMs_20	13 20 22.0	
	comp=Z,3µm,19.0s						
C16K	Lisburne Hills	71.50	338	P	P	12 46 47.9	-0.3
	baz=100,SNR=26						
NIKH	Nikolski High	71.70	322	P	P	12 46 49.1	-0.6
	baz=92						
MBO	M'Bour	71.91	79	IAMs_20	IAMs_20	13 14 21.9	
	comp=Z,3µm,22.0s						
TNA	Tin City	72.12	335	IAmb	IAmb	12 46 55.9	
	comp=Z,50nm,1.1s						
TNA				IAMs_20	IAMs_20	13 19 10.7	
	comp=Z,2µm,20.0s						
TNA	Tin City	72.12	335	P	P	12 46 51.6	-0.3
	baz=96,SNR=10						
P08K	Saint George I	72.22	325	P	P	12 46 53.3	+0.6
	baz=92						
GAMB	Gambell	73.60	333	IAmb	IAmb	12 47 04.8	
	comp=Z,70nm,1.1s						
GAMB	Gambell	73.60	333	P	P	12 47 01.0	+0.3
	baz=92						
VAL	Valentia	73.95	40	P	P	12 47 04.0	+0.9
JMIC	Jan Mayen	74.90	20	LR	LR	13 21 00.4	
	comp=Z,2µm,20.4s,baz=254,slow=37						
PMAFR	Mafra	75.49	53	P	P	12 47 14.4	+2.1
RAR	Rarotonga	75.52	244	LR	LR	13 12 21.7	
	comp=Z,2µm,18.0s,baz=74,slow=29						
PFVI	Vila Bisbo	76.04	55	P	P	12 47 16.7	+1.2
ADK	Adak	76.52	321	P	P	12 47 19.3	+1.4
ADK	Adak	76.52	321	P	P	12 47 19.8	+2.0
ADK	Adak	76.52	321	P	P	12 47 19.3	+1.4
ADK				pmax	pmax		
	comp=Z,188nm,1.1s						
AVE	Averroes	77.69	58	IAMs_20	IAMs_20	13 18 21.5	
	comp=Z,2µm,20.0s						
EKA	Eskdalemuir Ar	77.92	36	P	P	12 47 23.3	-2.4
	comp=Z,18nm,0.9s,baz=272,slow=6.1,SNR=14						
EKA				LR	LR	13 22 31.9	
	comp=Z,1µm,18.4s,baz=280,slow=36						
	comp=Z,18nm,0.9s						
ESDC	Sonseca Array	79.49	52	P	P	12 47 31.6	-3.1
	comp=Z,4.6nm,0.8s,baz=285,slow=5.7,SNR=16						
	comp=Z,4.6nm,0.8s						
ESDC	Sonseca Array	79.49	52	P	P	12 47 33.0	-1.7
MDT	Midelt	80.09	59	LR	LR	13 19 59.8	
	comp=Z,1µm,18.9s,baz=284,slow=34						
SPITS	Spitsbergen Ar	80.34	11	P	P	12 47 36.4	-2.2
	comp=Z,10nm,0.9s,baz=298,slow=1.8,SNR=4.9						
SPITS				LR	LR	13 25 06.4	
	comp=Z,4µm,19.5s,baz=280,slow=37						
	comp=Z,10nm,0.9s						
PMSA	Palmer Station	80.87	168	LR	LR	13 15 17.0	
	comp=Z,2µm,21.6s,baz=334,slow=29						
PMSA	Palmer Station	80.87	168	*e*P	P	12 47 42.0	+0.7
SHEM	Shemya Is, Ala	81.99	322	LR	LR	13 22 39.7	
	comp=Z,579nm,20.3s,baz=101,slow=34						
BILL	Bilibino	82.03	338	P	P	12 47 46.2	-1.4
BILL				IAmb	IAmb	12 47 50.8	
	comp=Z,30nm,0.8s						
BILL	Bilibino	82.03	338	*ce*P	P	12 47 49.5	+1.9
BILL				pmax	pmax		
	comp=Z,34nm,0.8s						
AFI	Afiamalu	84.16	254	IAMs_20	IAMs_20	13 16 53.1	
	comp=Z,2µm,18.0s						
NB2	NORSAR Subarra	84.19	29	P	P	12 47 58.4	-0.6
	comp=Z,40nm,1.4s,baz=287,slow=5.3						
NB2	NORSAR Subarra	84.19	29	P	P	12 47 58.4	-0.6
	baz=287,slow=5.3						
NB2	NORSAR Subarra	84.19	29	P	P	12 47 59.3	+0.3
NOA	NORSAR Array B	84.19	29	P	P	12 47 57.7	-1.3
	comp=Z,5.8nm,0.9s,baz=288,slow=5.2,SNR=14						
NOA				LR	LR	13 23 33.2	
	comp=Z,1µm,20.9s,baz=290,slow=34						
	comp=Z,5.8nm,0.9s						
NC405	NORSAR Array S	84.40	28	IAmb	IAmb	12 48 45.0	
	comp=Z,57nm,1.6s						
DBIC	Dimbokro	85.11	84	P	P	12 48 02.4	-2.1
	comp=Z,20nm,0.8s,baz=300,slow=4.8,SNR=25						
DBIC				LR	LR	13 21 55.5	
	comp=Z,2µm,21.8s,baz=301,slow=33						
	comp=Z,20nm,0.8s						
DBIC	Dimbokro	85.11	84	P	P	12 48 02.7	-1.8
DBIC				IAmb	IAmb	12 48 15.0	
	comp=Z,22nm,0.8s						
DBIC	Dimbokro	85.11	84	P	P	12 48 02.7	-1.8
DBIC				pmax	pmax		
	comp=Z,22nm,0.8s						
HFS	Hagfors	85.64	29	P	P	12 48 05.4	-0.8
	comp=Z,14nm,0.9s,baz=251,slow=2.7,SNR=13						
HFS				LR	LR	13 24 35.8	
	comp=Z,2µm,20.5s,baz=284,slow=34						
	comp=Z,14nm,0.9s						
BNI	Bardonecchia	86.08	45	IAMs_20	IAMs_20	13 29 07.6	
	comp=Z,2µm,19.0s						
SENIN	Lac Senin/Sane	86.15	43	P	P	12 48 09.1	-0.3
SENIN				IAmb	IAmb	12 48 26.7	
	comp=Z,37nm,1.3s						
ARCES	ARCESS Array B	86.31	18	P	P	12 48 07.5	-1.9
	comp=Z,6.5nm,0.9s,baz=253,slow=1.3,SNR=6.1						
ARCES				LR	LR	13 27 07.8	
	comp=Z,2µm,19.1s,baz=297,slow=36						
	comp=Z,6.5nm,0.9s						
KEV	Kevo	86.65	18	IAMs_20	IAMs_20	13 25 44.6	
	comp=Z,2µm,21.0s						
TUE	Stuetta	87.48	43	IAMs_20	IAMs_20	13 27 07.5	
	comp=Z,2µm,19.0s						
DAVA	Damuels	87.59	42	*i* P	P	12 48 15.4	-0.9
	comp=Z,14nm,0.9s						
DAVOX	Davos/Dischmat	87.74	42	LR	LR	13 22 56.4	
	comp=Z,1µm,21.9s,baz=264,slow=33						
FUORN	Ofenpass-Fuorn	88.04	42	P	P	12 48 17.9	-0.7
FUORN				IAmb	IAmb	12 48 29.7	
	comp=Z,26nm,1.1s						
RETA	Reutte	88.10	42	*e*P	P	12 48 18.4	-0.2
	comp=Z,20nm,1.1s						
FETA	Feichten	88.22	42	*i* P	P	12 48 18.2	-1.1
	comp=Z,8.2nm,1.1s						
CLL	Collm	88.25	37	*e*P	P	12 48 18.0	-1.1
CLL				*e*		12 58 46.0	
CLL				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SQTA	Sankt Quirin	88.47	42	*e*P	P	12 48 20.6	+0.1
	comp=Z,9.0nm,1.1s						
SALO	Salr	88.52	43	IAmb	IAmb	12 48 23.8	
	comp=Z,26nm,0.9s						
WATA	Walderalm	88.67	42	*e*P	P	12 48 21.1	-0.3
	comp=Z,7.6nm,0.8s						
WTTA	Wattenberg	88.73	42	*e*P	P	12 48 21.5	-0.3
	comp=Z,10nm,0.9s						
HSKC	Hora Svate Kat	88.75	38	AMS	AMS	13 29 50.0	
	comp=Z,2µm,17.3s						
SEY	Seymchan	89.34	336	LR	LR	13 31 02.6	
	comp=Z,1µm,21.7s,baz=62,slow=37						
SEY	Seymchan	89.34	336	*e*P	P	12 48 24.6	+0.6
SEY				pmax	pmax		
	comp=Z,30nm,1.0s						
KHC	Kasperske Hory	89.34	39	P	P	12 48 23.2	-1.1
KHC	Kasperske Hory	89.34	39	*ce*P	P	12 48 24.2	-0.2
KHC				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KHC	Kasperske Hory	89.34	39	*e*P	P	12 48 23.1	-1.3
KHC				AMS	AMS	13 31 50.0	
	comp=Z,2µm,17.0s						
LESA	Schwarzleotal	89.35	41	*e*P	P	12 48 24.2	-0.3
	comp=Z,6.7nm,1.0s						
TEOL	Teolo	89.37	43	IAmb	IAmb	12 48 25.5	
	comp=Z,26nm,0.8s						
ABTA	Abfaltersbach	89.47	42	*i* P	P	12 48 24.4	-0.6
	comp=Z,13nm,1.0s						
GERES	GERESS Array B	89.52	40	P	P	12 48 23.0	-2.3
	comp=Z,1.3nm,0.6s,baz=321,slow=3.4,SNR=7.9						
GERES				LR	LR	13 23 48.7	
	comp=Z,2µm,21.9s,baz=283,slow=32						
	comp=Z,1.3nm,0.6s						
PRA	Prague	89.53	38	AMS	AMS	13 31 00.0	
	comp=Z,3µm,19.7s						
VSL	Villasalto	89.56	49	IAMs_20	IAMs_20	13 27 29.3	
	comp=Z,2µm,20.0s						
ZVC	Zvikov	89.61	39	AMS	AMS	13 32 20.0	
	comp=Z,3µm,16.3s						
PRU	Pruhonice	89.63	38	AMS	AMS	13 31 10.0	
	comp=Z,3µm,20.3s						
BIOA	Bad Ischl, Aus	89.87	41	*e*P	P	12 48 26.8	-0.1
	comp=Z,2.6nm,0.6s						
TORD	Torodi Ar. Bea	89.89	77	P	P	12 48 25.6	-1.9
	comp=Z,1.7nm,0.8s,baz=307,slow=5.3,SNR=1.9						
TORD				LR	LR	13 26 28.8	
	comp=Z,2µm,19.8s,baz=280,slow=34						
	comp=Z,1.7nm,0.8s						
KBA	Koelnbreinsper	89.90	41	*e*P	P	12 48 26.5	-0.7
	comp=Z,9.0nm,1.4s						
CKRC	Cesky Krumlov	89.90	40	AMS	AMS	13 30 50.0	
	comp=Z,2µm,20.4s						
MOA	Molln	90.22	40	*e*P	P	12 48 28.3	-0.2
	comp=Z,6.6nm,1.3s						
CHVC	Chvalec	90.31	37	AMS	AMS	13 30 00.0	
	comp=Z,2µm,17.1s						
UPC	Upice	90.32	38	AMS	AMS	13 29 00.0	
	comp=Z,2µm,21.2s						
OSTC	Ostas	90.42	37	AMS	AMS	13 30 00.0	
	comp=Z,2µm,17.9s						
DPC	Dobruska-Polom	90.56	38	*e*P	P	12 48 30.6	+0.5
DPC				MLR	MLR		
	comp=Z,2µm,17.7s						
DPC	Dobruska-Polom	90.56	38	*e*P	P	12 48 30.6	+0.5
DPC				AMS	AMS	13 29 40.0	
	comp=Z,2µm,17.7s						
FINES	FINESS Array B	90.59	25	P	P	12 48 28.9	-1.0
	comp=Z,6.4nm,0.8s,baz=264,slow=3.5,SNR=7.6						
FINES				LR	LR	13 30 01.1	
	comp=Z,2µm,19.4s,baz=308,slow=36						
	comp=Z,6.4nm,0.8s						
KEST	Kesra	90.65	53	P	P	12 48 30.6	-0.2
	comp=Z,9.6nm,0.9s,baz=284,slow=4.0,SNR=6.0						
	comp=Z,9.6nm,0.9s						
TIXI	Tiksi	90.75	348	P	P	12 48 28.3	-2.1
	comp=Z,15nm,0.7s,baz=47,slow=6.8,SNR=12						
TIXI				LR	LR	13 37 03.6	
	comp=Z,1µm,18.1s,baz=39,slow=41						
	comp=Z,15nm,0.7s						
TIXI	Tiksi	90.75	348	IAmb	IAmb	12 48 32.4	
	comp=Z,19nm,0.9s						
TIXI				IAMs_20	IAMs_20	13 31 37.7	
	comp=Z,2µm,22.0s						
TIXI	Tiksi	90.75	348	*i* P	P	12 48 28.2	-2.2
TIXI				pmax	pmax		
	comp=Z,19nm,0.9s						
PET	Petropavlovsk	90.80	325	*e*P	P	12 48 34.1	+3.1
PET				*e*S	S	12 59 27.2	+1.2
PET				pmax	pmax		
	comp=Z,400nm,15.7s						
PET				MLR	MLR		
	comp=Z,500nm,19.0s						
OBKA	Obir	90.87	42	*e*P	P	12 48 31.4	-0.2
	comp=Z,7.4nm,1.0s						
KRLC	Kraliky	90.94	38	AMS	AMS	13 29 20.0	
	comp=Z,2µm,19.9s						
TAM	Tamanrasset	91.03	66	IAMs_20	IAMs_20	13 24 21.6	
	comp=Z,2µm,22.0s						
VRAC	Vranov	91.12	39	LR	LR	13 27 03.7	
	comp=Z,2µm,20.2s,baz=294,slow=34						
SOKA	Soboth	91.12	41	*e*PcP	P	12 48 33.4	+0.6
	comp=Z,3.3nm,1.1s						
CONA	Conrad Observa	91.19	40	*e*P	P	12 48 33.0	-0.1
	comp=Z,3.8nm,0.9s						
ARSA	Arzberg	91.23	41	*e*P	P	12 48 32.9	-0.3
	comp=Z,2.4nm,0.7s						
PETK	Petropavlovsk-	91.29	326	P	P	12 48 35.4	+2.1
	comp=Z,9.3nm,0.9s,baz=99,slow=7.7,SNR=5.4						
PETK				LR	LR	13 28 06.9	
	comp=Z,396nm,21.7s,baz=61,slow=34						
	comp=Z,9.3nm,0.9s						
RONA	Rosalia, Austr	91.55	40	*e*P	P	12 48 33.9	-0.8
	comp=Z,3.0nm,0.6s						
MA2	Magadan	91.70	333	LR	LR	13 37 26.0	
	comp=Z,892nm,18.2s,baz=60,slow=40						
MA2	Magadan	91.70	333	P	P	12 48 36.0	+0.9
MA2	Magadan	91.70	333	*ce*P	P	12 48 36.7	+1.7
MA2				pmax	pmax		
	comp=Z,72nm,1.0s						
MA2	Magadan	91.70	333	P	P	12 48 36.8	+1.7
OKC	Ostrava-Krasne	91.84	38	AMS	AMS	13 29 40.0	
	comp=Z,2µm,19.6s						
SKR	Severo-Kuril's	93.21	324	*e*P	P	12 48 28.0	-14
SKR				*e*S	S	12 59 38.5	-9.2
SKR				pmax	pmax		
	comp=Z,1µm,5.6s						
SKR				MLR	MLR		
	comp=Z,1µm,17.0s						
RAO	Raoul Island	93.57	241	LR	LR	13 20 55.3	
	comp=Z,1µm,21.4s,baz=114,slow=29						
ADZR	Andozero	93.69	20	*e*P	P	12 48 42.3	-1.8
ADZR				pmax	pmax		
	comp=Z,20nm,0.7s						
STHS	Stebnicka Huta	93.85	37	*e*P	P	12 48 43.0	-2.3
CUC	Castrocucco	94.08	47	IAMs_20	IAMs_20	13 29 41.8	
	comp=Z,1µm,20.0s						
MNK	Minsk	95.00	31	*i* P	P	12 48 48.0	-2.4
MNK				*i*		12 52 36.5	
MNK				*i* S	SKSac	12 59 20.4	-4.0
MNK				*i* SS	SS	13 06 25.5	-2.3
MNK				*i* SSS	SSS	13 10 08.2	
MNK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MNK				pmax	pmax		
	comp=E,7.0nm,0.6s						
MNK				MLR	MLR		
	comp=E,744nm,20.0s						
MNK				MLR	MLR		
	comp=Z,628nm,15.0s						
MNK				MLR	MLR		
	comp=N,947nm,19.0s						
TIP	Timpagrande	95.06	48	IAMs_20	IAMs_20	13 29 40.7	
	comp=Z,2µm,21.0s						
PDG	Podgorica	95.54	44	IAMs_20	IAMs_20	13 30 50.9	
	comp=Z,2µm,21.0s						
KLMR	Klimovskoe	96.18	22	*e*P	P	12 48 53.2	-2.4
KLMR				*e*		12 52 46.0	
KLMR				pmax	pmax		
	comp=Z,14nm,1.2s						
NRIK	Noril'sk	97.25	0	LR	LR	13 36 36.7	
	comp=Z,4µm,20.4s,baz=14,slow=38						
AKASG	Malin Array Be	97.72	34	LR	LR	13 33 31.0	
	comp=Z,2µm,19.8s,baz=304,slow=36						
YAK	Yakutsk	98.00	342	LR	LR	13 38 41.8	
	comp=Z,2µm,21.2s,baz=29,slow=39						
YAK	Yakutsk	98.00	342	IAMs_20	IAMs_20	13 37 29.8	
	comp=Z,2µm,21.0s						
YAK	Yakutsk	98.00	342	*i* P	Pdif	12 49 04.5	+0.7

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YAK                                  pmax      pmax
      comp=Z,48nm,3.1s
MLR   Muntele Rosu       98.49  39   LR        LR        13 32 44.6
      comp=Z,1µm,19.9s,baz=308,slow=35
MLR   Muntele Rosu       98.49  39   IAMs_20   IAMs_20   13 34 46.6
      comp=Z,2µm,20.0s
OBN   Obninsk            98.75  27   LR        LR        13 32 15.3
      comp=Z,1µm,21.0s,baz=239,slow=35
URZ   Urewera            99.46 233   LR        LR        13 23 49.5
      comp=Z,1µm,22.0s,baz=84,slow=29
TIRR  Tirgusor          100.53  39   IAMs_20   IAMs_20   13 38 37.4
      comp=Z,2µm,20.0s
TOZ   Tahuroa Road      100.62 234   IAMs_20   IAMs_20   13 24 30.8
      comp=Z,1µm,21.0s
SNAA  Sanae             102.37 161   IAMs_20   IAMs_20   13 34 16.9
      comp=Z,1µm,19.0s
QSPA  South Pole Qui    103.58 180   Pdiff     Pdif      12 49 31.1 +2.5
      comp=Z,1.2nm,0.3s,baz=113,slow=2.0,SNR=4.3
SIM   Simferopol'       103.66  37 i P         Pdif      12 49 32.0 +2.6
ERM   Erimo             105.31 321   IAMs_20   IAMs_20   13 33 35.6
      comp=Z,1µm,19.0s
ANTO  Ankara            105.72  41   IAMs_20   IAMs_20   13 38 14.2
      comp=Z,1µm,22.0s
DZM   Mont Dzumac       106.11 251  eP         Pdif      12 49 37.8 -3.0
      comp=Z,90nm,23.7s
DZM   Mont Dzumac       106.11 251  ePP        PP        12 54 02.4 -2.6
      comp=Z,147nm,24.9s
DZM                                 eSKSac     SKSac     13 00 15.2 -4.8
      comp=Z,127nm,24.6s
DZM                                 eSS        SKKPbc    13 09 00.8 +4.6
      comp=Z,633nm,25.4s
DZM   Mont Dzumac       106.11 251  eLQ        LQ        13 20 11.0
      comp=Z,998nm,36.5s
DZM                                 eLR        LR        13 24 42.9
      comp=Z,2µm,25.6s
BRTR  Keskin Array B    106.35  41   PKKPbc    PKKPbc    13 05 13.7 -0.8
      comp=Z,0.8nm,0.8s,baz=131,slow=5.9,SNR=3.6
HEH   HeiHe             107.87 335   Pdif      Pdif      12 49 46.6 -1.4
HEH                                  PP        PP        12 54 16.1  0.0
HEH                                  AMB       AMB
      comp=Z,440nm,6.2s
HEH                                  LR        LR
      comp=Z,760nm,18.6s
HEH                                  LR        LR
      comp=Z,1µm,17.1s
HEH                                  LR        LR
      comp=Z,2µm,19.5s
KIV   Kislovodsk        109.06  33   IAMs_20   IAMs_20   13 40 19.2
      comp=Z,1µm,20.0s
MDJ   Mudanjiang        111.12 330   IAMs_20   IAMs_20   13 48 05.6
      comp=Z,1µm,20.0s
HIA   Hailar            111.61 339   IAMs_20   IAMs_20   13 49 37.5
      comp=Z,1µm,21.0s
MAJO  Matsushiro        111.64 319   IAMs_20   IAMs_20   13 35 45.8
      comp=Z,1µm,21.0s
BVAR  Borovoye Array    111.80  12   PKiKP     PKiKP     12 54 03.6 +1.0
      comp=Z,2.0nm,0.8s,baz=233,slow=0.7,SNR=7.5
ZALV  Zalesovo Beam     112.62   2   PKiKP     PKiKP     12 54 04.7 +0.5
      comp=Z,1.2nm,0.4s,baz=236,slow=2.8,SNR=8.6
AKT   Akhty             113.45  32  ePKIKP     PKiKP     12 54 06.0 -0.3
AKT                                  MLR       MLR
      comp=Z,2µm,20.0s
KURK  Kurchatov         115.34   7             PKPdf     12 54 10.3 +0.9
KURK  Kurchatov         115.34   7   IAMs_20   IAMs_20   13 48 33.1
      comp=Z,1µm,21.0s
KURK  Kurchatov         115.34   7c iPKIKP     PKPdf     12 54 10.7 +1.3
KURK                                 pmax      pmax
      comp=Z,11nm,0.8s
KURBB Kurchatov Arra    115.42   7   PKP       PKiKP     12 54 07.9 -1.7
      comp=Z,9.5nm,0.9s,baz=342,slow=2.1,SNR=44
KURBB                                PKKPbc    PKKPbc    13 04 39.6 -5.4
      comp=Z,0.5nm,0.5s,baz=194,slow=2.8,SNR=6.1
KNGR  Kungurtug, Tuv    115.57 354 i PKIKP     PKPdf     12 54 10.9 +0.8
SNY   Shenyang          116.10 332   Pdif      Pdif      12 50 18.3 -6.5
SNY                                  PP        PP        12 55 16.5 +1.4
SNY   Shenyang          116.10 332   SS        SS        13 11 17.9 +2.2
SNY                                  AMB       AMB
      comp=Z,150nm,5.0s
SNY                                  LR        LR
      comp=N,420nm,15.5s
SNY                                  LR        LR
      comp=E,480nm,14.2s
SNY                                  LR        LR
      comp=Z,630nm,22.6s
ULN   Ulaanbaatar       116.61 346 i PKIKP     PKPdf     12 54 10.7 -1.5
SYO   Syowa Base        116.62 162⇑epPdiff     pPdif     12 50 36.1 +1.5
SYO   Syowa Base        116.62 162⇓epPdiff     PKiKP     12 54 14.4 +3.2
SONM  Songino Array     116.79 347   PKP       PKiKP     12 54 13.1 +0.6
      comp=Z,2.6nm,0.8s,baz=301,slow=1.4,SNR=13
SONM                                 PKKPbc    PKKPbc    13 04 39.0 -1.4
      comp=Z,0.9nm,0.6s,baz=208,slow=3.8,SNR=4.7
DGZ   Jazzator, Alta    116.94   1 i PKIKP     PKPdf     12 54 12.5 -0.3
KSRS  Korea Array       117.18 325   PKP       PKiKP     12 54 14.8 +1.4
      comp=Z,4.3nm,0.9s,baz=1.3,slow=1.3,SNR=8.3
KSAR  Wonju Array Be    117.21 325             PKiKP     12 54 14.1 +0.6
KSAR  Wonju Array Be    117.21 325   PKIKP     PKiKP     12 54 14.1 +0.6
DL2   Dalian            119.32 331   PKP       PKiKP     12 54 25.3 +7.8
DL2                                  PP        PP        12 55 50.8  +13
DL2   Dalian            119.32 331   SS        SS        13 12 09.3  +12
DL2                                  AMB       AMB
      comp=Z,210nm,6.5s
DL2                                  LR        LR
      comp=N,1µm,16.6s
DL2                                  LR        LR
      comp=E,590nm,16.6s
DL2                                  LR        LR
      comp=Z,1µm,20.6s
MAKZ  Makanchi          119.55   5             PKPdf     12 54 17.9 +0.1
MAKZ  Makanchi          119.55   5   PKIKP     PKPdf     12 54 17.9 +0.1
MK31  Makanchi Array    119.59   5c iPKIKP     PKiKP     12 54 18.7 +0.8
MKAR  Makanchi Array    119.59   5   PKP       PKPdf     12 54 17.2 -0.6
      comp=Z,7.7nm,0.9s,baz=346,slow=2.5,SNR=16
MKAR                                 PKKPab    PKKPab    13 04 35.4 +2.7
      comp=Z,1.1nm,0.9s,baz=141,slow=5.5,SNR=4.0
MKAR  Makanchi Array    119.59   5             PKPdf     12 54 17.8  0.0
MKAR  Makanchi Array    119.59   5   PKIKP     PKPdf     12 54 17.8  0.0
BOSA  Boshof            119.66 115   PKP       PKiKP     12 54 19.4 +0.8
      comp=Z,15nm,0.8s,baz=280,slow=1.1,SNR=15
BJI   Beijing           120.78 336   PKP       PKiKP     12 54 21.1 +0.8
BJI                                  PP        PP        12 55 52.8 +5.5
BJI                                  PKS       PKSdf     12 57 56.8 -0.1
BJI                                  SKS       SKSdf     13 01 28.4 -2.4
BJI                                  AMB       AMB
      comp=Z,190nm,9.8s
BJI                                  LR        LR
      comp=Z,430nm,22.2s
BJI                                  LR        LR
      comp=Z,310nm,19.1s
BJI                                  LR        LR
      comp=Z,590nm,21.3s
BJT   Baijiatuau        120.80 336   IAMs_20   IAMs_20   13 53 54.1
      comp=Z,1µm,21.0s
TDK   Taldyqorghan      120.92   8  ePKP       PKiKP     12 54 20.8 +0.2
TDK   Taldyqorghan      120.92   8  ePKIKP     PKiKP     12 54 20.7 +0.2
BRLS  Borolday          121.06  16  ePKP       PKiKP     12 54 21.4 +0.5
BRLS  Borolday          121.06  16  ePKIKP     PKiKP     12 54 21.4 +0.5
KKAR  Karatay Array     121.16  15             PKiKP     12 54 21.6 +0.6
KKAR  Karatay Array     121.16  15   PKIKP     PKiKP     12 54 21.6 +0.6
HHC   Hu-ho-hao-te      121.78 340  ePKP       PKPdf     12 54 22.3  0.0
HHC                                  PP        PP        12 55 56.4 +2.2
HHC                                  SS        SS        13 12 31.3 +2.4
HHC                                  LR        LR
      comp=Z,1µm,19.0s
HHC                                  LR        LR
      comp=Z,440nm,17.1s
HHC                                  LR        LR
      comp=Z,1µm,20.1s
IUG   Iuzhnay           121.93  16  ePKP       PKPdf     12 54 22.8 +0.2
IUG   Iuzhnay           121.93  16  ePKIKP     PKPdf     12 54 22.7 +0.2
USP   Ospenovka         121.93  12   P         PKiKP     12 54 24.5 +1.9
      SNR=10
EKS2  Erkin-Say         122.36  13   P         PKiKP     12 54 25.8 +2.3
      SNR=5.4
TKM2  Tokmak 2          122.48  11   P         PKiKP     12 54 25.6 +1.6
      SNR=10
BTO   Baotou            122.50 341  ePKP       PKPdf     12 54 22.8 -0.9
BTO                                  PP        PP        12 56 04.5 +5.4
BTO                                  SS        SS        13 12 37.1 -1.0
BTO                                  LR        LR
      comp=Z,3µm,21.8s
BTO                                  LR        LR
      comp=Z,2µm,19.0s
BTO                                  LR        LR
      comp=Z,4µm,23.3s
MDOK  Medeo             122.51  10  ePKP       PKPdf     12 54 23.9 +0.2
MDOK  Medeo             122.51  10  ePKIKP     PKPdf     12 54 23.9 +0.2
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AAK   Ala-Archa         122.53  12   P         PKiKP     12 54 25.9 +1.9
      SNR=5.1
AAK   Ala-Archa         122.53  12             PKiKP     12 54 25.2 +1.2
AAK   Ala-Archa         122.53  12   PKIKP     PKiKP     12 54 25.2 +1.2
TNSS  Tian-Shan         122.61  10  ePKP       PKPdf     12 54 24.0 -0.2
TNSS  Tian-Shan         122.61  10  ePKIKP     PKPdf     12 54 24.0 -0.2
SATY  Saty              122.83   9  ePKP       PKPdf     12 54 24.4 +0.1
SATY                                ePP        PP        12 56 01.7 +0.5
SATY  Saty              122.83   9  ePKIKP     PKPdf     12 54 24.4 +0.1
SATY                                e                    12 56 01.6
UZB   Uzynbulak         122.83   8  ePKP       PKPdf     12 54 24.4 +0.1
UZB                                 ePP        PP        12 56 01.7 +0.5
UZB   Uzynbulak         122.83   8  ePKIKP     PKPdf     12 54 24.4 +0.1
UZB                                 e                    12 56 01.6
WMQ   Urumqi            122.83   1  ePKP       PKPdf     12 54 23.8 -0.4
WMQ                                  sPKP      sPKPdf    12 54 35.8 +0.2
WMQ                                  LR        LR
      comp=Z,2µm,20.3s
WMQ                                  LR        LR
      comp=Z,1µm,18.5s
WMQ                                  LR        LR
      comp=Z,2µm,23.9s
SHLS  Shalkode          122.88   8  ePKP       PKiKP     12 54 24.8 +0.1
SHLS                                ePP        PP        12 56 02.5 +1.0
SHLS  Shalkode          122.88   8  ePKIKP     PKiKP     12 54 24.7 +0.1
SHLS                                e                    12 56 02.5
UCH   Uchtor            122.93  12   P         PKiKP     12 54 27.4 +2.3
      SNR=9.2
MAW   Mawson            123.49 168   PKP       PKiKP     12 54 25.4 +0.7
      comp=Z,4.0nm,0.7s,baz=202,slow=4.2,SNR=4.6
TIA   Tai'an            123.59 332   PKP       PKiKP     12 54 27.3 +1.3
TIA                                  PP        PP        12 56 08.3 +1.7
TIA                                  SS        SS        13 12 55.3 +3.2
TIA                                  LR        LR
      comp=Z,440nm,15.5s
TIA                                  LR        LR
      comp=Z,1µm,18.2s
TIA                                  LR        LR
      comp=Z,1µm,22.0s
HNS   HongShan          123.62 335 ⇑PKP        PKiKP     12 54 27.6 +1.6
HNS                                  PP        PP        12 56 12.3 +5.6
HNS                                  SS        SS        13 12 56.8 +4.5
HNS                                  AMB       AMB
      comp=Z,410nm,11.9s
HNS                                  LR        LR
      comp=Z,870nm,21.7s
HNS                                  LR        LR
      comp=Z,570nm,20.6s
HNS                                  LR        LR
      comp=Z,1µm,21.6s
RAYN  Ar Rayn           123.96  49             PKiKP     12 54 27.3 +0.1
RAYN  Ar Rayn           123.96  49   IAMs_20   IAMs_20   13 48 53.2
      comp=Z,928nm,20.0s
RAYN  Ar Rayn           123.96  49   PKIKP     PKiKP     12 54 27.3 +0.1
RAYN                                 MLR       MLR
      comp=Z,900nm,20.0s
LODK  Lodwar            124.53  76   IAMs_20   IAMs_20   13 46 12.3
      comp=Z,1µm,20.0s
FURI  Furi              125.62  68   IAMs_20   IAMs_20   13 46 55.5
      comp=Z,1µm,21.0s
SSE   Sheshan           125.62 325   PKP       PKiKP     12 54 32.3 +2.1
SSE                                  LR        LR
      comp=Z,220nm,20.4s
SSE                                  LR        LR
      comp=Z,360nm,20.2s
SSE                                  LR        LR
      comp=Z,390nm,20.9s
KSH   Kashi             125.84  12   PKP       PKiKP     12 54 32.4 +1.8
KSH                                  sPKP      sPKPdf    12 54 42.3 +0.8
KSH                                  LR        LR
      comp=Z,820nm,22.7s
KSH                                  LR        LR
      comp=Z,1µm,21.3s
KSH                                  LR        LR
      comp=Z,1µm,21.6s
NJ2   Nanjing           126.13 328  ePKP       PKiKP     12 54 32.6 +1.5
NJ2                                  LR        LR
      comp=Z,700nm,20.4s
NJ2                                  LR        LR
      comp=Z,620nm,19.9s
NJ2                                  LR        LR
      comp=Z,1µm,21.8s
GTA   Gaotai            126.22 349   PKP       PKiKP     12 54 32.3 +1.0
GTA                                  LR        LR
      comp=Z,1µm,21.1s
GTA                                  LR        LR
      comp=Z,710nm,18.7s
GTA                                  LR        LR
      comp=Z,2µm,21.5s
LYN   LuoYang           127.00 335   PKP       PKiKP     12 54 34.0 +1.2
LYN                                  PP        PP        12 56 31.0 +1.8
LYN                                  AMB       AMB
      comp=Z,660nm,12.0s
LYN                                  LR        LR
      comp=Z,760nm,25.1s
LYN                                  LR        LR
      comp=Z,750nm,25.8s
LYN                                  LR        LR
      comp=Z,1µm,26.8s
ATD   Arta Tunnel       128.19  63   IAMs_20   IAMs_20   13 46 40.9
      comp=Z,1µm,22.0s
STKA  Stephens Creek    128.38 240   PKP       PKiKP     12 54 36.9 +1.3
      comp=Z,15nm,0.8s,baz=36,slow=2.4,SNR=22
STKA  Stephens Creek    128.38 240 i PKIKP     PKPdf     12 54 35.6 +0.6
LZH   Lanzhou           128.50 344  ePKP       PKiKP     12 54 37.6 +1.6
LZH                                  sPKP      sPKPdf    12 54 48.0 +1.2
LZH                                  PP        PP        12 56 48.5 +9.4
LZH                                  SS        SS        13 13 54.3 +0.9
LZH                                  AMB       AMB
      comp=Z,450nm,5.6s
LZH                                  LR        LR
      comp=Z,1µm,21.7s
LZH                                  LR        LR
      comp=Z,1µm,20.6s
LZH                                  LR        LR
      comp=Z,2µm,20.6s
KBL   Kabul             128.62  21             PKiKP     12 54 36.5 +0.2
KBL   Kabul             128.62  21   PKIKP     PKiKP     12 54 36.5 +0.2
KIBK  Kibwezi           128.80  82   PKP       PKiKP     12 54 38.9 +1.8
KIBK  Kibwezi           128.80  82   IAMs_20   IAMs_20   14 03 16.0
      comp=Z,815nm,18.0s
XAN   Xi'an             128.81 338   PKP       PKiKP     12 54 38.0 +1.5
XAN                                  LR        LR
      comp=Z,2µm,17.9s
XAN                                  LR        LR
      comp=Z,1µm,19.5s
XAN                                  LR        LR
      comp=Z,2µm,18.9s
WHN   Wuhan             129.58 331   PKP       PKiKP     12 54 38.9 +0.8
WHN                                  PP        PP        12 56 49.5 +3.2
WHN                                  LR        LR
      comp=Z,4µm,25.0s
GOMU  GeErMu            130.10 353   PKP       PKiKP     12 54 39.4 -0.1
GOMU                                 PP        PP        12 56 49.9 +0.2
GOMU                                 SS        SS        13 14 12.5 -0.8
GOMU                                 LR        LR
      comp=Z,1µm,18.9s
GOMU                                 LR        LR
      comp=Z,600nm,18.4s
GOMU                                 LR        LR
      comp=Z,1µm,18.8s
UOSS  Minazif           130.32  40             PKPdf     12 54 38.4 -0.5
NIL   Nilore            130.76  17             PKiKP     12 54 40.7 +0.3
NIL   Nilore            130.76  17   IAMs_20   IAMs_20   13 56 19.2
      comp=Z,1µm,22.0s
NIL   Nilore            130.76  17   PKIKP     PKiKP     12 54 40.7 +0.3
ALCI  Alchi Leh         131.20  13  eP         PKPdf     12 54 38.5 -2.4
ENH   Enshi             131.95 336   IAMs_20   IAMs_20   14 00 16.5
      comp=Z,1µm,21.0s
TSSA  Tissa             132.29  14  eP         PKPdf     12 54 40.5 -2.2
DHRM  DHARAMSHALA       132.89  14  eP         PKPdf     12 54 41.6 -2.3
CD2   Chengdu           133.39 342   PKP       PKPdf     12 54 44.8 +0.2
CD2                                  sPKP      sPKPdf    12 54 58.8 +2.8
CD2                                  PP        PP        12 57 14.8 +4.1
CD2                                  PKS       PKSdf     12 58 15.8 -5.4
CD2                                  AMB       AMB
      comp=Z,320nm,8.9s
CD2                                  LR        LR
      comp=Z,2µm,17.1s
CD2                                  LR        LR
      comp=Z,1µm,15.9s
CD2                                  LR        LR
      comp=Z,2µm,19.0s
SMLA  Simla             134.17  14  eP         PKPdf     12 54 44.0 -1.9
JOSI  Joshimath         135.22  11  eP         PKPdf     12 54 46.1 -2.2
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WRAB  Tennant Creek     135.86 255             PKPdf     12 54 48.5 -0.9
WRAB  Tennant Creek     135.86 255   PKIKP     PKPdf     12 54 48.5 -0.9
WRA   Warramunga Arr    135.87 255   PKhKP     PKPpre    12 54 41.1
      comp=Z,1.0nm,0.7s,baz=98,slow=3.4,SNR=7.3
WRA                                  PKP       PKPdf     12 54 48.5 -0.9
      comp=Z,15nm,0.8s,baz=92,slow=1.9,SNR=34
WRA   Warramunga Arr    135.87 255             PKPdf     12 54 49.0 -0.5
WRA   Warramunga Arr    135.87 255   PKIKP     PKPdf     12 54 49.0 -0.5
GULI  GuiLin            135.89 331 ⇓PKP        PKPdf     12 54 46.0 -3.4
GULI                                 LR        LR
      comp=Z,520nm,24.9s
GULI                                 LR        LR
      comp=Z,810nm,21.2s
GULI                                 LR        LR
      comp=Z,870nm,20.0s
RTK   Rohtak            135.99  15  eP         PKPdf     12 54 49.8 +0.4
ASAR  Alice Springs     136.09 250   PKhKP     PKPpre    12 54 41.0
      comp=Z,1.0nm,0.7s,baz=108,slow=3.0,SNR=9.8
ASAR                                 PKP       PKPdf     12 54 49.9  0.0
      comp=Z,10nm,0.8s,baz=90,slow=2.3,SNR=22
ASAR  Alice Springs     136.09 250             PKPdf     12 54 50.5 +0.7
ASAR  Alice Springs     136.09 250   PKIKP     PKPdf     12 54 50.5 +0.7
PTH   Pithoragarh       136.32  11  eP         PKPdf     12 54 48.7 -1.7
JHJR  Jhajjar           136.45  15  eP         PKPdf     12 54 48.8 -1.6
GYA   Guiyang           136.46 336   PKP       PKiKP     12 54 52.3  0.0
GYA                                  PP        PP        12 57 34.6 +4.2
GYA                                  PKS       PKSdf     12 58 26.9 -0.2
GYA                                  SS        SS        13 15 28.3 -2.2
GYA                                  AMB       AMB
      comp=Z,540nm,13.2s
GYA                                  LR        LR
      comp=Z,510nm,23.4s
GYA                                  LR        LR
      comp=Z,610nm,15.8s
GYA                                  LR        LR
      comp=Z,730nm,24.3s
NDI   New Delhi         136.52  15  eP         PKPdf     12 54 48.1 -2.3
NPLP  NPLP New Delhi    136.56  15  eP         PKPdf     12 54 48.6 -2.0
JMIU  JAMIA UNIVERSI    136.65  15  eP         PKPdf     12 54 48.5 -2.2
AYAN  Aya Nagar         136.69  15  eP         PKPdf     12 54 48.6 -2.1
KUDL  Kundal            136.85  16  eP         PKPdf     12 54 48.9 -2.2
LSA   Lhasa             136.86 357   IAMs_20   IAMs_20   14 00 28.9
      comp=Z,1µm,21.0s
PZH   PanZhiHua         138.12 342   PKP       PKPdf     12 54 50.1 -3.6
PZH                                  PP        PP        12 57 43.3 +2.7
PZH                                  AMB       AMB
      comp=Z,350nm,8.2s
PZH                                  LR        LR
      comp=Z,610nm,23.0s
PZH                                  LR        LR
      comp=Z,440nm,23.2s
PZH                                  LR        LR
      comp=Z,720nm,21.6s
BHUJ  Bhuj              138.92  27  eP         PKPdf     12 54 52.6 -2.4
VLK   Valmikinagar      138.93   6  eP         PKPdf     12 54 52.7 -2.4
KMI   Kunming           139.10 340 ⇑PKP        PKPdf     12 54 56.9 +1.3
KMI                                  PKS       PKSdf     12 58 32.5 +0.4
KMI                                  AMB       AMB
      comp=Z,440nm,12.3s
KMI                                  LR        LR
      comp=Z,880nm,23.9s
KMI                                  LR        LR
      comp=Z,640nm,21.6s
KMI                                  LR        LR
      comp=Z,1µm,22.6s
GTK   Tadong            139.30   0  eP         PKPdf     12 54 53.4 -2.4
UDPR  Udaipur           139.34  21  eP         PKPdf     12 54 53.4 -2.4
TEZP  TEZPUR            139.79 354  eP         PKPdf     12 54 54.4 -2.2
ABPO  Ambohimpanom      140.00 103             PKPdf     12 54 56.9 -0.4
ABPO  Ambohimpanom      140.00 103   PKIKP     PKPdf     12 54 56.9 -0.4
TNCH  TengChong         140.38 346   PKP       PKPdf     12 54 53.5 -4.4
TNCH                                 PP        PP        12 57 54.9 +0.4
TNCH                                 PKS       PKSdf     12 58 35.4 +1.2
TNCH                                 AMB       AMB
      comp=Z,280nm,5.5s
TNCH                                 LR        LR
      comp=Z,430nm,22.7s
TNCH                                 LR        LR
      comp=Z,740nm,19.5s
TNCH                                 LR        LR
      comp=Z,1µm,21.2s
GUNA  GUNA              140.40  16  eP         PKPdf     12 54 55.2 -2.6
KOHI  KOHIMA            140.53 352  eP         PKPdf     12 54 56.0 -2.1
DHUB  DHUBRI            140.57 358  eP         PKPdf     12 54 56.1 -1.8
ALBI  Allahabad         140.74  10  eP         PKPdf     12 54 56.0 -2.3
SHL   Shillong          140.92 355  eP         PKPdf     12 54 56.1 -2.7
VAR   Varanasi          140.93   8  eP         PKPdf     12 54 56.4 -2.3
SHBG  Sahibganj         141.37   1  eP         PKPdf     12 54 57.3 -2.1
QIZ   Qiongzhong        141.39 327   IAMs_20   IAMs_20   14 03 40.4
      comp=Z,1µm,22.0s
QIZ   Qiongzhong        141.39 327   PKP       PKPdf     12 54 59.8 +0.2
QIZ                                  PP        PP        12 58 02.4 +1.3
QIZ                                  PKS       PKSdf     12 58 34.3 -1.4
QIZ                                  SS        SS        13 16 29.9 +0.9
QIZ                                  AMB       AMB
      comp=Z,620nm,11.3s
QIZ                                  LR        LR
      comp=Z,630nm,20.0s
QIZ                                  LR        LR
      comp=Z,470nm,21.9s
QIZ                                  LR        LR
      comp=Z,870nm,24.5s
SILR  SILCHAR           141.61 354  eP         PKPdf     12 54 57.5 -2.3
GAYA  Gaya              141.67   5  eP         PKPdf     12 54 57.6 -2.4
BHPL  Bhopal            141.76  17  eP         PKPdf     12 54 57.7 -2.6
BOK   Bokaro            142.72   4  eP         PKPdf     12 54 59.4 -2.5
GTOI  Gorontalo         143.09 290   PKP       PKiKP     12 55 07.1 +1.1
BLSP  Bilaspur          143.95  10  eP         PKPbc     12 55 01.6 -0.1
LUWI  Luwuk             143.95 287   PKP       PKPdf     12 55 04.1 -0.2
AKL   Akola             144.04  19  eP         PKPab     12 55 01.8 +0.1
MRSI  Marisa            144.13 290   PKP       PKPdf     12 55 04.4 -0.2
NGP   Nagpur            144.19  15  eP         PKPab     12 55 01.9 -0.2
SOEI  Soe               144.89 272   PKP       PKPab     12 55 05.2 +0.1
SOEI  Soe               144.89 272   IAMs_20   IAMs_20   14 12 05.1
      comp=Z,769nm,19.0s
SOEI  Soe               144.89 272   PKP       PKPdf     12 55 07.2 +1.2
POO   Poona             144.89  25  eP         PKPab     12 55 03.2 -1.7
APSI  Ampana            144.94 288   PKP       PKPdf     12 55 07.4 +1.4
BATI  Baumata           145.55 272   PKPbc     PKPab     12 55 08.5 +1.1
      comp=Z,129nm,0.9s,baz=190,slow=2.9,SNR=19
BATI  Baumata           145.55 272   PKP       PKiKP     12 55 09.9 -1.1
MPSI  Mapaga            146.04 292   PKP       PKPab     12 55 10.0 +0.7
KAD   Karad             146.13  25  eP         PKPdf     12 55 05.2 -2.8
BWNR  Bhubaneshwar      146.18   5  eP         PKPdf     12 55 05.6 -2.3
CHTO  Chiang Mai        146.20 342             PKPdf     12 55 07.2 -0.8
CHTO                                 IAMs_20   IAMs_20   14 10 52.4
      comp=Z,808nm,20.0s
CHTO  Chiang Mai        146.20 342   PKP       PKPdf     12 55 07.4 -0.6
CHTO  Chiang Mai        146.20 342   PKIKP     PKPdf     12 55 07.2 -0.8
CMAR  Chiang Mai Arr    146.53 342   PKPbc     PKPdf     12 55 09.1 +0.5
      comp=Z,104nm,1.0s,baz=343,slow=3.1,SNR=76
MMRI  Maumere           146.65 275   PKP       PKPbc     12 55 11.3 +0.8
RAGD  RAYAGADA          146.94   9  eP         PKPdf     12 55 07.4 -1.9
EDFI  Ende, Flores      147.21 275   PKP       PKPbc     12 55 12.6 +0.4
EDFI                                 PKP       PKPbc     12 55 12.6 +0.4
TTSI  Tana Toraja       147.43 286   PKP       PKiKP     12 55 16.3 +1.4
TTSI                                 PKP       pPKPdf    12 55 19.9 +1.2
GOA   Goa               147.59  27  eP         PKPdf     12 55 07.7 -2.7
HYB   Hyderabad         147.60  18  ePKiKP     PKiKP     12 55 15.4 +0.2
HYB                                 eSKSdf     SKSdf     13 02 17.8 -0.2
BNSI  Bone              147.61 283   PKP       PKPab     12 55 16.7 +1.3
SPSI  Sidrap Palu       147.78 284   PKP       PKiKP     12 55 15.8 +0.2
SPSI                                 PKP       PKPab     12 55 17.0 +0.9
RER   Riviere de l'E    147.81 108             PKPbc     12 55 14.6 +1.0
KAPI  Kappang           148.13 283   PKP       PKPbc     12 55 14.8 +0.2
MMSI  Mamuju            148.14 287   PKP       PKiKP     12 55 16.8 +0.4
MMSI                                 PKP       PKPab     12 55 18.3 +0.7
BASI  Baing, Sumba      148.55 273   PKP       PKiKP     12 55 17.6 +0.4
WSI   Waingapu          148.73 274   PKP       PKiKP     12 55 17.9 +0.3
LBFI  Labuhan Bajo,     148.89 276   PKP       PKiKP     12 55 17.7 -0.2
LBFI                                 PKP       pPKPdf    12 55 22.3 +1.2
PSA00 Pilbara Seismi    149.24 251             PKPbc     12 55 16.2 -1.0
MBWA  Marble Bar        149.41 251             PKPbc     12 55 18.4 +0.7
BKB   Balikpapan        149.43 291   IAMs_20   IAMs_20   14 16 14.4
      comp=Z,651nm,19.0s
BKB   Balikpapan        149.43 291   PKP       PKiKP     12 55 19.8 +0.7
BKB                                  PKP       sPKPdf    12 55 25.3 +0.4
WBSI  Waikabubak, Su    149.60 274   PKP       PKPbc     12 55 18.1 -0.3
WBSI                                 PKP       PKiKP     12 55 19.9 +0.5
MORW  Morawa            150.29 234             PKPbc     12 55 18.8 -0.9
DBNI  Kabupaten Domp    150.42 277   PKP       PKPbc     12 55 18.5 -1.8
DBNI                                 PKP       PKiKP     12 55 19.3 -1.8
PLAI  Plampang          151.01 276   PKP       PKPbc     12 55 19.8 -1.9
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PLAI				PKP	PKiKP	12 55 22.8	+0.5
SBUM	Sibu	151.65	303		PKPdf	12 55 20.2	+3.3
SBUM	Sibu	151.65	303	PKP	PKPdf	12 55 19.6	+2.6
SBUM				PKP	PKPbc	12 55 23.0	-0.2
TWSI	Taliwang, Sumb	151.85	277	PKP	PKPdf	12 55 17.5	+0.3
TWSI				PKP	PKPbc	12 55 22.4	-1.2
PKKI	Palangkaraya	152.49	292	PKP	PKPbc	12 55 23.7	-1.4
PKKI				PKP	sPKPdf	12 55 30.9	+1.3
DGPR	DIGLIPUR	153.03	351	*e*P	PKPdf	12 55 16.6	-2.3
KOD	Kodaikanal	153.85	26	*e*P	PKPdf	12 55 17.2	-3.3
PBA	Port Blair	154.55	351	*e*P	PKPdf	12 55 18.6	-2.5
SNJI	Sawahan-Nganju	156.53	282	PKP	PKPdf	12 55 28.7	+4.7
SNJI				PKP	pPKPdf	12 55 30.0	-2.5
KULM	Kulim	157.73	327	PKP	PKPdf	12 55 28.8	+3.5
KULM				PKP	pPKPdf	12 55 29.4	-4.4
IPM	Ipoh	158.19	325	PKP	PKPdf	12 55 27.5	+1.6
IPM				PKP	pPKPdf	12 55 30.0	-4.5
CTJI	Waduk Cacaban	158.72	286	PKP	PKPdf	12 55 30.2	+3.7
KPJI	Karang Pucung	159.07	285	PKP	PKPdf	12 55 30.2	+3.3
KPJI				PKP	sPKPdf	12 55 43.9	+5.6
PSI	Prapat	160.74	327	PKP	PKPdf	12 55 30.5	+1.5
PSI				PKP	pPKPdf	12 55 30.9	-6.6
TPTI		161.19	333	PKP	PKPdf	12 55 31.7	+2.4
TPTI				PKP	pPKPdf	12 55 32.1	-5.7
KLSI		161.79	298	PKP	PKPdf	12 55 31.5	+1.6
KLSI				PKP	pPKPdf	12 55 34.1	-4.4
MNSI	Mandailing Nat	162.01	322	PKP	PKPdf	12 55 30.7	+0.5
MNSI				PKP	pPKPdf	12 55 33.2	-5.5
MDSI	Maura Dua	162.16	299	PKP	PKPdf	12 55 28.7	-1.6
MDSI				PKP	pPKPdf	12 55 30.6	-8.2
KASI	Kota Agung	162.40	296	PKP	PKPdf	12 55 30.6	+0.1
PPI	Padang Panjang	162.47	317	PKP	PKPdf	12 55 30.8	+0.2
PPI				PKP	pPKPdf	12 55 33.6	-5.5
GSI	Gunungsitoli	162.71	328	PKP	PKPdf	12 55 31.3	+0.4
GSI				PKP	pPKPdf	12 55 33.4	-6.0
PDSI	Padang	162.76	316	PKP	PKPdf	12 55 35.5	+4.5
PDSI				PKP	sPKPdf	12 55 44.6	+2.2
SISI	Saibi	163.97	319	PKP	PKPdf	12 55 34.6	+2.5
SISI				PKP	pPKPdf	12 55 36.2	-4.4
EGSI	Enggano, Bengk	164.22	300	PKP	PKPdf	12 55 35.8	+3.5
EGSI				PKP	pPKPdf	12 55 37.6	-3.2

SNET ***19*** *12:39:08.8±1.9, 13°.61N×91°.39W, h35km, ML5.0*
GCG ***19*** *12:39:08.1±0.9, 13°.63N×91°.45W, h15km±11km, MD4.3, ML4.8, MW4.4*
CATAC ***19*** *12:39:08.4±0.3, 14°N±2°×9°1W±°, h7km, M5.5/44, mb5.9/7, MLv5.2/44, Error ellipse: s-maj=4.3km s-min=2.2km az=44.5, confirmed*
NEIC ***19*** *12:39:11.1±2.8, 13°.67N±0°.06×91°.29W±0°.07, h35km±1km, mb5.1/101, Error ellipse: s-maj=12.9km s-min=7.5km az=54.0*
IDC ***19*** *12:39:15.2±3.1, 14°.13N×90°.69W, h73km±27km, mb4.1/12, mbtmp4.5/14, Error ellipse: s-maj=35.4km s-min=13.6km az=51.0*
ISC 19 12:39:08.2±0.4, **13°.58N**±0°.04×**91°.31W**±0°.04, **h28**km, **n453**, σ**1°.34**/433, **mb5.1**/60, **1C-4D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESSJ	San Jos, E	0.79	91	*i* P	Pb	12 39 22.4	-1.0
STG2	El Palmar, Qui	0.85	356	*i* P	Pn	12 39 27.9	+3.4
STG8	El Palmar, Qui	0.86	357	IAML		12 39 50.9	
	comp=Z,13µm,0.2s						
ESSG	Sabana Grande	0.92	30	*i* P	Pb	12 39 25.7	0.0
ESSG				*i* S	Sn	12 39 38.8	+0.9
RTAL	Retalhuleu	1.01	338	Pn	Pn	12 39 26.2	-0.4
RTAL	Retalhuleu	1.01	338	P	Pb	12 39 26.5	-0.6
RTAL	Retalhuleu	1.01	338	S	Sb	12 39 39.9	-0.1
FG16	Alotenango, Sa	1.04	48	*i* P	Pb	12 39 27.1	-0.6
PCG5	San Vicente Pa	1.10	55	*i* P	Pb	12 39 27.6	-1.2
PCG5				*i* P	Pb	12 39 27.7	-1.2
SOKI	Kika Raxquin	1.23	356	*i* P	Pb	12 39 30.0	-1.1
SOKI				IAML		12 40 05.6	
	comp=Z,14µm,0.8s						
GCG4	OSOP	1.25	37	*i* P	Pb	12 39 31.7	+0.3
FAME	Alcaldia de Sa	1.29	78	S	Sb	12 39 48.2	+0.2
FAME	Alcaldia de Sa	1.29	78	⇑P	Pb	12 39 30.9	-0.9
QUEO	Labor Ovalle	1.30	351	*i* P	Pb	12 39 30.8	-1.3
SMCA	Catarina	1.47	330	*i* S	Sn	12 39 49.4	-1.8
NUBE	Las Nubes	1.52	78	*e*P	Pb	12 39 34.6	-1.3
NUBE				*e*S	Sb	12 39 53.4	-1.5
NUBE	Las Nubes	1.52	78	S	Sb	12 39 55.5	+0.6
NUBE	Las Nubes	1.52	78	⇓P	Pb	12 39 34.3	-1.6
SLOZ	Alcaldia de Sa	1.55	73	S	Sb	12 39 55.7	+0.2
APG	El Apazote	1.63	30	P	Pb	12 39 37.2	-0.7
	comp=Z,170nm,0.6s,baz=189,slow=12,SNR=13						
RTR	El Retiro	1.65	79	*e*P	Pb	12 39 36.8	-1.3
CEVE	Cerro Verde	1.66	81	*e*P	Pb	12 39 36.9	-1.4
CEVE				*e*S	Sb	12 39 59.4	+0.5
CEVE	Cerro Verde	1.66	81	⇓P	Pb	12 39 37.2	-1.1
SBLS	San Blas	1.66	81	*e*P	Pb	12 39 36.9	-1.4
RBDL	Robledal	1.66	71	*e*P	Pb	12 39 37.5	-0.9
RBDL				*e*S	Sb	12 39 58.4	-0.6
SNJE	San Jose	1.68	80	*e*P	Pb	12 39 37.0	-1.6
HUEH	Huehuetenango	1.73	354	Pn	Pb	12 39 37.7	-1.8
HUEH	Huehuetenango	1.73	354	*e*P	Pb	12 39 37.8	-1.8
HUEH	Huehuetenango	1.73	354	*i* P	Pb	12 39 38.3	-1.3
HUEH				IAML		12 40 07.5	
	comp=Z,9µm,0.5s						
HUEH	Huehuetenango	1.73	354	S	Sb	12 40 00.3	-0.8
HUEH	Huehuetenango	1.73	354	⇓P	Pb	12 39 37.8	-1.8
UNIC	Universidad Ca	1.76	77	*e*P	Pb	12 39 38.8	-1.1
UNIC	Universidad Ca	1.76	77	P	Pb	12 39 38.6	-1.3
UNIC	Universidad Ca	1.76	77	S	Sb	12 40 01.7	+0.1
JAYA	Jayaque - finc	1.81	88	*e*P	Pn	12 39 38.5	+0.7
JAYA	Jayaque - finc	1.81	88	*i* P	Pb	12 39 40.2	-0.7
JAYA	Jayaque - finc	1.81	88	P	Pb	12 39 38.9	-2.0
JAYA	Jayaque - finc	1.81	88	S	Sb	12 40 02.2	-1.0
CEDA	San Andres	1.88	83	*e*P	Pb	12 39 40.1	-1.8
CEDA	San Andres	1.88	83	P	Pb	12 39 40.7	-1.2
CEDA	San Andres	1.88	83	S	Sb	12 40 05.5	+0.6
LALI	Alcalda de L	1.94	93	*e*P	Pb	12 39 41.7	-1.2
LALI	Alcalda de L	1.94	93	*i* P	Pb	12 39 41.5	-1.4
LALI	Alcalda de L	1.94	93	P	Pb	12 39 41.0	-1.9
LALI	Alcalda de L	1.94	93	S	Sb	12 40 06.9	+0.3
PMON	Piamonte	1.95	86	S	Sb	12 40 07.5	+0.5
PMON	Piamonte	1.95	86	⇓P	Pb	12 39 41.0	-2.1
BOQS	Boqueron	1.98	85	*e*P	Pb	12 39 41.5	-2.3
UEES	Universidad Ev	2.02	86	S	Sb	12 40 09.5	+0.4
UEES	Universidad Ev	2.02	86	P	Pb	12 39 42.8	-1.6
UTEC	Universidad Te	2.06	86	P	Pb	12 39 43.8	-1.2
UTEC	Universidad Te	2.06	86	S	Sb	12 40 10.3	+0.2
MTO3	Montecristo	2.06	67	Pn	Pb	12 39 43.3	-1.9
MTO3	Montecristo	2.06	67	P	Pb	12 39 43.0	-2.1
MTO3	Montecristo	2.06	67	S	Sb	12 40 09.6	-0.8
PANCS	Alcalda de	2.07	89	P	Pb	12 39 43.3	-2.0
PANCS	Alcalda de	2.07	89	S	Sb	12 40 08.9	-1.7
IGN	Direccin Gen	2.09	86	P	Pb	12 39 44.0	-1.5
IGN	Direccin Gen	2.09	86	S	Sb	12 40 11.1	+0.1
LFU	La Fuente	2.14	85	*e*P	Pb	12 39 44.5	-2.0
ESQI	Esquipulas	2.15	63	Pn	Pb	12 39 44.5	-2.0
ESQI	Esquipulas	2.15	63	P	Pb	12 39 44.5	-2.0
ESQI	Esquipulas	2.15	63	S	Sb	12 40 12.8	0.0
PAVA	Las Pavas	2.31	87	S	Sb	12 40 16.7	-0.8
PAVA	Las Pavas	2.31	87	P	Pb	12 39 46.9	-2.5
LLGN	La Laguna	2.37	76	P	Pb	12 39 47.3	-3.0
LLGN	La Laguna	2.37	76	S	Sb	12 40 17.7	-1.6
UESV	Universidad de	2.46	88	P	Pb	12 39 49.4	-2.4
UESV	Universidad de	2.46	88	S	Sb	12 40 21.2	-0.4
TECO	Alcaldia de Te	2.46	91	P	Pb	12 39 49.2	-2.6
TECO	Alcaldia de Te	2.46	91	S	Sb	12 40 20.1	-1.7
SCLA	Alcaldia de Sa	2.51	87	P	Pb	12 39 49.7	-3.1
SCLA	Alcaldia de Sa	2.51	87	S	Sb	12 40 22.8	-0.5
PACA	Pacayal	2.91	92	P	Pb	12 39 55.7	-3.9
PACA	Pacayal	2.91	92	S	Sb	12 40 31.1	-3.7
CNRM	Centro Naciona	3.06	92	P	Pn	12 39 57.7	+3.0
IZABA	Izabal, Puerto	3.40	51	P	Pn	12 40 01.7	+2.4
CNCH	Conchagua	3.40	95	P	Pn	12 40 02.1	+2.5
CNCH	Conchagua	3.40	95	S	Sb	12 40 42.8	-6.0
PETF	Flores	3.60	23	Pn	Pn	12 40 04.7	+2.5
PETF	Flores	3.60	23	P	Pn	12 40 04.3	+2.1
CSGN	Cosiguina Volc	3.70	99	P	Pn	12 40 06.1	+2.4
CSGN				S	Sb	12 40 51.3	-6.3
POTN	Potosi Cosigui	3.75	98	P	Pn	12 40 07.6	+3.4
POTN				S	Sn	12 40 51.8	+4.3
TGUH	Tegucigalpa,Un	3.95	83	P	Pn	12 40 09.7	+2.5
CRIN	San Cristobal	4.24	101	Pn	Pn	12 40 14.8	+3.7
CRIN	San Cristobal	4.24	101	P	Pn	12 40 13.8	+2.7
PKGN	Cerro Pekin	4.32	102	P	Pn	12 40 14.5	+2.4
PKGN				S	Sn	12 41 06.1	+4.5
YUSH	Yuscaran	4.36	85	P	Pn	12 40 15.2	+2.5
HERN	Volcan Telica	4.47	102	Pn	Pn	12 40 16.8	+2.5
POLN	Al Sur del Vol	4.48	101	P	Pn	12 40 16.1	+1.7
POLN				S	Sn	12 41 05.5	-0.1
CNGA	Al SSO del Vol	4.62	103	P	Pn	12 40 17.4	+1.1
CNGN	Cerro Negro	4.62	103	Pn	Pn	12 40 18.9	+2.6
CNGN	Cerro Negro	4.62	103	P	Pn	12 40 19.1	+2.7
OCON	Estacion meteo	4.70	89	P	Pn	12 40 20.8	+3.4
MOMN	Momotombo	4.79	104	P	Pn	12 40 21.2	+2.5
COPN	Copaltepe	4.81	106	P	Pn	12 40 20.7	+1.8
MOM2	El Cardon	4.84	103	P	Pn	12 40 21.6	+2.3
MOM2				S	Sn	12 41 14.1	-0.4
LIMN	Finca el Limon	4.84	96	P	Pn	12 40 22.0	+2.6
LIMN				S	Sn	12 41 17.4	+2.8
CMIG	Matias Romero	4.90	316	P	Pn	12 40 19.6	-0.5
	comp=Z,55nm,0.3s,baz=6.3,slow=18,SNR=0.5						
CMIG				S	Sn	12 41 15.4	-0.6
	comp=Z,172nm,0.3s,baz=45,slow=17,SNR=2.3						
RCFN	Al S de San Ju	4.96	90	P	Pn	12 40 23.4	+2.4
RCON	San Juan de Ri	5.01	91	P	Pn	12 40 24.5	+2.7
TISN	Laguna Tiscapa	5.12	106	P	Pn	12 40 25.2	+2.0
UNAN	Cigeo UNAN	5.13	106	P	Pn	12 40 25.6	+2.3
UNAN				S	Sn	12 41 20.1	-1.5
MAS3	Al N del Volca	5.24	107	P	Pn	12 40 28.8	+3.9
MATN	Matagalpa	5.28	96	P	Pn	12 40 27.0	+1.5
NANN	Nandasmo	5.32	107	P	Pn	12 40 29.7	+3.8
NANN	Nandasmo	5.32	107	S	Sn	12 41 26.9	+0.6
SCIG	Sabancuy	5.36	1	P	Pn	12 40 29.7	+3.4
BOAB	BOACO BROADBAN	5.62	101	Pn	Pn	12 40 31.8	+1.9
BOAB	BOACO BROADBAN	5.62	101	P	Pn	12 40 31.2	+1.3
SIUN	Universidad Ur	6.36	88	Pn	Pn	12 40 42.7	+2.6
JTS	Las Juntas de	7.03	117	P	Pn	12 40 53.0	+3.6
	comp=Z,228nm,1.2s,baz=302,slow=14,SNR=0.7						
JTS				S	Sn	12 42 05.9	-2.6
	comp=Z,27nm,0.5s,baz=194,slow=17,SNR=0.9						
JTS	Las Juntas de	7.03	117	Pn	Pn	12 40 52.9	+3.5
TEIG	Tepich	7.22	23	Pn	Pn	12 40 54.7	+2.8
TEIG	Tepich	7.22	23	P	Pn	12 40 53.7	+1.7
MTDJ	Mount Denham	14.03	69	P	P	12 42 33.8	+0.9
ROSC	El Rosal	18.88	116	P	Pn	12 43 29.1	+1.4
	comp=Z,20nm,0.6s,baz=37,slow=20,SNR=2.8						
ROSC	El Rosal	18.88	116	IAmb	IAmb	12 43 38.8	
	comp=Z,43nm,1.1s						
TXAR	Lajitas Array	19.41	326	P	Pn	12 43 34.8	+1.1
	comp=Z,14nm,0.8s,baz=145,slow=10,SNR=9.8						
TXAR				PcP	PcP	12 47 54.9	+1.4
	comp=Z,0.6nm,0.6s,baz=84,slow=3.2,SNR=2.3						
TXAR	Lajitas Array	19.41	326	Pn	Pn	12 43 34.9	+1.2
TX31	Lajitas Ar. Si	19.41	326	Pn	Pn	12 43 35.1	+1.3
OZNA	Ozona	19.48	334	P	Pn	12 43 34.2	-0.3
RUSC	La Rusia	19.51	111	P	Pn	12 43 36.7	+1.3
PLPT	Palo Pinto	20.18	343	P	Pn	12 43 41.7	-1.1
ABTX	Abilene, Hawle	20.43	339	P	P	12 43 44.1	+0.7
MNHN	Monahans	20.57	331		Pn	12 43 46.9	-0.5
MNHN				IAmb	IAmb	12 43 48.3	
	comp=Z,108nm,0.9s						
SDV	Santo Domingo	20.81	101	P	P	12 43 47.1	-0.8
	comp=Z,8.6nm,0.6s,baz=285,slow=12,SNR=2.4						
	comp=Z,8.6nm,0.6s						
ODSA	Odessa	21.13	333	P	P	12 43 51.3	+0.2
ODSA				IAmb	IAmb	12 43 53.3	
	comp=Z,74nm,1.2s						
PECS	Pecos	21.13	329	P	P	12 43 52.8	+1.7
PECS				IAmb	IAmb	12 43 53.8	
	comp=Z,80nm,0.9s						
CLNB	Carlsbad	21.87	330	P	P	12 44 00.1	+1.1
GDL2	Guadalupe Moun	22.05	329		P	12 44 01.8	+0.8
TKL	Tuckaleechee C	23.01	16	P	P	12 44 10.7	-0.3
	comp=Z,14nm,0.5s,baz=180,slow=9.0,SNR=8.5						
319A	Douglas	24.21	320	P	P	12 44 25.4	+2.6
319A				IAmb	IAmb	12 44 45.6	
	comp=Z,51nm,1.0s						
ATAH	Atahualpa	24.25	147	P	P	12 44 28.1	+4.5
	comp=Z,11nm,0.8s,baz=350,slow=1.4,SNR=4.1						
	comp=Z,11nm,0.8s						
SJG	San Juan	24.61	76	P	P	12 44 25.8	-0.6
	comp=Z,21nm,0.2s,baz=311,slow=4.6,SNR=3.9						
SJG	San Juan	24.61	76	IAmb	IAmb	12 44 38.2	
	comp=Z,37nm,0.8s						
CRNM	Carthage	24.64	328	P	P	12 44 27.8	+1.0
V58A	Windy Hill, Pi	24.69	24	P	P	12 44 26.6	-0.4
SBM	South Baldy	24.89	327	P	P	12 44 29.5	+0.2
HUMP	Col San Antoni	24.90	76		P	12 44 27.8	-1.2
HUMP				IAmb	IAmb	12 44 39.6	
	comp=Z,73nm,0.9s						
DUN6	Lazy B Ranch	24.91	322	P	P	12 44 30.3	+1.2
LENM	Lemitar	24.93	328	P	P	12 44 29.9	+0.5
RTBA	Rita Blanca	24.96	338	P	P	12 44 28.3	-1.3
RTBA				IAmb	IAmb	12 44 30.5	
	comp=Z,31nm,0.8s						
CTU	Camp Tracy	32.39	330	P	P	12 45 37.9	+2.0
PDAR	Pinedale Array	33.08	335	P	P	12 45 42.6	+0.8
	comp=Z,1.7nm,0.7s,baz=139,slow=9.5,SNR=3.6						
PDAR				PcP	PcP	12 48 25.6	+0.6
	comp=Z,0.6nm,0.6s,baz=128,slow=2.9,SNR=4.0						
	comp=Z,1.7nm,0.7s						
VES	Vestal, Richgr	33.37	317	P	P	12 45 46.4	+2.1
SNOW	Snow King Moun	34.15	334	P	P	12 45 51.2	0.0
SNOW				IAmb	IAmb	12 45 53.2	
	comp=Z,36nm,1.1s						
NVAR	Mina Array Bea	34.41	321	P	P	12 45 56.2	+2.6
	comp=Z,13nm,0.9s,baz=137,slow=8.1,SNR=4.3						
NVAR				PcP	PcP	12 48 30.4	+1.6
	comp=Z,0.6nm,0.6s,baz=69,slow=2.9,SNR=4.5						
	comp=Z,13nm,0.9s						
NVAR	Mina Array Bea	34.41	321		P	12 45 55.4	+1.9
MFID	Camas Ranch	36.44	329		P	12 46 11.1	+0.4
MFID				IAmb	IAmb	12 46 14.8	
	comp=Z,23nm,1.1s						
ULM	Lac du Bonnet	36.76	355	P	P	12 46 10.3	-2.9
	comp=Z,3.8nm,0.6s,baz=146,slow=7.3,SNR=1.5						
	comp=Z,3.8nm,0.6s						
ULM	Lac du Bonnet	36.76	355	IAmb	IAmb	12 46 59.7	
	comp=Z,44nm,1.8s						
J08A	Circle Bar Ran	37.75	327		P	12 46 23.2	+1.3
PLID	Pearl Lake	37.76	331	P	P	12 46 22.3	+0.2
PLID				IAmb	IAmb	12 46 23.7	
	comp=Z,37nm,1.2s						
H04A	Detroit Lake	40.63	326	IAmb	IAmb	12 46 48.5	
	comp=Z,40nm,1.2s						
C09A	Chrisman Ranch	40.83	332		P	12 46 48.2	+0.8
C09A				IAmb	IAmb	12 46 49.0	
	comp=Z,41nm,1.3s						
F04D	Rainier, OR	41.98	327	IAmb	IAmb	12 46 59.9	
	comp=Z,44nm,0.9s						
GNW	Green Mountain	42.85	329		P	12 47 04.2	+0.3
GNW				IAmb	IAmb	12 47 05.7	
	comp=Z,43nm,1.6s						
LLLB	Lillooet	44.49	332		P	12 47 18.0	+0.8
SCHQ	Schefferville	45.38	20	P	P	12 47 21.5	-2.6
	comp=Z,15nm,1.0s,baz=238,slow=13,SNR=3.7						
	comp=Z,15nm,1.0s						
YKA	Yellowknife Ar	51.58	346	P	P	12 48 10.5	-1.2
	comp=Z,3.9nm,0.9s,baz=69,slow=2.1,SNR=16						
YKA				PcP	PcP	12 49 24.8	-0.5
	comp=Z,0.6nm,0.5s,baz=236,slow=1.0,SNR=4.3						
	comp=Z,3.9nm,0.9s						
CPUP	Villa Florida	51.64	140	P	P	12 48 14.9	+2.3
	comp=Z,0.5nm,0.8s,baz=297,slow=14,SNR=1.6						
	comp=Z,0.5nm,0.8s						
CPUP	Villa Florida	51.64	140	IAmb	IAmb	12 48 21.6	
	comp=Z,2.6nm,1.2s						
U35K	Hyder	51.68	333	P	P	12 48 13.3	+0.7
	baz=129						
TOAD	Toad River Com	51.77	338	P	P	12 48 13.0	-0.3
	baz=136						
KOTAN	Kotaneelee Air	52.31	340	P	P	12 48 17.1	-0.1
	baz=138						
T35M	Bob Quinn	52.46	334	P	P	12 48 19.0	+0.6
	baz=130						
CRAG	Craig	52.80	332	P	P	12 48 20.6	-0.2
	baz=126						
WRAK	Wrangell Islan	53.02	333	P	P	12 48 22.9	+0.5
	baz=127						
S34M	Telegraph Cree	53.42	335	P	P	12 48 25.2	-0.2
	baz=129						
T33K	Petersburg	53.52	333	P	P	12 48 26.8	+0.7
	baz=127						
WTLY	Watson Lake, Y	53.95	338	IAmb	IAmb	12 48 30.7	
	comp=Z,21nm,1.1s						
WTLY	Watson Lake, Y	53.95	338	P	P	12 48 30.2	+0.8
	baz=133						
R33M	Jennings River	54.30	336	P	P	12 48 32.6	+0.6
	baz=130						
WRGLY	Wrigley	54.49	343	P	P	12 48 33.6	+0.5
	baz=141						
Q32M	Nakina River	54.54	335	P	P	12 48 34.4	+0.5
	baz=129						
S32K	Killisnoo	54.62	333	P	P	12 48 35.0	+0.8
	baz=125						
P32M	Atlin	55.52	335	P	P	12 48 40.9	+0.2
	baz=127						
P33M	Teslin, Yukon	55.54	336	P	P	12 48 40.8	-0.1
	baz=129						
S31K	Pelican	55.63	333	P	P	12 48 42.1	+0.7
	baz=124						
N32M	Quiet Lake	56.23	337	P	P	12 48 46.3	+0.5
	baz=129						
WHY	Whitehorse	56.63	336	P	P	12 48 49.3	+0.6
	baz=127						
P30M	Million Dollar	57.16	335	P	P	12 48 52.4	0.0
	baz=124						
O30N	Mendenhall	57.17	336	P	P	12 48 52.3	-0.2
	baz=125						
P29M	Windy Craggy	57.21	334	P	P	12 48 53.1	+0.3
	baz=123						
M31M	Drury Creek, Y	57.38	338	P	P	12 48 53.6	-0.3
	baz=128						
N31M	Braeburn, Yuko	57.47	337	P	P	12 48 54.2	-0.3
	baz=126						
O29M	Mount Kennedy	57.93	334	P	P	12 48 57.3	-0.6
	baz=123						
N30M	Aishikik Lake	57.97	336	P	P	12 48 57.7	-0.4
	baz=125						
YUK6	Outpost Mounta	58.19	335	P	P	12 48 60.0	+0.1
	baz=123						
M30M	Minto, Yukon	58.50	337	P	P	12 49 01.7	-0.1
	baz=126						
YUK4	Talbot Arm	58.53	335	P	P	12 49 01.7	-0.5
	baz=123						
MAYO	Mayo, Yukon	58.77	338	P	P	12 49 03.9	+0.3
	baz=127						
O28M	Mount Upton	58.86	334	P	P	12 49 04.2	-0.3
	baz=121						
YUK8	Steele Glacier	58.95	335	P	P	12 49 04.4	-0.8
	baz=122						
M29M	Somme Creek	59.06	337	IAmb	IAmb	12 49 07.3	
	comp=Z,22nm,1.2s						
M29M	Somme Creek	59.06	337	P	P	12 49 05.4	-0.3
	baz=124						
L29M	L29M	59.31	337	P	P	12 49 07.4	0.0
	baz=124						
CTG	Chitna Glacier	59.44	334	P	P	12 49 08.8	+0.4
	baz=120						
C36M	Paulatuk	59.45	347	P	P	12 49 08.4	+0.3
	baz=142						
YUK3	Moose Creek	59.49	335	P	P	12 49 08.7	-0.1
	baz=121						
J30M	Hart River	59.52	339	P	P	12 49 08.9	-0.1
	baz=127						
H31M	Peel River	59.63	341	P	P	12 49 09.9	+0.3
	baz=130						
I30M	Mount Dempster	59.93	340	P	P	12 49 11.7	-0.1
	baz=127						
BVCY	Beaver Creek	59.98	336	P	P	12 49 12.6	+0.5
	baz=121						
CRQE	Cirque	60.09	334	P	P	12 49 12.4	-0.5
	baz=118						
KAIM	Kayak Island	60.29	332	P	P	12 49 13.5	-0.6
	baz=116						
G31M	Satah River	60.33	342	P	P	12 49 13.7	-0.5
	baz=130						
MCARA	McCarthy VSAT	60.36	334	P	P	12 49 14.1	-0.5
	baz=119						
M27K	Edge Creek, AK	60.36	336	P	P	12 49 14.3	-0.5
	baz=120						
F31M	Tsiigehtchic	60.51	343	P	P	12 49 15.8	+0.3
	baz=131						
I29M	Ogilvie Camp,	60.66	339	P	P	12 49 16.8	+0.2
	baz=125						
BCAR	Beaver Creek A	60.69	336		P	12 49 15.9	-1.0
L27K	Beaver Creek,	60.70	336	IAmb	IAmb	12 49 18.3	
	comp=Z,15nm,1.2s						
L27K	Beaver Creek,	60.70	336	P	P	12 49 16.8	-0.1
	baz=121						
EPYK	Eagle Plains	60.74	341	P	P	12 49 17.0	-0.2
	baz=128						
M26K	Nabesna, AK	60.84	335	P	P	12 49 17.7	-0.2
	baz=119						
BMRM	Bremner River	60.84	333	P	P	12 49 18.3	+0.3
	baz=117						
INK	Inuvik	61.03	343	P	P	12 49 19.6	+0.7
	baz=132						
N25K	Chitina, Valde	61.13	334	IAmb	IAmb	12 49 21.5	
	comp=Z,11nm,0.7s						
N25K	Chitina, Valde	61.13	334	P	P	12 49 19.9	0.0
	baz=117						
EYAK	Cordova Ski Ar	61.16	333	P	P	12 49 20.2	+0.2
	baz=116						
H29M	Whitestone	61.19	340	P	P	12 49 20.4	+0.3
	baz=126						
F30M	Barrier River	61.23	342	P	P	12 49 20.6	+0.2
	baz=129						
I28M	Miner Creek	61.28	339	P	P	12 49 21.3	+0.4
	baz=124						
L26K	Log Cabin Wild	61.28	336	P	P	12 49 21.0	+0.1
	baz=119						
G29M	Pine Creek	61.48	341	P	P	12 49 22.5	+0.3
	baz=126						
KLU	Klutina	61.65	334	P	P	12 49 23.6	+0.2
	baz=116,SNR=8.4						
HARP	HAARP	61.73	335	P	P	12 49 24.2	+0.3
	baz=117						
DOT	Dot Lake	61.87	336	IAmb	IAmb	12 49 26.2	
	comp=Z,18nm,1.2s						
I27K	Kandik River	61.95	339	P	P	12 49 24.7	-0.7
	baz=122						
SCRK	Sand Creek	62.00	337	P	P	12 49 25.3	-0.5
	baz=119						
M24K	Tolsona, Glenn	62.02	334	P	P	12 49 25.7	-0.2
	baz=116						
J26L	Joseph Creek	62.09	337	P	P	12 49 26.1	-0.3
	baz=120						
PAX	Paxson	62.11	335		P	12 49 26.5	-0.1
PAX				IAmb	IAmb	12 49 27.0	
	comp=Z,18nm,1.2s						
PAX	Paxson	62.11	335	P	P	12 49 26.6	0.0
	baz=117,SNR=6.2						
RIDG	Independent Ri	62.22	336	P	P	12 49 27.2	0.0
	baz=118						
H27K	Steamboat Moun	62.25	339	P	P	12 49 26.7	-0.7
	baz=122						
E29M	Blow River	62.33	342	P	P	12 49 27.6	-0.2
	baz=127						
I26K	Coal Creek Min	62.34	338	P	P	12 49 28.2	+0.3
	baz=120						
SCM	Sheep Creek Mo	62.40	334	P	P	12 49 28.4	0.0
	baz=114						
PWL	Port Wells	62.45	332	P	P	12 49 29.1	+0.3
	baz=113						
F28M	Old Crow	62.48	341	IAmb	IAmb	12 49 29.8	
	comp=Z,26nm,1.1s						
F28M	Old Crow	62.48	341	P	P	12 49 29.0	+0.2
	baz=125,SNR=9.1						
M23K	Glacier View	62.55	334	P	P	12 49 29.2	-0.2
	baz=114						
G27K	Doyon Strip	62.61	340	P	P	12 49 29.5	-0.2
	baz=122						
K24K	Donnelly Dome	62.62	336	P	P	12 49 30.3	+0.5
	baz=117						
SEW	Seward	62.67	331	P	P	12 49 30.7	+0.5
	baz=112						
KNK	Knik Glacier	62.72	333	IAmb	IAmb	12 49 32.6	
	comp=Z,30nm,1.2s						
KNK	Knik Glacier	62.72	333	P	P	12 49 30.6	0.0
	baz=113						
SML	Sawmill	62.82	333		P	12 49 31.5	+0.3
SML	Sawmill	62.82	333	P	P	12 49 31.2	0.0
	baz=114,SNR=5.2						
J25K	Salcha River,	62.83	337	P	P	12 49 31.8	+0.5
	baz=118						
WAT6	Susitna Watana	62.88	334	P	P	12 49 32.1	+0.3
	baz=114,SNR=8.5						
O22K	Cooper Landing	62.94	332	P	P	12 49 32.1	+0.2
	baz=112						
DHY	Denali Highway	62.94	335	P	P	12 49 32.4	+0.2
	baz=115						
E28M	Babbage River	62.95	342	P	P	12 49 31.8	-0.2
	baz=126						
PMR	Palmer	63.09	333		P	12 49 32.8	-0.1
PMR				IAmb	IAmb	12 49 34.2	

	comp=Z,18nm,1.1s						
PMR	**Palmer**	**63.09**	**333**	P	**P**	**12 49 33.5**	**+0.5**
	baz=113						
D28M	**Stokes Point**	**63.14**	**343**	P	**P**	**12 49 33.9**	**+0.7**
	baz=127						
BRSE	**Bradley Lake S**	**63.15**	**331**	P	**P**	**12 49 34.1**	**+0.7**
	baz=110						
RC01	**Rabbit Creek A**	**63.17**	**332**	P	**P**	**12 49 33.3**	**-0.2**
	baz=112,SNR=6.2						
WAT1	**Susitna Watana**	**63.33**	**334**	P	**P**	**12 49 34.9**	**+0.4**
	baz=114						
E27K	**Coleen River**	**63.34**	**341**	P	**P**	**12 49 34.8**	**+0.3**
	baz=123						
HDA	**Harding Lake**	**63.35**	**336**	P	**P**	**12 49 35.1**	**+0.4**
	baz=116						
G26K	**Porcupine Rive**	**63.40**	**340**	P	**P**	**12 49 35.4**	**+0.5**
	baz=120						
KDAK	**Kodiak Island**	**63.42**	**328**	P	**P**	**12 49 36.0**	**+0.8**
	baz=108						
IL31		**63.48**	**337**	IAmb	IAmb	12 49 36.4	
	comp=Z,16nm,1.1s						
ILAR	**Eielson Array**	**63.48**	**337**	P	**P**	**12 49 35.0**	**-0.6**
	comp=Z,9.2nm,1.0s,baz=124,slow=4.8,SNR=21						
	comp=Z,9.2nm,1.0s						
ILAR	**Eielson Array**	**63.48**	**337**		**P**	**12 49 34.5**	**-1.0**
HOM	**Homer**	**63.55**	**330**	P	**P**	**12 49 37.0**	**+1.0**
	baz=109						
Q20K	**Shuyak Island**	**63.58**	**329**	P	**P**	**12 49 36.2**	**0.0**
	baz=108						
M22K	**Willow**	**63.59**	**333**	P	**P**	**12 49 36.5**	**+0.3**
	baz=112						
OHAK	**Old Harbor**	**63.62**	**328**	P	**P**	**12 49 36.7**	**+0.2**
	baz=107						
CAPN	**Captain Cook N**	**63.70**	**332**	P	**P**	**12 49 37.2**	**+0.3**
	baz=110						
D27M	**Malcolm River**	**63.74**	**342**	P	**P**	**12 49 38.0**	**+0.8**
	baz=124						
SUA	**Susitna One**	**63.76**	**333**	P	**P**	**12 49 38.0**	**+0.4**
	baz=111						
POKR	**Poker Plat Res**	**63.85**	**337**	P	**P**	**12 49 38.7**	**+0.8**
	baz=116						
MCK	**McKinley**	**63.85**	**335**		**P**	**12 49 38.4**	**+0.4**
MCK				IAmb	IAmb	12 49 48.7	
	comp=Z,36nm,1.5s						
MCK	**McKinley**	**63.85**	**335**	P	**P**	**12 49 38.5**	**+0.5**
	baz=114						
CUT	**Chulitna**	**63.90**	**334**	P	**P**	**12 49 38.6**	**+0.3**
	baz=112,SNR=8.6						
COLA	**College**	**63.90**	**337**	P	**P**	**12 49 38.6**	**+0.4**
	baz=115						
F26K	**Sheenjek River**	**63.90**	**340**	P	**P**	**12 49 38.5**	**+0.2**
	baz=120						
SII	**Sitkinak Islan**	**63.91**	**327**	P	**P**	**12 49 38.9**	**+0.5**
	baz=106						
BMAR	**Burnt Mountain**	**63.91**	**340**		**P**	**12 49 38.2**	**-0.1**
G25K	**Bearman Lake**	**64.11**	**339**	P	**P**	**12 49 40.0**	**+0.4**
	baz=118						
L22K	**Petersville**	**64.16**	**334**		**P**	**12 49 39.6**	**-0.5**
SPU	**Mount Spurr**	**64.25**	**332**		**P**	**12 49 40.7**	**0.0**
SPU				IAmb	IAmb	12 49 41.9	
	comp=Z,31nm,1.1s						
NEA2	**Nenana**	**64.26**	**336**	P	**P**	**12 49 40.4**	**-0.3**
	baz=114						
STLK	**Strandline Lak**	**64.26**	**332**	IAmb	IAmb	12 49 42.0	
	comp=Z,14nm,1.1s						
SKT	**Skwentna**	**64.29**	**333**	P	**P**	**12 49 40.8**	**-0.1**
	baz=110,SNR=10.0						
Q19K	**Cape Douglas,**	**64.30**	**329**	P	**P**	**12 49 40.8**	**-0.2**
	baz=107						
TRF	**Thorofare Moun**	**64.30**	**335**	P	**P**	**12 49 40.7**	**-0.4**
	baz=112,SNR=6.4						
P19K	**Oil Pt**	**64.31**	**330**	P	**P**	**12 49 40.9**	**-0.2**
	baz=108						
H24K	**Noodor Dome**	**64.33**	**338**	P	**P**	**12 49 41.2**	**0.0**
	baz=116						
N20K	**Mount Spurr**	**64.33**	**332**	P	**P**	**12 49 41.4**	**+0.1**
	baz=110						
SPCR	**Spurr Chakacha**	**64.33**	**332**	P	**P**	**12 49 41.3**	**0.0**
	baz=110						
F25K	**Christian Rive**	**64.35**	**340**	P	**P**	**12 49 41.8**	**+0.5**
	baz=119						
CHIR	**Chirikof Islan**	**64.50**	**326**	P	**P**	**12 49 42.8**	**+0.5**
	baz=104						
G24K	**Hadweenzic Riv**	**64.56**	**339**	P	**P**	**12 49 42.8**	**+0.2**
	baz=117						
E25K	**Arctic Village**	**64.58**	**340**	P	**P**	**12 49 42.1**	**-0.6**
	baz=119						
I23K	**Minto, Yukon-K**	**64.60**	**337**	IAmb	IAmb	12 51 34.2	
	comp=Z,16nm,0.7s						
I23K	**Minto, Yukon-K**	**64.60**	**337**	P	**P**	**12 49 42.7**	**-0.1**
	baz=114,SNR=6.0						
KTH	**Kantishna Hill**	**64.60**	**335**	IAmb	IAmb	12 49 50.7	
	comp=Z,19nm,1.0s						
C27K	**Jago River**	**64.76**	**342**	P	**P**	**12 49 43.0**	**-0.9**
	baz=122						
BPAW	**Bear Paw Mtn.**	**64.83**	**335**	P	**P**	**12 49 43.8**	**-0.7**
BPAW				IAmb	IAmb	12 49 52.1	
	comp=Z,12nm,0.8s						
BPAW	**Bear Paw Mtn.**	**64.83**	**335**	P	**P**	**12 49 43.8**	**-0.7**
	baz=112,SNR=5.4						
Q18K	**Katmai Hardscr**	**64.90**	**329**	P	**P**	**12 49 45.0**	**-0.1**
	baz=106						
PPLA	**Purkeypile**	**64.90**	**334**	P	**P**	**12 49 45.0**	**0.0**
PPLA				IAmb	IAmb	12 49 45.9	
	comp=Z,25nm,1.2s						
PPLA	**Purkeypile**	**64.90**	**334**	P	**P**	**12 49 45.4**	**+0.4**
	baz=110						
H23K	**Yukon River**	**64.94**	**337**	P	**P**	**12 49 45.1**	**-0.1**
	baz=114						
M20K	**Styx River**	**64.97**	**333**	P	**P**	**12 49 45.6**	**+0.1**
	baz=109						
O19K	**Port Alsworth**	**65.00**	**331**	P	**P**	**12 49 45.3**	**-0.2**
	baz=107						
F24K	**Squaw Lake**	**65.08**	**339**	P	**P**	**12 49 46.2**	**+0.2**
	baz=116						
P18K	**Big Mountain,**	**65.21**	**330**	P	**P**	**12 49 47.2**	**+0.2**
	baz=106						
Q17K	**Contact Creek**	**65.24**	**328**	P	**P**	**12 49 47.3**	**0.0**
	baz=105						
N19K	**Bonanza Creek**	**65.26**	**331**	P	**P**	**12 49 47.2**	**-0.1**
	baz=107,SNR=8.5						
C26K	**Camden Bay**	**65.27**	**342**	P	**P**	**12 49 47.3**	**+0.2**
	baz=120						
CHUM	**Lake Minchumin**	**65.30**	**335**	P	**P**	**12 49 47.6**	**+0.2**
	baz=111						
O18K	**Koktuh Hills**	**65.33**	**330**	P	**P**	**12 49 47.2**	**-0.5**
	baz=106						
D25K	**Kavik River**	**65.42**	**341**	IAmb	IAmb	12 49 58.6	
	comp=Z,14nm,1.1s						
G23K	**Bananza Creek**	**65.49**	**338**	P	**P**	**12 49 49.1**	**+0.5**
	baz=114						
H22K	**Ishtalitna Cre**	**65.67**	**337**	P	**P**	**12 49 49.7**	**-0.1**
	baz=112						
Q16K	**King Salmon**	**65.74**	**329**	P	**P**	**12 49 49.6**	**-0.7**
	baz=104						
COLD	**Coldfoot**	**65.76**	**339**	P	**P**	**12 49 51.4**	**+1.0**
COLD	**Coldfoot**	**65.76**	**339**	P	**P**	**12 49 50.3**	**0.0**
	baz=114						
L19K	**White Mountain**	**65.84**	**333**	P	**P**	**12 49 50.9**	**-0.1**
	baz=107						
K20K	**Telida**	**65.86**	**334**	IAmb	IAmb	12 49 52.3	
	comp=Z,31nm,1.2s						
K20K	**Telida**	**65.86**	**334**	P	**P**	**12 49 51.0**	**-0.1**
	baz=109						
N18K	**Kilae Creek**	**65.88**	**331**	P	**P**	**12 49 50.6**	**-0.6**
	baz=106						
E23K	**Chandalar**	**65.90**	**339**	P	**P**	**12 49 50.4**	**-1.0**
	baz=115						
M18K	**Stony River**	**66.08**	**332**	P	**P**	**12 49 52.5**	**0.0**
	baz=106						
D24K	**Happy Valley**	**66.12**	**341**	P	**P**	**12 49 52.7**	**+0.1**
	baz=116						
H21K	**Melozitna Rive**	**66.12**	**337**	P	**P**	**12 49 52.8**	**0.0**
	baz=111						
TOLK	**Toolik Lake Re**	**66.14**	**340**	P	**P**	**12 49 53.2**	**+0.4**
	baz=115						
J20K	**Nowinta River**	**66.16**	**335**	IAmb	IAmb	12 50 02.5	
	comp=Z,13nm,1.0s						
J20K	**Nowinta River**	**66.16**	**335**	P	**P**	**12 49 53.1**	**+0.1**
	baz=109						
O17K	**Koliganek Bris**	**66.23**	**330**	P	**P**	**12 49 53.4**	**0.0**
	baz=104						
C24K	**Franklin Bluff**	**66.33**	**341**	P	**P**	**12 49 54.7**	**+0.7**
	baz=117						
N17K	**Nushagak Hills**	**66.46**	**331**	IAmb	IAmb	12 49 56.3	
	comp=Z,31nm,1.1s						
N17K	**Nushagak Hills**	**66.46**	**331**	P	**P**	**12 49 55.5**	**+0.5**
	baz=104						
I20K	**Naaghedeneel**	**66.50**	**335**	P	**P**	**12 49 56.0**	**+1.0**
	baz=109						
CHNA	**Chernabura Isl**	**66.51**	**324**	P	**P**	**12 49 56.3**	**+1.0**
	baz=100						
D23K	**Nanushuk River**	**66.64**	**340**	P	**P**	**12 49 56.6**	**+0.7**
	baz=114						
L18K	**Granite Mounta**	**66.67**	**332**	IAmb	IAmb	12 49 57.2	
	comp=Z,36nm,1.3s						
L18K	**Granite Mounta**	**66.67**	**332**	P	**P**	**12 49 56.8**	**+0.5**
	baz=106						
O16K	**Kokwok River B**	**66.68**	**329**	P	**P**	**12 49 56.7**	**+0.4**
	baz=103						
E22K	**Anaktuvuk Pass**	**66.69**	**339**	P	**P**	**12 49 56.3**	**-0.1**
	baz=113						
G21K	**Allakaket**	**66.70**	**337**	P	**P**	**12 49 57.0**	**+0.6**
	baz=110						
J19K	**Poorman**	**66.72**	**334**	IAmb	IAmb	12 49 56.9	
	comp=Z,19nm,1.0s						
J19K	**Poorman**	**66.72**	**334**	P	**P**	**12 49 56.6**	**+0.1**
	baz=108						
S14K	**Fog Glacier**	**66.75**	**326**	P	**P**	**12 49 56.9**	**-0.2**
	baz=101						
M17K	**Holitna River**	**66.80**	**331**	P	**P**	**12 49 56.8**	**-0.3**
	baz=105						
H20K	**Anotleneega Mo**	**66.88**	**336**	P	**P**	**12 49 57.5**	**-0.1**
	baz=109						
F21K	**Alatna River**	**66.94**	**338**	IAmb	IAmb	12 49 59.5	
	comp=Z,26nm,1.2s						
F21K	**Alatna River**	**66.94**	**338**	P	**P**	**12 49 58.3**	**+0.4**
	baz=111						
C23K	**Itkillik River**	**66.98**	**341**	P	**P**	**12 49 58.6**	**+0.5**
	baz=115						
J18K	**Innoko River**	**67.03**	**334**	P	**P**	**12 49 58.6**	**+0.1**
	baz=106						
SDPT	**Sand Point**	**67.10**	**325**	P	**P**	**12 49 59.0**	**-0.1**
	baz=99						
N16K	**Nishlik Lake**	**67.21**	**330**	P	**P**	**12 49 59.5**	**-0.2**
	baz=103						
D22K	**Ayikyak River**	**67.27**	**340**	P	**P**	**12 49 59.8**	**-0.2**
	baz=112						
L17K	**Donlin**	**67.38**	**332**	P	**P**	**12 50 00.2**	**-0.6**
	baz=104						
M16K	**Timber Creek**	**67.42**	**331**	P	**P**	**12 50 00.7**	**-0.4**
	baz=103						
GCSA	**Galena City Sc**	**67.46**	**335**	P	**P**	**12 50 00.8**	**-0.4**
	baz=107						
H19K	**Roundabout Mou**	**67.51**	**336**	IAmb	IAmb	12 50 02.9	
	comp=Z,22nm,1.1s						
H19K	**Roundabout Mou**	**67.51**	**336**	P	**P**	**12 50 01.6**	**+0.1**
	baz=107						
K17K	**Iditarod**	**67.53**	**333**	P	**P**	**12 50 00.9**	**-0.8**
	baz=104						
E21K	**Killik River**	**67.55**	**339**	P	**P**	**12 50 01.3**	**-0.5**
	baz=111						
F20K	**Avaraart Lake**	**67.71**	**338**	P	**P**	**12 50 02.6**	**-0.1**
	baz=109						
N15K	**Kwethluk River**	**67.79**	**330**	P	**P**	**12 50 03.3**	**-0.1**
	baz=102						
L16K	**Owhat River**	**67.82**	**331**	IAmb	IAmb	12 50 04.9	
	comp=Z,23nm,1.1s						
L16K	**Owhat River**	**67.82**	**331**	P	**P**	**12 50 03.3**	**-0.3**
	baz=103						
G19K	**Purcell Mounta**	**67.95**	**336**	IAmb	IAmb	12 50 05.9	
	comp=Z,21nm,1.4s						
G19K	**Purcell Mounta**	**67.95**	**336**	P	**P**	**12 50 04.3**	**0.0**
	baz=107						
J17K	**VABM Dome**	**68.04**	**333**	P	**P**	**12 50 05.1**	**+0.2**
	baz=104						
S12K	**Black Hills**	**68.05**	**325**	P	**P**	**12 50 05.2**	**+0.1**
	baz=98						
B22K	**Teshekpuk Lake**	**68.06**	**341**	P	**P**	**12 50 05.4**	**+0.5**
	baz=112						
C21K	**Knifeblade Rid**	**68.08**	**340**	P	**P**	**12 50 05.5**	**+0.4**
	baz=110						
H18K	**Honhosa River**	**68.18**	**335**	P	**P**	**12 50 05.9**	**+0.1**
	baz=105						
M15K	**Kasigluk River**	**68.18**	**330**	P	**P**	**12 50 05.9**	**0.0**
	baz=101						
B21K	**Ikpikpuk River**	**68.19**	**340**	P	**P**	**12 50 05.5**	**-0.2**
	baz=111						
E20K	**Nigu River**	**68.26**	**339**	P	**P**	**12 50 06.7**	**+0.4**
	baz=109						
E19K	**Redstone River**	**68.39**	**338**	P	**P**	**12 50 07.1**	**0.0**
	baz=107						
F19K	**Shaleruckik Mo**	**68.41**	**337**	P	**P**	**12 50 07.0**	**-0.2**
	baz=106						
G18K	**Tagagawik**	**68.49**	**336**	IAmb	IAmb	12 50 08.5	
	comp=Z,32nm,1.6s						
G18K	**Tagagawik**	**68.49**	**336**	P	**P**	**12 50 07.9**	**+0.2**
	baz=105						
N14K	**Kuskokwak Cree**	**68.52**	**329**	P	**P**	**12 50 07.7**	**-0.3**
	baz=100						
D20K	**Etivluk River**	**68.56**	**339**	IAmb	IAmb	12 50 09.1	
	comp=Z,14nm,1.1s						
D20K	**Etivluk River**	**68.56**	**339**	P	**P**	**12 50 08.2**	**+0.1**
	baz=108						
J16K	**Anvik River**	**68.68**	**333**	IAmb	IAmb	12 50 10.8	
	comp=Z,21nm,0.9s						
J16K	**Anvik River**	**68.68**	**333**	P	**P**	**12 50 09.1**	**+0.2**
	baz=102						
FALS	**False Pass**	**68.71**	**324**	P	**P**	**12 50 09.6**	**+0.4**
	baz=97						
L15K	**Ungalak Mounta**	**68.75**	**331**	P	**P**	**12 50 09.6**	**+0.2**
	baz=101						
H17K	**Granite Mounta**	**68.76**	**335**	IAmb	IAmb	12 50 11.2	
	comp=Z,18nm,1.3s						
H17K	**Granite Mounta**	**68.76**	**335**	P	**P**	**12 50 09.8**	**+0.4**
	baz=104						
A22K	**Sinclair Lake**	**68.79**	**342**	P	**P**	**12 50 09.5**	**0.0**
	baz=111						
M14K	**Bethel**	**68.81**	**330**	P	**P**	**12 50 10.0**	**+0.3**
	baz=100,SNR=7.1						
I17K	**Unalakleet**	**68.85**	**334**	P	**P**	**12 50 11.0**	**+1.0**
	baz=103						
K15K	**Wolf Creek Mou**	**68.89**	**332**	IAmb	IAmb	12 50 12.3	
	comp=Z,26nm,1.0s						
K15K	**Wolf Creek Mou**	**68.89**	**332**	P	**P**	**12 50 10.9**	**+0.6**
	baz=101						
D19K	**Kuna River**	**69.01**	**339**	P	**P**	**12 50 11.6**	**+0.7**
	baz=107						
F18K	**Selawik**	**69.07**	**337**	P	**P**	**12 50 12.3**	**+1.1**
	baz=105						
B20K	**Meade River**	**69.15**	**340**	P	**P**	**12 50 12.7**	**+1.0**
	baz=108						
G17K	**Kiwalik Mounta**	**69.20**	**335**	P	**P**	**12 50 12.0**	**-0.1**
	baz=103						
L14K	**Kuka Creek**	**69.26**	**331**	P	**P**	**12 50 12.9**	**+0.4**
	baz=100						
A21K	**Barrow**	**69.40**	**342**	P	**P**	**12 50 13.8**	**+0.6**
	baz=109						
M13K	**Dall Lake**	**69.43**	**330**	P	**P**	**12 50 14.2**	**+0.6**
	baz=99						
E18K	**Tukpahlearik C**	**69.63**	**337**	P	**P**	**12 50 15.2**	**+0.5**
	baz=104						
F17K	**Baldwin Pennin**	**69.65**	**336**	P	**P**	**12 50 15.0**	**+0.2**
	baz=103						
H16K	**Elim**	**69.67**	**334**	P	**P**	**12 50 15.2**	**+0.2**
	baz=102						
C19K	**Lookout Ridge**	**69.70**	**339**	P	**P**	**12 50 16.1**	**+0.9**
	baz=106						
G16K	**Koyuk River**	**69.87**	**335**	P	**P**	**12 50 16.7**	**+0.4**
	baz=102						
J14K	**Nanvaranak Lak**	**69.90**	**332**	IAmb	IAmb	12 50 18.7	
	comp=Z,23nm,1.1s						
J14K	**Nanvaranak Lak**	**69.90**	**332**	P	**P**	**12 50 16.7**	**+0.3**
	baz=100						
E17K	**Hotham Inlet**	**70.02**	**337**	P	**P**	**12 50 17.2**	**+0.1**
	baz=103						
C18K	**Utukok River**	**70.14**	**339**	P	**P**	**12 50 18.1**	**+0.2**
	baz=104						
K13K	**Kusilvak Mount**	**70.28**	**331**	P	**P**	**12 50 18.8**	**0.0**
	baz=98						
UNV	**Unalaska Valle**	**70.41**	**323**	P	**P**	**12 50 20.1**	**+0.3**
	baz=94						
A19K	**Wainwright**	**70.49**	**340**	P	**P**	**12 50 19.9**	**0.0**
	baz=105						
G15K	**Niukluk**	**70.49**	**334**	P	**P**	**12 50 20.5**	**+0.4**
	baz=100						
B18K	**Kokolik River**	**70.53**	**339**	P	**P**	**12 50 19.9**	**-0.3**
	baz=104						
D17K	**Noatak River**	**70.62**	**337**	P	**P**	**12 50 21.2**	**+0.4**
	baz=102						
RDOG	**Red Dog Mine**	**70.63**	**338**	P	**P**	**12 50 21.0**	**+0.1**
	baz=102						
C17K	**DeLong Mountai**	**70.82**	**338**	P	**P**	**12 50 22.1**	**+0.1**
	baz=102						
F15K	**North Star Dit**	**70.86**	**335**	IAmb	IAmb	12 50 24.2	
	comp=Z,16nm,1.1s						
F15K	**North Star Dit**	**70.86**	**335**	P	**P**	**12 50 21.9**	**-0.4**
	baz=100						
ANM	**Nome**	**70.99**	**334**	P	**P**	**12 50 22.8**	**-0.3**
	baz=98						
F14K	**Arctic Creek**	**71.52**	**335**	P	**P**	**12 50 26.3**	**+0.1**
	baz=98						
C16K	**Lisburne Hills**	**71.57**	**338**	P	**P**	**12 50 26.6**	**+0.1**
	baz=100						
NIKH	**Nikolski High**	**71.78**	**322**	P	**P**	**12 50 28.2**	**+0.2**
	baz=92						
TNA	**Tin City**	**72.19**	**335**	P	**P**	**12 50 30.7**	**+0.4**
	baz=96						
P08K	**Saint George I**	**72.30**	**325**	P	**P**	**12 50 31.1**	**0.0**
	baz=92						
SPIA	**Saint Paul Isl**	**72.70**	**326**	P	**P**	**12 50 33.2**	**-0.3**
	baz=92						
GAMB	**Gambell**	**73.67**	**333**	P	**P**	**12 50 39.3**	**+0.2**
	baz=92						
DBIC	**Dimbokro**	**85.03**	**84**	P	**P**	**12 51 39.3**	**-2.7**
	comp=Z,2.0nm,0.6s,baz=320,slow=5.3,SNR=1.9						
	comp=Z,2.0nm,0.6s						
DBIC	**Dimbokro**	**85.03**	**84**	IAmb	IAmb	12 51 43.6	
	comp=Z,36nm,1.9s						
ARCES	**ARCESS Array B**	**86.32**	**18**	P	**P**	**12 51 45.0**	**-2.4**
	comp=Z,2.3nm,0.8s,baz=288,slow=6.0,SNR=4.7						
	comp=Z,2.3nm,0.8s						
KEST	**Kesra**	**90.61**	**53**	P	**P**	**12 52 07.5**	**-1.0**
	comp=Z,1.8nm,0.4s,baz=285,slow=1.4,SNR=4.8						
	comp=Z,1.8nm,0.4s						
TIXI	**Tiksi**	**90.80**	**348**	P	**P**	**12 52 05.3**	**-3.2**
	comp=Z,4.3nm,0.6s,baz=62,slow=9.6,SNR=6.1						
TIXI	**Tiksi**	**90.80**	**348**	P	**P**	**12 52 05.0**	**-3.6**
TIXI				IAmb	IAmb	12 52 07.0	
	comp=Z,12nm,1.1s						
KURK	**Kurchatov**	**115.37**	**7**		**PKiKP**	**12 57 47.0**	**-0.4**
KURBB	**Kurchatov Arra**	**115.45**	**7**	PKP	**PKiKP**	**12 57 47.0**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=346,slow=2.1,SNR=5.0						
MKAR	**Makanchi Array**	**119.63**	**5**	PKP	**PKPdf**	**12 57 54.4**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=50,slow=4.5,SNR=3.2						
HHC	**Hu-ho-hao-te**	**121.84**	**340**	*e*P	**PKiKP**	**12 58 01.5**	**+1.0**
WMQ	**Urumqi**	**122.87**	**1**	*e*PKP	**PKPdf**	**12 58 02.3**	**+0.2**
WMQ				LR	LR		
	comp=N,2µm,22.5s						
WMQ				LR	LR		
	comp=E,2µm,22.5s						
WMQ				LR	LR		
	comp=Z,2µm,22.5s						
NJ2	**Nanjing**	**126.20**	**328**	*e*P	**PKiKP**	**12 58 09.9**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
WRA	**Warramunga Arr**	**135.94**	**255**	PKhKP	PKPpre	12 58 23.6	
	comp=Z,0.7nm,0.8s,baz=86,slow=1.7,SNR=1.6						
WRA				PKP	**PKPdf**	**12 58 27.8**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=90,slow=3.2,SNR=5.0						
ASAR	**Alice Springs**	**136.15**	**250**	PKhKP	PKPpre	12 58 24.1	
	comp=Z,0.7nm,0.8s,baz=84,slow=2.4,SNR=2.6						
ASAR				PKP	**PKPdf**	**12 58 28.9**	**+1.1**
	comp=Z,1.4nm,0.8s,baz=77,slow=2.7,SNR=4.9						
PZH	**PanZhiHua**	**138.18**	**342**	PKP	**PKPdf**	**12 58 32.3**	**+0.6**
CHTO	**Chiang Mai**	**146.26**	**342**		**PKPdf**	**12 58 45.9**	**-0.1**
CM31	**Chiang Mai Arr**	**146.59**	**342**	PKPdf	**PKPbc**	**12 58 48.0**	**-0.1**
CMAR	**Chiang Mai Arr**	**146.59**	**342**	PKPbc	**PKPbc**	**12 58 47.8**	**-0.3**
	comp=Z,12nm,0.8s,baz=341,slow=4.1,SNR=13						
HYB	**Hyderabad**	**147.61**	**18**	*e*PKiKP	**PKiKP**	**12 58 53.7**	**+0.6**

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*IDC **19** 12:41:23.4±0.8, 8°.80N×122°.42E, h0^{km}, mb3.9/11, mbtmp3.9/11, MS3.5/3, Error ellipse: s-maj=62.8km s-min=14.8km az=62.0*

*NEIC **19** 12:41:29.1±1.6, 8°.82N±0°.09×122°.4E±0°.1, h33^{km}±5^{km}, mb4.4/16, Error ellipse: s-maj=17.4km s-min=11.4km az=69.0*

ISC 19 12:41:27.5±0.6**, 8°.81N**±0°.08×**122°.4E**±0°.1**, h28^{km}, n35,** σ**0^{s}.81**/32**, mb4.2**/19**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**3.59**	**118**	LR	LR	12 43 58.9	
	comp=Z,810nm,20.6s,baz=174,slow=44						
TGY	**Tagaytay City**	**5.46**	**345**	LR	LR	12 45 18.0	
	comp=Z,281nm,20.1s,baz=121,slow=43						
KKM	**Kota Kinabalu**	**6.71**	**246**	Pn	**Pn**	**12 43 04.0**	**-0.4**
TOLI2	**Tolitoli**	**7.81**	**192**	Pn	**Pn**	**12 43 18.0**	**-1.4**
SBUM	**Sibu**	**11.93**	**239**		**Pn**	**12 44 15.7**	**-0.2**
TPUB	**Ta-pu**	**14.51**	**354**	Pn	**Pn**	**12 44 49.4**	**-1.7**
CM31	**Chiang Mai Arr**	**24.70**	**295**	P	**P**	**12 46 46.1**	**-0.4**
CMAR	**Chiang Mai Arr**	**24.70**	**295**	P	**P**	**12 46 46.6**	**+0.1**
	0.7nm,0.3s,baz=120,slow=7.5,SNR=12						
CMAR				LR	LR	12 56 26.3	
	comp=Z,196nm,18.2s,baz=290,slow=36						
	0.7nm,0.3s						
KNRA	**Kununurra**	**25.13**	**165**	P	**P**	**12 46 50.4**	**+0.1**
KNRA				IAmb	IAmb	12 46 58.5	
	comp=Z,18nm,1.2s						
WB0	**Warramunga Arr**	**30.75**	**157**	P	**P**	**12 47 41.0**	**+0.4**
WB0				IAmb	IAmb	12 48 08.8	
	comp=Z,4.8nm,1.1s						
WRAB	**Tennant Creek**	**30.89**	**158**	P	**P**	**12 47 41.8**	**0.0**
WRAB				IAmb	IAmb	12 47 42.8	
	comp=Z,8.8nm,1.4s						
WRA	**Warramunga Arr**	**30.89**	**158**	P	**P**	**12 47 41.5**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=340,slow=9.1,SNR=13						
	comp=Z,1.2nm,0.7s						
WR8	**Warramunga Arr**	**30.96**	**157**	P	**P**	**12 47 42.9**	**+0.4**
WR8				IAmb	IAmb	12 48 07.1	
	comp=Z,5.5nm,1.1s						
AS31	**Alice Springs**	**34.18**	**161**	P	**P**	**12 48 10.9**	**+0.2**
ASAR	**Alice Springs**	**34.18**	**161**	P	**P**	**12 48 10.9**	**+0.3**
	comp=Z,3.4nm,0.7s,baz=344,slow=7.1,SNR=59						
	comp=Z,3.4nm,0.7s						
PATS	**Pohnpei**	**35.63**	**91**	P	**P**	**12 48 23.9**	**+0.6**
SONM	**Songino Array**	**41.19**	**344**	P	**P**	**12 49 09.5**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=124,slow=4.3,SNR=4.5						
	comp=Z,0.5nm,0.5s						
SONM	**Songino Array**	**41.19**	**344**	IAmb	IAmb	12 49 10.5	
	comp=Z,4.2nm,1.4s						
BBOO	**Buckleboo**	**43.38**	**163**	P	**P**	**12 49 28.9**	**+1.2**
BBOO				IAmb	IAmb	12 49 29.1	
	comp=Z,14nm,1.0s						
STKA	**Stephens Creek**	**44.42**	**156**	P	**P**	**12 49 36.2**	**+0.2**
	comp=Z,5.9nm,0.8s,baz=338,slow=8.1,SNR=10.0						
	comp=Z,5.9nm,0.8s						
STKA	**Stephens Creek**	**44.42**	**156**	P	**P**	**12 49 36.9**	**+0.8**
ARMA	**Armidale**	**48.05**	**145**	P	**P**	**12 50 05.5**	**+0.7**
CAN	**Canberra**	**50.57**	**152**	P	**P**	**12 50 24.2**	**+0.3**
CAN				IAmb	IAmb	12 50 26.0	
	comp=Z,17nm,1.0s						
MKAR	**Makanchi Array**	**50.96**	**325**	P	**P**	**12 50 27.5**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=126,slow=10,SNR=3.7						
MKAR				PcP	**PcP**	**12 51 43.5**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=134,slow=4.2,SNR=1.6						
	comp=Z,0.7nm,0.8s						
ZALV	**Zalesovo Beam**	**54.15**	**334**	P	**P**	**12 50 49.5**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=145,slow=8.1,SNR=3.6						
	comp=Z,0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**55.17**	**327**	P	**P**	**12 50 57.9**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=122,slow=8.8,SNR=6.2						
	comp=Z,0.6nm,0.7s						
KURK	**Kurchatov**	**55.17**	**328**	P	**P**	**12 50 57.9**	**+0.3**
KURK	**Kurchatov**	**55.17**	**328**	IAmb	IAmb	12 51 26.7	
	comp=Z,4.8nm,1.1s						
BVAR	**Borovoye Array**	**60.74**	**327**	P	**P**	**12 51 36.7**	**0.0**
	comp=Z,0.2nm,0.3s,baz=94,slow=5.9,SNR=4.1						
	comp=Z,0.2nm,0.3s						
AB31	**Akbulak array**	**65.52**	**320**	P	**P**	**12 52 07.8**	**-0.6**
AB31				IAmb	IAmb	12 52 22.9	
	comp=Z,2.0nm,1.1s						
ABKAR	**Akbulak array**	**65.52**	**320**	P	**P**	**12 52 08.3**	**-0.1**
BFZ	**Birch Farm**	**69.84**	**139**	P	**P**	**12 52 35.3**	**-0.5**
BRTR	**Keskin Array B**	**83.49**	**309**	P	**P**	**12 53 53.8**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=59,slow=0.9,SNR=6.2						
	comp=Z,1.3nm,0.7s						
ARCES	**ARCESS Array B**	**84.22**	**339**	P	**P**	**12 53 57.9**	**+1.7**
	comp=Z,1.5nm,0.8s,baz=46,slow=3.9,SNR=3.6						
	comp=Z,1.5nm,0.8s						
PLCA	**Paso Flores**	**146.19**	**162**	PKPbc	**PKPab**	**13 01 04.4**	**-1.9**
	comp=Z,1.4nm,0.9s,baz=196,slow=6.0,SNR=3.5						

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*IDC **19** 12:51:19.6±1.2, 80°.03N×122°.73E, h0^{km}, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=54.3km s-min=24.2km az=145.0*

ISC 19 12:51:21.6±1.0**, 79°.9N**±0°.3×**122°.7E**±0°.2**, h10^{km}, n7,** σ**2^{s}.06**/6**, mb3.5**/7**, East of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILAR	Eielson Array	27.28	69	P	P	12 57 05.2	-0.4
	0.5nm,0.9s,baz=332,slow=6.6,SNR=4.0						
	0.5nm,0.9s						
SONM	Songino Array	32.70	200	P	P	12 57 54.2	+0.3
	0.4nm,0.7s,baz=8.9,slow=10,SNR=1.5						
	0.4nm,0.7s						
YKA	Yellowknife Ar	34.16	44	P	P	12 58 08.9	+2.8
	0.2nm,0.7s,baz=342,slow=8.5,SNR=3.8						
KBZ	Khabaz	45.52	270	P	P	12 59 40.5	-0.1
	1.3nm,0.7s,baz=338,slow=6.9,SNR=3.6						
	1.3nm,0.7s						
PDAR	Pinedale Array	54.10	46	P	P	13 00 44.2	-2.1
	0.4nm,0.9s,baz=353,slow=4.2,SNR=1.9						
	0.4nm,0.9s						
NVAR	Mina Array Bea	57.18	55	P	P	13 01 11.9	+3.6
	0.6nm,0.7s,baz=345,slow=4.1,SNR=5.1						
TXAR	Lajitas Array	68.08	43	P	P	13 02 20.4	-0.7
	0.7nm,0.9s,baz=349,slow=7.0,SNR=4.9						
	0.7nm,0.9s						

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*NOU **19** 12:53:48.0, 38°.16S×176°.14E, h212^{km}, ML3.5/9, North Island, New Zealand*
*WEL **19** 12:53:51.6±1.0, 38°S±5°×17°6E±°, h176^{km}±9^{km}, M2.9/29, ML2.0/8, MLv2.9/29, Error ellipse: s-maj=7.7km s-min=6.7km az=117.4, confirmed*
ISC 19 12:53:48.2±2.0, **38°.09S**±0°.06×**176°.15E**±0°.05, **h205**^{km}±12^{km}, **n79**, σ**1$\overset{s}{.}$13**/88, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARZ	Kaharoa	0.10	46	P	Pn	12 54 15.7	+0.5
OMRZ	Omania	0.17	95	P	Pn	12 54 16.0	+0.8
HLRZ	Highlands Stat	0.23	136	P	Pn	12 54 16.5	+1.3
HSRZ	Hossack Road	0.23	162	P	Pn	12 54 16.1	+0.9
TARZ	Mount Tarawera	0.31	118	P	Pn	12 54 16.5	+1.0
TGRZ	Tauranga	0.37	13	P	Pn	12 54 16.2	+0.6
RRRZ	Republican Roa	0.38	131	P	Pn	12 54 16.3	+0.7
OPRZ	Ohinepanea	0.40	52	P	Pn	12 54 16.1	+0.4
MARZ	Manawahe	0.43	76	P	Pn	12 54 16.9	+1.1
WPRZ	Whakapapatarin	0.43	179	P	Pn	12 54 16.5	+0.8
EDRZ	Edgecumbe	0.46	92	P	Pn	12 54 16.5	+0.6
KUTZ	Kaahu Road	0.47	213	P	Pn	12 54 16.7	+0.9
ALRZ	Allen Road	0.49	162	P	Pn	12 54 16.7	+0.8
TLZ	Tolley Road	0.54	244	P	Pn	12 54 17.1	+1.0
TOZ	Tahuroa Road	0.63	305	P	Pn	12 54 17.2	+0.7
MRHZ	Matea Rd	0.77	164	P	Pn	12 54 17.9	+0.7
URZ	Urewera	0.77	103	P	Pn	12 54 17.2	+0.1
URZ	Urewera	0.77	103	P	Pn	12 54 17.4	+0.3
RATZ	Rangitukua	0.83	201	P	Pn	12 54 18.4	+0.9
RTZ	Ruatahuna	0.84	129	P	Pn	12 54 18.3	+0.7
RTZ				S	Sn	12 54 39.6	-0.8
RITZ	Rihia Road	0.92	194	P	Pn	12 54 19.3	+1.3
MTHZ	Maungataniwha	0.93	145	P	Pn	12 54 19.2	+1.0
MTHZ				S	Sn	12 54 39.9	-1.6
NTVZ	North Tongarir	1.07	200	P	Pn	12 54 20.4	+1.3
RAGZ	Rawiri	1.07	113	P	Pn	12 54 20.0	+0.9
RAGZ				S	Sn	12 54 42.4	-0.7
KRVZ	Karewarewa	1.08	202	P	Pn	12 54 20.0	+0.8
TMVZ	Te Maari	1.08	199	P	Pn	12 54 20.1	+0.9
ETVZ	East Tongariro	1.10	198	P	Pn	12 54 20.4	+1.1
RAHZ	Arahi	1.10	139	P	Pn	12 54 20.7	+1.5
RAHZ				S	Sn	12 54 43.1	-0.3
HIZ	Hauiti	1.10	247	P	Pn	12 54 20.1	+0.9
HIZ	Hauiti	1.10	247	S	Sn	12 54 44.5	+1.2
HIZ	Hauiti	1.10	247	P	Pn	12 54 20.3	+1.1
BKZ	Black Stump Fm	1.11	166	P	Pn	12 54 19.9	+0.6
BKZ	Black Stump Fm	1.11	166	P	Pn	12 54 20.1	+0.8
BKZ				S	Sn	12 54 41.7	-1.9
MWZ	Matawai	1.11	103	P	Pn	12 54 20.0	+0.7
MWZ				S	Sn	12 54 42.3	-1.2
WTVZ	West Tongariro	1.11	203	P	Pn	12 54 20.4	+0.9
NNVZ	North Ngauruho	1.12	202	P	Pn	12 54 20.7	+1.2
NMHZ	Naumai	1.13	153	P	Pn	12 54 21.3	+1.8
NMHZ				S	Sn	12 54 43.9	0.0
TWVZ	Taurewa	1.13	210	P	Pn	12 54 20.4	+0.9
OTVZ	Oturere	1.14	199	P	Pn	12 54 20.9	+1.2
SNGZ	Shannon Statio	1.16	127	P	Pn	12 54 21.0	+1.4
SNGZ				S	Sn	12 54 43.6	-0.6
COVZ	Chateau Observ	1.21	203	P	Pn	12 54 20.9	+0.8
RUGZ	Raukumara Rang	1.21	85	P	Pn	12 54 20.0	-0.2
RUGZ				S	Sn	12 54 41.7	-3.2
FWVZ	Far West T-bar	1.25	202	P	Pn	12 54 21.5	+0.9
MKAZ	Moumakai	1.26	321	P	Pn	12 54 21.2	+0.8
WHHZ	Waihua	1.30	140	P	Pn	12 54 22.2	+1.5
HAZ	Te Kaha	1.33	76	P	Pn	12 54 21.0	0.0
ARHZ	Aropaoanui	1.34	151	P	Pn	12 54 22.7	+1.6
KWHZ	Kaweka Forest	1.35	171	P	Pn	12 54 22.2	+1.0
MOVZ	Moawhango	1.35	193	P	Pn	12 54 21.3	+0.1
TKGZ	Te Karaka	1.38	105	P	Pn	12 54 22.7	+1.3
KUZ	Kuaotunu	1.39	346	P	Pn	12 54 21.8	+0.3
KUZ	Kuaotunu	1.39	346	P	Pn	12 54 21.9	+0.5
RIGZ	Rimuhau	1.41	116	P	Pn	12 54 23.2	+1.6
MCHZ	McNeill Hill	1.42	163	P	Pn	12 54 23.4	+1.8
TWGZ	Tauwhareparae	1.44	94	P	Pn	12 54 23.3	+1.3
ETAZ	East Tamaki Re	1.50	319	P	Pn	12 54 23.1	+0.7
VRZ	Vera Road	1.50	226	P	Pn	12 54 24.0	+1.6
KNZ	Kokohu	1.51	128	P	Pn	12 54 23.8	+1.4
KRHZ	Kereru	1.56	174	P	Pn	12 54 24.0	+1.1
PRGZ	Paritu Road	1.59	122	P	Pn	12 54 24.6	+1.4
MBAZ	Motutapu North	1.66	323	P	Pn	12 54 24.6	+0.8
PUZ	Puketiti	1.66	90	P	Pn	12 54 24.6	+0.8
CNGZ	Carnagh Statio	1.66	104	P	Pn	12 54 25.7	+1.8
CKHZ	Cape Kidnapper	1.72	156	P	Pn	12 54 26.0	+1.7
MHGZ	Mahia Peninsul	1.74	128	P	Pn	12 54 26.2	+1.7
MXZ	Matakaoa Point	1.79	73	P	Pn	12 54 26.3	+1.3
MXZ	Matakaoa Point	1.79	73	P	Pn	12 54 26.3	+1.3
KAHZ	Kahuranaki	1.79	162	P	Pn	12 54 26.7	+1.6
WMGZ	Waiomatatini S	1.81	82	P	Pn	12 54 26.2	+1.0
PNHZ	Pukenui	1.82	179	P	Pn	12 54 26.2	+0.8
GRZ	Great Barrier	1.92	343	P	Pn	12 54 27.0	+0.7
WPHZ	Waipukurau	1.98	174	P	Pn	12 54 27.9	+1.0
PXZ	Pawanui	2.02	164	P	Pn	12 54 28.4	+1.1
PRHZ	Porangahau	2.21	170	P	Pn	12 54 30.1	+0.9
BFZ	Birch Farm	2.59	178	P	Pn	12 54 33.6	+0.2
MRZ	Mangatainoka R	2.60	190	P	Pn	12 54 33.6	0.0
OUZ	Omahuta	3.53	324	P	Pn	12 54 45.6	+1.2
KHZ	Kahutara	4.76	204	P	Pn	12 54 58.7	-0.9
ODZ	Otahua Downs	8.08	209	P	Pn	12 55 41.1	-1.3

DJA 19 13:18:55.6±0.4, **9°S**±3°×**12°4E**±°, **h75**^{km}±5^{km}, **M3.9**/13, **mB5.1**/2, **mb4.2**/6, **MLv3.8**/13, **Mw(mB)4.5**/2, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	0.63	163	P	Pn	13 19 11.9	+1.6
SOEI				S	Sn	13 19 24.2	+3.1
BATI	Baumata	1.13	201	P	Pn	13 19 16.9	+0.9
MMRI	Maumere	1.89	286	P	Pn	13 19 25.6	-0.3
EDFI	Ende, Flores	2.39	279	P	Pn	13 19 32.6	-0.2
BASI	Baing, Sumba	3.61	253	P	Pn	13 19 50.0	+0.8
LBFI	Labuhan Bajo,	4.19	279	P	Pn	13 19 57.5	+0.3
WBSI	Waikabubak, Su	4.65	264	P	Pn	13 20 03.1	-0.4
DBNI	Kabupaten Domp	5.74	276	P	Pn	13 20 18.8	+0.5
PLAI	Plampang	6.24	272	P	Pn	13 20 24.4	-0.7
TWSI	Taliwang, Sumb	7.12	273	P	Pn	13 20 36.4	-0.8
	0.1nm517nm17nm,0.9s						
KRAI	Karang Ratu	7.21	37	P	Pn	13 20 39.9	+1.5
MTNI	Mataram	7.83	273	P	Pn	13 20 46.6	-0.3
	9.4nm,0.4s						
SNJI	Sawahan-Nganju	12.26	275	P	Pn	13 21 48.4	+0.9

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*NEIC **19** 13:19:53.4±2.7, 14°.74N±0°.06×93°.90W±0°.04, h35^{km}±2^{km}, mb4.1/14, Md4.2/79(MEX), Error ellipse: s-maj=10.3km s-min=5.0km az=17.0*
*MEX **19** 13:19:54.5±0.4, 14°.77N×93°.92W, h24^{km}±11^{km}, MD4.2*
*GCG **19** 13:19:54.8±0.7, 14°.57N×93°.57W, h0^{km}±10^{km}, MD4.2*
*CATAC **19** 13:19:56.4±0.6, 15°N±3°×9°4W±°, h1^{km}, M5.0/16, mb5.5/3, MLv4.7/16, Error ellipse: s-maj=8.8km s-min=5.2km az=61.9, confirmed*
*IDC **19** 13:19:58.8±1.1, 16°.34N×93°.05W, h0^{km}, mb4.0/12, mbtmp3.9/14, ML3.4/2, Error ellipse: s-maj=34.0km s-min=16.0km az=38.0*
ISC 19 13:19:48.9±0.6, **14°.64N**±0°.04×**93°.95W**±0°.02, **h10**^{km}, **n110**, σ**2$\overset{s}{.}$78**/147, **mb4.1**/14, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		1.27	33		Pg	13 20 12.5	-0.8
PCIG					Sb	13 20 26.1	-3.2
PCIG		1.27	33	i P	Pg	13 20 12.5	-0.8
PCIG				i S	Sb	13 20 26.1	-3.2
THIG		1.65	81		Pg	13 20 19.1	-1.4
THIG					Sn	13 20 37.9	-1.2
THIG		1.65	81	i P	Pg	13 20 19.1	-1.4
THIG				i S	Sn	13 20 37.9	-1.2
PATR	El Naranjo	1.72	74		Pb	13 20 19.6	-1.1
PATR					Sn	13 20 36.2	-5.1
PATR	El Naranjo	1.72	74	i P	Pb	13 20 19.6	-1.1
PATR				i S	Sn	13 20 36.2	-5.1
PAVE	Pavencul	1.79	72		Pb	13 20 20.9	-1.1
PAVE					Sn	13 20 37.9	-5.2
PAVE	Pavencul	1.79	72	i P	Pb	13 20 20.9	-1.1
PAVE				i S	Sn	13 20 37.9	-5.2
SMCA	Catarina	1.82	83	i P	Pb	13 20 21.5	-0.8
SMCA				i S	Sb	13 20 43.6	-1.6
CHUJ	Union Juarez	1.83	76	eP	Pb	13 20 21.4	-1.2
CHUJ				i S	Sn	13 20 39.1	-5.0
RTAL	Retalhuleu	2.18	93		Pb	13 20 25.8	-2.6
RTAL				Sn	Sb	13 20 53.2	-2.3
RTAL	Retalhuleu	2.18	93	eP	Pb	13 20 27.0	-1.4
RTAL				eS	Sn	13 20 52.2	-0.1
RTAL	Retalhuleu	2.18	93	S	Sn	13 20 51.5	-0.8
RTAL	Retalhuleu	2.18	93	P	Pb	13 20 27.2	-1.2
TGIG		2.27	20		Pb	13 20 28.3	-1.7
TGIG					Sn	13 20 53.2	-1.4
TGIG		2.27	20	eP	Pb	13 20 28.3	-1.7
TGIG				i S	Sn	13 20 53.2	-1.4
TGBT	Tuxtla Gutierr	2.28	21		Pb	13 20 28.5	-1.6
TGBT					Sn	13 20 53.5	-1.2
TGBT	Tuxtla Gutierr	2.28	21	i P	Pb	13 20 28.5	-1.6
TGBT				i S	Sn	13 20 53.5	-1.2
QUEO	Labor Ovalle	2.36	84	i P	Pb	13 20 30.7	-1.1
QUEO				i S	Sb	13 20 58.2	-2.9
HUIG	Huatulco	2.37	298		Pn	13 20 29.1	+1.3
HUIG					Sn	13 20 54.8	-2.2
HUIG	Huatulco	2.37	298	eP	Pn	13 20 29.1	+1.3
HUIG				i S	Sn	13 20 54.8	-2.2
CCIG	Comitan	2.39	47		Pb	13 20 31.3	-0.8
CCIG					Sb	13 20 59.1	-2.5
CCIG	Comitan	2.39	47	eP	Pb	13 20 31.3	-0.8
CCIG				i S	Sb	13 20 59.1	-2.5
HUEH	Huehuetenango	2.45	74		Pb	13 20 31.5	-1.7
HUEH	Huehuetenango	2.45	74	i P	Pb	13 20 32.4	-0.8
HUEH				i S	Sb	13 21 01.9	-1.8
HUEH	Huehuetenango	2.45	74	i P	Pb	13 20 32.4	-0.8
HUEH	Huehuetenango	2.45	74	P	Pb	13 20 32.4	-0.8
HUEH	Huehuetenango	2.45	74	S	Sn	13 20 58.0	-1.4
SOKI	Kika Raxquin	2.46	86	i P	Pb	13 20 32.5	-1.1
STG2	El Palmar, Qui	2.50	94	i P	Pn	13 20 27.8	-1.9
STG2				i S	Sn	13 20 53.9	-6.4
STG8	El Palmar, Qui	2.52	94	i P	Pn	13 20 28.1	-2.0
STG8				i S	Sn	13 20 54.4	-6.6
CMIG	Matias Romero	2.60	340	Pn	Pn	13 20 31.9	+0.9
	25nm,0.3s,baz=172,slow=13,SNR=73						
CMIG				Sn	Sn	13 20 58.5	-4.1
	93nm,0.3s,baz=139,slow=14,SNR=12						
CMIG	Matias Romero	2.60	340		Pn	13 20 31.7	+0.8
CMIG					Sn	13 21 00.1	-2.5
CMIG	Matias Romero	2.60	340	i P	Pn	13 20 31.7	+0.8
CMIG				eS	Sn	13 21 00.1	-2.5
UXUV	UXUV	2.67	356		Pb	13 20 34.2	-2.6
UXUV					Sn	13 21 04.8	+0.4
UXUV	UXUV	2.67	356	eP	Pb	13 20 34.2	-2.6
UXUV				i S	Sn	13 21 04.8	+0.4
PEIG	Puerto Escondi	3.37	294	eP	Pn	13 20 44.2	+2.6
PEIG				i S	Sn	13 21 22.2	+0.5
APG	El Apazote	3.38	83	Pn	Pb	13 20 45.2	-3.9
	2.1nm,0.3s,baz=221,slow=18,SNR=23						
APG				Sn	Sn	13 21 22.1	-0.3
	1.1nm,0.3s,baz=228,slow=20,SNR=2.1						
	11nm,0.5s						
NEUV	Arroyo Zacate	3.54	330	eP	Pn	13 20 44.3	+0.4
NEUV				i S	Sn	13 21 24.9	-0.9
VHO	Vista Hermosa	3.61	312	eP	Pb	13 20 50.3	-2.7
VHO				eS	Sn	13 21 30.4	+2.5
FAME	Alcaldia de Sa	3.89	101	S	Sn	13 21 35.3	+0.7
FAME	Alcaldia de Sa	3.89	101	P	Pn	13 20 51.6	+2.8
PMUV	Sontecomapan	4.04	344		Pn	13 20 50.6	-0.3
PMUV					Sn	13 21 33.9	-4.5
PMUV	Sontecomapan	4.04	344	eP	Pn	13 20 50.6	-0.3
PMUV				i S	Sn	13 21 33.9	-4.5
NUBE	Las Nubes	4.11	100	P	Pn	13 20 55.0	+3.2
NUBE	Las Nubes	4.11	100	S	Sn	13 21 40.4	+0.3
YOIG	Yosondua	4.11	303	eP	Pn	13 20 55.2	+3.2
YOIG				i S	Sn	13 21 33.9	-6.4
PNIG	Pinotepa	4.39	294	eP	Pn	13 20 58.9	+3.2
PNIG				i S	Sn	13 21 43.2	-3.7
MTO3	Montecristo	4.45	93		Pn	13 20 57.0	+0.4
MTO3	Montecristo	4.45	93	P	Pn	13 20 59.5	+2.9
ESQI	Esquipulas	4.46	90	P	Pn	13 21 00.3	+3.7
TXIG	Tlaxiaco	4.50	306	eP	Pb	13 21 02.5	-5.7
TXIG				i S	Sb	13 21 55.9	-6.8
PETF	Flores	4.53	60		Pn	13 20 57.1	-0.4
PETF	Flores	4.53	60		Sn	13 21 48.6	-1.8
PETF	Flores	4.53	60	eP	Pn	13 20 59.3	+1.7
PETF				i S	Sn	13 21 48.6	-1.8
PETF	Flores	4.53	60	i P	Pn	13 21 01.0	+3.5
PETF	Flores	4.53	60	P	Pn	13 21 00.7	+3.2
TOIG	Toxpalan	4.56	319	eP	Pn	13 21 02.3	+4.3
TOIG				i S	Sn	13 21 54.8	+3.6
PMON	Piamonte	4.58	101	P	Pn	13 21 02.6	+4.1
LALI	Alcalda de L	4.63	104	P	Pn	13 21 02.9	+3.9
HLIG	Huajuapan de L	4.88	311	eP	Pb	13 21 08.5	-6.1
HLIG				i S	Sb	13 22 08.7	-4.8
PAVA	Las Pavas	4.94	100	P	Pn	13 21 06.9	+3.5
TPIG	Tehuac#an	4.98	319	eP	Pn	13 21 06.5	+2.6
TPIG				i S	Sb	13 22 12.8	-3.7
SCIG	Sabancuy	5.05	31	eP	Pn	13 21 08.1	+3.4
SCIG				i S	Sn	13 22 02.6	-0.4
SCIG	Sabancuy	5.05	31	P	Pn	13 21 07.6	+3.0
FTIG	Fresnillo de T	5.17	309	eP	Pn	13 21 11.3	+4.9
FTIG				eS	Sn	13 22 06.5	+0.2
MGIG	Malinaltepec	5.19	300	eP	Pn	13 21 11.4	+4.6
MGIG				i S	Sn	13 22 01.7	-5.3
TLIG	Tlapa	5.31	304	eP	Pn	13 21 12.1	+3.7
TLIG				i S	Sn	13 22 15.9	+6.2
CRIG	Cruz Grande	5.41	293	eP	Pn	13 21 12.1	+2.4
CRIG				i S	Sn	13 22 07.0	-5.0
JAUV	Jalcomulco	5.43	330		Pn	13 21 09.4	-0.7
JAUV	Jalcomulco	5.43	330	eP	Pn	13 21 09.4	-0.7
JAUV				eS	Sn	13 22 06.3	-6.5
CNCH	Conchagua	6.09	102	P	Pn	13 21 23.3	+4.2
PPCL	Tochimilco	6.17	314	eP	Pb	13 21 29.7	-6.9
PPCL				i S	Sn	13 22 36.7	+5.6
PPPT	Popocatepetl	6.21	315	eP	Pb	13 21 29.2	-8.3
PPPT				i S	Sb	13 22 43.3	-8.9
PPM	Popocatepetl	6.28	315	eP	Pb	13 21 31.8	-6.8
PPM				i S	Sn	13 22 38.5	+4.3
CXUV	Coxquihui	6.51	328		Pn	13 21 25.9	+1.2
CXUV					Sn	13 22 38.7	-0.5
CXUV	Coxquihui	6.51	328	eP	Pn	13 21 25.9	+1.2
CXUV				i S	Sn	13 22 38.7	-0.5
YUSH	Yuscaran	6.92	95	P	Pn	13 21 35.3	+4.8
CNGN	Cerro Negro	7.36	106		Pn	13 21 39.4	+2.9
CNGN	Cerro Negro	7.36	106	P	Pn	13 21 40.6	+4.1
TEIG	Tepich	7.75	43		Pn	13 21 42.1	+0.3
TEIG	Tepich	7.75	43	P	Pn	13 21 42.8	+1.0
JTS	Las Juntas de	9.79	115	Pn	Pn	13 22 17.3	+7.4
	1.3nm,0.3s,baz=328,slow=9.3,SNR=3.7						
JTS				Sn	Sn	13 24 13.0	+13
	1.1nm,0.3s,baz=262,slow=22,SNR=2.3						
HNDO	Hondo	15.61	342		Pn	13 23 29.4	+0.2
HNDO				IAmb	IAmb	13 23 38.4	
	comp=Z,11nm,0.7s						
SAND	Sanderson	17.00	335		P	13 23 47.9	-0.9
TXAR	Lajitas Array	17.16	330	Pn	P	13 23 52.1	+1.5
	comp=Z,0.1nm,0.3s,baz=143,slow=13,SNR=11						
	comp=Z,1.1nm,0.8s						
BRDY	Brady	17.20	345		P	13 23 50.1	-0.8
BRDY				IAmb	IAmb	13 24 16.0	
	comp=Z,4.6nm,0.7s						
PLPT	Palo Pinto	18.52	348	P	Pn	13 24 05.6	-0.1
PLPT				IAmb	IAmb	13 24 19.6	
	comp=Z,8.2nm,0.7s						
PECS	Pecos	18.97	333	P	Pn	13 24 13.2	+2.0
VHRN	Van Horn	19.00	330		Pn	13 24 14.0	+2.3
APMT	Aspermont	19.43	344		Pn	13 24 17.6	+0.9
APMT				IAmb	IAmb	13 24 20.8	
	comp=Z,6.7nm,0.8s						
POST	Post	19.59	341	P	Pn	13 24 18.0	-0.6
POST				IAmb	IAmb	13 24 21.7	
	comp=Z,9.8nm,0.8s						
MIAR	Mount Ida	19.82	1	P	Pn	13 24 20.0	-1.2
MIAR				IAmb	IAmb	13 24 26.7	
	comp=Z,5.6nm,0.7s						
PH02	Texas Public H	21.88	342	P	P	13 24 41.8	-0.3
PH02				IAmb	IAmb	13 24 50.0	
	comp=Z,12nm,0.7s						
RTBA	Rita Blanca	23.09	342		P	13 24 55.8	+0.9
ANMO	Albuquerque	23.15	333	P	P	13 24 59.1	+3.4
	comp=Z,0.5nm,0.5s,baz=135,slow=4.3,SNR=2.6						
ECSD	EROS Data Cent	29.08	356	P	P	13 25 49.0	-0.6
PDAR	Pinedale Array	31.08	337	P	P	13 26 08.3	+0.8
	comp=Z,0.2nm,0.5s,baz=142,slow=6.8,SNR=3.0						
	comp=Z,0.2nm,0.5s						
ELK	Elko	31.95	329	P	P	13 26 18.5	+3.3
	comp=Z,0.5nm,0.6s,baz=168,slow=12,SNR=3.7						
	comp=Z,0.5nm,0.6s						
NVAR	Mina Array Bea	32.00	322	P	P	13 26 20.3	+4.6
	comp=Z,1.6nm,0.8s,baz=135,slow=8.9,SNR=14						
	comp=Z,1.6nm,0.8s						
ULM	Lac du Bonnet	35.55	358	P	P	13 26 43.5	-2.6
	comp=Z,1.1nm,0.4s,baz=176,slow=6.6,SNR=3.0						
	comp=Z,1.1nm,0.4s						
PB09	IPOC Station P	43.57	146	P	P	13 27 54.6	+1.1
PB09				IAmb	IAmb	13 28 07.0	
	comp=Z,3.8nm,0.9s						
YKA	Yellowknife Ar	49.98	348	P	P	13 28 44.5	+1.5
	comp=Z,1.4nm,0.8s,baz=160,slow=6.8,SNR=26						
	comp=Z,1.4nm,0.8s						
PLCA	Paso Flores	59.22	159	P	P	13 30 11.6	+21
	comp=Z,0.5nm,0.4s,baz=349,slow=6.9,SNR=3.2						
	comp=Z,0.5nm,0.4s						
INK	Inuvik	59.30	344	P	P	13 29 52.4	+1.9
	comp=Z,1.7nm,0.8s,baz=117,slow=4.9,SNR=4.6						
	comp=Z,1.7nm,0.8s						
RES	Resolute Bay	60.04	360	P	P	13 29 56.5	+1.0
	comp=Z,1.1nm,0.7s,baz=192,slow=7.4,SNR=5.9						
	comp=Z,1.1nm,0.7s						
ILAR	Eielson Array	61.51	337	P	P	13 30 07.8	+2.1
	comp=Z,0.8nm,0.7s,baz=131,slow=6.2,SNR=14						
	comp=Z,0.8nm,0.7s						
NOA	NORSAR Array B	84.48	28	P	P	13 32 23.9	+2.0
	comp=Z,1.2nm,0.7s,baz=291,slow=5.0,SNR=5.3						
	comp=Z,1.2nm,0.7s						
ARCES	ARCESS Array B	86.11	18	P	P	13 32 31.1	+1.3
	comp=Z,6.2nm,1.1s,baz=330,slow=4.2,SNR=7.5						
	comp=Z,6.2nm,1.1s						
FINES	FINESS Array B	90.71	25	P	P	13 32 53.0	+1.2
	comp=Z,2.4nm,0.9s,baz=245,slow=3.6,SNR=3.4						
	comp=Z,2.4nm,0.9s						

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*IDC **19** 13:36:50.7±2.9, 4°.38S×134°.15E, h0^{km}, mb3.6/2, mbtmp3.7/5, ML3.6/3, Error ellipse: s-maj=128.8km s-min=27.0km az=83.0*
*DJA **19** 13:36:53.7±1.3, 4°S±4°×13°4E±°, h16^{km}±11^{km}, M4.3/10, mb4.6/5, MLv4.2/10*
ISC 19 13:36:51.7±1.1, **4°.42S**±0°.08×**134°.39E**±0°.09, **h22**^{km}, **n12**, σ**2$\overset{s}{.}$71**/13, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMPI	Kaimana, Papua	1.02	318	P	Pb	13 37 08.9	-1.7
FAKI	Fak Fak	2.60	305	P	Pn	13 37 32.3	-0.2
MWPI	Manokwari, Pap	3.48	354	P	Pn	13 37 44.3	-0.3
BAKI	Biak	3.64	28	P	Pn	13 37 46.4	-0.3
BNDI	Bandanaira	4.47	269	P	Pn	13 37 59.4	+1.2
MSAI	Masohi	5.55	281	P	Pn	13 38 14.7	+1.7
KRAI	Karang Ratu	6.08	280	P	Pn	13 38 20.9	+0.6
WRA	Warramunga Arr	15.43	180	Pn	Pn	13 40 28.3	+0.2
	0.1nm,0.3s,baz=355,slow=13,SNR=1.8						
	0.3nm,0.5s						
FITZ	Fitzroy Crossi	16.06	212	Pn	Pn	13 40 37.2	+0.9
	0.5nm,0.3s,baz=40,slow=13,SNR=12						
FITZ				Sn	Sn	13 43 26.6	-7.4
	0.2nm,0.3s,baz=118,slow=17,SNR=1.7						
	1.2nm,0.3s						
ASAR	Alice Springs	19.14	181	P	Pn	13 41 16.9	+2.4
	0.3nm,0.3s,baz=4.7,slow=11,SNR=27						
	1.9nm,0.6s						
MKAR	Makanchi Array	68.58	324	P	P	13 47 54.5	+1.6
	0.3nm,0.5s,baz=124,slow=8.2,SNR=4.7						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	72.70	326	P	P	13 48 19.3	+1.4
	0.4nm,0.5s,baz=124,slow=5.1,SNR=1.6						
	0.4nm,0.5s						

IDC 19 13:42:05.3±2.6, **22°.28N**×**145°.29E**, **h0**^{km}, **mb3.9**/5, **mbtmp3.9**/5, **MS3.9**/4, **Error ellipse: s-maj=203.3km s-min=23.8km az=121.0**, **North Pacific Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	Korea Array	21.29	319	LR	LR	13 54 17.8	
	comp=Z,227nm,21.8s,baz=15,slow=34						
WRA	Warramunga Arr	43.31	195	P	P	13 50 09.2	0.0
	1.8nm,0.8s,baz=17,slow=8.7,SNR=6.2						
	1.8nm,0.8s						
FITZ	Fitzroy Crossi	44.50	207	P	P	13 50 18.7	-0.1
	2.3nm,0.8s,baz=27,slow=12,SNR=7.1						
	2.3nm,0.8s						
ASAR	Alice Springs	47.00	194	P	P	13 50 38.1	-0.3
	0.5nm,0.7s,baz=17,slow=8.2,SNR=11						
	0.5nm,0.7s						
KDAK	Kodiak Island	56.61	35	LR	LR	14 10 46.5	
	comp=Z,71nm,21.8s,baz=331,slow=30						
NVAR	Mina Array Bea	81.25	52	P	P	13 54 24.3	+0.5
	1.0nm,0.7s,baz=270,slow=6.0,SNR=10						
	1.0nm,0.7s						
PDAR	Pinedale Array	85.59	45	P	P	13 54 45.5	-0.7
	0.3nm,0.6s,baz=270,slow=3.0,SNR=3.8						
	0.3nm,0.6s						
FRB	Frobisher Bay	90.26	14	LR	LR	14 41 40.5	
	comp=Z,50nm,18.5s,baz=104,slow=40						
MMAI	Mount Meron Ar	93.46	308	LR	LR	14 42 57.9	
	comp=Z,164nm,18.1s,baz=115,slow=39						

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*JMA **19** 13:43:42.3±0.3, 28°N±1°×14°0E±°, h490^{km}±4^{km}, MV4.0/26, W OFF OGASAWARA*
*IDC **19** 13:43:43.3±1.2, 28°.27N×139°.66E, h488^{km}±13^{km}, mb3.5/23, mbtmp4.3/29, Error ellipse: s-maj=13.2km s-min=9.4km az=92.0*
ISC 19 13:43:42.9±0.6, **28°.25N**±0°.07×**139°.91E**±0°.09, **h500**^{km}, **n42**, σ**1$\overset{s}{.}$71**/49, **mb3.8**/23, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.32	119	P	P	13 44 47.7	-2.1
CBIJ				eS	S	13 45 39.4	-4.6
JCJ	Chichijima	2.32	119	P	P	13 44 36.2	-14
	382nm,0.3s,baz=292,slow=23,SNR=77						
JCJ				S	S	13 45 28.4	-16
	1μm,0.4s,baz=319,slow=22,SNR=33						
JHH2	Haha-jima-NKT2	2.58	128	eP	P	13 44 49.7	-1.6
JHH2				eS	S	13 45 43.1	-3.6
JHJ2	Mitsune	4.85	359	eP	P	13 45 07.5	-0.9
JHJ	Hachijo jima 2	4.86	359	P	P	13 45 07.3	-1.2
	84nm,0.7s,baz=121,slow=22,SNR=6.5						
BSO1	Boso 1	6.45	8	eP	P	13 45 22.4	-0.5
BSO1				eS	S	13 46 42.7	-2.3
BSO3	Boso 3	6.55	4	eP	P	13 45 23.5	-0.7
BSO3				eS	S	13 46 43.9	-3.4
JIE	Ise	6.71	337	P	P	13 45 26.0	0.0
JIE				S	S	13 46 47.8	-2.8
JKN2	Miekihoku	6.74	333	P	P	13 45 26.2	-0.1
JEG	Eigenji	7.49	337	eP	P	13 45 34.7	+0.7
JAG	Ashikaga	8.16	357	P	P	13 45 38.4	-2.4
JHO	Hitachi	8.36	4	eP	P	13 45 41.8	-1.1
JHO				eS	S	13 47 17.1	-4.3
MJAR	Matsushiro Arr	8.39	351	P	P	13 45 41.3	-2.0
	1.5nm,0.4s,baz=132,slow=28,SNR=8.3						
JNU	Nakatsue	9.17	304	P	P	13 45 49.4	-2.1
	7.8nm,0.7s,baz=2.5,slow=11,SNR=6.3						
JOW	Kunigami	10.42	265	P	P	13 46 03.6	-1.2
	13nm,0.5s,baz=119,slow=21,SNR=5.2						
KSRS	Korea Array	13.62	315	P	P	13 46 36.1	-2.4
	2.0nm,0.5s,baz=122,slow=11,SNR=10						
JOSM	Okushiri--Mats	13.81	359	P	P	13 46 40.9	+0.5

ASAJ	Asahikawa	15.98	7	P	P	13 47 04.3	+1.2
	11nm,1.1s,baz=222,slow=14,SNR=5.5						
HILR	Hailar Array B	26.28	330	P	P	13 48 37.7	+0.2
	1.6nm,0.3s,baz=131,slow=8.2,SNR=4.9						
	1.6nm,0.3s						
PETK	Petropavlovsk-	28.11	23	P	P	13 48 55.5	+2.0
	6.9nm,1.0s,baz=206,slow=7.6,SNR=5.1						
	6.9nm,1.0s						
LZDM	Lanzhou Array	31.49	293	P	P	13 49 23.3	-0.2
	3.1nm,0.3s,baz=108,slow=4.8,SNR=3.6						
	3.1nm,0.3s						
SONM	Songino Array	32.49	316	P	P	13 49 31.6	0.0
	2.1nm,0.4s,baz=132,slow=9.2,SNR=16						
	2.1nm,0.4s						
CMAR	Chiang Mai Arr	38.70	265	P	P	13 50 22.1	-1.3
	1.1nm,0.8s,baz=49,slow=10.0,SNR=10						
	1.1nm,0.8s						
ZALV	Zalesovo Beam	47.30	319	P	P	13 51 30.1	-0.2
	0.8nm,0.3s,baz=93,slow=8.9,SNR=8.1						
ZALV				PcP	PcP	13 52 50.7	-0.9
	0.8nm,0.3s,baz=106,slow=2.4,SNR=4.3						
	0.8nm,0.3s						
FITZ	Fitzroy Crossi	48.10	198	P	P	13 51 38.1	+1.4
	2.8nm,0.8s,baz=9.2,slow=10.0,SNR=9.2						
	2.8nm,0.8s						
MKAR	Makanchi Array	48.19	309	P	P	13 51 37.0	-0.2
	2.6nm,0.5s,baz=88,slow=10,SNR=26						
MKAR				PcP	PcP	13 52 55.0	0.0
	1.1nm,0.7s,baz=94,slow=4.9,SNR=4.2						
MKAR				ScP	ScP	13 56 02.2	+0.7
	0.7nm,0.7s,baz=74,slow=4.3,SNR=4.5						
	2.6nm,0.5s						
WRA	Warramunga Arr	48.21	187	P	P	13 51 38.6	+1.0
	4.0nm,0.5s,baz=14,slow=7.4,SNR=48						
	4.0nm,0.5s						
KURBB	Kurchatov Arra	50.79	314	P	P	13 51 56.3	0.0
	6.4nm,0.6s,baz=92,slow=7.7,SNR=48						
	6.4nm,0.6s						
NRIK	Noril'sk	50.85	339	P	P	13 51 57.3	+0.9
	1.4nm,0.3s,baz=100,slow=14,SNR=4.2						
	1.4nm,0.3s						
ASAR	Alice Springs	51.94	187	P	P	13 52 06.0	+1.0
	1.9nm,0.3s,baz=1.2,slow=6.2,SNR=86						
	1.9nm,0.3s						
BVAR	Borovoye Array	55.83	317	P	P	13 52 32.6	+0.4
	7.1nm,0.4s,baz=93,slow=7.5,SNR=43						
	7.1nm,0.4s						
ILAR	Eielson Array	57.68	29	P	P	13 52 46.1	+1.4
	1.1nm,0.7s,baz=247,slow=5.9,SNR=22						
	1.1nm,0.7s						
ARCES	ARCESS Array B	71.79	340	P	P	13 54 14.9	+1.0
	1.8nm,0.6s,baz=64,slow=8.2,SNR=14						
	1.8nm,0.6s						
YKA	Yellowknife Ar	72.08	28	P	P	13 54 17.7	+2.0
	0.5nm,0.5s,baz=309,slow=10,SNR=12						
	0.5nm,0.5s						
KBZ	Khabaz	75.75	312	P	P	13 54 38.0	+1.1
	5.0nm,0.7s,baz=93,slow=5.6,SNR=16						
	5.0nm,0.7s						
FINES	FINESS Array B	76.02	333	P	P	13 54 38.7	+0.7
	3.4nm,0.4s,baz=68,slow=4.9,SNR=29						
	3.4nm,0.4s						
AKASG	Malin Array Be	80.49	323	P	P	13 55 02.9	+0.6
	0.7nm,0.4s,baz=46,slow=7.2,SNR=4.4						
	0.7nm,0.4s						
NVAR	Mina Array Bea	81.38	51	P	P	13 55 10.9	+3.5
	0.7nm,0.6s,baz=296,slow=5.9,SNR=6.1						
	0.7nm,0.6s						
HFS	Hagfors	81.56	336	P	P	13 55 07.8	+0.2
	1.4nm,0.3s,baz=117,slow=2.0,SNR=16						
	1.4nm,0.3s						
NB2	NORSAR Subarra	81.79	337	P	P	13 55 09.2	+0.3
	comp=Z,1.1nm,0.4s,baz=43,slow=5.1						
NOA	NORSAR Array B	81.79	337	P	P	13 55 09.1	+0.3
	comp=Z,1.5nm,0.6s,baz=45,slow=4.4,SNR=5.6						
	comp=Z,1.5nm,0.6s						
BRTR	Keskin Array B	83.74	312	P	P	13 55 18.6	-0.6
	comp=Z,0.8nm,0.6s,baz=92,slow=3.1,SNR=4.5						
	comp=Z,0.8nm,0.6s						

IDC 19 13:50:07.4±2.2**, 6°.50S**×**130°.46E, h0^{km}, mb3.9**/1**, mbtmp4.0**/3**, ML4.4**/2**, Error ellipse: s-maj=134.5km s-min=30.5km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.88	165	Pn	Pn	13 53 24.9	-0.6
	2.1nm,0.3s,baz=344,slow=9.2,SNR=27						
WRA				Sn	Sn	13 55 47.4	-13
	2.9nm,0.3s,baz=341,slow=23,SNR=15						
	1.6nm,0.5s						
ASAR	Alice Springs	17.39	169	P	Pn	13 54 12.1	+0.5
	1.3nm,0.3s,baz=344,slow=9.9,SNR=74						
ASAR				S	Sn	13 57 10.0	-16
	1.3nm,0.7s,baz=353,slow=29,SNR=4.6						
	2.0nm,0.4s						
MKAR	Makanchi Array	68.06	326	P	P	14 01 08.9	0.0
	0.4nm,0.3s,baz=120,slow=7.4,SNR=14						
	0.4nm,0.3s						

BEO ***19*** *13:53:01.8±0.4, 41°.49N×19°.57E, h10^{km}±2^{km}, ML3.1/18*
TIR ***19*** *13:53:01.5, 41°.62N×19°.63E, h33^{km}, Md3.0/5, Ml3.0/6*
SKO ***19*** *13:53:01.1, 41°.54N×19°.42E, h13^{km}, ML2.8*
PDG ***19*** *13:53:03.4±0.1, 41°.65N×19°.61E, h10^{km}, MD3.2/4, ML3.1/13, Error ellipse: s-maj=0.2km s-min=0.2km az=0.0*
ISC 19 13:53:01.8±1.1**, 41°.56N**±0°.02×**19°.56E**±0°.02**, h8^{km}**±9^{km}**, n87, σ0^{s}.94**/127**, 9C-5D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.32	133	Pg	Pg	13 53 06.6	-1.4
TIR				Sg	Sg	13 53 11.6	-0.5
TIR				AML	AML	13 53 13.2	
	3.4nm,0.1s						
TIR	Tirane	0.32	133	*i* Pg	Pg	13 53 08.1	+0.1
ULC	Ulcinj	0.46	329	*e*Pg	Pg	13 53 11.0	+0.2
ULC				*i* Sg	Sb	13 53 18.1	-1.3
SDA	Shkodra	0.49	355	Pg	Pg	13 53 11.3	0.0
SDA				Sg	Sb	13 53 18.4	-1.6
SDA				AMd		13 54 01.0	
PHP	Peshkopia	0.67	79	Pg	Pg	13 53 13.6	-1.1
PHP				Sg	Sg	13 53 22.6	-0.9
PHP				AML	AML	13 53 32.0	
	3.2nm,0.4s						
PHP				AMd		13 54 06.1	
DRME	Dracevica, Mon	0.68	336	*e*Pg	Pg	13 53 14.6	-0.4
DRME				*e*Sg	Sn	13 53 28.4	-0.3
DRME	Dracevica, Mon	0.68	336	*e*Pg	Pg	13 53 15.2	+0.2
DRME				*e*Sg	Sb	13 53 25.0	-0.6
BUM	Brajici-Budva	0.89	326	*e*Pg	Pg	13 53 19.1	+0.2
BUM				*i* Sg	Sn	13 53 32.4	-1.5
PDG	Podgorica	0.90	345	Pg	Pg	13 53 18.2	-0.8
PDG				Sg	Sb	13 53 30.7	-1.1
PDG				AMd		13 54 19.5	
PDG	Podgorica	0.90	345	⇑P	Pg	13 53 18.9	-0.1
PDG				⇓S	Sn	13 53 34.4	+0.5
PDG	Podgorica	0.90	345	*e*Pg	Pg	13 53 18.9	-0.1
PDG				*e*Sg	Sn	13 53 34.2	+0.3
PDG	Podgorica	0.90	345	*e*Pg	Pg	13 53 18.8	-0.2
PDG				*i* Sg	Sn	13 53 31.8	-2.1
OHR	Ohrid	1.04	115	*i* Pg	Pb	13 53 21.0	-1.1
OHR				*i* Sg	Sb	13 53 37.4	+1.6
OHR				*e*Lg	Lg	13 53 38.9	
	comp=N,266nm,0.8s						
OHR				*e*Lg	Lg	13 53 40.1	
	comp=E,190nm,0.7s						
PVY	Plav	1.07	16	*e*Pg	Pb	13 53 21.6	-1.1
PVY	Plav	1.07	16	*e*Pg	Pb	13 53 21.6	-1.1
PVY				*i* Sg	Sn	13 53 37.2	-1.3
CEME	Cevo	1.09	334	*e*Pg	Pb	13 53 22.6	-0.4
CEME				*e*Sg	Sn	13 53 39.1	+0.2
VLO	Vlora	1.10	183	Pg	Pb	13 53 22.6	-0.4
VLO				Sg	Sb	13 53 38.4	+1.0
VLO				AML	AML	13 53 44.5	
	comp=E,4.9nm,0.4s						
VLO				AMd		13 54 29.9	
HCY	Herceg Novi	1.19	318	*e*Pg	Pg	13 53 24.7	+0.1
HCY				*i* Sg	Sn	13 53 43.0	+1.8
NKME	Niksic	1.28	340	*e*Pg	Pb	13 53 26.1	-0.2
NKME				*e*Sg	Sg	13 53 45.2	+2.1
KOME	Kolasin	1.29	359	*e*Pg	Pb	13 53 26.3	-0.1
KOME				*e*Sg	Sg	13 53 46.3	+3.1
KOME	Kolasin	1.29	359	⇑*i*Pg	Pn	13 53 25.7	-0.5
KOME				*e*Sg	Sg	13 53 44.7	+1.5
KBN	Korca	1.32	135	Sn	Sn	13 53 43.8	-0.7
KBN				AML	AML	13 53 50.8	
	comp=E,0.7nm,0.5s						
BEY	Berane	1.33	11	*e*Pg	Pn	13 53 26.4	-0.4
IVA	Berane	1.33	11	⇑*i*Pg	Pn	13 53 26.3	-0.5
IVA				*i* Sg	Sg	13 53 46.0	+1.4
TREB	Trebinje	1.46	322	*e*Pn	Pn	13 53 28.3	-0.3
TREB	Trebinje	1.46	322	*e*Pg	Pn	13 53 28.4	-0.2
SKO	Skopje	1.46	73	*i* Pg	Pn	13 53 29.3	+0.7
SKO				*i* Sg	Sg	13 53 51.1	+2.2
BRY	Bratogost	1.54	331	*e*Pg	Pb	13 53 30.8	+0.1
BRY				*i* Sg	Sg	13 53 53.2	+2.0
UPM	Unac-Piva	1.71	344	*e*Pn	Pb	13 53 33.3	-0.3
UPM				*i* Sn	Sg	13 53 57.1	+0.4
SJES	Sjenica	1.72	10	*e*Pg	Pb	13 53 34.1	+0.3
SJES				*e*Sg	Sg	13 53 58.1	+0.9
KLINJ	Klinje	1.76	336	*e*Pn	Pn	13 53 33.1	+0.4
PLE	Pljevlja	1.77	356	*e*Pg	Pb	13 53 35.1	+0.5
PLE	Pljevlja	1.77	356	*e*Pn	Pb	13 53 34.1	-0.5
PLE				*i* Sn	Sg	13 53 58.4	-0.3
STON	Ston	1.90	314	*e*Pn	Pb	13 53 36.1	-0.7
SELS	Selova	2.02	34	*e*Pn	Pn	13 53 36.5	+0.3
SELS				*e*Sn	Sb	13 54 02.6	-1.5
NOCI	Noci	2.04	248	Pn	Pn	13 53 34.9	-1.6
NOCI				Sn	Sb	13 54 04.7	0.0
NOCI				AML	AML	13 54 16.3	
	comp=E,1.2nm,0.4s						
NOCI				AMd		13 55 04.2	
IVAS	Ivanjica	2.06	12	*e*Pn	Pn	13 53 37.1	+0.3
IVAS				*e*Sn	Sb	13 54 03.8	-1.5
RUDO	Rudo	2.06	356	*e*Pn	Pn	13 53 37.5	+0.8
RUDO	Rudo	2.06	356	*e*Pn	Pn	13 53 37.6	+0.8
BARS	Barje	2.09	52	*i* Pn	Pn	13 53 37.5	+0.3
BARS	Barje	2.09	52	*e*Pn	Pn	13 53 37.1	-0.1
BARS				*e*Sn	Sn	13 54 04.9	+1.4
IGT	Igoumenitsa	2.11	164	Sn	Sn	13 54 06.5	+2.5
IGT	Igoumenitsa	2.11	164	*e*Pn	Pn	13 53 38.0	+0.5
GOCS	Kraljevo Serbi	2.22	25	*e*Pn	Pn	13 53 39.7	+0.6
GOCS				*e*Sn	Sb	13 54 09.0	-1.0
GRG	Griva	2.23	105	*i* Pn	Pn	13 53 39.9	+0.8
VAY	Valandovo	2.27	95	*i* Pn	Pn	13 53 40.3	+0.6
VAY				*i* Sn	Sn	13 54 08.3	+0.4
VAY				*e*Lg	Lg	13 54 10.7	
	comp=E,23nm,0.7s						
VAY				*e*Lg	Lg	13 54 11.3	
	comp=N,52nm,0.8s						
BBLS	Lazi&#263i	2.30	357	*e*Pn	Pn	13 53 41.5	+1.3
BBLS				*e*Sn	Sb	13 54 11.9	-0.5
BOSS	Bosilegrad	2.37	66	*e*Pn	Pn	13 53 41.3	+0.3
GRUS	Gruza	2.47	20	*e*Pn	Pn	13 53 43.2	+0.7
GRUS				*e*Sn	Sb	13 54 15.3	-1.9
DIVS	Divibare	2.55	7	*e*Pn	Pn	13 53 43.7	+0.1
DIVS				*e*Sn	Sn	13 54 15.1	+0.1
BOVS	Bovan	2.61	37	⇓P	Pn	13 53 44.6	+0.3
BOVS	Bovan	2.61	37	*e*Pn	Pn	13 53 44.6	+0.3
BOVS				*e*Sn	Sn	13 54 17.0	+0.9
KKB	Krupnik	2.69	83	*i* Pn	Pn	13 53 46.0	+0.6
TRUS	Trudelj	2.73	13	*e*Pn	Pn	13 53 46.4	+0.4
ZAPS	Zavoj	2.84	52	*e*Pn	Pn	13 53 48.3	+0.7
ZAPS				*e*Sn	Sn	13 54 23.2	+1.1
VTS	Vitosha	2.93	68	*e*Pn	Pn	13 53 49.4	+0.5
TEKS	Tekeris	2.98	360	*e*Pn	Pn	13 53 49.3	-0.2
ZAGS	Zajecar	2.99	40	*e*Pn	Pn	13 53 50.2	+0.7
ZAGS				*e*Sn	Sn	13 54 27.3	+1.7
BORS2	Bor- Borsko je	3.10	35	*e*Pn	Pn	13 53 50.4	-0.8
BORS2				*e*Sn	Sn	13 54 27.8	-0.7
AVAS	Avala Beograd	3.21	12	*e*Pn	Pn	13 53 53.1	+0.5
KUBS	Kucevo	3.24	28	*e*Pn	Pn	13 53 51.8	-1.2
KUBS				*e*Sn	Sn	13 54 31.3	-0.5
MDVR	Moldovita	3.58	25	⇓P	Pn	13 53 58.3	+0.6
MDVR	Moldovita	3.58	25	*e*Pn	Pn	13 53 58.0	+0.3
FRGS	Fruska Gora	3.60	3	*e*Pn	Pn	13 53 57.0	-0.9
FRGS				*e*Sn	Sn	13 54 40.3	-0.3
BLY	Banja Luka	3.63	332	*e*Pn	Pn	13 53 58.4	+0.1
HERR	Herculane	3.92	31	⇑P	Pn	13 54 02.8	+0.5
BZS	Buzias	4.32	20	⇑P	Pn	13 54 07.9	+0.2
GZR	Gura Zlata	4.49	30	⇓P	Pn	13 54 10.6	+0.4
GZR	Gura Zlata	4.49	30	*e*Pn	Pn	13 54 11.4	+1.2
MORH	Mrgy, Hungar	4.70	352	*e*Pn	Pn	13 54 12.7	-0.3
MORH	Mrgy, Hungar	4.70	352	*e*Pn	Pn	13 54 13.7	+0.7
SIRR	Siria	4.94	17	⇑P	Pn	13 54 17.0	+0.6
SIRR	Siria	4.94	17	*e*Pn	Pn	13 54 16.9	+0.6
LOT	Lotru	4.94	37	⇑P	Pn	13 54 17.7	+1.2
BOJS	Bojanci	5.03	323	*e*Pn	Pn	13 54 17.5	-0.1
CEY	Cerknica	5.59	320	*e*Pn	Pn	13 54 25.2	-0.1
DRGR		5.70	22	⇓P	Pn	13 54 27.1	+0.3
DRGR		5.70	22	*e*Pn	Pn	13 54 26.9	+0.1
SOKA	Soboth	6.06	329	*e*Pn	Pn	13 54 32.0	+0.2
	comp=N,0.7nm,0.2s						
MLR	Muntele Rosu	6.08	48	⇑P	Pn	13 54 33.0	+0.9
OBKA	Obir	6.12	326	*e*Pn	Pn	13 54 32.6	0.0
	comp=N,1.3nm,0.2s						
MYKA	Terra Mystica	6.62	322	*e*Pn	Pn	13 54 38.2	-1.3
	comp=N,3.1nm,0.2s						
PLOR	Plostina	6.69	48	⇑P	Pn	13 54 41.6	+1.2
CONA	Conrad Observa	6.89	339	*i* Pn	Pn	13 54 43.0	-0.2
	comp=N,1.5nm,0.5s						
KBA	Koelnbreinsper	7.09	323	*e*Pn	Pn	13 54 46.8	+0.8
	comp=N,1.2nm,0.3s						
BIOA	Bad Ischl, Aus	7.44	327	*i* Pn	Pn	13 54 51.0	+0.3
	comp=N,1.8nm,0.3s						
LESA	Schwarzleotal	7.65	322	*e*Pn	Pn	13 54 53.3	-0.4

IDC ***19*** *13:55:36.7±0.9, 13°.78S×76°.07W, h53^{km}±7^{km}, mb3.9/5, mbtmp4.0/7, Error ellipse: s-maj=42.4km s-min=9.1km az=66.0*
NEIC ***19*** *13:55:36.2±1.1, 13°.87S±0°.09×76°.4W±0°.2, h55^{km}±11^{km}, mb4.2/3, Error ellipse: s-maj=22.8km s-min=9.9km az=68.0*
ISC 19 13:55:35.8±0.7**, 13°.89S**±0°.08×**76°.4W**±0°.1**, h50^{km}, n31, σ1^{s}.14**/34**, mb4.2**/5**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	1.95	346	P	Pn	13 56 05.9	-0.7
	72nm,0.3s,baz=152,slow=13,SNR=23						
NNA				S	Sn	13 56 31.2	+1.2
	564nm,0.4s,baz=291,slow=8.6,SNR=9.6						
NNA	Nana	1.95	346		Pn	13 56 05.6	-1.0
ATAH	Atahualpa	7.01	343	P	Pn	13 57 18.4	+2.2
	1.8nm,0.3s,baz=224,slow=2.2,SNR=5.7						
PB12	IPOC Station P	7.45	130		Pn	13 57 22.3	+0.2
PB16	IPOC Station P	7.92	125		Pn	13 57 30.1	+1.1
LPAZ	La Paz	8.29	108	P	Pn	13 57 36.9	+2.8
	3.9nm,0.4s,baz=317,slow=6.4,SNR=15						
LPAZ	La Paz	8.29	108		Pn	13 57 35.6	+1.6
PB11	IPOC Station P	8.67	133		Pn	13 57 39.0	+0.2
HMBC	Humberstone	8.86	137		Pn	13 57 41.1	-0.3
TA01	Diego Aracena	8.88	139	Pn	Pn	13 57 42.0	+0.5
GO01	Chusmiza	8.94	131		Pn	13 57 43.7	+0.8
PB08	IPOC Station P	9.28	133	Pn	Pn	13 57 47.1	-0.2
PB02	IPOC Station P	9.61	141		Pn	13 57 52.2	+0.6
PB01	IPOC Station P	9.67	138	Pn	Pn	13 57 53.8	+1.4
PB07	IPOC Station P	9.93	143		Pn	13 57 56.4	+0.4
PB03	IPOC Station P	10.26	143	Pn	Pn	13 58 02.6	+2.1
PB09	IPOC Station P	10.37	140	Pn	Pn	13 58 03.8	+1.7
PB05	IPOC Station P	10.65	148	Pn	Pn	13 58 06.1	+0.2
CFA	Coronel Fontan	19.14	158	P	Pn	13 59 57.2	+1.0
	1.8nm,0.6s,baz=351,slow=13,SNR=6.2						
RUSC	La Rusia	19.92	10	P	P	14 00 03.2	-0.8
RUSC				IAmb	IAmb	14 00 26.9	
	comp=Z,10nm,0.9s						
BOAV	Boa Vista	22.55	45	P	P	14 00 30.7	-1.2
BOAV				IAmb	IAmb	14 00 33.6	
	comp=Z,7.6nm,0.8s						
TXAR	Lajitas Array	50.42	329	P	P	14 04 29.1	+0.6
	comp=Z,0.7nm,0.7s,baz=149,slow=8.8,SNR=9.9						
	comp=Z,0.7nm,0.7s						
TXAR	Lajitas Array	50.42	329	P	P	14 04 28.1	-0.5
SNAA	Sanae	71.73	161	P	P	14 06 53.6	+1.2
	comp=Z,1.4nm,0.5s,baz=288,slow=6.2,SNR=14						
	comp=Z,1.4nm,0.5s						
SNAA	Sanae	71.73	161	P	P	14 06 52.2	-0.2
SNAA				IAmb	IAmb	14 06 59.7	
	comp=Z,6.2nm,1.3s						
DBIC	Dimbokro	73.83	79	P	P	14 07 04.2	-1.5
	comp=Z,3.2nm,0.7s,baz=250,slow=7.7,SNR=4.4						
	comp=Z,3.2nm,0.7s						
YKA	Yellowknife Ar	81.79	343	P	P	14 07 48.4	-0.5
	comp=Z,0.9nm,0.9s,baz=145,slow=5.2,SNR=7.7						
YKA				pP	pP	14 08 03.8	+0.4
	comp=Z,0.6nm,0.9s,baz=146,slow=4.4,SNR=4.1						
	comp=Z,0.9nm,0.9s						
TORD	Torodi Ar. Bea	81.84	74	P	P	14 07 49.3	-1.0
	comp=Z,2.7nm,0.7s,baz=266,slow=3.7,SNR=3.7						
	comp=Z,2.7nm,0.7s						
ASAR	Alice Springs	132.36	219	PKP	PKPdf	14 14 44.6	-0.7
	comp=Z,0.1nm,0.7s,baz=125,slow=2.0,SNR=4.2						
ASAR				pPKP	pPKPdf	14 15 01.1	+0.6
	comp=Z,0.3nm,0.8s,baz=146,slow=2.6,SNR=5.3						
WRA	Warramunga Arr	134.81	223	PKP	PKPdf	14 14 50.7	+0.7
	comp=Z,0.5nm,0.9s,baz=137,slow=2.3,SNR=2.3						
SONM	Songino Array	146.08	357	PKPbc	PKPbc	14 15 10.5	0.0
	comp=Z,1.3nm,0.5s,baz=346,slow=2.0,SNR=6.3						
SONM				pPKPbc	pPKPab	14 15 26.3	+0.3
	comp=Z,2.1nm,0.9s,baz=330,slow=2.4,SNR=2.3						

IDC ***19*** *14:09:50.7±1.2, 59°.36N×153°.84W, h85^{km}±13^{km}, mb3.9/17, mbtmp4.2/20, MS4.0/3, Error ellipse: s-maj=14.3km s-min=11.0km az=40.0*
NEIC ***19*** *14:09:53.0±0.6, 59°.27N±0°.04×153°.5W±0°.1, h113^{km}±4^{km}, Error ellipse: s-maj=7.6km s-min=6.4km az=96.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.11; M$_{\theta\theta}$0.13; M$_{\phi\phi}$0.99; M$_{r\theta}$1.38; M$_{\theta\phi}$0.71; M$_{\phi r}$0.95; Fault plane solution: M$_0$2.10000×10^{15} NP1:φ$_s$6.58000°, δ23.17000°, λ-131.44000°. NP2:φ$_s$230.42000°, δ72.85000°, λ-74.19000°. Principal axes: T 2.1347, Plg26.0000°, Azm308.0000°; N -0.0649, Plg15.0000°, Azm46.0000°; P -2.0698, Plg59.0000°, Azm162.0000°;*
ANF ***19*** *14:09:53.3±0.1, 59°.29N×153°.58W, h103^{km}±2^{km}, ML4.2/68 Error ellipse: s-maj=1.5km s-min=1.2km az=9.0*
NEIC ***19*** *14:09:53.9, 59°.33N×153°.60W, h103^{km}*
AEIC ***19*** *14:09:54.1±1.0, 59°.27N±0°.04×153°.55W±0°.07, h108^{km}±4^{km}, ML3.9, mb4.4/16(NEIC), ML4.1/158(NEIC), Mwr4.1/22(NEIC), Error ellipse: s-maj=6.5km s-min=4.1km az=215.0*
ISC 19 14:09:53.3±0.5**, 59°.28N**±0°.02×**153°.53W**±0°.02**, h118^{km}**±4^{km}**, n539, σ1^{s}.16**/606**, mb4.3**/24**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUI	Augustine Isla	0.08	43		Pn	14 10 08.6	-0.7
AUI					Sn	14 10 20.1	-1.4
AUCH	Augustine Cone	0.10	27		Pn	14 10 08.9	-0.6
AUCH					Sn	14 10 20.5	-1.2
AUJK	Augustine Jueg	0.10	41		Pn	14 10 08.7	-0.7
AUJK					Sn	14 10 20.5	-1.0
AUW	Augustine West	0.10	18		Pn	14 10 08.9	-0.5
AUW					Sn	14 10 20.5	-1.0
AUF	Augustine Flow	0.12	19		Pn	14 10 08.7	-0.7
AU22	Augustine Moun	0.13	44		Pn	14 10 08.7	-0.7
AU22					Sn	14 10 20.5	-1.0
Q19K	Cape Douglas,	0.35	189	Pn	Pn	14 10 09.4	-0.8
Q19K				Sn	Sn	14 10 21.5	-1.4
Q19K	Cape Douglas,	0.35	189	P	Pn	14 10 09.3	-0.8
	baz=4.0,SNR=420						
Q19K				S	Sn	14 10 21.6	-1.3
	baz=4.0						
Q19K				S	Sn	14 10 21.6	-1.3
	baz=4.0						
P19K	Oil Pt	0.41	22	Sn	Sn	14 10 22.3	-1.0
P19K	Oil Pt	0.41	22	P	Pn	14 10 09.9	-0.6
	baz=209,SNR=224						
P19K				S	Sn	14 10 22.4	-1.0
	baz=209						
P19K				S	Sn	14 10 22.4	-1.0
	baz=209						
ILS	Iliamna Low So	0.72	19		Pn	14 10 11.8	-0.9
ILSW	Iliamna Southw	0.74	15		Pn	14 10 11.9	-0.9
ILSW				Sn	Sn	14 10 26.3	-1.3
ILSW				IAML		14 10 26.9	
	comp=N,4μm,0.7s						
IVE	Iliamna Volcan	0.79	19		Sn	14 10 26.7	-1.6
KAPH	Katmai Pasha	0.80	212		Pn	14 10 12.5	-0.8
P18K	Big Mountain,	0.88	278		Pn	14 10 12.6	-1.3
P18K				IAML		14 10 27.8	
	comp=N,2μm,0.8s						
P18K	Big Mountain,	0.88	278		Sn	14 10 27.2	-2.4
P18K	Big Mountain,	0.88	278	P	Pn	14 10 12.6	-1.3
	baz=94,SNR=139						
P18K				S	Sn	14 10 27.1	-2.5
	baz=94						
P18K				S	Sn	14 10 27.1	-2.5
	baz=94						
Q20K	Shuyak Island	0.89	138	P	Pn	14 10 13.5	-0.5
	baz=320,SNR=427						
Q20K				S	Sn	14 10 28.3	-1.4
	baz=320						
Q20K				S	Sn	14 10 28.3	-1.4
	baz=320						
SYI	Shuyak Island	0.89	138		Pn	14 10 13.4	-0.6
SYI				IAML		14 10 29.1	
	comp=N,6μm,0.7s						
SYI				IAML		14 10 30.0	
	comp=E,3μm,0.6s						
SYI	Shuyak Island	0.89	138		Sn	14 10 28.4	-1.3
KAHG	Katmai Hook Gl	0.94	214		Sn	14 10 29.5	-1.2
KARR	Katmai Rainbow	0.99	218		Sn	14 10 30.5	-0.9
KAHC	Katmai Hardscr	0.99	231		Sn	14 10 29.4	-2.2
Q18K	Katmai Hardscr	0.99	231	P	Pn	14 10 14.1	-1.0
	baz=46,SNR=95						
Q18K				S	Sn	14 10 29.4	-2.2
	baz=46						
Q18K				S	Sn	14 10 29.4	-2.2
	baz=46						
O19K	Port Alsworth	1.00	337		Pn	14 10 14.2	-0.9
O19K	Port Alsworth	1.00	337	P	Pn	14 10 14.3	-0.8
	baz=157,SNR=721						
O19K				S	Sn	14 10 29.9	-1.7
	baz=157						
O19K				S	Sn	14 10 29.9	-1.7
	baz=157						
O18K	Koktuh Hills	1.03	305		Pn	14 10 14.4	-0.9
O18K				IAML		14 10 31.0	
	comp=E,4μm,0.8s						
O18K				IAML		14 10 31.2	
	comp=N,2μm,0.8s						
O18K	Koktuh Hills	1.03	305	P	Pn	14 10 14.5	-0.9
	baz=122,SNR=391						
O18K				S	Sn	14 10 30.4	-1.8
	baz=122						
O18K				S	Sn	14 10 30.4	-1.8
	baz=122						
HOM	Homer	1.04	68		Pn	14 10 32.0	+17
HOM					Sn	14 10 32.1	0.0
HOM	Homer	1.04	68	IAML		14 10 32.9	
	comp=N,18μm,0.7s						
HOM				IAML		14 10 33.0	
	comp=E,17μm,0.8s						
HOM	Homer	1.04	68	P	Pn	14 10 15.3	-0.1
	baz=252,SNR=15						
HOM				S	Sn	14 10 32.0	-0.2
	baz=252						
KAWH	Katmai	1.11	217		Sn	14 10 31.9	-1.8
CNPM	China Poot	1.20	77		Pn	14 10 16.8	-0.3
CNPM				IAML		14 10 35.6	
	comp=E,3μm,0.7s						
CNPM				IAML		14 10 36.8	
	comp=N,4μm,0.6s						
CNPM	China Poot	1.20	77		Sn	14 10 34.5	-0.8
RED	Redoubt Volcan	1.21	18		Pn	14 10 16.8	-0.6
RED				IAML		14 10 35.2	
	comp=N,2μm,1.0s						
RED				IAML		14 10 36.3	
	comp=E,2μm,0.7s						
RED	Redoubt Volcan	1.21	18		Sn	14 10 34.6	-1.0
KAKN	Katmai Knife C	1.27	220		Sn	14 10 34.9	-1.8
RDWB	Redoubt West	1.27	16		Sn	14 10 36.0	-0.8
KVTA	Katmai Vly 10	1.28	226		Pn	14 10 16.4	-1.6
NCT	North Crescent	1.32	13		Sn	14 10 36.9	-1.0
KABU	Katmai Buttres	1.36	223		Sn	14 10 37.7	-0.8
RDJH	Redoubt Jeurge	1.37	15		Pn	14 10 18.6	-0.5
RDJH					Sn	14 10 38.3	-0.5
DFR	Drift River	1.39	18		Sn	14 10 38.6	-0.4
ACHA	Angle Creek He	1.42	222		Pn	14 10 18.9	-0.8
BRLK	Bradley Lake	1.44	69		Pn	14 10 19.3	-0.5
BRLK				IAML		14 10 41.9	
	comp=E,3μm,0.7s						
BRLK	Bradley Lake	1.44	69		Sn	14 10 38.2	-1.7
ANCK	Angle Creek	1.49	224		Pn	14 10 19.7	-0.7
BRSE	Bradley Lake S	1.50	71		Pn	14 10 19.7	-0.8
BRSE					Sn	14 10 40.2	-1.0
BRSE	Bradley Lake S	1.50	71	P	Pn	14 10 19.9	-0.6
	baz=255,SNR=23						

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BRSE                              S      Sn     14 10 40.0 -1.2
      baz=255
KDAK  Kodiak Island    1.58 161   P      Pn     14 10 20.2 -1.3
      comp=E,654nm,0.3s,baz=22,slow=5.1,SNR=4278
KDAK                              S      Sn     14 10 40.1 -2.7
      comp=E,728nm,0.3s,baz=78,slow=1.8,SNR=14
KDAK  Kodiak Island    1.58 161          Pn     14 10 20.1 -1.3
KDAK                              IAML          14 10 42.0
      comp=E,2µm,0.3s
KDAK                              IAML          14 10 47.5
      comp=E,2µm,0.5s
KDAK  Kodiak Island    1.58 161          Sn     14 10 40.6 -2.2
KDAK  Kodiak Island    1.58 161   P      Pn     14 10 20.3 -1.1
      baz=342
KDAK                              S      Sn     14 10 40.5 -2.2
      baz=342
CNTC  Contact Creek    1.59 231          Pn     14 10 20.9 -0.8
CNTC                                     Sn     14 10 41.9 -1.4
Q17K  Contact Creek    1.59 231   P      Pn     14 10 20.9 -0.8
      baz=47,SNR=29
Q17K                              S      Sn     14 10 41.4 -1.9
      baz=47
Q17K                              S      Sn     14 10 41.4 -1.9
      baz=47
N19K  Bonanza Creek    1.61 343          Pn     14 10 21.5 -0.5
N19K                              IAML          14 10 43.4
      comp=N,1µm,0.7s
N19K                              IAML          14 10 43.0
      comp=E,2µm,0.9s
N19K  Bonanza Creek    1.61 343          Sn     14 10 42.4 -1.4
N19K  Bonanza Creek    1.61 343   P      Pn     14 10 21.4 -0.5
      baz=163,SNR=246
N19K                              S      Sn     14 10 42.2 -1.6
      baz=163
N19K                              S      Sn     14 10 42.2 -1.6
      baz=163
KJL   Kejulik          1.62 222          Pn     14 10 21.5 -0.5
Q16K  King Salmon      1.73 251          Pn     14 10 22.7 -0.4
Q16K  King Salmon      1.73 251   P      Pn     14 10 22.7 -0.4
      baz=66,SNR=32
Q16K                              S      Sn     14 10 45.3 -0.6
      baz=66
N18K  Kilae Creek      1.84 321          Pn     14 10 23.8 -0.8
N18K                              IAML          14 10 48.1
      comp=N,1µm,1.2s
N18K  Kilae Creek      1.84 321   P      Pn     14 10 23.9 -0.7
      baz=139,SNR=112
N18K                              S      Sn     14 10 46.8 -1.7
      baz=139
N18K                              S      Sn     14 10 46.8 -1.7
      baz=139
O17K  Koliganek Bris   1.88 287          Pn     14 10 24.5 -0.6
O17K  Koliganek Bris   1.88 287   P      Pn     14 10 24.5 -0.6
      baz=102,SNR=45
O17K                              S      Sn     14 10 46.7 -2.7
      baz=102
CAPN  Captain Cook N   1.92  38          Pn     14 10 26.6 +1.2
CAPN  Captain Cook N   1.92  38   P      Pn     14 10 26.7 +1.2
      baz=221,SNR=9.2
N20K  Mount Spurr      2.04  18   P      Pn     14 10 26.7 -0.4
      baz=201
N20K                              S      Sn     14 10 51.4 -1.7
      baz=201
N20K                              S      Sn     14 10 51.4 -1.7
      baz=201
SPCR  Spurr Chakacha   2.04  18          Pn     14 10 26.7 -0.4
SPCR  Spurr Chakacha   2.04  18   P      Pn     14 10 26.7 -0.4
      baz=201,SNR=47
SPCR                              S      Sn     14 10 51.6 -1.4
      baz=201
SPU   Mount Spurr      2.05  20          Pn     14 10 26.7 -0.5
OHAK  Old Harbor       2.06 176          Pn     14 10 25.8 -1.6
OHAK                              IAML          14 10 51.5
      comp=N,2µm,0.6s
OHAK                              IAML          14 10 52.2
      comp=E,1µm,0.5s
OHAK  Old Harbor       2.06 176   P      Pn     14 10 25.7 -1.6
OHAK  Old Harbor       2.06 176   S      Sn     14 10 51.2 -2.2
OHAK  Old Harbor       2.06 176   P      Pn     14 10 25.9 -1.5
      baz=356,SNR=70
OHAK                              S      Sn     14 10 50.6 -2.8
      baz=356
SLKM  Skilak Lake      2.08  52          Pn     14 10 27.1 -0.4
SLKM                              IAML          14 10 55.9
      comp=N,1µm,0.2s
SLKM                              IAML          14 10 57.0
      comp=E,941nm,0.2s
SPNN  North Nagishla   2.14  11          Pn     14 10 28.1 -0.3
PLK3  Peulik 3         2.15 223          Pn     14 10 28.2 -0.2
SPCG  Spurr Capps Gl   2.16  20          Pn     14 10 28.3 -0.3
PLK5  Peulik 5         2.17 235          Pn     14 10 28.5 -0.2
PLK1  Peulik 1         2.19 229          Pn     14 10 28.6 -0.3
PLK4  Peulik 4         2.22 223          Pn     14 10 29.1 -0.3
PLK4  Peulik 4         2.22 223   IAML          14 10 58.2
      comp=N,1µm,1.1s
PLK4                              IAML          14 11 00.8
      comp=E,1µm,0.4s
R17L  Mt. Peulik Vol   2.22 223   P      Pn     14 10 29.0 -0.4
      baz=39
R17L                              S      Sn     14 10 55.9 -1.1
      baz=39
R17L                              S      Sn     14 10 55.9 -1.1
      baz=39
N17K  Nushagak Hills   2.23 306          Pn     14 10 28.5 -0.9
N17K                              IAML          14 10 56.5
      comp=N,562nm,0.9s
N17K                              IAML          14 10 57.2
      comp=E,773nm,1.0s
N17K  Nushagak Hills   2.23 306   P      Pn     14 10 29.0 -0.5
      baz=122,SNR=43
N17K                              S      Sn     14 10 53.5 -3.7
      baz=122
SEW   Seward           2.23  66          Pn     14 10 29.0 -0.4
SEW                               IAML          14 11 05.0
      comp=E,959nm,1.0s
SEW   Seward           2.23  66   P      Pn     14 10 28.9 -0.5
      baz=251,SNR=19
SEW                               S      Sn     14 10 54.3 -2.8
      baz=251
O22K  Cooper Landing   2.27  56          Pn     14 10 29.9  0.0
O22K  Cooper Landing   2.27  56   P      Pn     14 10 29.8  0.0
      baz=241,SNR=63
O22K                              S      Sn     14 10 57.1 -0.9
      baz=241
O16K  Kokwok River B   2.35 280          Pn     14 10 30.6 -0.4
O16K  Kokwok River B   2.35 280   P      Pn     14 10 30.6 -0.4
      baz=95,SNR=23
O16K                              S      Sn     14 10 57.9 -2.0
      baz=95
STLK  Strandline Lak   2.38  20          Pn     14 10 31.1 -0.3
M18K  Stony River      2.50 334          Pn     14 10 32.4 -0.5
M18K  Stony River      2.50 334   P      Pn     14 10 32.3 -0.5
      baz=152,SNR=76
M18K                              S      Sn     14 11 01.3 -1.9
      baz=152
SUA   Susitna One      2.59  31          Pn     14 10 33.7 -0.5
SUA                               IAML          14 11 07.9
      comp=N,841nm,1.2s
SUA                               IAML          14 11 08.9
      comp=E,1µm,0.8s
SUA   Susitna One      2.59  31   P      Pn     14 10 34.2  0.0
      baz=215,SNR=50
SUA                               S      Sn     14 11 05.1 -0.6
      baz=215
M20K  Styx River       2.62   4   P      Pn     14 10 34.5 -0.1
      baz=185,SNR=32
M20K                              S      Sn     14 11 05.3 -1.1
      baz=185
M20K                              S      Sn     14 11 05.3 -1.1
      baz=185
RC01  Rabbit Creek A   2.63  45          Pn     14 10 34.1 -0.4
RC01  Rabbit Creek A   2.63  45   P      Pn     14 10 34.2 -0.4
      baz=229,SNR=37
RC01                              S      Sn     14 11 05.2 -1.1
      baz=229
SII   Sitkinak Islan   2.75 188          Pn     14 10 34.8 -1.4
SII   Sitkinak Islan   2.75 188   P      Pn     14 10 34.7 -1.4
      baz=6.2
SII                               S      Sn     14 11 06.1 -3.0
      baz=6.2
M17K  Holitna River    2.88 319          Pn     14 10 37.8  0.0
M17K  Holitna River    2.88 319   IAML          14 11 12.1
      comp=N,605nm,1.0s
M17K                              IAML          14 11 27.6
      comp=E,564nm,0.8s
M17K  Holitna River    2.88 319   P      Pn     14 10 37.9  0.0
      baz=136,SNR=24
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M17K                              S      Sn     14 11 11.0 -1.2
      baz=136
SKT   Skwentna         2.89  19          Pn     14 10 37.5 -0.5
SKT   Skwentna         2.89  19   P      Pn     14 10 37.5 -0.5
      baz=202,SNR=19
SKT                               S      Sn     14 11 11.9 -0.4
      baz=202
N16K  Nishlik Lake     2.90 297          Pn     14 10 38.2 +0.1
N16K  Nishlik Lake     2.90 297   P      Pn     14 10 38.3 +0.1
      baz=112
N16K                              S      Sn     14 11 11.7 -1.0
      baz=112
L19K  White Mountain   2.99 348          Pn     14 10 38.7 -0.6
L19K                              IAML          14 11 14.6
      comp=E,261nm,0.9s
L19K  White Mountain   2.99 348   P      Pn     14 10 38.5 -0.7
      baz=167,SNR=79
L19K                              S      Sn     14 11 13.4 -1.4
      baz=167
L19K                              S      Sn     14 11 13.4 -1.4
      baz=167
M22K  Willow           3.00  33          Pn     14 10 39.2 -0.2
M22K  Willow           3.00  33   P      Pn     14 10 39.5 +0.1
      baz=217,SNR=12
M22K                              S      Sn     14 11 14.5 -0.5
      baz=217
PWL   Port Wells       3.05  56   IAML          14 11 15.6
      comp=E,832nm,0.8s
PWL   Port Wells       3.05  56   P      Pn     14 10 39.4 -0.7
      baz=242,SNR=20
PWL                               S      Sn     14 11 13.2 -3.0
      baz=242
PMR   Palmer           3.19  41          Pn     14 10 40.9 -0.9
PMR                               IAML          14 11 18.1
      comp=N,406nm,0.7s
PMR                               IAML          14 11 19.3
      comp=E,575nm,0.6s
PMR   Palmer           3.19  41   P      Pn     14 10 40.7 -1.1
PMR   Palmer           3.19  41   S      Sn     14 11 17.3 -2.0
PMR   Palmer           3.19  41   P      Pn     14 10 40.9 -0.9
      baz=226,SNR=34
PMR                               S      Sn     14 11 16.7 -2.6
      baz=226
P23K  Montague Islan   3.19  74          Pn     14 10 41.7 -0.2
P23K                              IAML          14 11 20.7
      comp=E,585nm,0.3s
P23K                              IAML          14 11 21.3
      comp=N,550nm,0.3s
P23K  Montague Islan   3.19  74   P      Pn     14 10 41.8 -0.2
      baz=261
P23K                              S      Sn     14 11 17.0 -2.5
      baz=261
P23K                              S      Sn     14 11 17.0 -2.5
      baz=261
M16K  Timber Creek     3.23 305          Pn     14 10 42.6 +0.2
M16K  Timber Creek     3.23 305   P      Pn     14 10 42.4  0.0
      baz=120,SNR=22
M16K                              S      Sn     14 11 19.0 -1.4
      baz=120
M16K                              S      Sn     14 11 19.0 -1.4
      baz=120
O15K  Ungalikthiuk R   3.24 271          Pn     14 10 42.6 +0.1
O15K                              IAML          14 11 21.9
      comp=E,223nm,0.8s
O15K  Ungalikthiuk R   3.24 271   P      Pn     14 10 42.5 -0.1
      baz=85,SNR=15
O15K                              S      Sn     14 11 18.8 -1.8
      baz=85
KNK   Knik Glacier     3.31  47   P      Pn     14 10 42.6 -0.9
      baz=233,SNR=32
KNK                               S      Sn     14 11 19.8 -2.5
      baz=233
L18K  Granite Mounta   3.33 334          Pn     14 10 43.4 -0.4
L18K                              IAML          14 11 22.2
      comp=N,270nm,1.0s
L18K  Granite Mounta   3.33 334   P      Pn     14 10 43.4 -0.4
      baz=151,SNR=25
L18K                              S      Sn     14 11 20.8 -2.1
      baz=151
L18K                              S      Sn     14 11 20.8 -2.1
      baz=151
GHO   Glory Hole Cre   3.38  40          Pn     14 10 43.5 -1.1
N15K  Kwethluk River   3.44 288          Pn     14 10 45.8 +0.6
N15K                              IAML          14 11 26.5
      comp=N,661nm,0.9s
N15K                              IAML          14 11 27.6
      comp=E,657nm,0.8s
N15K  Kwethluk River   3.44 288   P      Pn     14 10 45.8 +0.6
      baz=102,SNR=27
N15K                              S      Sn     14 11 24.7 -0.7
      baz=102
N15K                              S      Sn     14 11 24.7 -0.7
      baz=102
CUT   Chulitna         3.52  26          Pn     14 10 46.0 -0.3
CUT   Chulitna         3.52  26   IAML          14 11 31.3
      comp=N,616nm,0.5s
CUT                               IAML          14 11 38.1
      comp=E,534nm,0.5s
CUT   Chulitna         3.52  26   P      Pn     14 10 46.2  0.0
      baz=209,SNR=13
CUT                               S      Sn     14 11 26.0 -1.3
      baz=209
L22K  Petersville      3.53  21          Pn     14 10 46.0 -0.4
L22K                              IAML          14 11 28.4
      comp=E,201nm,0.5s
L22K                              IAML          14 11 30.6
      comp=N,204nm,0.6s
ANPB  Aniakchak Plen   3.54 228          Pn     14 10 46.6 +0.1
GLI   Glacier Island   3.60  61   P      Pn     14 10 46.0 -1.4
      baz=247
GLI                               S      Sn     14 11 26.8 -2.4
      baz=247
SML   Sawmill          3.61  43   IAML          14 11 29.7
      comp=E,502nm,0.9s
SML   Sawmill          3.61  43   P      Pn     14 10 46.5 -1.0
      baz=228,SNR=20
SML                               S      Sn     14 11 26.9 -2.6
      baz=228
CHIR  Chirikof Islan   3.64 199          Pn     14 10 46.3 -1.6
CHIR  Chirikof Islan   3.64 199   P      Pn     14 10 46.3 -1.6
CHIR  Chirikof Islan   3.64 199   P      Pn     14 10 46.4 -1.6
      baz=16
CHIR                              S      Sn     14 11 26.2 -4.0
      baz=16
Q23K  Middleton Isla   3.68  85   P      Pn     14 10 48.1 -0.2
      baz=272
MID   Middleton Isla   3.69  85          Pn     14 10 47.9 -0.5
MID   Middleton Isla   3.69  85   IAML          14 11 32.3
      comp=E,518nm,0.6s
MID                               IAML          14 11 33.0
      comp=N,505nm,0.8s
PPLA  Purkeypile       3.69  10          Pn     14 10 48.9 +0.2
PPLA  Purkeypile       3.69  10   IAML          14 11 34.8
      comp=E,197nm,1.2s
PPLA  Purkeypile       3.69  10   P      Pn     14 10 49.0 +0.4
      baz=191,SNR=7.9
PPLA                              S      Sn     14 11 30.6 -1.0
      baz=191
L17K  Donlin           3.70 323          Pn     14 10 48.5 -0.2
L17K  Donlin           3.70 323   P      Pn     14 10 48.3 -0.4
      baz=139,SNR=13
L17K                              S      Sn     14 11 29.4 -2.2
      baz=139
L17K                              S      Sn     14 11 29.4 -2.2
      baz=139
HIN   Hinchinbrook I   3.72  69   Pn     Pn     14 10 48.4 -0.6
M23K  Glacier View     3.82  46   P      Pn     14 10 49.6 -0.7
      baz=232,SNR=15
M23K                              S      Sn     14 11 31.8 -2.7
      baz=232
M23K                              S      Sn     14 11 31.8 -2.7
      baz=232
L16K  Owhat River      3.82 312          Pn     14 10 50.0 -0.2
L16K  Owhat River      3.82 312   IAML          14 11 48.2
      comp=E,138nm,1.1s
L16K  Owhat River      3.82 312   P      Pn     14 10 50.1 -0.2
      baz=127
L16K                              S      Sn     14 11 32.8 -1.6
      baz=127
L16K                              S      Sn     14 11 32.8 -1.6
      baz=127
FID   Port Fidalgo     3.84  64          Pn     14 10 49.0 -1.5
FID                               IAML          14 11 32.9
      comp=E,500nm,0.7s
M15K  Kasigluk River   3.87 295          Pn     14 10 50.8  0.0
M15K  Kasigluk River   3.87 295   P      Pn     14 10 50.9  0.0
      baz=108,SNR=9.4
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O14K  Tigyukauivet M   3.97 273   Pn     Pn     14 10 52.5 +0.3
O14K  Tigyukauivet M   3.97 273   P      Pn     14 10 52.6 +0.3
      baz=86,SNR=7.4
O14K                              S      Sn     14 11 37.0 -0.9
      baz=86
O14K                              S      Sn     14 11 37.0 -0.9
      baz=86
SCM   Sheep Creek Mo   3.99  47   P      Pn     14 10 52.0 -0.6
      baz=234,SNR=9.4
SCM                               S      Sn     14 11 36.1 -2.6
      baz=234
K20K  Telida           4.10 357   P      Pn     14 10 53.5 -0.5
      baz=176,SNR=27
K20K                              S      Sn     14 11 38.6 -2.6
      baz=176
K20K                              S      Sn     14 11 38.6 -2.6
      baz=176
EYAK  Cordova Ski Ar   4.12  69   Pn     Pn     14 10 53.3 -1.0
EYAK                              IAML          14 11 41.8
      comp=E,132nm,0.6s
EYAK  Cordova Ski Ar   4.12  69   P      Pn     14 10 53.2 -1.0
EYAK  Cordova Ski Ar   4.12  69   P      Pn     14 10 53.7 -0.5
      baz=256
K17K  Iditarod         4.16 328          Pn     14 10 54.6 -0.1
K17K  Iditarod         4.16 328   IAML          14 11 56.3
      comp=N,116nm,1.0s
K17K                              IAML          14 11 58.8
      comp=E,216nm,0.9s
K17K  Iditarod         4.16 328   P      Pn     14 10 54.8  0.0
      baz=144,SNR=49
N14K  Kuskokwak Cree   4.19 282          Pn     14 10 55.4 +0.2
N14K  Kuskokwak Cree   4.19 282   IAML          14 11 59.6
      comp=N,154nm,1.1s
N14K                              IAML          14 12 28.0
      comp=E,145nm,0.8s
N14K  Kuskokwak Cree   4.19 282   P      Pn     14 10 55.8 +0.5
      baz=95,SNR=5.7
WAT7  Susitna Watana   4.23  31          Pn     14 10 55.1 -0.7
DIV   Divide           4.29  61          Pn     14 10 55.9 -0.8
DIV   Divide           4.29  61   IAML          14 11 45.1
      comp=N,272nm,1.2s
DIV                               IAML          14 11 46.7
      comp=E,181nm,0.7s
WAT1  Susitna Watana   4.31  32          Pn     14 10 56.0 -0.8
WAT1  Susitna Watana   4.31  32   P      Pn     14 10 56.3 -0.5
      baz=217
WAT1                              S      Sn     14 11 44.5 -1.6
      baz=217
WAT6  Susitna Watana   4.36  38   P      Pn     14 10 56.7 -0.9
      baz=224,SNR=16
WAT6                              S      Sn     14 11 44.9 -2.6
      baz=224
KLU   Klutina          4.38  56   P      Pn     14 10 57.1 -0.7
      baz=244,SNR=21
KLU                               S      Sn     14 11 44.7 -3.3
      baz=244
S14K  Fog Glacier      4.40 230   P      Pn     14 10 58.4 +0.3
      baz=44
VNFG  Fog Glacier, M   4.40 230          Pn     14 10 58.0 -0.2
VNFG  Fog Glacier, M   4.40 230   IAML          14 12 00.2
      comp=N,252nm,1.1s
VNFG                              IAML          14 12 05.0
      comp=E,256nm,0.9s
TRF   Thorofare Moun   4.47  19          Pn     14 10 58.2 -0.9
TRF   Thorofare Moun   4.47  19   IAML          14 11 50.2
      comp=N,159nm,0.6s
TRF   Thorofare Moun   4.47  19   P      Pn     14 10 58.8 -0.3
      baz=202,SNR=8.1
TRF                               S      Sn     14 11 48.0 -2.2
      baz=202
KTH   Kantishna Hill   4.47  15          Pn     14 10 58.1 -0.9
KTH   Kantishna Hill   4.47  15   IAML          14 11 49.9
      comp=N,126nm,0.6s
KTH                               IAML          14 12 16.6
      comp=E,123nm,0.8s
J18K  Innoko River     4.47 341   Pn     Pn     14 10 58.4 -0.6
J18K  Innoko River     4.47 341   P      Pn     14 10 58.4 -0.6
      baz=159,SNR=35
M14K  Bethel           4.48 293          Pn     14 10 59.0 -0.1
M14K  Bethel           4.48 293   IAML          14 12 21.9
      comp=E,90nm,1.1s
M14K                              IAML          14 12 28.6
      comp=N,87nm,1.1s
M14K  Bethel           4.48 293   P      Pn     14 10 59.4 +0.4
      baz=105,SNR=8.0
M24K  Tolsona, Glenn   4.60  49          Pn     14 11 00.3 -0.4
M24K  Tolsona, Glenn   4.60  49   P      Pn     14 11 00.3 -0.4
      baz=236,SNR=13
M24K                              S      Sn     14 11 52.1 -1.0
      baz=236
RAGM  Ragged Mountai   4.61  72   Pn     Pn     14 11 00.4 -0.4
L15K  Ungalak Mounta   4.61 305          Pn     14 11 00.9 +0.1
L15K  Ungalak Mounta   4.61 305   P      Pn     14 11 00.9 +0.1
      baz=118,SNR=22
GOAT  Goat Mountain    4.62  70          Pn     14 11 00.4 -0.7
CHUM  Lake Minchumin   4.66   7          Pn     14 11 01.4  0.0
CHUM  Lake Minchumin   4.66   7   P      Pn     14 11 01.5  0.0
      baz=188,SNR=11
CHUM                              S      Sn     14 11 52.0 -2.5
      baz=188
KAIM  Kayak Island     4.68  78   Pn     Pn     14 11 01.9 +0.2
KAIM  Kayak Island     4.68  78   P      Pn     14 11 01.6 -0.1
      baz=267
BMRM  Bremner River    4.78  65          Pn     14 11 02.4 -0.7
BMRM                              IAML          14 12 02.2
      comp=N,221nm,1.0s
BMRM                              IAML          14 12 04.8
      comp=E,131nm,0.6s
BMRM  Bremner River    4.78  65   P      Pn     14 11 02.1 -1.0
      baz=254
BMRM                              S      Sn     14 11 54.5 -3.0
      baz=254
DHY   Denali Highway   4.84  35   IAML          14 11 59.5
      comp=E,134nm,0.6s
DHY                               IAML          14 12 01.4
      comp=N,130nm,0.5s
DHY   Denali Highway   4.84  35   P      Pn     14 11 03.2 -0.8
      baz=221,SNR=13
DHY                               S      Sn     14 11 57.7 -1.3
      baz=221
J19K  Poorman          4.84 349   P      Pn     14 11 02.8 -1.1
      baz=167,SNR=10
J17K  VABM Dome        4.92 330          Pn     14 11 04.7 -0.2
J17K                              IAML          14 12 27.1
      comp=N,70nm,1.0s
J17K  VABM Dome        4.92 330   P      Pn     14 11 04.8 -0.2
      baz=145,SNR=78
J20K  Nowinta River    4.93 357          Pn     14 11 04.5 -0.5
J20K  Nowinta River    4.93 357   P      Pn     14 11 04.3 -0.8
      baz=177,SNR=23
K15K  Wolf Creek Mou   4.95 311          Pn     14 11 05.6 +0.2
K15K  Wolf Creek Mou   4.95 311   P      Pn     14 11 05.8 +0.4
      baz=124,SNR=12
MCK   McKinley         4.98  24          Pn     14 11 05.3 -0.6
MCK   McKinley         4.98  24   IAML          14 12 02.5
      comp=N,91nm,0.6s
MCK                               IAML          14 12 03.8
      comp=E,94nm,0.5s
MCK   McKinley         4.98  24   P      Pn     14 11 05.2 -0.6
      baz=209,SNR=7.7
BPAW  Bear Paw Mtn.    4.99  13          Pn     14 11 05.4 -0.5
BPAW  Bear Paw Mtn.    4.99  13   IAML          14 12 00.7
      comp=N,60nm,0.6s
BPAW  Bear Paw Mtn.    4.99  13   P      Pn     14 11 05.5 -0.5
      baz=196,SNR=6.7
L14K  Kuka Creek       5.00 298          Pn     14 11 06.4 +0.4
L14K  Kuka Creek       5.00 298   IAML          14 12 30.9
      comp=E,122nm,1.1s
L14K                              IAML          14 12 38.4
      comp=N,132nm,1.2s
L14K  Kuka Creek       5.00 298   P      Pn     14 11 06.7 +0.7
      baz=110,SNR=30
N25K  Chitina, Valde   5.00  58   IAML          14 12 03.0
      comp=E,112nm,0.6s
N25K                              IAML          14 12 03.9
      comp=N,158nm,0.8s
N25K  Chitina, Valde   5.00  58   P      Pn     14 11 05.8 -0.3
      baz=247,SNR=9.8
M13K  Dall Lake        5.08 287          Pn     14 11 08.0 +0.9
M13K  Dall Lake        5.08 287   IAML          14 12 37.7
      comp=E,61nm,0.9s
M13K  Dall Lake        5.08 287   P      Pn     14 11 07.8 +0.7
      baz=98,SNR=5.4
BERG  Berg Lake        5.08  73   Pn     Pn     14 11 06.8 -0.4
HARP  HAARP            5.16  49   P      Pn     14 11 07.7 -0.5
      baz=237,SNR=11
J16K  Anvik River      5.27 323   P      Pn     14 11 09.8 +0.1
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      baz=136,SNR=48
WACK  Wrangell Chich    5.28  55          Pn      14 11 09.7 -0.4
GLB   Gilahina Butte    5.29  62  IAML            14 12 09.7
      comp=E,107nm,0.9s
GLB                               IAML            14 12 10.1
      comp=N,139nm,0.9s
WASW  Wrangell South    5.32  56          Pn      14 11 10.2 -0.4
PAX   Paxson            5.38  43  IAML            14 12 12.7
      comp=E,103nm,0.7s
PAX                               IAML            14 12 26.1
      comp=N,96nm,1.1s
PAX   Paxson            5.38  43  P       Pn      14 11 11.2 -0.1
      baz=231,SNR=10
VRDI  Verde Repeater    5.39  64          Pn      14 11 10.8 -0.6
WAZA  Wrangell Mount    5.40  55          Pn      14 11 11.6 -0.1
CRQM  Cirque            5.42  70          Pn      14 11 11.6 -0.3
CRQE  Cirque            5.44  70  P       Pn      14 11 12.0 -0.2
      baz=259
SDPT  Sand Point        5.45 227          Pn      14 11 10.8 -1.3
SDPT  Sand Point        5.45 227  P       Pn      14 11 10.8 -1.3
SDPT  Sand Point        5.45 227  P       Pn      14 11 10.9 -1.1
      baz=40
CHNA  Chernabura Isl    5.55 219  P       Pn      14 11 11.9 -1.5
CHNA  Chernabura Isl    5.55 219  P       Pn      14 11 11.9 -1.5
      baz=34
I20K  Naaghedeneel      5.56 356  P       Pn      14 11 12.0 -1.5
      baz=175,SNR=5.4
MCARA McCarthy VSAT     5.63  63          Pn      14 11 14.6  0.0
MCARA McCarthy VSAT     5.63  63  P       Pn      14 11 14.8 +0.2
      baz=253
BARK  Barkley Ridge     5.68  74          Pn      14 11 15.3  0.0
GCSA  Galena City Sc    5.71 345          Pn      14 11 14.8 -0.7
GCSA  Galena City Sc    5.71 345  P       Pn      14 11 14.8 -0.7
      baz=163
NEA2  Nenana            5.74  20  P       Pn      14 11 14.4 -1.5
      baz=204,SNR=33
I17K  Unalakleet        5.75 327  P       Pn      14 11 16.4 +0.3
      baz=140,SNR=38
S12K  Black Hills       5.83 236  P       Pn      14 11 17.6 +0.3
      baz=48
KIAG  Kiagna River      5.83  69          Pn      14 11 17.1 -0.3
PTPK  Patty Peak        5.84  66          Pn      14 11 17.6 +0.1
BALM  Baldy             5.86  68          Pn      14 11 17.3 -0.4
K24K  Donnelly Dome     5.86  36  P       Pn      14 11 18.5 +0.8
      baz=223,SNR=13
PN7A  Pavlof North-7    5.99 234          Pn      14 11 19.7 +0.3
J14K  Nanvaranak Lak    5.99 310  P       Pn      14 11 19.5 +0.2
      baz=121,SNR=11
HDA   Harding Lake      6.02  28          Pn      14 11 18.6 -1.1
HDA   Harding Lake      6.02  28  P       Pn      14 11 19.5 -0.2
      baz=215,SNR=18
M26K  Nabesna, AK       6.03  54          Pn      14 11 19.6 -0.3
M26K  Nabesna, AK       6.03  54  P       Pn      14 11 20.3 +0.3
      baz=244,SNR=26
YAH   Yahtse            6.05  75          Pn      14 11 20.6 +0.2
GRNC  Granite Creek     6.09  71          Pn      14 11 20.6 -0.3
K13K  Kusilvak Mount    6.09 301          Pn      14 11 21.4 +0.7
K13K  Kusilvak Mount    6.09 301  P       Pn      14 11 20.9 +0.2
      baz=111,SNR=9.2
RIDG  Independent Ri    6.11  39  P       Pn      14 11 21.2 +0.2
      baz=227,SNR=13
BARN  Barnard Glacie    6.19  68          Pn      14 11 22.3  0.0
L26K  Log Cabin Wild    6.20  48          Pn      14 11 22.2  0.0
L26K  Log Cabin Wild    6.20  48  P       Pn      14 11 22.4 +0.1
      baz=238,SNR=8.1
I23K  Minto, Yukon-K    6.21  17  P       Pn      14 11 21.1 -1.2
      baz=201,SNR=15
COLA  College           6.22  23  P       Pn      14 11 20.4 -2.0
COLA  College           6.22  23  P       Pn      14 11 21.6 -0.8
      baz=208
H20K  Anotleneega Mo    6.27 355          Pn      14 11 22.7 -0.5
H20K  Anotleneega Mo    6.27 355  P       Pn      14 11 22.4 -0.7
      baz=174,SNR=14
DOT   Dot Lake          6.31  42          Pn      14 11 23.5 -0.2
H18K  Honhosa River     6.31 341          Pn      14 11 23.1 -0.7
H18K  Honhosa River     6.31 341  P       Pn      14 11 23.2 -0.6
      baz=157,SNR=18
CTG   Chitna Glacier    6.33  69  P       Pn      14 11 24.5 +0.4
      baz=260
CTGM  Chitina Glacie    6.33  69          Pn      14 11 24.2 +0.1
ILAR  Eielson Array     6.34  27  P       Pn      14 11 22.3 -1.7
      comp=N,11nm,0.5s,baz=218,slow=14,SNR=86
ILAR                              S       Sn      14 12 27.4 -7.5
      comp=N,6.2nm,0.4s,baz=170,slow=11,SNR=7.1
CHX   Chaix Hills       6.34  78          Pn      14 11 24.5 +0.2
H21K  Melozitna Rive    6.41   3  P       Pn      14 11 24.6 -0.5
      baz=184,SNR=30
H17K  Granite Mounta    6.42 335  P       Pn      14 11 24.7 -0.5
      baz=149,SNR=48
H19K  Roundabout Mou    6.42 349          Pn      14 11 24.9 -0.2
H19K  Roundabout Mou    6.42 349  P       Pn      14 11 24.2 -0.9
      baz=167,SNR=5.8
LOGN  Logan Glacier     6.46  71          Pn      14 11 26.0  0.0
M27K  Edge Creek, AK    6.48  57          Pn      14 11 26.2  0.0
M27K  Edge Creek, AK    6.48  57  P       Pn      14 11 26.4 +0.2
      baz=247
M11K  Mekoryuk          6.48 285          Pn      14 11 26.9 +0.9
M11K  Mekoryuk          6.48 285  P       Pn      14 11 25.5 -0.5
      baz=94
SAMH  Samovar Hills     6.51  77          Pn      14 11 26.7 +0.2
POKR  Poker Plat Res    6.52  23          Pn      14 11 25.7 -0.8
POKR  Poker Plat Res    6.52  23  P       Pn      14 11 25.4 -1.1
      baz=209,SNR=6.8
SCRK  Sand Creek        6.55  40          Pn      14 11 25.8 -1.3
SCRK  Sand Creek        6.55  40  P       Pn      14 11 26.4 -0.6
      baz=229,SNR=8.0
J25K  Salcha River,     6.59  32          Pn      14 11 26.2 -1.3
J25K  Salcha River,     6.59  32  P       Pn      14 11 26.9 -0.6
      baz=220,SNR=36
H22K  Ishtalitna Cre    6.72   8  P       Pn      14 11 28.3 -0.9
      baz=190,SNR=7.1
YUK2  White River       6.75  63          Pn      14 11 29.8 +0.1
H16K  Elim              6.76 326  P       Pn      14 11 29.8  0.0
      baz=139,SNR=26
PCA   Pinnacle          6.77  77          Pn      14 11 30.0 -0.1
PINM  Pinnacle          6.78  77  P       Pn      14 11 30.4 +0.3
      baz=269
L27K  Beaver Creek,     6.81  51          Pn      14 11 29.8 -0.7
L27K  Beaver Creek,     6.81  51  P       Pn      14 11 30.1 -0.4
      baz=242,SNR=9.3
H23K  Yukon River       6.83  14  P       Pn      14 11 29.6 -1.1
      baz=198
O28M  Mount Upton       6.85  72          Pn      14 11 31.8 +0.4
O28M  Mount Upton       6.85  72  P       Pn      14 11 31.8 +0.4
      baz=264,SNR=19
YUK3  Moose Creek       6.92  63          Pn      14 11 32.4 +0.2
YUK3  Moose Creek       6.92  63  P       Pn      14 11 32.4 +0.2
      baz=255,SNR=10.0
BVCY  Beaver Creek      6.94  58          Pn      14 11 32.5 +0.3
BVCY  Beaver Creek      6.94  58  P       Pn      14 11 32.8 +0.5
      baz=249,SNR=5.9
FALS  False Pass        6.97 235  P       Pn      14 11 32.2 -0.5
      baz=46
J26L  Joseph Creek      7.04  38          Pn      14 11 32.9 -0.8
J26L  Joseph Creek      7.04  38  P       Pn      14 11 33.8 +0.1
      baz=227,SNR=10
G18K  Tagagawik         7.05 343          Pn      14 11 32.8 -0.9
G18K  Tagagawik         7.05 343  P       Pn      14 11 32.6 -1.0
      baz=158
G17K  Kiwalik Mounta    7.06 335          Pn      14 11 33.0 -0.9
G17K  Kiwalik Mounta    7.06 335  P       Pn      14 11 32.9 -1.0
      baz=149,SNR=6.4
H24K  Noodor Dome       7.08  19  P       Pn      14 11 32.7 -1.4
      baz=205
G19K  Purcell Mounta    7.08 348  P       Pn      14 11 32.7 -1.4
      baz=165,SNR=13
BCPM  Bancas Point      7.08  79          Pn      14 11 34.3 +0.1
YUK8  Steele Glacier    7.13  68          Pn      14 11 36.1 +1.0
YUK8  Steele Glacier    7.13  68  P       Pn      14 11 36.3 +1.2
      baz=260,SNR=8.7
ISNN  Isanotski Nort    7.14 236          Pn      14 11 35.1 +0.1
G21K  Allakaket         7.27   0          Pn      14 11 36.4 -0.2
G21K  Allakaket         7.27   0  P       Pn      14 11 36.4 -0.2
      baz=180,SNR=55
G16K  Koyuk River       7.38 330          Pn      14 11 37.8 -0.3
G16K  Koyuk River       7.38 330  P       Pn      14 11 37.9 -0.2
      baz=142
G15K  Niukluk           7.55 324          Pn      14 11 41.0 +0.6
G15K  Niukluk           7.55 324  P       Pn      14 11 40.6 +0.2
      baz=134
O29M  Mount Kennedy     7.62  76  P       Pn      14 11 41.9 +0.4
      baz=269
G23K  Bananza Creek     7.63  11          Pn      14 11 40.3 -1.2
G23K  Bananza Creek     7.63  11  P       Pn      14 11 40.5 -1.1
      baz=194,SNR=22
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YUK4  Talbot Arm        7.68  68  P       Pn      14 11 43.7 +1.3
      baz=261,SNR=6.3
ANM   Nome              7.70 319  P       Pn      14 11 43.5 +1.1
      baz=128,SNR=23
I26K  Coal Creek Min    7.74  34          Pn      14 11 42.4 -0.6
I26K  Coal Creek Min    7.74  34  P       Pn      14 11 43.0  0.0
      baz=224
YUK6  Outpost Mounta    7.76  71          Pn      14 11 43.8 +0.2
YUK6  Outpost Mounta    7.76  71  P       Pn      14 11 43.7 +0.2
      baz=265
F19K  Shaleruckik Mo    7.82 348          Pn      14 11 43.4 -0.7
F19K  Shaleruckik Mo    7.82 348  P       Pn      14 11 43.5 -0.7
      baz=164
F18K  Selawik           7.86 342          Pn      14 11 44.0 -0.6
F18K  Selawik           7.86 342  P       Pn      14 11 43.8 -0.7
      baz=156
F20K  Avaraart Lake     7.87 354          Pn      14 11 44.4 -0.2
F20K  Avaraart Lake     7.87 354  P       Pn      14 11 44.5 -0.2
      baz=172,SNR=9.7
G24K  Hadweenzic Riv    7.94  18          Pn      14 11 44.2 -1.5
G24K  Hadweenzic Riv    7.94  18  P       Pn      14 11 44.4 -1.3
      baz=203,SNR=12
F21K  Alatna River      7.98   0  P       Pn      14 11 45.4 -0.9
      baz=180,SNR=11
F17K  Baldwin Pennin    8.00 337          Pn      14 11 46.0 -0.6
F17K  Baldwin Pennin    8.00 337  P       Pn      14 11 45.5 -1.0
      baz=150
M29M  Somme Creek       8.01  60          Pn      14 11 47.3 +0.5
M29M  Somme Creek       8.01  60  P       Pn      14 11 47.9 +1.1
      baz=254,SNR=19
YUK5  Granite Creek     8.02  70          Pn      14 11 47.1 +0.1
P29M  Windy Craggy      8.06  81          Pn      14 11 47.1 -0.2
P29M  Windy Craggy      8.06  81  P       Pn      14 11 47.4  0.0
      baz=275
COLD  Coldfoot          8.12   9          Pn      14 11 47.2 -0.9
COLD  Coldfoot          8.12   9  P       Pn      14 11 46.7 -1.4
      baz=192,SNR=9.7
HYT   Haines Junctio    8.17  72  P       Pn      14 11 48.4 -0.6
      baz=266
G25K  Bearman Lake      8.23  21  P       Pn      14 11 48.3 -1.4
      baz=208
F15K  North Star Dit    8.24 326          Pn      14 11 50.2 +0.4
F15K  North Star Dit    8.24 326  P       Pn      14 11 50.2 +0.4
      baz=136,SNR=23
DAWY  Dawson            8.25  48          Pn      14 11 50.0 -0.1
DAWY  Dawson            8.25  48  P       Pn      14 11 50.2 +0.2
      baz=241
L29M  L29M              8.37  56          Pn      14 11 51.9 +0.4
L29M  L29M              8.37  56  P       Pn      14 11 52.0 +0.4
      baz=250,SNR=6.7
E19K  Redstone River    8.38 350          Pn      14 11 51.7 +0.1
E19K  Redstone River    8.38 350  P       Pn      14 11 51.8 +0.2
      baz=167,SNR=44
I27K  Kandik River      8.40  36          Pn      14 11 51.9 -0.1
I27K  Kandik River      8.40  36  P       Pn      14 11 52.2 +0.2
      baz=227
P30M  Million Dollar    8.42  77  P       Pn      14 11 53.1 +0.7
      baz=272
N30M  Aishikik Lake     8.44  68          Pn      14 11 52.0 -0.5
N30M  Aishikik Lake     8.44  68  P       Pn      14 11 52.5  0.0
      baz=263,SNR=13
F14K  Arctic Creek      8.59 322          Pn      14 11 55.2 +0.8
F14K  Arctic Creek      8.59 322  P       Pn      14 11 54.0 -0.4
      baz=130
F24K  Squaw Lake        8.65  15          Pn      14 11 53.7 -1.6
F24K  Squaw Lake        8.65  15  P       Pn      14 11 53.8 -1.6
      baz=200,SNR=6.1
E17K  Hotham Inlet      8.68 338          Pn      14 11 54.5 -1.1
E17K  Hotham Inlet      8.68 338  P       Pn      14 11 54.6 -1.0
      baz=151
E18K  Tukpahlearik C    8.76 342  P       Pn      14 11 56.4 -0.4
      baz=156,SNR=12
PLBC  Pleasant Camp     8.77  81          Pn      14 11 57.5 +0.5
M30M  Minto, Yukon      8.79  61          Pn      14 11 56.9 -0.4
M30M  Minto, Yukon      8.79  61  P       Pn      14 11 57.6 +0.4
      baz=256
I28M  Miner Creek       8.83  40          Pn      14 11 57.7 -0.1
I28M  Miner Creek       8.83  40  P       Pn      14 11 57.7 -0.1
      baz=232
O30N  Mendenhall        8.86  73  Pn      Pn      14 11 59.2 +1.0
O30N  Mendenhall        8.86  73  P       Pn      14 11 58.8 +0.6
      baz=268
G26K  Porcupine Rive    8.86  26  P       Pn      14 11 57.8 -0.3
      baz=215
H27K  Steamboat Moun    8.87  33  P       Pn      14 11 58.0 -0.4
      baz=224
K29M  Barlow Dome       8.89  52  P       Pn      14 11 59.1 +0.3
      baz=247
E22K  Anaktuvuk Pass    8.93   4          Pn      14 11 58.4 -0.7
E22K  Anaktuvuk Pass    8.93   4  P       Pn      14 11 58.2 -0.9
      baz=186
P08K  Saint George I    8.93 259  P       Pn      14 11 59.2 +0.1
      baz=66
E23K  Chandalar         8.98   9  P       Pn      14 11 58.9 -1.0
      baz=193,SNR=6.8
UNV   Unalaska Valle    8.99 238  Pn      Pn      14 11 58.3 -1.6
UNV   Unalaska Valle    8.99 238  P       Pn      14 11 58.6 -1.3
UNV   Unalaska Valle    8.99 238  P       Pn      14 11 58.7 -1.3
      baz=47
MNAT  Makushin Natee    9.04 239          Pn      14 11 59.6 -1.1
F25K  Christian Rive    9.05  20          Pn      14 11 58.9 -1.9
F25K  Christian Rive    9.05  20  P       Pn      14 11 58.9 -1.9
      baz=207,SNR=8.0
N31M  Braeburn, Yuko    9.06  68          Pn      14 12 00.7 -0.2
N31M  Braeburn, Yuko    9.06  68  P       Pn      14 12 01.6 +0.6
      baz=264,SNR=7.7
E20K  Nigu River        9.09 354  P       Pn      14 12 01.0 -0.3
      baz=172,SNR=19
E24K  Your Creek        9.11  12  P       Pn      14 12 00.2 -1.3
      baz=197
MREP  Makushin Rep't    9.12 239          Pn      14 12 00.9 -0.9
S31K  Pelican           9.12  91  P       Pn      14 12 02.0 +0.3
      baz=286
BM01  Burnt Mountain    9.13  22          Pn      14 11 59.7 -2.1
TNA   Tin City          9.16 320  P       Pn      14 12 03.1 +0.9
      baz=127,SNR=11
E21K  Killik River      9.20 359  P       Pn      14 12 02.1 -0.7
      baz=179
G27K  Doyon Strip       9.27  30  P       Pn      14 12 03.3 -0.4
      baz=221
SKAG  Skagway           9.29  81  P       Pn      14 12 05.9 +1.9
SKAG  Skagway           9.29  81  P       Pn      14 12 05.6 +1.6
      baz=277
F26K  Sheenjek River    9.42  22  P       Pn      14 12 03.7 -2.0
      baz=211
WHY   Whitehorse        9.45  74  P       Pn      14 12 07.4 +1.1
      baz=270
D17K  Noatak River      9.46 337  P       Pn      14 12 06.3 +0.1
      baz=149
D19K  Kuna River        9.47 350  Pn      Pn      14 12 07.1 +0.7
D19K  Kuna River        9.47 350  P       Pn      14 12 06.8 +0.4
      baz=166,SNR=14
MAYO  Mayo, Yukon       9.48  55  P       Pn      14 12 04.8 -1.7
      baz=251
E25K  Arctic Village    9.54  18          Pn      14 12 05.4 -2.0
E25K  Arctic Village    9.54  18  P       Pn      14 12 05.5 -2.0
      baz=206,SNR=22
TOLK  Toolik Lake Re    9.56   9          Pn      14 12 06.7 -0.9
TOLK  Toolik Lake Re    9.56   9  P       Pn      14 12 06.9 -0.7
      baz=192
D20K  Etivluk River     9.57 353  P       Pn      14 12 07.3 -0.4
      baz=171,SNR=6.4
D22K  Ayikyak River     9.65   2  P       Pn      14 12 07.8 -1.0
      baz=183
J30M  Hart River        9.67  49          Pn      14 12 09.1 -0.1
J30M  Hart River        9.67  49  P       Pn      14 12 10.1 +0.9
      baz=245,SNR=5.7
RDOG  Red Dog Mine      9.73 339  P       Pn      14 12 10.2 +0.3
      baz=150
GAMB  Gambell           9.76 305  P       Pn      14 12 10.8 +0.5
      baz=109
D23K  Nanushuk River    9.81   6  Pn      Pn      14 12 10.2 -0.7
D23K  Nanushuk River    9.81   6  P       Pn      14 12 10.0 -0.9
      baz=189
M31M  Drury Creek, Y    9.81  64  P       Pn      14 12 11.8 +0.8
      baz=262
H29M  Whitestone        9.81  38  P       Pn      14 12 11.7 +0.7
      baz=232
SIT   Sitka             9.87  95  P       Pn      14 12 12.2 +0.4
SIT   Sitka             9.87  95  P       Pn      14 12 11.7 -0.1
      baz=291
C21K  Knifeblade Rid    9.94 357  P       Pn      14 12 11.4 -1.2
      baz=176
I30M  Mount Dempster    9.95  46  P       Pn      14 12 14.3 +1.3
      baz=242
C18K  Utukok River      9.98 344  Pn      Pn      14 12 13.8 +0.5
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C18K  Utukok River      9.98 344  P       Pn      14 12 13.8 +0.5
      baz=157,SNR=47
JIS   Juneau Island     9.99  87  P       Pn      14 12 14.9 +1.5
P32M  Atlin            10.10  80  P       Pn      14 12 15.9 +1.0
      baz=277
S32K  Killisnoo        10.12  92  Pn      Pn      14 12 15.4 +0.3
S32K  Killisnoo        10.12  92  P       Pn      14 12 15.8 +0.7
      baz=289
D24K  Happy Valley     10.12  10  P       Pn      14 12 13.8 -1.3
      baz=194
C17K  DeLong Mountai   10.15 339  P       Pn      14 12 15.2 -0.4
      baz=151,SNR=5.5
C19K  Lookout Ridge    10.21 348  P       Pn      14 12 16.2 -0.1
      baz=162,SNR=6.1
F28M  Old Crow         10.33  30  P       Pn      14 12 17.2 -0.8
      baz=223
N32M  Quiet Lake       10.34  71  P       Pn      14 12 19.0 +0.9
      baz=269
G29M  Pine Creek       10.36  36  P       Pn      14 12 19.1 +0.7
      baz=230
E27K  Coleen River     10.36  25  P       Pn      14 12 17.3 -1.2
      baz=216
B21K  Ikpikpuk River   10.40 358  P       Pn      14 12 18.8 -0.1
      baz=177
C16K  Lisburne Hills   10.41 335  P       Pn      14 12 18.5 -0.4
      baz=144
EPYK  Eagle Plains     10.44  40  P       Pn      14 12 19.9 +0.4
      baz=235
P33M  Teslin, Yukon    10.49  76          Pn      14 12 19.6 -0.7
P33M  Teslin, Yukon    10.49  76  P       Pn      14 12 20.3 +0.1
      baz=274
D25K  Kavik River      10.54  14  P       Pn      14 12 19.3 -1.6
      baz=201,SNR=16
NIKH  Nikolski High    10.62 240  P       Pn      14 12 22.0 +0.1
      baz=47
C23K  Itkillik River   10.68   5  P       Pn      14 12 21.2 -1.4
      baz=188
C24K  Franklin Bluff   10.69   9  P       Pn      14 12 20.9 -1.8
      baz=194
B18K  Kokolik River    10.73 344  P       Pn      14 12 22.7 -0.6
      baz=157,SNR=12
B20K  Meade River      10.88 353  P       Pn      14 12 23.4 -2.0
      baz=170,SNR=5.8
Q32M  Nakina River     10.93  83  P       Pn      14 12 26.8 +0.6
      baz=281
G30M  tAoh Zraii Nji   10.96  38  P       Pn      14 12 26.2 -0.3
      baz=234
H31M  Peel River       10.98  45  P       Pn      14 12 26.6  0.0
      baz=243
B22K  Teshekpuk Lake   11.11   0  P       Pn      14 12 25.7 -2.7
      baz=180
E28M  Babbage River    11.16  27  P       Pn      14 12 28.4 -0.8
      baz=220
T33K  Petersburg       11.17  94  P       Pn      14 12 30.2 +0.9
      baz=292
C27K  Jago River       11.20  18  P       Pn      14 12 29.1 -0.5
      baz=207
C26K  Camden Bay       11.29  15  P       Pn      14 12 30.4 -0.4
      baz=203
U33K  Whale Pass       11.36  97  P       Pn      14 12 31.8  0.0
      baz=295
D27M  Malcolm River    11.36  23  P       Pn      14 12 31.6 -0.3
      baz=215
E29M  Blow River       11.41  30  P       Pn      14 12 32.0 -0.4
      baz=225
A19K  Wainwright       11.42 347  P       Pn      14 12 32.1 -0.4
      baz=160
F30M  Barrier River    11.48  36  P       Pn      14 12 33.8 +0.5
      baz=232,SNR=8.7
R33M  Jennings River   11.51  80  P       Pn      14 12 34.3 +0.3
      baz=279
G31M  Satah River      11.56  40  P       Pn      14 12 34.1 -0.3
      baz=238
WRAK  Wrangell Islan   11.63  95  P       Pn      14 12 35.9 +0.5
      baz=293
CRAG  Craig            11.64 100  Pn      Pn      14 12 34.3 -1.2
CRAG  Craig            11.64 100  P       Pn      14 12 36.3 +0.8
CRAG  Craig            11.64 100  P       Pn      14 12 36.1 +0.6
      baz=298
S34M  Telegraph Cree   11.75  87  P       Pn      14 12 37.8 +0.8
      baz=286,SNR=5.7
D28M  Stokes Point     11.91  26  P       Pn      14 12 38.9 -0.1
      baz=220
F31M  Tsiigehtchic     12.02  39  P       Pn      14 12 39.9 -0.5
      baz=237
A21K  Barrow           12.16 355  P       Pn      14 12 41.1 -1.1
      baz=173
V35K  Ketchikan        12.47  99  P       Pn      14 12 47.3 +0.9
      baz=298
T35M  Bob Quinn        12.50  91  P       Pn      14 12 47.9 +1.1
      baz=291
INK   Inuvik           12.58  36  P       Pn      14 12 47.8  0.0
      comp=N,4.2nm,0.8s,baz=246,slow=11,SNR=12
INK   Inuvik           12.58  36          Pn      14 12 46.0 -1.8
INK   Inuvik           12.58  36  P       Pn      14 12 47.9 +0.1
      baz=234
U35K  Hyder            13.02  95  P       Pn      14 12 54.4 +0.8
      baz=295
ATKA  Atka Island      13.59 248  Pn      Pn      14 13 01.2 +0.3
ATKA  Atka Island      13.59 248  P       Pn      14 13 02.9 +2.0
TOAD  Toad River Com   14.52  79  P       Pn      14 13 14.1 +1.3
      baz=284
KOTAN Kotaneelee Air   14.85  74  P       Pn      14 13 17.3 +0.3
      baz=280
ETKA  Kagalaska Isla   14.86 250          Pn      14 13 17.2  0.0
WRGLY Wrigley          14.92  62  P       Pn      14 13 18.8 +1.0
      baz=269
ADK   Adak             14.98 251  P       Pn      14 13 19.9 +1.2
C36M  Paulatuk         16.07  39  P       Pn      14 13 31.4 -0.7
      baz=246
A36M  Sachs Harbour    17.02  30  Pn      Pn      14 13 42.9 -0.7
A36M                              IAmb    IAmb    14 13 48.0
      comp=Z,19nm,0.7s
A36M  Sachs Harbour    17.02  30  P       Pn      14 13 43.2 -0.4
      baz=236,SNR=24
YKA   Yellowknife Ar   19.01  64  P       P       14 14 06.6 +1.2
      comp=Z,1.1nm,0.6s,baz=278,slow=11,SNR=16
EDM   Edmonton         22.85  88  P       P       14 14 46.5 +0.3
EDM                               IAmb    IAmb    14 14 48.7
      comp=Z,9.7nm,0.8s
MXC   Moxie City       23.44 108  P       P       14 14 53.4 +1.7
E07A  Sunnyside        23.66 108  P       P       14 14 55.7 +1.9
E07A                              IAmb    IAmb    14 14 57.5
      comp=Z,14nm,1.1s
WAH2  Wahluke Slope    23.67 107  P       P       14 14 55.5 +1.8
F10A  Beach Ranch, E   25.37 105  P       P       14 15 10.9 +1.6
F10A                              IAmb    IAmb    14 15 12.5
      comp=Z,7.3nm,0.7s
PLID  Pearl Lake       26.61 106  P       P       14 15 22.2 +1.6
PETK  Petropavlovsk-   27.30 279  P       P       14 15 26.5 +0.1
      comp=Z,2.1nm,0.4s,baz=65,slow=12,SNR=6.1
      comp=Z,2.1nm,0.4s
O03E  Paynes Creek     27.52 119  P       P       14 15 30.4 +1.7
O03E                              IAmb    IAmb    14 15 59.2
      comp=Z,8.7nm,1.1s
MFID  Camas Ranch      27.91 108  P       P       14 15 33.6 +1.5
BCYI  Bear Canyon      28.45 104  P       P       14 15 38.7 +1.7
NVAR  Mina Array Bea   30.62 117  P       P       14 15 59.2 +3.0
      comp=Z,1.9nm,0.7s,baz=310,slow=9.2,SNR=15
NVAR                              PcP     PcP     14 18 52.9 +1.2
      comp=Z,0.6nm,0.7s,baz=324,slow=1.9,SNR=5.1
      comp=Z,1.9nm,0.7s
ILON  Igloolik, Nuna   30.73  41  IAmb    IAmb    14 15 59.1
      comp=Z,7.0nm,0.9s
PDAR  Pinedale Array   31.50 102  P       P       14 16 07.2 +3.2
      comp=Z,1.7nm,0.7s,baz=307,slow=5.4,SNR=16
      comp=Z,1.7nm,0.7s
PDAR  Pinedale Array   31.50 102  P       P       14 16 06.4 +2.4
SCHQ  Schefferville    44.19  56  P       P       14 17 50.5 +0.5
      comp=Z,1.4nm,0.6s,baz=281,slow=5.3,SNR=5.2
      comp=Z,1.4nm,0.6s
SCHQ  Schefferville    44.19  56  P       P       14 17 50.1 +0.1
NRIK  Noril'sk         44.42 334  P       P       14 17 50.8 -0.9
      comp=Z,4.9nm,0.4s,baz=57,slow=5.3,SNR=9.7
      comp=Z,4.9nm,0.4s
NRIK  Noril'sk         44.42 334  IAmb    IAmb    14 17 51.3
      comp=Z,6.0nm,0.6s
TXAR  Lajitas Array    44.99 109  P       P       14 17 59.3 +2.5
      comp=Z,2.7nm,0.7s,baz=324,slow=6.3,SNR=33
      comp=Z,2.7nm,0.7s
USRK  Ussuriysk Ar.    45.97 285  P       P       14 18 03.1 -1.0
      comp=Z,2.5nm,0.6s,baz=53,slow=9.7,SNR=5.0
      comp=Z,2.5nm,0.6s
HILR  Hailar Array B   47.90 299  P       P       14 18 18.6 -0.5
      comp=Z,2.0nm,0.3s,baz=49,slow=9.4,SNR=8.1
      comp=Z,2.0nm,0.3s
ARCES ARCESS Array B   51.48   0  P       P       14 18 44.9 -1.1
      comp=Z,1.5nm,0.8s,baz=344,slow=5.6,SNR=1.5
```

	comp=Z,1.5nm,0.8s						
KSRS	**Korea Array**	**53.07**	**283**	P	**P**	**14 18 58.8**	**+0.7**
	comp=Z,2.7nm,0.6s,baz=38,slow=7.0,SNR=8.6						
	comp=Z,2.7nm,0.6s						
JNU	**Nakatsue**	**54.98**	**277**	LR	LR	14 41 58.1	
	comp=Z,146nm,21.7s,baz=252,slow=35						
SONM	**Songino Array**	**55.00**	**306**	P	**P**	**14 19 12.7**	**+0.6**
	comp=Z,4.9nm,0.7s,baz=42,slow=7.6,SNR=20						
	comp=Z,4.9nm,0.7s						
SONM	**Songino Array**	**55.00**	**306**	P	**P**	**14 19 12.7**	**+0.6**
SONM				IAmb	IAmb	14 19 13.3	
	comp=Z,5.0nm,0.8s						
ZALV	**Zalesovo Beam**	**57.80**	**324**	P	**P**	**14 19 31.1**	**-0.5**
	comp=Z,1.5nm,0.3s,baz=21,slow=7.0,SNR=11						
	comp=Z,1.5nm,0.3s						
ZALV	**Zalesovo Beam**	**57.80**	**324**	P	**P**	**14 19 30.9**	**-0.7**
HHC	**Hu-ho-hao-te**	**58.28**	**297**	*e*P	**P**	**14 19 37.9**	**+2.6**
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
FINES	**FINESS Array B**	**59.61**	**0**	P	**P**	**14 19 45.1**	**+1.0**
	comp=Z,2.4nm,0.7s,baz=343,slow=8.7,SNR=3.0						
	comp=Z,2.4nm,0.7s						
HFS	**Hagfors**	**60.51**	**7**	P	**P**	**14 19 49.4**	**-0.8**
	comp=Z,4.9nm,1.1s,baz=358,slow=4.7,SNR=5.0						
	comp=Z,4.9nm,1.1s						
BVAR	**Borovoye Array**	**62.58**	**332**	P	**P**	**14 20 04.0**	**-0.3**
	comp=Z,2.2nm,0.6s,baz=25,slow=5.6,SNR=15						
	comp=Z,2.2nm,0.6s						
KURBB	**Kurchatov Arra**	**62.58**	**326**	P	**P**	**14 20 04.0**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=30,slow=6.4,SNR=1.9						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**64.83**	**321**	P	**P**	**14 20 17.5**	**-1.6**
	comp=Z,0.2nm,0.4s,baz=21,slow=5.1,SNR=5.7						
	comp=Z,0.2nm,0.4s						
OBN	**Obninsk**	**65.67**	**354**	LR	LR	14 52 58.2	
	comp=Z,163nm,21.3s,baz=218,slow=40						
AKASG	**Malin Array Be**	**70.36**	**358**	P	**P**	**14 20 51.5**	**-2.2**
	comp=Z,1.0nm,0.5s,baz=6.2,slow=6.1,SNR=3.3						
ESDC	**Sonseca Array**	**78.23**	**24**	LR	LR	14 59 45.9	
	comp=Z,79nm,18.3s,baz=122,slow=38						
QSPA	**South Pole Qui**	**149.07**	**180**	PKPbc	**PKPbc**	**14 29 26.6**	**+0.6**
	comp=Z,2.8nm,0.6s,baz=288,slow=0.6,SNR=22						
BOSA	**Boshof**	**149.33**	**2**	PKPbc	**PKPbc**	**14 29 27.6**	**-0.3**
	comp=Z,3.2nm,0.6s,baz=353,slow=2.7,SNR=8.1						

GCG ***19*** *14:23:38.4±1.5, 13°.52N×91°.36W, h13^{km}±21^{km}, MD4.1, ML4.0, MW3.7*

SNET ***19*** *14:23:40.0±1.4, 13°.62N×91°.34W, h64^{km}±16^{km}, ML4.1*

CATAC ***19*** *14:23:41.1±0.6, 14°N±3°×9°1W±°, h30^{km}±6^{km}, M4.2/24, MLv4.2/24, Error ellipse: s-maj=7.6km s-min=2.8km az=39.5, confirmed*

IDC ***19*** *14:23:42.8±3.1, 13°.55N×91°.30W, h41^{km}±27^{km}, mb3.4/4, mbtmp3.7/7, ML3.8/3, MS3.0/1, Error ellipse: s-maj=27.0km s-min=18.3km az=127.0*

ISC 19 14:23:41.8±0.9**, 13°.64N**±0°.06×**91°.21W**±0°.04**, h29^{km}, n75, σ1^{s}34**/80**, mb3.7**/4**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG5	**El Palmar, Qui**	**0.77**	**350**	*i* P	**Pn**	**14 23 59.2**	**+2.3**
STG8	**El Palmar, Qui**	**0.82**	**350**	*i* P	**Pb**	**14 24 00.4**	**+2.7**
FG16	**Alotenango, Sa**	**0.93**	**47**	*i* P	**Pn**	**14 23 58.2**	**-0.9**
FG16				*i* S	**Sb**	**14 24 12.4**	**+0.8**
PCG5	**San Vicente Pa**	**0.99**	**54**	*i* P	**Pn**	**14 23 58.7**	**-1.2**
PCG5				*i* P	**Pb**	**14 23 59.0**	**-1.6**
RTAL	**Retalhuleu**	**1.00**	**332**	P	**Pn**	**14 23 58.3**	**-1.6**
RTAL	**Retalhuleu**	**1.00**	**332**	S	**Sn**	**14 24 11.1**	**-2.0**
FAME	**Alcaldia de Sa**	**1.18**	**80**	P	**Pn**	**14 24 01.4**	**-1.0**
SOKI	**Kika Raxquin**	**1.19**	**351**	*i* P	**Pn**	**14 24 01.9**	**-1.0**
NUBE	**Las Nubes**	**1.41**	**79**	*e*P	**Pn**	**14 24 04.9**	**-0.8**
NUBE	**Las Nubes**	**1.41**	**79**	*i* P	**Pn**	**14 24 05.0**	**-0.8**
NUBE	**Las Nubes**	**1.41**	**79**	P	**Pn**	**14 24 05.0**	**-0.8**
NUBE	**Las Nubes**	**1.41**	**79**	S	**Sn**	**14 24 23.5**	**0.0**
SLOZ	**Alcaldia de Sa**	**1.44**	**74**	P	**Pn**	**14 24 01.5**	**-4.5**
APG	**El Apazote**	**1.54**	**28**	P	**Pn**	**14 24 08.5**	**+1.0**
	23nm,0.4s,baz=158,slow=9.9,SNR=135						
APG				S	**Sb**	**14 24 30.0**	**+0.9**
	54nm,0.7s,baz=143,slow=9.9,SNR=16						
RTR	**El Retiro**	**1.54**	**80**	*e*P	**Pn**	**14 24 07.4**	**-0.1**
CEVE	**Cerro Verde**	**1.55**	**83**	*e*P	**Pn**	**14 24 07.3**	**-0.4**
CEVE	**Cerro Verde**	**1.55**	**83**	S	**Sn**	**14 24 27.6**	**+0.5**
CEVE	**Cerro Verde**	**1.55**	**83**	P	**Pn**	**14 24 06.7**	**-1.0**
RBDL	**Robledal**	**1.55**	**72**	*e*P	**Pn**	**14 24 08.3**	**+0.6**
SBLS	**San Blas**	**1.56**	**82**	*e*P	**Pn**	**14 24 07.4**	**-0.4**
QUIS	**Sacapulas**	**1.65**	**4**	*i* P	**Pb**	**14 24 10.3**	**-1.3**
QUIS				*i* S	**Sb**	**14 24 34.2**	**+2.1**
UNIC	**Universidad Ca**	**1.65**	**78**	S	**Sn**	**14 24 30.8**	**+1.6**
UNIC	**Universidad Ca**	**1.65**	**78**	P	**Pn**	**14 24 08.7**	**-0.2**
HUEH	**Huehuetenango**	**1.69**	**350**	P	**Pn**	**14 24 10.6**	**+0.9**
JAYA	**Jayaque - finc**	**1.71**	**89**	*e*P	**Pn**	**14 24 10.4**	**+0.5**
JAYA	**Jayaque - finc**	**1.71**	**89**	P	**Pn**	**14 24 10.3**	**+0.5**
JAYA	**Jayaque - finc**	**1.71**	**89**	S	**Sn**	**14 24 30.0**	**-0.9**
CEDA	**San Andres**	**1.77**	**84**	P	**Pn**	**14 24 10.2**	**-0.4**
CEDA	**San Andres**	**1.77**	**84**	S	**Sn**	**14 24 32.5**	**+0.3**
LALI	**Alcalda de L**	**1.84**	**94**	P	**Pn**	**14 24 11.7**	**+0.2**
LALI	**Alcalda de L**	**1.84**	**94**	S	**Sn**	**14 24 35.8**	**+1.9**
PMON	**Piamonte**	**1.84**	**87**	*e*P	**Pn**	**14 24 11.5**	**-0.1**
PMON	**Piamonte**	**1.84**	**87**	P	**Pn**	**14 24 12.1**	**+0.5**
PMON	**Piamonte**	**1.84**	**87**	S	**Sn**	**14 24 35.9**	**+1.8**
BOQS	**Boqueron**	**1.88**	**87**	*e*P	**Pn**	**14 24 12.2**	**0.0**
MTO3	**Montecristo**	**1.95**	**67**	*e*P	**Pn**	**14 24 12.9**	**-0.3**
MTO3	**Montecristo**	**1.95**	**67**	P	**Pn**	**14 24 13.9**	**+0.7**
MTO3	**Montecristo**	**1.95**	**67**	S	**Sb**	**14 24 39.8**	**-0.9**
UTEC	**Universidad Te**	**1.95**	**88**	S	**Sn**	**14 24 38.6**	**+1.8**
PANCS	**Alcalda de**	**1.97**	**91**	S	**Sn**	**14 24 38.4**	**+1.2**
LOMA	**Loma Larga**	**1.98**	**90**	P	**Pn**	**14 24 13.5**	**-0.1**
LOMA	**Loma Larga**	**1.98**	**90**	S	**Sb**	**14 24 39.9**	**-1.8**
IGN	**Direccin Gen**	**1.98**	**88**	S	**Sn**	**14 24 38.8**	**+1.4**
ESQI	**Esquipulas**	**2.03**	**63**	*e*P	**Pn**	**14 24 15.2**	**+1.0**
ESQI	**Esquipulas**	**2.03**	**63**	P	**Pn**	**14 24 15.2**	**+1.0**
ESQI	**Esquipulas**	**2.03**	**63**	S	**Sn**	**14 24 40.0**	**+1.3**
PAVA	**Las Pavas**	**2.21**	**88**	*e*P	**Pn**	**14 24 17.1**	**+0.5**
PAVA	**Las Pavas**	**2.21**	**88**	P	**Pn**	**14 24 17.0**	**+0.3**
PAVA	**Las Pavas**	**2.21**	**88**	S	**Sn**	**14 24 44.5**	**+1.3**
LLGN	**La Laguna**	**2.26**	**76**	P	**Pn**	**14 24 17.7**	**+0.3**
LLGN	**La Laguna**	**2.26**	**76**	S	**Sn**	**14 24 46.6**	**+2.3**
UESV	**Universidad de**	**2.35**	**90**	S	**Sn**	**14 24 48.1**	**+1.5**
TECO	**Alcaldia de Te**	**2.36**	**92**	S	**Sn**	**14 24 48.9**	**+2.1**
SCLA	**Alcaldia de Sa**	**2.41**	**88**	P	**Pn**	**14 24 19.4**	**0.0**
SCLA	**Alcaldia de Sa**	**2.41**	**88**	S	**Sn**	**14 24 49.9**	**+1.8**
PACA	**Pacayal**	**2.81**	**93**	S	**Sn**	**14 25 00.3**	**+2.3**
CNCH	**Conchagua**	**3.30**	**96**	P	**Pn**	**14 24 32.6**	**+0.9**
CSGN	**Cosiguina Volc**	**3.61**	**100**	P	**Pn**	**14 24 36.4**	**+0.4**
CSGN				S	**Sn**	**14 25 20.0**	**+2.3**
PKGN	**Cerro Pekin**	**4.23**	**103**	P	**Pn**	**14 24 44.7**	**+0.2**
YUSH	**Yuscaran**	**4.25**	**85**	P	**Pn**	**14 24 45.4**	**+0.5**
POLN	**Al Sur del Vol**	**4.39**	**102**	P	**Pn**	**14 24 46.9**	**+0.2**
CNGN	**Cerro Negro**	**4.54**	**104**	P	**Pn**	**14 24 50.1**	**+1.4**
MOMN	**Momotombo**	**4.71**	**104**	P	**Pn**	**14 24 51.9**	**+0.8**
COPN	**Copaltepe**	**4.73**	**107**	P	**Pn**	**14 24 53.1**	**+1.8**
LIMN	**Finca el Limon**	**4.75**	**96**	P	**Pn**	**14 24 52.2**	**+0.6**
RCVN	**Varillal2**	**4.88**	**90**	P	**Pn**	**14 24 53.5**	**+0.1**
CMIG	**Matias Romero**	**4.93**	**315**	P	**Pn**	**14 24 52.4**	**-1.6**
	1.5nm,0.3s,baz=141,slow=13,SNR=8.2						
CMIG				S	**Sn**	**14 25 51.5**	**+1.3**
	19nm,0.6s,baz=42,slow=9.9,SNR=4.0						
CMIG				LR	LR	14 26 59.1	
	comp=Z,177nm,21.4s,baz=168,slow=40						
	8.4nm,0.3s						
JTS	**Las Juntas de**	**6.97**	**118**	P	**Pn**	**14 25 24.0**	**+1.9**
	0.8nm,0.3s,baz=315,slow=20,SNR=1.6						
	3.9nm,0.4s						
TXAR	**Lajitas Array**	**19.42**	**326**	P	**Pn**	**14 28 07.6**	**+0.2**
	0.2nm,0.3s,baz=152,slow=13,SNR=17						
	1.4nm,0.6s						
H06E1	**SOCORRO T-PHAS**	**19.61**	**288**	T	T	14 48 18.0	
	SNR=9.9						
PDAR	**Pinedale Array**	**33.07**	**335**	P	**P**	**14 30 15.8**	**+0.6**
	0.3nm,0.7s,baz=158,slow=8.6,SNR=2.9						
	0.3nm,0.7s						
NVAR	**Mina Array Bea**	**34.44**	**321**	P	**P**	**14 30 28.6**	**+1.5**
	1.3nm,0.6s,baz=131,slow=8.1,SNR=14						
	1.3nm,0.6s						
YKA	**Yellowknife Ar**	**51.55**	**346**	P	**P**	**14 32 42.9**	**-2.1**
	0.5nm,0.8s,baz=154,slow=7.5,SNR=7.3						
	0.5nm,0.8s						
ILAR	**Eielson Array**	**63.47**	**337**	P	**P**	**14 34 07.5**	**-1.4**
	1.0nm,0.9s,baz=130,slow=4.9,SNR=8.7						
	1.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**146.57**	**342**	PKPbc	**PKPbc**	**14 43 20.6**	**-0.8**
	1.9nm,0.6s,baz=335,slow=4.3,SNR=10						

IDC ***19*** *14:27:34.2±3.5, 6°.36S×130°.97E, h49^{km}±35^{km}, mb3.9/12, mbtmp4.2/15, ML4.5/3, Error ellipse: s-maj=30.4km s-min=18.4km az=73.0*

NEIC ***19*** *14:27:38.5±2.1, 6°.35S±0°.06×130°.6E±0°.1, h111^{km}±10^{km}, mb4.0/11, Error ellipse: s-maj=16.0km s-min=8.2km az=91.0*

DJA ***19*** *14:27:40.4±0.2, 6°S±2°×13°1E±°, h125^{km}±4^{km}, M4.7/25, mb4.5/25, mB5.3/7, MLv4.8/18, Mw(mB)4.7/7, MwMwp5.1/1, Mwp5.4/1*

ISC 19 14:27:38.4±0.4**, 6°.41S**±0°.04×**130°.74E**±0°.05**, h100^{km}, n84, σ2^{s}16**/78**, mb4.0**/18**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.66**	**160**	Pn	**Pn**	**14 28 09.2**	**+2.5**
SAUI				Sn	**Sn**	**14 28 29.1**	**+1.0**
SAUI	**Saumlaki**	**1.66**	**160**	P	**Pn**	**14 28 09.9**	**+3.2**
SAUI	**Saumlaki**	**1.66**	**160**	P	**Pn**	**14 28 09.8**	**+3.1**
SAUI				S	**Sn**	**14 28 32.8**	**+4.7**
BNDI	**Bandanaira**	**2.05**	**336**	P	**Pn**	**14 28 15.0**	**+3.3**
BNDI	**Bandanaira**	**2.05**	**336**	P	**Pn**	**14 28 14.8**	**+3.1**
MSAI	**Masohi**	**3.54**	**329**	P	**Pn**	**14 28 34.5**	**+3.0**
AAI	**Ambon**	**3.71**	**317**	P	Pn	14 28 37.2	+3.5
FAKI	**Fak Fak**	**3.78**	**24**		**Pn**	**14 28 34.6**	**-0.1**
FAKI				Sn	**Sn**	**14 29 15.3**	**-3.0**
FAKI	**Fak Fak**	**3.78**	**24**	P	**Pn**	**14 28 34.8**	**+0.1**
FAKI	**Fak Fak**	**3.78**	**24**	P	**Pn**	**14 28 34.7**	**-0.1**
KRAI	**Karang Ratu**	**3.86**	**323**	P	Pn	14 28 40.5	+4.7
KMPI	**Kaimana, Papua**	**4.02**	**47**	P	**Pn**	**14 28 38.1**	**+0.1**
NLAI	**Namlea**	**4.80**	**311**	P	Pn	14 28 54.5	+6.0
SWI	**Sorong**	**5.54**	**5**	P	**Pn**	**14 28 58.0**	**-0.5**
	1.6nm50nm,0.5s						
RKPI	**Ransiki, Papua**	**5.95**	**35**	P	**Pn**	**14 29 04.9**	**+0.7**
DRS	**Darwin Rock St**	**5.99**	**179**	P	**Pn**	**14 29 06.2**	**+1.6**
MWPI	**Manokwari, Pap**	**6.36**	**31**	P	**Pn**	**14 29 11.3**	**+1.6**
MTN	**Manton Dam**	**6.40**	**177**		**Pn**	**14 29 10.8**	**+0.6**
MTN				Sn	**Sn**	**14 30 20.2**	**-1.7**
SANI	**Sanana**	**6.42**	**312**	P	Pn	14 29 14.7	+4.2
SANI	**Sanana**	**6.42**	**312**	P	Pn	14 29 14.1	+3.6
	0.2nm41nm,0.5s						
SOEI	**Soe**	**7.22**	**242**	Pn	**Pn**	**14 29 20.2**	**-1.3**
SOEI	**Soe**	**7.22**	**242**	P	**Pn**	**14 29 25.0**	**+3.5**
	0.6nm46nm,0.6s						
BAKI	**Biak**	**7.45**	**46**	P	**Pn**	**14 29 26.3**	**+1.7**
	0.4nm93nm,1.0s						
BATI	**Baumata**	**7.95**	**241**	P	**Pn**	**14 29 34.2**	**+2.8**
	48nm,0.4s,baz=99,slow=1.9,SNR=16						
BATI				S	**Sn**	**14 31 00.8**	**+1.0**
	38nm,0.4s,baz=104,slow=22,SNR=7.8						
BATI	**Baumata**	**7.95**	**241**	P	**Pn**	**14 29 34.4**	**+3.0**
SMPI	**Sarmi**	**9.08**	**61**	P	**Pn**	**14 29 47.7**	**+1.0**
	53nm,1.0s						
EDFI	**Ende, Flores**	**9.27**	**255**	P	Pn	14 29 54.1	+4.8
KNRA	**Kununurra**	**9.41**	**192**		**Pn**	**14 29 50.4**	**-0.7**
GENI	**Genyem**	**10.13**	**68**	P	**Pn**	**14 30 00.2**	**-0.8**
	51nm,1.3s						
GTOI	**Gorontalo**	**10.42**	**312**	P	Pn	14 30 10.8	+5.9
	19nm,0.8s						
JAY	**Jayapura**	**10.66**	**69**	P	**Pn**	**14 30 09.3**	**+1.0**
	32nm,0.8s,baz=174,slow=2.8,SNR=6.1						
JAY	**Jayapura**	**10.66**	**69**	P	**Pn**	**14 30 08.9**	**+0.6**
	6µm41nm,0.9s						
BASI	**Baing, Sumba**	**10.74**	**249**	P	**Pn**	**14 30 11.8**	**+2.5**
WSI	**Waingapu**	**10.83**	**252**	P	**Pn**	**14 30 12.4**	**+1.8**
	2µm66nm,1.1s						
LBFI	**Labuhan Bajo,**	**10.95**	**259**	P	Pn	14 30 17.0	+4.8
	19nm,1.1s						
MRSI	**Marisa**	**11.13**	**308**	P	Pn	14 30 18.4	+3.8
	30nm,0.7s						
WBSI	**Waikabubak, Su**	**11.69**	**253**	P	**Pn**	**14 30 23.6**	**+1.5**
	31nm,1.0s						
TOLI2	**Tolitoli**	**12.44**	**307**	Pn	**P**	**14 30 35.8**	**-3.9**
TOLI2	**Tolitoli**	**12.44**	**307**	P	**Pn**	**14 30 34.1**	**+2.1**
DBNI	**Kabupaten Domp**	**12.50**	**260**	P	**Pn**	**14 30 35.2**	**+2.4**
FITZ	**Fitzroy Crossi**	**12.64**	**203**	P	**Pn**	**14 30 32.6**	**-2.0**
	4.9nm,0.3s,baz=32,slow=10,SNR=86						
FITZ				S	Sn	14 32 43.2	-10
	17nm,0.3s,baz=213,slow=16,SNR=9.3						
	12nm,0.3s						
FITZ	**Fitzroy Crossi**	**12.64**	**203**		**Pn**	**14 30 32.4**	**-2.2**
PLAI	**Plampang**	**13.07**	**259**	P	**Pn**	**14 30 42.3**	**+1.9**
PLAI	**Plampang**	**13.07**	**259**	P	**Pn**	**14 30 41.2**	**+0.8**
	21nm,0.9s						
WB0	**Warramunga Arr**	**13.74**	**165**		**Pn**	**14 30 45.8**	**-3.3**
WRAB	**Tennant Creek**	**13.89**	**166**		**Pn**	**14 30 47.6**	**-3.5**
WRA	**Warramunga Arr**	**13.90**	**166**	P	Pn	14 30 47.6	-3.6
	1.4nm,0.3s,baz=331,slow=14,SNR=37						
WRA				S	Sn	14 33 11.0	-13
	7.0nm,0.3s,baz=331,slow=23,SNR=15						
	3.1nm,0.5s						
WR8	**Warramunga Arr**	**13.95**	**165**		**Pn**	**14 30 48.4**	**-3.4**
COEN	**Coen**	**14.35**	**122**	Pn	**Pn**	**14 30 55.4**	**-1.6**
COEN	**Coen**	**14.35**	**122**	P	**Pn**	**14 30 56.2**	**-0.8**
PMG	**Port Moresby**	**16.53**	**101**	P	**Pn**	**14 31 26.3**	**+1.9**
	13nm,0.6s,baz=294,slow=3.9,SNR=6.4						
PMG	**Port Moresby**	**16.53**	**101**	P	**Pn**	**14 31 24.6**	**+0.2**
PMG	**Port Moresby**	**16.53**	**101**	P	**Pn**	**14 31 26.0**	**+1.6**
	25nm,1.2s						
GMJI	**Gumukmas**	**17.25**	**263**	P	**P**	**14 31 34.1**	**+0.8**
AS31	**Alice Springs**	**17.42**	**170**		**P**	**14 31 31.6**	**-3.5**
ASAR	**Alice Springs**	**17.43**	**170**	P	**P**	**14 31 34.2**	**-0.9**
	0.9nm,0.3s,baz=350,slow=14,SNR=70						
ASAR				S	Sn	14 34 39.7	-10
	4.3nm,0.6s,baz=350,slow=23,SNR=8.7						
	2.0nm,0.4s						
ASAR	**Alice Springs**	**17.43**	**170**	P	**P**	**14 31 33.6**	**-1.6**
MBWA	**Marble Bar**	**18.13**	**215**	P	**Pn**	**14 31 43.9**	**+0.2**
MBWA				IAmb	IAmb	14 31 49.8	
	comp=Z,8.6nm,0.9s						
PSA00	**Pilbara Seismi**	**18.39**	**214**	P	**P**	**14 31 42.2**	**-3.5**
KKM	**Kota Kinabalu**	**19.06**	**310**	P	**P**	**14 31 50.3**	**-2.9**
CTAO	**Charters Tower**	**20.29**	**134**	P	**P**	**14 32 06.4**	**0.0**
CTAO				IAmb	IAmb	14 32 10.1	
	comp=Z,14nm,1.1s						
SBUM	**Sibu**	**20.48**	**295**	P	**P**	**14 32 06.6**	**-1.8**
SBUM				IAmb	IAmb	14 32 13.7	
	comp=Z,3.5nm,0.8s						
BBOO	**Buckleboo**	**26.73**	**170**	P	**P**	**14 33 08.7**	**+0.1**
BBOO				IAmb	IAmb	14 33 28.1	
	comp=Z,5.4nm,1.1s						
IPM	**Ipoh**	**31.58**	**289**	P	**P**	**14 33 48.0**	**-3.9**
IPM				IAmb	IAmb	14 33 57.6	
	comp=Z,3.6nm,0.8s						
PSI	**Prapat**	**33.06**	**285**	P	P	14 34 08.8	+3.9
	comp=Z,6.1nm,0.7s,baz=159,slow=8.6,SNR=2.5						
	comp=Z,6.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**39.93**	**309**	P	**P**	**14 35 05.2**	**+2.1**
	comp=Z,1.4nm,0.6s,baz=138,slow=7.2,SNR=14						
	comp=Z,1.4nm,0.6s						
MJAR	**Matsushiro Arr**	**43.30**	**9**	P	**P**	**14 35 30.5**	**+0.2**
	comp=Z,2.4nm,0.9s,baz=181,slow=9.6,SNR=4.3						
	comp=Z,2.4nm,0.9s						
KSRS	**Korea Array**	**43.72**	**357**	P	**P**	**14 35 34.4**	**+0.7**
	comp=Z,1.3nm,0.7s,baz=170,slow=8.5,SNR=5.2						
	comp=Z,1.3nm,0.7s						
HHC	**Hu-ho-hao-te**	**50.22**	**341**	*e*P	**P**	**14 36 24.0**	**-0.4**
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
GTA	**Gaotai**	**53.82**	**330**	*e*P	**P**	**14 36 54.3**	**+3.1**
GTA				pP	pP	14 37 05.0	-9.1
GTA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ULN	**Ulaanbaatar**	**57.94**	**341**	P	**P**	**14 37 18.4**	**-2.1**
ULN				IAmb	IAmb	14 37 23.3	
	comp=Z,3.0nm,0.8s						
SONM	**Songino Array**	**58.12**	**341**	P	**P**	**14 37 23.6**	**+1.9**
	comp=Z,1.0nm,0.6s,baz=181,slow=7.3,SNR=6.3						
	comp=Z,1.0nm,0.6s						
PETK	**Petropavlovsk-**	**63.54**	**18**	P	**P**	**14 38 00.2**	**+2.1**
	comp=Z,4.1nm,0.8s,baz=173,slow=5.0,SNR=5.1						
	comp=Z,4.1nm,0.8s						
KSH	**Kashi**	**68.09**	**317**	P	**P**	**14 38 30.8**	**+3.0**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MKAR	**Makanchi Array**	**68.14**	**326**	P	**P**	**14 38 30.1**	**+2.3**
	comp=Z,3.1nm,0.3s,baz=117,slow=7.3,SNR=96						
	comp=Z,3.1nm,0.3s						
MKAR	**Makanchi Array**	**68.14**	**326**		**P**	**14 38 26.2**	**-1.7**
ZALV	**Zalesovo Beam**	**71.39**	**333**	P	**P**	**14 38 47.5**	**0.0**
	comp=Z,1.0nm,0.5s,baz=112,slow=6.6,SNR=4.9						
	comp=Z,1.0nm,0.5s						
KURBB	**Kurchatov Arra**	**72.40**	**328**	P	**P**	**14 38 55.5**	**+1.8**
	comp=Z,1.4nm,0.5s,baz=130,slow=4.9,SNR=10.0						
	comp=Z,1.4nm,0.5s						
BVAR	**Borovoye Array**	**77.96**	**328**	P	**P**	**14 39 26.4**	**+0.9**
	comp=Z,0.8nm,0.4s,baz=122,slow=11,SNR=12						
	comp=Z,0.8nm,0.4s						
ABKAR	**Akbulak array**	**82.51**	**321**	P	**P**	**14 39 47.9**	**-2.2**
QSPA	**South Pole Qui**	**83.56**	**180**	P	**P**	**14 39 57.3**	**+1.9**
	comp=Z,1.4nm,0.8s,baz=179,slow=1.2,SNR=12						
	comp=Z,1.4nm,0.8s						
QSPA	**South Pole Qui**	**83.56**	**180**	P	**P**	**14 39 53.9**	**-1.5**
QSPA				IAmb	IAmb	14 39 59.8	
	comp=Z,0.7nm,0.6s						
ILAR	**Eielson Array**	**92.50**	**25**	P	**P**	**14 40 37.3**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=254,slow=4.7,SNR=7.0						
	comp=Z,0.4nm,0.6s						
LPAZ	**La Paz**	**150.72**	**141**	PKPbc	**PKiKP**	**14 47 23.6**	**+2.1**
	comp=Z,2.7nm,0.9s,baz=36,slow=1.2,SNR=5.5						

IDC ***19*** *14:41:21.5±1.8, 13°.32N×91°.19W, h0^{km}, mb3.7/6, mbtmp3.8/9, ML3.8/2, MS3.9/1, Error ellipse: s-maj=37.4km s-min=25.3km az=25.0*

SNET ***19*** *14:41:26.0±1.5, 13°.52N×91°.45W, h60^{km}±8^{km}, ML5.0*

CATAC ***19*** *14:41:26.1±0.5, 14°N±3°×9°1W±°, h1^{km}, M4.6/20, MLv4.6/20, Error ellipse: s-maj=8.4km s-min=3.7km az=35.9, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-4.67; $M_{\theta\theta}$6.68; $M_{\phi\phi}$-2.01; $M_{r\theta}$-1.88; $M_{\theta\phi}$1.38; $M_{\phi r}$5.37; Fault plane solution: $M_0$8.33702×10^{16} NP1: ϕ_s115.09246°, δ62.34954°, λ-46.10830°. NP2: ϕ_s230.84449°, δ50.33113°, λ-142.92248°. Principal axes: T 7.0221, Plg7.0785°, Azm175.4886°; N 2.1918, Plg37.8880°, Azm271.0336°; P -9.2140, Plg51.2178°, Azm76.5983°; confirmed*

GCG ***19*** *14:41:27.6±1.0, 13°.68N×91°.31W, h60^{km}±22^{km}, MD4.6*

ISC 19 14:41:26.0±1.8**, 13°.61N**±0°.06×**91°.17W**±0°.04**, h15^{km}**±10^{km}**, n64, σ1^{s}53**/75**, mb3.8**/6**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESSJ	**San Jos, E**	**0.66**	**94**	*e*P	**Pn**	**14 41 40.1**	**-0.7**
ESSJ				*e*S	**Sn**	**14 41 52.0**	**+1.2**
ESSG	**Sabana Grande**	**0.84**	**23**	*e*P	**Pn**	**14 41 43.6**	**+0.2**
ESSG				*e*S	**Sn**	**14 41 55.6**	**+0.2**
STG8	**El Palmar, Qui**	**0.85**	**348**	*e*P	**Pn**	**14 41 46.8**	**+3.1**
STG8				*e*S	**Sn**	**14 42 01.6**	**+5.5**
FG16	**Alotenango, Sa**	**0.92**	**44**	*e*P	**Pn**	**14 41 44.7**	**+0.1**
FG16				*e*S	**Sn**	**14 41 58.4**	**+0.7**
PCG5	**San Vicente Pa**	**0.98**	**52**	*e*P	**Pn**	**14 41 45.3**	**-0.1**
PCG5				*e*S	**Sn**	**14 41 59.9**	**+0.8**
RTAL	**Retalhuleu**	**1.04**	**331**	*e*P	**Pb**	**14 41 44.9**	**-0.8**
RTAL	**Retalhuleu**	**1.04**	**331**	P	**Pb**	**14 41 45.0**	**-0.8**
FAME	**Alcaldia de Sa**	**1.15**	**78**	P	**Pn**	**14 41 47.9**	**+0.3**
FAME	**Alcaldia de Sa**	**1.15**	**78**	S	**Sn**	**14 42 03.6**	**+0.5**
SOKI	**Kika Raxquin**	**1.22**	**349**	*e*P	**Pn**	**14 41 48.5**	**-0.5**
SOKI				*e*S	**Sb**	**14 42 04.8**	**0.0**
QUEO	**Labor Ovalle**	**1.30**	**345**	*e*P	**Pn**	**14 41 49.9**	**0.0**
QUEO				*e*S	**Sb**	**14 42 06.5**	**-0.4**
NUBE	**Las Nubes**	**1.38**	**78**	*e*P	**Pn**	**14 41 51.3**	**+0.4**
NUBE	**Las Nubes**	**1.38**	**78**	P	**Pn**	**14 41 51.3**	**+0.4**
NUBE	**Las Nubes**	**1.38**	**78**	S	**Sn**	**14 42 09.2**	**+0.1**
CEVE	**Cerro Verde**	**1.52**	**82**	*e*P	**Pb**	**14 41 54.2**	**+0.1**
CEVE	**Cerro Verde**	**1.52**	**82**	P	**Pb**	**14 41 54.0**	**-0.1**
SBLS	**San Blas**	**1.52**	**81**	*e*P	**Pb**	**14 41 53.7**	**-0.4**
RBDL	**Robledal**	**1.53**	**71**	*e*P	**Pb**	**14 41 54.7**	**+0.5**
APG	**El Apazote**	**1.55**	**26**	Pn	**Pg**	**14 41 55.5**	**-0.4**
	4.2nm,0.3s,baz=156,slow=10.0,SNR=91						
UNIC	**Universidad Ca**	**1.62**	**77**	P	**Pb**	**14 41 55.2**	**-0.5**
JAYA	**Jayaque - finc**	**1.68**	**88**	*e*P	**Pn**	**14 41 55.6**	**+0.7**
JAYA	**Jayaque - finc**	**1.68**	**88**	*e*P	**Pb**	**14 41 57.0**	**+0.3**
JAYA	**Jayaque - finc**	**1.68**	**88**	P	**Pn**	**14 41 55.9**	**+0.9**
HUEH	**Huehuetenango**	**1.73**	**349**	*e*P	**Pn**	**14 41 54.8**	**-1.0**
HUEH				*e*S	**Sg**	**14 42 20.3**	**-1.4**
HUEH	**Huehuetenango**	**1.73**	**349**	*e*P	**Pb**	**14 41 57.7**	**+0.1**
HUEH				*e*S	**Sg**	**14 42 23.5**	**+1.8**
HUEH	**Huehuetenango**	**1.73**	**349**	P	**Pb**	**14 41 56.6**	**-1.0**
LALI	**Alcalda de L**	**1.81**	**94**	*e*P	**Pb**	**14 41 58.7**	**-0.1**
LALI	**Alcalda de L**	**1.81**	**94**	*e*P	**Pb**	**14 41 57.9**	**-0.9**
LALI				*e*S	**Sb**	**14 42 22.7**	**+1.5**
LALI	**Alcalda de L**	**1.81**	**94**	P	**Pn**	**14 41 57.6**	**+1.0**
PMON	**Piamonte**	**1.81**	**87**	*e*P	**Pb**	**14 41 58.3**	**-0.6**
PMON	**Piamonte**	**1.81**	**87**	P	**Pb**	**14 41 58.4**	**-0.5**
BOQS	**Boqueron**	**1.84**	**86**	*e*P	**Pb**	**14 42 00.2**	**+0.6**
MTO3	**Montecristo**	**1.93**	**66**	*e*P	**Pb**	**14 42 00.6**	**-0.4**
MTO3	**Montecristo**	**1.93**	**66**	P	**Pb**	**14 42 00.4**	**-0.6**
PANCS	**Alcalda de**	**1.94**	**90**	P	**Pn**	**14 41 59.4**	**+0.9**
LOMA	**Loma Larga**	**1.95**	**89**	P	**Pb**	**14 42 00.5**	**-0.7**
LOMA	**Loma Larga**	**1.95**	**89**	S	**Sb**	**14 42 25.8**	**+0.4**
IGN	**Direccin Gen**	**1.95**	**87**	P	**Pn**	**14 42 00.0**	**+1.4**
IGN	**Direccin Gen**	**1.95**	**87**	S	**Sb**	**14 42 25.9**	**+0.4**
AVCB	**Coban**	**1.99**	**22**	*e*P	**Pn**	**14 41 56.0**	**-3.3**
AVCB				*e*S	**Sg**	**14 42 32.0**	**+1.8**
ESQI	**Esquipulas**	**2.01**	**62**	*e*P	**Pb**	**14 42 01.2**	**-1.2**
ESQI	**Esquipulas**	**2.01**	**62**	P	**Pb**	**14 42 01.7**	**-0.7**
PAVA	**Las Pavas**	**2.17**	**87**	*e*P	**Pn**	**14 42 03.4**	**+1.5**
PAVA	**Las Pavas**	**2.17**	**87**	P	**Pn**	**14 42 03.3**	**+1.5**
UESV	**Universidad de**	**2.32**	**89**	P	**Pn**	**14 42 05.5**	**+1.8**
UESV	**Universidad de**	**2.32**	**89**	S	**Sb**	**14 42 34.9**	**-1.2**
TECO	**Alcaldia de Te**	**2.33**	**92**	P	**Pn**	**14 42 05.0**	**+1.2**
SCLA	**Alcaldia de Sa**	**2.38**	**88**	P	**Pn**	**14 42 06.4**	**+1.8**
CSGN	**Cosiguina Volc**	**3.57**	**100**	P	**Pn**	**14 42 23.1**	**+2.0**
TGUH	**Tegucigalpa,Un**	**3.81**	**83**	P	**Pn**	**14 42 25.9**	**+1.5**
LIMN	**Finca el Limon**	**4.71**	**96**	P	**Pn**	**14 42 38.7**	**+2.0**
CMIG	**Matias Romero**	**4.98**	**314**	Pn	**Pn**	**14 42 39.1**	**-1.2**
	4.6nm,0.3s,baz=138,slow=7.6,SNR=16						
CMIG				Sn	**Sn**	**14 43 41.5**	**+3.9**
	29nm,0.3s,baz=109,slow=7.3,SNR=6.4						
	15nm,0.3s						
JTS	**Las Juntas de**	**6.92**	**118**	Pn	**Pn**	**14 43 03.8**	**-3.3**
	1.1nm,0.3s,baz=173,slow=12,SNR=1.8						
	2.9nm,0.4s						
TEIG	**Tepich**	**7.14**	**22**	Pn	**Pn**	**14 43 13.0**	**+3.1**
	baz=132,slow=24,SNR=13						
TEIG	**Tepich**	**7.14**	**22**	P	**Pn**	**14 43 13.6**	**+3.7**
	18µm468nm,0.5s						
TXAR	**Lajitas Array**	**19.47**	**325**	P	**Pn**	**14 45 54.4**	**+0.7**
	2.1nm,0.7s,baz=152,slow=13,SNR=32						
LPIG	**La Paz**	**20.87**	**303**	LR	LR	14 54 44.9	
	comp=Z,332nm,18.4s,baz=116,slow=38						
PDAR	**Pinedale Array**	**33.11**	**335**	P	**P**	**14 48 01.9**	**+0.2**
	0.2nm,0.6s,baz=101,slow=7.7,SNR=3.5						
	0.2nm,0.6s						
NVAR	**Mina Array Bea**	**34.48**	**321**	P	**P**	**14 48 14.8**	**+1.1**
	1.3nm,0.6s,baz=133,slow=8.2,SNR=10						
	1.3nm,0.6s						
SCHQ	**Schefferville**	**45.31**	**20**	P	**P**	**14 49 41.3**	**-1.9**
	2.1nm,0.7s,baz=218,slow=17,SNR=1.4						
	2.1nm,0.7s						
YKA	**Yellowknife Ar**	**51.59**	**346**	P	**P**	**14 50 29.6**	**-1.8**
	0.3nm,0.7s,baz=143,slow=8.3,SNR=6.8						
	0.3nm,0.7s						
INK	**Inuvik**	**61.04**	**343**	P	**P**	**14 51 37.5**	**-1.3**
	0.8nm,0.4s,baz=121,slow=9.5,SNR=3.6						
	0.8nm,0.4s						
ILAR	**Eielson Array**	**63.51**	**337**	P	**P**	**14 51 54.8**	**-0.6**
	0.3nm,0.6s,baz=176,slow=4.8,SNR=7.3						
	0.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**146.61**	**342**	PKPbc	**PKPdf**	**15 01 06.8**	**+0.3**
	0.7nm,0.3s,baz=346,slow=4.6,SNR=10						

CATAC ***19*** *14:41:54.6±0.6, 14°N±2°×9°1W±°, h10^{km}±3^{km}, M4.9/6, MLv4.9/6, Error ellipse: s-maj=6.5km s-min=3.1km az=41.5, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-3.31; $M_{\theta\theta}$3.90; $M_{\phi\phi}$-0.59; $M_{r\theta}$8.01; $M_{\theta\phi}$-0.35; $M_{\phi r}$-4.19; Fault plane solution: $M_0$9.74904×10^{15} NP1:ϕ_s72.76319°, δ13.68141°, λ-132.29043°. NP2:ϕ_s295.87555°, δ79.92331°, λ-80.69749°. Principal axes: T 9.7529, Plg34.2860°, Azm17.9237°; N -0.0077, Plg9.1578°, Azm114.2339°; P -9.7452, Plg54.1706°, Azm217.1356°; confirmed*

NEIC ***19*** *14:41:54.9±2.5, 13°.64N±0°.09×91°.30W±0°.08, h25^{km}±5^{km}, mb4.8/309 Error ellipse: s-maj=15.4km s-min=7.3km az=221.0*

IDC ***19*** *14:41:58.4±2.1, 13°.81N×90°.90W, h53^{km}±18^{km}, mb4.2/14, mbtmp4.5/17, ML4.6/3, MS4.0/1, Error ellipse: s-maj=25.4km s-min=11.0km az=56.0*

UCR ***19*** *14:42:02.2±0.7, 13°.66N×90°.76W, h25^{km}, MB4.8(NEIC)*

ISC 19 14:41:54.9±0.4**, 13°.66N**±0°.05×**91°.21W**±0°.04**, h29^{km}, n358, σ1^{s}92**/227**, mb4.8**/151**, 3C-1D, Near coast of Guatemala**

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

RTAL	Retalhuleu	0.98	331	Pn	Pn	14 42 12.8	+0.1
RTAL	Retalhuleu	0.98	331	P	Pn	14 41 57.9	-15
RTAL	Retalhuleu	0.98	331	S	Sb	14 42 26.1	+0.3
FAME	Alcaldia de Sa	1.18	81	S	Sb	14 42 33.2	+1.7
FAME	Alcaldia de Sa	1.18	81	P	Pb	14 42 16.6	-0.1
NUBE	Las Nubes	1.41	80	P	Pn	14 42 13.6	-5.2
NUBE	Las Nubes	1.41	80	S	Sb	14 42 39.7	+1.2
SLOZ	Alcaldia de Sa	1.44	75	S	Sn	14 42 37.1	+0.2
APG	El Apazote	1.52	28	P	Pn	14 42 19.1	-1.2
	65nm,0.6s,baz=97,slow=14,SNR=7.1						
CEVE	Cerro Verde	1.55	84	S	Sb	14 42 43.9	+1.3
CEVE	Cerro Verde	1.55	84	P	Pn	14 42 15.3	-5.6
UNIC	Universidad Ca	1.65	79	P	Pb	14 42 24.3	-0.4
UNIC	Universidad Ca	1.65	79	S	Sb	14 42 46.8	+1.7
HUEH	Huehuetenango	1.67	350	S	Sb	14 42 49.1	+3.2
HUEH	Huehuetenango	1.67	350	P	Pb	14 42 25.9	+0.7
JAYA	Jayaque - finc	1.71	90	S	Sb	14 42 47.9	+0.8
JAYA	Jayaque - finc	1.71	90	P	Pn	14 42 18.5	-4.5
PMON	Piamonte	1.85	88	S	Sb	14 42 51.9	+1.1
PMON	Piamonte	1.85	88	P	Pn	14 42 22.8	-2.0
LALI	Alcalda de L	1.85	95	P	Pn	14 42 23.7	-0.9
LALI	Alcalda de L	1.85	95	S	Sb	14 42 51.4	+0.6
MTO3	Montecristo	1.94	68	Pn	Pn	14 42 27.7	+1.5
MTO3	Montecristo	1.94	68	P	Pb	14 42 29.3	-0.5
MTO3	Montecristo	1.94	68	S	Sb	14 42 55.9	+2.2
ESQI	Esquipulas	2.02	64	Pn	Pb	14 42 30.0	-1.1
ESQI	Esquipulas	2.02	64	S	Sb	14 42 58.7	+2.8
ESQI	Esquipulas	2.02	64	P	Pb	14 42 30.0	-1.1
PAVA	Las Pavas	2.21	88	P	Pn	14 42 32.3	+2.5
TECO	Alcaldia de Te	2.37	93	P	Pb	14 42 35.3	-1.6
SCLA	Alcaldia de Sa	2.42	89	P	Pb	14 42 35.8	-1.9
PETF	Flores	3.49	22	Pn	Pn	14 42 48.4	+1.1
CSGN	Cosiguina Volc	3.62	100	P	Pn	14 42 51.8	+2.7
CSGN				S	Sn	14 43 34.2	+3.2
TGUH	Tegucigalpa,Un	3.85	84		Pn	14 42 55.3	+3.0
TGUH	Tegucigalpa,Un	3.85	84	P	Pn	14 42 53.8	+1.5
CRIN	San Cristobal	4.17	103	Pn	Pn	14 42 58.9	+2.3
CRIN	San Cristobal	4.17	103	P	Pn	14 42 59.2	+2.6
	21µm1µm,0.6s						
PKGN	Cerro Pekin	4.24	103	P	Pn	14 42 59.6	+2.0
PKGN				S	Sn	14 43 49.0	+2.8
HERN	Volcan Telica	4.39	103	Pn	Pn	14 43 01.4	+1.5
POLN	Al Sur del Vol	4.40	103	P	Pn	14 43 02.4	+2.5
CNGN	Cerro Negro	4.55	104	Pn	Pn	14 43 02.6	+0.8
CNGN	Cerro Negro	4.55	104	P	Pn	14 43 05.4	+3.5
CNGN	Cerro Negro	4.55	104	P	Pn	14 43 04.9	+3.0
	56µm5µm,0.6s						
MOMN	Momotombo	4.72	105	P	Pn	14 43 06.7	+2.4
COPN	Copaltepe	4.74	108	P	Pn	14 43 06.7	+2.2
CMIG	Matias Romero	4.91	314	P	Pn	14 43 11.1	+4.2
	15nm,0.3s,baz=130,slow=7.4,SNR=7.8						
CMIG				S	Sn	14 44 05.9	+3.1
	122nm,0.4s,baz=64,slow=22,SNR=4.1						
CMIG				LR	LR	14 45 26.1	
	comp=Z,2µm,21.3s,baz=156,slow=41						
	29nm,0.3s						
MGAN	Managua	5.07	107	P	Pn	14 43 10.7	+1.7
BOAB	BOACO BROADBAN	5.54	102	Pn	Pn	14 43 16.3	+0.9
LCRUZ	La Cruz	6.03	115	eP	Pn	14 43 24.6	+2.4
SIUN	Universidad Ur	6.26	89	Pn	Pn	14 43 26.6	+1.3
ALIBA	Liberia Airpor	6.33	118	⇑iP	Pn	14 43 30.0	+3.7
LAPC	Finca la Perla	6.34	116	⇓iP	Pn	14 43 29.8	+3.3
BUAI	Buenos Aires	6.38	115	eP	Pn	14 43 30.6	+3.5
PEJA	Penjamo Buenos	6.39	115	eP	Pn	14 43 32.8	+5.6
VRLE	La Escondida,	6.39	116	eP	Pn	14 43 30.6	+3.3
GPS1	Guardaparques	6.41	116	eP	Pn	14 43 31.6	+4.1
GPS2	Hotel Rincn d	6.42	116	eP	Pn	14 43 31.1	+3.5
SAJU	San Juanillo,	6.46	123	eP	Pn	14 43 30.2	+2.0
JUD3	Juan Diaz 3	6.55	121	Pn	Pn	14 43 31.7	+2.3
CLARA	Aguas Claras	6.56	115	eP	Pn	14 43 31.4	+1.8
MESS	Mesas	6.56	116	eP	Pn	14 43 32.2	+2.6
HORNC	Hornillas	6.59	116	eP	Pn	14 43 31.6	+1.6
VMAR	Armenia, Volca	6.60	115	eP	Pn	14 43 32.0	+1.9
PLVR	Palo Verde	6.61	119	eP	Pn	14 43 33.2	+2.9
CUI	Cuipilapa	6.63	116	⇑iP	Pn	14 43 33.4	+2.9
NICO	Nicoya	6.64	121	eP	Pn	14 43 33.3	+2.6
CMARA	Lajas Hojancha	6.72	122	eP	Pn	14 43 34.2	+2.4
TIMP	Tierras Morena	6.79	116	eP	Pn	14 43 35.5	+2.8
INVE	Universidad In	6.80	117	eP	Pn	14 43 36.1	+3.3
QUEB	Quebradon, Cot	6.88	115	eP	Pn	14 43 36.8	+2.9
NYURE	Nandayure	6.88	121	eP	Pn	14 43 36.4	+2.5
TILA	Tilaran	6.88	117	eP	Pn	14 43 36.9	+2.9
JTS	Las Juntas de	6.98	118	P	Pn	14 43 37.4	+2.0
	11nm,0.3s,baz=306,slow=6.8,SNR=13						
JTS				S	Sn	14 44 49.9	-4.0
	41nm,0.6s,baz=294,slow=18,SNR=1.3						
	26nm,0.4s						
JTS	Las Juntas de	6.98	118	Pn	Pn	14 43 37.9	+2.6
JTS	Las Juntas de	6.98	118	eP	Pn	14 43 38.2	+2.9
JCR1	Jicaral	7.07	122	eP	Pn	14 43 39.3	+2.7
ARE1	Arenal 1	7.10	116	⇑iP	Pn	14 43 40.5	+3.5
VARE2	V. Arenal	7.10	116	eP	Pn	14 43 40.0	+2.9
TEIG	Tepich	7.11	23	P	Pn	14 43 42.1	+5.2
	baz=136,slow=24,SNR=11						
SOCE	Pocosol	7.23	116	Pn	Pn	14 43 39.9	+1.2
HDC	Heredia	7.84	117	eP	Pn	14 43 51.5	+4.3
VICA	Volcano Irazu	8.09	116	eP	Pn	14 43 53.3	+2.5
ABRB	Las Abras (San	8.19	116	eP	Pn	14 43 58.9	+6.8
RESJ	San Isidro (Tu	8.24	115	eP	Pn	14 43 55.7	+3.0
EDPE	Pejibaye, P	8.73	120	eP	Pn	14 44 03.9	+4.6
DRK0	Durika	8.95	118	eP	Pn	14 44 05.8	+3.3
FIMO	Fila Mora	9.00	120	eP	Pn	14 44 07.4	+4.3
EDP2	Potrero Grande	9.13	120	eP	Pn	14 44 09.9	+5.0
ALCO	Alturas Coton,	9.46	119	eP	Pn	14 44 11.9	+2.4
BRU2	Volcan	9.66	119	eP	Pn	14 44 15.6	+3.5
PTPA	Petro Terminal	9.83	123	eP	Pn	14 44 18.7	+4.4
JEFFS	S de V. Baru	9.86	119	eP	Pn	14 44 18.3	+3.5
SJCC	San Jacinto, C	16.14	102	P	P	14 45 42.7	-0.2
	26nm,0.8s						
DBBC	Dabeiba	16.16	113	P	P	14 45 42.4	-0.8
CBOC	Ciudad Bolivar	16.86	116	P	P	14 45 51.6	+0.6
	25nm,1.0s						
PLMC	San Jos del P	17.10	119	P	P	14 45 54.0	+0.4
JAMC	Jamundi, Valle	17.72	125	P	P	14 46 00.8	+0.2
PTBC	PUERTO BERRIO,	17.94	112	P	P	14 46 04.1	+1.3
	16nm,0.8s						
NORC	Norcasia	18.00	115	P	P	14 46 06.3	+2.8
	13nm,0.8s						
BBAC	Balboa, Cauca	18.02	129	P	P	14 46 05.2	+1.4
POPC	Popayan, Colom	18.13	126	P	P	14 46 07.4	+2.3
	43nm,0.9s						
OTAV	Otavalo	18.38	136	P	P	14 46 07.2	-0.8
OTAV	Otavalo	18.38	136	eP	Pn	14 46 10.4	+2.2
OTAV	Otavalo	18.38	136	P	Pn	14 46 10.3	+2.1
	9.6nm,1.4s						
ORTC	Ortega, Tolima	18.50	120	P	Pn	14 46 12.5	+3.2
	54nm,0.8s						
SPBC	San Pablo de B	18.67	114	P	Pn	14 46 12.6	+1.2
	1µm14nm,0.8s						
ROSC	El Rosal	18.82	116	P	Pn	14 46 14.9	+1.4
	24nm,0.8s,baz=244,slow=22,SNR=8.3						
ROSC	El Rosal	18.82	116	P	Pn	14 46 14.8	+1.2
	41nm,0.9s						
HPIG		18.90	317		P	14 46 13.1	-0.3
PRAC	Prado	18.91	120	P	Pn	14 46 15.9	+1.6
	775nm58nm,1.1s						
BRDY	Brady	18.95	339		P	14 46 13.4	-0.3
BARC	Barichara	19.08	110	P	Pn	14 46 17.4	+0.9
	28nm,0.8s						
CVER	Cruz Verde, Cu	19.19	117	P	Pn	14 46 21.3	+3.2
PAMC	Pamplona, Colo	19.25	107	P	Pn	14 46 19.8	+1.0
	291nm36nm,0.8s						
GARC	Garzon, Huila	19.28	125	P	Pn	14 46 20.1	+1.2
	19nm,1.1s						
TXAR	Lajitas Array	19.40	325	P	Pn	14 46 22.0	+1.8
	0.7nm,0.3s,baz=153,slow=11,SNR=48						
TXAR				PcP	PcP	14 50 40.3	+0.3
	1.1nm,0.9s,baz=142,slow=0.8,SNR=4.3						
	16nm,0.7s						
TX31	Lajitas Ar. Si	19.40	325	P	Pn	14 46 19.7	-0.5
CHIC	Chingaza	19.44	116	P	Pn	14 46 22.8	+1.8
	921nm61nm,0.8s						
RUSC	La Rusia	19.45	112	P	Pn	14 46 22.9	+1.7
	21nm,0.8s						
FLOC	Florencia	19.52	127	P	Pn	14 46 22.6	+1.0
	1µm120nm,1.4s						
URMC	La Uribe, Meta	19.59	120	P	Pn	14 46 23.1	+0.7
	646nm27nm,1.2s						
H06E1	SOCORRO T-PHAS	19.59	288	T	T	15 06 23.2	
	SNR=91						
Z38A	Mt. Pleasant	19.81	351	P	Pn	14 46 24.4	-0.4
Z38A				IAmb	IAmb	14 46 28.4	
	comp=Z,39nm,0.8s						
PLPT	Palo Pinto	20.14	342	P	P	14 46 25.8	-0.9
PLPT				IAmb	IAmb	14 46 33.0	
	comp=Z,56nm,0.8s						
SGCY	Sterling City	20.31	335		P	14 46 27.6	-1.1
SGCY				IAmb	IAmb	14 46 33.1	
	comp=Z,50nm,0.9s						
ABTX	Abilene, Hawle	20.39	339	P	P	14 46 28.2	-1.3
ABTX				IAmb	IAmb	14 46 33.2	
	comp=Z,39nm,0.7s						
MNHN	Monahans	20.55	331		Pn	14 46 33.4	-0.2
MACC	Macarena, Meta	20.64	122	P	Pn	14 46 34.5	-0.2
	comp=Z,52nm,0.9s						
SDV	Santo Domingo	20.73	101	P	P	14 46 32.8	-0.8
	comp=Z,18nm,0.7s,baz=277,slow=7.5,SNR=9.3						
	comp=Z,18nm,0.7s						
SDV	Santo Domingo	20.73	101	P	P	14 46 33.1	-0.5
SDV	Santo Domingo	20.73	101	eP	P	14 46 33.0	-0.5
SDV	Santo Domingo	20.73	101	P	P	14 46 33.0	-0.5
	comp=Z,24nm,0.7s						
MIAR	Mount Ida	20.90	355		P	14 46 34.5	-0.5
PTGC	Puerto Gaitan,	21.04	115	P	P	14 46 38.8	+2.1
	comp=Z,3µmcomp=Z,218nm,0.8s						
UALR	University of	21.05	357		P	14 46 38.0	+1.4
PTLC	Puerto Leguiza	21.07	128	P	P	14 46 41.7	+4.7
	comp=Z,5µmcomp=Z,85nm,0.9s						
ODSA	Odessa	21.10	332	P	P	14 46 38.2	+0.9
ODSA				IAmb	IAmb	14 46 44.9	
	comp=Z,32nm,0.9s						
PECS	Pecos	21.11	329	P	P	14 46 38.8	+1.3
MCRA	Macar, Loja	21.11	147	P	P	14 46 38.0	+0.5
APMT	Aspermont	21.19	339		P	14 46 38.4	+0.2
APMT				IAmb	IAmb	14 46 45.5	
	comp=Z,38nm,0.7s						
WHAR	Wooly Hollow	21.56	358	IAmb	IAmb	14 46 48.7	
	comp=Z,30nm,0.8s						
DKNS	Dickens	21.78	338		P	14 46 44.0	-0.6
DKNS				IAmb	IAmb	14 46 49.1	
	comp=Z,24nm,0.8s						
WMOK	Wichita Mounta	22.07	343		P	14 46 46.7	-0.9
WMOK				IAmb	IAmb	14 47 18.4	
	comp=Z,30nm,1.2s						
FCAR	Ozark Folk Cen	22.15	358	IAmb	IAmb	14 46 50.4	
	comp=Z,21nm,0.8s						
LCAR	Lake Charles	22.31	0	IAmb	IAmb	14 46 53.6	
	comp=Z,34nm,0.8s						
CPCT	Cooper Cave	22.52	14	IAmb	IAmb	14 47 17.5	
	comp=Z,23nm,0.9s						
BG3	Lake Jocassee	22.52	18	IAmb	IAmb	14 47 18.1	
	comp=Z,22nm,0.8s						
WVT	Waverly	22.58	7		P	14 46 48.6	-4.4
RLO	Rose Lookout	22.67	352	IAmb	IAmb	14 47 22.2	
	comp=Z,26nm,1.1s						
TKL	Tuckaleechee C	22.90	16	IAmb	IAmb	14 47 28.6	
	comp=Z,36nm,1.0s						
PBMO	Poplar Bluff	23.03	2	IAmb	IAmb	14 47 02.9	
	comp=Z,31nm,0.8s						
KMSC	Kings Mountain	23.17	21	IAmb	IAmb	14 47 29.9	
	comp=Z,30nm,0.9s						
V53A	Saluda	23.18	18	IAmb	IAmb	14 47 34.2	
	comp=Z,31nm,0.9s						
U49A	Red Boiling Sp	23.27	11	IAmb	IAmb	14 47 36.5	
	comp=Z,30nm,0.9s						
BLOK	Blackwell	23.62	348	IAmb	IAmb	14 47 06.5	
	comp=Z,19nm,0.6s						
PH02	Texas Public H	23.70	338	IAmb	IAmb	14 47 11.7	
	comp=Z,13nm,0.7s						
TZTN	Tazewell	23.80	15	IAmb	IAmb	14 47 39.4	
	comp=Z,35nm,0.9s						
S44A	Carbondale	24.00	4	IAmb	IAmb	14 47 12.1	
	comp=Z,31nm,0.8s						
SIUC	Southern Illin	24.02	4	IAmb	IAmb	14 47 48.8	
	comp=Z,33nm,0.9s						
319A	Douglas	24.21	320	IAmb	IAmb	14 47 16.0	
	comp=Z,27nm,1.0s						
FVM	French Village	24.23	2		P	14 47 07.5	-1.8
CCM	Cathedral Cave	24.29	360		P	14 47 09.9	0.0
V58A	Windy Hill, Pi	24.58	24	IAmb	IAmb	14 47 17.9	
	comp=Z,22nm,0.9s						
Y22A	Socorro	24.74	327	IAmb	IAmb	14 47 19.0	
	comp=Z,34nm,0.9s						
WCI	Wyandotte Cave	24.85	9		P	14 47 12.7	-2.2
RTBA	Rita Blanca	24.92	338	IAmb	IAmb	14 47 19.2	
	comp=Z,20nm,0.8s						
R50A	Paris	25.27	13	IAmb	IAmb	14 47 53.5	
	comp=Z,22nm,0.9s						
ANMO	Albuquerque	25.27	330		P	14 47 20.3	+1.3
TASM	ASL Pad, Albuq	25.27	330	IAmb	IAmb	14 47 23.1	
	comp=Z,10nm,0.8s						
TASM	ASL Pad, Albuq	25.27	330	IAmb	IAmb	14 47 23.1	
	comp=Z,11nm,0.8s						
TASM	ASL Pad, Albuq	25.27	330	IAmb	IAmb	14 47 23.1	
	comp=Z,11nm,0.8s						
T57A	Hurt	25.58	23	IAmb	IAmb	14 47 45.4	
	comp=Z,17nm,1.0s						
KSU1	Kansas State U	25.78	350	IAmb	IAmb	14 47 28.4	
	comp=Z,16nm,0.7s						
TUC	Tucson	25.79	319		P	14 47 24.4	+0.8
P38A	Dawn	25.94	356	IAmb	IAmb	14 47 30.1	
	comp=Z,20nm,0.8s						
214A	Organ Pipe Nat	26.89	316	IAmb	IAmb	14 47 41.6	
	comp=Z,11nm,0.7s						
P52A	Corning	27.08	16	IAmb	IAmb	14 47 42.5	
	comp=Z,18nm,0.6s						
W18A	Petrified Fore	27.12	325	IAmb	IAmb	14 47 40.3	
	comp=Z,27nm,1.3s						
MVCO	Mesa Verde	28.07	330	IAmb	IAmb	14 47 50.8	
	comp=Z,12nm,0.8s						
WUAZ	Wupatki	28.34	324	IAmb	IAmb	14 47 53.6	
	comp=Z,14nm,0.8s						
PV02	Paradox Valley	28.98	331	IAmb	IAmb	14 47 56.3	
	comp=Z,23nm,1.3s						
PV13	Radium Mtn., P	28.98	331	IAmb	IAmb	14 47 56.0	
	comp=Z,14nm,1.1s						
PV05	Paradox Valley	29.05	330	IAmb	IAmb	14 47 56.4	
	comp=Z,15nm,1.0s						
PV18	Skein Mesa, Pa	29.09	331	IAmb	IAmb	14 47 56.3	
	comp=Z,30nm,1.2s						
PV11	David Mesa, Pa	29.11	331	IAmb	IAmb	14 47 58.4	
	comp=Z,13nm,0.7s						
PV07	Paradox Valley	29.12	331	IAmb	IAmb	14 47 59.5	
	comp=Z,10nm,0.8s						
PV17	East Wray Mesa	29.14	330	IAmb	IAmb	14 47 59.4	
	comp=Z,12nm,0.9s						
PV19	Morning Glory	29.18	330	IAmb	IAmb	14 47 59.2	
	comp=Z,15nm,0.8s						
PV20	West Nyswonger	29.19	331	IAmb	IAmb	14 48 04.5	
	comp=Z,14nm,1.0s						
PV04	Paradox Valley	29.20	331	IAmb	IAmb	14 47 58.9	
	comp=Z,15nm,0.7s						
PV10	Paradox Valley	29.25	331	IAmb	IAmb	14 47 57.6	
	comp=Z,19nm,1.1s						
PV22	Blue Mesa, Par	29.26	331	IAmb	IAmb	14 47 59.7	
	comp=Z,8.6nm,0.7s						
BC3	Big Chuckawall	29.68	316	IAmb	IAmb	14 48 02.6	
	comp=Z,24nm,1.4s						
KNB	Kanab	30.22	324	IAmb	IAmb	14 48 10.2	
	comp=Z,12nm,0.7s						
DANC	Danby, Needles	30.23	318	IAmb	IAmb	14 48 11.1	
	comp=Z,11nm,0.7s						
LCMT	Little Creek M	30.46	324	IAmb	IAmb	14 48 11.1	
	comp=Z,10nm,0.8s						
V12A	Nelson	30.57	320	IAmb	IAmb	14 48 09.9	
	comp=Z,13nm,1.0s						
Q16A	Castle Valley	30.73	329	IAmb	IAmb	14 48 18.1	
	comp=Z,12nm,0.9s						
SZCU	Shurtz Canyon	30.78	325	IAmb	IAmb	14 48 12.8	
	comp=Z,16nm,1.0s						
CCUT	Cedar City	30.91	324	IAmb	IAmb	14 48 15.2	
	comp=Z,11nm,0.9s						
P17A	Butcher Ranch,	30.94	330	IAmb	IAmb	14 48 13.5	
	comp=Z,11nm,0.8s						
TEFE	Tefe	31.41	121	eP	P	14 48 14.3	+0.5
K22A	Casper	31.77	338	IAmb	IAmb	14 48 20.3	
	comp=Z,6.4nm,0.8s						
TPNV	Topopah Spring	32.22	321	IAmb	IAmb	14 48 38.2	
	comp=Z,10nm,1.3s						
BOAV	Boa Vista	32.34	108	P	P	14 48 22.3	+0.4
BOAV				IAmb	IAmb	14 48 24.0	
	comp=Z,12nm,1.1s						
BOAV	Boa Vista	32.34	108	eP	P	14 48 21.9	-0.1
BOAV	Boa Vista	32.34	108	P	P	14 48 21.9	-0.1
CTU	Camp Tracy	32.37	330	IAmb	IAmb	14 48 28.9	
	comp=Z,11nm,0.8s						
SPR3	Spring Creek 3	32.46	325	IAmb	IAmb	14 48 27.0	
	comp=Z,15nm,1.0s						
DUG	Dugway, Tooele	32.52	328	IAmb	IAmb	14 48 33.0	
	comp=Z,5.9nm,0.8s						
HWUT	Hardware Ranch	32.99	331	IAmb	IAmb	14 48 32.8	
	comp=Z,12nm,0.8s						
PDAR	Pinedale Array	33.05	335	P	P	14 48 29.6	+1.5
	comp=Z,1.7nm,0.8s,baz=133,slow=9.5,SNR=12						
PDAR				PcP	PcP	14 51 11.8	+0.4
	comp=Z,0.5nm,0.7s,baz=215,slow=3.7,SNR=3.8						
	comp=Z,1.7nm,0.8s						
PDAR	Pinedale Array	33.05	335	P	P	14 48 29.0	+0.9
BGU	Big Grassy Mou	33.18	329	IAmb	IAmb	14 48 34.8	
	comp=Z,12nm,0.9s						
HVU	Hansel Valley	33.70	330	IAmb	IAmb	14 48 36.8	
	comp=Z,19nm,1.3s						
LOHW	Long Hollow	34.17	335	IAmb	IAmb	14 48 40.8	
	comp=Z,10nm,1.1s						
ELK	Elko	34.19	327	IAmb	IAmb	14 48 43.4	
	comp=Z,12nm,0.8s						
NV11	Mina Array Sit	34.32	321	IAmb	IAmb	14 48 46.0	
	comp=Z,11nm,0.8s						
NVAR	Mina Array Bea	34.41	321	P	P	14 48 42.7	+2.6
	comp=Z,15nm,0.7s,baz=137,slow=8.6,SNR=33						
NVAR				PcP	PcP	14 51 16.8	+1.5
	comp=Z,2.6nm,0.8s,baz=97,slow=2.7,SNR=5.2						
	comp=Z,15nm,0.7s						
NVAR	Mina Array Bea	34.41	321		P	14 48 41.8	+1.7
NVAR					PcP	14 51 16.4	+1.1
MDPB	Devils Postpil	34.41	319	P	P	14 48 40.3	+0.2
RYN	Ryan	34.67	321	IAmb	IAmb	14 48 48.4	
	comp=Z,5.6nm,0.7s						
YMR	Madison River	35.19	335	IAmb	IAmb	14 48 50.1	
	comp=Z,9.0nm,1.0s						
CMB	Columbia Colle	35.49	318		P	14 48 49.4	+0.2
HLID	Hailey	35.84	331	IAmb	IAmb	14 48 59.7	
	comp=Z,7.3nm,0.8s						
BCYI	Bear Canyon	35.95	332	IAmb	IAmb	14 49 01.4	
	comp=Z,7.6nm,1.0s						
EPLO	Experimental L	35.97	357	IAmb	IAmb	14 48 54.7	
	comp=Z,12nm,0.9s						
MFID	Camas Ranch	36.42	329	IAmb	IAmb	14 49 03.9	
	comp=Z,14nm,0.8s						
DLMT	Dillon	36.43	334	IAmb	IAmb	14 49 00.7	
	comp=Z,9.3nm,0.9s						
ULM	Lac du Bonnet	36.68	355	P	P	14 48 57.7	-1.4
	comp=Z,5.9nm,0.7s,baz=162,slow=7.8,SNR=8.7						
	comp=Z,5.9nm,0.7s						
SUTB	Sutter Butte	37.07	319	IAmb	IAmb	14 49 06.0	
	comp=Z,17nm,0.9s						
LPAZ	La Paz	37.50	142	P	P	14 49 06.7	-0.4
	comp=Z,5.2nm,0.9s,baz=341,slow=7.3,SNR=11						
	comp=Z,5.2nm,0.9s						
LPAZ	La Paz	37.50	142		P	14 49 03.7	-3.4
LPAZ	La Paz	37.50	142	eP	P	14 49 07.0	-0.1
O03E	Paynes Creek	37.70	320	IAmb	IAmb	14 49 10.5	
	comp=Z,13nm,1.1s						
PLID	Pearl Lake	37.74	331	IAmb	IAmb	14 49 11.6	
	comp=Z,15nm,0.9s						
MSO	Missoula	38.16	335	IAmb	IAmb	14 49 14.4	
	comp=Z,13nm,1.2s						
PB16	IPOC Station P	38.33	145		P	14 49 13.6	-0.5
PB16				IAmb	IAmb	14 49 16.2	
	comp=Z,12nm,1.0s						
PINE	Pine Mountain	39.36	326	IAmb	IAmb	14 49 26.8	
	comp=Z,18nm,0.8s						
PB11	IPOC Station P	39.41	147	P	P	14 49 20.4	-2.2
PB11				IAmb	IAmb	14 49 24.2	
	comp=Z,28nm,1.1s						
ITTB	Itaituba	39.51	115	eP	P	14 49 23.4	0.0
I05D	Terrebonne, OR	39.94	326	IAmb	IAmb	14 49 31.6	
	comp=Z,18nm,0.9s						
WIFE	Three Sisters-	40.02	325		P	14 49 29.1	+1.5
WIFE				IAmb	IAmb	14 49 33.8	
	comp=Z,18nm,0.8s						
I04A	Tendick Farm,	40.18	324	IAmb	IAmb	14 49 34.4	
	comp=Z,16nm,0.8s						
VILB	Vilhena	40.54	129		P	14 49 28.1	-3.9
VILB				IAmb	IAmb	14 49 32.7	
	comp=Z,22nm,0.8s						
VILB	Vilhena	40.54	129	eP	P	14 49 32.4	+0.5
PB02	IPOC Station P	40.58	149	IAmb	IAmb	14 49 34.0	
	comp=Z,20nm,1.1s						
H04A	Detroit Lake	40.62	326	P	P	14 49 32.3	0.0
C09A	Chrisman Ranch	40.80	332		P	14 49 34.4	+0.6
C09A				IAmb	IAmb	14 49 38.0	
	comp=Z,16nm,0.7s						
MXC	Moxie City	40.89	329	IAmb	IAmb	14 49 37.9	
	comp=Z,21nm,1.2s						
PB07	IPOC Station P	40.93	149	IAmb	IAmb	14 49 36.8	
	comp=Z,16nm,1.1s						
EPH	Ephrata	41.10	331	IAmb	IAmb	14 49 38.9	
	comp=Z,21nm,1.2s						
NPGB	Novo Progresso	41.12	118	eP	P	14 49 35.6	-1.1
PB09	IPOC Station P	41.31	148	IAmb	IAmb	14 49 40.5	
	comp=Z,16nm,1.0s						
LON	Longmire	41.77	328	P	P	14 49 43.3	+1.5
LON				IAmb	IAmb	14 49 48.5	
	comp=Z,18nm,0.8s						
PDRB	Porto dos Gac	42.43	125	eP	P	14 49 46.3	-1.2
CLDB	Colider	42.76	123	eP	P	14 49 49.8	-0.4
PTLB	Pontes e Lacer	42.93	131	P	P	14 49 49.7	-1.8
PTLB	Pontes e Lacer	42.93	131	eP	P	14 49 51.2	-0.3
PB14	IPOC Station P	43.14	152	IAmb	IAmb	14 49 54.6	
	comp=Z,14nm,0.9s						
LLLB	Lillooet	44.47	332	IAmb	IAmb	14 50 05.7	
	comp=Z,7.5nm,0.8s						
SCHQ	Schefferville	45.28	20	P	P	14 50 08.8	-1.0
	comp=Z,16nm,0.9s,baz=197,slow=6.8,SNR=7.9						
	comp=Z,16nm,0.9s						
AC06	Mina Casimiro	45.52	154		P	14 50 11.3	-0.8
AC06				IAmb	IAmb	14 50 13.4	
	comp=Z,12nm,0.8s						
PRPB	Parauapebas	45.58	113	eP	P	14 50 11.8	-1.0
AC02	Maricunga	45.62	152	IAmb	IAmb	14 50 15.4	
	comp=Z,18nm,1.1s						
TMAB	Tom-Au,PA,Br	45.63	107	eP	P	14 50 13.2	+0.1
SALV	Santo Antonio	45.78	129	eP	P	14 50 13.6	-0.7
LCO	Las Campanas	46.83	155		P	14 50 20.5	-2.1
SNDB	Serra Nova Dou	47.07	121	eP	P	14 50 24.1	-0.3
PP1B	Ponte de Pedra	47.44	130	eP	P	14 50 27.2	-0.1
BDQN	Bodoquena, MS	47.93	134	eP	P	14 50 30.3	-0.7
H03N2	Juan Fernandez	48.28	166	T	T	15 42 17.5	
	baz=347,slow=76,SNR=7.1						
H03N1	Juan Fernandez	48.29	166	T	T	15 42 16.6	
	baz=347,slow=76,SNR=8.3						
H03N3	Juan Fernandez	48.30	166	T	T	15 42 16.5	
	baz=347,slow=76,SNR=8.3						
CO03	El Pedregal	48.45	156	IAmb	IAmb	14 50 36.0	
	comp=Z,11nm,0.8s						
ARAG	Araguaiana, MT	48.68	126	eP	P	14 50 36.2	-0.7
AQDB	Aquidauana	48.68	134	eP	P	14 50 36.4	-0.4
SMTB	Santa Maria do	48.74	115	eP	P	14 50 37.3	-0.2
CFA	Coronel Fontan	50.12	154	P	P	14 50 48.1	+0.5
	comp=Z,4.2nm,0.8s,baz=354,slow=5.9,SNR=10						
	comp=Z,4.2nm,0.8s						
AMBA	Amambai (Brazi	50.80	135	eP	P	14 50 52.4	-0.6
LMEL	Las Melosas	51.31	158	IAmb	IAmb	14 50 58.1	
	comp=Z,11nm,0.8s						
YKAW1	Yellowknife Wh	51.49	346	IAmb	IAmb	14 50 57.7	
	comp=Z,12nm,1.3s						
YKA	Yellowknife Ar	51.53	346	P	P	14 50 57.7	-0.2
	comp=Z,2.8nm,0.8s,baz=154,slow=7.2,SNR=21						
	comp=Z,2.8nm,0.8s						
YKA	Yellowknife Ar	51.53	346	P	P	14 50 56.7	-1.1
BDFB	Brasilia	51.70	123	P	P	14 50 58.8	-1.1
	comp=Z,2.5nm,0.4s,baz=311,slow=6.7,SNR=5.3						
	comp=Z,2.5nm,0.4s						
NBPS	Pedro II - PI	52.54	106	eP	P	14 51 06.8	+0.5
SDBA	SAO DESIDERIO	52.71	117	eP	P	14 51 05.6	-1.8
IPMB	Ipameri, GO	52.80	125	eP	P	14 51 06.8	-1.2
BI02	San Fabin de	53.47	160		P	14 51 10.6	-2.1
BI02				IAmb	IAmb	14 51 13.7	
	comp=Z,17nm,1.4s						
WTLY	Watson Lake, Y	53.92	338	IAmb	IAmb	14 51 17.9	
	comp=Z,12nm,1.0s						
R33M	Jennings River	54.27	336	IAmb	IAmb	14 51 21.8	
	comp=Z,7.7nm,0.9s						
N32M	Quiet Lake	56.20	337	IAmb	IAmb	14 51 35.0	
	comp=Z,13nm,1.1s						
O30N	Mendenhall	57.14	336	IAmb	IAmb	14 51 40.9	
	comp=Z,8.6nm,0.9s						
NBTA	Tacaratu-PE	57.40	110	eP	P	14 51 41.4	0.0
PLCA	Paso Flores	57.41	161	P	P	14 51 40.9	0.0
	comp=Z,5.9nm,1.1s,baz=327,slow=8.6,SNR=6.4						
	comp=Z,5.9nm,1.1s						
PLCA	Paso Flores	57.41	161		P	14 51 40.6	-0.3
PLCA				IAmb	IAmb	14 51 42.9	
	comp=Z,8.2nm,1.4s						
PLCA	Paso Flores	57.41	161	eP	P	14 51 40.8	-0.2
N30M	Aishikik Lake	57.93	336	IAmb	IAmb	14 51 47.1	

	comp=Z,11nm,1.1s						
LL01	San Ignacio de	58.38	164	P	P	14 51 47.5	-0.1
I30M	Mount Dempster	59.89	340	IAmb	IAmb	14 51 59.4	
	comp=Z,4.9nm,1.0s						
AY01	Puyuhuapi	60.23	165	P	P	14 51 59.4	-0.8
BCAR	Beaver Creek A	60.65	336		P	14 52 03.7	+0.5
L27K	Beaver Creek,	60.67	336	IAmb	IAmb	14 52 05.9	
	comp=Z,7.6nm,1.0s						
INK	Inuvik	60.98	343	P	P	14 52 04.1	-1.1
	comp=Z,4.1nm,0.8s,baz=129,slow=11,SNR=8.2						
	comp=Z,4.1nm,0.8s						
INK	Inuvik	60.98	343	IAmb	IAmb	14 52 05.9	
	comp=Z,6.5nm,1.0s						
G29M	Pine Creek	61.44	341	IAmb	IAmb	14 52 11.8	
	comp=Z,11nm,1.2s						
DOT	Dot Lake	61.83	336	IAmb	IAmb	14 52 12.9	
	comp=Z,11nm,1.1s						
I27K	Kandik River	61.91	339	IAmb	IAmb	14 52 14.8	
	comp=Z,6.8nm,1.0s						
SCRK	Sand Creek	61.96	337	IAmb	IAmb	14 52 13.9	
	comp=Z,13nm,1.4s						
J26L	Joseph Creek	62.06	337	IAmb	IAmb	14 52 54.0	
	comp=Z,4.7nm,0.9s						
H27K	Steamboat Moun	62.21	339	IAmb	IAmb	14 52 15.7	
	comp=Z,6.0nm,1.1s						
E29M	Blow River	62.29	342	IAmb	IAmb	14 52 15.5	
	comp=Z,9.0nm,1.2s						
J25K	Salcha River,	62.80	337	IAmb	IAmb	14 52 19.2	
	comp=Z,6.1nm,1.0s						
E28M	Babbage River	62.90	342	IAmb	IAmb	14 52 19.5	
	comp=Z,5.3nm,1.1s						
IL31		63.45	337	IAmb	IAmb	14 52 23.5	
	comp=Z,12nm,1.1s						
ILAR	Eielson Array	63.45	337	P	P	14 52 21.9	+0.1
	comp=Z,6.1nm,1.0s,baz=123,slow=4.3,SNR=31						
	comp=Z,6.1nm,1.0s						
ILAR	Eielson Array	63.45	337		P	14 52 21.5	-0.3
MCK	McKinley	63.82	335	IAmb	IAmb	14 52 25.8	
	comp=Z,12nm,1.2s						
F26K	Sheenjek River	63.86	340	IAmb	IAmb	14 52 26.7	
	comp=Z,5.1nm,1.0s						
CUT	Chulitna	63.87	334	P	P	14 52 23.7	-0.8
BMAR	Burnt Mountain	63.87	340		P	14 52 23.4	-1.2
NEA2	Nenana	64.22	336	P	P	14 52 26.6	-0.4
NEA2				IAmb	IAmb	14 53 02.6	
	comp=Z,6.0nm,1.0s						
STLK	Strandline Lak	64.23	332	IAmb	IAmb	14 52 29.7	
	comp=Z,9.1nm,1.0s						
TRF	Thorofare Moun	64.27	335		P	14 52 26.5	-0.9
H24K	Noodor Dome	64.29	338		P	14 52 27.0	-0.5
H24K				IAmb	IAmb	14 52 28.8	
	comp=Z,7.1nm,1.0s						
F25K	Christian Rive	64.31	340	IAmb	IAmb	14 52 30.4	
	comp=Z,6.3nm,0.9s						
E25K	Arctic Village	64.54	340		P	14 52 28.6	-0.3
I23K	Minto, Yukon-K	64.56	337	P	P	14 52 29.3	+0.2
C27K	Jago River	64.72	342	IAmb	IAmb	14 52 32.0	
	comp=Z,5.2nm,1.1s						
BPAW	Bear Paw Mtn.	64.80	335	P	P	14 52 30.4	-0.4
N19K	Bonanza Creek	65.23	331	P	P	14 52 32.2	-1.5
D25K	Kavik River	65.38	341	IAmb	IAmb	14 52 35.8	
	comp=Z,10.0nm,1.1s						
COLD	Coldfoot	65.72	339	IAmb	IAmb	14 52 40.8	
	comp=Z,16nm,1.4s						
E23K	Chandalar	65.86	339	IAmb	IAmb	14 52 43.9	
	comp=Z,7.8nm,0.9s						
C24K	Franklin Bluff	66.29	341	IAmb	IAmb	14 52 42.1	
	comp=Z,8.4nm,0.9s						
C23K	Itkillik River	66.94	341	IAmb	IAmb	14 52 46.0	
	comp=Z,9.5nm,1.1s						
G19K	Purcell Mounta	67.91	336	IAmb	IAmb	14 52 54.0	
	comp=Z,6.9nm,1.0s						
B21K	Ikpikpuk River	68.14	340	IAmb	IAmb	14 52 54.1	
	comp=Z,4.3nm,0.9s						
G18K	Tagagawik	68.46	336	IAmb	IAmb	14 52 56.4	
	comp=Z,9.7nm,1.3s						
D20K	Etivluk River	68.51	339	IAmb	IAmb	14 52 56.3	
	comp=Z,7.8nm,0.9s						
M14K	Bethel	68.78	330		P	14 52 55.7	-0.4
B20K	Meade River	69.11	340	IAmb	IAmb	14 52 59.9	
	comp=Z,8.1nm,0.9s						
C19K	Lookout Ridge	69.66	339	IAmb	IAmb	14 53 03.5	
	comp=Z,10nm,1.2s						
G16K	Koyuk River	69.84	335	IAmb	IAmb	14 53 03.6	
	comp=Z,10nm,0.9s						
C16K	Lisburne Hills	71.53	338	IAmb	IAmb	14 53 16.3	
	comp=Z,12nm,1.3s						
ESDC	Sonseca Array	79.33	52	P	P	14 53 57.5	-0.7
	comp=Z,0.8nm,0.8s,baz=276,slow=5.3,SNR=2.8						
	comp=Z,0.8nm,0.8s						
DBIC	Dimbokro	84.93	84	P	P	14 54 27.6	-0.4
	comp=Z,3.6nm,0.8s,baz=314,slow=6.9,SNR=5.3						
	comp=Z,3.6nm,0.8s						
KURBB	Kurchatov Arra	115.36	7	PKP	PKPdf	15 00 34.1	+0.2
	comp=Z,1.1nm,0.7s,baz=346,slow=2.2,SNR=11						
MKAR	Makanchi Array	119.54	5	PKP	PKPdf	15 00 41.0	-1.1
	comp=Z,1.1nm,0.9s,baz=40,slow=2.1,SNR=5.3						
HHC	Hu-ho-hao-te	121.80	340	*e*P	PKPdf	15 00 46.4	-0.3
NJ2	Nanjing	126.19	328	*e*P	PKPdf	15 00 54.3	-0.9
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GTA	Gaotai	126.21	349	*e*P	PKiKP	15 00 55.8	+0.1
GTA				pP	pPKPdf	15 01 00.6	-4.3
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
STKA	Stephens Creek	128.56	240	PKP	PKiKP	15 01 00.1	-0.3
	comp=Z,2.9nm,0.8s,baz=232,slow=2.1,SNR=5.3						
WRA	Warramunga Arr	136.05	255	PKP	PKPdf	15 01 14.5	+0.3
	comp=Z,3.4nm,0.8s,baz=89,slow=2.2,SNR=18						
ASAR	Alice Springs	136.27	250	PKP	PKPdf	15 01 15.1	+0.5
	comp=Z,2.5nm,0.8s,baz=91,slow=1.9,SNR=20						
LSA	Lhasa	136.83	357	P	PKPdf	15 01 03.9	-12
PZH	PanZhiHua	138.13	342	PKP	PKPdf	15 01 15.6	-2.5
CMAR	Chiang Mai Arr	146.55	342	PKPbc	PKPbc	15 01 34.6	+0.2
	comp=Z,10.0nm,0.8s,baz=11,slow=2.9,SNR=38						
CMAR	Chiang Mai Arr	146.55	342		PKPbc	15 01 33.9	-0.5

GCG 19 14:59:38.2±1.0**,14.°29N**×**91.°17W,h115**^{km}±20^{km}**,MD3.7, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG5	El Palmar, Qui	0.21	304	*e*P	Pn	14 59 56.8	+2.5
STG5				*e*S	Sn	15 00 04.3	-2.2
STG8	El Palmar, Qui	0.24	313	*e*P	Pn	14 59 56.8	+2.2
STG8				*e*S	Sn	15 00 04.4	-2.5
STG2	El Palmar, Qui	0.25	307	*e*P	Pn	14 59 57.3	+2.8
STG2				*e*S	Sn	15 00 05.1	-1.7
SOKI	Kika Raxquin	0.58	337	*i* S	Sn	15 00 13.4	+3.0
FG16	Alotenango, Sa	0.64	91	*i* P	Pn	14 59 55.4	-1.4
NUBE	Las Nubes	1.40	106	*i* P	Pn	15 00 05.4	+1.1

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*IDC **19** 15:00:34.6±0.7, 18.°13N×61.°39W, h0^{km}, mb4.0/9, mbtmp4.1/12, ML3.1/2, MS3.6/6, Error ellipse: s-maj=20.4km s-min=16.2km az=60.0*

*TRN **19** 15:00:35.9, 18.°01N×61.°55W, h15^{km}, MD4.3, North-east of Barbuda.*

*NEIC **19** 15:00:39.7±1.6, 17.°89N±0.°06×61.°56W±0.°05, h32^{km}±5^{km}, mb4.4/19, Mwr4.3/28, Error ellipse: s-maj=10.6km s-min=1.6km az=218.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.91; $M_{\theta\theta}$0.02; $M_{\phi\phi}$-1.92; $M_{r\theta}$-0.98; $M_{\theta\phi}$0.29; $M_{\phi r}$3.43; Fault plane solution: $M_0$4.06000×10^{15} NP1:ϕ_s344.96000°,δ75.85000°, λ86.60000°. NP2:ϕ_s178.62000°,δ14.55000°,λ103.24000°. Principal axes: T 4.0451, Plg59.0000°, Azm250.0000°; N 0.0326, Plg3.0000°, Azm346.0000°; P -4.0777, Plg31.0000°, Azm78.0000°;*

*NEIC **19** 15:00:39, 17.°93N×61.°53W, h27^{km}*

ISC 19 15:00:38.1±1.5**,18.°00N**±0.°05×**61.°52W**±0.°06**,h26**^{km}±10^{km}**, n90,**σ**1.ˢ29**/98**,mb4.2**/12**,1D,Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.42	218		Pb	15 00 47.0	0.0
ANWB				Sg	Sb	15 00 52.8	-0.2
ANWB	Willy Bob	0.42	218	⇓*i*P	Pb	15 00 47.0	0.0
ANWB				*e*S	Sb	15 00 52.8	-0.2
SKI	Saint Kitts	1.34	241	*e*P	Pn	15 01 01.3	+0.1
SKI				*e*S	Sb	15 01 20.1	+0.7
SKOC	St. Kitts, UWI	1.36	239	*e*P	Pb	15 01 02.8	0.0
SKOC				*e*S	Sb	15 01 21.1	+1.3
MBWH	Windy Hill	1.41	207	*e*P	Pn	15 01 01.8	-0.3
MBWH				*e*S	Sb	15 01 22.0	+0.7
SEUS	St. Eustatius	1.48	250		Pn	15 01 03.7	+0.5
SEUS				Sn	Sn	15 01 21.6	-0.1
ABD	La Joyeuse, An	1.52	179		Pn	15 01 03.5	0.0
ABD				Sn	Sn	15 01 22.4	-0.1
SABA	Saba	1.69	257		Pn	15 01 06.6	+0.7
H05N1	Guadeloupe/Mar	1.73	165	Pn	Pn	15 01 07.1	+0.6
DSDZ	La Diserade, G	1.73	166	*e*P	Pn	15 01 06.8	+0.3
GDSD	La Dsirade Is	1.73	166		Pn	15 01 06.7	+0.1
DHSZ	Broadband at M	1.73	188	*e*P	Pn	15 01 06.4	-0.1
GDHS	Morne Mazeau,	1.73	188		Pn	15 01 06.2	-0.5
GDHS				Sn	Sn	15 01 26.1	-1.8
ATGZ	Broadband at L	1.90	186	*e*P	Pn	15 01 09.4	+0.5
ATGZ				*e*S	Sb	15 01 35.5	0.0
CBE	Ff, Capester	1.92	183		Pn	15 01 09.7	+0.5
MMLZ	Guadeloupe Bro	1.95	184	*e*P	Pn	15 01 09.8	+0.2
MMLZ				*e*S	Sb	15 01 36.6	-0.2
MAGL	Barre de l'ile	2.05	174		Pn	15 01 12.2	+1.2
TBG	Guadaloupe-3	2.14	183	*e*P	Pn	15 01 13.4	+1.3
TBG				*e*S	Sn	15 01 40.2	+2.4
TDBA	Terre de Bas,	2.14	183		Pn	15 01 13.1	+0.9
DWS	Wesley	2.42	175	*e*P	Pn	15 01 18.0	+1.9
DWS				*e*S	Sn	15 01 47.9	+3.0
DSLB	Salisbury	2.55	178	*e*P	Pn	15 01 19.7	+1.9
DSLB				*e*S	Sn	15 01 49.5	+1.5
DLPL	La Plaine	2.66	174	*e*S	Sn	15 01 53.9	+3.0
SVN	Savane Anatole	3.16	174	Pn	Pn	15 01 25.4	-0.8
CXM	Morne La Croix	3.19	174		Pn	15 01 26.5	-0.2
ILAM	Ilet Lapin Mar	3.26	169	Pn	Pn	15 01 28.9	+1.3
ILAM	Ilet Lapin Mar	3.26	169	*e*P	Pn	15 01 28.6	+0.9
ILAM				*e*S	Sn	15 02 06.5	+0.9
BIM	Bigot	3.49	173		Pn	15 01 30.8	0.0
BIM	Bigot	3.49	173	*e*P	Pn	15 01 32.7	+1.9
BIM				*e*S	Sn	15 02 12.8	+1.6
MPOM	Morne Pois Mar	3.59	170		Pn	15 01 32.3	+0.2
H05S1	Guadeloupe/Mar	3.61	170	Pn	Pn	15 01 34.7	+2.3
SLBI	Saint Lucia, B	3.99	172	*e*P	Pn	15 01 39.0	+1.4
SLBI				*e*S	Sn	15 02 25.1	+1.6
SLAC	Saint Lucia, A	4.12	172	*e*P	Pn	15 01 41.0	+1.5
HUMP	Col San Antoni	4.13	273		Pn	15 01 39.5	0.0
MCLT	Moule a Chique	4.30	173	*e*P	Pn	15 01 43.0	+1.1
GCPR	Guaynabo City	4.36	275		Pn	15 01 42.6	-0.1
SJG	San Juan	4.41	272	Pn	Pn	15 01 45.3	+1.9
	155nm,0.6s,baz=96,slow=12,SNR=37						
SJG				Sn	Sn	15 02 35.3	+1.4
	15nm,0.3s,baz=206,slow=10,SNR=3.7						
SJG				LR	LR	15 03 49.4	
	comp=Z,608nm,18.0s,baz=54,slow=43						
SJG	San Juan	4.41	272		Pn	15 01 43.7	+0.3
SJG	San Juan	4.41	272	*e*P	Pn	15 01 44.1	+0.7
SVB	Belmont	4.71	177	*e*P	Pn	15 01 49.0	+1.5
OBIP	Obispado Ponce	4.84	271		Pn	15 01 49.6	+0.2
AOPR	Arecibo Observ	4.99	275		Pn	15 01 51.3	-0.1
AOPR	Arecibo Observ	4.99	275	*e*P	Pn	15 01 51.6	+0.2
BBGH	Gun Hill	5.18	158	Pn	Pn	15 01 53.8	-0.2
CRPR	Cabo Rojo, PR	5.32	271		Pn	15 01 55.2	-0.8
GRGR	Grenville	5.83	181	*e*P	Pn	15 02 05.9	+2.9
DR12	Loma Pena Alta	7.51	277	Pn	Pn	15 02 25.8	-0.3
SC01	Santiago de lo	8.85	281	Pn	Pn	15 02 44.1	-0.3
SDDR	Presa de Saban	9.32	278		Pn	15 02 50.0	-1.0
SDV	Santo Domingo	12.67	226	Pn	Pn	15 03 40.2	+3.3
	0.4nm,0.3s,baz=68,slow=11,SNR=11						
SDV				LR	LR	15 08 27.3	
	comp=Z,179nm,20.6s,baz=74,slow=37						
	17nm,1.0s						
SDV	Santo Domingo	12.67	226		Pn	15 03 35.1	-1.8
SMRC	Santa Marta, M	14.05	243	Pn	Pn	15 03 54.9	-0.7
MTDJ	Mount Denham	15.23	273	Pn	Pn	15 04 10.5	-1.2
MDP	Montagnes des	15.48	145	Pn	Pn	15 04 07.1	-7.8
	0.8nm,0.3s,baz=344,slow=14,SNR=4.1						
MDP				Sn	Sn	15 06 51.7	-14
	0.6nm,0.3s,baz=69,slow=14,SNR=2.8						
MDP				LR	LR	15 10 06.3	
	comp=Z,139nm,20.0s,baz=312,slow=37						
BOAV	Boa Vista	15.54	176	Pn	Pn	15 04 12.6	-3.0
RUSC	La Rusia	16.50	225		Pn	15 04 25.9	-2.6
RUSC				IAmb	IAmb	15 04 52.9	
	comp=Z,35nm,1.2s						
ROSC	El Rosal	18.11	225	P	P	15 04 51.3	+2.7
	comp=Z,2.0nm,0.3s,baz=176,slow=7.6,SNR=4.1						
ROSC				LR	LR	15 12 51.7	
	comp=Z,360nm,20.0s,baz=122,slow=40						
	comp=Z,8.6nm,0.3s						
ROSC	El Rosal	18.11	225	P	Pn	15 04 46.3	-2.0
ROSC				IAmb	IAmb	15 04 55.7	
	comp=Z,16nm,0.7s						
OTAV	Otavalo	24.26	225		P	15 05 52.4	-1.5
OTAV				IAmb	IAmb	15 05 56.1	
	comp=Z,15nm,0.9s						
LMN	Caledonia Moun	27.91	355		P	15 06 27.5	+1.5
ATAH	Atahualpa	30.02	215	LR	LR	15 20 31.4	
	comp=Z,173nm,18.0s,baz=10,slow=40						
BUKO	Buck Lake	31.16	335	P	P	15 06 55.6	+0.7
RCBR	Riachuelo	34.63	131	P	P	15 07 24.5	-1.1
LPAZ	La Paz	34.69	191	LR	LR	15 22 38.6	
	comp=Z,121nm,21.2s,baz=34,slow=38						
HBVL	Hebbronville	35.38	292	P	P	15 07 29.8	-2.1
SAND	Sanderson	38.78	296	P	P	15 08 00.6	-0.2
ECSD	EROS Data Cent	39.11	319	P	P	15 08 03.9	+0.6
ECSD				IAmb	IAmb	15 08 11.0	
	comp=Z,6.5nm,1.3s						
TXAR	Lajitas Array	40.03	294	P	P	15 08 11.9	+0.6
	comp=Z,0.7nm,0.7s,baz=106,slow=10,SNR=7.1						
	comp=Z,0.7nm,0.7s						
TXAR	Lajitas Array	40.03	294	P	P	15 08 11.0	-0.3
TX31	Lajitas Ar. Si	40.03	294	P	P	15 08 10.5	-0.8
PB07	IPOC Station P	40.32	192	P	P	15 08 11.7	-2.0
PB07				IAmb	IAmb	15 08 18.6	
	comp=Z,18nm,1.5s						
VHRN	Van Horn	41.34	296		P	15 08 22.5	+0.3
VHRN				IAmb	IAmb	15 08 30.3	
	comp=Z,4.9nm,0.9s						
MNTX	Cornudas Mount	41.80	298	P	P	15 08 26.0	+0.2
ULM	Lac du Bonnet	42.28	327	P	P	15 08 30.4	+0.9
	comp=Z,1.4nm,0.4s,baz=126,slow=8.2,SNR=3.3						
	comp=Z,1.4nm,0.4s						
ULM	Lac du Bonnet	42.28	327	IAmb	IAmb	15 08 53.0	
	comp=Z,11nm,1.5s						
PD31	Pinedale Array	47.44	312		P	15 09 10.9	-0.1
PD31				IAmb	IAmb	15 09 27.7	
	comp=Z,4.8nm,1.4s						
PDAR	Pinedale Array	47.44	312	P	P	15 09 11.4	+0.4
	comp=Z,0.2nm,0.4s,baz=104,slow=11,SNR=3.7						
	comp=Z,0.2nm,0.4s						
PDAR	Pinedale Array	47.44	312	P	P	15 09 10.9	-0.1
H10N3	ASCENSION HYDR	53.04	115	T	T	16 07 08.0	
	baz=299,slow=75,SNR=43						
H10N2	ASCENSION HYDR	53.04	115	T	T	16 07 08.5	
	baz=299,slow=75,SNR=32						
H10N1	ASCENSION HYDR	53.06	115	T	T	16 07 09.6	
	baz=299,slow=75,SNR=47						
H10S3	ASCENSION HYDR	53.45	116	T	T	16 07 40.3	
	baz=295,slow=74,SNR=45						
H10S2	ASCENSION HYDR	53.47	116	T	T	16 07 41.6	
	baz=285,slow=74,SNR=39						
DBIC	Dimbokro	56.29	94	P	P	15 10 18.3	+1.3
	comp=Z,2.3nm,0.5s,baz=307,slow=6.6,SNR=4.7						
	comp=Z,2.3nm,0.5s						
DBIC	Dimbokro	56.29	94	P	P	15 10 18.1	+1.0
DBIC				IAmb	IAmb	15 11 03.2	
	comp=Z,5.1nm,1.1s						
YKA	Yellowknife Ar	57.50	334	P	P	15 10 25.2	+0.4
	comp=Z,1.3nm,0.6s,baz=109,slow=6.6,SNR=23						
	comp=Z,1.3nm,0.6s						
PLCA	Paso Flores	59.03	188	P	P	15 10 35.8	-0.1
	comp=Z,1.9nm,0.8s,baz=1.3,slow=5.8,SNR=4.8						
	comp=Z,1.9nm,0.8s						
TORD	Torodi Ar. Bea	60.84	85	P	P	15 10 47.2	-1.6
	comp=Z,1.9nm,0.7s,baz=319,slow=5.6,SNR=4.9						
	comp=Z,1.9nm,0.7s						
ILAR	Eielson Array	71.92	333	P	P	15 11 57.8	-1.1
	comp=Z,0.8nm,0.8s,baz=98,slow=5.1,SNR=9.2						
	comp=Z,0.8nm,0.8s						
ILAR	Eielson Array	71.92	333	P	P	15 11 59.3	+0.5
BRTR	Keskin Array B	82.56	51	P	P	15 13 00.1	+0.8
	comp=Z,0.8nm,0.8s,baz=254,slow=4.5,SNR=4.6						
	comp=Z,0.8nm,0.8s						

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*IDC **19** 15:03:11.0±0.9, 13.°48N×120.°86E, h143^{km}±10^{km}, mb3.1/6, mbtmp3.6/6, Error ellipse: s-maj=42.7km s-min=15.9km az=64.0*

ISC 19 15:03:11.0±0.9**,13.°6N**±0.°2×**121.°0E**±0.°3**,h150**^{km}**,n8,** σ**1.ˢ86**/9**,mb3.4**/7**,Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.51	350	P	Pn	15 03 32.9	+0.4
	960nm,0.4s,baz=28,slow=1.4,SNR=9.1						
TGY				S	Sn	15 03 45.2	-3.7
	2µm,0.3s,baz=145,slow=24,SNR=39						
CMAR	Chiang Mai Arr	21.76	286	P	P	15 07 50.5	-0.5
	0.5nm,0.3s,baz=96,slow=7.4,SNR=6.9						
	0.5nm,0.3s						
BATI	Baumata	23.79	174	P	P	15 08 09.6	-0.6
	7.7nm,0.3s,baz=78,slow=2.7,SNR=2.1						
WRA	Warramunga Arr	35.81	158	P	P	15 09 55.3	-0.9
	0.4nm,0.7s,baz=326,slow=11,SNR=2.2						
	0.4nm,0.7s						
SONM	Songino Array	36.25	343	P	P	15 10 00.0	+0.3
	0.3nm,0.4s,baz=171,slow=9.2,SNR=2.3						
	0.3nm,0.4s						
ASAR	Alice Springs	39.12	161	P	P	15 10 25.0	+1.0
	0.2nm,0.7s,baz=341,slow=7.2,SNR=7.6						
	0.2nm,0.7s						
KURBB	Kurchatov Arra	50.45	326	P	P	15 11 53.4	0.0
	0.4nm,0.5s,baz=116,slow=8.6,SNR=4.3						
	0.4nm,0.5s						
ARCES	ARCESS Array B	79.29	339	P	P	15 15 01.6	+2.1
	2.7nm,0.9s,baz=78,slow=4.8,SNR=4.6						
	2.7nm,0.9s						

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*NEIC **19** 15:05:14.4±2.4, 14.°92N±0.°05×94.°41W±0.°05, h10^{km}±2^{km}, mb4.1/11, Md4.3/90(MEX), Error ellipse: s-maj=10.5km s-min=3.7km az=223.0*

*GCG **19** 15:05:16.5±0.8, 14.°85N×94.°56W, h35^{km}±999^{km}, MD4.6, ML4.5*

*MEX **19** 15:05:20.4±0.9, 15.°02N×94.°38W, h16^{km}±82^{km}, MD4.3*

ISC 19 15:05:18.2±0.8**,14.°95N**±0.°04×**94.°37W**±0.°02**,h45**^{km}±14^{km}**, n98,**σ**2.ˢ07**/167**,Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.34	56		Pn	15 05 40.1	-0.4
PCIG					Sn	15 05 55.0	-2.2
PCIG		1.34	56	*e*P	Pn	15 05 40.1	-0.4
PCIG				*e*S	Sn	15 05 55.0	-2.2
HUIG	Huatulco	1.86	296		Pn	15 05 48.3	+0.7
HUIG					Sn	15 06 08.1	-1.9
HUIG	Huatulco	1.86	296	*e*P	Pn	15 05 48.3	+0.7
HUIG				*e*S	Sn	15 06 08.1	-1.9
THIG		2.04	91		Pn	15 05 51.1	+1.1
THIG					Sn	15 06 14.0	-0.3
THIG		2.04	91	*e*P	Pn	15 05 51.1	+1.1
THIG				*e*S	Sn	15 06 14.0	-0.3
PATR	El Naranjo	2.08	85		Pn	15 05 51.2	+0.5
PATR					Sn	15 06 15.7	+0.1
PATR	El Naranjo	2.08	85	*e*P	Pn	15 05 51.2	+0.5
PATR				*i* S	Sn	15 06 15.7	+0.1
PAVE	Pavencul	2.14	83		Pn	15 05 52.2	+0.6
PAVE					Sn	15 06 17.1	0.0
PAVE	Pavencul	2.14	83	*e*P	Pn	15 05 52.2	+0.6
PAVE				*e*S	Sn	15 06 17.1	0.0
TGIG		2.18	33		Pn	15 05 53.3	+1.2
TGIG					Sn	15 06 17.6	-0.3
TGIG		2.18	33	*e*P	Pn	15 05 53.3	+1.2
TGIG				*e*S	Sn	15 06 17.6	-0.3
CMIG	Matias Romero	2.19	347		Pn	15 05 52.4	+0.3
CMIG					Sn	15 06 16.7	-1.3
CMIG	Matias Romero	2.19	347	*e*P	Pn	15 05 52.4	+0.3
CMIG				*e*S	Sn	15 06 16.7	-1.3
CHUJ	Union Juarez	2.19	86	*e*P	Pn	15 05 53.2	+0.8
CHUJ				*e*S	Sn	15 06 19.4	+0.9
TGBT	Tuxtla Gutierr	2.20	34		Pn	15 05 53.6	+1.4
TGBT					Sn	15 06 18.5	+0.3
TGBT	Tuxtla Gutierr	2.20	34	*e*P	Pn	15 05 53.6	+1.4
TGBT				*e*S	Sn	15 06 18.5	+0.3
SMCA	Catarina	2.23	92	*e*P	Pn	15 05 53.4	+0.8
SMCA				*i* S	Sn	15 06 19.1	+0.2
SMCA				IAML		15 06 27.8	
	comp=N,861nm,0.4s						
UXUV	UXUV	2.37	5		Pn	15 05 56.1	+1.5
UXUV					Sn	15 06 20.9	-1.5
UXUV	UXUV	2.37	5	*e*P	Pn	15 05 56.1	+1.5
UXUV				*e*S	Sn	15 06 20.9	-1.5
CCIG	Comitan	2.53	58		Pn	15 05 59.4	+2.4
CCIG					Sn	15 06 28.2	+1.5
CCIG	Comitan	2.53	58	*e*P	Pn	15 05 59.4	+2.4
CCIG				*e*S	Sn	15 06 28.2	+1.5
RTAL	Retalhuleu	2.63	99	Pn	Pn	15 05 56.2	-1.9
RTAL				Sn	Sn	15 06 28.9	+0.1
RTAL	Retalhuleu	2.63	99	*e*P	Pn	15 05 59.9	+1.8
RTAL				*e*S	Sn	15 06 30.0	+1.2
HUEH	Huehuetenango	2.80	82		Pn	15 06 00.5	-0.1
HUEH	Huehuetenango	2.80	82		Sn	15 06 34.3	+1.0
HUEH	Huehuetenango	2.80	82	*e*P	Pn	15 06 02.7	+2.0
HUEH				*e*S	Sn	15 06 34.3	+1.0
HUEH	Huehuetenango	2.80	82	*i* P	Pn	15 06 03.7	+3.0
HUEH				*i* S	Sn	15 06 36.8	+3.5
HUEH				IAML		15 06 47.2	
	comp=E,3µm,0.5s						
PEIG	Puerto Escondi	2.87	292		Pn	15 06 02.0	+0.5
PEIG					Sn	15 06 32.0	-2.8
PEIG	Puerto Escondi	2.87	292	*e*P	Pn	15 06 02.0	+0.5
PEIG				*e*S	Sn	15 06 32.0	-2.8
STG2	El Palmar, Qui	2.95	100	*i* P	Pn	15 06 00.2	-2.4
STG5	El Palmar, Qui	2.98	100	*e*P	Pn	15 06 00.4	-2.6
TUIG	Tuzandepetl	3.07	359		Pn	15 06 05.7	+1.5
TUIG					Sn	15 06 41.0	+1.3
TUIG	Tuzandepetl	3.07	359	*e*P	Pn	15 06 05.7	+1.5
TUIG				*e*S	Sn	15 06 41.0	+1.3
NEUV	Arroyo Zacate	3.07	334		Pn	15 06 05.0	+0.7
NEUV					Sn	15 06 39.0	-0.7
NEUV	Arroyo Zacate	3.07	334	*e*P	Pn	15 06 05.0	+0.7
NEUV				*e*S	Sn	15 06 39.0	-0.7
OXIG	Oaxaca	3.10	313		Pn	15 06 09.5	+4.7
OXIG					Sn	15 06 39.5	-1.2
VHO	Vista Hermosa	3.10	313	*i* P	Pn	15 06 09.5	+4.7
VHO				*i* S	Sn	15 06 39.5	-1.2
QUIS	Sacapulas	3.19	83	*e*P	Pn	15 06 08.9	+2.9
QUIS				*e*S	Sn	15 06 47.3	+4.4
QUIS				IAML		15 06 58.0	
	comp=E,1µm,0.5s						
VHSA	Villahermosa	3.32	24		Pn	15 06 08.4	+0.9
VHSA					Sn	15 06 45.4	-0.4
VHSA	Villahermosa	3.32	24	*i* P	Pn	15 06 08.4	+0.9
VHSA				*i* S	Sn	15 06 45.4	-0.4
YOIG	Yosondua	3.59	302		Pn	15 06 15.1	+3.4
YOIG					Sn	15 06 52.7	-0.3
YOIG	Yosondua	3.59	302	*e*P	Pn	15 06 15.1	+3.4
YOIG				*e*S	Sn	15 06 52.7	-0.3
PMUV	Sontecomapan	3.65	349		Pn	15 06 12.5	+0.3
PMUV					Sn	15 06 50.8	-3.3
PMUV	Sontecomapan	3.65	349	*i* P	Pn	15 06 12.5	+0.3
PMUV				*i* S	Sn	15 06 50.8	-3.3
PNIG	Pinotepa	3.89	292		Pn	15 06 17.7	+2.2
PNIG					Sn	15 06 56.8	-3.2
PNIG	Pinotepa	3.89	292	*e*P	Pn	15 06 17.7	+2.2
PNIG				*e*S	Sn	15 06 56.8	-3.2
TXIG	Tlaxiaco	3.99	306		Pn	15 06 20.1	+3.0
TXIG					Sn	15 07 04.8	+2.1
TXIG	Tlaxiaco	3.99	306	*e*P	Pn	15 06 20.1	+3.0
TXIG				*e*S	Sn	15 07 04.8	+2.1
TOIG	Toxpalan	4.06	321		Pn	15 06 19.4	+1.6
TOIG					Sn	15 07 05.4	+1.2
TOIG	Toxpalan	4.06	321	*e*P	Pn	15 06 19.4	+1.6
TOIG				*e*S	Sn	15 07 05.4	+1.2
HLIG	Huajuapan de L	4.36	312		Pn	15 06 25.9	+3.7
HLIG					Sn	15 07 09.3	-2.7
HLIG	Huajuapan de L	4.36	312	*e*P	Pn	15 06 25.9	+3.7
HLIG				*i* S	Sn	15 07 09.3	-2.7
TPIG	Tehuac#an	4.48	321		Pn	15 06 23.9	+0.1
TPIG					Sn	15 07 11.6	-3.3
TPIG	Tehuac#an	4.48	321	*e*P	Pn	15 06 23.9	+0.1
TPIG				*e*S	Sn	15 07 11.6	-3.3
FTIG	Fresnillo de T	4.66	310		Pn	15 06 29.9	+3.8
FTIG					Sn	15 07 16.5	-2.4
FTIG	Fresnillo de T	4.66	310	*e*P	Pn	15 06 29.9	+3.8
FTIG				*e*S	Sn	15 07 16.5	-2.4
MGIG	Malinaltepec	4.68	300		Pn	15 06 30.1	+3.5
MGIG					Sn	15 07 22.5	+2.8
MGIG	Malinaltepec	4.68	300	*e*P	Pn	15 06 30.1	+3.5
MGIG				*e*S	Sn	15 07 22.5	+2.8
PETF	Flores	4.76	65		Pn	15 06 26.8	-0.6

PETF	**Flores**	**4.76**	**65**		**Sn**	**15 07 20.6**	**-0.7**
PETF	**Flores**	**4.76**	**65**	*e*P	**Pn**	**15 06 28.7**	**+1.3**
PETF				*e*S	**Sn**	**15 07 20.6**	**-0.7**
PETF	**Flores**	**4.76**	**65**	*e*P	**Pn**	**15 06 29.8**	**+2.4**
TLIG	**Tlapa**	**4.79**	**303**		Pn	15 06 32.8	+4.8
TLIG					**Sn**	**15 07 23.5**	**+1.1**
TLIG	**Tlapa**	**4.79**	**303**	*e*P	Pn	15 06 32.8	+4.8
TLIG				*e*S	**Sn**	**15 07 23.5**	**+1.1**
MTO3	**Montecristo**	**4.88**	**96**	Pn	**Pn**	**15 06 28.8**	**-0.6**
ESQI	**Esquipulas**	**4.88**	**94**	Pn	**Pn**	**15 06 27.4**	**-1.9**
CRIG	**Cruz Grande**	**4.91**	**292**		**Pn**	**15 06 31.4**	**+1.9**
CRIG					**Sn**	**15 07 20.7**	**-4.4**
CRIG	**Cruz Grande**	**4.91**	**292**	*e*P	**Pn**	**15 06 31.4**	**+1.9**
CRIG				*e*S	**Sn**	**15 07 20.7**	**-4.4**
JAUV	**Jalcomulco**	**4.97**	**332**		**Pn**	**15 06 31.3**	**+1.0**
JAUV					**Sn**	**15 07 23.6**	**-3.0**
JAUV	**Jalcomulco**	**4.97**	**332**	*e*P	**Pn**	**15 06 31.3**	**+1.0**
JAUV				*e*S	**Sn**	**15 07 23.6**	**-3.0**
SCIG	**Sabancuy**	**5.03**	**37**		**Pn**	**15 06 32.2**	**+1.1**
SCIG					**Sn**	**15 07 23.7**	**-4.2**
SCIG	**Sabancuy**	**5.03**	**37**	*e*P	**Pn**	**15 06 32.2**	**+1.1**
SCIG				*e*S	**Sn**	**15 07 23.7**	**-4.2**
SCIG	**Sabancuy**	**5.03**	**37**	*e*P	**Pn**	**15 06 32.1**	**+1.1**
SCIG				IAML		15 07 31.4	
	comp=N,317nm,0.8s						
LVIG	**Laguna Verde**	**5.13**	**338**		**Pn**	**15 06 34.0**	**+1.4**
LVIG					**Sn**	**15 07 27.9**	**-2.6**
LVIG	**Laguna Verde**	**5.13**	**338**	*e*P	**Pn**	**15 06 34.0**	**+1.4**
LVIG				*e*S	**Sn**	**15 07 27.9**	**-2.6**
PPCL	**Tochimilco**	**5.66**	**315**	*e*P	**Pn**	**15 06 41.1**	**+1.1**
PPCL				*e*S	**Sn**	**15 07 43.4**	**-0.5**
PPPT	**Popocatepetl**	**5.71**	**315**	*e*P	**Pn**	**15 06 40.7**	**-0.2**
PPSX	**Xalitzintla**	**5.71**	**317**	*e*P	**Pn**	**15 06 43.6**	**+2.8**
PPSX				*e*S	**Sn**	**15 07 49.3**	**+4.1**
PBXN	**Popocatepetl**	**5.75**	**315**	*e*P	**Pn**	**15 06 43.1**	**+1.5**
PBXN				*e*S	**Sn**	**15 07 50.0**	**+3.5**
PPM	**Popocatepetl**	**5.77**	**316**	*e*P	**Pn**	**15 06 45.2**	**+3.4**
PPM				*e*S	**Sn**	**15 07 51.5**	**+4.5**
PPIG	**Popocatepetl**	**5.77**	**316**		**Pn**	**15 06 45.2**	**+3.4**
PPIG					**Sn**	**15 07 51.5**	**+4.4**
CXUV	**Coxquihui**	**6.03**	**330**		**Pn**	**15 06 46.5**	**+1.5**
CXUV					**Sn**	**15 07 53.9**	**+1.1**
CXUV	**Coxquihui**	**6.03**	**330**	*e*P	**Pn**	**15 06 46.5**	**+1.5**
CXUV				*e*S	**Sn**	**15 07 53.9**	**+1.1**
CRIN	**San Cristobal**	**7.46**	**107**	Pn	**Pn**	**15 07 01.9**	**-2.7**
HERN	**Volcan Telica**	**7.69**	**107**	Pn	**Pn**	**15 07 07.2**	**-0.6**
TEIG	**Tepich**	**7.83**	**47**		**Pn**	**15 07 09.4**	**-0.2**
SOR	**Soroa**	**13.28**	**52**	Pn	**Pn**	**15 08 21.7**	**-2.5**
833A	**Chaparral WMA,**	**14.10**	**342**		**Pn**	**15 08 34.6**	**-0.7**
HNDO	**Hondo**	**15.20**	**343**	Pn	**Pn**	**15 08 48.4**	**-1.5**
HNDO				IAmb	IAmb	15 09 05.6	
	comp=Z,6.1nm,0.8s						
BRDY	**Brady**	**16.80**	**346**	Pn	**Pn**	**15 09 08.1**	**-2.3**
OZNA	**Ozona**	**17.06**	**340**		**Pn**	**15 09 12.0**	**-1.6**
OZNA				IAmb	IAmb	15 09 30.9	
	comp=Z,8.0nm,0.6s						
MNHN	**Monahans**	**18.03**	**336**	P	**Pn**	**15 09 25.6**	**0.0**
ODSA	**Odessa**	**18.65**	**338**	P	**P**	**15 09 32.5**	**+0.1**
ODSA				IAmb	IAmb	15 09 40.2	
	comp=Z,15nm,1.1s						
Z47A	**Carrollton**	**19.05**	**16**	P	**P**	**15 09 36.2**	**-0.4**
Z47A				IAmb	IAmb	15 09 40.8	
	comp=Z,16nm,1.0s						
SABA	**Saba**	**29.98**	**81**	P	**P**	**15 11 22.1**	**-0.6**
F31M	**Tsiigehtchic**	**58.34**	**343**	P	**P**	**15 15 09.2**	**+0.8**
I28M	**Miner Creek**	**58.96**	**340**	P	**P**	**15 15 12.7**	**-0.2**
I28M				IAmb	IAmb	15 15 19.2	
	comp=Z,10nm,1.2s						

BJI **19** 15:19:38.6, 38°.29N×73°.74E, h128^{km}, mb4.4/7

IDC **19** 15:19:40.0±3.5, 38°.31N×73°.81E, h124^{km}±27^{km}, mb3.7/16, mbtmp4.1/21, MS2.6/1, Error ellipse: s-maj=26.7km s-min=15.2km az=16.0

MOS **19** 15:19:39.9±1.0, 38°.43N×73°.74E, h137^{km}, mb4.4/6, Error ellipse: s-maj=8.9km s-min=4.5km az=88.2

NEIC **19** 15:19:40.8±2.2, 38°.41N±0°.06×73°.73E±0°.08, h132^{km}±3^{km}, mb4.5/6, Error ellipse: s-maj=10.1km s-min=7.7km az=120.0

NNC **19** 15:19:41.7±3.8, 38°.49N×73°.48E, h148^{km}±39^{km}, mb3.4, mpv3.9, Error ellipse: s-maj=36.6km s-min=18.7km az=8.0

ISC 19 15:19:39.1±0.7, **38°.40N**±0°.04×**73°.83E**±0°.04, **h116**^{km}±8^{km}, **n122**, σ**2^s.27**/133, **mb4.1**/19, **12C-4D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**1.63**	**351**	PN	**Pn**	**15 20 10.6**	**+2.6**
MANEM	**Manem**	**1.90**	**244**		**Pn**	**15 20 14.6**	**+3.3**
MANEM				Sn	**Sn**	**15 20 38.7**	**+2.7**
DRK	**Karamyk**	**1.92**	**305**		**Pn**	**15 20 13.6**	**+2.1**
DRK				Sn	**Sn**	**15 20 37.8**	**+1.5**
DRK	**Karamyk**	**1.92**	**305**	PN	**Pn**	**15 20 13.6**	**+2.1**
DRK						15 20 37.8	
KSH	**Kashi**	**2.01**	**56**	P	**Pn**	**15 20 11.3**	**-1.3**
KSH				S	**Sn**	**15 20 38.0**	**-0.2**
KSH				smax	smax		
	comp=N,7μm,0.5s						
KSH				smax	smax		
	comp=E,6μm,0.6s						
OHH	**Osh**	**2.27**	**340**	PN	**Pn**	**15 20 16.2**	**+0.4**
GAR	**Garm**	**2.81**	**283**		**Pn**	**15 20 23.5**	**+0.6**
GAR				Sn	**Sn**	**15 20 55.1**	**-1.5**
BTK	**Batken**	**2.87**	**306**	Pn	**Pn**	**15 20 25.9**	**+2.4**
BTK				Sn	**Sn**	**15 20 59.1**	**+1.4**
BTK	**Batken**	**2.87**	**306**	PN	**Pn**	**15 20 25.9**	**+2.4**
BTK				S	**Sn**	**15 20 59.1**	**+1.4**
CHGR	**Chuyangaron**	**3.67**	**275**		**Pn**	**15 20 34.1**	**-0.1**
CHGR	**Chuyangaron**	**3.67**	**275**	PN	**Pn**	**15 20 34.1**	**-0.1**
ARK	**Arkit**	**3.69**	**338**	PN	**Pn**	**15 20 36.0**	**+1.6**
UCH	**Uchtor**	**3.86**	**8**	P	**Pn**	**15 20 39.9**	**+2.9**
	SNR=85						
MNAS	**Manas**	**4.21**	**347**	PN	**Pn**	**15 20 43.1**	**+1.7**
EKS2	**Erkin-Say**	**4.26**	**359**	P	**Pn**	**15 20 45.3**	**+3.2**
	SNR=28						
AAK	**Ala-Archa**	**4.27**	**7**	P	**Pn**	**15 20 45.4**	**+3.1**
	SNR=8.1						
AAK	**Ala-Archa**	**4.27**	**7**	P	**Pn**	**15 20 45.3**	**+3.1**
	20nm,0.4s,baz=151,slow=6.7,SNR=45						
AAK				S	**Sn**	**15 21 34.4**	**+3.3**
	60nm,0.3s,baz=295,slow=21,SNR=7.7						
AAK				LR	LR	15 22 26.4	
	comp=Z,79nm,19.9s,baz=178,slow=38						
AAK	**Ala-Archa**	**4.27**	**7**		**Pn**	**15 20 45.1**	**+2.9**
AAK	**Ala-Archa**	**4.27**	**7**	⇑P	**Pn**	**15 20 45.1**	**+2.9**
	6.6nm,0.5s						
AAK				⇑S	**Sn**	**15 21 35.1**	**+4.0**
	49nm,0.5s						
AAK	**Ala-Archa**	**4.27**	**7**	*ce*PN	**Pn**	**15 20 44.9**	**+2.7**
AAK				pmax	pmax		
	comp=Z,12nm,0.5s						
KBK	**Karagaybulak**	**4.34**	**11**	P	**Pn**	**15 20 46.5**	**+3.3**
	SNR=36						
BOOM	**Boomskoye usch**	**4.39**	**21**		**Pn**	**15 20 47.1**	**+3.2**
BOOM	**Boomskoye usch**	**4.39**	**21**	PN	**Pn**	**15 20 47.1**	**+3.2**
SRNI	**Srinagar**	**4.41**	**169**	*e*P	Pn	15 20 40.8	-2.6
SRNI				*e*S	**Sn**	**15 21 34.5**	**+1.1**
SRNI				IAML		15 21 40.2	
	comp=E,2μm,0.5s						
SRNI				IAML		15 21 40.4	
	comp=N,2μm,0.5s						
FRU1	**Bishkek**	**4.45**	**8**	Pn	**Pn**	**15 20 46.1**	**+1.5**
FRU1	**Bishkek**	**4.45**	**8**	PN	**Pn**	**15 20 46.1**	**+1.5**
TARG	**Taragay, Kyrgy**	**4.51**	**41**		**Pn**	**15 20 48.5**	**+2.7**
TARG	**Taragay, Kyrgy**	**4.51**	**41**	PN	**Pn**	**15 20 48.5**	**+2.7**
KDJ	**Kajisay**	**4.52**	**33**		**Pn**	**15 20 48.1**	**+2.4**
KDJ	**Kajisay**	**4.52**	**33**	PN	**Pn**	**15 20 48.1**	**+2.4**
SHAA	**Shahritus**	**4.58**	**261**		**Pn**	**15 20 46.0**	**-0.4**
TKM2	**Tokmak 2**	**4.71**	**16**	P	**Pn**	**15 20 51.2**	**+3.0**
	SNR=12						
NIL	**Nilore**	**4.76**	**186**		**Pn**	**15 20 51.7**	**+2.9**
NIL	**Nilore**	**4.76**	**186**	PN	**Pn**	**15 20 51.7**	**+2.9**
USP	**Ospenovka**	**4.89**	**6**	P	**Pn**	**15 20 55.1**	**+4.6**
	SNR=7.6						
ALCI	**Alchi Leh**	**4.98**	**146**	*e*P	Pn	15 20 48.8	-3.2
ALCI				*e*S	**Sn**	**15 21 48.1**	**-0.6**
ALCI				IAML		15 21 51.2	
	comp=E,404nm,0.5s						
ALCI				IAML		15 21 51.4	
	comp=N,245nm,0.3s						
WUS	**Wushi**	**5.01**	**54**		**Pn**	**15 20 54.6**	**+2.5**
KK31	**Karatay Array**	**5.33**	**333**		**Pn**	**15 20 57.5**	**+1.1**
KK31	**Karatay Array**	**5.33**	**333**	P	**Pn**	**15 20 57.9**	**+1.5**
	comp=N,7.6nm,0.2s,baz=267,slow=1.7,SNR=106						
KK31				S	**Sn**	**15 21 54.5**	**-2.2**
	comp=N,269nm,0.7s,baz=154,slow=22,SNR=21						
KK31	**Karatay Array**	**5.33**	**333**	PN	**Pn**	**15 20 57.5**	**+1.1**
KKAR	**Karatay Array**	**5.33**	**333**		**Pn**	**15 20 57.9**	**+1.5**
KKAR	**Karatay Array**	**5.33**	**333**	PN	**Pn**	**15 20 57.9**	**+1.5**
PRZ	**Przheval'sk**	**5.37**	**39**		**Pn**	**15 21 00.3**	**+3.3**
PRZ	**Przheval'sk**	**5.37**	**39**	PN	**Pn**	**15 21 00.3**	**+3.3**
KBL	**Kabul**	**5.45**	**226**		**Pn**	**15 20 59.6**	**+1.4**
KBL	**Kabul**	**5.45**	**226**	PN	**Pn**	**15 20 59.6**	**+1.4**
JMU	**Jammu**	**5.66**	**171**	*e*P	Pn	15 20 57.7	-4.2
JMU				*e*S	**Sn**	**15 22 03.0**	**-3.4**
JMU				IAML		15 22 07.5	
	comp=N,847nm,1.1s						
JMU				IAML		15 22 08.4	
	comp=E,1μm,0.1s						
TSSA	**Tissa**	**5.86**	**160**	*e*P	Pn	15 21 00.9	-2.8
TSSA				*e*S	**Sn**	**15 22 08.1**	**-1.7**
TSSA				IAML		15 22 11.3	
	comp=E,1μm,0.4s						
TSSA				IAML		15 22 13.0	
	comp=N,780nm,0.3s						
DHRM	**DHARAMSHALA**	**6.46**	**161**	*e*P	Pn	15 21 09.1	-2.8
DHRM				*e*S	**Sn**	**15 22 21.9**	**-2.4**
DHRM				IAML		15 22 25.0	
	comp=E,386nm,0.7s						
DHRM				IAML		15 22 28.0	
	comp=N,477nm,0.1s						
PDGK	**Podgornoye**	**6.53**	**39**	⇓P	**Pn**	**15 21 14.6**	**+1.9**
	comp=N,5.7nm,0.7s						
PDGK	**Podgornoye**	**6.53**	**39**	PN	**Pn**	**15 21 14.6**	**+1.9**
BHK	**Bhakra**	**7.29**	**163**	*e*S	**Sn**	**15 22 44.5**	**+0.5**
BHK				IAML		15 22 46.9	
	comp=N,217nm,0.4s						
BHK				IAML		15 22 48.9	
	comp=E,296nm,0.1s						
SMLA	**Simla**	**7.75**	**158**	*e*P	Pn	15 21 25.7	-3.5
SMLA				*e*S	**Sn**	**15 22 52.0**	**-3.4**
SMLA				IAML		15 22 54.2	
	comp=N,238nm,0.9s						
SMLA				IAML		15 22 56.2	
	comp=E,356nm,0.3s						
DDI	**Dehra Dun**	**8.78**	**155**	*e*P	Pn	15 21 39.0	-4.2
DDI				*e*S	**Sn**	**15 23 15.9**	**-4.4**
DDI				IAML		15 23 17.3	
	comp=E,234nm,0.5s						
DDI				IAML		15 23 20.4	
	comp=N,345nm,0.3s						
JOSI	**Joshimath**	**9.14**	**147**	*e*P	Pn	15 21 44.5	-3.6
JOSI				*e*S	**Sn**	**15 23 25.6**	**-3.8**
JOSI				IAML		15 23 28.8	
	comp=E,209nm,1.0s						
JOSI				IAML		15 23 29.4	
	comp=N,192nm,0.9s						
HRA	**Herat**	**10.16**	**250**	Pn	**Pn**	**15 22 01.9**	**0.0**
MAKZ	**Makanchi**	**10.32**	**33**		**Pn**	**15 22 05.4**	**+1.5**
MAKZ	**Makanchi**	**10.32**	**33**	⇓P	**Pn**	**15 22 08.5**	**+4.6**
	comp=N,9.6nm,1.2s						
MAKZ	**Makanchi**	**10.32**	**33**	P	**Pn**	**15 22 05.4**	**+1.5**
LGTI	**Lohaghat**	**10.37**	**148**	*e*P	Pn	15 22 01.2	-3.7
LGTI				*e*S	**Sn**	**15 23 54.2**	**-5.2**
LGTI				IAML		15 23 55.7	
	comp=E,38nm,0.1s						
LGTI				IAML		15 23 55.9	
	comp=N,68nm,0.2s						
MK31	**Makanchi Array**	**10.45**	**34**	⇑P	**Pn**	**15 22 07.7**	**+2.1**
	comp=N,1.5nm,0.6s,baz=207,slow=13,SNR=15						
MK31	**Makanchi Array**	**10.45**	**34**	*i* P	**Pn**	**15 22 05.8**	**+0.2**
MKAR	**Makanchi Array**	**10.45**	**34**	P	**Pn**	**15 22 07.5**	**+1.9**
	comp=N,1.5nm,0.5s,baz=213,slow=16,SNR=12						
MKAR	**Makanchi Array**	**10.45**	**34**	Pn	**Pn**	**15 22 07.1**	**+1.5**
KUDL	**Kundal**	**10.46**	**167**	*e*P	Pn	15 22 02.0	-3.9
KUDL				IAML		15 23 53.4	
	comp=E,57nm,0.3s						
KUDL				*e*S	**Sn**	**15 23 57.4**	**-3.8**
KUDL				IAML		15 23 59.2	
	comp=N,55nm,0.3s						
WMQ	**Urumqi**	**11.78**	**58**	*e*P	**Pn**	**15 22 27.0**	**+3.6**
KURBB	**Kurchatov Arra**	**12.67**	**14**	P	**Pn**	**15 22 33.9**	**-1.0**
	comp=N,1.7nm,0.7s,baz=200,slow=12,SNR=9.0						
KURK	**Kurchatov**	**12.78**	**14**		**Pn**	**15 22 35.1**	**-1.3**
KURK	**Kurchatov**	**12.78**	**14**	⇑P	**Pn**	**15 22 36.6**	**+0.2**
	comp=N,5.8nm,0.6s						
KURK	**Kurchatov**	**12.78**	**14**	*ce*P	**Pn**	**15 22 35.7**	**-0.6**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AB31	**Akbulak array**	**14.75**	**322**		**Pn**	**15 22 58.9**	**-2.7**
AB31	**Akbulak array**	**14.75**	**322**	P	**Pn**	**15 22 59.9**	**-1.8**
	comp=Z,2.5nm,0.4s,baz=134,slow=12,SNR=85						
AB31	**Akbulak array**	**14.75**	**322**	P	**Pn**	**15 22 59.9**	**-1.8**
ABKAR	**Akbulak array**	**14.75**	**322**		**Pn**	**15 22 59.6**	**-2.0**
BVA0	**Borovoye Array**	**14.82**	**352**	P	**Pn**	**15 23 04.4**	**+1.8**
	comp=Z,10nm,0.6s,baz=157,slow=11,SNR=76						
BVA0	**Borovoye Array**	**14.82**	**352**	P	**Pn**	**15 23 04.4**	**+1.8**
BVAR	**Borovoye Array**	**14.82**	**352**	P	**Pn**	**15 23 02.3**	**-0.3**
	comp=Z,2.9nm,0.4s,baz=156,slow=9.6,SNR=28						
BVAR				S	**Sn**	**15 25 40.7**	**-5.5**
	comp=Z,2.2nm,0.6s,baz=167,slow=20,SNR=5.3						
BORK	**Borovoye**	**14.85**	**352**		**Pn**	**15 23 02.4**	**-0.6**
BORK	**Borovoye**	**14.85**	**352**	*ce*P	**Pn**	**15 23 03.1**	**+0.1**
BORK				pmax	pmax		
	comp=Z,12nm,0.6s						
DGZ	**Jazzator, Alta**	**14.92**	**36**	*i* P	**Pn**	**15 23 05.1**	**+1.1**
AKTO	**Aktyubinsk**	**16.46**	**322**	P	**Pn**	**15 23 22.9**	**0.0**
	comp=Z,8.0nm,0.3s,baz=123,slow=9.7,SNR=19						
AKTO				S	**Sn**	**15 26 16.8**	**-9.0**
	comp=Z,5.7nm,0.7s,baz=330,slow=22,SNR=7.2						
AKTO	**Aktyubinsk**	**16.46**	**322**	⇓P	**Pn**	**15 23 22.3**	**-0.7**
	comp=Z,4.6nm,0.5s						
AKTO	**Aktyubinsk**	**16.46**	**322**	P	**Pn**	**15 23 23.0**	**0.0**
ZAA0	**Zalesovo Array**	**17.28**	**22**	P	**P**	**15 23 32.0**	**-0.6**
ZAA0				IAmb	IAmb	15 23 35.2	
	comp=Z,10.0nm,0.6s						
ZAA0	**Zalesovo Array**	**17.28**	**22**	⇑P	**P**	**15 23 32.6**	**0.0**
	comp=Z,1.1nm,0.6s						
ZALV	**Zalesovo Beam**	**17.28**	**22**	P	**P**	**15 23 33.2**	**+0.6**
	comp=Z,9.1nm,0.4s,baz=217,slow=11,SNR=48						
ZALV	**Zalesovo Beam**	**17.28**	**22**	P	**P**	**15 23 33.0**	**+0.4**
GTA	**Gaotai**	**20.23**	**79**	*e*P	**P**	**15 24 07.3**	**+2.2**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ARTI	**Arti**	**20.73**	**335**	P	**P**	**15 24 11.1**	**+1.1**
	comp=Z,14nm,0.7s,baz=146,slow=6.8,SNR=25						
	comp=Z,14nm,0.7s						
ARTI	**Arti**	**20.73**	**335**	P	**P**	**15 24 08.6**	**-1.4**
ARTI	**Arti**	**20.73**	**335**	*d* *i*P	**P**	**15 24 08.8**	**-1.3**
ARTI						15 24 38.1	
ARTI				S	**S**	**15 27 51.9**	**-3.0**
ARTI				pmax	pmax		
	comp=Z,15nm,0.7s						
KNGR	**Kungurtug, Tuv**	**20.74**	**46**	*i* P	**P**	**15 24 11.8**	**+1.4**
BELG	**Belogornoye**	**22.95**	**316**	P	**P**	**15 24 33.8**	**+0.6**
	comp=Z,6.9nm,0.8s,baz=103,slow=7.9,SNR=3.2						
	comp=Z,6.9nm,0.8s						
SONM	**Songino Array**	**25.41**	**58**	P	**P**	**15 24 58.1**	**+2.2**
	comp=Z,2.7nm,0.8s,baz=256,slow=11,SNR=12						
	comp=Z,2.7nm,0.8s						
SONM	**Songino Array**	**25.41**	**58**	P	**P**	**15 24 55.6**	**-0.2**
KIRV	**Kirov**	**25.62**	**330**	*ce*P	**P**	**15 24 56.4**	**-0.9**
ULN	**Ulaanbaatar**	**25.86**	**58**	*ce*P	**P**	**15 25 00.3**	**+0.5**
ULN				pmax	pmax		
	comp=Z,9.0nm,2.5s						
PZH	**PanZhiHua**	**26.27**	**109**	P	**P**	**15 25 05.6**	**+1.9**
HHC	**Hu-ho-hao-te**	**29.02**	**73**	*e*P	**P**	**15 25 29.6**	**+1.5**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRTR	**Keskin Array B**	**31.05**	**285**	P	**P**	**15 25 47.8**	**+1.7**
	comp=Z,0.3nm,0.4s,baz=50,slow=12,SNR=3.0						
	comp=Z,0.3nm,0.4s						
BRTR	**Keskin Array B**	**31.05**	**285**	P	**P**	**15 25 46.9**	**+0.7**
NRIK	**Noril'sk**	**31.88**	**9**	P	**P**	**15 25 53.6**	**+0.9**
	comp=Z,2.9nm,0.7s,baz=194,slow=7.9,SNR=6.4						
	comp=Z,2.9nm,0.7s						
NRIK	**Noril'sk**	**31.88**	**9**	P	**P**	**15 25 52.8**	**0.0**
NRIK				IAmb	IAmb	15 25 55.1	
	comp=Z,3.7nm,0.8s						
NRIK	**Noril'sk**	**31.88**	**9**	*i* P	**P**	**15 25 51.5**	**-1.3**
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FINES	**FINESS Array B**	**37.22**	**324**	P	**P**	**15 26 39.6**	**+0.8**
	comp=Z,5.0nm,0.7s,baz=114,slow=10.0,SNR=23						
	comp=Z,5.0nm,0.7s						
ARCES	**ARCESS Array B**	**40.29**	**336**	P	**P**	**15 27 05.2**	**+0.8**
	comp=Z,3.0nm,0.5s,baz=110,slow=7.9,SNR=44						
	comp=Z,3.0nm,0.5s						
ARCES	**ARCESS Array B**	**40.29**	**336**	IAmb	IAmb	15 27 06.1	
	comp=Z,17nm,1.1s						
ARCES	**ARCESS Array B**	**40.29**	**336**	P	**P**	**15 27 05.2**	**+0.8**
ARCES				pmax	pmax		
	comp=Z,17nm,1.2s						
YAK	**Yakutsk**	**41.11**	**36**	*ce*P	**P**	**15 27 09.2**	**-2.0**
YAK				pmax	pmax		
	comp=Z,41nm,2.5s						
HFS	**Hagfors**	**43.00**	**320**	P	**P**	**15 27 27.1**	**+0.5**
	comp=Z,7.7nm,0.5s,baz=98,slow=11,SNR=40						
	comp=Z,7.7nm,0.5s						
TIXI	**Tiksi**	**43.17**	**22**	P	**P**	**15 27 28.1**	**+0.4**
TIXI				IAmb	IAmb	15 27 29.2	
	comp=Z,8.2nm,0.6s						
TIXI	**Tiksi**	**43.17**	**22**	*ce*P	**P**	**15 27 28.7**	**+1.0**
TIXI				pmax	pmax		
	comp=Z,22nm,2.5s						
NORES	**NORESS Array B**	**44.09**	**321**	P	**P**	**15 27 36.0**	**+0.7**
NB2	**NORSAR Subarra**	**44.25**	**322**	P	**P**	**15 27 36.8**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=91,slow=7.9						
NOA	**NORSAR Array B**	**44.25**	**322**	P	**P**	**15 27 36.2**	**-0.5**
	comp=Z,1.1nm,0.4s,baz=102,slow=7.2,SNR=9.6						
	comp=Z,1.1nm,0.4s						
SPITS	**Spitsbergen Ar**	**46.18**	**346**	P	**P**	**15 27 53.1**	**+1.6**
	comp=Z,2.1nm,0.6s,baz=124,slow=14,SNR=5.6						
	comp=Z,2.1nm,0.6s						
EKA	**Eskdalemuir Ar**	**52.50**	**315**	P	**P**	**15 28 40.2**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=88,slow=8.9,SNR=4.4						
	comp=Z,1.4nm,0.6s						
ESDC	**Sonseca Array**	**58.56**	**298**	P	**P**	**15 29 23.8**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=58,slow=5.8,SNR=1.9						
	comp=Z,0.4nm,0.5s						
ILAR	**Eielson Array**	**72.33**	**17**	P	**P**	**15 30 51.5**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=321,slow=5.6,SNR=11						
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**79.22**	**4**	P	**P**	**15 31 31.4**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=344,slow=5.8,SNR=14						
	comp=Z,0.8nm,0.6s						
WRA	**Warramunga Arr**	**81.13**	**124**	P	**P**	**15 31 41.1**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=315,slow=5.6,SNR=2.2						
	comp=Z,0.4nm,0.6s						
ASAR	**Alice Springs**	**83.54**	**127**	P	**P**	**15 31 53.0**	**-1.2**
	comp=Z,0.2nm,0.7s,baz=314,slow=4.9,SNR=4.7						
	comp=Z,0.2nm,0.7s						

MOS **19** 15:25:55.7±1.1, 1°.76N×8°.24E, h10^{km}, mb5.4/67, MS4.9/13, Error ellipse: s-maj=8.5km s-min=3.4km az=71.9

IDC **19** 15:25:57.4±0.4, 1°.73N×8°.27E, h0^{km}, mb4.9/30, mbtmp4.9/31, ML4.6/1, MS4.7/64, Error ellipse: s-maj=17.9km s-min=11.0km az=103.0

NEIC **19** 15:25:58.8±1.5, 1°.81N±0°.07×8°.18E±0°.05, h10^{km}±1^{km}, mb5.4/213, Ms_20 5.1/78, Mwb5.4/23, Mww5.5/23, Error ellipse: s-maj=12.0km s-min=7.9km az=192.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.40; M$_{\theta\theta}$-0.00; M$_{\phi\phi}$-0.40; M$_{r\theta}$-0.66; M$_{\theta\phi}$1.42; M$_{\phi r}$0.05; Fault plane solution: M$_0$1.62000×10^{17} NP1: φ$_s$277.05000°, δ81.46000°, λ27.59000°. NP2: φ$_s$182.61000°, δ62.74000°, λ170.38000°. Principal axes: T 1.4545, Plg25.0000°, Azm143.0000°; N 0.2868, Plg61.0000°, Azm293.0000°; P -1.7413, Plg13.0000°, Azm47.0000°;

BJI **19** 15:25:59.3, 1°.89N×8°.22E, h18^{km}, mB5.4/7, mb4.8/26, Ms5.3/26, Ms7 5.0/26

GFZ **19** 15:25:59.7, 1°.75N×8°.21E, h29^{km}, MW5.5, Moment Tensor Solution. s57 Moment tensor: M$_{rr}$0.52; M$_{\theta\theta}$-0.60; M$_{\phi\phi}$0.08; M$_{r\theta}$-1.17; M$_{\theta\phi}$1.45; M$_{\phi r}$-0.01; Fault plane solution: NP1:φ$_s$171.00000°, δ49.00000°, λ167.00000°. NP2:φ$_s$270.00000°, δ80.00000°, λ42.00000°. Principal axes: T 1.7600, Plg36.0000°, Azm139.0000°; N 0.3300, Plg47.0000°, Azm280.0000°; P -2.0900, Plg20.0000°, Azm34.0000°;

NEIC **19** 15:25:59.4, 1°.55N×8°.42E, h36^{km}, Moment Tensor Solution. Duration: 2^s.8 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.32; M$_{\theta\theta}$-0.78; M$_{\phi\phi}$0.46; M$_{r\theta}$-0.91; M$_{\theta\phi}$1.74; M$_{\phi r}$0.10; Fault plane solution: M$_0$2.08000×10^{17} NP1: φ$_s$170.98000°, δ64.39000°, λ179.51000°. NP2: φ$_s$261.20000°, δ89.56000°, λ25.61000°. Principal axes: T 1.8339, Plg18.0000°, Azm129.0000°; N 0.4255, Plg64.0000°, Azm262.0000°; P -2.2594, Plg17.0000°, Azm33.0000°;

NEIC **19** 15:25:59.4, 1°.75N×8°.22E, h10^{km}

NEIC **19** 15:25:59.4, 1°.75N×8°.22E, h36^{km}

INMG **19** 15:26:00.0±2.8, 1°.63N×8°.22E, h10^{km}, M5.4, mb5.3, Ms4.7, #DIST_RANGE: DISTANT

GCMT **19** 15:26:01.8±0.1, 1°.67N±0°.01×8°.31E±0°.01, h32^{km}, MW5.5/141, Moment Tensor Solution. s112,c182; s141,c276; Duration: 1^s.3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.38±.03; M$_{\theta\theta}$-0.46±.02; M$_{\phi\phi}$0.08±.03; M$_{r\theta}$-1.31±.05; M$_{\theta\phi}$1.57±.02; M$_{\phi r}$-0.15±.04; Best double couple: M$_0$2.09200×10^{17} NP1:φ$_s$173.00000°, δ50.00000°, λ170.00000°. NP2:φ$_s$269.00000°, δ83.00000°, λ41.00000°. Principal axes: T 2.0420, Plg33.0000°, Azm139.0000°; N 0.1000, Plg49.0000°, Azm277.0000°; P -2.1430, Plg22.0000°, Azm34.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

BGR **19** 15:26:01.5, 1°.79N×8°.62E, h33^{km}, mb5.3, Ms4.7

ISC 19 15:25:58.7±0.2, **1°.81N**±0°.04×**8°.25E**±0°.04, **h10**^{km}, **n824**, σ**1^s.43**/743, **mb5.3**/262, **MS4.9**/113, **44C-50D, Off south coast of northwest Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDA	**Edea**	**2.73**	**44**		**Pn**	**15 26 41.4**	**-1.3**
EDA				Sn	**Sn**	**15 27 10.8**	**-4.9**
ACRG	**Accra**	**9.26**	**295**		**Pn**	**15 28 09.3**	**-3.1**
ACRG				Sn	Sn	15 29 42.0	-15
TOA0	**Torodi Ar. Sit**	**13.00**	**330**	P	**Pn**	**15 29 03.2**	**-0.5**
	SNR=8.6						
TORD	**Torodi Ar. Bea**	**13.00**	**330**	Pn	**Pn**	**15 29 02.6**	**-1.1**
	3.2nm,0.3s,baz=148,slow=13,SNR=60						
TORD				Sn	**Sn**	**15 31 31.6**	**+3.0**
	6.6nm,0.3s,baz=127,slow=22,SNR=5.2						
TORD				LR	LR	15 35 12.5	
	comp=Z,3μm,19.6s,baz=142,slow=42						
	27nm,0.6s						
TORD	**Torodi Ar. Bea**	**13.00**	**330**	Pn	**Pn**	**15 29 01.9**	**-1.8**
DBIC	**Dimbokro**	**13.93**	**291**	Pn	**Pn**	**15 29 14.1**	**-2.3**
	26nm,0.3s,baz=131,slow=13,SNR=424						
DBIC				Sn	Sn	15 31 39.0	-12
	32nm,0.3s,baz=303,slow=23,SNR=6.5						
DBIC				LR	LR	15 34 03.4	
	comp=Z,6μm,21.5s,baz=131,slow=35						
DBIC	**Dimbokro**	**13.93**	**291**		**Pn**	**15 29 13.2**	**-3.2**
DBIC	**Dimbokro**	**13.93**	**291**	P	**Pn**	**15 29 13.2**	**-3.2**
TAM	**Tamanrasset**	**21.03**	**353**		**P**	**15 30 41.3**	**-1.7**
TAM	**Tamanrasset**	**21.03**	**353**	P	**P**	**15 30 41.3**	**-1.7**
TAM				pmax	pmax		
	comp=Z,993nm,0.7s						
TAM				MLR	MLR		
	comp=Z,3μm,19.0s						
SHEL	**Horse Pasture**	**22.43**	**218**		**P**	**15 30 56.2**	**-1.7**
SHEL	**Horse Pasture**	**22.43**	**218**	P	**P**	**15 30 56.2**	**-1.7**
SHEL				pmax	pmax		
	comp=Z,318nm,0.9s						
MBAR	**Mbarara**	**22.61**	**96**	LR	LR	15 39 52.7	
	comp=Z,3μm,18.6s,baz=275,slow=37						
MBAR	**Mbarara**	**22.61**	**96**	P	**P**	**15 31 00.4**	**+0.3**
MBAR				P	**P**	**15 31 00.4**	**+0.3**
MBAR	**Mbarara**	**22.61**	**96**	P	**P**	**15 30 59.1**	**-1.0**
MBAR	**Mbarara**	**22.61**	**96**	IAMs_20	IAMs_20	15 39 50.6	
	comp=Z,5μm,18.0s						
MBAR	**Mbarara**	**22.61**	**96**	*i* P	**P**	**15 31 00.1**	**0.0**
MBAR				pmax	pmax		
	comp=Z,320nm,0.8s						
TSUM	**Tsumeb**	**22.80**	**157**	LR	LR	15 41 04.6	
	comp=Z,3μm,18.7s,baz=330,slow=40						
TSUM	**Tsumeb**	**22.80**	**157**		**P**	**15 31 00.9**	**-1.1**
TSUM				IAmb	IAmb	15 31 03.9	
	comp=Z,193nm,0.9s						
TSUM	**Tsumeb**	**22.80**	**157**	IAMs_20	IAMs_20	15 40 51.9	
	comp=Z,4μm,18.0s						
XAUDM	**Khaudum**	**23.97**	**148**	*i* P	**P**	**15 31 13.9**	**+0.2**
ASCN	**Ascension**	**24.54**	**246**	P	**P**	**15 31 16.4**	**-2.5**

ASCN				IAmb	IAmb	15 31 46.3	
	comp=Z,205nm,1.4s						
H10N1	ASCENSION HYDR	24.62	247	T	T	15 57 29.5	
	baz=66,slow=75,SNR=69						
H10N2	ASCENSION HYDR	24.62	247	T	T	15 57 29.3	
	baz=66,slow=75,SNR=68						
H10N3	ASCENSION HYDR	24.64	247	T	T	15 57 30.8	
	baz=66,slow=75,SNR=85						
QNGWA	Qangwa	24.71	150	P	P	15 31 19.3	-1.2
GMARE	Gumare	25.11	148	P	P	15 31 23.1	-0.9
H10S2	ASCENSION HYDR	25.20	245	T	T	15 58 29.0	
	baz=150,slow=74,SNR=30						
H10S3	ASCENSION HYDR	25.21	245	T	T	15 58 29.9	
	baz=70,slow=74,SNR=24						
KSANE	Kasane	25.64	140	P	P	15 31 28.5	-0.4
KSANE	Kasane	25.64	140	*i* P	P	15 31 28.8	0.0
LSZ	Lusaka	26.02	131	LR	LR	15 41 28.8	
	comp=Z,2µm,20.0s,baz=310,slow=36						
LSZ	Lusaka	26.02	131	P	P	15 31 33.1	+0.7
LSZ	Lusaka	26.02	131		P	15 31 32.1	-0.3
LSZ	Lusaka	26.02	131	P	P	15 31 32.1	-0.3
LSZ				pmax	pmax		
	comp=Z,604nm,1.1s						
LSZ				MLR	MLR		
	comp=Z,10µm,20.0s						
LSZ	Lusaka	26.02	131	*i* P	P	15 31 33.7	+1.3
GRTLG	Ghanzi	26.29	152	P	P	15 31 34.7	-0.1
GRTLG	Ghanzi	26.29	152	*i* P	P	15 31 34.6	-0.1
PHDHD	Phuduhudu	27.08	145	P	P	15 31 41.7	-0.2
LODK	Lodwar	27.13	86	P	P	15 31 43.8	+1.4
	SNR=19						
LODK	Lodwar	27.13	86		P	15 31 42.2	-0.2
LODK				IAmb	IAmb	15 32 24.8	
	comp=Z,70nm,0.9s						
KOOLE	Kule	27.26	155	P	P	15 31 43.0	-0.6
KOOLE	Kule	27.26	155	*i* P	P	15 31 43.1	-0.5
MBO	M'Bour	27.86	298	P	P	15 31 48.8	0.0
MBO	M'Bour	27.86	298	IAMs_20	IAMs_20	15 42 00.0	
	comp=Z,4µm,21.0s						
KGCAE	Kacgae	28.03	152		P	15 31 49.9	-0.5
KGCAE	Kacgae	28.03	152	*i* P	P	15 31 50.1	-0.3
LKGWB	Lokgwabe	28.68	155	*i* P	P	15 31 57.8	+1.7
KHWEE	KHWEE	28.98	145	P	P	15 31 58.5	-0.3
KHWEE	KHWEE	28.98	145	*i* P	P	15 31 58.8	0.0
KMBO	Kilima Mbogo	29.14	96	*i* P	P	15 32 10.1	+10
KMBO				pmax	pmax		
	comp=Z,183nm,0.4s						
BROLN	Tlhalogang	29.45	142	*i* P	P	15 32 02.1	-0.9
MATP	Matopo	29.70	139	LR	LR	15 44 25.8	
	comp=Z,2µm,19.8s,baz=308,slow=37						
KIBK	Kibwezi	30.07	98	P	P	15 32 10.6	+2.0
	SNR=12						
KIBK	Kibwezi	30.07	98		P	15 32 09.1	+0.4
KIBK				IAmb	IAmb	15 32 48.7	
	comp=Z,66nm,1.3s						
KIBK				IAMs_20	IAMs_20	15 44 40.2	
	comp=Z,5µm,18.0s						
SKOMA	Sekoma	30.27	151	*i* P	P	15 32 09.9	-0.4
LPHEP	Lephephe	30.33	147		P	15 32 10.5	-0.3
LPHEP	Lephephe	30.33	147	*i* P	P	15 32 11.0	+0.2
PHPEN	Phepeng	30.59	153	P	P	15 32 12.4	-0.7
MREMI	Moremi	30.62	143	*i* P	P	15 32 13.2	-0.2
FURI	Furi	31.08	76	LR	LR	15 44 37.0	
	comp=Z,3µm,19.2s,baz=262,slow=36						
FURI	Furi	31.08	76	P	P	15 32 17.4	-0.4
FURI	Furi	31.08	76	IAMs_20	IAMs_20	15 44 34.3	
	comp=Z,3µm,18.0s						
LBTB	Lobatse	31.52	149	LR	LR	15 45 26.2	
	comp=Z,5µm,18.0s,baz=319,slow=37						
LBTB	Lobatse	31.52	149	P	P	15 32 20.9	-0.4
LBTB	Lobatse	31.52	149	P	P	15 32 20.9	-0.4
LBTB				pmax	pmax		
	comp=Z,71nm,0.8s						
LBTB	Lobatse	31.52	149	*i* P	P	15 32 21.3	0.0
MAKGR	Makgori	31.78	151	*i* P	P	15 32 23.4	-0.2
MUSN	Musina, Limpop	31.91	140	*i* P	P	15 32 24.7	0.0
MDT	Midelt	33.13	340	LR	LR	15 48 01.1	
	comp=Z,2µm,18.3s,baz=171,slow=40						
MD31	MD31	33.23	340	P	P	15 32 35.9	-0.3
MD01	Midelt array s	33.23	340	P	P	15 32 35.8	-0.5
KEST	Kesra	33.77	2	P	P	15 32 42.6	+1.7
	comp=Z,14nm,0.8s,baz=297,slow=4.1,SNR=12						
KEST				LR	LR	15 48 05.9	
	comp=Z,2µm,18.6s,baz=168,slow=39						
	comp=Z,14nm,0.8s						
KEST	Kesra	33.77	2	P	P	15 32 43.2	+2.4
KEST	Kesra	33.77	2	P	P	15 32 39.8	-1.1
KEST				IAmb	IAmb	15 32 48.4	
	comp=Z,65nm,1.4s						
SACV	Santiago Islan	34.05	294	P	P	15 32 41.8	-1.7
BOSA	Boshof	34.37	153	P	P	15 32 45.3	-0.9
	comp=Z,24nm,0.6s,baz=333,slow=8.8,SNR=59						
BOSA				LR	LR	15 47 11.5	
	comp=Z,3µm,18.9s,baz=327,slow=37						
	comp=Z,24nm,0.6s						
BOSA	Boshof	34.37	153	P	P	15 32 44.9	-1.3
BOSA				IAmb	IAmb	15 32 45.9	
	comp=Z,42nm,0.8s						
BOSA	Boshof	34.37	153	*i* P	P	15 32 45.6	-0.6
AVE	Averroes	34.60	337	P	P	15 32 47.7	-0.3
AVE				IAmb	IAmb	15 33 00.8	
	comp=Z,74nm,0.9s						
AVE				IAMs_20	IAMs_20	15 49 02.0	
	comp=Z,2µm,20.0s						
ATD	Arta Tunnel	35.65	73	P	P	15 32 58.7	+1.3
ATD	Arta Tunnel	35.65	73	P	P	15 32 57.0	-0.4
RAFF	Raffo Rosso	35.69	8	P	P	15 32 56.8	-0.6
VAE	Valguarnera	35.95	8	LR	LR	15 48 56.6	
	comp=Z,1µm,18.2s,baz=245,slow=38						
SUR	Sutherland	36.02	162	P	P	15 33 00.6	+0.1
SUR	Sutherland	36.02	162	P	P	15 32 59.0	-1.4
SUR				IAmb	IAmb	15 33 06.2	
	comp=Z,70nm,0.8s						
IDI	Anoyia	36.73	23	LR	LR	15 49 31.6	
	comp=Z,446nm,18.6s,baz=163,slow=38						
IDI	Anoyia	36.73	23	P	P	15 33 06.7	+0.3
EIL	Elat	37.58	40	LR	LR	15 49 40.3	
	comp=Z,1µm,18.2s,baz=190,slow=38						
TIP	Timpagrande	38.00	11	P	P	15 33 16.0	-1.0
TIP				IAmb	IAmb	15 33 39.8	
	comp=Z,183nm,2.0s						
PBDV	Barranco-do-Ve	38.29	339	*e*P	P	15 33 21.9	+2.4
PBDV				*i* tx	tx	15 33 32.1	
PVAQ	Vaqueiros	38.36	339	*e*P	P	15 33 21.6	+1.6
PVAQ				*i* tx	tx	15 33 32.1	
PVAQ				*e*LR	LR	15 49 42.6	
PVAQ				*i* IAMs_20	IAMs_20	15 52 55.5	
	comp=Z,2µm,18.0s						
APE	Apeiranthos	38.54	22	⇓P	P	15 33 22.4	+0.8
APE	Apeiranthos	38.54	22	*i* P	P	15 33 22.1	+0.5
APE				pmax	pmax		
	comp=Z,81nm,2.3s						
MORF	Marmelete	38.61	338	*e*P	P	15 33 22.7	+0.5
MORF				IAmb	IAmb	15 33 28.9	
	comp=Z,68nm,1.1s						
MORF	Marmelete	38.61	338	*e*P	P	15 33 24.8	+2.6
MORF				*i* tx	tx	15 33 34.5	
MORF	Marmelete	38.61	338	*e*P	P	15 33 22.7	+0.5
PCVE	Castro Verde	38.67	339	*e*P	P	15 33 29.8	+7.1
PCVE				*i* IAmb	IAmb	15 33 31.2	
	comp=Z,114nm,1.5s						
PCVE				*i* tx	tx	15 33 35.8	
PBAR	Barrancos	38.82	341	*e*P	P	15 33 25.5	+1.6
PBAR				*i* tx	tx	15 33 35.4	
PBAR				*i* IAmb	IAmb	15 33 38.8	
	comp=Z,84nm,2.1s						
PTEO	Sao Teotonio	38.85	338	*e*P	P	15 33 26.4	+2.3
PTEO				*i* tx	tx	15 33 37.1	
GRHM	Grahamstown, E	38.86	155	P	P	15 33 23.6	-0.8
ARG	Arkhangelos	38.87	26	P	P	15 33 25.5	+1.1
ARG	Arkhangelos	38.87	26	P	P	15 33 25.5	+1.1
ARG				pmax	pmax		
	comp=Z,400nm,1.8s						
MESJ	Messejana	38.92	339	*e*P	P	15 33 25.4	+0.6
MESJ				IAmb	IAmb	15 33 37.9	
	comp=Z,45nm,0.8s						
MESJ	Messejana	38.92	339	P	P	15 33 25.2	+0.5
MESJ				IAmb	IAmb	15 33 38.1	
	comp=Z,53nm,0.9s						
MESJ	Messejana	38.92	339	*e*P	P	15 33 27.2	+2.4
MESJ	Messejana	38.92	339	*e*P	P	15 33 25.4	+0.6
GHAJ	Ghor Haditha	39.07	39	P	P	15 33 27.3	+1.2
GHAJ				IAmb	IAmb	15 33 33.1	
	comp=Z,82nm,1.4s						
KEK	Kerkira	39.17	14	P	P	15 33 27.1	+0.3
PAB	San Pablo	39.28	345	P	P	15 33 28.5	+0.7
PAB	San Pablo	39.28	345	P	P	15 33 28.5	+0.7
PAB				pmax	pmax		
	comp=Z,51nm,1.1s						
ESBB	Sonseca Array	39.30	345	P	P	15 33 28.0	0.0
ESDC	Sonseca Array	39.30	345	P	P	15 33 29.5	+1.5
	comp=Z,13nm,0.9s,baz=165,slow=7.1,SNR=31						
ESDC				LR	LR	15 52 51.4	
	comp=Z,2µm,18.1s,baz=156,slow=41						
	comp=Z,13nm,0.9s						
ESDC	Sonseca Array	39.30	345	P	P	15 33 27.9	-0.1
EVO	Evora	39.47	340	*e*P	P	15 33 31.6	+2.2
EVO				*i* tx	tx	15 33 42.6	
EVO				*i* IAmb	IAmb	15 33 46.4	
	comp=Z,69nm,1.5s						
MOE	Montemor	39.58	339	*e*P	P	15 33 32.7	+2.5
BALJ	Balqa	39.66	38	IAmb	IAmb	15 33 34.5	
	comp=Z,228nm,1.8s						
YER	Yerkesik	39.71	25	P	P	15 33 33.1	+1.6
PARRA	Arraiolos	39.73	340	*e*P	P	15 33 33.9	+2.3
PARRA				*i* IAmb	IAmb	15 33 37.7	
	comp=Z,78nm,1.4s						
PARRA				*i* tx	tx	15 33 44.2	
PMTG	Montargil	40.02	340	*e*P	P	15 33 36.3	+2.4
PMRV	Marv??o	40.07	341	*e*P	P	15 33 37.1	+2.8
PMRV				*i* IAmb	IAmb	15 33 49.4	
	comp=Z,65nm,1.6s						
ELL	Elmali	40.11	27	IAmb	IAmb	15 33 40.3	
	comp=Z,181nm,1.9s						
ELL	Elmali	40.11	27	P	P	15 33 36.7	+1.8
MMAI	Mount Meron Ar	40.16	36	P	P	15 33 37.2	+1.9
	comp=Z,9.5nm,0.7s,baz=168,slow=4.3,SNR=14						
MMAI				LR	LR	15 51 33.7	
	comp=Z,1µm,18.6s,baz=202,slow=38						
	comp=Z,9.5nm,0.7s						
LIT	Litokhoron	40.25	17	P	P	15 33 35.2	-0.7
LIT	Litokhoron	40.25	17	P	P	15 33 35.2	-0.7
LIT				pmax	pmax		
	comp=Z,30nm,1.2s						
INTR	Introdacqua	40.35	7		P	15 33 34.7	-2.0
CSS	Mathiatis	40.41	32	P	P	15 33 37.1	-0.2
PSARD	Sardoal	40.48	340	*e*P	P	15 33 41.6	+3.8
PSARD				*i* tx	tx	15 33 50.6	
PSBE	So Bento	40.62	340	*e*P	P	15 33 41.9	+3.0
PSBE				*i* tx	tx	15 33 51.9	
CESX	Cesi	40.81	5	P	P	15 33 38.9	-1.6
CAMP	Campotosto	40.81	6	P	P	15 33 38.7	-1.9
CASP	Castiglione de	40.87	3	P	P	15 33 39.0	-1.9
MANT	Manisa	40.97	25		P	15 33 40.7	-1.4
PCAS	Casmilo, Conde	41.00	340	*e*P	P	15 33 44.2	+2.2
PCAS				*i* IAmb	IAmb	15 33 48.0	
	comp=Z,199nm,1.8s						
PCAS				*i* tx	tx	15 33 54.0	
MTE	Manteigas	41.00	342	*e*LR	LR	15 52 06.4	
MTE				*i* IAMs_20	IAMs_20	15 55 50.0	
	comp=Z,723nm,18.0s						
CEST	Esterri de Car	41.09	352	P	P	15 33 42.5	-0.4
PHP	Peshkopia	41.19	14	P	P	15 33 46.0	+2.4
PHP				pmax	pmax		
	comp=Z,21nm,1.2s						
EZN	Ezine	41.26	21	P	P	15 33 45.2	+1.1
ISP	Isparta	41.27	27	*i* P	P	15 33 45.4	+1.0
ISP				pmax	pmax		
	comp=Z,48nm,1.9s						
FDMO	Fiordimonte	41.28	5	P	P	15 33 43.9	-0.4
GUMA	Gualdo di Mace	41.33	6	IAmb	IAmb	15 33 53.6	
	comp=Z,93nm,1.1s						
MURB	Monte Urbino	41.45	5	IAmb	IAmb	15 33 48.2	
	comp=Z,55nm,0.7s						
MVO	Moncorvo	41.54	343	*e*LR	LR	15 52 35.4	
MVO				*i* IAMs_20	IAMs_20	15 53 49.5	
	comp=Z,989nm,18.0s						
OSSC	Osservatorio P	41.62	3	IAmb	IAmb	15 33 50.3	
	comp=Z,114nm,1.8s						
PDG	Podgorica	41.63	12	P	P	15 33 47.4	+0.2
BALB	Balikesir	41.68	23		P	15 33 48.5	+0.9
RAYN	Ar Rayn	42.04	56	P	P	15 33 51.7	+0.9
RAYN	Ar Rayn	42.04	56	IAMs_20	IAMs_20	15 51 12.0	
	comp=Z,2µm,19.0s						
RAYN	Ar Rayn	42.04	56	*i* P	P	15 33 52.0	+1.2
	SNR=27						
RAYN	Ar Rayn	42.04	56	⇑P	P	15 33 52.6	+1.7
ALN	Alexandroupoli	42.11	20		P	15 33 51.0	-0.1
ALN				PcP	PcP	15 35 42.2	-3.4
ALN	Alexandroupoli	42.11	20	P	P	15 33 51.0	-0.1
ALN						15 35 42.2	
ALN				pmax	pmax		
	comp=Z,43nm,1.0s						
BAND	Balkesir-Ban	42.38	23	⇓P	P	15 33 54.9	+1.6
ZCCA	Zocca	42.43	3	IAmb	IAmb	15 34 45.4	
	comp=Z,159nm,1.9s						
PGAV	Gavieira, Arco	42.65	342	*e*LR	LR	15 53 04.1	
PGAV				*i* IAMs_20	IAMs_20	15 54 43.1	
	comp=Z,756nm,18.0s						
BORA	Eskisehir	42.94	25		P	15 33 57.4	-0.6
BORA				IAmb	IAmb	15 34 01.4	
	comp=Z,118nm,1.8s						
OPO	Ambohidratompo	43.32	120	LR	LR	15 51 46.5	
	comp=Z,3µm,19.1s,baz=154,slow=36						
ABPO	Ambohimpanom	43.53	120	P	P	15 34 03.6	+0.4
ABPO				IAmb	IAmb	15 34 05.4	
	comp=Z,35nm,0.8s						
ABPO	Ambohimpanom	43.53	120	P	P	15 34 03.6	+0.4
ABPO				pmax	pmax		
	comp=Z,35nm,0.8s						
ABPO				MLR	MLR		
	comp=Z,7µm,18.0s						
ANTO	Ankara	43.97	27	P	P	15 34 07.6	+1.3
ANTO	Ankara	43.97	27	P	P	15 34 05.8	-0.4
ANTO				IAmb	IAmb	15 34 09.4	
	comp=Z,127nm,1.8s						
ANTO	Ankara	43.97	27	⇓P	P	15 34 07.8	+1.5
ANTO	Ankara	43.97	27	⇓P	P	15 34 07.8	+1.5
ANTO	Ankara	43.97	27	P	P	15 34 07.6	+1.3
	comp=Z,357nmcomp=Z,18nm,1.1s						
SBV	Sambava	44.02	111	P	P	15 34 07.5	+0.6
CEY	Cerknica	44.09	6	*i* P	P	15 34 08.8	+1.7
GAZ	Gaziantep	44.16	34	IAmb	IAmb	15 34 11.3	
	comp=Z,141nm,2.0s						
NBPV	Pedro Velho	44.23	259	*e*P	P	15 34 09.3	+0.6
BR105	Keskin Array S	44.23	28	P	P	15 34 09.3	+0.8
	comp=Z,110nmcomp=Z,14nm,0.9s						
BR104	Keskin Array S	44.23	28	P	P	15 34 09.1	+0.6
	comp=Z,102nmcomp=Z,11nm,0.8s						
SABO	M.te Sabotino	44.24	5	P	P	15 34 07.6	-0.7
SABO				IAmb	IAmb	15 34 21.9	
	comp=Z,78nm,1.3s						
BR106	Keskin Array S	44.24	28	P	P	15 34 09.5	+0.9
	comp=Z,83nmcomp=Z,10nm,0.9s						
BR131	Keskin Array S	44.25	28	P	P	15 34 10.0	+1.4
	SNR=8.2						
BR131	Keskin Array S	44.25	28	*i* P	P	15 34 09.4	+0.8
BRTR	Keskin Array B	44.25	28	P	P	15 34 09.7	+1.0
	comp=Z,7.0nm,0.8s,baz=199,slow=9.6,SNR=33						
BRTR				PcP	PcP	15 35 53.5	+0.3
	comp=Z,3.4nm,0.7s,baz=189,slow=5.4,SNR=3.6						
BRTR				LR	LR	15 55 29.3	
	comp=Z,838nm,18.9s,baz=205,slow=40						
	comp=Z,7.0nm,0.8s						
BRTR	Keskin Array B	44.25	28	P	P	15 34 09.5	+0.8
LJU	Ljubljana	44.40	6	*i* P	P	15 34 11.3	+1.8
VOI	Vohitsoka	44.41	124	P	P	15 34 11.4	+1.3
VOI	Vohitsoka	44.41	124	P	P	15 34 08.8	-1.3
VOI				IAmb	IAmb	15 34 11.9	
	comp=Z,36nm,1.0s						
MDVR	Moldovita	44.42	14	⇑P	P	15 34 11.5	+1.7
STAL	STALIGIAL	44.45	4		P	15 34 08.6	-1.3
CIMO	Cimolais	44.48	4		P	15 34 09.5	-0.7
TUE	Stuetta	44.50	1		P	15 34 10.0	-0.6
TUE				IAmb	IAmb	15 34 12.2	
	comp=Z,35nm,0.7s						
BNN	Bunyan	44.66	31		P	15 34 11.3	-0.6
FUORN	Ofenpass-Fuorn	44.67	2	IAmb	IAmb	15 34 15.3	
	comp=Z,32nm,0.7s						
HERR	Herculane	44.68	14	⇓P	P	15 34 13.9	+2.1
RCBR	Riachuelo	44.74	260	P	P	15 34 12.2	-0.6
RCBR	Riachuelo	44.74	260	P	P	15 34 12.2	-0.6
RCBR				pmax	pmax		
	comp=Z,29nm,1.1s						
DAVOX	Davos/Dischmat	44.82	2	LR	LR	15 55 08.3	
	comp=Z,1µm,18.4s,baz=200,slow=39						
OBKA	Obir	44.86	6	*i* P	P	15 34 14.7	+1.4
	comp=Z,12nm,0.8s						
MYKA	Terra Mystica	44.89	5	*i* P	P	15 34 15.4	+1.9
	comp=Z,7.0nm,0.6s						
ABTA	Abfaltersbach	44.91	4	*i* P	P	15 34 16.0	+2.2
	comp=Z,19nm,0.8s,SNR=8.6						
PERS	Pernice	45.05	7	*i* P	P	15 34 16.6	+1.9
PERS				*e*		15 36 06.9	
SOKA	Soboth	45.08	7	*i* P	P	15 34 17.1	+2.0
	comp=Z,28nm,0.7s,SNR=9.6						
FETA	Feichten	45.09	2	*i* P	P	15 34 16.1	+0.9
	comp=Z,20nm,0.6s,SNR=9.3						
MORH	Mrgy, Hungar	45.16	10	⇓P	P	15 34 17.1	+1.6
MORH	Mrgy, Hungar	45.16	10	P	P	15 34 16.9	+1.4
	comp=Z,9.2nm,1.9s						
BZS	Buzias	45.19	13	⇓P	P	15 34 17.8	+2.0
BZS	Buzias	45.19	13	⇓P	P	15 34 17.8	+2.0
GZR	Gura Zlata	45.25	14	⇑P	P	15 34 18.1	+1.7
GZR	Gura Zlata	45.25	14	⇑P	P	15 34 18.1	+1.7
SQTA	Sankt Quirin	45.31	3	*i* P	P	15 34 18.5	+1.6
	comp=Z,37nm,0.7s,SNR=11						
KBA	Koelnbreinsper	45.31	5	*i* P	P	15 34 18.8	+1.8
	comp=Z,26nm,0.7s,SNR=12						
DAVA	Damuels	45.32	2	*i* P	P	15 34 17.1	+0.1
	comp=Z,30nm,0.7s,SNR=8.4						
WTTA	Wattenberg	45.37	3	*i* P	P	15 34 18.9	+1.4
	comp=Z,57nm,0.8s,SNR=16						
WATA	Walderalm	45.44	3	*i* P	P	15 34 18.9	+0.9
	comp=Z,29nm,0.7s,SNR=13						
RETA	Reutte	45.55	2	*i* P	P	15 34 19.3	+0.5
	comp=Z,38nm,0.9s,SNR=9.8						
LOT	Lotru	45.56	15	⇓P	P	15 34 21.5	+2.6
ICOR	Ion Corvin	45.56	20	⇓P	P	15 34 20.1	+1.3
MANR	Mangalia	45.57	21	⇑P	P	15 34 20.2	+1.4
LESA	Schwarzleotal	45.60	4	*i* P	P	15 34 20.6	+1.4
	comp=Z,25nm,0.7s,SNR=10						
ARSA	Arzberg	45.70	7	IAmb	IAmb	15 34 23.5	
	comp=Z,31nm,0.8s						
ARSA	Arzberg	45.70	7	*i* P	P	15 34 21.9	+2.0
	comp=Z,30nm,0.7s,SNR=14						
ARR	Arges	45.72	16	⇓P	P	15 34 22.0	+1.9
UBR	Ueberruh	45.72	2	*e*P	P	15 34 20.1	0.0
	comp=Z,28nm,0.7s,baz=184,slow=7.7						
DEV	Deva	45.74	14	⇑P	P	15 34 22.7	+2.5
DEV	Deva	45.74	14	⇑P	P	15 34 22.7	+2.5
SLE	Schleitheim	45.78	0	P	P	15 34 20.3	-0.2
SIRR	Siria	45.81	13	⇑P	P	15 34 22.5	+1.7
MFTR	Murfatlar	45.83	20	⇓P	P	15 34 22.2	+1.3
MPLH	Magyarpolny	45.90	9	P	P	15 34 23.2	+1.8
	comp=Z,54nm,0.8s						
BIOA	Bad Ischl, Aus	45.94	5	*i* P	P	15 34 22.6	+0.8
	comp=Z,23nm,0.6s,SNR=11						
FOMA	Nahampoana Res	46.01	128	IAMs_20	IAMs_20	15 53 55.6	
	comp=Z,2µm,18.0s						
TLBR	Topalu	46.02	20	⇓P	P	15 34 23.2	+0.7
TIRR	Tirgusor	46.07	20	IAmb	IAmb	15 34 24.2	
	comp=Z,34nm,0.9s						
TIRR	Tirgusor	46.07	20	⇓P	P	15 34 23.7	+0.9
TIRR	Tirgusor	46.07	20	⇓P	P	15 34 23.7	+0.9
TIRR	Tirgusor	46.07	20	P	P	15 34 23.2	+0.4
	comp=Z,55nm,1.6s						
ARPR	Arapgir-MALATY	46.16	33	IAmb	IAmb	15 35 11.4	
	comp=Z,29nm,1.1s						
MOA	Molln	46.16	6	*i* P	P	15 34 24.7	+1.2
	comp=Z,29nm,0.6s,SNR=15						
MLR	Muntele Rosu	46.21	17	⇑P	P	15 34 25.5	+1.5
MLR	Muntele Rosu	46.21	17	⇑P	P	15 34 25.5	+1.5
ECH	Echery	46.24	359	P	P	15 34 24.9	+0.8
ECH	Echery	46.24	359	P	P	15 34 24.9	+0.8
ECH				pmax	pmax		
	comp=Z,19nm,0.8s						
RONA	Rosalia, Austr	46.24	8	*i* P	P	15 34 26.5	+2.3
	comp=Z,24nm,0.9s,SNR=8.1						
SOP	Sopron	46.26	8	P	P	15 34 26.8	+2.5
CLF	Chambon-Foret	46.33	354	P	P	15 34 25.3	+0.5
BFO	Black Forest	46.34	0	P	P	15 34 25.7	+0.7
BFO				IAmb	IAmb	15 34 26.7	
	comp=Z,35nm,0.6s						
BFO	Black Forest	46.34	0	P	P	15 34 25.7	+0.7
BFO				pmax	pmax		
	comp=Z,35nm,0.6s						
BFO	Black Forest	46.34	0	*e*P	P	15 34 25.8	+0.8
	comp=Z,27nm,0.7s,baz=184,slow=7.7						
CONA	Conrad Observa	46.41	7	*i* P	P	15 34 27.4	+1.8
	comp=Z,35nm,1.3s,SNR=14						
TPGR	Topolog	46.42	20	⇓P	P	15 34 26.6	+0.9
JURR	Jurilovca	46.50	20	⇓P	P	15 34 27.7	+1.6
MARR	Marisel-Cluj	46.54	14	⇓P	P	15 34 27.9	+1.3
DRGR		46.55	14	⇓P	P	15 34 28.2	+1.6
DRGR		46.55	14	⇓P	P	15 34 28.2	+1.6
COVR	Voineasa-Covas	46.60	17	⇑P	P	15 34 27.6	+0.5
CFR	Carcaliu	46.61	19	⇓P	P	15 34 27.7	+0.7
SRO	Srobarova	46.65	9	*e*P	P	15 34 29.0	+1.7
SRO				pmax	pmax		
	comp=Z,29nm,1.4s						
SRO	Srobarova	46.65	9	*e*P	P	15 34 29.0	+1.7
PLOR	Plostina	46.74	18	⇓P	P	15 34 28.6	+0.4
PLOR	Plostina	46.74	18	⇓P	P	15 34 28.6	+0.4
VRI	Vrincioaia	46.78	18	⇓P	P	15 34 29.1	+0.7
VRI	Vrincioaia	46.78	18	⇓P	P	15 34 29.1	+0.7
STU	Stuttgart	46.79	1	IAmb	IAmb	15 34 31.9	
	comp=Z,35nm,0.8s						
STU	Stuttgart	46.79	1	P	P	15 34 29.5	+1.1
STU	Stuttgart	46.79	1	*e*P	P	15 34 29.7	+1.3
	comp=Z,93nm,0.9s,baz=184,slow=7.7						
TLCR		46.85	20	⇑P	P	15 34 30.1	+1.2
TLCR		46.85	20	⇑P	P	15 34 30.1	+1.2
ABTO	Aybut	46.86	68	P	P	15 34 30.1	+0.6
SMRA	Abu-Samra	46.98	57	P	P	15 34 30.8	+0.6
PSZ	Piszkesteto	47.03	11	IAmb	IAmb	15 34 43.0	
	comp=Z,26nm,0.9s						
PSZ	Piszkesteto	47.03	11	⇓P	P	15 34 31.6	+1.2
PSZ	Piszkesteto	47.03	11	⇓P	P	15 34 31.6	+1.2
MODS	Modra-Piesok	47.04	8	*e*P	P	15 34 31.9	+1.5
MODS				pmax	pmax		
	comp=Z,91nm,1.8s						
MODS	Modra-Piesok	47.04	8	*e*P	P	15 34 31.9	+1.5
GEC2	GERESS Array S	47.09	5	IAmb	IAmb	15 34 33.0	
	comp=Z,27nm,0.7s						
GEC2	GERESS Array S	47.09	5	*e*P	P	15 34 32.0	+1.1
	comp=Z,27nm,0.6s,baz=184,slow=7.7						
GERES	GERESS Array B	47.09	5	P	P	15 34 32.0	+1.1
	comp=Z,23nm,0.6s,baz=175,slow=7.5,SNR=111						
GERES				LR	LR	15 56 58.7	
	comp=Z,992nm,18.7s,baz=188,slow=40						
	comp=Z,23nm,0.6s						
ONER	Baraj Valea Uz	47.10	17	⇑P	P	15 34 32.1	+1.2
CKRC	Cesky Krumlov	47.12	5	*e*P	P	15 34 32.5	+1.4
CKRC	Cesky Krumlov	47.12	5	*e*P	P	15 34 32.5	+1.4
WET	Wettzell	47.33	4	*e*P	P	15 34 34.0	+1.4
	comp=Z,63nm,0.7s,baz=184,slow=7.7						
TESR	Tescani	47.34	17	⇑P	P	15 34 33.1	+0.4
KHC	Kasperske Hory	47.37	5	*ce*P	P	15 34 34.2	+1.2
KHC				pmax	pmax		
	comp=Z,33nm,0.6s						
KHC	Kasperske Hory	47.37	5	*e*P	P	15 34 34.1	+1.1
KHC				*e*x	x	15 34 44.5	
KHC				AMS	AMS	15 59 20.0	
	comp=Z,2µm,16.2s						
KHC	Kasperske Hory	47.37	5	P	P	15 34 33.8	+0.8
NBTA	Tacaratu-PE	47.41	256	*e*P	P	15 34 34.5	+0.7
WHFO	Wadi Hawf	47.44	67	P	P	15 34 35.0	+1.0
SHMA	Al-Shehemyia	47.52	56	P	P	15 34 36.7	+2.2
JAVC	Velka Javorina	47.57	8	*e*P	P	15 34 36.1	+1.5
KRUC	Moravsky	47.59	7	*e*P	P	15 34 35.4	+0.7
MSEY	Mahe Island	47.62	98	P	P	15 34 36.6	+1.0
MSEY	Mahe Island	47.62	98	P	P	15 34 36.3	+0.7
MSEY				IAmb	IAmb	15 34 37.6	
	comp=Z,59nm,1.1s						
MSEY	Mahe Island	47.62	98	IAMs_20	IAMs_20	15 54 44.4	
	comp=Z,2µm,19.0s						
MSEY	Mahe Island	47.62	98	P	P	15 34 36.3	+0.7
MSEY				pmax	pmax		
	comp=Z,59nm,1.1s						
MSEY				MLR	MLR		
	comp=Z,2µm,19.0s						
KECS	Kecovo	47.68	11	*e*P	P	15 34 36.8	+1.4
KECS				pmax	pmax		
	comp=Z,21nm,0.7s						
KECS	Kecovo	47.68	11	*e*P	P	15 34 36.8	+1.4
KECS				*e*		15 34 46.8	
WLF	Walferdange	47.71	358	P	P	15 34 35.6	0.0
WLF	Walferdange	47.71	358	P	P	15 34 35.6	0.0
WLF				pmax	pmax		
	comp=Z,46nm,0.8s						
WLF	Walferdange	47.71	358	*e*P	P	15 34 36.7	+1.1
	comp=Z,37nm,0.8s,baz=184,slow=7.7						

WLF	**Walferdange**	**47.71**	**358**	*d*P	**P**	**15 34 36.7**	**+1.1**
	comp=Z,38nm,0.9s						
WLF				*d*x	x	15 34 47.5	
TREC	**Trest**	**47.72**	**6**	*e*P	**P**	**15 34 37.2**	**+1.6**
TREC	**Trest**	**47.72**	**6**	*e*P	**P**	**15 34 37.2**	**+1.6**
ZVC	**Zvikov**	**47.73**	**5**	*e*P	**P**	**15 34 36.5**	**+0.8**
RBK	**Rabkut**	**47.74**	**68**	P	**P**	**15 34 37.7**	**+1.4**
GRFO	**Grafenberg**	**47.77**	**3**	P	**P**	**15 34 36.8**	**+0.7**
GRF	**Grafenberg Arr**	**47.77**	**3**	*e*P	**P**	**15 34 37.2**	**+1.1**
	comp=Z,54nm,0.8s,baz=184,slow=7.7						
GRF				*e*L	L	15 55 39.4	
	comp=Z,698nm,20.3s						
VRAC	**Vranov**	**47.86**	**7**	LR	LR	15 58 41.9	
	comp=Z,547nm,18.4s,baz=202,slow=41						
VRAC	**Vranov**	**47.86**	**7**	⇑P	**P**	**15 34 38.0**	**+1.3**
VRAC	**Vranov**	**47.86**	**7**	*e*P	**P**	**15 34 37.5**	**+0.7**
VRAC	**Vranov**	**47.86**	**7**	⇑P	**P**	**15 34 38.0**	**+1.3**
GURO	**Guroymak-BITLI**	**47.87**	**36**	IAmb	IAmb	15 34 39.7	
	comp=Z,99nm,1.9s						
BERU	**Beregovo**	**47.89**	**13**	P	**P**	**15 34 38.2**	**+1.2**
KORU	**Korolevo**	**47.93**	**13**	P	**P**	**15 34 38.9**	**+1.6**
BURAR	**Bucovina Array**	**47.94**	**15**	P	**P**	**15 34 39.2**	**+1.7**
BURAR	**Bucovina Array**	**47.94**	**15**	⇑P	**P**	**15 34 39.6**	**+2.0**
BURAR	**Bucovina Array**	**47.94**	**15**	⇑P	**P**	**15 34 39.6**	**+2.0**
DOK	**Doka**	**47.95**	**66**	P	**P**	**15 34 39.0**	**+1.1**
	SNR=5.3						
BUR08	**Bucovina Ar. S**	**47.97**	**15**	IAmb	IAmb	15 34 41.5	
	comp=Z,54nm,1.6s						
KOPT	**Kop Dagi**	**47.99**	**33**	IAmb	IAmb	15 34 41.9	
	comp=Z,28nm,0.8s						
RAKU	**Rahkiv**	**48.05**	**14**	P	**P**	**15 34 39.8**	**+1.5**
BRIU	**Brid**	**48.07**	**13**	P	**P**	**15 34 39.8**	**+1.4**
MAUC	**Maruska**	**48.09**	**8**	*e*P	**P**	**15 34 40.4**	**+1.9**
MUKU	**Mukachevo**	**48.11**	**13**	P	**P**	**15 34 40.1**	**+1.5**
MANZ	**Manzenberg**	**48.12**	**3**	*e*P	**P**	**15 34 39.8**	**+1.1**
	comp=Z,7.0nm,0.8s,baz=184,slow=7.7						
DOU	**Dourbes**	**48.21**	**357**	*d*P	**P**	**15 34 39.9**	**+0.4**
	comp=Z,20nm,0.9s						
TNS	**Taunus Mts**	**48.24**	**0**	*e*P	**P**	**15 34 40.5**	**+0.8**
	comp=Z,63nm,0.7s,baz=184,slow=7.7						
RCHB	**Rochefort**	**48.24**	**357**	*d*P	**P**	**15 34 39.7**	**0.0**
PRU	**Pruhonice**	**48.30**	**5**	*e*P	**P**	**15 34 40.8**	**+0.7**
PRU				MLR	MLR		
	comp=Z,1µm,18.9s						
PRU	**Pruhonice**	**48.30**	**5**	*e*P	**P**	**15 34 40.8**	**+0.7**
PRU				AMS	AMS	16 00 20.0	
	comp=Z,1µm,18.9s						
MEZ	**Mezhgor'ye**	**48.35**	**14**	P	**P**	**15 34 41.4**	**+0.8**
MILM	**Milestii Mici**	**48.37**	**19**	⇓P	**P**	**15 34 39.9**	**-0.8**
MILM	**Milestii Mici**	**48.37**	**19**	⇓P	**P**	**15 34 39.9**	**-0.8**
PRA	**Prague**	**48.37**	**5**	*e*P	**P**	**15 34 41.3**	**+0.6**
PRA	**Prague**	**48.37**	**5**	*e*P	**P**	**15 34 41.3**	**+0.6**
BHOU	**Houvegnez**	**48.41**	**358**	*d*P	**P**	**15 34 41.4**	**+0.5**
BMRD	**Maredsous**	**48.41**	**357**	*d*P	**P**	**15 34 41.3**	**+0.3**
	comp=Z,9.4nm,1.0s						
BMRD				*d*x	x	15 34 51.5	
MORC	**Moravsky Berou**	**48.45**	**8**	⇑P	**P**	**15 34 42.6**	**+1.3**
MORC	**Moravsky Berou**	**48.45**	**8**	*e*P	**P**	**15 34 42.1**	**+0.8**
MORC	**Moravsky Berou**	**48.45**	**8**	⇑P	**P**	**15 34 42.6**	**+1.3**
BGES	**Gesves**	**48.48**	**357**	*d*P	**P**	**15 34 42.1**	**+0.6**
DMTO	**DMTO**	**48.48**	**68**	P	**P**	**15 34 42.8**	**+0.7**
BCLA	**Clavier**	**48.50**	**357**	*d*P	**P**	**15 34 42.4**	**+0.7**
	comp=Z,12nm,1.0s						
NBMO	**Morrinhos-CE**	**48.54**	**264**	*e*P	**P**	**15 34 44.0**	**+1.4**
NIE	**Niedzica**	**48.54**	**10**	*e*P	**P**	**15 34 43.9**	**+1.8**
NIE	**Niedzica**	**48.54**	**10**	P	**P**	**15 34 43.9**	**+1.8**
NIE	**Niedzica**	**48.54**	**10**	P	**P**	**15 34 43.5**	**+1.4**
	comp=Z,8.1nm,1.2s						
PLN	**Plauen**	**48.62**	**3**	*e*P	**P**	**15 34 43.3**	**+0.8**
	comp=Z,2.7nm,0.8s,baz=184,slow=7.7						
STEB	**Steborice**	**48.63**	**8**	*e*P	**P**	**15 34 43.9**	**+1.2**
BTNL	**Ternell**	**48.64**	**358**	*d*P	**P**	**15 34 43.9**	**+1.1**
	comp=Z,30nm,0.8s						
BTNL				*d*x	x	15 34 54.6	
KRLC	**Kraliky**	**48.64**	**7**	*e*P	**P**	**15 34 44.5**	**+1.7**
KRLC	**Kraliky**	**48.64**	**7**	*e*P	**P**	**15 34 44.5**	**+1.7**
SIM	**Simferopol'**	**48.65**	**24**	*e*P	**P**	**15 34 43.6**	**+0.7**
SIM						15 36 33.0	
SIM				*e*S	**S**	**15 41 46.0**	**+0.9**
SIM						15 44 32.0	
SIM				pmax	pmax		
	comp=Z,17nm,0.9s						
SIM				pmax	pmax		
	comp=Z,140nm,9.8s						
SIM				smax	smax		
	comp=E,130nm,16.0s						
MEM	**Membach**	**48.66**	**358**	*d*P	**P**	**15 34 43.7**	**+0.8**
	comp=Z,30nm,0.9s						
MEM				*d*x	x	15 34 54.8	
STHS	**Stebnicka Huta**	**48.72**	**11**	*e*P	**P**	**15 34 44.3**	**+0.9**
STHS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
STHS	**Stebnicka Huta**	**48.72**	**11**	*e*P	**P**	**15 34 44.3**	**+0.9**
STHS				*e*		15 34 54.6	
MOX	**Moxa**	**48.74**	**3**	*e*P	**P**	**15 34 44.5**	**+0.9**
	comp=Z,14nm,0.7s,baz=184,slow=7.7						
MOX				*e*L	L	15 56 19.2	
	comp=Z,950nm,20.1s						
STNU	**Starunia**	**48.77**	**14**	P	**P**	**15 34 44.8**	**+1.0**
RICC	**Richard**	**48.81**	**5**	*e*P	**P**	**15 34 45.6**	**+1.5**
HSKC	**Hora Svate Kat**	**48.82**	**4**	*e*P	**P**	**15 34 45.5**	**+1.3**
PVCC	**Panska Ves**	**48.84**	**5**	P	**P**	**15 34 44.7**	**+0.4**
PVCC	**Panska Ves**	**48.84**	**5**	*e*P	**P**	**15 34 45.6**	**+1.3**
DPC	**Dobruska-Polom**	**48.85**	**7**	*e*P	**P**	**15 34 45.6**	**+1.2**
DPC	**Dobruska-Polom**	**48.85**	**7**	*e*P	**P**	**15 34 45.6**	**+1.2**
DPC	**Dobruska-Polom**	**48.85**	**7**	P	**P**	**15 34 45.4**	**+1.0**
	comp=Z,28nm,0.9s						
UBBA	**Unterbreizbach**	**48.86**	**1**	*e*P	**P**	**15 34 45.5**	**+1.2**
	comp=Z,19nm,0.8s,baz=184,slow=7.7						
UCC	**Uccle**	**48.93**	**357**	*d*P	**P**	**15 34 45.9**	**+0.9**
UPC	**Upice**	**48.97**	**7**	*e*P	**P**	**15 34 46.8**	**+1.5**
UPC	**Upice**	**48.97**	**7**	*e*P	**P**	**15 34 46.8**	**+1.5**
MORS	**Morshin**	**49.02**	**14**	P	**P**	**15 34 47.5**	**+1.8**
OSTC	**Ostas**	**49.04**	**7**	*e*P	**P**	**15 34 47.3**	**+1.4**
OSTC	**Ostas**	**49.04**	**7**	*e*P	**P**	**15 34 47.3**	**+1.4**
CHVC	**Chvalec**	**49.05**	**7**	*e*P	**P**	**15 34 47.4**	**+1.4**
CHVC	**Chvalec**	**49.05**	**7**	*e*P	**P**	**15 34 47.4**	**+1.4**
BRG	**Berggiesshubel**	**49.13**	**5**	*e*P	**P**	**15 34 47.5**	**+1.0**
	comp=Z,31nm,1.3s,baz=184,slow=7.7						
KMPD	**K-Podol'skiy**	**49.15**	**16**	P	**P**	**15 34 46.2**	**-0.4**
KASTN	**Kahler Asten**	**49.22**	**0**	*e*P	**P**	**15 34 48.4**	**+1.2**
	comp=Z,13nm,0.8s,baz=184,slow=7.7						
KWP	**Kalwaria Pacla**	**49.22**	**12**	P	**P**	**15 34 48.7**	**+1.4**
	comp=Z,29nm,1.1s						
OJC	**Ojcow**	**49.23**	**10**	*e*P	**P**	**15 34 48.1**	**+0.9**
OJC	**Ojcow**	**49.23**	**10**	P	**P**	**15 34 47.4**	**+0.1**
SORM	**Soroca**	**49.31**	**18**	⇓P	**P**	**15 34 47.8**	**0.0**
SORM	**Soroca**	**49.31**	**18**	⇓P	**P**	**15 34 47.8**	**0.0**
NEUB	**Neuenburg**	**49.32**	**3**	*e*P	**P**	**15 34 48.7**	**+0.8**
	comp=Z,23nm,0.8s,baz=184,slow=7.7						
KSP	**Ksiaz**	**49.33**	**7**	*e*P	**P**	**15 34 49.3**	**+1.2**
KSP	**Ksiaz**	**49.33**	**7**	P	**P**	**15 34 48.6**	**+0.5**
KSP	**Ksiaz**	**49.33**	**7**	P	**P**	**15 34 49.3**	**+1.2**
	comp=Z,24nm,1.6s						
CLL	**Collm**	**49.49**	**4**	⇓*i*P	**P**	**15 34 49.8**	**+0.6**
CLL				*e*S	**S**	**15 42 00.0**	**+3.3**
CLL				pmax	pmax		
	comp=Z,16nm,0.8s						
CLL				MLR	MLR		
	comp=Z,1µm,18.1s						
CLL	**Collm**	**49.49**	**4**	*e*P	**P**	**15 34 50.0**	**+0.8**
	comp=Z,12nm,0.8s,baz=184,slow=7.7						
CLL	**Collm**	**49.49**	**4**	P	**P**	**15 34 50.0**	**+0.8**
	comp=Z,22nm,0.8s						
CLL	**Collm**	**49.49**	**4**	⇓*i*P	**P**	**15 34 49.8**	**+0.6**
	comp=Z,16nm,0.8s						
CLL				*i* x	x	15 34 55.8	
CLL				*i* x	x	15 35 00.5	
CLL				*e*S	**S**	**15 42 00.0**	**+3.3**
CLL				*e*x	x	15 43 36.0	
CLL				*e*SS	**SS**	**15 45 36.0**	**+7.2**
CLL				*e*x	x	15 46 13.0	
CLL				*e*(SSS)		15 46 38.0	
CLL				*e*SSSS		15 47 12.0	
CLL				AMS	AMS	15 59 00.0	
	comp=Z,1µm,18.1s						
GTTG	**Gottingen**	**49.58**	**1**	*e*P	**P**	**15 34 51.4**	**+1.4**
	comp=Z,18nm,0.8s,baz=184,slow=7.7						
LVV	**L'vov**	**49.69**	**13**	P	**P**	**15 34 51.6**	**+0.8**
KARS	**Kars**	**49.85**	**35**	IAmb	IAmb	15 36 19.5	
	comp=Z,21nm,0.7s						
ANN	**Anapa**	**49.97**	**27**	*e*P	**P**	**15 34 53.2**	**+0.3**
ANN				*e*S	**S**	**15 41 59.4**	**-4.1**
ANN				pmax	pmax		
	comp=Z,80nm,1.3s						
UMZA	**Um Al Zommool**	**50.02**	**62**	P	**P**	**15 34 54.7**	**+1.0**
NBPS	**Pedro II - PI**	**50.04**	**263**	*e*P	**P**	**15 34 55.0**	**+0.8**
SOC	**Sochi**	**50.13**	**30**	*e*P	**P**	**15 34 52.8**	**-1.5**
SOC				*e*PPP	PPP	15 37 41.8	
SOC				*e*S	**S**	**15 41 57.5**	**-8.4**
SOC				*e*SS	**SS**	**15 45 34.1**	**-5.2**
SOC				*e*SSS	SSS	15 46 59.9	
SOC				pmax	pmax		
	comp=Z,18nm,1.1s						
SOC				MLR	MLR		
	comp=Z,487nm,16.0s						
VSLR	**Vesyoloye**	**50.20**	**30**	*i* P	**P**	**15 34 54.0**	**-0.8**
VSLR				pmax	pmax		
	comp=Z,76nm,1.5s						
CMC01	**Camacan, BA**	**50.22**	**248**	*e*P	**P**	**15 34 56.8**	**+1.4**
FLTG	**Flechtingen**	**50.41**	**2**	*e*P	**P**	**15 34 56.9**	**+0.7**
	comp=Z,15nm,0.8s,baz=184,slow=7.7						
AJN	**Ajban**	**50.45**	**59**	P	**P**	**15 34 57.6**	**+0.5**
LUBAR	**Lubar, Ukraine**	**50.74**	**16**	P	**P**	**15 34 58.2**	**-0.5**
ASUD	**Al Ashush, Dub**	**50.77**	**59**	P	**P**	**15 35 00.6**	**+1.2**
GUA01	**Guaratinga, BA**	**50.82**	**247**	*e*P	**P**	**15 35 00.7**	**+0.8**
ALNE	**Al Ain**	**50.95**	**60**	P	**P**	**15 35 01.6**	**+0.7**
	SNR=6.2						
ALNE				P	**P**	**15 35 01.6**	**+0.7**
	SNR=6.2						
ALNE	**Al Ain**	**50.95**	**60**	*i* P	**P**	**15 35 01.6**	**+0.7**
	SNR=11						
NAZ	**Nazwa, Dubai**	**51.17**	**59**	P	**P**	**15 35 03.0**	**+0.5**
LABN	**Labinsk**	**51.40**	**29**	*e*P	**P**	**15 35 02.6**	**-1.2**
LABN				pmax	pmax		
	comp=Z,15nm,0.5s						
ARQ	**Araqi**	**51.40**	**61**	P	**P**	**15 35 05.5**	**+1.2**
ASHO	**Ashiyiah**	**51.41**	**60**	P	**P**	**15 35 04.8**	**+0.5**
ASHO	**Ashiyiah**	**51.41**	**60**	*i* P	**P**	**15 35 04.0**	**-0.4**
	SNR=10						
NEUR	**Neytrino**	**51.43**	**32**	*i* P	**P**	**15 35 03.8**	**-0.5**
NEUR				pmax	pmax		
	comp=Z,13nm,1.6s						
RNPP5	**Staryi Chortor**	**51.45**	**14**	P	**P**	**15 35 03.8**	**-0.2**
HATD	**Hatta, Dubai**	**51.52**	**59**	P	**P**	**15 35 06.3**	**+1.1**
HATD	**Hatta, Dubai**	**51.52**	**59**	*i* P	**P**	**15 35 05.2**	**+0.1**
	SNR=6.2						
RNPP9	**Sopachiv**	**51.62**	**14**	P	**P**	**15 35 04.8**	**-0.5**
UOSS	**Minazif**	**51.62**	**59**	P	**P**	**15 35 06.3**	**+0.4**
UOSS	**Minazif**	**51.62**	**59**	P	**P**	**15 35 05.6**	**-0.2**
UOSS				IAmb	IAmb	15 35 19.8	
	comp=Z,37nm,0.8s						
UOSS	**Minazif**	**51.62**	**59**	IAMs_20	IAMs_20	15 58 00.9	
	comp=Z,2µm,18.0s						
UOSS	**Minazif**	**51.62**	**59**	*i* P	**P**	**15 35 05.5**	**-0.3**
	SNR=7.4						
SOHO	**SOHO**	**51.65**	**60**	P	**P**	**15 35 07.0**	**+1.0**
SOHO	**SOHO**	**51.65**	**60**	*i* P	**P**	**15 35 06.3**	**+0.3**
	SNR=5.7						
AK07	**Malin Array Si**	**51.72**	**17**	P	**P**	**15 35 06.2**	**+0.2**
MSFE	**Esma-Masafi**	**51.72**	**59**	P	**P**	**15 35 06.3**	**-0.3**
AK13	**Malin Array Si**	**51.73**	**17**	P	**P**	**15 35 05.8**	**-0.3**
SHA1	**Shidzhatmaz**	**51.73**	**31**	*ce*P	**P**	**15 35 08.0**	**+1.4**
RER	**Riviere de l'E**	**51.75**	**119**	P	**P**	**15 35 06.0**	**-0.9**
AK10	**Malin Array Si**	**51.77**	**17**	P	**P**	**15 35 06.7**	**+0.2**
AK16	**Malin Array Si**	**51.79**	**17**	P	**P**	**15 35 06.6**	**0.0**
AK09	**Malin Array Si**	**51.80**	**17**	P	**P**	**15 35 06.6**	**0.0**
MDH	**Madha**	**51.82**	**59**	P	**P**	**15 35 07.3**	**0.0**
MDH	**Madha**	**51.82**	**59**	P	**P**	**15 35 07.1**	**-0.2**
BSY	**Bisya**	**51.83**	**62**	P	**P**	**15 35 08.1**	**+0.6**
KIEV	**Kiev**	**51.84**	**17**	P	**P**	**15 35 07.3**	**+0.3**
KIEV				IAmb	IAmb	15 35 09.4	
	comp=Z,46nm,1.1s						
KIEV	**Kiev**	**51.84**	**17**	⇑P	**P**	**15 35 06.6**	**-0.4**
KIEV	**Kiev**	**51.84**	**17**	*i* P	**P**	**15 35 06.9**	**-0.1**
	SNR=21						
KIEV	**Kiev**	**51.84**	**17**	P	**P**	**15 35 07.3**	**+0.3**
KIEV				pmax	pmax		
	comp=Z,46nm,1.1s						
KIEV	**Kiev**	**51.84**	**17**	P	**P**	**15 35 06.9**	**-0.1**
	comp=Z,199nm,1.8s						
KBZ	**Khabaz**	**51.85**	**32**	P	**P**	**15 35 08.6**	**+1.4**
	comp=Z,8.8nm,0.8s,baz=213,slow=6.6,SNR=36						
KBZ				LR	LR	15 59 42.5	
	comp=Z,309nm,18.7s,baz=241,slow=39						
	comp=Z,8.8nm,0.8s						
KBZ	**Khabaz**	**51.85**	**32**	*ce*P	**P**	**15 35 08.2**	**+1.0**
KBZ				pmax	pmax		
	comp=Z,14nm,0.9s						
AKASG	**Malin Array Be**	**51.85**	**17**	P	**P**	**15 35 07.1**	**0.0**
	comp=Z,12nm,0.8s,baz=216,slow=7.9,SNR=54						
AKASG				PcP	**PcP**	**15 36 20.5**	**+0.6**
	comp=Z,1.0nm,0.5s,baz=209,slow=3.7,SNR=5.5						
AKASG				LR	LR	15 58 33.2	
	comp=Z,386nm,20.2s,baz=192,slow=38						
	comp=Z,12nm,0.8s						
AKASG	**Malin Array Be**	**51.85**	**17**	P	**P**	**15 35 06.2**	**-0.9**
AKASG				IAmb	IAmb	15 35 08.2	
	comp=Z,98nm,1.9s						
AKASG	**Malin Array Be**	**51.85**	**17**	*i* P	**P**	**15 35 07.0**	**0.0**
AKASG				pmax	pmax		
	comp=Z,11nm,0.7s						
AKBB	**Malin Array Si**	**51.85**	**17**		**P**	**15 35 06.8**	**-0.2**
AKBB				IAmb	IAmb	15 35 09.4	
	comp=Z,47nm,1.1s						
AKBB	**Malin Array Si**	**51.85**	**17**	*ce*P	**P**	**15 35 06.9**	**-0.2**
AKBB				pmax	pmax		
	comp=Z,107nm,1.9s						
AKBB	**Malin Array Si**	**51.85**	**17**	P	**P**	**15 35 07.2**	**+0.1**
AK04	**Malin Array Si**	**51.86**	**17**	P	**P**	**15 35 06.9**	**-0.2**
KIV	**Kislovodsk**	**51.90**	**31**	P	**P**	**15 35 09.1**	**+1.3**
KIV				P	**P**	**15 35 09.1**	**+1.3**
KIV	**Kislovodsk**	**51.90**	**31**	P	**P**	**15 35 08.2**	**+0.5**
KIV				IAmb	IAmb	15 35 44.5	
	comp=Z,107nm,1.5s						
KIV	**Kislovodsk**	**51.90**	**31**	*i* P	**P**	**15 35 09.0**	**+1.3**
	SNR=7.0						
KIV	**Kislovodsk**	**51.90**	**31**	*e*P	**P**	**15 35 07.3**	**-0.4**
KIV				*e*S	**S**	**15 42 30.1**	**-0.6**
KIV				*e*SS	**SS**	**15 46 08.2**	**+0.6**
KIV				pmax	pmax		
	comp=Z,18nm,1.0s						
KIV	**Kislovodsk**	**51.90**	**31**	P	**P**	**15 35 08.2**	**+0.5**
	comp=Z,644nmcomp=Z,29nm,1.1s						
SHME	**Shamm**	**51.93**	**58**	P	**P**	**15 35 09.0**	**+0.8**
SHME	**Shamm**	**51.93**	**58**	P	**P**	**15 35 07.7**	**-0.5**
BANOM	**Banah**	**52.02**	**58**	P	**P**	**15 35 08.2**	**-0.7**
BANOM	**Banah**	**52.02**	**58**	P	**P**	**15 35 08.3**	**-0.5**
MHTO	**MHTO**	**52.04**	**65**	P	**P**	**15 35 09.1**	**+0.1**
	SNR=6.5						
MHTO				P	**P**	**15 35 09.1**	**+0.1**
	SNR=6.5						
ERBR	**Yeremizino-Bor**	**52.07**	**28**	*e*P	**P**	**15 35 05.2**	**-3.6**
ERBR				pmax	pmax		
	comp=Z,52nm,1.7s						
RIB01	**Linhares ES**	**52.17**	**244**	*e*P	**P**	**15 35 11.4**	**+1.5**
HOQ	**Hoqain**	**52.17**	**61**	P	**P**	**15 35 11.3**	**+1.3**
JMDO	**Jabal Madar**	**52.53**	**63**	P	**P**	**15 35 13.3**	**+0.6**
SMDO	**Samad**	**52.67**	**62**	P	**P**	**15 35 15.0**	**+1.2**
	SNR=5.4						
GOF	**Gofitskoye**	**52.85**	**30**	*ce*P	**P**	**15 35 13.8**	**-0.8**
BIDO	**Bidbid**	**52.87**	**62**	P	**P**	**15 35 14.6**	**-0.5**
AKT	**Akhty**	**53.10**	**37**	*e*P	**P**	**15 35 17.6**	**+0.9**
AKT				*e*		15 36 27.2	
AKT				*e*		15 37 18.1	
AKT				*e*PPP	PPP	15 38 23.4	
AKT				*e*S	**S**	**15 42 51.3**	**+4.0**
AKT				pmax	pmax		
	comp=Z,71nm,1.6s						
AKT				MLR	MLR		
	comp=Z,2µm,15.0s						
WSAR	**Wadi Sarin**	**53.23**	**62**	LR	LR	15 59 17.1	
	comp=Z,11nm,18.5s,baz=266,slow=38						
WSAR	**Wadi Sarin**	**53.23**	**62**	P	**P**	**15 35 18.6**	**+0.7**
WBK	**Wadi Bani Khal**	**53.36**	**63**	P	**P**	**15 35 19.7**	**+0.9**
SUW	**Suwalki**	**53.47**	**11**	*e*P	**P**	**15 35 18.4**	**-0.5**
SUW	**Suwalki**	**53.47**	**11**		**P**	**15 35 17.5**	**-1.5**
SUW	**Suwalki**	**53.47**	**11**	P	**P**	**15 35 17.5**	**-1.5**
JLN	**Jalan Bani Buh**	**53.64**	**64**	P	**P**	**15 35 20.9**	**0.0**
COP	**Copenhagen**	**53.82**	**3**	*i* P	**P**	**15 35 22.8**	**+1.3**
COP				IAmb	IAmb	15 35 24.3	
	comp=Z,214nm,0.9s						
LUNU	**Lund**	**53.82**	**4**	*i* P	**P**	**15 35 21.4**	**-0.1**
MAK	**Makhachkala**	**53.88**	**35**	*d iP*	**P**	**15 35 20.5**	**-1.7**
MAK				*e*		15 37 20.3	
MAK				*e*PPP	PPP	15 38 30.1	
MAK				*e*S	**S**	**15 42 54.9**	**-2.6**
MAK				*e*SSS	SSS	15 48 28.4	
MAK				pmax	pmax		
	comp=Z,222nm,1.7s						
MAK				MLR	MLR		
	comp=Z,997nm,14.0s						
EKA	**Eskdalemuir Ar**	**54.16**	**352**	P	**P**	**15 35 24.6**	**+0.6**
	comp=Z,12nm,0.8s,baz=167,slow=6.7,SNR=14						
EKA				LR	LR	16 00 47.7	
	comp=Z,1µm,20.0s,baz=175,slow=38						
	comp=Z,12nm,0.8s						
BJUU	**Bjuv**	**54.24**	**3**	*i* P	**P**	**15 35 24.8**	**+0.2**
MUD	**Monsted U'grnd**	**54.49**	**1**	*i* P	**P**	**15 35 27.0**	**+0.7**
MUD				IAmb	IAmb	15 35 29.2	
	comp=Z,34nm,0.7s						
JANB	**Januaria**	**54.63**	**250**	*e*P	**P**	**15 35 28.3**	**+0.1**
SDBA	**SAO DESIDERIO**	**54.63**	**253**	*e*P	**P**	**15 35 28.8**	**+0.6**
DEL	**Delary**	**54.69**	**4**	*i* P	**P**	**15 35 27.0**	**-0.8**
MNK	**Minsk**	**54.93**	**14**	*i* P	**P**	**15 35 28.4**	**-1.3**
	comp=E,24nm,0.9s						
MNK				*i* P	**P**	**15 35 28.4**	**-1.3**
	comp=N,13nm,0.9s						
MNK				*i* P	**P**	**15 35 28.4**	**-1.3**
	comp=Z,37nm,0.8s,baz=204						
MNK				*i* PP	**PP**	**15 37 30.2**	**-2.5**
MNK				*i* PPP	PPP	15 38 41.2	
MNK				*i* S	**S**	**15 43 09.5**	**-1.8**
MNK				*i* SS	**SS**	**15 46 56.7**	**+1.7**
MNK				*i* SSS	SSS	15 48 56.6	
MNK				*i* LQ	LQ	15 54 42.3	
MNK				*i* LR	LR	16 00 03.8	
MNK				*i* LRM	MLR	16 01 51.6	
	comp=E,322nm,17.9s						
MNK				*i* LRM	MLR	16 02 28.2	
	comp=N,390nm,17.0s						
MNK				*i* LRM	MLR	16 03 06.7	
	comp=Z,417nm,17.5s						
MNK	**Minsk**	**54.93**	**14**	*i* P	**P**	**15 35 28.3**	**-1.3**
MNK				*i*		15 37 30.2	
MNK				*i* PPP	PPP	15 38 41.2	
MNK				*i* S	**S**	**15 43 09.4**	**-1.8**
MNK				*i* SS	**SS**	**15 46 56.6**	**+1.7**
MNK				*i* SSS	SSS	15 48 56.5	
MNK				pmax	pmax		
	comp=N,13nm,0.9s						
MNK				pmax	pmax		
	comp=Z,37nm,0.8s						
MNK				pmax	pmax		
	comp=E,24nm,0.9s						
MNK				MLR	MLR		
	comp=E,322nm,18.0s						
MNK				MLR	MLR		
	comp=N,390nm,17.0s						
MNK				MLR	MLR		
	comp=Z,417nm,18.0s						
PABE	**Paberze**	**55.03**	**11**	IAMs_20	IAMs_20	15 54 36.5	
	comp=Z,1µm,19.0s						
NACGM	**Naroch**	**55.05**	**13**	*e*P	**P**	**15 35 31.8**	**+1.3**
VORD	**Divnogorie**	**55.54**	**23**	*e*P	**P**	**15 35 33.1**	**-1.0**
VORD				pmax	pmax		
	comp=Z,20nm,0.8s						
VSR	**Storozhevoye**	**55.69**	**23**	*e*P	**P**	**15 35 33.3**	**-1.9**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BORU	**Boraas**	**55.78**	**3**	*i* P	**P**	**15 35 35.7**	**0.0**
VORR	**Voronezh**	**56.06**	**23**	*e*P	**P**	**15 35 38.5**	**+0.7**
VORR				pmax	pmax		
	comp=Z,88nm,0.5s						
TJOU	**Tjoern**	**56.13**	**2**	*i* P	**P**	**15 35 38.0**	**-0.2**
SNART	**Snartemo**	**56.38**	**359**	*e*P	**P**	**15 35 41.5**	**+1.5**
SNART	**Snartemo**	**56.38**	**359**	*i* P	**P**	**15 35 40.0**	**0.0**
SMTB	**Santa Maria do**	**56.65**	**258**	*e*P	**P**	**15 35 43.8**	**+1.0**
LPSR	**Galich'ya Gora**	**56.69**	**22**	*e*P	**P**	**15 35 41.8**	**-0.5**
LPSR				pmax	pmax		
	comp=Z,166nm,2.0s						
VRH	**Novokhopyorsk**	**56.71**	**25**	*e*P	**P**	**15 35 42.4**	**-0.1**
VRH				pmax	pmax		
	comp=Z,123nm,1.6s						
STRU	**Stroemstad**	**57.12**	**2**	*i* P	**P**	**15 35 45.0**	**-0.2**
OBN	**Obninsk**	**57.92**	**19**	LR	LR	16 02 24.9	
	comp=Z,378nm,20.1s,baz=190,slow=38						
OBN	**Obninsk**	**57.92**	**19**	P	**P**	**15 35 51.4**	**+0.5**
OBN	**Obninsk**	**57.92**	**19**	*ce*P	**P**	**15 35 51.0**	**+0.1**
OBN				*i* *PP	**sP**	**15 35 54.7**	**+0.4**
OBN						15 36 46.0	
OBN				*i* S	**S**	**15 43 57.8**	**+7.1**
OBN				*i*		15 45 40.0	
OBN				pmax	pmax		
	comp=Z,165nm,1.7s						
OBN				MLR	MLR		
	comp=Z,325nm,17.0s						
OBN	**Obninsk**	**57.92**	**19**	P	**P**	**15 35 51.4**	**+0.5**
	comp=Z,2µmcomp=Z,110nm,1.4s						
BDFB	**Brasilia**	**58.24**	**250**	P	**P**	**15 35 54.8**	**+0.7**
	comp=Z,18nm,0.9s,baz=88,slow=6.3,SNR=17						
BDFB				LR	LR	15 55 34.7	
	comp=Z,584nm,20.8s,baz=94,slow=30						
	comp=Z,18nm,0.9s						
BDFB	**Brasilia**	**58.24**	**250**	P	**P**	**15 35 54.5**	**+0.4**
BDFB				IAmb	IAmb	15 35 55.8	
	comp=Z,28nm,1.1s						
HFS	**Hagfors**	**58.33**	**3**	P	**P**	**15 35 53.9**	**+0.2**
	comp=Z,39nm,0.7s,baz=170,slow=9.0,SNR=79						
HFS				LR	LR	16 02 23.8	
	comp=Z,580nm,19.6s,baz=190,slow=37						
	comp=Z,39nm,0.7s						
VSU	**Vasula**	**58.34**	**11**	*ce*P	**P**	**15 35 53.9**	**+0.1**
VSU				pmax	pmax		
	comp=Z,149nm,1.7s						
MOS	**Moscow**	**58.77**	**19**	*e*P	**P**	**15 35 55.8**	**-1.1**
MOS				*e*		15 38 08.2	
MOS				pmax	pmax		
	comp=Z,300nm,1.8s						
MOS				pmax	pmax		
	comp=Z,157nm,1.3s						
NC602	**NORSAR Array S**	**58.83**	**2**	IAmb	IAmb	15 36 09.0	
	comp=Z,32nm,0.8s						
NC602	**NORSAR Array S**	**58.83**	**2**	*e*P	**P**	**15 35 57.6**	**+0.4**
NORES	**NORESS Array B**	**58.83**	**2**	P	**P**	**15 35 57.4**	**+0.2**
IPMB	**Ipameri, GO**	**58.94**	**248**	*e*P	**P**	**15 35 58.6**	**-0.3**
NB2	**NORSAR Subarra**	**59.13**	**2**	P	**P**	**15 35 59.2**	**-0.1**
	comp=Z,7.7nm,0.7s,baz=187,slow=6.9						
NB2	**NORSAR Subarra**	**59.13**	**2**	P	**P**	**15 35 59.2**	**-0.1**
	baz=187,slow=6.9						
NOA	**NORSAR Array B**	**59.13**	**2**	P	**P**	**15 35 59.8**	**+0.5**
	comp=Z,4.8nm,0.7s,baz=189,slow=6.7,SNR=26						
NOA				LR	LR	16 03 25.7	
	comp=Z,420nm,19.8s,baz=175,slow=38						
	comp=Z,4.8nm,0.7s						
NC405	**NORSAR Array S**	**59.22**	**2**	IAmb	IAmb	15 36 14.4	
	comp=Z,30nm,0.9s						
NC303	**NORSAR Array S**	**59.32**	**2**	IAmb	IAmb	15 36 12.7	
	comp=Z,19nm,0.8s						
HRA	**Herat**	**59.76**	**51**	P	**P**	**15 36 04.3**	**-0.1**
HRA				IAmb	IAmb	15 36 22.6	
	comp=Z,24nm,1.1s						
BB19B	**Bebedouro**	**59.98**	**244**	*e*P	**P**	**15 36 06.9**	**+0.9**
DOMB	**Dombas**	**60.09**	**0**	*e*P	**P**	**15 36 07.2**	**+1.2**
BELG	**Belogornoye**	**60.12**	**27**	P	**P**	**15 36 06.1**	**-0.1**
	comp=Z,30nm,1.0s,baz=58,slow=3.7,SNR=10.0						
BELG				LR	LR	16 06 18.5	
	comp=Z,242nm,18.8s,baz=246,slow=40						
	comp=Z,30nm,1.0s						
BELG	**Belogornoye**	**60.12**	**27**	*i* P	**P**	**15 36 05.2**	**-1.0**
BELG				pmax	pmax		
	comp=Z,11nm,1.4s						
MDP	**Montagnes des**	**60.85**	**275**	LR	LR	15 59 02.2	
	comp=Z,319nm,18.8s,baz=96,slow=33						
FINES	**FINESS Array B**	**61.01**	**10**	P	**P**	**15 36 12.5**	**+0.3**
	comp=Z,14nm,0.7s,baz=198,slow=5.4,SNR=33						
FINES				LR	LR	16 04 35.6	
	comp=Z,588nm,20.5s,baz=214,slow=38						
	comp=Z,14nm,0.7s						
FINES	**FINESS Array B**	**61.01**	**10**	P	**P**	**15 36 12.2**	**+0.1**
CRZF	**Crozet Islands**	**61.45**	**147**	IAMs_20	IAMs_20	16 01 03.0	
	comp=Z,2µm,19.0s						
ARAG	**Araguaiana, MT**	**61.84**	**251**	*e*P	**P**	**15 36 19.3**	**+0.6**
MAL2	**Monte Alegre,**	**62.54**	**267**	P	**P**	**15 36 21.8**	**-1.7**
MAL2				IAmb	IAmb	15 36 44.0	
	comp=Z,28nm,0.9s						
NSS	**Namsos**	**62.65**	**2**	*e*P	**P**	**15 36 23.7**	**+0.6**
KLMR	**Klimovskoe**	**63.54**	**16**	*e*P	**P**	**15 36 27.7**	**-1.4**
KLMR				*e*		15 37 04.9	
KLMR				pmax	pmax		
	comp=Z,218nm,1.5s						
NPGB	**Novo Progresso**	**64.08**	**261**	*e*P	**P**	**15 36 34.1**	**+0.5**
AKTO	**Aktyubinsk**	**64.09**	**33**	LR	LR	16 07 15.0	
	comp=Z,724nm,19.6s,baz=276,slow=39						

ITTB	Itaituba	64.23	264	*e*P	P	15 36 35.3	+0.7
LEIR	Leirfjorden	64.27	2	*e*P	P	15 36 34.2	+0.4
CNLB	Canela	64.34	236	*e*P	P	15 36 35.5	+0.3
MOR8	Moi Rana	64.39	3	*e*P	P	15 36 35.7	+1.0
AB31	Akbulak array	64.56	35	P	P	15 36 36.3	+0.2
AB31				IAmb	IAmb	15 36 37.8	
	comp=Z,21nm,1.2s						
ABKAR	Akbulak array	64.56	35	P	P	15 36 36.1	0.0
RAUS	Rausandaksla	64.63	3	*e*P	P	15 36 36.6	+0.4
KAAM	Kaadhehdhoo	64.74	90	P	P	15 36 37.9	0.0
KAAM	Kaadhehdhoo	64.74	90	P	P	15 36 36.8	-1.1
ITAB	Concordia	64.81	239	P	P	15 36 38.8	+0.7
ITAB				IAmb	IAmb	15 36 41.2	
	comp=Z,45nm,1.1s						
ITAB	Concordia	64.81	239	*e*P	P	15 36 38.9	+0.7
CLDB	Colider	64.93	257	*e*P	P	15 36 39.2	0.0
PP1B	Ponte de Pedra	65.08	250	*e*P	P	15 36 40.4	+0.3
KIRV	Kirov	65.11	22	*ce*P	P	15 36 40.4	+0.9
KBL	Kabul	65.15	53	P	P	15 36 40.0	-0.5
KBL	Kabul	65.15	53	P	P	15 36 40.0	-0.5
KBL				pmax	pmax		
	comp=Z,12nm,0.9s						
SHAA	Shahritus	65.31	49	IAmb	IAmb	15 36 47.3	
	comp=Z,38nm,1.0s						
SALV	Santo Antonio	65.55	252	*e*P	P	15 36 43.6	+0.5
FAUS	Fauske	65.63	3	*e*P	P	15 36 43.8	+1.1
ADZR	Andozero	65.77	14	*e*P	P	15 36 42.4	-1.2
ADZR				pmax	pmax		
	comp=Z,34nm,0.8s						
PDRB	Porto dos Gac	65.93	257	*e*P	P	15 36 46.6	+1.0
STEI	Steigen	66.18	3	*e*P	P	15 36 46.8	+0.6
AMBA	Amambai (Brazi	66.25	244	*e*P	P	15 36 47.4	-0.1
LOF	Lofoten	66.30	2	*e*P	P	15 36 47.8	+0.8
BORG	Borgarnes	66.35	347	LR	LR	16 06 56.4	
	comp=Z,702nm,18.6s,baz=148,slow=37						
AQDB	Aquidauana	66.38	247	IAmb	IAmb	15 37 01.6	
	comp=Z,25nm,1.4s						
CHGR	Chuyangaron	66.42	48		P	15 36 47.6	-0.9
CHGR	Chuyangaron	66.42	48	P	P	15 36 47.6	-0.9
CHGR				pmax	pmax		
	comp=Z,129nm,1.8s						
CPSB	Cacapava Do Su	66.81	236	*e*P	P	15 36 51.5	+0.5
GAR	Garm	67.39	48	IAmb	IAmb	15 37 07.2	
	comp=Z,36nm,1.0s						
ARTI	Arti	67.52	28	LR	LR	16 11 34.8	
	comp=Z,308nm,18.3s,baz=232,slow=40						
ARTI	Arti	67.52	28	P	P	15 36 54.9	-0.1
ARTI				IAmb	IAmb	15 37 07.0	
	comp=Z,23nm,0.8s						
ARTI	Arti	67.52	28	*d i*P	P	15 36 55.7	+0.7
ARTI						15 37 24.8	
ARTI						15 39 19.7	
ARTI				S	S	15 45 54.9	+3.5
ARTI				SS	SS	15 50 11.4	-0.6
ARTI				pmax	pmax		
	comp=Z,18nm,0.9s						
KTK1	Kautokeino	67.85	6	*e*P	P	15 36 57.2	+0.3
CHM	Chimkent	67.89	45	*e*P	P	15 36 58.6	+1.0
	comp=Z,18nm,0.8s						
CHM	Chimkent	67.89	45	*e*P	P	15 36 58.6	+1.0
CHM				pmax	pmax		
	comp=Z,18nm,0.8s						
TRO	Tromso	68.09	4	*e*P	P	15 36 58.8	+0.6
JETT	Jettan, Norway	68.12	5	*e*P	P	15 36 59.3	+0.7
IUG	Iuzhnay	68.14	45	*e*P	P	15 37 00.0	+0.7
	comp=Z,22nm,1.4s						
IUG	Iuzhnay	68.14	45	*e*P	P	15 37 00.0	+0.7
IUG				pmax	pmax		
	comp=Z,22nm,1.4s						
BRLS	Borolday	68.28	44	*e*P	P	15 36 59.5	-0.6
BRLS	Borolday	68.28	44	*e*P	P	15 36 59.5	-0.6
NIL	Nilore	68.31	54		P	15 36 59.7	-0.8
NIL				IAmb	IAmb	15 37 08.7	
	comp=Z,19nm,0.8s						
NIL	Nilore	68.31	54	IAMs_20	IAMs_20	16 08 13.1	
	comp=Z,912nm,20.0s						
NIL	Nilore	68.31	54	P	P	15 36 59.7	-0.8
NIL				pmax	pmax		
	comp=Z,19nm,0.9s						
NIL				MLR	MLR		
	comp=Z,900nm,20.0s						
LVZ	Lovozero	68.42	10	P	P	15 37 01.3	+0.8
ARA0	ARCESS Array S	68.59	6	*e*P	P	15 37 01.3	-0.2
ARCES	ARCESS Array B	68.59	6	P	P	15 37 01.4	0.0
	comp=Z,11nm,0.7s,baz=188,slow=6.4,SNR=28						
ARCES				LR	LR	16 10 18.8	
	comp=Z,256nm,18.1s,baz=208,slow=39						
	comp=Z,11nm,0.7s						
ARCES	ARCESS Array B	68.59	6	P	P	15 37 01.1	-0.4
ARCES				IAmb	IAmb	15 37 17.9	
	comp=Z,43nm,1.4s						
BOAV	Boa Vista	68.72	272		P	15 37 01.3	-2.1
BOAV				IAmb	IAmb	15 37 15.8	
	comp=Z,31nm,0.8s						
BOAV	Boa Vista	68.72	272	*e*P	P	15 37 04.3	+0.9
PTLB	Pontes e Lacer	68.76	253		P	15 37 02.4	-1.2
PTLB				IAmb	IAmb	15 37 06.4	
	comp=Z,27nm,1.1s						
PTLB	Pontes e Lacer	68.76	253	*e*P	P	15 37 05.0	+1.5
KK31	Karatay Array	68.77	44		P	15 37 02.7	-0.5
KK31				IAmb	IAmb	15 37 15.7	
	comp=Z,31nm,0.8s						
KK31	Karatay Array	68.77	44	P	P	15 37 02.7	-0.5
KK31				pmax	pmax		
	comp=Z,31nm,0.9s						
KKAR	Karatay Array	68.77	44	P	P	15 37 02.9	-0.3
KKAR	Karatay Array	68.77	44	P	P	15 37 02.9	-0.3
SVE	Sverdlovsk	68.81	28	*e*P	P	15 37 04.3	+1.3
KEV	Kevo	68.97	7	P	P	15 37 04.3	+0.5
KEV	Kevo	68.97	7	P	P	15 37 04.3	+0.5
KEV				pmax	pmax		
	comp=Z,57nm,0.6s						
MACA	Manacapuru-AM	69.08	266	*e*P	P	15 37 05.8	+0.2
KOD	Kodaikanal	69.23	80	*e*P	P	15 37 06.2	-0.6
KOD				IAmb	IAmb	15 37 20.3	
	comp=Z,28nm,0.4s						
DZA	Taraz	69.28	44	*e*P	P	15 37 07.1	+0.7
	comp=Z,24nm,0.8s						
DZA	Taraz	69.28	44	*e*P	P	15 37 07.0	+0.7
DZA				pmax	pmax		
	comp=Z,24nm,0.8s						
VILB	Vilhena	69.46	256		P	15 37 07.3	-0.7
VILB				IAmb	IAmb	15 37 15.6	
	comp=Z,22nm,0.8s						
VILB	Vilhena	69.46	256	*e*P	P	15 37 08.3	+0.4
NRDN	NARMADA NAGAR	69.88	67	*e*P	P	15 37 10.3	-0.1
NRDN				IAmb	IAmb	15 37 18.9	
	comp=Z,34nm,1.9s						
JMIC	Jan Mayen	69.92	354	LR	LR	16 11 01.2	
	comp=Z,378nm,18.5s,baz=70,slow=39						
PSAL	Palomas, Salto	70.45	236	*e*P	P	15 37 14.6	+0.9
DHRM	DHARAMSHALA	70.53	56	*e*P	P	15 37 14.5	-0.1
DHRM				IAmb	IAmb	15 37 26.6	
	comp=Z,42nm,1.2s						
HYB	Hyderabad	70.67	72	*e*P	P	15 37 15.4	0.0
HYB				*e*PP	PP	15 39 53.8	+1.7
HYB				*e*SKKSac	SKiKP	15 47 17.3	+18
JMIU	JAMIA UNIVERSI	70.77	60	*e*P	P	15 37 16.0	+0.3
JMIU				IAmb	IAmb	15 37 21.7	
	comp=Z,29nm,0.6s						
EKS2	Erkin-Say	70.94	45	P	P	15 37 17.4	+0.7
	SNR=10						
SMLA	Simla	71.07	58	*e*P	P	15 37 17.6	+0.2
SMLA				IAmb	IAmb	15 37 30.0	
	comp=Z,29nm,1.3s						
UCH	Uchtor	71.35	46	P	P	15 37 21.6	+2.1
	SNR=8.2						
AAK	Ala-Archa	71.44	45	P	P	15 37 21.7	+1.9
	SNR=7.4						
AAK	Ala-Archa	71.44	45	LR	LR	16 11 51.9	
	comp=Z,649nm,18.1s,baz=258,slow=38						
AAK	Ala-Archa	71.44	45	P	P	15 37 21.0	+1.2
AAK	Ala-Archa	71.44	45	P	P	15 37 20.4	+0.6
AAK	Ala-Archa	71.44	45	IAMs_20	IAMs_20	16 12 40.4	
	comp=Z,886nm,19.0s						
AAK	Ala-Archa	71.44	45	*i* P	P	15 37 19.7	-0.1
	SNR=13						
AAK	Ala-Archa	71.44	45	*ce*P	P	15 37 21.8	+2.0
AAK				pmax	pmax		
	comp=Z,16nm,1.3s						
ANGG	Ammassalik, Gr	71.50	342	*i* P	P	15 37 19.6	+0.2
FRU1	Bishkek	71.58	45	P	P	15 37 20.7	+0.2
FRU1				IAmb	IAmb	15 37 33.3	
	comp=Z,39nm,1.1s						
FRU1	Bishkek	71.58	45	P	P	15 37 20.7	+0.2
FRU1				pmax	pmax		
	comp=Z,39nm,1.1s						
USP	Ospenovka	71.61	45	P	P	15 37 21.0	+0.4
	SNR=6.9						
NRS	Narsarsuaq	71.67	336	*i* P	P	15 37 20.4	-0.1
NRS				IAmb	IAmb	15 37 21.3	
	comp=Z,19nm,0.6s						
KSH	Kashi	71.76	49	P	P	15 37 20.3	-1.4
KSH				pP	sP	15 37 24.8	-0.4
KSH				S	S	15 46 35.9	-6.4
KSH				pmax	pmax		
	comp=Z,15nm,1.2s						
KSH				pmax	pmax		
	comp=Z,220nm,5.1s						
KSH				LR	LR		
	comp=Z,790nm,17.5s						
KSH				LR	LR		
	comp=Z,750nm,19.2s						
KSH				LR	LR		
	comp=Z,740nm,19.9s						
KBK	Karagaybulak	71.77	46	P	P	15 37 23.4	+1.6
	SNR=13						
BORK	Borovoye	72.08	34	P	P	15 37 23.3	+0.1
BORK	Borovoye	72.08	34	*ce*P	P	15 37 23.9	+0.7
BORK				pmax	pmax		
	comp=Z,19nm,1.7s						
BVAR	Borovoye Array	72.11	34	P	P	15 37 23.9	+0.5
	comp=Z,3.9nm,0.8s,baz=244,slow=6.6,SNR=18						
BVAR				LR	LR	16 10 30.8	
	comp=Z,478nm,21.7s,baz=245,slow=37						
	comp=Z,3.9nm,0.8s						
TKM2	Tokmak 2	72.30	45	P	P	15 37 25.8	+0.8
	SNR=15						
PALK	Pallekele	72.37	83	LR	LR	16 05 25.4	
	comp=Z,777nm,21.6s,baz=265,slow=33						
PALK	Pallekele	72.37	83	P	P	15 37 26.1	+0.4
PALK				P	P	15 37 26.4	+0.7
PALK	Pallekele	72.37	83	IAMs_20	IAMs_20	16 04 51.5	
	comp=Z,858nm,22.0s						
BOOM	Boomskoye usch	72.44	46	P	P	15 37 25.9	+0.1
BOOM				IAmb	IAmb	15 37 38.7	
	comp=Z,38nm,1.1s						
BOOM	Boomskoye usch	72.44	46	P	P	15 37 25.9	+0.1
BOOM				pmax	pmax		
	comp=Z,39nm,1.1s						
NVL	N'lazarevskaya	72.48	179	*e*P	P	15 37 26.2	+1.1
NVL				*e*		15 40 06.9	
NVL				*e*PPP	PPP	15 41 51.0	
NVL				*e*S	S	15 46 50.6	+1.6
NVL				*e*SS	SS	15 51 29.8	+2.0
NVL				pmax	pmax		
	comp=Z,53nm,1.0s						
NVL				MLR	MLR		
	comp=Z,1µm,16.0s						
IVI	Ivigtut	72.84	335	*i* P	P	15 37 27.2	-0.3
IVI				IAmb	IAmb	15 37 28.5	
	comp=Z,26nm,0.7s						
PCRV	Puerto La Cruz	72.84	280	LR	LR	16 03 41.9	
	comp=Z,7.6nm,19.1s,slow=31						
DRLN	Deer Lake	72.99	321	P	P	15 37 29.0	+0.4
TEFE	Tefe	73.04	266	*e*P	P	15 37 30.2	+0.5
VNA1	Neumayer--Stat	73.15	186	⇑P	P	15 37 29.9	+0.8
	comp=Z,29nm,0.8s						
KDJ	Kajisay	73.25	46	IAmb	IAmb	15 37 47.5	
	comp=Z,21nm,0.9s						
TNSS	Tian-Shan	73.29	45	*e*P	P	15 37 31.2	0.0
TNSS	Tian-Shan	73.29	45	*e*P	P	15 37 31.1	0.0
AAA	Alma-Ata	73.31	45	*e*P	P	15 37 31.6	+0.8
	comp=Z,26nm,0.8s						
AAA	Alma-Ata	73.31	45	*e*P	P	15 37 31.5	+0.8
AAA				pmax	pmax		
	comp=Z,26nm,0.8s						
VNA2	Neumayer--Watz	73.33	185	⇑P	P	15 37 30.4	+0.2
	comp=Z,56nm,0.6s,baz=24,slow=5.6						
MDOK	Medeo	73.39	45	*e*P	P	15 37 32.0	+0.6
MDOK	Medeo	73.39	45	*e*P	P	15 37 32.0	+0.6
CHKK	Chushkaly	73.51	45	*e*P	P	15 37 32.8	+0.9
CHKK	Chushkaly	73.51	45	*e*P	P	15 37 32.8	+0.9
TARG	Taragay, Kyrgy	73.61	47	IAmb	IAmb	15 37 45.8	
	comp=Z,17nm,0.7s						
SNAA	Sanae	73.70	184	⇑P	P	15 37 32.8	+0.3
	comp=Z,723nm,1.0s						
SNAA	Sanae	73.70	184	P	P	15 37 32.8	+0.3
	comp=Z,31nm,0.9s,baz=11,slow=4.3,SNR=45						
SNAA				LR	LR	16 06 30.2	
	comp=Z,404nm,18.2s,baz=9.5,slow=33						
	comp=Z,31nm,0.9s						
SNAA	Sanae	73.70	184	P	P	15 37 32.6	+0.1
SNAA				IAmb	IAmb	15 37 34.1	
	comp=Z,57nm,1.1s						
SNAA				IAMs_20	IAMs_20	16 08 53.4	
	comp=Z,792nm,18.0s						
SNAA	Sanae	73.70	184	*ce*P	P	15 37 33.2	+0.7
SNAA				pmax	pmax		
	comp=Z,87nm,1.7s						
TROLL	Troll, Antarti	73.78	182	⇑P	P	15 37 33.1	+0.1
	comp=Z,4µm,0.7s						
SYO	Syowa Base	73.84	169	⇑*i*P	P	15 37 33.2	0.0
SYO	Syowa Base	73.84	169	⇑*e*sP	sP	15 37 38.3	+1.7
SYO	Syowa Base	73.84	169	⇑*i*PcP	PcP	15 37 49.1	+0.4
VNA3	Neumayer Olymp	73.86	186	⇑P	P	15 37 33.1	-0.2
	comp=Z,47nm,0.7s						
ARXS	Arharly	74.18	44	*e*P	P	15 37 35.1	-0.8
PRZ	Przheval'sk	74.21	46	IAmb	IAmb	15 37 49.4	
	comp=Z,33nm,1.0s						
ELIB	Princess Elisa	74.27	175	*d*P	P	15 37 36.9	+1.0
	comp=Z,47nm,0.8s						
SATY	Saty	74.34	46	*e*P	P	15 37 37.8	+0.9
SATY	Saty	74.34	46	*e*P	P	15 37 37.7	+0.9
DBG	Daneborg	74.38	352	*i* P	P	15 37 34.9	-1.4
DBG				IAmb	IAmb	15 37 40.5	
	comp=Z,2.3nm,0.8s						
WUS	Wushi	74.54	48	P	P	15 37 37.8	-0.3
WUS	Wushi	74.54	48	IAMs_20	IAMs_20	16 13 49.5	
	comp=Z,842nm,20.0s						
TDK	Taldyqorghan	74.76	44	*e*P	P	15 37 40.2	+1.0
TDK	Taldyqorghan	74.76	44	*e*P	P	15 37 40.2	+1.0
UZB	Uzynbulak	74.80	46	*e*P	P	15 37 40.5	+0.8
UZB	Uzynbulak	74.80	46	*e*P	P	15 37 40.4	+0.8
SHLS	Shalkode	75.11	46	*e*P	P	15 37 44.1	+2.7
SHLS	Shalkode	75.11	46	*e*P	P	15 37 44.0	+2.7
TRQA	Tornquist	75.66	230	P	P	15 37 43.5	-1.0
TRQA				IAmb	IAmb	15 37 46.5	
	comp=Z,54nm,1.5s						
TRQA				IAMs_20	IAMs_20	16 05 01.0	
	comp=Z,1µm,20.0s						
TRQA	Tornquist	75.66	230	P	P	15 37 43.5	-1.0
TRQA				pmax	pmax		
	comp=Z,54nm,1.5s						
NUUK	Nuuk	75.69	337	*i* P	P	15 37 44.3	+0.3
NUUK				IAmb	IAmb	15 37 45.2	
	comp=Z,13nm,0.7s						
KURBB	Kurchatov Arra	76.17	38	P	P	15 37 48.0	+0.9
	comp=Z,8.0nm,0.8s,baz=258,slow=6.4,SNR=37						
KURBB				LR	LR	16 12 53.5	
	comp=Z,348nm,20.1s,baz=194,slow=37						
	comp=Z,8.0nm,0.8s						
KURK	Kurchatov	76.25	38	P	P	15 37 49.0	+1.4
KURK	Kurchatov	76.25	38	P	P	15 37 47.8	+0.3
KURK				IAmb	IAmb	15 38 00.2	
	comp=Z,21nm,0.9s						
KURK	Kurchatov	76.25	38	*ce*P	P	15 37 48.7	+1.2
KURK				pmax	pmax		
	comp=Z,29nm,1.7s						
SUMG	Summit	76.33	347	P	P	15 37 48.4	+0.3
SUMG				IAmb	IAmb	15 38 01.2	
	comp=Z,45nm,1.3s						
SUMG	Summit	76.33	347	P	P	15 37 48.4	+0.3
SUMG				pmax	pmax		
	comp=Z,45nm,1.3s						
SUMG	Summit	76.33	347	*i* P	P	15 37 48.0	-0.1
SUMG				IAmb	IAmb	15 37 50.8	
	comp=Z,20nm,1.1s						
DAG	Danmarks Havn	76.36	354	P	P	15 37 48.0	+0.3
DAG	Danmarks Havn	76.36	354	*i* P	P	15 37 47.0	-0.7
DAG				IAmb	IAmb	15 38 00.1	
	comp=Z,9.9nm,0.5s						
SPITS	Spitsbergen Ar	76.43	2	P	P	15 37 49.1	+1.0
	comp=Z,19nm,1.0s,baz=215,slow=14,SNR=3.1						
SPITS				LR	LR	16 14 45.5	
	comp=Z,302nm,20.4s,baz=176,slow=38						
	comp=Z,19nm,1.0s						
SFJD	Kangerlussuaq	76.59	340	LR	LR	16 10 36.8	
	comp=Z,575nm,19.4s,baz=115,slow=35						
SFJD	Kangerlussuaq	76.59	340	P	P	15 37 49.4	+0.2
SFJD				IAmb	IAmb	15 38 01.4	
	comp=Z,63nm,1.4s						
SFJD	Kangerlussuaq	76.59	340	P	P	15 37 49.4	+0.2
SFJD				pmax	pmax		
	comp=Z,63nm,1.5s						
SFJD	Kangerlussuaq	76.59	340	*i* P	P	15 37 49.2	+0.1
SFJD				IAmb	IAmb	15 37 50.2	
	comp=Z,19nm,0.8s						
LPAZ	La Paz	77.45	253	P	P	15 37 55.1	-0.6
	comp=Z,8.9nm,0.8s,baz=82,slow=3.4,SNR=16						
LPAZ				LR	LR	16 08 19.0	
	comp=Z,272nm,19.4s,baz=88,slow=33						
	comp=Z,8.9nm,0.8s						
LPAZ	La Paz	77.45	253		P	15 37 53.1	-2.7
LPAZ	La Paz	77.45	253	*e*P	P	15 37 55.1	-0.6
MAKZ	Makanchi	77.58	42	P	P	15 37 54.8	-0.3
MAKZ				IAmb	IAmb	15 38 07.4	
	comp=Z,26nm,0.7s						
MAKZ	Makanchi	77.58	42	P	P	15 37 54.8	-0.3
MAKZ				pmax	pmax		
	comp=Z,26nm,0.7s						
MK31	Makanchi Array	77.78	43	P	P	15 37 56.0	-0.3
MK31				IAmb	IAmb	15 38 08.6	
	comp=Z,26nm,0.8s						
MK31	Makanchi Array	77.78	43	*ce*P	P	15 37 57.1	+0.8
MKAR	Makanchi Array	77.78	43	P	P	15 37 57.0	+0.6
	comp=Z,17nm,0.7s,baz=255,slow=5.1,SNR=96						
MKAR				LR	LR	16 17 56.2	
	comp=Z,163nm,18.6s,baz=231,slow=40						
	comp=Z,17nm,0.7s						
MKAR	Makanchi Array	77.78	43	P	P	15 37 56.4	+0.1
MKAR	Makanchi Array	77.78	43	*i* P	P	15 37 57.0	+0.6
MKAR				pmax	pmax		
	comp=Z,17nm,0.7s						
SDV	Santo Domingo	78.74	279	LR	LR	16 07 11.1	
	comp=Z,206nm,21.5s,baz=74,slow=31						
GO01	Chusmiza	78.80	250	IAMs_20	IAMs_20	16 09 23.2	
	comp=Z,609nm,20.0s						
PB08	IPOC Station P	78.81	249	P	P	15 38 01.2	-1.7
PB08				IAmb	IAmb	15 38 04.8	
	comp=Z,34nm,1.2s						
PB08				IAMs_20	IAMs_20	16 08 45.4	
	comp=Z,703nm,20.0s						
PB18	Visviri	78.86	252	P	P	15 38 01.5	-2.0
MAW	Mawson	78.88	161	P	P	15 38 03.5	+1.6
	comp=Z,7.4nm,2.1s						
MAW	Mawson	78.88	161	P	P	15 38 02.6	+0.7
	comp=Z,12nm,0.8s,baz=305,slow=6.8,SNR=16						
MAW				LR	LR	16 09 17.9	
	comp=Z,502nm,21.2s,baz=310,slow=33						
	comp=Z,12nm,0.8s						
PB16	IPOC Station P	78.96	251		P	15 38 01.3	-2.7
PB09	IPOC Station P	79.07	248	P	P	15 38 01.6	-2.6
PB09				IAmb	IAmb	15 38 19.6	
	comp=Z,82nm,1.8s						
PB01	IPOC Station P	79.22	248	P	P	15 38 03.2	-1.6
PB06	IPOC Station P	79.47	247	IAmb	IAmb	15 38 08.4	
	comp=Z,35nm,1.0s						
HMBC	Humberstone	79.51	249	P	P	15 38 04.0	-2.5
PB03	IPOC Station P	79.57	247	IAmb	IAmb	15 38 08.7	
	comp=Z,32nm,1.0s						
PB02	IPOC Station P	79.62	248	P	P	15 38 04.7	-2.4
PB02				IAmb	IAmb	15 38 09.1	
	comp=Z,34nm,1.0s						
ZSN	Zaisan	79.63	42	*e*P	P	15 38 07.6	+1.1
ZSN	Zaisan	79.63	42	*e*P	P	15 38 07.5	+1.1
GO02	Mina Guanaco	79.78	244	IAmb	IAmb	15 38 10.6	
	comp=Z,39nm,1.1s						
GO02				IAMs_20	IAMs_20	16 07 36.7	
	comp=Z,621nm,20.0s						
SCHQ	Schefferville	79.96	325	P	P	15 38 09.4	+1.3
	comp=Z,32nm,0.8s,baz=86,slow=6.3,SNR=22						
SCHQ				LR	LR	16 13 23.9	
	comp=Z,638nm,18.1s,baz=100,slow=36						
	comp=Z,32nm,0.8s						
SCHQ	Schefferville	79.96	325	P	P	15 38 06.4	-1.7
D62A	Allapoint, All	80.04	317	P	P	15 38 07.3	-1.3
D62A				IAmb	IAmb	15 38 21.6	
	comp=Z,49nm,0.8s						
E62A	Clayton Lake	80.30	317	P	P	15 38 09.3	-0.8
E62A				IAmb	IAmb	15 38 23.1	
	comp=Z,50nm,0.9s						
PB14	IPOC Station P	80.45	245	IAMs_20	IAMs_20	16 14 15.6	
	comp=Z,499nm,19.0s						
ZAA0	Zalesovo Array	80.65	36	IAmb	IAmb	15 38 24.0	
	comp=Z,27nm,0.9s						
ZALV	Zalesovo Beam	80.65	36	P	P	15 38 12.5	+0.7
	comp=Z,23nm,0.8s,baz=263,slow=5.4,SNR=82						
ZALV				LR	LR	16 16 30.6	
	comp=Z,244nm,20.0s,baz=248,slow=38						
	comp=Z,23nm,0.8s						
ZALV	Zalesovo Beam	80.65	36	P	P	15 38 11.3	-0.5
ZALV	Zalesovo Beam	80.65	36	*i* P	P	15 38 12.1	+0.3
ZALV				pmax	pmax		
	comp=Z,23nm,0.8s						
AC06	Mina Casimiro	80.72	242		P	15 38 11.6	-1.2
AC06				IAmb	IAmb	15 38 14.6	
	comp=Z,32nm,1.1s						
AC01	Pan de Azucar	80.79	243	IAmb	IAmb	15 38 15.1	
	comp=Z,60nm,1.5s						
CO01	Juntas del Tor	80.81	239		P	15 38 11.6	-1.9
CO01				IAmb	IAmb	15 38 16.2	
	comp=Z,24nm,0.9s						
AC05	El Transito	80.83	241	IAmb	IAmb	15 38 15.6	
	comp=Z,34nm,1.0s						
UPNV	Upernavik	80.88	344	*i* P	P	15 38 12.0	-0.6
UPNV				IAmb	IAmb	15 38 15.1	
	comp=Z,21nm,0.9s						
LMQ	La Malbaie	80.96	318	P	P	15 38 12.2	-1.4
LMQ				IAmb	IAmb	15 38 26.7	
	comp=Z,46nm,0.9s						
WMQ	Urumqi	81.13	46	*e*P	P	15 38 16.6	+1.9
WMQ				pmax	pmax		
	comp=Z,15nm,1.3s						
WMQ				LR	LR		
	comp=Z,1µm,21.9s						
WMQ				LR	LR		
	comp=Z,720nm,20.5s						
WMQ				LR	LR		
	comp=Z,290nm,23.3s						
LCO	Las Campanas	81.22	240	P	P	15 38 14.7	-1.0
LCO	Las Campanas	81.22	240	P	P	15 38 14.7	-1.0
LCO				pmax	pmax		
	comp=Z,13nm,0.9s						
LMEL	Las Melosas	81.42	236	P	P	15 38 15.5	-1.1
KUQ	Kuujjuuaa	81.44	329	IAmb	IAmb	15 38 28.7	
	comp=Z,39nm,0.8s						
DGZ	Jazzator, Alta	81.62	40	*i* P	P	15 38 18.3	+1.0
DGZ				pmax	pmax		
	comp=Z,14nm,0.9s						
MT03	Universidad Ad	81.63	236	P	P	15 38 16.8	-0.8
MT03				IAmb	IAmb	15 38 19.9	
	comp=Z,41nm,0.8s						
BO04	La Punta	81.78	235	P	P	15 38 17.0	-1.3
BO04				IAmb	IAmb	15 38 20.4	
	comp=Z,57nm,1.4s						
BO02	Sierra Bellavi	82.03	235		P	15 38 18.8	-0.9
BO02				IAmb	IAmb	15 38 21.9	
	comp=Z,58nm,1.4s						
MT09	Talagante	82.06	236	P	P	15 38 20.1	+0.2
MT09				IAmb	IAmb	15 38 21.7	
	comp=Z,42nm,1.2s						
CO06	Fray Jorge	82.22	239	P	P	15 38 19.6	-1.0
CO06				IAmb	IAmb	15 38 22.5	
	comp=Z,35nm,1.0s						
MT01	Popeta	82.29	236	P	P	15 38 19.2	-1.7
MT01				IAmb	IAmb	15 38 21.9	
	comp=Z,24nm,1.1s						
ROSC	El Rosal	82.45	275	P	P	15 38 23.6	+0.9
	comp=Z,9.8nm,0.5s,baz=143,slow=20,SNR=1.3						
	comp=Z,9.8nm,0.5s						
ROSC	El Rosal	82.45	275	P	P	15 38 20.8	-1.8
ROSC				IAmb	IAmb	15 38 36.4	
	comp=Z,31nm,0.7s						
FRB	Frobisher Bay	82.56	334	LR	LR	16 14 26.6	
	comp=Z,389nm,18.1s,baz=110,slow=35						
BI02	San Fabin de	82.67	233	IAmb	IAmb	15 38 25.3	
	comp=Z,32nm,1.4s						
PLCA	Paso Flores	82.69	229	P	P	15 38 23.8	+0.8
	comp=Z,3.6nm,0.9s,baz=78,slow=5.6,SNR=7.3						
PLCA				LR	LR	16 09 44.5	
	comp=Z,952nm,19.3s,baz=86,slow=32						
	comp=Z,3.6nm,0.9s						
PLCA	Paso Flores	82.69	229	P	P	15 38 22.0	-1.0
PLCA				IAmb	IAmb	15 38 41.5	
	comp=Z,41nm,1.9s						

LSA	**Lhasa**	**82.94**	**60**	P	P	15 38 18.9	-6.1
LSA	**Lhasa**	**82.94**	**60**	S	**S**	**15 48 39.9**	**-4.9**
LSA				LR	LR		
	comp=N,370nm,21.3s						
LSA				LR	LR		
	comp=E,180nm,18.6s						
TAWA	**Tawang**	**83.51**	**63**	*e*P	**P**	**15 38 27.9**	**+0.1**
TAWA				IAmb	IAmb	15 38 40.2	
	comp=Z,34nm,1.3s						
FLOC	**Florencia**	**83.86**	**271**		**P**	**15 38 27.8**	**-1.7**
LL02	**Futaleuf**	**84.01**	**226**		**P**	**15 38 29.2**	**-0.4**
LL02				IAmb	IAmb	15 38 31.1	
	comp=Z,16nm,1.0s						
WBO	**Williamsburg**	**84.14**	**315**	P	**P**	**15 38 30.3**	**0.0**
PMSA	**Palmer Station**	**84.15**	**204**	LR	LR	16 10 08.0	
	comp=Z,328nm,18.0s,baz=75,slow=32						
SILR	**SILCHAR**	**84.30**	**65**	*e*P	**P**	**15 38 31.1**	**-0.3**
SILR				IAmb	IAmb	15 38 36.6	
	comp=Z,40nm,0.8s						
LL01	**San Ignacio de**	**84.31**	**227**	P	**P**	**15 38 30.8**	**-0.3**
LL01				IAMs_20	IAMs_20	16 09 47.8	
	comp=Z,908nm,21.0s						
TEZP	**TEZPUR**	**84.32**	**64**	*e*P	**P**	**15 38 31.3**	**-0.3**
TEZP				IAmb	IAmb	15 38 42.9	
	comp=Z,10nm,0.9s						
DGPR	**DIGLIPUR**	**84.41**	**77**	*e*P	**P**	**15 38 32.0**	**-0.2**
DGPR				IAmb	IAmb	15 38 36.2	
	comp=Z,27nm,0.7s						
SAIH	**SAIHA**	**84.45**	**68**	*e*P	**P**	**15 38 29.7**	**-2.7**
NRIK	**Noril'sk**	**84.54**	**21**	P	**P**	**15 38 33.3**	**+1.5**
	comp=Z,2.9nm,0.8s,baz=246,slow=4.8,SNR=13						
NRIK				LR	LR	16 22 28.9	
	comp=Z,291nm,18.8s,baz=256,slow=40						
	comp=Z,2.9nm,0.8s						
NRIK	**Noril'sk**	**84.54**	**21**	IAmb	IAmb	15 38 46.0	
	comp=Z,45nm,1.4s						
NRIK	**Noril'sk**	**84.54**	**21**	*i* P	**P**	**15 38 33.6**	**+1.8**
NRIK				pmax	pmax		
	comp=Z,35nm,1.3s						
PAGS	**Pennsylvania G**	**85.00**	**310**	P	**P**	**15 38 34.1**	**-0.6**
N58A	**Sunbury**	**85.01**	**311**	P	**P**	**15 38 33.0**	**-1.8**
TULEG	**Thule**	**85.25**	**347**	P	**P**	**15 38 34.5**	**-0.7**
TULEG				IAmb	IAmb	15 40 12.2	
	comp=Z,16nm,0.6s						
ZIRO	**ZIRO**	**85.27**	**63**	*e*P	**P**	**15 38 35.9**	**-0.7**
ZIRO				IAmb	IAmb	15 38 42.4	
	comp=Z,29nm,1.0s						
PECO	**Prince Edward**	**85.33**	**314**	P	**P**	**15 38 34.9**	**-1.3**
IMP	**Imphal**	**85.34**	**65**	*e*P	**P**	**15 38 36.5**	**-0.3**
IMP				IAmb	IAmb	15 38 49.4	
	comp=Z,45nm,1.2s						
KOHI	**KOHIMA**	**85.49**	**64**	*e*P	**P**	**15 38 37.6**	**0.0**
KOHI				IAmb	IAmb	15 38 49.8	
	comp=Z,44nm,1.4s						
R58B	**Mineral**	**85.84**	**308**	P	**P**	**15 38 38.6**	**-0.4**
R58B				IAmb	IAmb	15 38 52.2	
	comp=Z,29nm,0.9s						
MOKO	**MOKOCHONG**	**85.86**	**64**	*e*P	**P**	**15 38 39.9**	**+0.5**
MOKO				IAmb	IAmb	15 38 51.4	
	comp=Z,24nm,1.1s						
SSPA	**Standing Stone**	**85.90**	**310**		**P**	**15 38 37.4**	**-1.8**
GOMU	**GeErMu**	**86.17**	**54**	P	**P**	**15 38 41.8**	**+0.7**
GOMU				pP	sP	15 38 45.3	+0.7
GOMU				sP	pwP	15 38 48.8	+2.1
GOMU				S	**S**	**15 49 21.3**	**+4.8**
GOMU				pmax	pmax		
	comp=Z,12nm,0.8s						
GOMU				LR	LR		
	comp=Z,220nm,13.8s						
GOMU				LR	LR		
	comp=Z,250nm,13.9s						
GOMU				LR	LR		
	comp=Z,300nm,13.7s						
PASG	**PASIGHAT**	**86.58**	**62**	*e*P	**P**	**15 38 42.0**	**-0.8**
PASG				IAmb	IAmb	15 38 44.3	
	comp=Z,30nm,1.2s						
OTAV	**Otavalo**	**86.70**	**270**	P	**P**	**15 38 41.1**	**-3.1**
OTAV	**Otavalo**	**86.70**	**270**	P	**P**	**15 38 41.1**	**-3.1**
OTAV				pmax	pmax		
	comp=Z,15nm,1.0s						
OTAV				MLR	MLR		
	comp=Z,400nm,20.0s						
OTAV	**Otavalo**	**86.70**	**270**	*e*P	**P**	**15 38 44.2**	**0.0**
SADO	**Sadowa**	**86.88**	**315**	LR	LR	16 16 57.4	
	comp=Z,283nm,18.3s,baz=112,slow=35						
ATAH	**Atahualpa**	**86.89**	**263**	LR	LR	16 14 09.1	
	comp=Z,332nm,21.3s,baz=91,slow=33						
U56A	**King**	**87.84**	**306**	IAMs_20	IAMs_20	16 14 10.3	
	comp=Z,1μm,19.0s						
ILON	**Igloolik, Nuna**	**88.35**	**339**	IAmb	IAmb	15 39 03.3	
	comp=Z,15nm,1.2s						
TNCH	**TengChong**	**89.49**	**65**	*e*P	**P**	**15 38 58.1**	**+1.1**
TNCH				S	**S**	**15 49 48.0**	**-0.3**
TNCH				SS	**SS**	**15 55 42.3**	**-1.6**
TNCH				LR	LR		
	comp=Z,270nm,12.1s						
TNCH				LR	LR		
	comp=Z,240nm,13.0s						
TNCH				LR	LR		
	comp=Z,500nm,22.3s						
GTA	**Gaotai**	**90.08**	**51**	pP	pP	15 42 39.3	
GTA	**Gaotai**	**90.08**	**51**	*e*P	**P**	**15 39 00.9**	**+1.5**
GTA				pP	pwP	15 39 04.8	-0.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CHTO	**Chiang Mai**	**90.08**	**71**	P	**P**	**15 38 58.9**	**-0.7**
CHTO	**Chiang Mai**	**90.08**	**71**	P	**P**	**15 38 58.9**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**90.09**	**72**	P	**P**	**15 38 59.2**	**-0.5**
	comp=Z,1.7nm,0.8s,baz=277,slow=6.1,SNR=13						
CMAR				LR	LR	16 19 13.1	
	comp=Z,103nm,19.7s,baz=280,slow=36						
	comp=Z,1.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**90.09**	**72**	P	**P**	**15 38 59.4**	**-0.3**
CMAR	**Chiang Mai Arr**	**90.09**	**72**	*i* P	**P**	**15 38 59.2**	**-0.5**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MOY	**Mondy**	**90.30**	**38**	*e*P	**P**	**15 39 04.9**	**+4.8**
MOY				pmax	pmax		
	comp=Z,13nm,1.9s						
PSI	**Prapat**	**90.58**	**87**	LR	LR	16 16 52.3	
	comp=Z,569nm,21.5s,baz=254,slow=34						
TKL	**Tuckaleechee C**	**90.61**	**306**	LR	LR	16 14 35.5	
	comp=Z,966nm,20.7s,baz=103,slow=32						
R49A	**Shelbyville**	**91.58**	**308**	IAMs_20	IAMs_20	16 14 34.3	
	comp=Z,928nm,21.0s						
RES	**Resolute Bay**	**91.73**	**345**	LR	LR	16 22 25.4	
	comp=Z,276nm,18.3s,baz=36,slow=37						
ZAK	**Zakamensk**	**91.84**	**40**	*e*P	**P**	**15 39 09.4**	**+2.1**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
QSPA	**South Pole Qui**	**91.85**	**180**	P	**P**	**15 39 07.5**	**+0.5**
	comp=Z,10nm,1.0s,baz=255,slow=2.5,SNR=30						
QSPA				LR	LR	16 18 18.3	
	comp=Z,367nm,18.1s,baz=224,slow=34						
	comp=Z,10nm,1.0s						
QSPA	**South Pole Qui**	**91.85**	**180**	P	**P**	**15 39 06.8**	**-0.2**
QSPA				IAmb	IAmb	15 39 08.1	
	comp=Z,15nm,1.1s						
KULM	**Kulim**	**92.22**	**85**	IAMs_20	IAMs_20	16 21 05.7	
	comp=Z,556nm,18.0s						
IPM	**Ipoh**	**92.62**	**85**	IAMs_20	IAMs_20	16 20 15.4	
	comp=Z,438nm,19.0s						
BKNI	**Bangkinang**	**92.78**	**90**	IAMs_20	IAMs_20	16 16 23.4	
	comp=Z,466nm,20.0s						
LZDM	**Lanzhou Array**	**93.36**	**54**	LR	LR	16 26 34.6	
	comp=Z,373nm,18.5s,baz=280,slow=39						
LZH	**Lanzhou**	**93.47**	**54**	*e*P	**P**	**15 39 14.6**	**-0.6**
LZH				pP	sP	15 39 19.0	+0.3
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
SONM	**Songino Array**	**94.14**	**42**	P	**P**	**15 39 18.7**	**+0.7**
	comp=Z,2.7nm,1.1s,baz=337,slow=3.4,SNR=4.7						
SONM				LR	LR	16 27 27.3	
	comp=Z,244nm,18.9s,baz=266,slow=39						
	comp=Z,2.7nm,1.1s						
SONM	**Songino Array**	**94.14**	**42**	IAmb	IAmb	15 39 23.5	
	comp=Z,5.9nm,1.3s						
SONM	**Songino Array**	**94.14**	**42**	P	**P**	**15 39 18.7**	**+0.7**
SONM				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ULN	**Ulaanbaatar**	**94.58**	**42**	*ce*P	**P**	**15 39 19.9**	**-0.2**
ULN				pmax	pmax		
	comp=Z,11nm,1.8s						
CASY	**Casey**	**96.58**	**157**	IAMs_20	IAMs_20	16 22 04.7	
	comp=Z,772nm,19.0s						
PMBI	**Palembang**	**96.60**	**93**	IAMs_20	IAMs_20	16 16 51.7	
	comp=Z,585nm,22.0s						
TIXI	**Tiksi**	**97.56**	**16**	LR	LR	16 31 03.8	
	comp=Z,258nm,18.2s,baz=242,slow=40						
TIXI	**Tiksi**	**97.56**	**16**	*i* P	Pdif	15 39 34.2	+1.3
TIXI				pmax	pmax		
	comp=Z,18nm,2.7s						
ULM	**Lac du Bonnet**	**97.62**	**321**	LR	LR	16 23 52.8	
	comp=Z,381nm,18.2s,baz=79,slow=36						
ULM	**Lac du Bonnet**	**97.62**	**321**	*i* P	Pdif	15 39 34.1	+0.4
BTO	**Baotou**	**97.75**	**49**	*e*P	Pdif	15 39 34.8	+0.2
BTO				pP	pwP	15 39 39.3	-1.0
BTO				sP	sP	15 39 41.8	+3.7
BTO				SKS	**SKSac**	**15 50 12.6**	**-0.1**
BTO				SS	**SS**	**15 57 41.4**	**+0.3**
BTO				LR	LR		
	comp=Z,1μm,18.2s						
BTO				LR	LR		
	comp=Z,750nm,20.5s						
BTO				LR	LR		
	comp=Z,1μm,21.1s						
XAN	**Xi'an**	**97.83**	**55**	P	P	15 39 29.5	-5.5
XAN				pP	pP	15 39 37.1	-0.5
HHC	**Hu-ho-hao-te**	**98.87**	**48**	*e*P	**P**	**15 39 39.4**	**-0.2**
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,96nm,7.6s						
QIZ	**Qiongzhong**	**100.36**	**70**	P	**Pdif**	**15 39 46.1**	**-0.4**
QIZ				PP	**PP**	**15 43 52.5**	**-0.5**
QIZ				S	**Sdif**	**15 51 21.8**	**-1.6**
QIZ				SS	**SS**	**15 58 19.1**	**+0.5**
QIZ				LR	LR		
	comp=Z,290nm,19.3s						
QIZ				LR	LR		
	comp=Z,280nm,17.7s						
QIZ				LR	LR		
	comp=Z,250nm,14.7s						
BJT	**Baijiatuau**	**102.48**	**48**	IAMs_20	IAMs_20	16 30 23.9	
	comp=Z,352nm,20.0s						
C27K	**Jago River**	**106.24**	**350**	IAMs_20	IAMs_20	16 24 03.0	
	comp=Z,655nm,19.0s						
BKB	**Balikpapan**	**108.67**	**91**	IAMs_20	IAMs_20	16 31 38.8	
	comp=Z,685nm,18.0s						
ILAR	**Eielson Array**	**111.12**	**349**	PKKPbc	PKKPbc	15 55 28.4	-3.1
	comp=Z,0.9nm,1.0s,baz=207,slow=5.0,SNR=5.8						
ILAR				PKKPab	**PKKPab**	**15 55 38.0**	**-1.9**
	comp=Z,1.2nm,0.7s,baz=226,slow=5.2,SNR=13						
KAPI	**Kappang**	**111.57**	**95**	IAMs_20	IAMs_20	16 28 38.4	
	comp=Z,410nm,21.0s						
TOLI2	**Tolitoli**	**112.48**	**88**	IAMs_20	IAMs_20	16 34 55.6	
	comp=Z,324nm,21.0s						
LUWI	**Luwuk**	**114.54**	**90**	IAMs_20	IAMs_20	16 31 16.2	
	comp=Z,420nm,20.0s						
ASAR	**Alice Springs**	**123.14**	**117**	PKP	**PKPdf**	**15 44 55.5**	**-1.2**
	comp=Z,1.5nm,1.0s,baz=261,slow=1.4,SNR=13						
ASAR				PKKPab	**PKKPbc**	**15 54 51.7**	**+4.2**
	comp=Z,0.9nm,0.8s,baz=64,slow=3.7,SNR=7.7						
ASAR	**Alice Springs**	**123.14**	**117**		**PKPdf**	**15 44 53.2**	**-3.4**
WRA	**Warramunga Arr**	**124.37**	**113**	PKP	**PKPdf**	**15 44 57.5**	**-1.6**
	comp=Z,0.9nm,0.9s,baz=266,slow=1.5,SNR=5.2						
WRA	**Warramunga Arr**	**124.37**	**113**		**PKPdf**	**15 44 55.4**	**-3.6**
WRAB	**Tennant Creek**	**124.38**	**113**	IAMs_20	IAMs_20	16 37 19.6	
	comp=Z,611nm,20.0s						
RKT	**Rikitea**	**138.53**	**236**	*e*LR	LR	16 30 04.6	
	comp=Z,4μm,32.2s						
TAOE	**Nuku Hiva Isla**	**147.79**	**256**	*e*LR	LR	16 34 22.2	
	comp=Z,144nm,22.7s						
TBI	**Tubuai**	**149.58**	**224**	*e*SS	SS	16 08 40.7	+4.7
	comp=Z,2μm,26.0s						
TBI				*e*SS	**SS**	**16 08 45.7**	**+10**
	comp=Z,2μm,24.5s						
TBI	**Tubuai**	**149.58**	**224**	*e*LR	LR	16 35 18.3	
	comp=Z,865nm,25.2s						
DZM	**Mont Dzumac**	**150.75**	**135**	*e*P	**PKPdf**	**15 45 44.8**	**-2.1**
	comp=Z,122nm,25.1s						
DZM	**Mont Dzumac**	**150.75**	**135**	*e*PP	PP	15 49 22.9	-5.5
	comp=Z,67nm,22.6s						
DZM	**Mont Dzumac**	**150.75**	**135**	*e*LR	LR	16 35 50.2	
	comp=Z,544nm,24.1s						
PPT2	**Papeete2**	**153.16**	**233**	*e*LR	LR	16 36 56.7	
	comp=Z,215nm,26.5s						
PPT2				*e*LR	LR	16 37 02.4	
	comp=Z,225nm,21.8s						

GCG 19 15:26:01.3±0.3, 13°.73N×91°.35W, h51^{km}±35^{km}, ML3.5, MW3.1, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESSG	**Sabana Grande**	**0.83**	**38**	*i* P	Pn	15 26 17.0	+0.1
FG16	**Alotenango, Sa**	**0.98**	**56**	*e*P	Pn	15 26 18.1	-0.9
FG16				IAML		15 26 36.0	
	comp=N,3μm,0.2s						
PCG5	**San Vicente Pa**	**1.06**	**63**	*i* P	Pn	15 26 18.8	-1.2
SOKI	**Kika Raxquin**	**1.09**	**357**	*e*P	Pn	15 26 21.7	+1.0

IDC ***19*** *15:30:11.9±2.8, 40°.47N×124°.11W, h0^{km}, mb3.4/2, mbtmp3.5/5, ML3.3/3, MS3.1/1, Error ellipse: s-maj=31.7km s-min=15.6km az=85.0*

NEIC ***19*** *15:30:11.6±2.3, 40°.28N±0°.02×124°.39W±0°.05, h21^{km}±5^{km}, Error ellipse: s-maj=5.2km s-min=2.7km az=99.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.11; $M_{\theta\theta}$-0.39; $M_{\phi\phi}$0.28; $M_{r\theta}$-0.03; $M_{\theta\phi}$-0.97; $M_{\phi r}$-0.28; Fault plane solution: $M_0$1.07000×10^{15} NP1:ϕ_s99.16000°, δ74.53000°, λ176.79000°. NP2:ϕ_s190.01000°, δ86.91000°, λ15.49000°. Principal axes: T 1.0246, Plg13.0000°, Azm56.0000°; N 0.0846, Plg74.0000°, Azm201.0000°; P -1.1092, Plg9.0000°, Azm324.0000°;*

NCEDC ***19*** *15:30:13.0±2.2, 40°.28N±0°.03×124°.36W±0°.06, h21^{km}±6^{km}, Mwr4.1/4, ML3.6/107(NEIC), Mwr4.0/67(NEIC) Error ellipse: s-maj=7.3km s-min=3.2km az=74.0*

NEIC ***19*** *15:30:13, 40°.28N×124°.36W, h21^{km}*

NEIC ***19*** *15:30:13.1, 40°.28N×124°.36W, h21^{km}*

NEIC ***19*** *15:30:13.1, 40°.28N×124°.36W, h30^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.15; $M_{\theta\theta}$-0.62; $M_{\phi\phi}$0.48; $M_{r\theta}$0.06; $M_{\theta\phi}$-1.41; $M_{\phi r}$-0.21; Fault plane solution: $M_0$1.53000×10^{15} NP1:ϕ_s191.03000°, δ85.30000°, λ7.96000°. NP2:ϕ_s100.37000°, δ82.07000°, λ175.25000°. Principal axes: T 1.4686, Plg9.0000°, Azm56.0000°; N 0.1195, Plg81.0000°, Azm221.0000°; P -1.5882, Plg2.0000°, Azm326.0000°;*

ISC 19 15:30:12.4±0.8, 40°.28N±0°.03×124°.34W±0°.05, h29^{km}±5^{km}, n138, σ1^{s}.01/143, Near coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETL	**Petrolia**	**0.01**	**326**		**Pb**	**15 30 16.9**	**-0.2**
PETL					**Sb**	**15 30 20.2**	**-0.3**
KCTM	**Capetown**	**0.20**	**0**		**Pb**	**15 30 18.7**	**+0.3**
KMPM	**Mount Pierce**	**0.21**	**50**		**Pb**	**15 30 18.9**	**+0.2**
KMPM				Sg	**Sb**	**15 30 22.7**	**-0.3**
FER	**Ferndale**	**0.30**	**11**		**Pn**	**15 30 20.5**	**-0.4**
BRIC	**Briceland Vine**	**0.38**	**116**		**Pn**	**15 30 21.4**	**-0.5**
BRIC	**Briceland Vine**	**0.38**	**116**	IAML		15 30 29.6	
	comp=N,22μm,0.4s						
BRIC				IAML		15 30 33.6	
	comp=E,18μm,0.6s						
KMRM	**Mail Ridge**	**0.48**	**97**		**Pn**	**15 30 23.3**	**-0.1**
KMRM				Sg	**Sn**	**15 30 31.1**	**+0.1**
JCC	**Jacoby Creek,**	**0.58**	**23**		**Pb**	**15 30 23.5**	**-0.6**
JCC					**Sb**	**15 30 31.4**	**-0.7**
JCC				IAML		15 30 32.3	
	comp=E,2μm,1.2s						
DMOR	**Dinsmores, CA**	**0.65**	**48**		**Pb**	**15 30 25.4**	**+0.2**
KHMM	**Horse Mountain**	**0.75**	**38**		**Pb**	**15 30 26.7**	**-0.4**
KHMM					**Sb**	**15 30 37.2**	**+0.2**
KHMM				IAML		15 30 40.8	
	comp=E,3μm,0.8s						
KIPM	**Iron Peak**	**0.81**	**125**		**Pb**	**15 30 27.9**	**-0.1**
KCPM	**Cahto Peak**	**0.83**	**135**		**Pb**	**15 30 27.6**	**-0.7**
KCPM				Sn	**Sb**	**15 30 39.4**	**+0.2**
KRPM	**Rodgers**	**0.91**	**15**		**Pb**	**15 30 28.4**	**-1.2**
KRPM				Sn	**Sb**	**15 30 39.6**	**-1.7**
KRPM				IAML		15 30 55.6	
	comp=N,2μm,1.2s						
KHBM	**Hayfork Bally**	**0.93**	**66**		**Pb**	**15 30 29.3**	**-0.8**
KHBM				IAML		15 30 49.0	
	comp=N,1μm,0.5s						
KHBM				IAML		15 30 59.5	
	comp=E,1μm,1.0s						
KBNM	**Bluenose Ridge**	**0.96**	**113**		**Pb**	**15 30 30.0**	**-0.4**
MNDO	**Woodland Fire**	**1.07**	**155**		**Pn**	**15 30 30.6**	**-0.9**
DCMP	**DeCamp, Califo**	**1.12**	**136**		**Pn**	**15 30 31.3**	**-0.8**
DCMP				Sn	**Sb**	**15 30 44.9**	**-2.3**
DCMP				IAML		15 30 45.5	
	comp=N,1μm,0.2s						
WEAV	**Weaverville**	**1.13**	**65**		**Pn**	**15 30 32.0**	**-0.4**
KRKM	**Rackout Spring**	**1.14**	**129**		**Pn**	**15 30 32.1**	**-0.4**
O02D	**Mt. Diablo Mer**	**1.19**	**95**		**Pn**	**15 30 33.4**	**+0.3**
O02D				Sn	**Sb**	**15 30 48.2**	**-1.2**
O02D				IAML		15 30 50.1	
	comp=N,1μm,0.8s						
O02D				IAML		15 30 53.4	
	comp=E,931nm,0.9s						
KOMM	**Orleans Mounta**	**1.20**	**34**		**Pn**	**15 30 32.9**	**-0.5**
GNAM	**Navarro Ridge**	**1.21**	**153**		**Pn**	**15 30 32.4**	**-1.0**
GROM	**Round Mountain**	**1.33**	**105**		**Pn**	**15 30 35.1**	**0.0**
GWRM	**Wonder Ranch**	**1.34**	**143**		**Pn**	**15 30 34.4**	**-0.7**
GVV	**Valley View**	**1.37**	**111**		**Pn**	**15 30 35.6**	**-0.2**
GHOM	**Hamilton Openi**	**1.38**	**153**		**Pn**	**15 30 34.8**	**-1.0**
N02D	**Trinity Center**	**1.42**	**60**		**Pn**	**15 30 36.3**	**-0.1**
N02D				Sn	**Sn**	**15 30 53.7**	**-0.5**
BONV	**Boonville, CA**	**1.50**	**149**		**Pn**	**15 30 36.4**	**-1.0**
LBKM	**Bonanza King**	**1.50**	**57**		**Pn**	**15 30 37.5**	**0.0**
M02C	**Callahan**	**1.58**	**45**		**Pn**	**15 30 38.5**	**-0.1**
M02C				Sn	**Sn**	**15 30 57.5**	**-0.5**
M02C				IAML		15 30 58.2	
	comp=E,436nm,1.4s						
KSXB	**Camp Six Broad**	**1.59**	**12**		**Pn**	**15 30 37.9**	**-0.8**
KSXB				Sn	**Sn**	**15 30 56.0**	**-2.3**
KSXB				IAML		15 30 57.2	
	comp=E,697nm,0.5s						
KSXB				IAML		15 30 57.6	
	comp=N,514nm,0.5s						
GSNM	**Snow Mountain**	**1.60**	**146**		**Pn**	**15 30 38.1**	**-0.8**
HOPS	**Hopland Field**	**1.61**	**142**		**Pn**	**15 30 38.2**	**-0.7**
GHGM	**Hogback Ridge**	**1.64**	**134**		**Pn**	**15 30 38.7**	**-0.6**
GALB	**Galbreath Wild**	**1.64**	**149**		**Pn**	**15 30 38.3**	**-1.0**
GPMM	**Pine Mountain**	**1.79**	**143**		**Pn**	**15 30 40.9**	**-0.5**
LSHM	**Sage Hen Hill**	**1.82**	**73**		**Pn**	**15 30 42.3**	**+0.4**
GDXM	**Geysers**	**1.89**	**140**		**Pn**	**15 30 42.1**	**-0.7**
YBH	**Yreka Blue Hor**	**1.90**	**40**	Pn	**Pn**	**15 30 43.0**	**+0.1**
	comp=N,2.8nm,0.3s,baz=289,slow=5.3,SNR=100						
YBH				Sn	**Sn**	**15 31 04.3**	**-1.7**
	comp=N,1.8nm,0.3s,baz=286,slow=4.6,SNR=11						
YBH	**Yreka Blue Hor**	**1.90**	**40**		**Pn**	**15 30 42.9**	**-0.1**
L02F	**Cave Junction**	**1.93**	**17**		**Pn**	**15 30 42.7**	**-0.6**
L02F				IAML		15 31 07.3	
	comp=N,750nm,0.4s						
KBO	**Bosley Butte**	**1.93**	**2**	Pn	**Pn**	**15 30 42.7**	**-0.7**
KBO				IAML		15 31 05.9	
	comp=N,644nm,0.4s						
KBO				IAML		15 31 06.5	
	comp=E,731nm,0.3s						
O03E	**Paynes Creek**	**1.94**	**89**		**Pn**	**15 30 43.6**	**+0.1**
O03E				IAML		15 31 09.0	
	comp=N,416nm,0.3s						
LGBM	**Gray Butte**	**1.94**	**56**		**Pn**	**15 30 44.6**	**+0.9**
M03C	**McCloud**	**1.95**	**59**		**Pn**	**15 30 44.5**	**+0.9**
M03C				IAML		15 31 10.3	
	comp=N,591nm,0.4s						
M03C				IAML		15 31 10.7	
	comp=E,533nm,1.0s						
LDBM	**Digger Butte**	**1.96**	**85**		**Pn**	**15 30 43.6**	**-0.1**
MNRC	**McLaughlin Min**	**2.02**	**133**		**Pn**	**15 30 44.6**	**0.0**
B040	**Montague**	**2.12**	**42**		**Pn**	**15 30 46.5**	**+0.6**
B040	**Montague**	**2.12**	**42**		**Pn**	**15 30 46.5**	**+0.6**
LMEM	**Manzanita Entr**	**2.13**	**82**		**Pn**	**15 30 46.5**	**+0.3**
LBFM	**Black Fox Moun**	**2.14**	**59**		**Pn**	**15 30 47.4**	**+1.0**
OSUM	**Sutter Buttes**	**2.16**	**117**		**Pn**	**15 30 46.1**	**-0.3**
LRDM	**Redding Peak**	**2.20**	**84**		**Pn**	**15 30 48.1**	**+1.0**
SIFF	**Sifford Mounta**	**2.23**	**86**		**Pn**	**15 30 48.0**	**+0.4**
SUTB	**Sutter Butte**	**2.23**	**117**		**Pn**	**15 30 47.2**	**-0.1**
HATC	**Hat Creek Radi**	**2.25**	**75**		**Pn**	**15 30 48.8**	**+1.0**
HATC				IAML		15 31 42.0	
	comp=N,441nm,1.7s						
HATC				IAML		15 31 50.0	
	comp=E,478nm,1.9s						
ORV	**Oroville**	**2.30**	**107**		**Pn**	**15 30 48.2**	**-0.1**
ORV				IAML		15 31 18.2	
	comp=E,390nm,0.4s						
MCCM	**Marconi Confer**	**2.41**	**152**	Pn	**Pn**	**15 30 49.2**	**-0.7**
CVS	**Carmenet Viney**	**2.42**	**142**		**Pn**	**15 30 49.7**	**-0.3**
K02D	**Willamette Mer**	**2.46**	**12**	Pn	**Pn**	**15 30 50.5**	**-0.2**
K02D				IAML		15 31 20.0	
	comp=N,274nm,0.3s						
K02D				IAML		15 31 20.1	
	comp=E,293nm,0.4s						
L04D	**Klamath Falls**	**2.47**	**38**		**Pn**	**15 30 52.2**	**+1.4**
L04D				IAML		15 31 23.2	
	comp=E,365nm,0.7s						
L04D				IAML		15 31 23.6	
	comp=N,438nm,1.1s						
KEBM	**Edson Butte**	**2.59**	**0**	Pn	**Pn**	**15 30 52.7**	**+0.3**
KEBM				IAML		15 31 22.6	
	comp=N,142nm,3.2s						
KEBM				IAML		15 31 41.1	
	comp=E,150nm,3.2s						
FARB	**Farallon Islan**	**2.78**	**158**	Pn	**Pn**	**15 30 54.3**	**-0.6**
FARB				IAML		15 31 24.2	
	comp=E,174nm,0.7s						
BBOR	**Butler Butte**	**2.88**	**25**	Pn	**Pn**	**15 30 56.6**	**+0.1**
BBOR				IAML		15 31 48.4	
	comp=E,98nm,1.7s						
K04D	**Chiloquin, OR**	**3.04**	**39**		**Pn**	**15 30 59.0**	**+0.3**
JRSC	**Jasper Ridge**	**3.31**	**150**	Pn	**Pn**	**15 31 01.0**	**-1.2**
JRSC				IAML		15 31 59.2	
	comp=N,116nm,2.2s						
JRSC				IAML		15 32 39.5	
	comp=E,101nm,2.3s						
J04A	**Umpqua Nationa**	**3.39**	**29**	Pn	**Pn**	**15 31 04.1**	**+0.5**
MPK	**Martis Peak**	**3.46**	**105**		**Pn**	**15 31 04.3**	**-0.3**
I03D	**Drain, OR**	**3.49**	**12**		**Pn**	**15 31 04.9**	**+0.2**
I03D				IAML		15 32 36.0	
	comp=E,62nm,2.7s						
K05A	**Summer Lake**	**3.56**	**46**		**Pn**	**15 31 06.6**	**+0.8**
K05A				IAML		15 32 16.4	
	comp=N,64nm,2.5s						
K05A				IAML		15 32 43.5	
	comp=E,71nm,4.3s						
MHC	**Mount Hamilton**	**3.61**	**144**		**Pn**	**15 31 06.5**	**0.0**
J05D	**Fort Rock, OR**	**3.79**	**37**		**Pn**	**15 31 09.3**	**+0.3**
J05D				IAML		15 32 15.6	
	comp=N,47nm,2.2s						
J05D				IAML		15 32 36.9	
	comp=E,62nm,1.7s						
CMB	**Columbia Colle**	**3.80**	**125**		**Pn**	**15 31 09.6**	**+0.5**
I02E	**Swisshome, OR**	**3.84**	**5**	Pn	**Pn**	**15 31 10.4**	**+0.9**
I02E				IAML		15 31 54.6	
	comp=N,82nm,3.1s						
I02E				IAML		15 32 49.3	
	comp=E,86nm,3.7s						
PNTR	**Pine Nut**	**3.84**	**107**		**Pn**	**15 31 10.6**	**+0.8**
PNTR				IAML		15 32 06.7	
	comp=E,122nm,1.2s						
PAHR	**Pah Rah Range**	**3.85**	**97**		**Pn**	**15 31 10.2**	**+0.5**
PAHR				IAML		15 32 03.5	
	comp=E,88nm,0.8s						
PAHR				IAML		15 32 03.8	
	comp=N,70nm,0.6s						
BUCK	**Buck Mountain**	**4.04**	**14**	Pn	**Pn**	**15 31 13.1**	**+0.8**
BUCK				IAML		15 32 04.3	
	comp=E,71nm,4.8s						
BUCK				IAML		15 33 53.1	
	comp=N,70nm,3.5s						
SAO	**San Andreas Ge**	**4.18**	**146**		**Pn**	**15 31 13.1**	**-1.1**
WIFE	**Three Sisters-**	**4.21**	**26**		**Pn**	**15 31 16.1**	**+1.2**
WIFE				IAML		15 33 21.4	
	comp=N,48nm,3.4s						
WIFE				IAML		15 33 32.5	
	comp=E,54nm,3.7s						
PINE	**Pine Mountain**	**4.33**	**35**		**Pn**	**15 31 16.5**	**+0.1**
COR	**Corvallis**	**4.37**	**10**	Pn	**Pn**	**15 31 17.3**	**+0.5**
COR				IAML		15 32 06.8	
	comp=E,66nm,3.3s						
COR				IAML		15 33 25.8	
	comp=E,61nm,2.5s						
H04D	**Lebanon**	**4.40**	**15**	Pn	**Pn**	**15 31 17.4**	**+0.2**
BBGB	**Big Mountain B**	**4.51**	**144**		**Pn**	**15 31 19.3**	**+0.4**
I05D	**Terrebonne, OR**	**4.62**	**28**	Pn	**Pn**	**15 31 20.1**	**-0.2**
H04A	**Detroit Lake**	**4.68**	**19**		**Pn**	**15 31 21.8**	**+0.7**
RYN	**Ryan**	**4.79**	**108**		**Pn**	**15 31 24.6**	**+1.8**

WVOR	Wild Horse Val	4.80	62		Pn	15 31 22.4	-0.5
WVOR				IAML		15 33 07.5	
	comp=E,21nm,2.6s						
MDPB	Devils Postpil	4.88	121		Pn	15 31 24.7	+0.7
HULI	Fort Hunter Li	4.90	149		Pn	15 31 23.3	-0.8
PMPB	Monarch Peak	4.92	144	Pn	Pn	15 31 24.5	+0.1
LHV	Little Huntoon	4.96	112		Pn	15 31 26.6	+1.7
G03D	McMinnville, O	4.99	9	Pn	Pn	15 31 26.2	+0.9
NVAR	Mina Array Bea	5.03	110	Pn	Pn	15 31 27.6	+1.5
	comp=E,1.8nm,0.3s,baz=303,slow=15,SNR=17						
NVAR				Lg	Lg	15 32 42.0	
	comp=E,2.6nm,0.3s,baz=308,slow=41,SNR=5.4						
	comp=E,5.1nm,0.5s						
G04A	Mulino	5.11	15	Pn	Pn	15 31 27.8	+0.9
NV11	Mina Array Sit	5.13	109		Pn	15 31 28.4	+0.9
NV11				IAML		15 32 46.4	
	comp=N,26nm,1.2s						
NV11				IAML		15 33 00.2	
	comp=E,18nm,3.6s						
PKD	Bear Valley Ra	5.26	144		Pn	15 31 29.0	-0.1
PKD				IAML		15 32 40.0	
	comp=E,34nm,4.8s						
PKD				IAML		15 33 27.9	
	comp=N,35nm,4.9s						
J08A	Circle Bar Ran	5.35	53		Pn	15 31 30.9	+0.5
G06A	Carlson Farm,	5.65	28	Pn	Pn	15 31 35.2	+0.8
DSP	Deep Springs	5.76	118	Pn	Pn	15 31 37.5	+1.7
CWC	Cottonwood Cre	6.23	126	Pn	Pn	15 31 42.6	0.0
BMO	Blue Mountains	6.91	46		Pn	15 31 53.6	+1.8
ELK	Elko	6.95	83	Pn	Pn	15 31 54.8	+2.3
	comp=N,0.1nm,0.3s,baz=276,slow=11,SNR=6.1						
ELK				Lg	Lg	15 33 45.4	
	comp=N,0.3nm,0.3s,baz=129,slow=12,SNR=6.1						
	comp=N,1.4nm,0.8s						
ELK	Elko	6.95	83	Pn	Pn	15 31 53.2	+0.8
HAWA	Hanford	7.04	28	Pn	Pn	15 31 53.2	-0.3
MFID	Camas Ranch	7.08	61	Pn	Pn	15 31 54.5	+0.3
TPO	Tropico Hills	7.25	136		Pn	15 31 58.4	+1.9
QSM	Queen of Sheba	7.29	124	Pn	Pn	15 31 58.7	+1.7
GSC	Goldstone, Bar	7.76	127	Pn	Pn	15 32 05.6	+2.1
PLID	Pearl Lake	7.79	49		Pn	15 32 06.3	+2.3
SPR3	Spring Creek 3	7.83	96	Pn	Pn	15 32 05.8	+1.2
MWC	Mount Wilson	7.85	138		Pn	15 32 05.1	+0.3
HLID	Hailey	8.09	63	Pn	Pn	15 32 09.8	+1.7
BGU	Big Grassy Mou	8.63	82		Pn	15 32 16.6	+1.2
DUG	Dugway, Tooele	8.81	87	Pn	Pn	15 32 18.7	+0.7
BCYI	Bear Canyon	9.04	60		Pn	15 32 22.4	+1.2
DNR	Dunn Ranch,Anz	9.11	135		Pn	15 32 23.0	+1.1
PFO	Pinyon Flats O	9.16	134	Pn	Pn	15 32 23.9	+1.2
	comp=N,0.5nm,0.3s,baz=324,slow=11,SNR=5.5						
PFO				LR	LR	15 35 26.2	
	comp=N,116nm,20.0s,baz=347,slow=34						
PFO	Pinyon Flats O	9.16	134	Pn	Pn	15 32 23.5	+0.8
LRM	Limekiln Ridge	10.31	54		Pn	15 32 37.7	-0.8
MOOW	Moose Ponds	10.69	67	Pn	Pn	15 32 42.7	-1.0
PDAR	Pinedale Array	11.36	73	Pn	Pn	15 32 56.8	+4.0
	comp=N,0.1nm,0.3s,baz=263,slow=13,SNR=8.3						
	comp=N,1.8nm,1.0s						
TX31	Lajitas Ar. Si	20.13	116	P	P	15 34 42.9	-1.3
TXAR	Lajitas Array	20.13	116	P	Pn	15 34 48.1	+1.9
	comp=N,0.6nm,0.8s,baz=303,slow=7.3,SNR=7.0						
	comp=N,0.6nm,0.8s						
TXAR	Lajitas Array	20.13	116	P	P	15 34 42.0	-2.2
FFC	Flin Flon	20.77	38	P	P	15 34 48.9	-1.9
ULM	Lac du Bonnet	22.25	54	P	P	15 35 06.8	+0.1
	comp=N,2.4nm,0.6s,baz=237,slow=13,SNR=3.7						
	comp=N,2.4nm,0.6s						
FCC	Fort Churchill	26.61	36	P	P	15 35 48.8	+0.8
DHY	Denali Highway	26.63	337	P	P	15 35 48.8	+0.4
ILSW	Iliamna Southw	26.66	327	P	P	15 35 48.6	0.0
N15K	Kwethluk River	29.76	324	P	P	15 36 16.7	+0.6
H11N3	WAKE ISLAND Hy	61.50	272	T	T	16 47 29.9	
	baz=54,slow=75,SNR=19						
H11N2	WAKE ISLAND Hy	61.50	272	T	T	16 47 30.0	
	baz=54,slow=75,SNR=22						
H11N1	WAKE ISLAND Hy	61.52	272	T	T	16 47 31.2	
	baz=54,slow=75,SNR=23						
H11S1	WAKE ISLAND Hy	62.37	271	T	T	16 48 35.7	
	baz=54,slow=76,SNR=64						
H11S2	WAKE ISLAND Hy	62.38	271	T	T	16 48 36.2	
	baz=54,slow=76,SNR=92						
H11S3	WAKE ISLAND Hy	62.39	271	T	T	16 48 37.1	
	baz=54,slow=76,SNR=66						
HHC	Hu-ho-hao-te	84.59	321	*e*P	P	15 42 43.3	+0.2
HHC				pmax	pmax		
	comp=Z,17nm,0.6s						
WMQ	Urumqi	91.44	337	*e*P	P	15 43 18.8	+2.9
WMQ				LR	LR		
	comp=N,630nm,19.1s						
WMQ				LR	LR		
	comp=E,600nm,22.3s						
WMQ				LR	LR		
	comp=Z,310nm,20.7s						

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*IDC **19** 15:45:52.8±2.7, 13°.29N×91°.27W, h0km, mb3.7/4, mbtmp3.6/5, ML1.6/1, Error ellipse: s-maj=50.1km s-min=29.5km az=144.0*

*GCG **19** 15:45:56.8±1.1, 13°.53N×91°.36W, h26km±10km, MD3.9, ML3.7, MW3.6*

*SNET **19** 15:45:58.0±1.7, 13°.59N×91°.32W, h53km±22km, ML4.0*

*CATAC **19** 15:45:59.0±0.9, 14°N±4°×9°1W±°, h21km±7km, M4.0/12, MLv4.0/12, Error ellipse: s-maj=10.3km s-min=5.4km az=28.4, confirmed*

ISC 19 15:45:55.3±2.1**, 13°.49N**±0°.08×**91°.27W**±0°.05**, h9**km±11km**,**
n40, σ1^{s}53/46**, mb3.8**/4**, 1C-2D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG5	El Palmar, Qui	0.91	355⇓	*e*P	Pn	15 46 17.3	+3.0
STG5				*e*S	Sn	15 46 38.2	+11
STG2	El Palmar, Qui	0.94	354	*e*P	Pn	15 46 18.3	+3.4
STG2				*e*S	Sn	15 46 33.1	+4.6
ESSG	Sabana Grande	0.98	26⇓	*i*P	Pn	15 46 15.1	-0.2
ESSG				IAML		15 46 36.0	
	comp=Z,1μm,0.5s						
FG16	Alotenango, Sa	1.07	44⇑	*e*P	Pn	15 46 16.3	-0.4
FG16				IAML		15 46 37.1	
	comp=Z,3μm,0.4s						
RTAL	Retalhuleu	1.10	338	*e*P	Pg	15 46 16.1	-0.5
RTAL				*e*S	Sb	15 46 28.6	-2.5
RTAL	Retalhuleu	1.10	338	P	Pn	15 46 16.3	-0.6
PCG5	San Vicente Pa	1.13	50	*e*P	Pb	15 46 16.9	-0.2
PCG5				*e*S	Sg	15 46 31.2	-0.6
FAME	Alcaldia de Sa	1.27	74	P	Pn	15 46 19.3	0.0
FAME	Alcaldia de Sa	1.27	74	S	Sb	15 46 35.5	-0.3
NUBE	Las Nubes	1.50	74	*e*P	Pn	15 46 22.8	+0.2
NUBE	Las Nubes	1.50	74	*e*P	Pn	15 46 23.0	+0.4
NUBE				*e*S	Sg	15 46 47.2	+3.4
NUBE	Las Nubes	1.50	74	P	Pn	15 46 23.0	+0.4
NUBE	Las Nubes	1.50	74	S	Sn	15 46 40.9	-1.6
RTR	El Retiro	1.63	76	*e*P	Pb	15 46 25.6	-0.1
CEVE	Cerro Verde	1.64	78	*e*P	Pb	15 46 25.7	-0.1
CEVE	Cerro Verde	1.64	78	P	Pb	15 46 26.0	+0.2
CEVE	Cerro Verde	1.64	78	S	Sb	15 46 46.2	-0.5
SBLS	San Blas	1.64	78	*e*P	Pn	15 46 25.4	+0.9
RBDL	Robledal	1.66	68	*e*P	Pb	15 46 26.2	0.0
APG	El Apazote	1.69	27	Pn	Pg	15 46 27.2	-0.7
	comp=Z,5.8nm,0.3s,baz=207,slow=15,SNR=116						
APG				Sn	Sg	15 46 50.8	+0.9
	comp=Z,6.0nm,0.3s,baz=70,slow=21,SNR=13						
UNIC	Universidad Ca	1.74	74	P	Pb	15 46 27.2	-0.4
UNIC	Universidad Ca	1.74	74	S	Sb	15 46 48.9	-0.6
JAYA	Jayaque - finc	1.78	85	*e*P	Pb	15 46 28.6	+0.3
JAYA	Jayaque - finc	1.78	85	P	Pb	15 46 28.9	+0.6
JAYA	Jayaque - finc	1.78	85	S	Sn	15 46 48.5	-0.7
HUEH	Huehuetenango	1.83	353	*e*P	Pb	15 46 28.6	-0.5
HUEH				*e*S	Sg	15 46 52.6	-1.6
PMON	Piamonte	1.92	83	*e*P	Pb	15 46 30.2	-0.3
PMON	Piamonte	1.92	83	P	Pb	15 46 30.7	+0.2
PMON	Piamonte	1.92	83	S	Sb	15 46 53.8	-0.8
UEES	Universidad Ev	1.99	83	P	Pn	15 46 30.6	+1.4
PANCS	Alcalda de	2.04	86	P	Pn	15 46 31.6	+1.8
ESQI	Esquipulas	2.15	60	P	Pb	15 46 33.1	-1.4
LLGN	La Laguna	2.36	73	P	Pn	15 46 35.7	+1.4
TEIG	Tepich	7.28	23	Pn	Pn	15 47 44.8	+2.9
	baz=311,slow=24,SNR=8.4						
TXAR	Lajitas Array	19.51	326	P	Pn	15 50 25.1	+0.9
	comp=Z,1.1nm,0.7s,baz=152,slow=13,SNR=11						
ELK	Elko	34.30	327	P	P	15 52 42.0	-0.3
	comp=Z,0.9nm,0.5s,baz=151,slow=16,SNR=3.5						
	comp=Z,0.9nm,0.5s						
NVAR	Mina Array Bea	34.51	321	P	P	15 52 46.3	+2.1
	comp=Z,1.4nm,0.7s,baz=134,slow=8.0,SNR=7.7						
	comp=Z,1.4nm,0.7s						
YKA	Yellowknife Ar	51.68	346	P	P	15 55 00.8	-1.5
	comp=Z,0.3nm,0.7s,baz=158,slow=7.4,SNR=6.0						
	comp=Z,0.3nm,0.7s						
ILAR	Eielson Array	63.58	337	P	P	15 56 24.6	-1.5
	comp=Z,0.5nm,0.8s,baz=149,slow=3.7,SNR=4.7						
	comp=Z,0.5nm,0.8s						
CMAR	Chiang Mai Arr	146.69	342	PKPbc	PKPbc	16 05 38.1	-0.4
	comp=Z,1.2nm,0.5s,baz=351,slow=3.4,SNR=8.7						

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*IDC **19** 15:46:39.7±1.6, 4°.04N×127°.44E, h0km, mb3.9/8, mbtmp3.9/8, Error ellipse: s-maj=204.1km s-min=15.9km az=68.0*

*NEIC **19** 15:46:44.4±1.4, 4°.11N±0°.10×127°.9E±0°.1, h36km±10km, mb4.3/15, Error ellipse: s-maj=17.2km s-min=11.5km az=53.0*

ISC 19 15:46:44.0±0.7**, 4°.10N**±0°.08×**128°.0E**±0°.1**, h35**km**, n29,**
σ1^{s}00/29**, mb4.2**/14**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	3.35	190	Pn	Pn	15 47 33.6	-0.4
LUWI	Luwuk	7.27	226	Pn	Pn	15 48 27.5	-0.3
TOLI2	Tolitoli	7.75	248	Pn	Pn	15 48 35.2	+0.8
FAKI	Fak Fak	8.19	148	Pn	Pn	15 48 41.9	+1.5
FAKI				Sn	Sn	15 50 10.7	-1.1
MTN	Manton Dam	17.12	169		Pn	15 50 39.7	-1.0
KNRA	Kununurra	19.66	178	P	P	15 51 09.6	-0.4
KNRA				IAmb	IAmb	15 51 14.7	
	comp=Z,36nm,1.4s						
FITZ	Fitzroy Crossi	22.17	186	P	P	15 51 36.3	-0.9
WRAB	Tennant Creek	24.69	165	P	P	15 52 02.3	+0.4
WRA	Warramunga Arr	24.70	165	P	P	15 52 02.6	+0.6
	comp=Z,1.6nm,0.8s,baz=343,slow=10,SNR=13						
	comp=Z,1.6nm,0.8s						
WR8	Warramunga Arr	24.75	165	P	P	15 52 01.8	-0.7
WR8				IAmb	IAmb	15 52 04.3	
	comp=Z,8.9nm,1.1s						
ASAR	Alice Springs	28.20	168	P	P	15 52 33.6	0.0
	comp=Z,0.3nm,0.7s,baz=349,slow=7.2,SNR=8.5						
	comp=Z,0.3nm,0.7s						
ASAR	Alice Springs	28.20	168	P	P	15 52 34.0	+0.4
CTAO	Charters Tower	30.02	144	P	P	15 52 48.7	-1.0
STKA	Stephens Creek	38.06	161	P	P	15 54 02.8	+3.5
	comp=Z,3.9nm,0.7s,baz=343,slow=6.8,SNR=6.7						
	comp=Z,3.9nm,0.7s						
STKA	Stephens Creek	38.06	161	P	P	15 53 59.5	+0.2
SONM	Songino Array	47.35	340	P	P	15 55 14.2	-0.5
	comp=Z,0.3nm,0.4s,baz=134,slow=6.2,SNR=2.2						
	comp=Z,0.3nm,0.4s						
SONM	Songino Array	47.35	340	IAmb	IAmb	15 55 43.9	
	comp=Z,2.7nm,1.4s						
MKAR	Makanchi Array	57.96	325	P	P	15 56 33.1	+0.1
	comp=Z,1.3nm,0.5s,baz=120,slow=8.0,SNR=26						
	comp=Z,1.3nm,0.5s						
MKAR	Makanchi Array	57.96	325	P	P	15 56 32.8	-0.2
MAKZ	Makanchi	58.15	324	P	P	15 56 33.4	-1.0
MAKZ				IAmb	IAmb	15 56 34.4	
	comp=Z,5.7nm,1.1s						
KDJ	Kajisay	58.89	318	P	P	15 56 39.3	-0.5
KDJ				IAmb	IAmb	15 56 40.9	
	comp=Z,2.7nm,1.1s						
ZALV	Zalesovo Beam	60.82	332	P	P	15 56 50.9	-1.7
	comp=Z,0.3nm,0.4s,baz=125,slow=9.0,SNR=2.0						
	comp=Z,0.3nm,0.4s						
KURK	Kurchatov	62.09	327	P	P	15 57 00.6	-0.6
KURBB	Kurchatov Arra	62.09	327	P	P	15 57 00.9	-0.4
	comp=Z,1.8nm,0.5s,baz=125,slow=6.2,SNR=22						
	comp=Z,1.8nm,0.5s						
BVAR	Borovoye Array	67.68	327	P	P	15 57 37.3	-0.3
	comp=Z,1.2nm,0.7s,baz=126,slow=7.5,SNR=5.7						
	comp=Z,1.2nm,0.7s						
C18K	Utukok River	79.29	21	P	P	15 58 45.5	-0.2
C18K				IAmb	IAmb	15 59 15.0	
	comp=Z,3.5nm,1.2s						
D19K	Kuna River	80.34	21	P	P	15 58 51.6	+0.2
D20K	Etivluk River	80.93	21	P	P	15 58 54.7	+0.2
D20K				IAmb	IAmb	15 59 32.8	
	comp=Z,5.0nm,1.4s						
B21K	Ikpikpuk River	81.81	20	P	P	15 58 59.3	+0.3
B21K				IAmb	IAmb	15 59 31.7	
	comp=Z,5.1nm,1.4s						

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*CATAC **19** 15:53:10.8±0.5, 14°N±2°×9°1W±°, h1km, M4.4/19, MLv4.4/19, Error ellipse: s-maj=6.5km s-min=2.8km az=44.0, confirmed*

*GCG **19** 15:53:12.1±1.1, 13°.71N×91°.39W, h65km±31km, MD3.8, ML4.0, MW3.8*

*IDC **19** 15:53:13.2±4.0, 13°.53N×91°.41W, h37km±32km, mb3.3/3, mbtmp3.6/6, ML2.3/2, Error ellipse: s-maj=38.5km s-min=25.7km az=31.0*

*SNET **19** 15:53:14.0±1.3, 13°.70N×91°.32W, h49km±15km, ML4.0*

ISC 19 15:53:09.5±1.7**, 13°.58N**±0°.06×**91°.34W**±0°.04**, h9**km±9km**,**
n68, σ1^{s}96/81**, mb3.7**/3**, 1C-3D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESSJ	San Jos, E	0.81	91	*e*P	Pg	15 53 25.9	+0.7
STG5	El Palmar, Qui	0.82	359⇑	*e*P	Pn	15 53 30.4	+3.1
STG5				*e*S	Sn	15 53 44.5	+4.8
STG5				IAML		15 53 59.8	
	comp=Z,3μm,0.5s						
STG2	El Palmar, Qui	0.85	358	*e*P	Pn	15 53 30.9	+3.1
STG2				*e*S	Sn	15 53 46.1	+5.6
STG8	El Palmar, Qui	0.87	359	*e*P	Pn	15 53 31.5	+3.4
STG8				*e*S	Sn	15 53 46.8	+5.8
STG8				IAML		15 53 51.9	
	comp=Z,1μm,0.1s						
ESSG	Sabana Grande	0.94	32⇓	*e*P	Pn	15 53 28.9	-0.1
ESSG				*e*S	Sn	15 53 41.3	-1.3
ESSG				IAML		15 53 43.1	
	comp=Z,3μm,0.7s						
RTAL	Retalhuleu	1.00	340	*e*P	Pb	15 53 28.9	-0.2
RTAL				*e*S	Sg	15 53 39.2	-2.6
RTAL	Retalhuleu	1.00	340	P	Pn	15 53 29.9	+0.1
RTAL	Retalhuleu	1.00	340	S	Sn	15 53 42.5	-1.5
FG16	Alotenango, Sa	1.06	49	*e*P	Pb	15 53 30.1	0.0
FG16				*e*S	Sn	15 53 44.4	-1.4
FG16				IAML		15 53 48.3	
	comp=Z,6μm,0.3s						
PCG5	San Vicente Pa	1.13	56	*e*P	Pg	15 53 30.9	-0.3
PCG5				*e*S	Sb	15 53 44.5	-1.7
SOKI	Kika Raxquin	1.23	357⇓	*i*P	Pn	15 53 33.1	-0.2
SOKI				*e*S	Sn	15 53 47.6	-2.7
SOKI				IAML		15 53 58.0	
	comp=Z,1μm,0.6s						
FAME	Alcaldia de Sa	1.31	78	P	Pn	15 53 34.3	+0.3
FAME	Alcaldia de Sa	1.31	78	S	Sn	15 53 52.4	+0.6
NUBE	Las Nubes	1.55	78	*e*P	Pn	15 53 37.9	+0.4
NUBE	Las Nubes	1.55	78⇓	*e*P	Pn	15 53 38.0	+0.6
NUBE				*e*S	Sn	15 53 57.0	-0.7
NUBE	Las Nubes	1.55	78	P	Pn	15 53 38.1	+0.6
NUBE	Las Nubes	1.55	78	S	Sg	15 54 00.8	+1.4
APG	El Apazote	1.65	31	Pn	Pg	15 53 40.8	-0.4
	comp=Z,3.7nm,0.3s,baz=167,slow=10,SNR=77						
APG				Sn	Sg	15 54 03.5	+0.9
	comp=Z,6.9nm,0.3s,baz=228,slow=20,SNR=17						
RTR	El Retiro	1.68	79	*e*P	Pn	15 53 40.1	+1.0
CEVE	Cerro Verde	1.69	81	*e*P	Pn	15 53 40.3	+0.9
CEVE	Cerro Verde	1.69	81	P	Pn	15 53 40.6	+1.2
CEVE	Cerro Verde	1.69	81	S	Sg	15 54 03.2	-0.5
SBLS	San Blas	1.69	81	*e*P	Pn	15 53 40.1	+0.7
RBDL	Robledal	1.69	72	*e*P	Pn	15 53 40.0	+0.6
HUEH	Huehuetenango	1.74	355	*e*P	Pn	15 53 39.7	-0.4
UNIC	Universidad Ca	1.79	77	P	Pb	15 53 42.7	+0.2
UNIC	Universidad Ca	1.79	77	S	Sg	15 54 06.2	-0.7
JAYA	Jayaque - finc	1.84	87	*e*P	Pn	15 53 43.6	+2.2
JAYA	Jayaque - finc	1.84	87	*e*P	Pb	15 53 43.9	+0.5
JAYA				*e*S	Sn	15 54 02.0	-3.0
JAYA	Jayaque - finc	1.84	87	P	Pb	15 53 44.1	+0.7
JAYA	Jayaque - finc	1.84	87	S	Sb	15 54 07.6	+1.0
CEDA	San Andres	1.90	83	P	Pb	15 53 45.3	+0.9
LALI	Alcalda de L	1.96	92	P	Pn	15 53 44.0	+1.0
LALI	Alcalda de L	1.96	92	S	Sn	15 54 09.4	+1.6
PMON	Piamonte	1.97	86	*e*P	Pn	15 53 44.6	+1.4
PMON	Piamonte	1.97	86	P	Pn	15 53 45.4	+2.2
PMON	Piamonte	1.97	86	S	Sb	15 54 10.2	-0.3
BOQS	Boqueron	2.01	85	*e*P	Pn	15 53 45.3	+1.5
UEES	Universidad Ev	2.05	86	S	Sb	15 54 12.8	+0.3
UEES	Universidad Ev	2.05	86	P	Pn	15 53 46.5	+2.3
MTO3	Montecristo	2.09	67	P	Pn	15 53 46.5	+1.6
PANCS	Alcalda de	2.10	89	P	Pn	15 53 47.6	+2.7
LOMA	Loma Larga	2.11	88	P	Pb	15 53 48.2	+0.2
IGN	Direccin Gen	2.11	86	P	Pn	15 53 47.5	+2.4
IGN	Direccin Gen	2.11	86	S	Sb	15 54 14.8	+0.4
ESQI	Esquipulas	2.17	63	*e*P	Pn	15 53 46.3	+0.4
ESQI	Esquipulas	2.17	63	P	Pb	15 53 47.9	-1.1
ESQI	Esquipulas	2.17	63	S	Sg	15 54 17.9	-1.3
PAVA	Las Pavas	2.34	86	*e*P	Pn	15 53 50.8	+2.6
PAVA	Las Pavas	2.34	86	S	Sb	15 54 19.9	-1.1
PAVA	Las Pavas	2.34	86	P	Pn	15 53 50.9	+2.6
LLGN	La Laguna	2.40	76	P	Pn	15 53 50.9	+1.8
LLGN	La Laguna	2.40	76	S	Sb	15 54 22.5	-0.1
UESV	Universidad de	2.48	88	S	Sb	15 54 23.8	-1.2
UESV	Universidad de	2.48	88	P	Pn	15 53 52.0	+1.9
TECO	Alcaldia de Te	2.49	91	P	Pn	15 53 52.8	+2.5
TECO	Alcaldia de Te	2.49	91	S	Sb	15 54 24.0	-1.2
SCLA	Alcaldia de Sa	2.54	87	*e*P	Pn	15 53 53.2	+2.2
SCLA	Alcaldia de Sa	2.54	87	S	Sb	15 54 25.9	-0.9
SCLA	Alcaldia de Sa	2.54	87	P	Pn	15 53 52.9	+1.9
CMIG	Matias Romero	4.89	316	Pn	Pn	15 54 22.7	-0.5
	comp=Z,1.0nm,0.3s,baz=152,slow=10,SNR=7.4						
CMIG				Sn	Sn	15 55 17.9	-2.0
	comp=Z,1.4nm,0.3s,baz=115,slow=14,SNR=4.0						
	comp=Z,2.4nm,0.3s						
JTS	Las Juntas de	7.05	117	Pn	Pn	15 54 54.6	+1.6
	comp=Z,4.2nm,0.3s,baz=320,slow=18,SNR=4.5						
JTS				Sn	Sn	15 56 07.9	-5.5
	comp=Z,0.8nm,0.3s,baz=280,slow=19,SNR=0.8						
TEIG	Tepich	7.23	23	Pn	Pn	15 54 57.7	+2.3
	baz=130,slow=24,SNR=7.6						
TXAR	Lajitas Array	19.40	326	P	Pn	15 57 38.2	+1.0
	comp=Z,1.4nm,0.7s,baz=154,slow=12,SNR=15						
NVAR	Mina Array Bea	34.40	321	P	P	15 59 58.9	+1.5
	comp=Z,1.1nm,0.7s,baz=99,slow=8.2,SNR=4.7						
	comp=Z,1.1nm,0.7s						
YKA	Yellowknife Ar	51.58	346	P	P	16 02 14.1	-1.7
	comp=Z,0.2nm,0.6s,baz=151,slow=7.3,SNR=3.2						
	comp=Z,0.2nm,0.6s						
ILAR	Eielson Array	63.48	337	P	P	16 03 38.1	-1.6
	comp=Z,0.5nm,0.9s,baz=120,slow=7.2,SNR=4.8						
	comp=Z,0.5nm,0.9s						
CMAR	Chiang Mai Arr	146.59	342	PKPbc	PKPdf	16 12 51.4	+0.4
	comp=Z,0.7nm,0.7s,baz=344,slow=3.7,SNR=7.6						

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*IDC **19** 16:00:32.8±1.2, 13°.92N×91°.82W, h0km, mb3.7/4, mbtmp3.6/6, ML3.3/2, MS4.3/1, Error ellipse: s-maj=21.5km s-min=15.0km az=159.0*

*CATAC **19** 16:00:33.0±0.5, 14°N±3°×9°1W±°, h3km, M4.0/14, MLv4.0/14, Error ellipse: s-maj=7.5km s-min=3.1km az=38.5, confirmed*

*GCG **19** 16:00:34.4±0.6, 13°.63N×91°.46W, h35km±69km, MD3.7, ML3.7*

*SNET **19** 16:00:35.0±1.8, 13°.63N×91°.38W, h38km±14km, ML4.0*

ISC 19 16:00:32.5±1.1**, 13°.47N**±0°.07×**91°.45W**±0°.05**, h28**km**, n53,**
σ2^{s}20/56**, mb3.6**/4**, 2C, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG5	El Palmar, Qui	0.93	6	*e*P	Pn	16 00 53.0	+3.2
STG5				*e*S	Sn	16 01 07.4	+5.1
STG2	El Palmar, Qui	0.96	4	*e*P	Pn	16 00 53.7	+3.4
STG2				*e*S	Sn	16 01 07.9	+4.8
STG8	El Palmar, Qui	0.98	6	*i* P	Pn	16 00 54.3	+3.7
STG8				*e*S	Sn	16 01 09.4	+5.8
STG8				IAML		16 01 18.2	
	comp=Z,1μm,0.1s						
RTAL	Retalhuleu	1.07	347	*e*P	Pn	16 00 50.9	-0.8
RTAL				*e*S	Sb	16 00 59.0	-7.1
RTAL	Retalhuleu	1.07	347	P	Pb	16 00 51.6	-0.9
RTAL	Retalhuleu	1.07	347	S	Sn	16 01 06.1	+0.5
ESSG	Sabana Grande	1.09	33⇑	*e*P	Pn	16 00 51.5	-0.4
ESSG				*e*S	Sb	16 01 05.3	-1.3
ESSG				IAML		16 01 22.5	
	comp=Z,1μm,0.4s						
FG16	Alotenango, Sa	1.21	49⇑	*e*P	Pn	16 00 52.7	-1.0
FG16				IAML		16 01 16.1	
	comp=Z,3μm,0.3s						
PCG5	San Vicente Pa	1.28	54	*e*P	Pn	16 00 53.4	-1.2
FAME	Alcaldia de Sa	1.44	75	P	Pn	16 00 56.7	-0.1
FAME	Alcaldia de Sa	1.44	75	S	Sn	16 01 15.0	+0.2
NUBE	Las Nubes	1.68	75	*e*P	Pn	16 01 00.5	+0.3
NUBE	Las Nubes	1.68	75	P	Pn	16 01 00.6	+0.5
NUBE	Las Nubes	1.68	75	S	Sn	16 01 21.3	+0.5
SLOZ	Alcaldia de Sa	1.71	71	P	Pn	16 00 56.9	-3.6
APG	El Apazote	1.80	32	Pg	Pb	16 01 03.4	-1.5
	comp=Z,2.9nm,0.3s,baz=200,slow=13,SNR=117						
APG				Lg	Lg	16 01 26.8	
	comp=Z,5.9nm,0.3s,baz=94,slow=14,SNR=7.3						
CEVE	Cerro Verde	1.81	79	*e*P	Pn	16 01 02.8	+0.8
CEVE				IAML		16 01 36.8	
	comp=Z,2μm,0.4s						
CEVE	Cerro Verde	1.81	79	P	Pn	16 01 03.0	+1.0
CEVE	Cerro Verde	1.81	79	S	Sn	16 01 25.0	+0.8
SBLS	San Blas	1.81	78	*e*P	Pn	16 01 02.5	+0.5
RBDL	Robledal	1.83	69	*e*P	Pn	16 01 02.9	+0.7
UNIC	Universidad Ca	1.92	74	S	Sn	16 01 28.0	+1.4
UNIC	Universidad Ca	1.92	74	P	Pn	16 01 03.6	+0.3
JAYA	Jayaque - finc	1.95	84	*e*P	Pn	16 01 05.3	+1.4
JAYA	Jayaque - finc	1.95	84	P	Pn	16 01 05.6	+1.6
JAYA	Jayaque - finc	1.95	84	S	Sn	16 01 29.5	+1.8
CEDA	San Andres	2.02	80	P	Pn	16 01 05.7	+0.9
CEDA	San Andres	2.02	80	S	Sn	16 01 30.5	+1.3
LALI	Alcalda de L	2.07	89	*e*P	Pn	16 01 07.8	+2.4
LALI	Alcalda de L	2.07	89	P	Pn	16 01 07.7	+2.4
PMON	Piamonte	2.09	83	*e*P	Pn	16 01 07.0	+1.2
PMON	Piamonte	2.09	83	P	Pn	16 01 07.5	+1.8
PMON	Piamonte	2.09	83	S	Sn	16 01 32.3	+1.4
BOQS	Boqueron	2.12	83	*e*P	Pn	16 01 07.2	+0.9
UEES	Universidad Ev	2.16	83	P	Pn	16 01 08.3	+1.6
UEES	Universidad Ev	2.16	83	S	Sn	16 01 35.0	+2.3
LOMA	Loma Larga	2.22	85	S	Sn	16 01 36.1	+1.9
MTO3	Montecristo	2.23	65	S	Sn	16 01 36.0	+1.6
MTO3	Montecristo	2.23	65	P	Pn	16 01 09.5	+1.8
ESQI	Esquipulas	2.31	62	*e*P	Pn	16 01 08.7	-0.1
ESQI	Esquipulas	2.31	62	P	Pn	16 01 10.2	+1.3
ESQI	Esquipulas	2.31	62	S	Sb	16 01 40.2	-1.6
LLGN	La Laguna	2.53	74	P	Pn	16 01 13.0	+1.2
CMIG	Matias Romero	4.89	318	Pn	Pn	16 01 43.6	-0.6
	comp=Z,1.1nm,0.3s,baz=147,slow=10,SNR=9.6						
CMIG				Lg	Lg	16 02 41.0	
	comp=Z,2.9nm,0.3s,baz=34,slow=11,SNR=5.3						
JTS	Las Juntas de	7.10	116	Pn	Pn	16 02 24.5	+10
	comp=Z,0.5nm,0.3s,baz=329,slow=18,SNR=1.5						
JTS				Sn	Sb	16 03 53.0	-6.4
	comp=Z,1.2nm,0.3s,baz=53,slow=20,SNR=1.6						
	comp=Z,4.2nm,0.6s						
TEIG	Tepich	7.37	24	Pn	Pn	16 02 20.0	+1.7
	baz=134,slow=24,SNR=13						
TEIG				Sn	Sn	16 03 40.8	-0.2
	baz=130,slow=24,SNR=1.6						
TXAR	Lajitas Array	19.43	326	P	P	16 04 54.7	-2.2
	baz=157,slow=12,SNR=7.3						
	comp=Z,0.2nm,0.6s						
NVAR	Mina Array Bea	34.42	321	P	P	16 07 18.2	+0.4
	comp=Z,0.9nm,0.9s,baz=134,slow=8.5,SNR=3.9						
	comp=Z,0.9nm,0.9s						
NEW	Newport	40.70	334	LR	LR	16 27 55.4	
	comp=Z,404nm,20.5s,baz=63,slow=41						
YKA	Yellowknife Ar	51.66	347	P	P	16 09 36.9	+0.4
	comp=Z,0.2nm,0.7s,baz=156,slow=7.5,SNR=4.1						
	comp=Z,0.2nm,0.7s						
BDFB	Brasilia	51.79	123	P	P	16 09 47.6	+9.3
	comp=Z,1.7nm,0.4s,baz=312,slow=14,SNR=3.6						
	comp=Z,1.7nm,0.4s						
ILAR	Eielson Array	63.53	337	P	P	16 11 00.9	+0.8
	comp=Z,0.3nm,0.6s,baz=116,slow=7.5,SNR=7.5						
	comp=Z,0.3nm,0.6s						
CMAR	Chiang Mai Arr	146.66	342	PKPbc	PKPab	16 20 14.0	+0.5
	comp=Z,0.7nm,0.6s,baz=335,slow=3.7,SNR=6.7						

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*SKO **19** 16:03:11.6, 41°.44N×19°.51E, h4km, ML4.0*

*PRU **19** 16:03:11.9, 41°.25N×19°.86E, h10km, M4.4*

*THE **19** 16:03:11.9, 42°N±6°×1°9E±°, h30km, M3.8/28, MLh3.8/28*

*NEIC **19** 16:03:12.6±2.1, 41°.39N±0°.03×19°.63E±0°.06, h17km±3km, mb4.4/38, Error ellipse: s-maj=6.7km s-min=4.4km az=67.0*

*TIR **19** 16:03:12.9, 41°.39N×19°.47E, h29km±2km, Ml4.3/8*

*MOS **19** 16:03:13.8±0.9, 41°.46N×19°.53E, h46km, mb4.5/13, Error ellipse: s-maj=5.2km s-min=3.5km az=83.9*

BEO ***19*** *16:03:13.8±0.4, 41.°40N×19.°64E, h13km±2km, ML4.3/19*
PDG ***19*** *16:03:13.3±0.1, 41.°46N×19.°70E, h5km, MD4.2/12, ML4.2/13, Error ellipse: s-maj=0.2km s-min=0.2km az=0.0*
ROM ***19*** *16:03:13.7, 41.°40N×19.°57E, h10km, mb4.7/9, Mwp4.3/2, Error ellipse: s-maj=3.2km s-min=0.2km az=231.0*
MCSM ***19*** *16:03:14.3±0.4, 41.°N±4.°×1.°9E±.°, h10km, mb4.3, MLv4.6*
IDC ***19*** *16:03:16.8±1.7, 41.°48N×19.°60E, h50km±16km, mb3.8/21, mbtmp4.0/30, ML3.6/8, MS3.8/6, Error ellipse: s-maj=13.5km s-min=10.1km az=152.0*
ISC 19 16:03:12.6±0.8, **41.°41N**±0.°02×**19.°61E**±0.°02, **h17**km±4km, **n483,** σ**1§79**/568, **mb4.3**/32, **MS3.8**/3, **55C-24D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.20	108	Pg	Pg	16 03 17.3	-0.2
TIR				Sg	Sg	16 03 19.5	-1.4
TIR				AML	AML	16 03 20.6	
	293nm,0.2s						
TIR				AML	AML	16 03 21.3	
	313nm,0.3s						
TIR	Tirane	0.20	108	i Pg	Pg	16 03 17.3	-0.2
TIR				i Sg	Sg	16 03 21.1	+0.3
ULC	Ulcinj	0.61	334	ePg	Pg	16 03 24.6	-0.1
ULC				i Sg	Sb	16 03 34.1	+0.9
SDA	Shkodra	0.64	353	Pg	Pg	16 03 25.4	+0.1
SDA				Sg	Sb	16 03 35.7	+1.7
SDA				AML	AML	16 03 43.0	
	27nm,0.6s						
PHP	Peshkopia	0.68	66	Pg	Pg	16 03 24.5	-1.5
PHP				AML	AML	16 03 39.6	
	41nm,0.3s						
PHP	Peshkopia	0.68	66	P	Pg	16 03 24.2	-1.8
PHP				S	Sg	16 03 35.4	+0.3
DRME	Dracevica, Mon	0.84	338	ePg	Pg	16 03 29.4	+0.5
DRME				eSg	Sn	16 03 43.8	+2.3
DRME	Dracevica, Mon	0.84	338	ePg	Pg	16 03 28.4	-0.5
DRME				eSg	Sb	16 03 41.4	+1.8
VLO	Vlora	0.95	185	Pg	Pn	16 03 33.5	+2.5
VLO				AML	AML	16 04 00.2	
	28nm,0.4s						
VLO	Vlora	0.95	185	P	Pn	16 03 33.2	+2.2
VLO				S	Sn	16 03 48.5	+4.4
VLO	Vlora	0.95	185	P	Pn	16 03 33.7	+2.7
OHR	Ohrid	0.95	108	i Pg	Pb	16 03 30.0	-0.6
OHR				i Sg	Sg	16 03 44.5	+1.0
OHR				eLg	Lg	16 03 46.5	
	comp=N,3µm,0.5s						
OHR				eLg	Lg	16 03 48.5	
	comp=E,3µm,0.5s						
BUM	Brajici-Budva	1.04	329	ePg	Pb	16 03 32.3	+0.2
BUM				i Sg	Sn	16 03 48.6	+2.1
PDG	Podgorica	1.05	346	Pg	Pb	16 03 32.6	+0.3
PDG				Sg	Sn	16 03 48.4	+1.6
PDG	Podgorica	1.05	346		Pb	16 03 32.2	-0.1
PDG				Sn	Sn	16 03 47.6	+0.9
PDG	Podgorica	1.05	346	⇑P	Pn	16 03 33.6	+1.1
PDG				⇑S	Sn	16 03 48.6	+1.9
PDG	Podgorica	1.05	346	ePg	Pb	16 03 33.2	+0.9
PDG				eSg	Sn	16 03 48.6	+1.9
PDG	Podgorica	1.05	346	⇑P	Pb	16 03 32.4	+0.1
PDG	Podgorica	1.05	346	ePg	Pb	16 03 32.2	-0.1
PDG				i Sg	Sn	16 03 48.3	+1.6
KBN	Korca	1.19	131	Pg	Pb	16 03 36.2	+1.5
KBN				Sg	Sg	16 03 53.2	+2.0
KBN				AML	AML	16 03 57.1	
	comp=E,13nm,1.1s						
KBN	Korca	1.19	131	P	Pn	16 03 36.0	+1.5
KBN				S	Sg	16 03 55.2	+4.0
KBN	Korca	1.19	131	P	Pb	16 03 36.1	+1.4
PVY	Plav	1.21	12	ePg	Pn	16 03 34.6	-0.3
PVY	Plav	1.21	12	ePg	Pn	16 03 34.5	-0.3
PVY				i Sg	Sn	16 03 52.5	+1.6
CEME	Cevo	1.25	336	⇑iPg	Pn	16 03 35.9	+0.7
CEME				eSg	Sg	16 03 55.4	+2.5
HCY	Herceg Novi	1.33	322	ePg	Pb	16 03 37.9	+0.9
HCY				i Sg	Sg	16 03 58.8	+3.3
KOME	Kolasin	1.44	357	ePg	Pb	16 03 39.7	+0.7
KOME				eSg	Sg	16 04 00.9	+1.8
KOME	Kolasin	1.44	357	⇑iPg	Pn	16 03 39.1	+1.2
KOME				eSg	Sg	16 04 00.9	+1.8
NKME	Niksic	1.44	340	ePg	Pb	16 03 39.5	+0.6
NKME				eSg	Sg	16 04 01.7	+2.6
BEY	Berane	1.47	8	ePg	Pb	16 03 40.5	+0.9
IVA	Berane	1.47	8	⇑iPg	Pn	16 03 39.4	+1.0
IVA				i Sg	Sg	16 04 01.7	+1.5
NEST	Nestorio	1.48	132	Pg	Pb	16 03 41.0	+1.4
NEST				Sn	Sg	16 04 02.6	+2.3
NEST				AML	AML	16 04 06.8	
	comp=E,12nm,0.7s						
NEST	Nestorio	1.48	132	P	Pb	16 03 40.8	+1.2
NEST				S	Sg	16 04 04.1	+3.8
SKO	Skopje	1.48	67	i Pg	Pn	16 03 38.8	+0.4
SKO				i Sg	Sb	16 04 00.5	+2.3
TREB	Trebinje	1.60	325	ePn	Pn	16 03 41.8	+1.7
TREB	Trebinje	1.60	325	ePg	Pb	16 03 41.9	+0.2
PENT	Pentalofos	1.68	136	P	Pb	16 03 44.3	+1.2
BRY	Bratogost	1.69	332	⇑iPn	Pb	16 03 44.2	+1.0
BRY				i Sn	Sg	16 04 08.8	+1.8
KEK	Kerkira	1.70	175	P	Pn	16 03 42.9	+1.5
KEK				S	Sg	16 04 07.3	-0.1
KEK	Kerkira	1.70	175		Pn	16 03 42.0	+0.5
KEK				Sn	Sn	16 04 02.5	-0.3
KEK	Kerkira	1.70	175	⇓P	Pn	16 03 41.8	+0.3
UPM	Unac-Piva	1.86	344	⇓iPn	Pb	16 03 46.5	+0.2
UPM				i Sn	Sg	16 04 12.7	+0.1
SJES	Sjenica	1.87	8	ePg	Pb	16 03 46.7	+0.4
SJES				eSg	Sg	16 04 12.9	+0.1
KLINJ	Klinje	1.91	337	ePn	Pb	16 03 47.0	0.0
PLE	Pljevlja	1.92	355	ePg	Pb	16 03 48.3	+1.1
PLE	Pljevlja	1.92	355	ePn	Pb	16 03 47.1	-0.1
PLE				i Sn	Sg	16 04 13.8	-0.7
IGT	Igoumenitsa	1.96	163	Pn	Pn	16 03 47.2	+2.3
IGT	Igoumenitsa	1.96	163	P	Pn	16 03 46.8	+1.8
IGT				S	Sb	16 04 12.8	+1.0
IGT	Igoumenitsa	1.96	163	ePn	Pn	16 03 47.6	+2.6
IGT	Igoumenitsa	1.96	163	P	Pn	16 03 46.7	+1.8
KPRO	Kipourio	1.98	137	P	Pb	16 03 48.6	+0.5
KZN	Kozani	1.98	123	P	Pn	16 03 47.2	+1.9
KZN	Kozani	1.98	123	P	Pn	16 03 47.0	+1.7
JAN	Janina	1.99	151	P	Pn	16 03 48.2	+2.8
JAN	Janina	1.99	151	P	Pn	16 03 48.0	+2.5
LFKM	Lefkimmi	1.99	170	P	Pb	16 03 48.9	+0.6
NOCI	Noci	2.02	253	Pn	Pn	16 03 46.9	+1.1
NOCI				AML	AML	16 04 28.7	
	comp=E,17nm,0.6s						
STON	Ston	2.03	316	ePn	Pn	16 03 47.7	+1.7
SELS	Selova	2.13	31	ePn	Pn	16 03 49.4	+2.1
SELS				eSn	Sn	16 04 16.7	+3.4
GRG	Griva	2.16	101	P	Pn	16 03 49.2	+1.5
GRG	Griva	2.16	101	i Pn	Pn	16 03 49.9	+2.1
BARS	Barje	2.16	49	i Pn	Pn	16 03 49.0	+1.3
BARS	Barje	2.16	49	ePn	Pn	16 03 49.1	+1.3
BARS				eSn	Sn	16 04 14.3	+0.1
PRMD	Pramanda	2.20	148	P	Pn	16 03 51.1	+2.8
IVAS	Ivanjica	2.20	10	ePn	Pn	16 03 49.7	+1.3
IVAS				eSn	Sb	16 04 19.3	+0.4
RUDO	Rudo	2.21	356	ePn	Pn	16 03 50.5	+2.0
RUDO	Rudo	2.21	356	ePn	Pb	16 03 52.0	-0.1
VAY	Valandovo	2.23	91	i Pn	Pn	16 03 50.3	+1.6
VAY				i Sn	Sn	16 04 18.7	+2.8
VAY				eLg	Lg	16 04 22.5	
	comp=N,1µm,0.9s						
VAY				eLg	Lg	16 04 23.1	
	comp=E,335nm,0.6s						
MATE	Matera	2.32	252	⇑P	Pn	16 03 51.2	+1.3
MATE	Matera	2.32	252	⇑P	Pn	16 03 51.0	+1.1
GOCS	Kraljevo Serbi	2.34	23	ePn	Pn	16 03 52.1	+1.7
GOCS				eSn	Sn	16 04 22.2	+3.4
BOSS	Bosilegrad	2.40	62	ePn	Pn	16 03 52.3	+1.2
BOSS				eSn	Sn	16 04 21.0	+0.9
TETR	Tetrakomo, Epi	2.43	148	P	Pn	16 03 53.8	+2.3
BBLS	Lazi&#263i	2.46	357	ePn	Pn	16 03 54.2	+2.3
BBLS				eSn	Sn	16 04 22.5	+0.9
LIT	Litokhoron	2.55	120	P	Pn	16 03 55.0	+1.9
LIT	Litokhoron	2.55	120		Pn	16 03 53.1	-0.1
LIT				Sn	Sn	16 04 23.9	+0.1
LIT	Litokhoron	2.55	120	⇑P	Pn	16 03 55.4	+2.2
MRVN	Minervino Murg	2.60	263	⇓P	Pn	16 03 55.1	+1.4
THL	Klokotos Trika	2.60	134	P	Pn	16 03 55.9	+2.1
GRUS	Gruza	2.61	18	ePn	Pn	16 03 55.9	+2.0
GRUS				eSn	Sn	16 04 27.9	+2.8
THE	Thessaloniki	2.66	106	P	Pn	16 03 56.2	+1.7
THE	Thessaloniki	2.66	106	i Pn	Pn	16 03 56.6	+2.0
KKB	Krupnik	2.67	80	P	Pn	16 03 56.2	+1.4
KKB	Krupnik	2.67	80	i Pn	Pn	16 03 56.2	+1.4
DIVS	Divibare	2.70	6	ePn	Pn	16 03 57.0	+1.7
DIVS				eSn	Sn	16 04 29.5	+1.9
TSLK	Tsoukalades, L	2.71	162	P	Pn	16 03 56.6	+1.3
BOVS	Bovan	2.71	34	ePn	Pn	16 03 56.9	+1.6
BOVS				eSn	Sn	16 04 30.1	+2.4
LKD2	Lefkada island	2.74	163	P	Pn	16 03 57.0	+1.2
HORT	Hortiatis	2.77	106	P	Pn	16 03 57.3	+1.1
AMPL	Ampelaki	2.77	153	P	Pn	16 03 58.2	+2.0
NYDR	Nydri-Lefkada	2.82	162	P	Pn	16 03 57.8	+1.0
DRAG	Dragano-Lefkad	2.82	164	P	Pn	16 03 57.5	+0.6
ACER	Acerenza	2.84	258		Pn	16 03 56.8	-0.3
TRUS	Trudelj	2.87	12	ePn	Pn	16 03 59.2	+1.7
TRUS				eSn	Sn	16 04 33.5	+1.8
EVGI	Lefkada island	2.90	164	P	Pn	16 03 58.8	+0.8
ZAPS	Zavoj	2.92	49	ePn	Pn	16 03 59.8	+1.6
ZAPS				eSn	Sn	16 04 35.2	+2.4
SGRT	San Giovanni R	2.92	278	Pn	Pn	16 03 59.6	+1.3
SGRT				AML	AML	16 05 08.2	
	comp=E,4.1nm,0.6s						
SGRT	San Giovanni R	2.92	278		Pn	16 03 58.9	+0.7
VTS	Vitosha	2.96	65	P	Pn	16 04 00.1	+1.2
VTS				S	Sn	16 04 35.0	+0.9
VTS	Vitosha	2.96	65	ePn	Pn	16 04 00.4	+1.5
EVR	Evrytania	3.01	145	P	Pn	16 04 02.2	+2.7
SRS	Serrai	3.02	94	P	Pn	16 04 00.3	+0.8
SRS	Serrai	3.02	94	i Pn	Pn	16 04 00.5	+0.9
SRS	Serrai	3.02	94	ePn	Pn	16 04 00.6	+1.0
SRS	Serrai	3.02	94	P	Pn	16 04 00.5	+0.9
FSK	Fiskardo	3.04	166	P	Pn	16 04 00.1	+0.2
MAKR	Makrakomi, Fth	3.08	140	P	Pn	16 04 02.8	+2.4
ZAGS	Zajecar	3.08	38	ePn	Pn	16 04 02.1	+1.7
ZAGS				eSn	Sn	16 04 38.5	+1.6
SVIS	Svilajnac	3.09	22	ePn	Pn	16 04 03.2	+2.7
SVIS				eSn	Sn	16 04 39.2	+2.2
PLG	Polygyros	3.09	108	P	Pn	16 04 02.7	+2.1
PLG	Polygyros	3.09	108	P	Pn	16 04 02.0	+1.4
MMB	Musomishta	3.12	86	P	Pn	16 04 02.0	+1.1
MMB	Musomishta	3.12	86	i Pn	Pn	16 04 02.2	+1.3
TIP	Timpagrande	3.12	225		Pn	16 04 01.4	+0.4
TIP	Timpagrande	3.12	225	⇑P	Pn	16 04 01.7	+0.7
TIP	Timpagrande	3.12	225	Pn	Pn	16 04 02.2	+1.2
TEKS	Tekeris	3.14	359	ePn	Pn	16 04 02.4	+1.2
PVO	Paravola	3.16	152	P	Pn	16 04 03.3	+1.9
AGG	Agios Georgios	3.17	138	P	Pn	16 04 03.8	+2.2
AGG	Agios Georgios	3.17	138	⇑P	Pn	16 04 03.8	+2.2
BORS2	Bor- Borsko je	3.21	33	ePn	Pn	16 04 02.7	+0.5
BORS2				eSn	Sn	16 04 41.9	+1.8
CUC	Castrocucco	3.21	245		Pn	16 04 03.3	+1.0
CUC	Castrocucco	3.21	245	⇑P	Pn	16 04 03.7	+1.5
DMLN	Damoulianata-K	3.22	169	P	Pn	16 04 02.1	-0.2
VLS	Valsamata	3.32	166	P	Pn	16 04 03.8	+0.1
AVAS	Avala Beograd	3.35	11	ePn	Pn	16 04 05.3	+1.2
AVAS				eSn	Sn	16 04 44.3	+0.8
KUBS	Kucevo	3.36	26	ePn	Pn	16 04 04.8	+0.5
KUBS				eSn	Sn	16 04 45.1	+1.3
RTZL	Ratzakli, Kefa	3.45	165	P	Pn	16 04 06.1	+0.6
BEO	Beograd	3.45	10	P	Pn	16 04 08.0	+2.5
NEO	Neokhori	3.47	126	P	Pn	16 04 07.8	+2.0
OUR	Ouranopolis	3.49	107	P	Pn	16 04 07.6	+1.6
OUR	Ouranopolis	3.49	107	P	Pn	16 04 08.5	+2.5
AXS	Araxos	3.49	156	P	Pn	16 04 07.1	+1.1
SERG	Sergoula	3.54	147	P	Pn	16 04 09.1	+2.4
KALE	Kalithea	3.59	146	P	Pn	16 04 09.0	+1.6
MDVR	Moldovita	3.70	24	⇓P	Pn	16 04 10.6	+1.6
MDVR	Moldovita	3.70	24	ePn	Pn	16 04 10.3	+1.3
KAVA	Kavala	3.73	95	P	Pn	16 04 10.1	+0.9
FRGS	Fruska Gora	3.75	2	ePn	Pn	16 04 10.6	+1.0
FRGS				eSn	Sn	16 04 55.3	+2.0
PUNG	Punghina	3.77	39	⇑P	Pn	16 04 11.8	+2.0
PUNG	Punghina	3.77	39	ePn	Pn	16 04 12.4	+2.6
BLY	Banja Luka	3.78	333	ePn	Pn	16 04 12.1	+2.1
BLY	Banja Luka	3.78	333	⇓P	Pn	16 04 12.2	+2.2
BLY	Banja Luka	3.78	333	ePn	Pn	16 04 12.2	+2.2
BLY	Banja Luka	3.78	333	⇑P	Pn	16 04 12.4	+2.4
LKR	Lokris	3.79	136	P	Pn	16 04 12.0	+1.8
PAOL	Paolisi	3.82	266		Pn	16 04 12.0	+1.4
DJES	Djerdap	3.89	32	⇑P	Pn	16 04 13.1	+1.6
KLV	Kalavryta, Ach	3.89	149	P	Pn	16 04 13.6	+2.0
PLD	Plovdiv	3.91	77	ePn	Pn	16 04 13.6	+1.8
PLD	Plovdiv	3.91	77	P	Pn	16 04 13.4	+1.6
VRSS	Vrsac	3.92	18	ePn	Pn	16 04 13.1	+1.2
VRSS				eSn	Sn	16 04 57.4	0.0
HERR	Herculane	4.03	30	⇓P	Pn	16 04 15.2	+1.7
BANR	Banloc	4.12	15	⇓P	Pn	16 04 17.0	+2.4
SRE	Strehaia	4.18	38	⇑P	Pn	16 04 18.0	+2.4
SRE	Strehaia	4.18	38	P	Pn	16 04 17.9	+2.4
INTR	Introdacqua	4.31	280		Pn	16 04 18.8	+1.4
VLAD	Vladila	4.38	52	⇓P	Pn	16 04 20.3	+2.1
BZS	Buzias	4.45	18	⇓P	Pn	16 04 20.6	+1.3
BZS	Buzias	4.45	18	ePn	Pn	16 04 20.4	+1.2
BZS	Buzias	4.45	18	P	Pn	16 04 20.5	+1.3
RDO	Rodhopi	4.48	91	P	Pn	16 04 20.6	+1.1
RDO	Rodhopi	4.48	91		Pn	16 04 20.5	+0.9
SKY	Skiros Island	4.56	122	P	Pn	16 04 22.8	+2.2
ITM	Ithomi	4.59	156		Pn	16 04 21.9	+0.7
GZR	Gura Zlata	4.60	29	⇑P	Pn	16 04 23.0	+1.6
GZR	Gura Zlata	4.60	29	ePn	Pn	16 04 23.6	+2.2
GZR	Gura Zlata	4.60	29	P	Pn	16 04 22.9	+1.6
AQU	L'Aquila	4.73	284	ePn	Pn	16 04 24.3	+1.2
AQU	L'Aquila	4.73	284	P	Pn	16 04 25.1	+2.0
AQU	L'Aquila	4.73	284	Pn	Pn	16 04 24.9	+1.8
CAMP	Campotosto	4.75	286		Pn	16 04 24.8	+1.2
MORH	Mrgy, Hungar	4.85	352	ePn	Pn	16 04 25.7	+1.0
MORH	Mrgy, Hungar	4.85	352	⇑P	Pn	16 04 25.8	+1.0
MORH	Mrgy, Hungar	4.85	352	ePn	Pn	16 04 26.2	+1.5
MORH	Mrgy, Hungar	4.85	352	Pn	Pn	16 04 26.1	+1.4
ALN	Alexandroupoli	4.89	94		Pn	16 04 26.3	+1.1
ALN	Alexandroupoli	4.89	94	P	Pn	16 04 26.3	+1.1
GUMA	Gualdo di Mace	4.94	292		Pn	16 04 26.9	+0.9
HUMR	Humele	5.02	50	⇑P	Pn	16 04 29.7	+2.6
NRCA	Norcia	5.03	289		Pn	16 04 29.0	+1.7
LOT	Lotru	5.05	36	⇑P	Pn	16 04 29.7	+2.2
DEV	Deva	5.07	27	P	Pn	16 04 31.5	+3.8
SIRR	Siria	5.08	16	⇓P	Pn	16 04 29.2	+1.4
SIRR	Siria	5.08	16	ePn	Pn	16 04 30.2	+2.4
FDMO	Fiordimonte	5.11	291		Pn	16 04 29.2	+0.9
BOJS	Bojanci	5.17	324	ePn	Pn	16 04 30.8	+1.6
BOJS	Bojanci	5.17	324	i Pn	Pn	16 04 30.9	+1.8
BOJS				eSn	Sn	16 05 29.4	+1.0
PTJ	Puntijarka	5.21	331	P	Pn	16 04 31.0	+1.3
CESX	Cesi	5.37	285		Pn	16 04 33.2	+1.3
ARR	Arges	5.39	41	⇑P	Pn	16 04 34.5	+2.3
BEHE	Becsehely	5.45	339		Pn	16 04 34.3	+1.3
BEHE	Becsehely	5.45	339	ePn	Pn	16 04 35.3	+2.3
SGRR	Singureni	5.46	57	⇑P	Pn	16 04 35.3	+2.3
MTUR	Matau	5.51	44	⇑P	Pn	16 04 36.8	+2.9
MTUR	Matau	5.51	44	P	Pn	16 04 36.7	+2.9
MURB	Monte Urbino	5.56	292		Pn	16 04 36.1	+1.5
VAE	Valguarnera	5.62	227	P	Pn	16 04 38.4	+3.0
	comp=E,8.6nm,0.3s,baz=37,slow=19,SNR=2.5						
CEY	Cerknica	5.73	321	ePn	Pn	16 04 38.5	+1.7
SKDS	Skadanscina	5.80	317	ePn	Pn	16 04 38.4	+0.6
DRGR		5.82	22	⇑P	Pn	16 04 39.8	+1.6
DRGR		5.82	22	P	Pn	16 04 39.7	+1.6
RAFF	Raffo Rosso	5.83	226	Pn	Pn	16 04 38.3	+0.1
MARR	Marisel-Cluj	5.84	24	⇓P	Pn	16 04 39.9	+1.5
SULR		5.86	54	⇓P	Pn	16 04 41.4	+2.8
BORR	Bors	5.89	15	⇑P	Pn	16 04 41.4	+2.4
LJU	Ljubljana	5.91	323	ePn	Pn	16 04 41.2	+1.9
MPLH	Magyarpolny	5.95	346	Pn	Pn	16 04 42.6	+2.9
	comp=E,0.8nmcomp=E,246nm,0.9s						
CJR	Cluj-Napoca	6.03	27	⇑P	Pn	16 04 44.0	+3.1
CJR	Cluj-Napoca	6.03	27	P	Pn	16 04 44.0	+3.1
TRI	Trieste	6.04	317		Pn	16 04 40.8	-0.2
TRI	Trieste	6.04	317	P	Pn	16 04 40.8	-0.2
LEHL	Lehliu	6.11	58	⇑P	Pn	16 04 45.1	+3.1
MLR	Muntele Rosu	6.16	46	P	Pn	16 04 45.6	+2.9
	comp=E,45nm,0.4s,baz=218,slow=12,SNR=43						
MLR				S	Sn	16 05 54.8	+2.0
	comp=E,57nm,0.7s,baz=283,slow=19,SNR=6.1						
MLR				LR	LR	16 07 45.4	
	comp=E,601nm,20.0s,baz=222,slow=44						
MLR	Muntele Rosu	6.16	46		Pn	16 04 44.3	+1.6
MLR	Muntele Rosu	6.16	46	⇓P	Pn	16 04 45.7	+2.9
MLR	Muntele Rosu	6.16	46	ePn	Pn	16 04 46.0	+3.2
MLR	Muntele Rosu	6.16	46	P	Pn	16 04 44.3	+1.6
DOPR	Dopca	6.19	41	⇓P	Pn	16 04 45.6	+2.5
SOKA	Soboth	6.21	329	i Pn	Pn	16 04 44.8	+1.4
	comp=E,16nm,0.6s,SNR=26						
SOKA				eSn	Sn	16 05 51.2	-2.9
	comp=E,18nm,0.7s						
OBKA	Obir	6.27	326	i Pn	Pn	16 04 46.8	+2.5
	comp=E,8.5nm,0.4s,SNR=14						
OBKA				eSn	Sn	16 05 57.8	+2.3
	comp=E,50nm,0.6s						
SABO	M.te Sabotino	6.31	318		Pn	16 04 44.6	-0.2
NEHR	Nehoiu	6.31	48	⇓P	Pn	16 04 47.6	+2.8
SRO	Srobarova	6.47	352	eP	Pn	16 04 55.7	+8.8
SRO				e		16 06 06.9	
SRO	Srobarova	6.47	352	ePN	Pn	16 04 55.7	+8.8
SRO				eSN	Sn	16 06 06.9	+6.7
OZUR		6.47	42	⇓P	Pn	16 04 49.4	+2.4
AMRR	Amara	6.50	58	⇑P	Pn	16 04 49.6	+2.2
AMRR	Amara	6.50	58	P	Pn	16 04 49.6	+2.2
PSZ	Piszkesteto	6.51	2		Pn	16 04 48.3	+0.7
PSZ	Piszkesteto	6.51	2	⇑P	Pn	16 04 49.3	+1.7
PSZ	Piszkesteto	6.51	2	P	Pn	16 04 48.3	+0.7
PSZ	Piszkesteto	6.51	2	⇑P	Pn	16 04 49.2	+1.7
BAND	Balkesir-Ban	6.52	97	⇑P	Pn	16 04 50.2	+2.5
COVR	Voineasa-Covas	6.52	45	⇑P	Pn	16 04 50.5	+2.8
ARSA	Arzberg	6.53	335		Pn	16 04 47.8	0.0
ARSA	Arzberg	6.53	335	i Pn	Pn	16 04 49.8	+2.0
	comp=E,5.3nm,0.4s,SNR=11						
ARSA				i Sn	Sn	16 06 05.2	+3.4
	comp=E,20nm,0.5s						
ARSA	Arzberg	6.53	335	ePn	Pn	16 04 49.8	+2.0
OSSC	Osservatorio P	6.53	292		Pn	16 04 47.9	+0.1
BALB	Balikesir	6.55	103		Pn	16 04 49.2	+1.2
TURR	Turia	6.56	43	⇑P	Pn	16 04 50.2	+1.9
ICOR	Ion Corvin	6.61	63	⇑P	Pn	16 04 51.3	+2.5
BISRR	Bisoca	6.62	49	⇑P	Pn	16 04 52.3	+3.2
CASP	Castiglione de	6.65	285	Pn	Pn	16 04 49.2	-0.2
PSN	Preselentsi	6.68	68	P	Pn	16 04 52.7	+2.8
RONA	Rosalia, Austr	6.72	341	i Pn	Pn	16 04 54.0	+3.7
	comp=E,3.1nm,0.4s						
RONA				eSn	Sn	16 06 09.9	+3.5
	comp=E,13nm,0.6s						
PTCC	Patocco-Chiusa	6.73	320	⇑P	Pn	16 04 52.1	+1.6
MYKA	Terra Mystica	6.76	323	i Pn	Pn	16 04 52.7	+1.7
	comp=E,5.2nm,0.4s,SNR=4.0						
MYKA				eSn	Sn	16 06 06.6	-0.9
	comp=E,14nm,0.7s						
PLOR	Plostina	6.77	47	⇓P	Pn	16 04 53.8	+2.7
PLOR	Plostina	6.77	47	P	Pn	16 04 53.7	+2.7
VRI	Vrincioaia	6.82	47	⇑P	Pn	16 04 54.6	+2.9
VRI	Vrincioaia	6.82	47	P	Pn	16 04 54.6	+2.9
TLBR	Topalu	6.94	60	⇓P	Pn	16 04 55.5	+2.2
ONER	Baraj Valea Uz	6.95	43	⇑P	Pn	16 04 56.2	+2.7
ZCCA	Zocca	6.99	298		Pn	16 04 54.5	+0.5
TEOL	Teolo	7.00	307		Pn	16 04 54.0	-0.2
CONA	Conrad Observa	7.04	339	ePn	Pn	16 04 58.1	+3.2
	comp=E,2.9nm,0.4s						
CONA				i Sn	Sn	16 06 12.9	-1.6
	comp=E,15nm,1.0s						
TRSU	Trosnyk	7.09	18	Pn	Pn	16 04 58.3	+2.8
KECS	Kecovo	7.10	5	eP	Pn	16 04 58.3	+2.7
KECS				e		16 06 17.1	
KECS	Kecovo	7.10	5	ePN	Pn	16 04 58.3	+2.7
KECS				eSN	Sn	16 06 17.1	+1.3
CIMO	Cimolais	7.12	316		Pn	16 04 55.7	-0.3
TIRR	Tirgusor	7.14	62		Pn	16 04 56.9	+0.7
TIRR	Tirgusor	7.14	62	⇑P	Pn	16 04 58.6	+2.4
TIRR	Tirgusor	7.14	62	P	Pn	16 04 56.9	+0.7
TIRR	Tirgusor	7.14	62	⇑P	Pn	16 04 58.5	+2.4
TIRR	Tirgusor	7.14	62	Pn	Pn	16 04 58.8	+2.6
	comp=E,0.2nmcomp=E,31nm,0.6s						
BERU	Beregovo	7.15	17	Pn	Pn	16 04 59.0	+2.7
MODS	Modra-Piesok	7.15	347	eP	Pn	16 04 58.0	+1.6
MODS				e		16 06 16.6	
MODS	Modra-Piesok	7.15	347	ePN	Pn	16 04 58.0	+1.6
MODS				eSN	Sn	16 06 16.6	-0.6
MODS				e		16 31 23.1	
TESR	Tescani	7.20	43	⇓P	Pn	16 04 59.3	+2.4
KBA	Koelnbreinsper	7.23	324	i Pn	Pn	16 04 58.9	+1.4
	comp=E,6.0nm,0.7s,SNR=9.5						
KBA				i Sn	Sn	16 06 20.1	+0.8
	comp=E,6.7nm,0.4s						
CFR	Carcaliu	7.27	56	⇑P	Pn	16 04 59.3	+1.4
CFR	Carcaliu	7.27	56	P	Pn	16 04 59.3	+1.4
TPGR	Topolog	7.31	59	⇑P	Pn	16 05 00.1	+1.6
VLC	Villacollemand	7.32	295	⇑P	Pn	16 05 00.4	+1.8
BRIU	Brid	7.34	18	Pn	Pn	16 05 01.4	+2.6
MUKU	Mukachevo	7.37	16	Pn	Pn	16 05 01.9	+2.6
ABTA	Abfaltersbach	7.38	319	i Pn	Pn	16 05 00.6	+1.0
	comp=E,6.7nm,0.4s,SNR=8.2						
ABTA				eSn	Sn	16 06 21.3	-1.7
	comp=E,6.9nm,0.3s						
BURAR	Bucovina Array	7.38	31		Pn	16 05 01.1	+1.5
BURAR	Bucovina Array	7.38	31	⇑P	Pn	16 05 03.3	+3.7
BURAR	Bucovina Array	7.38	31	P	Pn	16 05 03.3	+3.7
IDI	Anoyia	7.39	144	P	Pn	16 04 58.5	-1.2
	comp=E,3.4nm,0.3s,baz=25,slow=3.3,SNR=11						
IDI				S	Sn	16 06 21.2	-1.9
	comp=E,7.0nm,0.3s,baz=304,slow=21,SNR=6.4						
IDI	Anoyia	7.39	144		Pn	16 04 58.6	-1.0
CTI	Castel Tesino	7.39	311		Pn	16 04 59.6	-0.1
CTI	Castel Tesino	7.39	311	P	Pn	16 04 59.6	-0.1
BUR08	Bucovina Ar. S	7.40	31		Pn	16 05 01.7	+1.8
SCTR	Scanteiesti	7.43	52	⇓P	Pn	16 05 02.1	+1.9
MANT	Manisa	7.47	110		Pn	16 05 00.1	-0.8
MOA	Molln	7.48	331	i Pn	Pn	16 04 59.2	-1.6
	comp=E,1.9nm,0.3s						
MOA				eSn	Sn	16 06 28.1	+3.0
	comp=E,10nm,0.5s						
JURR	Jurilovca	7.57	61	⇑P	Pn	16 05 03.7	+1.7
JAVC	Velka Javorina	7.57	350	ePN	Pn	16 05 05.4	+3.3
VLDR	Vladesti	7.58	51	⇓P	Pn	16 05 04.4	+2.3
PRMA	PARMA	7.58	299	Pn	Pn	16 05 01.6	-0.6
BIOA	Bad Ischl, Aus	7.59	328	ePn	Pn	16 05 04.3	+2.1
	comp=E,12nm,0.4s,SNR=15						
BIOA				i Sn	Sn	16 06 31.1	+3.2
	comp=E,14nm,0.5s						
MEZ	Mezhgor'ye	7.62	20	Pn	Pn	16 05 05.8	+3.0
MEZ				Sn	Sn	16 06 31.2	+2.5
TLCR		7.70	58	⇓P	Pn	16 05 06.4	+2.6
TLCR		7.70	58	P	Pn	16 05 06.4	+2.6
LANS	Liptovska Anna	7.74	359	eP	Pn	16 05 10.0	+5.6
LANS				e		16 06 33.9	
LANS	Liptovska Anna	7.74	359	ePN	Pn	16 05 10.0	+5.6
LANS				eSN	Sn	16 06 33.9	+2.3
LESA	Schwarzleotal	7.79	323	i Pn	Pn	16 05 06.5	+1.4
	comp=E,7.8nm,0.5s,SNR=14						
LESA				i Sn	Sn	16 06 33.2	+0.2
	comp=E,5.7nm,0.3s						
SALO	Salr	7.82	306		Pn	16 05 04.9	-0.6
SALO	Salr	7.82	306	⇑P	Pn	16 05 05.9	+0.3
KSV	Kosov	7.92	27	Pn	Pn	16 05 10.9	+4.1
MSSA	Maissana	7.96	295		Pn	16 05 08.1	+0.6
KRUC	Moravsky	7.98	345	ePN	Pn	16 05 09.0	+1.4
NIE	Niedzica	8.02	3	Pn	Pn	16 05 12.0	+3.7
	comp=E,11nm,0.9s						
VSL	Villasalto	8.03	260	Pn	Pn	16 05 09.0	+0.6
MAUC	Maruska	8.05	352	ePN	Pn	16 05 11.2	+2.5
STHS	Stebnicka Huta	8.09	8	eP	Pn	16 05 13.1	+3.9
STHS	Stebnicka Huta	8.09	8	ePN	Pn	16 05 13.0	+3.9
BOB	Bobbio (Coli)	8.15	298	⇓P	Pn	16 05 11.8	+1.7
WTTA	Wattenberg	8.17	318	i Pn	Pn	16 05 12.8	+2.3
	comp=E,8.1nm,0.4s						
WTTA				i Sn	Sn	16 06 43.7	+1.2
	comp=E,45nm,0.6s						
WATA	Walderalm	8.25	319	i Pn	Pn	16 05 13.6	+2.1
	comp=E,16nm,0.4s,SNR=9.1						
WATA				i Sn	Sn	16 06 43.5	-0.9
	comp=E,5.0nm,0.4s						
CKRC	Cesky Krumlov	8.30	335	eP	Pn	16 05 13.7	+1.7
CKRC	Cesky Krumlov	8.30	335	ePN	Pn	16 05 13.7	+1.7
SQTA	Sankt Quirin	8.36	317	i Pn	Pn	16 05 15.1	+2.1
	comp=E,9.1nm,0.4s,SNR=6.3						
SQTA				i Sn	Sn	16 06 46.1	-0.9
	comp=E,21nm,0.7s						
BORA	Eskisehir	8.39	97		Pn	16 05 13.6	+0.3
FETA	Feichten	8.49	314	i Pn	Pn	16 05 16.2	+1.5
	comp=E,4.4nm,0.8s,SNR=7.1						
FETA				eSn	Sn	16 06 51.2	+1.0
	comp=E,8.0nm,0.8s						
MORC	Moravsky Berou	8.49	351	Pn	Pn	16 05 14.6	-0.1
MORC	Moravsky Berou	8.49	351	P	Pn	16 05 14.6	-0.1
FUORN	Ofenpass-Fuorn	8.51	311		Pn	16 05 15.5	+0.4

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GEC2  GERESS Array S    8.52 333       Pn     16 05 15.3 +0.1
GEC2  GERESS Array S    8.52 333  ePn  Pn     16 05 16.4 +1.3
GERES GERESS Array B    8.52 333   P   Pn     16 05 15.6 +0.4
      comp=E,0.1nm,0.3s,baz=160,slow=14,SNR=14
GERES                              S   Sn     16 06 51.8 +0.8
      comp=E,1.2nm,0.3s,baz=150,slow=25,SNR=1.7
      comp=E,7.0nm,0.9s
ZUGS  Zugspitze, Sch    8.61 317  ePn  Pn     16 05 18.3 +1.8
KMPD  K-Podol'skiy      8.64  32   Pn  Pn     16 05 19.3 +2.6
RETA  Reutte            8.77 317  ePn  Pn     16 05 21.0 +2.5
      comp=E,5.2nm,0.5s
RETA                              i Sn Sn     16 06 55.8 -1.1
      comp=E,7.0nm,0.5s
KHC   Kasperske Hory    8.81 333       Pn     16 05 18.9 -0.2
KHC   Kasperske Hory    8.81 333ceP    Pn     16 05 20.1 +1.0
KHC                                pmax pmax
      comp=Z,10.0nm,0.8s
KHC   Kasperske Hory    8.81 333  ePN  Pn     16 05 20.2 +1.1
KHC                               eSN  Sn     16 06 59.4 +1.5
KHC   Kasperske Hory    8.81 333 ⇑P    Pn     16 05 20.4 +1.4
KHC   Kasperske Hory    8.81 333   Pn  Pn     16 05 20.6 +1.5
      comp=Z,13nm,0.8s
OJC   Ojcow             8.81   1       Pn     16 05 19.6 +0.6
OJC   Ojcow             8.81   1   P   Pn     16 05 19.6 +0.6
DAVOX Davos/Dischmat    8.82 311   P   Pn     16 05 20.5 +1.2
      comp=Z,2.2nm,0.3s,baz=136,slow=20,SNR=18
DAVOX                              S   Sn     16 06 58.9 +0.5
      comp=Z,14nm,0.8s,baz=165,slow=20,SNR=1.8
      comp=Z,6.2nm,0.4s
MDUB  Mudurnu           8.82  92   Pn  Pn     16 05 20.7 +1.3
ZVC   Zvikov            8.88 336  ePN  Pn     16 05 22.3 +2.3
TUE   Stuetta           8.96 308       Pn     16 05 20.6 -0.7
TUE   Stuetta           8.96 308 ⇑P    Pn     16 05 22.0 +0.7
TUE   Stuetta           8.96 308   Pn  Pn     16 05 23.0 +1.7
      comp=Z,120nm,0.7s
WET   Wettzell          9.07 331  ePn  Pn     16 05 23.1 +0.5
DAVA  Damuels           9.11 313  i Pn Pn     16 05 25.6 +2.3
      comp=Z,5.8nm,0.4s
DAVA                              i Sn Sn     16 07 02.8 -2.7
      comp=Z,6.3nm,0.5s
DPC   Dobruska-Polom    9.23 347   Pn  Pn     16 05 26.3 +1.5
ELL   Elmali            9.26 117   Pn  Pn     16 05 25.3 -0.1
ELL   Elmali            9.26 117   P   Pn     16 05 25.3 -0.1
AKAS  Kas               9.36 120   Pn  Pn     16 05 26.3 -0.5
KEST  Kesra             9.83 238   LR  LR     16 10 42.2
      comp=Z,463nm,18.8s,baz=61,slow=45
BNI   Bardonecchia     10.11 295 ⇑P    Pn     16 05 38.8 +1.8
GRA1  Grafenberg Arr   10.15 327   Pn  Pn     16 05 37.3 -0.1
GRF   Grafenberg Arr   10.15 327   P   Pn     16 05 37.3 -0.1
SENIN Lac Senin/Sane   10.17 303       Pn     16 05 37.8 -0.1
LUBAR Lubar, Ukraine   10.24  31   Pn  Pn     16 05 41.6 +3.0
STU   Stuttgart        10.40 319   Pn  Pn     16 05 41.4 +0.5
STU   Stuttgart        10.40 319   P   Pn     16 05 41.4 +0.5
BFO   Black Forest     10.57 315   Pn  Pn     16 05 44.3 +1.1
BFO   Black Forest     10.57 315   P   Pn     16 05 44.3 +1.1
BFO   Black Forest     10.57 315  ePn  Pn     16 05 44.8 +1.6
RNPP5 Staryi Chortor   10.73  22   Pn  Pn     16 05 49.6 +4.3
BR131 Keskin Array S   10.81  94  i P  Pn     16 05 44.0 -2.6
BRTR  Keskin Array B   10.81  94   P   Pn     16 05 50.1 +3.5
      comp=Z,0.1nm,0.3s,baz=279,slow=13,SNR=5.1
BRTR                               LR  LR     16 10 41.5
      comp=Z,578nm,19.0s,baz=248,slow=41
      comp=Z,0.3nm,0.5s
BR104 Keskin Array S   10.81  94   Pn  Pn     16 05 49.7 +3.0
RNPP8 Varash           10.82  21   Pn  Pn     16 05 50.8 +4.3
CLL   Collm            10.89 338  eP   Pn     16 05 50.0 +2.5
CLL   Collm            10.89 338  ePn  Pn     16 05 50.0 +2.5
CLL                               ex   x      16 05 57.0
CLL                               eSn  Sn     16 07 39.0  -10
CLL                               ex   x      16 08 00.0
CLL                               eSb         16 08 24.0
CLL                               eSg         16 09 01.0
RNPP9 Sopachiv         10.90  21   Pn  Pn     16 05 51.7 +4.1
MI28  Mi28,Pidlybu     11.03  28   Pn  Pn     16 05 53.8 +4.4
ECH   Echery           11.15 312       Pn     16 05 52.0 +0.9
ECH   Echery           11.15 312   P   Pn     16 05 52.0 +0.9
AK07  Malin Array Si   11.31  33   Pn  Pn     16 05 55.8 +2.6
AK06  Malin Array Si   11.33  33   Pn  Pn     16 05 55.5 +1.9
AK17  Malin Array Si   11.35  32   Pn  Pn     16 05 56.3 +2.5
KIEV  Kiev             11.42  32       Pn     16 05 54.6 -0.1
KIEV  Kiev             11.42  32   P   Pn     16 05 54.6 -0.1
KIEV  Kiev             11.42  32   Pn  Pn     16 05 59.5 +4.8
AKASG Malin Array Be   11.43  32   P   Pn     16 05 57.0 +2.1
      comp=Z,0.4nm,0.3s,baz=223,slow=13,SNR=8.2
      comp=Z,1.2nm,0.6s
AKASG Malin Array Be   11.43  32   P   Pn     16 05 57.0 +2.1
AKBB  Malin Array Si   11.43  32       Pn     16 05 54.4 -0.5
AKBB  Malin Array Si   11.43  32   P   Pn     16 05 54.4 -0.5
AKBB  Malin Array Si   11.43  32   Pn  Pn     16 05 59.5 +4.6
AK03  Malin Array Si   11.45  32   Pn  Pn     16 05 57.8 +2.6
SUW   Suwalki          12.83  10   Pn  Pn     16 06 12.6 -1.4
SUW   Suwalki          12.83  10   P   Pn     16 06 12.6 -1.4
MNK   Minsk            14.21  20  i P  Pn     16 06 31.2 -1.6
      comp=E,10.0nm,0.8s
MNK                               i P  Pn     16 06 31.2 -1.6
      comp=N,16nm,1.0s
MNK                               i P  Pn     16 06 31.2 -1.6
      comp=Z,7.0nm,0.7s,baz=206
MNK                               i PP P      16 06 39.7 -0.4
MNK                               i S  Sn     16 09 08.6 -1.3
MNK                               i SS SnSn   16 09 21.4 -0.9
MNK                               i LR LR     16 11 17.2
MNK                               i LRM MLR   16 12 30.9
      comp=E,187nm,14.4s
MNK                               i LRM MLR   16 12 37.4
      comp=Z,290nm,17.1s
MNK                               i LRM MLR   16 13 09.8
      comp=N,173nm,14.9s
MNK   Minsk            14.21  20  i P  Pn     16 06 31.2 -1.6
MNK                               i S  Sn     16 09 08.6 -1.3
MNK                                pmax pmax
      comp=N,16nm,1.0s
MNK                                pmax pmax
      comp=E,10.0nm,0.8s
MNK                                pmax pmax
      comp=Z,7.0nm,0.7s
MNK                                pmax pmax
      comp=E,187nm,14.0s
MNK                                pmax pmax
      comp=Z,290nm,17.0s
MNK                                pmax pmax
      comp=N,173nm,15.0s
NACGM Naroch           14.31  17  eP   P      16 06 41.7 +0.4
PABE  Paberze          14.39  10       Pn     16 06 36.1 +0.8
SOC   Sochi            14.99  75  eP   Pn     16 06 43.7 +0.2
SOC                               eS   Sn     16 09 27.4 -1.7
SOC                                pmax pmax
      comp=Z,21nm,0.8s
SOC                                MLR MLR
      comp=Z,132nm,14.0s
MMAI  Mount Meron Ar   15.10 119   P   Pn     16 06 46.6 +1.4
      comp=Z,1.4nm,0.3s,baz=319,slow=10,SNR=6.5
      comp=Z,1.2nm,0.5s
KOPT  Kop Dagi         15.90  88   Pn  Pn     16 06 53.1 -2.6
KIV   Kislovodsk       17.15  74   Pn  Pn     16 07 09.8 -1.5
KIV   Kislovodsk       17.15  74  eP   Pn     16 07 09.7 -1.7
KIV                                pmax pmax
      comp=Z,4.0nm,1.0s
KBZ   Khabaz           17.30  75   P   Pn     16 07 15.0 +1.9
      comp=Z,0.1nm,0.3s,baz=294,slow=9.3,SNR=6.5
      comp=Z,1.9nm,0.7s
KBZ   Khabaz           17.30  75  i P  Pn     16 07 14.7 +1.6
KBZ                                pmax pmax
      comp=Z,10.0nm,1.6s
VSU   Vasula           17.66  12ceP    Pn     16 07 17.0 -0.4
VSU                                pmax pmax
      comp=Z,61nm,1.7s
OBN   Obninsk          17.69  33⇑eP    Pn     16 07 18.6 +0.7
OBN                                S   Sn     16 10 30.0 -4.4
OBN                                pmax pmax
      comp=Z,8.0nm,0.5s
OBN                                MLR MLR
      comp=Z,187nm,18.0s
ESDC  Sonseca Array    17.99 272   P   Pn     16 07 22.6 +0.8
      comp=Z,0.1nm,0.3s,baz=81,slow=13,SNR=5.3
      comp=Z,2.6nm,1.0s
HFS   Hagfors          19.10 351   P   P      16 07 34.1 -0.1
      comp=Z,0.3nm,0.3s,baz=163,slow=12,SNR=12
      comp=Z,12nm,0.8s
DVE   Vedeno           19.69  77  i P  P      16 07 41.2 +0.3
NC602 NORSAR Array S   19.97 348   P   P      16 07 42.0 -1.7
NC602                              IAmb IAmb  16 08 04.4
      comp=Z,24nm,1.1s
NAO01 NORSAR Array S   20.18 348       P      16 07 43.4 -2.6
NC405 NORSAR Array S   20.31 349       P      16 07 47.1 -0.3
NC405                              IAmb IAmb  16 08 02.8
      comp=Z,16nm,1.1s
NOA   NORSAR Array B   20.31 348   P   P      16 07 47.0 -0.5
      comp=Z,2.2nm,0.8s,baz=153,slow=10,SNR=12
      comp=Z,2.2nm,0.8s
NBO00 NORSAR Array S   20.37 348   P   P      16 07 47.5 -0.6
NBO00                              IAmb IAmb  16 07 47.9
      comp=Z,24nm,1.3s
EKA   Eskdalemuir Ar   20.43 321   P   P      16 07 48.7  0.0
      comp=Z,3.5nm,0.6s,baz=120,slow=9.9,SNR=9.0
      comp=Z,3.5nm,0.6s
FINES FINESS Array B   20.44   9   P   P      16 07 48.4 -0.4
      comp=Z,11nm,0.8s,baz=184,slow=9.6,SNR=26
FINES                              LR  LR     16 16 15.1
      comp=Z,244nm,19.1s,baz=215,slow=38
      comp=Z,11nm,0.8s
FINES FINESS Array B   20.44   9   P   P      16 07 47.8 -0.9
FIA1  FINESS Array S   20.44   9   P   P      16 07 48.0 -0.8
EKB   Eskdalemuir      20.45 321   P   P      16 07 44.7 -4.2
EKB                                IAmb IAmb  16 07 52.4
      comp=Z,26nm,1.2s
NC303 NORSAR Array S   20.47 349   P   P      16 07 47.5 -1.6
MDT   Midelt           21.08 254   P   P      16 07 57.0 +0.9
      comp=Z,7.2nm,1.0s,baz=72,slow=14,SNR=4.8
      comp=Z,7.2nm,1.0s
MD01  Midelt array s   21.16 254       P      16 07 55.7 -1.3
MD31  MD31             21.16 254   P   P      16 07 55.6 -1.3
BELG  Belogornoye      21.93  50   P   P      16 08 05.4 +0.5
      comp=Z,32nm,0.9s,baz=243,slow=6.8,SNR=5.2
      comp=Z,32nm,0.9s
BELG  Belogornoye      21.93  50  i P  P      16 08 05.4 +0.5
BELG                               pmax pmax
      comp=Z,9.0nm,1.1s
TAM   Tamanrasset      22.01 217       P      16 08 04.0 -2.1
TAM   Tamanrasset      22.01 217   P   P      16 08 04.1 -2.1
TAM                                pmax pmax
      comp=Z,22nm,0.4s
KLMR  Klimovskoe       22.95  25  eP   P      16 08 14.4 -1.3
KLMR                               pmax pmax
      comp=Z,40nm,1.5s
KIRV  Kirov            25.42  37  i P  P      16 08 38.5 -0.4
ARCES ARCESS Array B   28.36   4   P   P      16 09 04.3 -1.0
      comp=Z,1.3nm,0.8s,baz=193,slow=10.0,SNR=5.4
      comp=Z,1.3nm,0.8s
ARCES ARCESS Array B   28.36   4   IAmb IAmb  16 09 19.3
      comp=Z,9.8nm,1.2s
ARCES ARCESS Array B   28.36   4   P   P      16 09 04.3 -1.0
ARCES                              pmax pmax
      comp=Z,10.0nm,1.2s
ARTI  Arti             29.10  46   LR  LR     16 21 30.6
      comp=Z,262nm,19.3s,baz=190,slow=38
ARTI  Arti             29.10  46       P      16 09 10.1 -2.0
ARTI                               IAmb IAmb  16 09 20.7
      comp=Z,6.4nm,0.9s
ARTI  Arti             29.10  46d iP   P      16 09 11.4 -0.6
ARTI                               S   S      16 14 05.3 +2.5
ARTI                               pmax pmax
      comp=Z,6.0nm,1.2s
AB31  Akbulak array    29.14  61   P   P      16 09 10.6 -1.8
ABKAR Akbulak array    29.14  61   P   P      16 09 10.1 -2.3
TORD  Torodi Ar. Bea   32.21 214   P   P      16 09 40.7 +0.9
      comp=Z,1.6nm,0.7s,baz=26,slow=11,SNR=6.9
TORD                               LR  LR     16 24 15.0
      comp=Z,170nm,18.2s,baz=66,slow=39
      comp=Z,1.6nm,0.7s
TORD  Torodi Ar. Bea   32.21 214   P   P      16 09 39.0 -0.8
BORK  Borovoye         35.62  53       P      16 10 07.6 -1.6
BORK                               IAmb IAmb  16 10 11.7
      comp=Z,3.4nm,0.8s
BORK  Borovoye         35.62  53ceP    P      16 10 09.2 +0.1
BORK                               pmax pmax
      comp=Z,4.0nm,0.8s
BVAR  Borovoye Array   35.66  53   P   P      16 10 09.5  0.0
      comp=Z,1.8nm,0.7s,baz=284,slow=5.8,SNR=8.6
      comp=Z,1.8nm,0.7s
SCO   Scoresbysund     35.92 338   P   P      16 10 09.6 -1.9
SCO   Scoresbysund     35.92 338   P   P      16 10 09.6 -1.9
SCO                                pmax pmax
      comp=Z,8.0nm,1.0s
DBIC  Dimbokro         40.88 219   P   P      16 10 54.7 +1.0
      comp=Z,2.8nm,0.6s,baz=32,slow=10,SNR=5.3
      comp=Z,2.8nm,0.6s
DBIC  Dimbokro         40.88 219   P   P      16 10 52.4 -1.3
DBIC                               IAmb IAmb  16 10 53.7
      comp=Z,14nm,1.5s
DBIC  Dimbokro         40.88 219   P   P      16 10 52.4 -1.3
DBIC                               pmax pmax
      comp=Z,14nm,1.5s
KURBB Kurchatov Arra   40.95  56   P   P      16 10 54.0  0.0
      comp=Z,0.3nm,0.4s,baz=289,slow=9.6,SNR=4.6
      comp=Z,0.3nm,0.4s
KURK  Kurchatov        40.99  56   P   P      16 10 53.7 -0.6
KURK  Kurchatov        40.99  56  i P  P      16 10 54.8 +0.5
KURK                               pmax pmax
      comp=Z,2.0nm,1.1s
MAKZ  Makanchi         44.07  61   P   P      16 11 19.8 +0.4
MAKZ                               IAmb IAmb  16 12 02.2
      comp=Z,9.9nm,1.5s
MAKZ  Makanchi         44.07  61   P   P      16 11 19.8 +0.4
MAKZ                               pmax pmax
      comp=Z,10.0nm,1.5s
ZAA0  Zalesovo Array   44.12  50       P      16 11 18.3 -1.4
ZAA0                               IAmb IAmb  16 11 20.9
      comp=Z,3.6nm,0.8s
ZALV  Zalesovo Beam    44.12  50   P   P      16 11 19.1 -0.6
      comp=Z,2.8nm,0.3s,baz=282,slow=8.7,SNR=18
      comp=Z,2.8nm,0.3s
ZALV  Zalesovo Beam    44.12  50       P      16 11 18.6 -1.0
ZALV  Zalesovo Beam    44.12  50  i P  P      16 11 19.8 +0.1
ZALV                               pmax pmax
      comp=Z,3.0nm,0.3s
NRIK  Noril'sk         44.25  28   P   P      16 11 20.6 +0.1
      comp=Z,1.6nm,0.4s,baz=239,slow=3.5,SNR=5.9
      comp=Z,1.6nm,0.4s
NRIK  Noril'sk         44.25  28   P   P      16 11 19.4 -1.1
NRIK                               IAmb IAmb  16 11 21.9
      comp=Z,3.2nm,0.8s
NRIK  Noril'sk         44.25  28  i P  P      16 11 21.4 +0.9
NRIK                               pmax pmax
      comp=Z,4.0nm,0.9s
MK31  Makanchi Array   44.28  61   P   P      16 11 20.1 -1.0
MK31                               IAmb IAmb  16 11 29.1
      comp=Z,4.9nm,1.1s
MK31  Makanchi Array   44.28  61  i P  P      16 11 20.4 -0.7
MKAR  Makanchi Array   44.28  61   P   P      16 11 20.7 -0.4
      comp=Z,1.5nm,0.5s,baz=278,slow=8.0,SNR=14
MKAR                               PcP PP     16 13 04.3 +0.1
      comp=Z,0.5nm,0.8s,baz=290,slow=4.0,SNR=1.7
      comp=Z,1.5nm,0.5s
MKAR  Makanchi Array   44.28  61       P      16 11 19.9 -1.3
MKAR                                   PP     16 13 02.6 -1.6
MKAR  Makanchi Array   44.28  61  i P  P      16 11 21.7 +0.6
MKAR                               pmax pmax
      comp=Z,2.0nm,0.5s
DGZ   Jazzator, Alta   46.73  56  i P  P      16 11 41.1 +0.5
DGZ                                pmax pmax
      comp=Z,4.0nm,0.9s
BATG  Bathurst New B   58.58 307   P   P      16 13 08.7 +0.5
SONM  Songino Array    58.98  52   P   P      16 13 11.0 -0.1
      comp=Z,2.9nm,0.9s,baz=300,slow=8.6,SNR=15
      comp=Z,2.9nm,0.9s
SONM  Songino Array    58.98  52   P   P      16 13 11.4 +0.3
SONM                               IAmb IAmb  16 13 12.5
      comp=Z,3.3nm,1.0s
ULN   Ulaanbaatar      59.35  51ceP    P      16 13 14.9 +1.2
ULN                                pmax pmax
      comp=Z,2.0nm,1.0s
D62A  Allapoint, All   60.45 308   P   P      16 13 20.0 -1.0
HILR  Hailar Array B   65.56  45   P   P      16 13 54.0 -1.0
      comp=Z,0.3nm,0.3s,baz=315,slow=0.4,SNR=4.0
      comp=Z,0.3nm,0.3s
FCC   Fort Churchill   66.12 329   P   P      16 13 58.4  0.0
FCC                                IAmb IAmb  16 13 59.8
      comp=Z,4.1nm,1.2s
FCC   Fort Churchill   66.12 329   P   P      16 13 58.4  0.0
FCC                                pmax pmax
      comp=Z,4.0nm,1.2s
PZH   PanZhiHua        67.37  74   P   P      16 14 08.3 +1.2
C27K  Jago River       68.60 354   P   P      16 14 15.5 +1.6
C27K                               IAmb IAmb  16 14 23.4
      comp=Z,2.8nm,0.9s
E29M  Blow River       69.23 351   P   P      16 14 18.4 +0.5
D23K  Nanushuk River   69.70 356   P   P      16 14 21.8 +1.0
BOSA  Boshof           69.87 175   P   P      16 14 22.8 +0.4
      comp=Z,2.0nm,0.7s,baz=339,slow=5.1,SNR=3.9
      comp=Z,2.0nm,0.7s
BOSA  Boshof           69.87 175   P   P      16 14 22.0 -0.3
BOSA  Boshof           69.87 175   P   P      16 14 22.0 -0.3
BOSA                               pmax pmax
      comp=Z,9.0nm,1.3s
CMAR  Chiang Mai Arr   70.15  83   P   P      16 14 23.2 -1.2
      comp=Z,0.8nm,0.9s,baz=303,slow=7.3,SNR=7.3
      comp=Z,0.8nm,0.9s
G31M  Satah River      70.16 349   P   P      16 14 23.0 -0.6
C18K  Utukok River     70.26   0   P   P      16 14 24.4 +0.1
C18K                               IAmb IAmb  16 14 37.6
      comp=Z,4.0nm,1.1s
D19K  Kuna River       70.40 359   P   P      16 14 25.1  0.0
E19K  Redstone River   71.43 359   P   P      16 14 29.8 -1.6
ILAR  Eielson Array    73.62 354   P   P      16 14 44.6 +0.1
      comp=Z,0.1nm,0.6s,baz=5.7,slow=5.5,SNR=1.5
      comp=Z,0.1nm,0.6s
L18K  Granite Mounta   76.67 358   P   P      16 15 01.8 -0.3
L18K                               IAmb IAmb  16 15 43.8
      comp=Z,3.4nm,1.2s
KSRS  Korea Array      77.82  51   P   P      16 15 08.5 -0.4
      comp=Z,1.3nm,0.7s,baz=329,slow=4.9,SNR=4.2
      comp=Z,1.3nm,0.7s
PDAR  Pinedale Array   84.49 325   P   P      16 15 44.6  0.0
      comp=Z,0.5nm,0.9s,baz=23,slow=6.3,SNR=3.5
      comp=Z,0.5nm,0.9s
TXAR  Lajitas Array    92.24 313   P   P      16 16 23.1 +1.3
      comp=Z,1.4nm,1.0s,baz=73,slow=3.7,SNR=6.9
      comp=Z,1.4nm,1.0s
TXAR  Lajitas Array    92.24 313   P   P      16 16 21.4 -0.4
TXAR  Lajitas Array    92.24 313   P   P      16 16 21.4 -0.4
NNA   Nana            102.63 265  i P  Pdif   16 17 06.0 -2.8
ASAR  Alice Springs   123.15  94   PKP PKPdf  16 22 07.2 -1.3
      comp=Z,0.3nm,0.6s,baz=307,slow=1.6,SNR=11
QSPA  South Pole Qui  131.26 180   PKP PKPdf  16 22 22.4 -0.2
      comp=Z,0.8nm,0.9s,baz=224,slow=2.9,SNR=1.7
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IDC ***19*** *16:04:49.8±6.7, 6°.87S×129°.59E, h135^{km}±65^{km}, mb3.3/2, mbtmp3.8/6, Error ellipse: s-maj=55.9km s-min=21.2km az=50.0*

ISC 19 16:04:50.5±1.5**, 7°.04S**±0°.10×**129°.7E**±0°.1**, h139^{km}, n6, σ2ˢ.69**/10**, Banda Sea**

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Code  Station Name        Δ°  AZ°   Phase ID           Time     Res
                                    Op    ISC       h  m  s     ISC
BATI  Baumata           6.70 242    P     Pn      16 06 28.2   +1.7
      5.7nm,0.3s,baz=0.0,slow=4.0,SNR=1.7
BATI                                S     Sn      16 07 41.1   -0.5
      12nm,0.6s,baz=248,slow=19,SNR=5.9
FITZ  Fitzroy Crossi   11.66 199    P     Pn      16 07 34.3   +1.5
      1.5nm,0.3s,baz=26,slow=11,SNR=39
FITZ                                S     Sn      16 09 37.0   -4.5
      1.4nm,0.4s,baz=322,slow=21,SNR=5.8
WRA   Warramunga Arr   13.61 161    P     Pn      16 07 59.4   +1.4
      0.6nm,0.7s,baz=340,slow=13,SNR=16
WRA                                 S     Sn      16 10 25.7   -2.8
      0.7nm,0.4s,baz=329,slow=24,SNR=7.7
ASAR  Alice Springs    17.03 167    P     Pn      16 08 43.5   +3.1
      2.0nm,0.5s,baz=339,slow=9.2,SNR=80
ASAR                                S     Sn      16 11 51.9   +1.2
      0.8nm,1.0s,baz=351,slow=23,SNR=2.2
MKAR  Makanchi Array   68.07 327    P     P       16 15 33.9   -1.3
      0.6nm,0.4s,baz=116,slow=8.2,SNR=11
      0.6nm,0.4s
KURBB Kurchatov Arra   72.36 329    P     P       16 15 59.4   -1.7
      0.2nm,0.4s,baz=131,slow=5.2,SNR=2.1
      0.2nm,0.4s
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SJA ***19*** *16:05:30.8±0.6, 24°.25S×67°.02W, h205^{km}±7^{km}, ML3.8, MW3.6*

GUC ***19*** *16:05:34.1±0.7, 24°.16S×67°.04W, h177^{km}±9^{km}, ML4.1*

ISC 19 16:05:30.1±1.2**, 24°.27S**±0°.04×**67°.00W**±0°.04**, h200^{km}, n40, σ1ˢ.74**/58**, 6C-2D, Chile-Argentina border region**

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Code  Station Name        Δ°  AZ°   Phase ID           Time     Res
                                    Op    ISC       h  m  s     ISC
SALTA                   0.61  85⇓ eP    Pn      16 05 59.8   +1.5
SALTA                   0.61  85  eP    Pn      16 05 59.9   +1.5
SLA   San Lorenzo       1.44 108⇓ eP    Pn      16 06 05.6   +2.2
SLA   San Lorenzo       1.44 108  eP    Pn      16 06 05.6   +2.2
AF01  San Pedro de A    1.70 320  eP    Pn      16 06 08.1   +2.0
AF01  San Pedro de A    1.70 320  eP    Pn      16 06 03.6   -2.5
AF01                              eS    Sn      16 06 18.1    -16
AZAP  Zapla             1.77  89  eP    Pn      16 06 08.3   +1.7
HJA   Humahuaca         1.80  54  eP    Pn      16 06 09.2   +2.1
FSA   Cafayete          2.05 153  eP    Pn      16 06 11.5   +2.2
FSA                               eS    Sn      16 06 35.4   -4.6
YJA   Yavi              2.50  34  eP    Pn      16 06 16.7   +2.2
YJA                               eS    Sn      16 06 48.0   -1.0
YJA   Yavi              2.50  34  eP    Pn      16 06 13.2   -1.3
GO02  Mina Guanaco      2.52 249⇑ eP    Pn      16 06 16.5   +2.0
GO02                               IAML         16 06 51.1
      comp=N,710nm,0.3s
GO02  Mina Guanaco      2.52 249  eP    Pn      16 06 16.1   +1.6
GO02                               IAML         16 06 51.1
      comp=Z,369nm,0.2s
PB06  IPOC Station P    2.83 303⇑ iP    Pn      16 06 19.7   +1.8
PB06                              eS    Sn      16 06 54.3   -1.0
PB06                               IAML         16 06 55.9
      comp=E,458nm,0.1s
PB06  IPOC Station P    2.83 303  eP    Pn      16 06 19.8   +1.8
PB06                              eS    Sn      16 06 54.7   -0.5
PB06                               IAML         16 06 57.9
      comp=Z,264nm,0.2s
AHML  Horco Molle       2.92 149  eP    Pn      16 06 08.7    -10
AHML                              eS    Sn      16 06 44.8    -12
PB14  IPOC Station P    3.12 263  eP    Pn      16 06 22.8   +1.2
PB14                              eS    Sn      16 07 00.1   -1.5
PB14  IPOC Station P    3.12 263  eP    Pn      16 06 22.9   +1.4
PB14                              eS    Sn      16 07 00.7   -0.9
PB14                               IAML         16 07 04.5
      comp=Z,140nm,0.2s
AC02  Maricunga         3.19 217  eP    Pn      16 06 25.3   +2.8
AC02                              eS    Sn      16 06 58.7   -4.9
AC02                               IAML         16 07 48.1
      comp=Z,445nm,0.8s
PB09  IPOC Station P    3.21 320⇑ iP    Pn      16 06 24.5   +1.9
PB09                              eS    Sn      16 07 02.5   -1.0
PB09  IPOC Station P    3.21 320  eP    Pn      16 06 24.9   +2.3
PB09                              eS    Sn      16 07 04.3   +0.8
PB05  IPOC Station P    3.26 295⇑ eP    Pn      16 06 24.3   +1.3
PB05                               IAML         16 07 08.3
      comp=N,166nm,0.2s
PB05  IPOC Station P    3.26 295  eP    Pn      16 06 23.8   +0.8
PB05                              eS    Sn      16 07 04.1   -0.2
PB05                               IAML         16 07 05.0
      comp=Z,94nm,0.4s
PB10  IPOC Station P    3.34 282⇑ iP    Pn      16 06 25.4   +1.6
PB10                               IAML         16 07 09.3
      comp=E,175nm,0.4s
PB10  IPOC Station P    3.34 282  eP    Pn      16 06 25.6   +1.8
PB10                              eS    Sn      16 07 05.3   -0.5
PB10                               IAML         16 07 09.6
      comp=Z,139nm,0.4s
PB03  IPOC Station P    3.36 311⇑ iP    Pn      16 06 25.6   +1.3
PB03                               IAML         16 07 07.2
PB03  IPOC Station P    3.36 311  eP    Pn      16 06 25.7   +1.3
PB03                              eS    Sn      16 07 05.2   -1.5
PB03                               IAML         16 07 09.9
      comp=Z,211nm,0.3s
PB07  IPOC Station P    3.67 313  eP    Pn      16 06 29.2   +1.2
PB07                              i S   Sn      16 07 11.1   -2.4
PB07  IPOC Station P    3.67 313  eP    Pn      16 06 29.3   +1.2
PB07                              eS    Sn      16 07 12.7   -0.8
PB07                               IAML         16 07 14.8
      comp=Z,82nm,0.3s
AC01  Pan de Azucar     3.75 239  i P   Pn      16 06 29.8   +0.9
AC01  Pan de Azucar     3.75 239  eP    Pn      16 06 29.8   +0.9
AC01                              eS    Sn      16 07 14.2   -0.8
AC01                               IAML         16 07 16.9
      comp=Z,115nm,0.4s
PB01  IPOC Station P    3.95 324  eP    Pn      16 06 32.3   +0.8
PB01  IPOC Station P    3.95 324  eP    Pn      16 06 32.3   +0.8
PB01                              eS    Sn      16 07 18.4   -1.2
PB01                               IAML         16 07 21.7
      comp=Z,56nm,0.2s
PB02  IPOC Station P    3.97 317  eP    Pn      16 06 32.5   +0.8
PB02  IPOC Station P    3.97 317  eP    Pn      16 06 32.7   +1.0
PB02                              eS    Sn      16 07 19.0   -1.0
PB02                               IAML         16 07 23.3
      comp=Z,167nm,0.2s
GO03  Copiapo           4.41 221  eP    Pn      16 06 37.9   +0.9
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GO03	Copiapo	4.41	221	eP	Pn	16 06 38.5	+1.5
GO03				eS	Sn	16 07 29.1	-0.6
GO03				IAML		16 07 31.3	
	comp=Z,58nm,0.2s						
PATCX	Punta Patache	4.50	319	eP	Pn	16 06 39.0	+0.7
TA01	Diego Aracena	4.72	321	eP	Pn	16 06 41.2	+0.3
TA01				eS	Sn	16 07 35.0	-1.8
HMBC	Humberstone	4.79	326	eP	Pn	16 06 42.2	+0.2

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*IDC **19** 16:22:00.9±1.3, 13°.32N×91°.18W, h0^{km}, mb3.5/4, mbtmp3.7/7, ML3.9/3, MS3.8/2, Error ellipse: s-maj=18.7km s-min=16.1km az=115.0*

*NEIC **19** 16:22:05.8±1.8, 13°.39N±0°.07×91°.25W±0°.07, h37^{km}±9^{km}, mb4.3/23, Error ellipse: s-maj=12.2km s-min=6.5km az=222.0*

*CATAC **19** 16:22:05.2±0.5, 14°N±2°×9°1W±°, h9^{km}±3^{km}, M4.1/21, MLv4.1/21, Error ellipse: s-maj=6.5km s-min=3.5km az=51.6, confirmed*

*GCG **19** 16:22:06.7±0.7, 13°.69N×91°.37W, h60^{km}±13^{km}, MD4.4, ML4.3*

*SNET **19** 16:22:07.0±2.5, 13°.66N×91°.24W, h60^{km}±30^{km}, ML4.1*

ISC 19 16:22:02.6±1.5**, 13°.50N**±0°.05×**91°.27W**±0°.04**, h12**^{km}±8^{km}**, n117, σ1^{s}54**/124**, mb4.2**/15**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESSJ	San Jos, E	0.75	85	i P	Pn	16 22 19.6	+0.7
STG5	El Palmar, Qui	0.90	355	eP	Pn	16 22 25.0	+3.8
STG2	El Palmar, Qui	0.94	354	eP	Pn	16 22 26.2	+4.5
STG8	El Palmar, Qui	0.95	355	eP	Pn	16 22 26.3	+4.4
STG8				IAML		16 22 44.2	
	comp=E,5µm,0.2s						
ESSG	Sabana Grande	0.98	26	i P	Pn	16 22 23.0	+0.8
ESSG				IAML		16 22 37.5	
	comp=N,3µm,0.3s						
FG16	Alotenango, Sa	1.06	44	eP	Pn	16 22 24.5	+1.0
FG16				IAML		16 22 41.8	
	comp=E,19µm,0.2s						
RTAL	Retalhuleu	1.10	338		Pb	16 22 23.1	-0.5
RTAL				Sn	Sg	16 22 40.1	+1.9
RTAL	Retalhuleu	1.10	338	eP	Pg	16 22 24.2	+0.3
RTAL				eS	Sb	16 22 36.2	-1.7
RTAL	Retalhuleu	1.10	338	P	Pg	16 22 24.1	+0.3
RTAL	Retalhuleu	1.10	338	S	Sg	16 22 38.3	+0.1
PCG5	San Vicente Pa	1.12	50	eP	Pg	16 22 24.6	+0.4
FAME	Alcaldia de Sa	1.26	74	P	Pg	16 22 27.4	+0.4
FAME	Alcaldia de Sa	1.26	74	S	Sg	16 22 44.2	+0.8
SOKI	Kika Raxquin	1.32	354	eP	Pg	16 22 27.9	-0.2
NUBE	Las Nubes	1.50	74	eP	Pb	16 22 31.2	+0.8
NUBE	Las Nubes	1.50	74	eP	Pb	16 22 31.1	+0.7
NUBE	Las Nubes	1.50	74	S	Sg	16 22 50.0	-1.0
SMCA	Catarina	1.56	330	eP	Pn	16 22 30.1	-0.1
RTR	El Retiro	1.62	76	eP	Pg	16 22 33.7	-0.2
CEVE	Cerro Verde	1.63	78	eP	Pb	16 22 33.6	+0.9
CEVE				IAML		16 23 00.6	
	comp=Z,4µm,0.3s						
CEVE	Cerro Verde	1.63	78	P	Pb	16 22 33.3	+0.5
CEVE	Cerro Verde	1.63	78	S	Sg	16 22 54.5	-0.7
SBLS	San Blas	1.63	78	eP	Pb	16 22 33.2	+0.4
RBDL	Robledal	1.65	68	eP	Pg	16 22 34.3	-0.1
APG	El Apazote	1.69	27	Pg	Pg	16 22 34.7	-0.3
	comp=Z,4.6nm,0.3s,baz=181,slow=11,SNR=41						
APG				Lg	Lg	16 22 58.4	
	comp=Z,6.5nm,0.3s,baz=116,slow=11,SNR=24						
UNIC	Universidad Ca	1.74	74	P	Pg	16 22 35.8	-0.2
UNIC	Universidad Ca	1.74	74	S	Sg	16 22 58.0	-0.6
JAYA	Jayaque - finc	1.77	85	eP	Pg	16 22 37.0	+0.3
JAYA	Jayaque - finc	1.77	85	P	Pg	16 22 37.2	+0.5
JAYA	Jayaque - finc	1.77	85	S	Sg	16 22 58.8	-0.9
QUIS	Sacapulas	1.79	5	eP	Pg	16 22 35.9	-1.1
QUIS				i S	Sg	16 22 58.5	-1.8
QUIS				IAML		16 23 03.4	
	comp=E,3µm,0.5s						
HUEH	Huehuetenango	1.82	353		Pb	16 22 36.1	0.0
HUEH				Sn	Sg	16 22 59.6	-1.8
HUEH	Huehuetenango	1.82	353	eP	Pg	16 22 37.9	+0.2
HUEH	Huehuetenango	1.82	353	S	Sg	16 22 59.4	-2.0
HUEH	Huehuetenango	1.82	353	P	Pg	16 22 37.4	-0.3
CEDA	San Andres	1.84	80	S	Sg	16 23 01.1	-0.9
LALI	Alcalda de L	1.89	90	P	Pb	16 22 37.8	+0.7
LALI	Alcalda de L	1.89	90	S	Sb	16 23 01.9	+1.2
PMON	Piamonte	1.91	83	eP	Pb	16 22 38.3	+0.9
PMON	Piamonte	1.91	83	P	Pb	16 22 38.7	+1.3
PMON	Piamonte	1.91	83	S	Sg	16 23 03.4	-0.7
BOQS	Boqueron	1.95	83	eP	Pg	16 22 41.1	+1.1
UEES	Universidad Ev	1.98	84	S	Sg	16 23 05.0	-1.4
PANCS	Alcalda de	2.03	87	P	Pb	16 22 39.7	+0.2
PANCS	Alcalda de	2.03	87	S	Sb	16 23 05.8	+1.0
LOMA	Loma Larga	2.04	86	P	Pb	16 22 40.7	+1.0
LOMA	Loma Larga	2.04	86	S	Sb	16 23 06.3	+1.1
MTO3	Montecristo	2.06	64		Pn	16 22 37.8	+0.6
MTO3				Sn	Sb	16 23 02.8	-2.8
MTO3	Montecristo	2.06	64	eP	Pb	16 22 40.7	+0.7
MTO3	Montecristo	2.06	64	i P	Pb	16 22 40.1	+0.2
MTO3	Montecristo	2.06	64	P	Pb	16 22 40.5	+0.5
MTO3	Montecristo	2.06	64	S	Sg	16 23 06.8	-2.0
ESQI	Esquipulas	2.15	60		Pb	16 22 40.3	-1.1
ESQI				Sn	Sb	16 23 05.4	-2.7
ESQI	Esquipulas	2.15	60	eP	Pb	16 22 41.5	0.0
ESQI	Esquipulas	2.15	60	P	Pb	16 22 41.3	-0.1
ESQI	Esquipulas	2.15	60	S	Sg	16 23 09.3	-2.3
PAVA	Las Pavas	2.27	84	eP	Pb	16 22 43.2	-0.4
PAVA	Las Pavas	2.27	84	P	Pb	16 22 43.3	-0.4
LLGN	La Laguna	2.35	73	P	Pb	16 22 44.1	-0.9
LLGN	La Laguna	2.35	73	S	Sb	16 23 14.3	+0.3
UESV	Universidad de	2.42	86	P	Pb	16 22 44.9	-1.1
UESV	Universidad de	2.42	86	S	Sb	16 23 16.1	+0.3
TECO	Alcaldia de Te	2.42	89	P	Pb	16 22 45.9	-0.2
TECO	Alcaldia de Te	2.42	89	S	Sb	16 23 15.7	-0.2
SCLA	Alcaldia de Sa	2.48	85	P	Pb	16 22 46.1	-1.0
CNCH	Conchagua	3.35	93	P	Pn	16 22 58.4	+3.5
IZABA	Izabal, Puerto	3.42	49	P	Pn	16 22 58.6	+2.9
CSGN	Cosiguina Volc	3.65	98	P	Pn	16 23 02.4	+3.4
CSGN				S	Sn	16 23 45.7	+3.8
PETF	Flores	3.66	22	Pn	Pn	16 23 00.7	+1.7
CRIN	San Cristobal	4.18	100		Pn	16 23 06.4	+0.1
PKGN	Cerro Pekin	4.26	101	P	Pn	16 23 10.8	+3.5
YUSH	Yuscaran	4.32	83	P	Pn	16 23 12.1	+3.9
HERN	Volcan Telica	4.41	101	Pn	Pn	16 23 07.9	-1.6
CNGN	Cerro Negro	4.56	102	Pn	Pn	16 23 07.6	-3.9
CMIG	Matias Romero	4.99	316	Pn	Pn	16 23 19.2	+1.8
	comp=E,4.9nm,0.3s,baz=121,slow=8.3,SNR=12						
CMIG				Sn	Sn	16 24 13.9	-1.1
	comp=E,3.8nm,0.3s,baz=327,slow=20,SNR=4.7						
	comp=E,8.7nm,0.3s						
BOAB	BOACO BROADBAN	5.56	100	Pn	Pn	16 23 25.1	0.0
JUD3	Juan Diaz 3	6.51	120	Pn	Pn	16 23 37.5	-0.9
JTS	Las Juntas de	6.95	117	Pn	Pn	16 23 44.0	-0.3
	comp=E,1.4nm,0.3s,baz=307,slow=20,SNR=2.5						
JTS				Sn	Sn	16 24 59.9	-3.5
	comp=E,0.6nm,0.3s,baz=336,slow=19,SNR=1.2						
JTS				Lg	Lg	16 25 35.4	
	comp=E,1.2nm,0.3s,baz=121,slow=18,SNR=9.8						
	comp=E,2.8nm,0.3s						
TEIG	Tepich	7.28	23	Pn	Pn	16 23 51.7	+3.0
	baz=131,slow=24,SNR=1.2						
TEIG				Sn	Sn	16 25 14.1	+2.8
	baz=312,slow=24,SNR=1.9						
TEIG				Lg	Lg	16 25 56.4	
	baz=130,slow=24,SNR=1.0						
SAND	Sanderson	19.21	330		Pn	16 26 27.9	+0.4
TXAR	Lajitas Array	19.51	326	P	Pn	16 26 32.7	+1.6
	comp=E,0.1nm,0.3s,baz=153,slow=12,SNR=32						
TXAR				LR	LR	16 35 41.2	
	comp=E,319nm,18.7s,baz=51,slow=42						
	comp=E,2.6nm,0.8s						
TXAR	Lajitas Array	19.51	326	P	P	16 26 30.4	+0.6
TX31	Lajitas Ar. Si	19.51	326		P	16 26 30.6	+0.8
MNHN	Monahans	20.66	331		Pn	16 26 44.3	-0.4
MNHN				IAmb	IAmb	16 26 47.1	
	comp=Z,22nm,0.9s						
PECS	Pecos	21.23	329	P	P	16 26 49.6	+1.1
PECS				IAmb	IAmb	16 26 53.2	
	comp=Z,14nm,0.9s						
VHRN	Van Horn	21.35	326		P	16 26 50.9	+1.0
VHRN				IAmb	IAmb	16 26 54.0	
	comp=Z,7.8nm,1.0s						
MNTX	Cornudas Mount	22.27	327		P	16 27 00.2	+0.6
MNTX				IAmb	IAmb	16 27 04.4	
	comp=Z,9.4nm,0.8s						
LCAR	Lake Charles	22.48	0	P	P	16 27 01.5	-0.2
MGMO	Mountain Grove	23.57	358	P	P	16 27 12.3	-0.8
CCM	Cathedral Cave	24.46	0	P	P	16 27 20.8	-0.6
CCM				IAmb	IAmb	16 27 23.9	
	comp=Z,11nm,1.1s						
R40A	Maddies Statio	24.71	358	P	P	16 27 23.1	-0.5
R40A				IAmb	IAmb	16 27 24.9	
	comp=Z,7.5nm,0.9s						
BNM	Barren Site	24.84	328	P	P	16 27 25.7	+0.5
SBM	South Baldy	24.99	327	P	P	16 27 28.7	+2.0
LENM	Lemitar	25.03	328	P	P	16 27 28.2	+1.4
TASM	ASL Pad, Albuq	25.39	330	P	P	16 27 29.0	-1.1
N47A	Urbana	27.71	9	P	P	16 27 49.7	-1.0
MVCO	Mesa Verde	28.19	330	P	P	16 27 54.0	-1.4
MVCO				IAmb	IAmb	16 28 10.5	
	comp=Z,6.6nm,1.4s						
MTPU	Mount Pierson	30.71	326		P	16 28 19.5	+1.7
MTPU				IAmb	IAmb	16 28 23.7	
	comp=Z,4.3nm,0.8s						
PDAR	Pinedale Array	33.17	335	P	P	16 28 40.2	+1.0
	comp=Z,0.1nm,0.4s,baz=174,slow=7.6,SNR=1.6						
	comp=Z,0.1nm,0.4s						
ELK	Elko	34.30	327	P	P	16 28 50.7	+1.6
ELK				IAmb	IAmb	16 28 53.9	
	comp=Z,2.2nm,0.9s						
NVAR	Mina Array Bea	34.51	321	P	P	16 28 54.6	+3.6
	comp=Z,1.8nm,0.7s,baz=135,slow=8.3,SNR=11						
	comp=Z,1.8nm,0.7s						
NVAR	Mina Array Bea	34.51	321	P	P	16 28 51.0	+0.1
LHV	Little Huntoon	34.52	321	P	P	16 28 50.6	-0.1
YNE	Yellowstone No	35.22	337	P	P	16 28 57.4	+0.3
MCMT	McKenzie Canyo	36.23	334	P	P	16 29 05.7	0.0
DLMT	Dillon	36.55	334	P	P	16 29 07.7	-0.7
DLMT				IAmb	IAmb	16 29 38.0	
	comp=Z,6.4nm,1.2s						
LRM	Limekiln Ridge	36.86	335	P	P	16 29 11.1	0.0
J08A	Circle Bar Ran	37.85	327	P	P	16 29 19.6	+0.2
J08A				IAmb	IAmb	16 29 24.2	
	comp=Z,5.3nm,0.8s						
PLID	Pearl Lake	37.85	331	P	P	16 29 19.2	-0.3
PLID				IAmb	IAmb	16 29 23.1	
	comp=Z,3.3nm,0.8s						
PB12	IPOC Station P	38.00	147	P	P	16 29 18.3	-2.5
F10A	Beach Ranch, E	39.09	331	P	P	16 29 30.4	+0.7
SCHQ	Schefferville	45.45	20	LR	LR	16 48 59.0	
	comp=Z,99nm,18.2s,baz=102,slow=36						
YKA	Yellowknife Ar	51.67	346	P	P	16 31 08.9	-0.2
	comp=Z,0.3nm,0.7s,baz=156,slow=7.5,SNR=4.1						
	comp=Z,0.3nm,0.7s						
ILAR	Eielson Array	63.58	337	P	P	16 32 33.7	+0.8
	comp=Z,0.7nm,0.9s,baz=121,slow=4.7,SNR=8.1						
	comp=Z,0.7nm,0.9s						
ILAR	Eielson Array	63.58	337	P	P	16 32 33.2	+0.3
CMAR	Chiang Mai Arr	146.69	342	PKPbc	PKPbc	16 41 45.8	+0.6
	comp=Z,0.4nm,0.3s,baz=330,slow=3.2,SNR=5.0						
CMAR	Chiang Mai Arr	146.69	342		PKPdf	16 41 41.2	-2.4

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*OSPL **19** 16:30:11.8±2.6, 19°.75N×70°.52W, h14^{km}±14^{km}, ML2.2, Presumed earthquake*

*SDD **19** 16:30:14.5±1.7, 19°.57N×70°.76W, h20^{km}±15^{km}, MD2.9, ML2.5, MW2.9, Presumed earthquake*

ISC 19 16:30:13.4±1.2**, 19°.63N**±0°.04×**70°.70W**±0°.03**, h16**^{km}±11^{km}**, n13, σ1^{s}41**/22**, 8C-3D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SODR	Sosua Marina B	0.17	44	⇓eSg	Sb	16 30 24.3	+3.0
SODR				IAML		16 30 26.2	
	comp=N,364nm,0.4s						
SC01	Santiago de lo	0.20	187	i P	Pb	16 30 19.2	+0.5
SC01				eS	Sb	16 30 24.4	+2.1
LUDR	Luperon	0.35	318	⇑ePg	Pg	16 30 21.1	+0.3
LUDR				⇑eSg	Sb	16 30 27.6	+1.1
LOPP1	Punta Rusia, P	0.52	295	eS	Sb	16 30 32.4	+1.0
LOPP1				IAML		16 30 33.9	
	comp=Z,76nm,1.0s						
REDR	Restauracion	0.80	235	⇑ePg	Pn	16 30 30.9	+0.9
REDR				⇑eSg	Sn	16 30 42.8	+1.3
REDR				IAML		16 30 44.5	
	comp=N,510nm,0.1s						
NADR	Nagua	0.84	109	ePg	Pn	16 30 29.1	-1.4
NADR				⇓eSg	Sn	16 30 40.7	-1.8
NADR				IAML		16 30 43.4	
	comp=N,534nm,0.2s						
SDDR	Presa de Saban	0.85	221	⇑ePg	Pb	16 30 28.5	-1.4
SDDR				⇓eSg	Sb	16 30 39.5	-1.6
SDDR				IAML		16 30 40.8	
	comp=N,85nm,0.2s						
SDDR	Presa de Saban	0.85	221	i P	Pb	16 30 28.4	-1.4
SDDR				IAML		16 30 41.4	
	comp=Z,66nm,0.2s						
MCDR	Montecristi	0.94	286	⇑ePg	Pb	16 30 30.3	-1.0
MCDR				eSg	Sb	16 30 42.9	-0.6
MCDR				IAML		16 30 47.1	
	comp=N,95nm,0.4s						
LONE3	El Aguacate, B	1.25	215	i P	Pn	16 30 36.0	-0.2
LONE3				eS	Sb	16 30 52.8	+0.3
LONE3				IAML		16 30 53.2	
	comp=Z,30nm,0.3s						
LODU1	El Espartillar	1.47	210	i P	Pb	16 30 40.4	+0.1
LODU1				IAML		16 31 01.0	
	comp=Z,133nm,0.4s						
HATOM	Hato Mayor del	1.50	124	⇑ePg	Pb	16 30 40.7	-0.2
HATOM				⇑eSg	Sg	16 31 01.5	-0.4
HATOM				IAML		16 31 04.8	
	comp=N,34nm,0.8s						
PODR	Polo	1.56	201	i P	Pb	16 30 41.7	-0.2
PODR				eS	Sb	16 31 03.5	+2.0

TRN 19 16:53:23.8, 17°.78N×61°.64W, h27^{km}, MD3.9, North-east of Barbuda., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.18	231	eP	Pb	16 53 30.0	+0.5
ANWB				eS	Sb	16 53 36.1	+2.8
SKI	Saint Kitts	1.14	247	eP	Pb	16 53 44.6	-0.3
SKI				eS	Sb	16 54 01.2	+1.9
SKOC	St. Kitts, UWI	1.15	245	eP	Pb	16 53 45.5	+0.5
SKOC				eS	Sb	16 54 02.0	+2.5
MBWH	Windy Hill	1.16	207	eP	Pb	16 53 44.9	-0.3
MBWH				eS	Sb	16 54 01.9	+2.0
MBFL	Flemmings, Mon	1.17	208	eP	Pb	16 53 45.3	0.0
MBFL				eS	Sb	16 54 01.5	+1.5
DHSZ	Broadband at M	1.51	185	eP	Pb	16 53 50.9	-0.2
DHSZ				eS	Sb	16 54 10.0	+0.2
DSDZ	La Diserade, G	1.56	159	eP	Pn	16 53 50.7	+0.9
DSDZ				eS	Sb	16 54 11.0	-0.4
ATGZ	Broadband at L	1.68	183	eP	Pb	16 53 53.9	-0.1
ATGZ				eS	Sb	16 54 14.9	+0.2
MMLZ	Guadeloupe Bro	1.73	181	eP	Pb	16 53 54.5	-0.4
MMLZ				eS	Sb	16 54 16.0	-0.2
TBG	Guadaloupe-3	1.92	180	eP	Pb	16 53 56.7	-1.4
DSLB	Salisbury	2.34	175	eP	Pn	16 54 02.6	+2.0
DSLB				eS	Sn	16 54 30.3	+1.8
AOPR	Arecibo Observ	4.90	277	eP	Pn	16 54 38.8	+3.1

IDC 19 17:22:15.5±2.2**, 6°.84S**×**129°.38E, h0**^{km}**, mb3.3**/1**, mbtmp3.5**/5**, ML3.7**/4**, Error ellipse: s-maj=41.4km s-min=29.4km az=86.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.57	239	Pn	Pn	17 23 54.8	+1.2
	1.7nm,0.3s,baz=58,slow=9.5,SNR=2.3						
BATI				Sn	Sn	17 25 09.9	+0.7
	4.8nm,0.3s,baz=249,slow=8.2,SNR=4.1						
	4.7nm,0.3s						
FITZ	Fitzroy Crossi	11.77	198	Pn	Pn	17 25 04.7	-0.1
	0.4nm,0.3s,baz=18,slow=9.6,SNR=14						
FITZ				Sn	Sn	17 27 02.8	-14
	0.6nm,0.3s,baz=207,slow=18,SNR=6.8						
	1.3nm,0.9s						
WRA	Warramunga Arr	13.89	160	Pn	Pn	17 25 33.9	+0.1
	0.4nm,0.3s,baz=338,slow=14,SNR=22						
WRA				Sn	Sn	17 27 53.0	-16
	0.6nm,0.3s,baz=338,slow=22,SNR=9.3						
	0.5nm,0.3s						
ASAR	Alice Springs	17.29	166	P	Pn	17 26 18.0	-0.5
	0.2nm,0.3s,baz=342,slow=11,SNR=19						
ASAR				S	Sn	17 29 15.1	-17
	0.3nm,0.4s,baz=314,slow=17,SNR=7.7						
	0.3nm,0.4s						
MKAR	Makanchi Array	67.75	327	P	P	17 33 14.9	-0.1
	0.1nm,0.5s,baz=122,slow=7.7,SNR=1.8						
	0.1nm,0.5s						

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*IDC **19** 17:24:04.9±9.9, 18°.11S×174°.91W, h132^{km}±83^{km}, mb4.0/8, mbtmp4.4/9, Error ellipse: s-maj=42.6km s-min=25.2km az=43.0*

*NEIC **19** 17:24:06.5±0.9, 18°.09S±0°.06×175°.0W±0°.1, h139^{km}±9^{km}, mb4.6/18, Error ellipse: s-maj=19.1km s-min=6.4km az=68.0*

ISC 19 17:24:07.7±0.8**, 18°.0S**±0°.1×**174°.6W**±0°.1**, h200**^{km}**, n33, σ2^{s}25**/16**, mb4.3**/16**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.59	104	Pn	Pn	17 25 17.7	+0.7
AFI	Afiamalu	4.92	34		Pn	17 25 21.8	+0.6
AFI				Sn	Sn	17 26 16.2	-2.8
MSVF	Nonsavu	6.97	271	Pn	Pn	17 25 50.5	+2.9
DZM	Mont Dzumac	18.23	254	P	Pn	17 28 07.0	-1.6
	31nm,1.4s,baz=79,slow=17,SNR=6.6						
DZM	Mont Dzumac	18.23	254	P	Pn	17 28 05.2	-3.4
DZM				IAmb	IAmb	17 28 46.4	
	comp=Z,23nm,1.2s						
MXZ	Matakaoa Point	20.45	196	P	P	17 28 26.0	-3.8
URZ	Urewera	21.43	198	P	P	17 28 40.3	+0.2
	comp=Z,7.3nm,0.3s,baz=270,slow=2.7,SNR=12						
	comp=Z,7.3nm,0.3s						
RTZ	Ruatahuna	21.80	198	P	P	17 28 42.0	-2.0
RTZ				IAmb	IAmb	17 28 52.0	
	comp=Z,31nm,1.2s						
BKZ	Black Stump Fm	22.45	198	P	P	17 28 48.2	-2.0
BKZ				IAmb	IAmb	17 29 32.0	
	comp=Z,35nm,1.3s						
BFZ	Birch Farm	23.93	197	P	P	17 29 02.5	-0.9
TCW	Tory Channel	25.01	200	P	P	17 29 14.0	+0.8
CTA	Charters Tower	36.97	260	P	P	17 30 59.3	+1.1
	comp=Z,7.7nm,0.8s,baz=92,slow=10,SNR=8.1						
	comp=Z,7.7nm,0.8s						
STKA	Stephens Creek	41.74	242	P	P	17 31 39.8	+2.4
	comp=Z,2.0nm,0.8s,baz=98,slow=14,SNR=3.8						
	comp=Z,2.0nm,0.8s						
STKA	Stephens Creek	41.74	242	IAmb	IAmb	17 31 59.2	
	comp=Z,39nm,1.4s						
WB0	Warramunga Arr	48.11	259	P	P	17 32 28.9	+1.2
WRA	Warramunga Arr	48.14	259	P	P	17 32 29.2	+1.2
	comp=Z,2.2nm,0.5s,baz=97,slow=8.4,SNR=17						
	comp=Z,2.2nm,0.5s						
WRA	Warramunga Arr	48.14	259	IAmb	IAmb	17 32 30.1	
	comp=Z,0.3nm,0.7s						
AS31	Alice Springs	48.22	254		P	17 32 29.8	+1.2
AS31				IAmb	IAmb	17 32 31.1	
	comp=Z,4.7nm,0.7s						
ASAR	Alice Springs	48.22	254	P	P	17 32 30.0	+1.4
	comp=Z,21nm,0.8s,baz=91,slow=8.4,SNR=206						
ASAR				PcP	PcP	17 33 56.5	+3.8
	comp=Z,0.4nm,0.6s,baz=91,slow=3.7,SNR=1.8						
	comp=Z,21nm,0.8s						
ASAR	Alice Springs	48.22	254		P	17 32 29.7	+1.1
MTN	Manton Dam	52.38	267	P	P	17 33 00.5	+0.6
MTN				IAmb	IAmb	17 33 18.9	
	comp=Z,11nm,1.2s						
FORT	Forrest	53.21	245	P	P	17 33 06.4	+0.7
FORT				IAmb	IAmb	17 33 07.7	
	comp=Z,15nm,1.1s						
KNRA	Kununurra	54.05	263	P	P	17 33 14.1	+2.2
KNRA				IAmb	IAmb	17 33 52.1	
	comp=Z,16nm,1.4s						
FITZ	Fitzroy Crossi	56.55	260	P	P	17 33 31.8	+2.0
	comp=Z,2.7nm,0.5s,baz=91,slow=7.8,SNR=26						
	comp=Z,2.7nm,0.5s						
SOEI	Soe	59.66	269	P	P	17 33 53.9	+2.3
SOEI				IAmb	IAmb	17 33 59.6	
	comp=Z,12nm,0.8s						
PSA00	Pilbara Seismi	61.35	255	P	P	17 34 04.6	+1.8
TOLI2	Tolitoli	66.27	279	P	P	17 34 37.2	+2.2
TOLI2				IAmb	IAmb	17 35 20.6	
	comp=Z,5.7nm,0.8s						
QSPA	South Pole Qui	72.05	180	P	P	17 35 13.9	+4.1
	comp=Z,1.7nm,0.7s,baz=22,slow=3.3,SNR=12						
	comp=Z,1.7nm,0.7s						
QSPA	South Pole Qui	72.05	180	P	P	17 35 13.7	+3.9
UGM	Wanagama	73.23	267	P	P	17 35 20.6	+3.1
ILAR	Eielson Array	85.22	12	P	P	17 36 26.6	+5.4
	comp=Z,0.5nm,0.9s,baz=205,slow=5.0,SNR=2.6						
	comp=Z,0.5nm,0.9s						
BRTR	Keskin Array B	147.34	317	PKPbc	PKPab	17 43 32.1	+1.6
	comp=Z,0.8nm,0.8s,baz=46,slow=4.2,SNR=5.1						
MMAI	Mount Meron Ar	149.18	305	PKPbc	PKPab	17 43 39.0	+0.9
	comp=Z,0.3nm,0.3s,baz=86,slow=7.5,SNR=1.8						

IDC 19 17:40:31.9±2.0**, 1°.57N**×**126°.86E, h0**^{km}**, mb3.1**/4**, mbtmp3.1**/4**, Error ellipse: s-maj=193.6km s-min=23.7km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.61	161	P	P	17 45 34.3	0.0
	0.4nm,0.9s,baz=340,slow=11,SNR=6.4						
	0.4nm,0.9s						
ASAR	Alice Springs	26.01	165	P	P	17 46 06.8	0.0
	0.3nm,0.9s,baz=346,slow=8.2,SNR=5.1						
	0.3nm,0.9s						
MKAR	Makanchi Array	59.40	326	P	P	17 50 35.3	-0.9
	0.2nm,0.7s,baz=133,slow=7.9,SNR=1.4						
	0.2nm,0.7s						
KURBB	Kurchatov Arra	63.62	328	P	P	17 51 05.4	+0.8
	0.3nm,0.8s,baz=134,slow=7.9,SNR=2.8						
	0.3nm,0.8s						

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*NEIC **19** 18:09:41.6±1.6, 18°.6N±0°.1×145°.7E±0°.2, h198^{km}±9^{km}, mb4.0/12, Error ellipse: s-maj=25.8km s-min=13.8km az=104.0*

*IDC **19** 18:09:41.3±2.6, 18°.53N×145°.54E, h200^{km}±25^{km}, mb3.3/8, mbtmp3.9/9, Error ellipse: s-maj=33.1km s-min=17.0km az=93.0*

ISC 19 18:09:41.3±0.8**, 18°.52N**±0°.08×**145°.7E**±0°.2**, h200**^{km}**, n23, σ0^{s}93**/23**, mb3.8**/14**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DPSS	Saipan	3.26	179	Pn	Pn	18 10 35.2	+1.2
DPSS				Sn	Sn	18 11 13.6	-1.8
GUMO	Guam	4.97	190	P	Pn	18 10 55.9	+0.5
	61nm,0.6s,baz=33,slow=13,SNR=1.6						
GUMO				S	Sn	18 11 53.4	-0.4
	74nm,0.5s,baz=112,slow=20,SNR=1.5						
MTN	Manton Dam	34.33	206	P	P	18 16 08.8	-0.3
SBUM	Sibu	36.50	248	P	P	18 16 27.9	+0.2
SBUM				IAmb	IAmb	18 16 29.1	
	comp=Z,2.1nm,0.5s						
KNRA	Kununurra	37.87	207	P	P	18 16 38.9	-0.2
WB0	Warramunga Arr	39.64	197	P	P	18 16 54.5	+0.7
WB0				IAmb	IAmb	18 16 55.2	
	comp=Z,8.7nm,1.2s						
WR8	Warramunga Arr	39.79	197	P	P	18 16 55.0	0.0
WRAB	Tennant Creek	39.81	197	P	P	18 16 55.7	+0.5
WRAB				IAmb	IAmb	18 16 56.3	
	comp=Z,7.7nm,1.2s						
WRA	Warramunga Arr	39.82	197	P	P	18 16 55.1	-0.2
	comp=Z,1.3nm,0.3s,baz=349,slow=9.6,SNR=28						
	comp=Z,1.3nm,0.3s						
WRA	Warramunga Arr	39.82	197	IAmb	IAmb	18 16 56.8	
	comp=Z,0.4nm,1.1s						
FITZ	Fitzroy Crossi	41.40	210	P	P	18 17 08.4	+0.2
AS31	Alice Springs	43.49	196	P	P	18 17 25.6	+0.6
ASAR	Alice Springs	43.49	196	P	P	18 17 24.7	-0.3
	comp=Z,0.6nm,0.4s,baz=14,slow=6.0,SNR=35						
	comp=Z,0.6nm,0.4s						
KULM	Kulim	45.88	259	P	P	18 17 45.9	+1.8
KULM				IAmb	IAmb	18 18 13.5	
	comp=Z,7.9nm,1.0s						
INKA	Innaminka	46.24	186	P	P	18 17 45.8	-0.8
INKA				IAmb	IAmb	18 17 48.5	
	comp=Z,3.6nm,1.3s						
MKAR	Makanchi Array	58.61	314	P	P	18 19 16.6	-0.7
	comp=Z,0.2nm,0.5s,baz=104,slow=6.1,SNR=1.8						
	comp=Z,0.2nm,0.5s						
KURK	Kurchatov	61.42	318	P	P	18 19 35.9	-0.4
KURK	Kurchatov	61.42	318	IAmb	IAmb	18 19 38.3	
	comp=Z,4.5nm,1.5s						
KURBB	Kurchatov Arra	61.47	318	P	P	18 19 35.9	-0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,0.2nm,0.3s,baz=98,slow=7.6,SNR=2.3						
	comp=Z,0.2nm,0.3s						
ILAR	**Eielson Array**	**63.79**	**26**	P	**P**	**18 19 52.0**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=264,slow=6.0,SNR=4.4						
	comp=Z,0.5nm,0.7s						
BVAR	**Borovoye Array**	**66.63**	**320**	P	**P**	**18 20 10.2**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=91,slow=5.4,SNR=5.7						
	comp=Z,1.5nm,0.5s						
NVAR	**Mina Array Bea**	**83.23**	**52**	P	**P**	**18 21 47.0**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=289,slow=5.3,SNR=5.5						
	comp=Z,0.9nm,0.6s						
FINES	**FINESS Array B**	**87.06**	**335**	P	**P**	**18 22 01.9**	**-2.1**
	comp=Z,0.8nm,0.6s,baz=69,slow=4.7,SNR=4.7						
	comp=Z,0.8nm,0.6s						

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*SJA **19** 18:36:38.7±0.7, 24°.01S×66°.86W, h227^{km}±4^{km}, ML4.0, MW3.8*

*NEIC **19** 18:36:41.0±1.7, 23°.99S±0°.07×67°.05W±0°.10, h220^{km}±4^{km}, mb4.6/10, ML4.1(GUC), Error ellipse: s-maj=13.6km s-min=9.9km az=112.0*

*GUC **19** 18:36:41.8±0.7, 23°.98S×67°.21W, h235^{km}±10^{km}, ML4.1*

*IDC **19** 18:36:45.6±10.0, 23°.58S×66°.67W, h222^{km}±71^{km}, mb3.1/1, mbtmp3.9/4, Error ellipse: s-maj=110.8km s-min=29.6km az=24.0*

ISC 19 18:36:40.0±0.7, **23°.97S**±0°.04×**66°.93W**±0°.04, **h215**^{km}±6^{km}, **n79**, σ**1^{s}18**/109, **mb4.6**/4, **9C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALTA		**0.59**	**115**	⇓*e*P	**Pn**	**18 37 09.8**	**0.0**
SALTA		**0.59**	**115**	*e*P	Pn	18 37 04.5	-5.4
SALTA				*e*P	Pn	18 37 04.5	-5.4
SALTA				*e*P		18 37 09.8	
SLA	**San Lorenzo**	**1.50**	**120**	*e*P	**Pn**	**18 37 14.0**	**-1.2**
SLA	**San Lorenzo**	**1.50**	**120**	*e*P	**Pn**	**18 37 15.1**	**-0.1**
SLA				*e*S	**S**	**18 37 41.3**	**-1.2**
AF01	**San Pedro de A**	**1.53**	**311**		**Pn**	**18 37 16.5**	**+0.8**
AF01	**San Pedro de A**	**1.53**	**311**	*e*P	**Pn**	**18 37 17.1**	**+1.3**
AF01	**San Pedro de A**	**1.53**	**311**	*e*P	**Pn**	**18 37 16.1**	**+0.4**
AF01				*e*S	**S**	**18 37 44.7**	**+1.5**
AF01				IAML		18 37 52.8	
	comp=Z,203nm,0.4s						
AZAP	**Zapla**	**1.72**	**99**	*e*P	**Pn**	**18 37 17.2**	**-0.1**
AZAP				*e*S	**S**	**18 37 46.3**	**+0.3**
YJA	**Yavi**	**2.21**	**36**	*e*P	**Pn**	**18 37 23.1**	**+0.8**
YJA	**Yavi**	**2.21**	**36**	*e*P	**Pn**	**18 37 23.1**	**+0.8**
FSA	**Cafayete**	**2.30**	**158**	*e*P	**Pn**	**18 37 22.9**	**0.0**
FSA				*e*S	**S**	**18 37 54.5**	**-1.7**
GO02	**Mina Guanaco**	**2.70**	**243**		**Pn**	**18 37 28.0**	**+0.6**
GO02				Sn	**S**	**18 38 03.6**	**-0.6**
GO02	**Mina Guanaco**	**2.70**	**243**	⇑*i*P	**Pn**	**18 37 28.1**	**+0.8**
GO02				*i* S	**S**	**18 38 03.5**	**-0.6**
GO02	**Mina Guanaco**	**2.70**	**243**	*e*P	**Pn**	**18 37 27.6**	**+0.3**
GO02				*e*S	**S**	**18 38 03.9**	**-0.2**
GO02				IAML		18 38 07.8	
	comp=Z,732nm,0.3s						
PB06	**IPOC Station P**	**2.74**	**297**		**Pn**	**18 37 28.6**	**+0.9**
PB06	**IPOC Station P**	**2.74**	**297**	⇑*i*P	**Pn**	**18 37 28.8**	**+1.1**
PB06				*i* S	**S**	**18 38 03.6**	**-0.9**
PB06				IAML		18 38 05.6	
	comp=N,495nm,0.1s						
PB06	**IPOC Station P**	**2.74**	**297**	*e*P	**Pn**	**18 37 28.7**	**+1.1**
PB06				*e*S	**S**	**18 38 04.8**	**+0.2**
PB06				IAML		18 38 06.5	
	comp=Z,268nm,0.5s						
PB09	**IPOC Station P**	**3.04**	**315**		**Pn**	**18 37 32.4**	**+1.3**
PB09	**IPOC Station P**	**3.04**	**315**	⇑*i*P	**Pn**	**18 37 32.6**	**+1.5**
PB09				*i* S	**S**	**18 38 10.7**	**-0.1**
PB09				IAML		18 38 13.4	
	comp=N,272nm,0.3s						
PB09	**IPOC Station P**	**3.04**	**315**	*e*P	**Pn**	**18 37 32.6**	**+1.5**
PB09				*e*S	**S**	**18 38 11.7**	**+0.9**
PB09				IAML		18 38 13.2	
	comp=Z,196nm,0.5s						
AHML	**Horco Molle**	**3.15**	**153**	*e*P	Pn	18 37 19.2	-13
AHML				*e*S	S	18 37 58.0	-15
PB05	**IPOC Station P**	**3.21**	**290**		**Pn**	**18 37 33.4**	**+0.4**
PB05	**IPOC Station P**	**3.21**	**290**	⇑*i*P	**Pn**	**18 37 33.6**	**+0.6**
PB05				*e*S	**S**	**18 38 12.2**	**-1.9**
PB05	**IPOC Station P**	**3.21**	**290**	*e*P	**Pn**	**18 37 33.6**	**+0.6**
PB05				*e*S	**S**	**18 38 14.7**	**+0.5**
PB05				IAML		18 38 18.0	
	comp=Z,78nm,0.3s						
PB03	**IPOC Station P**	**3.23**	**306**		**Pn**	**18 37 34.0**	**+0.7**
PB03	**IPOC Station P**	**3.23**	**306**	⇑*i*P	**Pn**	**18 37 34.1**	**+0.7**
PB03				*e*S	**S**	**18 38 13.1**	**-1.7**
PB03	**IPOC Station P**	**3.23**	**306**	*e*P	**Pn**	**18 37 34.1**	**+0.7**
PB03				*e*S	**S**	**18 38 13.9**	**-0.9**
PB03				IAML		18 38 16.0	
	comp=Z,325nm,0.1s						
PB14	**IPOC Station P**	**3.24**	**258**		**Pn**	**18 37 33.7**	**+0.2**
PB14	**IPOC Station P**	**3.24**	**258**	⇑*i*P	**Pn**	**18 37 34.0**	**+0.5**
PB14				*i* S	**S**	**18 38 12.9**	**-2.3**
PB14	**IPOC Station P**	**3.24**	**258**	*e*P	**Pn**	**18 37 34.1**	**+0.5**
PB14				*e*S	**S**	**18 38 13.9**	**-1.3**
PB14				IAML		18 38 15.9	
	comp=Z,214nm,0.2s						
PB10	**IPOC Station P**	**3.35**	**277**		**Pn**	**18 37 35.3**	**+0.7**
PB10	**IPOC Station P**	**3.35**	**277**	⇑*i*P	**Pn**	**18 37 35.5**	**+0.9**
PB10				*i* S	**S**	**18 38 14.9**	**-2.2**
PB10	**IPOC Station P**	**3.35**	**277**	*e*P	**Pn**	**18 37 35.5**	**+0.9**
PB10				*e*S	**S**	**18 38 17.3**	**+0.3**
PB10				IAML		18 38 20.4	
	comp=Z,109nm,0.5s						
AC02	**Maricunga**	**3.48**	**214**	*e*P	**Pn**	**18 37 37.8**	**+1.3**
AC02				*e*S	**S**	**18 38 19.0**	**-1.6**
PB07	**IPOC Station P**	**3.53**	**309**		**Pn**	**18 37 37.0**	**+0.2**
PB07	**IPOC Station P**	**3.53**	**309**	⇑*i*P	**Pn**	**18 37 37.5**	**+0.6**
PB07				*i* S	**S**	**18 38 19.1**	**-2.1**
PB07	**IPOC Station P**	**3.53**	**309**	*e*P	**Pn**	**18 37 37.5**	**+0.6**
PB07				*e*S	**S**	**18 38 20.3**	**-0.8**
PB07				IAML		18 38 21.2	
	comp=Z,247nm,0.4s						
PB01	**IPOC Station P**	**3.75**	**320**		**Pn**	**18 37 39.9**	**+0.4**
PB01	**IPOC Station P**	**3.75**	**320**	*e*P	**Pn**	**18 37 40.0**	**+0.5**
PB01				*i* S	**S**	**18 38 23.8**	**-2.1**
PB01	**IPOC Station P**	**3.75**	**320**	*e*P	**Pn**	**18 37 40.1**	**+0.6**
PB01				*e*S	**S**	**18 38 25.3**	**-0.7**
PB01				IAML		18 38 26.7	
	comp=Z,162nm,0.1s						
PB02	**IPOC Station P**	**3.80**	**313**		**Pn**	**18 37 40.3**	**+0.2**
PB02	**IPOC Station P**	**3.80**	**313**	⇑*i*P	**Pn**	**18 37 40.4**	**+0.3**
PB02				*i* S	**S**	**18 38 24.7**	**-2.3**
PB02	**IPOC Station P**	**3.80**	**313**	*e*P	**Pn**	**18 37 40.6**	**+0.5**
PB02				*e*S	**S**	**18 38 27.8**	**+0.7**
PB02				IAML		18 38 31.6	
	comp=Z,478nm,0.3s						
AC01	**Pan de Azucar**	**3.97**	**236**		**Pn**	**18 37 41.6**	**-0.4**
AC01	**Pan de Azucar**	**3.97**	**236**	*e*P	**Pn**	**18 37 41.5**	**-0.4**
AC01				*e*S	**S**	**18 38 27.7**	**-2.9**
AC01	**Pan de Azucar**	**3.97**	**236**	*e*P	**Pn**	**18 37 41.6**	**-0.4**
AC01				*e*S	**S**	**18 38 27.5**	**-3.1**
AC01				IAML		18 38 28.7	
	comp=Z,123nm,0.5s						
TINO	**Tinogasta**	**4.12**	**188**	*e*P	**Pn**	**18 37 45.5**	**+1.6**
PATCX	**Punta Patache**	**4.33**	**316**		**Pn**	**18 37 46.3**	**-0.2**
PATCX	**Punta Patache**	**4.33**	**316**	*e*P	**Pn**	**18 37 46.6**	**+0.1**
PATCX				*e*S	**S**	**18 38 37.7**	**-1.0**
PATCX				IAML		18 38 42.3	
	comp=Z,107nm,0.3s						
TA01	**Diego Aracena**	**4.53**	**318**		**Pn**	**18 37 48.8**	**-0.2**
TA01	**Diego Aracena**	**4.53**	**318**	*e*P	**Pn**	**18 37 49.4**	**+0.4**
TA01				*e*S	**S**	**18 38 41.6**	**-1.5**
TA01				IAML		18 38 46.5	
	comp=Z,66nm,0.4s						
CYA	**Choya**	**4.57**	**167**	*e*P	**Pn**	**18 37 50.4**	**+1.0**
AC06	**Mina Casimiro**	**4.58**	**222**		**Pn**	**18 37 48.4**	**-1.1**
HMBC	**Humberstone**	**4.58**	**323**	*e*P	**Pn**	**18 37 49.3**	**-0.5**
HMBC				*e*S	**S**	**18 38 41.7**	**-2.9**
HMBC				IAML		18 38 43.6	
	comp=Z,252nm,0.3s						
GO03	**Copiapo**	**4.68**	**219**		**Pn**	**18 37 50.0**	**-0.8**
GO03	**Copiapo**	**4.68**	**219**	*e*P	**Pn**	**18 37 50.4**	**-0.5**
GO03				*e*S	**S**	**18 38 44.0**	**-2.5**
GO03				IAML		18 38 47.5	
	comp=Z,69nm,0.7s						
GO01	**Chusmiza**	**4.77**	**333**		**Pn**	**18 37 52.8**	**+0.3**
GO01	**Chusmiza**	**4.77**	**333**	*e*P	**Pn**	**18 37 54.2**	**+1.8**
GO01				IAML		18 38 56.2	
	comp=Z,53nm,0.1s						
PB11	**IPOC Station P**	**4.89**	**328**	*e*P	**Pn**	**18 37 53.6**	**-0.1**
LCO	**Las Campanas**	**6.05**	**213**	Pn	**Pn**	**18 38 07.5**	**-0.9**
PB16	**IPOC Station P**	**6.10**	**336**		**Pn**	**18 38 09.3**	**-0.1**
PB12	**IPOC Station P**	**6.20**	**329**	Pn	**Pn**	**18 38 10.3**	**+0.1**
LPAZ	**La Paz**	**7.72**	**351**	P	**Pn**	**18 38 31.5**	**+1.1**
	comp=Z,1.5nm,0.3s,baz=170,slow=11,SNR=8.8						
LPAZ				S	**S**	**18 39 56.9**	**-1.4**
	comp=Z,2.3nm,0.6s,baz=0.5,slow=18,SNR=6.4						
LPAZ	**La Paz**	**7.72**	**351**		**Pn**	**18 38 30.2**	**-0.2**
SIV	**San Ignacio**	**9.66**	**36**	P	**Pn**	**18 38 53.7**	**-1.0**
	comp=Z,2.9nm,0.3s,baz=212,slow=12,SNR=9.4						
BI02	**San Fabin de**	**13.19**	**195**	P	**Pn**	**18 39 40.8**	**+1.4**
VAO	**Valinhos**	**18.34**	**91**	P	**Pn**	**18 40 39.4**	**-2.0**
VAO				IAmb	IAmb	18 40 41.1	
	comp=Z,13nm,0.6s						
BDFB	**Brasilia**	**19.61**	**68**	P	**Pn**	**18 40 54.1**	**-2.4**
	comp=Z,6.7nm,0.6s,baz=249,slow=11,SNR=11						
BDFB	**Brasilia**	**19.61**	**68**	P	**Pn**	**18 40 54.2**	**-2.4**
BDFB				IAmb	IAmb	18 40 54.8	
	comp=Z,7.1nm,0.6s						
MACA	**Manacapuru-AM**	**21.55**	**17**	P	**P**	**18 41 13.0**	**+0.3**
MACA				IAmb	IAmb	18 41 41.7	
	comp=Z,38nm,1.2s						
PMSA	**Palmer Station**	**40.84**	**178**	P	**P**	**18 44 01.5**	**+1.2**
CHIV	**Chivirico**	**44.65**	**347**	P	**P**	**18 44 31.1**	**-0.3**
CHIV				IAmb	IAmb	18 44 42.9	
	comp=Z,20nm,1.1s						
X58A	**Rowland**	**59.38**	**348**	P	**P**	**18 46 19.7**	**0.0**
X58A				IAmb	IAmb	18 46 42.5	
	comp=Z,15nm,0.9s						
HKT	**Hockley**	**60.37**	**331**	P	**P**	**18 46 25.4**	**-1.1**
HKT				IAmb	IAmb	18 46 25.8	
	comp=Z,4.8nm,0.4s						
BRDY	**Brady**	**62.94**	**329**	P	**P**	**18 46 43.6**	**-0.1**
SBA	**Scott Base**	**73.74**	**190**	P	**P**	**18 47 49.3**	**-0.6**
TORD	**Torodi Ar. Bea**	**76.50**	**69**	P	**P**	**18 48 09.0**	**+2.3**
	comp=Z,0.4nm,0.6s,baz=255,slow=5.3,SNR=11						
	comp=Z,0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**76.50**	**69**	IAmb	IAmb	18 48 09.9	
	comp=Z,1.6nm,1.4s						
MKAR	**Makanchi Array**	**146.46**	**40**	PKPbc	**PKiKP**	**18 55 59.0**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=304,slow=3.3,SNR=2.5						

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*IDC **19** 19:00:39.0±1.4, 22°.64S×115°.22W, h0^{km}, mb3.7/4, mbtmp3.7/4, MS3.8/23, Error ellipse: s-maj=54.1km s-min=40.4km az=30.0*

ISC 19 19:00:40.7±1.4, **22°.7S**±0°.4×**115°.2W**±0°.3, **h10**^{km}, **n45**, σ**0^{s}97**/10, **mb3.9**/4, **MS3.8**/23, **Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**6.95**	**131**	LR	LR	19 04 11.8	
	comp=Z,1μm,18.4s,baz=310,slow=31						
RKT	**Rikitea**	**18.21**	**265**	*e*LR	LR	19 08 36.2	
	3μm,30.5s						
TAOE	**Nuku Hiva Isla**	**27.58**	**296**	*e*LR	LR	19 13 22.5	
	584nm,25.7s						
TBI	**Tubuai**	**31.48**	**262**	*e*LR	LR	19 14 54.6	
	1μm,30.2s						
PPT2	**Papeete2**	**32.60**	**273**	*e*LR	LR	19 15 24.2	
	243nm,25.5s						
PPT2				*e*LR	LR	19 15 29.9	
	210nm,30.2s						
PPT	**Papeete**	**32.61**	**273**	LR	LR	19 15 29.5	
	comp=Z,52nm,18.8s,baz=75,slow=27						
H03N2	**Juan Fernandez**	**33.62**	**117**	T	T	19 42 16.2	
	baz=282,slow=75,SNR=46						
H03N3	**Juan Fernandez**	**33.63**	**117**	T	T	19 42 17.4	
	baz=282,slow=75,SNR=73						
H03N1	**Juan Fernandez**	**33.64**	**117**	T	T	19 42 17.4	
	baz=282,slow=75,SNR=62						
NNA	**Nana**	**38.04**	**80**	LR	LR	19 19 45.0	
	comp=Z,126nm,18.3s,baz=231,slow=30						
ATAH	**Atahualpa**	**38.65**	**72**	LR	LR	19 19 48.5	
	comp=Z,124nm,21.0s,baz=240,slow=30						
RAR	**Rarotonga**	**41.23**	**263**	LR	LR	19 20 25.7	
	comp=Z,155nm,20.0s,baz=97,slow=29						
PLCA	**Paso Flores**	**41.56**	**126**	LR	LR	19 21 02.5	
	comp=Z,205nm,20.9s,baz=258,slow=29						
JTS	**Las Juntas de**	**44.19**	**45**	LR	LR	19 22 40.5	
	comp=Z,59nm,19.8s,baz=296,slow=30						
CMIG	**Matias Romero**	**44.24**	**28**	LR	LR	19 23 37.7	
	comp=Z,71nm,19.5s,baz=176,slow=31						
LPAZ	**La Paz**	**44.70**	**91**	P	**P**	**19 08 54.9**	**-0.1**
	1.3nm,0.7s,baz=225,slow=3.6,SNR=4.0						
LPAZ				LR	LR	19 23 16.3	
	comp=Z,107nm,18.5s,baz=248,slow=30						
	1.3nm,0.7s						
LPIG	**La Paz**	**46.73**	**6**	LR	LR	19 23 52.1	
	comp=Z,59nm,19.1s,baz=234,slow=30						
TXAR	**Lajitas Array**	**52.88**	**13**	LR	LR	19 27 47.0	
	comp=Z,66nm,21.0s,baz=78,slow=31						
PFO	**Pinyon Flats O**	**55.98**	**359**	LR	LR	19 27 20.0	
	comp=Z,51nm,21.0s,baz=318,slow=29						
ANMO	**Albuquerque**	**57.90**	**8**	LR	LR	19 31 14.9	
	comp=Z,51nm,18.1s,baz=188,slow=32						
NVAR	**Mina Array Bea**	**60.84**	**357**	P	**P**	**19 10 52.5**	**-0.9**
	0.8nm,1.0s,baz=196,slow=10,SNR=5.0						
NVAR				LR	LR	19 31 14.2	
	comp=Z,106nm,18.0s,baz=220,slow=30						
	0.8nm,1.0s						
BDFB	**Brasilia**	**63.42**	**97**	LR	LR	19 35 36.9	
	comp=Z,114nm,19.5s,baz=94,slow=33						
YBH	**Yreka Blue Hor**	**64.45**	**354**	LR	LR	19 35 06.5	
	comp=Z,5.5nm,18.9s,baz=300,slow=32						
TKL	**Tuckaleechee C**	**65.21**	**28**	LR	LR	19 34 31.5	
	comp=Z,65nm,20.5s,baz=238,slow=31						
PDAR	**Pinedale Array**	**65.32**	**5**	P	**P**	**19 11 23.3**	**+0.2**
	0.3nm,0.7s,baz=216,slow=5.5,SNR=2.5						
PDAR				LR	LR	19 34 32.0	
	comp=Z,49nm,18.4s,baz=310,slow=31						
	0.3nm,0.7s						
VNDA	**Vanda**	**66.50**	**194**	LR	LR	19 32 34.5	
	comp=Z,62nm,21.9s,baz=100,slow=29						
MDP	**Montagnes des**	**67.06**	**74**	LR	LR	19 37 38.5	
	comp=Z,68nm,18.8s,baz=322,slow=33						
DZM	**Mont Dzumac**	**71.56**	**253**	*e*LR	LR	19 33 25.8	
	131nm,25.9s						
ULM	**Lac du Bonnet**	**74.59**	**13**	LR	LR	19 39 54.6	
	comp=Z,77nm,18.6s,baz=264,slow=32						
YKA	**Yellowknife Ar**	**84.87**	**0**	P	**P**	**19 13 16.2**	**+1.1**
	0.8nm,0.9s,baz=187,slow=5.0,SNR=6.4						
	0.8nm,0.9s						
H11S2	**WAKE ISLAND Hy**	**86.54**	**292**	T	T	20 49 23.0	
	baz=116,slow=75,SNR=248						
H11S1	**WAKE ISLAND Hy**	**86.55**	**292**	T	T	20 49 22.6	
	baz=116,slow=75,SNR=210						
H11S3	**WAKE ISLAND Hy**	**86.56**	**292**	T	T	20 49 24.5	
	baz=116,slow=75,SNR=193						
H11N3	**WAKE ISLAND Hy**	**86.88**	**293**	T	T	20 49 53.1	
	baz=118,slow=76,SNR=61						
H11N1	**WAKE ISLAND Hy**	**86.90**	**293**	T	T	20 49 46.7	
	baz=118,slow=76,SNR=38						
H11N2	**WAKE ISLAND Hy**	**86.90**	**293**	T	T	20 49 54.6	
	baz=118,slow=76,SNR=159						
MAW	**Mawson**	**89.99**	**179**	LR	LR	19 49 13.4	
	comp=Z,47nm,19.4s,baz=155,slow=32						
FRB	**Frobisher Bay**	**93.52**	**19**	LR	LR	19 53 47.4	
	comp=Z,60nm,18.2s,baz=264,slow=34						
RES	**Resolute Bay**	**98.00**	**5**	LR	LR	19 53 34.7	
	comp=Z,92nm,18.5s,baz=2.0,slow=32						
ZALV	**Zalesovo Beam**	**145.28**	**339**	PKPbc	**PKPab**	**19 20 17.6**	**-0.7**
	0.3nm,0.4s,baz=27,slow=1.6,SNR=2.5						
CMAR	**Chiang Mai Arr**	**147.78**	**269**	PKPbc	**PKPbc**	**19 20 26.5**	**-0.1**
	0.4nm,0.7s,baz=151,slow=1.1,SNR=4.9						
BRTR	**Keskin Array B**	**148.61**	**50**	PKPbc	**PKPbc**	**19 20 27.9**	**-0.5**
	0.8nm,0.8s,baz=283,slow=4.2,SNR=4.9						
BVAR	**Borovoye Array**	**149.39**	**353**	PKPbc	**PKPdf**	**19 20 26.8**	**+1.5**
	0.9nm,0.7s,baz=356,slow=4.5,SNR=3.1						
KURBB	**Kurchatov Arra**	**150.10**	**342**	PKPbc	**PKPbc**	**19 20 30.2**	**-1.3**
	0.6nm,0.2s,baz=17,slow=1.6,SNR=4.2						
MKAR	**Makanchi Array**	**152.08**	**334**	PKPbc	**PKiKP**	**19 20 36.9**	**+0.3**
	0.2nm,0.6s,baz=12,slow=1.9,SNR=4.0						

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*DJA **19** 19:01:40.2±4.0, 6°N±17°×9°4E±3°0, h10^{km}, M4.8/12, mb4.9/12, mB5.2/7, MLv5.0/12, Mw(mB)4.6/7*

*IDC **19** 19:01:52.8±2.0, 5°.30N×94°.37E, h43^{km}±18^{km}, mb4.0/18, mbtmp4.2/21, ML4.4/3, MS3.6/24, Error ellipse: s-maj=22.0km s-min=11.3km az=49.0*

*NEIC **19** 19:01:53.7±1.7, 5°.17N±0°.08×94°.41E±0°.08, h51^{km}±6^{km}, mb4.6/46, Error ellipse: s-maj=13.1km s-min=9.8km az=213.0*

ISC 19 19:01:52.5±0.4, **5°.17N**±0°.05×**94°.40E**±0°.05, **h43**^{km}, **n152**, σ**1^{s}67**/135, **mb4.5**/56, **MS3.7**/23, **1C-1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMBY	**CAMPBELL BAY**	**1.89**	**346**	*e*P	**Pn**	**19 02 26.0**	**+3.7**
CMBY				*e*S	**Sn**	**19 02 51.1**	**+6.2**
CMBY				IAML		19 02 55.0	
	comp=E,6μm,0.8s						
CMBY				IAML		19 02 58.8	
	comp=N,6μm,0.7s						
MLSI	**Meulaboh, Aceh**	**2.19**	**114**	P	**Pn**	**19 02 28.3**	**+1.9**
LHMI	**Lhok Sumawe**	**2.54**	**88**		**Pn**	**19 02 33.1**	**+1.9**
LHMI	**Lhok Sumawe**	**2.54**	**88**	P	**Pn**	**19 02 32.1**	**+0.9**
SNSI	**Sinabang, Aceh**	**3.35**	**145**	P	**Pn**	**19 02 43.0**	**+0.7**
TPTI		**3.36**	**124**	P	**Pn**	**19 02 43.2**	**+0.7**
KCSI	**Kotacane, Aceh**	**3.74**	**116**	P	**Pn**	**19 02 50.8**	**+3.1**
TSI	**Tuntungan**	**4.47**	**112**	P	**Pn**	**19 03 00.5**	**+2.7**
GSI	**Gunungsitoli**	**4.98**	**140**		**Pn**	**19 03 05.4**	**+0.6**
GSI	**Gunungsitoli**	**4.98**	**140**	P	**Pn**	**19 03 05.2**	**+0.5**
	comp=N,0.5nmcomp=N,1μmcomp=N,45nm,0.6s						
PSI	**Prapat**	**5.09**	**117**	P	**Pn**	**19 03 09.7**	**+3.3**
	comp=N,8.6nm,0.3s,baz=321,slow=10,SNR=22						
PSI				S	**Sn**	**19 04 07.1**	**+3.1**
	comp=N,19nm,0.7s,baz=319,slow=20,SNR=1.1						
PSI				LR	LR	19 05 27.2	
	comp=N,305nm,20.4s,baz=266,slow=41						
	comp=N,21nm,0.4s						
PSI	**Prapat**	**5.09**	**117**	P	**Pn**	**19 03 09.9**	**+3.5**
	comp=N,50nm,0.6s						
RPSI	**Rantau Prapat**	**5.14**	**118**		**Pn**	**19 03 09.7**	**+2.8**
RPSI					**Sn**	**19 04 07.1**	**+2.1**
KULM	**Kulim**	**6.23**	**89**		**Pn**	**19 03 23.2**	**+1.4**
KULM	**Kulim**	**6.23**	**89**	P	**Pn**	**19 03 23.4**	**+1.5**
	comp=N,39nm,0.7s						
PBSI	**Pulau Batu**	**6.47**	**143**	P	**Pn**	**19 03 26.9**	**+1.6**
IPM	**Ipoh**	**6.64**	**96**		**Pn**	**19 03 28.7**	**+1.1**
IPM	**Ipoh**	**6.64**	**96**	P	**Pn**	**19 03 29.0**	**+1.4**
	comp=N,0.2nmcomp=N,30nm,0.5s						
PBA	**Port Blair**	**6.65**	**346**	IAML		19 02 31.0	
	comp=E,477nm,0.1s						
PBA				IAML		19 02 31.9	
	comp=N,657nm,0.4s						
PBA				*e*P	**Pn**	**19 03 28.7**	**+0.9**
PBA				*e*S	**Sn**	**19 04 37.8**	**-4.6**
MNSI	**Mandailing Nat**	**6.75**	**130**	P	**Pn**	**19 03 30.5**	**+1.4**
	comp=N,0.4nmcomp=N,68nm,0.8s						
DGPR	**DIGLIPUR**	**8.09**	**350**	*e*P	**Pn**	**19 03 48.3**	**+0.8**
DGPR				*e*S	**Sn**	**19 05 11.2**	**-6.5**
DGPR				IAML		19 05 19.4	
	comp=E,350nm,0.4s						
DGPR				IAML		19 05 24.9	
	comp=N,247nm,0.8s						
PPI	**Padang Panjang**	**8.19**	**133**	P	**Pn**	**19 03 50.8**	**+2.0**
	comp=N,19nm,0.5s						
BKNI	**Bangkinang**	**8.19**	**126**	Pn	**Pn**	**19 03 49.4**	**+0.6**
PDSI	**Padang**	**8.55**	**135**	P	**Pn**	**19 03 55.6**	**+1.8**
	comp=N,25nm,0.9s						
KRJI	**Kerinci**	**10.09**	**135**	P	**Pn**	**19 04 16.6**	**+1.7**
	comp=N,52nm,0.5s						
MASI	**Maura Aman, Be**	**11.38**	**136**	P	**Pn**	**19 04 34.6**	**+2.0**
	comp=N,31nm,0.9s						
KSI	**Kapahiang**	**11.99**	**137**	P	**Pn**	**19 04 43.0**	**+2.1**
MDSI	**Maura Dua**	**13.69**	**134**	P	**Pn**	**19 05 06.8**	**+2.7**
PALK	**Pallekele**	**13.78**	**279**	P	**Pn**	**19 05 05.5**	**+0.1**
	comp=N,1.1nm,0.3s,baz=99,slow=15,SNR=7.5						
PALK				S	Sn	19 07 23.4	-14
	comp=N,11nm,0.5s,baz=17,slow=19,SNR=9.7						
PALK				LR	LR	19 09 59.0	
	comp=N,255nm,20.1s,baz=104,slow=35						
	comp=N,2.8nm,0.3s						
CM31	**Chiang Mai Arr**	**13.94**	**18**		**Pn**	**19 05 10.3**	**+2.8**
CMAR	**Chiang Mai Arr**	**13.94**	**18**	P	**Pn**	**19 05 07.7**	**+0.2**
	comp=N,1.4nm,0.3s,baz=208,slow=14,SNR=77						
CMAR				LR	LR	19 10 04.2	
	comp=N,125nm,21.6s,baz=200,slow=36						
CMAR				ScP	**ScP**	**19 13 57.8**	**+0.2**
	comp=N,0.8nm,0.7s,baz=183,slow=1.1,SNR=8.0						
	comp=N,6.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**13.94**	**18**		**Pn**	**19 05 09.9**	**+2.4**
CHTO	**Chiang Mai**	**14.27**	**18**		**Pn**	**19 05 14.6**	**+2.6**
MDRS	**Chennai**	**16.02**	**300**	*e*P	**P**	**19 05 36.4**	**-1.4**
MDRS				IAmb	IAmb	19 05 48.6	
	comp=Z,46nm,1.1s						
MDRS				*e*S	**Sn**	**19 08 34.1**	**+2.4**
HYB	**Hyderabad**	**19.72**	**309**	*e*P	**Pn**	**19 06 23.9**	**+3.5**
QIZ	**Qiongzhong**	**20.41**	**46**	P	**P**	**19 06 26.8**	**+0.7**
QIZ				S	**S**	**19 10 11.8**	**-0.8**
QIZ				LR	LR		
	comp=N,290nm,12.4s						
QIZ				LR	LR		
	comp=E,380nm,11.6s						
QIZ				LR	LR		
	comp=Z,280nm,18.9s						
KOHI	**KOHIMA**	**20.44**	**359**	*e*P	**P**	**19 06 26.2**	**-0.3**
KOHI				IAmb	IAmb	19 06 28.4	
	comp=Z,21nm,0.8s						
KOHI				*e*S	**S**	**19 10 12.8**	**-0.4**
DHUB	**DHUBRI**	**21.16**	**349**	*e*P	**P**	**19 06 33.8**	**-0.3**
DHUB				IAmb	IAmb	19 06 59.9	
	comp=Z,15nm,0.7s						
DHUB				*e*S	**S**	**19 10 28.1**	**+0.9**
TEZP	**TEZPUR**	**21.39**	**356**	IAmb	IAmb	19 02 55.9	
	comp=Z,22nm,0.2s						
TEZP				*e*P	**P**	**19 06 36.8**	**+0.3**
TEZP				*e*S	**S**	**19 10 31.4**	**-0.3**
KMI	**Kunming**	**21.40**	**21**	P	**P**	**19 06 38.9**	**+2.0**
KMI				pP	pwP	19 06 50.8	+1.1
KMI				pmax	pmax		
	comp=Z,12nm,0.9s						
KMI				LR	LR		
	comp=Z,220nm,21.2s						
JORH	**JORHAT**	**21.46**	**360**	*e*S	**S**	**19 10 34.0**	**+0.9**
GYA	**Guiyang**	**24.20**	**28**	P	**P**	**19 07 05.5**	**+0.2**
GYA				pP	pwP	19 07 18.3	-1.0
GYA				pmax	pmax		
	comp=Z,16nm,0.8s						
LSA	**Lhasa**	**24.60**	**353**		**P**	**19 07 09.2**	**-0.1**
LSA	**Lhasa**	**24.60**	**353**	P	**P**	**19 07 04.9**	**-4.4**
H08S3	**Diego Garcia H**	**25.29**	**240**	T	T	19 33 10.3	
	baz=60,slow=76,SNR=680						
H08S2	**Diego Garcia H**	**25.29**	**240**	T	T	19 33 10.5	
	baz=60,slow=76,SNR=28						
H08S1	**Diego Carcia H**	**25.31**	**240**	T	T	19 33 13.2	
	baz=60,slow=76,SNR=20						
TOLI2	**Tolitoli**	**26.64**	**98**	P	**P**	**19 07 27.4**	**-0.1**
KAPI	**Kappang**	**27.26**	**111**	LR	LR	19 18 23.7	
	comp=Z,57nm,19.1s,baz=291,slow=36						
LUWI	**Luwuk**	**29.00**	**102**	P	**P**	**19 07 47.2**	**-1.4**
LUWI				IAmb	IAmb	19 07 56.3	
	comp=Z,16nm,0.7s						
NJ2	**Nanjing**	**35.20**	**38**	*e*P	**P**	**19 08 43.5**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HNS	**HongShan**	**37.06**	**27**	⇑P	**P**	**19 08 58.8**	**+0.3**
HNS				pmax	pmax		
	comp=Z,13nm,0.7s						
MANEM	**Manem**	**38.32**	**330**	P	**P**	**19 09 09.8**	**+0.3**
MANEM				IAmb	IAmb	19 09 27.8	
	comp=Z,29nm,1.4s						
WUS	**Wushi**	**38.37**	**341**		**P**	**19 09 09.8**	**+0.1**
WUS				IAmb	IAmb	19 09 23.3	
	comp=Z,10nm,0.8s						
FAKI	**Fak Fak**	**38.65**	**101**	P	**P**	**19 09 10.1**	**-2.2**
FAKI				IAmb	IAmb	19 09 50.5	
	comp=Z,16nm,1.0s						
HHC	**Hu-ho-hao-te**	**38.72**	**21**	*e*P	**P**	**19 09 14.5**	**+1.9**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
WMQ	**Urumqi**	**38.95**	**352**	*e*P	**P**	**19 09 16.1**	**+1.7**
PRZ	**Przheval'sk**	**39.79**	**341**	P	**P**	**19 09 22.5**	**+0.9**
PRZ				IAmb	IAmb	19 09 35.9	
	comp=Z,16nm,1.3s						
KDJ	**Kajisay**	**39.88**	**340**	P	**P**	**19 09 22.7**	**+0.3**
KDJ				IAmb	IAmb	19 09 37.1	
	comp=Z,4.9nm,0.7s						
BJI	**Beijing**	**39.88**	**26**	P	**P**	**19 09 22.3**	**+0.2**
BJI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
CHGR	**Chuyangaron**	**40.45**	**329**	P	**P**	**19 09 28.0**	**+1.0**
CHGR				IAmb	IAmb	19 09 43.4	
	comp=Z,8.4nm,0.9s						
BOOM	**Boomskoye usch**	**40.63**	**339**	P	**P**	**19 09 28.4**	**-0.1**
BOOM				IAmb	IAmb	19 09 35.1	
	comp=Z,7.6nm,1.0s						
MTN	**Manton Dam**	**40.65**	**116**	P	**P**	**19 09 27.1**	**-1.7**
MTN				IAmb	IAmb	19 09 53.2	

	comp=Z,20nm,1.5s						
AAK	Ala-Archa	41.29	338	LR	LR	19 28 07.5	
	comp=Z,71nm,19.9s,baz=147,slow=38						
AAK	Ala-Archa	41.29	338		pP	19 09 46.6	+1.5
MKAR	Makanchi Array	42.77	348	P	P	19 09 44.8	-1.0
	comp=Z,6.9nm,0.6s,baz=168,slow=7.0,SNR=75						
MKAR				PcP	PcP	19 11 36.6	-0.1
	comp=Z,0.2nm,0.3s,baz=164,slow=3.3,SNR=1.2						
MKAR				LR	LR	19 30 20.9	
	comp=Z,59nm,19.1s,baz=167,slow=40						
	comp=Z,6.9nm,0.6s						
MKAR	Makanchi Array	42.77	348		P	19 09 45.3	-0.5
MAKZ	Makanchi	42.85	347		P	19 09 46.0	-0.4
MAKZ				IAmb	IAmb	19 09 48.1	
	comp=Z,7.3nm,0.7s						
KK31	Karatay Array	43.29	334	P	P	19 09 50.2	+0.1
KKAR	Karatay Array	43.29	334	P	P	19 09 50.3	+0.2
SONM	Songino Array	43.74	12	P	P	19 09 52.8	-0.9
	comp=Z,1.7nm,0.8s,baz=191,slow=8.9,SNR=13						
SONM				PcP	PcP	19 11 40.2	+0.1
	comp=Z,0.6nm,0.4s,baz=198,slow=3.3,SNR=5.9						
SONM				LR	LR	19 30 56.6	
	comp=Z,64nm,18.7s,baz=183,slow=40						
	comp=Z,1.7nm,0.8s						
SONM	Songino Array	43.74	12	P	P	19 09 52.8	-0.9
JNU	Nakatsue	43.89	46	LR	LR	19 29 05.2	
	comp=Z,71nm,18.1s,baz=238,slow=37						
ULN	Ulaanbaatar	43.91	12	P	P	19 09 53.3	-1.8
KSRS	Korea Array	44.36	39	P	P	19 09 58.1	-0.6
	comp=Z,1.3nm,0.8s,baz=213,slow=8.4,SNR=4.5						
KSRS				PcP	PP	19 11 42.8	0.0
	comp=Z,0.9nm,0.4s,baz=276,slow=5.7,SNR=2.9						
KSRS				LR	LR	19 30 16.8	
	comp=Z,61nm,18.5s,baz=235,slow=38						
	comp=Z,1.3nm,0.8s						
WB0	Warramunga Arr	46.48	123	P	P	19 10 16.2	+0.4
WB0				IAmb	IAmb	19 10 31.6	
	comp=Z,6.6nm,0.7s						
WRA	Warramunga Arr	46.52	124	P	P	19 10 16.9	+0.8
	comp=Z,3.7nm,0.9s,baz=305,slow=8.1,SNR=26						
	comp=Z,3.7nm,0.9s						
WRAB	Tennant Creek	46.52	124	P	P	19 10 16.8	+0.6
WRAB				IAmb	IAmb	19 10 31.8	
	comp=Z,9.2nm,0.7s						
WR8	Warramunga Arr	46.66	124		P	19 10 17.9	+0.7
WR8				IAmb	IAmb	19 10 31.1	
	comp=Z,9.3nm,0.9s						
KURBB	Kurchatov Arra	47.22	346	P	P	19 10 20.9	-0.1
	comp=Z,3.1nm,0.3s,baz=170,slow=6.9,SNR=24						
	comp=Z,3.1nm,0.3s						
KURK	Kurchatov	47.29	346		P	19 10 21.6	0.0
KURK				IAmb	IAmb	19 10 38.7	
	comp=Z,9.7nm,0.8s						
ASAR	Alice Springs	48.02	128	P	P	19 10 28.5	+0.8
	comp=Z,2.0nm,0.7s,baz=300,slow=7.9,SNR=19						
ASAR				PcP	PcP	19 11 55.5	+0.2
	comp=Z,0.4nm,0.4s,baz=300,slow=3.1,SNR=1.4						
	comp=Z,2.0nm,0.7s						
ASAR	Alice Springs	48.02	128	P	P	19 10 25.7	-2.0
ZAA0	Zalesovo Array	49.26	353		P	19 10 36.5	-0.3
ZALV	Zalesovo Beam	49.26	353	P	P	19 10 36.0	-0.8
	comp=Z,4.5nm,0.3s,baz=176,slow=7.5,SNR=37						
	comp=Z,4.5nm,0.3s						
ZALV	Zalesovo Beam	49.26	353		P	19 10 36.5	-0.2
BNX	BinXian	49.55	30	⇓P	P	19 10 38.3	-0.8
BNX				pmax	pmax		
	comp=Z,6.0nm,1.5s						
RAYN	Ar Rayn	50.47	296	P	P	19 10 46.7	+0.2
RAYN				IAmb	IAmb	19 10 48.7	
	comp=Z,7.7nm,1.2s						
MJAR	Matsushiro Arr	50.81	46	LR	LR	19 35 03.3	
	comp=Z,61nm,18.6s,baz=223,slow=39						
BVAR	Borovoye Array	51.62	342	P	P	19 10 54.0	-0.7
	comp=Z,2.0nm,0.6s,baz=134,slow=9.1,SNR=15						
	comp=Z,2.0nm,0.6s						
BORK	Borovoye	51.66	342		P	19 10 54.3	-0.6
BORK				IAmb	IAmb	19 11 12.7	
	comp=Z,7.2nm,0.8s						
AB31	Akbulak array	52.73	332		P	19 11 02.5	-0.4
AB31				IAmb	IAmb	19 11 18.9	
	comp=Z,5.3nm,0.9s						
ABKAR	Akbulak array	52.73	332		P	19 11 02.3	-0.5
HEH	HeiHe	52.79	26	eP	P	19 10 57.0	-6.3
ASAJ	Asahikawa	57.30	40	LR	LR	19 37 24.4	
	comp=Z,52nm,18.8s,baz=174,slow=37						
STKA	Stephens Creek	58.08	133	P	P	19 11 43.4	+1.7
	comp=Z,1.4nm,0.7s,baz=309,slow=6.5,SNR=3.0						
	comp=Z,1.4nm,0.7s						
ARTI	Arti	58.51	337	LR	LR	19 38 56.3	
	comp=Z,48nm,18.4s,baz=252,slow=38						
ARTI	Arti	58.51	337		pP	19 11 56.7	+0.7
KBZ	Khabaz	59.27	319	P	P	19 11 49.0	-0.7
	comp=Z,1.1nm,0.8s,baz=135,slow=5.7,SNR=2.2						
	comp=Z,1.1nm,0.8s						
YAK	Yakutsk	62.47	18	LR	LR	19 39 57.2	
	comp=Z,58nm,18.4s,baz=253,slow=37						
H04N2	CROZET ISLANDS	63.56	212	T	T	20 22 18.0	
	baz=48,slow=75,SNR=266						
H04N1	CROZET ISLANDS	63.57	212	T	T	20 22 18.6	
	baz=48,slow=75,SNR=362						
H04N3	CROZET ISLANDS	63.58	212	T	T	20 22 17.3	
	baz=48,slow=75,SNR=288						
MBAR	Mbarara	63.84	267	LR	LR	19 35 41.8	
	comp=Z,89nm,21.5s,baz=85,slow=32						
H04S1	CROZET ISLANDS	63.95	211	T	T	20 22 41.6	
	baz=49						
H04S3	CROZET ISLANDS	63.96	211	T	T	20 22 43.6	
	baz=49						
H04S2	CROZET ISLANDS	63.97	211	T	T	20 22 43.5	
	baz=49						
NRIK	Noril'sk	64.24	357	P	P	19 12 22.9	+0.1
	comp=Z,1.7nm,0.5s,baz=163,slow=8.5,SNR=1.8						
NRIK				LR	LR	19 43 46.6	
	comp=Z,38nm,19.0s,baz=30,slow=39						
	comp=Z,1.7nm,0.5s						
NRIK	Noril'sk	64.24	357	IAmb	IAmb	19 12 36.4	
	comp=Z,6.7nm,1.2s						
BR131	Keskin Array S	64.40	312	P	P	19 12 23.7	-0.8
BRTR	Keskin Array B	64.40	312	P	P	19 12 23.6	-1.0
	comp=Z,1.3nm,0.7s,baz=124,slow=7.7,SNR=8.1						
	comp=Z,1.3nm,0.7s						
ELL	Elmali	66.56	308		P	19 12 38.9	+0.3
LSZ	Lusaka	68.63	251	LR	LR	19 39 37.0	
	comp=Z,90nm,19.3s,baz=44,slow=33						
MA2	Magadan	69.04	27	LR	LR	19 48 25.7	
	comp=Z,47nm,19.2s,baz=206,slow=40						
MATP	Matopo	69.49	246	LR	LR	19 40 40.6	
	comp=Z,76nm,19.4s,baz=118,slow=34						
TIXI	Tiksi	69.82	11	LR	LR	19 46 37.4	
	comp=Z,57nm,18.4s,baz=228,slow=38						
TIXI	Tiksi	69.82	11		P	19 12 56.7	-1.5
TIXI				IAmb	IAmb	19 13 13.1	
	comp=Z,14nm,1.4s						
IDI	Anoyia	70.33	306	P	P	19 13 01.8	-0.3
IDI				IAmb	IAmb	19 13 31.5	
	comp=Z,6.4nm,1.0s						
AKASG	Malin Array Be	70.43	322	P	P	19 13 00.5	-1.8
	comp=Z,0.5nm,0.4s,baz=94,slow=4.7,SNR=4.6						
	comp=Z,0.5nm,0.4s						
AKASG	Malin Array Be	70.43	322	IAmb	IAmb	19 13 07.3	
	comp=Z,4.7nm,1.2s						
MLR	Muntele Rosu	71.29	316	P	P	19 13 07.9	+0.1
MLR				IAmb	IAmb	19 13 24.5	
	comp=Z,5.3nm,0.8s						
LHI	Lord Howe Isla	71.49	126	P	P	19 13 07.5	-1.6
BURAR	Bucovina Array	72.22	318	P	P	19 13 13.0	-0.3
BUR08	Bucovina Ar. S	72.24	318	P	P	19 13 13.2	-0.3
LBTB	Lobatse	73.19	242	LR	LR	19 42 57.1	
	comp=Z,60nm,18.5s,baz=76,slow=34						
BOSA	Boshof	74.39	239	P	P	19 13 27.8	+1.3
	comp=Z,1.9nm,0.6s,baz=72,slow=3.2,SNR=7.0						
	comp=Z,1.9nm,0.6s						
BOSA	Boshof	74.39	239	IAmb	IAmb	19 13 28.8	
	comp=Z,3.8nm,0.8s						
PABE	Paberze	74.73	326	P	P	19 13 27.8	+0.1
PABE				IAmb	IAmb	19 13 42.1	
	comp=Z,15nm,1.1s						
STHS	Stebnicka Huta	75.16	320	eP	P	19 13 34.5	+4.1
FINES	FINESS Array B	75.21	332	P	P	19 13 29.6	-0.8
	comp=Z,0.9nm,0.5s,baz=116,slow=4.4,SNR=3.9						
	comp=Z,0.9nm,0.5s						
ARCES	ARCESS Array B	77.89	340	P	P	19 13 44.7	-0.8
	comp=Z,2.2nm,0.9s,baz=94,slow=6.3,SNR=13						
ARCES				LR	LR	19 51 17.5	
	comp=Z,40nm,18.6s,baz=125,slow=38						
	comp=Z,2.2nm,0.9s						
SOKA	Soboth	78.97	316	eP	P	19 13 51.4	-0.5
	comp=Z,1.1nm,0.6s						
GERES	GERESS Array B	80.01	319	P	P	19 13 57.7	+0.1
	comp=Z,1.6nm,0.6s,baz=97,slow=9.0,SNR=6.5						
	comp=Z,1.6nm,0.6s						
KBA	Koelnbreinsper	80.15	317	eP	P	19 13 58.3	-0.2
	comp=Z,1.7nm,0.4s						
LESA	Schwarzleotal	80.62	317	i P	P	19 14 00.2	-0.7
	comp=Z,1.6nm,0.3s						
HFS	Hagfors	80.91	330	P	P	19 14 01.3	-0.8
	comp=Z,2.4nm,0.9s,baz=98,slow=3.1,SNR=4.3						
	comp=Z,2.4nm,0.9s						
WTTA	Wattenberg	81.32	317	i P	P	19 14 03.4	-1.4
	comp=Z,2.4nm,0.5s						
SQTA	Sankt Quirin	81.61	317	i P	P	19 14 05.7	-0.5
	comp=Z,1.9nm,0.4s						
RETA	Reutte	81.92	317	i P	P	19 14 07.5	-0.3
	comp=Z,3.0nm,0.5s						
FETA	Feichten	81.93	317	i P	P	19 14 07.6	-0.3
	comp=Z,1.5nm,0.7s						
NOA	NORSAR Array B	82.20	331	LR	LR	19 53 27.1	
	comp=Z,28nm,18.4s,baz=240,slow=38						
FUORN	Ofenpass-Fuorn	82.25	316	P	P	19 14 10.3	+0.5
FUORN				IAmb	IAmb	19 14 28.3	
	comp=Z,6.7nm,1.0s						
TNA	Tin City	88.51	24	P	P	19 14 39.8	-0.4
TNA				IAmb	IAmb	19 15 21.6	
	comp=Z,6.1nm,1.1s						
VNDA	Vanda	90.24	168	LR	LR	19 51 39.7	
	comp=Z,40nm,18.3s,baz=284,slow=33						
C18K	Utukok River	90.43	21	P	P	19 14 49.2	0.0
E19K	Redstone River	92.21	21		pP	19 15 10.0	+0.4
B22K	Teshekpuk Lake	92.47	18	P	P	19 14 58.8	+0.2
J17K	VABM Dome	92.73	26	P	P	19 14 59.6	-0.4
QSPA	South Pole Qui	95.08	180	LR	LR	19 52 23.3	
	comp=Z,55nm,20.7s,baz=278,slow=32						
SUA	Susitna One	97.04	26	P	P	19 15 19.3	-0.5
NVAR	Mina Array Bea	127.08	32	PKP	PKPdf	19 20 51.7	-1.1
	comp=Z,0.3nm,0.4s,baz=313,slow=4.0,SNR=2.4						
PDAR	Pinedale Array	127.57	22	PKP	PKPdf	19 20 53.7	0.0
	comp=Z,0.5nm,0.8s,baz=48,slow=2.2,SNR=3.7						

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*NEIC **19** 19:07:53.6±2.6, 19°.17N±0°.03×67°.62W±0°.05, h10^{km}±1^{km}, ML2.4/10, Md3.0/5(RSPR), Error ellipse: s-maj=8.2km s-min=5.1km az=278.0*

*SDD **19** 19:07:55.5±2.3, 19°.13N×67°.63W, h0^{km}±28^{km}, MD3.1, ML3.0, MW2.6, Presumed earthquake*

*RSPR **19** 19:07:59.5, 19°.12N×67°.35W, h10^{km}±31^{km}, MD3.0/5*

ISC 19 19:07:53.9±1.8**, 19°.19N**±0°.08×**67°.56W**±0°.05**, h20**^{km}±4^{km}**, n30, σ0^{s}.75**/39**, 9C-8D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.80	174		Pb	19 08 08.8	-0.5
IDE					Sb	19 08 17.6	-2.1
IDE	Isla Desecheo	0.80	174	⇓eP	Pb	19 08 08.8	-0.5
AGPR	Aguadilla, PR	0.84	149	Pg	Pn	19 08 10.9	+0.3
AGPR				IAML		19 08 29.6	
	102nm,2.3s						
AGPR	Aguadilla, PR	0.84	149	⇓iP	Pn	19 08 11.3	+0.7
AGPR	Aguadilla, PR	0.84	149	eS	Sb	19 08 21.3	+0.6
AGPR	Aguadilla, PR	0.84	149	⇑ePg	Pb	19 08 10.0	+0.2
AGPR				⇓eSg	Sb	19 08 20.3	-0.4
AGPR				IAML		19 08 22.2	
	comp=N,550nm,0.2s						
LSP	Las Mesas	1.10	156		Pn	19 08 14.3	0.0
LSP					Sb	19 08 28.9	+0.5
LSP	Las Mesas	1.10	156	⇑eP	Pn	19 08 14.3	0.0
LSP	Las Mesas	1.10	156	eS	Sb	19 08 28.9	+0.5
AOPR	Arecibo Observ	1.14	137		Pg	19 08 16.0	0.0
AOPR					Sb	19 08 29.2	-0.1
AOPR	Arecibo Observ	1.14	137	IAML		19 08 38.6	
	comp=E,111nm,0.3s						
AOPR				IAML		19 08 44.0	
	comp=N,69nm,0.5s						
AOPR	Arecibo Observ	1.14	137	⇑iP	Pg	19 08 16.0	0.0
AOPR	Arecibo Observ	1.14	137	eS	Sb	19 08 29.2	-0.1
AOPR	Arecibo Observ	1.14	137	⇓ePg	Pn	19 08 14.2	-0.6
AOPR				⇓eSg	Sg	19 08 31.5	+0.6
AOPR				IAML		19 08 44.1	
	comp=N,481nm,0.3s						
UUPR	Utuado, UPR, P	1.23	139		Pb	19 08 17.3	+0.8
UUPR					Sb	19 08 30.5	-1.4
UUPR	Utuado, UPR, P	1.23	139		Pb	19 08 17.1	+0.7
UUPR				IAML		19 08 39.8	
	comp=N,300nm,0.4s						
UUPR				IAML		19 08 40.6	
	comp=N,271nm,0.3s						
UUPR	Utuado, UPR, P	1.23	139	⇑eP	Pb	19 08 17.3	+0.8
UUPR	Utuado, UPR, P	1.23	139	eS	Sb	19 08 30.5	-1.4
CRPR	Cabo Rojo, PR	1.25	160		Pg	19 08 18.2	0.0
CRPR					Sg	19 08 34.0	-0.6
CRPR	Cabo Rojo, PR	1.25	160	Pg	Pg	19 08 19.2	+1.0
CRPR				IAML		19 08 38.1	
	comp=N,60nm,0.6s						
CRPR				IAML		19 08 55.5	
	comp=N,52nm,2.6s						
CRPR	Cabo Rojo, PR	1.25	160	⇑eP	Pg	19 08 18.2	0.0
CRPR	Cabo Rojo, PR	1.25	160	eS	Sg	19 08 34.0	-0.6
CRPR	Cabo Rojo, PR	1.25	160	⇑ePg	Pb	19 08 17.7	+0.8
CRPR				⇑eSg	Sn	19 08 33.9	+1.3
CRPR				IAML		19 08 38.9	
	comp=N,241nm,0.3s						
MLPR	Magueyes Islan	1.31	158	⇓eP	Pg	19 08 20.2	+0.9
MLPR	Magueyes Islan	1.31	158	eS	Sb	19 08 34.9	+0.7
MLPR	Magueyes Islan	1.31	158	⇓ePg	Pg	19 08 18.9	-0.3
MLPR				⇓eSg	Sg	19 08 35.8	-0.6
MLPR				IAML		19 08 39.2	
	comp=N,298nm,0.3s						
ECPR	Experimental S	1.43	127	Pn	Pg	19 08 21.0	-0.5
ECPR				IAML		19 08 42.6	
	comp=N,58nm,0.2s						
ECPR				IAML		19 08 44.4	
	comp=N,55nm,0.2s						
ECPR	Experimental S	1.43	127	⇑eP	Pg	19 08 21.1	-0.4
ECPR	Experimental S	1.43	127	eS	Sn	19 08 36.2	-0.9
HATOM	Hato Mayor del	1.77	257	⇑iP	Pb	19 08 25.9	+0.2
HATOM				⇑eSg	Sb	19 08 47.3	-0.1
HATOM				IAML		19 08 51.0	
	comp=N,116nm,0.3s						

IDC 19 19:09:42.1±8.5**, 17°.98S**×**170°.29W, h0**^{km}**, mb3.3**/3**, mbtmp3.3**/3**, MS3.2**/1**, Error ellipse: s-maj=394.9km s-min=38.5km az=141.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	22.23	256	LR	LR	19 21 37.5	
	comp=Z,54nm,18.2s,baz=12,slow=32						
ASAR	Alice Springs	52.20	254	P	P	19 18 54.9	-0.3
	0.2nm,0.4s,baz=87,slow=7.5,SNR=6.8						
	0.2nm,0.4s						
WRA	Warramunga Arr	52.20	258	P	P	19 18 55.7	+0.5
	0.1nm,0.7s,baz=95,slow=8.2,SNR=1.6						
	0.1nm,0.7s						
ILAR	Eielson Array	84.43	10	P	P	19 22 16.5	+0.4
	0.5nm,0.8s,baz=213,slow=5.2,SNR=6.0						
	0.5nm,0.8s						
BRTR	Keskin Array B	150.03	321	PKPbc	PKPbc	19 29 33.9	-1.3
	0.4nm,0.8s,baz=72,slow=2.8,SNR=1.8						

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*IDC **19** 19:31:34.6±1.6, 1°.49N×99°.58E, h181^{km}±9^{km}, mb3.1/5, mbtmp3.6/5, Error ellipse: s-maj=86.1km s-min=15.8km az=58.0*

*DJA **19** 19:31:34.5±0.4, 1°N±3°×10°0E±°, h178^{km}±5^{km}, M3.5/15, MLv3.5/15*

ISC 19 19:31:34.2±0.9**, 1°.53N**±0°.05×**99°.70E**±0°.06**, h166**^{km}**, n21, σ1^{s}.50**/24**, mb3.2**/5**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNSI	Mandailing Nat	0.73	189	P	Pn	19 32 01.0	+2.4
MNSI				S	Sn	19 32 20.9	+3.4
PSI	Prapat	1.48	329	P	Pn	19 32 05.5	+0.6
	15nm,0.3s,baz=147,slow=8.0,SNR=7.6						
PSI				S	Sn	19 32 29.5	+0.8
	4.4nm,0.4s,baz=281,slow=20,SNR=8.9						
PSI	Prapat	1.48	329	P	Pn	19 32 05.7	+0.7
PSI				S	Sn	19 32 29.7	+1.0
PPI	Padang Panjang	2.09	160	P	Pn	19 32 13.6	+2.3
PBSI	Pulau Batu	2.12	222	P	Pn	19 32 12.7	+1.1
GSI	Gunungsitoli	2.13	264	P	Pn	19 32 13.5	+1.7
PDSI	Padang	2.54	162	P	Pn	19 32 17.7	+1.1
KCSI	Kotacane, Aceh	2.76	316	P	Pn	19 32 19.9	+0.6
SISI	Saibi	2.90	192	P	Pn	19 32 20.1	-0.9
TPTI		3.05	304	P	Pn	19 32 23.9	+1.1
IPM	Ipoh	3.22	24	P	Pn	19 32 26.7	+1.7
SNSI	Sinabang, Aceh	3.48	285	P	Pn	19 32 29.7	+1.5
KULM	Kulim	3.86	14	P	Pn	19 32 33.6	+0.5
MYKOM	Kota Tinggi	4.16	86	P	Pn	19 32 38.1	+1.2
MLSI	Meulaboh, Aceh	4.27	310	P	Pn	19 32 38.8	+0.4
PPSI	Pulau Pagai	4.27	176	P	Pn	19 32 36.6	-1.8
WRA	Warramunga Arr	40.12	124	P	P	19 38 53.4	-0.6
	0.7nm,0.6s,baz=297,slow=8.1,SNR=18						
	0.7nm,0.6s						
ASAR	Alice Springs	41.63	129	P	P	19 39 05.8	-0.6
	0.2nm,0.4s,baz=301,slow=7.5,SNR=4.5						
	0.2nm,0.4s						
SONM	Songino Array	46.49	6	P	P	19 39 44.1	-0.7
	0.3nm,0.4s,baz=193,slow=9.7,SNR=4.9						
	0.3nm,0.4s						
MKAR	Makanchi Array	47.58	344	P	P	19 39 51.9	-1.2
	0.1nm,0.3s,baz=161,slow=8.1,SNR=7.1						
	0.1nm,0.3s						
ZALV	Zalesovo Beam	53.67	349	P	P	19 40 37.1	-1.4
	1.0nm,0.4s,baz=162,slow=6.5,SNR=6.0						
	1.0nm,0.4s						

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*SJA **19** 19:45:59.0±0.8, 22°.89S×70°.42W, h56^{km}±3^{km}, ML3.4, MW3.6*

*GUC **19** 19:46:00.6±0.9, 22°.85S×70°.40W, h42^{km}±2^{km}, ML3.3*

ISC 19 19:46:00.8±1.2**, 22°.89S**±0°.02×**70°.46W**±0°.05**, h42**^{km}±9^{km}**, n34, σ1^{s}.47**/63**, 1C-7D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB05	IPOC Station P	0.24	81	⇑iP	Pn	19 46 08.5	-0.4
PB05				i S	Sn	19 46 13.9	-0.6
PB05				IAML		19 46 14.3	
	comp=E,4µm,0.3s						
PB05	IPOC Station P	0.24	81	eP	Pn	19 46 08.4	-0.4
PB05				eS	Sn	19 46 15.9	+1.4
PB05				IAML		19 46 17.3	
	comp=Z,2µm,0.3s						
PB10	IPOC Station P	0.62	188	⇓iP	Pn	19 46 13.4	+0.1
PB10				i S	Sn	19 46 22.8	+0.5
PB10	IPOC Station P	0.62	188	eP	Pn	19 46 13.4	+0.1
PB10				eS	Sn	19 46 23.5	+1.2
PB10				IAML		19 46 27.4	
	comp=Z,789nm,0.5s						
PB06	IPOC Station P	0.84	78	eP	Pn	19 46 15.8	-0.6
PB06				i S	Sn	19 46 26.4	-1.3
PB06				IAML		19 46 27.8	
	comp=N,1µm,0.4s						
PB06	IPOC Station P	0.84	78	eP	Pn	19 46 15.8	-0.6
PB06				eS	Sn	19 46 26.9	-0.8
PB06				IAML		19 46 28.0	
	comp=Z,868nm,0.1s						
PB03	IPOC Station P	1.06	38	⇓iP	Pn	19 46 19.4	-0.1
PB03				i S	Sn	19 46 32.6	-0.5
PB03				IAML		19 46 34.6	
	comp=N,1µm,0.4s						
PB03	IPOC Station P	1.06	38	eP	Pn	19 46 19.4	-0.1
PB03				eS	Sn	19 46 33.0	-0.2
PB03				IAML		19 46 34.4	
	comp=Z,1µm,0.1s						
PB07	IPOC Station P	1.28	25	⇓iP	Pn	19 46 22.4	+0.1
PB07				i S	Sn	19 46 38.5	+0.1
PB07				IAML		19 46 40.2	
	comp=N,1µm,0.3s						
PB07	IPOC Station P	1.28	25	eP	Pn	19 46 21.9	-0.5
PB07				eS	Sn	19 46 38.8	+0.4
PB07				IAML		19 46 40.3	
	comp=Z,911nm,0.5s						
PB09	IPOC Station P	1.57	46	⇓iP	Pn	19 46 27.3	+0.9
PB09				i S	Sn	19 46 46.9	+1.3
PB09				IAML		19 46 50.7	
	comp=E,396nm,0.6s						
PB09	IPOC Station P	1.57	46	eP	Pn	19 46 21.6	-4.7
PB09				eS	Sn	19 46 47.1	+1.6
PB09				IAML		19 46 48.8	
	comp=Z,336nm,0.3s						
PB02	IPOC Station P	1.65	19	⇓iP	Pn	19 46 27.4	0.0
PB02				i S	Sn	19 46 48.5	+1.1
PB02				IAML		19 46 53.5	
	comp=E,1µm,0.3s						
PB02	IPOC Station P	1.65	19	eP	Pn	19 46 27.5	0.0
PB02				IAML		19 46 51.3	
	comp=Z,732nm,0.5s						
PB14	IPOC Station P	1.73	178	⇓iP	Pn	19 46 28.5	-0.2
PB14				i S	Sn	19 46 48.7	-1.0
PB14	IPOC Station P	1.73	178	eP	Pn	19 46 28.4	-0.2
PB14				eS	Sn	19 46 49.0	-0.7
PB14				IAML		19 46 49.5	
	comp=Z,237nm,0.2s						
PB01	IPOC Station P	2.05	26	⇓iP	Pn	19 46 33.4	+0.5
PB01				i S	Sn	19 46 56.9	-0.4
PB01				IAML		19 47 10.1	
	comp=N,255nm,0.2s						
PB01	IPOC Station P	2.05	26	eP	Pn	19 46 32.8	-0.1
PB01				IAML		19 47 02.0	
	comp=Z,185nm,0.1s						
PATCX	Punta Patache	2.08	8	eP	Pn	19 46 32.8	-0.6
PATCX				i S	Sn	19 46 56.6	-1.4
PATCX	Punta Patache	2.08	8	eP	Pn	19 46 33.0	-0.3
PATCX				eS	Sn	19 46 58.2	+0.1
PATCX				IAML		19 47 10.6	
	comp=Z,141nm,0.7s						
AF01	San Pedro de A	2.11	92	eS	Sn	19 47 00.8	+1.8
AF01				IAML		19 47 13.1	
	comp=N,891nm,0.4s						
AF01	San Pedro de A	2.11	92	eP	Pn	19 46 33.4	-0.5
AF01				eS	Sn	19 46 58.9	-0.1
AF01				IAML		19 47 25.4	
	comp=Z,579nm,0.8s						
TA01	Diego Aracena	2.33	6	eP	Pn	19 46 35.9	-0.8
TA01				i S	Sn	19 47 01.5	-2.5
TA01	Diego Aracena	2.33	6	eP	Pn	19 46 36.1	-0.5
TA01				eS	Sn	19 47 05.2	+1.1
TA01				IAML		19 47 17.4	
	comp=Z,141nm,0.7s						
GO02	Mina Guanaco	2.40	161	eP	Pn	19 46 39.0	+1.1
GO02				i S	Sn	19 47 07.5	+1.3
GO02	Mina Guanaco	2.40	161	eP	Pn	19 46 39.1	+1.2
GO02				eS	Sn	19 47 08.2	+2.0
GO02				IAML		19 47 15.6	
	comp=Z,182nm,0.7s						
PX03	IPOC Station P	2.59	17	eP	Pn	19 46 40.0	-0.4
PX03				eS	Sn	19 47 09.5	-1.3
HMBC	Humberstone	2.66	12	eP	Pn	19 46 40.7	-0.5
HMBC				eS	Sn	19 47 11.3	-0.9
HMBC	Humberstone	2.66	12	eP	Pn	19 46 41.1	-0.2
HMBC				eS	Sn	19 47 18.7	+6.4
HMBC				IAML		19 47 26.6	
	comp=Z,147nm,0.6s						
PB11	IPOC Station P	3.20	14	eP	Pn	19 46 48.0	-0.8
PB11				eS	Sn	19 47 29.3	+3.4
PB11				IAML		19 47 45.8	
	comp=Z,86nm,0.7s						
AC01	Pan de Azucar	3.25	182	eP	Pn	19 46 47.4	-1.8
AC01				eS	Sn	19 47 24.7	-2.0
AC01				IAML		19 47 48.6	
	comp=Z,47nm,0.7s						
GO01	Chusmiza	3.42	20	eP	Pn	19 46 53.1	+1.1
GO01				eS	Sn	19 47 47.1	+16
GO01				IAML		19 47 48.6	
	comp=Z,81nm,0.3s						
PB12	IPOC Station P	4.26	2	eP	Pn	19 47 02.4	-0.9
PB12				eS	Sn	19 47 51.7	-0.1
PB12				IAML		19 48 15.7	
	comp=Z,27nm,0.6s						
PB16	IPOC Station P	4.62	11	eP	Pn	19 47 08.7	0.0
PB16				IAML		19 48 34.1	
	comp=Z,28nm,1.3s						

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*NEIC **19** 19:57:10.1±2.2, 43°.51N±0°.05×105°.42W±0°.06, h0^{km}±1^{km}, ML2.8/38, Error ellipse: s-maj=10.8km s-min=4.4km az=320.0*

*IDC **19** 19:57:10.1±2.0, 43°.90N×105°.62W, h0^{km}, mbtmp3.3/2, ML3.2/2, Error ellipse: s-maj=55.9km s-min=12.1km az=150.0*

ISC 19 19:57:06.5±1.0**, 43°.75N**±0°.05×**105°.48W**±0°.05**, h0**^{km}**, n21, σ1^{s}.66**/21**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.11**	**70**	Pg	**Pn**	**19 57 32.5**	**+3.0**
K22A	**Casper**	**1.34**	**215**	Pg	**Pn**	**19 57 32.8**	**+0.2**
LAO	**LASA Array**	**2.99**	**350**	Pn	**Pg**	**19 58 02.6**	**-1.2**
RLMT	**Red Lodge**	**3.04**	**298**	Pn	**Pg**	**19 58 04.5**	**-0.4**
RLMT				IAML		19 59 30.4	
	15nm,4.6s						
RLMT				IAML		19 59 58.8	
	24nm,5.0s						
BW06	**Boulder Array**	**3.14**	**253**	Pn	**Pb**	**19 58 02.0**	**-1.3**
BW06				IAML		19 58 49.2	
	14nm,0.6s						
PD31	**Pinedale Array**	**3.14**	**253**	Pn	**Pb**	**19 58 03.2**	**-0.1**
PDAR	**Pinedale Array**	**3.14**	**253**	Pn	**Pb**	**19 58 03.5**	**+0.2**
	2.2nm,0.3s,baz=76,slow=14,SNR=6.8						
PDAR				Lg	Lg	19 58 46.5	
	3.7nm,0.3s,baz=69,slow=37,SNR=2.1						
	1.4nm,0.4s						
PDAR	**Pinedale Array**	**3.14**	**253**		**Pg**	**19 58 07.2**	**+0.5**
PDAR					**Sg**	**19 58 46.1**	**-1.2**
YNE	**Yellowstone No**	**3.48**	**293**	Pn	**Pb**	**19 58 09.3**	**+0.1**
YNE				IAML		19 59 12.7	
	comp=N,20nm,0.5s						
YNE				IAML		19 59 16.9	
	comp=E,18nm,0.4s						
HAYD	**Hayden**	**3.49**	**203**		**Pb**	**19 58 07.8**	**-1.5**
HAYD				IAML		19 58 55.5	
	comp=E,14nm,2.6s						
HAYD				IAML		19 59 01.4	
	comp=N,18nm,3.8s						
YMP	**Mirror Lake Pl**	**3.50**	**288**	Pn	**Pb**	**19 58 08.3**	**-1.4**
LOHW	**Long Hollow**	**3.72**	**270**		**Pb**	**19 58 13.9**	**+0.7**
LOHW				IAML		19 59 13.0	
	comp=N,10.0nm,2.6s						
LOHW				IAML		19 59 26.7	
	comp=N,11nm,4.8s						
OGNE	**Ogallala**	**3.79**	**136**	Pn	**Pn**	**19 58 06.3**	**0.0**
MOOW	**Moose Ponds**	**3.82**	**272**	Pn	**Pb**	**19 58 11.8**	**-3.1**
YPP	**Pitchstone Pla**	**3.88**	**280**	Pn	**Pb**	**19 58 14.2**	**-1.7**
YPP				IAML		19 59 10.0	
	comp=E,10nm,4.2s						
YPP				IAML		20 00 42.0	
	comp=N,9.6nm,2.9s						
FXWY	**Fox Creek**	**4.03**	**270**		**Pn**	**19 58 12.4**	**+2.8**
FXWY				IAML		20 00 30.5	
	comp=N,9.1nm,4.8s						
YHL	**Hebgen Lake**	**4.24**	**287**		**Pb**	**19 58 19.3**	**-2.8**
YHL				IAML		19 59 01.8	
	comp=E,11nm,4.3s						
YHL				IAML		20 01 04.2	
	comp=N,16nm,4.8s						
BSUT	**Blindstream Ca**	**5.07**	**233**	Pn	**Pn**	**19 58 24.3**	**+0.2**
BSUT				IAML		20 01 41.1	
	comp=E,9.8nm,4.6s						
P18A	**Preston Nutter**	**5.45**	**223**	Pn	**Pn**	**19 58 30.5**	**+1.3**
I10CA	**LAC DU BONNET**	**9.13**	**42**	I	I	20 49 30.0	
	baz=222,slow=266,SNR=3.6						
ULM	**Lac du Bonnet**	**9.23**	**42**	Pn	**Pn**	**19 59 21.8**	**+0.9**
	comp=E,0.5nm,0.3s,baz=233,slow=8.0,SNR=2.4						
	comp=E,1.3nm,0.4s						

IDC ***19*** *20:13:02.7±0.7, 18°.65N×145°.55E, $h176^{km}\pm 6^{km}$, mb3.4/11, mbtmp3.9/13, Error ellipse: s-maj=17.5km s-min=10.1km az=92.0*

NEIC ***19*** *20:13:03.8±2.0, 18°.66N±0°.08×145°.5E±0°.1, $h178^{km}\pm 6^{km}$, mb4.5/51, Error ellipse: s-maj=17.8km s-min=11.3km az=97.0*

ISC 19 20:13:03.2±0.5**, 18°.64N**±0°.06×**145°.5E**±0°.1**, $h178^{km}$, n68, $\sigma 0^{s}.92$**/75**, mb4.4**/38**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.06**	**187**	P	**Pn**	**20 14 18.3**	**+0.3**
	27nm,0.3s,baz=0.0,slow=20,SNR=1.4						
GUMO				S	**Sn**	**20 15 15.7**	**-1.0**
	43nm,0.3s,baz=30,slow=20,SNR=1.7						
PATS	**Pohnpei**	**17.09**	**132**	P	**Pn**	**20 16 53.0**	**+1.2**
MJAR	**Matsushiro Arr**	**18.97**	**342**	P	**P**	**20 17 10.1**	**-0.9**
	0.6nm,0.4s,baz=170,slow=9.6,SNR=4.3						
MJAR	**Matsushiro Arr**	**18.97**	**342**	IAmb	IAmb	20 17 19.4	
	comp=Z,4.5nm,1.0s						
MANU	**Manus Island**	**20.63**	**175**	P	**P**	**20 17 28.2**	**-0.8**
MANU				IAmb	IAmb	20 17 30.4	
	comp=Z,22nm,0.9s						
FAKI	**Fak Fak**	**25.11**	**213**	P	**P**	**20 18 09.9**	**-1.9**
FAKI				IAmb	IAmb	20 18 25.0	
	comp=Z,21nm,1.1s						
COEN	**Coen**	**32.48**	**184**	P	**P**	**20 19 16.2**	**-0.8**
COEN				IAmb	IAmb	20 19 56.9	
	comp=Z,16nm,1.1s						
MTN	**Manton Dam**	**34.36**	**205**	P	**P**	**20 19 33.8**	**+0.5**
MTN				IAmb	IAmb	20 19 34.0	
	comp=Z,9.2nm,0.7s						
SBUM	**Sibu**	**36.38**	**248**		**P**	**20 19 52.9**	**+2.2**
KNRA	**Kununurra**	**37.89**	**207**	P	**P**	**20 20 04.2**	**+0.9**
KNRA				IAmb	IAmb	20 20 05.3	
	comp=Z,12nm,0.8s						
WB0	**Warramunga Arr**	**39.70**	**197**		**P**	**20 20 18.1**	**-0.3**
WB0				IAmb	IAmb	20 20 19.6	
	comp=Z,18nm,1.1s						
WR8	**Warramunga Arr**	**39.86**	**196**		**P**	**20 20 19.7**	**+0.1**
WR8				IAmb	IAmb	20 20 21.0	
	comp=Z,18nm,1.1s						
WRAB	**Tennant Creek**	**39.88**	**197**	P	**P**	**20 20 19.1**	**-0.7**
WRAB				IAmb	IAmb	20 20 20.6	
	comp=Z,16nm,1.0s						
WRA	**Warramunga Arr**	**39.89**	**197**	P	**P**	**20 20 19.5**	**-0.4**
	comp=Z,10nm,0.9s,baz=17,slow=8.2,SNR=42						
WRA				PcP	**PcP**	**20 22 21.8**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=25,slow=3.5,SNR=2.5						
	comp=Z,10nm,0.9s						
WRA	**Warramunga Arr**	**39.89**	**197**		**P**	**20 20 17.8**	**-2.0**
FITZ	**Fitzroy Crossi**	**41.42**	**209**		**P**	**20 20 33.2**	**+0.8**
SONM	**Songino Array**	**43.10**	**321**	P	**P**	**20 20 45.3**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=126,slow=8.4,SNR=2.2						
	comp=Z,0.2nm,0.4s						
AS31	**Alice Springs**	**43.55**	**196**		**P**	**20 20 49.7**	**+0.1**
ASAR	**Alice Springs**	**43.56**	**196**	P	**P**	**20 20 49.4**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=23,slow=9.7,SNR=27						
ASAR				PcP	**PcP**	**20 22 34.2**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=16,slow=4.5,SNR=2.1						
	comp=Z,2.5nm,0.8s						
ASAR	**Alice Springs**	**43.56**	**196**	P	**P**	**20 20 49.1**	**-0.5**
CMAR	**Chiang Mai Arr**	**44.08**	**278**	P	**P**	**20 20 54.3**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=88,slow=8.6,SNR=5.9						
	comp=Z,0.4nm,0.3s						
YAK	**Yakutsk**	**44.75**	**349**	P	**P**	**20 20 58.6**	**0.0**
YAK				IAmb	IAmb	20 21 32.7	
	comp=Z,8.9nm,1.1s						
GSI	**Gunungsitoli**	**50.07**	**256**	P	**P**	**20 21 40.8**	**+0.5**
FORT	**Forrest**	**51.93**	**199**	P	**P**	**20 21 54.7**	**+0.9**
FORT				IAmb	IAmb	20 21 58.3	
	comp=Z,10.0nm,1.0s						
BBOO	**Buckleboo**	**51.96**	**190**	P	**P**	**20 21 53.5**	**-0.6**
MORW	**Morawa**	**55.33**	**212**	P	**P**	**20 22 18.1**	**-0.5**
O15K	**Ungalikthiuk R**	**56.29**	**30**	P	**P**	**20 22 26.3**	**+1.2**
N15K	**Kwethluk River**	**56.54**	**29**	P	**P**	**20 22 28.3**	**+1.5**
COCO	**West Island**	**56.97**	**241**	P	**P**	**20 22 31.2**	**+0.8**
O16K	**Kokwok River B**	**57.27**	**30**	P	**P**	**20 22 32.5**	**+0.6**
L16K	**Owhat River**	**57.42**	**28**	P	**P**	**20 22 33.5**	**+0.6**
L16K				IAmb	IAmb	20 22 37.6	
	comp=Z,13nm,1.4s						
J16K	**Anvik River**	**57.58**	**26**	P	**P**	**20 22 35.3**	**+1.3**
J16K				IAmb	IAmb	20 23 16.0	
	comp=Z,10nm,1.4s						
ZALV	**Zalesovo Beam**	**57.97**	**323**	P	**P**	**20 22 35.8**	**-1.2**
	comp=Z,0.3nm,0.4s,baz=103,slow=6.4,SNR=1.8						
	comp=Z,0.3nm,0.4s						
J17K	**VABM Dome**	**58.25**	**26**	P	**P**	**20 22 40.4**	**+1.7**
J17K				IAmb	IAmb	20 22 42.4	
	comp=Z,11nm,1.3s						
C16K	**Lisburne Hills**	**58.27**	**19**	P	**P**	**20 22 39.5**	**+0.8**
C16K				IAmb	IAmb	20 23 21.2	
	comp=Z,4.4nm,1.2s						
MKAR	**Makanchi Array**	**58.40**	**314**	P	**P**	**20 22 39.1**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=86,slow=7.6,SNR=7.3						
MKAR				pP	**pP**	**20 23 20.6**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=97,slow=7.9,SNR=3.2						
	comp=Z,0.4nm,0.5s						
H17K	**Granite Mounta**	**58.55**	**24**	P	**P**	**20 22 42.1**	**+1.3**
MAKZ	**Makanchi**	**58.61**	**314**	P	**P**	**20 22 42.0**	**+0.5**
N18K	**Kilae Creek**	**58.67**	**29**	P	**P**	**20 22 43.1**	**+1.4**
H18K	**Honhosa River**	**59.24**	**24**	P	**P**	**20 22 46.2**	**+0.7**
H18K				IAmb	IAmb	20 23 24.7	
	comp=Z,5.8nm,1.4s						
G18K	**Tagagawik**	**59.43**	**23**	P	**P**	**20 22 46.9**	**0.0**
C18K	**Utukok River**	**59.78**	**20**	P	**P**	**20 22 49.8**	**+0.6**
C19K	**Lookout Ridge**	**60.51**	**20**	P	**P**	**20 22 55.6**	**+1.5**
C19K				IAmb	IAmb	20 23 13.1	
	comp=Z,4.0nm,1.2s						
PPLA	**Purkeypile**	**61.02**	**28**	P	**P**	**20 22 58.7**	**+0.9**
PPLA				IAmb	IAmb	20 23 30.1	
	comp=Z,16nm,1.4s						
SKT	**Skwentna**	**61.06**	**29**	P	**P**	**20 22 57.9**	**-0.1**
SKT				IAmb	IAmb	20 23 17.9	
	comp=Z,9.6nm,1.4s						
KURK	**Kurchatov**	**61.22**	**318**	P	**P**	**20 22 59.1**	**-0.1**
KURK	**Kurchatov**	**61.22**	**318**		**PcP**	**20 23 40.1**	**0.0**
KURBB	**Kurchatov Arra**	**61.27**	**318**	P	**P**	**20 22 59.1**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=96,slow=7.4,SNR=12						
KURBB				pP	**pP**	**20 23 40.1**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=95,slow=6.9,SNR=4.2						
	comp=Z,0.4nm,0.4s						
D20K	**Etivluk River**	**61.31**	**21**	P	**P**	**20 23 00.2**	**+0.7**
D20K				IAmb	IAmb	20 23 19.2	
	comp=Z,4.4nm,1.4s						
SLKM	**Skilak Lake**	**61.31**	**31**	P	**P**	**20 22 59.7**	**0.0**
SLKM				IAmb	IAmb	20 23 01.1	
	comp=Z,14nm,1.3s						
KTH	**Kantishna Hill**	**61.75**	**27**	P	**P**	**20 23 03.1**	**+0.5**
KTH				IAmb	IAmb	20 23 26.7	
	comp=Z,9.9nm,1.4s						
BPAW	**Bear Paw Mtn.**	**61.87**	**26**	P	**P**	**20 23 03.9**	**+0.6**
BPAW				IAmb	IAmb	20 23 22.2	
	comp=Z,8.0nm,1.4s						
TRF	**Thorofare Moun**	**62.00**	**27**	P	**P**	**20 23 04.4**	**0.0**
GHO	**Glory Hole Cre**	**62.21**	**29**	P	**P**	**20 23 05.5**	**-0.3**
GHO				IAmb	IAmb	20 23 34.2	
	comp=Z,16nm,1.4s						
PWL	**Port Wells**	**62.30**	**30**	P	**P**	**20 23 06.4**	**+0.2**
KNK	**Knik Glacier**	**62.35**	**30**	P	**P**	**20 23 06.6**	**0.0**
SML	**Sawmill**	**62.49**	**29**	P	**P**	**20 23 07.0**	**-0.6**
SCM	**Sheep Creek Mo**	**62.97**	**29**	P	**P**	**20 23 10.9**	**+0.2**
SCM				IAmb	IAmb	20 23 16.1	
	comp=Z,9.6nm,1.0s						
KLU	**Klutina**	**63.56**	**30**	P	**P**	**20 23 14.1**	**-0.5**
KLU				IAmb	IAmb	20 23 26.4	
	comp=Z,11nm,1.2s						
IL31		**63.76**	**26**	P	**P**	**20 23 15.2**	**-0.5**
IL31				IAmb	IAmb	20 23 48.8	
	comp=Z,4.6nm,1.3s						
ILAR	**Eielson Array**	**63.76**	**26**	P	**P**	**20 23 15.1**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=248,slow=5.6,SNR=12						
ILAR				pP	**pP**	**20 23 56.6**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=235,slow=5.3,SNR=2.2						
	comp=Z,0.7nm,0.6s						
D25K	**Kavik River**	**65.00**	**21**	P	**P**	**20 23 24.2**	**+0.4**
D25K				IAmb	IAmb	20 23 37.4	
	comp=Z,5.7nm,1.4s						
BVAR	**Borovoye Array**	**66.43**	**320**	P	**P**	**20 23 32.9**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=91,slow=7.6,SNR=9.4						
BVAR				pP	**pP**	**20 24 14.7**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=100,slow=6.7,SNR=2.9						
	comp=Z,0.9nm,0.5s						
YKA	**Yellowknife Ar**	**78.11**	**28**	P	**P**	**20 24 42.0**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=291,slow=5.8,SNR=9.5						
	comp=Z,0.5nm,0.6s						
NVAR	**Mina Array Bea**	**83.29**	**52**	P	**P**	**20 25 10.9**	**+0.4**
	comp=Z,1.2nm,0.6s,baz=274,slow=5.9,SNR=6.6						
NVAR				pP	**pP**	**20 25 53.2**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=269,slow=5.5,SNR=3.6						
	comp=Z,1.2nm,0.6s						
FINES	**FINESS Array B**	**86.88**	**335**	P	**P**	**20 25 24.1**	**-3.4**
	comp=Z,1.1nm,0.8s,baz=55,slow=5.3,SNR=4.6						
LPAZ	**La Paz**	**147.82**	**91**	PKPbc	**PKPdf**	**20 32 27.5**	**+1.9**
	comp=Z,1.4nm,0.6s,baz=301,slow=2.0,SNR=5.5						
LPAZ	**La Paz**	**147.82**	**91**		**PKPbc**	**20 32 29.2**	**+0.4**

BJI ***19*** *20:28:36.7, 30°.30N×131°.39E, $h46^{km}$, mB4.8/18, mb4.5/52, Ms4.4/39, Ms7 4.3/40*

MOS ***19*** *20:28:38.3±0.9, 30°.59N×131°.09E, $h34^{km}$, mb4.9/36, Error ellipse: s-maj=8.7km s-min=5.3km az=112.0*

JMA ***19*** *20:28:39.7±0.1, 30°.6N±0°.3×131°.2E±0°.7, $h30^{km}$, MD4.5/37, MW4.7/37, NEAR TANEGASHIMA ISLAND*

JMA Felt II J1 at NEAR TANEGASHIMA ISLAND .

NIED ***19*** *20:28:39.7, 30°.58N×131°.16E, $h30^{km}$, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.86; $M_{\theta\theta}$-0.48; $M_{\phi\phi}$-0.38; $M_{r\theta}$0.31; $M_{\theta\phi}$-0.36; $M_{\phi r}$0.48; Fault plane solution: $M_0$1.00000×10^{16} NP1: ϕ_s236.00000°, δ29.00000°, λ104.00000°. NP2: ϕ_s40.00000°, δ62.00000°, λ83.00000°.*

NEIC ***19*** *20:28:41.7±1.5, 30°.64N±0°.06×131°.04E±0°.08, $h42^{km}\pm 6^{km}$, mb4.9/121 Error ellipse: s-maj=9.8km s-min=8.1km az=94.0*

IDC ***19*** *20:28:42.1±1.6, 30°.62N×131°.01E, $h53^{km}\pm 14^{km}$, mb4.1/30, mbtmp4.3/35, ML3.5/5, MS4.1/48, Error ellipse: s-maj=14.2km s-min=9.7km az=84.0*

ISC 19 20:28:39.8±0.4**, 30°.60N**±0°.03×**131°.06E**±0°.04**, $h32^{km}$**$\pm 2^{km}$**, $h32^{km}$:pP-P, n367, $\sigma 1^{s}.39$**/342**, mb4.8**/136**, MS4.2**/54**, 20C-16D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTN	**Tanegashima 3**	**0.09**	**306**	⇓P	**Pn**	**20 28 45.4**	**0.0**
JTN				⇓*e*S	**Sb**	**20 28 50.1**	**+0.9**
JTN	**Tanegashima 3**	**0.09**	**306**	A	A	20 28 45.4	
	comp=N,265nm,1.2s,comp=E,229nm,1.2s						
JMTN	**Minamitane**	**0.25**	**214**	⇓*i*P	**Pb**	**20 28 46.8**	**0.0**
JMTN				⇓*e*S	**Sn**	**20 28 52.1**	**+0.1**
JMTN	**Minamitane**	**0.25**	**214**	A	A	20 28 46.8	
	comp=N,88nm,1.5s,comp=E,115nm,1.3s						
JTSR	**Tashiro 2**	**0.57**	**348**	⇓P	**Pn**	**20 28 51.7**	**0.0**
JTSR				⇓*e*S	**Sn**	**20 28 59.9**	**-0.2**
JTSR	**Tashiro 2**	**0.57**	**348**	A	A	20 28 51.7	
	comp=N,30nm,1.1s,comp=E,45nm,1.5s						
JYAK	**Yakushimahirau**	**0.60**	**233**	⇓*i*P	**Pb**	**20 28 52.0**	**+0.1**
JYAK				⇓S	**Sn**	**20 29 01.4**	**+0.7**
JYAK	**Yakushimahirau**	**0.60**	**233**	A	A	20 28 52.0	
	comp=N,50nm,0.5s,comp=E,49nm,0.5s						
JKC	**Kuchinoerabu**	**0.76**	**259**	⇓*i*P	**Pn**	**20 28 55.0**	**+0.8**
JKC				⇓*e*S	**Sn**	**20 29 05.8**	**+1.2**
JNAR	**Kushima--Naru**	**0.94**	**11**	⇓*i*P	**Pb**	**20 28 57.3**	**-0.2**
JNAR				⇓S	**Sn**	**20 29 09.3**	**+0.3**
JNAR	**Kushima--Naru**	**0.94**	**11**	A	A	20 28 57.3	
	comp=N,32nm,2.0s,comp=E,26nm,1.0s						
JSU	**Suzuyama**	**1.04**	**330**	Pn	**Pb**	**20 28 58.9**	**-0.4**
JSU	**Suzuyama**	**1.04**	**330**	P	**Pb**	**20 28 58.9**	**-0.4**
JSU	**Suzuyama**	**1.04**	**330**	S	**Sb**	**20 29 16.2**	**+3.6**
JSU	**Suzuyama**	**1.04**	**330**	⇓P	**Pb**	**20 28 58.9**	**-0.4**
JSU				⇓*e*S	**Sb**	**20 29 13.6**	**+1.0**
JSU	**Suzuyama**	**1.04**	**330**	A	A	20 28 58.9	
	comp=N,14nm,2.4s,comp=E,22nm,1.3s						
JNKG	**Nichinankitago**	**1.09**	**14**	P	**Pb**	**20 28 59.9**	**-0.2**
JNKG	**Nichinankitago**	**1.09**	**14**	A	A	20 28 59.9	
	comp=N,24nm,2.9s,comp=E,26nm,2.4s						
JNN	**Nakanoshima**	**1.28**	**234**	P	**Pb**	**20 29 02.4**	**-0.8**
JNN	**Nakanoshima**	**1.28**	**234**	A	A	20 29 02.4	
	comp=N,16nm,0.5s,comp=E,21nm,1.1s						
JTZ	**Takazaki**	**1.29**	**1**	P	**Pb**	**20 29 02.8**	**-0.7**
JTZ	**Takazaki**	**1.29**	**1**	A	A	20 29 02.8	
	comp=N,24nm,1.5s,comp=E,19nm,1.8s						
JZO	**Okuchi**	**1.58**	**346**	A	A	20 29 07.3	
	comp=N,8.0nm,1.4s,comp=E,6.0nm,1.5s						
JTSN	**Tsuno**	**1.68**	**13**	A	A	20 29 08.1	
	comp=N,6.0nm,3.5s,comp=E,12nm,3.2s						
JHHC	**Hyugahichiya**	**1.90**	**15**	A	A	20 29 11.2	
	comp=N,8.0nm,3.2s,comp=E,9.0nm,2.5s						
JIU3	**Izumi3**	**1.95**	**354**	A	A	20 29 12.4	
	comp=N,4.0nm,5.7s,comp=E,5.0nm,2.5s						
JHD	**Hondo**	**2.02**	**337**	A	A	20 29 13.7	
	comp=N,7.0nm,3.0s,comp=E,9.0nm,2.8s						
JKIT	**Kitakata**	**2.04**	**9**	A	A	20 29 13.4	
	comp=N,5.0nm,5.9s,comp=E,5.0nm,1.3s						
JTA	**Tamana**	**2.39**	**349**	A	A	20 29 18.9	
	comp=N,3.0nm,3.1s,comp=E,3.0nm,5.3s						
JZK	**Kikaishima**	**2.47**	**203**	A	A	20 29 19.4	
	comp=N,16nm,2.8s,comp=E,26nm,1.9s						
JNU	**Nakatsue**	**2.51**	**357**	P	**Pn**	**20 29 20.5**	**+2.1**
	comp=E,17nm,0.3s,baz=127,slow=2.3,SNR=74						
JNU				S	**Sb**	**20 29 50.9**	**-3.9**
	comp=E,663nm,0.9s,baz=174,slow=5.0,SNR=4.4						
	comp=E,102nm,0.4s						
JNU	**Nakatsue**	**2.51**	**357**		**Pn**	**20 29 19.6**	**+1.1**
JNU	**Nakatsue**	**2.51**	**357**	P	**Pn**	**20 29 20.2**	**+1.8**
JUS	**Usuki**	**2.52**	**13**	A	A	20 29 20.3	
	comp=N,4.0nm,7.6s,comp=E,5.0nm,1.3s						
JBEP	**Beppuamama**	**2.74**	**6**	A	A	20 29 23.5	
	comp=N,8.0nm,1.9s,comp=E,9.0nm,1.8s						
JKI	**Kunimi**	**3.05**	**8**	A	A	20 29 27.9	
	comp=N,4.0nm,2.3s,comp=E,3.0nm,2.1s						
JMN	**Monobe**	**3.93**	**37**		**Pn**	**20 29 38.4**	**+0.5**
JMN	**Monobe**	**3.93**	**37**	P	**Pn**	**20 29 38.4**	**+0.5**
JTU	**Tsushima**	**4.15**	**341**	P	**Pn**	**20 29 43.1**	**+2.2**
JOW	**Kunigami**	**4.48**	**214**	P	**Pn**	**20 29 46.6**	**+1.1**
	comp=E,7.7nm,0.3s,baz=134,slow=23,SNR=18						
JOW				S	**Sn**	**20 30 32.4**	**-4.1**
	comp=E,124nm,0.4s,baz=80,slow=21,SNR=5.8						
	comp=E,23nm,0.3s						
JOW	**Kunigami**	**4.48**	**214**	P	**Pn**	**20 29 43.1**	**-2.4**
TJN	**Taejon**	**6.53**	**333**	P	**Pn**	**20 30 16.7**	**+3.1**
INU	**Inuyama**	**6.89**	**45**		**Pn**	**20 30 19.8**	**+1.3**
INU	**Inuyama**	**6.89**	**45**	P	**Pn**	**20 30 20.0**	**+1.5**
JGF	**Kuroka**	**7.26**	**45**		**Pn**	**20 30 24.1**	**+0.4**
JGF	**Kuroka**	**7.26**	**45**	P	**Pn**	**20 30 24.9**	**+1.2**
KSAR	**Wonju Array Be**	**7.31**	**340**	Pn	**Pn**	**20 30 24.2**	**-0.1**
KSAR	**Wonju Array Be**	**7.31**	**340**	P	**Pn**	**20 30 24.2**	**-0.1**
KSRS	**Korea Array**	**7.31**	**340**	P	**Pn**	**20 30 27.4**	**+3.1**
	comp=E,0.9nm,0.3s,baz=162,slow=14,SNR=14						
KSRS				LR	LR	20 33 29.1	
	comp=E,1µm,20.4s,baz=160,slow=39						
	comp=E,9.6nm,0.9s						
JHJ	**Hachijo jima 2**	**7.83**	**69**	LR	LR	20 33 23.4	
	comp=E,418nm,19.2s,baz=296,slow=36						
MAJO	**Matsushiro**	**8.40**	**43**		**Pn**	**20 30 39.9**	**+0.6**
MAJO	**Matsushiro**	**8.40**	**43**	P	**Pn**	**20 30 40.4**	**+1.1**
MAJO	**Matsushiro**	**8.40**	**43**	*i* P	**Pn**	**20 30 40.1**	**+0.8**
MJAR	**Matsushiro Arr**	**8.40**	**43**	P	**Pn**	**20 30 40.2**	**+0.9**
	comp=E,0.2nm,0.3s,baz=242,slow=14,SNR=12						
	comp=E,2.4nm,0.5s						
MJB9	**Matsu-Tunnel**	**8.40**	**43**		**Pn**	**20 30 40.9**	**+1.5**
SSE	**Sheshan**	**8.50**	**276**	P	**Pn**	**20 30 40.6**	**0.0**
SSE				S	**Sn**	**20 32 16.6**	**+1.1**
SSE				pmax	pmax		
	comp=Z,17nm,0.7s						
SSE				pmax	pmax		
	comp=Z,190nm,5.0s						
SSE				LR	LR		
	comp=N,290nm,18.9s						
SSE				LR	LR		
	comp=E,470nm,19.6s						
JCJ	**Chichijima**	**10.36**	**107**	LR	LR	20 34 23.3	
	comp=E,495nm,20.8s,baz=263,slow=33						
NJ2	**Nanjing**	**10.54**	**281**	*e*P	**Pn**	**20 31 08.9**	**+0.4**
NJ2				pmax	pmax		
	comp=E,14nm,0.5s						
NJ2				pmax	pmax		
	comp=E,260nm,6.2s						
NJ2				LR	LR		
	comp=E,770nm,15.6s						
NJ2				LR	LR		
	comp=E,1µm,15.6s						
NJ2				LR	LR		
	comp=E,1µm,16.6s						
DL2	**Dalian**	**11.34**	**319**	P	**Pn**	**20 31 15.3**	**-4.2**
DL2				S	**Sn**	**20 33 18.3**	**-6.7**
DL2				pmax	pmax		
	comp=Z,34nm,1.2s						
DL2				pmax	pmax		
	comp=Z,210nm,5.0s						
DL2				LR	LR		
	comp=N,1µm,16.6s						
DL2				LR	LR		
	comp=E,590nm,16.6s						
DL2				LR	LR		
	comp=Z,2µm,15.1s						
TIA	**Tai'an**	**12.91**	**299**	P	P	20 31 46.5	-4.8
TIA				pmax	pmax		
	comp=Z,12nm,1.0s						
TIA				LR	LR		
	comp=Z,690nm,18.8s						
TIA				LR	LR		
	comp=Z,1µm,15.9s						
TIA				LR	LR		
	comp=Z,1µm,17.6s						
USRK	**Ussuriysk Ar.**	**13.59**	**3**	P	**P**	**20 32 00.8**	**+2.0**
	comp=Z,16nm,0.8s,baz=178,slow=11,SNR=16						
CN2	**Changchun**	**13.90**	**343**	*e*P	**P**	**20 32 04.8**	**+2.5**
CN2				*e*S	S	20 34 38.8	-10
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2				pmax	pmax		
	comp=Z,400nm,6.0s						
CN2				LR	LR		
	comp=N,1µm,17.0s						
CN2				LR	LR		
	comp=E,700nm,17.0s						
CN2				LR	LR		
	comp=Z,2µm,16.1s						
HNS	**HongShan**	**15.15**	**301**	⇓P	**P**	**20 32 16.8**	**+0.7**
HNS				S	**Sn**	**20 35 06.6**	**+8.5**
HNS				pmax	pmax		
	comp=Z,16nm,1.1s						
HNS				LR	LR		
	comp=Z,790nm,15.9s						
HNS				LR	LR		
	comp=Z,800nm,16.7s						
HNS				LR	LR		
	comp=Z,950nm,15.9s						
BJT	**Baijiatuau**	**15.34**	**312**	P	**P**	**20 32 17.7**	**-0.6**
BJT	**Baijiatuau**	**15.34**	**312**	P	**P**	**20 32 17.7**	**-0.6**
BJT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BNX	**BinXian**	**15.38**	**350**	⇑P	**P**	**20 32 19.0**	**+0.4**
BNX				pmax	pmax		
	comp=Z,18nm,1.1s						
LYN	**LuoYang**	**16.16**	**289**	*e*P	**P**	**20 32 28.1**	**+0.8**
LYN				pP	sP	20 32 37.9	-2.1
LYN				pmax	pmax		
	comp=Z,16nm,0.6s						
LYN				pmax	pmax		
	comp=Z,220nm,5.8s						
LYN				LR	LR		
	comp=Z,570nm,12.4s						
LYN				LR	LR		
	comp=Z,2µm,12.7s						
LYN				LR	LR		
	comp=Z,3µm,16.5s						
ASAJ	**Asahikawa**	**16.29**	**31**	P	**Pn**	**20 32 25.7**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=204,slow=17,SNR=4.3						
ASAJ				LR	LR	20 38 47.3	
	comp=Z,468nm,20.3s,baz=224,slow=37						
	comp=Z,8.6nm,1.1s						
JKA	**Kamikawa-asahi**	**16.29**	**31**	Pn	**Pn**	**20 32 26.4**	**+0.4**
HEH	**HeiHe**	**19.82**	**353**	*e*P	**Pn**	**20 33 08.8**	**-0.4**
HEH				pmax	pmax		
	comp=Z,23nm,0.8s						
HEH				LR	LR		
	comp=Z,410nm,11.7s						
HEH				LR	LR		
	comp=Z,340nm,11.8s						
HEH				LR	LR		
	comp=Z,440nm,12.0s						
HILR	**Hailar Array B**	**20.77**	**339**	P	**P**	**20 33 18.5**	**+0.6**
	comp=Z,4.9nm,0.6s,baz=156,slow=8.1,SNR=5.4						
	comp=Z,4.9nm,0.6s						
GUMO	**Guam**	**21.19**	**140**	LR	LR	20 40 26.4	
	comp=Z,195nm,18.9s,baz=33,slow=33						
GYA	**Guiyang**	**21.81**	**265**	⇑P	**P**	**20 33 31.8**	**+2.4**
GYA				pP	sP	20 33 41.8	-0.4
GYA				pmax	pmax		
	comp=Z,43nm,0.6s						
GYA				LR	LR		
	comp=Z,670nm,21.6s						
TYV	**Tymovskoe**	**22.01**	**20**	*e*P	**P**	**20 33 30.4**	**-0.8**
TYV				*e*S	**S**	**20 37 34.5**	**+2.3**
TYV				pmax	pmax		
	comp=Z,12nm,1.1s						
TYV				pmax	pmax		
	comp=Z,300nm,2.4s						
TYV				smax	smax		
	comp=N,400nm,4.7s						
TYV				smax	smax		
	comp=E,900nm,4.7s						
QIZ	**Qiongzhong**	**22.40**	**244**	P	**P**	**20 33 35.9**	**+0.3**
QIZ				S	**S**	**20 37 40.4**	**+0.5**
QIZ				LR	LR		
	comp=E,450nm,21.4s						
QIZ				LR	LR		
	comp=E,380nm,19.6s						
QIZ				LR	LR		
	comp=E,280nm,15.1s						
ZEA	**Zeya**	**23.28**	**354**	*e*P	**P**	**20 33 43.4**	**-1.1**

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ZEA                                pmax     pmax
      comp=N,10.0nm,0.6s
ZEA                                pmax     pmax
      comp=Z,20nm,0.7s
LZH   Lanzhou            23.34 291 eP       P          20 33 47.8 +2.3
LZH                                pP       sP         20 33 57.6 -0.8
LZH                                sP       pP         20 34 06.0  +12
LZH                                pmax     pmax
      comp=Z,14nm,1.3s
LZH                                pmax     pmax
      comp=Z,100nm,4.8s
LZH                                LR       LR
      comp=Z,580nm,13.1s
LZH                                LR       LR
      comp=Z,960nm,13.1s
LZH                                LR       LR
      comp=Z,1µm,13.4s
CD2   Chengdu            23.45 278  P       P          20 33 47.3 +0.9
CD2                                pmax     pmax
      comp=Z,40nm,0.6s
CD2                                LR       LR
      comp=Z,650nm,13.3s
CD2                                LR       LR
      comp=Z,890nm,14.6s
CD2                                LR       LR
      comp=Z,790nm,13.3s
LZDM  Lanzhou Array      23.45 290  P       P          20 33 46.1 -0.6
      comp=Z,1.8nm,0.3s,baz=89,slow=10,SNR=1.7
      comp=Z,1.8nm,0.3s
DAV   Davao City (W)     23.97 193  LR      LR         20 44 50.9
      comp=Z,101nm,18.4s,baz=42,slow=40
ULN   Ulaanbaatar        25.20 320          P          20 34 01.9 -0.6
ULN   Ulaanbaatar        25.20 320ceP       P          20 34 04.1 +1.6
ULN                                pmax     pmax
      comp=Z,12nm,1.0s
SONM  Songino Array      25.55 319  P       P          20 34 05.6 -0.1
      comp=Z,3.5nm,0.6s,baz=139,slow=9.7,SNR=27
SONM                                LR      LR         20 45 33.5
      comp=Z,651nm,18.2s,baz=148,slow=40
      comp=Z,3.5nm,0.6s
SONM  Songino Array      25.55 319  P       P          20 34 04.9 -0.8
PZH   PanZhiHua          26.04 268  P       P          20 34 10.3  0.0
GTA   Gaotai             26.95 298 eP       P          20 34 19.5 +1.0
GTA                                pmax     pmax
      comp=Z,3.0nm,0.6s
GTA                                 LR      LR
      comp=Z,340nm,13.9s
GTA                                 LR      LR
      comp=Z,370nm,13.1s
GTA                                 LR      LR
      comp=Z,420nm,14.7s
TNCH  TengChong          29.25 267 ⇑P       P          20 34 39.6 +0.5
TNCH                                pP      sP         20 34 51.3 -1.1
TNCH                                PP      PnPn       20 35 34.8 +2.0
TNCH                                S       S          20 39 25.4 -4.7
TNCH                                sS      sS         20 39 45.0 -0.5
TNCH                                SS      SnSn       20 41 00.1 +3.4
TNCH                                pmax    pmax
      comp=Z,10.0nm,2.7s
TNCH                                pmax    pmax
      comp=Z,190nm,4.6s
TNCH                                LR      LR
      comp=Z,230nm,8.7s
TNCH                                LR      LR
      comp=Z,290nm,15.6s
TNCH                                LR      LR
      comp=Z,470nm,19.0s
PETK  Petropavlovsk-     29.68  33  LR      LR         20 47 45.2
      comp=Z,174nm,18.1s,baz=203,slow=38
TOLI2 Tolitoli           30.91 200  P       P          20 34 55.0 +1.3
CHTO  Chiang Mai         31.34 256          P          20 34 57.6 +0.1
CHTO  Chiang Mai         31.34 256  P       P          20 34 57.6 +0.1
CHTO                                pmax    pmax
      comp=Z,7.0nm,0.7s
CHTO  Chiang Mai         31.34 256  P       P          20 34 57.8 +0.4
YAK   Yakutsk            31.45 359  LR      LR         20 48 04.3
      comp=Z,191nm,18.8s,baz=158,slow=37
YAK   Yakutsk            31.45 359          P          20 34 54.9 -3.0
YAK                                 IAmb    IAmb       20 34 58.2
      comp=Z,11nm,0.6s
YAK   Yakutsk            31.45 359 eP       P          20 34 57.8 -0.1
YAK                                 pmax    pmax
      comp=Z,8.0nm,1.1s
CM31  Chiang Mai Arr     31.51 255  P       P          20 34 59.1 +0.1
CMAR  Chiang Mai Arr     31.51 255  P       P          20 34 59.5 +0.5
      comp=Z,1.8nm,0.5s,baz=55,slow=7.5,SNR=22
CMAR                                PcP     PcP        20 37 52.4 +0.9
      comp=Z,1.0nm,0.7s,baz=32,slow=2.1,SNR=10
CMAR                                LR      LR         20 49 07.5
      comp=Z,186nm,19.1s,baz=75,slow=39
      comp=Z,1.8nm,0.5s
CMAR  Chiang Mai Arr     31.51 255  P       P          20 34 58.8 -0.2
MA2   Magadan            31.88  19  LR      LR         20 49 00.5
      comp=Z,174nm,18.1s,baz=196,slow=38
FAKI  Fak Fak            33.35 178  P       P          20 35 15.5 +0.4
FAKI                                IAmb    IAmb       20 35 40.4
      comp=Z,32nm,1.1s
LSA   Lhasa              34.40 279  P       P          20 35 21.3 -3.4
LSA                                 LR      LR
      comp=Z,120nm,13.4s
LSA                                 LR      LR
      comp=Z,290nm,16.5s
LSA                                 LR      LR
      comp=Z,340nm,15.1s
SHL   Shillong           34.80 272          P          20 35 27.5 -0.4
SHL                                 IAmb    IAmb       20 35 28.4
      comp=Z,13nm,0.5s
SHL   Shillong           34.80 272  P       P          20 35 27.5 -0.4
SHL                                 pmax    pmax
      comp=Z,13nm,0.5s
SEY   Seymchan           35.13  17  P       P          20 35 30.8 +0.8
      comp=Z,4.9nm,0.9s,baz=230,slow=8.5,SNR=5.4
SEY                                 LR      LR         20 50 41.4
      comp=Z,184nm,18.6s,baz=182,slow=38
      comp=Z,4.9nm,0.9s
BRDH  Bariadhala         35.96 267  LR      LR         20 53 56.6
      comp=Z,191nm,18.3s,baz=345,slow=42
WMQ   Urumqi             36.56 303 eP       P          20 35 44.5 +1.9
WMQ                                 pP      sP         20 35 55.0 -1.0
WMQ                                 pmax    pmax
      comp=Z,15nm,0.7s
WMQ                                 LR      LR
      comp=Z,340nm,17.5s
KAPI  Kappang            37.03 199  LR      LR         20 51 26.9
      comp=Z,63nm,21.9s,baz=12,slow=37
KULM  Kulim              38.11 235  P       P          20 35 56.6 +0.6
KULM                                IAmb    IAmb       20 36 47.5
      comp=Z,55nm,1.9s
IPM   Ipoh               38.42 233  P       P          20 35 58.6  0.0
IPM                                 IAmb    IAmb       20 36 54.8
      comp=Z,15nm,1.2s
ZAA0  Zalesovo Array     40.44 319          P          20 36 13.8 -1.2
ZALV  Zalesovo Beam      40.44 319  P       P          20 36 14.2 -0.8
      comp=Z,2.1nm,0.6s,baz=105,slow=7.8,SNR=10
ZALV                                PcP     PcP        20 38 15.8 -1.6
      comp=Z,0.5nm,0.4s,baz=132,slow=2.1,SNR=2.5
ZALV                                LR      LR         20 54 27.5
      comp=Z,384nm,18.6s,baz=92,slow=38
      comp=Z,2.1nm,0.6s
ZALV  Zalesovo Beam      40.44 319          P          20 36 13.8 -1.1
ZALV  Zalesovo Beam      40.44 319 i P      P          20 36 14.8 -0.2
ZALV                                pmax    pmax
      comp=Z,2.0nm,0.6s
MK31  Makanchi Array     40.67 308ceP       P          20 36 18.1 +1.1
MKAR  Makanchi Array     40.67 308  P       P          20 36 16.8 -0.2
      comp=Z,1.6nm,0.6s,baz=91,slow=10,SNR=20
MKAR                                PcP     PcP        20 38 17.2 -1.1
      comp=Z,0.8nm,0.9s,baz=64,slow=2.9,SNR=2.5
MKAR                                LR      LR         20 54 49.8
      comp=Z,327nm,18.7s,baz=85,slow=39
      comp=Z,1.6nm,0.6s
MKAR  Makanchi Array     40.67 308  P       P          20 36 16.5 -0.5
MAKZ  Makanchi           40.88 308  P       P          20 36 18.0 -0.8
MAKZ  Makanchi           40.88 308  P       P          20 36 18.0 -0.8
MAKZ                                pmax    pmax
      comp=Z,26nm,2.0s
PSI   Prapat             41.08 234  LR      LR         20 53 38.0
      comp=Z,50nm,18.5s,baz=24,slow=36
TIXI  Tiksi              41.12 359  LR      LR         20 55 04.2
      comp=Z,145nm,18.3s,baz=198,slow=38
TIXI  Tiksi              41.12 359          P          20 36 19.7 -0.5
TIXI  Tiksi              41.12 359ceP       P          20 36 22.3 +2.0
TIXI                                pmax    pmax
      comp=Z,9.0nm,1.3s
BILL  Bilibino           42.75  19          P          20 36 34.3 +0.6
BILL                                IAmb    IAmb       20 36 35.7
      comp=Z,17nm,1.2s
BILL  Bilibino           42.75  19ceP       P          20 36 35.3 +1.6
BILL                                pmax    pmax
      comp=Z,18nm,1.7s
GSI   Gunungsitoli       43.08 234  P       P          20 36 36.8 -0.2
PRZ   Przheval'sk        43.30 301  P       P          20 36 40.7 +1.9
PRZ                                 pmax    pmax
      comp=Z,12nm,1.0s
KURK  Kurchatov          43.52 313          P          20 36 39.8 -0.3
KURK  Kurchatov          43.52 313ceP       P          20 36 40.7 +0.6
KURK                                pmax    pmax
      comp=Z,22nm,1.7s
KURK  Kurchatov          43.52 313  P       P          20 36 40.4 +0.2
KURK                                pP      sP         20 36 51.7 -1.8
KURBB Kurchatov Arra     43.56 313  P       P          20 36 40.3 -0.2
      comp=Z,5.7nm,0.8s,baz=101,slow=9.4,SNR=46
KURBB                               LR      LR         20 56 57.9
      comp=Z,486nm,18.2s,baz=172,slow=39
      comp=Z,5.7nm,0.8s
TARG  Taragay, Kyrgy     43.78 300  P       P          20 36 44.0 +1.1
TARG  Taragay, Kyrgy     43.78 300  P       P          20 36 44.0 +1.1
TARG                                pmax    pmax
      comp=Z,8.0nm,0.7s
MNAI  Manna              43.94 223  P       P          20 36 45.4 +1.5
KDJ   Kajisay            44.22 301  P       P          20 36 46.9 +0.7
KDJ   Kajisay            44.22 301  P       P          20 36 46.9 +0.7
KDJ                                 pmax    pmax
      comp=Z,13nm,1.4s
BOOM  Boomskoye usch     45.12 301  P       P          20 36 54.1 +0.8
BOOM  Boomskoye usch     45.12 301  P       P          20 36 54.1 +0.8
BOOM                                pmax    pmax
      comp=Z,6.0nm,1.0s
KSH   Kashi              45.35 297  P       P          20 36 59.8 +4.7
KSH                                 pmax    pmax
      comp=Z,7.0nm,0.7s
NRIK  Noril'sk           45.93 340  P       P          20 36 58.0 -1.1
      comp=Z,7.3nm,0.6s,baz=117,slow=8.2,SNR=21
NRIK                                LR      LR         20 58 13.2
      comp=Z,509nm,18.8s,baz=140,slow=39
      comp=Z,7.3nm,0.6s
NRIK  Noril'sk           45.93 340          P          20 36 58.1 -1.1
NRIK                                IAmb    IAmb       20 36 58.6
      comp=Z,8.6nm,0.8s
NRIK  Noril'sk           45.93 340 i P      P          20 36 58.0 -1.1
NRIK                                pmax    pmax
      comp=Z,9.0nm,0.8s
KNRA  Kununurra          46.07 183  P       P          20 37 00.8 +0.1
AAK   Ala-Archa          46.18 301  LR      LR         20 59 04.3
      comp=Z,238nm,18.3s,baz=86,slow=40
AAK   Ala-Archa          46.18 301          P          20 37 01.9 +0.2
AAK   Ala-Archa          46.18 301ceP       P          20 37 01.8 +0.2
AAK                                 pmax    pmax
      comp=Z,2.0nm,0.6s
AAK   Ala-Archa          46.18 301  P       P          20 37 02.4 +0.8
AAK                                 sP      sP         20 37 19.1 +3.9
NIL   Nilore             48.50 290  P       P          20 37 20.3 +0.6
NIL                                 IAmb    IAmb       20 37 21.5
      comp=Z,29nm,1.7s
NIL   Nilore             48.50 290  P       P          20 37 20.3 +0.6
NIL                                 pmax    pmax
      comp=Z,29nm,1.7s
DRK   Karamyk            48.56 297  P       P          20 37 20.7 +0.3
DRK   Karamyk            48.56 297  P       P          20 37 20.7 +0.3
DRK                                 pmax    pmax
      comp=Z,4.0nm,0.8s
FITZ  Fitzroy Crossi     48.70 187  P       P          20 37 21.6 +0.4
BVAR  Borovoye Array     48.79 316  P       P          20 37 21.6  0.0
      comp=Z,14nm,0.5s,baz=100,slow=9.5,SNR=53
BVAR                                PcP     PcP        20 38 45.1 -0.9
      comp=Z,1.0nm,0.6s,baz=98,slow=4.4,SNR=1.3
BVAR                                LR      LR         20 59 58.8
      comp=Z,286nm,18.7s,baz=100,slow=38
      comp=Z,14nm,0.5s
BORK  Borovoye           48.83 316          P          20 37 22.2 +0.3
BORK  Borovoye           48.83 316ceP       P          20 37 22.2 +0.3
BORK                                pmax    pmax
      comp=Z,10.0nm,0.7s
BORK  Borovoye           48.83 316  P       P          20 37 22.2 +0.3
BORK                                pP      sP         20 37 33.1 -2.4
BORK                                PcP     PcP        20 38 46.0 -0.2
MANEM Manem              48.97 295          P          20 37 24.2 +0.7
MANEM                               IAmb    IAmb       20 37 26.2
      comp=Z,22nm,0.7s
KK31  Karatay Array      49.05 302          P          20 37 24.3 +0.5
KK31                                IAmb    IAmb       20 37 25.1
      comp=Z,5.7nm,0.7s
KK31  Karatay Array      49.05 302  P       P          20 37 24.3 +0.5
KK31                                pmax    pmax
      comp=Z,6.0nm,0.7s
KKAR  Karatay Array      49.05 302          P          20 37 24.0 +0.2
KKAR  Karatay Array      49.05 302  P       P          20 37 24.0 +0.2
GAR   Garm               49.77 297          P          20 37 29.8 +0.3
GAR                                 IAmb    IAmb       20 37 30.8
      comp=Z,15nm,1.0s
WB0   Warramunga Arr     50.18 176  P       P          20 37 32.3 -0.2
WB0                                 IAmb    IAmb       20 37 54.2
      comp=Z,35nm,1.9s
WRA   Warramunga Arr     50.35 176  P       P          20 37 33.1 -0.7
      comp=Z,2.3nm,0.6s,baz=354,slow=8.2,SNR=24
WRA                                 PcP     PcP        20 38 52.2 +0.1
      comp=Z,0.4nm,0.6s,baz=358,slow=3.9,SNR=1.4
      comp=Z,2.3nm,0.6s
WRA   Warramunga Arr     50.35 176  P       P          20 37 34.0 +0.2
WRA   Warramunga Arr     50.35 176  P       P          20 37 34.0 +0.2
WRA                                                    20 38 52.3
WRA                                 pmax    pmax
      comp=Z,1.0nm,1.3s
WR8   Warramunga Arr     50.38 176  P       P          20 37 33.9  0.0
WR8                                 IAmb    IAmb       20 38 03.1
      comp=Z,25nm,1.8s
CHGR  Chuyangaron        50.72 297          P          20 37 37.1 +0.5
CHGR  Chuyangaron        50.72 297  P       P          20 37 37.1 +0.5
CHGR                                pmax    pmax
      comp=Z,26nm,0.9s
ANM   Nome               51.49  30  P       P          20 37 43.2 +1.3
ANM                                 IAmb    IAmb       20 39 30.2
      comp=Z,41nm,2.0s
ANM   Nome               51.49  30  P       P          20 37 43.2 +1.3
ANM                                 pmax    pmax
      comp=Z,41nm,2.0s
KBL   Kabul              51.69 292          P          20 37 45.1 +1.0
KBL                                 IAmb    IAmb       20 37 46.1
      comp=Z,8.0nm,0.6s
KBL   Kabul              51.69 292  P       P          20 37 45.1 +1.0
KBL                                 pmax    pmax
      comp=Z,8.0nm,0.6s
SHAA  Shahritus          51.74 296          P          20 37 44.5 +0.2
SHAA                                IAmb    IAmb       20 37 47.9
      comp=Z,66nm,1.4s
C16K  Lisburne Hills     52.20  25  P       P          20 37 47.8 +0.7
C16K                                IAmb    IAmb       20 37 49.1
      comp=Z,8.0nm,0.8s
PALK  Pallekele          52.45 254  LR      LR         21 01 08.6
      comp=Z,117nm,22.0s,baz=54,slow=37
CTA   Charters Tower     52.48 162  LR      LR         20 57 07.1
      comp=Z,60nm,21.8s,baz=37,slow=32
PSA00 Pilbara Seismi     52.98 193  P       P          20 37 53.1 -0.3
PSA00                               IAmb    IAmb       20 38 06.6
      comp=Z,24nm,1.5s
E18K  Tukpahlearik C     53.83  26  IAmb    IAmb       20 38 01.5
      comp=Z,9.0nm,0.8s
ASAR  Alice Springs      54.03 177  P       P          20 38 01.1  0.0
      comp=Z,1.4nm,0.6s,baz=10,slow=13,SNR=58
ASAR                                PcP     PcP        20 39 06.2 +0.3
      comp=Z,0.7nm,0.6s,baz=353,slow=3.5,SNR=4.0
ASAR                                LR      LR         20 59 45.8
      comp=Z,61nm,20.9s,baz=346,slow=34
      comp=Z,1.4nm,0.6s
ASAR  Alice Springs      54.03 177  P       P          20 38 01.0 -0.1
SVE   Sverdlovsk         54.41 320 eP       P          20 38 03.6 +0.1
SVE                                 pmax    pmax
      comp=Z,15nm,0.7s
C19K  Lookout Ridge      54.41  24  P       P          20 38 04.2 +0.8
C19K                                IAmb    IAmb       20 38 05.5
      comp=Z,10nm,1.1s
G18K  Tagagawik          54.46  28  IAmb    IAmb       20 38 06.4
      comp=Z,14nm,1.4s
D19K  Kuna River         54.88  25  IAmb    IAmb       20 38 08.6
      comp=Z,9.0nm,0.9s
E19K  Redstone River     55.13  27  IAmb    IAmb       20 38 10.5
      comp=Z,7.2nm,0.8s
AB31  Akbulak array      55.56 311          P          20 38 11.8 -0.1
AB31                                IAmb    IAmb       20 38 12.8
      comp=Z,7.7nm,0.6s
ABKAR Akbulak array      55.56 311          P          20 38 12.0  0.0
ARTI  Arti               55.68 320  LR      LR         21 04 57.2
      comp=Z,447nm,18.8s,baz=86,slow=39
ARTI  Arti               55.68 320          P          20 38 12.2 -0.5
ARTI  Arti               55.68 320d iP      P          20 38 12.0 -0.7
ARTI                                *PP     pP         20 38 22.8 +0.3
ARTI                                                   20 40 12.5
ARTI                                S       S          20 45 57.0 +0.3
ARTI                                SS      SS         20 49 37.2 -4.6
ARTI                                pmax    pmax
      comp=Z,12nm,0.6s
ARTI  Arti               55.68 320  P       P          20 38 12.4 -0.3
ARTI                                pP      pP         20 38 23.2 +0.7
J20K  Nowinta River      56.33  31  P       P          20 38 18.7 +1.5
J20K                                IAmb    IAmb       20 38 47.7
      comp=Z,9.9nm,1.1s
AKTO  Aktyubinsk         56.62 313  LR      LR         21 04 34.5
      comp=Z,674nm,18.9s,baz=65,slow=38
B22K  Teshekpuk Lake     56.66  23  IAmb    IAmb       20 38 21.1
      comp=Z,9.3nm,0.8s
D22K  Ayikyak River      56.88  25  IAmb    IAmb       20 38 23.2
      comp=Z,8.9nm,0.6s
HRA   Herat              57.15 293  IAmb    IAmb       20 38 25.7
      comp=Z,6.9nm,0.7s
H22K  Ishtalitna Cre     57.44  28  IAmb    IAmb       20 38 51.3
      comp=Z,38nm,2.0s
D23K  Nanushuk River     57.61  25  P       P          20 38 27.4 +1.1
D23K                                IAmb    IAmb       20 38 28.6
      comp=Z,7.8nm,1.1s
BPAW  Bear Paw Mtn.      57.72  31  P       P          20 38 28.6 +1.5
BPAW                                IAmb    IAmb       20 38 49.6
      comp=Z,32nm,1.8s
TOLK  Toolik Lake Re     58.02  25  P       P          20 38 30.1 +0.9
TOLK                                IAmb    IAmb       20 38 39.9
      comp=Z,15nm,1.6s
D24K  Happy Valley       58.27  24  P       P          20 38 31.6 +0.8
D24K                                IAmb    IAmb       20 38 32.8
      comp=Z,12nm,0.8s
NEA2  Nenana             58.51  30  P       P          20 38 33.5 +0.9
NEA2                                IAmb    IAmb       20 38 34.1
      comp=Z,12nm,1.3s
F24K  Squaw Lake         58.72  26  IAmb    IAmb       20 38 36.2
      comp=Z,5.5nm,0.8s
CCB   Clear Creek Bu     59.04  30  P       P          20 38 37.4 +1.2
CCB                                 IAmb    IAmb       20 39 11.9
      comp=Z,8.8nm,1.5s
IL31                     59.42  30  P       P          20 38 39.0 +0.2
IL31                                IAmb    IAmb       20 38 41.6
      comp=Z,19nm,1.9s
ILAR  Eielson Array      59.42  30  P       P          20 38 39.0 +0.2
      comp=Z,1.1nm,0.7s,baz=283,slow=7.2,SNR=17
      comp=Z,1.1nm,0.7s
ILAR  Eielson Array      59.42  30  P       P          20 38 38.8 -0.1
HDA   Harding Lake       59.44  30  P       P          20 38 39.4 +0.3
HDA                                 IAmb    IAmb       20 38 40.5
      comp=Z,25nm,1.7s
BMAR  Burnt Mountain     60.00  26  P       P          20 38 44.4 +1.5
M24K  Tolsona, Glenn     60.12  33  P       P          20 38 44.0 +0.1
KIRV  Kirov              60.19 323  LR      LR         21 08 57.7
      comp=Z,93nm,18.4s,baz=81,slow=40
KIRV  Kirov              60.19 323ceP       P          20 38 44.3 +0.1
RIDG  Independent Ri     60.45  31  P       P          20 38 46.4 +0.3
E27K  Coleen River       61.00  25  IAmb    IAmb       20 38 52.1
      comp=Z,7.5nm,0.9s
L26K  Log Cabin Wild     61.25  31  IAmb    IAmb       20 38 57.4
      comp=Z,7.5nm,0.9s
I27K  Kandik River       61.48  28  IAmb    IAmb       20 38 56.0
      comp=Z,12nm,1.1s
BERG  Berg Lake          61.62  34  P       P          20 38 54.8 +0.8
DZM   Mont Dzumac        62.43 143  P       P          20 39 00.1 +0.1
      comp=Z,4.9nm,0.8s,baz=301,slow=12,SNR=1.9
      comp=Z,4.9nm,0.8s
STKA  Stephens Creek     62.94 170  P       P          20 39 03.5 +0.6
      comp=Z,2.7nm,0.5s,baz=344,slow=6.9,SNR=10
      comp=Z,2.7nm,0.5s
STKA  Stephens Creek     62.94 170  P       P          20 39 03.6 +0.6
STKA                                pmax    pmax
      comp=Z,133nm,1.7s
EPYK  Eagle Plains       63.25  27          P          20 39 05.5 +0.7
L29M  L29M               63.54  31  IAmb    IAmb       20 39 26.9
      comp=Z,13nm,1.1s
K29M  Barlow Dome        63.60  30          P          20 39 08.5 +1.2
K29M                                IAmb    IAmb       20 39 10.0
      comp=Z,30nm,1.6s
I30M  Mount Dempster     63.70  28  IAmb    IAmb       20 39 10.0
      comp=Z,8.8nm,0.8s
INK   Inuvik             63.90  24  LR      LR         21 08 35.7
      comp=Z,70nm,18.1s,baz=34,slow=38
INK   Inuvik             63.90  24  P       P          20 39 09.5 +0.5
INK                                 IAmb    IAmb       20 39 10.4
      comp=Z,7.9nm,0.6s
INK   Inuvik             63.90  24  P       P          20 39 09.5 +0.5
INK                                 pmax    pmax
      comp=Z,8.0nm,0.6s
G31M  Satah River        64.03  26          P          20 39 10.1 +0.2
G31M                                IAmb    IAmb       20 39 11.3
      comp=Z,6.7nm,0.7s
H31M  Peel River         64.34  27  IAmb    IAmb       20 39 13.6
      comp=Z,11nm,0.8s
KLMR  Klimovskoe         64.51 327 eP       P          20 39 11.8 -1.3
KLMR                               e*PP     sP         20 39 25.3 -1.5
KLMR                                pmax    pmax
      comp=Z,27nm,1.7s
SPB2  Spitsbergen Ar     65.07 348  P       P          20 39 16.3 -0.2
SPITS Spitsbergen Ar     65.08 348  P       P          20 39 16.4 -0.2
      comp=Z,3.9nm,0.5s,baz=89,slow=9.3,SNR=15
SPITS                               LR      LR         21 10 02.6
      comp=Z,85nm,19.5s,baz=50,slow=38
      comp=Z,3.9nm,0.5s
A36M  Sachs Harbour      65.30  19          P          20 39 18.7 +0.7
KBS   Kingsbay           65.42 349  P       P          20 39 18.9 +0.2
KBS   Kingsbay           65.42 349  P       P          20 39 19.0 +0.2
KBS                                 pmax    pmax
      comp=Z,51nm,1.4s
AKT   Akhty              65.83 305 eP       P          20 39 22.3 +0.1
AKT                                e*PP     sP         20 39 34.8 -1.1
AKT                                 pmax    pmax
      comp=Z,20nm,0.8s
KEV   Kevo               66.30 338  P       P          20 39 24.7 +0.2
KEV   Kevo               66.30 338  P       P          20 39 24.7 +0.2
KEV                                 pmax    pmax
      comp=Z,165nm,2.0s
C36M  Paulatuk           66.73  22          P          20 39 27.9 +0.6
ARCES ARCESS Array B     66.86 338  P       P          20 39 28.2  0.0
      comp=Z,1.4nm,0.5s,baz=60,slow=7.2,SNR=15
ARCES                               LR      LR         21 14 19.2
      comp=Z,284nm,19.0s,baz=74,slow=41
      comp=Z,1.4nm,0.5s
ARCES ARCESS Array B     66.86 338  P       P          20 39 28.4 +0.2
ARCES ARCESS Array B     66.86 338  P       P          20 39 28.4 +0.2
ARCES                               pmax    pmax
      comp=Z,124nm,2.0s
MOS   Moscow             67.13 322 eP       P          20 39 28.6 -1.5
MOS                                e                   20 39 57.3
OBN   Obninsk            67.92 322  LR      LR         21 12 09.1
      comp=Z,197nm,18.8s,baz=211,slow=38
OBN   Obninsk            67.92 322⇑iP       P          20 39 35.0 -0.1
OBN                                e*PP     pP         20 39 45.6 +0.5
OBN                                 *SP     sP         20 39 52.0 +3.2
OBN                                                    20 40 00.0
OBN                                                    20 42 07.0
OBN                                eS       S          20 48 28.3 -3.1
OBN                                e                   20 49 08.8
OBN                                 SS      SS         20 52 54.0 +1.1
OBN                                 SSS     SSS        20 56 00.0
OBN                                 pmax    pmax
      comp=Z,17nm,1.3s
OBN                                 MLR     MLR
      comp=Z,218nm,17.0s
KBZ   Khabaz             68.35 309  P       P          20 39 38.4 +0.4
      comp=Z,12nm,0.8s,baz=85,slow=3.5,SNR=32
KBZ                                 LR      LR         21 13 15.5
      comp=Z,150nm,18.3s,baz=48,slow=39
      comp=Z,12nm,0.8s
KBZ   Khabaz             68.35 309ceP       P          20 39 38.8 +0.9
KIV   Kislovodsk         68.40 309          P          20 39 38.8 +0.3
KIV                                 IAmb    IAmb       20 39 42.1
      comp=Z,17nm,0.8s
KIV   Kislovodsk         68.40 309 eP       P          20 39 37.8 -0.7
KIV                                 pmax    pmax
      comp=Z,19nm,1.1s
KIV                                 MLR     MLR
      comp=Z,111nm,17.0s
KIV   Kislovodsk         68.40 309  P       P          20 39 38.9 +0.5
      comp=Z,19nm,1.0s
KIV                                 pP      sP         20 39 50.4 -1.8
      comp=Z,19nm,1.0s
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KIV	**Kislovodsk**	**68.40**	**309**	P	**P**	**20 39 39.0**	**+0.5**
KIV				pP	**sP**	**20 39 50.8**	**-1.4**
SHA1	**Shidzhatmaz**	**68.50**	**309***ce*	P	**P**	**20 39 40.6**	**+1.3**
FIA1	**FINESS Array S**	**70.29**	**330**	P	**P**	**20 39 48.6**	**-1.1**
FINES	**FINESS Array B**	**70.30**	**330**	P	**P**	**20 39 49.0**	**-0.6**
	comp=Z,5.4nm,0.4s,baz=62,slow=5.6,SNR=58						
FINES				LR	LR	21 14 06.9	
	comp=Z,282nm,20.2s,baz=57,slow=39						
	comp=Z,5.4nm,0.4s						
FINES	**FINESS Array B**	**70.30**	**330**	P	**P**	**20 39 48.3**	**-1.4**
RES	**Resolute Bay**	**70.79**	**12**	LR	LR	21 13 46.3	
	comp=Z,87nm,18.7s,baz=5.0,slow=38						
RES	**Resolute Bay**	**70.79**	**12**		**P**	**20 39 52.2**	**-0.3**
RES				IAmb	IAmb	20 39 53.5	
	comp=Z,8.1nm,0.8s						
RES	**Resolute Bay**	**70.79**	**12**	P	**P**	**20 39 52.2**	**-0.3**
RES				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GURO	**Guroymak-BITLI**	**70.98**	**304**	IAmb	IAmb	20 39 56.2	
	comp=Z,7.6nm,0.8s						
VSU	**Vasula**	**71.41**	**327**	P	**P**	**20 39 55.2**	**-1.3**
MARD	**Mardin**	**72.40**	**303**	IAmb	IAmb	20 40 04.7	
	comp=Z,14nm,0.7s						
MNK	**Minsk**	**72.73**	**324**	*i* P	**P**	**20 40 05.1**	**+0.6**
MNK				*i* *PP	**sP**	**20 40 17.1**	**-1.2**
MNK				*i* *SP	**PcP**	**20 40 22.0**	**+0.3**
MNK				*i*		20 42 47.4	
MNK				*i* PPP	PPP	20 44 32.1	
MNK				*i* S	**S**	**20 49 29.7**	**+2.1**
MNK				*i* SS	**SS**	**20 54 11.3**	**+4.5**
MNK				pmax	pmax		
	comp=N,14nm,1.1s						
MNK				pmax	pmax		
	comp=Z,13nm,0.9s						
MNK				pmax	pmax		
	comp=E,13nm,1.0s						
MNK				MLR	MLR		
	comp=Z,156nm,14.0s						
MNK				MLR	MLR		
	comp=N,131nm,16.0s						
MNK				MLR	MLR		
	comp=E,77nm,17.0s						
YKAW3	**Yellowknife Wh**	**73.48**	**26**		**P**	**20 40 09.3**	**+0.5**
YKAW3				IAmb	IAmb	20 40 27.6	
	comp=Z,15nm,1.8s						
YKA	**Yellowknife Ar**	**73.52**	**26**	P	**P**	**20 40 09.6**	**+0.6**
	comp=Z,2.3nm,0.8s,baz=304,slow=6.5,SNR=14						
	comp=Z,2.3nm,0.8s						
YKAW1	**Yellowknife Wh**	**73.57**	**26**	P	**P**	**20 40 09.6**	**+0.3**
AK03	**Malin Array Si**	**73.82**	**320**	P	**P**	**20 40 10.8**	**-0.2**
AKASG	**Malin Array Be**	**73.83**	**320**	P	**P**	**20 40 11.0**	**0.0**
	comp=Z,2.4nm,0.5s,baz=57,slow=6.3,SNR=11						
AKASG				LR	LR	21 15 24.7	
	comp=Z,176nm,18.9s,baz=57,slow=38						
	comp=Z,2.4nm,0.5s						
AKASG	**Malin Array Be**	**73.83**	**320**	IAmb	IAmb	20 40 14.7	
	comp=Z,10nm,1.6s						
AKASG	**Malin Array Be**	**73.83**	**320**	P	**P**	**20 40 11.0**	**0.0**
AKASG				pmax	pmax		
	comp=Z,10.0nm,1.7s						
AKBB	**Malin Array Si**	**73.83**	**320**	IAmb	IAmb	20 40 11.5	
	comp=Z,6.2nm,0.8s						
AKBB	**Malin Array Si**	**73.83**	**320***ce*	P	**P**	**20 40 11.3**	**+0.3**
AKBB	**Malin Array Si**	**73.83**	**320**	P	**P**	**20 40 10.9**	**-0.1**
AK09	**Malin Array Si**	**73.84**	**320**	P	**P**	**20 40 10.9**	**-0.2**
AK01	**Malin Array Si**	**73.84**	**320**	P	**P**	**20 40 10.5**	**-0.6**
KIEV	**Kiev**	**73.84**	**320**	P	**P**	**20 40 10.9**	**-0.2**
KIEV	**Kiev**	**73.84**	**320**	P	**P**	**20 40 10.9**	**-0.2**
KIEV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KIEV	**Kiev**	**73.84**	**320**	P	**P**	**20 40 10.9**	**-0.2**
	comp=Z,38nm,1.6s						
AK02	**Malin Array Si**	**73.86**	**320**	P	**P**	**20 40 11.2**	**0.0**
AK22	**Malin Array Si**	**73.89**	**320**	P	**P**	**20 40 11.3**	**-0.1**
PABE	**Paberze**	**74.19**	**326**	P	**P**	**20 40 13.3**	**+0.3**
PABE				IAmb	IAmb	20 40 13.9	
	comp=Z,16nm,0.9s						
RAYN	**Ar Rayn**	**74.79**	**288**		**P**	**20 40 17.1**	**-0.1**
RAYN	**Ar Rayn**	**74.79**	**288**	P	**P**	**20 40 17.1**	**-0.1**
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
RAYN	**Ar Rayn**	**74.79**	**288**	P	**P**	**20 40 17.4**	**+0.1**
LUBAR	**Lubar, Ukraine**	**75.03**	**319**	P	**P**	**20 40 17.8**	**-0.3**
BNN	**Bunyan**	**75.21**	**306**	IAmb	IAmb	20 41 18.2	
	comp=Z,28nm,1.9s						
HFS	**Hagfors**	**76.10**	**333**	P	**P**	**20 40 23.5**	**-0.5**
	comp=Z,1.5nm,0.4s,baz=84,slow=6.1,SNR=21						
HFS				LR	LR	21 17 04.5	
	comp=Z,115nm,18.6s,baz=38,slow=38						
	comp=Z,1.5nm,0.4s						
HORU	**Horodok**	**76.14**	**319**	P	**P**	**20 40 24.9**	**+0.5**
NC303	**NORSAR Array S**	**76.31**	**334**	P	**P**	**20 40 24.5**	**-0.7**
BRTR	**Keskin Array B**	**76.31**	**308**	P	**P**	**20 40 25.4**	**-0.4**
	comp=Z,4.1nm,0.9s,baz=97,slow=5.3,SNR=24						
BRTR				LR	LR	21 18 33.0	
	comp=Z,62nm,19.1s,baz=60,slow=39						
	comp=Z,4.1nm,0.9s						
BRTR	**Keskin Array B**	**76.31**	**308**		**P**	**20 40 25.2**	**-0.6**
BRTR	**Keskin Array B**	**76.31**	**308***ce*	P	**P**	**20 40 26.1**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BR104	**Keskin Array S**	**76.32**	**308**	P	**P**	**20 40 26.4**	**+0.6**
	comp=Z,42nmcomp=Z,6.3nm,1.0s						
BR106	**Keskin Array S**	**76.32**	**308**	P	**P**	**20 40 26.5**	**+0.6**
	comp=Z,44nmcomp=Z,5.5nm,1.0s						
BR105	**Keskin Array S**	**76.33**	**308**	P	**P**	**20 40 26.5**	**+0.6**
	comp=Z,55nmcomp=Z,6.7nm,0.9s						
NB201	**NORSAR Array S**	**76.45**	**334**	P	**P**	**20 40 25.1**	**-0.9**
NB2	**NORSAR Subarra**	**76.48**	**334**	P	**P**	**20 40 25.2**	**-1.0**
	comp=Z,2.6nm,0.5s,baz=50,slow=5.9						
NB2	**NORSAR Subarra**	**76.48**	**334**	P	**P**	**20 40 25.2**	**-1.0**
NOA	**NORSAR Array B**	**76.48**	**334**	P	**P**	**20 40 25.4**	**-0.9**
	comp=Z,1.2nm,0.5s,baz=50,slow=5.6,SNR=8.5						
NOA				LR	LR	21 19 04.9	
	comp=Z,95nm,18.8s,baz=25,slow=40						
	comp=Z,1.2nm,0.5s						
SUMG	**Summit**	**76.84**	**357**	P	**P**	**20 40 28.3**	**-0.2**
SUMG				IAmb	IAmb	20 42 29.5	
	comp=Z,35nm,1.8s						
SUMG	**Summit**	**76.84**	**357**	P	**P**	**20 40 28.3**	**-0.2**
SUMG				pmax	pmax		
	comp=Z,35nm,1.8s						
ILON	**Igloolik, Nuna**	**77.46**	**11**	P	**P**	**20 40 31.0**	**-0.5**
ILON				IAmb	IAmb	20 40 31.8	
	comp=Z,8.8nm,0.8s						
BUR08	**Bucovina Ar. S**	**77.65**	**318**		**P**	**20 40 32.6**	**-0.5**
BURAR	**Bucovina Array**	**77.66**	**318**	P	**P**	**20 40 32.5**	**-0.7**
BURAR	**Bucovina Array**	**77.66**	**318**	P	**P**	**20 40 32.5**	**-0.7**
BURAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KWP	**Kalwaria Pacla**	**77.97**	**321**	P	**P**	**20 40 35.1**	**+0.3**
	comp=Z,17nm,1.0s						
MMAI	**Mount Meron Ar**	**78.27**	**301**	P	**P**	**20 40 36.6**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=72,slow=11,SNR=3.7						
	comp=Z,0.8nm,0.5s						
MLR	**Muntele Rosu**	**78.35**	**316**	LR	LR	21 18 52.8	
	comp=Z,248nm,20.5s,baz=50,slow=38						
STHS	**Stebnicka Huta**	**78.89**	**321**	*e*P	**P**	**20 40 41.2**	**+1.4**
STHS	**Stebnicka Huta**	**78.89**	**321**	*e*P	**P**	**20 40 41.2**	**+1.4**
OJC	**Ojcow**	**79.20**	**322**	P	**P**	**20 40 41.7**	**+0.2**
OJC	**Ojcow**	**79.20**	**322**	P	**P**	**20 40 41.7**	**+0.2**
OJC	**Ojcow**	**79.20**	**322**	P	**P**	**20 40 42.3**	**+0.8**
	comp=Z,10nm,1.0s						
NIE	**Niedzica**	**79.39**	**322**	P	**P**	**20 40 43.4**	**+0.8**
	comp=Z,4.7nm,1.3s						
MXC	**Moxie City**	**79.83**	**42**	P	**P**	**20 40 44.8**	**-0.2**
MXC				IAmb	IAmb	20 42 14.9	
	comp=Z,36nm,1.8s						
LANS	**Liptovska Anna**	**79.99**	**322**	*e*P	**P**	**20 40 47.0**	**+1.1**
LANS	**Liptovska Anna**	**79.99**	**322**	*e*P	**P**	**20 40 47.0**	**+1.1**
STEB	**Steborice**	**80.42**	**323**	*e*P	**P**	**20 40 48.2**	**+0.1**
KSP	**Ksiaz**	**80.63**	**324**	P	**P**	**20 40 50.1**	**+0.9**
VRAC	**Vranov**	**81.41**	**323**	LR	LR	21 20 35.9	
	comp=Z,182nm,20.3s,baz=67,slow=38						
MODS	**Modra-Piesok**	**81.62**	**322**	*e*P	**P**	**20 40 56.3**	**+1.7**
MODS	**Modra-Piesok**	**81.62**	**322**	*e*P	**P**	**20 40 56.2**	**+1.7**
O02D	**Mt. Diablo Mer**	**81.85**	**48**	P	**P**	**20 40 56.3**	**+0.3**
O02D				IAmb	IAmb	20 41 50.5	
	comp=Z,34nm,1.6s						
CLL	**Collm**	**81.96**	**326**	*e*P	**P**	**20 40 57.0**	**+0.8**
CLL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CLL	**Collm**	**81.96**	**326**	P	**P**	**20 40 57.1**	**+0.8**
	comp=Z,8.6nm,1.5s						
CLL	**Collm**	**81.96**	**326**	*e*P	**P**	**20 40 57.0**	**+0.8**
	comp=Z,7.0nm,1.0s						
MPLH	**Magyarpolny**	**82.21**	**321**	P	**P**	**20 40 58.5**	**+0.9**
	comp=Z,14nm,1.6s						
ZVC	**Zvikov**	**82.56**	**324**	*e*P	**P**	**20 41 00.5**	**+1.0**
CONA	**Conrad Observa**	**82.64**	**322**	*i* PcP	**P**	**20 41 01.8**	**+1.7**
	comp=Z,1.5nm,0.6s						
SFJD	**Kangerlussuaq**	**82.70**	**1**	LR	LR	21 18 50.7	
	comp=Z,112nm,19.5s,baz=337,slow=36						
SFJD	**Kangerlussuaq**	**82.70**	**1**	P	**P**	**20 40 59.5**	**-0.3**
SFJD	**Kangerlussuaq**	**82.70**	**1**	P	**P**	**20 40 59.5**	**-0.3**
CKRC	**Cesky Krumlov**	**82.90**	**324**	*e*P	**P**	**20 41 03.4**	**+2.2**
CKRC	**Cesky Krumlov**	**82.90**	**324**	*e*P	**P**	**20 41 03.4**	**+2.2**
KHC	**Kasperske Hory**	**83.07**	**324**	*e*P	**P**	**20 41 05.7**	**+3.5**
KHC	**Kasperske Hory**	**83.07**	**324**	*e*P	**P**	**20 41 05.7**	**+3.5**
GERES	**GERESS Array B**	**83.19**	**324**	P	**P**	**20 41 02.9**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=61,slow=6.0,SNR=3.1						
GERES				LR	LR	21 21 28.2	
	comp=Z,187nm,20.5s,baz=72,slow=38						
	comp=Z,1.0nm,0.8s						
ARSA	**Arzberg**	**83.24**	**322**	P	**P**	**20 41 03.9**	**+0.8**
ARSA				IAmb	IAmb	20 43 52.1	
	comp=Z,15nm,1.8s						
ARSA	**Arzberg**	**83.24**	**322**	*i* P	**P**	**20 41 04.1**	**+1.0**
	comp=Z,0.9nm,0.4s						
FCC	**Fort Churchill**	**83.37**	**22**	P	**P**	**20 41 03.3**	**-0.1**
FCC				IAmb	IAmb	20 41 04.3	
	comp=Z,35nm,1.8s						
FCC	**Fort Churchill**	**83.37**	**22**	P	**P**	**20 41 03.3**	**-0.1**
FCC				pmax	pmax		
	comp=Z,35nm,1.8s						
FFC	**Flin Flon**	**83.58**	**28**	P	**P**	**20 41 04.9**	**+0.3**
FFC	**Flin Flon**	**83.58**	**28**	P	**P**	**20 41 04.9**	**+0.3**
FFC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FFC	**Flin Flon**	**83.58**	**28**	P	**P**	**20 41 04.8**	**+0.2**
FFC				PcP	**PcP**	**20 41 09.1**	**+0.3**
SOKA	**Soboth**	**83.86**	**322**	*i* PcP	**P**	**20 41 07.8**	**+1.4**
	comp=Z,2.3nm,0.5s						
BIOA	**Bad Ischl, Aus**	**83.96**	**323**	*e*PcP	**P**	**20 41 08.3**	**+1.6**
	comp=Z,1.3nm,0.3s						
RAR	**Rarotonga**	**84.04**	**119**	LR	LR	21 09 15.1	
	comp=Z,48nm,20.9s,baz=104,slow=29						
LESA	**Schwarzleotal**	**84.63**	**323**	*i* PcP	**P**	**20 41 11.0**	**+0.8**
	comp=Z,2.7nm,0.5s						
MYKA	**Terra Mystica**	**84.64**	**322**	*i* P	**P**	**20 41 10.5**	**+0.3**
	comp=Z,1.8nm,0.4s						
FRB	**Frobisher Bay**	**84.69**	**9**	LR	LR	21 22 09.9	
	comp=Z,121nm,18.1s,baz=322,slow=38						
ABTA	**Abfaltersbach**	**85.16**	**323**	*i* P	**P**	**20 41 13.3**	**+0.4**
	comp=Z,1.0nm,0.3s						
NVAR	**Mina Array Bea**	**85.70**	**47**	P	**P**	**20 41 16.4**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=300,slow=5.0,SNR=8.5						
	comp=Z,1.2nm,0.7s						
EKA	**Eskdalemuir Ar**	**85.86**	**336**	P	**P**	**20 41 14.4**	**-1.7**
	comp=Z,0.4nm,0.4s,baz=46,slow=5.1,SNR=5.0						
	comp=Z,0.4nm,0.4s						
DAVOX	**Davos/Dischmat**	**86.49**	**324**	LR	LR	21 25 16.6	
	comp=Z,373nm,18.6s,baz=78,slow=39						
PDAR	**Pinedale Array**	**88.21**	**40**	P	**P**	**20 41 27.1**	**-1.0**
	comp=Z,0.9nm,0.9s,baz=318,slow=2.0,SNR=5.6						
	comp=Z,0.9nm,0.9s						
BNI	**Bardonecchia**	**89.30**	**324**	P	**P**	**20 41 33.2**	**+0.2**
BNI	**Bardonecchia**	**89.30**	**324**	P	**P**	**20 41 33.2**	**+0.2**
BNI				pmax	pmax		
	comp=Z,54nm,2.0s						
ULM	**Lac du Bonnet**	**89.40**	**28**	P	**P**	**20 41 33.4**	**+0.2**
	comp=Z,3.6nm,0.7s,baz=293,slow=6.3,SNR=6.5						
	comp=Z,3.6nm,0.7s						
ULM	**Lac du Bonnet**	**89.40**	**28**	P	**P**	**20 41 33.5**	**+0.3**
ULM	**Lac du Bonnet**	**89.40**	**28**	P	**P**	**20 41 33.5**	**+0.3**
ULM				pmax	pmax		
	comp=Z,22nm,1.7s						
EPLO	**Experimental L**	**90.71**	**27**	P	**P**	**20 41 39.2**	**-0.1**
SCHQ	**Schefferville**	**93.53**	**10**	LR	LR	21 25 23.9	
	comp=Z,66nm,21.1s,baz=298,slow=36						
ESDC	**Sonseca Array**	**98.55**	**327**	LR	LR	21 32 09.1	
	comp=Z,240nm,21.6s,baz=298,slow=39						
TROLL	**Troll, Antarti**	**130.42**	**199**	⇑P	**Pdif**	**20 44 41.3**	**+4.9**
	comp=Z,289nm,0.8s						
SNAA	**Sanae**	**132.04**	**198**	⇑P	**Pdif**	**20 44 43.5**	**0.0**
	comp=Z,87nm,0.9s						
VNA2	**Neumayer--Watz**	**133.67**	**198**	⇑P	**Pdif**	**20 44 47.5**	**-3.2**
	comp=Z,7.3nm,0.8s,baz=40,slow=11						
VNA3	**Neumayer Olymp**	**134.05**	**197**	⇑P	**Pdif**	**20 44 51.6**	**-0.7**
	comp=Z,4.7nm,0.7s						
SIV	**San Ignacio**	**161.70**	**40**	PKP	**PKPdf**	**20 48 38.8**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=20,slow=2.1,SNR=5.7						

IDC 19 20:47:21.6±2.3, 5°.75S×130°.24E, h0^{km}, mb3.6/1, mbtmp3.6/4, ML3.7/3, Error ellipse: s-maj=103.2km s-min=28.1km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**13.07**	**200**	Pn	Pn	20 50 29.8	+1.1
	0.2nm,0.3s,baz=28,slow=14,SNR=9.8						
FITZ				Sn	Sn	20 52 47.5	-7.5
	0.2nm,0.3s,baz=280,slow=18,SNR=1.7						
	0.5nm,0.4s						
WRA	**Warramunga Arr**	**14.66**	**165**	Pn	Pn	20 50 48.3	-2.2
	0.4nm,0.3s,baz=344,slow=13,SNR=26						
WRA				Sn	Sn	20 53 19.9	-14
	0.2nm,0.3s,baz=334,slow=22,SNR=4.9						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**18.16**	**169**	P	P	20 51 35.8	-0.1
	0.3nm,0.3s,baz=350,slow=10,SNR=18						
	0.9nm,0.6s						
MKAR	**Makanchi Array**	**67.32**	**326**	P	P	20 58 18.5	0.0
	0.3nm,0.4s,baz=110,slow=7.4,SNR=6.1						
	0.3nm,0.4s						

GCG 19 21:25:50.9±0.9, 13°.69N×91°.39W, h7^{km}±28^{km}, MD3.6, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG5	**El Palmar, Qui**	**0.71**	**3**	*e*P	Pn	21 26 09.4	+1.9
STG5				*e*S	Sn	21 26 24.0	+5.3
STG8	**El Palmar, Qui**	**0.75**	**3**	⇑*e*P	Pn	21 26 10.7	+2.4
STG8				*e*S	Sn	21 26 25.0	+4.9
ESSG	**Sabana Grande**	**0.88**	**38**	*e*P	Pg	21 26 07.4	-0.4
ESSG				*e*S	Sg	21 26 19.8	+0.6
FG16	**Alotenango, Sa**	**1.03**	**56**	*e*P	Pg	21 26 08.8	-1.9
FG16				*e*S	Sg	21 26 23.0	-1.2
PCG5	**San Vicente Pa**	**1.11**	**62**	*e*P	Pg	21 26 09.4	-3.0
PCG5				*e*S	Sg	21 26 24.0	-2.8
QUIS	**Sacapulas**	**1.61**	**10**	*e*P	Pb	21 26 20.8	-0.4
QUIS				*e*S	Sg	21 26 44.1	+1.2

IDC 19 21:29:40.0±1.9, 3°.02N×128°.62E, h0^{km}, mb3.4/5, mbtmp3.4/5, Error ellipse: s-maj=116.7km s-min=20.3km az=72.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.19**	**188**	P	P	21 34 28.5	+1.2
	0.5nm,0.5s,baz=10,slow=11,SNR=1.0						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**23.50**	**166**	P	P	21 34 50.9	-0.9
	0.3nm,0.3s,baz=342,slow=10.0,SNR=13						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**27.02**	**169**	P	P	21 35 22.4	-1.6
	0.3nm,0.7s,baz=351,slow=7.5,SNR=4.5						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**59.22**	**325**	P	P	21 39 44.1	+1.0
	0.2nm,0.4s,baz=108,slow=7.1,SNR=5.6						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.35**	**327**	P	P	21 40 11.3	+0.3
	0.3nm,0.3s,baz=126,slow=6.2,SNR=2.3						
	0.3nm,0.3s						

IDC 19 21:32:18.4±2.4, 5°.94S×130°.37E, h0^{km}, mb3.3/1, mbtmp3.3/4, ML3.3/3, MS2.9/1, Error ellipse: s-maj=86.2km s-min=30.8km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.94**	**200**	Pn	Pn	21 35 23.2	-0.6
	0.2nm,0.3s,baz=26,slow=12,SNR=6.4						
FITZ				Sn	Sn	21 37 33.0	-16
	0.1nm,0.3s,baz=283,slow=20,SNR=1.3						
	1.4nm,0.8s						
WRA	**Warramunga Arr**	**14.45**	**165**	Pn	Pn	21 35 45.1	+0.7
	0.1nm,0.3s,baz=346,slow=10,SNR=6.7						
WRA				Sn	Sn	21 38 12.0	-13
	0.2nm,0.3s,baz=342,slow=22,SNR=8.1						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**17.95**	**169**	P	Pn	21 36 29.6	-0.1
	0.1nm,0.3s,baz=340,slow=9.9,SNR=4.3						
	0.2nm,0.5s						
JCJ	**Chichijima**	**34.77**	**19**	LR	LR	21 53 55.0	
	comp=Z,19nm,18.2s,baz=17,slow=37						
MKAR	**Makanchi Array**	**67.55**	**326**	P	P	21 43 16.7	0.0
	0.2nm,0.5s,baz=116,slow=7.4,SNR=1.8						
	0.2nm,0.5s						

IDC 19 21:38:42.6±5.5, 18°.40S×174°.93W, h0^{km}, mb4.4/3, mbtmp4.4/3, Error ellipse: s-maj=175.4km s-min=107.0km az=156.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.31**	**242**	P	P	21 46 30.4	+0.1
	2.2nm,0.5s,baz=90,slow=11,SNR=4.6						
	2.2nm,0.5s						
WRA	**Warramunga Arr**	**47.79**	**259**	P	P	21 47 22.0	-0.2
	2.1nm,0.4s,baz=98,slow=8.9,SNR=16						
	2.1nm,0.4s						
ASAR	**Alice Springs**	**47.84**	**254**	P	P	21 47 22.4	-0.1
	4.4nm,0.5s,baz=88,slow=8.3,SNR=97						
ASAR				PcP	PcP	21 48 51.0	-0.5
	0.4nm,0.6s,baz=96,slow=3.6,SNR=2.1						
	4.4nm,0.5s						

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*NOU **19** 21:53:17.4, 22°.95S×178°.47W, h503^{km}, mb4.1/8, South of Fiji Islands*

*IDC **19** 21:53:26.3±2.4, 23°.58S×179°.83W, h495^{km}±24^{km}, mb3.3/5, mbtmp4.3/6, Error ellipse: s-maj=50.6km s-min=19.9km az=160.0*

*NEIC **19** 21:53:28.7±1.9, 23°.7S±0°.1×179°.8W±0°.2, h519^{km}±8^{km}, mb4.1/19, Error ellipse: s-maj=21.3km s-min=19.2km az=112.0*

ISC 19 21:53:27.1±0.6, 23°.78S±0°.09×179°.7W±0°.1, h500^{km}, n48, σ1^{s}.43/51, mb4.0/15, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.37**	**340**	P	**P**	**21 55 08.9**	**+1.6**
MARNC	**Mare, Loyalty**	**11.56**	**279**	P	**P**	**21 56 01.2**	**+0.1**
MARNC	**Mare, Loyalty**	**11.56**	**279**	P	**P**	**21 56 02.1**	**+1.0**
PINNC	**Pines Island,**	**11.88**	**273**	P	**P**	**21 56 06.2**	**+1.7**
OUZ	**Omahuta**	**12.80**	**206**	P	**P**	**21 56 17.4**	**+3.4**
TOZ	**Tahuroa Road**	**14.50**	**195**	P	**P**	**21 56 35.6**	**+3.7**
URZ	**Urewera**	**14.69**	**190**	P	**P**	**21 56 33.7**	**-0.1**
	7.4nm,0.3s,baz=150,slow=0.6,SNR=12						
URZ				S	**S**	**21 59 05.9**	**-2.0**
	7.6nm,0.7s,baz=73,slow=19,SNR=1.4						
URZ	**Urewera**	**14.69**	**190**	P	**P**	**21 56 35.3**	**+1.4**
BKZ	**Black Stump Fm**	**15.68**	**191**	P	**P**	**21 56 43.8**	**-0.5**
QRZ	**Quartz Range**	**18.21**	**199**	P	**P**	**21 57 10.1**	**+0.9**
KHZ	**Kahutara**	**19.42**	**195**	P	**P**	**21 57 19.7**	**-0.5**
RPZ	**Rata Peaks**	**21.29**	**199**	P	**P**	**21 57 38.4**	**+1.1**
JCZ	**Jackson Bay**	**22.34**	**202**	P	**P**	**21 57 46.8**	**0.0**
CTAO	**Charters Tower**	**31.75**	**270**	P	**P**	**21 59 09.7**	**0.0**
STKA	**Stephens Creek**	**35.02**	**248**	P	**P**	**21 59 37.1**	**-0.1**
	1.6nm,0.6s,baz=122,slow=14,SNR=2.9						
	1.6nm,0.6s						
STKA	**Stephens Creek**	**35.02**	**248**	P	**P**	**21 59 37.1**	**-0.1**
STKA				IAmb	IAmb	21 59 45.6	
	comp=Z,11nm,1.1s						
INKA	**Innaminka**	**35.74**	**255**	P	**P**	**21 59 44.2**	**+1.0**
INKA				IAmb	IAmb	21 59 45.7	
	comp=Z,3.0nm,1.1s						
BBOO	**Buckleboo**	**39.74**	**247**	P	**P**	**22 00 14.6**	**-1.5**
BBOO				IAmb	IAmb	22 00 17.5	
	comp=Z,8.2nm,1.1s						
AS31	**Alice Springs**	**42.33**	**260**	P	**P**	**22 00 35.9**	**-0.9**
ASAR	**Alice Springs**	**42.33**	**260**	P	**P**	**22 00 35.9**	**-0.9**
	comp=Z,3.5nm,0.8s,baz=99,slow=7.1,SNR=29						
ASAR				ScP	**ScP**	**22 05 21.2**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=98,slow=3.5,SNR=8.4						
	comp=Z,3.5nm,0.8s						
ASAR	**Alice Springs**	**42.33**	**260**	P	**P**	**22 00 35.6**	**-1.1**
WR8	**Warramunga Arr**	**42.54**	**266**	P	**P**	**22 00 37.0**	**-1.4**
WR8				IAmb	IAmb	22 00 42.6	
	comp=Z,3.3nm,1.0s						
WB0	**Warramunga Arr**	**42.68**	**266**	P	**P**	**22 00 38.2**	**-1.4**
WB0				IAmb	IAmb	22 00 38.7	
	comp=Z,6.6nm,0.7s						
WRAB	**Tennant Creek**	**42.68**	**266**	P	**P**	**22 00 38.2**	**-1.4**
WRAB				IAmb	IAmb	22 00 38.3	
	comp=Z,3.4nm,0.8s						
WRA	**Warramunga Arr**	**42.69**	**266**	P	**P**	**22 00 37.8**	**-1.8**
	comp=Z,3.4nm,0.5s,baz=90,slow=5.7,SNR=86						
WRA				ScP	**ScP**	**22 05 22.5**	**-0.9**
	comp=Z,0.8nm,0.9s,baz=99,slow=3.6,SNR=3.9						
	comp=Z,3.4nm,0.5s						
WRA	**Warramunga Arr**	**42.69**	**266**	P	**P**	**22 00 37.9**	**-1.8**
FORT	**Forrest**	**46.61**	**249**	P	**P**	**22 01 08.5**	**-1.3**
MTN	**Manton Dam**	**47.72**	**274**	P	**P**	**22 01 16.5**	**-1.8**
MTN				IAmb	IAmb	22 01 23.6	
	comp=Z,6.8nm,1.1s						
KNRA	**Kununurra**	**48.96**	**270**	P	**P**	**22 01 26.5**	**-1.1**
KNRA				IAmb	IAmb	22 01 38.9	
	comp=Z,5.7nm,1.1s						
FITZ	**Fitzroy Crossi**	**51.11**	**265**	P	**P**	**22 01 42.9**	**-0.5**
VNDA	**Vanda**	**54.52**	**185**	P	**P**	**22 02 08.3**	**+1.5**
SOEI	**Soe**	**55.11**	**275**	P	**P**	**22 02 12.9**	**+0.8**
SOEI				IAmb	IAmb	22 02 27.1	
	comp=Z,13nm,0.9s						
MORW	**Morawa**	**57.17**	**250**	P	**P**	**22 02 24.5**	**-1.6**
MORW				IAmb	IAmb	22 02 25.6	
	comp=Z,6.9nm,1.1s						
YULB	**Yu-li**	**74.03**	**305**	P	**P**	**22 04 11.7**	**0.0**
P17A	**Butcher Ranch,**	**89.96**	**46**	P	**P**	**22 05 32.6**	**-0.3**
TXAR	**Lajitas Array**	**90.13**	**58**	P	**P**	**22 05 34.5**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=214,slow=7.1,SNR=9.2						
	comp=Z,0.7nm,0.7s						
TXAR	**Lajitas Array**	**90.13**	**58**	P	**P**	**22 05 33.9**	**+0.1**
F20K	**Avaraart Lake**	**92.32**	**9**	P	**P**	**22 05 41.8**	**-1.0**
F20K				IAmb	IAmb	22 05 49.4	
	comp=Z,2.7nm,0.8s						
PDAR	**Pinedale Array**	**92.41**	**44**	P	**P**	**22 05 43.0**	**-1.2**
	comp=Z,0.7nm,0.9s,baz=164,slow=2.6,SNR=3.8						
	comp=Z,0.7nm,0.9s						
PDAR	**Pinedale Array**	**92.41**	**44**	P	**P**	**22 05 43.4**	**-0.8**
BVAR	**Borovoye Array**	**120.53**	**319**	PKP	**PKPdf**	**22 11 19.4**	**-1.8**
	comp=Z,0.4nm,0.4s,baz=98,slow=1.9,SNR=5.7						
ARCES	**ARCESS Array B**	**131.82**	**348**	PKP	**PKPdf**	**22 11 40.9**	**-1.4**
	comp=Z,5.8nm,1.1s,baz=345,slow=3.2,SNR=5.4						
HFS	**Hagfors**	**142.48**	**349**	PKhKP	PKPpre	22 11 57.2	
	comp=Z,1.6nm,0.3s,baz=45,slow=5.0,SNR=23						
AKASG	**Malin Array Be**	**145.02**	**328**	PKP	**PKPdf**	**22 12 05.1**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=40,slow=3.9,SNR=4.3						
BRTR	**Keskin Array B**	**147.72**	**307**	PKPbc	**PKPdf**	**22 12 13.2**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=65,slow=2.7,SNR=4.0						
BRTR	**Keskin Array B**	**147.72**	**307**		**PKPdf**	**22 12 13.8**	**+1.9**
BRTR				PKPab	**PKiKP**	**22 12 19.1**	**+2.1**
MMAI	**Mount Meron Ar**	**147.90**	**295**	PKPbc	**PKPbc**	**22 12 15.4**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=66,slow=4.9,SNR=7.9						
EKA	**Eskdalemuir Ar**	**148.38**	**4**	PKPbc	**PKPdf**	**22 12 14.7**	**+2.4**
	comp=Z,0.4nm,0.3s,baz=355,slow=2.6,SNR=4.1						

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*JMA **19** 21:58:50.2±0.4, 23°N±2°×12°3E±°, h50^{km}, FAR S OFF ISHIGAKIJIMA*

*TAP **19** 21:58:51.2, 22°.51N×122°.64E, h44^{km}±1^{km}, ML3.1, D*

ISC 19 21:58:48.2±1.8, 22°.54N±0°.04×122°.70E±0°.04, h19^{km}±4^{km}, n64, σ0^{s}.83/101, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LYUB	**Lan-yu**	**1.16**	**243**	*i* P	**Pb**	**21 59 10.0**	**+0.4**
LYUB				*i* S	**Sb**	**21 59 24.0**	**-0.3**
LAY	**Lan-yu**	**1.17**	**245**	*e*P	**Pn**	**21 59 09.3**	**-0.3**
LAY				S	**Sb**	**21 59 23.1**	**-1.6**
CHKT	**Chengkung**	**1.35**	**295**	*i* P	**Pb**	**21 59 13.0**	**+0.1**
CHKH	**Chenggong**	**1.37**	**299**	P	**Pb**	**21 59 13.0**	**-0.2**
CHKH				*i* S	**Sn**	**21 59 28.4**	**-1.4**
ECBN	**Changbin**	**1.39**	**304**	*e*P	**Pb**	**21 59 14.0**	**+0.5**
ECBN				S	**Sn**	**21 59 29.7**	**-0.7**
FULB	**Fuli**	**1.45**	**297**	P	**Pb**	**21 59 14.6**	**-0.1**
FULB				S	**Sn**	**21 59 31.2**	**-0.9**
ECS	**Chishang**	**1.47**	**292**	*e*P	**Pg**	**21 59 16.0**	**-0.6**
ECS				*e*S	**Sb**	**21 59 33.5**	**+0.1**
EHD	**Haiduan**	**1.50**	**294**	P	**Pb**	**21 59 15.6**	**0.0**
EHD				S	**Sn**	**21 59 32.1**	**-1.2**
HGSD	**Ruisui**	**1.51**	**309**	P	**Pn**	**21 59 14.9**	**+0.7**

HGSD				S	**Sn**	**21 59 31.9**	**-1.5**
TWGBT	**Beinan**	**1.52**	**281**	*e*P	**Pb**	**21 59 15.7**	**-0.1**
TWGBT				*e*S	**Sn**	**21 59 33.6**	**-0.1**
TWF1	**Yuli**	**1.52**	**302**	*i* P	**Pb**	**21 59 15.5**	**-0.4**
TWF1				*i* S	**Sn**	**21 59 33.8**	**0.0**
TWG	**Pinlang**	**1.53**	**281**	P	**Pb**	**21 59 16.1**	**+0.2**
TWG				S	**Sb**	**21 59 34.7**	**-0.3**
YULB	**Yu-li**	**1.55**	**304**	P	**Pn**	**21 59 15.4**	**+0.6**
YULB				S	**Sb**	**21 59 35.3**	**-0.2**
EHYH	**Wanrong**	**1.57**	**308**	P	**Pb**	**21 59 16.9**	**+0.2**
EHYH				S	**Sn**	**21 59 35.4**	**+0.5**
EHY	**Hungye**	**1.59**	**308**	*i* P	**Pn**	**21 59 16.1**	**+0.7**
EHY				S	**Sn**	**21 59 35.4**	**-0.1**
ECL	**Taimali**	**1.61**	**272**	P	**Pn**	**21 59 16.6**	**+0.9**
ECL				S	**Sn**	**21 59 36.0**	**+0.1**
EOS4	**EOS4**	**1.61**	**348**	P	**Pb**	**21 59 17.1**	**-0.1**
EOS4				S	**Sn**	**21 59 36.1**	**+0.6**
EGFH	**Guangfu**	**1.62**	**314**	*e*P	**Pb**	**21 59 17.5**	**-0.1**
EGFH				*e*S	**Sn**	**21 59 36.3**	**+0.1**
SHUL	**Shoufeng**	**1.62**	**320**	*e*P	**Pn**	**21 59 15.8**	**0.0**
SHUL				*e*S	**Sn**	**21 59 35.5**	**-0.8**
ELDTW	**Lidau**	**1.68**	**293**	*e*P	**Pb**	**21 59 18.3**	**-0.3**
ELDTW				*e*S	**Sn**	**21 59 38.5**	**+0.7**
TAWH	**Dawu Township**	**1.69**	**264**	*e*P	**Pb**	**21 59 18.5**	**-0.1**
EAST	**Anshuo**	**1.72**	**265**	*i* P	**Pb**	**21 59 19.2**	**0.0**
EAST				*i* S	**Sn**	**21 59 38.6**	**0.0**
ESL	**Shilin**	**1.72**	**318**	*e*P	**Pb**	**21 59 18.8**	**-0.5**
ESL				*e*S	**Sn**	**21 59 37.8**	**-0.9**
EOS3	**EOS3**	**1.78**	**349**	*e*P	**Pb**	**21 59 20.7**	**+0.6**
EOS3				*e*S	**Sb**	**21 59 41.4**	**-0.5**
TSEB	**Hengchuen, Pin**	**1.78**	**250**	*e*P	**Pb**	**21 59 19.9**	**-0.3**
SLIU	**Shizi**	**1.79**	**260**	*e*P	**Pb**	**21 59 20.3**	**0.0**
SLIU				*e*S	**Sn**	**21 59 40.4**	**+0.1**
HATJ	**Hateruma jima**	**1.82**	**34**	*e*P	**Pn**	**21 59 19.8**	**+1.2**
HATJ				*e*S	**Sn**	**21 59 40.9**	**-0.2**
VWDT	**VWDT**	**1.88**	**311**	*e*P	**Pb**	**21 59 21.4**	**-0.5**
VWDT				*e*S	**Sn**	**21 59 43.3**	**+0.9**
STYH	**Taoyuan**	**1.88**	**290**	*e*P	**Pb**	**21 59 21.5**	**-0.5**
STYH				*e*S	**Sb**	**21 59 44.1**	**-1.0**
MASBT	**Mashibuluo**	**1.91**	**273**	*e*P	**Pb**	**21 59 21.8**	**-0.6**
NACB	**Ninganchiao**	**1.92**	**328**	*e*P	**Pb**	**21 59 21.6**	**-1.1**
NACB				*i* S	**Sn**	**21 59 43.1**	**-0.4**
SSD	**Sandimen**	**1.92**	**277**	*e*P	**Pn**	**21 59 20.7**	**+0.8**
OWD	**Renai**	**1.99**	**316**	*e*P	**Pb**	**21 59 22.6**	**-1.3**
OWD				*e*S	**Sn**	**21 59 44.7**	**-0.7**
ALS	**Alishan**	**2.00**	**299**	P	**Pb**	**21 59 24.1**	**0.0**
ALS				S	**Sb**	**21 59 48.3**	**-0.4**
IRIF	**Iriomote-Funau**	**2.02**	**28**	*e*P	**Pn**	**21 59 22.6**	**+1.2**
SSLB	**Suanglung**	**2.03**	**308**	*e*P	**Pb**	**21 59 24.2**	**-0.3**
SSLB				*e*S	**Sn**	**21 59 47.0**	**+0.6**
WTP	**Ta-pu**	**2.05**	**291**	*e*P	**Pb**	**21 59 25.6**	**+0.7**
WUSB	**Renai**	**2.05**	**315**	*e*P	**Pn**	**21 59 22.3**	**+0.4**
TPUB	**Ta-pu**	**2.05**	**292**	*e*P	**Pb**	**21 59 25.4**	**+0.5**
TPUB				*i* S	**Sb**	**21 59 50.8**	**+0.7**
WHYT	**Xinyi Township**	**2.05**	**305**	*e*P	**Pb**	**21 59 23.7**	**-1.3**
WHF	**Hehuan Shan**	**2.07**	**321**	*e*P	**Pn**	**21 59 23.6**	**+1.2**
WHF				*e*S	**Sn**	**21 59 47.3**	**-0.6**
JKRS	**Kuro-shima**	**2.08**	**35**	*e*P	**Pn**	**21 59 23.4**	**+1.3**
CHN1	**Nanshi**	**2.10**	**288**	*e*P	**Pb**	**21 59 26.8**	**+1.0**
CHN1				*e*S	**Sb**	**21 59 52.2**	**+0.7**
WCKO	**Fanlu**	**2.13**	**295**	*e*P	**Pb**	**21 59 26.3**	**+0.1**
WCKO				*e*S	**Sb**	**21 59 53.1**	**+0.9**
SMLT	**Sun Moon Lake**	**2.13**	**309**	*e*P	**Pb**	**21 59 26.4**	**+0.1**
CHN5	**Tsauling**	**2.14**	**300**	P	**Pb**	**21 59 27.4**	**+1.0**
SNST	**Tainan City**	**2.14**	**289**	*i* P	**Pb**	**21 59 26.9**	**+0.5**
SNST				*i* S	**Sb**	**21 59 54.0**	**+1.4**
TWK	**Hsinying**	**2.16**	**290**	P	**Pb**	**21 59 27.4**	**+0.5**
FUSS	**Fushou**	**2.16**	**322**	*e*P	**Pb**	**21 59 26.3**	**-0.6**
TYC	**Yuchr**	**2.17**	**309**	*e*P	**Pb**	**21 59 27.6**	**+0.7**
NNSB	**Datong**	**2.24**	**328**	*e*P	**Pn**	**21 59 25.3**	**+0.9**
NNSB				*e*S	**Sn**	**21 59 51.2**	**-0.3**
JIJ	**Ishigaki jima**	**2.25**	**36**	*e*P	**Pn**	**21 59 25.1**	**+0.7**
NNS	**Nan Shan**	**2.25**	**328**	*e*P	**Pn**	**21 59 26.0**	**+1.4**
NNS				*e*S	**Sn**	**21 59 52.8**	**+0.9**
LATG	**Datong**	**2.26**	**332**	P	**Pn**	**21 59 26.3**	**+1.6**
WDLH	**Douliu**	**2.29**	**300**	*i* P	**Pb**	**21 59 29.6**	**+0.6**
ENTT	**Nioudou**	**2.34**	**334**	*e*P	**Pb**	**21 59 28.4**	**-1.4**
WHP	**Taichung City**	**2.37**	**317**	*e*P	**Pb**	**21 59 29.5**	**-0.7**
FUSB	**Fushanzhiwuyua**	**2.44**	**336**	*e*P	**Pn**	**21 59 29.3**	**+2.2**
YHNB	**Yeheng**	**2.44**	**331**	*e*P	**Pb**	**21 59 29.8**	**-1.9**
NSK	**Sanguang**	**2.46**	**330**	*e*P	**Pb**	**21 59 30.4**	**-1.5**
NWLT	**Wulai**	**2.48**	**334**	*e*P	**Pb**	**21 59 30.9**	**-1.4**
JISG	**Ishigakijimahi**	**2.52**	**36**	*e*P	**Pn**	**21 59 28.8**	**+0.6**
NFF	**Wufeng Townshi**	**2.54**	**326**	*e*P	**Pb**	**21 59 33.4**	**+0.1**
TIPB	**Shuangxi**	**2.55**	**342**	*e*P	**Pb**	**21 59 31.6**	**-1.9**

IDC ***19*** *22:16:19.4±0.6, 34°.71N×79°.68E, h0km, mb4.2/20, mbtmp4.2/26, ML3.9/6, MS3.7/33, Error ellipse: s-maj=17.2km s-min=12.1km az=40.0*

MOS ***19*** *22:16:20.3±1.1, 34°.76N×79°.69E, h17km, mb4.5/9, Error ellipse: s-maj=9.6km s-min=4.8km az=110.7*

NEIC ***19*** *22:16:21.0±1.5, 34°.70N±0°.08×79°.74E±0°.09, h10km±1km, mb4.5/34, Error ellipse: s-maj=14.3km s-min=12.4km az=212.0*

BJI ***19*** *22:16:22.8, 34°.86N×79°.88E, h10km, mB4.8/14, mb4.6/45, ML4.3/6, Ms4.2/30, Ms7 4.0/26*

NDI ***19*** *22:16:24.9±1.2, 34°.69N×79°.80E, h8km±10km, ML4.3, MW4.2, mb4.5(NEIC)*

ISC 19 22:16:21.3±0.3**, 34°.76N**±0°.03×**79°.69E**±0°.03**, h10km, n195,** σ**2s.12**/204**, mb4.4**/56**, MS3.8**/35**, 4C-3D, Kashmir-Xizang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSSA	**Tissa**	**3.51**	**238**	*e*P	**Pb**	**22 17 21.1**	**-2.6**
TSSA				*e*S	**Sn**	**22 18 01.4**	**+3.5**
TSSA				IAML		22 18 15.4	
	comp=N,2µm,0.3s						
TSSA				IAML		22 18 15.5	
	comp=E,1µm,0.8s						
SMLA	**Simla**	**4.19**	**211**	*e*P	**Pn**	**22 17 28.5**	**+3.3**
SMLA				*e*S	**Sn**	**22 18 15.7**	**+1.5**
SMLA				IAML		22 18 22.9	
	comp=E,404nm,0.6s						
SMLA				IAML		22 18 25.4	
	comp=N,474nm,1.1s						
DDI	**Dehra Dun**	**4.63**	**198**	*e*P	**Pn**	**22 17 34.8**	**+3.5**
DDI				*e*S	**Sn**	**22 18 25.4**	**+0.2**
DDI				IAML		22 18 34.1	
	comp=N,417nm,0.6s						
DDI				IAML		22 18 34.9	
	comp=E,426nm,0.9s						
PTH	**Pithoragarh**	**5.17**	**175**	*e*P	**Pn**	**22 17 41.6**	**+2.7**
PTH				IAML		22 18 31.4	
	comp=E,435nm,0.8s						
PTH				IAML		22 18 32.6	
	comp=N,436nm,0.9s						
PTH				*e*S	**Sn**	**22 18 37.4**	**-1.4**
LGTI	**Lohaghat**	**5.35**	**176**	*e*P	**Pn**	**22 17 44.5**	**+3.1**
LGTI				*e*S	**Sn**	**22 18 41.6**	**-1.6**
LGTI				IAML		22 18 51.8	
	comp=N,377nm,1.5s						
LGTI				IAML		22 18 55.7	
	comp=E,159nm,1.9s						
NIL	**Nilore**	**5.45**	**260**		**Pn**	**22 17 43.4**	**+0.8**
NIL	**Nilore**	**5.45**	**260**	P	**Pn**	**22 17 43.4**	**+0.8**
KSH	**Kashi**	**5.60**	**329**	Pn	**Pn**	**22 17 47.8**	**+3.0**
KSH				Sn	**Sn**	**22 18 51.5**	**+2.3**
KSH				smax	smax		
	comp=E,230nm,1.5s						
KSH				smax	smax		
	comp=E,340nm,0.9s						
WUS	**Wushi**	**6.44**	**357**		**Pn**	**22 17 57.9**	**+1.6**
MANEM	**Manem**	**7.05**	**296**		**Pn**	**22 18 04.5**	**-0.2**
TARG	**Taragay, Kyrgy**	**7.12**	**349**		**Pn**	**22 18 07.5**	**+1.7**
TARG	**Taragay, Kyrgy**	**7.12**	**349**	P	**Pn**	**22 18 07.5**	**+1.7**
PYUN	**Piuthan**	**7.21**	**156**	Pn	**Pn**	**22 18 09.5**	**+2.5**
	baz=157,slow=0.0						
PYUN				Sn	**Sn**	**22 19 28.5**	**-0.5**
	comp=E,3.1nm,0.5s,baz=157,slow=0.0						
DANN	**Dangsing**	**7.27**	**150**	Pn	**Pn**	**22 18 10.7**	**+2.8**
	baz=151,slow=0.0						
DANN				Sn	**Sn**	**22 19 30.6**	**0.0**
	comp=E,369nm,0.8s,baz=151,slow=0.0						
KDJ	**Kajisay**	**7.62**	**346**		**Pn**	**22 18 14.0**	**+1.5**
KDJ	**Kajisay**	**7.62**	**346**	P	**Pn**	**22 18 14.0**	**+1.5**
KOLN	**Koldanda**	**7.73**	**153**	Pn	**Pn**	**22 18 16.2**	**+2.2**
	baz=154,slow=0.0						
KOLN				Sn	**Sn**	**22 19 40.6**	**-1.1**
	comp=E,437nm,0.7s,baz=154,slow=0.0						
PRZ	**Przheval'sk**	**7.78**	**353**		**Pn**	**22 18 16.5**	**+1.7**
PRZ	**Przheval'sk**	**7.78**	**353**	P	**Pn**	**22 18 16.5**	**+1.7**
DRK	**Karamyk**	**7.87**	**309**		**Pn**	**22 18 16.2**	**+0.2**
DRK	**Karamyk**	**7.87**	**309**	P	**Pn**	**22 18 16.2**	**+0.2**
GKN	**Gorkha**	**7.95**	**147**	Pn	**Pn**	**22 18 19.1**	**+2.0**
	baz=147,slow=0.0						
GKN				Sn	**Sn**	**22 19 45.7**	**-1.5**
	comp=E,299nm,0.7s,baz=147,slow=0.0						
ULHL	**Ulahol**	**7.95**	**341**	P	Pn	22 18 22.2	+5.2
	SNR=5.4						
BOOM	**Boomskoye usch**	**8.26**	**340**		**Pn**	**22 18 24.7**	**+3.4**
BOOM	**Boomskoye usch**	**8.26**	**340**	P	**Pn**	**22 18 24.7**	**+3.4**
KKN	**Kakani**	**8.43**	**144**	Pn	**Pn**	**22 18 25.5**	**+1.8**
	baz=145,slow=0.0						
KKN				Sn	**Sn**	**22 19 57.8**	**-1.3**
	comp=E,491nm,1.2s,baz=145,slow=0.0						
UCH	**Uchtor**	**8.49**	**333**	P	**Pn**	**22 18 29.1**	**+4.4**
	SNR=10						
DMN	**Daman**	**8.50**	**145**	Pn	**Pn**	**22 18 26.3**	**+1.6**
	baz=146,slow=0.0						
DMN				Sn	**Sn**	**22 19 58.5**	**-2.4**
	comp=E,375nm,0.8s,baz=146,slow=0.0						
GAR	**Garm**	**8.62**	**302**		**Pn**	**22 18 26.3**	**+0.2**
GUN	**Gumba**	**8.63**	**141**	Pn	**Pn**	**22 18 28.7**	**+2.1**
	baz=141,slow=0.0						
GUN				Sn	**Sn**	**22 20 02.5**	**-1.8**
	comp=E,325nm,0.9s,baz=141,slow=0.0						
PKIN	**Phulchoki**	**8.67**	**144**	Pn	**Pn**	**22 18 28.3**	**+1.3**
	baz=145,slow=0.0						
PKIN				Sn	**Sn**	**22 20 02.4**	**-2.5**
	comp=E,126nm,0.5s,baz=145,slow=0.0						
KBK	**Karagaybulak**	**8.71**	**336**	P	**Pn**	**22 18 31.9**	**+4.4**
	SNR=18						
TKM2	**Tokmak 2**	**8.75**	**340**	P	Pn	22 18 33.1	+5.0
	SNR=6.6						
KBL	**Kabul**	**8.77**	**272**		**Pn**	**22 18 28.3**	**-0.1**
KBL	**Kabul**	**8.77**	**272**	P	**Pn**	**22 18 28.3**	**-0.1**
BTK	**Batken**	**8.82**	**309**	Pn	**Pn**	**22 18 29.4**	**+0.5**
BTK	**Batken**	**8.82**	**309**	P	**Pn**	**22 18 29.4**	**+0.5**
AAK	**Ala-Archa**	**8.85**	**334**	P	**Pn**	**22 18 33.7**	**+4.3**
	SNR=20						
AAK	**Ala-Archa**	**8.85**	**334**	Pn	**Pn**	**22 18 32.9**	**+3.5**
	comp=E,1.8nm,0.3s,baz=145,slow=7.7,SNR=29						
AAK				Lg	Lg	22 20 57.0	
	comp=E,0.1nm,0.3s,baz=326,slow=13,SNR=4.0						
AAK				LR	LR	22 22 20.8	
	comp=E,547nm,20.0s,baz=148,slow=41						
	comp=E,7.6nm,0.5s						
AAK	**Ala-Archa**	**8.85**	**334**		**Pn**	**22 18 31.8**	**+2.4**
FRU1	**Bishkek**	**8.96**	**335**		**Pn**	**22 18 33.6**	**+2.8**
FRU1	**Bishkek**	**8.96**	**335**	P	**Pn**	**22 18 33.6**	**+2.8**
CHMS	**Chumysh**	**9.08**	**336**	P	**Pn**	**22 18 36.5**	**+4.0**
	SNR=12						
EKS2	**Erkin-Say**	**9.14**	**331**	P	**Pn**	**22 18 38.1**	**+4.7**
	SNR=27						
CHGR	**Chuyangaron**	**9.31**	**298**		**Pn**	**22 18 36.1**	**+0.5**
CHGR	**Chuyangaron**	**9.31**	**298**	P	**Pn**	**22 18 36.1**	**+0.5**
SHAA	**Shahritus**	**9.76**	**290**		**Pn**	**22 18 40.0**	**-1.8**
GTK	**Tadong**	**10.64**	**132**	*e*P	**Pn**	**22 18 55.6**	**+1.6**
GTK				*e*x	x	22 20 52.6	
GTK				IAML		22 20 59.0	
	comp=E,246nm,0.8s						
GTK				IAML		22 21 02.7	
	comp=N,242nm,2.0s						
LSA	**Lhasa**	**10.94**	**114**	P	**Pn**	**22 18 57.9**	**-0.4**
LSA				S	**Sn**	**22 20 56.9**	**-4.0**
LSA				pmax	pmax		
	comp=N,32nm,0.8s						
LSA				LR	LR		
	comp=N,1µm,12.0s						
LSA				LR	LR		
	comp=N,540nm,13.1s						
WMQ	**Urumqi**	**10.97**	**32**	*e*P	**Pn**	**22 19 01.6**	**+3.3**
WMQ				S	**Sn**	**22 21 02.1**	**+1.0**
WMQ				pmax	pmax		
	comp=N,13nm,0.7s						
WMQ				LR	LR		
	comp=N,1µm,13.5s						
WMQ				LR	LR		
	comp=N,1µm,13.5s						
WMQ				LR	LR		
	comp=N,230nm,14.7s						
KK31	**Karatay Array**	**10.97**	**322**		**Pn**	**22 18 58.4**	**+0.1**
KK31	**Karatay Array**	**10.97**	**322**	P	**Pn**	**22 18 58.4**	**+0.1**
KKAR	**Karatay Array**	**10.97**	**322**		**Pn**	**22 18 59.4**	**+1.1**
KKAR	**Karatay Array**	**10.97**	**322**	P	**Pn**	**22 18 59.4**	**+1.1**
BHPL	**Bhopal**	**11.64**	**190**	*e*P	**Pn**	**22 19 09.9**	**+2.3**
BHPL				*e*S	**Sn**	**22 21 10.2**	**-7.5**
BHPL				IAML		22 21 18.0	
	comp=E,45nm,0.9s						
BHPL				IAML		22 21 18.1	
	comp=N,41nm,0.7s						
MAKZ	**Makanchi**	**12.16**	**7**		**Pn**	**22 19 14.4**	**-0.1**
MAKZ	**Makanchi**	**12.16**	**7**	P	**Pn**	**22 19 14.5**	**-0.1**
MK31	**Makanchi Array**	**12.19**	**9**	*ce*P	**Pn**	**22 19 14.7**	**-0.2**
MKAR	**Makanchi Array**	**12.19**	**9**	Pn	**Pn**	**22 19 15.1**	**+0.2**
	comp=N,3.1nm,0.3s,baz=190,slow=12,SNR=118						
MKAR				Sn	**Sn**	**22 21 29.0**	**-1.8**
	comp=N,0.7nm,0.3s,baz=198,slow=25,SNR=2.8						
MKAR				LR	LR	22 24 27.4	
	comp=N,149nm,21.4s,baz=184,slow=40						
	comp=N,12nm,0.5s						
MKAR	**Makanchi Array**	**12.19**	**9**		**Pn**	**22 19 14.2**	**-0.6**
GOMU	**GeErMu**	**12.42**	**79**	P	**Pn**	**22 19 17.1**	**-1.3**
GOMU				S	**Sn**	**22 21 36.8**	**-0.3**
DHUB	**DHUBRI**	**12.44**	**132**	*e*P	**Pn**	**22 19 19.6**	**+1.1**
DHUB				*e*x	**Sn**	**22 21 36.3**	**-0.9**
DHUB				IAML		22 21 37.3	
	comp=N,228nm,1.4s						
DHUB				IAML		22 21 38.7	
	comp=E,224nm,0.9s						
TAWA	**Tawang**	**12.63**	**121**	*e*P	**Pn**	**22 19 20.8**	**-0.6**
TAWA				*e*x	**Sn**	**22 21 41.4**	**-1.0**
TAWA				IAML		22 21 41.9	
	comp=N,130nm,1.1s						
TAWA				IAML		22 21 42.5	
	comp=E,134nm,1.1s						
NGP	**Nagpur**	**13.55**	**183**	*e*P	**Pn**	**22 19 34.9**	**+1.3**
NGP				*e*S	Sn	22 21 54.0	-10
NGP				IAML		22 22 08.3	
	comp=N,21nm,2.1s						
NGP				IAML		22 22 09.2	
	comp=E,34nm,1.4s						
SHL	**Shillong**	**13.96**	**128**		**Pn**	**22 19 35.5**	**-3.9**
SHL	**Shillong**	**13.96**	**128**	*e*P	**Pn**	**22 19 41.9**	**+2.5**
SHL				*e*S	Sn	22 22 04.8	-10
SHL				IAML		22 22 07.4	
	comp=E,139nm,1.8s						
SHL				IAML		22 22 13.7	
	comp=N,134nm,2.0s						
SHL	**Shillong**	**13.96**	**128**	P	**Pn**	**22 19 35.5**	**-3.9**
HRA	**Herat**	**14.38**	**274**		**Pn**	**22 19 44.3**	**-0.8**
KURBB	**Kurchatov Arra**	**15.88**	**357**	Pn	**Pn**	**22 20 02.8**	**-2.0**
	comp=N,0.1nm,0.3s,baz=185,slow=11,SNR=14						
KURBB				LR	LR	22 26 00.9	
	comp=N,79nm,20.7s,baz=184,slow=36						
	comp=N,7.1nm,1.0s						
KURK	**Kurchatov**	**15.97**	**358**		**Pn**	**22 20 03.6**	**-2.3**
KURK	**Kurchatov**	**15.97**	**358**	*ce*P	**Pn**	**22 20 03.7**	**-2.3**
KURK				pmax	pmax		
	comp=Z,16nm,1.0s						
DGZ	**Jazzator, Alta**	**15.98**	**19**	*i* P	**Pn**	**22 20 06.8**	**+0.5**
DGZ				pmax	pmax		
	comp=Z,23nm,0.8s						
GTA	**Gaotai**	**16.71**	**68**	*e*P	**Pn**	**22 20 16.0**	**+0.4**
GTA				pP	pP	22 20 19.8	-2.5
HYB	**Hyderabad**	**17.30**	**184**	*e*P	**Pn**	**22 20 22.3**	**-0.7**
TNCH	**TengChong**	**18.96**	**116**	P	**Pn**	**22 20 45.8**	**+2.2**
TNCH				S	**Sn**	**22 24 13.6**	**-2.4**
TNCH				pmax	pmax		
	comp=Z,39nm,0.9s						
TNCH				pmax	pmax		
	comp=Z,210nm,4.3s						
TNCH				LR	LR		
	comp=Z,490nm,16.0s						
TNCH				LR	LR		
	comp=Z,440nm,16.5s						
TNCH				LR	LR		
	comp=Z,350nm,11.2s						
BVAR	**Borovoye Array**	**19.42**	**343**	P	**P**	**22 20 47.9**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=153,slow=12,SNR=37						
BVAR				LR	LR	22 28 33.7	
	comp=Z,294nm,19.0s,baz=152,slow=38						
	comp=Z,9.1nm,0.6s						
BORK	**Borovoye**	**19.46**	**343**		**P**	**22 20 47.2**	**-0.8**
BORK	**Borovoye**	**19.46**	**343**	*i* P	**P**	**22 20 48.2**	**+0.2**
BORK				pmax	pmax		
	comp=Z,23nm,1.1s						
ZAA0	**Zalesovo Array**	**19.53**	**9**		**P**	**22 20 47.6**	**-1.1**
ZALV	**Zalesovo Beam**	**19.53**	**9**	P	**P**	**22 20 48.2**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=197,slow=11,SNR=24						
ZALV				LR	LR	22 29 15.3	
	comp=Z,126nm,19.7s,baz=214,slow=40						
	comp=Z,4.6nm,0.7s						
ZALV	**Zalesovo Beam**	**19.53**	**9**		**P**	**22 20 47.8**	**-0.9**
LZDM	**Lanzhou Array**	**19.61**	**80**	P	**Pn**	**22 20 50.3**	**-1.2**
	baz=269,slow=10						
	comp=Z,2.6nm,0.4s						
LZH	**Lanzhou**	**19.73**	**79**	*e*P	**Pn**	**22 20 52.5**	**-0.2**
LZH				sP	sP	22 20 59.1	+1.5
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,200nm,5.1s						
LZH				LR	LR		
	comp=Z,780nm,12.0s						
LZH				LR	LR		
	comp=Z,300nm,12.0s						
LZH				LR	LR		
	comp=Z,350nm,11.7s						
KNGR	**Kungurtug, Tuv**	**20.48**	**34**	*i* P	Pn	22 21 02.5	+1.2
AB31	**Akbulak array**	**20.53**	**321**		**P**	**22 21 00.1**	**+0.5**
ABKAR	**Akbulak array**	**20.53**	**321**		**P**	**22 20 59.9**	**+0.2**
KMI	**Kunming**	**22.12**	**109**	P	**P**	**22 21 18.0**	**+0.8**
KMI				pmax	pmax		
	comp=Z,29nm,0.8s						
KMI				LR	LR		
	comp=Z,250nm,14.2s						
KMI				LR	LR		
	comp=Z,150nm,13.3s						
KMI				LR	LR		
	comp=Z,200nm,9.7s						
AKTO	**Aktyubinsk**	**22.24**	**321**	P	**P**	**22 21 17.8**	**-0.2**
	comp=Z,10.0nm,0.7s,baz=123,slow=11,SNR=16						
AKTO				S	**S**	**22 25 20.0**	**-2.7**
	comp=Z,0.5nm,0.5s,baz=156,slow=20,SNR=1.2						
AKTO				LR	LR	22 29 58.9	
	comp=Z,108nm,19.1s,baz=55,slow=37						
	comp=Z,10.0nm,0.7s						
CHTO	**Chiang Mai**	**23.34**	**128**		**P**	**22 21 28.5**	**-1.3**
CHTO				IAmb	IAmb	22 21 48.9	
	comp=Z,8.9nm,0.8s						
CHTO	**Chiang Mai**	**23.34**	**128**	P	**P**	**22 21 28.5**	**-1.3**
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CM31	**Chiang Mai Arr**	**23.59**	**129**	P	**P**	**22 21 30.2**	**-2.1**
CMAR	**Chiang Mai Arr**	**23.59**	**129**	P	**P**	**22 21 32.8**	**+0.4**
	comp=Z,4.2nm,0.3s,baz=313,slow=10,SNR=53						
CMAR				LR	LR	22 31 07.2	
	comp=Z,168nm,21.5s,baz=315,slow=38						
	comp=Z,4.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**23.59**	**129**		**P**	**22 21 31.2**	**-1.2**
SONM	**Songino Array**	**23.81**	**49**	P	**P**	**22 21 36.3**	**+1.9**
	comp=Z,1.0nm,0.6s,baz=241,slow=11,SNR=7.9						
SONM				LR	LR	22 31 50.7	
	comp=Z,136nm,18.7s,baz=234,slow=39						
	comp=Z,1.0nm,0.6s						
SONM	**Songino Array**	**23.81**	**49**	P	**P**	**22 21 31.4**	**-3.0**
XAN	**Xi'an**	**24.10**	**83**	⇓P	**P**	**22 21 38.0**	**+0.8**
XAN				pP	sP	22 21 44.3	+0.6
XAN				S	**S**	**22 25 55.6**	**+0.8**
XAN				pmax	pmax		
	comp=Z,33nm,1.1s						
XAN				pmax	pmax		
	comp=Z,230nm,7.3s						
XAN				LR	LR		
	comp=Z,610nm,13.2s						
XAN				LR	LR		
	comp=Z,440nm,12.7s						
XAN				LR	LR		
	comp=Z,370nm,13.7s						
ULN	**Ulaanbaatar**	**24.23**	**49**	P	**P**	**22 21 37.9**	**-0.4**
ULN	**Ulaanbaatar**	**24.23**	**49**	*i* P	**P**	**22 21 43.2**	**+4.9**
GYA	**Guiyang**	**24.59**	**102**	⇓P	**P**	**22 21 42.8**	**+1.0**
GYA				pmax	pmax		
	comp=Z,19nm,0.9s						
BTO	**Baotou**	**24.64**	**67**	*e*P	**P**	**22 21 38.9**	**-3.2**
BTO				pP	**sP**	**22 21 50.6**	**+2.0**
BTO				sP	pP	22 21 56.0	+9.3
BTO				PP	**PnPn**	**22 22 16.3**	**+2.9**
BTO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BTO				pmax	pmax		
	comp=Z,250nm,4.9s						
BTO				LR	LR		
	comp=Z,610nm,11.5s						
BTO				LR	LR		
	comp=Z,640nm,12.4s						
BTO				LR	LR		
	comp=Z,840nm,13.8s						
ENH	**Enshi**	**25.48**	**92**	P	**P**	**22 21 47.8**	**-1.9**
ARTI	**Arti**	**26.07**	**333**	LR	LR	22 31 50.5	
	comp=Z,194nm,18.3s,baz=134,slow=36						
ARTI	**Arti**	**26.07**	**333**		**P**	**22 21 53.5**	**-1.3**
ARTI				IAmb	IAmb	22 22 28.2	
	comp=Z,7.8nm,0.9s						
ARTI	**Arti**	**26.07**	**333**	*c i*P	**P**	**22 21 55.1**	**+0.4**
ARTI						22 22 30.3	
ARTI				S	**S**	**22 26 27.3**	**+1.6**
ARTI				SS	**SnSn**	**22 27 25.1**	**+1.8**
ARTI				pmax	pmax		
	comp=Z,13nm,1.8s						
MAK	**Makhachkala**	**26.24**	**298**	*e*P	**P**	**22 21 51.1**	**-5.3**
MAK				*e*S	**S**	**22 26 20.3**	**-8.4**
MAK				MLR	MLR		
	comp=Z,123nm,10.0s						
LYN	**LuoYang**	**26.91**	**81**	P	**P**	**22 22 04.5**	**+2.0**
LYN				pmax	pmax		
	comp=Z,34nm,1.0s						
PALK	**Pallekele**	**27.37**	**178**	LR	LR	22 32 40.4	
	comp=Z,82nm,20.4s,baz=8.5,slow=36						
HNS	**HongShan**	**28.33**	**74**	⇓P	**P**	**22 22 16.5**	**+1.3**
HNS				LR	LR		
	comp=Z,650nm,19.1s						
HNS				LR	LR		
	comp=Z,130nm,14.3s						
BELG	**Belogornoye**	**28.83**	**318**	LR	LR	22 35 01.9	
	comp=Z,191nm,21.7s,baz=98,slow=39						
KBZ	**Khabaz**	**29.67**	**299**	LR	LR	22 37 55.4	
	comp=Z,74nm,20.2s,baz=96,slow=44						
KIV	**Kislovodsk**	**29.84**	**299**	*e*P	**P**	**22 22 30.1**	**+1.4**
KIV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,40nm,15.0s						
QIZ	**Qiongzhong**	**30.97**	**113**	P	**P**	**22 22 42.5**	**+3.7**
QIZ				S	**S**	**22 27 47.5**	**+4.0**
QIZ				LR	LR		
	comp=Z,160nm,13.0s						
QIZ				LR	LR		
	comp=Z,330nm,12.3s						
QIZ				LR	LR		
	comp=Z,290nm,10.1s						
KIRV	**Kirov**	**31.14**	**329**	LR	LR	22 36 15.8	
	comp=Z,211nm,19.2s,baz=130,slow=38						
RAYN	**Ar Rayn**	**31.74**	**259**	P	**P**	**22 22 45.4**	**-0.3**
RAYN	**Ar Rayn**	**31.74**	**259**	P	**P**	**22 22 45.4**	**-0.3**
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SOC	**Sochi**	**31.96**	**298**	*e*P	P	22 22 42.4	-4.9
SOC				*e*		22 23 50.3	
SOC				*e*S	**S**	**22 27 51.9**	**-6.7**
SOC				*e*SS	**SnSn**	**22 29 46.2**	**-0.9**
SOC				MLR	MLR		
	comp=Z,40nm,7.0s						
NJ2	**Nanjing**	**32.67**	**83**	*e*P	**P**	**22 22 50.3**	**-3.3**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
DL2	**Dalian**	**33.61**	**70**	P	P	22 23 10.3	+8.5
DL2				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KLMR	**Klimovskoe**	**36.60**	**328**	*e*P	**P**	**22 23 25.1**	**-2.1**
KLMR				*e*		22 25 49.8	
KLMR				pmax	pmax		
	comp=Z,19nm,1.6s						
BRTR	**Keskin Array B**	**36.68**	**292**	P	**P**	**22 23 29.6**	**+1.1**
	comp=Z,1.6nm,0.9s,baz=104,slow=8.8,SNR=8.3						
	comp=Z,1.6nm,0.9s						
BRTR	**Keskin Array B**	**36.68**	**292**		**P**	**22 23 27.6**	**-0.8**
GSI	**Gunungsitoli**	**37.23**	**149**		**P**	**22 23 31.1**	**-2.0**
HEH	**HeiHe**	**37.75**	**51**	*e*P	**P**	**22 23 39.0**	**+1.8**

HEH				pmax	pmax		
	comp=Z,4.0nm,1.4s						
KSRS	Korea Array	38.73	72	LR	LR	22 41 48.3	
	comp=Z,72nm,18.5s,baz=265,slow=40						
AKASG	Malin Array Be	39.53	310	P	P	22 23 52.3	+0.2
	comp=Z,0.3nm,0.3s,baz=78,slow=8.4,SNR=5.3						
AKASG				LR	LR	22 40 42.5	
	comp=Z,154nm,21.2s,baz=81,slow=37						
	comp=Z,0.3nm,0.3s						
AKASG	Malin Array Be	39.53	310	*i* P	P	22 23 55.2	+3.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ELL	Elmali	40.08	288		P	22 23 56.5	-0.6
ELL				IAmb	IAmb	22 24 15.5	
	comp=Z,19nm,1.4s						
ELL	Elmali	40.08	288	P	P	22 23 56.5	-0.6
ELL				pmax	pmax		
	comp=Z,19nm,1.4s						
NACGM	Naroch	41.40	316	*e*P	P	22 24 07.0	-0.5
YAK	Yakutsk	41.41	33	LR	LR	22 42 22.1	
	comp=Z,136nm,19.2s,baz=281,slow=38						
FINES	FINESS Array B	42.91	325	P	P	22 24 20.1	+0.3
	comp=Z,4.1nm,0.6s,baz=102,slow=11,SNR=16						
	comp=Z,4.1nm,0.6s						
PABE	Paberze	43.07	316	P	P	22 24 19.7	-1.4
TIXI	Tiksi	44.87	20	LR	LR	22 45 17.4	
	comp=Z,199nm,19.0s,baz=203,slow=39						
TIXI	Tiksi	44.87	20	*ce*P	P	22 24 38.9	+3.6
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FURI	Furi	45.48	245	LR	LR	22 46 36.5	
	comp=Z,81nm,18.8s,baz=50,slow=40						
ARCES	ARCESS Array B	45.52	336	P	P	22 24 39.9	-0.7
	comp=Z,3.1nm,0.8s,baz=99,slow=8.0,SNR=8.4						
ARCES				LR	LR	22 44 48.4	
	comp=Z,142nm,18.8s,baz=104,slow=38						
	comp=Z,3.1nm,0.8s						
STEB	Steborice	46.88	309	*e*P	P	22 24 53.6	+2.1
MJAR	Matsushiro Arr	46.95	70	P	P	22 24 51.6	-0.7
	comp=Z,3.8nm,0.8s,baz=291,slow=9.5,SNR=5.7						
MJAR				LR	LR	22 46 21.1	
	comp=Z,46nm,19.4s,baz=308,slow=38						
	comp=Z,3.8nm,0.8s						
DPC	Dobruska-Polom	47.76	309	*e*P	P	22 25 00.2	+1.7
DPC	Dobruska-Polom	47.76	309	*e*P	P	22 25 00.2	+1.7
RONA	Rosalia, Austr	48.12	306	*e*pP	P	22 25 03.1	+1.8
	comp=Z,1.3nm,0.5s						
CONA	Conrad Observa	48.38	306	*i* pP	P	22 25 05.1	+1.8
	comp=Z,1.7nm,0.6s						
ASAJ	Asahikawa	48.41	59	LR	LR	22 46 53.9	
	comp=Z,118nm,18.2s,baz=16,slow=38						
ARSA	Arzberg	48.71	305	*i* pP	P	22 25 08.4	+2.6
	comp=Z,0.4nm,0.3s						
HFS	Hagfors	48.78	323	P	P	22 25 06.3	+0.2
	comp=Z,5.0nm,0.6s,baz=101,slow=7.7,SNR=14						
HFS				LR	LR	22 45 04.5	
	comp=Z,92nm,20.6s,baz=82,slow=35						
	comp=Z,5.0nm,0.6s						
ZVC	Zvikov	49.24	308	*e*P	P	22 25 11.4	+1.5
MOA	Molln	49.45	306	*i* pP	P	22 25 13.0	+1.5
	comp=Z,1.8nm,0.5s						
OBKA	Obir	49.50	304	*i* pP	P	22 25 13.2	+1.3
	comp=Z,1.5nm,0.6s						
GERES	GERESS Array B	49.65	308	P	P	22 25 13.6	+0.5
	comp=Z,0.8nm,0.7s,baz=77,slow=7.8,SNR=2.7						
	comp=Z,0.8nm,0.7s						
KHC	Kasperske Hory	49.69	308	*e*P	P	22 25 14.3	+1.0
KHC	Kasperske Hory	49.69	308	*e*P	P	22 25 14.3	+1.0
NORES	NORESS Array B	49.84	323	P	P	22 25 18.5	+4.3
NB2	NORSAR Subarra	50.00	324	P	P	22 25 15.2	-0.3
	comp=Z,3.9nm,0.6s,baz=90,slow=7.9						
NB2	NORSAR Subarra	50.00	324	P	P	22 25 13.8	-1.7
NOA	NORSAR Array B	50.00	324	P	P	22 25 15.4	-0.1
	comp=Z,3.0nm,0.6s,baz=90,slow=7.5,SNR=15						
NOA				LR	LR	22 47 36.2	
	comp=Z,113nm,18.2s,baz=260,slow=38						
	comp=Z,3.0nm,0.6s						
LESA	Schwarzleotal	50.58	306	*i* P	P	22 25 20.6	+0.5
	comp=Z,1.6nm,0.5s						
SPITS	Spitsbergen Ar	50.84	346	LR	LR	22 50 37.9	
	comp=Z,111nm,18.6s,baz=114,slow=40						
MA2	Magadan	51.37	38	LR	LR	22 48 58.6	
	comp=Z,90nm,21.8s,baz=276,slow=38						
SQTA	Sankt Quirin	51.60	306	*i* pP	P	22 25 31.0	+3.1
	comp=Z,3.0nm,0.6s						
RETA	Reutte	51.84	306	*i* pP	P	22 25 33.6	+4.0
	comp=Z,2.3nm,0.6s						
FETA	Feichten	51.96	306	*i* pP	P	22 25 31.3	+0.6
	comp=Z,1.7nm,0.6s						
DAVA	Damuels	52.47	306	*i* pP	P	22 25 35.1	+0.7
	comp=Z,6.4nm,0.7s						
JCJ	Chichijima	53.41	80	LR	LR	22 51 38.5	
	comp=Z,32nm,18.9s,baz=320,slow=40						
KAPI	Kappang	54.66	128	LR	LR	22 51 22.5	
	comp=Z,36nm,20.5s,baz=318,slow=38						
MBAR	Mbarara	57.67	243	LR	LR	22 51 52.1	
	comp=Z,39nm,21.7s,baz=24,slow=37						
EKA	Eskdalemuir Ar	58.38	318	P	P	22 26 15.8	-0.8
	comp=Z,1.4nm,0.6s,baz=70,slow=7.4,SNR=7.0						
	comp=Z,1.4nm,0.6s						
BATI	Baumata	61.09	129	LR	LR	22 56 03.6	
	comp=Z,69nm,19.0s,baz=332,slow=39						
TORD	Torodi Ar. Bea	72.83	274	P	P	22 27 49.2	-1.4
	comp=Z,5.1nm,0.6s,baz=37,slow=7.8,SNR=16						
	comp=Z,5.1nm,0.6s						
TORD	Torodi Ar. Bea	72.83	274	P	P	22 27 48.8	-1.9
TORD				IAmb	IAmb	22 27 52.3	
	comp=Z,2.6nm,0.8s						
NEA2	Nenana	73.87	20	P	P	22 27 55.4	-0.5
NEA2				IAmb	IAmb	22 28 00.5	
	comp=Z,6.0nm,1.0s						
INK	Inuvik	74.30	12	P	P	22 27 57.9	-0.4
	comp=Z,0.7nm,0.5s,baz=0.7,slow=6.0,SNR=5.7						
	comp=Z,0.7nm,0.5s						
ILAR	Eielson Array	74.33	19	P	P	22 27 58.7	+0.1
	comp=Z,0.8nm,0.7s,baz=318,slow=5.3,SNR=9.2						
ILAR				LR	LR	23 05 47.1	
	comp=Z,106nm,18.8s,baz=260,slow=40						
	comp=Z,0.8nm,0.7s						
G30M	tAoh Zraii Nji	74.96	14	P	P	22 28 02.2	-0.1
G30M				IAmb	IAmb	22 28 06.4	
	comp=Z,7.2nm,1.3s						
WB0	Warramunga Arr	75.09	127	P	P	22 28 03.9	+0.3
WB0				IAmb	IAmb	22 28 04.3	
	comp=Z,6.6nm,1.0s						
SKT	Skwentna	75.13	22	P	P	22 28 03.2	-0.1
H29M	Whitestone	75.18	15	P	P	22 28 03.6	+0.1
H29M				IAmb	IAmb	22 28 41.7	
	comp=Z,8.5nm,1.4s						
WRA	Warramunga Arr	75.18	127	P	P	22 28 03.6	-0.5
	comp=Z,2.8nm,0.9s,baz=325,slow=5.5,SNR=12						
	comp=Z,2.8nm,0.9s						
WRA	Warramunga Arr	75.18	127	P	P	22 28 03.7	-0.5
WRA	Warramunga Arr	75.18	127	P	P	22 28 03.7	-0.5
WRA				pmax	pmax		
	comp=Z,1.0nm,1.5s						
WB2	Warramunga Arr	75.19	127	P	P	22 28 02.6	-1.6
WR8	Warramunga Arr	75.30	127	P	P	22 28 03.6	-1.2
WR8				IAmb	IAmb	22 28 26.5	
	comp=Z,5.7nm,1.1s						
G31M	Satah River	75.39	13	P	P	22 28 04.8	+0.1
G31M				IAmb	IAmb	22 28 06.9	
	comp=Z,11nm,1.5s						
STLK	Strandline Lak	75.39	23	P	P	22 28 03.0	-1.9
STLK				IAmb	IAmb	22 28 20.9	
	comp=Z,4.6nm,1.2s						
J26L	Joseph Creek	75.41	18	P	P	22 28 05.3	+0.4
J26L				IAmb	IAmb	22 28 20.8	
	comp=Z,5.0nm,1.2s						
I28M	Miner Creek	75.49	16	P	P	22 28 05.8	+0.4
I28M				IAmb	IAmb	22 28 22.3	
	comp=Z,2.8nm,1.1s						
DHY	Denali Highway	75.53	20	P	P	22 28 06.0	+0.2
DHY				IAmb	IAmb	22 28 37.5	
	comp=Z,3.3nm,1.0s						
RIDG	Independent Ri	75.69	19	P	P	22 28 06.6	+0.1
SCRK	Sand Creek	75.72	18	P	P	22 28 06.8	0.0
SCRK				IAmb	IAmb	22 28 09.3	
	comp=Z,4.4nm,1.3s						
ASAR	Alice Springs	77.59	130	P	P	22 28 17.2	-0.5
	comp=Z,1.0nm,0.7s,baz=320,slow=5.8,SNR=21						
ASAR				LR	LR	23 10 13.8	
	comp=Z,30nm,18.1s,baz=311,slow=42						
	comp=Z,1.0nm,0.7s						
KDAK	Kodiak Island	77.92	26	LR	LR	23 06 39.5	
	comp=Z,137nm,18.9s,baz=71,slow=39						
BOSA	Boshof	81.33	226	P	P	22 28 37.8	-0.4
	comp=Z,1.3nm,0.7s,baz=318,slow=1.7,SNR=3.5						
	comp=Z,1.3nm,0.7s						
DBIC	Dimbokro	81.76	272	P	P	22 28 41.0	+0.3
	comp=Z,4.3nm,0.9s,baz=95,slow=11,SNR=3.6						
	comp=Z,4.3nm,0.9s						
DBIC	Dimbokro	81.76	272	P	P	22 28 41.0	+0.3
YKA	Yellowknife Ar	82.41	7	P	P	22 28 42.2	-1.0
	comp=Z,0.4nm,0.5s,baz=340,slow=5.4,SNR=6.1						
	comp=Z,0.4nm,0.5s						
CTA	Charters Tower	83.45	120	LR	LR	23 07 59.0	
	comp=Z,30nm,21.2s,baz=36,slow=37						

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*IDC **19** 22:17:47.1±1.4, 59°.99N×152°.41W, h65^{km}±17^{km}, mb3.8/13, mbtmp4.1/16, Error ellipse: s-maj=20.9km s-min=9.7km az=108.0*
*ANF **19** 22:17:49.4±0.1, 59°.94N×152°.21W, h77^{km}±2^{km}, ML4.3/90, Error ellipse: s-maj=1.3km s-min=0.9km az=170.0*
*NEIC **19** 22:17:49.5±1.6, 59°.96N±0°.04×152°.23W±0°.05, h88^{km}±5^{km}, Error ellipse: s-maj=5.7km s-min=3.9km az=190.0*
*AEIC **19** 22:17:50.4±1.5, 59°.93N±0°.05×152°.20W±0°.08, h81^{km}±3^{km}, ML4.0, mb4.3/10(NEIC), ML4.2/198(NEIC), Error ellipse: s-maj=6.9km s-min=6.0km az=162.0*
ISC 19 22:17:49.4±0.6**, 59°.94N**±0°.03×**152°.19W**±0°.02**, h92**^{km}±5^{km}**, n578,** σ0^{s}.82/609**, mb4.2**/14**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOM	Homer	0.40	135		Pn	22 18 03.3	-0.2
HOM					Sn	22 18 14.0	-0.1
HOM	Homer	0.40	135	P	Pn	22 18 03.3	-0.2
	baz=317,SNR=70						
HOM				S	Sn	22 18 14.0	-0.1
	baz=317						
IVE	Iliamna Volcan	0.42	281		Pn	22 18 02.8	-1.1
IVE					Sn	22 18 12.9	-1.8
ILS	Iliamna Low So	0.44	273		Pn	22 18 03.1	-0.9
ILS					Sn	22 18 13.9	-0.9
ILSW	Iliamna Southw	0.48	276		Pn	22 18 03.2	-1.1
ILSW					Sn	22 18 13.9	-1.5
P19K	Oil Pt	0.60	242		Pn	22 18 04.6	-0.5
P19K	Oil Pt	0.60	242		Sn	22 18 15.7	-1.2
P19K				IAML		22 18 16.8	
	comp=N,7µm,0.3s						
P19K				IAML		22 18 17.0	
	comp=E,12µm,0.5s						
P19K	Oil Pt	0.60	242	P	Pn	22 18 04.6	-0.5
	baz=59,SNR=26						
P19K				S	Sn	22 18 15.9	-1.0
	baz=59						
P19K				S	Sn	22 18 15.9	-1.0
	baz=59						
CNPM	China Poot	0.64	130		Pn	22 18 05.2	-0.3
CNPM					Sn	22 18 17.0	-0.5
RDWB	Redoubt West	0.64	330		Pn	22 18 05.0	-0.7
RDWB					Sn	22 18 16.5	-1.3
BRLK	Bradley Lake	0.68	104		Pn	22 18 05.4	-0.5
BRLK					Sn	22 18 17.4	-0.9
BRLK	Bradley Lake	0.68	104	IAML		22 18 18.9	
	comp=N,9µm,0.3s						
RDJH	Redoubt Jeurge	0.72	335		Pn	22 18 05.8	-0.6
RDJH					Sn	22 18 18.2	-1.0
BRSE	Bradley Lake S	0.76	104		Pn	22 18 06.2	-0.4
BRSE					Sn	22 18 19.2	-0.4
BRSE	Bradley Lake S	0.76	104	P	Pn	22 18 06.3	-0.4
	baz=287,SNR=333						
BRSE				S	Sn	22 18 18.6	-0.9
	baz=287						
AU22	Augustine Moun	0.82	227		Sn	22 18 20.1	-0.5
AUL	Augustine Lava	0.84	229		Pn	22 18 07.2	-0.3
AUL					Sn	22 18 21.1	+0.1
AUF	Augustine Flow	0.85	230		Pn	22 18 06.9	-0.6
AUF					Sn	22 18 20.6	-0.5
AUJK	Augustine Jueg	0.85	227		Pn	22 18 07.2	-0.3
AUJK					Sn	22 18 21.0	-0.3
AUCH	Augustine Cone	0.86	228		Pn	22 18 07.3	-0.4
AUCH					Sn	22 18 21.3	-0.1
AUI	Augustine Isla	0.87	227		Sn	22 18 20.8	-0.8
CAPN	Captain Cook N	0.98	31		Pn	22 18 10.3	+1.4
CAPN	Captain Cook N	0.98	31	P	Pn	22 18 10.3	+1.4
	baz=213,SNR=40						
O19K	Port Alsworth	1.10	285		Pn	22 18 09.4	-0.8
O19K	Port Alsworth	1.10	285	P	Pn	22 18 09.5	-0.8
	baz=102,SNR=158						
O19K				S	Sn	22 18 24.6	-1.3
	baz=102						
O19K				S	Sn	22 18 24.6	-1.3
	baz=102						
SLKM	Skilak Lake	1.14	59		Pn	22 18 10.0	-0.8
SLKM					Sn	22 18 25.7	-1.2
SPU	Mount Spurr	1.25	3		Pn	22 18 12.0	-0.1
Q19K	Cape Douglas,	1.25	217		Pn	22 18 11.9	-0.3
Q19K					Sn	22 18 29.0	-0.4
Q19K	Cape Douglas,	1.25	217	IAML		22 18 30.9	
	comp=E,6µm,0.9s						
Q19K				IAML		22 18 37.7	
	comp=N,5µm,0.9s						
Q19K	Cape Douglas,	1.25	217	P	Pn	22 18 11.7	-0.5
	baz=35,SNR=47						
Q19K				S	Sn	22 18 28.8	-0.6
	baz=35						
Q19K				S	Sn	22 18 28.8	-0.6
	baz=35						
N20K	Mount Spurr	1.27	360	P	Pn	22 18 12.2	-0.1
	baz=180						
N20K				S	Sn	22 18 29.1	-0.7
	baz=180						
N20K				S	Sn	22 18 29.1	-0.7
	baz=180						
SPCR	Spurr Chakacha	1.27	360		Sn	22 18 30.1	+0.4
SPCR	Spurr Chakacha	1.27	360		Pn	22 18 12.2	-0.1
SPCR	Spurr Chakacha	1.27	360	P	Pn	22 18 12.2	-0.1
	baz=180,SNR=322						
SPCR				S	Sn	22 18 29.4	-0.3
	baz=180						
SPBG	Spurr Blockage	1.33	356		Pn	22 18 13.1	0.0
Q20K	Shuyak Island	1.34	185	P	Pn	22 18 12.9	-0.2
	baz=4.2,SNR=78						
Q20K				S	Sn	22 18 30.3	-0.7
	baz=4.2						
Q20K				S	Sn	22 18 30.3	-0.7
	baz=4.2						
SYI	Shuyak Island	1.34	184		Pn	22 18 13.1	-0.1
SYI				IAML		22 18 33.0	
	comp=E,2µm,0.6s						
SYI				IAML		22 18 34.8	
	comp=N,2µm,0.5s						
SYI	Shuyak Island	1.34	184		Sn	22 18 30.7	-0.3
O22K	Cooper Landing	1.35	65		Pn	22 18 13.3	0.0
O22K	Cooper Landing	1.35	65		Sn	22 18 30.8	-0.6
O22K	Cooper Landing	1.35	65	P	Pn	22 18 13.2	0.0
	baz=248,SNR=68						
O22K				S	Sn	22 18 30.5	-0.8
	baz=248						
SPCG	Spurr Capps Gl	1.36	4		Sn	22 18 32.2	+0.3
SEW	Seward	1.39	82		Pn	22 18 12.9	-0.8
SEW				IAML		22 18 35.2	
	comp=N,4µm,0.5s						
SEW				IAML		22 18 37.2	
	comp=E,4µm,0.8s						
SEW	Seward	1.39	82	P	Pn	22 18 13.0	-0.7
	baz=265,SNR=43						
SEW				S	Sn	22 18 31.0	-1.1
	baz=265						
N19K	Bonanza Creek	1.44	309		Pn	22 18 14.0	-0.5
N19K				IAML		22 18 32.7	
	comp=E,5µm,0.6s						
N19K				IAML		22 18 32.8	
	comp=N,3µm,0.6s						
N19K	Bonanza Creek	1.44	309	P	Pn	22 18 14.0	-0.5
	baz=126,SNR=116						
N19K				S	Sn	22 18 32.3	-1.2
	baz=126						
N19K				S	Sn	22 18 32.3	-1.2
	baz=126						
O18K	Koktuh Hills	1.52	268		Pn	22 18 14.8	-0.7
O18K				IAML		22 18 34.1	
	comp=N,2µm,0.7s						
O18K				IAML		22 18 34.3	
	comp=E,2µm,0.7s						
O18K	Koktuh Hills	1.52	268	P	Pn	22 18 14.8	-0.7
	baz=85,SNR=54						
O18K				S	Sn	22 18 33.8	-1.5
	baz=85						
O18K				S	Sn	22 18 33.8	-1.5
	baz=85						
STLK	Strandline Lak	1.58	6		Pn	22 18 16.4	+0.2
P18K	Big Mountain,	1.64	252		Pn	22 18 16.1	-0.9
P18K	Big Mountain,	1.64	252	P	Pn	22 18 16.0	-1.0
	baz=68,SNR=12						
P18K				S	Sn	22 18 35.6	-2.2
	baz=68						
P18K				S	Sn	22 18 35.6	-2.2
	baz=68						
RC01	Rabbit Creek A	1.68	45		Pn	22 18 17.3	-0.2
RC01	Rabbit Creek A	1.68	45	P	Pn	22 18 17.2	-0.2
	baz=228,SNR=69						
RC01				S	Sn	22 18 38.1	-0.6
	baz=228						
SUA	Susitna One	1.69	24		Pn	22 18 17.9	+0.2
SUA				IAML		22 18 40.4	
	comp=N,2µm,0.4s						
SUA				IAML		22 18 41.5	
	comp=E,3µm,1.0s						
SUA	Susitna One	1.69	24	P	Pn	22 18 18.0	+0.4
	baz=206,SNR=593						
SUA				S	Sn	22 18 39.1	-0.1
	baz=206						
KAHC	Katmai Hardscr	1.94	229		Pn	22 18 20.3	-0.6
Q18K	Katmai Hardscr	1.94	229	P	Pn	22 18 20.3	-0.6
	baz=46,SNR=22						
Q18K				S	Sn	22 18 43.1	-1.8
	baz=46						
Q18K				S	Sn	22 18 43.1	-1.8
	baz=46						
N18K	Kilae Creek	1.98	294		Pn	22 18 20.7	-0.7
N18K	Kilae Creek	1.98	294	P	Pn	22 18 20.7	-0.7
	baz=110,SNR=89						
N18K				S	Sn	22 18 44.1	-1.8
	baz=110						
N18K				S	Sn	22 18 44.1	-1.8
	baz=110						
M20K	Styx River	2.00	347	Pn	Pn	22 18 21.8	+0.1
M20K	Styx River	2.00	347	P	Pn	22 18 21.9	+0.1
	baz=166						
M20K				S	Sn	22 18 46.1	-0.4
	baz=166						
M20K				S	Sn	22 18 46.1	-0.4
	baz=166						
SKT	Skwentna	2.08	9		Pn	22 18 22.5	-0.1
SKT				IAML		22 18 50.4	
	comp=E,895nm,0.4s						
SKT				IAML		22 18 51.0	
	comp=N,922nm,0.3s						
SKT	Skwentna	2.08	9	P	Pn	22 18 22.6	0.0
	baz=189,SNR=244						
M22K	Willow	2.08	28	P	Pn	22 18 23.1	+0.4
	baz=210,SNR=103						
M22K				S	Sn	22 18 48.2	+0.1
	baz=210						
PWL	Port Wells	2.13	63		Pn	22 18 22.4	-0.9
PWL	Port Wells	2.13	63	P	Pn	22 18 22.5	-0.8
	baz=246,SNR=46						
PWL				S	Sn	22 18 47.5	-1.7
	baz=246						
KDAK	Kodiak Island	2.17	186	P	Pn	22 18 22.7	-1.2
	comp=N,407nm,0.5s,baz=35,slow=5.3,SNR=718						
KDAK				S	Sn	22 18 47.7	-2.4
	comp=N,352nm,0.3s,baz=352,slow=12,SNR=5.9						
KDAK	Kodiak Island	2.17	186		Pn	22 18 22.8	-1.0
KDAK	Kodiak Island	2.17	186	IAML		22 18 50.3	
	comp=N,1µm,0.8s						
KDAK				IAML		22 18 50.6	
	comp=N,960nm,0.5s						
KDAK	Kodiak Island	2.17	186	P	Pn	22 18 22.8	-1.0
	baz=5.1						
KDAK				S	Sn	22 18 48.9	-1.2
	baz=5.1						
PMR	Palmer	2.24	41		Pn	22 18 24.1	-0.6
PMR				IAML		22 18 52.1	
	comp=N,1µm,0.3s						
PMR				IAML		22 18 52.9	
	comp=E,2µm,0.4s						
PMR	Palmer	2.24	41	P	Pn	22 18 23.8	-0.9
PMR	Palmer	2.24	41	P	Pn	22 18 24.1	-0.6
	baz=224,SNR=50						
PMR				S	Sn	22 18 49.8	-1.9
	baz=224						
KNK	Knik Glacier	2.36	50	P	Pn	22 18 25.7	-0.6
	baz=233,SNR=77						
KNK				S	Sn	22 18 53.1	-1.6
	baz=233						
M18K	Stony River	2.37	313		Pn	22 18 25.8	-0.7
M18K	Stony River	2.37	313	P	Pn	22 18 25.9	-0.5
	baz=129,SNR=97						
M18K				S	Sn	22 18 53.6	-1.3
	baz=129						
P23K	Montague Islan	2.41	86		Pn	22 18 26.6	-0.4
P23K	Montague Islan	2.41	86	IAML		22 18 57.5	
	comp=E,2µm,0.6s						
P23K	Montague Islan	2.41	86	P	Pn	22 18 26.5	-0.4
	baz=271,SNR=46						
P23K				S	Sn	22 18 54.7	-1.1
	baz=271						
P23K				S	Sn	22 18 54.7	-1.1
	baz=271						
ANCK	Angle Creek	2.44	226		Pn	22 18 27.1	-0.3
O17K	Koliganek Bris	2.48	268		Pn	22 18 27.5	-0.3
O17K	Koliganek Bris	2.48	268	P	Pn	22 18 27.5	-0.3
	baz=84						
O17K				S	Sn	22 18 56.0	-1.5
	baz=84						
CNTC	Contact Creek	2.54	230		Pn	22 18 28.6	-0.2
Q17K	Contact Creek	2.54	230	P	Pn	22 18 28.6	-0.2
	baz=47						
Q17K				S	Sn	22 18 57.5	-1.6
	baz=47						
Q17K				S	Sn	22 18 57.5	-1.6
	baz=47						
N17K	Nushagak Hills	2.56	286		Pn	22 18 28.3	-0.6
N17K	Nushagak Hills	2.56	286	P	Pn	22 18 28.4	-0.6
	baz=101,SNR=49						
N17K				S	Sn	22 18 57.3	-2.1
	baz=101						
KJL	Kejulik	2.58	224		Pn	22 18 29.6	+0.3
L19K	White Mountain	2.60	331		Pn	22 18 29.4	0.0
L19K				IAML		22 19 00.6	
	comp=E,816nm,0.7s						
L19K				IAML		22 19 00.6	
	comp=N,1µm,1.0s						
L19K	White Mountain	2.60	331	P	Pn	22 18 29.5	0.0
	baz=149,SNR=102						
L19K				S	Sn	22 18 59.4	-0.9
	baz=149						
L19K				S	Sn	22 18 59.4	-0.9
	baz=149						
Q16K	King Salmon	2.61	243		Pn	22 18 29.7	+0.1
Q16K	King Salmon	2.61	243	P	Pn	22 18 29.8	+0.2
	baz=59,SNR=26						
Q16K				S	Sn	22 19 00.0	-0.6
	baz=59						
CUT	Chulitna	2.65	20		Pn	22 18 30.2	+0.1
CUT	Chulitna	2.65	20	P	Pn	22 18 30.1	+0.1
	baz=202						
SML	Sawmill	2.66	44		Pn	22 18 30.0	-0.4
SML	Sawmill	2.66	44	IAML		22 19 01.4	
	comp=E,2µm,0.5s						
SML				IAML		22 19 02.4	
	comp=N,1µm,0.7s						
SML	Sawmill	2.66	44	P	Pn	22 18 29.8	-0.6
	baz=227,SNR=48						
SML				S	Sn	22 19 00.4	-1.5
	baz=227						
L22K	Petersville	2.69	14	Pn	Pn	22 18 31.1	+0.4
L22K				IAML		22 19 04.5	
	comp=E,659nm,0.5s						
L22K				IAML		22 19 04.7	
	comp=N,753nm,0.6s						
GLI	Glacier Island	2.70	67		Pn	22 18 29.3	-1.6
GLI	Glacier Island	2.70	67	P	Pn	22 18 29.2	-1.6
	baz=252,SNR=7.0						
GLI				S	Sn	22 18 59.8	-2.9
	baz=252						
OHAK	Old Harbor	2.78	192		Pn	22 18 30.6	-1.4
OHAK				IAML		22 19 04.5	
	comp=N,602nm,0.5s						
OHAK	Old Harbor	2.78	192	P	Pn	22 18 30.6	-1.4
OHAK	Old Harbor	2.78	192	P	Pn	22 18 30.6	-1.4
	baz=11,SNR=22						
OHAK				S	Sn	22 19 01.7	-3.0
	baz=11						

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M23K  Glacier View     2.87  48        Pn    22 18 32.5 -0.6
M23K  Glacier View     2.87  48  P     Pn    22 18 32.8 -0.3
      baz=232,SNR=60
M23K                             S     Sn    22 19 05.1 -1.7
      baz=232
M23K                             S     Sn    22 19 05.1 -1.7
      baz=232
HIN   Hinchinbrook I   2.88  78        Pn    22 18 32.1 -1.2
HIN   Hinchinbrook I   2.88  78  IAML        22 19 07.0
      comp=N,1µm,0.7s
HIN                              IAML        22 19 07.8
      comp=E,878nm,0.9s
M17K  Holitna River    2.97 302  IAML        22 19 10.0
      comp=E,994nm,0.9s
M17K                             IAML        22 19 12.0
      comp=N,778nm,0.8s
M17K  Holitna River    2.97 302  P     Pn    22 18 34.1 -0.4
      baz=117,SNR=37
M17K                             S     Sn    22 19 07.8 -1.4
      baz=117
PPLA  Purkeypile       2.97   0        Pn    22 18 35.0 +0.4
PPLA  Purkeypile       2.97   0  P     Pn    22 18 35.1 +0.5
      baz=180,SNR=150
O16K  Kokwok River B   3.00 266        Pn    22 18 34.6 -0.3
O16K  Kokwok River B   3.00 266  P     Pn    22 18 34.6 -0.3
      baz=80,SNR=23
Q23K  Middleton Isla   3.01  97  P     Pn    22 18 34.9  0.0
      baz=283
MID   Middleton Isla   3.01  97        Pn    22 18 34.7 -0.3
SCM   Sheep Creek Mo   3.04  49        Pn    22 18 35.1 -0.4
SCM   Sheep Creek Mo   3.04  49  IAML        22 19 14.4
      comp=N,1µm,0.7s
SCM   Sheep Creek Mo   3.04  49  P     Pn    22 18 35.0 -0.5
      baz=234,SNR=22
PLK3  Peulik 3         3.10 225        Pn    22 18 36.6 +0.5
PLK5  Peulik 5         3.11 233        Pn    22 18 36.7 +0.4
PLK1  Peulik 1         3.14 229        Pn    22 18 37.2 +0.5
L18K  Granite Mounta   3.16 318        Pn    22 18 36.6 -0.4
L18K  Granite Mounta   3.16 318  IAML        22 19 13.0
      comp=N,505nm,0.8s
L18K  Granite Mounta   3.16 318  P     Pn    22 18 36.7 -0.4
      baz=134,SNR=23
L18K                             S     Sn    22 19 12.2 -1.6
      baz=134
L18K                             S     Sn    22 19 12.2 -1.6
      baz=134
PLK4  Peulik 4         3.17 225        Pn    22 18 37.9 +0.6
PLK4                             IAML        22 19 17.9
      comp=E,580nm,1.0s
PLK4                             IAML        22 19 18.2
      comp=N,424nm,0.6s
R17L  Mt. Peulik Vol   3.17 225  P     Pn    22 18 38.0 +0.8
      baz=41,SNR=5.8
R17L                             S     Sn    22 19 14.2 +0.1
      baz=41
R17L                             S     Sn    22 19 14.2 +0.1
      baz=41
EYAK  Cordova Ski Ar   3.27  76        Pn    22 18 37.3 -1.2
EYAK                             IAML        22 19 24.7
      comp=N,378nm,0.9s
EYAK  Cordova Ski Ar   3.27  76  P     Pn    22 18 37.1 -1.4
EYAK  Cordova Ski Ar   3.27  76  P     Pn    22 18 37.1 -1.4
      baz=262
EYAK                             S     Sn    22 19 14.2 -2.1
      baz=262
N16K  Nishlik Lake     3.33 282        Pn    22 18 39.3  0.0
N16K  Nishlik Lake     3.33 282  P     Pn    22 18 39.2  0.0
      baz=96,SNR=65
N16K                             S     Sn    22 19 16.3 -1.5
      baz=96
WAT1  Susitna Watana   3.39  30  P     Pn    22 18 40.3 +0.2
      baz=213
DIV   Divide           3.39  67        Pn    22 18 39.1 -1.1
DIV   Divide           3.39  67  IAML        22 19 19.9
      comp=N,828nm,0.3s
DIV                              IAML        22 19 20.4
      comp=E,496nm,0.4s
WAT6  Susitna Watana   3.42  37  P     Pn    22 18 40.3 -0.2
      baz=221,SNR=130
KLU   Klutina          3.45  60  P     Pn    22 18 40.3 -0.8
      baz=246,SNR=48
M16K  Timber Creek     3.52 291        Pn    22 18 41.7 -0.2
M16K  Timber Creek     3.52 291  P     Pn    22 18 41.7 -0.2
      baz=105,SNR=48
K20K  Telida           3.55 346        Pn    22 18 42.6 +0.3
K20K  Telida           3.55 346  P     Pn    22 18 42.5 +0.3
      baz=164,SNR=219
SII   Sitkinak Islan   3.55 198        Pn    22 18 41.0 -1.2
SII   Sitkinak Islan   3.55 198  IAML        22 19 21.3
      comp=E,613nm,0.8s
SII                              IAML        22 19 22.7
      comp=N,540nm,0.7s
SII   Sitkinak Islan   3.55 198  P     Pn    22 18 40.8 -1.5
SII   Sitkinak Islan   3.55 198  P     Pn    22 18 41.1 -1.2
      baz=16
TRF   Thorofare Moun   3.64  14        Pn    22 18 43.1 -0.5
TRF   Thorofare Moun   3.64  14  IAML        22 19 29.2
      comp=N,500nm,0.7s
TRF                              IAML        22 19 30.1
      comp=E,319nm,0.4s
TRF   Thorofare Moun   3.64  14  P     Pn    22 18 44.2 +0.6
      baz=195,SNR=195
M24K  Tolsona, Glenn   3.65  51        Pn    22 18 43.6 -0.1
M24K                             IAML        22 19 38.2
      comp=N,705nm,0.9s
M24K  Tolsona, Glenn   3.65  51  P     Pn    22 18 43.5 -0.1
      baz=236,SNR=30
KTH   Kantishna Hill   3.68   9        Pn    22 18 44.1 +0.1
KTH                              IAML        22 19 49.1
      comp=E,268nm,0.8s
KTH                              IAML        22 19 50.6
      comp=N,291nm,0.9s
L17K  Donlin           3.70 309  P     Pn    22 18 43.6 -0.6
      baz=124,SNR=35
GOAT  Goat Mountain    3.78  77        Pn    22 18 44.0 -1.4
RAGM  Ragged Mountai   3.78  80        Pn    22 18 44.2 -1.3
RND   Reindeer         3.83  23        Pn    22 18 46.0  0.0
RND   Reindeer         3.83  23  IAML        22 19 30.8
      comp=E,474nm,0.4s
RND                              IAML        22 19 34.9
      comp=N,352nm,0.6s
BMRM  Bremner River    3.90  71        Pn    22 18 45.6 -1.5
BMRM  Bremner River    3.90  71  IAML        22 19 31.9
      comp=N,496nm,0.4s
BMRM                             IAML        22 19 34.6
      comp=E,421nm,0.4s
BMRM  Bremner River    3.90  71  P     Pn    22 18 46.4 -0.6
      baz=258,SNR=9.2
DHY   Denali Highway   3.90  34  P     Pn    22 18 47.3 +0.2
      baz=218,SNR=91
KAIM  Kayak Island     3.91  87        Pn    22 18 47.1 -0.1
KAIM                             IAML        22 19 33.5
      comp=E,515nm,0.8s
KAIM                             IAML        22 19 36.6
      comp=N,446nm,0.6s
KAIM  Kayak Island     3.91  87  P     Pn    22 18 46.9 -0.2
      baz=274,SNR=8.6
O15K  Ungalikthiuk R   3.96 262        Pn    22 18 48.2 +0.5
O15K  Ungalikthiuk R   3.96 262  P     Pn    22 18 48.2 +0.5
      baz=75,SNR=8.5
CHUM  Lake Minchumin   3.96 359        Pn    22 18 47.5 -0.2
CHUM  Lake Minchumin   3.96 359  P     Pn    22 18 48.1 +0.3
      baz=179,SNR=70
N15K  Kwethluk River   3.97 277        Pn    22 18 48.4 +0.5
N15K                             IAML        22 19 59.8
      comp=N,210nm,1.0s
N15K  Kwethluk River   3.97 277  P     Pn    22 18 48.3 +0.4
      baz=90,SNR=23
L16K  Owhat River      3.98 300  Pn    Pn    22 18 47.6 -0.5
L16K  Owhat River      3.98 300  P     Pn    22 18 47.6 -0.5
      baz=113
K17K  Iditarod         4.05 316        Pn    22 18 49.0  0.0
K17K  Iditarod         4.05 316  IAML        22 19 49.6
      comp=N,267nm,0.8s
K17K                             IAML        22 19 50.8
      comp=E,408nm,1.0s
K17K  Iditarod         4.05 316  P     Pn    22 18 49.0  0.0
      baz=131,SNR=99
N25K  Chitina, Valde   4.08  63  IAML        22 19 37.3
      comp=N,344nm,0.4s
N25K                             IAML        22 19 41.4
      comp=E,297nm,0.6s
N25K  Chitina, Valde   4.08  63  P     Pn    22 18 49.0 -0.6
      baz=249,SNR=7.7
MCK   McKinley         4.11  21        Pn    22 18 49.9 +0.1
MCK   McKinley         4.11  21  IAML        22 19 40.1
      comp=N,407nm,0.5s
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MCK                              IAML        22 19 40.3
      comp=E,340nm,0.5s
MCK   McKinley         4.11  21  P     Pn    22 18 50.4 +0.6
      baz=204,SNR=161
J18K  Innoko River     4.14 331        Pn    22 18 50.4 +0.1
J18K  Innoko River     4.14 331  P     Pn    22 18 50.5 +0.3
      baz=147,SNR=17
HARP  HAARP            4.21  51  P     Pn    22 18 50.8 -0.4
      baz=237
BPAW  Bear Paw Mtn.    4.22   7  P     Pn    22 18 51.1 -0.1
      baz=188,SNR=62
BERG  Berg Lake        4.27  80        Pn    22 18 51.2 -0.8
M15K  Kasigluk River   4.29 284        Pn    22 18 52.1 -0.2
M15K  Kasigluk River   4.29 284  P     Pn    22 18 52.0 -0.2
      baz=96
WACK  Wrangell Chich   4.35  58        Pn    22 18 52.7 -0.6
J20K  Nowinta River    4.35 349        Pn    22 18 53.3 +0.2
J20K  Nowinta River    4.35 349  IAML        22 19 42.4
      comp=E,165nm,0.8s
J20K  Nowinta River    4.35 349  P     Pn    22 18 53.2 +0.1
      baz=167,SNR=93
J19K  Poorman          4.38 340        Pn    22 18 53.6 +0.2
J19K  Poorman          4.38 340  P     Pn    22 18 53.7 +0.2
      baz=157
GLB   Gilahina Butte   4.39  66  IAML        22 19 44.9
      comp=E,204nm,0.3s
GLB                              IAML        22 19 58.8
      comp=N,251nm,0.6s
WASW  Wrangell South   4.39  60        Pn    22 18 53.4 -0.5
PAX   Paxson           4.43  44  IAML        22 19 45.8
      comp=E,300nm,0.5s
PAX                              IAML        22 19 46.0
      comp=N,243nm,0.4s
PAX   Paxson           4.43  44  P     Pn    22 18 54.0 -0.3
      baz=230,SNR=45
BGLC  Bering Glacier   4.47  84  P     Pn    22 18 55.5 +0.8
      baz=272
VRDI  Verde Repeater   4.50  70        Pn    22 18 54.0 -1.3
VRDI  Verde Repeater   4.50  70  IAML        22 19 48.5
      comp=N,150nm,0.4s
CHIR  Chirikof Islan   4.51 205  Pn    Pn    22 18 53.8 -1.5
CHIR                             IAML        22 19 53.5
      comp=N,161nm,1.2s
CHIR                             IAML        22 20 07.9
      comp=E,132nm,0.7s
CHIR  Chirikof Islan   4.51 205  P     Pn    22 18 54.6 -0.7
CRQM  Cirque           4.57  76  IAML        22 19 47.7
      comp=E,328nm,0.5s
CRQM                             IAML        22 19 47.8
      comp=N,369nm,0.5s
CRQE  Cirque           4.59  76  P     Pn    22 18 56.5 -0.1
      baz=264,SNR=9.4
O14K  Tigyukauivet M   4.66 265        Pn    22 18 57.1 -0.2
O14K  Tigyukauivet M   4.66 265  P     Pn    22 18 57.8 +0.5
      baz=77,SNR=5.3
SNH   Sunshine Point   4.70  83        Pn    22 18 57.2 -0.6
SNH   Sunshine Point   4.70  83  IAML        22 19 50.1
      comp=N,228nm,0.5s
SNH                              IAML        22 19 50.8
      comp=E,269nm,0.5s
TGL   Tana Glacier     4.72  76        Pn    22 18 57.3 -0.9
TGL   Tana Glacier     4.72  76  IAML        22 19 51.7
      comp=E,180nm,0.5s
TGL                              IAML        22 20 19.6
      comp=N,177nm,0.7s
MCARA McCarthy VSAT    4.74  68        Pn    22 18 57.5 -0.8
MCARA McCarthy VSAT    4.74  68  IAML        22 20 00.8
      comp=N,315nm,0.6s
MCARA                            IAML        22 20 19.4
      comp=E,345nm,0.8s
MCARA McCarthy VSAT    4.74  68  P     Pn    22 18 58.4 +0.1
      baz=256
J17K  VABM Dome        4.77 320        Pn    22 18 58.4 -0.4
J17K  VABM Dome        4.77 320  IAML        22 20 17.6
      comp=N,124nm,0.8s
J17K                             IAML        22 20 18.7
      comp=E,123nm,1.0s
J17K  VABM Dome        4.77 320  P     Pn    22 18 58.5 -0.3
      baz=134,SNR=54
N14K  Kuskokwak Cree   4.78 274        Pn    22 18 59.4 +0.6
N14K                             IAML        22 20 28.1
      comp=N,178nm,0.9s
N14K  Kuskokwak Cree   4.78 274  P     Pn    22 18 59.3 +0.6
      baz=86,SNR=17
BARK  Barkley Ridge    4.87  80        Pn    22 18 59.9 -0.3
L15K  Ungalak Mounta   4.87 295        Pn    22 18 59.8 -0.3
L15K  Ungalak Mounta   4.87 295  P     Pn    22 18 59.6 -0.6
      baz=107,SNR=17
NEA2  Nenana           4.89  16  IAML        22 19 58.9
      comp=N,104nm,0.6s
NEA2  Nenana           4.89  16  P     Pn    22 19 00.2 -0.3
      baz=199,SNR=161
M14K  Bethel           4.92 284        Pn    22 19 00.6 -0.2
M14K  Bethel           4.92 284  P     Pn    22 19 00.9 +0.1
      baz=95,SNR=7.9
K24K  Donnelly Dome    4.92  35  P     Pn    22 19 02.3 +1.4
      baz=221,SNR=133
WRH   Wood River Hil   4.94  21        Pn    22 19 00.3 -0.7
WRH   Wood River Hil   4.94  21  IAML        22 19 55.9
      comp=E,131nm,0.8s
WRH                              IAML        22 19 58.8
      comp=N,146nm,0.5s
PTPK  Patty Peak       4.96  71        Pn    22 19 00.8 -0.8
KIAG  Kiagna River     4.97  74        Pn    22 19 00.6 -1.1
I20K  Naaghedeneel     4.99 349  Pn    Pn    22 19 02.1 +0.4
I20K                             IAML        22 20 00.5
      comp=N,241nm,0.7s
I20K                             IAML        22 20 44.2
      comp=E,292nm,0.8s
I20K  Naaghedeneel     4.99 349  P     Pn    22 19 01.8 +0.1
      baz=167
BALM  Baldy            4.99  73        Pn    22 19 00.9 -1.0
MENT  Mentasta         5.06  50  IAML        22 20 20.1
      comp=E,236nm,0.4s
M26K  Nabesna, AK      5.09  57        Pn    22 19 02.7 -0.5
M26K  Nabesna, AK      5.09  57  IAML        22 20 01.2
      comp=E,103nm,0.5s
M26K                             IAML        22 20 03.1
      comp=N,202nm,0.6s
M26K  Nabesna, AK      5.09  57  P     Pn    22 19 02.9 -0.3
      baz=245,SNR=14
K15K  Wolf Creek Mou   5.11 302  P     Pn    22 19 03.3  0.0
      baz=113,SNR=24
HDA   Harding Lake     5.12  26        Pn    22 19 03.3 -0.1
HDA   Harding Lake     5.12  26  P     Pn    22 19 03.3 -0.1
      baz=211
CCB   Clear Creek Bu   5.15  22        Pn    22 19 03.1 -0.8
CCB   Clear Creek Bu   5.15  22  IAML        22 20 02.5
      comp=E,164nm,0.3s
CCB                              IAML        22 20 03.4
      comp=N,112nm,0.4s
RIDG  Independent Ri   5.16  39        Pn    22 19 04.2  0.0
RIDG  Independent Ri   5.16  39  IAML        22 20 03.1
      comp=N,200nm,0.8s
RIDG  Independent Ri   5.16  39  P     Pn    22 19 04.4 +0.2
      baz=226,SNR=69
J16K  Anvik River      5.23 314        Pn    22 19 04.7 -0.3
J16K  Anvik River      5.23 314  P     Pn    22 19 04.7 -0.3
      baz=126,SNR=49
YAH   Yahtse           5.24  81        Pn    22 19 04.9 -0.5
YAH   Yahtse           5.24  81  IAML        22 20 07.9
      comp=E,179nm,0.3s
GRNC  Granite Creek    5.25  77        Pn    22 19 04.8 -0.7
GRNC  Granite Creek    5.25  77  IAML        22 20 05.8
      comp=E,141nm,0.6s
GRNC                             IAML        22 20 07.3
      comp=N,224nm,0.7s
L26K  Log Cabin Wild   5.25  50  IAML        22 20 30.4
      comp=N,202nm,0.5s
L26K                             IAML        22 20 37.5
      comp=E,217nm,0.4s
L26K  Log Cabin Wild   5.25  50  P     Pn    22 19 05.3  0.0
      baz=238,SNR=11
GCSA  Galena City Sc   5.30 338        Pn    22 19 05.8  0.0
GCSA  Galena City Sc   5.30 338  P     Pn    22 19 06.3 +0.5
      baz=154,SNR=6.9
BARN  Barnard Glacie   5.33  73        Pn    22 19 07.0 +0.5
BARN  Barnard Glacie   5.33  73  IAML        22 20 06.3
      comp=N,99nm,0.5s
BARN                             IAML        22 20 06.9
      comp=E,120nm,0.6s
COLA  College          5.35  20  Pn    Pn    22 19 06.8 +0.2
COLA  College          5.35  20  P     Pn    22 19 06.5 -0.1
COLA  College          5.35  20  P     Pn    22 19 06.6 +0.1
      baz=204
L14K  Kuka Creek       5.35 290        Pn    22 19 06.8 +0.1
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L14K  Kuka Creek       5.35 290  IAML        22 20 44.2
      comp=N,95nm,1.0s
L14K  Kuka Creek       5.35 290  P     Pn    22 19 06.9 +0.2
      baz=100,SNR=11
DOT   Dot Lake         5.36  43        Pn    22 19 06.8  0.0
DOT                              IAML        22 20 22.1
      comp=E,193nm,0.8s
DOT                              IAML        22 20 24.2
      comp=N,214nm,0.7s
I23K  Minto, Yukon-K   5.39  13        Pn    22 19 07.0 -0.1
I23K  Minto, Yukon-K   5.39  13  P     Pn    22 19 07.3 +0.1
      baz=195,SNR=150
RKAV  Rock Avalanche   5.44  81        Pn    22 19 07.5 -0.5
IL31                   5.44  25        Pn    22 19 07.5 -0.4
ILAR  Eielson Array    5.44  25  P     Pn    22 19 07.2 -0.6
      comp=N,80nm,0.6s,baz=206,slow=14,SNR=963
ILAR                             S     Sn    22 20 06.0 -3.1
      comp=N,68nm,0.5s,baz=204,slow=24,SNR=13
CTG   Chitna Glacier   5.47  74  P     Pn    22 19 09.1 +0.7
      baz=264,SNR=18
CTGM  Chitina Glacie   5.47  74        Pn    22 19 07.9 -0.5
M27K  Edge Creek, AK   5.55  60        Pn    22 19 09.4 -0.1
M27K  Edge Creek, AK   5.55  60  P     Pn    22 19 09.4 -0.1
      baz=249
CHX   Chaix Hills      5.56  84        Pn    22 19 10.2 +0.6
M13K  Dall Lake        5.59 280        Pn    22 19 10.5 +0.6
M13K  Dall Lake        5.59 280  P     Pn    22 19 10.6 +0.8
      baz=90
SCRK  Sand Creek       5.60  40        Pn    22 19 09.4 -0.8
SCRK  Sand Creek       5.60  40  P     Pn    22 19 09.6 -0.6
      baz=228,SNR=32
LOGN  Logan Glacier    5.62  76        Pn    22 19 11.1 +0.6
I17K  Unalakleet       5.64 318        Pn    22 19 10.6  0.0
I17K  Unalakleet       5.64 318  P     Pn    22 19 10.5  0.0
      baz=131,SNR=28
POKR  Poker Plat Res   5.64  21        Pn    22 19 10.3 -0.3
POKR  Poker Plat Res   5.64  21  P     Pn    22 19 10.5 -0.1
      baz=205,SNR=37
J25K  Salcha River,    5.67  31        Pn    22 19 10.9 -0.1
J25K  Salcha River,    5.67  31  P     Pn    22 19 10.9 -0.1
      baz=217
H20K  Anotleneega Mo   5.71 349        Pn    22 19 11.6  0.0
H20K  Anotleneega Mo   5.71 349  P     Pn    22 19 11.4 -0.2
      baz=166
SAMH  Samovar Hills    5.72  83        Pn    22 19 12.0 +0.2
H21K  Melozitna Rive   5.75 357        Pn    22 19 11.4 -0.7
H21K  Melozitna Rive   5.75 357  P     Pn    22 19 11.3 -0.7
      baz=177,SNR=49
YUK2  White River      5.85  67        Pn    22 19 12.9 -0.6
BC01  Beaver Creek A   5.87  53        Pn    22 19 13.1 -0.6
L27K  Beaver Creek,    5.87  53        Pn    22 19 13.3 -0.4
L27K  Beaver Creek,    5.87  53  P     Pn    22 19 13.0 -0.7
      baz=242
BCAR  Beaver Creek A   5.89  53        Pn    22 19 14.6 +0.6
H19K  Roundabout Mou   5.94 343        Pn    22 19 14.4 -0.3
H19K  Roundabout Mou   5.94 343  P     Pn    22 19 14.7 +0.1
      baz=159,SNR=29
H18K  Honhosa River    5.96 334        Pn    22 19 14.9  0.0
H18K  Honhosa River    5.96 334  P     Pn    22 19 15.3 +0.4
      baz=149,SNR=30
PCA   Pinnacle         5.99  83        Pn    22 19 14.8 -0.6
H22K  Ishtalitna Cre   5.99   3  P     Pn    22 19 15.5 +0.1
      baz=184,SNR=88
PINM  Pinnacle         5.99  83  P     Pn    22 19 15.9 +0.5
      baz=274,SNR=10
O28M  Mount Upton      6.02  77        Pn    22 19 16.1 +0.1
O28M  Mount Upton      6.02  77  P     Pn    22 19 16.8 +0.8
      baz=267,SNR=44
BVCY  Beaver Creek     6.02  61        Pn    22 19 15.3 -0.5
BVCY  Beaver Creek     6.02  61  P     Pn    22 19 15.8  0.0
      baz=251
YUK3  Moose Creek      6.02  67        Pn    22 19 15.4 -0.5
YUK3  Moose Creek      6.02  67  P     Pn    22 19 15.8 -0.2
      baz=258,SNR=7.1
H23K  Yukon River      6.03  10  P     Pn    22 19 16.1 +0.2
      baz=193
J26L  Joseph Creek     6.10  38        Pn    22 19 16.3 -0.6
J26L  Joseph Creek     6.10  38  P     Pn    22 19 16.4 -0.5
      baz=225,SNR=70
IMAR  Indian Mountai   6.11 354        Pn    22 19 16.5 -0.4
J14K  Nanvaranak Lak   6.15 302        Pn    22 19 16.8 -0.7
J14K  Nanvaranak Lak   6.15 302  P     Pn    22 19 16.8 -0.7
      baz=112,SNR=8.5
H17K  Granite Mounta   6.16 328        Pn    22 19 17.8 +0.1
H17K  Granite Mounta   6.16 328  P     Pn    22 19 17.8 +0.1
      baz=141,SNR=28
H24K  Noodor Dome      6.24  17  P     Pn    22 19 18.7 -0.1
      baz=200,SNR=35
YUK8  Steele Glacier   6.27  72        Pn    22 19 19.7 +0.4
YUK8  Steele Glacier   6.27  72  P     Pn    22 19 19.9 +0.6
      baz=263,SNR=28
K27K  Chicken          6.29  45        Pn    22 19 19.4  0.0
BCPM  Bancas Point     6.31  84        Pn    22 19 19.6 -0.1
PRP   Porcupine Dome   6.38  26  P     Pn    22 19 20.7 -0.1
      baz=212,SNR=44
K13K  Kusilvak Mount   6.39 294  Pn    Pn    22 19 21.2 +0.4
CHNA  Chernabura Isl   6.49 221  P     Pn    22 19 22.6 +0.4
      baz=35
CNBA  Chernabura Isl   6.50 221  Pn    Pn    22 19 20.9 -1.5
G19K  Purcell Mounta   6.61 342        Pn    22 19 23.7 -0.1
G19K  Purcell Mounta   6.61 342  P     Pn    22 19 23.6 -0.2
      baz=158,SNR=19
G21K  Allakaket        6.63 355        Pn    22 19 23.5 -0.6
G21K  Allakaket        6.63 355  P     Pn    22 19 23.5 -0.6
      baz=174,SNR=29
H16K  Elim             6.64 319        Pn    22 19 23.7 -0.4
H16K  Elim             6.64 319  P     Pn    22 19 23.7 -0.4
      baz=131,SNR=14
G18K  Tagagawik        6.66 337  P     Pn    22 19 24.6 +0.1
      baz=151
S12K  Black Hills      6.76 235  Pn    Pn    22 19 27.1 +1.2
G17K  Kiwalik Mounta   6.80 329        Pn    22 19 25.5 -0.8
G17K  Kiwalik Mounta   6.80 329  P     Pn    22 19 26.0 -0.3
      baz=141
I26K  Coal Creek Min   6.81  34  Pn    Pn    22 19 26.4  0.0
I26K  Coal Creek Min   6.81  34  P     Pn    22 19 25.8 -0.7
      baz=222
YUK4  Talbot Arm       6.81  72  P     Pn    22 19 27.7 +1.0
      baz=264,SNR=8.0
O29M  Mount Kennedy    6.82  81        Pn    22 19 26.9 +0.2
O29M  Mount Kennedy    6.82  81  P     Pn    22 19 26.9 +0.2
      baz=273,SNR=24
G23K  Bananza Creek    6.87   7        Pn    22 19 27.8 +0.5
G23K  Bananza Creek    6.87   7  P     Pn    22 19 27.8 +0.5
      baz=189
YUK6  Outpost Mounta   6.92  76        Pn    22 19 27.9 -0.3
YUK6  Outpost Mounta   6.92  76  P     Pn    22 19 28.3 +0.2
      baz=268,SNR=8.3
M11K  Mekoryuk         7.01 280  Pn    Pn    22 19 30.2 +1.1
M11K  Mekoryuk         7.01 280  P     Pn    22 19 29.4 +0.3
      baz=87
YUK7  Dusty Glacier    7.02  79        Pn    22 19 29.5 -0.1
M29M  Somme Creek      7.09  63        Pn    22 19 29.9 -0.5
M29M  Somme Creek      7.09  63  P     Pn    22 19 30.4 -0.1
      baz=256
G24K  Hadweenzic Riv   7.11  15        Pn    22 19 30.2 -0.4
G24K  Hadweenzic Riv   7.11  15  P     Pn    22 19 30.1 -0.4
      baz=200,SNR=24
YUK5  Granite Creek    7.17  74        Pn    22 19 31.5 -0.1
G16K  Koyuk River      7.19 324        Pn    22 19 31.6 -0.1
G16K  Koyuk River      7.19 324  P     Pn    22 19 31.3 -0.4
      baz=135
P29M  Windy Craggy     7.30  86  Pn    Pn    22 19 33.6 +0.3
P29M  Windy Craggy     7.30  86  P     Pn    22 19 33.3 +0.1
      baz=279
DAWY  Dawson           7.30  50        Pn    22 19 33.1 -0.1
DAWY  Dawson           7.30  50  P     Pn    22 19 33.3  0.0
      baz=241
F20K  Avaraart Lake    7.31 349  Pn    Pn    22 19 34.5 +1.3
F20K  Avaraart Lake    7.31 349  P     Pn    22 19 33.9 +0.7
      baz=166
HYT   Haines Junctio   7.33  77        Pn    22 19 34.1 +0.3
HYT   Haines Junctio   7.33  77  P     Pn    22 19 33.8  0.0
      baz=270
F21K  Alatna River     7.34 356        Pn    22 19 34.6 +1.0
F21K  Alatna River     7.34 356  P     Pn    22 19 34.3 +0.6
      baz=175,SNR=28
FYU   Fort Yukon       7.35  22  Pn    Pn    22 19 33.5 -0.3
F19K  Shaleruckik Mo   7.36 343        Pn    22 19 34.7 +0.8
F19K  Shaleruckik Mo   7.36 343  P     Pn    22 19 34.0 +0.1
      baz=158,SNR=16
COLD  Coldfoot         7.37   6        Pn    22 19 33.9 -0.2
COLD  Coldfoot         7.37   6  P     Pn    22 19 33.9 -0.2
      baz=188,SNR=31
G25K  Bearman Lake     7.38  19        Pn    22 19 33.5 -0.7
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G25K	Bearman Lake	7.38	19	P	Pn	22 19 33.2	-0.9
	baz=205,SNR=21						
L29M	L29M	7.43	59		Pn	22 19 36.3	+1.3
L29M	L29M	7.43	59	P	Pn	22 19 34.6	-0.4
	baz=251						
G15K	Niukluk	7.47	318		Pn	22 19 34.6	-0.8
G15K	Niukluk	7.47	318	P	Pn	22 19 35.3	-0.1
	baz=127						
I27K	Kandik River	7.47	36		Pn	22 19 34.8	-0.6
I27K	Kandik River	7.47	36	P	Pn	22 19 34.9	-0.6
	baz=225,SNR=23						
F18K	Selawik	7.48	337	P	Pn	22 19 35.3	-0.2
	baz=150						
N30M	Aishikik Lake	7.57	72		Pn	22 19 36.3	-0.5
N30M	Aishikik Lake	7.57	72	P	Pn	22 19 36.3	-0.5
	baz=265,SNR=9.5						
F22K	John River	7.60	0	P	Pn	22 19 37.7	+0.5
	baz=180						
P30M	Million Dollar	7.63	82	P	Pn	22 19 38.1	+0.3
	baz=275						
ANM	Nome	7.70	313		Pn	22 19 38.8	+0.2
ANM	Nome	7.70	313	P	Pn	22 19 38.5	0.0
	baz=121,SNR=6.3						
F17K	Baldwin Pennin	7.70	332		Pn	22 19 38.9	+0.4
F17K	Baldwin Pennin	7.70	332	P	Pn	22 19 38.6	+0.1
	baz=144,SNR=16						
F24K	Squaw Lake	7.84	12		Pn	22 19 40.3	-0.3
F24K	Squaw Lake	7.84	12	P	Pn	22 19 40.2	-0.3
	baz=196,SNR=20						
E19K	Redstone River	7.87	346		Pn	22 19 41.7	+0.8
E19K	Redstone River	7.87	346	P	Pn	22 19 41.4	+0.5
	baz=161,SNR=25						
M30M	Minto, Yukon	7.88	64		Pn	22 19 41.8	+0.8
M30M	Minto, Yukon	7.88	64	P	Pn	22 19 40.7	-0.4
	baz=257						
I28M	Miner Creek	7.88	40		Pn	22 19 41.0	-0.1
I28M	Miner Creek	7.88	40	P	Pn	22 19 41.3	+0.2
	baz=231,SNR=42						
H27K	Steamboat Moun	7.95	33		Pn	22 19 41.1	-0.8
H27K	Steamboat Moun	7.95	33	P	Pn	22 19 40.8	-1.2
	baz=222,SNR=12						
K29M	Barlow Dome	7.95	54		Pn	22 19 42.5	+0.4
K29M	Barlow Dome	7.95	54	P	Pn	22 19 41.5	-0.6
	baz=247						
G26K	Porcupine Rive	7.97	25		Pn	22 19 41.6	-0.7
G26K	Porcupine Rive	7.97	25	P	Pn	22 19 41.2	-1.1
	baz=212,SNR=16						
PLBC	Pleasant Camp	8.02	87		Pn	22 19 43.3	+0.3
O30N	Mendenhall	8.03	77		Pn	22 19 43.1	-0.1
O30N	Mendenhall	8.03	77	P	Pn	22 19 43.0	-0.1
	baz=271,SNR=5.8						
F15K	North Star Dit	8.11	321		Pn	22 19 44.3	+0.1
F15K	North Star Dit	8.11	321	P	Pn	22 19 44.2	+0.1
	baz=130						
N31M	Braeburn, Yuko	8.20	72		Pn	22 19 45.9	+0.5
N31M	Braeburn, Yuko	8.20	72	P	Pn	22 19 45.2	-0.1
	baz=266						
F25K	Christian Rive	8.21	18		Pn	22 19 44.4	-1.1
F25K	Christian Rive	8.21	18	P	Pn	22 19 44.3	-1.2
	baz=204,SNR=16						
E23K	Chandalar	8.23	7		Pn	22 19 46.2	+0.4
E23K	Chandalar	8.23	7	P	Pn	22 19 46.4	+0.5
	baz=189,SNR=20						
E22K	Anaktuvuk Pass	8.23	1	Pn	Pn	22 19 47.2	+1.3
E22K	Anaktuvuk Pass	8.23	1	P	Pn	22 19 46.9	+1.1
	baz=181						
BMAR	Burnt Mountain	8.24	21		Pn	22 19 45.2	-0.8
E24K	Your Creek	8.33	10	Pn	Pn	22 19 47.0	-0.2
E24K	Your Creek	8.33	10	P	Pn	22 19 46.5	-0.7
	baz=193						
G27K	Doyon Strip	8.35	30		Pn	22 19 46.7	-0.8
G27K	Doyon Strip	8.35	30	P	Pn	22 19 46.4	-1.1
	baz=219						
E17K	Hotham Inlet	8.35	333	P	Pn	22 19 47.2	-0.3
	baz=145						
E18K	Tukpahlearik C	8.38	337		Pn	22 19 48.7	+0.9
E18K	Tukpahlearik C	8.38	337	P	Pn	22 19 49.1	+1.3
	baz=150,SNR=16						
I29M	Ogilvie Camp,	8.38	44	Pn	Pn	22 19 48.5	+0.6
I29M	Ogilvie Camp,	8.38	44	P	Pn	22 19 47.9	0.0
	baz=236,SNR=10.0						
S31K	Pelican	8.48	97		Pn	22 19 49.4	+0.1
S31K	Pelican	8.48	97	P	Pn	22 19 49.0	-0.2
	baz=290						
F14K	Arctic Creek	8.53	317	P	Pn	22 19 49.7	-0.2
	baz=124						
E20K	Nigu River	8.53	350		Pn	22 19 50.7	+0.7
E20K	Nigu River	8.53	350	P	Pn	22 19 51.3	+1.3
	baz=166,SNR=20						
SKAG	Skagway	8.54	86		Pn	22 19 50.4	+0.3
SKAG	Skagway	8.54	86	P	Pn	22 19 50.2	+0.2
SKAG	Skagway	8.54	86	P	Pn	22 19 50.8	+0.8
	baz=281,SNR=12						
F26K	Sheenjek River	8.55	21		Pn	22 19 49.3	-0.9
F26K	Sheenjek River	8.55	21	P	Pn	22 19 49.1	-1.1
	baz=208,SNR=20						
E21K	Killik River	8.57	356	Pn	Pn	22 19 51.3	+0.8
E21K	Killik River	8.57	356	P	Pn	22 19 51.4	+1.0
	baz=174						
R31K	City Hall, Gus	8.59	93	P	Pn	22 19 51.3	+0.7
	baz=287						
WHY	Whitehorse	8.63	78		Pn	22 19 51.1	-0.2
WHY	Whitehorse	8.63	78	P	Pn	22 19 50.7	-0.6
	baz=273						
E25K	Arctic Village	8.71	17		Pn	22 19 51.2	-1.1
E25K	Arctic Village	8.71	17	P	Pn	22 19 51.1	-1.2
	baz=203,SNR=5.4						
J30M	Hart River	8.73	51		Pn	22 19 53.2	+0.6
J30M	Hart River	8.73	51	P	Pn	22 19 52.8	+0.2
	baz=245,SNR=9.3						
TOLK	Toolik Lake Re	8.81	6		Pn	22 19 54.7	+0.9
TOLK	Toolik Lake Re	8.81	6	P	Pn	22 19 54.6	+0.9
	baz=189,SNR=17						
H29M	Whitestone	8.87	39		Pn	22 19 54.7	+0.2
H29M	Whitestone	8.87	39	P	Pn	22 19 54.6	0.0
	baz=231,SNR=5.6						
M31M	Drury Creek, Y	8.92	68	Pn	Pn	22 19 55.9	+0.7
M31M	Drury Creek, Y	8.92	68	P	Pn	22 19 54.7	-0.5
	baz=263						
D19K	Kuna River	8.96	346		Pn	22 19 57.4	+1.6
D19K	Kuna River	8.96	346	P	Pn	22 19 56.9	+1.1
	baz=160,SNR=6.1						
D22K	Ayikyak River	8.98	359		Pn	22 19 57.2	+1.2
D22K	Ayikyak River	8.98	359	P	Pn	22 19 57.2	+1.2
	baz=178						
BESE	Bessie Mountai	8.98	91		Pn	22 19 57.1	+0.9
I30M	Mount Dempster	9.00	47		Pn	22 19 58.0	+1.6
I30M	Mount Dempster	9.00	47	P	Pn	22 19 56.9	+0.5
	baz=241						
D20K	Etivluk River	9.01	350		Pn	22 19 57.4	+1.0
D20K	Etivluk River	9.01	350	P	Pn	22 19 57.0	+0.5
	baz=166						
D23K	Nanushuk River	9.09	3		Pn	22 19 58.5	+1.0
D23K	Nanushuk River	9.09	3	P	Pn	22 19 58.4	+1.0
	baz=185						
TNA	Tin City	9.14	315		Pn	22 19 59.1	+1.0
TNA	Tin City	9.14	315	P	Pn	22 19 58.8	+0.7
	baz=121,SNR=5.7						
D17K	Noatak River	9.14	333	P	Pn	22 19 58.8	+0.7
	baz=143						
SIT	Sitka	9.29	101		Pn	22 20 00.2	+0.1
SIT	Sitka	9.29	101	P	Pn	22 19 59.4	-0.8
SIT	Sitka	9.29	101	P	Pn	22 19 59.8	-0.3
	baz=295						
JIS	Juneau Island	9.31	93		Pn	22 20 01.3	+0.8
JIS	Juneau Island	9.31	93	P	Pn	22 20 01.0	+0.5
C21K	Knifeblade Rid	9.32	354		Pn	22 20 01.1	+0.5
C21K	Knifeblade Rid	9.32	354	P	Pn	22 20 00.5	-0.1
	baz=172,SNR=25						
P32M	Atlin	9.33	84		Pn	22 20 01.1	+0.3
P32M	Atlin	9.33	84	P	Pn	22 20 00.7	-0.1
	baz=280						
D24K	Happy Valley	9.37	7	Pn	Pn	22 20 01.9	+0.8
D24K	Happy Valley	9.37	7	P	Pn	22 20 01.4	+0.2
	baz=190						
RDOG	Red Dog Mine	9.39	335	Pn	Pn	22 20 03.9	+2.3
F28M	Old Crow	9.42	30		Pn	22 20 01.7	-0.3
F28M	Old Crow	9.42	30	P	Pn	22 20 01.5	-0.4
	baz=221,SNR=14						
G29M	Pine Creek	9.43	36		Pn	22 20 02.2	+0.2
G29M	Pine Creek	9.43	36	P	Pn	22 20 02.0	-0.1
	baz=229						
E27K	Coleen River	9.47	25		Pn	22 20 01.3	-1.4
E27K	Coleen River	9.47	25	P	Pn	22 20 01.0	-1.7
	baz=214,SNR=8.8						
N32M	Quiet Lake	9.49	74	Pn	Pn	22 20 03.5	+0.5
N32M	Quiet Lake	9.49	74	P	Pn	22 20 03.0	0.0
	baz=271						
S32K	Killisnoo	9.49	97		Pn	22 20 04.0	+1.0
S32K	Killisnoo	9.49	97	P	Pn	22 20 03.7	+0.8
	baz=293,SNR=8.3						
EPYK	Eagle Plains	9.50	41		Pn	22 20 03.0	0.0
EPYK	Eagle Plains	9.50	41	P	Pn	22 20 02.8	-0.2
	baz=235						
C18K	Utukok River	9.56	340	Pn	Pn	22 20 05.5	+1.5
C18K	Utukok River	9.56	340	P	Pn	22 20 04.3	+0.3
	baz=152						
P33M	Teslin, Yukon	9.68	80		Pn	22 20 06.0	+0.3
P33M	Teslin, Yukon	9.68	80	P	Pn	22 20 05.5	-0.2
	baz=277						
C19K	Lookout Ridge	9.73	344		Pn	22 20 07.6	+1.4
C19K	Lookout Ridge	9.73	344	P	Pn	22 20 06.1	-0.1
	baz=158						
D25K	Kavik River	9.74	12	Pn	Pn	22 20 06.5	+0.1
D25K	Kavik River	9.74	12	P	Pn	22 20 06.0	-0.3
	baz=198						
B21K	Ikpikpuk River	9.78	355		Pn	22 20 06.6	-0.2
B21K	Ikpikpuk River	9.78	355	P	Pn	22 20 06.4	-0.3
	baz=173,SNR=5.1						
C17K	DeLong Mountai	9.79	336	P	Pn	22 20 07.1	0.0
	baz=146						
UNV	Unalaska Valle	9.91	238	Pn	Pn	22 20 08.3	-0.4
UNV	Unalaska Valle	9.91	238	P	Pn	22 20 08.5	-0.2
C24K	Franklin Bluff	9.93	7		Pn	22 20 08.8	0.0
C24K	Franklin Bluff	9.93	7	P	Pn	22 20 08.6	-0.3
	baz=190						
C23K	Itkillik River	9.96	3		Pn	22 20 10.1	+0.8
C23K	Itkillik River	9.96	3	P	Pn	22 20 09.3	0.0
	baz=185,SNR=12						
G30M	tAoh Zraii Nji	10.02	38		Pn	22 20 09.8	-0.3
G30M	tAoh Zraii Nji	10.02	38	P	Pn	22 20 09.4	-0.7
	baz=233						
H31M	Peel River	10.03	47		Pn	22 20 10.3	+0.1
H31M	Peel River	10.03	47	P	Pn	22 20 10.3	+0.1
	baz=242						
C16K	Lisburne Hills	10.12	331		Pn	22 20 13.7	+2.2
C16K	Lisburne Hills	10.12	331	P	Pn	22 20 11.8	+0.3
	baz=139						
Q32M	Nakina River	10.19	87		Pn	22 20 12.6	0.0
Q32M	Nakina River	10.19	87	P	Pn	22 20 12.4	-0.2
	baz=284						
E28M	Babbage River	10.26	27		Pn	22 20 12.0	-1.4
E28M	Babbage River	10.26	27	P	Pn	22 20 12.6	-0.9
	baz=218						
B18K	Kokolik River	10.30	341	P	Pn	22 20 13.3	-0.6
	baz=152						
B20K	Meade River	10.32	350	P	Pn	22 20 13.6	-0.6
	baz=166						
C27K	Jago River	10.36	17	Pn	Pn	22 20 15.3	+0.5
C27K	Jago River	10.36	17	P	Pn	22 20 14.5	-0.3
	baz=204						
B22K	Teshekpuk Lake	10.46	358		Pn	22 20 15.2	-0.8
B22K	Teshekpuk Lake	10.46	358	P	Pn	22 20 15.4	-0.6
	baz=177,SNR=17						
C26K	Camden Bay	10.47	14	P	Pn	22 20 16.0	-0.3
	baz=201						
E29M	Blow River	10.49	30	Pn	Pn	22 20 16.4	-0.2
E29M	Blow River	10.49	30	P	Pn	22 20 16.2	-0.4
	baz=223						
F30M	Barrier River	10.54	36		Pn	22 20 17.2	0.0
F30M	Barrier River	10.54	36	P	Pn	22 20 17.2	0.0
	baz=231						
G31M	Satah River	10.62	41		Pn	22 20 17.8	-0.4
G31M	Satah River	10.62	41	P	Pn	22 20 17.8	-0.4
	baz=237						
R33M	Jennings River	10.74	84		Pn	22 20 20.4	+0.3
R33M	Jennings River	10.74	84	P	Pn	22 20 19.8	-0.3
	baz=282						
U33K	Whale Pass	10.80	102		Pn	22 20 20.5	-0.3
U33K	Whale Pass	10.80	102	P	Pn	22 20 20.2	-0.6
	baz=299						
A19K	Wainwright	10.95	344	P	Pn	22 20 23.6	+0.9
	baz=156						
D28M	Stokes Point	11.02	26	P	Pn	22 20 23.1	-0.5
	baz=218,SNR=5.7						
WRAK	Wrangell Islan	11.04	100		Pn	22 20 24.3	+0.3
WRAK	Wrangell Islan	11.04	100	P	Pn	22 20 24.4	+0.4
	baz=297						
S34M	Telegraph Cree	11.06	91		Pn	22 20 25.3	+1.0
S34M	Telegraph Cree	11.06	91	P	Pn	22 20 25.5	+1.1
	baz=290,SNR=12						
F31M	Tsiigehtchic	11.07	39	Pn	Pn	22 20 23.5	-0.9
F31M	Tsiigehtchic	11.07	39	P	Pn	22 20 23.6	-0.8
	baz=236						
CRAG	Craig	11.12	105	Pn	Pn	22 20 24.4	-0.8
CRAG	Craig	11.12	105	P	Pn	22 20 23.8	-1.4
CRAG	Craig	11.12	105	P	Pn	22 20 24.9	-0.3
	baz=302						
A22K	Sinclair Lake	11.17	355	P	Pn	22 20 24.1	-1.5
	baz=173						
A21K	Barrow	11.57	353	P	Pn	22 20 29.6	-1.5
	baz=169						
INK	Inuvik	11.64	36	P	Pn	22 20 31.6	-0.5
	comp=N,4.0nm,0.6s,baz=236,slow=15,SNR=13						
INK				S	Sn	22 22 36.7	-3.2
	comp=N,2.1nm,0.7s,baz=214,slow=3.6,SNR=1.6						
INK	Inuvik	11.64	36		Pn	22 20 32.3	+0.2
INK	Inuvik	11.64	36	P	Pn	22 20 32.1	0.0
	baz=233,SNR=5.9						
V35K	Ketchikan	11.93	104	Pn	Pn	22 20 37.1	+1.1
U35K	Hyder	12.43	99		Pn	22 20 46.4	+3.8
TOAD	Toad River Com	13.74	83	P	Pn	22 21 01.6	+1.6
	baz=286						
KOTAN	Kotaneelee Air	14.02	77	P	Pn	22 21 05.0	+1.5
	baz=282						
ATKA	Atka Island	14.47	247	Pn	Pn	22 21 10.9	+1.6
ATKA	Atka Island	14.47	247	P	Pn	22 21 11.7	+2.4
BBB	Bella Bella	15.46	109	Pn	Pn	22 21 23.8	+1.9
A36M	Sachs Harbour	16.10	31		Pn	22 21 29.7	-0.2
A36M				IAmb	IAmb	22 21 34.0	
	comp=Z,13nm,0.8s						
A36M	Sachs Harbour	16.10	31	P	Pn	22 21 28.6	-1.3
	baz=235,SNR=8.7						
YKAW3	Yellowknife Wh	18.09	65		Pn	22 21 54.9	+0.6
YKA	Yellowknife Ar	18.11	66	P	Pn	22 21 54.9	+0.4
	comp=Z,1.0nm,0.5s,baz=280,slow=12,SNR=18						
YKA	Yellowknife Ar	18.11	66	P	P	22 21 53.5	0.0
YKAW1	Yellowknife Wh	18.16	66	P	Pn	22 21 55.5	+0.4
SHEM	Shemya Is, Ala	19.85	264	P	P	22 22 11.5	-1.1
	comp=Z,95nm,0.8s,baz=100,slow=19,SNR=2.8						
SHEM	Shemya Is, Ala	19.85	264	IAmb	IAmb	22 22 14.8	
	comp=Z,137nm,0.9s						
LRM	Limekiln Ridge	27.33	103	P	P	22 23 27.0	+1.4
NVAR	Mina Array Bea	30.34	120	P	P	22 23 54.6	+2.4
	comp=Z,0.6nm,0.7s,baz=307,slow=8.1,SNR=4.2						
	comp=Z,0.6nm,0.7s						
NRIK	Noril'sk	44.13	334	P	P	22 25 48.3	+0.4
	comp=Z,3.1nm,0.5s,baz=49,slow=6.4,SNR=3.8						
	comp=Z,3.1nm,0.5s						
NRIK	Noril'sk	44.13	334	IAmb	IAmb	22 25 49.1	
	comp=Z,3.5nm,0.6s						
ARCES	ARCESS Array B	50.81	1	P	P	22 26 38.7	-1.0
	comp=Z,0.6nm,0.5s,baz=347,slow=7.4,SNR=5.6						
	comp=Z,0.6nm,0.5s						
ARCES	ARCESS Array B	50.81	1	IAmb	IAmb	22 26 52.5	
	comp=Z,3.5nm,1.0s						
SONM	Songino Array	55.16	306	P	P	22 27 11.4	-0.6
	comp=Z,2.4nm,0.8s,baz=42,slow=6.5,SNR=14						
	comp=Z,2.4nm,0.8s						
SONM	Songino Array	55.16	306	IAmb	IAmb	22 27 15.4	
	comp=Z,2.9nm,0.9s						
ZALV	Zalesovo Beam	57.66	324	P	P	22 27 29.4	-0.2
	comp=Z,4.4nm,0.6s,baz=30,slow=7.1,SNR=20						
	comp=Z,4.4nm,0.6s						
ZALV	Zalesovo Beam	57.66	324		P	22 27 30.0	+0.5
FINES	FINESS Array B	58.94	1	P	P	22 27 39.8	+1.5
	comp=Z,0.8nm,0.5s,baz=8.9,slow=9.8,SNR=4.3						
	comp=Z,0.8nm,0.5s						
KURK	Kurchatov	62.31	326	P	P	22 28 02.3	+1.0
KURK	Kurchatov	62.31	326	IAmb	IAmb	22 28 02.7	
	comp=Z,2.8nm,0.8s						
BVAR	Borovoye Array	62.31	333	P	P	22 28 02.0	+0.7
	comp=Z,3.6nm,0.6s,baz=31,slow=7.0,SNR=18						
	comp=Z,3.6nm,0.6s						
KURBB	Kurchatov Arra	62.42	326	P	P	22 28 02.3	+0.3
	comp=Z,2.3nm,0.6s,baz=28,slow=6.5,SNR=8.6						
	comp=Z,2.3nm,0.6s						
EKA	Eskdalemuir Ar	62.46	19	P	P	22 28 02.0	-0.2
	comp=Z,0.8nm,0.5s,baz=329,slow=5.8,SNR=3.6						
	comp=Z,0.8nm,0.5s						
MKAR	Makanchi Array	64.73	322	P	P	22 28 17.0	-0.4
	comp=Z,1.2nm,0.5s,baz=37,slow=6.6,SNR=27						
	comp=Z,1.2nm,0.5s						
AKASG	Malin Array Be	69.71	359	P	P	22 28 47.7	-1.0
	comp=Z,1.4nm,0.5s,baz=6.0,slow=6.1,SNR=6.3						
	comp=Z,1.4nm,0.5s						
AKASG	Malin Array Be	69.71	359	IAmb	IAmb	22 29 00.8	
	comp=Z,2.7nm,1.1s						
BRTR	Keskin Array B	80.58	355	P	P	22 29 50.9	-0.6
	comp=Z,0.4nm,0.8s,baz=349,slow=2.9,SNR=3.2						
	comp=Z,0.4nm,0.8s						
CMAR	Chiang Mai Arr	83.26	295	P	P	22 30 06.2	+0.6
	comp=Z,1.0nm,0.3s,baz=5.9,slow=6.8,SNR=6.0						
	comp=Z,1.0nm,0.3s						

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*DJA **19** 22:31:18.8±0.2, 3°S±2°×13°5E±°, h10km, M4.5/13, mB5.2/2, mb4.3/5, MLv4.6/13, Mw(mB)4.6/2*

*IDC **19** 22:31:20.3±1.3, 3°.08S×135°.28E, h0km, mb3.7/3, mbtmp4.0/6, ML4.2/3, MS2.9/1, Error ellipse: s-maj=29.4km s-min=25.1km az=112.0*

ISC 19 22:31:17.5±0.9**, 2°.57S**±0°.06×**135°.08E**±0°.05**, h10km, n19, σ1ˢ.52**/21**, mb3.9**/3**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	Serui, Papua	1.35	59	P	Pn	22 31 42.2	-0.3
SRPI				S	Sb	22 31 59.9	-0.5
RKPI	Ransiki, Papua	1.38	319	P	Pn	22 31 42.8	0.0
RKPI				S	Sn	22 32 01.1	0.0
BAKI	Biak	1.71	37	P	Pb	22 31 49.2	+0.1
BAKI				S	Sn	22 32 10.1	+0.8
KMPI	Kaimana, Papua	1.75	231	P	Pn	22 31 49.8	+1.9
KMPI				S	Sb	22 32 13.1	+1.3
MWPI	Manokwari, Pap	1.93	327	P	Pn	22 31 51.6	+1.2
FAKI	Fak Fak	2.84	263	P	Pn	22 32 02.8	-0.2
SMPI	Sarmi	3.68	81	P	Pn	22 32 16.6	+2.1
SWI	Sorong	4.17	294	P	Pn	22 32 22.0	+0.7
GENI	Genyem	5.09	90	P	Pn	22 32 36.0	+2.1
JAY	Jayapura	5.62	90	Pn	Pn	22 32 43.0	+1.7
	5.3nm,0.3s,baz=202,slow=12,SNR=15						
JAY				Sn	Sn	22 33 45.8	-0.3
	18nm,0.3s,baz=246,slow=22,SNR=35						
	14nm,0.4s						
JAY	Jayapura	5.62	90	P	Pn	22 32 43.0	+1.7
	0.3nm18nm,0.8s						
KRAI	Karang Ratu	6.71	263	P	Pn	22 32 57.8	+1.6
SANI	Sanana	9.09	273	P	Pn	22 33 28.8	-0.1
PMG	Port Moresby	13.80	120	LR	LR	22 40 02.4	
	comp=Z,60nm,22.0s,baz=214,slow=39						
WRA	Warramunga Arr	17.29	182	Pn	Pn	22 35 15.6	-3.6
	0.6nm,0.3s,baz=6.2,slow=13,SNR=16						
WRA				Sn	Sn	22 38 15.8	-16
	0.4nm,0.3s,baz=4.8,slow=22,SNR=5.9						
	2.2nm,0.5s						
FITZ	Fitzroy Crossi	18.00	210	P	Pn	22 35 26.4	-1.6
	1.1nm,0.3s,baz=32,slow=11,SNR=38						
FITZ				S	Sn	22 38 34.0	-15
	9.6nm,0.7s,baz=203,slow=17,SNR=9.2						
	2.4nm,0.4s						
ASAR	Alice Springs	21.01	183	P	P	22 36 01.4	0.0
	3.9nm,0.7s,baz=10,slow=12,SNR=32						
ASAR				S	S	22 39 45.2	-10
	1.5nm,1.0s,baz=14,slow=20,SNR=4.3						
	3.9nm,0.7s						
MKAR	Makanchi Array	67.49	324	P	P	22 42 21.1	+7.3
	0.4nm,0.5s,baz=110,slow=8.0,SNR=6.6						
	0.4nm,0.5s						
ILAR	Eielson Array	87.22	25	P	P	22 44 11.2	+7.3
	0.3nm,0.6s,baz=270,slow=5.2,SNR=2.2						
	0.3nm,0.6s						

RSNC 19 22:32:46.9±0.0**, 7°N**±1°×**7°3W**±°**, h149km**±1km**, M3.2, mB4.7, mb3.6, ML2.8, Mw(mB)3.9, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.24	190	P	Pn	22 33 06.9	-0.6
BARC				S	Sn	22 33 22.5	-0.6
BRJC	Barrancabermej	0.62	283	P	Pn	22 33 08.6	-0.2
BRJC				S	Sn	22 33 26.0	+0.6
PAMC	Pamplona, Colo	0.67	41	P	Pn	22 33 09.8	+0.1
PAMC				S	Sn	22 33 26.6	-0.4
RUSC	La Rusia	0.93	177	P	Pn	22 33 10.8	-0.8
RUSC				S	Sn	22 33 29.8	-0.6
PTBC	PUERTO BERRIO,	1.34	258	P	Pn	22 33 13.5	-1.3
PTBC				S	Sn	22 33 34.5	-1.5
OCAC	Ocana	1.41	353	P	Pn	22 33 14.7	-1.0
OCAC				S	Sn	22 33 37.0	-0.7
SPBC	San Pablo de B	1.49	218	P	Pn	22 33 15.7	-0.7
SPBC				S	Sn	22 33 38.0	-1.0
NORC	Norcasia	2.13	234	P	Pn	22 33 23.1	-0.5
NORC				S	Sn	22 33 50.4	-1.4
CHIC	Chingaza	2.26	195	P	Pn	22 33 24.9	-0.7
CHIC				S	Sn	22 33 54.4	-0.8
ROSC	El Rosal	2.30	211	P	Pn	22 33 27.0	+1.0
ROSC				S	Sn	22 33 56.9	+1.0
HELC	Santa Helena	2.46	255	P	Pn	22 33 28.5	+0.7
HELC				S	Sn	22 33 59.2	-0.1
CVER	Cruz Verde, Cu	2.48	202	P	Pn	22 33 28.5	+0.3
CVER				S	Sn	22 33 59.5	-0.4
UREC	San Jos de Ur	2.54	291	P	Pn	22 33 27.5	-1.0
UREC				S	Sn	22 33 57.5	-3.1
VILC	Villavicencio,	2.76	192	P	Pn	22 33 30.7	-0.6
VILC				S	Sn	22 34 04.7	-0.9
CBOC	Ciudad Bolivar	3.01	252	P	Pn	22 33 35.1	+0.5
CBOC				S	Sn	22 34 10.0	-1.4
DBBC	Dabeiba	3.05	274	P	Pn	22 33 35.0	0.0
DBBC				S	Sn	22 34 10.9	-1.3
ARGC	Ariguani, Magd	3.20	340	P	Pn	22 33 36.7	-0.1
ARGC				S	Sn	22 34 15.0	-0.5
SDV	Santo Domingo	3.22	50	P	Pn	22 33 36.6	-0.6
SDV				S	Sn	22 34 14.6	-1.5
PRAC	Prado	3.55	209	P	Pn	22 33 40.8	-0.6
PRAC				S	Sn	22 34 23.5	-0.1
APAC	Apartado, Choc	3.57	288	P	Pn	22 33 41.1	-0.5
APAC				S	Sn	22 34 22.9	-1.1
ORTC	Ortega, Tolima	3.58	216	P	Pn	22 33 41.3	-0.5
ORTC				S	Sn	22 34 24.7	+0.4
SJCC	San Jacinto, C	3.66	327	P	Pn	22 33 40.6	-2.1
SJCC				S	Sn	22 34 22.3	-3.7
PLMC	San Jos del P	3.67	239	P	Pn	22 33 42.5	-0.4
PLMC				S	Sn	22 34 23.7	-2.6
URMC	La Uribe, Meta	3.77	199	P	Pn	22 33 43.9	-0.3
URMC				S	Sn	22 34 27.7	-1.0
LCBC	Los crdobas,	3.78	302	P	Pn	22 33 41.6	-2.7
LCBC				S	Sn	22 34 29.3	+0.5
YOTC	Yotoco, Valle	4.26	229	P	Pn	22 33 49.4	-1.3
YOTC				S	Sn	22 34 39.7	-0.7
SMRC	Santa Marta, M	4.44	346	P	Pn	22 33 52.4	-0.5
SMRC				S	Sn	22 34 41.4	-2.9
PTAC	Punta Ardita,	4.64	274	P	Pn	22 33 53.7	-1.9
PTAC				S	Sn	22 34 45.4	-3.8
MACC	Macarena, Meta	4.71	189	P	Pn	22 33 54.5	-2.0
MACC				S	Sn	22 34 46.3	-4.4
URIC	Uribia, Colomb	4.97	13	P	Pn	22 33 57.4	-2.6
URIC				S	Sn	22 34 54.6	-2.4
JAMC	Jamundi, Valle	5.03	225	P	Pn	22 34 01.2	+0.3
	950nm7.9nm,0.4s						
JAMC				S	Sn	22 34 49.3	-9.3
	950nm7.9nm,0.4s						
GARC	Garzon, Huila	5.17	207	P	Pn	22 34 01.0	-1.9
GARC				S	Sn	22 34 58.7	-3.5
POPC	Popayan, Colom	5.53	220	P	Pn	22 34 07.1	-0.5
	5.5nm,1.2s						
FLOC	Florencia	5.78	206	P	Pn	22 34 10.3	-0.5
	6.2nm,1.1s						
BBAC	Balboa, Cauca	6.29	221	P	Pn	22 34 14.7	-3.0

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*IDC **19** 22:46:56.0±4.7, 13°.81N×146°.11E, h97km±89km, mb3.4/5, mbtmp3.8/5, Error ellipse: s-maj=357.9km s-min=40.7km az=177.0*

ISC 19 22:46:53.6±2.3**, 14°.6N**±0°.3×**146°.0E**±0°.4**, h35km, n12, σ0ˢ.82**/7**, mb3.8**/5**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.52	227	P	Pn	22 47 19.1	+0.8
	409nm,0.3s,baz=120,slow=4.3,SNR=9.9						
GUMO				S	Sn	22 47 35.9	-0.9
	215nm,0.3s,baz=5.9,slow=22,SNR=7.1						
H11S3	WAKE ISLAND Hy	20.19	76	T	T	23 13 00.2	
	baz=263,slow=74						
H11S1	WAKE ISLAND Hy	20.21	76	T	T	23 13 01.4	

	baz=263,slow=74						
H11S2	**WAKE ISLAND Hy**	**20.21**	**76**	T	T	23 13 02.7	
	baz=263,slow=74						
H11N1	**WAKE ISLAND Hy**	**20.58**	**73**	T	T	23 13 09.5	
	baz=260						
H11N2	**WAKE ISLAND Hy**	**20.59**	**73**	T	T	23 13 13.8	
	baz=260						
H11N3	**WAKE ISLAND Hy**	**20.60**	**73**	T	T	23 13 33.9	
	baz=260						
ZALV	**Zalesovo Beam**	**61.42**	**324**	P	**P**	**22 57 07.3**	**+0.9**
	0.3nm,0.4s,baz=108,slow=8.0,SNR=1.8						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**61.51**	**316**	P	**P**	**22 57 07.4**	**+0.3**
	0.2nm,0.3s,baz=91,slow=8.4,SNR=17						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**64.55**	**319**	P	**P**	**22 57 27.1**	**-0.1**
	1.2nm,0.3s,baz=102,slow=7.1,SNR=6.1						
	1.2nm,0.3s						
ILAR	**Eielson Array**	**67.16**	**25**	P	**P**	**22 57 43.4**	**-0.3**
	0.2nm,0.4s,baz=256,slow=5.7,SNR=4.5						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**69.79**	**321**	P	**P**	**22 58 00.0**	**-0.4**
	0.5nm,0.6s,baz=97,slow=7.8,SNR=4.7						
	0.5nm,0.6s						

IDC 19 23:18:43.2±1.7, 6°.99N×126°.30E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=35.4km s-min=11.5km az=17.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.72**	**276**	Pg	Pb	23 18 58.0	-0.7
	206nm,0.3s,baz=109,slow=2.0,SNR=16						
DAV				Lg	Lg	23 19 06.6	
	924nm,0.3s,baz=17,slow=19,SNR=9.1						
WRA	**Warramunga Arr**	**27.91**	**164**	P	P	23 24 34.8	-0.4
	0.5nm,0.7s,baz=338,slow=8.6,SNR=2.5						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**31.36**	**167**	P	P	23 25 05.9	0.0
	0.4nm,0.6s,baz=338,slow=6.7,SNR=5.5						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**54.66**	**324**	P	P	23 28 13.6	-0.5
	0.6nm,0.8s,baz=121,slow=7.8,SNR=5.6						
	0.6nm,0.8s						

DJA 19 23:29:00.9±0.4, 9°S±4°×12°4E±°, h95km±5km, M3.5/12, mB5.5/1, mb3.8/4, MLv3.4/12, Mw(mB)4.9/1, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**0.87**	**180**	P	Pn	23 29 21.4	+1.7
BATI	**Baumata**	**1.44**	**204**	P	Pn	23 29 27.2	+0.9
MMRI	**Maumere**	**2.01**	**277**	P	Pn	23 29 33.2	-0.3
EDFI	**Ende, Flores**	**2.54**	**273**	P	Pn	23 29 40.7	+0.2
BASI	**Baing, Sumba**	**3.87**	**250**	P	Pn	23 29 57.7	-0.5
LBFI	**Labuhan Bajo,**	**4.34**	**275**	P	Pn	23 30 04.7	+0.1
WBSI	**Waikabubak, Su**	**4.87**	**261**	P	Pn	23 30 12.2	+0.4
KDI	**Kendari**	**5.16**	**341**	P	Pn	23 30 16.3	+0.6
	0.5nm,0.8s						
PLAI	**Plampang**	**6.41**	**270**	P	Pn	23 30 32.4	-0.4
	0.1nm16nm,1.1s						
LUWI	**Luwuk**	**7.93**	**349**	P	Pn	23 30 53.7	+0.2

GCG 19 23:31:13.6±0.7, 13°.83N×91°.33W, h95km±40km, MD3.5, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG8	**El Palmar, Qui**	**0.62**	**358**	*i* P	Pn	23 31 33.6	+3.5
STG8				*i* S	Sn	23 31 49.4	+7.0
ESSG	**Sabana Grande**	**0.73**	**42**	*i* P	Pn	23 31 31.0	0.0
ESSG				*i* S	Sn	23 31 44.3	+0.4
FG16	**Alotenango, Sa**	**0.91**	**61**	*i* P	Pn	23 31 32.4	-0.5
FG16				*i* S	Sn	23 31 46.5	-0.8
SOKI	**Kika Raxquin**	**0.99**	**356**	*i* P	Pn	23 31 35.2	+1.3
NUBE	**Las Nubes**	**1.51**	**87**	*i* P	Pn	23 31 40.1	+0.3

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*BEO **19** 23:42:36.2±1.4, 45°.72N×27°.10E, h94km±9km, ML3.0/9*
*BUC **19** 23:42:40.9±0.2, 45°.61N×26°.48E, h111km±1km, ml3.6/64, Error ellipse: s-maj=1.3km s-min=1.0km az=26.0*
*SOF **19** 23:42:41.6, 45°.53N±0°.02×26°.40E±0°.02, h100km±4km, MD3.1/3*
*MCSM **19** 23:42:42.0±0.4, 46°N±3°×2°6E±°, h115km, MLv3.4*
ISC 19 23:42:39.4±1.2, 45°.62N±0°.02×26°.42E±0°.02, h125km±5km, n110, σ1s23/172, 59C-59D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEHR	**Nehoiu**	**0.21**	**205**	⇑P	**Pn**	**23 42 57.4**	**+0.7**
NEHR				⇓S	**Sn**	**23 43 09.3**	**-0.4**
BISRR	**Bisoca**	**0.21**	**108**	⇑P	**Pn**	**23 42 57.3**	**+0.6**
BISRR				⇑S	**Sn**	**23 43 09.2**	**-0.6**
COVR	**Voineasa-Covas**	**0.28**	**327**	⇑P	**Pn**	**23 42 57.0**	**+0.2**
COVR				⇑S	**Sn**	**23 43 08.9**	**-1.2**
PLOR	**Plostina**	**0.28**	**34**	⇑P	**Pn**	**23 42 56.9**	**0.0**
PLOR				⇑S	**Sn**	**23 43 09.0**	**-1.2**
VRI	**Vrincioaia**	**0.33**	**41**	⇑P	**Pn**	**23 42 57.3**	**+0.2**
VRI				⇓S	**Sn**	**23 43 09.8**	**-0.6**
MLR	**Muntele Rosu**	**0.36**	**250**	⇑P	**Pn**	**23 42 58.0**	**+0.6**
MLR				⇓S	**Sn**	**23 43 10.4**	**-0.4**
MLR	**Muntele Rosu**	**0.36**	**250**	*e*Pg	**Pn**	**23 42 57.9**	**+0.6**
MLR				*e*Sg	**Sn**	**23 43 09.5**	**-1.3**
TURR	**Turia**	**0.52**	**327**	⇑P	**Pn**	**23 42 58.4**	**+0.3**
TURR				⇑S	**Sn**	**23 43 11.4**	**-0.8**
PANC	**Panciu**	**0.57**	**63**	⇑P	**Pn**	**23 42 58.9**	**+0.6**
PANC				⇓S	**Sn**	**23 43 11.8**	**-0.7**
OZUR		**0.65**	**318**	⇑P	**Pn**	**23 42 59.0**	**+0.1**
COSR	**Cosmesti PH**	**0.67**	**69**	⇑P	**Pn**	**23 42 59.2**	**+0.3**
COSR				⇓S	**Sn**	**23 43 12.8**	**-0.9**
BOSR	**Bodos**	**0.70**	**311**	⇑P	**Pn**	**23 42 59.5**	**+0.3**
BOSR				⇑S	**Sn**	**23 43 13.5**	**-0.8**
ONER	**Baraj Valea Uz**	**0.72**	**359**	⇑P	**Pn**	**23 42 59.8**	**+0.4**
ONER				⇑S	**Sn**	**23 43 14.5**	**-0.1**
PLAR	**PLOIESTI**	**0.75**	**202**	⇑P	**Pn**	**23 43 00.9**	**+1.3**
DOPR	**Dopca**	**0.80**	**296**	⇑P	**Pn**	**23 43 00.6**	**+0.6**
DOPR				⇓S	**Sn**	**23 43 15.5**	**-0.2**
GHRR		**0.82**	**57**	⇑P	**Pn**	**23 43 00.8**	**+0.6**
GHRR				⇑S	**Sn**	**23 43 15.1**	**-0.8**
TUDR		**0.88**	**91**	⇑P	**Pn**	**23 43 00.7**	**0.0**
TUDR				⇑S	**Sn**	**23 43 15.5**	**-1.2**
TESR	**Tescani**	**0.91**	**10**	⇑P	**Pn**	**23 43 01.1**	**+0.1**
SULR		**0.94**	**187**	⇓P	**Pn**	**23 43 02.5**	**+1.2**
SULR				⇑S	**Sn**	**23 43 18.2**	**+0.4**
IZVR	**Izvoarele**	**0.95**	**94**	⇑P	**Pn**	**23 43 01.1**	**-0.2**
IZVR				⇓S	**Sn**	**23 43 16.1**	**-1.8**
SCHL	**Schela**	**1.00**	**96**	⇓P	**Pn**	**23 43 01.8**	**+0.1**
SCHL				⇑S	**Sn**	**23 43 16.9**	**-1.8**
SCHLR	**Schela**	**1.00**	**98**	⇓P	**Pn**	**23 43 01.8**	**0.0**
SCHLR				⇓S	**Sn**	**23 43 17.1**	**-1.7**
NEGRR	**Negrea**	**1.03**	**94**	⇓P	**Pn**	**23 43 02.5**	**+0.5**
NEGRR				⇓S	**Sn**	**23 43 17.9**	**-1.3**
MTUR	**Matau**	**1.03**	**248**	⇓P	**Pn**	**23 43 03.5**	**+1.3**
VARL	**Varlezi**	**1.04**	**74**	⇓P	**Pn**	**23 43 02.7**	**+0.5**
VARL				⇓S	**Sn**	**23 43 18.6**	**-0.8**
BIR	**Birlad**	**1.06**	**52**	⇓P	**Pn**	**23 43 03.1**	**+0.6**
BIR				⇑S	**Sn**	**23 43 18.8**	**-1.1**
SCTR	**Scanteiesti**	**1.11**	**86**	⇓P	**Pn**	**23 43 03.6**	**+0.8**
SCTR				⇑S	**Sn**	**23 43 20.3**	**-0.3**
TATR	**Tatarca**	**1.15**	**90**	⇓P	**Pn**	**23 43 03.9**	**+0.7**
TATR				⇓S	**Sn**	**23 43 20.8**	**-0.5**
GISR	**Galati**	**1.16**	**98**	⇑P	**Pn**	**23 43 03.8**	**+0.5**
GISR				⇑S	**Sn**	**23 43 21.0**	**-0.6**
LEHL	**Lehliu**	**1.18**	**166**	⇓P	**Pn**	**23 43 04.7**	**+1.1**
LEHL				⇑S	**Sn**	**23 43 22.6**	**+0.7**
VLDR	**Vladesti**	**1.19**	**78**	⇑P	**Pn**	**23 43 04.3**	**+0.7**
VLDR				⇓S	**Sn**	**23 43 21.1**	**-1.0**
AMRR	**Amara**	**1.20**	**147**	⇓P	**Pn**	**23 43 04.8**	**+1.1**
AMRR				⇓S	**Sn**	**23 43 22.4**	**+0.2**
JOSR	**Joseni**	**1.26**	**330**	⇓P	**Pn**	**23 43 04.6**	**+0.2**
ARR	**Arges**	**1.28**	**259**	⇓P	**Pn**	**23 43 05.9**	**+1.2**
ARR				⇓S	**Sn**	**23 43 24.1**	**+0.1**
CFR	**Carcaliu**	**1.29**	**109**	⇓P	**Pn**	**23 43 05.0**	**+0.3**
CFR				⇑S	**Sn**	**23 43 22.8**	**-1.1**
BUC1	**Bucharest**	**1.30**	**192**	⇑P	**Pn**	**23 43 05.9**	**+1.1**
BUC1				⇑S	**Sn**	**23 43 24.5**	**+0.3**
GIRR	**Girov**	**1.34**	**2**	⇑P	**Pn**	**23 43 06.1**	**+0.8**
GIRR				⇓S	**Sn**	**23 43 24.4**	**-0.7**
BIZ	**Bicaz**	**1.34**	**351**	⇓S	**Sn**	**23 43 26.0**	**+0.8**
VASR	**Vaslui**	**1.40**	**42**	⇑P	**Pn**	**23 43 06.5**	**+0.5**
VASR				⇓S	**Sn**	**23 43 25.0**	**-1.2**
SGRR	**Singureni**	**1.43**	**193**	⇓P	**Pn**	**23 43 07.2**	**+0.9**
SGRR				⇑S	**Sn**	**23 43 27.0**	**+0.3**
CICN	**Ciocanesti**	**1.48**	**163**	⇓P	**Pn**	**23 43 07.7**	**+0.8**
CICN				⇑S	**Sn**	**23 43 27.7**	**-0.1**
HUMR	**Humele**	**1.49**	**224**	⇓P	**Pn**	**23 43 07.9**	**+0.9**
HUMR				⇓S	**Sn**	**23 43 28.3**	**+0.3**
TNR	**Turnu Rosu**	**1.51**	**272**	⇑P	**Pn**	**23 43 08.4**	**+1.2**
MDB	**Medias**	**1.52**	**291**	⇓P	**Pn**	**23 43 09.2**	**+1.9**
MDB				⇑S	**Sn**	**23 43 30.3**	**+1.8**
TLBR	**Topalu**	**1.57**	**132**	⇓P	**Pn**	**23 43 08.7**	**+0.8**
TLBR				⇑S	**Sn**	**23 43 28.4**	**-1.3**
TPGR	**Topolog**	**1.60**	**118**	⇓P	**Pn**	**23 43 08.9**	**+0.6**
TPGR				⇑S	**Sn**	**23 43 29.8**	**-0.6**
CVDA	**Cernavoda**	**1.72**	**138**	⇑S	**Sn**	**23 43 32.0**	**-0.8**
TLCR		**1.74**	**103**	⇓P	**Pn**	**23 43 10.4**	**+0.5**
TLCR				⇑S	**Sn**	**23 43 32.6**	**-0.6**
PRAR	**RASCA**	**1.75**	**356**	⇑P	**Pn**	**23 43 11.3**	**+1.2**
PRAR				⇓S	**Sn**	**23 43 33.5**	**0.0**
IASR	**Iasi**	**1.75**	**27**	⇓P	**Pn**	**23 43 10.5**	**+0.4**
ICOR	**Ion Corvin**	**1.79**	**146**	⇓P	**Pn**	**23 43 11.8**	**+1.3**
ICOR				⇓S	**Sn**	**23 43 33.6**	**-0.7**
TIRR	**Tirgusor**	**1.83**	**129**	⇓P	**Pn**	**23 43 11.7**	**+0.7**
TIRR				⇑S	**Sn**	**23 43 34.1**	**-0.9**
TIRR	**Tirgusor**	**1.83**	**129**	Pn	**Pn**	**23 43 11.6**	**+0.7**
TIRR				Sn	**Sn**	**23 43 33.4**	**-1.6**
LOT	**Lotru**	**1.87**	**266**	⇑P	**Pn**	**23 43 13.5**	**+1.9**
LOT				⇓S	**Sn**	**23 43 37.8**	**+1.6**
JURR	**Jurilovca**	**1.93**	**115**	⇑S	**Sn**	**23 43 36.9**	**-0.5**
MFTR	**Murfatlar**	**2.02**	**135**	⇓P	**Pn**	**23 43 14.3**	**+0.9**
ZIMR		**2.10**	**201**	⇓P	**Pn**	**23 43 15.2**	**+0.9**
TSCT	**Constanta Port**	**2.16**	**132**	⇓P	**Pn**	**23 43 15.8**	**+0.9**
TSCT				⇓S	**Sn**	**23 43 41.6**	**-0.6**
KIS	**Kishinev**	**2.16**	**49**	⇓P	**Pn**	**23 43 15.5**	**+0.5**
VLAD	**Vladila**	**2.16**	**222**	⇓P	**Pn**	**23 43 15.8**	**+0.7**
BURAR	**Bucovina Array**	**2.17**	**338**	⇓P	**Pn**	**23 43 17.2**	**+2.0**
PSN	**Preselentsi**	**2.33**	**148**	*i* P	**Pn**	**23 43 18.3**	**+1.2**
PSN				S	**Sn**	**23 43 45.6**	**-0.5**
SZH	**Strazhitsa**	**2.37**	**188**	P	**Pn**	**23 43 18.3**	**+0.6**
SZH				S	**Sn**	**23 43 46.8**	**-0.3**
MANR	**Mangalia**	**2.37**	**139**	⇓P	**Pn**	**23 43 18.7**	**+1.0**
MANR				⇑S	**Sn**	**23 43 46.6**	**-0.5**
TSMN	**Mangalia Port-**	**2.39**	**139**	⇑P	**Pn**	**23 43 18.9**	**+1.0**
TSMN				⇓S	**Sn**	**23 43 46.8**	**-0.6**
NEF	**NEVSHA**	**2.43**	**165**	*i* P	**Pn**	**23 43 19.8**	**+1.3**
NEF				S	**Sn**	**23 43 48.0**	**-0.5**
SRE	**Strehaia**	**2.47**	**248**	⇓P	**Pn**	**23 43 19.9**	**+1.0**
MARR	**Marisel-Cluj**	**2.53**	**296**	⇑P	**Pn**	**23 43 21.5**	**+1.8**
MARR				⇑S	**Sn**	**23 43 53.2**	**+2.4**
PRD	**Provadia**	**2.56**	**164**	P	**Pn**	**23 43 21.7**	**+1.6**
PRD				S	**Sn**	**23 43 52.4**	**+1.1**
GZR	**Gura Zlata**	**2.57**	**266**	⇓P	**Pn**	**23 43 21.7**	**+1.4**
GZR	**Gura Zlata**	**2.57**	**266**	*e*Pn	**Pn**	**23 43 21.3**	**+1.0**
GZR				*e*Sn	**Sn**	**23 43 49.7**	**-2.1**
PURM	**Purcari**	**2.57**	**68**	⇓P	**Pn**	**23 43 20.7**	**+0.5**
AVR	**AVREN**	**2.65**	**160**	P	**Pn**	**23 43 22.6**	**+1.3**
RMGR	**Halanga-Turnu**	**2.80**	**251**	⇑P	**Pn**	**23 43 24.1**	**+0.9**
PUNG	**Punghina**	**2.81**	**243**	*e*Sn	**Sn**	**23 43 55.0**	**-2.2**
DRGR		**2.83**	**296**	⇑P	**Pn**	**23 43 25.2**	**+1.5**
DRGR		**2.83**	**296**	*e*Pn	**Pn**	**23 43 24.1**	**+0.5**
DRGR				*e*Sn	**Sn**	**23 43 52.3**	**-5.5**
SORM	**Soroca**	**2.85**	**27**	⇓P	**Pn**	**23 43 23.7**	**0.0**
RAKU	**Rahkiv**	**2.86**	**328**	Pn	**Pn**	**23 43 27.1**	**+3.1**
VALD	**Valchedram**	**2.87**	**229**	P	**Pn**	**23 43 24.8**	**+0.7**
KMPD	**K-Podol'skiy**	**2.95**	**1**	Pn	**Pn**	**23 43 26.2**	**+1.1**
KMPD				Sn	**Sn**	**23 43 59.3**	**-1.0**
MPEP	**Malo Peshtene**	**2.96**	**221**	*i* P	**Pn**	**23 43 26.4**	**+1.1**
JMB	**Yambol**	**3.12**	**179**	P	**Pn**	**23 43 28.8**	**+1.4**
JMB				S	**Sn**	**23 44 03.5**	**-1.0**
STNU	**Starunia**	**3.36**	**338**	Pn	**Pn**	**23 43 31.9**	**+1.4**
BZS	**Buzias**	**3.37**	**272**	⇓P	**Pn**	**23 43 31.6**	**+1.0**
BZS	**Buzias**	**3.37**	**272**	*e*Pn	**Pn**	**23 43 31.4**	**+0.8**
MDVR	**Moldovita**	**3.43**	**258**	⇑P	**Pn**	**23 43 32.4**	**+0.9**
BORS2	**Bor- Borsko je**	**3.48**	**246**	*e*Pn	**Pn**	**23 43 30.8**	**-1.3**
BORS2				*e*Sn	**Sn**	**23 44 08.2**	**-4.7**
ZAGS	**Zajecar**	**3.49**	**240**	*e*Pn	**Pn**	**23 43 31.9**	**-0.3**
ZAGS				*e*Sn	**Sn**	**23 44 09.7**	**-3.3**
KUBS	**Kucevo**	**3.57**	**252**	*e*Pn	**Pn**	**23 43 32.3**	**-1.0**
KUBS				*e*Sn	**Sn**	**23 44 10.8**	**-4.3**
ZAPS	**Zavoj**	**3.58**	**231**	*e*Pn	**Pn**	**23 43 33.8**	**+0.3**
HORU	**Horodok**	**3.60**	**0**	Pn	**Pn**	**23 43 34.8**	**+1.2**
VTS	**Vitosha**	**3.77**	**219**	*e*Pn	**Pn**	**23 43 37.3**	**+1.2**
BOVS	**Bovan**	**3.90**	**241**	⇑P	**Pn**	**23 43 38.5**	**+0.8**
BOVS	**Bovan**	**3.90**	**241**	*e*Pn	**Pn**	**23 43 38.3**	**+0.6**
BOVS				*e*Sn	**Sn**	**23 44 20.8**	**-2.1**
BOSS	**Bosilegrad**	**4.22**	**224**	*e*Pn	**Pn**	**23 43 43.4**	**+1.5**
BARS	**Barje**	**4.33**	**231**	*e*Pn	**Pn**	**23 43 43.7**	**+0.2**
GRUS	**Gruza**	**4.42**	**249**	*e*Pn	**Pn**	**23 43 45.1**	**+0.6**
GOCS	**Kraljevo Serbi**	**4.46**	**245**	*e*Pn	**Pn**	**23 43 45.4**	**+0.2**
SELS	**Selova**	**4.49**	**240**	*e*Pn	**Pn**	**23 43 46.1**	**+0.6**
SELS				*e*Sn	**Sn**	**23 44 34.7**	**-2.2**
TRUS	**Trudelj**	**4.49**	**254**	*e*Pn	**Pn**	**23 43 46.1**	**+0.6**
DIVS	**Divibare**	**4.81**	**254**	*e*Pn	**Pn**	**23 43 50.3**	**+0.4**
IVAS	**Ivanjica**	**4.92**	**248**	*e*Pn	**Pn**	**23 43 51.7**	**+0.4**
TEKS	**Tekeris**	**5.00**	**260**	*e*Pn	**Pn**	**23 43 52.4**	**+0.1**
SJES	**Sjenica**	**5.18**	**245**	*e*Pn	**Pn**	**23 43 55.1**	**+0.2**
AK09	**Malin Array Si**	**5.36**	**20**	Pn	**Pn**	**23 43 58.7**	**+1.6**
AK08	**Malin Array Si**	**5.37**	**20**	Pn	**Pn**	**23 43 58.7**	**+1.5**
KIEV	**Kiev**	**5.41**	**19**	Pn	**Pn**	**23 43 59.7**	**+1.9**
AKBB	**Malin Array Si**	**5.42**	**19**	Pn	**Pn**	**23 43 59.1**	**+1.1**
MORH	**Mrgy, Hungar**	**5.46**	**279**	Pn	**Pn**	**23 44 00.3**	**+1.8**

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*MOS **19** 23:57:29.3, 40°.97N×49°.24E, h16km, MPVA4.3*
*AZER **19** 23:57:31.4, 40°.97N×49°.17E, h43km, ml3.4*
*DRS **19** 23:57:32.2, 40°.86N×49°.25E, h33km*
*IDC **19** 23:57:41.8±4.0, 42°.00N×49°.32E, h93km±27km, mb3.3/5, mbtmp3.7/10, MS2.8/1, Error ellipse: s-maj=41.6km s-min=16.0km az=169.0*
ISC 19 23:57:30.8±0.8, 40°.93N±0°.02×49°.17E±0°.03, h52km±6km, n101, σ3s30/169, mb3.5/5, 1C, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATGJ	**Altiaghaj**	**0.19**	**250**	P	**Pn**	**23 57 39.7**	**+0.2**
ATGJ				S	**Sn**	**23 57 46.5**	**+0.9**
SIZA	**Siyzn**	**0.25**	**306**	P	**Pn**	**23 57 39.8**	**-0.1**
SIZA				S	**Sn**	**23 57 48.0**	**+1.7**
GBS	**Qobustan**	**0.43**	**204**	P	**Pn**	**23 57 44.0**	**+2.6**
GBS				S	**Sn**	**23 57 54.6**	**+5.5**
PQL	**Pirkuli**	**0.46**	**253**	P	**Pn**	**23 57 43.4**	**+1.5**
PQL				S	**Sn**	**23 57 52.9**	**+3.1**
QUBA	**Quba, Azerbaij**	**0.67**	**310**	P	**Pn**	**23 57 45.5**	**+1.2**
QUBA				S	**Sn**	**23 57 56.2**	**+2.2**
GOBA	**Gobu**	**0.68**	**141**	P	**Pn**	**23 57 46.6**	**+2.3**
GOBA				S	**Sn**	**23 57 59.9**	**+5.7**
NDR	**Nardaran**	**0.71**	**119**	P	**Pn**	**23 57 46.1**	**+1.3**
NDR				S	**Sn**	**23 57 58.8**	**+3.9**
IML	**Ismayilli**	**0.76**	**260**	P	**Pn**	**23 57 47.3**	**+1.8**
IML				S	**Sn**	**23 58 00.4**	**+4.3**
XNQ	**Khinaliq**	**0.82**	**288**	P	**Pn**	**23 57 47.7**	**+1.3**
XNQ				S	**Sn**	**23 58 00.6**	**+2.9**
QSAR	**Qusar**	**0.90**	**311**	P	**Pn**	**23 57 48.9**	**+1.6**
QSAR				S	**Sn**	**23 58 03.5**	**+4.1**
GALA	**Gala**	**0.91**	**124**	P	**Pn**	**23 57 50.8**	**+3.5**
GALA				S	**Sn**	**23 58 04.9**	**+5.5**
KDMR	**Kurdemir**	**0.93**	**234**	P	**Pn**	**23 57 49.4**	**+1.8**
KDMR				S	**Sn**	**23 58 05.0**	**+5.1**
ALIB	**&Aumlli-Bayram**	**0.98**	**187**	P	**Pn**	**23 57 51.7**	**+3.5**
ALIB				S	**Sn**	**23 58 06.8**	**+5.8**
QBL	**Gabala**	**1.01**	**272**	P	**Pn**	**23 57 50.4**	**+1.6**
QBL				S	**Sn**	**23 58 07.0**	**+4.9**
KSMR	**Kasumkent**	**1.04**	**311**	*i* Pg	**Pn**	**23 57 50.9**	**+1.7**
KSMR				*e*Sg	**Sn**	**23 58 06.4**	**+3.7**
KSMR	**Kasumkent**	**1.04**	**311**	*i* P	**Pn**	**23 57 50.9**	**+1.7**
KSMR				*e*S	**Sn**	**23 58 06.4**	**+3.7**
SAAT	**Saatly**	**1.21**	**208**	P	**Pn**	**23 57 53.8**	**+2.4**
SAAT				S	**Sn**	**23 58 11.7**	**+5.1**
AKT	**Akhty**	**1.22**	**297**	*i* Pg	**Pn**	**23 57 53.5**	**+1.9**
AKT				*e*Sg	**Sn**	**23 58 11.2**	**+4.0**
AKT	**Akhty**	**1.22**	**297**	⇑*i*P	**Pn**	**23 57 53.5**	**+1.9**
AKT				*e*S	**Sn**	**23 58 11.1**	**+4.0**
AKT				pmax	pmax		
	comp=Z,244nm,0.2s						
DRN	**Derbent**	**1.27**	**330**	*i* Pg	**Pn**	**23 57 53.4**	**+1.2**
DRN				*e*Sg	**Sn**	**23 58 10.8**	**+2.7**
DRN	**Derbent**	**1.27**	**330**	*i* P	**Pn**	**23 57 53.4**	**+1.2**
DRN				*e*S	**Sn**	**23 58 10.8**	**+2.7**
ZRD	**Zardab**	**1.30**	**241**	Pn	**Pn**	**23 57 54.7**	**+2.1**
ZRD				Sn	**Sn**	**23 58 14.2**	**+5.2**
SEKA	**Sheki**	**1.52**	**281**	Pn	**Pn**	**23 57 57.5**	**+1.9**
SEKA				Sn	**Sn**	**23 58 18.5**	**+4.2**
SEKA	**Sheki**	**1.52**	**281**	P	**Pn**	**23 57 57.4**	**+1.8**
MNGR	**Mingechevir, A**	**1.59**	**265**	Pn	**Pn**	**23 57 58.7**	**+2.2**
MNGR				Sn	**Sn**	**23 58 20.2**	**+4.3**
MNGR	**Mingechevir, A**	**1.59**	**265**	P	**Pn**	**23 57 58.9**	**+2.4**
BRDA	**Brd**	**1.66**	**247**	Pn	**Pn**	**23 57 59.9**	**+2.4**
BRDA				Sn	**Sn**	**23 58 23.4**	**+5.9**
URKR	**Urkarakh**	**1.69**	**318**	*e*Pg	**Pn**	**23 57 59.5**	**+1.4**
URKR				*e*Sg	**Sn**	**23 58 22.4**	**+3.7**
URKR	**Urkarakh**	**1.69**	**318**	*e*P	**Pn**	**23 57 59.5**	**+1.4**
URKR				*e*S	**Sn**	**23 58 22.4**	**+3.7**
URKR				pmax	pmax		
	comp=Z,97nm,0.2s						
BLQ	**Beylaqan**	**1.72**	**226**	Pn	**Pn**	**23 58 01.4**	**+3.0**
BLQ				Sn	**Sn**	**23 58 21.1**	**+1.9**
AGDM	**Agdam**	**1.77**	**243**	Pn	**Pn**	**23 58 00.4**	**+1.3**
AGDM				Sn	**Sn**	**23 58 23.9**	**+3.4**
GLBA	**Clilabad**	**1.79**	**200**	Pn	**Pn**	**23 58 02.7**	**+3.5**
GLBA				Sn	**Sn**	**23 58 22.8**	**+2.1**
SGKR	**Sergokala**	**1.91**	**324**	*e*Pg	**Pn**	**23 58 02.9**	**+2.0**
SGKR				*e*Sg	**Sn**	**23 58 27.3**	**+3.6**
SGKR	**Sergokala**	**1.91**	**324**	*e*P	**Pn**	**23 58 02.9**	**+2.0**
SGKR				*e*S	**Sn**	**23 58 27.3**	**+3.6**
KMKR	**Kumukh**	**1.97**	**308**	*e*Pg	**Pn**	**23 58 04.4**	**+2.5**
KMKR				*e*Sg	**Sn**	**23 58 30.5**	**+4.9**
KMKR	**Kumukh**	**1.97**	**308**	*e*P	**Pn**	**23 58 04.4**	**+2.5**
KMKR				*e*S	**Sn**	**23 58 30.4**	**+4.9**
KMKR				pmax	pmax		
	comp=Z,104nm,0.3s						
QRD	**Qoradiz**	**2.04**	**225**	Pn	**Pn**	**23 58 03.1**	**+0.5**
QRD				Sn	**Sn**	**23 58 29.0**	**+2.1**
ZKTA	**Zakatala**	**2.05**	**291**	Pn	**Pn**	**23 58 04.7**	**+1.9**
ZKTA				Sg	Sn	23 58 38.3	+11
VSHL	**Vashlovani**	**2.12**	**279**	P	**Pn**	**23 58 05.8**	**+2.0**
YRD	**Yardimli**	**2.13**	**200**	Pn	**Pn**	**23 58 07.7**	**+3.6**
YRD				Sn	**Sn**	**23 58 29.3**	**-0.3**
GANJ	**Ganja**	**2.18**	**264**	Pn	**Pn**	**23 58 05.1**	**+0.5**
GANJ				Sn	**Sn**	**23 58 30.8**	**+0.3**
GANJ	**Ganja**	**2.18**	**264**	P	**Pn**	**23 58 05.9**	**+1.2**
LKRN	**Lenkeran, Azer**	**2.23**	**188**	Pn	**Pn**	**23 58 05.5**	**+0.1**
LKRN				Sn	**Sn**	**23 58 32.8**	**+1.0**
LKRN	**Lenkeran, Azer**	**2.23**	**188**	P	**Pn**	**23 58 09.3**	**+3.9**
ARKR	**Arakani**	**2.34**	**317**	*e*Pn	**Pn**	**23 58 08.9**	**+2.1**
ARKR				*e*Sn	**Sn**	**23 58 39.3**	**+5.0**
ARKR	**Arakani**	**2.34**	**317**	*e*P	**Pn**	**23 58 08.9**	**+2.1**
ARKR				*e*S	**Sn**	**23 58 39.3**	**+5.0**
ARKR				pmax	pmax		
	comp=Z,35nm,0.4s						
LRK	**Lerik**	**2.37**	**196**	Pn	**Pn**	**23 58 11.0**	**+3.7**
LRK				Sn	**Sn**	**23 58 36.0**	**+0.7**
ASTR	**Astara**	**2.38**	**187**	Pn	**Pn**	**23 58 08.0**	**+0.7**
ASTR				Sn	**Sn**	**23 58 35.2**	**-0.1**
MAK	**Makhachkala**	**2.38**	**329**	*e*Pn	**Pn**	**23 58 09.1**	**+1.7**
MAK				*e*Sn	**Sn**	**23 58 40.5**	**+5.2**
MAK	**Makhachkala**	**2.38**	**329**	*e*P	**Pn**	**23 58 10.1**	**+2.7**
MAK				*e*S	**Sn**	**23 58 42.9**	**+7.6**
MAK				pmax	pmax		
	comp=Z,196nm,0.3s						
MAK				smax	smax		
	comp=E,876nm,0.5s						
MAK				smax	smax		
	comp=E,793nm,0.6s						
MAK				MLR	MLR		
	comp=Z,99nm,6.0s						
LGD	**Lagodekhi**	**2.38**	**293**	P	**Pn**	**23 58 09.1**	**+1.7**
LGD				S	Sn	23 58 47.7	+12
LGD	**Lagodekhi**	**2.38**	**293**	P	**Pn**	**23 58 09.1**	**+1.7**
LGD				S	Sn	23 58 47.7	+12
TLTR	**Tlyarata**	**2.42**	**300**	*e*Pn	**Pn**	**23 58 09.7**	**+1.7**
TLTR				*e*Sn	**Sn**	**23 58 40.8**	**+4.3**
TLTR	**Tlyarata**	**2.42**	**300**	*e*P	**Pn**	**23 58 09.7**	**+1.7**
TLTR				*e*S	**Sn**	**23 58 40.8**	**+4.3**
TLTR				pmax	pmax		
	comp=Z,17nm,0.3s						
BUJR	**Buynaksk**	**2.44**	**322**	*e*Pn	**Pn**	**23 58 10.1**	**+1.8**
BUJR				*e*Sn	**Sn**	**23 58 39.3**	**+2.4**
BUJR	**Buynaksk**	**2.44**	**322**	*e*P	**Pn**	**23 58 10.1**	**+1.8**
BUJR				*e*S	**Sn**	**23 58 39.3**	**+2.4**
XNZR	**Khunzakh**	**2.45**	**312**	*e*Pn	**Pn**	**23 58 12.4**	**+3.9**
XNZR				*e*Sn	**Sn**	**23 58 41.1**	**+3.8**
HNZR	**Khunzah**	**2.46**	**312**	*e*P	**Pn**	**23 58 12.4**	**+3.8**
HNZR				*e*S	**Sn**	**23 58 41.1**	**+3.7**
UNCR	**Uncukul**	**2.52**	**316**	*e*Pn	**Pn**	**23 58 11.2**	**+1.9**
UNCR				*e*Sn	**Sn**	**23 58 43.3**	**+4.5**
UNCR	**Uncukul**	**2.52**	**316**	*e*P	**Pn**	**23 58 11.2**	**+1.9**
UNCR				*e*S	**Sn**	**23 58 43.3**	**+4.5**
KRNR	**Karanay**	**2.54**	**319**	*e*Pn	**Pn**	**23 58 12.1**	**+2.4**
KRNR				*e*Sn	**Sn**	**23 58 44.2**	**+4.8**
KRNR	**Karanay**	**2.54**	**319**	*e*P	**Pn**	**23 58 12.1**	**+2.4**
KRNR				*e*S	**Sn**	**23 58 44.2**	**+4.8**
GDB	**GEDABAY**	**2.60**	**267**	Pn	**Pn**	**23 58 11.0**	**+0.4**
GDB				Sn	**Sn**	**23 58 41.9**	**+0.8**
BTLR	**Botlikh**	**2.81**	**309**	*e*Pn	**Pn**	**23 58 16.8**	**+3.6**
BTLR				*e*Sn	**Sn**	**23 58 52.2**	**+6.3**
BTLR	**Botlikh**	**2.81**	**309**	*e*P	**Pn**	**23 58 16.8**	**+3.6**
BTLR				*e*S	**Sn**	**23 58 52.2**	**+6.3**
DLMR	**Dylym**	**2.86**	**319**	*e*Pn	**Pn**	**23 58 17.8**	**+3.9**
DLMR				*e*Sn	**Sn**	**23 58 55.1**	**+8.0**
DLMR	**Dylym**	**2.86**	**319**	*e*P	**Pn**	**23 58 17.8**	**+3.9**
DLMR				*e*S	**Sn**	**23 58 55.1**	**+8.0**
QZX	**Qazax, Azerbai**	**2.88**	**274**	Pn	**Pn**	**23 58 15.2**	**+1.0**
QZX				Sn	**Sn**	**23 58 48.5**	**+0.8**
DGRG	**David-gareji**	**2.91**	**282**	P	**Pn**	**23 58 16.4**	**+1.7**
DGRG				S	**Sn**	**23 58 52.4**	**+3.9**
DGRG	**David-gareji**	**2.91**	**282**	*e*Pn	**Pn**	**23 58 16.4**	**+1.7**
DGRG				*e*Sn	**Sn**	**23 58 52.4**	**+3.9**
DGRG	**David-gareji**	**2.91**	**282**	P	**Pn**	**23 58 16.4**	**+1.7**
DGRG				S	**Sn**	**23 58 52.4**	**+3.9**
DVE	**Vedeno**	**3.04**	**313**	*e*Pn	**Pn**	**23 58 19.1**	**+2.6**
DVE				*e*Sn	**Sn**	**23 58 58.3**	**+6.5**
DVE	**Vedeno**	**3.04**	**313**	*e*P	**Pn**	**23 58 19.1**	**+2.6**
DVE				*e*S	**Sn**	**23 58 58.2**	**+6.5**
DVE				pmax	pmax		
	comp=Z,71nm,0.6s						
ORD	**Ordubad**	**3.15**	**232**	Pn	**Pn**	**23 58 20.3**	**+2.2**
ORD				Sn	**Sn**	**23 58 56.3**	**+1.8**
SBZ	**Shahbuz**	**3.17**	**242**	Pn	**Pn**	**23 58 20.6**	**+2.4**
SBZ				Sn	**Sn**	**23 58 55.8**	**+1.0**
NAX	**Nakhchivan**	**3.32**	**239**	Pn	**Pn**	**23 58 23.1**	**+2.7**
NAX	**Nakhchivan**	**3.32**	**239**	P	**Pn**	**23 58 23.0**	**+2.7**
GROC	**Groznyy**	**3.39**	**313**	*e*Pn	**Pn**	**23 58 23.7**	**+2.5**
GROC				*e*Sn	**Sn**	**23 59 02.7**	**+2.6**
GROC	**Groznyy**	**3.39**	**313**	*e*P	**Pn**	**23 58 23.7**	**+2.5**
GROC				*e*S	**Sn**	**23 59 02.7**	**+2.6**
TBLG	**Delisi**	**3.43**	**285**	P	**Pn**	**23 58 23.4**	**+1.6**
TBLG	**Delisi**	**3.43**	**285**	P	**Pn**	**23 58 23.4**	**+1.6**
CHRG	**Chargali**	**3.48**	**295**	P	**Pn**	**23 58 23.5**	**+1.0**
HYR	**Heyderabad**	**3.52**	**251**	Sn	**Sn**	**23 59 06.8**	**+3.4**
KMGR	**Komgaron**	**3.85**	**305**	*e*P	Pn	23 58 37.5	+10
KMGR				*e*S	**Sn**	**23 59 16.8**	**+5.3**
TKB	**Tkibuli**	**4.84**	**289**	P	**Pn**	**23 58 42.5**	**+1.4**
TKB	**Tkibuli**	**4.84**	**289**	P	**Pn**	**23 58 42.5**	**+1.4**
KBZ	**Khabaz**	**5.43**	**303**	P	Pn	23 58 55.0	+5.9
	comp=Z,0.5nm,0.2s,baz=126,slow=5.9,SNR=5.4						
KBZ				S	**Sn**	**23 59 52.5**	**+2.4**
	comp=Z,2.5nm,0.5s,baz=136,slow=3.0,SNR=3.6						
AKTO	**Aktyubinsk**	**11.34**	**30**	P	**Pn**	**00 00 06.9**	**-3.0**
	comp=Z,1.1nm,0.3s,baz=215,slow=6.4,SNR=7.7						
AKTO				S	Sn	00 02 02.7	-12
	comp=Z,1.3nm,0.3s,baz=251,slow=15,SNR=2.1						
BELG	**Belogornoye**	**11.52**	**355**	P	**Pn**	**00 00 08.5**	**-3.9**
	comp=Z,8.1nm,0.5s,baz=25,slow=5.7,SNR=6.0						
BELG				S	Sn	00 02 04.8	-15
	comp=Z,3.3nm,0.3s,baz=207,slow=18,SNR=1.7						
ARTI	**Arti**	**16.60**	**18**	P	**Pn**	**00 01 15.2**	**-4.5**
	comp=Z,1.0nm,0.3s,baz=219,slow=6.7,SNR=20						
ARTI				S	Sn	00 04 06.9	-16
	comp=Z,0.8nm,0.4s,baz=0.0,slow=20,SNR=1.5						
BVAR	**Borovoye Array**	**18.78**	**43**	P	**P**	**00 01 43.6**	**-2.0**
	comp=Z,0.6nm,0.3s,baz=224,slow=10,SNR=6.3						
AAK	**Ala-Archa**	**18.95**	**76**	LR	LR	00 10 27.1	
	comp=Z,27nm,19.7s,baz=326,slow=41						
KLMR	**Klimovskoe**	**20.82**	**347**	P	**P**	**00 02 02.9**	**-4.7**
KLMR	**Klimovskoe**	**20.82**	**347**	P	**P**	**00 02 02.9**	**-4.7**
KURBB	**Kurchatov Arra**	**22.52**	**55**	P	**P**	**00 02 26.9**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=257,slow=12,SNR=2.5						
	comp=Z,0.3nm,0.6s						
KURK	**Kurchatov**	**22.60**	**54**	P	**P**	**00 02 26.9**	**+0.1**
LSH	**Leshukonskoye**	**24.08**	**356**	P	**P**	**00 02 37.6**	**-3.3**

FINES	FINESS Array B	24.88	333	P	P	00 02 46.9	-1.3
	comp=Z,0.7nm,0.4s,baz=126,slow=9.2,SNR=7.4						
	comp=Z,0.7nm,0.4s						
HFS	Hagfors	29.10	323	P	P	00 03 25.5	-0.7
	comp=Z,2.5nm,1.0s,baz=120,slow=7.6,SNR=5.2						
	comp=Z,2.5nm,1.0s						
NOA	NORSAR Array B	30.59	324	P	P	00 03 40.3	+0.8
	comp=Z,0.3nm,0.8s,baz=130,slow=7.6,SNR=1.6						
	comp=Z,0.3nm,0.8s						
ARCES	ARCESS Array B	31.24	344	P	P	00 03 44.2	-0.8
	comp=Z,1.7nm,0.9s,baz=143,slow=9.2,SNR=2.0						
	comp=Z,1.7nm,0.9s						

IDC 20 00:00:30.5±3.0, 6°.40S×129°.18E, h0^{km}, mb3.9/1, mbtmp3.6/3, ML3.7/2, Error ellipse: s-maj=289.1km s-min=30.7km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.36	160	Pn	Pn	00 03 53.6	-1.6
	0.4nm,0.3s,baz=338,slow=15,SNR=9.9						
WRA				Sn	Sn	00 06 19.7	-16
	0.7nm,0.3s,baz=319,slow=28,SNR=7.5						
	0.3nm,0.3s						
ASAR	Alice Springs	17.75	166	P	P	00 04 40.2	0.0
	0.2nm,0.3s,baz=342,slow=11,SNR=11						
ASAR				S	Sn	00 07 45.5	-12
	0.7nm,0.6s,baz=356,slow=27,SNR=5.4						
	0.5nm,0.5s						
MKAR	Makanchi Array	67.28	327	P	P	00 11 27.1	0.0
	0.7nm,0.5s,baz=148,slow=4.6,SNR=8.6						
	0.7nm,0.5s						

IDC 20 00:07:27.5±2.2, 2°.29S×128°.48E, h0^{km}, mb3.2/2, mbtmp3.4/4, ML3.4/2, MS2.5/1, Error ellipse: s-maj=111.3km s-min=27.5km az=71.0

DJA 20 00:07:30.2±0.3, 3°S±2°×12°7E±°, h10^{km}, M4.1/8, mB4.7/2, mb4.7/2, MLv3.8/8, Mw(mB)3.9/2

ISC 20 00:07:33.8±1.1, 2°.78S±0°.08×127°.09E±0°.07, h35^{km}, n13, σ1^{s}.77/14, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NLAI	Namlea	0.46	178	P	Pn	00 07 42.7	-1.3
NLAI				S	Sn	00 07 50.9	-0.1
SANI	Sanana	1.31	303	P	Pn	00 07 54.0	-1.7
SANI				S	Sn	00 08 09.3	-2.7
KRAI	Karang Ratu	1.41	112	P	Pn	00 07 55.8	-1.3
AAI	Ambon	1.43	129	P	Pn	00 07 57.9	+0.6
MSAI	Masohi	1.93	107	P	Pn	00 08 03.2	-0.9
LUWI	Luwuk	4.64	292	P	Pn	00 08 41.8	+0.3
GTOI	Gorontalo	5.30	310	P	Pn	00 08 52.2	+1.7
	0.1nm467nm35nm,0.7s						
APSI	Ampana	5.74	289	P	Pn	00 08 55.8	-0.8
BATI	Baumata	8.13	205	LR	LR	00 14 17.2	
	comp=Z,29nm,19.4s,baz=263,slow=44						
FITZ	Fitzroy Crossi	15.29	185	Pn	P	00 11 14.2	+2.5
	baz=14,slow=12,SNR=2.4						
	3.2nm,1.1s						
WRA	Warramunga Arr	18.48	158	P	P	00 11 44.4	-2.5
	0.2nm,0.3s,baz=341,slow=12,SNR=6.4						
	0.5nm,0.9s						
ASAR	Alice Springs	21.79	163	P	P	00 12 21.9	-1.1
	0.3nm,0.3s,baz=344,slow=11,SNR=9.0						
	0.3nm,0.3s						
MKAR	Makanchi Array	63.12	327	P	P	00 17 59.7	+1.7
	0.2nm,0.8s,baz=120,slow=8.5,SNR=1.9						
	0.2nm,0.8s						

DJA 20 00:10:08.7±0.2, 6°S±3°×12°9E±°, h315^{km}±4^{km}, M4.4/18, mb4.3/16, mB5.0/7, MLv4.5/18, Mw(mB)4.3/7

IDC 20 00:10:12.1±3.3, 6°.08S×128°.48E, h341^{km}±33^{km}, mb3.1/3, mbtmp4.2/6, Error ellipse: s-maj=42.0km s-min=11.9km az=66.0

ISC 20 00:10:08.0±0.7, 5°.83S±0°.06×128°.73E±0°.08, h322^{km}, n24, σ1^{s}.60/29, mb3.4/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.75	42	P	Pn	00 10 55.7	+0.6
AAI	Ambon	2.20	346	P	Pn	00 10 59.1	+0.7
MSAI	Masohi	2.48	5	P	Pn	00 11 00.8	+0.1
MSAI				S	S	00 11 38.0	-4.8
KRAI	Karang Ratu	2.52	352	P	Pn	00 11 02.2	+1.1
NLAI	Namlea	3.04	328	P	Pn	00 11 07.9	+2.1
SAUI	Saumlaki	3.33	130	P	Pn	00 11 09.2	+0.6
FAKI	Fak Fak	4.55	51	P	Pn	00 11 21.3	-0.2
SANI	Sanana	4.64	324	P	Pn	00 11 23.2	+0.7
KMPI	Kaimana, Papua	5.41	67	P	Pn	00 11 31.1	-0.1
	237nm,0.8s						
SWI	Sorong	5.55	27	P	Pn	00 11 32.0	-0.8
	0.7nm17nm,0.5s						
SOEI	Soe	5.89	228	P	Pn	00 11 37.8	+0.9
BATI	Baumata	6.63	229	P	Pn	00 11 45.7	+0.2
	341nm,0.4s,baz=150,slow=1.2,SNR=36						
BATI				S	S	00 13 02.3	-2.2
	17nm,0.2s,baz=61,slow=18,SNR=0.9						
BATI	Baumata	6.63	229	P	Pn	00 11 46.3	+0.8
EDFI	Ende, Flores	7.56	247	P	Pn	00 11 56.9	+0.3
DBNI	Kabupaten Domp	10.67	255	P	Pn	00 12 34.7	+0.5
	9.0nm,0.8s						
PLAI	Plampang	11.26	254	P	Pn	00 12 41.4	0.0
	12nm,0.5s						
TWSI	Taliwang, Sumb	12.10	255	P	Pn	00 12 50.9	-0.6
FITZ	Fitzroy Crossi	12.56	194	P	Pn	00 12 55.9	-1.1
	8.7nm,0.7s,baz=35,slow=10,SNR=34						
FITZ				S	S	00 15 14.2	-1.9
	2.8nm,0.3s,baz=301,slow=15,SNR=3.7						
KLNI	Mataram	12.79	258	P	P	00 12 59.1	-0.7
	13nm,0.8s						
WRA	Warramunga Arr	15.05	159	P	Pn	00 13 25.9	-0.5
	4.2nm,0.4s,baz=340,slow=11,SNR=38						
WRA				S	S	00 16 06.3	-1.5
	2.8nm,1.0s,baz=328,slow=21,SNR=6.2						
ASAR	Alice Springs	18.42	165	P	P	00 14 03.1	+2.1
	9.8nm,0.3s,baz=346,slow=12,SNR=103						
ASAR				S	S	00 17 13.6	-0.9
	11nm,0.9s,baz=346,slow=19,SNR=48						
STKA	Stephens Creek	28.57	157	P	P	00 15 37.1	+1.9
	2.4nm,0.6s,baz=335,slow=12,SNR=4.3						
	2.4nm,0.6s						
MKAR	Makanchi Array	66.56	327	P	P	00 20 27.2	+3.0
	0.4nm,0.5s,baz=121,slow=8.0,SNR=9.3						
	0.4nm,0.5s						
KURBB	Kurchatov Arra	70.86	329	P	P	00 20 52.2	+1.8
	0.2nm,0.6s,baz=134,slow=5.3,SNR=2.5						
	0.2nm,0.6s						

NNC 20 00:19:37.7±0.3, 42°.93N×76°.97E, h0^{km}, mb2.5, mpv2.7, Error ellipse: s-maj=2.6km s-min=1.4km az=178.0

SOME 20 00:19:38.1, 42°.93N×76°.97E, h5^{km}

KRNET 20 00:19:38.7±0.1, 42°.90N×76°.93E, h19^{km}, mb2.2

ISC 20 00:19:38.3±0.9, 42°.95N±0°.02×76°.94E±0°.02, h6^{km}±7^{km}, n42, σ1^{s}.32/77, 18C-3D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSS	Tian-Shan	0.08	2	P	Pg	00 19 40.2	-0.3
	122nm,0.2s						
TNSS				S	Sg	00 19 41.9	-0.2
	74nm,0.1s						
TNSS	Tian-Shan	0.08	2	*e*P	Pg	00 19 40.2	-0.3
	122nm,0.2s						
TNSS				*e*S	Sg	00 19 41.9	-0.2
	74nm,0.1s						
MDOK	Medeo	0.22	20	Pg	Pg	00 19 42.5	-0.2
	37nm,0.2s						
MDOK				Lg	Lg	00 19 46.0	
	55nm,0.3s						
IZV	Izvestkoviy	0.26	289	P	Pg	00 19 43.5	+0.1
	17nm,0.1s						
IZV				S	Sg	00 19 47.8	+1.0
	98nm,0.3s						
IZV	Izvestkoviy	0.26	289	*e*P	Pg	00 19 43.5	+0.1
	17nm,0.1s						
IZV				*e*S	Sg	00 19 47.8	+1.0
	98nm,0.3s						
KNDC	Almaty	0.26	4	⇑P	Pg	00 19 43.8	+0.3
	13nm,0.3s						
KNDC				⇑S	Sg	00 19 47.4	+0.3
	35nm,0.2s						
KOTS	Kotyrbulak	0.31	24	P	Pg	00 19 44.3	-0.1
	46nm,0.2s						
KOTS				S	Sg	00 19 49.1	+0.7
	153nm,0.3s						
KOTS	Kotyrbulak	0.31	24	*e*P	Pg	00 19 44.3	-0.1
	46nm,0.2s						
KOTS				*e*S	Sg	00 19 49.1	+0.7
	153nm,0.3s						
MTBS	Maitube	0.42	295	P	Pg	00 19 46.5	+0.1
	5.6nm,0.2s						
MTBS				S	Sg	00 19 52.7	+0.9
	38nm,0.2s						
MTBS	Maitube	0.42	295	*e*P	Pg	00 19 46.5	+0.1
	5.6nm,0.2s						
MTBS				*e*S	Sg	00 19 52.7	+0.9
	38nm,0.2s						
KST	Kastek	0.72	277	P	Pg	00 19 52.1	-0.1
	1.6nm,0.1s						
KST				S	Sg	00 20 02.3	+0.7
	3.4nm,0.2s						
KST	Kastek	0.72	277	*e*P	Pg	00 19 52.1	-0.1
	1.6nm,0.1s						
KST				*e*S	Sg	00 20 02.3	+0.7
	3.4nm,0.2s						
KDJ	Kajisay	0.84	168	⇑*i*P	Pg	00 19 53.6	-0.8
KDJ				⇑*i*S	Sg	00 20 04.8	-0.5
BOOM	Boomskoye usch	0.87	238	⇑*i*P	Pg	00 19 54.6	-0.4
BOOM				⇑*i*S	Sg	00 20 06.0	-0.4
ULHL	Ulahol	0.88	216	⇑*i*P	Pg	00 19 54.4	-0.7
ULHL				⇑*i*S	Sg	00 20 05.9	-0.6
DGS	Degeres	0.91	289	P	Pg	00 19 55.4	-0.3
	1.3nm,0.2s						
DGS				S	Sg	00 20 07.9	+0.5
	11nm,0.2s						
DGS	Degeres	0.91	289	*e*P	Pg	00 19 55.4	-0.3
	2.1nm,0.1s						
DGS				*e*S	Sg	00 20 07.9	+0.5
	11nm,0.2s						
TKM2	Tokmak 2	0.99	269	⇑*i*P	Pg	00 19 57.2	-0.1
TKM2				⇑*i*S	Sg	00 20 10.2	+0.1
KUU	Kurty	1.04	335	*e*P	Pg	00 19 57.8	-0.4
	4.4nm,0.1s						
KUU				*e*S	Sg	00 20 12.0	+0.4
	6.9nm,0.1s						
KURS	Kuram	1.04	59	P	Pg	00 19 57.4	-0.9
	0.8nm,0.2s						
KURS				S	Sg	00 20 11.9	0.0
	1.0nm,0.2s						
SATY	Saty	1.08	84	P	Pg	00 19 57.5	-1.5
	1.4nm,0.1s						
SATY				S	Sg	00 20 11.5	-1.4
	18nm,0.3s						
PRZ	Przheval'sk	1.17	113	⇑*e*P	Pg	00 20 00.1	-0.6
PRZ				⇑*e*S	Sg	00 20 15.8	-0.1
KRBS	Karabastau	1.19	309	P	Pg	00 20 00.3	-0.7
	1.1nm,0.3s						
KRBS				S	Sg	00 20 16.4	-0.1
	6.8nm,0.3s						
KRBS	Karabastau	1.19	309	*e*P	Pg	00 20 00.3	-0.7
	1.1nm,0.3s						
KRBS				*e*S	Sg	00 20 16.4	-0.1
	6.8nm,0.3s						
KPKS	Kokpek	1.37	67	P	Pn	00 20 03.0	-1.1
	2.2nm,0.6s						
KPKS				S	Sg	00 20 21.4	-0.9
	6.5nm,0.3s						
KPKS	Kokpek	1.37	67	*e*P	Pn	00 20 02.9	-1.2
	2.5nm,0.1s						
KPKS				*e*S	Sg	00 20 21.4	-0.9
	27nm,0.4s						
ARXS	Arharly	1.41	27	P	Pn	00 20 03.9	-0.7
	1.4nm,0.2s						
ARXS				S	Sb	00 20 22.6	-0.8
	11nm,0.2s						
ARXS	Arharly	1.41	27	*e*P	Pn	00 20 03.9	-0.7
	1.4nm,0.2s						
ARXS				*e*S	Sb	00 20 22.6	-0.8
	11nm,0.2s						
UZB	Uzynbulak	1.54	82	P	Pn	00 20 05.6	-0.8
	2.4nm,0.2s						
UZB				S	Sn	00 20 25.8	-1.0
	5.7nm,0.3s						
UZB	Uzynbulak	1.54	82	*e*P	Pn	00 20 05.6	-0.8
	2.4nm,0.2s						
UZB				*e*S	Sn	00 20 25.8	-1.0
	5.7nm,0.3s						
BLB	Baldybastay	1.60	44	P	Pn	00 20 07.0	-0.2
	8.9nm,0.1s						
BLB				S	Sn	00 20 27.8	-0.4
	6.4nm,0.2s						
SGDS	Sogindy	1.76	287	P	Pb	00 20 10.6	-0.5
	1.6nm,0.3s						
SGDS				S	Sb	00 20 34.0	+0.5
	2.0nm,0.3s						
AAK	Ala-Archa	1.83	261	⇓Pg	Pg	00 20 14.4	+1.0
	0.2nm,0.5s						
AAK				⇓Lg	Lg	00 20 37.5	
	0.6nm,0.5s						
SHLS	Shalkode	1.86	83	Pg	Pg	00 20 17.5	+3.6
	2.8nm,0.3s						
SHLS				Lg	Lg	00 20 46.1	
	19nm,0.6s						
SHLS	Shalkode	1.86	83	*e*P	Pg	00 20 17.5	+3.6
	2.8nm,0.3s						
SHLS				*e*S	Sg	00 20 46.1	+8.1
	19nm,0.6s						
PDGK	Podgornoye	1.90	78	⇓Pg	Pn	00 20 12.5	+1.1
	1.3nm,0.4s						
PDGK				⇑Lg	Lg	00 20 37.6	
	6.2nm,0.5s						
JNKS	Jany-Kuch	2.12	207	⇑*e*P	Pn	00 20 14.4	-0.2
JNKS				⇑*e*S	Sn	00 20 40.9	-0.5
KNOS	Konyrlen	2.15	48	Pg	Pb	00 20 17.1	-0.5
	1.5nm,0.4s						
KNOS				Lg	Lg	00 20 45.3	
	9.9nm,0.5s						
ARLS	Aral	2.23	242	⇑*e*P	Pn	00 20 16.2	+0.3
ARLS				⇑*e*S	Sn	00 20 43.0	-0.8
MRKS	Merke	2.74	267	Pg	Pb	00 20 27.6	-0.2
	0.9nm,0.7s						
MRKS				Lg	Lg	00 21 03.6	
	2.0nm,0.2s						
MRKS	Merke	2.74	267	*e*P	Pb	00 20 27.6	-0.2
	0.9nm,0.7s						
MRKS				*e*S	Sb	00 21 03.5	+1.9
	2.0nm,0.2s						
KK31	Karatay Array	4.72	274	Pg	Pb	00 21 02.7	+1.4
KK31				⇑Lg	Lg	00 22 07.8	
	0.2nm,0.3s,baz=97,slow=26,SNR=3.7						

IDC 20 00:35:13.4±1.3, 27°.85N×87°.84E, h0^{km}, mb3.8/7, mbtmp3.8/10, ML4.4/3, Error ellipse: s-maj=44.5km s-min=18.9km az=60.0

NDI 20 00:35:22.4±1.6, 27°.92N×87°.87E, h30^{km}, ML3.9, MW3.8

DMN 20 00:35:22.1±0.0, 28°.19N×87°.93E, h60^{km}, Ml4.8/7, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0

ISC 20 00:35:21.3±0.9, 27°.93N±0°.07×87°.90E±0°.03, h67^{km}±12^{km}, n38, σ1^{s}.97/66, mb3.5/7, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTK	Tadong	0.87	134	*e*P	Pn	00 35 39.2	+1.0
GTK				*e*S	Sn	00 35 51.3	+0.6
GTK				IAML		00 35 54.2	
	comp=E,5µm,0.2s						
GTK				IAML		00 35 54.2	
	comp=N,6µm,0.2s						
GUN	Gumba	1.79	270	Pg	Pn	00 35 52.9	+2.5
	baz=266,slow=0.0						
GUN				Sn	Sn	00 36 14.6	+2.3
	comp=N,1µm,0.3s,baz=266,slow=0.0						
GUN	Gumba	1.79	270	Pg	Pn	00 35 52.8	+2.4
	baz=262,slow=0.0						
GUN				Sg	Sn	00 36 14.8	+2.5
	comp=N,1µm,0.3s,baz=262,slow=0.0						
PKIN	Phulchoki	2.25	262	Pg	Pn	00 35 58.3	+1.8
	baz=258,slow=0.0						
PKIN				Sn	Sn	00 36 24.8	+1.5
	comp=N,2µm,0.4s,baz=258,slow=0.0						
PKIN	Phulchoki	2.25	262	Pg	Pn	00 35 58.3	+1.8
	baz=255,slow=0.0						
PKIN				Sg	Sn	00 36 24.8	+1.5
	comp=N,2µm,0.4s,baz=255,slow=0.0						
KKN	Kakani	2.32	267	Pg	Pn	00 35 59.9	+2.4
	baz=264,slow=0.0						
KKN				Sg	Sn	00 36 27.1	+2.0
	comp=N,2µm,0.5s,baz=264,slow=0.0						
KKN	Kakani	2.32	267	Pg	Pn	00 35 59.8	+2.3
	baz=261,slow=0.0						
KKN				Sg	Sn	00 36 26.4	+1.3
	comp=N,2µm,0.5s,baz=261,slow=0.0						
DMN	Daman	2.50	263	Pg	Pn	00 36 01.6	+1.7
	baz=260,slow=0.0						
DMN				Sn	Sn	00 36 30.6	+1.2
	comp=N,682nm,0.3s,baz=260,slow=0.0						
DMN	Daman	2.50	263	Pg	Pn	00 36 01.6	+1.7
	baz=258,slow=0.0						
DMN				Sg	Sn	00 36 30.7	+1.3
	comp=N,682nm,0.3s,baz=258,slow=0.0						
DHUB	DHUBRI	2.67	135	*e*P	Pn	00 36 04.8	+2.8
DHUB				*e*S	Sn	00 36 34.1	+0.9
DHUB				IAML		00 36 37.6	
	comp=E,776nm,0.2s						
DHUB				IAML		00 36 38.0	
	comp=N,573nm,0.1s						
GKN	Gorkha	2.89	272	Pg	Pn	00 36 06.3	+1.2
	baz=270,slow=0.0						
GKN				Sn	Sn	00 36 38.7	-0.1
	comp=N,1µm,0.4s,baz=270,slow=0.0						
GKN	Gorkha	2.89	272	Pg	Pn	00 36 06.3	+1.2
	baz=267,slow=0.0						
GKN				Sg	Sn	00 36 39.3	+0.5
	comp=N,1µm,0.6s,baz=267,slow=0.0						
TAWA	Tawang	3.53	94	*e*P	Pn	00 36 16.6	+2.5
TAWA				*e*S	Sn	00 36 55.5	+0.7
TAWA				IAML		00 36 59.9	
	comp=E,430nm,0.0s						
TAWA				IAML		00 37 00.5	
	comp=N,410nm,0.3s						
DANN	Dangsing	3.68	278	Pg	Pn	00 36 16.8	+0.8
	baz=276,slow=0.0						
DANN				Sn	Sn	00 36 56.9	-1.5
	comp=N,479nm,0.3s,baz=276,slow=0.0						
DANN	Dangsing	3.68	278	Pg	Pn	00 36 16.8	+0.8
	baz=273,slow=0.0						
DANN				Sg	Sn	00 36 57.1	-1.3
	comp=N,479nm,0.3s,baz=273,slow=0.0						
GUWA	GUWAHATI	3.80	116	*e*P	Pn	00 36 18.6	+1.2
GUWA				*e*S	Sn	00 37 00.6	-0.2
GUWA				IAML		00 37 05.1	
	comp=E,243nm,0.1s						
GUWA				IAML		00 37 05.4	
	comp=N,386nm,0.5s						
KOLN	Koldanda	3.81	269	Pg	Pn	00 36 18.4	+0.7
	baz=267,slow=0.0						
KOLN				Sg	Sn	00 37 00.6	-0.8
	comp=N,346nm,0.3s,baz=267,slow=0.0						
KOLN	Koldanda	3.81	269	Pg	Pn	00 36 18.3	+0.6
	baz=265,slow=0.0						
KOLN				Sg	Sn	00 37 00.4	-1.0
	comp=N,346nm,0.3s,baz=265,slow=0.0						
SHL	Shillong	4.27	123	*e*P	Pn	00 36 26.4	+2.5
SHL				*e*S	Sn	00 37 13.3	+0.6
SHL				IAML		00 37 13.7	
	comp=E,334nm,0.6s						
SHL				IAML		00 37 14.7	
	comp=N,457nm,0.4s						
PYUN	Piuthan	4.34	273	Pg	Pn	00 36 24.7	-0.3
	baz=272,slow=0.0						
PYUN				Sn	Sn	00 37 13.4	-1.1
	comp=N,5.6nm,0.2s,baz=272,slow=0.0						
PYUN	Piuthan	4.34	273	Pg	Pn	00 36 24.7	-0.3
	baz=270,slow=0.0						
PYUN				Sg	Sn	00 37 13.7	-0.8
	baz=270,slow=0.0						
BOK	Bokaro	4.50	204	*e*P	Pn	00 36 28.2	+1.2
BOK				*e*S	Sn	00 37 15.9	-2.2
BOK				IAML		00 37 19.0	
	comp=E,263nm,0.3s						
BOK				IAML		00 37 19.6	
	comp=N,326nm,0.2s						
TEZP	TEZPUR	4.55	106	*e*P	Pn	00 36 28.1	+0.5
TEZP				*e*S	Sn	00 37 17.6	-1.8
TEZP				IAML		00 37 21.2	
	comp=E,488nm,0.1s						
TEZP				IAML		00 37 22.3	
	comp=N,588nm,0.2s						
KOHI	KOHIMA	5.97	110	*e*P	Pn	00 36 47.8	+0.6
KOHI				*e*S	Sn	00 37 51.9	-2.4
KOHI				IAML		00 37 54.8	
	comp=E,264nm,0.3s						
KOHI				IAML		00 37 55.2	
	comp=N,232nm,0.3s						
MOKO	MOKOCHONG	6.11	104	*e*P	Pn	00 36 49.3	+0.2
MOKO				*e*S	Sn	00 37 55.3	-2.5
MOKO				IAML		00 38 02.3	
	comp=N,278nm,0.4s						
MOKO				IAML		00 38 02.6	
	comp=E,322nm,0.4s						
IMP	Imphal	6.24	118	*e*P	Pn	00 36 53.3	+2.5
IMP				*e*S	Sn	00 37 58.3	-2.5
IMP				IAML		00 38 06.0	
	comp=E,55nm,0.5s						
IMP				IAML		00 38 07.4	
	comp=N,85nm,0.9s						
SAIH	SAIHA	7.11	138	*e*P	Pn	00 37 05.2	+2.4
SAIH				*e*S	Sn	00 38 17.9	-4.4
SAIH				IAML		00 38 24.1	
	comp=N,205nm,0.9s						
SAIH				IAML		00 38 24.9	
	comp=E,312nm,0.3s						
SMLA	Simla	9.88	291	*e*P	Pn	00 37 41.1	+0.7
SMLA				*e*S	Sn	00 39 22.5	-7.3
SMLA				IAML		00 39 26.8	
	comp=E,63nm,0.3s						
SMLA				IAML		00 39 28.2	
	comp=N,41nm,0.8s						
CMAR	Chiang Mai Arr	13.85	131	Pn	Pn	00 38 30.6	-3.9
	comp=N,1.9nm,0.3s,baz=317,slow=13,SNR=4.3						
	comp=N,2.2nm,0.3s						
LZDM	Lanzhou Array	15.60	55	Pn	Pn	00 38 55.1	-2.4
	baz=229,slow=9.0						
	comp=N,0.5nm,0.3s						
MKAR	Makanchi Array	19.34	348	P	P	00 39 40.4	-0.9
	comp=N,0.1nm,0.3s,baz=161,slow=12,SNR=8.6						
	comp=N,0.2nm,0.4s						
KURBB	Kurchatov Arra	23.76	345	P	P	00 40 27.7	+0.3
	comp=N,1.4nm,0.7s,baz=163,slow=8.9,SNR=11						
	comp=N,1.4nm,0.7s						
SONM	Songino Array	24.54	31	P	P	00 40 36.4	+1.6
	comp=N,1.6nm,0.9s,baz=218,slow=9.4,SNR=6.8						
	comp=N,1.6nm,0.9s						
ZALV	Zalesovo Beam	26.09	356	P	P	00 40 49.4	+0.8
	comp=N,0.3nm,0.4s,baz=179,slow=7.2,SNR=2.5						
	comp=N,0.3nm,0.4s						
FINES	FINESS Array B	52.46	328	P	P	00 44 27.6	+0.7
	comp=N,3.2nm,1.0s,baz=109,slow=8.4,SNR=2.0						
	comp=N,3.2nm,1.0s						
HFS	Hagfors	58.41	326	P	P	00 45 11.1	+1.4
	comp=N,2.3nm,0.8s,baz=90,slow=1.4,SNR=2.4						
	comp=N,2.3nm,0.8s						
WRA	Warramunga Arr	65.44	131	P	P	00 45 58.5	+1.1
	comp=N,0.3nm,0.6s,baz=317,slow=6.1,SNR=2.7						
	comp=N,0.3nm,0.6s						
ASAR	Alice Springs	67.82	135	P	P	00 46 13.2	+0.6
	comp=N,0.7nm,0.6s,baz=317,slow=6.3,SNR=7.1						
	comp=N,0.7nm,0.6s						

OSPL 20 00:44:34.1±1.1, 18°.63N×71°.55W, h8^{km}±6^{km}, ML2.2, Presumed earthquake

SDD 20 00:44:34.5±1.6, 18°.49N×71°.39W, h20^{km}±8^{km}, MD3.1, ML3.1, MW2.7, Presumed earthquake

ISC 20 00:44:34.1±1.0, 18°.59N±0°.03×71°.44W±0°.05, h16^{km}±6^{km}, n13, σ0^{s}.85/23, 8C-3D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LONE3	El Aguacate, B	0.03	305	*i* P	Pg	00 44 36.5	-0.6
LONE3				IAML		00 44 40.4	
	comp=Z,418nm,0.9s						
NEDR	Neiba UASD	0.11	171	⇑*e*Pg	Pg	00 44 37.1	-0.4
NEDR				⇑*e*Sg	Sg	00 44 40.7	+0.9
NEDR				IAML		00 44 41.1	
	comp=N,2µm,0.3s						
LODU1	El Espartillar	0.24	189	*i* P	Pg	00 44 39.2	-0.2
LODU1				*e*S	Sb	00 44 43.3	-0.8
LODU1				IAML		00 44 44.1	
	comp=Z,466nm,0.7s						
JIDR	Jimani	0.41	256	⇓*e*Pg	Pg	00 44 41.9	-0.4
JIDR				⇓*e*Sg	Sb	00 44 49.2	+0.3
JIDR				IAML		00 44 49.7	
	comp=N,3µm,0.3s						
JIDR				IAML		00 44 49.7	

	comp=E,3µm,0.3s						
SDDR	Presa de Saban	0.41	20	i P	Pg	00 44 41.6	-0.9
SDDR				eS	Sg	00 44 48.0	-0.2
SDDR				IAML		00 44 50.2	
	comp=Z,41nm,0.2s						
PODR	Polo	0.45	161	⇑ePg	Pg	00 44 42.6	-0.6
PODR				IAML		00 44 50.8	
	comp=N,2µm,0.2s						
PODR	Polo	0.45	161	i P	Pg	00 44 42.5	-0.6
PODR				eS	Sb	00 44 49.9	-0.4
LOBH	Bahia de las A	0.75	195	i P	Pg	00 44 47.6	-1.1
LOBH				eS	Sb	00 44 59.1	+0.3
LOBH				IAML		00 45 02.4	
	comp=Z,77nm,1.9s						
LOVI	El Cajuil, Ovi	0.79	175	i P	Pg	00 44 48.6	-0.9
LOVI				eS	Sb	00 45 00.3	+0.4
LOVI				IAML		00 45 02.6	
	comp=Z,110nm,1.6s						
LOPP1	Punta Rusia, P	1.28	10	i P	Pn	00 44 56.3	-1.0
LOPP1				IAML		00 45 21.5	
	comp=Z,47nm,3.6s						
LUDR	Luperon	1.38	19	⇑ePg	Pn	00 44 59.5	+0.8
LUDR				⇑eSg	Sn	00 45 18.1	+1.5
LUDR				IAML		00 45 20.6	
	comp=E,1µm,0.3s						
HATOM	Hato Mayor del	1.96	84	⇑ePg	Pn	00 45 06.6	-0.1
HATOM				⇑eSg	Sn	00 45 30.2	-0.9
HATOM				IAML		00 45 36.7	
	comp=N,62nm,0.2s						
MIDR	Miches	2.29	80	⇑ePg	Pn	00 45 12.3	+0.9
MIDR				⇓eSg	Sn	00 45 40.7	+1.4
MIDR				IAML		00 45 46.5	
	comp=N,30nm,1.7s						

IDC ***20*** *00:52:02.0±1.0, 29.°41N×104.°52E, h0km, mb3.7/8, mbtmp3.7/10, ML4.0/2, MS3.9/1, Error ellipse: s-maj=36.8km s-min=15.7km az=66.0*

ISC 20 00:52:07.1±1.1**, 29.°4N**±0.°1×**104.°6E**±0.°2**, h35km, n11, σ0.s35**/11**, mb3.6**/8**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZDM	Lanzhou Array	6.55	354	Pn	Pn	00 53 41.4	+0.1
	baz=158,slow=16						
LZDM				Sn	Sn	00 54 55.5	+0.5
	baz=129,slow=15						
LZDM				Lg	Lg	00 55 30.1	
	baz=283,slow=39						
	4.1nm,0.3s						
SONM	Songino Array	18.44	4	P	P	00 56 19.4	-0.2
	0.2nm,0.3s,baz=178,slow=9.1,SNR=5.0						
	0.6nm,0.6s						
KSRS	Korea Array	21.02	62	P	P	00 56 47.4	-0.3
	2.0nm,0.8s,baz=253,slow=12,SNR=2.7						
	2.0nm,0.8s						
MKAR	Makanchi Array	24.53	321	P	P	00 57 23.6	+0.3
	0.5nm,0.6s,baz=116,slow=10,SNR=7.7						
	0.5nm,0.6s						
ZALV	Zalesovo Beam	28.41	335	P	P	00 57 58.0	-0.1
	0.3nm,0.5s,baz=151,slow=3.3,SNR=1.5						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	28.83	325	P	P	00 58 01.9	0.0
	0.4nm,0.7s,baz=131,slow=9.2,SNR=4.2						
	0.4nm,0.7s						
BELG	Belogornoye	47.33	316	LR	LR	01 22 43.2	
	comp=Z,132nm,20.7s,baz=101,slow=39						
WRA	Warramunga Arr	56.85	146	P	P	01 01 48.8	+0.4
	0.7nm,0.9s,baz=338,slow=6.8,SNR=9.8						
	0.7nm,0.9s						
FINES	FINESS Array B	59.19	327	P	P	01 02 03.8	-0.4
	2.8nm,1.1s,baz=87,slow=14,SNR=1.1						
	2.8nm,1.1s						
ASAR	Alice Springs	59.85	149	P	P	01 02 09.6	+0.3
	0.5nm,0.6s,baz=330,slow=7.2,SNR=5.5						
	0.5nm,0.6s						
HFS	Hagfors	65.39	327	P	P	01 02 45.5	-0.3
	2.5nm,1.1s,baz=50,slow=7.7,SNR=1.1						
	2.5nm,1.1s						

SNET ***20*** *00:55:07.6±0.8, 13.°11N×89.°66W, h44km, ML3.4*

CATAC ***20*** *00:55:08.1±0.5, 13°N±3°×9°0W±°, h26km±2km, M3.5/19, MLv3.5/19, Error ellipse: s-maj=6.4km s-min=3.8km az=27.5, confirmed*

ISC 20 00:55:08.0±2.1**, 13.°11N**±0.°09×**89.°64W**±0.°07**, h43km, n54, σ0.s80**/57**, 2C-7D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.49	40	eP	Pn	00 55 18.6	-0.1
LALI				eS	Sn	00 55 26.5	+0.3
LALI	Alcalda de L	0.49	40	⇓P	Pn	00 55 18.6	-0.1
LALI	Alcalda de L	0.49	40	S	Sn	00 55 25.8	-0.4
JAYA	Jayaque - finc	0.57	19	eP	Pn	00 55 19.8	-0.1
JAYA				eS	Sn	00 55 28.4	+0.1
JAYA	Jayaque - finc	0.57	19	⇓P	Pn	00 55 19.8	-0.1
PANCS	Alcalda de	0.67	42	P	Pn	00 55 21.0	-0.1
PANCS	Alcalda de	0.67	42	S	Sn	00 55 30.2	-0.4
PMON	Piamonte	0.68	28	⇓P	Pn	00 55 21.1	-0.2
LOMA	Loma Larga	0.70	41	⇓P	Pn	00 55 21.2	-0.4
LOMA	Loma Larga	0.70	41	S	Sn	00 55 31.2	-0.2
CEVE	Cerro Verde	0.71	1	eP	Pn	00 55 21.8	-0.1
CEVE				eS	Sn	00 55 34.0	+2.2
CEVE	Cerro Verde	0.71	1	P	Pn	00 55 21.9	+0.1
BOQS	Boqueron	0.71	30	eP	Pn	00 55 21.8	0.0
UEES	Universidad Ev	0.71	33	⇓P	Pn	00 55 21.7	-0.1
UEES	Universidad Ev	0.71	33	S	Sn	00 55 31.4	-0.3
CEDA	San Andres	0.73	19	P	Pn	00 55 22.0	+0.1
CEDA	San Andres	0.73	19	S	Sn	00 55 32.2	+0.3
IGN	Direccin Gen	0.75	38	P	Pn	00 55 22.2	-0.1
IGN	Direccin Gen	0.75	38	S	Sn	00 55 33.1	+0.5
LFRS	El Faro	0.76	48	eP	Pn	00 55 22.4	0.0
UDBS	Universidad Do	0.76	38	S	Sn	00 55 33.0	+0.2
UDBS	Universidad Do	0.76	38	P	Pn	00 55 21.8	-0.6
NUBE	Las Nubes	0.80	350	S	Sn	00 55 33.4	-0.4
NUBE	Las Nubes	0.80	350	P	Pn	00 55 22.9	-0.1
FAME	Alcaldia de Sa	0.81	333	⇓P	Pn	00 55 22.9	-0.2
LBRS	Las Brisas	0.85	43	eP	Pn	00 55 23.9	+0.2
UNIC	Universidad Ca	0.87	6	P	Pn	00 55 24.1	+0.3
UNIC	Universidad Ca	0.87	6	S	Sn	00 55 36.2	+0.9
PAVA	Las Pavas	0.91	49	⇓P	Pn	00 55 24.8	+0.4
PAVA	Las Pavas	0.91	49	S	Sn	00 55 36.6	+0.2
SLOZ	Alcaldia de Sa	0.92	351	P	Pn	00 55 20.0	-4.5
SLOZ	Alcaldia de Sa	0.92	351	S	Sn	00 55 33.2	-3.4
TECO	Alcaldia de Te	0.94	63	⇑P	Pn	00 55 24.3	-0.4
TECO	Alcaldia de Te	0.94	63	S	Sn	00 55 36.6	-0.4
UESV	Universidad de	0.98	58	⇑P	Pn	00 55 25.4	0.0
UESV	Universidad de	0.98	58	S	Sn	00 55 37.7	-0.4
SCLA	Alcaldia de Sa	1.06	57	P	Pn	00 55 26.5	+0.1
SCLA	Alcaldia de Sa	1.06	57	S	Sn	00 55 40.3	+0.1
PQSS	Presa 15 de Se	1.17	64	S	Sn	00 55 40.0	-2.6
PQSS	Presa 15 de Se	1.17	64	P	Pn	00 55 26.4	-1.5
LLGN	La Laguna	1.24	33	P	Pn	00 55 29.5	+0.5
LLGN	La Laguna	1.24	33	S	Sn	00 55 44.8	+0.1
MTO3	Montecristo	1.31	12	S	Sn	00 55 45.9	-0.5
MTO3	Montecristo	1.31	12	P	Pn	00 55 30.3	+0.3
PACA	Pacayal	1.33	74	P	Pn	00 55 30.8	+0.5
PACA	Pacayal	1.33	74	S	Sn	00 55 47.1	+0.3
ESQI	Esquipulas	1.47	11	eP	Pn	00 55 32.8	+0.6
ESQI	Esquipulas	1.47	11	P	Pn	00 55 32.7	+0.6
ESQI	Esquipulas	1.47	11	S	Sn	00 55 50.3	+0.2
CNRM	Centro Naciona	1.48	76	S	Sn	00 55 50.9	+0.7
LCND	La Caada	1.72	83	eS	Sn	00 55 56.6	+0.5
CNCH	Conchagua	1.77	85	S	Sn	00 55 57.7	+0.1
CNCH	Conchagua	1.77	85	P	Pn	00 55 36.0	-0.2
PKGN	Cerro Pekin	2.64	99	P	Pn	00 55 49.3	+1.3
PKGN				S	Sn	00 56 17.6	-1.2

IDC ***20*** *01:08:20.2±40.0, 29.°12N×130.°60E, h0km, mb3.4/4, mbtmp3.4/4, MS3.5/1, Error ellipse: s-maj=742.0km s-min=244.4km az=116.0*

JMA ***20*** *01:08:25.4±0.2, 29.°6N±0.°6×130.°4E±0.°7, h20km±3km, MV3.2/16, NEAR AMAMI-OSHIMA ISLAND*

ISC 20 01:08:24.1±1.7**, 29.°56N**±0.°05×**130.°45E**±0.°07**, h9km**±14km**, n18, σ0.s76**/20**, mb3.3**/4**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNN	Nakanoshima	0.57	300	eP	Pb	01 08 36.3	-0.1
JNN				eS	Sb	01 08 44.2	-0.5
JYAK	Yakushimahirau	0.68	5	P	Pb	01 08 37.9	-0.3
JYAK				eS	Sb	01 08 46.9	-0.8
JMTN	Minamitane	0.93	25	P	Pn	01 08 42.6	-0.8
JMTN				eS	Sb	01 08 54.4	-0.4
JKC	Kuchinoerabu	0.93	346	eP	Pb	01 08 42.5	0.0
JKC				eS	Sb	01 08 54.5	-0.4
JTAJ	Takarajima	1.16	250	eP	Pn	01 08 45.9	-0.6
JTN	Tanegashima 3	1.19	23	eP	Pb	01 08 47.0	+0.1
JTN				eS	Sn	01 09 02.4	-0.8
JZK	Kikaishima	1.31	199	eP	Pg	01 08 50.1	+0.9
JAM	Amami Oshima	1.36	213	eP	Pb	01 08 49.1	-0.6
JAM				eS	Sg	01 09 06.7	-1.2
JAMN	Amaminishikomi	1.72	221	eP	Pn	01 08 53.4	-0.8
JTK	Tokunoshima	2.20	217	eP	Pn	01 09 01.0	+0.1
SONM	Songino Array	26.01	321	P	P	01 13 58.7	+1.2
	0.2nm,0.5s,baz=108,slow=9.5,SNR=2.6						
	0.2nm,0.5s						
H11N2	WAKE ISLAND Hy	34.42	98	T	T	01 51 43.6	
	baz=296,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	34.42	98	T	T	01 51 42.5	
	baz=296,slow=75,SNR=10						
H11N3	WAKE ISLAND Hy	34.44	98	T	T	01 51 43.0	
	baz=296,slow=75,SNR=7.7						
ZALV	Zalesovo Beam	40.89	320	P	P	01 16 07.5	+1.1
	0.2nm,0.3s,baz=120,slow=8.2,SNR=2.1						
	0.2nm,0.3s						
MKAR	Makanchi Array	40.89	309	P	P	01 16 07.2	+0.6
	0.5nm,0.8s,baz=95,slow=8.6,SNR=4.9						
	0.5nm,0.8s						
KURBB	Kurchatov Arra	43.89	314	P	P	01 16 31.1	+0.2
	0.3nm,0.5s,baz=99,slow=8.2,SNR=3.3						
	0.3nm,0.5s						
ARTI	Arti	56.14	320	LR	LR	01 43 05.3	
	comp=Z,40nm,20.0s,baz=306,slow=37						

IDC 20 01:08:56.6±8.6**, 19.°49N**×**109.°29W, h0km, mb3.0**/3**, mbtmp3.3**/5**, ML3.7**/2**, MS2.8**/4**, Error ellipse: s-maj=122.0km s-min=75.6km az=172.0, Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	La Paz	4.69	349	Pn	Pn	01 10 08.8	+0.2
	5.8nm,0.3s,baz=172,slow=7.1,SNR=2.0						
LPIG				Sn	Sn	01 10 54.4	-9.2
	8.4nm,0.3s,baz=192,slow=21,SNR=5.7						
LPIG				LR	LR	01 11 14.1	
	comp=Z,37nm,21.9s,baz=180,slow=29						
	19nm,0.3s						
TXAR	Lajitas Array	11.05	26	Pn	Pn	01 11 36.8	+0.8
	0.1nm,0.3s,baz=206,slow=15,SNR=7.9						
	0.5nm,0.6s						
CMIG	Matias Romero	13.89	98	LR	LR	01 17 21.5	
	comp=Z,21nm,20.5s,baz=348,slow=36						
PFO	Pinyon Flats O	15.45	337	LR	LR	01 17 32.2	
	comp=Z,116nm,20.2s,baz=190,slow=33						
NVAR	Mina Array Bea	20.43	339	P	P	01 13 35.5	-0.2
	0.3nm,0.5s,baz=162,slow=13,SNR=7.5						
NVAR				LR	LR	01 21 27.6	
	comp=Z,51nm,18.8s,baz=176,slow=37						
	0.3nm,0.5s						
PDAR	Pinedale Array	23.20	359	P	P	01 14 05.8	+0.5
	0.5nm,0.8s,baz=166,slow=8.7,SNR=4.7						
	0.5nm,0.8s						
YKA	Yellowknife Ar	43.12	356	P	P	01 16 58.1	-0.3
	0.2nm,0.8s,baz=177,slow=8.4,SNR=5.4						
	0.2nm,0.8s						
H03N2	Juan Fernandez	60.08	151	T	T	02 24 21.5	
	baz=329,slow=77,SNR=36						
H03N1	Juan Fernandez	60.09	151	T	T	02 24 19.1	
	baz=329,slow=77,SNR=35						
H03N3	Juan Fernandez	60.10	151	T	T	02 24 18.1	
	baz=329,slow=77,SNR=39						

IDC ***20*** *01:36:39.8±1.0, 30.°57S×178.°68W, h0km, mb4.0/3, mbtmp4.0/3, MS3.1/1, Error ellipse: s-maj=35.1km s-min=20.8km az=127.0*

ISC 20 01:36:39.4±0.8**, 30.°8S**±0.°1×**178.°7W**±0.°4**, h35km, n33, σ1.s83**/34**, mb3.9**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.70	24	Pn	Pn	01 37 08.3	+1.9
	83nm,0.3s,baz=116,slow=21,SNR=1.8						
RAO				Sn	Sn	01 37 26.8	-0.3
	498nm,0.3s,baz=87,slow=23,SNR=8.1						
RAO	Raoul Island	1.70	24	P	Pn	01 37 08.4	+1.9
RAO				S	Sn	01 37 25.4	-1.6
RIZ	Raoul Island	1.70	24	P	Pn	01 37 08.4	+1.8
RIZ				S	Sn	01 37 26.5	-0.6
MXZ	Matakaoa Point	7.17	199	S	Sn	01 39 44.4	+2.5
WMGZ	Waiomatatini S	7.38	198	S	Sn	01 39 50.0	+2.8
HAZ	Te Kaha	7.51	202	P	Pn	01 38 27.0	+0.7
HAZ				S	Sn	01 39 53.7	+3.4
PUZ	Puketiti	7.66	198	P	Pn	01 38 27.6	-0.9
PUZ				S	Sn	01 39 53.0	-1.0
RUGZ	Raukumara Rang	7.73	202	P	Pn	01 38 30.2	+0.6
RUGZ				S	Sn	01 39 58.7	+2.8
OUZ	Omahuta	7.81	234	P	Pn	01 38 44.0	+13
TWGZ	Tauwhareparae	7.84	200	S	Sn	01 40 00.0	+1.6
CNGZ	Carnagh Statio	8.06	198	P	Pn	01 38 32.6	-1.3
CNGZ				S	Sn	01 40 03.3	-0.5
MWZ	Matawai	8.12	201	P	Pn	01 38 34.9	+0.2
MWZ				S	Sn	01 40 04.9	-0.4
TKGZ	Te Karaka	8.12	200	S	Sn	01 40 06.8	+1.6
URZ	Urewera	8.19	204	Pn	Pn	01 38 35.7	+0.1
	1.6nm,0.3s,baz=252,slow=3.2,SNR=8.9						
URZ				Sn	Sn	01 40 07.8	+0.9
	6.6nm,0.3s,baz=173,slow=23,SNR=18						
URZ	Urewera	8.19	204	P	Pn	01 38 35.8	+0.1
URZ				S	Sn	01 40 07.6	+0.6
RIGZ	Rimuhau	8.39	199	P	Pn	01 38 37.7	-0.8
RIGZ				S	Sn	01 40 12.2	+0.2
PRGZ	Paritu Road	8.56	198	P	Pn	01 38 39.5	-1.3
PRGZ				S	Sn	01 40 15.1	-1.1
MHGZ	Mahia Peninsul	8.77	198	S	Sn	01 40 17.3	-4.0
CTA	Charters Tower	33.27	280	LR	LR	01 54 29.7	
	comp=Z,30nm,19.5s,baz=36,slow=32						
ASAR	Alice Springs	42.48	268	P	P	01 44 37.1	+5.8
	1.0nm,0.6s,baz=107,slow=7.3,SNR=13						
	1.0nm,0.6s						
WRA	Warramunga Arr	43.51	273	P	P	01 44 45.1	+5.4
	0.9nm,0.3s,baz=111,slow=8.1,SNR=28						
	0.9nm,0.3s						
SNAA	Sanae	77.76	179	P	P	01 48 39.6	+7.2
	1.0nm,0.7s,baz=184,slow=13,SNR=12						
	1.0nm,0.7s						
H03S2	Juan Fernandez	80.74	124	T	T	03 17 56.9	
	baz=238,slow=74,SNR=13						
H03S1	Juan Fernandez	80.75	124	T	T	03 17 58.1	
	baz=238,slow=74,SNR=14						
H03S3	Juan Fernandez	80.76	124	T	T	03 17 57.0	
	baz=238,slow=74,SNR=14						
H03N3	Juan Fernandez	80.94	123	T	T	03 18 14.5	
	baz=241,slow=72,SNR=7.0						
H03N2	Juan Fernandez	80.94	123	T	T	03 18 04.2	
	baz=241,slow=72,SNR=7.2						
H03N1	Juan Fernandez	80.96	123	T	T	03 18 13.6	
	baz=241,slow=72,SNR=14						
FINES	FINESS Array B	145.32	339	PKPbc	PKPdf	01 56 13.2	+0.6
	1.2nm,0.4s,baz=48,slow=4.8,SNR=8.4						
NOA	NORSAR Array B	149.06	351	PKPbc	PKPab	01 56 28.5	+1.1
	0.8nm,0.7s,baz=15,slow=2.5,SNR=3.4						
HFS	Hagfors	149.52	348	PKPbc	PKPab	01 56 29.6	+0.3
	3.6nm,1.0s,baz=8.1,slow=2.0,SNR=5.8						
MMAI	Mount Meron Ar	151.03	283	PKPbc	PKPab	01 56 34.6	-1.9
	0.5nm,0.4s,baz=96,slow=6.0,SNR=5.3						
BRTR	Keskin Array B	152.25	298	PKPbc	PKPab	01 56 37.0	-4.6
	0.3nm,0.5s,baz=100,slow=1.6,SNR=2.1						

BER 20 01:54:33.1±1.4**, 72.°58N**×**2.°45E, h10km, Mw4.0, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNE	Jan Mayen East	3.73	250	eP	Pn	01 55 29.0	-1.6
JNE				IAML		01 55 29.7	
	comp=Z,10nm,0.2s						
JNW	Jan Mayen West	3.75	251	eP	Pn	01 55 29.2	-1.6
LOF	Lofoten	5.82	135	eP	Pn	01 55 56.7	-2.6
LOF				IAML		01 55 58.3	
	comp=Z,3.9nm,0.4s						
TRO	Tromso	6.10	111	eP	Pn	01 55 59.9	-3.2
TRO				IAML		01 56 01.2	
	comp=Z,9.7nm,0.4s						
STEI	Steigen	6.36	131	eP	Pn	01 56 03.8	-2.9
STEI				IAML		01 56 05.6	
	comp=Z,2.2nm,0.5s						
JETT	Jettan, Norway	6.57	109	eP	Pn	01 56 06.7	-2.9
JETT				IAML		01 56 07.3	
	comp=Z,6.1nm,0.4s						
DBG	Daneborg	6.68	296	eP	Pn	01 56 08.4	-2.7
FAUS	Fauske	6.81	134	eP	Pn	01 56 10.0	-2.9
VAGH	Vaagaholmen	6.97	142	eP	Pn	01 56 11.6	-3.4
HAMF	Hammerfest	6.97	96	eP	Pn	01 56 11.5	-3.5
KIF	Kilpisjarvi	7.01	112	eP	Pn	01 56 12.8	-2.9
STOK	Stokkvaagen	7.28	144	eP	Pn	01 56 16.4	-2.9
RAUS	Rausandaksla	7.37	141	eP	Pn	01 56 17.7	-2.9
LEIR	Leirfjorden	7.49	145	eP	Pn	01 56 18.6	-3.7
SALU	Saltoluokta	7.56	126	eP	Pn	01 56 20.7	-2.5
MOR8	Moi Rana	7.68	141	eP	Pn	01 56 22.3	-2.5
ARA0	ARCESS Array S	8.06	101	eP	Pn	01 56 27.4	-2.7
HEF	Hetta	8.20	110	eP	Pn	01 56 29.1	-2.9
NSS	Namsos	8.79	152	eP	Pn	01 56 37.0	-3.0
VADS	Vadso	8.92	93	eP	Pn	01 56 38.3	-3.4
MOL	Molde	10.23	167	eP	Pn	01 56 58.2	-1.6

IDC 20 02:21:21.7±2.6**, 29.°40S**×**178.°47W, h0km, mb3.8**/3**, mbtmp3.8**/3**, MS3.2**/3**, Error ellipse: s-maj=199.9km s-min=13.6km az=168.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.50	73	Pn	Pn	02 21 35.9	-0.2
	242nm,0.3s,baz=294,slow=19,SNR=6.5						
RAO				Sn	Sn	02 21 46.0	+0.5
	571nm,0.3s,baz=182,slow=14,SNR=9.2						
DZM	Mont Dzumac	15.42	295	LR	LR	02 29 14.0	
	comp=Z,69nm,19.2s,baz=194,slow=31						
CTA	Charters Tower	33.25	278	LR	LR	02 39 51.9	
	comp=Z,36nm,18.1s,baz=64,slow=33						
ASAR	Alice Springs	42.76	266	P	P	02 29 20.5	-0.7
	0.7nm,0.7s,baz=100,slow=6.6,SNR=6.7						
ASAR				LR	LR	02 47 03.6	
	comp=Z,26nm,18.2s,baz=178,slow=36						
	0.7nm,0.7s						
WRA	Warramunga Arr	43.66	271	P	P	02 29 28.1	-0.3
	1.4nm,0.6s,baz=110,slow=8.0,SNR=8.8						
	1.4nm,0.6s						
H03S2	Juan Fernandez	81.36	124	T	T	04 03 08.4	
	baz=239,slow=74,SNR=44						
H03S1	Juan Fernandez	81.37	124	T	T	04 03 12.8	
	baz=239,slow=74,SNR=48						
H03S3	Juan Fernandez	81.37	124	T	T	04 03 18.6	
	baz=239,slow=74,SNR=58						
H03N3	Juan Fernandez	81.55	124	T	T	04 03 11.6	
	baz=254,slow=71						
H03N2	Juan Fernandez	81.55	124	T	T	04 03 06.3	
	baz=254,slow=71						
H03N1	Juan Fernandez	81.56	124	T	T	04 03 05.6	
	baz=254,slow=71						
NVAR	Mina Array Bea	87.78	43	P	P	02 34 14.5	+1.5
	0.4nm,0.7s,baz=244,slow=6.9,SNR=3.6						
	0.4nm,0.7s						
H10N3	ASCENSION HYDR	139.88	155	T	T	05 16 44.8	
	baz=203						
H10N1	ASCENSION HYDR	139.89	155	T	T	05 17 19.8	
	baz=203						
H10N2	ASCENSION HYDR	139.90	155	T	T	05 17 27.0	
	baz=203						

GCG ***20*** *02:33:06.1±0.7, 13.°69N×91.°31W, h85km±14km, MD4.0, ML3.9*

SNET ***20*** *02:33:07.4±0.7, 13.°44N×91.°17W, h75km±33km, ML3.4*

ISC 20 02:33:07.9±3.0**, 13.°5N**±0.°2×**91.°2W**±0.°1**, h29km, n14, σ1.s64**/14**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESSJ	San Jos, E	0.67	85	i P	Pn	02 33 20.6	-0.9
STG5	El Palmar, Qui	0.91	350	i P	Pb	02 33 25.9	+0.7
STG5				i S	Sb	02 33 40.8	+3.9
STG2	El Palmar, Qui	0.94	349	i P	Pb	02 33 27.1	+1.3
STG8	El Palmar, Qui	0.95	351	i P	Pb	02 33 27.0	+0.9
FG16	Alotenango, Sa	1.01	41	i P	Pn	02 33 25.2	-1.2
FG16				IAML		02 33 43.1	
	comp=E,6µm,0.1s						
SOKI	Kika Raxquin	1.33	351	i P	Pn	02 33 28.7	-2.2
SOKI				i S	Sn	02 33 45.9	-1.9
SOKI				IAML		02 33 51.4	
	comp=N,1µm,0.6s						
NUBE	Las Nubes	1.43	74	eP	Pn	02 33 31.8	-0.3
NUBE	Las Nubes	1.43	74	i P	Pn	02 33 32.0	0.0
CEVE	Cerro Verde	1.56	78	eS	Sb	02 33 54.9	-0.8
SBLS	San Blas	1.56	77	IAML		02 34 02.5	
	comp=Z,278nm,0.2s						
JAYA	Jayaque - finc	1.70	85	IAML		02 34 04.7	
	comp=Z,544nm,0.2s						
HUEH	Huehuetenango	1.83	351	eS	Sb	02 34 03.2	-0.3
BOQS	Boqueron	1.87	83	eP	Pn	02 33 38.6	+0.4
COEG	Centro de Oper	2.25	87	eP	Pn	02 33 42.8	-0.5

IDC ***20*** *02:50:25.7±1.3, 53.°86N×164.°27W, h0km, mb3.8/11, mbtmp3.8/13, ML3.5/2, MS3.3/2, Error ellipse: s-maj=30.1km s-min=19.6km az=179.0*

AEIC ***20*** *02:50:30.7±1.6, 53.°80N±0.°08×164.°00W±0.°08, h24km±5km, Error ellipse: s-maj=12.3km s-min=4.3km az=151.0*

NEIC ***20*** *02:50:31.4±1.7, 53.°81N±0.°02×164.°01W±0.°07, h35km±2km, mb3.8/15, ML3.9/14, ML3.6(AEIC), Error ellipse: s-maj=7.6km s-min=3.0km az=111.0*

ISC 20 02:50:31.6±1.2**, 53.°82N**±0.°07×**163.°94W**±0.°04**, h42km**±11km**, n100, σ1.s17**/98**, mb4.0**/12**, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WEBT	Westdahl Beart	0.91	329		Pn	02 50 47.6	-0.4
WEBT					Sn	02 51 00.4	+0.5
SSBA	Shishaldin	0.96	354		Pn	02 50 48.1	-0.7
SSBA					Sn	02 51 01.3	+0.1
ISNN	Isanotski Nort	1.02	5		Pn	02 50 49.7	+0.2
ISNN					Sn	02 51 04.2	+1.6
FALS	False Pass	1.08	16		Pn	02 50 49.8	-0.5
FALS				Sn	Sn	02 51 03.6	-0.5
FALS	False Pass	1.08	16	P	Pn	02 50 49.6	-0.7
FALS	False Pass	1.08	16	S	Sn	02 51 04.4	+0.3
AKSA	Akutan Strait	1.09	288		Pn	02 50 49.4	-0.9
AKSA					Sn	02 51 03.7	-0.5
AKUT	Akutan	1.13	287		Pn	02 50 50.2	-0.7
AKUT				Sn	Sn	02 51 04.3	-0.9
AKUT				IAML		02 51 09.7	
	comp=E,1µm,0.5s						
AKUT				IAML		02 51 12.3	
	comp=N,1µm,0.4s						
AKUT	Akutan	1.13	287	P	Pn	02 50 49.9	-1.0
AKUT	Akutan	1.13	287	S	Sn	02 51 04.8	-0.4
AHB	Akutan Harbor	1.15	286		Pn	02 50 50.4	-0.8
AKBBA	Akutan Broad B	1.21	284		Pn	02 50 51.3	-0.8
AKV	Akutan Volcano	1.24	285		Pn	02 50 51.6	-0.8
ZRO	Akutan Zero	1.24	284		Sn	02 51 07.5	-0.4
AKGG	Akutan Green G	1.27	288		Sn	02 51 09.3	+0.5
LVA	Lava Point	1.29	286		Pn	02 50 52.5	-0.6
LVA				IAML		02 51 17.3	
	comp=N,2µm,0.6s						
UNV	Unalaska Valle	1.52	272		Pn	02 50 54.8	-1.5
UNV				Sn	Sn	02 51 14.1	-0.7
MNAT	Makushin Natee	1.63	273		Pn	02 50 56.8	-1.0
MSW	Makushin Switc	1.69	274		Sn	02 51 20.2	+1.2
MGOD	Makushin Gods	1.74	270		Pn	02 50 58.7	-0.6
PN7A	Pavlof North-7	1.97	34		Pn	02 51 04.2	+1.6
S12K	Black Hills	2.18	29	Pn	Pn	02 51 05.6	+0.3
S12K				IAML		02 51 39.5	
	comp=E,1µm,0.4s						
OKTU	Okmok Mt. Tuli	2.48	262		Pn	02 51 10.2	+0.7
SDPT	Sand Point	2.53	51		Pn	02 51 10.4	+0.3
SDPT				IAML		02 51 49.2	
	comp=E,577nm,1.0s						
SDPT				IAML		02 51 51.4	
	comp=N,729nm,0.7s						
SDPT	Sand Point	2.53	51	P	Pn	02 51 10.7	+0.6
SDPT	Sand Point	2.53	51	S	Sn	02 51 40.7	+1.0
CHNA	Chernabura Isl	2.74	66	P	Pn	02 51 13.3	+0.3
CHNA	Chernabura Isl	2.74	66	S	Sn	02 51 44.8	0.0
NIKH	Nikolski High	3.06	256	Pn	Pn	02 51 17.6	+0.2

NIKH				IAML		02 52 04.7	
	comp=E,415nm,0.8s						
NIKH				IAML		02 52 08.4	
	comp=N,359nm,0.7s						
NIKH	Nikolski High	3.06	256	P	Pn	02 51 17.7	+0.2
O14K	Tigyukauivet M	5.65	14		Pn	02 51 54.9	+2.0
O15K	Ungalikthiuk R	5.83	21	Pn	Pn	02 51 56.3	+0.8
N14K	Kuskokwak Cree	6.25	10		Pn	02 52 05.1	+4.0
O16K	Kokwok River B	6.62	27	Pn	Pn	02 52 06.9	+0.6
M11K	Mekoryuk	6.70	350	Pn	Pn	02 52 05.8	-1.4
N15K	Kwethluk River	6.71	17		Pn	02 52 09.1	+1.7
OHAK	Old Harbor	6.94	56	Pn	Pn	02 52 10.5	-0.1
OHAK	Old Harbor	6.94	56	P	Pn	02 52 10.4	-0.2
KDAK	Kodiak Island	7.53	54	Pn	Pn	02 52 18.3	-0.4
	comp=N,1.3nm,0.3s,baz=53,slow=2.4,SNR=17						
KDAK				Sn	Sn	02 53 38.0	-4.6
	comp=N,0.6nm,0.3s,baz=128,slow=17,SNR=1.9						
	comp=N,5.2nm,0.6s						
KDAK	Kodiak Island	7.53	54	Pn	Pn	02 52 18.1	-0.6
M16K	Timber Creek	7.71	18	Pn	Pn	02 52 21.9	+0.8
ADK	Adak	7.96	261	Pn	Pn	02 52 24.8	+0.2
KIWB	Kanaga Island	8.24	262	Pn	Pn	02 52 29.4	+1.0
M17K	Holitna River	8.36	22	Pn	Pn	02 52 31.0	+0.9
N19K	Bonanza Creek	8.67	32	Pn	Pn	02 52 36.0	+1.6
K17K	Iditarod	9.40	16	Pn	Pn	02 52 44.0	-0.3
J17K	VABM Dome	9.93	13		Pn	02 52 51.4	-0.2
J18K	Innoko River	10.37	18	Pn	Pn	02 52 57.9	+0.3
RC01	Rabbit Creek A	10.55	41	Pn	Pn	02 53 00.1	+0.2
ANM	Nome	10.81	357	Pn	Pn	02 53 03.9	+0.4
PWL	Port Wells	10.97	44	Pn	Pn	02 53 04.9	-0.9
SCM	Sheep Creek Mo	11.92	41	Pn	Pn	02 53 18.1	-0.7
EYAK	Cordova Ski Ar	11.92	48	P	Pn	02 53 17.7	-1.0
TRF	Thorofare Moun	11.96	31		Pn	02 53 19.0	-0.4
RAGM	Ragged Mountai	12.34	50	Pn	Pn	02 53 23.9	-0.6
DHY	Denali Highway	12.66	36	Pn	Pn	02 53 27.2	-1.7
G19K	Purcell Mounta	12.82	13		Pn	02 53 26.9	-4.1
GLB	Gilahina Butte	13.17	47	Pn	Pn	02 53 34.6	-1.2
IMAR	Indian Mountai	13.20	18	Pn	Pn	02 53 38.0	+1.8
H22K	Ishtalitna Cre	13.62	22	Pn	Pn	02 53 41.6	-0.3
ILAR	Eielson Array	13.95	31	Pn	Pn	02 53 44.2	-2.2
	comp=N,0.1nm,0.3s,baz=221,slow=12,SNR=10.0						
	comp=N,0.2nm,0.5s						
SCRK	Sand Creek	14.41	37		Pn	02 53 53.5	+0.7
G23K	Bananza Creek	14.60	22		Pn	02 53 54.8	-0.4
O29M	Mount Kennedy	15.18	55	Pn	Pn	02 54 03.1	+0.2
O29M				IAmb	IAmb	02 54 24.9	
	comp=Z,10.0nm,1.1s						
I26K	Coal Creek Min	15.50	34	IAmb	IAmb	02 54 10.6	
	comp=Z,5.5nm,1.2s						
F24K	Squaw Lake	15.75	23	Pn	Pn	02 54 10.3	+0.1
M29M	Somme Creek	15.88	47		Pn	02 54 12.3	+0.2
E24K	Your Creek	16.07	21	IAmb	IAmb	02 54 42.8	
	comp=Z,3.9nm,0.8s						
DAWY	Dawson	16.18	41	Pn	P	02 54 16.8	-1.7
DAWY				IAmb	IAmb	02 54 20.3	
	comp=Z,2.8nm,0.7s						
N30M	Aishikik Lake	16.18	51	Pn	P	02 54 17.1	-1.4
N30M				IAmb	IAmb	02 54 41.0	
	comp=Z,13nm,1.3s						
I27K	Kandik River	16.19	34	Pn	Pn	02 54 16.4	+0.6
BMAR	Burnt Mountain	16.51	27	Pn	Pn	02 54 20.4	+0.6
I28M	Miner Creek	16.68	36	Pn	P	02 54 22.8	-1.2
I30M	Mount Dempster	17.87	39		P	02 54 37.2	+0.1
I30M				IAmb	IAmb	02 54 42.5	
	comp=Z,10.0nm,1.5s						
R33M	Jennings River	18.85	60	P	Pn	02 54 49.7	+1.0
R33M				IAmb	IAmb	02 55 02.0	
	comp=Z,16nm,1.5s						
INK	Inuvik	20.34	33	P	P	02 55 02.9	-1.0
	comp=Z,0.5nm,0.4s,baz=244,slow=8.1,SNR=13						
	comp=Z,0.5nm,0.4s						
INK	Inuvik	20.34	33	IAmb	IAmb	02 55 10.9	
	comp=Z,6.4nm,1.4s						
A36M	Sachs Harbour	24.60	28	P	P	02 55 47.5	+0.2
A36M				IAmb	IAmb	02 56 21.6	
	comp=Z,4.5nm,0.9s						
YKA	Yellowknife Ar	26.80	51	P	P	02 56 08.1	+0.8
	comp=Z,0.7nm,0.8s,baz=276,slow=9.5,SNR=4.4						
	comp=Z,0.7nm,0.8s						
NVAR	Mina Array Bea	34.51	98	P	P	02 57 17.8	+2.1
	comp=Z,0.4nm,0.7s,baz=322,slow=8.9,SNR=4.0						
	comp=Z,0.4nm,0.7s						
H11N2	WAKE ISLAND Hy	40.71	225	T	T	03 41 44.4	
	baz=26,slow=76,SNR=115						
H11N3	WAKE ISLAND Hy	40.72	225	T	T	03 41 45.8	
	baz=26,slow=76,SNR=118						
H11N1	WAKE ISLAND Hy	40.73	225	T	T	03 41 44.6	
	baz=26,slow=76,SNR=102						
H11S1	WAKE ISLAND Hy	41.89	224	T	T	03 43 10.0	
	baz=25,slow=76,SNR=238						
H11S2	WAKE ISLAND Hy	41.90	224	T	T	03 43 13.0	
	baz=25,slow=76,SNR=190						
H11S3	WAKE ISLAND Hy	41.91	224	T	T	03 43 13.9	
	baz=25,slow=76,SNR=114						
TXAR	Lajitas Array	49.52	95	P	P	02 59 19.2	+1.2
	comp=Z,0.4nm,0.7s,baz=295,slow=5.0,SNR=6.4						
TXAR				LR	LR	03 20 17.5	
	comp=Z,38nm,18.0s,baz=347,slow=36						
	comp=Z,0.4nm,0.7s						
TXAR	Lajitas Array	49.52	95	P	P	02 59 18.4	+0.4
JNU	Nakatsue	49.70	273	LR	LR	03 20 12.6	
	comp=Z,18nm,19.4s,baz=58,slow=36						
BVAR	Borovoye Array	64.35	327	P	P	03 01 02.8	+0.2
	comp=Z,1.3nm,0.7s,baz=28,slow=6.7,SNR=6.2						
	comp=Z,1.3nm,0.7s						
FINES	FINESS Array B	64.81	355	P	P	03 01 04.8	-0.6
	comp=Z,1.9nm,0.7s,baz=358,slow=6.6,SNR=8.0						
	comp=Z,1.9nm,0.7s						
ARTI	Arti	64.82	336	P	P	03 01 05.3	-0.3
MKAR	Makanchi Array	65.11	316	P	P	03 01 06.7	-1.0
	comp=Z,0.8nm,0.9s,baz=39,slow=5.4,SNR=1.9						
	comp=Z,0.8nm,0.9s						
MKAR	Makanchi Array	65.11	316	P	P	03 01 07.2	-0.5
HFS	Hagfors	66.38	1	P	P	03 01 14.3	-1.3
	comp=Z,2.3nm,0.7s,baz=21,slow=3.8,SNR=12						
	comp=Z,2.3nm,0.7s						
KKAR	Karatay Array	72.80	321	P	P	03 01 55.3	-0.1
AKASG	Malin Array Be	75.27	351	P	P	03 02 09.0	-0.7
	comp=Z,0.3nm,0.3s,baz=12,slow=4.7,SNR=2.1						
	comp=Z,0.3nm,0.3s						
CMAR	Chiang Mai Arr	79.42	287	P	P	03 02 33.2	-0.2
	comp=Z,1.5nm,0.3s,baz=32,slow=5.7,SNR=1.8						
ESDC	Sonseca Array	85.29	15	P	P	03 03 05.1	+1.2
	comp=Z,0.9nm,0.8s,baz=341,slow=6.6,SNR=1.9						
	comp=Z,0.9nm,0.8s						
BRTR	Keskin Array B	85.61	346	P	P	03 03 06.0	+0.5
	comp=Z,1.8nm,0.9s,baz=20,slow=1.8,SNR=11						
	comp=Z,1.8nm,0.9s						

IDC ***20*** *02:55:13.0±3.7, 21°.94S×178°.52W, h0^{km}, mb4.2/3, mbtmp4.2/3, Error ellipse: s-maj=180.7km s-min=45.9km az=148.0*

NEIC ***20*** *02:56:10.7±1.1, 24°.3S±0°.2×179°.34W±0°.08, h515^{km}±16^{km}, mb4.3/11, Error ellipse: s-maj=30.0km s-min=10.0km az=189.0*

ISC 20 02:56:10.5±1.0**, 24°.4S**±0°.1×**179°.5W**±0°.1**, h500**^{km}**, n21, σ1^s.10**/20**, mb4.1**/10**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	5.02	164	P	P	02 57 38.8	+1.2
MSVF	Nonsavu	7.03	341	P	P	02 57 57.3	+0.1
MARNC	Mare, Loyalty	11.85	282	P	P	02 58 47.9	+0.4
CTAO	Charters Tower	31.93	271	P	P	03 01 54.5	-0.1
CTAO				IAmb	IAmb	03 02 03.0	
	comp=Z,19nm,1.5s						
STKA	Stephens Creek	34.95	249	P	P	03 02 21.1	+1.0
	comp=Z,0.8nm,0.3s,baz=113,slow=11,SNR=2.2						
	comp=Z,0.8nm,0.3s						
STKA	Stephens Creek	34.95	249	P	P	03 02 20.9	+0.8
BBOO	Buckleboo	39.66	247	P	P	03 02 59.2	+0.5
BBOO				IAmb	IAmb	03 03 29.6	
	comp=Z,23nm,1.3s						
ASAR	Alice Springs	42.40	261	P	P	03 03 20.4	-0.3
	comp=Z,1.4nm,0.5s,baz=93,slow=6.7,SNR=17						
	comp=Z,1.4nm,0.5s						
ASAR	Alice Springs	42.40	261	P	P	03 03 20.1	-0.7
WR8	Warramunga Arr	42.68	267	P	P	03 03 21.8	-1.1
WB0	Warramunga Arr	42.82	267	P	P	03 03 22.9	-1.2
WB0				IAmb	IAmb	03 03 23.4	
	comp=Z,4.9nm,0.7s						
WRA	Warramunga Arr	42.83	267	P	P	03 03 22.4	-1.7
	comp=Z,2.6nm,0.4s,baz=96,slow=8.4,SNR=81						
	comp=Z,2.6nm,0.4s						
FORT	Forrest	46.56	250	P	P	03 03 51.5	-1.2
FORT				IAmb	IAmb	03 04 33.2	
	comp=Z,13nm,1.0s						
KNRA	Kununurra	49.14	270	P	P	03 04 11.4	-0.9
KNRA				IAmb	IAmb	03 04 15.4	
	comp=Z,10.0nm,1.2s						
FITZ	Fitzroy Crossi	51.24	266	P	P	03 04 27.3	-0.4
MORW	Morawa	57.12	250	P	P	03 05 09.4	+0.2
MORW				IAmb	IAmb	03 05 13.0	
	comp=Z,25nm,1.5s						
QSPA	South Pole Qui	65.67	180	P	P	03 06 04.3	-0.3
QSPA				IAmb	IAmb	03 06 05.2	
	comp=Z,7.5nm,1.5s						
GO09	Cerro Castillo	81.33	143	P	P	03 07 32.4	-1.8
HFS	Hagfors	143.14	349	PKP	PKPab	03 14 42.4	-1.8
	comp=Z,1.7nm,0.3s,baz=0.0,slow=1.4,SNR=18						
BRTR	Keskin Array B	148.25	307	PKPbc	PKPdf	03 14 58.5	+2.3
	comp=Z,0.6nm,0.6s,baz=76,slow=3.5,SNR=5.0						
MMAI	Mount Meron Ar	148.32	294	PKPbc	PKPbc	03 15 00.8	+0.3
	comp=Z,1.8nm,0.5s,baz=69,slow=2.0,SNR=7.8						

IDC ***20*** *03:05:12.8±7.4, 19°.08S×177°.59W, h0^{km}, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=320.1km s-min=41.7km az=144.0*

NEIC ***20*** *03:06:22.0±1.3, 21°.55S±0°.07×179°.0W±0°.2, h619^{km}±16^{km}, mb4.3/10, Error ellipse: s-maj=27.9km s-min=9.5km az=79.0*

ISC 20 03:06:21.4±1.4**, 21°.6S**±0°.1×**179°.1W**±0°.2**, h602**^{km}**, n16, σ1^s.14**/15**, mb4.2**/9**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.68	325	P	P	03 07 55.1	+2.9
MARNC	Mare, Loyalty	11.97	268	P	P	03 08 59.0	-0.9
FUNA	Funafuti	13.10	353	P	P	03 09 10.2	-1.2
WHZ	Wether Hill Ro	26.44	201	P	P	03 11 12.4	+0.5
CTAO	Charters Tower	32.37	266	P	P	03 12 03.9	+0.5
TOO	Toolangi	34.42	235	P	P	03 12 20.3	0.0
TOO				IAmb	IAmb	03 12 59.7	
	comp=Z,8.2nm,1.4s						
BBOO	Buckleboo	41.14	244	P	P	03 13 14.5	-0.3
BBOO				IAmb	IAmb	03 13 24.8	
	comp=Z,36nm,1.5s						
ASAR	Alice Springs	43.27	258	P	P	03 13 31.4	-0.2
	comp=Z,1.2nm,0.8s,baz=98,slow=8.3,SNR=8.7						
	comp=Z,1.2nm,0.8s						
WR8	Warramunga Arr	43.28	263	P	P	03 13 30.7	-1.1
WR8				IAmb	IAmb	03 13 32.5	
	comp=Z,5.9nm,1.2s						
WB0	Warramunga Arr	43.42	264	P	P	03 13 32.7	-0.1
WB0				IAmb	IAmb	03 13 57.6	
	comp=Z,9.9nm,1.4s						
WRA	Warramunga Arr	43.43	263	P	P	03 13 32.4	-0.5
	comp=Z,1.2nm,0.7s,baz=95,slow=7.6,SNR=9.5						
	comp=Z,1.2nm,0.7s						
KNRA	Kununurra	49.56	267	P	P	03 14 19.9	+0.8
KNRA				IAmb	IAmb	03 15 01.9	
	comp=Z,23nm,1.5s						
FITZ	Fitzroy Crossi	51.86	264	P	P	03 14 36.6	+1.0
SBA	Scott Base	56.71	184	P	P	03 15 08.5	-0.1
SBA				IAmb	IAmb	03 15 40.3	
	comp=Z,57nm,1.5s						
JYT	Yasato	69.20	326	P	P	03 16 27.8	-1.2
ILAR	Eielson Array	89.61	13	P	P	03 17 58.7	-17
	comp=Z,0.5nm,1.0s,baz=206,slow=5.6,SNR=2.2						
	comp=Z,0.5nm,1.0s						

GCG ***20*** *03:08:50.5±1.1, 15°.46N×91°.82W, h213^{km}±8^{km}, MD4.2, ML4.9*

CATAC ***20*** *03:08:52.6±0.5, 15°N±3°×9°2W±°, h196^{km}±3^{km}, M4.1/7, MLv4.1/7, Error ellipse: s-maj=6.9km s-min=4.9km az=47.8, confirmed*

NEIC ***20*** *03:08:52.4±1.7, 15°.43N±0°.07×91°.83W±0°.07, h205^{km}±5^{km}, mb4.5/43, Error ellipse: s-maj=11.1km s-min=9.6km az=219.0*

IDC ***20*** *03:08:52.4±0.6, 15°.41N×91°.65W, h213^{km}±3^{km}, mb3.5/11, mbtmp4.1/13, Error ellipse: s-maj=17.0km s-min=7.4km az=50.0*

ISC 20 03:08:52.1±0.5**, 15°.40N**±0°.04×**91°.79W**±0°.05**, h210**^{km}±4^{km}**, n102, σ1^s.52**/115**, mb4.3**/19**, 5C-4D, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUEH	Huehuetenango	0.29	107		Pn	03 09 19.8	-0.3
HUEH				Sn	S	03 09 40.1	-1.7
HUEH	Huehuetenango	0.29	107	⇓*i*P	Pn	03 09 19.8	-0.3
HUEH				*e*S	S	03 09 40.3	-1.6
HUEH				IAML		03 09 42.5	
	comp=E,59μm,0.4s						
HUEH				IAML		03 09 43.8	
	comp=N,45μm,0.4s						
HUEH				IAML		03 09 43.8	
	comp=Z,19μm,0.5s						
HUEH	Huehuetenango	0.29	107	P	Pn	03 09 19.8	-0.3
QUEO	Labor Ovalle	0.59	153	*e*P	Pn	03 09 21.2	+0.1
QUEO				*e*S	S	03 09 43.5	-0.3
QUIS	Sacapulas	0.69	99	⇑*i*P	Pn	03 09 21.0	-0.3
QUIS				*i* S	S	03 09 42.4	-1.6
QUIS				IAML		03 09 43.9	
	comp=N,7μm,0.4s						
SOKI	Kika Raxquin	0.69	147	⇑*i*P	Pn	03 09 21.7	0.0
SOKI				*i* S	S	03 09 46.1	+1.4
SOKI				IAML		03 09 56.7	
	comp=N,6μm,0.6s						
RTAL	Retalhuleu	0.88	174		Pn	03 09 22.1	-0.2
RTAL				Sn	S	03 09 44.9	-0.8
RTAL	Retalhuleu	0.88	174	P	Pn	03 09 22.0	-0.2
RTAL	Retalhuleu	0.88	174	S	S	03 09 44.6	-1.1
STG8	El Palmar, Qui	1.04	156	*i* P	Pn	03 09 20.9	-2.7
STG2	El Palmar, Qui	1.04	157	⇑*e*P	Pn	03 09 20.7	-2.7
STG2				*e*S	S	03 09 46.0	-1.6
STG5	El Palmar, Qui	1.08	157	*i* P	Pn	03 09 20.9	-2.8
APG	El Apazote	1.34	107	P	Pn	03 09 25.1	-0.6
	comp=N,44nm,0.4s,baz=194,slow=12,SNR=658						
APG				S	S	03 09 50.9	-0.6
	comp=N,85nm,0.8s,baz=74,slow=19,SNR=18						
ESSG	Sabana Grande	1.38	137	⇑*i*P	Pn	03 09 25.4	-0.4
ESSG				*e*S	S	03 09 48.9	-2.9
FG16	Alotenango, Sa	1.68	132	*e*P	Pn	03 09 25.6	-2.9
FG16				*e*S	S	03 09 52.1	-4.4
FG16				IAML		03 10 02.7	
	comp=N,13μm,0.5s						
ESSJ	San Jos, E	2.22	145	⇑*e*P	Pn	03 09 29.1	-4.5
ESSJ				*e*S	S	03 09 59.4	-6.3
FAME	Alcaldia de Sa	2.32	132	P	Pn	03 09 34.5	-0.2
FAME	Alcaldia de Sa	2.32	132	S	S	03 10 07.6	+0.1
SLOZ	Alcaldia de Sa	2.38	125	P	Pn	03 09 34.4	-0.9
PETF	Flores	2.38	51		Pn	03 09 35.2	-0.1
PETF	Flores	2.38	51	⇓*i*P	Pn	03 09 35.2	-0.1
PETF	Flores	2.38	51	P	Pn	03 09 35.3	-0.1
PETF	Flores	2.38	51	S	S	03 10 07.4	-1.3
NUBE	Las Nubes	2.46	127	⇓*i*P	Pn	03 09 36.4	0.0
NUBE				*e*S	S	03 10 13.9	+3.5
NUBE	Las Nubes	2.46	127	P	Pn	03 09 36.4	0.0
NUBE	Las Nubes	2.46	127	S	S	03 10 09.4	-1.0
ZAFR2	Estanzuela, Za	2.50	109	*i* P	Pn	03 09 32.7	-3.9
ESQI	Esquipulas	2.51	109		Pn	03 09 37.6	+0.7
ESQI	Esquipulas	2.51	109	P	Pn	03 09 37.4	+0.5
ESQI	Esquipulas	2.51	109	S	S	03 10 11.6	+0.2
MTO3	Montecristo	2.56	113		Pn	03 09 37.9	+0.4
MTO3	Montecristo	2.56	113	P	Pn	03 09 37.6	+0.1
MTO3	Montecristo	2.56	113	S	S	03 10 11.9	-0.6
UNIC	Universidad Ca	2.59	123	P	Pn	03 09 37.8	+0.1
JAYA	Jayaque - finc	2.86	127	P	Pn	03 09 40.8	-0.1
PMON	Piamonte	2.93	125	P	Pn	03 09 42.4	+0.8
CMIG	Matias Romero	3.41	300	P	Pn	03 09 45.8	-1.3
	comp=N,287nm,0.4s,baz=121,slow=11,SNR=1294						
CMIG				S	S	03 10 25.9	-3.9
	comp=N,301nm,0.4s,baz=90,slow=20,SNR=15						
SCIG	Sabancuy	3.59	9	⇓*i*P	Pn	03 09 48.4	-0.9
SCIG				*e*S	S	03 10 31.6	-2.2
SCIG				IAML		03 10 34.8	
	comp=E,293nm,1.0s						
SCIG	Sabancuy	3.59	9	P	Pn	03 09 48.3	-0.9
SCIG	Sabancuy	3.59	9	S	S	03 10 30.8	-3.0
TGUH	Tegucigalpa,Un	4.57	106		Pn	03 10 02.2	+0.7
TEIG	Tepich	5.85	34	P	Pn	03 10 16.6	-1.0
	baz=311,slow=24,SNR=12						
TEIG				S	S	03 11 23.3	-1.8
	comp=E,0.1nm,0.6s,baz=131,slow=24,SNR=1.3						
BOAB	BOACO BROADBAN	6.63	116	Pn	Pn	03 10 28.5	+0.8
SIUN	Universidad Ur	7.00	103		Pn	03 10 32.4	-0.1
JUD3	Juan Diaz 3	8.02	130		Pn	03 10 46.2	+0.5
JTS	Las Juntas de	8.38	126	P	Pn	03 10 50.1	-0.3
	comp=E,12nm,0.4s,baz=310,slow=12,SNR=12						
JTS				S	S	03 12 16.0	-9.0
	comp=E,5.3nm,0.5s,baz=276,slow=19,SNR=1.7						
JTS	Las Juntas de	8.38	126		Pn	03 10 50.5	+0.1
RAFA	San Farael, Vo	9.48	124		Pn	03 11 06.2	+1.3
JRQG	Juriquilla Cam	9.77	304		Pn	03 11 10.2	+1.7
PIRO	Carate, Puerto	10.81	129		Pn	03 11 23.6	+1.9
BRU2	Volcan	11.06	125		Pn	03 11 25.2	+0.2
SOR	Soroa	11.09	47	Pn	Pn	03 11 26.4	+1.3
MTDJ	Mount Denham	13.94	76	P	P	03 12 04.6	+1.9
BRDY	Brady	17.13	339		Pn	03 12 38.6	-0.7
SAND	Sanderson	17.32	328	P	Pn	03 12 41.9	+0.2
OZNA	Ozona	17.65	333		Pn	03 12 46.1	+0.5
OZNA				IAmb	IAmb	03 12 46.9	
	comp=Z,7.9nm,0.6s						
TX31	Lajitas Ar. Si	17.66	324	P	Pn	03 12 46.2	+0.4
TXAR	Lajitas Array	17.66	324	P	Pn	03 12 46.0	+0.3
	comp=Z,2.2nm,0.7s,baz=153,slow=9.5,SNR=29						
TXAR				pP	pP	03 13 20.2	+2.6
	comp=Z,2.6nm,0.9s,baz=147,slow=16,SNR=5.8						
TXAR	Lajitas Array	17.66	324	P	Pn	03 12 46.7	+1.0
PLPT	Palo Pinto	18.32	342	P	Pn	03 12 52.1	-1.2
PLPT				IAmb	IAmb	03 12 52.9	
	comp=Z,19nm,0.5s						
152A	Waverly Hall	18.35	19	P	Pn	03 12 52.9	-0.7
152A				IAmb	IAmb	03 12 57.3	
	comp=Z,11nm,0.6s						
ABTX	Abilene, Hawle	18.57	339	P	P	03 12 53.9	+0.5
ABTX				IAmb	IAmb	03 12 56.0	
	comp=Z,24nm,1.3s						
MNHN	Monahans	18.77	330		Pn	03 12 57.2	-1.4
MNHN				IAmb	IAmb	03 12 58.5	
	comp=Z,14nm,0.9s						
154A	Montrose	18.86	23	P	Pn	03 12 57.5	-2.1
APMT	Aspermont	19.37	339		P	03 13 02.4	+0.3
VHRN	Van Horn	19.51	324		P	03 13 05.3	+1.6
VHRN				IAmb	IAmb	03 13 06.4	
	comp=Z,7.4nm,0.8s						
OTAV	Otavalo	20.02	138		P	03 13 11.2	+1.6
OTAV				IAmb	IAmb	03 13 14.3	
	comp=Z,17nm,1.4s						
ROSC	El Rosal	20.13	120	P	P	03 13 10.5	-0.3
	comp=Z,8.9nm,0.5s,baz=241,slow=22,SNR=4.4						
	comp=Z,8.9nm,0.5s						
ROSC	El Rosal	20.13	120		P	03 13 10.5	-0.3
ROSC				IAmb	IAmb	03 13 16.7	
	comp=Z,12nm,0.7s						
MNTX	Cornudas Mount	20.42	325		P	03 13 14.4	+1.1
SC01	Santiago de lo	20.49	76	P	P	03 13 15.3	+1.2
HODGE	Hodges	20.62	23	IAmb	IAmb	03 13 17.9	
	comp=Z,10nm,0.8s						
RUSC	La Rusia	20.66	115	P	P	03 13 15.4	-1.0
WVT	Waverly	20.94	9	P	P	03 13 18.6	-0.1
WVT				IAmb	IAmb	03 13 19.9	
	comp=Z,14nm,0.5s						
FLOC	Florencia	21.03	129	P	P	03 13 20.6	+0.7
FLOC				IAmb	IAmb	03 13 24.6	
	comp=Z,25nm,1.3s						
TKL	Tuckaleechee C	21.41	18	P	P	03 13 24.3	+0.7
	comp=Z,7.0nm,0.8s,baz=189,slow=11,SNR=12						
	comp=Z,7.0nm,0.8s						
TKL	Tuckaleechee C	21.41	18	IAmb	IAmb	03 13 25.5	
	comp=Z,7.5nm,0.7s						
SDV	Santo Domingo	21.67	105	P	P	03 13 26.4	-0.2
	comp=Z,5.6nm,0.6s,baz=307,slow=6.9,SNR=6.5						
	comp=Z,5.6nm,0.6s						
U49A	Red Boiling Sp	21.70	13	P	P	03 13 26.5	+0.1
U49A				IAmb	IAmb	03 13 28.0	
	comp=Z,14nm,1.1s						
CGM3	Cape Girardeau	21.89	5	IAmb	IAmb	03 13 28.9	
	comp=Z,14nm,0.7s						
SIUC	Southern Illin	22.34	5	P	P	03 13 32.8	+0.2
V55A	Taylorsville	22.45	23	IAmb	IAmb	03 13 35.1	
	comp=Z,11nm,0.8s						
CCM	Cathedral Cave	22.57	1		P	03 13 34.2	-0.4
CCM				IAmb	IAmb	03 13 36.0	
	comp=Z,30nm,1.4s						
R40A	Maddies Statio	22.80	359	P	P	03 13 36.2	-0.5
WCI	Wyandotte Cave	23.25	11		P	03 13 40.6	-0.2
WCI				IAmb	IAmb	03 13 42.2	
	comp=Z,14nm,0.7s						
R49A	Shelbyville	23.54	13	IAmb	IAmb	03 13 44.9	
	comp=Z,8.5nm,0.6s						
P48A	Milroy	24.61	12	IAmb	IAmb	03 13 53.5	
	comp=Z,9.4nm,0.8s						
Q51A	Peebles	24.68	16	IAmb	IAmb	03 13 54.8	
	comp=Z,10nm,0.8s						
PDAR	Pinedale Array	31.24	334	P	P	03 14 52.1	-0.2
	comp=Z,0.2nm,0.6s,baz=147,slow=9.4,SNR=2.4						
	comp=Z,0.2nm,0.6s						
NVAR	Mina Array Bea	32.72	320	P	P	03 15 07.4	+2.2
	comp=Z,2.3nm,0.6s,baz=134,slow=8.0,SNR=24						
NVAR				pP	pP	03 15 49.6	+1.3
	comp=Z,0.9nm,0.7s,baz=134,slow=9.3,SNR=4.6						
NVAR				sP	sP	03 16 14.7	+2.0
	comp=Z,1.2nm,0.9s,baz=133,slow=8.4,SNR=2.9						
	comp=Z,2.3nm,0.6s						
NVAR	Mina Array Bea	32.72	320	P	P	03 15 07.3	+2.0
LPAZ	La Paz	39.21	142	P	P	03 16 00.7	-0.2
	comp=Z,5.7nm,0.6s,baz=335,slow=6.5,SNR=27						
	comp=Z,5.7nm,0.6s						
LPAZ	La Paz	39.21	142		P	03 16 01.1	+0.2
LPAZ				IAmb	IAmb	03 16 01.6	
	comp=Z,5.9nm,0.7s						
YKA	Yellowknife Ar	49.72	346	P	P	03 17 22.1	-0.5
	comp=Z,1.1nm,0.7s,baz=154,slow=7.0,SNR=22						
YKA				pP	pP	03 18 09.0	-0.3
	comp=Z,0.6nm,0.7s,baz=154,slow=7.1,SNR=6.1						
YKA				sP	sP	03 18 31.1	-1.8
	comp=Z,1.5nm,0.8s,baz=152,slow=7.5,SNR=6.9						
	comp=Z,1.1nm,0.7s						
YKA	Yellowknife Ar	49.72	346	P	P	03 17 22.2	-0.3
BDFB	Brasilia	53.12	124	P	P	03 17 46.8	-1.9
	comp=Z,2.5nm,0.6s,baz=322,slow=8.6,SNR=5.2						
	comp=Z,2.5nm,0.6s						
CPUP	Villa Florida	53.33	141	P	P	03 17 47.9	-2.0
	comp=Z,3.8nm,0.9s,baz=270,slow=20,SNR=8.2						
	comp=Z,3.8nm,0.9s						
CPUP	Villa Florida	53.33	141	P	P	03 17 48.4	-1.5
ILAR	Eielson Array	61.64	336	P	P	03 18 46.9	-0.4
	comp=Z,0.1nm,0.4s,baz=123,slow=6.5,SNR=5.1						
ILAR				pP	pP	03 19 35.6	-0.4
	comp=Z,0.3nm,0.7s,baz=131,slow=4.9,SNR=2.9						
	comp=Z,0.1nm,0.4s						
EKA	Eskdalemuir Ar	76.72	36	P	P	03 20 18.5	-1.4
	comp=Z,1.1nm,0.6s,baz=280,slow=5.0,SNR=4.1						
	comp=Z,1.1nm,0.6s						
WRA	Warramunga Arr	135.92	257	PKP	PKPdf	03 27 49.2	+0.4
	comp=Z,0.4nm,0.6s,baz=89,slow=2.9,SNR=1.9						
ASAR	Alice Springs	136.31	252	PKP	PKPdf	03 27 49.2	-0.2
	comp=Z,0.3nm,0.7s,baz=87,slow=1.2,SNR=2.0						

SNET ***20*** *03:21:56.7±1.7, 13°.10N×89°.59W, h59^{km}, ML3.3*

CATAC ***20*** *03:21:57.6±0.4, 13°N±2°×9°0W±°, h29^{km}±2^{km}, M3.6/26, MLv3.6/26, Error ellipse: s-maj=5.1km s-min=2.7km az=34.5, confirmed*

ISC 20 03:21:57.7±1.7**, 13°.08N**±0°.07×**89°.59W**±0°.07**, h40**^{km}±26^{km}**, n63, σ0^s.41**/71**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.49	33	*e*P	Pn	03 22 08.4	0.0
LALI				*e*S	Sn	03 22 16.3	+0.4
LALI	Alcalda de L	0.49	33	P	Pn	03 22 08.4	0.0
JAYA	Jayaque - finc	0.59	14	*e*P	Pn	03 22 09.6	-0.4
JAYA	Jayaque - finc	0.59	14	P	Pn	03 22 09.8	-0.2
JAYA	Jayaque - finc	0.59	14	S	Sn	03 22 18.1	-0.5
PANCS	Alcalda de	0.67	37	S	Sn	03 22 19.5	-0.7
PANCS	Alcalda de	0.67	37	P	Pn	03 22 10.6	-0.2
PMON	Piamonte	0.69	23	P	Pn	03 22 10.8	-0.4
PMON	Piamonte	0.69	23	S	Sn	03 22 21.0	+0.2
LOMA	Loma Larga	0.70	36	P	Pn	03 22 10.9	-0.4
LOMA	Loma Larga	0.70	36	S	Sn	03 22 21.0	-0.1
BOQS	Boqueron	0.72	25	*e*P	Pn	03 22 11.7	-0.1
BOQS				*e*S	Sn	03 22 22.1	+0.3
UEES	Universidad Ev	0.72	28	P	Pn	03 22 11.6	0.0
UEES	Universidad Ev	0.72	28	S	Sn	03 22 21.6	0.0
UTEC	Universidad Te	0.73	31	S	Sn	03 22 21.8	+0.1
CEDA	San Andres	0.75	15	*e*S	Sn	03 22 22.3	+0.2

CEDA	San Andres	0.75	15	S	Sn	03 22 22.4	+0.2
CEDA	San Andres	0.75	15	P	Pn	03 22 11.8	-0.1
CEVE	Cerro Verde	0.75	358	*e*P	Pn	03 22 12.0	-0.1
CEVE	Cerro Verde	0.75	358	P	Pn	03 22 12.2	+0.1
IGN	Direccin Gen	0.76	33	*e*S	Sn	03 22 22.4	0.0
IGN	Direccin Gen	0.76	33	P	Pn	03 22 11.9	-0.2
IGN	Direccin Gen	0.76	33	S	Sn	03 22 22.4	0.0
UDBS	Universidad Do	0.77	34	P	Pn	03 22 12.1	-0.1
UDBS	Universidad Do	0.77	34	S	Sn	03 22 22.7	+0.1
NUBE	Las Nubes	0.84	348	P	Pn	03 22 13.2	-0.2
NUBE	Las Nubes	0.84	348	S	Sn	03 22 24.8	+0.2
FAME	Alcaldia de Sa	0.87	332	P	Pn	03 22 13.5	-0.1
PAVA	Las Pavas	0.90	45	P	Pn	03 22 14.1	0.0
PAVA	Las Pavas	0.90	45	S	Sn	03 22 26.5	+0.6
UNIC	Universidad Ca	0.90	3	P	Pn	03 22 14.2	+0.1
UNIC	Universidad Ca	0.90	3	S	Sn	03 22 26.6	+0.7
TECO	Alcaldia de Te	0.92	60	P	Pn	03 22 13.5	-0.7
TECO	Alcaldia de Te	0.92	60	S	Sn	03 22 25.8	-0.4
UESV	Universidad de	0.96	54	P	Pn	03 22 14.4	-0.4
UESV	Universidad de	0.96	54	S	Sn	03 22 27.0	-0.4
SCLA	Alcaldia de Sa	1.05	53	P	Pn	03 22 15.9	-0.2
LLGN	La Laguna	1.25	30	P	Pn	03 22 18.6	-0.3
LLGN	La Laguna	1.25	30	S	Sn	03 22 34.7	+0.1
PACA	Pacayal	1.30	72	P	Pn	03 22 19.8	+0.2
PACA	Pacayal	1.30	72	S	Sn	03 22 36.3	+0.6
MTO3	Montecristo	1.33	10	S	Sn	03 22 36.8	0.0
MTO3	Montecristo	1.33	10	P	Pn	03 22 19.9	-0.2
CNRM	Centro Naciona	1.44	74	P	Pn	03 22 21.6	+0.2
CNRM	Centro Naciona	1.44	74	S	Sn	03 22 39.5	+0.4
ESQI	Esquipulas	1.50	9	S	Sn	03 22 40.6	-0.1
ESQI	Esquipulas	1.50	9	P	Pn	03 22 22.2	-0.1
CNCH	Conchagua	1.73	83	*e*S	Sn	03 22 48.4	+2.1
CNCH	Conchagua	1.73	83	S	Sn	03 22 46.8	+0.5
CNCH	Conchagua	1.73	83	P	Pn	03 22 25.4	0.0
CSGN	Cosiguina Volc	1.99	93	P	Pn	03 22 29.0	+0.1
CSGN				S	Sn	03 22 52.6	0.0
TGUH	Tegucigalpa,Un	2.46	66	P	Pn	03 22 35.4	-0.1
PKGN	Cerro Pekin	2.58	99	P	Pn	03 22 37.4	+0.3
PKGN				S	Sn	03 23 06.9	-0.4
YUSH	Yuscaran	2.81	72	P	Pn	03 22 40.3	-0.1
CNGA	Al SSO del Vol	2.88	101	P	Pn	03 22 41.4	+0.2
CNGA				S	Sn	03 23 14.1	-0.5
CNGN	Cerro Negro	2.88	101	S	Sn	03 23 14.4	-0.4
CNGN	Cerro Negro	2.88	101	P	Pn	03 22 41.4	+0.2
LEVN	Ruinas Leon Vi	2.98	103	P	Pn	03 22 42.5	-0.1
LEVN				S	Sn	03 23 16.7	-0.4
COPN	Copaltepe	3.06	107	P	Pn	03 22 44.1	+0.4
MOM2	El Cardon	3.10	101	P	Pn	03 22 44.2	0.0
MOM2				S	Sn	03 23 19.1	-0.9
LIMN	Finca el Limon	3.15	90	P	Pn	03 22 45.1	+0.2
LIMN				S	Sn	03 23 21.6	+0.3
NANN	Nandasmo	3.57	108	P	Pn	03 22 50.7	-0.1
NANN	Nandasmo	3.57	108	S	Sn	03 23 31.2	-0.6

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*IDC **20** 03:30:20.3±1.2, 29°.57N×98°.80E, h0^{km}, mb3.6/6, mbtmp3.6/7, ML2.9/1, MS3.0/4, Error ellipse: s-maj=71.1km s-min=19.6km az=60.0*

ISC 20 03:30:25.4±1.3, **29°.6N**±0°.2×**98°.8E**±0°.3, **h35**^{km}, **n11**, σ**0^{s}.99**/7, **mb3.5**/6, **MS2.9**/3, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.11	179	LR	LR	03 37 13.0	
	comp=Z,14nm,20.8s,baz=60,slow=37						
SONM	Songino Array	19.11	16	P	P	03 34 45.1	-0.2
	baz=204,slow=9.5,SNR=4.1						
	1.1nm,0.9s						
MKAR	Makanchi Array	21.42	328	P	P	03 35 09.7	-0.6
	0.6nm,0.7s,baz=122,slow=11,SNR=5.4						
	0.6nm,0.7s						
AAK	Ala-Archa	23.44	310	LR	LR	03 45 56.4	
	comp=Z,42nm,18.9s,baz=280,slow=40						
KURBB	Kurchatov Arra	25.92	330	P	P	03 35 55.7	+1.6
	0.4nm,0.4s,baz=144,slow=8.5,SNR=5.9						
	0.4nm,0.4s						
ZALV	Zalesovo Beam	26.35	341	P	P	03 35 58.7	+0.8
	0.4nm,0.4s,baz=156,slow=11,SNR=2.4						
	0.4nm,0.4s						
BATI	Baumata	46.28	145	LR	LR	03 58 58.5	
	comp=Z,12nm,20.4s,baz=317,slow=37						
FINES	FINESS Array B	56.25	327	P	P	03 40 01.3	-0.6
	4.7nm,1.1s,baz=96,slow=8.5,SNR=2.7						
	4.7nm,1.1s						
WRA	Warramunga Arr	60.02	141	P	P	03 40 28.7	-0.1
	0.6nm,0.6s,baz=330,slow=7.0,SNR=8.0						
	0.6nm,0.6s						
ASAR	Alice Springs	62.82	144	P	P	03 40 47.8	+0.1
	0.2nm,0.5s,baz=327,slow=7.0,SNR=2.4						
	0.2nm,0.5s						
YKA	Yellowknife Ar	84.38	15	LR	LR	04 26 49.1	
	comp=Z,45nm,18.5s,baz=338,slow=40						

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*NEIC **20** 03:41:23.9±2.3, 21°.9S±0°.1×179°.5W±0°.2, h588^{km}±8^{km}, mb4.2/23, Error ellipse: s-maj=21.0km s-min=17.9km az=113.0*

*IDC **20** 03:41:24.5±2.6, 21°.83S×179°.58W, h602^{km}±29^{km}, mb3.4/11, mbtmp4.3/12, Error ellipse: s-maj=18.3km s-min=14.1km az=157.0*

ISC 20 03:41:23.4±0.5, **21°.98S**±0°.09×**179°.52W**±0°.09, **h592**^{km}, **n61**, σ**1^{s}.24**/58, **mb4.1**/23, **3C**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.81	331		P	03 42 54.5	+0.1
MARNC	Mare, Loyalty	11.58	270	P	P	03 43 58.8	+0.9
DZM	Mont Dzumac	13.02	267	P	P	03 44 11.8	-0.8
	9.7nm,0.7s,baz=85,slow=17,SNR=7.4						
URZ	Urewera	16.48	189	P	P	03 44 43.8	-1.5
	7.9nm,0.8s,baz=95,slow=12,SNR=1.0						
URZ				S	S	03 47 23.8	-5.9
	20nm,0.9s,baz=233,slow=23,SNR=6.1						
TUWZ	Tuamarina	20.16	194	P	P	03 45 17.2	-1.4
ARMA	Armidale	27.16	246	P	P	03 46 23.0	+1.9
ARMA				IAmb	IAmb	03 46 47.6	
	comp=Z,11nm,1.2s						
CTAO	Charters Tower	31.96	267	P	P	03 47 03.1	+0.7
STKA	Stephens Creek	35.88	246	P	P	03 47 35.9	+0.9
	comp=Z,3.0nm,0.6s,baz=106,slow=11,SNR=4.0						
	comp=Z,3.0nm,0.6s						
STKA	Stephens Creek	35.88	246	P	P	03 47 36.2	+1.2
AS31	Alice Springs	42.81	258	P	P	03 48 30.6	-0.1
ASAR	Alice Springs	42.81	258	P	P	03 48 31.2	+0.5
	comp=Z,5.1nm,0.8s,baz=92,slow=8.3,SNR=42						
ASAR				PcP	PcP	03 50 08.7	+0.5
	comp=Z,1.4nm,0.7s,baz=105,slow=4.1,SNR=8.3						
ASAR				S	S	03 54 13.2	-0.1
	comp=Z,0.5nm,0.7s,baz=92,slow=14,SNR=5.0						
	comp=Z,5.1nm,0.8s						
ASAR	Alice Springs	42.81	258	P	P	03 48 30.9	+0.2
WR8	Warramunga Arr	42.86	264	P	P	03 48 31.0	-0.1
WR8				IAmb	IAmb	03 48 31.9	
	comp=Z,7.2nm,1.3s						
WRA	Warramunga Arr	43.01	264	P	P	03 48 31.9	-0.4
	comp=Z,4.5nm,0.8s,baz=92,slow=6.5,SNR=23						
	comp=Z,4.5nm,0.8s						
WRA	Warramunga Arr	43.01	264	P	P	03 48 31.6	-0.7
KNRA	Kununurra	49.16	268	P	P	03 49 19.0	+0.2
KNRA				IAmb	IAmb	03 49 19.8	
	comp=Z,6.9nm,0.8s						
VNDA	Vanda	56.32	185	P	P	03 50 11.0	+2.4
	comp=Z,2.4nm,0.9s,baz=7.5,slow=6.8,SNR=2.7						
	comp=Z,2.4nm,0.9s						
VNDA	Vanda	56.32	185	P	P	03 50 11.4	+2.8
VNDA				IAmb	IAmb	03 50 49.7	
	comp=Z,11nm,1.4s						
QSPA	South Pole Qui	68.09	180	P	P	03 51 26.0	+1.1
	comp=Z,4.0nm,0.7s,baz=3.7,slow=1.4,SNR=12						
	comp=Z,4.0nm,0.7s						
QSPA	South Pole Qui	68.09	180	P	P	03 51 26.4	+1.5
QSPA				IAmb	IAmb	03 51 27.3	
	comp=Z,5.8nm,0.9s						
PETK	Petropavlovsk-	77.35	346	P	P	03 52 17.5	-0.4
	comp=Z,5.6nm,0.8s,baz=110,slow=8.7,SNR=4.6						
	comp=Z,5.6nm,0.8s						
PETK	Petropavlovsk-	77.35	346	P	P	03 52 15.9	-1.9
BELA	Belgrano 2	78.27	173	P	P	03 52 22.8	+0.2
BELA				IAmb	IAmb	03 52 23.6	
	comp=Z,5.2nm,1.0s						
CMB	Columbia Colle	81.51	43	P	P	03 52 40.3	+0.2
CLC	China Lake	82.06	46	P	P	03 52 42.9	-0.1
PNTR	Pine Nut	82.63	43	P	P	03 52 46.8	+0.8
PNTR				IAmb	IAmb	03 52 47.4	
	comp=Z,9.9nm,0.9s						
NVAR	Mina Array Bea	83.07	44	P	P	03 52 48.4	+0.2
	comp=Z,2.0nm,0.9s,baz=220,slow=9.9,SNR=11						
	comp=Z,2.0nm,0.9s						
NVAR	Mina Array Bea	83.07	44	P	P	03 52 47.6	-0.5
ILSW	Iliamna Southw	84.47	13	P	P	03 52 53.9	-0.5
L18K	Granite Mounta	85.87	11	P	P	03 53 01.4	+0.4
L18K				IAmb	IAmb	03 53 01.9	
	comp=Z,2.9nm,0.8s						
TROLL	Troll, Antarti	86.24	181	⇑P	P	03 53 02.9	-0.1
	comp=Z,208nm,0.8s						
VNA3	Neumayer Olymp	86.75	177	⇑P	P	03 53 04.7	-0.5
	comp=Z,4.5nm,0.7s						
VNA2	Neumayer--Watz	87.18	177	⇑P	P	03 53 07.4	+0.2
	comp=Z,3.3nm,0.6s,baz=184,slow=4.6						
TRF	Thorofare Moun	88.20	13	P	P	03 53 11.2	-0.9
TRF				IAmb	IAmb	03 53 11.7	
	comp=Z,8.6nm,0.9s						
HVU	Hansel Valley	88.45	43	IAmb	IAmb	03 53 16.2	
	comp=Z,2.9nm,0.8s						
MNTX	Cornudas Mount	88.76	55	IAmb	IAmb	03 53 16.7	
	comp=Z,3.4nm,0.9s						
TXAR	Lajitas Array	89.05	58	P	P	03 53 17.5	+0.7
	comp=Z,1.4nm,0.9s,baz=213,slow=6.2,SNR=13						
	comp=Z,1.4nm,0.9s						
TXAR	Lajitas Array	89.05	58	P	P	03 53 17.8	+1.0
BSUT	Blindstream Ca	89.12	45	IAmb	IAmb	03 53 18.6	
	comp=Z,4.7nm,0.9s						
PLCA	Paso Flores	89.28	134	P	P	03 53 18.5	+0.8
	comp=Z,1.6nm,0.8s,baz=279,slow=1.7,SNR=3.8						
	comp=Z,1.6nm,0.8s						
PLCA	Paso Flores	89.28	134	IAmb	IAmb	03 53 19.1	
	comp=Z,3.9nm,1.1s						
PLCA				P	P	03 53 19.1	+1.4
ILAR	Eielson Array	90.07	13	P	P	03 53 19.3	-1.2
	comp=Z,0.6nm,0.6s,baz=220,slow=4.7,SNR=9.6						
	comp=Z,0.6nm,0.6s						
ILAR	Eielson Array	90.07	13	P	P	03 53 19.5	-1.0
PDAR	Pinedale Array	91.01	44	P	P	03 53 25.0	-0.7
	comp=Z,0.3nm,0.6s,baz=199,slow=3.1,SNR=5.0						
	comp=Z,0.3nm,0.6s						
PDAR	Pinedale Array	91.01	44	P	P	03 53 25.7	0.0
MKAR	Makanchi Array	111.18	313	PKiKP	PKiKP	03 58 49.2	-1.4
	comp=Z,0.3nm,0.4s,baz=82,slow=3.1,SNR=4.7						
BVAR	Borovoye Array	119.29	319	PKP	PKPdf	03 59 05.0	-0.9
	comp=Z,1.6nm,0.4s,baz=111,slow=2.1,SNR=7.3						
SPITS	Spitsbergen Ar	123.25	356	PKP	PKPdf	03 59 11.9	-1.0
	comp=Z,2.9nm,0.7s,baz=358,slow=4.3,SNR=1.4						
ARCES	ARCESS Array B	130.11	349	PKP	PKPdf	03 59 25.2	-1.0
	comp=Z,1.5nm,0.6s,baz=0.1,slow=1.4,SNR=12						
FINES	FINESS Array B	136.77	342	PKP	PKPdf	03 59 39.2	+0.4
	comp=Z,1.5nm,0.7s,baz=47,slow=1.9,SNR=7.2						
HFS	Hagfors	140.76	350	PKhKP	PKPpre	03 59 38.6	
	comp=Z,1.2nm,0.3s,baz=47,slow=4.6,SNR=22						
AKASG	Malin Array Be	143.58	329	PKP	PKPab	03 59 49.0	-1.3
	comp=Z,1.7nm,0.3s,baz=44,slow=4.2,SNR=17						
AKBB	Malin Array Si	143.58	329		PKPab	03 59 49.5	-0.9
KIEV	Kiev	143.60	329		PKPab	03 59 49.6	-0.8
EKA	Eskdalemuir Ar	146.59	4	PKPbc	PKPbc	03 59 58.5	-0.5
	comp=Z,1.3nm,0.5s,baz=11,slow=3.8,SNR=5.3						
BRTR	Keskin Array B	146.74	310	PKPbc	PKPbc	03 59 59.8	-0.4
	comp=Z,1.8nm,0.7s,baz=90,slow=3.5,SNR=13						
BRTR	Keskin Array B	146.74	310		PKPbc	04 00 00.1	-0.1
MMAI	Mount Meron Ar	147.27	297	PKPbc	PKPbc	04 00 02.2	+0.5
	comp=Z,2.5nm,0.5s,baz=72,slow=6.2,SNR=7.2						
BUR08	Bucovina Ar. S	147.60	328		PKPbc	04 00 02.3	+0.2
GERES	GERESS Array B	151.20	342	PKPbc	PKPbc	04 00 10.1	-0.5
	comp=Z,1.5nm,0.6s,baz=15,slow=5.5,SNR=4.6						
TORD	Torodi Ar. Bea	171.14	188	PKP	PKPdf	04 00 24.5	-0.8
	comp=Z,0.6nm,0.7s,baz=172,slow=0.5,SNR=4.1						
TORD				PKPab	PKPab	04 01 48.5	-0.5
	comp=Z,0.7nm,0.8s,baz=165,slow=2.5,SNR=3.6						

KRSC 20 03:42:03.4±1.2, **48°.56N**×**157°.27E**, **h24**^{km}±32^{km}, **Ml3.8**, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	Pauzhetka	2.92	354	*e*S	Sn	03 43 25.1	+2.5
KDTR	Khodutka, Kamc	3.29	9	*e*P	Pn	03 42 57.0	+3.7
KDTR				*e*S	Sb	03 43 36.5	-4.1
ASAK	Asacha	3.84	6	*e*P	Pn	03 43 05.3	+4.3
RUS	Russkaya	3.95	11	*e*P	Pn	03 43 06.9	+4.4
RUS				*e*S	Sn	03 43 53.4	+5.4
MTVR	Mutnovka	3.97	8	*e*P	Pn	03 43 06.9	+4.1
MTVR				*e*S	Sn	03 43 53.6	+5.0
GRL	Gorelyy	4.03	7	*e*P	Pn	03 43 07.7	+4.1
GRL				*e*S	Sn	03 43 55.3	+5.3
DALK	Dalny	4.57	11	*e*P	Pn	03 43 15.0	+4.0
DALK				*e*S	Sn	03 44 08.3	+5.1
UGLR	Uglovaya	4.75	11	*e*P	Pn	03 43 18.1	+4.6
AVH	Avacha	4.80	11	*e*P	Pn	03 43 19.1	+4.9
SMAR	Somma	4.80	11	*e*P	Pn	03 43 18.4	+4.0
KOK	Koryaka	4.81	10	*e*P	Pn	03 43 19.6	+5.3
SDLR	Sedlovina	4.83	12	*e*P	Pn	03 43 17.7	+3.0
KRX	Arik	4.88	10	*e*P	Pn	03 43 20.0	+4.7

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*IDC **20** 03:45:49.8±0.7, 6°.48N×125°.31E, h0^{km}, mb4.0/14, mbtmp4.0/14, MS2.9/2, Error ellipse: s-maj=19.4km s-min=8.8km az=109.0*

*NEIC **20** 03:45:52.2±1.8, 6°.60N±0°.07×125°.3E±0°.1, h10^{km}±1^{km}, mb4.6/34, Error ellipse: s-maj=20.7km s-min=5.9km az=120.0*

*DJA **20** 03:45:53.1±0.5, 7°N±4°×12°5E±°, h10^{km}, M4.7/10, mb4.8/10, mB5.1/3, MLv4.7/7, Mw(mB)4.5/3*

ISC 20 03:45:52.2±0.5, **6°.63N**±0°.05×**125°.24E**±0°.07, **h10**^{km}, **n62**, σ**1^{s}.60**/53, **mb4.5**/32, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.55	37	Pg	Pg	03 46 02.6	-0.3
	675nm,0.3s,baz=256,slow=2.2,SNR=23						
DAV				Lg	Lg	03 46 11.3	
	1μm,0.3s,baz=298,slow=24,SNR=9.8						
DAV	Davao City (W)	0.55	37		Pg	03 46 02.6	-0.3
DAV				Sg	Sg	03 46 10.4	+0.2
DAV	Davao City (W)	0.55	37	P	Pg	03 46 02.7	-0.2
DAV	Davao City (W)	0.55	37	P	Pg	03 46 02.0	-0.9
SGSI	Sangihe	2.94	174	P	Pn	03 46 40.8	+1.9
SGSI				S	Sn	03 47 16.1	+1.8
TNTI	Ternate	6.19	160	P	Pn	03 47 25.2	+1.5
	0.2nm45nm,0.9s						
GTOI	Gorontalo	6.36	201	P	Pn	03 47 25.5	-0.5
	0.5nm1μm179nm,0.8s						
MRSI	Marisa	6.94	208	P	Pn	03 47 36.3	+2.3
	0.4nm972nm70nm,0.6s						
TOLI2	Tolitoli	7.06	219		Pn	03 47 32.1	-3.6
LUWI	Luwuk	8.01	198		Pn	03 47 48.6	0.0
LUWI	Luwuk	8.01	198	P	Pn	03 47 50.7	+2.0
	92nm,0.9s						
MPSI	Mapaga	8.21	221	P	Pn	03 47 53.9	+2.4
APSI	Ampana	8.30	206	P	Pn	03 47 55.6	+2.9
	67nm,0.9s						
SANI	Sanana	8.65	175	P	Pn	03 47 56.6	-0.9
	18nm,0.8s						
NLAI	Namlea	9.97	169	P	Pn	03 48 15.1	-0.6
KNRA	Kununurra	22.43	171	P	P	03 50 50.8	-0.6
KNRA				IAmb	IAmb	03 50 53.3	
	comp=Z,15nm,0.7s						
KULM	Kulim	24.49	268	P	P	03 51 07.8	-4.1
KULM				IAmb	IAmb	03 51 13.7	
	comp=Z,28nm,1.4s						
FITZ	Fitzroy Crossi	24.57	179	P	P	03 51 11.0	-1.5
WB0	Warramunga Arr	27.73	161	P	P	03 51 37.9	-3.2
WRA	Warramunga Arr	27.88	161	P	P	03 51 40.3	-2.1
	comp=Z,1.6nm,0.9s,baz=328,slow=11,SNR=8.5						
	comp=Z,1.6nm,0.9s						
WR8	Warramunga Arr	27.94	161	P	P	03 51 40.1	-2.9
CMAR	Chiang Mai Arr	28.19	297	P	P	03 51 46.8	+1.6
	comp=Z,1.4nm,0.3s,baz=138,slow=6.8,SNR=5.1						
CMAR				LR	LR	04 02 48.8	
	comp=Z,22nm,19.8s,baz=115,slow=36						
	comp=Z,1.4nm,0.3s						
KSRS	Korea Array	30.78	4	LR	LR	04 04 40.9	
	comp=Z,24nm,21.1s,baz=120,slow=37						
ASAR	Alice Springs	31.27	165	P	P	03 52 10.7	-1.8
	comp=Z,1.0nm,0.6s,baz=353,slow=9.1,SNR=17						
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	31.27	165	P	P	03 52 11.4	-1.1
LZDM	Lanzhou Array	35.25	329	P	P	03 52 48.3	+0.9
	comp=Z,0.7nm,0.4s,baz=142,slow=5.4,SNR=1.2						
	comp=Z,0.7nm,0.4s						
SHL	Shillong	37.00	304	P	P	03 53 03.0	+0.5
SHL				IAmb	IAmb	03 53 08.2	
	comp=Z,7.0nm,0.6s						
INKA	Innaminka	37.31	157	P	P	03 53 03.2	-1.5
USRK	Ussuriysk Ar.	37.89	8	P	P	03 53 08.8	-0.6
	comp=Z,3.1nm,0.9s,baz=194,slow=11,SNR=3.6						
	comp=Z,3.1nm,0.9s						
BBOO	Buckleboo	40.55	166	P	P	03 53 30.4	-1.4
STKA	Stephens Creek	41.35	159	P	P	03 53 36.3	-2.1
	comp=Z,2.4nm,0.6s,baz=344,slow=12,SNR=5.0						
	comp=Z,2.4nm,0.6s						
STKA	Stephens Creek	41.35	159	P	P	03 53 37.0	-1.4
SONM	Songino Array	44.10	342	P	P	03 54 02.3	+1.5
	comp=Z,0.5nm,0.8s,baz=157,slow=8.6,SNR=1.5						
	comp=Z,0.5nm,0.8s						
CAN	Canberra	47.35	153	P	P	03 54 27.9	+1.4
PEA0B	Petropavlovsk-	53.36	24	P	P	03 55 13.4	+1.7
PETK	Petropavlovsk-	53.36	24	P	P	03 55 12.1	+0.4
	comp=Z,3.7nm,0.8s,baz=227,slow=6.9,SNR=2.1						
	comp=Z,3.7nm,0.8s						
PETK	Petropavlovsk-	53.36	24	P	P	03 55 13.5	+1.8
MKAR	Makanchi Array	54.35	325	P	P	03 55 19.7	+0.6
	comp=Z,0.5nm,0.5s,baz=116,slow=6.6,SNR=7.8						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	54.35	325	P	P	03 55 18.9	-0.2
ZALV	Zalesovo Beam	57.35	333	P	P	03 55 40.0	-0.5
	comp=Z,0.4nm,0.3s,baz=98,slow=8.9,SNR=2.2						
	comp=Z,0.4nm,0.3s						
KURBB	Kurchatov Arra	58.52	327	P	P	03 55 48.5	-0.2
	comp=Z,0.5nm,0.2s,baz=123,slow=6.8,SNR=5.0						
	comp=Z,0.5nm,0.2s						
KURK	Kurchatov	58.52	327	P	P	03 55 49.0	+0.3
GAR	Garm	58.89	312	P	P	03 55 51.7	-0.1
GAR				IAmb	IAmb	03 56 05.4	
	comp=Z,10nm,1.1s						
KKAR	Karatay Array	60.12	316	P	P	03 55 59.1	-0.9
BVAR	Borovoye Array	64.10	327	P	P	03 56 25.2	-1.3
	comp=Z,0.5nm,0.4s,baz=104,slow=6.3,SNR=3.8						
	comp=Z,0.5nm,0.4s						
C16K	Lisburne Hills	76.32	21	P	P	03 57 40.8	-0.2
C16K				IAmb	IAmb	03 57 43.9	
	comp=Z,7.6nm,1.1s						
C18K	Utukok River	77.90	21	P	P	03 57 50.5	+0.5
C18K				IAmb	IAmb	03 58 22.0	
	comp=Z,5.5nm,1.2s						
C19K	Lookout Ridge	78.57	21	P	P	03 57 54.5	+0.7
C19K				IAmb	IAmb	03 58 21.7	
	comp=Z,11nm,1.4s						
B21K	Ikpikpuk River	80.39	20	IAmb	IAmb	03 58 05.8	
	comp=Z,5.0nm,0.8s						
B22K	Teshekpuk Lake	80.88	20	IAmb	IAmb	03 58 08.7	
	comp=Z,6.1nm,0.8s						
L22K	Petersville	81.38	28	IAmb	IAmb	03 58 10.8	
	comp=Z,9.0nm,1.0s						
COLD	Coldfoot	81.82	23	IAmb	IAmb	03 58 14.8	
	comp=Z,4.8nm,1.1s						
TOLK	Toolik Lake Re	82.11	22	IAmb	IAmb	03 58 19.0	
	comp=Z,5.4nm,0.9s						
H24K	Noodor Dome	82.72	24	P	P	03 58 16.9	+0.8
H24K				IAmb	IAmb	03 58 20.0	
	comp=Z,3.2nm,0.7s						
IL31		83.14	26	IAmb	IAmb	03 58 29.5	
	comp=Z,5.3nm,1.4s						
ILAR	Eielson Array	83.14	26	P	P	03 58 16.5	-1.7
	comp=Z,1.4nm,0.7s,baz=248,slow=4.2,SNR=24						
	comp=Z,1.4nm,0.7s						
ILAR	Eielson Array	83.14	26	P	P	03 58 16.9	-1.3
H27K	Steamboat Moun	85.29	24	IAmb	IAmb	03 59 10.9	
	comp=Z,9.5nm,1.5s						
F28M	Old Crow	85.78	22	IAmb	IAmb	03 58 35.0	
	comp=Z,3.3nm,0.8s						
E28M	Babbage River	85.79	21	IAmb	IAmb	03 58 35.2	
	comp=Z,7.9nm,1.4s						
G29M	Pine Creek	86.59	23	IAmb	IAmb	03 58 40.0	
	comp=Z,4.4nm,0.9s						
YKA	Yellowknife Ar	97.48	24	P	P	03 59 26.0	-0.2
	comp=Z,0.3nm,0.7s,baz=301,slow=5.3,SNR=5.2						
	comp=Z,0.3nm,0.7s						

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*BEO **20** 03:54:11.4±0.3, 43°.23N×17°.98E, h7^{km}±2^{km}, ML2.5/15*

*RHSSO **20** 03:54:11.9±0.5, 43°.18N×18°.02E, h9^{km}, ML2.8/4*

*PDG **20** 03:54:11.3±0.0, 43°.21N×17°.98E, h14^{km}, MD2.8/1, ML2.7/12, Error ellipse: s-maj=0.1km s-min=0.1km az=90.0*

*VIE **20** 03:54:15.5±0.9, 43°.63N×18°.29E, h8^{km}, mb2.8/6, ml2.4/5, Error ellipse: s-maj=21.0km s-min=6.6km az=57.0 24 km SSW of Sarajevo*

ISC 20 03:54:11.2±1.0, **43°.22N**±0°.02×**18°.00E**±0°.02, **h5**^{km}±9^{km}, **n57**, σ**0^{s}.87**/102, **3C**, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	Ston	0.41	213	*e*Pg	Pg	03 54 18.8	-0.4
STON				Sg	Sg	03 54 24.4	-0.1
STON	Ston	0.41	213	*e*Pg	Pg	03 54 18.9	-0.3
STON				*e*Sg	Sg	03 54 24.9	+0.3
KLINJ	Klinje	0.43	97	*e*Pg	Pg	03 54 19.1	-0.4
KLINJ				*e*Sg	Sb	03 54 27.0	-1.1
BRY	Bratogost	0.51	129	*e*Pg	Pg	03 54 20.9	-0.1
BRY				*i* Sg	Sg	03 54 29.1	+1.6
DBRK	Dubrovnik	0.56	169	*e*Pg	Pg	03 54 21.7	-0.3
DBRK				Sg	Sg	03 54 29.7	+0.4
TREB	Trebinje	0.56	153	⇑*i*Pg	Pg	03 54 21.4	-0.6
TREB				*e*Sg	Sg	03 54 30.0	+0.6
TREB	Trebinje	0.56	153	*e*Pg	Pg	03 54 21.4	-0.6
TREB				*e*Sg	Sg	03 54 30.2	+0.8
UPM	Unac-Piva	0.66	91	*e*Pg	Pg	03 54 24.0	+0.1
UPM				*i* Sg	Sb	03 54 34.7	-0.1
RICI	Ricice	0.69	294	*e*Pg	Pg	03 54 24.1	-0.4
RICI				Sg	Sg	03 54 35.0	+1.5
MAKA	Makarska	0.72	276	*e*Pg	Pg	03 54 24.1	-1.0
MAKA				Sg	Sg	03 54 34.9	+0.5
NKME	Niksic	0.83	123	*e*Pg	Pg	03 54 26.4	-0.8
NKME				*e*Sg	Sb	03 54 40.2	+0.6
LSTV	Lastovo	0.93	241	*e*Pg	Pg	03 54 27.8	-1.3
LSTV				Sg	Sg	03 54 40.7	-0.5
CEME	Cevo	0.95	135	*e*Pg	Pg	03 54 28.7	-0.8
CEME				*e*Sg	Sb	03 54 44.1	+1.0
PLE	Pljevlja	1.02	83	*e*Pg	Pg	03 54 30.8	+0.1
PLE	Pljevlja	1.02	83	*e*Pg	Pg	03 54 30.5	-0.2
PLE				*i* Sg	Sn	03 54 46.8	-0.2
RUDO	Rudo	1.07	68	⇑*i*Pg	Pg	03 54 31.1	-0.7
RUDO				*e*Sg	Sg	03 54 45.8	+0.1
RUDO	Rudo	1.07	68	*e*Pg	Pg	03 54 30.9	-0.9
RUDO				*e*Sg	Sg	03 54 45.2	-0.5
BUM	Brajici-Budva	1.13	144	*e*Pg	Pg	03 54 32.2	-0.7
BUM				*i* Sg	Sn	03 54 50.0	+0.4
HVAR	Hvar	1.14	268	*e*Pg	Pb	03 54 31.9	-1.5
HVAR				Sg	Sg	03 54 46.7	-1.1
KOME	Kolasin	1.17	108	*e*Pg	Pb	03 54 33.1	-0.8
KOME	Kolasin	1.17	108	*e*Pg	Pb	03 54 33.1	-0.8
KOME				*e*Sg	Sn	03 54 51.6	+1.0
BBLS	Lazi&#263i	1.21	57	*e*Pg	Pb	03 54 34.1	-0.5
BBLS				*e*Sg	Sn	03 54 50.9	-0.7
PDG	Podgorica	1.21	130	*e*Pg	Pb	03 54 32.9	-1.7
PDG				*e*Sg	Sn	03 54 52.0	+0.4
PDG	Podgorica	1.21	130	*e*Pg	Pb	03 54 33.8	-0.8
PDG				*i* Sg	Sn	03 54 52.9	+1.3
DRME	Dracevica, Mon	1.35	140	*e*Pg	Pn	03 54 36.3	-0.4
DRME				*e*Sg	Sg	03 54 57.1	+2.5
KIJV	Kijevo	1.40	305	*e*Pn	Pb	03 54 38.5	+0.6
KIJV				Sg	Sg	03 54 57.6	+1.4
BEY	Berane	1.43	103	*e*Pg	Pn	03 54 38.0	+0.1
IVA	Berane	1.43	103	⇑*i*Pg	Pn	03 54 37.9	+0.1
IVA				*i* Sg	Sg	03 54 59.3	+2.2
SJES	Sjenica	1.44	88	*e*Pg	Pn	03 54 38.3	+0.3
SJES				*e*Sg	Sg	03 54 58.6	+1.1
ULC	Ulcinj	1.56	143	*e*Pg	Pn	03 54 39.6	+0.1
ULC				*i* Sg	Sg	03 55 02.0	+0.8
PVY	Plav	1.57	113	*e*Pg	Pn	03 54 40.0	+0.2
PVY	Plav	1.57	113	*e*Pn	Pn	03 54 40.0	+0.2
PVY				*i* Sn	Sg	03 55 02.6	+1.1
IVAS	Ivanjica	1.61	76	*e*Pg	Pn	03 54 39.7	-0.6
IVAS				*e*Sg	Sb	03 55 01.8	-0.2
BLY	Banja Luka	1.64	339	*e*Pn	Pb	03 54 41.7	-0.2
BLY				*e*Sn	Sb	03 55 02.8	-0.1
BLY	Banja Luka	1.64	339	*e*Pg	Pb	03 54 42.1	+0.2
BLY				*e*Sg	Sb	03 55 03.5	+0.6
DIVS	Divibare	1.69	58	*e*Pg	Pn	03 54 41.1	-0.3
DIVS				*e*Sg	Sg	03 55 05.0	-0.5
TEKS	Tekeris	1.73	39	*e*Pn	Pn	03 54 40.8	-1.1
TEKS				*e*Sn	Sn	03 55 03.5	-0.8
ZIRJ	Zirje	1.77	285	*e*Pn	Pn	03 54 42.6	+0.1

ZIRJ				Sn	**Sn**	**03 55 05.6**	**+0.2**
MORI	**Morici**	**1.79**	**292**	*e*Pn	**Pn**	**03 54 43.4**	**+0.7**
MORI				Sn	**Sn**	**03 55 06.6**	**+0.7**
GRUS	**Gruza**	**2.08**	**70**	*e*Pn	**Pn**	**03 54 45.8**	**-1.0**
GRUS				*e*Sn	**Sn**	**03 55 12.8**	**-0.2**
GOCS	**Kraljevo Serbi**	**2.12**	**80**	*e*Pn	**Pn**	**03 54 47.1**	**-0.3**
GOCS				*e*Sn	**Sn**	**03 55 13.3**	**-0.8**
DUGI	**Dugi Otok**	**2.27**	**291**	*e*Pn	**Pn**	**03 54 49.7**	**+0.3**
DUGI				Sn	**Sn**	**03 55 17.4**	**-0.4**
SELS	**Selova**	**2.28**	**89**	*e*Pn	**Pn**	**03 54 50.0**	**+0.5**
FRGS	**Fruska Gora**	**2.33**	**33**	*e*Pn	**Pn**	**03 54 49.7**	**-0.5**
VIRC	**Vir**	**2.39**	**298**	*e*Pn	**Pn**	**03 54 51.6**	**+0.7**
VIRC				Sn	**Sn**	**03 55 20.0**	**-0.7**
BOVS	**Bovan**	**2.73**	**80**	*e*Pn	**Pn**	**03 54 56.4**	**+0.8**
BARS	**Barje**	**2.82**	**97**	*e*Pn	**Pn**	**03 54 57.5**	**+0.5**
BARS				*e*Sn	**Sn**	**03 55 32.4**	**+1.0**
BOJS	**Bojanci**	**3.02**	**320**	*e*Pn	**Pn**	**03 54 59.6**	**0.0**
BOJS				*e*Sn	**Sn**	**03 55 35.8**	**-0.3**
MORH	**Mrgy, Hungar**	**3.03**	**8**	*e*Pn	**Pn**	**03 55 00.8**	**+1.0**
MORH				*e*Sn	**Sn**	**03 55 37.3**	**+0.9**
ZAGS	**Zajecar**	**3.13**	**78**	*e*Pn	**Pn**	**03 55 01.7**	**+0.5**
ZAGS				*e*Sn	**Sn**	**03 55 37.8**	**-1.2**
ZAPS	**Zavoj**	**3.38**	**88**	*e*Pn	**Pn**	**03 55 05.2**	**+0.5**
ZAPS				*e*Sn	**Sn**	**03 55 44.2**	**-1.0**
OBKA	**Obir**	**4.10**	**324**	*e*Pn	**Pn**	**03 55 16.6**	**+2.0**
	0.4nm,0.3s						
ARSA	**Arzberg**	**4.39**	**337**	*e*Pn	**Pn**	**03 55 18.8**	**+0.3**
	0.9nm,0.3s						
ARSA				*i* Sn	**Sn**	**03 56 08.8**	**-1.3**
	0.7nm,0.3s						
ABTA	**Abfaltersbach**	**5.25**	**314**	*e*Pn	**Pn**	**03 55 32.6**	**+2.2**
	0.6nm,0.4s						
MOA	**Molln**	**5.32**	**332**	*i* Pn	**Pn**	**03 55 31.9**	**+0.6**
	0.4nm,0.2s						
LESA	**Schwarzleotal**	**5.64**	**320**	*e*Pn	**Pn**	**03 55 37.4**	**+1.7**
	1.1nm,0.5s						
WTTA	**Wattenberg**	**6.04**	**314**	*i* Pn	**Pn**	**03 55 42.5**	**+1.1**
	0.6nm,0.2s						

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*MOS **20** 04:00:19.6, 40°.20N×47°.41E, h12^{km}, MPVA3.7*
*AZER **20** 04:00:21.8, 40°.18N×47°.13E, h24^{km}, ml3.2*
*TIF **20** 04:00:21.8, 40°.19N×47°.11E, h30^{km}±1^{km}*
*NSSP **20** 04:00:22.2, 40°.18N×47°.00E, h10^{km}, Ms3.0*
*TEH **20** 04:00:22.3, 40°.09N×47°.23E, h10^{km}±85^{km}*
*DRS **20** 04:00:24.1, 40°.18N×47°.39E, h0^{km}*
ISC 20 04:00:23.3±0.9, **40°.17N**±0°.02×**47°.15E**±0°.02, **h29**^{km}±5^{km}, **n65**, σ1^{s}.**32**/120, **2C-4D**, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGDM	**Agdam**	**0.07**	**207**	P	**Pb**	**04 00 27.3**	**-1.0**
AGDM				S	**Sb**	**04 00 31.8**	**0.0**
BRDA	**Brd**	**0.10**	**14**	P	**Pb**	**04 00 27.4**	**-1.0**
BRDA				S	**Sb**	**04 00 32.7**	**+0.8**
ZRD	**Zardab**	**0.42**	**75**	P	**Pb**	**04 00 32.1**	**-0.3**
ZRD				S	**Sn**	**04 00 41.1**	**+0.8**
BLQ	**Beylaqan**	**0.55**	**145**	P	**Pb**	**04 00 33.9**	**-0.5**
BLQ				S	**Sn**	**04 00 43.0**	**-0.4**
MNGR	**Mingechevir, A**	**0.61**	**355**	P	**Pb**	**04 00 34.4**	**-0.9**
MNGR				S	**Sb**	**04 00 44.0**	**+0.4**
QRD	**Qoradiz**	**0.72**	**169**	P	**Pb**	**04 00 36.7**	**-0.5**
QRD				S	**Sn**	**04 00 47.7**	**+0.2**
GANJ	**Ganja**	**0.79**	**307**	P	**Pn**	**04 00 36.2**	**-2.3**
GANJ				S	**Sb**	**04 00 47.1**	**-1.8**
KDMR	**Kurdemir**	**0.82**	**75**	P	**Pn**	**04 00 38.1**	**-0.7**
KDMR				S	**Sn**	**04 00 51.5**	**+1.5**
QBL	**Gabala**	**0.94**	**34**	P	**Pn**	**04 00 39.5**	**-1.1**
QBL				S	**Sb**	**04 00 53.0**	**-0.1**
IML	**Ismayilli**	**1.00**	**51**	P	**Pn**	**04 00 40.5**	**-1.0**
IML				S	**Sb**	**04 00 54.8**	**-0.2**
SAAT	**Saatly**	**1.03**	**107**	P	**Pn**	**04 00 40.0**	**-1.7**
SAAT				S	**Sn**	**04 00 54.0**	**-1.1**
SEKA	**Sheki**	**1.04**	**2**	P	**Pn**	**04 00 40.6**	**-1.4**
SEKA				S	**Sn**	**04 00 54.8**	**-0.8**
AYRK	**Ayrk**	**1.04**	**268**	⇓*i*P	**Pn**	**04 00 41.4**	**-0.8**
AYRK				⇓*i*S	**Sn**	**04 00 55.3**	**-0.6**
EGVZ	**Egvard**	**1.05**	**207**	⇓*i*P	**Pn**	**04 00 42.0**	**-0.2**
EGVZ				⇑*i*S	**Sb**	**04 00 56.6**	**+0.2**
GDB	**GEDABAY**	**1.20**	**298**	P	**Pn**	**04 00 43.1**	**-1.2**
GDB				S	**Sn**	**04 00 58.8**	**-0.8**
VSHL	**Vashlovani**	**1.20**	**332**	P	**Pn**	**04 00 44.4**	**+0.2**
VSHL				S	**Sb**	**04 01 02.9**	**+2.2**
XNQ	**Khinaliq**	**1.25**	**37**	P	**Pn**	**04 00 43.9**	**-1.2**
XNQ				S	**Sn**	**04 01 00.7**	**-0.4**
PQL	**Pirkuli**	**1.26**	**60**	P	**Pn**	**04 00 45.2**	**0.0**
PQL				S	**Sb**	**04 01 03.0**	**+0.5**
GLBA	**Clilabad**	**1.33**	**134**	Pn	**Pb**	**04 00 46.4**	**-1.2**
GLBA				Sn	**Sb**	**04 01 05.7**	**+1.4**
AKT	**Akhty**	**1.38**	**18**	*e*Pg	**Pn**	**04 00 46.0**	**-0.7**
AKT				*e*Sg	**Sn**	**04 01 04.8**	**+0.7**
VAYK	**Vayk**	**1.41**	**251**	*i* P	**Pb**	**04 00 48.0**	**-0.9**
VAYK				*i* S	**Sb**	**04 01 06.7**	**+0.2**
GBS	**Qobustan**	**1.42**	**74**	Pn	**Pb**	**04 00 48.8**	**-0.3**
GBS				Sn	**Sb**	**04 01 09.6**	**+2.8**
ALIB	**&Aumlli-Bayram**	**1.44**	**98**	Pn	**Pb**	**04 00 49.2**	**-0.2**
ALIB				Sn	**Sb**	**04 01 07.4**	**0.0**
SBZ	**Shahbuz**	**1.45**	**238**	Pn	**Pn**	**04 00 48.1**	**+0.4**
SBZ				Sn	**Sb**	**04 01 08.5**	**+0.7**
GRMI	**Germi**	**1.48**	**157**	Pg	**Pn**	**04 00 48.5**	**+0.5**
YRD	**Yardimli**	**1.51**	**146**	Pn	**Pn**	**04 00 49.0**	**+0.4**
YRD				Sn	**Sb**	**04 01 09.5**	**0.0**
ZKTA	**Zakatala**	**1.52**	**345**	Pn	**Pn**	**04 00 48.6**	**+0.1**
ZKTA				Sn	**Sb**	**04 01 09.6**	**-0.2**
ORD	**Ordubad**	**1.53**	**216**	Pn	**Pb**	**04 00 49.7**	**-1.2**
ORD				Sn	**Sb**	**04 01 09.5**	**-0.4**
ATGJ	**Altiaghaj**	**1.53**	**63**	Pn	**Pb**	**04 00 50.1**	**-0.9**
ATGJ				Sn	**Sb**	**04 01 11.8**	**+1.7**
QUBA	**Quba, Azerbaij**	**1.56**	**40**	Pn	**Pn**	**04 00 50.1**	**+0.9**
QUBA				Sn	**Sb**	**04 01 11.2**	**+0.2**
QSAR	**Qusar**	**1.59**	**32**	Pn	**Pb**	**04 00 50.6**	**-1.4**
QSAR				Sn	**Sb**	**04 01 11.6**	**-0.1**
SIZA	**Siyzn**	**1.61**	**55**	Pn	**Pb**	**04 00 51.2**	**-1.2**
SIZA				Sn	**Sb**	**04 01 13.8**	**+1.4**
KSMR	**Kasumkent**	**1.61**	**27**	*e*Pg	**Pn**	**04 00 49.0**	**-0.9**
KSMR				*e*Sg	**Sn**	**04 01 10.0**	**+0.3**
NAX	**Nakhchivan**	**1.62**	**233**	Pg	**Pb**	**04 00 52.6**	**+0.1**
NAX				Sg	**Sb**	**04 01 14.2**	**+1.7**
QZX	**Qazax, Azerbai**	**1.62**	**304**	Pn	**Pn**	**04 00 50.1**	**+0.2**
QZX				Sn	**Sb**	**04 01 12.1**	**-0.4**
LSVT	**Lusahovit**	**1.67**	**297**	⇑*i*P	**Pn**	**04 00 51.1**	**+0.4**
LSVT				⇓*i*S	**Sn**	**04 01 12.3**	**+1.1**
LRK	**Lerik**	**1.78**	**148**	Pn	**Pb**	**04 00 53.7**	**-1.7**
LRK				Sn	**Sb**	**04 01 16.6**	**-0.7**
LGD	**Lagodekhi**	**1.80**	**338**	P	**Pn**	**04 00 53.0**	**+0.6**
LGD				S	**Sb**	**04 01 18.2**	**+0.4**
HYR	**Heyderabad**	**1.82**	**256**	Pg	**Pb**	**04 00 55.5**	**-0.5**
HYR				Sg	**Sb**	**04 01 20.6**	**+2.2**
IMRD	**Marand**	**1.83**	**218**	Pn	**Pb**	**04 00 55.5**	**-0.7**
IHRS	**Heris**	**1.85**	**183**	Pg	**Pb**	**04 00 55.2**	**-1.4**
DGRG	**David-gareji**	**1.86**	**314**	P	**Pn**	**04 00 54.2**	**+1.0**
KAPZ	**Kaputan**	**1.88**	**275**	*e*P	**Pb**	**04 00 56.4**	**-0.6**
KAPZ				*e*S	**Sb**	**04 01 21.4**	**+1.2**
LKRN	**Lenkeran, Azer**	**1.93**	**139**	Pn	**Pn**	**04 00 55.0**	**+1.0**
LKRN				Sn	**Sb**	**04 01 19.9**	**-1.4**
KMKR	**Kumukh**	**1.96**	**359**	*e*Pg	**Pn**	**04 00 56.4**	**+1.6**
KMKR				*e*Sg	**Sb**	**04 01 21.8**	**-0.7**
TLTR	**Tlyarata**	**2.03**	**343**	*e*Pg	**Pn**	**04 00 56.3**	**+0.7**
TLTR				*e*Sg	**Sn**	**04 01 22.0**	**+2.0**
URKR	**Urkarakh**	**2.03**	**10**	*e*Pg	**Pn**	**04 00 56.5**	**+0.8**
URKR				*e*Sg	**Sb**	**04 01 23.0**	**-1.4**
ASTR	**Astara**	**2.05**	**141**	Pn	**Pn**	**04 00 57.2**	**+1.5**
ASTR				Sn	**Sb**	**04 01 24.2**	**-0.7**
DRN	**Derbent**	**2.06**	**25**	*e*Pg	**Pn**	**04 00 55.6**	**-0.3**
DRN				*e*Sg	**Sn**	**04 01 21.9**	**+1.2**
MAKU	**Maku**	**2.07**	**248**	Pn	**Pb**	**04 00 59.6**	**-0.6**
ITBZ	**Tabriz**	**2.08**	**202**	Pn	**Pb**	**04 00 58.7**	**-1.8**
GAS1	**Astara - Iran**	**2.21**	**143**	Pn	**Pn**	**04 00 59.4**	**+1.4**
ISHB	**Shabestar**	**2.23**	**213**	Pn	**Pb**	**04 01 01.3**	**-1.7**
SGKR	**Sergokala**	**2.32**	**9**	*e*Pn	**Pn**	**04 01 01.1**	**+1.6**
SGKR				*e*Sn	**Sb**	**04 01 30.6**	**-2.1**
ISRB	**Sarab**	**2.38**	**170**	Pn	**Pb**	**04 01 03.1**	**-2.3**
IGDI	**IGDIR**	**2.38**	**264**	Pg	**Pb**	**04 01 05.1**	**-0.3**
IGDI				Sg	**Sb**	**04 01 35.8**	**+1.4**
XNZR	**Khunzakh**	**2.40**	**352**	*e*Pn	**Pn**	**04 01 02.8**	**+2.1**
XNZR				*e*Sn	**Sb**	**04 01 34.8**	**-0.1**
KZR	**Kazreti**	**2.40**	**301**	P	**Pn**	**04 01 00.4**	**-0.3**
KZR				S	**Sn**	**04 01 30.3**	**+1.1**
ARKR	**Arakani**	**2.44**	**357**	*e*Pn	**Pn**	**04 01 03.3**	**+2.2**
ARKR				*e*Sn	**Sn**	**04 01 32.0**	**+2.0**
UNCR	**Uncukul**	**2.56**	**354**	*e*Pn	**Pn**	**04 01 04.0**	**+1.2**
UNCR				*e*Sn	**Sn**	**04 01 35.6**	**+2.6**
BUJR	**Buynaksk**	**2.65**	**359**	*e*Pn	**Pn**	**04 01 06.4**	**+2.3**
BUJR				*e*Sn	**Sb**	**04 01 39.0**	**-3.2**
KRNR	**Karanay**	**2.66**	**356**	*e*Pn	**Pn**	**04 01 06.8**	**+2.4**
KRNR				*e*Sn	**Sb**	**04 01 39.8**	**-2.8**
CHRG	**Chargali**	**2.73**	**323**	P	**Pn**	**04 01 05.5**	**+0.2**
DVE	**Vedeno**	**2.89**	**345**	*e*Pn	**Pn**	**04 01 08.9**	**+1.5**
DVE				*e*Sn	**Sn**	**04 01 44.1**	**+2.9**
LACR	**Lac**	**3.41**	**322**	*e*Pn	**Pn**	**04 01 15.6**	**+1.0**
LACR				*e*Sn	**Sb**	**04 01 59.9**	**-4.2**

IDC 20 04:06:43.9±1.2, **19°.18S**×**175°.68W**, **h0**^{km}, **mb4.0**/5, **mbtmp4.0**/5, **Error ellipse: s-maj=50.6km s-min=28.5km az=148.0**, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**46.96**	**255**	P	P	04 15 17.1	+0.2
	12nm,0.6s,baz=87,slow=8.4,SNR=108						
	12nm,0.6s						
WRA	**Warramunga Arr**	**46.96**	**260**	P	P	04 15 16.6	-0.4
	1.7nm,0.5s,baz=96,slow=8.5,SNR=19						
	1.7nm,0.5s						
QSPA	**South Pole Qui**	**70.89**	**180**	P	P	04 18 02.5	-0.1
	0.6nm,0.6s,baz=13,slow=6.8,SNR=2.2						
	0.6nm,0.6s						
NVAR	**Mina Array Bea**	**78.57**	**42**	P	P	04 18 47.9	+0.2
	0.4nm,0.7s,baz=240,slow=4.0,SNR=3.9						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**86.56**	**12**	P	P	04 19 28.3	-0.2
	0.3nm,0.9s,baz=207,slow=5.8,SNR=1.4						
	0.3nm,0.9s						

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*IDC **20** 04:41:08.2±0.8, 36°.17N×69°.06E, h0^{km}, mb4.0/21, mbtmp4.1/26, ML3.9/5, MS3.3/10, Error ellipse: s-maj=14.7km s-min=12.8km az=166.0*
*NNC **20** 04:41:09.4±3.9, 36°.47N×68°.68E, h0^{km}, mb4.5, mpv4.3, Error ellipse: s-maj=45.2km s-min=32.3km az=155.0*
*MOS **20** 04:41:14.9±1.4, 36°.52N×69°.09E, h49^{km}, mb4.4/11, Error ellipse: s-maj=8.7km s-min=4.1km az=75.3*
*NEIC **20** 04:41:16.9±2.2, 36°.39N±0°.04×68°.96E±0°.07, h50^{km}±8^{km}, mb4.4/21, Error ellipse: s-maj=8.7km s-min=5.9km az=70.0*
ISC 20 04:41:15.8±0.5, **36°.45N**±0°.05×**69°.04E**±0°.04, **h43**^{km}, **n156**, σ**2**^{s}.**09**/168, **mb4.1**/32, **MS3.2**/8, **9C-6D**, **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHAA	**Shahritus**	**1.33**	**327**		**Pn**	**04 41 38.0**	**0.0**
SHAA				Sn	**Sn**	**04 41 56.1**	**+1.6**
KBL	**Kabul**	**1.91**	**180**		**Pn**	**04 41 45.0**	**-1.1**
KBL				Sn	**Sn**	**04 42 08.9**	**-0.1**
KBL	**Kabul**	**1.91**	**180**	PN	**Pn**	**04 41 45.0**	**-1.1**
CHGR	**Chuyangaron**	**2.20**	**2**		**Pn**	**04 41 50.5**	**+0.5**
CHGR	**Chuyangaron**	**2.20**	**2**	PN	**Pn**	**04 41 50.6**	**+0.5**
MANEM	**Manem**	**2.38**	**62**		**Pn**	**04 41 55.8**	**+3.2**
GAR	**Garm**	**2.74**	**21**		**Pn**	**04 41 58.9**	**+1.5**
DRK	**Karamyk**	**3.73**	**35**		**Pn**	**04 42 13.8**	**+2.6**
DRK	**Karamyk**	**3.73**	**35**	PN	**Pn**	**04 42 13.8**	**+2.6**
BTK	**Batken**	**3.86**	**21**	Pn	**Pn**	**04 42 16.3**	**+3.5**
BTK	**Batken**	**3.86**	**21**	PN	**Pn**	**04 42 16.3**	**+3.5**
NIL	**Nilore**	**4.45**	**128**		**Pn**	**04 42 23.2**	**+2.4**
NIL	**Nilore**	**4.45**	**128**	PN	**Pn**	**04 42 23.2**	**+2.4**
IUG	**Iuzhnay**	**5.74**	**7**	*e*P	**Pn**	**04 42 38.1**	**-0.5**
IUG				*e*S	Sn	04 43 33.4	-10
IUG	**Iuzhnay**	**5.74**	**7**	*e*PN	**Pn**	**04 42 38.0**	**-0.5**
ARSB	**Arslanbob**	**5.76**	**31**	Pn	**Pn**	**04 42 39.8**	**+1.0**
ARSB	**Arslanbob**	**5.76**	**31**	PN	**Pn**	**04 42 39.8**	**+1.0**
CHM	**Chimkent**	**5.88**	**4**	*e*P	**Pn**	**04 42 39.7**	**-0.7**
CHM	**Chimkent**	**5.88**	**4**	*e*PN	**Pn**	**04 42 39.6**	**-0.7**
HRA	**Herat**	**5.92**	**252**		**Pn**	**04 42 41.2**	**0.0**
JMU	**Jammu**	**6.02**	**126**	*e*P	**Pn**	**04 42 47.5**	**+4.0**
JMU				*e*S	**Sn**	**04 43 52.7**	**+0.7**
JMU				IAML		04 44 22.1	
	comp=N,519nm,1.0s						
JMU				IAML		04 44 23.9	
	comp=E,560nm,0.5s						
KSH	**Kashi**	**6.27**	**59**	Pn	**Pn**	**04 42 43.3**	**-2.6**
KSH				Sn	**Sn**	**04 43 52.3**	**-4.1**
KSH				smax	smax		
	comp=N,180nm,0.7s						
KSH				smax	smax		
	comp=E,180nm,0.7s						
BRLS	**Borolday**	**6.60**	**5**	*e*P	**Pn**	**04 42 46.1**	**-4.2**
BRLS				*e*S	Sn	04 43 48.3	-16
DZA	**Taraz**	**6.67**	**15**	*e*P	**Pn**	**04 42 50.7**	**-0.6**
DZA	**Taraz**	**6.67**	**15**	*e*PN	**Pn**	**04 42 50.7**	**-0.6**
KK31	**Karatay Array**	**6.74**	**9**		**Pn**	**04 42 52.6**	**+0.4**
KK31	**Karatay Array**	**6.74**	**9**	⇓P	**Pn**	**04 42 52.4**	**+0.2**
	comp=E,8.7nm,0.4s,baz=198,slow=14,SNR=106						
KK31				⇓S	**Sn**	**04 44 05.7**	**-2.0**
	comp=E,28nm,0.7s,baz=196,slow=28,SNR=5.1						
KK31	**Karatay Array**	**6.74**	**9**	PN	**Pn**	**04 42 52.6**	**+0.4**
KKAR	**Karatay Array**	**6.74**	**9**		**Pn**	**04 42 52.5**	**+0.3**
KKAR	**Karatay Array**	**6.74**	**9**	PN	**Pn**	**04 42 52.5**	**+0.3**
ALCI	**Alchi Leh**	**7.02**	**106**	*e*P	**Pn**	**04 42 59.5**	**+3.1**
ALCI				*e*S	**Sn**	**04 44 14.5**	**-0.7**
ALCI				IAML		04 44 27.6	
	comp=N,284nm,0.6s						
ALCI				IAML		04 45 11.1	
	comp=E,394nm,0.9s						
UCH	**Uchtor**	**7.16**	**35**	P	**Pn**	**04 42 59.7**	**+1.3**
	SNR=111						
EKS2	**Erkin-Say**	**7.20**	**29**	P	**Pn**	**04 42 59.8**	**+1.2**
	SNR=26						
AAK	**Ala-Archa**	**7.48**	**33**	P	**Pn**	**04 43 03.8**	**+1.3**
	SNR=36						
AAK	**Ala-Archa**	**7.48**	**33**	Pn	**Pn**	**04 43 03.7**	**+1.2**
	comp=E,11nm,0.3s,baz=214,slow=9.4,SNR=61						
AAK				Sn	**Sn**	**04 44 29.9**	**+3.9**
	comp=E,2.2nm,0.3s,baz=336,slow=17,SNR=1.8						
AAK				Lg	Lg	04 45 13.7	
	baz=198,slow=20						
AAK				LR	LR	04 46 40.0	
	comp=E,292nm,20.7s,baz=226,slow=43						
	comp=E,41nm,0.4s						
AAK	**Ala-Archa**	**7.48**	**33**	⇓P	**Pn**	**04 43 03.6**	**+1.2**
	comp=E,12nm,0.5s						
AAK				⇓S	**Sn**	**04 44 31.0**	**+5.0**
	comp=E,12nm,0.6s						
AAK	**Ala-Archa**	**7.48**	**33**	*ce*P	**Pn**	**04 43 03.5**	**+1.0**
AAK				pmax	pmax		
	comp=Z,41nm,0.8s						
KBK	**Karagaybulak**	**7.70**	**35**	P	**Pn**	**04 43 07.1**	**+1.7**
	SNR=27						
CHMS	**Chumysh**	**7.88**	**32**	P	**Pn**	**04 43 08.9**	**+1.0**
	SNR=19						
USP	**Ospenovka**	**8.00**	**30**	P	**Pn**	**04 43 09.9**	**+0.5**
	SNR=23						
ULHL	**Ulahol**	**8.04**	**42**	P	**Pn**	**04 43 11.3**	**+1.1**
	SNR=24						
BOOM	**Boomskoye usch**	**8.05**	**39**		**Pn**	**04 43 11.5**	**+1.1**
BOOM	**Boomskoye usch**	**8.05**	**39**	P	**Pn**	**04 43 11.5**	**+1.1**
TKM2	**Tokmak 2**	**8.20**	**36**	P	**Pn**	**04 43 13.3**	**+0.9**
	SNR=43						
KDJ	**Kajisay**	**8.48**	**46**		**Pn**	**04 43 16.8**	**+0.5**
KDJ	**Kajisay**	**8.48**	**46**	P	**Pn**	**04 43 16.8**	**+0.5**
SMLA	**Simla**	**8.60**	**126**	*e*P	**Pn**	**04 43 21.9**	**+4.2**
SMLA				*e*S	**Sn**	**04 44 53.8**	**+0.4**
SMLA				IAML		04 45 08.2	
	comp=N,258nm,0.2s						
SMLA				IAML		04 45 20.2	
	comp=E,254nm,0.5s						
TARG	**Taragay, Kyrgy**	**8.61**	**50**		**Pn**	**04 43 18.7**	**+0.4**
TARG	**Taragay, Kyrgy**	**8.61**	**50**	P	**Pn**	**04 43 18.7**	**+0.4**
TNSS	**Tian-Shan**	**8.96**	**40**	*e*P	**Pn**	**04 43 23.5**	**+0.4**
TNSS				*e*S	**Sn**	**04 44 56.8**	**-6.0**
TNSS	**Tian-Shan**	**8.96**	**40**	*e*P	**Pn**	**04 43 23.4**	**+0.4**
TNSS				*e*S	**Sn**	**04 44 56.8**	**-6.0**
HNLY	**HANLEY**	**8.97**	**111**	*e*P	**Pn**	**04 43 27.8**	**+4.5**
HNLY				*e*S	**Sn**	**04 45 00.8**	**-2.5**
HNLY				IAML		04 45 09.2	
	comp=N,217nm,1.3s						
HNLY				IAML		04 45 13.7	
	comp=E,222nm,1.0s						
AAA	**Alma-Ata**	**9.07**	**39**	*e*P	**Pn**	**04 43 24.6**	**+0.5**
AAA	**Alma-Ata**	**9.07**	**39**	*e*P	**Pn**	**04 43 24.6**	**+0.5**
MDOK	**Medeo**	**9.10**	**40**	*e*P	**Pn**	**04 43 25.4**	**+0.7**
MDOK	**Medeo**	**9.10**	**40**	*e*P	**Pn**	**04 43 25.4**	**+0.7**
UZB	**Uzynbulak**	**10.18**	**46**	*e*P	**Pn**	**04 43 40.5**	**+1.0**
UZB	**Uzynbulak**	**10.18**	**46**	*e*P	**Pn**	**04 43 40.4**	**+1.0**
PDGK	**Podgornoye**	**10.56**	**46**	⇑P	**Pn**	**04 43 44.6**	**-0.1**
	comp=E,10nm,0.7s						
PDGK	**Podgornoye**	**10.56**	**46**	P	**Pn**	**04 43 44.6**	**-0.1**
LGTI	**Lohaghat**	**11.64**	**124**	*e*P	**Pn**	**04 44 04.2**	**+3.9**
LGTI				*e*S	**Sn**	**04 46 04.4**	**-5.4**
MK31	**Makanchi Array**	**14.30**	**40**	⇑P	**Pn**	**04 44 33.2**	**-2.3**
	comp=E,9.6nm,0.8s,baz=228,slow=14,SNR=18						
MK31	**Makanchi Array**	**14.30**	**40**	*i* P	**Pn**	**04 44 34.6**	**-0.9**
MK31				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MKAR	**Makanchi Array**	**14.30**	**40**	Pn	**Pn**	**04 44 33.5**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=228,slow=14,SNR=25						
MKAR				Lg	Lg	04 48 49.2	
	comp=Z,0.1nm,0.3s,baz=232,slow=43,SNR=1.7						
MKAR				LR	LR	04 50 13.8	
	comp=Z,71nm,18.7s,baz=230,slow=38						
	comp=Z,7.5nm,0.8s						
MKAR	**Makanchi Array**	**14.30**	**40**		**Pn**	**04 44 34.5**	**-1.0**
MKAR	**Makanchi Array**	**14.30**	**40**	P	**Pn**	**04 44 34.5**	**-1.0**
AB31	**Akbulak array**	**14.41**	**335**		**Pn**	**04 44 33.2**	**-3.9**
AB31	**Akbulak array**	**14.41**	**335**	P	**Pn**	**04 44 32.8**	**-4.2**
	comp=Z,5.8nm,0.6s,baz=153,slow=13,SNR=90						
AB31	**Akbulak array**	**14.41**	**335**	P	**Pn**	**04 44 32.8**	**-4.2**
ABKAR	**Akbulak array**	**14.41**	**335**		**Pn**	**04 44 33.0**	**-4.0**
KURBB	**Kurchatov Arra**	**15.73**	**23**	Pn	**Pn**	**04 44 50.7**	**-3.5**
	comp=Z,0.1nm,0.3s,baz=213,slow=12,SNR=22						
KURBB				Lg	Lg	04 49 37.0	
	baz=219,slow=29,SNR=2.5						
	comp=Z,2.8nm,0.6s						
KURBB	**Kurchatov Arra**	**15.73**	**23**	⇓P	**Pn**	**04 44 50.1**	**-4.1**
	comp=Z,18nm,0.8s						
KURBB	**Kurchatov Arra**	**15.73**	**23**	P	**Pn**	**04 44 50.1**	**-4.1**
KURK	**Kurchatov**	**15.84**	**23**		**Pn**	**04 44 52.3**	**-3.3**
KURK	**Kurchatov**	**15.84**	**23**	*ce*P	**Pn**	**04 44 52.4**	**-3.3**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
WMQ	**Urumqi**	**16.04**	**57**	*e*P	**P**	**04 45 02.1**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,19nm,0.9s						
ZSN	**Zaisan**	**16.07**	**42**	*e*P	**Pn**	**04 44 58.6**	**-0.1**
ZSN	**Zaisan**	**16.07**	**42**	*e*P	**Pn**	**04 44 58.6**	**-0.1**
AKTO	**Aktyubinsk**	**16.08**	**334**	Pn	**Pn**	**04 44 55.9**	**-2.9**
	comp=Z,0.5nm,0.3s,baz=148,slow=13,SNR=11						
	comp=Z,1.6nm,0.3s						
AKTO	**Aktyubinsk**	**16.08**	**334**	⇑P	**Pn**	**04 44 56.1**	**-2.6**
	comp=Z,7.5nm,0.8s						
AKTO	**Aktyubinsk**	**16.08**	**334**	P	**Pn**	**04 44 56.1**	**-2.6**
BVA0	**Borovoye Array**	**16.60**	**3**	⇑P	**Pn**	**04 45 02.1**	**-3.2**
	comp=Z,4.5nm,0.6s,baz=179,slow=12,SNR=29						
BVA0	**Borovoye Array**	**16.60**	**3**	*i* P	**Pn**	**04 45 02.1**	**-3.2**
BVAR	**Borovoye Array**	**16.60**	**3**	Pn	**Pn**	**04 45 02.5**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=172,slow=12,SNR=14						
BVAR				LR	LR	04 51 47.7	
	comp=Z,69nm,18.4s,baz=197,slow=38						
	comp=Z,3.5nm,0.5s						
BORK	**Borovoye**	**16.62**	**3**		**Pn**	**04 45 03.1**	**-2.4**
BORK				IAmb	IAmb	04 45 10.0	
	comp=Z,10nm,0.5s						
BORK	**Borovoye**	**16.62**	**3**	*ce*P	**Pn**	**04 45 02.3**	**-3.2**
BORK				pmax	pmax		
	comp=Z,11nm,0.8s						
DGZ	**Jazzator, Alta**	**18.80**	**39**	*i* P	**P**	**04 45 30.3**	**-1.4**
DGZ				pmax	pmax		
	comp=Z,19nm,1.1s						
LSA	**Lhasa**	**19.69**	**104**	P	**Pn**	**04 45 43.3**	**-0.4**
ZAA0	**Zalesovo Array**	**20.65**	**27**		**P**	**04 45 51.4**	**-0.2**
ZAA0				IAmb	IAmb	04 46 01.2	
	comp=Z,8.9nm,0.7s						
ZAA0	**Zalesovo Array**	**20.65**	**27**	⇓P	**P**	**04 45 50.9**	**-0.7**
	comp=Z,1.1nm,0.7s						
ZALV	**Zalesovo Beam**	**20.65**	**27**	P	**P**	**04 45 51.1**	**-0.5**
	comp=Z,8.2nm,0.6s,baz=222,slow=11,SNR=30						
	comp=Z,8.2nm,0.6s						
ZALV	**Zalesovo Beam**	**20.65**	**27**		**P**	**04 45 51.3**	**-0.2**
ZALV	**Zalesovo Beam**	**20.65**	**27**	*i* P	**P**	**04 45 51.4**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ARTI	**Arti**	**21.20**	**343**	P	**P**	**04 45 57.5**	**0.0**
	comp=Z,5.9nm,0.6s,baz=159,slow=9.2,SNR=8.2						
	comp=Z,5.9nm,0.6s						
ARTI	**Arti**	**21.20**	**343**		**P**	**04 45 58.2**	**+0.7**
ARTI				IAmb	IAmb	04 46 14.9	
	comp=Z,12nm,0.6s						
ARTI	**Arti**	**21.20**	**343**	*c i*P	**P**	**04 45 57.8**	**+0.2**
ARTI				*PP	**sP**	**04 46 12.8**	**-0.9**
ARTI						04 46 25.5	
ARTI				S	**S**	**04 49 46.3**	**-4.5**
ARTI				SS	**SnSn**	**04 50 19.0**	**+4.3**
ARTI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KBZ	**Khabaz**	**21.22**	**298**	P	**P**	**04 45 56.9**	**-1.0**
	comp=Z,1.7nm,0.8s,baz=111,slow=6.0,SNR=4.4						
	comp=Z,1.7nm,0.8s						
KBZ	**Khabaz**	**21.22**	**298**	*i* P	**P**	**04 46 00.4**	**+2.5**
KIV	**Kislovodsk**	**21.42**	**299**	*e*P	**P**	**04 46 03.1**	**+3.0**
KIV				*e*S	**S**	**04 49 53.9**	**-1.5**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,29nm,14.0s						
BELG	**Belogornoye**	**21.96**	**323**	P	**P**	**04 46 04.6**	**-1.1**
	comp=Z,21nm,0.8s,baz=101,slow=19,SNR=7.2						
	comp=Z,21nm,0.8s						
BELG	**Belogornoye**	**21.96**	**323**	*i* P	**P**	**04 46 05.1**	**-0.6**
SHL	**Shillong**	**22.33**	**113**		**P**	**04 46 10.7**	**+0.5**
SHL	**Shillong**	**22.33**	**113**	P	**P**	**04 46 10.7**	**+0.5**
SHL				pmax	pmax		
	comp=Z,43nm,1.3s						
GTA	**Gaotai**	**24.40**	**74**	*e*P	**P**	**04 46 31.5**	**+1.2**
GTA				pP	pP	04 46 34.8	-7.4
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
VSR	**Storozhevoye**	**25.89**	**314**	*e*P	**P**	**04 46 41.3**	**-2.2**
VSR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRTR	**Keskin Array B**	**27.94**	**288**	P	**P**	**04 47 03.0**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=81,slow=8.9,SNR=1.7						
BRTR				LR	LR	05 02 11.1	
	comp=Z,32nm,20.5s,baz=307,slow=45						
	comp=Z,0.1nm,0.3s						
BRTR	**Keskin Array B**	**27.94**	**288**	P	**P**	**04 47 03.0**	**+0.7**
SONM	**Songino Array**	**29.67**	**56**	P	**P**	**04 47 18.6**	**+1.1**
	comp=Z,1.4nm,0.6s,baz=273,slow=9.1,SNR=9.5						
SONM				LR	LR	05 00 56.0	
	comp=Z,118nm,20.1s,baz=268,slow=40						
	comp=Z,1.4nm,0.6s						
SONM	**Songino Array**	**29.67**	**56**	IAmb	IAmb	04 47 25.1	
	comp=Z,1.9nm,1.1s						
SONM	**Songino Array**	**29.67**	**56**	*e*P	**P**	**04 47 19.2**	**+1.7**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PALK	**Pallekele**	**30.94**	**157**	LR	LR	05 00 10.7	
	comp=Z,33nm,21.8s,baz=354,slow=37						
AKASG	**Malin Array Be**	**31.75**	**309**	P	**P**	**04 47 35.8**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=89,slow=7.1,SNR=4.1						
AKASG				LR	LR	05 02 04.2	
	comp=Z,41nm,19.7s,baz=242,slow=39						
	comp=Z,0.7nm,0.5s						
AKASG	**Malin Array Be**	**31.75**	**309**	*e*P	**P**	**04 47 36.8**	**+1.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**31.84**	**116**	P	**P**	**04 47 33.6**	**-3.2**
	comp=Z,1.3nm,0.3s,baz=307,slow=8.0,SNR=1.7						
	comp=Z,1.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**31.84**	**116**	*e*P	P	04 47 45.5	+8.8
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NRIK	**Noril'sk**	**34.47**	**11**	P	**P**	**04 47 59.8**	**+0.6**
	comp=Z,3.0nm,0.4s,baz=199,slow=5.5,SNR=5.7						
	comp=Z,3.0nm,0.4s						
NRIK	**Noril'sk**	**34.47**	**11**	P	**P**	**04 48 00.3**	**+1.2**
NRIK				IAmb	IAmb	04 48 01.5	
	comp=Z,7.4nm,1.3s						
FIA1	**FINESS Array S**	**36.65**	**327**	P	**P**	**04 48 18.5**	**+0.6**
FINES	**FINESS Array B**	**36.65**	**327**	P	**P**	**04 48 18.0**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=117,slow=11,SNR=6.9						
	comp=Z,1.4nm,0.6s						
FINES	**FINESS Array B**	**36.65**	**327**	P	**P**	**04 48 18.2**	**+0.3**
FINES	**FINESS Array B**	**36.65**	**327**	P	**P**	**04 48 18.2**	**+0.3**
LVZ	**Lovozero**	**36.93**	**339**	P	**P**	**04 48 20.7**	**+0.4**
LVZ	**Lovozero**	**36.93**	**339**	P	**P**	**04 48 20.7**	**+0.4**
LVZ				pmax	pmax		
	comp=Z,35nm,1.4s						
HILR	**Hailar Array B**	**38.61**	**54**	P	**P**	**04 48 35.8**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=282,slow=6.6,SNR=2.3						

	comp=Z,0.4nm,0.3s						
ARCES	**ARCESS Array B**	**40.59**	**338**	P	**P**	**04 48 51.6**	**+0.8**
	comp=Z,2.8nm,0.6s,baz=131,slow=8.8,SNR=21						
	comp=Z,2.8nm,0.6s						
ARCES	**ARCESS Array B**	**40.59**	**338**	P	**P**	**04 48 51.7**	**+0.8**
ARCES				IAmb	IAmb	04 48 58.9	
	comp=Z,17nm,1.4s						
ARCES	**ARCESS Array B**	**40.59**	**338**	P	**P**	**04 48 51.7**	**+0.8**
ARCES				pmax	pmax		
	comp=Z,17nm,1.5s						
GERES	**GERESS Array B**	**41.66**	**305**	LR	LR	05 09 20.4	
	comp=Z,45nm,20.7s,baz=281,slow=40						
HFS	**Hagfors**	**42.13**	**322**	P	**P**	**04 49 04.0**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=107,slow=10,SNR=9.1						
	comp=Z,2.0nm,0.6s						
HFS	**Hagfors**	**42.13**	**322**	P	**P**	**04 49 04.0**	**+0.4**
NORES	**NORESS Array B**	**43.27**	**323**	P	**P**	**04 49 16.0**	**+3.1**
NC303	**NORSAR Array S**	**43.42**	**324**	P	**P**	**04 49 14.7**	**+0.6**
NC303				IAmb	IAmb	04 49 21.3	
	comp=Z,9.2nm,0.9s						
NB2	**NORSAR Subarra**	**43.47**	**323**	P	**P**	**04 49 14.3**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=99,slow=8.6						
NOA	**NORSAR Array B**	**43.47**	**323**	P	**P**	**04 49 14.3**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=99,slow=8.1,SNR=7.1						
NOA				LR	LR	05 09 52.6	
	comp=Z,35nm,20.7s,baz=280,slow=40						
	comp=Z,1.0nm,0.5s						
HEH	**HeiHe**	**43.53**	**53**	*e*P	**P**	**04 49 16.5**	**+1.4**
HEH				pmax	pmax		
	comp=Z,6.0nm,1.2s						
YAK	**Yakutsk**	**44.92**	**36**	LR	LR	05 10 20.4	
	comp=Z,49nm,19.2s,baz=292,slow=39						
KSRS	**Korea Array**	**46.39**	**70**	P	**P**	**04 49 36.4**	**-1.5**
	comp=Z,0.9nm,0.4s,baz=270,slow=4.9,SNR=3.2						
	comp=Z,0.9nm,0.4s						
TIXI	**Tiksi**	**46.41**	**22**	P	**P**	**04 49 38.8**	**+1.1**
TIXI	**Tiksi**	**46.41**	**22**	*ce*P	**P**	**04 49 38.7**	**+1.1**
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SPITS	**Spitsbergen Ar**	**47.18**	**347**	P	**P**	**04 49 45.0**	**+1.3**
	comp=Z,2.9nm,0.7s,baz=111,slow=6.3,SNR=5.5						
	comp=Z,2.9nm,0.7s						
SPITS	**Spitsbergen Ar**	**47.18**	**347**	P	**P**	**04 49 45.0**	**+1.3**
TORD	**Torodi Ar. Bea**	**64.14**	**267**	P	**P**	**04 51 44.5**	**-1.6**
	comp=Z,1.0nm,0.6s,baz=39,slow=8.2,SNR=4.6						
	comp=Z,1.0nm,0.6s						
C16K	**Lisburne Hills**	**68.02**	**19**	P	**P**	**04 52 11.1**	**+0.9**
C16K				IAmb	IAmb	04 52 11.9	
	comp=Z,4.7nm,0.9s						
B21K	**Ikpikpuk River**	**69.53**	**15**	P	**P**	**04 52 21.0**	**+1.4**
B21K				IAmb	IAmb	04 52 21.9	
	comp=Z,3.8nm,0.8s						
D19K	**Kuna River**	**69.65**	**17**	P	**P**	**04 52 21.4**	**+1.0**
D19K				IAmb	IAmb	04 52 22.3	
	comp=Z,4.7nm,0.8s						
A36M	**Sachs Harbour**	**71.39**	**5**	P	**P**	**04 52 32.5**	**+1.6**
A36M				IAmb	IAmb	04 52 32.5	
	comp=Z,6.6nm,0.9s						
INK	**Inuvik**	**74.20**	**9**	P	**P**	**04 52 48.8**	**+1.3**
INK				IAmb	IAmb	04 52 57.8	
	comp=Z,2.4nm,0.9s						
INK	**Inuvik**	**74.20**	**9**	P	**P**	**04 52 48.8**	**+1.3**
INK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ILAR	**Eielson Array**	**75.25**	**15**	P	**P**	**04 52 53.6**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=337,slow=6.2,SNR=5.8						
	comp=Z,0.5nm,0.7s						
ILAR	**Eielson Array**	**75.25**	**15**	*e*P	**P**	**04 52 54.8**	**+1.1**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
M27K	**Edge Creek, AK**	**78.42**	**14**	P	**P**	**04 53 13.1**	**+1.2**
YKA	**Yellowknife Ar**	**81.35**	**2**	P	**P**	**04 53 27.5**	**0.0**
	comp=Z,0.3nm,0.6s,baz=348,slow=5.5,SNR=7.5						
	comp=Z,0.3nm,0.6s						
YKA	**Yellowknife Ar**	**81.35**	**2**	P	**P**	**04 53 27.7**	**+0.3**
YKA	**Yellowknife Ar**	**81.35**	**2**	*e*P	**P**	**04 53 28.1**	**+0.6**
WRA	**Warramunga Arr**	**83.32**	**121**	P	**P**	**04 53 35.4**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=326,slow=4.5,SNR=4.6						
	comp=Z,0.2nm,0.3s						
ASAR	**Alice Springs**	**85.53**	**124**	P	**P**	**04 53 47.4**	**-2.2**
	comp=Z,0.6nm,0.6s,baz=313,slow=4.8,SNR=10						
	comp=Z,0.6nm,0.6s						

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*IDC **20** 05:14:04.3±1.1, 49°.10S×105°.87E, h0km, mb4.0/5, mbtmp4.0/5, MS3.6/13, Error ellipse: s-maj=47.4km s-min=23.5km az=111.0*

ISC 20 05:14:05.4±1.1**, 49°.1S**±0°.2×**106°.0E**±0°.3**, h10km, n23,** σ1s.**20**/9**, mb4.0**/5**, MS3.5**/12**, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.46**	**26**	T	T	05 33 40.7	
	baz=199,slow=74,SNR=33						
H01W1	**Cape Leeuwin H**	**15.47**	**26**	T	T	05 33 43.0	
	baz=199,slow=74,SNR=12						
H01W3	**Cape Leeuwin H**	**15.47**	**26**	T	T	05 33 43.3	
	baz=199,slow=74,SNR=38						
NWAO	**Narrogin (SRO)**	**18.26**	**32**	LR	LR	05 23 45.2	
	comp=Z,169nm,19.6s,baz=198,slow=32						
MAW	**Mawson**	**28.32**	**214**	LR	LR	05 28 38.2	
	comp=Z,98nm,19.2s,baz=68,slow=31						
STKA	**Stephens Creek**	**31.74**	**70**	LR	LR	05 30 47.5	
	comp=Z,82nm,21.5s,baz=208,slow=32						
ASAR	**Alice Springs**	**33.59**	**51**	P	**P**	**05 20 44.8**	**-1.0**
	1.9nm,1.1s,baz=230,slow=6.6,SNR=6.4						
ASAR				LR	LR	05 32 47.3	
	comp=Z,115nm,20.5s,baz=225,slow=33						
	1.9nm,1.1s						
FITZ	**Fitzroy Crossi**	**34.81**	**34**	LR	LR	05 33 55.1	
	comp=Z,93nm,19.8s,baz=173,slow=34						
VNDA	**Vanda**	**35.29**	**162**	P	**P**	**05 20 59.7**	**-0.2**
	2.6nm,0.9s,baz=302,slow=9.5,SNR=2.4						
	2.6nm,0.9s						
WRA	**Warramunga Arr**	**36.94**	**48**	P	**P**	**05 21 14.7**	**+0.1**
	1.2nm,1.0s,baz=205,slow=8.4,SNR=3.6						
	1.2nm,1.0s						
QSPA	**South Pole Qui**	**40.99**	**180**	LR	LR	05 37 13.3	
	comp=Z,64nm,19.5s,baz=291,slow=34						
BATI	**Baumata**	**41.53**	**27**	LR	LR	05 39 14.6	
	comp=Z,54nm,20.7s,baz=195,slow=36						
SNAA	**Sanae**	**49.58**	**203**	P	**P**	**05 22 55.8**	**-0.3**
	1.1nm,0.6s,baz=133,slow=14,SNR=7.3						
SNAA				LR	LR	05 42 24.4	
	comp=Z,78nm,19.3s,baz=4.0,slow=34						
	1.1nm,0.6s						
PMG	**Port Moresby**	**52.41**	**55**	LR	LR	05 44 53.4	
	comp=Z,47nm,18.1s,baz=204,slow=35						
PALK	**Pallekele**	**60.37**	**331**	LR	LR	05 46 18.6	
	comp=Z,17nm,20.8s,baz=257,slow=32						
BOSA	**Boshof**	**63.10**	**257**	LR	LR	05 47 50.5	
	comp=Z,45nm,18.0s,baz=169,slow=32						
SUR	**Sutherland**	**63.33**	**251**	LR	LR	05 45 18.3	
	comp=Z,61nm,20.8s,baz=144,slow=30						
PMSA	**Palmer Station**	**66.16**	**185**	LR	LR	05 55 12.9	
	comp=Z,54nm,18.3s,baz=254,slow=37						
CMAR	**Chiang Mai Arr**	**67.58**	**353**	P	**P**	**05 25 01.6**	**-0.5**
	0.9nm,0.3s,baz=180,slow=5.2,SNR=4.2						
	0.9nm,0.3s						
NVAR	**Mina Array Bea**	**146.73**	**92**	PKPbc	**PKiKP**	**05 33 49.4**	**-0.6**
	0.6nm,0.6s,baz=228,slow=6.7,SNR=7.8						
TXAR	**Lajitas Array**	**150.00**	**120**	PKPbc	**PKiKP**	**05 33 56.5**	**-0.4**
	0.3nm,0.8s,baz=249,slow=5.0,SNR=2.1						
YKA	**Yellowknife Ar**	**154.10**	**44**	PKPbc	**PKiKP**	**05 34 06.5**	**+2.3**
	0.2nm,0.7s,baz=280,slow=3.1,SNR=4.1						
PDAR	**Pinedale Array**	**154.66**	**91**	PKPab	**PKPab**	**05 34 22.3**	**+1.1**
	0.1nm,0.3s,baz=252,slow=2.4,SNR=4.4						

DJA 20 05:26:40.9±0.3**, 9°S**±3°×**11°4E**±°**, h10km, M3.7**/18**, mB4.4**/1**, mb3.9**/4**, MLv3.6**/18**, Mw(mB)3.6**/1**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**0.94**	**32**	P	Pg	05 26 59.0	-0.1
JAGI				S	Sg	05 27 11.5	+0.1
GMJI	**Gumukmas**	**1.02**	**348**	P	Pg	05 26 59.6	-1.0
GMJI				S	Sg	05 27 12.9	-1.0
BYJI	**Banyuwangi**	**1.27**	**33**	P	Pn	05 27 04.7	0.0
RTBI	**Rangdo, Negare**	**1.52**	**58**	P	Pn	05 27 07.8	-0.3
RTBI				S	Sn	05 27 26.7	-1.2
BLJI	**Banyuglugur**	**1.53**	**358**	P	Pn	05 27 08.4	+0.2
IGBI	**Denpasar**	**1.55**	**73**	P	Pn	05 27 07.7	-0.8
ABJI	**Asem Bagus**	**1.58**	**21**	P	Pb	05 27 10.0	-0.3
ABJI				S	Sg	05 27 32.2	+0.3
DNP	**Denpasar**	**1.65**	**69**	P	Pn	05 27 10.6	+0.6
DNP				S	Sn	05 27 31.3	0.0
SRBI	**Singaraja**	**1.95**	**53**	P	Pn	05 27 13.9	-0.2
KHKI	**Kahang-Kahang**	**2.14**	**65**	P	Pn	05 27 17.7	+1.0
KHKI				S	Sn	05 27 42.3	-1.0
KMMI	**Kalianget**	**2.24**	**8**	P	Pn	05 27 18.7	+0.7
SNJI	**Sawahan-Nganju**	**2.39**	**308**	P	Pn	05 27 20.9	+0.6
SJI	**Sawahan**	**2.41**	**309**	P	Pn	05 27 20.6	+0.1
KLNI	**Mataram**	**2.56**	**71**	P	Pn	05 27 22.3	-0.2
GRJI	**Gresik**	**2.62**	**334**	P	Pn	05 27 22.3	-1.0
PCJI	**Pacitan**	**2.67**	**294**	P	Pn	05 27 22.9	-1.1
TWSI	**Taliwang, Sumb**	**3.24**	**81**	P	Pn	05 27 31.3	-0.5
UGM	**Wanagama**	**3.38**	**293**	P	Pn	05 27 33.2	-0.6
PLAI	**Plampang**	**4.10**	**84**	P	Pn	05 27 44.4	+0.7
DBNI	**Kabupaten Domp**	**4.67**	**81**	P	Pn	05 27 52.5	+0.9
KAPI	**Kappang**	**7.39**	**55**	P	Pn	05 28 28.9	0.0
	0.0nm255nm3.3nm,0.9s						
EDFI	**Ende, Flores**	**7.96**	**87**	P	Pn	05 28 36.5	-0.3
	7.7nm,1.1s						
KASI	**Kota Agung**	**9.81**	**292**	P	Pn	05 29 02.0	-0.2
	13nm,1.0s						
KLSI		**9.96**	**297**	P	Pn	05 29 04.0	-0.2

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*NOU **20** 05:27:16.3, 39°.64S×176°.18E, h33km, MLv3.7/10, North Island, New Zealand*

*WEL **20** 05:27:16.7±0.4, 40°S±2°×17°6E±°, h28km±4km, M3.9/21, ML3.8/20, MLv3.9/21, Error ellipse: s-maj=3.4km s-min=2.7km az=39.5, confirmed*

ISC 20 05:27:17.6±0.9**, 39°.63S**±0°.02×**176°.12E**±0°.02**, h32km**±6km**, n116,** σ1s.**02**/130**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WAKS	**Wakarara Rangi**	**0.18**	**145**	P	**Pn**	**05 27 23.8**	**-0.3**
WAKS				S	**Sb**	**05 27 29.9**	**+1.6**
KRHZ	**Kereru**	**0.20**	**94**	P	**Pn**	**05 27 23.8**	**-0.6**
KRHZ				S	**Sb**	**05 27 29.5**	**+0.9**
THHS	**Taihape Hospit**	**0.26**	**258**	P	**Pb**	**05 27 24.9**	**+0.1**
THHS				S	**Sb**	**05 27 30.8**	**+1.2**
PNHZ	**Pukenui**	**0.29**	**168**	P	**Pb**	**05 27 24.8**	**-0.5**
PNHZ				S	**Sb**	**05 27 31.3**	**+0.8**
MNGS	**Mangaweka Scho**	**0.31**	**235**	P	**Pb**	**05 27 25.3**	**-0.2**
KWHZ	**Kaweka Forest**	**0.31**	**49**	P	**Pb**	**05 27 25.1**	**-0.4**
KWHZ				S	**Sb**	**05 27 32.0**	**+1.1**
KFHS	**Kaweka Forest**	**0.33**	**54**	P	**Pb**	**05 27 25.3**	**-0.5**
KFHS				S	**Sn**	**05 27 32.7**	**+0.8**
MOVZ	**Moawhango**	**0.36**	**308**	P	**Pb**	**05 27 26.0**	**-0.2**
MOVZ				S	**Sn**	**05 27 32.7**	**0.0**
TSZ	**Takapari Road**	**0.45**	**196**	P	**Pb**	**05 27 26.9**	**-0.5**
TSZ				S	**Sb**	**05 27 34.7**	**+0.5**
WPWS	**Waipawa Distri**	**0.48**	**131**	P	**Pb**	**05 27 27.5**	**-0.4**
WPWS				S	**Sn**	**05 27 36.5**	**+1.0**
MCHZ	**McNeill Hill**	**0.48**	**68**	P	**Pb**	**05 27 28.3**	**+0.4**
WPHZ	**Waipukurau**	**0.50**	**150**	P	**Pb**	**05 27 27.9**	**-0.3**
WPHZ				S	**Sn**	**05 27 37.7**	**+1.6**
WNVZ	**Wahianoa**	**0.50**	**307**	P	**Pb**	**05 27 28.3**	**-0.1**
WNVZ				S	**Sn**	**05 27 36.8**	**+0.4**
TUVZ	**Tukino**	**0.51**	**315**	P	**Pb**	**05 27 28.4**	**0.0**
BKZ	**Black Stump Fm**	**0.55**	**32**	P	**Pb**	**05 27 28.3**	**-0.7**
BKZ	**Black Stump Fm**	**0.55**	**32**	S	**Sn**	**05 27 37.5**	**+0.3**
BKZ	**Black Stump Fm**	**0.55**	**32**	P	**Pb**	**05 27 28.1**	**-0.8**
BKZ				S	**Sn**	**05 27 37.2**	**0.0**
TRVZ	**Turoa**	**0.55**	**306**	P	**Pb**	**05 27 28.9**	**-0.2**
MTVZ	**Mangateitei**	**0.56**	**296**	P	**Pb**	**05 27 29.0**	**-0.2**
MAVZ	**Matarangi**	**0.56**	**310**	P	**Pb**	**05 27 29.0**	**-0.4**
FWVZ	**Far West T-bar**	**0.57**	**310**	P	**Pb**	**05 27 29.2**	**-0.4**
SNVZ	**South Ngauruho**	**0.58**	**320**	P	**Pb**	**05 27 29.2**	**-0.3**
OTVZ	**Oturere**	**0.58**	**323**	P	**Pb**	**05 27 29.3**	**-0.3**
ETVZ	**East Tongariro**	**0.58**	**327**	P	**Pb**	**05 27 29.3**	**-0.4**
NGZ	**Ngauruhoe**	**0.60**	**318**	P	**Pn**	**05 27 29.6**	**-0.5**
TMVZ	**Te Maari**	**0.60**	**328**	P	**Pn**	**05 27 29.5**	**-0.6**
TMVZ				S	**Sb**	**05 27 38.8**	**+0.4**
KAHZ	**Kahuranaki**	**0.61**	**106**	P	**Pn**	**05 27 29.5**	**-0.5**
KAHZ				S	**Sn**	**05 27 40.6**	**+1.8**
COVZ	**Chateau Observ**	**0.62**	**314**	P	**Pn**	**05 27 29.7**	**-0.5**
NNVZ	**North Ngauruho**	**0.63**	**322**	P	**Pn**	**05 27 30.0**	**-0.5**
NTVZ	**North Tongarir**	**0.63**	**327**	P	**Pn**	**05 27 29.8**	**-0.6**
KRVZ	**Karewarewa**	**0.65**	**325**	P	**Pn**	**05 27 30.1**	**-0.6**
WTVZ	**West Tongariro**	**0.66**	**321**	P	**Pn**	**05 27 30.2**	**-0.6**
DVHZ	**Dannevirke**	**0.67**	**177**	P	**Pn**	**05 27 30.0**	**-0.9**
RITZ	**Rihia Road**	**0.68**	**343**	P	**Pn**	**05 27 30.6**	**-0.4**
PKVZ	**Pokaka**	**0.69**	**299**	P	**Pn**	**05 27 30.6**	**-0.5**
PXZ	**Pawanui**	**0.70**	**125**	P	**Pn**	**05 27 30.3**	**-1.0**
KATZ	**Kakaramea**	**0.73**	**333**	P	**Pn**	**05 27 31.2**	**-0.6**
CKHZ	**Cape Kidnapper**	**0.74**	**93**	P	**Pn**	**05 27 31.1**	**-0.7**
PRHZ	**Porangahau**	**0.75**	**148**	P	**Pn**	**05 27 31.1**	**-0.9**
NMHZ	**Naumai**	**0.75**	**45**	P	**Pn**	**05 27 32.3**	**+0.2**
TWVZ	**Taurewa**	**0.77**	**316**	P	**Pn**	**05 27 31.4**	**-0.9**
ARHZ	**Aropaoanui**	**0.77**	**62**	P	**Pn**	**05 27 31.9**	**-0.3**
RATZ	**Rangitukua**	**0.81**	**340**	P	**Pn**	**05 27 32.0**	**-0.8**
POWZ	**Post Office Ro**	**0.81**	**199**	P	**Pn**	**05 27 32.5**	**-0.3**
MRHZ	**Matea Rd**	**0.83**	**16**	P	**Pn**	**05 27 32.2**	**-0.9**
OHWZ	**Ohakea**	**0.84**	**227**	P	**Pb**	**05 27 33.8**	**0.0**
ANWZ	**Angora Road**	**0.87**	**162**	P	**Pn**	**05 27 33.0**	**-0.7**
WAZ	**Wanganui**	**0.88**	**261**	P	**Pn**	**05 27 34.3**	**+0.5**
PRWZ	**Pori Road**	**0.93**	**187**	P	**Pn**	**05 27 33.9**	**-0.6**
MTHZ	**Maungataniwha**	**0.96**	**36**	P	**Pn**	**05 27 34.6**	**-0.2**
WATZ	**Wairara**	**0.97**	**342**	P	**Pn**	**05 27 33.9**	**-1.1**
WHTZ	**Whakaora**	**0.97**	**353**	P	**Pn**	**05 27 34.5**	**-0.6**
WHHZ	**Waihua**	**1.02**	**58**	P	**Pn**	**05 27 35.5**	**-0.3**
RAHZ	**Arahi**	**1.03**	**47**	P	**Pn**	**05 27 35.5**	**-0.4**
BFZ	**Birch Farm**	**1.06**	**175**	P	**Pn**	**05 27 35.1**	**-1.1**
BFZ	**Birch Farm**	**1.06**	**175**	P	**Pn**	**05 27 34.9**	**-1.3**
ALRZ	**Allen Road**	**1.08**	**9**	P	**Pn**	**05 27 35.3**	**-1.2**
WPRZ	**Whakapapatarin**	**1.11**	**2**	P	**Pn**	**05 27 35.8**	**-1.2**
MRZ	**Mangatainoka R**	**1.11**	**202**	P	**Pn**	**05 27 36.0**	**-1.0**
PRRZ	**Plateau Road**	**1.15**	**11**	P	**Pn**	**05 27 36.3**	**-1.1**
TIWZ	**Tintock**	**1.16**	**189**	P	**Pn**	**05 27 36.7**	**-1.0**
KUTZ	**Kaahu Road**	**1.16**	**348**	P	**Pn**	**05 27 36.5**	**-1.1**
VRZ	**Vera Road**	**1.17**	**295**	P	**Pn**	**05 27 37.0**	**-0.7**
RTZ	**Ruatahuna**	**1.21**	**34**	P	**Pn**	**05 27 38.1**	**-0.4**
HRRZ	**Handcock Road**	**1.24**	**6**	P	**Pn**	**05 27 37.9**	**-0.9**
MUGZ	**Murupara**	**1.26**	**24**	P	**Pn**	**05 27 37.8**	**-1.2**
SNGZ	**Shannon Statio**	**1.27**	**49**	P	**Pn**	**05 27 38.4**	**-0.7**
CPWZ	**Castlepoint**	**1.28**	**177**	P	**Pn**	**05 27 38.5**	**-0.8**
HSRZ	**Hossack Road**	**1.32**	**4**	P	**Pn**	**05 27 38.8**	**-1.0**
RRRZ	**Republican Roa**	**1.32**	**14**	P	**Pn**	**05 27 38.7**	**-1.2**
LREZ	**Lake Rotokare**	**1.34**	**277**	P	**Pn**	**05 27 40.4**	**+0.3**
HOWZ	**Holdsworth Sta**	**1.35**	**200**	P	**Pn**	**05 27 38.6**	**-1.6**
KNZ	**Kokohu**	**1.35**	**64**	P	**Pn**	**05 27 38.6**	**-1.6**
TLZ	**Tolley Road**	**1.37**	**341**	P	**Pn**	**05 27 39.1**	**-1.5**
HLRZ	**Highlands Stat**	**1.39**	**8**	P	**Pn**	**05 27 40.6**	**-0.1**
OGWZ	**Otaki Gorge**	**1.39**	**211**	P	**Pn**	**05 27 39.7**	**-1.1**
TARZ	**Mount Tarawera**	**1.42**	**12**	P	**Pn**	**05 27 40.5**	**-0.9**
UTU	**Utuhina**	**1.45**	**2**	P	**Pn**	**05 27 40.7**	**-0.9**
MHGZ	**Mahia Peninsul**	**1.47**	**72**	P	**Pn**	**05 27 40.7**	**-1.1**
HIZ	**Hauiti**	**1.49**	**318**	P	**Pn**	**05 27 41.1**	**-1.0**
HIZ	**Hauiti**	**1.49**	**318**	P	**Pn**	**05 27 41.1**	**-1.0**
TMWZ	**Te Maipa**	**1.49**	**187**	P	**Pn**	**05 27 40.4**	**-1.7**
RAGZ	**Rawiri**	**1.52**	**42**	P	**Pn**	**05 27 44.0**	**+1.4**
NGRZ	**Ngongotaha**	**1.52**	**2**	P	**Pn**	**05 27 41.7**	**-1.0**
OMRZ	**Omania**	**1.53**	**7**	P	**Pn**	**05 27 41.8**	**-1.0**
KIW	**Kapiti Island**	**1.54**	**217**	P	**Pn**	**05 27 41.8**	**-1.1**
PRGZ	**Paritu Road**	**1.54**	**63**	P	**Pn**	**05 27 41.2**	**-1.6**
PREZ	**Palmer Road**	**1.54**	**280**	P	**Pn**	**05 27 43.4**	**+0.5**
DREZ	**Durham Road**	**1.55**	**286**	P	**Pn**	**05 27 43.1**	**+0.2**
URZ	**Urewera**	**1.57**	**30**	P	**Pn**	**05 27 42.0**	**-1.2**
URZ	**Urewera**	**1.57**	**30**	P	**Pn**	**05 27 41.8**	**-1.4**
RIGZ	**Rimuhau**	**1.57**	**55**	P	**Pn**	**05 27 42.9**	**-0.4**
EDRZ	**Edgecumbe**	**1.59**	**18**	P	**Pn**	**05 27 42.8**	**-0.8**
MTW	**Mount Morrison**	**1.60**	**197**	P	**Pn**	**05 27 41.6**	**-2.1**
KARZ	**Kaharoa**	**1.61**	**4**	P	**Pn**	**05 27 42.8**	**-1.0**
KHEZ	**Kahui Hut**	**1.66**	**281**	P	**Pn**	**05 27 45.7**	**+1.1**
KHEZ	**Kahui Hut**	**1.66**	**281**	P	**Pn**	**05 27 45.5**	**+0.9**
CAW	**Cannon Point**	**1.68**	**208**	P	**Pn**	**05 27 42.9**	**-1.9**
MWZ	**Matawai**	**1.70**	**41**	P	**Pn**	**05 27 44.0**	**-1.0**
PKE	**Pukeiti**	**1.71**	**284**	P	**Pn**	**05 27 45.9**	**+0.7**
NMEZ	**Namu Road**	**1.75**	**276**	P	**Pn**	**05 27 46.7**	**+1.1**
NBEZ	**Newall Road No**	**1.78**	**281**	P	**Pn**	**05 27 47.0**	**+0.9**
TKGZ	**Te Karaka**	**1.80**	**49**	P	**Pn**	**05 27 45.3**	**-1.1**
TRWZ	**Traveller**	**1.80**	**190**	P	**Pn**	**05 27 44.4**	**-2.1**
MSWZ	**Moikau Station**	**1.91**	**200**	P	**Pn**	**05 27 45.2**	**-2.6**
TOZ	**Tahuroa Road**	**1.96**	**346**	P	**Pn**	**05 27 47.2**	**-1.4**
SNZO	**South Karori**	**2.00**	**212**	P	**Pn**	**05 27 47.4**	**-1.7**
BHW	**Baring Head**	**2.02**	**208**	P	**Pn**	**05 27 46.8**	**-2.6**
DUWZ	**D'Urville Isla**	**2.05**	**234**	P	**Pn**	**05 27 48.9**	**-1.0**
TWGZ	**Tauwhareparae**	**2.05**	**46**	P	**Pn**	**05 27 49.4**	**-0.5**
RUGZ	**Raukumara Rang**	**2.06**	**37**	P	**Pn**	**05 27 48.7**	**-1.4**
TCW	**Tory Channel**	**2.12**	**221**	P	**Pn**	**05 27 48.7**	**-2.1**
TUWZ	**Tuamarina**	**2.45**	**222**	P	**Pn**	**05 27 54.7**	**-0.6**
KUZ	**Kuaotunu**	**2.90**	**354**	P	**Pn**	**05 28 00.0**	**-1.5**
QRZ	**Quartz Range**	**3.00**	**245**	P	**Pn**	**05 28 00.5**	**-2.4**
KHZ	**Kahutara**	**3.40**	**214**	P	**Pn**	**05 28 07.8**	**-0.6**

IDC 20 05:29:55.7±6.6**, 27°.35S**×**22°.85E, h0km, mbtmp2.1**/1**, ML2.2**/1**, Error ellipse: s-maj=46.0km s-min=43.2km az=30.0, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I47ZA	**BOSHOF INFRASO**	**2.46**	**122**	I	I	05 42 40.0	
	0.7nm,0.8s,baz=302,slow=323,SNR=14						
BOSA	**Boshof**	**2.47**	**121**	Pn	Pn	05 30 37.5	0.0
	0.3nm,0.3s,baz=300,slow=15,SNR=7.8						
BOSA				Pg	Pb	05 30 40.1	-1.0
	0.3nm,0.3s,baz=299,slow=17,SNR=2.1						
BOSA				Sn	Sn	05 31 08.8	+0.4
	0.4nm,0.3s,baz=202,slow=21,SNR=5.6						
BOSA				Lg	Lg	05 31 15.4	
	1.0nm,0.3s,baz=213,slow=20,SNR=8.8						
	0.7nm,0.4s						
I35NA	**TSUMEB INFRASO**	**9.46**	**328**	I	I	06 30 30.9	
	0.1nm,1.2s,baz=154,slow=312,SNR=4.4						

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*IDC **20** 05:44:27.5±0.6, 59°.41N×30°.38W, h0km, mb4.0/22, mbtmp4.0/24, ML3.7/2, MS3.8/40, Error ellipse: s-maj=16.9km s-min=11.8km az=180.0*

*NEIC **20** 05:44:29.6±1.2, 59°.5N±0°.1×30°.4W±0°.2, h10km±1km, mb4.6/50, Error ellipse: s-maj=17.9km s-min=14.5km az=185.0*

ISC 20 05:44:30.0±0.4**, 59°.48N**±0°.07×**30°.34W**±0°.05**, h16km, n118,** σ0s.**81**/90**, mb4.5**/46**, MS3.7**/37**, 4D, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**6.76**	**35**	Pn	**Pn**	**05 46 09.3**	**+0.8**
	0.4nm,0.3s,baz=256,slow=8.7,SNR=3.2						
BORG				Sn	**Sn**	**05 47 23.2**	**-1.8**
	1.3nm,0.3s,baz=109,slow=22,SNR=8.1						
	22nm,0.7s						
BORG	**Borgarnes**	**6.76**	**35**		**Pn**	**05 46 07.8**	**-0.6**
ANGG	**Ammassalik, Gr**	**7.01**	**334**	Pn	**Pn**	**05 46 10.4**	**-1.5**
SFJD	**Kangerlussuaq**	**11.79**	**318**	LR	LR	05 51 00.8	
	comp=Z,798nm,20.5s,baz=130,slow=33						
SUMG	**Summit**	**13.53**	**350**	Pn	**Pn**	**05 47 40.3**	**-1.1**
ESK	**Eskdalemuir**	**15.15**	**94**	Pn	**Pn**	**05 48 02.1**	**-1.1**
ESK				IAmb	IAmb	05 48 09.3	
	comp=Z,32nm,1.2s						
EKA	**Eskdalemuir Ar**	**15.17**	**94**	Pn	**Pn**	**05 48 04.4**	**+1.0**
	baz=288,slow=8.1						
EKA				LR	LR	05 52 41.7	
	comp=Z,379nm,20.6s,baz=300,slow=33						
	comp=Z,9.2nm,1.0s						
FRB	**Frobisher Bay**	**18.45**	**300**	LR	LR	05 54 58.3	
	comp=Z,443nm,18.9s,baz=92,slow=34						
SCHQ	**Schefferville**	**20.15**	**273**	P	**P**	**05 49 02.3**	**-0.9**
	comp=Z,4.1nm,0.8s,baz=36,slow=8.7,SNR=2.5						
SCHQ				LR	LR	05 55 04.1	
	comp=Z,292nm,21.2s,baz=86,slow=32						
	comp=Z,4.1nm,0.8s						
SCHQ	**Schefferville**	**20.15**	**273**	P	**P**	**05 49 02.8**	**-0.4**
NOA	**NORSAR Array B**	**20.43**	**68**	P	**P**	**05 49 05.9**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=282,slow=10,SNR=3.5						
NOA				LR	LR	05 56 13.8	
	comp=Z,148nm,19.3s,baz=285,slow=34						
	comp=Z,0.9nm,0.8s						
TULEG	**Thule**	**21.62**	**337**	P	**P**	**05 49 18.9**	**0.0**
HFS	**Hagfors**	**21.85**	**69**	LR	LR	05 57 05.3	
	comp=Z,195nm,18.2s,baz=262,slow=35						
DOU	**Dourbes**	**21.98**	**100**	*d*P	**P**	**05 49 22.9**	**-0.1**
BGES	**Gesves**	**22.05**	**99**	*d*P	**P**	**05 49 23.9**	**+0.2**
	comp=Z,19nm,1.0s						
BTNL	**Ternell**	**22.45**	**97**	*d*P	**P**	**05 49 25.2**	**-2.8**
	comp=Z,8.8nm,1.0s						
WLF	**Walferdange**	**23.04**	**99**	*d*P	**P**	**05 49 32.9**	**-1.2**
ECH	**Echery**	**24.48**	**101**	P	**P**	**05 49 48.8**	**+0.7**
ECH				IAmb	IAmb	05 49 51.0	
	comp=Z,17nm,1.3s						
ARCES	**ARCESS Array B**	**25.07**	**43**	P	**P**	**05 49 53.0**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=286,slow=8.7,SNR=7.5						
ARCES				LR	LR	05 57 46.5	
	comp=Z,124nm,19.0s,baz=282,slow=32						
	comp=Z,1.2nm,0.6s						
ARCES	**ARCESS Array B**	**25.07**	**43**	P	**P**	**05 49 52.6**	**-0.6**
ARCES				IAmb	IAmb	05 50 25.8	
	comp=Z,13nm,1.4s						
ESDC	**Sonseca Array**	**25.88**	**128**	P	**P**	**05 50 01.1**	**+0.3**
	comp=Z,3.2nm,0.9s,baz=332,slow=9.6,SNR=6.8						
ESDC				LR	LR	05 58 05.8	
	comp=Z,138nm,21.6s,baz=333,slow=32						
	comp=Z,3.2nm,0.9s						
DAVOX	**Davos/Dischmat**	**26.81**	**100**	LR	LR	05 59 22.4	
	comp=Z,225nm,20.2s,baz=260,slow=33						
FINES	**FINESS Array B**	**27.15**	**61**	P	**P**	**05 50 13.9**	**+1.9**
	comp=Z,4.0nm,0.9s,baz=282,slow=6.8,SNR=5.3						
FINES				LR	LR	05 59 02.1	
	comp=Z,102nm,19.8s,baz=245,slow=32						
	comp=Z,4.0nm,0.9s						
FINES	**FINESS Array B**	**27.15**	**61**	P	**P**	**05 50 12.8**	**+0.8**
FIA1	**FINESS Array S**	**27.15**	**61**	P	**P**	**05 50 12.6**	**+0.5**
GERES	**GERESS Array B**	**27.38**	**93**	LR	LR	06 01 04.1	
	comp=Z,194nm,18.4s,baz=272,slow=36						
RES	**Resolute Bay**	**27.46**	**329**	LR	LR	06 01 07.2	
	comp=Z,93nm,18.0s,baz=138,slow=36						
VRAC	**Vranov**	**28.57**	**90**	LR	LR	06 01 09.8	
	comp=Z,151nm,19.5s,baz=300,slow=35						
FCC	**Fort Churchill**	**31.61**	**297**		**P**	**05 50 52.2**	**+0.6**
FCC				IAmb	IAmb	05 50 52.8	
	comp=Z,7.6nm,1.0s						
MDT	**Midelt**	**31.69**	**136**	LR	LR	06 01 32.6	
	comp=Z,108nm,18.4s,baz=328,slow=32						
SADO	**Sadowa**	**32.54**	**265**	LR	LR	06 02 25.5	
	comp=Z,308nm,20.0s,baz=72,slow=33						
AKASG	**Malin Array Be**	**34.10**	**78**	P	**P**	**05 51 13.4**	**0.0**
	comp=Z,1.0nm,0.6s,baz=298,slow=8.5,SNR=6.5						
AKASG				LR	LR	06 03 28.2	
	comp=Z,72nm,19.8s,baz=306,slow=33						
	comp=Z,1.0nm,0.6s						
KEST	**Kesra**	**34.96**	**115**	P	**P**	**05 51 20.2**	**-1.0**
	comp=Z,7.4nm,1.1s,baz=336,slow=10.0,SNR=3.4						
KEST				LR	LR	06 04 01.9	
	comp=Z,239nm,19.7s,baz=304,slow=34						
	comp=Z,7.4nm,1.1s						
OBN	**Obninsk**	**35.03**	**67**	LR	LR	06 05 06.9	
	comp=Z,162nm,18.7s,baz=222,slow=35						
MLR	**Muntele Rosu**	**35.86**	**87**	LR	LR	06 07 45.6	
	comp=Z,78nm,18.1s,baz=315,slow=39						
ULM	**Lac du Bonnet**	**37.34**	**286**	P	**P**	**05 51 41.0**	**-0.2**
	comp=Z,3.6nm,0.8s,baz=47,slow=10,SNR=3.9						
ULM				LR	LR	06 05 41.6	
	comp=Z,226nm,18.5s,baz=11,slow=34						
	comp=Z,3.6nm,0.8s						
YKAW1	**Yellowknife Wh**	**38.21**	**312**	P	**P**	**05 51 48.2**	**-0.2**
YKAW1				IAmb	IAmb	05 51 51.6	
	comp=Z,10nm,1.2s						
YKA	**Yellowknife Ar**	**38.25**	**312**	P	**P**	**05 51 48.9**	**+0.1**
	comp=Z,2.5nm,0.8s,baz=51,slow=8.2,SNR=18						
YKA				PcP	**PcP**	**05 54 02.0**	**-0.5**
	comp=Z,0.8nm,0.9s,baz=37,slow=3.1,SNR=6.0						
YKA				LR	LR	06 06 40.4	
	comp=Z,186nm,19.5s,baz=89,slow=35						
	comp=Z,2.5nm,0.8s						
YKA	**Yellowknife Ar**	**38.25**	**312**	P	**P**	**05 51 48.0**	**-0.8**
KIRV	**Kirov**	**38.73**	**55**	LR	LR	06 06 07.4	
	comp=Z,92nm,20.9s,baz=302,slow=34						
INK	**Inuvik**	**40.97**	**326**	LR	LR	06 08 34.8	
	comp=Z,106nm,18.5s,baz=81,slow=35						
TKL	**Tuckaleechee C**	**41.69**	**260**	LR	LR	06 06 58.8	
	comp=Z,141nm,20.1s,baz=26,slow=32						
E27K	**Coleen River**	**43.24**	**329**		**P**	**05 52 30.4**	**+0.5**
EDM	**Edmonton**	**43.57**	**300**		**P**	**05 52 33.4**	**+0.6**
EDM				IAmb	IAmb	05 52 34.6	
	comp=Z,11nm,1.1s						
CCM	**Cathedral Cave**	**43.63**	**269**		**P**	**05 52 33.4**	**+0.1**
CCM				IAmb	IAmb	05 52 34.3	
	comp=Z,15nm,1.3s						
ARTI	**Arti**	**43.86**	**53**	LR	LR	06 09 29.2	
	comp=Z,107nm,20.6s,baz=321,slow=34						
BRTR	**Keskin Array B**	**43.94**	**87**	P	**P**	**05 52 36.9**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=338,slow=3.1,SNR=4.4						
BRTR				LR	LR	06 11 30.6	
	comp=Z,96nm,20.1s,baz=291,slow=37						
	comp=Z,0.5nm,0.5s						
NRIK	**Noril'sk**	**44.01**	**27**	LR	LR	06 12 33.6	
	comp=Z,53nm,18.1s,baz=340,slow=38						

PBMO	Poplar Bluff	44.19	267	P	P	05 52 38.6	+0.7
PBMO				IAmb	IAmb	05 52 39.3	
	comp=Z,10nm,0.9s						
E25K	Arctic Village	44.29	331	P	P	05 52 39.1	+0.8
K30B	Basset	44.44	280		P	05 52 40.8	+0.9
BMAR	Burnt Mountain	44.56	330	P	P	05 52 41.7	+1.1
H27K	Steamboat Moun	44.65	327	P	P	05 52 41.7	+0.4
MGMO	Mountain Grove	44.84	269	P	P	05 52 43.6	+0.4
MGMO				IAmb	IAmb	05 52 44.5	
	comp=Z,11nm,1.1s						
TOLK	Toolik Lake Re	44.85	333		P	05 52 43.9	+1.0
TOLK				IAmb	IAmb	05 52 44.5	
	comp=Z,12nm,1.2s						
F24K	Squaw Lake	45.33	331		P	05 52 48.1	+1.4
F24K				IAmb	IAmb	05 52 48.8	
	comp=Z,7.8nm,1.1s						
KBZ	Khabaz	45.65	76	LR	LR	06 12 43.9	
	comp=Z,64nm,18.0s,baz=318,slow=37						
WHAR	Wooly Hollow	46.30	267	P	P	05 52 54.7	+0.1
G23K	Bananza Creek	46.48	332		P	05 52 57.1	+1.3
G23K				IAmb	IAmb	05 52 57.9	
	comp=Z,13nm,1.2s						
X40A	Basin Creek Fa	47.20	267	P	P	05 53 01.2	-0.5
ILAR	Eielson Array	47.21	329	P	P	05 53 02.2	+0.8
	comp=Z,2.0nm,1.0s,baz=34,slow=6.3,SNR=13						
ILAR				LR	LR	06 12 26.9	
	comp=Z,72nm,21.7s,baz=132,slow=36						
	comp=Z,2.0nm,1.0s						
ILAR	Eielson Array	47.21	329	P	P	05 53 01.4	-0.1
MIAR	Mount Ida	47.53	268		P	05 53 03.9	-0.4
AKTO	Aktyubinsk	47.90	59	LR	LR	06 13 13.3	
	comp=Z,90nm,18.1s,baz=71,slow=36						
TIXI	Tiksi	48.35	9	P	P	05 53 11.0	+0.9
	comp=Z,1.4nm,0.3s,baz=22,slow=5.7,SNR=9.5						
	comp=Z,1.4nm,0.3s						
TIXI	Tiksi	48.35	9		P	05 53 11.3	+1.1
TIXI				IAmb	IAmb	05 53 12.0	
	comp=Z,10nm,1.1s						
KSCO	Kaye Shedlock'	48.69	279	P	P	05 53 13.5	+0.1
W35A	Tecumseh	48.74	271	P	P	05 53 13.2	-0.5
SJG	San Juan	48.75	228	LR	LR	06 09 41.6	
	comp=Z,19nm,21.1s,baz=341,slow=31						
NEW	Newport	48.78	298	LR	LR	06 13 17.0	
	comp=Z,381nm,18.3s,baz=44,slow=35						
BW06	Boulder Array	49.30	287	P	P	05 53 17.6	-0.5
PD31	Pinedale Array	49.30	287	P	P	05 53 17.4	-0.6
PDAR	Pinedale Array	49.30	287	P	P	05 53 17.6	-0.5
	comp=Z,1.4nm,0.9s,baz=62,slow=6.9,SNR=8.0						
PDAR				LR	LR	06 12 09.4	
	comp=Z,113nm,20.5s,baz=346,slow=34						
	comp=Z,1.4nm,0.9s						
ISCO	Idaho Springs	49.59	282	P	P	05 53 20.4	-0.1
ISCO				IAmb	IAmb	05 53 23.9	
	comp=Z,11nm,1.4s						
AB31	Akbulak array	49.61	59		P	05 53 21.1	+1.0
RTBA	Rita Blanca	50.73	277		P	05 53 29.1	+0.2
RTBA				IAmb	IAmb	05 53 30.2	
	comp=Z,9.5nm,0.9s						
T25A	Trinidad	51.03	279	P	P	05 53 31.4	+0.1
T25A				IAmb	IAmb	05 53 33.2	
	comp=Z,10nm,1.0s						
BVAR	Borovoye Array	51.10	50	P	P	05 53 31.4	+0.1
	comp=Z,1.5nm,0.8s,baz=319,slow=6.1,SNR=6.4						
	comp=Z,1.5nm,0.8s						
S22A	4UR Ranch, Cre	51.77	281		P	05 53 37.9	+1.0
TORD	Torodi Ar. Bea	51.99	139	P	P	05 53 37.6	-0.8
	comp=Z,1.6nm,0.8s,baz=346,slow=11,SNR=5.1						
	comp=Z,1.6nm,0.8s						
P17A	Butcher Ranch,	52.38	286	P	P	05 53 41.4	+0.1
P17A				IAmb	IAmb	05 53 42.5	
	comp=Z,8.7nm,1.3s						
MPU	Maple Canyon	52.40	287	P	P	05 53 41.8	+0.3
MPU				IAmb	IAmb	05 53 42.9	
	comp=Z,10.0nm,1.3s						
ELK	Elko	53.59	290	LR	LR	06 14 17.1	
	comp=Z,137nm,19.4s,baz=18,slow=33						
ANMO	Albuquerque	53.77	279	LR	LR	06 16 12.9	
	comp=Z,106nm,18.5s,baz=72,slow=35						
ANMO	Albuquerque	53.77	279		P	05 53 52.8	+1.2
OZNA	Ozona	54.26	271		P	05 53 55.6	+0.5
OZNA				IAmb	IAmb	05 54 22.9	
	comp=Z,8.4nm,1.4s						
PSUT	Pine Spring	54.64	287	P	P	05 53 57.9	0.0
Y22A	Socorro	54.83	278		P	05 54 00.4	+1.2
Y22A				IAmb	IAmb	05 54 01.6	
	comp=Z,6.9nm,1.1s						
SAND	Sanderson	55.55	271		P	05 54 04.6	+0.2
SAND				IAmb	IAmb	05 54 05.9	
	comp=Z,6.3nm,0.8s						
ZALV	Zalesovo Beam	55.57	40	P	P	05 54 03.7	-0.4
	comp=Z,0.5nm,0.5s,baz=318,slow=2.0,SNR=4.5						
	comp=Z,0.5nm,0.5s						
KURK	Kurchatov	56.05	46		P	05 54 08.0	+0.4
KURK				IAmb	IAmb	05 54 12.0	
	comp=Z,4.0nm,0.8s						
KURBB	Kurchatov Arra	56.10	47	P	P	05 54 08.2	+0.3
	comp=Z,3.2nm,0.8s,baz=323,slow=7.1,SNR=18						
KURBB				LR	LR	06 17 36.1	
	comp=Z,59nm,19.5s,baz=164,slow=35						
	comp=Z,3.2nm,0.8s						
DBIC	Dimbokro	56.16	149	LR	LR	06 15 51.5	
	comp=Z,156nm,18.1s,baz=6.0,slow=34						
YBH	Yreka Blue Hor	56.32	296	LR	LR	06 17 49.4	
	comp=Z,20nm,19.1s,baz=62,slow=36						
TXAR	Lajitas Array	56.84	272	P	P	05 54 13.7	+0.1
	comp=Z,1.1nm,0.9s,baz=60,slow=4.9,SNR=8.8						
	comp=Z,1.1nm,0.9s						
TXAR	Lajitas Array	56.84	272	P	P	05 54 13.1	-0.5
NVAR	Mina Array Bea	56.87	290	P	P	05 54 14.4	+0.5
	comp=Z,0.7nm,0.8s,baz=54,slow=4.5,SNR=5.5						
NVAR				LR	LR	06 17 10.2	
	comp=Z,139nm,19.8s,baz=356,slow=35						
	comp=Z,0.7nm,0.8s						
KK31	Karatay Array	58.99	57	P	P	05 54 28.9	+0.4
KK31				IAmb	IAmb	05 54 38.4	
	comp=Z,6.8nm,1.5s						
KKAR	Karatay Array	58.99	57	P	P	05 54 29.3	+0.8
ISA	Isabella, Lake	59.16	289	P	P	05 54 30.1	+0.3
ISA				IAmb	IAmb	05 54 32.2	
	comp=Z,9.4nm,1.2s						
PFO	Pinyon Flats O	59.82	286	LR	LR	06 20 08.1	
	comp=Z,108nm,18.2s,baz=61,slow=36						
MKAR	Makanchi Array	60.66	47	P	P	05 54 40.3	+0.3
	comp=Z,2.6nm,0.6s,baz=342,slow=4.7,SNR=16						
	comp=Z,2.6nm,0.6s						
GAR	Garm	62.26	60		P	05 54 51.6	+0.6
SONM	Songino Array	67.35	30	P	P	05 55 24.4	+0.5
	comp=Z,1.2nm,1.0s,baz=324,slow=3.7,SNR=5.3						
	comp=Z,1.2nm,1.0s						
GTA	Gaotai	73.21	38	*e*P	P	05 56 00.5	+0.5
GTA				pP	pP	05 56 05.0	+0.2
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HHC	Hu-ho-hao-te	75.19	29	*e*P	P	05 56 10.5	-1.0
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,69nm,4.8s						
BDFB	Brasilia	76.23	198	P	P	05 56 17.9	+0.4
	comp=Z,3.6nm,0.7s,baz=16,slow=6.7,SNR=7.6						
	comp=Z,3.6nm,0.7s						
AQDB	Aquidauana	82.34	204		P	05 56 50.9	+0.3
AQDB				IAmb	IAmb	05 56 51.7	
	comp=Z,7.0nm,1.0s						
GO01	Chusmiza	85.02	216	P	P	05 57 05.3	+0.3
PB11	IPOC Station P	85.25	217	P	P	05 57 05.2	-0.5
NJ2	Nanjing	85.30	26	*e*P	P	05 57 05.0	-0.9
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PZH	PanZhiHua	85.69	42	P	P	05 57 08.3	+0.2
TAOE	Nuku Hiva Isla	107.60	283	*e*LR	LR	06 34 14.7	
	comp=Z,100nm,24.9s						
RKT	Rikitea	117.03	270	*e*LR	LR	06 38 47.2	
	comp=Z,3µm,34.5s						
PPT2	Papeete2	119.74	287	*e*LR	LR	06 39 52.5	
	comp=Z,83nm,24.0s						
TBI	Tubuai	124.55	283	*e*LR	LR	06 42 14.1	
	comp=Z,576nm,36.8s						
DZM	Mont Dzumac	140.76	335	*e*LR	LR	06 49 46.1	
	comp=Z,57nm,29.1s						
QSPA	South Pole Qui	149.39	180	PKPbc	PKPbc	06 04 14.4	-2.1
	comp=Z,4.2nm,0.9s,baz=200,slow=2.1,SNR=7.5						

*NEIC **20** 05:49:03.0±1.3, 19°.13N±0°.03×66°.59W±0°.02, h10^{km}±1^{km}, ML3.1/28, Md2.6/15(RSPR), Error ellipse: s-maj=5.9km s-min=3.2km az=163.0*

*RSPR **20** 05:49:07.0, 19°.11N×66°.62W, h23^{km}±14^{km}, MD2.6/15*

*SDD **20** 05:49:07.3±1.9, 19°.07N×66°.88W, h15^{km}±47^{km}, MD3.7, ML2.8, MW3.3, Presumed earthquake*

ISC 20 05:49:03.4±1.7**, 19°.15N**±0°.06×**66°.64W**±0°.04**, h23**^{km}±14^{km}**, n56, σ0^{s}95**/62**, 16C-7D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	Esperanza - Ma	0.68	171		Pn	05 49 17.7	+0.1
EMPR				IAML		05 49 27.3	
	1µm,0.5s						
EMPR				IAML		05 49 27.5	
	1µm,0.5s						
EMPR	Esperanza - Ma	0.68	171	⇑*e*P	Pn	05 49 18.2	+0.5
EMPR	Esperanza - Ma	0.68	171	*e*S	Sn	05 49 27.1	-0.5
AOPR	Arecibo Observ	0.81	187	Pn	Pn	05 49 19.6	+0.1
AOPR					Sb	05 49 29.7	+0.3
AOPR				IAML		05 49 34.0	
	comp=N,1µm,0.4s						
AOPR	Arecibo Observ	0.81	187	⇓*e*P	Pn	05 49 19.7	+0.3
AOPR	Arecibo Observ	0.81	187	*e*S	Sb	05 49 30.0	+0.7
AOPR	Arecibo Observ	0.81	187	⇑*e*Pg	Pn	05 49 19.9	+0.4
AOPR				⇑*e*Sg	Sb	05 49 29.5	+0.2
AOPR				IAML		05 49 41.2	
	comp=N,1µm,0.2s						
AGPR	Aguadilla, PR	0.81	213	Pg	Pn	05 49 19.4	-0.1
AGPR				IAML		05 49 37.5	
	comp=N,380nm,0.3s						
AGPR				IAML		05 49 41.5	
	comp=N,375nm,0.3s						
AGPR	Aguadilla, PR	0.81	213	⇓*e*P	Pn	05 49 19.7	+0.2
AGPR	Aguadilla, PR	0.81	213	*e*S	Sb	05 49 30.1	+0.7
AGPR	Aguadilla, PR	0.81	213	⇑*e*Pg	Pn	05 49 19.6	+0.1
AGPR				⇑*e*Sg	Sb	05 49 27.9	-1.5
AGPR				IAML		05 49 34.9	
	comp=N,381nm,0.3s						
ECPR	Experimental S	0.87	162	Pg	Pb	05 49 20.1	+0.3
ECPR				IAML		05 49 36.9	
	comp=N,1µm,0.2s						
ECPR				IAML		05 49 38.2	
	comp=N,1µm,0.2s						
ECPR	Experimental S	0.87	162	⇑*e*P	Pn	05 49 20.4	+0.1
ECPR	Experimental S	0.87	162	*e*S	Sb	05 49 30.1	-0.9
UUPR	Utuado, UPR, P	0.90	185	Pg	Pn	05 49 20.7	0.0
UUPR	Utuado, UPR, P	0.90	185	⇑*e*P	Pn	05 49 20.9	+0.3
UUPR	Utuado, UPR, P	0.90	185	*e*S	Sb	05 49 31.6	-0.3
GCPR	Guaynabo City	0.99	148		Pn	05 49 22.3	+0.3
GCPR	Guaynabo City	0.99	148		Sb	05 49 33.7	-0.9
GCPR	Guaynabo City	0.99	148	⇓*e*P	Pn	05 49 22.5	+0.6
GCPR	Guaynabo City	0.99	148	*e*S	Sb	05 49 33.7	-0.9
PRSN	Puerto Rico Se	1.04	207	Pg	Pb	05 49 23.0	+0.2
PRSN	Puerto Rico Se	1.04	207	⇑*e*P	Pb	05 49 23.3	+0.5
PRSN	Puerto Rico Se	1.04	207	*e*S	Sb	05 49 36.5	+0.5
LSP	Las Mesas	1.06	203	⇑*e*P	Pb	05 49 23.6	+0.6
LSP	Las Mesas	1.06	203	*e*S	Sb	05 49 36.4	-0.1
CELP	Cerrillos	1.07	177	Pg	Pb	05 49 23.5	+0.2
CELP				IAML		05 49 41.3	
	comp=N,229nm,0.5s						
IDE	Isla Desecheo	1.09	226	⇑*e*P	Pb	05 49 24.4	+0.8
IDE	Isla Desecheo	1.09	226	*e*S	Sn	05 49 38.2	+0.3
OBIP	Obispado Ponce	1.10	178		Pb	05 49 24.0	+0.2
OBIP					Sb	05 49 37.3	-0.5
OBIP	Obispado Ponce	1.10	178	IAML		05 49 42.7	
	comp=E,217nm,0.4s						
OBIP	Obispado Ponce	1.10	178	⇑*e*P	Pb	05 49 24.0	+0.2
OBIP	Obispado Ponce	1.10	178	*e*S	Sb	05 49 37.3	-0.5
SJG	San Juan	1.14	156		Pb	05 49 24.9	+0.6
SJG	San Juan	1.14	156		Pn	05 49 24.1	+0.2
SJG	San Juan	1.14	156	⇑*e*P	Pb	05 49 25.4	+1.0
SJG	San Juan	1.14	156	*e*S	Sb	05 49 38.0	-0.7
GBPR	Guanica, Bosqu	1.19	191		Pb	05 49 25.8	+0.5
GBPR	Guanica, Bosqu	1.19	191	⇓*e*P	Pb	05 49 25.8	+0.5
GBPR	Guanica, Bosqu	1.19	191	*e*S	Sn	05 49 39.6	-0.6
CRPR	Cabo Rojo, PR	1.22	201	Pn	Pb	05 49 25.9	+0.1
CRPR				IAML		05 49 43.5	
	comp=E,303nm,0.7s						
CRPR				IAML		05 49 48.2	
	comp=E,353nm,0.5s						
CRPR	Cabo Rojo, PR	1.22	201		Sn	05 49 40.8	-0.2
CRPR	Cabo Rojo, PR	1.22	201	⇓*i*P	Pb	05 49 25.9	+0.1
CRPR	Cabo Rojo, PR	1.22	201	*e*S	Sn	05 49 40.8	-0.2
MLPR	Magueyes Islan	1.24	198	⇓*e*P	Pb	05 49 26.1	0.0
MLPR	Magueyes Islan	1.24	198	*e*S	Sn	05 49 40.8	-0.5
HUMP	Col San Antoni	1.26	143		Pn	05 49 26.0	+0.4
HUMP	Col San Antoni	1.26	143	Pn	Pn	05 49 25.7	+0.1
HUMP				IAML		05 49 43.6	
	comp=E,249nm,0.5s						
HUMP				IAML		05 49 43.7	
	comp=E,158nm,0.3s						
HUMP	Col San Antoni	1.26	143	⇓*e*P	Pn	05 49 26.0	+0.4
HUMP	Col San Antoni	1.26	143	*e*S	Sn	05 49 40.7	-1.1
HIDR	Higuey Centro	2.04	254	*i* P	Pn	05 49 35.5	-0.9
HIDR				*i* S	Sn	05 49 57.0	-4.1
HIDR				IAML		05 50 18.6	
	comp=N,86nm,0.3s						
MIDR	Miches	2.28	266	⇑*e*Pg	Pb	05 49 44.0	+0.1
MIDR				⇑*e*Sg	Sn	05 50 09.2	+2.1
MIDR				IAML		05 50 25.4	
	comp=N,51nm,1.0s						
DR12	Loma Pena Alta	2.62	262	Pn	Pb	05 49 47.9	-1.8
HATOM	Hato Mayor del	2.62	262	⇑*e*Pg	Pb	05 49 48.0	-1.6
HATOM				⇑*e*Sg	Sn	05 50 17.4	+1.9
HATOM				IAML		05 50 39.3	
	comp=N,46nm,1.7s						
SC01	Santiago de lo	3.87	275	Pn	Pn	05 50 02.0	+0.5
SDDR	Presa de Saban	4.39	269	Pn	Pn	05 50 11.4	+2.6
SDDR				IAML		05 51 26.8	
	comp=N,36nm,1.1s						
SDDR				IAML		05 51 42.2	
	comp=N,35nm,2.9s						

*MOS **20** 05:52:20.1±0.8, 52°.23N×153°.74E, h586^{km}, mb4.1/3, Error ellipse: s-maj=13.7km s-min=11.0km az=74.4*

*KRSC **20** 05:52:21.3±2.1, 52°.26N×154°.37E, h586^{km}±29^{km}, Ml4.5*

*NEIC **20** 05:52:22.2±1.5, 52°.8N±0°.2×152°.6E±0°.2, h512^{km}±7^{km}, mb4.1/26, Error ellipse: s-maj=24.3km s-min=13.3km az=160.0*

*IDC **20** 05:52:23.4±1.1, 52°.84N×152°.73E, h531^{km}±13^{km}, mb3.1/24, mbtmp4.0/28, Error ellipse: s-maj=12.0km s-min=10.6km az=148.0*

ISC 20 05:52:22.2±0.6**, 52°.60N**±0°.08×**153°.42E**±0°.08**, h550**^{km}**, n132, σ1^{s}63**/98**, mb3.8**/35**, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIPR	Malaya Ipel'ka	2.07	98	P	P	05 53 32.2	+0.1
MIPR	Malaya Ipel'ka	2.07	98	*e*P	P	05 53 32.3	+0.1
APC	Apacha	2.29	80	P	P	05 53 33.4	+0.3
APC	Apacha	2.29	80	*e*P	P	05 53 33.4	+0.3
PAU	Pauzhetka	2.38	117	P	P	05 53 34.8	+1.1
PAU	Pauzhetka	2.38	117	*e*P	P	05 53 34.8	+1.1
PEA0B	Petropavlovsk-	2.64	77	P	P	05 53 35.7	+0.7
PEA0B	Petropavlovsk-	2.64	77	P	P	05 53 35.7	+0.7
PETK	Petropavlovsk-	2.64	77	P	P	05 53 34.9	-0.1
	4.9nm,0.3s,baz=262,slow=5.6,SNR=46						
PETK	Petropavlovsk-	2.64	77	P	P	05 53 34.3	-0.7
ASAK	Asacha	2.75	93	P	P	05 53 36.3	+0.6
ASAK	Asacha	2.75	93	*e*P	P	05 53 36.4	+0.6
GRL	Gorelyy	2.84	89	P	P	05 53 37.0	+0.7
GRL	Gorelyy	2.84	89	*e*P	P	05 53 37.0	+0.7
KRMR	Karymshinskiy	2.87	84	P	P	05 53 36.6	+0.3
KRMR				S	S	05 54 37.1	+0.2
KRMR	Karymshinskiy	2.87	84	*e*P	P	05 53 36.7	+0.3
KRMR				*e*S	S	05 54 37.2	+0.2
MTVR	Mutnovka	2.91	90	P	P	05 53 38.0	+1.2
MTVR	Mutnovka	2.91	90	*e*P	P	05 53 38.0	+1.3
GNL	Ganaly	2.94	66	P	P	05 53 37.6	+0.8
GNL	Ganaly	2.94	66	*e*P	P	05 53 37.6	+0.8
KDTR	Khodutka, Kamc	2.97	104	P	P	05 53 36.2	-0.8
KDTR				S	S	05 54 34.9	-3.1
KDTR	Khodutka, Kamc	2.97	104	*e*P	P	05 53 36.2	-0.8
KDTR				*e*S	S	05 54 35.0	-3.1
RUS	Russkaya	3.12	91	P	P	05 53 37.8	0.0
RUS				S	S	05 54 39.0	-0.6
RUS	Russkaya	3.12	91	*e*P	P	05 53 37.8	0.0
RUS				*e*S	S	05 54 39.0	-0.6
PET	Petropavlovsk	3.20	80	P	P	05 53 38.6	+0.3
PET	Petropavlovsk	3.20	80	*e*P	P	05 53 39.6	+1.2
PET				*e*S	S	05 54 40.4	-0.2
PET				pmax	pmax		
	comp=Z,51nm,0.4s						
PET				smax	smax		
	comp=E,74nm,0.5s						
PET				smax	smax		
	comp=N,50nm,0.7s						
PET	Petropavlovsk	3.20	80	*e*P	P	05 53 38.8	+0.4
KOK	Koryaka	3.23	76	P	P	05 53 39.6	+1.0
KOK	Koryaka	3.23	76	*e*P	P	05 53 39.7	+1.0
KRX	Arik	3.25	74	P	P	05 53 39.6	+0.8
KRX	Arik	3.25	74	*e*P	P	05 53 39.7	+0.8
DALK	Dalny	3.27	80	P	P	05 53 39.1	+0.4
DALK	Dalny	3.27	80	*e*P	P	05 53 39.1	+0.4
AVH	Avacha	3.29	76	P	P	05 53 40.0	+1.0
AVH	Avacha	3.29	76	*e*P	P	05 53 40.0	+1.0
KRER	Koryakskii	3.30	76	P	P	05 53 41.5	+2.3
KRER	Koryakskii	3.30	76	*e*P	P	05 53 41.5	+2.3
SMAR	Somma	3.32	76	P	P	05 53 40.7	+1.3
SMAR	Somma	3.32	76	*e*P	P	05 53 40.7	+1.3
UGLR	Uglovaya	3.33	77	P	P	05 53 40.4	+1.1
UGLR	Uglovaya	3.33	77	*e*P	P	05 53 40.5	+1.1
SDLR	Sedlovina	3.38	76	P	P	05 53 40.5	+0.9
SDLR	Sedlovina	3.38	76	*e*P	P	05 53 40.6	+0.9
KII	Karymskiy	3.89	66	P	P	05 53 45.3	+2.1
KII	Karymskiy	3.89	66	*e*P	P	05 53 45.3	+2.1
SPN	Mys Shipunski	4.03	80	P	P	05 53 43.9	-0.3
SPN				S	S	05 54 47.6	-3.6
SPN	Mys Shipunski	4.03	80	*e*P	P	05 53 43.9	-0.3
SPN				*e*S	S	05 54 47.7	-3.6
ESO	Esso	4.55	41	P	P	05 53 49.2	+1.1
ESO	Esso	4.55	41	*e*P	P	05 53 49.2	+1.1
KZV	Kizimen	4.79	56	P	P	05 53 52.3	+2.1
KZV	Kizimen	4.79	56	*e*P	P	05 53 52.3	+2.1
KMNR	Kamenistaya	5.10	49	P	P	05 53 54.7	+1.9
KMNR	Kamenistaya	5.10	49	*e*P	P	05 53 54.8	+1.9
SRKR	Sorokina	6.06	45	P	P	05 54 02.6	+1.4
SRKR	Sorokina	6.06	45	*e*P	P	05 54 02.6	+1.4
KBTR	Krutoberegovo	6.57	53	P	P	05 54 04.9	-0.9
KBTR				S	S	05 55 26.0	-4.9
KBTR	Krutoberegovo	6.57	53	*e*P	P	05 54 04.9	-0.9
KBTR				*e*S	S	05 55 26.1	-4.9
MA2	Magadan	7.15	349	P	P	05 54 09.6	-1.7
	comp=N,9.1nm,0.5s,baz=170,slow=6.2,SNR=3.9						
YSS	Yuzhno-Sakhali	8.91	235	P	P	05 54 24.7	-4.3
SEY	Seymchan	10.38	357	P	P	05 54 43.7	+0.1
	comp=N,14nm,0.5s,baz=176,slow=11,SNR=32						
SEY	Seymchan	10.38	357	*e*P	P	05 54 42.4	-1.2
SEY				pmax	pmax		
	comp=Z,14nm,0.7s						
ERM	Erimo	12.66	217	P	P	05 55 04.4	-3.1
ERM	Erimo	12.66	217	P	P	05 55 04.4	-3.1
BILL	Bilibino	16.68	17	P	P	05 55 48.0	+0.4
BILL				IAmb	IAmb	05 55 49.3	
	comp=Z,3.8nm,0.5s						
JSD	Sado	17.99	222	P	P	05 55 59.6	-0.4
JYT	Yasato	18.85	215	P	P	05 56 08.7	+1.0
MJB9	Matsu-Tunnel	19.30	220	P	P	05 56 12.2	+0.2
MAJO	Matsushiro	19.30	220		P	05 56 12.4	+0.5
MAJO	Matsushiro	19.30	220	P	P	05 56 12.5	+0.5
MAJO				pmax	pmax		
	comp=Z,24nm,0.7s						
MJAR	Matsushiro Arr	19.30	220	P	P	05 56 13.6	+1.6
	comp=Z,10nm,0.6s,baz=17,slow=10,SNR=18						
MJAR	Matsushiro Arr	19.30	220		P	05 56 13.1	+1.1
MJAR				IAmb	IAmb	05 56 14.4	
	comp=Z,4.1nm,0.6s						
MJAR	Matsushiro Arr	19.30	220	P	P	05 56 13.1	+1.1
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
JGF	Kuroka	20.46	220	P	P	05 56 22.8	+0.3
HILR	Hailar Array B	21.26	275	P	P	05 56 27.9	-1.6
	comp=Z,2.3nm,0.4s,baz=74,slow=11,SNR=2.1						
	comp=Z,2.3nm,0.4s						
TIXI	Tiksi	21.97	339	P	P	05 56 34.1	-1.3
	comp=Z,0.7nm,0.3s,baz=129,slow=12,SNR=3.7						
	comp=Z,0.7nm,0.3s						
C16K	Lisburne Hills	25.01	35	P	P	05 57 04.8	+2.3
C16K				IAmb	IAmb	05 57 21.3	
	comp=Z,12nm,1.5s						
G16K	Koyuk River	25.49	43	P	P	05 57 09.7	+2.9
G16K				IAmb	IAmb	05 57 39.9	
	comp=Z,13nm,1.4s						
F17K	Baldwin Pennin	26.11	41	P	P	05 57 16.6	+4.4
F17K				IAmb	IAmb	05 57 21.2	
	comp=Z,10nm,1.3s						
C18K	Utukok River	26.59	36	P	P	05 57 18.9	+2.5
C18K				IAmb	IAmb	05 57 40.6	
	comp=Z,7.5nm,1.4s						
J17K	VABM Dome	26.73	48	P	P	05 57 21.9	+4.2
J17K				IAmb	IAmb	05 57 43.1	
	comp=Z,9.2nm,1.5s						
M17K	Holitna River	27.54	52	P	P	05 57 30.1	+5.2
E19K	Redstone River	27.83	39	P	P	05 57 30.7	+3.4
E19K				IAmb	IAmb	05 58 04.2	
	comp=Z,7.1nm,1.4s						
B21K	Ikpikpuk River	29.09	35	P	P	05 57 41.0	+2.9
B21K				IAmb	IAmb	05 57 42.4	
	comp=Z,4.0nm,1.1s						
E22K	Anaktuvuk Pass	29.94	38	P	P	05 57 49.0	+3.3
E22K				IAmb	IAmb	05 58 02.8	
	comp=Z,5.9nm,1.5s						
SONM	Songino Array	30.04	280	P	P	05 57 44.5	-2.4
SONM	Songino Array	30.04	280	P	P	05 57 44.5	-2.3
SONM				pmax	pmax		
	comp=Z,1.0nm,1.1s						
H22K	Ishtalitna Cre	30.06	42	P	P	05 57 50.2	+3.5
D24K	Happy Valley	31.08	36	P	P	05 57 58.1	+2.7
WRH	Wood River Hil	31.54	45	P	P	05 58 03.2	+3.9
ILAR	Eielson Array	32.02	44	P	P	05 58 07.3	+3.9
	comp=Z,0.4nm,0.4s,baz=260,slow=6.9,SNR=12						
	comp=Z,0.4nm,0.4s						
ILAR	Eielson Array	32.02	44	P	P	05 58 06.6	+3.2
ILAR	Eielson Array	32.02	44	P	P	05 58 06.6	+3.2
L27K	Beaver Creek,	34.52	47	P	P	05 58 29.1	+4.6
L27K				IAmb	IAmb	05 58 49.8	
	comp=Z,6.0nm,1.4s						
ZALV	Zalesovo Beam	39.58	300	P	P	05 59 04.3	-1.7
	comp=Z,0.7nm,0.3s,baz=41,slow=6.6,SNR=5.2						
	comp=Z,0.7nm,0.3s						
KURK	Kurchatov	44.49	299	P	P	05 59 43.5	-1.1
KURK	Kurchatov	44.49	299	P	P	05 59 44.6	0.0
KURBB	Kurchatov Arra	44.59	299	P	P	05 59 44.6	-0.7
	comp=Z,3.4nm,0.4s,baz=61,slow=7.4,SNR=15						
	comp=Z,3.4nm,0.4s						
MKAR	Makanchi Array	44.66	292	P	P	05 59 45.0	-1.1
	comp=Z,1.4nm,0.4s,baz=61,slow=6.9,SNR=33						
	comp=Z,1.4nm,0.4s						
MKAR	Makanchi Array	44.66	292	P	P	05 59 45.0	-1.0
MAKZ	Makanchi	44.83	293	P	P	05 59 45.8	-1.5
MAKZ				IAmb	IAmb	05 59 48.2	
	comp=Z,9.7nm,1.4s						
MAKZ	Makanchi	44.83	293	P	P	05 59 45.8	-1.5
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.4s						
YKA	Yellowknife Ar	46.20	40	P	P	06 00 01.0	+3.5
	comp=Z,0.2nm,0.5s,baz=301,slow=8.0,SNR=7.2						
	comp=Z,0.2nm,0.5s						
YKA	Yellowknife Ar	46.20	40	P	P	06 00 01.0	+3.5
SPITS	Spitsbergen Ar	46.90	349	P	P	06 00 02.4	-0.2
	comp=Z,11nm,1.1s,baz=66,slow=14,SNR=4.9						
	comp=Z,11nm,1.1s						
BVAR	Borovoye Array	47.45	306	P	P	06 00 06.2	-0.8
	comp=Z,4.8nm,0.4s,baz=53,slow=7.4,SNR=26						
	comp=Z,4.8nm,0.4s						
BORK	Borovoye	47.47	306	P	P	06 00 06.2	-1.0
BORK				IAmb	IAmb	06 00 06.9	
	comp=Z,4.8nm,0.5s						
BORK	Borovoye	47.47	306	P	P	06 00 06.2	-1.0
BORK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ARCES	ARCESS Array B	52.41	340	P	P	06 00 42.8	-0.3
	comp=Z,1.7nm,0.7s,baz=32,slow=8.2,SNR=12						
	comp=Z,1.7nm,0.7s						
ARCES	ARCESS Array B	52.41	340	P	P	06 00 42.2	-0.9
ARCES				IAmb	IAmb	06 01 21.1	
	comp=Z,23nm,1.4s						
AB31	Akbulak array	54.94	307	P	P	06 01 00.5	-0.8
FINES	FINESS Array B	58.86	333	P	P	06 01 27.1	-0.7
	comp=Z,1.1nm,0.5s,baz=37,slow=6.8,SNR=8.1						
	comp=Z,1.1nm,0.5s						
FINES	FINESS Array B	58.86	333	P	P	06 01 27.5	-0.3
FINES	FINESS Array B	58.86	333	P	P	06 01 27.5	-0.3
NVAR	Mina Array Bea	59.67	65	P	P	06 01 38.6	+4.6
	comp=Z,0.4nm,0.7s,baz=340,slow=5.5,SNR=3.0						
	comp=Z,0.4nm,0.7s						

PDAR	Pinedale Array	61.24	56	P	P	06 01 48.0	+3.8
	comp=Z,0.3nm,0.6s,baz=310,slow=4.2,SNR=3.5						
	comp=Z,0.3nm,0.6s						
PDAR	Pinedale Array	61.24	56	P	P	06 01 48.1	+3.9
NB2	NORSAR Subarra	62.76	340	P	P	06 01 53.5	0.0
	comp=Z,0.4nm,0.4s,baz=26,slow=6.5						
NOA	NORSAR Array B	62.76	340	P	P	06 01 53.9	+0.3
	comp=Z,1.0nm,0.6s,baz=28,slow=6.5,SNR=6.6						
	comp=Z,1.0nm,0.6s						
HFS	Hagfors	63.06	339	P	P	06 01 55.5	+0.1
	comp=Z,1.4nm,0.4s,baz=29,slow=3.4,SNR=16						
	comp=Z,1.4nm,0.4s						
AKASG	Malin Array Be	66.82	325	P	P	06 02 18.6	-0.6
	comp=Z,0.4nm,0.3s,baz=35,slow=6.8,SNR=3.6						
	comp=Z,0.4nm,0.3s						
KBZ	Khabaz	66.99	312	P	P	06 02 20.5	+0.1
	comp=Z,1.5nm,0.7s,baz=147,slow=2.3,SNR=4.2						
	comp=Z,1.5nm,0.7s						
SCHQ	Schefferville	67.85	24	P	P	06 02 26.8	+1.3
	comp=Z,4.4nm,1.0s,baz=294,slow=10.0,SNR=2.0						
	comp=Z,4.4nm,1.0s						
EKA	Eskdalemuir Ar	70.70	346	P	P	06 02 43.0	+0.6
	comp=Z,0.6nm,0.4s,baz=16,slow=5.6,SNR=7.1						
	comp=Z,0.6nm,0.4s						
GERES	GERESS Array B	73.29	334	P	P	06 02 56.9	-0.8
	comp=Z,0.3nm,0.3s,baz=354,slow=6.1,SNR=1.9						
	comp=Z,0.3nm,0.3s						
WRA	Warramunga Arr	74.12	199	P	P	06 03 05.3	+2.7
	comp=Z,0.7nm,0.8s,baz=18,slow=5.8,SNR=3.1						
	comp=Z,0.7nm,0.8s						
BRTR	Keskin Array B	74.29	316	P	P	06 03 03.7	+0.1
	comp=Z,0.7nm,0.7s,baz=111,slow=6.8,SNR=4.0						
	comp=Z,0.7nm,0.7s						
BRTR	Keskin Array B	74.29	316	P	P	06 03 03.3	-0.3
BRTR	Keskin Array B	74.29	316	P	P	06 03 03.3	-0.3
TXAR	Lajitas Array	74.50	62	P	P	06 03 10.2	+5.2
	comp=Z,0.3nm,0.5s,baz=301,slow=5.1,SNR=6.1						
	comp=Z,0.3nm,0.5s						
TXAR	Lajitas Array	74.50	62	P	P	06 03 09.4	+4.4
ASAR	Alice Springs	77.83	198	P	P	06 03 26.4	+3.3
	comp=Z,0.5nm,0.5s,baz=8.3,slow=5.1,SNR=9.6						
	comp=Z,0.5nm,0.5s						
PLCA	Paso Flores	148.07	86	PKPbc	PKPab	06 11 09.7	-0.9
	comp=Z,1.9nm,0.9s,baz=270,slow=2.0,SNR=3.8						

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*IDC **20** 05:58:19.3±1.0, 25°.04N×126°.19E, h0^{km}, mb3.7/7, mbtmp3.7/8, ML3.2/1, Error ellipse: s-maj=31.3km s-min=20.3km az=73.0*

*NIED **20** 05:58:23.0, 25°.00N×126°.37E, h76^{km}, MW3.9, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-3.24; M$_{\theta\theta}$7.74; M$_{\phi\phi}$-4.50; M$_{r\theta}$3.71; M$_{\theta\phi}$5.67; M$_{\phi r}$1.16; Fault plane solution: M$_0$8.88000×10^{14} NP1:ϕ_s22.00000°, δ75.00000°, λ173.00000°. NP2:ϕ_s114.00000°, δ84.00000°, λ15.00000°.*

*JMA **20** 05:58:23.0±0.2, 25°N±2°×12°6E±°, h76^{km}±3^{km}, MV3.9/18, NEAR MIYAKOJIMA ISLAND*

ISC 20 05:58:26.5±0.9**, 25°.1N**±0°.1×**126°.31E**±0°.08**, h64**^{km}**, n24, σ2^{s}08**/26**, mb3.6**/8**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	Gusukube	0.87	250	P	Pn	05 58 40.8	-2.2
JOGS				*e*S	Sn	05 58 53.6	-1.6
JMJ2	Miyako jima3	0.94	251	P	Pn	05 58 41.9	-2.0
JMJ2				*e*S	Sn	05 58 56.3	-0.5
JIKM	Ikemajima	0.97	262	*e*P	Pn	05 58 42.2	-2.0
JIRB	Irabujima	1.05	258	*e*P	Pn	05 58 43.4	-1.9
JIRB				S	Sn	05 58 57.6	-1.8
JKE	Kume jima 2	1.33	19	P	Pn	05 58 47.0	-2.0
JTJ	Tarama	1.52	254	P	Pn	05 58 49.3	-2.1
JJT3	Tamagusuku3	1.72	51	P	Pn	05 58 51.1	-3.0
JISG	Ishigakijimahi	1.87	256	P	Pn	05 58 54.0	-2.2
JIJ	Ishigaki jima	2.08	251	*e*P	Pn	05 58 56.6	-2.6
JNTH	Nagotoyohara	2.12	46	*e*P	Pn	05 58 56.8	-2.9
IRIF	Iriomote-Funau	2.45	253	*e*P	Pn	05 59 02.0	-2.1
JOW	Kunigami	2.50	45	Pn	Pn	05 59 02.8	-2.1
	7.8nm,0.3s,baz=116,slow=26,SNR=13						
JOW				Sn	Sn	05 59 44.3	+10
	51nm,0.3s,baz=232,slow=24,SNR=8.8						
	15nm,0.3s						
JOW	Kunigami	2.50	45	*e*P	Pn	05 59 02.7	-2.1
JYRO	Yoronjima	2.75	44	*e*P	Pn	05 59 06.0	-2.2
JOKE	Okinoerabujima	3.07	41	*e*P	Pn	05 59 10.6	-2.0
JTK	Tokunoshima	3.61	41	*e*P	Pn	05 59 17.0	-2.9
SONM	Songino Array	27.65	330	P	P	06 04 08.5	+0.3
	1.5nm,0.5s,baz=146,slow=11,SNR=15						
	1.5nm,0.5s						
MKAR	Makanchi Array	41.05	313	P	P	06 06 03.8	+0.2
	0.5nm,0.3s,baz=99,slow=9.4,SNR=13						
	0.5nm,0.3s						
WRA	Warramunga Arr	45.41	169	P	P	06 06 38.6	-0.3
	0.5nm,0.8s,baz=348,slow=8.1,SNR=2.1						
	0.5nm,0.8s						
ASAR	Alice Springs	48.99	171	P	P	06 07 08.7	+1.9
	0.2nm,0.4s,baz=344,slow=7.9,SNR=3.4						
	0.2nm,0.4s						
BVAR	Borovoye Array	50.01	319	P	P	06 07 15.1	+0.9
	0.4nm,0.3s,baz=102,slow=9.2,SNR=2.7						
	0.4nm,0.3s						
ILAR	Eielson Array	66.28	28	P	P	06 09 09.5	+1.8
	0.2nm,0.6s,baz=265,slow=4.9,SNR=3.2						
	0.2nm,0.6s						
FINES	FINESS Array B	73.02	330	P	P	06 09 50.5	+1.3
	1.1nm,0.5s,baz=46,slow=6.0,SNR=6.4						
	1.1nm,0.5s						
YKA	Yellowknife Ar	80.31	24	P	P	06 10 36.6	+6.4
	0.3nm,0.5s,baz=300,slow=6.3,SNR=19						

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*NEIC **20** 05:58:27.0±1.7, 37°.30N±0°.06×71°.93E±0°.10, h98^{km}±6^{km}, mb4.5/11, Error ellipse: s-maj=10.9km s-min=9.2km az=97.0*

*IDC **20** 05:58:29.8±8.4, 37°.56N×72°.04E, h122^{km}±52^{km}, mb3.5/6, mbtmp3.8/9, Error ellipse: s-maj=74.4km s-min=35.9km az=165.0*

*NNC **20** 05:58:32.0±6.3, 37°.69N×71°.73E, h129^{km}±104^{km}, mb3.1, mpv3.6, Error ellipse: s-maj=59.7km s-min=50.1km az=1.0*

ISC 20 05:58:26.5±0.7**, 37°.32N**±0°.06×**71°.96E**±0°.06**, h100**^{km}**, n47, σ1^{s}33**/50**, mb4.3**/12**, 3C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANEM	Manem	0.32	316		Pn	05 58 41.4	-0.1
GAR	Garm	2.12	323		Pn	05 59 01.0	+0.2
DRK	Karamyk	2.17	357		Pn	05 59 02.9	+1.4
CHGR	Chuyangaron	2.59	302	Pn	Pn	05 59 06.4	-0.4
BTK	Batken	2.88	342	Pn	Pn	05 59 12.2	+1.5
SHAA	Shahritus	3.06	276	Pn	Pn	05 59 12.1	-1.1
KBL	Kabul	3.64	221		Pn	05 59 21.6	+0.5
NIL	Nilore	3.81	164		Pn	05 59 23.9	+0.9
KSH	Kashi	3.84	54	Pn	Pn	05 59 19.8	-3.8
KSH				Sn	Sn	05 59 58.6	-9.2
KSH				smax	smax		
	comp=N,140nm,0.8s						
KSH				smax	smax		
	comp=E,250nm,0.5s						
ARSB	Arslanbob	4.08	11		Pn	05 59 26.9	0.0
AAK	Ala-Archa	5.66	19	P	Pn	05 59 49.1	+0.9
	comp=E,2.2nm,0.3s,baz=183,slow=7.3,SNR=13						
AAK				S	Sn	06 00 49.8	-2.1
	comp=E,7.8nm,0.3s,baz=326,slow=21,SNR=22						
AAK	Ala-Archa	5.66	19	⇑Pn	Pn	05 59 50.5	+2.3
	comp=E,0.8nm,0.4s						
AAK				⇑Sn	Sn	06 00 51.4	-0.5
	comp=E,12nm,0.7s						
KK31	Karatay Array	5.89	350	Pn	Pn	05 59 50.7	-0.5
KK31	Karatay Array	5.89	350	⇓Pn	Pn	05 59 51.2	+0.1
	comp=E,11nm,0.4s,baz=170,slow=12,SNR=97						
KK31				⇓Sn	Sn	06 00 54.5	-2.7
	comp=E,5.4nm,0.3s,baz=170,slow=14,SNR=9.8						
KKAR	Karatay Array	5.89	350		Pn	05 59 50.6	-0.5
BOOM	Boomskoye usch	6.00	29	Pn	Pn	05 59 53.7	+0.8
MKAR	Makanchi Array	12.18	36	P	P	06 01 24.4	-0.4
	comp=E,0.8nm,0.5s,baz=215,slow=11,SNR=8.3						
WMQ	Urumqi	13.60	57	*e*P	Pn	06 01 36.8	+1.6
KURBB	Kurchatov Arra	14.11	17	P	P	06 01 45.5	-0.6
	comp=E,1.8nm,0.5s,baz=207,slow=10,SNR=9.9						
KURK	Kurchatov	14.22	17	P	P	06 01 47.1	-0.2
AB31	Akbulak array	14.78	328	P	Pn	06 01 47.0	-3.2
	comp=E,0.4nm,0.3s,baz=134,slow=14,SNR=16						
BVAR	Borovoye Array	15.75	356	P	Pn	06 02 01.4	-1.0
	comp=E,0.5nm,0.4s,baz=168,slow=9.7,SNR=4.4						
AKTO	Aktyubinsk	16.49	327	⇑P	P	06 02 12.6	+0.1
	comp=E,5.7nm,0.7s						
ZAA0	Zalesovo Array	18.86	24	P	P	06 02 37.9	-0.6
ZALV	Zalesovo Beam	18.86	24	P	P	06 02 37.6	-0.8
	comp=E,1.4nm,0.4s,baz=220,slow=9.3,SNR=8.6						
ZALV	Zalesovo Beam	18.86	24	P	P	06 02 37.8	-0.7
SHL	Shillong	20.60	119	P	P	06 02 56.9	-0.8
SHL				IAmb	IAmb	06 03 10.0	
	comp=Z,6.5nm,0.5s						
PZH	PanZhiHua	27.38	105	P	P	06 04 04.3	+1.7
HHC	Hu-ho-hao-te	30.76	71	*e*P	P	06 04 32.5	+0.1
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,65nm,4.4s						
AKASG	Malin Array Be	33.05	308	P	P	06 04 51.8	-0.3
	comp=Z,0.2nm,0.3s,baz=102,slow=8.6,SNR=2.4						
	comp=Z,0.2nm,0.3s						
AKBB	Malin Array Si	33.05	308	P	P	06 04 52.3	+0.2
AKBB				IAmb	IAmb	06 04 58.5	
	comp=Z,3.0nm,0.8s						
KIEV	Kiev	33.05	308	P	P	06 04 52.5	+0.3
KIEV				IAmb	IAmb	06 04 58.5	
	comp=Z,2.7nm,0.8s						
FIA1	FINESS Array S	37.24	325	P	P	06 05 28.4	+0.4
FIA1				IAmb	IAmb	06 05 54.1	
	comp=Z,71nm,1.5s						
FINES	FINESS Array B	37.24	325	P	P	06 05 28.0	0.0
	comp=Z,1.5nm,0.3s,baz=121,slow=8.7,SNR=12						
	comp=Z,1.5nm,0.3s						
FINES	FINESS Array B	37.24	325	P	P	06 05 28.4	+0.4
ARCES	ARCESS Array B	40.69	337	P	P	06 05 56.9	+0.2
	comp=Z,1.6nm,0.5s,baz=118,slow=8.7,SNR=16						
	comp=Z,1.6nm,0.5s						
ARCES	ARCESS Array B	40.69	337	P	P	06 05 57.2	+0.6
ARCES				IAmb	IAmb	06 05 57.7	
	comp=Z,15nm,1.2s						
HFS	Hagfors	42.91	321	P	P	06 06 14.5	-0.3
	comp=Z,2.3nm,0.4s,baz=98,slow=11,SNR=18						
	comp=Z,2.3nm,0.4s						
NC303	NORSAR Array S	44.14	323	P	P	06 06 25.1	+0.4
NC303				IAmb	IAmb	06 06 35.0	
	comp=Z,22nm,1.5s						
NB2	NORSAR Subarra	44.20	322	P	P	06 06 24.7	-0.5
	comp=Z,0.5nm,0.6s,baz=93,slow=7.9						
NOA	NORSAR Array B	44.20	322	P	P	06 06 24.6	-0.6
	comp=Z,0.7nm,0.6s,baz=93,slow=7.9,SNR=3.8						
	comp=Z,0.7nm,0.6s						
NC204	NORSAR Array S	44.43	323	P	P	06 06 26.9	-0.1
NC204				IAmb	IAmb	06 06 39.6	
	comp=Z,12nm,1.2s						
SHEM	Shemya Is, Ala	67.84	40	P	P	06 09 16.7	+3.1
SMY	Shemya	67.84	40	P	P	06 09 16.8	+3.2
COLD	Coldfoot	70.98	16	P	P	06 09 32.9	+0.2
YKA	Yellowknife Ar	80.39	3	P	P	06 10 25.7	-0.7
	comp=Z,0.1nm,0.5s,baz=352,slow=5.6,SNR=6.5						
	comp=Z,0.1nm,0.5s						
ASAR	Alice Springs	84.09	126	P	P	06 10 46.8	+0.5

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*CATAC **20** 06:06:32.4±0.5, 14°N±4°×9°2W±°, h53^{km}±6^{km}, M3.2/10, MLv3.2/10, Error ellipse: s-maj=10.1km s-min=4.1km az=32.7, confirmed*

*GCG **20** 06:06:32.9±0.8, 14°.39N×91°.78W, h68^{km}±7^{km}, MD3.8, ML3.5*

ISC 20 06:06:33.1±1.9**, 14°.3N**±0°.1×**91°.8W**±0°.1**, h67**^{km}**, n24, σ0^{s}68**/27**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.25	32	P	Pn	06 06 43.4	-0.2
RTAL	Retalhuleu	0.25	32	S	Sn	06 06 53.0	+1.7
STG2	El Palmar, Qui	0.46	74	*i* P	Pn	06 06 44.6	-0.8
STG2				*i* S	Sn	06 06 54.5	+0.1
STG5	El Palmar, Qui	0.48	79	*i* P	Pn	06 06 44.5	-1.1
STG8	El Palmar, Qui	0.49	73	*i* P	Pn	06 06 44.9	-0.9
STG8				*i* S	Sn	06 06 55.2	+0.1
STG8				IAML		06 06 57.2	
	comp=E,4μm,0.2s						
SMCA	Catarina	0.59	337	*i* P	Pn	06 06 46.0	-0.6
SMCA				*i* S	Sn	06 06 56.8	+0.3
SMCA				IAML		06 06 57.0	
	comp=E,2μm,0.1s						
QUEO	Labor Ovalle	0.64	29	*i* P	Pn	06 06 47.3	-0.1
SOKI	Kika Raxquin	0.66	39	*i* P	Pn	06 06 47.2	-0.5
HUEH	Huehuetenango	1.05	18	*i* P	Pn	06 06 51.7	-0.7
HUEH	Huehuetenango	1.05	18	P	Pn	06 06 51.8	-0.5
HUEH	Huehuetenango	1.05	18	S	Sn	06 07 07.5	+0.9
QUIS	Sacapulas	1.21	36	*i* P	Pn	06 06 53.8	-0.5
FG16	Alotenango, Sa	1.28	91	*i* P	Pn	06 06 50.5	-4.8
FAME	Alcaldia de Sa	1.83	104	P	Pn	06 07 02.3	0.0
FAME	Alcaldia de Sa	1.83	104	S	Sn	06 07 24.4	-0.1
SLOZ	Alcaldia de Sa	2.01	98	P	Pn	06 07 04.1	-0.7
NUBE	Las Nubes	2.04	101	*i* P	Pn	06 07 05.6	+0.3
NUBE				*i* S	Sn	06 07 31.1	+1.3
NUBE	Las Nubes	2.04	101	S	Sn	06 07 30.1	+0.3
NUBE	Las Nubes	2.04	101	P	Pn	06 07 05.3	+0.1
JAYA	Jayaque - finc	2.41	105	S	Sn	06 07 39.0	+0.2
PMON	Piamonte	2.52	103	S	Sn	06 07 42.0	+0.5
LALI	Alcalda de L	2.57	108	S	Sn	06 07 43.2	+0.5
LALI	Alcalda de L	2.57	108	P	Pn	06 07 12.2	-0.2
SCLA	Alcaldia de Sa	3.08	101	S	Sn	06 07 54.7	-0.3

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*IDC **20** 06:10:57.9±0.9, 59°.49N×30°.34W, h0^{km}, mb3.8/12, mbtmp3.9/13, ML4.0/1, MS4.5/1, Error ellipse: s-maj=23.1km s-min=18.4km az=8.0*

*NEIC **20** 06:11:00.8±1.2, 59°.7N±0°.1×30°.35W±0°.07, h10^{km}±2^{km}, mb4.3/13, Error ellipse: s-maj=23.9km s-min=5.0km az=173.0*

ISC 20 06:11:00.3±0.6**, 59°.5N**±0°.1×**30°.44W**±0°.07**, h16**^{km}**, n39, σ1^{s}31**/36**, mb3.9**/19**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	Borgarnes	6.76	35	Pn	Pn	06 12 39.5	+0.8
	2.8nm,0.3s,baz=227,slow=7.4,SNR=11						
	15nm,0.4s						
BORG	Borgarnes	6.76	35		Pn	06 12 39.5	+0.8
ANGG	Ammassalik, Gr	6.96	335	Pn	Pn	06 12 40.9	-0.5
NRS	Narsarsuaq	7.61	289	Pn	Pn	06 12 50.4	0.0
IVI	Ivigtut	8.94	288	Pn	Pn	06 13 10.2	+1.6
SUMG	Summit	13.48	350	Pn	Pn	06 14 09.4	-1.6
EKA	Eskdalemuir Ar	15.22	94	Pn	Pn	06 14 36.2	+1.9
	baz=301,slow=8.6						
SCHQ	Schefferville	20.10	273	P	Pn	06 15 34.7	-0.1
NC405	NORSAR Array S	20.68	67	P	P	06 15 39.5	+0.3
ARCES	ARCESS Array B	25.07	43	P	P	06 16 23.7	+0.2
	2.3nm,0.8s,baz=290,slow=7.6,SNR=6.3						
	2.3nm,0.8s						
ARCES	ARCESS Array B	25.07	43	P	P	06 16 23.9	+0.4
D62A	Allapoint, All	25.80	258	P	P	06 16 30.3	0.0
ESDC	Sonseca Array	25.95	128	P	P	06 16 33.1	+1.3
	1.0nm,0.7s,baz=336,slow=11,SNR=3.0						
	1.0nm,0.7s						
FINES	FINESS Array B	27.17	61	P	P	06 16 43.2	+0.6
	2.6nm,0.9s,baz=284,slow=11,SNR=2.2						
	2.6nm,0.9s						
FINES	FINESS Array B	27.17	61	P	P	06 16 42.6	+0.1
FCC	Fort Churchill	31.55	297	P	P	06 17 22.1	+0.7
FCC				IAmb	IAmb	06 17 30.7	
	comp=Z,10nm,1.5s						
AKASG	Malin Array Be	34.14	78	P	P	06 17 42.8	-1.3
	comp=Z,0.5nm,0.5s,baz=292,slow=8.5,SNR=4.0						
	comp=Z,0.5nm,0.5s						
A36M	Sachs Harbour	36.45	329	P	P	06 18 05.7	+1.9
A36M				IAmb	IAmb	06 18 09.6	
	comp=Z,4.0nm,1.1s						
EPLO	Experimental L	36.59	283	P	P	06 18 07.8	+2.6
EPLO				IAmb	IAmb	06 18 14.4	
	comp=Z,4.0nm,1.0s						
FFC	Flin Flon	37.40	295	P	P	06 18 13.2	+1.2
YKA	Yellowknife Ar	38.18	312	P	P	06 18 19.1	+0.6
	comp=Z,1.6nm,0.9s,baz=52,slow=8.7,SNR=15						
	comp=Z,1.6nm,0.9s						
YKA	Yellowknife Ar	38.18	312	P	P	06 18 19.9	+1.4
G31M	Satah River	42.04	325	P	P	06 18 50.7	+0.2
D25K	Kavik River	43.53	332	P	P	06 19 03.6	+1.1
D25K				IAmb	IAmb	06 19 35.5	
	comp=Z,5.7nm,1.4s						
E25K	Arctic Village	44.23	331	P	P	06 19 08.9	+0.7
E25K				IAmb	IAmb	06 19 10.2	
	comp=Z,4.4nm,1.1s						
KVAR	Kislovodsk Arr	45.42	76	LR	LR	06 38 35.3	
	comp=Z,600nm,21.2s,slow=36						
ILAR	Eielson Array	47.15	328	P	P	06 19 32.3	+1.1
	comp=Z,1.0nm,0.9s,baz=34,slow=8.4,SNR=9.1						
	comp=Z,1.0nm,0.9s						
PDAR	Pinedale Array	49.24	287	P	P	06 19 44.1	-3.9
	comp=Z,0.3nm,0.4s,baz=48,slow=5.4,SNR=4.5						
AB31	Akbulak array	49.63	59	P	P	06 19 51.0	+0.4
AB31				IAmb	IAmb	06 19 53.1	
	comp=Z,5.8nm,1.4s						
BVAR	Borovoye Array	51.11	50	P	P	06 20 02.3	+0.6
	comp=Z,0.6nm,0.7s,baz=316,slow=8.1,SNR=2.7						
	comp=Z,0.6nm,0.7s						
TORD	Torodi Ar. Bea	52.05	139	P	P	06 20 07.9	-1.2
	comp=Z,0.5nm,0.6s,baz=345,slow=9.6,SNR=4.3						
	comp=Z,0.5nm,0.6s						
KURK	Kurchatov	56.06	46	P	P	06 20 38.0	+0.1
KURK				IAmb	IAmb	06 20 38.8	
	comp=Z,3.5nm,0.8s						
KURBB	Kurchatov Arra	56.10	47	P	P	06 20 37.5	-0.8
	comp=Z,1.3nm,0.5s,baz=324,slow=6.8,SNR=5.4						
	comp=Z,1.3nm,0.5s						
TXAR	Lajitas Array	56.78	272	P	P	06 20 44.0	+0.5
	comp=Z,0.9nm,1.0s,baz=54,slow=6.4,SNR=4.8						
	comp=Z,0.9nm,1.0s						
MKAR	Makanchi Array	60.67	47	P	P	06 21 10.3	0.0
	comp=Z,1.6nm,0.5s,baz=338,slow=4.9,SNR=16						
	comp=Z,1.6nm,0.5s						
APG	El Apazote	62.13	251	LR	LR	06 48 39.8	
	comp=Z,25nm,21.1s,baz=268,slow=36						
SONM	Songino Array	67.34	30	P	P	06 21 53.1	-1.1
	comp=Z,0.2nm,0.3s,baz=335,slow=6.5,SNR=4.2						
	comp=Z,0.2nm,0.3s						
ASAR	Alice Springs	142.51	24	PKP	PKPdf	06 30 29.7	-2.3
	comp=Z,0.5nm,0.9s,baz=332,slow=2.2,SNR=3.3						
QSPA	South Pole Qui	149.43	180	PKPbc	PKPbc	06 30 46.8	-0.2
	comp=Z,2.4nm,0.9s,baz=246,slow=3.0,SNR=4.5						

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*DNK **20** 06:11:45.8±3.8, 59°.29N×30°.81W, h0^{km}±78^{km}, Ms4.7, Presumed earthquake*

*MOS **20** 06:11:47.8±0.9, 59°.61N×30°.44W, h8^{km}, mb4.8/46, MS4.5/11, Error ellipse: s-maj=9.6km s-min=6.7km az=72.7*

*IDC **20** 06:11:47.8±0.4, 59°.52N×30°.47W, h0^{km}, mb4.3/27, mbtmp4.3/30, ML4.6/3, MS4.7/16, Error ellipse: s-maj=13.6km s-min=10.1km az=169.0*

*BJI **20** 06:11:47.1, 59°.88N×30°.73W, h8^{km}, mB5.3/10, mb4.7/40, Ms5.0/14, Ms7 4.7/17*

*GCMT **20** 06:11:49.2±0.1, 59°.54N±0°.01×30°.12W±0°.01, h12^{km}, MW5.1/137, Moment Tensor Solution. s69,c94; s137,c228; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-5.63±.09; M$_{\theta\theta}$1.02±.11; M$_{\phi\phi}$4.61±.08; M$_{r\theta}$-0.10±.30; M$_{\theta\phi}$1.88±.08; M$_{\phi r}$-2.41±.27; Best double couple: M$_0$6.02200×10^{16} NP1:ϕ_s210.00000°, δ34.00000°, λ-77.00000°. NP2:ϕ_s15.00000°, δ57.00000°, λ-98.00000°. Principal axes: T 5.8610, Plg11.0000°, Azm111.0000°; N 0.3220, Plg7.0000°, Azm20.0000°; P -6.1830, Plg77.0000°, Azm258.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **20** 06:11:50.2±0.9, 59°.62N±0°.09×30°.4W±0°.1, h10^{km}±1^{km}, mb4.9/61, Mww5.1/36 Error ellipse: s-maj=15.4km s-min=11.5km az=167.0*

*NEIC **20** 06:11:50.2, 59°.62N×30°.40W, h12^{km}*

*NEIC **20** 06:11:50.2, 59°.22N×30°.40W, h12^{km}, Moment Tensor Solution. Duration: 2^{s}2 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.98; M$_{\theta\theta}$1.16; M$_{\phi\phi}$3.82; M$_{r\theta}$0.03; M$_{\theta\phi}$1.75; M$_{\phi r}$-3.87; Fault plane solution: M$_0$6.19000×10^{16} NP1: ϕ_s218.36000°, δ28.35000°, λ-65.55000°. NP2:ϕ_s11.04000°, δ64.39000°, λ-102.59000°. Principal axes: T 5.8433, Plg18.0000°, Azm110.0000°; N 0.6507, Plg11.0000°, Azm17.0000°; P -6.4939, Plg68.0000°, Azm257.0000°;*

*GFZ **20** 06:11:50.3, 59°.51N×30°.32W, h10^{km}, MW5.1, Moment Tensor Solution. s117 Moment tensor: M$_{rr}$-4.60; M$_{\theta\theta}$1.16; M$_{\phi\phi}$3.44; M$_{r\theta}$-0.42; M$_{\theta\phi}$0.73; M$_{\phi r}$-2.79; Fault plane solution: NP1:ϕ_s198.00000°, δ28.00000°, λ-84.00000°. NP2:ϕ_s12.00000°, δ62.00000°, λ-92.00000°. Principal axes: T 4.5200, Plg17.0000°, Azm104.0000°; N 0.9600, Plg3.0000°, Azm14.0000°; P -5.4800, Plg73.0000°, Azm275.0000°;*

*BGR **20** 06:11:59.0, 58°.72N×28°.56W, h10^{km}, mb4.9*

ISC 20 06:11:50.4±0.3**, 59°.58N**±0°.05×**30°.32W**±0°.04**, h16**^{km}**, n482, σ1^{s}27**/489**, mb4.7**/109**, MS4.7**/28**, 18C-14D, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	Borgarnes	6.67	35	Pn	Pn	06 13 28.7	+1.1
	10.0nm,0.3s,baz=242,slow=2.6,SNR=13						
BORG				Sn	Sn	06 14 43.3	+0.1
	11nm,0.3s,baz=93,slow=23,SNR=17						
BORG				LR	LR	06 15 32.9	
	comp=Z,5μm,18.9s,baz=255,slow=33						
	21nm,0.3s						
BORG	Borgarnes	6.67	35	Pn	Pn	06 13 26.9	-0.7
BORG	Borgarnes	6.67	35	*i* P	Pn	06 13 29.2	+1.6
BORG				*e*S	Sn	06 14 45.6	+2.3
ANGG	Ammassalik, Gr	6.93	334	Pn	Pn	06 13 29.9	-1.3
ANGG	Ammassalik, Gr	6.93	334	*i* P	Pn	06 13 30.0	-1.1
ANGG	Ammassalik, Gr	6.93	334	*i* P	Pn	06 13 29.9	-1.3
ANGG				*e*S	Sn	06 14 45.6	-3.9
NRS	Narsarsuaq	7.65	288	Pn	Pn	06 13 41.2	+0.2
NRS	Narsarsuaq	7.65	288	P	Pn	06 13 41.2	+0.2
IVI	Ivigtut	8.98	288	Pn	Pn	06 13 59.5	+0.2
SCO	Scoresbysund	11.49	14	Pn	Pn	06 14 32.3	-1.2
SCO	Scoresbysund	11.49	14	P	Pn	06 14 32.3	-1.2
SCO	Scoresbysund	11.49	14	*e*P	Pn	06 14 32.1	-1.3
SFJD	Kangerlussuaq	11.72	318	Pn	Pn	06 14 36.3	-0.4
	1.6nm,0.3s,baz=124,slow=12,SNR=8.5						
SFJD				Sn	Sn	06 16 36.8	-10
	1.5nm,0.3s,baz=325,slow=23,SNR=3.6						
SFJD				LR	LR	06 18 20.8	
	comp=Z,6μm,21.4s,baz=117,slow=34						
	14nm,0.7s						
ILULI	Ilulissat	13.10	326	Pn	Pn	06 14 55.0	-0.6
ILULI	Ilulissat	13.10	326	P	Pn	06 14 55.0	-0.6
SUMG	Summit	13.44	349		Pn	06 15 00.4	-0.1
SUMG	Summit	13.44	349	P	Pn	06 15 00.4	-0.1
SUMG	Summit	13.44	349	*i* P	Pn	06 15 00.8	+0.3
JMIC	Jan Mayen	14.50	29	LR	LR	06 19 22.9	
	comp=Z,772nm,21.7s,baz=208,slow=31						
EKA	Eskdalemuir Ar	15.17	94	Pn	Pn	06 15 24.1	+0.4
	baz=303,slow=8.8						
EKA				LR	LR	06 20 12.3	
	comp=Z,3μm,19.1s,baz=276,slow=33						
	12nm,1.1s						
DBG	Daneborg	15.27	10	*e*P	Pn	06 15 25.8	+0.9
DAG	Danmarks Havn	17.73	9	*i* P	P	06 15 58.9	+1.9
DAG				IAMs_20	IAMs_20	06 22 15.4	
	comp=Z,2μm,17.9s						
FRB	Frobisher Bay	18.41	299	P	Pn	06 16 07.1	+2.5
	comp=Z,7.2nm,0.7s,baz=87,slow=15,SNR=3.3						
FRB				LR	LR	06 22 18.1	
	comp=Z,4μm,19.2s,baz=100,slow=34						
NEEM	North Greenlan	19.25	346	*e*P	Pn	06 16 16.5	+1.5
NEEM				IAMs_20	IAMs_20	06 22 58.0	
	comp=Z,4μm,17.9s						
SCHQ	Schefferville	20.16	272	P	P	06 16 23.0	-0.7
	comp=Z,6.8nm,0.7s,baz=69,slow=7.3,SNR=9.8						
	comp=Z,6.8nm,0.7s						
NOA	NORSAR Array B	20.38	68	P	P	06 16 26.1	0.0
	comp=Z,4.3nm,1.1s,baz=283,slow=9.4,SNR=4.0						
UCC	Uccle	21.43	99	*d*P	P	06 16 38.2	+0.8
TULEG	Thule	21.54	337	P	P	06 16 38.6	+0.3
HFS	Hagfors	21.81	69	P	P	06 16 43.7	+2.2
	comp=Z,6.8nm,1.0s,baz=294,slow=7.1,SNR=4.3						
	comp=Z,6.8nm,1.0s						
BMRD	Maredsous	21.94	99	*d*P	P	06 16 44.1	+1.1
	comp=Z,27nm,1.1s						
DOU	Dourbes	21.99	100	*d*P	P	06 16 42.9	-0.6
BGES	Gesves	22.05	99	*d*P	P	06 16 47.7	+3.5
	comp=Z,33nm,1.1s						
RCHB	Rochefort	22.27	99	*d*P	P	06 16 47.0	+0.5
	comp=Z,18nm,1.2s						
MEM	Membach	22.38	97	P	P	06 16 44.4	-3.3
MEM				pmax	pmax		
	comp=Z,27nm,1.4s						
MEM	Membach	22.38	97	*d*P	P	06 16 48.3	+0.6
NOR	Nord	22.45	5	*e*P	P	06 16 47.1	-1.1
NOR				IAMs_20	IAMs_20	06 24 44.4	

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      comp=Z,2µm,15.7s
BTNL  Ternell           22.45  97 dP    P      06 16 48.0 -0.5
POIN  Pond Inlet        22.48 325       P      06 16 47.1 -1.4
POIN                               IAmb  IAmb   06 16 51.6
      comp=Z,66nm,1.6s
BUG   Bochum--Univer    22.52  95  P    P      06 16 50.2 +1.1
BUG                                pmax  pmax
      comp=Z,36nm,1.4s
BHOU  Houvegnez         22.53  98 dP    P      06 16 48.6 -0.7
BSEG  Bad Segeberg      22.70  86  P    P      06 16 50.7 -0.3
BSEG                               pmax  pmax
      comp=Z,30nm,1.4s
WLF   Walferdange       23.04  99 dP    P      06 16 55.4 +0.8
ILON  Igloolik, Nuna    23.48 316       P      06 16 57.4 -1.4
LOR   Lormes            23.50 106  P    P      06 16 58.9 -0.4
LOR                                pmax  pmax
      comp=Z,18nm,2.5s
TNS   Taunus Mts        23.85  96  P    P      06 17 02.9 +0.2
TNS                                pmax  pmax
      comp=Z,33nm,1.5s
ECH   Echery            24.49 101  P    P      06 17 12.3 +3.7
ECH                                pmax  pmax
      comp=Z,23nm,1.7s
ARCES ARCESS Array B    24.99  44  P    P      06 17 12.1 -0.8
      comp=Z,3.9nm,0.7s,baz=267,slow=8.5,SNR=15
      comp=Z,3.9nm,0.7s
ARCES ARCESS Array B    24.99  44  P    P      06 17 13.6 +0.7
ARCES                              IAmb  IAmb   06 17 14.1
      comp=Z,63nm,1.8s
ARCES ARCESS Array B    24.99  44  P    P      06 17 13.6 +0.7
ARCES                              pmax  pmax
      comp=Z,63nm,1.8s
MOX   Moxa              25.20  92  P    P      06 17 14.9 -0.1
MOX                                pmax  pmax
      comp=Z,21nm,2.0s
SLE   Schleitheim       25.45 100  P    P      06 17 18.9 +1.6
SLE                                pmax  pmax
      comp=Z,22nm,2.7s
KEV   Kevo              25.49  43  P    P      06 17 19.3 +1.9
KEV                                IAmb  IAmb   06 17 19.8
      comp=Z,55nm,1.3s
KEV   Kevo              25.49  43  P    P      06 17 19.3 +1.9
KEV                                pmax  pmax
      comp=Z,55nm,1.3s
CLL   Collm             25.51  90 eP    P      06 17 21.0 +3.3
CLL                                pmax  pmax
      comp=Z,25nm,1.6s
CLL                                MLR   MLR
      comp=Z,2µm,20.1s
CLL   Collm             25.51  90 eP    P      06 17 21.0 +3.3
      comp=Z,25nm,1.6s
CLL                                AMS   AMS    06 27 00.0
      comp=Z,2µm,20.1s
GRF   Grafenberg Arr    25.58  94 eP    P      06 17 18.7 +0.3
      comp=Z,46nm,2.0s,baz=304,slow=9.1
OUL   Oulu              25.89  54  P    P      06 17 22.2 +1.2
OUL                                pmax  pmax
      comp=Z,25nm,1.8s
ESDC  Sonseca Array     25.93 128  P    P      06 17 23.3 +1.5
      comp=Z,6.6nm,0.9s,baz=327,slow=9.1,SNR=15
ESDC                               LR    LR     06 26 22.3
      comp=Z,650nm,21.6s,baz=339,slow=34
      comp=Z,6.6nm,0.9s
ESDC  Sonseca Array     25.93 128  P    P      06 17 23.2 +1.5
BRG   Berggiesshubel    26.25  90  P    P      06 17 24.2 -0.2
BRG                                pmax  pmax
      comp=Z,5.0nm,1.8s
TUE   Stuetta           26.76 102       P      06 17 30.0 +0.6
TUE   Stuetta           26.76 102  P    P      06 17 29.7 +0.3
      comp=Z,46nm,1.1s
DAVOX Davos/Dischmat    26.82 100  LR   LR     06 28 08.2
      comp=Z,875nm,21.3s,baz=262,slow=36
FINES FINESS Array B    27.09  61  P    P      06 17 32.1 +0.2
      comp=Z,5.5nm,0.7s,baz=289,slow=7.5,SNR=10
      comp=Z,5.5nm,0.7s
FINES FINESS Array B    27.09  61  P    P      06 17 32.5 +0.5
FINES FINESS Array B    27.09  61  P    P      06 17 32.5 +0.5
FIA1  FINESS Array S    27.09  61  P    P      06 17 32.6 +0.7
KHC   Kasperske Hory    27.13  93⇑iP    P      06 17 35.0 +2.5
KHC                                pmax  pmax
      comp=Z,4.0nm,1.1s
RES   Resolute Bay      27.38 329       P      06 17 34.7 +0.3
RES                                IAmb  IAmb   06 17 43.2
      comp=Z,30nm,1.3s
RES   Resolute Bay      27.38 329  P    P      06 17 34.7 +0.3
RES                                pmax  pmax
      comp=Z,30nm,1.3s
KSP   Ksiaz             27.46  88  P    P      06 17 40.3 +4.9
UPC   Upice             27.52  89  P    P      06 17 36.1 +0.2
UPC                                pmax  pmax
      comp=Z,11nm,1.5s
DPC   Dobruska-Polom    27.77  89  P    P      06 17 38.8 +0.6
      comp=Z,14nm,1.2s
APA   Apatity           28.19  47⇓eP    P      06 17 38.5 -3.2
APA                                MLR   MLR
      comp=Z,929nm,5.3s
VRAC  Vranov            28.56  90 eP    P      06 17 45.6 +0.4
KRUC  Moravsky          28.61  91 eP    P      06 17 46.0 +0.4
MORC  Moravsky Berou    28.75  88 eP    P      06 17 47.2 +0.3
MODS  Modra-Piesok      29.50  91 eP    P      06 17 59.0 +5.4
MODS  Modra-Piesok      29.50  91 eP    P      06 17 58.9 +5.3
BLKN  Baker Lake        29.99 307       P      06 17 58.2 +0.6
BLKN                               IAmb  IAmb   06 18 07.6
      comp=Z,22nm,1.2s
NACGM Naroch            30.41  73 eP    P      06 18 05.0 +3.5
      comp=Z,15nm,0.8s,baz=303
MNK   Minsk             31.17  73 i P   P      06 18 08.0 -0.2
      comp=E,17nm,0.7s
MNK                               i P   P      06 18 08.0 -0.2
      comp=N,15nm,0.7s
MNK                               i P   P      06 18 08.0 -0.2
      comp=Z,9.0nm,0.6s,baz=304
MNK                               i PP   PP     06 19 08.3  -10
MNK                               i PPP  PPP    06 19 17.3
MNK                               i S    S      06 23 12.7 -0.5
MNK                               i SS   SnSn   06 24 54.4 -0.6
MNK                               i SSS  SSS    06 25 09.1
MNK                               i LQ   LQ     06 28 00.6
MNK                               i LR   LR     06 28 56.6
MNK                               i LRM  MLR    06 30 23.4
      comp=Z,1µm,18.1s
MNK                               i LRM  MLR    06 30 29.7
MNK   Minsk             31.17  73 i P   P      06 18 07.9 -0.2
MNK                               i             06 19 08.3
MNK                               i S    S      06 23 12.6 -0.5
MNK                               i SS   SnSn   06 24 54.4 -0.6
MNK                                pmax  pmax
      comp=Z,9.0nm,0.6s
MNK                                pmax  pmax
      comp=E,17nm,0.7s
MNK                                pmax  pmax
      comp=N,15nm,0.7s
MNK                                MLR   MLR
      comp=E,501nm,20.0s
MNK                                MLR   MLR
      comp=Z,1µm,18.0s
FCC   Fort Churchill    31.58 297       P      06 18 11.8 +0.1
FCC                                IAmb  IAmb   06 18 15.3
      comp=Z,29nm,1.5s
FCC   Fort Churchill    31.58 297  P    P      06 18 11.8 +0.1
FCC                                pmax  pmax
      comp=Z,29nm,1.5s
MDT   Midelt            31.75 136  LR   LR     06 30 35.7
      comp=Z,546nm,18.1s,baz=346,slow=36
RNPP9 Sopachiv          31.97  79  P    P      06 18 17.0 +1.8
BERU  Beregovo          32.32  87  P    P      06 18 19.2 +0.8
L59A  Walton            32.36 258  P    P      06 18 19.7 +0.9
SADO  Sadowa            32.56 265  LR   LR     06 30 06.4
      comp=Z,3µm,19.7s,baz=61,slow=34
KLMR  Klimovskoe        33.23  57 eP    P      06 18 25.4 -0.8
KLMR                               pmax  pmax
      comp=Z,71nm,1.3s
KLMR                               MLR   MLR
      comp=Z,728nm,15.0s
DRGR                    33.31  89  P    P      06 18 31.8 +4.7
BZS   Buzias            33.55  91  P    P      06 18 30.0 +0.8
LUBAR Lubar, Ukraine    33.82  80  P    P      06 18 31.1 -0.4
AK21  Malin Array Si    33.93  78  P    P      06 18 33.9 +1.5
AK19  Malin Array Si    33.95  78  P    P      06 18 33.4 +0.9
AK22  Malin Array Si    33.95  78  P    P      06 18 33.1 +0.5
BUR08 Bucovina Ar. S    34.01  85       P      06 18 33.8 +0.5
AK16  Malin Array Si    34.03  78  P    P      06 18 33.1 -0.1
BURAR Bucovina Array    34.03  85       P      06 18 34.1 +0.7
BURAR Bucovina Array    34.03  85  P    P      06 18 34.1 +0.7
BURAR                              pmax  pmax
      comp=Z,12nm,1.5s
KIEV  Kiev              34.06  78  P    P      06 18 34.5 +0.9
KIEV  Kiev              34.06  78  P    P      06 18 34.5 +0.9
KIEV                               pmax  pmax
      comp=Z,13nm,1.2s
KIEV  Kiev              34.06  78  P    P      06 18 34.1 +0.6
      comp=Z,51nm,1.2s
AKASG Malin Array Be    34.07  78  P    P      06 18 33.5 -0.1
      comp=Z,5.3nm,0.9s,baz=306,slow=8.7,SNR=9.0
      comp=Z,5.3nm,0.9s
AKASG Malin Array Be    34.07  78 i P   P      06 18 34.0 +0.4
AKASG                              pmax  pmax
      comp=Z,5.0nm,0.9s
AKBB  Malin Array Si    34.07  78       P      06 18 34.3 +0.7
AKBB  Malin Array Si    34.07  78⇑iP    P      06 18 34.8 +1.2
AKBB                               pmax  pmax
      comp=Z,12nm,1.1s
AKBB  Malin Array Si    34.07  78  P    P      06 18 34.2 +0.6
OBN   Obninsk           34.98  67deP    P      06 18 41.8 +0.4
OBN                               e             06 20 05.2
OBN                               eS    S      06 24 10.3 -1.9
OBN                                pmax  pmax
      comp=Z,13nm,0.9s
OBN                                MLR   MLR
      comp=Z,939nm,19.0s
KEST  Kesra             35.00 115  P    P      06 18 42.4 +0.5
      comp=Z,7.4nm,0.9s,baz=265,slow=0.7,SNR=6.7
      comp=Z,7.4nm,0.9s
KEST  Kesra             35.00 115       P      06 18 41.8 -0.1
VRI   Vrincioaia        35.98  86  P    P      06 18 54.9 +4.7
VAE   Valguarnera       35.99 108  LR   LR     06 32 55.8
      comp=Z,1µm,18.2s,baz=16,slow=35
A36M  Sachs Harbour     36.43 329       P      06 18 54.3 +0.6
A36M                               IAmb  IAmb   06 19 02.5
      comp=Z,21nm,1.2s
A36M  Sachs Harbour     36.43 329  P    P      06 18 54.5 +0.8
      baz=59,SNR=7.3
EPLO  Experimental L    36.64 283       P      06 18 54.5 -1.2
ULM   Lac du Bonnet     37.32 285  P    P      06 18 59.0 -2.5
      comp=Z,4.3nm,0.8s,baz=52,slow=8.5,SNR=6.0
ULM                                LR    LR     06 33 01.9
      comp=Z,2µm,21.1s,baz=18,slow=34
      comp=Z,4.3nm,0.8s
FFC   Flin Flon         37.43 295       P      06 19 02.2 -0.2
FFC                                IAmb  IAmb   06 19 04.3
      comp=Z,39nm,1.9s
FFC   Flin Flon         37.43 295  P    P      06 19 02.2 -0.2
FFC                                pmax  pmax
      comp=Z,39nm,1.9s
YKAW1 Yellowknife Wh    38.15 312  P    P      06 19 08.1 -0.3
YKAW1                              IAmb  IAmb   06 19 12.1
      comp=Z,30nm,1.3s
YKAW3 Yellowknife Wh    38.15 312       P      06 19 07.9 -0.4
YKAW3                              IAmb  IAmb   06 19 12.2
      comp=Z,25nm,1.3s
YKA   Yellowknife Ar    38.19 312  P    P      06 19 08.5 -0.2
      comp=Z,6.0nm,1.0s,baz=56,slow=8.6,SNR=22
YKA                                LR    LR     06 34 25.4
      comp=Z,1µm,18.0s,baz=70,slow=36
      comp=Z,6.0nm,1.0s
YKA   Yellowknife Ar    38.19 312  P    P      06 19 08.8 +0.2
YKA   Yellowknife Ar    38.19 312  P    P      06 19 08.9 +0.2
VSR   Storozhevoye      38.61  71 eP    P      06 19 10.9 -1.4
VSR                                pmax  pmax
      comp=Z,7.0nm,1.1s
KIRV  Kirov             38.67  56⇑iP    P      06 19 15.6 +2.9
SPMN  Marine on St.     39.18 277  P    P      06 19 17.5 +0.3
VRH   Novokhopyorsk     39.84  69 eP    P      06 19 21.8 -0.8
VRH                                pmax  pmax
      comp=Z,10.0nm,1.2s
INK   Inuvik            40.89 326  P    P      06 19 30.8 -0.3
      baz=49
WRGLY Wrigley           40.98 316  P    P      06 19 31.6 -0.3
      baz=51
F31M  Tsiigehtchic      41.53 326  P    P      06 19 35.8 -0.5
      baz=48,SNR=8.0
D28M  Stokes Point      41.61 330  P    P      06 19 36.6 -0.4
      baz=47
TKL   Tuckaleechee C    41.72 259  LR   LR     06 36 07.6
      comp=Z,2µm,18.4s,baz=38,slow=35
F30M  Barrier River     41.99 327  P    P      06 19 39.4 -0.8
      baz=47
G31M  Satah River       42.03 325  P    P      06 19 39.9 -0.6
      baz=48
E29M  Blow River        42.04 328  P    P      06 19 39.9 -0.6
      baz=46
ANN   Anapa             42.13  79 eP    P      06 19 40.2 -1.3
ANN                               e*PP  pP     06 19 43.8 -2.3
ANN                               eS    S      06 25 58.2 -2.0
ANN                                pmax  pmax
      comp=Z,27nm,1.2s
ANN                                MLR   MLR
      comp=N,805nm,20.0s
ANN                                MLR   MLR
      comp=Z,768nm,19.0s
ANN                                MLR   MLR
      comp=E,445nm,13.0s
D27M  Malcolm River     42.24 330  P    P      06 19 41.3 -0.9
      baz=45
E28M  Babbage River     42.32 329  P    P      06 19 42.5 -0.4
      baz=46
G30M  tAoh Zraii Nji    42.55 326  P    P      06 19 44.1 -0.7
      baz=46
C27K  Jago River        42.64 332  P    P      06 19 44.8 -0.6
      baz=44
C26K  Camden Bay        42.72 332  P    P      06 19 45.6 -0.4
      baz=43
H31M  Peel River        42.82 324  P    P      06 19 46.2 -0.8
      baz=47
ERBR  Yeremizino-Bor    42.99  76 eP    P      06 19 49.9 +1.4
ERBR                              e*PP  pP     06 19 53.9 +0.8
ERBR                              eS    S      06 26 16.0 +3.0
ERBR                               pmax  pmax
      comp=Z,9.0nm,0.7s
ERBR                               MLR   MLR
      comp=Z,972nm,19.0s
ERBR                               MLR   MLR
      comp=N,825nm,17.0s
G29M  Pine Creek        43.11 327  P    P      06 19 49.2 -0.1
      baz=45
F28M  Old Crow          43.12 328  P    P      06 19 48.7 -0.7
      baz=45
EPYK  Eagle Plains      43.12 326  P    P      06 19 48.6 -0.8
      baz=46
E27K  Coleen River      43.16 329  P    P      06 19 49.0 -0.7
      baz=44
KOTAN Kotaneelee Air    43.23 313  P    P      06 19 49.2 -1.0
      baz=48
WVT   Waverly           43.40 264  P    P      06 19 52.0 +0.1
WVT                                IAmb  IAmb   06 19 56.7
      comp=Z,39nm,1.9s
WVT   Waverly           43.40 264  P    P      06 19 52.0 +0.1
WVT                                pmax  pmax
      comp=Z,39nm,1.9s
D25K  Kavik River       43.50 332  P    P      06 19 52.2 -0.2
      baz=42,SNR=5.1
CCM   Cathedral Cave    43.64 269       P      06 19 54.2 +0.4
CCM   Cathedral Cave    43.64 269  P    P      06 19 54.3 +0.4
CCM                                pmax  pmax
      comp=Z,14nm,1.1s
H29M  Whitestone        43.70 326  P    P      06 19 53.8 -0.2
      baz=44
C24K  Franklin Bluff    43.74 334  P    P      06 19 54.2  0.0
      baz=40
ARTI  Arti              43.79  53       P      06 19 55.9 +1.0
ARTI  Arti              43.79  53c iP   P      06 19 56.4 +1.5
ARTI                               S     S      06 26 25.9 +1.4
ARTI                               SS    SS     06 29 27.8  -12
ARTI                               pmax  pmax
      comp=Z,23nm,1.5s
I30M  Mount Dempster    43.83 324  P    P      06 19 55.0 -0.2
      baz=45
LABN  Labinsk           43.88  77 eP    P      06 19 56.0 +0.3
LABN                              e*PP  pP     06 19 59.8 -0.5
LABN                              eS    S      06 26 26.8 +0.8
LABN                               pmax  pmax
      comp=Z,17nm,0.5s
LABN                               MLR   MLR
      comp=Z,730nm,16.0s
NRIK  Noril'sk          43.91  27  P    P      06 19 56.1 +0.5
      comp=Z,1.0nm,0.2s,baz=330,slow=6.2,SNR=6.6
      comp=Z,1.0nm,0.2s
NRIK  Noril'sk          43.91  27       P      06 19 56.6 +0.9
NRIK                               IAmb  IAmb   06 19 58.1
      comp=Z,35nm,1.9s
NRIK  Noril'sk          43.91  27⇑iP    P      06 19 57.0 +1.3
NRIK                               pmax  pmax
      comp=Z,7.0nm,1.7s
BR131 Keskin Array S    43.92  87  P    P      06 19 56.5 +0.1
BR131 Keskin Array S    43.92  87⇑iP    P      06 19 56.3  0.0
BRTR  Keskin Array B    43.92  87  P    P      06 19 57.2 +0.9
      comp=Z,1.2nm,1.0s,baz=337,slow=5.6,SNR=9.6
      comp=Z,1.2nm,1.0s
BRTR  Keskin Array B    43.92  87       P      06 19 56.7 +0.4
BRTR  Keskin Array B    43.92  87 i P   P      06 20 00.2 +3.9
BRTR                               pmax  pmax
      comp=Z,2.0nm,0.9s
R40A  Maddies Statio    43.98 270  P    P      06 19 56.3 -0.3
R40A                               IAmb  IAmb   06 19 57.2
      comp=Z,45nm,1.9s
A22K  Sinclair Lake     44.06 337  P    P      06 19 56.8  0.0
      baz=37
C23K  Itkillik River    44.07 335  P    P      06 19 56.2 -0.7
      baz=39
A21K  Barrow            44.12 338  P    P      06 19 57.1 -0.1
      baz=36,SNR=7.9
SOC   Sochi             44.14  79 eP    P      06 19 57.8  0.0
SOC                               e             06 21 40.6
SOC                               ePPP  PPP    06 22 18.2
SOC                               eS    S      06 26 30.0 +0.2
SOC                               eSS   SS     06 29 39.0 -8.1
SOC                                pmax  pmax
      comp=Z,9.0nm,0.7s
SOC                                MLR   MLR
      comp=Z,336nm,17.0s
F26K  Sheenjek River    44.18 330  P    P      06 19 58.0 +0.1
      baz=42
G27K  Doyon Strip       44.18 328  P    P      06 19 57.9  0.0
      baz=43
D24K  Happy Valley      44.20 333  P    P      06 19 58.4 +0.4
      baz=40,SNR=6.3
E25K  Arctic Village    44.21 331  P    P      06 19 58.3 +0.1
      baz=41
B22K  Teshekpuk Lake    44.27 336  P    P      06 19 58.8 +0.3
      baz=38
J30M  Hart River        44.28 324  P    P      06 19 59.1 +0.2
      baz=44
I29M  Ogilvie Camp,     44.30 325  P    P      06 19 59.2 +0.3
      baz=44,SNR=6.8
LIRD  Liard River Hi    44.48 313  P    P      06 20 00.7 +0.4
      baz=46
BMAR  Burnt Mountain    44.49 330       P      06 20 00.7 +0.3
TOAD  Toad River Com    44.54 312  P    P      06 20 01.0 +0.2
      baz=46
H27K  Steamboat Moun    44.57 327  P    P      06 20 00.7 -0.4
      baz=42
TAM   Tamanrasset       44.58 130       P      06 20 02.7 +1.0
TAM                                IAmb  IAmb   06 20 06.5
      comp=Z,29nm,1.4s
TAM   Tamanrasset       44.58 130  P    P      06 20 02.7 +1.0
TAM                                pmax  pmax
      comp=Z,29nm,1.4s
F25K  Christian Rive    44.63 330  P    P      06 20 01.5  0.0
      baz=41
G26K  Porcupine Rive    44.64 329  P    P      06 20 01.8 +0.3
      baz=42
I28M  Miner Creek       44.70 326  P    P      06 20 01.8 -0.4
      baz=43
D23K  Nanushuk River    44.77 334  P    P      06 20 03.1 +0.6
      baz=39,SNR=7.0
TOLK  Toolik Lake Re    44.77 333  P    P      06 20 02.4 -0.3
      baz=39,SNR=7.6
J29N  Klondike Camp     44.94 324  P    P      06 20 03.3 -0.7
      baz=43
E24K  Your Creek        44.96 332  P    P      06 20 04.0 -0.2
      baz=39
I27K  Kandik River      45.06 327  P    P      06 20 04.6 -0.4
      baz=42
B21K  Ikpikpuk River    45.10 336  P    P      06 20 05.4 +0.3
      baz=36
K29M  Barlow Dome       45.17 323  P    P      06 20 05.8 -0.1
      baz=43
E23K  Chandalar         45.24 333  P    P      06 20 06.1 -0.3
      baz=39
F24K  Squaw Lake        45.24 331  P    P      06 20 07.2 +0.9
F24K  Squaw Lake        45.24 331  P    P      06 20 06.2 -0.2
      baz=40
D22K  Ayikyak River     45.28 334       P      06 20 07.8 +1.2
D22K  Ayikyak River     45.28 334  P    P      06 20 07.0 +0.3
      baz=37
B20K  Meade River       45.30 337  P    P      06 20 07.3 +0.6
      baz=35
KIV   Kislovodsk        45.35  76 eP    P      06 20 09.6 +2.1
KIV                                pmax  pmax
      comp=Z,8.0nm,1.0s
KIV                                MLR   MLR
      comp=Z,391nm,16.0s
G25K  Bearman Lake      45.38 330  P    P      06 20 07.2 -0.2
      baz=40
M31M  Drury Creek, Y    45.38 320  P    P      06 20 06.7 -0.8
      baz=44
C21K  Knifeblade Rid    45.51 336  P    P      06 20 08.7 +0.2
      baz=36
DAWY  Dawson            45.57 324  P    P      06 20 09.4 +0.4
      baz=42,SNR=6.2
KBZ   Khabaz            45.62  76  P    P      06 20 11.7 +2.2
      comp=Z,5.2nm,1.1s,baz=344,slow=8.3,SNR=3.7
      comp=Z,5.2nm,1.1s
KBZ   Khabaz            45.62  76⇑iP    P      06 20 11.0 +1.5
KBZ                                pmax  pmax
      comp=Z,4.0nm,1.2s
E22K  Anaktuvuk Pass    45.69 333  P    P      06 20 09.8 -0.1
      baz=37
BNN   Bunyan            45.70  86       P      06 20 12.0 +1.5
BNN                                IAmb  IAmb   06 20 16.2
      comp=Z,17nm,1.4s
N32M  Quiet Lake        45.71 319  P    P      06 20 09.9 -0.3
      baz=44
I26K  Coal Creek Min    45.71 327  P    P      06 20 10.4 +0.4
      baz=41
G24K  Hadweenzic Riv    45.78 330  P    P      06 20 10.2 -0.3
      baz=39
M30M  Minto, Yukon      45.88 322  P    P      06 20 11.5 +0.1
      baz=43
A19K  Wainwright        45.88 339  P    P      06 20 11.3 +0.1
      baz=32
L29M  L29M              45.90 323  P    P      06 20 11.6  0.0
      baz=42
E21K  Killik River      45.92 335  P    P      06 20 12.0 +0.3
      baz=36
COLD  Coldfoot          46.03 332  P    P      06 20 12.7 +0.1
      baz=38
PRP   Porcupine Dome    46.19 329  P    P      06 20 13.6 -0.4
      baz=40
R33M  Jennings River    46.25 316  P    P      06 20 14.5  0.0
      baz=44
D20K  Etivluk River     46.26 336  P    P      06 20 14.2 -0.1
      baz=35
F22K  John River        46.27 333  P    P      06 20 14.7 +0.2
      baz=37
P33M  Teslin, Yukon     46.30 318  P    P      06 20 14.5 -0.4
      baz=43
N31M  Braeburn, Yuko    46.35 320  P    P      06 20 15.1 -0.1
      baz=43
G23K  Bananza Creek     46.40 332  P    P      06 20 15.8 +0.3
      baz=38
J26L  Joseph Creek      46.44 327  P    P      06 20 15.8 -0.1
      baz=40
M29M  Somme Creek       46.50 322  P    P      06 20 16.9 +0.4
      baz=42
C19K  Lookout Ridge     46.53 337  P    P      06 20 16.6 +0.1
      baz=33,SNR=6.5
E20K  Nigu River        46.55 335  P    P      06 20 16.6 -0.1
      baz=35
H24K  Noodor Dome       46.56 330  P    P      06 20 16.7 -0.1
      baz=38
WHY   Whitehorse        46.67 319  P    P      06 20 17.1 -0.7
      baz=43
B18K  Kokolik River     46.73 339  P    P      06 20 17.6 -0.4
      baz=32
D19K  Kuna River        46.75 336  P    P      06 20 16.9 -1.3
      baz=34
N30M  Aishikik Lake     46.80 321  P    P      06 20 18.7 -0.1
      baz=42
F21K  Alatna River      46.80 333  P    P      06 20 18.4 -0.3
      baz=36
J25K  Salcha River,     46.85 328  P    P      06 20 19.1  0.0
      baz=39
SCRK  Sand Creek        46.96 326  P    P      06 20 20.3 +0.2
      baz=40
O30N  Mendenhall        46.99 320  P    P      06 20 20.4 +0.2
      baz=42
POKR  Poker Plat Res    47.01 329  P    P      06 20 20.5 +0.2
      baz=38
```

Q32M	**Nakina River**	**47.02**	**316**	P	**P**	**06 20 20.4**	**-0.3**
	baz=43						
L27K	**Beaver Creek,**	**47.05**	**325**	P	**P**	**06 20 20.8**	**+0.2**
	baz=40						
P32M	**Atlin**	**47.06**	**317**	P	**P**	**06 20 21.2**	**+0.4**
	baz=42						
IL31		**47.14**	**328**	P	**P**	**06 20 22.1**	**+0.9**
ILAR	**Eielson Array**	**47.14**	**328**	P	**P**	**06 20 22.0**	**+0.7**
	comp=Z,2.5nm,0.9s,baz=28,slow=5.5,SNR=10						
	comp=Z,2.5nm,0.9s						
ILAR	**Eielson Array**	**47.14**	**328**	P	**P**	**06 20 21.5**	**+0.3**
C18K	**Utukok River**	**47.23**	**338**	P	**P**	**06 20 22.2**	**+0.3**
	baz=32						
BVCY	**Beaver Creek**	**47.25**	**324**	P	**P**	**06 20 22.1**	**-0.2**
	baz=40						
COLA	**College**	**47.31**	**329**	c *i*P	**P**	**06 20 23.9**	**+1.4**
COLA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
COLA	**College**	**47.31**	**329**	P	**P**	**06 20 21.9**	**-0.6**
	baz=38						
YUK4	**Talbot Arm**	**47.38**	**322**	P	**P**	**06 20 22.9**	**-0.6**
	baz=41						
G21K	**Allakaket**	**47.38**	**333**	P	**P**	**06 20 22.8**	**-0.4**
	baz=35						
H22K	**Ishtalitna Cre**	**47.38**	**331**	P	**P**	**06 20 23.0**	**-0.2**
	baz=36						
RIDG	**Independent Ri**	**47.39**	**327**	P	**P**	**06 20 23.6**	**+0.3**
	baz=39						
S34M	**Telegraph Cree**	**47.39**	**315**	P	**P**	**06 20 22.4**	**-0.8**
	baz=43						
HYT	**Haines Junctio**	**47.41**	**321**	P	**P**	**06 20 23.8**	**+0.2**
	baz=41						
E19K	**Redstone River**	**47.43**	**335**	P	**P**	**06 20 24.0**	**+0.4**
	baz=34						
HDA	**Harding Lake**	**47.44**	**328**	P	**P**	**06 20 23.8**	**+0.2**
	baz=38						
F20K	**Avaraart Lake**	**47.45**	**334**	P	**P**	**06 20 22.8**	**-0.8**
	baz=34						
I23K	**Minto, Yukon-K**	**47.48**	**330**	P	**P**	**06 20 23.8**	**-0.1**
	baz=37						
L26K	**Log Cabin Wild**	**47.52**	**325**	P	**P**	**06 20 24.6**	**+0.3**
	baz=39						
YUK6	**Outpost Mounta**	**47.59**	**321**	P	**P**	**06 20 25.4**	**+0.3**
	baz=41						
K24K	**Donnelly Dome**	**47.60**	**327**	P	**P**	**06 20 25.2**	**+0.3**
	baz=38						
M27K	**Edge Creek, AK**	**47.60**	**324**	P	**P**	**06 20 25.0**	**-0.1**
	baz=40						
YUK3	**Moose Creek**	**47.62**	**323**	P	**P**	**06 20 25.4**	**+0.1**
	baz=40						
SKAG	**Skagway**	**47.71**	**318**	P	**P**	**06 20 25.6**	**-0.2**
	baz=42						
C17K	**DeLong Mountai**	**47.75**	**339**	P	**P**	**06 20 26.5**	**+0.5**
	baz=30						
T35M	**Bob Quinn**	**47.75**	**313**	P	**P**	**06 20 26.5**	**+0.4**
	baz=43						
YUK8	**Steele Glacier**	**47.78**	**322**	P	**P**	**06 20 26.3**	**-0.3**
	baz=40						
NEA2	**Nenana**	**47.85**	**329**	P	**P**	**06 20 26.7**	**-0.1**
	baz=37						
IMAR	**Indian Mountai**	**47.88**	**333**	P	**P**	**06 20 26.9**	**-0.1**
M26K	**Nabesna, AK**	**47.90**	**325**	P	**P**	**06 20 27.2**	**-0.1**
	baz=39						
H21K	**Melozitna Rive**	**47.92**	**332**	P	**P**	**06 20 26.8**	**-0.6**
	baz=35						
PLBC	**Pleasant Camp**	**48.06**	**319**	P	**P**	**06 20 28.0**	**-0.5**
	baz=41						
RDOG	**Red Dog Mine**	**48.06**	**338**	P	**P**	**06 20 27.7**	**-0.7**
	baz=30						
F19K	**Shaleruckik Mo**	**48.07**	**335**	P	**P**	**06 20 27.8**	**-0.7**
	baz=33						
O29M	**Mount Kennedy**	**48.15**	**321**	P	**P**	**06 20 29.1**	**-0.3**
	baz=40						
E18K	**Tukpahlearik C**	**48.16**	**337**	P	**P**	**06 20 29.4**	**+0.3**
E18K				IAmb	IAmb	06 20 35.9	
	comp=Z,17nm,1.4s						
E18K	**Tukpahlearik C**	**48.16**	**337**	P	**P**	**06 20 29.1**	**0.0**
	baz=31						
PAX	**Paxson**	**48.17**	**326**	P	**P**	**06 20 29.1**	**-0.2**
	baz=38						
TIXI	**Tiksi**	**48.25**	**9**		**P**	**06 20 30.4**	**+0.6**
TIXI				IAmb	IAmb	06 20 32.1	
	comp=Z,21nm,1.1s						
TIXI	**Tiksi**	**48.25**	**9**	⇑*i*P	**P**	**06 20 31.2**	**+1.4**
TIXI				pmax	pmax		
	comp=Z,13nm,1.1s						
O28M	**Mount Upton**	**48.30**	**322**	P	**P**	**06 20 29.9**	**-0.8**
	baz=40						
C16K	**Lisburne Hills**	**48.32**	**339**		**P**	**06 20 30.9**	**+0.6**
C16K	**Lisburne Hills**	**48.32**	**339**	P	**P**	**06 20 29.9**	**-0.4**
	baz=29						
P29M	**Windy Craggy**	**48.39**	**320**	P	**P**	**06 20 30.7**	**-0.4**
	baz=40						
D17K	**Noatak River**	**48.41**	**338**	P	**P**	**06 20 30.4**	**-0.7**
	baz=30,SNR=5.8						
MAK	**Makhachkala**	**48.45**	**74**	*e*P	**P**	**06 20 27.1**	**-4.5**
MAK				*e*S	**S**	**06 27 24.9**	**-6.6**
MAK				*e*SS	**SS**	**06 30 58.9**	**-1.8**
MAK				pmax	pmax		
	comp=Z,278nm,1.5s						
MAK				MLR	MLR		
	comp=Z,457nm,16.0s						
U35K	**Hyder**	**48.46**	**312**	P	**P**	**06 20 31.4**	**-0.1**
	baz=42						
G19K	**Purcell Mounta**	**48.51**	**334**	P	**P**	**06 20 31.7**	**-0.1**
	baz=33						
MCK	**McKinley**	**48.51**	**329**	P	**P**	**06 20 31.1**	**-0.8**
	baz=37						
CTG	**Chitna Glacier**	**48.51**	**323**	P	**P**	**06 20 30.7**	**-1.4**
	baz=39						
HARP	**HAARP**	**48.53**	**326**	P	**P**	**06 20 31.8**	**-0.3**
	baz=38						
H20K	**Anotleneega Mo**	**48.55**	**333**	P	**P**	**06 20 32.2**	**0.0**
	baz=34						
DHY	**Denali Highway**	**48.62**	**327**	P	**P**	**06 20 32.7**	**-0.2**
	baz=37						
R31K	**City Hall, Gus**	**48.64**	**317**	P	**P**	**06 20 32.6**	**-0.4**
	baz=41						
F18K	**Selawik**	**48.67**	**336**	P	**P**	**06 20 32.6**	**-0.4**
	baz=32						
E17K	**Hotham Inlet**	**48.70**	**337**	P	**P**	**06 20 32.9**	**-0.3**
	baz=30,SNR=7.9						
MCARA	**McCarthy VSAT**	**48.70**	**324**	P	**P**	**06 20 31.9**	**-1.5**
	baz=39						
NEW	**Newport**	**48.74**	**297**	LR	LR	06 40 27.4	
	comp=Z,3µm,18.5s,baz=42,slow=35						
BPAW	**Bear Paw Mtn.**	**48.74**	**330**	P	**P**	**06 20 33.6**	**-0.2**
	baz=36						
PINM	**Pinnacle**	**48.85**	**321**	P	**P**	**06 20 33.9**	**-0.8**
	baz=39						
H19K	**Roundabout Mou**	**48.88**	**333**	P	**P**	**06 20 34.1**	**-0.5**
	baz=33						
WRAK	**Wrangell Islan**	**48.94**	**314**	P	**P**	**06 20 35.1**	**-0.1**
	baz=41						
S32K	**Killisnoo**	**48.95**	**316**	P	**P**	**06 20 35.2**	**-0.1**
	baz=41						
N25K	**Chitina, Valde**	**48.99**	**325**	P	**P**	**06 20 35.4**	**-0.3**
	baz=38						
I20K	**Naaghedeneel**	**49.03**	**332**	P	**P**	**06 20 35.4**	**-0.4**
	baz=34						
M24K	**Tolsona, Glenn**	**49.05**	**326**	P	**P**	**06 20 35.8**	**-0.3**
	baz=37						
G18K	**Tagagawik**	**49.06**	**335**	P	**P**	**06 20 36.2**	**+0.1**
	baz=32						
TRF	**Thorofare Moun**	**49.09**	**329**	P	**P**	**06 20 36.3**	**-0.3**
	baz=36						
WAT6	**Susitna Watana**	**49.11**	**327**	P	**P**	**06 20 36.1**	**-0.7**
	baz=37						
WAT1	**Susitna Watana**	**49.13**	**328**	P	**P**	**06 20 36.6**	**-0.2**
	baz=36						
F17K	**Baldwin Pennin**	**49.14**	**336**	P	**P**	**06 20 35.8**	**-0.8**
	baz=31						
S31K	**Pelican**	**49.16**	**317**	P	**P**	**06 20 35.8**	**-1.1**
	baz=40						
CRQE	**Cirque**	**49.22**	**323**	P	**P**	**06 20 35.8**	**-1.8**
	baz=38						
CHUM	**Lake Minchumin**	**49.26**	**330**	P	**P**	**06 20 36.0**	**-1.6**
	baz=35						
PD31	**Pinedale Array**	**49.28**	**287**		**P**	**06 20 36.8**	**-1.5**
PD31				IAmb	IAmb	06 20 39.0	
	comp=Z,21nm,1.8s						
PDAR	**Pinedale Array**	**49.28**	**287**	P	**P**	**06 20 36.9**	**-1.5**
	comp=Z,1.7nm,0.8s,baz=56,slow=6.7,SNR=8.8						
PDAR				LR	LR	06 40 44.0	
	comp=Z,1µm,18.1s,baz=14,slow=35						
	comp=Z,1.7nm,0.8s						
PDAR	**Pinedale Array**	**49.28**	**287**		**P**	**06 20 37.2**	**-1.2**
BW06	**Boulder Array**	**49.28**	**287**	P	**P**	**06 20 37.1**	**-1.2**
BW06				IAmb	IAmb	06 20 39.0	
	comp=Z,19nm,1.8s						
MCMT	**McKenzie Canyo**	**49.31**	**291**	P	**P**	**06 20 38.9**	**+0.2**
U33K	**Whale Pass**	**49.46**	**314**	P	**P**	**06 20 38.4**	**-0.8**
	baz=41						
J20K	**Nowinta River**	**49.47**	**331**	P	**P**	**06 20 38.2**	**-1.0**
	baz=34						
KLU	**Klutina**	**49.47**	**325**	P	**P**	**06 20 38.5**	**-0.9**
	baz=37						
V35K	**Ketchikan**	**49.50**	**313**	P	**P**	**06 20 38.9**	**-0.6**
	baz=41						
BMRM	**Bremner River**	**49.50**	**324**	P	**P**	**06 20 38.4**	**-1.2**
	baz=38						
SIT	**Sitka**	**49.53**	**316**	P	**P**	**06 20 39.1**	**-0.6**
	baz=40						
ABKAR	**Akbulak array**	**49.55**	**59**		**P**	**06 20 40.7**	**+0.7**
ISCO	**Idaho Springs**	**49.58**	**282**	P	**P**	**06 20 40.7**	**-0.1**
ISCO				IAmb	IAmb	06 20 45.9	
	comp=Z,32nm,1.9s						
ISCO	**Idaho Springs**	**49.58**	**282**	P	**P**	**06 20 40.7**	**-0.1**
ISCO				pmax	pmax		
	comp=Z,33nm,1.9s						
GCSA	**Galena City Sc**	**49.64**	**333**	P	**P**	**06 20 40.1**	**-0.4**
	baz=32						
M23K	**Glacier View**	**49.74**	**326**	P	**P**	**06 20 40.7**	**-0.7**
	baz=36						
G17K	**Kiwalik Mounta**	**49.83**	**335**	P	**P**	**06 20 41.3**	**-0.6**
	baz=30						
SML	**Sawmill**	**49.90**	**327**	P	**P**	**06 20 42.5**	**-0.1**
	baz=36						
J19K	**Poorman**	**49.98**	**332**	P	**P**	**06 20 43.3**	**+0.2**
	baz=33						
PPLA	**Purkeypile**	**50.05**	**330**	P	**P**	**06 20 43.6**	**-0.2**
	baz=34						
K20K	**Telida**	**50.14**	**331**	P	**P**	**06 20 44.4**	**+0.1**
	baz=34						
H17K	**Granite Mounta**	**50.15**	**335**	P	**P**	**06 20 44.6**	**+0.2**
	baz=31						
EYAK	**Cordova Ski Ar**	**50.18**	**324**	P	**P**	**06 20 44.3**	**-0.3**
	baz=37						
KNK	**Knik Glacier**	**50.26**	**327**	P	**P**	**06 20 44.9**	**-0.4**
	baz=36						
G16K	**Koyuk River**	**50.27**	**336**	P	**P**	**06 20 45.6**	**+0.3**
	baz=29						
KAIM	**Kayak Island**	**50.28**	**323**	P	**P**	**06 20 45.9**	**+0.5**
	baz=37						
PMR	**Palmer**	**50.30**	**327**	P	**P**	**06 20 45.7**	**+0.1**
	baz=35						
GLI	**Glacier Island**	**50.30**	**325**	P	**P**	**06 20 45.5**	**-0.1**
	baz=36						
M22K	**Willow**	**50.44**	**328**	P	**P**	**06 20 45.9**	**-0.7**
	baz=35						
F15K	**North Star Dit**	**50.46**	**337**	P	**P**	**06 20 45.7**	**-1.1**
	baz=28						
SKT	**Skwentna**	**50.63**	**329**	P	**P**	**06 20 47.7**	**-0.4**
	baz=34						
PWL	**Port Wells**	**50.67**	**326**	P	**P**	**06 20 47.7**	**-0.7**
	baz=36						
J18K	**Innoko River**	**50.69**	**332**	P	**P**	**06 20 48.5**	**0.0**
	baz=32						
SUA	**Susitna One**	**50.85**	**328**	P	**P**	**06 20 50.2**	**+0.3**
	baz=34						
RC01	**Rabbit Creek A**	**50.88**	**327**	P	**P**	**06 20 49.8**	**-0.1**
	baz=35						
H16K	**Elim**	**50.91**	**336**	P	**P**	**06 20 49.7**	**-0.5**
	baz=29						
G15K	**Niukluk**	**50.97**	**337**	P	**P**	**06 20 50.8**	**+0.2**
	baz=28						
BORK	**Borovoye**	**50.98**	**50**		**P**	**06 20 52.0**	**+1.2**
BORK	**Borovoye**	**50.98**	**50**	⇑*i*P	**P**	**06 20 51.8**	**+0.9**
BORK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
F14K	**Arctic Creek**	**50.99**	**338**	P	**P**	**06 20 50.9**	**+0.2**
	baz=27						
BVAR	**Borovoye Array**	**51.03**	**50**	P	**P**	**06 20 52.2**	**+1.0**
	comp=Z,5.5nm,0.9s,baz=285,slow=5.7,SNR=12						
	comp=Z,5.5nm,0.9s						
M20K	**Styx River**	**51.13**	**329**	P	**P**	**06 20 51.6**	**-0.4**
	baz=33						
TNA	**Tin City**	**51.21**	**339**	P	**P**	**06 20 52.5**	**+0.1**
	baz=26						
I17K	**Unalakleet**	**51.24**	**334**	P	**P**	**06 20 52.5**	**-0.1**
	baz=30						
Q23K	**Middleton Isla**	**51.26**	**324**	P	**P**	**06 20 52.9**	**+0.1**
	baz=36						
J17K	**VABM Dome**	**51.30**	**333**	P	**P**	**06 20 53.0**	**0.0**
	baz=31						
CAPN	**Captain Cook N**	**51.54**	**327**	P	**P**	**06 20 54.8**	**-0.1**
	baz=34						
SEW	**Seward**	**51.61**	**326**	P	**P**	**06 20 55.3**	**-0.1**
	baz=34						
ANM	**Nome**	**51.62**	**337**	P	**P**	**06 20 55.3**	**-0.1**
	baz=27						
K17K	**Iditarod**	**51.71**	**332**	P	**P**	**06 20 55.8**	**-0.4**
	baz=31						
J16K	**Anvik River**	**51.74**	**334**	P	**P**	**06 20 56.4**	**0.0**
	baz=30						
L18K	**Granite Mounta**	**51.75**	**331**	P	**P**	**06 20 56.3**	**-0.1**
	baz=31,SNR=5.6						
TORD	**Torodi Ar. Bea**	**52.06**	**139**	P	**P**	**06 20 57.5**	**-1.8**
	comp=Z,5.1nm,0.8s,baz=348,slow=10.0,SNR=5.3						
	comp=Z,5.1nm,0.8s						
BILL	**Bilibino**	**52.11**	**352**	P	**P**	**06 20 59.5**	**+0.5**
BILL				IAmb	IAmb	06 21 03.7	
	comp=Z,20nm,1.4s						
M18K	**Stony River**	**52.16**	**330**	P	**P**	**06 20 59.0**	**-0.5**
	baz=32						
L17K	**Donlin**	**52.21**	**332**	P	**P**	**06 20 58.9**	**-0.9**
	baz=30						
BRSE	**Bradley Lake S**	**52.28**	**326**	P	**P**	**06 20 58.8**	**-1.6**
	baz=34						
HKT	**Hockley**	**52.36**	**266**	P	**P**	**06 21 01.9**	**+0.6**
HKT	**Hockley**	**52.36**	**266**	P	**P**	**06 21 01.9**	**+0.6**
HKT				pmax	pmax		
	comp=Z,13nm,1.1s						
N19K	**Bonanza Creek**	**52.39**	**329**	P	**P**	**06 21 00.3**	**-1.1**
	baz=32						
HOM	**Homer**	**52.60**	**327**	P	**P**	**06 21 02.4**	**-0.4**
	baz=33						
M17K	**Holitna River**	**52.63**	**331**	P	**P**	**06 21 02.9**	**-0.1**
	baz=31						
K15K	**Wolf Creek Mou**	**52.82**	**334**	P	**P**	**06 21 04.3**	**0.0**
	baz=29						
L16K	**Owhat River**	**52.85**	**332**	P	**P**	**06 21 04.2**	**-0.5**
	baz=30						
O19K	**Port Alsworth**	**52.87**	**329**	P	**P**	**06 21 03.4**	**-1.4**
	baz=32						
P19K	**Oil Pt**	**53.04**	**328**	P	**P**	**06 21 04.8**	**-1.3**
	baz=32						
N17K	**Nushagak Hills**	**53.33**	**330**	P	**P**	**06 21 05.8**	**-2.3**
	baz=30						
M16K	**Timber Creek**	**53.33**	**332**	P	**P**	**06 21 05.7**	**-2.5**
	baz=30						
L15K	**Ungalak Mounta**	**53.35**	**333**	P	**P**	**06 21 07.1**	**-1.1**
	baz=28						
O18K	**Koktuh Hills**	**53.40**	**329**	P	**P**	**06 21 07.3**	**-1.4**
	baz=31						
GAMB	**Gambell**	**53.52**	**340**	P	**P**	**06 21 08.0**	**-1.5**
	baz=23						
ELK	**Elko**	**53.56**	**290**	LR	LR	06 43 26.5	
	comp=Z,1µm,19.1s,baz=40,slow=36						
Q20K	**Shuyak Island**	**53.70**	**327**	P	**P**	**06 21 09.4**	**-1.5**
	baz=32						
N16K	**Nishlik Lake**	**53.76**	**331**	P	**P**	**06 21 10.2**	**-1.2**
	baz=30						
ANMO	**Albuquerque**	**53.77**	**279**	⇓*i*P	**P**	**06 21 13.7**	**+1.7**
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
Q19K	**Cape Douglas,**	**53.77**	**328**	P	**P**	**06 21 09.8**	**-1.7**
	baz=32						
P18K	**Big Mountain,**	**53.80**	**329**	P	**P**	**06 21 10.4**	**-1.3**
	baz=31						
K13K	**Kusilvak Mount**	**53.82**	**335**	P	**P**	**06 21 10.6**	**-1.1**
	baz=27						
L14K	**Kuka Creek**	**53.92**	**334**	P	**P**	**06 21 11.1**	**-1.3**
	baz=28						
O17K	**Koliganek Bris**	**53.95**	**330**	P	**P**	**06 21 11.4**	**-1.4**
	baz=30						
M15K	**Kasigluk River**	**54.03**	**332**	P	**P**	**06 21 12.5**	**-0.8**
	baz=29						
M14K	**Bethel**	**54.28**	**333**	P	**P**	**06 21 13.7**	**-1.3**
	baz=28						
N15K	**Kwethluk River**	**54.35**	**332**	P	**P**	**06 21 14.4**	**-1.3**
	baz=29						
O16K	**Kokwok River B**	**54.36**	**330**	P	**P**	**06 21 13.8**	**-1.9**
	baz=30						
Q18K	**Katmai Hardscr**	**54.38**	**328**	P	**P**	**06 21 13.8**	**-2.2**
	baz=31						
KDAK	**Kodiak Island**	**54.45**	**326**	P	**P**	**06 21 15.2**	**-1.2**
	baz=32						
Q16K	**King Salmon**	**54.79**	**329**	P	**P**	**06 21 17.9**	**-0.9**
	baz=30						
M13K	**Dall Lake**	**54.90**	**334**	P	**P**	**06 21 18.4**	**-1.1**
	baz=27						
N14K	**Kuskokwak Cree**	**54.95**	**332**	P	**P**	**06 21 18.8**	**-1.1**
	baz=28						
OHAK	**Old Harbor**	**55.13**	**326**	P	**P**	**06 21 19.5**	**-1.8**
	baz=31						
O15K	**Ungalikthiuk R**	**55.16**	**331**	P	**P**	**06 21 20.0**	**-1.5**
	baz=29						
ZALV	**Zalesovo Beam**	**55.49**	**40**	P	**P**	**06 21 23.6**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=331,slow=8.5,SNR=5.8						
	comp=Z,0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**55.49**	**40**		**P**	**06 21 24.5**	**+0.6**
ZALV	**Zalesovo Beam**	**55.49**	**40**	*i* P	**P**	**06 21 25.7**	**+1.8**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
R17L	**Mt. Peulik Vol**	**55.62**	**328**	P	**P**	**06 21 23.1**	**-1.8**
	baz=30						
SII	**Sitkinak Islan**	**55.95**	**326**	P	**P**	**06 21 25.5**	**-1.7**
	baz=31						
KURK	**Kurchatov**	**55.98**	**47**		**P**	**06 21 28.2**	**+0.6**
KURK				IAmb	IAmb	06 21 32.7	
	comp=Z,10.0nm,0.8s						
KURK	**Kurchatov**	**55.98**	**47**	⇑*i*P	**P**	**06 21 28.1**	**+0.6**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KURBB	**Kurchatov Arra**	**56.02**	**47**	P	**P**	**06 21 28.1**	**+0.3**
	comp=Z,8.0nm,0.8s,baz=324,slow=6.9,SNR=12						
	comp=Z,8.0nm,0.8s						
DBIC	**Dimbokro**	**56.24**	**149**	P	**P**	**06 21 28.5**	**-1.3**
	comp=Z,2.3nm,0.6s,baz=358,slow=8.1,SNR=4.1						
	comp=Z,2.3nm,0.6s						
NVAR	**Mina Array Bea**	**56.84**	**290**	P	**P**	**06 21 35.4**	**+1.3**
	comp=Z,0.8nm,0.7s,baz=50,slow=5.9,SNR=7.8						
	comp=Z,0.8nm,0.7s						
NVAR	**Mina Array Bea**	**56.84**	**290**		**P**	**06 21 34.3**	**+0.2**
TXAR	**Lajitas Array**	**56.84**	**272**	P	**P**	**06 21 33.5**	**-0.6**
	comp=Z,1.5nm,0.8s,baz=68,slow=5.0,SNR=12						
	comp=Z,1.5nm,0.8s						
PNTR	**Pine Nut**	**56.94**	**292**	P	**P**	**06 21 36.1**	**+1.4**
DUN6	**Lazy B Ranch**	**56.99**	**279**	P	**P**	**06 21 35.6**	**+0.4**
DSP	**Deep Springs**	**57.53**	**289**		**P**	**06 21 38.4**	**-0.2**
DSP				IAmb	IAmb	06 21 39.6	
	comp=Z,27nm,2.0s						
YAK	**Yakutsk**	**57.74**	**11**	*e*P	**P**	**06 21 38.7**	**-1.1**
YAK				pmax	pmax		
	comp=Z,13nm,0.9s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.3s						
KKAR	**Karatay Array**	**58.93**	**57**		**P**	**06 21 49.7**	**+1.3**
KKAR	**Karatay Array**	**58.93**	**57**	P	**P**	**06 21 49.7**	**+1.3**
SDV	**Santo Domingo**	**58.97**	**228**	P	**P**	**06 21 48.4**	**-0.8**
	comp=E,2.5nm,0.6s,baz=48,slow=10,SNR=2.7						
	comp=E,2.5nm,0.6s						
DGZ	**Jazzator, Alta**	**59.94**	**42**	⇑*i*P	**P**	**06 21 56.1**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MAKZ	**Makanchi**	**60.46**	**47**	P	**P**	**06 22 00.2**	**+1.2**
MAKZ				IAmb	IAmb	06 22 03.9	
	comp=Z,18nm,1.2s						
MAKZ	**Makanchi**	**60.46**	**47**	P	**P**	**06 22 00.2**	**+1.2**
MAKZ				pmax	pmax		
	comp=Z,18nm,1.3s						
MK31	**Makanchi Array**	**60.59**	**47**	c *i*P	**P**	**06 22 00.4**	**+0.6**
MKAR	**Makanchi Array**	**60.59**	**47**	P	**P**	**06 22 00.3**	**+0.4**
	comp=Z,5.3nm,0.6s,baz=344,slow=4.9,SNR=32						
	comp=Z,5.3nm,0.6s						
ESJX	**Sierra Juarez**	**60.86**	**284**	P	**P**	**06 22 02.5**	**+0.4**
ESJX				IAmb	IAmb	06 22 04.4	
	comp=Z,11nm,1.1s						
AAK	**Ala-Archa**	**60.99**	**55**	P	**P**	**06 22 03.9**	**+1.1**
AAK	**Ala-Archa**	**60.99**	**55**	⇑*i*P	**P**	**06 22 03.0**	**+0.2**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ARSB	**Arslanbob**	**61.44**	**57**		**P**	**06 22 06.8**	**+0.9**
ARSB				IAmb	IAmb	06 22 11.6	
	comp=Z,9.2nm,0.9s						
ARSB	**Arslanbob**	**61.44**	**57**	P	**P**	**06 22 06.8**	**+0.9**
ARSB				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GAR	**Garm**	**62.20**	**60**		**P**	**06 22 11.8**	**+0.9**
KSH	**Kashi**	**64.21**	**56**	P	**P**	**06 22 27.4**	**+3.1**
KSH				pmax	pmax		
	comp=Z,22nm,1.1s						
KSH				LR	LR		
	comp=Z,480nm,19.9s						
KSH				LR	LR		
	comp=Z,300nm,16.1s						
KSH				LR	LR		
	comp=Z,820nm,20.3s						
WMQ	**Urumqi**	**65.10**	**45**	*e*P	**P**	**06 22 29.6**	**-0.4**
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.3s						
WMQ				LR	LR		
	comp=Z,260nm,23.8s						
ZEA	**Zeya**	**65.60**	**14**	*e*P	**P**	**06 22 34.1**	**+1.2**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SONM	**Songino Array**	**67.26**	**30**	P	**P**	**06 22 44.6**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=326,slow=6.1,SNR=9.8						
	comp=Z,0.9nm,0.7s						
SONM	**Songino Array**	**67.26**	**30**		**P**	**06 22 44.5**	**+0.6**
SONM				IAmb	IAmb	06 22 45.5	
	comp=Z,21nm,1.8s						
ULN	**Ulaanbaatar**	**67.40**	**30**	P	**P**	**06 22 45.9**	**+1.2**
ULN	**Ulaanbaatar**	**67.40**	**30**	⇑*i*P	**P**	**06 22 45.5**	**+0.8**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.6s						
NIL	**Nilore**	**67.97**	**61**	P	**P**	**06 22 49.1**	**+0.8**
NIL				IAmb	IAmb	06 22 53.8	
	comp=Z,16nm,1.1s						
NIL	**Nilore**	**67.97**	**61**	P	**P**	**06 22 49.1**	**+0.8**
NIL				pmax	pmax		
	comp=Z,16nm,1.2s						
HEH	**HeiHe**	**69.04**	**15**	*e*P	**P**	**06 22 55.0**	**+0.3**
HEH				pmax	pmax		
	comp=Z,14nm,1.4s						
OTAV	**Otavalo**	**69.93**	**232**	P	**P**	**06 23 01.8**	**+0.6**
OTAV				IAmb	IAmb	06 25 26.2	
	comp=Z,27nm,1.9s						
OTAV	**Otavalo**	**69.93**	**232**	P	**P**	**06 23 01.8**	**+0.6**
OTAV				pmax	pmax		
	comp=Z,27nm,1.9s						
GTA	**Gaotai**	**73.13**	**38**	*e*P	**P**	**06 23 20.0**	**+0.1**
GTA				pP	pP	06 23 23.3	-1.4
GTA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BNX	**BinXian**	**73.46**	**16**	⇓P	**P**	**06 23 20.6**	**-0.9**
BNX				pmax	pmax		
	comp=Z,10.0nm,1.7s						
BTO	**Baotou**	**74.94**	**30**	*e*P	**P**	**06 23 29.0**	**-1.4**
BTO				S	**S**	**06 33 05.4**	**-1.6**
BTO				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BTO				pmax	pmax		
	comp=Z,370nm,5.0s						
BTO				LR	LR		
	comp=Z,320nm,9.4s						
BTO				LR	LR		
	comp=Z,280nm,6.5s						
BTO				LR	LR		
	comp=Z,360nm,15.3s						
CN2	**Changchun**	**75.06**	**18**	P	P	06 23 22.8	-8.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**75.10**	**29**	*e*P	**P**	**06 23 30.8**	**-0.5**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,62nm,4.7s						
HHC				LR	LR		
	comp=Z,120nm,15.5s						
HHC				LR	LR		
	comp=Z,130nm,15.1s						
HHC				LR	LR		
	comp=Z,250nm,15.9s						
VILB	**Vilhena**	**76.21**	**210**	P	**P**	**06 23 38.1**	**+0.4**
BDFB	**Brasilia**	**76.33**	**198**	P	**P**	**06 23 37.7**	**-0.8**
	comp=Z,5.6nm,0.7s,baz=24,slow=5.2,SNR=12						
	comp=Z,5.6nm,0.7s						
LZH	**Lanzhou**	**77.43**	**37**	*e*P	**P**	**06 23 45.3**	**+0.6**
LZH				sP	sP	06 23 52.6	+1.3

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LZH                                   pmax     pmax
      comp=Z,14nm,1.1s
LZH                                   LR       LR
      comp=Z,220nm,14.6s
LZH                                   LR       LR
      comp=Z,250nm,15.3s
LZH                                   LR       LR
      comp=Z,320nm,17.0s
HNS   HongShan            79.13  28 ⇓P        P        06 23 54.8 +0.9
HNS                                   pmax     pmax
      comp=Z,10.0nm,1.8s
SIV   San Ignacio         79.34 210  P        P        06 23 54.8 -0.3
      comp=Z,5.1nm,0.9s,baz=54,slow=4.4,SNR=13
      comp=Z,5.1nm,0.9s
LYN   LuoYang             81.29  30 ⇑P        P        06 24 05.8 +0.2
LYN                                   pmax     pmax
      comp=Z,10.0nm,0.9s
LPAZ  La Paz              81.60 217  P        P        06 24 07.3 -0.7
      comp=Z,1.8nm,0.9s,baz=351,slow=5.2,SNR=5.2
      comp=Z,1.8nm,0.9s
CD2   Chengdu             82.20  39  P        P        06 24 09.5 -1.0
CD2                                   pmax     pmax
      comp=Z,10.0nm,0.5s
AQDB  Aquidauana          82.43 204           P        06 24 11.5  0.0
AQDB                                  IAmb     IAmb     06 24 15.9
      comp=Z,11nm,1.0s
PB16  IPOC Station P      83.95 217           P        06 24 20.4 +0.3
HYB   Hyderabad           84.32  65 eP        P        06 24 22.7 +1.1
GO01  Chusmiza            85.11 216  P        P        06 24 25.8  0.0
GO01                                  IAmb     IAmb     06 24 30.1
      comp=Z,9.0nm,0.9s
NJ2   Nanjing             85.21  26 eP        P        06 24 25.0 -0.8
NJ2                                   pmax     pmax
      comp=Z,12nm,0.5s
PB08  IPOC Station P      85.54 216  P        P        06 24 27.6 -0.3
PZH   PanZhiHua           85.61  42  P        P        06 24 28.8 +0.7
QIZ   Qiongzhong          95.20  37  P        P        06 25 12.6 -0.5
QIZ                                   S        S        06 36 27.0 -0.7
QIZ                                   LR       LR
      comp=Z,240nm,16.3s
QIZ                                   LR       LR
      comp=Z,350nm,14.5s
QIZ                                   LR       LR
      comp=Z,290nm,26.7s
TAOE  Nuku Hiva Isla     107.59 283 eLR       LR       07 01 45.2
      comp=Z,291nm,22.3s
RKT   Rikitea            117.04 270 eLR       LR       07 05 57.1
      comp=Z,1μm,37.0s
PPT2  Papeete2           119.72 287 eLR       LR       07 07 14.5
      comp=Z,321nm,22.2s
PPT2                                 eLR       LR       07 07 18.2
      comp=Z,364nm,21.5s
TBI   Tubuai             124.54 283 eLR       LR       07 09 26.0
      comp=Z,1μm,27.5s
TBI                                  eLR       LR       07 09 28.7
      comp=Z,1μm,31.0s
SYO   Syowa Base         137.74 150⇑ePdiff    Pdif     06 28 22.2 +1.2
SYO   Syowa Base         137.74 150⇑epPdiff   pPdif    06 28 26.2 +0.2
WRA   Warramunga Arr     138.90  22  PKP      PKPdf    06 31 13.7 -2.0
      comp=Z,0.5nm,0.6s,baz=338,slow=2.4,SNR=2.3
DZM   Mont Dzumac        140.67 335 eLR       LR       07 16 55.6
      comp=Z,296nm,27.9s
ASAR  Alice Springs      142.43  24  PKhKP    PKPpre   06 31 16.7
      comp=Z,0.6nm,0.7s,baz=347,slow=2.1,SNR=8.4
QSPA  South Pole Qui     149.49 180  PKP      PKPdf    06 31 33.3 +0.7
      comp=Z,6.1nm,0.7s,baz=111,slow=1.7,SNR=6.4
QSPA                                  PKPbc    PKPbc    06 31 36.8 -0.4
      comp=Z,6.1nm,0.7s,baz=243,slow=1.5,SNR=6.0
STKA  Stephens Creek     151.77  15  PKPbc    PKPbc    06 31 43.3 -0.3
      comp=Z,2.3nm,0.6s,baz=6.7,slow=23,SNR=4.0
```

IDC ***20*** *06:13:37.3±0.5, 59°.42N×30°.40W, h0^{km}, mb4.1/22, mbtmp4.1/23, ML4.3/1, Error ellipse: s-maj=17.0km s-min=12.1km az=175.0*

NEIC ***20*** *06:13:39.3±1.3, 59°.45N±0°.10×30°.3W±0°.2, h10^{km}±1^{km}, mb4.9/71, Error ellipse: s-maj=16.3km s-min=13.8km az=179.0*

GCMT ***20*** *06:13:42.3±0.2, 59°.60N±0°.04×30°.06W±0°.04, h12^{km}, MW5.0/110, Moment Tensor Solution. s110,c180; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.63±.13; $M_{\theta\theta}$0.27±.14; $M_{\phi\phi}$3.36±.09; $M_{r\theta}$2.03±.58; $M_{\theta\phi}$1.22±.10; $M_{\phi r}$-2.03±.53; Best double couple: $M_0$4.59200×10^{16} NP1:ϕ_s221.00000°,δ40.00000°,λ-48.00000°. NP2: ϕ_s351.00000°,δ61.00000°,λ-119.00000°. Principal axes: T 4.0410, Plg12.0000°, Azm102.0000°; N 1.1010, Plg25.0000°, Azm6.0000°; P -5.1430, Plg62.0000°, Azm214.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 06:13:39.9±0.4**, 59°.43N**±0°.07×**30°.34W**±0°.06**, h16^{km}, n117,** σ**0s.84**/119**, mb4.8**/56**, MS4.6**/3**, 7D, Reykjanes Ridge**

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Code  Station Name          Δ°   AZ°    Phase ID           Time      Res
                                        Op       ISC       h  m  s   ISC
BORG  Borgarnes            6.81  35  Pn       Pn       06 15 18.2 -0.7
      5.4nm,0.3s,baz=270,slow=6.1,SNR=1.5
BORG                                 Sn       Sn       06 16 34.2 -1.8
      1.0nm,0.3s,baz=309,slow=18,SNR=1.2
      56nm,0.8s
BORG  Borgarnes            6.81  35  Pn       Pn       06 15 18.4 -0.6
ANGG  Ammassalik, Gr       7.07 335  Pn       Pn       06 15 21.5 -1.0
SCO   Scoresbysund        11.64  14  Pn       Pn       06 16 23.6 -1.5
SFJD  Kangerlussuaq       11.83 318  Pn       Pn       06 16 27.8 +0.1
SUMG  Summit              13.59 350  Pn       Pn       06 16 52.0 -0.1
EKA   Eskdalemuir Ar      15.16  94  Pn       P        06 17 16.3 -1.9
      baz=303,slow=9.0
DRLN  Deer Lake           18.69 249  P        P        06 17 55.0 -2.1
SCHQ  Schefferville       20.15 273  P        P        06 18 12.9 -0.3
      11nm,1.1s,baz=60,slow=14,SNR=3.3
      11nm,1.1s
SCHQ  Schefferville       20.15 273  P        P        06 18 12.7 -0.5
NOA   NORSAR Array B      20.45  68  P        P        06 18 16.4 +0.1
      0.9nm,0.7s,baz=284,slow=10,SNR=2.8
BMRD  Maredsous           21.93  99 dP        P        06 18 32.1 -0.2
DOU   Dourbes             21.97 100 dP        P        06 18 32.9 +0.2
BGES  Gesves              22.04  99 dP        P        06 18 34.9 +1.4
RCHB  Rochefort           22.25  99 dP        P        06 18 36.1 +0.3
MEM   Membach             22.37  97 dP        P        06 18 39.0 +2.0
BTNL  Ternell             22.44  97 dP        P        06 18 37.5 -0.4
WLF   Walferdange         23.02  99 dP        P        06 18 44.1 +0.2
ARCES ARCESS Array B      25.11  43  P        P        06 19 03.1 -0.3
      4.8nm,1.0s,baz=262,slow=8.1,SNR=5.9
      4.8nm,1.0s
ARCES ARCESS Array B      25.11  43  P        P        06 19 02.5 -0.9
ESDC  Sonseca Array       25.84 128  P        P        06 19 11.3 +0.8
      6.7nm,0.9s,baz=330,slow=9.4,SNR=9.5
      6.7nm,0.9s
ESDC  Sonseca Array       25.84 128           P        06 19 10.5  0.0
ESDC                                 IAmb     IAmb     06 19 16.8
      comp=Z,24nm,1.4s
FINES FINESS Array B      27.17  61  P        P        06 19 20.9 -1.2
      comp=Z,3.9nm,0.9s,baz=264,slow=7.7,SNR=5.1
      comp=Z,3.9nm,0.9s
FINES FINESS Array B      27.17  61  P        P        06 19 21.7 -0.4
FIA1  FINESS Array S      27.18  61  P        P        06 19 21.7 -0.4
AKASG Malin Array Be      34.11  78  P        P        06 20 21.7 -1.7
      comp=Z,0.5nm,0.5s,baz=308,slow=8.4,SNR=2.0
      comp=Z,0.5nm,0.5s
KEST  Kesra               34.94 115  P        P        06 20 29.7 -1.2
      comp=Z,4.8nm,0.9s,baz=18,slow=8.0,SNR=3.6
      comp=Z,4.8nm,0.9s
KEST  Kesra               34.94 115  P        P        06 20 30.6 -0.2
ULM   Lac du Bonnet       37.36 286  P        P        06 20 49.7 -1.6
      comp=Z,3.3nm,0.8s,baz=78,slow=1.7,SNR=3.7
      comp=Z,3.3nm,0.8s
YKAW1 Yellowknife Wh      38.25 312  P        P        06 20 59.2 +0.6
YKAW1                                IAmb     IAmb     06 21 01.6
      comp=Z,52nm,1.8s
YKAW3 Yellowknife Wh      38.25 312           P        06 20 59.3 +0.7
YKAW3                                IAmb     IAmb     06 21 01.9
      comp=Z,28nm,1.6s
YKA   Yellowknife Ar      38.29 312  P        P        06 20 58.1 -0.8
      comp=Z,3.2nm,1.1s,baz=54,slow=7.5,SNR=6.8
      comp=Z,3.2nm,1.1s
ECSD  EROS Data Cent      42.17 279           P        06 21 31.4 -0.1
S44A  Carbondale          42.89 267  P        P        06 21 38.4 +1.2
P40A  Paris               42.93 271  P        P        06 21 38.0 +0.4
CCM   Cathedral Cave      43.63 269           P        06 21 43.5 +0.3
BRTR  Keskin Array B      43.94  87  P        P        06 21 46.8 +0.9
      comp=Z,0.7nm,0.7s,baz=339,slow=5.4,SNR=14
BRTR                                 PcP      PcP      06 23 31.4 -0.2
      comp=Z,0.7nm,0.9s,baz=296,slow=4.6,SNR=3.6
      comp=Z,0.7nm,0.7s
BRTR  Keskin Array B      43.94  87  P        P        06 21 45.2 -0.7
PBMO  Poplar Bluff        44.19 267  P        P        06 21 47.0 -0.8
PBMO                                 IAmb     IAmb     06 21 49.0
      comp=Z,18nm,1.1s
C23K  Itkillik River      44.21 335  P        P        06 21 48.2 +0.7
LCAR  Lake Charles        45.11 267  P        P        06 21 55.0 -0.1
KBZ   Khabaz              45.66  76  P        P        06 22 01.3 +1.9
      comp=Z,3.6nm,1.0s,baz=320,slow=6.3,SNR=3.7
      comp=Z,3.6nm,1.0s
WHAR  Wooly Hollow        46.29 267  P        P        06 22 04.0 -0.5
HHAR  Hobbs               46.37 269           P        06 22 04.2 -0.9
U38A  Gravette            46.47 270  P        P        06 22 05.4 -0.5
C19K  Lookout Ridge       46.67 338           P        06 22 08.2 +1.1
RLO   Rose Lookout        47.01 270  P        P        06 22 10.2 +0.1
CCAR  Cane Creek          47.11 265  P        P        06 22 11.2 +0.3
X40A  Basin Creek Fa      47.20 267  P        P        06 22 12.0 +0.4
X40A                                 IAmb     IAmb     06 22 14.0
      comp=Z,13nm,1.0s
ILAR  Eielson Array       47.26 329  P        P        06 22 12.1 +0.4
      comp=Z,3.6nm,1.1s,baz=26,slow=5.8,SNR=5.5
      comp=Z,3.6nm,1.1s
ILAR  Eielson Array       47.26 329  P        P        06 22 11.7  0.0
MIAR  Mount Ida           47.53 268           P        06 22 14.2  0.0
F20K  Avaraart Lake       47.58 334  P        P        06 22 13.7 -0.4
F20K                                 IAmb     IAmb     06 22 18.4
      comp=Z,26nm,1.9s
YNE   Yellowstone No      47.87 290  P        P        06 22 15.7 -1.3
YNE                                  IAmb     IAmb     06 22 22.6
      comp=Z,12nm,1.1s
143A  Socs Landing,       47.88 264  P        P        06 22 16.4 -0.5
TIXI  Tiksi               48.41   9           P        06 22 21.6 +1.2
TIXI                                 IAmb     IAmb     06 22 22.3
      comp=Z,11nm,1.1s
KSCO  Kaye Shedlock'      48.70 279  P        P        06 22 23.1 -0.2
W35A  Tecumseh            48.74 271  P        P        06 22 23.3 -0.3
W35A                                 IAmb     IAmb     06 22 24.0
      comp=Z,18nm,1.1s
BW06  Boulder Array       49.32 287  P        P        06 22 27.9 -0.2
PD31  Pinedale Array      49.32 287  P        P        06 22 28.0 -0.1
PDAR  Pinedale Array      49.32 287  P        P        06 22 27.2 -0.9
      comp=Z,1.8nm,0.9s,baz=55,slow=7.8,SNR=5.6
      comp=Z,1.8nm,0.9s
AB31  Akbulak array       49.64  59           P        06 22 30.5 +0.3
AB31                                 IAmb     IAmb     06 22 35.2
      comp=Z,20nm,1.8s
ABKAR Akbulak array       49.64  59           P        06 22 30.9 +0.8
BCYI  Bear Canyon         50.01 292  P        P        06 22 33.8 +0.3
WMOK  Wichita Mounta      50.04 272           P        06 22 34.0 +0.5
WMOK                                 IAmb     IAmb     06 22 35.5
      comp=Z,34nm,1.9s
O20A  White River Ci      50.66 284           P        06 22 37.9 -0.4
O20A                                 IAmb     IAmb     06 22 42.8
      comp=Z,29nm,1.6s
RTBA  Rita Blanca         50.73 277           P        06 22 39.2 +0.4
RTBA                                 IAmb     IAmb     06 22 40.0
      comp=Z,18nm,1.2s
RDMU  Red Mountain        50.98 286  P        P        06 22 41.4 +0.6
RDMU                                 IAmb     IAmb     06 22 42.2
      comp=Z,23nm,1.4s
T25A  Trinidad            51.04 279  P        P        06 22 41.0 -0.2
T25A                                 IAmb     IAmb     06 22 45.0
      comp=Z,12nm,1.1s
BVAR  Borovoye Array      51.13  50  P        P        06 22 42.1 +0.7
      comp=Z,2.3nm,0.8s,baz=316,slow=6.2,SNR=5.2
      comp=Z,2.3nm,0.8s
PLPT  Palo Pinto          51.32 270  P        P        06 22 43.4 +0.3
PLPT                                 IAmb     IAmb     06 22 44.0
      comp=Z,25nm,1.3s
SPU   Mount Spurr         51.56 328  P        P        06 22 45.5 +0.9
SPU                                  IAmb     IAmb     06 24 31.9
      comp=Z,8.1nm,0.7s
S22A  4UR Ranch, Cre      51.79 281           P        06 22 46.7 -0.2
TORD  Torodi Ar. Bea      51.95 139  P        P        06 22 47.0 -0.9
      comp=Z,3.3nm,0.9s,baz=349,slow=9.1,SNR=4.7
      comp=Z,3.3nm,0.9s
TORD  Torodi Ar. Bea      51.95 139  P        P        06 22 47.2 -0.7
DKNS  Dickens             51.98 273           P        06 22 48.4 +0.3
DKNS                                 IAmb     IAmb     06 22 49.3
      comp=Z,24nm,1.1s
HKT   Hockley             52.34 266  P        P        06 22 50.3 -0.4
HKT                                  IAmb     IAmb     06 22 52.0
      comp=Z,14nm,1.2s
P17A  Butcher Ranch,      52.40 286  P        P        06 22 51.4 +0.1
P17A                                 IAmb     IAmb     06 22 53.1
      comp=Z,23nm,1.6s
PV03  Paradox Valley      52.40 283  P        P        06 22 51.7 +0.3
MPU   Maple Canyon        52.42 287  P        P        06 22 51.6 +0.1
MPU                                  IAmb     IAmb     06 22 53.5
      comp=Z,16nm,1.4s
ELK   Elko                53.61 290           P        06 23 01.0 +0.7
ELK                                  IAmb     IAmb     06 23 02.8
      comp=Z,13nm,1.4s
ANMO  Albuquerque         53.78 279           P        06 23 01.1 -0.5
KNB   Kanab               55.34 285           P        06 23 12.5 -0.3
KNB                                  IAmb     IAmb     06 23 13.6
      comp=Z,11nm,1.3s
SAND  Sanderson           55.55 271           P        06 23 14.7 +0.4
SAND                                 IAmb     IAmb     06 23 17.2
      comp=Z,9.7nm,1.0s
ZALV  Zalesovo Beam       55.61  40  P        P        06 23 14.7 +0.4
      comp=Z,0.9nm,0.7s,baz=305,slow=8.5,SNR=4.5
      comp=Z,0.9nm,0.7s
ZALV  Zalesovo Beam       55.61  40  P        P        06 23 14.1 -0.2
WUAZ  Wupatki             55.80 283           P        06 23 16.9 +0.7
WUAZ                                 IAmb     IAmb     06 23 19.6
      comp=Z,15nm,1.4s
KURK  Kurchatov           56.09  46           P        06 23 17.9 +0.2
KURK                                 IAmb     IAmb     06 23 20.4
      comp=Z,10nm,1.1s
PRN   Pahroc Range        56.12 287  P        P        06 23 19.0 +0.6
PRN                                  IAmb     IAmb     06 23 21.7
      comp=Z,17nm,1.5s
KURBB Kurchatov Arra      56.13  47  P        P        06 23 18.3 +0.2
      comp=Z,2.8nm,0.7s,baz=322,slow=7.3,SNR=9.0
      comp=Z,2.8nm,0.7s
PAHR  Pah Rah Range       56.40 292           P        06 23 21.8 +1.5
PAHR                                 IAmb     IAmb     06 23 22.4
      comp=Z,25nm,1.6s
RYN   Ryan                56.84 291  P        P        06 23 23.2 -0.3
TXAR  Lajitas Array       56.84 272  P        P        06 23 23.1 -0.4
      comp=Z,1.8nm,0.9s,baz=48,slow=8.0,SNR=4.9
      comp=Z,1.8nm,0.9s
TXAR  Lajitas Array       56.84 272  P        P        06 23 23.8 +0.3
NVAR  Mina Array Bea      56.89 290  P        P        06 23 24.5 +0.5
      comp=Z,0.5nm,0.7s,baz=26,slow=6.6,SNR=2.0
      comp=Z,0.5nm,0.7s
NVAR  Mina Array Bea      56.89 290  P        P        06 23 24.3 +0.3
MPK   Martis Peak         57.02 292  P        P        06 23 25.1 +0.2
MPK                                  IAmb     IAmb     06 23 33.8
      comp=Z,23nm,1.2s
GMN   Gold Mountain       57.28 289  P        P        06 23 26.9 +0.2
KKAR  Karatay Array       59.02  57           P        06 23 39.4 +0.8
MK31  Makanchi Array      60.70  47  P        P        06 23 50.3 +0.3
MK31                                 IAmb     IAmb     06 24 17.4
      comp=Z,24nm,1.8s
MKAR  Makanchi Array      60.70  47  P        P        06 23 49.8 -0.3
      comp=Z,2.0nm,0.5s,baz=343,slow=4.7,SNR=12
      comp=Z,2.0nm,0.5s
GAR   Garm                62.29  60           P        06 24 03.1 +2.1
KSH   Kashi               64.30  55  P        P        06 24 12.9 -1.5
KSH                                  pP       pP       06 24 17.3 -1.8
KSH                                  pmax     pmax
      comp=Z,10.0nm,1.1s
KSH                                  LR       LR
      comp=N,480nm,20.3s
KSH                                  LR       LR
      comp=E,290nm,15.1s
KSH                                  LR       LR
      comp=Z,820nm,19.9s
WMQ   Urumqi              65.22  45 eP        P        06 24 22.6 +2.4
WMQ                                  pmax     pmax
      comp=Z,15nm,0.9s
WMQ                                  LR       LR
      comp=Z,260nm,23.9s
SONM  Songino Array       67.40  30  P        P        06 24 34.4 +0.2
      comp=Z,1.6nm,1.1s,baz=332,slow=5.0,SNR=4.2
      comp=Z,1.6nm,1.1s
SONM  Songino Array       67.40  30  P        P        06 24 35.1 +0.9
SONM                                 IAmb     IAmb     06 24 38.8
      comp=Z,11nm,1.7s
GTA   Gaotai              73.25  38 eP        P        06 25 10.3 +0.2
GTA                                  pP       pP       06 25 13.8 -1.1
GTA                                  pmax     pmax
      comp=Z,7.0nm,1.4s
HHC   Hu-ho-hao-te        75.24  29 eP        P        06 25 19.8 -1.8
HHC                                  pmax     pmax
      comp=Z,8.0nm,0.6s
HHC                                  pmax     pmax
      comp=Z,100nm,4.9s
HHC                                  LR       LR
      comp=N,210nm,17.5s
HHC                                  LR       LR
      comp=E,150nm,17.5s
HHC                                  LR       LR
      comp=Z,260nm,17.8s
BDFB  Brasilia            76.17 198  P        P        06 25 26.1 -0.9
      comp=Z,2.7nm,0.7s,baz=36,slow=6.4,SNR=4.1
      comp=Z,2.7nm,0.7s
SIV   San Ignacio         79.21 210  P        P        06 25 44.2 +0.3
      comp=Z,2.7nm,0.9s,baz=33,slow=6.8,SNR=7.2
      comp=Z,2.7nm,0.9s
LPAZ  La Paz              81.47 217           P        06 25 57.8 +1.0
LPAZ                                 IAmb     IAmb     06 26 12.5
      comp=Z,15nm,1.6s
AQDB  Aquidauana          82.29 204           P        06 26 01.4 +1.1
AQDB                                 IAmb     IAmb     06 26 03.6
      comp=Z,12nm,1.1s
PB11  IPOC Station P      85.20 217  P        P        06 26 15.7 +0.3
NJ2   Nanjing             85.35  26 eP        P        06 26 14.9 -1.1
NJ2                                  pmax     pmax
      comp=Z,11nm,0.6s
PZH   PanZhiHua           85.73  42  P        P        06 26 18.3 +0.1
ASAR  Alice Springs      142.57  24  PKhKP    PKPpre   06 33 05.7
      comp=Z,0.4nm,0.6s,baz=333,slow=2.3,SNR=3.2
QSPA  South Pole Qui     149.33 180  PKP      PKPdf    06 33 22.8 +0.9
      comp=Z,1.2nm,0.4s,baz=202,slow=5.0,SNR=3.1
QSPA                                 PKPbc    PKPbc    06 33 26.3  0.0
      comp=Z,6.8nm,0.7s,baz=224,slow=1.9,SNR=6.4
```

IDC ***20*** *06:24:36.1±4.3, 59°.26N×30°.33W, h0^{km}, mb3.6/4, mbtmp3.7/5, ML3.8/1, MS3.2/2, Error ellipse: s-maj=101.9km s-min=32.7km az=180.0*

ISC 20 06:24:40.1±1.6**, 59°.5N**±0°.2×**30°.3W**±0°.1**, h16^{km}, n8,** σ**0s.74**/7**, mb3.8**/4**, Reykjanes Ridge**

```
Code  Station Name          Δ°   AZ°    Phase ID           Time      Res
                                        Op       ISC       h  m  s   ISC
BORG  Borgarnes            6.70  35  Pn       Pn       06 26 18.3 +0.6
      1.8nm,0.3s,baz=237,slow=3.6,SNR=7.7
BORG                                 Sn       Sn       06 27 32.9 -0.7
      0.3nm,0.3s,baz=319,slow=20,SNR=1.3
      49nm,1.1s
EKA   Eskdalemuir Ar      15.15  94  Pn       P        06 28 18.1 -0.2
      baz=294,slow=8.9
FRB   Frobisher Bay       18.44 300  LR       LR       06 35 07.8
      comp=Z,107nm,20.3s,baz=296,slow=34
NOA   NORSAR Array B      20.38  68  LR       LR       06 35 42.4
      comp=Z,50nm,18.7s,baz=220,slow=32
YKA   Yellowknife Ar      38.23 312  P        P        06 31 58.0 -0.8
      0.3nm,0.6s,baz=55,slow=8.2,SNR=4.3
      0.3nm,0.6s
ILAR  Eielson Array       47.18 328  P        P        06 33 12.0 +0.7
      0.6nm,0.9s,baz=46,slow=6.8,SNR=4.4
      0.6nm,0.9s
KURBB Kurchatov Arra      56.04  47  P        P        06 34 17.9 +0.3
      0.5nm,0.3s,baz=325,slow=6.7,SNR=4.8
      0.5nm,0.3s
MKAR  Makanchi Array      60.61  47  P        P        06 34 49.2 -0.4
      0.6nm,0.6s,baz=323,slow=7.8,SNR=3.9
      0.6nm,0.6s
```

FUNV ***20*** *06:46:38.8, 8°.23N×72°.13W, h4^{km}, MW2.4*

RSNC ***20*** *06:46:44.7±0.0, 8°N±4°×7°2W±°, h0^{km}±6^{km}, M1.9, ML1.7, MLv2.5*

ISC 20 06:46:32.9±1.3**, 8°.09N**±0°.06×**71°.66W**±0°.04**, h32^{km}**±17^{km}**, n8,** σ**1s.92**/16**, 1D, Venezuela**

```
Code  Station Name          Δ°   AZ°    Phase ID           Time      Res
                                        Op       ISC       h  m  s   ISC
CAPV  Capacho              0.68 251⇓iP        Pn       06 46 46.7 +0.2
CAPV                                eS        Sb       06 46 52.8 -3.0
PAMC  Pamplona, Colo       1.27 234  P        Pb       06 46 56.4 -0.2
PAMC                                 S        Sn       06 47 10.5 -0.5
OCAC  Ocana                1.65 275  P        Pb       06 47 05.9 +3.2
OCAC                                 S        Sb       06 47 25.2 +2.0
BRJC  Barrancabermej       2.34 242  P        Pb       06 47 16.9 +2.4
BRJC                                 S        Sb       06 47 43.0  0.0
RUSC  La Rusia             2.60 213  P        Pb       06 47 19.9 +0.8
RUSC                                 S        Sb       06 47 51.1 +0.3
PTBC  PUERTO BERRIO,       3.17 241  P        Pb       06 47 29.3 +0.7
PTBC                                 S        Sb       06 48 03.6 -3.2
SJCC  San Jacinto, C       3.91 298  P        Pb       06 47 39.9 -1.3
SJCC                                 S        Sb       06 48 26.9 -1.3
BENV  Beln                 4.43  65 eP        Pb       06 47 50.1 +0.1
BENV                                eS        Sb       06 48 43.3 +0.3
```

ASRS ***20*** *06:53:10.0±2.0, 50°.92N×81°.98E, h0^{km}, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 20 06:53:14.7±1.6**, 51°.24N×81°.72E, h0^{km}, mbtmp2.2**/3**,** **ML1.7**/3**, Error ellipse: s-maj=16.9km s-min=14.8km az=30.0, Southwestern Siberia**

```
Code  Station Name          Δ°   AZ°    Phase ID           Time      Res
                                        Op       ISC       h  m  s   ISC
KURBB Kurchatov Arra       2.11 254  Pn       Pn       06 53 50.6 -0.6
      0.1nm,0.3s,baz=71,slow=18,SNR=8.9
KURBB                                Lg       Lg       06 54 22.6
      0.2nm,0.3s,baz=72,slow=32,SNR=7.6
      0.6nm,0.4s
ZALV  Zalesovo Beam        3.30  34  Pn       Pn       06 54 08.2 +0.5
      0.3nm,0.3s,baz=218,slow=19,SNR=4.2
ZALV                                 Sn       Sn       06 54 49.6 +2.0
      0.4nm,0.3s,baz=218,slow=24,SNR=5.3
      0.9nm,0.5s
I46RU ZALESOVO INFRA       3.31  34  I        I        07 11 00.0
      baz=210,slow=318,SNR=24
MKAR  Makanchi Array       4.47 175  Pn       Pn       06 54 24.7 +1.0
      0.1nm,0.3s,baz=2.5,slow=10,SNR=8.3
MKAR                                 Lg       Lg       06 55 37.3
      0.3nm,0.3s,baz=346,slow=31,SNR=4.2
      0.6nm,0.8s
```

IDC ***20*** *06:58:14.9±0.6, 59°.38N×30°.38W, h0^{km}, mb4.0/20, mbtmp4.0/22, ML4.1/2, MS4.2/81, Error ellipse: s-maj=18.6km s-min=12.3km az=2.0*

GFZ ***20*** *06:58:16.7, 59°.45N×30°.10W, h10^{km}, MW5.0, Moment Tensor Solution. s111 Moment tensor: M_{rr}-3.36; $M_{\theta\theta}$0.96; $M_{\phi\phi}$2.40; $M_{r\theta}$-0.74; $M_{\theta\phi}$0.66; $M_{\phi r}$-2.39; Fault plane solution: NP1:ϕ_s202.00000°,δ25.00000°, λ-86.00000°. NP2:ϕ_s19.00000°,δ65.00000°,λ-90.00000°. Principal axes: T 3.5600, Plg20.0000°, Azm110.0000°; N 0.7100, Plg1.0000°, Azm19.0000°; P -4.2700, Plg70.0000°, Azm286.0000°;*

GCMT ***20*** *06:58:17.9±0.1, 59°.53N±0°.02×30°.19W±0°.02, h12^{km}, MW5.0/133, Moment Tensor Solution. s46,c53; s133,c197; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.98±.07; $M_{\theta\theta}$0.73±.09; $M_{\phi\phi}$3.25±.06; $M_{r\theta}$0.23±.27; $M_{\theta\phi}$0.94±.06; $M_{\phi r}$-0.38±.24; Best double couple: $M_0$3.79600×10^{16} NP1:ϕ_s203.00000°,δ43.00000°, λ-84.00000°. NP2:ϕ_s14.00000°,δ47.00000°,λ-96.00000°. Principal axes: T 3.5750, Plg2.0000°, Azm108.0000°; N 0.4430, Plg4.0000°, Azm18.0000°; P -4.0180, Plg85.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***20*** *06:58:17.9±1.1, 59°.60N±0°.10×30°.4W±0°.1, h10^{km}±1^{km}, mb4.5/36 Error ellipse: s-maj=16.8km s-min=11.0km az=191.0*

DNK ***20*** *06:58:19.4±4.2, 59°.59N×31°.01W, h17^{km}±85^{km}, ML4.0, Presumed earthquake*

ISC 20 06:58:17.6±0.4**, 59°.47N**±0°.07×**30°.37W**±0°.05**, h16^{km}, n172,** σ**1s.53**/116**, mb4.4**/51**, MS4.2**/81**, 1C-4D, Reykjanes Ridge**

```
Code  Station Name          Δ°   AZ°    Phase ID           Time      Res
                                        Op       ISC       h  m  s   ISC
BORG  Borgarnes            6.78  35  Pn       Pn       06 59 57.9 +1.6
      18nm,0.3s,baz=243,slow=4.9,SNR=80
BORG                                 Sn       Sn       07 01 11.7 -1.4
      5.8nm,0.3s,baz=255,slow=24,SNR=10
BORG                                 LR       LR       07 01 52.4
      comp=Z,3μm,19.1s,baz=241,slow=32
      37nm,0.3s
```

BORG	**Borgarnes**	**6.78**	**35**		**Pn**	**06 59 56.0**	**-0.4**
BORG	**Borgarnes**	**6.78**	**35**	*e*P	**Pn**	**06 59 57.8**	**+1.5**
BORG				*e*S	**Sn**	**07 01 12.2**	**-0.9**
ANGG	**Ammassalik, Gr**	**7.02**	**335**	Pn	**Pn**	**06 59 57.1**	**-2.5**
ANGG	**Ammassalik, Gr**	**7.02**	**335**	*e*P	**Pn**	**06 59 56.9**	**-2.7**
ANGG				*e*S	Sn	07 01 08.4	-11
ANGG				IAML		07 01 17.3	
	comp=Z,78nm,2.4s						
NRS	**Narsarsuaq**	**7.66**	**289**	Pn	**Pn**	**07 00 07.8**	**-0.6**
NRS	**Narsarsuaq**	**7.66**	**289**	*e*P	**Pn**	**07 00 04.8**	**-3.7**
SCO	**Scoresbysund**	**11.60**	**14**	Pn	**Pn**	**07 00 59.2**	**-3.0**
SCO	**Scoresbysund**	**11.60**	**14**	*e*P	**Pn**	**07 00 59.4**	**-2.9**
SFJD	**Kangerlussuaq**	**11.79**	**318**	Pn	**Pn**	**07 01 07.4**	**+2.6**
	comp=Z,0.5nm,0.3s,baz=130,slow=14,SNR=4.6						
SFJD				LR	LR	07 04 49.2	
	comp=Z,4µm,21.7s,baz=124,slow=33						
SUMG	**Summit**	**13.55**	**350**		**Pn**	**07 01 28.7**	**-0.5**
SUMG	**Summit**	**13.55**	**350**	*i* P	**Pn**	**07 01 28.0**	**-1.2**
ESK	**Eskdalemuir**	**15.16**	**94**	Pn	**Pn**	**07 01 51.1**	**+0.2**
ESK				IAmb	IAmb	07 02 14.0	
	comp=Z,43nm,1.4s						
EKA	**Eskdalemuir Ar**	**15.18**	**94**	Pn	**Pn**	**07 01 52.0**	**+0.9**
	baz=287,slow=10.0						
EKA				LR	LR	07 06 40.8	
	comp=Z,2µm,19.0s,baz=282,slow=33						
	comp=Z,6.5nm,0.8s						
DAG	**Danmarks Havn**	**17.85**	**9**	*i* P	**P**	**07 02 25.0**	**-0.5**
FRB	**Frobisher Bay**	**18.45**	**300**	LR	LR	07 08 46.6	
	comp=Z,2µm,19.1s,baz=92,slow=34						
SCHQ	**Schefferville**	**20.14**	**273**	LR	LR	07 09 14.2	
	comp=Z,977nm,19.8s,baz=80,slow=33						
SCHQ	**Schefferville**	**20.14**	**273**	P	**P**	**07 02 50.5**	**-0.2**
NOA	**NORSAR Array B**	**20.45**	**68**	P	**P**	**07 02 52.6**	**-1.4**
	comp=Z,0.9nm,0.9s,baz=283,slow=10,SNR=4.3						
NOA				LR	LR	07 09 42.7	
	comp=Z,852nm,21.3s,baz=285,slow=34						
	comp=Z,0.9nm,0.9s						
UCC	**Uccle**	**21.44**	**98**	P	**P**	**07 03 04.0**	**-0.7**
UCC				IAmb	IAmb	07 03 07.7	
	comp=Z,18nm,1.0s						
TULEG	**Thule**	**21.63**	**337**	P	**P**	**07 03 05.3**	**-1.3**
HFS	**Hagfors**	**21.87**	**69**	P	**P**	**07 03 12.0**	**+2.7**
	comp=Z,4.8nm,0.8s,baz=301,slow=11,SNR=4.8						
HFS				LR	LR	07 10 35.5	
	comp=Z,902nm,20.4s,baz=280,slow=34						
BMRD	**Maredsous**	**21.95**	**99**	*d*P	**P**	**07 03 09.4**	**-0.8**
	comp=Z,24nm,1.1s						
BGES	**Gesves**	**22.06**	**99**	*d*P	**P**	**07 03 13.3**	**+1.9**
	comp=Z,24nm,1.1s						
BTNL	**Ternell**	**22.46**	**97**	*d*P	**P**	**07 03 15.4**	**-0.4**
BHOU	**Houvegnez**	**22.54**	**98**	*d*P	**P**	**07 03 16.5**	**-0.1**
	comp=Z,9.5nm,1.3s						
POIN	**Pond Inlet**	**22.56**	**325**		**P**	**07 03 16.4**	**-0.1**
POIN				IAmb	IAmb	07 03 47.5	
	comp=Z,36nm,1.4s						
NOR	**Nord**	**22.57**	**5**	*e*P	**P**	**07 03 22.0**	**+5.4**
WLF	**Walferdange**	**23.05**	**99**	P	**P**	**07 03 21.7**	**-0.2**
WLF				IAmb	IAmb	07 03 26.1	
	comp=Z,32nm,1.3s						
ILON	**Igloolik, Nuna**	**23.54**	**316**		**P**	**07 03 25.9**	**-0.7**
ARCES	**ARCESS Array B**	**25.09**	**43**	P	**P**	**07 03 42.0**	**+1.1**
	comp=Z,3.9nm,0.9s,baz=273,slow=8.1,SNR=11						
ARCES				LR	LR	07 11 34.6	
	comp=Z,551nm,20.1s,baz=270,slow=32						
	comp=Z,3.9nm,0.9s						
CLL	**Collm**	**25.54**	**89**	P	**P**	**07 03 45.4**	**+0.2**
	comp=Z,6.4nm,1.3s						
CLL	**Collm**	**25.54**	**89**	*e*P	**P**	**07 03 46.0**	**+0.8**
CLL				AMS	AMS	07 13 00.0	
	comp=Z,800nm,20.5s						
ESDC	**Sonseca Array**	**25.88**	**128**	P	**P**	**07 03 48.6**	**+0.1**
	comp=Z,4.2nm,0.9s,baz=322,slow=10,SNR=9.1						
ESDC				LR	LR	07 12 16.0	
	comp=Z,240nm,21.0s,baz=344,slow=33						
	comp=Z,4.2nm,0.9s						
ESDC	**Sonseca Array**	**25.88**	**128**		**P**	**07 03 48.9**	**+0.4**
DAVOX	**Davos/Dischmat**	**26.82**	**100**	LR	LR	07 13 58.7	
	comp=Z,570nm,21.5s,baz=262,slow=35						
FINES	**FINESS Array B**	**27.17**	**61**	P	**P**	**07 03 59.6**	**-0.2**
	comp=Z,5.0nm,0.8s,baz=288,slow=7.8,SNR=8.7						
FINES				LR	LR	07 14 00.1	
	comp=Z,468nm,18.5s,baz=274,slow=35						
	comp=Z,5.0nm,0.8s						
FIA1	**FINESS Array S**	**27.17**	**61**	P	**P**	**07 03 59.8**	**0.0**
GERES	**GERESS Array B**	**27.39**	**93**	LR	LR	07 14 23.5	
	comp=Z,1µm,20.1s,baz=282,slow=35						
RES	**Resolute Bay**	**27.47**	**329**	LR	LR	07 14 29.2	
	comp=Z,548nm,18.1s,baz=84,slow=35						
RES	**Resolute Bay**	**27.47**	**329**		**P**	**07 04 02.5**	**+0.1**
RES				IAmb	IAmb	07 04 11.6	
	comp=Z,12nm,1.3s						
KSP	**Ksiaz**	**27.49**	**87**	P	**P**	**07 04 02.7**	**-0.1**
	comp=Z,14nm,1.7s						
DPC	**Dobruska-Polom**	**27.80**	**88**	P	**P**	**07 04 05.5**	**-0.2**
	comp=Z,14nm,1.7s						
VRAC	**Vranov**	**28.58**	**90**	LR	LR	07 16 19.5	
	comp=Z,736nm,18.6s,baz=305,slow=38						
OJC	**Ojcow**	**29.65**	**86**	P	**P**	**07 04 21.9**	**-0.2**
	comp=Z,7.1nm,1.8s						
STHS	**Stebnicka Huta**	**30.88**	**86**	*e*P	**P**	**07 04 33.5**	**+0.5**
MNK	**Minsk**	**31.23**	**73**	*i* P	**P**	**07 04 32.4**	**-3.5**
	comp=E,40nm,0.9s						
MNK				*i* P	**P**	**07 04 32.4**	**-3.5**
	comp=N,8.0nm,0.6s						
MNK				*i* P	**P**	**07 04 32.4**	**-3.5**
	comp=Z,9.0nm,0.7s,baz=303						
MNK				*i* PP	**PnPn**	**07 05 32.2**	**-5.5**
MNK				*i* PPP	PPP	07 05 42.0	
MNK				*i* S	**S**	**07 09 38.7**	**-2.5**
MNK				*i* SS	**SnSn**	**07 11 21.4**	**-2.1**
MNK				*i* SSS	SSS	07 11 35.4	
MNK				*i* LQ	LQ	07 14 21.5	
MNK				*i* LRM	MLR	07 16 48.4	
	comp=E,463nm,25.3s						
MNK				*i* LRM	MLR	07 16 49.1	
	comp=Z,723nm,18.3s						
MNK				*i* LRM	MLR	07 17 20.7	
	comp=N,554nm,16.0s						
MORH	**Mrgy, Hungar**	**31.65**	**93**	P	**P**	**07 04 39.3**	**-0.4**
	comp=N,11nm,1.9s						
MDT	**Midelt**	**31.68**	**136**	LR	LR	07 16 25.4	
	comp=N,474nm,19.3s,baz=338,slow=34						
MUKU	**Mukachevo**	**32.23**	**86**	P	**P**	**07 04 44.9**	**+0.1**
BRIU	**Brid**	**32.48**	**86**	P	**P**	**07 04 46.9**	**0.0**
SADO	**Sadowa**	**32.52**	**265**	LR	LR	07 16 34.3	
	comp=N,2µm,19.1s,baz=66,slow=34						
STNU	**Starunia**	**32.99**	**84**	P	**P**	**07 04 51.2**	**-0.2**
LUBAR	**Lubar, Ukraine**	**33.87**	**80**	P	**P**	**07 04 58.6**	**-0.5**
AK21	**Malin Array Si**	**33.98**	**78**	P	**P**	**07 05 00.0**	**0.0**
AK17	**Malin Array Si**	**34.04**	**78**	P	**P**	**07 04 59.7**	**-0.8**
BURAR	**Bucovina Array**	**34.06**	**85**		**P**	**07 05 01.4**	**+0.4**
AK16	**Malin Array Si**	**34.07**	**78**	P	**P**	**07 05 00.0**	**-0.8**
KIEV	**Kiev**	**34.11**	**78**	P	**P**	**07 05 00.8**	**-0.3**
AKASG	**Malin Array Be**	**34.11**	**78**	P	**P**	**07 04 59.9**	**-1.3**
	comp=N,2.2nm,0.8s,baz=301,slow=8.7,SNR=6.8						
AKASG				LR	LR	07 19 02.7	
	comp=N,301nm,18.0s,baz=290,slow=37						
	comp=N,2.2nm,0.8s						
AKBB	**Malin Array Si**	**34.11**	**78**	P	**P**	**07 05 00.6**	**-0.6**
AK02	**Malin Array Si**	**34.13**	**78**	P	**P**	**07 05 00.6**	**-0.7**
KEST	**Kesra**	**34.97**	**115**	P	**P**	**07 05 07.6**	**-1.2**
	comp=N,3.7nm,0.8s,baz=292,slow=11,SNR=2.6						
KEST				LR	LR	07 17 50.4	
	comp=N,963nm,21.4s,baz=303,slow=34						
	comp=N,3.7nm,0.8s						
OBN	**Obninsk**	**35.05**	**67**	LR	LR	07 18 26.0	
	comp=N,696nm,21.8s,baz=234,slow=34						
MLR	**Muntele Rosu**	**35.87**	**87**	LR	LR	07 20 07.3	
	comp=N,428nm,20.0s,baz=318,slow=37						
VAE	**Valguarnera**	**35.97**	**107**	LR	LR	07 19 33.6	
	comp=N,629nm,19.3s,baz=7.5,slow=36						
A36M	**Sachs Harbour**	**36.52**	**329**	P	**P**	**07 05 22.1**	**+0.5**
A36M				IAmb	IAmb	07 05 33.3	
	comp=Z,8.2nm,1.0s						
ULM	**Lac du Bonnet**	**37.33**	**286**	P	**P**	**07 05 28.1**	**-0.7**
	comp=Z,1.6nm,0.6s,baz=49,slow=9.1,SNR=2.9						
ULM				LR	LR	07 19 38.8	
	comp=Z,901nm,18.9s,baz=20,slow=34						
	comp=Z,1.6nm,0.6s						
YKAW1	**Yellowknife Wh**	**38.21**	**312**	P	**P**	**07 05 36.4**	**+0.4**
YKAW1				IAmb	IAmb	07 05 38.4	
	comp=Z,13nm,1.3s						
YKAW3	**Yellowknife Wh**	**38.21**	**312**		**P**	**07 05 36.2**	**+0.1**
YKAW3				IAmb	IAmb	07 05 38.5	
	comp=Z,9.3nm,1.2s						
YKA	**Yellowknife Ar**	**38.25**	**312**	P	**P**	**07 05 36.5**	**+0.1**
	comp=Z,2.9nm,1.1s,baz=51,slow=7.7,SNR=19						
YKA				LR	LR	07 20 27.5	
	comp=Z,847nm,19.1s,baz=66,slow=35						
	comp=Z,2.9nm,1.1s						
KIRV	**Kirov**	**38.75**	**55**	LR	LR	07 22 10.0	
	comp=Z,272nm,18.0s,baz=311,slow=37						
INK	**Inuvik**	**40.98**	**326**	LR	LR	07 22 02.2	
	comp=Z,347nm,19.9s,baz=78,slow=35						
INK	**Inuvik**	**40.98**	**326**	P	**P**	**07 05 58.8**	**-0.2**
F31M	**Tsiigehtchic**	**41.61**	**326**	P	**P**	**07 06 04.6**	**+0.4**
F31M				IAmb	IAmb	07 06 10.5	
	comp=Z,20nm,1.4s						
TKL	**Tuckaleechee C**	**41.68**	**260**	LR	LR	07 22 00.1	
	comp=Z,860nm,18.9s,baz=38,slow=34						
BELG	**Belogornoye**	**41.88**	**64**	LR	LR	07 22 17.2	
	comp=Z,318nm,19.6s,baz=306,slow=34						
F30M	**Barrier River**	**42.08**	**327**		**P**	**07 06 08.6**	**+0.5**
G31M	**Satah River**	**42.11**	**325**		**P**	**07 06 08.2**	**-0.1**
G31M				IAmb	IAmb	07 06 08.6	
	comp=Z,18nm,1.4s						
H31M	**Peel River**	**42.90**	**324**	P	**P**	**07 06 15.4**	**+0.6**
H31M				IAmb	IAmb	07 06 18.4	
	comp=Z,14nm,1.5s						
IDI	**Anoyia**	**42.90**	**99**	LR	LR	07 25 42.6	
	comp=Z,256nm,18.8s,baz=302,slow=38						
E27K	**Coleen River**	**43.24**	**329**	P	**P**	**07 06 17.9**	**+0.3**
E27K				IAmb	IAmb	07 06 18.4	
	comp=Z,11nm,1.2s						
D25K	**Kavik River**	**43.59**	**332**		**P**	**07 06 21.0**	**+0.6**
ARTI	**Arti**	**43.88**	**53**	LR	LR	07 23 18.5	
	comp=Z,533nm,20.7s,baz=314,slow=34						
BRTR	**Keskin Array B**	**43.95**	**87**	P	**P**	**07 06 24.2**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=328,slow=4.4,SNR=3.9						
BRTR				LR	LR	07 25 09.3	
	comp=Z,459nm,21.7s,baz=307,slow=37						
	comp=Z,0.5nm,0.6s						
BRTR	**Keskin Array B**	**43.95**	**87**		**P**	**07 06 24.8**	**+1.0**
NRIK	**Noril'sk**	**44.03**	**27**	LR	LR	07 26 12.9	
	comp=Z,122nm,18.9s,baz=337,slow=38						
TAM	**Tamanrasset**	**44.53**	**130**		**P**	**07 06 29.8**	**+1.3**
BMAR	**Burnt Mountain**	**44.57**	**330**	P	**P**	**07 06 28.5**	**+0.2**
KBZ	**Khabaz**	**45.66**	**76**	P	**P**	**07 06 36.6**	**-0.5**
	comp=Z,2.2nm,0.9s,baz=352,slow=7.1,SNR=3.6						
KBZ				LR	LR	07 26 23.1	
	comp=Z,388nm,18.4s,baz=322,slow=37						
	comp=Z,2.2nm,0.9s						
ILAR	**Eielson Array**	**47.22**	**329**	P	**P**	**07 06 49.5**	**+0.4**
	comp=Z,2.2nm,1.1s,baz=33,slow=5.6,SNR=14						
ILAR				LR	LR	07 29 12.5	
	comp=Z,218nm,18.3s,baz=30,slow=39						
	comp=Z,2.2nm,1.1s						
E19K	**Redstone River**	**47.53**	**335**	P	**P**	**07 06 51.8**	**+0.3**
E19K				IAmb	IAmb	07 06 52.7	
	comp=Z,6.1nm,0.9s						
F20K	**Avaraart Lake**	**47.54**	**334**	P	**P**	**07 06 52.2**	**+0.7**
AKTO	**Aktyubinsk**	**47.91**	**59**	LR	LR	07 27 02.2	
	comp=Z,298nm,18.6s,baz=292,slow=36						
IMAR	**Indian Mountai**	**47.97**	**333**	P	**P**	**07 06 55.7**	**+0.8**
TIXI	**Tiksi**	**48.37**	**9**	LR	LR	07 25 50.5	
	comp=Z,88nm,20.2s,baz=18,slow=34						
TIXI	**Tiksi**	**48.37**	**9**		**P**	**07 06 57.9**	**0.0**
SJG	**San Juan**	**48.73**	**228**	LR	LR	07 23 40.4	
	comp=Z,76nm,21.6s,baz=24,slow=31						
PDAR	**Pinedale Array**	**49.29**	**287**	P	**P**	**07 07 05.1**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=67,slow=7.3,SNR=7.0						
PDAR				LR	LR	07 26 54.2	
	comp=Z,670nm,18.7s,baz=12,slow=35						
	comp=Z,0.5nm,0.5s						
AB31	**Akbulak array**	**49.63**	**59**		**P**	**07 07 08.8**	**+1.0**
ABKAR	**Akbulak array**	**49.63**	**59**		**P**	**07 07 08.6**	**+0.7**
WMOK	**Wichita Mounta**	**50.03**	**272**		**P**	**07 07 11.4**	**+0.4**
WMOK				IAmb	IAmb	07 07 11.6	
	comp=Z,6.7nm,1.1s						
MMAI	**Mount Meron Ar**	**50.03**	**91**	LR	LR	07 30 45.0	
	comp=Z,110nm,19.5s,baz=303,slow=39						
BBB	**Bella Bella**	**50.57**	**308**	LR	LR	07 28 11.6	
	comp=Z,427nm,19.4s,baz=39,slow=36						
PLID	**Pearl Lake**	**50.62**	**294**		**P**	**07 07 16.5**	**+0.8**
PLID				IAmb	IAmb	07 07 23.9	
	comp=Z,8.3nm,1.4s						
BVAR	**Borovoye Array**	**51.12**	**50**	P	**P**	**07 07 19.6**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=305,slow=5.2,SNR=7.8						
BVAR				LR	LR	07 28 37.4	
	comp=Z,171nm,18.4s,baz=316,slow=36						
	comp=Z,1.3nm,0.6s						
S22A	**4UR Ranch, Cre**	**51.77**	**281**		**P**	**07 07 25.3**	**+0.8**
S22A				IAmb	IAmb	07 07 26.9	
	comp=Z,10nm,1.5s						
TORD	**Torodi Ar. Bea**	**51.99**	**139**	P	**P**	**07 07 24.5**	**-1.4**
	comp=Z,1.5nm,0.7s,baz=332,slow=9.5,SNR=2.7						
	comp=Z,1.5nm,0.7s						
MPU	**Maple Canyon**	**52.39**	**287**	P	**P**	**07 07 29.2**	**+0.2**
MPU				IAmb	IAmb	07 07 30.6	
	comp=Z,6.7nm,1.2s						
EIL	**Elat**	**52.48**	**94**	LR	LR	07 31 26.1	
	comp=Z,91nm,20.0s,baz=62,slow=38						
ELK	**Elko**	**53.58**	**290**	LR	LR	07 29 45.5	
	comp=Z,526nm,18.2s,baz=58,slow=35						
ANMO	**Albuquerque**	**53.76**	**279**	LR	LR	07 29 07.4	
	comp=Z,492nm,20.8s,baz=39,slow=34						
SPR3	**Spring Creek 3**	**54.50**	**288**		**P**	**07 07 45.8**	**+1.2**
KDAK	**Kodiak Island**	**54.53**	**326**	LR	LR	07 29 50.3	
	comp=Z,260nm,18.1s,baz=29,slow=35						
SAND	**Sanderson**	**55.54**	**271**		**P**	**07 07 52.1**	**+0.2**
ZALV	**Zalesovo Beam**	**55.59**	**40**	P	**P**	**07 07 51.9**	**0.0**
	comp=Z,0.7nm,0.6s,baz=313,slow=5.5,SNR=5.4						
ZALV				LR	LR	07 31 52.9	
	comp=Z,114nm,19.8s,baz=332,slow=36						
	comp=Z,0.7nm,0.6s						
KURK	**Kurchatov**	**56.07**	**46**		**P**	**07 07 55.9**	**+0.5**
KURK				IAmb	IAmb	07 07 57.1	
	comp=Z,3.4nm,0.8s						
KURBB	**Kurchatov Arra**	**56.12**	**47**	P	**P**	**07 07 55.9**	**+0.2**
	comp=Z,2.4nm,0.7s,baz=323,slow=7.1,SNR=20						
KURBB				LR	LR	07 31 45.8	
	comp=Z,196nm,18.3s,baz=158,slow=36						
	comp=Z,2.4nm,0.7s						
DBIC	**Dimbokro**	**56.16**	**149**	LR	LR	07 29 30.7	
	comp=Z,413nm,19.5s,baz=14,slow=33						
YBH	**Yreka Blue Hor**	**56.32**	**296**	LR	LR	07 31 37.7	
	comp=Z,94nm,18.5s,baz=39,slow=36						
TXAR	**Lajitas Array**	**56.83**	**272**	P	**P**	**07 08 00.2**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=55,slow=6.5,SNR=8.6						
TXAR				LR	LR	07 31 45.7	
	comp=Z,389nm,19.6s,baz=41,slow=35						
	comp=Z,0.7nm,0.7s						
NVAR	**Mina Array Bea**	**56.86**	**290**	P	**P**	**07 08 02.5**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=22,slow=9.4,SNR=2.1						
NVAR				LR	LR	07 31 59.6	
	comp=Z,493nm,18.4s,baz=41,slow=36						
	comp=Z,0.2nm,0.5s						
MDP	**Montagnes des**	**56.87**	**207**	LR	LR	07 25 59.9	
	comp=Z,137nm,21.9s,baz=325,slow=29						
YAK	**Yakutsk**	**57.86**	**11**	LR	LR	07 32 11.9	
	comp=Z,99nm,19.7s,baz=304,slow=35						
SEY	**Seymchan**	**57.91**	**359**	LR	LR	07 33 48.2	
	comp=Z,157nm,19.0s,baz=346,slow=37						
SDV	**Santo Domingo**	**58.87**	**228**	LR	LR	07 31 17.2	
	comp=Z,44nm,21.8s,baz=34,slow=34						
KKAR	**Karatay Array**	**59.01**	**57**	P	**P**	**07 08 17.2**	**+1.0**
PFO	**Pinyon Flats O**	**59.81**	**286**	LR	LR	07 34 04.7	
	comp=Z,527nm,19.1s,baz=44,slow=36						
MKAR	**Makanchi Array**	**60.68**	**47**	P	**P**	**07 08 27.8**	**+0.1**
	comp=Z,1.6nm,0.5s,baz=347,slow=4.6,SNR=14						
MKAR				LR	LR	07 34 20.6	
	comp=Z,116nm,21.1s,baz=318,slow=36						
	comp=Z,1.6nm,0.5s						
MKAR	**Makanchi Array**	**60.68**	**47**		**P**	**07 08 28.1**	**+0.4**
AAK	**Ala-Archa**	**61.08**	**55**	LR	LR	07 33 53.7	
	comp=Z,274nm,21.7s,baz=240,slow=35						
MA2	**Magadan**	**61.29**	**359**	LR	LR	07 35 48.4	
	comp=Z,103nm,19.7s,baz=13,slow=37						
GAR	**Garm**	**62.28**	**60**		**P**	**07 08 40.6**	**+1.9**
CMIG	**Matias Romero**	**62.53**	**257**	LR	LR	07 35 23.4	
	comp=Z,225nm,21.9s,baz=12,slow=36						
JTS	**Las Juntas de**	**63.66**	**244**	LR	LR	07 33 24.7	
	comp=Z,190nm,21.0s,baz=30,slow=33						
ROSC	**El Rosal**	**64.00**	**230**	LR	LR	07 37 32.1	
	comp=Z,62nm,18.3s,baz=36,slow=37						
KSH	**Kashi**	**64.29**	**55**	P	**P**	**07 08 56.6**	**+4.6**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KSH				LR	LR		
	comp=N,370nm,19.2s						
KSH				LR	LR		
	comp=E,210nm,16.5s						
KSH				LR	LR		
	comp=Z,480nm,21.3s						
LPIG	**La Paz**	**64.49**	**274**	LR	LR	07 35 30.1	
	comp=Z,166nm,18.7s,baz=16,slow=35						
WMQ	**Urumqi**	**65.20**	**45**	*e*P	**P**	**07 09 01.1**	**+3.3**
WMQ				LR	LR		
	comp=Z,200nm,20.5s						
SHEM	**Shemya Is, Ala**	**66.43**	**344**	LR	LR	07 38 09.3	
	comp=Z,90nm,21.2s,baz=308,slow=36						
SONM	**Songino Array**	**67.37**	**30**	LR	LR	07 40 51.6	
	comp=Z,184nm,18.9s,baz=340,slow=38						
PETK	**Petropavlovsk-**	**67.59**	**355**	LR	LR	07 39 17.3	
	comp=Z,130nm,20.5s,baz=17,slow=36						
HEH	**HeiHe**	**69.15**	**15**	*e*P	**P**	**07 09 23.1**	**+0.5**
HEH				pmax	pmax		
	comp=Z,9.0nm,1.4s						
FURI	**Furi**	**71.79**	**104**	LR	LR	07 41 33.5	
	comp=Z,108nm,21.9s,baz=354,slow=36						
GTA	**Gaotai**	**73.23**	**38**	*e*P	**P**	**07 09 47.8**	**+0.1**
GTA				pP	pP	07 09 50.9	-1.6
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BNX	**BinXian**	**73.57**	**16**	⇑P	**P**	**07 09 52.3**	**+2.9**
BNX				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**75.21**	**29**	*e*P	**P**	**07 09 57.3**	**-1.9**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,4.4s						
BDFB	**Brasilia**	**76.21**	**198**	P	**P**	**07 10 04.9**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=360,slow=9.8,SNR=3.6						
BDFB				LR	LR	07 39 15.2	
	comp=Z,111nm,19.0s,baz=359,slow=32						
	comp=Z,1.2nm,0.5s						
MBAR	**Mbarara**	**76.25**	**116**	LR	LR	07 42 42.3	
	comp=Z,182nm,21.6s,baz=329,slow=35						
ATAH	**Atahualpa**	**76.54**	**229**	LR	LR	07 41 51.2	
	comp=Z,80nm,21.9s,baz=1.6,slow=34						
ASAJ	**Asahikawa**	**76.61**	**5**	LR	LR	07 44 22.9	
	comp=Z,50nm,18.3s,baz=68,slow=36						
SIV	**San Ignacio**	**79.23**	**210**	LR	LR	07 40 46.1	
	comp=Z,155nm,20.1s,baz=100,slow=32						
NNA	**Nana**	**80.41**	**226**	LR	LR	07 43 10.9	
	comp=Z,42nm,21.9s,baz=360,slow=34						
LPAZ	**La Paz**	**81.49**	**216**	LR	LR	07 45 06.8	
	comp=Z,74nm,19.6s,baz=22,slow=34						
KSRS	**Korea Array**	**81.77**	**17**	LR	LR	07 49 34.2	
	comp=Z,30nm,18.1s,baz=10.0,slow=38						
AQDB	**Aquidauana**	**82.32**	**204**	P	**P**	**07 10 39.7**	**+1.6**
NJ2	**Nanjing**	**85.32**	**26**	*e*P	**P**	**07 10 53.0**	**-0.6**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
PZH	**PanZhiHua**	**85.71**	**42**	P	**P**	**07 10 55.5**	**-0.3**
TSUM	**Tsumeb**	**87.59**	**135**	LR	LR	07 51 29.1	
	comp=Z,128nm,19.1s,baz=330,slow=36						
LSZ	**Lusaka**	**88.17**	**125**	LR	LR	07 53 54.9	
	comp=Z,315nm,18.3s,baz=332,slow=38						
MATP	**Matopo**	**92.91**	**127**	LR	LR	07 56 26.2	
	comp=Z,214nm,19.2s,baz=344,slow=38						
PALK	**Pallekele**	**94.24**	**68**	LR	LR	07 58 35.9	
	comp=Z,84nm,19.1s,baz=344,slow=38						
LBTB	**Lobatse**	**95.87**	**131**	LR	LR	07 53 44.1	
	comp=Z,155nm,21.1s,baz=348,slow=35						
BOSA	**Boshof**	**98.99**	**133**	LR	LR	07 58 35.4	
	comp=Z,101nm,18.1s,baz=6.0,slow=37						
OPO	**Ambohidratompo**	**99.66**	**110**	LR	LR	08 00 27.0	
	comp=Z,53nm,18.2s,baz=176,slow=38						
TAOE	**Nuku Hiva Isla**	**107.59**	**283**	*e*LR	LR	07 48 00.7	
	comp=Z,227nm,28.9s						
PPT2	**Papeete2**	**119.73**	**287**	*e*LR	LR	07 53 40.0	
	comp=Z,192nm,36.5s						
PPT2				*e*LR	LR	07 53 41.8	
	comp=Z,187nm,21.8s						
TBI	**Tubuai**	**124.54**	**283**	*e*LR	LR	07 55 53.4	
	comp=Z,762nm,26.5s						
WRA	**Warramunga Arr**	**139.01**	**22**	PKP	**PKPdf**	**07 17 42.3**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=335,slow=2.2,SNR=1.8						
DZM	**Mont Dzumac**	**140.77**	**335**	*e*LR	LR	08 03 19.5	
	comp=Z,160nm,24.6s						
ASAR	**Alice Springs**	**142.54**	**24**	PKhKP	PKPpre	07 17 43.0	
	comp=Z,0.2nm,0.5s,baz=7.6,slow=2.8,SNR=3.1						
QSPA	**South Pole Qui**	**149.37**	**180**	PKPbc	**PKPbc**	**07 18 03.9**	**-0.2**
	comp=Z,5.6nm,0.9s,baz=238,slow=2.8,SNR=6.5						

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*IDC **20** 07:03:34.4±0.9, 59°.38N×30°.18W, h0km, mb3.9/12, mbtmp3.9/13, ML4.1/1, Error ellipse: s-maj=26.4km s-min=16.2km az=177.0*

*NEIC **20** 07:03:35.7±1.4, 59°.37N±0°.09×30°.3W±0°.2, h10km±1km, mb4.4/15, Error ellipse: s-maj=15.9km s-min=13.0km az=15.0*

ISC 20 07:03:36.3±0.7**, 59°.39N**±0°.10×**30°.20W**±0°.07**, h14km, n34, σ0s.79**/35**, mb4.2**/18**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**6.80**	**34**	Pn	**Pn**	**07 05 16.9**	**+1.5**
	3.8nm,0.3s,baz=209,slow=4.8,SNR=14						
BORG				Sn	**Sn**	**07 06 31.8**	**-0.7**
	1.8nm,0.3s,baz=90,slow=24,SNR=9.0						
	46nm,0.9s						
BORG	**Borgarnes**	**6.80**	**34**		**Pn**	**07 05 16.2**	**+0.7**
NRS	**Narsarsuaq**	**7.77**	**290**	Pn	**Pn**	**07 05 27.3**	**-1.5**
SCO	**Scoresbysund**	**11.66**	**14**	Pn	**Pn**	**07 06 21.5**	**-0.5**
SUMG	**Summit**	**13.64**	**349**	Pn	**Pn**	**07 06 48.1**	**-1.2**
SCHQ	**Schefferville**	**20.23**	**273**	P	**P**	**07 08 10.9**	**+0.3**
NC405	**NORSAR Array S**	**20.62**	**67**	P	**P**	**07 08 13.7**	**-1.0**
TULEG	**Thule**	**21.74**	**337**	P	**P**	**07 08 27.3**	**+0.6**
TULEG				IAmb	IAmb	07 09 07.9	
	comp=Z,20nm,1.4s						
ARCES	**ARCESS Array B**	**25.09**	**43**	P	**P**	**07 08 59.9**	**0.0**
	comp=Z,1.0nm,0.7s,baz=271,slow=9.5,SNR=5.9						
	comp=Z,1.0nm,0.7s						
KHC	**Kasperske Hory**	**27.06**	**93**	P	**P**	**07 09 17.8**	**-0.2**
FINES	**FINESS Array B**	**27.13**	**61**	P	**P**	**07 09 18.8**	**+0.3**
	comp=Z,4.3nm,0.9s,baz=276,slow=15,SNR=4.1						
	comp=Z,4.3nm,0.9s						
FINES	**FINESS Array B**	**27.13**	**61**	P	**P**	**07 09 17.8**	**-0.6**
AKASG	**Malin Array Be**	**34.05**	**78**	P	**P**	**07 10 19.7**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=304,slow=8.4,SNR=4.1						
	comp=Z,1.0nm,0.7s						
A36M	**Sachs Harbour**	**36.63**	**329**	P	**P**	**07 10 41.5**	**0.0**
A36M				IAmb	IAmb	07 10 48.8	
	comp=Z,5.6nm,1.1s						
YKA	**Yellowknife Ar**	**38.37**	**312**	P	**P**	**07 10 55.8**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=54,slow=8.5,SNR=17						
	comp=Z,1.3nm,0.8s						
ARTI	**Arti**	**43.86**	**53**	P	**P**	**07 11 42.0**	**+0.4**
ARTI				IAmb	IAmb	07 11 43.3	
	comp=Z,5.2nm,0.9s						
BRTR	**Keskin Array B**	**43.87**	**87**	P	**P**	**07 11 40.6**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=312,slow=13,SNR=2.2						
	comp=Z,0.3nm,0.4s						
BRTR	**Keskin Array B**	**43.87**	**87**	P	**P**	**07 11 41.0**	**-1.0**
G26K	**Porcupine Rive**	**44.84**	**329**	P	**P**	**07 11 49.5**	**+0.3**
ILAR	**Eielson Array**	**47.33**	**329**	P	**P**	**07 12 09.1**	**+0.1**
	comp=Z,0.5nm,0.9s,baz=49,slow=7.0,SNR=4.2						
	comp=Z,0.5nm,0.9s						
TIXI	**Tiksi**	**48.43**	**9**		**P**	**07 12 17.6**	**+0.3**
TIXI				IAmb	IAmb	07 12 22.8	
	comp=Z,4.0nm,0.8s						
PDAR	**Pinedale Array**	**49.40**	**288**	P	**P**	**07 12 25.1**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=63,slow=6.2,SNR=6.1						
	comp=Z,0.8nm,0.7s						
AB31	**Akbulak array**	**49.59**	**59**		**P**	**07 12 27.0**	**+0.5**
AB31				IAmb	IAmb	07 12 28.4	
	comp=Z,4.7nm,1.0s						
BORK	**Borovoye**	**51.06**	**50**	P	**P**	**07 12 38.1**	**+0.5**
BVAR	**Borovoye Array**	**51.11**	**50**	P	**P**	**07 12 39.0**	**+1.1**
	comp=Z,2.1nm,0.7s,baz=324,slow=7.3,SNR=12						
	comp=Z,2.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**51.87**	**139**	P	**P**	**07 12 43.1**	**-0.9**
	comp=Z,0.8nm,0.9s,baz=346,slow=7.0,SNR=2.8						
	comp=Z,0.8nm,0.9s						
KURK	**Kurchatov**	**56.07**	**46**	P	**P**	**07 13 14.3**	**0.0**
KURK				IAmb	IAmb	07 13 15.3	
	comp=Z,3.8nm,0.8s						
KURBB	**Kurchatov Arra**	**56.11**	**47**	P	**P**	**07 13 15.0**	**+0.4**
	comp=Z,3.1nm,0.8s,baz=322,slow=7.1,SNR=24						
	comp=Z,3.1nm,0.8s						
PAHR	**Pah Rah Range**	**56.48**	**292**	P	**P**	**07 13 18.5**	**+0.9**
PAHR				IAmb	IAmb	07 13 22.5	
	comp=Z,5.0nm,1.2s						
TXAR	**Lajitas Array**	**56.91**	**272**	P	**P**	**07 13 22.3**	**+1.6**
	comp=Z,0.6nm,0.9s,baz=97,slow=4.3,SNR=4.9						
	comp=Z,0.6nm,0.9s						
MKAR	**Makanchi Array**	**60.68**	**47**	P	**P**	**07 13 47.0**	**+0.4**
	comp=Z,4.1nm,0.9s,baz=339,slow=5.3,SNR=17						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,4.1nm,0.9s						
MKAR	Makanchi Array	60.68	47	P	P	07 13 46.2	-0.4
GAR	Garm	62.24	60	P	P	07 13 58.2	+0.8
QSPA	South Pole Qui	149.29	180	PKPbc	PKiKP	07 23 24.4	+0.4
	comp=Z,5.0nm,0.9s,baz=208,slow=1.3,SNR=6.5						

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*IDC **20** 07:15:18.5±0.9, 59°.43N×30°.44W, h0^{km}, mb3.8/14, mbtmp3.9/15, ML4.3/1, MS3.8/31, Error ellipse: s-maj=26.1km s-min=16.3km az=176.0*

*NEIC **20** 07:15:20.5±1.3, 59°.6N±0°.1×30°.5W±0°.1, h10^{km}±1^{km}, mb4.3/21, Error ellipse: s-maj=18.5km s-min=12.2km az=176.0*

ISC 20 07:15:21.1±0.6, **59°.55N**±0°.08×**30°.50W**±0°.06, **h16**^{km}, **n70**, σ**0^s.80**/47, **mb4.2**/19, **MS3.8**/28, **Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	Borgarnes	6.75	36	Pn	Pn	07 17 00.9	+1.6
	5.7nm,0.3s,baz=228,slow=6.6,SNR=27						
BORG				Sn	Sn	07 18 16.0	+0.2
	1.7nm,0.3s,baz=58,slow=20,SNR=8.8						
	20nm,0.4s						
BORG	Borgarnes	6.75	36		Pn	07 16 59.3	-0.1
ANGG	Ammassalik, Gr	6.92	335	Pn	Pn	07 17 01.4	-0.2
SFJD	Kangerlussuaq	11.69	318	LR	LR	07 21 52.3	
	comp=Z,686nm,19.4s,baz=133,slow=33						
SUMG	Summit	13.45	350	Pn	Pn	07 18 29.5	-1.9
DSB	Dublin	14.71	105	Pn	Pn	07 18 48.6	+0.2
EKA	Eskdalemuir Ar	15.25	94	LR	LR	07 23 09.4	
	comp=Z,363nm,20.6s,baz=337,slow=31						
FRB	Frobisher Bay	18.35	299	LR	LR	07 25 49.4	
	comp=Z,421nm,18.1s,baz=75,slow=34						
SCHQ	Schefferville	20.07	272	LR	LR	07 25 54.4	
	comp=Z,200nm,20.5s,baz=92,slow=32						
KONO	Kongsberg	20.08	72	P	P	07 19 53.2	-0.2
NC204	NORSAR Array S	20.20	67	P	P	07 19 55.3	+0.4
NC204				IAmb	IAmb	07 20 06.7	
	comp=Z,22nm,1.5s						
NAO01	NORSAR Array S	20.37	68	P	P	07 19 57.1	+0.5
NAO01				IAmb	IAmb	07 20 30.4	
	comp=Z,16nm,1.2s						
NOA	NORSAR Array B	20.47	68	LR	LR	07 27 05.4	
	comp=Z,98nm,19.3s,baz=285,slow=34						
NB201	NORSAR Array S	20.51	68	P	P	07 19 58.4	+0.2
NB201				IAmb	IAmb	07 20 41.1	
	comp=Z,29nm,1.4s						
TULEG	Thule	21.53	337	P	P	07 20 09.7	+0.7
HFS	Hagfors	21.90	69	LR	LR	07 27 28.2	
	comp=Z,132nm,20.6s,baz=260,slow=33						
CLF	Chambon-Foret	22.27	107	P	P	07 20 18.4	+1.2
ILON	Igloolik, Nuna	23.43	316	P	P	07 20 29.4	+0.3
ARCES	ARCESS Array B	25.07	43	P	P	07 20 44.2	-0.1
	comp=Z,4.1nm,1.0s,baz=269,slow=8.1,SNR=5.8						
	comp=Z,4.1nm,1.0s						
ARCES	ARCESS Array B	25.07	43	P	P	07 20 44.0	-0.4
ARCES				IAmb	IAmb	07 20 48.1	
	comp=Z,12nm,1.4s						
ESDC	Sonseca Array	25.98	128	P	P	07 20 54.4	+1.5
	comp=Z,2.1nm,0.9s,baz=316,slow=9.2,SNR=5.4						
ESDC				LR	LR	07 29 06.7	
	comp=Z,154nm,18.5s,baz=316,slow=32						
ESDC	Sonseca Array	25.98	128	P	P	07 20 52.6	-0.3
ESDC				IAmb	IAmb	07 20 57.0	
	comp=Z,9.3nm,1.5s						
DAVOX	Davos/Dischmat	26.90	100	LR	LR	07 29 59.7	
	comp=Z,184nm,20.7s,baz=76,slow=33						
FINES	FINESS Array B	27.18	61	P	P	07 21 04.1	+0.7
	comp=Z,3.2nm,0.9s,baz=278,slow=9.7,SNR=2.3						
FINES				LR	LR	07 31 21.7	
	comp=Z,114nm,18.9s,baz=212,slow=35						
	comp=Z,3.2nm,0.9s						
RES	Resolute Bay	27.36	329	LR	LR	07 30 29.7	
	comp=Z,59nm,19.4s,baz=160,slow=33						
GERES	GERESS Array B	27.46	93	LR	LR	07 31 14.2	
	comp=Z,201nm,19.3s,baz=275,slow=35						
VRAC	Vranov	28.64	90	LR	LR	07 31 49.9	
	comp=Z,204nm,18.0s,baz=306,slow=35						
BLKN	Baker Lake	29.93	307	P	P	07 21 28.6	+0.8
LONY	Lake Ozonia	30.27	260	P	P	07 21 30.8	-0.3
FCC	Fort Churchill	31.51	297	P	P	07 21 42.7	+0.9
FCC				IAmb	IAmb	07 22 08.8	
	comp=Z,4.8nm,1.2s						
SADO	Sadowa	32.47	265	LR	LR	07 32 24.7	
	comp=Z,169nm,18.1s,baz=49,slow=32						
KIEV	Kiev	34.16	78	P	P	07 22 05.2	+0.2
KIEV				IAmb	IAmb	07 22 38.0	
	comp=Z,5.8nm,1.5s						
AKASG	Malin Array Be	34.16	78	P	P	07 22 03.0	-2.1
	comp=Z,0.3nm,0.3s,baz=298,slow=9.1,SNR=2.8						
	comp=Z,0.3nm,0.3s						
AKASG	Malin Array Be	34.16	78	P	P	07 22 04.5	-0.6
AKBB	Malin Array Si	34.16	78	P	P	07 22 04.9	-0.1
AKBB				IAmb	IAmb	07 22 38.0	
	comp=Z,6.5nm,1.5s						
I49A	Point Hope	34.92	267	P	P	07 22 12.3	+0.6
KEST	Kesra	35.06	115	LR	LR	07 35 54.3	
	comp=Z,144nm,18.2s,baz=128,slow=35						
OBN	Obninsk	35.07	67	LR	LR	07 34 53.1	
	comp=Z,205nm,21.6s,baz=242,slow=34						
MLR	Muntele Rosu	35.93	87	LR	LR	07 37 48.7	
	comp=Z,103nm,18.5s,baz=304,slow=38						
ULM	Lac du Bonnet	37.25	285	LR	LR	07 36 21.2	
	comp=Z,171nm,19.6s,baz=12,slow=34						
YKAW3	Yellowknife Wh	38.11	312	P	P	07 22 38.5	-0.1
YKAW3				IAmb	IAmb	07 22 44.7	
	comp=Z,9.3nm,1.4s						
YKA	Yellowknife Ar	38.14	312	P	P	07 22 40.1	+1.1
	comp=Z,1.0nm,0.9s,baz=53,slow=8.8,SNR=10						
YKA				LR	LR	07 37 20.6	
	comp=Z,213nm,18.3s,baz=314,slow=35						
	comp=Z,1.0nm,0.9s						
YKA	Yellowknife Ar	38.14	312	P	P	07 22 39.1	+0.2
INK	Inuvik	40.87	326	LR	LR	07 38 54.3	
	comp=Z,116nm,19.4s,baz=346,slow=34						
TKL	Tuckaleechee C	41.63	259	LR	LR	07 38 54.6	
	comp=Z,136nm,18.5s,baz=32,slow=34						
ARTI	Arti	43.88	53	P	P	07 23 27.0	+0.7
	comp=Z,2.1nm,0.5s,baz=318,slow=4.8,SNR=3.3						
ARTI				LR	LR	07 40 22.1	
	comp=Z,79nm,20.1s,baz=266,slow=34						
	comp=Z,2.1nm,0.5s						
ARTI	Arti	43.88	53	P	P	07 23 26.3	+0.1
ARTI				IAmb	IAmb	07 23 31.1	
	comp=Z,5.4nm,0.7s						
BRTR	Keskin Array B	44.01	87	P	P	07 23 28.4	+0.6
	comp=Z,0.3nm,0.4s,baz=260,slow=7.2,SNR=2.0						
BRTR				LR	LR	07 42 20.5	
	comp=Z,60nm,20.0s,baz=283,slow=37						
	comp=Z,0.3nm,0.4s						
BRTR	Keskin Array B	44.01	87	P	P	07 23 27.3	-0.4
ILAR	Eielson Array	47.12	328	P	P	07 23 51.0	-0.8
	comp=Z,0.3nm,0.8s,baz=46,slow=7.5,SNR=5.4						
ILAR				LR	LR	07 43 39.1	
	comp=Z,62nm,18.8s,baz=91,slow=36						
	comp=Z,0.3nm,0.8s						
AKTO	Aktyubinsk	47.93	59	P	P	07 23 57.2	-1.1
	comp=Z,1.1nm,0.4s,baz=312,slow=12,SNR=6.0						
	comp=Z,1.1nm,0.4s						
NEW	Newport	48.68	297	LR	LR	07 43 59.0	
	comp=Z,266nm,19.1s,baz=47,slow=35						
PDAR	Pinedale Array	49.20	287	P	P	07 24 08.3	-0.1
	comp=Z,0.5nm,0.7s,baz=64,slow=10,SNR=5.2						
PDAR				LR	LR	07 42 60.0	
	comp=Z,95nm,19.2s,baz=39,slow=34						
	comp=Z,0.5nm,0.7s						
AB31	Akbulak array	49.64	59	P	P	07 24 11.5	+0.1
BVAR	Borovoye Array	51.12	50	P	P	07 24 23.5	+1.0
	comp=Z,1.3nm,0.6s,baz=316,slow=6.2,SNR=10.0						
	comp=Z,1.3nm,0.6s						
TORD	Torodi Ar. Bea	52.09	139	P	P	07 24 28.4	-1.7
	comp=Z,0.8nm,0.7s,baz=355,slow=6.5,SNR=4.0						
	comp=Z,0.8nm,0.7s						
ELK	Elko	53.49	290	LR	LR	07 45 21.2	
	comp=Z,96nm,19.4s,baz=23,slow=34						
ANMO	Albuquerque	53.69	278	LR	LR	07 46 32.2	
	comp=Z,81nm,19.1s,baz=74,slow=35						
KURK	Kurchatov	56.06	46	P	P	07 24 59.1	+0.4
KURK				IAmb	IAmb	07 24 59.9	
	comp=Z,3.3nm,0.9s						
KURBB	Kurchatov Arra	56.11	47	P	P	07 24 59.5	+0.5
	comp=Z,2.6nm,0.8s,baz=324,slow=6.8,SNR=22						
	comp=Z,2.6nm,0.8s						
YBH	Yreka Blue Hor	56.22	296	LR	LR	07 48 51.1	
	comp=Z,16nm,19.4s,baz=25,slow=36						
DBIC	Dimbokro	56.26	149	LR	LR	07 46 30.5	
	comp=Z,126nm,19.6s,baz=13,slow=33						
TXAR	Lajitas Array	56.76	272	P	P	07 25 04.9	+0.7
	comp=Z,0.4nm,0.9s,baz=33,slow=9.1,SNR=2.9						
	comp=Z,0.4nm,0.9s						
TXAR	Lajitas Array	56.76	272	P	P	07 25 04.3	+0.2
NVAR	Mina Array Bea	56.77	290	LR	LR	07 47 50.9	
	comp=Z,130nm,19.9s,baz=60,slow=34						
PFO	Pinyon Flats O	59.73	285	LR	LR	07 50 17.9	
	comp=Z,134nm,18.5s,baz=26,slow=35						
MKAR	Makanchi Array	60.67	47	P	P	07 25 31.7	+0.6
	comp=Z,2.6nm,0.8s,baz=349,slow=4.8,SNR=15						
	comp=Z,2.6nm,0.8s						
MKAR	Makanchi Array	60.67	47	P	P	07 25 30.8	-0.3
ASAR	Alice Springs	142.49	24	PKhKP	PKPpre	07 34 46.9	
	comp=Z,0.1nm,0.4s,baz=353,slow=3.9,SNR=3.2						
ASAR				PKP	PKPdf	07 34 52.9	+0.1
	comp=Z,0.3nm,0.6s,baz=343,slow=2.2,SNR=4.1						
QSPA	South Pole Qui	149.45	180	PKPbc	PKiKP	07 35 08.0	-0.8
	comp=Z,1.2nm,0.3s,baz=276,slow=1.9,SNR=5.5						

IDC 20 07:24:00.9±2.0, **59°.59N**×**30°.36W**, **h0**^{km}, **mb3.7**/5, **mbtmp3.7**/5, **Error ellipse: s-maj=49.5km s-min=31.3km az=32.0**, **Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESDC	Sonseca Array	25.95	128	P	P	07 29 34.8	0.0
	1.3nm,0.8s,baz=329,slow=9.6,SNR=3.5						
	1.3nm,0.8s						
YKA	Yellowknife Ar	38.17	312	P	P	07 31 21.4	-0.1
	0.2nm,0.7s,baz=54,slow=8.8,SNR=4.2						
	0.2nm,0.7s						
BVAR	Borovoye Array	51.04	50	P	P	07 33 04.8	+0.6
	0.9nm,0.8s,baz=280,slow=9.7,SNR=5.0						
	0.9nm,0.8s						
KURBB	Kurchatov Arra	56.03	47	P	P	07 33 40.5	-0.4
	1.2nm,0.8s,baz=322,slow=7.3,SNR=9.3						
	1.2nm,0.8s						
MKAR	Makanchi Array	60.60	47	P	P	07 34 12.7	-0.3
	1.4nm,0.7s,baz=330,slow=6.0,SNR=7.4						
	1.4nm,0.7s						

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*BEO **20** 07:41:07.3±0.3, 43°.22N×17°.88E, h9^{km}±3^{km}, ML2.7/15*

*PDG **20** 07:41:07.6±0.0, 43°.20N×17°.97E, h13^{km}, ML2.9/13, Error ellipse: s-maj=0.1km s-min=0.1km az=90.0*

*RHSSO **20** 07:41:08.0±0.5, 43°.18N×18°.01E, h8^{km}, ML2.8/4*

ISC 20 07:41:07.5±1.0, **43°.21N**±0°.02×**17°.97E**±0°.02, **h6**^{km}±9^{km}, **n51**, σ**0^s.87**/92, **3C-1D**, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	Ston	0.39	211	*e*Pg	Pg	07 41 15.1	0.0
STON				Sg	Sg	07 41 21.3	+1.2
STON	Ston	0.39	211	*e*Pg	Pg	07 41 15.1	0.0
STON				*e*Sg	Sg	07 41 21.5	+1.3
KLINJ	Klinje	0.45	95	*e*Pg	Pg	07 41 15.9	-0.4
KLINJ				*e*Sg	Sg	07 41 23.2	+1.0
BRY	Bratogost	0.52	126	*e*Pg	Pg	07 41 17.2	-0.3
BRY				*i* Sg	Sb	07 41 25.6	-1.3
DBRK	Dubrovnik	0.55	166	*e*Pg	Pg	07 41 18.0	-0.2
DBRK				Sg	Sg	07 41 26.3	+0.9
TREB	Trebinje	0.56	150	*e*Pg	Pg	07 41 17.7	-0.7
TREB				*e*Sg	Sg	07 41 25.9	+0.2
TREB	Trebinje	0.56	150	*e*Pg	Pg	07 41 18.0	-0.4
TREB				*e*Sg	Sg	07 41 26.7	+1.0
RICI	Ricice	0.67	295	*e*Pg	Pg	07 41 20.2	-0.2
RICI				Sg	Sb	07 41 30.8	-0.5
UPM	Unac-Piva	0.69	90	*e*Pg	Pg	07 41 20.3	-0.4
UPM				*i* Sg	Sb	07 41 31.1	-0.6
MAKA	Makarska	0.70	277	*e*Pg	Pg	07 41 20.4	-0.6
MAKA				Sg	Sb	07 41 31.7	-0.2
NKME	Niksic	0.85	121	*e*Pg	Pg	07 41 23.2	-0.6
NKME				*e*Sg	Sb	07 41 36.5	+0.3
HCY	Herceg Novi	0.85	153	*e*Pg	Pg	07 41 23.2	-0.7
HCY				*i* Sg	Sb	07 41 36.8	+0.4
LSTV	Lastovo	0.90	241	*e*Pg	Pg	07 41 23.7	-1.2
LSTV				Sg	Sb	07 41 37.4	-0.5
CEME	Cevo	0.96	133	*e*Pg	Pg	07 41 25.0	-1.0
CEME				*e*Sg	Sn	07 41 40.4	-1.2
PLE	Pljevlja	1.04	83	*e*Pg	Pg	07 41 27.6	0.0
PLE	Pljevlja	1.04	83	⇑*i*Pg	Pg	07 41 26.9	-0.7
PLE				*i* Sg	Sn	07 41 43.3	-0.4
RUDO	Rudo	1.10	68	*e*Pg	Pg	07 41 27.2	-1.4
RUDO				*e*Sg	Sg	07 41 42.3	-0.6
RUDO	Rudo	1.10	68	*e*Pg	Pg	07 41 27.4	-1.2
RUDO				*e*Sg	Sg	07 41 42.7	-0.2
HVAR	Hvar	1.11	269	*e*Pg	Pg	07 41 27.7	-1.1
HVAR				Sg	Sb	07 41 43.9	+0.1
BUM	Brajici-Budva	1.13	143	*e*Pg	Pg	07 41 28.5	-0.8
BUM				*i* Sg	Sn	07 41 46.2	+0.4
KOME	Kolasin	1.19	107	*e*Pg	Pb	07 41 29.5	-1.0
KOME	Kolasin	1.19	107	*e*Pg	Pb	07 41 29.5	-1.0
KOME				*e*Sg	Sn	07 41 48.2	+1.0
PDG	Podgorica	1.23	129	*e*Pg	Pn	07 41 30.3	-0.9
PDG				*e*Sg	Sn	07 41 48.9	+1.0
PDG	Podgorica	1.23	129	⇓*i*Pg	Pn	07 41 30.2	-0.9
PDG				*i* Sg	Sn	07 41 49.3	+1.4
BBLS	Lazi&#263i	1.23	57	*e*Pg	Pn	07 41 30.9	-0.5
BBLS				*e*Sg	Sn	07 41 49.6	+1.2
DRME	Dracevica, Mon	1.36	138	*e*Pg	Pn	07 41 32.7	-0.3
DRME	Dracevica, Mon	1.36	138	⇑*i*Pg	Pn	07 41 32.6	-0.4
DRME				*e*Sg	Sg	07 41 53.5	+2.3
KIJV	Kijevo	1.39	306	*e*Pn	Pn	07 41 32.9	-0.6
KIJV				Sg	Sg	07 41 52.7	+0.6
BEY	Berane	1.45	103	*e*Pg	Pb	07 41 34.4	-0.6
IVA	Berane	1.45	103	⇑*i*Pg	Pn	07 41 34.2	-0.1
IVA				*i* Sg	Sg	07 41 55.8	+1.7
SJES	Sjenica	1.47	87	*e*Pg	Pb	07 41 34.8	-0.4
SJES				*e*Sg	Sg	07 41 56.8	+2.1
ULC	Ulcinj	1.56	142	*e*Pg	Pn	07 41 36.0	+0.2
ULC				*i* Sg	Sg	07 41 58.5	+0.9
PVY	Plav	1.58	112	*e*Pg	Pb	07 41 36.7	-0.6
PVY	Plav	1.58	112	*e*Pn	Pn	07 41 36.4	+0.2
PVY				*i* Sn	Sg	07 41 59.2	+0.7
IVAS	Ivanjica	1.63	76	*e*Pg	Pn	07 41 36.5	-0.3
IVAS				*e*Sg	Sg	07 42 00.5	+0.5
BLY	Banja Luka	1.64	340	*e*Pn	Pb	07 41 37.7	-0.5
BLY				*e*Sn	Sb	07 41 59.1	0.0
BLY	Banja Luka	1.64	340	*e*Pg	Pb	07 41 38.0	-0.2
BLY				*e*Sg	Sg	07 42 00.8	+0.5
DIVS	Divibare	1.72	58	*e*Pg	Pn	07 41 38.2	+0.2
DIVS				*e*Sg	Sg	07 42 03.6	+0.9
ZIRJ	Zirje	1.75	286	*e*Pn	Pn	07 41 38.6	+0.2
ZIRJ				Sn	Sb	07 42 01.6	-0.7
MORI	Morici	1.77	293	*e*Pn	Pn	07 41 39.4	+0.7
MORI				Sn	Sb	07 42 02.3	-0.5
TRUS	Trudelj	2.04	59	*e*Pn	Pn	07 41 42.3	0.0
GRUS	Gruza	2.11	70	*e*Pn	Pn	07 41 43.4	+0.1
GRUS				*e*Sg	Sg	07 42 17.2	+1.9
GOCS	Kraljevo Serbi	2.15	79	*e*Pn	Pn	07 41 44.0	+0.1
GOCS				*e*Sg	Sg	07 42 17.9	+1.4
DUGI	Dugi Otok	2.25	291	*e*Pn	Pn	07 41 45.5	+0.2
DUGI				Sn	Sn	07 42 14.4	+1.0
SELS	Selova	2.30	89	*e*Pn	Pn	07 41 46.3	+0.3
FRGS	Fruska Gora	2.36	34	*e*Pn	Pn	07 41 47.8	+1.1
VIRC	Vir	2.37	298	*e*Pn	Pn	07 41 47.2	+0.3
VIRC				Sn	Sn	07 42 17.1	+0.8
BARS	Barje	2.85	97	*e*Pn	Pn	07 41 53.8	+0.3
BOJS	Bojanci	3.01	321	*e*Pg	Pb	07 41 59.3	-2.2
BOJS				*e*Sg	Sb	07 42 40.1	+1.6
MORH	Mrgy, Hungar	3.05	9	*e*Pn	Pn	07 41 57.2	+1.0
MORH				*e*Sn	Sn	07 42 33.7	+0.8
ZAPS	Zavoj	3.41	87	*e*Pn	Pn	07 42 01.4	+0.2

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*IDC **20** 07:44:26.1±1.3, 52°.38N×168°.63W, h0^{km}, mb4.0/16, mbtmp4.0/17, ML2.9/1, Error ellipse: s-maj=36.1km s-min=17.9km az=175.0*

*AEIC **20** 07:44:30.0±1.8, 52°.31N±0°.07×168°.47W±0°.05, h20^{km}±4^{km}, Error ellipse: s-maj=10.1km s-min=3.5km az=161.0*

*NEIC **20** 07:44:31.1±1.7, 52°.35N±0°.02×168°.52W±0°.07, h36^{km}±8^{km}, mb4.0/17, ML3.8/20, ML3.2(AEIC), Error ellipse: s-maj=6.9km s-min=2.3km az=106.0*

ISC 20 07:44:28.6±0.9, **52°.2N**±0°.1×**168°.47W**±0°.05, **h21**^{km}±5^{km}, **n94**, σ**0^s.90**/95, **mb4.2**/18, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.77	343		Pb	07 44 43.3	+0.1
NIKH				Sn	Sb	07 44 52.5	-0.8
NIKH				IAML		07 44 58.5	
	comp=N,3µm,0.6s						
CLCO	Concord Point,	0.94	306		Pb	07 44 46.5	+0.4
CLCO					Sn	07 44 59.9	+0.6
OKSP	Okmok Steeple	1.02	6		Pn	07 44 47.5	-0.2
OKTU	Okmok Mt. Tuli	1.18	13		Pb	07 44 50.1	-0.1
OKFG	Magazine Ridge	1.22	16		Pb	07 44 50.9	-0.1
MGOD	Makushin Gods	1.83	31		Pn	07 44 59.3	+0.4
MREP	Makushin Rep't	1.89	33		Pn	07 45 00.1	+0.5
MSW	Makushin Switc	1.96	31		Pn	07 45 01.3	+0.7
MSW					Sn	07 45 25.4	+0.8
MNAT	Makushin Natee	1.97	33		Pn	07 45 01.3	+0.6
UNV	Unalaska Valle	2.00	36		Pn	07 45 01.0	-0.1
UNV					Sn	07 45 25.2	-0.2
AKRB	Akutan Reef Bi	2.38	36		Pn	07 45 07.8	+1.4
AKRB					Sn	07 45 35.0	0.0
ZRO	Akutan Zero	2.39	38		Pn	07 45 07.8	+1.4
ZRO					Sn	07 45 36.6	+1.5
AKBBA	Akutan Broad B	2.41	38		Pn	07 45 08.1	+1.4
AKV	Akutan Volcano	2.42	38		Pn	07 45 08.5	+1.6
LVA	Lava Point	2.42	36		Pn	07 45 06.3	-0.6
LVA				IAML		07 45 48.9	
	comp=E,268nm,0.6s						
LVA				IAML		07 45 50.4	
	comp=N,434nm,1.0s						
AHB	Akutan Harbor	2.47	39		Pn	07 45 08.7	+1.1
AHB					Sn	07 45 38.6	+1.6
AKUT	Akutan	2.50	40	Pn	Pn	07 45 08.3	+0.4
KOSE	Korovin Southe	3.42	274		Pn	07 45 21.9	+1.2
KOFP	Korovin Flat P	3.46	273		Pn	07 45 22.7	+1.5
KOKL	Mount Kliuchef	3.52	274		Pn	07 45 23.4	+1.4
ATKA	Atka Island	3.52	272		Pn	07 45 22.5	+0.5
ATKA				IAML		07 46 01.4	
	comp=E,95nm,3.1s						
ATKA				IAML		07 46 24.1	
	comp=N,108nm,2.1s						
FALS	False Pass	4.00	47	Pn	Pn	07 45 28.9	+0.4
FALS				IAML		07 46 29.5	
	comp=E,233nm,0.9s						
GSTR	Great Sitkin T	4.67	271	Pn	Pn	07 45 38.5	+0.6
ETKA	Kagalaska Isla	4.91	269		Pn	07 45 41.9	+0.8
SPIA	Saint Paul Isl	5.05	349	Pn	Pn	07 45 43.5	+0.4
ADK	Adak	5.08	269	Pn	Pn	07 45 44.2	+0.8
ADK				IAML		07 46 45.6	
	comp=E,79nm,2.9s						
ADK				IAML		07 48 36.8	
	comp=E,99nm,2.6s						
KIWB	Kanaga Island	5.37	269	Pn	Pn	07 45 47.7	+0.3
KIWB				IAML		07 47 21.8	
	comp=N,101nm,1.9s						
KIWB				IAML		07 47 58.0	
	comp=E,95nm,2.3s						
CNBA	Chernabura Isl	5.89	61	Pn	Pn	07 45 55.2	+0.6
CHIR	Chirikof Islan	8.37	60	Pn	Pn	07 46 28.4	-0.1
N15K	Kwethluk River	9.21	27	Pn	Pn	07 46 40.7	+0.6
O16K	Kokwok River B	9.38	34	Pn	Pn	07 46 43.9	+1.5
OHAK	Old Harbor	10.09	54	Pn	Pn	07 46 51.9	-0.2
KDAK	Kodiak Island	10.67	52	Pn	Pn	07 46 58.4	-1.6
	comp=E,0.9nm,0.3s,baz=262,slow=2.7,SNR=12						
KDAK	Kodiak Island	10.67	52		Pn	07 46 58.9	-1.1
Q19K	Cape Douglas,	10.72	46	Pn	Pn	07 47 01.9	+1.1
K15K	Wolf Creek Mou	10.75	18	Pn	Pn	07 47 02.4	+1.3
K17K	Iditarod	11.82	23	Pn	Pn	07 47 15.3	-0.5
CNPM	China Poot	12.09	46	Pn	Pn	07 47 20.1	+0.6
J17K	VABM Dome	12.24	20	Pn	Pn	07 47 21.3	-0.1
BRLK	Bradley Lake	12.37	46	Pn	Pn	07 47 23.6	+0.4
SLKM	Skilak Lake	13.03	43	Pn	Pn	07 47 32.0	-0.3
SKT	Skwentna	13.37	37	Pn	Pn	07 47 38.0	+1.1
RC01	Rabbit Creek A	13.54	42	Pn	Pn	07 47 38.9	-0.3
L22K	Petersville	13.99	36	Pn	Pn	07 47 44.7	-0.7
I20K	Naaghedeneel	14.51	24	Pn	Pn	07 47 53.3	+1.0
KLU	Klutina	15.34	44		Pn	07 48 01.8	-1.9
KLU				IAmb	IAmb	07 48 05.3	
	comp=Z,7.1nm,0.8s						
M24K	Tolsona, Glenn	15.53	42	Pn	Pn	07 48 05.2	-0.9
M24K				IAmb	IAmb	07 48 07.7	
	comp=Z,12nm,0.8s						
IMAR	Indian Mountai	15.65	23	Pn	Pn	07 48 07.5	-0.1
BERG	Berg Lake	15.90	49	Pn	Pn	07 48 10.2	-0.6
NEA2	Nenana	15.92	32	Pn	Pn	07 48 11.4	+0.4
G21K	Allakaket	16.14	22	Pn	Pn	07 48 14.3	+0.4
H22K	Ishtalitna Cre	16.18	26	Pn	Pn	07 48 14.1	-0.3
PAX	Paxson	16.24	40	Pn	Pn	07 48 15.1	-0.2
CRQM	Cirque	16.29	49	Pn	Pn	07 48 15.3	-0.6
CRQM				IAmb	IAmb	07 48 22.1	
	comp=Z,18nm,1.0s						
TGL	Tana Glacier	16.43	49	Pn	Pn	07 48 17.5	-0.2
TGL				IAmb	IAmb	07 48 51.3	
	comp=Z,19nm,1.2s						
ILAR	Eielson Array	16.75	33	Pn	Pn	07 48 20.6	-1.1
	baz=244,slow=13,SNR=5.2						
	comp=Z,0.8nm,1.0s						
M26K	Nabesna, AK	16.98	43	P	Pn	07 48 23.1	-1.5
M26K				IAmb	IAmb	07 48 28.2	
	comp=Z,18nm,1.4s						
PEA0B	Petropavlovsk-	20.43	286	P	P	07 49 03.6	-0.5
PETK	Petropavlovsk-	20.43	286	P	P	07 49 03.3	-0.9
	comp=Z,11nm,0.9s,baz=83,slow=14,SNR=18						
	comp=Z,11nm,0.9s						
PETK	Petropavlovsk-	20.43	286	P	P	07 49 03.6	-0.5
EPYK	Eagle Plains	21.18	36		P	07 49 10.4	-1.8
EPYK				IAmb	IAmb	07 49 13.6	
	comp=Z,10.0nm,0.9s						
G30M	tAoh Zraii Nji	21.63	35	P	P	07 49 15.6	-1.5
G30M				IAmb	IAmb	07 49 28.3	
	comp=Z,4.6nm,0.9s						
H31M	Peel River	21.83	38	P	P	07 49 17.5	-1.7
H11N2	WAKE ISLAND Hy	37.70	220	T	T	08 32 22.8	
	baz=24						
H11N3	WAKE ISLAND Hy	37.71	220	T	T	08 32 24.6	
	baz=24,SNR=5.1						
H11N1	WAKE ISLAND Hy	37.72	220	T	T	08 32 21.1	
	baz=24						
H11S1	WAKE ISLAND Hy	38.88	219	T	T	08 33 36.3	
	baz=23,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy	38.90	219	T	T	08 33 44.4	
	baz=23,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	38.90	219	T	T	08 33 32.8	
	baz=23,slow=76,SNR=9.4						
PDAR	Pinedale Array	39.89	80	P	P	07 52 02.5	+1.5
	comp=Z,0.5nm,0.6s,baz=293,slow=3.9,SNR=6.2						
	comp=Z,0.5nm,0.6s						
PDAR	Pinedale Array	39.89	80	P	P	07 52 00.8	-0.1
KSRS	Korea Array	45.97	277	P	P	07 52 49.4	-0.5
	comp=Z,2.1nm,0.7s,baz=47,slow=10,SNR=6.3						
	comp=Z,2.1nm,0.7s						
SONM	Songino Array	51.84	301	P	P	07 53 35.1	+0.1
	comp=Z,0.5nm,0.4s,baz=57,slow=4.9,SNR=5.1						
	comp=Z,0.5nm,0.4s						
SONM	Songino Array	51.84	301	P	P	07 53 34.9	0.0
SONM				IAmb	IAmb	07 53 38.7	
	comp=Z,1.2nm,1.0s						
TXAR	Lajitas Array	52.20	90	P	P	07 53 38.5	+0.7
	comp=Z,0.2nm,0.7s,baz=282,slow=6.3,SNR=3.4						
	comp=Z,0.2nm,0.7s						
TXAR	Lajitas Array	52.20	90	P	P	07 53 38.0	+0.1
KURBB	Kurchatov Arra	62.94	319	P	P	07 54 53.1	+0.1
	comp=Z,0.8nm,0.2s,baz=44,slow=7.7,SNR=5.9						
	comp=Z,0.8nm,0.2s						
BVAR	Borovoye Array	64.12	325	P	P	07 55 01.0	+0.1
	comp=Z,1.6nm,0.8s,baz=46,slow=6.4,SNR=7.4						
	comp=Z,1.6nm,0.8s						
MKAR	Makanchi Array	64.29	314	P	P	07 55 01.6	-0.5
	comp=Z,1.7nm,0.8s,baz=46,slow=6.9,SNR=7.4						
	comp=Z,1.7nm,0.8s						
MKAR	Makanchi Array	64.29	314	P	P	07 55 01.4	-0.7
FIA1	FINESS Array S	66.07	352	P	P	07 55 12.8	-0.5
FINES	FINESS Array B	66.07	352	P	P	07 55 12.2	-1.1
	comp=Z,3.6nm,0.8s,baz=3.6,slow=8.1,SNR=8.5						
	comp=Z,3.6nm,0.8s						
FINES	FINESS Array B	66.07	352	P	P	07 55 12.4	-0.9
NC405	NORSAR Array S	67.00	360	P	P	07 55 18.6	-0.6
NC405				IAmb	IAmb	07 55 21.4	
	comp=Z,0.9nm,0.6s						
NOA	NORSAR Array B	67.07	0	P	P	07 55 19.6	-0.2
	comp=Z,0.9nm,0.8s,baz=0.1,slow=6.4,SNR=3.2						
	comp=Z,0.9nm,0.8s						
HFS	Hagfors	67.97	359	P	P	07 55 25.1	-0.3
	comp=Z,1.4nm,0.4s,baz=5.7,slow=3.0,SNR=15						
	comp=Z,1.4nm,0.4s						
AKTO	Aktyubinsk	70.39	331	P	P	07 55 39.9	-0.7
	comp=Z,3.2nm,0.9s,baz=16,slow=5.6,SNR=6.7						
	comp=Z,3.2nm,0.9s						
ABKAR	Akbulak array	70.83	329	P	P	07 55 43.3	0.0
AKASG	Malin Array Be	76.34	349	P	P	07 56 14.6	-1.0

	comp=Z,1.3nm,0.5s,baz=13,slow=5.6,SNR=4.2						
	comp=Z,1.3nm,0.5s						
CMAR	Chiang Mai Arr	77.18	283	P	P	07 56 21.6	+0.8
	comp=Z,1.6nm,0.3s,baz=25,slow=6.7,SNR=8.5						
	comp=Z,1.6nm,0.3s						
CMAR	Chiang Mai Arr	77.18	283	P	P	07 56 19.9	-0.9
GERES	GERESS Array B	79.27	359	P	P	07 56 33.5	+1.4
	comp=Z,1.1nm,0.8s,baz=33,slow=9.4,SNR=3.6						
	comp=Z,1.1nm,0.8s						
BRTR	Keskin Array B	86.41	343	P	P	07 57 11.2	+1.8
	comp=Z,1.0nm,0.8s,baz=72,slow=4.0,SNR=4.5						
	comp=Z,1.0nm,0.8s						
BRTR	Keskin Array B	86.41	343	P	P	07 57 10.2	+0.8

IDC 20 07:50:23.3±7.0, 30°.69S×179°.01W, h0^{km}, mb4.1/2, mbtmp4.1/2, Error ellipse: s-maj=284.0km s-min=58.2km az=156.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.23	268	P	P	07 58 18.2	-0.2
	1.0nm,0.6s,baz=105,slow=7.8,SNR=14						
	1.0nm,0.6s						
WRA	Warramunga Arr	43.24	273	P	P	07 58 26.6	-0.1
	2.5nm,0.5s,baz=111,slow=8.1,SNR=16						
	2.5nm,0.5s						
H03S2	Juan Fernandez	81.03	124	T	T	09 30 45.5	
	baz=238,slow=74,SNR=18						
H03S1	Juan Fernandez	81.04	124	T	T	09 30 47.2	
	baz=238,slow=74,SNR=22						
H03S3	Juan Fernandez	81.05	124	T	T	09 30 45.0	
	baz=238,slow=74,SNR=20						
H03N3	Juan Fernandez	81.22	124	T	T	09 31 07.5	
	baz=242,slow=73,SNR=11						
H03N2	Juan Fernandez	81.23	124	T	T	09 31 04.1	
	baz=242,slow=73,SNR=11						
H03N1	Juan Fernandez	81.24	124	T	T	09 31 06.6	
	baz=242,slow=73,SNR=11						
FINES	FINESS Array B	145.11	339	PKPbc	PKPbc	08 10 00.6	-0.9
	2.8nm,1.0s,baz=78,slow=4.4,SNR=5.0						

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*IDC **20** 07:55:52.7±0.9, 22°.56S×176°.40W, h0^{km}, mb4.4/8, mbtmp4.5/9, ML4.4/1, Error ellipse: s-maj=31.6km s-min=24.1km az=138.0*

*NEIC **20** 07:55:59.5±1.2, 22°.92S±0°.09×176°.2W±0°.1, h52^{km}±8^{km}, mb4.8/20, Error ellipse: s-maj=20.5km s-min=2.6km az=127.0*

ISC 20 07:55:59.5±0.5, 22°.93S±0°.08×176°.11W±0°.09, h50^{km}, n48, σ1ˢ57/42, mb4.7/17, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	6.93	58	Pn	Pn	07 57 38.3	-0.2
MSVF	Nonsavu	7.53	312		Pn	07 57 51.2	+4.4
AFI	Afiamalu	9.86	25	Pn	Pn	07 58 18.5	-0.3
PINNC	Pines Island,	15.18	268	P	Pn	07 59 30.1	-0.6
URZ	Urewera	16.35	199	Pn	P	07 59 47.4	-0.4
	1.5nm,0.3s,baz=280,slow=4.8,SNR=6.3						
URZ				Sn	Sn	08 02 34.6	-11
	0.5nm,0.3s,baz=162,slow=20,SNR=1.6						
	18nm,1.0s						
QRZ	Quartz Range	20.25	206	P	P	08 00 30.4	-0.2
CTAO	Charters Tower	35.07	267		P	08 02 46.8	-1.2
CTAO				IAmb	IAmb	08 02 49.1	
	comp=Z,15nm,0.8s						
CTAO	Charters Tower	35.07	267	P	P	08 02 47.8	-0.2
TOO	Toolangi	35.98	237	P	P	08 02 54.6	-1.0
PMG	Port Moresby	37.63	285	P	P	08 03 10.1	+0.2
STKA	Stephens Creek	38.40	247	P	P	08 03 15.3	-0.8
	comp=Z,2.7nm,0.6s,baz=341,slow=23,SNR=3.6						
	comp=Z,2.7nm,0.6s						
AS31	Alice Springs	45.73	259		P	08 04 14.2	-1.9
ASAR	Alice Springs	45.73	259	P	P	08 04 14.4	-1.6
	comp=Z,13nm,0.8s,baz=98,slow=7.0,SNR=69						
	comp=Z,13nm,0.8s						
ASAR	Alice Springs	45.73	259		P	08 04 14.2	-1.9
WR8	Warramunga Arr	45.90	264		P	08 04 14.8	-2.6
WR8				IAmb	IAmb	08 04 17.4	
	comp=Z,9.6nm,1.1s						
WRAB	Tennant Creek	46.05	264	P	P	08 04 15.3	-3.3
WRA	Warramunga Arr	46.05	264	P	P	08 04 16.5	-2.2
	comp=Z,4.5nm,0.5s,baz=92,slow=6.0,SNR=25						
	comp=Z,4.5nm,0.5s						
WRA	Warramunga Arr	46.05	264		P	08 04 16.6	-2.1
FORT	Forrest	50.00	248	P	P	08 04 47.4	-1.6
FORT				IAmb	IAmb	08 04 50.1	
	comp=Z,10nm,1.0s						
DRV	Dumont d'Urvil	51.69	201	P	P	08 05 02.7	+1.6
FITZ	Fitzroy Crossi	54.48	264	P	P	08 05 21.0	-1.4
MBWA	Marble Bar	59.07	258	P	P	08 05 53.7	-1.2
CCD	Concordia, Ant	60.58	195	P	P	08 06 07.2	+2.2
CCD				PcP	PcP	08 06 49.2	+0.3
CASY	Casey	62.55	206	P	P	08 06 18.5	+0.7
CASY				IAmb	IAmb	08 06 19.4	
	comp=Z,5.9nm,0.8s						
QSPA	South Pole Qui	67.15	180	P	P	08 06 50.5	+2.6
	comp=Z,2.7nm,0.5s,baz=324,slow=1.2,SNR=7.6						
	comp=Z,2.7nm,0.5s						
QSPA	South Pole Qui	67.15	180		P	08 06 47.1	-0.8
QSPA				IAmb	IAmb	08 06 54.3	
	comp=Z,8.6nm,1.1s						
BELA	Belgrano 2	76.93	172	P	P	08 07 46.9	+0.8
TPO	Tropico Hills	79.48	45	P	P	08 07 59.8	-1.2
TPO				IAmb	IAmb	08 08 00.7	
	comp=Z,12nm,1.3s						
MAW	Mawson	79.88	199	P	P	08 08 04.2	+1.7
	comp=Z,3.1nm,0.6s,baz=140,slow=9.9,SNR=6.3						
	comp=Z,3.1nm,0.6s						
H03S2	Juan Fernandez	83.18	124	T	T	09 40 15.0	
	baz=246,slow=74,SNR=171						
H03S1	Juan Fernandez	83.19	124	T	T	09 40 16.9	
	baz=246,slow=74,SNR=193						
H03S3	Juan Fernandez	83.20	124	T	T	09 40 16.0	
	baz=246,slow=74,SNR=178						
H03N2	Juan Fernandez	83.33	123	T	T	09 40 22.5	
	baz=251,slow=72,SNR=71						
H03N3	Juan Fernandez	83.33	123	T	T	09 40 23.5	
	baz=251,slow=72,SNR=69						
H03N1	Juan Fernandez	83.34	123	T	T	09 40 23.5	
	baz=251,slow=72,SNR=70						
M16K	Timber Creek	84.80	8	P	P	08 08 28.3	+0.2
SNAA	Sanae	85.54	178	P	P	08 08 30.6	-1.3
SNAA				IAmb	IAmb	08 08 35.8	
	comp=Z,5.9nm,1.2s						
SLKM	Skilak Lake	85.77	13	P	P	08 08 32.3	-0.6
SLKM				IAmb	IAmb	08 09 08.9	
	comp=Z,11nm,1.0s						
CRNM	Carthage	86.87	51	P	P	08 08 38.6	-0.6
TXAR	Lajitas Array	86.90	56	P	P	08 08 40.8	+1.5
	comp=Z,1.3nm,1.0s,baz=224,slow=7.0,SNR=7.5						
	comp=Z,1.3nm,1.0s						
ILAR	Eielson Array	90.29	12	P	P	08 08 53.4	-1.1
	comp=Z,0.4nm,0.7s,baz=215,slow=5.5,SNR=5.1						
	comp=Z,0.4nm,0.7s						
J26L	Joseph Creek	90.73	13	P	P	08 08 56.8	+0.2
J26L				IAmb	IAmb	08 08 58.5	
	comp=Z,3.7nm,0.8s						
E19K	Redstone River	91.20	7	P	P	08 08 58.5	-0.1
E19K				IAmb	IAmb	08 09 00.8	
	comp=Z,4.9nm,1.1s						
CMAR	Chiang Mai Arr	92.57	289	P	P	08 09 05.8	-0.3
	comp=Z,0.9nm,0.3s,baz=123,slow=4.2,SNR=6.6						
	comp=Z,0.9nm,0.3s						
ARCES	ARCESS Array B	131.61	350	PKP	PKPdf	08 15 04.3	-1.7
	comp=Z,1.3nm,0.8s,baz=36,slow=2.3,SNR=9.5						
HFS	Hagfors	142.19	352	PKhKP	PKPpre	08 15 20.0	
	comp=Z,0.7nm,0.4s,baz=44,slow=4.4,SNR=1.5						
AKASG	Malin Array Be	145.98	331	PKPbc	PKPdf	08 15 31.6	-1.1
	comp=Z,2.1nm,0.5s,baz=41,slow=4.4,SNR=10						
CLL	Collm	150.80	348	*e*PKPbc	PKPbc	08 15 46.0	-0.1

IDC 20 07:56:27.3±3.2, 54°.05N×87°.32E, h0^{km}, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=29.9km s-min=18.0km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.48	267	I	I	08 07 35.9	
	baz=89,slow=343,SNR=4.8						
ZALV	Zalesovo Beam	1.48	267	Pg	Pn	07 56 52.6	-2.6
	3.7nm,0.3s,baz=80,slow=18,SNR=36						
ZALV				Lg	Lg	07 57 14.7	
	2.0nm,0.3s,baz=86,slow=25,SNR=8.0						
KURBB	Kurchatov Arra	6.39	241	Pn	Pn	07 58 03.4	+0.8
	0.1nm,0.3s,baz=54,slow=13,SNR=5.1						
	0.9nm,0.4s						
MKAR	Makanchi Array	7.94	206	Pn	Pn	07 58 25.6	+1.7
	0.2nm,0.3s,baz=28,slow=13,SNR=5.8						
	0.2nm,0.3s						

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*ASRS **20** 08:02:56.0±0.3, 53°.92N×86°.60E, h0^{km}, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 20 08:02:57.2±3.3, 54°.11N×86°.76E, h0^{km}, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=29.5km s-min=16.8km az=46.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.16	263	I	I	08 11 19.9	
	baz=80,slow=316,SNR=5.6						
ZALV	Zalesovo Beam	1.16	263	Pg	Pg	08 03 18.9	-0.5
	0.9nm,0.3s,baz=84,slow=16,SNR=11						
ZALV				Lg	Lg	08 03 34.8	
	1.6nm,0.3s,baz=89,slow=29,SNR=11						
KURBB	Kurchatov Arra	6.13	239	Pn	Pn	08 04 30.4	+1.4
	0.1nm,0.3s,baz=56,slow=14,SNR=4.7						
	0.4nm,0.5s						
MKAR	Makanchi Array	7.86	203	Pn	Pn	08 04 53.5	+0.7
	0.1nm,0.3s,baz=24,slow=13,SNR=6.2						
	0.2nm,0.3s						

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*ASRS **20** 08:15:50.0±0.8, 53°.77N×91°.08E, h0^{km}, M3.2, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*NNC **20** 08:15:55.8±2.8, 53°.70N×90°.63E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=22.2km s-min=17.6km az=33.0, Suspected Mining explosion.*

*IDC **20** 08:15:56.4±3.2, 53°.61N×90°.73E, h0^{km}, mbtmp3.5/3, ML3.1/3, Error ellipse: s-maj=27.6km s-min=22.8km az=44.0*

ISC 20 08:15:58.5±4.0, 53°.6N±0°.1×90°.5E±0°.2, h0^{km}, n9, σ1ˢ01/12, 3C-7D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.37	278	⇑Pg	Pb	08 16 58.2	-0.8
	2.5nm,0.7s						
ZAA0				⇑Lg	Lg	08 17 47.5	
	10nm,0.8s						
ZALV	Zalesovo Beam	3.37	278	Pn	Pn	08 16 53.6	+1.3
	2.5nm,0.3s,baz=94,slow=11,SNR=23						
ZALV				Lg	Lg	08 17 48.3	
	4.4nm,0.3s,baz=90,slow=26,SNR=9.4						
	4.9nm,0.3s						
KURK	Kurchatov	7.84	253	⇑Pn	Pn	08 17 53.1	-0.6
	1.1nm,0.8s						
KURK				⇓Sn	Sn	08 19 24.5	+1.4
	3.8nm,0.7s						
KURK				⇓Lg	Lg	08 20 11.4	
	29nm,1.3s						
KURBB	Kurchatov Arra	7.94	253	Pn	Pn	08 17 54.9	-0.1
	0.3nm,0.3s,baz=66,slow=15,SNR=8.7						
KURBB				Sn	Sn	08 19 25.2	-0.2
	0.1nm,0.3s,baz=66,slow=26,SNR=8.6						
KURBB				Lg	Lg	08 20 12.8	
	0.1nm,0.3s,baz=62,slow=30,SNR=7.4						
	1.5nm,0.3s						
KURBB	Kurchatov Arra	7.94	253	⇓Pn	Pn	08 17 54.1	-0.8
	1.8nm,0.3s						
KURBB				⇓Sn	Sn	08 19 24.9	-0.4
	32nm,0.7s						
KURBB				⇓Lg	Lg	08 20 14.9	
	90nm,1.1s						
MK31	Makanchi Array	8.60	221	Pn	Pn	08 18 04.3	+0.1
	1.8nm,0.7s,baz=247,slow=9.7,SNR=13						
MK31				⇓Sn	Sn	08 19 43.8	+1.9
	4.4nm,0.8s,baz=34,slow=21,SNR=3.1						
MK31				⇓Lg	Lg	08 20 33.4	
	20nm,1.0s,baz=45,slow=30,SNR=4.3						
MKAR	Makanchi Array	8.60	221	Pn	Pn	08 18 04.2	0.0
	0.5nm,0.3s,baz=29,slow=12,SNR=14						
MKAR				Sn	Sn	08 19 41.6	-0.3
	0.3nm,0.3s,baz=37,slow=25,SNR=4.5						
MKAR				Lg	Lg	08 20 32.6	
	0.2nm,0.3s,baz=34,slow=32,SNR=6.1						
	1.3nm,0.5s						
SONM	Songino Array	11.62	113	Lg	Lg	08 21 50.6	
	baz=295,slow=26						
I34MN	SONGINO INFRAS	11.65	114	I	I	09 22 30.0	
	baz=313,slow=328,SNR=0.4						

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*SJA **20** 08:31:54.3±0.7, 26°.34S×70°.52W, h63^{km}±7^{km}, ML4.0, MW3.8*

*NEIC **20** 08:31:55.5±1.5, 26°.35S±0°.02×70°.53W±0°.10, h59^{km}±10^{km}, mb4.5/4, Mwr3.8/38, Mwr4.0(GUC), Error ellipse: s-maj=13.1km s-min=1.4km az=103.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$5.74; M$_{\theta\theta}$0.80; M$_{\phi\phi}$-6.54; M$_{r\theta}$3.13; M$_{\theta\phi}$2.17; M$_{\phi r}$-0.48; Fault plane solution: M$_0$7.27000×10^{14} NP1:ϕ_s8.59000°, δ44.98000°, λ127.93000°. NP2:ϕ_s140.82000°, δ56.11000°, λ58.44000°. Principal axes: T 7.2714, Plg63.0000°, Azm355.0000°; N -0.0024, Plg26.0000°, Azm160.0000°; P -7.2690, Plg6.0000°, Azm253.0000°;*

*NEIC **20** 08:31:55.6, 26°.35S×70°.51W, h59^{km}*

*GUC **20** 08:31:55.1±0.8, 26°.39S×70°.45W, h55^{km}±5^{km}, ML4.0*

*IDC **20** 08:31:56.8±3.9, 26°.19S×70°.22W, h56^{km}±26^{km}, mb4.2/1, mbtmp4.0/4, ML3.8/3, Error ellipse: s-maj=73.4km s-min=19.0km az=88.0*

ISC 20 08:31:54.8±0.8, 26°.36S±0°.04×70°.61W±0°.06, h61^{km}±7^{km}, n87, σ1ˢ31/91, 3C-5D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC01	Pan de Azucar	0.21	3		Pn	08 32 05.4	+1.0
AC01	Pan de Azucar	0.21	3	*e*P	Pn	08 32 05.2	+0.8
AC01				*e*S	Sn	08 32 11.8	+0.5
AC01				IAML		08 32 12.1	
	comp=E,34µm,0.2s						
AC06	Mina Casimiro	1.02	167		Pn	08 32 13.5	+0.3
AC06	Mina Casimiro	1.02	167	*e*P	Pn	08 32 13.1	0.0
AC06				*e*S	Sn	08 32 26.2	-0.6
AC06				IAML		08 32 28.5	
	comp=E,5µm,0.3s						
GO03	Copiapo	1.27	165		Pn	08 32 16.8	+0.2
GO03	Copiapo	1.27	165	*e*P	Pn	08 32 16.5	-0.1
GO03				*e*S	Sn	08 32 31.8	-1.0
GO03				IAML		08 32 37.8	
	comp=E,3µm,0.2s						
GO03	Copiapo	1.27	165	*i* P	Pn	08 32 16.8	+0.2
GO03				*i* S	Sn	08 32 34.2	+1.4
GO03				IAML		08 32 37.8	
	comp=Z,2µm,0.3s						
AC02	Maricunga	1.41	110		Pn	08 32 18.0	-0.8
AC02	Maricunga	1.41	110	⇓*i*P	Pn	08 32 18.0	-0.8
AC02				IAML		08 32 34.9	
	comp=N,5µm,0.2s						
GO02	Mina Guanaco	1.51	38		Pn	08 32 19.8	-0.1
GO02	Mina Guanaco	1.51	38	⇓*i*P	Pn	08 32 19.7	-0.1
GO02	Mina Guanaco	1.51	38	*i* P	Pn	08 32 19.9	-0.1
GO02				*i* S	Sn	08 32 39.2	+0.5
GO02				IAML		08 32 42.8	
	comp=Z,4µm,0.1s						
PB14	IPOC Station P	1.74	6		Pn	08 32 24.2	+1.2
PB14	IPOC Station P	1.74	6	*e*P	Pn	08 32 24.1	+1.0
PB14	IPOC Station P	1.74	6	*i* P	Pn	08 32 24.0	+1.0
PB14				*i* S	Sn	08 32 45.8	+1.5
PB14				IAML		08 32 51.2	
	comp=Z,1µm,0.4s						
AC04	Llanos de Chal	1.88	193		Pn	08 32 25.7	+1.0
AC04	Llanos de Chal	1.88	193	*e*P	Pn	08 32 25.5	+0.8
AC04				IAML		08 32 57.1	
	comp=E,884nm,0.3s						
AC05	El Transito	2.48	173		Pn	08 32 35.2	+2.2
AC05	El Transito	2.48	173	*e*P	Pn	08 32 35.1	+2.0
AC05				IAML		08 33 25.2	
	comp=N,584nm,0.5s						
AC05	El Transito	2.48	173	*i* P	Pn	08 32 35.0	+2.0
AC05				IAML		08 33 13.5	
	comp=Z,511nm,0.9s						
LCO	Las Campanas	2.64	182		Pn	08 32 36.5	+1.2
LCO	Las Campanas	2.64	182	⇓*e*P	Pn	08 32 36.1	+0.9
LCO	Las Campanas	2.64	182	*i* P	Pn	08 32 36.2	+0.9
LCO				IAML		08 33 19.8	
	comp=Z,1µm,0.8s						
PB10	IPOC Station P	2.83	1		Pn	08 32 38.8	+1.1
PB10	IPOC Station P	2.83	1	*e*P	Pn	08 32 37.7	+0.1
PB10				IAML		08 33 24.4	
	comp=E,337nm,0.3s						
PB10	IPOC Station P	2.83	1	*i* P	Pn	08 32 38.7	+1.0
PB10				IAML		08 33 27.4	
	comp=Z,252nm,0.4s						
VCA	Vinchina	3.19	138	⇓*e*P	Pn	08 32 45.3	+2.7
VCA	Vinchina	3.19	138	*i* P	Pn	08 32 44.3	+1.7
VCA				IAML		08 33 32.1	
	comp=Z,157nm,0.3s						
TINO	Tinogasta	3.20	123	*i* P	Pn	08 32 42.9	+0.2
TINO				*i* S	Sn	08 33 21.9	+2.2
PB05	IPOC Station P	3.51	6		Pn	08 32 47.0	-0.1
PB05	IPOC Station P	3.51	6	⇑*e*P	Pn	08 32 46.8	-0.3
PB05				IAML		08 33 47.3	
	comp=E,358nm,0.6s						
CO05	La Serena	3.59	189		Pn	08 32 48.9	+1.0
CO05	La Serena	3.59	189	*e*P	Pn	08 32 47.7	-0.2
CO01	Juntas del Tor	3.63	173		Pn	08 32 50.9	+2.1
CO01	Juntas del Tor	3.63	173	*e*P	Pn	08 32 50.6	+1.8
CO01	Juntas del Tor	3.63	173	*i* P	Pn	08 32 50.9	+2.1
CO01				IAML		08 33 56.5	
	comp=Z,179nm,0.8s						
AGUA	GUANDACOL	3.64	149	*i* P	Pn	08 32 50.4	+1.6
AGUA				IAML		08 33 45.5	
	comp=Z,234nm,0.5s						
PB06	IPOC Station P	3.76	15		Pn	08 32 50.6	+0.1
PB06	IPOC Station P	3.76	15	⇑*e*P	Pn	08 32 50.5	+0.1
GO04	Tololo Observa	3.80	182		Pn	08 32 52.4	+1.3
AROD	Rodeo	3.92	165	*i* P	Pn	08 32 55.4	+2.6
AF01	San Pedro de A	4.05	34		Pn	08 32 56.1	+1.5
AF01	San Pedro de A	4.05	34	*e*P	Pn	08 32 57.0	+2.4
PB03	IPOC Station P	4.36	11		Pn	08 32 58.0	-0.7
PB03	IPOC Station P	4.36	11	*e*P	Pn	08 32 58.0	-0.7
CO06	Fray Jorge	4.39	192	*e*P	Pn	08 32 58.6	-0.4
ACCO	Cerro Coronel	4.43	162	*i* P	Pn	08 33 02.0	+2.3
ACLC	CERRO LA CRUZ	4.45	134	*i* P	Pn	08 33 00.8	+0.8
ACLC				IAML		08 34 02.6	
	comp=Z,33nm,1.4s						
CO03	El Pedregal	4.46	181		Pn	08 33 00.4	+0.3
CO03	El Pedregal	4.46	181	*e*P	Pn	08 33 00.8	+0.8
CO03	El Pedregal	4.46	181	⇓*i*P	Pn	08 33 01.1	+1.1
CO03				IAML		08 34 14.7	
	comp=Z,158nm,0.9s						
PB07	IPOC Station P	4.66	8	*e*P	Pn	08 33 02.1	-0.8
PB09	IPOC Station P	4.71	16		Pn	08 33 04.0	+0.5
PB09	IPOC Station P	4.71	16	*e*P	Pn	08 33 04.2	+0.6
AHML	Horco Molle	4.74	96	⇑*e*P	Pn	08 32 51.4	-12
CYA	Choya	4.75	117	*e*P	Pn	08 33 02.9	-1.0
CO02	Combarbal	4.84	184		Pn	08 33 05.5	+0.3
CO02	Combarbal	4.84	184	*e*P	Pn	08 33 05.3	+0.1
CO02	Combarbal	4.84	184	*i* P	Pn	08 33 05.2	+0.1
CO02				IAML		08 34 33.7	
	comp=Z,234nm,0.3s						
PB02	IPOC Station P	5.06	8		Pn	08 33 07.6	-0.7
AVFE	Valle Fertil	5.10	148	*i* P	Pn	08 33 09.7	+0.9
AVFE				IAML		08 34 15.9	
	comp=Z,189nm,0.8s						
PB01	IPOC Station P	5.39	11		Pn	08 33 11.6	-1.2
PATCX	Punta Patache	5.53	4	Pn	Pn	08 33 15.2	+0.6
CFA	Coronel Fontan	5.62	159	P	Pn	08 33 17.6	+1.7
	comp=Z,2.8nm,0.3s,baz=343,slow=15,SNR=28						
CFA				S	Sn	08 34 23.3	+4.2
	comp=Z,31nm,0.7s,baz=163,slow=14,SNR=5.6						
	comp=Z,7.4nm,0.3s						
VA06	Catapilco	6.21	185	Pn	Pn	08 33 22.6	-1.2
VA03	San Esteban	6.38	180	Pn	Pn	08 33 25.3	-1.0
GO01	Chusmiza	6.79	11		Pn	08 33 31.3	-1.0
MT02	Curacav	6.89	184	Pn	Pn	08 33 31.7	-1.5
BO04	La Punta	7.60	180	Pn	Pn	08 33 41.9	-1.1
BO01	Tunca	8.02	183	Pn	Pn	08 33 47.6	-0.9
PB16	IPOC Station P	8.05	8	Pn	Pn	08 33 50.2	+0.6
H03N1	Juan Fernandez	10.08	224	T	T	08 44 26.3	
	baz=50,slow=72,SNR=134						
H03N2	Juan Fernandez	10.09	224	T	T	08 44 16.3	
	baz=50,slow=72,SNR=123						
H03N3	Juan Fernandez	10.10	224	T	T	08 44 25.2	
	baz=50,slow=72,SNR=157						
LPAZ	La Paz	10.29	13	P	Pn	08 34 20.4	+0.1
	comp=Z,0.2nm,0.3s,baz=194,slow=6.9,SNR=5.5						
	comp=Z,0.5nm,0.3s						
LPAZ	La Paz	10.29	13		Pn	08 34 20.1	-0.2
BI02	San Fabin de	10.29	183	Pn	Pn	08 34 19.7	0.0
SIV	San Ignacio	13.62	43	P	Pn	08 35 00.8	-4.4
	comp=Z,0.1nm,0.3s,baz=239,slow=9.0,SNR=15						
	comp=Z,1.7nm,0.4s						
TRQA	Tornquist	13.75	150	Pn	Pn	08 35 05.1	-1.8
VAO	Valinhos	21.74	86	P	P	08 36 40.1	-1.1
MACA	Manacapuru-AM	24.95	24	P	P	08 37 13.5	+0.8
MACA				IAmb	IAmb	08 37 14.6	
	comp=Z,11nm,0.5s						
SNAA	Sanae	58.24	160	P	P	08 41 42.1	-0.5
SNAA				IAmb	IAmb	08 42 23.9	
	comp=Z,4.5nm,1.2s						
DBIC	Dimbokro	71.64	73	P	P	08 43 10.1	-0.3
TORD	Torodi Ar. Bea	80.45	70	P	P	08 44 01.2	+0.7
	comp=Z,3.0nm,0.7s,baz=216,slow=4.6,SNR=13						
	comp=Z,3.0nm,0.7s						
KURBB	Kurchatov Arra	146.20	36	PKPbc	PKPdf	08 51 28.2	+1.3
	comp=Z,1.0nm,0.2s,baz=305,slow=3.3,SNR=5.6						
ZALV	Zalesovo Beam	146.99	27	PKPbc	PKPbc	08 51 30.5	+0.3
	comp=Z,5.1nm,0.7s,baz=301,slow=4.4,SNR=12						
MKAR	Makanchi Array	150.42	39	PKPbc	PKiKP	08 51 41.0	+0.9
	comp=Z,2.5nm,0.7s,baz=321,slow=2.1,SNR=19						

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*IDC **20** 08:42:23.0±1.7, 30°.83S×177°.60W, h0^{km}, mb4.4/3, mbtmp4.4/4, ML3.3/1, MS3.4/1, Error ellipse: s-maj=46.4km s-min=23.6km az=122.0*

ISC 20 08:42:26.8±1.8, 30°.73S±0°.09×177°.6W±0°.3, h35^{km}, n15, σ1ˢ92/11, mb4.4/3, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.50	349	Pn	Pn	08 42 52.4	+1.1
	126nm,0.3s,baz=90,slow=20,SNR=2.5						
RAO				Sn	Sn	08 43 06.3	-3.4
	561nm,0.3s,baz=263,slow=21,SNR=7.3						
URZ	Urewera	8.69	209	Pn	Pn	08 44 28.7	-1.4
	0.3nm,0.3s,baz=184,slow=18,SNR=1.7						
URZ				Sn	Sn	08 46 05.3	-1.5
	3.0nm,0.3s,baz=212,slow=20,SNR=14						
	26nm,1.1s						
STKA	Stephens Creek	34.76	257	P	P	08 49 16.4	+2.5
	11nm,0.7s,baz=100,slow=11,SNR=26						
	11nm,0.7s						
ASAR	Alice Springs	43.45	267	P	P	08 50 27.2	+0.5
	0.6nm,0.4s,baz=106,slow=7.3,SNR=28						
ASAR				LR	LR	09 07 29.5	
	comp=Z,43nm,18.5s,baz=136,slow=35						
	0.6nm,0.4s						
WRA	Warramunga Arr	44.47	272	P	P	08 50 35.1	+0.2
	3.8nm,0.6s,baz=111,slow=8.2,SNR=17						
	3.8nm,0.6s						
H03S2	Juan Fernandez	79.98	123	T	T	10 23 43.3	
	baz=238,slow=74,SNR=9.2						
H03S1	Juan Fernandez	79.99	123	T	T	10 23 45.0	
	baz=238,slow=74,SNR=9.3						
H03S3	Juan Fernandez	80.00	123	T	T	10 23 48.2	
	baz=238,slow=74,SNR=9.7						
H03N3	Juan Fernandez	80.17	123	T	T	10 23 59.6	
	baz=241,slow=73,SNR=8.0						
H03N2	Juan Fernandez	80.17	123	T	T	10 23 54.4	
	baz=241,slow=73,SNR=5.6						
H03N1	Juan Fernandez	80.19	123	T	T	10 23 57.5	
	baz=241,slow=73,SNR=11						
FINES	FINESS Array B	145.58	340	PKPbc	PKiKP	09 02 02.4	-2.3
	2.2nm,0.5s,baz=37,slow=3.9,SNR=11						
NOA	NORSAR Array B	149.13	352	PKPbc	PKiKP	09 02 12.8	+0.8
	0.6nm,0.6s,baz=16,slow=4.3,SNR=3.7						
HFS	Hagfors	149.64	349	PKPbc	PKiKP	09 02 13.7	+0.6
	2.0nm,0.8s,baz=318,slow=1.9,SNR=1.8						
AKASG	Malin Array Be	151.78	323	PKPbc	PKiKP	09 02 18.2	+0.5
	0.3nm,0.3s,baz=46,slow=2.8,SNR=2.5						

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*TAP **20** 08:43:44.7, 24°.27N×122°.64E, h50^{km}, ML2.9, C*

*JMA **20** 08:43:44.6±0.1, 24°N±2°×122°.6E±0°.4, h46^{km}±2^{km}, MV2.3/10, NW OFF ISHIGAKIJIMA IS*

ISC 20 08:43:43.0±1.2, 24°.17N±0°.03×122°.67E±0°.02, h17^{km}±10^{km}, n58, σ1ˢ02/88, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS4	EOS4	0.33	262	*e*P	Pn	08 43 54.4	+1.7
EOS4				*e*S	Sn	08 44 01.3	+2.5
EOS3	EOS3	0.34	290	*e*P	Pn	08 43 54.4	+1.3
EOS3				*e*S	Sn	08 44 01.9	+2.4
JYNG	Yonagunijimaku	0.38	41	P	Pn	08 43 54.4	+0.8
JYNG				S	Sn	08 44 01.6	+1.1
YOJ	Yonaguni jima	0.42	47	*i* P	Pn	08 43 55.0	+0.7
YOJ				S	Sn	08 44 02.5	+0.8
YOJ	Yonaguni jima	0.42	47	P	Pn	08 43 55.0	+0.7
YOJ				S	Sn	08 44 02.5	+0.8
EOS2	EOS2	0.47	302	*e*P	Pn	08 43 55.8	+1.0
ESAO	Su ao	0.86	298	*e*P	Pb	08 43 59.9	+0.5
EWUT	Wuta	0.86	289	*e*P	Pb	08 44 00.0	+0.6
TWC	Suao	0.87	300	P	Pg	08 44 00.3	+0.4
TWC				*e*S	Sb	08 44 11.3	+0.4
IRIF	Iriomote-Funau	0.98	80	P	Pn	08 44 02.6	+0.7
IRIF				S	Sn	08 44 15.9	+0.5
NACB	Ninganchiao	0.98	270	*i* P	Pb	08 44 01.7	+0.2
NACB				S	Sb	08 44 14.2	-0.1
TWD	Chiawan	0.99	265	P	Pb	08 44 01.6	-0.1
TWD				S	Sb	08 44 14.3	0.0
TWB1	Santiao Chiao	1.04	323	*e*S	Sb	08 44 14.8	-1.2
TWE	Neicheng	1.07	301	*e*P	Pg	08 44 03.6	0.0
SHUL	Shoufeng	1.08	250	S	Sb	08 44 17.5	+0.4
ETLH	Xiulin Townshi	1.09	272	P	Pb	08 44 03.2	-0.2
ETM	Tongmen	1.10	260	P	Pb	08 44 03.1	-0.4
LATG	Datong	1.11	289	*e*P	Pb	08 44 03.9	+0.1
TIPB	Shuangxi	1.11	316	P	Pb	08 44 03.4	-0.4
TIPB				*e*S	Sb	08 44 16.8	-1.2
ENTT	Nioudou	1.11	295	*e*P	Pg	08 44 04.4	-0.1
FUSB	Fushanzhiwuyua	1.15	301	P	Pb	08 44 04.6	+0.1
SXI1	Grass Mountain	1.17	322	P	Pn	08 44 04.1	-0.6
SXI1				*e*S	Sb	08 44 18.1	-1.7
NNSB	Datong	1.21	283	*e*P	Pn	08 44 05.1	-0.1
NNSB				*e*S	Sb	08 44 20.0	-0.8
NWF	Wu-fen Shan	1.21	318	*e*P	Pn	08 44 04.8	-0.4
NWF				*e*S	Sb	08 44 18.8	-2.1
WFSB	Wu-fen Shan	1.21	318	*e*P	Pn	08 44 04.7	-0.5
WFSB				*e*S	Sb	08 44 18.8	-2.0
JKRS	Kuro-shima	1.22	87	P	Pg	08 44 06.7	+0.1
JKRS				S	Sg	08 44 23.0	+0.4
NWLT	Wulai	1.23	300	*e*P	Pn	08 44 05.8	+0.4
NWLT				*e*S	Sb	08 44 20.3	-1.0
YHNB	Yeheng	1.28	293	P	Pn	08 44 06.6	+0.4
YHNB				*e*S	Sb	08 44 22.4	-0.6
WHF	Hehuan Shan	1.29	269	*e*P	Pn	08 44 06.7	+0.1
WHF				S	Sb	08 44 23.1	-0.2
NSK	Sanguang	1.30	293	*e*P	Pn	08 44 07.0	+0.5
HGSD	Ruisui	1.33	240	*e*P	Pn	08 44 06.7	0.0
JIJ	Ishigaki jima	1.35	81	P	Pn	08 44 07.7	+0.6
JIJ				*e*S	Sn	08 44 24.1	-0.6
TWT	Tachien	1.37	274	*e*P	Pb	08 44 08.7	+0.5
OWD	Renai	1.39	261	*e*P	Pn	08 44 07.6	0.0
OWD				*e*S	Sn	08 44 23.7	-1.9
TDCB	Techi	1.39	274	*e*P	Pb	08 44 08.7	+0.2
TDCB				S	Sn	08 44 24.2	-1.4
ZUZH	Zhuzihu	1.43	314	P	Pn	08 44 07.5	-0.6
WUSB	Renai	1.43	263	P	Pn	08 44 08.7	+0.4
WUSB				S	Sn	08 44 26.4	-0.4
VWDT	VWDT	1.46	254	P	Pn	08 44 09.3	+0.7
VWDT				*e*S	Sn	08 44 26.3	-0.9
YULB	Yu-li	1.48	239	P	Pn	08 44 09.0	+0.1
NFF	Wufeng Townshi	1.49	288	P	Pb	08 44 10.1	-0.2
JISG	Ishigakijimahi	1.55	74	P	Pn	08 44 10.1	+0.4
JISG				*e*S	Sn	08 44 29.7	+0.2
WHP	Taichung City	1.58	274	*e*P	Pb	08 44 11.7	-0.1
WHP				*e*S	Sn	08 44 30.0	-0.4
FULB	Fuli	1.59	233	*e*S	Sn	08 44 29.4	-1.2
SSLB	Suanglung	1.62	257	*e*P	Pn	08 44 11.2	+0.5
SMLT	Sun Moon Lake	1.65	260	*e*P	Pn	08 44 12.0	+0.8
EHD	Haiduan	1.69	233	*e*P	Pn	08 44 10.3	-1.4
ECS	Chishang	1.71	232	*e*S	Sn	08 44 32.9	-0.6
WHYT	Xinyi Township	1.73	255	*e*P	Pb	08 44 13.7	-0.6
ALS	Alishan	1.83	249	P	Pb	08 44 15.4	-0.8
ALS				*e*S	Sn	08 44 36.8	-0.1
CHN5	Tsauling	1.91	253	*e*P	Pb	08 44 16.8	-0.6
CHN5				*e*S	Sn	08 44 39.9	+1.3
WCKO	Fanlu	2.03	249	*e*S	Sn	08 44 42.5	+1.2
TPUB	Ta-pu	2.06	246	*e*P	Pb	08 44 19.1	-0.8
TPUB				*e*S	Sn	08 44 44.0	+1.8
WTP	Ta-pu	2.10	244	S	Sn	08 44 44.9	+1.7
TWK	Hsinying	2.19	246	*e*S	Sn	08 44 47.2	+1.7
CHN1	Nanshi	2.20	244	*e*P	Pn	08 44 20.5	+1.8
CHN1				*e*S	Sn	08 44 47.6	+2.1
SNST	Tainan City	2.21	245	*e*S	Sn	08 44 47.7	+2.0
MASBT	Mashibuluo	2.43	231	*e*P	Pb	08 44 24.8	-1.5
MASBT				S	Sb	08 44 54.7	-1.3
PHUB	P'eng-hu	2.91	258	*e*S	Sn	08 45 01.6	-1.5

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*IDC **20** 08:53:47.8±1.3, 59°.40N×30°.53W, h0^{km}, mb3.7/8, mbtmp3.7/9, ML3.9/1, Error ellipse: s-maj=33.4km s-min=24.3km az=173.0*

ISC 20 08:53:50.2±1.1**, 59°.4N**±0°.2×**30°.6W**±0°.1**, h16**^{km}**, n9,** σ**0^s.92**/9**,** **mb3.9**/7**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORG	Borgarnes	6.91	35	Pn	Pn	08 55 31.1	+0.5
	2.1nm,0.3s,baz=218,slow=7.8,SNR=12						
	19nm,0.7s						
ARCES	ARCESS Array B	25.22	43	P	P	08 59 14.1	-0.6
	1.2nm,0.8s,baz=282,slow=6.1,SNR=7.3						
	1.2nm,0.8s						
YKA	Yellowknife Ar	38.23	312	P	P	09 01 07.5	-1.2
	0.2nm,0.7s,baz=56,slow=8.8,SNR=3.1						
	0.2nm,0.7s						
AKTO	Aktyubinsk	48.05	59	P	P	09 02 28.5	+0.3
	0.9nm,0.4s,baz=309,slow=8.2,SNR=2.8						
	0.9nm,0.4s						
PDAR	Pinedale Array	49.22	287	P	P	09 02 38.8	+1.1
	0.4nm,0.8s,baz=48,slow=9.0,SNR=4.3						
	0.4nm,0.8s						
BVAR	Borovoye Array	51.25	49	P	P	09 02 52.8	+0.2
	0.6nm,0.4s,baz=316,slow=8.2,SNR=4.6						
	0.6nm,0.4s						
TORD	Torodi Ar. Bea	51.99	139	P	P	09 02 58.4	-0.1
	0.7nm,1.0s,baz=357,slow=8.7,SNR=4.1						
	0.7nm,1.0s						
KURBB	Kurchatov Arra	56.25	46	P	P	09 03 27.9	-1.3
	1.1nm,0.7s,baz=324,slow=6.9,SNR=2.5						
	1.1nm,0.7s						
MKAR	Makanchi Array	60.82	46	P	P	09 04 01.3	+0.2
	1.3nm,0.7s,baz=342,slow=4.5,SNR=13						
	1.3nm,0.7s						

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*IDC **20** 08:54:22.4±1.1, 59°.30N×30°.42W, h0^{km}, mb4.0/10, mbtmp4.0/11, ML3.8/1, Error ellipse: s-maj=28.5km s-min=19.9km az=15.0*

*NEIC **20** 08:54:24.2±1.9, 59°.5N±0°.1×30°.5W±0°.2, h10^{km}±2^{km}, mb4.5/10, Error ellipse: s-maj=22.2km s-min=14.1km az=164.0*

ISC 20 08:54:24.6±0.7**, 59°.4N**±0°.1×**30°.51W**±0°.07**, h16**^{km}**, n29,** σ**0^s.90**/30**, mb4.1**/12**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORG	Borgarnes	6.89	35	Pn	Pn	08 56 05.8	+1.0
	1.8nm,0.3s,baz=240,slow=8.1,SNR=2.4						
BORG				Sn	Sn	08 57 21.6	-1.2
	1.0nm,0.3s,baz=105,slow=21,SNR=7.3						
	42nm,1.0s						
BORG	Borgarnes	6.89	35		Pn	08 56 04.3	-0.6
ANGG	Ammassalik, Gr	7.07	335	Pn	Pn	08 56 05.7	-1.5
NRS	Narsarsuaq	7.63	290	Pn	Pn	08 56 14.9	0.0
DRLN	Deer Lake	18.59	249	P	P	08 58 39.3	-1.5
DRLN				IAmb	IAmb	08 59 21.9	
	comp=Z,74nm,1.5s						
NBO00	NORSAR Array S	20.34	68	P	P	08 58 59.1	-0.7
NBO00				IAmb	IAmb	08 59 00.3	
	comp=Z,25nm,1.2s						
NAO01	NORSAR Array S	20.44	68	P	P	08 58 59.5	-1.4
NAO01				IAmb	IAmb	08 59 20.0	
	comp=Z,26nm,1.4s						
ESDC	Sonseca Array	25.88	128	P	P	08 59 56.2	+0.7
	comp=Z,2.6nm,1.0s,baz=342,slow=9.2,SNR=5.6						
	comp=Z,2.6nm,1.0s						
H62A	Milan	28.55	257	P	P	09 00 19.2	-0.1
AKASG	Malin Array Be	34.20	78	P	P	09 01 08.0	-0.9
	comp=Z,0.3nm,0.4s,baz=302,slow=9.0,SNR=1.5						
	comp=Z,0.3nm,0.4s						
YKA	Yellowknife Ar	38.25	312	P	P	09 01 44.4	+1.0
	comp=Z,0.7nm,0.8s,baz=53,slow=8.2,SNR=5.9						
	comp=Z,0.7nm,0.8s						
ILAR	Eielson Array	47.26	328	P	P	09 02 57.7	+1.3
	comp=Z,1.1nm,1.1s,baz=39,slow=5.0,SNR=6.5						
	comp=Z,1.1nm,1.1s						
ILAR	Eielson Array	47.26	328	P	P	09 02 56.0	-0.4
AKTO	Aktyubinsk	48.02	59	P	P	09 03 01.9	-0.6
	comp=Z,1.9nm,0.6s,baz=311,slow=3.8,SNR=5.1						
	comp=Z,1.9nm,0.6s						
TIXI	Tiksi	48.47	9	P	P	09 03 06.7	+1.1
	comp=Z,3.7nm,0.3s,baz=18,slow=5.8,SNR=5.2						
	comp=Z,3.7nm,0.3s						
TIXI	Tiksi	48.47	9	P	P	09 03 06.4	+0.8
TIXI				IAmb	IAmb	09 03 07.7	
	comp=Z,4.7nm,0.9s						
TGL	Tana Glacier	49.24	323	P	P	09 03 12.8	+0.9
PDAR	Pinedale Array	49.25	287	P	P	09 03 12.7	+0.4
	comp=Z,1.2nm,1.1s,baz=65,slow=8.4,SNR=3.8						
	comp=Z,1.2nm,1.1s						
PDAR	Pinedale Array	49.25	287	P	P	09 03 13.0	+0.7
J20K	Nowinta River	49.60	331	P	P	09 03 15.7	+1.3
J20K				IAmb	IAmb	09 03 56.5	
	comp=Z,8.9nm,1.5s						
AB31	Akbulak array	49.73	59	P	P	09 03 15.8	+0.2
ABKAR	Akbulak array	49.73	59	P	P	09 03 16.2	+0.6
HAYD	Hayden	49.81	284	P	P	09 03 16.7	+0.2
BVAR	Borovoye Array	51.23	50	P	P	09 03 27.6	+0.8
	comp=Z,1.2nm,0.7s,baz=319,slow=5.9,SNR=4.2						
	comp=Z,1.2nm,0.7s						
KURK	Kurchatov	56.19	46	P	P	09 04 03.5	+0.4
KURK				IAmb	IAmb	09 04 05.6	
	comp=Z,4.2nm,0.8s						
KURBB	Kurchatov Arra	56.23	46	P	P	09 04 03.7	+0.3
	comp=Z,1.2nm,0.2s,baz=320,slow=7.7,SNR=6.9						
	comp=Z,1.2nm,0.2s						
MKAR	Makanchi Array	60.80	47	P	P	09 04 35.9	+0.5
	comp=Z,1.8nm,0.7s,baz=338,slow=5.8,SNR=8.1						
	comp=Z,1.8nm,0.7s						
MKAR	Makanchi Array	60.80	47	P	P	09 04 35.0	-0.4
QSPA	South Pole Qui	149.28	180	PKPbc	PKPbc	09 14 09.9	-0.9
	comp=Z,4.8nm,1.0s,baz=293,slow=2.5,SNR=4.6						

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*KOLA **20** 08:58:52.1, 78°.34N×7°.79E, h0^{km}, ML2.3, Error ellipse: s-maj=15.1km s-min=10.2km az=110.0, Greenland sea,Knipovich ridge, middle*

*BER **20** 08:58:52.6±2.2, 78°.38N×6°.90E, h10^{km}, Mw3.2, ML2.7(DNK), Confirmed Earthquake*

*DNK **20** 08:58:52.3±2.5, 78°.59N×6°.61E, h15^{km}, ML2.6, Presumed earthquake*

ISC 20 08:58:51.0±1.7**, 78°.31N**±0°.07×**6°.68E**±0°.04**, h27**^{km}±16^{km}**,** **n17,** σ**1^s.85**/34**, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	1.21	57	P	Pn	08 59 12.7	+0.6
KBS				S	Sn	08 59 25.3	-2.3
KBS	Kingsbay	1.21	57	P	Pb	08 59 13.1	-0.2
KBS				S	Sn	08 59 24.4	-3.2
KBS	Kingsbay	1.21	57	*e*P	Pb	08 59 13.0	-0.2
KBS				*e*S	Sn	08 59 25.5	-2.1
KBS				IAML		08 59 27.8	
	comp=Z,89nm,0.3s						
KBS	Kingsbay	1.21	57	*i* P	Pb	08 59 12.9	-0.3
KBS				*i*		08 59 13.9	
KBS				*i* S	Sn	08 59 25.4	-2.1
BRBB	Barentsburg B	1.56	94	P	Pn	08 59 18.0	+1.1
BRBB				S	Sn	08 59 35.8	-0.5
BRBB	Barentsburg B	1.56	94	P	Pn	08 59 17.6	+0.6
BRBB				S	Sn	08 59 34.8	-1.4
BRBB	Barentsburg B	1.56	94	*e*P	Pb	08 59 18.3	-0.8
BRBB				*e*		08 59 19.7	
SPA0	Spitsbergen Ar	1.99	89	*e*P	Pb	08 59 25.1	-1.3
SPA0				*e*	S	08 59 47.6	+0.9
SPA0				*e*S	S	08 59 47.6	+0.9
SPA0				IAML		08 59 52.4	
	comp=Z,7.4nm,0.3s						
SPITS	Spitsbergen Ar	1.99	89	P	Pb	08 59 25.1	-1.4
SPITS				S	Sn	08 59 47.4	+0.7
SPITS	Spitsbergen Ar	1.99	89	P	Pb	08 59 25.0	-1.4
SPITS				S	Sn	08 59 47.0	+0.3
HSPB	Hornsund (broa	2.31	120	P	Pn	08 59 28.8	+1.6
HSPB				S	Sn	08 59 53.9	-0.8
HSPB	Hornsund (broa	2.31	120	P	Pn	08 59 28.8	+1.6
HSPB				S	Sn	08 59 53.0	-1.7
HSPB	Hornsund (broa	2.31	120	*e*P	Pn	08 59 29.0	+1.8
HSPB				*e*S	Sn	08 59 54.1	-0.6
HSPB				IAML		08 59 59.7	
	comp=Z,4.4nm,0.2s						
HOPEN	Hopen	4.39	105	*e*P	Pn	08 59 57.3	+1.6
HOPEN				*e*S	Sn	09 00 44.8	-1.0
HOPEN				IAML		09 00 52.4	
	comp=Z,9.8nm,0.7s						
DAG	Danmarks Havn	5.66	267	*e*P	Pn	09 00 16.1	+2.9
DAG				*e*S	Sn	09 01 14.8	-2.4
DAG	Danmarks Havn	5.66	267	*i* P	Pn	09 00 16.1	+2.9
DAG				*i* S	Sn	09 01 15.7	-1.4
DAG				IAML		09 01 28.6	
	comp=Z,22nm,3.1s						
DBG	Daneborg	7.47	251	*e*P	Pn	09 00 41.5	+3.6
DBG				*e*S	Sn	09 01 57.9	-3.5
DBG				IAML		09 03 35.2	
	comp=Z,33nm,6.2s						

BER 20 08:59:51.4±0.6**, 78°.49N**×**10°.64E, h10**^{km}**, ML1.0, Confirmed Earthquake, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	0.51	29	*e*P	Pg	09 00 00.5	-0.9
KBS				IAML		09 00 01.6	
	comp=Z,9.6nm,0.2s						
BRBB	Barentsburg B	0.83	117	*e*P	Pg	09 00 05.8	-1.5
SPA0	Spitsbergen Ar	1.21	102	*e*P	Pb	09 00 12.9	-1.4

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*IDC **20** 09:00:55.5±0.8, 59°.40N×30°.54W, h0^{km}, mb4.1/16, mbtmp4.1/18, ML3.7/2, MS3.9/50, Error ellipse: s-maj=20.4km s-min=15.9km az=17.0*

*GCMT **20** 09:00:56.6±0.3, 59°.80N±0°.05×30°.24W±0°.05, h18^{km}±1^{km}, MW4.8/80, Moment Tensor Solution. s9,c9; s80,c102; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.51±.17; $M_{\theta\theta}$-0.04±.12; $M_{\phi\phi}$1.55±.11; $M_{r\theta}$1.43±.35; $M_{\theta\phi}$0.32±.06; $M_{\phi r}$0.17±.21; Best double couple: $M_0$2.04400×10^{16} NP1:ϕ_s349.00000°, δ42.00000°, λ-136.00000°. NP2: ϕ_s223.00000°, δ62.00000°, λ-57.00000°. Principal axes: T 1.7040, Plg11.0000°, Azm290.0000°; N 0.6780, Plg29.0000°, Azm26.0000°; P -2.3830, Plg59.0000°, Azm181.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **20** 09:00:58.6±1.2, 59°.7N±0°.1×30°.44W±0°.06, h10^{km}±2^{km}, mb4.4/18 Error ellipse: s-maj=20.1km s-min=3.0km az=192.0*

ISC 20 09:00:58.9±0.7**, 59°.6N**±0°.1×**30°.56W**±0°.07**, h16**^{km}**, n83,** σ**0^s.99**/50**, mb4.2**/23**, MS3.9**/46**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORG	Borgarnes	6.73	36	Pn	Pn	09 02 37.8	+1.0
	2.3nm,0.3s,baz=233,slow=4.2,SNR=8.7						
BORG				Sn	Sn	09 03 53.7	+0.8
	1.2nm,0.3s,baz=100,slow=22,SNR=10						
BORG				LR	LR	09 04 40.8	
	comp=Z,1μm,18.3s,baz=244,slow=33						
	21nm,0.8s						
BORG	Borgarnes	6.73	36		Pn	09 02 36.4	-0.4
ANGG	Ammassalik, Gr	6.86	335	Pn	Pn	09 02 38.5	-0.1
SFJD	Kangerlussuaq	11.62	318	LR	LR	09 07 29.3	
	comp=Z,958nm,21.4s,baz=126,slow=33						
SUMG	Summit	13.39	350	Pn	Pn	09 04 07.1	-1.2
EKA	Eskdalemuir Ar	15.29	94	Pn	Pn	09 04 33.4	-0.3
	baz=297,slow=7.4						
EKA				LR	LR	09 09 20.9	
	comp=Z,629nm,19.3s,baz=276,slow=33						
	7.5nm,1.0s						
FRB	Frobisher Bay	18.29	299	LR	LR	09 11 25.8	
	comp=Z,724nm,18.8s,baz=88,slow=34						
SCHQ	Schefferville	20.03	272	LR	LR	09 11 42.9	
	comp=Z,376nm,20.3s,baz=86,slow=32						
NOA	NORSAR Array B	20.48	68	LR	LR	09 12 22.8	
	comp=Z,245nm,21.4s,baz=285,slow=33						
TULEG	Thule	21.46	337	P	P	09 05 44.2	-1.9
TULEG				IAmb	IAmb	09 05 59.5	
	comp=Z,13nm,1.3s						
HFS	Hagfors	21.91	69	P	P	09 05 53.4	+2.3
	comp=Z,3.6nm,0.8s,baz=230,slow=11,SNR=3.7						
HFS				LR	LR	09 12 54.0	
	comp=Z,279nm,21.6s,baz=268,slow=33						
ARCES	ARCESS Array B	25.06	44	P	P	09 06 21.5	-0.4
	comp=Z,4.6nm,1.0s,baz=283,slow=8.2,SNR=5.6						
ARCES				LR	LR	09 14 23.9	
	comp=Z,142nm,18.1s,baz=280,slow=32						
	comp=Z,4.6nm,1.0s						
ARCES	ARCESS Array B	25.06	44	P	P	09 06 20.8	-1.1
ARCES				IAmb	IAmb	09 06 56.0	
	comp=Z,22nm,1.4s						
ESDC	Sonseca Array	26.05	128	P	P	09 06 30.6	-0.5
	comp=Z,5.1nm,1.0s,baz=323,slow=9.1,SNR=11						
ESDC				LR	LR	09 14 31.1	
	comp=Z,162nm,19.4s,baz=327,slow=32						
	comp=Z,5.1nm,1.0s						
ESDC	Sonseca Array	26.05	128		P	09 06 31.2	0.0
DAVOX	Davos/Dischmat	26.94	100	LR	LR	09 16 04.9	
	comp=Z,228nm,21.0s,baz=261,slow=34						
FINES	FINESS Array B	27.19	61	P	P	09 06 42.6	+1.4
	comp=Z,5.6nm,0.9s,baz=230,slow=11,SNR=4.9						
FINES				LR	LR	09 15 31.1	
	comp=Z,186nm,21.4s,baz=242,slow=32						
	comp=Z,5.6nm,0.9s						
RES	Resolute Bay	27.30	329	LR	LR	09 16 28.8	
	comp=Z,207nm,19.7s,baz=40,slow=34						
RES	Resolute Bay	27.30	329	P	P	09 06 42.2	+0.1
RES				IAmb	IAmb	09 06 44.9	
	comp=Z,8.7nm,1.1s						
GERES	GERESS Array B	27.50	93	LR	LR	09 17 32.5	
	comp=Z,326nm,18.7s,baz=276,slow=36						
VRAC	Vranov	28.68	90	LR	LR	09 18 58.8	
	comp=Z,279nm,18.3s,baz=310,slow=38						
FCC	Fort Churchill	31.46	297	P	P	09 07 19.6	+0.6
MDT	Midelt	31.85	136	LR	LR	09 18 11.7	
	comp=Z,112nm,18.4s,baz=12,slow=33						
SADO	Sadowa	32.44	265	LR	LR	09 19 13.2	
	comp=Z,463nm,19.5s,baz=60,slow=34						
BURAR	Bucovina Array	34.15	85	P	P	09 07 41.9	-1.0
AKASG	Malin Array Be	34.18	78	P	P	09 07 40.9	-2.1
	comp=Z,0.2nm,0.3s,baz=306,slow=8.5,SNR=4.5						
AKASG				LR	LR	09 20 10.0	
	comp=Z,81nm,19.8s,baz=263,slow=34						
	comp=Z,0.2nm,0.3s						
OBN	Obninsk	35.08	67	LR	LR	09 21 05.8	
	comp=Z,266nm,21.5s,baz=249,slow=34						
KEST	Kesra	35.12	115	LR	LR	09 20 29.3	
	comp=Z,308nm,20.7s,baz=300,slow=34						
MLR	Muntele Rosu	35.96	87	LR	LR	09 24 31.3	
	comp=Z,181nm,18.0s,baz=310,slow=39						
VAE	Valguarnera	36.11	107	LR	LR	09 20 33.8	
	comp=Z,218nm,18.2s,baz=320,slow=33						
ULM	Lac du Bonnet	37.20	285	LR	LR	09 22 17.7	
	comp=Z,297nm,19.0s,baz=14,slow=34						
YKA	Yellowknife Ar	38.08	312	P	P	09 08 16.8	+0.5
	comp=Z,2.8nm,1.1s,baz=52,slow=8.1,SNR=25						
YKA				PcP	PcP	09 10 29.6	-1.3
	comp=Z,0.6nm,1.1s,baz=46,slow=2.1,SNR=3.6						
YKA				LR	LR	09 23 17.2	
	comp=Z,234nm,18.1s,baz=78,slow=35						
	comp=Z,2.8nm,1.1s						
YKA	Yellowknife Ar	38.08	312	P	P	09 08 17.0	+0.8
KIRV	Kirov	38.75	55	LR	LR	09 24 49.5	
	comp=Z,107nm,18.6s,baz=304,slow=37						
INK	Inuvik	40.81	326	LR	LR	09 24 07.9	
	comp=Z,129nm,20.0s,baz=25,slow=34						
TKL	Tuckaleechee C	41.61	259	LR	LR	09 24 48.0	
	comp=Z,366nm,18.3s,baz=36,slow=34						
D25K	Kavik River	43.43	332	P	P	09 09 00.5	+0.2
ARTI	Arti	43.88	53	LR	LR	09 26 08.1	
	comp=Z,150nm,18.5s,baz=308,slow=34						
NRIK	Noril'sk	43.95	27	P	P	09 09 05.5	+1.1
	comp=Z,0.7nm,0.4s,baz=319,slow=5.6,SNR=5.1						
	comp=Z,0.7nm,0.4s						
NRIK	Noril'sk	43.95	27		P	09 09 03.2	-1.2
NRIK				IAmb	IAmb	09 09 07.5	
	comp=Z,8.1nm,1.4s						
BRTR	Keskin Array B	44.04	87	LR	LR	09 30 53.7	
	comp=Z,120nm,18.0s,baz=304,slow=41						
D23K	Nanushuk River	44.70	334	P	P	09 09 11.2	+0.9
D23K				IAmb	IAmb	09 09 13.2	
	comp=Z,13nm,1.4s						
KBZ	Khabaz	45.73	76	LR	LR	09 29 13.1	
	comp=Z,111nm,18.1s,baz=334,slow=37						
ILAR	Eielson Array	47.05	328	P	P	09 09 29.7	+0.7
	comp=Z,2.3nm,1.1s,baz=33,slow=6.5,SNR=13						
ILAR				PcP	PcP	09 11 00.2	-0.6
	comp=Z,0.6nm,1.0s,baz=9.8,slow=5.3,SNR=3.6						
ILAR				LR	LR	09 31 32.0	
	comp=Z,120nm,18.1s,baz=164,slow=39						
	comp=Z,2.3nm,1.1s						
ILAR	Eielson Array	47.05	328	P	P	09 09 29.6	+0.5
IMAR	Indian Mountai	47.80	332	P	P	09 09 36.1	+1.3
AKTO	Aktyubinsk	47.93	59	P	P	09 09 36.1	+0.1
	comp=Z,1.6nm,0.7s,baz=325,slow=11,SNR=5.0						
AKTO				LR	LR	09 29 30.9	
	comp=Z,114nm,18.8s,baz=42,slow=36						
	comp=Z,1.6nm,0.7s						
TIXI	Tiksi	48.25	9	P	P	09 09 39.3	+1.2
	comp=Z,3.2nm,0.4s,baz=26,slow=5.2,SNR=13						
TIXI				LR	LR	09 27 07.1	
	comp=Z,43nm,21.9s,baz=23,slow=32						
	comp=Z,3.2nm,0.4s						
TIXI	Tiksi	48.25	9		P	09 09 38.8	+0.7
NEW	Newport	48.62	297	LR	LR	09 29 35.0	
	comp=Z,583nm,18.7s,baz=45,slow=35						
PDAR	Pinedale Array	49.15	287	P	P	09 09 45.5	-0.3
	comp=Z,0.7nm,0.7s,baz=57,slow=6.0,SNR=6.3						
PDAR				LR	LR	09 29 43.8	
	comp=Z,188nm,18.5s,baz=4.0,slow=35						
	comp=Z,0.7nm,0.7s						
PDAR	Pinedale Array	49.15	287	P	P	09 09 44.9	-1.0
AB31	Akbulak array	49.64	59	P	P	09 09 48.8	-0.3
AB31				IAmb	IAmb	09 09 54.4	
	comp=Z,3.4nm,1.1s						
ABKAR	Akbulak array	49.64	59		P	09 09 48.8	-0.4
MMAI	Mount Meron Ar	50.14	91	LR	LR	09 32 47.2	
	comp=Z,38nm,20.8s,baz=311,slow=38						
BBB	Bella Bella	50.40	308	LR	LR	09 30 39.7	
	comp=Z,211nm,18.3s,baz=48,slow=35						
BVAR	Borovoye Array	51.11	50	P	P	09 10 00.3	+0.1
	comp=Z,2.0nm,0.9s,baz=309,slow=7.1,SNR=9.0						
BVAR				LR	LR	09 30 10.3	
	comp=Z,58nm,19.8s,baz=316,slow=34						
	comp=Z,2.0nm,0.9s						
TORD	Torodi Ar. Bea	52.16	139	P	P	09 10 05.3	-3.1
	comp=Z,1.3nm,0.9s,baz=349,slow=9.1,SNR=6.1						
	comp=Z,1.3nm,0.9s						
EIL	Elat	52.59	94	LR	LR	09 36 52.6	
	comp=Z,39nm,18.2s,baz=246,slow=41						
ELK	Elko	53.44	290	LR	LR	09 32 34.3	
	comp=Z,225nm,18.4s,baz=30,slow=36						
ELK	Elko	53.44	290		P	09 10 16.8	-1.2
ELK				IAmb	IAmb	09 10 24.6	
	comp=Z,4.6nm,1.4s						
ANMO	Albuquerque	53.65	278	LR	LR	09 31 34.6	
	comp=Z,208nm,20.1s,baz=40,slow=34						
KDAK	Kodiak Island	54.36	326	LR	LR	09 36 00.7	
	comp=Z,63nm,20.8s,baz=48,slow=39						
ZALV	Zalesovo Beam	55.55	40	P	P	09 10 32.8	0.0
	comp=Z,1.4nm,0.9s,baz=329,slow=7.2,SNR=4.1						
ZALV				LR	LR	09 36 43.6	
	comp=Z,37nm,18.1s,baz=48,slow=39						
	comp=Z,1.4nm,0.9s						
ZALV	Zalesovo Beam	55.55	40	P	P	09 10 31.8	-1.0
KURK	Kurchatov	56.05	46	P	P	09 10 36.1	-0.3
KURK				IAmb	IAmb	09 10 37.5	
	comp=Z,8.6nm,1.0s						
KURBB	Kurchatov Arra	56.09	46	P	P	09 10 36.6	-0.1
	comp=Z,3.3nm,0.8s,baz=322,slow=7.2,SNR=18						
	comp=Z,3.3nm,0.8s						
YBH	Yreka Blue Hor	56.17	296	LR	LR	09 34 17.4	
	comp=Z,31nm,19.2s,baz=42,slow=36						
DBIC	Dimbokro	56.33	149	LR	LR	09 31 38.7	
	comp=Z,161nm,18.8s,baz=358,slow=33						
NVAR	Mina Array Bea	56.72	290	LR	LR	09 33 15.2	
	comp=Z,218nm,19.1s,baz=13,slow=34						
TXAR	Lajitas Array	56.72	272	LR	LR	09 34 34.1	
	comp=Z,144nm,18.3s,baz=28,slow=36						
MDP	Montagnes des	56.95	207	LR	LR	09 29 08.9	

	comp=Z,38nm,20.8s,baz=80,slow=30						
KK31	Karatay Array	59.02	57	P	P	09 10 57.9	+0.4
KK31				IAmb	IAmb	09 11 02.4	
	comp=Z,3.3nm,1.1s						
KKAR	Karatay Array	59.02	57	P	P	09 10 57.4	-0.1
PFO	Pinyon Flats O	59.68	285	LR	LR	09 36 35.1	
	comp=Z,212nm,18.1s,baz=50,slow=36						
MKAR	Makanchi Array	60.66	47	P	P	09 11 08.2	-0.5
	comp=Z,4.0nm,0.9s,baz=334,slow=5.4,SNR=17						
MKAR				LR	LR	09 37 49.7	
	comp=Z,46nm,18.1s,baz=315,slow=36						
	comp=Z,4.0nm,0.9s						
MKAR	Makanchi Array	60.66	47		P	09 11 08.9	+0.1
GAR	Garm	62.30	60		P	09 11 20.2	+0.2
CMIG	Matias Romero	62.47	256	LR	LR	09 38 13.2	
	comp=Z,85nm,21.8s,baz=11,slow=36						
SONM	Songino Array	67.30	30	P	P	09 11 52.3	-0.2
	comp=Z,1.9nm,1.1s,baz=316,slow=6.2,SNR=6.8						
	comp=Z,1.9nm,1.1s						
SONM	Songino Array	67.30	30	P	P	09 11 52.1	-0.4
SONM				IAmb	IAmb	09 11 52.9	
	comp=Z,3.1nm,1.2s						
ULN	Ulaanbaatar	67.44	29	P	P	09 11 53.7	+0.3
QSPA	South Pole Qui	149.51	180	PKPbc	PKPdf	09 20 44.1	+3.0
	comp=Z,1.4nm,0.3s,baz=296,slow=1.6,SNR=5.3						

RSNC 20 09:04:53.0±0.0,7°N±1°×7°5W±°,h18^{km}±3^{km},M2.5,mb3.9, ML2.2,MLv2.9,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTBC	PUERTO BERRIO,	0.40	162	P	Pg	09 04 59.8	-1.5
PTBC				S	Sg	09 05 05.8	-1.0
BRJC	Barrancabermej	0.83	86	P	Pb	09 05 07.5	-1.4
BRJC				S	Sb	09 05 19.3	-0.5
UREC	San Jos de Ur	1.25	311	P	Pn	09 05 13.2	-2.5
UREC				S	Sb	09 05 30.3	-1.7
SPBC	San Pablo de B	1.36	158	P	Pn	09 05 15.6	-1.6
SPBC				S	Sn	09 05 32.7	-2.1
BARC	Barichara	1.43	103	P	Pn	09 05 17.3	-0.9
BARC				S	Sn	09 05 35.7	-1.0
DBBC	Dabeiba	1.62	274	P	Pn	09 05 18.9	-1.9
DBBC				S	Sn	09 05 40.2	-1.1
CBOC	Ciudad Bolivar	1.77	234	P	Pn	09 05 20.9	-2.0
CBOC				S	Sn	09 05 44.3	-0.7
RUSC	La Rusia	1.80	124	P	Pn	09 05 22.8	-0.9
RUSC				S	Sn	09 05 45.2	-1.1
OCAC	Ocana	1.81	44	P	Pn	09 05 22.3	-1.2
OCAC				S	Sn	09 05 45.0	-1.1
PAMC	Pamplona, Colo	1.91	77	P	Pn	09 05 24.5	-0.6
PAMC				S	Sn	09 05 48.7	-0.3
NIZA	Niza - Manizal	2.05	206	P	Pn	09 05 25.6	-1.3
NIZA				S	Sn	09 05 50.5	-1.7
ROSC	El Rosal	2.08	173	P	Pn	09 05 28.5	+1.1
ROSC				S	Sn	09 05 51.3	-1.8
APAC	Apartado, Choc	2.21	296	P	Pn	09 05 29.0	+0.2
APAC				S	Sn	09 05 54.3	-1.4
CHIC	Chingaza	2.43	160	P	Pn	09 05 33.0	+0.8
CHIC				S	Sn	09 06 03.1	+1.5
LCBC	Los crdobas,	2.62	317	P	Pn	09 05 34.9	+0.5
LCBC				S	Sb	09 06 10.2	-1.0
VILC	Villavicencio,	2.93	162	P	Pn	09 05 40.9	+2.1
VILC				S	Sb	09 06 18.5	-1.8
SJCC	San Jacinto, C	3.02	349	P	Pn	09 05 39.7	-0.3
SJCC				S	Sn	09 06 16.8	+1.1
ORTC	Ortega, Tolima	3.06	193	P	Pn	09 05 42.0	+1.4
ORTC				S	Sb	09 06 21.9	-2.3
PRAC	Prado	3.20	185	P	Pn	09 05 43.9	+1.4
PRAC				S	Sb	09 06 25.4	-2.7
CAPC	Capurgana	3.23	302	P	Pn	09 05 41.7	-1.2
CAPC				S	Sn	09 06 18.7	-2.3
SDV	Santo Domingo	4.37	63	P	Pn	09 06 00.7	+2.0
SDV				S	Sn	09 06 49.4	+0.1
URIC	Uribia, Colomb	5.39	28	P	Pn	09 06 13.3	+0.7
URIC				S	Sn	09 07 17.5	+3.2

IDC 20 09:07:41.3±2.6,59°.43N×30°.56W,h0^{km},mb3.6/4, mbtmp3.7/5,ML3.5/1,Error ellipse: s-maj=79.1km s-min=26.7km az=165.0,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORG	Borgarnes	6.87	35	Pn	Pn	09 09 23.9	+0.8
	0.9nm,0.3s,baz=207,slow=9.2,SNR=1.9						
	24nm,0.9s						
YKA	Yellowknife Ar	38.20	312	P	P	09 15 01.9	-0.3
	0.5nm,0.8s,baz=50,slow=8.6,SNR=7.0						
	0.5nm,0.8s						
KURBB	Kurchatov Arra	56.21	46	P	P	09 17 22.8	+0.1
	1.1nm,0.8s,baz=324,slow=6.8,SNR=7.0						
	1.1nm,0.8s						
TXAR	Lajitas Array	56.73	272	P	P	09 17 26.9	+0.2
	0.4nm,0.9s,baz=28,slow=8.8,SNR=3.5						
	0.4nm,0.9s						
MKAR	Makanchi Array	60.78	47	P	P	09 17 54.1	-0.5
	0.7nm,0.7s,baz=346,slow=6.2,SNR=5.7						
	0.7nm,0.7s						

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*KOLA **20** 09:08:05.9,78°.31N×7°.90E,h0^{km},ML1.9,Error ellipse: s-maj=15.6km s-min=7.6km az=100.0,Greenland sea,Knipovich ridge, middle*

*DNK **20** 09:08:05.4±1.8,78°.87N×6°.20E,h15^{km},ML1.8,Presumed earthquake*

*BER **20** 09:08:07.7±2.0,78°.37N×7°.26E,h10^{km},Mw3.2, ML2.0(NAO),Confirmed Earthquake*

*NAO **20** 09:08:08.1±1.3,78°.29N×7°.79E,h5^{km}±14^{km},ML2.0*

ISC 20 09:08:04.8±2.3,78°.3N±0°.1×7°.28E±0°.08,h7^{km}±16^{km},n23, σ1^{s}25/41,1C,Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	1.12	54	Pg	Pb	09 08 27.1	+0.7
KBS				Sg	Sg	09 08 39.5	-1.2
KBS	Kingsbay	1.12	54	P	Pb	09 08 26.6	+0.2
KBS				S	Sg	09 08 39.2	-1.4
KBS	Kingsbay	1.12	54	*e*P	Pb	09 08 27.1	+0.7
KBS				*e*S	Sg	09 08 39.5	-1.2
KBS				IAML		09 08 41.6	
	comp=Z,133nm,0.3s						
KBS	Kingsbay	1.12	54	*e*	Pb	09 08 25.3	-1.1
	baz=272,slow=3.8						
KBS				*i* P	Pg	09 08 26.9	+0.7
KBS				*i* S	Sg	09 08 39.2	-1.4
BRBB	Barentsburg B	1.44	95	Pb	Pn	09 08 32.2	+0.9
BRBB				Sb	Sn	09 08 48.7	-1.7
BRBB	Barentsburg B	1.44	95	P	Pn	09 08 32.0	+0.7
BRBB				S	Sn	09 08 49.8	-0.6
BRBB	Barentsburg B	1.44	95	P	Pn	09 08 32.2	+0.9
BRBB				S	Sn	09 08 48.7	-1.7
BRBA	Barentsburg A	1.45	96	Pb	Pn	09 08 32.3	+1.0
BRBA				Sb	Sn	09 08 50.4	-0.2
BRBA	Barentsburg A	1.45	96	P	Pn	09 08 32.3	+1.0
BRBA				S	Sn	09 08 50.4	-0.2
SPA0	Spitsbergen Ar	1.87	89	Pn	Pn	09 08 39.3	+2.2
	baz=284,slow=9.3						
SPA0				Sn	Sn	09 09 02.0	+1.1
	baz=272,slow=22						
SPA0	Spitsbergen Ar	1.87	89	⇑*i*P	Pn	09 08 39.2	+2.1
SPA0				*i* S	Sn	09 09 00.9	0.0
SPA0	Spitsbergen Ar	1.87	89	*e*P	Pn	09 08 39.2	+2.1
SPA0				*e*S	Sn	09 09 02.1	+1.1
SPA0				IAML		09 09 03.0	
	comp=Z,10nm,0.3s						
SPITS	Spitsbergen Ar	1.87	89	P	Pn	09 08 36.8	-0.4
SPITS				S	Sn	09 08 58.8	-2.2
HSPB	Hornsund (broa	2.20	122	Pn	Pn	09 08 43.1	+1.4
HSPB				Sn	Sn	09 09 08.6	-0.5
HSPB	Hornsund (broa	2.20	122	P	Pn	09 08 42.8	+1.0
HSPB				S	Sn	09 09 08.0	-1.1
HSPB	Hornsund (broa	2.20	122	*e*P	Pn	09 08 42.6	+0.9
HSPB				*e*S	Sn	09 09 08.1	-1.1
HSPB	Hornsund (broa	2.20	122	*e*P	Pn	09 08 43.0	+1.4
HSPB				*e*S	Sn	09 09 08.1	-1.1
HSPB				IAML		09 09 13.8	
	comp=Z,8.1nm,0.3s						
HOPEN	Hopen	4.26	106	Pn	Pn	09 09 11.2	+1.2
HOPEN				Sn	Sn	09 09 58.4	-1.5
HOPEN	Hopen	4.26	106	*e*P	Pn	09 09 11.3	+1.2
HOPEN				Sn	Sn	09 09 58.4	-1.5
DAG	Danmarks Havn	5.79	268	*e*P	Pn	09 09 30.6	-0.3
DAG	Danmarks Havn	5.79	268	*i* P	Pn	09 09 30.0	-0.9
DAG				*e*S	Sn	09 10 28.8	-8.6
DAG				IAML		09 10 32.1	
	comp=Z,3.6nm,0.3s						
DBG	Daneborg	7.58	252	*e*S	Sn	09 11 12.7	-8.8
OMEGA	Omega	7.61	52	P	Pn	09 09 51.5	-4.4
OMEGA				*e*S	Sn	09 11 08.2	-14
	comp=Z,9.3nm,3.2s						

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*DNK **20** 09:09:03.4±4.8,78°.01N×7°.95E,h15^{km},ML1.6,Presumed earthquake*

*BER **20** 09:09:07.9±1.9,78°.43N×6°.98E,h10^{km},Mw3.7, Confirmed Earthquake*

*KOLA **20** 09:09:08.8,78°.33N×8°.30E,h0^{km},ML2.5,Error ellipse: s-maj=13.2km s-min=6.6km az=90.0,Greenland sea,Knipovich ridge, middle*

ISC 20 09:09:07.0±3.2,78°.38N±0°.06×7°.8E±0°.1,h8^{km}±13^{km},n10, σ0^{s}59/19,Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	0.99	54	P	Pn	09 09 27.4	+0.2
KBS				S	Sb	09 09 39.8	+0.4
KBS	Kingsbay	0.99	54	*e*P	Pn	09 09 27.8	+0.6
KBS				*e*S	Sb	09 09 40.1	+0.7
KBS				IAML		09 09 42.2	
	comp=Z,253nm,0.3s						
KBS	Kingsbay	0.99	54	*e*	Pg	09 09 25.0	-0.9
	baz=208,slow=9.3						
KBS				*i* P	Pn	09 09 27.6	+0.4
KBS				*e*S	Sb	09 09 39.9	+0.4
BRBB	Barentsburg B	1.35	99	P	Pg	09 09 32.8	0.0
BRBB				S	Sg	09 09 50.3	+0.1
BRBB	Barentsburg B	1.35	99	*e*P	Pg	09 09 33.1	+0.3
BRBA	Barentsburg A	1.36	101	*e*P	Pb	09 09 32.9	+0.3
SPA0	Spitsbergen Ar	1.76	92	*e*P	Pb	09 09 39.5	-0.1
SPA0				IAML		09 09 57.1	
	comp=Z,35nm,0.3s						
SPA0				*e*S	Sg	09 10 03.3	-0.3
SPITS	Spitsbergen Ar	1.76	92	P	Pb	09 09 39.8	+0.2
SPITS				S	Sb	09 10 02.1	+0.3
HSPB	Hornsund (broa	2.16	126	P	Pn	09 09 43.5	+0.3
HSPB				S	Sn	09 10 09.1	-1.1
HSPB	Hornsund (broa	2.16	126	*e*P	Pn	09 09 43.7	+0.5
HSPB				*e*S	Sn	09 10 09.1	-1.1

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*DNK **20** 09:11:30.5±1.9,78°.53N×6°.61E,h15^{km},ML2.1,Presumed earthquake*

*BER **20** 09:11:31.8±2.6,78°.40N×7°.02E,h10^{km},Mw3.4, Confirmed Earthquake*

*KOLA **20** 09:11:37.6,78°.37N×9°.51E,h0^{km},ML2.5,Error ellipse: s-maj=13.8km s-min=6.8km az=80.0,Greenland sea*

ISC 20 09:11:27.8±1.6,78°.39N±0°.08×6°.85E±0°.04,h14^{km}±11^{km}, n12,σ2^{s}60/22,Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	1.14	60	P	Pn	09 11 51.7	+2.4
KBS				S	Sg	09 12 03.0	-1.6
KBS	Kingsbay	1.14	60	*e*P	Pn	09 11 52.1	+2.8
KBS				*e*S	Sb	09 12 04.1	+0.1
KBS				IAML		09 12 06.8	
	comp=Z,206nm,0.3s						
KBS	Kingsbay	1.14	60	*e*	Pn	09 11 50.8	+1.5
	baz=253,slow=5.1						
KBS				*i* P	Pn	09 11 52.1	+2.8
KBS				*i* S	Sb	09 12 04.2	+0.2
BRBB	Barentsburg B	1.54	98	P	Pg	09 11 57.1	-0.2
BRBB				S	Sn	09 12 09.4	-5.1
BRBB	Barentsburg B	1.54	98	*e*P	Pg	09 11 57.3	0.0
BRBB				*e*S	Sn	09 12 14.0	-0.6
BRBA	Barentsburg A	1.55	99	*e*P	Pg	09 11 57.5	-0.1
SPA0	Spitsbergen Ar	1.96	92	*e*P	Pg	09 12 04.2	-1.1
SPA0				*e*S	Sn	09 12 26.5	+1.6
SPA0				IAML		09 12 29.0	
	comp=Z,20nm,0.3s						
SPITS	Spitsbergen Ar	1.96	92	P	Pg	09 12 04.3	-1.0
SPITS				S	Sn	09 12 24.0	-0.9
HSPB	Hornsund (broa	2.33	123	*e*P	Pn	09 12 08.1	+2.5
HSPB				*e*S	Sn	09 12 33.9	-0.1
HSPB				IAML		09 12 38.8	
	comp=Z,8.6nm,0.3s						
DAG	Danmarks Havn	5.70	266	*e*P	Pn	09 12 56.1	+4.1
DAG				*e*S	Sn	09 13 54.2	-2.8
DAG	Danmarks Havn	5.70	266	*e*S	Sn	09 13 54.7	-2.3
DAG				IAML		09 13 57.1	
	comp=Z,6.7nm,0.2s						
DBG	Daneborg	7.52	251	*e*S	Sn	09 14 36.6	-5.2

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*SDD **20** 09:17:03.0±4.6,18°.46N×72°.75W,h15^{km}±48^{km},MD3.7, ML3.8,MW3.7,Presumed earthquake*

*OSPL **20** 09:17:04.7±2.8,18°.46N×72°.64W,h0^{km}±9^{km},ML2.8, Presumed earthquake*

*SSNC **20** 09:17:06.0±1.6,18°.61N×72°.61W,h5^{km}±10^{km},MD3.1, ML2.8*

ISC 20 09:16:58.5±1.3,18°.45N±0°.05×72°.81W±0°.02,h3^{km}±11^{km}, n29,σ1^{s}30/54,17C-1D,Haiti region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIDR	Jimani	0.92	87	⇓*e*Pg	Pn	09 17 18.0	-0.3
JIDR				IAML		09 17 31.6	
	comp=N,10µm,0.3s						
LOBH	Bahia de las A	1.26	117	*i* P	Pn	09 17 24.1	+1.1
LOBH				*e*S	Sn	09 17 39.6	-0.8
LOBH				IAML		09 17 40.7	
	comp=Z,174nm,0.2s						
LODU1	El Espartillar	1.27	94	*i* P	Pn	09 17 24.2	+1.0
LODU1				*e*S	Sn	09 17 39.9	-0.9
LODU1				IAML		09 17 46.4	
	comp=Z,1µm,0.4s						
LONE3	El Aguacate, B	1.29	83	*i* P	Pb	09 17 24.1	+0.5
LONE3				*e*S	Sb	09 17 39.9	-0.7
LONE3				IAML		09 17 49.1	
	comp=Z,214nm,0.8s						
NEDR	Neiba UASD	1.32	88	⇑*e*Pg	Pb	09 17 25.0	+1.0
NEDR				⇑*e*Sg	Sn	09 17 42.6	+0.6
NEDR				IAML		09 17 50.4	
	comp=N,3µm,0.3s						
PODR	Polo	1.48	101	*i* P	Pg	09 17 28.1	+1.2
PODR				*e*S	Sn	09 17 49.3	+3.1
LOVI	El Cajuil, Ovi	1.52	115	*i* P	Pg	09 17 28.5	+0.9
LOVI				*e*S	Sg	09 17 47.4	+0.1
LOVI				IAML		09 17 49.5	
	comp=Z,293nm,2.4s						
SDDR	Presa de Saban	1.54	69	*e*P	Pg	09 17 29.1	+1.1
SDDR				*e*S	Sn	09 17 45.3	-2.2
SDDR				IAML		09 17 53.2	
	comp=Z,139nm,0.3s						
SDDR				IAML		09 17 53.5	
	comp=Z,102nm,0.4s						
SDDR	Presa de Saban	1.54	69	⇑*e*Pg	Pg	09 17 28.4	+0.4
SDDR				⇑*e*Sg	Sg	09 17 49.0	+0.9
SDDR				IAML		09 17 53.8	
	comp=N,5µm,0.3s						
SDDR	Presa de Saban	1.54	69	*i* P	Pg	09 17 28.4	+0.4
SDDR				*e*S	Sg	09 17 48.9	+0.8
SDDR				IAML		09 17 51.8	
	comp=Z,103nm,0.5s						
MCDR	Montecristi	1.81	37	⇑*e*Pg	Pg	09 17 33.5	+0.4
MCDR				⇑*e*Sg	Sb	09 17 55.2	0.0
MCDR				IAML		09 18 01.1	
	comp=N,2µm,0.3s						
LOPP1	Punta Rusia, P	2.07	47	*i* P	Pg	09 17 38.2	+0.1
LOPP1				IAML		09 18 15.3	
	comp=Z,165nm,0.5s						
ABDR	Alto Bandera	2.10	80	⇑*i*P	Pg	09 17 38.9	+0.1
ABDR				⇑*e*Sg	Sg	09 18 04.8	-1.3
ABDR				IAML		09 18 19.9	
	comp=N,1.3nm,0.3s						
MASC	Masc	2.18	322	*e*P	Pg	09 17 40.5	+0.2
MASC				*e*S	Sb	09 18 07.2	+1.2
MASC				IAML		09 18 08.9	
	comp=E,40nm,0.5s						
MASC				IAML		09 18 09.0	
	comp=N,42nm,0.7s						
MASC	Masc	2.18	322	*i* P	Pg	09 17 40.8	+0.5
MASC				*e*S	Sg	09 18 08.0	-0.6
MASC				IAML		09 18 10.5	
	comp=Z,24nm,1.7s						
SC01	Santiago de lo	2.20	63	⇑*e*Pg	Pg	09 17 40.6	-0.1
SC01				⇑*e*Sg	Sb	09 18 06.5	-0.2
SC01				IAML		09 18 14.7	
	comp=N,4µm,0.3s						
LUDR	Luperon	2.27	50	⇑*e*Pg	Pg	09 17 41.7	-0.4
LUDR				⇑*e*Sg	Sb	09 18 09.6	+0.9
LUDR				IAML		09 18 12.9	
	comp=E,9µm,0.3s						
QMBU	Quimbuelo	2.57	313	*e*P	Pb	09 17 45.8	+0.6
QMBU				*e*S	Sb	09 18 17.8	+0.5
QMBU				IAML		09 18 24.5	
	comp=E,30nm,0.5s						
QMBU				IAML		09 18 26.2	
	comp=N,43nm,0.2s						
GTBY	Guantanamo Bay	2.62	305	*e*P	Pg	09 17 50.0	+1.2
GTBY				*e*S	Sg	09 18 21.8	-1.1
GTBY	Guantanamo Bay	2.62	305	*i* P	Pg	09 17 48.2	-0.6
GTBY				IAML		09 18 27.1	
	comp=Z,26nm,1.1s						
NADR	Nagua	2.94	72	⇑*e*Pg	Pb	09 17 50.6	-1.0
NADR				⇑*e*Sg	Sb	09 18 27.4	-0.5
NADR				IAML		09 18 32.1	
	comp=N,1µm,0.3s						
MOAC	Moa	2.99	318	*e*P	Pb	09 17 53.4	+1.0
MOAC				*e*S	Sb	09 18 29.1	-0.3
RCC	Rio Carpintero	3.13	300	*e*P	Pb	09 17 55.2	+0.5
RCC				*e*S	Sb	09 18 33.2	-0.1
HATOM	Hato Mayor del	3.27	83	⇑*e*Pg	Pb	09 17 55.9	-1.4
HATOM				⇑*e*Sg	Sb	09 18 35.9	-1.6
HATOM				IAML		09 18 40.7	
	comp=N,212nm,0.3s						
PINC	Pinares de May	3.47	306	*e*P	Pb	09 18 00.8	+0.3
PINC				*e*S	Sb	09 18 39.6	-3.4
MIDR	Miches	3.61	81	⇑*e*Pg	Pb	09 17 59.8	-3.1
MIDR				IAML		09 19 06.0	
	comp=N,23nm,1.6s						
CHIV	Chivirico	3.73	295	*e*P	Pb	09 18 03.4	-1.6
CHIV				*e*S	Sb	09 18 48.3	-2.3
HLGC	Holguin	3.91	309	*e*P	Pb	09 18 09.4	+1.4
HLGC				*e*S	Sb	09 18 56.9	+1.1
LMGC	Las Mercedes	4.28	293	*e*P	Pb	09 18 11.5	-2.8
LMGC				*e*S	Sn	09 18 56.7	+1.8

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*CATAC **20** 09:25:30.2±0.5,14°N±3°×9°1W±°,h2^{km}±1^{km},M2.9/6, MLv2.9/6,Error ellipse: s-maj=7.5km s-min=3.3km az=35.1, confirmed*

*GCG **20** 09:25:30.0±1.1,14°.48N×90°.76W,h1^{km}±6^{km},MD3.5*

ISC 20 09:25:30.6±1.1,14°.23N±0°.07×90°.71W±0°.04,h10^{km},n17, σ2^{s}18/20,2C,Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESSG	Sabana Grande	0.19	323	*i* P	Pg	09 25 33.1	-1.6
FG16	Alotenango, Sa	0.20	77	*i* P	Pg	09 25 32.9	-1.9
FG16				*i* S	Sg	09 25 35.0	-2.8
PCG5	San Vicente Pa	0.32	92	*i* P	Pg	09 25 33.9	-3.2
PCG5				*i* S	Sg	09 25 36.7	-4.8
STG5	El Palmar, Qui	0.64	286	*i* P	Pn	09 25 45.9	+0.1
STG5				*i* S	Sn	09 25 57.8	+1.7
FAME	Alcaldia de Sa	0.78	120	S	Sn	09 26 01.4	+2.0
FAME	Alcaldia de Sa	0.78	120	⇑P	Pn	09 25 48.3	+0.7
NUBE	Las Nubes	0.96	110	*i* P	Pn	09 25 51.9	+1.6
NUBE	Las Nubes	0.96	110	S	Sn	09 26 06.2	+2.1
NUBE	Las Nubes	0.96	110	⇑P	Pn	09 25 51.7	+1.5
MTO3	Montecristo	1.32	83	P	Pg	09 25 56.7	+0.8
ZAFR2	Estanzuela, Za	1.36	75	*i* P	Pn	09 25 53.8	-1.8
ESQI	Esquipulas	1.37	76	P	Pg	09 25 56.9	+0.1
ESQI	Esquipulas	1.37	76	S	Sg	09 26 17.1	+2.5
SARH	Santa Rosa de	1.96	74	P	Pb	09 26 06.7	+0.2
SARH	Santa Rosa de	1.96	74	S	Sg	09 26 34.0	+0.2
PETF	Flores	2.79	17	S	Sn	09 26 51.6	+2.5
PETF	Flores	2.79	17	P	Pn	09 26 15.8	+0.4

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*IDC **20** 09:29:26.9±0.6,59°.39N×30°.46W,h0^{km},mb4.0/24, mbtmp4.1/26,ML3.9/2,MS4.1/77,Error ellipse: s-maj=18.3km s-min=11.2km az=3.0*

*GCMT **20** 09:29:28.6±0.2,59°.51N±0°.03×30°.23W±0°.02,h12^{km}, MW4.9/108,Moment Tensor Solution. s33,c41; s108,c161; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.73±.08; M$_{\theta\theta}$-0.12±.10; M$_{\phi\phi}$2.86±.06; M$_{r\theta}$0.55±.31; M$_{\theta\phi}$0.59±.07; M$_{\phi r}$-0.45±.23; Best double couple: M$_0$2.94400×10^{16} NP1:φ$_s$204.00000°,δ43.00000°, λ-71.00000°. NP2:φ$_s$358.00000°,δ50.00000°, λ-107.00000°. Principal axes: T 2.9920, Plg3.0000°, Azm100.0000°; N -0.0910, Plg13.0000°, Azm9.0000°; P -2.8960, Plg76.0000°, Azm205.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **20** 09:29:29.6±1.4,59°.58N±0°.04×30°.6W±0°.1,h10^{km}±1^{km}, mb4.6/120 Error ellipse: s-maj=12.6km s-min=7.3km az=104.0*

*GFZ **20** 09:29:29.4,59°.37N×30°.52W,h10^{km},MW4.9,Moment Tensor Solution. s93 Moment tensor: M$_{rr}$-2.47; M$_{\theta\theta}$0.46; M$_{\phi\phi}$2.01; M$_{r\theta}$-0.56; M$_{\theta\phi}$0.31; M$_{\phi r}$-0.35; Fault plane solution: NP1:φ$_s$183.00000°,δ40.00000°, λ-103.00000°. NP2:φ$_s$21.00000°,δ51.00000°, λ-77.00000°. Principal axes: T 2.1100, Plg6.0000°, Azm103.0000°; N 0.4800, Plg9.0000°, Azm194.0000°; P -2.5900, Plg79.0000°, Azm340.0000°;*

*DNK **20** 09:29:36.1±3.2,60°.16N×30°.40W,h0^{km}±132^{km},mb5.0, Presumed earthquake*

*BGR **20** 09:29:38.3,58°.64N×28°.81W,h10^{km},mb4.7*

ISC 20 09:29:29.9±0.4,59°.49N±0°.06×30°.46W±0°.05,h16^{km},n230, σ0^{s}92/155,mb4.6/80,MS4.1/73,2C-3D,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORG	Borgarnes	6.79	35	Pn	Pn	09 31 09.1	+0.3
	3.8nm,0.3s,baz=226,slow=6.6,SNR=20						
BORG				Sn	Sn	09 32 23.2	-2.5
	2.0nm,0.3s,baz=103,slow=21,SNR=7.9						
BORG				LR	LR	09 33 14.2	
	comp=Z,3µm,18.6s,baz=238,slow=33						
	38nm,0.8s						
BORG	Borgarnes	6.79	35	Pn	Pn	09 31 08.6	-0.2
BORG	Borgarnes	6.79	35	*i* P	Pn	09 31 09.3	+0.4
ANGG	Ammassalik, Gr	6.99	335	Pn	Pn	09 31 09.4	-2.0
SCO	Scoresbysund	11.60	14	Pn	Pn	09 32 12.8	-1.7
SCO	Scoresbysund	11.60	14	*e*P	Pn	09 32 13.8	-0.7
SFJD	Kangerlussuaq	11.74	318	Pn	Pn	09 32 17.4	+0.8
	0.4nm,0.3s,baz=142,slow=11,SNR=4.1						
SFJD				LR	LR	09 36 09.9	
	comp=Z,3µm,18.1s,baz=122,slow=34						
	8.6nm,0.7s						
SFJD	Kangerlussuaq	11.74	318	Pn	Pn	09 32 15.6	-0.9
SFJD	Kangerlussuaq	11.74	318	*e*P	Pn	09 32 18.4	+1.8
SUMG	Summit	13.52	350	Pn	Pn	09 32 40.2	-0.9
SUMG	Summit	13.52	350	*i* P	Pn	09 32 40.0	-1.1
JMIC	Jan Mayen	14.62	29	LR	LR	09 37 17.3	
	comp=Z,477nm,21.1s,baz=190,slow=32						
EKA	Eskdalemuir Ar	15.23	94	Pn	Pn	09 33 05.7	+1.6
	baz=307,slow=8.9						
EKA				LR	LR	09 38 01.4	
	comp=Z,1µm,18.2s,baz=274,slow=34						
DAG	Danmarks Havn	17.84	9	*e*P	P	09 33 38.0	+0.3
FRB	Frobisher Bay	18.40	300	LR	LR	09 39 57.7	
	comp=Z,2µm,19.2s,baz=102,slow=34						
NEEM	North Greenlan	19.32	347	*e*P	Pn	09 33 57.5	+2.1
NEEM				IAmb	IAmb	09 34 01.5	
	comp=Z,43nm,1.1s						
KUQ	Kuujjuuaa	19.54	283	P	P	09 33 55.9	-0.4
SCHQ	Schefferville	20.09	273	P	P	09 34 03.3	+0.9
	comp=Z,5.7nm,0.7s,baz=125,slow=3.5,SNR=5.1						
SCHQ				LR	LR	09 40 33.9	
	comp=Z,880nm,18.0s,baz=88,slow=33						
	comp=Z,5.7nm,0.7s						
SCHQ	Schefferville	20.09	273	P	P	09 34 02.7	+0.2
NOA	NORSAR Array B	20.48	68	P	P	09 34 06.8	0.0
	comp=Z,1.5nm,1.0s,baz=285,slow=10,SNR=2.8						
NOA				LR	LR	09 40 54.5	
	comp=Z,686nm,20.9s,baz=280,slow=34						
	comp=Z,1.5nm,1.0s						
TULEG	Thule	21.59	337	P	P	09 34 18.5	0.0
TULEG				IAmb	IAmb	09 34 27.7	
	comp=Z,33nm,1.5s						
TULEG	Thule	21.59	337	*e*P	P	09 34 19.8	+1.3

TULEG				IAmb	IAmb	09 34 21.0	
	comp=Z,180nm,2.3s						
HFS	**Hagfors**	21.91	69	P	P	09 34 22.2	+0.2
	comp=Z,5.0nm,0.8s,baz=33,slow=3.4,SNR=5.2						
HFS				LR	LR	09 41 57.5	
	comp=Z,702nm,19.4s,baz=279,slow=34						
	comp=Z,5.0nm,0.8s						
NOR	**Nord**	22.55	5	*e*P	P	09 34 29.1	+0.3
NOR				IAmb	IAmb	09 34 30.9	
	comp=Z,160nm,2.8s						
ILON	**Igloolik, Nuna**	23.49	316		P	09 34 37.3	-1.2
SPB2	**Spitsbergen Ar**	24.01	22	P	P	09 34 42.4	-1.0
ECH	**Echery**	24.54	101	P	P	09 34 47.1	-1.4
ECH				IAmb	IAmb	09 34 49.9	
	comp=Z,16nm,1.1s						
ARCES	**ARCESS Array B**	25.11	43	P	P	09 34 53.6	+0.2
	comp=Z,4.5nm,0.9s,baz=292,slow=6.4,SNR=5.2						
ARCES				LR	LR	09 42 46.9	
	comp=Z,310nm,20.1s,baz=270,slow=32						
	comp=Z,4.5nm,0.9s						
ARCES	**ARCESS Array B**	25.11	43	P	P	09 34 52.8	-0.7
CLL	**Collm**	25.58	89	*e*P	P	09 34 58.0	+0.1
	comp=Z,6.0nm,0.8s						
CLL				AMS	AMS	09 44 00.0	
	comp=N,700nm,18.1s						
CLL				AMS	AMS	09 44 00.0	
	comp=E,800nm,19.1s						
CLL				AMS	AMS	09 44 00.0	
	comp=Z,700nm,20.6s						
GRF	**Grafenberg Arr**	25.65	94	*e*P	P	09 34 59.2	+0.6
	comp=Z,11nm,0.8s,baz=304,slow=9.0						
ESDC	**Sonseca Array**	25.93	128	P	P	09 35 01.9	+0.7
	comp=Z,9.6nm,1.0s,baz=325,slow=9.2,SNR=18						
ESDC				LR	LR	09 43 15.1	
	comp=Z,345nm,19.3s,baz=332,slow=32						
	comp=Z,9.6nm,1.0s						
ESDC	**Sonseca Array**	25.93	128	P	P	09 35 02.2	+1.0
TUE	**Stuetta**	26.82	101	P	P	09 35 08.1	-1.3
TUE				IAmb	IAmb	09 35 24.3	
	comp=Z,16nm,1.3s						
TUE	**Stuetta**	26.82	101	P	P	09 35 09.1	-0.3
	comp=Z,44nm,2.7s						
DAVOX	**Davos/Dischmat**	26.87	100	LR	LR	09 44 47.5	
	comp=Z,577nm,22.0s,baz=262,slow=34						
FINES	**FINESS Array B**	27.20	61	P	P	09 35 13.5	+1.1
	comp=Z,10nm,1.1s,baz=270,slow=8.8,SNR=6.6						
FINES				LR	LR	09 45 21.8	
	comp=Z,437nm,18.1s,baz=271,slow=35						
	comp=Z,10nm,1.1s						
FINES	**FINESS Array B**	27.20	61	P	P	09 35 12.6	+0.2
RES	**Resolute Bay**	27.43	329	LR	LR	09 45 41.3	
	comp=Z,310nm,19.2s,baz=82,slow=35						
RES	**Resolute Bay**	27.43	329		P	09 35 14.8	+0.4
GERES	**GERESS Array B**	27.45	93	P	P	09 35 15.9	+1.1
	comp=Z,0.4nm,0.6s,baz=267,slow=6.6,SNR=1.8						
GERES				LR	LR	09 46 04.4	
	comp=Z,775nm,19.0s,baz=272,slow=36						
	comp=Z,0.4nm,0.6s						
KSP	**Ksiaz**	27.54	87	P	P	09 35 15.9	+0.3
	comp=Z,11nm,1.4s						
DPC	**Dobruska-Polom**	27.85	88	P	P	09 35 18.7	+0.3
	comp=Z,863nmcomp=Z,18nm,1.8s						
VRAC	**Vranov**	28.63	90	LR	LR	09 47 21.5	
	comp=Z,611nm,18.1s,baz=306,slow=38						
ARSA	**Arzberg**	29.41	94	P	P	09 35 31.5	-0.8
ARSA				IAmb	IAmb	09 35 36.2	
	comp=Z,12nm,1.2s						
BLKN	**Baker Lake**	29.99	307	P	P	09 35 37.2	0.0
BLKN				IAmb	IAmb	09 35 43.4	
	comp=Z,12nm,1.4s						
PSZ	**Piszkesteto**	31.20	89	P	P	09 35 48.9	+0.7
PSZ				IAmb	IAmb	09 35 57.1	
	comp=Z,6.1nm,0.9s						
FCC	**Fort Churchill**	31.56	297	P	P	09 35 50.6	-0.5
FCC				IAmb	IAmb	09 35 56.8	
	comp=Z,8.2nm,1.1s						
MD01	**Midelt array s**	31.63	136	P	P	09 35 52.4	+0.3
MORH	**Mrgy, Hungar**	31.70	93	⇓P	P	09 35 53.0	+0.6
MORH	**Mrgy, Hungar**	31.70	93	P	P	09 35 52.0	-0.4
	comp=Z,9.1nm,1.0s						
MDT	**Midelt**	31.73	136	LR	LR	09 47 36.6	
	comp=Z,283nm,19.7s,baz=34,slow=34						
RNPP9	**Sopachiv**	32.06	79	P	P	09 35 55.8	+0.3
RNPP9				pP	pP	09 35 58.9	-1.1
BERU	**Beregovo**	32.40	86	P	P	09 35 58.0	-0.6
SADO	**Sadowa**	32.48	265	LR	LR	09 47 44.8	
	comp=Z,1μm,19.3s,baz=67,slow=34						
BRIU	**Brid**	32.52	86	P	P	09 35 59.6	0.0
STNU	**Starunia**	33.03	84	P	P	09 36 04.1	-0.1
MI30	**MI30,Zelenitsa**	33.61	79	P	P	09 36 09.7	+0.6
	comp=Z,11nm,1.0s						
BZS	**Buzias**	33.62	91	⇓P	P	09 36 10.3	+1.0
LUBAR	**Lubar, Ukraine**	33.91	80	P	P	09 36 11.9	+0.1
BUR08	**Bucovina Ar. S**	34.09	85	P	P	09 36 13.5	+0.1
BUR08				IAmb	IAmb	09 36 23.5	
	comp=Z,9.5nm,1.2s						
BURAR	**Bucovina Array**	34.11	85		P	09 36 14.3	+0.6
BURAR	**Bucovina Array**	34.11	85	⇑P	P	09 36 14.7	+1.0
KMPD	**K-Podol'skiy**	34.12	83	P	P	09 36 12.1	-1.5
AK03	**Malin Array Si**	34.14	78	P	P	09 36 12.9	-0.8
AK11	**Malin Array Si**	34.14	78	P	P	09 36 13.5	-0.2
KIEV	**Kiev**	34.15	78	P	P	09 36 13.3	-0.5
KIEV				IAmb	IAmb	09 36 23.5	
	comp=Z,7.6nm,1.0s						
KIEV	**Kiev**	34.15	78	P	P	09 36 13.4	-0.4
	comp=Z,30nm,1.2s						
AKASG	**Malin Array Be**	34.16	78	P	P	09 36 12.4	-1.5
	comp=Z,3.0nm,0.9s,baz=309,slow=8.2,SNR=9.6						
AKASG				LR	LR	09 49 22.2	
	comp=Z,196nm,18.9s,baz=272,slow=35						
	comp=Z,3.0nm,0.9s						
AKBB	**Malin Array Si**	34.16	78	P	P	09 36 14.2	+0.3
AKBB				IAmb	IAmb	09 36 23.5	
	comp=Z,9.3nm,1.1s						
AKBB	**Malin Array Si**	34.16	78	P	P	09 36 13.4	-0.5
AK01	**Malin Array Si**	34.16	78	P	P	09 36 13.4	-0.5
AK12	**Malin Array Si**	34.16	78	P	P	09 36 13.4	-0.5
AK02	**Malin Array Si**	34.17	78	P	P	09 36 13.5	-0.5
AK08	**Malin Array Si**	34.22	78	P	P	09 36 13.9	-0.5
AK06	**Malin Array Si**	34.22	78	P	P	09 36 13.9	-0.5
AK10	**Malin Array Si**	34.23	78	P	P	09 36 14.1	-0.4
AK07	**Malin Array Si**	34.24	78	P	P	09 36 14.1	-0.5
AK09	**Malin Array Si**	34.24	78	P	P	09 36 14.1	-0.5
GZR	**Gura Zlata**	34.37	90	⇓P	P	09 36 17.2	+1.4
HERR	**Herculane**	34.54	91	⇑P	P	09 36 18.5	+1.3
KEST	**Kesra**	35.02	115	LR	LR	09 49 21.9	
	comp=Z,661nm,20.1s,baz=315,slow=34						
OBN	**Obninsk**	35.09	67	LR	LR	09 49 59.0	
	comp=Z,574nm,20.9s,baz=256,slow=35						
PAOC	**Oil Creek Stat**	35.10	262	P	P	09 36 22.9	+0.8
MLR	**Muntele Rosu**	35.92	87	LR	LR	09 52 55.0	
	comp=Z,436nm,18.1s,baz=315,slow=39						
VAE	**Valguarnera**	36.03	107	LR	LR	09 50 45.5	
	comp=Z,356nm,20.9s,baz=355,slow=36						
A36M	**Sachs Harbour**	36.48	329	P	P	09 36 34.3	+0.8
EPLO	**Experimental L**	36.59	283	P	P	09 36 34.8	-0.1
EPLO				IAmb	IAmb	09 36 38.4	
	comp=Z,8.3nm,0.9s						
ULM	**Lac du Bonnet**	37.28	285	P	P	09 36 39.6	-1.0
	comp=Z,3.3nm,0.8s,baz=82,slow=4.4,SNR=5.1						
ULM				LR	LR	09 50 49.3	
	comp=Z,706nm,18.9s,baz=12,slow=34						
	comp=Z,3.3nm,0.8s						
ULM	**Lac du Bonnet**	37.28	285	P	P	09 36 40.3	-0.4
FFC	**Flin Flon**	37.40	295	P	P	09 36 41.3	-0.4
YKAW1	**Yellowknife Wh**	38.16	312	P	P	09 36 48.0	+0.1
YKAW3	**Yellowknife Wh**	38.16	312		P	09 36 47.5	-0.5
YKAW3				IAmb	IAmb	09 36 50.1	
	comp=Z,15nm,1.4s						
YKA	**Yellowknife Ar**	38.20	312	P	P	09 36 48.1	-0.2
	comp=Z,1.9nm,0.8s,baz=53,slow=8.4,SNR=19						
YKA				LR	LR	09 51 39.1	
	comp=Z,592nm,19.3s,baz=74,slow=35						
	comp=Z,1.9nm,0.8s						
YKA	**Yellowknife Ar**	38.20	312		P	09 36 48.5	+0.3
KIRV	**Kirov**	38.78	55	LR	LR	09 51 32.1	
	comp=Z,235nm,21.2s,baz=307,slow=34						
ALN	**Alexandroupoli**	39.26	92	P	P	09 36 57.1	-0.3
ALN				IAmb	IAmb	09 36 58.9	
	comp=Z,12nm,1.1s						
INK	**Inuvik**	40.93	326	LR	LR	09 53 34.7	
	comp=Z,241nm,19.6s,baz=56,slow=35						
TKL	**Tuckaleechee C**	41.63	259	LR	LR	09 53 10.8	
	comp=Z,782nm,18.8s,baz=36,slow=34						
BELG	**Belogornoye**	41.91	64	LR	LR	09 54 01.1	
	comp=Z,120nm,18.4s,baz=294,slow=35						
E27K	**Coleen River**	43.20	329		P	09 37 29.6	+0.1
E27K				IAmb	IAmb	09 37 31.1	
	comp=Z,16nm,1.5s						
EDM	**Edmonton**	43.52	300		P	09 37 32.7	+0.4
ARTI	**Arti**	43.91	53	LR	LR	09 54 50.1	
	comp=Z,359nm,18.2s,baz=323,slow=35						
ARTI	**Arti**	43.91	53	P	P	09 37 35.1	-0.3
ARTI				IAmb	IAmb	09 37 37.6	
	comp=Z,10nm,1.0s						
BRTR	**Keskin Array B**	44.00	87	P	P	09 37 35.4	-1.0
	comp=Z,1.2nm,0.9s,baz=319,slow=5.3,SNR=7.2						
BRTR				LR	LR	09 56 21.1	
	comp=Z,356nm,21.9s,baz=306,slow=37						
	comp=Z,1.2nm,0.9s						
BRTR	**Keskin Array B**	44.00	87		P	09 37 37.0	+0.6
NRIK	**Noril'sk**	44.03	27	P	P	09 37 37.6	+1.4
	comp=Z,0.8nm,0.4s,baz=335,slow=6.7,SNR=7.8						
NRIK				LR	LR	09 57 34.9	
	comp=Z,82nm,19.4s,baz=340,slow=38						
	comp=Z,0.8nm,0.4s						
NRIK	**Noril'sk**	44.03	27		P	09 37 37.6	+1.4
PBMO	**Poplar Bluff**	44.13	267	IAmb	IAmb	09 37 43.1	
	comp=Z,10nm,1.0s						
BMAR	**Burnt Mountain**	44.53	330		P	09 37 39.8	-0.5
TAM	**Tamanrasset**	44.58	129		P	09 37 41.2	0.0
TOLK	**Toolik Lake Re**	44.83	333	P	P	09 37 42.6	0.0
TOLK				IAmb	IAmb	09 38 00.7	
	comp=Z,8.1nm,0.7s						
LRAL	**Lakeview Retre**	45.33	260	P	P	09 37 46.5	-0.4
EGMT	**Eagleton**	45.49	292	P	P	09 37 49.2	+1.0
KBZ	**Khabaz**	45.71	76	P	P	09 37 48.8	-1.0
	comp=Z,3.6nm,0.9s,baz=298,slow=6.4,SNR=6.0						
KBZ				LR	LR	09 57 35.1	
	comp=Z,300nm,18.1s,baz=326,slow=37						
	comp=Z,3.6nm,0.9s						
BNN	**Bunyan**	45.78	86	P	P	09 37 51.8	+1.2
G23K	**Bananza Creek**	46.45	331	IAmb	IAmb	09 38 08.3	
	comp=Z,7.8nm,1.2s						
SCRK	**Sand Creek**	47.00	326	P	P	09 38 00.5	+0.6
SCRK				IAmb	IAmb	09 38 17.6	
	comp=Z,6.5nm,1.4s						
ILAR	**Eielson Array**	47.18	328	P	P	09 38 00.4	-0.7
	comp=Z,1.6nm,1.1s,baz=30,slow=6.1,SNR=8.8						
ILAR				LR	LR	10 00 22.8	
	comp=Z,133nm,18.4s,baz=31,slow=39						
	comp=Z,1.6nm,1.1s						
ILAR	**Eielson Array**	47.18	328	P	P	09 38 01.2	+0.1
E19K	**Redstone River**	47.49	335	IAmb	IAmb	09 38 28.0	
	comp=Z,9.3nm,1.3s						
AKTO	**Aktyubinsk**	47.95	59	LR	LR	09 58 03.9	
	comp=Z,237nm,19.9s,baz=240,slow=36						
C16K	**Lisburne Hills**	48.39	339	P	P	09 38 10.2	-0.1
SJG	**San Juan**	48.71	228	LR	LR	09 54 49.7	
	comp=Z,75nm,21.5s,baz=14,slow=31						
NEW	**Newport**	48.72	297	LR	LR	09 58 06.7	
	comp=Z,1μm,18.8s,baz=40,slow=35						
LOHW	**Long Hollow**	49.11	289	P	P	09 38 16.6	0.0
LOHW				IAmb	IAmb	09 38 21.3	
	comp=Z,9.5nm,1.4s						
BW06	**Boulder Array**	49.24	287	IAmb	IAmb	09 38 21.1	
	comp=Z,7.9nm,1.3s						
PD31	**Pinedale Array**	49.24	287	IAmb	IAmb	09 38 21.1	
	comp=Z,8.9nm,1.4s						
PDAR	**Pinedale Array**	49.24	287	P	P	09 38 16.8	-0.8
	comp=Z,1.0nm,0.5s,baz=67,slow=7.0,SNR=7.5						
PDAR				LR	LR	09 58 14.4	
	comp=Z,459nm,18.4s,baz=6.0,slow=35						
	comp=Z,1.0nm,0.5s						
ISCO	**Idaho Springs**	49.53	282	IAmb	IAmb	09 38 27.7	
	comp=Z,6.5nm,1.2s						
AB31	**Akbulak array**	49.66	59	IAmb	IAmb	09 38 23.0	
	comp=Z,10nm,1.1s						
ABKAR	**Akbulak array**	49.66	59		P	09 38 20.8	+0.4
MMAI	**Mount Meron Ar**	50.08	91	LR	LR	10 00 55.9	
	comp=Z,130nm,22.0s,baz=306,slow=38						
BBB	**Bella Bella**	50.52	308	LR	LR	09 59 02.5	
	comp=Z,338nm,18.6s,baz=34,slow=35						
WTFS	**Witchita Falls**	50.58	271	P	P	09 38 27.6	+0.1
SDCO	**Great Sand Dun**	51.05	280	P	P	09 38 30.9	-0.5
BORK	**Borovoye**	51.10	50		P	09 38 30.9	-0.3
BORK				IAmb	IAmb	09 38 34.4	
	comp=Z,8.4nm,1.2s						
BVAR	**Borovoye Array**	51.15	50	P	P	09 38 31.3	-0.3
	comp=Z,4.3nm,0.9s,baz=320,slow=8.3,SNR=14						
BVAR				LR	LR	09 59 51.0	
	comp=Z,135nm,19.1s,baz=312,slow=36						
	comp=Z,4.3nm,0.9s						
TORD	**Torodi Ar. Bea**	52.03	139	P	P	09 38 35.8	-2.8
	comp=Z,3.2nm,0.8s,baz=351,slow=9.1,SNR=14						
TORD				LR	LR	09 57 36.3	
	comp=Z,188nm,21.9s,baz=7.5,slow=32						
	comp=Z,3.2nm,0.8s						
TORD	**Torodi Ar. Bea**	52.03	139	P	P	09 38 36.8	-1.8
PV02	**Paradox Valley**	52.31	283	IAmb	IAmb	09 38 46.0	
	comp=Z,14nm,1.3s						
PV16	**Nyswonger Mesa**	52.32	283	P	P	09 38 40.4	-0.4
PV16				IAmb	IAmb	09 38 50.5	
	comp=Z,12nm,1.5s						
PV20	**West Nyswonger**	52.32	283	P	P	09 38 41.8	+1.0
PV20				IAmb	IAmb	09 38 42.1	
	comp=Z,9.6nm,1.4s						
PV10	**Paradox Valley**	52.33	283	IAmb	IAmb	09 39 07.5	
	comp=Z,9.8nm,1.3s						
PV18	**Skein Mesa, Pa**	52.36	283	IAmb	IAmb	09 38 46.4	
	comp=Z,9.0nm,1.1s						
PV13	**Radium Mtn., P**	52.39	283	IAmb	IAmb	09 38 46.7	
	comp=Z,9.4nm,1.2s						
SRU	**San Rafael Swe**	52.49	285	IAmb	IAmb	09 38 47.3	
	comp=Z,7.9nm,1.2s						
TMUT	**Trail Mountain**	52.69	286	IAmb	IAmb	09 38 48.2	
	comp=Z,9.3nm,1.3s						
BRDY	**Brady**	52.82	270	IAmb	IAmb	09 38 47.7	
	comp=Z,8.9nm,1.2s						
MVCO	**Mesa Verde**	52.96	282	P	P	09 38 46.0	+0.4
MVCO				IAmb	IAmb	09 38 51.7	
	comp=Z,11nm,1.4s						
ANMO	**Albuquerque**	53.71	279	LR	LR	10 00 17.9	
	comp=Z,386nm,20.8s,baz=40,slow=34						
TASM	**ASL Pad, Albuq**	53.71	279	P	P	09 38 51.0	-0.1
TASM				IAmb	IAmb	09 38 56.4	
	comp=Z,9.1nm,1.4s						
TASM	**ASL Pad, Albuq**	53.71	279	IAmb	IAmb	09 38 56.4	
	comp=Z,8.6nm,1.3s						
ABQ	**Albuquerque**	53.72	279	IAmb	IAmb	09 38 56.4	
	comp=Z,9.1nm,1.4s						
JCT	**Junction City**	53.88	270	IAmb	IAmb	09 38 55.9	
	comp=Z,6.8nm,0.9s						
OZNA	**Ozona**	54.20	271	P	P	09 38 54.2	-0.4
OZNA				IAmb	IAmb	09 39 00.4	
	comp=Z,9.5nm,1.1s						
KDAK	**Kodiak Island**	54.49	326	LR	LR	10 05 01.5	
	comp=Z,122nm,18.2s,baz=35,slow=39						
LCMT	**Little Creek M**	55.47	285	IAmb	IAmb	09 39 24.7	
	comp=Z,7.6nm,1.5s						
SAND	**Sanderson**	55.49	271	IAmb	IAmb	09 39 09.5	
	comp=Z,6.3nm,1.0s						
ZALV	**Zalesovo Beam**	55.61	40	P	P	09 39 03.5	-0.8
	comp=Z,0.6nm,0.3s,baz=336,slow=6.8,SNR=5.5						
ZALV				LR	LR	10 04 46.0	
	comp=Z,91nm,18.5s,baz=344,slow=38						
	comp=Z,0.6nm,0.3s						
ZALV	**Zalesovo Beam**	55.61	40	P	P	09 39 04.8	+0.5
WUAZ	**Wupatki**	55.73	283	IAmb	IAmb	09 39 06.3	
	comp=Z,12nm,1.4s						
KURK	**Kurchatov**	56.10	46		P	09 39 06.7	-1.2
KURK				IAmb	IAmb	09 39 10.4	
	comp=Z,7.3nm,0.9s						
KURBB	**Kurchatov Arra**	56.14	46	P	P	09 39 07.2	-0.9
	comp=Z,5.2nm,0.9s,baz=320,slow=7.3,SNR=22						
KURBB				LR	LR	10 02 48.5	
	comp=Z,174nm,19.8s,baz=175,slow=36						
	comp=Z,5.2nm,0.9s						
DBIC	**Dimbokro**	56.20	149	LR	LR	10 00 40.7	
	comp=Z,229nm,19.3s,baz=16,slow=33						
YBH	**Yreka Blue Hor**	56.27	296	LR	LR	10 02 48.5	
	comp=Z,73nm,18.6s,baz=36,slow=36						
TXAR	**Lajitas Array**	56.78	272	P	P	09 39 12.9	-0.2
	comp=Z,0.7nm,0.8s,baz=51,slow=9.9,SNR=7.3						
TXAR				LR	LR	10 02 56.4	
	comp=Z,354nm,18.9s,baz=28,slow=35						
	comp=Z,0.7nm,0.8s						
TXAR	**Lajitas Array**	56.78	272	P	P	09 39 11.9	-1.2
NVAR	**Mina Array Bea**	56.81	290	P	P	09 39 13.2	-0.2
	comp=Z,0.4nm,0.7s,baz=58,slow=3.7,SNR=4.3						
NVAR				LR	LR	10 02 20.5	
	comp=Z,295nm,20.3s,baz=22,slow=35						
	comp=Z,0.4nm,0.7s						
NVAR	**Mina Array Bea**	56.81	290	P	P	09 39 11.6	-1.8
SHPR	**Sheep Range**	56.81	287		P	09 39 13.4	0.0
MDP	**Montagnes des**	56.86	207	LR	LR	09 58 01.4	
	comp=Z,100nm,19.8s,baz=16,slow=30						
DUN6	**Lazy B Ranch**	56.94	279	P	P	09 39 14.4	+0.1
GMN	**Gold Mountain**	57.20	289	IAmb	IAmb	09 39 21.7	
	comp=Z,7.3nm,1.4s						
GWY	**Greenwater Val**	57.80	287		P	09 39 20.6	+0.3
GWY				IAmb	IAmb	09 39 26.2	
	comp=Z,9.3nm,1.2s						
YAK	**Yakutsk**	57.85	11	LR	LR	10 02 53.6	
	comp=Z,46nm,18.9s,baz=320,slow=35						
SEY	**Seymchan**	57.89	358	LR	LR	10 04 50.0	
	comp=Z,91nm,19.3s,baz=357,slow=37						
SDV	**Santo Domingo**	58.85	228	LR	LR	10 02 15.1	
	comp=Z,28nm,21.9s,baz=56,slow=34						
KKAR	**Karatay Array**	59.04	57	P	P	09 39 29.9	+1.1
PFO	**Pinyon Flats O**	59.76	286	LR	LR	10 05 06.1	
	comp=Z,439nm,19.1s,baz=54,slow=36						
MAKZ	**Makanchi**	60.58	47		P	09 39 39.1	-0.1
MK31	**Makanchi Array**	60.71	47	P	P	09 39 39.3	-0.9
MK31				IAmb	IAmb	09 39 42.3	
	comp=Z,6.4nm,1.1s						
MKAR	**Makanchi Array**	60.71	47	P	P	09 39 39.2	-0.9
	comp=Z,5.6nm,0.9s,baz=331,slow=5.8,SNR=19						
MKAR				LR	LR	10 04 51.6	
	comp=Z,84nm,18.1s,baz=303,slow=35						
	comp=Z,5.6nm,0.9s						
MKAR	**Makanchi Array**	60.71	47		P	09 39 39.0	-1.1
AAK	**Ala-Archa**	61.10	55	LR	LR	10 06 25.7	
	comp=Z,139nm,18.2s,baz=328,slow=36						
AAK	**Ala-Archa**	61.10	55		P	09 39 44.8	+1.7
AAK				IAmb	IAmb	09 39 46.5	
	comp=Z,9.7nm,1.3s						
MA2	**Magadan**	61.27	359	LR	LR	10 06 40.4	
	comp=Z,63nm,19.3s,baz=0.5,slow=36						
GAR	**Garm**	62.31	60	P	P	09 39 52.3	+1.1
CMIG	**Matias Romero**	62.49	257	LR	LR	10 07 30.0	
	comp=Z,142nm,20.4s,baz=13,slow=36						
JTS	**Las Juntas de**	63.62	243	LR	LR	10 04 34.5	
	comp=Z,170nm,21.0s,baz=326,slow=33						
ROSC	**El Rosal**	63.98	230	LR	LR	10 04 36.4	
	comp=Z,62nm,21.9s,baz=32,slow=33						
LPIG	**La Paz**	64.44	274	LR	LR	10 06 41.5	
	comp=Z,83nm,19.9s,baz=26,slow=35						
WMQ	**Urumqi**	65.22	45	*e*P	P	09 40 11.8	+1.5
WMQ				pP	sP	09 40 19.1	+2.3
WMQ				pmax	pmax		
	comp=Z,34nm,1.1s						
SHEM	**Shemya Is, Ala**	66.39	344	LR	LR	10 10 29.2	
	comp=Z,44nm,19.5s,baz=333,slow=37						
SONM	**Songino Array**	67.38	30	P	P	09 40 23.9	-0.1
	comp=Z,1.3nm,1.1s,baz=314,slow=4.7,SNR=6.0						
	comp=Z,1.3nm,1.1s						
SONM	**Songino Array**	67.38	30		P	09 40 23.8	-0.3
FLOC	**Florencia**	67.47	230		P	09 40 24.8	-0.2
ULN	**Ulaanbaatar**	67.52	29	P	P	09 40 25.4	+0.4
PETK	**Petropavlovsk-**	67.57	355	LR	LR	10 12 02.6	
	comp=Z,73nm,18.5s,baz=15,slow=38						
NIL	**Nilore**	68.07	61	P	P	09 40 29.3	+0.7
HEH	**HeiHe**	69.15	15	*e*P	P	09 40 35.1	+0.2
HEH				pmax	pmax		
	comp=Z,9.0nm,1.6s						
FURI	**Furi**	71.84	104	LR	LR	10 12 21.5	
	comp=Z,85nm,21.8s,baz=54,slow=36						
GTA	**Gaotai**	73.25	38	*e*P	P	09 40 59.9	-0.2
GTA				pP	pP	09 41 04.3	-0.6
GTA				pmax	pmax		
	comp=Z,10.0nm,1.9s						
LODK	**Lodwar**	74.95	109		P	09 41 11.9	+1.6
LODK				IAmb	IAmb	09 41 16.1	
	comp=Z,11nm,1.5s						
HHC	**Hu-ho-hao-te**	75.22	29	*e*P	P	09 41 09.3	-2.2
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,4.1s						
BDFB	**Brasilia**	76.21	197	LR	LR	10 08 40.0	
	comp=Z,96nm,20.3s,baz=75,slow=31						
MBAR	**Mbarara**	76.30	116	LR	LR	10 13 52.2	
	comp=Z,140nm,21.1s,baz=334,slow=35						
ATAH	**Atahualpa**	76.52	229	LR	LR	10 11 54.7	
	comp=Z,63nm,22.0s,baz=11,slow=33						
NNA	**Nana**	80.39	226	LR	LR	10 15 29.5	
	comp=Z,33nm,21.2s,baz=28,slow=34						
NNA	**Nana**	80.39	226	P	P	09 41 38.8	-1.6
LPAZ	**La Paz**	81.48	216	LR	LR	10 16 07.4	
	comp=Z,64nm,19.6s,baz=42,slow=34						
KSRS	**Korea Array**	81.77	17	P	P	09 41 48.5	+1.0
	comp=Z,1.5nm,0.8s,baz=330,slow=4.8,SNR=4.6						
KSRS				LR	LR	10 19 41.9	
	comp=Z,21nm,18.2s,baz=330,slow=37						
	comp=Z,1.5nm,0.8s						
PB16	**IPOC Station P**	83.83	217		P	09 41 59.4	+0.4
NJ2	**Nanjing**	85.32	26	*e*P	P	09 42 05.3	-0.6
PZH	**PanZhiHua**	85.73	42	P	P	09 42 08.1	-0.1
TSUM	**Tsumeb**	87.64	135	LR	LR	10 22 40.2	
	comp=Z,115nm,18.6s,baz=326,slow=36						
LSZ	**Lusaka**	88.22	124	LR	LR	10 23 57.8	
	comp=Z,237nm,19.0s,baz=336,slow=37						
CPUP	**Villa Florida**	88.33	204	LR	LR	10 16 51.8	
	comp=Z,76nm,19.2s,baz=102,slow=32						
MATP	**Matopo**	92.96	126	LR	LR	10 26 25.5	
	comp=Z,188nm,20.2s,baz=348,slow=37						
PALK	**Pallekele**	94.28	68	LR	LR	10 29 56.5	
	comp=Z,89nm,18.1s,baz=343,slow=38						
LBTB	**Lobatse**	95.92	131	LR	LR	10 25 05.8	
	comp=Z,92nm,21.0s,baz=341,slow=35						
BOSA	**Boshof**	99.03	133	LR	LR	10 28 11.1	
	comp=Z,79nm,18.1s,baz=14,slow=36						
TAOE	**Nuku Hiva Isla**	107.54	283	*e*LR	LR	10 19 16.4	
	comp=Z,221nm,29.6s						
RKT	**Rikitea**	116.97	270	*e*LR	LR	10 23 34.4	
	comp=Z,3μm,40.2s						
PPT2	**Papeete2**	119.68	286	*e*LR	LR	10 24 46.0	
	comp=Z,144nm,27.2s						
PPT2				*e*LR	LR	10 24 51.8	
	comp=Z,155nm,21.2s						
TBI	**Tubuai**	124.49	283	*e*LR	LR	10 27 09.4	
	comp=Z,857nm,29.0s						
DZM	**Mont Dzumac**	140.73	335	*e*LR	LR	10 34 31.3	
	comp=Z,74nm,28.6s						
QSPA	**South Pole Qui**	149.39	180	PKPbc	PKPbc	09 49 15.4	-1.0
	comp=Z,14nm,1.0s,baz=258,slow=1.7,SNR=12						
QSPA	**South Pole Qui**	149.39	180		PKPbc	09 49 14.7	-1.8
STKA	**Stephens Creek**	151.88	14	PKPdf	PKPdf	09 49 19.4	+2.4

NIED ***20*** *09:31:16.4, 28°.30N×129°.58E, h33^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.02; M$_{\theta\theta}$-2.02; M$_{\phi\phi}$1.00; M$_{r\theta}$1.84; M$_{\theta\phi}$-0.77; M$_{\phi r}$-0.89; Fault plane solution: M$_0$2.79000×10^{15} NP1: φ$_s$219.00000°, δ37.00000°, λ23.00000°. NP2: φ$_s$110.00000°, δ77.00000°, λ124.00000°.*

JMA ***20*** *09:31:16.4±0.2, 28°.3N±0°.8×129°.6E±0°.5, h33^{km}±1^{km}, MD4.1/26, MV4.1/26, NEAR AMAMI-OSHIMA ISLAND*

JMA Felt III J1 at NEAR AMAMI-OSHIMA ISLAND.

NEIC ***20*** *09:31:17.6±1.9, 28°.29N±0°.09×129°.5E±0°.1, h48^{km}±10^{km}, mb4.6/25, Error ellipse: s-maj=18.9km s-min=9.3km az=126.0*

IDC ***20*** *09:31:17.7±1.7, 28°.25N×129°.56E, h54^{km}±17^{km}, mb3.6/13, mbtmp3.9/16, ML3.7/3, MS3.3/12, Error ellipse: s-maj=26.1km s-min=11.7km az=124.0*

ISC 20 09:31:15.8±0.5**, 28°.24N**±0°.04×**129°.61E**±0°.05**, h34^{km}, n109, σ1^s.36**/99**, mb4.3**/26**, MS3.2**/8**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAM	**Amami Oshima**	0.17	359	P	Pb	09 31 22.1	-0.2
JAM				S	Sb	09 31 26.2	-0.4
JAM	**Amami Oshima**	0.17	359	A	A	09 31 22.1	
	comp=N,125nm,1.9s,comp=E,43nm,0.4s						
JZK	**Kikaishima**	0.33	77	P	Pb	09 31 24.6	+0.6
JZK	**Kikaishima**	0.33	77	A	A	09 31 24.6	
	comp=N,94nm,0.4s,comp=E,61nm,0.4s						
JAMN	**Amaminishikomi**	0.38	270	*i* P	Pn	09 31 24.9	-0.1
JAMN				*e*S	Sb	09 31 31.1	+0.3
JAMN	**Amaminishikomi**	0.38	270	A	A	09 31 24.9	
	comp=N,123nm,0.3s,comp=E,79nm,0.2s						
JTK	**Tokunoshima**	0.74	232	P	Pn	09 31 30.0	+0.3
JTK				S	Sb	09 31 41.2	+1.0
JTK	**Tokunoshima**	0.74	232	A	A	09 31 30.0	
	comp=N,10.0nm,0.5s,comp=E,7.0nm,0.4s						
JTAJ	**Takarajima**	0.98	339	P	Pn	09 31 32.9	-0.2

JOKE	Okinoerabujima	1.27	227	P	Pb	09 31 39.0	-0.2
JYRO	Yoronjima	1.59	221	P	Pn	09 31 43.3	+1.8
JYRO				eS	Sb	09 32 03.9	-0.4
JNN	Nakanoshima	1.61	8	eP	Pn	09 31 41.9	0.0
JNN	Nakanoshima	1.61	8	A	A	09 31 41.9	
	comp=N,5.0nm,5.4s,comp=E,5.0nm,0.9s						
JOW	Kunigami	1.84	221	P	Pn	09 31 46.4	+1.4
	comp=E,291nm,0.3s,baz=128,slow=18,SNR=143						
JOW				S	Sn	09 32 08.6	+1.6
	comp=E,458nm,0.3s,baz=119,slow=26,SNR=8.6						
JOW	Kunigami	1.84	221		Pn	09 31 45.7	+0.8
JOW	Kunigami	1.84	221	P	Pn	09 31 46.2	+1.3
JOW	Kunigami	1.84	221	P	Pn	09 31 46.3	+1.4
JOW	Kunigami	1.84	221	A	A	09 31 46.3	
	comp=N,3.0nm,2.0s,comp=E,3.0nm,1.3s						
JIH	Iheya	1.89	231	P	Pn	09 31 47.2	+1.6
JYAK	Yakushimahirau	2.14	21	P	Pn	09 31 49.8	+0.7
JNTH	Nagotoyohara	2.22	220	P	Pn	09 31 51.6	+1.4
JKC	Kuchinoerabu	2.27	13	eP	Pn	09 31 51.9	+1.0
JKC				eS	Sn	09 32 18.7	+1.0
JMTN	Minamitane	2.43	27	P	Pn	09 31 54.0	+0.9
JMTN				eS	Sn	09 32 23.8	+2.2
JJT3	Tamagusuku3	2.65	218	P	Pn	09 31 57.9	+1.8
JAGN	Aguni-jima	2.67	233	P	Pn	09 31 58.6	+2.2
JTN	Tanegashima 3	2.69	26	P	Pn	09 31 57.7	+1.1
JKDJ	Kitadaitoujima	2.73	146	eP	Pn	09 31 57.1	-0.1
JKDJ				eS	Sn	09 32 29.3	+0.2
JKE	Kume jima 2	3.15	233	eP	Pn	09 32 04.3	+1.3
JKE				eS	Sn	09 32 41.8	+2.3
JSU	Suzuyama	3.34	13	Pn	Pn	09 32 06.4	+0.8
JSU	Suzuyama	3.34	13	P	Pn	09 32 07.6	+2.0
JNU	Nakatsue	4.99	12	P	Pn	09 32 30.6	+2.4
	comp=E,14nm,0.3s,baz=187,slow=11,SNR=108						
JNU				LR	LR	09 34 43.1	
	comp=E,255nm,21.8s,baz=166,slow=41						
	comp=E,38nm,0.3s						
JNU	Nakatsue	4.99	12	Pn	Pn	09 32 29.8	+1.6
JNU	Nakatsue	4.99	12	P	Pn	09 32 31.4	+3.1
JMJ	Miyako jima 2	5.16	230	P	Pn	09 32 31.8	+1.2
JTU	Tsushima	6.27	358	P	Pn	09 32 50.4	+4.6
JMN	Monobe	6.58	33	Pn	Pn	09 32 49.6	-0.6
JMN	Monobe	6.58	33	P	Pn	09 32 51.1	+0.9
YHNB	Yeheng	8.19	246	Pn	Pn	09 33 14.4	+2.0
YHNB	Yeheng	8.19	246	P	Pn	09 33 15.4	+3.1
NACB	Ninganchiao	8.26	242	P	Pn	09 33 14.9	+1.7
YULB	Yu-li	8.91	239	Pn	Pn	09 33 20.1	-2.0
YULB	Yu-li	8.91	239	P	Pn	09 33 23.5	+1.4
SSLB	Suanglung	8.96	242	Pn	Pn	09 33 23.2	+0.3
KSRS	Korea Array	9.30	352	P	Pn	09 33 29.9	+2.5
	comp=E,0.2nm,0.3s,baz=170,slow=14,SNR=6.6						
KSRS				LR	LR	09 37 21.6	
	comp=E,157nm,18.4s,baz=175,slow=39						
	comp=E,2.3nm,0.7s						
TPUB	Ta-pu	9.47	241	Pn	Pn	09 33 29.8	0.0
TPUB	Ta-pu	9.47	241	P	Pn	09 33 32.1	+2.3
INU	Inuyama	9.48	40	Pn	Pn	09 33 31.1	+1.2
INU	Inuyama	9.48	40	P	Pn	09 33 33.4	+3.5
JGF	Kuroka	9.85	40	Pn	Pn	09 33 36.0	+0.9
JHJ	Hachijo jima 2	10.02	58	LR	LR	09 37 01.4	
	comp=E,182nm,21.0s,baz=106,slow=34						
MAJO	Matsushiro	11.01	39	Pn	Pn	09 33 51.4	+0.6
MJAR	Matsushiro Arr	11.01	39	P	Pn	09 33 51.5	+0.6
	comp=E,0.1nm,0.3s,baz=242,slow=14,SNR=5.2						
	comp=E,1.4nm,0.7s						
JCJ	Chichijima	11.21	93	LR	LR	09 38 07.7	
	comp=E,58nm,18.2s,baz=34,slow=36						
CN2	Changchun	15.88	349	P	P	09 35 08.4	+8.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
DAV	Davao City (W)	21.40	191	LR	LR	09 46 19.5	
	comp=Z,46nm,18.1s,baz=348,slow=42						
HILR	Hailar Array B	22.59	343	LR	LR	09 45 23.3	
	comp=Z,88nm,20.3s,baz=100,slow=38						
LZDM	Lanzhou Array	23.22	296	P	P	09 36 21.5	+1.3
	comp=Z,0.9nm,0.3s,baz=140,slow=9.7,SNR=5.6						
	comp=Z,0.9nm,0.3s						
SONM	Songino Array	26.60	324	LR	LR	09 49 17.0	
	comp=Z,43nm,18.8s,baz=88,slow=41						
CMAR	Chiang Mai Arr	29.72	258	LR	LR	09 49 57.1	
	comp=Z,29nm,18.3s,baz=85,slow=38						
PETK	Petropavlovsk-	32.35	32	LR	LR	09 50 35.4	
	comp=Z,50nm,21.3s,baz=271,slow=36						
H11N2	WAKE ISLAND Hy	34.99	96	T	T	10 15 28.4	
	baz=290,slow=74,SNR=10						
H11N1	WAKE ISLAND Hy	34.99	96	T	T	10 15 28.3	
	baz=290,slow=74,SNR=5.4						
H11N3	WAKE ISLAND Hy	35.01	96	T	T	10 15 29.4	
	baz=290,slow=74,SNR=8.8						
MKAR	Makanchi Array	41.15	310	P	P	09 38 55.7	-1.1
	comp=Z,0.3nm,0.4s,baz=93,slow=10,SNR=5.2						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	41.15	310	P	P	09 38 56.0	-0.8
ZALV	Zalesovo Beam	41.43	321	P	P	09 38 57.7	-1.1
	comp=Z,0.8nm,0.4s,baz=97,slow=12,SNR=1.9						
	comp=Z,0.8nm,0.4s						
ZALV	Zalesovo Beam	41.43	321	P	P	09 38 57.4	-1.4
ARSB	Arslanbob	47.53	301	P	P	09 39 45.9	-2.1
ARSB				IAmb	IAmb	09 39 49.0	
	comp=Z,11nm,1.2s						
NRIK	Noril'sk	47.73	341	P	P	09 39 47.8	-1.1
	comp=Z,1.6nm,0.5s,baz=121,slow=11,SNR=5.1						
	comp=Z,1.6nm,0.5s						
NRIK	Noril'sk	47.73	341	P	P	09 39 48.1	-0.8
DRK	Karamyk	48.56	299	P	P	09 39 55.3	-0.9
BVAR	Borovoye Array	49.62	317	P	P	09 40 03.4	-0.4
	comp=Z,0.8nm,0.3s,baz=79,slow=7.9,SNR=5.1						
	comp=Z,0.8nm,0.3s						
BORK	Borovoye	49.66	317	P	P	09 40 03.7	-0.3
BORK				IAmb	IAmb	09 40 04.4	
	comp=Z,2.0nm,0.6s						
C16K	Lisburne Hills	54.87	24	P	P	09 40 42.7	+0.3
C16K				IAmb	IAmb	09 40 57.8	
	comp=Z,9.9nm,1.2s						
AB31	Akbulak array	56.19	312	P	P	09 40 51.1	-1.1
ABKAR	Akbulak array	56.19	312	P	P	09 40 50.5	-1.7
C18K	Utukok River	56.44	24	P	P	09 40 53.9	+0.1
C19K	Lookout Ridge	57.08	24	P	P	09 40 59.4	+1.1
C19K				IAmb	IAmb	09 41 19.3	
	comp=Z,5.7nm,1.2s						
D19K	Kuna River	57.55	25	P	P	09 41 02.1	+0.5
D20K	Etivluk River	58.12	24	P	P	09 41 06.0	+0.4
D20K				IAmb	IAmb	09 41 20.6	
	comp=Z,7.6nm,1.2s						
D22K	Ayikyak River	59.55	24	P	P	09 41 16.5	+1.0
E22K	Anaktuvuk Pass	59.88	25	P	P	09 41 18.3	+0.5
STKA	Stephens Creek	60.86	168	LR	LR	10 10 44.1	
	comp=Z,14nm,18.7s,baz=29,slow=39						
D24K	Happy Valley	60.93	24	P	P	09 41 26.0	+1.0
F24K	Squaw Lake	61.39	26	P	P	09 41 29.1	+0.9
F24K				IAmb	IAmb	09 41 30.3	
	comp=Z,2.5nm,0.8s						
D25K	Kavik River	61.79	24	P	P	09 41 31.5	+0.7
D25K				IAmb	IAmb	09 41 32.2	
	comp=Z,2.8nm,0.8s						
ILAR	Eielson Array	62.09	29	P	P	09 41 31.7	-1.1
	comp=Z,0.4nm,0.7s,baz=283,slow=6.6,SNR=4.7						
	comp=Z,0.4nm,0.7s						
ILAR	Eielson Array	62.09	29	P	P	09 41 33.0	+0.2
F25K	Christian Rive	62.24	26	P	P	09 41 35.4	+1.5
F25K				IAmb	IAmb	09 41 36.2	
	comp=Z,3.6nm,0.9s						
C27K	Jago River	62.69	23	P	P	09 41 37.9	+1.1
C27K				IAmb	IAmb	09 41 52.7	
	comp=Z,7.5nm,1.1s						
E28M	Babbage River	64.34	24	P	P	09 41 48.5	+0.9
F30M	Barrier River	65.94	25	P	P	09 41 58.9	+0.8
F30M				IAmb	IAmb	09 42 15.5	
	comp=Z,11nm,1.4s						
A36M	Sachs Harbour	67.94	19	P	P	09 42 11.0	+0.3
A36M				IAmb	IAmb	09 42 12.2	
	comp=Z,5.7nm,0.8s						
FINES	FINESS Array B	71.72	331	P	P	09 42 32.8	-1.4
	comp=Z,1.7nm,0.6s,baz=80,slow=4.5,SNR=7.9						
	comp=Z,1.7nm,0.6s						
FINES	FINESS Array B	71.72	331	P	P	09 42 32.9	-1.2
AKASG	Malin Array Be	74.80	320	P	P	09 42 52.1	-0.4
	comp=Z,1.1nm,0.4s,baz=58,slow=6.5,SNR=3.6						
	comp=Z,1.1nm,0.4s						
KIEV	Kiev	74.81	320	P	P	09 42 51.8	-0.8
KIEV				IAmb	IAmb	09 42 54.9	
	comp=Z,3.0nm,0.5s						
YKAW3	Yellowknife Wh	76.15	25	P	P	09 43 00.1	+0.1
YKA	Yellowknife Ar	76.19	26	P	P	09 43 01.0	+0.8
	comp=Z,0.4nm,0.7s,baz=301,slow=6.5,SNR=6.7						
	comp=Z,0.4nm,0.7s						
YKA	Yellowknife Ar	76.19	26	P	P	09 42 59.5	-0.7
YKAW1	Yellowknife Wh	76.24	25	P	P	09 43 00.5	0.0
BRTR	Keskin Array B	76.77	308	P	P	09 43 04.3	+0.1
	comp=Z,1.1nm,0.8s,baz=90,slow=3.8,SNR=6.6						
	comp=Z,1.1nm,0.8s						
NOA	NORSAR Array B	78.05	334	P	P	09 43 10.0	-0.8
	comp=Z,1.1nm,0.9s,baz=51,slow=5.5,SNR=3.4						
NOA				LR	LR	10 23 59.8	
	comp=Z,24nm,18.1s,baz=245,slow=40						
	comp=Z,1.1nm,0.9s						
ILON	Igloolik, Nuna	80.02	11	P	P	09 43 20.5	-0.7
ILON				IAmb	IAmb	09 43 22.0	
	comp=Z,5.9nm,1.0s						
FCC	Fort Churchill	86.03	21	P	P	09 43 51.8	-0.8
FFC	Flin Flon	86.25	27	P	P	09 43 53.3	-0.4
FRB	Frobisher Bay	87.20	8	LR	LR	10 25 51.6	
	comp=Z,68nm,18.0s,baz=290,slow=38						
NVAR	Mina Array Bea	88.23	47	P	P	09 44 03.4	-0.6
	comp=Z,0.3nm,0.6s,baz=291,slow=5.2,SNR=3.8						
	comp=Z,0.3nm,0.6s						
PDAR	Pinedale Array	90.83	39	P	P	09 44 17.0	+0.9
	comp=Z,0.3nm,0.6s,baz=8.5,slow=3.0,SNR=3.8						
	comp=Z,0.3nm,0.6s						

NEIC **20** *09:35:25.9±1.3, 7°.63S±0°.07×127°.45E±0°.07, h176^{km}±6^{km}, mb4.6/43, Error ellipse: s-maj=10.7km s-min=9.6km az=167.0*

DJA **20** *09:35:25.9±0.1, 8˚S±2˚×12˚7E±˚, h168^{km}±3^{km}, M4.5/45, mb4.7/45, mB5.0/18, MLv5.1/21, Mw(mB)4.3/18*

IDC **20** *09:35:27.1±1.5, 7°.67S×127°.28E, h187^{km}±13^{km}, mb4.1/14, mbtmp4.6/17, MS3.1/3, Error ellipse: s-maj=14.8km s-min=10.0km az=71.0*

ISC 20 09:35:24.4±0.3**, 7°.65S**±0°.04×**127°.45E**±0°.04**, h162**^{km}**, n182, σ1^{s}49**/186**, mb4.5**/39**, 2D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	3.78	236		Pn	09 36 24.2	+1.9
SOEI	Soe	3.78	236	P	Pn	09 36 24.8	+2.5
SOEI	Soe	3.78	236	S	Sn	09 37 09.0	+1.6
SOEI	Soe	3.78	236	P	Pn	09 36 24.4	+2.1
SOEI				S	Sn	09 37 09.6	+2.2
SAUI	Saumlaki	3.83	95		Pn	09 36 24.5	+1.7
SAUI	Saumlaki	3.83	95	P	Pn	09 36 24.3	+1.6
SAUI	Saumlaki	3.83	95	S	Sn	09 37 09.8	+1.7
SAUI	Saumlaki	3.83	95	P	Pn	09 36 24.4	+1.7
BNDI	Bandanaira	3.95	38	P	Pn	09 36 26.6	+2.3
AAI	Ambon	4.00	11	P	Pn	09 36 28.2	+3.1
NLAI	Namlea	4.39	355	P	Pn	09 36 34.6	+4.5
KRAI	Karang Ratu	4.40	12	P	Pn	09 36 33.7	+3.5
MSAI	Masohi	4.52	19	P	Pn	09 36 34.7	+3.0
BATI	Baumata	4.53	236	P	Pn	09 36 34.7	+2.8
	2μm,0.6s,baz=113,slow=1.8,SNR=118						
BATI				S	Sn	09 37 25.1	+0.6
	1μm,0.4s,baz=300,slow=24,SNR=27						
BATI				LR	LR	09 37 55.7	
	comp=Z,143nm,19.4s,baz=298,slow=34						
BATI	Baumata	4.53	236	P	Pn	09 36 34.1	+2.2
MMRI	Maumere	5.26	259		Pn	09 36 42.7	+1.3
MMRI	Maumere	5.26	259	P	Pn	09 36 44.9	+3.5
MMRI	Maumere	5.26	259	S	Sn	09 37 44.2	+2.5
MMRI	Maumere	5.26	259	P	Pn	09 36 43.4	+2.0
	1.7nm3μm194nm,1.1s						
SANI	Sanana	5.75	345	P	Pn	09 36 51.3	+3.4
	58nm,0.8s						
EDFI	Ende, Flores	5.81	259	P	Pn	09 36 50.9	+2.1
	0.5nm1μm104nm,0.8s						
DRS	Darwin Rock St	5.84	145	P	Pn	09 36 49.4	+0.3
MTN	Manton Dam	6.30	145		Pn	09 36 55.3	0.0
FAKI	Fak Fak	6.70	46		Pn	09 36 60.0	-0.6
FAKI	Fak Fak	6.70	46	P	Pn	09 37 00.2	-0.3
FAKI	Fak Fak	6.70	46	P	Pn	09 36 59.8	-0.7
	0.3nm1μm70nm,0.7s						
BASI	Baing, Sumba	7.26	249	P	Pn	09 37 09.2	+1.3
WSI	Waingapu	7.36	254	P	Pn	09 37 09.8	+0.6
KMPI	Kaimana, Papua	7.37	58	P	Pn	09 37 08.9	-0.6
LBFI	Labuhan Bajo,	7.54	263	P	Pn	09 37 13.1	+1.5
	0.6nm62nm,0.6s						
SWI	Sorong	7.73	30	P	Pn	09 37 16.0	+1.7
	0.5nm3μm83nm,0.7s						
BNSI	Bone	7.99	293	P	Pn	09 37 20.7	+3.1
	775nm55nm,1.2s						
KNRA	Kununurra	8.08	171		Pn	09 37 18.1	-0.7
KAPI	Kappang	8.09	288	Pn	Pn	09 37 21.7	+2.7
TNTI	Ternate	8.37	359	Pn	Pn	09 37 24.2	+1.6
TTSI	Tana Toraja	8.87	301	P	Pn	09 37 33.8	+4.4
RKPI	Ransiki, Papua	9.06	48	P	Pn	09 37 31.9	0.0
	119nm,1.0s						
DBNI	Kabupaten Domp	9.09	264	P	Pn	09 37 33.7	+1.4
	23nm,0.6s						
GTOI	Gorontalo	9.35	332	P	Pn	09 37 41.9	+6.2
MWPI	Manokwari, Pap	9.36	45	P	Pn	09 37 36.8	+0.9
	103nm,1.1s						
PLAI	Plampang	9.65	262	P	Pn	09 37 39.1	-0.6
PLAI	Plampang	9.65	262	P	Pn	09 37 39.7	0.0
	1μm105nm,0.7s						
MRSI	Marisa	9.77	325	P	Pn	09 37 45.0	+3.8
MMSI	Mamuju	9.83	300	P	Pn	09 37 45.9	+3.8
	629nm27nm,0.5s						
TWSI	Taliwang, Sumb	10.52	263	P	Pn	09 37 50.1	-1.0
	46nm,1.1s						
FITZ	Fitzroy Crossi	10.54	189	P	Pn	09 37 49.4	-1.9
	155nm,0.6s,baz=22,slow=10,SNR=245						
FITZ				S	Sn	09 39 38.8	-9.3
	90nm,0.7s,baz=112,slow=24,SNR=7.0						
FITZ	Fitzroy Crossi	10.54	189		Pn	09 37 49.1	-2.2
FITZ	Fitzroy Crossi	10.54	189	P	Pn	09 37 49.7	-1.6
BAKI	Biak	10.75	54	P	Pn	09 37 55.9	+1.8
	115nm,0.9s						
MPSI	Mapaga	10.94	316	P	Pn	09 37 59.5	+2.9
TOLI2	Tolitoli	10.96	322		Pn	09 37 60.0	+3.1
TOLI2	Tolitoli	10.96	322	P	P	09 38 02.0	-2.7
KLNI	Mataram	11.28	265	P	Pn	09 38 02.1	+1.1
	30nm,1.1s						
JAGI	Jajag, Banyuwa	13.20	266	Pn	Pn	09 38 25.5	-0.3
JAGI	Jajag, Banyuwa	13.20	266	P	Pn	09 38 27.6	+1.8
	23nm,1.0s						
GENI	Genyem	13.62	69	P	P	09 38 34.2	-0.4
	92nm,0.7s						
BLJI	Banyuglugur	13.74	269	P	P	09 38 35.8	0.0
	3μm47nm,0.7s						
WB0	Warramunga Arr	13.80	152		Pn	09 38 31.0	-2.4
WRA	Warramunga Arr	13.93	152	P	Pn	09 38 32.1	-2.8
	6.2nm,0.3s,baz=323,slow=14,SNR=113						
WRA				S	Sn	09 40 59.3	-10
	37nm,0.6s,baz=325,slow=22,SNR=12						
JAY	Jayapura	14.14	70	P	P	09 38 41.2	+0.7
	28nm,0.9s,baz=208,slow=11,SNR=5.4						
JAY	Jayapura	14.14	70	P	P	09 38 40.9	+0.4
	31nm,1.0s						
MTKI	Muara Teweh, K	14.18	297	P	P	09 38 43.5	+2.7
MBWA	Marble Bar	15.37	208		Pn	09 38 52.8	-0.1
MBWA				IAmb	IAmb	09 39 10.1	
	comp=Z,33nm,1.0s						
MBWA	Marble Bar	15.37	208	P	P	09 38 53.7	-0.2
SJI	Sawahan	15.55	269	P	P	09 38 56.1	0.0
	comp=Z,24nm,0.6s						
SNJI	Sawahan-Nganju	15.55	268	P	P	09 38 56.4	+0.2
	comp=Z,61nm,0.7s						
PSA00	Pilbara Seismi	15.67	207		Pn	09 38 56.0	-0.6
PSA00	Pilbara Seismi	15.67	207	P	P	09 38 56.9	-0.3
PSA00				IAmb	IAmb	09 38 58.7	
	comp=Z,31nm,1.0s						
PSA00	Pilbara Seismi	15.67	207	P	P	09 38 57.7	+0.4
PCJI	Pacitan	16.13	267	P	Pn	09 39 00.6	-1.7
	comp=Z,33nm,0.6s						
COEN	Coen	16.66	113		P	09 39 08.7	+0.4
COEN				IAmb	IAmb	09 39 11.3	
	comp=Z,57nm,1.4s						
COEN	Coen	16.66	113	P	P	09 39 08.6	+0.4
UGM	Wanagama	16.78	268	P	P	09 39 08.8	-0.8
UGM	Wanagama	16.78	268	P	Pn	09 39 10.9	+0.8
UGM	Wanagama	16.78	268	P	Pn	09 39 10.0	-0.1
	comp=Z,73nm,2.0s						
AS31	Alice Springs	17.09	159		Pn	09 39 13.4	-0.3
AS31				IAmb	IAmb	09 39 17.1	
	comp=Z,22nm,0.6s						
ASAR	Alice Springs	17.09	159	P	Pn	09 39 13.8	0.0
	comp=Z,40nm,0.6s,baz=334,slow=10,SNR=460						
ASAR				S	S	09 42 10.5	-12
	comp=Z,11nm,0.7s,baz=333,slow=22,SNR=7.0						
ASAR	Alice Springs	17.09	159		P	09 39 13.4	+0.4
QIS	Mount Isa	17.41	139	P	Pn	09 39 17.6	0.0
KKM	Kota Kinabalu	17.63	320	P	P	09 39 19.1	+0.1
KKM				IAmb	IAmb	09 39 29.8	
	comp=Z,40nm,1.0s						
KKM	Kota Kinabalu	17.63	320	P	Pn	09 39 20.3	0.0
	comp=Z,43nm,1.1s						
SBUM	Sibu	18.21	303		Pn	09 39 27.0	-0.2
SBUM				IAmb	IAmb	09 39 29.6	
	comp=Z,34nm,0.8s						
SBUM	Sibu	18.21	303	P	Pn	09 39 28.5	+1.4
SBUM	Sibu	18.21	303	P	Pn	09 39 27.9	+0.8
	comp=Z,49nm,0.9s						
KPJI	Karang Pucung	18.37	270	P	P	09 39 26.0	-1.0
	comp=Z,28nm,0.6s						
PMG	Port Moresby	19.57	97	P	Pn	09 39 44.0	+0.9
	comp=Z,23nm,0.7s,baz=285,slow=5.0,SNR=7.2						
PMG	Port Moresby	19.57	97		P	09 39 41.7	+1.8
PMG				IAmb	IAmb	09 39 46.6	
	comp=Z,27nm,0.7s						
PMG	Port Moresby	19.57	97	P	Pn	09 39 43.6	+0.6
	comp=Z,40nm,0.8s						
GIRL	Giralia	19.60	219	P	P	09 39 40.0	-0.2
BBJI	Bungbulang	19.63	269	P	P	09 39 39.3	-1.5
BBJI	Bungbulang	19.63	269	P	P	09 39 38.5	-2.3
CNJI	Cibinong	20.16	270	P	P	09 39 47.0	+0.7
	comp=Z,33nm,0.8s						
TPI	Tanjungpandan	20.30	283	P	P	09 39 49.6	+1.7
	comp=Z,18nm,0.7s						
MEEK	Meekatharra	20.67	203	P	P	09 39 52.5	+0.8
CTA	Charters Tower	22.01	126	LR	LR	09 49 16.0	
	comp=Z,56nm,19.5s,baz=247,slow=37						
CTAO	Charters Tower	22.01	126	P	P	09 40 05.5	-0.5
TGY	Tagaytay City	22.56	343	P	P	09 40 12.0	+0.8
	comp=Z,160nm,0.3s,baz=186,slow=9.2,SNR=4.5						
FORT	Forrest	23.02	179	P	P	09 40 14.9	-0.3
FORT				IAmb	IAmb	09 40 41.7	
	comp=Z,13nm,0.7s						
INKA	Innaminka	23.62	149		P	09 40 21.2	+0.5
INKA				IAmb	IAmb	09 40 54.4	
	comp=Z,8.4nm,0.7s						
MORW	Morawa	23.87	205	P	P	09 40 23.7	+0.7
MORW				IAmb	IAmb	09 40 53.7	
	comp=Z,35nm,1.2s						
MORW	Morawa	23.87	205	P	P	09 40 23.5	+0.5
QLP	Quilpie	24.68	142	P	P	09 40 33.2	+2.8
BLDU	Ballidu	24.97	202	P	P	09 40 33.7	+0.7
MYKOM	Kota Tinggi	25.34	291	P	P	09 40 37.2	+0.7
MYKOM	Kota Tinggi	25.34	291	P	P	09 40 38.4	+1.8
KLBR	Kellerberrin	25.48	200	P	P	09 40 38.4	+0.7
BBOO	Buckleboo	26.28	163	P	P	09 40 45.3	+0.5
NWAO	Narrogin (SRO)	26.88	199	LR	LR	09 52 19.3	
	comp=Z,66nm,20.7s,baz=301,slow=38						
NWAO	Narrogin (SRO)	26.88	199	P	P	09 40 50.9	+0.7
NWAO				IAmb	IAmb	09 41 35.4	
	comp=Z,23nm,1.1s						
NWAO	Narrogin (SRO)	26.88	199	P	P	09 40 50.9	+0.7
STKA	Stephens Creek	27.47	153	P	P	09 40 55.1	-0.4
	comp=Z,1.8nm,0.4s,baz=326,slow=11,SNR=6.7						
	comp=Z,1.8nm,0.4s						
IPM	Ipoh	28.99	294		P	09 41 08.4	-0.8
CMSA	Cobar Meteorol	29.23	147	P	P	09 41 12.1	+1.0
KULM	Kulim	29.67	295		P	09 41 14.7	-0.5
KULM	Kulim	29.67	295	P	P	09 41 15.0	-0.2
COCO	West Island	30.48	259	P	P	09 41 24.0	+1.7
GSI	Gunungsitoli	31.10	285	P	P	09 41 26.5	-1.3
GSI				IAmb	IAmb	09 41 28.2	
	comp=Z,18nm,1.1s						
CAN	Canberra	33.90	147	P	P	09 41 52.6	+0.6
CAN				IAmb	IAmb	09 42 14.7	
	comp=Z,28nm,1.5s						
CM31	Chiang Mai Arr	38.27	313	P	P	09 42 28.8	-0.4
CM31				IAmb	IAmb	09 42 30.1	
	comp=Z,9.8nm,0.8s						
CMAR	Chiang Mai Arr	38.27	313	P	P	09 42 29.2	0.0
	comp=Z,4.3nm,0.4s,baz=142,slow=6.8,SNR=35						
CMAR				PcP	PcP	09 44 39.1	-1.0
	comp=Z,2.3nm,0.3s,baz=166,slow=3.0,SNR=8.1						
CMAR				ScP	S	09 48 11.2	-0.2
	comp=Z,0.9nm,0.3s,baz=124,slow=3.9,SNR=4.1						
	comp=Z,4.3nm,0.4s						
CMAR	Chiang Mai Arr	38.27	313	P	P	09 42 28.1	-1.1
CMAR					PcP	09 44 40.0	-0.2
CHTO	Chiang Mai	38.49	313		P	09 42 30.8	-0.4
CHTO				IAmb	IAmb	09 42 32.1	
	comp=Z,7.4nm,0.7s						
NJ2	Nanjing	40.32	349	eP	P	09 42 48.6	+2.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
PZH	PanZhiHua	42.13	325	P	P	09 43 03.3	+2.2
CD2	Chengdu	44.56	331	P	P	09 43 19.5	-0.8
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
KSRS	Korea Array	44.87	1	P	P	09 43 22.1	-0.4
	comp=Z,1.2nm,0.6s,baz=183,slow=9.5,SNR=5.0						
	comp=Z,1.2nm,0.6s						
HNS	HongShan	46.37	346	⇓P	P	09 43 33.6	-0.8
HNS				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SHL	Shillong	47.82	315	P	P	09 43 45.6	-0.5
LZDM	Lanzhou Array	48.79	334	P	P	09 43 53.6	+0.1
	comp=Z,4.1nm,0.6s,baz=169,slow=12,SNR=7.3						
	comp=Z,4.1nm,0.6s						
LZH	Lanzhou	48.84	334	eP	P	09 43 53.6	-0.1
LZH				pP	pwP	09 44 36.8	+2.0
LZH				pmax	pmax		
	comp=Z,24nm,1.0s						
HHC	Hu-ho-hao-te	50.43	344	eP	P	09 44 08.9	+3.4
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,47nm,5.2s						
LSA	Lhasa	50.96	318	P	P	09 44 09.1	-1.1
TUWZ	Tuamarina	53.11	137	P	P	09 44 26.0	+0.7
GTA	Gaotai	53.37	333	P	P	09 44 27.8	+0.5
GTA				pP	sP	09 45 15.5	-4.8
GTA				pmax	pmax		
	comp=Z,28nm,0.9s						
ULN	Ulaanbaatar	58.14	344		P	09 45 00.8	-0.4
SONM	Songino Array	58.30	343	P	P	09 45 02.5	+0.3
	comp=Z,2.1nm,0.7s,baz=162,slow=7.4,SNR=13						
	comp=Z,2.1nm,0.7s						
SONM	Songino Array	58.30	343	P	P	09 45 02.2	0.0
WMQ	Urumqi	62.59	329	eP	P	09 45 31.8	+0.4
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
PETK	Petropavlovsk-	65.75	19	P	P	09 45 53.7	+2.1
	comp=Z,1.8nm,0.6s,baz=223,slow=7.0,SNR=5.5						
	comp=Z,1.8nm,0.6s						
PETK	Petropavlovsk-	65.75	19	P	P	09 45 50.6	-1.1
NIL	Nilore	65.75	312		P	09 45 50.9	-1.3
KSH	Kashi	66.81	319	P	P	09 45 58.8	-0.1
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MKAR	Makanchi Array	67.41	328	P	P	09 46 02.0	-0.4
	comp=Z,10nm,0.7s,baz=128,slow=8.0,SNR=84						
	comp=Z,10nm,0.7s						
MKAR	Makanchi Array	67.41	328		P	09 46 01.8	-0.6
MAKZ	Makanchi	67.58	328		P	09 46 02.9	-0.6
MAKZ				IAmb	IAmb	09 46 03.4	
	comp=Z,6.6nm,0.8s						
BOOM	Boomskoye usch	68.45	322		P	09 46 08.7	-0.5
BOOM				IAmb	IAmb	09 46 09.9	
	comp=Z,6.2nm,0.7s						
KBL	Kabul	69.27	311		P	09 46 13.5	-0.9
AAK	Ala-Archa	69.43	321		P	09 46 14.9	-0.3
AAK				IAmb	IAmb	09 46 16.4	
	comp=Z,4.4nm,0.6s						
DRK	Karamyk	69.57	317	P	P	09 46 15.4	-0.9
DRK				IAmb	IAmb	09 46 17.9	
	comp=Z,9.7nm,0.6s						
ARSB	Arslanbob	69.70	319	P	P	09 46 15.9	-1.0
ARSB				IAmb	IAmb	09 46 18.2	
	comp=Z,5.5nm,0.6s						
ZALV	Zalesovo Beam	71.07	335	P	P	09 46 23.3	-1.4
	comp=Z,6.2nm,0.5s,baz=124,slow=5.4,SNR=20						
	comp=Z,6.2nm,0.5s						
ZALV	Zalesovo Beam	71.07	335	P	P	09 46 23.1	-1.6
KURBB	Kurchatov Arra	71.76	330	P	P	09 46 28.1	-0.8
	comp=Z,10nm,0.7s,baz=133,slow=5.1,SNR=118						
	comp=Z,10nm,0.7s						
KURK	Kurchatov	71.78	330		P	09 46 27.9	-1.1
VNDA	Vanda	72.12	173	P	P	09 46 30.5	-0.2
KKAR	Karatay Array	72.18	320	P	P	09 46 30.8	-0.8
MAW	Mawson	73.43	201	P	P	09 46 38.5	-0.1

	comp=Z,1.8nm,0.5s,baz=70,slow=9.5,SNR=2.2						
	comp=Z,1.8nm,0.5s						
HRA	Herat	74.37	309	P	P	09 46 43.6	-1.3
HRA				IAmb	IAmb	09 46 45.8	
	comp=Z,12nm,1.1s						
BVAR	Borovoye Array	77.28	329	P	P	09 46 60.0	-0.8
	comp=Z,2.8nm,0.7s,baz=140,slow=7.2,SNR=16						
	comp=Z,2.8nm,0.7s						
BORK	Borovoye	77.33	329		P	09 47 00.0	-1.0
VOI	Vohitsoka	78.56	249		P	09 47 07.8	-0.9
VOI				IAmb	IAmb	09 47 09.4	
	comp=Z,12nm,0.7s						
TIXI	Tiksi	79.14	0		P	09 47 09.2	-1.3
AB31	Akbulak array	81.46	322		P	09 47 22.5	-0.9
ABKAR	Akbulak array	81.46	322	P	P	09 47 22.4	-1.0
NRIK	Noril'sk	81.59	347	P	P	09 47 23.3	-0.3
	comp=Z,3.4nm,0.6s,baz=140,slow=6.0,SNR=7.4						
	comp=Z,3.4nm,0.6s						
QSPA	South Pole Qui	82.33	180	P	P	09 47 27.8	-0.1
	comp=Z,3.2nm,0.4s,baz=332,slow=1.5,SNR=12						
	comp=Z,3.2nm,0.4s						
QSPA	South Pole Qui	82.33	180	P	P	09 47 27.1	-0.8
RAYN	Ar Rayn	85.70	294	P	P	09 47 44.3	-1.4
RAYN				IAmb	IAmb	09 47 45.5	
	comp=Z,9.3nm,0.8s						
ELIB	Princess Elisa	87.12	198	dP	P	09 47 53.3	+1.5
SNAA	Sanae	94.44	194	P	P	09 48 26.3	+0.6
	comp=Z,3.0nm,0.9s,baz=184,slow=7.1,SNR=9.6						
	comp=Z,3.0nm,0.9s						
SNAA	Sanae	94.44	194	P	P	09 48 26.1	+0.4
YKA	Yellowknife Ar	109.44	26	PKiKP	PKiKP	09 53 34.4	-0.8
	comp=Z,0.6nm,0.7s,baz=288,slow=2.3,SNR=14						
GERES	GERESS Array B	111.28	320	PKiKP	PKiKP	09 53 38.4	-0.8
	comp=Z,1.1nm,0.6s,baz=66,slow=3.3,SNR=4.8						
NVAR	Mina Array Bea	113.67	51	PKiKP	PKiKP	09 53 44.9	+0.6
	comp=Z,0.7nm,0.9s,baz=249,slow=2.1,SNR=4.2						
EKA	Eskdalemuir Ar	118.50	330	PKP	PKPdf	09 53 51.6	-1.1
	comp=Z,1.2nm,0.6s,baz=348,slow=2.7,SNR=4.0						
PDAR	Pinedale Array	119.14	45	PKP	PKPdf	09 53 54.5	-0.2
	comp=Z,0.7nm,0.7s,baz=162,slow=0.9,SNR=8.3						
PDAR				PKKPab	PKKPab	10 04 11.2	+0.2
	comp=Z,0.2nm,0.6s,baz=111,slow=3.4,SNR=4.6						
PDAR	Pinedale Array	119.14	45		PKPdf	09 53 53.2	-1.4
ULM	Lac du Bonnet	124.35	32	PKP	PKPdf	09 54 02.7	-1.4
	comp=Z,2.6nm,0.5s,baz=316,slow=3.2,SNR=4.6						
TORD	Torodi Ar. Bea	126.45	281	PKP	PKPdf	09 54 08.3	-0.8
	comp=Z,3.6nm,0.8s,baz=59,slow=3.5,SNR=15						
TXAR	Lajitas Array	127.42	59	PKP	PKPdf	09 54 10.6	-0.2
	comp=Z,0.4nm,0.7s,baz=236,slow=1.7,SNR=5.4						
CPUP	Villa Florida	145.91	172	PKPbc	PKPdf	09 54 45.2	+0.5
	comp=Z,2.0nm,0.4s,baz=346,slow=18,SNR=9.0						
LPAZ	La Paz	151.65	147	PKPbc	PKPbc	09 55 01.1	-0.2
	comp=Z,3.6nm,0.8s,baz=57,slow=2.8,SNR=13						
LPAZ				PKPab	PKPab	09 55 10.8	+0.3
	comp=Z,3.5nm,0.8s,baz=184,slow=7.1,SNR=4.3						

NNC ***20*** *09:35:56.6±0.5, 43°.29N×74°.50E, h0^{km}, mb2.9, mpv2.8, Error ellipse: s-maj=4.8km s-min=2.9km az=143.0*
KNET ***20*** *09:35:56.4±0.5, 43°.28N×74°.49E, h14^{km}±2^{km}, ml1.7, Error ellipse: s-maj=3.2km s-min=2.4km az=167.0*
KRNET ***20*** *09:35:56.3±0.1, 43°.33N×74°.48E, h17^{km}, mb2.8*
SOME ***20*** *09:35:56.7, 43°.33N×74°.50E, h10^{km}*
ISC 20 09:35:55.1±1.0, **43°.34N**±0°.03×**74°.47E**±0°.02, **h19**^{km}±2^{km}, **n55**, σ**0^{s}.81**/104, **20C-20D**, **Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
USP	Ospenovka	0.08	162	⇑P	Pg	09 35 58.9	+0.1
	136nm,0.1s,SNR=540						
USP				⇑S	Sg	09 36 00.5	-0.7
	328nm,0.1s						
USP	Ospenovka	0.08	162	⇑iP	Pg	09 35 58.8	+0.1
USP				⇑iS	Sg	09 36 00.5	-0.7
SGDS	Sogindy	0.16	46	P	Pg	09 36 00.5	+0.8
	10nm,0.0s						
SGDS				S	Sg	09 36 03.1	+0.3
	142nm,0.1s						
CHMS	Chumysh	0.40	148	⇓P	Pb	09 36 04.0	+0.3
	64nm,0.1s,SNR=8.4						
CHMS				⇓S	Sb	09 36 09.3	-0.1
	101nm,0.3s						
CHMS	Chumysh	0.40	148	⇑iP	Pb	09 36 04.1	+0.5
CHMS				⇑iS	Sb	09 36 09.4	-0.1
FRU1	Bishkek	0.54	167	⇓eP	Pg	09 36 06.2	+0.2
FRU1				⇓eS	Sg	09 36 13.7	+0.4
AAK	Ala-Archa	0.70	178	⇑P	Pn	09 36 09.7	-0.5
	4.5nm,0.1s,SNR=6.0						
AAK				⇓S	Sg	09 36 19.3	+1.0
	10nm,0.1s						
AAK	Ala-Archa	0.70	178	⇑iP	Pn	09 36 09.7	-0.5
AAK				⇑iS	Sg	09 36 19.1	+0.8
AAK	Ala-Archa	0.70	178	⇓P	Pn	09 36 09.6	-0.5
	1.2nm,0.4s						
AAK				⇓S	Sg	09 36 18.8	+0.5
	1.9nm,0.4s						
KBK	Karagaybulak	0.77	152	⇓P	Pn	09 36 10.6	-0.5
	12nm,0.1s,SNR=32						
KBK				⇓S	Sn	09 36 21.4	-0.8
KBK	Karagaybulak	0.77	152	⇓iP	Pn	09 36 10.8	-0.3
KBK				⇓iS	Sn	09 36 21.2	-1.0
EKS2	Erkin-Say	0.84	217	⇑P	Pn	09 36 12.4	+0.3
	2.2nm,0.1s,SNR=15						
EKS2				⇓S	Sn	09 36 24.0	-0.1
	14nm,0.2s						
EKS2	Erkin-Say	0.84	217	⇓iP	Pn	09 36 12.4	+0.3
EKS2				⇓iS	Sn	09 36 23.8	-0.3
TKM2	Tokmak 2	0.93	116	⇓P	Pn	09 36 13.2	-0.1
	5.7nm,0.1s,SNR=45						
TKM2				⇑S	Sn	09 36 26.0	-0.2
	55nm,0.1s						
TKM2	Tokmak 2	0.93	116	⇑iP	Pn	09 36 13.2	-0.1
TKM2				⇑iS	Sn	09 36 25.8	-0.4
KRBS	Karabastau	0.95	67	eP	Pg	09 36 14.2	+0.7
KRBS				eS	Sn	09 36 26.4	-0.1
KRBS	Karabastau	0.95	67	P	Pg	09 36 14.2	+0.7
	3.0nm,0.1s						
KRBS				S	Sn	09 36 26.5	-0.1
	4.8nm,0.2s						
KRBS	Karabastau	0.95	67	eP	Pg	09 36 14.2	+0.7
	3.0nm,0.1s						
KRBS				eS	Sn	09 36 26.5	-0.1
	4.8nm,0.2s						
DGS	Degeres	0.96	95	eP	Pg	09 36 14.3	+0.6
DGS				eS	Sn	09 36 26.9	0.0
DGS	Degeres	0.96	95	P	Pg	09 36 14.3	+0.6
	5.4nm,0.2s						
DGS				S	Sn	09 36 26.8	0.0
	15nm,0.3s						
DGS	Degeres	0.96	95	eP	Pg	09 36 14.3	+0.6
	5.4nm,0.2s						
DGS				eS	Sn	09 36 26.8	0.0
	15nm,0.3s						
MRKS	Merke	1.09	237	eP	Pg	09 36 16.6	+0.4
MRKS				eS	Sg	09 36 30.8	+0.4
MRKS	Merke	1.09	237	P	Pg	09 36 16.6	+0.4
	0.6nm,0.1s						
MRKS				S	Sg	09 36 30.8	+0.4
	6.9nm,0.2s						
MRKS	Merke	1.09	237	eP	Pg	09 36 16.6	+0.4
	0.6nm,0.1s						
MRKS				eS	Sg	09 36 30.8	+0.4
	6.9nm,0.2s						
UCH	Uchtor	1.11	178	⇑P	Pg	09 36 17.1	+0.4
	3.1nm,0.1s,SNR=21						
UCH				⇓S	Sg	09 36 31.8	+0.4
	5.5nm,0.1s						
KST	Kastek	1.13	105	eP	Pg	09 36 17.4	+0.3
KST				eS	Sg	09 36 32.5	+0.5
KST	Kastek	1.13	105	P	Pg	09 36 17.4	+0.3
	10nm,0.2s						
KST				S	Sg	09 36 32.5	+0.5
	15nm,0.3s						
KST	Kastek	1.13	105	eP	Pg	09 36 17.4	+0.3
	10nm,0.2s						
KST				eS	Sg	09 36 32.5	+0.5
	15nm,0.3s						
BOOM	Boomskoye usch	1.38	128	⇑eP	Pg	09 36 21.1	-0.5
BOOM				⇑eS	Sg	09 36 39.4	-0.2
MTBS	Maitube	1.45	98	eP	Pg	09 36 23.3	+0.3
MTBS				eS	Sg	09 36 42.2	+0.2
MTBS	Maitube	1.45	98	P	Pg	09 36 23.3	+0.3
	3.2nm,0.3s						
MTBS				S	Sg	09 36 42.2	+0.2
	8.3nm,0.3s						
MTBS	Maitube	1.45	98	eP	Pg	09 36 23.3	+0.3
	3.2nm,0.3s						
MTBS				eS	Sg	09 36 42.2	+0.2
	8.3nm,0.3s						
KUU	Kurty	1.47	67	eP	Pg	09 36 23.4	0.0
KUU				eS	Sg	09 36 42.4	-0.2
KUU	Kurty	1.47	67	P	Pg	09 36 24.3	+0.9
	4.0nm,0.1s						
KUU				S	Sg	09 36 44.0	+1.4
	19nm,0.3s						
KUU	Kurty	1.47	67	eP	Pg	09 36 23.4	0.0
	4.2nm,0.1s						
KUU				eS	Sg	09 36 42.4	-0.2
	20nm,0.2s						
ARLS	Aral	1.48	184	⇓eP	Pg	09 36 23.4	-0.2
ARLS				⇓eS	Sg	09 36 43.2	+0.2
MNAS	Manas	1.68	240	⇓eP	Pg	09 36 27.1	-0.2
MNAS				⇓eS	Sg	09 36 49.1	0.0
ULHL	Ulahol	1.70	129	⇑P	Pg	09 36 27.5	-0.4
	3.5nm,0.1s,SNR=9.5						
ULHL				⇑S	Sg	09 36 50.0	-0.1
	5.4nm,0.1s						
TNSS	Tian-Shan	1.84	99	eP	Pg	09 36 30.2	-0.3
TNSS				eS	Sg	09 36 54.0	-0.4
TNSS	Tian-Shan	1.84	99	P	Pg	09 36 30.6	+0.2
	1.5nm,0.4s						
TNSS				S	Sg	09 36 55.0	+0.5
	0.8nm,0.3s						
TNSS	Tian-Shan	1.84	99	eP	Pg	09 36 30.2	-0.3
	1.1nm,0.2s						
TNSS				eS	Sg	09 36 54.0	-0.4
	5.3nm,0.2s						
MDOK	Medeo	1.89	94	eP	Pg	09 36 31.0	-0.5
MDOK				eS	Sg	09 36 55.7	-0.4
MDOK	Medeo	1.89	94	Pg	Pg	09 36 31.0	-0.5
	1.8nm,0.2s						
MDOK				Lg	Lg	09 36 55.7	
	6.0nm,0.4s						
KOTS	Kotyrbulak	1.93	92	P	Pg	09 36 32.0	-0.2
	5.7nm,0.3s						
KOTS				S	Sg	09 36 57.7	+0.3
	19nm,0.2s						
KOTS	Kotyrbulak	1.93	92	eP	Pg	09 36 32.0	-0.2
	5.7nm,0.3s						
KOTS				eS	Sg	09 36 57.7	+0.3
	19nm,0.2s						
KDJ	Kajisay	2.33	120	⇑eP	Pb	09 36 36.4	-0.3
KDJ				⇑eS	Sb	09 37 05.9	+0.7
ARXS	Arharly	2.59	69	Pg	Pg	09 36 43.2	-1.5
	0.8nm,0.5s						
ARXS				Lg	Lg	09 37 16.6	
	6.0nm,0.4s						
ARXS	Arharly	2.59	69	eP	Pg	09 36 43.2	-1.5
	0.8nm,0.5s						
ARXS				eS	Sg	09 37 16.6	-1.6
	6.0nm,0.4s						
KURS	Kuram	2.70	86	Pg	Pg	09 36 45.7	-1.2
	5.3nm,0.7s						
KURS				Lg	Lg	09 37 20.6	
	2.7nm,0.5s						
SATY	Saty	2.89	94	Pg	Pg	09 36 48.9	-1.6
	1.7nm,0.8s						
SATY				Lg	Lg	09 37 26.2	
	8.2nm,0.2s						
KK31	Karatay Array	2.90	267	Pn	Pg	09 36 50.3	-0.3
	0.3nm,0.2s,baz=83,slow=15,SNR=4.2						
KK31				Sn	Sg	09 37 25.6	-2.7
	0.6nm,0.2s,baz=82,slow=28,SNR=6.9						
KPKS	Kokpek	3.08	86	Pg	Pg	09 36 52.9	-1.1
	0.6nm,0.7s						
KPKS				Lg	Lg	09 37 33.3	
	4.2nm,0.2s						
KPKS	Kokpek	3.08	86	eP	Pg	09 36 52.9	-1.1
	0.6nm,0.7s						
KPKS				eS	Sg	09 37 33.3	-0.6
	4.2nm,0.2s						
UZB	Uzynbulak	3.33	92	Pg	Pb	09 36 55.9	+2.3
	1.1nm,0.1s						
UZB				Lg	Lg	09 37 38.1	
	2.8nm,0.5s						
UZB	Uzynbulak	3.33	92	eP	Pb	09 36 55.9	+2.3
	1.1nm,0.1s						
UZB				eS	Sg	09 37 38.1	-4.0
	2.8nm,0.5s						

IDC ***20*** *09:38:02.7±1.2, 59°.36N×30°.56W, h0^{km}, mb3.7/7, mbtmp3.8/8, ML3.6/1, Error ellipse: s-maj=31.1km s-min=24.0km az=36.0*
ISC 20 09:38:05.0±1.1, **59°.3N**±0°.2×**30°.5W**±0°.1, **h16**^{km}, **n9**, σ**0^{s}.69**/9, **mb3.8**/6, **Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORG	Borgarnes	6.93	35	Pn	Pn	09 39 46.0	+0.3
	1.2nm,0.3s,baz=98,slow=7.1,SNR=1.2						
	12nm,0.8s						
EKA	Eskdalemuir Ar	15.25	93	Pn	P	09 41 43.3	-1.0
	baz=299,slow=9.4						
ESDC	Sonseca Array	25.87	128	P	P	09 43 36.5	+0.8
	1.7nm,0.9s,baz=316,slow=8.4,SNR=5.6						
	1.7nm,0.9s						
FINES	FINESS Array B	27.30	61	P	P	09 43 47.7	-0.7
	2.8nm,1.0s,baz=268,slow=6.7,SNR=1.9						
	2.8nm,1.0s						
ILAR	Eielson Array	47.29	328	P	P	09 46 37.5	+0.5
	0.7nm,1.0s,baz=50,slow=5.8,SNR=5.2						
	0.7nm,1.0s						
PDAR	Pinedale Array	49.25	287	P	P	09 46 52.1	-0.6
	0.3nm,0.5s,baz=37,slow=6.6,SNR=3.7						
	0.3nm,0.5s						
TORD	Torodi Ar. Bea	51.95	139	P	P	09 47 13.3	+0.3
	0.6nm,0.8s,baz=360,slow=5.0,SNR=2.4						
	0.6nm,0.8s						
KURBB	Kurchatov Arra	56.26	46	P	P	09 47 44.4	+0.3
	1.3nm,0.8s,baz=322,slow=7.2,SNR=4.9						
	1.3nm,0.8s						
MKAR	Makanchi Array	60.83	46	P	P	09 48 16.0	0.0
	0.9nm,0.7s,baz=326,slow=5.1,SNR=3.2						
	0.9nm,0.7s						

CATAC ***20*** *09:44:23.4±0.6, 14°N±3°×9°1W±°, h18^{km}±4^{km}, M3.5/15, MLv3.5/15, Error ellipse: s-maj=7.5km s-min=2.8km az=33.5, confirmed*
GCG ***20*** *09:44:24.5±1.2, 13°.70N×91°.12W, h51^{km}±16^{km}, MD3.8, MW3.3*
SNET ***20*** *09:44:24.9±3.9, 13°.80N×91°.02W, h14^{km}, ML3.3*
ISC 20 09:44:24.7±1.6, **13°.69N**±0°.08×**91°.00W**±0°.06, **h20**^{km}±5^{km}, **n44**, σ**1^{s}.17**/49, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESSJ	San Jos, E	0.51	104	i P	Pb	09 44 35.1	+0.2
ESSG	Sabana Grande	0.71	14	i P	Pn	09 44 38.7	-0.9
ESSG				i S	Sn	09 44 49.9	-0.2
FG16	Alotenango, Sa	0.75	40	i P	Pn	09 44 40.1	-0.3
STG5	El Palmar, Qui	0.78	335	i P	Pn	09 44 43.0	+2.3
STG2	El Palmar, Qui	0.82	334	i P	Pn	09 44 44.4	+3.1
STG8	El Palmar, Qui	0.83	336	i P	Pn	09 44 44.7	+3.3
FAME	Alcaldia de Sa	0.97	81	P	Pn	09 44 42.3	-0.9
FAME	Alcaldia de Sa	0.97	81	S	Sb	09 44 55.4	+0.1
RTAL	Retalhuleu	1.07	321	P	Pn	09 44 43.2	-1.3
RTAL	Retalhuleu	1.07	321	S	Sn	09 44 56.7	-2.0
SOKI	Kika Raxquin	1.19	341	i P	Pn	09 44 45.5	-1.0
SOKI				i S	Sb	09 45 02.0	+0.1
NUBE	Las Nubes	1.21	80	i P	Pn	09 44 45.8	-0.7
NUBE				i S	Sb	09 45 02.5	+0.3
NUBE	Las Nubes	1.21	80	P	Pn	09 44 45.9	-0.7
NUBE	Las Nubes	1.21	80	S	Sb	09 45 01.9	-0.3
CEVE	Cerro Verde	1.35	84	eP	Pn	09 44 48.0	-0.6
CEVE				eS	Sb	09 45 07.9	+1.6
CEVE	Cerro Verde	1.35	84	P	Pn	09 44 48.4	-0.2
UNIC	Universidad Ca	1.44	78	P	Pn	09 44 49.4	-0.3
UNIC	Universidad Ca	1.44	78	S	Sb	09 45 08.8	-0.1
JAYA	Jayaque - finc	1.51	91	i P	Pn	09 44 50.5	-0.3
JAYA	Jayaque - finc	1.51	91	S	Sn	09 45 10.0	+0.1
JAYA	Jayaque - finc	1.51	91	P	Pn	09 44 50.3	-0.4
PMON	Piamonte	1.64	89	P	Pn	09 44 52.4	-0.1
PMON	Piamonte	1.64	89	S	Sn	09 45 13.3	+0.2
LALI	Alcalda de L	1.65	97	i P	Pn	09 44 52.7	+0.2
LALI	Alcalda de L	1.65	97	P	Pn	09 44 52.3	-0.2
LALI	Alcalda de L	1.65	97	S	Sn	09 45 13.8	+0.7
BOQS	Boqueron	1.68	88	eP	Pn	09 44 53.3	+0.3
HUEH	Huehuetenango	1.69	343	S	Sb	09 45 15.2	-0.9
UEES	Universidad Ev	1.72	89	S	Sn	09 45 15.1	+0.3
UEES	Universidad Ev	1.72	89	P	Pn	09 44 53.5	0.0
MTO3	Montecristo	1.74	66	P	Pb	09 44 54.7	-1.4
MTO3	Montecristo	1.74	66	S	Sb	09 45 17.1	-0.6
PANCS	Alcalda de	1.78	92	P	Pn	09 44 54.3	+0.1
PANCS	Alcalda de	1.78	92	S	Sn	09 45 17.1	+0.8
IGN	Direccin Gen	1.78	89	P	Pn	09 44 55.1	+0.7
LOMA	Loma Larga	1.78	91	S	Sb	09 45 18.0	-0.7
LOMA	Loma Larga	1.78	91	P	Pn	09 44 54.4	0.0
UDBS	Universidad Do	1.80	89	S	Sb	09 45 18.3	-0.8
ESQI	Esquipulas	1.83	62	eP	Pb	09 44 56.8	-0.8
ESQI				eS	Sb	09 45 23.1	+3.1
ESQI	Esquipulas	1.83	62	P	Pb	09 44 56.7	-0.8
ESQI	Esquipulas	1.83	62	S	Sb	09 45 22.3	+2.2
SCLA	Alcaldia de Sa	2.21	89	P	Pn	09 45 01.1	+0.8
SARH	Santa Rosa de	2.43	63	i P	Pn	09 45 04.2	+0.9
SARH	Santa Rosa de	2.43	63	P	Pn	09 45 04.0	+0.7

IDC ***20*** *09:50:05.5±1.9, 0°.55S×123°.65E, h0^{km}, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=241.4km s-min=28.3km az=62.0*
DJA ***20*** *09:50:11.5±0.2, 1°S±3°×12°4E±°, h10^{km}, M4.4/18, mB5.0/3, mb4.5/10, MLv4.4/18, Mw(mB)4.4/3*
ISC 20 09:50:09.9±1.2, **0°.6S**±0°.1×**123°.96E**±0°.05, **h10**^{km}, **n21**, σ**1^{s}.44**/23, **mb3.4**/3, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	Luwuk	1.25	251	P	Pb	09 50 34.2	+0.6
LUWI				S	Sb	09 50 49.5	-0.3
MRSI	Marisa	2.30	299	P	Pn	09 50 48.2	+0.3
APSI	Ampana	2.32	263	P	Pn	09 50 49.5	+1.3
SANI	Sanana	2.47	125	P	Pn	09 50 50.1	-0.1
SANI				S	Sn	09 51 18.5	-2.0
NLAI	Namlea	4.07	129	P	Pn	09 51 14.0	+1.8
PCI	Palu	4.13	266	P	Pg	09 51 27.8	-1.3
MPSI	Mapaga	4.17	283	P	Pn	09 51 15.8	+2.1
TTSI	Tana Toraja	4.78	240	P	Pn	09 51 22.9	+0.9
KRAI	Karang Ratu	5.17	121	P	Pn	09 51 29.7	+2.2
	0.6nm23nm,0.5s						
AAI	Ambon	5.21	126	P	Pn	09 51 30.8	+2.9
	0.4nm5μm51nm,0.7s						
SPSI	Sidrap Palu	5.33	232	P	Pn	09 51 31.2	+1.6
	0.2nm1μm52nm,0.7s						
SPSI				S	Sn	09 52 30.5	-0.7
	0.2nm1μm52nm,0.7s						
BNSI	Bone	5.36	226	P	Pn	09 51 31.8	+1.7
	0.3nm621nm32nm,0.6s						
MMSI	Mamuju	5.44	248	P	Pn	09 51 32.3	+1.1
	0.2nm39nm,0.5s						
BKSI	Bulukumba	6.03	219	P	Pn	09 51 40.2	+1.0
	0.2nm21nm,0.5s						
KAPI	Kappang	6.04	224	P	Pn	09 51 40.7	+1.3
	11nm,0.5s						
BKB	Balikpapan	7.09	265	P	Pn	09 51 54.3	+0.5
EDFI	Ende, Flores	8.37	196	P	Pn	09 52 12.1	+0.6
FAKI	Fak Fak	8.59	105	P	Pn	09 52 15.3	+0.8
WRA	Warramunga Arr	21.71	153	P	P	09 55 00.6	-0.8
	0.7nm,0.8s,baz=328,slow=10,SNR=4.2						
	0.7nm,0.8s						
ASAR	Alice Springs	24.84	158	P	P	09 55 31.9	-0.8
	0.6nm,0.7s,baz=333,slow=6.9,SNR=11						
	0.6nm,0.7s						
MKAR	Makanchi Array	59.66	328	P	P	10 00 09.8	-4.6
	0.2nm,0.3s,baz=124,slow=9.9,SNR=2.9						
	0.2nm,0.3s						

NNC 20 09:54:31.4±11.0, **37°.04N**×**70°.16E**, **h0**^{km}, **mb3.8**, **mpv3.4**, **1C-3D**, **Error ellipse: s-maj=115.8km s-min=75.3km az=146.0**, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.06	2	⇓P	Pn	09 56 04.5	+2.2
	2.1nm,0.2s,baz=184,slow=13,SNR=36						
KK31				⇓S	Sn	09 57 14.4	+1.9
	3.1nm,0.3s,baz=132,slow=18,SNR=8.3						
AAK	Ala-Archa	6.51	29	⇓P	Pn	09 56 08.5	-0.1
	0.5nm,0.4s						
AAK				⇑S	Sn	09 57 23.9	+0.2
	8.8nm,0.6s						
AB31	Akbulak array	14.29	332	P	Pn	09 57 51.1	-3.8
	0.5nm,0.3s,baz=163,slow=12,SNR=45						

NOU ***20*** *10:14:08.8, 40°.23S×174°.93E, h18^{km}, MLv3.8/16, Cook Strait, New Zealand*
WEL ***20*** *10:14:08.4±0.4, 40°S±2°×17°5E±°, h21^{km}±4^{km}, M3.8/18, ML3.8/18, MLv3.8/18, Error ellipse: s-maj=3.6km s-min=2.2km az=89.6, confirmed*
ISC 20 10:14:09.1±1.0, **40°.18S**±0°.02×**174°.95E**±0°.02, **h27**^{km}±10^{km}, **n86**, σ**0^{s}.78**/113, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHWZ	Ohakea	0.28	96	P	Pb	10 14 16.4	+0.4
OHWZ				S	Sn	10 14 22.3	-0.3
WAZ	Wanganui	0.42	3	P	Pb	10 14 18.5	+0.3
WAZ				S	Sn	10 14 25.6	-0.7
POWZ	Post Office Ro	0.66	109	P	Pn	10 14 22.3	-0.3
POWZ				S	Sn	10 14 31.9	-0.2
OGWZ	Otaki Gorge	0.66	166	P	Pb	10 14 22.1	0.0
OGWZ				S	Sb	10 14 31.2	+0.3
MRZ	Mangatainoka R	0.68	136	P	Pn	10 14 22.7	-0.2
MRZ				S	Sn	10 14 32.2	-0.4
KIW	Kapiti Island	0.68	183	P	Pb	10 14 22.1	-0.4
KIW				S	Sb	10 14 30.9	-0.7
TSZ	Takapari Road	0.78	82	P	Pb	10 14 23.9	-0.2
TSZ				S	Sb	10 14 34.6	+0.2
LREZ	Lake Rotokare	0.83	329	P	Pn	10 14 25.3	+0.3
LREZ				S	Sn	10 14 38.2	+1.8
HOWZ	Holdsworth Sta	0.84	149	P	Pn	10 14 25.0	-0.1
HOWZ				S	Sn	10 14 36.3	-0.3
PRWZ	Pori Road	0.86	116	P	Pn	10 14 26.0	+0.6
PRWZ				S	Sn	10 14 38.1	+0.9
MTVZ	Mangateitei	0.89	27	P	Pb	10 14 25.1	-0.9
MTVZ				S	Sb	10 14 37.7	+0.3
TIWZ	Tintock	0.93	130	P	Pn	10 14 26.9	+0.6
TIWZ				S	Sn	10 14 39.9	+1.1
CAW	Cannon Point	0.93	175	P	Pb	10 14 26.1	-0.5
CAW				S	Sb	10 14 38.5	-0.1
DVHZ	Dannevirke	0.94	98	P	Pn	10 14 26.8	+0.4
DVHZ				S	Sn	10 14 40.1	+1.2
PKVZ	Pokaka	0.94	19	P	Pb	10 14 25.6	-1.2
PKVZ				S	Sb	10 14 38.2	-0.6
WNVZ	Wahianoa	0.98	30	P	Pb	10 14 26.6	-1.0
WNVZ				S	Sb	10 14 39.8	-0.5
MOVZ	Moawhango	0.99	39	P	Pb	10 14 26.2	-1.4
MOVZ				S	Sb	10 14 39.1	-1.1
TRVZ	Turoa	0.99	28	P	Pb	10 14 26.6	-1.2
TRVZ				S	Sb	10 14 39.5	-1.0
PNHZ	Pukenui	0.99	75	P	Pb	10 14 27.0	-0.7
PNHZ				S	Sb	10 14 40.4	0.0
DUWZ	D'Urville Isla	1.00	231	P	Pb	10 14 26.6	-1.3
DUWZ				S	Sn	10 14 40.8	+0.1
WHVZ	Whangaehu Hut	1.02	29	P	Pb	10 14 27.1	-1.1
MAVZ	Matarangi	1.02	27	P	Pb	10 14 27.2	-1.2
MAVZ				S	Sb	10 14 40.4	-1.1
FWVZ	Far West T-bar	1.03	27	P	Pb	10 14 27.2	-1.3
FWVZ				S	Sb	10 14 40.8	-0.9
PREZ	Palmer Road	1.04	323	P	Pn	10 14 28.7	+0.9
TUVZ	Tukino	1.06	31	P	Pb	10 14 27.9	-0.9
TUVZ				S	Sb	10 14 42.1	-0.2
VRZ	Vera Road	1.06	352	P	Pn	10 14 28.0	-0.1
MTW	Mount Morrison	1.06	157	P	Pb	10 14 28.5	-0.4
MTW				S	Sn	10 14 43.9	+1.8
COVZ	Chateau Observ	1.08	25	P	Pn	10 14 27.8	-0.7
COVZ				S	Sn	10 14 43.2	+0.6
BFZ	Birch Farm	1.11	117	P	Pn	10 14 29.0	+0.2
BFZ	Birch Farm	1.11	117	S	Sn	10 14 44.6	+1.4
BFZ	Birch Farm	1.11	117	P	Pb	10 14 29.2	-0.4
BFZ				S	Sn	10 14 44.8	+1.6
WEL	Wellington	1.11	187	P	Pn	10 14 28.8	-0.1
NGZ	Ngauruhoe	1.12	27	P	Pn	10 14 28.4	-0.7
NGZ				S	Sb	10 14 43.9	-0.2
SNVZ	South Ngauruho	1.12	28	P	Pn	10 14 28.7	-0.5
NMEZ	Namu Road	1.13	312	P	Pb	10 14 29.9	-0.1
KHEZ	Kahui Hut	1.14	320	P	Pb	10 14 30.1	-0.1
KHEZ	Kahui Hut	1.14	320	S	Sn	10 14 46.5	+2.4
KHEZ	Kahui Hut	1.14	320	P	Pb	10 14 30.2	-0.1
WPHZ	Waipukurau	1.15	85	P	Pb	10 14 30.2	0.0

DREZ	Durham Road	1.15	329	P	Pb	10 14 30.0	-0.2
SNZO	South Karori	1.15	189	P	Pn	10 14 28.5	-0.8
SNZO	South Karori	1.15	189	S	Sn	10 14 44.4	+0.3
OTVZ	Oturere	1.15	29	P	Pn	10 14 29.2	-0.4
TCW	Tory Channel	1.15	206	P	Pn	10 14 28.9	-0.5
NNVZ	North Ngauruho	1.16	26	P	Pn	10 14 29.1	-0.6
TWVZ	Taurewa	1.17	19	P	Pn	10 14 28.7	-1.0
TMWZ	Te Maipa	1.17	143	P	Pn	10 14 29.9	+0.2
WTVZ	West Tongariro	1.17	25	P	Pn	10 14 29.0	-0.8
ETVZ	East Tongariro	1.19	30	P	Pn	10 14 29.8	-0.3
ANWZ	Angora Road	1.20	104	P	Pb	10 14 30.8	-0.3
CPWZ	Castlepoint	1.20	128	P	Pb	10 14 30.9	-0.3
MHEZ	Mangahewa	1.20	336	P	Pb	10 14 31.3	+0.1
KRVZ	Karewarewa	1.21	26	P	Pn	10 14 29.7	-0.6
TMVZ	Te Maari	1.21	29	P	Pn	10 14 30.0	-0.3
KRHZ	Kereru	1.21	64	P	Pn	10 14 30.4	+0.1
NTVZ	North Tongarir	1.21	28	P	Pn	10 14 30.0	-0.4
BHW	Baring Head	1.23	183	P	Pb	10 14 30.9	-0.8
PKE	Pukeiti	1.23	322	P	Pb	10 14 31.8	0.0
NBEZ	Newall Road No	1.24	317	P	Pb	10 14 31.7	-0.1
MSWZ	Moikau Station	1.26	170	P	Pn	10 14 31.3	+0.4
PRHZ	Porangahau	1.29	94	P	Pb	10 14 32.1	-0.7
KATZ	Kakaramea	1.33	26	P	Pn	10 14 31.9	-0.1
TRWZ	Traveller	1.34	156	P	Pb	10 14 33.5	-0.1
KWHZ	Kaweka Forest	1.36	57	P	Pn	10 14 32.5	+0.2
RITZ	Rihia Road	1.39	31	P	Pn	10 14 33.3	+0.6
RATZ	Rangitukua	1.45	26	P	Pn	10 14 33.8	+0.2
TUWZ	Tuamarina	1.47	211	P	Pn	10 14 34.2	+0.5
PXZ	Pawanui	1.47	85	P	Pn	10 14 34.2	+0.4
KAHZ	Kahuranaki	1.53	76	P	Pn	10 14 35.2	+0.6
MCHZ	McNeill Hill	1.53	62	P	Pb	10 14 36.0	-0.8
BKZ	Black Stump Fm	1.56	50	P	Pn	10 14 36.2	+1.1
BKZ	Black Stump Fm	1.56	50	S	Sb	10 14 57.0	+0.4
BKZ	Black Stump Fm	1.56	50	P	Pn	10 14 35.5	+0.5
NNZ	Nelson	1.58	229	P	Pn	10 14 35.4	0.0
WATZ	Wairara	1.59	23	P	Pb	10 14 37.3	-0.5
HIZ	Hauiti	1.67	357	P	Pn	10 14 36.5	0.0
HIZ	Hauiti	1.67	357	P	Pn	10 14 36.3	-0.1
CMWZ	Cape Campbell	1.67	199	P	Pb	10 14 37.9	-1.3
TKNZ	Takaka Hill	1.74	240	P	Pn	10 14 37.9	+0.4
QRZ	Quartz Range	1.96	250	P	Pn	10 14 40.7	+0.2
KHZ	Kahutara	2.48	205	P	Pn	10 14 47.9	+0.3
URZ	Urewera	2.54	42	P	Pn	10 14 48.6	0.0
KUZ	Kuaotunu	3.48	10	P	Pn	10 15 03.9	+2.5
OUZ	Omahuta	5.07	347	P	Pn	10 15 24.4	+1.2
ODZ	Otahua Downs	5.81	212	P	Pn	10 15 32.4	-1.0
JCZ	Jackson Bay	6.01	228	P	Pn	10 15 35.7	-0.6

NNC ***20*** *10:20:48.4±1.7, 51°.55N×75°.29E, h0^{km}, mb2.5, mpv2.1, Error ellipse: s-maj=85.4km s-min=10.4km az=25.0, Suspected Mining explosion.*

IDC ***20*** *10:20:52.2±1.4, 51°.76N×75°.55E, h0^{km}, mbtmp2.5/3, ML1.6/3, Error ellipse: s-maj=27.9km s-min=11.0km az=33.0*

ISC 20 10:20:48.8±1.1**, 51°.8N**±0°.1×**75°.19E**±0°.09**, h0^{km}, n9, σ1^{s}63**/8**, 4C-4D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	2.42	119	Pg	Pn	10 21 31.4	+1.7
	0.1nm,0.3s,baz=304,slow=18,SNR=7.6						
KURBB				Lg	Lg	10 22 00.7	
	0.1nm,0.3s,baz=300,slow=32,SNR=11						
KURBB	Kurchatov Arra	2.42	119	⇓Pg	Pn	10 21 30.9	+1.2
	0.5nm,0.2s						
KURBB				⇓Lg	Lg	10 22 00.6	
	23nm,0.7s						
KURK	Kurchatov	2.43	116	⇓Pg	Pn	10 21 29.3	-0.4
	0.3nm,0.6s						
KURK				⇓Lg	Lg	10 21 57.9	
	1.3nm,0.4s						
BVA0	Borovoye Array	3.17	294	⇑Pg	Pg	10 21 49.5	-0.1
	0.7nm,0.5s						
BVA0				⇑Lg	Lg	10 22 33.8	
	22nm,0.9s						
BVAR	Borovoye Array	3.17	294	Pn	Pb	10 21 45.8	-0.3
	baz=123,slow=16,SNR=3.2						
BVAR				Lg	Lg	10 22 33.9	
	0.1nm,0.3s,baz=124,slow=31,SNR=8.7						
	0.9nm,0.6s						
ZALV	Zalesovo Beam	6.21	66	Pn	Pn	10 22 22.3	+0.7
	0.1nm,0.3s,baz=244,slow=13,SNR=1.6						
ZALV				Lg	Lg	10 24 10.3	
	0.2nm,0.3s,baz=242,slow=25,SNR=5.4						
	0.2nm,0.3s						
I46RU	ZALESOVO INFRA	6.21	66	I	I	10 58 00.0	
	baz=248,slow=317,SNR=1.9						
MK31	Makanchi Array	6.85	135	⇑Sn	Sn	10 23 40.4	-8.7
	1.0nm,0.8s,baz=326,slow=25,SNR=4.9						
MK31				⇑Lg	Lg	10 24 21.7	
	3.4nm,0.8s,baz=325,slow=30,SNR=4.5						
MKAR	Makanchi Array	6.85	135	Pn	Pn	10 22 32.2	+1.7
	baz=352,slow=18,SNR=2.7						
MKAR				Sn	Sn	10 23 46.8	-2.3
	baz=320,slow=20,SNR=6.5						
MKAR				Lg	Lg	10 24 21.1	
	0.1nm,0.3s,baz=326,slow=25,SNR=9.9						
	0.4nm,0.8s						

IDC ***20*** *10:39:44.3±3.2, 55°.68N×151°.98W, h0^{km}, mb3.8/7, mbtmp3.8/9, ML3.4/2, MS2.6/1, Error ellipse: s-maj=70.3km s-min=28.3km az=151.0*

NEIC ***20*** *10:39:48.8±1.9, 56°.35N±0°.06×152°.3W±0°.1, h10^{km}±2^{km}, ML3.1/56, ML3.1(AEIC), Error ellipse: s-maj=11.5km s-min=7.5km az=130.0*

AEIC ***20*** *10:39:52.5±1.6, 56°.36N±0°.05×152°.2W±0°.1, h6^{km}±7^{km}, Error ellipse: s-maj=8.3km s-min=7.5km az=115.0*

ISC 20 10:39:51.4±1.0**, 56°.49N**±0°.08×**152°.23W**±0°.06**, h18^{km}, n100, σ1^{s}14**/102**, mb4.0**/7**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHAK	Old Harbor	0.94	322		Pb	10 40 08.5	-0.6
OHAK				IAML		10 40 32.5	
	comp=N,459nm,0.6s						
OHAK				IAML		10 40 32.9	
	comp=E,418nm,0.7s						
SII	Sitkinak Islan	1.09	275		Pn	10 40 09.4	-2.3
SII	Sitkinak Islan	1.09	275	IAML		10 40 35.5	
	comp=E,572nm,0.7s						
SII				IAML		10 40 40.6	
	comp=N,727nm,1.1s						
KDAK	Kodiak Island	1.31	352	Pn	Pn	10 40 14.3	-0.5
	comp=N,3.9nm,0.3s,baz=193,slow=6.9,SNR=58						
KDAK				LR	LR	10 41 06.1	
	comp=N,158nm,21.8s,baz=36,slow=38						
KDAK	Kodiak Island	1.31	352		Pn	10 40 14.3	-0.5
R18K	Karluk	1.63	313		Pn	10 40 19.7	+0.6
R18K				IAML		10 40 52.2	
	comp=E,349nm,0.6s						
R18K				IAML		10 41 04.0	
	comp=N,267nm,0.7s						
CHIR	Chirikof Islan	2.01	252		Pn	10 40 22.0	-2.4
CHIR					Sn	10 40 44.8	-4.3
CHIR				IAML		10 40 47.0	
	comp=E,166nm,0.7s						
CHIR				IAML		10 40 47.7	
	comp=N,144nm,1.1s						
SYI	Shuyak Island	2.13	358	Pn	Pn	10 40 25.8	-0.2
SYI					Sn	10 40 49.2	-2.8
ANCK	Angle Creek	2.46	315		Pn	10 40 30.9	+0.2
PLK4	Peulik 4	2.53	299		Pn	10 40 31.2	-0.4
PLK4					Sn	10 41 01.9	-0.1
Q19K	Cape Douglas,	2.56	343		Pn	10 40 32.8	+0.7
KAHC	Katmai Hardscr	2.63	327		Pn	10 40 33.4	+0.4
KAHC					Sn	10 41 04.4	-0.2
CNTC	Contact Creek	2.66	314		Pn	10 40 33.1	-0.3
CNTC					Pb	10 40 33.7	-4.9
PLK1	Peulik 1	2.73	301		Pn	10 40 33.0	-1.2
CNPM	China Poot	3.09	9	Pn	Pn	10 40 38.7	-0.6
CNPM				IAML		10 41 08.0	
	comp=N,31nm,1.1s						
HOM	Homer	3.20	5	Pn	Pn	10 40 41.0	+0.3
P19K	Oil Pt	3.22	351	Pn	Pn	10 40 41.9	+0.9
P19K				IAML		10 41 26.0	
	comp=N,73nm,0.9s						
P18K	Big Mountain,	3.32	332	Pn	Pn	10 40 42.5	0.0
P18K				IAML		10 41 58.8	
	comp=E,30nm,1.0s						
BRSE	Bradley Lake S	3.36	13		Pn	10 40 42.1	-0.8
BRLK	Bradley Lake	3.36	12	Pn	Pn	10 40 41.8	-1.2
BRLK				IAML		10 42 07.7	
	comp=N,42nm,1.0s						
BRLK				IAML		10 42 08.2	
	comp=E,45nm,0.9s						
ILSW	Iliamna Southw	3.54	353		Pn	10 40 45.3	-0.2
ILSW				IAML		10 41 50.9	
	comp=E,24nm,1.0s						
ILSW				IAML		10 42 11.0	
	comp=N,43nm,0.9s						
IVE	Iliamna Volcan	3.56	354		Pn	10 40 46.1	+0.3
O18K	Koktuh Hills	3.73	336	Pn	Pn	10 40 49.1	+1.2
O18K				IAML		10 42 07.8	
	comp=N,19nm,1.2s						
O19K	Port Alsworth	3.88	344	Pn	Pn	10 40 51.2	+1.1
O19K				IAML		10 41 25.9	
	comp=N,41nm,0.5s						
SEW	Seward	3.91	21	Pn	Pn	10 40 49.2	-1.2
RED	Redoubt Volcan	3.95	356	Pn	Pn	10 40 51.6	+0.4
RED				IAML		10 41 56.5	
	comp=E,21nm,1.0s						
RED				IAML		10 42 21.9	
	comp=N,27nm,1.1s						
RDWB	Redoubt West	4.03	356		Pn	10 40 52.3	0.0
SLKM	Skilak Lake	4.17	14	Pn	Pn	10 40 54.0	-0.1
SLKM				IAML		10 41 46.8	
	comp=N,16nm,1.1s						
SLKM				IAML		10 42 47.4	
	comp=E,17nm,1.2s						
P23K	Montague Islan	4.35	34	Pn	Pn	10 40 55.5	-1.0
O16K	Kokwok River B	4.41	317	Pn	Pn	10 40 58.0	+0.8
O16K				IAML		10 42 26.9	
	comp=E,13nm,1.0s						
N19K	Bonanza Creek	4.50	346		Pn	10 40 59.1	+0.5
N19K	Bonanza Creek	4.50	346	IAML		10 42 40.0	
	comp=E,17nm,1.0s						
N18K	Kilae Creek	4.62	337		Pn	10 41 00.8	+0.5
N18K	Kilae Creek	4.62	337	IAML		10 42 40.0	
	comp=E,14nm,1.0s						
SPU	Mount Spurr	4.71	1	Pn	Pn	10 41 02.0	+0.5
RC01	Rabbit Creek A	4.79	15	Pn	Pn	10 41 01.9	-0.8
RC01				IAML		10 42 05.9	
	comp=N,9.9nm,1.0s						
RC01				IAML		10 42 21.3	
	comp=E,11nm,1.1s						
PWL	Port Wells	4.83	23	Pn	Pn	10 41 02.5	-0.7
HIN	Hinchinbrook I	4.94	35	Pn	Pn	10 41 03.9	-0.7
STLK	Strandline Lak	5.03	2		Pn	10 41 06.5	+0.6
FID	Port Fidalgo	5.22	33	Pn	Pn	10 41 07.3	-1.2
FID				IAML		10 42 22.3	
	comp=E,19nm,1.1s						
FID				IAML		10 43 24.9	
	comp=N,13nm,1.1s						
EYAK	Cordova Ski Ar	5.30	37	Pn	Pn	10 41 09.2	-0.3
KNK	Knik Glacier	5.31	20	Pn	Pn	10 41 08.9	-0.9
PMR	Palmer	5.37	16	Pn	Pn	10 41 09.8	-0.6
KAIM	Kayak Island	5.38	47	Pn	Pn	10 41 12.0	+1.4
M20K	Styx River	5.43	355	Pn	Pn	10 41 12.2	+0.7
GHO	Glory Hole Cre	5.57	16	Pn	Pn	10 41 14.5	+1.2
RAGM	Ragged Mountai	5.57	42	Pn	Pn	10 41 14.2	+0.9
M17K	Holitna River	5.62	333		Pn	10 41 14.9	+1.1
SML	Sawmill	5.70	19	Pn	Pn	10 41 15.1	0.0
DIV	Divide	5.74	33	Pn	Pn	10 41 15.5	-0.1
L19K	White Mountain	5.87	348	Pn	Pn	10 41 18.4	+1.0
SCM	Sheep Creek Mo	5.92	23	Pn	Pn	10 41 18.2	0.0
KLU	Klutina	5.98	30	Pn	Pn	10 41 19.1	+0.1
BMRM	Bremner River	5.99	38	Pn	Pn	10 41 19.2	+0.1
SNH	Sunshine Point	6.18	49	Pn	Pn	10 41 22.8	+1.2
CRQM	Cirque	6.39	44	Pn	Pn	10 41 25.9	+1.2
L16K	Owhat River	6.43	328		Pn	10 41 26.3	+1.3
M24K	Tolsona, Glenn	6.43	26	Pn	Pn	10 41 25.9	+0.8
PPLA	Purkeypile	6.43	0	Pn	Pn	10 41 25.8	+0.6
N25K	Chitina, Valde	6.47	34	Pn	Pn	10 41 25.7	0.0
TGL	Tana Glacier	6.51	45	Pn	Pn	10 41 26.5	+0.3
VRDI	Verde Repeater	6.58	40	Pn	Pn	10 41 26.5	-0.8
GLB	Gilahina Butte	6.60	38	Pn	Pn	10 41 27.2	-0.2
MCARA	McCarthy VSAT	6.84	40	Pn	Pn	10 41 31.2	+0.6
BALM	Baldy	6.87	44		Pn	10 41 30.4	-0.8
PTPK	Patty Peak	6.92	43		Pn	10 41 31.2	-0.7
GRNC	Granite Creek	6.93	48	Pn	Pn	10 41 32.5	+0.4
BARN	Barnard Glacie	7.15	46	Pn	Pn	10 41 35.5	+0.3
CTGM	Chitina Glacie	7.23	47	Pn	Pn	10 41 37.0	+0.8
PCA	Pinnacle	7.27	55	Pn	Pn	10 41 37.3	+0.7
LOGN	Logan Glacier	7.29	49	Pn	Pn	10 41 37.5	+0.5
PAX	Paxson	7.34	25	Pn	Pn	10 41 38.7	+1.1
BCPM	Bancas Point	7.50	57		Pn	10 41 39.3	-0.4
J17K	VABM Dome	7.73	336	Pn	Pn	10 41 44.0	+1.1
J20K	Nowinta River	7.77	354	Pn	Pn	10 41 44.0	+0.5
RIDG	Independent Ri	8.15	24	Pn	Pn	10 41 48.7	0.0
DOT	Dot Lake	8.26	26	Pn	Pn	10 41 49.9	-0.2
WRH	Wood River Hil	8.27	13	Pn	Pn	10 41 50.3	+0.1
ILAR	Eielson Array	8.71	15	Pn	Pn	10 41 56.8	+0.5
	comp=N,0.5nm,0.3s,baz=199,slow=14,SNR=26						
ILAR				Sn	Sn	10 43 29.2	-4.8
	comp=N,0.1nm,0.3s,baz=208,slow=14,SNR=4.8						
	comp=N,2.1nm,0.5s						
ILAR	Eielson Array	8.71	15	Pn	Pn	10 41 57.4	+1.1
S31K	Pelican	8.80	74	Pn	Pn	10 41 55.8	-1.8
O30N	Mendenhall	9.44	56	Pn	Pn	10 42 07.4	+1.0
H22K	Ishtalitna Cre	9.45	2	Pn	Pn	10 42 06.2	-0.2
IMAR	Indian Mountai	9.56	356	Pn	Pn	10 42 07.2	-0.7
M30M	Minto, Yukon	9.92	46	Pn	Pn	10 42 13.4	+0.5
WHY	Whitehorse	9.97	58	Pn	Pn	10 42 14.0	+0.4
M31M	Drury Creek, Y	10.74	50	Pn	Pn	10 42 23.4	-0.6
F21K	Alatna River	10.79	357	Pn	Pn	10 42 24.4	-0.4
E25K	Arctic Village	12.07	12	Pn	Pn	10 42 40.8	-1.4
C27K	Jago River	13.72	13	Pn	Pn	10 43 05.4	+0.7
INK	Inuvik	14.59	28	Pn	Pn	10 43 20.4	+3.9
	comp=N,0.1nm,0.3s,baz=221,slow=7.8,SNR=4.2						
	comp=N,2.1nm,1.1s						
INK	Inuvik	14.59	28	Pn	Pn	10 43 17.4	+0.8
YKA	Yellowknife Ar	19.80	57	P	P	10 44 21.4	+1.1
	comp=N,0.2nm,0.6s,baz=273,slow=12,SNR=3.3						
ARCES	ARCESS Array B	54.27	1	P	P	10 49 15.8	+0.1
	comp=N,0.4nm,0.4s,baz=302,slow=2.3,SNR=3.6						
	comp=N,0.4nm,0.4s						
SONM	Songino Array	57.24	308	P	P	10 49 38.8	+1.4
	comp=N,1.2nm,0.7s,baz=50,slow=6.2,SNR=7.5						
	comp=N,1.2nm,0.7s						
ZALV	Zalesovo Beam	60.48	325	P	P	10 50 00.2	+0.7
	comp=N,0.5nm,0.5s,baz=52,slow=9.9,SNR=4.2						
	comp=N,0.5nm,0.5s						
HFS	Hagfors	63.19	8	P	P	10 50 18.6	+0.9
	comp=N,1.5nm,0.7s,baz=48,slow=2.2,SNR=4.3						
	comp=N,1.5nm,0.7s						
KURBB	Kurchatov Arra	65.30	327	P	P	10 50 32.2	+0.5
	comp=N,0.3nm,0.5s,baz=31,slow=6.9,SNR=3.1						
	comp=N,0.3nm,0.5s						
BVAR	Borovoye Array	65.39	333	P	P	10 50 33.1	+0.8
	comp=N,1.0nm,0.6s,baz=34,slow=9.2,SNR=5.3						
	comp=N,1.0nm,0.6s						
MKAR	Makanchi Array	67.46	323	P	P	10 50 45.9	+0.2
	comp=N,0.4nm,0.6s,baz=43,slow=6.1,SNR=4.2						
	comp=N,0.4nm,0.6s						

IDC ***20*** *11:03:43.6±6.0, 14°.69S×176°.03W, h252^{km}±57^{km}, mb3.9/18, mbtmp4.5/18, Error ellipse: s-maj=17.8km s-min=12.5km az=124.0*

NEIC ***20*** *11:03:49.0±0.9, 14°.64S±0°.09×175°.94W±0°.08, h302^{km}±5^{km}, mb4.4/37, Error ellipse: s-maj=16.4km s-min=7.7km az=141.0*

ISC 20 11:03:48.5±0.4**, 14°.67S**±0°.08×**175°.96W**±0°.08**, h300^{km}, n78, σ0^{s}78**/79**, mb4.3**/38**, 4C, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.12	80		Pn	11 04 56.7	+0.5
MSVF	Nonsavu	6.52	241		Pn	11 05 27.3	+3.1
NIUE	Niue	7.25	128	Pn	Pn	11 05 33.4	+0.4
FUNA	Funafuti	7.73	322	Pn	Pn	11 05 38.8	-0.1
TOZ	Tahuroa Road	24.19	197	P	P	11 08 37.4	-1.0
TOZ				IAmb	IAmb	11 08 38.5	
	comp=Z,12nm,0.7s						
URZ	Urewera	24.29	193	P	P	11 08 36.0	-3.2
	comp=Z,18nm,0.6s,baz=317,slow=2.4,SNR=8.9						
URZ				S	S	11 12 22.4	-13
	comp=Z,45nm,1.1s,baz=15,slow=5.5,SNR=3.7						
	comp=Z,18nm,0.6s						
EIDS	Eidsvold	32.67	246	P	P	11 09 54.1	+0.7
EIDS				IAmb	IAmb	11 10 20.6	
	comp=Z,7.5nm,1.1s						
COEN	Coen	39.57	266	P	P	11 10 52.3	+0.6
COEN				IAmb	IAmb	11 11 13.8	
	comp=Z,21nm,1.4s						
INKA	Innaminka	42.20	245	P	P	11 11 12.9	+0.1
STKA	Stephens Creek	42.29	239	P	P	11 11 12.9	-0.6
	comp=Z,1.8nm,0.4s,baz=57,slow=8.3,SNR=4.6						
	comp=Z,1.8nm,0.4s						
STKA	Stephens Creek	42.29	239	P	P	11 11 12.9	-0.6
STKA				IAmb	IAmb	11 11 14.2	
	comp=Z,44nm,1.1s						
BBOO	Buckleboo	47.06	239	P	P	11 11 50.6	-0.4
BBOO				IAmb	IAmb	11 11 51.7	
	comp=Z,12nm,1.0s						
WR0	Warramunga Arr	47.42	256	P	P	11 11 52.9	-1.0
WR8	Warramunga Arr	47.46	256	P	P	11 11 53.3	-0.9
WB0	Warramunga Arr	47.57	257	P	P	11 11 54.0	-1.0
WRAB	Tennant Creek	47.60	256	P	P	11 11 54.3	-1.0
WRA	Warramunga Arr	47.61	256	P	P	11 11 54.4	-0.9
	comp=Z,2.0nm,0.8s,baz=79,slow=5.8,SNR=24						
WRA				PcP	PcP	11 13 19.5	-0.4
	comp=Z,0.5nm,0.7s,baz=94,slow=5.7,SNR=2.3						
	comp=Z,2.0nm,0.8s						
WRA	Warramunga Arr	47.61	256	P	P	11 11 54.7	-0.7
AS31	Alice Springs	48.00	251		P	11 11 57.7	-0.6
ASAR	Alice Springs	48.00	251	P	P	11 11 57.4	-0.9
	comp=Z,7.5nm,0.5s,baz=87,slow=7.9,SNR=108						
ASAR				PcP	PcP	11 13 20.8	-0.5
	comp=Z,0.5nm,0.7s,baz=73,slow=4.9,SNR=0.8						
	comp=Z,7.5nm,0.5s						
ASAR	Alice Springs	48.00	251		P	11 11 57.5	-0.8
MTN	Manton Dam	51.33	265	P	P	11 12 23.8	+0.4
MTN				IAmb	IAmb	11 12 46.8	
	comp=Z,8.9nm,1.1s						
KNRA	Kununurra	53.23	261	P	P	11 12 36.6	-0.6
KNRA				IAmb	IAmb	11 12 37.8	
	comp=Z,9.0nm,1.0s						
FITZ	Fitzroy Crossi	55.95	258	P	P	11 12 56.2	-0.4
PSA00	Pilbara Seismi	61.05	253	P	P	11 13 31.1	-0.5
PSA00				IAmb	IAmb	11 13 32.0	
	comp=Z,13nm,1.1s						
PSA00	Pilbara Seismi	61.05	253	P	P	11 13 30.4	-1.2
PSA00				IAmb	IAmb	11 13 32.1	
	comp=Z,6.1nm,1.1s						
MBWA	Marble Bar	61.19	254	P	P	11 13 31.7	-0.9
SBA	Scott Base	63.79	184	P	P	11 13 49.5	+0.9
VNDA	Vanda	63.86	185	P	P	11 13 48.8	-0.3
	comp=Z,6.0nm,0.8s,baz=7.3,slow=8.4,SNR=10						
	comp=Z,6.0nm,0.8s						
VNDA	Vanda	63.86	185	P	P	11 13 49.5	+0.4
VNDA				IAmb	IAmb	11 13 51.6	
	comp=Z,16nm,1.1s						
PEA0B	Petropavlovsk-	71.21	344	P	P	11 14 34.6	-0.5
PETK	Petropavlovsk-	71.21	344	P	P	11 14 35.1	0.0
	comp=Z,8.7nm,0.8s,baz=124,slow=7.9,SNR=8.1						
	comp=Z,8.7nm,0.8s						
PETK	Petropavlovsk-	71.21	344	P	P	11 14 34.8	-0.2
MDPB	Devils Postpil	74.52	44	P	P	11 14 55.3	+0.2
MDPB				IAmb	IAmb	11 14 56.7	
	comp=Z,5.3nm,0.9s						
YBH	Yreka Blue Hor	74.53	38	P	P	11 14 55.9	+1.0
	comp=Z,0.3nm,0.7s,baz=166,slow=3.8,SNR=6.0						
PNTR	Pine Nut	74.97	42		P	11 14 57.5	-0.1
PNTR				IAmb	IAmb	11 14 59.4	
	comp=Z,10.0nm,0.9s						
QSPA	South Pole Qui	75.37	180	P	P	11 15 00.1	+0.8
	comp=Z,12nm,0.8s,baz=23,slow=1.2,SNR=30						
	comp=Z,12nm,0.8s						
QSPA	South Pole Qui	75.37	180		P	11 14 59.9	+0.5
NVAR	Mina Array Bea	75.46	43	P	P	11 15 01.3	+0.9
	comp=Z,4.6nm,0.8s,baz=227,slow=9.7,SNR=34						
	comp=Z,4.6nm,0.8s						
NV11	Mina Array Sit	75.56	43	P	P	11 15 01.1	+0.2
NV11				IAmb	IAmb	11 15 02.7	
	comp=Z,5.7nm,0.9s						
N18K	Kilae Creek	76.80	10	P	P	11 15 07.1	0.0
N18K				IAmb	IAmb	11 15 15.9	
	comp=Z,13nm,1.2s						
K17K	Iditarod	78.36	8	P	P	11 15 16.5	+0.9
ELK	Elko	78.69	43	P	P	11 15 18.6	+0.3
	comp=Z,3.1nm,0.9s,baz=246,slow=5.6,SNR=12						
	comp=Z,3.1nm,0.9s						
N25K	Chitina, Valde	79.97	15	P	P	11 15 24.1	-0.3
TNA	Tin City	80.22	3	P	P	11 15 25.6	+0.2
HLID	Hailey	80.65	40		P	11 15 28.5	-0.1
HLID				IAmb	IAmb	11 15 30.5	
	comp=Z,4.1nm,0.8s						
BCAR	Beaver Creek A	81.91	15	P	P	11 15 34.6	0.0
CCB	Clear Creek Bu	81.93	12		P	11 15 34.1	-0.4
ILAR	Eielson Array	82.23	12	P	P	11 15 36.0	-0.1
	comp=Z,2.6nm,0.5s,baz=219,slow=5.3,SNR=37						
	comp=Z,2.6nm,0.5s						
ILAR	Eielson Array	82.23	12	P	P	11 15 35.7	-0.4
ANMO	Albuquerque	82.24	51	P	P	11 15 37.5	+0.4
	comp=Z,2.4nm,1.0s,baz=240,slow=6.8,SNR=3.6						
	comp=Z,2.4nm,1.0s						
TXAR	Lajitas Array	82.27	57	P	P	11 15 38.6	+1.3
	comp=Z,2.1nm,1.0s,baz=241,slow=4.1,SNR=7.0						
	comp=Z,2.1nm,1.0s						
E19K	Redstone River	83.03	7		P	11 15 40.2	0.0
S22A	4UR Ranch, Cre	83.11	48		P	11 15 42.3	+0.7
S22A				IAmb	IAmb	11 15 43.5	
	comp=Z,4.1nm,1.0s						
DAWY	Dawson	83.35	15		P	11 15 42.1	+0.2
DAWY				IAmb	IAmb	11 15 43.0	
	comp=Z,8.0nm,0.8s						
PDAR	Pinedale Array	83.39	43	P	P	11 15 42.8	0.0
	comp=Z,2.6nm,0.9s,baz=214,slow=3.4,SNR=15						
	comp=Z,2.6nm,0.9s						
PDAR	Pinedale Array	83.39	43	P	P	11 15 42.5	-0.3
BILL	Bilibino	83.48	353	P	P	11 15 42.1	-0.3
BILL				IAmb	IAmb	11 15 42.5	
	comp=Z,8.0nm,1.4s						
BMAR	Burnt Mountain	85.02	12	P	P	11 15 50.2	+0.1
BELA	Belgrano 2	85.06	172	P	P	11 15 50.1	-0.2
BELA				IAmb	IAmb	11 15 51.0	
	comp=Z,9.3nm,0.8s						
HHC	Hu-ho-hao-te	86.73	314	*e*P	P	11 15 58.4	-0.8
HHC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,120nm,4.9s						
MAW	Mawson	87.69	199	P	P	11 16 03.2	+0.1
	comp=Z,9.3nm,0.9s,baz=103,slow=6.2,SNR=5.8						
	comp=Z,9.3nm,0.9s						
CMAR	Chiang Mai Arr	90.04	289	P	P	11 16 14.1	-1.0
	comp=Z,0.9nm,0.3s,baz=113,slow=5.0,SNR=4.1						
	comp=Z,0.9nm,0.3s						
YKA	Yellowknife Ar	90.42	24	P	P	11 16 15.8	0.0
	comp=Z,1.3nm,1.0s,baz=250,slow=5.4,SNR=6.2						
	comp=Z,1.3nm,1.0s						
SONM	Songino Array	92.66	319	P	P	11 16 26.7	0.0
	comp=Z,0.3nm,0.6s,baz=145,slow=3.5,SNR=2.2						
	comp=Z,0.3nm,0.6s						
TROLL	Troll, Antarti	93.53	180	⇑P	P	11 16 29.9	-0.4
	comp=Z,178nm,0.8s						
SNAA	Sanae	93.75	178	⇑P	P	11 16 30.9	-0.4
	comp=Z,34nm,0.7s						
SNAA	Sanae	93.75	178	P	P	11 16 30.6	-0.7
	comp=Z,1.3nm,0.7s,baz=232,slow=4.9,SNR=6.8						
	comp=Z,1.3nm,0.7s						
SNAA	Sanae	93.75	178	P	P	11 16 30.6	-0.7
SNAA				IAmb	IAmb	11 16 37.5	
	comp=Z,6.9nm,1.5s						
VNA3	Neumayer Olymp	93.79	176	⇑P	P	11 16 30.9	-0.5
	comp=Z,6.8nm,0.7s						
VNA2	Neumayer--Watz	94.26	176	⇑P	P	11 16 33.7	+0.1
	comp=Z,3.7nm,0.7s,baz=165,slow=2.6						
ARCES	ARCESS Array B	123.53	351	PKP	PKPdf	11 22 08.9	-0.8
	comp=Z,2.2nm,0.8s,baz=113,slow=3.2,SNR=3.7						
BR131	Keskin Array S	144.02	320		PKPab	11 22 47.1	-0.2
BRTR	Keskin Array B	144.02	320	PKP	PKPab	11 22 47.5	+0.3
	comp=Z,9.2nm,0.8s,baz=90,slow=2.5,SNR=42						
BRTR	Keskin Array B	144.02	320		PKPab	11 22 46.9	-0.3
KHC	Kasperske Hory	144.75	349		PKPbc	11 22 48.7	-0.8
GERES	GERESS Array B	145.00	349	PKPbc	PKPdf	11 22 50.0	-0.3
	comp=Z,1.3nm,0.6s,baz=339,slow=3.4,SNR=9.2						
MMAI	Mount Meron Ar	146.18	308	PKPbc	PKPbc	11 22 54.9	+0.5
	comp=Z,1.4nm,0.5s,baz=48,slow=2.1,SNR=1.9						

NEIC ***20*** *11:10:09.8±1.8, 56°.39N±0°.04×152°.23W±0°.08, h10^{km}±2^{km}, ML3.1/60, ML3.0(AEIC), Error ellipse: s-maj=7.6km s-min=7.4km az=65.0*

AEIC ***20*** *11:10:13.9±1.9, 56°.39N±0°.04×152°.30W±0°.07, h10^{km}±6^{km}, Error ellipse: s-maj=6.3km s-min=5.4km az=196.0*

IDC ***20*** *11:10:21.5±9.9, 56°.98N×151°.89W, h84^{km}±72^{km}, mb3.4/5, mbtmp3.7/6, ML3.4/1, Error ellipse: s-maj=149.9km*

s-min=65.5km az=120.0

ISC 20 11:10:10.7±1.2**, 56°.45N**±0°.08×**152°.22W**±0°.06**, h18^{km}, n109, σ1^s.18**/105**, mb4.0**/5**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**0.97**	**323**		**Pb**	**11 10 28.6**	**-0.3**
OHAK				Sg	**Sb**	**11 10 42.3**	**+0.8**
OHAK				IAML		11 10 52.3	
	comp=N,597nm,0.8s						
OHAK				IAML		11 10 53.0	
	comp=E,530nm,0.7s						
SII	**Sitkinak Islan**	**1.10**	**277**		**Pn**	**11 10 31.5**	**+0.4**
SII				IAML		11 10 55.2	
	comp=E,658nm,0.8s						
SII				IAML		11 11 01.2	
	comp=N,675nm,0.8s						
KDAK	**Kodiak Island**	**1.35**	**352**		**Pn**	**11 10 34.2**	**-0.4**
R18K	**Karluk**	**1.66**	**313**		**Sn**	**11 10 58.1**	**-1.5**
R18K	**Karluk**	**1.66**	**313**		**Pn**	**11 10 39.7**	**+0.9**
R18K				IAML		11 11 17.6	
	comp=N,298nm,0.6s						
CHIR	**Chirikof Islan**	**2.01**	**253**	Pn	**Pn**	**11 10 42.7**	**-0.9**
CHIR				IAML		11 11 06.9	
	comp=N,145nm,0.8s						
CHIR				IAML		11 11 43.6	
	comp=E,103nm,1.1s						
CHIR	**Chirikof Islan**	**2.01**	**253**		**Sn**	**11 11 05.0**	**-3.1**
SYI	**Shuyak Island**	**2.17**	**358**	Pn	**Pn**	**11 10 45.8**	**-0.1**
SYI	**Shuyak Island**	**2.17**	**358**		**Sn**	**11 11 11.1**	**-1.2**
ANCK	**Angle Creek**	**2.50**	**316**		**Pn**	**11 10 51.2**	**+0.8**
ANCK					Pb	11 10 51.8	-3.2
PLK4	**Peulik 4**	**2.56**	**299**		**Pn**	**11 10 52.1**	**+0.9**
Q19K	**Cape Douglas,**	**2.60**	**343**	Pn	**Pn**	**11 10 53.1**	**+1.3**
KAHC	**Katmai Hardscr**	**2.67**	**327**		**Pn**	**11 10 53.1**	**+0.2**
CNTC	**Contact Creek**	**2.69**	**314**		**Pn**	**11 10 54.1**	**+1.0**
CNPM	**China Poot**	**3.13**	**9**	Pn	**Pn**	**11 10 58.9**	**-0.2**
CNPM				IAML		11 11 26.0	
	comp=N,37nm,1.0s						
HOM	**Homer**	**3.23**	**5**		**Pn**	**11 11 00.1**	**-0.4**
P19K	**Oil Pt**	**3.26**	**351**	Pn	**Pn**	**11 11 02.7**	**+1.8**
P18K	**Big Mountain,**	**3.36**	**333**	Pn	**Pn**	**11 11 02.3**	**+0.1**
BRLK	**Bradley Lake**	**3.40**	**11**	Pn	**Pn**	**11 11 02.3**	**-0.5**
BRLK				IAML		11 11 35.4	
	comp=E,48nm,1.1s						
BRLK				IAML		11 12 05.6	
	comp=N,47nm,1.1s						
ILS	**Iliamna Low So**	**3.55**	**353**		**Pn**	**11 11 05.1**	**+0.2**
ILSW	**Iliamna Southw**	**3.58**	**353**		**Pn**	**11 11 05.8**	**+0.5**
ILSW				IAML		11 12 31.4	
	comp=N,32nm,1.1s						
ILSW				IAML		11 12 32.6	
	comp=E,27nm,1.1s						
IVE	**Iliamna Volcan**	**3.60**	**354**		**Pn**	**11 11 06.1**	**+0.4**
O18K	**Koktuh Hills**	**3.77**	**336**		**Pn**	**11 11 08.6**	**+0.8**
O18K				IAML		11 12 11.5	
	comp=N,24nm,1.2s						
O18K				IAML		11 12 42.2	
	comp=E,22nm,1.0s						
SEW	**Seward**	**3.95**	**21**	Pn	**Pn**	**11 11 09.5**	**-0.7**
RED	**Redoubt Volcan**	**3.99**	**356**	Pn	**Pn**	**11 11 11.2**	**+0.3**
RED				IAML		11 12 38.3	
	comp=E,29nm,1.1s						
RDWB	**Redoubt West**	**4.07**	**356**		**Pn**	**11 11 12.6**	**+0.5**
DFR	**Drift River**	**4.17**	**357**		**Pn**	**11 11 14.1**	**+0.8**
SLKM	**Skilak Lake**	**4.21**	**14**	Pn	**Pn**	**11 11 13.4**	**-0.5**
SLKM				IAML		11 12 16.6	
	comp=E,18nm,1.2s						
SLKM				IAML		11 13 11.2	
	comp=N,19nm,1.2s						
O17K	**Koliganek Bris**	**4.22**	**324**		**Pn**	**11 11 14.9**	**+0.9**
P23K	**Montague Islan**	**4.38**	**34**	Pn	**Pn**	**11 11 14.8**	**-1.3**
P23K				IAML		11 13 10.6	
	comp=N,29nm,1.2s						
O16K	**Kokwok River B**	**4.44**	**318**	Pn	**Pn**	**11 11 16.9**	**-0.1**
N19K	**Bonanza Creek**	**4.54**	**346**		**Pn**	**11 11 19.5**	**+1.1**
N19K				IAML		11 13 00.1	
	comp=E,22nm,1.1s						
N19K				IAML		11 13 27.5	
	comp=N,10nm,1.2s						
N18K	**Kilae Creek**	**4.66**	**337**	Pn	**Pn**	**11 11 20.1**	**0.0**
N18K				IAML		11 12 58.5	
	comp=N,11nm,1.1s						
N18K				IAML		11 13 01.5	
	comp=E,11nm,1.0s						
SPU	**Mount Spurr**	**4.75**	**1**	Pn	**Pn**	**11 11 22.7**	**+1.4**
RC01	**Rabbit Creek A**	**4.83**	**14**	Pn	**Pn**	**11 11 22.6**	**+0.2**
RC01				IAML		11 12 24.1	
	comp=E,14nm,0.9s						
RC01				IAML		11 12 26.9	
	comp=N,14nm,0.7s						
N17K	**Nushagak Hills**	**4.85**	**330**	Pn	**Pn**	**11 11 24.2**	**+1.5**
N17K				IAML		11 13 05.0	
	comp=N,8.9nm,0.8s						
PWL	**Port Wells**	**4.87**	**23**	Pn	**Pn**	**11 11 22.2**	**-0.7**
PWL				IAML		11 12 30.0	
	comp=E,21nm,1.0s						
HIN	**Hinchinbrook I**	**4.97**	**35**	Pn	**Pn**	**11 11 24.0**	**-0.3**
STLK	**Strandline Lak**	**5.07**	**2**	Pn	**Pn**	**11 11 26.6**	**+0.8**
GLI	**Glacier Island**	**5.19**	**29**	Pn	**Pn**	**11 11 27.0**	**-0.3**
FID	**Port Fidalgo**	**5.25**	**32**	Pn	**Pn**	**11 11 27.3**	**-0.9**
FID				IAML		11 12 32.5	
	comp=E,16nm,0.9s						
FID				IAML		11 13 10.3	
	comp=N,17nm,1.0s						
EYAK	**Cordova Ski Ar**	**5.33**	**37**	Pn	**Pn**	**11 11 29.4**	**+0.2**
EYAK				IAML		11 12 32.1	
	comp=N,13nm,1.0s						
EYAK				IAML		11 12 32.5	
	comp=E,11nm,1.1s						
PMR	**Palmer**	**5.40**	**16**	Pn	**Pn**	**11 11 30.7**	**+0.6**
KAIM	**Kayak Island**	**5.40**	**47**	Pn	**Pn**	**11 11 31.8**	**+1.5**
M20K	**Styx River**	**5.47**	**355**	Pn	**Pn**	**11 11 32.2**	**+0.9**
SKT	**Skwentna**	**5.56**	**3**	Pn	**Pn**	**11 11 34.4**	**+2.0**
N15K	**Kwethluk River**	**5.58**	**315**	Pn	**Pn**	**11 11 34.4**	**+1.7**
RAGM	**Ragged Mountai**	**5.59**	**42**	Pn	**Pn**	**11 11 33.0**	**+0.1**
GHO	**Glory Hole Cre**	**5.60**	**16**	Pn	**Pn**	**11 11 34.7**	**+1.6**
M17K	**Holitna River**	**5.66**	**334**		**Pn**	**11 11 35.5**	**+1.9**
SML	**Sawmill**	**5.74**	**19**	Pn	**Pn**	**11 11 35.1**	**+0.3**
DIV	**Divide**	**5.77**	**33**	Pn	**Pn**	**11 11 35.5**	**+0.2**
L19K	**White Mountain**	**5.91**	**348**		**Pn**	**11 11 38.1**	**+0.9**
SCM	**Sheep Creek Mo**	**5.96**	**23**	Pn	**Pn**	**11 11 38.4**	**+0.4**
KLU	**Klutina**	**6.01**	**30**	Pn	**Pn**	**11 11 39.2**	**+0.5**
BMRM	**Bremner River**	**6.02**	**38**	Pn	**Pn**	**11 11 39.1**	**+0.4**
L18K	**Granite Mounta**	**6.22**	**340**	Pn	**Pn**	**11 11 42.6**	**+1.1**
M24K	**Tolsona, Glenn**	**6.46**	**26**	Pn	**Pn**	**11 11 46.0**	**+1.1**
L16K	**Owhat River**	**6.47**	**328**	Pn	**Pn**	**11 11 46.6**	**+1.8**
PPLA	**Purkeypile**	**6.47**	**0**	Pn	**Pn**	**11 11 45.8**	**+0.8**
N25K	**Chitina, Valde**	**6.50**	**34**	Pn	**Pn**	**11 11 45.9**	**+0.6**
VRDI	**Verde Repeater**	**6.61**	**40**	Pn	**Pn**	**11 11 47.2**	**+0.3**
GLB	**Gilahina Butte**	**6.63**	**37**	Pn	**Pn**	**11 11 47.5**	**+0.3**
MCARA	**McCarthy VSAT**	**6.86**	**40**	Pn	**Pn**	**11 11 51.7**	**+1.5**
GRNC	**Granite Creek**	**6.95**	**48**	Pn	**Pn**	**11 11 52.9**	**+1.3**
KTH	**Kantishna Hill**	**7.16**	**5**	Pn	**Pn**	**11 11 55.5**	**+1.1**
BARN	**Barnard Glacie**	**7.18**	**46**	Pn	**Pn**	**11 11 55.1**	**+0.4**
CTGM	**Chitina Glacie**	**7.25**	**47**	Pn	**Pn**	**11 11 57.0**	**+1.3**
LOGN	**Logan Glacier**	**7.31**	**48**	Pn	**Pn**	**11 11 57.2**	**+0.7**
MCK	**McKinley**	**7.49**	**11**	Pn	**Pn**	**11 12 00.7**	**+1.8**
BCPM	**Bancas Point**	**7.52**	**57**	Pn	**Pn**	**11 11 59.7**	**+0.4**
K15K	**Wolf Creek Mou**	**7.54**	**325**	Pn	**Pn**	**11 12 01.6**	**+2.0**
M26K	**Nabesna, AK**	**7.59**	**34**	Pn	**Pn**	**11 12 01.8**	**+1.4**
O28M	**Mount Upton**	**7.63**	**50**	Pn	**Pn**	**11 12 02.3**	**+1.3**
J19K	**Poorman**	**7.76**	**349**	Pn	**Pn**	**11 12 03.2**	**+0.7**
M27K	**Edge Creek, AK**	**7.93**	**37**	Pn	**Pn**	**11 12 06.3**	**+1.3**
J16K	**Anvik River**	**8.04**	**332**	Pn	**Pn**	**11 12 07.6**	**+1.2**
K24K	**Donnelly Dome**	**8.04**	**21**	Pn	**Pn**	**11 12 08.1**	**+1.6**
O29M	**Mount Kennedy**	**8.14**	**56**	Pn	**Pn**	**11 12 09.1**	**+1.1**
RIDG	**Independent Ri**	**8.19**	**24**	Pn	**Pn**	**11 12 09.2**	**+0.8**
P29M	**Windy Craggy**	**8.32**	**61**	Pn	**Pn**	**11 12 10.9**	**+0.7**
BCAR	**Beaver Creek A**	**8.46**	**34**	Pn	**Pn**	**11 12 13.4**	**+1.2**
CCB	**Clear Creek Bu**	**8.51**	**13**	Pn	**Pn**	**11 12 13.9**	**+1.1**
SCRK	**Sand Creek**	**8.59**	**25**	Pn	**Pn**	**11 12 14.3**	**+0.4**
IL31		**8.75**	**15**	Pn	**Pn**	**11 12 17.4**	**+1.3**
ILAR	**Eielson Array**	**8.75**	**15**	P	**Pn**	**11 12 17.6**	**+1.4**
	comp=E,0.4nm,0.3s,baz=199,slow=14,SNR=32						
ILAR				S	**Sn**	**11 13 48.5**	**-5.7**
	comp=E,0.3nm,0.6s,baz=128,slow=22,SNR=4.5						
	comp=E,2.0nm,0.5s						
S31K	**Pelican**	**8.81**	**73**	Pn	**Pn**	**11 12 16.5**	**-0.4**
HYT	**Haines Junctio**	**8.83**	**54**	Pn	**Pn**	**11 12 17.3**	**0.0**
J25K	**Salcha River,**	**8.85**	**20**	Pn	**Pn**	**11 12 19.0**	**+1.4**
J26L	**Joseph Creek**	**9.13**	**24**	Pn	**Pn**	**11 12 22.3**	**+0.9**
M29M	**Somme Creek**	**9.22**	**44**	Pn	**Pn**	**11 12 23.5**	**+0.9**
H21K	**Melozitna Rive**	**9.25**	**358**	Pn	**Pn**	**11 12 23.7**	**+0.8**
N30M	**Aishikik Lake**	**9.28**	**51**	Pn	**Pn**	**11 12 24.0**	**+0.6**
O30N	**Mendenhall**	**9.46**	**56**	Pn	**Pn**	**11 12 26.4**	**+0.6**
S32K	**Killisnoo**	**9.69**	**77**	Pn	**Pn**	**11 12 28.9**	**-0.1**
N31M	**Braeburn, Yuko**	**9.86**	**52**	Pn	**Pn**	**11 12 31.7**	**+0.3**
M30M	**Minto, Yukon**	**9.94**	**46**	Pn	**Pn**	**11 12 31.8**	**-0.7**
WHY	**Whitehorse**	**9.98**	**58**	Pn	**Pn**	**11 12 34.6**	**+1.5**
H11N2	**WAKE ISLAND Hy**	**47.58**	**237**	T	T	12 10 04.7	
	baz=23						
H11N3	**WAKE ISLAND Hy**	**47.59**	**237**	T	T	12 09 54.9	
	baz=23						
H11N1	**WAKE ISLAND Hy**	**47.60**	**237**	T	T	12 09 55.1	
	baz=23						
H11S1	**WAKE ISLAND Hy**	**48.73**	**236**	T	T	12 11 25.6	
	baz=29						
H11S2	**WAKE ISLAND Hy**	**48.74**	**236**	T	T	12 11 27.9	
	baz=29						
H11S3	**WAKE ISLAND Hy**	**48.75**	**236**	T	T	12 11 28.0	
	baz=29						
SONM	**Songino Array**	**57.27**	**308**	P	**P**	**11 19 58.5**	**+1.6**
	comp=E,1.2nm,0.7s,baz=45,slow=6.7,SNR=8.3						
	comp=E,1.2nm,0.7s						
ZALV	**Zalesovo Beam**	**60.51**	**325**	P	**P**	**11 20 20.5**	**+1.4**
	comp=E,0.7nm,0.6s,baz=29,slow=6.8,SNR=4.1						
	comp=E,0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**65.33**	**327**	P	**P**	**11 20 51.9**	**+0.7**
	comp=E,0.5nm,0.6s,baz=36,slow=4.8,SNR=2.9						
	comp=E,0.5nm,0.6s						
BVAR	**Borovoye Array**	**65.42**	**333**	P	**P**	**11 20 52.2**	**+0.5**
	comp=E,0.8nm,0.6s,baz=23,slow=8.0,SNR=5.3						
	comp=E,0.8nm,0.6s						
MKAR	**Makanchi Array**	**67.49**	**323**	P	**P**	**11 21 05.8**	**+0.6**
	comp=E,0.4nm,0.6s,baz=36,slow=8.0,SNR=3.1						
	comp=E,0.4nm,0.6s						

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*IDC **20** 11:10:44.2±1.4, 3°.78S×150°.04E, h0^{km}, mb3.8/7, mbtmp3.8/7, MS3.3/9, Error ellipse: s-maj=53.8km s-min=23.7km az=118.0*

*NEIC **20** 11:10:44.3±1.0, 3°.5S±0°.2×150°.06E±0°.09, h10^{km}±2^{km}, mb4.1/7, Error ellipse: s-maj=33.4km s-min=8.9km az=22.0*

ISC 20 11:10:46.9±0.7**, 3°.7S**±0°.1×**149°.96E**±0°.09**, h19^{km}, n28, σ1^s.13**/20**, mb3.9**/11**, MS3.3**/7**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.26**	**103**		**Pn**	**11 11 21.7**	**-1.7**
MANU	**Manus Island**	**3.06**	**302**	Pn	**Pn**	**11 11 32.5**	**-1.8**
CTA	**Charters Tower**	**16.70**	**192**	LR	LR	11 19 59.2	
	comp=Z,48nm,20.9s,baz=236,slow=33						
GUMO	**Guam**	**17.88**	**344**	LR	LR	11 20 27.2	
	comp=Z,71nm,19.8s,baz=78,slow=32						
MTN	**Manton Dam**	**20.72**	**243**	P	**P**	**11 15 25.9**	**-0.5**
MTN				IAmb	IAmb	11 15 31.3	
	comp=Z,13nm,1.2s						
WB0	**Warramunga Arr**	**22.05**	**222**	P	**P**	**11 15 40.0**	**-0.8**
WB0				IAmb	IAmb	11 16 02.4	
	comp=Z,12nm,1.4s						
WR8	**Warramunga Arr**	**22.11**	**222**	P	**P**	**11 15 41.6**	**+0.1**
WRAB	**Tennant Creek**	**22.20**	**222**	P	**P**	**11 15 42.1**	**-0.3**
WRAB				IAmb	IAmb	11 15 49.0	
	comp=Z,8.0nm,0.9s						
WRA	**Warramunga Arr**	**22.21**	**222**	P	**P**	**11 15 41.9**	**-0.6**
	comp=Z,3.9nm,0.9s,baz=44,slow=10,SNR=15						
	comp=Z,3.9nm,0.9s						
KNRA	**Kununurra**	**24.02**	**239**	P	**P**	**11 15 59.9**	**-1.0**
KNRA				IAmb	IAmb	11 16 36.7	
	comp=Z,7.5nm,1.1s						
AS31	**Alice Springs**	**25.20**	**217**	P	**P**	**11 16 11.6**	**0.0**
ASAR	**Alice Springs**	**25.20**	**217**	P	**P**	**11 16 11.4**	**-0.3**
	comp=Z,2.1nm,1.0s,baz=53,slow=9.0,SNR=9.7						
ASAR				LR	LR	11 27 06.1	
	comp=Z,93nm,19.3s,baz=98,slow=39						
	comp=Z,2.1nm,1.0s						
ASAR	**Alice Springs**	**25.20**	**217**	P	**P**	**11 16 10.9**	**-0.8**
DAV	**Davao City (W)**	**26.57**	**294**	LR	LR	11 25 32.1	
	comp=Z,51nm,20.0s,baz=134,slow=33						
BATI	**Baumata**	**26.88**	**255**	LR	LR	11 27 20.9	
	comp=Z,100nm,18.3s,baz=94,slow=37						
FITZ	**Fitzroy Crossi**	**27.79**	**237**	P	**P**	**11 16 37.2**	**+2.2**
FITZ				IAmb	IAmb	11 16 39.9	
	comp=Z,1.9nm,1.0s						
STKA	**Stephens Creek**	**29.13**	**195**	LR	LR	11 28 42.2	
	comp=Z,36nm,18.2s,baz=24,slow=37						
JCJ	**Chichijima**	**31.50**	**347**	LR	LR	11 28 06.9	
	comp=Z,47nm,21.1s,baz=91,slow=33						
JOW	**Kunigami**	**36.87**	**327**	LR	LR	11 30 17.2	
	comp=Z,68nm,20.0s,baz=130,slow=32						
URZ	**Urewera**	**42.41**	**148**	LR	LR	11 32 39.0	
	comp=Z,77nm,20.0s,baz=294,slow=31						
TUWZ	**Tuamarina**	**43.31**	**154**	P	**P**	**11 18 48.2**	**+0.5**
CMAR	**Chiang Mai Arr**	**54.84**	**296**	P	**P**	**11 20 17.8**	**+1.4**
	comp=Z,0.5nm,0.4s,baz=107,slow=4.9,SNR=4.4						
	comp=Z,0.5nm,0.4s						
SONM	**Songino Array**	**63.89**	**329**	P	**P**	**11 21 19.2**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=134,slow=4.2,SNR=2.5						
	comp=Z,0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**78.66**	**327**	P	**P**	**11 22 45.6**	**-2.0**
ILAR	**Eielson Array**	**82.21**	**23**	P	**P**	**11 23 06.9**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=250,slow=5.9,SNR=6.8						
	comp=Z,0.7nm,0.8s						
BVAR	**Borovoye Array**	**86.66**	**323**	P	**P**	**11 23 29.9**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=86,slow=6.2,SNR=3.6						
	comp=Z,0.8nm,0.7s						
YKA	**Yellowknife Ar**	**95.76**	**28**	P	**P**	**11 24 12.4**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=271,slow=7.1,SNR=3.9						
	comp=Z,0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**147.26**	**289**	PKPbc	**PKPab**	**11 30 31.7**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=70,slow=4.7,SNR=4.9						

GCG 20 11:18:58.0±0.4**, 14°.27N×91°.49W, h66^{km}**±5^{km}**, MD3.7, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG5	**El Palmar, Qui**	**0.19**	**45**	*i* P	Pn	11 19 10.0	+1.7
STG2	**El Palmar, Qui**	**0.20**	**33**	*i* P	Pn	11 19 10.7	+2.3
STG2				*i* S	Sn	11 19 20.3	+4.4
STG8	**El Palmar, Qui**	**0.22**	**36**	*i* P	Pn	11 19 11.2	+2.6
STG8				*i* S	Sn	11 19 21.0	+4.7
SOKI	**Kika Raxquin**	**0.55**	**8**	*i* P	Pn	11 19 12.6	+1.1
SOKI				*i* S	Sn	11 19 24.0	+2.7
SMCA	**Catarina**	**0.81**	**316**	*i* P	Pn	11 19 14.3	+0.3
FG16	**Alotenango, Sa**	**0.94**	**90**	*i* P	Pn	11 19 12.7	-3.1
FG16				*i* S	Sn	11 19 24.3	-4.7
NUBE	**Las Nubes**	**1.69**	**102**	*i* P	Pn	11 19 26.0	+0.4

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*IDC **20** 11:23:44.1±0.8, 59°.35N×30°.51W, h0^{km}, mb3.7/15, mbtmp3.7/17, ML4.3/1, Error ellipse: s-maj=23.9km s-min=15.2km az=4.0*

*NEIC **20** 11:23:46.0±1.7, 59°.38N±0°.07×30°.5W±0°.2, h10^{km}±1^{km}, mb4.3/12, Error ellipse: s-maj=17.6km s-min=9.9km az=242.0*

ISC 20 11:23:46.7±0.7**, 59°.4N**±0°.1×**30°.51W**±0°.08**, h16^{km}, n38, σ0^s.65**/39**, mb3.9**/20**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**6.89**	**35**	Pn	**Pn**	**11 25 27.6**	**+0.7**
	5.4nm,0.3s,baz=221,slow=7.0,SNR=22						
BORG				Sn	**Sn**	**11 26 44.0**	**-0.9**
	0.7nm,0.3s,baz=281,slow=7.9,SNR=2.0						
	12nm,0.3s						
ANGG	**Ammassalik, Gr**	**7.07**	**335**	Pn	**Pn**	**11 25 29.1**	**-0.2**
EKA	**Eskdalemuir Ar**	**15.25**	**93**	Pn	**Pn**	**11 27 20.9**	**-0.2**
	0.2nm,0.2s,baz=309,slow=9.6,SNR=6.9						
ARCES	**ARCESS Array B**	**25.20**	**43**	P	**P**	**11 29 10.7**	**-0.4**
	1.6nm,0.8s,baz=268,slow=8.7,SNR=4.9						
	1.6nm,0.8s						
ESDC	**Sonseca Array**	**25.89**	**128**	P	**P**	**11 29 17.8**	**+0.2**
	1.4nm,0.8s,baz=329,slow=10,SNR=3.6						
	1.4nm,0.8s						
FINES	**FINESS Array B**	**27.27**	**61**	P	**P**	**11 29 29.8**	**0.0**
	1.7nm,0.7s,baz=237,slow=6.6,SNR=4.3						
	1.7nm,0.7s						
FINES	**FINESS Array B**	**27.27**	**61**	P	**P**	**11 29 29.4**	**-0.4**
FIA1	**FINESS Array S**	**27.27**	**61**	P	**P**	**11 29 29.2**	**-0.6**
YKAW1	**Yellowknife Wh**	**38.21**	**312**	P	**P**	**11 31 06.5**	**+1.4**
YKAW3	**Yellowknife Wh**	**38.21**	**312**	P	**P**	**11 31 04.7**	**-0.5**
YKAW3				IAmb	IAmb	11 31 11.4	
	comp=Z,7.7nm,1.2s						
YKA	**Yellowknife Ar**	**38.25**	**312**	P	**P**	**11 31 05.5**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=53,slow=8.7,SNR=16						
	comp=Z,1.1nm,0.8s						
YKA	**Yellowknife Ar**	**38.25**	**312**	P	**P**	**11 31 06.5**	**+1.0**
I30M	**Mount Dempster**	**43.94**	**324**	P	**P**	**11 31 53.2**	**+0.9**
I30M				IAmb	IAmb	11 32 06.4	
	comp=Z,10.0nm,1.5s						
BRTR	**Keskin Array B**	**44.03**	**87**	P	**P**	**11 31 53.4**	**0.0**
	comp=Z,0.4nm,0.6s,baz=335,slow=9.5,SNR=2.2						
	comp=Z,0.4nm,0.6s						
D23K	**Nanushuk River**	**44.91**	**334**	P	**P**	**11 32 00.6**	**+0.7**
D23K				IAmb	IAmb	11 32 43.9	
	comp=Z,7.0nm,1.4s						
TOLK	**Toolik Lake Re**	**44.91**	**333**	P	**P**	**11 32 00.4**	**+0.4**
TOLK				IAmb	IAmb	11 32 02.0	
	comp=Z,5.5nm,1.2s						
BCAR	**Beaver Creek A**	**47.14**	**325**	P	**P**	**11 32 16.4**	**-1.2**
ILAR	**Eielson Array**	**47.26**	**328**	P	**P**	**11 32 18.8**	**+0.4**
	comp=Z,0.9nm,1.1s,baz=48,slow=7.1,SNR=4.1						
	comp=Z,0.9nm,1.1s						
E19K	**Redstone River**	**47.57**	**335**	P	**P**	**11 32 21.8**	**+0.9**
IMAR	**Indian Mountai**	**48.01**	**333**	P	**P**	**11 32 23.2**	**-1.0**
PDAR	**Pinedale Array**	**49.25**	**287**	P	**P**	**11 32 34.8**	**+0.4**
	comp=Z,1.1nm,0.9s,baz=42,slow=4.6,SNR=6.7						
	comp=Z,1.1nm,0.9s						
PDAR	**Pinedale Array**	**49.25**	**287**	P	**P**	**11 32 34.1**	**-0.3**
AB31	**Akbulak array**	**49.73**	**59**	P	**P**	**11 32 38.3**	**+0.6**
ABKAR	**Akbulak array**	**49.73**	**59**	P	**P**	**11 32 38.7**	**+1.0**
BVAR	**Borovoye Array**	**51.23**	**50**	P	**P**	**11 32 48.4**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=328,slow=7.0,SNR=7.1						
	comp=Z,1.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**51.97**	**139**	P	**P**	**11 32 54.4**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=346,slow=8.2,SNR=4.8						
	comp=Z,0.8nm,0.7s						
SAND	**Sanderson**	**55.47**	**271**	P	**P**	**11 33 20.9**	**+0.4**
ZALV	**Zalesovo Beam**	**55.70**	**40**	P	**P**	**11 33 21.5**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=358,slow=7.2,SNR=2.0						
	comp=Z,0.2nm,0.3s						
KURK	**Kurchatov**	**56.19**	**46**	P	**P**	**11 33 24.7**	**-0.5**
KURK				IAmb	IAmb	11 33 28.5	
	comp=Z,2.9nm,0.8s						
KURBB	**Kurchatov Arra**	**56.23**	**46**	P	**P**	**11 33 25.8**	**+0.3**
	comp=Z,2.6nm,0.9s,baz=321,slow=7.3,SNR=9.6						
	comp=Z,2.6nm,0.9s						
PAHR	**Pah Rah Range**	**56.33**	**292**	P	**P**	**11 33 26.8**	**+0.1**
TXAR	**Lajitas Array**	**56.76**	**272**	P	**P**	**11 33 28.8**	**-1.0**
	comp=Z,0.3nm,0.8s,baz=22,slow=7.1,SNR=4.4						
	comp=Z,0.3nm,0.8s						
NVAR	**Mina Array Bea**	**56.82**	**290**	P	**P**	**11 33 30.6**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=47,slow=6.1,SNR=2.4						
	comp=Z,0.5nm,0.8s						
NVAR	**Mina Array Bea**	**56.82**	**290**	P	**P**	**11 33 30.3**	**0.0**
MAKZ	**Makanchi**	**60.67**	**47**	P	**P**	**11 33 57.0**	**+0.4**
MAKZ				IAmb	IAmb	11 33 59.7	
	comp=Z,2.9nm,1.1s						
MKAR	**Makanchi Array**	**60.80**	**47**	P	**P**	**11 33 58.1**	**+0.7**
	comp=Z,1.4nm,0.6s,baz=335,slow=5.6,SNR=13						
	comp=Z,1.4nm,0.6s						
MKAR	**Makanchi Array**	**60.80**	**47**	P	**P**	**11 33 57.0**	**-0.5**
SONM	**Songino Array**	**67.48**	**30**	P	**P**	**11 34 41.0**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=317,slow=8.5,SNR=3.5						
	comp=Z,0.2nm,0.5s						

IDC 20 11:24:30.9±2.5**, 5°.33S×147°.43E, h0^{km}, mb3.4**/2**, mbtmp3.3**/3**, ML2.9**/1**, MS3.2**/1**, Error ellipse: s-maj=273.8km s-min=32.7km az=122.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.32**	**220**	P	P	11 28 57.9	+0.1
	baz=42,slow=11,SNR=5.0						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**22.41**	**214**	P	P	11 29 31.3	0.0
	0.7nm,0.9s,baz=45,slow=9.7,SNR=4.8						
	0.7nm,0.9s						
BATI	**Baumata**	**24.04**	**257**	LR	LR	11 40 20.0	
	comp=Z,47nm,18.6s,baz=106,slow=40						
ILAR	**Eielson Array**	**84.70**	**23**	P	P	11 37 06.4	0.0
	0.8nm,1.1s,baz=245,slow=5.2,SNR=2.1						
	0.8nm,1.1s						

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*IDC **20** 11:27:11.9±0.5, 59°.34N×30°.55W, h0^{km}, mb4.2/26, mbtmp4.3/29, ML3.8/3, MS4.8/27, Error ellipse: s-maj=16.2km s-min=10.4km az=3.0*

*GCMT **20** 11:27:12.9±0.2, 59°.58N±0°.03×30°.20W±0°.02, h12^{km}, MW5.1/90, Moment Tensor Solution. s33,c45; s90,c145; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.58±.16; $M_{\theta\theta}$-0.24±.20; $M_{\phi\phi}$4.83±.13; $M_{r\theta}$2.13±.48; $M_{\theta\phi}$1.37±.12; $M_{\phi r}$-1.98±.38; Best double couple: $M_0$5.68100×10^{16} NP1:ϕ_s217.00000°,δ42.00000°,λ-52.00000°. NP2: ϕ_s350.00000°,δ58.00000°,λ-119.00000°. Principal axes: T 5.3960, Plg9.0000°, Azm100.0000°; N 0.5750, Plg24.0000°, Azm6.0000°; P -5.9650, Plg64.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **20** 11:27:13.9±1.2, 59°.46N±0°.09×30°.6W±0°.1, h10^{km}±1^{km}, mb4.6/120 Error ellipse: s-maj=15.8km s-min=12.0km az=183.0*

*GFZ **20** 11:27:14.7, 59°.51N×30°.34W, h10^{km}, MW5.1, Moment Tensor Solution. s94 Moment tensor: M_{rr}-4.51; $M_{\theta\theta}$1.14; $M_{\phi\phi}$3.37; $M_{r\theta}$0.79; $M_{\theta\phi}$1.20; $M_{\phi r}$-2.97; Fault plane solution: NP1:ϕ_s215.00000°,δ31.00000°, λ-62.00000°. NP2:ϕ_s4.00000°,δ63.00000°,λ-10.00000°. Principal axes: T 4.6000, Plg16.0000°, Azm106.0000°; N 1.0900, Plg14.0000°, Azm12.0000°; P -5.6900, Plg69.0000°, Azm243.0000°;*

ISC 20 11:27:14.4±0.4**, 59°.46N**±0°.07×**30°.58W**±0°.05**, h16^{km}, n173, σ1^s.08**/129**, mb4.5**/81**, MS4.8**/24**, 4D, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**6.85**	**35**	Pn	**Pn**	**11 28 54.5**	**+0.5**
	12nm,0.3s,baz=236,slow=6.5,SNR=28						
BORG				Sn	**Sn**	**11 30 09.3**	**-2.2**
	0.4nm,0.3s,baz=349,slow=5.3,SNR=0.9						
BORG				LR	LR	11 30 58.6	
	comp=Z,5μm,18.2s,baz=240,slow=33						
	38nm,0.4s						
BORG	**Borgarnes**	**6.85**	**35**		**Pn**	**11 28 54.0**	**-0.1**
ANGG	**Ammassalik, Gr**	**6.98**	**335**	Pn	**Pn**	**11 28 55.0**	**-0.8**
NRS	**Narsarsuaq**	**7.56**	**289**	Pn	**Pn**	**11 29 03.7**	**-0.1**
SCO	**Scoresbysund**	**11.64**	**14**	Pn	**Pn**	**11 30 00.1**	**+0.6**
SFJD	**Kangerlussuaq**	**11.72**	**318**	Pn	**Pn**	**11 30 02.8**	**+2.1**
	0.6nm,0.3s,baz=142,slow=6.9,SNR=4.2						
SFJD				Sn	**Sn**	**11 32 04.9**	**-6.1**
	0.7nm,0.3s,baz=8.6,slow=17,SNR=2.3						
SFJD				LR	LR	11 33 46.0	
	comp=Z,4μm,21.2s,baz=124,slow=33						
	8.2nm,0.8s						
SFJD	**Kangerlussuaq**	**11.72**	**318**	Pn	**Pn**	**11 30 01.9**	**+1.2**
SUMG	**Summit**	**13.53**	**350**		**Pn**	**11 30 25.6**	**-0.2**
JMIC	**Jan Mayen**	**14.67**	**29**	LR	LR	11 35 01.9	
	comp=Z,680nm,21.0s,baz=213,slow=32						
DSB	**Dublin**	**14.74**	**104**	Pn	**Pn**	**11 30 39.5**	**-2.5**
EKB	**Eskdalemuir**	**15.27**	**94**		**Pn**	**11 30 49.0**	**-0.1**
EKB				IAmb	IAmb	11 30 54.4	
	comp=Z,33nm,1.2s						
ESK	**Eskdalemuir**	**15.28**	**94**	Pn	**Pn**	**11 30 48.5**	**-0.6**
ESK				IAmb	IAmb	11 30 51.1	
	comp=Z,22nm,1.1s						
EKA	**Eskdalemuir Ar**	**15.29**	**94**	Pn	**Pn**	**11 30 48.3**	**-1.0**
	baz=298,slow=12						
EKA				LR	LR	11 35 46.8	
	comp=Z,3μm,18.3s,baz=270,slow=34						
	comp=Z,6.8nm,0.9s						
FRB	**Frobisher Bay**	**18.35**	**300**	LR	LR	11 37 42.6	
	comp=Z,3μm,19.4s,baz=101,slow=34						
KUQ	**Kuujjuuaa**	**19.48**	**283**	P	**P**	**11 31 40.6**	**+0.4**
SCHQ	**Schefferville**	**20.03**	**273**	P	**P**	**11 31 46.0**	**-0.3**
	comp=Z,8.4nm,0.6s,baz=82,slow=5.1,SNR=13						
SCHQ				S	**S**	**11 35 29.9**	**-0.7**
	comp=Z,4.7nm,0.7s,baz=78,slow=9.6,SNR=4.1						
SCHQ				LR	LR	11 38 18.6	
	comp=Z,2μm,18.3s,baz=81,slow=33						
	comp=Z,8.4nm,0.6s						
SCHQ	**Schefferville**	**20.03**	**273**	P	**P**	**11 31 47.0**	**+0.8**
NBO00	**NORSAR Array S**	**20.35**	**68**	P	Pn	11 31 50.7	-1.1
NBO00				IAmb	IAmb	11 31 57.6	
	comp=Z,39nm,1.4s						
NB2	**NORSAR Subarra**	**20.55**	**68**	P	**P**	**11 31 51.5**	**-0.4**
	comp=Z,103nm,2.5s,baz=284,slow=10						

NB2	NORSAR Subarra	20.55	68	P	P	11 31 51.5	-0.4
	baz=284,slow=10						
NOA	NORSAR Array B	20.55	68	P	Pn	11 31 51.7	-2.5
	comp=Z,1.7nm,0.8s,baz=282,slow=10,SNR=13						
NOA				LR	LR	11 38 40.0	
	comp=Z,1µm,21.2s,baz=285,slow=33						
	comp=Z,1.7nm,0.8s						
NC303	NORSAR Array S	20.58	67	P	Pn	11 31 52.5	-2.0
NB201	NORSAR Array S	20.59	67	P	Pn	11 31 52.9	-1.7
NC602	NORSAR Array S	20.78	68	P	Pn	11 31 54.8	-2.0
UCC	Uccle	21.55	98	P	P	11 32 01.8	-0.9
UCC				IAmb	IAmb	11 32 04.7	
	comp=Z,17nm,0.9s						
TULEG	Thule	21.59	337	P	P	11 32 03.7	+0.8
HFS	Hagfors	21.98	69	P	P	11 32 07.5	+0.2
	comp=Z,11nm,0.8s,baz=323,slow=4.7,SNR=8.8						
HFS				LR	LR	11 40 01.6	
	comp=Z,1µm,18.1s,baz=266,slow=35						
	comp=Z,11nm,0.8s						
DOU	Dourbes	22.10	99	*d*P	P	11 32 07.8	-0.8
	comp=Z,17nm,0.9s						
BGES	Gesves	22.17	98	*d*P	P	11 32 08.2	-1.2
	comp=Z,30nm,0.9s						
RCHB	Rochefort	22.38	99	*d*P	P	11 32 10.1	-1.5
	comp=Z,22nm,0.9s						
POIN	Pond Inlet	22.50	325	P	P	11 32 13.4	+0.7
WLF	Walferdange	23.15	99	*d*P	P	11 32 19.5	-0.3
ILON	Igloolik, Nuna	23.47	316	P	P	11 32 22.9	+0.2
ECH	Echery	24.60	100	P	P	11 32 33.2	-0.3
ECH				IAmb	IAmb	11 32 36.0	
	comp=Z,15nm,1.2s						
ARCES	ARCESS Array B	25.17	43	P	P	11 32 38.5	0.0
	comp=Z,3.6nm,0.7s,baz=252,slow=6.5,SNR=9.8						
	comp=Z,3.6nm,0.7s						
ARCES	ARCESS Array B	25.17	43	P	P	11 32 37.9	-0.6
ARCES				IAmb	IAmb	11 32 46.6	
	comp=Z,22nm,1.4s						
CLL	Collm	25.65	89	*e*P	P	11 32 43.0	+0.1
	comp=Z,7.0nm,0.9s						
CLL				AMS	AMS	11 42 00.0	
	comp=Z,1µm,20.3s						
PAB	San Pablo	25.92	129	P	P	11 32 45.8	+0.1
PAB				IAmb	IAmb	11 32 52.7	
	comp=Z,13nm,1.1s						
ESDC	Sonseca Array	25.96	128	P	P	11 32 45.0	-1.0
	comp=Z,3.7nm,0.8s,baz=327,slow=9.3,SNR=11						
	comp=Z,3.7nm,0.8s						
TUE	Stuetta	26.87	101		P	11 32 54.7	+0.4
TUE				IAmb	IAmb	11 32 59.9	
	comp=Z,14nm,0.9s						
FIA1	FINESS Array S	27.27	61		P	11 32 57.8	+0.3
FINES	FINESS Array B	27.27	61	P	P	11 32 57.4	-0.1
	comp=Z,13nm,0.8s,baz=298,slow=8.4,SNR=15						
	comp=Z,13nm,0.8s						
FINES	FINESS Array B	27.27	61	P	P	11 32 57.1	-0.4
RES	Resolute Bay	27.42	329	LR	LR	11 43 26.4	
	comp=Z,666nm,18.7s,baz=131,slow=35						
RES	Resolute Bay	27.42	329		P	11 32 59.5	+0.8
GERES	GERESS Array B	27.51	93	P	P	11 32 60.0	+0.1
	comp=Z,0.8nm,0.7s,baz=272,slow=8.6,SNR=4.3						
GERES				LR	LR	11 44 08.5	
	comp=Z,1µm,18.5s,baz=239,slow=37						
	comp=Z,0.8nm,0.7s						
CIMO	Cimolais	28.54	98	P	P	11 33 09.1	+0.1
VRAC	Vranov	28.69	90	LR	LR	11 45 16.6	
	comp=Z,1µm,18.7s,baz=346,slow=38						
PABE	Paberze	28.89	74	P	P	11 33 11.9	-0.1
ARSA	Arzberg	29.47	94	P	P	11 33 16.6	-0.7
ARSA				IAmb	IAmb	11 33 19.7	
	comp=Z,6.6nm,0.9s						
MODS	Modra-Piesok	29.63	90	*e*P	P	11 33 19.0	+0.3
PSZ	Piszkesteto	31.26	89	P	P	11 33 32.1	-1.0
PSZ				IAmb	IAmb	11 33 34.1	
	comp=Z,7.2nm,1.0s						
FCC	Fort Churchill	31.51	297	P	P	11 33 35.5	+0.4
FCC				IAmb	IAmb	11 33 42.5	
	comp=Z,11nm,1.2s						
SADO	Sadowa	32.41	265	LR	LR	11 45 38.5	
	comp=Z,2µm,18.0s,baz=67,slow=34						
BUR08	Bucovina Ar. S	34.15	85		P	11 33 58.4	0.0
BUR08				IAmb	IAmb	11 34 05.0	
	comp=Z,4.1nm,0.8s						
BURAR	Bucovina Array	34.18	85	P	P	11 33 57.9	-0.8
AKASG	Malin Array Be	34.22	78	P	P	11 33 58.0	-0.9
	comp=Z,3.9nm,0.8s,baz=310,slow=8.7,SNR=14						
	comp=Z,3.9nm,0.8s						
KEST	Kesra	35.07	115	P	P	11 34 06.3	-0.2
	comp=Z,5.9nm,0.7s,baz=307,slow=5.3,SNR=6.2						
	comp=Z,5.9nm,0.7s						
KEST	Kesra	35.07	115	P	P	11 34 06.5	0.0
KEST				IAmb	IAmb	11 34 07.8	
	comp=Z,7.7nm,0.8s						
A36M	Sachs Harbour	36.47	329		P	11 34 19.2	+1.2
A36M				IAmb	IAmb	11 34 22.4	
	comp=Z,8.3nm,0.9s						
EPLO	Experimental L	36.53	283		P	11 34 18.1	-0.8
EPLO				IAmb	IAmb	11 34 23.3	
	comp=Z,14nm,1.2s						
ULM	Lac du Bonnet	37.23	285	P	P	11 34 24.4	-0.2
	comp=Z,4.3nm,0.7s,baz=57,slow=8.2,SNR=7.1						
ULM				LR	LR	11 48 34.1	
	comp=Z,1µm,18.7s,baz=82,slow=34						
	comp=Z,4.3nm,0.7s						
ULM	Lac du Bonnet	37.23	285	IAmb	IAmb	11 34 31.7	
	comp=Z,9.6nm,1.2s						
YKA	Yellowknife Ar	38.17	312	P	P	11 34 32.8	+0.3
	comp=Z,3.2nm,0.8s,baz=54,slow=8.5,SNR=26						
YKA				PcP	PcP	11 36 46.5	-0.2
	comp=Z,0.8nm,0.8s,baz=33,slow=2.9,SNR=8.2						
YKA				LR	LR	11 49 33.1	
	comp=Z,1µm,18.2s,baz=68,slow=35						
	comp=Z,3.2nm,0.8s						
YKA	Yellowknife Ar	38.17	312	P	P	11 34 32.3	-0.2
AGMN	Agassiz Nation	38.50	283	P	P	11 34 36.9	+1.4
AGMN				IAmb	IAmb	11 34 37.7	
	comp=Z,6.3nm,0.8s						
ALN	Alexandroupoli	39.31	92	IAmb	IAmb	11 34 44.1	
	comp=Z,9.6nm,0.8s						
F31M	Tsiigehtchic	41.55	326	IAmb	IAmb	11 35 02.8	
	comp=Z,14nm,1.4s						
TKL	Tuckaleechee C	41.57	259	LR	LR	11 51 04.1	
	comp=Z,2µm,18.1s,baz=62,slow=34						
EDM	Edmonton	43.48	300	P	P	11 35 16.4	-0.1
EDM				IAmb	IAmb	11 35 18.9	
	comp=Z,10nm,0.9s						
D25K	Kavik River	43.55	332	P	P	11 35 17.7	+0.9
D25K				IAmb	IAmb	11 35 18.6	
	comp=Z,15nm,1.5s						
C24K	Franklin Bluff	43.79	334	IAmb	IAmb	11 35 21.4	
	comp=Z,13nm,1.0s						
ARTI	Arti	43.97	53	P	P	11 35 20.8	+0.5
BR131	Keskin Array S	44.06	87		P	11 35 22.1	+0.7
BRTR	Keskin Array B	44.06	87	P	P	11 35 22.2	+0.8
	comp=Z,1.7nm,0.8s,baz=324,slow=4.9,SNR=7.0						
BRTR				LR	LR	11 55 17.0	
	comp=Z,5µm,19.3s,baz=22,slow=38						
	comp=Z,1.7nm,0.8s						
BRTR	Keskin Array B	44.06	87		P	11 35 21.7	+0.3
D24K	Happy Valley	44.25	333	IAmb	IAmb	11 35 25.2	
	comp=Z,9.3nm,0.9s						
E25K	Arctic Village	44.25	331	IAmb	IAmb	11 35 26.4	
	comp=Z,9.1nm,1.1s						
J30M	Hart River	44.30	323	IAmb	IAmb	11 35 26.2	
	comp=Z,8.4nm,1.1s						
I29M	Ogilvie Camp,	44.32	325	IAmb	IAmb	11 35 25.4	
	comp=Z,7.4nm,1.0s						
BMAR	Burnt Mountain	44.52	330		P	11 35 25.6	+0.9
G26K	Porcupine Rive	44.68	329	IAmb	IAmb	11 35 28.6	
	comp=Z,6.8nm,1.0s						
D23K	Nanushuk River	44.82	334	IAmb	IAmb	11 35 30.0	
	comp=Z,8.0nm,0.9s						
D22K	Ayikyak River	45.33	334		P	11 35 32.8	+1.8
D22K				IAmb	IAmb	11 35 37.7	
	comp=Z,12nm,1.4s						
DAWY	Dawson	45.59	324	IAmb	IAmb	11 35 36.8	
	comp=Z,10nm,1.3s						
E22K	Anaktuvuk Pass	45.73	333	IAmb	IAmb	11 35 36.7	
	comp=Z,5.5nm,1.0s						
KBZ	Khabaz	45.77	76	P	P	11 35 36.3	+1.5
	comp=Z,5.4nm,0.9s,baz=318,slow=9.4,SNR=7.9						
	comp=Z,5.4nm,0.9s						
E21K	Killik River	45.97	335	IAmb	IAmb	11 35 39.1	
	comp=Z,7.5nm,1.1s						
COLD	Coldfoot	46.08	332	IAmb	IAmb	11 35 39.9	
	comp=Z,5.4nm,0.9s						
ARPR	Arapgir-MALATY	46.93	84	P	P	11 35 44.7	+0.6
ILAR	Eielson Array	47.17	328	P	P	11 35 47.0	+1.5
	comp=Z,3.0nm,1.0s,baz=30,slow=6.4,SNR=16						
	comp=Z,3.0nm,1.0s						
ILAR	Eielson Array	47.17	328	P	P	11 35 45.8	+0.3
MIAR	Mount Ida	47.41	267	IAmb	IAmb	11 35 50.3	
	comp=Z,5.7nm,1.1s						
H22K	Ishtalitna Cre	47.43	331	IAmb	IAmb	11 35 50.7	
	comp=Z,7.7nm,1.2s						
F20K	Avaraart Lake	47.50	334	IAmb	IAmb	11 35 50.2	
	comp=Z,4.5nm,1.1s						
IMAR	Indian Mountai	47.92	333	P	P	11 35 52.5	+1.1
H21K	Melozitna Rive	47.97	332	IAmb	IAmb	11 35 54.7	
	comp=Z,8.3nm,1.2s						
TIXI	Tiksi	48.39	9	P	P	11 35 55.2	+0.4
W35A	Tecumseh	48.62	271	P	P	11 35 56.3	-0.7
NEW	Newport	48.68	297	LR	LR	11 55 51.6	
	comp=Z,3µm,19.0s,baz=85,slow=35						
BW06	Boulder Array	49.19	287	IAmb	IAmb	11 36 05.3	
	comp=Z,4.8nm,1.1s						
PD31	Pinedale Array	49.19	287	IAmb	IAmb	11 36 05.3	
	comp=Z,4.7nm,1.1s						
PDAR	Pinedale Array	49.19	287	P	P	11 36 01.2	-0.4
	comp=Z,2.0nm,0.7s,baz=61,slow=6.3,SNR=15						
PDAR				LR	LR	11 55 59.1	
	comp=Z,940nm,18.4s,baz=68,slow=35						
	comp=Z,2.0nm,0.7s						
PDAR	Pinedale Array	49.19	287	P	P	11 36 00.8	-0.9
ISCO	Idaho Springs	49.47	282	P	P	11 36 03.9	0.0
X34A	Smith Ranch, M	49.54	271	P	P	11 36 04.7	+0.5
AB31	Akbulak array	49.73	59		P	11 36 06.2	+0.8
AB31				IAmb	IAmb	11 36 08.2	
	comp=Z,7.1nm,0.8s						
ABKAR	Akbulak array	49.73	59		P	11 36 06.2	+0.8
WMOK	Wichita Mounta	49.92	272	P	P	11 36 07.2	+0.2
WMOK				IAmb	IAmb	11 36 10.7	
	comp=Z,5.4nm,1.1s						
K20K	Telida	50.18	331	IAmb	IAmb	11 36 11.5	
	comp=Z,9.0nm,1.0s						
BBB	Bella Bella	50.48	308	LR	LR	11 58 12.2	
	comp=Z,758nm,18.7s,baz=45,slow=37						
RTBA	Rita Blanca	50.61	277	IAmb	IAmb	11 36 16.1	
	comp=Z,9.8nm,1.0s						
RDMU	Red Mountain	50.85	285	IAmb	IAmb	11 36 18.5	
	comp=Z,9.0nm,1.1s						
T25A	Trinidad	50.91	279	IAmb	IAmb	11 36 18.2	
	comp=Z,6.5nm,0.8s						
HWUT	Hardware Ranch	51.04	288	P	P	11 36 16.2	+0.5
BORK	Borovoye	51.16	50		P	11 36 16.9	+0.7
BORK				IAmb	IAmb	11 36 20.1	
	comp=Z,5.0nm,0.8s						
BVAR	Borovoye Array	51.21	50	P	P	11 36 17.6	+1.1
	comp=Z,6.0nm,0.8s,baz=318,slow=7.7,SNR=16						
	comp=Z,6.0nm,0.8s						
SPU	Mount Spurr	51.47	328	IAmb	IAmb	11 36 21.3	
	comp=Z,12nm,1.1s						
S22A	4UR Ranch, Cre	51.66	281	P	P	11 36 20.4	-0.1
TORD	Torodi Ar. Bea	52.05	139	P	P	11 36 21.4	-1.8
	comp=Z,3.0nm,0.6s,baz=346,slow=8.4,SNR=18						
	comp=Z,3.0nm,0.6s						
PV02	Paradox Valley	52.25	283	P	P	11 36 24.2	-0.7
PV03	Paradox Valley	52.27	283	IAmb	IAmb	11 36 35.1	
	comp=Z,7.8nm,1.5s						
PV18	Skein Mesa, Pa	52.31	283	P	P	11 36 26.3	+1.1
PV05	Paradox Valley	52.53	283	P	P	11 36 26.6	-0.3
PV05				IAmb	IAmb	11 36 33.7	
	comp=Z,8.4nm,1.2s						
ELK	Elko	53.48	290	LR	LR	11 58 13.3	
	comp=Z,870nm,19.9s,baz=72,slow=35						
ANMO	Albuquerque	53.66	278	LR	LR	11 58 55.5	
	comp=Z,861nm,19.1s,baz=88,slow=36						
TASM	ASL Pad, Albuq	53.66	278	P	P	11 36 35.9	+0.7
JCT	Junction City	53.82	270	IAmb	IAmb	11 36 39.3	
	comp=Z,7.2nm,0.8s						
OZNA	Ozona	54.14	271	P	P	11 36 39.0	+0.4
OZNA				IAmb	IAmb	11 36 43.7	
	comp=Z,8.0nm,1.0s						
SPR3	Spring Creek 3	54.39	288	P	P	11 36 41.2	+0.6
SPR3				IAmb	IAmb	11 36 46.0	
	comp=Z,6.3nm,1.1s						
GDL2	Guadalupe Moun	54.77	275	P	P	11 36 43.4	+0.2
SAND	Sanderson	55.43	271	P	P	11 36 46.8	-1.1
SAND				IAmb	IAmb	11 36 52.7	
	comp=Z,7.8nm,0.9s						
ZAA0	Zalesovo Array	55.67	40	P	P	11 36 49.2	0.0
ZALV	Zalesovo Beam	55.67	40	P	P	11 36 49.6	+0.4
	comp=Z,1.8nm,0.7s,baz=316,slow=6.2,SNR=5.9						
	comp=Z,1.8nm,0.7s						
ZALV	Zalesovo Beam	55.67	40		P	11 36 49.0	-0.2
KURK	Kurchatov	56.16	46		P	11 36 52.8	0.0
KURBB	Kurchatov Arra	56.20	46	P	P	11 36 53.6	+0.5
	comp=Z,9.6nm,0.8s,baz=323,slow=7.1,SNR=23						
	comp=Z,9.6nm,0.8s						
YBH	Yreka Blue Hor	56.22	296	LR	LR	12 00 33.5	
	comp=Z,142nm,18.3s,baz=74,slow=36						
121A	Cookes Peak, D	56.24	278	P	P	11 36 53.5	-0.3
121A				IAmb	IAmb	11 36 57.5	
	comp=Z,5.1nm,0.9s						
TEIG	Tepich	56.51	252	LR	LR	12 01 31.6	
	comp=Z,5.6nm,18.4s,baz=236,slow=36						
TX31	Lajitas Ar. Si	56.72	272	IAmb	IAmb	11 37 39.6	
	comp=Z,6.9nm,1.5s						
TXAR	Lajitas Array	56.72	272	P	P	11 36 57.2	+0.1
	comp=Z,0.8nm,0.8s,baz=60,slow=5.8,SNR=9.6						
	comp=Z,0.8nm,0.8s						
NVAR	Mina Array Bea	56.76	290	P	P	11 36 59.2	+1.7
	comp=Z,0.6nm,0.8s,baz=51,slow=5.8,SNR=4.3						
NVAR				LR	LR	12 00 55.8	
	comp=Z,661nm,18.6s,baz=79,slow=36						
	comp=Z,0.6nm,0.8s						
NVAR	Mina Array Bea	56.76	290	P	P	11 36 58.0	+0.5
GMN	Gold Mountain	57.15	289	P	P	11 37 00.5	+0.2
PFO	Pinyon Flats O	59.71	285	LR	LR	12 02 60.0	
	comp=Z,872nm,18.4s,baz=60,slow=36						
MAKZ	Makanchi	60.64	47		P	11 37 23.2	-0.9
MKAR	Makanchi Array	60.77	47	P	P	11 37 24.9	-0.1
	comp=Z,8.1nm,0.8s,baz=336,slow=4.8,SNR=40						
	comp=Z,8.1nm,0.8s						
MKAR	Makanchi Array	60.77	47		P	11 37 24.3	-0.7
AAK	Ala-Archa	61.17	54	P	P	11 37 29.1	+1.1
AAK				IAmb	IAmb	11 37 31.6	
	comp=Z,5.0nm,1.1s						
TARG	Taragay, Kyrgy	63.28	53	P	P	11 37 42.2	-0.3
MANEM	Manem	64.19	60	P	P	11 37 49.6	+1.4
MANEM				IAmb	IAmb	11 38 03.0	
	comp=Z,18nm,0.9s						
KSH	Kashi	64.39	55	P	P	11 37 52.6	+3.2
KSH				pmax	pmax		
	comp=Z,11nm,1.1s						
WMQ	Urumqi	65.28	45	*e*P	P	11 37 57.6	+2.5
WMQ				PP	PP	11 40 22.0	+3.8
WMQ				pmax	pmax		
	comp=Z,14nm,0.8s						
SONM	Songino Array	67.43	30	P	P	11 38 09.7	+0.8
	comp=Z,0.7nm,0.5s,baz=313,slow=5.6,SNR=5.9						
	comp=Z,0.7nm,0.5s						
SONM	Songino Array	67.43	30	P	P	11 38 09.5	+0.6
GTA	Gaotai	73.31	38	*e*P	P	11 38 44.3	-0.6
GTA				pP	pP	11 38 47.4	-2.3
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HHC	Hu-ho-hao-te	75.27	29	*e*P	P	11 38 56.1	-0.2
HHC				pmax	pmax		
	comp=Z,18nm,0.8s						
HHC				pmax	pmax		
	comp=Z,59nm,4.6s						
BDFB	Brasilia	76.17	197	P	P	11 39 02.0	+0.5
	comp=Z,4.5nm,0.7s,baz=2.4,slow=5.8,SNR=7.0						
	comp=Z,4.5nm,0.7s						
BDFB	Brasilia	76.17	197	P	P	11 39 02.0	+0.5
BDFB				IAmb	IAmb	11 39 03.5	
	comp=Z,4.6nm,0.8s						
KSRS	Korea Array	81.81	17	P	P	11 39 32.2	0.0
	comp=Z,1.6nm,0.8s,baz=0.0,slow=5.6,SNR=4.3						
	comp=Z,1.6nm,0.8s						
AQDB	Aquidauana	82.27	204	P	P	11 39 35.1	+0.5
NJ2	Nanjing	85.37	26	*e*P	P	11 39 49.9	-0.7
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
PZH	PanZhiHua	85.79	42	P	P	11 39 53.6	+0.7
LSZ	Lusaka	88.26	124	LR	LR	12 19 22.0	
	comp=Z,1µm,21.9s,baz=39,slow=36						
CMAR	Chiang Mai Arr	92.17	47	P	P	11 40 23.1	-0.1
	comp=Z,0.5nm,0.3s,baz=327,slow=7.2,SNR=6.4						
	comp=Z,0.5nm,0.3s						
CMAR	Chiang Mai Arr	92.17	47	P	P	11 40 22.6	-0.6
LBTB	Lobatse	95.95	131	LR	LR	12 24 38.5	
	comp=Z,1µm,18.6s,baz=37,slow=36						
BOSA	Boshof	99.06	133	LR	LR	12 24 01.6	
	comp=Z,968nm,20.7s,baz=43,slow=34						
WRA	Warramunga Arr	139.06	22	PKhKP	PKPpre	11 46 33.4	
	comp=Z,0.4nm,0.6s,baz=337,slow=2.4,SNR=2.8						
WRA				PKP	PKPdf	11 46 39.5	-0.5
	comp=Z,0.5nm,0.8s,baz=336,slow=2.4,SNR=2.8						
ASAR	Alice Springs	142.59	24	PKhKP	PKPpre	11 46 40.1	
	comp=Z,0.4nm,0.9s,baz=298,slow=40,SNR=1.7						
ASAR				PKP	PKPdf	11 46 46.6	+0.3
	comp=Z,0.6nm,0.6s,baz=340,slow=2.3,SNR=3.6						
FORT	Forrest	147.90	36		PKPbc	11 46 57.1	-1.0
QSPA	South Pole Qui	149.36	180	PKPbc	PKPbc	11 46 59.4	-1.5
	comp=Z,6.8nm,0.8s,baz=177,slow=1.1,SNR=6.7						

IDC 20 11:28:25.0±30.0**, 24°.87S**×**174°.76W, h0^{km}, mb4.0**/4**,**
mbtmp4.0/4**, Error ellipse: s-maj=553.1km**
s-min=161.7km az=81.0, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	36.25	270	P	P	11 35 30.3	+0.2
	3.3nm,0.7s,baz=101,slow=10,SNR=2.9						
	3.3nm,0.7s						
STKA	Stephens Creek	38.83	249	P	P	11 35 51.3	-0.6
	1.1nm,0.5s,baz=76,slow=8.3,SNR=2.3						
	1.1nm,0.5s						
ASAR	Alice Springs	46.59	260	P	P	11 36 55.0	0.0
	0.7nm,0.4s,baz=96,slow=7.2,SNR=26						
	0.7nm,0.4s						
WRA	Warramunga Arr	47.10	265	P	P	11 36 59.0	-0.1
	0.7nm,0.4s,baz=105,slow=7.8,SNR=29						
	0.7nm,0.4s						

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*IDC **20** 11:30:54.8±0.7, 59°.43N×30°.44W, h0^{km}, mb3.9/20,*
mbtmp3.9/22, ML4.0/2, Error ellipse: s-maj=20.2km
s-min=13.0km az=6.0
*NEIC **20** 11:30:56.6±1.9, 59°.4N±0°.1×30°.5W±0°.1, h10^{km}±1^{km},*
mb4.4/24, Error ellipse: s-maj=18.4km s-min=8.5km
az=188.0
ISC 20 11:30:57.2±0.5**, 59°.44N**±0°.09×**30°.46W**±0°.06**, h16^{km}, n58,**
σ**0^{s}85**/59**, mb4.3**/30**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	Borgarnes	6.83	35	Pn	Pn	11 32 37.4	+0.8
	4.4nm,0.3s,baz=229,slow=6.1,SNR=12						
BORG				Sn	Sn	11 33 52.9	-1.0
	baz=98,slow=11						
	11nm,0.3s						
BORG	Borgarnes	6.83	35		Pn	11 32 36.5	0.0
ANGG	Ammassalik, Gr	7.03	335	Pn	Pn	11 32 39.5	+0.2
EKA	Eskdalemuir Ar	15.22	94	Pn	Pn	11 34 31.3	+0.1
	baz=303,slow=8.4						
	1.7nm,0.8s						
TULEG	Thule	21.64	337	P	P	11 35 45.9	-0.3
TULEG				IAmb	IAmb	11 36 17.4	
	comp=Z,20nm,1.5s						
HFS	Hagfors	21.93	69	P	P	11 35 49.4	-0.1
	comp=Z,4.9nm,1.0s,baz=269,slow=6.9,SNR=3.2						
	comp=Z,4.9nm,1.0s						
ILON	Igloolik, Nuna	23.53	316	P	P	11 36 04.9	-1.2
ARCES	ARCESS Array B	25.14	43	P	P	11 36 20.4	-0.6
	comp=Z,4.0nm,1.0s,baz=265,slow=9.3,SNR=8.8						
	comp=Z,4.0nm,1.0s						
ARCES	ARCESS Array B	25.14	43	P	P	11 36 20.6	-0.4
ESDC	Sonseca Array	25.90	128	P	P	11 36 29.3	+1.1
	comp=Z,1.9nm,0.7s,baz=323,slow=9.8,SNR=5.5						
	comp=Z,1.9nm,0.7s						
FINES	FINESS Array B	27.22	61	P	P	11 36 39.9	+0.1
	comp=Z,2.1nm,0.8s,baz=292,slow=12,SNR=4.8						
	comp=Z,2.1nm,0.8s						
GERES	GERESS Array B	27.44	93	P	P	11 36 43.4	+1.3
	comp=Z,0.3nm,0.3s,baz=296,slow=9.6,SNR=3.7						
	comp=Z,0.3nm,0.3s						
FCC	Fort Churchill	31.58	297	P	P	11 37 19.4	+0.9
FCC				IAmb	IAmb	11 37 56.3	
	comp=Z,7.6nm,1.3s						
BURAR	Bucovina Array	34.11	85	P	P	11 37 40.9	0.0
AKASG	Malin Array Be	34.16	78	P	P	11 37 39.8	-1.4
	comp=Z,0.6nm,0.5s,baz=310,slow=8.4,SNR=4.1						
	comp=Z,0.6nm,0.5s						
KEST	Kesra	35.00	115	P	P	11 37 49.6	+1.0
	comp=Z,5.2nm,0.9s,baz=344,slow=8.5,SNR=3.2						
	comp=Z,5.2nm,0.9s						
ULM	Lac du Bonnet	37.30	286	P	P	11 38 08.0	-0.1
	comp=Z,2.1nm,0.6s,baz=21,slow=8.0,SNR=4.2						
	comp=Z,2.1nm,0.6s						
YKAW1	Yellowknife Wh	38.19	312	P	P	11 38 14.1	-1.4
YKAW1				IAmb	IAmb	11 38 21.6	
	comp=Z,6.0nm,1.0s						
YKAW3	Yellowknife Wh	38.20	312	P	P	11 38 15.7	+0.2
YKAW3				IAmb	IAmb	11 38 19.6	
	comp=Z,9.1nm,1.4s						
YKA	Yellowknife Ar	38.23	312	P	P	11 38 16.1	+0.2
	comp=Z,2.0nm,0.9s,baz=53,slow=8.5,SNR=12						
	comp=Z,2.0nm,0.9s						
YKA	Yellowknife Ar	38.23	312	P	P	11 38 14.8	-1.1
G31M	Satah River	42.11	325	P	P	11 38 46.6	-1.2
D25K	Kavik River	43.60	332	P	P	11 39 00.3	+0.3
BRTR	Keskin Array B	44.00	87	P	P	11 39 03.7	0.0
	comp=Z,0.6nm,0.7s,baz=330,slow=8.6,SNR=3.6						
	comp=Z,0.6nm,0.7s						
BRTR	Keskin Array B	44.00	87	P	P	11 39 02.9	-0.8
BMAR	Burnt Mountain	44.58	330	P	P	11 39 09.2	+1.3
D23K	Nanushuk River	44.87	334	P	P	11 39 10.9	+0.8
F24K	Squaw Lake	45.34	331	P	P	11 39 14.9	+1.0
F24K				IAmb	IAmb	11 39 16.3	
	comp=Z,3.9nm,0.9s						
WHAR	Wooly Hollow	46.23	267	P	P	11 39 21.6	+0.3
F21K	Alatna River	46.90	333	P	P	11 39 27.1	+0.9
F21K				IAmb	IAmb	11 39 46.9	
	comp=Z,3.7nm,1.1s						
X40A	Basin Creek Fa	47.14	267	P	P	11 39 28.4	0.0
ILAR	Eielson Array	47.22	328	P	P	11 39 29.9	+1.2
	comp=Z,0.9nm,1.0s,baz=35,slow=6.9,SNR=5.7						
	comp=Z,0.9nm,1.0s						
E19K	Redstone River	47.53	335	P	P	11 39 32.5	+1.4
AKTO	Aktyubinsk	47.97	59	P	P	11 39 35.1	+0.5
	comp=Z,2.3nm,0.7s,baz=322,slow=9.2,SNR=3.9						
	comp=Z,2.3nm,0.7s						
IMAR	Indian Mountai	47.97	333	P	P	11 39 35.9	+1.4
TIXI	Tiksi	48.40	9	P	P	11 39 38.3	+0.6
TIXI				IAmb	IAmb	11 39 39.6	
	comp=Z,4.5nm,1.0s						
PD31	Pinedale Array	49.26	287	P	P	11 39 44.4	-0.5
PDAR	Pinedale Array	49.26	287	P	P	11 39 45.0	+0.1
	comp=Z,1.2nm,0.8s,baz=56,slow=7.6,SNR=8.4						
	comp=Z,1.2nm,0.8s						
PDAR	Pinedale Array	49.26	287	P	P	11 39 43.8	-1.2
AB31	Akbulak array	49.68	59	P	P	11 39 49.1	+1.3
AB31				IAmb	IAmb	11 39 51.0	
	comp=Z,8.0nm,1.4s						
ABKAR	Akbulak array	49.68	59	P	P	11 39 48.2	+0.5
J19K	Poorman	50.08	332	P	P	11 39 51.3	+0.7
J19K				IAmb	IAmb	11 40 02.9	
	comp=Z,6.1nm,1.3s						
BVAR	Borovoye Array	51.17	50	P	P	11 39 59.7	+0.7
	comp=Z,1.4nm,0.7s,baz=334,slow=9.9,SNR=5.2						
	comp=Z,1.4nm,0.7s						
L18K	Granite Mounta	51.84	331	P	P	11 40 05.2	+1.3
TORD	Torodi Ar. Bea	51.99	139	P	P	11 40 04.2	-1.3
	comp=Z,1.4nm,0.9s,baz=340,slow=5.5,SNR=4.9						
	comp=Z,1.4nm,0.9s						
SAND	Sanderson	55.49	271	P	P	11 40 32.0	+0.9
SAND				IAmb	IAmb	11 40 32.9	
	comp=Z,3.6nm,0.8s						
ZALV	Zalesovo Beam	55.64	40	P	P	11 40 31.1	-0.7
	comp=Z,1.1nm,0.4s,baz=330,slow=8.3,SNR=5.3						
	comp=Z,1.1nm,0.4s						
ZALV	Zalesovo Beam	55.64	40	P	P	11 40 31.3	-0.5
KURK	Kurchatov	56.13	46	P	P	11 40 34.7	-0.6
KURK				IAmb	IAmb	11 40 38.6	
	comp=Z,3.8nm,0.9s						
KURBB	Kurchatov Arra	56.17	46	P	P	11 40 35.0	-0.6
	comp=Z,2.6nm,0.9s,baz=324,slow=6.6,SNR=9.8						
	comp=Z,2.6nm,0.9s						
TXAR	Lajitas Array	56.78	272	P	P	11 40 40.6	+0.2
	comp=Z,0.9nm,0.9s,baz=71,slow=5.4,SNR=5.8						
	comp=Z,0.9nm,0.9s						
TXAR	Lajitas Array	56.78	272	P	P	11 40 40.4	0.0
MAKZ	Makanchi	60.61	47	P	P	11 41 06.6	-0.2
MKAR	Makanchi Array	60.74	47	P	P	11 41 07.7	+0.1
	comp=Z,1.5nm,0.5s,baz=345,slow=4.8,SNR=25						
	comp=Z,1.5nm,0.5s						
MKAR	Makanchi Array	60.74	47	P	P	11 41 06.8	-0.8
SONM	Songino Array	67.42	30	P	P	11 41 52.0	+0.4

	comp=Z,0.3nm,0.4s,baz=337,slow=4.6,SNR=4.2						
	comp=Z,0.3nm,0.4s						
QSPA	**South Pole Qui**	**149.34**	**180**	PKPbc	**PKPbc**	**11 50 42.9**	**-0.7**
	comp=Z,5.6nm,1.0s,baz=196,slow=4.9,SNR=5.8						
QSPA	**South Pole Qui**	**149.34**	**180**		**PKPbc**	**11 50 41.7**	**-1.9**

BGR **20** 11:39:18.9, 34°.33N×71°.92E, h210^{km}±5^{km}, mb6.3, mB_BB6.7

BJI **20** 11:39:51.0, 36°.55N×70°.50E, h200^{km}, mB6.0/61, mb6.0/91

MOS **20** 11:39:51.3±0.9, 36°.54N×70°.57E, h211^{km}, mb6.1/69, MS5.3/6, Error ellipse: s-maj=3.7km s-min=2.7km az=103.1

MOS Felt (IV) at Dushanbe, Termez; (III) at Samarkand, Tashkent, Fergana.

NEIC **20** 11:39:52.6, 36°.52N×70°.45E, h208^{km}

NEIC **20** 11:39:52.6, 36°.52N×70°.45E, h210^{km}, Moment Tensor Solution. Duration: 6^{s}1 Moment tensor: Scale 10^{18}Nm; M_{rr}1.40; $M_{\theta\theta}$0.64; $M_{\phi\phi}$-2.05; $M_{r\theta}$0.90; $M_{\theta\phi}$-0.07; $M_{\phi r}$0.15; Fault plane solution: $M_0$2.03000×10^{18} NP1: ϕ_s152.41000°, δ51.12000°, λ45.05000°. NP2: ϕ_s30.25000°, δ56.57000°, λ131.23000°. Principal axes: T 2.0078, Plg56.0000°, Azm358.0000°; N 0.0522, Plg33.0000°, Azm184.0000°; P -2.0601, Plg3.0000°, Azm92.0000°;

GFZ **20** 11:39:52.6, 36°.52N×70°.56E, h235^{km}, MW6.2, Moment Tensor Solution. s143 Moment tensor: M_{rr}1.45; $M_{\theta\theta}$0.34; $M_{\phi\phi}$-1.80; $M_{r\theta}$1.42; $M_{\theta\phi}$-0.10; $M_{\phi r}$0.28; Fault plane solution: NP1: ϕ_s156.00000°, δ47.00000°, λ42.00000°. NP2: ϕ_s34.00000°, δ61.00000°, λ129.00000°. Principal axes: T 2.4300, Plg56.0000°, Azm356.0000°; N -0.5800, Plg33.0000°, Azm193.0000°; P -1.8500, Plg8.0000°, Azm98.0000°;

NEIC **20** 11:39:52.6, 36°.52N×70°.45E, h208^{km}

IPGP **20** 11:39:52.0, 36°.53N×70°.44E, h216^{km}, Mw6.2, Fault plane solution: NP1: ϕ_s41.00000°, δ67.00000°, λ142.00000°. NP2: ϕ_s148.00000°, δ56.00000°, λ28.00000°.

NEIC **20** 11:39:52.9±1.8, 36°.54N±0°.06×70°.46E±0°.07, h212^{km}±1^{km}, mb6.1/603, Mwb6.1/142, Mww6.1/29, Error ellipse: s-maj=9.9km s-min=9.5km az=257.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.27; $M_{\theta\theta}$0.45; $M_{\phi\phi}$-1.72; $M_{r\theta}$1.31; $M_{\theta\phi}$0.19; $M_{\phi r}$0.52; Fault plane solution: $M_0$2.10000×10^{18} NP1: ϕ_s28.31000°, δ63.64000°, λ129.44000°. NP2: ϕ_s146.67000°, δ46.21000°, λ37.95000°. Principal axes: T 2.3032, Plg53.0000°, Azm347.0000°; N -0.4970, Plg35.0000°, Azm188.0000°; P -1.8062, Plg10.0000°, Azm91.0000°;

GCMT **20** 11:39:52.9±0.1, 36°.55N×70°.45E, h209^{km}, MW6.2/170, Moment Tensor Solution. s160,c361; s170,c652; Duration: 3^{s}1 Moment tensor: Scale 10^{18}Nm; M_{rr}0.99±.01; $M_{\theta\theta}$1.24±.01; $M_{\phi\phi}$-2.24±.01; $M_{r\theta}$1.59±.01; $M_{\theta\phi}$-0.13±.01; $M_{\phi r}$0.37±.01; Best double couple: $M_0$2.51700×10^{18} NP1: ϕ_s147.00000°, δ53.00000°, λ27.00000°. NP2: ϕ_s40.00000°, δ68.00000°, λ140.00000°. Principal axes: T 2.7170, Plg43.0000°, Azm358.0000°; N -0.4060, Plg46.0000°, Azm196.0000°; P -2.3160, Plg9.0000°, Azm96.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function

IDC **20** 11:39:53.3±0.3, 36°.38N×70°.53E, h221^{km}±2^{km}, mb5.7/49, mbtmp6.3/54 Error ellipse: s-maj=7.2km s-min=5.0km az=17.0

NNC **20** 11:39:57.1±4.3, 36°.93N×70°.56E, h225^{km}±41^{km}, mb5.8, mpv6.5, Error ellipse: s-maj=39.7km s-min=21.3km az=2.0

ISC 20 11:39:51.9±0.2**, 36°.48N**±0°.02×**70°.56E**±0°.02**, h211**^{km}±1^{km}**, h211**^{km}**:pP-P, n2353,** σ1^s**50**/2956**, mb6.1**/650**, 338C-107D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANEM	**Manem**	**1.39**	**40**		**Pn**	**11 40 27.1**	**+1.2**
MANEM				Sn	**S**	**11 40 52.3**	**0.0**
SHAA	**Shahritus**	**2.23**	**300**		**Pn**	**11 40 32.7**	**-0.9**
KBL	**Kabul**	**2.30**	**213**	P	**Pn**	**11 40 34.3**	**-0.3**
KBL	**Kabul**	**2.30**	**213**		**Pn**	**11 40 34.0**	**-0.5**
KBL	**Kabul**	**2.30**	**213**	PN	**Pn**	**11 40 34.0**	**-0.5**
CHGR	**Chuyangaron**	**2.44**	**333**		**Pn**	**11 40 34.9**	**-1.0**
CHGR	**Chuyangaron**	**2.44**	**333**	PN	**Pn**	**11 40 34.9**	**-1.0**
GAR	**Garm**	**2.52**	**356**		**Pn**	**11 40 36.5**	**-0.3**
DRK	**Karamyk**	**3.15**	**18**		**Pn**	**11 40 45.1**	**+1.0**
DRK	**Karamyk**	**3.15**	**18**	PN	**Pn**	**11 40 45.1**	**+1.0**
BTK	**Batken**	**3.58**	**3**	Pn	**Pn**	**11 40 50.7**	**+1.8**
BTK	**Batken**	**3.58**	**3**	PN	**Pn**	**11 40 50.7**	**+1.8**
NIL	**Nilore**	**3.58**	**141**		**Pn**	**11 40 50.5**	**+1.4**
NIL	**Nilore**	**3.58**	**141**	⇑P	**Pn**	**11 40 48.5**	**-0.6**
OHH	**Osh**	**4.40**	**23**	PN	**Pn**	**11 40 57.1**	**-1.9**
ARSB	**Arslanbob**	**5.19**	**21**		**Pn**	**11 41 08.9**	**-0.2**
ARSB	**Arslanbob**	**5.19**	**21**	PN	**Pn**	**11 41 08.9**	**-0.2**
KSH	**Kashi**	**5.24**	**53**	P	**Pn**	**11 41 05.3**	**-4.4**
KSH				S	S	11 42 01.5	-9.4
KSH				smax	smax		
	comp=N,114μm,1.0s						
KSH				smax	smax		
	comp=E,90μm,1.1s						
ARK	**Arkit**	**5.42**	**11**	PN	**Pn**	**11 41 11.4**	**-0.5**
IUG	**Iuzhnay**	**5.67**	**356**	*e*P	**Pn**	**11 41 15.0**	**-0.1**
IUG	**Iuzhnay**	**5.67**	**356**	*e*PN	**Pn**	**11 41 15.0**	**-0.1**
CHM	**Chimkent**	**5.88**	**353**	*e*P	**Pn**	**11 41 17.6**	**-0.1**
CHM	**Chimkent**	**5.88**	**353**	*e*PN	**Pn**	**11 41 17.6**	**-0.1**
DZA	**Taraz**	**6.43**	**5**	*e*P	**Pn**	**11 41 24.6**	**-0.2**
DZA	**Taraz**	**6.43**	**5**	*e*PN	**Pn**	**11 41 24.6**	**-0.2**
UCH	**Uchtor**	**6.50**	**27**	P	**Pn**	**11 41 25.5**	**-0.6**
BRLS	**Borolday**	**6.57**	**355**	*e*P	**Pn**	**11 41 22.7**	**-3.9**
BRLS	**Borolday**	**6.57**	**355**	*e*PN	**Pn**	**11 41 22.6**	**-3.9**
KK31	**Karatay Array**	**6.62**	**360**		**Pn**	**11 41 26.5**	**-0.6**
KK31	**Karatay Array**	**6.62**	**360**	⇓P	**Pn**	**11 41 26.6**	**-0.6**
	2μm,0.6s,baz=174,slow=12,SNR=7670						
KK31				⇑S	**S**	**11 42 37.9**	**-4.9**
	6μm,0.5s,baz=178,slow=22,SNR=18						
KK31	**Karatay Array**	**6.62**	**360**	PN	**Pn**	**11 41 26.5**	**-0.6**
KKAR	**Karatay Array**	**6.62**	**360**		**Pn**	**11 41 26.5**	**-0.6**
KKAR	**Karatay Array**	**6.62**	**360**	PN	**Pn**	**11 41 26.5**	**-0.6**
EKS2	**Erkin-Say**	**6.66**	**21**	P	**Pn**	**11 41 27.7**	**-0.1**
	SNR=2030						
AAK	**Ala-Archa**	**6.86**	**25**	P	**Pn**	**11 41 30.3**	**-0.1**
	SNR=6092						
AAK	**Ala-Archa**	**6.86**	**25**	P	**Pn**	**11 41 31.8**	**+1.4**
	6μm,0.5s,baz=202,slow=6.9,SNR=2554						
AAK				S	**S**	**11 42 47.3**	**-1.3**
	19μm,0.7s,baz=112,slow=22,SNR=25						
AAK	**Ala-Archa**	**6.86**	**25**		**Pn**	**11 41 30.5**	**+0.1**
AAK	**Ala-Archa**	**6.86**	**25**	⇑P	**Pn**	**11 41 30.7**	**+0.3**
AAK				⇓S	**S**	**11 42 46.0**	**-2.7**
AAK	**Ala-Archa**	**6.86**	**25**	*i* P	**Pn**	**11 41 30.3**	**-0.1**
	SNR=2802						
AAK	**Ala-Archa**	**6.86**	**25**	*d i*PN	**Pn**	**11 41 30.3**	**-0.1**
AAK	**Ala-Archa**	**6.86**	**25**	P	**Pn**	**11 41 30.2**	**-0.2**
KBK	**Karagaybulak**	**7.04**	**27**	P	**Pn**	**11 41 32.8**	**0.0**
	SNR=2721						
FRU1	**Bishkek**	**7.06**	**25**		**Pn**	**11 41 33.3**	**+0.4**
FRU1	**Bishkek**	**7.06**	**25**	PN	**Pn**	**11 41 33.3**	**+0.4**
HRA	**Herat**	**7.10**	**255**		**Pn**	**11 41 33.4**	**-0.4**
ULHL	**Ulahol**	**7.25**	**36**	P	**Pn**	**11 41 35.0**	**-0.5**
	SNR=2001						
CHMS	**Chumysh**	**7.27**	**25**	P	**Pn**	**11 41 35.1**	**-0.4**
	SNR=615						
BOOM	**Boomskoye usch**	**7.30**	**33**		**Pn**	**11 41 35.8**	**-0.3**
BOOM	**Boomskoye usch**	**7.30**	**33**	PN	**Pn**	**11 41 35.8**	**-0.3**
USP	**Ospenovka**	**7.42**	**23**	P	**Pn**	**11 41 36.8**	**-0.8**
	SNR=233						
TKM2	**Tokmak 2**	**7.51**	**30**	P	**Pn**	**11 41 38.7**	**-0.2**
KDJ	**Kajisay**	**7.62**	**40**		**Pn**	**11 41 39.7**	**-0.7**
KDJ	**Kajisay**	**7.62**	**40**	PN	**Pn**	**11 41 39.7**	**-0.7**
SGDS	**Sogindy**	**7.63**	**23**	*e*P	**Pn**	**11 41 39.7**	**-0.6**
TARG	**Taragay, Kyrgy**	**7.69**	**45**		**Pn**	**11 41 41.0**	**-0.5**
TARG	**Taragay, Kyrgy**	**7.69**	**45**	PN	**Pn**	**11 41 41.0**	**-0.5**
TNSS	**Tian-Shan**	**8.19**	**35**	*e*P	**Pn**	**11 41 47.4**	**-0.5**
TNSS	**Tian-Shan**	**8.19**	**35**	*e*PN	**Pn**	**11 41 47.3**	**-0.5**
AAA	**Alma-Ata**	**8.31**	**34**	*e*P	**Pn**	**11 41 49.2**	**+0.2**
AAA	**Alma-Ata**	**8.31**	**34**	*e*PN	**Pn**	**11 41 49.2**	**+0.2**
MDOK	**Medeo**	**8.33**	**35**	*e*P	**Pn**	**11 41 49.3**	**-0.2**
MDOK				*e*S	**S**	**11 43 23.4**	**-0.1**
MDOK	**Medeo**	**8.33**	**35**	*e*PN	**Pn**	**11 41 49.3**	**-0.2**
MDOK				*e*S	**S**	**11 43 23.4**	**-0.1**
KNDC	**Almaty**	**8.34**	**34**	⇑P	**Pn**	**11 41 50.0**	**+0.5**
KNDC				⇓S	**S**	**11 43 22.4**	**-1.0**
KNDC	**Almaty**	**8.34**	**34**	PN	**Pn**	**11 41 49.8**	**+0.4**
PRZ	**Przheval'sk**	**8.52**	**43**		**Pn**	**11 41 52.0**	**0.0**
PRZ	**Przheval'sk**	**8.52**	**43**	PN	**Pn**	**11 41 52.0**	**0.0**
KUU	**Kurty**	**8.62**	**29**	*e*P	**Pn**	**11 41 52.5**	**-0.6**
KUU	**Kurty**	**8.62**	**29**	*e*PN	**Pn**	**11 41 52.4**	**-0.6**
CHKK	**Chushkaly**	**8.86**	**32**	*e*P	**Pn**	**11 41 55.5**	**-0.6**
CHKK	**Chushkaly**	**8.86**	**32**	*e*PN	**Pn**	**11 41 55.4**	**-0.6**
SATY	**Saty**	**8.92**	**40**	*e*P	**Pn**	**11 41 56.2**	**-0.8**
SATY				*e*S	**S**	**11 43 36.5**	**-1.0**
SATY	**Saty**	**8.92**	**40**	*e*PN	**Pn**	**11 41 56.2**	**-0.8**
SATY				*e*S	**S**	**11 43 36.4**	**-1.0**
BTLS	**Baital**	**8.95**	**16**	*e*P	**Pn**	**11 41 56.5**	**-0.9**
BTLS	**Baital**	**8.95**	**16**	*e*PN	**Pn**	**11 41 56.4**	**-0.9**
UZB	**Uzynbulak**	**9.31**	**42**	*e*P	**Pn**	**11 42 01.3**	**-0.8**
UZB				*e*S	**S**	**11 43 45.8**	**-0.9**
UZB	**Uzynbulak**	**9.31**	**42**	*e*P	**Pn**	**11 42 01.2**	**-0.8**
UZB				*e*S	**S**	**11 43 45.7**	**-0.9**
KPKS	**Kokpek**	**9.35**	**39**	*e*P	**Pn**	**11 42 02.4**	**-0.3**
KPKS	**Kokpek**	**9.35**	**39**	*e*P	**Pn**	**11 42 02.3**	**-0.3**
ARXS	**Arharly**	**9.51**	**33**	*e*P	**Pn**	**11 42 03.1**	**-1.4**
SHLS	**Shalkode**	**9.55**	**43**	*e*P	**Pn**	**11 42 07.6**	**+2.4**
SHLS				*e*S	**S**	**11 43 57.5**	**+5.0**
SHLS	**Shalkode**	**9.55**	**43**	*e*P	**Pn**	**11 42 07.6**	**+2.4**
SHLS				*e*S	**S**	**11 43 57.4**	**+5.0**
TDK	**Taldyqorghan**	**10.38**	**33**	*e*P	**Pn**	**11 42 15.3**	**-0.5**
TDK				*e*S	**S**	**11 44 11.5**	**-0.5**
TDK	**Taldyqorghan**	**10.38**	**33**	*e*P	**Pn**	**11 42 15.2**	**-0.5**
TDK				*e*S	**S**	**11 44 11.5**	**-0.5**
MAKZ	**Makanchi**	**13.38**	**36**		**Pn**	**11 42 53.1**	**-0.4**
MAKZ	**Makanchi**	**13.38**	**36**	P	**Pn**	**11 42 53.1**	**-0.4**
MAKZ	**Makanchi**	**13.38**	**36**	⇓P	**Pn**	**11 42 52.9**	**-0.7**
PYUN	**Piuthan**	**13.42**	**125**	Pn	**Pn**	**11 42 53.1**	**-1.4**
	baz=132,slow=0.0						
PYUN				Sn	**S**	**11 45 14.9**	**-8.4**
	7μm,0.5s,baz=132,slow=0.0						
MK31	**Makanchi Array**	**13.52**	**37**	⇓P	**Pn**	**11 42 55.5**	**+0.2**
	2μm,0.8s,baz=207,slow=9.9,SNR=7656						
MK31	**Makanchi Array**	**13.52**	**37**	*d i*P	**Pn**	**11 42 54.4**	**-0.9**
MKAR	**Makanchi Array**	**13.52**	**37**	P	**Pn**	**11 42 56.1**	**+0.8**
	549nm,0.6s,baz=219,slow=9.0,SNR=1061						
MKAR				S	**S**	**11 45 24.5**	**-0.5**
	388nm,0.9s,baz=226,slow=20,SNR=3.6						
MKAR	**Makanchi Array**	**13.52**	**37**		**Pn**	**11 42 54.8**	**-0.5**
MKAR	**Makanchi Array**	**13.52**	**37**	*i* P	**Pn**	**11 42 54.5**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,574nm,0.6s						
NGCH	**Negor - Chabah**	**13.71**	**219**	P	**P**	**11 42 58.9**	**-0.9**
	SNR=42						
NGCH				S	**S**	**11 45 30.0**	**+0.1**
DANN	**Dangsing**	**13.77**	**122**	Pn	**Pn**	**11 42 58.2**	**-0.7**
	baz=130,slow=0.0						
DANN				Sn	S	11 45 22.4	-9.4
	comp=Z,24μm,0.9s,baz=130,slow=0.0						
KOLN	**Koldanda**	**14.04**	**125**	Pn	**Pn**	**11 43 02.1**	**0.0**
	baz=132,slow=0.0						
KOLN				Sn	**S**	**11 45 30.1**	**-7.8**
	baz=132,slow=0.0						
GKN	**Gorkha**	**14.59**	**121**	Pn	**Pn**	**11 43 08.1**	**-0.8**
	baz=128,slow=0.0						
GKN				Sn	S	11 45 40.5	-10
	comp=Z,21μm,0.8s,baz=128,slow=0.0						
AB31	**Akbulak array**	**14.93**	**332**		**Pn**	**11 43 11.3**	**-1.3**
AB31	**Akbulak array**	**14.93**	**332**	⇑P	**Pn**	**11 43 11.2**	**-1.3**
	comp=Z,5μm,0.8s						
AB31	**Akbulak array**	**14.93**	**332**	P	**Pn**	**11 43 11.6**	**-1.0**
ABKAR	**Akbulak array**	**14.93**	**332**		**Pn**	**11 43 11.2**	**-1.4**
WMQ	**Urumqi**	**15.00**	**55**	P	**P**	**11 43 14.3**	**+0.3**
WMQ				S	**S**	**11 46 01.4**	**+1.8**
WMQ				pmax	pmax		
	comp=Z,4μm,1.1s						
WMQ				pmax	pmax		
	comp=Z,24μm,3.7s						
DMN	**Daman**	**15.16**	**122**	Pn	**Pn**	**11 43 15.5**	**-0.4**
	baz=128,slow=0.0						
DMN				Sn	**S**	**11 45 55.9**	**-8.0**
	comp=Z,46μm,1.2s,baz=128,slow=0.0						
KKN	**Kakani**	**15.17**	**121**	Pn	**Pn**	**11 43 15.7**	**-0.2**
	baz=127,slow=0.0						
KKN				Sn	**S**	**11 45 53.6**	**-10**
	comp=Z,23μm,1.0s,baz=127,slow=0.0						
ZSN	**Zaisan**	**15.25**	**40**	*e*P	**Pn**	**11 43 16.4**	**-0.2**
ZSN	**Zaisan**	**15.25**	**40**	*e*P	**Pn**	**11 43 16.3**	**-0.2**
KURBB	**Kurchatov Arra**	**15.26**	**20**	P	**Pn**	**11 43 16.6**	**+0.1**
	comp=Z,1μm,0.8s,baz=210,slow=11,SNR=1566						
KURBB				PKiKP	**PKiKP**	**11 56 00.1**	**-1.3**
	comp=Z,4.1nm,0.5s,baz=249,slow=0.6,SNR=10						
KURBB	**Kurchatov Arra**	**15.26**	**20**	⇑P	**Pn**	**11 43 15.1**	**-1.4**
	comp=Z,2μm,0.7s						
KURBB	**Kurchatov Arra**	**15.26**	**20**	P	**Pn**	**11 43 15.1**	**-1.4**
KURK	**Kurchatov**	**15.37**	**20**		**Pn**	**11 43 16.3**	**-1.5**
KURK	**Kurchatov**	**15.37**	**20**	⇑P	**Pn**	**11 43 16.7**	**-1.2**
	comp=Z,1μm,1.2s						
KURK	**Kurchatov**	**15.37**	**20**	P	**Pn**	**11 43 16.6**	**-1.2**
PKIN	**Phulchoki**	**15.38**	**121**	Pn	**P**	**11 43 18.8**	**+0.2**
	baz=128,slow=0.0						
PKIN				Sn	**S**	**11 45 59.5**	**-10**
	comp=Z,10μm,0.7s,baz=128,slow=0.0						
GUN	**Gumba**	**15.51**	**119**	Pn	**P**	**11 43 19.7**	**-0.4**
	baz=126,slow=0.0						
GUN				Sn	S	11 46 01.2	-11
	comp=Z,21μm,1.2s,baz=126,slow=0.0						
BANOM	**Banah**	**16.09**	**233**	P	**P**	**11 43 25.9**	**-0.2**
BANOM				P	**P**	**11 43 25.9**	**-0.2**
BANOM	**Banah**	**16.09**	**233**	*i* P	**P**	**11 43 26.0**	**-0.2**
	SNR=365						
SHME	**Shamm**	**16.11**	**234**	P	**P**	**11 43 26.4**	**+0.1**
	SNR=64						
SHME				P	**P**	**11 43 26.4**	**+0.1**
	SNR=64						
SHME	**Shamm**	**16.11**	**234**	*i* P	**P**	**11 43 26.6**	**+0.3**
	SNR=262						
MDH	**Madha**	**16.53**	**232**	P	**P**	**11 43 29.6**	**-1.4**
	SNR=35						
MDH				P	**P**	**11 43 29.6**	**-1.4**
	SNR=35						
MDH	**Madha**	**16.53**	**232**	*i* P	**P**	**11 43 29.7**	**-1.3**
	SNR=84						
BVA0	**Borovoye Array**	**16.55**	**360**	⇑P	**P**	**11 43 30.8**	**-0.1**
	comp=Z,3μm,1.4s						
BVA0	**Borovoye Array**	**16.55**	**360**	P	**P**	**11 43 30.7**	**-0.1**
BVAR	**Borovoye Array**	**16.55**	**360**	P	**Pn**	**11 43 32.4**	**+0.4**
	comp=Z,2μm,0.6s,baz=168,slow=12,SNR=56						
BVAR				S	**S**	**11 46 33.8**	**+0.8**
	comp=Z,514nm,1.0s,baz=171,slow=19,SNR=2.4						
BVAR				PKiKP	**PKiKP**	**11 56 01.1**	**-0.7**
	comp=Z,2.9nm,0.5s,baz=268,slow=1.0,SNR=7.0						
BORK	**Borovoye**	**16.57**	**359**		**Pn**	**11 43 31.7**	**-0.5**
BORK	**Borovoye**	**16.57**	**359**	*c i*P	**Pn**	**11 43 31.9**	**-0.3**
BORK				pmax	pmax		
	comp=Z,10μm,1.3s						
BORK	**Borovoye**	**16.57**	**359**	⇑P	**P**	**11 43 31.5**	**+0.4**
MASF	**Masafi**	**16.57**	**232**	P	**P**	**11 43 31.0**	**-0.4**
	SNR=61						
MASF				P	**P**	**11 43 31.0**	**-0.4**
	SNR=61						
MSFE	**Esma-Masafi**	**16.58**	**232**	*i* P	**P**	**11 43 30.8**	**-0.7**
	SNR=187						
AKTO	**Aktyubinsk**	**16.62**	**331**	P	**Pn**	**11 43 32.5**	**-0.5**
	comp=Z,12μm,0.9s,baz=143,slow=8.5,SNR=6354						
AKTO				S	**S**	**11 46 32.0**	**-2.6**
	comp=Z,847nm,0.9s,baz=214,slow=13,SNR=6.7						
AKTO	**Aktyubinsk**	**16.62**	**331**	⇓P	**Pn**	**11 43 33.2**	**+0.3**
	comp=Z,10μm,1.0s						
WSAR	**Wadi Sarin**	**16.75**	**221**	P	**Pn**	**11 43 34.7**	**+0.1**
	SNR=47						
UMQ	**Umm Al-Quwin**	**16.78**	**234**	P	**Pn**	**11 43 35.1**	**+0.1**
	SNR=27						
UMQ				P	**Pn**	**11 43 35.1**	**+0.1**
	SNR=27						
UMQ	**Umm Al-Quwin**	**16.78**	**234**	*i* P	**Pn**	**11 43 35.1**	**+0.1**
	SNR=32						
BIDO	**Bidbid**	**16.79**	**223**	P	**P**	**11 43 33.8**	**0.0**
	SNR=18						
UOSS	**Minazif**	**16.85**	**231**	P	**P**	**11 43 33.4**	**-1.0**
UOSS				P	**P**	**11 43 33.4**	**-1.0**
UOSS	**Minazif**	**16.85**	**231**		**P**	**11 43 33.1**	**-1.3**
UOSS	**Minazif**	**16.85**	**231**	*i* P	**P**	**11 43 33.4**	**-1.0**
	SNR=56						
UOSS	**Minazif**	**16.85**	**231**	⇓P	**P**	**11 43 33.2**	**-1.3**
UOSS	**Minazif**	**16.85**	**231**	P	**P**	**11 43 33.1**	**-1.3**
HATD	**Hatta, Dubai**	**16.98**	**231**	P	**P**	**11 43 35.6**	**-0.3**
	SNR=98						
HATD				P	**P**	**11 43 35.6**	**-0.3**
	SNR=98						
HATD	**Hatta, Dubai**	**16.98**	**231**	*i* P	**P**	**11 43 35.1**	**-0.7**
	SNR=220						
WBK	**Wadi Bani Khal**	**17.09**	**219**	P	**Pn**	**11 43 39.1**	**+0.4**
	SNR=69						
WBK				P	**Pn**	**11 43 39.1**	**+0.4**
	SNR=69						
ASHO	**Ashiyiah**	**17.13**	**231**	P	**Pn**	**11 43 38.4**	**-0.8**
	SNR=141						
ASHO	**Ashiyiah**	**17.13**	**231**	*i* P	**Pn**	**11 43 38.9**	**-0.3**
	SNR=1168						
NAZ	**Nazwa, Dubai**	**17.16**	**232**	P	**Pn**	**11 43 38.7**	**-0.8**
	SNR=155						
NAZ				P	**Pn**	**11 43 38.7**	**-0.8**
	SNR=155						
NAZ	**Nazwa, Dubai**	**17.16**	**232**	*i* P	**P**	**11 43 38.5**	**+0.7**
	SNR=408						
HOQ	**Hoqain**	**17.20**	**225**	P	**P**	**11 43 38.7**	**+0.3**
	SNR=36						
HOQ				P	**P**	**11 43 38.7**	**+0.3**
	SNR=36						
SMDO	**Samad**	**17.21**	**222**	P	**Pn**	**11 43 39.7**	**-0.4**
	SNR=61						
SMDO				P	**Pn**	**11 43 39.7**	**-0.4**
	SNR=61						
SOHO	**SOHO**	**17.24**	**228**	P	**P**	**11 43 37.9**	**-0.8**
SOHO				P	**P**	**11 43 37.9**	**-0.8**
SOHO	**SOHO**	**17.24**	**228**	*i* P	**P**	**11 43 37.8**	**-0.9**
	SNR=253						
JLN	**Jalan Bani Buh**	**17.25**	**217**	P	**Pn**	**11 43 40.8**	**+0.2**
	SNR=47						
JLN				P	**Pn**	**11 43 40.8**	**+0.2**
	SNR=47						
FAQ	**Al Faqa, Dubai**	**17.38**	**232**	P	**P**	**11 43 40.7**	**+0.5**
	SNR=111						
FAQ				P	**P**	**11 43 40.7**	**+0.5**
	SNR=111						
FAQ	**Al Faqa, Dubai**	**17.38**	**232**	*i* P	**P**	**11 43 41.0**	**+0.8**
	SNR=182						
ASUD	**Al Ashush, Dub**	**17.63**	**232**	P	**Pn**	**11 43 44.0**	**-1.0**
	SNR=59						
ASUD				P	**Pn**	**11 43 44.0**	**-1.0**
	SNR=59						
ASUD	**Al Ashush, Dub**	**17.63**	**232**	*i* P	**Pn**	**11 43 43.9**	**-1.0**
	SNR=171						
JMDO	**Jabal Madar**	**17.73**	**221**	P	**Pn**	**11 43 45.9**	**-0.4**
	SNR=78						
JMDO				P	**Pn**	**11 43 45.9**	**-0.4**
	SNR=78						
ALNE	**Al Ain**	**17.77**	**230**	P	**P**	**11 43 45.3**	**+0.7**
	SNR=151						
ALNE				P	**P**	**11 43 45.3**	**+0.7**
	SNR=151						
ALNE	**Al Ain**	**17.77**	**230**	*i* P	**P**	**11 43 44.9**	**+0.3**
	SNR=58						
ARQ	**Araqi**	**17.85**	**227**	P	**Pn**	**11 43 46.8**	**-0.9**
	SNR=90						
ARQ				P	**Pn**	**11 43 46.8**	**-0.9**
	SNR=90						
AJN	**Ajban**	**17.89**	**233**	P	**P**	**11 43 46.7**	**+0.9**
AJN				P	**P**	**11 43 46.7**	**+0.9**
BSY	**Bisya**	**17.93**	**224**	P	**Pn**	**11 43 48.0**	**-0.5**
	SNR=88						
BSY				P	**Pn**	**11 43 48.0**	**-0.5**
	SNR=88						
DGZ	**Jazzator, Alta**	**18.01**	**38**	*c i*P	**Pn**	**11 43 48.6**	**-0.8**
AKT	**Akhty**	**18.42**	**293**	*e*P	**P**	**11 43 52.2**	**+0.6**
AKT				*e*S	**S**	**11 47 09.6**	**-1.1**
AKT				pmax	pmax		
	comp=Z,1μm,0.8s						
AKT				MLR	MLR		
	comp=Z,6μm,13.0s						
LSA	**Lhasa**	**18.51**	**105**	P	**Pn**	**11 43 56.1**	**+0.4**
LSA	**Lhasa**	**18.51**	**105**	P	**P**	**11 43 52.0**	**-1.0**
LSA				S	**S**	**11 47 09.8**	**-3.5**
LSA				pmax	pmax		
	comp=Z,5μm,1.2s						
LSA				LR	LR		
	comp=Z,19μm,7.9s						
LSA				LR	LR		
	comp=Z,28μm,4.1s						
LSA				LR	LR		
	comp=Z,21μm,5.0s						
LSA	**Lhasa**	**18.51**	**105**	P	**Pn**	**11 43 56.2**	**+0.4**
MAK	**Makhachkala**	**18.85**	**297**	*e*P	**P**	**11 43 56.1**	**+0.1**
MAK				*e*S	**S**	**11 47 18.8**	**-0.1**
MAK				pmax	pmax		
	comp=Z,2μm,1.0s						
MAK				MLR	MLR		
	comp=Z,7μm,12.0s						
MHTO	**MHTO**	**18.95**	**219**	P	**Pn**	**11 43 59.4**	**-1.1**
	SNR=179						
MHTO				P	**Pn**	**11 43 59.4**	**-1.1**
	SNR=179						
JRN	**Qarnain Island**	**19.05**	**238**	P	**P**	**11 43 57.5**	**-0.8**
	SNR=22						
UMZA	**Um Al Zommool**	**19.13**	**228**	P	**P**	**11 43 59.4**	**+0.2**
UMZA				P	**P**	**11 43 59.4**	**+0.2**
MZWR	**Madinat Zayed**	**19.17**	**233**	P	**P**	**11 43 59.4**	**-0.3**
MZWR				P	**P**	**11 43 59.4**	**-0.3**
GOMU	**GeErMu**	**19.53**	**84**	P	**P**	**11 44 05.4**	**+1.6**
GOMU				pP	Pn	11 44 08.8	+1.0
GOMU				S	**S**	**11 47 40.4**	**+7.3**
GOMU				pmax	pmax		
	comp=Z,2μm,1.3s						
GOMU				LR	LR		
	comp=Z,12μm,8.1s						
GOMU				LR	LR		
	comp=Z,8μm,8.4s						
GOMU				LR	LR		
	comp=Z,5μm,9.0s						
GHWR	**Ruwais**	**19.69**	**236**	P	**P**	**11 44 04.5**	**-0.7**
GHWR				P	**P**	**11 44 04.5**	**-0.7**
SHMA	**Al-Shehemyia**	**19.80**	**243**	P	**P**	**11 44 05.8**	**-0.5**
	SNR=45						
MZR	**Muzera**	**19.97**	**232**	P	**P**	**11 44 07.4**	**-0.8**
	SNR=43						
MZR				P	**P**	**11 44 07.4**	**-0.8**
	SNR=43						
MZR	**Muzera**	**19.97**	**232**	*i* P	**P**	**11 44 07.6**	**-0.6**
	SNR=54						
SAKB	**Bahrain**	**20.03**	**244**	P	**P**	**11 44 08.8**	**0.0**
DQM	**DQM**	**20.05**	**218**	P	**P**	**11 44 10.2**	**+1.1**
	SNR=37						
I46RU	**ZALESOVO INFRA**	**20.08**	**25**	P	**P**	**11 44 10.0**	**+0.9**
	baz=222,slow=9.5,SNR=2.3						
ZAA0	**Zalesovo Array**	**20.08**	**25**		**P**	**11 44 09.5**	**+0.4**
ZALV	**Zalesovo Beam**	**20.08**	**25**	P	**P**	**11 44 10.1**	**+1.0**
	comp=Z,2μm,0.6s,baz=218,slow=9.3,SNR=1701						
ZALV				S	**S**	**11 47 42.2**	**-0.6**
	comp=Z,742nm,1.1s,baz=213,slow=16,SNR=3.7						
ZALV				PKiKP	**PKiKP**	**11 56 02.0**	**-1.2**
	comp=Z,4.8nm,0.4s,baz=182,slow=1.7,SNR=6.9						
	comp=Z,2μm,0.6s						
ZALV	**Zalesovo Beam**	**20.08**	**25**		**P**	**11 44 09.5**	**+0.4**
ZALV	**Zalesovo Beam**	**20.08**	**25**	*i* P	**P**	**11 44 09.3**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,2μm,0.6s						
HYB	**Hyderabad**	**20.26**	**157**	*e*P	**P**	**11 44 12.3**	**+0.9**
HYB				IVmB_BB		11 44 15.2	
	comp=Z,14μm,1.1s						
HYB				*e*pP	**pP**	**11 44 47.9**	**+1.7**
HYB				*e*sP	**sP**	**11 45 15.5**	**+2.5**
HYB				*e*S	**S**	**11 47 47.6**	**+0.7**
HYB				IVMs_BB	IVMs_BB	11 51 05.4	
	comp=Z,23μm,4.0s						
TRNA	**Turayna**	**20.31**	**240**	P	**P**	**11 44 10.9**	**-1.0**
	SNR=16						
SLWR	**Sila**	**20.41**	**238**	P	**P**	**11 44 12.0**	**-1.0**
SLWR				P	**P**	**11 44 12.0**	**-1.0**
SMRA	**Abu-Samra**	**20.58**	**241**	P	**P**	**11 44 13.9**	**-0.8**
	SNR=40						
TBLG	**Delisi**	**20.68**	**293**	P	**P**	**11 44 16.7**	**+1.1**
GUDG	**Gudauri**	**20.96**	**295**	P	**P**	**11 44 20.6**	**+1.8**
TRLG	**Trialeti**	**21.14**	**292**	P	**P**	**11 44 21.7**	**+1.1**
SHL	**Shillong**	**21.22**	**115**		**P**	**11 44 22.4**	**+0.8**
SHL	**Shillong**	**21.22**	**115**	P	**P**	**11 44 22.4**	**+0.8**
SVE	**Sverdlovsk**	**21.42**	**345**	*d i*P	**P**	**11 44 23.4**	**+0.3**
SVE				*i* S	**S**	**11 48 08.7**	**+2.0**
SVE				pmax	pmax		
	comp=Z,4μm,1.2s						
ARTI	**Arti**	**21.55**	**341**	P	**P**	**11 44 25.5**	**+1.1**
	comp=Z,6μm,1.0s,baz=155,slow=9.7,SNR=913						
	comp=Z,6μm,1.0s						
ARTI	**Arti**	**21.55**	**341**		**P**	**11 44 24.8**	**+0.3**
ARTI	**Arti**	**21.55**	**341**	*d i*P	**P**	**11 44 24.1**	**-0.3**
ARTI				*PP	**pP**	**11 44 56.8**	**-3.8**
ARTI				S	**S**	**11 48 11.2**	**+2.4**

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ARTI  Arti             21.55 341 ⇑P       P      11 44 24.4  0.0
NCK   Nalchik          21.76 297ceP       P      11 44 27.3 +0.6
NCK                               pmax    pmax
      comp=Z,1µm,1.0s
KARS  Kars             21.85 289 ⇑P       P      11 44 32.0 +4.2
KARS  Kars             21.85 289 ⇑P       P      11 44 33.0 +5.2
KBZ   Khabaz           22.30 297  P       P      11 44 31.8 +0.1
      comp=Z,82nm,0.8s,baz=116,slow=9.5,SNR=90
      comp=Z,82nm,0.8s
KBZ   Khabaz           22.30 297c iP      P      11 44 31.3 -0.4
KBZ                               pmax    pmax
      comp=Z,612nm,0.9s
NEUR  Neytrino         22.37 296c iP      P      11 44 34.2 +1.6
NEUR                              pmax    pmax
      comp=Z,664nm,1.5s
GOF   Gofitskoye       22.45 301c iP      P      11 44 34.4 +1.2
GOF                              eS       S      11 48 29.4 +5.9
SHA1  Shidzhatmaz      22.47 297c iP      P      11 44 34.6 +1.0
KIV   Kislovodsk       22.48 298  P       P      11 44 34.1 +0.4
KIV                               P       P      11 44 34.1 +0.4
KIV   Kislovodsk       22.48 298          P      11 44 34.0 +0.4
KIV   Kislovodsk       22.48 298 ⇑P       P      11 44 34.8 +1.2
KIV   Kislovodsk       22.48 298 i P      P      11 44 33.8 +0.1
      SNR=94
KIV   Kislovodsk       22.48 298 eP       P      11 44 33.5 -0.1
KIV                              e*PP     pP     11 45 08.2 -2.4
KIV                              e               11 48 18.1
KIV                              eS       S      11 48 27.4 +3.2
KIV                               pmax    pmax
      comp=Z,725nm,3.8s
KIV                               pmax    pmax
      comp=Z,282nm,1.1s
KIV                               MLR     MLR
      comp=Z,5µm,14.0s
KIV   Kislovodsk       22.48 298 ⇑P       P      11 44 34.0 +0.4
KIV   Kislovodsk       22.48 298  P       P      11 44 32.5 -1.1
      comp=Z,14µmcomp=Z,623nm,0.9s
KIV   Kislovodsk       22.48 298  P       P      11 44 34.0 +0.4
SHAO  Shalim           22.62 220  P       P      11 44 35.1 +0.1
SHAO                              P       P      11 44 35.1 +0.1
SHAO  Shalim           22.62 220 i P      P      11 44 35.8 +0.8
      SNR=28
BELG  Belogornoye      22.69 322  P       P      11 44 36.4 +1.2
      comp=Z,6µm,0.9s,baz=114,slow=2.7,SNR=867
BELG                              S       S      11 48 29.8 +2.7
      comp=Z,341nm,0.8s,baz=358,slow=14,SNR=1.4
      comp=Z,6µm,0.9s
BELG  Belogornoye      22.69 322c iP      P      11 44 36.0 +0.9
BELG                              pmax    pmax
      comp=Z,1µm,0.9s
GURO  Guroymak-BITLI   22.69 284          P      11 44 37.9 +2.4
GURO  Guroymak-BITLI   22.69 284 ⇑P       P      11 44 37.8 +2.3
DOK   Doka             22.93 224  P       P      11 44 38.4 +0.7
      SNR=30
DOK                               P       P      11 44 38.4 +0.7
      SNR=30
GTA   Gaotai           23.21  74 ⇓P       P      11 44 41.9 +1.7
GTA                               sP      sP     11 45 47.8 +0.9
GTA                               S       S      11 48 35.5 -0.7
GTA                               pmax    pmax
      comp=Z,2µm,1.1s
GTA                               pmax    pmax
      comp=Z,8µm,8.0s
DMTO  DMTO             23.23 221  P       P      11 44 40.6 +0.2
      SNR=6.5
DMTO                              P       P      11 44 40.6 +0.2
      SNR=6.5
WHFO  Wadi Hawf        23.70 223  P       P      11 44 44.6 -0.1
      SNR=47
MORE  Moreh            23.77 114          P      11 44 47.6 +2.3
MARD  Mardin           23.79 281          P      11 44 47.3 +1.8
RBK   Rabkut           23.80 222  P       P      11 44 45.8 +0.1
      SNR=25
RBK                               P       P      11 44 45.8 +0.1
      SNR=25
KOPT  Kop Dagi         23.82 288          P      11 44 47.9 +2.0
KNGR  Kungurtug, Tuv   23.94  45c iP      P      11 44 50.0 +3.3
KNGR                              pmax    pmax
      comp=Z,3µm,0.7s
LABN  Labinsk          23.99 299 eP       P      11 44 47.5 +0.4
LABN                             e*PP     pP     11 45 22.7 -4.1
LABN                             eS       S      11 48 51.3 +3.1
LABN                             e*SS     sS     11 49 59.6 -2.8
LABN                              pmax    pmax
      comp=Z,554nm,1.3s
VSLR  Vesyoloye        24.32 296c iP      P      11 44 51.7 +1.6
VSLR                              pmax    pmax
      comp=Z,557nm,1.5s
ERBR  Yeremizino-Bor   24.35 302 eP       P      11 44 50.1 -0.3
ERBR                             e*PP     pP     11 45 29.0 -1.7
ERBR                             eS       S      11 48 55.6 +1.7
ERBR                             e*SS     sS     11 50 04.3 -5.2
ERBR                              pmax    pmax
      comp=Z,330nm,1.1s
ABTO  Aybut            24.42 223  P       P      11 44 51.6 +0.4
      SNR=61
SOC   Sochi            24.56 296 eP       P      11 44 52.5 +0.2
SOC                              e*PP     pP     11 45 29.2 -3.7
SOC                              eS       S      11 48 57.9 +0.6
SOC                              e*SS     sS     11 50 08.6 -4.9
SOC                               pmax    pmax
      comp=Z,291nm,1.1s
RAYN  Ar Rayn          25.17 246  P       P      11 44 58.9 +0.9
RAYN  Ar Rayn          25.17 246          P      11 44 58.4 +0.4
RAYN                              IAmb    IAmb   11 45 05.6
      comp=Z,661nm,0.8s
RAYN  Ar Rayn          25.17 246 i P      P      11 44 58.7 +0.7
      SNR=43
RAYN  Ar Rayn          25.17 246  P       P      11 44 59.3 +1.3
RAYN  Ar Rayn          25.17 246 ⇓P       P      11 44 58.2 +0.2
VRH   Novokhopyorsk    25.27 315 eP       P      11 44 59.0 +0.4
VRH                               pmax    pmax
      comp=Z,1µm,1.1s
KIRV  Kirov            26.11 335  P       P      11 45 07.7 +1.7
      comp=Z,4µm,0.6s,baz=135,slow=8.4,SNR=934
KIRV  Kirov            26.11 335c iP      P      11 45 06.9 +0.9
ANN   Anapa            26.33 299 eP       P      11 45 08.4 +0.2
ANN                              e*PP     pP     11 45 48.3 -2.2
ANN                              e               11 45 59.2
ANN                              eS       S      11 49 27.7 +2.5
ANN                              e*SS     sS     11 50 40.9 -2.1
ANN                               pmax    pmax
      comp=Z,198nm,0.7s
MOY   Mondy            26.37  45 eP       P      11 45 10.7 +2.1
MOY                              e               11 45 59.1
MOY                              e               11 49 30.5
MOY                               pmax    pmax
      comp=Z,812nm,2.6s
TNCH  TengChong        26.51 108 ⇓P       P      11 45 12.3 +2.1
TNCH                              sP      sP     11 46 21.5 +2.8
TNCH                              S       S      11 49 29.8 +1.1
TNCH                              sS      sS     11 50 43.4 -3.2
TNCH                              ScP     ScP    11 51 48.1 -0.9
TNCH                              pmax    pmax
      comp=Z,2µm,1.0s
TNCH                              pmax    pmax
      comp=Z,3µm,3.0s
VORD  Divnogorie       26.59 313 eP       P      11 45 09.4 -1.0
VORD                             eS       S      11 49 22.9 -6.2
VORD                              pmax    pmax
      comp=Z,390nm,1.1s
VORD                              smax    smax
      comp=N,600nm,4.1s
GAZ   Gaziantep        26.63 282 ⇑P       P      11 45 13.1 +2.1
LZDM  Lanzhou Array    26.67  81  P       P      11 45 13.7 +2.0
      comp=N,117nm,0.8s,baz=269,slow=9.9,SNR=112
LZDM                              pP      pP     11 45 55.9 +0.7
      comp=N,117nm,0.6s,baz=275,slow=7.3,SNR=1.8
LZDM                              PcP     PcP    11 48 31.1 +1.5
      comp=N,20nm,0.4s,baz=259,slow=2.9,SNR=5.3
LZDM                              ScP     ScP    11 51 47.8 -1.7
      comp=N,170nm,1.0s,baz=279,slow=2.9,SNR=12
      comp=N,117nm,0.8s
VSR   Storozhevoye     26.76 313 eP       P      11 45 09.6 -2.3
VSR                              eS       S      11 49 25.7 -6.0
VSR                               pmax    pmax
      comp=Z,490nm,1.1s
VSR                               smax    smax
      comp=N,5µm,7.6s
LZH   Lanzhou          26.76  81 ⇓P       P      11 45 14.5 +2.2
LZH                               S       S      11 49 36.1 +3.6
LZH                               ScP     ScP    11 51 49.3 -0.3
LZH                               ScS     ScS    11 55 39.0 -1.8
LZH                               pmax    pmax
      comp=N,330nm,1.1s
LZH                               pmax    pmax
      comp=N,2µm,4.3s
TOKA  Tokat            26.89 289  IAmb    IAmb   11 46 02.2
      comp=Z,487nm,1.3s
VORR  Voronezh         26.90 314 eP       P      11 45 13.9 +0.7
VORR                              pmax    pmax
      comp=Z,1µm,1.2s
ZAK   Zakamensk        27.27  49 eP       P      11 45 17.9 +1.3
ZAK                               pmax    pmax
      comp=Z,463nm,1.2s
LPSR  Galich'ya Gora   27.42 316 eP       P      11 45 18.2 +0.4
LPSR                             eS       S      11 49 41.6 -0.5
LPSR                              pmax    pmax
      comp=Z,2µm,1.2s
BNN   Bunyan           27.49 286  IAmb    IAmb   11 46 07.8
      comp=Z,366nm,1.2s
BNN   Bunyan           27.49 286 ⇑P       P      11 45 20.2 +1.5
FKH   Fakeheh          27.86 276 eP       P      11 45 24.2 +2.2
TLY   Talaya           27.91  47          P      11 45 24.6 +2.5
TLY                               IAmb    IAmb   11 45 26.5
      comp=Z,306nm,0.6s
TLY   Talaya           27.91  47c iP      P      11 45 24.7 +2.5
TLY                               pmax    pmax
      comp=Z,316nm,0.6s
TLY   Talaya           27.91  47 ⇑P       P      11 45 24.7 +2.5
BEIL  Beino            27.97 276 eP       P      11 45 24.8 +1.9
CD2   Chengdu          28.09  92 ⇓P       P      11 45 26.3 +2.3
CD2                               pP      pP     11 46 10.8 +3.3
CD2                               PP      PP     11 46 28.4 -3.4
CD2                               S       S      11 49 55.8 +2.6
CD2                               ScP     ScP    11 51 52.3 -1.2
CD2                               ScS     ScS    11 55 43.8 -2.8
CD2                               pmax    pmax
      comp=Z,1µm,1.2s
CD2                               pmax    pmax
      comp=Z,5µm,4.7s
CD2                               LR      LR
      comp=Z,9µm,12.7s
CD2                               LR      LR
      comp=Z,5µm,12.1s
CD2                               LR      LR
      comp=Z,11µm,12.1s
HWQ   Hawqa            28.22 276 eP       P      11 45 27.3 +2.0
PZH   PanZhiHua        28.28 102 ⇓P       P      11 45 27.6 +1.7
PZH                               S       S      11 49 57.4 +1.0
PZH                               sS      sS     11 51 08.9 -5.7
PZH                               pmax    pmax
      comp=Z,500nm,1.4s
PZH                               pmax    pmax
      comp=Z,2µm,4.5s
ZAHL  Zahle            28.38 275 eP       P      11 45 29.0 +2.3
IRK   Irkutsk          28.47  46 eP       P      11 45 28.3 +1.2
IRK                              e               11 46 15.2
IRK                              e               11 50 02.9
IRK                              e               11 51 38.4
IRK                               pmax    pmax
      comp=Z,925nm,0.8s
RCY   Rachaya          28.52 274 eP       P      11 45 29.8 +1.9
BHL   Bhannes          28.55 275 eP       P      11 45 30.1 +1.9
QRWL  Qaraoun          28.62 275 eP       P      11 45 31.0 +2.2
SHBL  Chebaa           28.63 274 eP       P      11 45 30.9 +2.0
SONM  Songino Array    28.64  55  P       P      11 45 31.1 +2.2
      comp=Z,381nm,0.8s,baz=257,slow=9.8,SNR=1428
SONM                              pP      pP     11 46 14.1 +1.7
      comp=Z,150nm,0.9s,baz=264,slow=9.0,SNR=3.3
SONM                              PcP     PcP    11 48 35.5 +1.5
      comp=Z,95nm,0.9s,baz=289,slow=2.3,SNR=3.7
SONM                              P3KPbc         12 17 40.5
      comp=Z,8.4nm,0.9s,baz=89,slow=2.8,SNR=20
      comp=Z,381nm,0.8s
SONM  Songino Array    28.64  55          P      11 45 30.9 +2.1
SONM                              IAmb    IAmb   11 45 32.3
      comp=Z,384nm,0.8s
DQRL  Deir Qamar       28.67 275 eP       P      11 45 31.0 +1.8
SIM   Simferopol'      28.70 299 eP       P      11 45 28.9 -0.3
SIM                              e               11 46 29.3
SIM                              eS       S      11 50 00.7 -1.6
SIM                              eSS      ScP    11 51 44.6  -11
SIM                               pmax    pmax
      comp=Z,174nm,1.3s
SIM                               pmax    pmax
      comp=Z,1µm,16.5s
SIM                               smax    smax
      comp=N,2µm,14.6s
BZK   Bozkurt          28.70 292 ⇑P       P      11 45 30.9 +1.7
GEM   Giv'at Ha'Em     28.73 274 ⇑P       P      11 45 31.6 +1.9
ILGA  Ilgaz            28.95 290  IAmb    IAmb   11 46 23.1
      comp=Z,580nm,1.3s
KIRS  Kirsehir-Merke   28.95 286 ⇑P       P      11 45 33.5 +1.8
MMAI  Mount Meron Ar   29.00 274  P       P      11 45 34.2 +2.2
      comp=Z,26nm,0.7s,baz=74,slow=8.9,SNR=30
MMAI                              pP      pP     11 46 16.5 +1.6
      comp=Z,8.2nm,0.6s,baz=57,slow=10,SNR=2.3
MMAI                              PcP     PcP    11 48 36.4 +1.3
      comp=Z,26nm,0.4s,baz=80,slow=6.1,SNR=16
MMAI                              ScP     ScP    11 51 56.1 -0.3
      comp=Z,83nm,1.0s,baz=48,slow=1.2,SNR=11
ULN   Ulaanbaatar      29.08  55          P      11 45 34.5 +1.8
ULN                               IAmb    IAmb   11 45 36.0
      comp=Z,353nm,0.8s
ULN   Ulaanbaatar      29.08  55  P       P      11 45 33.3 +0.6
ULN   Ulaanbaatar      29.08  55d iP      P      11 45 34.9 +2.1
ULN                               pmax    pmax
      comp=Z,413nm,0.8s
ULN   Ulaanbaatar      29.08  55 ⇑P       P      11 45 34.8 +2.1
BALJ  Balqa            29.09 272  IAmb    IAmb   11 46 21.5
      comp=Z,389nm,1.0s
BR104 Keskin Array S   29.10 288  P       P      11 45 32.3 -0.7
      comp=Z,2µmcomp=Z,99nm,1.2s
BR131 Keskin Array S   29.10 288  P       P      11 45 34.0 +1.0
      SNR=90
BR131 Keskin Array S   29.10 288          P      11 45 33.8 +0.8
BR131                             IAmb    IAmb   11 46 25.0
      comp=Z,351nm,0.9s
BR131 Keskin Array S   29.10 288c iP      P      11 45 34.2 +1.2
BRTR  Keskin Array B   29.10 288  P       P      11 45 34.1 +1.0
      comp=Z,46nm,0.7s,baz=99,slow=7.6,SNR=234
BRTR                              pP      pP     11 46 17.1 +1.3
      comp=Z,39nm,0.7s,baz=94,slow=8.7,SNR=2.5
BRTR                              PcP     PcP    11 48 37.1 +1.8
      comp=Z,34nm,0.8s,baz=144,slow=2.0,SNR=5.4
BRTR                              ScP     ScP    11 51 55.1 -1.6
      comp=Z,22nm,0.9s,baz=114,slow=5.5,SNR=4.9
BRTR                              P3KPbc         12 17 40.2
      comp=Z,1.2nm,0.8s,baz=265,slow=5.7,SNR=4.5
      comp=Z,46nm,0.7s
BRTR  Keskin Array B   29.10 288          P      11 45 33.6 +0.5
BRTR  Keskin Array B   29.10 288 i P      P      11 45 34.0 +1.0
BRTR                              pmax    pmax
      comp=Z,52nm,0.8s
BR106 Keskin Array S   29.12 288  P       P      11 45 33.7 +0.5
      comp=Z,2µmcomp=Z,88nm,0.8s
BR105 Keskin Array S   29.12 288  P       P      11 45 33.7 +0.5
      comp=Z,2µmcomp=Z,104nm,0.8s
MALK  Mahakanadarawa   29.39 160  P       P      11 45 37.5 +1.9
MALK                              S       S      11 50 14.0 +0.2
MALK  Mahakanadarawa   29.39 160 ⇓P       P      11 45 37.3 +1.6
GHAJ  Ghor Haditha     29.40 270          P      11 45 37.0 +1.4
GHAJ                              IAmb    IAmb   11 46 24.5
      comp=Z,472nm,1.1s
SALP  Salfit           29.45 272 ⇑P       P      11 45 38.1 +2.0
MOS   Moscow           29.45 321 eP       P      11 45 36.0 +0.3
MOS                              e*PP     pP     11 46 17.2 -1.3
MOS                              e               11 46 36.6
MOS                              eS       S      11 50 12.9 -1.0
MOS                               pmax    pmax
      comp=Z,5µm,1.2s
MOS                               pmax    pmax
      comp=Z,4µm,1.2s
MOS                               pmax    pmax
      comp=N,1µm,1.1s
MOS                               pmax    pmax
      comp=E,3µm,1.1s
MOS                               pmax    pmax
      comp=N,954nm,0.9s
MOS                               pmax    pmax
      comp=E,3µm,1.1s
MOS                               smax    smax
      comp=N,8µm,4.0s
MOS                               smax    smax
      comp=E,3µm,2.5s
HMDM  Hanimaadhoo      29.66 175  P       P      11 45 40.8 +2.8
HMDM  Hanimaadhoo      29.66 175          P      11 45 39.8 +1.8
HMDM  Hanimaadhoo      29.66 175  P       P      11 45 39.5 +1.5
      comp=E,976nm,1.2s
HMDM  Hanimaadhoo      29.66 175 ⇑P       P      11 45 41.3 +3.3
OBN   Obninsk          29.72 320  P       P      11 45 39.0 +0.9
      comp=E,2µm,0.6s,baz=52,slow=5.0,SNR=416
      comp=E,2µm,0.6s
OBN   Obninsk          29.72 320          P      11 45 38.6 +0.5
OBN   Obninsk          29.72 320 ⇑P       P      11 45 39.2 +1.1
OBN   Obninsk          29.72 320c iP      P      11 45 39.0 +0.9
OBN                              e*PP     pP     11 46 22.1 +1.1
OBN                              e               11 46 50.4
OBN                              i S      S      11 50 10.2 -7.9
OBN                               pmax    pmax
      comp=Z,6µm,1.5s
OBN   Obninsk          29.72 320 ⇑P       P      11 45 38.7 +0.6
OBN   Obninsk          29.72 320  P       P      11 45 38.9 +0.9
      comp=Z,34µmcomp=Z,3µm,1.3s
KMI   Kunming          29.74 103 ⇓P       P      11 45 40.1 +1.2
KMI                               sP      sP     11 46 46.8 -1.0
KMI                               S       S      11 50 20.5 +1.0
KMI                               sS      sS     11 51 36.3 -1.5
KMI                               ScP     ScP    11 51 57.1 -2.0
KMI                               ScS     ScS    11 55 51.3 -3.6
KMI                               pmax    pmax
      comp=Z,470nm,0.7s
KMI                               pmax    pmax
      comp=Z,3µm,3.0s
ANTO  Ankara           29.74 288  P       P      11 45 39.7 +1.2
ANTO  Ankara           29.74 288  P       P      11 45 39.0 +0.5
ANTO                              IAmb    IAmb   11 46 30.1
      comp=Z,1µm,2.0s
ANTO  Ankara           29.74 288 ⇑P       P      11 45 40.0 +1.4
ANTO  Ankara           29.74 288  P       P      11 45 39.9 +1.4
ANTO  Ankara           29.74 288 ⇑P       P      11 45 39.9 +1.4
ANTO  Ankara           29.74 288  P       P      11 45 39.2 +0.6
      comp=Z,3µmcomp=Z,85nm,1.7s
ANTO  Ankara           29.74 288  P       P      11 45 39.7 +1.2
AMAZ  Amatzia          29.85 271 ⇑P       P      11 45 41.9 +2.4
CSS   Mathiatis        30.15 278          P      11 45 41.7 -0.5
CSS   Mathiatis        30.15 278 ⇑P       P      11 45 42.7 +0.6
CSS   Mathiatis        30.15 278  P       P      11 45 42.1  0.0
      comp=Z,3µmcomp=Z,55nm,0.9s
KZIT  Kziot            30.48 270 ⇑P       P      11 45 46.7 +1.7
PALK  Pallekele        30.51 160  P       P      11 45 47.1 +1.6
PALK                              IAmb    IAmb   11 46 39.5
      comp=Z,1µm,1.6s
PALK  Pallekele        30.51 160  P       P      11 45 44.7 -0.8
PALK  Pallekele        30.51 160 i P      P      11 45 48.0 +2.5
      SNR=16
PALK  Pallekele        30.51 160  P       P      11 45 47.1 +1.6
PALK                              pmax    pmax
      comp=Z,1µm,1.6s
PALK  Pallekele        30.51 160  P       P      11 45 47.1 +1.6
CHTO  Chiang Mai       30.52 118  P       P      11 45 46.5 +0.9
CHTO                              P       P      11 45 46.5 +0.9
CHTO  Chiang Mai       30.52 118  P       P      11 45 45.8 +0.2
CHTO                              IAmb    IAmb   11 45 50.0
      comp=Z,475nm,1.1s
CHTO  Chiang Mai       30.52 118  P       P      11 45 46.2 +0.6
CHTO  Chiang Mai       30.52 118  P       P      11 45 45.6  0.0
      comp=Z,13µmcomp=Z,6µmcomp=Z,436nm,1.2s
CHTO  Chiang Mai       30.52 118  P       P      11 45 45.8 +0.2
CHTO                              pmax    pmax
      comp=Z,475nm,1.1s
CHTO  Chiang Mai       30.52 118 ⇓P       P      11 45 46.1 +0.6
CHTO  Chiang Mai       30.52 118  P       P      11 45 46.0 +0.4
CHTO  Chiang Mai       30.52 118  P       P      11 45 46.1 +0.5
CHTO                              pP      pP     11 46 31.1 +1.5
CHTO                              sP      sP     11 46 55.3 +0.8
CM31  Chiang Mai Arr   30.76 118  P       P      11 45 48.8 +1.2
CMAR  Chiang Mai Arr   30.76 118  P       P      11 45 49.5 +1.9
      comp=Z,564nm,0.9s,baz=294,slow=7.7,SNR=658
CMAR                              pP      pP     11 46 32.8 +1.0
      comp=Z,282nm,1.1s,baz=309,slow=9.5,SNR=3.1
CMAR                              ScP     ScP    11 52 00.9 -1.3
      comp=Z,81nm,0.9s,baz=298,slow=4.6,SNR=13
CMAR                              P3KPbc         12 17 33.3
      comp=Z,5.3nm,0.9s,baz=156,slow=3.3,SNR=29
      comp=Z,564nm,0.9s
CMAR  Chiang Mai Arr   30.76 118  P       P      11 45 49.0 +1.4
CMAR  Chiang Mai Arr   30.76 118 i P      P      11 45 48.7 +1.1
CMAR                              pmax    pmax
      comp=Z,555nm,0.9s
MDUB  Mudurnu          30.90 290  P       P      11 45 48.6 -0.1
MDUB                              IAmb    IAmb   11 46 53.2
      comp=Z,290nm,1.1s
BTO   Baotou           30.96  70 eP       P      11 45 50.3 +1.0
BTO                               pP      pP     11 46 35.4 +1.9
BTO                               PP      sP     11 46 58.3 -0.2
BTO                               S       S      11 50 39.3 +1.3
BTO                               pmax    pmax
      comp=Z,1µm,1.0s
BTO                               pmax    pmax
      comp=Z,2µm,5.8s
BTO                               LR      LR
      comp=Z,21µm,9.2s
BTO                               LR      LR
      comp=Z,13µm,11.6s
BTO                               LR      LR
      comp=Z,6µm,7.0s
SAHE  Sakarya_HENDEK   31.12 290 ⇑P       P      11 45 51.8 +1.1
XAN   Xi'an            31.28  83 ⇓P       P      11 45 53.4 +1.2
XAN                               S       S      11 50 44.3 +1.2
XAN                               pmax    pmax
      comp=Z,840nm,0.9s
XAN                               pmax    pmax
      comp=Z,2µm,4.2s
XAN                               LR      LR
      comp=Z,11µm,8.9s
XAN                               LR      LR
      comp=Z,8µm,8.3s
XAN                               LR      LR
      comp=Z,8µm,14.4s
XAN   Xi'an            31.28  83  P       P      11 45 53.0 +0.9
XAN                               pP      pP     11 46 36.6 +0.5
XAN                               sP      sP     11 47 02.0 +1.0
KLMR  Klimovskoe       31.33 331c iP      P      11 45 51.6 -0.5
KLMR                             e*PP     pP     11 46 32.5 -2.6
KLMR                             e               11 47 03.3
KLMR                              pmax    pmax
      comp=Z,5µm,1.2s
BORA  Eskisehir        31.53 289  IAmb    IAmb   11 45 56.6
      comp=Z,336nm,1.3s
HALK  Hakmana          31.64 161 ⇓P       P      11 45 57.0 +1.6
PURM  Purcari          31.77 301 ⇓P       P      11 45 57.5 +1.4
ISP   Isparta          31.77 285          P      11 45 56.2 -0.3
ISP   Isparta          31.77 285  P       P      11 45 56.2 -0.3
ISP                               pmax    pmax
      comp=Z,155nm,1.0s
PBA   Port Blair       31.79 135          P      11 45 59.1 +2.4
PBA   Port Blair       31.79 135 ⇓P       P      11 45 59.2 +2.5
HHC   Hu-ho-hao-te     32.10  69 eP       P      11 46 01.3 +2.0
HHC                               pP      pP     11 46 43.9 +0.4
HHC                               sP      sP     11 47 05.9 -2.5
HHC                               PP      PP     11 47 15.3 -0.9
HHC                               S       S      11 50 56.8 +1.0
HHC                               sS      sS     11 52 11.3 -3.1
HHC                               SS      SS     11 53 06.1  -15
HHC                               ScS     ScS    11 56 03.1 -2.8
HHC                               pmax    pmax
      comp=Z,150nm,0.9s
HHC                               pmax    pmax
      comp=Z,480nm,4.0s
GYA   Guiyang          32.21  98 ⇓P       P      11 46 01.9 +1.5
GYA                               pP      pP     11 46 48.8 +4.5
GYA                               sP      sP     11 47 11.0 +1.8
GYA                               S       S      11 50 58.4 +0.6
GYA                               ScP     ScP    11 52 05.8 -1.4
GYA                               pmax    pmax
      comp=Z,2µm,1.0s
TLCR                   32.46 299 ⇑P       P      11 46 03.2 +1.0
TLCR                   32.46 299  P       P      11 46 03.2 +1.0
ELL   Elmali           32.46 283  IAmb    IAmb   11 46 04.9
      comp=Z,629nm,0.8s
ELL   Elmali           32.46 283  P       P      11 46 03.7 +1.2
ELL                               pmax    pmax
      comp=Z,3µm,1.0s
ELL   Elmali           32.46 283 ⇑P       P      11 46 03.4 +0.9
AK09  Malin Array Si   32.63 309  P       P      11 46 03.0 -0.6
MANR  Mangalia         32.63 296 ⇑P       P      11 46 05.0 +1.3
AK10  Malin Array Si   32.65 309  P       P      11 46 03.1 -0.7
AK08  Malin Array Si   32.65 309  P       P      11 46 03.9 +0.1
AK07  Malin Array Si   32.67 309  P       P      11 46 03.4 -0.6
AK06  Malin Array Si   32.68 309  P       P      11 46 03.2 -0.8
AKASG Malin Array Be   32.68 309  P       P      11 46 04.2 +0.1
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	comp=Z,171nm,0.8s,baz=92,slow=7.2,SNR=440						
AKASG				pP	pP	11 46 48.7	+1.4
	comp=Z,94nm,0.7s,baz=90,slow=7.5,SNR=3.4						
AKASG				ScP	ScP	11 52 06.0	-2.1
	comp=Z,92nm,1.0s,baz=82,slow=3.3,SNR=8.5						
AKASG				PKiKP	PKiKP	11 56 09.7	-1.0
	comp=Z,1.2nm,0.4s,baz=57,slow=2.0,SNR=4.5						
AKASG				P3KPbc		12 17 20.0	
	comp=Z,0.2nm,0.3s,baz=272,slow=3.6,SNR=4.3						
	comp=Z,171nm,0.8s						
AKASG	Malin Array Be	32.68	309	P	P	11 46 03.8	-0.3
AKASG				IAmb	IAmb	11 46 06.0	
	comp=Z,1µm,1.1s						
AKASG	Malin Array Be	32.68	309	i P	P	11 46 04.1	0.0
AKASG				pmax	pmax		
	comp=Z,251nm,0.9s						
AKBB	Malin Array Si	32.68	309c	iP	P	11 46 04.3	+0.2
AKBB				pmax	pmax		
	comp=Z,1µm,1.5s						
AKBB	Malin Array Si	32.68	309	P	P	11 46 03.3	-0.8
KIEV	Kiev	32.69	309		P	11 46 04.0	-0.1
KIEV				IAmb	IAmb	11 46 06.0	
	comp=Z,1µm,1.6s						
KIEV	Kiev	32.69	309	⇑P	P	11 46 04.9	+0.8
KIEV	Kiev	32.69	309	i P	P	11 46 04.0	-0.1
	SNR=45						
KIEV	Kiev	32.69	309	P	P	11 46 04.9	+0.8
KIEV	Kiev	32.69	309	⇑P	P	11 46 04.0	-0.1
KIEV	Kiev	32.69	309	P	P	11 46 03.3	-0.8
	comp=Z,37µmcomp=Z,2µm,1.3s						
TPGR	Topolog	32.74	298	⇑P	P	11 46 05.4	+0.8
MFTR	Murfatlar	32.74	297	⇑P	P	11 46 05.7	+1.0
TIRR	Tirgusor	32.74	297	⇑P	P	11 46 05.4	+0.7
AKAS	Kas	32.81	282	P	P	11 46 04.9	-0.6
AKAS				IAmb	IAmb	11 46 07.3	
	comp=Z,346nm,1.0s						
GIUM	Giurgiulesti	32.89	299	⇓P	P	11 46 07.2	+1.3
SORM	Soroca	32.92	304	⇑P	P	11 46 06.9	+0.7
SORM	Soroca	32.92	304	P	P	11 46 06.9	+0.7
ENH	Enshi	32.93	89	P	P	11 46 07.5	+1.0
ENH				IAmb	IAmb	11 46 18.7	
	comp=Z,266nm,0.8s						
CFR	Carcaliu	32.94	299	⇑P	P	11 46 07.5	+1.1
CFR	Carcaliu	32.94	299	P	P	11 46 07.4	+1.1
PSN	Preselentsi	32.97	296	i P	P	11 46 08.0	+1.4
VLDR	Vladesti	32.98	300	⇑P	P	11 46 08.4	+1.6
SCTR	Scanteiesti	33.04	300	⇓P	P	11 46 08.6	+1.4
VARL	Varlezi	33.15	300	⇓P	P	11 46 09.8	+1.6
SCHLR	Schela	33.16	299	⇑P	P	11 46 09.5	+1.3
MANT	Manisa	33.19	286	IAmb	IAmb	11 46 11.2	
	comp=Z,419nm,1.2s						
ICOR	Ion Corvin	33.19	297	⇑P	P	11 46 10.3	+1.8
TIY	Taiyuan	33.22	75	eP	P	11 46 11.0	+2.0
TIY				pP	pP	11 46 57.5	+3.9
TIY				sP	sP	11 47 15.0	-3.4
TIY				PP	PP	11 47 34.8	+6.2
TIY				S	S	11 51 15.3	+2.1
TIY				sS	sS	11 52 34.3	+2.3
TIY				SS	SS	11 53 35.5	-4.0
TIY				ScS	ScS	11 56 12.1	+0.4
TIY				pmax	pmax		
	comp=Z,180nm,1.0s						
TIY				pmax	pmax		
	comp=Z,800nm,3.8s						
BAND	Balkesir-Ban	33.26	290	⇓P	P	11 46 10.3	+1.1
TUDR		33.27	299	⇓P	P	11 46 10.9	+1.7
BIR	Birlad	33.31	301	⇑P	P	11 46 11.2	+1.6
BIR	Birlad	33.31	301	P	P	11 46 11.2	+1.6
MI30	MI30,Zelenitsa	33.34	309	P	P	11 46 09.2	-0.6
	comp=Z,12µmcomp=Z,940nm,1.2s						
GHRR		33.46	300	⇓P	P	11 46 12.2	+1.3
LUBAR	Lubar, Ukraine	33.50	307	P	P	11 46 10.2	-1.0
AMRR	Amara	33.51	298	⇑P	P	11 46 13.3	+1.9
AMRR	Amara	33.51	298	P	P	11 46 13.2	+1.9
PRD	Provadia	33.52	295	i P	P	11 46 12.6	+1.2
BALB	Balikesir	33.52	289	P	P	11 46 11.8	+0.3
BALB				IAmb	IAmb	11 46 14.0	
	comp=Z,354nm,1.2s						
BALB	Balikesir	33.52	289	⇑P	P	11 46 12.2	+0.7
PANC	Panciu	33.64	300	⇓P	P	11 46 14.6	+2.2
YER	Yerkesik	33.66	284	P	P	11 46 12.2	-0.5
ADZR	Andozero	33.68	335c	iP	P	11 46 13.7	+1.2
ADZR				e		11 47 20.8	
ADZR				pmax	pmax		
	comp=Z,3µm,1.2s						
MI28	Mi28,Pidlybu	33.69	309	P	P	11 46 11.8	-1.0
ODBI	Odobesti	33.70	300	⇑P	P	11 46 14.7	+1.8
PGOR	Pogoanele	33.76	298	⇑P	P	11 46 15.5	+2.1
GRER		33.76	299	⇑P	P	11 46 15.8	+2.3
LEHL	Lehliu	33.88	297	⇓P	P	11 46 16.1	+1.6
CIT	Chita	33.93	49	eP	P	11 46 16.3	+1.4
CIT				e		11 47 03.9	
CIT				e		11 47 28.8	
CIT				e		11 47 44.9	
CIT				e		11 48 43.0	
CIT				eS	S	11 51 26.3	+2.6
CIT				pmax	pmax		
	comp=Z,2µm,2.3s						
VRI	Vrincioaia	33.93	300	⇑P	P	11 46 16.4	+1.4
VRI	Vrincioaia	33.93	300	P	P	11 46 16.3	+1.4
BISRR	Bisoca	33.94	299	⇓P	P	11 46 17.4	+2.2
LYN	LuoYang	33.97	81	⇓P	P	11 46 17.8	+2.4
LYN				sP	sP	11 47 26.0	+1.1
LYN				S	S	11 51 26.6	+2.0
LYN				ScP	ScP	11 52 12.0	-1.1
LYN				sS	sS	11 52 39.8	-3.8
LYN				pmax	pmax		
	comp=Z,550nm,1.1s						
LYN				pmax	pmax		
	comp=Z,2µm,3.8s						
ARG	Arkhangelos	33.98	282	IAmb	IAmb	11 46 17.3	
	comp=Z,724nm,1.0s						
ARG	Arkhangelos	33.98	282	⇑P	P	11 46 15.8	+0.3
ARG	Arkhangelos	33.98	282	⇑P	P	11 46 15.8	+0.3
PLOR	Plostina	33.99	300	⇑P	P	11 46 17.0	+1.5
PLOR	Plostina	33.99	300	P	P	11 46 16.9	+1.5
TESR	Tescani	33.99	301	⇑P	P	11 46 16.2	+0.8
GIRR	Girov	34.11	302	⇑P	P	11 46 17.6	+1.1
ONER	Baraj Valea Uz	34.17	301	⇓P	P	11 46 18.4	+1.4
JMB	Yambol	34.21	294	i P	P	11 46 18.6	+1.2
NRIK	Noril'sk	34.21	11	P	P	11 46 18.6	+1.6
	comp=Z,3µm,0.8s,baz=203,slow=5.9,SNR=1878						
NRIK				P3KPbc		12 17 17.2	
	comp=Z,3.0nm,0.4s,baz=38,slow=2.7,SNR=11						
	comp=Z,3µm,0.8s						
NRIK	Noril'sk	34.21	11	P	P	11 46 18.3	+1.3
NRIK	Noril'sk	34.21	11c	iP	P	11 46 18.7	+1.7
NRIK				pmax	pmax		
	comp=Z,4µm,0.9s						
KMPD	K-Podol'skiy	34.21	305	P	P	11 46 16.5	-0.8
NEHR	Nehoiu	34.24	299	⇑P	P	11 46 19.4	+1.8
MNK	Minsk	34.27	315	i P	P	11 46 18.1	+0.4
	comp=E,732nm,1.2s						
MNK				i P	P	11 46 18.1	+0.4
	comp=N,1µm,1.1s						
MNK				i P	P	11 46 18.1	+0.4
	comp=Z,1µm,1.1s,baz=104						
MNK				i pP	pP	11 46 59.9	-1.3
MNK				i PP	PnPn	11 47 40.2	0.0
MNK				i S	S	11 51 30.9	+2.3
MNK				i sS	sS	11 52 44.1	-3.5
MNK				i SS	SS	11 54 06.5	+2.4
MNK	Minsk	34.27	315	i P	P	11 46 18.0	+0.4
MNK				i *PP	pP	11 46 59.9	-1.3
MNK				i		11 47 40.2	
MNK				i S	S	11 51 30.9	+2.3
MNK				i *SS	sS	11 52 44.1	-3.5
MNK				pmax	pmax		
	comp=Z,1µm,1.1s						
MNK				pmax	pmax		
	comp=N,1µm,1.1s						
MNK				pmax	pmax		
	comp=E,732nm,1.2s						
MNK				MLR	MLR		
	comp=E,4µm,15.0s						
HORU	Horodok	34.29	306	P	P	11 46 17.2	-0.8
COVR	Voineasa-Covas	34.30	300	⇑P	P	11 46 19.9	+1.7
PRAR	RASCA	34.31	303	⇑P	P	11 46 19.1	+1.0
BLCB	Balcova	34.38	287	P	P	11 46 18.8	0.0
TURR	Turia	34.43	300	⇑P	P	11 46 20.7	+1.5
MLR	Muntele Rosu	34.48	299	P	P	11 46 22.1	+2.2
	comp=E,584nm,1.1s,baz=72,slow=5.1,SNR=336						
	comp=E,584nm,1.1s						
MLR	Muntele Rosu	34.48	299	⇑P	P	11 46 22.0	+2.2
SGRR	Singureni	34.50	297	⇑P	P	11 46 21.4	+1.5
SZH	Strazhitsa	34.56	295	i P	P	11 46 21.4	+1.1
OZUR		34.59	300	⇓P	P	11 46 21.8	+1.2
BOSR	Bodos	34.67	300	⇓P	P	11 46 23.1	+1.7
CAVK	Edirne/Enez-Ca	34.68	291	⇑P	P	11 46 22.7	+1.3
EZN	Ezine	34.68	289	P	P	11 46 22.0	+0.6
EZN	Ezine	34.68	289	P	P	11 46 22.6	+1.2
ENEZ	Enez	34.68	291	P	P	11 46 22.7	+1.3
PUL	Pulkovo	34.73	325	eP	P	11 46 22.9	+1.3
PUL	Pulkovo	34.73	325	⇑P	P	11 46 22.6	+1.0
PUL	Pulkovo	34.73	325	⇑P	P	11 46 22.6	+1.0
ALN	Alexandroupoli	34.74	291	P	P	11 46 22.6	+0.7
ALN	Alexandroupoli	34.74	291	⇑P	P	11 46 22.7	+0.7
ALN	Alexandroupoli	34.74	291	⇑P	P	11 46 22.7	+0.7
PRK	Paraskevi	34.82	288	P	P	11 46 22.8	+0.2
RNPP5	Staryi Chortor	34.85	309	P	P	11 46 21.9	-0.8
DOPR	Dopca	34.87	300	⇑P	P	11 46 24.3	+1.3
RNPP9	Sopachiv	34.87	310	P	P	11 46 22.0	-0.9
NACGM	Naroch	34.98	316	eP	P	11 46 24.6	+0.8
	comp=E,2µm,1.1s						
BURAR	Bucovina Array	35.00	303	P	P	11 46 24.5	+0.3
BURAR	Bucovina Array	35.00	303	⇑P	P	11 46 25.8	+1.5
BURAR	Bucovina Array	35.00	303	P	P	11 46 25.7	+1.5
HNS	HongShan	35.06	75	⇓P	P	11 46 26.6	+1.9
HNS				sP	sP	11 47 35.0	+0.9
HNS				S	S	11 51 44.0	+2.9
HNS				ScP	ScP	11 52 15.4	-1.5
HNS				ScS	ScS	11 56 19.3	-1.9
HNS				pmax	pmax		
	comp=E,160nm,1.0s						
HNS				LR	LR		
	comp=E,6µm,13.5s						
HNS				LR	LR		
	comp=E,3µm,11.2s						
HNS				LR	LR		
	comp=E,3µm,15.1s						
RDO	Rodhopi	35.09	292	P	P	11 46 24.9	0.0
RDO	Rodhopi	35.09	292	⇑P	P	11 46 25.6	+0.7
MTUR	Matau	35.11	299	⇓P	P	11 46 26.7	+1.6
MTUR	Matau	35.11	299	P	P	11 46 26.7	+1.6
KSV	Kosov	35.13	304	P	P	11 46 24.3	-0.9
CHOS	Chios island	35.14	287	P	P	11 46 26.8	+1.4
PVL	Pavlikeni	35.15	295	i P	P	11 46 26.7	+1.3
KDZ	Kurdzhali	35.18	293	P	P	11 46 26.2	+0.5
KDZ	Kurdzhali	35.18	293	i P	P	11 46 26.5	+0.8
SMTH	Samothraki Isl	35.19	291	P	P	11 46 26.2	+0.4
XLT	XiLinHaoTe	35.19	64	eP	P	11 46 28.3	+2.4
XLT				S	S	11 51 44.3	+1.1
XLT				ScP	ScP	11 52 16.8	-0.6
XLT				sS	sS	11 52 55.3	-7.2
XLT				pmax	pmax		
	comp=E,110nm,1.3s						
XLT				pmax	pmax		
	comp=E,910nm,3.7s						
XLT				LR	LR		
	comp=E,750nm,8.6s						
XLT				LR	LR		
	comp=E,4µm,7.3s						
XLT				LR	LR		
	comp=E,4µm,12.1s						
HUMR	Humele	35.20	298	⇑P	P	11 46 26.5	+0.7
ATD	Arta Tunnel	35.23	232	P	P	11 46 28.0	+1.6
	SNR=30						
ATD	Arta Tunnel	35.23	232	P	P	11 46 28.4	+1.9
ATD				IAmb	IAmb	11 46 30.9	
	comp=Z,497nm,1.2s						
ATD	Arta Tunnel	35.23	232	⇑P	P	11 46 28.6	+2.2
ATD	Arta Tunnel	35.23	232	P	P	11 46 28.3	+1.9
ATD				PcP	PcP	11 48 52.5	+0.1
IIGN	Ignalina	35.40	316	eP	P	11 46 29.6	+2.3
ARR	Arges	35.41	299	⇑P	P	11 46 29.1	+1.5
TGMR	Targu Mures	35.46	301	⇓P	P	11 46 30.2	+2.1
IZAR	Zarasai	35.48	317	eP	P	11 46 31.9	+3.8
ISAL	Salakas	35.51	317	eP	P	11 46 31.2	+3.0
STNU	Starunia	35.52	305	P	P	11 46 27.7	-0.8
LIA	Limnos Island	35.54	290	P	P	11 46 28.5	-0.2
MDB	Medias	35.56	300	⇓P	P	11 46 31.1	+2.2
MDB	Medias	35.56	300	P	P	11 46 31.1	+2.2
BOD	Bodaibo	35.59	39	eP	P	11 46 29.0	+0.1
BOD				pmax	pmax		
	comp=Z,1µm,1.1s						
RZN	Rozhen	35.62	293	P	P	11 46 30.1	+0.5
RZN	Rozhen	35.62	293	i P	P	11 46 30.8	+1.1
TNR	Turnu Rosu	35.65	300	⇑P	P	11 46 31.4	+1.6
TNR	Turnu Rosu	35.65	300	P	P	11 46 31.3	+1.6
BJT	Baijiatuau	35.69	70	P	P	11 46 31.9	+1.8
BJT	Baijiatuau	35.69	70	P	P	11 46 32.0	+1.9
BJT	Baijiatuau	35.69	70	P	P	11 46 31.9	+1.8
BJT				pmax	pmax		
	comp=Z,260nm,1.3s						
BJI	Beijing	35.70	70	P	P	11 46 31.9	+1.8
BJI				sP	sP	11 47 40.8	+1.3
BJI				PP	PP	11 47 59.8	+4.1
BJI				PcP	PcP	11 48 55.6	+2.2
BJI				S	S	11 51 53.0	+2.2
BJI				ScP	ScP	11 52 18.3	-0.8
BJI				sS	sS	11 53 07.5	-2.7
BJI				pmax	pmax		
	comp=Z,59nm,0.7s						
BJI				pmax	pmax		
	comp=Z,280nm,6.1s						
GULI	GuiLin	35.71	97	P	P	11 46 26.3	-4.1
GULI				pP	pP	11 47 14.1	-0.9
GULI				sP	sP	11 47 33.6	-5.9
GULI				PP	PP	11 47 54.0	-2.1
GULI				S	S	11 51 41.6	-10
GULI				SS	SS	11 53 50.1	-46
GULI				pmax	pmax		
	comp=Z,2µm,4.3s						
GULI				pmax	pmax		
	comp=Z,1µm,1.0s						
GULI				LR	LR		
	comp=N,5µm,16.3s						
GULI				LR	LR		
	comp=E,3µm,19.1s						
GULI				LR	LR		
	comp=Z,4µm,19.8s						
JOF	Joensuu	35.71	330	eP	P	11 46 31.2	+1.3
RAKU	Rahkiv	35.72	304	P	P	11 46 29.4	-0.8
THAS	Thassos island	35.78	291	P	P	11 46 30.6	-0.1
KAAM	Kaadhehdhoo	35.88	176	P	P	11 46 34.2	+2.3
KAAM				IAmb	IAmb	11 46 35.3	
	comp=Z,418nm,0.8s						
KAAM	Kaadhehdhoo	35.88	176	P	P	11 46 34.6	+2.8
KAAM	Kaadhehdhoo	35.88	176	⇑P	P	11 46 34.6	+2.8
KAVA	Kavala	35.88	292	P	P	11 46 31.7	+0.1
LVV	L'vov	35.89	307	P	P	11 46 30.8	-0.8
MORS	Morshin	35.94	306	P	P	11 46 31.4	-0.6
PGB	Panagyurishte	35.94	294	i P	P	11 46 33.7	+1.5
VSU	Vasula	35.98	322	eP	P	11 46 32.2	0.0
VSU	Vasula	35.98	322c	iP	P	11 46 31.5	-0.7
VSU				pmax	pmax		
	comp=Z,3µm,1.1s						
VSU	Vasula	35.98	322	⇑P	P	11 46 31.4	-0.7
LOT	Lotru	36.01	299	⇓P	P	11 46 33.9	+1.1
THERA	Ancient Thera,	36.02	284	P	P	11 46 32.0	-1.0
THR3	Thira Island,	36.07	284	P	P	11 46 33.0	-0.3
SNT5	Nea Kammeni, S	36.08	284	P	P	11 46 33.0	-0.3
THR6	Thira Island,	36.09	284	P	P	11 46 33.1	-0.3
CJR	Cluj-Napoca	36.10	301	⇑P	P	11 46 35.1	+1.6
CJR	Cluj-Napoca	36.10	301	P	P	11 46 35.0	+1.6
SAP3	Santorini-Thir	36.11	284	P	P	11 46 33.3	-0.3
THR5	Thira Island,	36.11	284	P	P	11 46 33.4	-0.3
THR9	Santorini-Faro	36.12	284	P	P	11 46 33.5	-0.2
MEZ	Mezhgor'ye	36.17	304	P	P	11 46 33.2	-0.8
MPEP	Malo Peshtene	36.17	296	i P	P	11 46 35.7	+1.6
VALD	Valchedram	36.37	296	i P	P	11 46 37.4	+1.7
MMB	Musomishta	36.37	293	P	P	11 46 35.8	0.0
MMB	Musomishta	36.37	293	i P	P	11 46 37.0	+1.1
OUR	Ouranopolis	36.38	291	P	P	11 46 36.6	+0.7
OUR	Ouranopolis	36.38	291	P	P	11 46 36.8	+1.0
MARR	Marisel-Cluj	36.43	301	⇑P	P	11 46 38.3	+2.0
SRE	Strehaia	36.46	298	⇓P	P	11 46 36.8	+0.3
SRE	Strehaia	36.46	298	P	P	11 46 36.8	+0.3
KARY	Karystos	36.46	287	P	P	11 46 37.3	+0.8
CNSH	ChangSha	36.51	91	P	P	11 46 38.3	+1.2
CNSH				S	S	11 51 59.6	-3.8
CNSH				pmax	pmax		
	comp=Z,220nm,1.0s						
CNSH				LR	LR		
	comp=Z,6µm,14.4s						
CNSH				LR	LR		
	comp=Z,4µm,12.4s						
CNSH				LR	LR		
	comp=Z,6µm,26.2s						
MESR	Meseseni	36.54	302	⇑P	P	11 46 38.6	+1.5
SRS	Serrai	36.55	292	P	P	11 46 37.1	-0.2
KYMI	Kymi, Euboea I	36.59	288	P	P	11 46 37.6	-0.1
DEV	Deva	36.60	300	⇑P	P	11 46 39.6	+1.9
DEV	Deva	36.60	300	P	P	11 46 39.6	+1.9
VTS	Vitosha	36.62	295	P	P	11 46 38.8	+0.7
VTS	Vitosha	36.62	295	i P	P	11 46 39.3	+1.2
AOS	Alonnisos	36.66	289	P	P	11 46 38.6	+0.4
ARBE	Arbavere	36.66	323	eP	P	11 46 39.3	+1.4
PUNG	Punghina	36.68	297	⇑P	P	11 46 39.5	+1.2
PABE	Paberze	36.69	316	eP	P	11 46 39.6	+1.4
DRGR		36.71	302	⇓P	P	11 46 39.6	+1.0
DRGR		36.71	302	P	P	11 46 39.6	+1.0
KWP	Kalwaria Pacla	36.74	306	eP	P	11 46 40.0	+1.2
KWP				eS	S	11 52 06.9	+0.5
KWP	Kalwaria Pacla	36.74	306	P	P	11 46 39.8	+1.0
KWP	Kalwaria Pacla	36.74	306	⇑P	P	11 46 39.8	+1.0
KWP	Kalwaria Pacla	36.74	306	P	P	11 46 38.1	-0.7
	comp=Z,11µmcomp=Z,865nm,1.4s						
BERU	Beregovo	36.74	304	P	P	11 46 38.1	-0.7
WHN	Wuhan	36.75	86	⇓iP	P	11 46 40.8	+1.7
WHN				sP	sP	11 47 49.1	+0.8
WHN				S	S	11 52 08.0	+1.1
WHN				ScP	ScP	11 52 22.0	-1.2
WHN				sS	sS	11 53 29.0	+2.4
WHN				ScS	ScS	11 56 27.9	-2.9
WHN				pmax	pmax		
	comp=Z,470nm,0.6s						
WHN				pmax	pmax		
	comp=Z,4µm,5.5s						
IDI	Anoyia	36.76	282	P3KPbc		12 17 06.5	
	comp=Z,8.1nm,0.9s,baz=269,slow=4.2,SNR=5.8						
IDI	Anoyia	36.76	282	P	P	11 46 38.6	-0.7
IDI	Anoyia	36.76	282	P	P	11 46 38.7	-0.5
PLG	Polygyros	36.78	291	P	P	11 46 40.1	+0.9
KKB	Krupnik	36.80	293	P	P	11 46 40.3	+0.9
KKB	Krupnik	36.80	293	i P	P	11 46 40.5	+1.1
VSVD	Vaisvydziai	36.81	317	eP	P	11 46 40.6	+1.4
DION	Dionisos Attik	36.84	287	P	P	11 46 39.8	0.0
SUW	Suwalki	36.87	314	eP	P	11 46 40.0	+0.1
SUW				ePP	PP	11 48 09.1	+0.8
SUW				eS	S	11 52 07.8	-0.5
SUW	Suwalki	36.87	314	P	P	11 46 39.7	-0.2
SUW	Suwalki	36.87	314	eP	P	11 46 39.9	+0.1
SUW	Suwalki	36.87	314	P	P	11 46 39.7	-0.2
PTL	Penteli	36.90	287	P	P	11 46 40.9	+0.6
VLY	Voula,Athens	36.99	287	P	P	11 46 41.1	0.0
HORT	Hortiatis	37.00	291	P	P	11 46 41.5	+0.3
HERR	Herculane	37.00	298	⇓P	P	11 46 41.7	+0.7
ATH	Athens Observa	37.03	287	P	P	11 46 41.4	+0.1
THE	Thessaloniki	37.10	291	P	P	11 46 42.1	+0.2
TIA	Tai'an	37.22	76	P	P	11 46 44.8	+1.8
TIA				PP	PnPn	11 48 17.0	+1.2
TIA				S	S	11 52 13.1	-0.9
TIA				sS	sS	11 53 26.3	-7.5
TIA				pmax	pmax		
	comp=Z,230nm,0.7s						
TIA				pmax	pmax		
	comp=Z,980nm,4.9s						
TIA				LR	LR		
	comp=Z,4µm,10.8s						
TIA				LR	LR		
	comp=Z,4µm,16.2s						
TIA				LR	LR		
	comp=Z,7µm,14.2s						
VAM	Vamos	37.27	283	P	P	11 46 42.6	-0.8
VAY	Valandovo	37.28	292	i P	P	11 46 44.7	+1.2
VILL	Villia	37.30	287	P	P	11 46 42.8	-0.9
FIA1	FINESS Array S	37.30	326	P	P	11 46 43.8	+0.4
FINES	FINESS Array B	37.30	326	P	P	11 46 44.9	+1.5
	comp=Z,1µm,0.9s,baz=110,slow=8.9,SNR=1359						
FINES				PP	PP	11 48 10.4	-2.5
	comp=Z,316nm,0.8s,baz=99,slow=12,SNR=6.0						
FINES				P3KPbc		12 17 03.6	
	comp=Z,7.4nm,1.2s,baz=174,slow=5.7,SNR=4.3						
	comp=Z,1µm,0.9s						
FINES	FINESS Array B	37.30	326	P	P	11 46 43.9	+0.5
FINES	FINESS Array B	37.30	326	i P	P	11 46 44.0	+0.7
FINES				pmax	pmax		
	comp=Z,1µm,0.9s						
BORR	Bors	37.33	302	⇑P	P	11 46 44.7	+0.9
LVZ	Lovozero	37.35	339	P	P	11 46 44.0	+0.3
LVZ	Lovozero	37.35	339c	iP	P	11 46 44.2	+0.5
LVZ				pmax	pmax		
	comp=Z,3µm,0.8s						
LVZ	Lovozero	37.35	339	⇑P	P	11 46 44.2	+0.5
LVZ	Lovozero	37.35	339	P	P	11 46 44.1	+0.3
	comp=Z,30µmcomp=Z,3µm,1.2s						
CHAN	Chania	37.36	283	P	P	11 46 43.4	-0.8
ATAL	Atalanti	37.41	288	P	P	11 46 43.7	-0.9
IMMV	Iera Moni Meta	37.43	283	P	P	11 46 44.1	-0.7
LKR	Lokris	37.43	288	P	P	11 46 44.3	-0.5
SIRR	Siria	37.45	301	⇑P	P	11 46 46.7	+1.9
GRG	Griva	37.47	292	P	P	11 46 44.9	-0.2
MDVR	Moldovita	37.51	298	⇑P	P	11 46 46.4	+1.0
GVD	Gavdhos	37.51	282	P	P	11 46 44.6	-0.9
BZS	Buzias	37.52	300	⇓P	P	11 46 46.3	+0.9
BZS	Buzias	37.52	300	P	P	11 46 46.3	+0.9
MTSE	Matsula	37.52	321	eP	P	11 46 46.4	+1.2
APA	Apatity	37.52	338	⇓iP	P	11 46 44.7	-0.4
APA				i *PP	pP	11 47 26.6	-2.7
APA				i		11 48 14.1	
APA				i		11 49 07.4	
APA				i S	S	11 52 18.2	+0.5
APA				i SS	SS	11 55 06.6	-4.8
APA				MLR	MLR		
	comp=Z,8µm,15.8s						
LIT	Litokhoron	37.54	291	P	P	11 46 45.1	-0.6
LIT	Litokhoron	37.54	291	P	P	11 46 45.3	-0.4
LIT	Litokhoron	37.54	291	P	P	11 46 45.3	-0.4
LIT				pmax	pmax		
	comp=Z,163nm,1.1s						
LIT	Litokhoron	37.54	291	⇑P	P	11 46 45.7	0.0
HIA	Hailar	37.59	54	P	P	11 46 48.2	+2.2
HIA	Hailar	37.59	54	P	P	11 46 48.2	+2.2
HIA	Hailar	37.59	54	P	P	11 46 48.2	+2.2
HIA				pmax	pmax		
	comp=Z,199nm,0.8s						
HIA	Hailar	37.59	54	P	P	11 46 48.2	+2.2
HIA				pP	pP	11 47 30.4	-0.9
HIA				sP	sP	11 47 55.6	-0.3
HIA				PcP	PcP	11 48 59.8	+0.8
LTK	Loutraki	37.59	287	P	P	11 46 44.8	-1.3
HILR	Hailar Array B	37.60	54	P	P	11 46 48.4	+2.3
	comp=Z,48nm,0.3s,baz=278,slow=7.1,SNR=119						
HILR				PcP	PcP	11 48 59.4	+0.4
	comp=Z,137nm,0.7s,baz=282,slow=2.5,SNR=13						
HILR				ScP	ScP	11 52 25.4	-0.8
	comp=Z,79nm,1.0s,baz=245,slow=3.1,SNR=7.0						
	comp=Z,48nm,0.3s						
MEF	Metsahovi	37.67	324	eP	P	11 46 47.7	+1.3
AXAR	Agios Charalam	37.67	288	P	P	11 46 46.2	-0.6
ANKY	Antikythira Is	37.85	284	P	P	11 46 48.9	+0.6
AGG	Agios Georgios	37.87	289	P	P	11 46 47.6	-0.9
AGG	Agios Georgios	37.87	289	⇑P	P	11 46 48.4	-0.1
AGG	Agios Georgios	37.87	289	⇑P	P	11 46 48.4	-0.1
R9F13	Warsaw-Wawer	37.89	310	eP	P	11 46 49.5	+1.1
	comp=Z,28nm,0.6s						
R9F13				epP	pP	11 47 33.8	+1.2
R9F13				esP	sP	11 47 59.3	+2.5
R9F13				eS	S	11 52 24.1	+0.5
PBUR	Paburge	37.92	317	eP	P	11 46 49.6	+1.1
VLI	Veliai	37.92	285	P	P	11 46 46.6	-2.3
KTHA	Kythira Island	37.94	284	P	P	11 46 47.8	-1.3
THL	Klokotos Trika	38.00	290	P	P	11 46 48.5	-1.0
MAKR	Makrakomi, Fth	38.02	289	P	P	11 46 49.3	-0.4
SKO	Skopje	38.02	294	i P	P	11 46 50.8	+1.1
SLIT	Slitere, Latvi	38.04	319	eP	P	11 46 49.6	+0.1
SLIT	Slitere, Latvi	38.04	319	⇑P	P	11 46 49.5	+0.1
KZN	Kozani	38.05	291	P	P	11 46 48.6	-1.4
MSF	Maaselka	38.05	334	P	P	11 46 50.3	+0.7
BEL	Belsk	38.08	310	eP	P	11 46 50.6	+0.6
BEL				eS	S	11 52 27.4	+1.0
BEL	Belsk	38.08	310	⇑P	P	11 46 50.8	+0.9
BEL	Belsk	38.08	310	⇑P	P	11 46 50.8	+0.9
GUR	Goura	38.09	287	P	P	11 46 48.8	-1.7
KEF	Keuruu	38.10	327	eP	P	11 46 51.9	+1.9
KALE	Kalithea	38.15	288	P	P	11 46 48.8	-2.0

KECS	**Kecovo**	**38.18**	**304**	*e*P	**P**	**11 46 52.6**	**+1.7**
KECS				pmax	pmax		
	comp=Z,102nm,0.9s						
KECS	**Kecovo**	**38.18**	**304**	*e*P	**P**	**11 46 52.6**	**+1.7**
KECS				*e*PP	**PnPn**	**11 48 27.7**	**+0.8**
VLX	**Vlachokerasia**	**38.20**	**286**	P	**P**	**11 46 49.1**	**-2.2**
SERG	**Sergoula**	**38.21**	**288**	P	**P**	**11 46 49.5**	**-1.8**
KLV	**Kalavryta, Ach**	**38.22**	**287**	P	**P**	**11 46 49.4**	**-2.0**
ANX	**Ano Chora**	**38.27**	**288**	P	**P**	**11 46 50.9**	**-1.0**
EVR	**Evrytania**	**38.29**	**289**	P	**P**	**11 46 51.8**	**-0.2**
NIE	**Niedzica**	**38.30**	**306**	*e*P	**P**	**11 46 53.7**	**+1.8**
NIE				*e*S	**S**	**11 52 32.3**	**+2.3**
NIE	**Niedzica**	**38.30**	**306**	P	**P**	**11 46 53.5**	**+1.6**
NIE	**Niedzica**	**38.30**	**306**	P	**P**	**11 46 52.3**	**+0.4**
	comp=Z,4µmcomp=Z,296nm,1.1s						
EFP	**Efpalio**	**38.32**	**288**	P	**P**	**11 46 51.0**	**-1.2**
BSZH	**Besenyszg**	**38.36**	**302**	⇑P	**P**	**11 46 54.2**	**+1.9**
BEO	**Beograd**	**38.39**	**298**	P	**P**	**11 46 54.0**	**+1.4**
KPRO	**Kipourio**	**38.42**	**291**	P	**P**	**11 46 52.4**	**-0.7**
PENT	**Pentalofos**	**38.55**	**291**	P	**P**	**11 46 54.3**	**+0.1**
QIZ	**Qiongzhong**	**38.55**	**106**	P	**P**	**11 46 54.8**	**+0.4**
QIZ				IAmb	IAmb	11 47 09.8	
	comp=Z,402nm,1.0s						
QIZ	**Qiongzhong**	**38.55**	**106**	P	**P**	**11 46 54.9**	**+0.6**
QIZ				pP	**pP**	**11 47 39.4**	**-0.5**
QIZ				sP	**sP**	**11 48 03.6**	**-0.8**
QIZ				PP	**PP**	**11 48 29.0**	**+1.8**
QIZ				S	**S**	**11 52 32.5**	**-1.9**
QIZ				sS	**sS**	**11 53 53.4**	**-1.1**
QIZ				pmax	pmax		
	comp=Z,370nm,2.1s						
QIZ				pmax	pmax		
	comp=Z,2µm,2.8s						
QIZ	**Qiongzhong**	**38.55**	**106**	P	**P**	**11 46 55.1**	**+0.8**
PVO	**Paravola**	**38.57**	**288**	P	**P**	**11 46 54.4**	**+0.2**
NEST	**Nestorio**	**38.57**	**291**	P	**P**	**11 46 54.4**	**0.0**
DRO	**Drossia**	**38.58**	**287**	P	**P**	**11 46 53.2**	**-1.2**
PSZ	**Piszkesteto**	**38.59**	**303**	⇑P	**P**	**11 46 56.1**	**+1.7**
PSZ	**Piszkesteto**	**38.59**	**303**	*e*P	**P**	**11 46 56.1**	**+1.7**
PSZ	**Piszkesteto**	**38.59**	**303**	P	**P**	**11 46 56.1**	**+1.7**
PSZ	**Piszkesteto**	**38.59**	**303**	⇑P	**P**	**11 46 55.6**	**+1.2**
ITM	**Ithomi**	**38.59**	**286**	P	**P**	**11 46 52.7**	**-1.8**
ITM	**Ithomi**	**38.59**	**286**	P	**P**	**11 46 53.0**	**-1.4**
ITM	**Ithomi**	**38.59**	**286**	⇑P	**P**	**11 46 53.4**	**-1.1**
TETR	**Tetrakomo, Epi**	**38.61**	**290**	P	**P**	**11 46 54.5**	**-0.2**
OJC	**Ojcow**	**38.63**	**307**	*e*P	**P**	**11 46 55.1**	**+0.5**
OJC				*e*S	**S**	**11 52 34.9**	**0.0**
OJC				*e*SS	**SS**	**11 55 30.0**	**-4.1**
OJC	**Ojcow**	**38.63**	**307**	P	**P**	**11 46 55.4**	**+0.7**
OJC	**Ojcow**	**38.63**	**307**	⇑P	**P**	**11 46 54.7**	**+0.1**
OJC	**Ojcow**	**38.63**	**307**	P	**P**	**11 46 53.8**	**-0.9**
	comp=Z,8µmcomp=Z,486nm,1.1s						
OHR	**Ohrid**	**38.64**	**293**	*i* P	**P**	**11 46 55.1**	**+0.2**
PRMD	**Pramanda**	**38.71**	**290**	P	**P**	**11 46 55.2**	**-0.2**
KBN	**Korca**	**38.73**	**292**	P	**P**	**11 46 54.9**	**-0.8**
RLS	**Riolos of Patr**	**38.74**	**288**	P	**P**	**11 46 54.4**	**-1.3**
AMPL	**Ampelaki**	**38.74**	**289**	P	**P**	**11 46 54.6**	**-1.1**
AXS	**Araxos**	**38.78**	**288**	P	**P**	**11 46 54.9**	**-1.1**
PYL	**PYLOS**	**38.80**	**286**	P	**P**	**11 46 54.6**	**-1.6**
OUL	**Oulu**	**38.83**	**332**	P	**P**	**11 46 56.4**	**+0.4**
OUL				pmax	pmax		
	comp=Z,3µm,1.0s						
JAN	**Janina**	**38.87**	**290**	P	**P**	**11 46 57.0**	**+0.3**
PVY	**Plav**	**39.02**	**295**	⇑*i*P	**P**	**11 46 58.7**	**+0.6**
IVA	**Berane**	**39.03**	**295**	⇑*i*P	**P**	**11 46 59.4**	**+1.3**
RAF	**Rauma**	**39.15**	**325**	*e*P	**P**	**11 46 59.3**	**+0.6**
GZH	**Guangzhou**	**39.15**	**98**	P	**P**	**11 47 00.5**	**+1.3**
GZH				pP	**pP**	**11 47 43.3**	**-1.1**
GZH				sP	**sP**	**11 48 10.3**	**+1.5**
GZH				S	**S**	**11 52 42.9**	**-0.3**
GZH				pmax	pmax		
	comp=Z,1µm,0.8s						
NYDR	**Nydri-Lefkada**	**39.18**	**289**	P	**P**	**11 46 58.8**	**-0.4**
TSLK	**Tsoukalades, L**	**39.19**	**289**	P	**P**	**11 46 58.7**	**-0.7**
BUD	**Budapest**	**39.20**	**303**	P	**P**	**11 47 00.1**	**+0.8**
LKD2	**Lefkada island**	**39.20**	**289**	P	**P**	**11 46 58.7**	**-0.8**
EVGI	**Lefkada island**	**39.23**	**289**	P	**P**	**11 46 58.3**	**-1.5**
RTZL	**Ratzakli, Kefa**	**39.27**	**288**	P	**P**	**11 46 58.3**	**-1.8**
DRAG	**Dragano-Lefkad**	**39.28**	**289**	P	**P**	**11 46 59.6**	**-0.6**
IGT	**Igoumenitsa**	**39.28**	**290**	P	**P**	**11 46 58.7**	**-1.5**
LTHK	**Lithakia**	**39.30**	**287**	P	**P**	**11 46 58.3**	**-2.0**
KOME	**Kolasin**	**39.31**	**295**	⇑*i*P	**P**	**11 47 01.2**	**+0.8**
RUDO	**Rudo**	**39.31**	**297**	*e*P	**P**	**11 47 00.8**	**+0.5**
PLE	**Pljevlja**	**39.33**	**296**	⇑*i*P	**P**	**11 47 02.2**	**+1.5**
FSK	**Fiskardo**	**39.34**	**288**	P	**P**	**11 46 59.3**	**-1.4**
VAF	**Ylistaro**	**39.36**	**328**	*e*P	**P**	**11 47 01.6**	**+1.2**
ORTH	**Orthonies,Zaky**	**39.38**	**287**	P	**P**	**11 47 00.7**	**-0.3**
VLS	**Valsamata**	**39.38**	**288**	P	**P**	**11 46 59.8**	**-1.3**
LHMI	**Lhok Sumawe**	**39.41**	**136**	P	**P**	**11 47 01.4**	**0.0**
LHMI				IAmb	IAmb	11 47 04.3	
	comp=Z,1µm,1.4s						
LHMI	**Lhok Sumawe**	**39.41**	**136**	P	**P**	**11 47 02.9**	**+1.5**
LHMI	**Lhok Sumawe**	**39.41**	**136**	P	**P**	**11 47 02.0**	**+0.6**
	comp=Z,6µmcomp=Z,8µmcomp=Z,779nm,0.9s						
LHMI	**Lhok Sumawe**	**39.41**	**136**	⇓P	**P**	**11 47 02.0**	**+0.6**
MORH	**Mrgy, Hungar**	**39.54**	**301**	*e*P	**P**	**11 47 03.0**	**+0.8**
MORH	**Mrgy, Hungar**	**39.54**	**301**	⇑P	**P**	**11 47 03.2**	**+1.0**
MORH	**Mrgy, Hungar**	**39.54**	**301**	P	**P**	**11 47 01.4**	**-0.8**
	comp=Z,4µmcomp=Z,189nm,1.5s						
PDG	**Podgorica**	**39.56**	**295**	P	**P**	**11 47 01.9**	**-0.4**
PDG	**Podgorica**	**39.56**	**295**	⇑P	**P**	**11 47 02.7**	**+0.3**
PDG	**Podgorica**	**39.56**	**295**	⇑P	**P**	**11 47 02.3**	**-0.1**
PDG	**Podgorica**	**39.56**	**295**	⇑*i*P	**P**	**11 47 02.6**	**+0.2**
ULC	**Ulcinj**	**39.64**	**294**	⇑*i*P	**P**	**11 47 04.7**	**+1.6**
KEK	**Kerkira**	**39.65**	**291**	P	**P**	**11 47 02.7**	**-0.5**
DRME	**Dracevica, Mon**	**39.65**	**295**	⇑*i*P	**P**	**11 47 03.3**	**+0.1**
SRO	**Srobarova**	**39.66**	**303**	*e*P	**P**	**11 47 05.0**	**+1.9**
SRO				pmax	pmax		
	comp=Z,767nm,1.1s						
SRO	**Srobarova**	**39.66**	**303**	*e*P	**P**	**11 47 05.0**	**+1.9**
SGF	**Sodankyl**	**39.68**	**335**	P	**P**	**11 47 04.1**	**+1.1**
SGF				pmax	pmax		
	comp=Z,2µm,1.3s						
OKC	**Ostrava-Krasne**	**39.70**	**307**	*e*P	**P**	**11 47 04.9**	**+1.5**
OKC				*e*		11 48 13.4	
OKC				*e*S	**S**	**11 52 52.0**	**+1.2**
OKC	**Ostrava-Krasne**	**39.70**	**307**	*e*P	**P**	**11 47 04.9**	**+1.5**
OKC				*e*sP	**sP**	**11 48 13.4**	**+1.4**
OKC				*e*S	**S**	**11 52 52.0**	**+1.2**
UPM	**Unac-Piva**	**39.70**	**296**	⇑*i*P	**P**	**11 47 04.8**	**+1.0**
NKME	**Niksic**	**39.73**	**295**	⇑*i*P	**P**	**11 47 04.2**	**+0.3**
AAL	**Aland**	**39.77**	**323**	*e*P	**P**	**11 47 04.5**	**+0.6**
CEME	**Cevo**	**39.79**	**295**	⇑*i*P	**P**	**11 47 04.6**	**+0.2**
NJ2	**Nanjing**	**39.83**	**82**	⇓*i*P	**P**	**11 47 06.3**	**+1.6**
NJ2				sP	**sP**	**11 48 15.6**	**+0.4**
NJ2				PP	**PP**	**11 48 45.8**	**+5.0**
NJ2				ScP	**ScP**	**11 52 33.0**	**-2.0**
NJ2				S	**S**	**11 52 54.0**	**+0.9**
NJ2				ScS	**ScS**	**11 56 45.1**	**-3.5**
NJ2				pmax	pmax		
	comp=Z,370nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,2µm,4.2s						
BUM	**Brajici-Budva**	**39.84**	**295**	⇑*i*P	**P**	**11 47 05.1**	**+0.2**
MLSI	**Meulaboh, Aceh**	**39.90**	**137**	P	**P**	**11 47 04.7**	**-0.8**
	comp=Z,8µmcomp=Z,1µm,0.9s						
MAUC	**Maruska**	**39.92**	**306**	*e*P	**P**	**11 47 06.9**	**+1.6**
MAUC				*e*x	x	11 48 15.1	
KOVH	**Kovagotottos**	**39.93**	**301**	⇑P	**P**	**11 47 04.7**	**-0.7**
KLINJ	**Klinje**	**39.94**	**296**	*e*P	**P**	**11 47 04.5**	**-1.1**
STEB	**Steborice**	**39.94**	**307**	*e*P	**P**	**11 47 06.6**	**+1.2**
BRY	**Bratogost**	**40.01**	**296**	⇑*i*P	**P**	**11 47 06.7**	**+0.4**
JAVC	**Velka Javorina**	**40.04**	**305**	⇑*i*P	**P**	**11 47 07.9**	**+1.6**
JAVC				*e*pP	**pP**	**11 47 52.9**	**+2.1**
JAVC				*e*sP	**sP**	**11 48 17.8**	**+3.0**
JAVC				*e*PKIKP	PKiKP	11 56 00.8	-16
DL2	**Dalian**	**40.05**	**71**	P	**P**	**11 47 08.3**	**+1.8**
DL2				pP	**pP**	**11 47 51.0**	**-1.0**
DL2				S	**S**	**11 52 57.8**	**+1.5**
DL2				pmax	pmax		
	comp=Z,270nm,1.0s						
DL2				pmax	pmax		
	comp=Z,660nm,6.4s						
MORC	**Moravsky Berou**	**40.09**	**306**	⇑P	**P**	**11 47 08.4**	**+1.6**
MORC	**Moravsky Berou**	**40.09**	**306**	⇑*i*P	**P**	**11 47 07.6**	**+0.9**
MORC				*e*pP	**pP**	**11 47 52.7**	**+1.4**
MORC				*e*sP	**sP**	**11 48 16.8**	**+1.5**
MORC				*e*S	**S**	**11 52 55.5**	**-1.2**
MORC				*e*PKIKP	PKiKP	11 55 55.6	-21
MORC	**Moravsky Berou**	**40.09**	**306**	P	**P**	**11 47 08.3**	**+1.6**
MORC	**Moravsky Berou**	**40.09**	**306**	⇑P	**P**	**11 47 07.6**	**+0.9**
HCY	**Herceg Novi**	**40.11**	**295**	⇑*i*P	**P**	**11 47 05.5**	**-1.5**
TREB	**Trebinje**	**40.17**	**295**	*e*P	**P**	**11 47 07.4**	**-0.1**
HKPS	**Hong Kong Po S**	**40.19**	**98**	P	**P**	**11 47 09.3**	**+1.5**
HKPS	**Hong Kong Po S**	**40.19**	**98**	P	**P**	**11 47 09.5**	**+1.7**
HKC	**Hong Kong Obse**	**40.20**	**98**	⇑P	**P**	**11 47 10.0**	**+2.1**
VADS	**Vadso**	**40.21**	**340**	*e*P	**P**	**11 47 08.4**	**+1.1**
VADS				IVmB_BB		11 47 09.3	
	comp=Z,24µm,0.9s						
VADS				*i*		11 48 18.2	
SMOL	**Smolenice**	**40.21**	**305**	*e*P	**P**	**11 47 08.9**	**+1.2**
SMOL				pmax	pmax		
	comp=Z,90nm,1.1s						
MPLH	**Magyarpolny**	**40.22**	**302**	P	**P**	**11 47 07.1**	**-0.7**
	comp=Z,9µmcomp=Z,513nm,1.3s						
MODS	**Modra-Piesok**	**40.32**	**304**	*e*P	**P**	**11 47 10.0**	**+1.4**
MODS				pmax	pmax		
	comp=Z,441nm,1.2s						
MODS	**Modra-Piesok**	**40.32**	**304**	*e*P	**P**	**11 47 10.0**	**+1.4**
MODS				*e*pP	**pP**	**11 47 55.0**	**+1.9**
MODS				*e*sP	**sP**	**11 48 19.1**	**+2.0**
MODS				*e*PP	**PP**	**11 48 48.5**	**+2.6**
GKP	**Gorka Klasztor**	**40.32**	**312**	*e*P	**P**	**11 47 09.1**	**+0.6**
GKP				*e*PP	**PP**	**11 48 47.5**	**+1.7**
GKP				*e*S	**S**	**11 53 00.3**	**+0.4**
GKP				*e*SS	**SS**	**11 56 05.3**	**-2.1**
GKP	**Gorka Klasztor**	**40.32**	**312**	*e*P	**P**	**11 47 09.3**	**+0.8**
GKP	**Gorka Klasztor**	**40.32**	**312**	P	**P**	**11 47 09.5**	**+1.0**
ZST	**Bratislava**	**40.45**	**304**	*e*P	**P**	**11 47 10.8**	**+1.2**
ZST				pmax	pmax		
	comp=Z,554nm,3.2s						
ZST	**Bratislava**	**40.45**	**304**	*e*P	**P**	**11 47 10.8**	**+1.2**
ZST				*e*pP	**pP**	**11 47 55.0**	**+0.9**
ZST				*e*sP	**sP**	**11 48 20.0**	**+1.8**
ZST				*e*PP	**PP**	**11 48 49.7**	**+2.5**
KRLC	**Kraliky**	**40.58**	**307**	*e*P	**P**	**11 47 12.4**	**+1.7**
KRLC	**Kraliky**	**40.58**	**307**	*e*P	**P**	**11 47 12.4**	**+1.7**
KEV	**Kevo**	**40.69**	**338**	P	**P**	**11 47 11.8**	**+0.5**
KEV	**Kevo**	**40.69**	**338**	P	**P**	**11 47 11.8**	**+0.5**
KEV				pmax	pmax		
	comp=Z,2µm,0.8s						
KEV	**Kevo**	**40.69**	**338**	⇑P	**P**	**11 47 12.0**	**+0.8**
KEV	**Kevo**	**40.69**	**338**	P	**P**	**11 47 12.0**	**+0.8**
KEV	**Kevo**	**40.69**	**338**	P	**P**	**11 47 12.2**	**+0.9**
BLY	**Banja Luka**	**40.72**	**299**	*e*P	**P**	**11 47 12.4**	**+0.5**
BLY	**Banja Luka**	**40.72**	**299**	⇑P	**P**	**11 47 12.6**	**+0.8**
BLY	**Banja Luka**	**40.72**	**299**	⇑P	**P**	**11 47 12.7**	**+0.8**
VRAC	**Vranov**	**40.73**	**306**	P	**P**	**11 47 13.2**	**+1.3**
	comp=Z,327nm,1.0s,baz=92,slow=8.8,SNR=214						
	comp=Z,327nm,1.0s						
VRAC	**Vranov**	**40.73**	**306**	⇑P	**P**	**11 47 13.2**	**+1.3**
VRAC	**Vranov**	**40.73**	**306**	⇑*i*P	**P**	**11 47 12.8**	**+0.9**
VRAC				*e*pP	**pP**	**11 47 58.1**	**+1.6**
VRAC				*e*sP	**sP**	**11 48 22.3**	**+1.8**
VRAC				*e*S	**S**	**11 53 07.6**	**+1.5**
VRAC				*e*PKIKP	**PKiKP**	**11 56 12.6**	**-4.6**
BEHE	**Becsehely**	**40.81**	**301**	*e*P	**P**	**11 47 13.3**	**+0.7**
SOP	**Sopron**	**40.85**	**303**	⇑P	**P**	**11 47 13.8**	**+0.9**
DPC	**Dobruska-Polom**	**40.86**	**307**	*e*P	**P**	**11 47 14.6**	**+1.6**
DPC	**Dobruska-Polom**	**40.86**	**307**	*e*P	**P**	**11 47 14.6**	**+1.6**
DPC	**Dobruska-Polom**	**40.86**	**307**	P	**P**	**11 47 12.3**	**-0.7**
	comp=Z,6µmcomp=Z,412nm,1.2s						
KRUC	**Moravsky**	**40.87**	**305**	⇑*i*P	**P**	**11 47 13.8**	**+0.8**
KRUC				*e*pP	**pP**	**11 47 59.2**	**+1.5**
KRUC				*e*sP	**sP**	**11 48 23.3**	**+1.6**
KRUC				*e*S	**S**	**11 53 09.4**	**+1.3**
KRUC				*e*PKIKP	**PKiKP**	**11 56 18.3**	**+1.0**
KSP	**Ksiaz**	**40.87**	**308**	*e*P	**P**	**11 47 14.0**	**+0.9**
KSP				*e*S	**S**	**11 53 08.5**	**+0.4**
KSP				*e*SS	**SS**	**11 56 13.9**	**-4.3**
KSP	**Ksiaz**	**40.87**	**308**	⇑P	**P**	**11 47 13.9**	**+0.9**
KSP	**Ksiaz**	**40.87**	**308**	⇑P	**P**	**11 47 13.8**	**+0.7**
KSP	**Ksiaz**	**40.87**	**308**	P	**P**	**11 47 12.4**	**-0.6**
	comp=Z,4µmcomp=Z,219nm,1.7s						
SNY	**Shenyang**	**40.92**	**66**	⇓P	**P**	**11 47 14.3**	**+0.8**
SNY				pP	**pP**	**11 47 56.6**	**-2.8**
SNY				S	**S**	**11 53 07.8**	**-1.2**
SNY				pmax	pmax		
	comp=Z,210nm,0.6s						
SNY				pmax	pmax		
	comp=Z,550nm,3.5s						
SNY				LR	LR		
	comp=Z,2µm,13.1s						
SNY				LR	LR		
	comp=Z,4µm,12.6s						
SNY				LR	LR		
	comp=Z,4µm,16.7s						
OSTC	**Ostas**	**40.93**	**308**	*e*P	**P**	**11 47 15.2**	**+1.7**
OSTC	**Ostas**	**40.93**	**308**	*e*P	**P**	**11 47 15.2**	**+1.7**
RONA	**Rosalia, Austr**	**41.02**	**303**	*i* P	**P**	**11 47 15.1**	**+0.7**
	comp=Z,31nm,0.6s,SNR=74						
RONA				*e*sP	**sP**	**11 48 24.4**	**+1.3**
	comp=Z,3µm,3.4s						
RONA				*e*ScP	**ScP**	**11 52 37.5**	**-1.9**
	comp=Z,53nm,1.3s						
RONA				S	**S**	**11 53 11.1**	**+0.5**
	comp=Z,886nm,5.1s						
CHVC	**Chvalec**	**41.03**	**308**	*e*P	**P**	**11 47 15.7**	**+1.3**
CHVC				*e*		11 48 24.9	
CHVC	**Chvalec**	**41.03**	**308**	*e*P	**P**	**11 47 15.7**	**+1.3**
CHVC				*e*x	x	11 48 24.9	
ARA0	**ARCESS Array S**	**41.03**	**338**	*e*P	**P**	**11 47 15.2**	**+1.1**
ARCES	**ARCESS Array B**	**41.03**	**338**	P	**P**	**11 47 15.1**	**+1.0**
	comp=Z,2µm,0.7s,baz=115,slow=8.2,SNR=1762						
ARCES				PP	**PP**	**11 48 53.6**	**+0.4**
	comp=Z,433nm,0.9s,baz=121,slow=9.6,SNR=6.3						
ARCES				ScP	**ScP**	**11 52 37.9**	**-1.2**
	comp=Z,86nm,1.0s,baz=142,slow=6.0,SNR=3.7						
	comp=Z,2µm,0.7s						
ARCES	**ARCESS Array B**	**41.03**	**338**	P	**P**	**11 47 14.9**	**+0.8**
UPC	**Upice**	**41.06**	**308**	*e*P	**P**	**11 47 16.0**	**+1.4**
UPC				*e*S	**S**	**11 53 11.8**	**+0.9**
UPC	**Upice**	**41.06**	**308**	*e*P	**P**	**11 47 16.0**	**+1.4**
UPC				*e*S	**S**	**11 53 11.8**	**+0.9**
TPTI		**41.16**	**137**	P	**P**	**11 47 14.9**	**-0.9**
	comp=Z,8µmcomp=Z,598nm,1.1s						
KOGS	**Kog**	**41.17**	**301**	*i* P	**P**	**11 47 16.1**	**+0.6**
KCSI	**Kotacane, Aceh**	**41.27**	**136**	P	**P**	**11 47 14.9**	**-1.8**
	comp=Z,231nm,0.5s						
CONA	**Conrad Observa**	**41.30**	**304**	*i* P	**P**	**11 47 17.6**	**+1.0**
	comp=Z,886nm,1.2s,SNR=212						
CONA				*e*sP	**sP**	**11 48 26.8**	**+1.5**
	comp=Z,3µm,3.7s						
CONA				S	**S**	**11 53 13.4**	**-1.3**
	comp=Z,2µm,5.6s						
SNSI	**Sinabang, Aceh**	**41.42**	**139**	P	**P**	**11 47 18.2**	**+0.4**
PTJ	**Puntijarka**	**41.43**	**301**	P	**P**	**11 47 18.5**	**+0.8**
TREC	**Trest**	**41.45**	**306**	*e*P	**P**	**11 47 19.3**	**+1.5**
TREC	**Trest**	**41.45**	**306**	*e*P	**P**	**11 47 19.3**	**+1.5**
KTK1	**Kautokeino**	**41.49**	**336**	*e*P	**P**	**11 47 18.5**	**+0.6**
KTK1				IVmB_BB		11 47 19.5	
	comp=Z,11µm,0.8s						
KTK1				*i*		11 53 18.5	
KULM	**Kulim**	**41.53**	**131**	P	**P**	**11 47 20.0**	**+1.2**
KULM				IAmb	IAmb	11 47 21.4	
	comp=Z,702nm,1.0s						
KULM	**Kulim**	**41.53**	**131**	P	**P**	**11 47 19.9**	**+1.2**
KULM	**Kulim**	**41.53**	**131**	P	**P**	**11 47 18.9**	**+0.1**
	comp=Z,5µmcomp=Z,9µmcomp=Z,779nm,1.2s						
KULM	**Kulim**	**41.53**	**131**	⇓P	**P**	**11 47 19.9**	**+1.2**
ARSA	**Arzberg**	**41.59**	**303**	*i* P	**P**	**11 47 19.5**	**+0.6**
	comp=Z,92nm,1.2s,SNR=65						
ARSA				*e*sP	**sP**	**11 48 29.1**	**+1.4**
	comp=Z,3µm,4.0s						
ARSA				*e*ScP	**ScP**	**11 52 40.1**	**-1.6**
	comp=Z,85nm,1.9s						
ARSA				*e*S	**S**	**11 53 18.3**	**-0.6**
	comp=Z,0.1nm,7.1s						
TSI	**Tuntungan**	**41.74**	**135**	P	**P**	**11 47 19.4**	**-1.1**
	comp=Z,6µmcomp=Z,652nm,1.0s						
MATE	**Matera**	**41.77**	**293**	⇑P	**P**	**11 47 21.4**	**+0.9**
MATE	**Matera**	**41.77**	**293**	*e*P	**P**	**11 47 20.6**	**+0.1**
MATE	**Matera**	**41.77**	**293**	⇑P	**P**	**11 47 20.6**	**+0.1**
BSD	**Bornholm Skovb**	**41.77**	**315**	*e*P	**P**	**11 47 19.9**	**-0.3**
BSD	**Bornholm Skovb**	**41.77**	**315**	⇑P	**P**	**11 47 19.6**	**-0.7**
BSD	**Bornholm Skovb**	**41.77**	**315**	⇑P	**P**	**11 47 19.6**	**-0.7**
CN2	**Changchun**	**41.93**	**62**	P	**P**	**11 47 23.3**	**+1.6**
CN2				sP	sP	11 48 30.1	-2.1
CN2				PP	**PP**	**11 49 06.3**	**+3.1**
CN2				PcP	**PcP**	**11 49 13.8**	**+0.8**
CN2				ScP	**ScP**	**11 52 40.0**	**-3.1**
CN2				S	**S**	**11 53 23.9**	**0.0**
CN2				SS	**SS**	**11 56 32.0**	**-7.1**
CN2				ScS	**ScS**	**11 56 57.5**	**-3.5**
CN2				pmax	pmax		
	comp=Z,60nm,1.0s						
CN2				pmax	pmax		
	comp=Z,800nm,4.0s						
BOJS	**Bojanci**	**41.98**	**300**	*i* P	**P**	**11 47 22.9**	**+0.9**
BOJS				*i* pP	**pP**	**11 48 08.4**	**+1.5**
BOJS				*e*sP	**sP**	**11 48 32.5**	**+1.7**
PVCC	**Panska Ves**	**41.98**	**308**	P	**P**	**11 47 23.3**	**+1.3**
PVCC	**Panska Ves**	**41.98**	**308**	*e*P	**P**	**11 47 23.7**	**+1.7**
SOKA	**Soboth**	**41.98**	**302**	*i* P	**P**	**11 47 22.9**	**+0.7**
	comp=Z,127nm,0.6s,SNR=198						
SOKA				*e*sP	**sP**	**11 48 32.6**	**+1.6**
	comp=Z,4µm,3.8s						
SOKA				*e*ScP	**ScP**	**11 52 43.3**	**-0.1**
	comp=Z,52nm,1.1s						
SOKA				*e*S	**S**	**11 53 22.2**	**-2.5**
	comp=Z,0.1nm,9.0s						
PRU	**Pruhonice**	**42.02**	**307**	*e*P	**P**	**11 47 23.9**	**+1.5**
PRU				*e*		11 48 33.0	
PRU	**Pruhonice**	**42.02**	**307**	*e*P	**P**	**11 47 23.9**	**+1.5**
PRU				*e*sP	**sP**	**11 48 33.0**	**+1.8**
PRU				*e*S	**S**	**11 53 28.5**	**+3.4**
SSE	**Sheshan**	**42.03**	**82**	P	**P**	**11 47 24.3**	**+1.6**
SSE				PP	**PP**	**11 49 06.5**	**+2.1**
SSE				S	**S**	**11 53 24.1**	**-1.5**
SSE				ScS	**ScS**	**11 57 04.3**	**+2.3**
SSE				pmax	pmax		
	comp=Z,300nm,0.8s						
SSE				pmax	pmax		
	comp=Z,440nm,3.8s						
MRVN	**Minervino Murg**	**42.06**	**293**	⇑P	**P**	**11 47 22.8**	**-0.1**
TIP	**Timpagrande**	**42.06**	**291**	⇑P	**P**	**11 47 23.5**	**+0.5**
TIP	**Timpagrande**	**42.06**	**291**	⇑P	**P**	**11 47 23.1**	**+0.1**
TIP	**Timpagrande**	**42.06**	**291**	P	**P**	**11 47 22.2**	**-0.8**
	comp=Z,3µmcomp=Z,183nm,1.4s						
PRA	**Prague**	**42.09**	**307**	*e*P	**P**	**11 47 24.9**	**+2.0**
PRA				*e*S	**S**	**11 53 27.0**	**+1.0**
PRA	**Prague**	**42.09**	**307**	*e*P	**P**	**11 47 24.9**	**+2.0**
PRA				*e*S	**S**	**11 53 27.0**	**+1.0**
HAMF	**Hammerfest**	**42.12**	**339**	*e*P	**P**	**11 47 24.2**	**+1.4**
HAMF				IVmB_BB		11 47 25.3	
	comp=Z,40µm,0.8s						
HAMF				*i*		11 48 33.9	
HAMF				*i*		11 53 28.5	
SGRT	**San Giovanni R**	**42.25**	**295**	P	**P**	**11 47 24.6**	**+0.1**
SGRT				IAmb	IAmb	11 47 26.5	
	comp=Z,724nm,1.4s						
CKRC	**Cesky Krumlov**	**42.26**	**305**	*e*P	**P**	**11 47 25.7**	**+1.4**
CKRC				*e*S	**S**	**11 53 30.6**	**+2.0**
CKRC	**Cesky Krumlov**	**42.26**	**305**	*e*P	**P**	**11 47 25.7**	**+1.4**
CKRC				*e*S	**S**	**11 53 30.6**	**+2.0**
RICC	**Richard**	**42.28**	**308**	*e*P	**P**	**11 47 26.2**	**+1.8**
RICC				*e*x	x	11 48 35.6	
ZVC	**Zvikov**	**42.28**	**306**	*e*P	**P**	**11 47 26.0**	**+1.5**
ZVC				*e*sP	**sP**	**11 48 35.7**	**+2.4**
ACER	**Acerenza**	**42.31**	**293**	IAmb	IAmb	11 47 27.0	
	comp=Z,628nm,1.5s						
OBKA	**Obir**	**42.33**	**302**	*i* P	**P**	**11 47 25.8**	**+0.8**
	comp=Z,0.1nm,3.4s,SNR=51						
OBKA				*e*sP	**sP**	**11 48 35.0**	**+1.2**
	comp=Z,5µm,3.8s						
OBKA				*e*ScP	**ScP**	**11 52 44.9**	**+0.1**
	comp=Z,48nm,1.1s						
OBKA				*e*S	**S**	**11 53 29.7**	**-0.2**
	comp=Z,0.1nm,7.2s						
ZEA	**Zeya**	**42.34**	**47**	*e*P	**P**	**11 47 27.3**	**+2.4**
ZEA				*e*		11 48 16.0	
ZEA				*e**SP	**sP**	**11 48 35.4**	**0.0**
ZEA				*e*		11 49 19.7	
ZEA				*e*S	**S**	**11 53 33.7**	**+4.0**
ZEA				pmax	pmax		
	comp=E,700nm,4.5s						
ZEA				pmax	pmax		
	comp=N,300nm,2.4s						
ZEA				pmax	pmax		
	comp=Z,2µm,4.6s						
ZEA				pmax	pmax		
	comp=N,180nm,0.7s						
ZEA				pmax	pmax		
	comp=E,210nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,640nm,0.7s						
ZEA				smax	smax		
	comp=E,2µm,7.7s						
ZEA				smax	smax		
	comp=N,4µm,7.1s						
BRG	**Berggiesshubel**	**42.36**	**308**	*e*P	**P**	**11 47 26.2**	**+1.1**
	comp=N,470nm,1.1s,baz=86,slow=7.9						
BRG				*e*sP	**sP**	**11 48 34.9**	**+0.7**
MOA	**Molln**	**42.37**	**304**	*i* P	**P**	**11 47 25.8**	**+0.5**
	comp=N,619nm,1.1s,SNR=164						
MOA				*e*sP	**sP**	**11 48 35.8**	**+1.6**
	comp=N,2µm,3.5s						
MOA				S	**S**	**11 53 30.5**	**+0.2**
	comp=N,0.1nm,7.4s						
IPM	**Ipoh**	**42.39**	**131**	P	**P**	**11 47 26.3**	**+0.5**
IPM	**Ipoh**	**42.39**	**131**	P	**P**	**11 47 26.6**	**+0.8**
IPM	**Ipoh**	**42.39**	**131**	P	**P**	**11 47 26.0**	**+0.2**
	comp=N,7µmcomp=N,18µmcomp=N,2µm,1.0s						
LJU	**Ljubljana**	**42.41**	**301**	*i* P	**P**	**11 47 26.6**	**+1.1**
LJU				*i* pP	**pP**	**11 48 12.3**	**+1.8**
LJU				*i* sP	**sP**	**11 48 35.5**	**+1.2**
LJU				*e*S	**S**	**11 53 29.2**	**-1.7**
LJU				*i* SS	**SS**	**11 56 48.5**	**+0.1**
RUE	**Ruedersdorf**	**42.41**	**311**	*e*P	**P**	**11 47 26.1**	**+0.7**
RUE	**Ruedersdorf**	**42.41**	**311**	⇑P	**P**	**11 47 26.1**	**+0.7**
RUE	**Ruedersdorf**	**42.41**	**311**	*e*P	**P**	**11 47 26.0**	**+0.7**
	comp=N,416nm,0.9s,baz=86,slow=7.9						
RUE				*e*pP	**pP**	**11 48 11.3**	**+0.8**
RUE				*e*sP	**sP**	**11 48 35.1**	**+0.7**
QZH	**Quanzhou**	**42.48**	**92**	⇓*i*P	**P**	**11 47 27.1**	**+0.7**
QZH				sP	**sP**	**11 48 36.3**	**-0.5**
QZH				PcP	**PcP**	**11 49 15.1**	**0.0**
QZH				ScP	**ScP**	**11 52 43.3**	**-2.3**
QZH				S	**S**	**11 53 34.0**	**+1.7**
QZH				ScS	**ScS**	**11 57 05.4**	**+0.5**
QZH				pmax	pmax		
	comp=N,280nm,0.9s						
QZH				LR	LR		
	comp=N,4µm,14.1s						
QZH				LR	LR		
	comp=N,3µm,12.0s						
QZH				LR	LR		
	comp=N,5µm,16.0s						
PSI	**Prapat**	**42.51**	**135**	P	**P**	**11 47 26.8**	**-0.1**
	comp=N,4µmcomp=N,461nm,1.0s						
CEY	**Cerknica**	**42.52**	**301**	*e*P	**P**	**11 47 27.3**	**+0.9**
KNMB	**Chin-men Tao**	**42.53**	**93**	P	**P**	**11 47 27.4**	**+0.6**
KNMB				IAmb	IAmb	11 47 29.3	
	comp=Z,371nm,0.9s						
HEH	**HeiHe**	**42.54**	**53**	⇑P	**P**	**11 47 28.0**	**+1.4**
HEH				pP	**pP**	**11 48 16.1**	**+3.5**
HEH				sP	**sP**	**11 48 37.0**	**0.0**
HEH				ScP	**ScP**	**11 52 44.1**	**-1.3**
HEH				S	**S**	**11 53 34.5**	**+1.9**
HEH				pmax	pmax		
	comp=Z,2µm,0.7s						
CUC	**Castrocucco**	**42.58**	**292**	P	**P**	**11 47 27.7**	**+0.6**
CUC				IAmb	IAmb	11 47 29.9	
	comp=Z,448nm,0.9s						
CUC	**Castrocucco**	**42.58**	**292**	⇑P	**P**	**11 47 28.1**	**+1.0**
JETT	**Jettan, Norway**	**42.64**	**337**	⇑*i*P	**P**	**11 47 28.2**	**+1.1**
JETT				IVmB_BB		11 47 29.1	
	comp=Z,21µm,1.0s						
GEC2	**GERESS Array S**	**42.65**	**305**	*e*P	**P**	**11 47 28.5**	**+0.8**
	comp=Z,147nm,1.1s,baz=86,slow=7.9						
GEC2				*e*pP	**pP**	**11 48 13.4**	**+0.8**
GEC2				*e*sP	**sP**	**11 48 36.5**	**0.0**
GERES	**GERESS Array B**	**42.65**	**305**	P	**P**	**11 47 28.5**	**+0.8**
	comp=Z,90nm,1.1s,baz=86,slow=7.0,SNR=190						
GERES				pP	**pP**	**11 48 15.3**	**+2.7**
	comp=Z,16nm,0.7s,baz=76,slow=6.1,SNR=2.0						
GERES				PP	**PP**	**11 49 09.3**	**-1.6**
	comp=Z,44nm,0.9s,baz=64,slow=7.6,SNR=5.8						
GERES				ScP	**ScP**	**11 52 44.4**	**-1.6**
	comp=Z,30nm,1.0s,baz=88,slow=4.5,SNR=5.3						
	comp=Z,90nm,1.1s						
RGN	**Rugen**	**42.68**	**314**	⇑P	**P**	**11 47 28.8**	**+1.2**
RGN	**Rugen**	**42.68**	**314**	*e*P	**P**	**11 47 28.9**	**+1.4**
	comp=Z,2µm,1.1s,baz=86,slow=7.9						
RGN				*e*pP	**pP**	**11 48 13.9**	**+1.3**
RGN				*e*sP	**sP**	**11 48 38.2**	**+1.6**
HSKC	**Hora Svate Kat**	**42.70**	**308**	*e*P	**P**	**11 47 29.2**	**+1.3**
HSKC				*e*x	x	11 48 38.0	

KHC	**Kasperske Hory**	**42.71**	**306**	P	**P**	**11 47 28.1**	**+0.1**
KHC	**Kasperske Hory**	**42.71**	**306**	c *i*P	**P**	**11 47 28.5**	**+0.5**
KHC				pmax	pmax		
	comp=Z,157nm,1.1s						
KHC	**Kasperske Hory**	**42.71**	**306**	*e*P	**P**	**11 47 29.1**	**+1.1**
KHC				*e*sP	**sP**	**11 48 38.1**	**+1.2**
KHC				*e*PP	**PP**	**11 49 10.0**	**-1.5**
KHC				*e*S	**S**	**11 53 37.0**	**+1.8**
KHC				*e*XS	**sS**	**11 54 56.8**	**+0.3**
KHC	**Kasperske Hory**	**42.71**	**306**	⇑P	**P**	**11 47 28.3**	**+0.3**
KHC	**Kasperske Hory**	**42.71**	**306**	P	**P**	**11 47 27.3**	**-0.7**
	comp=Z,4µmcomp=Z,166nm,1.7s						
BIOA	**Bad Ischl, Aus**	**42.81**	**304**	*e*P	**P**	**11 47 28.9**	**+0.1**
	comp=Z,19nm,0.4s,SNR=67						
BIOA				*e*sP	**sP**	**11 48 39.0**	**+1.3**
	comp=Z,2µm,3.7s						
BIOA				S	**S**	**11 53 35.9**	**-0.9**
	comp=Z,0.1nm,6.9s						
HFS	**Hagfors**	**42.87**	**322**	P	**P**	**11 47 29.5**	**+0.5**
	comp=Z,701nm,0.8s,baz=95,slow=9.2,SNR=501						
HFS				pP	**pP**	**11 48 17.4**	**+3.3**
	comp=Z,148nm,0.7s,baz=88,slow=9.2,SNR=2.5						
HFS				PP	**PP**	**11 49 11.6**	**-1.2**
	comp=Z,406nm,0.9s,baz=97,slow=12,SNR=7.3						
	comp=Z,701nm,0.8s						
CLL	**Collm**	**42.93**	**309**	⇑*i*P	**P**	**11 47 30.1**	**+0.4**
CLL				*i* *PP	**pP**	**11 48 16.3**	**+1.4**
CLL				*e*S	**S**	**11 53 35.0**	**-3.3**
CLL				pmax	pmax		
	comp=Z,276nm,1.0s						
CLL	**Collm**	**42.93**	**309**	*e*P	**P**	**11 47 30.3**	**+0.7**
	comp=Z,217nm,1.0s,baz=86,slow=7.9						
CLL				*e*pP	**pP**	**11 48 15.1**	**+0.2**
CLL				*e*sP	**sP**	**11 48 38.4**	**-0.4**
CLL	**Collm**	**42.93**	**309**	P	**P**	**11 47 29.0**	**-0.7**
	comp=Z,6µmcomp=Z,319nm,1.5s						
CLL	**Collm**	**42.93**	**309**	⇑*i*P	**P**	**11 47 30.1**	**+0.4**
	comp=Z,276nm,1.0s						
CLL				*e*Plp		11 47 32.0	
CLL				*i* pP	**pP**	**11 48 16.3**	**+1.4**
	comp=Z,238nm,1.2s						
CLL				*i* x	x	11 48 29.7	
CLL				*e*PPlp		11 48 39.0	
CLL				*e*PP	**PP**	**11 49 13.0**	**-0.7**
CLL				*e*PPP	PPP	11 49 51.0	
CLL				*e*S	**S**	**11 53 35.0**	**-3.3**
	comp=N,5µm,12.2s						
CLL				*e*S	**S**	**11 53 35.0**	**-3.3**
	comp=E,3µm,10.9s						
CLL				*e*sS	**sS**	**11 54 59.0**	**-0.6**
CLL				*e*SS	**SS**	**11 56 57.0**	**-1.3**
MYKA	**Terra Mystica**	**42.94**	**302**	*i* P	**P**	**11 47 30.3**	**+0.4**
	comp=E,0.1nm,4.5s,SNR=40						
MYKA				*e*sP	**sP**	**11 48 40.2**	**+1.4**
	comp=E,0.1nm,4.5s						
MYKA				*e*S	**S**	**11 53 37.1**	**-1.5**
	comp=E,0.2nm,8.0s						
BNX	**BinXian**	**43.01**	**59**	⇓P	**P**	**11 47 31.8**	**+1.4**
BNX				pP	**pP**	**11 48 13.0**	**-3.4**
BNX				sP	**sP**	**11 48 38.0**	**-2.7**
BNX				S	**S**	**11 53 39.6**	**0.0**
BNX				pmax	pmax		
	comp=E,140nm,1.5s						
BNX				pmax	pmax		
	comp=E,2µm,3.7s						
GSI	**Gunungsitoli**	**43.01**	**138**	P	**P**	**11 47 32.7**	**+1.9**
GSI	**Gunungsitoli**	**43.01**	**138**	P	**P**	**11 47 32.9**	**+2.2**
GSI	**Gunungsitoli**	**43.01**	**138**	P	**P**	**11 47 32.6**	**+1.9**
	comp=E,8µmcomp=E,18µmcomp=E,2µm,1.0s						
SABO	**M.te Sabotino**	**43.05**	**301**	P	**P**	**11 47 30.6**	**-0.2**
SABO				IAmb	IAmb	11 47 32.9	
	comp=Z,1µm,1.2s						
ROBS	**Robic**	**43.08**	**301**	*e*P	**P**	**11 47 31.2**	**+0.2**
ROBS				*e*S	**S**	**11 53 39.7**	**-1.0**
KBA	**Koelnbreinsper**	**43.08**	**303**	*i* P	**P**	**11 47 31.5**	**+0.3**
	comp=Z,59nm,0.6s,SNR=80						
KBA				*e*sP	**sP**	**11 48 41.1**	**+1.0**
	comp=Z,3µm,3.8s						
KBA				*e*ScP	**ScP**	**11 52 47.0**	**-0.9**
	comp=Z,30nm,1.1s						
KBA				*e*S	**S**	**11 53 39.0**	**-2.0**
	comp=Z,0.1nm,8.0s						
TRO	**Tromso**	**43.15**	**336**	*e*P	**P**	**11 47 31.7**	**+0.6**
TRO				IVmB_BB		11 47 32.7	
	comp=Z,18µm,1.5s						
TRO				*e*		11 48 40.7	
TRO				*e*PP	**PP**	**11 49 14.2**	**-1.4**
TRO				*i*		11 53 42.4	
PTCC	**Patocco-Chiusa**	**43.16**	**302**	⇑P	**P**	**11 47 32.1**	**+0.5**
WET	**Wettzell**	**43.17**	**306**	*e*P	**P**	**11 47 32.6**	**+0.9**
	comp=Z,194nm,1.6s,baz=86,slow=7.9						
WET				*e*pP	**pP**	**11 48 17.9**	**+1.2**
WET				*e*sP	**sP**	**11 48 41.5**	**+0.9**
MSEY	**Mahe Island**	**43.30**	**202**	P	**P**	**11 47 35.3**	**+2.3**
MSEY	**Mahe Island**	**43.30**	**202**	P	**P**	**11 47 34.6**	**+1.5**
MSEY	**Mahe Island**	**43.30**	**202**	*i* P	**P**	**11 47 35.1**	**+2.0**
	SNR=8.1						
MSEY	**Mahe Island**	**43.30**	**202**	P	**P**	**11 47 34.6**	**+1.5**
MSEY				pmax	pmax		
	comp=Z,132nm,1.0s						
MSEY	**Mahe Island**	**43.30**	**202**	⇑P	**P**	**11 47 35.3**	**+2.3**
TANN	**Tannenbergstha**	**43.33**	**308**	*e*P	**P**	**11 47 34.1**	**+1.1**
	comp=Z,214nm,1.1s,baz=86,slow=7.9						
TANN				*e*pP	**pP**	**11 48 19.3**	**+1.2**
TANN				*e*sP	**sP**	**11 48 42.7**	**+0.7**
LESA	**Schwarzleotal**	**43.49**	**303**	*i* P	**P**	**11 47 34.4**	**+0.1**
	comp=Z,14nm,0.3s,SNR=102						
LESA				*e*sP	**sP**	**11 48 44.5**	**+1.2**
	comp=Z,3µm,4.2s						
LESA				*e*S	**S**	**11 53 46.1**	**-0.7**
	comp=Z,0.1nm,6.1s						
PLN	**Plauen**	**43.52**	**308**	*e*P	**P**	**11 47 35.4**	**+1.0**
	comp=Z,67nm,1.0s,baz=86,slow=7.9						
PLN				*e*pP	**pP**	**11 48 19.6**	**0.0**
PLN				*e*sP	**sP**	**11 48 44.3**	**+0.8**
ROTZ	**Rotzenmuhle**	**43.55**	**307**	*e*P	**P**	**11 47 35.8**	**+1.2**
	comp=Z,104nm,1.2s,baz=86,slow=7.9						
ROTZ				*e*pP	**pP**	**11 48 21.7**	**+1.9**
ROTZ				*e*sP	**sP**	**11 48 44.8**	**+1.0**
MANZ	**Manzenberg**	**43.59**	**307**	*e*P	**P**	**11 47 36.5**	**+1.4**
	comp=Z,61nm,1.0s,baz=86,slow=7.9						
MANZ				*e*pP	**pP**	**11 48 21.7**	**+1.4**
MANZ				*e*sP	**sP**	**11 48 45.0**	**+0.9**
STAL	**STALIGIAL**	**43.63**	**302**	IAmb	IAmb	11 47 36.9	
	comp=Z,464nm,1.1s						
FAUS	**Fauske**	**43.66**	**333**	⇑*i*P	**P**	**11 47 35.9**	**+0.7**
FAUS				IVmB_BB		11 47 37.0	
	comp=Z,29µm,1.1s						
FAUS				*i*		11 53 50.1	
FAUS				*e*		11 57 01.1	
MOR8	**Moi Rana**	**43.66**	**331**	⇑*i*P	**P**	**11 47 35.1**	**-0.2**
MOR8				IVmB_BB		11 47 36.2	
	comp=Z,31µm,1.1s						
MOR8				*i*		11 48 46.5	
MOR8				*i*		11 53 45.6	
ABTA	**Abfaltersbach**	**43.69**	**302**	*i* P	**P**	**11 47 35.5**	**-0.4**
	comp=Z,260nm,1.1s,SNR=64						
ABTA				*e*sP	**sP**	**11 48 45.6**	**+0.7**
	comp=Z,1µm,4.4s						
ABTA				*e*ScP	**ScP**	**11 52 49.1**	**-1.2**
	comp=Z,42nm,1.1s						
ABTA				*e*S	**S**	**11 53 48.2**	**-1.5**
	comp=Z,0.1nm,9.3s						
DGAR	**Diego Garcia**	**43.69**	**177**	P	**P**	**11 47 36.8**	**+0.7**
DGAR	**Diego Garcia**	**43.69**	**177**	P	**P**	**11 47 36.8**	**+0.7**
DGAR				pmax	pmax		
	comp=Z,179nm,0.9s						
DGAR	**Diego Garcia**	**43.69**	**177**	⇓P	**P**	**11 47 38.2**	**+2.1**
NEUB	**Neuenburg**	**43.70**	**309**	*e*P	**P**	**11 47 36.7**	**+0.9**
	comp=Z,569nm,1.0s,baz=86,slow=7.9						
NEUB				*e*sP	**sP**	**11 48 46.5**	**+1.4**
CIMO	**Cimolais**	**43.80**	**302**	IAmb	IAmb	11 47 38.5	
	comp=Z,477nm,1.0s						
STEI	**Steigen**	**43.83**	**333**	*e*P	**P**	**11 47 37.1**	**+0.5**
STEI				IVmB_BB		11 47 38.2	
	comp=Z,22µm,1.1s						
STEI				*e*		11 48 21.8	
STEI				*i*		11 48 47.7	
STEI				*i*		11 53 52.7	
AQU	**L'Aquila**	**43.84**	**296**	*e*P	**P**	**11 47 38.0**	**+0.9**
AQU	**L'Aquila**	**43.84**	**296**	P	**P**	**11 47 38.2**	**+1.1**
AQU				pmax	pmax		
	comp=Z,104nm,1.2s						
AQU	**L'Aquila**	**43.84**	**296**	⇑P	**P**	**11 47 37.7**	**+0.6**
AQU	**L'Aquila**	**43.84**	**296**	P	**P**	**11 47 36.4**	**-0.7**
	comp=Z,3µmcomp=Z,104nm,1.2s						
MOX	**Moxa**	**43.85**	**308**	*e*P	**P**	**11 47 38.2**	**+1.1**
	comp=Z,342nm,1.2s,baz=86,slow=7.9						
MOX				*e*pP	**pP**	**11 48 22.6**	**+0.3**
MOX				*e*sP	**sP**	**11 48 47.4**	**+1.2**
RAUS	**Rausandaksla**	**43.88**	**331**	*e*P	**P**	**11 47 38.5**	**+1.4**
RAUS				IVmB_BB		11 47 38.6	
	comp=Z,17µm,1.4s						
RAUS				*e*		11 48 28.2	
RAUS				*i*		11 48 48.3	
RAUS				*i*		11 53 52.7	
RAUS				*e*		11 57 04.1	
GORT1	**Trebel**	**43.89**	**311**	*e*P	**P**	**11 47 38.6**	**+1.4**
	comp=Z,685nm,1.1s,baz=86,slow=7.9						
GORT1				*e*pP	**pP**	**11 48 23.1**	**+0.6**
GORT1				*e*sP	**sP**	**11 48 47.2**	**+0.7**
NC405	**NORSAR Array S**	**43.95**	**323**	P	**P**	**11 47 37.9**	**+0.2**
FLTG	**Flechtingen**	**43.97**	**311**	⇑P	**P**	**11 47 38.0**	**+0.1**
FLTG	**Flechtingen**	**43.97**	**311**	*e*P	**P**	**11 47 38.3**	**+0.4**
	comp=Z,821nm,1.0s,baz=86,slow=7.9						
FLTG				*e*pP	**pP**	**11 48 24.0**	**+0.8**
NC602	**NORSAR Array S**	**43.99**	**323**	IAmb	IAmb	11 47 39.7	
	comp=Z,1µm,1.1s						
NC602	**NORSAR Array S**	**43.99**	**323**	⇑*i*P	**P**	**11 47 37.5**	**-0.5**
NC602				IVmB_BB		11 47 38.9	
	comp=Z,11µm,1.6s						
NORES	**NORESS Array B**	**43.99**	**323**	P	**P**	**11 47 38.0**	**0.0**
LEIR	**Leirfjorden**	**44.17**	**330**	*e*P	**P**	**11 47 39.3**	**0.0**
LEIR				IVmB_BB		11 47 40.9	
	comp=Z,14µm,1.1s						
LEIR				*i*		11 53 54.8	
NB2	**NORSAR Subarra**	**44.18**	**323**	P	**P**	**11 47 39.6**	**0.0**
	comp=Z,2µm,1.2s,baz=97,slow=7.9						
NB2				PP	**PP**	**11 49 24.5**	**-2.4**
	comp=Z,2µm,2.5s,baz=101,slow=10						
NB2	**NORSAR Subarra**	**44.18**	**323**	P	**P**	**11 47 39.6**	**0.0**
	baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.18**	**323**	P	**P**	**11 47 40.1**	**+0.5**
	comp=Z,902nm,0.9s,baz=96,slow=7.8,SNR=978						
NOA				PP	**PP**	**11 49 24.5**	**-2.4**
	comp=Z,225nm,1.0s,baz=93,slow=10,SNR=7.8						
	comp=Z,902nm,0.9s						
YAK	**Yakutsk**	**44.19**	**35**	P	**P**	**11 47 40.2**	**+0.7**
YAK	**Yakutsk**	**44.19**	**35**	c *i*P	**P**	**11 47 40.1**	**+0.6**
YAK				*e**PP	**pP**	**11 48 21.9**	**-3.6**
YAK				*e*		11 49 21.6	
YAK				*e*		11 49 28.1	
YAK				*e*PPP	PPP	11 50 15.0	
YAK				*e*S	**S**	**11 53 56.4**	**+0.2**
YAK				*e**SS	**sS**	**11 55 14.7**	**-3.1**
YAK				*e*		11 57 07.8	
YAK				pmax	pmax		
	comp=Z,3µm,0.9s						
YAK				pmax	pmax		
	comp=N,254nm,0.9s						
YAK				pmax	pmax		
	comp=E,242nm,0.8s						
YAK				pmax	pmax		
	comp=Z,2µm,2.8s						
YAK				pmax	pmax		
	comp=N,419nm,2.2s						
YAK				pmax	pmax		
	comp=E,992nm,2.3s						
YAK				smax	smax		
	comp=N,4µm,1.8s						
YAK				smax	smax		
	comp=E,5µm,2.1s						
YAK	**Yakutsk**	**44.19**	**35**	⇑P	**P**	**11 47 40.1**	**+0.6**
YAK	**Yakutsk**	**44.19**	**35**	P	**P**	**11 47 40.2**	**+0.7**
GRA1	**Grafenberg Arr**	**44.19**	**307**	IAmb	IAmb	11 47 43.1	
	comp=Z,948nm,1.5s						
GRF	**Grafenberg Arr**	**44.19**	**307**	*e*P	**P**	**11 47 41.3**	**+1.6**
	comp=Z,320nm,1.0s,baz=86,slow=7.9						
GRF				*e*pP	**pP**	**11 48 26.4**	**+1.3**
GRF				*e*sP	**sP**	**11 48 50.0**	**+1.0**
WTTA	**Wattenberg**	**44.21**	**303**	*i* P	**P**	**11 47 39.8**	**-0.3**
	comp=Z,392nm,1.0s,SNR=97						
WTTA				*e*sP	**sP**	**11 48 49.5**	**+0.2**
	comp=Z,0.1nm,4.0s						
WTTA				*e*ScP	**ScP**	**11 52 51.7**	**-0.8**
	comp=Z,115nm,1.1s						
WTTA				*e*S	**S**	**11 53 54.3**	**-3.0**
	comp=Z,2µm,4.2s						
INCN	**Inchon**	**44.23**	**71**	P	**P**	**11 47 41.2**	**+0.9**
INCN	**Inchon**	**44.23**	**71**	P	**P**	**11 47 41.2**	**+0.9**
INCN				pmax	pmax		
	comp=Z,142nm,0.9s						
WATA	**Walderalm**	**44.24**	**303**	*i* P	**P**	**11 47 39.8**	**-0.6**
	comp=Z,201nm,0.8s,SNR=83						
WATA				*e*sP	**sP**	**11 48 49.8**	**+0.3**
	comp=Z,3µm,4.7s						
WATA				*e*ScP	**ScP**	**11 52 51.7**	**-0.9**
	comp=Z,86nm,1.1s						
WATA				*e*S	**S**	**11 53 54.2**	**-3.6**
	comp=Z,0.1nm,5.7s						
WATA				*e*pPKiKP	**pPKiKP**	**11 57 13.5**	**-3.0**
	comp=Z,24nm,1.4s						
VAGH	**Vaagaholmen**	**44.25**	**331**	*e*P	**P**	**11 47 41.3**	**+1.3**
VAGH				*i*		11 48 51.4	
VAGH				*i*		11 53 57.7	
KONS	**Konsvik**	**44.26**	**331**	*e*P	**P**	**11 47 41.2**	**+1.2**
KONS				*i*		11 53 58.2	
KONS				*e*		11 57 08.6	
STOK	**Stokkvaagen**	**44.26**	**331**	*e*P	**P**	**11 47 40.4**	**+0.4**
STOK				IVmB_BB		11 47 41.4	
	comp=Z,10µm,1.8s						
STOK				*i*		11 48 50.4	
STOK				*e*PP	**PP**	**11 49 26.7**	**-0.8**
STOK				*i*		11 53 58.1	
MURB	**Monte Urbino**	**44.28**	**297**	IAmb	IAmb	11 47 44.5	
	comp=Z,1µm,1.1s						
NAO01	**NORSAR Array S**	**44.33**	**323**	IAmb	IAmb	11 47 42.8	
	comp=Z,1µm,1.1s						
ASSE	**Asse, Remlinge**	**44.33**	**310**	*e*P	**P**	**11 47 41.2**	**+0.6**
	comp=Z,139nm,1.1s,baz=86,slow=7.9						
ASSE				*e*pP	**pP**	**11 48 27.3**	**+1.3**
ASSE				*e*sP	**sP**	**11 48 50.5**	**+0.6**
NSS	**Namsos**	**44.33**	**328**	*e*P	**P**	**11 47 40.8**	**+0.2**
NSS				IVmB_BB		11 47 41.6	
	comp=Z,7µm,1.3s						
FUR	**Furstenfeldbru**	**44.33**	**305**	*e*P	**P**	**11 47 41.8**	**+0.9**
	comp=Z,719nm,1.3s,baz=86,slow=7.9						
FUR				*e*pP	**pP**	**11 48 27.6**	**+1.4**
FUR				*e*sP	**sP**	**11 48 50.0**	**0.0**
OSL	**Oslo**	**44.33**	**321**	*e*P	**P**	**11 47 41.0**	**+0.3**
OSL				IVmB_BB		11 47 41.7	
	comp=Z,8µm,1.3s						
OSL				*i*		11 53 55.6	
OSL				*e*		11 57 12.9	
CTI	**Castel Tesino**	**44.39**	**301**	P	**P**	**11 47 42.0**	**+0.5**
NBO00	**NORSAR Array S**	**44.40**	**323**	P	**P**	**11 47 40.9**	**-0.4**
NBO00				IAmb	IAmb	11 47 43.4	
	comp=Z,1µm,1.1s						
RAFF	**Raffo Rosso**	**44.40**	**289**	IAmb	IAmb	11 47 44.5	
	comp=Z,976nm,1.0s						
BSEG	**Bad Segeberg**	**44.45**	**313**	*e*P	**P**	**11 47 43.0**	**+1.3**
	comp=Z,301nm,1.0s,baz=86,slow=7.9						
BSEG				*e*pP	**pP**	**11 48 28.8**	**+1.6**
BSEG				*e*sP	**sP**	**11 48 51.2**	**+0.1**
TEOL	**Teolo**	**44.49**	**301**	IAmb	IAmb	11 47 44.1	
	comp=Z,441nm,1.0s						
LOF	**Lofoten**	**44.50**	**333**	*e*P	**P**	**11 47 41.7**	**-0.2**
LOF				IVmB_BB		11 47 42.8	
	comp=Z,12µm,1.5s						
LOF				*i*		11 53 49.5	
SQTA	**Sankt Quirin**	**44.51**	**303**	*i* P	**P**	**11 47 41.7**	**-0.8**
	comp=Z,79nm,0.6s,SNR=80						
SQTA				*e*sP	**sP**	**11 48 52.2**	**+0.7**
	comp=Z,0.1nm,4.3s						
SQTA				*e*ScP	**ScP**	**11 52 53.0**	**-0.7**
	comp=Z,131nm,1.0s						
SQTA				*e*S	**S**	**11 53 58.4**	**-3.1**
	comp=Z,0.1nm,8.7s						
SQTA				*e*pPKiKP	**pPKiKP**	**11 57 14.3**	**-2.5**
	comp=Z,6.3nm,0.7s						
PBSI	**Pulau Batu**	**44.53**	**138**	P	**P**	**11 47 43.3**	**+0.5**
	comp=Z,8µmcomp=Z,13µmcomp=Z,1µm,1.4s						
MNSI	**Mandailing Nat**	**44.53**	**136**	P	**P**	**11 47 42.9**	**+0.1**
	comp=Z,1µm,0.9s						
CLZ	**Clausthal**	**44.53**	**310**	*e*P	**P**	**11 47 43.5**	**+1.0**
	comp=Z,747nm,1.3s,baz=86,slow=7.9						
CLZ				*e*pP	**pP**	**11 48 29.2**	**+1.3**
CLZ				*e*sP	**sP**	**11 48 52.4**	**+0.7**
MGAB	**Montegabbione**	**44.65**	**297**	⇑P	**P**	**11 47 43.4**	**-0.1**
WDD	**Wied Dalam**	**44.69**	**287**	IAmb	IAmb	11 47 45.7	
	comp=Z,1µm,1.3s						
MDJ	**Mudanjiang**	**44.72**	**60**	P	**P**	**11 47 45.5**	**+1.4**
MDJ				sP	sP	11 48 54.5	-0.3
MDJ				PcP	**PcP**	**11 49 22.8**	**+0.3**
MDJ				PP	**PP**	**11 49 35.0**	**+2.2**
MDJ				ScP	**ScP**	**11 52 55.3**	**+0.9**
MDJ				S	**S**	**11 54 05.3**	**+0.9**
MDJ				ScS	**ScS**	**11 57 15.3**	**-3.2**
MDJ				pmax	pmax		
	comp=Z,120nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,1µm,3.5s						
MDJ	**Mudanjiang**	**44.72**	**60**	P	**P**	**11 47 45.4**	**+1.4**
RETA	**Reutte**	**44.77**	**304**	*i* P	**P**	**11 47 44.4**	**0.0**
	comp=Z,3.2nm,0.3s,SNR=48						
RETA				*e*sP	**sP**	**11 48 54.1**	**+0.5**
	comp=Z,0.1nm,3.7s						
RETA				S	**S**	**11 54 03.2**	**-1.9**
	comp=Z,0.1nm,5.8s						
RETA				*e*pPKiKP	**pPKiKP**	**11 57 14.4**	**-2.5**
	comp=Z,35nm,1.4s						
GTTG	**Gottingen**	**44.81**	**309**	*e*P	**P**	**11 47 45.8**	**+1.2**
	comp=Z,729nm,1.0s,baz=86,slow=7.9						
GTTG				*e*pP	**pP**	**11 48 30.4**	**+0.3**
UBBA	**Unterbreizbach**	**44.85**	**308**	*e*P	**P**	**11 47 46.0**	**+1.1**
	comp=Z,114nm,0.8s,baz=86,slow=7.9						
UBBA				*e*pP	**pP**	**11 48 31.4**	**+1.1**
UBBA				*e*sP	**sP**	**11 48 55.4**	**+1.3**
FETA	**Feichten**	**44.86**	**303**	*i* P	**P**	**11 47 45.1**	**-0.2**
	comp=Z,73nm,0.6s,SNR=64						
FETA				*e*sP	**sP**	**11 48 54.9**	**+0.5**
	comp=Z,2µm,3.6s						
FETA				*e*ScP	**ScP**	**11 52 53.2**	**-1.9**
	comp=Z,101nm,1.0s						
FETA				*e*S	**S**	**11 54 04.2**	**-2.5**
	comp=Z,0.1nm,6.4s						
FETA				*e*pPKiKP	**pPKiKP**	**11 57 16.6**	**-0.5**
	comp=Z,96nm,2.2s						
KONO	**Kongsberg**	**44.88**	**321**	P	**P**	**11 47 45.2**	**+0.2**
KONO				IAmb	IAmb	11 47 46.8	
	comp=Z,662nm,1.1s						
KONO	**Kongsberg**	**44.88**	**321**	*e*P	**P**	**11 47 45.4**	**+0.4**
KONO				IVmB_BB		11 47 46.1	
	comp=Z,6µm,1.2s						
KONO				*i*		11 54 06.2	
KONO				*e*		11 57 19.5	
KONO	**Kongsberg**	**44.88**	**321**	c *i*P	**P**	**11 47 45.1**	**+0.1**
KONO				pmax	pmax		
	comp=Z,837nm,1.3s						
KONO	**Kongsberg**	**44.88**	**321**	⇑P	**P**	**11 47 45.0**	**0.0**
TPUB	**Ta-pu**	**44.89**	**93**	P	**P**	**11 47 47.8**	**+2.2**
SSLB	**Suanglung**	**44.92**	**92**	IAmb	IAmb	11 47 49.9	
	comp=Z,629nm,0.8s						
SSLB	**Suanglung**	**44.92**	**92**	P	**P**	**11 47 48.3**	**+2.4**
HOPEN	**Hopen**	**44.94**	**346**	⇑*i*P	**P**	**11 47 47.5**	**+2.2**
HOPEN				IVmB_BB		11 47 48.4	
	comp=Z,28µm,1.3s						
HOPEN				*e*		11 57 28.6	
RETH	**Rethem/Aller,**	**45.09**	**311**	*e*P	**P**	**11 47 47.8**	**+1.1**
	comp=Z,245nm,1.1s,baz=86,slow=7.9						
RETH				*e*pP	**pP**	**11 48 33.2**	**+1.0**
RETH				*e*sP	**sP**	**11 48 56.8**	**+0.8**
TJN	**Taejon**	**45.12**	**72**	P	**P**	**11 47 47.2**	**0.0**
TJN				IAmb	IAmb	11 47 49.2	
	comp=Z,1µm,1.4s						
TJN	**Taejon**	**45.12**	**72**	P	**P**	**11 47 47.9**	**+0.7**
TJN	**Taejon**	**45.12**	**72**	d *i*P	**P**	**11 47 47.4**	**+0.2**
KS19	**Wonju Array Si**	**45.16**	**71**	P	**P**	**11 47 48.3**	**+0.7**
UBR	**Ueberruh**	**45.18**	**304**	*e*P	**P**	**11 47 47.7**	**+0.1**
	comp=Z,452nm,1.1s,baz=86,slow=7.9						
UBR				*e*pP	**pP**	**11 48 33.2**	**+0.2**
UBR				*e*sP	**sP**	**11 48 56.8**	**0.0**
BJO1	**Bjornoya**	**45.18**	**343**	*e*P	**P**	**11 47 48.3**	**+1.1**
BJO1				IVmB_BB		11 47 49.1	
	comp=Z,34µm,0.9s						
KSAR	**Wonju Array Be**	**45.19**	**71**	P	**P**	**11 47 48.5**	**+0.7**
KSAR	**Wonju Array Be**	**45.19**	**71**	P	**P**	**11 47 48.5**	**+0.7**
KSRS	**Korea Array**	**45.22**	**71**	P	**P**	**11 47 48.6**	**+0.6**
	comp=Z,144nm,1.0s,baz=281,slow=6.3,SNR=204						
KSRS				ScP	**ScP**	**11 52 53.5**	**-3.1**
	comp=Z,20nm,1.0s,baz=291,slow=4.0,SNR=6.3						
	comp=Z,144nm,1.0s						
SALO	**Salr**	**45.24**	**301**	IAmb	IAmb	11 47 50.5	
	comp=Z,707nm,1.0s						
SALO	**Salr**	**45.24**	**301**	⇑P	**P**	**11 47 48.7**	**+0.6**
FUORN	**Ofenpass-Fuorn**	**45.24**	**303**	P	**P**	**11 47 48.1**	**-0.3**
NACB	**Ninganchiao**	**45.25**	**91**	P	**P**	**11 47 51.2**	**+2.8**
DOMB	**Dombas**	**45.30**	**324**	⇑*i*P	**P**	**11 47 48.9**	**+0.5**
DOMB				IVmB_BB		11 47 49.5	
	comp=Z,13µm,1.5s						
DOMB				*i*		11 48 58.8	
DOMB				*i*		11 54 13.1	
DOMB				*e*		11 57 33.6	
DOMB				IVMs_BB	IVMs_BB	12 01 14.7	
	comp=Z,8µm,6.5s						
YULB	**Yu-li**	**45.38**	**92**	IAmb	IAmb	11 47 53.4	
	comp=Z,455nm,0.9s						
YULB	**Yu-li**	**45.38**	**92**	P	**P**	**11 47 52.2**	**+2.7**
DAVA	**Damuels**	**45.39**	**304**	*i* P	**P**	**11 47 49.1**	**-0.4**
	comp=Z,505nm,0.8s,SNR=172						
DAVA				*e*sP	**sP**	**11 48 59.5**	**+0.8**
	comp=Z,0.1nm,4.0s						
DAVA				*e*ScP	**ScP**	**11 52 57.3**	**-0.1**
	comp=Z,178nm,1.1s						
DAVA				S	**S**	**11 54 10.7**	**-3.6**
	comp=Z,2µm,6.0s						
HOMB	**Homborsund**	**45.40**	**319**	*e*P	**P**	**11 47 49.0**	**-0.1**
HOMB				IVmB_BB		11 47 50.3	
	comp=Z,8µm,1.6s						
HOMB				*i*		11 48 46.6	
HOMB				*i*		11 54 13.7	
HOMB				*e*		11 57 35.7	
DAVOX	**Davos/Dischmat**	**45.47**	**303**	P	**P**	**11 47 50.3**	**+0.2**
	comp=Z,207nm,0.8s,baz=96,slow=6.2,SNR=205						
DAVOX				ScP	**ScP**	**11 52 55.5**	**-2.3**
	comp=Z,78nm,0.9s,baz=82,slow=5.3,SNR=5.9						
	comp=Z,207nm,0.8s						
TWG	**Pinlang**	**45.48**	**93**	IAmb	IAmb	11 47 54.7	
	comp=Z,1µm,0.9s						
TWGBT	**Beinan**	**45.49**	**93**	P	**P**	**11 47 53.4**	**+3.1**
SKAR	**Skarslia**	**45.58**	**322**	*e*P	**P**	**11 47 51.3**	**+0.7**
SKAR				IVmB_BB		11 47 52.5	
	comp=Z,7µm,1.5s						
SKAR				*i*		11 49 01.2	
SKAR				*i*		11 54 17.2	
VLC	**Villacollemand**	**45.62**	**299**	⇑P	**P**	**11 47 51.7**	**+0.6**
STU	**Stuttgart**	**45.62**	**306**	*e*P	**P**	**11 47 51.9**	**+0.9**
STU	**Stuttgart**	**45.62**	**306**	P	**P**	**11 47 51.9**	**+0.9**
STU				pmax	pmax		
	comp=Z,932nm,1.2s						
STU	**Stuttgart**	**45.62**	**306**	⇑P	**P**	**11 47 51.7**	**+0.7**
STU	**Stuttgart**	**45.62**	**306**	*e*P	**P**	**11 47 51.9**	**+0.9**
	baz=86,slow=7.9						
STU				*e*pP	**pP**	**11 48 36.1**	**-0.7**
STU				*e*sP	**sP**	**11 49 02.0**	**+1.5**
BKNI	**Bangkinang**	**45.74**	**135**	P	**P**	**11 47 52.4**	**+0.1**
BKNI	**Bangkinang**	**45.74**	**135**	P	**P**	**11 47 52.6**	**+0.3**
BKNI	**Bangkinang**	**45.74**	**135**	⇓P	**P**	**11 47 52.6**	**+0.3**
KASTN	**Kahler Asten**	**45.81**	**309**	*e*P	**P**	**11 47 53.4**	**+0.9**
	comp=Z,107nm,1.1s,baz=86,slow=7.9						
KASTN				*e*sP	**sP**	**11 49 02.3**	**+0.3**
TUE	**Stuetta**	**45.89**	**302**	⇑P	**P**	**11 47 52.2**	**-1.2**
TUE	**Stuetta**	**45.89**	**302**	P	**P**	**11 47 52.4**	**-1.0**
	comp=Z,563nm,0.8s						
TNS	**Taunus Mts**	**45.91**	**308**	*e*P	**P**	**11 47 54.3**	**+1.0**
	comp=Z,199nm,1.0s,baz=86,slow=7.9						
TNS				*e*sP	**sP**	**11 49 04.4**	**+1.7**
TIXI	**Tiksi**	**45.92**	**22**	P	**P**	**11 47 53.7**	**+0.7**
TIXI	**Tiksi**	**45.92**	**22**	c *i*P	**P**	**11 47 53.8**	**+0.7**
TIXI				pmax	pmax		
	comp=Z,2µm,0.9s						
PSTR	**Posyet**	**45.99**	**63**	*i* P	**P**	**11 47 56.5**	**+2.5**
PPI	**Padang Panjang**	**46.02**	**136**	P	**P**	**11 47 54.3**	**-0.2**
	comp=Z,7µmcomp=Z,10µmcomp=Z,1µm,0.9s						
SISI	**Saibi**	**46.03**	**138**	P	**P**	**11 47 54.7**	**+0.2**
	comp=Z,9µmcomp=Z,827nm,1.1s						
MOL	**Molde**	**46.05**	**325**	*e*P	**P**	**11 47 54.1**	**0.0**
MOL				IVmB_BB		11 47 55.8	
	comp=Z,9µm,2.5s						
MOL				*i*		11 54 25.3	
SNART	**Snartemo**	**46.09**	**319**	*e*P	**P**	**11 47 54.9**	**+0.4**
IBBN	**Ibbenburen**	**46.10**	**311**	⇑P	**P**	**11 47 55.5**	**+0.8**
IBBN	**Ibbenburen**	**46.10**	**311**	*e*P	**P**	**11 47 55.6**	**+0.9**
	comp=Z,450nm,0.9s,baz=86,slow=7.9						
IBBN				*e*pP	**pP**	**11 48 40.6**	**+0.1**

IBBN				esP	sP	11 49 05.1	+0.9
BOB	Bobbio (Coli)	46.15	300	⇑P	P	11 47 56.5	+1.2
BOB	Bobbio (Coli)	46.15	300	⇑P	P	11 47 56.5	+1.2
LODK	Lodwar	46.17	233	P	P	11 47 58.4	+2.6
	SNR=101						
LODK	Lodwar	46.17	233	P	P	11 47 57.3	+1.5
MYKOM	Kota Tinggi	46.23	131	IAmb	IAmb	11 47 58.8	
	comp=Z,1µm,0.9s						
MYKOM	Kota Tinggi	46.23	131	P	P	11 47 57.3	+1.2
MYKOM	Kota Tinggi	46.23	131	P	P	11 47 56.4	+0.3
	comp=Z,7µmcomp=Z,11µmcomp=Z,1µm,1.0s						
MYKOM	Kota Tinggi	46.23	131	⇓P	P	11 47 57.4	+1.3
BFO	Black Forest	46.26	305	P	P	11 47 55.8	-0.2
BFO	Black Forest	46.26	305	P	P	11 47 55.8	-0.2
BFO				pmax	pmax		
	comp=Z,167nm,1.0s						
BFO	Black Forest	46.26	305	⇑P	P	11 47 56.1	+0.1
BFO	Black Forest	46.26	305	eP	P	11 47 56.3	+0.3
	comp=Z,137nm,1.0s,baz=86,slow=7.9						
BFO				esP	sP	11 49 06.3	+0.8
BFO	Black Forest	46.26	305	P	P	11 47 56.3	+0.3
BFO				pP	pP	11 48 42.9	+1.2
MSHR	Mys Shultsa	46.27	63	⇑iP	P	11 47 58.3	+2.2
MSHR				pmax	pmax		
	comp=Z,109nm,1.1s						
AKN	Aaknes	46.28	324	eP	P	11 47 56.8	+0.8
ODD1	Odda	46.39	321	eP	P	11 47 58.2	+1.4
ODD1				IVmB_BB		11 47 58.8	
	comp=Z,8µm,1.7s						
ODD1				e		11 54 25.1	
PDSI	Padang	46.43	137	P	P	11 47 57.1	-0.6
	comp=Z,7µmcomp=Z,12µmcomp=Z,1µm,0.9s						
BLS5	Blasjo	46.47	321	⇑iP	P	11 47 58.6	+1.1
BLS5				IVmB_BB		11 47 59.2	
	comp=Z,10µm,1.6s						
BLS5				eS	S	11 54 32.3	+3.3
USRK	Ussuriysk Ar.	46.49	61	P	P	11 47 58.7	+0.9
	comp=Z,58nm,0.6s,baz=274,slow=7.3,SNR=65						
	comp=Z,58nm,0.6s						
BUG	Bochum--Univer	46.50	310	eP	P	11 47 58.7	+0.9
	comp=Z,421nm,1.0s,baz=86,slow=7.9						
BUG				esP	sP	11 49 07.9	+0.6
BTDF	Bukit Timah Da	46.52	131	P	P	11 47 59.6	+1.2
BTDF	Bukit Timah Da	46.52	131	P	P	11 47 58.8	+0.4
	comp=Z,7µmcomp=Z,827nm,1.0s						
HYA	Hoyanger	46.63	323	⇑iP	P	11 47 59.4	+0.8
HYA				IVmB_BB		11 48 00.2	
	comp=Z,9µm,1.6s						
HYA				e		11 49 06.8	
HYA				i		11 54 33.5	
HYA				i		11 58 09.5	
VLA	Vladivostok	46.66	62	d iP	P	11 48 01.1	+2.0
VLA				pmax	pmax		
	comp=Z,647nm,1.0s						
PGF	Pioggiola	46.97	297	P	P	11 48 01.8	+0.1
PGF				pmax	pmax		
	comp=Z,289nm,1.4s						
PGF	Pioggiola	46.97	297	⇑P	P	11 48 01.6	-0.1
BER	Bergen	47.04	322	⇑iP	P	11 48 02.2	+0.4
BER				IVmB_BB		11 48 03.2	
	comp=Z,8µm,1.3s						
BER				i		11 54 37.5	
ECH	Echery	47.05	305	⇑P	P	11 48 02.1	0.0
HSPB	Hornsund (broa	47.07	345	eP	P	11 48 03.7	+1.9
HSPB				ePP	PP	11 49 56.0	+1.8
HSPB				eS	S	11 54 41.3	+4.3
HSPB	Hornsund (broa	47.07	345	⇑iP	P	11 48 03.7	+1.9
KMY	Karmoy	47.10	320	⇑iP	P	11 48 03.1	+0.9
KMY				IVmB_BB		11 48 03.9	
	comp=Z,7µm,1.7s						
KMY				i		11 54 39.5	
KMY				e		11 56 01.1	
KMY				e		11 58 15.4	
ASK	Askoy	47.11	322	eP	P	11 48 02.8	+0.5
ASK				IVmB_BB		11 48 03.7	
	comp=Z,10µm,1.5s						
FOO	Floro	47.19	324	eP	P	11 48 03.5	+0.6
FOO				IVmB_BB		11 48 04.4	
	comp=Z,8µm,1.5s						
FOO				i		11 54 41.3	
FOO				e		11 57 39.2	
JTU	Tsushima	47.29	74	P	P	11 48 04.8	+0.7
JTU	Tsushima	47.29	74	P	P	11 48 05.0	+0.8
SUE	Sulen	47.32	323	eP	P	11 48 04.5	+0.6
SUE				IVmB_BB		11 48 05.2	
	comp=Z,10µm,1.6s						
SUE				eS	S	11 54 42.8	+2.0
BTNL	Ternell	47.33	309	dP	P	11 48 05.2	+1.0
	comp=Z,209nm,1.0s						
TPRI	Tanjung Pinang	47.33	131	P	P	11 48 05.2	+0.6
	comp=Z,6µmcomp=Z,13µmcomp=Z,1µm,1.1s						
MEM	Membach	47.40	309	dP	P	11 48 05.3	+0.6
	comp=Z,240nm,1.0s						
SPA0	Spitsbergen Ar	47.43	347	⇑iP	P	11 48 05.9	+1.3
SPITS	Spitsbergen Ar	47.43	347	P	P	11 48 06.2	+1.5
	comp=Z,746nm,0.7s,baz=115,slow=11,SNR=594						
	comp=Z,746nm,0.7s						
BHOU	Houvegnez	47.44	308	dP	P	11 48 06.3	+1.1
	comp=Z,88nm,1.2s						
WLF	Walferdange	47.45	307	IAmb	IAmb	11 48 08.0	
	comp=Z,520nm,0.9s						
WLF	Walferdange	47.45	307	P	P	11 48 06.6	+1.4
WLF				pmax	pmax		
	comp=Z,611nm,1.1s						
WLF	Walferdange	47.45	307	⇑P	P	11 48 06.6	+1.4
WLF	Walferdange	47.45	307	eP	P	11 48 06.8	+1.5
	comp=Z,587nm,1.0s,baz=86,slow=7.9						
WLF				esP	sP	11 49 16.2	+1.3
WLF	Walferdange	47.45	307	dP	P	11 48 06.0	+0.8
	comp=Z,385nm,1.0s						
VSL	Villasalto	47.50	293	⇑P	P	11 48 05.6	-0.2
BEBN	Eben Emael	47.58	309	dP	P	11 48 06.7	+0.6
BEBN				dpP	pP	11 48 52.4	+0.3
BSTI	Sart Tilman	47.68	309	dP	P	11 48 08.0	+1.1
	comp=Z,23nm,1.0s						
PPSI	Pulau Pagai	47.73	138	P	P	11 48 09.7	+2.0
	comp=Z,12µmcomp=Z,1µm,1.0s						
BCLA	Clavier	47.87	308	dP	P	11 48 09.2	+0.8
	comp=Z,69nm,1.0s						
BCLA				dpP	pP	11 48 55.4	+1.0
BCLA				dsP	sP	11 49 18.5	+0.3
JMJ	Miyako jima 2	47.94	88	P	P	11 48 11.2	+2.0
KRJI	Kerinci	47.96	136	P	P	11 48 11.4	+1.8
RCHB	Rochefort	47.96	308	dP	P	11 48 09.8	+0.7
	comp=Z,106nm,0.8s						
BNI	Bardonecchia	48.01	301	P	P	11 48 10.0	+0.3
BNI				pmax	pmax		
	comp=Z,991nm,1.1s						
BNI	Bardonecchia	48.01	301	⇑P	P	11 48 09.8	+0.1
BGES	Gesves	48.02	308	dP	P	11 48 10.4	+0.9
	comp=Z,101nm,1.1s						
GRNR	Gornyy	48.20	51	⇑iP	P	11 48 12.5	+1.6
GRNR				pmax	pmax		
	comp=E,150nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,300nm,0.8s						
GRNR				MLR	MLR		
	comp=E,2µm,12.0s						
GRNR				MLR	MLR		
	comp=N,2µm,10.0s						
GRNR				MLR	MLR		
	comp=Z,3µm,13.0s						
BMRD	Maredsous	48.23	308	dP	P	11 48 12.0	+0.8
	comp=Z,263nm,1.0s						
DOU	Dourbes	48.38	308	dP	P	11 48 12.9	+0.6
	comp=Z,178nm,1.1s						
DOU				dpP	pP	11 48 59.5	+1.1
DOU				dsP	sP	11 49 20.5	-1.6
UCC	Uccle	48.40	309	dP	P	11 48 12.8	+0.4
	comp=Z,81nm,1.1s						
DSRI	Dabo	48.46	132	P	P	11 48 13.7	+0.4
	comp=Z,7µmcomp=Z,16µmcomp=Z,2µm,1.1s						
KBS	Kingsbay	48.55	347	P	P	11 48 14.2	+1.0
KBS	Kingsbay	48.55	347	⇑iP	P	11 48 14.6	+1.4
KBS				IVmB_BB		11 48 15.7	
	comp=Z,23µm,1.1s						
KBS				ePP	PP	11 50 10.0	+2.2
KBS				i		11 55 03.6	
KBS				eSS	SS	11 58 51.9	+22
KBS	Kingsbay	48.55	347	P	P	11 48 14.2	+1.0
KBS				pmax	pmax		
	comp=Z,2µm,0.9s						
KBS	Kingsbay	48.55	347	⇑P	P	11 48 14.6	+1.4
KBS	Kingsbay	48.55	347	P	P	11 48 14.7	+1.4
KBS				pP	pP	11 49 00.7	+1.0
KMBO	Kilima Mbogo	48.56	227	P	P	11 48 14.6	+0.3
	comp=Z,212nm,0.7s,baz=40,slow=14,SNR=7.0						
	comp=Z,212nm,0.7s						
KMBO	Kilima Mbogo	48.56	227	i P	P	11 48 17.1	+2.8
KMBO				pmax	pmax		
	comp=Z,212nm,0.7s						
KEST	Kesra	48.71	288	P	P	11 48 16.4	+1.2
	comp=Z,340nm,1.1s,baz=56,slow=1.6,SNR=97						
KEST				pP	pP	11 49 04.2	+3.0
	comp=Z,431nm,1.1s,baz=40,slow=2.2,SNR=6.8						
	comp=Z,340nm,1.1s						
KEST	Kesra	48.71	288	P	P	11 48 15.7	+0.6
	SNR=64						
KEST	Kesra	48.71	288	IAmb	IAmb	11 49 08.0	
	comp=Z,871nm,1.2s						
JMBI	JAMBI	48.83	134	P	P	11 48 16.8	+0.7
	comp=Z,7µmcomp=Z,10µmcomp=Z,809nm,0.9s						
JNU	Nakatsue	48.94	75	IAmb	IAmb	11 48 19.8	
	comp=Z,533nm,0.8s						
JNU	Nakatsue	48.94	75	P	P	11 48 17.7	+0.8
JNU	Nakatsue	48.94	75	⇓P	P	11 48 18.1	+1.2
JNU	Nakatsue	48.94	75	P	P	11 48 18.1	+1.2
KIBK	Kibwezi	49.08	225	P	P	11 48 20.1	+2.0
KIBK				S	S	11 55 05.3	-1.4
KIBK	Kibwezi	49.08	225	P	P	11 48 20.5	+2.4
	SNR=82						
CBOGS	Bougous	49.09	290	P	P	11 48 18.6	+0.7
JSU	Suzuyama	49.22	77	P	P	11 48 20.7	+1.7
JSU	Suzuyama	49.22	77	⇑P	P	11 48 19.9	+1.0
MASI	Maura Aman, Be	49.26	136	P	P	11 48 19.7	+0.3
LOR	Lormes	49.42	305	P	P	11 48 20.2	-0.1
LOR				pmax	pmax		
	comp=Z,78nm,1.1s						
LOR	Lormes	49.42	305	⇑P	P	11 48 20.2	-0.1
SSB	Saint Sauveur	49.42	302	P	P	11 48 20.9	+0.6
SSB	Saint Sauveur	49.42	302	⇑P	P	11 48 20.8	+0.5
JOW	Kunigami	49.42	84	P	P	11 48 21.4	+0.9
	comp=Z,238nm,0.7s,baz=298,slow=7.0,SNR=30						
	comp=Z,238nm,0.7s						
JOW	Kunigami	49.42	84	P	P	11 48 20.9	+0.3
JOW	Kunigami	49.42	84	P	P	11 48 21.4	+0.9
TEY	Ternei	49.50	58	⇑eP	P	11 48 21.5	+0.7
TEY				e		11 49 27.7	
TEY				e		11 55 09.4	
TEY				pmax	pmax		
	comp=N,30nm,0.9s						
TEY				pmax	pmax		
	comp=E,30nm,0.9s						
TEY				pmax	pmax		
	comp=Z,180nm,0.9s						
TEY				pmax	pmax		
	comp=E,100nm,9.4s						
TEY				pmax	pmax		
	comp=N,300nm,9.3s						
UBSI	University, Be	49.79	137	P	P	11 48 23.0	-0.3
	comp=N,7µmcomp=N,11µmcomp=N,961nm,0.5s						
CMAH	Djebel Manchou	49.87	290	P	P	11 48 24.6	+0.7
KSI	Kapahiang	49.88	136	P	P	11 48 23.5	-0.6
CRHA	Rehia	49.99	289	P	P	11 48 26.0	+1.2
CBST	Bordj Sabath	50.19	290	P	P	11 48 27.1	+0.8
CAEH	'Ain El Ouahch	50.25	291	P	P	11 48 26.6	0.0
LRW	Lerwick	50.29	322	⇑eP	P	11 48 26.9	+0.3
LRW				IAmb	IAmb	11 48 28.6	
	comp=Z,248nm,0.9s						
LRW	Lerwick	50.29	322	⇑P	P	11 48 27.1	+0.5
CLF	Chambon-Foret	50.30	306	IAmb	IAmb	11 48 28.5	
	comp=Z,451nm,1.1s						
ELSH	Elham, Standar	50.34	310	⇑eP	P	11 48 27.8	+0.7
ELSH				IAmb	IAmb	11 48 29.3	
	comp=Z,737nm,0.9s						
WACR	West Acre	50.35	312	⇑eP	P	11 48 27.4	+0.2
WACR				IAmb	IAmb	11 48 29.5	
	comp=Z,1µm,0.9s						
NKL	Nikolayevsk	50.39	47	eP	P	11 48 27.6	+0.3
NKL				eS	S	11 55 24.9	+1.1
NKL				pmax	pmax		
	comp=E,519nm,0.6s						
NKL				pmax	pmax		
	comp=N,1µm,0.7s						
NKL				pmax	pmax		
	comp=Z,5µm,0.7s						
NKL				smax	smax		
	comp=E,1µm,3.7s						
NKL				smax	smax		
	comp=N,4µm,4.4s						
PMBI	Palembang	50.53	133	IAmb	IAmb	11 48 30.4	
	comp=Z,692nm,0.6s						
PMBI	Palembang	50.53	133	P	P	11 48 29.2	+0.3
	comp=Z,13µmcomp=Z,1µm,0.9s						
CNGR	Negrine	50.56	288	P	P	11 48 30.1	+1.1
CBBAR	Babar	50.56	288	P	P	11 48 29.9	+0.7
CSGS	Sigus	50.57	290	P	P	11 48 29.8	+0.6
CBOS	Bilal Ibnou Ra	50.64	291	P	P	11 48 30.2	+0.6
MNAI	Manna	50.66	136	IAmb	IAmb	11 48 30.0	
	comp=Z,588nm,0.7s						
MNAI	Manna	50.66	136	P	P	11 48 28.9	-1.0
MNAI	Manna	50.66	136	P	P	11 48 29.7	-0.2
	comp=Z,6µmcomp=Z,10µmcomp=Z,767nm,0.6s						
MNAI	Manna	50.66	136	⇓P	P	11 48 28.6	-1.3
CASM	Ain Smara	50.70	290	P	P	11 48 30.5	+0.4
PPBI	Pangkal Pinang	50.73	131	P	P	11 48 30.8	+0.3
LMK	Market Rasen	50.78	313	eP	P	11 48 30.7	+0.4
LMK				IAmb	IAmb	11 48 34.1	
	comp=Z,458nm,1.0s						
CTEI	Djebel Teioual	50.83	290	P	P	11 48 31.6	+0.5
COAT	Oued Athmania	50.86	290	P	P	11 48 31.6	+0.3
HMNX	Herstmonceux	50.90	310	eP	P	11 48 32.0	+0.8
HMNX				IAmb	IAmb	11 48 33.2	
	comp=Z,313nm,0.8s						
CTGD	Timgad	50.92	289	P	P	11 48 32.2	+0.4
JMN	Monobe	51.04	73	P	P	11 48 33.8	+1.2
JMN	Monobe	51.04	73	⇑P	P	11 48 34.0	+1.3
JMN	Monobe	51.04	73	P	P	11 48 33.9	+1.3
EGSI	Enggano, Bengk	51.11	138	P	P	11 48 33.6	+0.4
SBUM	Sibu	51.19	122	P	P	11 48 35.4	+1.5
SBUM	Sibu	51.19	122	P	P	11 48 35.4	+1.5
SBUM	Sibu	51.19	122	P	P	11 48 35.0	+1.1
	comp=Z,3µmcomp=Z,319nm,1.4s						
SBUM	Sibu	51.19	122	⇓P	P	11 48 35.6	+1.7
CJSR	Ain Djasser	51.25	290	P	P	11 48 34.8	+0.6
DRUM	Mains of Drumt	51.40	318	⇑eP	P	11 48 34.8	-0.1
DRUM				IAmb	IAmb	11 48 36.3	
	comp=Z,127nm,0.8s						
HPK	Haverah Park	51.45	314	⇑eP	P	11 48 35.6	+0.3
HPK				IAmb	IAmb	11 48 36.7	
	comp=Z,336nm,0.7s						
MDSI	Maura Dua	51.45	135	P	P	11 48 32.8	-3.0
	comp=Z,208nm,1.0s						
EDMD	Edmundbyers	51.48	315	⇑eP	P	11 48 35.8	+0.3
EDMD				IAmb	IAmb	11 48 38.7	
	comp=Z,318nm,0.8s						
CWF	Charnwood Fore	51.50	312	⇑eP	P	11 48 35.7	0.0
KKM	Kota Kinabalu	51.52	115	P	P	11 48 38.0	+1.6
KKM	Kota Kinabalu	51.52	115	P	P	11 48 38.1	+1.6
	comp=Z,6µmcomp=Z,17µmcomp=Z,2µm,1.1s						
KKM	Kota Kinabalu	51.52	115	⇑P	P	11 48 38.2	+1.7
SET	Setif	51.54	290	P	P	11 48 37.0	+0.6
MTLF	Montolieu	51.55	300	⇑P	P	11 48 36.8	+0.5
LBWR	Ladybower, Pea	51.62	313	⇑eP	P	11 48 36.6	+0.1
LBWR				IAmb	IAmb	11 48 39.1	
	comp=Z,178nm,0.9s						
JWT	Wachi	51.63	71	P	P	11 48 38.4	+1.5
CKTS	El Kantara	51.67	289	P	P	11 48 37.3	0.0
MCD	Coleburn Disti	51.70	319	⇑eP	P	11 48 37.6	+0.5
MCD				IAmb	IAmb	11 48 38.7	
	comp=Z,318nm,0.7s						
CAZD	Ain Tagrout	51.74	290	P	P	11 48 37.8	0.0
BUW	Bucklebury Wes	51.74	311	eP	P	11 48 38.1	+0.6
LWLI	Liwa	51.82	136	P	P	11 48 36.6	-2.0
	comp=Z,5µmcomp=Z,10µmcomp=Z,1µm,0.9s						
BIGH	Upper Bighouse	51.90	320	⇑eP	P	11 48 39.0	+0.5
BIGH				IAmb	IAmb	11 48 40.7	
	comp=Z,131nm,0.9s						
KLSI		51.93	135	P	P	11 48 36.4	-2.9
	comp=Z,5µmcomp=Z,6µmcomp=Z,763nm,1.0s						
EDI	Edinburgh	51.96	317	⇑eP	P	11 48 39.2	+0.2
EDI				IAmb	IAmb	11 48 40.7	
	comp=Z,211nm,0.9s						
STNC	Stoke	51.96	313	eP	P	11 48 39.5	+0.5
STNC				IAmb	IAmb	11 48 40.6	
	comp=Z,97nm,0.7s						
TYV	Tymovskoe	52.05	50	eP	P	11 48 42.4	+2.6
TYV				eS	S	11 55 50.1	+3.4
TYV				pmax	pmax		
	comp=Z,278nm,0.7s						
TYV				pmax	pmax		
	comp=Z,2µm,2.4s						
TYV				smax	smax		
	comp=N,22nm,2.4s						
TYV				smax	smax		
	comp=E,49nm,2.4s						
TYV				smax	smax		
	comp=N,7µm,10.0s						
TYV				smax	smax		
	comp=E,8µm,10.0s						
EKA	Eskdalemuir Ar	52.06	316	P	P	11 48 39.8	0.0
	comp=E,303nm,1.0s,baz=90,slow=7.9,SNR=232						
EKA				pP	pP	11 49 28.1	+1.7
	comp=E,33nm,0.7s,baz=86,slow=7.3,SNR=1.8						
EKA				ScP	ScP	11 53 23.6	-1.8
	comp=E,21nm,1.0s,baz=82,slow=5.9,SNR=1.8						
	comp=E,303nm,1.0s						
SWN1	Swindon	52.07	311	⇑eP	P	11 48 40.4	+0.5
SWN1				IAmb	IAmb	11 48 42.3	
	comp=Z,551nm,0.8s						
EKB	Eskdalemuir	52.07	316	P	P	11 48 39.8	-0.1
EKB				IAmb	IAmb	11 48 41.3	
	comp=Z,437nm,1.1s						
ESK	Eskdalemuir	52.09	316	P	P	11 48 39.9	0.0
ESK				IAmb	IAmb	11 48 41.4	
	comp=Z,368nm,1.1s						
ESK	Eskdalemuir	52.09	316	⇑eP	P	11 48 40.0	0.0
ESK				IAmb	IAmb	11 48 41.7	
	comp=Z,150nm,0.9s						
ESK	Eskdalemuir	52.09	316	P	P	11 48 39.9	0.0
ESK				pmax	pmax		
	comp=Z,368nm,1.1s						
ESK	Eskdalemuir	52.09	316	⇑P	P	11 48 39.9	0.0
ESK	Eskdalemuir	52.09	316	P	P	11 48 39.9	0.0
UGL	Uglegorsk	52.11	52	eP	P	11 48 42.3	+2.1
UGL				e		11 49 51.0	
UGL				eS	S	11 55 45.3	-2.3
UGL				eSS	ScS	11 58 04.0	-4.0
UGL				pmax	pmax		
	comp=Z,4µm,4.0s						
UGL				pmax	pmax		
	comp=Z,1µm,0.7s						
UGL				smax	smax		
	comp=N,7µm,7.0s						
UGL				smax	smax		
	comp=E,7µm,7.0s						
TPI	Tanjungpandan	52.13	130	P	P	11 48 41.1	+0.3
	comp=E,6µmcomp=E,7µmcomp=E,689nm,1.0s						
KLI	Kotabumi	52.15	135	P	P	11 48 38.1	-2.8
	comp=E,5µmcomp=E,5µmcomp=E,621nm,1.0s						
KESW	Keswick, Cumbr	52.17	315	eP	P	11 48 41.1	+0.5
KESW				IAmb	IAmb	11 48 42.2	
	comp=Z,166nm,0.7s						
MBAR	Mbarara	52.21	234	P	P	11 48 42.2	+0.6
MBAR	Mbarara	52.21	234	P	P	11 48 42.2	+0.6
MBAR				pmax	pmax		
	comp=Z,223nm,0.8s						
ETOS	Mallorca	52.24	296	P	P	11 48 42.5	+1.2
ETOS				S	S	11 55 48.5	-1.2
MFF	Saint Martin d	52.24	305	⇑P	P	11 48 41.0	-0.2
MFF	Saint Martin d	52.24	305	⇑P	P	11 48 41.0	-0.2
JNE	Jan Mayen East	52.39	336	eP	P	11 48 44.5	+2.6
JNE				IVmB_BB		11 48 44.8	
	comp=Z,14µm,1.3s						
JNW	Jan Mayen West	52.43	336	eP	P	11 48 44.1	+1.9
JNW				IVmB_BB		11 48 45.1	
	comp=Z,19µm,1.5s						
JNW				i		11 55 58.6	
JNW				IVMs_BB	IVMs_BB	12 02 27.8	
	comp=Z,6µm,5.0s						
JMIC	Jan Mayen	52.46	336	P	P	11 48 44.0	+1.5
	comp=Z,356nm,0.9s,baz=101,slow=7.6,SNR=16						
	comp=Z,356nm,0.9s						
JMIC	Jan Mayen	52.46	336	eP	P	11 48 45.0	+2.6
JMIC				IVmB_BB		11 48 45.2	
	comp=Z,15µm,2.3s						
KASI	Kota Agung	52.48	136	P	P	11 48 40.7	-2.6
	comp=Z,4µmcomp=Z,565nm,0.8s						
HLM1	Long Mynd	52.49	312	⇑eP	P	11 48 43.2	+0.2
HLM1				IAmb	IAmb	11 48 45.8	
	comp=Z,101nm,0.8s						
OLDB	Oldbury-Upon-S	52.49	311	eP	P	11 48 42.7	-0.2
JMI	Jan Mayen	52.53	336	eP	P	11 48 44.3	+1.3
JMI				IVmB_BB		11 48 46.1	
	comp=Z,21µm,1.4s						
JSH	Shimam	52.56	61	P	P	11 48 44.1	+0.5
FOEL	Foel Wylfa	52.59	313	⇑eP	P	11 48 44.0	+0.2
MONM	Monmouth	52.60	312	⇑eP	P	11 48 43.6	-0.2
MONM				IAmb	IAmb	11 48 46.4	
	comp=Z,221nm,1.0s						
MCH1	Michaelchurch	52.68	312	⇑eP	P	11 48 44.5	+0.1
MCH1				IAmb	IAmb	11 48 46.0	
	comp=Z,440nm,0.8s						
MCH1	Michaelchurch	52.68	312	⇑P	P	11 48 43.4	-1.0
PGBU	Glenifferbraes	52.70	317	⇑eP	P	11 48 44.9	+0.5
PGBU				IAmb	IAmb	11 48 47.4	
	comp=Z,379nm,0.8s						
NEWG	New Galloway	52.70	316	⇑eP	P	11 48 44.9	+0.4
NEWG				IAmb	IAmb	11 48 46.5	
	comp=Z,279nm,0.8s						
JGN	Niukaw	52.74	69	P	P	11 48 46.0	+0.9
BLSI	Bandar Lampung	52.78	135	P	P	11 48 43.1	-2.5
	comp=Z,677nm,0.8s						
JSD	Sado	52.79	67	IAmb	IAmb	11 48 47.0	
	comp=Z,267nm,0.7s						
JSD	Sado	52.79	67	P	P	11 48 45.7	+0.3
JSD	Sado	52.79	67	⇑P	P	11 48 45.8	+0.3
JSD	Sado	52.79	67	P	P	11 48 45.8	+0.4
INU	Inuyama	52.83	70	P	P	11 48 46.5	+0.7
INU	Inuyama	52.83	70	⇓P	P	11 48 46.2	+0.4
JSA	Saint Aubin	52.87	308	⇑P	P	11 48 44.4	-1.3
JIE	Ise	52.96	71	P	P	11 48 48.0	+1.3
JGF	Kuroka	53.00	70	P	P	11 48 47.2	+0.2
JGF	Kuroka	53.00	70	⇑P	P	11 48 47.6	+0.7
JGF	Kuroka	53.00	70	P	P	11 48 47.7	+0.7
KPL	Plockton	53.02	319	⇑eP	P	11 48 47.3	+0.5
KPL				IAmb	IAmb	11 48 48.6	
	comp=Z,196nm,0.9s						
GAL1	Galloway	53.02	316	eP	P	11 48 46.8	-0.1
GAL1				IAmb	IAmb	11 48 48.4	
	comp=Z,100nm,0.9s						
ADJB	Djebel Djouab	53.04	291	P	P	11 48 47.5	+0.1
IOMK	Kirk Michael	53.08	315	⇑eP	P	11 48 47.8	+0.6
IOMK				IAmb	IAmb	11 48 48.9	
	comp=Z,100nm,0.8s						
YLL	Llanberis	53.11	313	eP	P	11 48 48.2	+0.8
LAWE	Loch Awe, Argy	53.11	317	⇑eP	P	11 48 47.7	+0.3
LAWE				IAmb	IAmb	11 48 49.4	
	comp=Z,184nm,0.9s						
YSS	Yuzhno-Sakhali	53.12	55	P	P	11 48 48.8	+1.1
YSS				IAmb	IAmb	11 48 50.4	
	comp=Z,770nm,0.8s						
YSS	Yuzhno-Sakhali	53.12	55	P	P	11 48 49.2	+1.6
YSS	Yuzhno-Sakhali	53.12	55	αeP	P	11 48 49.1	+1.4
YSS				e*PP	pP	11 49 33.7	-2.0
YSS				e*SP	sP	11 49 57.5	-2.0
YSS				e		11 50 50.4	
YSS				ePPP	PPP	11 52 02.7	
YSS				eS	S	11 56 02.7	+1.3
YSS				e*SS	sS	11 57 24.4	-1.2
YSS				eSS	SS	11 59 47.2	+3.8
YSS				pmax	pmax		
	comp=Z,2µm,4.6s						
YSS				pmax	pmax		
	comp=Z,900nm,0.8s						
YSS	Yuzhno-Sakhali	53.12	55	⇑P	P	11 48 49.1	+1.4
YSS	Yuzhno-Sakhali	53.12	55	P	P	11 48 49.3	+1.6
YSS				pP	pP	11 49 37.8	+2.1
WIM	Isle of Man	53.16	315	⇑eP	P	11 48 48.6	+0.7
WLF1	Llynfaes	53.20	314	⇑eP	P	11 48 48.4	+0.3
WLF1				IAmb	IAmb	11 48 49.5	
	comp=Z,171nm,0.8s						
WPS	Cemaes, Angles	53.24	314	⇑eP	P	11 48 48.6	+0.2
ADOR	Douera	53.24	292	P	P	11 48 49.8	+0.7
MJB9	Matsu-Tunnel	53.28	68	IAmb	IAmb	11 48 51.9	
	comp=Z,355nm,0.8s						
MAJO	Matsushiro	53.29	68	P	P	11 48 49.1	+0.1
MAJO				IAmb	IAmb	11 48 50.9	
	comp=Z,366nm,0.8s						
MAJO	Matsushiro	53.29	68	P	P	11 48 49.3	+0.2
MAJO	Matsushiro	53.29	68	P	P	11 48 49.2	+0.1
MAJO				pmax	pmax		
	comp=Z,367nm,0.8s						

MAJO	Matsushiro	53.29	68	⇓P	P	11 48 49.3	+0.2
MAJO	Matsushiro	53.29	68	P	P	11 48 49.3	+0.2
MAT	Matsushiro	53.29	68	P	P	11 48 49.3	+0.2
MJAR	Matsushiro Arr	53.29	68	P	P	11 48 49.7	+0.6
	comp=Z,234nm,0.9s,baz=292,slow=9.8,SNR=318						
MJAR				pP	pP	11 49 40.3	+2.8
	comp=Z,77nm,1.0s,baz=289,slow=7.5,SNR=3.1						
MJAR				ScP	ScP	11 53 28.7	-2.4
	comp=Z,28nm,1.0s,baz=268,slow=3.3,SNR=5.6						
	comp=Z,234nm,0.9s						
MJAR	Matsushiro Arr	53.29	68	P	P	11 48 49.3	+0.2
SBV	Sambava	53.35	205	P	P	11 48 51.7	+2.1
	SNR=7.9						
SBV	Sambava	53.35	205	⇓P	P	11 48 51.0	+1.4
ABRIN	Birine	53.47	291	P	P	11 48 50.5	0.0
JEW	Eniwo	53.48	60	P	P	11 48 51.1	+0.8
LEWI	Lewis, Hebride	53.50	320	⇑eP	P	11 48 51.0	+0.7
LEWI				IAmb	IAmb	11 48 52.0	
	comp=Z,111nm,0.9s						
ADCK	Dar Chioukh	53.50	290	P	P	11 48 51.2	+0.4
EIBI	Ibiza	53.56	295	P	P	11 48 52.6	+1.6
EIBI				S	S	11 56 07.6	0.0
JYA	Atsumi	53.66	65	P	P	11 48 52.4	+0.6
RSBS	Rosebush, Pemb	53.74	312	⇑eP	P	11 48 52.0	-0.1
RSBS				IAmb	IAmb	11 48 53.1	
	comp=Z,89nm,0.7s						
ABKD	Sidi Amar	53.74	292	P	P	11 48 53.3	+0.9
NOR	Nord	53.76	350	⇑P	P	11 48 52.6	+0.8
NOR	Nord	53.76	350	⇑P	P	11 48 52.5	+0.8
NOR	Nord	53.76	350	i P	P	11 48 52.3	+0.5
NOR				IAmb	IAmb	11 48 54.3	
	comp=Z,510nm,1.1s						
CLGH	Cloghs, Cushen	53.76	316	⇑eP	P	11 48 52.1	-0.1
CLGH				IAmb	IAmb	11 48 54.6	
	comp=Z,117nm,0.9s						
ROSF	Rostrenen	53.80	307	⇑P	P	11 48 52.8	+0.2
HTL	Hartland	53.83	311	⇑eP	P	11 48 52.7	0.0
HTL				IAmb	IAmb	11 48 54.2	
	comp=Z,146nm,0.7s						
JTM	Tenmabayashi	53.88	62	P	P	11 48 54.0	+0.7
AFDJ	Sidi Ladjel	53.97	291	P	P	11 48 53.8	-0.3
JRY	Ryogami san	54.01	69	P	P	11 48 54.6	+0.3
EDDR	Deurdeur	54.02	291	P	P	11 48 54.4	0.0
EHRZ	Djelida	54.02	292	P	P	11 48 54.8	+0.4
ILTH	Belurgan, Co L	54.14	315	P	P	11 48 54.8	-0.1
ILTH	Belurgan, Co L	54.14	315	eP	P	11 48 54.5	-0.4
EBNH	Beni Haoua	54.31	292	P	P	11 48 57.1	+0.6
TARAI	Tarakan	54.35	116	P	P	11 48 59.4	+2.4
DSB	Dublin	54.37	314	P	P	11 48 56.8	+0.2
DSB	Dublin	54.37	314	⇑eP	P	11 48 56.6	0.0
DSB	Dublin	54.37	314	⇑P	P	11 48 56.6	0.0
COCO	West Island	54.38	148	P	P	11 48 56.1	-0.9
COCO	West Island	54.38	148	P	P	11 48 59.6	+2.6
COCO	West Island	54.38	148	P	P	11 48 59.6	+2.6
COCO	West Island	54.38	148	P	P	11 48 59.6	+2.6
COCO				pmax	pmax		
	comp=Z,1μm,1.2s						
COCO	West Island	54.38	148	⇓P	P	11 48 58.6	+1.6
COCO	West Island	54.38	148	P	P	11 48 58.7	+1.7
COCO				pP	pP	11 49 45.7	+0.8
EZEK	Zmalet El Emir	54.38	290	P	P	11 48 57.2	+0.1
EBGR	Bougara	54.39	291	P	P	11 48 57.2	0.0
EBNR	Beni Rached	54.42	292	P	P	11 48 58.4	+1.1
JMP	Maruseppu	54.42	58	P	P	11 48 58.0	+0.8
JOM	Ohasama	54.50	64	P	P	11 48 58.1	+0.3
CCA1	Carnmenellis	54.51	310	⇑eP	P	11 48 57.6	0.0
CCA1				IAmb	IAmb	11 48 59.1	
	comp=Z,225nm,0.8s						
IDGL	Inch Island, C	54.55	316	P	P	11 48 58.3	+0.5
IDGL	Inch Island, C	54.55	316	eP	P	11 48 58.3	+0.5
IDGL				IAmb	IAmb	11 49 00.1	
	comp=Z,253nm,0.8s						
MA2	Magadan	54.60	38	P	P	11 48 59.6	+1.4
MA2				IAmb	IAmb	11 49 00.9	
	comp=Z,360nm,0.8s						
MA2	Magadan	54.60	38	P	P	11 48 59.3	+1.1
MA2	Magadan	54.60	38c	iP	P	11 48 59.4	+1.2
MA2				pmax	pmax		
	comp=Z,495nm,1.0s						
MA2	Magadan	54.60	38	⇑P	P	11 48 59.2	+1.0
MA2	Magadan	54.60	38	P	P	11 48 58.4	+0.2
	comp=Z,9μmcomp=Z,675nm,1.2s						
DBJI	Dramaga	54.61	134	P	P	11 48 55.6	-3.2
	comp=Z,14μmcomp=Z,350nm,0.9s						
SEY	Seymchan	54.63	34	eP	P	11 48 56.3	-2.0
SEY				e		11 50 05.5	
SEY				pmax	pmax		
	comp=Z,778nm,0.9s						
DAG	Danmarks Havn	54.65	344	P	P	11 48 58.6	+0.3
DAG				pmax	pmax		
	comp=Z,2μm,1.2s						
DAG	Danmarks Havn	54.65	344	⇑P	P	11 48 58.9	+0.7
DAG	Danmarks Havn	54.65	344	i P	P	11 48 59.2	+1.0
DAG				IAmb	IAmb	11 49 00.7	
	comp=Z,1μm,1.0s						
JMM	Marumori	54.72	66	P	P	11 48 59.9	+0.5
IWEX	Carrickbyrne,	54.83	313	P	P	11 49 00.1	+0.2
IWEX	Carrickbyrne,	54.83	313	eP	P	11 49 00.3	+0.4
IWEX				IAmb	IAmb	11 49 01.9	
	comp=Z,132nm,0.9s						
SKJI	Sukabumi	54.86	134	P	P	11 48 57.6	-3.0
	comp=Z,339nm,0.8s						
EANR	'Ain N'Sour	54.87	292	P	P	11 49 01.3	+0.7
JEM	Erimo	54.94	60	P	P	11 49 02.5	+1.6
ERM	Erimo	54.94	60	P	P	11 49 01.6	+0.7
ERM	Erimo	54.94	60	P	P	11 49 02.5	+1.6
ERM	Erimo	54.94	60	P	P	11 49 01.6	+0.7
ERM				pmax	pmax		
	comp=Z,148nm,0.8s						
ERM	Erimo	54.94	60	⇓P	P	11 49 02.2	+1.3
ERM	Erimo	54.94	60	P	P	11 49 01.9	+1.0
EADEB	Ain Deheb	54.95	290	P	P	11 49 01.3	+0.1
ECHE	Chera	55.04	297	P	P	11 49 02.8	+1.1
ECHE				S	S	11 56 28.1	+0.8
EKMS	Oued Kramis	55.07	292	P	P	11 49 03.8	+1.9
EASA	Ain Sidi Ali	55.24	290	P	P	11 49 04.1	+0.7
CNJI	Cibinong	55.44	134	P	P	11 49 02.8	-1.9
MTKI	Muara Teweh, K	55.48	122	P	P	11 49 06.6	+1.6
	comp=Z,6μmcomp=Z,572nm,0.9s						
DBG	Daneborg	55.49	341	i P	P	11 49 05.4	+1.1
DBG				IAmb	IAmb	11 49 07.2	
	comp=Z,475nm,1.1s						
PKKI	Palangkaraya	55.80	124	P	P	11 49 09.1	+1.8
	comp=Z,2μm,1.0s						
CART	Cartagena	55.80	294	IAmb	IAmb	11 49 08.5	
	comp=Z,508nm,1.0s						
ETOB	Tobarra	55.80	296	P	P	11 49 08.7	+1.5
BBJI	Bungbulang	55.86	134	P	P	11 49 04.9	-2.9
EMUR	La Murta	55.88	295	P	P	11 49 08.5	+0.8
IGLA	Glengowla, Co	56.05	315	P	P	11 49 08.9	+0.4
ODJA	Bouhanifia	56.05	292	P	P	11 49 10.0	+1.0
YUK	Yuzh-Kuril'sk	56.11	57d	iP	P	11 49 09.8	+0.6
YUK				e*PP	pP	11 49 54.7	-3.1
YUK				e		11 51 25.8	
YUK				eS	S	11 56 32.8	-8.5
YUK				eSS	SS	12 00 27.5	-3.0
YUK				pmax	pmax		
	comp=Z,1μm,0.9s						
YUK				pmax	pmax		
	comp=N,376nm,0.8s						
YUK				pmax	pmax		
	comp=E,275nm,0.8s						
TLOR	Lorca, Murcia	56.28	295	P	P	11 49 11.7	+1.1
CTJI	Waduk Cacaban	56.41	132	P	P	11 49 10.2	-1.4
	comp=E,5μmcomp=E,225nm,0.8s						
KPJI	Karang Pucung	56.51	132	P	P	11 49 10.6	-1.7
	comp=E,5μmcomp=E,216nm,1.0s						
OSBL	Sidi Abdelli	56.89	292	P	P	11 49 15.9	+1.0
SCO	Scoresbysund	56.93	336	IAmb	IAmb	11 49 18.1	
	comp=Z,386nm,1.1s						
SCO	Scoresbysund	56.93	336	⇑P	P	11 49 16.1	+1.6
SCO	Scoresbysund	56.93	336	⇑P	P	11 49 16.1	+1.6
SCO	Scoresbysund	56.93	336	i P	P	11 49 16.1	+1.6
SCO				IAmb	IAmb	11 49 17.9	
	comp=Z,357nm,1.1s						
VAL	Valentia	57.00	313	P	P	11 49 16.0	+0.7
VAL	Valentia	57.00	313	⇑P	P	11 49 15.9	+0.7
OLHC	Oulhaca	57.03	292	P	P	11 49 21.3	+5.4
KUR	Kuril'sk	57.04	55	⇑iP	P	11 49 14.8	-0.9
KUR				pmax	pmax		
	comp=Z,296nm,0.9s						
BKB	Balikpapan	57.08	121	P	P	11 49 17.2	+0.8
BKB	Balikpapan	57.08	121	P	P	11 49 17.8	+1.4
	comp=Z,7μmcomp=Z,11μmcomp=Z,1μm,1.4s						
BKB	Balikpapan	57.08	121	⇓P	P	11 49 17.7	+1.4
ESBB	Sonseca Array	57.15	298	IAmb	IAmb	11 49 18.3	
	comp=Z,275nm,1.1s						
ESDC	Sonseca Array	57.15	298	P	P	11 49 16.8	+0.1
	comp=Z,194nm,1.1s,baz=58,slow=7.2,SNR=231						
ESDC				pP	pP	11 50 06.2	+1.9
	comp=Z,56nm,1.0s,baz=69,slow=7.2,SNR=3.3						
ESDC				PKP2bc	P'P'bc	12 19 10.7	-7.4
	comp=Z,5.0nm,1.3s,baz=238,slow=3.3,SNR=4.0						
	comp=Z,194nm,1.1s						
ESDC	Sonseca Array	57.15	298	P	P	11 49 16.3	-0.4
TAM	Tamanrasset	57.19	275	P	P	11 49 16.9	-0.3
TAM	Tamanrasset	57.19	275	P	P	11 49 16.9	-0.3
TAM				pmax	pmax		
	comp=Z,144nm,0.7s						
TAM	Tamanrasset	57.19	275	⇑P	P	11 49 17.2	-0.1
SMRI	Semarang	57.20	131	IAmb	IAmb	11 49 18.9	
	comp=Z,262nm,0.8s						
SMRI	Semarang	57.20	131	P	P	11 49 16.8	-0.4
	comp=Z,6μmcomp=Z,362nm,0.9s						
SMRI	Semarang	57.20	131	⇑P	P	11 49 16.6	-0.6
XMI	Christmas Isla	57.20	138	P	P	11 49 17.4	+0.3
XMI	Christmas Isla	57.20	138	⇑P	P	11 49 16.3	-0.9
BBKI	Banjar Baru	57.28	124	P	P	11 49 18.5	+0.7
	comp=Z,6μmcomp=Z,13μmcomp=Z,1μm,1.1s						
OBBL	Beni Bahdel	57.32	291	P	P	11 49 18.5	+0.6
PAB	San Pablo	57.48	298	P	P	11 49 18.4	-0.6
PAB				IAmb	IAmb	11 49 20.7	
	comp=Z,487nm,1.4s						
PAB	San Pablo	57.48	298	P	P	11 49 18.4	-0.6
PAB				pmax	pmax		
	comp=Z,487nm,1.4s						
EQTA	Presa de Quent	57.74	295	P	P	11 49 21.0	+0.2
TBJI	Tambak Boyo	57.89	129	P	P	11 49 24.4	+2.5
	comp=Z,6μmcomp=Z,6μmcomp=Z,516nm,0.9s						
DAV	Davao City (W)	57.93	106	P	P	11 49 24.0	+1.7
DAV	Davao City (W)	57.93	106	P	P	11 49 25.0	+2.7
	comp=Z,8μmcomp=Z,9μmcomp=Z,760nm,1.1s						
DAV	Davao City (W)	57.93	106	P	P	11 49 23.4	+1.1
UGM	Wanagama	57.93	131	P	P	11 49 22.2	-0.1
EALB	Alboran	57.95	293	P	P	11 49 22.2	0.0
ELGU	Los Guajares,	58.01	295	P	P	11 49 22.8	+0.1
NGJI	Ngawi	58.07	130	P	P	11 49 24.4	+1.2
	comp=Z,265nm,1.1s						
MPSI	Mapaga	58.09	117	P	P	11 49 24.9	+1.5
	comp=Z,5μmcomp=Z,13μmcomp=Z,1μm,1.0s						
EADA	Adamuz	58.18	296	P	P	11 49 24.6	+0.8
TOLI2	Tolitoli	58.20	115	IAmb	IAmb	11 49 26.4	
	comp=Z,356nm,0.7s						
TOLI2	Tolitoli	58.20	115	P	P	11 49 25.5	+1.3
ECAL	Calabor	58.24	301	P	P	11 49 25.2	+0.9
EGOR	Sierra Gorda,	58.27	295	P	P	11 49 24.1	-0.5
PBRG	Braganca	58.29	301	eP	P	11 49 25.0	+0.4
PBRG				i IAmb	IAmb	11 49 27.4	
	comp=Z,280nm,1.6s						
GRJI	Gresik	58.36	129	P	P	11 49 26.3	+1.1
	comp=Z,6μmcomp=Z,4μmcomp=Z,425nm,1.3s						
BORG	Borgarnes	58.44	330	P	P	11 49 27.7	+2.6
	comp=Z,335nm,1.1s,baz=71,slow=5.6,SNR=17						
BORG				PP	PP	11 51 36.1	-0.4
	comp=Z,128nm,1.0s,baz=103,slow=5.9,SNR=4.4						
	comp=Z,335nm,1.1s						
BORG	Borgarnes	58.44	330	⇓P	P	11 49 28.4	+3.3
PCJI	Pacitan	58.55	131	P	P	11 49 22.6	-3.9
SJI	Sawahan	58.55	130	P	P	11 49 24.8	-1.8
SNJI	Sawahan-Nganju	58.58	130	P	P	11 49 25.6	-1.3
MVO	Moncorvo	58.74	300	eP	P	11 49 28.1	+0.4
MVO				i IAmb	IAmb	11 49 29.6	
	comp=Z,330nm,1.4s						
BILL	Bilibino	58.78	26c	iP	P	11 49 28.8	+1.4
BILL				pmax	pmax		
	comp=Z,1μm,0.9s						
BILL	Bilibino	58.78	26	P	P	11 49 29.2	+1.8
ECAB	El Cabril	58.83	297	P	P	11 49 29.1	+0.8
PCI	Palu	58.90	118	P	P	11 49 29.8	+0.8
	comp=Z,14μmcomp=Z,1μm,1.2s						
EMIJ	Mijas	58.98	295	P	P	11 49 28.4	-0.9
RER	Riviere de l'E	59.01	196	P	P	11 49 31.0	+1.4
RER	Riviere de l'E	59.01	196	⇑P	P	11 49 31.9	+2.3
PVRL	Vila Real	59.17	301	eP	P	11 49 31.0	+0.4
PVRL				i IAmb	IAmb	11 49 33.3	
	comp=Z,315nm,1.5s						
POLO	Lamas de Olo	59.19	301	eP	P	11 49 31.5	+0.7
POLO				i IAmb	IAmb	11 49 33.5	
	comp=Z,90nm,1.4s						
PCAB	Cabril	59.22	301	eP	P	11 49 31.6	+0.7
PCAB				i IAmb	IAmb	11 49 33.8	
	comp=Z,575nm,1.4s						
PGAV	Gavieira, Arco	59.28	302	eP	P	11 49 32.1	+0.7
PGAV				i IAmb	IAmb	11 49 34.7	
	comp=Z,439nm,2.1s						
KMMI	Kalianget	59.40	128	P	P	11 49 32.1	-0.3
	comp=Z,6μmcomp=Z,3μmcomp=Z,196nm,1.1s						
MTE	Manteigas	59.40	300	IAmb	IAmb	11 49 34.5	
	comp=Z,609nm,1.2s						
MTE	Manteigas	59.40	300	eP	P	11 49 33.2	+1.0
MTE				i IAmb	IAmb	11 49 35.4	
	comp=Z,765nm,1.4s						
MTE	Manteigas	59.40	300	eP	P	11 49 33.5	+1.3
MTE	Manteigas	59.40	300	⇑P	P	11 49 32.0	-0.2
ABPO	Ambohimpanom	59.44	206	P	P	11 49 34.3	+1.6
ABPO	Ambohimpanom	59.44	206	P	P	11 49 34.3	+1.6
ABPO				pmax	pmax		
	comp=Z,130nm,1.1s						
ABPO	Ambohimpanom	59.44	206	⇑P	P	11 49 34.4	+1.6
MRSI	Marisa	59.47	115	P	P	11 49 33.9	+1.0
MMSI	Mamuju	59.51	120	P	P	11 49 34.5	+1.3
PVIS	Viseu	59.52	300	eP	P	11 49 33.7	+0.7
PVIS				epP	pP	11 50 23.3	+2.2
PCBR	Castelo Branco	59.58	299	eP	P	11 49 34.0	+0.6
PCBR				i IAmb	IAmb	11 49 36.3	
	comp=Z,325nm,1.7s						
ESPR	Espera	59.64	295	P	P	11 49 33.8	0.0
PMRV	Marv??o	59.69	299	eP	P	11 49 34.6	+0.4
PMRV				i IAmb	IAmb	11 49 36.9	
	comp=Z,417nm,1.6s						
EBAD	Badajoz	59.69	298	P	P	11 49 34.8	+0.6
BLJI	Banyuglugur	59.70	128	P	P	11 49 33.9	-0.5
	comp=Z,5μmcomp=Z,4μmcomp=Z,392nm,1.4s						
EMIN	Mina Concepcio	59.86	297	P	P	11 49 35.3	0.0
PBAR	Barrancos	59.95	297	P	P	11 49 36.9	+1.0
PBAR	Barrancos	59.95	297	eP	P	11 49 36.2	+0.3
PBAR				i IAmb	IAmb	11 49 38.6	
	comp=Z,715nm,1.5s						
GMJI	Gumukmas	60.01	129	P	P	11 49 33.4	-3.1
PESTR	Estremoz	60.06	298	P	P	11 49 37.5	+0.8
PESTR	Estremoz	60.06	298	IAmb	IAmb	11 49 38.4	
	comp=Z,343nm,1.1s						
PESTR	Estremoz	60.06	298	eP	P	11 49 37.1	+0.5
PESTR				i IAmb	IAmb	11 49 38.5	
	comp=Z,463nm,1.3s						
PESTR				epP	pP	11 50 26.7	+1.8
PESTR	Estremoz	60.06	298	⇑P	P	11 49 36.8	+0.2
PMSI	Majene	60.09	121	P	P	11 49 38.1	+1.0
	comp=Z,7μmcomp=Z,5μmcomp=Z,577nm,1.1s						
ABJI	Asem Bagus	60.14	128	P	P	11 49 37.1	-0.3
	comp=Z,6μmcomp=Z,5μmcomp=Z,457nm,1.2s						
PSARD	Sardoal	60.16	299	eP	P	11 49 37.8	+0.5
PSARD				i IAmb	IAmb	11 49 40.2	
	comp=Z,524nm,1.6s						
PSARD				epP	pP	11 50 28.1	+2.6
APSI	Ampana	60.21	116	P	P	11 49 38.5	+0.6
	comp=Z,2μm,1.3s						
PCAS	Casmilo, Conde	60.21	300	eP	P	11 49 38.2	+0.5
PCAS				i IAmb	IAmb	11 49 39.9	
	comp=Z,294nm,1.3s						
PEA0B	Petropavlovsk-	60.23	44	P	P	11 49 37.2	-0.3
PEA0B	Petropavlovsk-	60.23	44	P	P	11 49 37.3	-0.3
PEA0B				pmax	pmax		
	comp=Z,162nm,0.9s						
PETK	Petropavlovsk-	60.23	44	P	P	11 49 37.5	0.0
	comp=Z,74nm,0.8s,baz=314,slow=2.8,SNR=113						
	comp=Z,74nm,0.8s						
PETK	Petropavlovsk-	60.23	44	P	P	11 49 37.4	-0.1
SKR	Severo-Kuril's	60.23	47	eP	P	11 49 36.6	-1.0
SKR				pmax	pmax		
	comp=Z,406nm,0.9s						
SKR				pmax	pmax		
	comp=Z,900nm,5.5s						
SKR				MLR	MLR		
	comp=Z,2μm,14.0s						
JCJ	Chichijima	60.35	77	P	P	11 49 37.2	-1.6
TTSI	Tana Toraja	60.39	120	P	P	11 49 39.2	0.0
	comp=Z,5μmcomp=Z,5μmcomp=Z,652nm,0.9s						
PARRA	Arraiolos	60.40	298	eP	P	11 49 39.4	+0.5
PARRA				i IAmb	IAmb	11 49 40.8	
	comp=Z,241nm,1.3s						
PARRA				epP	pP	11 50 31.1	+3.9
PMTG	Montargil	60.42	299	eP	P	11 49 39.5	+0.3
PMTG				i IAmb	IAmb	11 49 41.7	
	comp=Z,318nm,1.4s						
EVO	Evora	60.50	298	eP	P	11 49 40.1	+0.5
EVO				i IAmb	IAmb	11 49 42.3	
	comp=Z,554nm,1.5s						
EVO				epP	pP	11 50 30.1	+2.3
EGRO	El Granado	60.54	297	P	P	11 49 40.7	+0.8
IFR	Ifrane	60.54	292	P	P	11 49 41.6	+1.4
MD01	Midelt array s	60.55	291	P	P	11 49 40.1	-0.2
MD31	MD31	60.55	291	IAmb	IAmb	11 49 42.1	
	comp=Z,317nm,1.2s						
JAGI	Jajag, Banyuwa	60.60	128	P	P	11 49 38.8	-1.8
JAGI	Jajag, Banyuwa	60.60	128	P	P	11 49 38.3	-2.3
	comp=Z,4μmcomp=Z,240nm,1.0s						
JAGI	Jajag, Banyuwa	60.60	128	⇑P	P	11 49 37.9	-2.7
PBEJ	Beja	60.61	297	eP	P	11 49 41.0	+0.7
PBEJ				i IAmb	IAmb	11 49 42.5	
	comp=Z,440nm,1.4s						
PSBE	So Bento	60.64	299	eP	P	11 49 41.8	+1.1
PSBE				i IAmb	IAmb	11 49 43.8	
	comp=Z,599nm,1.5s						
PSBE				epP	pP	11 50 31.4	+2.6
MOE	Montemor	60.74	298	eP	P	11 49 41.9	+0.6
MOE				i IAmb	IAmb	11 49 44.1	
	comp=Z,968nm,1.5s						
MOE				epP	pP	11 50 32.3	+2.7
PVAQ	Vaqueiros	60.76	297	P	P	11 49 41.6	+0.2
PVAQ				IAmb	IAmb	11 49 43.2	
	comp=Z,447nm,1.1s						
PVAQ	Vaqueiros	60.76	297	eP	P	11 49 41.8	+0.4
PVAQ				i IAmb	IAmb	11 49 44.0	
	comp=Z,686nm,1.4s						
PVAQ				epP	pP	11 50 31.7	+2.0
PVAQ	Vaqueiros	60.76	297	⇑P	P	11 49 41.6	+0.2
PET	Petropavlovsk	60.79	44	P	P	11 49 40.2	-1.1
PET				IAmb	IAmb	11 49 42.1	
	comp=Z,302nm,1.1s						
PET	Petropavlovsk	60.79	44	P	P	11 49 41.3	0.0
PET	Petropavlovsk	60.79	44	eP	P	11 49 39.0	-2.3
PET				e		11 50 22.2	
PET				e*SP	sP	11 50 51.4	-2.7
PET				e		11 51 56.5	
PET				eS	S	11 57 39.0	-2.4
PET				e		11 59 06.6	
PET				pmax	pmax		
	comp=Z,2μm,4.8s						
PET				pmax	pmax		
	comp=Z,288nm,1.0s						
PET				pmax	pmax		
	comp=Z,800nm,8.9s						
PET				pmax	pmax		
	comp=Z,900nm,12.1s						
PET				pmax	pmax		
	comp=Z,800nm,13.9s						
PET	Petropavlovsk	60.79	44	⇑P	P	11 49 40.8	-0.6
PET	Petropavlovsk	60.79	44	P	P	11 49 41.5	+0.2
	comp=Z,4μmcomp=Z,280nm,1.4s						
PCVE	Castro Verde	60.90	297	P	P	11 49 43.0	+0.6
PCVE	Castro Verde	60.90	297	eP	P	11 49 42.8	+0.5
PCVE				i IAmb	IAmb	11 49 45.2	
	comp=Z,413nm,1.5s						
PCVE				epP	pP	11 50 33.0	+2.4
MESJ	Messejana	60.94	297	eP	P	11 49 43.2	+0.6
MESJ				IAmb	IAmb	11 49 44.9	
	comp=Z,726nm,1.4s						
MESJ				eS	S	11 57 44.6	+0.8
MESJ	Messejana	60.94	297	IAmb	IAmb	11 49 44.6	
	comp=Z,397nm,1.1s						
MESJ	Messejana	60.94	297	eP	P	11 49 43.2	+0.6
MESJ				i IAmb	IAmb	11 49 44.7	
	comp=Z,530nm,1.3s						
MESJ	Messejana	60.94	297	eP	P	11 49 43.2	+0.6
MESJ				eS	S	11 57 44.6	+0.8
MESJ	Messejana	60.94	297	⇑P	P	11 49 43.1	+0.5
SUMG	Summit	60.97	341	P	P	11 49 44.1	+1.4
SUMG	Summit	60.97	341	⇑P	P	11 49 43.9	+1.2
SUMG	Summit	60.97	341	i P	P	11 49 43.0	+0.3
SUMG				IAmb	IAmb	11 49 45.6	
	comp=Z,1μm,1.1s						
NEEM	North Greenlan	60.98	348	⇑P	P	11 49 43.2	+0.6
NEEM	North Greenlan	60.98	348	i P	P	11 49 43.0	+0.4
NEEM				IAmb	IAmb	11 49 44.5	
	comp=Z,827nm,1.0s						
PBDV	Barranco-do-Ve	60.98	297	P	P	11 49 44.2	+1.2
PBDV	Barranco-do-Ve	60.98	297	eP	P	11 49 43.4	+0.5
PBDV				i IAmb	IAmb	11 49 45.2	
	comp=Z,886nm,1.2s						
SPSI	Sidrap Palu	61.01	120	P	P	11 49 42.5	-0.8
	comp=Z,5μmcomp=Z,3μmcomp=Z,375nm,0.8s						
RTBI	Rangdo, Negare	61.10	128	P	P	11 49 43.0	-0.9
	comp=Z,5μmcomp=Z,215nm,1.0s						
LUWI	Luwuk	61.11	116	P	P	11 49 43.3	-0.7
	comp=Z,6μmcomp=Z,820nm,1.0s						
LUWI	Luwuk	61.11	116	⇓P	P	11 49 43.0	-1.0
PMAFR	Mafra	61.22	299	P	P	11 49 45.7	+1.2
PMAFR	Mafra	61.22	299	eP	P	11 49 45.2	+0.7
PMAFR				i IAmb	IAmb	11 49 46.6	
	comp=Z,789nm,1.3s						
LIS	Lisbon	61.23	299	eP	P	11 49 45.3	+0.8
LIS				IAmb	IAmb	11 49 46.6	
	comp=Z,557nm,1.1s						
LIS				eS	S	11 57 47.9	+0.6
LIS	Lisbon	61.23	299	eP	P	11 49 45.3	+0.8
LIS				eS	S	11 57 47.9	+0.6
PTEO	Sao Teotonio	61.42	297	eP	P	11 49 46.7	+0.8
PTEO				i IAmb	IAmb	11 49 48.1	
	comp=Z,716nm,1.3s						
DNP	Denpasar	61.43	128	P	P	11 49 46.5	+0.4
	comp=Z,427nm,1.0s						
KHKI	Kahang-Kahang	61.45	127	P	P	11 49 44.8	-1.4
	comp=Z,5μmcomp=Z,6μmcomp=Z,762nm,0.9s						
MORF	Marmelete	61.48	297	eP	P	11 49 46.9	+0.6
MORF				IAmb	IAmb	11 49 48.0	
	comp=Z,447nm,1.5s						
MORF				eS	S	11 57 51.4	+0.7
MORF	Marmelete	61.48	297	eP	P	11 49 46.8	+0.5
MORF				i IAmb	IAmb	11 49 49.1	
	comp=Z,421nm,1.5s						
MORF	Marmelete	61.48	297	eP	P	11 49 46.9	+0.6
MORF				eS	S	11 57 51.4	+0.7
IGBI	Denpasar	61.50	128	P	P	11 49 43.8	-2.7
	comp=Z,4μmcomp=Z,3μmcomp=Z,260nm,0.9s						
BNSI	Bone	61.55	120	P	P	11 49 46.4	-0.6
	comp=Z,5μmcomp=Z,3μmcomp=Z,408nm,1.1s						
PFVI	Vila Bisbo	61.68	297	P	P	11 49 48.8	+1.3
KAPI	Kappang	61.75	121	P	P	11 49 47.2	-1.1
KAPI	Kappang	61.75	121	P	P	11 49 47.9	-0.4
KAPI				IAmb	IAmb	11 49 50.3	
	comp=Z,500nm,1.1s						
KAPI	Kappang	61.75	121	P	P	11 49 48.9	+0.7
KAPI	Kappang	61.75	121	P	P	11 49 46.5	-1.7
	comp=Z,237nm,1.1s						
KAPI	Kappang	61.75	121	P	P	11 49 47.9	-0.4
KAPI				pmax	pmax		
	comp=Z,500nm,1.1s						
KAPI	Kappang	61.75	121	⇓P	P	11 49 47.7	-0.6
KAPI	Kappang	61.75	121	P	P	11 49 47.7	-0.6
KLNI	Mataram	61.81	127	P	P	11 49 46.1	-2.5
BKSI	Bulukumba	62.22	121	P	P	11 49 51.2	-0.2
	comp=Z,5μmcomp=Z,4μmcomp=Z,280nm,1.3s						
VOI	Vohitsoka	62.26	205	P	P	11 49 54.0	+2.3
	SNR=38						
VOI	Vohitsoka	62.26	205	IAmb	IAmb	11 50 45.7	
	comp=Z,478nm,1.0s						
AVE	Averroes	62.35	292	IAmb	IAmb	11 49 53.6	
	comp=Z,260nm,0.6s						
AVE	Averroes	62.35	292	⇑P	P	11 49 51.8	-0.3
KKSI	Kolaka, Sulawe	62.48	119	P	P	11 49 53.3	+0.2
	comp=Z,5μmcomp=Z,7μmcomp=Z,794nm,1.0s						
TWSI	Taliwang, Sumb	62.55	126	P	P	11 49 50.0	-3.6
PLAI	Plampang	63.20	126	P	P	11 49 54.9	-3.0
	comp=Z,4μmcomp=Z,191nm,1.2s						
TNTI	Ternate	63.31	111	P	P	11 49 59.7	+1.1
TNTI	Ternate	63.31	111	P	P	11 49 59.1	+0.5
	comp=Z,4μmcomp=Z,13μmcomp=Z,2μm,1.1s						
TNTI	Ternate	63.31	111	⇓P	P	11 49 59.1	+0.5
DBNI	Kabupaten Domp	63.31	125	P	P	11 49 57.2	-1.4
KULLO	Kullorsuaq	64.01	346	⇑P	P	11 50 02.8	+0.6
KULLO	Kullorsuaq	64.01	346	i P	P	11 50 02.2	-0.1

KULLO				IAmb	IAmb	11 50 04.4	
	comp=Z,932nm,1.2s						
SANI	Sanana	64.15	114	P	P	11 50 03.7	-0.3
SANI	Sanana	64.15	114	P	P	11 50 03.8	-0.3
SANI	Sanana	64.15	114	⇑P	P	11 50 04.0	-0.1
EDA	Edea	64.16	255	P	P	11 50 03.8	-0.4
EDA				IAmb	IAmb	11 50 06.8	
	comp=Z,400nm,0.9s						
EDA	Edea	64.16	255	P	P	11 50 03.6	-0.6
EDA				PcP	PcP	11 50 36.7	-0.6
EDA				pP	pP	11 50 54.9	+1.5
EDA				sP	sP	11 51 16.3	-0.1
LBFI	Labuhan Bajo,	64.35	124	P	P	11 50 03.8	-1.5
	comp=Z,6µmcomp=Z,7µmcomp=Z,825nm,0.9s						
TULEG	Thule	64.40	350	⇑P	P	11 50 04.9	+0.1
TULEG	Thule	64.40	350	*i* P	P	11 50 04.2	-0.6
TULEG				IAmb	IAmb	11 50 06.7	
	comp=Z,1µm,1.2s						
WBSI	Waikabubak, Su	64.87	125	P	P	11 50 06.4	-2.4
	comp=Z,4µmcomp=Z,10µmcomp=Z,1µm,1.3s						
FOMA	Nahampoana Res	65.05	204	⇑P	P	11 50 11.3	+1.8
UPNV	Upernavik	65.06	345	*i* P	P	11 50 09.2	+0.1
UPNV				IAmb	IAmb	11 50 11.4	
	comp=Z,688nm,1.1s						
LSZ	Lusaka	65.19	226	P	P	11 50 10.9	+0.1
LSZ	Lusaka	65.19	226	P	P	11 50 11.2	+0.4
LSZ				IAmb	IAmb	11 50 13.5	
	comp=Z,450nm,1.4s						
LSZ	Lusaka	65.19	226	P	P	11 50 11.2	+0.4
LSZ				pmax	pmax		
	comp=Z,450nm,1.5s						
LSZ	Lusaka	65.19	226	*i* P	P	11 50 12.0	+1.1
LSZ	Lusaka	65.19	226	⇑P	P	11 50 11.6	+0.7
NUUG	Nuugaatsiaq	65.27	343	⇑P	P	11 50 11.1	+0.6
NUUG	Nuugaatsiaq	65.27	343	*i* P	P	11 50 10.5	+0.1
NUUG				IAmb	IAmb	11 50 12.6	
	comp=Z,437nm,1.2s						
TOA0	Torodi Ar. Sit	65.36	268	P	P	11 50 11.2	-0.8
	SNR=64						
TORD	Torodi Ar. Bea	65.36	268	P	P	11 50 10.3	-1.7
	comp=Z,365nm,0.5s,baz=48,slow=7.8,SNR=958						
TORD				pP	pP	11 51 02.0	+0.8
	comp=Z,148nm,1.1s,baz=57,slow=6.7,SNR=2.1						
TORD				PKPPKP	P'P'df	12 18 41.0	-11
	comp=Z,3.3nm,1.0s,baz=207,slow=1.0,SNR=8.4						
	comp=Z,365nm,0.5s						
TORD	Torodi Ar. Bea	65.36	268	P	P	11 50 10.9	-1.1
TORD				IAmb	IAmb	11 50 13.2	
	comp=Z,561nm,1.1s						
SAATT	Saattut	65.38	342	*i* P	P	11 50 11.3	+0.2
SAATT				IAmb	IAmb	11 50 12.9	
	comp=Z,380nm,1.1s						
WSI	Waingapu	65.49	124	P	P	11 50 11.5	-1.2
	comp=Z,5µmcomp=Z,12µmcomp=Z,1µm,1.0s						
EDFI	Ende, Flores	65.76	122	P	P	11 50 11.3	-3.3
	comp=Z,4µmcomp=Z,204nm,0.8s						
NLAI	Namlea	65.77	114	P	P	11 50 15.3	+0.8
	comp=Z,6µmcomp=Z,10µmcomp=Z,1µm,0.8s						
NIAQ	Niaqornat	65.89	343	*i* P	P	11 50 14.0	-0.4
NIAQ				IAmb	IAmb	11 50 16.3	
	comp=Z,316nm,1.2s						
SAQQ	Saqqaq	65.99	341	*i* P	P	11 50 15.9	+0.8
SAQQ				IAmb	IAmb	11 50 17.3	
	comp=Z,858nm,1.2s						
MMRI	Maumere	66.05	122	P	P	11 50 15.3	-1.0
MMRI	Maumere	66.05	122	P	P	11 50 13.8	-2.5
	comp=Z,5µmcomp=Z,5µmcomp=Z,630nm,1.0s						
MMRI	Maumere	66.05	122	⇑P	P	11 50 13.3	-3.0
BASI	Baing, Sumba	66.08	124	P	P	11 50 15.1	-1.3
ILULI	Ilulissat	66.30	341	P	P	11 50 17.5	+0.4
ILULI	Ilulissat	66.30	341	P	P	11 50 17.5	+0.4
ILULI				pmax	pmax		
	comp=Z,2µm,1.2s						
ILULI	Ilulissat	66.30	341	*i* P	P	11 50 17.2	+0.1
ILULI				IAmb	IAmb	11 50 19.3	
	comp=Z,2µm,1.2s						
KRAI	Karang Ratu	66.78	113	P	P	11 50 21.3	+0.4
	comp=Z,5µmcomp=Z,9µmcomp=Z,839nm,0.6s						
AAI	Ambon	66.87	114	P	P	11 50 21.4	-0.1
	comp=Z,6µmcomp=Z,6µmcomp=Z,594nm,0.6s						
GDH	Godhavn	66.92	341	*i* P	P	11 50 21.1	+0.2
GDH				IAmb	IAmb	11 50 23.0	
	comp=Z,693nm,1.2s						
MSAI	Masohi	67.19	113	P	P	11 50 24.1	+0.6
	comp=Z,5µmcomp=Z,12µmcomp=Z,2µm,0.9s						
A19K	Wainwright	67.29	17	P	P	11 50 24.8	+1.6
	baz=317						
A19K				S	S	11 59 02.5	+1.8
	baz=317						
A19K				S	S	11 59 02.5	+1.8
	baz=317						
SWI	Sorong	67.32	109	P	P	11 50 24.1	-0.3
	comp=Z,4µmcomp=Z,10µmcomp=Z,1µm,1.1s						
A21K	Barrow	67.43	15	P	P	11 50 25.1	+0.9
	baz=320,SNR=438						
A21K				S	S	11 59 03.8	+1.6
	baz=320						
A21K				S	S	11 59 03.8	+1.6
	baz=320						
C16K	Lisburne Hills	67.59	19	P	P	11 50 26.0	+0.8
	baz=314,SNR=273						
C16K				S	S	11 59 05.0	+0.6
	baz=314						
C16K				S	S	11 59 05.0	+0.6
	baz=314						
SFJD	Kangerlussuaq	67.65	339	P	P	11 50 25.6	0.0
SFJD				IAmb	IAmb	11 50 27.6	
	comp=Z,609nm,1.1s						
SFJD	Kangerlussuaq	67.65	339	P	P	11 50 25.6	0.0
SFJD				pmax	pmax		
	comp=Z,609nm,1.1s						
SFJD	Kangerlussuaq	67.65	339	⇑P	P	11 50 25.6	0.0
SFJD	Kangerlussuaq	67.65	339	P	P	11 50 25.9	+0.3
SFJD	Kangerlussuaq	67.65	339	*i* P	P	11 50 27.1	+1.5
SFJD				IAmb	IAmb	11 50 27.3	
	comp=Z,597nm,1.1s						
B18K	Kokolik River	67.73	18	P	P	11 50 27.6	+1.6
	baz=316						
B18K				S	S	11 59 08.0	+2.0
	baz=316						
B18K				S	S	11 59 08.0	+2.0
	baz=316						
A22K	Sinclair Lake	68.01	15	P	P	11 50 29.0	+1.2
	baz=322						
A22K				S	S	11 59 11.1	+1.9
	baz=322						
A22K				S	S	11 59 11.1	+1.9
	baz=322						
C17K	DeLong Mountai	68.02	19	P	P	11 50 29.1	+1.1
	baz=316,SNR=246						
C17K				S	S	11 59 10.1	+0.6
	baz=316						
BATI	Baumata	68.15	122	P	P	11 50 30.4	+0.9
	comp=Z,4µmcomp=Z,11µmcomp=Z,1µm,0.9s						
SOEI	Soe	68.25	121	P	P	11 50 29.5	-0.7
SOEI	Soe	68.25	121	P	P	11 50 30.6	+0.4
	comp=Z,6µmcomp=Z,12µmcomp=Z,1µm,0.9s						
SOEI	Soe	68.25	121	⇓P	P	11 50 29.0	-1.2
B20K	Meade River	68.32	16	P	P	11 50 31.1	+1.4
	baz=320						
B20K				S	S	11 59 13.0	+0.1
	baz=320						
B20K				S	S	11 59 13.0	+0.1
	baz=320						
RDOG	Red Dog Mine	68.40	19	P	P	11 50 30.9	+0.7
	baz=316,SNR=115						
RDOG				S	S	11 59 15.2	+1.2
	baz=316						
C18K	Utukok River	68.40	18	P	P	11 50 31.2	+0.8
	baz=317						
C18K				S	S	11 59 13.7	-0.4
	baz=317						
C18K				S	S	11 59 13.7	-0.4
	baz=317						
C19K	Lookout Ridge	68.45	17	P	P	11 50 32.0	+1.4
	baz=318						
C19K				S	S	11 59 16.1	+1.4
	baz=318						
C19K				S	S	11 59 16.1	+1.4
	baz=318						
D17K	Noatak River	68.61	19	P	P	11 50 32.6	+1.1
	baz=316,SNR=523						
D17K				S	S	11 59 18.4	+2.1
	baz=316						
D17K				S	S	11 59 18.4	+2.1
	baz=316						
GAMB	Gambell	68.67	25	P	P	11 50 32.9	+0.9
	baz=310,SNR=5.3						
GAMB				S	S	11 59 20.3	+3.1
	baz=310						
BNDI	Bandanaira	68.69	113	P	P	11 50 32.4	-0.5
BNDI	Bandanaira	68.69	113	P	P	11 50 32.8	-0.1
BNDI	Bandanaira	68.69	113	⇓P	P	11 50 32.2	-0.7
RES	Resolute Bay	68.69	356	⇑P	P	11 50 32.5	+0.5
RES	Resolute Bay	68.69	356	⇑P	P	11 50 32.5	+0.5
TNA	Tin City	68.72	22	P	P	11 50 32.8	+0.5
TNA				IAmb	IAmb	11 50 35.1	
	comp=Z,293nm,0.8s						
TNA	Tin City	68.72	22	P	P	11 50 33.3	+1.1
	baz=313,SNR=26						
TNA				S	S	11 59 19.7	+2.0
	baz=313						
B22K	Teshekpuk Lake	68.86	15	P	P	11 50 34.2	+1.2
	baz=323						
B22K				S	S	11 59 20.1	+1.0
	baz=323						
B22K				S	S	11 59 20.1	+1.0
	baz=323						
KSANE	Kasane	68.94	227	IAmb	IAmb	11 50 37.6	
	comp=Z,526nm,1.4s						
KSANE	Kasane	68.94	227	*i* P	P	11 50 35.6	+1.2
POIN	Pond Inlet	68.95	350	IAmb	IAmb	11 50 36.3	
	comp=Z,432nm,1.2s						
PMPST	Porto Santo, M	69.01	296	*e*P	P	11 50 35.0	+0.4
PMPST				*i* IAmb	IAmb	11 50 37.2	
	comp=Z,937nm,1.2s						
B21K	Ikpikpuk River	69.18	15	P	P	11 50 36.3	+1.3
	baz=322						
B21K				S	S	11 59 23.8	+0.8
	baz=322						
SMY	Shemya	69.20	39	P	P	11 50 35.9	+0.5
SMY				IAmb	IAmb	11 50 37.2	
	comp=Z,456nm,1.0s						
SMY	Shemya	69.20	39	P	P	11 50 35.9	+0.5
SMY				pmax	pmax		
	comp=Z,456nm,1.0s						
F14K	Arctic Creek	69.26	22	P	P	11 50 36.9	+1.3
	baz=314,SNR=50						
F14K				S	S	11 59 27.1	+3.0
	baz=314						
D19K	Kuna River	69.27	17	P	P	11 50 36.3	+0.7
D19K	Kuna River	69.27	17	P	P	11 50 36.5	+0.8
	baz=320,SNR=504						
D19K				S	S	11 59 24.6	+0.4
	baz=320						
E17K	Hotham Inlet	69.39	19	P	P	11 50 37.1	+0.8
	baz=317,SNR=274						
E17K				S	S	11 59 25.7	+0.1
	baz=317						
FAKI	Fak Fak	69.40	110	P	P	11 50 37.7	+0.4
FAKI	Fak Fak	69.40	110	P	P	11 50 37.0	-0.3
	comp=Z,6µmcomp=Z,7µmcomp=Z,887nm,1.0s						
FAKI	Fak Fak	69.40	110	⇓P	P	11 50 37.6	+0.4
D20K	Etivluk River	69.45	17	P	P	11 50 37.6	+0.9
D20K	Etivluk River	69.45	17	P	P	11 50 37.6	+0.9
	baz=321,SNR=386						
D20K				S	S	11 59 26.6	+0.2
	baz=321						
D20K				S	S	11 59 26.6	+0.2
	baz=321						
E18K	Tukpahlearik C	69.46	19	P	P	11 50 37.5	+0.8
E18K	Tukpahlearik C	69.46	19	P	P	11 50 37.7	+0.9
	baz=318,SNR=431						
E18K				S	S	11 59 26.4	0.0
	baz=318						
E18K				S	S	11 59 26.4	0.0
	baz=318						
MWPI	Manokwari, Pap	69.49	107	P	P	11 50 39.3	+1.5
	comp=Z,8µmcomp=Z,1µm,1.1s						
C21K	Knifeblade Rid	69.51	16	P	P	11 50 38.4	+1.3
	baz=322						
C21K				S	S	11 59 28.3	+1.3
	baz=322						
C21K				S	S	11 59 28.3	+1.3
	baz=322						
F15K	North Star Dit	69.59	21	P	P	11 50 39.0	+1.4
	baz=315,SNR=251						
F15K				S	S	11 59 29.7	+1.7
	baz=315						
F15K				S	S	11 59 29.7	+1.7
	baz=315						
PMAR	Madeira	69.61	296	*e*P	P	11 50 38.9	+0.4
PMAR				*i* IAmb	IAmb	11 50 41.2	
	comp=Z,2µm,1.5s						
NRS	Narsarsuaq	69.72	332	IAmb	IAmb	11 50 40.6	
	comp=Z,550nm,0.9s						
NRS	Narsarsuaq	69.72	332	⇑P	P	11 50 38.7	+0.2
NRS	Narsarsuaq	69.72	332	⇑P	P	11 50 38.7	+0.2
NRS	Narsarsuaq	69.72	332	*i* P	P	11 50 39.1	+0.6
NRS				IAmb	IAmb	11 50 40.4	
	comp=Z,636nm,1.0s						
PMOZ	Porto Moniz, M	69.76	296	P	P	11 50 40.6	+1.2
PMOZ	Porto Moniz, M	69.76	296	*e*P	P	11 50 40.0	+0.6
PMOZ				*i* IAmb	IAmb	11 50 42.1	
	comp=Z,721nm,1.4s						
C23K	Itkillik River	69.83	14	P	P	11 50 40.5	+1.5
	baz=326,SNR=800						
C23K				S	S	11 59 32.1	+1.5
	baz=326						
C23K				S	S	11 59 32.1	+1.5
	baz=326						
NUUK	Nuuk	69.90	337	⇑P	P	11 50 39.6	+0.2
NUUK	Nuuk	69.90	337	*i* P	P	11 50 39.4	-0.1
NUUK				IAmb	IAmb	11 50 41.3	
	comp=Z,532nm,1.1s						
E20K	Nigu River	69.91	17	P	P	11 50 40.4	+0.8
	baz=322						
E20K				S	S	11 59 31.0	-0.7
	baz=322						
MUSN	Musina, Limpop	69.96	220	*i* P	P	11 50 41.8	+1.3
RKPI	Ransiki, Papua	69.97	108	P	P	11 50 41.1	+0.4
	comp=Z,5µmcomp=Z,12µmcomp=Z,310nm,1.2s						
F17K	Baldwin Pennin	70.02	20	P	P	11 50 41.5	+1.3
	baz=318,SNR=236						
F17K				S	S	11 59 34.5	+1.6
	baz=318						
ANM	Nome	70.19	22	P	P	11 50 42.7	+1.4
ANM				IAmb	IAmb	11 50 44.6	
	comp=Z,572nm,1.0s						
ANM	Nome	70.19	22	P	P	11 50 42.7	+1.4
ANM				pmax	pmax		
	comp=Z,572nm,1.0s						
ANM	Nome	70.19	22	P	P	11 50 43.0	+1.7
	baz=315,SNR=76						
ANM				S	S	11 59 38.9	+3.9
	baz=315						
D22K	Ayikyak River	70.19	15	IAmb	IAmb	11 50 44.1	
	comp=Z,721nm,1.1s						
D22K	Ayikyak River	70.19	15	P	P	11 50 42.5	+1.2
	baz=324,SNR=353						
D22K				S	S	11 59 35.4	+0.5
	baz=324						
D22K				S	S	11 59 35.4	+0.5
	baz=324						
E21K	Killik River	70.26	16	P	P	11 50 42.3	+0.5
	baz=323						
E21K				S	S	11 59 34.9	-0.9
	baz=323						
E21K				S	S	11 59 34.9	-0.9
	baz=323						
E19K	Redstone River	70.28	18	P	P	11 50 42.5	+0.6
	baz=321,SNR=278						
E19K				S	S	11 59 34.9	-1.0
	baz=321						
E19K				S	S	11 59 34.9	-1.0
	baz=321						
G15K	Niukluk	70.28	22	P	P	11 50 42.8	+1.0
	baz=316						
G15K				S	S	11 59 38.9	+2.8
	baz=316						
C24K	Franklin Bluff	70.29	14	P	P	11 50 43.2	+1.4
	baz=327						
C24K				S	S	11 59 36.9	+0.9
	baz=327						
F18K	Selawik	70.33	19	P	P	11 50 42.8	+0.8
	baz=319,SNR=329						
F18K				S	S	11 59 38.0	+1.6
	baz=319						
F18K				S	S	11 59 38.0	+1.6
	baz=319						
BROLN	Tlhalogang	70.33	223	*i* P	P	11 50 43.4	+0.6
G16K	Koyuk River	70.48	21	IAmb	IAmb	11 50 46.1	
	comp=Z,652nm,1.1s						
G16K	Koyuk River	70.48	21	P	P	11 50 44.4	+1.4
	baz=317						
G16K				S	S	11 59 40.9	+2.6
	baz=317						
D23K	Nanushuk River	70.54	15	P	P	11 50 44.6	+1.3
	baz=326						
D23K				S	S	11 59 40.8	+1.9
	baz=326						
F19K	Shaleruckik Mo	70.63	18	P	P	11 50 44.0	+0.1
	baz=320,SNR=116						
F19K				S	S	11 59 38.7	-1.3
	baz=320						
IVI	Ivigtut	70.71	333	IAmb	IAmb	11 50 57.0	
	comp=Z,236nm,1.0s						
IVI	Ivigtut	70.71	333	⇑P	P	11 50 44.4	0.0
D24K	Happy Valley	70.75	14	P	P	11 50 45.6	+1.0
	baz=327						
D24K				S	S	11 59 41.9	+0.6
	baz=327						
D24K				S	S	11 59 41.9	+0.6
	baz=327						
C26K	Camden Bay	70.80	12	P	P	11 50 46.7	+1.9
	baz=330						
C26K				S	S	11 59 43.8	+1.9
	baz=330						
C26K				S	S	11 59 43.8	+1.9
	baz=330						
G17K	Kiwalik Mounta	70.88	20	P	P	11 50 46.4	+0.9
	baz=318,SNR=188						
G17K				S	S	11 59 44.1	+1.2
	baz=318						
G17K				S	S	11 59 44.1	+1.2
	baz=318						
F20K	Avaraart Lake	70.97	17	IAmb	IAmb	11 50 48.0	
	comp=Z,426nm,1.1s						
F20K	Avaraart Lake	70.97	17	P	P	11 50 46.6	+0.7
	baz=322,SNR=231						
F20K				S	S	11 59 42.6	-1.2
	baz=322						
F20K				S	S	11 59 42.6	-1.2
	baz=322						
KMPI	Kaimana, Papua	70.98	110	P	P	11 50 48.1	+1.3
	comp=Z,8µmcomp=Z,568nm,1.5s						
E22K	Anaktuvuk Pass	70.98	15	P	P	11 50 46.8	+0.7
	baz=325,SNR=507						
E22K				S	S	11 59 43.3	-0.9
	baz=325						
E22K				S	S	11 59 43.3	-0.9
	baz=325						
TOLK	Toolik Lake Re	71.03	14	P	P	11 50 47.4	+1.1
	baz=327,SNR=769						
TOLK				S	S	11 59 45.4	+0.8
	baz=327						
TOLK				S	S	11 59 45.4	+0.8
	baz=327						
D25K	Kavik River	71.06	13	P	P	11 50 48.1	+1.5
	baz=329,SNR=834						
D25K				S	S	11 59 45.9	+0.8
	baz=329						
D25K				S	S	11 59 45.9	+0.8
	baz=329						
H16K	Elim	71.07	21	P	P	11 50 47.8	+1.2
	baz=317,SNR=118						
H16K				S	S	11 59 47.2	+2.1
	baz=317						
H16K				S	S	11 59 47.2	+2.1
	baz=317						
G18K	Tagagawik	71.13	19	IAmb	IAmb	11 50 49.2	
	comp=Z,919nm,1.6s						
G18K	Tagagawik	71.13	19	P	P	11 50 47.5	+0.5
	baz=320,SNR=97						
G18K				S	S	11 59 45.8	0.0
	baz=320						
PHDHD	Phuduhudu	71.19	226	*i* P	P	11 50 48.9	+0.9
ACRG	Accra	71.22	263	IAmb	IAmb	11 50 50.2	
	comp=Z,546nm,0.8s						
BAKI	Biak	71.25	106	P	P	11 50 47.3	-1.2
	comp=Z,6µmcomp=Z,5µmcomp=Z,256nm,1.4s						
A36M	Sachs Harbour	71.26	5	P	P	11 50 48.6	+1.0
	baz=347,SNR=1000						
A36M				S	S	11 59 48.0	+1.0
	baz=347						
C27K	Jago River	71.26	12	P	P	11 50 49.5	+1.8
	baz=332						
C27K				S	S	11 59 48.2	+0.9
	baz=332						
C27K				S	S	11 59 48.2	+0.9
	baz=332						
G19K	Purcell Mounta	71.34	18	P	P	11 50 49.0	+0.9
	baz=321,SNR=128						
G19K				S	S	11 59 48.2	0.0
	baz=321						
G19K				S	S	11 59 48.2	0.0
	baz=321						
F21K	Alatna River	71.36	17	IAmb	IAmb	11 50 51.9	
	comp=Z,424nm,0.8s						
F21K	Alatna River	71.36	17	P	P	11 50 49.2	+0.9
	baz=324,SNR=479						
F21K				S	S	11 59 48.5	+0.1
	baz=324						
F21K				S	S	11 59 48.5	+0.1
	baz=324						
F22K	John River	71.42	16	P	P	11 50 49.9	+1.2
	baz=325						
F22K				S	S	11 59 49.0	-0.1
	baz=325						
MREMI	Moremi	71.46	222	*i* P	P	11 50 50.2	+0.7
E23K	Chandalar	71.51	15	IAmb	IAmb	11 50 52.0	
	comp=Z,643nm,1.1s						
E23K	Chandalar	71.51	15	P	P	11 50 50.5	+1.2
	baz=327,SNR=385						
E23K				S	S	11 59 50.8	+0.5
	baz=327						
MACI	Morro de la Ar	71.64	292	P	P	11 50 50.4	-0.4
SRPI	Serui, Papua	71.78	106	P	P	11 50 51.9	+0.2
	comp=Z,3µmcomp=Z,6µmcomp=Z,190nm,0.8s						
XAUDM	Khaudum	71.80	229	P	P	11 50 51.5	-0.2
GIRL	Giralia	71.82	138	IAmb	IAmb	11 50 56.3	
	comp=Z,198nm,0.8s						
G21K	Allakaket	71.93	17	P	P	11 50 52.1	+0.4
	baz=324,SNR=189						
G21K				S	S	11 59 54.4	-0.5
	baz=324						
GMARE	Gumare	71.95	228	IAmb	IAmb	11 50 55.0	
	comp=Z,340nm,1.4s						
H19K	Roundabout Mou	71.99	19	IAmb	IAmb	11 50 54.7	
	comp=Z,533nm,0.9s						
H19K	Roundabout Mou	71.99	19	P	P	11 50 52.9	+0.9
	baz=322,SNR=212						
H19K				S	S	11 59 56.4	+0.9
	baz=322						
SAUI	Saumlaki	72.03	115	P	P	11 50 54.5	+1.4
SAUI	Saumlaki	72.03	115	P	P	11 50 54.5	+1.4
SAUI	Saumlaki	72.03	115	⇓P	P	11 50 54.3	+1.2
D27M	Malcolm River	72.05	11	IAmb	IAmb	11 50 56.9	
	comp=Z,275nm,0.9s						
D27M	Malcolm River	72.05	11	P	P	11 50 54.0	+1.5
	baz=334,SNR=130						
D27M				S	S	11 59 58.9	+2.5
	baz=334						
KHWEE	KHWEE	72.06	224	*i* P	P	11 50 53.8	+0.7
J14K	Nanvaranak Lak	72.06	23	P	P	11 50 53.9	+1.4
	baz=317						
J14K				S	S	11 59 59.3	+2.9
	baz=317						
COLD	Coldfoot	72.08	15	P	P	11 50 53.6	+1.0
	baz=327,SNR=467						
COLD				S	S	11 59 56.7	0.0
	baz=327						
I17K	Unalakleet	72.08	21	P	P	11 50 54.0	+1.4
	baz=319,SNR=162						
I17K				S	S	11 59 58.4	+1.8
	baz=319						
E25K	Arctic Village	72.25	13	IAmb	IAmb	11 50 56.4	
	comp=Z,487nm,1.0s						
E25K	Arctic Village	72.25	13	P	P	11 50 54.9	+1.2
	baz=330,SNR=436						
E25K				S	S	12 00 00.1	+1.5
	baz=330						
E25K				S	S	12 00 00.1	+1.5
	baz=330						
K13K	Kusilvak Mount	72.30	24	P	P	11 50 55.2	+1.3
	baz=316						
K13K				S	S	12 00 01.4	+2.2
	baz=316						
K13K				S	S	12 00 01.4	+2.2
	baz=316						
IMAR	Indian Mountai	72.30	17	P	P	11 50 54.1	+0.3

D28M	**Stokes Point**	72.31	11	P	P	11 50 55.6 +1.7
	baz=336					
D28M				S	S	12 00 02.1 +3.0
	baz=336					
F24K	**Squaw Lake**	72.32	15	IAmb	IAmb	11 50 56.9
	comp=Z,259nm,1.1s					
F24K	**Squaw Lake**	72.32	15	P	P	11 50 55.3 +1.2
	baz=328,SNR=173					
F24K				S	S	12 00 00.6 +1.1
	baz=328					
H20K	**Anotleneega Mo**	72.42	18	P	P	11 50 55.2 +0.6
	baz=323,SNR=378					
H20K				S	S	12 00 00.9 +0.4
	baz=323					
H20K				S	S	12 00 00.9 +0.4
	baz=323					
GCSA	**Galena City Sc**	72.49	19	P	P	11 50 56.2 +1.2
	baz=322,SNR=228					
GCSA				S	S	12 00 01.9 +0.7
	baz=322					
ILON	**Igloolik, Nuna**	72.52	350	IAmb	IAmb	11 50 56.9
	comp=Z,608nm,1.2s					
G23K	**Bananza Creek**	72.56	16	IAmb	IAmb	11 50 58.2
	comp=Z,556nm,1.1s					
G23K	**Bananza Creek**	72.56	16	P	P	11 50 56.6 +1.1
	baz=327,SNR=331					
G23K				S	S	12 00 02.0 -0.2
	baz=327					
G23K				S	S	12 00 02.0 -0.2
	baz=327					
J16K	**Anvik River**	72.57	22	P	P	11 50 56.9 +1.3
	baz=319					
J16K				S	S	12 00 04.6 +2.4
	baz=319					
F25K	**Christian Rive**	72.70	14	IAmb	IAmb	11 50 59.6
	comp=Z,630nm,1.0s					
F25K	**Christian Rive**	72.70	14	P	P	11 50 57.8 +1.5
	baz=330,SNR=571					
F25K				S	SKiKP	12 00 06.9 -0.8
	baz=330					
H21K	**Melozitna Rive**	72.79	17	P	P	11 50 57.9 +1.0
	baz=325,SNR=348					
H21K				S	S	12 00 05.0 +0.3
	baz=325					
H21K				S	S	12 00 05.0 +0.3
	baz=325					
E28M	**Babbage River**	72.86	11	P	P	11 50 58.6 +1.5
	baz=335,SNR=482					
E28M				S	SKiKP	12 00 08.0 +0.2
	baz=335					
M11K	**Mekoryuk**	72.88	26	IAmb	IAmb	11 51 01.2
	comp=Z,458nm,1.1s					
M11K	**Mekoryuk**	72.88	26	P	P	11 50 59.4 +2.1
	baz=315,SNR=7.9					
M11K				S	SKiKP	12 00 10.6 +2.6
	baz=315					
M11K				S	SKiKP	12 00 10.6 +2.6
	baz=315					
F26K	**Sheenjek River**	72.89	13	IAmb	IAmb	11 51 01.2
	comp=Z,340nm,1.1s					
F26K	**Sheenjek River**	72.89	13	P	P	11 50 58.6 +1.2
	baz=331,SNR=312					
F26K				S	SKiKP	12 00 08.5 +0.6
	baz=331					
E27K	**Coleen River**	72.90	12	P	P	11 50 58.7 +1.3
	baz=334,SNR=662					
E27K				S	SKiKP	12 00 07.8 -0.2
	baz=334					
E27K				S	SKiKP	12 00 07.8 -0.2
	baz=334					
J17K	**VABM Dome**	72.93	21	IAmb	IAmb	11 51 00.4
	comp=Z,435nm,1.0s					
J17K	**VABM Dome**	72.93	21	P	P	11 50 58.9 +1.3
	baz=320					
J17K				S	SKiKP	12 00 07.8 -0.3
	baz=320					
J17K				S	SKiKP	12 00 07.8 -0.3
	baz=320					
H22K	**Ishtalitna Cre**	72.93	17	P	P	11 50 58.8 +1.1
	baz=326,SNR=213					
H22K				S	S	12 00 06.4 0.0
	baz=326					
H22K				S	S	12 00 06.4 0.0
	baz=326					
LPHEP	**Lephephe**	72.96	223	P	P	11 50 58.5 0.0
LPHEP				IAmb	IAmb	11 51 00.6
	comp=Z,204nm,0.9s					
LPHEP	**Lephephe**	72.96	223	*i* P	P	11 50 59.3 +0.8
K15K	**Wolf Creek Mou**	73.03	23	P	P	11 50 60.0 +1.7
	baz=318					
K15K				S	SKiKP	12 00 09.8 +1.6
	baz=318					
K15K				S	SKiKP	12 00 09.8 +1.6
	baz=318					
BMAR	**Burnt Mountain**	73.04	13	P	P	11 50 59.6 +1.3
I20K	**Naaghedeneel**	73.08	18	P	P	11 50 59.9 +1.5
	baz=324					
I20K				S	SKiKP	12 00 08.6 +0.4
	baz=324					
G24K	**Hadweenzic Riv**	73.11	15	IAmb	IAmb	11 51 01.8
	comp=Z,562nm,0.9s					
G24K	**Hadweenzic Riv**	73.11	15	P	P	11 51 00.0 +1.3
	baz=329,SNR=333					
G24K				S	SKiKP	12 00 09.0 +0.7
	baz=329					
G24K				S	SKiKP	12 00 09.0 +0.7
	baz=329					
E29M	**Blow River**	73.30	11	P	P	11 51 01.0 +1.3
	baz=336					
E29M				S	S	12 00 12.4 +2.1
	baz=336					
G25K	**Bearman Lake**	73.33	14	P	P	11 51 01.7 +1.8
	baz=330,SNR=158					
G25K				S	S	12 00 10.6 -0.1
	baz=330					
L14K	**Kuka Creek**	73.37	24	P	P	11 51 01.9 +1.6
	baz=318,SNR=129					
L14K				S	S	12 00 13.8 +2.5
	baz=318					
L14K				S	S	12 00 13.8 +2.5
	baz=318					
J19K	**Poorman**	73.42	19	P	P	11 51 01.6 +1.1
	baz=323,SNR=426					
J19K				S	S	12 00 12.0 +0.2
	baz=323					
J19K				S	S	12 00 12.0 +0.2
	baz=323					
L15K	**Ungalak Mounta**	73.51	23	P	P	11 51 02.6 +1.6
	baz=319					
L15K				S	S	12 00 15.3 +2.5
	baz=319					
J18K	**Innoko River**	73.54	20	P	P	11 51 02.2 +1.0
	baz=322					
J18K				S	S	12 00 13.7 +0.5
	baz=322					
SPIA	**Saint Paul Isl**	73.60	30	P	P	11 51 02.8 +1.1
	baz=313					
G26K	**Porcupine Rive**	73.61	13	P	P	11 51 03.1 +1.5
	baz=332,SNR=148					
G26K				S	S	12 00 16.4 +2.5
	baz=332					
J20K	**Nowinta River**	73.66	19	P	P	11 51 03.2 +1.3
	baz=324					
J20K				S	S	12 00 15.4 +0.8
	baz=324					
J20K				S	S	12 00 15.4 +0.8
	baz=324					
K17K	**Iditarod**	73.68	21	P	P	11 51 03.3 +1.2
	baz=321					
K17K				S	S	12 00 15.8 +1.0
	baz=321					
F28M	**Old Crow**	73.70	12	IAmb	IAmb	11 51 05.2
	comp=Z,623nm,1.1s					
F28M	**Old Crow**	73.70	12	P	P	11 51 03.4 +1.3
	baz=335,SNR=356					
F28M				S	S	12 00 16.8 +1.9
	baz=335					
H24K	**Noodor Dome**	73.76	15	IAmb	IAmb	11 51 05.6
	comp=Z,451nm,0.9s					
H24K	**Noodor Dome**	73.76	15	P	P	11 51 03.9 +1.3
	baz=329,SNR=286					
H24K				S	S	12 00 15.6 -0.1
	baz=329					
H24K				S	S	12 00 15.6 -0.1
	baz=329					
MBWA	**Marble Bar**	73.77	133	P	P	11 51 02.1 -1.0
MBWA	**Marble Bar**	73.77	133	P	P	11 51 03.0 -0.1
MBWA	**Marble Bar**	73.77	133	P	P	11 51 03.3 +0.1
MBWA	**Marble Bar**	73.77	133	⇓P	P	11 51 03.2 +0.1
MBWA	**Marble Bar**	73.77	133	P	P	11 51 03.1 -0.1
MBWA	**Marble Bar**	73.77	133	P	P	11 51 03.2 +0.1
MBWA				PcP	PcP	11 51 17.4 -0.2
MBWA				pP	pP	11 51 54.6 +0.3
MBWA				sP	sP	11 52 18.0 +0.8
SMPI	**Sarmi**	73.78	105	P	P	11 51 03.9 +0.6
	comp=Z,8µmcomp=Z,280nm,1.1s					
M13K	**Dall Lake**	73.84	25	P	P	11 51 05.5 +2.5
	baz=318					
M13K				S	S	12 00 20.9 +4.4
	baz=318					
C36M	**Paulatuk**	73.93	5	P	P	11 51 03.7 +0.4
	baz=348,SNR=408					
C36M				S	S	12 00 17.3 0.0
	baz=348					
INK	**Inuvik**	73.98	9	P	P	11 51 04.5 +0.8
	comp=Z,753nm,0.9s,baz=2.2,slow=7.5,SNR=1383					
	comp=Z,753nm,0.9s					
INK	**Inuvik**	73.98	9	⇑P	P	11 51 04.8 +1.2
INK	**Inuvik**	73.98	9	P	P	11 51 04.9 +1.2
	baz=340,SNR=826					
INK				S	S	12 00 18.7 +0.8
	baz=340					
I23K	**Minto, Yukon-K**	74.02	16	P	P	11 51 05.2 +1.3
	baz=328,SNR=322					
I23K				S	S	12 00 18.8 +0.3
	baz=328					
I23K				S	S	12 00 18.8 +0.3
	baz=328					
GRTLG	**Ghanzi**	74.03	227	IAmb	IAmb	11 51 07.3
	comp=Z,421nm,1.3s					
GRTLG	**Ghanzi**	74.03	227	*i* P	P	11 51 06.2 +1.4
M14K	**Bethel**	74.05	24	P	P	11 51 05.9 +1.8
	baz=318,SNR=230					
M14K				S	S	12 00 21.5 +2.7
	baz=318					
M14K				S	S	12 00 21.5 +2.7
	baz=318					
L16K	**Owhat River**	74.11	22	P	P	11 51 06.2 +1.7
	baz=320,SNR=258					
L16K				S	S	12 00 22.7 +3.1
	baz=320					
L16K				S	S	12 00 22.7 +3.1
	baz=320					
G27K	**Doyon Strip**	74.13	13	IAmb	IAmb	11 51 07.9
	comp=Z,579nm,0.8s					
G27K	**Doyon Strip**	74.13	13	P	P	11 51 06.2 +1.6
	baz=334					
G27K				S	S	12 00 20.7 +1.0
	baz=334					
G27K				S	S	12 00 20.7 +1.0
	baz=334					
L17K	**Donlin**	74.13	22	P	P	11 51 06.3 +1.6
	baz=321					
L17K				S	S	12 00 21.2 +1.3
	baz=321					
L17K				S	S	12 00 21.2 +1.3
	baz=321					
PSA00	**Pilbara Seismi**	74.16	133	P	P	11 51 05.3 -0.1
PSA00				IAmb	IAmb	11 51 06.7
	comp=Z,239nm,1.0s					
PSA00	**Pilbara Seismi**	74.16	133	P	P	11 51 04.8 -0.5
AIS	**Amsterdam Isla**	74.19	174	P	P	11 51 06.3 +1.2
AIS				IAmb	IAmb	11 51 11.3
	comp=Z,264nm,1.0s					
AIS	**Amsterdam Isla**	74.19	174	⇑P	P	11 51 07.5 +2.4
ADK	**Adak**	74.26	36	P	P	11 51 04.7 -0.9
ADK	**Adak**	74.26	36	P	P	11 51 05.6 +0.1
ADK	**Adak**	74.26	36	P	P	11 51 04.7 -0.9
ADK				pmax	pmax	
	comp=Z,134nm,1.0s					
ADK	**Adak**	74.26	36	⇑P	P	11 51 05.4 -0.2
P08K	**Saint George I**	74.27	30	P	P	11 51 07.3 +1.8
	baz=314,SNR=9.4					
P08K				S	S	12 00 26.3 +4.8
	baz=314					
P08K				S	S	12 00 26.3 +4.8
	baz=314					
F30M	**Barrier River**	74.33	10	P	P	11 51 06.8 +1.1
	baz=338,SNR=799					
F30M				S	S	12 00 22.9 +1.0
	baz=338					
DBIC	**Dimbokro**	74.34	267	P	P	11 51 05.7 -1.0
	comp=Z,295nm,0.6s,baz=76,slow=6.6,SNR=201					
	comp=Z,295nm,0.6s					
DBIC	**Dimbokro**	74.34	267	IAmb	IAmb	11 51 08.2
	comp=Z,370nm,0.8s					
DBIC	**Dimbokro**	74.34	267	⇑P	P	11 51 05.6 -1.0
DBIC	**Dimbokro**	74.34	267	P	P	11 51 05.6 -1.0
K20K	**Telida**	74.35	19	P	P	11 51 07.3 +1.3
	baz=324					
K20K				S	S	12 00 22.6 +0.4
	baz=324					
K20K				S	S	12 00 22.6 +0.4
	baz=324					
CHUM	**Lake Minchumin**	74.37	18	P	P	11 51 07.3 +1.3
	baz=325,SNR=158					
CHUM				S	S	12 00 22.5 +0.1
	baz=325					
LBTB	**Lobatse**	74.43	222	IAmb	IAmb	11 51 09.4
	comp=Z,982nm,1.4s					
LBTB	**Lobatse**	74.43	222	⇑P	P	11 51 07.5 +0.6
LBTB	**Lobatse**	74.43	222	*i* P	P	11 51 08.1 +1.1
LBTB	**Lobatse**	74.43	222	⇑P	P	11 51 07.5 +0.6
POKR	**Poker Plat Res**	74.48	16	P	P	11 51 08.1 +1.5
	baz=329,SNR=231					
POKR				S	S	12 00 24.1 +0.5
	baz=329					
POKR				S	S	12 00 24.1 +0.5
	baz=329					
M15K	**Kasigluk River**	74.50	23	P	P	11 51 08.5 +1.7
	baz=319					
M15K				S	S	12 00 26.6 +2.7
	baz=319					
BPAW	**Bear Paw Mtn.**	74.52	18	IAmb	IAmb	11 51 09.1
	comp=Z,704nm,1.1s					
BPAW	**Bear Paw Mtn.**	74.52	18	P	P	11 51 07.4 +0.5
	baz=326,SNR=89					
BPAW				S	S	12 00 22.5 -1.7
	baz=326					
L18K	**Granite Mounta**	74.54	21	IAmb	IAmb	11 51 09.8
	comp=Z,529nm,1.1s					
L18K	**Granite Mounta**	74.54	21	P	P	11 51 08.2 +1.2
	baz=322,SNR=122					
L18K				S	S	12 00 23.5 -0.8
	baz=322					
L18K				S	S	12 00 23.5 -0.8
	baz=322					
NEA2	**Nenana**	74.56	17	P	P	11 51 07.7 +0.6
	baz=328,SNR=873					
NEA2				S	S	12 00 23.2 -1.3
	baz=328					
COLA	**College**	74.59	16	P	P	11 51 07.9 +0.6
COLA	**College**	74.59	16	P	P	11 51 07.5 +0.3
COLA	**College**	74.59	16	*c i* P	P	11 51 08.0 +0.8
COLA				pmax	pmax	
	comp=Z,1µm,0.9s					
COLA	**College**	74.59	16	⇑P	P	11 51 07.8 +0.6
COLA	**College**	74.59	16	P	P	11 51 08.1 +0.9
	baz=329					
COLA				S	S	12 00 23.7 -1.1
	baz=329					
COLA	**College**	74.59	16	P	P	11 51 07.6 +0.4
COLA	**College**	74.59	16	P	P	11 51 08.2 +0.9
COLA				PcP	PcP	11 51 23.1 +2.6
COLA				sP	sP	11 52 21.1 -0.1
KGCAE	**Kacgae**	74.61	226	*i* P	P	11 51 09.2 +1.2
TSUM	**Tsumeb**	74.63	231	P	P	11 51 08.3 +0.1
TSUM				IAmb	IAmb	11 51 10.2
	comp=Z,474nm,1.3s					
TSUM	**Tsumeb**	74.63	231	⇑P	P	11 51 08.5 +0.3
G29M	**Pine Creek**	74.64	11	IAmb	IAmb	11 51 10.5
	comp=Z,596nm,1.0s					
G29M	**Pine Creek**	74.64	11	P	P	11 51 08.7 +1.1
	baz=337,SNR=214					
G29M				S	S	12 00 27.8 +2.4
	baz=337					
H27K	**Steamboat Moun**	74.67	13	P	P	11 51 09.1 +1.3
	baz=334,SNR=860					
H27K				S	S	12 00 27.7 +1.9
	baz=334					
DRS	**Darwin Rock St**	74.75	118	P	P	11 51 08.8 -0.1
N14K	**Kuskokwak Cree**	74.76	24	P	P	11 51 10.0 +1.7
	baz=319					
N14K				S	S	12 00 29.8 +3.0
	baz=319					
F31M	**Tsiigehtchic**	74.77	9	P	P	11 51 09.2 +1.0
	baz=340,SNR=321					
F31M				S	S	12 00 26.8 +0.2
	baz=340					
M16K	**Timber Creek**	74.80	23	P	P	11 51 10.3 +1.8
	baz=321					
M16K				S	S	12 00 28.8 +1.6
	baz=321					
M16K				S	S	12 00 28.8 +1.6
	baz=321					
G30M	**tAoh Zraii Nji**	74.85	11	P	P	11 51 09.7 +0.9
	baz=338,SNR=881					
G30M				S	S	12 00 27.6 -0.2
	baz=338					
WRH	**Wood River Hil**	74.89	16	IAmb	IAmb	11 51 10.7
	comp=Z,306nm,1.0s					
IL31		74.89	16	IAmb	IAmb	11 51 10.8
	comp=Z,589nm,1.1s					
ILAR	**Eielson Array**	74.89	16	P	P	11 51 08.8 -0.2
	comp=Z,363nm,1.0s,baz=333,slow=3.8,SNR=940					
ILAR				PP	PP	11 53 59.7 +0.8
	comp=Z,65nm,0.8s,baz=319,slow=6.8,SNR=7.8					
	comp=Z,363nm,1.0s					
ILAR	**Eielson Array**	74.89	16	P	P	11 51 09.4 +0.4
ILAR	**Eielson Array**	74.89	16	P	P	11 51 09.4 +0.4
SKOMA	**Sekoma**	74.94	223	*i* P	P	11 51 10.6 +0.7
M17K	**Holitna River**	74.96	22	P	P	11 51 11.2 +1.8
	baz=322,SNR=173					
M17K				S	S	12 00 30.9 +1.8
	baz=322					
L19K	**White Mountain**	75.09	20	IAmb	IAmb	11 51 13.1
	comp=Z,708nm,1.2s					
L19K	**White Mountain**	75.09	20	P	P	11 51 11.5 +1.3
	baz=324					
L19K				S	S	12 00 31.3 +0.8
	baz=324					
L19K				S	S	12 00 31.3 +0.8
	baz=324					
N15K	**Kwethluk River**	75.10	24	P	P	11 51 12.1 +1.9
	baz=320					
N15K				S	S	12 00 34.2 +3.5
	baz=320					
N15K				S	S	12 00 34.2 +3.5
	baz=320					
FITZ	**Fitzroy Crossi**	75.16	126	P	P	11 51 11.6 +0.5
G31M	**Satah River**	75.19	10	P	P	11 51 11.4 +0.9
	baz=340,SNR=391					
G31M				S	S	12 00 32.2 +1.0
	baz=340					
I26K	**Coal Creek Min**	75.19	14	IAmb	IAmb	11 51 13.4
	comp=Z,524nm,0.9s					
I26K	**Coal Creek Min**	75.19	14	P	P	11 51 11.8 +1.1
	baz=333,SNR=496					
I26K				S	S	12 00 33.1 +1.7
	baz=333					
I26K				S	S	12 00 33.1 +1.7
	baz=333					
HDA	**Harding Lake**	75.19	16	IAmb	IAmb	11 51 12.0
	comp=Z,478nm,1.2s					
HDA	**Harding Lake**	75.19	16	P	P	11 51 10.3 -0.5
	baz=330,SNR=110					
HDA				S	S	12 00 28.0 -3.6
	baz=330					
MTN	**Manton Dam**	75.20	119	IAmb	IAmb	11 51 13.2
	comp=Z,141nm,0.6s					
I27K	**Kandik River**	75.22	13	IAmb	IAmb	11 51 13.7
	comp=Z,582nm,0.9s					
I27K	**Kandik River**	75.22	13	P	P	11 51 12.1 +1.2
	baz=334,SNR=394					
I27K				S	S	12 00 34.1 +2.2
	baz=334					
I27K				S	S	12 00 34.1 +2.2
	baz=334					
PPLA	**Purkeypile**	75.22	19	P	P	11 51 11.3 +0.2
	baz=326,SNR=94					
PPLA				S	S	12 00 30.6 -1.5
	baz=326					
H29M	**Whitestone**	75.22	12	P	P	11 51 11.8 +0.9
H29M	**Whitestone**	75.22	12	P	P	11 51 12.0 +1.2
	baz=336,SNR=467					
H29M				S	S	12 00 32.7 +0.9
	baz=336					
ATKA	**Atka Island**	75.22	35	P	P	11 51 10.7 -0.4
ATKA	**Atka Island**	75.22	35	⇑P	P	11 51 10.2 -0.9
TRF	**Thorofare Moun**	75.24	18	P	P	11 51 11.3 +0.1
	baz=327,SNR=63					
TRF				S	S	12 00 29.9 -2.5
	baz=327					
N16K	**Nishlik Lake**	75.28	23	P	P	11 51 13.3 +2.0
	baz=321					
N16K				S	S	12 00 35.2 +2.5
	baz=321					
GENI	**Genyem**	75.29	105	P	P	11 51 12.7 +0.7
	comp=Z,14µmcomp=Z,417nm,0.9s					
GENI	**Genyem**	75.29	105	⇑P	P	11 51 12.9 +0.8
MCK	**McKinley**	75.32	17	IAmb	IAmb	11 51 13.6
	comp=Z,578nm,1.2s					
MCK	**McKinley**	75.32	17	P	P	11 51 11.4 -0.1
	baz=328,SNR=151					
MCK				S	S	12 00 29.5 -3.5
	baz=328					
EPYK	**Eagle Plains**	75.35	11	IAmb	IAmb	11 51 13.8
	comp=Z,778nm,1.1s					
EPYK	**Eagle Plains**	75.35	11	P	P	11 51 12.1 +0.5
	baz=338,SNR=211					
EPYK				S	S	12 00 34.0 +0.8
	baz=338					
J25K	**Salcha River,**	75.36	15	IAmb	IAmb	11 51 13.6
	comp=Z,341nm,0.9s					
J25K	**Salcha River,**	75.36	15	P	P	11 51 12.2 +0.5
	baz=331,SNR=310					
J25K				S	S	12 00 31.4 -2.1
	baz=331					
J25K				S	S	12 00 31.4 -2.1
	baz=331					
M18K	**Stony River**	75.37	21	P	P	11 51 13.1 +1.4
	baz=323					
M18K				S	S	12 00 34.5 +1.1
	baz=323					
O14K	**Tigyukauivet M**	75.41	25	P	P	11 51 13.4 +1.4
	baz=319					
O14K				S	S	12 00 34.7 +0.8
	baz=319					
O14K				S	S	12 00 34.7 +0.8
	baz=319					
MAKGR	**Makgori**	75.49	222	*i* P	P	11 51 13.6 +0.5
KNRA	**Kununurra**	75.51	122	P	P	11 51 13.5 +0.3
RND	**Reindeer**	75.62	17	IAmb	IAmb	11 51 14.7
	comp=Z,612nm,1.0s					
JAY	**Jayapura**	75.66	104	P	P	11 51 14.4 +0.2
	comp=Z,43nm,0.5s,baz=192,slow=2.6,SNR=16					
JAY				pP	pP	11 52 08.0 +2.3
	comp=Z,72nm,0.9s,baz=284,slow=3.7,SNR=3.6					
	comp=Z,43nm,0.5s					
JAY	**Jayapura**	75.66	104	P	P	11 51 15.5 +1.3
I28M	**Miner Creek**	75.66	13	IAmb	IAmb	11 51 15.8
	comp=Z,572nm,0.8s					
I28M	**Miner Creek**	75.66	13	P	P	11 51 14.2 +0.7
	baz=335,SNR=441					
I28M				S	S	12 00 38.0 +1.1
	baz=335					
N17K	**Nushagak Hills**	75.73	22	IAmb	IAmb	11 51 17.4
	comp=Z,751nm,1.2s					
N17K	**Nushagak Hills**	75.73	22	P	P	11 51 15.5 +1.7
	baz=322,SNR=103					
N17K				S	S	12 00 40.7 +3.2
	baz=322					
M20K	**Styx River**	75.81	20	P	P	11 51 15.1 +0.8
	baz=325					
M20K				S	S	12 00 36.7 -1.8
	baz=325					
M20K				S	S	12 00 36.7 -1.8
	baz=325					
J26L	**Joseph Creek**	75.83	15	P	P	11 51 15.2 +0.8
	baz=332,SNR=695					
J26L				S	S	12 00 39.8 +1.1
	baz=332					
J26L				S	S	12 00 39.8 +1.1
	baz=332					
KOOLE	**Kule**	75.89	227	IAmb	IAmb	11 51 17.6
	comp=Z,582nm,1.3s					
KOOLE	**Kule**	75.89	227	*i* P	P	11 51 16.6 +1.2
O15K	**Ungalikthiuk R**	75.95	24	IAmb	IAmb	11 51 18.2
	comp=Z,706nm,1.1s					
O15K	**Ungalikthiuk R**	75.95	24	P	P	11 51 16.5 +1.4
	baz=320					
O15K				S	S	12 00 42.3 +2.4
	baz=320					

K24K	**Donnelly Dome**	75.98	16	P	P	11 51 15.3	+0.1
	baz=331,SNR=510						
K24K				S	S	12 00 36.8	-3.4
	baz=331						
K24K				S	S	12 00 36.8	-3.4
	baz=331						
N18K	**Kilae Creek**	76.00	22	IAmb	IAmb	11 51 18.7	
	comp=Z,411nm,1.2s						
N18K	**Kilae Creek**	76.00	22	P	P	11 51 16.9	+1.5
	baz=323,SNR=50						
N18K				S	S	12 00 40.6	+0.1
	baz=323						
N18K				S	S	12 00 40.6	+0.1
	baz=323						
I29M	**Ogilvie Camp,**	76.02	12	P	P	11 51 15.9	+0.4
	baz=336,SNR=613						
I29M				S	S	12 00 40.0	-0.6
	baz=336						
CUT	**Chulitna**	76.12	18	P	P	11 51 15.8	-0.2
	baz=327,SNR=87						
CUT				S	S	12 00 37.7	-4.0
	baz=327						
LKGWB	**Lokgwabe**	76.15	226	*i* P	P	11 51 16.1	-0.7
SKT	**Skwentna**	76.15	19	P	P	11 51 16.2	-0.1
SKT	**Skwentna**	76.15	19	P	P	11 51 16.1	-0.1
	baz=326,SNR=367						
SKT				S	S	12 00 37.8	-4.3
	baz=326						
O16K	**Kokwok River B**	76.18	23	P	P	11 51 18.1	+1.7
	baz=322						
O16K				S	S	12 00 45.5	+3.1
	baz=322						
WAT1	**Susitna Watana**	76.18	17	P	P	11 51 16.2	-0.2
	baz=329						
WAT1				S	S	12 00 37.7	-4.8
	baz=329						
SCRK	**Sand Creek**	76.21	15	P	P	11 51 17.5	+0.8
	baz=332,SNR=443						
SCRK				S	S	12 00 40.6	-2.3
	baz=332						
H31M	**Peel River**	76.23	10	P	P	11 51 17.2	+0.6
	baz=340,SNR=380						
H31M				S	S	12 00 43.1	+0.2
	baz=340						
RIDG	**Independent Ri**	76.23	15	IAmb	IAmb	11 51 18.6	
	comp=Z,801nm,1.2s						
RIDG	**Independent Ri**	76.23	15	P	P	11 51 16.8	+0.1
	baz=331,SNR=204						
RIDG				S	S	12 00 40.4	-2.6
	baz=331						
DHY	**Denali Highway**	76.25	17	IAmb	IAmb	11 51 19.3	
	comp=Z,451nm,0.8s						
DHY	**Denali Highway**	76.25	17	P	P	11 51 16.9	-0.1
	baz=330,SNR=271						
DHY				S	S	12 00 39.2	-4.3
	baz=330						
N19K	**Bonanza Creek**	76.30	21	P	P	11 51 17.9	+0.8
N19K				IAmb	IAmb	11 51 22.0	
	comp=Z,406nm,1.0s						
N19K	**Bonanza Creek**	76.30	21	P	P	11 51 18.4	+1.2
	baz=324,SNR=124						
N19K				S	S	12 00 44.2	+0.3
	baz=324						
N19K				S	S	12 00 44.2	+0.3
	baz=324						
O17K	**Koliganek Bris**	76.35	23	P	P	11 51 18.8	+1.5
	baz=322,SNR=73						
O17K				S	S	12 00 45.4	+1.1
	baz=322						
I30M	**Mount Dempster**	76.47	11	P	P	11 51 18.7	+0.6
	baz=338						
I30M				S	S	12 00 44.7	-1.0
	baz=338						
DOT	**Dot Lake**	76.48	15	IAmb	IAmb	11 51 20.2	
	comp=Z,431nm,1.0s						
WAT6	**Susitna Watana**	76.59	17	P	P	11 51 19.0	+0.1
	baz=329,SNR=178						
WAT6				S	S	12 00 43.0	-4.2
	baz=329						
N20K	**Mount Spurr**	76.62	20	P	P	11 51 19.0	+0.1
	baz=326						
N20K				S	S	12 00 44.5	-2.9
	baz=326						
N20K				S	S	12 00 44.5	-2.9
	baz=326						
SPCR	**Spurr Chakacha**	76.62	20	P	P	11 51 19.0	+0.1
	baz=326,SNR=32						
SPCR				S	S	12 00 43.8	-3.6
	baz=326						
M22K	**Willow**	76.71	19	P	P	11 51 19.3	+0.1
	baz=328,SNR=90						
M22K				S	S	12 00 44.5	-3.5
	baz=328						
PAX	**Paxson**	76.78	16	P	P	11 51 20.2	+0.4
	baz=331,SNR=396						
PAX				S	S	12 00 46.0	-3.1
	baz=331						
SUA	**Susitna One**	76.79	19	IAmb	IAmb	11 51 22.3	
	comp=Z,580nm,1.0s						
SUA	**Susitna One**	76.79	19	P	P	11 51 20.2	+0.3
	baz=327,SNR=18						
SUA				S	S	12 00 46.1	-3.2
	baz=327						
O19K	**Port Alsworth**	76.85	21	IAmb	IAmb	11 51 22.8	
	comp=Z,583nm,1.2s						
O19K	**Port Alsworth**	76.85	21	P	P	11 51 21.2	+1.1
	baz=324,SNR=69						
O19K				S	S	12 00 49.8	+0.1
	baz=324						
O19K				S	S	12 00 49.8	+0.1
	baz=324						
O18K	**Koktuh Hills**	76.86	22	P	P	11 51 21.7	+1.5
	baz=324,SNR=105						
O18K				S	S	12 00 52.1	+2.1
	baz=324						
O18K				S	S	12 00 52.1	+2.1
	baz=324						
J29N	**Klondike Camp**	76.88	12	P	P	11 51 21.5	+1.2
	baz=337,SNR=39						
J29N				S	S	12 00 49.5	-0.5
	baz=337						
DAWY	**Dawson**	77.02	13	IAmb	IAmb	11 51 23.5	
	comp=Z,728nm,1.0s						
DAWY	**Dawson**	77.02	13	P	P	11 51 22.0	+0.9
	baz=336,SNR=492						
DAWY				S	S	12 00 52.0	+0.4
	baz=336						
J30M	**Hart River**	77.08	12	IAmb	IAmb	11 51 24.2	
	comp=Z,646nm,1.1s						
J30M	**Hart River**	77.08	12	P	P	11 51 22.7	+1.2
	baz=338,SNR=397						
J30M				S	S	12 00 52.2	-0.1
	baz=338						
NIKH	**Nikolski High**	77.09	32	P	P	11 51 20.5	-1.1
NIKH				IAmb	IAmb	11 51 21.9	
	comp=Z,239nm,1.0s						
NIKH	**Nikolski High**	77.09	32	P	P	11 51 20.8	-0.8
NIKH	**Nikolski High**	77.09	32	P	P	11 51 20.4	-1.1
	baz=315						
NIKH				S	S	12 00 49.4	-3.1
	baz=315						
PMR	**Palmer**	77.10	18	IAmb	IAmb	11 51 23.4	
	comp=Z,552nm,1.0s						
PMR	**Palmer**	77.10	18	P	P	11 51 22.0	+0.6
PMR	**Palmer**	77.10	18	P	P	11 51 21.6	+0.1
	baz=328,SNR=122						
PMR				S	S	12 00 50.0	-2.3
	baz=328						
RED	**Redoubt Volcan**	77.11	20	IAmb	IAmb	11 51 23.5	
	comp=Z,481nm,1.2s						
SML	**Sawmill**	77.11	18	P	P	11 51 22.1	+0.5
	baz=329,SNR=338						
SML				S	S	12 00 50.4	-2.3
	baz=329						
MENT	**Mentasta**	77.19	15	P	P	11 51 22.9	+0.9
L26K	**Log Cabin Wild**	77.19	15	IAmb	IAmb	11 51 24.7	
	comp=Z,545nm,1.1s						
L26K	**Log Cabin Wild**	77.19	15	P	P	11 51 23.2	+1.2
	baz=333,SNR=250						
L26K				S	S	12 00 52.9	-0.4
	baz=333						
L26K				S	S	12 00 52.9	-0.4
	baz=333						
P18K	**Big Mountain,**	77.23	22	P	P	11 51 23.2	+0.9
	baz=324,SNR=42						
P18K				S	S	12 00 54.9	+1.0
	baz=324						
P18K				S	S	12 00 54.9	+1.0
	baz=324						
CAPN	**Captain Cook N**	77.27	20	P	P	11 51 23.5	+1.1
	baz=327						
M23K	**Glacier View**	77.27	18	P	P	11 51 22.8	+0.3
	baz=329,SNR=324						
M23K				S	S	12 00 52.3	-1.9
	baz=329						
M23K				S	S	12 00 52.3	-1.9
	baz=329						
SCM	**Sheep Creek Mo**	77.34	17	P	P	11 51 23.3	+0.4
	baz=330,SNR=118						
SCM				S	S	12 00 52.7	-2.4
	baz=330						
HARP	**HAARP**	77.35	16	P	P	11 51 24.4	+1.5
	baz=331,SNR=426						
HARP				S	S	12 00 55.5	+0.4
	baz=331						
HARP				S	S	12 00 55.5	+0.4
	baz=331						
Q16K	**King Salmon**	77.36	23	P	P	11 51 24.4	+1.4
	baz=323,SNR=165						
Q16K				S	S	12 00 57.3	+2.1
	baz=323						
RC01	**Rabbit Creek A**	77.37	19	P	P	11 51 22.9	-0.2
RC01				IAmb	IAmb	11 51 24.8	
	comp=Z,804nm,1.2s						
RC01	**Rabbit Creek A**	77.37	19	P	P	11 51 23.2	+0.2
	baz=328,SNR=116						
RC01				S	S	12 00 52.9	-2.4
	baz=328						
M24K	**Tolsona, Glenn**	77.37	17	P	P	11 51 24.5	+1.4
	baz=330,SNR=251						
M24K				S	S	12 00 56.2	+0.8
	baz=330						
MEEK	**Meekatharra**	77.39	137	P	P	11 51 23.1	-0.5
KNK	**Knik Glacier**	77.42	18	P	P	11 51 24.3	+1.0
	baz=329,SNR=236						
KNK				S	S	12 00 54.8	-1.1
	baz=329						
LVA	**Lava Point**	77.42	30	IAmb	IAmb	11 51 27.1	
	comp=Z,270nm,0.8s						
L27K	**Beaver Creek,**	77.47	14	IAmb	IAmb	11 51 26.6	
	comp=Z,484nm,0.9s						
L27K	**Beaver Creek,**	77.47	14	P	P	11 51 25.0	+1.4
	baz=334						
L27K				S	S	12 00 57.5	+1.1
	baz=334						
BOSA	**Boshof**	77.50	220	P	P	11 51 24.7	+0.4
	comp=Z,170nm,0.6s,baz=12,slow=4.5,SNR=400						
BOSA				PKKPbc	PKKPbc	12 10 27.1	-0.1
	comp=Z,0.8nm,0.5s,baz=279,slow=0.9,SNR=5.8						
	comp=Z,170nm,0.6s						
BOSA	**Boshof**	77.50	220	P	P	11 51 24.4	+0.1
BOSA				IAmb	IAmb	11 51 26.1	
	comp=Z,626nm,1.3s						
BOSA	**Boshof**	77.50	220	*e*P	P	11 51 24.2	0.0
BOSA	**Boshof**	77.50	220	*i* P	P	11 51 24.4	+0.1
BOSA	**Boshof**	77.50	220	⇑P	P	11 51 24.3	+0.1
BOSA	**Boshof**	77.50	220	P	P	11 51 24.7	+0.4
AKUT	**Akutan**	77.55	30	IAmb	IAmb	11 51 25.1	
	comp=Z,209nm,0.8s						
AKUT	**Akutan**	77.55	30	P	P	11 51 24.2	+0.2
AKUT	**Akutan**	77.55	30	⇑P	P	11 51 23.7	-0.3
K29M	**Barlow Dome**	77.56	12	IAmb	IAmb	11 51 26.9	
	comp=Z,632nm,1.0s						
K29M	**Barlow Dome**	77.56	12	P	P	11 51 25.3	+1.1
	baz=337						
K29M				S	S	12 00 57.7	+0.2
	baz=337						
P19K	**Oil Pt**	77.61	21	IAmb	IAmb	11 51 26.6	
	comp=Z,523nm,1.1s						
P19K	**Oil Pt**	77.61	21	P	P	11 51 24.3	-0.1
	baz=325,SNR=19						
M26K	**Nabesna, AK**	77.82	15	IAmb	IAmb	11 51 28.3	
	comp=Z,387nm,1.1s						
M26K	**Nabesna, AK**	77.82	15	P	P	11 51 26.4	+0.9
	baz=333,SNR=161						
M26K				S	S	12 00 59.7	-0.5
	baz=333						
M26K				S	S	12 00 59.7	-0.5
	baz=333						
S12K	**Black Hills**	77.82	27	IAmb	IAmb	11 51 27.5	
	comp=Z,286nm,0.8s						
S12K	**Black Hills**	77.82	27	P	P	11 51 25.4	-0.2
	baz=319,SNR=11						
O22K	**Cooper Landing**	77.89	19	IAmb	IAmb	11 51 27.7	
	comp=Z,852nm,1.2s						
O22K	**Cooper Landing**	77.89	19	P	P	11 51 26.0	+0.1
	baz=328,SNR=18						
O22K				S	S	12 00 58.0	-2.8
	baz=328						
Q18K	**Katmai Hardscr**	77.90	22	P	P	11 51 25.9	-0.3
	baz=324,SNR=52						
Q18K				S	S	12 01 01.4	+0.1
	baz=324						
Q18K				S	S	12 01 01.4	+0.1
	baz=324						
PWL	**Port Wells**	77.93	18	IAmb	IAmb	11 51 28.1	
	comp=Z,618nm,1.0s						
PWL	**Port Wells**	77.93	18	P	P	11 51 26.5	+0.4
	baz=329,SNR=55						
PWL				S	S	12 00 58.7	-2.6
	baz=329						
Q17K	**Contact Creek**	77.94	23	P	P	11 51 26.3	0.0
	baz=324						
Q17K				S	S	12 01 00.4	-1.3
	baz=324						
Q17K				S	S	12 01 00.4	-1.3
	baz=324						
FALS	**False Pass**	77.94	29	IAmb	IAmb	11 51 30.0	
	comp=Z,557nm,0.9s						
FALS	**False Pass**	77.94	29	P	P	11 51 26.4	+0.2
FALS	**False Pass**	77.94	29	P	P	11 51 26.7	+0.5
	baz=318,SNR=17						
MORW	**Morawa**	77.96	140	IAmb	IAmb	11 51 29.6	
	comp=Z,195nm,0.8s						
MORW	**Morawa**	77.96	140	P	P	11 51 26.2	-0.4
KLU	**Klutina**	77.97	17	P	P	11 51 27.5	+1.1
	baz=331,SNR=334						
KLU				S	S	12 01 01.4	-0.5
	baz=331						
HOM	**Homer**	78.06	20	IAmb	IAmb	11 51 28.7	
	comp=Z,719nm,1.3s						
HOM	**Homer**	78.06	20	P	P	11 51 26.8	0.0
	baz=327						
MAYO	**Mayo, Yukon**	78.06	12	P	P	11 51 27.7	+0.9
MAYO	**Mayo, Yukon**	78.06	12	P	P	11 51 27.8	+1.0
	baz=339,SNR=191						
MAYO				S	S	12 01 03.2	+0.5
	baz=339						
Q19K	**Cape Douglas,**	78.08	22	IAmb	IAmb	11 51 27.7	
	comp=Z,480nm,1.2s						
Q19K	**Cape Douglas,**	78.08	22	P	P	11 51 25.9	-1.1
	baz=325,SNR=9.9						
M27K	**Edge Creek, AK**	78.09	15	P	P	11 51 28.4	+1.2
	baz=334,SNR=602						
M27K				S	S	12 01 03.1	-0.1
	baz=334						
M27K				S	S	12 01 03.1	-0.1
	baz=334						
L29M	**L29M**	78.13	13	P	P	11 51 28.5	+1.3
	baz=337						
L29M				S	S	12 01 04.7	+1.2
	baz=337						
N25K	**Chitina, Valde**	78.17	16	P	P	11 51 28.6	+1.1
	baz=332,SNR=90						
N25K				S	S	12 01 04.7	+0.7
	baz=332						
N25K				S	S	12 01 04.7	+0.7
	baz=332						
BRLK	**Bradley Lake**	78.18	20	IAmb	IAmb	11 51 28.8	
	comp=Z,685nm,1.0s						
GLI	**Glacier Island**	78.22	18	P	P	11 51 28.1	+0.4
	baz=330,SNR=36						
GLI				S	S	12 01 03.9	-0.5
	baz=330						
BRSE	**Bradley Lake S**	78.24	20	P	P	11 51 27.8	-0.1
	baz=327,SNR=25						
BVCY	**Beaver Creek**	78.25	14	P	P	11 51 29.4	+1.6
	baz=335,SNR=328						
BVCY				S	S	12 01 06.4	+1.7
	baz=335						
S14K	**Fog Glacier**	78.28	26	P	P	11 51 28.4	+0.2
	baz=321,SNR=6.1						
SEW	**Seward**	78.28	19	IAmb	IAmb	11 51 29.9	
	comp=Z,572nm,1.2s						
SEW	**Seward**	78.28	19	P	P	11 51 28.2	+0.2
	baz=328,SNR=34						
SEW				S	S	12 01 02.3	-2.7
	baz=328						
CNPM	**China Poot**	78.28	20	IAmb	IAmb	11 51 29.3	
	comp=Z,405nm,1.1s						
R17L	**Mt. Peulik Vol**	78.30	24	P	P	11 51 28.5	+0.3
	baz=323						
R17L				S	S	12 01 04.4	-0.9
	baz=323						
R17L				S	S	12 01 04.4	-0.9
	baz=323						
DIV	**Divide**	78.32	17	P	P	11 51 29.1	+0.8
DIV				IAmb	IAmb	11 51 30.8	
	comp=Z,517nm,0.9s						
FID	**Port Fidalgo**	78.48	18	IAmb	IAmb	11 51 31.6	
	comp=Z,542nm,1.0s						
GLB	**Gilahina Butte**	78.50	16	IAmb	IAmb	11 51 31.8	
	comp=Z,362nm,1.2s						
SDPT	**Sand Point**	78.67	27	IAmb	IAmb	11 51 32.5	
	comp=Z,263nm,0.9s						
SDPT	**Sand Point**	78.67	27	P	P	11 51 31.1	+0.9
SDPT	**Sand Point**	78.67	27	P	P	11 51 29.6	-0.6
	baz=320,SNR=10						
M29M	**Somme Creek**	78.68	13	IAmb	IAmb	11 51 33.5	
	comp=Z,421nm,1.0s						
M29M	**Somme Creek**	78.68	13	P	P	11 51 31.8	+1.4
	baz=337						
M29M				S	S	12 01 10.7	+1.2
	baz=337						
Q20K	**Shuyak Island**	78.72	21	P	P	11 51 30.3	-0.1
	baz=326,SNR=28						
SYI	**Shuyak Island**	78.72	21	IAmb	IAmb	11 51 33.5	
	comp=Z,433nm,0.8s						
MCARA	**McCarthy VSAT**	78.72	16	IAmb	IAmb	11 51 33.1	
	comp=Z,407nm,1.0s						
MCARA	**McCarthy VSAT**	78.72	16	P	P	11 51 31.4	+1.0
	baz=333,SNR=80						
MCARA				S	S	12 01 08.8	-0.9
	baz=333						
BMRM	**Bremner River**	78.73	17	P	P	11 51 31.5	+0.9
	baz=332,SNR=174						
BMRM				S	S	12 01 09.1	-0.8
	baz=332						
VRDI	**Verde Repeater**	78.77	16	IAmb	IAmb	11 51 33.4	
	comp=Z,679nm,1.2s						
HIN	**Hinchinbrook I**	78.78	18	IAmb	IAmb	11 51 33.4	
	comp=Z,592nm,1.1s						
EYAK	**Cordova Ski Ar**	78.83	17	P	P	11 51 31.8	+0.8
EYAK	**Cordova Ski Ar**	78.83	17	P	P	11 51 32.5	+1.5
EYAK	**Cordova Ski Ar**	78.83	17	P	P	11 51 32.5	+1.5
	baz=331,SNR=102						
EYAK				S	S	12 01 10.8	0.0
	baz=331						
M30M	**Minto, Yukon**	78.86	13	P	P	11 51 32.0	+0.8
	baz=338,SNR=88						
M30M				S	S	12 01 12.8	+1.6
	baz=338						
P23K	**Montague Islan**	78.91	18	P	P	11 51 32.6	+1.2
	baz=330,SNR=45						
YUK3	**Moose Creek**	78.91	14	P	P	11 51 32.8	+1.0
	baz=335,SNR=298						
YUK3				S	S	12 01 13.9	+1.8
	baz=335						
BLKN	**Baker Lake**	78.98	354	IAmb	IAmb	11 51 33.8	
	comp=Z,606nm,0.9s						
RAGM	**Ragged Mountai**	79.23	17	IAmb	IAmb	11 51 36.2	
	comp=Z,688nm,1.1s						
CRQM	**Cirque**	79.26	16	IAmb	IAmb	11 51 36.1	
	comp=Z,627nm,1.0s						
CRQE	**Cirque**	79.27	16	P	P	11 51 34.5	+1.0
	baz=333,SNR=90						
CRQE				S	S	12 01 15.1	-0.7
	baz=333						
BARN	**Barnard Glacie**	79.31	15	IAmb	IAmb	11 51 36.7	
	comp=Z,845nm,1.3s						
TGL	**Tana Glacier**	79.33	16	IAmb	IAmb	11 51 36.4	
	comp=Z,582nm,1.1s						
KDAK	**Kodiak Island**	79.35	22	P	P	11 51 35.4	+1.5
	comp=Z,874nm,0.9s,baz=329,slow=2.9,SNR=209						
	comp=Z,874nm,0.9s						
KDAK	**Kodiak Island**	79.35	22	P	P	11 51 33.4	-0.4
KDAK	**Kodiak Island**	79.35	22	⇑P	P	11 51 34.4	+0.5
KDAK	**Kodiak Island**	79.35	22	P	P	11 51 34.3	+0.5
	baz=326						
KDAK				S	S	12 01 15.3	-1.0
	baz=326						
KDAK	**Kodiak Island**	79.35	22	P	P	11 51 34.9	+1.0
KDAK				PcP	PcP	11 51 41.9	+0.6
KDAK				sP	sP	11 52 48.2	0.0
CHNA	**Chernabura Isl**	79.40	27	P	P	11 51 34.9	+0.7
CHNA	**Chernabura Isl**	79.40	27	P	P	11 51 34.1	0.0
	baz=321,SNR=64						
CHNA				S	S	12 01 15.4	-1.5
	baz=321						
CTG	**Chitna Glacier**	79.46	15	P	P	11 51 35.7	+1.1
	baz=334,SNR=108						
CTG				S	S	12 01 18.5	+0.8
	baz=334						
CTGM	**Chitina Glacie**	79.46	15	IAmb	IAmb	11 51 37.5	
	comp=Z,700nm,1.0s						
YUK8	**Steele Glacier**	79.49	14	P	P	11 51 35.8	+0.9
	baz=336,SNR=59						
YUK8				S	S	12 01 19.3	+0.9
	baz=336						
BLDU	**Ballidu**	79.55	141	P	P	11 51 34.4	-0.8
GRNC	**Granite Creek**	79.58	15	IAmb	IAmb	11 51 38.0	
	comp=Z,468nm,1.0s						
OHAK	**Old Harbor**	79.60	23	P	P	11 51 36.2	+1.0
OHAK	**Old Harbor**	79.60	23	P	P	11 51 36.0	+0.8
	baz=326,SNR=71						
OHAK				S	S	12 01 17.8	-1.2
	baz=326						
M31M	**Drury Creek, Y**	79.61	12	IAmb	IAmb	11 51 37.8	
	comp=Z,583nm,1.0s						
M31M	**Drury Creek, Y**	79.61	12	P	P	11 51 36.5	+1.2
	baz=340,SNR=276						
M31M				S	S	12 01 20.1	+1.0
	baz=340						
YUK4	**Talbot Arm**	79.66	14	P	P	11 51 36.5	+0.8
	baz=337,SNR=242						
LOGN	**Logan Glacier**	79.66	15	IAmb	IAmb	11 51 38.5	
	comp=Z,525nm,1.0s						
Q23K	**Middleton Isla**	79.67	18	P	P	11 51 37.0	+1.4
	baz=331,SNR=5.5						
KUQ	**Kuujjuuaa**	79.70	339	P	P	11 51 36.2	+0.5
KUQ				IAmb	IAmb	11 51 37.6	
	comp=Z,698nm,1.0s						
KAIM	**Kayak Island**	79.70	17	IAmb	IAmb	11 51 39.0	
	comp=Z,590nm,1.0s						
KAIM	**Kayak Island**	79.70	17	P	P	11 51 37.4	+1.7
	baz=332,SNR=14						
N30M	**Aishikik Lake**	79.84	13	IAmb	IAmb	11 51 39.6	
	comp=Z,498nm,1.1s						
N30M	**Aishikik Lake**	79.84	13	P	P	11 51 38.0	+1.5
	baz=338						
N30M				S	S	12 01 23.9	+2.2
	baz=338						
SII	**Sitkinak Islan**	79.86	23	P	P	11 51 38.7	+2.0
SII	**Sitkinak Islan**	79.86	23	P	P	11 51 37.5	+0.8
	baz=325,SNR=21						
O28M	**Mount Upton**	79.87	15	IAmb	IAmb	11 51 39.8	
	comp=Z,319nm,1.1s						
O28M	**Mount Upton**	79.87	15	P	P	11 51 38.0	+1.0
	baz=335,SNR=88						
O28M				S	S	12 01 22.4	0.0
	baz=335						
YAH	**Yahtse**	79.92	16	IAmb	IAmb	11 51 40.0	
	comp=Z,394nm,0.9s						
CHIR	**Chirikof Islan**	79.99	24	P	P	11 51 39.1	+1.7
CHIR	**Chirikof Islan**	79.99	24	P	P	11 51 38.3	+0.9
	baz=324,SNR=6.5						
WRGLY	**Wrigley**	80.00	6	P	P	11 51 38.9	+1.6
	baz=349,SNR=373						
WRGLY				S	S	12 01 24.9	+1.9
	baz=349						
N31M	**Braeburn, Yuko**	80.05	12	P	P	11 51 38.2	+0.6
N31M	**Braeburn, Yuko**	80.05	12	P	P	11 51 38.6	+1.0
	baz=339,SNR=179						
N31M				S	S	12 01 24.7	+1.0
	baz=339						
YUK6	**Outpost Mounta**	80.08	14	P	P	11 51 39.4	+1.3
	baz=337,SNR=81						
YUK6				S	S	12 01 26.0	+1.5
	baz=337						
ALKP	**Alkanpan, Nort**	80.14	221	*e*P	P	11 51 38.8	+0.3
ALKP	**Alkanpan, Nort**	80.14	221	⇑P	P	11 51 39.5	+0.9
HYT	**Haines Junctio**	80.36	14	IAmb	IAmb	11 51 42.4	
	comp=Z,514nm,1.0s						

HYT	Haines Junctio	80.36	14	P	P	11 51 40.9	+1.5
	baz=338,SNR=230						
HYT				S	S	12 01 28.0	+0.8
	baz=338						
MUN	Mundaring	80.39	142	P	P	11 51 39.4	-0.3
PINM	Pinnacle	80.48	15	P	P	11 51 41.2	+1.2
	baz=335,SNR=83						
PINM				S	S	12 01 28.9	+0.6
	baz=335						
MANU	Manus Island	80.62	100	IAmb	IAmb	11 52 38.6	
	comp=Z,431nm,1.9s						
O29M	Mount Kennedy	80.63	14	IAmb	IAmb	11 51 44.9	
	comp=Z,727nm,2.0s						
O29M	Mount Kennedy	80.63	14	P	P	11 51 41.7	+0.8
	baz=337,SNR=35						
O29M				S	S	12 01 30.8	+0.8
	baz=337						
O30N	Mendenhall	80.67	13	IAmb	IAmb	11 51 43.5	
	comp=Z,467nm,0.9s						
O30N	Mendenhall	80.67	13	P	P	11 51 41.9	+0.9
	baz=339,SNR=195						
O30N				S	S	12 01 31.3	+1.1
	baz=339						
BCPM	Bancas Point	80.74	15	IAmb	IAmb	11 51 44.3	
	comp=Z,561nm,1.0s						
GRHM	Grahamstown, E	80.74	216	IAmb	IAmb	11 51 44.6	
	comp=Z,773nm,1.4s						
GRHM	Grahamstown, E	80.74	216	⇑P	P	11 51 42.7	+1.1
N32M	Quiet Lake	80.82	11	P	P	11 51 41.9	+0.2
	baz=341						
N32M				S	S	12 01 31.0	-0.7
	baz=341						
KLBR	Kellerberrin	80.86	141	P	P	11 51 41.7	-0.5
BFON	Badsfontein, M	80.87	219	eP	P	11 51 43.6	+1.2
WHY	Whitehorse	80.98	12	IAmb	IAmb	11 51 44.5	
	comp=Z,666nm,1.0s						
WHY	Whitehorse	80.98	12	P	P	11 51 43.0	+0.3
	baz=340,SNR=113						
WHY				S	S	12 01 33.8	+0.2
	baz=340						
P30M	Million Dollar	81.11	14	P	P	11 51 44.7	+1.4
	baz=338						
P30M				S	S	12 01 34.2	-0.6
	baz=338						
YKAW3	Yellowknife Wh	81.21	2	IAmb	IAmb	11 51 46.0	
	comp=Z,754nm,1.1s						
YKA	Yellowknife Ar	81.28	2	P	P	11 51 44.9	+0.8
	comp=Z,282nm,0.9s,baz=342,slow=5.5,SNR=1134						
YKA				pP	pP	11 52 37.3	+1.6
	comp=Z,42nm,0.8s,baz=347,slow=5.8,SNR=2.1						
YKA				PP	PP	11 54 52.8	+0.9
	comp=Z,65nm,0.9s,baz=352,slow=8.3,SNR=7.7						
YKA				PKKPbc	PKKPbc	12 10 15.9	-1.7
	comp=Z,8.6nm,0.7s,baz=188,slow=2.1,SNR=49						
YKA				PKPPKP	P'P'df	12 18 20.0	-4.4
	comp=Z,1.0nm,0.8s,baz=189,slow=1.9,SNR=4.9						
	comp=Z,282nm,0.9s						
YKA	Yellowknife Ar	81.28	2	P	P	11 51 44.4	+0.3
YKA	Yellowknife Ar	81.28	2	*i* P	P	11 51 44.2	+0.1
YKA				pmax	pmax		
	comp=Z,295nm,0.9s						
P29M	Windy Craggy	81.42	14	P	P	11 51 45.8	+0.9
	baz=337						
P29M				S	S	12 01 38.9	+1.0
	baz=337						
NWAO	Narrogin (SRO)	81.67	142	P	P	11 51 45.2	-1.2
NWAO	Narrogin (SRO)	81.67	142	P	P	11 51 45.3	-1.1
NWAO				IAmb	IAmb	11 51 48.8	
	comp=Z,164nm,0.7s						
NWAO	Narrogin (SRO)	81.67	142	P	P	11 51 45.7	-0.7
NWAO	Narrogin (SRO)	81.67	142	P	P	11 51 45.8	-0.7
NWAO	Narrogin (SRO)	81.67	142	P	P	11 51 45.3	-1.1
NWAO				pmax	pmax		
	comp=Z,164nm,0.7s						
P33M	Teslin, Yukon	81.75	12	P	P	11 51 47.2	+0.5
	baz=341,SNR=468						
P33M				S	S	12 01 41.6	+0.2
	baz=341						
PLBC	Pleasant Camp	81.84	14	P	P	11 51 48.2	+1.1
	baz=338						
PLBC				S	S	12 01 43.3	+1.1
	baz=338						
SCHQ	Schefferville	81.98	337	P	P	11 51 48.1	+0.3
	comp=Z,170nm,0.9s,baz=41,slow=5.9,SNR=66						
SCHQ				pP	pP	11 52 41.4	+2.1
	comp=Z,36nm,0.7s,baz=90,slow=5.4,SNR=2.4						
	comp=Z,170nm,0.9s						
SKAG	Skagway	82.03	13	IAmb	IAmb	11 51 51.1	
	comp=Z,322nm,1.0s						
SKAG	Skagway	82.03	13	P	P	11 51 49.6	+1.6
SKAG	Skagway	82.03	13	⇑P	P	11 51 49.3	+1.3
SKAG	Skagway	82.03	13	P	P	11 51 49.3	+1.3
	baz=339,SNR=53						
SKAG				S	S	12 01 45.3	+1.3
	baz=339						
P32M	Atlin	82.19	12	IAmb	IAmb	11 51 51.4	
	comp=Z,514nm,1.1s						
P32M	Atlin	82.19	12	P	P	11 51 49.7	+0.7
	baz=341,SNR=85						
P32M				S	S	12 01 47.2	+1.4
	baz=341						
WB0	Warramunga Arr	82.20	121	IAmb	IAmb	11 51 51.5	
	comp=Z,233nm,0.8s						
WRA	Warramunga Arr	82.28	122	P	P	11 51 49.0	-1.0
	comp=Z,212nm,0.8s,baz=323,slow=4.7,SNR=794						
WRA				pP	pP	11 52 43.2	+0.9
	comp=Z,38nm,0.7s,baz=322,slow=4.7,SNR=2.2						
WRA				PP	PP	11 55 02.9	+0.9
	comp=Z,82nm,1.1s,baz=316,slow=8.2,SNR=5.6						
WRA				PKKPbc	PKKPbc	12 10 16.6	+1.1
	comp=Z,7.3nm,0.9s,baz=172,slow=0.9,SNR=27						
WRA				PKPPKP	P'P'df	12 18 20.4	+0.1
	comp=Z,7.4nm,1.2s,baz=121,slow=1.6,SNR=8.7						
	comp=Z,212nm,0.8s						
WRA	Warramunga Arr	82.28	122	P	P	11 51 48.4	-1.6
WRA	Warramunga Arr	82.28	122	*i* P	P	11 51 49.0	-1.0
WRA				pmax	pmax		
	comp=Z,206nm,0.7s						
WRAB	Tennant Creek	82.28	122	P	P	11 51 48.8	-1.1
WRAB				IAmb	IAmb	11 51 50.8	
	comp=Z,369nm,1.0s						
WRAB	Tennant Creek	82.28	122	P	P	11 51 48.9	-1.0
WRAB	Tennant Creek	82.28	122	P	P	11 51 48.8	-1.1
WRAB				pmax	pmax		
	comp=Z,369nm,1.0s						
WR8	Warramunga Arr	82.40	122	IAmb	IAmb	11 51 51.3	
	comp=Z,281nm,0.9s						
WTLY	Watson Lake, Y	82.44	10	P	P	11 51 51.4	+1.1
	baz=344,SNR=22						
WTLY				S	S	12 01 49.6	+1.2
	baz=344						
SUR	Sutherland	82.81	221	P	P	11 51 54.0	+1.4
SUR	Sutherland	82.81	221	P	P	11 51 53.7	+1.1
SUR				IAmb	IAmb	11 51 55.2	
	comp=Z,360nm,1.3s						
SUR	Sutherland	82.81	221	⇑P	P	11 51 53.4	+0.8
SUR	Sutherland	82.81	221	P	P	11 51 54.1	+1.5
SUR				pP	pP	11 52 44.6	-0.5
SUR				sP	sP	11 53 08.1	+0.3
R33M	Jennings River	82.82	11	IAmb	IAmb	11 51 54.9	
	comp=Z,516nm,1.1s						
R33M	Jennings River	82.82	11	P	P	11 51 53.3	+1.0
	baz=343,SNR=220						
R31K	City Hall, Gus	82.93	14	P	P	11 51 54.0	+1.3
	baz=339,SNR=7.2						
BESE	Bessie Mountai	82.94	13	IAmb	IAmb	11 51 55.9	
	comp=Z,450nm,1.0s						
KOTAN	Kotaneelee Air	82.99	7	P	P	11 51 54.1	+1.1
	baz=348,SNR=80						
KOTAN				S	S	12 01 53.5	-0.3
	baz=348						
DRLN	Deer Lake	83.02	329	IAmb	IAmb	11 51 55.5	
	comp=Z,494nm,1.1s						
DRLN	Deer Lake	83.02	329	⇑P	P	11 51 53.4	+0.1
Q32M	Nakina River	83.03	12	P	P	11 51 54.6	+1.1
	baz=342						
Q32M				S	S	12 01 53.2	-1.5
	baz=342						
S31K	Pelican	83.26	14	P	P	11 51 55.6	+1.3
	baz=339,SNR=9.6						
S31K				S	SKSac	12 01 55.8	-0.2
	baz=339						
S31K				S	SKSac	12 01 55.8	-0.2
	baz=339						
JIS	Juneau Island	83.31	13	P	P	11 51 57.0	+2.4
LIRD	Liard River Hi	83.47	8	P	P	11 51 56.7	+1.2
	baz=347,SNR=81						
LIRD				S	S	12 02 00.3	+1.7
	baz=347						
S32K	Killisnoo	84.04	13	IAmb	IAmb	11 52 01.2	
	comp=Z,329nm,1.0s						
S32K	Killisnoo	84.04	13	P	P	11 51 59.7	+1.4
	baz=340,SNR=24						
TOAD	Toad River Com	84.11	8	P	P	11 52 00.0	+1.2
	baz=347,SNR=246						
PATS	Pohnpei	84.18	86	IAmb	IAmb	11 52 56.8	
	comp=Z,720nm,1.6s						
S34M	Telegraph Cree	84.21	11	P	P	11 52 00.7	+1.4
	baz=343,SNR=189						
S34M				S	S	12 02 06.9	+0.8
	baz=343						
CRZF	Crozet Islands	84.23	193	IAmb	IAmb	11 52 04.7	
	comp=Z,283nm,1.1s						
FCC	Fort Churchill	84.25	352	IAmb	IAmb	11 52 01.7	
	comp=Z,422nm,1.0s						
SIT	Sitka	84.28	14	IAmb	IAmb	11 52 02.6	
	comp=Z,363nm,1.0s						
SIT	Sitka	84.28	14	P	P	11 52 01.8	+2.2
SIT	Sitka	84.28	14	P	P	11 52 01.0	+1.5
	baz=339,SNR=20						
SIT				S	S	12 02 09.8	+3.0
	baz=339						
SACV	Santiago Islan	84.53	284	P	P	11 52 01.8	+0.2
ASAR	Alice Springs	84.53	125	P	P	11 52 00.5	-0.9
	comp=Z,262nm,0.8s,baz=312,slow=4.9,SNR=1085						
ASAR				pP	pP	11 52 55.1	+1.0
	comp=Z,80nm,0.9s,baz=320,slow=5.7,SNR=3.0						
ASAR				PP	PP	11 55 21.5	+1.2
	comp=Z,34nm,0.9s,baz=315,slow=6.2,SNR=2.7						
ASAR				PKKPbc	PKKPbc	12 10 11.2	+0.7
	comp=Z,3.7nm,0.8s,baz=130,slow=2.8,SNR=11						
ASAR				SKKPbc	SKKPbc	12 13 26.4	-3.6
	comp=Z,1.5nm,0.9s,baz=125,slow=2.7,SNR=4.5						
ASAR				PKPPKP	P'P'df	12 18 15.6	-0.5
	comp=Z,3.6nm,1.1s,baz=136,slow=2.8,SNR=8.2						
	comp=Z,262nm,0.8s						
COEN	Coen	84.72	111	P	P	11 52 02.0	-0.4
PMG	Port Moresby	84.94	106	P	P	11 52 03.7	+0.2
	comp=Z,103nm,0.9s,baz=333,slow=3.1,SNR=26						
	comp=Z,103nm,0.9s						
PMG	Port Moresby	84.94	106	P	P	11 52 03.7	+0.2
PMG				IAmb	IAmb	11 52 59.1	
	comp=Z,559nm,1.7s						
PMG	Port Moresby	84.94	106	P	P	11 52 04.1	+0.6
PMG	Port Moresby	84.94	106	P	P	11 52 03.6	+0.1
	comp=Z,4μmcomp=Z,157nm,1.0s						
PMG	Port Moresby	84.94	106	*d i*P	P	11 52 03.4	-0.1
PMG				pmax	pmax		
	comp=Z,161nm,1.1s						
PMG	Port Moresby	84.94	106	⇑P	P	11 52 03.7	+0.2
T33K	Petersburg	84.95	13	P	P	11 52 04.2	+1.3
	baz=341,SNR=9.1						
T35M	Bob Quinn	85.25	11	IAmb	IAmb	11 52 07.6	
	comp=Z,303nm,0.9s						
T35M	Bob Quinn	85.25	11	P	P	11 52 06.1	+1.7
	baz=343,SNR=70						
T35M				S	S	12 02 14.8	-1.6
	baz=343						
WRAK	Wrangell Islan	85.44	13	IAmb	IAmb	11 52 08.2	
	comp=Z,348nm,0.9s						
WRAK	Wrangell Islan	85.44	13	⇑P	P	11 52 06.5	+1.2
WRAK	Wrangell Islan	85.44	13	P	P	11 52 06.6	+1.3
	baz=342,SNR=29						
U33K	Whale Pass	85.59	13	P	P	11 52 07.4	+1.4
	baz=341,SNR=14						
U33K				S	S	12 02 23.4	+3.8
	baz=341						
U33K				S	S	12 02 23.4	+3.8
	baz=341						
FORT	Forrest	85.91	133	IAmb	IAmb	11 52 11.6	
	comp=Z,272nm,0.7s						
CRAG	Craig	86.20	13	P	P	11 52 10.8	+1.7
CRAG	Craig	86.20	13	⇑P	P	11 52 11.1	+2.0
CRAG	Craig	86.20	13	P	P	11 52 10.2	+1.1
	baz=341,SNR=8.0						
U35K	Hyder	86.31	11	IAmb	IAmb	11 52 12.3	
	comp=Z,379nm,1.1s						
U35K	Hyder	86.31	11	P	P	11 52 10.6	+1.0
	baz=344,SNR=15						
QIS	Mount Isa	86.36	119	P	P	11 52 09.2	-1.2
ICQ	Pointe Anglais	86.58	334	IAmb	IAmb	11 52 13.7	
	comp=Z,249nm,1.2s						
V35K	Ketchikan	86.60	12	P	P	11 52 11.6	+0.6
	baz=342,SNR=7.1						
V35K				S	S	12 02 30.3	+0.8
	baz=342						
V35K				S	S	12 02 30.3	+0.8
	baz=342						
GBN	Guysborough	87.73	328	IAmb	IAmb	11 52 20.1	
	comp=Z,263nm,1.0s						
MTSU	Mount Surprise	88.21	114	P	P	11 52 19.7	+0.4
FFC	Flin Flon	88.94	356	P	P	11 52 22.5	+0.4
FFC				IAmb	IAmb	11 52 24.2	
	comp=Z,322nm,1.1s						
FFC	Flin Flon	88.94	356	P	P	11 52 22.5	+0.4
FFC				pmax	pmax		
	comp=Z,322nm,1.1s						
FFC	Flin Flon	88.94	356	⇑P	P	11 52 22.4	+0.2
FFC	Flin Flon	88.94	356	P	P	11 52 22.8	+0.6
FFC				pP	pP	11 53 16.5	+2.2
FFC				sP	sP	11 53 37.4	+0.8
BBB	Bella Bella	90.21	11	P	P	11 52 29.6	+1.5
	comp=Z,89nm,0.9s,baz=0.2,slow=7.0,SNR=10						
	comp=Z,89nm,0.9s						
BBB	Bella Bella	90.21	11	⇑P	P	11 52 29.8	+1.7
TV1H	Townsville Har	90.74	113	P	P	11 52 31.3	+0.3
CTA	Charters Tower	90.85	114	P	P	11 52 31.7	+0.1
	comp=Z,138nm,0.7s,baz=318,slow=4.6,SNR=178						
CTA				pP	pP	11 53 26.0	+1.1
	comp=Z,199nm,1.3s,baz=307,slow=4.7,SNR=4.1						
	comp=Z,138nm,0.7s						
CTA	Charters Tower	90.85	114	P	P	11 52 31.2	-0.4
CTAO	Charters Tower	90.85	114	P	P	11 52 30.6	-0.9
CTAO				IAmb	IAmb	11 52 32.2	
	comp=Z,117nm,0.7s						
CTAO	Charters Tower	90.85	114	P	P	11 52 31.4	-0.2
CTAO	Charters Tower	90.85	114	P	P	11 52 30.7	-0.9
CTAO				pmax	pmax		
	comp=Z,117nm,0.7s						
CTAO	Charters Tower	90.85	114	⇑P	P	11 52 30.7	-0.9
VLDQ	Val d'Or	91.08	339	IAmb	IAmb	11 52 34.5	
	comp=Z,287nm,1.1s						
TRQ	Mont Tremblant	91.89	337	IAmb	IAmb	11 52 38.0	
	comp=Z,158nm,1.2s						
BBOO	Buckleboo	92.16	130	P	P	11 52 37.0	-0.3
GAC	Glen Almond	92.65	337	⇑P	P	11 52 40.8	+1.3
GAC	Glen Almond	92.65	337	⇑P	P	11 52 40.9	+1.3
CBB	Campbell River	92.72	10	IAmb	IAmb	11 52 42.8	
	comp=Z,241nm,1.3s						
LBNH	Lisbon	92.75	334	⇓P	P	11 52 41.5	+1.5
ULM	Lac du Bonnet	92.82	351	P	P	11 52 40.0	-0.3
	comp=Z,149nm,0.9s,baz=8.5,slow=4.6,SNR=121						
ULM				PKKPbc	PKKPdf	12 09 47.2	+1.3
	comp=Z,4.5nm,0.5s,baz=216,slow=2.8,SNR=7.9						
ULM				PKPPKP	P'P'df	12 17 51.4	-12
	comp=Z,2.3nm,0.6s,baz=143,slow=2.1,SNR=3.1						
	comp=Z,149nm,0.9s						
ULM	Lac du Bonnet	92.82	351	P	P	11 52 39.3	-0.9
ULM				IAmb	IAmb	11 52 41.5	
	comp=Z,178nm,1.0s						
ULM	Lac du Bonnet	92.82	351	P	P	11 52 40.0	-0.3
EPLO	Experimental L	93.10	350	IAmb	IAmb	11 52 42.8	
	comp=Z,110nm,1.0s						
LONY	Lake Ozonia	93.32	336	IAmb	IAmb	11 52 44.5	
	comp=Z,120nm,1.1s						
LONY	Lake Ozonia	93.32	336	⇓P	P	11 52 43.6	+0.9
TBO	Thunder Bay	93.39	347	IAmb	IAmb	11 52 44.6	
	comp=Z,105nm,1.1s						
QLP	Quilpie	93.47	121	P	P	11 52 44.0	+0.5
OZB	Mount Ozzard	93.75	11	IAmb	IAmb	11 52 47.4	
	comp=Z,228nm,1.0s						
OZB	Mount Ozzard	93.75	11	⇑P	P	11 52 47.1	+2.5
J61A	Chester	93.75	334	IAmb	IAmb	11 52 47.0	
	comp=Z,119nm,1.1s						
BUKO	Buck Lake	94.06	339	P	P	11 52 46.6	+0.6
BUKO				IAmb	IAmb	11 52 47.8	
	comp=Z,111nm,1.0s						
CLRS	Cowichan Lake	94.07	10	IAmb	IAmb	11 52 48.1	
	comp=Z,192nm,1.6s						
TATA	Tatamba Isabel	94.31	97	P	P	11 52 47.9	+0.2
A04D	Lummi Island	94.36	9	IAmb	IAmb	11 52 49.8	
	comp=Z,206nm,1.1s						
HTT	Hallett	94.36	129	P	P	11 52 47.4	-0.1
HTT	Hallett	94.36	129	⇑P	P	11 52 47.0	-0.5
HTT	Hallett	94.36	129	⇑P	P	11 52 47.0	-0.5
DELO	Deloro Mine	94.38	338	IAmb	IAmb	11 52 49.3	
	comp=Z,131nm,1.0s						
EYMN	Ely	94.43	348	IAmb	IAmb	11 52 49.9	
	comp=Z,178nm,0.9s						
EYMN	Ely	94.43	348	⇑P	P	11 52 47.5	-0.2
E46A	Sault Ste Mari	94.49	343	IAmb	IAmb	11 52 49.6	
	comp=Z,159nm,1.0s						
L61B	Northampton	94.58	334	P	P	11 52 48.2	-0.3
M65A	Busby, Falmout	94.60	332	P	P	11 52 48.8	+0.2
	baz=30						
PECO	Prince Edward	94.71	337	IAmb	IAmb	11 52 50.6	
	comp=Z,82nm,1.0s						
AGMN	Agassiz Nation	94.73	351	IAmb	IAmb	11 52 50.6	
	comp=Z,154nm,1.1s						
AGMN	Agassiz Nation	94.73	351	⇑P	P	11 52 49.0	-0.1
B04A	Port Angeles	94.91	9	IAmb	IAmb	11 52 52.8	
	comp=Z,105nm,1.0s						
STKA	Stephens Creek	95.06	126	P	P	11 52 49.9	-0.8
	comp=Z,21nm,0.5s,baz=329,slow=4.5,SNR=40						
STKA				PKKPbc	PKKPbc	12 09 41.0	-3.3
	comp=Z,3.6nm,0.9s,baz=97,slow=3.7,SNR=3.3						
	comp=Z,21nm,0.5s						
STKA	Stephens Creek	95.06	126	P	P	11 52 48.6	-2.1
STKA				IAmb	IAmb	11 52 52.9	
	comp=Z,111nm,0.6s						
STKA	Stephens Creek	95.06	126	P	P	11 52 49.9	-0.8
B08A	Colville Reser	95.08	7	IAmb	IAmb	11 52 52.9	
	comp=Z,144nm,1.2s						
DGMT	Dagmar	95.30	356	IAmb	IAmb	11 52 54.4	
	comp=Z,187nm,1.1s						
DGMT	Dagmar	95.30	356	⇑P	P	11 52 52.8	+1.1
NEW	Newport	95.35	5	P	P	11 52 52.5	+0.5
	comp=Z,61nm,1.0s,baz=332,slow=4.5,SNR=60						
NEW				pP	pP	11 53 47.1	+2.7
	comp=Z,37nm,0.9s,baz=338,slow=4.2,SNR=6.1						
NEW				PP	PP	11 56 37.0	-7.1
	comp=Z,57nm,0.9s,baz=353,slow=10,SNR=8.4						
	comp=Z,61nm,1.0s						
NEW	Newport	95.35	5	IAmb	IAmb	11 52 54.3	
	comp=Z,98nm,1.1s						
NEW	Newport	95.35	5	⇑P	P	11 52 52.5	+0.5
GNW	Green Mountain	95.48	9	IAmb	IAmb	11 52 55.5	
	comp=Z,116nm,1.1s						
NLWA	Neilton Lookou	95.51	10	IAmb	IAmb	11 52 55.7	
	comp=Z,87nm,1.1s						
NLWA	Neilton Lookou	95.51	10	⇑P	P	11 52 55.2	+2.5
J55A	Hilton	95.57	337	IAmb	IAmb	11 52 54.4	
	comp=Z,90nm,1.2s						
MDND	Maddock	95.59	353	IAmb	IAmb	11 52 54.7	
	comp=Z,192nm,1.0s						
K57A	Scipio Center	95.64	336	P	P	11 52 53.3	0.0
K57A				IAmb	IAmb	11 52 54.8	
	comp=Z,74nm,1.1s						
C09A	Chrisman Ranch	95.72	6	IAmb	IAmb	11 52 56.0	
	comp=Z,129nm,1.2s						
E38A	The Farm, Brul	95.74	348	IAmb	IAmb	11 52 54.9	
	comp=Z,97nm,1.0s						
EGMT	Eagleton	95.87	0	IAmb	IAmb	11 52 56.4	
	comp=Z,219nm,1.4s						
EGMT	Eagleton	95.87	0	⇑P	P	11 52 54.8	+0.4
F42A	Maple Grove Fa	95.91	345	IAmb	IAmb	11 52 57.1	
	comp=Z,114nm,0.8s						
LTY	Liberty	96.03	8	IAmb	IAmb	11 56 49.5	
	comp=Z,202nm,1.6s						
EPH	Ephrata	96.05	7	IAmb	IAmb	11 56 48.7	
	comp=Z,65nm,1.2s						
MMNY	Mt. Morris Dam	96.08	337	IAmb	IAmb	11 52 56.6	
	comp=Z,96nm,1.1s						
I49A	Point Hope	96.39	341	IAmb	IAmb	11 56 51.5	
	comp=Z,83nm,1.0s						
D08A	Wollman Farm,	96.41	7	P	P	11 52 56.7	0.0
D08A				IAmb	IAmb	11 52 59.0	
	comp=Z,94nm,1.3s						
L56A	Greenwood	96.51	337	IAmb	IAmb	11 56 52.8	
	comp=Z,94nm,1.0s						
MXC	Moxie City	96.75	8	IAmb	IAmb	11 53 00.6	
	comp=Z,94nm,1.1s						
G40A	Rib Lake	96.79	346	IAmb	IAmb	11 53 00.0	
	comp=Z,93nm,1.0s						
E28A	Huff	96.95	354	P	P	11 52 59.5	+0.3
MSO	Missoula	96.97	3	IAmb	IAmb	11 53 01.3	
	comp=Z,97nm,1.4s						
MSO	Missoula	96.97	3	⇑P	P	11 52 59.7	+0.3
E09A	Wood Farm, Sta	97.01	6	IAmb	IAmb	11 53 01.8	
	comp=Z,84nm,1.1s						
H43A	Windswept, Lux	97.07	345	IAmb	IAmb	11 53 01.2	
	comp=Z,62nm,1.0s						
M57A	Sunshine Farm,	97.09	336	IAmb	IAmb	11 53 01.7	
	comp=Z,83nm,1.2s						
I45A	Fountain	97.14	343	IAmb	IAmb	11 53 02.3	
	comp=Z,137nm,0.9s						
LAO	LASA Array	97.16	358	IAmb	IAmb	11 53 03.2	
	comp=Z,130nm,1.1s						
LAO	LASA Array	97.16	358	⇑P	Pdif	11 53 01.6	+1.4
F33A	5 Mile Ranch,	97.20	351	IAmb	IAmb	11 53 02.0	
	comp=Z,67nm,1.1s						
ERPA	Erie	97.28	338	IAmb	IAmb	11 56 56.5	
	comp=Z,84nm,1.2s						
SPMN	Marine on St.	97.29	348	IAmb	IAmb	11 56 58.2	
	comp=Z,108nm,1.3s						
YPT	Yellepit	97.40	7	IAmb	IAmb	11 53 03.9	
	comp=Z,83nm,1.4s						
K50A	Casco	97.42	340	IAmb	IAmb	11 53 04.5	
	comp=Z,101nm,1.2s						
F07A	Phinny Hill Vi	97.46	7	IAmb	IAmb	11 53 04.2	
	comp=Z,87nm,1.2s						
J47A	Sunmer	97.55	342	IAmb	IAmb	11 53 03.7	
	comp=Z,151nm,1.2s						
CMSA	Cobar Meteorol	97.56	124	P	P	11 53 01.6	-0.4
EIDS	Eidsvold	97.59	116	IAmb	IAmb	11 53 57.2	
	comp=Z,128nm,1.8s						
EIDS	Eidsvold	97.59	116	P	Pdif	11 53 03.3	+1.0
EIDS	Eidsvold	97.59	116	⇓P	P	11 53 01.7	-0.6
F10A	Beach Ranch, E	97.62	5	IAmb	IAmb	11 57 00.8	
	comp=Z,103nm,1.3s						
PAOC	Oil Creek Stat	97.73	338	IAmb	IAmb	11 53 04.1	
	comp=Z,91nm,1.1s						
HOOD	Mount Hood Mea	97.83	9	IAmb	IAmb	11 57 03.1	
	comp=Z,132nm,1.3s						
I42A	Draeger Farm,	97.86	345	IAmb	IAmb	11 53 04.9	
	comp=Z,56nm,1.0s						
SSPA	Standing Stone	97.97	336	P	P	11 53 03.6	-0.2
SSPA				IAmb	IAmb	11 57 03.6	
	comp=Z,54nm,1.1s						
SSPA	Standing Stone	97.97	336	⇓P	Pdif	11 53 04.2	+0.3
MVL	Millersville	98.03	335	IAmb	IAmb	11 57 01.9	
	comp=Z,63nm,1.0s						
I40A	Norwalk	98.20	346	IAmb	IAmb	11 53 06.6	
	comp=Z,84nm,1.0s						
BOZ	Bozeman (W)	98.28	2	IAmb	IAmb	11 57 05.4	
	comp=Z,90nm,1.1s						
PAMR	Moraine State	98.39	338	IAmb	IAmb	11 57 05.7	
	comp=Z,91nm,1.3s						
H04D	Lebanon	98.48	10	IAmb	IAmb	11 53 38.6	
	comp=Z,50nm,1.0s						
DLMT	Dillon	98.48	2	IAmb	IAmb	11 53 08.8	
	comp=Z,166nm,1.6s						
I37A	Lemond, Waseca	98.57	348	IAmb	IAmb	11 57 01.3	
	comp=Z,62nm,0.9s						
SDMD	Soldier's Deli	98.73	335	P	P	11 53 06.4	-0.8
N53A	Lisbon	98.73	338	IAmb	IAmb	11 57 09.6	
	comp=Z,51nm,1.0s						
BMO	Blue Mountains	98.73	6	IAmb	IAmb	11 57 09.4	
	comp=Z,216nm,1.9s						
RLMT	Red Lodge	98.78	360	IAmb	IAmb	11 53 10.4	
	comp=Z,103nm,1.4s						
RLMT	Red Lodge	98.78	360	⇓P	Pdif	11 53 09.3	+1.6
K43A	Burlington	98.87	344	IAmb	IAmb	11 53 09.3	
	comp=Z,98nm,1.1s						
YNE	Yellowstone No	98.89	0	IAmb	IAmb	11 57 09.7	
	comp=Z,63nm,1.0s						
YHL	Hebgen Lake	99.03	1	IAmb	IAmb	11 57 09.9	
	comp=Z,71nm,1.0s						
QLMT	Earthquake Lak	99.05	1	P	Pdif	11 53 09.0	+0.1
JFWS	Jewell Farm	99.07	346	IAmb	IAmb	11 53 10.0	
	comp=Z,68nm,1.1s						
JFWS	Jewell Farm	99.07	346	⇓P	Pdif	11 53 09.2	+0.5
O54A	Avella	99.17	338	Pdif	Pdif	11 53 09.4	+0.1
O54A				IAmb	IAmb	11 57 07.0	
	comp=Z,46nm,1.0s						
ARMA	Armidale	100.96	120	P	Pdif	11 53 17.6	+0.3
PDAR	Pinedale Array	101.13	0	P	Pdif	11 53 18.9	+0.7
	comp=Z,2.0nm,0.6s,baz=36,slow=4.1,SNR=21						
PDAR				PKKPbc	PKKPbc	12 09 24.6	-3.3
	comp=Z,3.8nm,0.4s,baz=144,slow=4.8,SNR=19						
PDAR				SKKP	SKKPbc	12 12 44.1	-0.3

	comp=Z,1.6nm,0.8s,baz=161,slow=3.8,SNR=5.0						
PDAR				PKPPKP	P'P'df	12 17 42.0	-5.5
	comp=Z,1.3nm,0.8s,baz=203,slow=1.3,SNR=7.5						
PDAR	Pinedale Array	101.13	0	Pdif	Pdif	11 53 18.8	+0.5
YBH	Yreka Blue Hor	101.22	10	P	Pdif	11 53 20.5	+2.1
	comp=Z,0.6nm,1.0s,baz=32,slow=2.8,SNR=6.8						
CAN	Canberra	102.04	125	P	Pdif	11 53 22.4	+0.5
MAW	Mawson	103.93	183	Pdiff	Pdif	11 53 30.6	+1.2
	comp=Z,14nm,0.9s,baz=345,slow=5.7,SNR=10.0						
MAW				PKiKP	PKiKP	11 57 46.3	+0.7
	comp=Z,13nm,0.9s,baz=293,slow=4.1,SNR=9.0						
MAW				PKKPbc	PKKPbc	12 09 21.1	+0.6
	comp=Z,4.5nm,0.6s,baz=194,slow=5.5,SNR=5.3						
CCM	Cathedral Cave	103.95	345	P	Pdif	11 53 31.5	+1.0
CCM				pmax	pmax		
	comp=Z,21nm,1.0s						
NVAR	Mina Array Bea	105.01	7	Pdiff	Pdif	11 53 37.2	+1.7
	comp=Z,8.1nm,0.9s,baz=18,slow=3.0,SNR=27						
NVAR				PKKPbc	PKKPbc	12 09 17.0	+0.7
	comp=Z,11nm,0.7s,baz=187,slow=4.6,SNR=36						
NVAR				SKKPbc	SKKPbc	12 12 36.8	+2.6
	comp=Z,2.8nm,0.9s,baz=196,slow=5.9,SNR=4.7						
NVAR				PKPPKP	P'P'df	12 17 35.4	-4.7
	comp=Z,1.8nm,0.8s,baz=302,slow=1.1,SNR=7.2						
DZM	Mont Dzumac	107.32	105	eP	Pdif	11 53 44.9	-0.9
	comp=Z,167nm,27.6s						
DZM	Mont Dzumac	107.32	105	ePP	PP	11 58 17.9	+1.9
	comp=Z,434nm,26.3s						
DZM				eSKSac	SKSac	12 04 06.7	+1.3
	comp=Z,218nm,26.2s						
DZM				eSS	SS	12 13 06.3	-2.3
	comp=Z,3µm,26.8s						
DZM	Mont Dzumac	107.32	105	eLR	LR	12 29 36.1	
	comp=Z,2µm,25.5s						
SYO	Syowa Base	107.65	191	⇓iPKiKP	PKiKP	11 57 54.1	+1.6
ELIB	Princess Elisa	113.06	194	dPKiKP	PKiKP	11 58 03.1	+0.2
MSVF	Nonsavu	114.21	95	P	PKiKP	11 58 08.2	+1.6
MSVF	Nonsavu	114.21	95	P	Pdif	11 54 18.5	+2.0
TXAR	Lajitas Array	114.31	354	PKP	PKPdf	11 58 06.8	+0.1
	comp=Z,6.7nm,0.9s,baz=85,slow=0.6,SNR=12						
TXAR				PKKPbc	PKKPbc	12 08 46.4	-0.1
	comp=Z,18nm,0.8s,baz=182,slow=6.5,SNR=44						
TXAR				SKKPbc	SKKPbc	12 12 08.6	+0.9
	comp=Z,2.4nm,1.0s,baz=178,slow=4.5,SNR=3.8						
TXAR				PKPPKP	P'P'df	12 17 16.7	-5.4
	comp=Z,1.7nm,0.8s,baz=120,slow=0.6,SNR=10.0						
TXAR	Lajitas Array	114.31	354		PKiKP	11 58 05.7	-1.0
NVL	N'lazarevskaya	114.83	198	i PKIKP	PKiKP	11 58 08.1	+2.0
NVL				e		11 59 03.3	
NVL				eSS	SS	12 14 51.5	+5.2
NVL				eSSS	SSS	12 19 09.5	
NVL				pmax	pmax		
	comp=Z,102nm,1.0s						
SDBA	SAO DESIDERIO	117.70	275	eP	PKPdf	11 58 12.6	-0.8
SMTB	Santa Maria do	117.80	280	eP	PKPdf	11 58 13.2	-0.4
TROLL	Troll, Antarti	117.97	199	⇑PKKPbc	PKKPab	12 08 33.4	-0.5
	comp=Z,1µm,0.7s						
TROLL				⇑PKPdf	PKiKP	11 58 12.8	+0.4
	comp=Z,6µm,0.6s						
SNAA	Sanae	119.25	200	⇓PKKPbc	PKKPab	12 08 27.3	-0.9
	comp=Z,338nm,0.7s						
SNAA				⇑PKPdf	PKPdf	11 58 14.2	-0.6
	comp=Z,1µm,0.9s						
SNAA	Sanae	119.25	200	PKP	PKPdf	11 58 14.1	-0.6
	comp=Z,63nm,0.9s,baz=67,slow=3.3,SNR=57						
SNAA				SKP	SKPdf	12 01 28.5	-1.3
	comp=Z,28nm,1.2s,baz=25,slow=3.1,SNR=3.7						
SNAA				PKKPbc	PKKPab	12 08 28.5	+0.3
	comp=Z,17nm,0.8s,baz=234,slow=7.4,SNR=21						
SNAA	Sanae	119.25	200		PKPdf	11 58 14.0	-0.7
JCZ	Jackson Bay	119.56	125	P	PKPdf	11 58 15.6	-0.6
JCZ	Jackson Bay	119.56	125	P	PKiKP	11 58 16.7	+0.4
DIAM	Diamantina, MG	119.93	269	eP	PKPdf	11 58 17.7	0.0
FOZ	Fox Glacier	120.03	124		PKPdf	11 58 16.6	-0.3
CAM01	Campos-RJ	120.13	264	eP	PKiKP	11 58 18.2	+0.3
TEIG	Tepich	120.16	337	PKPdf	PKPdf	11 58 15.7	-2.3
VNA2	Neumayer--Watz	120.25	202	⇑PKKPbc	PKKPab	12 08 22.8	-1.0
	comp=Z,17nm,0.8s,baz=196,slow=31						
VNA2				⇑PKPdf	PKPdf	11 58 16.6	0.0
	comp=Z,86nm,0.6s,baz=43,slow=3.2						
BOAV	Boa Vista	120.31	299	PKPdf	PKPdf	11 58 18.0	-0.4
BOAV	Boa Vista	120.31	299	eP	PKiKP	11 58 18.8	+0.2
AFI	Afiamalu	120.31	85	PKPdf	PKiKP	11 58 18.9	+0.4
AFI	Afiamalu	120.31	85	P	PKiKP	11 58 20.4	+1.9
AFI	Afiamalu	120.31	85	P	PKiKP	11 58 20.0	+1.5
AFI	Afiamalu	120.31	85	PKIKP	PKiKP	11 58 18.9	+0.4
VNA1	Neumayer--Stat	120.40	202	⇑PKPdf	PKPdf	11 58 16.4	-0.4
	comp=Z,140nm,1.0s						
SYZ	Scrubby Hill	120.75	127	P	PKiKP	11 58 19.8	+1.5
SYZ	Scrubby Hill	120.75	127	P	PKiKP	11 58 19.6	+1.3
QRZ	Quartz Range	120.82	120	P	PKPdf	11 58 16.9	-1.7
QRZ	Quartz Range	120.82	120	P	PKiKP	11 58 19.2	+0.5
RPZ	Rata Peaks	120.94	124	P	PKPdf	11 58 18.4	-0.3
RPZ	Rata Peaks	120.94	124	P	PKiKP	11 58 20.1	+1.3
VNA3	Neumayer Olymp	121.06	202	⇑PKKPbc	PKKPab	12 08 21.6	+1.3
	comp=Z,36nm,0.7s						
VNA3				⇑PKPdf	PKPdf	11 58 17.6	-0.5
	comp=Z,132nm,0.7s						
ODZ	Otahua Downs	121.17	125	P	PKiKP	11 58 19.7	+0.5
ODZ	Otahua Downs	121.17	125	P	PKiKP	11 58 20.6	+1.4
KHEZ	Kahui Hut	121.26	118	P	PKiKP	11 58 20.2	+0.5
KHEZ	Kahui Hut	121.26	118	P	PKiKP	11 58 21.0	+1.3
ITTB	Itaituba	121.37	290	PKP	PKPdf	11 58 20.3	-0.2
ITTB	Itaituba	121.37	290	eP	PKPdf	11 58 20.3	-0.2
KUZ	Kuaotunu	121.46	115	P	PKPdf	11 58 19.3	-0.6
KUZ	Kuaotunu	121.46	115	P	PKiKP	11 58 21.6	+1.5
HIZ	Hauiti	121.55	117	P	PKPdf	11 58 19.3	-0.7
HIZ	Hauiti	121.55	117	P	PKiKP	11 58 21.6	+1.4
TOZ	Tahuroa Road	121.70	116	PKPdf	PKiKP	11 58 20.7	+0.2
SDV	Santo Domingo	121.99	313	PKP	PKPdf	11 58 21.0	-1.0
	comp=Z,30nm,1.0s,baz=33,slow=2.5,SNR=12						
SDV	Santo Domingo	121.99	313	PKP	PKPdf	11 58 21.1	-0.9
SDV	Santo Domingo	121.99	313	eP	PKPdf	11 58 21.2	-0.7
BDFB	Brasilia	122.01	274	PKP	PKPdf	11 58 20.4	-1.4
	comp=Z,4.0nm,0.3s,baz=295,slow=1.1,SNR=7.4						
BDFB				PP	PP	11 59 59.2	+0.1
	comp=Z,20nm,0.9s,baz=60,slow=5.9,SNR=3.7						
BDFB				PKKPbc	PKKPbc	12 08 17.8	-0.5
	comp=Z,3.8nm,0.4s,baz=227,slow=6.7,SNR=6.1						
KHZ	Kahutara	122.13	122	PKPdf	PKPdf	11 58 20.5	-0.5
KHZ	Kahutara	122.13	122	P	PKPdf	11 58 19.9	-1.1
KHZ	Kahutara	122.13	122	P	PKiKP	11 58 21.6	+0.4
BSCB	Bom Sucesso	122.22	267	PKP	PKPdf	11 58 21.9	0.0
BSCB	Bom Sucesso	122.22	267	eP	PKPdf	11 58 21.9	0.0
PMNB	Patos De Minas	122.29	270	PKP	PKiKP	11 58 22.4	0.0
SNZO	South Karori	122.52	120	P	PKPdf	11 58 20.5	-1.3
SNZO	South Karori	122.52	120	P	PKiKP	11 58 22.4	+0.4
SNZO	South Karori	122.52	120	PKP	PKPdf	11 58 21.0	-0.7
SNDB	Serra Nova Dou	122.57	280	PKP	PKPdf	11 58 22.3	-0.4
NPGB	Novo Progresso	122.78	287	PKP	PKPdf	11 58 23.1	-0.1
NPGB	Novo Progresso	122.78	287	eP	PKPdf	11 58 22.8	-0.4
BKZ	Black Stump Fm	122.98	117	P	PKPdf	11 58 20.7	-2.1
BKZ	Black Stump Fm	122.98	117	P	PKPdf	11 58 22.6	-0.2
SFA1	Serra Facao	123.01	271	PKP	PKPdf	11 58 23.5	-0.1
URZ	Urewera	123.08	116	P	PKPdf	11 58 20.3	-2.7
URZ	Urewera	123.08	116	P	PKPdf	11 58 21.9	-1.1
BFZ	Birch Farm	123.37	119	P	PKPdf	11 58 22.8	-0.7
BFZ	Birch Farm	123.37	119	P	PKiKP	11 58 24.1	+0.4
IPMB	Ipameri, GO	123.43	272	PKP	PKPdf	11 58 23.9	-0.4
IPMB	Ipameri, GO	123.43	272	eP	PKPdf	11 58 23.9	-0.4
SLP01	Ubatuba-SP	123.68	264	PKP	PKPdf	11 58 24.7	-0.1
SLP01	Ubatuba-SP	123.68	264	eP	PKiKP	11 58 25.3	+0.3
PARB	Paraibuna	124.06	265	PKP	PKiKP	11 58 26.3	+0.5
PARB	Paraibuna	124.06	265	eP	PKiKP	11 58 26.0	+0.3
ITU3	Corumbazu	124.08	272	PKP	PKPdf	11 58 25.5	0.0
MACA	Manacapuru-AM	124.26	295	PKP	PKPdf	11 58 26.0	-0.1
MACA	Manacapuru-AM	124.26	295	eP	PKPdf	11 58 25.8	-0.2
VAO	Valinhos	124.98	266	PKPdf	PKPdf	11 58 27.1	0.0
VAO	Valinhos	124.98	266	eP	PKiKP	11 58 27.8	+0.2
ARAG	Araguaiana, MT	125.09	276	eP	PKPdf	11 58 27.4	-0.1
RCLB	Rio Claro- Sao	125.14	267	PKP	PKiKP	11 58 28.3	+0.4
RCLB	Rio Claro- Sao	125.14	267	eP	PKiKP	11 58 27.8	-0.1
BB19B	Bebedouro	125.28	269	PKP	PKiKP	11 58 28.7	+0.6
BB19B	Bebedouro	125.28	269	eP	PKPdf	11 58 27.3	-0.5
CLDB	Colider	125.47	284	PKP	PKPdf	11 58 28.3	0.0
CLDB	Colider	125.47	284	eP	PKPdf	11 58 28.3	0.0
VNDA	Vanda	125.57	164	PKP	PKPdf	11 58 26.3	-0.3
	comp=Z,50nm,0.9s,baz=305,slow=4.3,SNR=45						
SPB	Sao Paulo	125.64	265	eP	PKiKP	11 58 28.6	-0.1
PET01	Itanhaem-SP	125.84	265	PKP	PKiKP	11 58 29.4	+0.3
PET01	Itanhaem-SP	125.84	265	eP	PKiKP	11 58 29.3	+0.2
ITRB	Iturama	126.06	271	PKP	PKiKP	11 58 29.7	0.0
ITRB	Iturama	126.06	271	eP	PKiKP	11 58 29.6	-0.2
QSPA	South Pole Qui	126.28	180	PKP	PKPdf	11 58 27.9	-0.4
	comp=Z,309nm,0.9s,baz=280,slow=1.7,SNR=63						
QSPA	South Pole Qui	126.28	180	PKPdf	PKPdf	11 58 27.8	-0.5
BOAB	BOACO BROADBAN	126.42	331	PKPdf	PKPdf	11 58 28.8	-1.3
SGC2	Sao Gabriel da	126.59	303	PKP	PKPdf	11 58 30.2	-0.3
PDRB	Porto dos Gac	126.64	284	PKP	PKPdf	11 58 30.3	-0.3
PDRB	Porto dos Gac	126.64	284	eP	PKPdf	11 58 30.2	-0.3
SBA	Scott Base	126.65	165	PKPdf	PKPdf	11 58 28.7	0.0
SBA	Scott Base	126.65	165	PKIKP	PKPdf	11 58 28.7	0.0
TEFE	Tefe	127.36	298	PKP	PKPdf	11 58 32.2	+0.2
TEFE	Tefe	127.36	298	eP	PKiKP	11 58 32.3	-0.2
ROSC	El Rosal	127.40	314	PKP	PKPdf	11 58 32.3	-0.2
	comp=Z,153nm,1.0s,baz=123,slow=2.7,SNR=42						
ROSC				SKPbc	SKPbc	12 01 28.5	
	comp=Z,124nm,0.9s,baz=139,slow=6.0,SNR=8.5						
C2SB	Chapadao do Su	127.57	274	PKP	PKiKP	11 58 33.2	+0.5
C2SB	Chapadao do Su	127.57	274	eP	PKiKP	11 58 32.8	+0.1
TIJ01	Guaruva-PR	127.71	264	PKP	PKiKP	11 58 33.8	+0.8
SALV	Santo Antonio	128.30	279	PKP	PKPdf	11 58 33.7	+0.1
SALV	Santo Antonio	128.30	279	eP	PKPdf	11 58 33.8	+0.1
PP1B	Ponte de Pedra	128.58	276	eP	PKiKP	11 58 34.6	-0.2
PTGB	Pitanga	129.89	267	PKP	PKPdf	11 58 36.8	+0.3
PTGB	Pitanga	129.89	267	eP	PKPdf	11 58 36.5	0.0
VILB	Vilhena	130.16	285	PKPdf	PKPdf	11 58 37.3	0.0
VILB	Vilhena	130.16	285	PKP	PKiKP	11 58 37.8	-0.3
VILB	Vilhena	130.16	285	eP	PKPdf	11 58 37.5	+0.2
AQDB	Aquidauana	130.75	274	PKP	PKPdf	11 58 37.8	-0.4
AQDB	Aquidauana	130.75	274	eP	PKPdf	11 58 37.7	-0.4
PTLB	Pontes e Lacer	130.78	282	PKP	PKPdf	11 58 37.8	-0.4
PTLB	Pontes e Lacer	130.78	282	eP	PKPdf	11 58 37.9	-0.4
CNLB	Canela	130.94	261	PKP	PKPdf	11 58 38.2	-0.1
CNLB	Canela	130.94	261	eP	PKPdf	11 58 38.4	+0.1
ITAB	Concordia	131.08	264	PKPdf	PKPdf	11 58 38.0	-0.6
ITAB	Concordia	131.08	264	PKP	PKPdf	11 58 38.7	+0.1
ITAB	Concordia	131.08	264	eP	PKPdf	11 58 38.4	-0.2
BDQN	Bodoquena, MS	131.58	274	eP	PKPdf	11 58 39.0	-0.7
SIV	San Ignacio	132.62	282	PKP	PKPdf	11 58 41.8	0.0
	comp=Z,5.8nm,0.9s,baz=97,slow=5.2,SNR=4.9						
SIV				pPKP	pPKPdf	11 59 36.7	-0.5
	comp=Z,9.4nm,0.9s,baz=39,slow=4.4,SNR=2.6						
SIV				SKPbc	SKPbc	12 01 46.9	-2.1
	comp=Z,17nm,0.8s,baz=71,slow=5.2,SNR=5.5						
CPSB	Cacapava Do Su	133.43	260	PKP	PKPdf	11 58 42.8	-0.1
CPSB	Cacapava Do Su	133.43	260	eP	PKPdf	11 58 43.0	+0.1
OTAV	Otavalo	133.51	315	PKP	PKPdf	11 58 42.8	-1.4
OTAV	Otavalo	133.51	315	eP	PKPdf	11 58 43.2	-1.0
CPUP	Villa Florida	134.86	268	PKhKP	PKPpre	11 58 32.3	
	comp=Z,2.1nm,0.5s,baz=89,slow=2.0,SNR=7.3						
CPUP				PKP	PKPdf	11 58 45.0	-0.7
	comp=Z,41nm,0.7s,baz=127,slow=2.4,SNR=54						
CPUP				PP	PP	12 01 21.9	-1.0
	comp=Z,19nm,1.0s,baz=132,slow=4.3,SNR=2.9						
CPUP				SKPbc	SKPbc	12 01 54.5	-1.5
	comp=Z,49nm,1.1s,baz=131,slow=4.4,SNR=7.1						
CPUP				SKKPbc	SKKPbc	12 11 00.1	-1.5
	comp=Z,6.8nm,1.1s,baz=308,slow=5.9,SNR=4.5						
CPUP	Villa Florida	134.86	268	PKIKP	PKPdf	11 58 45.0	-0.7
CPUP	Villa Florida	134.86	268	PKP	PKPdf	11 58 44.6	-1.1
PSAL	Palomas, Salto	137.01	262	eP	PKPdf	11 58 49.9	+0.4
LPAZ	La Paz	138.28	288	PKhKP	PKPpre	11 58 43.5	
	comp=Z,2.7nm,0.8s,baz=17,slow=8.8,SNR=6.6						
LPAZ				PKP	PKPdf	11 58 51.7	-1.4
	comp=Z,31nm,1.1s,baz=35,slow=5.9,SNR=31						
LPAZ				PP	PP	12 01 43.2	-1.6
	comp=Z,25nm,1.0s,baz=33,slow=6.0,SNR=5.8						
LPAZ				SKPbc	SKPbc	12 02 07.1	-0.3
	comp=Z,51nm,1.1s,baz=26,slow=7.3,SNR=5.2						
LPAZ				SKKPbc	SKKPbc	12 10 47.1	-1.5
	comp=Z,7.5nm,0.7s,baz=177,slow=3.4,SNR=7.4						
LPAZ	La Paz	138.28	288	PKP	PKPpre	11 58 43.2	
LPAZ	La Paz	138.28	288	eP	PKPdf	11 58 50.9	-2.2
ATAH	Atahualpa	139.31	308	PKP	PKPdf	11 58 53.7	-1.2
	comp=Z,14nm,0.7s,baz=68,slow=1.9,SNR=10						
ATAH				PP	PP	12 01 49.4	-1.0
	comp=Z,18nm,0.9s,baz=351,slow=1.1,SNR=3.6						
ATAH				SKPbc	SKPbc	12 02 09.4	-0.7
	comp=Z,61nm,0.9s,baz=50,slow=2.1,SNR=6.8						
PMOR	Pomariorio Ree	139.66	68	eP	PKPdf	11 58 51.3	-3.5
	comp=Z,127nm,0.9s						
PPT	Papeete	139.94	73	PKhKP	PKPpre	11 58 47.7	
	comp=Z,43nm,0.9s,baz=217,slow=6.3,SNR=4.4						
PPT				PKP	PKiKP	11 58 56.6	-1.2
	comp=Z,99nm,0.7s,baz=82,slow=2.6,SNR=12						
PPT				SKPbc	SKPbc	12 02 10.7	-0.5
	comp=Z,282nm,1.1s,baz=3.2,slow=0.2,SNR=12						
PPT2	Papeete2	139.95	73	ePKIKP	PKPdf	11 58 47.0	-8.4
	comp=Z,278nm,31.0s						
PPT2	Papeete2	139.95	73	eP	PKPdf	11 58 51.8	-3.6
	comp=Z,182nm,1.3s						
PPT2	Papeete2	139.95	73	ePP	PP	12 01 50.0	-4.4
	comp=Z,325nm,24.2s						
PPT2				esS		12 11 31.5	
	comp=Z,518nm,25.0s						
PPT2				eSS	SS	12 19 46.7	-13
	comp=Z,2µm,24.2s						
PPT2	Papeete2	139.95	73	eLR	LR	12 44 47.5	
	comp=Z,1µm,27.5s						
PAE	Paea	139.99	73	eP	PKPdf	11 58 53.8	-1.6
	comp=Z,53nm,1.2s						
VAH	Vaihoa	140.00	68	eP	PKPdf	11 58 51.3	-4.2
	comp=Z,1.2nm,0.9s						
TIAR	Tiarei	140.11	73	eP	PKPdf	11 58 51.1	-4.6
	comp=Z,105nm,0.9s						
TVO	Taravao	140.32	73	eP	PKPdf	11 58 52.2	-3.9
	comp=Z,57nm,0.8s						
NNA	Nana	141.87	301	PKhKP	PKPpre	11 58 54.1	
	comp=Z,17nm,0.7s,baz=339,slow=4.6,SNR=4.2						
TRQA	Tornquist	142.52	253	PKPpre	PKPpre	11 58 53.7	
TRQA	Tornquist	142.52	253	PKHKP	PKPpre	11 58 53.7	
TRQA	Tornquist	142.52	253	PKP	PKPdf	11 58 55.6	-3.8
TBI	Tubuai	143.18	80	ePKIKP	PKPab	11 58 56.2	-0.9
	comp=Z,2µm,26.5s						
TBI	Tubuai	143.18	80	eP	PKPbc	11 58 58.4	-0.2
	comp=Z,326nm,1.1s						
TBI	Tubuai	143.18	80	ePP	PP	12 02 10.1	-3.9
	comp=Z,2µm,28.5s						
TBI				esS		12 11 57.3	
	comp=Z,995nm,32.8s						
TBI				eSS	SS	12 20 34.6	-2.1
	comp=Z,9µm,30.0s						
TBI	Tubuai	143.18	80	eLQ	LQ	12 40 10.2	
	comp=Z,8µm,28.2s						
TBI				eLR	LR	12 46 09.0	
	comp=Z,7µm,30.2s						
TBI				eLR	LR	12 46 11.0	
	comp=Z,968nm,26.0s						
PB10	IPOC Station P	144.17	280		PKPab	11 59 00.6	-0.4
CFA	Coronel Fontan	145.70	266	SKKPbc	SKKPbc	12 10 18.2	-1.0
	comp=Z,8.3nm,1.0s,baz=266,slow=3.5,SNR=5.7						
VA06	Catapilco	148.47	266	PKPdf	PKPdf	11 59 08.2	-1.5
PLCA	Paso Flores	149.49	250	PKPbc	PKPbc	11 59 14.1	-1.9
	comp=Z,35nm,0.9s,baz=106,slow=2.0,SNR=51						
PLCA				pPKPbc	pPKPbc	12 00 12.7	+1.5
	comp=Z,47nm,0.9s,baz=276,slow=1.5,SNR=1.7						
PLCA	Paso Flores	149.49	250	PKPdf	PKPdf	11 59 10.9	-0.3
PLCA	Paso Flores	149.49	250	PKP	PKPdf	11 59 11.6	+0.4
PLCA	Paso Flores	149.49	250	eP	PKPdf	11 59 11.8	+0.6
MG05	Puerto Natales	149.81	228	PKPdf	PKPdf	11 59 11.0	-0.2
GO09	Cerro Castillo	149.81	229	PKPdf	PKPdf	11 59 11.1	-0.1
RKT	Rikitea	154.24	66	eP	PKiKP	11 59 28.4	+1.3
	comp=Z,135nm,1.0s						
RKT	Rikitea	154.24	66	eLR	LR	12 51 15.1	
	comp=Z,6µm,39.2s						

IDC 20 11:44:44.4±5.9**,2°.99S**×**148°.95E,h0**^{km}**,mb3.9**/3**, mbtmp3.9**/4**,ML1.7**/1**,Error ellipse: s-maj=104.5km s-min=69.8km az=82.0,Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.62	195	Pn	Pn	11 46 23.3	+0.3
	0.9nm,0.3s,baz=304,slow=3.6,SNR=1.9						
PMG				Sn	Sn	11 47 40.2	+1.0
	0.3nm,0.3s,baz=216,slow=14,SNR=0.9						
	5.8nm,0.6s						
WRA	Warramunga Arr	22.07	219	P	P	11 49 41.7	+0.4
	4.3nm,1.0s,baz=44,slow=11,SNR=14						
	4.3nm,1.0s						
ASAR	Alice Springs	25.18	214	P	P	11 50 10.8	-1.0
	1.8nm,0.8s,baz=51,slow=8.3,SNR=13						
	1.8nm,0.8s						
DAV	Davao City (W)	25.37	293	P	P	11 50 14.0	+0.4
STKA	Stephens Creek	29.56	193	P	P	11 50 52.0	+1.0
	2.0nm,0.8s,baz=29,slow=10,SNR=3.0						
	2.0nm,0.8s						

JMA 20 11:46:39.7±0.0**,35°.7N**±0°.1×**136°.9E**±0°.1**,h6**^{km}**,MV-0.1**/9**, SW GIFU PREF,Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYTA	Yamagatataniai	0.17	221	P	Pg	11 46 43.4	+0.2
JYTA				S	Sg	11 46 45.9	+0.4

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*ATH **20** 12:07:51.2,34°.97N×23°.10E,h23^{km}±2^{km},ML3.0/10, Manual Solution by I.Dede First location: 2019/12/20 12:09:12, This location: 2019/12/20 12:25:37 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*

*THE **20** 12:07:52.5,35°N±5°×2°3E±°,h21^{km},M3.0/7,MLh3.0/7*

*IDC **20** 12:08:12.4±16.0,36°.77N×24°.21E,h116^{km}±106^{km}, mb3.4/7,mbtmp3.7/8,ML2.6/1,Error ellipse: s-maj=240.0km s-min=33.9km az=27.0*

ISC 20 12:07:52.4±1.7**,35°.00N**±0°.10×**23°.14E**±0°.09**,h56**^{km}±12^{km}**, n38,**σ**0**^{s}**96**/48**,mb3.7**/7**,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	Gavdhos	0.80	102	P	Pn	12 08 07.5	-0.2
GVD				S	Sn	12 08 17.2	-1.6
IMMV	Iera Moni Meta	0.82	56	P	Pn	12 08 08.0	0.0
IMMV				S	Sn	12 08 20.4	+0.9
IMMV	Iera Moni Meta	0.82	56	P	Pn	12 08 07.8	-0.2
IMMV				S	Sn	12 08 19.0	-0.5
ANKY	Antikythira Is	0.87	9	P	Pn	12 08 08.5	-0.1
ANKY				S	Sn	12 08 21.3	+0.8
ANKY	Antikythira Is	0.87	9	P	Pn	12 08 08.3	-0.3
ANKY				S	Sn	12 08 20.5	0.0
CHAN	Chania	0.90	55	P	Pn	12 08 09.2	+0.2
CHAN				S	Sn	12 08 21.7	+0.6
CHAN	Chania	0.90	55	P	Pn	12 08 09.2	+0.2
CHAN				S	Sn	12 08 21.6	+0.4
VAM	Vamos	0.95	65	P	Pn	12 08 10.5	+0.8
VAM	Vamos	0.95	65	P	Pn	12 08 10.2	+0.5
VAM				S	Sn	12 08 23.5	+1.0
KTHA	Kythira Island	1.25	357	P	Pn	12 08 14.2	+0.6
IDI	Anoyia	1.46	78	P	Pn	12 08 17.8	+1.3
IDI	Anoyia	1.46	78	P	Pn	12 08 16.9	+0.3
IDI				S	Sn	12 08 38.0	+3.4
VLI	Veliai	1.72	355	P	Pn	12 08 21.2	+1.3
VLI				S	Sn	12 08 42.2	+1.4
NPS	Neapolis	2.04	82	P	Pn	12 08 24.6	+0.2
THR6	Thira Island,	2.28	53	P	Pn	12 08 27.7	+0.1
THR5	Thira Island,	2.28	51	P	Pn	12 08 27.7	0.0
THR3	Thira Island,	2.31	52	P	Pn	12 08 27.7	-0.3
ITM	Ithomi	2.38	336	P	Pn	12 08 30.1	+1.1
ZKR	Zakros	2.53	87	P	Pn	12 08 33.1	+2.1
MET5	Makryloggos,Me	2.62	4	P	Pn	12 08 34.0	+1.7
VLY	Voula,Athens	2.89	10	P	Pn	12 08 36.3	+0.3
GUR	Goura	3.00	348	P	Pn	12 08 38.9	+1.3
ATHU	Athens Univers	3.00	10	P	Pn	12 08 36.9	-0.6
LTK	Loutraki	3.02	357	P	Pn	12 08 37.9	+0.3
LTK	Loutraki	3.02	357	P	Pn	12 08 38.0	+0.3
PTL	Penteli	3.09	11	P	Pn	12 08 38.9	+0.1
DION	Dionisos Attik	3.13	12	P	Pn	12 08 39.2	-0.1
VILL	Villia	3.16	2	P	Pn	12 08 39.5	-0.2
KARY	Karystos	3.20	19	P	Pn	12 08 39.7	-0.4
KARY	Karystos	3.20	19	P	Pn	12 08 39.9	-0.3
GERES	GERESS Array B	15.49	336	P	P	12 11 30.0	-0.7
	baz=136,slow=12,SNR=2.4						
	0.2nm,0.4s						
HFS	Hagfors	25.88	349	P	P	12 13 18.0	-0.6
	1.1nm,0.4s,baz=146,slow=9.0,SNR=8.5						
	1.1nm,0.4s						
FINES	FINESS Array B	26.52	3	P	P	12 13 22.9	-1.5
	2.2nm,0.8s,baz=181,slow=9.2,SNR=2.1						
	2.2nm,0.8s						
NOA	NORSAR Array B	27.16	347	P	P	12 13 30.9	+0.8
	0.3nm,0.6s,baz=156,slow=10.0,SNR=4.8						
	0.3nm,0.6s						
ARCES	ARCESS Array B	34.61	1	P	P	12 14 34.6	-1.0
	0.6nm,0.6s,baz=181,slow=8.7,SNR=1.4						
	0.6nm,0.6s						
KURBB	Kurchatov Arra	42.51	51	P	P	12 15 41.3	-0.7
	0.3nm,0.2s,baz=272,slow=8.9,SNR=2.1						
	0.3nm,0.2s						
SPITS	Spitsbergen Ar	43.38	358	P	P	12 15 49.0	+0.3
	8.9nm,1.1s,baz=153,slow=9.7,SNR=7.6						
	8.9nm,1.1s						
MKAR	Makanchi Array	45.24	56	P	P	12 16 04.4	+0.4
	0.2nm,0.3s,baz=272,slow=8.4,SNR=9.1						
	0.2nm,0.3s						

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*IDC **20** 12:11:05.3±0.8,6°.55N×125°.16E,h0^{km},mb3.9/8, mbtmp3.9/8,Error ellipse: s-maj=20.8km s-min=9.1km az=123.0*

*NEIC **20** 12:11:07.7±1.5,6°.62N±0°.09×125°.2E±0°.1,h10^{km}±1^{km}, mb4.4/20,Error ellipse: s-maj=22.0km s-min=6.4km az=128.0*

ISC 20 12:11:06.6±0.7**,6°.57N**±0°.09×**125°.1E**±0°.1**,h10**^{km}**,n32,** σ**1**^{s}**06**/32**,mb4.2**/18**,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.70	45	Pg	Pg	12 11 19.7	-0.4
	1µm,0.3s,baz=235,slow=1.1,SNR=23						
DAV				Lg	Lg	12 11 25.9	
	3µm,0.3s,baz=231,slow=5.6,SNR=39						
MTN	Manton Dam	20.20	163	P	P	12 15 42.5	+0.8
KNRA	Kununurra	22.40	171	P	P	12 16 06.5	+1.1
KNRA				IAmb	IAmb	12 16 14.4	
	comp=Z,6.8nm,0.8s						
FITZ	Fitzroy Crossi	24.52	179	P	P	12 16 26.8	+0.5
WB0	Warramunga Arr	27.73	161	P	P	12 16 55.5	0.0
WB0				IAmb	IAmb	12 17 27.2	
	comp=Z,4.4nm,0.9s						
WRAB	Tennant Creek	27.87	161	P	P	12 16 56.5	-0.2
WRAB				IAmb	IAmb	12 17 35.5	
	comp=Z,8.1nm,1.4s						
WRA	Warramunga Arr	27.88	161	P	P	12 16 56.3	-0.5
	comp=Z,0.5nm,0.5s,baz=335,slow=11,SNR=8.0						
	comp=Z,0.5nm,0.5s						
WRA	Warramunga Arr	27.88	161	P	P	12 16 56.2	-0.5
WR8	Warramunga Arr	27.94	161	P	P	12 16 58.0	+0.7
WR8				IAmb	IAmb	12 17 37.6	
	comp=Z,7.2nm,1.2s						
AS31	Alice Springs	31.26	164	P	P	12 17 27.7	+0.9
ASAR	Alice Springs	31.26	164	P	P	12 17 26.9	+0.1
	comp=Z,0.5nm,0.5s,baz=344,slow=7.8,SNR=13						
	comp=Z,0.5nm,0.5s						
ASAR	Alice Springs	31.26	164	P	P	12 17 27.6	+0.8
SHL	Shillong	36.90	305	P	P	12 18 14.1	-1.8
INKA	Innaminka	37.32	157	P	P	12 18 19.4	+0.3
BBOO	Buckleboo	40.53	166	P	P	12 18 45.6	-0.4
STKA	Stephens Creek	41.35	159	P	P	12 18 52.2	-0.6
	comp=Z,2.1nm,0.8s,baz=341,slow=9.3,SNR=3.1						
	comp=Z,2.1nm,0.8s						
STKA	Stephens Creek	41.35	159	P	P	12 18 52.1	-0.7
PETK	Petropavlovsk-	53.47	24	P	P	12 20 26.7	-0.2
	comp=Z,4.9nm,1.0s,baz=210,slow=7.9,SNR=1.4						
	comp=Z,4.9nm,1.0s						
MKAR	Makanchi Array	54.30	325	P	P	12 20 34.6	+1.5
	comp=Z,0.5nm,0.5s,baz=119,slow=6.9,SNR=6.2						
	comp=Z,0.5nm,0.5s						
KURBB	Kurchatov Arra	58.48	327	P	P	12 21 03.6	+0.8
	comp=Z,1.0nm,0.5s,baz=124,slow=6.7,SNR=9.5						
	comp=Z,1.0nm,0.5s						
KURK	Kurchatov	58.48	327	P	P	12 21 03.5	+0.7
KURK				IAmb	IAmb	12 21 04.7	
	comp=Z,2.2nm,0.7s						
BVAR	Borovoye Array	64.06	327	P	P	12 21 39.9	-0.7
	comp=Z,1.1nm,0.8s,baz=123,slow=5.3,SNR=2.1						
	comp=Z,1.1nm,0.8s						
BKZ	Black Stump Fm	65.78	138	P	P	12 21 50.8	-1.3
C18K	Utukok River	78.01	21	P	P	12 23 05.9	+0.8
C18K				IAmb	IAmb	12 23 17.6	
	comp=Z,11nm,1.5s						
C19K	Lookout Ridge	78.68	21	P	P	12 23 10.9	+2.2
C19K				IAmb	IAmb	12 23 47.7	
	comp=Z,5.6nm,1.3s						
D20K	Etivluk River	79.67	21	P	P	12 23 15.6	+1.4
D20K				IAmb	IAmb	12 23 26.2	
	comp=Z,4.9nm,1.3s						
D22K	Ayikyak River	81.11	21	P	P	12 23 23.2	+1.3
H24K	Noodor Dome	82.84	24	P	P	12 23 31.4	+0.3
H24K				IAmb	IAmb	12 23 50.1	

	comp=Z,6.5nm,1.4s						
ILAR	**Eielson Array**	**83.26**	**26**	P	**P**	**12 23 33.6**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=235,slow=4.9,SNR=8.3						
	comp=Z,0.6nm,0.7s						
BMAR	**Burnt Mountain**	**84.11**	**23**	P	**P**	**12 23 39.3**	**+1.7**
SCRK	**Sand Creek**	**84.56**	**26**	P	**P**	**12 23 40.9**	**+0.9**
SCRK				IAmb	IAmb	12 24 23.1	
	comp=Z,6.8nm,1.5s						
BCAR	**Beaver Creek A**	**85.62**	**27**	P	**P**	**12 23 47.1**	**+1.9**

IDC 20 12:15:43.0±3.4**,59°.28N**×**30°.54W,h0^{km},mb3.9**/4**,
mbtmp3.9**/5**,ML3.7**/1**,Error ellipse: s-maj=94.1km
s-min=27.6km az=170.0,Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**6.98**	**34**	Pn	Pn	12 17 26.4	+0.1
	1.2nm,0.3s,baz=253,slow=11,SNR=6.6						
BORG				Sn	Sn	12 18 43.3	-3.1
	0.5nm,0.3s,baz=266,slow=10,SNR=1.6						
	19nm,0.9s						
YKA	**Yellowknife Ar**	**38.31**	**312**	P	P	12 23 04.7	-0.1
	0.8nm,1.0s,baz=55,slow=7.7,SNR=6.2						
	0.8nm,1.0s						
PDAR	**Pinedale Array**	**49.26**	**287**	P	P	12 24 33.1	-0.2
	0.4nm,0.6s,baz=3.5,slow=6.2,SNR=3.9						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**56.31**	**46**	P	P	12 25 24.9	0.0
	3.1nm,0.3s,baz=321,slow=7.0,SNR=4.6						
	3.1nm,0.3s						
MKAR	**Makanchi Array**	**60.88**	**46**	P	P	12 25 56.9	0.0
	1.0nm,0.8s,baz=320,slow=7.1,SNR=5.3						
	1.0nm,0.8s						

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*OSPL **20** 12:20:19.5±0.8,20°.35N×70°.67W,h0^{km},ML2.1,
Presumed earthquake*
*SDD **20** 12:20:21.4±2.3,20°.33N×70°.82W,h23^{km}±24^{km},MD3.2,
ML3.5,MW2.8,Presumed earthquake*
ISC 20 12:20:20.1±1.6**,20°.34N**±0°.04×**70°.80W**±0°.06**,h15^{km}**±10^{km}**,
n10,**σ**0^{s}.74**/19**,5C-6D,Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUDR	**Luperon**	**0.47**	**198**	⇓*e*Pg	**Pg**	**12 20 29.1**	**-0.3**
LUDR				⇓*e*Sg	**Sb**	**12 20 37.8**	**+1.0**
LUDR				IAML		12 20 38.5	
	comp=E,3µm,0.3s						
LOPP1	**Punta Rusia, P**	**0.61**	**218**	*i* P	**Pg**	**12 20 31.8**	**-0.3**
LOPP1				*e*S	**Sg**	**12 20 41.5**	**+1.2**
LOPP1				IAML		12 20 49.9	
	comp=Z,71nm,1.0s						
MCDR	**Montecristi**	**0.92**	**241**	*e*Pg	**Pg**	**12 20 36.6**	**-1.4**
MCDR				⇑*e*Sg	**Sg**	**12 20 50.6**	**+0.5**
MCDR				IAML		12 20 54.1	
	comp=N,1µm,0.3s						
GRTK	**Grand Turk**	**1.21**	**345**	*e*Pg	**Pn**	**12 20 43.3**	**+0.8**
GRTK				⇑*e*Sg	**Sb**	**12 20 57.8**	**-0.4**
GRTK				IAML		12 21 08.4	
	comp=N,1µm,0.3s						
REDR	**Restauracion**	**1.29**	**206**	⇑*e*Pg	**Pn**	**12 20 43.6**	**-0.1**
REDR				⇑*e*Sg	**Sb**	**12 21 00.9**	**+0.3**
REDR				IAML		12 21 07.9	
	comp=N,651nm,0.2s						
SDDR	**Presa de Saban**	**1.43**	**199**	⇓*e*Pg	**Pn**	**12 20 44.7**	**-0.9**
SDDR				⇓*e*Sg	**Sn**	**12 21 04.0**	**-0.1**
SDDR				IAML		12 21 07.4	
	comp=N,2µm,0.3s						
SDDR	**Presa de Saban**	**1.43**	**199**	*i* P	**Pn**	**12 20 45.0**	**-0.6**
SDDR				*e*S	**Sn**	**12 21 04.1**	**-0.1**
SDDR				IAML		12 21 10.5	
	comp=Z,28nm,0.9s						
DR08	**Loma La Naviza**	**1.55**	**152**	⇓*e*Sg	**Sn**	**12 21 07.2**	**0.0**
DR08				IAML		12 21 15.8	
	comp=N,2µm,0.2s						
LONE3	**El Aguacate, B**	**1.83**	**200**	*i* P	**Pn**	**12 20 51.7**	**+0.4**
LONE3				*e*S	**Sn**	**12 21 14.8**	**+0.4**
LONE3				IAML		12 21 24.8	
	comp=Z,35nm,4.8s						
HATOM	**Hato Mayor del**	**2.04**	**139**	⇑*e*Pg	**Pn**	**12 20 54.5**	**+0.5**
HATOM				⇓*e*Sg	**Sb**	**12 21 21.2**	**-1.0**
HATOM				IAML		12 21 30.6	
	comp=N,112nm,0.3s						

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*IDC **20** 13:02:55.7±1.5,3°.03S×148°.96E,h0^{km},mb3.6/5,
mbtmp3.6/5,MS3.2/1,Error ellipse: s-maj=77.3km
s-min=24.3km az=110.0*
ISC 20 13:03:01.0±1.4**,3°.1S**±0°.2×**148°.9E**±0°.5**,h35^{km},n7,**σ**0^{s}.33**/6**,
mb3.6**/5**,Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.53**	**195**	LR	LR	13 07 26.7	
	comp=Z,178nm,18.4s,baz=338,slow=41						
WRA	**Warramunga Arr**	**22.00**	**219**	P	**P**	**13 07 52.5**	**+0.2**
	0.8nm,0.9s,baz=43,slow=11,SNR=6.9						
	0.8nm,0.9s						
ASAR	**Alice Springs**	**25.10**	**214**	P	**P**	**13 08 23.0**	**+0.3**
	0.6nm,0.8s,baz=48,slow=8.1,SNR=8.0						
	0.6nm,0.8s						
STKA	**Stephens Creek**	**29.47**	**193**	P	**P**	**13 09 01.5**	**-0.2**
	2.0nm,0.9s,baz=51,slow=17,SNR=2.1						
	2.0nm,0.9s						
ZALV	**Zalesovo Beam**	**77.59**	**327**	P	**P**	**13 14 53.3**	**-0.1**
	0.2nm,0.3s,baz=101,slow=6.0,SNR=1.7						
	0.2nm,0.3s						
ILAR	**Eielson Array**	**82.05**	**23**	P	**P**	**13 15 17.6**	**+0.2**
	0.7nm,0.8s,baz=249,slow=5.7,SNR=6.1						
	0.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**146.09**	**289**	PKPbc	**PKPbc**	**13 22 38.2**	**-0.2**
	0.5nm,0.7s,baz=89,slow=5.0,SNR=3.0						

NOU 20 13:19:23.3,16°.65S×**168°.16E,h41^{km},MLv4.3**/14**,
Vanuatu Islands,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.07**	**179**	P	Pn	13 19 41.1	-0.7
RTV	**Rentapao**	**1.16**	**167**	P	Pn	13 19 42.8	-0.3
SANVU	**Saraoutou**	**1.51**	**322**	P	Pn	13 19 47.7	-0.2
SANVU	**Saraoutou**	**1.51**	**322**	S	Sn	13 20 07.7	+1.4
YATNC	**Mamie plateau,**	**5.51**	**192**	P	Pn	13 20 42.4	-0.5
DZM	**Mont Dzumac**	**5.63**	**196**	P	Pn	13 20 44.3	-0.3
ONTNC	**Ouen Toro**	**5.85**	**196**	P	Pn	13 20 48.3	+0.7
OUENC	**Ouen Island, N**	**5.87**	**192**	P	Pn	13 20 50.0	+2.2
PINNC	**Pines Island,**	**5.97**	**186**	P	Pn	13 20 50.9	+1.7

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*NEIC **20** 13:32:48.7±1.2,4°.61N±0°.07×126°.6E±0°.1,h75^{km}±8^{km},
mb4.4/26,Error ellipse: s-maj=18.2km s-min=9.7km
az=76.0*
*IDC **20** 13:32:49.0±2.7,4°.63N×126°.44E,h75^{km}±24^{km},mb3.9/21,
mbtmp4.3/23,MS2.8/1,Error ellipse: s-maj=29.0km
s-min=11.5km az=74.0*
*DJA **20** 13:32:50.3±0.5,4°N±4°×12°7E±°,h37^{km}±6^{km},M4.5/17,
mb4.5/17,mB5.0/8,MLv4.6/15,Mw(mB)4.3/8*
ISC 20 13:32:49.5±0.4**,4°.54N**±0°.05×**126°.49E**±0°.08**,h85^{km},n99,
σ1^{s}.29**/104**,mb4.2**/29**,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.28**	**228**	P	**Pn**	**13 33 11.6**	**-0.7**
DAV	**Davao City (W)**	**2.67**	**340**	P	**Pn**	**13 33 29.0**	**-1.5**
	117nm,0.4s,baz=78,slow=22,SNR=1.3						
DAV				S	**Sn**	**13 34 06.8**	**+4.8**
	338nm,0.4s,baz=253,slow=20,SNR=5.2						
DAV				LR	LR	13 34 36.4	
	comp=Z,188nm,20.8s,baz=186,slow=42						
DAV	**Davao City (W)**	**2.67**	**340**		**Pn**	**13 33 28.9**	**-1.6**
DAV	**Davao City (W)**	**2.67**	**340**	P	**Pn**	**13 33 32.9**	**+2.4**
TNTI	**Ternate**	**3.85**	**167**		**Pn**	**13 33 45.8**	**-0.7**
TNTI	**Ternate**	**3.85**	**167**	P	**Pn**	**13 33 45.4**	**-1.1**
TNTI	**Ternate**	**3.85**	**167**	P	**Pn**	**13 33 45.4**	**-1.1**
GTOI	**Gorontalo**	**5.21**	**222**	P	**Pn**	**13 34 04.6**	**-0.4**
	0.4nm1µm84nm,1.0s						
MRSI	**Marisa**	**6.08**	**228**	P	**Pn**	**13 34 18.2**	**+1.3**
SANI	**Sanana**	**6.57**	**184**	P	**Pn**	**13 34 20.4**	**-3.1**
SANI	**Sanana**	**6.57**	**184**	P	**Pn**	**13 34 19.9**	**-3.6**
TOLI2	**Tolitoli**	**6.64**	**239**		**Pn**	**13 34 24.3**	**-0.2**
TOLI2	**Tolitoli**	**6.64**	**239**	P	**Pn**	**13 34 24.2**	**-0.4**
LUWI	**Luwuk**	**6.68**	**214**		**Pn**	**13 34 25.9**	**+0.9**
LUWI	**Luwuk**	**6.68**	**214**	P	**Pn**	**13 34 26.3**	**+1.3**
SWI	**Sorong**	**7.18**	**138**	P	**Pn**	**13 34 30.4**	**-1.5**
	0.1nm22nm,0.9s						
SIJI	**Sorong**	**7.19**	**138**	P	**Pn**	**13 34 30.7**	**-1.3**
NLAI	**Namlea**	**7.75**	**175**	P	**Pn**	**13 34 38.9**	**-0.8**
	2µm44nm,0.7s						
MPSI	**Mapaga**	**7.80**	**238**	P	**Pn**	**13 34 40.7**	**+0.4**
KRAI	**Karang Ratu**	**8.04**	**166**	P	**Pn**	**13 34 42.9**	**-0.7**
	0.3nm20nm,0.7s						
KDI	**Kendari**	**9.29**	**205**	P	**Pn**	**13 35 02.9**	**+2.2**
FAKI	**Fak Fak**	**9.38**	**142**	Pn	**Pn**	**13 35 00.5**	**-1.5**
FAKI	**Fak Fak**	**9.38**	**142**	P	**Pn**	**13 35 01.3**	**-0.7**
FAKI	**Fak Fak**	**9.38**	**142**	P	**Pn**	**13 35 01.3**	**-0.7**
	31nm,1.0s						
EDFI	**Ende, Flores**	**14.05**	**200**	P	**Pn**	**13 36 06.0**	**+1.2**
	15nm,1.7s						
SOEI	**Soe**	**14.38**	**189**	Pn	**Pn**	**13 36 07.4**	**-1.7**
BATI	**Baumata**	**14.92**	**191**	P	**Pn**	**13 36 17.6**	**+1.5**
	7.4nm,0.4s,baz=65,slow=6.8,SNR=3.7						
DBNI	**Kabupaten Domp**	**15.31**	**212**	P	**P**	**13 36 25.2**	**+1.3**
	9.8nm,0.8s						
GENI	**Genyem**	**15.39**	**117**	P	**P**	**13 36 24.8**	**0.0**
GENI	**Genyem**	**15.39**	**117**	P	**P**	**13 36 24.6**	**-0.2**
WBSI	**Waikabubak, Su**	**15.77**	**207**	P	**P**	**13 36 28.7**	**-0.3**
	35nm,0.8s						
PLAI	**Plampang**	**15.87**	**213**	P	**Pn**	**13 36 27.4**	**-0.7**
PLAI	**Plampang**	**15.87**	**213**	P	**P**	**13 36 30.5**	**+0.4**
JAGI	**Jajag, Banyuwa**	**17.85**	**224**		**Pn**	**13 36 53.1**	**+0.7**
JAGI				IAmb	IAmb	13 37 09.5	
	comp=Z,22nm,1.1s						
JAGI	**Jajag, Banyuwa**	**17.85**	**224**	P	**P**	**13 36 52.4**	**+0.4**
MTN	**Manton Dam**	**17.88**	**165**		**P**	**13 36 50.5**	**-1.7**
YULB	**Yu-li**	**19.40**	**345**	P	**P**	**13 37 06.2**	**-2.6**
YULB				IAmb	IAmb	13 37 37.9	
	comp=Z,40nm,1.4s						
TPUB	**Ta-pu**	**19.49**	**344**	P	**P**	**13 37 07.1**	**-2.7**
KNRA	**Kununurra**	**20.22**	**174**		**P**	**13 37 16.1**	**-1.7**
KNRA				IAmb	IAmb	13 37 44.3	
	comp=Z,14nm,0.7s						
FITZ	**Fitzroy Crossi**	**22.51**	**182**		**P**	**13 37 42.5**	**+0.1**
FITZ	**Fitzroy Crossi**	**22.51**	**182**	P	**P**	**13 37 43.9**	**+1.5**
WB0	**Warramunga Arr**	**25.38**	**162**		**P**	**13 38 09.0**	**0.0**
WB0				IAmb	IAmb	13 38 28.1	
	comp=Z,11nm,0.9s						
WRAB	**Tennant Creek**	**25.52**	**163**	P	**P**	**13 38 10.8**	**+0.4**
WRAB				IAmb	IAmb	13 38 32.9	
	comp=Z,7.9nm,0.9s						
WRAB	**Tennant Creek**	**25.52**	**163**	P	**P**	**13 38 12.7**	**+2.4**
WRA	**Warramunga Arr**	**25.53**	**163**	P	**P**	**13 38 10.7**	**+0.4**
	comp=Z,4.9nm,0.7s,baz=342,slow=10,SNR=43						
	comp=Z,4.9nm,0.7s						
WRA	**Warramunga Arr**	**25.53**	**163**	P	**P**	**13 38 10.3**	**-0.1**
WR8	**Warramunga Arr**	**25.59**	**162**	P	**P**	**13 38 11.6**	**+0.7**
PSA00	**Pilbara Seismi**	**26.76**	**194**		**P**	**13 38 22.2**	**+0.8**
PSA00				IAmb	IAmb	13 38 23.3	
	comp=Z,16nm,0.9s						
PSA00	**Pilbara Seismi**	**26.76**	**194**		**P**	**13 38 22.2**	**+0.8**
PSA00				IAmb	IAmb	13 38 24.4	
	comp=Z,6.2nm,0.8s						
ASAR	**Alice Springs**	**28.96**	**166**	P	**P**	**13 38 41.9**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=343,slow=7.0,SNR=15						
ASAR				PcP	**PcP**	**13 41 49.6**	**+1.4**
	comp=Z,1.2nm,0.8s,baz=352,slow=2.8,SNR=6.3						
ASAR				S	**S**	**13 43 24.8**	**-1.2**
	comp=Z,0.8nm,0.9s,baz=349,slow=22,SNR=4.5						
	comp=Z,1.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**30.26**	**299**	P	**P**	**13 38 52.4**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=115,slow=7.5,SNR=5.5						
	comp=Z,0.8nm,0.5s						
MEEK	**Meekatharra**	**31.92**	**193**	P	**P**	**13 39 07.8**	**+0.6**
KSRS	**Korea Array**	**32.78**	**2**	P	**P**	**13 39 14.0**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=183,slow=10,SNR=4.5						
	comp=Z,0.9nm,0.6s						
MORW	**Morawa**	**34.90**	**196**	P	**P**	**13 39 33.7**	**+0.7**
BLDU	**Ballidu**	**36.19**	**194**	P	**P**	**13 39 44.8**	**+0.7**
KLBR	**Kellerberrin**	**36.89**	**192**	P	**P**	**13 39 51.4**	**+1.4**
MUN	**Mundaring**	**37.62**	**194**	P	**P**	**13 39 59.0**	**+2.9**
BBOO	**Buckleboo**	**38.24**	**167**	P	**P**	**13 40 04.8**	**+3.4**
STKA	**Stephens Creek**	**38.97**	**159**	P	**P**	**13 40 10.0**	**+2.5**
	comp=Z,3.5nm,0.7s,baz=319,slow=8.2,SNR=6.1						
	comp=Z,3.5nm,0.7s						
STKA	**Stephens Creek**	**38.97**	**159**	P	**P**	**13 40 06.6**	**-0.9**
USRK	**Ussuriysk Ar.**	**39.79**	**6**	P	**P**	**13 40 15.1**	**+0.9**
	comp=Z,1.0nm,0.5s,baz=120,slow=11,SNR=1.9						
	comp=Z,1.0nm,0.5s						
HILR	**Hailar Array B**	**45.22**	**354**	P	**P**	**13 40 58.8**	**+0.6**
	comp=Z,1.0nm,0.5s,baz=182,slow=13,SNR=3.8						
	comp=Z,1.0nm,0.5s						
HEH	**HeiHe**	**45.56**	**1**	*e*P	**P**	**13 41 01.8**	**+1.1**
SONM	**Songino Array**	**46.46**	**341**	P	**P**	**13 41 07.6**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=164,slow=9.8,SNR=5.9						
SONM				PcP	**PcP**	**13 42 42.3**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=149,slow=2.6,SNR=3.9						
	comp=Z,0.8nm,0.6s						
SONM	**Songino Array**	**46.46**	**341**	P	**P**	**13 41 07.8**	**-0.2**
PETK	**Petropavlovsk-**	**54.77**	**22**	P	**P**	**13 42 09.2**	**-1.2**
	comp=Z,4.9nm,0.9s,baz=220,slow=6.9,SNR=2.5						
	comp=Z,4.9nm,0.9s						
PETK	**Petropavlovsk-**	**54.77**	**22**	P	**P**	**13 42 09.4**	**-1.0**
MKAR	**Makanchi Array**	**56.76**	**325**	P	**P**	**13 42 24.6**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=123,slow=8.1,SNR=19						
MKAR				PcP	**PcP**	**13 43 20.5**	**+0.8**
	comp=Z,2.1nm,0.8s,baz=123,slow=4.5,SNR=5.5						
	comp=Z,1.2nm,0.5s						
ZAA0	**Zalesovo Array**	**59.76**	**333**	P	**P**	**13 42 44.9**	**-0.6**
ZAA0				IAmb	IAmb	13 43 16.9	
	comp=Z,2.0nm,0.9s						
ZALV	**Zalesovo Beam**	**59.76**	**333**	P	**P**	**13 42 45.0**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=120,slow=5.3,SNR=3.5						
	comp=Z,0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**59.76**	**333**	P	**P**	**13 42 44.8**	**-0.7**
KURBB	**Kurchatov Arra**	**60.93**	**327**	P	**P**	**13 42 53.3**	**-0.2**
	comp=Z,2.6nm,0.7s,baz=125,slow=6.2,SNR=29						
	comp=Z,2.6nm,0.7s						
KURK	**Kurchatov**	**60.93**	**327**		**P**	**13 42 53.3**	**-0.2**
GAR	**Garm**	**61.20**	**312**	P	**P**	**13 42 55.0**	**-0.7**
KK31	**Karatay Array**	**62.48**	**317**	P	**P**	**13 43 03.6**	**-0.5**
KK31				IAmb	IAmb	13 43 44.1	
	comp=Z,2.0nm,0.8s						
KKAR	**Karatay Array**	**62.48**	**317**	P	**P**	**13 43 03.8**	**-0.4**
BVAR	**Borovoye Array**	**66.51**	**327**	P	**P**	**13 43 29.9**	**-0.2**
	comp=Z,2.2nm,0.5s,baz=133,slow=8.7,SNR=13						
BVAR				PcP	**sP**	**13 43 59.2**	**-0.6**
	comp=Z,3.7nm,0.8s,baz=90,slow=3.1,SNR=6.6						
	comp=Z,2.2nm,0.5s						
BORK	**Borovoye**	**66.56**	**327**		**P**	**13 43 30.4**	**-0.1**
BORK				IAmb	IAmb	13 43 30.9	
	comp=Z,4.1nm,0.8s						
TIXI	**Tiksi**	**67.04**	**1**	P	**P**	**13 43 32.8**	**-0.3**
	comp=Z,2.2nm,0.4s,baz=195,slow=5.3,SNR=11						
	comp=Z,2.2nm,0.4s						
TIXI	**Tiksi**	**67.04**	**1**	P	**P**	**13 43 32.7**	**-0.5**
TIXI				IAmb	IAmb	13 43 34.0	
	comp=Z,4.8nm,1.1s						
NRIK	**Noril'sk**	**69.59**	**346**	P	**P**	**13 43 49.7**	**+0.5**
	comp=Z,3.4nm,0.6s,baz=131,slow=6.6,SNR=7.9						
	comp=Z,3.4nm,0.6s						
NRIK	**Noril'sk**	**69.59**	**346**	P	**P**	**13 43 49.6**	**+0.5**
NRIK				IAmb	IAmb	13 43 50.8	
	comp=Z,6.8nm,1.1s						
AB31	**Akbulak array**	**71.37**	**321**	P	**P**	**13 44 00.1**	**-0.2**
AB31				IAmb	IAmb	13 44 02.8	
	comp=Z,2.1nm,0.7s						
ABKAR	**Akbulak array**	**71.37**	**321**	P	**P**	**13 44 00.3**	**-0.1**
RAYN	**Ar Rayn**	**79.95**	**293**	P	**P**	**13 44 48.5**	**-1.4**
RAYN				IAmb	IAmb	13 44 51.9	
	comp=Z,3.0nm,0.7s						
D20K	**Etivluk River**	**81.04**	**21**	P	**P**	**13 44 55.4**	**+0.6**
D20K				IAmb	IAmb	13 45 27.5	
	comp=Z,9.9nm,1.4s						
L22K	**Petersville**	**82.64**	**28**	P	**P**	**13 45 04.0**	**+0.7**
PWL	**Port Wells**	**83.70**	**29**	P	**P**	**13 45 08.2**	**-0.7**
ILAR	**Eielson Array**	**84.47**	**25**	P	**P**	**13 45 13.1**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=255,slow=5.8,SNR=6.8						
	comp=Z,0.5nm,0.8s						
BMAR	**Burnt Mountain**	**85.42**	**23**	P	**P**	**13 45 18.1**	**+0.7**
BRTR	**Keskin Array B**	**89.32**	**310**	P	**P**	**13 45 36.4**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=134,slow=11,SNR=4.2						
	comp=Z,0.8nm,0.7s						
ARCES	**ARCESS Array B**	**89.61**	**340**	P	**P**	**13 45 37.2**	**-0.2**
	comp=Z,3.5nm,0.7s,baz=68,slow=6.7,SNR=11						
	comp=Z,3.5nm,0.7s						
ARCES	**ARCESS Array B**	**89.61**	**340**	P	**P**	**13 45 37.7**	**+0.3**
SPITS	**Spitsbergen Ar**	**89.64**	**349**	P	**P**	**13 45 37.9**	**+0.5**
	comp=Z,6.2nm,1.0s,baz=144,slow=11,SNR=2.0						
	comp=Z,6.2nm,1.0s						
FINES	**FINESS Array B**	**91.01**	**332**	P	**P**	**13 45 44.3**	**+0.3**
	comp=Z,2.3nm,0.5s,baz=226,slow=10,SNR=18						
	comp=Z,2.3nm,0.5s						
FINES	**FINESS Array B**	**91.01**	**332**	P	**P**	**13 45 44.5**	**+0.4**
HFS	**Hagfors**	**97.19**	**332**	P	Pdif	13 46 12.3	-0.2
	comp=Z,2.9nm,1.0s,baz=66,slow=3.5,SNR=1.8						
	comp=Z,2.9nm,1.0s						
TORD	**Torodi Ar. Bea**	**122.44**	**289**	PKP	**PKiKP**	**13 51 36.7**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=74,slow=4.2,SNR=3.8						
PLCA	**Paso Flores**	**140.85**	**159**	PKP	**PKiKP**	**13 52 12.9**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=135,slow=1.6,SNR=4.3						

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*IDC **20** 13:43:10.6±0.9,59°.27N×30°.43W,h0^{km},mb3.7/13,
mbtmp3.7/15,ML3.9/2,MS3.6/9,Error ellipse:
s-maj=25.4km s-min=16.2km az=180.0*
*NEIC **20** 13:43:12.5±1.1,59°.2N±0°.1×30°.4W±0°.2,h10^{km}±1^{km},
mb4.3/24,Error ellipse: s-maj=24.2km s-min=15.2km
az=153.0*
ISC 20 13:43:13.3±0.7**,59°.2N**±0°.1×**30°.39W**±0°.08**,h17^{km},n57,
σ0^{s}.70**/50**,mb4.1**/22**,MS3.5**/6**,Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**7.00**	**34**	Pn	**Pn**	**13 44 54.3**	**-0.6**
	3.1nm,0.3s,baz=206,slow=5.1,SNR=14						
BORG				LR	LR	13 46 57.5	
	comp=Z,605nm,20.4s,baz=242,slow=33						
	20nm,0.8s						
BORG	**Borgarnes**	**7.00**	**34**		**Pn**	**13 44 54.8**	**0.0**
SFJD	**Kangerlussuaq**	**11.98**	**319**	LR	LR	13 49 45.1	
	comp=Z,255nm,18.7s,baz=145,slow=33						
EKA	**Eskdalemuir Ar**	**15.18**	**93**	Pn	**Pn**	**13 46 46.9**	**+0.3**
	baz=304,slow=9.0						
EKA				LR	LR	13 51 26.6	
	comp=Z,319nm,19.4s,baz=283,slow=33						
	1.6nm,0.9s						
SCHQ	**Schefferville**	**20.14**	**273**	LR	LR	13 52 52.6	
	comp=Z,92nm,20.6s,baz=288,slow=29						
NOA	**NORSAR Array B**	**20.55**	**67**	LR	LR	13 54 17.0	
	comp=Z,98nm,21.2s,baz=275,slow=32						
TULEG	**Thule**	**21.86**	**337**	P	**P**	**13 48 04.2**	**-0.4**
HFS	**Hagfors**	**21.97**	**69**	LR	LR	13 55 58.7	
	comp=Z,173nm,18.5s,baz=292,slow=35						
ARCES	**ARCESS Array B**	**25.28**	**43**	P	**P**	**13 48 38.8**	**+0.5**
	2.7nm,0.9s,baz=293,slow=6.5,SNR=5.0						
ARCES				LR	LR	13 57 16.2	
	comp=Z,109nm,18.4s,baz=274,slow=34						
	2.7nm,0.9s						
ARCES	**ARCESS Array B**	**25.28**	**43**	P	**P**	**13 48 39.1**	**+0.9**
ARCES				IAmb	IAmb	13 49 00.3	
	comp=Z,12nm,1.4s						
DAVOX	**Davos/Dischmat**	**26.78**	**100**	LR	LR	13 57 40.8	
	comp=Z,210nm,20.2s,baz=80,slow=32						
FINES	**FINESS Array B**	**27.30**	**61**	P	**P**	**13 48 54.9**	**-1.6**
	comp=Z,1.4nm,0.9s,baz=286,slow=10.0,SNR=1.0						
	comp=Z,1.4nm,0.9s						
SABO	**M.te Sabotino**	**29.22**	**97**	P	**P**	**13 49 13.3**	**-0.5**
FCC	**Fort Churchill**	**31.72**	**297**	P	**P**	**13 49 35.7**	**+0.1**
FCC				IAmb	IAmb	13 49 53.9	
	comp=Z,8.0nm,1.4s						
BUR08	**Bucovina Ar. S**	**34.07**	**85**	P	**P**	**13 49 55.4**	**-1.1**
BUR08				IAmb	IAmb	13 50 07.1	
	comp=Z,4.3nm,1.2s						
BURAR	**Bucovina Array**	**34.10**	**85**	P	**P**	**13 49 55.4**	**-1.3**
AKASG	**Malin Array Be**	**34.18**	**78**	P	**P**	**13 49 56.9**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=294,slow=9.1,SNR=4.8						
	comp=Z,0.2nm,0.3s						
YKA	**Yellowknife Ar**	**38.41**	**312**	P	**P**	**13 50 32.6**	**-0.6**
	comp=Z,1.4nm,1.0s,baz=52,slow=8.5,SNR=14						
	comp=Z,1.4nm,1.0s						
BRTR	**Keskin Array B**	**43.98**	**87**	P	**P**	**13 51 17.8**	**-1.7**
	comp=Z,0.3nm,0.5s,baz=327,slow=13,SNR=2.2						
	comp=Z,0.3nm,0.5s						
BMAR	**Burnt Mountain**	**44.79**	**330**	P	**P**	**13 51 26.2**	**+0.7**
F21K	**Alatna River**	**47.12**	**334**	P	**P**	**13 51 44.1**	**+0.3**
ILAR	**Eielson Array**	**47.44**	**329**	P	**P**	**13 51 44.8**	**-1.5**
	comp=Z,0.7nm,1.1s,baz=42,slow=4.7,SNR=5.4						
	comp=Z,0.7nm,1.1s						
E19K	**Redstone River**	**47.76**	**335**	P	**P**	**13 51 48.7**	**-0.1**
IMAR	**Indian Mountai**	**48.19**	**333**	P	**P**	**13 51 52.4**	**+0.3**
TIXI	**Tiksi**	**48.62**	**9**	P	**P**	**13 51 55.9**	**+0.6**
PD31	**Pinedale Array**	**49.36**	**288**	P	**P**	**13 52 01.6**	**0.0**
PD31				IAmb	IAmb	13 52 02.9	
	comp=Z,7.4nm,1.5s						
PDAR	**Pinedale Array**	**49.36**	**288**	P	**P**	**13 52 01.0**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=55,slow=5.6,SNR=6.4						
	comp=Z,1.0nm,0.8s						
PDAR	**Pinedale Array**	**49.36**	**288**	P	**P**	**13 52 01.3**	**-0.3**
ISCO	**Idaho Springs**	**49.62**	**282**	P	**P**	**13 52 03.8**	**0.0**
ISCO				IAmb	IAmb	13 52 06.2	
	comp=Z,3.4nm,1.1s						
AB31	**Akbulak array**	**49.77**	**59**	P	**P**	**13 52 05.4**	**+1.0**
AB31				IAmb	IAmb	13 52 07.1	
	comp=Z,3.0nm,1.1s						
ABKAR	**Akbulak array**	**49.77**	**59**	P	**P**	**13 52 05.2**	**+0.8**
RDMU	**Red Mountain**	**51.02**	**286**	P	**P**	**13 52 14.5**	**+0.3**
RDMU				IAmb	IAmb	13 52 15.8	
	comp=Z,7.6nm,1.2s						
BORK	**Borovoye**	**51.25**	**50**	P	**P**	**13 52 16.1**	**+0.5**
BORK				IAmb	IAmb	13 52 21.2	
	comp=Z,2.0nm,0.8s						
BVAR	**Borovoye Array**	**51.29**	**50**	P	**P**	**13 52 15.6**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=348,slow=6.5,SNR=4.7						
	comp=Z,0.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**51.80**	**139**	P	**P**	**13 52 21.0**	**+0.9**
	comp=Z,1.1nm,0.9s,baz=350,slow=7.9,SNR=4.5						
	comp=Z,1.1nm,0.9s						
S22A	**4UR Ranch, Cre**	**51.81**	**281**	P	**P**	**13 52 20.5**	**+0.2**
S22A				IAmb	IAmb	13 52 22.4	
	comp=Z,4.6nm,1.2s						
MPU	**Maple Canyon**	**52.46**	**287**	P	**P**	**13 52 24.9**	**-0.1**
MPU				IAmb	IAmb	13 52 27.1	
	comp=Z,5.0nm,1.1s						
ZAA0	**Zalesovo Array**	**55.79**	**40**	P	**P**	**13 52 47.9**	**-0.9**
ZALV	**Zalesovo Beam**	**55.79**	**40**	P	**P**	**13 52 48.0**	**-0.8**
KURK	**Kurchatov**	**56.26**	**46**	P	**P**	**13 52 52.1**	**-0.1**
KURK				IAmb	IAmb	13 52 56.6	
	comp=Z,3.4nm,1.2s						
KURBB	**Kurchatov Arra**	**56.30**	**46**	P	**P**	**13 52 52.6**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=326,slow=6.8,SNR=9.9						
	comp=Z,1.1nm,0.6s						
TX31	**Lajitas Ar. Si**	**56.83**	**272**	P	**P**	**13 52 56.6**	**0.0**
TXAR	**Lajitas Array**	**56.83**	**272**	P	**P**	**13 52 56.8**	**+0.2**
	comp=Z,0.4nm,0.9s,baz=43,slow=6.7,SNR=3.8						
	comp=Z,0.4nm,0.9s						
TXAR	**Lajitas Array**	**56.83**	**272**	P	**P**	**13 52 56.5**	**-0.2**
KK31	**Karatay Array**	**59.16**	**57**	P	**P**	**13 53 13.3**	**+0.6**
KK31				IAmb	IAmb	13 53 35.4	
	comp=Z,4.6nm,1.4s						
KKAR	**Karatay Array**	**59.16**	**57**	P	**P**	**13 53 13.3**	**+0.6**
MAKZ	**Makanchi**	**60.74**	**47**	P	**P**	**13 53 24.6**	**+1.1**
MK31	**Makanchi Array**	**60.87**	**47**	P	**P**	**13 53 24.7**	**+0.3**
MKAR	**Makanchi Array**	**60.87**	**47**	P	**P**	**13 53 24.8**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=329,slow=5.7,SNR=13						
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**60.87**	**47**	P	**P**	**13 53 24.9**	**+0.5**
GAR	**Garm**	**62.42**	**60**	P	**P**	**13 53 35.9**	**+0.8**
JTS	**Las Juntas de**	**63.53**	**244**	LR	LR	14 21 05.2	
	comp=Z,50nm,18.5s,baz=49,slow=36						
SONM	**Songino Array**	**67.60**	**30**	P	**P**	**13 54 08.9**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=321,slow=6.1,SNR=3.6						
	comp=Z,0.4nm,0.6s						
SONM	**Songino Array**	**67.60**	**30**	P	**P**	**13 54 09.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**92.27**	**47**	P	**P**	**13 56 23.2**	**+0.9**
ASAR	**Alice Springs**	**142.78**	**24**	PKhKP	PKPpre	14 02 39.3	
	comp=Z,0.4nm,1.0s,baz=340,slow=3.8,SNR=2.4						
QSPA	**South Pole Qui**	**149.11**	**180**	PKPbc	**PKPbc**	**14 02 58.7**	**-0.2**
	comp=Z,4.6nm,1.1s,baz=304,slow=1.2,SNR=6.5						

IDC 20 13:43:36.8±7.1**,9°.22S**×**161°.84E,h0^{km},mb3.6**/3**,
mbtmp3.6**/3**,Error ellipse: s-maj=207.1km
s-min=51.5km az=119.0,Bougainville-Solomon Islands
region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**28.62**	**245**	P	P	13 49 34.7	-0.5
	0.4nm,0.4s,baz=74,slow=9.2,SNR=9.6						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**30.32**	**238**	P	P	13 49 50.6	+0.4
	0.2nm,0.3s,baz=64,slow=10,SNR=13						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**89.58**	**317**	P	P	13 56 36.4	0.0
	0.3nm,0.6s,baz=90,slow=4.7,SNR=2.4						
	0.3nm,0.6s						

IDC 20 13:44:11.9±3.6, 59.54°N×30.77°W, h0^{km}, mb3.6/4, mbtmp3.7/5, MS3.4/1, Error ellipse: s-maj=103.0km s-min=29.1km az=170.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	6.84	36	Pn	Pn	13 45 53.7	+0.5
	36nm,1.2s,baz=176,slow=7.5,SNR=1.4						
YKA	**Yellowknife Ar**	38.04	311	P	P	13 51 31.1	-0.3
	0.7nm,0.9s,baz=56,slow=8.2,SNR=4.1						
	0.7nm,0.9s						
BRTR	**Keskin Array B**	44.15	87	LR	LR	14 10 26.3	
	comp=Z,47nm,20.5s,baz=292,slow=36						
PDAR	**Pinedale Array**	49.07	287	P	P	13 53 00.9	+0.1
	0.2nm,0.5s,baz=50,slow=7.1,SNR=1.7						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	56.21	46	P	P	13 53 52.9	-0.2
	1.1nm,0.8s,baz=320,slow=7.6,SNR=3.1						
	1.1nm,0.8s						
MKAR	**Makanchi Array**	60.78	46	P	P	13 54 25.1	0.0
	0.8nm,0.7s,baz=343,slow=6.1,SNR=4.5						
	0.8nm,0.7s						

NNC 20 14:10:53.1±10.0, 36.88°N×70.05°E, h0^{km}, mb3.6, mpv3.2, 2C-3D, Error ellipse: s-maj=104.4km s-min=68.8km az=146.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	6.23	3	⇓P	Pn	14 12 29.9	+3.6
	0.3nm,0.2s,baz=23,slow=12,SNR=5.8						
KK31				⇓S	Sn	14 13 40.5	+2.4
	1.8nm,0.3s,baz=191,slow=20,SNR=13						
AAK	**Ala-Archa**	6.69	29	⇑P	Pn	14 12 33.7	+0.9
	1.2nm,0.4s						
AAK				⇓S	Sn	14 13 49.2	-0.6
	4.6nm,0.6s						
AB31	**Akbulak array**	14.39	332	P	Pn	14 14 17.2	-0.7
	0.5nm,0.5s,baz=142,slow=12,SNR=16						
AKTO	**Aktyubinsk**	16.07	331	⇑P	Pn	14 14 35.3	-5.1
	1.2nm,0.7s						

*IDC **20** 14:29:08.3±1.1, 12.13°S×136.18°E, h0^{km}, mb3.8/4, mbtmp4.2/10, ML4.3/5, Error ellipse: s-maj=24.2km s-min=16.1km az=99.0*

*NOU **20** 14:29:09.4, 12.19°S×136.14°E, h0^{km}, mb4.5/23, Northern Territory, Australia*

*NEIC **20** 14:29:10.4±1.9, 12.17°S±0.07°×136.12°E±0.02°, h10^{km}±1^{km}, mb4.1/10, Error ellipse: s-maj=12.7km s-min=3.7km az=170.0*

*AUST **20** 14:29:11.8±0.3, 12°S±3°×13°6E±°, h10^{km}, ML3.8/13, Error ellipse: s-maj=7.5km s-min=4.6km az=11.4*

ISC 20 14:29:09.4±0.5, **12.21°S**±0.05°×**136.21°E**±0.05°, **h10^{km}, n87, σ1^{s}93**/98, **mb4.2**/8, **Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDU	**Kakadu**	3.68	262	P	Pn	14 30 08.7	+2.3
KDU				S	Sn	14 30 48.8	-1.1
LAROZ	**Larrimah, NT**	4.43	221	P	Pn	14 30 19.8	+3.0
LAROZ				S	Sn	14 31 07.7	-0.8
MTN	**Manton Dam**	5.00	262	P	Pn	14 30 26.4	+1.9
MTN				S	Sn	14 31 18.3	-4.1
MTN	**Manton Dam**	5.00	262		Pn	14 30 26.5	+2.0
MTN				Sn	Sn	14 31 17.7	-4.7
DRS	**Darwin Rock St**	5.19	267	P	Pn	14 30 29.1	+1.8
	comp=Z,59nm,0.5s,comp=Z,0.6nm						
DRS				S	Sn	14 31 23.2	-4.0
DRS	**Darwin Rock St**	5.19	267	P	Pn	14 30 28.6	+1.4
DPH	**Darwin Parliam**	5.25	267	P	Pn	14 30 30.2	+2.2
	comp=Z,44nm,0.5s,comp=Z,0.4nm						
SAUI	**Saumlaki**	6.40	311	P	Pn	14 30 49.2	+5.4
	comp=Z,110nm,0.8s,comp=Z,0.4nm						
SAUI	**Saumlaki**	6.40	311	Pn	Pn	14 30 43.3	-0.5
SAUI				Sn	Sn	14 31 53.7	-3.3
COEN	**Coen**	7.01	105	P	Pn	14 30 53.6	+1.4
	comp=Z,15nm,0.4s,comp=Z,0.2nm						
COEN	**Coen**	7.01	105		Pn	14 30 53.9	+1.7
COEN				Sn	Sn	14 32 07.8	-4.2
COEN	**Coen**	7.01	105	P	Pn	14 30 53.8	+1.7
NTNOZ	**Mutton Hole St**	7.22	139	P	Pn	14 30 57.1	+1.9
	comp=Z,259nm,0.5s,comp=Z,0.0nmcomp=Z,1.2nm						
NTNOZ				S	Sn	14 32 14.1	-3.2
WB0	**Warramunga Arr**	7.72	193		Pn	14 31 03.6	+1.7
WB0				Sn	Sn	14 32 25.8	-3.7
WB10	**Warramunga Arr**	7.72	193	P	Pn	14 31 03.6	+1.6
WR8	**Warramunga Arr**	7.88	192	P	Pn	14 31 05.7	+1.5
WR8	**Warramunga Arr**	7.88	192		Pn	14 31 05.7	+1.5
WRAB	**Tennant Creek**	7.89	193	P	Pn	14 31 05.7	+1.5
	comp=Z,24nm,0.6s,comp=Z,0.1nm						
WRAB				S	Sn	14 32 29.9	-3.8
WRAB	**Tennant Creek**	7.89	193		Pn	14 31 05.8	+1.5
WRAB	**Tennant Creek**	7.89	193	P	Pn	14 31 05.6	+1.3
WB2	**Warramunga Arr**	7.90	193	P	Pn	14 31 06.1	+1.6
WRA	**Warramunga Arr**	7.90	193	Pn	Pn	14 31 05.5	+1.1
	comp=Z,4.6nm,0.3s,baz=17,slow=13,SNR=196						
WRA				Sn	Sn	14 32 30.3	-3.7
	comp=Z,7.9nm,0.3s,baz=14,slow=22,SNR=6.3						
WRA				Lg	Lg	14 33 22.7	
	comp=Z,8.0nm,0.3s,baz=13,slow=25,SNR=6.7						
	comp=Z,8.2nm,0.3s						
WRA	**Warramunga Arr**	7.90	193		Pn	14 31 03.9	-0.6
KNRA	**Kununurra**	8.01	244	P	Pn	14 31 06.6	+0.7
	comp=Z,38nm,0.6s,comp=Z,0.3nm						
KNRA	**Kununurra**	8.01	244		Pn	14 31 06.4	+0.5
QIS	**Mount Isa**	8.92	159	P	Pn	14 31 20.2	+1.7
QIS	**Mount Isa**	8.92	159	P	Pn	14 31 20.2	+1.7
MTSU	**Mount Surprise**	9.80	128	P	Pn	14 31 31.3	+0.8
MTSU	**Mount Surprise**	9.80	128	P	Pn	14 31 31.4	+0.9
FAKI	**Fak Fak**	10.03	337		Pn	14 31 33.3	-0.3
FAKI	**Fak Fak**	10.03	337	P	Pn	14 31 33.1	-0.5
CN2S	**Cairns Soft Ro**	10.38	119	P	Pn	14 31 40.1	+1.7
JAY	**Jayapura**	10.61	25	Pn	Pn	14 31 41.1	-0.5
	comp=Z,2.0nm,0.3s,baz=206,slow=14,SNR=7.5						
	comp=Z,10.0nm,0.5s						
PMG	**Port Moresby**	11.11	77	P	Pn	14 31 50.5	+2.0
	comp=Z,14nm,0.9s						
PMG	**Port Moresby**	11.11	77	Pn	Pn	14 31 49.9	+1.5
	comp=Z,8.6nm,0.3s,baz=282,slow=4.2,SNR=17						
PMG				Sn	Sn	14 33 46.9	-6.0
	comp=Z,4.6nm,0.3s,baz=278,slow=19,SNR=15						
PMG	**Port Moresby**	11.11	77	Pn	Pn	14 31 50.4	+1.9
PMG	**Port Moresby**	11.11	77	P	Pn	14 31 50.6	+2.1
AS31	**Alice Springs**	11.61	191		Pn	14 31 56.0	+0.7
ASAR	**Alice Springs**	11.61	191	Pn	Pn	14 31 55.9	+0.6
	comp=Z,4.4nm,0.3s,baz=11,slow=10,SNR=290						
ASAR				Sn	Sn	14 33 57.2	-7.8
	comp=Z,1.8nm,0.3s,baz=11,slow=29,SNR=6.4						
ASAR				Lg	Lg	14 35 19.9	
	baz=18,slow=30						
	comp=Z,9.0nm,0.4s						
ASAR	**Alice Springs**	11.61	191		Pn	14 31 55.8	+0.5
FITZ	**Fitzroy Crossi**	11.76	239	P	Pn	14 31 56.5	-0.9
	comp=Z,1.6nm,0.7s						
FITZ	**Fitzroy Crossi**	11.76	239	Pn	Pn	14 31 56.5	-0.9
	comp=Z,1.7nm,0.3s,baz=60,slow=11,SNR=54						
FITZ				Sn	Sn	14 33 58.0	-11
	comp=Z,10.0nm,0.3s,baz=120,slow=10,SNR=11						
FITZ				Lg	Lg	14 35 23.5	
	comp=Z,2.0nm,0.3s,baz=133,slow=10,SNR=4.0						
	comp=Z,6.3nm,0.4s						
FITZ	**Fitzroy Crossi**	11.76	239		Pn	14 31 56.1	-1.3
FITZ	**Fitzroy Crossi**	11.76	239	P	Pn	14 31 55.9	-1.5
SOEI	**Soe**	11.97	281	P	Pn	14 32 02.1	+1.7
	comp=Z,21nm,0.9s						
SOEI	**Soe**	11.97	281	Pn	Pn	14 32 00.6	+0.2
CTA	**Charters Tower**	12.43	130	P	Pn	14 32 08.6	+2.1
	comp=Z,3.8nm,2.1s						
CTA	**Charters Tower**	12.43	130	Pn	Pn	14 32 08.0	+1.5
	comp=Z,0.8nm,0.3s,baz=306,slow=14,SNR=10						
	comp=Z,2.1nm,0.4s						
CTA	**Charters Tower**	12.43	130	P	Pn	14 32 08.4	+1.9
CTAO	**Charters Tower**	12.43	130	Pn	Pn	14 32 07.5	+1.0
AXCOZ	**Aramac airstri**	13.73	142	P	Pn	14 32 25.0	+0.8
	comp=Z,66nm,2.3s						
WRKA	**Warakurna**	14.80	209	P	Pn	14 32 35.9	-3.0
INKA	**Innaminka**	16.03	165		Pn	14 32 54.1	-0.9
QLP	**Quilpie**	16.17	153	P	Pn	14 32 57.1	+0.2
	comp=Z,17nm,0.7s						
QLP	**Quilpie**	16.17	153	P	Pn	14 32 58.5	+1.6
MULG	**Mulgathing**	18.10	186	P	Pn	14 33 20.0	-1.0
	comp=Z,15nm,0.7s						
MBWA	**Marble Bar**	18.11	238	P	Pn	14 33 19.7	-1.5
MBWA				IAmb	IAmb	14 33 47.3	
	comp=Z,23nm,1.3s						
PSA00	**Pilbara Seismi**	18.20	237	P	Pn	14 33 20.9	-1.5
PSA00				IAmb	IAmb	14 33 38.9	
	comp=Z,13nm,1.4s						
PLAI	**Plampang**	18.43	279	P	Pn	14 33 26.0	+0.8
FORT	**Forrest**	19.96	201		P	14 33 41.5	-0.3
STKA	**Stephens Creek**	20.20	167	P	P	14 33 45.8	+1.4
	comp=Z,57nm,1.5s						
STKA	**Stephens Creek**	20.20	167	P	P	14 33 45.5	+1.1
	comp=Z,4.3nm,0.8s,baz=347,slow=10,SNR=9.7						
	comp=Z,4.3nm,0.8s						
STKA	**Stephens Creek**	20.20	167	P	P	14 33 45.6	+1.1
STKA	**Stephens Creek**	20.20	167	P	P	14 33 46.7	+2.3
BBOO	**Buckleboo**	20.51	180	P	P	14 33 49.1	+1.3
	comp=Z,19nm,1.2s						
BBOO	**Buckleboo**	20.51	180	P	P	14 33 48.5	+0.8
BBOO				IAmb	IAmb	14 34 02.6	
	comp=Z,14nm,0.8s						
BBOO	**Buckleboo**	20.51	180	P	P	14 33 49.7	+1.9
CMSA	**Cobar Meteorol**	21.14	157	P	P	14 33 57.1	+2.5
	comp=Z,13nm,0.6s						
CMSA	**Cobar Meteorol**	21.14	157	P	P	14 33 56.4	+1.8
HTT	**Hallett**	21.27	174	P	P	14 33 57.8	+1.7
MEEK	**Meekatharra**	21.90	226	P	P	14 34 03.7	+0.8
	comp=Z,23nm,2.4s						
MEEK	**Meekatharra**	21.90	226	P	P	14 34 02.6	-0.3
ARMA	**Armidale**	23.08	144	P	P	14 34 16.3	+0.8
TATA	**Tatamba Isabel**	23.52	83	P	P	14 34 21.8	+1.9
MORW	**Morawa**	25.18	225	P	P	14 34 35.9	+0.7
BLDU	**Ballidu**	25.71	222	P	P	14 34 41.5	+1.5
	comp=Z,19nm,1.9s						
BLDU	**Ballidu**	25.71	222	P	P	14 34 41.2	+1.2
NWAO	**Narrogin (SRO)**	26.97	217	P	P	14 34 52.8	+1.4
	comp=Z,56nm,2.0s						
NWAO	**Narrogin (SRO)**	26.97	217	P	P	14 34 52.7	+1.3
BBJI	**Bungbulang**	28.52	277	P	P	14 35 07.4	+1.9
CASY	**Casey**	56.73	192	P	P	14 38 52.8	-0.3
MK31	**Makanchi Array**	75.94	325	P	P	14 40 56.8	+0.3
MK31				IAmb	IAmb	14 41 19.6	
	comp=Z,1.4nm,0.8s						
MKAR	**Makanchi Array**	75.94	325	P	P	14 40 56.4	-0.1
	comp=Z,0.7nm,0.7s,baz=125,slow=6.1,SNR=6.5						
	comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	75.94	325	P	P	14 40 56.2	-0.2
ZALV	**Zalesovo Beam**	78.98	332	P	P	14 41 14.7	+1.4
	comp=Z,0.3nm,0.4s,baz=72,slow=4.8,SNR=4.3						
	comp=Z,0.3nm,0.4s						
ZALV	**Zalesovo Beam**	78.98	332	P	P	14 41 12.3	-1.0
BVAR	**Borovoye Array**	85.73	326	P	P	14 41 47.3	-1.3
	comp=Z,0.7nm,0.7s,baz=134,slow=6.2,SNR=4.0						
	comp=Z,0.7nm,0.7s						

*IDC **20** 14:30:03.6±0.6, 29.62°S×178.37°W, h0^{km}, mb4.2/8, mbtmp4.2/9, ML4.3/1, MS4.0/34, Error ellipse: s-maj=26.3km s-min=11.5km az=138.0*

*NEIC **20** 14:30:06.9±1.7, 29.7°S±0.1°×178.4°W±0.1°, h10^{km}±1^{km}, mb4.9/32, Error ellipse: s-maj=27.9km s-min=3.0km az=128.0*

ISC 20 14:30:06.0±0.5, **29.80°S**±0.06°×**178.3°W**±0.1°, **h10^{km}, n114, σ1^{s}39**/73, **mb4.9**/23, **MS4.1**/32, **5C-1D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	0.62	31	P	Pg	14 30 17.9	-0.1
GLKZ				S	Sb	14 30 27.9	+0.4
RAO	**Raoul Island**	0.63	30	Pn	Pg	14 30 18.3	+0.1
	2μm,0.3s,baz=223,slow=3.9,SNR=66						
RAO				Sn	Sb	14 30 28.9	+1.1
	3μm,0.3s,baz=110,slow=23,SNR=9.6						
RAO				LR	LR	14 30 42.2	
	comp=Z,9μm,21.7s,baz=11,slow=72						
RAO	**Raoul Island**	0.63	30		Pg	14 30 18.2	+0.1
RAO				Sg	Sg	14 30 25.9	-0.4
RIZ	**Raoul Island**	0.63	29	P	Pg	14 30 18.2	0.0
RIZ				S	Sn	14 30 29.8	-1.3
WMGZ	**Waiomatatini S**	8.46	198	P	Pn	14 32 06.6	-2.0
WMGZ				S	Sn	14 33 45.1	+0.9
HAZ	**Te Kaha**	8.59	201	P	Pn	14 32 06.3	-4.0
HAZ				S	Sn	14 33 49.1	+1.8
PKGZ	**Pakihiroa**	8.60	200	P	Pn	14 32 06.2	-4.3
PKGZ				S	Sn	14 33 47.4	-0.2
WCZ	**Waipu Caves**	8.71	223	P	Pn	14 32 15.6	+3.5
OUZ	**Omahuta**	8.73	230	P	Pn	14 32 10.9	-1.4
PUZ	**Puketiti**	8.74	198	P	Pn	14 32 09.7	-2.7
PUZ				S	Sn	14 33 50.6	-0.5
RUGZ	**Raukumara Rang**	8.81	201	P	Pn	14 32 13.9	+0.4
TWGZ	**Tauwhareparae**	8.92	199	P	Pn	14 32 13.3	-1.6
CNGZ	**Carnagh Statio**	9.14	198	P	Pn	14 32 16.6	-1.3
MWZ	**Matawai**	9.20	201	P	Pn	14 32 18.5	-0.3
MWZ				S	Sn	14 34 02.8	+0.5
TKGZ	**Te Karaka**	9.20	199	P	Pn	14 32 17.9	-0.8
URZ	**Urewera**	9.27	203	Pn	Pn	14 32 21.3	+1.7
	2.6nm,0.3s,baz=224,slow=1.2,SNR=11						
URZ				Sn	Sn	14 34 03.5	-0.4
	1.1nm,0.3s,baz=13,slow=16,SNR=1.8						
	5.0nm,0.3s						
URZ	**Urewera**	9.27	203	P	Pn	14 32 21.7	+2.1
URZ				S	Sn	14 34 04.3	+0.4
RIGZ	**Rimuhau**	9.47	199	P	Pn	14 32 16.8	-5.7
RIGZ				S	Sn	14 34 08.9	-0.2
SNGZ	**Shannon Statio**	9.67	201	P	Pn	14 32 21.4	-3.8
MTHZ	**Maungataniwha**	9.89	203	P	Pn	14 32 29.8	+1.5
BKZ	**Black Stump Fm**	10.29	203	P	Pn	14 32 36.9	+3.1
DZM	**Mont Dzumac**	15.74	296	LR	LR	14 38 07.1	
	comp=Z,650nm,20.8s,baz=124,slow=31						
DZM	**Mont Dzumac**	15.74	296	*e*P	Pn	14 33 28.3	-20
	118nm,25.8s						
DZM				*e*LR	LR	14 37 09.3	
	888nm,25.9s						
RAR	**Rarotonga**	18.75	67	LR	LR	14 40 16.2	
	comp=Z,330nm,21.9s,baz=269,slow=33						
TBI	**Tubuai**	26.52	83	*e*S	S	14 39 49.7	-28
	5μm,26.0s						
TBI				*e*LR	LR	14 42 08.2	
	2μm,31.2s						
PPT2	**Papeete2**	28.87	72	*e*LR	LR	14 42 59.8	
	572nm,33.0s						
PPT2				*e*LR	LR	14 43 08.3	
	917nm,29.5s						
PPT	**Papeete**	28.88	72	LR	LR	14 46 54.9	
	comp=Z,119nm,18.1s,baz=212,slow=35						
STKA	**Stephens Creek**	34.38	256	P	P	14 36 53.1	-0.2
	4.4nm,0.8s,baz=69,slow=15,SNR=4.1						
STKA				LR	LR	14 48 46.5	
	comp=Z,350nm,20.6s,baz=72,slow=33						
	4.4nm,0.8s						
STKA	**Stephens Creek**	34.38	256	P	P	14 36 53.0	-0.3
TAOE	**Nuku Hiva Isla**	41.30	68	*e*LR	LR	14 48 52.4	
	481nm,28.6s						
AS31	**Alice Springs**	42.90	266	P	P	14 38 05.5	+0.5
ASAR	**Alice Springs**	42.90	266	P	P	14 38 03.4	-1.6
	4.3nm,1.0s,baz=112,slow=8.5,SNR=4.5						
ASAR				LR	LR	14 54 34.7	
	comp=Z,320nm,20.6s,baz=110,slow=34						
	4.3nm,1.0s						
WR8	**Warramunga Arr**	43.69	272	P	P	14 38 10.1	-1.3
WRAB	**Tennant Creek**	43.83	272	P	P	14 38 12.1	-0.4
WRA	**Warramunga Arr**	43.83	272	P	P	14 38 09.7	-2.9
	7.2nm,0.8s,baz=110,slow=8.6,SNR=5.4						
	7.2nm,0.8s						
WRA	**Warramunga Arr**	43.83	272	P	P	14 38 11.1	-1.5
WB0	**Warramunga Arr**	43.85	272	P	P	14 38 10.5	-2.2
JAY	**Jayapura**	47.41	297	LR	LR	14 57 36.4	
	comp=Z,94nm,18.4s,baz=244,slow=35						
VNDA	**Vanda**	48.67	186	LR	LR	14 57 07.0	
	comp=Z,117nm,18.9s,baz=14,slow=33						
FITZ	**Fitzroy Crossi**	52.12	270	P	P	14 39 15.9	-0.8
NWAO	**Narrogin (SRO)**	54.38	249	LR	LR	15 02 28.3	
	comp=Z,204nm,18.5s,baz=118,slow=36						
GUMO	**Guam**	55.88	315	LR	LR	15 01 46.2	
	comp=Z,70nm,18.9s,baz=110,slow=34						
RPN	**Rapa Nui**	59.83	106	LR	LR	15 00 56.7	
	comp=Z,32nm,19.2s,baz=354,slow=31						
QSPA	**South Pole Qui**	60.31	180	P	P	14 40 14.1	-0.6
	2.3nm,0.9s,baz=39,slow=1.2,SNR=12						
QSPA				LR	LR	15 05 26.4	
	comp=Z,197nm,18.0s,baz=31,slow=35						
	2.3nm,0.9s						
QSPA	**South Pole Qui**	60.31	180	P	P	14 40 14.7	0.0
QSPA				IAmb	IAmb	14 40 26.9	
	comp=Z,10nm,0.9s						
JCJ	**Chichijima**	68.06	322	LR	LR	15 04 19.9	
	comp=Z,115nm,20.7s,baz=108,slow=30						
JCJ	**Chichijima**	68.06	322	P	P	14 41 05.4	-0.4
BELA	**Belgrano 2**	70.42	172	P	P	14 41 20.4	+0.6
MAW	**Mawson**	72.79	201	LR	LR	15 15 23.6	
	comp=Z,102nm,18.0s,baz=116,slow=37						
PMSA	**Palmer Station**	72.91	156	LR	LR	15 09 49.1	
	comp=Z,108nm,18.9s,baz=227,slow=33						
JOW	**Kunigami**	76.08	312	LR	LR	15 10 51.2	
	comp=Z,116nm,21.6s,baz=108,slow=32						
MJAR	**Matsushiro Arr**	77.61	325	LR	LR	15 09 43.5	
	comp=Z,64nm,19.9s,baz=150,slow=31						
SYO	**Syowa Base**	77.65	193	⇓*i*PcP	PcP	14 42 14.3	+2.0
TROLL	**Troll, Antarti**	78.47	180	⇑P	P	14 42 05.7	-1.2
	comp=Z,390nm,0.8s						
SNAA	**Sanae**	78.76	179	⇑P	P	14 42 09.0	+0.6
	comp=Z,96nm,1.0s						
SNAA	**Sanae**	78.76	179	P	P	14 42 09.8	+1.4
	comp=Z,2.2nm,0.9s,baz=200,slow=13,SNR=8.5						
SNAA				LR	LR	15 16 22.6	
	comp=Z,174nm,18.1s,baz=184,slow=35						
	comp=Z,2.2nm,0.9s						
SNAA	**Sanae**	78.76	179	P	P	14 42 08.0	-0.4
SNAA				IAmb	IAmb	14 42 40.5	
	comp=Z,16nm,1.5s						
VNA3	**Neumayer Olymp**	78.92	176	⇑P	P	14 42 07.4	-1.9
	comp=Z,11nm,0.8s						
JNU	**Nakatsue**	78.94	318	LR	LR	15 11 04.7	
	comp=Z,65nm,22.0s,baz=110,slow=31						
VNA2	**Neumayer--Watz**	79.35	177	⇑P	P	14 42 09.3	-2.3
	comp=Z,10nm,0.9s,baz=162,slow=3.9						
VNA1	**Neumayer--Stat**	79.58	177	⇑P	P	14 42 11.8	-1.0
	comp=Z,12nm,0.9s						
H03S2	**Juan Fernandez**	81.00	124	T	T	16 11 47.7	
	baz=239,slow=74,SNR=485						
H03S1	**Juan Fernandez**	81.01	124	T	T	16 11 46.9	
	baz=239,slow=74,SNR=398						
H03S3	**Juan Fernandez**	81.02	124	T	T	16 11 53.9	
	baz=239,slow=74,SNR=476						
H03N3	**Juan Fernandez**	81.19	123	T	T	16 11 54.0	
	baz=244,slow=72,SNR=172						
H03N2	**Juan Fernandez**	81.19	123	T	T	16 11 56.8	
	baz=244,slow=72,SNR=157						
H03N1	**Juan Fernandez**	81.21	123	T	T	16 11 52.8	
	baz=244,slow=72,SNR=258						
ASAJ	**Asahikawa**	81.79	333	LR	LR	15 15 50.9	
	comp=Z,133nm,18.4s,baz=20,slow=34						
PLCA	**Paso Flores**	83.10	133	LR	LR	15 12 57.6	
	comp=Z,82nm,18.5s,baz=220,slow=31						
KSRS	**Korea Array**	83.73	320	LR	LR	15 18 51.1	
	comp=Z,24nm,18.1s,baz=135,slow=35						
LPIG	**La Paz**	84.42	58	LR	LR	15 11 43.3	
	comp=Z,99nm,20.1s,baz=358,slow=30						
PETK	**Petropavlovsk-**	85.17	346	LR	LR	15 16 08.3	
	comp=Z,108nm,18.9s,baz=159,slow=32						
PFO	**Pinyon Flats O**	85.98	48	LR	LR	15 16 15.4	
	comp=Z,176nm,18.4s,baz=254,slow=32						
ISA	**Isabella, Lake**	86.04	45	P	P	14 42 48.0	+1.1
ISA				IAmb	IAmb	14 42 49.0	
	comp=Z,11nm,1.2s						
LRMC	**Laurel Mtn Rad**	86.41	45	P	P	14 42 49.3	+0.5
WSHM	**Spangler Hills**	86.61	45	P	P	14 42 50.0	+0.4
CLC	**China Lake**	86.68	45	P	P	14 42 50.7	+0.7
GSC	**Goldstone, Bar**	86.84	46	P	P	14 42 51.7	+0.9
IRM	**Iron Mountain**	87.17	48		P	14 42 53.3	+0.9
IRM				IAmb	IAmb	14 42 55.1	
	comp=Z,10nm,1.2s						
QSM	**Queen of Sheba**	87.23	45	P	P	14 42 53.7	+1.1
QSM				IAmb	IAmb	14 43 02.6	
	comp=Z,7.7nm,1.3s						
NVAR	**Mina Array Bea**	87.96	43	P	P	14 42 56.5	+0.1
	comp=Z,1.6nm,0.9s,baz=218,slow=8.2,SNR=7.8						
NVAR				LR	LR	15 14 03.3	
	comp=Z,125nm,20.2s,baz=266,slow=30						
	comp=Z,1.6nm,0.9s						
Y14A	**Wickenburg**	88.42	49	P	P	14 42 59.5	+1.0
Y14A				IAmb	IAmb	14 43 00.3	
	comp=Z,8.6nm,1.3s						
W13A	**Hualapai Mount**	88.57	48	IAmb	IAmb	14 43 09.7	
	comp=Z,8.5nm,1.4s						
TUC	**Tucson**	88.93	51	P	P	14 43 01.8	+0.9
TUC				IAmb	IAmb	14 43 12.0	
	comp=Z,8.8nm,1.1s						
X16A	**Lo Mia Camp, P**	89.74	49	IAmb	IAmb	14 43 15.7	
	comp=Z,12nm,1.4s						
KDAK	**Kodiak Island**	89.88	13	LR	LR	15 18 23.9	
	comp=Z,87nm,18.9s,baz=193,slow=32						
U15A	**North Rim**	90.40	47	IAmb	IAmb	14 43 18.7	
	comp=Z,9.4nm,1.3s						
KNB	**Kanab**	90.42	47	IAmb	IAmb	14 43 18.5	
	comp=Z,18nm,1.6s						
WUAZ	**Wupatki**	90.45	49	IAmb	IAmb	14 43 18.6	
	comp=Z,8.8nm,1.2s						
MTPU	**Mount Pierson**	91.45	46	IAmb	IAmb	14 43 15.7	
	comp=Z,7.2nm,1.3s						
TXAR	**Lajitas Array**	92.27	57	P	P	14 43 17.4	+0.8
	comp=Z,0.6nm,0.9s,baz=225,slow=8.3,SNR=5.1						
TXAR				LR	LR	15 20 15.4	
	comp=Z,60nm,18.0s,baz=267,slow=33						
	comp=Z,0.6nm,0.9s						
MA2	**Magadan**	92.65	345	LR	LR	15 19 60.0	
	comp=Z,64nm,20.5s,baz=158,slow=32						
BBB	**Bella Bella**	92.68	28	LR	LR	15 19 41.7	
	comp=Z,35nm,18.4s,baz=211,slow=32						
BMO	**Blue Mountains**	92.72	39	P	P	14 43 20.4	+2.1
BMO				IAmb	IAmb	14 45 02.1	
	comp=Z,3.1nm,0.7s						
CMIG	**Matias Romero**	92.80	72	LR	LR	15 14 52.4	
	comp=Z,41nm,21.1s,baz=200,slow=29						
CMAR	**Chiang Mai Arr**	92.97	289	P	P	14 43 20.2	+0.3
	comp=Z,0.3nm,0.5s,baz=106,slow=4.6,SNR=2.3						
	comp=Z,0.3nm,0.5s						
CMAR	**Chiang Mai Arr**	92.97	289	P	P	14 43 19.5	-0.4
ANMO	**Albuquerque**	93.39	51	LR	LR	15 17 29.7	
	comp=Z,60nm,21.9s,baz=256,slow=30						
NEW	**Newport**	95.03	36	LR	LR	15 17 49.4	
	comp=Z,63nm,20.9s,baz=231,slow=30						
PDAR	**Pinedale Array**	95.87	44	LR	LR	15 26 13.2	
	comp=Z,58nm,18.4s,baz=258,slow=35						
ILAR	**Eielson Array**	97.39	13	LR	LR	15 21 56.3	
	comp=Z,65nm,18.7s,baz=225,slow=32						
WUPA	**West Chester U**	117.56	58		PKPdf	14 48 52.6	+0.5
BVAR	**Borovoye Array**	125.80	316	PKP	PKPdf	14 49 05.3	-2.2
	comp=Z,0.8nm,0.8s,baz=81,slow=4.7,SNR=3.6						
H10S3	**ASCENSION HYDR**	138.37	155	T	T	17 24 38.4	
	baz=204,slow=74,SNR=102						
H10S2	**ASCENSION HYDR**	138.37	155	T	T	17 24 38.8	
	baz=16,slow=74,SNR=131						
H10N3	**ASCENSION HYDR**	139.46	155	T	T	17 25 43.0	
	baz=203,slow=75,SNR=66						
H10N1	**ASCENSION HYDR**	139.46	155	T	T	17 25 43.3	
	baz=203,slow=75,SNR=68						
H10N2	**ASCENSION HYDR**	139.48	155	T	T	17 25 44.3	
	baz=203,slow=75,SNR=71						
FINES	**FINESS Array B**	144.50	340	PKP	PKPab	14 49 38.6	-1.7
	comp=Z,2.9nm,0.9s,baz=35,slow=5.1,SNR=8.5						
NOA	**NORSAR Array B**	148.12	351	PKPbc	PKPdf	14 49 49.8	+1.6
	comp=Z,1.6nm,1.0s,baz=26,slow=1.9,SNR=3.4						
HFS	**Hagfors**	148.60	349	PKPbc	PKPdf	14 49 49.5	+0.6
	comp=Z,4.5nm,1.0s,baz=342,slow=1.8,SNR=2.5						
AKASG	**Malin Array Be**	150.67	323	PKPbc	PKPdf	14 49 55.7	+3.2
	comp=Z,1.5nm,0.7s,baz=54,slow=2.7,SNR=5.3						
MMAI	**Mount Meron Ar**	151.14	285	PKPbc	PKPbc	14 49 59.9	+0.1
	comp=Z,2.6nm,0.7s,baz=66,slow=2.8,SNR=3.9						
TORD	**Torodi Ar. Bea**	163.43	180	PKPab	PKPab	14 50 58.5	-1.9
	comp=Z,1.1nm,0.8s,baz=168,slow=4.3,SNR=4.4						

*IDC **20** 14:32:17.9±2.2, 0.73°S×97.72°E, h0^{km}, mb3.8/5, mbtmp3.7/7, ML3.6/2, MS3.4/2, Error ellipse: s-maj=73.9km s-min=22.8km az=64.0*

*DJA **20** 14:32:18.2±0.4, 1°S±2°×9°8E±°, h10^{km}, M4.6/21, mB5.6/2, mb4.9/10, MLv4.4/21, Mw(mB)5.2/2*

ISC 20 14:32:22.2±1.0, **0.76°S**±0.06°×**97.7°E**±0.1°, **h35^{km}, n47, σ1^{s}17**/35, **mb3.9**/5, **Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBSI	**Pulau Batu**	0.93	42	P	Pn	14 32 37.3	-1.6
PBSI				S	Sn	14 32 50.9	-0.1
SISI	**Saibi**	1.54	112	P	Pn	14 32 46.8	-0.4
GSI	**Gunungsitoli**	2.05	358	P	Pn	14 32 51.7	-2.5
MNSI	**Mandailing Nat**	2.46	51	P	Pn	14 33 00.2	+0.3
SBSI	**Sibolga**	2.60	28	P	Pn	14 33 03.2	+1.4
PPI	**Padang Panjang**	2.76	84	P	Pn	14 33 03.2	-0.8
PDSI	**Padang**	2.81	93	P	Pn	14 33 03.4	-1.3
PPSI	**Pulau Pagai**	3.08	130	P	Pn	14 33 07.7	-0.8
SNSI	**Sinabang, Aceh**	3.41	337	P	Pn	14 33 12.0	-1.0

BKNI	Bangkinang	3.55	72	P	Pn	14 33 16.7	+1.8
PSI	Prapat	3.75	20	Pn	Pn	14 33 15.3	-2.4
	1.5nm,0.3s,baz=331,slow=19,SNR=14						
	2.7nm,0.3s						
PSI	Prapat	3.75	20	P	Pn	14 33 16.1	-1.7
TPTI		4.02	353	P	Pn	14 33 20.2	-1.1
KRJI	Kerinci	4.03	109	P	Pn	14 33 22.3	+0.7
KCSI	Kotacane, Aceh	4.25	2	P	Pn	14 33 22.3	-2.2
MASI	Maura Aman, Be	5.16	117	P	Pn	14 33 37.1	+0.1
	1.1nm105nm,0.5s						
UBSI	University, Be	5.49	123	P	Pn	14 33 40.9	-0.7
	1.2nm265nm,0.7s						
KSI	Kapahiang	5.71	120	P	Pn	14 33 44.4	-0.3
	6µm281nm,0.8s						
IPM	Ipoh	6.19	33	P	Pn	14 33 50.6	-0.7
	0.1nm12nm,0.7s						
MNAI	Manna	6.39	124	P	Pn	14 33 54.0	0.0
EGSI	Enggano, Bengk	6.49	135	P	Pn	14 33 54.0	-1.3
	0.5nm125nm,0.6s						
MYKOM	Kota Tinggi	6.69	68	P	Pn	14 33 57.9	-0.2
KULM	Kulim	6.71	26	P	Pn	14 33 56.7	-1.6
	0.1nm11nm,0.7s						
MDSI	Maura Dua	7.49	120	P	Pn	14 34 09.0	-0.1
	0.1nm30nm,0.6s						
LWLI	Liwa	7.67	124	P	Pn	14 34 11.5	-0.1
	138nm,0.7s						
KLSI		8.07	119	P	Pn	14 34 17.3	+0.2
	51nm,0.7s						
KASI	Kota Agung	8.31	125	P	Pn	14 34 19.1	-1.2
CMAR	Chiang Mai Arr	19.13	4	P	Pn	14 36 42.5	-1.1
	0.1nm,0.3s,baz=189,slow=11,SNR=8.0						
CMAR				LR	LR	14 44 38.4	
	comp=Z,48nm,20.0s,baz=265,slow=39						
	1.1nm,0.6s						
H08S2	Diego Garcia H	26.00	254	T	T	15 04 59.0	
	baz=76,slow=75,SNR=27						
H08S3	Diego Garcia H	26.00	254	T	T	15 05 00.3	
	baz=76,slow=75,SNR=237						
H08S1	Diego Carcia H	26.02	254	T	T	15 04 51.8	
	baz=76,slow=75,SNR=21						
H01W3	Cape Leeuwin H	37.28	157	T	T	15 19 09.9	
	baz=334,slow=76,SNR=47						
H01W2	Cape Leeuwin H	37.29	157	T	T	15 19 04.6	
	baz=334,slow=76,SNR=45						
H01W1	Cape Leeuwin H	37.29	157	T	T	15 19 03.1	
	baz=334,slow=76,SNR=40						
WRA	Warramunga Arr	40.64	120	P	P	14 39 59.3	0.0
	2.2nm,0.9s,baz=297,slow=9.6,SNR=3.2						
	2.2nm,0.9s						
ASAR	Alice Springs	41.88	126	P	P	14 40 09.9	+0.5
	0.9nm,0.8s,baz=300,slow=8.2,SNR=1.2						
	0.9nm,0.8s						
SONM	Songino Array	48.99	8	P	P	14 41 06.1	+0.6
	0.4nm,0.6s,baz=199,slow=9.4,SNR=3.6						
	0.4nm,0.6s						
MKAR	Makanchi Array	49.24	346	P	P	14 41 07.7	+0.4
	1.1nm,0.6s,baz=155,slow=8.0,SNR=5.6						
	1.1nm,0.6s						
ZALV	Zalesovo Beam	55.55	351	P	P	14 41 54.6	+0.7
	0.9nm,0.5s,baz=180,slow=7.2,SNR=4.3						
	0.9nm,0.5s						
H04N2	CROZET ISLANDS	60.43	215	T	T	15 48 20.4	
	baz=56,slow=75,SNR=71						
H04N1	CROZET ISLANDS	60.45	215	T	T	15 48 26.2	
	baz=56,slow=75,SNR=90						
H04N3	CROZET ISLANDS	60.45	215	T	T	15 48 03.9	
	baz=56,slow=75,SNR=69						
H04S1	CROZET ISLANDS	60.76	214	T	T	15 48 39.3	
	baz=56						
H04S3	CROZET ISLANDS	60.77	214	T	T	15 48 45.9	
	baz=56,SNR=5.1						
H04S2	CROZET ISLANDS	60.77	214	T	T	15 48 44.2	
	baz=56						
SEY	Seymchan	75.37	23	LR	LR	15 20 07.4	
	comp=Z,53nm,19.6s,baz=138,slow=38						
TXAR	Lajitas Array	145.06	34	PKPbc	PKPdf	14 51 57.4	+0.5
	0.8nm,0.6s,baz=304,slow=2.9,SNR=6.7						

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*DJA **20** 14:34:03.9±0.3, 3°S±3°×12°2E±°, h10km, M4.4/15, MLv4.4/15*

*IDC **20** 14:34:03.7±1.2, 2°.57S×122°.24E, h0km, mb3.9/9, mbtmp3.9/9, MS3.3/3, Error ellipse: s-maj=59.1km s-min=26.5km az=61.0*

*NEIC **20** 14:34:05.3±2.7, 2°.74S±0°.06×122°.36E±0°.07, h10km±1km, mb4.3/8, Error ellipse: s-maj=12.8km s-min=9.9km az=105.0*

ISC 20 14:34:07.0±0.7**, 2°.94S**±0°.05×**122°.38E**±0°.06**, h35**km**, n48,** σ**1s.24**/42**, mb4.0**/13**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDI	Kendari	1.04	167	P	Pn	14 34 24.0	-1.0
KKSI	Kolaka, Sulawe	1.42	211	P	Pn	14 34 30.0	-0.3
LUWI	Luwuk	1.93	12		Pn	14 34 37.1	-0.2
LUWI	Luwuk	1.93	12	P	Pn	14 34 37.1	-0.2
APSI	Ampana	2.15	340	P	Pn	14 34 40.2	-0.1
TTSI	Tana Toraja	2.56	268	P	Pn	14 34 46.1	+0.1
BNSI	Bone	2.69	237	P	Pn	14 34 46.9	-0.9
SPSI	Sidrap Palu	2.80	249	P	Pn	14 34 49.5	+0.2
PCI	Palu	3.25	308	P	Pn	14 34 56.0	+0.5
BKSI	Bulukumba	3.27	224	P	Pn	14 34 55.5	-0.2
KAPI	Kappang	3.33	232		Pn	14 34 59.9	+3.3
KAPI	Kappang	3.33	232	P	Pn	14 34 55.3	-1.3
MRSI	Marisa	3.42	353	P	Pn	14 34 57.5	-0.4
MMSI	Mamuju	3.48	274	P	Pn	14 34 59.2	+0.6
PMSI	Majene	3.50	261	P	Pn	14 34 57.9	-1.1
GTOI	Gorontalo	3.61	10	P	Pn	14 35 01.7	+1.3
SANI	Sanana	3.71	76	P	Pn	14 34 58.5	-3.3
MPSI	Mapaga	4.09	323	P	Pn	14 35 06.5	-0.6
TOLI2	Tolitoli	4.33	338		Pn	14 35 11.9	+1.5
NLAI	Namlea	4.72	94	P	Pn	14 35 16.4	+0.7
MMRI	Maumere	5.66	181	Pn	Pn	14 35 34.9	+6.3
BKB	Balikpapan	5.73	287	Pn	Pn	14 35 30.6	+1.0
TNTI	Ternate	6.20	54		Pn	14 35 35.8	-0.3
SOEI	Soe	7.02	165		Pn	14 35 53.6	+6.1
BATI	Baumata	7.33	170	LR	LR	14 38 48.1	
	comp=Z,271nm,19.2s,baz=96,slow=37						
FAKI	Fak Fak	9.86	90	Pn	Pn	14 36 27.1	+0.8
DAV	Davao City (W)	10.45	18	LR	LR	14 40 38.0	
	comp=Z,70nm,21.8s,baz=254,slow=39						
AS31	Alice Springs	23.42	153	P	P	14 39 15.9	+2.8
ASAR	Alice Springs	23.42	153	P	P	14 39 19.2	+6.0
	2.0nm,0.8s,baz=341,slow=14,SNR=4.4						
	2.0nm,0.8s						
ASAR	Alice Springs	23.42	153	P	P	14 39 16.3	+3.1
CM31	Chiang Mai Arr	31.38	314	P	P	14 40 24.9	0.0
CM31				IAmb	IAmb	14 41 01.6	
	comp=Z,2.1nm,0.6s						
CMAR	Chiang Mai Arr	31.38	314	P	P	14 40 25.2	+0.4
	comp=Z,1.8nm,0.7s,baz=136,slow=7.1,SNR=16						
	comp=Z,1.8nm,0.7s						
USRK	Ussuriysk Ar.	47.72	9	P	P	14 42 39.9	-0.3
	comp=Z,3.1nm,0.6s,baz=217,slow=10.0,SNR=4.7						
	comp=Z,3.1nm,0.6s						
SONM	Songino Array	52.47	346	P	P	14 43 16.1	-0.4
	comp=Z,0.9nm,0.8s,baz=163,slow=7.1,SNR=2.5						
	comp=Z,0.9nm,0.8s						
SONM	Songino Array	52.47	346	P	P	14 43 16.0	-0.4
MK31	Makanchi Array	60.80	330	P	P	14 44 15.5	-0.1
MK31				IAmb	IAmb	14 44 16.9	
	comp=Z,1.3nm,0.8s						
MKAR	Makanchi Array	60.80	330	P	P	14 44 14.8	-0.8
	comp=Z,1.5nm,0.8s,baz=125,slow=7.5,SNR=5.9						
	comp=Z,1.5nm,0.8s						
MKAR	Makanchi Array	60.80	330	P	P	14 44 15.4	-0.2
KBL	Kabul	62.39	312	P	P	14 44 26.3	-0.5
KURBB	Kurchatov Arra	65.20	331	P	P	14 44 44.1	-0.6
	comp=Z,0.7nm,0.7s,baz=141,slow=6.0,SNR=6.3						
	comp=Z,0.7nm,0.7s						
KURK	Kurchatov	65.22	331	P	P	14 44 43.3	-1.5
KURK				IAmb	IAmb	14 44 46.3	
	comp=Z,1.9nm,0.7s						
BVAR	Borovoye Array	70.68	330	P	P	14 45 18.3	-0.9
	comp=Z,0.3nm,0.6s,baz=128,slow=4.0,SNR=2.3						
	comp=Z,0.3nm,0.6s						
TIXI	Tiksi	74.58	2	P	P	14 45 41.9	0.0
AB31	Akbulak array	74.68	323	P	P	14 45 42.2	-0.7
AB31				IAmb	IAmb	14 46 15.6	
	comp=Z,5.1nm,1.5s						
ABKAR	Akbulak array	74.68	323	P	P	14 45 42.0	-1.0
AKTO	Aktyubinsk	76.28	324	P	P	14 45 51.1	-1.1
	comp=Z,1.0nm,0.6s,baz=111,slow=7.0,SNR=3.9						
	comp=Z,1.0nm,0.6s						
RAR	Rarotonga	77.61	111	LR	LR	15 20 58.8	
	comp=Z,32nm,18.2s,baz=136,slow=36						
BRTR	Keskin Array B	90.89	310	P	P	14 47 07.2	-0.3
	comp=Z,0.5nm,0.7s,baz=113,slow=3.3,SNR=2.6						
	comp=Z,0.5nm,0.7s						

IDC 20 14:59:29.7±2.0**, 14°.14S×166°.16E, h0**km**, mb3.9**/4**, mbtmp3.9**/5**, ML3.5**/1**, Error ellipse: s-maj=49.0km s-min=34.1km az=123.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.89	178	Pn	Pn	15 01 26.3	+0.5
	0.6nm,0.3s,baz=49,slow=10,SNR=11						
DZM				Sn	Sn	15 02 48.3	-7.7
	0.5nm,0.3s,baz=290,slow=1.5,SNR=3.2						
	7.7nm,0.9s						
STKA	Stephens Creek	28.57	228	P	P	15 05 26.4	-1.2
	3.2nm,0.6s,baz=51,slow=10,SNR=2.8						
	3.2nm,0.6s						
WRA	Warramunga Arr	30.93	255	P	P	15 05 50.0	+1.4
	0.4nm,0.5s,baz=84,slow=8.0,SNR=8.9						
	0.4nm,0.5s						
ASAR	Alice Springs	31.89	248	P	P	15 05 56.3	-0.7
	0.6nm,0.3s,baz=73,slow=9.8,SNR=27						
	0.6nm,0.3s						
ILAR	Eielson Array	86.31	18	P	P	15 12 13.2	0.0
	0.4nm,0.8s,baz=212,slow=8.5,SNR=1.7						
	0.4nm,0.8s						

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*IDC **20** 15:12:01.0±4.2, 22°.95N×11°.57W, h0km, mb3.9/4, mbtmp3.8/5, ML3.8/1, MS3.6/1, Error ellipse: s-maj=127.5km s-min=41.3km az=76.0*

ISC 20 15:12:02.0±4.4**, 22°.9N**±0°.4×**11°.6W**±0°.7**, h10**km**, n7,** σ**0s.66**/6**, mb3.8**/4**, Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	15.92	125	Pn	Pn	15 15 46.1	-0.2
	0.3nm,0.3s,baz=314,slow=12,SNR=9.6						
	0.9nm,0.6s						
HFS	Hagfors	41.23	19	P	P	15 19 46.2	-0.6
	1.7nm,0.7s,baz=189,slow=8.3,SNR=4.3						
	1.7nm,0.7s						
FINES	FINESS Array B	46.38	24	P	P	15 20 28.1	-0.1
	2.7nm,0.9s,baz=249,slow=5.3,SNR=4.7						
	2.7nm,0.9s						
MBAR	Mbarara	47.35	114	LR	LR	15 43 09.6	
	comp=Z,68nm,18.4s,baz=134,slow=40						
KURBB	Kurchatov Arra	72.74	42	P	P	15 23 30.6	+0.3
	0.4nm,0.4s,baz=284,slow=6.7,SNR=4.3						
	0.4nm,0.4s						
MKAR	Makanchi Array	76.24	45	P	P	15 23 51.7	+0.9
	0.2nm,0.5s,baz=287,slow=6.0,SNR=2.5						
	0.2nm,0.5s						
ASAR	Alice Springs	148.35	98	PKPbc	PKPbc	15 31 49.2	-0.2
	0.5nm,0.7s,baz=272,slow=1.9,SNR=7.8						

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*NIED **20** 15:22:25.2, 38°.82N×142°.18E, h45km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.43; $M_{\theta\theta}$-0.24; $M_{\phi\phi}$-2.19; $M_{r\theta}$-1.08; $M_{\theta\phi}$0.26; $M_{\phi r}$-1.50; Fault plane solution: $M_0$2.93000×10^{14} NP1: ϕ_s338.00000°, δ32.00000°, λ57.00000°. NP2: ϕ_s195.00000°, δ64.00000°, λ109.00000°.*

*JMA **20** 15:22:25.2±0.1, 38°.8N±0°.3×142°.2E±0°.7, h45km±1km, MD4.0/40, MV3.9/40, E OFF MIYAGI PREF*

JMA Felt I J1 at E OFF MIYAGI PREF .

*IDC **20** 15:22:27.2±2.6, 38°.81N×142°.26E, h71km±23km, mb3.4/8, mbtmp3.7/12, MS2.4/1, Error ellipse: s-maj=25.1km s-min=17.0km az=93.0*

ISC 20 15:22:25.1±1.7**, 38°.78N**±0°.07×**142°.2E**±0°.1**, h46**km±15km**, n30,** σ**1s.37**/27**, mb3.7**/8**, 6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.52	305	P	Pn	15 22 35.9	-0.5
OFUJ				*e*S	Sn	15 22 43.4	-1.1
OFUJ	Ofunato	0.52	305	A	A	15 22 35.9	
	comp=N,4.0nm,1.8s,comp=E,15nm,0.5s						
JKMT	Kesennumamotoy	0.58	273	P	Pn	15 22 36.7	-0.4
JKMT				*e*S	Sn	15 22 44.8	-1.0
JIO	Ouri	0.76	245	⇓*i*P	Pn	15 22 39.2	-0.2
JIO				⇓S	Sn	15 22 48.8	-1.0
JMK	Ichinoseki	0.80	283	⇓*i*P	Pn	15 22 39.6	-0.3
JMK				⇓*e*S	Sn	15 22 49.0	-1.8
JOM	Ohasama	1.00	314	*i* P	Pn	15 22 42.3	-0.3
JOM				S	Sn	15 22 54.7	-0.9
JOM	Ohasama	1.00	314	A	A	15 22 42.3	
	comp=N,16nm,0.2s,comp=E,16nm,0.3s						
JOU	Okura	1.29	252	⇓*i*P	Pn	15 22 46.7	0.0
JRG	Rokugo	1.38	297	*i* P	Pn	15 22 47.7	-0.1
JMM	Marumori	1.45	231	*i* P	Pn	15 22 48.6	-0.2
JYK	Kaneyama	1.46	276	⇓P	Pn	15 22 48.9	-0.1
JANG	Nango	1.68	341	*i* P	Pn	15 22 51.8	-0.2
MJAR	Matsushiro Arr	3.89	236	P	Pn	15 23 24.3	+1.9
	comp=E,8.7nm,0.6s,baz=44,slow=11,SNR=38						
MJAR				LR	LR	15 25 08.8	
	comp=E,47nm,18.2s,baz=20,slow=41						
ASAJ	Asahikawa	5.34	3	P	Pn	15 23 43.0	+0.9
	comp=E,1.8nm,0.2s,baz=210,slow=16,SNR=12						
USRK	Ussuriysk Ar.	9.39	308	P	Pn	15 24 41.5	+3.8
	comp=E,2.6nm,0.7s,baz=116,slow=13,SNR=4.5						
KSRS	Korea Array	11.34	268	P	Pn	15 25 08.0	+3.6
	comp=E,2.0nm,0.7s,baz=75,slow=15,SNR=5.6						
H11N2	WAKE ISLAND Hy	28.55	125	T	T	15 58 42.5	
	baz=318,slow=75,SNR=92						
H11N1	WAKE ISLAND Hy	28.56	125	T	T	15 58 50.8	
	baz=318,slow=75,SNR=96						
H11N3	WAKE ISLAND Hy	28.57	125	T	T	15 58 57.0	
	baz=318,slow=75,SNR=80						
H11S1	WAKE ISLAND Hy	29.33	127	T	T	15 59 42.5	
	baz=318,slow=76,SNR=38						
H11S3	WAKE ISLAND Hy	29.33	127	T	T	15 59 42.2	
	baz=318,slow=76,SNR=38						
H11S2	WAKE ISLAND Hy	29.35	127	T	T	15 59 38.5	
	baz=318,slow=76,SNR=32						
ZALV	Zalesovo Beam	41.23	311	P	P	15 30 04.5	-0.6
	comp=E,0.7nm,0.5s,baz=77,slow=7.3,SNR=3.7						
	comp=E,0.7nm,0.5s						
MKAR	Makanchi Array	43.75	301	P	P	15 30 24.9	-0.9
	comp=E,0.4nm,0.5s,baz=84,slow=11,SNR=5.6						
	comp=E,0.4nm,0.5s						
KURBB	Kurchatov Arra	45.45	307	P	P	15 30 38.7	-0.5
	comp=E,1.1nm,0.5s,baz=80,slow=8.2,SNR=8.1						
	comp=E,1.1nm,0.5s						
ILAR	Eielson Array	47.68	33	P	P	15 30 55.5	-1.0
	comp=E,0.4nm,0.6s,baz=265,slow=5.6,SNR=6.0						
	comp=E,0.4nm,0.6s						
BVAR	Borovoye Array	49.88	311	P	P	15 31 13.4	-0.2
	comp=E,0.5nm,0.5s,baz=70,slow=4.7,SNR=2.5						
	comp=E,0.5nm,0.5s						
WRA	Warramunga Arr	58.88	189	P	P	15 32 18.4	-0.8
	comp=E,1.0nm,0.5s,baz=7.5,slow=6.9,SNR=13						
	comp=E,1.0nm,0.5s						
ASAR	Alice Springs	62.61	189	P	P	15 32 44.6	+0.1
	comp=E,0.6nm,0.7s,baz=1.1,slow=5.3,SNR=11						
	comp=E,0.6nm,0.7s						
TXAR	Lajitas Array	88.55	53	P	P	15 35 13.2	+0.1
	comp=E,0.1nm,0.6s,baz=310,slow=3.0,SNR=1.7						
	comp=E,0.1nm,0.6s						

WEL 20 15:24:31.2±1.4**, 32°S**±32°×**18°0W**±5°1**, h389**km±58km**, mB4.4**/3**, ML4.2**/10**, MLv4.5**/6**, Mw(mB)3.5**/3**, Error ellipse: s-maj=71.8km s-min=30.7km az=115.5, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	5.76	194	P	Pn	15 26 01.0	+0.3
HAZ	Te Kaha	5.85	198	P	Pn	15 26 02.1	+0.5
HAZ				S	S	15 27 15.7	+0.4
PUZ	Puketiti	6.03	194	P	Pn	15 26 03.4	-0.3
PUZ				S	S	15 27 18.8	-0.3
RUGZ	Raukumara Rang	6.07	199	P	Pn	15 26 04.9	+0.7
RUGZ				S	S	15 27 18.8	-1.2
TWGZ	Tauwhareparae	6.20	196	P	Pn	15 26 05.5	0.0
TWGZ				S	S	15 27 24.6	+2.2
CNGZ	Carnagh Statio	6.44	193	P	Pn	15 26 08.3	+0.1
MWZ	Matawai	6.46	198	P	Pn	15 26 08.1	-0.3
TKGZ	Te Karaka	6.48	196	P	Pn	15 26 07.8	-0.8
TKGZ				S	S	15 27 28.4	+0.4
URZ	Urewera	6.51	201	P	Pn	15 26 07.9	-1.0
RIGZ	Rimuhau	6.75	196	P	Pn	15 26 10.8	-0.9
MUGZ	Murupara	6.81	203	P	P	15 26 13.6	+0.4
SNGZ	Shannon Statio	6.93	198	P	Pn	15 26 13.6	0.0
MTHZ	Maungataniwha	7.13	201	P	P	15 26 16.9	+0.1
OTVZ	Oturere	7.81	206	P	Pn	15 26 23.4	-0.6

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*DJA **20** 15:45:35.2±2.4, 8°N±21°×12°5E±°, h10km, M4.9/14, mb4.8/14, mB5.3/6, MLv5.1/7, Mw(mB)4.8/6*

*IDC **20** 15:45:46.6±0.7, 6°.55N×125°.20E, h0km, mb3.9/11, mbtmp3.9/12, ML4.6/1, MS3.2/7, Error ellipse: s-maj=17.1km s-min=8.2km az=119.0*

*NEIC **20** 15:45:49.3±1.9, 6°.64N±0°.06×125°.23E±0°.08, h10km±1km, mb4.5/16, Error ellipse: s-maj=16.2km s-min=5.5km az=123.0*

ISC 20 15:45:48.9±0.5**, 6°.61N**±0°.06×**125°.14E**±0°.07**, h10**km**, n62,** σ**1s.76**/54**, mb4.2**/22**, MS3.1**/6**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.63	43	Pg	Pg	15 45 59.9	-1.2
	482nm,0.3s,baz=227,slow=2.7,SNR=32						
DAV				Lg	Lg	15 46 07.0	
	2µm,0.3s,baz=109,slow=23,SNR=19						
DAV	Davao City (W)	0.63	43		Pg	15 46 00.1	-1.1
SGSI	Sangihe	2.93	172	P	Pn	15 46 37.9	+2.2
TNTI	Ternate	6.21	159	Pn	Pn	15 47 20.0	-0.8
TNTI	Ternate	6.21	159	P	Pn	15 47 23.4	+2.6
	0.2nm38nm,0.8s						
GTOI	Gorontalo	6.31	200	P	Pn	15 47 21.8	-0.3
	0.4nm1µm115nm,0.6s						
MRSI	Marisa	6.88	208	P	Pn	15 47 30.7	+0.7
TOLI2	Tolitoli	6.99	219	Pn	Pn	15 47 30.0	-1.4
LUWI	Luwuk	7.96	197		Pn	15 47 46.9	+2.1
LUWI	Luwuk	7.96	197	P	Pn	15 47 47.7	+2.9
	74nm,0.9s						
MPSI	Mapaga	8.14	220	P	Pn	15 47 44.6	-2.6
APSI	Ampana	8.25	205	P	Pn	15 47 49.6	+0.9
	69nm,1.1s						
SANI	Sanana	8.64	174	P	Pn	15 47 55.8	+1.6
	33nm,0.8s						
SWI	Sorong	9.61	140	P	Pn	15 48 09.8	+2.3
	12nm,0.7s						
NLAI	Namlea	9.98	169	P	Pn	15 48 16.2	+3.7
	31nm,0.8s						
KRAI	Karang Ratu	10.38	162	P	Pn	15 48 20.9	+2.8
	21nm,0.7s						
TTSI	Tana Toraja	10.97	209	P	Pn	15 48 26.5	+0.5
MTKI	Muara Teweh, K	12.69	234	P	Pn	15 48 41.8	-7.8
SBUM	Sibu	13.53	253		Pn	15 49 04.8	+3.7
BATI	Baumata	16.77	185	Pn	Pn	15 49 43.5	-0.7
	2.3nm,0.3s,baz=223,slow=2.6,SNR=6.2						
BATI				LR	LR	15 57 16.1	
	comp=Z,56nm,20.7s,baz=327,slow=41						
	5.5nm,0.4s						
KNRA	Kununurra	22.43	171		P	15 50 48.5	+0.3
KNRA				IAmb	IAmb	15 50 58.0	
	comp=Z,14nm,0.7s						
FITZ	Fitzroy Crossi	24.56	179	P	P	15 51 07.6	-1.6
	comp=Z,3.6nm,0.5s,baz=214,slow=1.3,SNR=27						
	comp=Z,3.6nm,0.5s						
FITZ	Fitzroy Crossi	24.56	179	P	P	15 51 08.1	-1.0
JNU	Nakatsue	26.91	11	LR	LR	16 00 56.3	
	comp=Z,49nm,21.9s,baz=118,slow=34						
WB0	Warramunga Arr	27.75	161	P	P	15 51 37.9	-0.2
WB0				IAmb	IAmb	15 51 56.5	
	comp=Z,7.0nm,0.9s						
WRA	Warramunga Arr	27.90	161	P	P	15 51 38.0	-1.4
	comp=Z,0.7nm,0.6s,baz=342,slow=9.3,SNR=7.7						
	comp=Z,0.7nm,0.6s						
GSI	Gunungsitoli	27.99	260	P	P	15 51 37.6	-2.7
CMAR	Chiang Mai Arr	28.11	297	P	P	15 51 42.2	+0.9
	comp=Z,1.0nm,0.8s,baz=108,slow=7.3,SNR=8.0						
	comp=Z,1.0nm,0.8s						
CMAR	Chiang Mai Arr	28.11	297	P	P	15 51 41.2	-0.1
CHTO	Chiang Mai	28.24	298	P	P	15 51 42.4	-0.1
PZH	PanZhiHua	29.80	314	P	P	15 51 59.6	+3.2
KSAR	Wonju Array Be	30.79	4	P	P	15 52 01.4	-3.4
KSRS	Korea Array	30.80	4	LR	LR	16 03 33.3	
	comp=Z,20nm,21.0s,baz=355,slow=35						
AS31	Alice Springs	31.29	164	P	P	15 52 09.2	-0.1
ASAR	Alice Springs	31.29	164	P	P	15 52 07.6	-1.8
	comp=Z,0.8nm,0.6s,baz=350,slow=8.1,SNR=18						
	comp=Z,0.8nm,0.6s						
MAJO	Matsushiro	32.10	20	P	P	15 52 15.7	-0.7
MAJO				IAmb	IAmb	15 52 19.7	
	comp=Z,14nm,1.2s						
MJAR	Matsushiro Arr	32.10	20	LR	LR	16 03 48.4	
	comp=Z,34nm,21.1s,baz=164,slow=34						
HHC	Hu-ho-hao-te	36.19	342	*e*P	P	15 52 53.8	+1.9
HHC				pmax	pmax		
	comp=Z,18nm,0.6s						
HHC				pmax	pmax		
	comp=Z,47nm,5.2s						
FORT	Forrest	37.28	176	P	P	15 53 00.5	-0.7
FORT				IAmb	IAmb	15 53 25.2	
	comp=Z,15nm,1.3s						
INKA	Innaminka	37.33	157	P	P	15 53 01.1	-0.6
INKA				IAmb	IAmb	15 53 35.2	
	comp=Z,8.7nm,1.5s						
LSA	Lhasa	39.38	310	P	P	15 53 19.8	+0.3
GTA	Gaotai	39.83	329	*e*P	P	15 53 27.1	+4.4
GTA				pP	sP	15 53 31.1	+3.8
GTA				pmax	pmax		
	comp=Z,6.0nm,1.8s						
ASAJ	Asahikawa	40.37	19	LR	LR	16 10 54.8	
	comp=Z,30nm,19.0s,baz=146,slow=37						
BBOO	Buckleboo	40.56	166	P	P	15 53 28.3	-0.4
STKA	Stephens Creek	41.37	159	P	P	15 53 33.8	-1.6
	comp=Z,2.3nm,0.7s,baz=339,slow=7.1,SNR=3.0						
	comp=Z,2.3nm,0.7s						
STKA	Stephens Creek	41.37	159	P	P	15 53 35.2	-0.2
HILR	Hailar Array B	43.04	355	P	P	15 53 49.9	+1.1
	comp=Z,2.5nm,0.6s,baz=153,slow=10.0,SNR=6.3						
	comp=Z,2.5nm,0.6s						
PALK	Pallekele	44.11	274	LR	LR	16 14 06.7	
	comp=Z,25nm,18.9s,baz=152,slow=38						
WUS	Wushi	53.38	318	P	P	15 55 09.3	+0.3
WUS				IAmb	IAmb	15 55 14.0	
	comp=Z,10nm,1.5s						
MKAR	Makanchi Array	54.30	325	P	P	15 55 14.4	-1.1
	comp=Z,0.4nm,0.5s,baz=119,slow=7.3,SNR=5.3						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	54.30	325	P	P	15 55 16.3	+0.8
KSH	Kashi	54.91	314	P	P	15 55 25.8	+5.6
KSH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ZALV	Zalesovo Beam	57.32	333	P	P	15 55 36.4	-0.6
	comp=Z,0.5nm,0.4s,baz=160,slow=8.9,SNR=2.5						
	comp=Z,0.5nm,0.4s						
ZALV	Zalesovo Beam	57.32	333	P	P	15 55 37.6	+0.6
KURBB	Kurchatov Arra	58.48	327	P	P	15 55 43.8	-1.4
	comp=Z,0.7nm,0.7s,baz=124,slow=7.4,SNR=6.4						
	comp=Z,0.7nm,0.7s						
GAR	Garm	58.83	312	P	P	15 55 48.0	-0.1
KKAR	Karatay Array	60.06	316	P	P	15 55 54.4	-1.9
BVAR	Borovoye Array	64.06	327	P	P	15 56 22.8	-0.2
	comp=Z,0.2nm,0.4s,baz=111,slow=8.1,SNR=5.1						
	comp=Z,0.2nm,0.4s						
AB31	Akbulak array	68.94	320	P	P	15 56 53.3	-0.9
AB31				IAmb	IAmb	15 56 57.8	
	comp=Z,2.3nm,1.0s						
ILAR	Eielson Array	83.20	26	P	P	15 58 14.7	-0.5
	comp=Z,0.7nm,0.7s,baz=232,slow=4.4,SNR=13						
	comp=Z,0.7nm,0.7s						
I28M	Miner Creek	86.08	25	P	P	15 58 29.1	-0.8
I28M				IAmb	IAmb	15 58 32.4	
	comp=Z,3.4nm,0.8s						
NOA	NORSAR Array B	95.52	333	LR	LR	16 44 40.8	
	comp=Z,28nm,18.4s,baz=265,slow=37						

DJA 20 16:04:28.2±0.2**, 0°S**±2°×**12°3E**±°**, h47**km±11km**, M3.9**/15**, mB4.6**/1**, mb4.1**/6**, MLv3.8**/15**, Mw(mB)3.8**/1**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	Gorontalo	0.83	1	P	Pn	16 04 45.8	+2.2
GTOI				S	Sn	16 04 59.2	+4.4
LUWI	Luwuk	0.86	195	P	Pn	16 04 44.8	+0.8
LUWI				S	Sn	16 04 57.7	+2.1
MRSI	Marisa	1.25	303	P	Pn	16 04 48.3	-0.9
MRSI				S	Sn	16 05 03.7	-1.2
APSI	Ampana	1.52	242	P	Pn	16 04 52.8	-0.1

MPSI	Mapaga	3.14	280	P	Pn	16 05 15.4	+0.2
PCI	Palu	3.23	257	P	Pn	16 05 18.1	+1.7
SANI	Sanana	3.52	122	P	Pn	16 05 19.1	-1.3
KDI	Kendari	3.75	186	P	Pn	16 05 22.9	-0.7
KKSI	Kolaka, Sulawe	4.17	199	P	Pn	16 05 28.9	-0.4
TTSI	Tana Toraja	4.25	228	P	Pn	16 05 30.1	-0.3
TNTI	Ternate	4.48	78	P	Pn	16 05 34.7	+1.1
MMSI	Mamuju	4.77	239	P	Pn	16 05 37.2	-0.4
SPSI	Sidrap Palu	4.93	221	P	Pn	16 05 39.8	0.0
BNSI	Bone	5.07	215	P	Pn	16 05 41.7	0.0
	0.1nm13nm,1.2s						
NLAI	Namlea	5.10	126	P	Pn	16 05 42.7	+0.6
	674nm15nm,0.9s						
EDFI	Ende, Flores	8.59	189	P	Pn	16 06 30.7	+0.6
KKM	Kota Kinabalu	9.18	313	P	Pn	16 06 39.7	+1.5
	23nm,1.2s						
FAKI	Fak Fak	9.64	106	P	Pn	16 06 43.0	-1.4
PCJI	Pacitan	14.20	236	P	Pn	16 07 48.2	+1.5

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*IDC **20** 16:15:06.0±1.6, 23°.70S×176°.55W, h0km, mb4.2/5, mbtmp4.3/6, ML3.9/1, Error ellipse: s-maj=44.6km s-min=30.3km az=39.0*

ISC 20 16:15:19.8±1.6**, 24°.0S**±0°.2×**176°.8W**±0°.3**, h100km, n12, σ0ˢ.93**/13**, mb4.3**/7**, 4C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	15.14	199	Pn	Pn	16 18 47.1	-1.1
	0.5nm,0.3s,baz=253,slow=3.8,SNR=7.4						
URZ				Sn	Sn	16 21 18.2	-17
	0.5nm,0.3s,baz=138,slow=9.2,SNR=5.7						
	11nm,1.0s						
STKA	Stephens Creek	37.40	248	P	P	16 22 23.8	+0.6
	1.8nm,0.5s,baz=82,slow=7.0,SNR=4.7						
	1.8nm,0.5s						
ASAR	Alice Springs	44.90	260	P	P	16 23 24.7	0.0
	1.0nm,0.5s,baz=96,slow=7.0,SNR=34						
ASAR				PcP	PcP	16 25 05.8	+1.0
	0.4nm,0.7s,baz=108,slow=3.6,SNR=4.6						
	1.0nm,0.5s						
WRA	Warramunga Arr	45.31	265	P	P	16 23 27.6	-0.4
	1.2nm,0.4s,baz=105,slow=8.6,SNR=24						
	1.2nm,0.4s						
QSPA	South Pole Qui	66.10	180	P	P	16 25 57.1	+1.1
	4.0nm,0.7s,baz=29,slow=0.9,SNR=25						
	4.0nm,0.7s						
TROLL	Troll, Antarti	84.26	180	⇑P	P	16 27 40.3	+0.3
	comp=Z,173nm,0.5s						
SNAA	Sanae	84.51	178	⇑P	P	16 27 41.1	-0.2
	comp=Z,68nm,0.9s						
SNAA	Sanae	84.51	178	P	P	16 27 40.7	-0.6
	comp=Z,2.5nm,0.8s,baz=193,slow=3.2,SNR=5.8						
	comp=Z,2.5nm,0.8s						
VNA3	Neumayer Olymp	84.60	176	⇑P	P	16 27 41.3	-0.4
	comp=Z,5.1nm,0.7s						
VNA2	Neumayer--Watz	85.06	177	⇑P	P	16 27 44.0	0.0
	comp=Z,4.2nm,0.6s,baz=180,slow=4.2						
BRTR	Keskin Array B	149.94	309	PKPbc	PKiKP	16 34 57.6	-2.0
	comp=Z,0.5nm,0.6s,baz=20,slow=2.1,SNR=4.4						
MMAI	Mount Meron Ar	150.39	295	PKPbc	PKiKP	16 35 00.7	0.0
	comp=Z,2.2nm,0.7s,baz=165,slow=2.8,SNR=6.3						

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*IDC **20** 16:49:18.4±2.6, 3°.03S×130°.75E, h0km, mb3.8/2, mbtmp3.7/4, ML3.8/2, MS3.7/3, Error ellipse: s-maj=132.4km s-min=27.6km az=75.0*

*DJA **20** 16:49:21.4±0.2, 3°S±3°×13°0E±°, h10km, M3.4/12, MLv3.4/12*

ISC 20 16:49:22.6±0.9**, 2°.99S**±0°.07×**130°.44E**±0°.04**, h24km, n19, σ1ˢ.36**/19**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.55	257	P	Pb	16 49 50.3	-0.4
MSAI				S	Sb	16 50 11.5	+1.6
BNDI	Bandanaira	1.61	199	P	Pn	16 49 50.6	+1.0
FAKI	Fak Fak	1.81	88	P	Pn	16 49 52.5	+0.2
KRAI	Karang Ratu	2.07	261	P	Pn	16 49 56.5	+0.6
KRAI				S	Sn	16 50 22.5	+1.5
SWI	Sorong	2.27	21	P	Pn	16 49 58.2	-0.4
AAI	Ambon	2.35	253	P	Pn	16 50 00.2	+0.5
KMPI	Kaimana, Papua	3.32	102	P	Pn	16 50 13.6	+0.4
KMPI				S	Sn	16 50 53.3	+1.4
NLAI	Namlea	3.35	266	P	Pn	16 50 14.4	+0.9
NLAI				S	Sn	16 50 53.2	+0.7
RKPI	Ransiki, Papua	4.01	69	P	Pn	16 50 22.8	+0.2
MWPI	Manokwari, Pap	4.14	60	P	Pn	16 50 26.2	+1.8
SANI	Sanana	4.55	282	P	Pn	16 50 28.4	-1.6
BATI	Baumata	9.83	223	LR	LR	16 55 29.0	
	comp=Z,35nm,20.6s,baz=144,slow=37						
FITZ	Fitzroy Crossi	15.73	197	Pn	Pn	16 53 01.6	-1.2
	0.2nm,0.3s,baz=24,slow=8.5,SNR=11						
	1.3nm,0.8s						
WRA	Warramunga Arr	17.27	168	P	Pn	16 53 19.3	-3.1
	0.4nm,0.3s,baz=350,slow=11,SNR=17						
	0.6nm,0.5s						
TGY	Tagaytay City	19.42	331	LR	LR	17 01 24.3	
	comp=Z,288nm,20.9s,baz=298,slow=37						
ASAR	Alice Springs	20.83	171	P	P	16 54 01.4	-1.3
	3.3nm,0.3s,baz=353,slow=10,SNR=136						
	3.3nm,0.3s						
SONM	Songino Array	54.82	340	LR	LR	17 23 47.4	
	comp=Z,55nm,21.7s,baz=154,slow=38						
MKAR	Makanchi Array	65.16	326	P	P	17 00 02.7	+0.9
	0.3nm,0.7s,baz=125,slow=8.1,SNR=4.3						
	0.3nm,0.7s						
SPITS	Spitsbergen Ar	97.74	349	LR	LR	17 53 40.9	
	comp=Z,37nm,18.1s,baz=178,slow=40						

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*IDC **20** 16:55:45.1±0.5, 6°.57N×125°.15E, h0km, mb4.4/24, mbtmp4.4/25, ML4.8/1, MS3.5/18, Error ellipse: s-maj=12.5km s-min=7.8km az=123.0*

*BJI **20** 16:55:45.3, 6°.41N×125°.21E, h13km, mB4.9/12, mb4.6/59, Ms4.3/13, Ms7 3.9/14*

*DJA **20** 16:55:47.3±0.6, 7°N±7°×12°5E±°, h13km±9km, M4.8/31, mb4.8/31, mB5.2/16, MLv5.2/8, Mw(mB)4.6/16*

*NEIC **20** 16:55:47.2±1.5, 6°.71N±0°.07×125°.20E±0°.07, h10km±1km, mb4.8/46, Error ellipse: s-maj=14.8km s-min=7.4km az=134.0*

ISC 20 16:55:46.9±0.4**, 6°.65N**±0°.04×**125°.18E**±0°.06**, h10km, n143, σ1ˢ.53**/125**, mb4.7**/58**, MS3.6**/24**, 1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.58	44	Pg	Pb	16 55 58.6	-0.6
	2µm,0.3s,baz=236,slow=2.2,SNR=101						
DAV				Lg	Lg	16 56 06.6	
	9µm,0.3s,baz=111,slow=23,SNR=24						
DAV	Davao City (W)	0.58	44		Pg	16 55 57.6	-0.6
DAV	Davao City (W)	0.58	44	P	Pb	16 55 58.3	-0.9
DAV	Davao City (W)	0.58	44	P	Pg	16 55 56.0	-2.2
SGSI	Sangihe	2.96	173	P	Pn	16 56 36.0	+2.0
TNTI	Ternate	6.23	159		Pn	16 57 20.5	+1.5
TNTI	Ternate	6.23	159	P	Pn	16 57 21.7	+2.7
	0.4nm1µm81nm,0.9s						
GTOI	Gorontalo	6.35	200	P	Pn	16 57 20.4	-0.2
GTOI				S	Sn	16 58 32.1	-1.2
MRSI	Marisa	6.93	208	P	Pn	16 57 29.0	+0.4
TOLI2	Tolitoli	7.03	219	Pn	Pn	16 57 28.0	-2.0
LUWI	Luwuk	8.01	198		Pn	16 57 46.1	+2.7
LUWI	Luwuk	8.01	198	P	Pn	16 57 45.8	+2.4
MPSI	Mapaga	8.19	220	P	Pn	16 57 45.6	-0.3
	570nm18nm,0.7s						
APSI	Ampana	8.29	205	P	Pn	16 57 49.8	+2.5
	2µm219nm,1.1s						
SANI	Sanana	8.68	175	P	Pn	16 57 53.6	+1.0
	890nm113nm,0.9s						
PCI	Palu	9.20	216	P	Pn	16 57 58.8	-1.0
	33nm,0.9s						
SWI	Sorong	9.62	141	P	Pn	16 58 07.4	+1.9
	28nm,0.7s						
NLAI	Namlea	10.01	169	P	Pn	16 58 14.0	+3.2
	1µm81nm,0.7s						
KRAI	Karang Ratu	10.41	162	P	Pn	16 58 17.3	+1.0
	2µm37nm,0.8s						
KDI	Kendari	10.84	194	P	Pn	16 58 24.3	+2.0
TTSI	Tana Toraja	11.01	209	P	Pn	16 58 26.1	+1.5
	516nm50nm,0.9s						
KKSI	Kolaka, Sulawe	11.31	198	P	Pn	16 58 31.0	+2.3
	25nm,0.7s						
SPSI	Sidrap Palu	11.84	207	P	Pn	16 58 38.4	+2.4
	15nm,0.7s						
BNSI	Bone	12.09	205	P	Pn	16 58 42.3	+3.0
	805nm34nm,1.2s						
KAPI	Kappang	12.79	205	P	Pn	16 58 50.8	+1.9
BKSI	Bulukumba	12.91	203	P	Pn	16 58 52.2	+1.5
	25nm,1.7s						
SBUM	Sibu	13.57	253	Pn	Pn	16 59 02.3	+2.7
SBUM	Sibu	13.57	253	P	Pn	16 58 58.9	-0.7
	18nm,0.9s						
BBKI	Banjar Baru	14.40	226	P	Pn	16 59 12.3	+1.3
	70nm,1.1s						
MMRI	Maumere	15.46	191	P	P	16 59 31.4	+1.6
MMRI				IAmb	IAmb	16 59 33.9	
	comp=Z,50nm,1.1s						
EDFI	Ende, Flores	15.69	193	P	Pn	16 59 30.5	+2.2
LBFI	Labuhan Bajo,	15.93	199	P	Pn	16 59 32.1	+0.8
	comp=Z,902nmcomp=Z,62nm,2.0s						
SOEI	Soe	16.32	183		P	16 59 39.4	0.0
SOEI				IAmb	IAmb	16 59 44.5	
	comp=Z,121nm,1.9s						
SOEI	Soe	16.32	183	P	Pn	16 59 38.1	+1.6
	comp=Z,73nm,1.0s						
DBNI	Kabupaten Domp	16.53	205	P	Pn	16 59 40.1	+1.0
BATI	Baumata	16.81	185	Pn	Pn	16 59 42.7	+0.1
	comp=Z,3.7nm,0.3s,baz=333,slow=2.3,SNR=13						
BATI				LR	LR	17 07 14.3	
	comp=Z,183nm,19.6s,baz=356,slow=41						
	comp=Z,10.0nm,0.6s						
BATI	Baumata	16.81	185	P	Pn	16 59 44.3	+1.7
	comp=Z,78nm,1.1s						
TWSI	Taliwang, Sumb	17.38	209	P	Pn	16 59 50.6	+0.9
	comp=Z,42nm,1.1s						
KLNI	Mataram	17.50	211	P	Pn	16 59 51.5	+0.3
	comp=Z,898nmcomp=Z,76nm,0.8s						
KMMI	Kalianget	17.61	220	P	Pn	16 59 53.7	+1.1
JAGI	Jajag, Banyuwa	18.61	216	P	P	17 00 02.5	-2.1
JAGI				IAmb	IAmb	17 00 10.0	
	comp=Z,77nm,1.4s						
QIZ	Qiongzhong	19.34	311	P	P	17 00 12.6	-0.1
QIZ				S	Sn	17 03 50.9	+0.1
QIZ				LR	LR		
	comp=Z,290nm,13.1s						
QIZ				LR	LR		
	comp=Z,350nm,12.9s						
QIZ				LR	LR		
	comp=Z,330nm,20.8s						
TPI	Tanjungpandan	19.83	242	P	P	17 00 17.6	-0.4
MTN	Manton Dam	20.25	163	P	P	17 00 22.9	+0.3
JOW	Kunigami	20.29	8	LR	LR	17 08 09.1	
	comp=Z,138nm,21.8s,baz=134,slow=36						
GUMO	Guam	20.57	69	LR	LR	17 06 49.7	
	comp=Z,68nm,19.9s,baz=42,slow=32						
KNRA	Kununurra	22.46	171		P	17 00 46.4	0.0
KNRA				IAmb	IAmb	17 00 56.9	
	comp=Z,38nm,0.7s						
IPM	Ipoh	24.13	266	P	P	17 01 02.1	-1.2
IPM				IAmb	IAmb	17 01 09.4	
	comp=Z,26nm,1.0s						
FITZ	Fitzroy Crossi	24.59	179	P	P	17 01 07.2	-0.2
	comp=Z,8.3nm,0.5s,baz=2.3,slow=7.1,SNR=25						
FITZ				LR	LR	17 13 11.0	
	comp=Z,41nm,19.3s,baz=357,slow=43						
	comp=Z,8.3nm,0.5s						
FITZ	Fitzroy Crossi	24.59	179	P	P	17 01 07.2	-0.2
NJ2	Nanjing	25.96	348	*e*P	P	17 01 19.8	+0.1
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
JCJ	Chichijima	25.98	37	LR	LR	17 09 47.3	
	comp=Z,41nm,20.5s,baz=192,slow=32						
PSI	Prapat	26.43	263	P	P	17 01 24.1	-0.2
	comp=Z,7.1nm,0.4s,baz=20,slow=4.9,SNR=7.6						
PSI				LR	LR	17 13 50.5	
	comp=Z,127nm,19.4s,baz=90,slow=41						
	comp=Z,7.1nm,0.4s						
JNU	Nakatsue	26.87	11	LR	LR	17 11 19.6	
	comp=Z,101nm,21.7s,baz=171,slow=35						
PMG	Port Moresby	27.09	126	P	P	17 01 29.0	-1.1
	comp=Z,21nm,0.8s,baz=314,slow=6.0,SNR=7.1						
	comp=Z,21nm,0.8s						
PMG	Port Moresby	27.09	126		P	17 01 29.4	-0.8
PMG				IAmb	IAmb	17 01 39.6	
	comp=Z,24nm,0.8s						
WB0	Warramunga Arr	27.77	161	P	P	17 01 35.4	-0.8
WB0				IAmb	IAmb	17 01 55.1	
	comp=Z,19nm,1.1s						
WRAB	Tennant Creek	27.91	161	P	P	17 01 38.6	+1.2
WRA	Warramunga Arr	27.92	161	P	P	17 01 35.8	-1.7
	comp=Z,2.3nm,0.8s,baz=343,slow=9.5,SNR=17						
	comp=Z,2.3nm,0.8s						
WRA	Warramunga Arr	27.92	161	P	P	17 01 36.7	-0.8
WR8	Warramunga Arr	27.98	161	P	P	17 01 38.9	+0.8
WR8				IAmb	IAmb	17 02 00.7	
	comp=Z,13nm,0.8s						
CM31	Chiang Mai Arr	28.12	297	P	P	17 01 38.6	-0.8
CM31				IAmb	IAmb	17 01 45.0	
	comp=Z,31nm,1.6s						
CMAR	Chiang Mai Arr	28.12	297	P	P	17 01 39.8	+0.5
	comp=Z,3.7nm,0.7s,baz=115,slow=7.2,SNR=30						
CMAR				PcP	PcP	17 04 54.5	+0.8
	comp=Z,0.5nm,0.8s,baz=87,slow=0.2,SNR=4.4						
	comp=Z,3.7nm,0.7s						
CMAR	Chiang Mai Arr	28.12	297	P	P	17 01 38.5	-0.8
CHTO	Chiang Mai	28.25	298	P	P	17 01 39.4	-1.1
KMI	Kunming	28.25	313	P	P	17 01 43.5	+2.8
KMI				pmax	pmax		
	comp=Z,19nm,1.0s						
KMI				LR	LR		
	comp=Z,190nm,15.0s						
KMI				LR	LR		
	comp=Z,310nm,18.3s						
KMI				LR	LR		
	comp=Z,360nm,20.3s						
PSA00	Pilbara Seismi	28.53	190	P	P	17 01 40.9	-2.0
JHJ	Hachijo jima 2	29.63	25	LR	LR	17 14 23.0	
	comp=Z,76nm,18.8s,baz=326,slow=38						
PZH	PanZhiHua	29.80	314	P	P	17 01 56.5	+2.2
KSRS	Korea Array	30.77	4	P	P	17 02 01.9	-0.6
	comp=Z,2.5nm,1.0s,baz=180,slow=11,SNR=5.0						
KSRS				LR	LR	17 13 42.4	
	comp=Z,107nm,21.8s,baz=165,slow=35						
	comp=Z,2.5nm,1.0s						
XAN	Xi'an	31.13	333	⇓P	P	17 02 08.3	+2.4
XAN				pP	sP	17 02 17.5	+7.1
XAN				pmax	pmax		
	comp=Z,20nm,1.6s						
AS31	Alice Springs	31.31	164	P	P	17 02 07.2	-0.4
ASAR	Alice Springs	31.31	164	P	P	17 02 07.0	-0.5
	comp=Z,2.2nm,0.5s,baz=345,slow=7.4,SNR=37						
ASAR				LR	LR	17 15 30.8	
	comp=Z,43nm,20.7s,baz=332,slow=38						
	comp=Z,2.2nm,0.5s						
TNCH	TengChong	31.38	309	*e*P	P	17 02 11.8	+3.4
TNCH				pmax	pmax		
	comp=Z,14nm,0.7s						
CD2	Chengdu	31.39	323	P	P	17 02 09.1	+0.8
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				LR	LR		
	comp=Z,450nm,14.0s						
CD2				LR	LR		
	comp=Z,370nm,12.7s						
CD2				LR	LR		
	comp=Z,300nm,11.4s						
MJAR	Matsushiro Arr	32.05	20	LR	LR	17 16 29.5	
	comp=Z,93nm,18.0s,baz=204,slow=39						
HNS	HongShan	32.06	344	⇑P	P	17 02 17.4	+3.4
HNS				pmax	pmax		
	comp=Z,18nm,1.2s						
HNS				LR	LR		
	comp=Z,240nm,14.1s						
HNS				LR	LR		
	comp=Z,120nm,15.9s						
CTA	Charters Tower	33.70	142	LR	LR	17 18 00.1	
	comp=Z,85nm,18.0s,baz=292,slow=40						
BJI	Beijing	34.22	348	P	P	17 02 36.1	+3.4
BJI				pP	sP	17 02 39.3	+2.2
BJI				pmax	pmax		
	comp=Z,15nm,0.8s						
LZDM	Lanzhou Array	35.20	329	P	P	17 02 42.7	+1.0
	comp=Z,3.1nm,0.4s,baz=82,slow=40,SNR=2.2						
	comp=Z,3.1nm,0.4s						
LZH	Lanzhou	35.22	329	*e*P	P	17 02 43.3	+1.6
LZH				sP	sP	17 02 49.9	+3.6
LZH				pmax	pmax		
	comp=Z,53nm,1.1s						
LZH				LR	LR		
	comp=Z,290nm,16.7s						
LZH				LR	LR		
	comp=Z,210nm,16.5s						
LZH				LR	LR		
	comp=Z,230nm,17.5s						
HHC	Hu-ho-hao-te	36.16	342	*e*P	P	17 02 51.6	+1.9
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,81nm,3.6s						
HHC				LR	LR		
	comp=Z,130nm,12.7s						
HHC				LR	LR		
	comp=Z,140nm,12.9s						
HHC				LR	LR		
	comp=Z,90nm,12.4s						
SHL	Shillong	36.94	304	P	P	17 02 55.7	-0.9
SHL				IAmb	IAmb	17 03 00.7	
	comp=Z,28nm,0.9s						
INKA	Innaminka	37.35	157	P	P	17 03 01.1	+1.3
USRK	Ussuriysk Ar.	37.88	8	P	P	17 03 04.9	+0.9
	comp=Z,6.6nm,0.8s,baz=190,slow=8.1,SNR=8.8						
	comp=Z,6.6nm,0.8s						
XLT	XiLinHaoTe	37.95	349	*e*P	P	17 03 07.6	+2.8
XLT				pmax	pmax		
	comp=Z,20nm,1.0s						
MDJ	Mudanjiang	38.02	5	P	P	17 03 06.4	+1.2
MDJ				pmax	pmax		
	comp=Z,14nm,1.0s						
BNX	BinXian	38.99	2	⇓P	P	17 03 14.0	+0.6
BNX				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LSA	Lhasa	39.38	310	P	P	17 03 14.8	-2.7
GTA	Gaotai	39.82	329	*e*P	P	17 03 22.8	+2.2
GTA				pP	sP	17 03 25.8	+0.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.4s						
GTA				LR	LR		
	comp=Z,140nm,14.3s						
GTA				LR	LR		
	comp=Z,210nm,15.1s						
GTA				LR	LR		
	comp=Z,200nm,14.7s						
ASAJ	Asahikawa	40.32	19	LR	LR	17 18 13.9	
	comp=Z,64nm,21.6s,baz=168,slow=33						
BBOO	Buckleboo	40.58	166	P	P	17 03 27.3	+0.5
BBOO				IAmb	IAmb	17 03 33.3	
	comp=Z,21nm,0.7s						
STKA	Stephens Creek	41.39	159	P	P	17 03 33.0	-0.5
	comp=Z,8.7nm,0.7s,baz=337,slow=11,SNR=11						
	comp=Z,8.7nm,0.7s						
STKA	Stephens Creek	41.39	159	P	P	17 03 33.8	+0.3
HILR	Hailar Array B	43.01	355	P	P	17 03 48.0	+1.4
	comp=Z,11nm,0.8s,baz=165,slow=12,SNR=9.4						
	comp=Z,11nm,0.8s						
HEH	HeiHe	43.50	2	*e*P	P	17 03 46.6	-3.8
HEH				pmax	pmax		
	comp=Z,19nm,1.0s						
SONM	Songino Array	44.06	342	P	P	17 03 56.2	+1.0
	comp=Z,0.7nm,0.5s,baz=156,slow=6.6,SNR=5.1						
	comp=Z,0.7nm,0.5s						
SONM	Songino Array	44.06	342	P	P	17 03 55.5	+0.3
WMQ	Urumqi	49.46	325	*e*P	P	17 04 39.1	+1.6
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ				LR	LR		
	comp=Z,140nm,24.9s						
PETK	Petropavlovsk-	53.37	24	P	P	17 05 06.9	+0.4
	comp=Z,7.2nm,1.0s,baz=214,slow=4.5,SNR=6.1						
	comp=Z,7.2nm,1.0s						
MKAR	Makanchi Array	54.29	325	P	P	17 05 14.2	+0.7
	comp=Z,2.0nm,0.5s,baz=116,slow=6.7,SNR=21						
MKAR				LR	LR	17 29 37.0	
	comp=Z,94nm,18.9s,baz=116,slow=37						
	comp=Z,2.0nm,0.5s						
MKAR	Makanchi Array	54.29	325	P	P	17 05 12.4	-1.1
KSH	Kashi	54.91	314	P	P	17 05 19.8	+1.7
KSH				pmax	pmax		
	comp=Z,10.0nm,1.4s						
NIL	Nilore	54.94	307		P	17 05 18.1	-0.3
NIL				IAmb	IAmb	17 05 24.7	
	comp=Z,18nm,1.1s						
KDJ	Kajisay	55.16	318		P	17 05 16.9	-3.1
YAK	Yakutsk	55.37	3	P	P	17 05 20.1	-0.8
ZALV	Zalesovo Beam	57.30	333	P	P	17 05 33.4	-1.4
	comp=Z,1.1nm,0.7s,baz=126,slow=7.5,SNR=5.8						
	comp=Z,1.1nm,0.7s						
KURBB	Kurchatov Arra	58.47	327	P	P	17 05 42.3	-0.8
	comp=Z,2.8nm,0.8s,baz=124,slow=6.4,SNR=18						
	comp=Z,2.8nm,0.8s						
KURK	Kurchatov	58.47	327	P	P	17 05 42.8	-0.3
GAR	Garm	58.83	312	P	P	17 05 46.0	0.0
CHGR	Chuyangaron	59.59	311	P	P	17 05 50.9	-0.4
KK31	Karatay Array	60.06	316	P	P	17 05 53.4	-0.9
KKAR	Karatay Array	60.06	316	P	P	17 05 53.4	-0.9
BVAR	Borovoye Array	64.05	327	P	P	17 06 19.5	-1.4
	comp=Z,1.9nm,0.7s,baz=119,slow=8.6,SNR=10.0						
	comp=Z,1.9nm,0.7s						
BORK	Borovoye	64.09	327	P	P	17 06 19.4	-1.8
TIXI	Tiksi	64.97	1	P	P	17 06 25.9	-0.6
NRIK	Noril'sk	67.25	346	P	P	17 06 41.7	+0.4
	comp=Z,1.1nm,0.6s,baz=92,slow=6.7,SNR=4.1						
	comp=Z,1.1nm,0.6s						
NRIK	Noril'sk	67.25	346	IAmb	IAmb	17 06 43.8	
	comp=Z,10.0nm,1.6s						
AB31	Akbulak array	68.93	320	P	P	17 06 52.1	-0.1
AB31				IAmb	IAmb	17 06 56.4	
	comp=Z,7.1nm,0.9s						
ABKAR	Akbulak array	68.93	320	P	P	17 06 52.3	+0.2
BELG	Belogornoye	77.17	322	LR	LR	17 43 33.3	
	comp=Z,111nm,18.6s,baz=93,slow=37						
RAYN	Ar Rayn	77.93	293	P	P	17 07 45.4	-0.4
RAYN				IAmb	IAmb	17 07 54.7	
	comp=Z,5.8nm,0.8s						
KBZ	Khabaz	79.87	313	LR	LR	17 47 10.2	
	comp=Z,37nm,18.0s,baz=68,slow=39						
E22K	Anaktuvuk Pass	81.26	22	IAmb	IAmb	17 08 14.2	
	comp=Z,6.9nm,0.9s						
F24K	Squaw Lake	82.73	23	IAmb	IAmb	17 08 27.2	
	comp=Z,20nm,1.8s						
CCB	Clear Creek Bu	82.76	26	IAmb	IAmb	17 08 33.8	
	comp=Z,9.7nm,1.2s						
ILAR	Eielson Array	83.15	26	P	P	17 08 12.8	-0.2
	comp=Z,1.9nm,0.8s,baz=230,slow=5.1,SNR=18						
	comp=Z,1.9nm,0.8s						
ILAR	Eielson Array	83.15	26	P	P	17 08 12.3	-0.6
BMAR	Burnt Mountain	84.00	23		P	17 08 17.8	+0.5
J26L	Joseph Creek	84.59	26	IAmb	IAmb	17 08 27.2	
	comp=Z,8.4nm,0.9s						
E27K	Coleen River	85.08	22	IAmb	IAmb	17 08 50.8	
	comp=Z,6.2nm,1.1s						
H27K	Steamboat Moun	85.30	24	IAmb	IAmb	17 08 28.9	
	comp=Z,5.3nm,0.9s						
FURI	Furi	85.55	278	LR	LR	17 45 28.8	
	comp=Z,45nm,20.1s,baz=88,slow=35						
F28M	Old Crow	85.79	22	IAmb	IAmb	17 08 29.6	
	comp=Z,6.7nm,0.8s						
I28M	Miner Creek	86.04	25	IAmb	IAmb	17 08 31.2	
	comp=Z,11nm,0.8s						
MMAI	Mount Meron Ar	86.23	303	P	P	17 08 30.6	+1.3
	comp=Z,1.4nm,0.6s,baz=63,slow=9.6,SNR=6.6						
	comp=Z,1.4nm,0.6s						
BRTR	Keskin Array B	86.98	309	P	P	17 08 32.0	-0.9
	comp=Z,0.6nm,0.7s,baz=101,slow=4.8,SNR=5.8						
	comp=Z,0.6nm,0.7s						
FINES	FINESS Array B	88.55	332	P	P	17 08 40.3	+0.6
	comp=Z,2.5nm,0.8s,baz=134,slow=5.5,SNR=6.3						
	comp=Z,2.5nm,0.8s						
RES	Resolute Bay	95.23	10	P	P	17 09 09.8	-0.6
	comp=Z,1.5nm,0.8s,baz=182,slow=18,SNR=14						
	comp=Z,1.5nm,0.8s						
NOA	NORSAR Array B	95.50	333	LR	LR	17 54 26.7	
	comp=Z,69nm,19.4s,baz=240,slow=37						
YKA	Yellowknife Ar	97.49	24	P	P	17 09 20.0	-0.9
	comp=Z,0.3nm,0.7s,baz=300,slow=5.5,SNR=5.0						
	comp=Z,0.3nm,0.7s						
TORD	Torodi Ar. Bea	120.52	289	PKP	PKPdf	17 14 39.0	-0.9
	comp=Z,0.9nm,0.7s,baz=48,slow=3.8,SNR=4.8						
PLCA	Paso Flores	143.26	160	PKP	PKPbc	17 15 19.9	+1.0
	comp=Z,1.0nm,0.9s,baz=326,slow=4.7,SNR=3.8						

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*IDC **20** 16:59:59.5±0.9, 6°.74N×125°.09E, h0km, mb3.7/8, mbtmp3.7/8, Error ellipse: s-maj=18.1km s-min=8.9km az=148.0*

ISC 20 17:00:01.1±0.9**, 6°.8N**±0°.1×**125°.1E**±0°.1**, h10km, n9, σ1ˢ.43**/9**, mb3.7**/8**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.53	56	Pg	Pg	17 00 10.6	-0.8
	1µm,0.3s,baz=243,slow=3.3,SNR=16						
DAV				Lg	Lg	17 00 18.8	
	1µm,0.3s,baz=79,slow=23,SNR=17						
CMAR	Chiang Mai Arr	28.03	297	P	P	17 05 51.2	-1.4
	0.5nm,0.6s,baz=112,slow=7.0,SNR=5.1						
	0.5nm,0.6s						
WRA	Warramunga Arr	28.05	161	P	P	17 05 52.7	-0.1
	0.6nm,0.5s,baz=334,slow=11,SNR=4.5						
	0.6nm,0.5s						
ASAR	Alice Springs	31.44	164	P	P	17 06 21.6	-1.3
	0.6nm,0.5s,baz=340,slow=7.1,SNR=5.3						
	0.6nm,0.5s						
USRK	Ussuriysk Ar.	37.76	8	P	P	17 07 19.0	+1.7
	2.0nm,0.7s,baz=160,slow=5.6,SNR=3.1						
	2.0nm,0.7s						
STKA	Stephens Creek	41.52	159	P	P	17 07 49.9	+1.2
	1.9nm,0.7s,baz=340,slow=11,SNR=2.9						
	1.9nm,0.7s						
MKAR	Makanchi Array	54.17	325	P	P	17 09 27.3	+0.6
	0.2nm,0.5s,baz=118,slow=8.0,SNR=4.8						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	58.34	327	P	P	17 09 55.0	-1.4
	0.4nm,0.5s,baz=123,slow=7.8,SNR=4.3						
	0.4nm,0.5s						
BVAR	Borovoye Array	63.92	327	P	P	17 10 35.3	+1.0
	0.6nm,0.8s,baz=132,slow=2.1,SNR=2.0						
	0.6nm,0.8s						

GCG 20 17:10:06.7±1.4**,13°.56N**×**91°.39W,h6**^{km}±27^{km}**,MD3.5, ML3.1,1C,Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG5	El Palmar, Qui	0.84	3	eP	Pn	17 10 27.1	+1.9
STG5				eS	Sn	17 10 41.7	+3.8
STG8	El Palmar, Qui	0.89	2	i P	Pn	17 10 28.1	+2.1
STG8				IAML		17 10 44.9	
	comp=Z,271nm,0.1s						
STG8				IAML		17 10 48.1	
	comp=E,817nm,0.2s						
ESSG	Sabana Grande	0.98	33	⇑eP	Pg	17 10 24.9	-0.7
ESSG				eS	Sg	17 10 37.4	-1.0
QUIS	Sacapulas	1.75	9	eP	Pn	17 10 38.2	+0.5
QUIS				eS	Sg	17 11 03.8	+1.0
QUIS				IAML		17 11 05.1	
	comp=E,297nm,0.4s						
MTO3	Montecristo	2.14	67	eP	Pn	17 10 42.0	-1.2

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*HEL **20** 17:14:41.3±0.2,66°.77N×13°.79E,h0^{km},ML2.3,Suspected explosion*

*NAO **20** 17:14:42.6±0.3,66°.82N×13°.91E,ML2.7*

*BER **20** 17:14:43.0±2.6,66°.83N×13°.86E,h0^{km},ML1.8, ML2.7(NAO),Suspected explosion*

*IDC **20** 17:14:43.2±1.5,66°.84N×14°.09E,h0^{km},mbtmp3.0/4, ML2.1/4,Error ellipse: s-maj=19.0km s-min=8.5km az=119.0*

ISC 20 17:14:41.6±0.7**,66°.83N**±0°.02×**14°.00E**±0°.03**,h0**^{km}**,n56,** σ**1**^{s}**.35**/100**,1D,Northern Norway**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAGH	Vaagaholmen	0.30	252	Pg	Pg	17 14 47.3	-0.1
VAGH				Sg	Sg	17 14 51.4	+0.1
VAGH	Vaagaholmen	0.30	252	eP	Pg	17 14 47.2	-0.1
VAGH				eS	Sg	17 14 51.1	-0.2
VAGH				IAML		17 14 53.1	
	comp=Z,111nm,0.3s						
RAUS	Rausandaksla	0.39	178	eP	Pg	17 14 49.4	+0.4
RAUS				eS	Sg	17 14 54.9	+0.9
RAUS				IAML		17 14 55.9	
	comp=Z,68nm,0.2s						
KONS	Konsvik	0.48	227	eP	Pg	17 14 50.7	0.0
KONS				eS	Sg	17 14 56.7	-0.2
KONS				IAML		17 14 57.6	
	comp=Z,72nm,0.3s						
STOK	Stokkvaagen	0.63	219	Pg	Pg	17 14 53.6	-0.1
STOK				Sg	Sg	17 15 02.1	+0.3
STOK	Stokkvaagen	0.63	219	⇓iP	Pg	17 14 53.5	-0.1
STOK				eS	Sg	17 15 02.0	+0.2
STOK				IAML		17 15 06.6	
	comp=Z,29nm,0.2s						
MOR8	Moi Rana	0.68	165	Pg	Pg	17 14 53.8	-0.7
MOR8				Sg	Sg	17 15 02.6	-0.7
MOR8	Moi Rana	0.68	165	eP	Pg	17 14 53.8	-0.7
MOR8				eS	Sg	17 15 02.1	-1.2
MOR8				IAML		17 15 03.8	
	comp=Z,46nm,0.2s						
FAUS	Fauske	0.75	41	Pg	Pg	17 14 56.5	+0.6
FAUS				Sg	Sg	17 15 05.6	0.0
FAUS	Fauske	0.75	41	eP	Pg	17 14 55.9	0.0
FAUS				eS	Sg	17 15 05.8	+0.1
FAUS				IAML		17 15 10.0	
	comp=Z,50nm,0.1s						
LEIR	Leirfjorden	0.80	207	Pg	Pg	17 14 56.6	-0.2
LEIR				Sg	Sg	17 15 06.6	-0.6
LEIR	Leirfjorden	0.80	207	eP	Pg	17 14 56.6	-0.2
STEI	Steigen	1.21	23	Pg	Pg	17 15 04.6	-0.1
STEI				Sg	Sn	17 15 22.6	-0.2
STEI	Steigen	1.21	23	eP	Pg	17 15 04.7	0.0
STEI				eS	Sb	17 15 21.8	+0.4
STEI				IAML		17 15 29.4	
	comp=Z,21nm,0.4s						
LOF	Lofoten	1.32	353	Pg	Pg	17 15 05.5	-1.4
LOF				Sg	Sg	17 15 22.6	-1.4
LOF	Lofoten	1.32	353	eP	Pg	17 15 05.0	-1.9
LOF				eS	Sg	17 15 21.9	-2.1
LOF				IAML		17 15 30.4	
	comp=Z,22nm,0.4s						
SALU	Saltoluokta	1.85	70	eP	Pb	17 15 15.9	-0.3
SALU				eSg	Sg	17 15 41.8	+1.0
NSS	Namsos	2.45	201	eP	Pn	17 15 24.4	+1.6
NSS				eSg	Sb	17 15 56.7	-0.5
NSS				IAML		17 16 03.0	
	comp=Z,11nm,0.5s						
ERTU	Ertsjaerv	3.27	91	eP	Pn	17 15 35.0	+1.1
ERTU				eS	Sn	17 16 14.5	+1.1
LANU	Lannavaara	3.32	65	ePG	Pb	17 15 43.0	+1.8
LANU				eS	Sn	17 16 15.9	+1.2
TRO	Tromso	3.37	31	eP	Pn	17 15 36.5	+1.2
TRO				eS	Sn	17 16 16.4	+0.6
KIF	Kilpisjarvi	3.37	46	Pn	Pn	17 15 37.0	+1.7
KIF				Sn	Sn	17 16 15.7	-0.3
KIF				Sg	Sg	17 16 29.2	-0.6
KIF	Kilpisjarvi	3.37	46	eP	Pn	17 15 37.5	+2.1
KIF				Sn	Sn	17 16 15.7	-0.3
KIF				Sg	Sg	17 16 29.2	-0.6
KIF	Kilpisjarvi	3.37	46	eP	Pn	17 15 37.1	+1.7
PAJU	Pajala	3.59	83	eP	Pn	17 15 39.6	+1.1
PAJU				eS	Sn	17 16 22.5	+1.0
JETT	Jettan, Norway	3.64	38	Pn	Pn	17 15 40.5	+1.5
JETT	Jettan, Norway	3.64	38	Pn	Pn	17 15 40.5	+1.5
KLF	Kolari	3.93	79	eP	Pn	17 15 44.8	+1.8
KLF				eS	Sn	17 16 29.9	+0.2
KLF				MSG		17 16 50.9	
	comp=Z,5.3nm,0.2s						
HEF	Hetta	4.02	62	Pn	Pn	17 15 45.3	+1.0
HEF				Sn	Sn	17 16 33.1	+1.0
HEF	Hetta	4.02	62	Pn	Pn	17 15 45.3	+1.0
HEF				eS	Sn	17 16 32.4	+0.3
HEF	Hetta	4.02	62	ePG	Pb	17 15 54.9	+1.7
HEF				eS	Sn	17 16 32.9	+0.8
HEF				MSG		17 16 52.8	
	comp=Z,4.8nm,0.3s						
KTK1	Kautokeino	4.12	54	eP	Pn	17 15 46.5	+0.8
KTK1				eS	Sn	17 16 34.8	+0.3
KTK1	Kautokeino	4.12	54	eP	Pn	17 15 46.4	+0.8
KTK1				eS	Sn	17 16 34.8	+0.3
TOF	Tornio	4.21	95	eP	Pn	17 15 48.0	+1.2
TOF				eS	Sn	17 16 36.2	-0.4
HEMU	Hemsoen	4.51	156	eS	Sn	17 16 42.7	-1.3
OBF8	Ulkokalla	4.65	118	eP	Pn	17 15 53.5	+0.6
OBF8				eS	Sn	17 16 44.9	-2.5
RNF	Rovaniemi	4.77	87	eP	Pn	17 15 55.4	+0.8
RNF				eS	Sn	17 16 49.9	-0.7
OBF0	Syolatti, Pyha	4.83	114	eP	Pn	17 15 55.7	+0.3
OBF0				eS	Sn	17 16 50.7	-1.4
ARCES	ARCESS Array B	5.08	52	Pn	Pn	17 15 59.0	+0.2
	comp=Z,0.1nm,0.3s,baz=239,slow=14,SNR=19						
ARCES				Sn	Sn	17 16 55.5	-2.6
	comp=Z,0.6nm,0.3s,baz=236,slow=23,SNR=10						
ARCES				Lg	Lg	17 17 20.2	
	comp=Z,0.7nm,0.3s,baz=241,slow=26,SNR=8.4						
	comp=Z,0.7nm,0.5s						
ARA0	ARCESS Array S	5.08	52	Pn	Pn	17 15 58.9	+0.1
	baz=238,slow=14						
ARA0				Sn	Sn	17 16 55.7	-2.4
	baz=235,slow=22						
ARA0	ARCESS Array S	5.08	52	Pn	Pn	17 15 58.9	+0.1
	baz=238,slow=14						
ARA0				Sn	Sn	17 16 55.7	-2.4
	baz=235,slow=22						
ARA0	ARCESS Array S	5.08	52	eS	Sn	17 16 56.6	-1.5
VAF	Ylistaro	5.29	132	eP	Pn	17 16 03.1	+1.4
VAF				eS	Sn	17 17 01.3	-1.9
KEV	Kevo	5.65	53	Pn	Pn	17 16 08.2	+1.6
KEV				Sn	Sn	17 17 09.6	-2.4
KEV	Kevo	5.65	53	Pn	Pn	17 16 08.2	+1.6
KEV				Sn	Sn	17 17 09.6	-2.4
NOA	NORSAR Array B	5.94	193	Pn	Pn	17 16 10.9	+0.2
	baz=5.2,slow=13,SNR=1.2						
NOA				Lg	Lg	17 17 47.1	
	comp=Z,0.1nm,0.3s,baz=359,slow=19,SNR=5.4						
	comp=Z,0.4nm,0.6s						
NRA0	NORESS Array S	6.21	191	Pn	Pn	17 16 15.1	+0.7
	baz=2.2,slow=14						
NRA0	NORESS Array S	6.21	191	Pn	Pn	17 16 15.1	+0.7
	baz=2.2,slow=14						
HFS	Hagfors	6.72	181	Pn	Pn	17 16 22.5	+1.1
	comp=Z,0.2nm,0.3s,baz=7.4,slow=12,SNR=9.1						
	comp=Z,1.5nm,0.8s						
HFS	Hagfors	6.72	181	Pn	Pn	17 16 21.5	+0.2
	baz=2.5,slow=12						
HFS	Hagfors	6.72	181	Pn	Pn	17 16 21.5	+0.2
	baz=2.5,slow=12						
APA0	Apatity Array	7.41	75	Pn	Pn	17 16 30.3	-0.5
	baz=284,slow=10						
APA0				Sn	Sn	17 17 50.2	-5.1
	baz=273,slow=28						
APA0	Apatity Array	7.41	75	Pn	Pn	17 16 30.3	-0.5
	baz=284,slow=10						
APA0				Sn	Sn	17 17 50.2	-5.1
	baz=273,slow=28						
FIA0	FINESS Array S	7.54	130	Pn	Pn	17 16 32.8	+0.2
	baz=324,slow=16						
FIA0	FINESS Array S	7.54	130	Pn	Pn	17 16 32.8	+0.2
	baz=324,slow=16						
FINES	FINESS Array B	7.54	130	Pn	Pn	17 16 31.9	-0.7
	comp=Z,0.2nm,0.3s,baz=320,slow=12,SNR=8.8						
FINES				Sn	Sn	17 17 56.4	-2.3
	comp=Z,0.2nm,0.3s,baz=328,slow=23,SNR=5.5						
FINES				Lg	Lg	17 18 39.5	
	comp=Z,0.4nm,0.3s,baz=327,slow=26,SNR=5.4						
	comp=Z,2.3nm,0.9s						

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*BJI **20** 17:20:17.2,21°.81S×173°.64W,h5^{km},mB5.7/12,mb5.1/28, Ms5.0/14,Ms7 4.8/15*

*NEIC **20** 17:20:20.0±1.9,21°.43S±0°.07×173°.93W±0°.07,h10^{km}±1^{km}, mb5.0/43,Error ellipse: s-maj=15.2km s-min=5.5km az=139.0*

*NOU **20** 17:20:21.1,20°.95S×173°.88W,h0^{km},mb4.9/15,Tonga Islands*

*MOS **20** 17:20:22.4±1.6,21°.56S×174°.62W,h10^{km},mb5.2/15, Error ellipse: s-maj=12.0km s-min=10.5km az=152.9*

*IDC **20** 17:20:22.6±0.4,21°.28S×174°.56W,h0^{km},mb4.6/19, mbtmp4.5/20,ML4.5/1,MS4.6/19,Error ellipse: s-maj=18.0km s-min=15.5km az=127.0*

*GCMT **20** 17:20:27.0±0.3,21°.53S±0°.02×173°.86W±0°.02,h23^{km}, MW5.0/91,Moment Tensor Solution. s48,c63; s91,c122; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.37±.20; M$_{\theta\theta}$-0.98±.13; M$_{\phi\phi}$-3.39±.12; M$_{r\theta}$1.53±.20; M$_{\theta\phi}$-0.52±.09; M$_{\phi r}$2.34±.16; Best double couple: M$_0$4.80800×10^{16} NP1:φ$_s$186.00000°,δ29.00000°,λ75.00000°. NP2: φ$_s$23.00000°,δ63.00000°,λ98.00000°. Principal axes: T 5.3080, Plg71.0000°, Azm311.0000°; N -1.0050, Plg7.0000°, Azm199.0000°; P -4.3070, Plg17.0000°, Azm107.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 17:20:20.1±0.3**,21°.48S**±0°.05×**173°.80W**±0°.05**,h10**^{km}**, h10**^{km}**:pP-P,n266,**σ**2**^{s}**.45**/251**,mb4.9**/56**,MS4.7**/29**, 29C-19D,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.35	57		Pn	17 21 25.2	-1.1
NIUE				Sn	Sn	17 22 13.1	-3.9
NIUE	Niue	4.35	57	P	Pn	17 21 28.2	+1.9
AFI	Afiamalu	7.77	15		Pn	17 22 11.4	-1.9
AFI				Sn	Sn	17 23 36.5	-4.9
AFI	Afiamalu	7.77	15	P	Pn	17 22 13.3	-0.1
AFI				pmax	pmax		
	comp=Z,96nm,0.8s						
MSVF	Nonsavu	8.54	294		Pn	17 22 26.9	+3.0
MSVF	Nonsavu	8.54	294	⇑eP	Pn	17 22 26.5	+2.6
RAO	Raoul Island	8.59	205	Pn	Pn	17 22 22.7	-1.9
RAO	Raoul Island	8.59	205	P	Pn	17 22 22.7	-1.9
RAR	Rarotonga	13.07	91	Pn	Pn	17 23 28.5	+2.5
	comp=Z,12nm,0.3s,baz=262,slow=11,SNR=12						
RAR	Rarotonga	13.07	91	Pn	Pn	17 23 24.8	-1.2
RAR	Rarotonga	13.07	91	P	Pn	17 23 26.6	+0.6
RAR	Rarotonga	13.07	91	P	Pn	17 23 24.8	-1.2
MARNC	Mare, Loyalty	16.91	267	Pn	Pn	17 24 14.0	-3.0
MARNC				IAmb	IAmb	17 24 17.8	
	comp=Z,162nm,1.1s						
MARNC	Mare, Loyalty	16.91	267	P	P	17 24 19.8	+0.8
PINNC	Pines Island,	17.42	263	P	Pn	17 24 22.3	-1.1
PINNC				IAmb	IAmb	17 24 30.1	
	comp=Z,291nm,1.9s						
PINNC	Pines Island,	17.42	263	P	P	17 24 26.4	+1.7
YATNC	Mamie plateau,	17.95	265	P	P	17 24 31.3	+0.8
OUENC	Ouen Island, N	17.98	263	P	P	17 24 32.5	+1.6
DZM	Mont Dzumac	18.36	264	P	Pn	17 24 33.3	-1.8
	comp=Z,38nm,0.9s,baz=77,slow=16,SNR=14						
DZM	Mont Dzumac	18.36	264	eP	Pn	17 24 30.3	-4.8
	comp=Z,82nm,0.9s						
DZM				eLR	LR	17 28 39.9	
	comp=Z,2µm,21.5s						
DZM	Mont Dzumac	18.36	264		Pn	17 24 33.2	-1.8
DZM	Mont Dzumac	18.36	264	P	P	17 24 35.8	+0.7
URZ	Urewera	18.47	203	P	Pn	17 24 38.1	+1.9
	comp=Z,1.4nm,0.3s,baz=55,slow=4.7,SNR=8.8						
URZ				LR	LR	17 30 49.9	
	comp=Z,2µm,18.2s,baz=11,slow=34						
	comp=Z,17nm,0.7s						
TOZ	Tahuroa Road	18.66	207	P	P	17 24 35.5	-2.7
SANVU	Saraoutou	18.98	285		P	17 24 39.0	-2.9
MRZ	Mangatainoka R	21.15	203	P	P	17 25 02.6	-2.7
MRZ				IAmb	IAmb	17 25 16.9	
	comp=Z,84nm,1.6s						
SNZO	South Karori	22.04	204	P	P	17 25 23.2	+8.4
TUWZ	Tuamarina	22.43	205	P	P	17 25 15.7	-3.3
QRZ	Quartz Range	22.51	208	P	P	17 25 25.8	+5.9
TBI	Tubuai	22.57	99	eP	P	17 25 18.3	-2.4
	comp=Z,242nm,19.8s						
TBI				eS	S	17 29 22.5	-5.8
	comp=Z,4µm,25.0s						
TBI				eLR	LR	17 30 42.8	
	comp=Z,8µm,27.0s						
TBI				eLR	LR	17 30 47.3	
	comp=Z,2µm,23.0s						
PPT2	Papeete2	23.15	85	eP	P	17 25 17.9	-9.0
	comp=Z,80nm,22.2s						
PPT2				eS	S	17 29 29.7	-8.9
	comp=Z,1µm,25.2s						
PPT2				eLR	LR	17 31 03.3	
	comp=Z,1µm,25.0s						
PPT2				eLR	LR	17 31 04.6	
	comp=Z,1µm,23.5s						
PPT	Papeete	23.15	85	P	P	17 25 37.5	+11
	comp=Z,27nm,0.8s,baz=274,slow=9.3,SNR=3.7						
PPT				LR	LR	17 33 41.7	
	comp=Z,1µm,18.0s,baz=254,slow=34						
	comp=Z,27nm,0.8s						
KHZ	Kahutara	23.43	204	P	P	17 25 35.5	+6.1
GVZ	Greta Valley S	24.09	204	P	P	17 25 34.9	-0.9
RPZ	Rata Peaks	25.50	206	P	P	17 25 56.9	+8.2
FOZ	Fox Glacier	25.88	208	P	P	17 25 51.1	-0.9
JCZ	Jackson Bay	26.76	209	P	P	17 26 04.9	+4.7
ODZ	Otahua Downs	26.77	205	P	P	17 26 07.8	+7.7
MLZ	Mavora Lakes	28.08	208	P	P	17 26 11.2	-0.6
MLZ				IAmb	IAmb	17 26 25.1	
	comp=Z,38nm,1.1s						
ARMA	Armidale	32.23	247		P	17 26 47.5	-1.5
ARMA				IAmb	IAmb	17 26 50.1	
	comp=Z,11nm,0.9s						
EIDS	Eidsvold	32.40	256	P	P	17 26 49.0	-1.3
TAOE	Nuku Hiva Isla	34.73	74	eS	S	17 32 45.0	+3.8
	comp=Z,95nm,27.6s						
TAOE				eLR	LR	17 36 26.5	
	comp=Z,613nm,22.0s						
CAN	Canberra	35.30	239	P	P	17 27 13.4	-2.0
CAN				IAmb	IAmb	17 27 19.7	
	comp=Z,22nm,1.2s						
CAN	Canberra	35.30	239	P	P	17 27 13.4	-2.0
CAN				pmax	pmax		
	comp=Z,22nm,1.2s						
RKT	Rikitea	35.89	100	eLR	LR	17 36 50.6	
	comp=Z,5µm,34.5s						
CTA	Charters Tower	37.30	265	LR	LR	17 41 38.6	
	comp=Z,750nm,18.3s,baz=92,slow=35						
CTAO	Charters Tower	37.30	265	P	P	17 27 30.6	-2.1
CTAO	Charters Tower	37.30	265	P	P	17 27 30.7	-2.1
CTAO				pmax	pmax		
	comp=Z,13nm,0.9s						
TOO	Toolangi	38.56	236	P	P	17 27 41.8	-1.3
TOO				IAmb	IAmb	17 28 44.9	
	comp=Z,37nm,1.8s						
TOO	Toolangi	38.56	236	P	P	17 27 41.8	-1.3
TOO				pmax	pmax		
	comp=Z,37nm,1.8s						
TAU	Tasmania Unive	38.77	227	P	P	17 27 44.1	-0.7
TAU	Tasmania Unive	38.77	227	P	P	17 27 44.1	-0.7
TAU				pmax	pmax		
	comp=Z,293nm,1.9s						
PMG	Port Moresby	39.38	282	LR	LR	17 42 23.6	
	comp=Z,1µm,18.2s,baz=138,slow=34						
PMG	Port Moresby	39.38	282		P	17 27 48.4	-1.9
PMG				IAmb	IAmb	17 27 59.4	
	comp=Z,23nm,0.8s						
PMG	Port Moresby	39.38	282	⇓eP	P	17 27 49.1	-1.2
PMG				pmax	pmax		
	comp=Z,25nm,1.7s						
STKA	Stephens Creek	40.94	246	P	P	17 28 01.9	-1.1
	comp=Z,9.1nm,0.8s,baz=89,slow=9.3,SNR=15						
	comp=Z,9.1nm,0.8s						
STKA	Stephens Creek	40.94	246		P	17 28 00.6	-2.3
COEN	Coen	41.56	273	P	P	17 28 06.5	-1.7
COEN				IAmb	IAmb	17 29 30.3	
	comp=Z,24nm,1.3s						
INKA	Innaminka	41.61	252		P	17 28 07.3	-1.3
JAY	Jayapura	48.08	287	LR	LR	17 48 18.7	
	comp=Z,289nm,18.4s,baz=359,slow=35						
JAY	Jayapura	48.08	287	P	P	17 28 58.8	-1.5
JAY				pmax	pmax		
	comp=Z,32nm,0.6s						
AS31	Alice Springs	48.12	257		P	17 28 57.7	-2.9
ASAR	Alice Springs	48.12	257	P	P	17 28 58.4	-2.2
	comp=Z,19nm,0.8s,baz=104,slow=7.4,SNR=159						
ASAR				LR	LR	17 49 22.1	
	comp=Z,1µm,18.1s,baz=94,slow=37						
	comp=Z,19nm,0.8s						
ASAR	Alice Springs	48.12	257	P	P	17 28 57.9	-2.7
WR8	Warramunga Arr	48.20	262	P	P	17 28 58.5	-2.7
WR8				IAmb	IAmb	17 29 03.9	
	comp=Z,8.1nm,0.7s						
WB0	Warramunga Arr	48.34	262	P	P	17 28 59.4	-2.8
WRAB	Tennant Creek	48.34	262	P	P	17 28 59.4	-2.9
WRAB				IAmb	IAmb	17 29 09.0	
	comp=Z,13nm,0.9s						
WRAB	Tennant Creek	48.34	262	⇓eP	P	17 28 59.9	-2.4
WRAB				pmax	pmax		
	comp=Z,17nm,0.9s						
WRA	Warramunga Arr	48.35	262	P	P	17 28 59.8	-2.6
	comp=Z,9.3nm,0.8s,baz=96,slow=8.5,SNR=88						
	comp=Z,9.3nm,0.8s						
WRA	Warramunga Arr	48.35	262	P	P	17 28 59.2	-3.2
FORT	Forrest	52.52	247	IAmb	IAmb	17 29 41.0	
	comp=Z,16nm,0.8s						
GUMO	Guam	53.48	307	LR	LR	17 49 16.7	
	comp=Z,341nm,21.2s,baz=140,slow=33						
FITZ	Fitzroy Crossi	56.78	262	P	P	17 30 03.1	-1.8
VNDA	Vanda	57.33	186	P	P	17 30 14.2	+6.4
	comp=Z,4.8nm,1.0s,baz=13,slow=7.2,SNR=5.0						
	comp=Z,4.8nm,1.0s						
VNDA	Vanda	57.33	186	P	P	17 30 09.2	+1.4
VNDA	Vanda	57.33	186	P	P	17 30 09.2	+1.4
VNDA				pmax	pmax		
	comp=Z,37nm,1.7s						
RPN	Rapa Nui	58.47	109	LR	LR	17 51 06.4	
	comp=Z,639nm,18.2s,baz=332,slow=31						
SOEI	Soe	60.45	271	P	P	17 30 29.0	-1.6
BATI	Baumata	60.86	270	LR	LR	17 54 43.6	
	comp=Z,604nm,21.9s,baz=130,slow=34						
MBWA	Marble Bar	61.46	257	P	P	17 30 35.5	-1.9
DAV	Davao City (W)	65.86	289	LR	LR	17 58 19.1	
	comp=Z,240nm,18.1s,baz=87,slow=35						
QSPA	South Pole Qui	68.60	180	P	P	17 31 28.5	+5.3
	comp=Z,6.3nm,1.0s,baz=339,slow=1.2,SNR=16						
	comp=Z,6.3nm,1.0s						
QSPA	South Pole Qui	68.60	180	P	P	17 31 26.8	+3.6
QSPA				IAmb	IAmb	17 31 42.9	
	comp=Z,15nm,1.1s						
MJAR	Matsushiro Arr	73.37	321	P	P	17 31 53.4	+1.1
	comp=Z,9.9nm,0.8s,baz=156,slow=6.1,SNR=25						
	comp=Z,9.9nm,0.8s						
MJAR	Matsushiro Arr	73.37	321		P	17 31 50.8	-1.5
MJAR				IAmb	IAmb	17 31 54.2	
	comp=Z,8.2nm,0.9s						
ASAJ	Asahikawa	76.51	329	LR	LR	18 04 07.9	
	comp=Z,390nm,18.4s,baz=150,slow=35						
PETK	Petropavlovsk-	78.28	343	P	P	17 32 20.6	+0.7
	comp=Z,5.7nm,0.7s,baz=104,slow=6.2,SNR=10						
	comp=Z,5.7nm,0.7s						
PETK	Petropavlovsk-	78.28	343	P	P	17 32 20.0	0.0
YSS	Yuzhno-Sakhali	78.58	331	eP	P	17 32 18.7	-3.0
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
NVAR	Mina Array Bea	79.10	41	P	P	17 32 31.4	+6.2
	comp=Z,2.4nm,0.7s,baz=226,slow=8.9,SNR=9.4						
	comp=Z,2.4nm,0.7s						
NVAR	Mina Array Bea	79.10	41		P	17 32 26.4	+1.2
KSRS	Korea Array	80.25	317	P	P	17 32 33.0	+1.9
	comp=Z,4.8nm,0.9s,baz=131,slow=6.0,SNR=14						
	comp=Z,4.8nm,0.9s						
KSAR	Wonju Array Be	80.27	317	P	P	17 32 29.4	-1.8
KSAR	Wonju Array Be	80.27	317	P	P	17 32 29.4	-1.8
PSTR	Posyet	81.69	322	⇑iP	P	17 32 42.5	+3.9
USRK	Ussuriysk Ar.	82.02	324	P	P	17 32 43.4	+3.1
	comp=Z,2.5nm,0.7s,baz=108,slow=7.7,SNR=4.0						
	comp=Z,2.5nm,0.7s						
O19K	Port Alsworth	82.91	10	P	P	17 32 44.2	-0.4
NJ2	Nanjing	83.55	308	eP	P	17 32 48.9	+0.3
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MDJ	Mudanjiang	83.61	323	P	P	17 32 51.3	+2.7
MDJ				pmax	pmax		
	comp=Z,20nm,1.6s						
TXAR	Lajitas Array	84.32	56	P	P	17 32 59.4	+6.6
	comp=Z,1.0nm,0.9s,baz=219,slow=5.8,SNR=7.0						
	comp=Z,1.0nm,0.9s						
TXAR	Lajitas Array	84.32	56	P	P	17 32 53.8	+1.0
TXAR	Lajitas Array	84.32	56	P	P	17 32 53.8	+1.0
QIZ	Qiongzhong	84.84	293	P	P	17 32 54.3	-1.2
QIZ				S	S	17 43 24.3	0.0
QIZ				LR	LR		
	comp=Z,210nm,19.7s						
QIZ				LR	LR		
	comp=Z,310nm,16.4s						
QIZ				LR	LR		
	comp=Z,220nm,16.9s						
ANMO	Albuquerque	85.00	50	⇑eP	P	17 33 02.3	+6.1
ANMO				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CN2	Changchun	85.50	321	P	P	17 32 59.8	+1.6
CN2				S	S	17 43 30.8	+1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
CN2				LR	LR		
	comp=Z,300nm,17.0s						
BNX	BinXian	85.52	323	⇓P	P	17 33 00.6	+2.3
BNX				S	S	17 43 37.6	+7.8

BNX				sS	**ScS**	**17 43 43.3**	**+3.6**
BNX				pmax	pmax		
	comp=Z,12nm,0.8s						
BNX				LR	LR		
	comp=Z,200nm,14.1s						
BNX				LR	LR		
	comp=Z,270nm,18.4s						
BNX				LR	LR		
	comp=Z,420nm,19.5s						
PLCA	**Paso Flores**	**85.73**	**132**	P	P	17 33 07.9	+8.1
	comp=Z,3.3nm,1.2s,baz=300,slow=4.7,SNR=3.2						
PLCA				LR	LR	18 07 43.9	
	comp=Z,249nm,18.0s,baz=236,slow=33						
	comp=Z,3.3nm,1.2s						
PLCA	**Paso Flores**	**85.73**	**132**	P	**P**	**17 32 59.6**	**-0.2**
PLCA				IAmb	IAmb	17 33 42.0	
	comp=Z,24nm,1.9s						
PLCA	**Paso Flores**	**85.73**	**132**	P	**P**	**17 32 59.6**	**-0.2**
PLCA				pmax	pmax		
	comp=Z,24nm,2.0s						
ELIB	**Princess Elisa**	**86.08**	**185**	*d*P	**P**	**17 33 04.7**	**+3.7**
	comp=Z,5.1nm,1.2s						
CMIG	**Matias Romero**	**86.28**	**70**	LR	LR	18 05 20.8	
	comp=Z,301nm,18.1s,baz=184,slow=31						
SYO	**Syowa Base**	**86.60**	**191**	⇑*e*P	**P**	**17 33 03.1**	**-0.2**
SYO	**Syowa Base**	**86.60**	**191**	⇓*i*PP	PP	17 36 24.8	+0.3
KTH	**Kantishna Hill**	**86.63**	**10**	P	**P**	**17 33 04.0**	**+0.6**
KTH				IAmb	IAmb	17 33 18.4	
	comp=Z,12nm,0.9s						
SNAA	**Sanae**	**86.89**	**177**	P	P	17 33 10.0	+5.2
	comp=Z,1.1nm,0.2s,baz=216,slow=13,SNR=4.0						
	comp=Z,1.1nm,0.2s						
SNAA	**Sanae**	**86.89**	**177**		pwP	17 33 14.2	-2.5
SNAA	**Sanae**	**86.89**	**177**	⇓*e*P	**P**	**17 33 07.5**	**+2.6**
SNAA				pmax	pmax		
	comp=Z,11nm,1.5s						
PDAR	**Pinedale Array**	**87.03**	**42**	P	P	17 33 10.9	+4.8
	comp=Z,0.7nm,0.8s,baz=222,slow=3.6,SNR=6.3						
	comp=Z,0.7nm,0.8s						
M26K	**Nabesna, AK**	**87.11**	**14**	P	**P**	**17 33 06.4**	**+0.7**
MCK	**McKinley**	**87.13**	**11**	P	**P**	**17 33 06.8**	**+1.0**
MCK	**McKinley**	**87.13**	**11**	P	**P**	**17 33 06.8**	**+1.0**
MCK				pmax	pmax		
	comp=Z,33nm,0.9s						
IPM	**Ipoh**	**87.14**	**276**	P	**P**	**17 33 06.3**	**-0.8**
NVL	**N'lazarevskaya**	**87.92**	**182**	*e*P	**P**	**17 33 07.8**	**-1.9**
NVL				*e*S	**SKSac**	**17 43 35.4**	**-2.5**
NVL				*e*SS	**SS**	**17 49 37.9**	**-0.8**
NVL				*e*SSS	SSS	17 53 11.5	
NVL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NVL				MLR	MLR		
	comp=Z,609nm,20.0s						
DOT	**Dot Lake**	**87.98**	**13**	P	**P**	**17 33 10.1**	**+0.2**
HEH	**HeiHe**	**88.24**	**327**	*e*P	**P**	**17 33 13.3**	**+1.9**
HEH				pmax	pmax		
	comp=Z,7.0nm,1.4s						
SEY	**Seymchan**	**88.26**	**345**	*e*P	**P**	**17 33 12.6**	**+1.4**
SEY				pmax	pmax		
	comp=Z,22nm,2.0s						
COLA	**College**	**88.37**	**11**	⇑*i*P	P	17 33 16.4	+4.8
COLA				pmax	pmax		
	comp=Z,23nm,1.1s						
ILAR	**Eielson Array**	**88.45**	**11**	P	**P**	**17 33 15.7**	**+3.6**
	comp=Z,1.7nm,0.9s,baz=211,slow=5.9,SNR=9.9						
	comp=Z,1.7nm,0.9s						
ILAR	**Eielson Array**	**88.45**	**11**	P	**P**	**17 33 12.3**	**+0.2**
ILAR	**Eielson Array**	**88.45**	**11**	P	**P**	**17 33 12.3**	**+0.2**
PSI	**Prapat**	**88.48**	**274**	P	**P**	**17 33 14.1**	**+0.5**
	comp=Z,13nm,0.9s,baz=168,slow=2.5,SNR=7.4						
PSI				LR	LR	18 14 43.7	
	comp=Z,307nm,19.4s,baz=134,slow=37						
	comp=Z,13nm,0.9s						
HNS	**HongShan**	**89.12**	**311**	⇓P	**P**	**17 33 18.8**	**+2.9**
HNS				S	**S**	**17 44 09.8**	**+4.9**
HNS				pmax	pmax		
	comp=Z,9.0nm,1.4s						
HNS				LR	LR		
	comp=Z,230nm,18.4s						
HNS				LR	LR		
	comp=Z,210nm,17.5s						
E18K	**Tukpahlearik C**	**89.17**	**5**	IAmb	IAmb	17 33 31.1	
	comp=Z,8.9nm,1.0s						
LYN	**LuoYang**	**89.43**	**308**	⇓P	**P**	**17 33 20.1**	**+2.7**
LYN				sS	sS	17 44 24.0	+15
LYN				pmax	pmax		
	comp=Z,18nm,0.8s						
LYN				pmax	pmax		
	comp=Z,370nm,5.1s						
ZEA	**Zeya**	**90.42**	**329**	*e*P	**P**	**17 33 24.7**	**+3.1**
ZEA				*e*		17 43 53.4	
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BILL	**Bilibino**	**90.45**	**353**	⇓*e*P	**P**	**17 33 22.3**	**+0.9**
BILL				pmax	pmax		
	comp=Z,16nm,2.4s						
E22K	**Anaktuvuk Pass**	**90.80**	**8**	P	**P**	**17 33 22.6**	**-0.5**
E22K				IAmb	IAmb	17 33 38.8	
	comp=Z,9.2nm,0.9s						
BMAR	**Burnt Mountain**	**91.26**	**11**	P	**P**	**17 33 25.3**	**+0.1**
XAN	**Xi'an**	**91.86**	**306**	⇑P	**P**	**17 33 30.8**	**+2.0**
XAN				pP	pwP	17 33 37.4	-3.6
XAN				pmax	pmax		
	comp=Z,25nm,1.1s						
NNA	**Nana**	**92.02**	**104**	LR	LR	18 07 33.5	
	comp=Z,293nm,18.3s,baz=208,slow=30						
ATAH	**Atahualpa**	**92.42**	**99**	LR	LR	18 07 55.4	
	comp=Z,349nm,18.1s,baz=253,slow=31						
JTS	**Las Juntas de**	**92.65**	**80**	LR	LR	18 08 12.0	
	comp=Z,207nm,18.0s,baz=228,slow=31						
HHC	**Hu-ho-hao-te**	**92.86**	**313**	*e*P	**P**	**17 33 33.8**	**+0.4**
HHC				SKS	**SKSac**	**17 44 02.4**	**-5.1**
HHC				S	**S**	**17 44 36.3**	**-2.9**
HHC				sS	sS	17 44 44.9	+4.2
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,3.9s						
HHC				LR	LR		
	comp=Z,120nm,12.9s						
HHC				LR	LR		
	comp=Z,130nm,12.4s						
HHC				LR	LR		
	comp=Z,160nm,13.7s						
KMI	**Kunming**	**93.30**	**296**	P	**P**	**17 33 38.8**	**+2.9**
KMI				pmax	pmax		
	comp=Z,12nm,0.9s						
KMI				LR	LR		
	comp=Z,280nm,21.1s						
KMI				LR	LR		
	comp=Z,240nm,19.6s						
KMI				LR	LR		
	comp=Z,370nm,18.9s						
BTO	**Baotou**	**93.82**	**312**	*e*P	**P**	**17 33 38.4**	**+0.6**
BTO				SKS	**SKSac**	**17 44 15.3**	**+2.6**
BTO				S	**ScS**	**17 44 50.8**	**+1.7**
BTO				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BTO				pmax	pmax		
	comp=Z,240nm,9.1s						
BTO				LR	LR		
	comp=Z,170nm,4.9s						
BTO				LR	LR		
	comp=Z,150nm,4.2s						
BTO				LR	LR		
	comp=Z,410nm,16.2s						
CM31	**Chiang Mai Arr**	**94.14**	**288**	P	**P**	**17 33 37.8**	**-1.8**
CM31				IAmb	IAmb	17 33 43.4	
	comp=Z,6.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**94.14**	**288**	P	**P**	**17 33 42.0**	**+2.4**
	comp=Z,5.3nm,0.8s,baz=117,slow=2.9,SNR=42						
CMAR				LR	LR	18 14 17.0	
	comp=Z,78nm,19.2s,baz=75,slow=35						
	comp=Z,5.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**94.14**	**288**		**P**	**17 33 38.5**	**-1.2**
CHTO	**Chiang Mai**	**94.27**	**288**	P	**P**	**17 33 38.4**	**-1.8**
CHTO	**Chiang Mai**	**94.27**	**288**	P	**P**	**17 33 38.4**	**-1.8**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
YAK	**Yakutsk**	**94.52**	**337**	*e*P	**P**	**17 33 41.7**	**+1.4**
YAK				pmax	pmax		
	comp=Z,9.0nm,1.5s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.3s						
PZH	**PanZhiHua**	**94.64**	**297**	P	**P**	**17 33 41.8**	**-0.1**
YKA	**Yellowknife Ar**	**95.79**	**24**	P	P	17 33 50.9	+4.8
	comp=E,0.2nm,0.7s,baz=245,slow=5.1,SNR=3.6						
	comp=E,0.2nm,0.7s						
YKA	**Yellowknife Ar**	**95.79**	**24**	P	**P**	**17 33 46.5**	**+0.4**
YKA	**Yellowknife Ar**	**95.79**	**24**	*i* P	**P**	**17 33 50.5**	**+4.4**
FFC	**Flin Flon**	**97.35**	**34**	*i* P	Pdif	17 33 59.0	+5.5
LPAZ	**La Paz**	**98.06**	**111**	LR	LR	18 11 37.2	
	comp=E,363nm,18.2s,baz=248,slow=31						
ULN	**Ulaanbaatar**	**98.69**	**318**	⇓*e*P	**P**	**17 33 58.8**	**-1.0**
ULN				pmax	pmax		
	comp=Z,15nm,3.4s						
WMQ	**Urumqi**	**110.54**	**310**	*e*PKP	**PKiKP**	**17 38 52.6**	**-0.4**
WMQ				LR	LR		
	comp=Z,120nm,24.0s						
ZALV	**Zalesovo Beam**	**113.72**	**321**	PKiKP	**PKiKP**	**17 39 00.8**	**+2.2**
	comp=Z,1.0nm,0.7s,baz=45,slow=0.8,SNR=4.7						
MKAR	**Makanchi Array**	**114.73**	**313**	PKiKP	**PKiKP**	**17 39 03.0**	**+2.1**
	comp=Z,0.5nm,0.8s,baz=162,slow=0.5,SNR=5.2						
KURK	**Kurchatov**	**117.37**	**317**		**PKPdf**	**17 39 04.8**	**-1.0**
KURK	**Kurchatov**	**117.37**	**317**	*c i*PKIKP	**PKiKP**	**17 39 07.9**	**+2.1**
KURBB	**Kurchatov Arra**	**117.43**	**317**	PKP	**PKiKP**	**17 39 07.5**	**+1.6**
	comp=Z,0.5nm,0.6s,baz=88,slow=1.7,SNR=5.7						
BVAR	**Borovoye Array**	**122.35**	**320**	PKP	**PKiKP**	**17 39 16.9**	**+1.4**
	comp=Z,1.3nm,0.7s,baz=59,slow=0.9,SNR=7.9						
BORK	**Borovoye**	**122.39**	**320**	⇑*i*PKIKP	**PKiKP**	**17 39 17.1**	**+1.6**
SPITS	**Spitsbergen Ar**	**123.04**	**358**	PKP	**PKiKP**	**17 39 19.2**	**+3.1**
	comp=Z,6.8nm,0.9s,baz=82,slow=3.1,SNR=3.6						
ARTI	**Arti**	**128.32**	**326**	*i* PKIKP	**PKiKP**	**17 39 29.5**	**+2.3**
ARTI						17 41 33.5	
ARTI						17 46 40.3	
ARTI				SS	SS	17 58 46.5	+0.3
ARCES	**ARCESS Array B**	**130.53**	**351**	PKP	**PKiKP**	**17 39 31.9**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=46,slow=3.5,SNR=6.4						
ARCES	**ARCESS Array B**	**130.53**	**351**		**PKPdf**	**17 39 29.9**	**-0.6**
ARCES	**ARCESS Array B**	**130.53**	**351**	PKIKP	**PKPdf**	**17 39 29.9**	**-0.6**
BELG	**Belogornoye**	**135.69**	**325**	PKP	**PKiKP**	**17 39 44.1**	**+1.9**
	comp=Z,7.0nm,0.8s,baz=329,slow=3.8,SNR=3.7						
BELG	**Belogornoye**	**135.69**	**325**	⇓*i*PKIKP	**PKiKP**	**17 39 44.5**	**+2.3**
FINES	**FINESS Array B**	**137.74**	**346**	PKP	**PKiKP**	**17 39 48.1**	**+2.0**
	comp=Z,1.8nm,0.8s,baz=100,slow=2.3,SNR=4.0						
HFS	**Hagfors**	**141.01**	**354**	PKP	**PKiKP**	**17 39 51.7**	**-1.1**
	comp=Z,1.5nm,0.7s,baz=210,slow=8.6,SNR=4.5						
KIV	**Kislovodsk**	**142.43**	**315**	*i* PKIKP	**PKiKP**	**17 39 57.6**	**+1.2**
KIV				pmax	pmax		
	comp=Z,3.0nm,1.1s						
EKA	**Eskdalemuir Ar**	**145.47**	**9**	PKPbc	**PKiKP**	**17 40 01.9**	**-0.2**
	comp=Z,1.6nm,0.7s,baz=349,slow=2.7,SNR=4.1						
EKA	**Eskdalemuir Ar**	**145.47**	**9**	PKP2	**PKiKP**	**17 40 02.0**	**-0.2**
AKASG	**Malin Array Be**	**145.69**	**334**	PKPbc	**PKiKP**	**17 40 00.8**	**-2.0**
	comp=Z,6.8nm,0.8s,baz=41,slow=4.2,SNR=25						
AKASG	**Malin Array Be**	**145.69**	**334**		**PKPab**	**17 40 00.3**	**+1.0**
AKBB	**Malin Array Si**	**145.69**	**334**	*c i*PKP2	**PKPab**	**17 40 00.4**	**+1.1**
KIEV	**Kiev**	**145.70**	**334**	⇑P	**PKiKP**	**17 40 01.2**	**-1.5**
KIEV	**Kiev**	**145.70**	**334**	⇑PKIKP	**PKiKP**	**17 40 01.2**	**-1.5**
FURI	**Furi**	**146.34**	**253**	PKPbc	**PKiKP**	**17 40 06.0**	**+0.4**
	comp=Z,21nm,0.3s,baz=157,slow=4.8,SNR=3.6						
RNPP8	**Varash**	**146.48**	**338**	PKP	**PKPbc**	**17 40 00.6**	**-0.8**
MBAR	**Mbarara**	**147.50**	**231**	PKPbc	**PKiKP**	**17 40 09.7**	**+1.8**
	comp=Z,3.1nm,0.2s,baz=158,slow=14,SNR=4.9						
MBAR	**Mbarara**	**147.50**	**231**		**PKiKP**	**17 40 07.7**	**-0.2**
MBAR	**Mbarara**	**147.50**	**231**	PKP2	**PKiKP**	**17 40 07.7**	**-0.2**
SORM	**Soroca**	**148.01**	**332**	⇑P	**PKPab**	**17 40 07.8**	**-0.6**
SORM	**Soroca**	**148.01**	**332**	⇑PKP2	**PKPab**	**17 40 07.8**	**-0.6**
KSV	**Kosov**	**149.24**	**335**	PKIKP	**PKiKP**	**17 40 09.4**	**-0.8**
BNN	**Bunyan**	**149.26**	**311**		**PKPdf**	**17 40 01.2**	**-4.0**
BNN					**pPKPbc**	**17 40 10.5**	**+0.6**
ILGA	**Ilgaz**	**149.64**	**316**		**PKPdf**	**17 40 02.7**	**-3.2**
ILGA					**sPKPbc**	**17 40 12.9**	**+1.9**
STHS	**Stebnicka Huta**	**149.66**	**340**	*e*PKP2	**PKPab**	**17 40 15.7**	**+0.6**
STHS	**Stebnicka Huta**	**149.66**	**340**	*e*PKP	**PKPab**	**17 40 15.7**	**+0.6**
BUR08	**Bucovina Ar. S**	**149.73**	**334**		**PKPdf**	**17 40 02.2**	**-3.4**
BURAR	**Bucovina Array**	**149.75**	**334**	PKPdf	**PKPdf**	**17 40 01.4**	**-4.3**
BURAR	**Bucovina Array**	**149.75**	**334**	⇓P	**PKPab**	**17 40 13.7**	**-1.9**
BURAR	**Bucovina Array**	**149.75**	**334**	PKP2	**PKPab**	**17 40 14.8**	**-0.8**
CLL	**Collm**	**149.75**	**352**		**PKPdf**	**17 40 01.6**	**-3.8**
CLL	**Collm**	**149.75**	**352**	PKIKP	**PKPdf**	**17 40 01.6**	**-3.8**
CLL	**Collm**	**149.75**	**352**	*e*PKiKP	**PKPab**	**17 40 13.0**	**-2.3**
CLL				*i* PKPab	**sPKPab**	**17 40 18.0**	**+2.1**
	comp=Z,32nm,1.3s						
CLL				*i* x	x	17 40 27.4	
CLL				AMS	AMS	19 03 00.0	
	comp=Z,200nm,18.6s						
OSTC	**Ostas**	**149.93**	**347**	*e*PKP2	**PKPab**	**17 40 14.9**	**-1.2**
OSTC	**Ostas**	**149.93**	**347**	*e*PKP	**PKPab**	**17 40 14.9**	**-1.2**
TESR	**Tescani**	**149.99**	**331**	⇓P	**PKPab**	**17 40 19.7**	**+3.1**
DPC	**Dobruska-Polom**	**150.10**	**347**	*e*PKP2	**PKPab**	**17 40 15.1**	**-1.8**
DPC	**Dobruska-Polom**	**150.10**	**347**	*e*PKP	**PKPab**	**17 40 15.1**	**-1.8**
STEB	**Steborice**	**150.16**	**345**	*e*PKP	**PKPab**	**17 40 14.4**	**-2.7**
ONER	**Baraj Valea Uz**	**150.24**	**331**	⇑P	**PKPab**	**17 40 14.9**	**-2.7**
CFR	**Carcaliu**	**150.27**	**328**	⇓P	**PKPab**	**17 40 14.9**	**-2.8**
CFR	**Carcaliu**	**150.27**	**328**	⇓PKP2	**PKPab**	**17 40 14.9**	**-2.8**
TPGR	**Topolog**	**150.36**	**327**	⇓P	**PKPbc**	**17 40 11.8**	**0.0**
MORC	**Moravsky Berou**	**150.36**	**345**	PKPdf	**PKPdf**	**17 40 03.1**	**-3.4**
MORC	**Moravsky Berou**	**150.36**	**345**	⇑P	**PKPab**	**17 40 15.8**	**-2.2**
MORC	**Moravsky Berou**	**150.36**	**345**	*e*PKP	**PKiKP**	**17 40 14.8**	**+2.3**
MORC	**Moravsky Berou**	**150.36**	**345**	PKIKP	**PKPdf**	**17 40 03.1**	**-3.4**
BR131	**Keskin Array S**	**150.37**	**314**	PKPdf	**PKPdf**	**17 40 02.3**	**-4.6**
BR131	**Keskin Array S**	**150.37**	**314**	PKIKP	**PKPdf**	**17 40 02.3**	**-4.6**
BRTR	**Keskin Array B**	**150.37**	**314**	PKPbc	**PKiKP**	**17 40 14.1**	**+1.1**
	comp=Z,4.3nm,0.9s,baz=127,slow=2.7,SNR=24						
BRTR	**Keskin Array B**	**150.37**	**314**		**PKPdf**	**17 40 03.0**	**-3.9**
BRTR	**Keskin Array B**	**150.37**	**314**	PKP2	**PKiKP**	**17 40 14.5**	**+1.5**
VRI	**Vrincioaia**	**150.44**	**330**	⇑P	**PKPab**	**17 40 15.1**	**-3.3**
VRI	**Vrincioaia**	**150.44**	**330**	⇑PKIKP	**PKPab**	**17 40 15.1**	**-3.3**
KIRS	**Kirsehir-Merke**	**150.47**	**313**	⇑P	**PKiKP**	**17 40 15.0**	**+1.9**
PLOR	**Plostina**	**150.49**	**330**	⇓P	**PKiKP**	**17 40 14.7**	**+1.8**
PLOR	**Plostina**	**150.49**	**330**	⇓PKIKP	**PKiKP**	**17 40 14.7**	**+1.8**
TURR	**Turia**	**150.62**	**331**	⇑P	**PKPab**	**17 40 21.0**	**+1.8**
MAUC	**Maruska**	**150.67**	**344**	*e*PKP	**PKPab**	**17 40 16.2**	**-3.1**
PRU	**Pruhonice**	**150.79**	**349**	*e*PKIKP	**PKPab**	**17 40 16.2**	**-3.5**
PRU	**Pruhonice**	**150.79**	**349**	*e*PKP	**PKPab**	**17 40 16.2**	**-3.5**
ANTO	**Ankara**	**150.85**	**315**	PKIKP	**PKiKP**	**17 40 16.4**	**+2.5**
DOPR	**Dopca**	**150.97**	**332**	⇑P	**PKPab**	**17 40 17.0**	**-3.6**
VRAC	**Vranov**	**151.02**	**346**	*e*PKP	**PKiKP**	**17 40 16.2**	**+2.4**
MLR	**Muntele Rosu**	**151.09**	**331**	PKP	**PKPbc**	**17 40 11.5**	**-2.1**
	comp=Z,2.9nm,0.9s,baz=203,slow=2.7,SNR=3.3						
MLR				PKPbc	**sPKPbc**	**17 40 17.4**	**+3.2**
	comp=Z,6.3nm,0.8s,baz=315,slow=3.8,SNR=7.2						
MLR	**Muntele Rosu**	**151.09**	**331**		**PKPdf**	**17 40 03.8**	**-4.1**
MLR	**Muntele Rosu**	**151.09**	**331**	⇑P	**PKPab**	**17 40 17.6**	**-3.7**
MLR	**Muntele Rosu**	**151.09**	**331**	PKIKP	**PKPdf**	**17 40 03.8**	**-4.1**
KRUC	**Moravsky**	**151.30**	**346**	*e*PKP	**PKiKP**	**17 40 16.6**	**+2.2**
MARR	**Marisel-Cluj**	**151.34**	**335**	⇑P	**PKiKP**	**17 40 16.9**	**+2.2**
ZVC	**Zvikov**	**151.38**	**349**	*e*PKP	**PKiKP**	**17 40 17.5**	**+3.0**
PSZ	**Piszkesteto**	**151.41**	**341**	⇑P	**PKiKP**	**17 40 16.9**	**+2.1**
PSZ	**Piszkesteto**	**151.41**	**341**	⇑PKIKP	**PKiKP**	**17 40 16.9**	**+2.1**
MMAI	**Mount Meron Ar**	**151.70**	**300**	PKPbc	**PKiKP**	**17 40 18.1**	**+2.3**
	comp=Z,4.1nm,0.7s,baz=70,slow=5.4,SNR=12						
MODS	**Modra-Piesok**	**151.73**	**344**	*e*PKP	**PKPab**	**17 40 23.2**	**-0.4**
ARR	**Arges**	**151.77**	**332**	⇓P	**PKiKP**	**17 40 16.8**	**+1.2**
KHC	**Kasperske Hory**	**151.78**	**350**	*e*PKP	**PKiKP**	**17 40 18.4**	**+3.0**
CKRC	**Cesky Krumlov**	**151.96**	**349**	*e*PKIKP	**PKiKP**	**17 40 18.3**	**+2.5**
CKRC	**Cesky Krumlov**	**151.96**	**349**	*e*PKP	**PKiKP**	**17 40 18.3**	**+2.5**
GERES	**GERESS Array B**	**152.04**	**349**	PKPbc	**PKiKP**	**17 40 19.0**	**+2.9**
	comp=Z,2.4nm,1.0s,baz=56,slow=3.6,SNR=4.1						
CONA	**Conrad Observa**	**152.49**	**346**	*e*pPKP	**PKiKP**	**17 40 17.8**	**+0.9**
	comp=Z,14nm,1.6s						
RONA	**Rosalia, Austr**	**152.60**	**345**	*e*pPKiKP	**PKiKP**	**17 40 19.8**	**+2.6**
	comp=Z,2.2nm,0.5s						
BZS	**Buzias**	**152.81**	**336**	⇑P	**PKiKP**	**17 40 18.7**	**+1.1**
BZS	**Buzias**	**152.81**	**336**	⇑PKIKP	**PKiKP**	**17 40 18.7**	**+1.1**
HERR	**Herculane**	**153.10**	**334**	⇑P	**PKiKP**	**17 40 20.2**	**+2.0**
BIOA	**Bad Ischl, Aus**	**153.16**	**349**	*e*PKiKP	**PKiKP**	**17 40 18.6**	**+0.2**
	comp=Z,8.4nm,1.0s						
MORH	**Mrgy, Hungar**	**153.31**	**341**	⇑P	**PKiKP**	**17 40 20.9**	**+2.3**
LESA	**Schwarzleotal**	**153.59**	**350**	*e*pPKP	**PKiKP**	**17 40 20.2**	**+0.9**
	comp=Z,0.5nm,0.4s						
RETA	**Reutte**	**153.79**	**353**	*e*PKP	**PKPbc**	**17 40 18.7**	**-0.9**
	comp=Z,7.2nm,1.2s						
KBA	**Koelnbreinsper**	**153.81**	**349**	*e*PKiKP	**PKiKP**	**17 40 20.0**	**+0.2**
	comp=Z,7.2nm,1.1s						
SOKA	**Soboth**	**153.85**	**346**	*e*pPKiKP	**PKiKP**	**17 40 22.8**	**+3.0**
	comp=Z,6.9nm,1.1s						
WTTA	**Wattenberg**	**153.90**	**352**	*e*pPKiKP	**PKiKP**	**17 40 22.9**	**+2.9**
	comp=Z,4.7nm,0.7s						
DAVA	**Damuels**	**154.08**	**354**	*e*pPKP	**PKiKP**	**17 40 21.9**	**+1.5**
	comp=Z,16nm,1.4s						
FETA	**Feichten**	**154.25**	**353**	*e*PKiKP	**PKiKP**	**17 40 20.8**	**0.0**
	comp=Z,11nm,1.9s						
ABTA	**Abfaltersbach**	**154.27**	**350**	*e*PKiKP	**PKPbc**	**17 40 20.3**	**-0.3**
	comp=Z,6.7nm,1.1s						
BOVS	**Bovan**	**154.41**	**333**	⇑P	**PKiKP**	**17 40 24.2**	**+3.2**
TORD	**Torodi Ar. Bea**	**170.67**	**152**	PKP	**PKPdf**	**17 40 31.9**	**+2.5**
	comp=Z,1.7nm,1.1s,baz=169,slow=2.4,SNR=4.0						
TORD				PKPab	**sPKPab**	**17 41 52.3**	**+4.9**
	comp=Z,1.0nm,0.9s,baz=198,slow=2.8,SNR=2.4						

IDC ***20*** *17:24:59.4±0.7, 29°.72S×178°.33W, h0^{km}, mb4.3/7, mbtmp4.3/7, MS4.5/4, Error ellipse: s-maj=26.7km s-min=12.2km az=134.0*

NEIC ***20*** *17:25:00.9±2.0, 29°.7S±0°.1×178°.6W±0°.1, h10^{km}±1^{km}, mb4.8/22, Error ellipse: s-maj=25.0km s-min=3.0km az=137.0*

GCMT ***20*** *17:25:04.9±0.4, 29°.68S±0°.02×178°.58W±0°.02, h16^{km}±1^{km}, MW4.9/76, Moment Tensor Solution. s15,c16; s76,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.32±.12; $M_{\theta\theta}$1.71±.12; $M_{\phi\phi}$-1.39±.10; $M_{r\theta}$-0.36±.32; $M_{\theta\phi}$1.63±.10; $M_{\phi r}$0.84±.37; Best double couple: $M_0$2.44400×10^{16} NP1:ϕ_s204.00000°, δ74.00000°, λ-163.00000°. NP2: ϕ_s109.00000°, δ74.00000°, λ-17.00000°. Principal axes: T 2.4090, Plg0.0000°, Azm157.0000°; N 0.0740, Plg67.0000°, Azm247.0000°; P -2.4790, Plg23.0000°, Azm67.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 17:25:00.8±0.5, 29°.65S±0°.09×178°.63W±0°.07, h10^{km}, n58, σ1^{s}.25/51, mb4.7/18, MS4.5/4, 4C-1D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.74**	**57**	Pn	**Pg**	**17 25 15.0**	**-0.1**
	2µm,0.3s,baz=268,slow=8.9,SNR=47						
RAO				Sn	**Sb**	**17 25 25.3**	**-0.7**
	2µm,0.3s,baz=108,slow=23,SNR=12						
RAO	**Raoul Island**	**0.74**	**57**		**Pg**	**17 25 14.9**	**-0.2**
RAO				Sg	**Sg**	**17 25 24.3**	**-0.4**
URZ	**Urewera**	**9.28**	**201**	Pn	**Pn**	**17 27 18.1**	**+3.5**
	2.0nm,0.3s,baz=289,slow=12,SNR=5.1						
RTZ	**Ruatahuna**	**9.65**	**201**		**Pn**	**17 27 17.7**	**-2.1**
BKZ	**Black Stump Fm**	**10.30**	**202**	Pn	**Pn**	**17 27 26.7**	**-2.1**
GVZ	**Greta Valley S**	**14.88**	**204**	Pn	**Pn**	**17 28 29.6**	**-1.6**
TBI	**Tubuai**	**26.81**	**83**	*e*S	S	17 35 33.6	+16
	5µm,24.8s						
TBI				*e*LR	LR	17 37 20.9	
	2µm,27.8s						
PPT2	**Papeete2**	**29.12**	**72**	*e*S	S	17 36 16.7	+23
	535nm,23.2s						
PPT2				*e*LR	LR	17 38 23.6	
	845nm,26.5s						
PPT2				*e*LR	LR	17 38 25.2	
	628nm,28.0s						
CTAO	**Charters Tower**	**33.14**	**279**	P	**P**	**17 31 37.4**	**0.0**
CTAO				IAmb	IAmb	17 31 49.2	
	comp=Z,11nm,0.9s						
STKA	**Stephens Creek**	**34.12**	**256**	P	**P**	**17 31 49.3**	**+3.4**
	comp=Z,3.7nm,0.7s,baz=92,slow=8.8,SNR=7.8						
	comp=Z,3.7nm,0.7s						
STKA	**Stephens Creek**	**34.12**	**256**		**P**	**17 31 44.8**	**-1.1**
INKA	**Innaminka**	**35.56**	**263**		**P**	**17 31 57.2**	**-1.1**
PMG	**Port Moresby**	**37.79**	**295**	P	**P**	**17 32 15.4**	**-2.1**
RKT	**Rikitea**	**39.47**	**91**	*e*LR	LR	17 43 05.9	
	comp=Z,2µm,29.2s						
TAOE	**Nuku Hiva Isla**	**41.53**	**68**	*e*LR	LR	17 44 19.6	
	comp=Z,479nm,26.0s						
AS31	**Alice Springs**	**42.60**	**266**		**P**	**17 32 57.8**	**+0.4**
ASAR	**Alice Springs**	**42.60**	**266**	P	**P**	**17 32 59.8**	**+2.3**
	comp=Z,8.7nm,0.8s,baz=102,slow=7.7,SNR=18						
	comp=Z,8.7nm,0.8s						
ASAR	**Alice Springs**	**42.60**	**266**		**P**	**17 32 56.3**	**-1.1**
WR8	**Warramunga Arr**	**43.38**	**272**	P	**P**	**17 33 03.5**	**-0.2**
WR8				IAmb	IAmb	17 33 11.4	
	comp=Z,20nm,0.9s						
WRAB	**Tennant Creek**	**43.52**	**272**	P	**P**	**17 33 04.8**	**-0.1**
WRA	**Warramunga Arr**	**43.52**	**272**	P	**P**	**17 33 06.0**	**+1.1**
	comp=Z,4.9nm,0.8s,baz=111,slow=8.0,SNR=16						
	comp=Z,4.9nm,0.8s						
WB0	**Warramunga Arr**	**43.54**	**272**		**P**	**17 33 04.6**	**-0.5**
FORT	**Forrest**	**45.71**	**255**	P	**P**	**17 33 21.5**	**-0.7**
FORT				IAmb	IAmb	17 33 39.3	
	comp=Z,13nm,1.1s						
MTN	**Manton Dam**	**49.33**	**279**	P	**P**	**17 33 50.4**	**-0.1**
MTN				IAmb	IAmb	17 34 13.5	
	comp=Z,18nm,1.4s						
FITZ	**Fitzroy Crossi**	**51.81**	**270**	LR	LR	17 53 51.9	
	comp=Z,1µm,18.6s,baz=98,slow=33						
FITZ	**Fitzroy Crossi**	**51.81**	**270**	P	**P**	**17 34 08.8**	**-0.4**
QSPA	**South Pole Qui**	**60.45**	**180**	P	**P**	**17 35 10.3**	**-0.2**
	comp=Z,3.4nm,0.8s,baz=37,slow=2.5,SNR=7.1						
	comp=Z,3.4nm,0.8s						
QSPA	**South Pole Qui**	**60.45**	**180**	P	**P**	**17 35 09.8**	**-0.7**
BELA	**Belgrano 2**	**70.59**	**172**	P	**P**	**17 36 14.9**	**-0.8**
BELA				IAmb	IAmb	17 36 21.4	
	comp=Z,6.6nm,1.0s						
MJAR	**Matsushiro Arr**	**77.32**	**326**	P	**P**	**17 36 57.4**	**+1.9**
	comp=Z,0.8nm,0.8s,baz=138,slow=1.7,SNR=4.6						
	comp=Z,0.8nm,0.8s						
SYO	**Syowa Base**	**77.71**	**193**	⇓*e*P	**P**	**17 36 59.2**	**+1.8**
TROLL	**Troll, Antarti**	**78.61**	**180**	⇑P	**P**	**17 37 02.9**	**+0.3**
	comp=Z,413nm,0.9s						
JNU	**Nakatsue**	**78.64**	**319**	LR	LR	18 06 24.4	
	comp=Z,128nm,20.1s,baz=115,slow=32						
SNAA	**Sanae**	**78.91**	**179**	P	**P**	**17 37 03.8**	**-0.3**
	comp=Z,2.0nm,0.7s,baz=192,slow=8.4,SNR=3.2						
	comp=Z,2.0nm,0.7s						
SNAA	**Sanae**	**78.91**	**179**	P	**P**	**17 37 03.9**	**-0.2**
SNAA				IAmb	IAmb	17 37 14.8	
	comp=Z,9.6nm,1.2s						
VNA3	**Neumayer Olymp**	**79.08**	**176**	⇑P	**P**	**17 37 05.4**	**+0.4**
	comp=Z,11nm,0.7s						
VNA2	**Neumayer--Watz**	**79.51**	**177**	⇑P	**P**	**17 37 07.5**	**+0.2**
	comp=Z,10nm,0.8s,baz=170,slow=4.3						
VNA1	**Neumayer--Stat**	**79.74**	**177**	⇑P	**P**	**17 37 10.6**	**+2.1**
PFO	**Pinyon Flats O**	**86.11**	**48**	LR	LR	18 11 20.8	
	comp=Z,257nm,18.2s,baz=250,slow=32						
LRMC	**Laurel Mtn Rad**	**86.53**	**46**	P	**P**	**17 37 44.6**	**+0.4**
LRMC				IAmb	IAmb	17 38 02.9	
	comp=Z,6.9nm,1.3s						
CLC	**China Lake**	**86.80**	**45**	P	**P**	**17 37 46.1**	**+0.7**
GSC	**Goldstone, Bar**	**86.96**	**46**	P	**P**	**17 37 46.8**	**+0.5**
GSC				IAmb	IAmb	17 37 58.1	
	comp=Z,8.9nm,1.3s						
MPMC	**Manual Prospec**	**87.02**	**45**	P	**P**	**17 37 47.2**	**+0.5**
MPMC				IAmb	IAmb	17 37 58.7	
	comp=Z,8.7nm,1.5s						
NVAR	**Mina Array Bea**	**88.07**	**43**	P	**P**	**17 37 53.1**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=221,slow=2.8,SNR=5.6						
	comp=Z,0.5nm,0.3s						
TUC	**Tucson**	**89.08**	**52**	P	**P**	**17 37 57.7**	**+1.3**
PRN	**Pahroc Range**	**89.39**	**45**	P	**P**	**17 37 58.6**	**+0.7**
U15A	**North Rim**	**90.53**	**48**	P	**P**	**17 38 04.4**	**+1.0**
U15A				IAmb	IAmb	17 38 15.8	
	comp=Z,5.6nm,1.2s						
ILAR	**Eielson Array**	**97.33**	**13**	LR	LR	18 15 30.2	
	comp=Z,122nm,19.2s,baz=206,slow=31						
KURBB	**Kurchatov Arra**	**120.18**	**314**	PKP	**PKPdf**	**17 43 50.7**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=98,slow=2.0,SNR=4.7						
BVAR	**Borovoye Array**	**125.49**	**316**	PKP	**PKPdf**	**17 44 01.0**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=293,slow=1.1,SNR=4.5						
FINES	**FINESS Array B**	**144.26**	**340**	PKP	PKPbc	17 44 35.7	+1.1
	comp=Z,2.8nm,0.8s,baz=42,slow=3.1,SNR=5.7						
NB2	**NORSAR Subarra**	**147.93**	**351**	PKP	**PKPbc**	**17 44 45.8**	**+0.1**
	comp=Z,4.9nm,1.0s,baz=11,slow=2.0						
NOA	**NORSAR Array B**	**147.93**	**351**	PKPbc	**PKPbc**	**17 44 46.3**	**+0.6**
	comp=Z,1.1nm,0.9s,baz=16,slow=4.4,SNR=3.5						
AKASG	**Malin Array Be**	**150.38**	**323**	PKPbc	**PKPbc**	**17 44 52.4**	**+0.3**
	comp=Z,1.9nm,0.6s,baz=49,slow=2.9,SNR=7.6						
AKASG	**Malin Array Be**	**150.38**	**323**		**PKPbc**	**17 44 51.6**	**-0.5**
BRTR	**Keskin Array B**	**151.76**	**300**	PKPbc	**PKiKP**	**17 44 57.2**	**+0.9**
	comp=Z,0.5nm,0.8s,baz=64,slow=3.4,SNR=2.4						
BRTR	**Keskin Array B**	**151.76**	**300**		**PKPbc**	**17 44 54.9**	**-1.0**
TORD	**Torodi Ar. Bea**	**163.57**	**181**	PKPab	**PKPab**	**17 45 55.2**	**-0.7**
	comp=Z,2.0nm,0.8s,baz=170,slow=2.9,SNR=7.1						

TIR 20 17:38:55.9, 41°.42N×19°.73E, h10^{km}, Ml1.6/2, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.12**	**126**	Pg	Pg	17 38 58.8	-0.1
TIR				Sg	Sg	17 39 01.1	+0.1
TIR				AML	AML	17 39 01.9	
	0.8nm,0.1s						
PHP	**Peshkopia**	**0.59**	**63**	Pg	Pg	17 39 06.3	-1.1
PHP				Sg	Sg	17 39 15.9	+0.6
PHP				AML	AML	17 39 18.7	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	0.1nm,0.3s						
NEST	**Nestorio**	**1.42**	**135**	Pn	Pg	17 39 22.8	-0.3
NEST				Sn	Sg	17 39 43.0	+1.6

ATH ***20*** *18:04:10.2, 36°.42N×28°.80E, h18^{km}±3^{km}, ML2.6/2, Manual Solution by M.Kolligri First location: 2019/12/20 18:06:05, This location: 2019/12/20 18:34:58 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*

AFAD ***20*** *18:04:11.9, 36°.42N×28°.69E, h7^{km}±2^{km}, ML2.5*

ISK ***20*** *18:04:12.2, 36°.47N×28°.66E, h6^{km}, ML2.8/22*

ISC 20 18:04:12.1±1.1**, 36°.44N**±0°.03×**28°.67E**±0°.02**, h4**^{km}±10^{km}**, n40, σ0**^{s}**79**/58**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RDI1	**Rhodes Town Ha**	**0.36**	**273**	P	**Pg**	**18 04 19.9**	**+0.8**
RDI1				S	**Sb**	**18 04 26.1**	**-1.0**
RODB	**Rodos**	**0.36**	**272**	P	**Pg**	**18 04 19.7**	**+0.5**
RODB				S	**Sb**	**18 04 26.9**	**-0.3**
DALY	**Dalyan (Mula)**	**0.38**	**358**	Pg	**Pg**	**18 04 19.4**	**-0.1**
DALY				Sg	**Sg**	**18 04 24.8**	**+0.3**
FETY	**Fethiye**	**0.39**	**59**	P	Pg	18 04 10.6	-9.0
FETY				S	Sg	18 04 15.2	-10
IZZE	**Mula-Seydike**	**0.45**	**90**	P	**Pg**	**18 04 20.3**	**-0.5**
IZZE				S	**Sg**	**18 04 27.3**	**+0.7**
IZZE				*i* IAML		18 04 33.0	
	comp=E,1µm,0.4s						
IZZE				*i* IAML		18 04 35.0	
	comp=N,2µm,0.4s						
SABU	**Mula-Dalaman**	**0.46**	**32**	P	**Pg**	**18 04 20.7**	**-0.3**
SABU				S	**Sg**	**18 04 27.6**	**+0.7**
SABU				*i* IAML		18 04 28.0	
	comp=E,445nm,0.3s						
SABU				*i* IAML		18 04 29.0	
	comp=N,711nm,0.3s						
TURN	**Turunc**	**0.48**	**315**	P	**Pg**	**18 04 21.4**	**0.0**
TURN				S	**Sb**	**18 04 29.7**	**-0.9**
TURN				*i* IAML		18 04 31.0	
	comp=N,332nm,0.2s						
TURN				*i* IAML		18 04 32.0	
	comp=E,336nm,0.4s						
TURN	**Turunc**	**0.48**	**315**	Pg	**Pg**	**18 04 21.5**	**+0.1**
TURN				Sg	**Sg**	**18 04 28.5**	**+0.8**
ARG	**Arkhangelos**	**0.49**	**244**	Pg	**Pb**	**18 04 22.3**	**-1.0**
ARG				Sg	**Sb**	**18 04 30.2**	**-0.7**
ARG	**Arkhangelos**	**0.49**	**244**	P	**Pg**	**18 04 21.8**	**+0.2**
ARG				S	**Sb**	**18 04 29.9**	**-1.0**
CAME	**Cameli-Denizli**	**0.72**	**45**	Pg	**Pg**	**18 04 25.9**	**0.0**
RGE1	**Gennadi, Rhode**	**0.72**	**236**	P	**Pg**	**18 04 25.8**	**-0.3**
RGE1				S	**Sb**	**18 04 36.4**	**-1.2**
YER	**Yerkesik**	**0.77**	**336**	Pg	**Pg**	**18 04 26.6**	**-0.2**
AKAS	**Kas**	**0.78**	**105**	P	**Pg**	**18 04 26.9**	**-0.2**
AKAS				S	**Sb**	**18 04 37.6**	**-1.7**
AKAS				*i* IAML		18 04 44.0	
	comp=E,472nm,0.7s						
AKAS				*i* IAML		18 04 50.0	
	comp=N,496nm,0.5s						
AKAS	**Kas**	**0.78**	**105**	Pg	**Pb**	**18 04 28.2**	**-0.1**
KNIK	**Mula-Seydike**	**0.83**	**60**	P	**Pg**	**18 04 27.7**	**-0.5**
KNIK				S	**Sb**	**18 04 40.3**	**-0.5**
KNIK				*i* IAML		18 04 41.0	
	comp=N,150nm,0.8s						
KNIK				*i* IAML		18 04 45.0	
	comp=E,161nm,0.6s						
CAEL	**Denizli, Camel**	**0.86**	**37**	P	**Pg**	**18 04 28.6**	**-0.1**
CAEL				S	**Sb**	**18 04 41.1**	**-0.6**
CAEL				*i* IAML		18 04 52.0	
	comp=E,192nm,0.5s						
CAEL				*i* IAML		18 04 57.0	
	comp=N,202nm,0.7s						
MULA	**Mugla, Merkez-**	**0.87**	**341**	P	**Pb**	**18 04 29.4**	**-0.4**
MULA				S	**Sb**	**18 04 41.4**	**-0.5**
MULA				*i* IAML		18 04 45.0	
	comp=E,130nm,0.3s						
MULA				*i* IAML		18 04 51.0	
	comp=N,93nm,0.4s						
DATC	**Datca-Mugla**	**0.88**	**292**	Pg	**Pg**	**18 04 28.9**	**0.0**
DNZT	**Denizli-Tavas-**	**0.89**	**18**	P	**Pg**	**18 04 29.1**	**-0.1**
DNZT				S	**Sb**	**18 04 41.6**	**-0.8**
DNZT				*i* IAML		18 04 48.0	
	comp=E,69nm,0.4s						
DAT	**Datca**	**0.93**	**289**	Pg	**Pg**	**18 04 30.2**	**+0.3**
ELL	**Elmali**	**1.04**	**72**	Pg	**Pb**	**18 04 32.4**	**-0.4**
TAVA	**DENIZLI_Tavas**	**1.05**	**11**	P	**Pb**	**18 04 32.7**	**-0.2**
TAVA				S	**Sn**	**18 04 48.1**	**-0.7**
TAVA				*i* IAML		18 04 52.0	
	comp=N,113nm,0.2s						
TAVA				*i* IAML		18 04 52.0	
	comp=E,170nm,0.3s						
GOLH	**Golhisar**	**1.07**	**41**	P	**Pg**	**18 04 31.8**	**-0.9**
GOLH				S	**Sb**	**18 04 47.2**	**-0.6**
GOLH				*i* IAML		18 04 55.0	
	comp=N,162nm,0.4s						
GOLH				*i* IAML		18 04 58.0	
	comp=E,130nm,0.4s						
MLSB	**Milas**	**1.12**	**320**	Pn	**Pg**	**18 04 33.2**	**-0.4**
APMY	**Acipayam-Deniz**	**1.15**	**26**	Pn	**Pg**	**18 04 34.1**	**-0.1**
DNIZ	**Denizli-Tavas-**	**1.22**	**14**	P	**Pg**	**18 04 35.4**	**-0.2**
DNIZ				S	**Sb**	**18 04 51.8**	**-0.3**
NISR	**Nisiros**	**1.26**	**279**	P	**Pn**	**18 04 36.0**	**-0.4**
AKUM	**Antalya-Kumluc**	**1.35**	**94**	P	**Pg**	**18 04 38.0**	**0.0**
AKUM				S	**Sn**	**18 05 00.1**	**+3.9**
AKUM				*i* IAML		18 05 04.0	
	comp=N,66nm,0.7s						
AKUM				*i* IAML		18 05 11.0	
	comp=E,54nm,0.4s						
KORT	**Korkueli**	**1.46**	**67**	Pn	**Pg**	**18 04 39.9**	**-0.3**
NAZL	**Nazilli-Aydin**	**1.56**	**349**	Pn	**Pn**	**18 04 40.6**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**1.63**	**338**	Pn	**Pn**	**18 04 41.5**	**-0.3**
ANTB	**Antalya**	**1.66**	**73**	Pn	**Pb**	**18 04 42.4**	**-0.9**
GCAM	**G?zelcaml?**	**1.71**	**318**	Pn	**Pn**	**18 04 42.6**	**-0.1**
BASM	**Basmaki-Afyon**	**1.85**	**36**	Pn	**Pn**	**18 04 44.9**	**+0.2**
ODEM	**Odemis-Izmir**	**1.90**	**346**	Pn	**Pn**	**18 04 45.6**	**+0.2**
KULA	**Kula-Manisa**	**2.08**	**360**	Pn	**Pn**	**18 04 48.1**	**+0.3**
BLCB	**Balcova**	**2.34**	**327**	Pn	**Pn**	**18 04 51.7**	**+0.3**
GORD	**Gordes-Manisa**	**2.50**	**351**	Pn	**Pn**	**18 04 54.0**	**+0.4**
URLA	**Izmir**	**2.54**	**320**	Pn	**Pn**	**18 04 54.9**	**+0.8**

IDC ***20*** *18:25:05.5±1.8, 59°.26N×30°.78W, h0^{km}, mb3.6/6, mbtmp3.6/7, ML3.6/1, Error ellipse: s-maj=43.5km s-min=30.5km az=26.0*

ISC 20 18:25:06.9±1.5**, 59°.2N**±0°.3×**30°.9W**±0°.2**, h10**^{km}**, n7, σ0**^{s}**80**/7**, mb3.8**/5**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EKA	**Eskdalemuir Ar**	**15.42**	**93**	Pn	**Pn**	**18 28 45.1**	**+0.8**
	baz=315,slow=9.4						
	2.4nm,0.9s						
YKA	**Yellowknife Ar**	**38.21**	**312**	P	**P**	**18 32 26.7**	**+0.5**
	0.3nm,0.8s,baz=49,slow=8.7,SNR=4.4						
	0.3nm,0.8s						
AKTO	**Aktyubinsk**	**48.25**	**59**	P	**P**	**18 33 47.9**	**+0.4**
	0.8nm,0.5s,baz=290,slow=5.3,SNR=4.0						
	0.8nm,0.5s						
BVAR	**Borovoye Array**	**51.47**	**49**	P	**P**	**18 34 11.9**	**0.0**
	0.6nm,0.7s,baz=330,slow=8.3,SNR=3.4						
	0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**51.98**	**138**	P	**P**	**18 34 15.8**	**-0.3**
	0.7nm,0.9s,baz=339,slow=8.7,SNR=2.2						
	0.7nm,0.9s						
KURBB	**Kurchatov Arra**	**56.46**	**46**	P	**P**	**18 34 47.5**	**-0.9**
	0.6nm,0.6s,baz=324,slow=7.0,SNR=8.4						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**61.03**	**46**	P	**P**	**18 35 19.4**	**-0.8**
	0.7nm,0.7s,baz=333,slow=7.1,SNR=5.0						
	0.7nm,0.7s						

IDC ***20*** *18:42:44.6±3.6, 36°.24N×71°.21E, h69^{km}±31^{km}, mb3.9/16, mbtmp4.2/21, ML3.7/5, Error ellipse: s-maj=22.4km s-min=16.0km az=22.0*

MOS ***20*** *18:42:47.1±1.5, 36°.47N×71°.27E, h95^{km}, mb4.3/14, Error ellipse: s-maj=7.4km s-min=3.8km az=85.5*

NEIC ***20*** *18:42:48.2±1.8, 36°.40N±0°.04×71°.15E±0°.07, h100^{km}±2^{km}, mb4.3/40, Error ellipse: s-maj=8.7km s-min=6.2km az=100.0*

BJI ***20*** *18:42:49.9, 36°.60N×71°.40E, h100^{km}, mB4.7/3, mb4.0/12*

NNC ***20*** *18:42:52.3±2.7, 36°.81N×70°.92E, h124^{km}±40^{km}, mb3.8, mpv4.5, Error ellipse: s-maj=22.2km s-min=19.4km az=16.0*

ISC 20 18:42:48.1±0.4**, 36°.36N**±0°.04×**71°.25E**±0°.04**, h100**^{km}**, n177, σ1**^{s}**59**/189**, mb4.2**/36**, 13C-9D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANEM	**Manem**	**1.23**	**16**		**Pn**	**18 43 11.9**	**+0.5**
MANEM				Sn	**Sn**	**18 43 28.6**	**-0.3**
KBL	**Kabul**	**2.56**	**225**		**Pn**	**18 43 29.1**	**+1.0**
KBL				Sn	**Sn**	**18 43 58.7**	**-0.1**
KBL	**Kabul**	**2.56**	**225**	PN	**Pn**	**18 43 29.1**	**+1.0**
KBL				S	**Sn**	**18 43 58.7**	**-0.1**
GAR	**Garm**	**2.73**	**345**		**Pn**	**18 43 29.6**	**-0.8**
SHAA	**Shahritus**	**2.77**	**297**		**Pn**	**18 43 29.2**	**-1.6**
SHAA				Sn	**Sn**	**18 43 59.8**	**-3.9**
CHGR	**Chuyangaron**	**2.83**	**325**		**Pn**	**18 43 29.9**	**-1.7**
CHGR	**Chuyangaron**	**2.83**	**325**	PN	**Pn**	**18 43 29.9**	**-1.7**
DRK	**Karamyk**	**3.14**	**8**		**Pn**	**18 43 35.9**	**-0.1**
DRK	**Karamyk**	**3.14**	**8**	PN	**Pn**	**18 43 35.9**	**-0.1**
NIL	**Nilore**	**3.17**	**148**		**Pn**	**18 43 38.5**	**+2.4**
NIL	**Nilore**	**3.17**	**148**	PN	**Pn**	**18 43 38.5**	**+2.4**
BTK	**Batken**	**3.71**	**355**	Pn	**Pn**	**18 43 46.9**	**+3.6**
BTK	**Batken**	**3.71**	**355**	PN	**Pn**	**18 43 46.9**	**+3.6**
SRNI	**Srinagar**	**3.72**	**127**	*e*P	**Pn**	**18 43 44.6**	**+1.2**
SRNI				*e*S	**Sn**	**18 44 26.6**	**+0.4**
SRNI				IAML		18 44 34.3	
	comp=N,636nm,0.3s						
SRNI				IAML		18 44 34.5	
	comp=E,980nm,0.8s						
JMU	**Jammu**	**4.64**	**139**	*e*P	**Pn**	**18 43 57.2**	**+0.2**
JMU				*e*S	**Sn**	**18 44 48.0**	**-2.6**
JMU				IAML		18 44 52.7	
	comp=E,367nm,0.3s						
JMU				IAML		18 44 53.3	
	comp=N,857nm,0.7s						
KSH	**Kashi**	**4.89**	**48**	P	**Pn**	**18 43 55.8**	**-3.5**
KSH				S	Sn	18 44 45.9	-8.8
KSH				smax	smax		
	comp=N,790nm,0.5s						
KSH				smax	smax		
	comp=N,520nm,0.7s						
ARSB	**Arslanbob**	**5.14**	**15**		**Pn**	**18 44 01.3**	**-1.4**
ARSB	**Arslanbob**	**5.14**	**15**	PN	**Pn**	**18 44 01.3**	**-1.4**
ALCI	**Alchi Leh**	**5.31**	**112**	*e*P	**Pn**	**18 44 05.4**	**+0.1**
ALCI				*e*S	**Sn**	**18 45 02.7**	**-2.7**
ALCI				IAML		18 45 07.4	
	comp=E,198nm,0.0s						
ALCI				IAML		18 45 07.4	
	comp=N,187nm,0.2s						
IUG	**Iuzhnay**	**5.85**	**351**	*e*P	**Pn**	**18 44 11.0**	**-1.4**
IUG	**Iuzhnay**	**5.85**	**351**	*e*PN	**Pn**	**18 44 11.0**	**-1.4**
UCH	**Uchtor**	**6.38**	**22**	P	**Pn**	**18 44 19.7**	**-0.2**
	SNR=53						
DZA	**Taraz**	**6.52**	**1**	*e*P	**Pn**	**18 44 19.9**	**-1.5**
DZA	**Taraz**	**6.52**	**1**	*e*PN	**Pn**	**18 44 19.9**	**-1.5**
EKS2	**Erkin-Say**	**6.59**	**17**	P	**Pn**	**18 44 22.2**	**-0.2**
	SNR=59						
BRLS	**Borolday**	**6.75**	**351**	*e*P	Pn	18 44 19.3	-5.2
BRLS	**Borolday**	**6.75**	**351**	*e*PN	Pn	18 44 19.2	-5.2
AAK	**Ala-Archa**	**6.75**	**21**	P	**Pn**	**18 44 24.9**	**+0.2**
	SNR=44						
AAK	**Ala-Archa**	**6.75**	**21**	P	**Pn**	**18 44 24.7**	**+0.1**
	comp=N,13nm,0.3s,baz=181,slow=4.4,SNR=112						
AAK				S	**Sn**	**18 45 38.0**	**-2.0**
	comp=N,31nm,0.6s,baz=154,slow=22,SNR=14						
	comp=N,29nm,0.4s						
AAK	**Ala-Archa**	**6.75**	**21**		**Pn**	**18 44 24.5**	**-0.1**
AAK	**Ala-Archa**	**6.75**	**21**	⇓P	**Pn**	**18 44 24.5**	**-0.1**
	comp=N,6.5nm,0.4s						
AAK				⇑S	**Sn**	**18 45 38.1**	**-2.0**
	comp=N,71nm,0.9s						
AAK	**Ala-Archa**	**6.75**	**21**	*d i*PN	**Pn**	**18 44 24.6**	**-0.1**
AAK				pmax	pmax		
	comp=Z,18nm,0.5s						
KK31	**Karatay Array**	**6.76**	**355**		**Pn**	**18 44 23.1**	**-1.5**
KK31	**Karatay Array**	**6.76**	**355**	⇑P	**Pn**	**18 44 23.1**	**-1.5**
	comp=Z,32nm,0.3s,baz=177,slow=12,SNR=473						
KK31				⇑S	**Sn**	**18 45 33.5**	**-6.5**
	comp=Z,51nm,0.5s,baz=188,slow=22,SNR=10						
KK31	**Karatay Array**	**6.76**	**355**	PN	**Pn**	**18 44 23.1**	**-1.5**
KKAR	**Karatay Array**	**6.76**	**355**		**Pn**	**18 44 23.0**	**-1.6**
KKAR	**Karatay Array**	**6.76**	**355**	PN	**Pn**	**18 44 23.0**	**-1.6**
KBK	**Karagaybulak**	**6.91**	**23**	P	**Pn**	**18 44 26.7**	**-0.1**
	SNR=11						
FRU1	**Bishkek**	**6.95**	**21**		**Pn**	**18 44 26.9**	**-0.3**
FRU1	**Bishkek**	**6.95**	**21**	PN	**Pn**	**18 44 26.9**	**-0.3**
ULHL	**Ulahol**	**7.04**	**32**	P	**Pn**	**18 44 28.7**	**+0.1**
	SNR=6.8						
BOOM	**Boomskoye usch**	**7.12**	**29**	Pn	**Pn**	**18 44 28.7**	**-0.9**
BOOM	**Boomskoye usch**	**7.12**	**29**	PN	**Pn**	**18 44 28.7**	**-0.9**
CHMS	**Chumysh**	**7.16**	**21**	P	**Pn**	**18 44 30.0**	**-0.1**
	SNR=8.9						
SMLA	**Simla**	**7.18**	**135**	*e*P	**Pn**	**18 44 30.0**	**-0.3**
SMLA				*e*S	**Sn**	**18 45 46.7**	**-3.6**
SMLA				IAML		18 45 52.5	
	comp=E,161nm,0.6s						
SMLA				IAML		18 45 52.5	
	comp=N,175nm,0.2s						
USP	**Ospenovka**	**7.33**	**19**	P	**Pn**	**18 44 32.3**	**-0.2**
	SNR=12						
TKM2	**Tokmak 2**	**7.36**	**26**	P	**Pn**	**18 44 33.0**	**+0.1**
	SNR=11						
KDJ	**Kajisay**	**7.37**	**37**	Pn	**Pn**	**18 44 32.3**	**-0.8**
KDJ	**Kajisay**	**7.37**	**37**	PN	**Pn**	**18 44 32.3**	**-0.8**
TARG	**Taragay, Kyrgy**	**7.40**	**42**		**Pn**	**18 44 32.5**	**-1.2**
TARG	**Taragay, Kyrgy**	**7.40**	**42**	PN	**Pn**	**18 44 32.5**	**-1.2**
HRA	**Herat**	**7.61**	**258**		**Pn**	**18 44 34.8**	**-1.7**
WUS	**Wushi**	**7.88**	**50**		**Pn**	**18 44 39.8**	**-0.1**
TNSS	**Tian-Shan**	**7.98**	**32**	*e*P	**Pn**	**18 44 40.8**	**-0.9**
TNSS	**Tian-Shan**	**7.98**	**32**	*e*PN	**Pn**	**18 44 40.7**	**-0.9**
AAA	**Alma-Ata**	**8.11**	**31**	*e*P	**Pn**	**18 44 42.3**	**-0.8**
AAA	**Alma-Ata**	**8.11**	**31**	*e*PN	**Pn**	**18 44 42.2**	**-0.8**
MDOK	**Medeo**	**8.13**	**32**	*e*P	**Pn**	**18 44 42.5**	**-0.9**
MDOK	**Medeo**	**8.13**	**32**	*e*PN	**Pn**	**18 44 42.4**	**-0.9**
PRZ	**Przheval'sk**	**8.24**	**40**		**Pn**	**18 44 41.9**	**-3.1**
PRZ	**Przheval'sk**	**8.24**	**40**	PN	**Pn**	**18 44 41.9**	**-3.1**
SATY	**Saty**	**8.67**	**37**	*e*P	**Pn**	**18 44 50.3**	**-0.4**
SATY	**Saty**	**8.67**	**37**	*e*PN	**Pn**	**18 44 50.2**	**-0.4**
UZB	**Uzynbulak**	**9.04**	**39**	*e*P	**Pn**	**18 44 55.2**	**-0.5**
UZB	**Uzynbulak**	**9.04**	**39**	*e*PN	**Pn**	**18 44 55.2**	**-0.5**
SHLS	**Shalkode**	**9.27**	**40**	*e*P	**Pn**	**18 45 01.3**	**+2.4**
SHLS	**Shalkode**	**9.27**	**40**	*e*P	**Pn**	**18 45 01.3**	**+2.4**
LGTI	**Lohaghat**	**10.17**	**131**	*e*P	**Pn**	**18 45 11.2**	**-0.7**
LGTI				*e*S	Sn	18 46 56.2	-8.4
LGTI				IAML		18 46 58.6	
	comp=E,122nm,0.8s						
LGTI				IAML		18 46 59.1	
	comp=N,124nm,0.3s						
TDK	**Taldyqorghan**	**10.20**	**30**	*e*P	**Pn**	**18 45 10.6**	**-0.8**
TDK	**Taldyqorghan**	**10.20**	**30**	*e*P	**Pn**	**18 45 10.5**	**-0.8**
UDPR	**Udaipur**	**11.94**	**169**	*e*P	**Pn**	**18 45 34.9**	**0.0**
MAKZ	**Makanchi**	**13.15**	**34**	Pn	**Pn**	**18 45 49.7**	**-1.2**
MAKZ	**Makanchi**	**13.15**	**34**	P	**Pn**	**18 45 49.7**	**-1.2**
MK31	**Makanchi Array**	**13.29**	**35**	⇑P	**Pn**	**18 45 52.1**	**-0.5**
	comp=N,2.7nm,0.7s,baz=221,slow=14,SNR=8.1						
MK31	**Makanchi Array**	**13.29**	**35**	⇑*e*P	**Pn**	**18 45 52.3**	**-0.3**
MKAR	**Makanchi Array**	**13.29**	**35**	P	**Pn**	**18 45 51.6**	**-1.0**
	comp=N,0.1nm,0.3s,baz=218,slow=14,SNR=10						
	comp=N,1.1nm,0.7s						
MKAR	**Makanchi Array**	**13.29**	**35**		**Pn**	**18 45 50.6**	**-2.0**
WMQ	**Urumqi**	**14.62**	**54**	*e*P	**P**	**18 46 12.6**	**-0.9**
KURBB	**Kurchatov Arra**	**15.19**	**18**	P	**Pn**	**18 46 17.7**	**+0.7**
	comp=N,0.1nm,0.3s,baz=205,slow=10,SNR=12						
	comp=N,1.6nm,0.6s						
KURK	**Kurchatov**	**15.30**	**18**		**Pn**	**18 46 19.1**	**+0.8**
KURK	**Kurchatov**	**15.30**	**18**	⇑*i*P	**P**	**18 46 20.3**	**-0.6**
AB31	**Akbulak array**	**15.30**	**331**		**Pn**	**18 46 14.0**	**-4.3**
AB31	**Akbulak array**	**15.30**	**331**	P	**Pn**	**18 46 14.7**	**-3.7**
	comp=N,3.2nm,0.4s,baz=138,slow=11,SNR=178						
AB31	**Akbulak array**	**15.30**	**331**	P	**Pn**	**18 46 14.7**	**-3.7**
ABKAR	**Akbulak array**	**15.30**	**331**		**Pn**	**18 46 14.2**	**-4.2**
BVAR	**Borovoye Array**	**16.67**	**358**	P	**Pn**	**18 46 34.2**	**-1.2**
	comp=N,0.1nm,0.3s,baz=162,slow=11,SNR=12						
BVAR				S	Sn	18 49 28.8	-11
	comp=N,2.9nm,0.6s,baz=165,slow=24,SNR=6.6						
	comp=N,1.6nm,0.4s						
BORK	**Borovoye**	**16.69**	**358**		**Pn**	**18 46 33.9**	**-1.8**
BORK	**Borovoye**	**16.69**	**358**	⇓*i*P	**Pn**	**18 46 34.4**	**-1.3**
BORK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
AKTO	**Aktyubinsk**	**17.00**	**330**	P	**Pn**	**18 46 37.9**	**-1.6**
	comp=Z,0.6nm,0.3s,baz=133,slow=10,SNR=20						
AKTO				S	Sn	18 49 35.3	-13
	comp=Z,3.9nm,0.5s,baz=17,slow=23,SNR=4.5						
	comp=Z,10nm,0.8s						
AKTO	**Aktyubinsk**	**17.00**	**330**	⇑P	**Pn**	**18 46 37.2**	**-2.2**
	comp=Z,8.7nm,0.7s						
UOSS	**Minazif**	**17.21**	**233**	P	**Pn**	**18 46 40.8**	**-1.4**
DGZ	**Jazzator, Alta**	**17.77**	**36**	⇓*e*P	**P**	**18 46 47.3**	**-1.1**
LSA	**Lhasa**	**17.95**	**106**	P	**P**	**18 46 50.1**	**-0.7**
LSA	**Lhasa**	**17.95**	**106**	P	**P**	**18 46 46.8**	**-4.1**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LSA	**Lhasa**	**17.95**	**106**	P	**P**	**18 46 50.1**	**-0.7**
LSA				pmax	pmax		
	comp=Z,11nm,1.2s						
AKT	**Akhty**	**18.98**	**293**	*e*P	**Pn**	**18 47 05.2**	**+1.8**
AKT				*e*		18 50 34.4	
AKT				pmax	pmax		
	comp=Z,5.0nm,0.4s						
AKT				pmax	pmax		
	comp=E,8.0nm,0.4s						
AKT				pmax	pmax		
	comp=N,7.0nm,0.6s						
ZAA0	**Zalesovo Array**	**19.96**	**24**		**P**	**18 47 10.2**	**-1.9**
ZAA0				IAmb	IAmb	18 47 12.9	
	comp=Z,10nm,0.8s						
ZALV	**Zalesovo Beam**	**19.96**	**24**	P	**P**	**18 47 11.1**	**-0.9**
	comp=Z,7.5nm,0.5s,baz=221,slow=9.8,SNR=47						
	comp=Z,7.5nm,0.5s						
ZALV	**Zalesovo Beam**	**19.96**	**24**		**P**	**18 47 10.0**	**-2.1**
SHL	**Shillong**	**20.67**	**116**	P	**P**	**18 47 20.1**	**0.0**
SHL				IAmb	IAmb	18 47 26.7	
	comp=Z,12nm,0.5s						
SHL	**Shillong**	**20.67**	**116**	P	**P**	**18 47 20.1**	**0.0**
SHL				pmax	pmax		
	comp=Z,12nm,0.5s						
ARTI	**Arti**	**21.84**	**341**	P	**P**	**18 47 33.1**	**+1.0**
	comp=Z,7.6nm,0.7s,baz=183,slow=4.2,SNR=12						
	comp=Z,7.6nm,0.7s						
ARTI	**Arti**	**21.84**	**341**		**P**	**18 47 31.4**	**-0.8**
ARTI				IAmb	IAmb	18 47 36.8	
	comp=Z,32nm,1.4s						
ARTI	**Arti**	**21.84**	**341**	*c i*P	**P**	**18 47 34.1**	**+2.0**
ARTI						18 48 10.4	
ARTI				S	**S**	**18 51 31.0**	**+3.6**
ARTI				SS	**SnSn**	**18 52 07.7**	**+5.9**
ARTI				pmax	pmax		
	comp=Z,17nm,1.3s						
NCK	**Nalchik**	**22.30**	**297**	⇓*e*P	**P**	**18 47 40.0**	**+2.8**
NCK				pmax	pmax		
	comp=Z,6.0nm,0.4s						
GTA	**Gaotai**	**22.71**	**74**	*e*P	**P**	**18 47 43.6**	**+2.0**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KBZ	**Khabaz**	**22.84**	**298**	P	**P**	**18 47 42.2**	**-0.4**
	comp=Z,2.5nm,0.9s,baz=170,slow=6.2,SNR=4.3						
	comp=Z,2.5nm,0.9s						
KIV	**Kislovodsk**	**23.03**	**298**	P	**P**	**18 47 42.8**	**-1.7**
KIV				IAmb	IAmb	18 48 15.8	
	comp=Z,9.0nm,0.7s						
KIV	**Kislovodsk**	**23.03**	**298**	*e*P	**P**	**18 47 44.2**	**-0.4**
KIV				*e*S	**S**	**18 51 48.2**	**+0.7**
KIV				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BELG	**Belogornoye**	**23.12**	**321**	P	**P**	**18 47 45.9**	**+0.7**
	comp=Z,7.4nm,0.5s,baz=342,slow=5.1,SNR=4.1						
	comp=Z,7.4nm,0.5s						
BELG	**Belogornoye**	**23.12**	**321**	*d i*P	**P**	**18 47 46.5**	**+1.3**
BELG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KNGR	**Kungurtug, Tuv**	**23.63**	**45**	⇓*e*P	**P**	**18 47 52.3**	**+2.2**
KNGR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KIRV	**Kirov**	**26.45**	**334**	⇑*e*P	**P**	**18 48 17.3**	**+2.0**
PZH	**PanZhiHua**	**27.72**	**102**	P	**P**	**18 48 29.4**	**+2.2**
SONM	**Songino Array**	**28.25**	**55**	PP	PP	18 49 21.7	-15
	comp=Z,0.3nm,0.4s,baz=245,slow=9.7,SNR=3.7						
OBN	**Obninsk**	**30.17**	**319**	⇑*e*P	**P**	**18 48 49.0**	**+0.6**
OBN				*e*		18 49 50.0	
OBN				*e*S	**S**	**18 53 42.2**	**+2.2**
OBN				pmax	pmax		
	comp=Z,30nm,1.7s						
CMAR	**Chiang Mai Arr**	**30.22**	**119**	P	**P**	**18 48 48.8**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=297,slow=7.8,SNR=5.4						
	comp=Z,0.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**30.22**	**119**	P	**P**	**18 48 50.5**	**+1.3**
CMAR	**Chiang Mai Arr**	**30.22**	**119**	*ce*P	**P**	**18 48 52.0**	**+2.8**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**31.63**	**69**	*e*P	**P**	**18 49 02.3**	**+0.7**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,5.1s						
KLMR	**Klimovskoe**	**31.70**	**331**	*e*P	**P**	**18 49 00.4**	**-1.4**
KLMR				*e*		18 50 06.8	
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
AKASG	**Malin Array Be**	**33.19**	**309**	P	**P**	**18 49 15.0**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=85,slow=6.9,SNR=8.1						
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**33.19**	**309**	*ce*P	**P**	**18 49 15.8**	**+0.9**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKBB	**Malin Array Si**	**33.19**	**309**	P	**P**	**18 49 14.7**	**-0.2**
AKBB				IAmb	IAmb	18 49 16.6	
	comp=Z,4.9nm,1.1s						
AKBB	**Malin Array Si**	**33.19**	**309**	⇓*i*P	**P**	**18 49 15.8**	**+0.9**
AKBB				pmax	pmax		
	comp=Z,8.0nm,1.5s						
KIEV	**Kiev**	**33.19**	**309**	P	**P**	**18 49 14.3**	**-0.7**
KIEV				IAmb	IAmb	18 49 16.6	
	comp=Z,4.4nm,1.1s						
KIEV	**Kiev**	**33.19**	**309**	P	**P**	**18 49 14.3**	**-0.7**
KIEV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
NRIK	**Noril'sk**	**34.23**	**10**	P	**P**	**18 49 25.3**	**+1.6**
	comp=Z,5.0nm,0.7s,baz=183,slow=5.9,SNR=6.5						
	comp=Z,5.0nm,0.7s						
NRIK	**Noril'sk**	**34.23**	**10**		**P**	**18 49 24.4**	**+0.6**
NRIK				IAmb	IAmb	18 49 26.5	
	comp=Z,5.8nm,0.8s						
NRIK	**Noril'sk**	**34.23**	**10**	*d i*P	**P**	**18 49 25.4**	**+1.6**
NRIK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MLR	**Muntele Rosu**	**35.02**	**299**	P	**P**	**18 49 30.6**	**-0.4**
MLR	**Muntele Rosu**	**35.02**	**299**	P	**P**	**18 49 30.6**	**-0.4**
MLR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BURAR	**Bucovina Array**	**35.52**	**303**	P	**P**	**18 49 35.4**	**+0.1**
BURAR	**Bucovina Array**	**35.52**	**303**	P	**P**	**18 49 35.4**	**+0.1**
BURAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FIA1	**FINESS Array S**	**37.71**	**326**	P	**P**	**18 49 53.8**	**+0.3**
FINES	**FINESS Array B**	**37.71**	**326**	P	**P**	**18 49 53.6**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=121,slow=9.7,SNR=18						
	comp=Z,1.8nm,0.6s						
FINES	**FINESS Array B**	**37.71**	**326**	P	**P**	**18 49 53.0**	**-0.5**
FINES	**FINESS Array B**	**37.71**	**326**	*i* P	**P**	**18 49 54.5**	**+1.0**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARCES	**ARCESS Array B**	**41.35**	**338**	P	**P**	**18 50 24.4**	**+0.8**
	comp=Z,4.1nm,0.8s,baz=112,slow=8.5,SNR=18						
	comp=Z,4.1nm,0.8s						
ARCES	**ARCESS Array B**	**41.35**	**338**	P	**P**	**18 50 23.2**	**-0.4**
SGRT	**San Giovanni R**	**42.80**	**295**	P	**P**	**18 50 35.8**	**-0.2**
HFS	**Hagfors**	**43.30**	**322**	P	**P**	**18 50 40.0**	**+0.5**
	comp=Z,2.9nm,0.4s,baz=93,slow=12,SNR=35						
	comp=Z,2.9nm,0.4s						
HFS	**Hagfors**	**43.30**	**322**	P	**P**	**18 50 40.0**	**+0.5**
NC405	**NORSAR Array S**	**44.37**	**323**	P	**P**	**18 50 48.1**	**-0.1**
NC602	**NORSAR Array S**	**44.42**	**323**	P	**P**	**18 50 48.2**	**-0.3**
NORES	**NORESS Array B**	**44.42**	**323**	P	**P**	**18 50 48.7**	**+0.2**
NB201	**NORSAR Array S**	**44.57**	**323**	P	**P**	**18 50 50.1**	**+0.4**
NB2	**NORSAR Subarra**	**44.61**	**323**	P	**P**	**18 50 50.3**	**+0.2**
	comp=Z,4.0nm,0.8s,baz=96,slow=7.9						
NB2	**NORSAR Subarra**	**44.61**	**323**	P	**P**	**18 50 50.3**	**+0.2**
NOA	**NORSAR Array B**	**44.61**	**323**	P	**P**	**18 50 50.8**	**+0.7**
	comp=Z,2.4nm,0.7s,baz=101,slow=7.3,SNR=14						
	comp=Z,2.4nm,0.7s						
KONO	**Kongsberg**	**45.32**	**321**	P	**P**	**18 50 55.4**	**-0.2**
KONO	**Kongsberg**	**45.32**	**321**	P	**P**	**18 50 55.4**	**-0.2**
KONO				pmax	pmax		
	comp=Z,62nm,1.4s						
TIXI	**Tiksi**	**45.83**	**22**	P	**P**	**18 50 59.2**	**-0.2**
TIXI				IAmb	IAmb	18 51 03.4	

	comp=Z,8.2nm,1.4s						
TIXI	**Tiksi**	**45.83**	**22**	*ce*P	**P**	**18 51 00.6**	**+1.1**
TIXI				pmax	pmax		
	comp=Z,12nm,2.5s						
SPITS	**Spitsbergen Ar**	**47.67**	**347**	P	**P**	**18 51 15.4**	**+1.6**
	comp=Z,6.0nm,1.0s,baz=115,slow=12,SNR=5.3						
	comp=Z,6.0nm,1.0s						
SENIN	**Lac Senin/Sane**	**47.83**	**303**	P	**P**	**18 51 15.8**	**+0.1**
SENIN				IAmb	IAmb	18 51 26.3	
	comp=Z,10.0nm,1.2s						
SUMG	**Summit**	**61.26**	**341**	P	**P**	**18 52 54.0**	**+1.4**
SUMG	**Summit**	**61.26**	**341**	P	**P**	**18 52 54.0**	**+1.4**
SUMG				pmax	pmax		
	comp=Z,18nm,1.5s						
TULEG	**Thule**	**64.60**	**350**	P	**P**	**18 53 13.6**	**-0.6**
TULEG				IAmb	IAmb	18 53 15.5	
	comp=Z,3.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**65.91**	**269**	P	**P**	**18 53 22.6**	**-1.0**
	comp=Z,2.7nm,0.5s,baz=46,slow=8.1,SNR=20						
	comp=Z,2.7nm,0.5s						
C16K	**Lisburne Hills**	**67.52**	**20**	P	**P**	**18 53 33.0**	**+0.1**
C18K	**Utukok River**	**68.34**	**18**	P	**P**	**18 53 38.2**	**0.0**
C18K				IAmb	IAmb	18 53 39.5	
	comp=Z,2.9nm,0.8s						
C19K	**Lookout Ridge**	**68.40**	**17**	P	**P**	**18 53 39.0**	**+0.5**
C19K				IAmb	IAmb	18 54 16.9	
	comp=Z,9.4nm,1.4s						
POIN	**Pond Inlet**	**69.16**	**351**	P	**P**	**18 53 43.9**	**+0.8**
POIN				IAmb	IAmb	18 53 45.3	
	comp=Z,11nm,1.4s						
D19K	**Kuna River**	**69.21**	**17**	P	**P**	**18 53 43.6**	**0.0**
D19K				IAmb	IAmb	18 53 44.9	
	comp=Z,3.9nm,0.7s						
E19K	**Redstone River**	**70.22**	**18**	P	**P**	**18 53 49.5**	**-0.2**
E19K				IAmb	IAmb	18 54 25.8	
	comp=Z,4.7nm,1.4s						
J19K	**Poorman**	**73.35**	**20**	P	**P**	**18 54 08.2**	**-0.3**
J19K				IAmb	IAmb	18 54 17.7	
	comp=Z,7.1nm,1.4s						
INK	**Inuvik**	**74.01**	**9**	P	**P**	**18 54 12.4**	**+0.2**
INK				IAmb	IAmb	18 54 13.7	
	comp=Z,2.4nm,0.7s						
INK	**Inuvik**	**74.01**	**9**	P	**P**	**18 54 12.4**	**+0.2**
INK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ILAR	**Eielson Array**	**74.86**	**16**	P	**P**	**18 54 17.8**	**+0.5**
	comp=Z,1.2nm,1.1s,baz=323,slow=4.4,SNR=5.9						
	comp=Z,1.2nm,1.1s						
KTH	**Kantishna Hill**	**74.93**	**18**	P	**P**	**18 54 17.6**	**-0.2**
DAWY	**Dawson**	**77.01**	**13**	P	**P**	**18 54 29.6**	**0.0**
DAWY				IAmb	IAmb	18 54 56.2	
	comp=Z,6.2nm,1.4s						
BLKN	**Baker Lake**	**79.15**	**354**	P	**P**	**18 54 41.3**	**0.0**
YKAW3	**Yellowknife Wh**	**81.30**	**3**	P	**P**	**18 54 52.8**	**-0.1**
YKA	**Yellowknife Ar**	**81.37**	**3**	P	**P**	**18 54 53.5**	**+0.3**
	comp=Z,2.2nm,0.9s,baz=346,slow=5.6,SNR=25						
	comp=Z,2.2nm,0.9s						
YKA	**Yellowknife Ar**	**81.37**	**3**	*i* P	**P**	**18 54 54.0**	**+0.8**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ASAR	**Alice Springs**	**84.01**	**125**	P	**P**	**18 55 07.6**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=311,slow=4.6,SNR=7.0						
	comp=Z,0.5nm,0.8s						

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*IDC **20** 19:16:10.5±3.9,31°.04N×142°.99E,h0^{km},mb3.7/7, mbtmp3.6/8,ML2.9/1,MS2.5/2,Error ellipse: s-maj=136.1km s-min=20.9km az=69.0*

ISC 20 19:16:15.0±3.2,**31°.0N**±0°.3×**143°.0E**±0°.7,**h30**^{km},**n10**, σ**0^{s}85**/8,**mb3.6**/7,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**3.99**	**190**	LR	LR	19 18 35.4	
	comp=Z,55nm,18.7s,baz=98,slow=36						
MJAR	**Matsushiro Arr**	**6.77**	**325**	Pn	**Pn**	**19 17 52.7**	**+0.3**
	0.2nm,0.3s,baz=158,slow=11,SNR=20						
	2.8nm,0.7s						
KSRS	**Korea Array**	**13.99**	**301**	LR	LR	19 26 12.4	
	comp=Z,16nm,18.3s,baz=310,slow=43						
SONM	**Songino Array**	**32.48**	**312**	P	**P**	**19 22 43.5**	**+0.6**
	0.5nm,0.7s,baz=128,slow=9.5,SNR=3.1						
	0.5nm,0.7s						
LZDM	**Lanzhou Array**	**32.97**	**289**	P	**P**	**19 22 47.3**	**-0.2**
	3.8nm,0.4s,baz=63,slow=6.6,SNR=2.3						
	3.8nm,0.4s						
MKAR	**Makanchi Array**	**48.58**	**307**	P	**P**	**19 24 55.5**	**-0.2**
	0.7nm,0.8s,baz=94,slow=11,SNR=5.2						
	0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**50.85**	**312**	P	**P**	**19 25 11.4**	**-1.3**
	0.5nm,0.7s,baz=87,slow=7.6,SNR=5.4						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**51.37**	**190**	P	**P**	**19 25 16.3**	**-0.6**
	0.4nm,0.4s,baz=6.7,slow=7.7,SNR=10						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**55.09**	**190**	P	**P**	**19 25 45.3**	**+1.0**
	0.2nm,0.5s,baz=5.0,slow=6.5,SNR=5.1						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**55.66**	**316**	P	**P**	**19 25 48.2**	**0.0**
	0.2nm,0.5s,baz=82,slow=10,SNR=2.4						
	0.2nm,0.5s						

CATAC 20 19:20:50.9±0.3,**10°N**±2°×**8°4W**±°,**h33**^{km}±3^{km},**M4.0**/16, **MLv4.0**/16,**Error ellipse: s-maj=5.1km s-min=2.4km az=49.6,confirmed,Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCR2	**La Lucha 2**	**0.21**	**14**	S	Sb	19 21 05.9	+3.2
OCHAL	**Ojochal**	**0.59**	**137**	P	Pb	19 21 03.3	+0.3
OCHAL	**Ojochal**	**0.59**	**137**	S	Sn	19 21 13.8	+2.3
DRK0	**Durika**	**0.85**	**108**	P	Pn	19 21 06.0	-0.6
DRK0	**Durika**	**0.85**	**108**	S	Sn	19 21 18.1	+0.2
SOCE	**Pocosol**	**1.01**	**327**	P	Pn	19 21 09.2	+0.4
TRT2	**Tortugero**	**1.07**	**17**	S	Sb	19 21 24.0	-0.6
TRT2	**Tortugero**	**1.07**	**17**	P	Pn	19 21 09.1	-0.4
JTS	**Las Juntas de**	**1.16**	**311**	P	Pn	19 21 10.8	0.0
JTS				S	Sn	19 21 26.3	+0.8
COVE	**Coope Vega, Sa**	**1.23**	**344**	P	Pn	19 21 11.3	-0.4
COVE	**Coope Vega, Sa**	**1.23**	**344**	S	Sb	19 21 28.3	-0.8
PTJ1	**Puerto Jimnez**	**1.24**	**143**	P	Pb	19 21 13.1	-0.7
PIRO	**Carate, Puerto**	**1.33**	**147**	P	Pn	19 21 12.9	-0.2
PIRO	**Carate, Puerto**	**1.33**	**147**	S	Sb	19 21 31.4	-0.6
CMARA	**Lajas Hojancha**	**1.43**	**290**	S	Sn	19 21 31.8	-0.4
CMARA	**Lajas Hojancha**	**1.43**	**290**	P	Pn	19 21 14.4	-0.2
CDITO	**Canoas**	**1.51**	**129**	P	Pn	19 21 15.0	-0.6
BRU2	**Volcan**	**1.54**	**118**	P	Pn	19 21 16.0	-0.2
BRU2	**Volcan**	**1.54**	**118**	S	Sn	19 21 36.4	+1.4
ELI1	**Hacienda Flor**	**1.84**	**307**	P	Pn	19 21 20.7	+0.6
BLUN	**Bluefields**	**2.47**	**6**	S	Sn	19 21 58.6	+0.7
NANN	**Nandasmo**	**3.13**	**320**	S	Sn	19 22 15.6	+1.3
MAS3	**Al N del Volca**	**3.23**	**320**	S	Sn	19 22 17.7	+1.0
BOAB	**BOACO BROADBAN**	**3.30**	**332**	P	Pn	19 21 40.2	0.0
BOAB	**BOACO BROADBAN**	**3.30**	**332**	S	Sn	19 22 19.3	+1.0
MATN	**Matagalpa**	**3.84**	**332**	P	Pn	19 21 47.1	-0.7
MATN	**Matagalpa**	**3.84**	**332**	S	Sn	19 22 32.8	+0.9
LIMN	**Finca el Limon**	**4.17**	**327**	P	Pn	19 21 52.1	-0.2
LIMN				S	Sn	19 22 40.8	+0.8
RCON	**San Juan de Ri**	**4.43**	**333**	P	Pn	19 21 56.7	+0.8
RCON	**San Juan de Ri**	**4.43**	**333**	S	Sn	19 22 46.7	+0.2
RCVN	**Varillal2**	**4.54**	**333**	P	Pn	19 21 58.3	+0.9
RCVN	**Varillal2**	**4.54**	**333**	S	Sn	19 22 49.5	+0.4

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*IDC **20** 19:29:13.0±5.9,36°.89N×71°.73E,h262^{km}±42^{km},mb3.2/5, mbtmp3.9/11,Error ellipse: s-maj=55.6km s-min=35.3km az=179.0*

*NNC **20** 19:29:16.7±4.7,37°.17N×71°.32E,h240^{km}±60^{km},mb2.2, mpv3.0,Error ellipse: s-maj=51.9km s-min=40.7km az=11.0*

ISC 20 19:29:12.8±2.1,**36°.9N**±0°.2×**71°.5E**±0°.1,**h250**^{km},**n15**, σ**1^{s}16**/19,**mb3.6**/5,**3C-2D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**6.13**	**21**	P	**Pn**	**19 30 42.9**	**+0.3**
	2.3nm,0.5s,baz=184,slow=8.8,SNR=8.1						
AAK				S	**S**	**19 31 55.3**	**+0.8**
	2.4nm,0.4s,baz=305,slow=21,SNR=6.3						
AAK	**Ala-Archa**	**6.13**	**21**	⇓P	**Pn**	**19 30 44.1**	**+1.5**
	0.9nm,0.5s						
AAK				⇑S	**S**	**19 31 55.2**	**+0.7**
	5.3nm,0.9s						
KK31	**Karatay Array**	**6.21**	**353**	⇓P	**Pn**	**19 30 44.3**	**+0.8**
	0.6nm,0.3s,baz=168,slow=11,SNR=19						
KK31				⇑S	**S**	**19 31 53.7**	**-2.4**
	6.7nm,0.8s,baz=184,slow=18,SNR=6.4						
MKAR	**Makanchi Array**	**12.68**	**36**	P	**P**	**19 32 05.5**	**-1.4**
	1.4nm,0.9s,baz=219,slow=11,SNR=11						
KURBB	**Kurchatov Arra**	**14.57**	**18**	P	**Pn**	**19 32 26.9**	**-0.8**
	0.8nm,0.5s,baz=210,slow=11,SNR=7.8						
AB31	**Akbulak array**	**14.92**	**329**	P	**P**	**19 32 32.6**	**+1.1**
	0.2nm,0.3s,baz=135,slow=13,SNR=13						
BVAR	**Borovoye Array**	**16.11**	**357**	P	**P**	**19 32 45.7**	**+1.2**
	1.4nm,0.5s,baz=165,slow=11,SNR=13						
AKTO	**Aktyubinsk**	**16.63**	**328**	P	**P**	**19 32 50.8**	**+0.5**
	2.5nm,0.4s,baz=131,slow=9.1,SNR=17						
AKTO				S	**S**	**19 35 52.0**	**+1.1**
	1.2nm,0.8s,baz=304,slow=22,SNR=1.2						
AKTO	**Aktyubinsk**	**16.63**	**328**	⇑P	**P**	**19 32 51.6**	**+1.4**
	2.9nm,0.7s						
ZALV	**Zalesovo Beam**	**19.34**	**24**	P	**P**	**19 33 18.3**	**-1.2**
	1.7nm,0.3s,baz=210,slow=12,SNR=10						
ARTI	**Arti**	**21.38**	**340**	P	**P**	**19 33 41.4**	**+0.7**
	1.7nm,0.6s,baz=108,slow=5.7,SNR=4.3						
	1.7nm,0.6s						
FINES	**FINESS Array B**	**37.37**	**326**	P	**P**	**19 36 01.6**	**+0.3**
	4.8nm,1.1s,baz=111,slow=8.5,SNR=2.2						
	4.8nm,1.1s						
ARCES	**ARCESS Array B**	**40.91**	**337**	P	**P**	**19 36 30.9**	**+0.5**
	0.7nm,0.5s,baz=126,slow=6.2,SNR=11						
	0.7nm,0.5s						
HFS	**Hagfors**	**42.99**	**322**	P	**P**	**19 36 46.9**	**-0.4**
	1.6nm,0.6s,baz=98,slow=11,SNR=8.3						
	1.6nm,0.6s						
NOA	**NORSAR Array B**	**44.29**	**323**	P	**P**	**19 36 56.8**	**-0.9**
	0.4nm,0.6s,baz=95,slow=7.8,SNR=1.8						
	0.4nm,0.6s						

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*NEIC **20** 19:40:34.4±2.0,24°.6S±0°.1×179°.8W±0°.2,h486^{km}±10^{km}, mb4.3/16,Error ellipse: s-maj=25.4km s-min=15.3km az=220.0*

*IDC **20** 19:40:48.5±9.5,24°.52S×179°.45E,h645^{km}±114^{km}, mb3.0/6,mbtmp4.1/6,Error ellipse: s-maj=56.7km s-min=31.0km az=54.0*

ISC 20 19:40:39.2±0.9,**24°.4S**±0°.1×**179°.9E**±0°.1,**h550**^{km},**n27**, σ**1^{s}68**/27,**mb3.9**/12,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.83**	**345**	P	**P**	**19 42 22.5**	**-3.2**
MARNC	**Mare, Loyalty**	**11.29**	**282**	P	**P**	**19 43 09.1**	**-1.3**
PINNC	**Pines Island,**	**11.54**	**276**	P	**P**	**19 43 12.5**	**-0.5**
DZM	**Mont Dzumac**	**12.56**	**278**	P	**P**	**19 43 23.5**	**-0.2**
MRZ	**Mangatainoka R**	**16.63**	**191**	P	**P**	**19 43 59.3**	**-5.0**
NNZ	**Nelson**	**17.65**	**196**	P	**P**	**19 44 11.0**	**-2.5**
EIDS	**Eidsvold**	**26.12**	**262**	P	**P**	**19 45 31.1**	**+1.1**
EIDS				IAmb	IAmb	19 45 45.1	
	comp=Z,7.6nm,1.1s						
CAN	**Canberra**	**28.81**	**241**	P	**P**	**19 45 54.3**	**+0.9**
CTAO	**Charters Tower**	**31.37**	**271**	P	**P**	**19 46 16.2**	**+0.7**
STKA	**Stephens Creek**	**34.44**	**249**	P	**P**	**19 46 42.2**	**+0.8**
	comp=Z,1.1nm,0.3s,baz=112,slow=13,SNR=4.0						
	comp=Z,1.1nm,0.3s						
STKA	**Stephens Creek**	**34.44**	**249**	P	**P**	**19 46 41.6**	**+0.3**
PMG	**Port Moresby**	**34.55**	**290**	P	**P**	**19 46 43.0**	**+0.6**
PMG				IAmb	IAmb	19 46 43.2	
	comp=Z,11nm,0.8s						
COEN	**Coen**	**36.08**	**280**	P	**P**	**19 46 57.4**	**+2.2**
COEN				IAmb	IAmb	19 47 16.0	
	comp=Z,22nm,1.4s						
BBOO	**Buckleboo**	**39.16**	**247**	P	**P**	**19 47 19.7**	**-0.4**
ASAR	**Alice Springs**	**41.85**	**261**	P	**P**	**19 47 41.7**	**0.0**
	comp=Z,0.8nm,0.4s,baz=95,slow=7.3,SNR=14						
	comp=Z,0.8nm,0.4s						
WR8	**Warramunga Arr**	**42.11**	**267**	P	**P**	**19 47 43.4**	**-0.4**
WR8				IAmb	IAmb	19 48 19.7	
	comp=Z,5.2nm,1.2s						
WRA	**Warramunga Arr**	**42.26**	**267**	P	**P**	**19 47 44.9**	**0.0**
	comp=Z,2.0nm,0.5s,baz=104,slow=8.0,SNR=21						
	comp=Z,2.0nm,0.5s						
WRA	**Warramunga Arr**	**42.26**	**267**	P	**P**	**19 47 44.2**	**-0.7**
FORT	**Forrest**	**46.04**	**250**	P	**P**	**19 48 13.3**	**-0.6**
FORT				IAmb	IAmb	19 48 32.2	
	comp=Z,20nm,1.4s						
KNRA	**Kununurra**	**48.57**	**270**	P	**P**	**19 48 33.7**	**+0.6**
KNRA				IAmb	IAmb	19 48 54.1	
	comp=Z,16nm,1.3s						
FITZ	**Fitzroy Crossi**	**50.68**	**266**	P	**P**	**19 48 49.0**	**+0.5**
	comp=Z,2.4nm,0.7s,baz=123,slow=7.5,SNR=8.0						
	comp=Z,2.4nm,0.7s						
BKB	**Balikpapan**	**64.97**	**281**	P	**P**	**19 50 27.0**	**+1.5**
QSPA	**South Pole Qui**	**65.71**	**180**	P	**P**	**19 50 30.6**	**+1.2**
	comp=Z,1.3nm,0.6s,baz=38,slow=0.9,SNR=5.7						
	comp=Z,1.3nm,0.6s						
BELA	**Belgrano 2**	**75.98**	**173**	P	**P**	**19 51 29.6**	**+0.2**
TXAR	**Lajitas Array**	**90.78**	**58**	P	**P**	**19 52 47.0**	**+2.8**
	comp=Z,0.5nm,0.8s,baz=201,slow=8.0,SNR=5.4						
	comp=Z,0.5nm,0.8s						
HFS	**Hagfors**	**142.99**	**349**	PKP	**PKPdf**	**19 59 08.5**	**-1.4**
	comp=Z,1.6nm,0.4s,baz=53,slow=2.6,SNR=22						
EKA	**Eskdalemuir Ar**	**149.00**	**3**	PKPbc	**PKiKP**	**19 59 25.9**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=345,slow=2.9,SNR=4.9						

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*BJI **20** 19:40:50.3,32°.90N×142°.55E,h5^{km},mB5.2/63,mb5.0/84, Ms5.1/86,Ms7 5.0/85*

*IDC **20** 19:40:51.7±0.4,32°.86N×142°.65E,h0^{km},mb5.0/35, mbtmp5.0/43,ML4.4/8,MS4.3/70,Error ellipse: s-maj=12.1km s-min=9.9km az=90.0*

*MOS **20** 19:40:51.6±1.1,32°.87N×142°.57E,h8^{km},mb5.6/113, MS5.0/19,Error ellipse: s-maj=6.4km s-min=3.3km az=121.1*

*NEIC **20** 19:40:52.5±1.6,32°.86N±0°.06×142°.66E±0°.08,h10^{km}±1^{km}, mb5.5/498,Mww5.2/40,Error ellipse: s-maj=11.1km s-min=10.5km az=52.0*

*NEIC **20** 19:40:52.5,33°.06N×142°.75E,h12^{km},Moment Tensor Solution. Duration: 2^{s}2 Moment tensor: Scale 10^{16}Nm; M_{rr}-8.33; $M_{\theta\theta}$1.23; $M_{\phi\phi}$7.11; $M_{r\theta}$0.52; $M_{\theta\phi}$-1.96; $M_{\phi r}$2.50; Fault plane solution: $M_0$8.43000×10^{16} NP1: ϕ_s336.26000°,δ37.61000°,λ-101.57000°. NP2: ϕ_s170.75000°,δ53.28000°,λ-81.22000°. Principal axes: T 8.0078, Plg8.0000°, Azm254.0000°; N 0.7876, Plg7.0000°, Azm345.0000°; P -8.7954, Plg79.0000°, Azm117.0000°;*

*NEIC **20** 19:40:52.5,32°.86N×142°.75E,h12^{km}*

*GFZ **20** 19:40:53.8,32°.87N×142°.66E,h16^{km},MW5.3,Moment Tensor Solution. s61 Moment tensor: M_{rr}-1.05; $M_{\theta\theta}$0.15; $M_{\phi\phi}$0.90; $M_{r\theta}$-0.18; $M_{\theta\phi}$-0.04; $M_{\phi r}$0.46; Fault plane solution: NP1:ϕ_s170.00000°,δ58.00000°, λ-96.00000°. NP2:ϕ_s3.00000°,δ32.00000°,λ-78.00000°. Principal axes: T 1.0100, Plg13.0000°, Azm265.0000°; N 0.1600, Plg6.0000°, Azm173.0000°; P -1.1700, Plg76.0000°, Azm59.0000°;*

*JMA **20** 19:40:54.6±0.4,33°.0N±0°.9×14°2E±°,h2^{km},MD5.1/37, MW5.3/37,FAR E OFF IZU ISLANDS*

*NIED **20** 19:40:54.6,33°.01N×142°.33E,h2^{km},MW5.2,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-6.26; $M_{\theta\theta}$0.97; $M_{\phi\phi}$5.28; $M_{r\theta}$-4.22; $M_{\theta\phi}$-1.62; $M_{\phi r}$3.45; Fault plane solution: $M_0$8.08000×10^{16} NP1: ϕ_s355.00000°,δ28.00000°,λ-60.00000°. NP2: ϕ_s142.00000°,δ66.00000°,λ-105.00000°.*

*BGR **20** 19:40:56.1,32°.61N×143°.37E,h42^{km},mb5.3*

*GCMT **20** 19:40:56.5±0.1,32°.88N±0°.01×142°.65E±0°.01,h12^{km}, MW5.3/147,Moment Tensor Solution. s88,c135; s147,c258; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.97±.01; $M_{\theta\theta}$0.03±.01; $M_{\phi\phi}$0.94±.01; $M_{r\theta}$0.01±.03; $M_{\theta\phi}$-0.22±.01; $M_{\phi r}$0.29±.03; Best double couple: $M_0$1.02200×10^{17} NP1:ϕ_s343.00000°,δ37.00000°, λ-97.00000°. NP2:ϕ_s171.00000°,δ53.00000°, λ-85.00000°. Principal axes: T 1.0310, Plg8.0000°, Azm258.0000°; N -0.0160, Plg4.0000°, Azm348.0000°; P -1.0130, Plg81.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 19:40:53.6±0.3,**32°.88N**±0°.03×**142°.63E**±0°.03,**h16**^{km}±1^{km}, **h16**^{km}**:pP-P,n1398,**σ**1^{s}81**/1256,**mb5.5**/448,**MS4.6**/113, **48C-104D,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**2.24**	**323**	⇓P	**Pn**	**19 41 29.7**	**+0.1**
JHJ2	**Mitsune**	**2.38**	**276**		**Pn**	**19 41 31.7**	**-0.1**
JHJ2				Sn	**Sn**	**19 41 58.6**	**-2.1**
JHJ2	**Mitsune**	**2.38**	**276**	P	**Pn**	**19 41 32.7**	**+0.8**
JHJ2	**Mitsune**	**2.38**	**276**	*i* P	**Pn**	**19 41 31.8**	**-0.1**
JHJ2	**Mitsune**	**2.38**	**276**	A	A	19 41 31.8	
	comp=N,31nm,5.6s,comp=E,38nm,8.9s						
JHCJ	**Hachijojimakas**	**2.39**	**275**	P	**Pn**	**19 41 31.8**	**-0.3**
JHCJ	**Hachijojimakas**	**2.39**	**275**	A	A	19 41 31.8	
	comp=N,22nm,5.0s,comp=E,35nm,4.3s						
JHJ	**Hachijo jima 2**	**2.40**	**277**	Pn	**Pn**	**19 41 31.8**	**-0.5**
	comp=E,284nm,0.3s,baz=351,slow=18,SNR=234						
JHJ				Sn	**Sn**	**19 42 01.6**	**+0.1**
	comp=E,879nm,0.3s,baz=243,slow=21,SNR=5.6						
	comp=E,741nm,0.4s						
BSO2	**Boso 2**	**2.44**	**321**	*e*S	**Sn**	**19 42 02.1**	**+0.3**
JAOM	**Aogashimamukai**	**2.45**	**261**	*e*P	**Pn**	**19 41 33.3**	**+0.3**
JAOM	**Aogashimamukai**	**2.45**	**261**	A	A	19 41 33.3	
	comp=N,55nm,4.5s,comp=E,69nm,4.3s						
BSO3	**Boso 3**	**2.61**	**318**	*e*P	**Pn**	**19 41 35.2**	**+0.3**
BSO3				*e*S	**Sn**	**19 42 05.8**	**-0.2**
JMKN	**Mikurajimanish**	**2.74**	**293**	*e*P	**Pn**	**19 41 36.8**	**-0.1**
JMKN				*e*S	**Sn**	**19 42 08.2**	**-1.5**
JMKN	**Mikurajimanish**	**2.74**	**293**	A	A	19 41 36.8	
	comp=N,32nm,10.5s,comp=E,33nm,6.9s						
JMYK	**Miyake Tsubota**	**2.83**	**295**	*e*P	**Pn**	**19 41 38.2**	**0.0**
JMYK				*e*S	**Sn**	**19 42 09.9**	**-2.2**
JMYK	**Miyake Tsubota**	**2.83**	**295**	A	A	19 41 38.2	
	comp=N,44nm,2.9s,comp=E,35nm,8.1s						
BSO4	**Boso 4**	**2.84**	**319**	P	**Pn**	**19 41 39.1**	**+0.8**
JKUC	**kamogawauchiur**	**3.04**	**319**	A	A	19 41 41.2	
	comp=N,19nm,2.9s,comp=E,15nm,6.2s						
TATJ	**Tateyama 2**	**3.13**	**314**	A	A	19 41 42.4	
	comp=N,29nm,6.5s,comp=E,26nm,6.3s						
JCAJ	**Choshiashikaji**	**3.19**	**333**	A	A	19 41 43.9	
	comp=N,12nm,3.1s,comp=E,13nm,7.4s						
JCCN	**Chibachonan**	**3.19**	**322**	A	A	19 41 43.4	
	comp=N,34nm,7.2s,comp=E,57nm,7.8s						
JSKK	**Shikinejimakit**	**3.20**	**298**	A	A	19 41 43.2	
	comp=N,19nm,4.2s,comp=E,27nm,2.2s						
JTHY	**Toshimahigashi**	**3.23**	**301**	A	A	19 41 43.6	
	comp=N,28nm,4.3s,comp=E,33nm,4.6s						
JIM2	**Oshima 3**	**3.23**	**305**	A	A	19 41 43.7	
	comp=N,22nm,3.3s,comp=E,19nm,0.9s						
JSMT	**Sammumatsuo**	**3.30**	**327**	A	A	19 41 45.1	
	comp=N,49nm,5.4s,comp=E,50nm,5.1s						
JYO	**Yokosk**	**3.40**	**314**	A	A	19 41 46.2	
	comp=N,19nm,0.9s,comp=E,23nm,8.8s						
JIHU	**Itakohorinouch**	**3.54**	**331**	A	A	19 41 48.7	
	comp=N,29nm,1.6s,comp=E,34nm,3.8s						
JIZS	**Izushimoda**	**3.62**	**301**	A	A	19 41 49.2	
	comp=N,11nm,3.1s,comp=E,13nm,4.8s						
JHTM	**Izuhatsuma**	**3.66**	**306**	A	A	19 41 49.7	
	comp=N,20nm,1.4s,comp=E,17nm,5.5s						
TOK	**Tokyo**	**3.67**	**320**	A	A	19 41 50.3	
	comp=N,39nm,6.0s,comp=E,35nm,6.9s						
JOD2	**Odawara 2**	**3.78**	**310**	*e*P	**Pn**	**19 41 50.6**	**-0.7**
JOD2	**Odawara 2**	**3.78**	**310**	A	A	19 41 50.6	
	comp=N,9.0nm,2.1s,comp=E,9.0nm,2.3s						
JHYU	**Hitachinakayam**	**3.84**	**335**	A	A	19 41 53.2	
	comp=N,9.0nm,1.5s,comp=E,8.0nm,0.7s						
JSGW	**Sagamiharawaka**	**3.93**	**315**	A	A	19 41 53.7	
	comp=N,6.0nm,0.5s,comp=E,7.0nm,3.1s						
JFNN	**Fujinakano**	**4.01**	**306**	A	A	19 41 54.7	
	comp=N,12nm,3.1s,comp=E,10.0nm,2.3s						
JSG	**Sagara**	**4.11**	**297**		**Pn**	**19 41 55.9**	**+0.1**
JSG	**Sagara**	**4.11**	**297**	P	**Pn**	**19 41 57.1**	**+1.3**
JSG	**Sagara**	**4.11**	**297**	A	A	19 41 56.1	
	comp=N,21nm,5.7s,comp=E,12nm,19.4s						
TK02	**Tokai 2**	**4.21**	**286**	*e*P	**Pn**	**19 41 58.1**	**+1.2**
SHZ3	**Shizuoka 3**	**4.27**	**302**	A	A	19 41 58.4	
	comp=N,7.0nm,4.5s,comp=E,7.0nm,4.4s						
JYN	**Shimob**	**4.28**	**309**	*e*P	**Pn**	**19 41 58.3**	**+0.1**
JKKS	**Kakegawashinom**	**4.29**	**297**	A	A	19 41 58.7	
	comp=N,12nm,4.0s,comp=E,12nm,4.0s						
TTO5	**TONANKAI O.B.S**	**4.33**	**290**	A	A	19 41 59.2	
	comp=N,32nm,10.2s,comp=E,21nm,13.3s						
JRY	**Ryogami san**	**4.39**	**317**	*e*P	**Pn**	**19 41 59.5**	**-0.2**
JRY				*e*S	**Sn**	**19 42 48.2**	**-2.4**
JAG	**Ashikaga**	**4.40**	**324**	*e*P	**Pn**	**19 42 00.1**	**+0.3**
JAG				S	**Sn**	**19 42 48.0**	**-2.8**
JAG	**Ashikaga**	**4.40**	**324**	A	A	19 42 00.1	
	comp=N,8.0nm,1.4s,comp=E,6.0nm,5.3s						
TTO4	**TONANKAI O.B.S**	**4.40**	**286**	A	A	19 42 00.3	
	comp=N,19nm,12.8s,comp=E,21nm,8.9s						
TTO3	**TONANKAI O.B.S**	**4.49**	**284**	A	A	19 42 01.5	
	comp=N,26nm,13.5s,comp=E,24nm,10.2s						
JSB	**Shiboa**	**4.65**	**332**	A	A	19 42 04.5	
	comp=N,11nm,3.9s,comp=E,11nm,5.7s						
JNY	**Yasuok**	**4.67**	**303**	A	A	19 42 04.0	
	comp=N,6.0nm,3.8s,comp=E,5.0nm,6.8s						
JFK	**Kawauchi**	**4.71**	**343**	A	A	19 42 05.7	
	comp=N,3.0nm,7.9s,comp=E,4.0nm,3.7s						
JNT	**Takato**	**4.77**	**310**	A	A	19 42 05.5	
	comp=N,5.0nm,8.1s,comp=E,5.0nm,3.7s						
TTO2	**TONANKAI O.B.S**	**4.77**	**282**	A	A	19 42 05.5	
	comp=N,28nm,12.0s,comp=E,30nm,9.0s						
TTO1	**TONANKAI O.B.S**	**4.95**	**280**	*e*P	**Pn**	**19 42 09.6**	**+2.5**
TTO1	**TONANKAI O.B.S**	**4.95**	**280**	A	A	19 42 09.6	
	comp=N,32nm,7.7s,comp=E,26nm,8.2s						
JOTO	**OTAMA OYAMA**	**5.04**	**339**	*e*P	**Pn**	**19 42 08.0**	**-0.5**
JOTO				*e*S	**Sn**	**19 43 01.4**	**-5.0**
JAO	**Obara**	**5.05**	**300**	A	A	19 42 09.5	
	comp=N,4.0nm,5.3s,comp=E,4.0nm,8.9s						
JGF	**Kuroka**	**5.14**	**303**		**Pn**	**19 42 11.4**	**+1.4**
JGF	**Kuroka**	**5.14**	**303**	P	**Pn**	**19 42 11.7**	**+1.7**
MJAR	**Matsushiro Arr**	**5.16**	**316**	Pn	**Pn**	**19 42 10.4**	**+0.1**
	comp=E,8.8nm,0.3s,baz=56,slow=14,SNR=266						
MJAR				Sn	**Sn**	**19 43 07.7**	**-1.7**
	comp=E,17nm,0.3s,baz=181,slow=16,SNR=11						
	comp=E,30nm,0.3s						
MJAR	**Matsushiro Arr**	**5.16**	**316**		**Pn**	**19 42 11.5**	**+1.3**
MJAR	**Matsushiro Arr**	**5.16**	**316**	P	**Pn**	**19 42 11.5**	**+1.3**
MJAR						19 43 07.7	
MAJO	**Matsushiro**	**5.16**	**316**		**Pn**	**19 42 11.2**	**+1.0**
MAJO	**Matsushiro**	**5.16**	**316**	P	**Pn**	**19 42 11.4**	**+1.1**
MAJO	**Matsushiro**	**5.16**	**316**	*c i*P	**Pn**	**19 42 11.3**	**+1.0**
MAT	**Matsushiro**	**5.16**	**316**	*e*P	**Pn**	**19 42 11.4**	**+1.2**
MAT				*e*S	**Sn**	**19 43 08.5**	**-1.0**
MJB9	**Matsu-Tunnel**	**5.17**	**316**		**Pn**	**19 42 11.3**	**+1.0**
JIE	**Ise**	**5.17**	**289**	*e*P	**Pn**	**19 42 10.9**	**+0.6**
INU	**Inuyama**	**5.27**	**299**		**Pn**	**19 42 12.9**	**+1.2**
INU	**Inuyama**	**5.27**	**299**	P	**Pn**	**19 42 13.5**	**+1.8**
JYAR	**Yonezawaarcadi**	**5.42**	**339**	A	A	19 42 15.5	
	comp=N,8.0nm,5.8s,comp=E,8.0nm,1.2s						
JYTA	**Yamagatataniai**	**5.58**	**301**	*e*P	**Pn**	**19 42 17.7**	**+1.7**
JJN	**Nakama**	**5.59**	**320**	A	A	19 42 17.2	
	comp=N,7.0nm,3.9s,comp=E,6.0nm,4.3s						
JNS	**Sasagawa**	**5.62**	**332**	*e*P	**Pn**	**19 42 16.6**	**0.0**
JNS				*e*S	**Sn**	**19 43 16.1**	**-4.7**
JIZZ	**Izumozaki**	**5.64**	**326**	A	A	19 42 18.2	
	comp=N,12nm,3.7s,comp=E,15nm,3.7s						
CBIJ	**Chichi jima**	**5.77**	**184**	*e*P	**Pn**	**19 42 16.3**	**-2.4**
JCJ	**Chichijima**	**5.77**	**184**	Sn	Sn	19 43 10.2	-14
	comp=E,256nm,0.3s,baz=284,slow=23,SNR=9.8						
JCJ	**Chichijima**	**5.77**	**184**		**Pn**	**19 42 17.1**	**-1.6**
JCJ	**Chichijima**	**5.77**	**184**	P	**Pn**	**19 42 18.6**	**-0.1**
JOFO	**Osakifurukawao**	**5.88**	**347**	A	A	19 42 22.4	
	comp=N,17nm,3.4s,comp=E,18nm,2.5s						
JMK	**Ichinoseki**	**6.17**	**350**	P	**Pn**	**19 42 22.7**	**-1.4**
JSD	**Sado**	**6.26**	**327**		**Pn**	**19 42 24.5**	**-0.9**
JSD	**Sado**	**6.26**	**327**	P	**Pn**	**19 42 25.6**	**+0.3**
JMN	**Monobe**	**7.38**	**279**		**Pn**	**19 42 42.2**	**+1.5**
JMN	**Monobe**	**7.38**	**279**	P	**Pn**	**19 42 43.9**	**+3.2**
ERM	**Erimo**	**9.13**	**2**		**Pn**	**19 43 00.3**	**-4.4**
ERM	**Erimo**	**9.13**	**2**	P	**Pn**	**19 43 00.8**	**-3.9**
ERM	**Erimo**	**9.13**	**2**	P	**Pn**	**19 43 00.3**	**-4.4**
JEM	**Erimo**	**9.13**	**2**	P	**Pn**	**19 43 01.4**	**-3.3**
JNU	**Nakatsue**	**9.87**	**275**	Pn	**Pn**	**19 43 17.1**	**+2.2**
	comp=E,1.6nm,0.3s,baz=97,slow=4.1,SNR=16						
JNU				LR	LR	19 46 50.4	
	comp=E,5µm,21.8s,baz=108,slow=36						
	comp=E,36nm,0.8s						
JNU	**Nakatsue**	**9.87**	**275**		**Pn**	**19 43 14.7**	**-0.2**
JNU	**Nakatsue**	**9.87**	**275**	P	**Pn**	**19 43 17.4**	**+2.4**
NMR	**Nemuro--Hokkai**	**10.76**	**12**	⇓*i*P	**Pn**	**19 43 22.6**	**-4.3**
GLVR	**Golovnino**	**11.08**	**11**	P	Pn	19 43 26.4	-4.9
GLVR				pmax	pmax		
	comp=Z,76nm,0.1s						
JKA	**Kamikawa-asahi**	**11.22**	**360**		**Pn**	**19 43 30.5**	**-2.8**
ASAJ	**Asahikawa**	**11.22**	**360**	Pn	**Pn**	**19 43 32.0**	**-1.3**
	comp=Z,11nm,0.3s,baz=214,slow=14,SNR=44						
ASAJ				Sn	**Sn**	**19 45 31.8**	**-6.6**

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       comp=Z,6.1nm,0.3s,baz=318,slow=33,SNR=5.8
ASAJ                                    LR      LR        19 50 25.1
       comp=Z,1µm,18.1s,baz=180,slow=51
       comp=Z,51nm,0.5s
RUSJ   Misakicho          11.40  10  eP     Pn        19 43 31.5  -4.2
YUK    Yuzh-Kuril'sk      11.42  12d iP     Pn        19 43 32.9  -3.2
YUK                                  pmax   pmax
       comp=N,86nm,0.2s
YUK                                  pmax   pmax
       comp=E,51nm,0.2s
YUK                                  pmax   pmax
       comp=Z,197nm,0.2s
KSRS   Korea Array        12.87 295  Pn     Pn        19 43 58.4  +2.6
       comp=Z,0.9nm,0.3s,baz=107,slow=14,SNR=18
KSRS                                 LR     LR        19 50 00.3
       comp=Z,3µm,18.2s,baz=105,slow=42
       comp=Z,6.7nm,0.6s
KSAR   Wonju Array Be     12.89 295         Pn        19 43 56.7  +0.5
KSAR   Wonju Array Be     12.89 295  P      Pn        19 43 56.7  +0.5
KS19   Wonju Array Si     12.92 295         Pn        19 43 57.2  +0.6
KUR    Kuril'sk           12.99  17  eP     Pn        19 43 55.3  -2.1
KUR                                  pmax   pmax
       comp=Z,119nm,0.7s
KUR                                  MLR    MLR
       comp=Z,4µm,10.0s
KUR                                  MLR    MLR
       comp=E,4µm,7.0s
TEY    Ternei             13.01 341  eP     Pn        19 43 54.7  -3.0
TJN    Taejon             13.05 290         Pn        19 43 58.1  -0.3
TJN    Taejon             13.05 290  P      Pn        19 43 58.0  -0.3
TJN    Taejon             13.05 290⇑eP     Pn        19 44 01.5  +3.2
VLA    Vladivostok        13.27 323⇑eP     Pn        19 44 02.1  +0.8
PSTR   Posyet             13.50 320⇓eP     Pn        19 44 05.0  +0.5
JOW    Kunigami           13.83 248  Pn     Pn        19 44 10.8  +1.7
       comp=E,3.9nm,0.3s,baz=102,slow=9.3,SNR=5.4
JOW                                  LR     LR        19 48 52.3
       comp=E,3µm,19.6s,baz=90,slow=35
       comp=E,40nm,1.1s
JOW    Kunigami           13.83 248         Pn        19 44 09.0  -0.1
JOW    Kunigami           13.83 248  P      Pn        19 44 10.2  +1.1
INCN   Inchon             13.87 294         Pn        19 44 08.4  -1.1
INCN   Inchon             13.87 294  P      Pn        19 44 12.9  +3.4
INCN   Inchon             13.87 294  P      Pn        19 44 08.4  -1.1
USRK   Ussuriysk Ar.      14.03 327  Pn     Pn        19 44 11.5  -0.2
       comp=E,0.7nm,0.3s,baz=139,slow=12,SNR=27
       comp=E,34nm,0.9s
YSS    Yuzhno-Sakhali     14.06   0         Pn        19 44 09.2  -2.9
YSS    Yuzhno-Sakhali     14.06   0  P      Pn        19 44 09.4  -2.7
YSS    Yuzhno-Sakhali     14.06   0⇑eP     Pn        19 44 08.2  -3.9
YSS                                  pmax   pmax
       comp=Z,70nm,1.3s
YSS                                  pmax   pmax
       comp=Z,400nm,2.9s
YSS                                  MLR    MLR
       comp=Z,2µm,16.0s
YSS                                  MLR    MLR
       comp=N,2µm,12.0s
MDJ    Mudanjiang         15.50 323  P      Pn        19 44 31.0  -0.4
MDJ                                  pP     P         19 44 33.0  -2.8
MDJ                                  sP     pP        19 44 34.8  -3.5
MDJ                                  S      Sn        19 47 27.9  +5.2
MDJ                                  sS     S         19 47 32.3  -6.1
MDJ                                  ScS    ScS       19 56 43.3  -2.3
MDJ                                  pmax   pmax
       comp=N,22nm,0.9s
MDJ                                  LR     LR
       comp=N,2µm,14.8s
MDJ                                  LR     LR
       comp=N,2µm,15.1s
MDJ                                  LR     LR
       comp=N,5µm,15.0s
MDJ    Mudanjiang         15.50 323  P      Pn        19 44 30.5  -0.9
UGL    Uglegorsk          16.19 359⇓eP     P         19 44 46.4  +3.0
UGL                                  pmax   pmax
       comp=Z,440nm,1.0s
UGL                                  MLR    MLR
       comp=E,5µm,12.0s
CN2    Changchun          17.30 314  P      Pn        19 44 52.8  -1.7
CN2                                  S      Sn        19 48 04.6  -2.0
CN2                                  pmax   pmax
       comp=E,10.0nm,1.2s
CN2                                  pmax   pmax
       comp=E,300nm,7.0s
CN2                                  LR     LR
       comp=E,2µm,13.0s
CN2                                  LR     LR
       comp=E,3µm,13.0s
CN2                                  LR     LR
       comp=E,4µm,14.0s
BNX    BinXian            17.39 322 ⇑P      Pn        19 44 54.3  -1.2
BNX                                  pP     pP        19 44 59.3   0.0
BNX                                  sP     sP        19 45 00.9  +0.4
BNX                                  S      Sn        19 48 12.3  +3.6
BNX                                  pmax   pmax
       comp=E,95nm,1.0s
BNX                                  pmax   pmax
       comp=E,420nm,3.8s
BNX                                  LR     LR
       comp=E,3µm,14.6s
BNX                                  LR     LR
       comp=E,2µm,15.7s
BNX                                  LR     LR
       comp=E,3µm,15.7s
SNY    Shenyang           17.56 306 ⇑P      Pn        19 44 57.9  +0.3
SNY                                  S      Sn        19 48 07.0  -5.8
SNY                                  pmax   pmax
       comp=E,49nm,1.0s
SNY                                  pmax   pmax
       comp=E,570nm,4.9s
SNY                                  LR     LR
       comp=E,1µm,14.6s
SNY                                  LR     LR
       comp=E,1µm,15.8s
SNY                                  LR     LR
       comp=E,2µm,15.7s
TYV    Tymovskoe          17.97   0  eP     P         19 45 03.9  +0.7
TYV                                  eS     Sn        19 48 20.6  -2.1
TYV                                  pmax   pmax
       comp=Z,700nm,4.1s
TYV                                  pmax   pmax
       comp=Z,41nm,1.0s
TYV                                  smax   smax
       comp=N,11nm,1.6s
TYV                                  smax   smax
       comp=E,8.0nm,1.6s
TYV                                  smax   smax
       comp=N,1µm,4.7s
TYV                                  smax   smax
       comp=E,800nm,4.7s
TYV                                  MLR    MLR
       comp=Z,1µm,16.0s
DL2    Dalian             18.03 295  P      P         19 45 04.3  +0.4
DL2                                  S      Sn        19 48 22.8  -1.5
DL2                                  pmax   pmax
       comp=Z,91nm,1.1s
DL2                                  pmax   pmax
       comp=Z,1µm,5.6s
DL2                                  LR     LR
       comp=Z,4µm,17.2s
DL2                                  LR     LR
       comp=Z,2µm,18.0s
DL2                                  LR     LR
       comp=Z,7µm,17.3s
SSE    Sheshan            18.28 270  P      Pn        19 45 06.0  -0.6
SSE                                  S      Sn        19 48 28.8  -1.5
SSE                                  ScS    ScS       19 56 54.1  +0.1
SSE                                  pmax   pmax
       comp=Z,19nm,1.0s
SSE                                  pmax   pmax
       comp=Z,300nm,3.9s
SSE                                  LR     LR
       comp=Z,310nm,12.7s
GRNR   Gornyy             18.45 347⇓iP     P         19 45 06.9  -1.6
GRNR                                 pmax   pmax
       comp=Z,20nm,0.7s
GRNR                                 MLR    MLR
       comp=E,750nm,13.0s
GRNR                                 MLR    MLR
       comp=Z,1µm,14.0s
YOJ    Yonaguni jima      19.13 249  P      P         19 45 15.2  -0.8
YOJ                                  IAmb   IAmb      19 45 28.4
       comp=Z,164nm,0.7s
YOJ    Yonaguni jima      19.13 249  P      P         19 45 15.3  -0.8
YOJ                                  pmax   pmax
       comp=Z,165nm,0.7s
GUMO   Guam               19.31 173  P      Pn        19 45 19.4  +0.3
       comp=Z,2.7nm,0.3s,baz=82,slow=7.4,SNR=3.7
GUMO                                 LR     LR        19 56 49.2
       comp=Z,204nm,18.1s,baz=32,slow=50
       comp=Z,197nm,1.0s
GUMO   Guam               19.31 173  P      P         19 45 17.9  -0.2
GUMO                                 IAmb   IAmb      19 45 22.6
       comp=Z,395nm,1.1s
NJ2    Nanjing            20.07 274  eP     P         19 45 25.9  -0.4
NJ2                                  S      S         19 49 08.0  -3.4
NJ2                                  SS     SnSn      19 49 29.3  +1.2
NJ2                                  pmax   pmax
       comp=Z,55nm,1.1s
NJ2                                  pmax   pmax
       comp=Z,520nm,3.5s
NJ2                                  LR     LR
       comp=Z,2µm,13.1s
NJ2                                  LR     LR
       comp=Z,2µm,13.9s
NJ2                                  LR     LR
       comp=Z,2µm,15.7s
TATO   Taipei             20.09 252         P         19 45 25.3  -1.2
TATO                                 IAmb   IAmb      19 45 39.5
       comp=Z,284nm,1.3s
NKL    Nikolayevsk        20.31 357  eP     P         19 45 28.8  +0.1
NKL                                  eS     Sn        19 49 17.9  -1.2
NKL                                  pmax   pmax
       comp=N,61nm,1.0s
NKL                                  pmax   pmax
       comp=E,296nm,1.1s
NKL                                  pmax   pmax
       comp=Z,481nm,1.1s
NKL                                  smax   smax
       comp=E,253nm,3.8s
NKL                                  smax   smax
       comp=N,268nm,4.2s
NKL                                  MLR    MLR
       comp=E,13µm,21.0s
NKL                                  MLR    MLR
       comp=N,3µm,22.0s
NKL                                  MLR    MLR
       comp=Z,10µm,19.0s
YHNB   Yeheng             20.32 252  P      P         19 45 28.1  -1.1
YHNB   Yeheng             20.32 252  P      P         19 45 28.0  -1.1
SKR    Severo-Kuril's     20.38  25  eP     P         19 45 24.3  -5.2
SKR                                  eS     Sn        19 49 21.5  +0.7
SKR                                  pmax   pmax
       comp=Z,500nm,5.0s
SKR                                  MLR    MLR
       comp=Z,2µm,15.0s
NACB   Ninganchiao        20.39 250  P      P         19 45 28.7  -1.1
HEH    HeiHe              20.69 332  eP     P         19 45 32.6  -0.3
HEH                                  pP     sP        19 45 37.5  +1.0
HEH                                  S      S         19 49 22.4  -1.0
HEH                                  sS     pS        19 49 30.8  -0.8
HEH                                  pmax   pmax
       comp=Z,82nm,1.1s
HEH                                  pmax   pmax
       comp=Z,820nm,5.0s
HEH                                  LR     LR
       comp=Z,2µm,15.9s
HEH                                  LR     LR
       comp=Z,2µm,14.5s
HEH                                  LR     LR
       comp=Z,3µm,15.7s
YULB   Yu-li              21.02 249  P      P         19 45 35.4  -1.3
YULB   Yu-li              21.02 249  P      P         19 45 36.2  -0.5
SSLB   Suanglung          21.09 250  P      P         19 45 36.5  -1.0
SSLB   Suanglung          21.09 250  P      P         19 45 37.0  -0.4
TIA    Tai'an             21.25 286  P      P         19 45 37.8  -1.3
TIA                                  S      S         19 49 28.4  -6.4
TIA                                  pmax   pmax
       comp=Z,55nm,1.1s
TIA                                  pmax   pmax
       comp=Z,320nm,7.9s
TIA                                  LR     LR
       comp=Z,6µm,16.9s
TIA                                  LR     LR
       comp=Z,3µm,21.8s
TIA                                  LR     LR
       comp=Z,8µm,15.5s
TWGBT  Beinan             21.49 248  P      P         19 45 40.7  -1.0
TWG    Pinlang            21.50 248  P      P         19 45 40.2  -1.6
TWG                                  IAmb   IAmb      19 45 53.0
       comp=Z,201nm,1.4s
TPUB   Ta-pu              21.59 249  P      P         19 45 41.3  -1.6
TPUB                                 IAmb   IAmb      19 45 54.8
       comp=Z,397nm,1.6s
TPUB   Ta-pu              21.59 249  P      P         19 45 43.0  +0.2
BJI    Beijing            22.39 296  P      P         19 45 50.3  -1.0
BJI                                  pP     pP        19 45 53.3  -0.7
BJI                                  S      S         19 49 55.4  -1.3
BJI                                  pmax   pmax
       comp=Z,11nm,1.2s
BJI                                  pmax   pmax
       comp=Z,160nm,6.3s
BJI                                  LR     LR
       comp=Z,810nm,16.0s
BJI                                  LR     LR
       comp=Z,1µm,14.3s
BJI                                  LR     LR
       comp=Z,2µm,14.0s
BJT    Baijiatuau         22.40 296  P      P         19 45 49.9  -1.4
BJT    Baijiatuau         22.40 296  P      P         19 45 50.3  -1.0
BJT                                  pmax   pmax
       comp=Z,25nm,0.6s
QZH    Quanzhou           22.44 256  P      P         19 45 52.1  +0.1
QZH                                  S      S         19 49 51.0  -6.9
QZH                                  LR     LR
       comp=Z,930nm,12.7s
QZH                                  LR     LR
       comp=Z,2µm,13.7s
QZH                                  LR     LR
       comp=Z,2µm,14.8s
PEA0B  Petropavlovsk-     22.94  24  P      P         19 45 55.9  -1.1
PEA0B  Petropavlovsk-     22.94  24⇓eP     P         19 45 57.2  +0.2
PETK   Petropavlovsk-     22.94  24  P      P         19 45 58.2  +1.2
       comp=Z,11nm,1.0s,baz=214,slow=6.7,SNR=6.3
PETK                                 PcP    PcP       19 49 47.8  +1.0
       comp=Z,4.5nm,0.8s,baz=234,slow=4.8,SNR=2.6
PETK                                 LR     LR        19 55 37.7
       comp=Z,845nm,20.2s,baz=191,slow=39
       comp=Z,11nm,1.0s
PETK   Petropavlovsk-     22.94  24  P      P         19 45 56.3  -0.7
PET    Petropavlovsk      23.20  25  P      P         19 45 57.4  -2.2
PET    Petropavlovsk      23.20  25  P      P         19 46 00.7  +1.1
PET    Petropavlovsk      23.20  25  eP     P         19 46 01.2  +1.6
PET                                  eS     S         19 50 03.9  -6.8
PET                                  pmax   pmax
       comp=Z,400nm,6.5s
PET                                  pmax   pmax
       comp=Z,64nm,1.4s
PET                                  MLR    MLR
       comp=Z,1µm,14.0s
PET                                  MLR    MLR
       comp=Z,1µm,14.0s
PET    Petropavlovsk      23.20  25  P      P         19 46 00.1  +0.5
       comp=Z,46nm,1.1s
HNS    HongShan           23.24 289 ⇑P      P         19 45 58.5  -1.6
HNS                                  S      S         19 50 04.3  -7.3
HNS                                  pmax   pmax
       comp=Z,94nm,1.3s
HNS                                  pmax   pmax
       comp=Z,660nm,5.4s
HNS                                  LR     LR
       comp=Z,3µm,14.3s
HNS                                  LR     LR
       comp=Z,6µm,14.3s
HNS                                  LR     LR
       comp=Z,7µm,15.1s
XLT    XiLinHaoTe         23.44 306  eP     P         19 46 00.3  -2.0
XLT                                  pP     pP        19 46 04.1  -0.8
XLT                                  sP     sP        19 46 07.6  +1.6
XLT                                  S      S         19 50 09.3  -5.8
XLT                                  sS     sS        19 50 20.8  +1.3
XLT                                  pmax   pmax
       comp=Z,14nm,1.1s
XLT                                  LR     LR
       comp=Z,2µm,15.1s
XLT                                  LR     LR
       comp=Z,2µm,15.6s
ZEA    Zeya               23.57 337  eP     P         19 46 04.4  +1.1
ZEA                                  eS     S         19 50 12.0  -4.7
ZEA                                  pmax   pmax
       comp=N,300nm,3.8s
ZEA                                  pmax   pmax
       comp=E,200nm,3.8s
ZEA                                  pmax   pmax
       comp=Z,700nm,3.9s
ZEA                                  pmax   pmax
       comp=E,20nm,0.9s
ZEA                                  pmax   pmax
       comp=N,70nm,1.1s
ZEA                                  pmax   pmax
       comp=Z,170nm,1.2s
ZEA                                  smax   smax
       comp=E,600nm,5.3s
ZEA                                  smax   smax
       comp=N,800nm,7.7s
ZEA                                  MLR    MLR
       comp=N,1µm,15.0s
ZEA                                  MLR    MLR
       comp=Z,2µm,16.0s
HIA    Hailar             23.65 321  P      P         19 46 03.6  -0.5
HIA    Hailar             23.65 321  P      P         19 46 04.0  -0.1
HIA    Hailar             23.65 321  P      P         19 46 03.6  -0.5
HIA                                  pmax   pmax
       comp=Z,35nm,0.7s
HILR   Hailar Array B     23.81 321  P      P         19 46 05.7   0.0
       comp=Z,18nm,0.5s,baz=129,slow=14,SNR=29
       comp=Z,18nm,0.5s
WHN    Wuhan              24.14 272  P      P         19 46 08.4  -0.6
WHN                                  S      S         19 50 24.1  -2.2
WHN                                  pmax   pmax
       comp=Z,390nm,0.8s
WHN                                  pmax   pmax
       comp=Z,2µm,4.3s
WHN                                  LR     LR
       comp=Z,4µm,13.1s
WHN                                  LR     LR
       comp=Z,6µm,13.6s
WHN                                  LR     LR
       comp=Z,8µm,12.5s
TIY    Taiyuan            25.05 290  eP     P         19 46 18.8  +1.5
TIY                                  PP     PnPn      19 46 56.8  +6.0
TIY                                  S      S         19 50 41.8  +0.8
TIY                                  pmax   pmax
       comp=Z,57nm,0.9s
TIY                                  pmax   pmax
       comp=Z,460nm,8.0s
TIY                                  LR     LR
       comp=Z,930nm,13.1s
TIY                                  LR     LR
       comp=Z,5µm,14.4s
TIY                                  LR     LR
       comp=Z,6µm,15.8s
LYN    LuoYang            25.10 282 ⇑P      P         19 46 17.3  -0.4
LYN                                  pmax   pmax
       comp=Z,58nm,1.3s
LYN                                  pmax   pmax
       comp=Z,730nm,7.8s
LYN                                  LR     LR
       comp=Z,6µm,16.3s
LYN                                  LR     LR
       comp=Z,3µm,17.1s
LYN                                  LR     LR
       comp=Z,4µm,18.2s
H11N2  WAKE ISLAND Hy     25.32 115  T      T         20 13 01.0
       baz=307,slow=75,SNR=16
H11N1  WAKE ISLAND Hy     25.32 115  T      T         20 12 41.0
       baz=307,slow=75,SNR=22
H11N3  WAKE ISLAND Hy     25.33 115  T      T         20 12 57.4
       baz=307,slow=75,SNR=14
H11S3  WAKE ISLAND Hy     25.90 118  T      T         20 13 41.4
       baz=312,slow=75,SNR=8.6
H11S1  WAKE ISLAND Hy     25.90 118  T      T         20 13 30.0
       baz=312,slow=75,SNR=9.9
H11S2  WAKE ISLAND Hy     25.92 118  T      T         20 13 52.4
       baz=312,slow=75,SNR=8.3
CNSH   ChangSha           25.96 268  P      P         19 46 25.8  +0.3
CNSH                                 S      S         19 50 56.5  +1.1
CNSH                                 pmax   pmax
       comp=Z,26nm,1.3s
CNSH                                 LR     LR
       comp=Z,1µm,14.0s
CNSH                                 LR     LR
       comp=Z,1µm,13.6s
CNSH                                 LR     LR
       comp=Z,2µm,14.4s
HHC    Hu-ho-hao-te       26.00 297  eP     P         19 46 26.3  +0.4
HHC                                  sP     pwP       19 46 38.8  +1.4
HHC                                  S      S         19 50 52.1  -3.9
HHC                                  sS     sS        19 51 01.3  +0.9
HHC                                  SS     SnSn      19 52 01.1  +7.8
HHC                                  pmax   pmax
       comp=Z,25nm,0.7s
HHC                                  pmax   pmax
       comp=Z,660nm,4.6s
HHC                                  LR     LR
       comp=Z,920nm,10.8s
HHC                                  LR     LR
       comp=Z,2µm,10.8s
HHC                                  LR     LR
       comp=Z,3µm,11.6s
BTO    Baotou             27.13 296  eP     P         19 46 37.9  +1.8
BTO                                  sP     pwP       19 46 45.5  -2.2
BTO                                  S      S         19 51 18.3  +4.4
BTO                                  pmax   pmax
       comp=Z,55nm,1.0s
BTO                                  pmax   pmax
       comp=Z,2µm,3.7s
BTO                                  LR     LR
       comp=Z,4µm,14.1s
BTO                                  LR     LR
       comp=Z,5µm,15.4s
BTO                                  LR     LR
       comp=Z,5µm,15.7s
TGY    Tagaytay City      27.20 232  LR     LR        19 56 35.9
       comp=Z,623nm,20.3s,baz=98,slow=35
MA2    Magadan            27.25   9  LR     LR        20 01 27.3
       comp=Z,225nm,18.0s,baz=194,slow=45
MA2    Magadan            27.25   9  P      P         19 46 35.8  -1.0
MA2    Magadan            27.25   9  P      P         19 46 36.6  -0.2
MA2    Magadan            27.25   9⇓eP     P         19 46 37.6  +0.8
MA2                                  pmax   pmax
       comp=Z,70nm,1.2s
XAN    Xi'an              28.08 282 ⇑P      P         19 46 44.3  -0.3
XAN                                  S      S         19 51 23.3  -5.5
XAN                                  pmax   pmax
       comp=Z,41nm,1.4s
XAN                                  pmax   pmax
       comp=Z,480nm,9.3s
XAN                                  LR     LR
       comp=Z,4µm,16.5s
XAN                                  LR     LR
       comp=Z,3µm,19.6s
XAN                                  LR     LR
       comp=Z,6µm,15.0s
CIT    Chita              28.45 321  eP     P         19 46 48.6  +0.9
CIT                                  e                19 47 47.4
CIT                                  e                19 49 59.8
CIT                                  eS     S         19 51 33.2  -1.1
CIT                                  pmax   pmax
       comp=Z,280nm,2.5s
SHEM   Shemya Is, Ala     30.08  39  LR     LR        19 57 26.5
       comp=Z,469nm,21.8s,baz=240,slow=33
DAV    Davao City (W)     30.17 215  LR     LR        19 57 37.6
       comp=Z,316nm,21.2s,baz=51,slow=33
YAK    Yakutsk            30.34 348  LR     LR        19 58 54.5
       comp=Z,364nm,21.9s,baz=141,slow=36
YAK    Yakutsk            30.34 348  P      P         19 47 03.6  -0.6
YAK                                  IAmb   IAmb      19 47 05.8
       comp=Z,63nm,0.9s
YAK    Yakutsk            30.34 348d iP     P         19 47 04.4  +0.2
YAK                                  e*PP   sP        19 47 09.5  +1.1
YAK                                  e                19 48 01.5
YAK                                  ePPP   PPP       19 48 14.4
YAK                                  e                19 50 02.8
YAK                                  eS     S         19 52 05.9  +2.4
YAK                                  eSS    SnSn      19 53 39.0  +0.6
YAK                                  e                19 57 44.0
YAK                                  pmax   pmax
       comp=Z,81nm,1.2s
YAK                                  pmax   pmax
       comp=N,53nm,1.5s
YAK                                  pmax   pmax
       comp=E,11nm,1.3s
YAK                                  pmax   pmax
       comp=Z,181nm,3.3s
YAK                                  pmax   pmax
       comp=N,80nm,2.5s
YAK                                  pmax   pmax
       comp=E,156nm,3.9s
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YAK                               smax     smax
       comp=E,194nm,4.1s
YAK                               smax     smax
       comp=N,139nm,3.5s
YAK                               MLR      MLR
       comp=Z,1μm,18.0s
YAK                               MLR      MLR
       comp=N,623nm,15.0s
YAK                               MLR      MLR
       comp=E,767nm,18.0s
ULN    Ulaanbaatar      30.65 310  P       P        19 47 07.0  -0.4
ULN                               IAmb     IAmb     19 47 17.5
       comp=Z,125nm,1.4s
ULN    Ulaanbaatar      30.65 310  P       P        19 47 08.7 +1.3
       comp=Z,192nm,1.0s
ULN    Ulaanbaatar      30.65 310d iP      P        19 47 09.1 +1.7
ULN                               pmax     pmax
       comp=Z,69nm,1.3s
SEY    Seymchan         30.70   9  LR      LR       20 03 29.1
       comp=Z,639nm,18.1s,baz=188,slow=44
SEY    Seymchan         30.70   9 eP       P        19 47 07.7 +0.2
SEY                               eS       S        19 52 07.6  -1.7
SEY                               pmax     pmax
       comp=Z,67nm,1.5s
SEY                               smax     smax
       comp=N,176nm,18.5s
SEY                               smax     smax
       comp=E,549nm,19.1s
SONM   Songino Array    31.07 309  P       P        19 47 12.9 +1.9
       comp=E,23nm,0.9s,baz=118,slow=8.8,SNR=111
SONM                               PcP     PcP      19 50 07.6 +1.2
       comp=E,1.2nm,0.5s,baz=132,slow=3.7,SNR=4.1
SONM                               LR      LR       20 01 17.1
       comp=E,1μm,18.7s,baz=106,slow=39
       comp=E,23nm,0.9s
SONM   Songino Array    31.07 309  P       P        19 47 11.4 +0.4
SONM                               IAmb    IAmb     19 47 29.9
       comp=Z,115nm,1.4s
SONM                                       PcP      19 50 05.8  -0.6
BOD    Bodaibo          31.61 331 eP       P        19 47 15.9 +0.5
BOD                               pmax     pmax
       comp=Z,101nm,1.0s
GYA    Guiyang          31.79 268 ⇓P       P        19 47 18.8 +1.2
GYA                                S       S        19 52 21.9  -5.5
GYA                               pmax     pmax
       comp=Z,30nm,1.1s
GYA                               LR       LR
       comp=Z,2μm,17.9s
GYA                               LR       LR
       comp=Z,930nm,21.4s
GYA                               LR       LR
       comp=Z,2μm,15.8s
LZH    Lanzhou          31.99 287 eP       P        19 47 19.6 +0.3
LZH                               sP       sP       19 47 25.8 +2.4
LZH                               PP       PP       19 48 29.3  -2.2
LZH                               PcP      PcP      19 50 11.3 +2.2
LZH                               S        S        19 52 25.8  -4.6
LZH                               SS       SnSn     19 54 25.8 +6.3
LZH                               pmax     pmax
       comp=Z,37nm,1.1s
LZH                               pmax     pmax
       comp=Z,250nm,4.3s
LZH                               LR       LR
       comp=Z,3μm,20.6s
LZH                               LR       LR
       comp=Z,940nm,18.2s
LZH                               LR       LR
       comp=Z,5μm,16.8s
LZDM   Lanzhou Array    32.12 286  P       P        19 47 20.2  -0.5
       comp=Z,2.5nm,0.4s,baz=114,slow=3.7,SNR=4.3
LZDM                              LR       LR       20 03 10.5
       comp=Z,1μm,18.0s,baz=80,slow=42
       comp=Z,2.5nm,0.4s
QIZ    Qiongzhong       32.40 253  P       P        19 47 22.4  -0.4
QIZ                                S       S        19 52 38.3 +1.6
QIZ                               pmax     pmax
       comp=Z,380nm,7.8s
QIZ                               LR       LR
       comp=Z,810nm,18.5s
QIZ                               LR       LR
       comp=Z,720nm,14.7s
QIZ                               LR       LR
       comp=Z,2μm,27.8s
CD2    Chengdu          32.94 277  P       P        19 47 27.0  -0.5
CD2                                S       S        19 52 46.3 +1.3
CD2                               pmax     pmax
       comp=Z,40nm,0.8s
CD2                               pmax     pmax
       comp=Z,530nm,3.7s
CD2                               LR       LR
       comp=Z,5μm,15.9s
CD2                               LR       LR
       comp=Z,5μm,15.9s
CD2                               LR       LR
       comp=Z,6μm,16.5s
IRK    Irkutsk          33.72 317 eP       P        19 47 34.8 +0.8
IRK                               pmax     pmax
       comp=Z,71nm,1.1s
ZAK    Zakamensk        33.73 313 eP       P        19 47 34.7 +0.4
ZAK                               pmax     pmax
       comp=Z,58nm,1.5s
TLY    Talaya           33.90 315  P       P        19 47 36.7 +1.1
TLY                               IAmb     IAmb     19 47 38.7
       comp=Z,53nm,1.2s
TLY    Talaya           33.90 315d iP      P        19 47 37.3 +1.6
TLY                               pmax     pmax
       comp=Z,69nm,1.7s
KIWB   Kanaga Island    34.68  45  P       P        19 47 41.8  -0.5
SMPI   Sarmi            34.88 187  P       P        19 47 46.2 +1.9
GTA    Gaotai           34.93 293  P       P        19 47 45.9 +1.0
GTA                               pP       sP       19 47 51.0 +2.1
GTA                               PP       PP       19 49 06.8 +2.7
GTA                               PcP      PcP      19 50 19.1 +1.8
GTA                               S        S        19 53 14.8  -1.1
GTA                               pmax     pmax
       comp=Z,26nm,1.4s
GTA                               pmax     pmax
       comp=Z,310nm,8.8s
GTA                               LR       LR
       comp=Z,2μm,19.1s
GTA                               LR       LR
       comp=Z,3μm,15.9s
GTA                               LR       LR
       comp=Z,3μm,15.9s
ADK    Adak             34.97  45  P       P        19 47 44.2  -0.6
ADK                               IAmb     IAmb     19 48 01.1
       comp=Z,146nm,1.5s
ADK    Adak             34.97  45  P       P        19 47 44.2  -0.6
ADK                               pmax     pmax
       comp=Z,146nm,1.5s
TNTI   Ternate          35.02 207  P       P        19 47 45.0  -0.6
TNTI                              IAmb     IAmb     19 47 49.4
       comp=Z,148nm,1.5s
TNTI   Ternate          35.02 207  P       P        19 47 48.4 +2.8
TNTI   Ternate          35.02 207  P       P        19 47 45.3  -0.3
       comp=Z,63nm,1.1s
SRPI   Serui, Papua     35.08 191  P       P        19 47 47.6 +1.5
       comp=Z,45nm,1.1s
SWI    Sorong           35.23 200  P       P        19 47 47.8 +0.4
       comp=Z,25nm,0.9s
GENI   Genyem           35.35 184  P       P        19 47 50.1 +1.6
       comp=Z,105nm,1.1s
MOY    Mondy            35.47 315 eP       P        19 47 50.3 +0.9
MOY                               pmax     pmax
       comp=Z,46nm,1.7s
KMI    Kunming          35.57 268 ⇑P       P        19 47 51.8 +1.2
KMI                               PP       PP       19 49 14.5 +3.1
KMI                               S        S        19 53 17.9  -8.2
KMI                               pmax     pmax
       comp=Z,13nm,1.1s
KMI                               LR       LR
       comp=Z,1μm,19.3s
KMI                               LR       LR
       comp=Z,890nm,13.6s
KMI                               LR       LR
       comp=Z,2μm,13.2s
PZH    PanZhiHua        35.92 271  P       P        19 47 52.9  -0.6
PZH                                S       S        19 53 25.3  -5.9
PZH                               pmax     pmax
       comp=Z,30nm,1.3s
PZH                               pmax     pmax
       comp=Z,220nm,6.1s
PZH                               LR       LR
       comp=Z,1μm,17.8s
PZH                               LR       LR
       comp=Z,940nm,18.5s
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PZH                               LR       LR
       comp=Z,1μm,16.1s
GTOI   Gorontalo        37.01 214  P       P        19 48 02.7 +0.1
       comp=Z,963nmcomp=Z,81nm,1.0s
KNGR   Kungurtug, Tuv   37.37 312d iP      P        19 48 08.1 +2.6
KNGR                              pmax     pmax
       comp=Z,82nm,1.4s
MRSI   Marisa           37.66 215  P       P        19 48 08.7 +0.5
       comp=Z,2μmcomp=Z,108nm,1.0s
TOLI2  Tolitoli         37.69 217          P        19 48 07.7  -0.8
TOLI2  Tolitoli         37.69 217  P       P        19 48 08.5   0.0
BILL   Bilibino         37.76  14  P       P        19 48 08.3  -0.2
UBPT   Khong Chiam      37.93 251  P       P        19 48 11.5 +1.0
SANI   Sanana           38.14 208  P       P        19 48 11.9  -0.3
SANI   Sanana           38.14 208  P       P        19 48 10.6  -1.6
       comp=Z,2μmcomp=Z,111nm,0.7s
MSAI   Masohi           38.29 202  P       P        19 48 14.4 +0.9
       comp=Z,3μmcomp=Z,94nm,1.1s
KRAI   Karang Ratu      38.44 203  P       P        19 48 15.5 +0.7
       comp=Z,1μmcomp=Z,58nm,0.9s
LUWI   Luwuk            38.59 213  P       P        19 48 14.3  -1.7
LUWI                              IAmb     IAmb     19 48 29.7
       comp=Z,85nm,1.1s
LUWI   Luwuk            38.59 213  P       P        19 48 16.5 +0.4
LUWI   Luwuk            38.59 213  P       P        19 48 14.6  -1.5
       comp=Z,798nmcomp=Z,85nm,1.2s
MPSI   Mapaga           38.80 218  P       P        19 48 16.8  -1.0
NLAI   Namlea           38.81 205  P       P        19 48 18.4 +0.5
AAI    Ambon            38.85 203  P       P        19 48 18.0  -0.2
       comp=Z,53nm,0.7s
APSI   Ampana           39.01 215  P       P        19 48 19.1  -0.4
       comp=Z,1μmcomp=Z,175nm,1.0s
TNCH   TengChong        39.16 270  P       P        19 48 21.0   0.0
TNCH                              PP       PnPn     19 49 54.3 +0.9
TNCH                              PcP      PcP      19 50 30.8 +0.4
TNCH                              S        S        19 54 18.6  -2.0
TNCH                              pmax     pmax
       comp=Z,60nm,1.3s
TNCH                              pmax     pmax
       comp=Z,290nm,4.1s
TNCH                              LR       LR
       comp=Z,860nm,14.2s
TNCH                              LR       LR
       comp=Z,710nm,15.2s
TNCH                              LR       LR
       comp=Z,2μm,22.4s
GOMU   GeErMu           39.22 289  P       P        19 48 20.4  -1.2
GOMU                              pP       pP       19 48 24.3  -0.2
GOMU                              sP       sP       19 48 27.9 +2.2
GOMU                              S        S        19 54 21.0  -0.7
GOMU                              SS       SS       19 57 08.0  -6.6
GOMU                              pmax     pmax
       comp=Z,6.0nm,0.9s
GOMU                              LR       LR
       comp=Z,2μm,19.6s
GOMU                              LR       LR
       comp=Z,1μm,19.3s
GOMU                              LR       LR
       comp=Z,1μm,19.5s
TIXI   Tiksi            39.53 353  LR      LR       20 08 50.2
       comp=Z,460nm,19.2s,baz=190,slow=42
TIXI   Tiksi            39.53 353          P        19 48 22.4  -0.9
TIXI   Tiksi            39.53 353deP       P        19 48 23.8 +0.6
TIXI                              pmax     pmax
       comp=Z,45nm,1.0s
NIKH   Nikolski High    39.88  45  P       P        19 48 25.6  -0.8
NIKH                              IAmb     IAmb     19 48 28.8
       comp=Z,184nm,1.0s
NIKH   Nikolski High    39.88  45  P       P        19 48 27.6 +1.1
NIKH   Nikolski High    39.88  45  P       P        19 48 27.0 +0.6
       baz=259
PCI    Palu             39.90 217  P       P        19 48 25.9  -1.1
       comp=Z,1μmcomp=Z,142nm,1.2s
SPIA   Saint Paul Isl   40.10  38  P       P        19 48 28.9 +0.7
       baz=253
P08K   Saint George I   40.31  39  P       P        19 48 31.0 +1.1
       baz=254
UNV    Unalaska Valle   41.42  44  P       P        19 48 41.0 +1.9
       baz=260
CHTO   Chiang Mai       41.45 261  P       P        19 48 38.3  -1.5
CHTO   Chiang Mai       41.45 261  P       P        19 48 39.8   0.0
CHTO   Chiang Mai       41.45 261  P       P        19 48 39.8   0.0
       comp=Z,32nm,0.8s
CHTO   Chiang Mai       41.45 261  P       P        19 48 38.3  -1.5
CHTO                              pmax     pmax
       comp=Z,21nm,0.8s
SBUM   Sibu             41.58 230  P       P        19 48 42.6 +1.7
SBUM   Sibu             41.58 230  P       P        19 48 41.6 +0.7
CM31   Chiang Mai Arr   41.62 261  P       P        19 48 39.3  -1.9
CMAR   Chiang Mai Arr   41.62 261  P       P        19 48 41.3 +0.1
       comp=Z,4.5nm,0.7s,baz=48,slow=7.8,SNR=37
CMAR                              PcP      PcP      19 50 39.5 +1.4
       comp=Z,7.4nm,1.2s,baz=39,slow=3.0,SNR=7.8
CMAR                              LR       LR       20 09 12.5
       comp=Z,476nm,18.1s,baz=55,slow=41
       comp=Z,4.5nm,0.7s
CMAR   Chiang Mai Arr   41.62 261  P       P        19 48 39.5  -1.7
CMAR                                       PcP      19 50 39.2 +1.0
TTSI   Tana Toraja      41.75 216  P       P        19 48 41.5  -0.7
GAMB   Gambell          41.82  28  P       P        19 48 44.6 +2.3
       baz=244
KKSI   Kolaka, Sulawe   41.87 212  P       P        19 48 43.4 +0.2
MMSI   Mamuju           41.89 217  P       P        19 48 40.9  -2.5
       comp=Z,50nm,1.0s
SAUI   Saumlaki         42.04 197  P       P        19 48 43.1  -1.5
SAUI   Saumlaki         42.04 197  P       P        19 48 46.2 +1.6
SAUI   Saumlaki         42.04 197  P       P        19 48 43.4  -1.2
SPSI   Sidrap Palu      42.57 215  P       P        19 48 47.8  -1.1
MTKI   Muara Teweh, K   42.62 223  P       P        19 48 50.3 +1.0
BNSI   Bone             42.79 214  P       P        19 48 50.3  -0.4
       comp=Z,632nmcomp=Z,48nm,0.9s
M11K   Mekoryuk         43.03  35  P       P        19 48 54.4 +2.3
       baz=254
FALS   False Pass       43.35  43  P       P        19 48 56.8 +2.0
       baz=262
KAPI   Kappang          43.49 214  P       P        19 48 55.6  -0.8
KAPI   Kappang          43.49 214  P       P        19 48 58.4 +2.0
KAPI   Kappang          43.49 214  P       P        19 48 56.1  -0.3
KAPI   Kappang          43.49 214⇓eP       P        19 48 56.6 +0.2
KAPI                              pmax     pmax
       comp=Z,44nm,1.0s
BKSI   Bulukumba        43.59 214  P       P        19 48 55.4  -1.7
DGZ    Jazzator, Alta   43.72 310d iP      P        19 48 59.8 +1.7
DGZ                               pmax     pmax
       comp=Z,156nm,1.1s
WMQ    Urumqi           43.72 301 eP       P        19 49 00.0 +1.9
WMQ                               PcP      PcP      19 50 49.0 +4.1
WMQ                               S        S        19 55 30.8 +3.1
WMQ                               pmax     pmax
       comp=Z,80nm,1.9s
WMQ                               pmax     pmax
       comp=Z,410nm,3.7s
WMQ                               LR       LR
       comp=Z,1μm,15.5s
WMQ                               LR       LR
       comp=Z,550nm,15.5s
WMQ                               LR       LR
       comp=Z,420nm,17.3s
LSA    Lhasa            43.76 280  P       P        19 48 58.5  -0.6
LSA    Lhasa            43.76 280  P       P        19 48 55.4  -3.6
LSA                               S        S        19 55 21.8  -7.5
LSA                               pmax     pmax
       comp=Z,17nm,1.2s
LSA                               LR       LR
       comp=Z,700nm,15.0s
LSA                               LR       LR
       comp=Z,580nm,16.0s
LSA                               LR       LR
       comp=Z,340nm,15.1s
LSA    Lhasa            43.76 280  P       P        19 49 00.4 +1.4
LSA    Lhasa            43.76 280  P       P        19 48 58.5  -0.6
LSA                               pmax     pmax
       comp=Z,19nm,0.6s
TNA    Tin City         44.04  27  P       P        19 49 02.5 +2.3
       baz=247
K13K   Kusilvak Mount   44.18  33  IAmb    IAmb     19 49 05.2
       comp=Z,95nm,1.1s
K13K   Kusilvak Mount   44.18  33  P       P        19 49 03.6 +2.2
       baz=254,SNR=9.6
S12K   Black Hills      44.24  42  P       P        19 49 03.9 +1.9
       baz=263
M13K   Dall Lake        44.41  35  P       P        19 49 04.5 +1.2
       baz=257
SHL    Shillong         44.54 274  P       P        19 49 06.2 +1.2
SHL                               pmax     pmax
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       comp=Z,33nm,1.0s
F14K   Arctic Creek     44.62  28  P       P        19 49 07.0 +2.1
       baz=249,SNR=6.8
ANM    Nome             44.68  29  P       P        19 49 04.1  -1.3
ANM                               IAmb     IAmb     19 49 20.1
       comp=Z,56nm,0.8s
ANM    Nome             44.68  29  P       P        19 49 04.1  -1.3
ANM                               pmax     pmax
       comp=Z,55nm,0.8s
ANM    Nome             44.68  29  P       P        19 49 07.7 +2.2
       baz=250,SNR=6.6
BBKI   Banjar Baru      44.71 221  P       P        19 49 06.0  -0.2
       comp=Z,77nm,1.1s
J14K   Nanvaranak Lak   44.90  32  P       P        19 49 07.9 +0.7
       baz=254
L14K   Kuka Creek       44.94  34  P       P        19 49 10.0 +2.5
       baz=256,SNR=10
SDPT   Sand Point       45.09  42  P       P        19 49 10.6 +1.8
       baz=264
N14K   Kuskokwak Cree   45.12  36  P       P        19 49 11.1 +2.2
       baz=259,SNR=5.9
M14K   Bethel           45.15  35  P       P        19 49 11.4 +2.3
       baz=258,SNR=13
O14K   Tigyukauivet M   45.20  37  P       P        19 49 11.3 +1.7
       baz=260
F15K   North Star Dit   45.35  28  IAmb    IAmb     19 49 14.7
       comp=Z,70nm,1.1s
F15K   North Star Dit   45.35  28  P       P        19 49 12.9 +2.1
       baz=250,SNR=8.2
G15K   Niukluk          45.36  29  P       P        19 49 13.1 +2.3
       baz=251,SNR=7.6
ZSN    Zaisan           45.46 306 eP       P        19 49 12.8 +0.9
       comp=Z,34nm,1.0s
ZSN    Zaisan           45.46 306 eP       P        19 49 12.7 +0.9
ZSN                               pmax     pmax
       comp=Z,34nm,1.0s
ZAA0   Zalesovo Array   45.51 315  IAmb    IAmb     19 49 25.7
       comp=Z,46nm,1.1s
ZALV   Zalesovo Beam    45.51 315  P       P        19 49 12.6 +0.5
       comp=Z,9.7nm,0.6s,baz=106,slow=7.8,SNR=53
ZALV                              PcP      PcP      19 50 51.0 +0.3
       comp=Z,20nm,0.7s,baz=99,slow=3.2,SNR=8.0
ZALV                              LR       LR       20 11 10.6
       comp=Z,400nm,19.0s,baz=94,slow=40
       comp=Z,9.7nm,0.6s
ZALV   Zalesovo Beam    45.51 315  P       P        19 49 11.7  -0.5
CNBA   Chernabura Isl   45.55  43  P       P        19 49 10.7  -1.7
CNBA                              IAmb     IAmb     19 49 25.8
       comp=Z,84nm,1.0s
CHNA   Chernabura Isl   45.55  43  P       P        19 49 13.5 +1.1
CHNA   Chernabura Isl   45.55  43  P       P        19 49 12.7 +0.3
       baz=266,SNR=5.8
L15K   Ungalak Mounta   45.58  34  P       P        19 49 12.7 +0.2
       baz=257,SNR=7.5
MMRI   Maumere          45.62 209  P       P        19 49 15.7 +2.3
MMRI   Maumere          45.62 209  P       P        19 49 12.1  -1.3
       comp=Z,1μmcomp=Z,81nm,1.2s
K15K   Wolf Creek Mou   45.70  33  IAmb    IAmb     19 49 17.4
       comp=Z,123nm,1.3s
K15K   Wolf Creek Mou   45.70  33  P       P        19 49 15.7 +2.2
       baz=257
S14K   Fog Glacier      45.70  41  P       P        19 49 16.2 +2.5
       baz=264
M15K   Kasigluk River   45.75  35  P       P        19 49 15.7 +1.8
       baz=259,SNR=10
BRDH   Bariadhala       45.87 271  LR      LR       20 11 04.3
       comp=Z,615nm,18.0s,baz=72,slow=40
SOEI   Soe              45.87 206  P       P        19 49 15.4  -0.1
SOEI   Soe              45.87 206  P       P        19 49 14.3  -1.2
       comp=Z,2μmcomp=Z,144nm,1.1s
O15K   Ungalikthiuk R   45.92  37  P       P        19 49 17.3 +2.0
       baz=261,SNR=14
N15K   Kwethluk River   45.95  36  P       P        19 49 17.3 +1.8
       baz=260
EDFI   Ende, Flores     45.95 209  P       P        19 49 14.9  -1.2
       comp=Z,719nmcomp=Z,57nm,0.7s
H16K   Elim             45.99  29  P       P        19 49 17.5 +1.8
       baz=254,SNR=6.8
C16K   Lisburne Hills   46.04  24  IAmb    IAmb     19 49 19.1
       comp=Z,76nm,1.2s
C16K   Lisburne Hills   46.04  24  P       P        19 49 17.7 +1.6
       baz=247,SNR=16
G16K   Koyuk River      46.16  28  P       P        19 49 18.6 +1.5
       baz=253
KDU    Kakadu           46.33 194  P       P        19 49 19.7 +0.7
       comp=Z,36nm,1.3s
J16K   Anvik River      46.34  32  IAmb    IAmb     19 49 23.4
       comp=Z,98nm,1.9s
J16K   Anvik River      46.34  32  P       P        19 49 20.1 +1.6
       baz=257
DRS    Darwin Rock St   46.42 196  P       P        19 49 21.4 +1.7
I17K   Unalakleet       46.44  31  IAmb    IAmb     19 49 23.0
       comp=Z,47nm,1.1s
I17K   Unalakleet       46.44  31  P       P        19 49 21.2 +1.9
       baz=256
LBFI   Labuhan Bajo,    46.48 212  P       P        19 49 18.4  -1.8
       comp=Z,723nmcomp=Z,30nm,0.9s
BATI   Baumata          46.51 206  P       P        19 49 20.6 +0.3
       comp=Z,26nm,0.6s,baz=12,slow=0.7,SNR=11
BATI                              LR       LR       20 07 54.0
       comp=Z,249nm,20.7s,baz=14,slow=35
       comp=Z,26nm,0.6s
BATI   Baumata          46.51 206  P       P        19 49 19.3  -1.1
       comp=Z,1μmcomp=Z,101nm,0.7s
L16K   Owhat River      46.52  34  IAmb    IAmb     19 49 23.3
       comp=Z,66nm,1.2s
L16K   Owhat River      46.52  34  P       P        19 49 21.7 +1.7
       baz=259,SNR=8.8
COEN   Coen             46.57 179  P       P        19 49 22.8 +2.0
       comp=Z,53nm,1.0s
COEN   Coen             46.57 179  P       P        19 49 20.3  -0.5
COEN                              IAmb     IAmb     19 49 34.6
       comp=Z,39nm,0.9s
COEN   Coen             46.57 179  P       P        19 49 22.3 +1.5
D17K   Noatak River     46.62  25  P       P        19 49 22.8 +2.2
       baz=250,SNR=19
M16K   Timber Creek     46.64  35  P       P        19 49 22.7 +1.7
       baz=260
N16K   Nishlik Lake     46.65  36  P       P        19 49 23.3 +2.3
       baz=261,SNR=32
MTN    Manton Dam       46.77 195  P       P        19 49 22.6 +0.2
       comp=Z,152nm,0.6s
MTN    Manton Dam       46.77 195  P       P        19 49 21.2  -1.2
RDOG   Red Dog Mine     46.80  25  IAmb    IAmb     19 49 25.6
       comp=Z,76nm,1.2s
RDOG   Red Dog Mine     46.80  25  P       P        19 49 24.1 +2.0
       baz=250,SNR=13
P16K   Nushagak River   46.84  38  P       P        19 49 24.8 +2.3
       baz=263
O16K   Kokwok River B   46.86  37  IAmb    IAmb     19 49 26.0
       comp=Z,80nm,1.1s
O16K   Kokwok River B   46.86  37  P       P        19 49 24.7 +2.0
       baz=262,SNR=9.7
C17K   DeLong Mountai   46.86  24  P       P        19 49 24.8 +2.2
       baz=249
G17K   Kiwalik Mounta   46.88  29  P       P        19 49 24.6 +1.9
       baz=254,SNR=6.3
E17K   Hotham Inlet     46.88  26  P       P        19 49 24.7 +2.0
       baz=252,SNR=18
F17K   Baldwin Pennin   46.90  27  IAmb    IAmb     19 49 38.4
       comp=Z,38nm,1.0s
F17K   Baldwin Pennin   46.90  27  P       P        19 49 25.3 +2.4
       baz=253,SNR=7.5
H17K   Granite Mounta   47.03  29  P       P        19 49 26.1 +2.2
       baz=256
J17K   VABM Dome        47.04  32  IAmb    IAmb     19 49 27.9
       comp=Z,62nm,1.1s
J17K   VABM Dome        47.04  32  P       P        19 49 26.4 +2.4
       baz=258,SNR=9.5
L17K   Donlin           47.15  33  P       P        19 49 27.4 +2.6
       baz=260,SNR=15
DBNI   Kabupaten Domp   47.22 214  P       P        19 49 24.2  -1.8
K17K   Iditarod         47.25  33  P       P        19 49 28.3 +2.6
       baz=259,SNR=23
MK31   Makanchi Array   47.26 306d iP      P        19 49 26.9 +0.8
MKAR   Makanchi Array   47.26 306  P       P        19 49 27.0 +1.0
       comp=Z,14nm,0.6s,baz=87,slow=9.3,SNR=176
MKAR                              PcP      PcP      19 50 58.0 +0.9
       comp=Z,7.4nm,0.9s,baz=62,slow=4.3,SNR=1.3
MKAR                              S        S        19 56 24.4 +5.7
       comp=Z,4.1nm,1.2s,baz=86,slow=18,SNR=4.2
MKAR                              LR       LR       20 09 42.0
       comp=Z,474nm,21.5s,baz=84,slow=37
       comp=Z,14nm,0.6s
MKAR   Makanchi Array   47.26 306          P        19 49 26.7 +0.6
MKAR                                       PcP      19 50 56.7  -0.4
MKAR   Makanchi Array   47.26 306 i P      P        19 49 27.0 +1.0
MKAR                              pmax     pmax
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	comp=Z,15nm,0.6s						
O17K	Koliganek Bris	47.38	37	P	P	19 49 28.9	+2.1
	baz=263,SNR=18						
N17K	Nushagak Hills	47.43	36	P	P	19 49 29.6	+2.5
	baz=262,SNR=20						
M17K	Holitna River	47.43	34	P	P	19 49 29.6	+2.5
	baz=261,SNR=30						
E18K	Tukpahlearik C	47.43	26	IAmb	IAmb	19 49 30.8	
	comp=Z,74nm,1.4s						
E18K	Tukpahlearik C	47.43	26	P	P	19 49 29.4	+2.3
	baz=253,SNR=15						
NRIK	Noril'sk	47.46	337	P	P	19 49 27.9	+0.7
	comp=Z,49nm,1.1s,baz=114,slow=7.6,SNR=45						
NRIK				LR	LR	20 13 32.3	
	comp=Z,649nm,18.3s,baz=106,slow=41						
	comp=Z,49nm,1.1s						
NRIK	Noril'sk	47.46	337		P	19 49 26.4	-0.8
NRIK				IAmb	IAmb	19 49 29.4	
	comp=Z,77nm,1.1s						
NRIK				PcP	PcP	19 50 57.0	-0.3
NRIK	Noril'sk	47.46	337	*d* *i*P	P	19 49 27.9	+0.7
NRIK				pmax	pmax		
	comp=Z,82nm,1.1s						
MAKZ	Makanchi	47.47	306	P	P	19 49 26.9	-0.8
MAKZ				IAmb	IAmb	19 49 30.1	
	comp=Z,33nm,0.9s						
MAKZ	Makanchi	47.47	306	P	P	19 49 28.0	+0.3
Q16K	King Salmon	47.49	38	P	P	19 49 29.1	+1.5
	baz=265,SNR=11						
R17L	Mt. Peulik Vol	47.56	40	P	P	19 49 29.0	+0.8
	baz=266						
F18K	Selawik	47.56	27	P	P	19 49 29.8	+1.8
	baz=254,SNR=15						
C18K	Utukok River	47.60	24	IAmb	IAmb	19 49 31.6	
	comp=Z,71nm,1.2s						
C18K	Utukok River	47.60	24	P	P	19 49 30.2	+1.8
	baz=251,SNR=26						
B18K	Kokolik River	47.64	23	P	P	19 49 31.2	+2.6
	baz=250,SNR=43						
P17K	Kvichak River	47.65	37	P	P	19 49 30.7	+1.9
	baz=264						
H18K	Honhosa River	47.72	29	IAmb	IAmb	19 49 32.5	
	comp=Z,64nm,1.4s						
H18K	Honhosa River	47.72	29	P	P	19 49 30.3	+1.0
	baz=257						
WBSI	Waikabubak, Su	47.73	212	P	P	19 49 29.4	-0.6
	comp=Z,40nm,1.0s						
KULM	Kulim	47.75	244	IAmb	IAmb	19 49 44.2	
	comp=Z,31nm,0.9s						
KULM	Kulim	47.75	244	P	P	19 49 31.1	+1.0
KULM	Kulim	47.75	244	P	P	19 49 29.6	-0.5
	comp=Z,43nm,1.0s						
PLAI	Plampang	47.76	214	P	P	19 49 29.2	-0.9
PLAI	Plampang	47.76	214	P	P	19 49 27.7	-2.4
	comp=Z,1µmcomp=Z,114nm,0.9s						
G18K	Tagagawik	47.77	28	IAmb	IAmb	19 49 32.9	
	comp=Z,57nm,1.1s						
G18K	Tagagawik	47.77	28	P	P	19 49 31.5	+1.7
	baz=256,SNR=20						
Q17K	Contact Creek	47.86	39	P	P	19 49 31.5	+0.9
	baz=266						
CHIR	Chirikof Islan	47.87	42	P	P	19 49 32.4	+1.8
	baz=268						
L18K	Granite Mounta	47.91	33	P	P	19 49 33.0	+2.2
	baz=261,SNR=14						
IPM	Ipoh	47.99	243	IAmb	IAmb	19 49 45.4	
	comp=Z,48nm,1.1s						
IPM	Ipoh	47.99	243	P	P	19 49 32.6	+0.5
IPM	Ipoh	47.99	243	P	P	19 49 28.2	-3.9
	comp=Z,41nm,1.0s						
N18K	Kilae Creek	48.08	36	P	P	19 49 34.1	+1.9
	baz=263,SNR=13						
J18K	Innoko River	48.09	32	P	P	19 49 34.1	+1.9
	baz=260,SNR=6.1						
TWSI	Taliwang, Sumb	48.11	215	P	P	19 49 32.0	-0.8
	comp=Z,886nmcomp=Z,90nm,0.8s						
A19K	Wainwright	48.16	22	P	P	19 49 35.3	+2.7
	baz=250,SNR=16						
KMMI	Kalianget	48.16	220	P	P	19 49 33.0	-0.3
	comp=Z,83nm,0.9s						
M18K	Stony River	48.21	34	P	P	19 49 35.5	+2.4
	baz=263						
KLNI	Mataram	48.22	216	P	P	19 49 32.9	-0.8
GCSA	Galena City Sc	48.25	30	P	P	19 49 34.1	+0.7
	baz=259						
P18K	Big Mountain,	48.29	37	P	P	19 49 35.7	+1.9
	baz=265,SNR=16						
C19K	Lookout Ridge	48.30	24	P	P	19 49 36.0	+2.2
	baz=252,SNR=38						
O18K	Koktuh Hills	48.34	37	IAmb	IAmb	19 49 39.6	
	comp=Z,60nm,0.8s						
O18K	Koktuh Hills	48.34	37	P	P	19 49 36.3	+2.1
	baz=265,SNR=8.5						
F19K	Shaleruckik Mo	48.34	27	IAmb	IAmb	19 49 37.0	
	comp=Z,59nm,1.6s						
F19K	Shaleruckik Mo	48.34	27	P	P	19 49 35.5	+1.4
	baz=256,SNR=7.8						
Q18K	Katmai Hardscr	48.35	38	P	P	19 49 35.0	+0.6
	baz=266,SNR=10						
KHKI	Kahang-Kahang	48.42	217	P	P	19 49 35.1	-0.1
	comp=Z,2µmcomp=Z,203nm,1.6s						
G19K	Purcell Mounta	48.45	28	P	P	19 49 36.5	+1.6
	baz=258,SNR=8.0						
TPI	Tanjungpandan	48.48	230	P	P	19 49 36.3	+0.6
	comp=Z,652nmcomp=Z,49nm,1.2s						
R18K	Karluk	48.58	40	P	P	19 49 36.0	0.0
	baz=268						
H19K	Roundabout Mou	48.58	29	IAmb	IAmb	19 49 39.3	
	comp=Z,85nm,1.3s						
H19K	Roundabout Mou	48.58	29	P	P	19 49 38.0	+2.1
	baz=259,SNR=18						
D19K	Kuna River	48.64	25	IAmb	IAmb	19 49 39.6	
	comp=Z,74nm,1.4s						
D19K	Kuna River	48.64	25	P	P	19 49 38.2	+1.8
	baz=254,SNR=16						
ABJI	Asem Bagus	48.65	219	P	P	19 49 36.0	-1.0
	comp=Z,2µmcomp=Z,108nm,0.9s						
J19K	Poorman	48.66	31	P	P	19 49 38.3	+1.7
	baz=261,SNR=12						
SII	Sitkinak Islan	48.70	41	P	P	19 49 38.6	+1.7
	baz=269						
E19K	Redstone River	48.70	26	IAmb	IAmb	19 49 40.1	
	comp=Z,63nm,1.1s						
E19K	Redstone River	48.70	26	P	P	19 49 38.7	+1.9
	baz=256,SNR=35						
L19K	White Mountain	48.75	34	IAmb	IAmb	19 49 40.9	
	comp=Z,64nm,1.2s						
L19K	White Mountain	48.75	34	P	P	19 49 39.5	+2.1
	baz=263,SNR=12						
N19K	Bonanza Creek	48.78	35	IAmb	IAmb	19 49 41.8	
	comp=Z,53nm,1.1s						
N19K	Bonanza Creek	48.78	35	P	P	19 49 40.0	+2.3
	baz=265,SNR=9.9						
O19K	Port Alsworth	48.81	36	P	P	19 49 39.9	+2.1
	baz=265,SNR=6.6						
RTBI	Rangdo, Negare	48.84	218	P	P	19 49 39.5	+1.0
Q19K	Cape Douglas,	49.07	38	P	P	19 49 41.6	+1.7
	baz=267						
F20K	Avaraart Lake	49.18	27	P	P	19 49 42.0	+1.6
	baz=258						
OHAK	Old Harbor	49.20	40	P	P	19 49 40.4	-0.4
OHAK	Old Harbor	49.20	40	P	P	19 49 42.1	+1.3
OHAK	Old Harbor	49.20	40	P	P	19 49 42.7	+1.9
	baz=269						
H20K	Anotleneega Mo	49.22	29	P	P	19 49 42.4	+1.5
	baz=260,SNR=10						
D20K	Etivluk River	49.23	25	IAmb	IAmb	19 49 44.1	
	comp=Z,70nm,1.1s						
D20K	Etivluk River	49.23	25	P	P	19 49 42.7	+1.8
	baz=256,SNR=26						
K20K	Telida	49.26	32	IAmb	IAmb	19 49 44.8	
	comp=Z,46nm,1.0s						
K20K	Telida	49.26	32	P	P	19 49 43.6	+2.4
	baz=263						
JAGI	Jajag, Banyuwa	49.26	219	P	P	19 49 40.7	-1.0
JAGI				IAmb	IAmb	19 49 54.4	
	comp=Z,60nm,0.9s						
JAGI	Jajag, Banyuwa	49.26	219	P	P	19 49 42.0	+0.3
JAGI	Jajag, Banyuwa	49.26	219	P	P	19 49 41.6	-0.1
	comp=Z,81nm,1.1s						
E20K	Nigu River	49.27	26	P	P	19 49 42.9	+1.6
	baz=257,SNR=18						
I20K	Naaghedeneel	49.28	30	P	P	19 49 43.3	+2.0
	baz=261						
P19K	Oil Pt	49.32	37	P	P	19 49 43.3	+1.5
	baz=267,SNR=5.1						
J20K	Nowinta River	49.33	31	IAmb	IAmb	19 49 58.1	
	comp=Z,115nm,1.7s						
J20K	Nowinta River	49.33	31	P	P	19 49 43.8	+2.1
	baz=262,SNR=18						
KURK	Kurchatov	49.35	311	P	P	19 49 41.8	-0.2
KURK	Kurchatov	49.35	311	*d* *i*P	P	19 49 42.4	+0.4
KURK				pmax	pmax		
	comp=Z,185nm,1.3s						
B20K	Meade River	49.38	23	IAmb	IAmb	19 49 45.4	
	comp=Z,71nm,0.9s						
B20K	Meade River	49.38	23	P	P	19 49 44.0	+2.0
	baz=254						
ILSW	Iliamna Southw	49.39	37	IAmb	IAmb	19 49 46.2	
	comp=Z,120nm,1.6s						
KURBB	Kurchatov Arra	49.41	311	P	P	19 49 43.2	+0.7
	comp=Z,44nm,0.6s,baz=86,slow=7.5,SNR=208						
KURBB				S	S	19 56 55.5	+6.7
	comp=Z,1.4nm,0.2s,baz=84,slow=12,SNR=4.9						
KURBB				LR	LR	20 13 45.6	
	comp=Z,865nm,18.6s,baz=144,slow=40						
KURBB				PKPPKP	P'P'df	20 20 42.3	-4.2
	comp=Z,0.4nm,0.2s,baz=251,slow=2.9,SNR=4.0						
	comp=Z,44nm,0.6s						
KURBB	Kurchatov Arra	49.41	311	P	P	19 49 42.5	0.0
M20K	Styx River	49.53	34	P	P	19 49 45.6	+2.2
	baz=265						
KDAK	Kodiak Island	49.59	40	LR	LR	20 07 58.0	
	comp=Z,377nm,21.5s,baz=251,slow=33						
KDAK	Kodiak Island	49.59	40		P	19 49 43.3	-0.4
KDAK	Kodiak Island	49.59	40	*d* *i*P	P	19 49 44.4	+0.6
KDAK				pmax	pmax		
	comp=Z,269nm,1.0s						
KDAK	Kodiak Island	49.59	40	P	P	19 49 44.6	+0.9
	baz=269						
RED	Redoubt Volcan	49.60	36	IAmb	IAmb	19 49 46.4	
	comp=Z,87nm,1.2s						
Q20K	Shuyak Island	49.71	38	P	P	19 49 45.7	+1.0
	baz=268,SNR=5.9						
SHLS	Shalkode	49.75	301	⇓*i*P	P	19 49 43.9	-1.6
SHLS	Shalkode	49.75	301	*d* *i*P	P	19 49 43.8	-1.6
IMAR	Indian Mountai	49.76	29	P	P	19 49 45.5	+0.5
IMAR					PcP	19 51 06.2	+0.6
NGJI	Ngawi	49.81	222	P	P	19 49 46.3	+0.4
	comp=Z,74nm,1.6s						
A21K	Barrow	49.92	22	P	P	19 49 48.1	+2.1
	baz=254,SNR=59						
N20K	Mount Spurr	49.92	35	P	P	19 49 48.3	+2.0
	baz=266						
SPCR	Spurr Chakacha	49.92	35	P	P	19 49 48.5	+2.2
	baz=266,SNR=36						
SJI	Sawahan	49.94	222	P	P	19 49 46.8	-0.2
	comp=Z,69nm,0.9s						
G21K	Allakaket	49.95	28	P	P	19 49 48.3	+1.9
	baz=261,SNR=10						
C21K	Knifeblade Rid	49.97	25	P	P	19 49 48.8	+2.2
	baz=257,SNR=24						
SNJI	Sawahan-Nganju	49.98	222	P	P	19 49 47.4	0.0
	comp=Z,72nm,1.5s						
SPU	Mount Spurr	49.99	35	IAmb	IAmb	19 49 50.6	
	comp=Z,68nm,1.1s						
PPLA	Purkeypile	50.06	33	P	P	19 49 49.9	+2.4
	baz=265,SNR=18						
UZB	Uzynbulak	50.06	301	⇓*i*P	P	19 49 48.5	+0.6
UZB	Uzynbulak	50.06	301	*d* *i*P	P	19 49 48.4	+0.6
KNRA	Kununurra	50.07	198	P	P	19 49 48.5	+0.8
	comp=Z,139nm,0.8s						
KNRA	Kununurra	50.07	198	P	P	19 49 46.8	-1.0
F21K	Alatna River	50.07	27	P	P	19 49 49.2	+1.8
	baz=260,SNR=8.7						
CHUM	Lake Minchumin	50.09	32	P	P	19 49 50.0	+2.5
	baz=264						
H21K	Melozitna Rive	50.10	29	P	P	19 49 49.8	+2.2
	baz=262,SNR=18						
E21K	Killik River	50.11	26	IAmb	IAmb	19 49 50.7	
	comp=Z,55nm,1.2s						
E21K	Killik River	50.11	26	P	P	19 49 49.3	+1.6
	baz=259						
STLK	Strandline Lak	50.12	35	IAmb	IAmb	19 50 02.9	
	comp=Z,53nm,1.2s						
HOM	Homer	50.13	37	P	P	19 49 49.0	+1.2
	baz=268						
SMRI	Semarang	50.13	224	P	P	19 49 50.0	+1.6
SMRI	Semarang	50.13	224	P	P	19 49 48.3	-0.1
	comp=Z,83nm,0.7s						
B21K	Ikpikpuk River	50.14	24	IAmb	IAmb	19 49 51.3	
	comp=Z,48nm,0.8s						
B21K	Ikpikpuk River	50.14	24	P	P	19 49 49.8	+2.1
	baz=257						
TDK	Taldyqorghan	50.18	304	*e*P	P	19 49 49.4	+0.8
	comp=Z,83nm,1.4s						
TDK	Taldyqorghan	50.18	304	*e*P	P	19 49 49.3	+0.8
TDK				pmax	pmax		
	comp=Z,83nm,1.4s						
SKT	Skwentna	50.29	34	IAmb	IAmb	19 49 52.3	
	comp=Z,46nm,1.0s						
SKT	Skwentna	50.29	34	P	P	19 49 50.4	+1.3
	baz=266,SNR=14						
WUS	Wushi	50.30	299	IAmb	IAmb	19 50 12.2	
	comp=Z,55nm,1.2s						
CNPM	China Poot	50.33	37	IAmb	IAmb	19 49 52.0	
	comp=Z,66nm,0.8s						
A22K	Sinclair Lake	50.35	22	P	P	19 49 51.2	+1.9
	baz=256						
I21K	Tanana	50.38	30	IAmb	IAmb	19 49 53.5	
	comp=Z,129nm,1.8s						
I21K	Tanana	50.38	30	P	P	19 49 51.7	+2.0
	baz=263						
CAPN	Captain Cook N	50.41	36	P	P	19 49 50.9	+1.0
	baz=268						
BRLK	Bradley Lake	50.51	37	P	P	19 49 49.7	-1.1
BRLK				IAmb	IAmb	19 49 53.5	
	comp=Z,53nm,0.9s						
SATY	Saty	50.52	301	⇓*i*P	P	19 49 52.1	+0.7
SATY	Saty	50.52	301	*d* *i*P	P	19 49 52.0	+0.7
BRSE	Bradley Lake S	50.59	37	P	P	19 49 52.9	+1.6
	baz=269						
F22K	John River	50.62	27	P	P	19 49 53.6	+2.1
	baz=261						
LHMI	Lhok Sumawe	50.62	247	P	P	19 49 53.6	+1.4
SUA	Susitna One	50.64	35	IAmb	IAmb	19 49 55.2	
	comp=Z,46nm,0.8s						
SUA	Susitna One	50.64	35	P	P	19 49 52.9	+1.0
	baz=267,SNR=9.5						
PRZ	Przheval'sk	50.64	301	IAmb	IAmb	19 50 07.0	
	comp=Z,88nm,1.2s						
PCJI	Pacitan	50.65	222	P	P	19 49 51.9	-0.3
	comp=Z,74nm,1.1s						
D22K	Ayikyak River	50.66	25	IAmb	IAmb	19 49 57.8	
	comp=Z,101nm,1.4s						
D22K	Ayikyak River	50.66	25	P	P	19 49 54.0	+2.2
	baz=260,SNR=35						
PSI	Prapat	50.67	243	P	P	19 49 52.3	-0.4
	comp=Z,8.4nm,0.6s,baz=22,slow=2.3,SNR=10						
PSI				LR	LR	20 12 34.5	
	comp=Z,131nm,18.1s,baz=33,slow=38						
	comp=Z,8.4nm,0.6s						
PSI	Prapat	50.67	243	P	P	19 49 54.2	+1.6
L22K	Petersville	50.68	33	IAmb	IAmb	19 49 54.5	
	comp=Z,77nm,1.2s						
KTH	Kantishna Hill	50.68	32	IAmb	IAmb	19 49 56.3	
	comp=Z,110nm,1.7s						
B22K	Teshekpuk Lake	50.70	23	IAmb	IAmb	19 49 55.2	
	comp=Z,93nm,1.3s						
B22K	Teshekpuk Lake	50.70	23	P	P	19 49 53.8	+1.8
	baz=258,SNR=22						
BPAW	Bear Paw Mtn.	50.70	31	P	P	19 49 54.2	+2.1
	baz=265						
H22K	Ishtalitna Cre	50.71	29	IAmb	IAmb	19 49 56.0	
	comp=Z,93nm,1.6s						
H22K	Ishtalitna Cre	50.71	29	P	P	19 49 54.1	+1.9
	baz=263,SNR=14						
MTSU	Mount Surprise	50.75	178	P	P	19 49 55.0	+2.1
UGM	Wanagama	50.79	223	P	P	19 49 52.4	-1.0
UGM	Wanagama	50.79	223	P	P	19 49 53.9	+0.5
UGM	Wanagama	50.79	223	P	P	19 49 51.8	-1.6
	comp=Z,179nm,1.6s						
CTJI	Waduk Cacaban	50.84	225	P	P	19 49 53.8	+0.1
	comp=Z,141nm,1.3s						
YOGI	Yogyakarta	50.84	223	P	P	19 49 52.4	-1.3
E22K	Anaktuvuk Pass	50.85	26	IAmb	IAmb	19 49 56.6	
	comp=Z,58nm,1.1s						
E22K	Anaktuvuk Pass	50.85	26	P	P	19 49 55.3	+2.0
	baz=261,SNR=30						
SLKM	Skilak Lake	50.86	36	IAmb	IAmb	19 49 55.9	
	comp=Z,52nm,0.8s						
MLY	Manley	50.89	30	IAmb	IAmb	19 49 58.5	
	comp=Z,68nm,1.5s						
MLY	Manley	50.89	30	P	P	19 49 55.7	+2.1
	baz=264						
CUT	Chulitna	50.91	34	P	P	19 49 54.5	+0.9
	baz=267						
M22K	Willow	50.95	34	P	P	19 49 55.4	+1.4
	baz=268,SNR=7.6						
TRF	Thorofare Moun	50.96	32	P	P	19 49 55.6	+1.3
	baz=266,SNR=8.6						
KCSI	Kotacane, Aceh	51.07	245	P	P	19 49 55.5	-0.1
	comp=Z,20nm,0.8s						
O22K	Cooper Landing	51.11	36	P	P	19 49 55.8	+0.6
	baz=269						
RC01	Rabbit Creek A	51.11	35	IAmb	IAmb	19 49 58.0	
	comp=Z,92nm,1.2s						
RC01	Rabbit Creek A	51.11	35	P	P	19 49 56.0	+0.8
	baz=269,SNR=12						
TARG	Taragay, Kyrgy	51.23	300	IAmb	IAmb	19 50 12.7	
	comp=Z,124nm,1.6s						
TARG	Taragay, Kyrgy	51.23	300	P	P	19 49 58.6	+1.6
TARG				pmax	pmax		
	comp=Z,54nm,1.2s						
SEW	Seward	51.24	37	P	P	19 49 57.1	+0.9
	baz=270,SNR=9.0						
KPJI	Karang Pucung	51.25	225	P	P	19 49 56.7	-0.1
COLD	Coldfoot	51.34	27	P	P	19 49 58.7	+1.9
	baz=263,SNR=10						
G23K	Bananza Creek	51.35	28	IAmb	IAmb	19 50 00.5	
	comp=Z,58nm,1.3s						
G23K	Bananza Creek	51.35	28	P	P	19 49 59.0	+2.0
	baz=264,SNR=24						
CHKK	Chushkaly	51.39	302	*e*P	P	19 49 58.4	+0.8
CHKK	Chushkaly	51.39	302	*e*P	P	19 49 58.4	+0.8
D23K	Nanushuk River	51.39	25	P	P	19 49 59.6	+2.3
	baz=261,SNR=33						
PMR	Palmer	51.42	35	P	P	19 49 56.4	-1.1
PMR				IAmb	IAmb	19 49 59.6	
	comp=Z,119nm,1.2s						
PMR	Palmer	51.42	35	P	P	19 49 58.4	+0.9
PMR	Palmer	51.42	35	P	P	19 49 56.4	-1.1
PMR				pmax	pmax		
	comp=Z,119nm,1.2s						
PMR	Palmer	51.42	35	P	P	19 49 58.4	+0.9
	baz=269,SNR=18						
I23K	Minto, Yukon-K	51.48	30	IAmb	IAmb	19 50 02.9	
	comp=Z,69nm,1.4s						
I23K	Minto, Yukon-K	51.48	30	P	P	19 49 60.0	+2.0
	baz=266,SNR=12						
MNSI	Mandailing Nat	51.51	241	P	P	19 49 59.6	+0.8
	comp=Z,59nm,1.2s						
GHO	Glory Hole Cre	51.52	34	IAmb	IAmb	19 50 00.9	
	comp=Z,130nm,1.2s						
C23K	Itkillik River	51.55	24	IAmb	IAmb	19 50 01.8	
	comp=Z,96nm,1.1s						
C23K	Itkillik River	51.55	24	P	P	19 50 00.3	+1.9
	baz=261,SNR=36						
AAA	Alma-Ata	51.56	302	*e*P	P	19 49 59.7	+0.7
	comp=Z,63nm,1.0s						
AAA	Alma-Ata	51.56	302	*e*P	P	19 49 59.7	+0.7
AAA				pmax	pmax		
	comp=Z,63nm,1.0s						
NEA2	Nenana	51.56	31	IAmb	IAmb	19 50 01.8	
	comp=Z,78nm,1.2s						
NEA2	Nenana	51.56	31	P	P	19 50 00.4	+1.8
	baz=266,SNR=29						
MCK	McKinley	51.58	32	IAmb	IAmb	19 50 01.3	
	comp=Z,83nm,1.4s						
MCK	McKinley	51.58	32	P	P	19 49 60.0	+1.2
	baz=267,SNR=18						
TNSS	Tian-Shan	51.58	301	*e*P	P	19 49 60.0	+0.4
TNSS	Tian-Shan	51.58	301	*e*P	P	19 49 59.9	+0.4
KDJ	Kajisay	51.60	300	P	P	19 50 00.9	+1.5
KDJ				pmax	pmax		
	comp=Z,23nm,1.6s						
RND	Reindeer	51.60	32	P	P	19 49 57.9	-1.1
RND				IAmb	IAmb	19 50 01.2	
	comp=Z,59nm,1.2s						
RND	Reindeer	51.60	32	P	P	19 49 57.9	-1.1
RND				pmax	pmax		
	comp=Z,59nm,1.2s						
MLSI	Meulaboh, Aceh	51.65	247	P	P	19 49 59.8	-0.1
	comp=Z,117nm,0.9s						
E23K	Chandalar	51.66	26	IAmb	IAmb	19 50 03.0	
	comp=Z,55nm,1.2s						
E23K	Chandalar	51.66	26	P	P	19 50 01.6	+2.3
	baz=263,SNR=21						
TPTI		51.69	245	P	P	19 49 59.0	-1.2
	comp=Z,38nm,1.1s						
WAT1	Susitna Watana	51.72	33	P	P	19 50 00.2	+0.4
	baz=268						
KNK	Knik Glacier	51.74	35	P	P	19 50 01.2	+1.3
	baz=270,SNR=21						
TOLK	Toolik Lake Re	51.74	26	IAmb	IAmb	19 50 03.3	
	comp=Z,73nm,1.3s						
TOLK	Toolik Lake Re	51.74	26	P	P	19 50 01.7	+1.7
	baz=263,SNR=14						
PPI	Padang Panjang	51.77	239	P	P	19 50 00.8	0.0
	comp=Z,718nmcomp=Z,44nm,1.4s						
PWL	Port Wells	51.79	36	P	P	19 50 01.1	+0.7
	baz=270,SNR=7.0						
SML	Sawmill	51.80	34	IAmb	IAmb	19 50 04.3	
	comp=Z,75nm,0.8s						
SML	Sawmill	51.80	34	P	P	19 50 01.7	+1.2
	baz=269,SNR=20						
KLSI		51.83	231	P	P	19 50 02.1	+0.9
KLI	Kotabumi	51.88	231	P	P	19 50 01.6	+0.1
DBJI	Dramaga	51.96	228	P	P	19 50 01.9	-0.3
	comp=Z,2µmcomp=Z,127nm,1.2s						
WRH	Wood River Hil	51.98	31	P	P	19 50 00.1	-1.6
BLSI	Bandar Lampung	52.01	230	P	P	19 50 02.5	0.0
PDSI	Padang	52.04	238	P	P	19 50 01.7	-1.1
MDSI	Maura Dua	52.05	232	P	P	19 50 02.9	+0.1
D24K	Happy Valley	52.08	25	IAmb	IAmb	19 50 05.8	
	comp=Z,70nm,1.1s						
D24K	Happy Valley	52.08	25	P	P	19 50 04.4	+2.0
	baz=263						
E24K	Your Creek	52.08	26	IAmb	IAmb	19 50 06.3	
	comp=Z,94nm,1.5s						
E24K	Your Creek	52.08	26	P	P	19 50 04.4	+2.0
	baz=264						
WAT6	Susitna Watana	52.09	33	P	P	19 50 03.8	+1.1
	baz=269,SNR=17						
M23K	Glacier View	52.09	34	P	P	19 50 03.9	+1.4
	baz=270,SNR=10						
COLA	College	52.10	30	P	P	19 50 04.4	+1.8
COLA	College	52.10	30	P	P	19 50 04.7	+2.1
COLA				pmax	pmax		
	comp=Z,17nm,1.2s						
COLA	College	52.10	30	P	P	19 50 04.1	+1.5
	baz=267						
BBJI	Bungbulang	52.12	226	P	P	19 50 04.4	+1.0
BBJI	Bungbulang	52.12	226	P	P	19 50 04.3	+0.9
	comp=Z,50nm,0.8s						
H24K	Noodor Dome	52.14	29	P	P	19 50 05.2	+2.2
	baz=267,SNR=16						
C24K	Franklin Bluff	52.19	24	P	P	19 50 04.8	+1.7
	baz=263,SNR=41						
F24K	Squaw Lake	52.26	27	P	P	19 50 06.0	+2.2
	baz=265,SNR=14						
DHY	Denali Highway	52.26	33	P	P	19 50 05.3	+1.3
	baz=269,SNR=6.5						
P23K	Montague Islan	52.27	37	P	P	19 50 05.7	+1.8
	baz=272						
SCM	Sheep Creek Mo	52.28	34	P	P	19 50 05.6	+1.5
	baz=270,SNR=16						
POKR	Poker Plat Res	52.29	30	P	P	19 50 06.0	+2.0
	baz=268,SNR=12						
G24K	Hadweenzic Riv	52.36	28	IAmb	IAmb	19 50 08.5	
	comp=Z,70nm,1.4s						
G24K	Hadweenzic Riv	52.36	28	P	P	19 50 07.0	+2.5
	baz=266,SNR=22						
MASI	Maura Aman, Be	52.37	235	P	P	19 50 06.6	+1.3
GLI	Glacier Island	52.40	36	P	P	19 50 07.3	+2.4
	baz=271						
BOOM	Boomskoye usch	52.42	301	IAmb	IAmb	19 50 20.0	
	comp=Z,80nm,1.6s						
HDA	Harding Lake	52.48	31	P	P	19 50 04.7	-0.7
HDA				IAmb	IAmb	19 50 08.9	
	comp=Z,125nm,1.7s						
HDA	Harding Lake	52.48	31	P	P	19 50 07.5	+2.1
	baz=268,SNR=6.7						
KSI	Kapahiang	52.50	234	P	P	19 50 07.4	+1.2
	comp=Z,2µmcomp=Z,94nm,0.8s						
ILAR	Eielson Array	52.51	31	P	P	19 50 06.2	+0.5
	comp=Z,11nm,0.6s,baz=260,slow=6.0,SNR=118						
ILAR				LR	LR	20 13 34.4	
	comp=Z,112nm,19.8s,baz=265,slow=37						
	comp=Z,11nm,0.6s						
ILAR	Eielson Array	52.51	31		P	19 50 05.7	+0.1
LWLI	Liwa	52.52	232	P	P	19 50 06.4	0.0

TKM2	**Tokmak 2**	**52.57**	**302**	P	**P**	**19 50 08.3**	**+1.6**
	SNR=6.7						
KASI	**Kota Agung**	**52.61**	**231**	P	**P**	**19 50 06.3**	**-0.7**
	comp=Z,89nm,1.0s						
GSI	**Gunungsitoli**	**52.66**	**243**	P	**P**	**19 50 08.5**	**+1.0**
GSI	**Gunungsitoli**	**52.66**	**243**	P	**P**	**19 50 08.4**	**+1.0**
	comp=Z,3µmcomp=Z,212nm,1.4s						
FID	**Port Fidalgo**	**52.71**	**36**	IAmb	IAmb	19 50 09.7	
	comp=Z,67nm,1.0s						
MNAI	**Manna**	**52.77**	**233**	P	**P**	**19 50 09.4**	**+1.2**
M24K	**Tolsona, Glenn**	**52.82**	**34**	IAmb	IAmb	19 50 11.4	
	comp=Z,124nm,1.3s						
M24K	**Tolsona, Glenn**	**52.82**	**34**	P	**P**	**19 50 09.9**	**+1.8**
	baz=271,SNR=7.1						
Q23K	**Middleton Isla**	**52.83**	**37**	P	**P**	**19 50 10.3**	**+2.3**
	baz=273						
SNSI	**Sinabang, Aceh**	**52.89**	**245**	P	**P**	**19 50 10.8**	**+1.7**
	comp=Z,2µmcomp=Z,162nm,1.1s						
G25K	**Bearman Lake**	**52.91**	**28**	P	**P**	**19 50 11.1**	**+2.6**
	baz=268,SNR=14						
KLU	**Klutina**	**52.95**	**35**	IAmb	IAmb	19 50 12.1	
	comp=Z,74nm,1.0s						
KLU	**Klutina**	**52.95**	**35**	P	**P**	**19 50 10.9**	**+1.9**
	baz=272,SNR=18						
D25K	**Kavik River**	**52.96**	**25**	P	**P**	**19 50 10.5**	**+1.5**
	baz=265						
K24K	**Donnelly Dome**	**52.98**	**32**	IAmb	IAmb	19 50 12.4	
	comp=Z,161nm,1.8s						
K24K	**Donnelly Dome**	**52.98**	**32**	P	**P**	**19 50 11.5**	**+2.3**
	baz=270						
DIV	**Divide**	**53.04**	**35**	IAmb	IAmb	19 50 13.3	
	comp=Z,107nm,1.0s						
EYAK	**Cordova Ski Ar**	**53.07**	**36**	IAmb	IAmb	19 50 12.9	
	comp=Z,148nm,1.4s						
EYAK	**Cordova Ski Ar**	**53.07**	**36**	P	**P**	**19 50 11.6**	**+1.8**
EYAK	**Cordova Ski Ar**	**53.07**	**36**	P	**P**	**19 50 11.7**	**+1.8**
	baz=272,SNR=6.3						
KBK	**Karagaybulak**	**53.09**	**301**	P	**P**	**19 50 12.0**	**+1.4**
	SNR=25						
WRAB	**Tennant Creek**	**53.10**	**190**	P	**P**	**19 50 09.5**	**-1.0**
WRAB				IAmb	IAmb	19 50 22.9	
	comp=Z,50nm,0.8s						
WRAB	**Tennant Creek**	**53.10**	**190**	P	**P**	**19 50 10.5**	**0.0**
WRAB	**Tennant Creek**	**53.10**	**190**	*i* P	**P**	**19 50 10.4**	**0.0**
WRAB				pmax	pmax		
	comp=Z,26nm,0.9s						
KSH	**Kashi**	**53.11**	**297**	P	**P**	**19 50 15.3**	**+4.7**
KSH				sP	pwP	19 50 26.6	+4.2
KSH				S	**S**	**19 57 48.0**	**+7.5**
KSH				pmax	pmax		
	comp=Z,32nm,1.2s						
KSH				pmax	pmax		
	comp=Z,290nm,5.8s						
KSH				LR	LR		
	comp=Z,630nm,14.1s						
KSH				LR	LR		
	comp=Z,720nm,14.4s						
KSH				LR	LR		
	comp=Z,520nm,20.3s						
WRA	**Warramunga Arr**	**53.12**	**190**	P	**P**	**19 50 10.5**	**-0.1**
	comp=Z,18nm,0.8s,baz=9.0,slow=7.5,SNR=55						
WRA				PcP	**PcP**	**19 51 20.5**	**+1.8**
	comp=Z,7.7nm,0.7s,baz=5.5,slow=4.0,SNR=6.6						
	comp=Z,18nm,0.8s						
WRA	**Warramunga Arr**	**53.12**	**190**	P	**P**	**19 50 09.4**	**-1.1**
WRA				PcP	**PcP**	**19 51 17.1**	**-1.7**
F25K	**Christian Rive**	**53.12**	**27**	P	**P**	**19 50 12.7**	**+2.5**
	baz=267,SNR=36						
PAX	**Paxson**	**53.13**	**33**	IAmb	IAmb	19 50 15.5	
	comp=Z,87nm,1.5s						
PAX	**Paxson**	**53.13**	**33**	P	**P**	**19 50 12.0**	**+1.6**
	baz=271,SNR=14						
CHMS	**Chumysh**	**53.16**	**302**	P	**P**	**19 50 11.9**	**+1.1**
	SNR=8.8						
J25K	**Salcha River,**	**53.16**	**31**	P	**P**	**19 50 12.2**	**+1.6**
	baz=270						
E25K	**Arctic Village**	**53.17**	**26**	IAmb	IAmb	19 50 14.6	
	comp=Z,67nm,1.1s						
E25K	**Arctic Village**	**53.17**	**26**	P	**P**	**19 50 12.6**	**+2.0**
	baz=267,SNR=44						
QIS	**Mount Isa**	**53.21**	**184**	P	**P**	**19 50 12.3**	**+1.0**
FITZ	**Fitzroy Crossi**	**53.23**	**200**	P	**P**	**19 50 12.3**	**+0.9**
	comp=Z,37nm,1.0s,baz=19,slow=7.1,SNR=22						
	comp=Z,37nm,1.0s						
FITZ	**Fitzroy Crossi**	**53.23**	**200**	P	**P**	**19 50 12.4**	**+1.0**
USP	**Ospenovka**	**53.28**	**302**	P	**P**	**19 50 12.7**	**+1.0**
	SNR=13						
HARP	**HAARP**	**53.29**	**34**	P	**P**	**19 50 13.3**	**+1.9**
	baz=272,SNR=10						
RIDG	**Independent Ri**	**53.40**	**32**	P	**P**	**19 50 13.2**	**+0.9**
	baz=271,SNR=6.1						
AAK	**Ala-Archa**	**53.42**	**301**	P	**P**	**19 50 14.1**	**+1.1**
	SNR=9.4						
AAK	**Ala-Archa**	**53.42**	**301**		**P**	**19 50 12.7**	**-0.2**
AAK	**Ala-Archa**	**53.42**	**301**	*i* P	**P**	**19 50 14.0**	**+1.1**
	SNR=12						
AAK	**Ala-Archa**	**53.42**	**301**	*d i*P	**P**	**19 50 14.0**	**+1.1**
AAK				pmax	pmax		
	comp=Z,20nm,1.1s						
UCH	**Uchtor**	**53.51**	**301**	P	**P**	**19 50 15.5**	**+1.6**
	SNR=16						
C26K	**Camden Bay**	**53.52**	**24**	P	**P**	**19 50 15.4**	**+2.5**
	baz=266,SNR=23						
BMAR	**Burnt Mountain**	**53.52**	**27**		**P**	**19 50 13.6**	**+0.5**
N25K	**Chitina, Valde**	**53.58**	**35**	IAmb	IAmb	19 50 33.0	
	comp=Z,49nm,1.4s						
N25K	**Chitina, Valde**	**53.58**	**35**	P	**P**	**19 50 15.5**	**+1.8**
	baz=273,SNR=8.0						
BMRM	**Bremner River**	**53.61**	**35**	P	**P**	**19 50 15.9**	**+2.0**
	baz=273,SNR=14						
RAGM	**Ragged Mountai**	**53.61**	**36**	IAmb	IAmb	19 50 20.2	
	comp=Z,80nm,1.0s						
F26K	**Sheenjek River**	**53.70**	**27**	IAmb	IAmb	19 50 18.6	
	comp=Z,62nm,1.2s						
F26K	**Sheenjek River**	**53.70**	**27**	P	**P**	**19 50 17.2**	**+2.8**
	baz=269,SNR=46						
ARLS	**Aral**	**53.73**	**301**	P	**P**	**19 50 17.0**	**+1.8**
ARLS				pmax	pmax		
	comp=Z,26nm,1.0s						
DOT	**Dot Lake**	**53.75**	**32**	IAmb	IAmb	19 50 18.7	
	comp=Z,84nm,1.6s						
SCRK	**Sand Creek**	**53.77**	**32**	IAmb	IAmb	19 50 17.6	
	comp=Z,65nm,1.3s						
SCRK	**Sand Creek**	**53.77**	**32**	P	**P**	**19 50 16.2**	**+1.1**
	baz=272,SNR=21						
KAIM	**Kayak Island**	**53.77**	**37**	P	**P**	**19 50 18.2**	**+3.2**
	baz=274						
G26K	**Porcupine Rive**	**53.83**	**28**	IAmb	IAmb	19 50 19.3	
	comp=Z,69nm,1.4s						
G26K	**Porcupine Rive**	**53.83**	**28**	P	**P**	**19 50 17.9**	**+2.7**
	baz=270,SNR=16						
C27K	**Jago River**	**53.92**	**25**	P	**P**	**19 50 18.1**	**+2.1**
	baz=268						
MENT	**Mentasta**	**53.93**	**33**	P	**P**	**19 50 18.3**	**+2.1**
EKS2	**Erkin-Say**	**53.93**	**302**	P	**P**	**19 50 17.8**	**+1.1**
	SNR=9.8						
J26L	**Joseph Creek**	**53.94**	**31**	IAmb	IAmb	19 50 19.9	
	comp=Z,45nm,1.2s						
J26L	**Joseph Creek**	**53.94**	**31**	P	**P**	**19 50 16.9**	**+0.6**
	baz=272						
GLB	**Gilahina Butte**	**53.97**	**35**	IAmb	IAmb	19 50 19.6	
	comp=Z,65nm,1.2s						
L26K	**Log Cabin Wild**	**54.09**	**33**	IAmb	IAmb	19 50 20.7	
	comp=Z,59nm,1.3s						
L26K	**Log Cabin Wild**	**54.09**	**33**	P	**P**	**19 50 19.3**	**+2.0**
	baz=273,SNR=8.3						
BVA0	**Borovoye Array**	**54.16**	**315**	P	**P**	**19 50 17.8**	**-0.1**
BVAR	**Borovoye Array**	**54.16**	**315**	P	**P**	**19 50 18.6**	**+0.7**
	comp=Z,27nm,0.9s,baz=87,slow=6.4,SNR=49						
BVAR				PcP	**PcP**	**19 51 23.6**	**+1.2**
	comp=Z,9.2nm,0.6s,baz=96,slow=4.7,SNR=4.1						
BVAR				LR	LR	20 15 51.7	
	comp=Z,296nm,19.6s,baz=79,slow=39						
	comp=Z,27nm,0.9s						
VRDI	**Verde Repeater**	**54.16**	**35**	IAmb	IAmb	19 50 21.0	
	comp=Z,45nm,1.1s						
BORK	**Borovoye**	**54.19**	**315**		**P**	**19 50 18.2**	**0.0**
BORK				IAmb	IAmb	19 50 20.2	
	comp=Z,65nm,1.2s						
BORK	**Borovoye**	**54.19**	**315**	*d i*P	**P**	**19 50 18.8**	**+0.6**
BORK				pmax	pmax		
	comp=Z,65nm,1.2s						
M26K	**Nabesna, AK**	**54.29**	**34**	IAmb	IAmb	19 51 03.7	
	comp=Z,62nm,1.7s						
M26K	**Nabesna, AK**	**54.29**	**34**	P	**P**	**19 50 20.6**	**+1.8**
	baz=274,SNR=6.9						
MCARA	**McCarthy VSAT**	**54.35**	**35**	IAmb	IAmb	19 50 22.9	
	comp=Z,65nm,1.0s						
MCARA	**McCarthy VSAT**	**54.35**	**35**	P	**P**	**19 50 21.2**	**+2.0**
	baz=274,SNR=14						
CRQE	**Cirque**	**54.37**	**36**	P	**P**	**19 50 21.1**	**+1.6**
	baz=275,SNR=14						
TGL	**Tana Glacier**	**54.49**	**36**	IAmb	IAmb	19 50 35.5	
	comp=Z,70nm,1.2s						
E27K	**Coleen River**	**54.66**	**26**	IAmb	IAmb	19 50 25.2	
	comp=Z,43nm,1.1s						
E27K	**Coleen River**	**54.66**	**26**	P	**P**	**19 50 23.9**	**+2.4**
	baz=271,SNR=26						
G27K	**Doyon Strip**	**54.67**	**28**	P	**P**	**19 50 23.8**	**+2.3**
	baz=272						
I27K	**Kandik River**	**54.73**	**30**	IAmb	IAmb	19 50 26.3	
	comp=Z,71nm,1.6s						
I27K	**Kandik River**	**54.73**	**30**	P	**P**	**19 50 23.4**	**+1.4**
	baz=272,SNR=15						
H27K	**Steamboat Moun**	**54.74**	**29**	P	**P**	**19 50 24.4**	**+2.4**
	baz=272,SNR=58						
L27K	**Beaver Creek,**	**54.78**	**33**	P	**P**	**19 50 24.1**	**+1.7**
	baz=274,SNR=20						
BCAR	**Beaver Creek A**	**54.80**	**33**		**P**	**19 50 22.6**	**0.0**
M27K	**Edge Creek, AK**	**54.81**	**34**	P	**P**	**19 50 24.3**	**+1.6**
	baz=274,SNR=7.8						
ARSB	**Arslanbob**	**54.84**	**300**	IAmb	IAmb	19 50 38.0	
	comp=Z,91nm,1.2s						
D27M	**Malcolm River**	**54.88**	**25**	IAmb	IAmb	19 50 26.7	
	comp=Z,45nm,1.2s						
D27M	**Malcolm River**	**54.88**	**25**	P	**P**	**19 50 24.7**	**+1.7**
	baz=270						
GRNC	**Granite Creek**	**55.02**	**36**	IAmb	IAmb	19 50 27.7	
	comp=Z,40nm,0.9s						
YAH	**Yahtse**	**55.07**	**36**	IAmb	IAmb	19 50 39.2	
	comp=Z,33nm,0.9s						
CTG	**Chitna Glacier**	**55.20**	**35**	P	**P**	**19 50 27.3**	**+1.7**
	baz=276,SNR=6.5						
BVCY	**Beaver Creek**	**55.28**	**33**	P	**P**	**19 50 27.8**	**+1.9**
	baz=275,SNR=13						
F28M	**Old Crow**	**55.33**	**27**	IAmb	IAmb	19 50 30.1	
	comp=Z,66nm,1.2s						
F28M	**Old Crow**	**55.33**	**27**	P	**P**	**19 50 28.7**	**+2.4**
	baz=273,SNR=35						
E28M	**Babbage River**	**55.41**	**26**	IAmb	IAmb	19 50 30.7	
	comp=Z,72nm,1.2s						
E28M	**Babbage River**	**55.41**	**26**	P	**P**	**19 50 29.4**	**+2.5**
	baz=272						
I28M	**Miner Creek**	**55.44**	**30**	IAmb	IAmb	19 50 32.9	
	comp=Z,58nm,1.4s						
I28M	**Miner Creek**	**55.44**	**30**	P	**P**	**19 50 28.9**	**+1.8**
	baz=274,SNR=19						
ARK	**Arkit**	**55.45**	**301**	P	**P**	**19 50 29.3**	**+1.6**
ARK				pmax	pmax		
	comp=Z,51nm,1.3s						
YUK3	**Moose Creek**	**55.53**	**34**	P	**P**	**19 50 29.4**	**+1.4**
	baz=276,SNR=9.4						
DZA	**Taraz**	**55.62**	**302**	*e*P	**P**	**19 50 29.6**	**+0.8**
DZA	**Taraz**	**55.62**	**302**	*e*P	**P**	**19 50 29.5**	**+0.8**
D28M	**Stokes Point**	**55.67**	**25**	P	**P**	**19 50 30.4**	**+1.9**
	baz=272,SNR=10						
O28M	**Mount Upton**	**55.78**	**35**	P	**P**	**19 50 31.6**	**+1.7**
	baz=277,SNR=5.1						
DAWY	**Dawson**	**55.79**	**31**	IAmb	IAmb	19 50 34.5	
	comp=Z,59nm,1.3s						
DAWY	**Dawson**	**55.79**	**31**	P	**P**	**19 50 31.2**	**+1.6**
	baz=276,SNR=19						
PINM	**Pinnacle**	**55.84**	**36**	P	**P**	**19 50 31.4**	**+1.4**
	baz=278						
YUK8	**Steele Glacier**	**55.92**	**35**	P	**P**	**19 50 32.7**	**+1.9**
	baz=277						
H29M	**Whitestone**	**56.02**	**29**	IAmb	IAmb	19 50 34.8	
	comp=Z,81nm,1.3s						
H29M	**Whitestone**	**56.02**	**29**	P	**P**	**19 50 33.5**	**+2.4**
	baz=275,SNR=20						
E29M	**Blow River**	**56.03**	**26**	IAmb	IAmb	19 50 35.0	
	comp=Z,86nm,1.2s						
E29M	**Blow River**	**56.03**	**26**	P	**P**	**19 50 33.4**	**+2.2**
	baz=274,SNR=54						
G29M	**Pine Creek**	**56.09**	**28**	P	**P**	**19 50 30.3**	**-1.5**
G29M	**Pine Creek**	**56.09**	**28**	P	**P**	**19 50 34.1**	**+2.4**
	baz=275,SNR=38						
I29M	**Ogilvie Camp,**	**56.12**	**30**	IAmb	IAmb	19 50 35.2	
	comp=Z,83nm,1.2s						
I29M	**Ogilvie Camp,**	**56.12**	**30**	P	**P**	**19 50 33.5**	**+1.6**
	baz=276,SNR=40						
KK31	**Karatay Array**	**56.15**	**303**	IAmb	IAmb	19 50 34.8	
	comp=Z,76nm,1.1s						
KK31	**Karatay Array**	**56.15**	**303**	*i* P	**P**	**19 50 33.0**	**+0.5**
KKAR	**Karatay Array**	**56.15**	**303**		**P**	**19 50 32.7**	**+0.2**
KKAR	**Karatay Array**	**56.15**	**303**	P	**P**	**19 50 32.7**	**+0.2**
DRK	**Karamyk**	**56.22**	**298**	IAmb	IAmb	19 50 47.1	
	comp=Z,39nm,0.7s						
J29N	**Klondike Camp**	**56.26**	**31**	P	**P**	**19 50 34.9**	**+1.9**
	baz=276						
M29M	**Somme Creek**	**56.39**	**33**	P	**P**	**19 50 36.3**	**+2.3**
	baz=277,SNR=14						
AUNRC	**North Rockhamp**	**56.42**	**171**	P	**P**	**19 50 36.1**	**+1.7**
YUK4	**Talbot Arm**	**56.45**	**35**	P	**P**	**19 50 37.0**	**+2.5**
	baz=278,SNR=14						
L29M	**L29M**	**56.45**	**32**	P	**P**	**19 50 37.0**	**+2.6**
	baz=277,SNR=34						
K29M	**Barlow Dome**	**56.63**	**31**	IAmb	IAmb	19 50 39.5	
	comp=Z,98nm,1.4s						
K29M	**Barlow Dome**	**56.63**	**31**	P	**P**	**19 50 38.0**	**+2.3**
	baz=277,SNR=24						
O29M	**Mount Kennedy**	**56.64**	**36**	P	**P**	**19 50 38.4**	**+2.6**
	baz=279,SNR=15						
BRLS	**Borolday**	**56.64**	**303**	*e*P	**P**	**19 50 38.1**	**+2.0**
	comp=Z,25nm,0.8s						
BRLS	**Borolday**	**56.64**	**303**	*e*P	**P**	**19 50 38.0**	**+2.0**
BRLS				pmax	pmax		
	comp=Z,25nm,0.8s						
YUK6	**Outpost Mounta**	**56.64**	**35**	P	**P**	**19 50 38.3**	**+2.3**
	baz=278,SNR=6.9						
EPYK	**Eagle Plains**	**56.67**	**28**	P	**P**	**19 50 38.0**	**+2.2**
	baz=276,SNR=67						
IUG	**Iuzhnay**	**56.75**	**302**	*e*P	**P**	**19 50 37.9**	**+1.0**
	comp=Z,54nm,0.8s						
IUG	**Iuzhnay**	**56.75**	**302**	*e*P	**P**	**19 50 37.8**	**+1.0**
IUG				pmax	pmax		
	comp=Z,54nm,0.8s						
G30M	**tAoh Zraii Nji**	**56.79**	**28**	P	**P**	**19 50 38.7**	**+2.0**
	baz=276						
ASAR	**Alice Springs**	**56.84**	**190**	P	**P**	**19 50 37.6**	**+0.1**
	comp=Z,1.8nm,0.5s,baz=16,slow=9.3,SNR=29						
ASAR				PcP	**PcP**	**19 51 34.8**	**+1.7**
	comp=Z,6.3nm,0.7s,baz=14,slow=4.1,SNR=5.7						
ASAR				LR	LR	20 12 57.2	
	comp=Z,142nm,22.0s,baz=358,slow=34						
ASAR				PKPPKP	P'P'df	20 20 39.6	+17
	comp=Z,0.3nm,0.6s,baz=178,slow=1.9,SNR=4.5						
	comp=Z,1.8nm,0.5s						
ASAR	**Alice Springs**	**56.84**	**190**	P	**P**	**19 50 36.8**	**-0.7**
F30M	**Barrier River**	**56.89**	**27**	P	**P**	**19 50 39.9**	**+2.5**
	baz=276,SNR=42						
MANEM	**Manem**	**56.90**	**296**	IAmb	IAmb	19 50 52.4	
	comp=Z,113nm,0.9s						
I30M	**Mount Dempster**	**56.94**	**30**	P	**P**	**19 50 39.6**	**+1.7**
	baz=277						
NIL	**Nilore**	**56.96**	**291**	P	**P**	**19 50 39.1**	**+0.6**
NIL				IAmb	IAmb	19 50 55.2	
	comp=Z,34nm,0.7s						
NIL	**Nilore**	**56.96**	**291**	P	**P**	**19 50 39.1**	**+0.6**
NIL				pmax	pmax		
	comp=Z,34nm,0.7s						
CHM	**Chimkent**	**57.00**	**302**	*e*P	**P**	**19 50 39.5**	**+0.8**
	comp=Z,29nm,1.2s						
CHM	**Chimkent**	**57.00**	**302**	*e*P	**P**	**19 50 39.4**	**+0.8**
CHM				pmax	pmax		
	comp=Z,29nm,1.2s						
J30M	**Hart River**	**57.05**	**31**	P	**P**	**19 50 40.8**	**+2.1**
	baz=278,SNR=14						
HYT	**Haines Junctio**	**57.08**	**35**	IAmb	IAmb	19 50 44.0	
	comp=Z,58nm,1.0s						
HYT	**Haines Junctio**	**57.08**	**35**	P	**P**	**19 50 41.0**	**+2.1**
	baz=279,SNR=19						
M30M	**Minto, Yukon**	**57.14**	**33**	IAmb	IAmb	19 50 43.1	
	comp=Z,111nm,1.7s						
M30M	**Minto, Yukon**	**57.14**	**33**	P	**P**	**19 50 41.6**	**+2.4**
	baz=279,SNR=16						
P29M	**Windy Craggy**	**57.16**	**37**	IAmb	IAmb	19 50 43.3	
	comp=Z,58nm,1.0s						
P29M	**Windy Craggy**	**57.16**	**37**	P	**P**	**19 50 41.8**	**+2.3**
	baz=280,SNR=9.6						
N30M	**Aishikik Lake**	**57.17**	**34**	IAmb	IAmb	19 50 43.4	
	comp=Z,110nm,1.9s						
N30M	**Aishikik Lake**	**57.17**	**34**	P	**P**	**19 50 41.9**	**+2.4**
	baz=279,SNR=8.8						
MAYO	**Mayo, Yukon**	**57.38**	**32**	P	**P**	**19 50 43.4**	**+2.5**
	baz=279						
P30M	**Million Dollar**	**57.46**	**36**	P	**P**	**19 50 43.6**	**+2.0**
	baz=280						
G31M	**Satah River**	**57.56**	**28**	P	**P**	**19 50 43.5**	**+1.4**
	baz=278,SNR=30						
INK	**Inuvik**	**57.65**	**26**	LR	LR	20 17 12.5	
	comp=Z,262nm,21.4s,baz=280,slow=38						
INK	**Inuvik**	**57.65**	**26**	IAmb	IAmb	19 50 45.4	
	comp=Z,74nm,1.2s						
INK	**Inuvik**	**57.65**	**26**	P	**P**	**19 50 44.1**	**+1.4**
	baz=278,SNR=38						
F31M	**Tsiigehtchic**	**57.69**	**27**	P	**P**	**19 50 44.5**	**+1.5**
	baz=278,SNR=36						
H31M	**Peel River**	**57.70**	**29**	P	**P**	**19 50 45.4**	**+2.3**
	baz=279						
O30N	**Mendenhall**	**57.77**	**35**	IAmb	IAmb	19 50 49.6	
	comp=Z,53nm,1.6s						
O30N	**Mendenhall**	**57.77**	**35**	P	**P**	**19 50 45.9**	**+2.1**
	baz=280,SNR=7.1						
N31M	**Braeburn, Yuko**	**57.79**	**34**	P	**P**	**19 50 46.4**	**+2.5**
	baz=280,SNR=14						
PLBC	**Pleasant Camp**	**57.88**	**37**	P	**P**	**19 50 46.5**	**+2.1**
	baz=281						
MBWA	**Marble Bar**	**58.02**	**205**		**P**	**19 50 45.7**	**0.0**
MBWA				IAmb	IAmb	19 50 58.8	
	comp=Z,40nm,0.8s						
MBWA	**Marble Bar**	**58.02**	**205**	P	**P**	**19 50 46.5**	**+0.7**
S31K	**Pelican**	**58.25**	**38**	P	**P**	**19 50 50.2**	**+3.1**
	baz=282						
M31M	**Drury Creek, Y**	**58.30**	**33**	IAmb	IAmb	19 50 50.9	
	comp=Z,43nm,0.9s						
M31M	**Drury Creek, Y**	**58.30**	**33**	P	**P**	**19 50 49.6**	**+2.2**
	baz=281,SNR=19						
PSA00	**Pilbara Seismi**	**58.35**	**205**		**P**	**19 50 47.5**	**-0.6**
PSA00	**Pilbara Seismi**	**58.35**	**205**	P	**P**	**19 50 50.3**	**+2.2**
WHY	**Whitehorse**	**58.38**	**35**	IAmb	IAmb	19 50 51.7	
	comp=Z,89nm,1.1s						
WHY	**Whitehorse**	**58.38**	**35**	P	**P**	**19 50 50.2**	**+2.1**
	baz=282,SNR=12						
SKAG	**Skagway**	**58.40**	**36**	P	**P**	**19 50 50.7**	**+2.6**
SKAG	**Skagway**	**58.40**	**36**	P	**P**	**19 50 49.8**	**+1.7**
	baz=282						
CHGR	**Chuyangaron**	**58.43**	**298**	*d i*P	**P**	**19 50 49.3**	**+0.5**
CHGR				pmax	pmax		
	comp=Z,218nm,0.7s						
EIDS	**Eidsvold**	**58.48**	**171**	IAmb	IAmb	19 51 02.9	
	comp=Z,25nm,0.8s						
EIDS	**Eidsvold**	**58.48**	**171**	P	**P**	**19 50 50.1**	**+1.2**
SIT	**Sitka**	**58.93**	**39**	P	**P**	**19 50 53.4**	**+1.7**
	baz=283						
SVE	**Sverdlovsk**	**58.95**	**321**	*ce*P	**P**	**19 50 53.2**	**+1.2**
SVE				pmax	pmax		
	comp=Z,90nm,1.2s						
R32K	**Eaglecrest**	**59.07**	**38**	P	**P**	**19 50 53.9**	**+1.1**
	baz=283						
N32M	**Quiet Lake**	**59.13**	**34**	IAmb	IAmb	19 50 56.5	
	comp=Z,48nm,1.1s						
N32M	**Quiet Lake**	**59.13**	**34**	P	**P**	**19 50 55.2**	**+2.0**
	baz=283,SNR=12						
JIS	**Juneau Island**	**59.14**	**38**	P	**P**	**19 50 55.8**	**+2.6**
QLP	**Quilpie**	**59.15**	**178**	P	**P**	**19 50 53.9**	**+0.3**
P32M	**Atlin**	**59.17**	**36**	IAmb	IAmb	19 50 57.0	
	comp=Z,48nm,1.2s						
P32M	**Atlin**	**59.17**	**36**	P	**P**	**19 50 55.6**	**+2.1**
	baz=283,SNR=7.0						
DZM	**Mont Dzumac**	**59.19**	**154**	LR	LR	20 17 30.6	
	comp=Z,314nm,18.0s,baz=356,slow=37						
DZM	**Mont Dzumac**	**59.19**	**154**	*e*P	**P**	**19 50 55.5**	**+1.5**
	comp=Z,112nm,1.6s						
DZM				*e*S	**S**	**19 58 59.9**	**-1.3**
	comp=Z,170nm,23.8s						
DZM				*e*SS	**SS**	**20 02 54.5**	**-1.6**
	comp=Z,107nm,26.4s						
DZM				*e*LQ	LQ	20 05 36.8	
	comp=Z,368nm,24.1s						
DZM				*e*LR	LR	20 08 12.7	
	comp=Z,423nm,20.9s						
DZM	**Mont Dzumac**	**59.19**	**154**	P	**P**	**19 50 56.4**	**+2.4**
HYB	**Hyderabad**	**59.21**	**272**	*e*P	**P**	**19 50 54.5**	**+0.2**
HYB				IVmB_BB		19 50 55.6	
	comp=Z,662nm,1.6s						
HYB				*e*sP	**sP**	**19 50 58.4**	**0.0**
S32K	**Killisnoo**	**59.23**	**39**	P	**P**	**19 50 56.1**	**+2.3**
	baz=284						
P33M	**Teslin, Yukon**	**59.47**	**35**	IAmb	IAmb	19 50 59.2	
	comp=Z,40nm,1.0s						
P33M	**Teslin, Yukon**	**59.47**	**35**	P	**P**	**19 50 57.4**	**+1.7**
	baz=283,SNR=16						
SHAA	**Shahritus**	**59.56**	**297**	IAmb	IAmb	19 51 04.8	
	comp=Z,161nm,1.1s						
A36M	**Sachs Harbour**	**59.75**	**21**	IAmb	IAmb	19 51 00.2	
	comp=Z,75nm,1.1s						
A36M	**Sachs Harbour**	**59.75**	**21**	P	**P**	**19 50 58.7**	**+1.5**
	baz=283,SNR=20						
KBL	**Kabul**	**59.92**	**294**		**P**	**19 50 58.6**	**-0.7**
KBL				IAmb	IAmb	19 51 01.1	
	comp=Z,41nm,1.2s						
KBL	**Kabul**	**59.92**	**294**	P	**P**	**19 50 58.6**	**-0.7**
KBL				pmax	pmax		
	comp=Z,41nm,1.3s						
Q32M	**Nakina River**	**60.05**	**37**	P	**P**	**19 51 01.4**	**+1.7**
	baz=285						
ARTI	**Arti**	**60.27**	**320**	LR	LR	20 19 47.7	
	comp=Z,591nm,18.9s,baz=72,slow=39						
ARTI	**Arti**	**60.27**	**320**	P	**P**	**19 51 00.9**	**-0.2**
ARTI	**Arti**	**60.27**	**320**	*c i*P	**P**	**19 51 01.3**	**+0.2**
ARTI						19 51 42.7	
ARTI						19 53 10.9	
ARTI				S	**S**	**19 59 19.5**	**+5.1**
ARTI				SS	**SS**	**20 03 16.0**	**+4.8**
ARTI				pmax	pmax		
	comp=Z,70nm,0.8s						
ARTI				MLR	MLR		
	comp=Z,936nm,16.0s						
U33K	**Whale Pass**	**60.34**	**40**	P	**P**	**19 51 02.9**	**+1.3**
	baz=286						
CRAG	**Craig**	**60.52**	**41**	P	**P**	**19 51 04.1**	**+1.4**
	baz=286						
R33M	**Jennings River**	**60.58**	**36**	IAmb	IAmb	19 51 07.2	
	comp=Z,53nm,1.4s						
R33M	**Jennings River**	**60.58**	**36**	P	**P**	**19 51 05.4**	**+2.1**
	baz=285,SNR=8.4						
MSVF	**Nonsavu**	**60.66**	**141**	P	**P**	**19 51 07.8**	**+3.6**
MSVF				pmax	pmax		
	comp=Z,31nm,1.7s						
WRAK	**Wrangell Islan**	**60.68**	**39**	P	**P**	**19 51 05.9**	**+2.1**
	baz=286						
AUWSH	**Wavell State H**	**60.76**	**169**	P	**P**	**19 51 06.8**	**+2.2**
C36M	**Paulatuk**	**60.80**	**24**	P	**P**	**19 51 05.3**	**+0.9**
	baz=286,SNR=19						
S34M	**Telegraph Cree**	**60.90**	**38**	P	**P**	**19 51 07.7**	**+2.3**
	baz=286,SNR=8.5						
V35K	**Ketchikan**	**61.38**	**40**	P	**P**	**19 51 09.5**	**+0.9**
	baz=287						
AB31	**Akbulak array**	**61.42**	**312**	P	**P**	**19 51 08.5**	**-0.5**
AB31	**Akbulak array**	**61.42**	**312**	*i* P	**P**	**19 51 09.2**	**+0.2**
ABKAR	**Akbulak array**	**61.42**	**312**	P	**P**	**19 51 08.9**	**-0.1**
WTLY	**Watson Lake, Y**	**61.44**	**35**	P	**P**	**19 51 11.2**	**+2.2**
	baz=287,SNR=20						
T35M	**Bob Quinn**	**61.62**	**38**	P	**P**	**19 51 11.4**	**+1.1**
	baz=287,SNR=13						
AULRC	**Lightning Ridg**	**62.17**	**175**	P	**P**	**19 51 16.1**	**+2.0**
AKTO	**Aktyubinsk**	**62.23**	**314**	LR	LR	20 19 29.2	
	comp=Z,660nm,18.3s,baz=80,slow=37						
AKTO	**Aktyubinsk**	**62.23**	**314**	P	**P**	**19 51 14.1**	**-0.4**
PALK	**Pallekele**	**62.56**	**261**	LR	LR	20 21 53.5	
	comp=Z,281nm,18.2s,baz=56,slow=39						
PALK	**Pallekele**	**62.56**	**261**	P	**P**	**19 51 16.9**	**-0.3**
PALK	**Pallekele**	**62.56**	**261**	P	**P**	**19 51 16.9**	**-0.3**
PALK				pmax	pmax		
	comp=Z,50nm,0.9s						
WRGLY	**Wrigley**	**62.89**	**31**	P	**P**	**19 51 20.3**	**+1.7**
	baz=289,SNR=20						
LIRD	**Liard River Hi**	**62.95**	**35**	P	**P**	**19 51 21.4**	**+2.3**
	baz=289,SNR=6.6						
ARMA	**Armidale**	**63.53**	**171**	P	**P**	**19 51 22.2**	**-1.0**
ARMA				IAmb	IAmb	19 51 37.6	
	comp=Z,28nm,0.9s						
ARMA	**Armidale**	**63.53**	**171**	P	**P**	**19 51 25.0**	**+1.7**
TOAD	**Toad River Com**	**63.56**	**35**	P	**P**	**19 51 25.2**	**+2.0**
	baz=290,SNR=15						
KOTAN	**Kotaneelee Air**	**63.68**	**34**	P	**P**	**19 51 25.6**	**+1.7**
	baz=290						
AUPHS	**Peel High Scho**	**64.11**	**172**	P	**P**	**19 51 28.8**	**+1.8**
CMSA	**Cobar Meteorol**	**64.13**	**177**	P	**P**	**19 51 29.1**	**+2.0**
KIRV	**Kirov**	**64.18**	**324**	LR	LR	20 22 00.7	
	comp=Z,421nm,18.2s,baz=64,slow=38						

KIRV	Kirov	64.18	324	d iP	P	19 51 28.0	+0.8
BBB	Bella Bella	64.38	43	LR	LR	20 16 34.9	
	comp=Z,175nm,20.4s,baz=256,slow=33						
STKA	Stephens Creek	64.41	181	P	P	19 51 29.5	+0.6
	comp=Z,16nm,1.1s,baz=344,slow=7.5,SNR=11						
STKA				LR	LR	20 20 58.8	
	comp=Z,121nm,20.2s,baz=15,slow=37						
	comp=Z,16nm,1.1s						
STKA	Stephens Creek	64.41	181	P	P	19 51 28.3	-0.6
STKA	Stephens Creek	64.41	181	P	P	19 51 30.4	+1.5
STKA	Stephens Creek	64.41	181	⇓eP	P	19 51 30.0	+1.1
SPITS	Spitsbergen Ar	64.78	349	P	P	19 51 32.4	+1.5
	comp=Z,12nm,1.0s,baz=67,slow=6.4,SNR=7.6						
SPITS				LR	LR	20 23 48.3	
	comp=Z,249nm,18.6s,baz=34,slow=40						
	comp=Z,12nm,1.0s						
FORT	Forrest	64.80	194	P	P	19 51 29.9	-1.5
FORT				IAmb	IAmb	19 51 44.6	
	comp=Z,19nm,0.8s						
KBS	Kingsbay	64.91	351	P	P	19 51 30.9	-0.8
KBS				IAmb	IAmb	19 51 34.6	
	comp=Z,39nm,1.0s						
KBS	Kingsbay	64.91	351	eP	P	19 51 32.9	+1.2
KBS	Kingsbay	64.91	351	c iP	P	19 51 33.9	+2.2
KBS				pmax	pmax		
	comp=Z,30nm,1.0s						
AUDCS	Dubbo College	65.00	174	P	P	19 51 35.6	+2.8
HRA	Herat	65.17	296	P	P	19 51 33.5	-0.9
HRA				IAmb	IAmb	19 51 48.1	
	comp=Z,30nm,0.8s						
NOR	Nord	65.25	357	P	P	19 51 34.5	+0.6
NOR				pmax	pmax		
	comp=Z,16nm,1.2s						
BBOO	Buckleboo	65.63	186	P	P	19 51 38.1	+1.3
HSPB	Hornsund (broa	65.71	349	eP	P	19 51 38.2	+1.3
AUJCS	Jamestown Cent	65.83	184	P	P	19 51 39.2	+1.0
HTT	Hallett	66.05	183	P	P	19 51 41.6	+2.0
LVZ	Lovozero	66.31	337	⇓eP	P	19 51 41.3	+0.4
LVZ				pmax	pmax		
	comp=Z,64nm,1.5s						
RES	Resolute Bay	66.37	14	LR	LR	20 22 23.0	
	comp=Z,105nm,21.8s,baz=338,slow=38						
RES	Resolute Bay	66.37	14	P	P	19 51 42.3	+1.1
RES				pmax	pmax		
	comp=Z,77nm,1.1s						
SYDH	Sydney Hard Ro	66.72	173	P	P	19 51 47.0	+3.2
YKAW3	Yellowknife Wh	66.88	29	IAmb	IAmb	19 51 46.9	
	comp=Z,65nm,1.1s						
APA	Apatity	66.89	337	⇓iP	P	19 51 43.7	-0.9
APA				i		19 52 17.1	
APA				e		19 54 07.9	
ADZR	Andozero	66.89	332	eP	P	19 51 44.2	-0.4
ADZR				pmax	pmax		
	comp=Z,64nm,0.9s						
YKA	Yellowknife Ar	66.91	29	P	P	19 51 45.7	+0.9
	comp=Z,32nm,1.0s,baz=296,slow=7.0,SNR=126						
YKA				LR	LR	20 20 12.7	
	comp=Z,43nm,21.9s,baz=318,slow=35						
YKA				PKPPKP	P'P'df	20 20 15.7	-4.1
	comp=Z,0.6nm,1.0s,baz=125,slow=2.6,SNR=4.8						
	comp=Z,32nm,1.0s						
YKA	Yellowknife Ar	66.91	29	P	P	19 51 44.3	-0.5
YKA	Yellowknife Ar	66.91	29	i P	P	19 51 45.7	+0.9
YKA				pmax	pmax		
	comp=Z,31nm,1.0s						
BELG	Belogornoye	67.55	319	LR	LR	20 25 11.8	
	comp=Z,387nm,18.0s,baz=82,slow=39						
BELG	Belogornoye	67.55	319	d iP	P	19 51 49.6	+0.6
BELG				pmax	pmax		
	comp=Z,19nm,1.1s						
KLMR	Klimovskoe	67.81	329	eP	P	19 51 49.2	-1.3
KLMR				e		19 52 15.4	
KLMR				e		19 54 19.2	
KLMR				S	S	20 00 47.7	0.0
KLMR				pmax	pmax		
	comp=Z,98nm,1.2s						
AUDAR	Daramalan Coll	68.05	174	P	P	19 51 54.9	+2.7
ARA0	ARCESS Array S	68.23	340	eP	P	19 51 54.2	+1.1
ARCES	ARCESS Array B	68.23	340	P	P	19 51 54.2	+1.2
	comp=Z,13nm,0.9s,baz=56,slow=5.6,SNR=30						
ARCES				LR	LR	20 26 24.5	
	comp=Z,183nm,20.4s,baz=70,slow=40						
	comp=Z,13nm,0.9s						
ARCES	ARCESS Array B	68.23	340	P	P	19 51 52.6	-0.5
ARCES				IAmb	IAmb	19 51 55.5	
	comp=Z,50nm,1.2s						
SGF	Sodankyl	69.17	338	P	P	19 52 00.2	+1.3
SGF				pmax	pmax		
	comp=Z,61nm,1.5s						
KTK1	Kautokeino	69.19	340	eP	P	19 52 00.3	+1.2
MSF	Maaselka	69.24	336	P	P	19 52 00.6	+1.2
MSF				pmax	pmax		
	comp=Z,63nm,1.6s						
JETT	Jettan, Norway	69.62	342	eP	P	19 52 03.9	+2.1
NWAO	Narrogin (SRO)	69.69	203	LR	LR	20 25 59.9	
	comp=Z,69nm,18.0s,baz=274,slow=39						
DAG	Danmarks Havn	69.99	355	P	P	19 52 04.7	+0.9
BRAT	Ballarat	70.08	179	P	P	19 52 07.4	+2.7
AUMTC	Mt Clear Colle	70.14	179	P	P	19 52 07.9	+2.8
OUL	Oulu	70.79	336	P	P	19 52 10.1	+1.2
OUL				pmax	pmax		
	comp=Z,49nm,1.6s						
POIN	Pond Inlet	71.08	12	P	P	19 52 10.0	-0.5
POIN				IAmb	IAmb	19 52 12.4	
	comp=Z,63nm,1.3s						
B08A	Colville Reser	71.09	44	IAmb	IAmb	19 52 14.0	
	comp=Z,52nm,1.4s						
MOS	Moscow	71.19	325	eP	P	19 52 11.8	+0.3
MOS				e		19 52 30.8	
MOS				e		19 54 52.3	
MOS				eS	S	20 01 28.5	+0.8
MOS				pmax	pmax		
	comp=Z,200nm,1.8s						
MOS				pmax	pmax		
	comp=Z,113nm,1.4s						
MOS				pmax	pmax		
	comp=E,42nm,1.0s						
MOS				pmax	pmax		
	comp=N,39nm,0.8s						
MAK	Makhachkala	71.84	310	eP	P	19 52 10.7	-4.9
MAK				ePPP	PPP	19 56 35.8	
MAK				eS	S	20 01 29.5	-6.1
MAK				eSS	SS	20 06 10.3	-0.9
MAK				pmax	pmax		
	comp=Z,134nm,0.9s						
MAK				MLR	MLR		
	comp=Z,2µm,15.0s						
C09A	Chrisman Ranch	71.98	44	IAmb	IAmb	19 52 19.3	
	comp=Z,66nm,1.6s						
EDM	Edmonton	72.00	38	IAmb	IAmb	19 52 18.9	
	comp=Z,41nm,1.0s						
OBN	Obninsk	72.03	325	P	P	19 52 17.0	+0.4
OBN				IAmb	IAmb	19 52 18.4	
	comp=Z,63nm,0.9s						
OBN	Obninsk	72.03	325	⇑P	P	19 52 18.0	+1.4
OBN	Obninsk	72.03	325	d iP	P	19 52 17.3	+0.7
OBN				e		19 54 55.3	
OBN				ePPP	PPP	19 56 35.2	
OBN				i S	SKiKP	20 02 04.3	+11
OBN				pmax	pmax		
	comp=Z,138nm,1.7s						
OBN				MLR	MLR		
	comp=Z,689nm,15.0s						
YBH	Yreka Blue Hor	72.11	52	LR	LR	20 18 16.4	
	comp=Z,30nm,19.9s,baz=281,slow=31						
STEI	Steigen	72.12	342	eP	P	19 52 18.1	+1.2
LPSR	Galich'ya Gora	72.15	321	eP	P	19 52 17.4	+0.1
LPSR				pmax	pmax		
	comp=Z,68nm,1.0s						
RAO	Raoul Island	72.23	144	LR	LR	20 19 41.5	
	comp=Z,232nm,19.5s,baz=352,slow=32						
PUL	Pulkovo	72.28	331	⇑iP	P	19 52 19.4	+1.5
PUL				pmax	pmax		
	comp=Z,94nm,0.6s						
AKT	Akhty	72.39	308	eP	P	19 52 17.7	-1.5
AKT				e		19 52 35.3	
AKT				eS	S	20 01 39.9	-2.4
AKT				pmax	pmax		
	comp=Z,100nm,1.3s						
AKT				MLR	MLR		
	comp=Z,2µm,18.0s						
LOF	Lofoten	72.41	342	eP	P	19 52 19.7	+1.0
NEW	Newport	72.43	44	LR	LR	20 19 40.9	
	comp=Z,176nm,21.5s,baz=309,slow=32						
NEW	Newport	72.43	44	P	P	19 52 19.0	-0.2
NEW	Newport	72.43	44	P	P	19 52 19.0	-0.2
NEW				pmax	pmax		
	comp=Z,23nm,1.0s						
VORR	Voronezh	72.48	321	eP	P	19 52 19.8	+0.5
VORR				pmax	pmax		
	comp=Z,67nm,1.2s						
FAUS	Fauske	72.50	341	eP	P	19 52 20.4	+1.3
VSR	Storozhevoye	72.73	320	eP	P	19 52 18.9	-1.9
VSR				pmax	pmax		
	comp=Z,40nm,1.0s						
VORD	Divnogorie	72.80	320	eP	P	19 52 19.9	-1.3
VORD				pmax	pmax		
	comp=Z,30nm,1.0s						
SEKA	Sheki	72.87	308	P	P	19 52 22.9	+0.9
FINES	FINESS Array B	72.96	333	P	P	19 52 22.8	+0.8
	comp=Z,52nm,1.0s,baz=58,slow=7.2,SNR=53						
	comp=Z,52nm,1.0s						
FINES	FINESS Array B	72.96	333	P	P	19 52 22.3	+0.4
ILON	Igloolik, Nuna	73.00	15	P	P	19 52 21.9	-0.2
ILON				IAmb	IAmb	19 52 23.8	
	comp=Z,60nm,1.2s						
LKRN	Lenkeran, Azer	73.01	305	P	P	19 52 24.3	+1.6
MNGR	Mingechevir, A	73.16	308	P	P	19 52 25.9	+2.4
O03E	Paynes Creek	73.41	53	IAmb	IAmb	19 52 28.4	
	comp=Z,128nm,1.8s						
VAGH	Vaagaholmen	73.52	341	eP	P	19 52 26.2	+1.1
BANOM	Banah	73.54	290	P	P	19 52 25.8	-0.2
SHME	Shamm	73.60	291	i P	P	19 52 27.4	+1.0
	SNR=5.6						
MOR8	Moi Rana	73.60	341	eP	P	19 52 25.8	+0.1
GOF	Gofitskoye	73.63	313	ceP	P	19 52 27.4	+1.1
GLAD	Gladstone	73.66	176	P	P	19 52 28.9	+2.7
GANJ	Ganja	73.73	308	P	P	19 52 28.1	+1.1
STOK	Stokkvaagen	73.88	341	eP	P	19 52 28.8	+1.5
LEIR	Leirfjorden	74.02	341	eP	P	19 52 29.3	+1.2
NCK	Nalchik	74.08	312	⇓eP	P	19 52 30.0	+1.1
NCK				pmax	pmax		
	comp=Z,53nm,1.3s						
UOSS	Minazif	74.08	290	P	P	19 52 30.7	+1.4
SOHO	SOHO	74.22	289	i P	P	19 52 30.1	+0.1
	SNR=11						
ASHO	Ashiyiah	74.33	289	P	P	19 52 31.5	+0.8
KBZ	Khabaz	74.39	312	P	P	19 52 32.1	+1.4
	comp=Z,44nm,1.0s,baz=64,slow=4.7,SNR=51						
KBZ				LR	LR	20 28 15.1	
	comp=Z,328nm,18.5s,baz=63,slow=38						
	comp=Z,44nm,1.0s						
KBZ	Khabaz	74.39	312	d iP	P	19 52 31.7	+1.0
KBZ				pmax	pmax		
	comp=Z,89nm,1.1s						
KIV	Kislovodsk	74.41	312	P	P	19 52 31.7	+0.7
KIV	Kislovodsk	74.41	312	⇑P	P	19 52 32.8	+1.8
KIV	Kislovodsk	74.41	312	i P	P	19 52 32.0	+1.0
	SNR=26						
KIV	Kislovodsk	74.41	312	eP	P	19 52 30.4	-0.6
KIV				pmax	pmax		
	comp=Z,79nm,1.0s						
WVOR	Wild Horse Val	74.42	49	IAmb	IAmb	19 52 34.3	
	comp=Z,62nm,1.6s						
WVOR	Wild Horse Val	74.42	49	P	P	19 52 33.0	+1.9
WVOR				pmax	pmax		
	comp=Z,27nm,1.7s						
SHA1	Shidzhatmaz	74.54	312	d iP	P	19 52 33.1	+1.2
VSU	Vasula	74.55	331	d iP	P	19 52 31.2	-0.1
VSU				pmax	pmax		
	comp=Z,195nm,1.3s						
PLID	Pearl Lake	74.70	46	P	P	19 52 31.9	-0.9
TRLG	Trialeti	74.74	310	P	P	19 52 34.4	+1.4
SUMG	Summit	74.83	0	IAmb	IAmb	19 52 35.7	
	comp=Z,80nm,1.5s						
SUMG	Summit	74.83	0	P	P	19 52 35.2	+1.9
ERBR	Yeremizino-Bor	74.84	315	eP	P	19 52 31.8	-1.5
ERBR				e*PP	pP	19 52 34.7	-1.9
ERBR				eS	S	20 02 09.4	-0.2
ERBR				pmax	pmax		
	comp=Z,118nm,1.2s						
ERBR				MLR	MLR		
	comp=Z,422nm,17.0s						
ERBR				MLR	MLR		
	comp=N,724nm,15.0s						
ERBR				MLR	MLR		
	comp=E,740nm,13.0s						
ALNE	Al Ain	74.88	289	i P	P	19 52 34.8	+0.8
	SNR=6.5						
ASUD	Al Ashush, Dub	74.93	290	P	P	19 52 33.6	-0.5
NAX	Nakhchivan	75.01	307	P	P	19 52 36.1	+1.6
LABN	Labinsk	75.26	314	eP	P	19 52 33.7	-2.1
LABN				e*PP	pP	19 52 37.4	-1.6
LABN				eS	S	20 02 12.7	-1.6
LABN				pmax	pmax		
	comp=Z,57nm,1.0s						
CMB	Columbia Colle	75.48	54	P	P	19 52 37.2	0.0
CMB	Columbia Colle	75.48	54	P	P	19 52 37.2	0.0
CMB				pmax	pmax		
	comp=Z,25nm,1.1s						
KUZ	Kuaotunu	75.85	153	P	P	19 52 41.7	+2.7
VSLR	Vesyoloye	76.31	313	d iP	P	19 52 43.0	+1.2
VSLR				pmax	pmax		
	comp=Z,155nm,1.0s						
SCO	Scoresbysund	76.34	355	P	P	19 52 43.7	+2.3
SCO				pmax	pmax		
	comp=Z,78nm,1.3s						
SOC	Sochi	76.44	313	eP	P	19 52 43.3	+0.8
SOC				e		19 55 33.8	
SOC				eS	S	20 02 20.3	-7.0
SOC				eSS	SS	20 07 18.8	-2.3
SOC				eSSS	SSS	20 10 33.8	
SOC				pmax	pmax		
	comp=Z,64nm,1.2s						
SOC				MLR	MLR		
	comp=Z,542nm,18.0s						
MNK	Minsk	76.50	327	i P	P	19 52 43.6	+1.0
MNK				i		19 55 36.4	
MNK				i PPP	PPP	19 57 23.7	
MNK				i S	S	20 02 31.3	+3.7
MNK				i SS	SS	20 07 28.1	+6.6
MNK				pmax	pmax		
	comp=Z,104nm,1.1s						
MNK				pmax	pmax		
	comp=N,53nm,1.2s						
MNK				pmax	pmax		
	comp=E,59nm,1.1s						
DLMT	Dillon	76.59	44	IAmb	IAmb	19 52 48.3	
	comp=Z,47nm,1.2s						
FFC	Flin Flon	76.66	33	P	P	19 52 43.8	+0.3
FFC				IAmb	IAmb	19 52 46.0	
	comp=Z,62nm,1.1s						
FFC	Flin Flon	76.66	33	P	P	19 52 43.8	+0.3
FFC				pmax	pmax		
	comp=Z,62nm,1.1s						
NVAR	Mina Array Bea	76.69	53	P	P	19 52 44.8	+0.5
	comp=Z,6.1nm,0.7s,baz=289,slow=5.8,SNR=30						
NVAR				LR	LR	20 21 12.6	
	comp=Z,500nm,20.4s,baz=274,slow=32						
	comp=Z,6.1nm,0.7s						
NVAR	Mina Array Bea	76.69	53	P	P	19 52 44.1	-0.2
RAR	Rarotonga	76.92	126	LR	LR	20 20 50.5	
	comp=Z,209nm,19.6s,baz=185,slow=31						
ANN	Anapa	77.15	315	eP	P	19 52 45.0	-1.5
ANN				e*PP	pP	19 52 49.0	-0.7
ANN				eS	S	20 02 34.7	-0.3
ANN				pmax	pmax		
	comp=Z,60nm,1.0s						
ANN				MLR	MLR		
	comp=N,174nm,16.0s						
ANN				MLR	MLR		
	comp=Z,522nm,16.0s						
ANN				MLR	MLR		
	comp=E,301nm,19.0s						
MZR	Muzera	77.21	289	P	P	19 52 47.4	+0.2
FCC	Fort Churchill	77.27	27	IAmb	IAmb	19 52 48.8	
	comp=Z,57nm,1.1s						
ELK	Elko	77.47	50	P	P	19 52 50.4	+1.7
VES	Vestal, Richgr	77.50	55	IAmb	IAmb	19 52 51.4	
	comp=Z,81nm,1.3s						
GURO	Guroymak-BITLI	77.64	308	P	P	19 52 50.1	+0.6
URZ	Urewera	77.71	153	LR	LR	20 21 32.0	
	comp=Z,168nm,21.6s,baz=324,slow=31						
KOPT	Kop Dagi	77.86	310	IAmb	IAmb	19 53 05.6	
	comp=Z,54nm,1.2s						
GRAC	Grapevine Rang	78.07	54	IAmb	IAmb	19 52 57.4	
	comp=Z,93nm,2.0s						
AKASG	Malin Array Be	78.21	323	P	P	19 52 52.8	+0.6
	comp=Z,20nm,0.8s,baz=46,slow=5.6,SNR=78						
AKASG				LR	LR	20 30 30.0	
	comp=Z,498nm,19.2s,baz=54,slow=38						
	comp=Z,20nm,0.8s						
AKASG	Malin Array Be	78.21	323	P	P	19 52 52.3	+0.1
AKASG				IAmb	IAmb	19 52 54.4	
	comp=Z,46nm,1.2s						
AKBB	Malin Array Si	78.21	323	IAmb	IAmb	19 52 54.1	
	comp=Z,67nm,1.1s						
AKBB	Malin Array Si	78.21	323	ceP	P	19 52 52.7	+0.5
AKBB				pmax	pmax		
	comp=Z,66nm,1.0s						
NC303	NORSAR Array S	78.21	338	IAmb	IAmb	19 52 54.4	
	comp=Z,90nm,1.2s						
KIEV	Kiev	78.22	323	P	P	19 52 52.0	-0.3
KIEV				IAmb	IAmb	19 52 54.1	
	comp=Z,60nm,1.1s						
KIEV	Kiev	78.22	323	⇓P	P	19 52 53.1	+0.8
KIEV	Kiev	78.22	323	i P	P	19 52 52.4	+0.1
	SNR=24						
KIEV	Kiev	78.22	323	P	P	19 52 52.0	-0.3
AK04	Malin Array Si	78.22	323	P	P	19 52 52.3	0.0
AK09	Malin Array Si	78.23	323	P	P	19 52 52.4	0.0
AK08	Malin Array Si	78.23	323	P	P	19 52 52.4	0.0
AK02	Malin Array Si	78.24	323	P	P	19 52 52.4	-0.1
AK22	Malin Array Si	78.25	324	P	P	19 52 52.4	-0.1
AK11	Malin Array Si	78.25	323	P	P	19 52 52.5	0.0
AK21	Malin Array Si	78.25	324	P	P	19 52 52.5	0.0
AK10	Malin Array Si	78.26	323	P	P	19 52 52.5	0.0
AK15	Malin Array Si	78.26	323	P	P	19 52 52.5	-0.1
AK05	Malin Array Si	78.27	323	P	P	19 52 52.6	0.0
AK18	Malin Array Si	78.27	323	P	P	19 52 52.6	0.0
AK12	Malin Array Si	78.28	323	P	P	19 52 52.6	0.0
DOMB	Dombas	78.28	340	eP	P	19 52 53.5	+1.0
AK16	Malin Array Si	78.28	323	P	P	19 52 52.7	0.0
HFS	Hagfors	78.28	337	P	P	19 52 53.1	+0.5
	comp=Z,46nm,1.1s,baz=95,slow=1.8,SNR=32						
	comp=Z,46nm,1.1s						
AK20	Malin Array Si	78.29	324	P	P	19 52 52.7	0.0
AK06	Malin Array Si	78.29	323	P	P	19 52 52.7	0.0
AK19	Malin Array Si	78.30	324	P	P	19 52 52.7	-0.1
NB2	NORSAR Subarra	78.40	338	P	P	19 52 53.8	+0.6
	comp=Z,148nm,1.4s,baz=40,slow=5.6						
NB2	NORSAR Subarra	78.40	338	P	P	19 52 53.8	+0.6
	baz=40,slow=5.6						
NB2	NORSAR Subarra	78.40	338	P	P	19 52 50.7	-2.5
NB2				pmax	pmax		
	comp=Z,64nm,1.4s						
NOA	NORSAR Array B	78.40	338	P	P	19 52 53.9	+0.7
	comp=Z,28nm,0.9s,baz=39,slow=5.6,SNR=54						
NOA				LR	LR	20 34 00.5	
	comp=Z,257nm,18.1s,baz=25,slow=41						
	comp=Z,28nm,0.9s						
HVU	Hansel Valley	78.46	48	IAmb	IAmb	19 52 57.5	
	comp=Z,56nm,1.7s						
NC602	NORSAR Array S	78.53	338	IAmb	IAmb	19 53 06.7	
	comp=Z,35nm,1.1s						
NC602	NORSAR Array S	78.53	338	eP	P	19 52 56.6	+2.7
NORES	NORESS Array B	78.53	338	P	P	19 52 57.0	+3.1
NBO00	NORSAR Array S	78.55	338	IAmb	IAmb	19 52 56.1	
	comp=Z,62nm,1.1s						
NAO01	NORSAR Array S	78.66	338	P	P	19 52 53.6	-0.9
NAO01				IAmb	IAmb	19 52 56.5	
	comp=Z,86nm,1.2s						
AKN	Aaknes	78.76	340	eP	P	19 52 57.1	+2.0
BGU	Big Grassy Mou	78.78	48	IAmb	IAmb	19 52 59.3	
	comp=Z,67nm,1.9s						
MI28	Mi28,Pidlybu	78.84	324	P	P	19 52 55.0	-0.7
SUW	Suwalki	78.93	328	eP	P	19 52 56.9	+0.7
SIM	Simferopol'	79.01	317	eP	P	19 52 57.8	+1.0
SIM				e		19 53 07.9	
SIM				eS	S	20 02 51.3	-3.8
SIM				pmax	pmax		
	comp=Z,81nm,1.3s						
SIM				smax	smax		
	comp=N,33nm,12.6s						
SIM				MLR	MLR		
	comp=Z,71nm,15.9s						
DUG	Dugway, Tooele	79.32	49	IAmb	IAmb	19 53 02.1	
	comp=Z,55nm,1.5s						
DUG	Dugway, Tooele	79.32	49	P	P	19 53 00.6	+1.8
DUG				pmax	pmax		
	comp=Z,27nm,1.5s						
THZ	Tophouse	79.33	157	P	P	19 52 57.8	-0.6
THZ				IAmb	IAmb	19 53 11.6	
	comp=Z,65nm,0.9s						
RNPP9	Sopachiv	79.39	325	P	P	19 52 58.6	-0.2
LUBAR	Lubar, Ukraine	79.43	323	P	P	19 52 58.8	-0.2
RNPP8	Varash	79.46	325	P	P	19 52 59.0	-0.1
RNPP5	Staryi Chortor	79.51	325	P	P	19 52 59.7	+0.3
PSUT	Pine Spring	79.58	51	IAmb	IAmb	19 53 05.7	
	comp=Z,84nm,2.0s						
SKAR	Skarslia	79.58	339	eP	P	19 53 01.4	+1.7
ELS	Elsinore Mount	79.82	57	IAmb	IAmb	19 53 04.1	
	comp=Z,85nm,2.0s						
PDAR	Pinedale Array	79.87	45	P	P	19 53 02.8	+0.9
	comp=Z,7.0nm,1.0s,baz=281,slow=2.7,SNR=23						
PDAR				LR	LR	20 31 07.1	
	comp=Z,31nm,18.1s,baz=300,slow=38						
	comp=Z,7.0nm,1.0s						
PDAR	Pinedale Array	79.87	45	P	P	19 53 01.0	-0.8
SFJD	Kangerlussuaq	79.93	5	LR	LR	20 30 02.3	
	comp=Z,96nm,20.5s,baz=348,slow=37						
SFJD	Kangerlussuaq	79.93	5	P	P	19 53 02.0	+0.6
SFJD	Kangerlussuaq	79.93	5	P	P	19 53 02.0	+0.6
SFJD				pmax	pmax		
	comp=Z,44nm,1.3s						
SORM	Soroca	80.25	322	⇓P	P	19 53 04.0	+0.5
SORM	Soroca	80.25	322	⇓P	P	19 53 04.0	+0.5
PURM	Purcari	80.44	320	⇑P	P	19 53 05.8	+1.3
PFO	Pinyon Flats O	80.52	56	LR	LR	20 23 02.2	
	comp=Z,618nm,20.9s,baz=270,slow=31						
PFO	Pinyon Flats O	80.52	56	P	P	19 53 04.2	-1.2
PFO	Pinyon Flats O	80.52	56	P	P	19 53 04.2	-1.2
PFO				pmax	pmax		
	comp=Z,35nm,1.3s						
FRB	Frobisher Bay	80.58	13	LR	LR	20 32 10.1	
	comp=Z,158nm,20.7s,baz=348,slow=38						
MILM	Milestii Mici	80.77	321	⇓P	P	19 53 05.2	-1.1
MILM	Milestii Mici	80.77	321	⇓P	P	19 53 05.2	-1.1
LCMT	Little Creek M	80.83	52	IAmb	IAmb	19 53 10.2	
	comp=Z,67nm,1.6s						
KMPD	K-Podol'skiy	80.95	323	P	P	19 53 07.0	-0.2
KMPD				P	pP	19 53 07.2	-3.2
KMPD				pP	sP	19 53 10.5	-1.1
KMPD				pP	PcP	19 53 11.0	-2.7
CBX	Cerro Bola	81.08	57	IAmb	IAmb	19 53 10.2	
	comp=Z,64nm,1.5s						
RDMU	Red Mountain	81.14	47	IAmb	IAmb	19 53 11.9	
	comp=Z,105nm,1.3s						
YUH	Yuha Desert	81.42	57	P	P	19 53 09.2	-0.9
BEL	Belsk	81.48	328	eP	P	19 53 11.1	+1.1
BEL	Belsk	81.48	328	P	P	19 53 11.6	+1.7
BNN	Bunyan	81.50	311	IAmb	IAmb	19 53 13.3	
	comp=Z,60nm,1.1s						
ILGA	Ilgaz	81.54	314	IAmb	IAmb	19 53 13.9	
	comp=Z,81nm,1.1s						
GAZ	Gaziantep	81.58	309	IAmb	IAmb	19 53 14.0	
	comp=Z,49nm,1.1s						
K22A	Casper	81.73	44	IAmb	IAmb	19 53 14.4	
	comp=Z,46nm,1.2s						
VLDR	Vladesti	81.84	320	⇑P	P	19 53 13.9	+2.0
PRAR	RASCA	81.85	322	⇓P	P	19 53 13.6	+1.6
PPT	Papeete	81.88	117	LR	LR	20 25 37.7	
	comp=Z,107nm,19.0s,baz=337,slow=33						
BORG	Borgarnes	81.89	353	LR	LR	20 31 37.9	
	comp=Z,64nm,20.0s,baz=18,slow=37						
PPT2	Papeete2	81.89	117	eP	P	19 53 08.8	-3.9
	comp=Z,46nm,22.8s						
PPT2	Papeete2	81.89	117	eS	S	20 03 18.9	-7.1
	comp=Z,135nm,25.8s						
PPT2	Papeete2	81.89	117	eLQ	LQ	20 14 49.3	
	comp=Z,584nm,37.8s						
PPT2				eLR	LR	20 18 14.0	
	comp=Z,488nm,31.2s						
PPT2				eLR	LR	20 18 37.4	
	comp=Z,718nm,29.5s						
HMU	Henry Mountain	81.93	50	IAmb	IAmb	19 53 15.7	
	comp=Z,43nm,1.2s						
GIRR	Girov	81.97	322	⇑P	P	19 53 14.1	+1.5
GKP	Gorka Klasztor	82.00	330	eP	P	19 53 13.3	+0.7
GHRR		82.06	321	⇑P	P	19 53 15.2	+2.0
KWP	Kalwaria Pacla	82.10	325	eP	P	19 53 14.5	+1.2
KWP	Kalwaria Pacla	82.10	325	P	P	19 53 14.8	+1.5
TESR	Tescani	82.18	321	⇓P	P	19 53 14.8	+1.0
BUR08	Bucovina Ar. S	82.19	323	IAmb	IAmb	19 53 16.6	
	comp=Z,73nm,1.2s						

BURAR	Bucovina Array	82.20	323	P	P	19 53 14.6	+0.5
BURAR				IAmb	IAmb	19 53 28.0	
	comp=Z,33nm,0.8s						
BURAR	Bucovina Array	82.20	323	⇓P	P	19 53 15.1	+1.1
BURAR	Bucovina Array	82.20	323	⇓P	P	19 53 15.1	+1.1
O20A	White River Ci	82.21	47	IAmb	IAmb	19 53 17.1	
	comp=Z,67nm,1.2s						
CFR	Carcaliu	82.23	319	⇓P	P	19 53 14.7	+0.6
CFR	Carcaliu	82.23	319	⇓P	P	19 53 14.7	+0.6
RSSD	Black Hills	82.25	42	P	P	19 53 15.6	+1.1
RSSD				pmax	pmax		
	comp=Z,15nm,1.4s						
TPGR	Topolog	82.28	319	⇓P	P	19 53 15.2	+0.9
PANC	Panciu	82.32	320	⇓P	P	19 53 16.6	+2.0
BR131	Keskin Array S	82.37	313	IAmb	IAmb	19 53 17.6	
	comp=Z,54nm,1.2s						
BR131	Keskin Array S	82.37	313	*d i*P	P	19 53 15.7	+0.6
BRTR	Keskin Array B	82.37	313	P	P	19 53 16.1	+0.9
	comp=Z,30nm,1.1s,baz=108,slow=4.0,SNR=82						
BRTR				PKKPbc	PKKPbc	20 11 51.2	+10
	comp=Z,0.6nm,0.6s,baz=243,slow=4.9,SNR=3.9						
BRTR				LR	LR	20 33 55.1	
	comp=Z,148nm,18.2s,baz=52,slow=39						
	comp=Z,30nm,1.1s						
BRTR	Keskin Array B	82.37	313	P	P	19 53 15.5	+0.4
BRTR	Keskin Array B	82.37	313	*i* P	P	19 53 16.1	+0.9
BRTR				pmax	pmax		
	comp=Z,17nm,0.9s						
ULM	Lac du Bonnet	82.42	34	P	P	19 53 15.9	+1.0
	comp=Z,24nm,1.2s,baz=322,slow=4.6,SNR=13						
ULM				LR	LR	20 29 04.2	
	comp=Z,272nm,21.0s,baz=340,slow=35						
	comp=Z,24nm,1.2s						
ULM	Lac du Bonnet	82.42	34	IAmb	IAmb	19 53 16.9	
	comp=Z,67nm,1.4s						
ULM	Lac du Bonnet	82.42	34	P	P	19 53 16.0	+1.0
ONER	Baraj Valea Uz	82.42	321	⇑P	P	19 53 17.2	+2.1
ODBI	Odobesti	82.44	320	⇑P	P	19 53 17.6	+2.5
TIRR	Tirgusor	82.54	319	IAmb	IAmb	19 53 17.9	
	comp=Z,30nm,1.1s						
TIRR	Tirgusor	82.54	319	⇑P	P	19 53 16.8	+1.1
TIRR	Tirgusor	82.54	319	⇑P	P	19 53 16.8	+1.1
VRI	Vrincioaia	82.55	321	⇓P	P	19 53 17.0	+1.3
VRI	Vrincioaia	82.55	321	⇓P	P	19 53 17.0	+1.3
PLOR	Plostina	82.60	321	⇓P	P	19 53 17.2	+1.1
PLOR	Plostina	82.60	321	⇓P	P	19 53 17.2	+1.1
JOSR	Joseni	82.64	322	⇑P	P	19 53 17.7	+1.5
TLBR	Topalu	82.68	319	⇓P	P	19 53 18.6	+2.1
TURR	Turia	82.81	321	⇓P	P	19 53 19.2	+2.1
ANTO	Ankara	82.81	313	P	P	19 53 17.0	-0.3
ANTO				IAmb	IAmb	19 53 19.9	
	comp=Z,40nm,0.8s						
ANTO	Ankara	82.81	313	P	P	19 53 17.0	-0.3
ANTO				pmax	pmax		
	comp=Z,40nm,0.9s						
COVR	Voineasa-Covas	82.84	321	⇑P	P	19 53 19.0	+1.7
OZUR		82.90	321	⇓P	P	19 53 19.6	+1.9
WUAZ	Wupatki	82.92	52	IAmb	IAmb	19 53 21.9	
	comp=Z,50nm,1.4s						
STHS	Stebnicka Huta	82.94	326	*e*P	P	19 53 19.7	+2.0
STHS				pmax	pmax		
	comp=Z,40nm,1.2s						
STHS	Stebnicka Huta	82.94	326	*e*P	P	19 53 19.7	+2.0
AMRR	Amara	83.03	319	⇓P	P	19 53 19.9	+1.7
AMRR	Amara	83.03	319	⇓P	P	19 53 19.9	+1.7
OJC	Ojcow	83.05	327	*e*P	P	19 53 19.3	+1.0
OJC	Ojcow	83.05	327	P	P	19 53 19.5	+1.2
OJC				pmax	pmax		
	comp=Z,72nm,1.3s						
NEHR	Nehoiu	83.07	321	⇓P	P	19 53 19.9	+1.4
ICOR	Ion Corvin	83.09	319	⇑P	P	19 53 20.6	+2.0
ISR	Istrita	83.13	320	⇑P	P	19 53 21.1	+2.2
ISR	Istrita	83.13	320	⇑P	P	19 53 21.1	+2.2
RAYN	Ar Rayn	83.19	293	P	P	19 53 19.1	-0.4
RAYN				IAmb	IAmb	19 53 32.8	
	comp=Z,25nm,0.9s						
RAYN	Ar Rayn	83.19	293	*i* P	P	19 53 20.1	+0.5
	SNR=6.2						
RAYN	Ar Rayn	83.19	293	⇓P	P	19 53 20.3	+0.8
DOPR	Dopca	83.19	321	⇓P	P	19 53 21.1	+2.0
MLR	Muntele Rosu	83.21	321	LR	LR	20 34 26.3	
	comp=Z,457nm,19.0s,baz=54,slow=39						
MLR	Muntele Rosu	83.21	321	⇓P	P	19 53 20.1	+0.8
MLR	Muntele Rosu	83.21	321	⇓P	P	19 53 20.1	+0.8
NIE	Niedzica	83.38	326	*e*P	P	19 53 21.7	+1.6
NIE	Niedzica	83.38	326	P	P	19 53 21.6	+1.6
SAHE	Sakarya_HENDEK	83.38	315	⇑P	P	19 53 21.0	+0.8
LEHL	Lehliu	83.40	320	⇓P	P	19 53 21.6	+1.5
CICN	Ciocanesti	83.47	319	⇓P	P	19 53 21.9	+1.4
PLAR	PLOIESTI	83.55	320	⇓P	P	19 53 22.7	+1.8
SULR		83.58	320	⇓P	P	19 53 22.7	+1.7
MDB	Medias	83.61	322	⇓P	P	19 53 23.3	+2.1
MDB	Medias	83.61	322	⇓P	P	19 53 23.3	+2.1
CJR	Cluj-Napoca	83.62	323	P	P	19 53 23.1	+1.7
MESR	Meseseni	83.66	323	⇑P	P	19 53 23.1	+1.6
AGMN	Agassiz Nation	83.77	35	IAmb	IAmb	19 53 24.5	
	comp=Z,35nm,1.2s						
BEIL	Beino	83.78	307	*e*P	P	19 53 23.1	+0.8
FKH	Fakeheh	83.81	307	*e*P	P	19 53 23.7	+1.1
MARR	Marisel-Cluj	83.89	323	⇓P	P	19 53 24.0	+1.2
KECS	Kecovo	83.95	325	*e*P	P	19 53 24.6	+1.7
KECS				pmax	pmax		
	comp=Z,51nm,1.0s						
KECS	Kecovo	83.95	325	*e*P	P	19 53 24.6	+1.7
KECS				*e*		19 53 36.7	
ARR	Arges	83.99	321	⇓P	P	19 53 25.2	+2.0
RUE	Ruedersdorf	84.00	331	*e*P	P	19 53 24.3	+1.3
	comp=Z,34nm,0.8s,baz=39,slow=4.8						
DRGR		84.02	323	⇓P	P	19 53 24.5	+1.1
DRGR		84.02	323	⇓P	P	19 53 24.5	+1.1
ISCO	Idaho Springs	84.02	46	P	P	19 53 25.9	+2.0
ISCO				pmax	pmax		
	comp=Z,34nm,2.3s						
OKC	Ostrava-Krasne	84.07	328	*e*P	P	19 53 25.0	+1.5
OKC				MLR	MLR		
	comp=Z,800nm,18.3s						
OKC	Ostrava-Krasne	84.07	328	*e*P	P	19 53 25.0	+1.5
OKC				AMS	AMS	20 35 10.0	
	comp=Z,800nm,18.3s						
HWQ	Hawqa	84.10	307	*e*P	P	19 53 24.4	+0.3
KSP	Ksiaz	84.16	329	*e*P	P	19 53 24.9	+0.9
STEB	Steborice	84.17	328	*e*P	P	19 53 25.3	+1.3
STEB				*e*x	x	19 53 37.3	
TAOE	Nuku Hiva Isla	84.19	104	*e*LR	LR	20 19 43.8	
	comp=Z,731nm,21.9s						
BSEG	Bad Segeberg	84.22	334	P	P	19 53 25.2	+1.1
BSEG				pmax	pmax		
	comp=Z,26nm,1.1s						
BSEG	Bad Segeberg	84.22	334	*e*P	P	19 53 24.8	+0.7
	comp=Z,19nm,1.1s,baz=39,slow=4.8						
HUMR	Humele	84.36	320	⇑P	P	19 53 25.9	+0.8
ZAHL	Zahle	84.38	307	*e*P	P	19 53 26.4	+0.9
MORC	Moravsky Berou	84.39	328	IAmb	IAmb	19 53 27.7	
	comp=Z,52nm,1.1s						
MORC	Moravsky Berou	84.39	328	⇓P	P	19 53 26.1	+0.9
MORC	Moravsky Berou	84.39	328	*e*P	P	19 53 25.9	+0.7
MORC	Moravsky Berou	84.39	328	⇓P	P	19 53 26.1	+0.9
OSTC	Ostas	84.41	329	*e*P	P	19 53 26.4	+1.2
OSTC	Ostas	84.41	329	*e*P	P	19 53 26.4	+1.2
OSTC				*e*x	x	19 53 38.7	
CHVC	Chvalec	84.45	329	*e*P	P	19 53 26.7	+1.2
CHVC				MLR	MLR		
	comp=Z,1µm,15.9s						
CHVC	Chvalec	84.45	329	*e*P	P	19 53 26.7	+1.2
CHVC				AMS	AMS	20 38 40.0	
	comp=Z,1µm,15.9s						
BHL	Bhannes	84.51	307	*e*P	P	19 53 26.6	+0.4
DPC	Dobruska-Polom	84.51	329	*e*P	P	19 53 27.2	+1.4
DPC				MLR	MLR		
	comp=Z,800nm,11.1s						
DPC	Dobruska-Polom	84.51	329	*e*P	P	19 53 27.2	+1.4
DPC				*e*x	x	19 53 39.4	
DPC				AMS	AMS	20 36 40.0	
	comp=Z,800nm,11.1s						
KRLC	Kraliky	84.51	328	*e*P	P	19 53 26.8	+1.0
KRLC				MLR	MLR		
	comp=Z,1µm,14.4s						
KRLC	Kraliky	84.51	328	*e*P	P	19 53 26.8	+1.0
KRLC				AMS	AMS	20 37 00.0	
	comp=Z,1µm,14.4s						
UPC	Upice	84.53	329	*e*P	P	19 53 27.2	+1.4
UPC				MLR	MLR		
	comp=Z,900nm,14.9s						
UPC	Upice	84.53	329	*e*P	P	19 53 27.2	+1.4
UPC				*e*x	x	19 53 38.3	
UPC				AMS	AMS	20 38 40.0	
	comp=Z,900nm,14.9s						
DEV	Deva	84.54	322	⇑P	P	19 53 27.3	+1.3
DEV	Deva	84.54	322	⇑P	P	19 53 27.3	+1.3
PSZ	Piszkesteto	84.62	325	⇓P	P	19 53 27.7	+1.3
PSZ	Piszkesteto	84.62	325	⇓P	P	19 53 27.7	+1.3
RCY	Rachaya	84.63	307	*e*P	P	19 53 28.0	+1.1
DQRL	Deir Qamar	84.69	307	*e*P	P	19 53 27.7	+0.7
QRWL	Qaraoun	84.70	307	*e*P	P	19 53 28.0	+0.8
SHBL	Chebaa	84.78	306	*e*P	P	19 53 28.4	+0.8
BSZH	Besenyszg	84.88	325	⇓P	P	19 53 28.5	+0.9
GZR	Gura Zlata	84.94	322	⇓P	P	19 53 28.8	+0.7
GZR	Gura Zlata	84.94	322	⇓P	P	19 53 28.8	+0.7
JAVC	Velka Javorina	85.00	327	*e*P	P	19 53 30.3	+2.0
VLAD	Vladila	85.02	320	⇑P	P	19 53 29.7	+1.3
FLTG	Flechtingen	85.12	332	*e*P	P	19 53 29.2	+0.5
	comp=Z,43nm,1.0s,baz=39,slow=4.8						
FLTG				*e*pP	pwP	19 53 41.4	+1.1
PVCC	Panska Ves	85.14	330	*e*P	P	19 53 30.2	+1.3
PVCC	Panska Ves	85.14	330	*e*P	P	19 53 30.2	+1.3
BRG	Berggiesshubel	85.14	330	P	P	19 53 29.9	+1.0
BRG				pmax	pmax		
	comp=Z,40nm,1.6s						
BRG	Berggiesshubel	85.14	330	*e*P	P	19 53 29.6	+0.7
	comp=Z,22nm,1.0s,baz=39,slow=4.8						
BRG				*e*pP	pwP	19 53 41.9	+1.4
VRAC	Vranov	85.16	328	LR	LR	20 35 36.5	
	comp=Z,270nm,18.6s,baz=53,slow=39						
VRAC	Vranov	85.16	328	⇓P	P	19 53 30.1	+1.1
VRAC	Vranov	85.16	328	*e*P	P	19 53 30.0	+1.0
VRAC	Vranov	85.16	328	⇓P	P	19 53 30.1	+1.1
TUC	Tucson	85.18	55	P	P	19 53 29.7	+0.1
TUC				IAmb	IAmb	19 53 32.4	
	comp=Z,30nm,1.4s						
TUC	Tucson	85.18	55	P	P	19 53 29.7	+0.1
TUC				pmax	pmax		
	comp=Z,30nm,1.4s						
CLL	Collm	85.20	331	*i* P	P	19 53 29.6	+0.5
CLL				pmax	pmax		
	comp=Z,99nm,1.1s						
CLL				MLR	MLR		
	comp=Z,800nm,15.6s						
CLL	Collm	85.20	331	*e*P	P	19 53 29.7	+0.5
	comp=Z,55nm,1.0s,baz=39,slow=4.8						
CLL				*e*pP	pwP	19 53 42.1	+1.3
CLL	Collm	85.20	331	*i* P	P	19 53 29.6	+0.5
	comp=Z,99nm,1.1s						
CLL				*i* P(2)		19 53 41.5	
	comp=Z,85nm,1.1s						
CLL				*e*PP	PP	19 56 45.0	-0.9
CLL				AMS	AMS	20 28 00.0	
	comp=N,400nm,19.9s						
CLL				AMS	AMS	20 28 00.0	
	comp=E,500nm,18.4s						
MMAI	Mount Meron Ar	85.20	306	P	P	19 53 30.9	+1.3
	comp=E,34nm,1.0s,baz=44,slow=6.1,SNR=42						
MMAI				LR	LR	20 36 59.0	
	comp=E,199nm,18.3s,baz=67,slow=40						
	comp=E,34nm,1.0s						
SRE	Strehaia	85.21	321	⇓P	P	19 53 30.7	+1.4
SRE	Strehaia	85.21	321	⇓P	P	19 53 30.7	+1.4
BAND	Balkesir-Ban	85.33	316	⇑P	P	19 53 30.9	+0.8
BUD	Budapest	85.35	325	P	P	19 53 30.7	+0.7
BUD				pmax	pmax		
	comp=Z,30nm,1.5s						
SMOL	Smolenice	85.36	327	*e*P	P	19 53 32.2	+2.2
SMOL				*e*		19 56 50.3	
SMOL				pmax	pmax		
	comp=Z,53nm,1.2s						
BZS	Buzias	85.38	323	⇓P	P	19 53 30.7	+0.5
BZS	Buzias	85.38	323	⇓P	P	19 53 30.7	+0.5
KRUC	Moravsky	85.42	328	*e*P	P	19 53 31.1	+0.8
KRUC	Moravsky	85.42	328	P	P	19 53 31.6	+1.3
KRUC				pmax	pmax		
	comp=Z,45nm,1.3s						
CSS	Mathiatis	85.42	309	IAmb	IAmb	19 53 32.5	
	comp=Z,63nm,1.4s						
SRO	Srobarova	85.45	326	*e*P	P	19 53 32.2	+1.7
SRO				pmax	pmax		
	comp=Z,76nm,1.4s						
SRO	Srobarova	85.45	326	*e*P	P	19 53 32.2	+1.7
SRO				*e*		19 53 43.8	
HERR	Herculane	85.48	322	⇑P	P	19 53 31.7	+1.0
ASSE	Asse, Remlinge	85.49	333	*e*P	P	19 53 31.5	+1.0
	comp=Z,26nm,1.1s,baz=39,slow=4.8						
MODS	Modra-Piesok	85.53	327	*e*P	P	19 53 33.0	+2.1
MODS				*e*		19 56 51.8	
MODS				pmax	pmax		
	comp=Z,201nm,1.4s						
MODS	Modra-Piesok	85.53	327	*e*P	P	19 53 33.0	+2.1
MODS				*e*		19 53 45.0	
MODS				*e*		19 56 51.8	
TBI	Tubuai	85.53	121	*e*S	S	20 04 03.6	+1.3
	comp=Z,580nm,27.2s						
TBI	Tubuai	85.53	121	*e*LQ	LQ	20 16 21.1	
	comp=Z,2µm,38.2s						
TBI				*e*LR	LR	20 19 51.8	
	comp=Z,2µm,31.8s						
PRA	Prague	85.54	329	AMS	AMS	20 38 00.0	
	comp=Z,800nm,13.1s						
PRU	Pruhonice	85.55	329	*e*P	P	19 53 32.4	+1.5
PRU				MLR	MLR		
	comp=Z,900nm,13.4s						
PRU	Pruhonice	85.55	329	*e*P	P	19 53 32.4	+1.5
PRU				*e*x	x	19 53 43.7	
PRU				AMS	AMS	20 39 20.0	
	comp=Z,900nm,13.4s						
HSKC	Hora Svate Kat	85.55	330	*e*P	P	19 53 31.9	+0.9
HSKC				*e*x	x	19 53 43.9	
TREC	Trest	85.66	328	*e*P	P	19 53 32.5	+1.0
TREC	Trest	85.66	328	*e*P	P	19 53 32.5	+1.0
KUQ	Kuujjuuaa	85.69	16	IAmb	IAmb	19 53 34.9	
	comp=Z,85nm,1.5s						
NEUB	Neuenburg	85.77	332	*e*P	P	19 53 32.7	+0.7
	comp=Z,52nm,1.0s,baz=39,slow=4.8						
NEUB				*e*pP	pwP	19 53 44.7	+1.2
CLZ	Clausthal	85.83	333	*e*P	P	19 53 32.8	+0.4
	comp=Z,36nm,0.9s,baz=39,slow=4.8						
CLZ				*e*pP	pwP	19 53 45.3	+1.4
MDVR	Moldovita	85.91	322	⇑P	P	19 53 33.6	+0.7
BALB	Balikesir	85.91	315	IAmb	IAmb	19 53 35.6	
	comp=Z,42nm,1.3s						
GHAJ	Ghor Haditha	86.10	305	IAmb	IAmb	19 53 48.3	
	comp=Z,26nm,0.7s						
ZVC	Zvikov	86.11	329	*e*P	P	19 53 34.6	+0.8
ZVC				AMS	AMS	20 37 50.0	
	comp=Z,800nm,11.9s						
GTTG	Gottingen	86.22	333	*e*P	P	19 53 34.6	+0.4
	comp=Z,29nm,0.9s,baz=39,slow=4.8						
GTTG				*e*pP	pwP	19 53 47.1	+1.3
MANT	Manisa	86.24	314	IAmb	IAmb	19 53 37.4	
	comp=Z,34nm,1.3s						
MOX	Moxa	86.27	331	P	P	19 53 35.2	+0.7
MOX				pmax	pmax		
	comp=Z,34nm,1.4s						
MOX	Moxa	86.27	331	*e*P	P	19 53 35.0	+0.5
	comp=Z,26nm,1.1s,baz=39,slow=4.8						
SOP	Sopron	86.36	327	P	P	19 53 36.4	+1.4
SOP				pmax	pmax		
	comp=Z,41nm,1.4s						
T25A	Trinidad	86.42	47	P	P	19 53 35.6	-0.2
T25A				IAmb	IAmb	19 53 38.7	
	comp=Z,42nm,1.3s						
MORH	Mrgy, Hungar	86.44	325	⇑P	P	19 53 37.1	+1.7
RONA	Rosalia, Austr	86.47	327	*i* PcP	P	19 53 36.6	+1.0
	comp=Z,106nm,1.5s,SNR=6.8						
TASM	ASL Pad, Albuq	86.48	50	IAmb	IAmb	19 53 38.9	
	comp=Z,26nm,1.3s						
TASM	ASL Pad, Albuq	86.48	50	IAmb	IAmb	19 53 38.8	
	comp=Z,22nm,1.3s						
ANMO	Albuquerque	86.48	50	LR	LR	20 27 57.8	
	comp=Z,531nm,19.1s,baz=310,slow=33						
ANMO	Albuquerque	86.48	50	P	P	19 53 35.8	-0.4
ANMO	Albuquerque	86.48	50	*de*P	P	19 53 37.0	+0.9
ANMO				pmax	pmax		
	comp=Z,23nm,1.3s						
CONA	Conrad Observa	86.50	327	*i* PcP	P	19 53 35.9	+0.1
	comp=Z,264nm,2.3s,SNR=13						
CONA				*e*PP	PP	19 56 57.8	+1.2
	comp=Z,3.2nm,1.2s						
ELL	Elmali	86.52	312	IAmb	IAmb	19 54 05.2	
	comp=Z,60nm,1.3s						
ELL	Elmali	86.52	312	P	P	19 53 37.1	+1.0
ELL				pmax	pmax		
	comp=Z,106nm,1.2s						
BEO	Beograd	86.52	323	P	P	19 53 37.8	+2.0
CKRC	Cesky Krumlov	86.53	329	*e*P	P	19 53 36.4	+0.6
CKRC				MLR	MLR		
	comp=Z,1µm,19.4s						
CKRC	Cesky Krumlov	86.53	329	*e*P	P	19 53 36.4	+0.6
CKRC				AMS	AMS	20 38 30.0	
	comp=Z,1µm,19.4s						
ECSD	EROS Data Cent	86.55	39	IAmb	IAmb	19 53 38.1	
	comp=Z,76nm,1.4s						
MANZ	Manzenberg	86.58	331	*e*P	P	19 53 36.7	+0.6
	comp=Z,4.1nm,1.1s,baz=39,slow=4.8						
MANZ				*e*pP	pwP	19 53 48.7	+1.1
KHC	Kasperske Hory	86.61	329	P	P	19 53 35.5	-0.7
KHC				IAmb	IAmb	19 53 39.4	
	comp=Z,69nm,1.8s						
KHC	Kasperske Hory	86.61	329	⇓*i*P	P	19 53 36.6	+0.3
KHC				pmax	pmax		
	comp=Z,37nm,1.7s						
KHC	Kasperske Hory	86.61	329	*e*P	P	19 53 36.7	+0.4
KHC				*e*x	x	19 53 48.9	
KHC				AMS	AMS	20 40 00.0	
	comp=Z,800nm,15.9s						
BOVS	Bovan	86.70	321	⇓P	P	19 53 38.0	+1.3
ROTZ	Rotzenmuhle	86.70	330	*e*P	P	19 53 37.5	+0.8
	comp=Z,7.7nm,1.2s,baz=39,slow=4.8						
GEC2	GERESS Array S	86.77	329	*e*P	P	19 53 38.0	+0.8
	comp=Z,3.2nm,0.9s,baz=39,slow=4.8						
GERES	GERESS Array B	86.77	329	P	P	19 53 37.9	+0.8
	comp=Z,1.3nm,0.6s,baz=38,slow=6.8,SNR=12						
GERES				LR	LR	20 36 40.3	
	comp=Z,387nm,18.7s,baz=68,slow=39						
	comp=Z,1.3nm,0.6s						
UBBA	Unterbreizbach	86.78	332	*e*P	P	19 53 37.6	+0.7
	comp=Z,33nm,1.3s,baz=39,slow=4.8						
WET	Wettzell	86.90	330	P	P	19 53 38.3	+0.6
WET				pmax	pmax		
	comp=Z,14nm,2.9s						
WET	Wettzell	86.90	330	*e*P	P	19 53 38.5	+0.8
	comp=Z,17nm,1.4s,baz=39,slow=4.8						
E38A	The Farm, Brul	87.03	34	IAmb	IAmb	19 53 40.1	
	comp=Z,38nm,1.2s						
KASTN	Kahler Asten	87.09	333	*e*P	P	19 53 38.9	+0.4
	comp=Z,25nm,1.1s,baz=39,slow=4.8						
KASTN				*e*pP	pwP	19 53 51.1	+0.9
ARSA	Arzberg	87.15	327	IAmb	IAmb	19 53 41.3	
	comp=Z,48nm,1.7s						
ARSA	Arzberg	87.15	327	*i* P	P	19 53 37.4	-1.5
	comp=Z,44nm,1.6s,SNR=6.1						
ARSA				*e*PP	PP	19 56 58.2	-3.7
	comp=Z,0.8nm,0.8s						
GRF	Grafenberg Arr	87.17	331	*e*P	P	19 53 39.7	+0.7
	comp=Z,52nm,1.3s,baz=39,slow=4.8						
MOA	Molln	87.28	328	*e*pP	P	19 53 40.8	+1.3
	comp=Z,17nm,1.4s						
MOA				*e*PP	PP	19 57 02.8	-0.1
	comp=Z,1.6nm,1.0s						
BUG	Bochum--Univer	87.33	334	*e*P	P	19 53 40.3	+0.7
	comp=Z,53nm,1.2s,baz=39,slow=4.8						
EKA	Eskdalemuir Ar	87.38	341	P	P	19 53 39.7	-0.1
	comp=Z,9.4nm,0.9s,baz=26,slow=4.0,SNR=9.8						
	comp=Z,9.4nm,0.9s						
SPMN	Marine on St.	87.43	36	IAmb	IAmb	19 53 42.4	
	comp=Z,23nm,0.9s						
BIOA	Bad Ischl, Aus	87.67	328	*e*PcP	P	19 53 42.4	+1.0
	comp=Z,29nm,1.5s						
SOKA	Soboth	87.81	327	*i* PcP	P	19 53 41.7	-0.5
	comp=Z,270nm,2.4s,SNR=11						
TNS	Taunus Mts	87.86	333	P	P	19 53 42.5	+0.2
TNS				pmax	pmax		
	comp=Z,27nm,1.6s						
TNS	Taunus Mts	87.86	333	*e*P	P	19 53 42.6	+0.2
	comp=Z,28nm,1.2s,baz=39,slow=4.8						
PTJ	Puntijarka	87.94	326	P	P	19 53 46.4	+3.6
ARG	Arkhangelos	87.96	313	P	P	19 53 42.4	-0.6
ARG				IAmb	IAmb	19 53 44.4	
	comp=Z,30nm,1.0s						
ARG	Arkhangelos	87.96	313	P	P	19 53 42.4	-0.6
ARG				pmax	pmax		
	comp=Z,31nm,1.0s						
KBA	Koelnbreinsper	88.27	328	*e*PcP	P	19 53 45.0	+0.5
	comp=Z,7.1nm,0.8s						
LESA	Schwarzleotal	88.30	329	*e*pP	P	19 53 45.4	+0.9
	comp=Z,24nm,1.4s						
BEBN	Eben Emael	88.44	334	*d*P	P	19 53 45.7	+0.8
BTNL	Ternell	88.44	334	*d*P	P	19 53 45.8	+0.8
	comp=Z,15nm,1.3s						
MEM	Membach	88.47	334	P	P	19 53 44.2	-0.9
MEM				pmax	pmax		
	comp=Z,40nm,1.5s						
MEM	Membach	88.47	334	*d*P	P	19 53 46.0	+0.9
MYKA	Terra Mystica	88.47	328	*e*PcP	P	19 53 45.0	-0.4
	comp=Z,23nm,1.6s						
BSTI	Sart Tilman	88.65	334	*d*P	P	19 53 45.3	-0.7
G40A	Rib Lake	88.65	34	IAmb	IAmb	19 53 48.2	
	comp=Z,25nm,1.0s						
BHOU	Houvegnez	88.68	334	*d*P	P	19 53 46.8	+0.7
	comp=Z,14nm,1.2s						
LIT	Litokhoron	88.71	318	IAmb	IAmb	19 53 47.0	
	comp=Z,22nm,1.2s						
LIT	Litokhoron	88.71	318	P	P	19 53 46.1	-0.4
LIT				pmax	pmax		
	comp=Z,17nm,1.2s						
STU	Stuttgart	88.72	331	IAmb	IAmb	19 53 49.9	
	comp=Z,22nm,1.0s						
STU	Stuttgart	88.72	331	P	P	19 53 47.1	+0.8
STU				pmax	pmax		
	comp=Z,28nm,1.4s						
STU	Stuttgart	88.72	331	*e*P	P	19 53 47.1	+0.8
	comp=Z,57nm,1.1s,baz=39,slow=4.8						
PDG	Podgorica	88.83	322	⇑P	P	19 53 48.3	+1.4
WATA	Walderalm	88.85	329	*e*pP	P	19 53 47.9	+0.7
	comp=Z,7.0nm,1.0s						
WATA				*e*PP	PP	19 57 17.2	+1.7
	comp=Z,14nm,1.1s						
WTTA	Wattenberg	88.88	329	*e*PcP	P	19 53 47.7	+0.4
	comp=Z,2.9nm,0.6s						
WTTA				*e*PP	PP	19 57 16.8	+0.9
	comp=Z,11nm,1.2s						
ABTA	Abfaltersbach	88.89	328	*e*P	P	19 53 45.0	-2.3
	comp=Z,18nm,1.0s						
BGES	Gesves	88.99	334	*d*P	P	19 53 47.9	+0.4
	comp=Z,12nm,1.2s						
SCHQ	Schefferville	89.04	17	P	P	19 53 48.8	+1.1
	comp=Z,17nm,1.0s,baz=16,slow=3.9,SNR=5.1						
SCHQ				LR	LR	20 36 31.3	
	comp=Z,154nm,20.8s,baz=329,slow=38						
	comp=Z,17nm,1.0s						
SCHQ	Schefferville	89.04	17	P	P	19 53 47.5	-0.2
RETA	Reutte	89.08	330	*e*P	P	19 53 46.7	-1.4
	comp=Z,0.9nm,0.3s						
RCHB	Rochefort	89.13	334	*d*P	P	19 53 48.7	+0.5
STAL	STALIGIAL	89.17	328	IAmb	IAmb	19 55 53.9	
	comp=Z,60nm,1.7s						
BMRD	Maredsous	89.17	335	*d*P	P	19 53 48.1	-0.3
WLF	Walferdange	89.19	333	IAmb	IAmb	19 53 51.1	
	comp=Z,45nm,1.4s						
WLF	Walferdange	89.19	333	*d*P	P	19 53 49.8	+1.3
KBN	Korca	89.28	320	P	P	19 53 49.5	+0.2
KBN				pmax	pmax		
	comp=Z,16nm,1.6s						
BFO	Black Forest	89.42	331	P	P	19 53 49.2	-0.5
BFO	Black Forest	89.42	331	P	P	19 53 49.2	-0.5
BFO				pmax	pmax		
	comp=Z,20nm,1.1s						
BFO	Black Forest	89.42	331	*e*P	P	19 53 50.0	+0.3
	comp=Z,6.1nm,1.0s,baz=39,slow=4.8						
FETA	Feichten	89.45	329	*e*PcP	P	19 53 49.7	-0.3
	comp=Z,20nm,1.1s						
DAVA	Damuels	89.61	330	*e*PcP	P	19 53 50.5	-0.2
	comp=Z,27nm,1.2s						
KSU1	Kansas State U	89.74	42	IAmb	IAmb	19 53 53.2	
	comp=Z,23nm,0.9s						
FUORN	Ofenpass-Fuorn	89.97	329	P	P	19 53 52.7	+0.2
FUORN				IAmb	IAmb	19 53 54.5	
	comp=Z,66nm,1.2s						
DAVOX	Davos/Dischmat	90.00	330	LR	LR	20 38 56.3	
	comp=Z,358nm,18.5s,baz=44,slow=39						
LPIG	La Paz	90.36	61	LR	LR	20 27 00.3	
	comp=Z,182nm,21.0s,baz=238,slow=31						
TUE	Stuetta	90.47	330	IAmb	IAmb	19 53 58.3	
	comp=Z,24nm,1.1s						
IDI	Anoyia	90.56	314	IAmb	IAmb	19 53 59.0	
	comp=Z,33nm,1.3s						
DKNS	Dickens	90.83	48	P	P	19 53 56.4	-0.2
DKNS				IAmb	IAmb	19 54 00.2	

	comp=Z,34nm,1.4s						
P38A	Dawn	91.07	40	IAmb	IAmb	19 53 59.8	
	comp=Z,71nm,1.7s						
T35A	Sooner Cattle	91.31	43	IAmb	IAmb	19 54 01.8	
	comp=Z,44nm,1.4s						
WMOK	Wichita Mounta	91.44	46	IAmb	IAmb	19 54 01.6	
	comp=Z,25nm,1.3s						
WMOK	Wichita Mounta	91.44	46	P	P	19 54 00.8	+1.4
WMOK				pmax	pmax		
	comp=Z,17nm,1.6s						
APMT	Aspermont	91.56	48	IAmb	IAmb	19 54 02.2	
	comp=Z,60nm,1.6s						
NRCA	Norcia	91.60	325	P	P	19 53 59.8	-0.2
ACER	Acerenza	91.73	322	P	P	19 54 00.3	-0.3
TXAR	Lajitas Array	91.84	53	P	P	19 54 02.7	+1.3
	comp=Z,9.8nm,0.9s,baz=309,slow=2.8,SNR=51						
TXAR				PP	PP	19 57 43.1	+3.2
	comp=Z,1.4nm,1.0s,baz=309,slow=4.4,SNR=3.5						
TXAR				LR	LR	20 30 41.7	
	comp=Z,431nm,20.0s,baz=318,slow=33						
	comp=Z,9.8nm,0.9s						
TXAR	Lajitas Array	91.84	53	P	P	19 54 01.1	-0.3
P40A	Paris	91.94	39	IAmb	IAmb	19 54 03.7	
	comp=Z,19nm,1.0s						
LOR	Lormes	92.03	333	P	P	19 54 02.7	+0.9
W35A	Tecumseh	92.31	45	IAmb	IAmb	19 54 05.5	
	comp=Z,43nm,1.2s						
ABTX	Abilene, Hawle	92.32	48	IAmb	IAmb	19 54 05.9	
	comp=Z,34nm,1.1s						
SAND	Sanderson	92.47	52	IAmb	IAmb	19 54 06.5	
	comp=Z,25nm,1.3s						
RLO	Rose Lookout	92.69	43	IAmb	IAmb	19 54 07.1	
	comp=Z,35nm,1.4s						
R40A	Maddies Statio	92.72	40	IAmb	IAmb	19 54 06.8	
	comp=Z,22nm,1.0s						
U38A	Gravette	92.86	43	P	P	19 54 05.3	-0.5
U38A				IAmb	IAmb	19 54 07.8	
	comp=Z,20nm,1.0s						
HHAR	Hobbs	93.23	42	IAmb	IAmb	19 54 12.6	
	comp=Z,51nm,1.6s						
CCM	Cathedral Cave	93.44	40	P	P	19 54 07.7	-0.8
CCM				IAmb	IAmb	19 54 10.4	
	comp=Z,31nm,1.1s						
CCM	Cathedral Cave	93.44	40	P	P	19 54 07.7	-0.8
CCM				pmax	pmax		
	comp=Z,31nm,1.2s						
BRDY	Brady	93.62	49	IAmb	IAmb	19 54 11.8	
	comp=Z,44nm,1.4s						
TRQ	Mont Tremblant	94.39	25	P	P	19 54 12.8	+0.1
TRQ				IAmb	IAmb	19 54 15.3	
	comp=Z,22nm,1.2s						
FCAR	Ozark Folk Cen	94.53	42	IAmb	IAmb	19 54 16.9	
	comp=Z,24nm,1.4s						
MIAR	Mount Ida	94.67	43	IAmb	IAmb	19 54 16.3	
	comp=Z,19nm,0.9s						
MIAR	Mount Ida	94.67	43	P	P	19 54 15.1	+0.9
MIAR				pmax	pmax		
	comp=Z,21nm,1.3s						
PBMO	Poplar Bluff	94.82	40	IAmb	IAmb	19 54 18.5	
	comp=Z,35nm,1.4s						
LCAR	Lake Charles	94.94	41	IAmb	IAmb	19 54 19.4	
	comp=Z,48nm,1.7s						
833A	Chaparral WMA,	95.34	51	P	P	19 54 17.5	+0.2
833A				IAmb	IAmb	19 54 20.2	
	comp=Z,39nm,1.2s						
RKT	Rikitea	96.22	113	*e*LR	LR	20 25 12.5	
	comp=Z,2μm,31.2s						
FURI	Furi	96.75	285	LR	LR	20 45 17.9	
	comp=Z,100nm,18.0s,baz=20,slow=40						
KEST	Kesra	98.93	323	P	P	19 54 33.2	-0.3
	comp=Z,5.7nm,0.9s,baz=32,slow=5.6,SNR=4.6						
KEST				LR	LR	20 44 25.0	
	comp=Z,115nm,18.3s,baz=1.2,slow=38						
	comp=Z,5.7nm,0.9s						
KEST	Kesra	98.93	323	IAmb	IAmb	19 54 35.2	
	comp=Z,12nm,1.1s						
TKL	Tuckaleechee C	99.15	37	LR	LR	20 37 15.1	
	comp=Z,142nm,21.8s,baz=334,slow=34						
ESDC	Sonseca Array	101.46	334	P	Pdif	19 54 44.4	-0.3
	comp=Z,0.6nm,0.5s,baz=37,slow=5.7,SNR=3.5						
ESDC				PP	PP	19 58 57.9	+4.5
	comp=Z,1.8nm,0.9s,baz=24,slow=6.2,SNR=4.8						
LSZ	Lusaka	118.52	270	PKP	PKiKP	19 59 41.9	+0.5
	comp=Z,0.8nm,0.4s,baz=50,slow=2.9,SNR=3.9						
TORD	Torodi Ar. Bea	120.95	314	PKP	PKiKP	19 59 46.4	+0.3
	comp=Z,3.9nm,1.0s,baz=18,slow=4.3,SNR=12						
TORD				PP	PP	20 01 13.9	-0.3
	comp=Z,13nm,1.2s,baz=22,slow=7.3,SNR=12						
TORD				PKKPbc	PKKPab	20 09 51.9	-0.1
	comp=Z,1.4nm,0.8s,baz=264,slow=2.0,SNR=5.2						
TORD	Torodi Ar. Bea	120.95	314	PKPdf	PKPdf	19 59 41.4	-4.6
TORD					PP	20 01 07.5	-6.7
QSPA	South Pole Qui	122.63	180	PKP	PKiKP	19 59 48.2	+0.4
	comp=Z,9.7nm,0.9s,baz=317,slow=1.0,SNR=14						
QSPA				PKKPbc	PKKPbc	20 09 43.7	+0.4
	comp=Z,0.6nm,0.3s,baz=241,slow=8.0,SNR=3.1						
QSPA	South Pole Qui	122.63	180		PKPdf	19 59 45.5	-2.2
SYO	Syowa Base	124.92	205	⇑*e*pPdiff	pPdif	19 56 32.2	+1.0
SYO	Syowa Base	124.92	205	⇓*e*PKPdf	PKiKP	19 59 53.0	+0.8
SYO	Syowa Base	124.92	205	⇑*e*pPKPdf	pPKPdf	19 59 56.6	+1.4
LBTB	Lobatse	125.04	261	PKP	PKiKP	19 59 55.0	+1.0
	comp=Z,3.3nm,0.7s,baz=83,slow=1.6,SNR=6.7						
LBTB	Lobatse	125.04	261	PKIKP	PKiKP	19 59 55.0	+1.0
BOSA	Boshof	126.70	257	PKP	PKiKP	19 59 57.6	+0.4
	comp=Z,1.5nm,0.6s,baz=186,slow=2.5,SNR=5.6						
TSUM	Tsumeb	129.29	271	PKP	PKPdf	20 00 02.2	+0.2
	comp=Z,2.5nm,0.9s,baz=52,slow=4.0,SNR=3.5						
TSUM	Tsumeb	129.29	271		PKPdf	19 59 59.4	-2.5
DBIC	Dimbokro	129.98	316	PKP	PKPdf	20 00 03.2	-0.1
	comp=Z,8.4nm,1.1s,baz=48,slow=6.2,SNR=3.3						
NVL	N'lazarevskaya	133.78	200	*e*PKHKP	PKPpre	19 59 57.8	
NVL				pmax	pmax		
	comp=Z,12nm,0.9s						
BELA	Belgrano 2	134.89	181		PKPdf	20 00 08.7	-2.0
TROLL	Troll, Antarti	135.57	197	⇑P	PKPdf	20 00 12.8	+0.6
	comp=Z,572nm,0.6s						
SNAA	Sanae	137.04	195	⇑P	PKPdf	20 00 13.7	-1.1
	comp=Z,166nm,0.7s						
SNAA	Sanae	137.04	195	PKP	PKPdf	20 00 14.0	-0.9
	comp=Z,4.8nm,1.0s,baz=200,slow=4.8,SNR=11						
VNA2	Neumayer--Watz	138.58	194	⇑P	PKPdf	20 00 16.8	-0.8
	comp=Z,13nm,0.6s,baz=126,slow=1.6						
VNA3	Neumayer Olymp	138.78	193	⇑P	PKiKP	20 00 20.0	-0.2
	comp=Z,21nm,0.7s						
ESPZ	Base Esperanza	147.06	164		PKPdf	20 00 30.3	-2.4
LPAZ	La Paz	147.68	67	PKPbc	PKPdf	20 00 37.5	+1.5
	comp=Z,42nm,1.1s,baz=356,slow=4.7,SNR=27						
TA01	Diego Aracena	148.36	75		PKPdf	20 00 33.3	-3.0
PB07	IPOC Station P	149.16	77		PKPdf	20 00 34.1	-3.7
AY03	Cochrane	149.75	129	PKPdf	PKPdf	20 00 33.8	-3.8
AY03					pPKPbc	20 00 44.6	-1.1
VILB	Vilhena	151.21	52	PKPdf	PKPdf	20 00 37.2	-3.8
VILB					pPKPdf	20 00 43.2	-1.1
VILB				PKPab	PKiKP	20 00 48.7	+1.3
LCO	Las Campanas	151.22	91	PKPdf	PKPdf	20 00 36.5	-4.4
LCO	Las Campanas	151.22	91	PKIKP	PKPdf	20 00 36.5	-4.4
PEL	Peldehue	152.12	100	PKPdf	PKPdf	20 00 37.8	-4.1
PEL				PKPbc	pPKPdf	20 00 45.3	+0.1
PEL				PKPab	PKPab	20 00 58.1	-0.1
PEL	Peldehue	152.12	100	PKIKP	PKPdf	20 00 37.8	-4.1
PEL						20 00 45.3	
PEL						20 00 58.1	
BO02	Sierra Bellavi	152.25	103		PKPdf	20 00 38.9	-3.2
BO02				PKPbc	PKPbc	20 00 48.6	-0.2
PLCA	Paso Flores	152.42	116	PKPbc	PKPbc	20 00 48.8	-0.2
	comp=Z,3.3nm,1.1s,baz=324,slow=10,SNR=3.0						
BDFB	Brasilia	160.31	32	PKP	PKPdf	20 00 54.0	+0.8
	comp=Z,1.5nm,0.5s,baz=57,slow=1.4,SNR=3.7						
BDFB				PKPab	PKPab	20 01 33.0	-0.5
	comp=Z,8.4nm,1.0s,baz=328,slow=3.4,SNR=5.1						
BDFB	Brasilia	160.31	32	PKPdf	PKPdf	20 00 49.3	-3.8
BDFB					PKPab	20 01 32.4	-1.2
BDFB	Brasilia	160.31	32	PKP2	PKPab	20 01 32.4	-1.2

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*SOME **20** 19:49:47.0, 43°.83N×76°.80E, h0^{km}*

NNC 20 19:49:47.0±0.6, 43°.03N×77°.93E, h0^{km}, mpv2.7, Error ellipse: s-maj=6.5km s-min=3.4km az=11.0, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOTS	Kotyrbulak	0.64	289	P	Pg	19 49 59.5	+0.3
	20nm,1.1s						
KOTS				S	Sg	19 50 08.5	+1.1
	38nm,0.8s						
KOTS	Kotyrbulak	0.64	289	*e*P	Pg	19 49 59.5	+0.3
	20nm,1.1s						
KOTS				*e*S	Sg	19 50 08.5	+1.1
	38nm,0.8s						
MDOK	Medeo	0.66	282	Pg	Pg	19 49 59.9	+0.1
	25nm,0.7s						
MDOK				Lg	Lg	19 50 09.1	
	21nm,0.6s						
MDOK	Medeo	0.66	282	*e*P	Pg	19 49 59.4	-0.3
MDOK	Medeo	0.66	282	*e*P	Pg	19 49 59.4	-0.3
TNSS	Tian-Shan	0.72	271	P	Pg	19 50 01.2	+0.3
	7.0nm,0.8s						
TNSS				S	Sg	19 50 11.6	+1.3
	5.1nm,0.7s						
TNSS	Tian-Shan	0.72	271	*e*P	Pg	19 50 01.2	+0.3
	7.0nm,0.8s						
TNSS				*e*S	Sg	19 50 11.6	+1.3
	5.1nm,0.7s						

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*CNRM **20** 20:13:45.8, 36°.29N×9°.06W, h11^{km}*

*IGIL **20** 20:13:50.7, 36°.46N×8°.96W, h6^{km}, ML1.8*

*MDD **20** 20:13:50.3±1.8, 36°.44N×8°.78W, h1^{km}±10^{km}, Mb3.8/2, Error ellipse: s-maj=10.7km s-min=7.5km az=11.0*

*INMG **20** 20:13:50.4±1.9, 36°.47N×8°.94W, h4^{km}±4^{km}, ML1.9, Error ellipse: s-maj=9.4km s-min=6.2km az=72.0, #DIST_RANGE: LOCAL #IPMA_REGION: S Cabo S.Vicente*

*SFS **20** 20:13:51.7, 36°.50N×8°.89W, h13^{km}, ML2.2/5, MLv1.9/5*

ISC 20 20:13:47.9±1.5, 36°.39N±0°.04×8°.89W±0°.06, h17^{km}±9^{km}, n33, σ1§46/47, 2C, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	0.75	4	*e*Pg	Pb	20 14 02.7	+0.2
PFVI				*e*Sg	Sb	20 14 12.6	+0.2
PFVI				*i* IAML		20 14 14.2	
PFVI				*i* IAML		20 14 14.2	
PFVI				*i* IAML		20 14 15.3	
PFVI	Vila Bisbo	0.75	4	P	Pg	20 14 02.1	-0.4
PFVI	Vila Bisbo	0.75	4	S	Sn	20 14 14.7	+0.1
MORF	Marmelete	0.94	12	*e*P	Pg	20 14 06.2	+0.1
MORF				*e*S	Sg	20 14 18.1	-0.4
MORF				IAML		20 14 20.0	
	comp=N,50nm,0.3s						
MORF	Marmelete	0.94	12	*e*P	Pg	20 14 06.3	+0.1
MORF				*e*S	Sn	20 14 18.6	-0.7
MORF				*i* IAML		20 14 20.0	
MORF				*i* IAML		20 14 20.1	
MORF				*i* IAML		20 14 20.2	
PBDV	Barranco-do-Ve	1.15	42	Sg	Sb	20 14 24.8	+0.7
PBDV				Pg	Pb	20 14 10.4	+1.0
PBDV	Barranco-do-Ve	1.15	42	*e*S	Sg	20 14 26.2	+0.8
PBDV				*i* IAML		20 14 28.2	
PBDV				*i* IAML		20 14 28.6	
PBDV				*i* IAML		20 14 30.8	
PTEO	Sao Teotonio	1.17	7	*e*P	Pg	20 14 10.6	+0.1
PTEO				*e*S	Sn	20 14 24.9	-0.1
PTEO				*i* IAML		20 14 26.6	
PTEO				*i* IAML		20 14 26.8	
PTEO				*i* IAML		20 14 26.9	
PVAQ	Vaqueiros	1.39	43	*e*P	Pb	20 14 14.8	+1.4
PVAQ				*e*S	Sg	20 14 32.9	+0.2
PVAQ				*i* IAML		20 14 34.7	
PVAQ				*i* IAML		20 14 34.7	
PVAQ				*i* IAML		20 14 35.8	
PVAQ	Vaqueiros	1.39	43	P	Pn	20 14 13.7	+1.3
PVAQ	Vaqueiros	1.39	43	S	Sg	20 14 33.5	+0.8
PCVE	Castro Verde	1.42	29	Pn	Pg	20 14 15.5	+0.2
PCVE				Sg	Sg	20 14 33.4	-0.5
PCVE	Castro Verde	1.42	29	*e*P	Pg	20 14 15.9	+0.6
PCVE				*i* IAML		20 14 35.1	
PCVE				*i* IAML		20 14 35.7	
PCVE				*i* IAML		20 14 37.5	
MESJ	Messejana	1.55	20	*e*S	Sb	20 14 34.9	-0.5
MESJ				IAML		20 14 36.5	
	comp=E,4.8nm,0.1s						
MESJ	Messejana	1.55	20	*e*S	Sg	20 14 36.1	-1.8
MESJ				*i* IAML		20 14 40.0	
MESJ				*i* IAML		20 14 41.1	
MESJ				*i* IAML		20 14 41.3	
EGRO	El Granado	1.61	44	Sn	Sn	20 14 37.0	+1.1
PBEJ	Beja	1.83	26	*e*S	Sb	20 14 42.9	-0.7
PBEJ				*i* IAML		20 14 48.7	
PBEJ				*i* IAML		20 14 49.5	
PBEJ				*i* IAML		20 14 49.5	
EMIN	Mina Concepcio	2.25	52	Sg	Sg	20 14 59.4	-0.8
EVO	Evora	2.25	18	Sn	Sn	20 14 50.7	-1.1
EVO	Evora	2.25	18	*e*S	Sn	20 14 51.5	-0.3
EVO				*i* IAML		20 15 01.0	
EVO				*i* IAML		20 15 01.1	
EVO				*i* IAML		20 15 01.1	
PBAR	Barrancos	2.32	39	*e*Pn	Pn	20 14 27.1	+1.8
PBAR				*e*Sn	Sn	20 14 54.7	+1.3
PBAR				*e*Sg	Sg	20 15 02.4	-0.1
PBAR				*i* IAML		20 15 07.9	
PBAR				*i* IAML		20 15 08.3	
PBAR				*i* IAML		20 15 08.8	
PARRA	Arraiolos	2.52	15	*e*Pg	Pg	20 14 35.4	-0.9
PARRA				*e*Sn	Sn	20 14 58.6	+0.3
PARRA				*e*Sg	Sg	20 15 07.8	-1.1
PARRA				*i* IAML		20 15 09.3	
PARRA				*i* IAML		20 15 10.4	
PARRA				*i* IAML		20 15 11.4	
PMTG	Montargil	2.73	11	*e*Sn	Sn	20 15 03.2	-0.4
PMTG				*e*Sg	Sg	20 15 14.6	-1.1
PMTG				*i* IAML		20 15 16.0	
PMTG				*i* IAML		20 15 17.3	
PMTG				*i* IAML		20 15 17.9	
ECAB	El Cabril	3.25	58	Pn	Pn	20 14 38.7	+0.6
ECAB				⇑*i*IVmb_VC		20 14 46.2	
	comp=E,191nm,SNR=1.1						
ECAB				Sn	Sn	20 15 17.3	+0.9
ECAB				Sg	Sg	20 15 29.7	-2.4
PMRV	Marv??o	3.26	21	*e*Sn	Sn	20 15 16.0	-0.7
PSARD	Sardoal	3.26	10	*e*Sn	Sn	20 15 15.7	-1.0
EADA	Adamuz	3.87	61	Pn	Pn	20 14 47.5	+0.8
EADA				⇑*i*IVmb_VC		20 14 53.9	
	comp=E,174nm,SNR=0.9						
EADA				Sn	Sn	20 15 24.4	-7.5
MD31	MD31	4.89	135	P	Pn	20 14 59.9	-0.9
MD31	MD31	4.89	135	S	Sn	20 15 57.7	+0.7
MDT	Midelt	5.02	134	P	Pn	20 15 01.5	-1.0
MDT	Midelt	5.02	134	S	Sn	20 16 01.1	+0.9
OUZM	OUZ	5.74	161	P	Pn	20 15 10.9	-1.6
OUZM	OUZ	5.74	161	S	Sn	20 16 18.6	+0.5

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*BJI **20** 20:54:31.9, 33°.02N×142°.36E, h5^{km}, mB4.8/7, mb4.4/44, Ms4.2/4, Ms7 4.0/7*

*MOS **20** 20:54:31.3±1.0, 32°.90N×142°.67E, h11^{km}, mb4.8/32, Error ellipse: s-maj=13.4km s-min=6.1km az=124.9*

*IDC **20** 20:54:31.8±0.6, 32°.87N×142°.63E, h0^{km}, mb4.1/23, mbtmp4.1/26, ML3.8/3, MS3.2/13, Error ellipse: s-maj=17.6km s-min=15.6km az=67.0*

*NEIC **20** 20:54:33.7±1.7, 32°.94N±0°.08×142°.48E±0°.08, h10^{km}±1^{km}, mb4.6/53, Error ellipse: s-maj=14.1km s-min=10.3km az=144.0*

*JMA **20** 20:54:35.7±0.6, 33°N±1°×14°3E±°, h68^{km}, MV4.3/40, FAR E OFF IZU ISLANDS*

*NIED **20** 20:54:35.7, 33°.00N×142°.51E, h68^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.38; $M_{\theta\theta}$0.08; $M_{\phi\phi}$1.30; $M_{r\theta}$-0.66; $M_{\theta\phi}$-0.06; $M_{\phi r}$0.32; Fault plane solution: $M_0$1.51000×10^{15} NP1:ϕ_s15.00000°, δ41.00000°, λ-59.00000°. NP2:ϕ_s156.00000°, δ56.00000°, λ-114.00000°.*

ISC 20 20:54:33.1±0.4, 32°.93N±0°.05×142°.60E±0°.06, h10^{km}, n196, σ1§43/208, mb4.5/70, MS3.6/11, 10C-13D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	2.19	322	P	Pn	20 55 09.4	+0.4
JHJ2	Mitsune	2.35	275	Pn	Pn	20 55 11.1	-0.6
JHJ2				Sn	Sn	20 55 39.6	-1.0
JHJ2	Mitsune	2.35	275	P	Pn	20 55 11.6	-0.1
JHJ2	Mitsune	2.35	275	P	Pn	20 55 11.6	-0.1
JHJ	Hachijo jima 2	2.38	275	Pn	Pn	20 55 11.6	-0.5
	100nm,0.3s,baz=86,slow=22,SNR=27						
JHJ				LR	LR	20 55 36.9	
	comp=Z,139nm,21.6s,baz=124,slow=27						
JHJ				Sn	Sn	20 55 39.1	-2.2
	118nm,0.3s,baz=245,slow=23,SNR=9.2						
	191nm,0.3s						
BSO3	Boso 3	2.55	318	P	Pn	20 55 14.7	+0.4
BSO4	Boso 4	2.79	318	P	Pn	20 55 18.5	+0.9
JOD2	Odawara 2	3.73	310	P	Pn	20 55 30.1	-0.7
JOD2				*e*S	Sn	20 56 10.8	-3.9
JHO	Hitachi	4.03	336	P	Pn	20 55 34.0	-0.9
JSG	Sagara	4.07	296	Pn	Pn	20 55 34.0	-1.4
JRY	Ryogami san	4.34	316	P	Pn	20 55 39.1	0.0
JAG	Ashikaga	4.34	324	P	Pn	20 55 39.6	+0.4
JNY	Yasuok	4.62	303	P	Pn	20 55 44.7	+1.7
JFK	Kawauchi	4.64	343	P	Pn	20 55 41.9	-1.4
JOTO	OTAMA OYAMA	4.98	339	P	Pn	20 55 47.7	-0.2
JOTO				*e*S	Sn	20 56 40.3	-5.2
JGF	Kuroka	5.09	303		Pn	20 55 50.4	+0.9
JGF	Kuroka	5.09	303	P	Pn	20 55 51.0	+1.5
MJAR	Matsushiro Arr	5.10	316	Pn	Pn	20 55 50.3	+0.7
	2.5nm,0.3s,baz=151,slow=12,SNR=83						
MJAR				Sn	Sn	20 56 47.1	-1.5
	1.3nm,0.3s,baz=194,slow=32,SNR=8.6						
MJAR				LR	LR	20 57 58.5	
	comp=Z,180nm,20.6s,baz=149,slow=40						
	7.5nm,0.3s						
MJAR	Matsushiro Arr	5.10	316		Pn	20 55 50.7	+1.1
MJAR	Matsushiro Arr	5.10	316	P	Pn	20 55 50.7	+1.1
MJAR						20 56 47.1	
MAJO	Matsushiro	5.11	316		Pn	20 55 50.5	+0.8
MAJO				Sn	Sn	20 56 46.8	-1.9
MAJO	Matsushiro	5.11	316	P	Pn	20 55 51.0	+1.4
MAJO	Matsushiro	5.11	316	*c i*P	Pn	20 55 50.8	+1.2
MAT	Matsushiro	5.11	316	P	Pn	20 55 51.0	+1.4
MJB9	Matsu-Tunnel	5.11	316		Pn	20 55 51.3	+1.6
JMM	Marumori	5.14	344	Pn	Pn	20 55 52.3	+2.3
INU	Inuyama	5.22	299		Pn	20 55 52.6	+1.4
INU	Inuyama	5.22	299	P	Pn	20 55 53.2	+2.0
JYTA	Yamagatataniai	5.54	300	P	Pn	20 55 57.2	+1.7
JNS	Sasagawa	5.56	332	P	Pn	20 55 56.0	+0.1
JNS				*e*S	Sn	20 56 56.5	-3.4
JCJ	Chichijima	5.83	184	Pn	Pn	20 55 46.8	-13
	13nm,0.3s,baz=103,slow=23,SNR=10						
JCJ				Sn	Sn	20 56 47.4	-19
	38nm,0.3s,baz=272,slow=23,SNR=7.7						
JCJ	Chichijima	5.83	184	Pn	Pn	20 55 56.2	-3.4
JCJ	Chichijima	5.83	184	P	Pn	20 55 58.5	-1.1
JSD	Sado	6.20	326	Pn	Pn	20 56 01.2	-3.4
JSD	Sado	6.20	326	P	Pn	20 56 04.5	-0.2
JMN	Monobe	7.34	279	Pn	Pn	20 56 15.3	-5.1
JMN	Monobe	7.34	279	P	Pn	20 56 22.0	+1.6
ERM	Erimo	9.08	3	Pn	Pn	20 56 40.4	-3.7
ERM	Erimo	9.08	3	P	Pn	20 56 41.5	-2.6
ERM	Erimo	9.08	3	P	Pn	20 56 40.4	-3.7
JEM	Erimo	9.08	3	P	Pn	20 56 41.6	-2.5
JNU	Nakatsue	9.85	274	Pn	Pn	20 56 57.7	+3.0
	0.6nm,0.3s,baz=174,slow=3.1,SNR=5.9						
JNU				LR	LR	21 00 28.3	
	comp=Z,130nm,20.7s,baz=113,slow=36						
JNU	Nakatsue	9.85	274	Pn	Pn	20 56 54.3	-0.4
ASAJ	Asahikawa	11.17	360	Pn	Pn	20 57 11.1	-1.6
	2.9nm,0.3s,baz=219,slow=12,SNR=12						
ASAJ				Sn	Sn	20 59 06.2	-11
	0.4nm,0.3s,baz=291,slow=24,SNR=1.6						
ASAJ	Asahikawa	11.17	360	P	Pn	20 57 09.7	-3.0
JKA	Kamikawa-asahi	11.17	360	Pn	Pn	20 57 09.7	-3.0
JKA	Kamikawa-asahi	11.17	360		Sn	20 59 06.2	-11
KSRS	Korea Array	12.82	295	Pn	Pn	20 57 38.8	+3.4
	0.2nm,0.3s,baz=107,slow=13,SNR=8.1						
KSRS				LR	LR	21 02 20.9	
	comp=Z,29nm,21.0s,baz=105,slow=36						
JOW	Kunigami	13.83	248	LR	LR	21 02 30.8	
	comp=Z,175nm,19.9s,baz=112,slow=35						
USRK	Ussuriysk Ar.	13.97	327	Pn	Pn	20 57 50.9	-0.1
	0.2nm,0.3s,baz=137,slow=17,SNR=6.1						
	5.3nm,0.7s						
MDJ	Mudanjiang	15.44	323	P	Pn	20 58 10.8	-0.1
MDJ				pmax	pmax		
	comp=Z,9.0nm,2.5s						
CN2	Changchun	17.25	314	P	Pn	20 58 31.3	-2.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2	Nanjing	20.05	274	*e*P	Pn	20 59 07.0	-1.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
NACB	Ninganchiao	20.39	250	P	P	20 59 07.1	-3.0
NACB				IAmb	IAmb	20 59 16.1	
	comp=Z,35nm,1.2s						
HEH	HeiHe	20.63	331	*e*P	P	20 59 12.3	-0.2
HEH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
YULB	Yu-li	21.02	249	P	P	20 59 14.2	-2.8
YULB				IAmb	IAmb	20 59 40.9	
	comp=Z,33nm,1.3s						
SSLB	Suanglung	21.09	250	P	P	20 59 15.5	-2.2
SSLB				IAmb	IAmb	20 59 48.8	
	comp=Z,41nm,1.3s						
TPUB	Ta-pu	21.59	249	P	P	20 59 21.0	-2.1
TPUB				IAmb	IAmb	20 59 25.7	
	comp=Z,40nm,1.0s						
HNS	HongShan	23.20	289	⇑P	P	20 59 38.0	-2.0
HNS				pmax	pmax		
	comp=Z,13nm,0.8s						
HNS				LR	LR		
	comp=Z,310nm,12.5s						
HNS				LR	LR		
	comp=Z,300nm,13.5s						
ZEA	Zeya	23.51	337	*e*P	P	20 59 44.1	+1.1
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.4s						
HILR	Hailar Array B	23.75	321	P	P	20 59 45.6	+0.1
	comp=Z,2.8nm,0.5s,baz=123,slow=11,SNR=7.1						
	comp=Z,2.8nm,0.5s						
H11N2	WAKE ISLAND Hy	25.36	115	T	T	21 26 22.1	
	baz=307,slow=74						
H11N1	WAKE ISLAND Hy	25.37	115	T	T	21 26 19.5	
	baz=307,slow=74						
H11N3	WAKE ISLAND Hy	25.38	115	T	T	21 26 24.7	
	baz=307						
HHC	Hu-ho-hao-te	25.95	297	*e*P	P	21 00 05.3	-0.5
HHC				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,180nm,4.9s						
HHC				LR	LR		
	comp=Z,110nm,10.2s						
HHC				LR	LR		
	comp=Z,120nm,10.0s						
HHC				LR	LR		
	comp=Z,130nm,10.4s						
YAK	Yakutsk	30.28	348	⇑*e*P	P	21 00 43.5	-0.5
YAK				pmax	pmax		
	comp=Z,25nm,2.7s						
ULN	Ulaanbaatar	30.60	310		P	21 00 46.7	-0.5
ULN				IAmb	IAmb	21 00 49.9	
	comp=Z,13nm,1.4s						
ULN	Ulaanbaatar	30.60	310	*d i*P	P	21 00 48.9	+1.6
ULN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SEY	Seymchan	30.65	9	P	P	21 00 48.6	+1.3
	comp=Z,2.2nm,0.7s,baz=207,slow=13,SNR=5.0						
	comp=Z,2.2nm,0.7s						
SEY	Seymchan	30.65	9	⇓*e*P	P	21 00 47.3	0.0
SEY				pmax	pmax		
	comp=Z,26nm,1.6s						
SONM	Songino Array	31.02	309	P	P	21 00 52.7	+1.8
	comp=Z,2.2nm,0.5s,baz=114,slow=9.9,SNR=16						
SONM				LR	LR	21 13 51.2	
	comp=Z,45nm,19.2s,baz=53,slow=37						
	comp=Z,2.2nm,0.5s						
SONM	Songino Array	31.02	309		P	21 00 51.0	0.0
TLY	Talaya	33.84	315	*d i*P	P	21 01 16.9	+1.4
TLY				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GTA	Gaotai	34.89	293	*e*P	P	21 01 26.1	+1.2
GTA				pP	sP	21 01 30.3	+4.1
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PZH	PanZhiHua	35.89	271	P	P	21 01 34.1	+0.5
KNGR	Kungurtug, Tuv	37.31	312	⇑*i*P	P	21 01 48.0	+2.6
KNGR				pmax	pmax		
	comp=Z,9.0nm,1.4s						
TIXI	Tiksi	39.47	353	P	P	21 02 02.7	-0.4

TIXI	Tiksi	39.47	353	⇑iP	P	21 02 03.6	+0.5
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.4s						
CHTO	Chiang Mai	41.43	261	P	P	21 02 19.5	-0.5
CHTO	Chiang Mai	41.43	261	P	P	21 02 19.5	-0.5
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CM31	Chiang Mai Arr	41.60	261	P	P	21 02 21.1	-0.3
CMAR	Chiang Mai Arr	41.60	261	P	P	21 02 21.4	0.0
	comp=Z,1.0nm,0.7s,baz=50,slow=7.6,SNR=15						
CMAR				LR	LR	21 20 20.2	
	comp=Z,16nm,18.7s,baz=50,slow=37						
	comp=Z,1.0nm,0.7s						
CMAR	Chiang Mai Arr	41.60	261	P	P	21 02 20.3	-1.1
DGZ	Jazzator, Alta	43.67	309	deP	P	21 02 39.4	+1.3
DGZ				pmax	pmax		
	comp=Z,14nm,1.0s						
WMQ	Urumqi	43.67	301	eP	P	21 02 40.8	+2.7
WMQ				PP	PcP	21 04 22.5	-2.7
WMQ				pmax	pmax		
	comp=Z,13nm,1.3s						
S12K	Black Hills	44.21	42	P	P	21 02 42.6	+0.5
ZAA0	Zalesovo Array	45.46	315		P	21 02 51.3	-0.8
ZAA0				IAmb	IAmb	21 03 01.7	
	comp=Z,5.4nm,0.8s						
ZAA0				PcP	PcP	21 04 30.5	-0.5
ZALV	Zalesovo Beam	45.46	315	P	P	21 02 52.5	+0.4
	comp=Z,2.3nm,0.6s,baz=101,slow=7.5,SNR=12						
ZALV				PcP	PcP	21 04 31.2	+0.3
	comp=Z,2.8nm,0.6s,baz=98,slow=3.5,SNR=8.7						
	comp=Z,2.3nm,0.6s						
ZALV	Zalesovo Beam	45.46	315	P	P	21 02 51.7	-0.4
ZALV					PcP	21 04 29.7	-1.3
ZALV				PP	PP	21 04 40.2	+2.0
MK31	Makanchi Array	47.21	306	d iP	P	21 03 06.5	+0.5
MKAR	Makanchi Array	47.21	306	P	P	21 03 06.6	+0.6
	comp=Z,2.8nm,0.6s,baz=85,slow=9.5,SNR=37						
MKAR				PcP	PcP	21 04 37.9	+0.6
	comp=Z,1.0nm,0.8s,baz=90,slow=4.3,SNR=2.6						
MKAR				LR	LR	21 24 58.5	
	comp=Z,38nm,19.5s,baz=10.0,slow=39						
	comp=Z,2.8nm,0.6s						
MKAR	Makanchi Array	47.21	306		P	21 03 06.1	+0.1
MKAR				PcP	PcP	21 04 36.8	-0.6
NRIK	Noril'sk	47.40	337	P	P	21 03 07.8	+0.7
	comp=Z,1.1nm,0.3s,baz=144,slow=6.4,SNR=3.9						
NRIK				LR	LR	21 24 54.4	
	comp=Z,27nm,18.9s,baz=346,slow=38						
	comp=Z,1.1nm,0.3s						
NRIK	Noril'sk	47.40	337	P	P	21 03 06.3	-0.9
NRIK				IAmb	IAmb	21 03 08.6	
	comp=Z,5.6nm,1.1s						
NRIK	Noril'sk	47.40	337	deP	P	21 03 07.4	+0.3
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MAKZ	Makanchi	47.42	306	P	P	21 03 05.3	-2.4
MAKZ				IAmb	IAmb	21 03 08.9	
	comp=Z,3.8nm,0.6s						
MAKZ				PcP	PcP	21 04 35.3	-2.7
MAKZ	Makanchi	47.42	306	P	P	21 03 05.3	-2.4
MAKZ						21 04 35.3	
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
P18K	Big Mountain,	48.26	37	P	P	21 03 13.5	-0.5
J19K	Poorman	48.62	31	P	P	21 03 16.5	-0.2
KURK	Kurchatov	49.29	311		P	21 03 21.9	-0.1
KURK	Kurchatov	49.29	311	d iP	P	21 03 22.1	+0.1
KURK				pmax	pmax		
	comp=Z,15nm,0.8s						
KURBB	Kurchatov Arra	49.36	311	P	P	21 03 22.8	+0.3
	comp=Z,8.4nm,0.6s,baz=86,slow=7.5,SNR=102						
	comp=Z,8.4nm,0.6s						
KNRA	Kununurra	50.11	197	P	P	21 03 28.4	0.0
SKT	Skwentna	50.26	34	P	P	21 03 29.5	+0.3
SKT				IAmb	IAmb	21 04 09.3	
	comp=Z,11nm,1.4s						
WUS	Wushi	50.26	299		P	21 03 29.4	-0.3
L22K	Petersville	50.65	33	P	P	21 03 32.3	+0.1
E22K	Anaktuvuk Pass	50.81	26	P	P	21 03 34.6	+1.3
ILAR	Eielson Array	52.47	31	P	P	21 03 46.1	+0.4
	comp=Z,0.4nm,0.7s,baz=260,slow=6.1,SNR=5.5						
	comp=Z,0.4nm,0.7s						
GSI	Gunungsitoli	52.67	243	P	P	21 03 47.4	-0.5
WB0	Warramunga Arr	52.99	190	P	P	21 03 49.5	-0.5
WB0				IAmb	IAmb	21 04 00.5	
	comp=Z,5.8nm,0.8s						
KSH	Kashi	53.06	297	P	P	21 03 54.9	+4.3
KSH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WR8	Warramunga Arr	53.16	190	P	P	21 03 50.2	-1.1
WR8				IAmb	IAmb	21 04 01.8	
	comp=Z,4.2nm,0.7s						
WRA	Warramunga Arr	53.17	190	P	P	21 03 50.7	-0.7
	comp=Z,2.0nm,0.8s,baz=6.6,slow=7.6,SNR=8.6						
WRA				PcP	PcP	21 05 00.8	+1.4
	comp=Z,0.9nm,0.8s,baz=351,slow=3.3,SNR=2.6						
	comp=Z,2.0nm,0.8s						
WRA	Warramunga Arr	53.17	190	i P	P	21 03 52.7	+1.4
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FITZ	Fitzroy Crossi	53.27	200	P	P	21 03 51.8	-0.3
AAK	Ala-Archa	53.38	301	⇓eP	P	21 03 53.3	+0.3
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BMAR	Burnt Mountain	53.48	27	P	P	21 03 52.8	-0.4
BVAR	Borovoye Array	54.10	315	P	P	21 03 58.5	+0.6
	comp=Z,2.6nm,0.8s,baz=79,slow=7.6,SNR=14						
BVAR				PcP	PcP	21 05 02.9	+0.3
	comp=Z,1.4nm,0.7s,baz=85,slow=4.9,SNR=4.8						
	comp=Z,2.6nm,0.8s						
BORK	Borovoye	54.14	315		P	21 03 57.2	-0.9
BORK	Borovoye	54.14	315	c iP	P	21 03 58.8	+0.6
BORK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CRQM	Cirque	54.31	36	P	P	21 03 59.0	-0.5
ARSB	Arslanbob	54.80	300		P	21 04 02.4	-0.9
ARSB				IAmb	IAmb	21 04 04.8	
	comp=Z,6.1nm,1.2s						
ARSB	Arslanbob	54.80	300	P	P	21 04 02.4	-0.9
ARSB				pmax	pmax		
	comp=Z,6.0nm,1.2s						
E28M	Babbage River	55.37	26	P	P	21 04 07.8	+0.9
KK31	Karatay Array	56.10	303		P	21 04 12.0	-0.5
KK31				IAmb	IAmb	21 04 14.1	
	comp=Z,6.9nm,0.9s						
KK31	Karatay Array	56.10	303	P	P	21 04 12.0	-0.5
KK31				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KKAR	Karatay Array	56.10	303		P	21 04 12.2	-0.3
KKAR	Karatay Array	56.10	303	P	P	21 04 12.2	-0.3
DRK	Karamyk	56.17	298	P	P	21 04 14.0	+0.5
DRK				IAmb	IAmb	21 04 15.1	
	comp=Z,3.7nm,0.6s						
DRK	Karamyk	56.17	298	P	P	21 04 14.0	+0.5
DRK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MANEM	Manem	56.85	296		P	21 04 18.4	+0.1
MANEM				IAmb	IAmb	21 04 20.6	
	comp=Z,10nm,0.9s						
ASAR	Alice Springs	56.89	190	P	P	21 04 17.8	-0.5
	comp=Z,0.2nm,0.3s,baz=6.6,slow=6.6,SNR=4.7						
ASAR				PcP	PcP	21 05 14.2	+0.5
	comp=Z,0.5nm,0.8s,baz=355,slow=5.1,SNR=1.8						
	comp=Z,0.2nm,0.3s						
NIL	Nilore	56.92	291	P	P	21 04 17.5	-1.0
NIL				IAmb	IAmb	21 04 54.2	
	comp=Z,5.7nm,1.1s						
NIL	Nilore	56.92	291	P	P	21 04 17.5	-1.0
NIL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HYT	Haines Junctio	57.04	35	P	P	21 04 19.9	+0.8
HYT				IAmb	IAmb	21 04 33.8	
	comp=Z,9.0nm,1.2s						
GAR	Garm	57.42	298	P	P	21 04 21.6	-0.5
GAR				IAmb	IAmb	21 04 23.5	
	comp=Z,13nm,1.2s						
G31M	Satah River	57.52	28	P	P	21 04 22.1	0.0
G31M				IAmb	IAmb	21 04 26.3	
	comp=Z,6.1nm,1.2s						
INK	Inuvik	57.61	26	P	P	21 04 23.0	+0.2
INK	Inuvik	57.61	26	P	P	21 04 23.0	+0.2
INK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
CHGR	Chuyangaron	58.38	298		P	21 04 28.4	-0.5
CHGR	Chuyangaron	58.38	298	d iP	P	21 04 29.4	+0.6
CHGR				pmax	pmax		
	comp=Z,18nm,0.7s						
EIDS	Eidsvold	58.54	171	P	P	21 04 30.1	+0.4
DZM	Mont Dzumac	59.24	154	LR	LR	21 28 25.6	
	comp=Z,41nm,19.4s,baz=224,slow=34						
SHAA	Shahritus	59.52	297	P	P	21 04 37.5	+0.8
SHAA				IAmb	IAmb	21 04 43.6	
	comp=Z,21nm,1.1s						
ARTI	Arti	60.21	320		P	21 04 40.7	-0.4
ARTI	Arti	60.21	320	c iP	P	21 04 40.9	-0.1
ARTI						21 06 55.2	
ARTI				S	S	21 12 58.6	+3.9
ARTI				SS	SS	21 16 49.3	-2.0
ARTI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AB31	Akbulak array	61.37	312		P	21 04 48.6	-0.4
AB31				IAmb	IAmb	21 04 50.1	
	comp=Z,6.1nm,0.8s						
ABKAR	Akbulak array	61.37	312		P	21 04 48.6	-0.4
KIRV	Kirov	64.12	324	LR	LR	21 35 40.9	
	comp=Z,22nm,18.1s,baz=210,slow=38						
KIRV	Kirov	64.12	324	⇑iP	P	21 05 08.0	+0.8
SPB2	Spitsbergen Ar	64.73	349	P	P	21 05 11.0	+0.1
HRA	Herat	65.12	296		P	21 05 14.5	0.0
HRA				IAmb	IAmb	21 05 16.2	
	comp=Z,2.9nm,0.8s						
YKA	Yellowknife Ar	66.87	29	P	P	21 05 25.5	+0.6
	comp=Z,1.1nm,0.9s,baz=297,slow=7.1,SNR=7.6						
	comp=Z,1.1nm,0.9s						
YKA	Yellowknife Ar	66.87	29	P	P	21 05 24.8	-0.1
BELG	Belogornoye	67.49	319	d iP	P	21 05 29.2	+0.2
BELG				pmax	pmax		
	comp=Z,7.0nm,4.0s						
ARCES	ARCESS Array B	68.17	340	P	P	21 05 34.3	+1.2
	comp=Z,1.2nm,0.7s,baz=72,slow=7.8,SNR=5.7						
	comp=Z,1.2nm,0.7s						
ARCES	ARCESS Array B	68.17	340	P	P	21 05 33.4	+0.3
ARCES	ARCESS Array B	68.17	340	P	P	21 05 33.4	+0.3
ARCES				pmax	pmax		
	comp=Z,15nm,1.3s						
OBN	Obninsk	71.98	325	⇓eP	P	21 05 55.2	-1.4
OBN				eS	SKiKP	21 15 49.0	+15
OBN				pmax	pmax		
	comp=Z,41nm,2.4s						
AKT	Akhty	72.34	308	eP	P	21 05 58.4	-0.8
AKT				pmax	pmax		
	comp=Z,14nm,0.8s						
BLKN	Baker Lake	72.78	23	P	P	21 06 01.1	-0.1
BLKN				IAmb	IAmb	21 06 02.2	
	comp=Z,4.8nm,0.8s						
FIA1	FINESS Array S	72.90	333	P	P	21 06 01.6	-0.4
FINES	FINESS Array B	72.90	333	P	P	21 06 02.7	+0.7
	comp=Z,5.0nm,0.8s,baz=69,slow=6.3,SNR=9.3						
	comp=Z,5.0nm,0.8s						
FINES	FINESS Array B	72.90	333	P	P	21 06 02.0	0.0
NCK	Nalchik	74.02	312	⇑eP	P	21 06 10.1	+1.1
NCK				pmax	pmax		
	comp=Z,6.0nm,0.4s						
KBZ	Khabaz	74.34	312	P	P	21 06 12.1	+1.3
	comp=Z,4.3nm,0.8s,baz=110,slow=4.8,SNR=9.4						
	comp=Z,4.3nm,0.8s						
KBZ	Khabaz	74.34	312	deP	P	21 06 11.7	+0.9
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIV	Kislovodsk	74.36	312	eP	P	21 06 11.3	+0.2
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SUMG	Summit	74.78	0	P	P	21 06 14.7	+1.4
SUMG				IAmb	IAmb	21 06 39.2	
	comp=Z,9.7nm,1.5s						
SUMG	Summit	74.78	0	P	P	21 06 14.7	+1.4
SUMG				pmax	pmax		
	comp=Z,10.0nm,1.5s						
MNK	Minsk	76.44	327	i P	P	21 06 22.0	-0.7
MNK				i		21 09 15.7	
MNK				i PPP	PPP	21 11 00.8	
MNK				i S	S	21 16 09.0	+1.0
MNK				i SS	SS	21 21 05.8	+4.3
MNK				i SSS	SSS	21 24 27.5	
MNK				pmax	pmax		
	comp=E,8.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,5.0nm,0.8s						
MNK				MLR	MLR		
	comp=E,616nm,19.0s						
MNK				MLR	MLR		
	comp=N,723nm,20.0s						
MNK				MLR	MLR		
	comp=Z,80nm,14.0s						
NVAR	Mina Array Bea	76.67	53	P	P	21 06 24.2	-0.4
	comp=Z,0.1nm,0.3s,baz=290,slow=7.7,SNR=1.7						
	comp=Z,0.1nm,0.3s						
GURO	Guroymak-BITLI	77.59	308		P	21 06 29.9	+0.2
GURO				IAmb	IAmb	21 06 32.1	
	comp=Z,8.4nm,1.1s						
AKASG	Malin Array Be	78.15	323	P	P	21 06 32.4	0.0
	comp=Z,1.7nm,0.6s,baz=46,slow=6.6,SNR=7.7						
AKASG				LR	LR	21 44 44.3	
	comp=Z,57nm,18.4s,baz=262,slow=38						
	comp=Z,1.7nm,0.6s						
AKBB	Malin Array Si	78.15	323	⇓iP	P	21 06 32.3	0.0
AKBB				pmax	pmax		
	comp=Z,20nm,2.7s						
HFS	Hagfors	78.22	337	P	P	21 06 33.0	+0.4
	comp=Z,3.0nm,0.8s,baz=81,slow=2.0,SNR=6.5						
	comp=Z,3.0nm,0.8s						
NB2	NORSAR Subarra	78.34	338	P	P	21 06 33.7	+0.4
	comp=Z,0.3nm,0.5s,baz=40,slow=5.9						
NOA	NORSAR Array B	78.34	338	P	P	21 06 33.5	+0.2
	comp=Z,2.2nm,0.9s,baz=39,slow=5.6,SNR=5.3						
	comp=Z,2.2nm,0.9s						
MARD	Mardin	79.09	307		P	21 06 37.8	-0.2
BUR08	Bucovina Ar. S	82.13	323		P	21 06 54.0	-0.1
BUR08				IAmb	IAmb	21 07 25.3	
	comp=Z,8.5nm,1.4s						
BR131	Keskin Array S	82.32	313	⇑iP	P	21 06 55.9	+0.7
BRTR	Keskin Array B	82.32	313	P	P	21 06 56.5	+1.2
	comp=Z,0.9nm,0.7s,baz=132,slow=5.2,SNR=7.8						
	comp=Z,0.9nm,0.7s						
BRTR	Keskin Array B	82.32	313	P	P	21 06 54.4	-0.8
BRTR	Keskin Array B	82.32	313	i P	P	21 06 56.0	+0.7
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PV19	Morning Glory	82.82	49	P	P	21 06 57.6	-0.4
PV18	Skein Mesa, Pa	82.90	49	P	P	21 06 58.9	+0.5
PV18				IAmb	IAmb	21 07 02.4	
	comp=Z,9.8nm,1.3s						
CLL	Collm	85.14	331	eP	P	21 07 10.0	+0.7
CLL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CLL	Collm	85.14	331	eP	P	21 07 10.0	+0.7
	comp=Z,6.0nm,0.8s						
MMAI	Mount Meron Ar	85.15	306	P	P	21 07 10.7	+0.9
	comp=Z,3.4nm,0.9s,baz=33,slow=3.4,SNR=5.4						
	comp=Z,3.4nm,0.9s						
TXAR	Lajitas Array	91.82	53	P	P	21 07 43.0	+1.2
	comp=Z,0.4nm,0.8s,baz=299,slow=3.6,SNR=4.1						
	comp=Z,0.4nm,0.8s						
TXAR	Lajitas Array	91.82	53	P	P	21 07 41.2	-0.4
TXAR	Lajitas Array	91.82	53	P	P	21 07 41.3	-0.4
FURI	Furi	96.71	285	LR	LR	21 57 12.7	
	comp=Z,41nm,18.4s,baz=180,slow=39						
TORD	Torodi Ar. Bea	120.90	314	PKP	PKPdf	21 13 26.9	+0.5
	comp=Z,0.1nm,0.5s,baz=15,slow=5.0,SNR=1.6						
LPAZ	La Paz	147.68	67	PKPbc	PKPdf	21 14 18.5	+2.1
	comp=Z,2.1nm,0.8s,baz=3.4,slow=10.0,SNR=4.5						
LPAZ	La Paz	147.68	67		PKPbc	21 14 19.0	-0.2

IDC 20 21:11:24.7±2.8**,3°.50S**×**150°.92E,h0**^{km}**,mb3.3**/3**,**
mbtmp3.4/3**,MS3.2**/4**,Error ellipse: s-maj=291.3km**
s-min=31.7km az=124.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	17.10	195	LR	LR	21 21 14.0	
	comp=Z,27nm,19.2s,baz=38,slow=34						
WRA	Warramunga Arr	22.99	223	P	P	21 16 31.6	+0.2
	0.7nm,0.8s,baz=41,slow=10,SNR=4.9						
	0.7nm,0.8s						
ASAR	Alice Springs	25.93	218	P	P	21 16 58.7	-0.3
	0.7nm,0.8s,baz=55,slow=7.7,SNR=6.3						
	0.7nm,0.8s						
BATI	Baumata	27.85	255	LR	LR	21 29 46.4	
	comp=Z,57nm,18.5s,baz=120,slow=40						
FITZ	Fitzroy Crossi	28.69	238	LR	LR	21 29 41.1	
	comp=Z,44nm,19.9s,baz=16,slow=38						
HILR	Hailar Array B	59.32	337	LR	LR	21 46 05.0	
	comp=Z,32nm,19.8s,baz=50,slow=35						
ILAR	Eielson Array	81.68	23	P	P	21 23 44.8	+0.1
	0.1nm,0.5s,baz=252,slow=4.9,SNR=2.2						
	0.1nm,0.5s						

IDC 20 21:11:56.8±4.3**,32°.19N**×**140°.62E,h0**^{km}**,mb3.4**/3**,**
mbtmp3.3/4**,ML2.3**/1**,Error ellipse: s-maj=158.0km**
s-min=27.4km az=73.0,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	4.78	336	Pn	Pn	21 13 09.5	-0.6
	0.1nm,0.3s,baz=156,slow=12,SNR=8.0						
MJAR				Sn	Sn	21 14 07.1	+0.8
	0.1nm,0.3s,baz=128,slow=20,SNR=4.1						
	0.7nm,0.3s						
MKAR	Makanchi Array	46.29	306	P	P	21 20 24.0	-0.1
	0.8nm,1.0s,baz=84,slow=10,SNR=3.9						
	0.8nm,1.0s						
KURBB	Kurchatov Arra	48.59	311	P	P	21 20 41.9	0.0
	0.3nm,0.5s,baz=87,slow=8.2,SNR=6.4						
	0.3nm,0.5s						
WRA	Warramunga Arr	52.18	187	P	P	21 21 09.2	-0.1
	0.2nm,0.6s,baz=5.8,slow=7.4,SNR=1.3						
	0.2nm,0.6s						

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*JMA **20** 21:16:37.7±0.5,33°.0N±0°.9×14°2E±°,h70^{km},MV3.1/13,*
FAR E OFF IZU ISLANDS
*IDC **20** 21:16:39.0±4.6,32°.22N×140°.80E,h0^{km},mb3.4/3,*
mbtmp3.3/4,ML2.4/1,Error ellipse: s-maj=167.9km
s-min=27.5km az=72.0
ISC 20 21:16:37.1±1.5**,32°.98N**±0°.09×**142°.7E**±0°.1**,h33**^{km}**,n14,**
σ1ˢ**33**/23**,mb3.4**/3**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	2.19	320	eP	Pn	21 17 11.3	+0.6
BSO1				eS	Sn	21 17 36.8	+0.4
JHJ2	Mitsune	2.41	274	eP	Pn	21 17 13.6	-0.6
BSO3	Boso 3	2.56	316	eP	Pn	21 17 16.8	+0.7
BSO3				eS	Sn	21 17 45.3	-0.7
JOD2	Odawara 2	3.75	308	eP	Pn	21 17 32.3	-0.4
JOD2				eS	Sn	21 18 14.1	-1.7
JYN	Shimob	4.25	307	eP	Pn	21 17 40.0	+0.5
JYN				eS	Sn	21 18 27.0	-1.1
JAG	Ashikaga	4.35	323	eP	Pn	21 17 41.9	+1.0
JAG				eS	Sn	21 18 29.5	-0.9
JRY	Ryogami san	4.35	315	eP	Pn	21 17 41.6	+0.7
JRY				eS	Sn	21 18 30.1	-0.4
JOTO	OTAMA OYAMA	4.96	338	eP	Pn	21 17 50.5	+1.2
JOTO				eS	Sn	21 18 43.7	-1.8
MJAR	Matsushiro Arr	5.12	315	Pn	Pn	21 17 52.3	+0.8
	0.1nm,0.3s,baz=157,slow=13,SNR=8.4						
MJAR				Sn	Sn	21 18 49.8	+0.4
	0.1nm,0.3s,baz=348,slow=31,SNR=4.7						
	0.7nm,0.3s						
MAT	Matsushiro	5.12	315	eP	Pn	21 17 53.4	+1.9
JMK	Ichinoseki	6.08	349	eP	Pn	21 18 05.2	+0.6
JMK				eS	Sn	21 19 09.2	-3.9
MKAR	Makanchi Array	47.24	306	P	P	21 25 07.7	+0.8
	0.2nm,0.5s,baz=92,slow=8.4,SNR=2.0						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	49.38	311	P	P	21 25 24.3	+1.0
	0.4nm,0.5s,baz=87,slow=7.4,SNR=6.3						
	0.4nm,0.5s						
WRA	Warramunga Arr	53.22	190	P	P	21 25 51.8	-0.5
	0.5nm,1.0s,baz=6.5,slow=7.4,SNR=2.1						
	0.5nm,1.0s						

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*UCR **20** 21:20:11.8±1.3,7°.08N×82°.34W,h0^{km}±50^{km},MW4.0*
*UPA **20** 21:20:12.5±0.9,6°.91N×82°.43W,h23^{km}±6^{km},MW4.1*
*CATAC **20** 21:20:13.6±0.7,7°N±4°×8°2W±°,h27^{km}±9^{km},M4.3/18,*
mb4.2/2,MLv4.4/18,Error ellipse: s-maj=9.6km
s-min=3.3km az=13.7,confirmed
*RSNC **20** 21:20:21.2±0.7,7°N±5°×8°2W±°,h0^{km},M3.6,mB4.8,mb4.3,*
ML3.1,Mw(mB)4.0
ISC 20 21:20:09.7±1.5**,6°.87N**±0°.07×**82°.42W**±0°.05**,h10**^{km}**,n127,**
σ1ˢ**66**/143**,4C-4D,South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMNES	Limones	1.30	340	eP	Pn	21 20 33.5	-0.4
LIMO3	Limones	1.30	340	eP	Pn	21 20 33.8	-0.1
PTPA	Petro Terminal	1.39	341	eP	Pn	21 20 34.8	-0.4
PTPM	Petroterminale	1.40	341	⇑iP	Pn	21 20 35.0	-0.3
PTPM				eS	Sb	21 20 52.7	-1.1
REME3	Remedios, Chir	1.47	23	eP	Pn	21 20 36.1	-0.1
GMAL	Guarumal, Vera	1.47	53	eP	Pn	21 20 36.2	-0.2
GMAL	Guarumal, Vera	1.47	53	eP	Pn	21 20 36.1	-0.2
NANC3	Nancito, Chiri	1.52	27	⇓iP	Pn	21 20 36.5	-0.5
NANC3				eS	Sn	21 20 56.1	-0.8
LOCO3	Loma Colorada,	1.53	360	eP	Pn	21 20 37.1	+0.1
LESP3	La Esperanza,	1.57	346	⇓iP	Pn	21 20 37.3	-0.3
PDCAN	Manzana , Fuen	1.58	27	eP	Pn	21 20 37.2	-0.6
BAGA3	Bagala, Chiriq	1.59	356	eP	Pn	21 20 38.2	+0.3
MARI3	Mariato, Verag	1.61	61	eP	Pn	21 20 38.9	+0.7
CACAO	El Cacao, Vera	1.61	73	i P	Pn	21 20 38.5	+0.3
CACAO				eS	Sn	21 20 59.0	-0.2
RSUS3	Rio de Jesus,	1.66	48	eP	Pn	21 20 39.2	+0.3
RSUS3				eS	Sn	21 20 59.3	-1.1
LPPC	Paso Canoas	1.70	346	eP	Pn	21 20 39.3	-0.2
CDITO	Canoas	1.75	345	P	Pn	21 20 40.0	-0.1
CDITO	Canoas	1.75	345	S	Sn	21 21 02.7	+0.2
MESA3	La Mesa, Verag	1.76	44	eP	Pn	21 20 40.5	+0.2
PIRO	Carate, Puerto	1.77	329	⇑iP	Pn	21 20 40.2	-0.2
PIRO	Carate, Puerto	1.77	329	P	Pn	21 20 40.3	-0.2
PIRO	Carate, Puerto	1.77	329	S	Sn	21 21 03.9	+0.8
PIRO	Carate, Puerto	1.77	329	eP	Pn	21 20 40.1	-0.2
JEFFS	S de V. Baru	1.79	356	eP	Pn	21 20 40.9	+0.1
PTAR3	Potrerillos Ar	1.81	358	eP	Pn	21 20 41.2	+0.2
DMCAL	E. de Neily	1.82	348	eP	Pn	21 20 41.3	+0.1
NELY	Ciudad Neily	1.84	343	eP	Pn	21 20 41.5	+0.1
BQSF3	Alto Boquete,	1.86	359	eP	Pn	21 20 42.6	+0.9
CLLRA	Cordillera,	1.87	354	eP	Pn	21 20 41.6	-0.3
PTJ1	Puerto Jimnez	1.87	332	eP	Pn	21 20 42.5	+0.7
PTJ1	Puerto Jimnez	1.87	332	P	Pn	21 20 42.1	+0.3
PTJ1	Puerto Jimnez	1.87	332	S	Sn	21 21 05.4	-0.1
BQTLY	Boquete Panama	1.87	359	eP	Pn	21 20 41.7	-0.2
STIA3	Santiago, Vera	1.88	50	i P	Pn	21 20 42.7	+0.8
LNBQ3	Los Naranjos,	1.91	359	eP	Pn	21 20 42.5	+0.1
EDAD	Golfito	1.92	337	eP	Pn	21 20 42.0	-0.5
BRU2	Volcan	1.93	352	⇑iP	Pn	21 20 42.6	-0.1
BRU2				eS	Sn	21 21 06.8	-0.3
BRU2	Volcan	1.93	352	S	Sn	21 21 07.1	0.0
BRU2	Volcan	1.93	352	P	Pn	21 20 42.8	+0.1
BRU2	Volcan	1.93	352	eP	Pn	21 20 42.6	-0.1
SCLRA	Santa Clara, W	1.98	350	eP	Pn	21 20 43.8	+0.3
RBALA	Bur	2.01	7	eP	Pn	21 20 44.0	+0.3
PBNVO	Pueblo Nuevo,	2.02	6	eP	Pn	21 20 43.9	+0.1
TOSI3	Tonosi	2.03	75	eP	Pn	21 20 44.7	+0.7
TOSI3				eS	Sn	21 21 08.6	-0.9
KKNTU	Kakintº	2.05	17	eP	Pn	21 20 44.2	0.0
CHGR2	Aguacate	2.07	7	eP	Pn	21 20 45.0	+0.5
ALCO	Alturas Coton,	2.10	349	eP	Pn	21 20 45.0	-0.1
SAFE3	Santa Fe, Vera	2.10	39	eP	Pn	21 20 45.8	+0.8
CALO3	Calobre, Verag	2.12	47	eP	Pn	21 20 46.0	+0.7
CALO3				eS	Sn	21 21 11.5	-0.2
CHIT3	Chitre	2.26	61	⇓iP	Pn	21 20 48.1	+1.0
CHIT3				eS	Sn	21 21 16.1	+1.1
EDP2	Potrero Grande	2.26	341	eP	Pn	21 20 48.5	+1.4
ACHO3	Achotines, Los	2.29	76	eP	Pn	21 20 48.3	+0.7
FIMO	Fila Mora	2.30	336	eP	Pn	21 20 48.6	+0.8
AZU	Azuero	2.31	67	⇓iP	Pn	21 20 49.0	+1.1
AZU				eS	Sn	21 21 16.2	-0.2
AZU	Azuero	2.31	67	eP	Pn	21 20 48.8	+1.0
PCRI3	Pocri, Los San	2.41	71	eP	Pn	21 20 50.5	+1.3
PCRI3				eS	Sn	21 21 19.1	+0.2
DRK0	Durika	2.51	341	⇑iP	Pn	21 20 51.3	+0.5
DRK0				eS	Sn	21 21 21.1	-0.5
DRK0	Durika	2.51	341	P	Pn	21 20 51.2	+0.5
DRK0	Durika	2.51	341	eP	Pn	21 20 51.2	+0.5
OCHAL	Ojochal	2.52	331	P	Pn	21 20 51.4	+0.6
OCHAL	Ojochal	2.52	331	S	Sn	21 21 23.2	+1.6
EDPE	Pejibaye, P	2.54	333	eP	Pn	21 20 52.2	+1.2
SAJE	San Jernim	2.68	336	eP	Pn	21 20 53.7	+0.6
BRIBI	Bribri	2.76	352	eP	Pn	21 20 57.4	+3.4

BUS1	**Rivas**	**2.97**	**334**	*e*P	**Pn**	**21 20 58.4**	**+1.1**
PIEC	**Cerro El Cedra**	**3.13**	**331**	*e*P	**Pn**	**21 21 00.9**	**+1.6**
PICV	**PH. Pirrs**	**3.25**	**327**	*e*P	**Pn**	**21 21 02.0**	**+1.2**
LCR2	**La Lucha 2**	**3.25**	**331**	S	**Sn**	**21 21 40.2**	**+0.2**
VINA	**Juan Vinas**	**3.28**	**336**	*e*P	**Pn**	**21 21 03.2**	**+1.9**
CHOR3	**La Chorrera**	**3.31**	**52**	*e*P	**Pn**	**21 21 02.4**	**+0.8**
ABRB	**Las Abras (San**	**3.37**	**338**	*e*P	**Pn**	**21 21 04.8**	**+2.1**
CVTV	**Tajo**	**3.38**	**337**	*e*P	**Pn**	**21 21 04.8**	**+1.9**
ACOS	**Acosta**	**3.38**	**329**	*e*P	**Pn**	**21 21 04.1**	**+1.4**
LCOCO	**El Coco**	**3.38**	**341**	*e*P	**Pn**	**21 21 05.1**	**+2.4**
CVTQ	**Turrialba Volc**	**3.39**	**337**	*e*P	**Pn**	**21 21 05.4**	**+2.4**
VTR0	**Volcan Turrial**	**3.40**	**337**	*e*P	**Pn**	**21 21 05.0**	**+1.8**
CVTR	**Volcan Turrial**	**3.40**	**337**	*e*P	**Pn**	**21 21 04.9**	**+1.7**
VICA	**Volcano Irazu**	**3.40**	**336**	*e*P	**Pn**	**21 21 04.9**	**+1.7**
RVLA	**Villa Bonita**	**3.42**	**340**	*e*P	**Pn**	**21 21 05.7**	**+2.6**
BCIP	**Isla Barro Col**	**3.42**	**48**	P	**Pn**	**21 21 04.2**	**+1.0**
BCIP				S	**Sn**	**21 21 45.0**	**+1.1**
BCIP	**Isla Barro Col**	**3.42**	**48**	*e*P	**Pn**	**21 21 04.3**	**+1.2**
CVIMO	**Finca Echandi**	**3.48**	**334**	*e*P	**Pn**	**21 21 05.9**	**+1.8**
GAMB1	**Gamboa**	**3.49**	**50**	*e*P	**Pn**	**21 21 05.4**	**+1.3**
FLAM	**Flamenco Islan**	**3.50**	**54**	*e*P	**Pn**	**21 21 06.2**	**+2.0**
EGUB	**Earth Gu¡pi**	**3.52**	**341**	*e*P	**Pn**	**21 21 06.9**	**+2.5**
FRIJ	**El Hiral**	**3.54**	**49**	*e*P	**Pn**	**21 21 06.1**	**+1.3**
VPS8	**V Poas**	**3.75**	**331**	*e*P	**Pn**	**21 21 10.0**	**+2.1**
CAZU	**Cerro Azul, Pa**	**3.79**	**52**	*e*P	**Pn**	**21 21 09.3**	**+0.9**
TRT2	**Tortugero**	**3.89**	**340**	P	**Pn**	**21 21 10.6**	**+1.1**
TRT2	**Tortugero**	**3.89**	**340**	S	**Sn**	**21 21 55.8**	**+0.6**
VPL2	**V. Platanar**	**3.93**	**330**	*e*P	**Pn**	**21 21 12.2**	**+1.9**
JCR1	**Jicaral**	**3.98**	**318**	*e*P	**Pn**	**21 21 09.8**	**-1.1**
SOCE	**Pocosol**	**4.11**	**328**	P	**Pn**	**21 21 15.3**	**+2.6**
SOCE	**Pocosol**	**4.11**	**328**	*e*P	**Pn**	**21 21 15.2**	**+2.6**
VACR	**Volcan Arenal**	**4.22**	**328**	*e*P	**Pn**	**21 21 16.6**	**+2.5**
JTS	**Las Juntas de**	**4.22**	**324**	*e*P	**Pn**	**21 21 14.6**	**+0.5**
JTS	**Las Juntas de**	**4.22**	**324**	P	**Pn**	**21 21 16.2**	**+2.0**
ARE1	**Arenal 1**	**4.23**	**328**	*e*P	**Pn**	**21 21 15.5**	**+1.2**
VARE2	**V. Arenal**	**4.23**	**328**	*e*P	**Pn**	**21 21 16.6**	**+2.3**
INDI	**Punta indio, G**	**4.26**	**314**	*e*P	**Pn**	**21 21 16.3**	**+1.6**
TABAC	**Tabacon**	**4.29**	**327**	*e*P	**Pn**	**21 21 18.8**	**+3.7**
CMARA	**Lajas Hojancha**	**4.32**	**317**	S	**Sn**	**21 22 05.4**	**-0.5**
CMARA	**Lajas Hojancha**	**4.32**	**317**	P	**Pn**	**21 21 17.1**	**+1.6**
INVE	**Universidad In**	**4.43**	**324**	*e*P	**Pn**	**21 21 20.4**	**+3.3**
JUD3	**Juan Diaz 3**	**4.50**	**317**	*e*P	**Pn**	**21 21 19.7**	**+1.6**
TENO	**El Achiote**	**4.57**	**327**	*e*P	**Pn**	**21 21 21.2**	**+2.2**
ELVJ	**El Viejo (Barb**	**4.57**	**321**	*e*P	**Pn**	**21 21 21.8**	**+2.9**
PTAC	**Punta Ardita,**	**4.58**	**86**	P	**Pn**	**21 21 19.2**	**+0.1**
PTAC				S	**Sn**	**21 22 07.2**	**-5.3**
CUI	**Cuipilapa**	**4.64**	**324**	*e*P	**Pn**	**21 21 22.6**	**+2.7**
VMAR	**Armenia, Volca**	**4.74**	**326**	*e*P	**Pn**	**21 21 23.8**	**+2.6**
ELI1	**Hacienda Flor**	**4.86**	**321**	P	**Pn**	**21 21 25.8**	**+2.8**
ELI1	**Hacienda Flor**	**4.86**	**321**	*e*P	**Pn**	**21 21 25.8**	**+2.8**
LAPC	**Finca la Perla**	**4.88**	**323**	*e*P	**Pn**	**21 21 26.0**	**+2.7**
APAC	**Apartado, Choc**	**5.88**	**80**	P	**Pn**	**21 21 36.7**	**-0.2**
	915nm18nm,0.7s						
APAC				S	**Sn**	**21 22 39.8**	**-4.6**
	915nm18nm,0.7s						
DBBC	**Dabeiba**	**6.16**	**88**	P	**Pn**	**21 21 43.5**	**+2.6**
	19nm,0.9s						
DBBC				S	**Sn**	**21 22 48.2**	**-3.4**
	19nm,0.9s						
BOAB	**BOACO BROADBAN**	**6.40**	**330**	P	**Pn**	**21 21 45.4**	**+1.3**
PLMC	**San Jos del P**	**6.41**	**107**	P	**Pn**	**21 21 46.8**	**+2.5**
PLMC				S	**Sn**	**21 22 55.5**	**-2.1**
CBOC	**Ciudad Bolivar**	**6.44**	**99**	P	**Pn**	**21 21 44.8**	**-0.1**
CBOC				S	**Sn**	**21 22 54.3**	**-4.3**
YOTC	**Yotoco, Valle**	**6.69**	**115**	P	**Pn**	**21 21 51.4**	**+3.2**
	12nm,0.7s						
YOTC				S	**Sn**	**21 23 04.5**	**-0.2**
	12nm,0.7s						
JAMC	**Jamundi, Valle**	**6.78**	**122**	P	**Pn**	**21 21 53.5**	**+4.0**
HELC	**Santa Helena**	**6.88**	**95**	P	Pn	21 21 55.9	+4.9
HELC				S	**Sn**	**21 23 08.8**	**-0.8**
UREC	**San Jos de Ur**	**6.88**	**82**	S	**Sn**	**21 23 06.8**	**-2.5**
BBAC	**Balboa, Cauca**	**7.06**	**133**	P	**Pn**	**21 21 56.8**	**+3.5**
BBAC				S	**Sn**	**21 23 16.4**	**+2.6**
POPC	**Popayan, Colom**	**7.16**	**127**	P	Pn	21 22 02.1	+7.3
	18nm,0.8s						
NORC	**Norcasia**	**7.62**	**99**	P	**Pn**	**21 22 02.7**	**+1.8**
	5.1nm,0.7s						
ORTC	**Ortega, Tolima**	**7.72**	**112**	P	Pn	21 22 08.0	+5.7
	38nm,0.7s						
URMC	**La Uribe, Meta**	**8.78**	**114**	P	Pn	21 22 21.9	+5.0

TRN 20 21:34:15.2, 17°.63N×61°.54W, h28^{km}, MD3.6, 1D, East of Barbuda., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANWB	**Willy Bob**	**0.24**	**279**	⇓*i*P	Pn	21 34 23.1	+0.2
ANWB				*e*S	Sb	21 34 28.6	+2.7
MBWH	**Windy Hill**	**1.08**	**215**	*e*P	Pb	21 34 35.5	+0.2
MBWH				*e*S	Sb	21 34 50.6	+1.5
MBFL	**Flemmings, Mon**	**1.09**	**216**	*e*S	Sb	21 34 50.9	+1.6
SKI	**Saint Kitts**	**1.18**	**256**	*e*P	Pb	21 34 37.7	+0.7
SKI				*e*S	Sb	21 34 54.2	+2.3
DHSZ	**Broadband at M**	**1.37**	**189**	*e*P	Pb	21 34 39.8	-0.4
DHSZ				*e*S	Sb	21 34 58.4	+1.2
DSDZ	**La Diserade, G**	**1.39**	**161**	*e*P	Pb	21 34 39.7	-0.7
DSDZ				*e*S	Sb	21 34 59.1	+1.3
ATGZ	**Broadband at L**	**1.54**	**187**	*e*P	Pb	21 34 42.4	-0.6
ATGZ				*e*S	Sb	21 35 02.2	+0.2
MMLZ	**Guadeloupe Bro**	**1.58**	**185**	*e*P	Pb	21 34 42.7	-1.1
MMLZ				*e*S	Sb	21 35 03.1	-0.2
TBG	**Guadaloupe-3**	**1.77**	**183**	*e*P	Pb	21 34 45.9	-1.1
TBG				*e*S	Sb	21 35 08.6	-0.2
DSLB	**Salisbury**	**2.18**	**177**	*e*P	Pn	21 34 51.0	+1.3
DSLB				*e*S	Sb	21 35 18.8	-1.9

IDC 20 22:34:17.5±2.1**, 3°.46S×149°.25E, h0^{km}, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=178.6km s-min=32.0km az=122.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.91**	**220**	P	P	22 39 13.6	+1.0
	0.9nm,0.8s,baz=43,slow=11,SNR=4.6						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**24.97**	**215**	P	P	22 39 42.2	-0.8
	1.0nm,1.1s,baz=52,slow=9.0,SNR=7.4						
	1.0nm,1.1s						
ILAR	**Eielson Array**	**82.28**	**23**	P	P	22 46 40.8	+0.2
	0.2nm,0.6s,baz=248,slow=6.1,SNR=1.5						
	0.2nm,0.6s						

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*IDC **20** 22:35:13.4±0.7, 3°.58S×149°.90E, h0^{km}, mb4.1/14, mbtmp4.1/16, ML2.8/2, MS4.2/34, Error ellipse: s-maj=25.6km s-min=14.0km az=102.0*

*NEIC **20** 22:35:15.8±1.7, 3°.69S±0°.09×149°.81E±0°.06, h10^{km}±1^{km}, mb4.8/22, Error ellipse: s-maj=15.7km s-min=9.8km az=202.0*

*GCMT **20** 22:35:17.8±0.1, 3°.61S±0°.01×149°.74E±0°.01, h14^{km}±1^{km}, MW5.0/129, Moment Tensor Solution. s51,c65; s129,c207; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.32±.10; M$_{\theta\theta}$3.99±.10; M$_{\phi\phi}$-3.67±.10; M$_{r\theta}$0.22±.17; M$_{\theta\phi}$2.79±.08; M$_{\phi r}$-0.29±.17; Best double couple: M$_0$4.75400×10^{16} NP1:φ$_s$27.00000°, δ86.00000°, λ-178.00000°. NP2:φ$_s$297.00000°, δ88.00000°, λ-4.00000°. Principal axes: T 4.9010, Plg1.0000°, Azm342.0000°; N -0.2900, Plg85.0000°, Azm88.0000°; P -4.6060, Plg5.0000°, Azm252.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **20** 22:35:18.7±2.6, 3°S±14°×15°0E±1°6, h47^{km}±16^{km}, M4.5/15, mb4.5/15, mB5.1/7, MLv4.6/1, Mw(mB)4.5/7*

ISC 20 22:35:16.6±0.4**, 3°.64S**±0°.05×**149°.91E**±0°.05**, h19^{km}, n110, σ2^{s}.04**/88**, mb4.5**/30**, MS4.3**/37**, 2C-1D, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BULU	**Kimbe**	**1.93**	**168**	P	Pg	22 36 00.5	+6.8
RABL	**Rabaul**	**2.32**	**104**	Pn	**Pn**	**22 35 55.0**	**+1.2**
MANU	**Manus Island**	**2.99**	**302**		**Pn**	**22 36 02.8**	**-0.3**
PMG	**Port Moresby**	**6.35**	**205**	Pn	**Pn**	**22 36 50.8**	**+1.5**
	1.6nm,0.3s,baz=353,slow=9.2,SNR=7.4						
PMG				Sn	**Sn**	**22 38 00.5**	**-0.8**
	0.8nm,0.3s,baz=188,slow=13,SNR=1.3						
PMG				LR	LR	22 39 15.1	
	comp=Z,2µm,18.1s,baz=82,slow=38						
	22nm,0.8s						
PMG	**Port Moresby**	**6.35**	**205**		**Pn**	**22 36 47.8**	**-1.4**
PMG	**Port Moresby**	**6.35**	**205**	P	Pn	22 36 54.5	+5.3
PMG	**Port Moresby**	**6.35**	**205**	P	**Pn**	**22 36 52.5**	**+3.3**
	0.2nm744nm38nm,0.8s						
JAY	**Jayapura**	**9.26**	**277**	LR	LR	22 40 32.9	
	comp=Z,4µm,18.5s,baz=81,slow=35						
MTSU	**Mount Surprise**	**15.41**	**200**	P	**P**	**22 38 56.2**	**-1.5**
CTA	**Charters Tower**	**16.73**	**192**	Pn	**Pn**	**22 39 10.9**	**+0.8**
	0.2nm,0.3s,baz=341,slow=10,SNR=3.1						
CTA				Sn	Sn	22 42 04.9	-11
	0.4nm,0.3s,baz=16,slow=8.5,SNR=2.0						
CTA				LR	LR	22 44 56.7	
	comp=Z,554nm,21.7s,baz=16,slow=35						
	6.8nm,1.0s						
FAKI	**Fak Fak**	**17.64**	**272**		**Pn**	**22 39 17.8**	**-3.8**
FAKI				IAmb	IAmb	22 39 20.1	
	comp=Z,106nm,1.4s						
FAKI	**Fak Fak**	**17.64**	**272**	P	**Pn**	**22 39 18.8**	**-2.8**
	comp=Z,1µmcomp=Z,57nm,2.2s						
GUMO	**Guam**	**17.83**	**344**	LR	LR	22 44 41.9	
	comp=Z,1µm,21.9s,baz=156,slow=32						
SWI	**Sorong**	**18.84**	**278**	P	**P**	**22 39 33.8**	**-1.8**
	comp=Z,2µmcomp=Z,25nm,1.5s						
SAUI	**Saumlaki**	**19.01**	**256**	P	**P**	**22 39 32.2**	**-5.2**
SAUI	**Saumlaki**	**19.01**	**256**	P	**Pn**	**22 39 41.7**	**+3.5**
SAUI	**Saumlaki**	**19.01**	**256**	P	**Pn**	**22 39 37.7**	**-0.5**
QIS	**Mount Isa**	**19.58**	**210**	P	**Pn**	**22 39 45.2**	**+0.1**
AUNRC	**North Rockhamp**	**19.61**	**178**	P	**Pn**	**22 39 46.6**	**+1.3**
GD1S	**Gladstone Soft**	**20.12**	**177**	P	Pn	22 39 52.7	+1.3
MTN	**Manton Dam**	**20.69**	**243**		**P**	**22 39 53.8**	**-2.0**
KRAI	**Karang Ratu**	**21.48**	**270**	P	**P**	**22 40 04.0**	**-0.3**
EIDS	**Eidsvold**	**21.64**	**177**		**P**	**22 40 05.2**	**-0.7**
EIDS				IAmb	IAmb	22 40 15.1	
	comp=Z,33nm,1.2s						
EIDS	**Eidsvold**	**21.64**	**177**	P	**P**	**22 40 09.2**	**+3.3**
WB0	**Warramunga Arr**	**22.05**	**222**		**P**	**22 40 09.3**	**-1.1**
WB0				IAmb	IAmb	22 40 18.4	
	comp=Z,91nm,1.5s						
WR8	**Warramunga Arr**	**22.11**	**222**		**P**	**22 40 09.7**	**-1.4**
WR8				IAmb	IAmb	22 40 16.6	
	comp=Z,42nm,1.1s						
WRAB	**Tennant Creek**	**22.20**	**222**	P	**P**	**22 40 11.0**	**-1.0**
WRAB				IAmb	IAmb	22 40 17.5	
	comp=Z,37nm,0.9s						
WRAB	**Tennant Creek**	**22.20**	**222**	P	**P**	**22 40 13.7**	**+1.7**
WRA	**Warramunga Arr**	**22.21**	**222**	P	**P**	**22 40 11.0**	**-1.2**
	comp=Z,9.7nm,0.8s,baz=45,slow=9.7,SNR=18						
WRA				S	**S**	**22 44 17.0**	**+1.0**
	comp=Z,3.5nm,1.3s,baz=44,slow=16,SNR=5.5						
	comp=Z,9.7nm,0.8s						
WRA	**Warramunga Arr**	**22.21**	**222**	P	**P**	**22 40 08.8**	**-3.3**
QLP	**Quilpie**	**23.45**	**193**	P	**P**	**22 40 27.0**	**+2.0**
AUWSH	**Wavell State H**	**23.82**	**173**	P	**P**	**22 40 31.8**	**+3.3**
DZM	**Mont Dzumac**	**24.35**	**140**	P	**P**	**22 40 34.2**	**+0.5**
	comp=Z,10.0nm,0.7s,baz=226,slow=7.8,SNR=8.7						
DZM				LR	LR	22 49 07.8	
	comp=Z,1µm,19.9s,baz=315,slow=34						
	comp=Z,10.0nm,0.7s						
DZM	**Mont Dzumac**	**24.35**	**140**	*e*P	**P**	**22 40 33.2**	**-0.5**
	comp=Z,55nm,1.2s						
DZM				*e*S	**S**	**22 44 49.0**	**-3.4**
	comp=Z,1µm,28.0s						
DZM				*e*LR	LR	22 46 33.0	
	comp=Z,2µm,27.7s						
DZM	**Mont Dzumac**	**24.35**	**140**	P	**P**	**22 40 32.5**	**-1.3**
DZM				IAmb	IAmb	22 40 43.9	
	comp=Z,28nm,1.2s						
AS31	**Alice Springs**	**25.21**	**216**	P	**P**	**22 40 41.0**	**-0.4**
ASAR	**Alice Springs**	**25.21**	**216**	P	**P**	**22 40 41.5**	**+0.1**
	comp=Z,4.0nm,0.8s,baz=48,slow=8.4,SNR=12						
ASAR				S	**S**	**22 45 09.7**	**+3.6**
	comp=Z,0.4nm,0.9s,baz=37,slow=16,SNR=2.1						
ASAR				LR	LR	22 51 40.8	
	comp=Z,1µm,18.8s,baz=36,slow=39						
	comp=Z,4.0nm,0.8s						
ASAR	**Alice Springs**	**25.21**	**216**	P	**P**	**22 40 40.9**	**-0.5**
PINNC	**Pines Island,**	**25.39**	**139**	P	**P**	**22 40 43.3**	**+0.4**
INKA	**Innaminka**	**25.51**	**199**		**P**	**22 40 44.8**	**+0.8**
INKA				IAmb	IAmb	22 40 48.0	
	comp=Z,14nm,1.2s						
AULRC	**Lightning Ridg**	**25.72**	**184**	P	**P**	**22 40 47.8**	**+1.9**
SOEI	**Soe**	**26.17**	**255**	P	**P**	**22 40 52.7**	**+2.4**
	comp=Z,28nm,1.1s						
ARMA	**Armidale**	**26.69**	**177**		**P**	**22 40 55.5**	**+0.8**
ARMA				IAmb	IAmb	22 40 58.8	
	comp=Z,32nm,1.3s						
ARMA	**Armidale**	**26.69**	**177**	P	**P**	**22 40 57.2**	**+2.4**
BATI	**Baumata**	**26.84**	**255**	LR	LR	22 53 51.7	
	comp=Z,2µm,20.1s,baz=93,slow=42						
LUWI	**Luwuk**	**27.23**	**275**	P	**P**	**22 40 57.8**	**-2.0**
H11S3	**WAKE ISLAND Hy**	**27.51**	**36**	T	T	23 10 12.6	
	baz=220						
H11S2	**WAKE ISLAND Hy**	**27.52**	**36**	T	T	23 10 10.4	
	baz=220,slow=74						
H11S1	**WAKE ISLAND Hy**	**27.53**	**36**	T	T	23 10 11.5	
	baz=220,slow=74						
FITZ	**Fitzroy Crossi**	**27.77**	**237**	LR	LR	22 52 45.4	
	comp=Z,1µm,18.6s,baz=62,slow=38						
FITZ	**Fitzroy Crossi**	**27.77**	**237**		**P**	**22 41 03.0**	**-1.5**
EDFI	**Ende, Flores**	**28.50**	**258**	P	**P**	**22 41 08.1**	**-3.1**
H11N1	**WAKE ISLAND Hy**	**28.59**	**35**	T	T	23 11 44.6	
	baz=219						
H11N3	**WAKE ISLAND Hy**	**28.60**	**35**	T	T	23 11 48.0	
	baz=219						
H11N2	**WAKE ISLAND Hy**	**28.60**	**35**	T	T	23 11 48.0	
	baz=219						
LHI	**Lord Howe Isla**	**29.04**	**164**	P	**P**	**22 41 16.6**	**+0.9**
JCJ	**Chichijima**	**31.45**	**347**	LR	LR	22 53 27.2	
	comp=Z,121nm,19.0s,baz=200,slow=35						
NWAO	**Narrogin (SRO)**	**42.22**	**223**	LR	LR	23 00 58.5	
	comp=Z,688nm,21.4s,baz=53,slow=37						
SSE	**Sheshan**	**44.08**	**324**	P	**P**	**22 43 25.0**	**+1.4**
SSE				S	**S**	**22 49 59.8**	**+4.4**
SSE				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SSE				pmax	pmax		
	comp=Z,130nm,3.1s						
SSE				LR	LR		
	comp=N,200nm,18.2s						
SSE				LR	LR		
	comp=E,190nm,18.7s						
QIZ	**Qiongzhong**	**45.40**	**301**	P	**P**	**22 43 33.6**	**-0.8**
QIZ				S	**S**	**22 50 15.5**	**+0.5**
QIZ				LR	LR		
	comp=N,340nm,16.9s						
QIZ				LR	LR		
	comp=E,300nm,18.7s						
QIZ				LR	LR		
	comp=Z,430nm,18.9s						
KSRS	**Korea Array**	**45.71**	**335**	LR	LR	23 02 44.5	
	comp=Z,78nm,18.5s,baz=140,slow=36						
NJ2	**Nanjing**	**46.15**	**323**	*e*P	**P**	**22 43 41.0**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**50.27**	**343**	P	**P**	**22 44 11.3**	**-0.4**
	comp=Z,2.0nm,0.8s,baz=120,slow=8.5,SNR=4.2						
	comp=Z,2.0nm,0.8s						
HNS	**HongShan**	**52.31**	**325**	⇑P	**P**	**22 44 26.6**	**-0.6**
HNS				S	**S**	**22 51 55.0**	**+3.2**
HNS				LR	LR		
	comp=N,300nm,19.1s						
HNS				LR	LR		
	comp=Z,380nm,20.7s						
BNX	**BinXian**	**53.08**	**340**	⇓P	**P**	**22 44 32.4**	**-0.3**
BNX				pmax	pmax		
	comp=Z,7.0nm,1.3s						
CMAR	**Chiang Mai Arr**	**54.78**	**296**	P	**P**	**22 44 46.3**	**+0.7**
	comp=Z,0.9nm,0.4s,baz=104,slow=7.0,SNR=6.9						
CMAR				LR	LR	23 08 31.4	
	comp=Z,70nm,18.9s,baz=130,slow=36						
	comp=Z,0.9nm,0.4s						
HHC	**Hu-ho-hao-te**	**56.45**	**326**	*e*P	**P**	**22 44 59.5**	**+2.1**
HHC				S	**S**	**22 52 48.9**	**+1.2**
HHC				sS	sS	22 52 59.3	+2.6
HHC				ScS	**ScS**	**22 54 45.3**	**-0.7**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,89nm,4.7s						
HHC				LR	LR		
	comp=N,190nm,13.3s						
HHC				LR	LR		
	comp=E,220nm,13.0s						
HHC				LR	LR		
	comp=Z,240nm,12.7s						
HEH	**HeiHe**	**57.07**	**343**	*e*P	**P**	**22 45 01.3**	**-0.2**
HEH				pmax	pmax		
	comp=Z,8.0nm,1.3s						
LZH	**Lanzhou**	**58.40**	**317**	*e*P	**P**	**22 45 13.3**	**+1.9**
LZH				sP	pwP	22 45 20.8	+1.0
LZH	**Lanzhou**	**58.40**	**317**	SS	SS	22 57 12.6	+6.3
LZH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LZH				LR	LR		
	comp=N,160nm,17.3s						
LZH				LR	LR		
	comp=E,240nm,14.9s						
LZH				LR	LR		
	comp=Z,350nm,18.7s						
HILR	**Hailar Array B**	**59.06**	**338**	LR	LR	23 09 17.8	
	comp=Z,204nm,20.8s,baz=90,slow=35						
PPT2	**Papeete2**	**60.83**	**108**	*e*S	**S**	**22 53 40.8**	**-4.6**
	comp=Z,67nm,29.5s						
PPT2				*e*SS	**SS**	**22 57 38.6**	**-6.1**
	comp=Z,62nm,30.5s						
PPT2				*e*LQ	LQ	23 00 47.0	
	comp=Z,746nm,33.8s						
PPT2				*e*LR	LR	23 03 26.0	
	comp=Z,285nm,32.8s						
PPT2				*e*LR	LR	23 03 28.4	
	comp=Z,349nm,29.8s						
TBI	**Tubuai**	**61.66**	**114**	*e*S	**S**	**22 53 53.5**	**-2.2**
	comp=Z,857nm,22.0s						
TBI				*e*SS	**SS**	**22 58 01.3**	**+3.9**
	comp=Z,646nm,23.5s						
TBI				*e*LQ	LQ	23 01 13.2	
	comp=Z,5µm,39.2s						
TBI				*e*LR	LR	23 03 45.5	
	comp=Z,1µm,31.0s						
TBI				*e*LR	LR	23 03 48.4	
	comp=Z,1µm,26.8s						
GTA	**Gaotai**	**62.86**	**318**	*e*P	**P**	**22 45 43.1**	**+1.4**
GTA				pP	pP	22 45 47.6	+0.5
GTA				pmax	pmax		
	comp=Z,6.0nm,2.1s						
GTA				LR	LR		
	comp=N,140nm,11.2s						
GTA				LR	LR		
	comp=E,140nm,16.3s						
GTA				LR	LR		
	comp=Z,250nm,18.3s						
SONM	**Songino Array**	**63.83**	**329**	P	**P**	**22 45 46.8**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=130,slow=4.6,SNR=4.4						
	comp=Z,0.3nm,0.5s						
LSA	**Lhasa**	**65.21**	**305**	P	**P**	**22 45 55.0**	**-2.7**
SEY	**Seymchan**	**66.42**	**1**	LR	LR	23 18 16.5	
	comp=Z,91nm,18.0s,baz=160,slow=39						
YAK	**Yakutsk**	**67.30**	**350**	LR	LR	23 14 19.8	
	comp=Z,68nm,21.9s,baz=115,slow=35						
TAOE	**Nuku Hiva Isla**	**69.64**	**98**	*e*LR	LR	23 07 41.5	
	comp=Z,263nm,23.5s						
WMQ	**Urumqi**	**72.95**	**318**	*e*P	**P**	**22 46 47.3**	**+2.3**
WMQ				LR	LR		
	comp=Z,180nm,22.1s						
VNDA	**Vanda**	**74.10**	**177**	LR	LR	23 15 21.4	
	comp=Z,128nm,20.4s,baz=353,slow=32						
MKAR	**Makanchi Array**	**77.57**	**319**	P	**P**	**22 47 11.2**	**-0.2**
	comp=Z,0.8nm,1.0s,baz=114,slow=4.9,SNR=3.6						
MKAR				LR	LR	23 21 33.6	
	comp=Z,111nm,19.0s,baz=93,slow=36						
	comp=Z,0.8nm,1.0s						
G18K	**Tagagawik**	**78.58**	**19**	P	**P**	**22 47 17.1**	**+0.5**
ZALV	**Zalesovo Beam**	**78.60**	**327**	P	**P**	**22 47 16.1**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=91,slow=7.2,SNR=4.2						
ZALV				LR	LR	23 21 12.7	
	comp=Z,155nm,20.9s,baz=102,slow=35						
	comp=Z,0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**81.12**	**322**	P	**P**	**22 47 30.2**	**-0.5**
	comp=Z,0.6nm,0.9s,baz=103,slow=4.8,SNR=6.2						
KURBB				LR	LR	23 23 30.7	
	comp=Z,151nm,20.0s,baz=168,slow=36						
	comp=Z,0.6nm,0.9s						
AAK	**Ala-Archa**	**81.78**	**314**	LR	LR	23 24 51.5	
	comp=Z,108nm,20.1s,baz=102,slow=36						
CRQM	**Cirque**	**82.13**	**27**	P	**P**	**22 47 38.4**	**+2.3**
CRQM				IAmb	IAmb	22 47 47.6	
	comp=Z,15nm,1.0s						
IL31		**82.19**	**23**	P	**P**	**22 47 36.4**	**+0.4**
ILAR	**Eielson Array**	**82.19**	**23**	P	**P**	**22 47 35.5**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=248,slow=5.9,SNR=14						
ILAR				LR	LR	23 19 18.7	
	comp=Z,123nm,21.9s,baz=250,slow=32						
	comp=Z,2.0nm,0.7s						
ILAR	**Eielson Array**	**82.19**	**23**	P	**P**	**22 47 36.1**	**0.0**
NRIK	**Noril'sk**	**83.95**	**342**	P	**P**	**22 47 45.0**	**0.0**
	comp=Z,1.6nm,0.6s,baz=118,slow=2.7,SNR=5.4						
NRIK				LR	LR	23 24 18.5	
	comp=Z,122nm,20.1s,baz=119,slow=35						
	comp=Z,1.6nm,0.6s						
NRIK	**Noril'sk**	**83.95**	**342**	P	**P**	**22 47 45.4**	**+0.3**
NRIK				IAmb	IAmb	22 47 51.7	
	comp=Z,11nm,1.1s						
KKAR	**Karatay Array**	**84.75**	**314**	P	**P**	**22 47 48.6**	**-1.2**
HYT	**Haines Junctio**	**84.76**	**28**	P	**P**	**22 47 51.6**	**+2.0**
HYT				IAmb	IAmb	22 47 53.5	
	comp=Z,10.0nm,1.2s						
CHGR	**Chuyangaron**	**85.04**	**309**	P	**P**	**22 47 51.1**	**-0.4**
MAW	**Mawson**	**85.53**	**203**	LR	LR	23 23 42.9	
	comp=Z,293nm,21.3s,baz=80,slow=34						
QSPA	**South Pole Qui**	**86.31**	**180**	P	**P**	**22 47 56.2**	**-1.1**
	comp=Z,2.7nm,1.1s,baz=1.6,slow=1.3,SNR=3.8						
QSPA				LR	LR	23 26 27.2	
	comp=Z,149nm,18.2s,baz=12,slow=36						
	comp=Z,2.7nm,1.1s						
BVAR	**Borovoye Array**	**86.59**	**323**	P	**P**	**22 47 58.2**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=92,slow=7.8,SNR=6.1						
BVAR				LR	LR	23 27 05.9	
	comp=Z,54nm,18.2s,baz=80,slow=36						
	comp=Z,1.0nm,0.8s						
BBB	**Bella Bella**	**87.93**	**38**	LR	LR	23 21 05.6	
	comp=Z,80nm,20.2s,baz=237,slow=31						
INK	**Inuvik**	**88.41**	**21**	LR	LR	23 23 02.7	
	comp=Z,92nm,20.8s,baz=274,slow=32						
YBH	**Yreka Blue Hor**	**90.44**	**48**	LR	LR	23 21 16.8	
	comp=Z,13nm,21.3s,baz=268,slow=31						
NVAR	**Mina Array Bea**	**93.64**	**52**	LR	LR	23 26 07.8	
	comp=Z,119nm,18.9s,baz=276,slow=33						
SYO	**Syowa Base**	**93.79**	**200**	⇑*e*PcP	**P**	**22 48 33.8**	**+1.7**
ARTI	**Arti**	**93.85**	**326**	LR	LR	23 30 25.2	
	comp=Z,264nm,21.3s,baz=76,slow=35						
AKTO	**Aktyubinsk**	**93.99**	**320**	LR	LR	23 30 41.8	
	comp=Z,180nm,20.6s,baz=188,slow=35						
NEW	**Newport**	**94.67**	**42**	LR	LR	23 25 33.9	
	comp=Z,79nm,19.6s,baz=259,slow=32						
PFO	**Pinyon Flats O**	**95.02**	**57**	LR	LR	23 24 30.5	
	comp=Z,131nm,19.1s,baz=264,slow=31						
YKA	**Yellowknife Ar**	**95.75**	**28**	P	**P**	**22 48 42.0**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=275,slow=5.5,SNR=12						
	comp=Z,0.7nm,0.8s						
KIRV	**Kirov**	**98.56**	**329**	LR	LR	23 35 23.3	
	comp=Z,116nm,21.8s,baz=79,slow=37						
TORD	**Torodi Ar. Bea**	**147.21**	**289**	PKPbc	**PKPbc**	**22 54 59.0**	**-0.7**
	comp=Z,2.3nm,0.8s,baz=66,slow=3.7,SNR=13						

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*IDC **20** 22:57:37.0±1.6, 16°.72S×178°.28W, h0^{km}, mb4.1/6, mbtmp4.1/6, Error ellipse: s-maj=106.0km s-min=21.4km az=149.0*

*NEIC **20** 22:58:33.5±1.5, 17°.8S±0°.2×178°.6W±0°.2, h571^{km}±12^{km}, mb4.2/19, Error ellipse: s-maj=25.3km s-min=20.2km az=150.0*

ISC 20 22:58:32.0±0.8**, 17°.9S**±0°.2×**178°.5W**±0°.1**, h550^{km}, n31, σ1^{s}.10**/31**, mb4.1**/17**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.25**	**272**		**P**	**22 59 52.6**	**+3.9**
SANVU	**Saraoutou**	**13.88**	**278**	P	**P**	**23 01 29.6**	**-0.4**
DZM	**Mont Dzumac**	**14.72**	**251**	P	**P**	**23 01 38.0**	**-0.7**
SNZO	**South Karori**	**24.06**	**193**	P	**P**	**23 03 04.5**	**+0.4**
ARMA	**Armidale**	**29.85**	**240**	P	**P**	**23 03 55.5**	**+0.2**
ARMA				IAmb	IAmb	23 04 18.5	
	comp=Z,18nm,1.4s						
CTAO	**Charters Tower**	**33.33**	**260**	P	**P**	**23 04 24.5**	**-0.5**
PATS	**Pohnpei**	**33.55**	**315**	P	**P**	**23 04 27.4**	**+0.5**
COEN	**Coen**	**36.98**	**270**	P	**P**	**23 04 53.9**	**-1.5**
COEN				IAmb	IAmb	23 05 08.5	
	comp=Z,7.4nm,0.9s						
TOO	**Toolangi**	**37.09**	**231**	P	**P**	**23 04 55.6**	**-0.4**
TOO				IAmb	IAmb	23 05 14.6	
	comp=Z,12nm,1.4s						
STKA	**Stephens Creek**	**38.53**	**241**	P	**P**	**23 05 07.6**	**-0.3**
	comp=Z,1.7nm,0.4s,baz=68,slow=9.8,SNR=5.7						

	comp=Z,1.7nm,0.4s						
STKA	**Stephens Creek**	**38.53**	**241**	P	**P**	**23 05 07.1**	**-0.8**
INKA	**Innaminka**	**38.64**	**248**	P	**P**	**23 05 09.3**	**+0.6**
BBOO	**Buckleboo**	**43.31**	**241**	P	**P**	**23 05 45.2**	**-0.6**
BBOO				IAmb	IAmb	23 05 46.0	
	comp=Z,20nm,1.1s						
WR8	**Warramunga Arr**	**44.36**	**260**	P	**P**	**23 05 53.2**	**-0.9**
WR8				IAmb	IAmb	23 06 03.9	
	comp=Z,7.8nm,1.4s						
WB0	**Warramunga Arr**	**44.48**	**260**	P	**P**	**23 05 54.1**	**-0.9**
WB0				IAmb	IAmb	23 06 03.0	
	comp=Z,12nm,1.5s						
WRA	**Warramunga Arr**	**44.52**	**260**	P	**P**	**23 05 54.5**	**-0.7**
	comp=Z,1.6nm,0.6s,baz=90,slow=8.3,SNR=22						
	comp=Z,1.6nm,0.6s						
WRA	**Warramunga Arr**	**44.52**	**260**	P	**P**	**23 05 54.5**	**-0.7**
AS31	**Alice Springs**	**44.68**	**254**	P	**P**	**23 05 56.4**	**-0.1**
AS31				IAmb	IAmb	23 05 57.4	
	comp=Z,3.0nm,0.5s						
ASAR	**Alice Springs**	**44.68**	**254**	P	**P**	**23 05 56.4**	**-0.1**
	comp=Z,10nm,0.6s,baz=88,slow=8.6,SNR=151						
	comp=Z,10nm,0.6s						
ASAR	**Alice Springs**	**44.68**	**254**	P	**P**	**23 05 56.2**	**-0.3**
NVAR	**Mina Array Bea**	**79.49**	**44**	P	**P**	**23 09 41.5**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=260,slow=6.3,SNR=4.1						
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	**85.89**	**13**	P	**P**	**23 10 11.8**	**-1.6**
	comp=Z,0.2nm,0.4s,baz=205,slow=5.3,SNR=7.7						
	comp=Z,0.2nm,0.4s						
TXAR	**Lajitas Array**	**86.08**	**58**	P	**P**	**23 10 15.6**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=208,slow=7.6,SNR=7.1						
	comp=Z,0.6nm,0.7s						
TXAR	**Lajitas Array**	**86.08**	**58**	P	**P**	**23 10 15.8**	**+0.6**
J26L	**Joseph Creek**	**86.41**	**14**	P	**P**	**23 10 15.6**	**-0.3**
M30M	**Minto, Yukon**	**86.65**	**18**	P	**P**	**23 10 16.4**	**-0.7**
M30M				IAmb	IAmb	23 10 42.6	
	comp=Z,5.9nm,1.4s						
L29M	**L29M**	**86.68**	**17**	P	**P**	**23 10 16.5**	**-0.7**
L29M				IAmb	IAmb	23 10 25.5	
	comp=Z,6.0nm,1.3s						
MOOW	**Moose Ponds**	**87.10**	**42**	P	**P**	**23 10 20.9**	**+1.0**
O20A	**White River Ci**	**87.12**	**46**	P	**P**	**23 10 21.1**	**+1.0**
O20A				IAmb	IAmb	23 10 57.7	
	comp=Z,4.1nm,1.1s						
LOHW	**Long Hollow**	**87.13**	**42**	P	**P**	**23 10 18.0**	**-2.0**
K29M	**Barlow Dome**	**87.43**	**17**	P	**P**	**23 10 20.0**	**-0.8**
K29M				IAmb	IAmb	23 10 51.3	
	comp=Z,6.2nm,1.4s						

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*IDC **20** 23:19:25.5±1.1, 59°.31N×30°.29W, h0^{km}, mb3.7/7, mbtmp3.7/7, MS3.3/3, Error ellipse: s-maj=34.4km s-min=22.7km az=29.0*

ISC 20 23:19:27.8±1.0**, 59°.3N**±0°.2×**30°.3W**±0°.2**, h16**^{km}**, n10, σ0^{s}.87**/8**, mb3.7**/6**, MS3.6**/3**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EKA	**Eskdalemuir Ar**	**15.15**	**93**	Pn	**P**	**23 23 05.7**	**-0.2**
	baz=309,slow=9.5						
ESDC	**Sonseca Array**	**25.76**	**128**	P	**P**	**23 24 58.6**	**+1.0**
	1.2nm,0.7s,baz=334,slow=9.1,SNR=3.6						
	1.2nm,0.7s						
YKA	**Yellowknife Ar**	**38.38**	**312**	P	**P**	**23 26 48.8**	**+1.1**
	0.5nm,0.6s,baz=56,slow=8.7,SNR=8.8						
	0.5nm,0.6s						
NEW	**Newport**	**48.87**	**298**	LR	LR	23 46 32.9	
	comp=Z,72nm,20.1s,baz=56,slow=33						
PDAR	**Pinedale Array**	**49.36**	**288**	P	**P**	**23 28 15.4**	**-1.0**
	0.2nm,0.2s,baz=24,slow=6.2,SNR=3.5						
PDAR				LR	LR	23 47 33.3	
	comp=Z,57nm,18.2s,baz=339,slow=34						
	0.2nm,0.2s						
BVAR	**Borovoye Array**	**51.22**	**50**	P	**P**	**23 28 29.6**	**-0.4**
	0.8nm,0.7s,baz=316,slow=10,SNR=3.8						
	0.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**51.84**	**139**	P	**P**	**23 28 34.8**	**-0.3**
	0.6nm,0.7s,baz=346,slow=9.2,SNR=4.6						
	0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**56.23**	**46**	P	**P**	**23 29 06.4**	**-0.3**
	1.1nm,0.8s,baz=322,slow=7.2,SNR=6.6						
	1.1nm,0.8s						
YBH	**Yreka Blue Hor**	**56.41**	**296**	LR	LR	23 52 25.5	
	comp=Z,5.9nm,18.8s,baz=58,slow=35						
MKAR	**Makanchi Array**	**60.79**	**47**	P	**P**	**23 29 38.8**	**+0.2**
	0.8nm,0.8s,baz=330,slow=6.1,SNR=4.1						
	0.8nm,0.8s						

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*IDC **20** 23:31:35.1±2.3, 2°.86S×130°.59E, h0^{km}, mb3.6/3, mbtmp3.6/5, ML3.6/2, Error ellipse: s-maj=129.8km s-min=24.6km az=75.0*

*DJA **20** 23:31:39.2±0.5, 3°S±4°×13°0E±°, h12^{km}±5^{km}, M3.7/10, mb4.3/2, MLv3.5/10*

ISC 20 23:31:39.1±0.9**, 2°.86S**±0°.06×**130°.35E**±0°.06**, h24**^{km}**, n13, σ1^{s}.50**/15**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.50**	**251**	P	**Pn**	**23 32 05.9**	**+1.3**
BNDI	**Bandanaira**	**1.71**	**195**	P	**Pn**	**23 32 09.0**	**+1.5**
FAKI	**Fak Fak**	**1.90**	**92**	P	**Pb**	**23 32 11.6**	**-1.5**
FAKI				S	**Sb**	**23 32 36.9**	**+0.5**
KRAI	**Karang Ratu**	**2.00**	**257**	P	**Pn**	**23 32 13.3**	**+1.8**
SIJI	**Sorong**	**2.18**	**25**	P	**Pn**	**23 32 15.3**	**+1.4**
SWI	**Sorong**	**2.18**	**25**	P	**Pb**	**23 32 16.8**	**-1.2**
SWI				S	**Sb**	**23 32 43.7**	**-0.9**
NLAI	**Namlea**	**3.27**	**263**	P	**Pn**	**23 32 28.4**	**-0.5**
BAKI	**Biak**	**5.99**	**74**	P	**Pn**	**23 33 09.2**	**+2.9**
FITZ	**Fitzroy Crossi**	**15.83**	**197**	Pn	**Pn**	**23 35 20.8**	**+0.2**
	0.1nm,0.3s,baz=16,slow=12,SNR=1.8						
	1.2nm,0.6s						
WRA	**Warramunga Arr**	**17.42**	**167**	P	**Pn**	**23 35 39.2**	**-1.5**
	0.2nm,0.3s,baz=347,slow=11,SNR=5.8						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**20.97**	**171**	P	**P**	**23 36 19.4**	**-1.3**
	2.0nm,0.3s,baz=352,slow=12,SNR=30						
	2.0nm,0.3s						
MKAR	**Makanchi Array**	**65.00**	**326**	P	**P**	**23 42 17.9**	**+0.7**
	0.2nm,0.4s,baz=107,slow=7.7,SNR=1.7						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**69.20**	**328**	P	**P**	**23 42 44.5**	**+0.7**
	0.4nm,0.8s,baz=122,slow=6.1,SNR=4.1						
	0.4nm,0.8s						

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*NEIC **20** 23:59:24.8±1.0, 18°.3S±0°.1×178°.2W±0°.1, h529^{km}±9^{km}, mb4.1/30, Error ellipse: s-maj=21.8km s-min=17.9km az=140.0*

*IDC **20** 23:59:25.8±8.5, 18°.22S×178°.41W, h534^{km}±94^{km}, mb3.1/6, mbtmp4.0/6, Error ellipse: s-maj=42.0km s-min=32.5km az=132.0*

ISC 20 23:59:26.8±0.6**, 18°.3S**±0°.1×**178°.3W**±0°.1**, h550**^{km}**, n42, σ0^{s}.84**/41**, mb4.0**/21**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.52**	**279**	P	P	00 00 41.9	-3.4
NIUE	**Niue**	**7.97**	**97**	P	P	00 01 20.8	-3.5
STKA	**Stephens Creek**	**38.52**	**242**	P	**P**	**00 06 02.8**	**+0.2**
	1.2nm,0.3s,baz=90,slow=11,SNR=3.1						
	1.2nm,0.3s						
STKA	**Stephens Creek**	**38.52**	**242**	P	**P**	**00 06 02.7**	**+0.2**
STKA				IAmb	IAmb	00 06 05.7	
	comp=Z,11nm,0.9s						
WR8	**Warramunga Arr**	**44.50**	**260**	P	**P**	**00 06 49.4**	**-0.6**
WR8				IAmb	IAmb	00 06 51.6	
	comp=Z,3.7nm,1.1s						
WB0	**Warramunga Arr**	**44.62**	**260**	P	**P**	**00 06 50.6**	**-0.3**
WB0				IAmb	IAmb	00 07 05.7	
	comp=Z,3.0nm,1.1s						
WRA	**Warramunga Arr**	**44.66**	**260**	P	**P**	**00 06 50.1**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=97,slow=8.6,SNR=15						
WRA				PcP	**PcP**	**00 08 21.9**	**0.0**
	comp=Z,0.5nm,1.0s,baz=92,slow=3.1,SNR=1.6						
	comp=Z,0.6nm,0.3s						
WRA	**Warramunga Arr**	**44.66**	**260**	P	**P**	**00 06 50.0**	**-1.2**
AS31	**Alice Springs**	**44.77**	**255**	P	**P**	**00 06 51.8**	**-0.3**
AS31				IAmb	IAmb	00 06 52.3	
	comp=Z,1.8nm,0.6s						
ASAR	**Alice Springs**	**44.78**	**255**	P	**P**	**00 06 51.6**	**-0.5**
	comp=Z,5.5nm,0.7s,baz=100,slow=7.8,SNR=5.2						
ASAR				PcP	**PcP**	**00 08 22.6**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=103,slow=3.7,SNR=5.8						
	comp=Z,5.5nm,0.7s						
ASAR	**Alice Springs**	**44.78**	**255**	P	**P**	**00 06 51.5**	**-0.6**
VNDA	**Vanda**	**60.04**	**185**	P	**P**	**00 08 40.9**	**+0.6**
VNDA				IAmb	IAmb	00 09 23.3	
	comp=Z,6.4nm,1.1s						
QSPA	**South Pole Qui**	**71.73**	**180**	P	**P**	**00 09 53.6**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=225,slow=10,SNR=2.0						
	comp=Z,1.0nm,0.5s						
QSPA	**South Pole Qui**	**71.73**	**180**	P	**P**	**00 09 53.8**	**+0.4**
PEA0B	**Petropavlovsk-**	**74.10**	**345**	P	**P**	**00 10 07.8**	**+0.9**
PETK	**Petropavlovsk-**	**74.10**	**345**	P	**P**	**00 10 07.8**	**+0.9**
OHAK	**Old Harbor**	**78.11**	**14**	P	**P**	**00 10 28.0**	**-0.8**
M02C	**Callahan**	**78.49**	**39**	P	**P**	**00 10 29.3**	**-2.1**
P17K	**Kvichak River**	**79.29**	**11**	P	**P**	**00 10 34.4**	**-0.6**
PIX	**Pinacate**	**79.52**	**52**	P	**P**	**00 10 35.8**	**-1.1**
PIX				IAmb	IAmb	00 10 41.2	
	comp=Z,15nm,1.1s						
N15K	**Kwethluk River**	**79.60**	**9**	P	P	00 10 34.4	-2.4
N15K				IAmb	IAmb	00 10 39.6	
	comp=Z,18nm,1.1s						
P18K	**Big Mountain,**	**79.70**	**12**	P	**P**	**00 10 36.3**	**-1.1**
P18K				IAmb	IAmb	00 11 06.2	
	comp=Z,12nm,1.1s						
O18K	**Koktuh Hills**	**80.14**	**12**	P	**P**	**00 10 38.4**	**-1.1**
O18K				IAmb	IAmb	00 10 39.5	
	comp=Z,10nm,1.1s						
M16K	**Timber Creek**	**80.59**	**9**	P	**P**	**00 10 41.4**	**-0.4**
M16K				IAmb	IAmb	00 10 43.7	
	comp=Z,10nm,1.1s						
L16K	**Owhat River**	**81.17**	**9**	P	**P**	**00 10 44.8**	**0.0**
L16K				IAmb	IAmb	00 10 50.0	
	comp=Z,4.0nm,1.1s						
M17K	**Holitna River**	**81.19**	**10**	P	**P**	**00 10 45.1**	**+0.1**
M17K				IAmb	IAmb	00 10 50.4	
	comp=Z,9.9nm,1.1s						
K15K	**Wolf Creek Mou**	**81.44**	**8**	P	**P**	**00 10 45.4**	**-0.8**
K15K				IAmb	IAmb	00 11 01.7	
	comp=Z,8.4nm,1.1s						
BELA	**Belgrano 2**	**81.74**	**173**	P	**P**	**00 10 47.6**	**-0.1**
L18K	**Granite Mounta**	**82.08**	**10**	P	**P**	**00 10 49.5**	**0.0**
K17K	**Iditarod**	**82.30**	**9**	P	**P**	**00 10 49.4**	**-1.1**
K17K				IAmb	IAmb	00 11 13.6	
	comp=Z,5.7nm,1.1s						
CCUT	**Cedar City**	**82.52**	**47**	P	**P**	**00 10 51.5**	**-1.1**
J17K	**VABM Dome**	**82.83**	**9**	P	**P**	**00 10 53.2**	**0.0**
YAH	**Yahtse**	**83.80**	**17**	P	**P**	**00 10 58.8**	**+0.4**
I21K	**Tanana**	**85.64**	**11**	P	**P**	**00 11 07.1**	**+0.2**
TXAR	**Lajitas Array**	**86.13**	**58**	P	**P**	**00 11 12.0**	**+1.7**
	comp=Z,0.2nm,0.6s,baz=265,slow=6.6,SNR=4.5						
	comp=Z,0.2nm,0.6s						
TXAR	**Lajitas Array**	**86.13**	**58**	P	**P**	**00 11 10.7**	**+0.4**
ILAR	**Eielson Array**	**86.27**	**13**	P	**P**	**00 11 09.0**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=209,slow=5.1,SNR=9.9						
	comp=Z,0.2nm,0.4s						
ILAR	**Eielson Array**	**86.27**	**13**	P	**P**	**00 11 09.6**	**-0.3**
YNE	**Yellowstone No**	**88.34**	**41**	P	**P**	**00 11 22.2**	**+1.7**
D22K	**Ayikyak River**	**88.90**	**9**	P	**P**	**00 11 22.0**	**-0.2**
D22K				IAmb	IAmb	00 11 36.3	
	comp=Z,1.5nm,1.1s						
LL01	**San Ignacio de**	**89.02**	**135**	P	**P**	**00 11 22.4**	**-1.1**
B21K	**Ikpikpuk River**	**89.31**	**8**	P	**P**	**00 11 24.3**	**+0.2**
B21K				IAmb	IAmb	00 12 02.0	
	comp=Z,2.4nm,0.9s						

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*IDC **21** 00:07:52.9±1.0, 8°.97S×108°.92W, h0^{km}, mb4.1/8, mbtmp4.1/8, MS3.9/27, Error ellipse: s-maj=43.4km s-min=23.6km az=75.0*

ISC 21 00:07:54.6±1.1**, 8°.9S**±0°.2×**108°.9W**±0°.3**, h10**^{km}**, n38, σ0^{s}.96**/9**, mb4.0**/8**, MS3.9**/27**, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**18.10**	**181**	LR	LR	00 17 01.6	
	comp=Z,426nm,21.2s,baz=354,slow=30						
CMIG	**Matias Romero**	**29.33**	**28**	LR	LR	00 23 15.1	
	comp=Z,94nm,18.4s,baz=194,slow=31						
ATAH	**Atahualpa**	**30.23**	**89**	LR	LR	00 23 05.2	
	comp=Z,207nm,18.3s,baz=269,slow=30						
LPIG	**La Paz**	**32.87**	**358**	LR	LR	00 24 25.8	
	comp=Z,221nm,21.2s,baz=196,slow=30						
H03N2	**Juan Fernandez**	**36.82**	**136**	T	T	00 53 55.6	
	baz=308,slow=77,SNR=20						
H03N1	**Juan Fernandez**	**36.84**	**136**	T	T	00 53 56.9	
	baz=308,slow=77,SNR=18						
H03N3	**Juan Fernandez**	**36.84**	**136**	T	T	00 53 56.4	
	baz=308,slow=77,SNR=17						
TXAR	**Lajitas Array**	**38.38**	**7**	P	**P**	**00 15 16.9**	**+0.6**
	1.8nm,1.1s,baz=195,slow=8.9,SNR=7.9						
TXAR				LR	LR	00 28 15.4	
	comp=Z,127nm,21.7s,baz=168,slow=32						
	1.8nm,1.1s						
LPAZ	**La Paz**	**40.37**	**105**	P	**P**	**00 15 34.0**	**+0.2**
	2.3nm,0.9s,baz=286,slow=6.7,SNR=5.7						
LPAZ				LR	LR	00 28 39.3	
	comp=Z,154nm,18.9s,baz=290,slow=31						
	2.3nm,0.9s						
PFO	**Pinyon Flats O**	**42.92**	**351**	LR	LR	00 28 35.0	
	comp=Z,64nm,20.4s,baz=174,slow=29						
ANMO	**Albuquerque**	**43.70**	**3**	LR	LR	00 31 16.5	
	comp=Z,154nm,18.8s,baz=180,slow=32						
PLCA	**Paso Flores**	**46.42**	**139**	LR	LR	00 30 41.3	
	comp=Z,206nm,21.2s,baz=278,slow=30						
SIV	**San Ignacio**	**47.12**	**103**	LR	LR	00 34 03.7	
	comp=Z,79nm,18.0s,baz=122,slow=33						
NVAR	**Mina Array Bea**	**47.94**	**350**	P	**P**	**00 16 35.4**	**+1.8**
	2.9nm,1.0s,baz=165,slow=7.7,SNR=12						
NVAR				LR	LR	00 31 57.5	
	comp=Z,214nm,20.9s,baz=144,slow=30						
	2.9nm,1.0s						
ELK	**Elko**	**49.78**	**354**	LR	LR	00 33 50.5	
	comp=Z,147nm,19.3s,baz=100,slow=31						
PDAR	**Pinedale Array**	**51.46**	**359**	P	**P**	**00 17 00.3**	**-0.1**
	1.3nm,1.1s,baz=175,slow=7.1,SNR=6.2						
PDAR				LR	LR	00 35 34.7	
	comp=Z,85nm,18.2s,baz=162,slow=32						
	1.3nm,1.1s						
YBH	**Yreka Blue Hor**	**52.00**	**347**	LR	LR	00 34 22.1	
	comp=Z,8.2nm,18.9s,baz=180,slow=31						
NEW	**Newport**	**57.42**	**353**	LR	LR	00 38 10.0	
	comp=Z,112nm,18.3s,baz=142,slow=32						
MDP	**Montagnes des**	**57.77**	**78**	LR	LR	00 41 05.7	
	comp=Z,56nm,18.7s,baz=324,slow=34						
BDFB	**Brasilia**	**59.68**	**103**	LR	LR	00 41 05.5	
	comp=Z,103nm,20.4s,baz=306,slow=33						
ULM	**Lac du Bonnet**	**60.02**	**10**	P	**P**	**00 18 00.5**	**-1.0**
	6.6nm,1.1s,baz=194,slow=8.3,SNR=3.3						
ULM				LR	LR	00 41 17.1	
	comp=Z,64nm,18.6s,baz=192,slow=33						
	6.6nm,1.1s						
YKA	**Yellowknife Ar**	**71.35**	**357**	P	**P**	**00 19 13.8**	**-0.6**
	1.7nm,1.1s,baz=180,slow=5.8,SNR=11						
YKA				LR	LR	00 46 55.4	
	comp=Z,62nm,19.1s,baz=9.5,slow=33						
	1.7nm,1.1s						
KDAK	**Kodiak Island**	**75.39**	**338**	LR	LR	00 45 43.9	
	comp=Z,134nm,18.2s,baz=117,slow=30						
FRB	**Frobisher Bay**	**78.66**	**17**	LR	LR	00 52 39.3	
	comp=Z,80nm,18.5s,baz=133,slow=34						
ILAR	**Eielson Array**	**78.80**	**344**	P	**P**	**00 19 56.9**	**-0.5**
	0.7nm,0.9s,baz=162,slow=6.6,SNR=5.9						
ILAR				LR	LR	00 47 44.2	
	comp=Z,74nm,18.6s,baz=91,slow=30						
	0.7nm,0.9s						
INK	**Inuvik**	**79.01**	**351**	LR	LR	00 51 30.3	
	comp=Z,122nm,19.1s,baz=100,slow=33						
QSPA	**South Pole Qui**	**81.14**	**180**	P	**P**	**00 20 10.5**	**+0.2**
	1.2nm,0.2s,baz=114,slow=3.0,SNR=5.1						
QSPA				LR	LR	00 49 22.6	
	comp=Z,56nm,20.3s,baz=141,slow=31						
	1.2nm,0.2s						
RES	**Resolute Bay**	**83.92**	**4**	LR	LR	00 55 27.9	
	comp=Z,130nm,19.4s,baz=70,slow=34						
SNAA	**Sanae**	**86.56**	**162**	LR	LR	00 51 14.6	
	comp=Z,47nm,20.7s,baz=320,slow=30						
H11S2	**WAKE ISLAND Hy**	**87.56**	**289**	T	T	01 57 43.0	
	baz=100,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**87.57**	**289**	T	T	01 57 29.8	
	baz=100,slow=75,SNR=39						
H11S3	**WAKE ISLAND Hy**	**87.58**	**289**	T	T	01 57 32.5	
	baz=100,slow=75,SNR=33						
H11N3	**WAKE ISLAND Hy**	**87.59**	**290**	T	T	01 57 33.4	
	baz=101,slow=75,SNR=18						
H11N2	**WAKE ISLAND Hy**	**87.60**	**290**	T	T	01 57 34.6	
	baz=101,slow=75,SNR=17						
H11N1	**WAKE ISLAND Hy**	**87.60**	**290**	T	T	01 57 32.5	
	baz=101,slow=75,SNR=12						
SHEM	**Shemya Is, Ala**	**89.29**	**324**	LR	LR	00 52 43.7	
	comp=Z,78nm,21.1s,baz=134,slow=30						
PETK	**Petropavlovsk-**	**99.13**	**322**	LR	LR	00 57 37.1	
	comp=Z,57nm,19.8s,baz=88,slow=30						
CMAR	**Chiang Mai Arr**	**151.40**	**292**	PKPbc	**PKPbc**	**00 27 49.3**	**-0.4**
	1.0nm,0.3s,baz=26,slow=0.9,SNR=11						

CATAC 21 00:17:13.1±0.5**, 11°N**±2°×**8°7W**±°**, h26**^{km}±5^{km}**, M3.6**/25**, MLv3.6**/25**, 4C-11D, Error ellipse: s-maj=5.6km s-min=2.9km az=37.2, confirmed, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NADN	**Granada**	**1.23**	**48**	⇓P	Pn	00 17 34.3	-0.4
NADN				S	Sb	00 17 51.4	+0.3
CRUN	**El Crucero**	**1.24**	**32**	P	Pn	00 17 34.7	-0.2
SABN	**Sabanita**	**1.29**	**38**	⇓P	Pb	00 17 36.5	-0.3
COPN	**Copaltepe**	**1.30**	**16**	⇑P	Pn	00 17 35.4	-0.3
NANN	**Nandasmo**	**1.30**	**39**	S	Sb	00 17 54.3	+1.0
NANN	**Nandasmo**	**1.30**	**39**	⇓P	Pn	00 17 36.3	+0.6
MAS3	**Al N del Volca**	**1.34**	**35**	P	Pb	00 17 37.3	-0.3
MAS3				S	Sb	00 17 54.0	-0.3
UNAN	**Cigeo UNAN**	**1.36**	**30**	⇓P	Pn	00 17 36.2	-0.3
UNAN				S	Sb	00 17 54.5	-0.4
TISN	**Laguna Tiscapa**	**1.39**	**29**	⇓P	Pn	00 17 36.6	-0.3
ALLN	**Telcor Managua**	**1.40**	**29**	S	Sn	00 17 53.2	-1.4
JAPN	**Al SSO del Vol**	**1.40**	**65**	⇓P	Pn	00 17 37.0	-0.1
JAPN				S	Sb	00 17 55.9	-0.1
MGAN	**Managua**	**1.40**	**30**	S	Sb	00 17 55.5	-0.6
MGAN	**Managua**	**1.40**	**30**	P	Pn	00 17 36.9	-0.2
APQ2	**Apoyeque**	**1.41**	**26**	S	Sn	00 17 54.7	-0.2
ELI1	**Hacienda Flor**	**1.42**	**101**	S	Sn	00 17 55.7	+0.5
ELI1	**Hacienda Flor**	**1.42**	**101**	P	Pb	00 17 38.3	-0.6
MORN	**Al O del Volca**	**1.43**	**64**	⇓P	Pn	00 17 37.3	-0.3
MORN				S	Sb	00 17 56.7	-0.4
CARN	**Rivas**	**1.44**	**80**	⇓P	Pn	00 17 37.4	-0.2
CARN				S	Sb	00 17 57.0	-0.3
ALEN	**Leon**	**1.52**	**4**	S	Sn	00 17 58.2	+0.4
MOM2	**El Cardon**	**1.57**	**17**	⇓P	Pn	00 17 39.3	-0.1
MOM2				S	Sn	00 17 59.8	+0.8
CNGA	**Al SSO del Vol**	**1.58**	**9**	⇑P	Pn	00 17 39.4	-0.2
CNGA				S	Sn	00 17 60.0	+0.8
CNGN	**Cerro Negro**	**1.58**	**10**	S	Sn	00 17 60.0	+0.6
CNGN	**Cerro Negro**	**1.58**	**10**	⇑P	Pn	00 17 39.5	-0.1
POLN	**Al Sur del Vol**	**1.72**	**5**	⇑P	Pn	00 17 42.5	+1.1
PKGN	**Cerro Pekin**	**1.73**	**360**	S	Sn	00 18 03.4	+0.5
CRIN	**San Cristobal**	**1.76**	**357**	S	Sn	00 18 03.7	-0.1
CRIN	**San Cristobal**	**1.76**	**357**	P	Pn	00 17 42.6	+0.5
CMARA	**Lajas Hojancha**	**1.77**	**121**	S	Sn	00 18 04.0	+0.1
UPAL	**Upala**	**1.92**	**91**	⇓P	Pn	00 17 44.2	0.0
BOAB	**BOACO BROADBAN**	**1.98**	**40**	S	Sn	00 18 09.3	+0.4
BOAB	**BOACO BROADBAN**	**1.98**	**40**	⇓P	Pn	00 17 43.9	-1.0
JTS	**Las Juntas de**	**2.08**	**108**	P	Pn	00 17 46.4	0.0
CSGN	**Cosiguina Volc**	**2.12**	**344**	P	Pb	00 17 49.0	-2.0
CSGN				S	Sn	00 18 13.1	+0.5
LIMN	**Finca el Limon**	**2.20**	**15**	P	Pn	00 17 47.7	-0.5
LIMN				S	Sn	00 18 14.6	0.0
MATN	**Matagalpa**	**2.23**	**27**	P	Pn	00 17 47.1	-1.5
MATN	**Matagalpa**	**2.23**	**27**	S	Sn	00 18 15.8	+0.3
CNCH	**Conchagua**	**2.48**	**340**	P	Pn	00 17 52.7	+0.7
CNCH	**Conchagua**	**2.48**	**340**	S	Sn	00 18 21.6	-0.1
PACA	**Pacayal**	**2.85**	**332**	S	Sn	00 18 31.3	+0.5
YUSH	**Yuscaran**	**3.01**	**2**	P	Pn	00 17 59.8	+0.5

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*BEO **21** 00:18:24.9±0.2, 43°.24N×18°.02E, h11^{km}±1^{km}, ML3.4/22*

*PDG **21** 00:18:24.5±0.1, 43°.22N×18°.00E, h13^{km}, MD3.6/8, ML3.5/13, Error ellipse: s-maj=0.3km s-min=0.3km az=90.0*

*RHSSO **21** 00:18:24.3±0.3, 43°.25N×17°.97E, h7^{km}, ML3.4/5*

*IDC **21** 00:18:25.4±1.9, 43°.30N×17°.93E, h0^{km}, mbtmp3.7/6, ML3.2/5, Error ellipse: s-maj=22.9km s-min=14.4km az=33.0*

*PRU **21** 00:18:26.7, 43°.24N×17°.97E, h10^{km}*

*VIE **21** 00:18:28.9±0.5, 43°.68N×18°.32E, h10^{km}, mb3.3/18, ml3.2/11, ms3.9/5, Error ellipse: s-maj=6.0km s-min=3.8km az=47.0 19 km SSW of Sarajevo*

ISC 21 00:18:24.4±1.0**, 43°.25N**±0°.02×**18°.01E**±0°.01**, h7**^{km}±9^{km}**, n128, σ1^{s}.38**/212**, 20C-19D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLINJ	**Klinje**	**0.43**	**100**	*e*Pg	**Pg**	**00 18 32.7**	**0.0**
KLINJ				*e*Sg	**Sg**	**00 18 40.1**	**+1.7**
STON	**Ston**	**0.44**	**211**	*e*Pg	**Pg**	**00 18 32.3**	**-0.6**
STON				Sg	**Sg**	**00 18 38.9**	**+0.3**
STON	**Ston**	**0.44**	**211**	*e*Pg	**Pg**	**00 18 32.3**	**-0.6**
STON				*e*Sg	**Sb**	**00 18 39.1**	**-2.1**
BRY	**Bratogost**	**0.52**	**131**	⇓*i*Pg	**Pg**	**00 18 34.1**	**-0.3**
BRY				*i* Sg	**Sg**	**00 18 42.2**	**+1.0**
DBRK	**Dubrovnik**	**0.59**	**170**	*e*Pg	**Pg**	**00 18 35.2**	**-0.5**
DBRK				Sg	**Sg**	**00 18 43.5**	**+0.1**
TREB	**Trebinje**	**0.59**	**155**	⇑*i*Pg	**Pg**	**00 18 34.7**	**-0.9**
TREB				*e*Sg	**Sg**	**00 18 44.2**	**+0.9**
TREB	**Trebinje**	**0.59**	**155**	*e*Pg	**Pg**	**00 18 34.8**	**-0.9**
TREB				*e*Sg	**Sg**	**00 18 43.9**	**+0.6**
UPM	**Unac-Piva**	**0.66**	**94**	⇓*i*Pg	**Pg**	**00 18 37.0**	**-0.1**
UPM				*i* Sg	**Sb**	**00 18 47.3**	**-0.5**
RICI	**Ricice**	**0.69**	**291**	*e*Pg	**Pb**	**00 18 37.6**	**-1.1**
RICI				Sg	**Sb**	**00 18 47.6**	**-0.8**
MAKA	**Makarska**	**0.72**	**274**	*e*Pg	**Pg**	**00 18 37.5**	**-0.8**
MAKA				Sg	**Sb**	**00 18 48.8**	**-0.7**
NKME	**Niksic**	**0.84**	**124**	⇓*i*Pg	**Pg**	**00 18 39.8**	**-0.8**
NKME				*e*Sg	**Sb**	**00 18 53.3**	**+0.3**
HCY	**Herceg Novi**	**0.88**	**156**	⇓*i*Pg	**Pg**	**00 18 40.0**	**-1.2**
HCY				*i* Sg	**Sb**	**00 18 53.9**	**0.0**
LSTV	**Lastovo**	**0.95**	**240**	*e*Pg	**Pg**	**00 18 40.9**	**-1.7**
LSTV				Sg	**Sb**	**00 18 55.2**	**-0.8**
CEME	**Cevo**	**0.97**	**136**	⇓*i*Pg	**Pg**	**00 18 41.8**	**-1.2**
CEME				*e*Sg	**Sb**	**00 18 57.1**	**+0.5**
PLE	**Pljevlja**	**1.01**	**85**	*e*Pg	**Pg**	**00 18 44.0**	**+0.2**
PLE	**Pljevlja**	**1.01**	**85**	⇓*i*Pg	**Pg**	**00 18 43.5**	**-0.3**
PLE				*i* Sg	**Sb**	**00 18 59.7**	**+1.8**
RUDO	**Rudo**	**1.06**	**69**	*e*Pg	**Pg**	**00 18 43.7**	**-1.0**
RUDO				*e*Sg	**Sg**	**00 18 58.9**	**+0.4**
RUDO	**Rudo**	**1.06**	**69**	*e*Pg	**Pg**	**00 18 43.8**	**-1.0**
RUDO				*e*Sg	**Sg**	**00 18 58.6**	**+0.1**
HVAR	**Hvar**	**1.14**	**267**	*e*Pg	**Pg**	**00 18 45.0**	**-1.3**
HVAR				Sg	**Sb**	**00 19 00.6**	**-0.9**
BUM	**Brajici-Budva**	**1.15**	**145**	⇓*i*Pg	**Pg**	**00 18 45.1**	**-1.3**
BUM				*i* Sg	**Sn**	**00 19 03.3**	**+0.3**
KOME	**Kolasin**	**1.17**	**109**	*e*Pg	**Pg**	**00 18 46.6**	**-0.3**
KOME	**Kolasin**	**1.17**	**109**	⇓*i*Pg	**Pg**	**00 18 46.7**	**-0.2**
KOME				*e*Sg	**Sn**	**00 19 04.8**	**+1.1**
BBLS	**Lazi&#263i**	**1.19**	**58**	*e*Pg	**Pg**	**00 18 46.9**	**-0.3**
BBLS				*e*Sg	**Sb**	**00 19 03.5**	**+0.5**
PDG	**Podgorica**	**1.23**	**131**	⇑P	**Pg**	**00 18 46.5**	**-1.5**
PDG				⇑S	**Sg**	**00 19 02.9**	**-1.0**
PDG	**Podgorica**	**1.23**	**131**	*e*Pg	**Pg**	**00 18 46.2**	**-1.7**
PDG				*e*Sg	**Sg**	**00 19 03.7**	**-0.2**
PDG	**Podgorica**	**1.23**	**131**	⇓*i*Pg	**Pg**	**00 18 46.2**	**-1.7**
PDG				*i* Sg	**Sn**	**00 19 06.3**	**+1.4**
DRME	**Dracevica, Mon**	**1.37**	**140**	*e*Pg	**Pn**	**00 18 49.5**	**-0.5**
DRME	**Dracevica, Mon**	**1.37**	**140**	⇓*i*Pg	**Pn**	**00 18 49.4**	**-0.5**
DRME				*e*Sg	**Sn**	**00 19 10.5**	**+2.1**
KIJV	**Kijevo**	**1.39**	**304**	*e*Pn	**Pn**	**00 18 50.2**	**0.0**
KIJV				Sg	**Sn**	**00 19 09.7**	**+0.8**
BEY	**Berane**	**1.43**	**105**	*e*Pg	**Pn**	**00 18 51.3**	**+0.4**
IVA	**Berane**	**1.43**	**105**	⇓*i*Pg	**Pn**	**00 18 51.3**	**+0.4**
IVA				*i* Sg	**Sn**	**00 19 12.5**	**+2.4**
SJES	**Sjenica**	**1.44**	**89**	*e*Pg	**Pn**	**00 18 51.4**	**+0.4**
SJES				*e*Sg	**Sb**	**00 19 10.9**	**+0.8**
PVY	**Plav**	**1.57**	**114**	*e*Pg	**Pb**	**00 18 54.1**	**+0.2**
PVY	**Plav**	**1.57**	**114**	⇑*i*Pg	**Pn**	**00 18 53.2**	**+0.3**
PVY				*i* Sg	**Sg**	**00 19 16.1**	**+1.1**
ULC	**Ulcinj**	**1.57**	**144**	⇓*i*Pg	**Pn**	**00 18 53.0**	**+0.2**
ULC				*i* Sg	**Sg**	**00 19 15.6**	**+0.6**
IVAS	**Ivanjica**	**1.60**	**77**	*e*Pg	**Pn**	**00 18 52.7**	**-0.5**
IVAS				*e*Sg	**Sn**	**00 19 14.5**	**+0.4**
BLY	**Banja Luka**	**1.61**	**339**	⇑*i*Pn	**Pn**	**00 18 53.4**	**0.0**
BLY				*e*Sn	**Sn**	**00 19 14.1**	**-0.4**
BLY	**Banja Luka**	**1.61**	**339**	⇑P	**Pn**	**00 18 54.0**	**+0.6**
BLY				⇑S	**Sb**	**00 19 15.3**	**+0.1**
BLY	**Banja Luka**	**1.61**	**339**	*e*Pg	**Pn**	**00 18 53.9**	**+0.5**
BLY				*e*Sg	**Sg**	**00 19 19.4**	**+3.1**
DIVS	**Divibare**	**1.67**	**59**	*e*Pg	**Pn**	**00 18 53.8**	**-0.4**
DIVS				*e*Sg	**Sg**	**00 19 18.7**	**+0.6**
TEKS	**Tekeris**	**1.70**	**40**	*e*Pn	**Pn**	**00 18 53.7**	**-0.9**

TEKS				*e*Sn	**Sn**	**00 19 15.4**	**-1.3**
ZIRJ	**Zirje**	**1.77**	**284**	*e*Pn	**Pn**	**00 18 56.0**	**+0.5**
ZIRJ				Sn	**Sb**	**00 19 19.3**	**-0.3**
MORI	**Morici**	**1.78**	**291**	*e*Pn	**Pb**	**00 18 56.4**	**-1.0**
MORI				Sn	**Sb**	**00 19 20.1**	**+0.1**
TRUS	**Trudelj**	**1.99**	**60**	*e*Pn	**Pn**	**00 18 58.1**	**-0.5**
GRUS	**Gruza**	**2.07**	**71**	*e*Pn	**Pn**	**00 18 59.3**	**-0.3**
GOCS	**Kraljevo Serbi**	**2.11**	**80**	*e*Pn	**Pn**	**00 19 00.1**	**-0.2**
GOCS				*e*Sn	**Sn**	**00 19 26.8**	**-0.1**
DUGI	**Dugi Otok**	**2.27**	**290**	*e*Pn	**Pn**	**00 19 03.2**	**+0.8**
DUGI				Sn	**Sb**	**00 19 32.8**	**-1.2**
SELS	**Selova**	**2.27**	**90**	*e*Pn	**Pn**	**00 19 02.8**	**+0.3**
SELS				*e*Sn	**Sn**	**00 19 30.2**	**-0.6**
FRGS	**Fruska Gora**	**2.31**	**34**	*e*Pn	**Pn**	**00 19 01.8**	**-1.1**
FRGS				*e*Sn	**Sn**	**00 19 31.4**	**-0.2**
AVAS	**Avala Beograd**	**2.32**	**50**	*e*Pn	**Pn**	**00 19 02.4**	**-0.6**
AVAS				*e*Sn	**Sn**	**00 19 30.3**	**-1.5**
PLIT	**Plitvice**	**2.37**	**314**	*e*Pn	**Pn**	**00 19 04.6**	**+0.8**
PLIT				Sn	**Sn**	**00 19 34.8**	**+1.7**
VIRC	**Vir**	**2.38**	**297**	*e*Pn	**Pn**	**00 19 05.2**	**+1.4**
VIRC				Sn	**Sb**	**00 19 35.4**	**-1.8**
NVLJ	**Novalja**	**2.62**	**301**	*e*Pn	**Pn**	**00 19 08.4**	**+1.3**
NVLJ				Sn	**Sn**	**00 19 40.4**	**+1.2**
RABC	**Rab**	**2.77**	**304**	*e*Pn	**Pn**	**00 19 11.0**	**+1.7**
RABC				Sn	**Sn**	**00 19 44.6**	**+1.6**
MATE	**Matera**	**2.77**	**201**	⇑P	**Pn**	**00 19 08.2**	**-1.1**
MATE				⇑S	**Sn**	**00 19 40.7**	**-2.2**
BARS	**Barje**	**2.82**	**97**	*e*Pn	**Pn**	**00 19 10.3**	**+0.3**
BARS				*e*Sn	**Sn**	**00 19 43.3**	**-1.0**
SKO	**Skopje**	**2.83**	**116**	*i* Pn	**Pn**	**00 19 12.3**	**+2.2**
SKO				*i* Sn	**Sn**	**00 19 47.4**	**+2.9**
KUBS	**Kucevo**	**2.90**	**65**	*e*Pn	**Pn**	**00 19 09.3**	**-1.7**
OHR	**Ohrid**	**2.98**	**135**	*i* Pn	**Pb**	**00 19 15.2**	**-2.6**
OHR				*i* Sn	**Sg**	**00 20 02.5**	**+2.6**
OZLJ	**Ozalj**	**2.99**	**323**	*e*Pn	**Pn**	**00 19 13.4**	**+1.3**
OZLJ				Sn	**Sn**	**00 19 49.2**	**+1.0**
BOJS	**Bojanci**	**3.00**	**320**	*e*Pn	**Pn**	**00 19 13.5**	**+1.1**
BOJS				*e*Sn	**Sn**	**00 19 48.9**	**+0.3**
BOJS	**Bojanci**	**3.00**	**320**	*i* Pn	**Pn**	**00 19 13.8**	**+1.4**
BOJS				*i* Sn	**Sn**	**00 19 51.3**	**+2.6**
MORH	**Mrgy, Hungar**	**3.00**	**8**	⇑*i*Pn	**Pn**	**00 19 11.4**	**-1.0**
MORH				*e*Sn	**Sn**	**00 19 48.1**	**-0.6**
MORH	**Mrgy, Hungar**	**3.00**	**8**	⇑P	**Pn**	**00 19 12.0**	**-0.4**
MORH	**Mrgy, Hungar**	**3.00**	**8**	*e*Pn	**Pn**	**00 19 11.7**	**-0.7**
BORS2	**Bor- Borsko je**	**3.03**	**72**	*e*Pn	**Pn**	**00 19 11.2**	**-1.6**
MDVR	**Moldovita**	**3.08**	**59**	⇑P	**Pn**	**00 19 13.6**	**0.0**
ZAGS	**Zajecar**	**3.12**	**78**	*e*Pn	**Pn**	**00 19 13.8**	**-0.3**
RIY	**Rijeka**	**3.27**	**311**	*e*Pn	**Pn**	**00 19 16.9**	**+0.7**
RIY				Sn	**Sn**	**00 19 57.1**	**+1.7**
RIY	**Rijeka**	**3.27**	**311**	*e*Pn	**Pn**	**00 19 17.8**	**+1.6**
BEHE	**Becsehely**	**3.34**	**345**	⇑*i*Pn	**Pn**	**00 19 17.0**	**-0.1**
BEHE				*e*Sn	**Sn**	**00 19 56.1**	**-0.9**
BOSS	**Bosilegrad**	**3.37**	**101**	*e*Pn	**Pn**	**00 19 18.0**	**+0.5**
BOSS				*e*Sn	**Sn**	**00 19 57.8**	**0.0**
ZAPS	**Zavoj**	**3.38**	**88**	*e*Pn	**Pn**	**00 19 18.1**	**+0.4**
ZAPS				*e*Sn	**Sn**	**00 19 57.8**	**-0.2**
AQU	**L'Aquila**	**3.51**	**257**	⇑*i*Pn	**Pn**	**00 19 19.3**	**-0.1**
AQU				*e*Sn	**Sn**	**00 19 59.5**	**-1.7**
BZS	**Buzias**	**3.51**	**46**	⇓P	**Pn**	**00 19 20.5**	**+1.1**
BZS	**Buzias**	**3.51**	**46**	*e*Pn	**Pn**	**00 19 18.3**	**-1.1**
BZS				*e*Sn	**Sn**	**00 19 59.0**	**-2.1**
HERR	**Herculane**	**3.57**	**61**	⇓P	**Pn**	**00 19 20.4**	**+0.2**
SKDS	**Skadanscina**	**3.67**	**310**	*e*Pn	**Pn**	**00 19 22.9**	**+1.2**
VTS	**Vitosha**	**3.89**	**98**	*e*Pn	**Pn**	**00 19 25.1**	**+0.3**
VAY	**Valandovo**	**3.89**	**118**	*i* Pn	**Pn**	**00 19 25.5**	**+0.8**
SOKA	**Soboth**	**4.03**	**329**	*e*Pn	**Pn**	**00 19 27.4**	**+0.8**
	43nm,0.7s,SNR=13						
SOKA				*e*Sn	**Sn**	**00 20 13.8**	**-0.3**
	44nm,0.7s						
GZR	**Gura Zlata**	**4.04**	**56**	⇓P	**Pn**	**00 19 26.6**	**-0.1**
GZR	**Gura Zlata**	**4.04**	**56**	*e*Pn	**Pn**	**00 19 25.9**	**-0.8**
OBKA	**Obir**	**4.08**	**324**	*i* Pn	**Pn**	**00 19 29.6**	**+2.2**
	6.2nm,0.3s,SNR=7.3						
OBKA				*e*Sn	**Sn**	**00 20 14.5**	**-1.0**
	30nm,0.5s						
IGT	**Igoumenitsa**	**4.10**	**154**	*e*Pn	**Pn**	**00 19 26.2**	**-1.4**
TIP	**Timpagrande**	**4.17**	**193**	⇑P	**Pn**	**00 19 27.7**	**-0.9**
ARSA	**Arzberg**	**4.37**	**337**	*e*Pn	**Pn**	**00 19 31.6**	**+0.3**
	14nm,0.3s,SNR=13						
ARSA				*e*Sn	**Sn**	**00 20 20.8**	**-1.7**
	8.2nm,0.4s						
ARSA	**Arzberg**	**4.37**	**337**	*e*Pn	**Pn**	**00 19 31.9**	**+0.6**
DEV	**Deva**	**4.38**	**51**	⇓P	**Pn**	**00 19 31.0**	**-0.4**
MYKA	**Terra Mystica**	**4.59**	**319**	*i* Pn	**Pn**	**00 19 36.3**	**+2.0**
	5.3nm,0.4s,SNR=5.4						
MYKA				*i* Sn	**Sn**	**00 20 27.5**	**-0.4**
	9.5nm,0.4s						
RONA	**Rosalia, Austr**	**4.61**	**345**	*i* Pn	**Pn**	**00 19 33.4**	**-1.2**
	6.0nm,0.4s						
SRS	**Serrai**	**4.66**	**115**	*e*Pn	**Pn**	**00 19 36.5**	**+1.2**
LOT	**Lotru**	**4.68**	**60**	⇓P	**Pn**	**00 19 35.9**	**+0.3**
PSZ	**Piszkesteto**	**4.86**	**15**	⇑P	**Pn**	**00 19 38.2**	**+0.2**
DRGR		**4.87**	**42**	⇑P	**Pn**	**00 19 37.9**	**-0.2**
CONA	**Conrad Observa**	**4.92**	**343**	*e*Pn	**Pn**	**00 19 39.6**	**+0.8**
	4.4nm,0.4s,SNR=5.4						
CONA				*i* Sn	**Sn**	**00 20 32.6**	**-3.5**
	8.5nm,0.5s						
MARR	**Marisel-Cluj**	**4.99**	**45**	⇑P	**Pn**	**00 19 40.6**	**+0.7**
KBA	**Koelnbreinsper**	**5.05**	**321**	*i* Pn	**Pn**	**00 19 42.5**	**+1.7**
	7.3nm,0.4s,SNR=12						
KBA				*e*Sn	**Sn**	**00 20 39.7**	**+0.2**
	7.4nm,0.4s						
MODS	**Modra-Piesok**	**5.15**	**355**	*e*PN	**Pn**	**00 19 42.2**	**+0.2**
MODS				*e*SN	**Sn**	**00 20 40.4**	**-1.3**
ARR	**Arges**	**5.21**	**64**	⇑P	**Pn**	**00 19 43.1**	**+0.3**
ABTA	**Abfaltersbach**	**5.24**	**314**	*i* Pn	**Pn**	**00 19 45.0**	**+1.8**
	11nm,0.3s,SNR=5.0						
ABTA				*e*Sn	**Sn**	**00 20 47.4**	**+3.5**
	20nm,0.8s						
MOA	**Molln**	**5.30**	**332**	*i* Pn	**Pn**	**00 19 45.8**	**+1.7**
	6.4nm,0.3s,SNR=14						
MOA				*i* Sn	**Sn**	**00 20 45.0**	**-0.4**
	24nm,0.6s						
BIOA	**Bad Ischl, Aus**	**5.40**	**327**	*i* Pn	**Pn**	**00 19 47.0**	**+1.6**
	14nm,0.4s,SNR=27						
BIOA				*i* Sn	**Sn**	**00 20 46.9**	**-1.0**
	13nm,0.5s						
KECS	**Kecovo**	**5.51**	**17**	*e*PN	**Pn**	**00 19 46.1**	**-0.9**
KECS				*e*SN	**Sn**	**00 20 45.5**	**-5.1**
LESA	**Schwarzleotal**	**5.62**	**320**	*e*Pn	**Pn**	**00 19 50.1**	**+1.7**
	14nm,0.3s,SNR=30						
LESA				*e*Sn	**Sn**	**00 20 54.4**	**+1.1**
	11nm,0.4s						
KRUC	**Moravsky**	**5.92**	**350**	*e*PN	**Pn**	**00 19 52.8**	**+0.2**
WTTA	**Wattenberg**	**6.03**	**314**	*e*Pn	**Pn**	**00 19 56.2**	**+2.0**
	21nm,0.3s,SNR=34						
WTTA				*i* Sn	**Sn**	**00 21 05.9**	**+2.4**
	16nm,0.5s						
WATA	**Walderalm**	**6.11**	**314**	*i* Pn	**Pn**	**00 19 57.6**	**+2.4**
	22nm,0.4s,SNR=32						
WATA				*i* Sn	**Sn**	**00 21 06.8**	**+1.4**
	11nm,0.4s						
MLR	**Muntele Rosu**	**6.12**	**66**	Pn	**Pn**	**00 19 58.6**	**+3.3**
	2.4nm,0.9s,baz=255,slow=12						
MLR	**Muntele Rosu**	**6.12**	**66**	⇑P	**Pn**	**00 19 56.1**	**+0.7**
MAUC	**Maruska**	**6.12**	**359**	*e*PN	**Pn**	**00 19 57.6**	**+2.3**
CKRC	**Cesky Krumlov**	**6.14**	**337**	*e*PN	**Pn**	**00 19 55.4**	**-0.2**
CKRC				*e*SN	**Sn**	**00 21 04.6**	**-1.4**
VRAC	**Vranov**	**6.14**	**351**	Pn	**Pn**	**00 19 58.6**	**+3.1**
	0.3nm,0.3s,baz=176,slow=15,SNR=2.4						
VRAC				Sn	**Sn**	**00 21 06.3**	**+0.3**
	0.5nm,0.3s,baz=208,slow=17,SNR=1.5						
	1.1nm,0.4s						
VRAC	**Vranov**	**6.14**	**351**	*e*PN	**Pn**	**00 19 56.0**	**+0.4**
SQTA	**Sankt Quirin**	**6.23**	**312**	*i* Pn	**Pn**	**00 19 59.7**	**+2.8**
	7.9nm,0.3s,SNR=17						
SQTA				*e*Sn	**Sn**	**00 21 09.6**	**+1.1**
	18nm,0.4s						
GERES	**GERESS Array B**	**6.35**	**333**	Pn	**Pn**	**00 19 59.7**	**+1.2**
	0.2nm,0.3s,baz=153,slow=14,SNR=32						
GERES				Sn	**Sn**	**00 21 12.3**	**+1.0**
	0.2nm,0.3s,baz=149,slow=23,SNR=9.5						
	3.1nm,0.3s						
FETA	**Feichten**	**6.38**	**309**	*i* Pn	**Pn**	**00 20 01.8**	**+2.8**
	4.2nm,0.5s,SNR=6.1						
FETA				*i* Sn	**Sn**	**00 21 13.1**	**+0.8**
	17nm,0.7s						
MORC	**Moravsky Berou**	**6.54**	**357**	⇓P	**Pn**	**00 20 02.1**	**+1.0**
STHS	**Stebnicka Huta**	**6.56**	**19**	*e*SN	**Sn**	**00 21 13.6**	**-2.9**
RETA	**Reutte**	**6.63**	**312**	*i* Pn	**Pn**	**00 20 04.9**	**+2.5**
	4.4nm,0.3s,SNR=9.8						
RETA				*e*Sn	**Sn**	**00 21 19.4**	**+1.1**
	6.4nm,0.3s						
KHC	**Kasperske Hory**	**6.64**	**334**	*e*PN	**Pn**	**00 20 03.4**	**+1.0**
KHC				*e*SN	**Sn**	**00 21 16.9**	**-1.5**
BURAR	**Bucovina Array**	**6.69**	**47**	⇓P	**Pn**	**00 20 04.0**	**+0.8**
ZVC	**Zvikov**	**6.73**	**338**	*e*PN	**Pn**	**00 20 05.9**	**+2.2**
ZVC				*e*SN	**Sn**	**00 21 17.9**	**-2.7**
DAVOX	**Davos/Dischmat**	**6.76**	**304**	Pn	**Pn**	**00 20 05.7**	**+1.5**
	1.4nm,0.3s,baz=120,slow=20,SNR=18						
DAVOX				Sn	**Sn**	**00 21 17.2**	**-4.3**
	1.2nm,0.3s,baz=303,slow=13,SNR=1.4						
	6.9nm,0.4s						
DAVA	**Damuels**	**7.01**	**308**	*i* Pn	**Pn**	**00 20 10.9**	**+3.2**
	2.1nm,0.3s						
DAVA				*i* Sn	**Sn**	**00 21 26.7**	**-1.1**
	18nm,0.5s						
IDI	**Anoyia**	**9.57**	**144**	Pn	Pn	00 20 34.0	-8.7
	0.1nm,0.3s,baz=51,slow=20,SNR=1.4						
IDI				Sn	Sn	00 22 20.1	-10
	0.2nm,0.3s,baz=303,slow=20,SNR=1.9						
KEST	**Kesra**	**10.05**	**225**	Pn	**Pn**	**00 20 51.0**	**+1.8**
	0.2nm,0.3s,baz=37,slow=10,SNR=4.2						
	2.5nm,0.7s						
FINES	**FINESS Array B**	**18.85**	**12**	P	**Pn**	**00 22 45.5**	**+0.2**
	0.1nm,0.3s,baz=194,slow=9.4,SNR=2.6						
	4.6nm,1.0s						

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*IDC **21** 00:22:47.0±0.9, 35°.61N×117°.34W, h0^{km}, mb3.4/2, mbtmp3.2/7, ML3.4/4, Error ellipse: s-maj=18.9km s-min=6.9km az=75.0*

*PAS **21** 00:22:47.8±1.5, 35°.653N±0°.007×117°.45W±0°.01, h3^{km}±1^{km}, ML3.8/122, ML3.5/186(NEIC), Error ellipse: s-maj=1.4km s-min=1.0km az=100.0*

*NEIC **21** 00:22:47.1±1.5, 35°.639N±0°.010×117°.44W±0°.01, h6^{km}±1^{km}, Error ellipse: s-maj=1.5km s-min=1.2km az=135.0*

ISC 21 00:22:47.8±0.8**, 35°.64N**±0°.02×**117°.43W**±0°.02**, h7**^{km}±6^{km}**, n97, σ0^{s}89**/102**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSHM	**Spangler Hills**	**0.07**	**230**		**Pg**	**00 22 49.3**	**-0.3**
WSHM				Sg	**Sg**	**00 22 50.7**	**-0.3**
WSHM				IAML		00 22 50.8	
	65μm,0.2s						
CCCA	**Chr Cany lake**	**0.13**	**155**		**Pg**	**00 22 51.2**	**+0.6**
GPO	**China Lake**	**0.19**	**272**		**Pg**	**00 22 51.5**	**-0.1**
CLC	**China Lake**	**0.22**	**322**		**Pg**	**00 22 51.8**	**-0.4**
CLC				IAML		00 22 55.2	
	comp=N,7μm,0.4s						
CLC				IAML		00 22 55.3	
	comp=E,7μm,0.4s						
LRMC	**Laurel Mtn Rad**	**0.26**	**232**		**Pg**	**00 22 52.8**	**-0.2**
LRMC				Sg	**Sg**	**00 22 56.7**	**+0.2**
LRMC				IAML		00 22 57.1	
	comp=E,13μm,0.5s						
LRMC				IAML		00 22 57.2	
	comp=N,12μm,0.4s						
SRTC	**Snort**	**0.26**	**281**		**Pg**	**00 22 53.1**	**+0.1**
SRTC					**Sb**	**00 22 57.5**	**-2.1**
TOW	**Tower One**	**0.32**	**302**		**Pg**	**00 22 54.1**	**+0.1**
TOW					**Sb**	**00 22 59.3**	**-1.9**
RCWM	**Renegade Canyo**	**0.35**	**330**		**Pg**	**00 22 54.4**	**-0.4**
RCWM					**Sg**	**00 22 59.2**	**-0.3**
MPMC	**Manual Prospec**	**0.42**	**354**		**Pg**	**00 22 55.5**	**-0.5**
MPMC					**Sg**	**00 23 01.3**	**-0.3**
MPMC				IAML		00 23 03.1	
	comp=N,6μm,0.6s						
WNMM	**Nine Mile Cany**	**0.43**	**298**		**Sg**	**00 23 02.1**	**+0.2**
WVPM	**Volcano Peak E**	**0.44**	**315**		**Pg**	**00 22 56.0**	**-0.4**
WVPM					**Sg**	**00 23 02.5**	**+0.4**
WCSM	**Coso Springs S**	**0.47**	**325**		**Pg**	**00 22 56.4**	**-0.6**
WCSM					**Sg**	**00 23 02.8**	**-0.3**
DTP	**Desert Tortois**	**0.50**	**222**		**Pg**	**00 22 57.1**	**-0.4**
DTP					**Sg**	**00 23 04.3**	**+0.2**
WRVM	**Rose V. Centra**	**0.52**	**315**		**Pg**	**00 22 57.5**	**-0.5**
WRVM					**Sg**	**00 23 04.4**	**-0.4**
QSM	**Queen of Sheba**	**0.56**	**55**		**Pg**	**00 22 58.6**	**0.0**
QSM				Sg	**Sg**	**00 23 06.4**	**+0.5**
QSM				IAML		00 23 07.2	
	comp=N,5μm,0.2s						
WCHM	**Chimney Peak**	**0.58**	**295**		**Pg**	**00 22 58.4**	**-0.6**
WCHM					**Sg**	**00 23 05.8**	**-0.7**
MFS	**McCloud Flat S**	**0.59**	**324**		**Pg**	**00 22 58.6**	**-0.6**
MFS					**Sg**	**00 23 06.8**	**0.0**
WBSM	**Bird Springs**	**0.59**	**260**		**Sg**	**00 23 06.3**	**-0.6**
GSC	**Goldstone, Bar**	**0.61**	**123**		**Pb**	**00 22 59.8**	**-1.1**
GSC				IAML		00 23 08.7	
	comp=E,2μm,0.4s						
GSC				IAML		00 23 12.5	
	comp=N,2μm,0.3s						
GSC	**Goldstone, Bar**	**0.61**	**123**		**Sb**	**00 23 08.4**	**-1.3**
DAC	**Darwin (Calif)**	**0.65**	**348**		**Pg**	**00 22 59.4**	**-1.0**
DAC					**Sg**	**00 23 08.1**	**-0.7**
WORM	**Onyx Ranch**	**0.66**	**275**		**Pg**	**00 22 59.9**	**-0.7**
WORM					**Sg**	**00 23 08.5**	**-0.8**
CCAC	**Calif City Air**	**0.68**	**225**		**Pg**	**00 23 00.5**	**-0.4**
CCAC					**Sg**	**00 23 10.1**	**+0.3**
WHFM	**Hanning Flat**	**0.75**	**274**		**Pg**	**00 23 01.6**	**-0.7**
WHFM					**Sg**	**00 23 11.2**	**-0.8**
HYS	**Haystack Butte**	**0.78**	**188**		**Pg**	**00 23 02.5**	**-0.4**
HYS					**Sg**	**00 23 13.2**	**+0.1**
GWY	**Greenwater Val**	**0.82**	**48**		**Pg**	**00 23 03.2**	**-0.4**
GWY					**Sg**	**00 23 14.3**	**0.0**
GWY				IAML		00 23 19.4	
	comp=N,3μm,0.3s						
RRX	**Edison Barstow**	**0.84**	**155**		**Pb**	**00 23 04.0**	**-0.8**
RRX					**Sb**	**00 23 16.1**	**-0.2**
ISA	**Isabella, Lake**	**0.85**	**272**		**Pg**	**00 23 03.4**	**-0.8**
ISA				IAML		00 23 15.1	
	comp=E,1μm,0.5s						
ISA				IAML		00 23 17.8	
	comp=N,2μm,0.5s						
ISA	**Isabella, Lake**	**0.85**	**272**		**Sg**	**00 23 14.5**	**-0.7**
ALV	**Alvord Mountai**	**0.87**	**131**		**Pb**	**00 23 04.6**	**-0.7**
ALV					**Sb**	**00 23 16.4**	**-0.8**
WLHM	**Little Horse**	**0.88**	**306**		**Sg**	**00 23 15.4**	**-0.7**
EDW2	**Edwards Air Fo**	**0.89**	**211**		**Sg**	**00 23 16.1**	**-0.3**
WASM	**Alta Sierra Ca**	**0.92**	**276**		**Pg**	**00 23 04.8**	**-0.8**
WASM					**Sg**	**00 23 16.9**	**-0.7**
FURC	**Furnace Creek,**	**0.94**	**29**		**Pg**	**00 23 05.7**	**-0.2**
FURC	**Furnace Creek,**	**0.94**	**29**		**Sb**	**00 23 18.6**	**-0.5**
CWC	**Cottonwood Cre**	**0.95**	**327**		**Pg**	**00 23 05.3**	**-0.8**
CWC					**Sg**	**00 23 17.9**	**-0.7**
CGO	**Cerro Gordo**	**0.96**	**342**		**Pg**	**00 23 05.2**	**-1.0**
CGO					**Sg**	**00 23 18.1**	**-0.6**
SHOC	**Shoshone, Teco**	**0.97**	**74**		**Pb**	**00 23 06.6**	**-0.3**
TPO	**Tropico Hills**	**1.00**	**221**		**Pg**	**00 23 06.3**	**-0.7**
TPO				IAML		00 23 22.9	
	comp=N,2μm,0.7s						
DSCC	**Desert Studies**	**1.19**	**114**		**Pg**	**00 23 09.6**	**-1.1**
SPG2	**Springville 2**	**1.22**	**298**		**Pg**	**00 23 09.9**	**-1.3**
ARVC	**Arvin**	**1.25**	**246**		**Pg**	**00 23 10.7**	**-1.2**
WCT	**Wildcat Mounta**	**1.32**	**29**		**Pg**	**00 23 11.8**	**-1.3**
WCT				IAML		00 23 32.8	
	comp=E,1μm,0.4s						
WCT				IAML		00 23 32.0	
	comp=N,893nm,0.5s						
GRAC	**Grapevine Rang**	**1.35**	**2**		**Pn**	**00 23 12.7**	**-0.4**
VES	**Vestal, Richgr**	**1.36**	**279**		**Pn**	**00 23 12.8**	**-0.4**
VES				IAML		00 23 34.4	
	comp=N,1μm,0.7s						
VES				IAML		00 23 36.4	
	comp=E,1μm,0.8s						
OSI	**Osito Audit: C**	**1.47**	**226**		**Pn**	**00 23 13.9**	**-0.9**
OSI				IAML		00 23 39.6	
	comp=N,861nm,0.6s						
OSI				IAML		00 23 41.4	
	comp=E,824nm,0.6s						
MWC	**Mount Wilson**	**1.50**	**200**		**Pn**	**00 23 14.7**	**-0.6**
MWC				IAML		00 23 41.0	
	comp=E,1μm,0.6s						
MTPC	**Mountain Pass**	**1.54**	**95**		**Pn**	**00 23 14.8**	**-1.0**
MTPC				IAML		00 23 39.4	
	comp=E,507nm,0.2s						
MTPC				IAML		00 23 40.1	
	comp=N,458nm,0.2s						
TIN	**Tinemaha, Big**	**1.55**	**336**		**Pn**	**00 23 15.8**	**-0.1**
TIN				IAML		00 23 43.1	
	comp=E,875nm,0.6s						
TIN				IAML		00 23 47.8	
	comp=N,891nm,0.8s						
PASC	**Pasadena Art C**	**1.59**	**203**		**Pn**	**00 23 16.0**	**-0.4**
PASC				IAML		00 23 41.6	
	comp=E,514nm,0.7s						
PASC				IAML		00 23 42.0	
	comp=N,503nm,0.5s						
TPNV	**Topopah Spring**	**1.62**	**36**		**Pn**	**00 23 16.2**	**-0.7**
GMN	**Gold Mountain**	**1.66**	**5**	IAML		00 23 47.4	
	comp=N,324nm,0.6s						
DSP	**Deep Springs**	**1.78**	**346**		**Pn**	**00 23 18.5**	**-0.4**
DANC	**Danby, Needles**	**1.96**	**120**		**Pn**	**00 23 20.2**	**-1.2**
DANC				IAML		00 23 54.8	
	comp=N,568nm,0.4s						
ELS	**Elsinore Mount**	**1.99**	**180**		**Pn**	**00 23 21.2**	**-0.7**
ELS				IAML		00 23 51.1	
	comp=N,333nm,0.3s						
ELS				IAML		00 23 51.8	
	comp=E,503nm,0.3s						
SHPR	**Sheep Range**	**2.03**	**64**		**Pn**	**00 23 22.2**	**-0.4**
PMD	**Palm Desert**	**2.17**	**156**	IAML		00 24 00.3	
	comp=E,172nm,0.4s						
PFO	**Pinyon Flats O**	**2.18**	**158**	Pn	**Pn**	**00 23 23.3**	**-1.2**
	comp=E,3.3nm,0.3s,baz=335,slow=12,SNR=32						
PFO				Lg	Lg	00 23 55.1	
	comp=E,61nm,0.3s,baz=59,slow=13,SNR=15						
	comp=E,13nm,0.3s						
PFO	**Pinyon Flats O**	**2.18**	**158**		**Pn**	**00 23 23.8**	**-0.7**
PFO				IAML		00 23 59.4	
	comp=E,167nm,0.6s						
MDPB	**Devils Postpil**	**2.39**	**327**		**Pn**	**00 23 28.8**	**+1.3**
IRM	**Iron Mountain**	**2.39**	**128**		**Pn**	**00 23 27.4**	**0.0**
IRM				IAML		00 24 06.2	
	comp=E,140nm,0.4s						
IRM				IAML		00 24 06.5	
	comp=N,141nm,0.6s						
S11A	**Rachel**	**2.41**	**34**		**Pn**	**00 23 28.6**	**+0.8**
S11A				IAML		00 24 08.9	
	comp=N,409nm,0.6s						
NEE2	**Needles Airpor**	**2.46**	**110**		**Pn**	**00 23 26.9**	**-1.4**
NEE2				IAML		00 24 15.4	
	comp=N,375nm,0.8s						
NEE2				IAML		00 24 19.6	
	comp=E,260nm,0.5s						
BORC	**Borrego Spring**	**2.51**	**160**	IAML		00 24 08.9	
	comp=E,216nm,0.3s						
BORC				IAML		00 24 16.7	
	comp=N,178nm,0.8s						
PKD	**Bear Valley Ra**	**2.55**	**278**		**Pn**	**00 23 29.5**	**0.0**
BC3	**Big Chuckawall**	**2.57**	**140**		**Pn**	**00 23 28.6**	**-1.3**
BC3				IAML		00 24 12.4	
	comp=N,169nm,0.4s						
BC3				IAML		00 24 13.2	
	comp=E,149nm,0.5s						
PRN	**Pahroc Range**	**2.60**	**47**		**Pn**	**00 23 31.5**	**+1.1**
DPP	**Dos Picos Cty**	**2.67**	**171**		**Pn**	**00 23 30.6**	**-0.6**
DPP				IAML		00 24 12.4	
	comp=E,206nm,0.7s						
CPE	**Camp Elliot**	**2.76**	**174**		**Pn**	**00 23 32.4**	**+0.1**
CPE				IAML		00 24 14.3	
	comp=N,245nm,0.3s						
CPE				IAML		00 24 15.9	
	comp=E,242nm,0.2s						
PMPB	**Monarch Peak**	**2.79**	**283**		**Pn**	**00 23 33.4**	**+0.4**
PMPB				IAML		00 24 17.3	
	comp=E,215nm,0.7s						
PMPB				IAML		00 24 33.2	
	comp=N,209nm,0.8s						
NV11	**Mina Array Sit**	**2.84**	**348**		**Pn**	**00 23 33.7**	**0.0**
NVAR	**Mina Array Bea**	**2.87**	**346**	Pn	**Pn**	**00 23 34.1**	**0.0**
	comp=N,2.8nm,0.3s,baz=168,slow=12,SNR=36						
NVAR				Pg	**Pb**	**00 23 40.5**	**+1.1**
	comp=N,20nm,0.3s,baz=160,slow=15,SNR=56						
NVAR				Lg	Lg	00 24 18.2	
	comp=N,7.2nm,0.3s,baz=162,slow=29,SNR=3.0						
	comp=N,5.7nm,0.6s						
W13A	**Hualapai Mount**	**2.95**	**100**		**Pn**	**00 23 34.9**	**-0.3**
BAR	**Barrett**	**3.02**	**168**	IAML		00 24 23.6	
	comp=E,179nm,0.3s						
BAR				IAML		00 24 25.6	
	comp=N,133nm,0.5s						
BLYC	**Blythe**	**3.05**	**127**	IAML		00 24 27.6	
	comp=N,116nm,0.4s						
BLYC				IAML		00 24 37.7	
	comp=E,87nm,0.7s						
HULI	**Fort Hunter Li**	**3.12**	**278**	IAML		00 24 30.0	
	comp=N,80nm,1.5s						
CMB	**Columbia Colle**	**3.37**	**316**	IAML		00 24 37.5	
	comp=N,70nm,0.8s						
CMB				IAML		00 24 38.2	
	comp=E,60nm,0.7s						
MHC	**Mount Hamilton**	**3.79**	**298**		**Pn**	**00 23 47.4**	**+0.6**
MHC				IAML		00 24 51.6	
	comp=E,53nm,0.8s						
MHC				IAML		00 25 00.8	
	comp=N,59nm,0.8s						
ESJX	**Sierra Juarez**	**3.83**	**161**	IAML		00 24 52.1	
	comp=N,41nm,0.7s						
ESJX				IAML		00 24 52.4	
	comp=E,68nm,0.9s						
PNTR	**Pine Nut**	**3.85**	**334**	IAML		00 25 10.6	
	comp=E,49nm,1.2s						
PNTR				IAML		00 25 22.9	
	comp=N,59nm,1.0s						
KNB	**Kanab**	**3.97**	**68**	IAML		00 24 58.4	
	comp=N,37nm,0.9s						
KNB				IAML		00 25 01.4	
	comp=E,52nm,0.9s						
SZCU	**Shurtz Canyon**	**4.00**	**60**	IAML		00 24 57.5	
	comp=E,37nm,0.3s						
Y14A	**Wickenburg**	**4.02**	**114**	IAML		00 24 59.9	
	comp=N,74nm,0.6s						
Y14A				IAML		00 25 01.3	
	comp=E,50nm,0.3s						
PSUT	**Pine Spring**	**4.06**	**44**	IAML		00 25 06.0	
	comp=N,48nm,0.9s						
PSUT				IAML		00 25 08.6	
	comp=E,60nm,1.1s						
SPR3	**Spring Creek 3**	**4.16**	**35**	IAML		00 25 00.7	
	comp=E,43nm,0.6s						
SPR3				IAML		00 25 10.0	
	comp=N,40nm,0.7s						
U15A	**North Rim**	**4.24**	**78**	IAML		00 25 01.4	
	comp=E,49nm,0.9s						
U15A				IAML		00 25 07.0	
	comp=N,48nm,1.1s						
VTX	**Valle De La Tr**	**4.46**	**162**	IAML		00 24 41.8	
	comp=E,57nm,0.5s						
VTX				IAML		00 24 52.5	
	comp=N,65nm,0.1s						
PKCU	**Pink Cliffs**	**4.50**	**65**	IAML		00 25 11.5	
	comp=N,57nm,0.7s						
PKCU				IAML		00 25 14.2	
	comp=E,68nm,0.9s						
MTPU	**Mount Pierson**	**4.84**	**59**	IAML		00 25 36.8	
	comp=N,22nm,1.4s						
WUAZ	**Wupatki**	**4.94**	**90**	IAML		00 25 32.7	
	comp=N,47nm,0.5s						
WUAZ				IAML		00 25 36.5	
	comp=N,31nm,0.8s						
TCRU	**Three Creeks R**	**4.96**	**52**	IAML		00 25 34.8	
	comp=N,32nm,1.4s						
TCRU				IAML		00 25 38.5	
	comp=E,32nm,0.9s						
ELK	**Elko**	**5.38**	**18**	Pn	**Pn**	**00 24 09.0**	**+0.3**
	comp=E,1.6nm,0.4s,baz=197,slow=11						
ELK				Pg	**Pg**	**00 24 26.9**	**-3.9**
	comp=E,2.9nm,0.3s,baz=211,slow=16,SNR=18						
ELK				Lg	Lg	00 25 35.7	
	comp=E,5.9nm,0.3s,baz=100,slow=3.3,SNR=11						
ELK	**Elko**	**5.38**	**18**	IAML		00 25 41.3	
	comp=E,15nm,0.7s						
ELK				IAML		00 25 43.1	
	comp=E,15nm,0.6s						
PDAR	**Pinedale Array**	**9.37**	**38**	Pn	**Pn**	**00 25 04.9**	**+1.5**
	comp=E,0.1nm,0.3s,baz=232,slow=11,SNR=2.0						
PDAR				Lg	Lg	00 27 41.1	
	comp=E,0.1nm,0.3s,baz=220,slow=37,SNR=2.4						
	comp=E,0.3nm,0.8s						
TXAR	**Lajitas Array**	**13.21**	**115**	Pn	**Pn**	**00 25 57.9**	**+2.1**
	comp=E,0.1nm,0.3s,baz=299,slow=14,SNR=1.7						
	comp=E,0.1nm,0.3s						
ULM	**Lac du Bonnet**	**21.39**	**40**	P	**P**	**00 27 36.6**	**+0.9**
	comp=E,2.3nm,0.6s,baz=218,slow=12,SNR=3.3						
	comp=E,2.3nm,0.6s						
YKA	**Yellowknife Ar**	**26.93**	**3**	P	**P**	**00 28 31.7**	**+2.4**
	comp=E,0.3nm,0.9s,baz=192,slow=9.0,SNR=3.9						
	comp=E,0.3nm,0.9s						

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*SJA **21** 00:29:07.5±0.7, 28°.30S×70°.98W, h31^{km}±1^{km}, ML3.4,*

MW3.5
*GUC **21** 00:29:09.4±0.6, 28°.32S×70°.93W, h58^{km}±3^{km}, ML3.3*
ISC 21 00:29:08.3±1.4, **28°.28S**±0°.03×**71°.20W**±0°.06, **h49**^{km}±8^{km}, **n39**, σ**1^{s}.67**/54, **2C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC04	Llanos de Chal	0.14	55	⇓iP	Pn	00 29 18.1	+2.0
AC04				eS	Sn	00 29 24.3	+2.6
AC04				IAML		00 29 24.7	
	comp=E,5µm,0.2s						
AC04	Llanos de Chal	0.14	55	eP	Pn	00 28 59.3	-17
AC04				eS	Sn	00 29 17.7	-4.0
AC04				IAML		00 29 25.1	
	comp=Z,2µm,0.2s						
LCO	Las Campanas	0.85	149	eP	Pn	00 29 23.2	-1.0
LCO	Las Campanas	0.85	149	eP	Pn	00 29 23.4	-0.8
LCO				IAML		00 29 34.2	
	comp=Z,3µm,0.2s						
LCO				eS	Sn	00 29 34.3	-1.5
AC05	El Transito	0.98	124	⇑iP	Pn	00 29 24.8	-1.1
AC05				eS	Sn	00 29 35.9	-3.0
AC05	El Transito	0.98	124	eP	Pn	00 29 24.8	-1.1
AC05				eS	Sn	00 29 36.1	-2.8
AC05				IAML		00 29 36.3	
	comp=Z,949nm,0.3s						
GO03	Copiapo	1.10	51	eP	Pn	00 29 26.8	-0.6
GO03				eS	Sn	00 29 40.0	-1.5
GO03				IAML		00 29 41.6	
	comp=E,1µm,0.2s						
GO03	Copiapo	1.10	51	eP	Pn	00 29 26.8	-0.6
GO03				eS	Sn	00 29 40.3	-1.2
GO03				IAML		00 29 41.2	
	comp=Z,880nm,0.1s						
AC06	Mina Casimiro	1.19	39	eP	Pn	00 29 29.1	+0.5
AC06				IAML		00 29 45.0	
	comp=E,984nm,0.2s						
CO05	La Serena	1.63	181	eP	Pn	00 29 35.7	+1.1
CO05				IAML		00 30 00.2	
	comp=E,592nm,0.2s						
GO04	Tololo Observa	1.92	169	eP	Pn	00 29 39.5	+0.8
GO04	Tololo Observa	1.92	169	eP	Pn	00 29 39.6	+0.9
GO04				eS	Sn	00 29 48.1	-14
GO04				IAML		00 30 09.6	
	comp=Z,428nm,0.3s						
CO01	Juntas del Tor	1.95	150	eP	Pn	00 29 39.3	+0.2
CO01	Juntas del Tor	1.95	150	eP	Pn	00 29 39.4	+0.2
CO01				eS	Sn	00 30 03.4	+0.8
CO01				IAML		00 30 05.8	
	comp=Z,137nm,0.2s						
AC01	Pan de Azucar	2.19	14	⇑eP	Pn	00 29 42.7	+0.4
AC01				IAML		00 30 19.9	
	comp=E,191nm,0.3s						
AC01	Pan de Azucar	2.19	14	eP	Pn	00 29 42.9	+0.6
AC01				eS	Sn	00 30 06.7	-1.6
AC01				IAML		00 30 21.9	
	comp=Z,177nm,0.5s						
AC02	Maricunga	2.34	52	eP	Pn	00 29 45.7	+1.0
AC02				IAML		00 30 15.8	
	comp=N,316nm,0.4s						
AC02	Maricunga	2.34	52	eP	Pn	00 29 45.8	+1.0
AC02				eS	Sn	00 30 14.2	+1.7
AC02				IAML		00 30 18.1	
	comp=Z,169nm,0.1s						
CO03	El Pedregal	2.58	170	eP	Pn	00 29 48.8	+1.0
CO03	El Pedregal	2.58	170	eP	Pn	00 29 48.6	+0.9
CO03				eS	Sn	00 30 04.7	-13
CO03				IAML		00 30 37.1	
	comp=Z,134nm,0.4s						
AGUA	GUANDACOL	2.66	117	eP	Pn	00 29 51.0	+2.2
AGUA				eS	Sn	00 30 18.8	-1.1
AGUA				IAML		00 30 30.2	
	comp=Z,153nm,0.4s						
VCA	Vinchina	2.68	100	eP	Pn	00 29 51.5	+2.5
VCA				eS	Sn	00 30 31.9	+12
VCA				IAML		00 30 32.7	
	comp=Z,134nm,0.2s						
CO02	Combarbal	2.92	177	eP	Pn	00 29 52.8	+0.6
CO02	Combarbal	2.92	177	eP	Pn	00 29 52.9	+0.6
CO02				eS	Sn	00 30 39.3	+13
CO02				IAML		00 30 39.8	
	comp=Z,184nm,0.3s						
TINO	Tinogasta	3.21	87	eP	Pn	00 29 57.0	+0.6
TINO				eS	Sn	00 30 17.2	-16
GO02	Mina Guanaco	3.43	25	eP	Pn	00 30 00.2	+0.7
GO02	Mina Guanaco	3.43	25	eP	Pn	00 30 00.5	+1.0
GO02				IAML		00 31 03.9	
	comp=Z,129nm,0.3s						
PB14	IPOC Station P	3.71	11	eP	Pn	00 30 02.8	-0.6
PB14				IAML		00 31 10.0	
	comp=Z,47nm,0.4s						
CO04	Los Peladeros	3.75	177	eP	Pn	00 30 04.7	+0.8
AANI	Anillaco	3.79	99	eP	Pn	00 30 05.4	+1.1
AANI				IAML		00 31 20.5	
	comp=Z,120nm,1.0s						
ACLC	CERRO LA CRUZ	3.90	108	eP	Pn	00 30 06.6	+0.8
ACLC				eS	Sn	00 30 52.7	+2.3
ACLC				IAML		00 30 57.9	
	comp=Z,23nm,0.3s						
AVFE	Valle Fertil	4.03	127	eP	Pn	00 30 08.2	+0.6
AVFE				eS	Sn	00 30 48.1	-5.5
AVFE				IAML		00 31 00.4	
	comp=Z,107nm,0.5s						
CFA	Coronel Fontan	4.19	143	eP	Pn	00 30 03.4	-6.4
CFA				eP		00 30 11.0	
CFA				eS	Sn	00 30 58.5	+1.0
CFA				IAML		00 31 08.2	
	comp=Z,34nm,0.7s						
VA03	San Esteban	4.50	173	eP	Pn	00 30 15.0	+1.0
VA03	San Esteban	4.50	173	eP	Pn	00 30 15.2	+1.2
VA03				eS	Sn	00 31 15.8	+11
VA03				IAML		00 31 26.2	
	comp=Z,47nm,0.7s						
ASAL	Salagasta	4.75	155	eP	Pn	00 30 19.9	+2.4
ASAL				eS	Sn	00 31 12.8	+1.4
CYA	Choya	4.76	93	eP	Pn	00 30 18.0	+0.5
CYA				eS	Sn	00 31 12.9	+1.4
CYA				IAML		00 31 15.6	
	comp=Z,19nm,0.4s						
PB10	IPOC Station P	4.79	7	eP	Pn	00 30 16.8	-1.0
PB10				eS	Sn	00 31 10.6	-1.4
PB10				IAML		00 31 48.2	
	comp=Z,30nm,1.7s						
MT02	Curacav	4.96	179	eP	Pn	00 30 19.8	-0.4
MT02				eS	Sn	00 31 31.6	+15
MT02				IAML		00 31 35.1	
	comp=Z,42nm,3.5s						

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*IDC **21** 00:29:46.1±1.1, 46°.98N×153°.91E, h0^{km}, mb3.9/16, mbtmp3.9/17, ML2.7/1, MS3.2/9, Error ellipse: s-maj=27.7km s-min=18.9km az=152.0*
*MOS **21** 00:29:50.5±1.1, 47°.11N×154°.02E, h44^{km}, mb4.6/4, Error ellipse: s-maj=11.4km s-min=8.8km az=75.1*
*SKHL **21** 00:29:52.9±0.4, 47°.10N×153°.90E, h62^{km}±6^{km}, mb4.7/4*
ISC 21 00:29:50.3±0.8, **47°.03N**±0°.08×**154°.12E**±0°.08, **h27**^{km}, **n67**, σ**1^{s}.49**/64, **mb4.1**/21, **MS3.6**/5, **5C-5D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril’s	3.89	19	i PN	Pn	00 30 48.8	+0.6
SKR	Severo-Kuril’s	3.89	19	eP	Pn	00 30 49.1	+0.9
SKR				AMB	AMB	00 30 54.7	
	30nm,0.3s						
SKR				eS	Sn	00 31 31.2	-1.7
SKR				A	A	00 31 33.0	
	30nm,0.3s						
SKR				A	A	00 31 33.0	
	50nm,0.3s						
KUR	Kuril'sk	4.70	250	ePN	Pn	00 31 03.0	+3.6
KUR				eS	Sn	00 31 56.1	+3.1
KUR				pmax	pmax		
	comp=Z,80nm,0.4s						
KUR				pmax	pmax		
	comp=N,52nm,0.2s						
KUR				pmax	pmax		
	comp=E,44nm,0.2s						
KUR				smax	smax		
	comp=N,198nm,0.5s						
KUR				smax	smax		
	comp=E,110nm,0.3s						
KUR	Kuril'sk	4.70	250	eP	Pn	00 31 00.2	+0.8
KUR				AMB	AMB	00 31 04.9	
	comp=E,80nm,0.5s						
KUR				eS	Sn	00 31 51.6	-1.4
KUR				A	A	00 32 10.7	
	comp=E,200nm,0.5s						
KUR				A	A	00 32 10.7	
	comp=E,110nm,0.5s						
PAU	Pauzhetka	4.78	21	eP	Pn	00 31 02.5	+2.1
PAU				AMB	AMB	00 31 10.8	
	comp=E,30nm,0.6s						
PAU				eS	Sn	00 31 54.1	-0.8
PAU				A	A	00 31 57.5	
	comp=E,80nm,0.3s						
PAU				A	A	00 31 57.5	
	comp=E,80nm,0.3s						
PEA0B	Petropavlovsk-	6.51	19	cePN	Pn	00 31 24.9	+0.7
PETK	Petropavlovsk-	6.51	19	Pn	Pn	00 31 23.9	-0.3
	comp=E,0.8nm,0.3s,baz=180,slow=12,SNR=9.0						
PETK				Sn	Sn	00 32 42.2	+4.8
	baz=190,slow=16						
PETK				LR	LR	00 34 38.1	
	comp=E,44nm,18.1s,baz=158,slow=44						
	comp=E,3.1nm,0.6s						
YUK	Yuzh-Kuril'sk	6.53	246	PN	Pn	00 31 26.3	+1.9
YUK	Yuzh-Kuril'sk	6.53	246	eP	Pn	00 31 26.6	+2.2
YUK				AMB	AMB	00 31 29.4	
	comp=E,130nm,0.5s						
YUK				eS	Sn	00 32 36.2	-1.7
YUK				A	A	00 32 42.5	
	comp=E,180nm,0.7s						
YUK				A	A	00 32 42.5	
	comp=E,150nm,0.7s						
RUSJ	Misakicho	6.88	248	PN	Pn	00 31 32.3	+3.0
GLVR	Golovnino	6.89	245	eS	Sn	00 32 45.3	-1.6
NMR	Nemuro--Hokkai	6.96	241	⇓iPN	Pn	00 31 30.2	-0.3
NMR	Nemuro--Hokkai	6.96	241	i P	Pn	00 31 32.2	+1.7
NMR				eS	Sn	00 32 46.5	-2.2
YSS	Yuzhno-Sakhali	7.77	274	ePN	Pn	00 31 42.3	+0.8
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
YSS				MLR	MLR		
	comp=Z,500nm,12.0s						
YSS				MLR	MLR		
	comp=N,300nm,14.0s						
YSS				MLR	MLR		
	comp=E,400nm,13.0s						
YSS	Yuzhno-Sakhali	7.77	274	eP	Pn	00 31 43.5	+2.0
TYV	Tymovskoe	8.46	301	eP	Pn	00 31 52.1	+1.1
ASAJ	Asahikawa	8.59	254	Pn	Pn	00 31 55.6	+2.8
	comp=E,0.4nm,0.3s,baz=70,slow=12,SNR=2.4						
ASAJ				Sn	Sn	00 33 28.8	+0.1
	comp=E,0.7nm,0.3s,baz=133,slow=19,SNR=2.4						
MA2	Magadan	12.72	352	LR	LR	00 38 38.1	
	comp=E,71nm,18.2s,baz=78,slow=42						
SHEM	Shemya Is, Ala	14.07	59	LR	LR	00 38 17.7	
	comp=E,39nm,19.4s,baz=106,slow=36						
SEY	Seymchan	15.97	357	LR	LR	00 40 51.6	
	comp=E,83nm,18.6s,baz=164,slow=42						
ZEA	Zeya	18.33	301	eP	P	00 34 02.9	+0.7
ZEA	Zeya	18.33	301	eP	P	00 34 02.9	+0.7
YAK	Yakutsk	20.46	326	LR	LR	00 42 28.3	
	comp=E,51nm,18.4s,baz=24,slow=37						
KSRS	Korea Array	21.54	253	P	P	00 34 35.8	-1.4
	comp=E,0.6nm,0.5s,baz=55,slow=14,SNR=2.0						
	comp=E,0.6nm,0.5s						
H11N2	WAKE ISLAND Hy	29.16	155	T	T	01 07 41.9	
	baz=341,slow=76,SNR=31						
H11N1	WAKE ISLAND Hy	29.18	155	T	T	01 07 43.7	
	baz=341,slow=76,SNR=33						
H11N3	WAKE ISLAND Hy	29.18	155	T	T	01 07 58.8	
	baz=341,slow=76,SNR=20						
H11S1	WAKE ISLAND Hy	30.27	156	T	T	01 08 19.2	
	baz=343,slow=75,SNR=90						
H11S3	WAKE ISLAND Hy	30.28	156	T	T	01 07 57.5	
	baz=343,slow=75,SNR=90						
H11S2	WAKE ISLAND Hy	30.29	156	T	T	01 08 18.6	
	baz=343,slow=75,SNR=99						
SONM	Songino Array	31.89	289	P	P	00 36 12.4	-0.9
	comp=E,0.3nm,0.6s,baz=53,slow=5.6,SNR=2.8						
	comp=E,0.3nm,0.6s						
INK	Inuvik	41.04	33	P	P	00 37 31.6	+0.9
	comp=E,1.1nm,0.8s,baz=290,slow=5.9,SNR=3.8						
	comp=E,1.1nm,0.8s						
ZALV	Zalesovo Beam	43.01	306	P	P	00 37 45.5	-1.5
	comp=E,1.3nm,0.6s,baz=60,slow=9.4,SNR=7.1						
ZALV				PcP	PcP	00 39 37.3	+0.4
	comp=E,0.7nm,0.5s,baz=104,slow=3.6,SNR=1.8						
ZALV				LR	LR	00 55 53.4	
	comp=E,34nm,18.8s,baz=354,slow=36						
	comp=E,1.3nm,0.6s						
MK31	Makanchi Array	47.42	298	⇑eP	P	00 38 21.0	-1.2
MKAR	Makanchi Array	47.42	298	P	P	00 38 21.0	-1.2
	comp=E,1.1nm,0.8s,baz=61,slow=6.4,SNR=5.8						
	comp=E,1.1nm,0.8s						
KURK	Kurchatov	47.78	304	d iP	P	00 38 23.9	-1.0
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURK	Kurchatov	47.78	304	eP	P	00 38 23.9	-1.0
KURBB	Kurchatov Arra	47.87	304	P	P	00 38 24.5	-1.1
	comp=Z,1.2nm,0.3s,baz=66,slow=8.2,SNR=12						
KURBB				PcP	PcP	00 39 54.6	+0.8
	comp=Z,0.5nm,0.2s,baz=86,slow=3.8,SNR=1.3						
	comp=Z,1.2nm,0.3s						
YKA	Yellowknife Ar	50.29	37	P	P	00 38 44.0	+0.1
	comp=Z,0.4nm,0.9s,baz=297,slow=8.1,SNR=4.0						
	comp=Z,0.4nm,0.9s						
YKA	Yellowknife Ar	50.29	37	P	P	00 38 44.0	+0.1
BVAR	Borovoye Array	51.21	310	P	P	00 38 50.0	-1.0
	comp=Z,1.5nm,0.8s,baz=48,slow=8.9,SNR=7.4						
	comp=Z,1.5nm,0.8s						
BVAR	Borovoye Array	51.21	310	P	P	00 38 50.0	-1.0
BORK	Borovoye	51.24	310	⇓iP	P	00 38 50.4	-0.8
BORK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
AAK	Ala-Archa	54.32	297	⇑eP	P	00 39 13.7	-0.7
AAK	Ala-Archa	54.32	297	eP	P	00 39 13.7	-0.7
ARTI	Arti	55.37	318	c iP	P	00 39 21.1	-0.4
ARTI				S	S	00 47 06.1	+2.2
ARTI				SS	SS	00 50 46.1	-1.8
ARTI				pmax	pmax		
	comp=Z,13nm,2.4s						
CHGR	Chuyangaron	59.95	296	⇓eP	P	00 39 53.4	-0.7
FINES	FINESS Array B	64.08	335	P	P	00 40 21.0	-0.3
	comp=Z,0.5nm,0.3s,baz=35,slow=7.2,SNR=15						
	comp=Z,0.5nm,0.3s						
FINES	FINESS Array B	64.08	335	eP	P	00 40 21.3	0.0
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NB2	NORSAR Subarra	68.18	342	P	P	00 40 48.2	+0.5
	comp=Z,1.2nm,0.7s,baz=26,slow=6.5						
NOA	NORSAR Array B	68.18	342	P	P	00 40 47.8	+0.1
	comp=Z,3.2nm,0.9s,baz=27,slow=6.3,SNR=6.2						
	comp=Z,3.2nm,0.9s						
NOA	NORSAR Array B	68.18	342	eP	P	00 40 48.2	+0.5
NOA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HFS	Hagfors	68.43	340	P	P	00 40 49.5	+0.3
	comp=Z,7.4nm,0.8s,baz=53,slow=5.6,SNR=12						
HFS				LR	LR	01 13 22.0	
	comp=Z,49nm,18.2s,baz=330,slow=38						
	comp=Z,7.4nm,0.8s						
KBZ	Khabaz	71.16	314	⇓eP	P	00 41 05.6	-0.6
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KBZ	Khabaz	71.16	314	eP	P	00 41 05.6	-0.6
AKASG	Malin Array Be	71.69	327	P	P	00 41 08.7	-0.7
	comp=Z,1.3nm,0.5s,baz=36,slow=6.5,SNR=7.0						
	comp=Z,1.3nm,0.5s						
AKASG	Malin Array Be	71.69	327	eP	P	00 41 07.7	-1.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKBB	Malin Array Si	71.69	327	⇑eP	P	00 41 08.8	-0.6
AKBB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ASAR	Alice Springs	72.70	199	P	P	00 41 14.3	-1.3
	comp=Z,0.3nm,0.6s,baz=10,slow=5.9,SNR=2.1						
	comp=Z,0.3nm,0.6s						
TXAR	Lajitas Array	76.75	61	P	P	00 41 40.6	+1.3
	comp=Z,0.5nm,0.7s,baz=278,slow=3.8,SNR=6.0						
	comp=Z,0.5nm,0.7s						
GERES	GERESS Array B	78.50	335	LR	LR	01 20 44.7	
	comp=Z,52nm,19.1s,baz=274,slow=39						
BRTR	Keskin Array B	78.65	317	P	P	00 41 49.7	-0.2
	comp=Z,1.3nm,0.9s,baz=55,slow=4.7,SNR=5.3						
	comp=Z,1.3nm,0.9s						
PPT	Papeete	81.77	127	LR	LR	01 18 46.7	
	comp=Z,22nm,18.5s,baz=78,slow=36						
MMAI	Mount Meron Ar	83.14	312	P	P	00 42 14.6	+0.7
	comp=Z,0.8nm,0.5s,baz=46,slow=5.2,SNR=5.0						
	comp=Z,0.8nm,0.5s						
H03N2	Juan Fernandez	138.07	91	T	T	03 22 50.2	
	baz=308,slow=77,SNR=6.8						
H03N1	Juan Fernandez	138.08	91	T	T	03 22 55.1	
	baz=308,slow=77,SNR=9.2						
H03N3	Juan Fernandez	138.08	91	T	T	03 22 49.4	
	baz=308,slow=77,SNR=7.3						

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*IDC **21** 00:30:20.7±1.0, 32°.77N×142°.53E, h0^{km}, mb3.8/13, mbtmp3.8/16, ML3.6/3, MS3.0/2, Error ellipse: s-maj=26.2km s-min=19.9km az=58.0*
*NIED **21** 00:30:24.7, 32°.97N×142°.52E, h69^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.70; $M_{\theta\theta}$0.34; $M_{\phi\phi}$3.36; $M_{r\theta}$-1.71; $M_{\theta\phi}$-0.21; $M_{\phi r}$1.30; Fault plane solution: $M_0$4.09000×10^{14} NP1:ϕ_s11.00000°, δ36.00000°, λ-61.00000°. NP2:ϕ_s156.00000°, δ59.00000°, λ-110.00000°.*
*JMA **21** 00:30:24.7±0.7, 33°N±1°×14°3E±°, h69^{km}, MV3.8/22, FAR E OFF IZU ISLANDS*
ISC 21 00:30:25.9±0.9, **32°.87N**±0°.08×**142°.50E**±0°.09, **h33**^{km}, **n31**, σ**1^{s}.02**/31, **mb3.7**/13, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	2.18	325	P	Pn	00 30 58.6	-0.8
BSO1				eS	Sn	00 31 24.1	-0.9
JHJ2	Mitsune	2.27	277	eP	Pn	00 31 00.9	-0.1
JHJ	Hachijo jima 2	2.29	277	Pn	Pn	00 31 00.2	-1.2
	46nm,0.3s,baz=68,slow=23,SNR=12						
JHJ				Sn	Sn	00 31 28.5	-0.1
	65nm,0.3s,baz=100,slow=22,SNR=4.7						
	95nm,0.3s						
BSO3	Boso 3	2.54	320	P	Pn	00 31 04.0	-0.5
BSO3				eS	Sn	00 31 34.0	-0.1
JMKN	Mikurajimanish	2.64	294	eS	Sn	00 31 37.0	0.0
BSO4	Boso 4	2.77	320	P	Pn	00 31 07.8	-0.1
JOD2	Odawara 2	3.70	311	eP	Pn	00 31 19.6	-1.2
JOD2				eS	Sn	00 32 01.4	-1.9
JHO	Hitachi	4.06	337	eP	Pn	00 31 23.4	-2.3
JNY	Yasuok	4.58	304	P	Pn	00 31 34.1	+1.3
JIE	Ise	5.06	289	eP	Pn	00 31 40.0	+0.5
MJAR	Matsushiro Arr	5.09	317	Pn	Pn	00 31 39.4	-0.5
	0.8nm,0.3s,baz=153,slow=12,SNR=11						
MJAR				Sn	Sn	00 32 36.8	-0.7
	0.4nm,0.3s,baz=140,slow=28,SNR=2.4						
	3.3nm,0.3s						
JCJ	Chichijima	5.76	183	Pn	Pn	00 31 36.2	-13
	15nm,0.3s,baz=100,slow=23,SNR=6.7						
JCJ				Sn	Sn	00 32 38.9	-15
	36nm,0.3s,baz=280,slow=23,SNR=8.3						
JNU	Nakatsue	9.76	275	Pn	Pn	00 32 41.2	-2.8
	0.7nm,0.3s,baz=53,slow=5.1,SNR=1.3						
	2.2nm,0.4s						
HILR	Hailar Array B	23.75	321	P	P	00 35 35.8	+0.7
	1.2nm,0.5s,baz=114,slow=13,SNR=3.7						
	1.2nm,0.5s						
H11N2	WAKE ISLAND Hy	25.41	115	T	T	01 02 09.3	
	baz=304,slow=75,SNR=3.1						
H11N1	WAKE ISLAND Hy	25.42	115	T	T	01 02 15.0	
	baz=304,slow=75,SNR=3.5						
H11N3	WAKE ISLAND Hy	25.43	115	T	T	01 02 07.1	
	baz=304,slow=75,SNR=2.9						
SONM	Songino Array	30.99	310	P	P	00 36 41.3	+1.1
	0.7nm,0.5s,baz=112,slow=9.2,SNR=6.1						
	0.7nm,0.5s						
CMAR	Chiang Mai Arr	41.51	261	LR	LR	00 56 46.7	
	comp=Z,5.3nm,19.3s,baz=240,slow=38						
ZALV	Zalesovo Beam	45.44	315	P	P	00 38 41.5	+0.1
	0.5nm,0.5s,baz=99,slow=8.2,SNR=7.0						
ZALV				PcP	PcP	00 40 20.3	+0.2
	0.2nm,0.3s,baz=94,slow=1.9,SNR=3.5						
	0.5nm,0.5s						
MKAR	Makanchi Array	47.17	306	P	P	00 38 55.7	+0.5
	1.0nm,0.5s,baz=87,slow=9.5,SNR=11						
	1.0nm,0.5s						
KURBB	Kurchatov Arra	49.33	311	P	P	00 39 12.3	+0.5
	2.2nm,0.5s,baz=86,slow=7.5,SNR=12						
	2.2nm,0.5s						
WRA	Warramunga Arr	53.09	190	P	P	00 39 39.3	-0.9
	0.6nm,0.4s,baz=7.4,slow=7.6,SNR=6.6						
	0.6nm,0.4s						
BVAR	Borovoye Array	54.08	315	P	P	00 39 48.0	+0.8
	0.6nm,0.5s,baz=90,slow=10,SNR=4.3						
	0.6nm,0.5s						
ASAR	Alice Springs	56.81	189	P	P	00 40 06.2	-0.9
	0.2nm,0.6s,baz=9.8,slow=6.8,SNR=2.3						
	0.2nm,0.6s						
YKA	Yellowknife Ar	66.97	29	P	P	00 41 15.1	+0.1
	0.6nm,1.0s,baz=290,slow=7.7,SNR=3.9						
	0.6nm,1.0s						
ARCES	ARCESS Array B	68.20	340	LR	LR	01 16 42.1	
	comp=Z,33nm,18.5s,baz=282,slow=41						
FINES	FINESS Array B	72.92	333	P	P	00 41 51.8	+0.4
	5.0nm,1.1s,baz=68,slow=9.1,SNR=1.9						
	5.0nm,1.1s						
HFS	Hagfors	78.25	337	P	P	00 42 22.4	+0.4
	2.1nm,1.0s,baz=28,slow=3.4,SNR=1.2						
	2.1nm,1.0s						
NOA	NORSAR Array B	78.37	338	P	P	00 42 23.0	+0.2
	0.4nm,0.6s,baz=53,slow=6.8,SNR=2.3						
	0.4nm,0.6s						
BRTR	Keskin Array B	82.30	313	P	P	00 42 44.9	+0.5
	0.3nm,0.7s,baz=34,slow=3.8,SNR=2.2						
	0.3nm,0.7s						

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*RSPR **21** 00:40:25.2, 18°.70N×64°.18W, h42^{km}±24^{km}, MD3.5/3*
*NEIC **21** 00:40:25.2±0.7, 18°.7N±0°.1×64°.23W±0°.07, h35^{km}±2^{km}, ML2.5/12, Md3.5/3(RSPR), Error ellipse: s-maj=25.6km s-min=3.2km az=24.0*
ISC 21 00:40:24.5±3.3, **18°.7N**±0°.3×**64°.2W**±0°.1, **h35**^{km}, **n12**, σ**0^{s}.49**/15, **1C-2D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUMP	Col San Antoni	1.66	250		Pn	00 40 50.8	-0.4
HUMP					Sn	00 41 10.8	-0.5
HUMP	Col San Antoni	1.66	250	⇓eP	Pn	00 40 50.9	-0.3
HUMP	Col San Antoni	1.66	250	eS	Sn	00 41 11.0	-0.3
SEUS	St. Eustatius	1.69	136	Pn	Pn	00 40 51.5	0.0
GCPR	Guaynabo City	1.83	257	Pn	Pn	00 40 53.1	-0.4
GCPR				IAML		00 41 36.9	
	comp=N,15nm,2.4s						
OBIP	Obispado Ponce	2.38	254	Pn	Pn	00 41 01.3	+0.3
OBIP				IAML		00 41 50.0	
	comp=N,20nm,3.4s						
OBIP				IAML		00 42 05.4	
	comp=E,23nm,3.2s						
AOPR	Arecibo Observ	2.44	262		Pn	00 41 01.5	-0.5
AOPR					Sn	00 41 30.4	-0.2
AOPR				IAML		00 41 55.5	
	comp=E,36nm,0.5s						
AOPR				IAML		00 42 34.2	
	comp=N,27nm,2.2s						
AOPR	Arecibo Observ	2.44	262	⇓eP	Pn	00 41 02.2	+0.2
AOPR	Arecibo Observ	2.44	262	eS	Sn	00 41 30.5	-0.2
CRPR	Cabo Rojo, PR	2.85	256		Pn	00 41 07.5	+0.1
CRPR					Sn	00 41 41.2	+0.7
CRPR				IAML		00 41 46.4	
	comp=E,35nm,1.9s						
CRPR	Cabo Rojo, PR	2.85	256	⇑eP	Pn	00 41 07.8	+0.4
CRPR	Cabo Rojo, PR	2.85	256	eS	Sn	00 41 41.6	+1.1

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*IDC **21** 01:11:33.4±2.1, 79°.85N×1°.23W, h0^{km}, mb3.5/5, mbtmp3.7/7, ML3.8/2, MS3.1/3, Error ellipse: s-maj=48.1km s-min=21.4km az=48.0*
*BER **21** 01:11:34.1±2.3, 80°.14N×0°.41W, h10^{km}, Mw3.9, ML3.6(NAO), Confirmed Earthquake*
*DNK **21** 01:11:34.1±2.5, 80°.24N×0°.09W, h18^{km}±18^{km}, ML2.6, Presumed earthquake*
*FCIAR **21** 01:11:37.0, 79°.99N×0°.61E, h10^{km}, station ZFI2 has station magnitude of 3.60 station OMEGA has station magnitude of 3.50*
*KOLA **21** 01:11:42.2, 80°.16N×4°.72E, h0^{km}, ML2.6, Error ellipse: s-maj=69.7km s-min=23.5km az=50.0, Greenland sea*
ISC 21 01:11:33.6±0.7, **80°.04N**±0°.05×**0°.43W**±0°.04, **h10**^{km}, **n57**, σ**2^{s}.95**/77, **mb3.5**/4, **2C, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	2.53	110	Pn	Pn	01 12 13.4	-1.2
KBS				Sn	Sn	01 12 40.9	-4.4

KBS	Kingsbay	2.53	110	P	Pn	01 12 13.1	-1.5
KBS				S	Sn	01 12 38.0	-7.4
KBS	Kingsbay	2.53	110	eP	Pn	01 12 13.3	-1.2
KBS				eS	Sn	01 12 40.8	-4.6
KBS				IAML		01 12 43.2	
	comp=Z,56nm,0.3s						
KBS	Kingsbay	2.53	110	i P	Pn	01 12 13.4	-1.2
KBS				i S	Sn	01 12 43.9	-1.5
NOR	Nord	3.03	309	Pn	Pn	01 12 20.4	-1.1
NOR				Sn	Sn	01 12 52.2	-5.5
NOR	Nord	3.03	309	eP	Pn	01 12 19.8	-1.7
NOR				eS	Sn	01 12 52.1	-5.6
NOR	Nord	3.03	309	i P	Pn	01 12 20.0	-1.5
NOR				eS	Sn	01 12 55.2	-2.5
NOR				IAML		01 13 10.3	
	comp=Z,17nm,0.7s						
BRBB	Barentsburg B	3.40	118	Pn	Pn	01 12 27.6	+1.1
BRBB				Sn	Sn	01 13 04.0	-2.7
BRBB	Barentsburg B	3.40	118	P	Pn	01 12 26.6	+0.1
BRBB				S	Sn	01 12 55.8	-11
BRBB	Barentsburg B	3.40	118	eP	Pn	01 12 26.9	+0.4
BRBB				eS	Sn	01 13 03.9	-2.9
BRBA	Barentsburg A	3.42	118	Pn	Pn	01 12 28.0	+1.2
BRBA				Sn	Sn	01 13 04.9	-2.4
BRBA	Barentsburg A	3.42	118	eP	Pn	01 12 27.7	+0.8
BRBA				eS	Sn	01 13 05.0	-2.4
BRBA				IAML		01 13 08.6	
	comp=Z,35nm,0.4s						
SPA0	Spitsbergen Ar	3.69	112	Pn	Pn	01 12 30.1	-0.5
	baz=309,slow=11						
SPA0				Sn	Sn	01 13 10.2	-3.7
	baz=308,slow=37						
SPA0	Spitsbergen Ar	3.69	112	⇑iP	Pn	01 12 29.9	-0.5
SPA0				i S	Sn	01 13 09.4	-4.5
SPA0	Spitsbergen Ar	3.69	112	Pn	Pn	01 12 30.1	-0.5
	baz=309,slow=11						
SPA0				Sn	Sn	01 13 10.2	-3.7
	baz=308,slow=37						
SPA0				IAML		01 13 14.5	
	comp=Z,31nm,0.5s						
SPITS	Spitsbergen Ar	3.69	112	Pn	Pn	01 12 30.0	-0.5
	baz=314,slow=9.0						
SPITS				Sn	Sn	01 13 10.3	-3.6
	baz=323,slow=16						
	comp=Z,27nm,0.3s						
SPITS	Spitsbergen Ar	3.69	112	P	Pn	01 12 29.9	-0.7
SPITS				S	Sn	01 13 04.3	-10
HSPB	Hornsund (broa	4.40	126	Pn	Pn	01 12 40.7	+0.4
HSPB				Sn	Sn	01 13 28.1	-3.3
HSPB	Hornsund (broa	4.40	126	P	Pn	01 12 40.1	-0.1
HSPB				S	Sn	01 13 25.9	-5.4
HSPB	Hornsund (broa	4.40	126	eP	Pn	01 12 40.1	-0.1
HSPB				eS	Sn	01 13 27.2	-4.1
HSPB	Hornsund (broa	4.40	126	eP	Pn	01 12 40.4	+0.1
HSPB				eS	Sn	01 13 28.2	-3.2
HSPB				IAML		01 13 34.2	
	comp=Z,35nm,0.7s						
DAG	Danmarks Havn	4.90	237	⇑iP	Pn	01 12 46.3	-0.9
DAG				eS	Sn	01 13 38.8	-5.1
DAG	Danmarks Havn	4.90	237	i P	Pn	01 12 46.3	-0.9
DAG				i S	Sn	01 13 42.6	-1.3
DAG				IAML		01 13 59.7	
	comp=Z,15nm,0.7s						
HOPEN	Hopen	6.22	111	Pn	Pn	01 13 04.2	-1.1
HOPEN				Sn	Sn	01 14 10.3	-5.9
HOPEN	Hopen	6.22	111	eP	Pn	01 13 03.9	-1.3
HOPEN				eS	Sn	01 14 09.8	-6.4
HOPEN				IAML		01 14 13.2	
	comp=Z,20nm,0.4s						
BJO1	Bjornoya	6.97	133	e	Pn	01 13 17.9	+2.4
BEA1	Bear Island, N	6.97	133	Pn	Pn	01 13 16.1	+0.5
	baz=332,slow=18						
BEAR	Bear Island, N	6.98	133	Pn	Pn	01 13 16.1	+0.5
	baz=332,slow=18						
DBG	Daneborg	7.19	227	Pn	Pn	01 13 17.9	-0.7
DBG				Sn	Sn	01 14 33.3	-6.8
DBG	Daneborg	7.19	227	eP	Pn	01 13 18.1	-0.5
DBG				eS	Sn	01 14 32.8	-7.3
DBG	Daneborg	7.19	227	i P	Pn	01 13 17.9	-0.7
DBG				eS	Sn	01 14 37.0	-3.1
DBG				IAML		01 14 59.3	
	comp=Z,13nm,1.2s						
ZFI2	Zemlya Franca-	7.85	61	eP	Pn	01 13 25.9	-1.7
ZFI2				eS	Sn	01 14 46.5	-10
	comp=Z,15nm,1.4s						
OMEGA	Omega	7.87	61	eP	Pn	01 13 26.1	-1.8
OMEGA				eS	Sn	01 14 46.5	-10
	comp=Z,14nm,1.3s						
JNW	Jan Mayen West	9.27	196	eP	Pn	01 13 48.5	+1.5
JMIC	Jan Mayen	9.31	197	eP	Pn	01 13 49.1	+1.5
NEEM	North Greenlan	9.93	281	i P	Pn	01 13 53.3	-3.0
NEEM				eS	Sn	01 15 36.3	-11
HAMF	Hammerfest	11.08	135	eP	Pn	01 14 12.6	+0.8
SUMG	Summit	11.39	250	i P	Pn	01 14 13.3	-3.2
SUMG				i S	Sn	01 16 12.5	-11
SUMG				IAML		01 17 18.9	
	comp=Z,55nm,3.7s						
VADS	Vadso	12.31	127	eP	Pn	01 14 29.0	+0.4
KEV	Kevo	12.33	131	eP	Pn	01 14 31.0	+2.1
ARA0	ARCESS Array S	12.35	134	Pn	Pn	01 14 29.0	-0.1
	baz=349,slow=11						
ARA0	ARCESS Array S	12.35	134	Pn	Pn	01 14 29.0	-0.1
	baz=349,slow=11						
ARCES	ARCESS Array B	12.35	134	Pn	Pn	01 14 29.4	+0.3
	comp=Z,0.1nm,0.3s,baz=334,slow=14,SNR=14						
ARCES				Sn	Sn	01 16 38.9	-7.6
	comp=Z,0.1nm,0.3s,baz=339,slow=17,SNR=1.7						
	comp=Z,0.9nm,0.6s						
LOF	Lofoten	12.50	155	eP	Pn	01 14 34.3	+3.1
KULLO	Kullorsuaq	13.01	276	i P	Pn	01 14 34.5	-3.6
TULEG	Thule	13.51	291	eP	Pn	01 14 39.2	-5.7
SALU	Saltoluokta	13.65	148	eP	Pn	01 14 52.8	+5.9
VAGH	Vaagaholmen	13.86	157	eP	Pn	01 14 53.9	+4.2
STOK	Stokkvaagen	14.24	158	eP	Pn	01 14 59.5	+4.6
LEIR	Leirfjorden	14.47	158	eP	Pn	01 15 02.9	+4.9
NOA	NORSAR Array B	19.40	163	LR	LR	01 21 55.6	
	comp=Z,44nm,19.1s,baz=275,slow=32						
FINES	FINESS Array B	20.21	142	P	P	01 16 09.6	+1.5
	comp=Z,2.0nm,0.9s,baz=350,slow=7.7,SNR=5.1						
	comp=Z,2.0nm,0.9s						
NRIK	Noril'sk	22.66	67	P	P	01 16 39.3	+4.9
	comp=Z,2.9nm,0.8s,baz=345,slow=8.8,SNR=7.3						
NRIK				LR	LR	01 26 29.6	
	comp=Z,50nm,20.1s,baz=330,slow=39						
	comp=Z,2.9nm,0.8s						
ILAR	Eielson Array	34.15	335	P	P	01 18 20.2	+2.1
	comp=Z,0.3nm,0.7s,baz=0.0,slow=8.6,SNR=3.9						
	comp=Z,0.3nm,0.7s						
KURBB	Kurchatov Arra	38.71	89	P	P	01 18 59.0	+2.0
	comp=Z,1.1nm,0.8s,baz=339,slow=7.7,SNR=11						
	comp=Z,1.1nm,0.8s						
MKAR	Makanchi Array	43.06	87	P	P	01 19 35.1	+2.0
	comp=Z,0.7nm,0.7s,baz=357,slow=7.2,SNR=4.0						
	comp=Z,0.7nm,0.7s						
SONM	Songino Array	46.07	64	LR	LR	01 40 36.9	
	comp=Z,34nm,19.6s,baz=59,slow=38						

IDC ***21*** *01:59:42.9±6.4, 6.°38S×154.°95E, h47^{km}±53^{km}, mb3.4/7, mbtmp3.8/8, ML2.3/1, Error ellipse: s-maj=56.6km s-min=31.7km az=119.0*

ISC 21 01:59:44.1±1.7**, 6.°4S**±0.°3×**154.°9E**±0.°2**, h56**^{km}**, n8,** σ**0.**^{s}**91**/9**, mb3.5**/7**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	8.24	248	P	Pn	02 01 42.0	+1.0
	2.0nm,0.3s,baz=72,slow=8.9,SNR=9.9						
PMG				S	Sn	02 03 11.2	-1.5
	4.4nm,0.3s,baz=288,slow=9.6,SNR=1.5						
	14nm,0.5s						
WRA	Warramunga Arr	24.10	234	P	P	02 04 55.0	+0.3
	0.5nm,0.5s,baz=55,slow=9.1,SNR=2.7						
	0.5nm,0.5s						
ASAR	Alice Springs	26.52	227	P	P	02 05 16.8	+0.1
	0.3nm,0.4s,baz=59,slow=8.6,SNR=7.3						
	0.3nm,0.4s						
FITZ	Fitzroy Crossi	30.82	245	P	P	02 05 54.6	-0.4
	0.8nm,0.7s,baz=88,slow=9.7,SNR=1.5						
	0.8nm,0.7s						
CMAR	Chiang Mai Arr	60.43	295	P	P	02 09 49.4	+1.0
	1.1nm,0.3s,baz=119,slow=5.2,SNR=7.0						
	1.1nm,0.3s						
SONM	Songino Array	68.76	327	P	P	02 10 42.2	-0.1
	0.2nm,0.4s,baz=116,slow=5.0,SNR=1.6						
	0.2nm,0.4s						
ILAR	Eielson Array	82.83	22	P	P	02 12 01.4	-0.8
	0.4nm,0.8s,baz=246,slow=5.3,SNR=5.3						
	0.4nm,0.8s						
MKAR	Makanchi Array	82.87	319	P	P	02 12 02.6	-0.2
	0.5nm,0.5s,baz=92,slow=8.9,SNR=5.9						
	0.5nm,0.5s						

GCG ***21*** *02:00:09.4±1.2, 13.°63N×91.°35W, h101^{km}±12^{km}, MD4.7, ML3.7, MW3.3*

SNET ***21*** *02:00:12.0±0.8, 13.°67N×91.°36W, h72^{km}±7^{km}, ML3.8*

CATAC ***21*** *02:00:14.1±0.7, 14°N±4°×9°1W±°, h15^{km}±6^{km}, M3.8/17, MLv3.8/17, Error ellipse: s-maj=10.8km s-min=4.1km az=44.5, confirmed*

IDC ***21*** *02:00:26.8±4.2, 14.°01N×90.°26W, h0^{km}, mb3.6/5, mbtmp3.6/6, ML4.8/1, Error ellipse: s-maj=143.6km s-min=62.5km az=38.0*

ISC 21 02:00:15.3±2.2**, 13.°6N**±0.°1×**91.°28W**±0.°09**, h35**^{km}**, n50,** σ**1.**^{s}**53**/45**, mb3.6**/5**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESSJ	San Jos, E	0.76	96	i P	Pn	02 00 25.8	-3.7
ESSJ				i S	Sn	02 00 39.3	-0.4
STG5	El Palmar, Qui	0.77	355	eP	Pn	02 00 30.5	+0.8
STG2	El Palmar, Qui	0.80	353	eP	Pn	02 00 31.8	+1.5
STG8	El Palmar, Qui	0.81	355	eP	Pn	02 00 31.8	+1.3
STG8				IAML		02 01 13.8	
	comp=N,3μm,0.3s						
ESSG	Sabana Grande	0.86	30	eP	Pn	02 00 29.1	-1.9
ESSG				IAML		02 01 06.5	
	comp=E,1μm,0.5s						
RTAL	Retalhuleu	0.97	335	eP	Pn	02 00 29.7	-2.8
FG16	Alotenango, Sa	0.98	50	eP	Pn	02 00 30.3	-2.5
FG16				i S	Sn	02 00 45.7	+0.2
PCG5	San Vicente Pa	1.05	56	eP	Pn	02 00 31.0	-2.6
SOKI	Kika Raxquin	1.18	354	eP	Pn	02 00 33.9	-1.8
SOKI				IAML		02 01 16.5	
	comp=N,2μm,0.7s						
NUBE	Las Nubes	1.48	80	eP	Pn	02 00 37.2	-2.4
NUBE	Las Nubes	1.48	80	eP	Pn	02 00 37.2	-2.4
NUBE				i S	Sn	02 00 57.9	+0.1
NUBE	Las Nubes	1.48	80	S	Sn	02 00 59.5	+1.8
LOAL	Lomas de Alarc	1.50	76	eP	Pn	02 00 38.3	-1.4
RBDL	Robledal	1.61	73	eP	Pn	02 00 40.8	-0.7
CEVE	Cerro Verde	1.62	83	P	Pn	02 00 42.5	+1.0
CEVE	Cerro Verde	1.62	83	S	Sn	02 01 03.0	+1.7
SBLS	San Blas	1.62	83	eP	Pn	02 00 40.8	-0.8
SNJE	San Jose	1.64	82	eP	Pn	02 00 41.3	-0.5
QUIS	Sacapulas	1.65	6	i P	Pn	02 00 42.2	+0.2
HUEH	Huehuetenango	1.69	353	P	Pn	02 00 42.0	-0.5
HUEH	Huehuetenango	1.69	353	S	Sn	02 01 04.0	+0.9
UNIC	Universidad Ca	1.71	78	P	Pn	02 00 41.6	-1.1
JAYA	Jayaque - finc	1.78	89	eP	Pn	02 00 43.1	-0.6
JAYA	Jayaque - finc	1.78	89	eP	Pn	02 00 41.4	-2.3
JAYA				eS	Sn	02 01 03.9	-1.2
JAYA	Jayaque - finc	1.78	89	P	Pn	02 00 44.2	+0.5
CEDA	San Andres	1.84	85	P	Pn	02 00 44.2	-0.2
LALI	Alcalda de L	1.91	94	P	Pn	02 00 46.4	+1.1
LALI	Alcalda de L	1.91	94	S	Sn	02 01 10.8	+2.7
PMON	Piamonte	1.91	88	eP	Pn	02 00 44.8	-0.6
PMON	Piamonte	1.91	88	P	Pn	02 00 45.4	-0.1
PMON	Piamonte	1.91	88	S	Sn	02 01 10.6	+2.2
UEES	Universidad Ev	1.98	87	P	Pn	02 00 47.6	+1.1
UEES	Universidad Ev	1.98	87	S	Sn	02 01 11.1	+1.0
MTO3	Montecristo	2.01	68	eP	Pn	02 00 46.5	-0.5
MTO3	Montecristo	2.01	68	i P	Pn	02 00 46.4	-0.5
MTO3	Montecristo	2.01	68	P	Pn	02 00 46.3	-0.7
LOMA	Loma Larga	2.05	90	P	Pn	02 00 48.7	+1.3
PAVA	Las Pavas	2.27	88	P	Pn	02 00 52.3	+1.7
LLGN	La Laguna	2.32	77	P	Pn	02 00 51.4	+0.2
SCLA	Alcaldia de Sa	2.48	88	P	Pn	02 00 52.4	-0.8
SARH	Santa Rosa de	2.69	65	P	Pn	02 00 55.8	-0.4
PACA	Pacayal	2.88	93	P	Pn	02 01 01.2	+2.4
LCND	La Caada	3.31	95	P	Pn	02 01 04.4	-0.3
TXAR	Lajitas Array	19.39	326	P	Pn	02 04 57.8	+18
	comp=N,0.7nm,0.3s,baz=132,slow=9.1,SNR=6.9						
	comp=N,2.1nm,0.8s						
ANMO	Albuquerque	25.26	330	P	P	02 05 57.0	+18
	comp=N,0.6nm,0.5s,baz=143,slow=10,SNR=3.8						
	comp=N,0.6nm,0.5s						
ELK	Elko	34.18	327	P	P	02 07 16.5	+19
	comp=N,0.5nm,0.4s,baz=125,slow=8.8,SNR=4.0						
	comp=N,0.5nm,0.4s						
NVAR	Mina Array Bea	34.40	321	P	P	02 07 19.1	+20
	comp=N,1.2nm,0.8s,baz=131,slow=6.9,SNR=8.5						
	comp=N,1.2nm,0.8s						
YKA	Yellowknife Ar	51.54	346	P	P	02 09 33.6	+16
	comp=N,0.4nm,0.7s,baz=157,slow=7.4,SNR=6.6						
	comp=N,0.4nm,0.7s						
ILAR	Eielson Array	63.45	337	P	P	02 10 57.4	+16
	comp=N,0.5nm,0.9s,baz=104,slow=5.8,SNR=4.8						
	comp=N,0.5nm,0.9s						
CMAR	Chiang Mai Arr	146.56	342	PKPbc	PKiKP	02 20 10.4	+14
	comp=N,0.9nm,0.4s,baz=16,slow=3.1,SNR=4.4						

CATAC ***21*** *02:05:53.8±0.5, 13°N±2°×9°1W±°, h1^{km}, M4.6/16, MLv4.6/16, Error ellipse: s-maj=6.8km s-min=3.4km az=46.4, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.29; M$_{\theta\theta}$-1.28; M$_{\phi\phi}$-0.01; M$_{r\theta}$1.80; M$_{\theta\phi}$1.85; M$_{\phi r}$-1.57; Fault plane solution: M$_0$3.27539×10^{15} NP1: ϕ_s134.10558°, δ70.93743°, λ99.35430°. NP2: ϕ_s287.34028°, δ21.15717°, λ64.80872°. Principal axes: T 2.4494, Plg62.9216°, Azm58.7301°; N 1.2710, Plg8.8371°, Azm311.0260°; P -3.7204, Plg25.3725°, Azm216.7976°; confirmed*

GCG ***21*** *02:05:55.6±0.8, 13.°56N×91.°46W, h21^{km}±8^{km}, MD4.7, ML4.3, MW3.9*

IDC ***21*** *02:05:57.7±1.0, 13.°76N×91.°40W, h15^{km}±3^{km}, mb3.7/12, mbtmp3.9/14, ML3.8/2, MS3.5/14, Error ellipse: s-maj=25.7km s-min=15.3km az=43.0*

NEIC ***21*** *02:06:00.3±2.8, 13.°72N±0.°06×91.°40W±0.°07, h35^{km}±2^{km}, mb4.5/68, Error ellipse: s-maj=13.0km s-min=8.2km az=229.0*

SNET ***21*** *02:06:04.0±1.7, 13.°98N×90.°85W, h35^{km}±13^{km}, ML4.2*

ISC 21 02:05:58.8±0.6**, 13.°61N**±0.°06×**91.°42W**±0.°05**, h35**^{km}**, n172,** σ**2.**^{s}**09**/149**, mb4.4**/39**, MS3.5**/11**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG5	El Palmar, Qui	0.80	5	eP	Pn	02 06 15.8	+2.1
STG2	El Palmar, Qui	0.83	3	eP	Pn	02 06 16.5	+2.4
STG8	El Palmar, Qui	0.84	4	eP	Pn	02 06 16.8	+2.4
STG8				i S	Sn	02 06 34.2	+8.4
STG8				IAML		02 06 44.2	
	comp=E,8μm,0.2s						
ESSJ	San Jos, E	0.89	93	i P	Pn	02 06 10.9	-4.0
RTAL	Retalhuleu	0.95	344		Pn	02 06 13.9	-1.8
RTAL	Retalhuleu	0.95	344	eP	Pn	02 06 14.3	-1.5
RTAL	Retalhuleu	0.95	344	P	Pn	02 06 14.8	-1.0
RTAL	Retalhuleu	0.95	344	S	Sn	02 06 30.3	+2.2
ESSG	Sabana Grande	0.96	36	eP	Pn	02 06 14.1	-1.9
ESSG				IAML		02 06 35.1	
	comp=E,8μm,0.5s						
FG16	Alotenango, Sa	1.10	53	eP	Pn	02 06 15.3	-2.7
FG16				IAML		02 06 38.0	
	comp=N,56μm,0.2s						
PCG5	San Vicente Pa	1.18	59	eP	Pn	02 06 15.9	-3.1
SOKI	Kika Raxquin	1.21	1	i P	Pn	02 06 18.8	-0.8
SOKI				IAML		02 06 50.2	
	comp=N,11μm,0.6s						
FAME	Alcaldia de Sa	1.38	80	P	Pn	02 06 20.5	-1.2
NUBE	Las Nubes	1.62	79	eP	Pn	02 06 22.3	-2.7
NUBE	Las Nubes	1.62	79	eP	Pn	02 06 22.3	-2.7
NUBE	Las Nubes	1.62	79	P	Pn	02 06 23.5	-1.6
LOAL	Lomas de Alarc	1.64	76	eP	Pn	02 06 23.3	-1.9
LOAL	Lomas de Alarc	1.64	76	P	Pn	02 06 23.7	-1.5
LOAL	Lomas de Alarc	1.64	76	S	Sn	02 06 48.3	+3.2
SLOZ	Alcaldia de Sa	1.64	75	P	Pn	02 06 24.2	-1.0
SLOZ	Alcaldia de Sa	1.64	75	S	Sn	02 06 48.2	+3.0
APG	El Apazote	1.67	33	Pn	Pn	02 06 26.0	+0.2
	comp=N,5.4nm,0.3s,baz=170,slow=11,SNR=70						
HUEH	Huehuetenango	1.70	357		Pn	02 06 25.9	-0.4
HUEH				Sn	Sn	02 06 47.2	+0.2
HUEH	Huehuetenango	1.70	357	eP	Pn	02 06 26.8	+0.5
HUEH	Huehuetenango	1.70	357	eP	Pn	02 06 26.8	+0.5
HUEH				IAML		02 07 08.9	
	comp=E,4μm,0.8s						
HUEH	Huehuetenango	1.70	357	P	Pn	02 06 27.5	+1.2
HUEH	Huehuetenango	1.70	357	S	Sn	02 06 51.5	+4.5
QUIS	Sacapulas	1.70	11	eP	Pn	02 06 27.1	+0.9
RTR	El Retiro	1.75	80	eP	Pn	02 06 24.9	-1.9
RBDL	Robledal	1.75	73	eP	Pn	02 06 25.6	-1.3
CEVE	Cerro Verde	1.76	83	eP	Pn	02 06 25.0	-2.0
CEVE	Cerro Verde	1.76	83	S	Sn	02 06 50.8	+2.5
CEVE	Cerro Verde	1.76	83	P	Pn	02 06 26.5	-0.5
SBLS	San Blas	1.76	82	eP	Pn	02 06 24.6	-2.4
SNJE	San Jose	1.78	81	eP	Pn	02 06 23.9	-3.4
UNIC	Universidad Ca	1.85	78	S	Sn	02 06 53.0	+2.6
UNIC	Universidad Ca	1.85	78	P	Pn	02 06 28.5	+0.3
JAYA	Jayaque - finc	1.91	88	eP	Pn	02 06 26.7	-2.4
JAYA	Jayaque - finc	1.91	88	eP	Pn	02 06 26.9	-2.2
JAYA				eS	Sn	02 06 52.0	-0.1
JAYA	Jayaque - finc	1.91	88	P	Pn	02 06 28.8	-0.3
JAYA	Jayaque - finc	1.91	88	S	Sn	02 06 54.3	+2.2
LALI	Alcalda de L	2.04	93	eP	Pn	02 06 29.6	-1.1
LALI	Alcalda de L	2.04	93	eP	Pn	02 06 29.6	-1.1
LALI				IAML		02 07 03.8	
	comp=E,480nm,0.4s						
LALI	Alcalda de L	2.04	93	P	Pn	02 06 36.0	+5.3
LALI	Alcalda de L	2.04	93	S	Sn	02 06 57.5	+2.5
PMON	Piamonte	2.05	87	eP	Pn	02 06 29.2	-1.7
PMON	Piamonte	2.05	87	P	Pn	02 06 29.9	-1.0
PMON	Piamonte	2.05	87	S	Sn	02 06 58.2	+3.0
BOQS	Boqueron	2.08	86	eP	Pn	02 06 30.7	-0.8
UEES	Universidad Ev	2.12	87	P	Pn	02 06 37.4	+5.5
UEES	Universidad Ev	2.12	87	S	Sn	02 07 00.3	+3.3
MTO3	Montecristo	2.15	68		Pn	02 06 31.4	-0.9
MTO3	Montecristo	2.15	68	eP	Pn	02 06 31.8	-0.6
MTO3	Montecristo	2.15	68	i P	Pn	02 06 31.4	-0.9
MTO3	Montecristo	2.15	68	P	Pn	02 06 32.0	-0.4
MTO3	Montecristo	2.15	68	S	Sn	02 07 05.1	+7.2
PANCS	Alcalda de	2.17	90	P	Pn	02 06 37.7	+5.1
PANCS	Alcalda de	2.17	90	S	Sn	02 07 00.3	+1.9
LOMA	Loma Larga	2.18	89	P	Pn	02 06 37.2	+4.4
LOMA	Loma Larga	2.18	89	S	Sn	02 07 01.1	+2.4
IGN	Direccin Gen	2.19	87	P	Pn	02 06 31.7	-1.1
ESQI	Esquipulas	2.23	65		Pn	02 06 32.6	-0.8
ESQI	Esquipulas	2.23	65	eP	Pn	02 06 32.8	-0.6
ESQI	Esquipulas	2.23	65	P	Pn	02 06 32.9	-0.4
ESQI	Esquipulas	2.23	65	S	Sn	02 07 03.8	+4.1
LFRS	El Faro	2.29	89	eP	Pn	02 06 33.3	-1.0
PAVA	Las Pavas	2.41	87	eP	Pn	02 06 34.8	-1.1
PAVA	Las Pavas	2.41	87	P	Pn	02 06 35.4	-0.5
LLGN	La Laguna	2.46	77	P	Pn	02 06 41.2	+4.6
UESV	Universidad de	2.56	89	P	Pn	02 06 38.2	+0.3
TECO	Alcaldia de Te	2.56	91	P	Pn	02 06 42.1	+4.2
SARH	Santa Rosa de	2.83	65	i P	Pn	02 06 41.1	-0.5
SARH	Santa Rosa de	2.83	65	P	Pn	02 06 41.4	-0.2
PACA	Pacayal	3.01	92	P	Pn	02 06 48.5	+4.3
LCND	La Caada	3.44	95	P	Pn	02 06 48.9	-1.2
PETF	Flores	3.61	24		Pn	02 06 51.7	-0.7
TGUH	Tegucigalpa,Un	4.05	83		Pn	02 07 00.6	+2.1
CRIN	San Cristobal	4.35	101		Pn	02 07 04.6	+2.1
HERN	Volcan Telica	4.58	102		Pn	02 07 03.9	-1.8
CNGN	Cerro Negro	4.73	103		Pn	02 07 07.0	-0.7
CMIG	Matias Romero	4.81	316	Pn	Pn	02 07 09.6	+0.7
	comp=E,1.8nm,0.3s,baz=154,slow=12,SNR=11						
CMIG				Sn	Sn	02 08 03.7	+0.2
	comp=E,3.8nm,0.3s,baz=132,slow=4.7,SNR=4.4						
CMIG				LR	LR	02 08 16.0	
	comp=E,72nm,19.1s,baz=120,slow=29						
	comp=E,5.5nm,0.4s						
MGAN	Managua	5.25	105		Pn	02 07 14.9	+0.1
BOAB	BOACO BROADBAN	5.72	101		Pn	02 07 18.4	-3.0
SIUN	Universidad Ur	6.46	88		Pn	02 07 29.5	-2.0
JUD3	Juan Diaz 3	6.69	120		Pn	02 07 33.3	-1.4
JTS	Las Juntas de	7.13	117	Pn	Pn	02 07 43.9	+3.1
	comp=E,3.2nm,0.3s,baz=279,slow=9.8,SNR=11						
JTS				Sn	Sn	02 08 55.9	-4.8
	comp=E,1.1nm,0.3s,baz=198,slow=20,SNR=0.9						
JTS				LR	LR	02 10 27.9	
	comp=E,232nm,19.6s,baz=298,slow=38						
	comp=E,6.5nm,0.4s						
JTS	Las Juntas de	7.13	117		Pn	02 07 43.0	+2.2
TEIG	Tepich	7.24	24	Pn	Pn	02 07 43.4	+1.3
	baz=312,slow=24,SNR=12						
TEIG	Tepich	7.24	24		Pn	02 07 43.0	+0.8
PIRO	Carate, Puerto	9.47	122		Pn	02 08 14.0	+1.2
BRU2	Volcan	9.80	118		Pn	02 08 19.0	+1.4
JRQG	Juriquilla Cam	11.14	311	Pn	Pn	02 08 36.8	+0.8
SOR	Soroa	12.13	40	Pn	Pn	02 08 50.0	+0.8
MTDJ	Mount Denham	14.12	69	Pn	Pn	02 09 16.9	+0.4
HNDO	Hondo	17.44	337		P	02 10 00.1	-0.3
553A	Crawfordville	17.72	20		P	02 10 03.1	-0.4
BRDY	Brady	18.93	340		Pn	02 10 16.5	-1.1
ROSC	El Rosal	18.98	116	P	Pn	02 10 22.5	+3.8
	comp=E,9.9nm,0.7s,baz=89,slow=7.8,SNR=3.8						
ROSC	El Rosal	18.98	116		Pn	02 10 19.4	+0.7
SAND	Sanderson	19.05	330		Pn	02 10 18.9	-0.1
TXAR	Lajitas Array	19.34	326	P	Pn	02 10 23.8	+1.2
	comp=E,3.4nm,0.8s,baz=153,slow=11,SNR=23						
TXAR				LR	LR	02 17 33.2	
	comp=E,49nm,18.6s,baz=100,slow=36						
TXAR	Lajitas Array	19.34	326	P	Pn	02 10 22.0	-0.7
TX31	Lajitas Ar. Si	19.34	326		Pn	02 10 21.8	-0.9
OZNA	Ozona	19.42	334		Pn	02 10 22.0	-1.5
H06E1	SOCORRO T-PHAS	19.42	288	T	T	02 30 23.5	
	SNR=35						
RUSC	La Rusia	19.61	111		Pn	02 10 26.8	+0.3
FLOC	Florencia	19.65	126		Pn	02 10 25.4	-1.0
FLOC				IAmb	IAmb	02 10 37.8	
	comp=Z,39nm,1.3s						
SDV	Santo Domingo	20.91	101	P	Pn	02 10 40.7	-0.7
	comp=Z,3.1nm,0.5s,baz=283,slow=3.8,SNR=3.9						
SDV				LR	LR	02 20 28.3	
	comp=Z,78nm,19.5s,baz=272,slow=42						
	comp=Z,3.1nm,0.5s						
MIAR	Mount Ida	20.94	355		P	02 10 39.0	+0.4
PECS	Pecos	21.06	329	IAmb	IAmb	02 10 50.5	
	comp=Z,34nm,0.9s						
ODSA	Odessa	21.06	333	IAmb	IAmb	02 10 49.1	
	comp=Z,13nm,0.7s						
APMT	Aspermont	21.17	339	IAmb	IAmb	02 10 48.6	
	comp=Z,16nm,0.7s						
VHRN	Van Horn	21.18	326		P	02 10 42.4	+0.9
VHRN				IAmb	IAmb	02 10 51.2	
	comp=Z,23nm,0.8s						
POST	Post	21.44	336		P	02 10 42.5	-1.7
POST				IAmb	IAmb	02 10 51.5	
	comp=Z,21nm,0.9s						
WHAR	Wooly Hollow	21.60	358	IAmb	IAmb	02 10 53.0	
	comp=Z,10nm,0.8s						
SWET	Sewanee	22.08	12	P	P	02 10 48.2	-2.7
SWET				IAmb	IAmb	02 11 28.5	
	comp=Z,16nm,1.0s						
MNTX	Cornudas Mount	22.10	327	IAmb	IAmb	02 11 01.6	
	comp=Z,25nm,1.1s						
FCAR	Ozark Folk Cen	22.20	358	IAmb	IAmb	02 10 58.2	
	comp=Z,8.7nm,0.8s						
LCAR	Lake Charles	22.37	1	P	P	02 10 52.0	-2.0
LCAR				IAmb	IAmb	02 11 01.2	
	comp=Z,7.8nm,0.6s						
SMWD	Samnorwood	22.84	341	IAmb	IAmb	02 11 07.2	
	comp=Z,30nm,1.2s						
TKL	Tuckaleechee C	23.01	16	P	P	02 10 59.3	-1.5
	comp=Z,3.0nm,0.7s,baz=180,slow=14,SNR=2.4						
TKL				pP	pP	02 11 04.8	-5.3
	comp=Z,5.9nm,0.6s,baz=172,slow=18,SNR=6.3						
TKL				LR	LR	02 21 00.5	
	comp=Z,167nm,18.7s,baz=187,slow=40						
	comp=Z,3.0nm,0.7s						
TKL	Tuckaleechee C	23.01	16	IAmb	IAmb	02 11 37.5	
	comp=Z,18nm,0.9s						
PBMO	Poplar Bluff	23.09	2	IAmb	IAmb	02 11 07.4	
	comp=Z,20nm,1.3s						
U49A	Red Boiling Sp	23.36	12		P	02 11 02.3	-2.0
U49A				IAmb	IAmb	02 11 32.0	
	comp=Z,11nm,1.0s						
MGMO	Mountain Grove	23.46	358	IAmb	IAmb	02 11 10.9	
	comp=Z,16nm,1.1s						
121A	Cookes Peak, D	24.06	324		P	02 11 11.8	+0.7
121A				IAmb	IAmb	02 11 22.7	
	comp=Z,25nm,1.2s						
S44A	Carbondale	24.07	4	IAmb	IAmb	02 11 17.8	
	comp=Z,10nm,0.7s						
SIUC	Southern Illin	24.09	4	IAmb	IAmb	02 11 17.6	
	comp=Z,34nm,1.4s						
ATAH	Atahualpa	24.33	147	LR	LR	02 19 24.6	
	comp=Z,97nm,18.0s,baz=348,slow=33						
CCM	Cathedral Cave	24.35	0		P	02 11 11.5	-2.0
CCM				IAmb	IAmb	02 11 19.9	

	comp=Z,12nm,0.6s						
Y22A	Socorro	24.68	328	IAmb	IAmb	02 11 27.4	
	comp=Z,9.8nm,0.8s						
SJG	San Juan	24.70	76	LR	LR	02 22 11.0	
	comp=Z,135nm,18.9s,baz=320,slow=40						
ANMO	Albuquerque	25.22	330	P	P	02 11 22.4	+0.7
	comp=Z,0.9nm,0.7s,baz=153,slow=11,SNR=4.9						
ANMO				pP	pP	02 11 28.5	-3.2
	comp=Z,1.7nm,0.5s,baz=144,slow=9.2,SNR=12						
ANMO				LR	LR	02 22 28.9	
	comp=Z,66nm,18.2s,baz=78,slow=40						
	comp=Z,0.9nm,0.7s						
ANMO	Albuquerque	25.22	330	P	P	02 11 20.6	-1.0
TASM	ASL Pad, Albuq	25.22	330	IAmb	IAmb	02 11 29.5	
	comp=Z,3.4nm,0.8s						
TUC	Tucson	25.70	320	P	P	02 11 26.4	+0.5
P40A	Paris	25.83	359	IAmb	IAmb	02 11 32.3	
	comp=Z,8.5nm,0.8s						
PFO	Pinyon Flats O	30.24	315	LR	LR	02 24 09.5	
	comp=Z,99nm,18.6s,baz=88,slow=36						
MTPU	Mount Pierson	30.54	327		P	02 12 09.8	+0.4
MTPU				IAmb	IAmb	02 12 26.5	
	comp=Z,4.6nm,0.8s						
SPR3	Spring Creek 3	32.40	326	IAmb	IAmb	02 12 34.3	
	comp=Z,6.4nm,1.0s						
SADO	Sadowa	32.77	16	LR	LR	02 26 23.0	
	comp=Z,153nm,20.2s,baz=217,slow=38						
PDAR	Pinedale Array	33.01	335	P	P	02 12 31.2	+0.2
	comp=Z,0.3nm,0.7s,baz=139,slow=6.9,SNR=2.7						
PDAR				pP	pP	02 12 37.4	-3.7
	comp=Z,0.5nm,0.6s,baz=126,slow=7.5,SNR=5.8						
PDAR				PcP	PcP	02 15 18.2	+3.9
	comp=Z,0.4nm,0.6s,baz=122,slow=5.4,SNR=4.1						
	comp=Z,0.3nm,0.7s						
PDAR	Pinedale Array	33.01	335	P	P	02 12 30.8	-0.1
ELK	Elko	34.13	327	P	P	02 12 43.0	+2.2
	comp=Z,1.2nm,0.9s,baz=143,slow=7.8,SNR=4.9						
ELK				pP	pP	02 12 48.2	-2.6
	comp=Z,3.2nm,0.9s,baz=127,slow=6.0,SNR=6.9						
	comp=Z,1.2nm,0.9s						
ELK	Elko	34.13	327	IAmb	IAmb	02 12 50.8	
	comp=Z,2.3nm,0.7s						
NV11	Mina Array Sit	34.24	321		P	02 12 40.5	-1.1
NV11				IAmb	IAmb	02 12 50.8	
	comp=Z,5.2nm,1.1s						
NVAR	Mina Array Bea	34.33	321	P	P	02 12 44.8	+2.3
	comp=Z,1.5nm,0.7s,baz=130,slow=8.1,SNR=8.6						
NVAR				pP	pP	02 12 51.2	-1.4
	comp=Z,4.6nm,0.7s,baz=129,slow=5.9,SNR=16						
NVAR				PcP	PcP	02 15 20.3	+2.1
	comp=Z,0.4nm,0.6s,baz=116,slow=2.0,SNR=2.3						
NVAR				LR	LR	02 28 34.2	
	comp=Z,129nm,21.8s,baz=193,slow=40						
	comp=Z,1.5nm,0.7s						
NVAR	Mina Array Bea	34.33	321	P	P	02 12 44.1	+1.6
MACA	Manacapuru-AM	34.75	116		P	02 12 47.8	+1.7
ULM	Lac du Bonnet	36.72	355	P	P	02 13 03.6	+1.0
	comp=Z,2.3nm,0.6s,baz=173,slow=12,SNR=4.6						
ULM				LR	LR	02 30 09.5	
	comp=Z,64nm,18.2s,baz=193,slow=40						
	comp=Z,2.3nm,0.6s						
ULM	Lac du Bonnet	36.72	355	IAmb	IAmb	02 13 26.2	
	comp=Z,5.3nm,1.2s						
LPAZ	La Paz	37.58	141	P	P	02 13 13.4	+2.5
	comp=Z,0.6nm,0.7s,baz=345,slow=12,SNR=1.8						
LPAZ				LR	LR	02 27 09.0	
	comp=Z,70nm,19.1s,baz=334,slow=34						
	comp=Z,0.6nm,0.7s						
PLID	Pearl Lake	37.69	331	IAmb	IAmb	02 13 18.3	
	comp=Z,4.7nm,0.8s						
NEW	Newport	40.60	334	P	P	02 13 36.3	+1.1
	comp=Z,1.0nm,0.7s,baz=129,slow=22,SNR=1.9						
	comp=Z,1.0nm,0.7s						
SCHQ	Schefferville	45.40	20	P	P	02 14 15.1	+1.2
	comp=Z,7.0nm,0.9s,baz=212,slow=7.8,SNR=4.1						
SCHQ				LR	LR	02 33 19.2	
	comp=Z,139nm,19.1s,baz=213,slow=36						
	comp=Z,7.0nm,0.9s						
H03N2	Juan Fernandez	48.27	166	T	T	03 06 16.1	
	baz=347						
H03N1	Juan Fernandez	48.28	166	T	T	03 06 17.0	
	baz=347,slow=74,SNR=4.4						
H03N3	Juan Fernandez	48.29	166	T	T	03 06 17.4	
	baz=347,slow=74,SNR=4.6						
YKAW1	Yellowknife Wh	51.50	347	P	P	02 14 58.7	-2.1
YKAW1				IAmb	IAmb	02 15 05.6	
	comp=Z,5.1nm,0.8s						
YKA	Yellowknife Ar	51.54	346	P	P	02 14 59.6	-1.4
	comp=Z,0.6nm,0.7s,baz=156,slow=7.0,SNR=10						
YKA				pP	pP	02 15 05.2	-6.3
	comp=Z,2.1nm,0.7s,baz=156,slow=7.3,SNR=18						
	comp=Z,0.6nm,0.7s						
YKA	Yellowknife Ar	51.54	346	P	P	02 14 58.9	-2.1
YKAW3	Yellowknife Wh	51.60	347	P	P	02 14 59.4	-2.0
YKAW3				IAmb	IAmb	02 15 06.8	
	comp=Z,4.7nm,0.8s						
GHO	Glory Hole Cre	63.00	333	P	P	02 16 21.9	-0.2
ILAR	Eielson Array	63.42	337	P	P	02 16 23.9	-0.8
	comp=Z,0.9nm,0.9s,baz=140,slow=4.9,SNR=9.7						
ILAR				pP	pP	02 16 30.3	-5.1
	comp=Z,2.3nm,0.8s,baz=131,slow=4.8,SNR=17						
	comp=Z,0.9nm,0.9s						
BMAR	Burnt Mountain	63.85	340	P	P	02 16 26.8	-0.8
SPU	Mount Spurr	64.18	332	P	P	02 16 29.4	-0.5
SKT	Skwentna	64.22	333		P	02 16 29.6	-0.5
TRF	Thorofare Moun	64.23	335	P	P	02 16 29.9	-0.4
D20K	Etivluk River	68.50	339	IAmb	IAmb	02 17 04.1	
	comp=Z,4.4nm,0.8s						
ARCES	ARCESS Array B	86.33	18	pP	pP	02 18 41.9	-6.2
	comp=Z,1.5nm,0.9s,baz=307,slow=4.2,SNR=1.3						
BOSA	Boshof	119.68	115	PKP	PKiKP	02 24 48.9	+2.9
	comp=Z,4.9nm,1.2s,baz=135,slow=2.6,SNR=3.2						
CMAR	Chiang Mai Arr	146.54	342	PKPbc	PKPbc	02 25 36.1	-1.3
	comp=Z,2.1nm,0.3s,baz=336,slow=4.7,SNR=7.3						
CMAR				pPKPbc	PKiKP	02 25 42.6	+2.2
	comp=Z,5.3nm,0.7s,baz=344,slow=4.4,SNR=2.8						

IDC ***21*** *02:07:39.2±0.9, 3°.68S×149°.75E, h0^{km}, mb4.4/16, mbtmp4.4/17, ML3.6/1, MS4.3/36, Error ellipse: s-maj=32.8km s-min=15.9km az=101.0*

NEIC ***21*** *02:07:40.3±1.6, 3°.60S±0°.08×149°.73E±0°.06, h10^{km}±1^{km}, mb4.9/65, Error ellipse: s-maj=14.1km s-min=9.7km az=205.0*

BJI ***21*** *02:07:41.7, 3°.30S×149°.50E, h10^{km}, mB5.0/10, mb4.7/48, Ms4.7/23, Ms7 4.5/23*

GCMT ***21*** *02:07:43.3±0.2, 3°.62S±0°.01×149°.67E±0°.01, h17^{km}, MW5.2/126, Moment Tensor Solution. s53,c68; s126,c205; Duration: 0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.25±.02; $M_{\theta\theta}$0.80±.02; $M_{\phi\phi}$-0.55±.01; $M_{r\theta}$0.01±.03; $M_{\theta\phi}$-0.15±.01; $M_{\phi r}$-0.01±.04; Best double couple: $M_0$0.69500×10^{17} NP1:ϕ_s51.00000°, δ88.00000°, λ-179.00000°. NP2:ϕ_s321.00000°, δ89.00000°, λ-2.00000°. Principal axes: T 0.8210, Plg1.0000°, Azm6.0000°; N -0.2530, Plg88.0000°, Azm115.0000°; P -0.5680, Plg2.0000°, Azm276.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***21*** *02:07:45.4±1.8, 4°S±10°×15°0E±1°3, h53^{km}±10^{km}, M4.8/25, mb4.7/25, mB5.4/12, MLv4.8/1, Mw(mB)4.8/12, MwMwp4.6/4, Mwp5.0/4*

ISC 21 02:07:40.0±0.4,**3°.72S**±0°.06×**149°.80E**±0°.06,**h10**^{km}**,n147,** σ**1°.59**/110,**mb4.9**/67,**MS4.4**/45,**1C-2D,Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	2.41	101	Pn	Pn	02 08 19.3	-0.2
MANU	Manus Island	2.94	304		Pn	02 08 23.6	-3.3
PMG	Port Moresby	6.23	205	Pn	Pn	02 09 15.7	+3.7
	2.5nm,0.3s,baz=21,slow=7.8,SNR=13						
PMG				LR	LR	02 11 02.1	
	comp=Z,894nm,21.4s,baz=52,slow=32						
PMG	Port Moresby	6.23	205		Pn	02 09 14.0	+2.0
PMG	Port Moresby	6.23	205	P	Pn	02 09 15.2	+3.2
	0.4nm5μm1μm84nm,1.4s						
JAY	Jayapura	9.16	277	LR	LR	02 12 46.6	
	comp=Z,5μm,20.4s,baz=90,slow=34						
GENI	Genyem	9.68	276	P	Pn	02 09 59.2	-0.2
	3μm71nm,1.5s						
SMPI	Sarmi	11.20	279	P	Pn	02 10 19.7	-0.6
	3μm89nm,1.3s						
COEN	Coen	12.09	212		Pn	02 10 33.8	+1.3
CTA	Charters Tower	16.63	192	Pn	P	02 11 36.4	+0.6
	0.1nm,0.3s,baz=1.2,slow=14,SNR=6.6						
CTA				LR	LR	02 17 23.1	
	comp=Z,1μm,21.3s,baz=7.5,slow=35						
	28nm,1.2s						
CTAO	Charters Tower	16.63	192		Pn	02 11 33.3	-0.1
FAKI	Fak Fak	17.54	272		Pn	02 11 41.0	-3.8
FAKI				IAmb	IAmb	02 11 44.5	
	comp=Z,245nm,1.7s						
FAKI	Fak Fak	17.54	272	P	Pn	02 11 42.5	-2.3
	comp=Z,1μmcomp=Z,62nm,1.4s						
GUMO	Guam	17.88	344	LR	LR	02 17 17.0	
	comp=Z,1μm,21.9s,baz=146,slow=32						
SIJI	Sorong	18.73	278	P	P	02 11 57.9	-1.2
	comp=Z,20nm,1.1s						
SWI	Sorong	18.74	278	P	P	02 11 56.8	-2.3
SAUI	Saumlaki	18.88	256	P	P	02 11 59.8	-0.9
SAUI	Saumlaki	18.88	256	P	P	02 12 00.0	-0.7
	comp=Z,155nm,1.3s						
BNDI	Bandanaira	19.86	267	P	P	02 12 11.8	+0.4
MTN	Manton Dam	20.56	243		P	02 12 18.2	-0.8
MSAI	Masohi	20.83	270	P	P	02 12 22.5	+0.5
	comp=Z,5μmcomp=Z,30nm,1.1s						
EIDS	Eidsvold	21.56	177		P	02 12 31.3	+1.5
EIDS				IAmb	IAmb	02 12 40.7	
	comp=Z,88nm,1.4s						
WR8	Warramunga Arr	21.98	222	P	P	02 12 33.5	-0.8
WR8				IAmb	IAmb	02 12 49.1	
	comp=Z,68nm,1.1s						
WRA	Warramunga Arr	22.07	222	P	P	02 12 35.0	-0.3
	comp=Z,19nm,1.2s,baz=43,slow=9.7,SNR=30						
	comp=Z,19nm,1.2s						
WRA	Warramunga Arr	22.07	222		P	02 12 34.8	-0.5
NLAI	Namlea	22.66	270	P	P	02 12 41.9	+0.2
TNTI	Ternate	22.86	281	P	P	02 12 41.4	-2.4
KNRA	Kununurra	23.86	239		P	02 12 52.8	-1.0
KNRA				IAmb	IAmb	02 12 58.5	
	comp=Z,66nm,1.6s						
DZM	Mont Dzumac	24.36	140	LR	LR	02 20 43.3	
	comp=Z,1μm,19.8s,baz=327,slow=32						
DZM	Mont Dzumac	24.36	140	*e*P	P	02 12 59.8	+1.3
	comp=Z,74nm,1.4s						
DZM				*e*S	S	02 17 12.8	-5.4
	comp=Z,446nm,28.4s						
DZM				*e*LR	LR	02 18 55.6	
	comp=Z,2μm,27.6s						
AS31	Alice Springs	25.08	216	P	P	02 13 05.0	0.0
ASAR	Alice Springs	25.08	216	P	P	02 13 05.5	+0.5
	comp=Z,6.4nm,0.7s,baz=50,slow=8.3,SNR=33						
ASAR				LR	LR	02 23 32.9	
	comp=Z,2μm,20.3s,baz=43,slow=38						
	comp=Z,6.4nm,0.7s						
ASAR	Alice Springs	25.08	216		P	02 13 05.2	+0.3
INKA	Innaminka	25.40	199	P	P	02 13 08.2	+0.5
INKA				IAmb	IAmb	02 13 12.8	
	comp=Z,26nm,1.1s						
SOEI	Soe	26.04	255	P	P	02 13 15.0	+1.1
	comp=Z,1μmcomp=Z,20nm,0.5s						
DAV	Davao City (W)	26.44	294	LR	LR	02 23 35.5	
	comp=Z,629nm,18.1s,baz=90,slow=36						
ARMA	Armidale	26.61	176	P	P	02 13 19.6	+0.8
BATI	Baumata	26.71	255	LR	LR	02 25 55.3	
	comp=Z,1μm,20.5s,baz=94,slow=41						
BATI	Baumata	26.71	255	P	P	02 13 19.9	0.0
GTOI	Gorontalo	27.12	279	P	P	02 13 22.6	-0.8
	comp=Z,545nmcomp=Z,18nm,1.2s						
KDI	Kendari	27.12	269	P	P	02 13 21.4	-2.1
LUWI	Luwuk	27.13	275	P	P	02 13 21.1	-2.4
LUWI	Luwuk	27.13	275	P	P	02 13 24.0	+0.4
FITZ	Fitzroy Crossi	27.63	237	LR	LR	02 25 17.3	
	comp=Z,794nm,18.6s,baz=60,slow=38						
FITZ	Fitzroy Crossi	27.63	237	P	P	02 13 28.8	+0.8
EDFI	Ende, Flores	28.37	259	P	P	02 13 32.5	-2.3
	comp=Z,11nm,1.4s						
STKA	Stephens Creek	29.05	194	P	P	02 13 41.6	+1.1
	comp=Z,1.1nm,0.3s,baz=13,slow=13,SNR=3.8						
STKA				LR	LR	02 26 09.1	
	comp=Z,1μm,18.2s,baz=17,slow=38						
	comp=Z,1.1nm,0.3s						
TOLI2	Tolitoli	29.39	279	P	P	02 13 41.5	-2.3
TOLI2				IAmb	IAmb	02 14 28.8	
	comp=Z,39nm,1.9s						
MPSI	Mapaga	30.15	277	P	P	02 13 47.5	-3.0
MBWA	Marble Bar	33.98	237	P	P	02 14 23.4	-0.7
PSA00	Pilbara Seismi	34.07	236	P	P	02 14 24.2	-0.6
PSA00				IAmb	IAmb	02 14 29.1	
	comp=Z,24nm,1.6s						
JHJ	Hachijo jima 2	37.84	346	LR	LR	02 29 57.3	
	comp=Z,400nm,19.2s,baz=117,slow=35						
MJAR	Matsushiro Arr	41.49	346	LR	LR	02 30 11.9	
	comp=Z,443nm,21.8s,baz=155,slow=33						
NWAO	Narrogin (SRO)	42.08	222	LR	LR	02 33 35.3	
	comp=Z,676nm,19.2s,baz=88,slow=37						
SSE	Sheshan	44.08	324	P	P	02 15 47.8	-0.6
SSE				S	S	02 22 21.3	+0.3
SSE				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SSE				pmax	pmax		
	comp=Z,220nm,3.4s						
SSE				LR	LR		
	comp=Z,230nm,20.6s						
SSE				LR	LR		
	comp=Z,200nm,19.9s						
QIZ	Qiongzhong	45.35	301	P	P	02 15 58.8	0.0
QIZ				S	S	02 22 39.1	-0.8
QIZ				LR	LR		
	comp=Z,350nm,16.6s						
QIZ				LR	LR		
	comp=Z,310nm,14.4s						
QIZ				LR	LR		
	comp=Z,290nm,17.2s						
NJ2	Nanjing	46.15	323	*e*P	P	02 16 04.8	-0.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TIA	Tai'an	50.10	325	P	P	02 16 35.3	-0.1
TIA				pmax	pmax		
	comp=Z,13nm,0.8s						
USRK	Ussuriysk Ar.	50.31	343	P	P	02 16 38.0	+1.1
	comp=Z,3.2nm,0.7s,baz=151,slow=8.3,SNR=5.5						
	comp=Z,3.2nm,0.7s						
PSI	Prapat	51.25	277	LR	LR	02 41 54.9	
	comp=Z,162nm,18.3s,baz=112,slow=40						
RAR	Rarotonga	51.95	114	LR	LR	02 36 17.8	
	comp=Z,64nm,18.4s,baz=270,slow=33						
CN2	Changchun	52.13	338	*e*P	P	02 16 53.6	+3.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HNS	HongShan	52.31	325	⇓P	P	02 16 51.3	-0.7
HNS				S	S	02 24 17.1	-0.4
HNS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HNS				LR	LR		
	comp=Z,320nm,15.3s						
HNS				LR	LR		
	comp=Z,210nm,17.5s						
HNS				LR	LR		
	comp=Z,310nm,17.5s						
BNX	BinXian	53.12	341	⇓P	P	02 16 57.8	0.0
BNX				S	S	02 24 28.8	+0.6
BNX				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BNX				LR	LR		
	comp=Z,570nm,26.0s						
BNX				LR	LR		
	comp=Z,350nm,16.3s						
BNX				LR	LR		
	comp=Z,570nm,26.0s						
XAN	Xi'an	53.79	318	⇑P	P	02 17 03.9	+0.8
XAN				pmax	pmax		
	comp=Z,8.0nm,1.5s						
XAN				LR	LR		
	comp=Z,260nm,16.5s						
XAN				LR	LR		
	comp=Z,190nm,19.2s						
XAN				LR	LR		
	comp=Z,240nm,16.5s						
KMI	Kunming	53.91	305	P	P	02 17 05.6	+1.3
KMI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KMI				LR	LR		
	comp=Z,220nm,15.6s						
KMI				LR	LR		
	comp=Z,180nm,15.5s						
KMI				LR	LR		
	comp=Z,220nm,18.8s						
CMAR	Chiang Mai Arr	54.71	296	P	P	02 17 10.2	+0.3
	comp=Z,5.2nm,0.9s,baz=108,slow=5.7,SNR=18						
CMAR				LR	LR	02 40 28.9	
	comp=Z,84nm,18.0s,baz=110,slow=36						
	comp=Z,5.2nm,0.9s						
CMAR	Chiang Mai Arr	54.71	296	P	P	02 17 08.5	-1.4
CHTO	Chiang Mai	54.82	296	P	P	02 17 08.2	-2.6
PZH	PanZhiHua	55.31	306	P	P	02 17 15.3	+1.0
CD2	Chengdu	55.77	312	P	P	02 17 17.8	+0.3
CD2				S	S	02 25 05.8	+1.1
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				LR	LR		
	comp=Z,450nm,16.5s						
CD2				LR	LR		
	comp=Z,370nm,13.3s						
CD2				LR	LR		
	comp=Z,280nm,13.3s						
XLT	XiLinHaoTe	56.25	331	*e*P	P	02 17 21.1	+0.4
XLT				pP	pwP	02 17 26.9	+0.6
XLT				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XLT				LR	LR		
	comp=Z,25nm,22.5s						
XLT				LR	LR		
	comp=Z,240nm,20.4s						
XLT				LR	LR		
	comp=Z,320nm,19.6s						
HHC	Hu-ho-hao-te	56.45	326	*e*P	P	02 17 23.4	+1.2
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,79nm,4.2s						
HHC				LR	LR		
	comp=Z,290nm,14.5s						
HHC				LR	LR		
	comp=Z,210nm,14.1s						
HHC				LR	LR		
	comp=Z,260nm,14.1s						
PETK	Petropavlovsk-	57.01	6	P	P	02 17 26.6	+0.9
	comp=Z,8.0nm,0.9s,baz=212,slow=10,SNR=4.1						
PETK				LR	LR	02 37 32.3	
	comp=Z,527nm,21.7s,baz=197,slow=32						
	comp=Z,8.0nm,0.9s						
PETK	Petropavlovsk-	57.01	6	P	P	02 17 25.5	-0.3
HEH	HeiHe	57.12	343	*e*P	P	02 17 27.0	+0.4
HEH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BTO	Baotou	57.17	325	*e*P	P	02 17 29.3	+2.0
BTO				PP	PP	02 19 35.6	+1.2
BTO				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BTO				pmax	pmax		
	comp=Z,270nm,5.3s						
BTO				LR	LR		
	comp=Z,440nm,13.6s						
BTO				LR	LR		
	comp=Z,410nm,14.5s						
LZH	Lanzhou	58.38	317	*e*P	P	02 17 39.8	+3.8
LZH				sP	pwP	02 17 44.9	+3.3
LZH				S	S	02 25 42.3	+3.1
LZH				pmax	pmax		
	comp=Z,28nm,1.0s						
LZH				LR	LR		
	comp=Z,290nm,14.9s						
LZH				LR	LR		
	comp=Z,230nm,15.3s						
LZDM	Lanzhou Array	58.42	317	P	P	02 17 37.2	+0.7
	comp=Z,1.1nm,0.4s,baz=150,slow=9.5,SNR=1.6						
	comp=Z,1.1nm,0.4s						
SHEM	Shemya Is, Ala	59.87	17	LR	LR	02 38 43.3	
	comp=Z,441nm,21.8s,baz=192,slow=31						
PPT2	Papeete2	60.91	108	*e*P	P	02 18 00.6	+7.0
	comp=Z,32nm,24.5s						
PPT2				*e*S	S	02 26 08.7	-3.5
	comp=Z,170nm,28.5s						
PPT2				*e*SS	SS	02 30 15.8	+4.2
	comp=Z,85nm,27.5s						
PPT2				*e*LQ	LQ	02 33 21.5	
	comp=Z,315nm,29.2s						
PPT2				*e*LR	LR	02 35 57.3	
	comp=Z,427nm,34.5s						
PPT2				*e*LR	LR	02 35 58.2	
	comp=Z,606nm,28.8s						
TBI	Tubuai	61.73	114	*e*S	S	02 26 19.7	-2.6
	comp=Z,1μm,22.2s						
TBI				*e*LQ	LQ	02 33 42.0	
	comp=Z,4μm,33.8s						
TBI				*e*LR	LR	02 36 14.6	
	comp=Z,2μm,33.2s						
BRDH	Bariadhala	62.51	298	LR	LR	02 45 36.3	
	comp=Z,75nm,18.7s,baz=158,slow=36						
GTA	Gaotai	62.85	318	P	P	02 18 08.1	+1.7
GTA				pmax	pmax		
	comp=Z,7.0nm,1.5s						
GTA				LR	LR		
	comp=Z,180nm,15.9s						
GTA				LR	LR		
	comp=Z,180nm,17.9s						
GTA				LR	LR		
	comp=Z,240nm,19.5s						
MA2	Magadan	63.10	1	LR	LR	02 42 15.7	
	comp=Z,258nm,21.8s,baz=163,slow=33						
SHL	Shillong	63.18	301		P	02 18 08.0	-1.0
SHL				IAmb	IAmb	02 18 09.9	
	comp=Z,11nm,0.9s						
ULN	Ulaanbaatar	63.52	329	P	P	02 18 09.4	-1.3
SONM	Songino Array	63.84	329	P	P	02 18 13.8	+1.0
	comp=Z,1.3nm,0.7s,baz=144,slow=5.2,SNR=7.7						
SONM				LR	LR	02 47 02.1	
	comp=Z,198nm,19.4s,baz=126,slow=37						
	comp=Z,1.3nm,0.7s						
SONM	Songino Array	63.84	329		P	02 18 11.7	-1.1
SEY	Seymchan	66.50	1	LR	LR	02 50 34.2	
	comp=Z,129nm,18.0s,baz=172,slow=39						
YAK	Yakutsk	67.36	350	LR	LR	02 46 54.9	
	comp=Z,88nm,21.8s,baz=128,slow=35						
TAOE	Nuku Hiva Isla	69.74	98	*e*SS	SS	02 32 29.8	+0.5
	comp=Z,91nm,31.0s						
TAOE				*e*LR	LR	02 40 05.5	
	comp=Z,443nm,23.3s						
PALK	Pallekele	69.81	279	LR	LR	02 52 34.7	
	comp=Z,100nm,18.1s,baz=109,slow=39						
WMQ	Urumqi	72.93	318	*e*P	P	02 19 10.6	+0.9
WMQ				LR	LR		
	comp=Z,140nm,23.8s						
TIXI	Tiksi	76.46	353	LR	LR	02 49 52.4	
	comp=Z,102nm,21.6s,baz=196,slow=33						
KDAK	Kodiak Island	76.59	28	LR	LR	02 47 03.5	
	comp=Z,242nm,21.6s,baz=244,slow=31						
J17K	VABM Dome	77.03	21	IAmb	IAmb	02 19 42.5	
	comp=Z,13nm,1.2s						
MKAR	Makanchi Array	77.55	319	P	P	02 19 36.3	+0.1
	comp=Z,2.1nm,1.0s,baz=90,slow=10,SNR=4.5						
MKAR				LR	LR	02 55 02.7	
	comp=Z,115nm,19.5s,baz=86,slow=37						
	comp=Z,2.1nm,1.0s						
MKAR	Makanchi Array	77.55	319	P	P	02 19 35.8	-0.5
H17K	Granite Mounta	77.69	20	IAmb	IAmb	02 19 47.1	
	comp=Z,19nm,1.4s						
L19K	White Mountain	77.92	23	IAmb	IAmb	02 19 47.1	
	comp=Z,22nm,1.2s						
ZALV	Zalesovo Beam	78.61	327	P	P	02 19 41.4	-0.5
	comp=Z,1.8nm,0.8s,baz=102,slow=6.2,SNR=7.9						
ZALV				LR	LR	02 55 07.7	
	comp=Z,89nm,19.7s,baz=59,slow=36						
	comp=Z,1.8nm,0.8s						
ZALV	Zalesovo Beam	78.61	327	P	P	02 19 40.7	-1.2
G18K	Tagagawik	78.69	19	IAmb	IAmb	02 19 50.8	
	comp=Z,10nm,1.1s						
H19K	Roundabout Mou	79.21	20	IAmb	IAmb	02 19 47.7	
	comp=Z,9.9nm,1.0s						
J20K	Nowinta River	79.27	22	IAmb	IAmb	02 19 54.7	
	comp=Z,27nm,1.4s						
G19K	Purcell Mounta	79.35	19	IAmb	IAmb	02 19 54.8	
	comp=Z,16nm,1.1s						
F19K	Shaleruckik Mo	79.54	19	P	P	02 19 47.0	+0.3
KSH	Kashi	79.97	311	P	P	02 19 52.3	+2.5
KSH				pmax	pmax		
	comp=Z,5.0nm,1.2s						
F20K	Avaraart Lake	80.32	19	IAmb	IAmb	02 20 21.5	
	comp=Z,20nm,1.6s						
D19K	Kuna River	80.43	17	IAmb	IAmb	02 20 22.5	
	comp=Z,32nm,1.9s						
NIL	Nilore	80.90	305		P	02 19 55.3	+0.4
NIL				IAmb	IAmb	02 19 56.9	
	comp=Z,15nm,0.8s						
RND	Reindeer	80.92	24	IAmb	IAmb	02 20 02.0	
	comp=Z,13nm,1.1s						
MCK	McKinley	81.04	23		P	02 19 54.5	-0.5
MCK				IAmb	IAmb	02 19 56.2	

	comp=Z,16nm,1.0s						
KURK	Kurchatov	81.08	322	P	P	02 19 55.5	+0.1
KURBB	Kurchatov Arra	81.11	322	P	P	02 19 55.9	+0.3
	comp=Z,1.3nm,0.9s,baz=108,slow=4.8,SNR=5.8						
	comp=Z,1.3nm,0.9s						
CCB	Clear Creek Bu	81.90	23		P	02 19 58.9	-0.5
COLD	Coldfoot	82.25	20	IAmb	IAmb	02 20 44.5	
	comp=Z,14nm,1.5s						
D22K	Ayikyak River	82.29	18	IAmb	IAmb	02 20 13.9	
	comp=Z,13nm,1.3s						
IL31		82.31	23		P	02 20 00.2	-1.3
ILAR	Eielson Array	82.31	23	P	P	02 20 01.2	-0.4
	comp=Z,3.7nm,0.8s,baz=251,slow=5.4,SNR=34						
ILAR				LR	LR	02 53 19.3	
	comp=Z,140nm,20.4s,baz=248,slow=33						
	comp=Z,3.7nm,0.8s						
J25K	Salcha River,	82.83	23	IAmb	IAmb	02 20 05.9	
	comp=Z,8.9nm,0.8s						
E23K	Chandalar	82.85	19	IAmb	IAmb	02 20 16.6	
	comp=Z,20nm,1.6s						
D23K	Nanushuk River	82.95	18	IAmb	IAmb	02 20 13.8	
	comp=Z,8.6nm,1.1s						
M27K	Edge Creek, AK	83.40	26	IAmb	IAmb	02 20 10.2	
	comp=Z,8.2nm,0.9s						
NRIK	Noril'sk	83.99	342	P	P	02 20 11.3	+1.1
	comp=Z,8.2nm,1.1s,baz=116,slow=5.5,SNR=7.2						
NRIK				LR	LR	02 57 13.4	
	comp=Z,91nm,20.5s,baz=116,slow=35						
	comp=Z,8.2nm,1.1s						
NRIK	Noril'sk	83.99	342		P	02 20 09.7	-0.5
NRIK				IAmb	IAmb	02 20 39.6	
	comp=Z,13nm,1.2s						
GAR	Garm	84.17	310	P	P	02 20 10.4	-1.5
KK31	Karatay Array	84.72	314		P	02 20 13.8	-0.7
KKAR	Karatay Array	84.72	314	P	P	02 20 14.8	+0.3
CHGR	Chuyangaron	85.01	309		P	02 20 14.9	-1.2
DAWY	Dawson	85.05	25	IAmb	IAmb	02 20 45.2	
	comp=Z,12nm,1.4s						
K29M	Barlow Dome	85.76	25	IAmb	IAmb	02 20 22.6	
	comp=Z,9.0nm,0.8s						
D27M	Malcolm River	86.22	20	IAmb	IAmb	02 20 53.0	
	comp=Z,14nm,1.6s						
QSPA	South Pole Qui	86.23	180	P	P	02 20 23.2	+1.5
	comp=Z,1.3nm,0.8s,baz=335,slow=2.6,SNR=4.5						
	comp=Z,1.3nm,0.8s						
J30M	Hart River	86.47	25	IAmb	IAmb	02 20 26.0	
	comp=Z,7.1nm,0.9s						
E28M	Babbage River	86.49	20	IAmb	IAmb	02 21 11.6	
	comp=Z,14nm,1.5s						
BVAR	Borovoye Array	86.59	324	P	P	02 20 24.0	+0.4
	comp=Z,2.6nm,0.7s,baz=119,slow=5.2,SNR=13						
	comp=Z,2.6nm,0.7s						
BBB	Bella Bella	88.06	38	LR	LR	02 55 09.5	
	comp=Z,236nm,18.5s,baz=260,slow=32						
INK	Inuvik	88.53	21	LR	LR	02 55 13.8	
	comp=Z,178nm,21.2s,baz=259,slow=32						
INK	Inuvik	88.53	21	P	P	02 20 32.3	-0.2
INK				IAmb	IAmb	02 20 48.3	
	comp=Z,13nm,1.6s						
YBH	Yreka Blue Hor	90.58	48	LR	LR	02 54 33.7	
	comp=Z,23nm,20.5s,baz=271,slow=31						
ARTI	Arti	93.85	326	LR	LR	03 04 44.3	
	comp=Z,124nm,19.1s,baz=141,slow=36						
YKA	Yellowknife Ar	95.87	28	P	P	02 21 07.5	+0.9
	comp=Z,1.6nm,0.8s,baz=277,slow=5.4,SNR=22						
YKA				LR	LR	03 01 02.2	
	comp=Z,295nm,20.0s,baz=300,slow=33						
	comp=Z,1.6nm,0.8s						
YKA	Yellowknife Ar	95.87	28	P	P	02 21 07.1	+0.5
KIRV	Kirov	98.57	329	LR	LR	03 07 12.7	
	comp=Z,186nm,21.7s,baz=75,slow=36						
TORD	Torodi Ar. Bea	147.12	289	PKPbc	PKPbc	02 27 25.1	+0.7
	comp=Z,5.4nm,0.9s,baz=52,slow=4.7,SNR=23						

IDC 21 02:19:34.7±2.4**, 3°.61S×149°.69E, h0^{km}, mb3.5**/3**,**
mbtmp3.5/3**, Error ellipse: s-maj=269.2km**
s-min=29.8km az=123.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.08	221	P	P	02 24 32.1	+0.6
	1.0nm,0.7s,baz=42,slow=10,SNR=10						
	1.0nm,0.7s						
ASAR	Alice Springs	25.10	216	P	P	02 25 00.9	-0.4
	0.9nm,0.8s,baz=50,slow=8.0,SNR=10						
	0.9nm,0.8s						
ILAR	Eielson Array	82.25	23	P	P	02 31 57.8	+0.1
	0.4nm,0.8s,baz=260,slow=5.3,SNR=4.2						
	0.4nm,0.8s						

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*IDC **21** 02:25:42.2±0.6, 31°.15S×13°.38W, h0^{km}, mb4.3/11, mbtmp4.3/11, Error ellipse: s-maj=21.9km s-min=18.5km az=127.0*

*NEIC **21** 02:25:44.1±1.1, 31°.2S±0°.1×13°.36W±0°.07, h10^{km}±1^{km}, mb5.0/52, Error ellipse: s-maj=19.5km s-min=9.0km az=192.0*

*GCMT **21** 02:25:49.1±0.2, 31°.19S±0°.02×13°.35W±0°.01, h12^{km}, MW5.2/140, Moment Tensor Solution. s75,c101; s140,c259; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.72±.01; $M_{\theta\theta}$0.03±.01; $M_{\phi\phi}$0.68±.01; $M_{r\theta}$-0.03±.04; $M_{\theta\phi}$-0.22±.01; $M_{\phi r}$-0.43±.04; Best double couple: $M_0$0.85300×10^{17} NP1:ϕ_s152.00000°, δ32.00000°, λ-108.00000°. NP2:ϕ_s354.00000°, δ60.00000°, λ-79.00000°. Principal axes: T 0.8570, Plg15.0000°, Azm76.0000°; N -0.0080, Plg9.0000°, Azm168.0000°; P -0.8490, Plg72.0000°, Azm290.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 02:25:45.0±0.4**, 31°.15S**±0°.09×**13°.34W**±0°.09**, h20^{km}, n94,**
σ**0^{s}96**/85**, mb4.9**/33**, 8D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H09N1	TRISTAN DA CUN	5.97	172	T	T	02 33 34.2	
	SNR=8.0						
H10S2	ASCENSION HYDR	22.11	357	T	T	02 53 30.7	
	baz=43,slow=74,SNR=130						
H10S3	ASCENSION HYDR	22.12	357	T	T	02 53 29.9	
	baz=177,slow=74,SNR=136						
H10N1	ASCENSION HYDR	23.21	357	T	T	02 54 57.4	
	baz=180,slow=80,SNR=9.6						
H10N3	ASCENSION HYDR	23.21	357	T	T	02 54 59.9	
	baz=180,slow=80,SNR=38						
H10N2	ASCENSION HYDR	23.23	357	T	T	02 54 58.1	
	baz=180,slow=80,SNR=12						
TSUM	Tsumeb	30.31	74	P	P	02 31 54.8	-0.6
KOOLE	Kule	30.86	83		P	02 31 59.3	-0.9
GRTLG	Ghanzi	32.38	81		P	02 32 12.3	-1.3
GRTLG				IAmb	IAmb	02 32 29.2	
	comp=Z,35nm,1.7s						
KGCAE	Kacgae	32.63	84	P	P	02 32 15.3	-0.5
BOSA	Boshof	33.45	96	P	P	02 32 21.9	-1.1
	comp=Z,5.7nm,1.0s,baz=234,slow=9.5,SNR=6.5						
	comp=Z,5.7nm,1.0s						
BOSA	Boshof	33.45	96	P	P	02 32 21.6	-1.3
BOSA				IAmb	IAmb	02 32 37.8	
	comp=Z,49nm,1.7s						
XAUDM	Khaudum	33.74	76	P	P	02 32 25.4	0.0
XAUDM				IAmb	IAmb	02 32 32.0	
	comp=Z,19nm,1.4s						
LBTB	Lobatse	34.77	90		P	02 32 32.9	-1.4
LBTB				IAmb	IAmb	02 32 41.5	
	comp=Z,45nm,1.8s						
BDFB	Brasilia	35.19	288	P	P	02 32 38.1	+0.1
	comp=Z,8.3nm,0.7s,baz=123,slow=8.0,SNR=14						
	comp=Z,8.3nm,0.7s						
BDFB	Brasilia	35.19	288		P	02 32 37.5	-0.6
BDFB				IAmb	IAmb	02 32 44.7	
	comp=Z,25nm,1.0s						
LPHEP	Lephephe	35.56	87	P	P	02 32 39.6	-1.6
LPHEP				IAmb	IAmb	02 32 45.2	
	comp=Z,27nm,1.4s						
PHDHD	Phuduhudu	35.68	81	P	P	02 32 42.4	+0.2
PHDHD				IAmb	IAmb	02 32 55.5	
	comp=Z,55nm,2.0s						
KHWEE	KHWEE	35.74	85	P	P	02 32 42.3	-0.5
KHWEE				IAmb	IAmb	02 32 43.9	
	comp=Z,28nm,0.8s						
KSANE	Kasane	37.29	78		P	02 32 55.4	-0.6
KSANE				IAmb	IAmb	02 33 00.0	
	comp=Z,35nm,1.8s						
DBIC	Dimbokro	38.47	14	P	P	02 33 06.0	+0.3
DBIC				IAmb	IAmb	02 33 09.5	
	comp=Z,25nm,1.4s						
AQDB	Aquidauana	39.37	275		P	02 33 13.4	0.0
VNA2	Neumayer--Watz	39.96	177	⇓P	P	02 33 18.1	+0.4
	comp=Z,7.7nm,0.8s,baz=346,slow=10						
VNA3	Neumayer Olymp	40.20	178	⇓P	P	02 33 20.1	+0.5
	comp=Z,4.6nm,0.8s						
TRQA	Tornquist	40.25	246	P	P	02 33 19.9	-0.6
SNAA	Sanae	40.98	175	⇓P	P	02 33 26.7	+0.6
	comp=Z,32nm,0.8s						
SNAA	Sanae	40.98	175	P	P	02 33 26.6	+0.5
	comp=Z,1.2nm,0.9s,baz=311,slow=11,SNR=2.8						
SNAA				PcP	PcP	02 35 26.4	+0.5
	comp=Z,2.9nm,1.1s,baz=20,slow=6.4,SNR=4.5						
	comp=Z,1.2nm,0.9s						
SNAA	Sanae	40.98	175	P	P	02 33 26.4	+0.2
LSZ	Lusaka	41.05	77		P	02 33 27.5	0.0
TROLL	Troll, Antarti	41.80	173	⇓P	P	02 33 33.7	+0.8
	comp=Z,391nm,1.0s						
PTLB	Pontes e Lacer	44.54	280		P	02 33 56.3	+0.7
ELIB	Princess Elisa	45.30	165	*d*P	P	02 34 01.8	+0.7
	comp=Z,5.9nm,0.9s						
ELIB				*d*PcP	PcP	02 35 40.6	0.0
TORD	Torodi Ar. Bea	46.35	20	P	P	02 34 10.3	+0.4
	comp=Z,5.5nm,1.0s,baz=197,slow=4.2,SNR=14						
	comp=Z,5.5nm,1.0s						
PLCA	Paso Flores	46.57	242	P	P	02 34 12.4	+0.9
	comp=Z,2.3nm,0.8s,baz=127,slow=2.9,SNR=5.9						
	comp=Z,2.3nm,0.8s						
PLCA	Paso Flores	46.57	242	P	P	02 34 11.8	+0.2
PLCA				IAmb	IAmb	02 35 34.5	
	comp=Z,26nm,2.0s						
VILB	Vilhena	46.67	282	P	P	02 34 12.9	+0.4
VILB				IAmb	IAmb	02 34 20.7	
	comp=Z,10nm,0.7s						
MT08	Bocatoma Ro	47.45	251	P	P	02 34 19.3	+0.5
MT08				IAmb	IAmb	02 34 33.4	
	comp=Z,18nm,1.0s						
LMEL	Las Melosas	47.51	251	P	P	02 34 19.2	+0.1
LMEL				IAmb	IAmb	02 34 25.2	
	comp=Z,19nm,0.9s						
BO02	Sierra Bellavi	47.77	250	P	P	02 34 20.8	-0.2
BO02				IAmb	IAmb	02 34 27.7	
	comp=Z,14nm,0.8s						
BELA	Belgrano 2	47.78	186	P	P	02 34 20.3	-0.1
BO01	Tunca	48.10	250		P	02 34 23.1	-0.3
SYO	Syowa Base	48.22	157	⇓*e*pP	P	02 34 24.0	+0.2
CO01	Juntas del Tor	48.41	256	P	P	02 34 24.8	-1.4
CO01				IAmb	IAmb	02 34 35.1	
	comp=Z,15nm,1.1s						
AC01	Pan de Azucar	50.03	261	P	P	02 34 38.5	+0.2
PB06	IPOC Station P	50.38	265	P	P	02 34 40.8	-0.5
PB06				IAmb	IAmb	02 35 06.4	
	comp=Z,13nm,1.0s						
PB01	IPOC Station P	50.96	267	P	P	02 34 45.0	-0.5
PB01				IAmb	IAmb	02 34 52.2	
	comp=Z,14nm,0.8s						
PB02	IPOC Station P	51.20	267	P	P	02 34 47.5	+0.1
GO01	Chusmiza	51.26	269	P	P	02 34 47.5	-0.8
GO01				IAmb	IAmb	02 34 54.8	
	comp=Z,13nm,0.8s						
MBAR	Mbarara	51.59	63	P	P	02 34 50.1	-0.3
MBAR				IAmb	IAmb	02 35 01.8	
	comp=Z,31nm,1.8s						
HMBC	Humberstone	51.61	268	P	P	02 34 50.4	-0.1
HMBC				IAmb	IAmb	02 34 57.1	
	comp=Z,14nm,0.7s						
LPAZ	La Paz	51.81	273	P	P	02 34 50.6	-1.9
	comp=Z,1.9nm,0.7s,baz=127,slow=3.8,SNR=7.3						
	comp=Z,1.9nm,0.7s						
LPAZ	La Paz	51.81	273	P	P	02 34 51.2	-1.3
PB16	IPOC Station P	52.09	270		P	02 34 54.2	-0.4
PB16				IAmb	IAmb	02 35 12.5	
	comp=Z,24nm,1.5s						
TAM	Tamanrasset	56.60	21	P	P	02 35 26.9	+0.2
LODK	Lodwar	57.70	63	P	P	02 35 36.1	+1.4
QSPA	South Pole Qui	59.09	180	P	P	02 35 44.9	+1.1
	comp=Z,16nm,0.9s,baz=183,slow=2.0,SNR=53						
	comp=Z,16nm,0.9s						
QSPA	South Pole Qui	59.09	180	P	P	02 35 44.8	+1.1
QSPA				IAmb	IAmb	02 35 45.6	
	comp=Z,12nm,0.8s						
FLOC	Florencia	67.41	287	P	P	02 36 38.7	-0.7
SDV	Santo Domingo	67.74	296	P	P	02 36 41.7	0.0
RUSC	La Rusia	67.83	292	P	P	02 36 42.8	+0.1
KEST	Kesra	69.86	20	P	P	02 36 54.9	+0.6
	comp=Z,4.9nm,0.8s,baz=286,slow=10,SNR=4.2						
	comp=Z,4.9nm,0.8s						
KEST	Kesra	69.86	20	P	P	02 36 54.4	+0.1
HUMP	Col San Antoni	70.31	307	P	P	02 36 57.6	+0.3
GCPR	Guaynabo City	70.58	307	P	P	02 36 59.0	0.0
CRPR	Cabo Rojo, PR	71.09	306	P	P	02 37 01.9	-0.1
SMRC	Santa Marta, M	71.92	296	P	P	02 37 07.1	-0.1
BMRD	Maredsous	82.67	12	*d*P	P	02 38 07.6	+1.0
BR131	Keskin Array S	82.91	35	P	P	02 38 09.1	+0.7
BRTR	Keskin Array B	82.91	35	P	P	02 38 09.8	+1.5
	comp=Z,2.7nm,0.9s,baz=184,slow=5.8,SNR=14						
	comp=Z,2.7nm,0.9s						
BRTR	Keskin Array B	82.91	35		P	02 38 09.7	+1.4
PSZ	Piszkesteto	84.17	22	P	P	02 38 14.0	-0.5
PSZ				IAmb	IAmb	02 38 30.1	
	comp=Z,15nm,1.2s						
MLR	Muntele Rosu	84.21	27	P	P	02 38 15.0	+0.1
CLL	Collm	85.32	16	*e*P	P	02 38 18.0	-2.1
CLL				LV		03 21 00.0	
	comp=Z,300nm,18.7s						
BURAR	Bucovina Array	85.72	25	P	P	02 38 23.1	+0.7
EKA	Eskdalemuir Ar	86.57	6	P	P	02 38 27.6	+1.4
	comp=Z,3.5nm,0.9s,baz=190,slow=4.2,SNR=4.4						
	comp=Z,3.5nm,0.9s						
AKASG	Malin Array Be	89.75	25	P	P	02 38 42.0	+0.5
	comp=Z,0.1nm,0.3s,baz=218,slow=3.5,SNR=1.6						
	comp=Z,0.1nm,0.3s						
RKT	Rikitea	102.30	233	*e*LR	LR	03 13 06.4	
	comp=Z,1µm,31.0s						
TBI	Tubuai	111.41	223	*e*LR	LR	03 17 18.3	
	comp=Z,1µm,31.2s						
TAOE	Nuku Hiva Isla	115.40	241	*e*LR	LR	03 19 09.8	
	comp=Z,563nm,25.4s						
PPT2	Papeete2	115.85	227	*e*SS	SS	03 01 34.7	+5.1
	comp=Z,143nm,24.0s						
PPT2	Papeete2	115.85	227	*e*LR	LR	03 19 20.0	
	comp=Z,341nm,32.0s						
PPT2				*e*LR	LR	03 19 20.4	
	comp=Z,508nm,31.5s						
ASAR	Alice Springs	117.11	146	PKP	PKPdf	02 44 28.4	-0.8
	comp=Z,0.4nm,0.7s,baz=188,slow=2.0,SNR=6.9						
WMQ	Urumqi	118.29	54	*e*PKP	PKiKP	02 44 31.8	+1.0
WMQ				LR	LR		
	comp=Z,430nm,23.9s						
YKA	Yellowknife Ar	122.25	327	PKP	PKPdf	02 44 37.6	-0.1
	comp=Z,0.6nm,0.8s,baz=109,slow=1.1,SNR=7.2						
PZH	PanZhiHua	123.66	77	PKP	PKPdf	02 44 40.9	-0.8
INK	Inuvik	129.65	335		PKiKP	02 44 52.4	0.0
H29M	Whitestone	132.07	333		PKiKP	02 44 57.9	+0.5
BTO	Baotou	133.84	62	*e*PKP	PKPdf	02 44 57.1	-3.5
BTO				PP	PP	02 47 42.9	+12
BTO				pmax	pmax		
	comp=Z,14nm,0.7s						
BTO				pmax	pmax		
	comp=Z,260nm,6.8s						
HHC	Hu-ho-hao-te	135.04	62	*e*P	PKPdf	02 44 59.3	-3.5
HHC				LR	LR		
	comp=N,230nm,18.2s						
HHC				LR	LR		
	comp=E,210nm,18.8s						
HHC				LR	LR		
	comp=Z,300nm,18.6s						
ILAR	Eielson Array	135.90	333	PKP	PKPdf	02 45 04.2	+0.6
	comp=Z,1.1nm,0.7s,baz=12,slow=1.2,SNR=17						
ILAR	Eielson Array	135.90	333		PKPdf	02 45 04.3	+0.7
HEH	HeiHe	145.18	45	PKPbc	PKPbc	02 45 20.4	+0.1
CN2	Changchun	145.29	57	*e*P	PKiKP	02 45 23.3	-1.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSRS	Korea Array	147.56	68	PKPbc	PKPbc	02 45 27.6	-0.2
	comp=Z,3.4nm,0.8s,baz=270,slow=3.0,SNR=5.9						

IDC 21 02:26:12.9±4.4**, 8°.19N×126°.44E, h0^{km}, mb3.6**/4**,**
mbtmp3.6/4**, Error ellipse: s-maj=474.3km**
s-min=24.3km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	32.49	167	P	P	02 32 45.4	-0.1
	0.2nm,0.4s,baz=343,slow=8.2,SNR=4.6						
	0.2nm,0.4s						
STKA	Stephens Creek	42.39	161	P	P	02 34 09.2	0.0
	1.5nm,0.7s,baz=324,slow=14,SNR=3.9						
	1.5nm,0.7s						
MKAR	Makanchi Array	53.78	324	P	P	02 35 37.8	+0.5
	0.8nm,0.8s,baz=128,slow=7.9,SNR=3.9						
	0.8nm,0.8s						
KURBB	Kurchatov Arra	57.88	326	P	P	02 36 06.0	-0.6
	0.6nm,0.7s,baz=123,slow=7.3,SNR=4.0						
	0.6nm,0.7s						

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*FUNV **21** 02:29:33.3, 10°.76N×62°.23W, h72^{km}, MW3.5*

*TRN **21** 02:29:33.7, 10°.80N×62°.30W, h51^{km}, MD3.5, North of the Paria peninsula.*

ISC 21 02:29:32.8±1.7**, 10°.79N**±0°.07×**62°.36W**±0°.07**, h60^{km}**±40^{km}**,**
n18, σ**1^{s}27**/31**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMDM	Guralp CMG5TDE	0.80	96	*e*P	Pn	02 29 47.5	-0.7
DMDM				*e*S	Sn	02 29 59.4	-0.1
TRN	Trinidad (W)	0.95	98	*e*P	Pn	02 29 50.2	+0.1
TRN				*e*S	Sn	02 30 02.4	-0.5
TPP	Pointe-a-Pierr	1.00	118	*e*P	Pn	02 29 51.7	+0.7
TPP				*e*S	Sn	02 30 04.6	+0.2
GRFF	Grenada Fort F	1.39	26	*e*P	Pn	02 29 56.2	0.0
GRFF				*e*S	Sn	02 30 13.2	-0.4
GRGR	Grenville	1.50	27	*e*P	Pn	02 29 57.4	-0.2
GRGR				*e*S	Sn	02 30 16.2	0.0
GRW	Mount Saint Ca	1.52	26	*e*P	Pn	02 29 58.4	+0.5
GRW				*e*S	Sn	02 30 16.1	-0.7
GRSS	Sisters	1.67	26	*e*P	Pn	02 29 60.0	+0.2
GRSS				*e*S	Sn	02 30 20.7	+0.5
GCMP	Grenada, Carri	1.92	28	*e*S	Sn	02 30 25.5	-0.8
PCRV	Puerto La Cruz	2.32	255	*e*P	Pn	02 30 09.9	+1.1
PCRV				*e*S	Sn	02 30 36.6	+0.4
PCRV	Puerto La Cruz	2.32	255	*e*P	Pn	02 30 10.2	+1.4
PCRV				*e*S	Sn	02 30 38.0	+1.8
SVB	Belmont	2.70	24	*e*P	Pn	02 30 15.6	+1.8
SVB				*e*S	Sn	02 30 44.6	-0.7
MCLT	Moule a Chique	3.22	25	*e*S	Sn	02 30 56.7	-1.4
SLBI	Saint Lucia, B	3.49	23	*e*P	Pn	02 30 26.1	+1.4
SLBI				*e*S	Sn	02 31 03.2	-1.5
BIM	Bigot	3.91	19	*e*P	Pn	02 30 32.0	+1.5
TACV	Tcata	4.64	262	*e*P	Pn	02 30 41.3	+0.8
TACV				*e*S	Sn	02 31 30.7	-2.4
BENV	Beln	5.22	261	*e*P	Pn	02 30 49.5	+1.0
BENV				*e*S	Sn	02 31 45.6	-1.8
CACV	CAICARA DEL OR	5.23	233	*e*P	Pn	02 30 42.7	-5.7
CACV				*e*S	Sn	02 31 34.8	-13
MAPV	Macapo	6.08	262	*e*P	Pn	02 31 00.2	0.0
MAPV				*e*S	Sn	02 32 05.2	-3.3

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*MOS **21** 02:33:13.3±1.5, 31°.13S×13°.45W, h10^{km}, mb5.2/18, Error ellipse: s-maj=16.0km s-min=12.0km az=52.2*

*IDC **21** 02:33:13.1±0.6, 31°.12S×13°.45W, h0^{km}, mb4.3/11, mbtmp4.3/11, MS4.7/32, Error ellipse: s-maj=21.6km s-min=18.6km az=122.0*

*NEIC **21** 02:33:14.9±1.7, 31°.26S±0°.09×13°.5W±0°.1, h10^{km}±1^{km}, mb5.1/55, Error ellipse: s-maj=16.7km s-min=15.1km az=49.0*

*GCMT **21** 02:33:18.9±0.1, 31°.18S±0°.01×13°.37W±0°.01, h12^{km}, MW5.2/143, Moment Tensor Solution. s56,c78; s143,c258; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.85±.01; $M_{\theta\theta}$0.06±.01; $M_{\phi\phi}$0.79±.01; $M_{r\theta}$0.02±.05; $M_{\theta\phi}$-0.14±.01; $M_{\phi r}$-0.39±.04; Best double couple: $M_0$0.92500×10^{17} NP1:ϕ_s167.00000°, δ33.00000°, λ-95.00000°. NP2:ϕ_s353.00000°, δ58.00000°, λ-87.00000°. Principal axes: T 0.9090, Plg12.0000°, Azm81.0000°; N 0.0330, Plg2.0000°, Azm171.0000°; P -0.9420, Plg77.0000°, Azm272.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 02:33:16.1±0.3**, 31°.22S**±0°.08×**13°.45W**±0°.07**, h20^{km}, n182,**
σ**1^{s}24**/144**, mb5.0**/52**, MS4.8**/39**, 7C-8D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H09N1	TRISTAN DA CUN	5.91	171	T	T	02 41 04.3	
	SNR=7.5						
SHEL	Horse Pasture	16.75	27	P	P	02 37 13.1	+1.4
SHEL	Horse Pasture	16.75	27	P	P	02 37 13.1	+1.4
SHEL				pmax	pmax		
	comp=Z,74nm,1.0s						
H10S2	ASCENSION HYDR	22.18	357	T	T	03 00 53.7	
	baz=177,slow=74,SNR=32						
H10S3	ASCENSION HYDR	22.19	357	T	T	03 00 57.7	
	baz=43,slow=74,SNR=29						
H10N1	ASCENSION HYDR	23.28	357	T	T	03 02 25.6	
	SNR=10						
H10N3	ASCENSION HYDR	23.29	357	T	T	03 02 24.5	
	SNR=18						
H10N2	ASCENSION HYDR	23.30	357	T	T	03 02 26.5	
	SNR=12						
SJMB	Sao Joao De Ma	27.98	290	*e*P	P	02 39 05.8	+0.3
GUA01	Guaratinga, BA	28.06	295	*e*P	P	02 39 07.5	+1.2
SUR	Sutherland	29.07	101	LR	LR	02 48 30.8	
	comp=Z,2µm,18.9s,baz=257,slow=32						
TSUM	Tsumeb	30.42	74	LR	LR	02 50 10.1	
	comp=Z,4µm,18.2s,baz=224,slow=34						
TSUM	Tsumeb	30.42	74		P	02 39 26.6	-0.8
VAO	Valinhos	30.84	277	P	P	02 39 28.9	-2.1
VAO				IAmb	IAmb	02 39 54.3	
	comp=Z,48nm,1.6s						
VAO	Valinhos	30.84	277	*e*P	P	02 39 32.5	+1.4
KOOLE	Kule	30.96	83		P	02 39 32.5	+0.3
KOOLE				IAmb	IAmb	02 39 39.7	
	comp=Z,60nm,1.8s						
LKGWB	Lokgwabe	31.42	86		P	02 39 40.8	+4.6
JANB	Januaria	32.47	293	*e*P	P	02 39 45.4	0.0
GRTLG	Ghanzi	32.48	81	P	P	02 39 45.9	+0.3
GRTLG				IAmb	IAmb	02 39 48.7	
	comp=Z,25nm,1.4s						
KGCAE	Kacgae	32.73	84		P	02 39 48.5	+0.9
BOSA	Boshof	33.54	96	P	P	02 39 54.9	+0.2
	comp=Z,14nm,1.0s,baz=246,slow=7.7,SNR=10.0						
BOSA				LR	LR	02 50 51.9	
	comp=Z,2µm,21.4s,baz=270,slow=32						
	comp=Z,14nm,1.0s						
BOSA	Boshof	33.54	96		P	02 39 54.6	-0.1
BOSA	Boshof	33.54	96	P	P	02 39 54.6	-0.1
BOSA				pmax	pmax		
	comp=Z,59nm,1.6s						
XAUDM	Khaudum	33.85	76	P	P	02 39 58.1	+0.6
XAUDM				IAmb	IAmb	02 40 07.3	
	comp=Z,66nm,1.8s						
SDBA	SAO DESIDERIO	34.50	296	*e*P	P	02 40 03.2	+0.1
PTGB	Pitanga	34.59	271	*e*P	P	02 40 05.0	+1.1
LBTB	Lobatse	34.86	90	LR	LR	02 51 43.0	
	comp=Z,2µm,21.7s,baz=254,slow=32						
LBTB	Lobatse	34.86	90		P	02 40 06.1	-0.1
LBTB				IAmb	IAmb	02 40 13.0	
	comp=Z,41nm,1.4s						
LBTB	Lobatse	34.86	90	P	P	02 40 06.1	-0.1
LBTB				pmax	pmax		
	comp=Z,41nm,1.4s						
ITRB	Iturama	35.09	280	*e*P	P	02 40 10.0	+1.9
BDFB	Brasilia	35.12	288	P	P	02 40 08.6	+0.1
	comp=Z,11nm,0.9s,baz=139,slow=7.4,SNR=12						
BDFB				LR	LR	02 51 53.2	
	comp=Z,2µm,20.8s,baz=136,slow=32						
	comp=Z,11nm,0.9s						
BDFB	Brasilia	35.12	288		P	02 40 08.8	+0.2
BDFB				IAmb	IAmb	02 40 12.0	
	comp=Z,42nm,1.3s						
LPHEP	Lephephe	35.66	87		P	02 40 12.7	-0.3
PHDHD	Phuduhudu	35.79	81	P	P	02 40 13.0	-1.2
PHDHD				IAmb	IAmb	02 40 21.0	
	comp=Z,42nm,1.6s						
KHWEE	KHWEE	35.84	85	P	P	02 40 14.1	-0.6
KSANE	Kasane	37.40	78	P	P	02 40 28.6	+0.7
KSANE				IAmb	IAmb	02 40 35.2	
	comp=Z,75nm,1.8s						
C2SB	Chapadao do Su	37.60	280	*e*P	P	02 40 30.7	+1.2
AMBA	Amambai (Brazi	37.72	272	*e*P	P	02 40 32.9	+2.4
ARAG	Araguaiana, MT	38.21	285	*e*P	P	02 40 36.2	+1.5
DBIC	Dimbokro	38.57	14	P	P	02 40 36.9	-0.7
	comp=Z,2.7nm,0.8s,baz=205,slow=9.3,SNR=3.6						

DBIC				LR	LR	02 52 23.8	
	comp=Z,387nm,18.5s,baz=210,slow=30						
	comp=Z,2.7nm,0.8s						
DBIC	Dimbokro	38.57	14	P	P	02 40 37.5	-0.1
SMTB	Santa Maria do	38.77	298	eP	P	02 40 39.0	-0.4
AQDB	Aquidauana	39.29	275		P	02 40 43.0	-0.7
SNDB	Serra Nova Dou	39.80	290	eP	P	02 40 47.6	-0.4
PP1B	Ponte de Pedra	39.85	280	eP	P	02 40 49.7	+1.2
VNA2	Neumayer--Watz	39.89	177	⇓P	P	02 40 49.8	+1.7
	comp=Z,7.0nm,1.0s,baz=351,slow=11						
VNA3	Neumayer Olymp	40.12	178	⇓P	P	02 40 51.4	+1.3
	comp=Z,5.9nm,0.8s						
BDQN	Bodoquena, MS	40.20	275	eP	P	02 40 52.6	+1.3
SNAA	Sanae	40.91	175	P	P	02 40 57.8	+1.1
	comp=Z,1.7nm,1.0s,baz=13,slow=6.5,SNR=4.7						
	comp=Z,1.7nm,1.0s						
SNAA	Sanae	40.91	175	P	P	02 40 53.8	-2.9
SNAA	Sanae	40.91	175	⇑eP	P	02 40 55.5	-1.1
SNAA				pmax	pmax		
	comp=Z,18nm,1.8s						
LSZ	Lusaka	41.15	77	LR	LR	02 55 37.7	
	comp=Z,3µm,21.8s,baz=230,slow=33						
LSZ	Lusaka	41.15	77	P	P	02 40 58.1	-1.3
LSZ				IAmb	IAmb	02 41 08.2	
	comp=Z,57nm,1.6s						
LSZ	Lusaka	41.15	77	P	P	02 40 58.1	-1.3
LSZ				pmax	pmax		
	comp=Z,57nm,1.6s						
SALV	Santo Antonio	41.35	282	eP	P	02 41 01.8	+1.0
EDA	Edea	41.45	37	P	P	02 41 02.9	+1.2
EDA				IAmb	IAmb	02 41 14.4	
	comp=Z,56nm,1.5s						
TROLL	Troll, Antarti	41.73	173	⇓P	P	02 41 05.2	+1.7
	comp=Z,301nm,0.9s						
NVL	N'lazarevskaya	41.98	168	eP	P	02 41 08.5	+3.2
NVL				pmax	pmax		
	comp=Z,23nm,1.3s						
PRPB	Parauapebas	42.18	299	eP	P	02 41 07.1	-0.6
CLDB	Colider	44.06	288	eP	P	02 41 23.6	+0.7
PTLB	Pontes e Lacer	44.46	280	P	P	02 41 26.7	+0.6
PTLB	Pontes e Lacer	44.46	280	eP	P	02 41 27.8	+1.7
ELIB	Princess Elisa	45.25	165	dP	P	02 41 33.4	+1.6
	comp=Z,9.3nm,1.4s						
PMSA	Palmer Station	45.64	208	LR	LR	02 57 10.9	
	comp=Z,643nm,19.6s,baz=52,slow=31						
SIV	San Ignacio	45.84	278	LR	LR	02 58 29.1	
	comp=Z,2µm,20.7s,baz=124,slow=33						
NPGB	Novo Progresso	45.92	293	eP	P	02 41 38.5	+0.9
CFA	Coronel Fontan	46.33	255	LR	LR	02 57 57.8	
	comp=Z,582nm,21.8s,baz=160,slow=32						
PLCA	Paso Flores	46.45	242	P	P	02 41 43.7	+2.0
	comp=Z,2.0nm,0.8s,baz=136,slow=8.1,SNR=4.1						
PLCA				LR	LR	02 59 37.9	
	comp=Z,716nm,18.2s,baz=84,slow=34						
	comp=Z,2.0nm,0.8s						
PLCA	Paso Flores	46.45	242	P	P	02 41 42.0	+0.2
PLCA	Paso Flores	46.45	242	eP	P	02 41 43.9	+2.2
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TORD	Torodi Ar. Bea	46.45	21	P	P	02 41 41.0	-0.8
	comp=Z,3.7nm,1.0s,baz=196,slow=4.6,SNR=9.3						
	comp=Z,3.7nm,1.0s						
TORD	Torodi Ar. Bea	46.45	21	P	P	02 41 41.0	-0.8
TORD				IAmb	IAmb	02 41 53.6	
	comp=Z,25nm,1.5s						
VILB	Vilhena	46.59	282	P	P	02 41 41.7	-1.3
VILB				IAmb	IAmb	02 42 29.2	
	comp=Z,49nm,1.8s						
LL02	Futaleuf	47.15	238	P	P	02 41 47.0	0.0
LL02				IAmb	IAmb	02 41 52.0	
	comp=Z,26nm,1.4s						
MT08	Bocatoma Ro	47.34	252	P	P	02 41 50.1	+1.2
MT08				IAmb	IAmb	02 41 56.1	
	comp=Z,19nm,0.9s						
LMEL	Las Melosas	47.40	251	P	P	02 41 50.6	+1.3
LMEL				IAmb	IAmb	02 42 09.6	
	comp=Z,24nm,1.1s						
BELA	Belgrano 2	47.70	186	P	P	02 41 49.9	-0.9
ITTB	Itaituba	47.85	295	eP	P	02 41 53.6	+0.8
BO01	Tunca	47.99	250	P	P	02 41 53.5	-0.1
SYO	Syowa Base	48.18	157	⇓iP	P	02 41 53.0	-1.6
SYO	Syowa Base	48.18	157	⇑isP	P	02 41 57.5	+2.9
AC02	Maricunga	48.45	260	P	P	02 41 57.2	-0.7
AC02				IAmb	IAmb	02 42 03.2	
	comp=Z,47nm,2.0s						
PB08	IPOC Station P	50.94	269	P	P	02 42 15.9	-0.9
PB08				IAmb	IAmb	02 42 21.0	
	comp=Z,22nm,1.1s						
GO01	Chusmiza	51.17	269	P	P	02 42 17.5	-1.2
GO01				IAmb	IAmb	02 42 21.6	
	comp=Z,22nm,1.2s						
HMBC	Humberstone	51.51	268	P	P	02 42 20.7	-0.1
HMBC				IAmb	IAmb	02 42 24.6	
	comp=Z,26nm,1.1s						
PB11	IPOC Station P	51.52	269	P	P	02 42 21.1	+0.2
PB11				IAmb	IAmb	02 42 24.3	
	comp=Z,37nm,1.4s						
MBAR	Mbarara	51.71	63	LR	LR	03 02 02.5	
	comp=Z,2µm,20.1s,baz=229,slow=34						
MBAR	Mbarara	51.71	63	P	P	02 42 21.9	-0.5
MBAR				IAmb	IAmb	02 42 34.1	
	comp=Z,62nm,1.8s						
MBAR	Mbarara	51.71	63	⇓eP	P	02 42 21.1	-1.3
MBAR				pmax	pmax		
	comp=Z,13nm,1.5s						
LPAZ	La Paz	51.72	273	P	P	02 42 21.9	-1.0
	comp=Z,2.5nm,0.8s,baz=126,slow=6.8,SNR=7.9						
LPAZ				LR	LR	03 02 43.3	
	comp=Z,1µm,19.7s,baz=114,slow=34						
	comp=Z,2.5nm,0.8s						
LPAZ	La Paz	51.72	273	P	P	02 42 21.6	-1.4
LPAZ	La Paz	51.72	273	P	P	02 42 22.0	-1.0
LPAZ	La Paz	51.72	273	eP	P	02 42 22.4	-0.6
PB16	IPOC Station P	52.00	270	P	P	02 42 23.8	-1.2
PB16				IAmb	IAmb	02 42 29.4	
	comp=Z,52nm,1.8s						
PB18	Visviri	52.30	271	P	P	02 42 25.8	-1.4
MACA	Manacapuru-AM	52.48	292	eP	P	02 42 29.0	+1.1
PB12	IPOC Station P	52.58	270	P	P	02 42 27.4	-1.3
PB12				IAmb	IAmb	02 42 37.6	
	comp=Z,37nm,1.2s						
OPO	Ambohidratompo	55.83	92	LR	LR	03 04 37.9	
	comp=Z,704nm,19.2s,baz=358,slow=34						
BOAV	Boa Vista	55.84	298	P	P	02 42 51.4	-1.0
BOAV				IAmb	IAmb	02 42 55.5	
	comp=Z,38nm,1.6s						
BOAV	Boa Vista	55.84	298	eP	P	02 42 53.1	+0.7
TAM	Tamanrasset	56.71	21	P	P	02 42 58.7	+0.2
TAM	Tamanrasset	56.71	21	P	P	02 42 58.7	+0.2
TAM				pmax	pmax		
	comp=Z,15nm,1.2s						
LODK	Lodwar	57.82	63	P	P	02 43 07.7	+1.2
QSPA	South Pole Qui	59.01	180	P	P	02 43 14.8	+0.5
	comp=Z,8.2nm,1.0s,baz=224,slow=4.1,SNR=13						
QSPA				LR	LR	03 07 39.2	
	comp=Z,150nm,18.3s,baz=245,slow=35						
	comp=Z,8.2nm,1.0s						
QSPA	South Pole Qui	59.01	180	P	P	02 43 15.0	+0.8
QSPA				IAmb	IAmb	02 43 18.1	
	comp=Z,15nm,1.1s						
NNA	Nana	61.19	273	LR	LR	03 09 30.6	
	comp=Z,714nm,18.5s,baz=148,slow=36						
NNA	Nana	61.19	273	⇑eP	P	02 43 27.9	-1.9
NNA				pmax	pmax		
	comp=Z,14nm,1.2s						
FURI	Furi	63.87	60	LR	LR	03 09 31.0	
	comp=Z,725nm,20.9s,baz=222,slow=34						
ATAH	Atahualpa	64.93	277	LR	LR	03 10 44.9	
	comp=Z,1µm,21.8s,baz=144,slow=35						
FLOC	Florencia	67.34	287	P	P	02 44 08.5	-1.6
SDV	Santo Domingo	67.69	296	LR	LR	03 12 02.8	
	comp=Z,2µm,19.4s,baz=125,slow=34						
SDV	Santo Domingo	67.69	296	P	P	02 44 11.4	-1.1
SDV	Santo Domingo	67.69	296	eP	P	02 44 13.2	+0.7
RUSC	La Rusia	67.78	292	P	P	02 44 11.6	-1.8
ROSC	El Rosal	68.14	290	LR	LR	03 13 27.6	
	comp=Z,2µm,18.6s,baz=109,slow=36						
ATD	Arta Tunnel	68.69	61	LR	LR	03 11 57.3	
	comp=Z,19nm,19.3s,baz=198,slow=34						
OTAV	Otavalo	68.90	284	P	P	02 44 19.8	-0.7
OTAV				IAmb	IAmb	02 44 32.9	
	comp=Z,30nm,1.8s						
OTAV	Otavalo	68.90	284	eP	P	02 44 19.8	-0.7
OTAV	Otavalo	68.90	284	eP	P	02 44 21.4	+0.9
SJG	San Juan	70.47	307	LR	LR	03 14 06.5	
	comp=Z,224nm,19.6s,baz=134,slow=35						
VNDA	Vanda	71.47	179	LR	LR	03 11 39.6	
	comp=Z,280nm,21.8s,baz=170,slow=32						
ARG	Arkhangelos	77.60	33	P	P	02 45 10.3	-0.4
ARG	Arkhangelos	77.60	33	P	P	02 45 10.3	-0.4
ARG				pmax	pmax		
	comp=Z,51nm,1.6s						
MMAI	Mount Meron Ar	78.82	40	LR	LR	03 19 54.2	
	comp=Z,202nm,18.1s,baz=211,slow=36						
JTS	Las Juntas de	79.86	289	LR	LR	03 19 08.1	
	comp=Z,958nm,20.9s,baz=125,slow=34						
JTS	Las Juntas de	79.86	289	⇓eP	P	02 45 23.4	-0.3
JTS				pmax	pmax		
	comp=Z,21nm,1.3s						
DAVOX	Davos/Dischmat	80.45	16	LR	LR	03 18 07.1	
	comp=Z,339nm,21.1s,baz=206,slow=34						
FETA	Feichten	80.88	16	eP	P	02 45 32.9	+4.4
	comp=Z,6.8nm,1.3s						
RPN	Rapa Nui	81.04	244	LR	LR	03 16 44.6	
	comp=Z,218nm,19.5s,baz=96,slow=32						
WATA	Walderalm	81.38	17	P	P	02 45 33.4	+2.2
	comp=Z,13nm,1.3s						
SOKA	Soboth	81.70	19	eP	P	02 45 35.8	+2.9
	comp=Z,10nm,1.6s						
ARSA	Arzberg	82.36	19	eP	P	02 45 37.6	+1.3
	comp=Z,5.4nm,1.0s						
BRTR	Keskin Array B	83.02	35	P	P	02 45 40.4	+0.3
	comp=Z,1.7nm,1.0s,baz=177,slow=4.9,SNR=7.3						
	comp=Z,1.7nm,1.0s						
BRTR	Keskin Array B	83.02	35	P	P	02 45 40.0	0.0
BRTR	Keskin Array B	83.02	35	eP	P	02 45 41.1	+1.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BR131	Keskin Array S	83.03	35	P	P	02 45 40.3	+0.3
BR131	Keskin Array S	83.03	35	ceP	P	02 45 40.4	+0.3
CONA	Conrad Observa	83.07	19	eP	P	02 45 40.0	+0.1
	comp=Z,8.6nm,1.5s						
GERES	GERESS Array B	83.32	18	P	P	02 45 39.8	-1.5
	comp=Z,0.5nm,0.7s,baz=223,slow=4.0,SNR=3.2						
GERES				LR	LR	03 22 16.9	
	comp=Z,296nm,18.4s,baz=204,slow=35						
	comp=Z,0.5nm,0.7s						
KHC	Kasperske Hory	83.55	17	⇑eP	P	02 45 43.7	+1.3
KHC				pmax	pmax		
	comp=Z,17nm,2.1s						
PSZ	Piszkesteto	84.28	22	P	P	02 45 46.0	-0.1
PSZ				IAmb	IAmb	02 45 59.0	
	comp=Z,14nm,1.1s						
PSZ	Piszkesteto	84.28	22	P	P	02 45 46.0	-0.1
PSZ				pmax	pmax		
	comp=Z,14nm,1.1s						
MLR	Muntele Rosu	84.32	27	LR	LR	03 23 41.6	
	comp=Z,197nm,18.5s,baz=154,slow=36						
MLR	Muntele Rosu	84.32	27	P	P	02 45 46.4	-0.1
MLR	Muntele Rosu	84.32	27	P	P	02 45 46.4	-0.1
MLR				pmax	pmax		
	comp=Z,61nm,1.7s						
BURAR	Bucovina Array	85.83	25	P	P	02 45 54.6	+0.6
GURO	Guroymak-BITLI	86.53	40	P	P	02 45 57.8	0.0
GURO				IAmb	IAmb	02 46 13.9	
	comp=Z,21nm,1.9s						
EKA	Eskdalemuir Ar	86.66	6	P	P	02 45 58.1	+0.4
	comp=Z,2.6nm,0.9s,baz=191,slow=7.1,SNR=3.7						
	comp=Z,2.6nm,0.9s						
APG	El Apazote	86.94	289	LR	LR	03 25 53.2	
	comp=Z,28nm,20.5s,baz=52,slow=36						
KBZ	Khabaz	90.64	37	LR	LR	03 27 29.8	
	comp=Z,111nm,19.5s,baz=178,slow=36						
KBZ	Khabaz	90.64	37	⇑eP	P	02 46 19.1	+2.2
KBZ				pmax	pmax		
	comp=Z,11nm,3.2s						
KIV	Kislovodsk	90.69	37	eP	P	02 46 16.8	-0.5
KIV				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,153nm,20.0s						
CMIG	Matias Romero	91.64	289	LR	LR	03 28 12.5	
	comp=Z,232nm,18.5s,baz=134,slow=36						
MNK	Minsk	92.51	23	i P	P	02 46 24.4	-0.9
MNK				i		02 50 05.3	
MNK				i PPP	PPP	02 52 04.5	
MNK				i S	SKSac	02 56 57.5	+0.3
MNK				i		02 57 30.3	
MNK				i SS	SS	03 03 41.3	+0.7
MNK				i SSS	SSS	03 07 26.5	
MNK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,8.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,6.0nm,0.7s						
MNK				MLR	MLR		
	comp=E,678nm,19.0s						
MNK				MLR	MLR		
	comp=N,358nm,20.0s						
MNK				MLR	MLR		
	comp=Z,188nm,19.0s						
KONO	Kongsberg	92.53	11	⇑eP	P	02 46 25.2	0.0
KONO				pmax	pmax		
	comp=Z,24nm,1.6s						
OBN	Obninsk	96.08	26	eP	P	02 46 43.5	+1.9
OBN				e		02 50 32.7	
OBN				ePPP	PPP	02 52 39.4	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PALK	Pallekele	97.27	86	LR	LR	03 26 25.5	
	comp=Z,626nm,19.4s,baz=241,slow=33						
FINES	FINESS Array B	97.75	18	LR	LR	03 29 09.8	
	comp=Z,192nm,21.5s,baz=208,slow=34						
RKT	Rikitea	102.18	233	eLR	LR	03 20 27.8	
	comp=Z,2µm,35.5s						
TBI	Tubuai	111.29	223	eLR	LR	03 24 43.7	
	comp=Z,1µm,32.8s						
TAOE	Nuku Hiva Isla	115.28	241	eLR	LR	03 26 27.1	
	comp=Z,695nm,26.0s						
PPT2	Papeete2	115.73	227	eLR	LR	03 26 40.8	
	comp=Z,532nm,30.2s						
PPT2				eLR	LR	03 26 47.2	
	comp=Z,368nm,32.8s						
WMQ	Urumqi	118.41	54	ePKP	PKiKP	02 52 03.3	+1.2
WMQ				LR	LR		
	comp=Z,360nm,22.9s						
WRA	Warramunga Arr	120.47	144	PKP	PKPdf	02 52 05.5	-1.2
	comp=Z,1.1nm,0.8s,baz=234,slow=2.7,SNR=5.3						
WRA	Warramunga Arr	120.47	144		PKPdf	02 52 05.9	-0.9
WRA	Warramunga Arr	120.47	144	i PKIKP	PKPdf	02 52 06.5	-0.3
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	122.26	327	PKP	PKPdf	02 52 08.0	-0.8
	comp=Z,0.3nm,0.8s,baz=76,slow=1.0,SNR=5.1						
YKA	Yellowknife Ar	122.26	327	ePKIKP	PKiKP	02 52 11.4	+2.5
PZH	PanZhiHua	123.76	77	PKP	PKiKP	02 52 12.9	-0.3
DZM	Mont Dzumac	127.01	180	eLR	LR	03 32 10.9	
	comp=Z,337nm,24.6s						
QIZ	Qiongzhong	127.74	89	PKP	PKPdf	02 52 17.5	-3.1
QIZ				PP	PP	02 54 20.9	-1.7
QIZ	Qiongzhong	127.74	89	SS	SS	03 11 34.3	+0.1
QIZ				LR	LR		
	comp=N,150nm,8.3s						
QIZ				LR	LR		
	comp=E,340nm,16.7s						
QIZ				LR	LR		
	comp=Z,390nm,19.9s						
HHC	Hu-ho-hao-te	135.16	62	eP	PKPdf	02 52 30.0	-4.1
HHC				LR	LR		
	comp=N,240nm,17.7s						
HHC				LR	LR		
	comp=E,190nm,17.3s						
HHC				LR	LR		
	comp=Z,300nm,17.1s						
ILAR	Eielson Array	135.93	333	PKP	PKiKP	02 52 35.7	-0.6
	comp=Z,1.2nm,0.8s,baz=358,slow=1.3,SNR=12						
ILAR	Eielson Array	135.93	333		PKiKP	02 52 36.2	-0.1
ILAR	Eielson Array	135.93	333	ePKIKP	PKiKP	02 52 36.3	-0.1
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
HNS	HongShan	137.18	67	⇓PKP	PKiKP	02 52 41.3	+1.6
NJ2	Nanjing	139.65	76	eP	PKPdf	02 52 42.1	-0.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HEH	HeiHe	145.29	45	PKPbc	PKPbc	02 52 50.8	-1.0
CN2	Changchun	145.41	57	eP	PKiKP	02 52 54.6	-1.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SEY	Seymchan	147.00	12	i PKP2	PKPbc	02 52 56.2	-0.3
SEY				pmax	pmax		
	comp=Z,20nm,1.0s						
KSRS	Korea Array	147.67	68	PKPbc	PKiKP	02 53 00.5	-0.8
	comp=Z,2.3nm,0.9s,baz=251,slow=2.7,SNR=5.5						

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*CATAC **21** 02:34:01.6±0.5, 14°N±2°×9°1W±°, h1^{km}, M3.8/15, MLv3.8/15, Error ellipse: s-maj=6.0km s-min=3.1km az=33.0, confirmed*

*GCG **21** 02:34:03.6±1.0, 13°.66N×91°.42W, h38^{km}±186^{km}, MD4.4, ML3.7*

*SNET **21** 02:34:05.0±1.7, 13°.69N×91°.22W, h68^{km}±26^{km}, ML3.7*

ISC 21 02:34:02.7±1.9**, 13°.54N**±0°.09×**91°.29W**±0°.06**, h28^{km}, n42, σ1^{s}42**/43**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG5	El Palmar, Qui	0.86	356	eP	Pn	02 34 21.6	+2.5
STG2	El Palmar, Qui	0.89	355	eP	Pn	02 34 22.4	+2.8
STG8	El Palmar, Qui	0.91	356	eP	Pn	02 34 22.8	+3.0
STG8				IAML		02 34 42.7	
	comp=N,3µm,0.2s						
ESSG	Sabana Grande	0.95	28	i P	Pb	02 34 20.2	-0.5
ESSG				eS	Sn	02 34 32.8	-0.2
ESSG				IAML		02 34 34.1	
	comp=E,2µm,0.3s						
FG16	Alotenango, Sa	1.05	46	eP	Pb	02 34 21.4	-1.0
FG16				IAML		02 34 36.8	
	comp=N,11µm,0.2s						
RTAL	Retalhuleu	1.05	338	P	Pb	02 34 22.9	+0.6
RTAL	Retalhuleu	1.05	338	S	Sn	02 34 35.0	-0.5
PCG5	San Vicente Pa	1.11	53	i P	Pn	02 34 21.8	-0.8
SOKI	Kika Raxquin	1.28	355	eP	Pb	02 34 24.7	-1.7
SOKI				IAML		02 34 46.7	
	comp=E,1µm,0.3s						
FAME	Alcaldia de Sa	1.28	76	P	Pn	02 34 25.1	+0.3
SMCA	Catarina	1.51	330	eP	Pn	02 34 26.3	-1.7
SMCA				IAML		02 34 52.4	
	comp=N,339nm,0.1s						
NUBE	Las Nubes	1.51	76	eP	Pn	02 34 28.9	+0.8
NUBE	Las Nubes	1.51	76	eP	Pn	02 34 28.9	+0.8
NUBE	Las Nubes	1.51	76	P	Pn	02 34 29.2	+1.0
NUBE	Las Nubes	1.51	76	S	Sb	02 34 48.5	-0.6
LOAL	Lomas de Alarc	1.54	73	eP	Pb	02 34 30.0	-0.7
LOAL	Lomas de Alarc	1.54	73	P	Pb	02 34 30.2	-0.4
LOAL	Lomas de Alarc	1.54	73	S	Sb	02 34 50.0	+0.3
RTR	El Retiro	1.64	77	eP	Pb	02 34 31.3	-1.1
CEVE	Cerro Verde	1.65	80	eP	Pn	02 34 30.4	+0.3
SBLS	San Blas	1.65	79	eP	Pn	02 34 31.2	+1.1
RBDL	Robledal	1.66	70	eP	Pb	02 34 32.3	-0.5
QUIS	Sacapulas	1.75	6	i P	Pb	02 34 33.1	-1.2
QUIS				IAML		02 35 02.9	
	comp=E,881nm,0.5s						
UNIC	Universidad Ca	1.75	75	P	Pb	02 34 34.1	-0.1
UNIC	Universidad Ca	1.75	75	S	Sb	02 34 57.9	+2.0
HUEH	Huehuetenango	1.78	353	P	Pb	02 34 33.1	-1.7
HUEH	Huehuetenango	1.78	353	S	Sb	02 34 57.0	+0.2
JAYA	Jayaque - finc	1.80	86	eP	Pb	02 34 34.0	-1.1
JAYA	Jayaque - finc	1.80	86	eP	Pn	02 34 33.8	+1.8
JAYA				i S	Sb	02 34 56.6	-0.7
JAYA	Jayaque - finc	1.80	86	P	Pb	02 34 34.0	-1.1
PMON	Piamonte	1.93	85	eP	Pn	02 34 35.8	+1.9
PMON	Piamonte	1.93	85	P	Pb	02 34 36.2	-1.2
PMON	Piamonte	1.93	85	S	Sb	02 35 01.4	+0.4
MTO3	Montecristo	2.06	65	P	Pb	02 34 38.3	-1.4
MTO3	Montecristo	2.06	65	S	Sb	02 35 04.5	-0.4
ESQI	Esquipulas	2.15	62	P	Pb	02 34 39.5	-1.6
ESQI	Esquipulas	2.15	62	S	Sb	02 35 08.3	+1.0
SARH	Santa Rosa de	2.75	63	i P	Pn	02 34 47.4	+2.4
SARH	Santa Rosa de	2.75	63	P	Pn	02 34 47.4	+2.4
SARH	Santa Rosa de	2.75	63	S	Sb	02 35 22.1	-2.3
IZABA	Izabal, Puerto	3.41	50	P	Pb	02 34 57.4	-5.0
PETF	Flores	3.63	22	P	Pn	02 34 57.9	+0.8

IDC 21 02:55:09.6±2.7**, 2°.11N**×**127°.43E, h0^{km}, mb3.4**/4**, mbtmp3.4**/4**, Error ellipse: s-maj=268.5km s-min=23.6km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.93	163	P	P	03 00 15.3	-0.2
	0.3nm,0.3s,baz=341,slow=9.8,SNR=2.4						
	0.3nm,0.3s						
ASAR	Alice Springs	26.38	167	P	P	03 00 47.4	-0.4
	0.3nm,0.6s,baz=344,slow=9.6,SNR=6.1						
	0.3nm,0.6s						
MKAR	Makanchi Array	59.28	325	P	P	03 05 14.0	+0.9
	0.2nm,0.4s,baz=128,slow=6.3,SNR=4.5						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	63.48	328	P	P	03 05 40.8	-0.5
	0.3nm,0.2s,baz=132,slow=5.4,SNR=2.1						
	0.3nm,0.2s						

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*NIED **21** 03:00:17.7, 38°.89N×142°.12E, h44^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}5.17; $M_{\theta\theta}$-0.40; $M_{\phi\phi}$-4.77; $M_{r\theta}$-1.55; $M_{\theta\phi}$-2.02; $M_{\phi r}$5.31; Fault plane solution: $M_0$7.69000×10^{14} NP1: ϕ_s221.00000°, δ28.00000°, λ130.00000°. NP2: ϕ_s357.00000°, δ69.00000°, λ71.00000°.*

*JMA **21** 03:00:17.7±0.1, 38°.9N±0°.3×142°.1E±0°.8, h44^{km}±1^{km}, MD4.0/40, MV4.0/40, KINKAZAN REGION*

JMA Felt I J1 at KINKAZAN REGION .

*NEIC **21** 03:00:19.4±0.9, 38°.93N±0°.08×142°.2E±0°.1, h60^{km}±7^{km}, mb4.6/9, Error ellipse: s-maj=17.0km s-min=8.4km az=127.0*

*IDC **21** 03:00:19.7±2.7, 38°.85N×142°.07E, h62^{km}±23^{km}, mb3.7/15, mbtmp4.0/19, ML3.7/4, MS3.7/8, Error ellipse: s-maj=26.3km s-min=14.6km az=82.0*

ISC 21 03:00:17.4±1.4**, 38°.88N**±0°.05×**142°.14E**±0°.09**, h43^{km}**±11^{km}**, n63, σ1^{s}09**/56**, mb4.2**/20**, MS4.1**/6**, 12D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.42	298	⇓iP	Pn	03 00 27.5	+0.2
OFUJ				⇓S	Sn	03 00 34.1	-0.1
JKMT	Kesennumamotoy	0.53	262	⇓iP	Pn	03 00 28.6	0.0
JKMT				⇓eS	Sn	03 00 36.1	-0.4
JMK	Ichinoseki	0.72	276	⇓iP	Pn	03 00 31.3	+0.1
JMK				⇓S	Sn	03 00 40.9	-0.3
JIO	Ouri	0.76	236	⇓iP	Pn	03 00 31.6	-0.1
JIO				⇓S	Sn	03 00 41.0	-0.9
JOM	Ohasama	0.89	312	⇓iP	Pn	03 00 33.7	+0.2
JOM				⇓S	Sn	03 00 45.0	-0.1
JOM	Ohasama	0.89	312	A	A	03 00 33.7	
	comp=N,13nm,0.4s,comp=E,16nm,0.3s						
JOFO	Osakifurukawao	1.00	254	A	A	03 00 35.4	
	comp=N,15nm,0.8s,comp=E,13nm,0.8s						
JTH	Tanohata	1.08	348	P	Pn	03 00 36.0	-0.1
JTH				eS	Sn	03 00 49.2	-0.7
JOU	Okura	1.27	246	⇓iP	Pn	03 00 38.8	+0.1
JRG	Rokugo	1.28	294	i P	Pn	03 00 39.1	+0.3
JRG	Rokugo	1.28	294	A	A	03 00 39.1	
	comp=N,3.0nm,0.8s,comp=E,4.0nm,1.0s						
JYK	Kaneyama	1.39	272	⇓iP	Pn	03 00 40.7	+0.3
JMM	Marumori	1.47	227	P	Pn	03 00 41.2	-0.2
JMM				eS	Sn	03 00 59.1	-0.4
JANG	Nango	1.57	342	i P	Pn	03 00 43.1	+0.3
JANG				eS	Sn	03 01 02.5	+0.6
JSD	Sado	3.16	256		Pn	03 01 05.1	+0.4
ERM	Erimo	3.22	14	Pn	Pn	03 01 06.3	+0.8
MJAR	Matsushiro Arr	3.90	234	P	Pn	03 01 16.9	+2.1
	comp=E,1.0nm,0.3s,baz=35,slow=13,SNR=32						
MJAR				LR	LR	03 02 59.4	
	comp=E,112nm,19.9s,baz=12,slow=42						
	comp=E,10nm,0.4s						
MAJO	Matsushiro	3.90	234		Pn	03 01 16.8	+2.0
MJB9	Matsu-Tunnel	3.90	234		Pn	03 01 17.9	+3.0
JGF	Kuroka	5.03	231		Pn	03 01 33.6	+3.2
ASAJ	Asahikawa	5.24	4	P	Pn	03 01 35.5	+2.3
	comp=E,2.0nm,0.3s,baz=221,slow=11,SNR=6.2						
	comp=E,2.4nm,0.3s						
JKA	Kamikawa-asahi	5.24	4		Pn	03 01 35.2	+2.0
INU	Inuyama	5.41	231		Pn	03 01 38.9	+3.4
USRK	Ussuriysk Ar.	9.28	308	P	Pn	03 02 30.9	+2.3
	comp=E,0.6nm,0.3s,baz=114,slow=14,SNR=6.1						
	comp=E,5.2nm,0.6s						
KSRS	Korea Array	11.29	267	P	Pn	03 03 00.6	+4.5
	comp=E,1.3nm,0.5s,baz=84,slow=14,SNR=4.5						
KSRS				LR	LR	03 06 42.1	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=E,38nm,19.4s,baz=245,slow=34						
HILR	Hailar Array B	19.20	311	P	P	03 04 36.2	-1.4
	baz=109,slow=13						
	comp=E,1.5nm,0.4s						
SONM	Songino Array	27.28	301	P	P	03 05 56.8	-1.1
	comp=E,0.4nm,0.6s,baz=110,slow=9.1,SNR=4.0						
SONM				LR	LR	03 16 16.5	
	comp=E,97nm,18.1s,baz=302,slow=35						
	comp=E,0.4nm,0.6s						
SONM	Songino Array	27.28	301	P	P	03 05 58.4	+0.5
H11N2	WAKE ISLAND Hy	28.66	125	T	T	03 36 33.4	
	baz=317,slow=75,SNR=2054						
H11N1	WAKE ISLAND Hy	28.67	125	T	T	03 36 34.1	
	baz=317,slow=75,SNR=1571						
H11N3	WAKE ISLAND Hy	28.68	125	T	T	03 36 34.7	
	baz=317,slow=75,SNR=2812						
H11S1	WAKE ISLAND Hy	29.44	127	T	T	03 37 31.9	
	baz=318,slow=76,SNR=236						
H11S3	WAKE ISLAND Hy	29.44	127	T	T	03 37 32.0	
	baz=318,slow=76,SNR=250						
H11S2	WAKE ISLAND Hy	29.45	127	T	T	03 37 33.1	
	baz=318,slow=76,SNR=228						
ANM	Nome	39.72	32	P	P	03 07 43.6	-1.8
ANM				IAmb	IAmb	03 08 21.9	
	comp=Z,12nm,1.1s						
ZALV	Zalesovo Beam	41.12	311	P	P	03 07 57.4	+0.3
	comp=Z,1.8nm,0.5s,baz=94,slow=8.5,SNR=9.7						
	comp=Z,1.8nm,0.5s						
ZALV	Zalesovo Beam	41.12	311	P	P	03 07 57.2	+0.2
MKAR	Makanchi Array	43.65	301	P	P	03 08 17.8	0.0
	comp=Z,1.8nm,0.5s,baz=83,slow=10,SNR=22						
	comp=Z,1.8nm,0.5s						
KURK	Kurchatov	45.27	307	P	P	03 08 30.3	-0.3
KURBB	Kurchatov Arra	45.34	307	P	P	03 08 31.1	0.0
	comp=Z,7.2nm,0.6s,baz=80,slow=8.0,SNR=51						
	comp=Z,7.2nm,0.6s						
ILAR	Eielson Array	47.63	33	P	P	03 08 49.6	+0.7
	comp=Z,0.3nm,0.6s,baz=270,slow=5.5,SNR=4.7						
	comp=Z,0.3nm,0.6s						
BVAR	Borovoye Array	49.77	311	P	P	03 09 05.5	-0.1
	comp=Z,2.8nm,0.5s,baz=69,slow=8.8,SNR=13						
	comp=Z,2.8nm,0.5s						
BORK	Borovoye	49.81	311	P	P	03 09 05.8	0.0
BORK				IAmb	IAmb	03 09 06.4	
	comp=Z,2.9nm,0.6s						
ARTI	Arti	55.48	318	P	P	03 09 47.6	0.0
AB31	Akbulak array	57.20	309	P	P	03 09 59.8	-0.3
AB31				IAmb	IAmb	03 10 00.4	
	comp=Z,2.4nm,0.6s						
ABKAR	Akbulak array	57.20	309	P	P	03 09 59.8	-0.2
FITZ	Fitzroy Crossi	58.75	198	P	P	03 10 11.3	+0.2
	comp=Z,1.3nm,0.9s,baz=30,slow=8.1,SNR=2.1						
FITZ				LR	LR	03 33 30.4	
	comp=Z,202nm,20.8s,baz=226,slow=34						
	comp=Z,1.3nm,0.9s						
FITZ	Fitzroy Crossi	58.75	198	P	P	03 10 11.3	+0.2
WB0	Warramunga Arr	58.79	189	P	P	03 10 11.0	-0.4
WB0				IAmb	IAmb	03 10 12.0	
	comp=Z,6.2nm,1.2s						
WR8	Warramunga Arr	58.97	188	P	P	03 10 12.2	-0.4
WR8				IAmb	IAmb	03 10 36.6	
	comp=Z,8.6nm,1.4s						
WRA	Warramunga Arr	58.97	189	P	P	03 10 11.8	-0.8
	comp=Z,1.2nm,0.5s,baz=7.2,slow=6.9,SNR=13						
	comp=Z,1.2nm,0.5s						
YKA	Yellowknife Ar	61.92	31	LR	LR	03 38 03.6	
	comp=Z,281nm,21.4s,baz=92,slow=36						
ASAR	Alice Springs	62.70	189	P	P	03 10 37.6	-0.3
	comp=Z,0.6nm,0.7s,baz=12,slow=6.2,SNR=7.6						
	comp=Z,0.6nm,0.7s						
ASAR	Alice Springs	62.70	189	P	P	03 10 38.0	+0.1
BELG	Belogornoye	62.85	317	LR	LR	03 39 31.4	
	comp=Z,186nm,18.5s,baz=169,slow=37						
FINES	FINESS Array B	67.45	332	P	P	03 11 08.3	0.0
	comp=Z,3.4nm,0.9s,baz=32,slow=11,SNR=4.5						
	comp=Z,3.4nm,0.9s						
NEW	Newport	68.41	45	LR	LR	03 41 01.7	
	comp=Z,56nm,21.0s,baz=110,slow=36						
HFS	Hagfors	72.64	336	P	P	03 11 40.6	+0.4
	comp=Z,3.2nm,1.0s,baz=51,slow=14,SNR=1.6						
	comp=Z,3.2nm,1.0s						
NOA	NORSAR Array B	72.71	337	P	P	03 11 40.8	+0.2
	comp=Z,0.6nm,0.9s,baz=34,slow=6.3,SNR=1.5						
	comp=Z,0.6nm,0.9s						
AKASG	Malin Array Be	73.19	322	P	P	03 11 43.2	-0.4
	comp=Z,0.4nm,0.4s,baz=45,slow=6.5,SNR=2.3						
	comp=Z,0.4nm,0.4s						
ELK	Elko	73.92	50	LR	LR	03 46 25.6	
	comp=Z,72nm,18.1s,baz=128,slow=37						
BRTR	Keskin Array B	78.06	312	P	P	03 12 11.7	-0.2
	comp=Z,0.3nm,0.4s,baz=99,slow=3.8,SNR=6.0						
	comp=Z,0.3nm,0.4s						
MMAI	Mount Meron Ar	81.36	306	P	P	03 12 30.9	+1.1
	comp=Z,1.7nm,0.9s,baz=1.4,slow=5.8,SNR=1.6						
	comp=Z,1.7nm,0.9s						

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*JMA **21** 03:03:58.8±0.3, 44°.3N±0°.9×14°1E±°, h233km±2km, MV3.2/21, NW OFF HOKKAIDO*

*IDC **21** 03:03:59.1±0.9, 44°.27N×141°.17E, h224km±9km, mb3.2/3, mbtmp3.7/6, Error ellipse: s-maj=28.1km s-min=16.2km az=130.0*

*SKHL **21** 03:03:59.7±0.3, 44°.40N×141°.30E, h206km±6km, mb4.5/4, msha4.8/4*

ISC 21 03:03:59.5±0.9**, 44°.26N**±0°.06×**141°.21E**±0°.07**, h227**km±7km**, n22, σ0s.78**/31**, mb3.3**/3**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSS	Shosan	0.48	73	P	Pn	03 04 30.1	+0.5
JSS				eS	S	03 04 54.0	+0.8
JHR	Hokuryu	0.63	144	P	Pn	03 04 30.6	+0.4
JHR				eS	S	03 04 55.0	+0.8
ASAJ	Asahikawa	1.01	98	P	Pn	03 04 32.1	+0.1
	6.9nm,0.2s,baz=225,slow=9.9,SNR=18						
ASAJ				S	S	03 04 57.1	-0.3
	23nm,0.8s,baz=118,slow=32,SNR=5.7						
JAB	Ashibetsu	1.05	135	eS	S	03 04 58.8	+0.9
JWK2	Keihoku	1.17	25	P	Pn	03 04 33.3	+0.2
JWK2				eS	S	03 04 59.4	+0.1
JRBN	Rebuntou	1.17	355	eP	Pn	03 04 33.0	0.0
JSE	Soyaes	1.21	54	P	Pn	03 04 33.0	-0.3
JSE				eS	S	03 04 59.1	-0.6
JEW	Eniwo	1.43	173	eP	Pn	03 04 35.1	0.0
JNBK	Urakawa-nobuka	2.27	150	eP	Pn	03 04 43.3	+0.5
YSS	Yuzhno-Sakhali	2.91	21	eP	Pn	03 04 49.2	-0.2
YSS				AMB	AMB	03 04 49.9	
	120nm,0.4s						
YSS				eS	S	03 05 27.5	-1.1
YSS				A	A	03 05 28.8	
	50nm,0.7s						
YSS				A	A	03 05 28.8	
	30nm,0.7s						
AKK	Akkeshi	2.91	114	eP	Pn	03 04 49.9	+0.3
YUK	Yuzh-Kuril'sk	3.36	92	eP	Pn	03 04 53.1	-1.5
YUK				AMB	AMB	03 04 55.4	
	80nm,0.7s						
NMR	Nemuro--Hokkai	3.39	104	eP	Pn	03 04 56.1	+1.1
SHO	Shikotan	4.07	94	eS	S	03 05 54.8	+1.7
SHO				A	A	03 05 59.5	
	50nm,0.3s						
SHO				A	A	03 05 59.5	
	70nm,0.3s						
KUR	Kuril'sk	4.84	76	eP	Pn	03 05 12.4	-0.1
KUR				eS	S	03 06 10.2	0.0
USRK	Ussuriysk Ar.	6.63	273	P	Pn	03 05 35.1	0.0
	2.9nm,0.6s,baz=88,slow=14,SNR=4.0						
TYV	Tymovskoe	6.68	8	eP	Pn	03 05 36.5	+0.8
TYV				AMB	AMB	03 05 37.8	
	20nm,0.6s						
TYV				eS	S	03 06 52.3	-0.1
TYV				A	A	03 06 54.4	
	20nm,0.3s						
TYV				A	A	03 06 54.4	
	20nm,0.3s						
MJAR	Matsushiro Arr	8.04	198	P	Pn	03 05 51.7	-1.6
	2.0nm,0.5s,baz=7.6,slow=12,SNR=6.4						
MJAR				S	S	03 07 24.5	0.0
	0.8nm,0.3s,baz=295,slow=25,SNR=4.4						
SEY	Seymchan	19.79	15	P	P	03 08 11.1	-1.3
	1.0nm,0.3s,baz=68,slow=19,SNR=4.9						
ILAR	Eielson Array	43.61	36	P	P	03 11 40.8	-0.3
	0.3nm,0.6s,baz=284,slow=5.9,SNR=5.4						
	0.3nm,0.6s						
FINES	FINESS Array B	62.40	331	P	P	03 13 57.7	-0.1
	2.3nm,1.0s,baz=28,slow=6.7,SNR=3.5						
	2.3nm,1.0s						
PDAR	Pinedale Array	72.77	47	P	P	03 15 03.9	+0.6
	0.3nm,0.4s,baz=321,slow=1.9,SNR=5.2						
	0.3nm,0.4s						

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*IDC **21** 03:28:47.9±0.6, 13°.93N×120°.83E, h212km±4km, mb3.3/10, mbtmp3.9/10, Error ellipse: s-maj=32.0km s-min=13.9km az=63.0*

ISC 21 03:28:48.0±0.9**, 13°.9N**±0°.2×**120°.8E**±0°.3**, h214**km±8km**, n11, σ0s.33**/12**, mb3.6**/10**, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.19	29	P	Pn	03 29 16.2	0.0
	432nm,0.5s,baz=240,slow=3.4,SNR=8.2						
TGY				S	S	03 29 38.2	0.0
	495nm,0.5s,baz=347,slow=8.4,SNR=6.7						
CMAR	Chiang Mai Arr	21.50	285	P	P	03 33 20.1	-0.2
	2.9nm,0.3s,baz=96,slow=8.3,SNR=9.4						
	2.9nm,0.3s						
SONM	Songino Array	35.88	343	P	P	03 35 27.8	+0.2
	1.0nm,0.6s,baz=164,slow=9.9,SNR=7.5						
	1.0nm,0.6s						
WRA	Warramunga Arr	36.19	158	P	P	03 35 30.1	-0.3
	0.3nm,0.6s,baz=333,slow=8.7,SNR=1.4						
	0.3nm,0.6s						
ASAR	Alice Springs	39.49	161	P	P	03 35 58.5	+0.4
	0.2nm,0.4s,baz=336,slow=7.3,SNR=7.0						
	0.2nm,0.4s						
MKAR	Makanchi Array	45.93	323	P	P	03 36 49.8	+0.4
	0.6nm,0.3s,baz=114,slow=8.3,SNR=11						
	0.6nm,0.3s						
ZALV	Zalesovo Beam	48.91	333	P	P	03 37 11.8	-0.4
	1.0nm,0.3s,baz=130,slow=5.4,SNR=5.3						
	1.0nm,0.3s						
KURBB	Kurchatov Arra	50.07	326	P	P	03 37 21.4	+0.3
	1.0nm,0.5s,baz=131,slow=7.4,SNR=13						
	1.0nm,0.5s						
BVAR	Borovoye Array	55.66	326	P	P	03 38 01.9	0.0
	0.5nm,0.6s,baz=120,slow=8.5,SNR=3.0						
	0.5nm,0.6s						
ARCES	ARCESS Array B	78.92	339	P	P	03 40 27.1	-0.3
	1.4nm,0.8s,baz=79,slow=6.3,SNR=6.5						
	1.4nm,0.8s						
SPITS	Spitsbergen Ar	79.39	348	P	P	03 40 29.8	0.0
	1.3nm,0.5s,baz=96,slow=13,SNR=6.3						
	1.3nm,0.5s						

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*IDC **21** 03:36:47.1±8.3, 20°.35S×178°.26W, h571km±85km, mb2.8/4, mbtmp3.7/4, Error ellipse: s-maj=160.7km s-min=36.1km az=151.0*

ISC 21 03:36:48.1±3.1**, 20°S**±1°×**178°.3W**±0°.6**, h587**km**, n8, σ1s.15**/8**, mb3.3**/4**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	44.28	257	P	P	03 44 07.3	+0.3
	0.7nm,0.5s,baz=94,slow=7.7,SNR=15						
	0.7nm,0.5s						
WRA	Warramunga Arr	44.34	262	P	P	03 44 07.6	0.0
	0.3nm,0.3s,baz=94,slow=6.7,SNR=9.2						
	0.3nm,0.3s						
ILAR	Eielson Array	88.22	13	P	P	03 48 37.0	-0.1
	0.3nm,0.5s,baz=214,slow=5.4,SNR=6.5						
	0.3nm,0.5s						
PDAR	Pinedale Array	89.04	43	P	P	03 48 42.3	+0.6
	0.2nm,0.6s,baz=253,slow=9.8,SNR=3.1						
	0.2nm,0.6s						
BVAR	Borovoye Array	118.77	320	PKP	PKiKP	03 54 30.4	+0.1
	0.3nm,0.4s,baz=67,slow=4.8,SNR=2.4						
AKASG	Malin Array Be	142.73	331	PKP	PKPdf	03 55 12.8	-2.3
	0.8nm,0.5s,baz=42,slow=4.2,SNR=5.1						
BRTR	Keskin Array B	146.52	312	PKPbc	PKPbc	03 55 25.4	+0.6
	0.4nm,0.6s,baz=124,slow=4.5,SNR=2.3						
MMAI	Mount Meron Ar	147.49	300	PKPbc	PKPbc	03 55 28.2	+0.8
	0.4nm,0.4s,baz=86,slow=4.5,SNR=4.8						

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*IDC **21** 03:51:01.5±1.2, 6°.62N×94°.37E, h0km, mb3.8/10, mbtmp3.8/10, MS3.7/2, Error ellipse: s-maj=79.0km s-min=20.6km az=51.0*

ISC 21 03:51:10.0±1.3**, 6°.7N**±0°.4×**94°.5E**±0°.4**, h64**km**, n15, σ0s.69**/10**, mb3.7**/10**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	27.06	72	LR	LR	04 07 48.6	
	comp=Z,112nm,19.1s,baz=14,slow=37						
MKAR	Makanchi Array	41.33	347	P	P	03 58 48.7	-0.8
	3.9nm,1.2s,baz=161,slow=9.2,SNR=4.3						
	3.9nm,1.2s						
KURBB	Kurchatov Arra	45.78	346	P	P	03 59 25.1	-0.1
	0.4nm,0.4s,baz=167,slow=7.1,SNR=8.7						
	0.4nm,0.4s						
WRA	Warramunga Arr	47.32	125	P	P	03 59 38.0	+0.3
	0.3nm,0.8s,baz=304,slow=7.4,SNR=1.3						
	0.3nm,0.8s						
ASAR	Alice Springs	48.91	129	P	P	03 59 49.5	-0.6
	0.2nm,0.6s,baz=297,slow=8.2,SNR=3.3						
	0.2nm,0.6s						
BVAR	Borovoye Array	50.23	341	P	P	03 59 59.0	-0.6
	0.5nm,0.5s,baz=140,slow=9.1,SNR=3.6						
	0.5nm,0.5s						
NRIK	Noril'sk	62.75	357	LR	LR	04 30 27.1	
	comp=Z,65nm,19.2s,baz=42,slow=38						
BRTR	Keskin Array B	63.45	311	P	P	04 01 32.8	-0.8
	0.4nm,0.7s,baz=157,slow=7.8,SNR=2.6						
	0.4nm,0.7s						
H04N2	CROZET ISLANDS	64.86	211	T	T	05 12 35.6	
	baz=48,slow=75,SNR=8.4						
H04N1	CROZET ISLANDS	64.87	211	T	T	05 12 35.0	
	baz=48,slow=75,SNR=8.8						
H04N3	CROZET ISLANDS	64.88	211	T	T	05 12 35.9	
	baz=48,slow=75,SNR=10.0						
FINES	FINESS Array B	73.92	332	P	P	04 02 38.4	+0.3
	3.3nm,0.9s,baz=84,slow=5.9,SNR=7.4						
	3.3nm,0.9s						
ARCES	ARCESS Array B	76.50	340	P	P	04 02 53.5	+0.7
	4.2nm,0.9s,baz=98,slow=8.8,SNR=3.9						
	4.2nm,0.9s						
GERES	GERESS Array B	78.93	318	P	P	04 03 07.7	+0.8
	0.4nm,0.6s,baz=79,slow=8.7,SNR=4.3						
	0.4nm,0.6s						
HFS	Hagfors	79.65	330	P	P	04 03 10.8	+0.4
	6.5nm,1.1s,baz=116,slow=9.8,SNR=5.7						
	6.5nm,1.1s						

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*IDC **21** 03:52:19.5±1.2, 6°.63N×94°.44E, h0km, mb3.8/11, mbtmp3.8/11, MS3.0/2, Error ellipse: s-maj=56.4km s-min=21.4km az=52.0*

ISC 21 03:52:28.2±1.2**, 6°.7N**±0°.3×**94°.6E**±0°.3**, h64**km**, n16, σ0s.77**/11**, mb3.8**/11**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.44	20	LR	LR	03 59 53.3	
	comp=Z,42nm,20.3s,baz=240,slow=36						
PALK	Pallekele	13.78	273	LR	LR	04 00 20.6	
	comp=Z,92nm,20.0s,baz=96,slow=35						
MKAR	Makanchi Array	41.32	347	P	P	04 00 07.5	0.0
	1.9nm,0.6s,baz=166,slow=12,SNR=6.0						
	1.9nm,0.6s						
SONM	Songino Array	42.22	12	P	P	04 00 15.4	+0.4
	0.5nm,0.8s,baz=189,slow=8.5,SNR=2.5						
	0.5nm,0.8s						
KURBB	Kurchatov Arra	45.78	346	P	P	04 00 43.5	+0.2
	0.7nm,0.5s,baz=169,slow=7.2,SNR=9.7						
	0.7nm,0.5s						
WRA	Warramunga Arr	47.23	125	P	P	04 00 54.3	-0.9
	0.3nm,0.8s,baz=304,slow=7.3,SNR=1.6						
	0.3nm,0.8s						
ASAR	Alice Springs	48.84	129	P	P	04 01 08.3	+0.7
	0.4nm,0.7s,baz=303,slow=7.1,SNR=4.3						
	0.4nm,0.7s						
BVAR	Borovoye Array	50.23	341	P	P	04 01 16.8	-0.9
	1.4nm,0.8s,baz=141,slow=7.6,SNR=5.3						
	1.4nm,0.8s						
BRTR	Keskin Array B	63.52	311	P	P	04 02 51.7	-0.5
	0.5nm,0.7s,baz=116,slow=8.6,SNR=4.9						
	0.5nm,0.7s						
H04N2	CROZET ISLANDS	64.95	211	T	T	05 13 50.3	
	baz=47,slow=75,SNR=7.3						
H04N1	CROZET ISLANDS	64.96	211	T	T	05 13 52.7	
	baz=47,slow=75,SNR=7.6						
H04N3	CROZET ISLANDS	64.97	211	T	T	05 13 50.2	
	baz=47,slow=75,SNR=7.1						
FINES	FINESS Array B	73.95	332	P	P	04 03 55.8	-0.6
	1.0nm,0.6s,baz=153,slow=5.8,SNR=5.8						
	1.0nm,0.6s						
ARCES	ARCESS Array B	76.51	340	P	P	04 04 10.2	-0.8
	1.5nm,0.7s,baz=84,slow=5.7,SNR=4.4						
	1.5nm,0.7s						
GERES	GERESS Array B	78.98	318	P	P	04 04 26.1	+0.8
	0.6nm,0.7s,baz=76,slow=5.6,SNR=4.8						
	0.6nm,0.7s						
HFS	Hagfors	79.68	330	P	P	04 04 29.4	+0.7
	1.3nm,0.7s,baz=100,slow=3.6,SNR=4.8						
	1.3nm,0.7s						

KRSC 21 04:04:52.3±0.9**, 54°.77N×164°.49E, h40**km±25km**, Ml3.5, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	0.96	62	eP	Pn	04 05 10.5	+1.3
BKI				eS	Sn	04 05 21.9	+0.2
KBTR	Krutoberegovo	1.73	327	eP	Pn	04 05 20.9	+1.2
KZV	Kizimen	2.44	280	eP	Pn	04 05 33.4	+3.6
BZGR	Bezymyannyi-Gr	2.46	300	eS	Sn	04 06 02.3	+3.4
KMNR	Kamenistaya	2.63	294	eP	Pn	04 05 36.2	+4.0
SRKR	Sorokina	2.67	317	eP	Pn	04 05 36.9	+4.2
KLY	Klyuchi	2.67	307	eP	Pn	04 05 34.6	+1.9
KII	Karymskiy	3.04	258	eP	Pn	04 05 41.7	+3.9
SPN	Mys Shipunski	3.13	239	eS	Sn	04 06 16.7	+1.6
NLC	Nalytchevo	3.43	244	eS	Sn	04 06 25.5	+2.9
ESO	Esso	3.50	292	eP	Pn	04 05 47.5	+3.3
SDLR	Sedlovina	3.63	248	eP	Pn	04 05 50.1	+4.1
SMAR	Somma	3.68	248	eP	Pn	04 05 51.4	+4.7
KRER	Koryakskii	3.69	249	eP	Pn	04 05 51.6	+4.7
AVH	Avacha	3.71	248	eP	Pn	04 05 52.3	+5.2
KRX	Arik	3.72	250	eP	Pn	04 05 51.4	+4.2
KOK	Koryaka	3.75	249	eP	Pn	04 05 52.5	+4.8
DALK	Dalny	3.81	245	eS	Sn	04 06 35.4	+3.4
KRMR	Karymshinskiy	4.24	245	eP	Pn	04 05 58.5	+4.3
KRMR				eS	Sn	04 06 46.4	+3.9
MTVR	Mutnovka	4.40	241	eP	Pn	04 06 01.3	+4.7
ASAK	Asacha	4.60	241	eP	Pn	04 06 04.8	+5.6

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*BGR **21** 04:17:44.0, 17°.52S×174°.00W, h202km±1km*

*NEIC **21** 04:17:58.6±2.1, 17°.70S±0°.09×174°.67W±0°.10, h155km±5km, mb4.9/335, Error ellipse: s-maj=13.1km s-min=12.5km az=86.0*

*IDC **21** 04:18:03.5±0.6, 17°.81S×174°.65W, h204km±4km, mb4.4/23, mbtmp4.9/24, MS3.6/7, Error ellipse: s-maj=11.2km s-min=9.5km az=118.0*

*GCMT **21** 04:18:03.6±0.3, 17°.76S±0°.02×174°.29W±0°.02, h199km±2km, MW5.1/101, Moment Tensor Solution. s47,c53; s101,c124; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.89±.14; $M_{\theta\theta}$4.63±.16; $M_{\phi\phi}$-0.73±.16; $M_{r\theta}$0.51±.14; $M_{\theta\phi}$-1.56±.14; $M_{\phi r}$2.16±.12; Best double couple: $M_0$5.09000×10^{16} NP1:ϕ_s259.00000°,δ51.00000°, λ-129.00000°. NP2:ϕ_s131.00000°,δ52.00000°, λ-52.00000°. Principal axes: T 5.0510, Plg0.0000°, Azm195.0000°; N 0.0830, Plg29.0000°, Azm286.0000°; P -5.1290, Plg61.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **21** 04:18:08.0±1.7, 17°.10S×174°.82W, h228km, mb5.0/15 Error ellipse: s-maj=18.1km s-min=14.9km az=35.3*

*NOU **21** 04:18:08.3, 18°.05S×174°.81W, h241km, mb5.0/41, Tonga Islands*

ISC 21 04:18:01.8±0.5**, 17°.79S**±0°.05×**174°.59W**±0°.04**, h194**km±4km**, h193**km**:pP-P, n827, σ1s.06**/713**, mb4.8**/242**, 58C-50D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.61	107		Pn	04 19 09.1	-2.0
NIUE	Niue	4.61	107	P	Pn	04 19 09.3	-1.7
NIUE				S	Sn	04 20 01.1	-4.4
AFI	Afiamalu	4.71	35		Pn	04 19 07.0	-5.5
AFI	Afiamalu	4.71	35	P	Pn	04 19 07.5	-5.0
AFI				S	Sn	04 19 56.2	-12
MSVF	Nonsavu	7.01	269		Pn	04 19 45.1	+2.8
MSVF	Nonsavu	7.01	269	P	Pn	04 19 46.2	+3.9
	173nm,0.8s						
MSVF	Nonsavu	7.01	269	*d i*P	Pn	04 19 46.4	+4.1
GLKZ	Green Lake	11.82	194	P	Pn	04 20 40.5	-4.0
GLKZ				S	Sn	04 22 45.1	-11
RAR	Rarotonga	14.38	106	LR	LR	04 25 31.9	
	comp=Z,90nm,20.1s,baz=287,slow=31						
MARNC	Mare, Loyalty	16.78	255	P	P	04 21 44.2	-0.6
SANVU	Saraoutou	17.60	275	P	P	04 21 51.9	-2.0
DZM	Mont Dzumac	18.33	253	P	P	04 22 02.0	+0.2
	10nm,0.8s,baz=79,slow=16,SNR=6.4						
DZM	Mont Dzumac	18.33	253	eP	Pn	04 22 03.5	-0.8
	56nm,0.9s						
DZM				epP	pP	04 22 33.9	+0.9
	70nm,1.3s						
DZM				eLR	LR	04 26 23.9	
	273nm,23.2s						
DZM	Mont Dzumac	18.33	253		P	04 21 59.1	-2.8
DZM	Mont Dzumac	18.33	253	P	Pn	04 22 03.4	-0.8
	42nm,0.9s						
OUZ	Omahuta	20.29	209	P	P	04 22 22.9	+0.2
GRZ	Great Barrier	20.39	204	P	P	04 22 24.4	+0.7
WCZ	Waipu Caves	20.57	206	P	P	04 22 26.4	+0.8
MXZ	Matakaoa Point	20.66	196	P	P	04 22 28.2	+1.6
KUZ	Kuaotunu	20.73	202	P	P	04 22 28.2	+0.9
	238nm,0.9s						
KUZ	Kuaotunu	20.73	202	P	P	04 22 28.5	+1.2
WMGZ	Waiomatatini S	20.88	196	P	P	04 22 31.8	+3.0
WMGZ				S	S	04 26 11.8	+1.3
HAZ	Te Kaha	20.99	197	P	P	04 22 30.4	+0.4
WIAZ	Waiheke Island	20.99	204	P	P	04 22 31.1	+1.0
PKGZ	Pakihiroa	21.01	196	P	P	04 22 29.9	-0.4
MYRZ	Mayor Island	21.02	201	P	P	04 22 32.6	+2.1
PUZ	Puketiti	21.15	196	P	P	04 22 31.8	-0.1
ETAZ	East Tamaki Re	21.21	204	P	P	04 22 33.8	+1.4
RUGZ	Raukumara Rang	21.21	197	P	P	04 22 33.9	+1.3
MKAZ	Moumakai	21.25	203	P	P	04 22 34.0	+1.1
TWGZ	Tauwhareparae	21.33	196	P	P	04 22 34.2	+0.5
TGRZ	Tauranga	21.42	200	P	P	04 22 37.4	+2.7
MWZ	Matawai	21.60	197	P	P	04 22 37.1	+0.6
EDRZ	Edgecumbe	21.62	199	P	P	04 22 38.1	+1.3
KMRZ	Kaimai	21.64	201	P	P	04 22 39.2	+2.3
URZ	Urewera	21.65	198	P	P	04 22 35.5	-1.4
	127nm,0.5s,baz=2.8,slow=2.8,SNR=90						
URZ				S	S	04 26 16.3	-7.2
	13nm,0.5s,baz=56,slow=23,SNR=6.1						
	127nm,0.5s						
URZ	Urewera	21.65	198	P	P	04 22 35.7	-1.2
	182nm,0.6s						
URZ	Urewera	21.65	198	S	S	04 26 18.2	-5.3
	182nm,0.6s						
URZ	Urewera	21.65	198	P	P	04 22 35.8	-1.2
TOZ	Tahuroa Road	21.68	202		P	04 22 38.4	+1.0
TOZ	Tahuroa Road	21.68	202	P	P	04 22 38.7	+1.3
RTZ	Ruatahuna	22.02	198	P	P	04 22 41.9	+1.2
KNZ	Kokohu	22.20	196	P	P	04 22 44.5	+2.1
HIZ	Hauiti	22.61	202	P	P	04 22 48.4	+2.3
BKZ	Black Stump Fm	22.67	198	P	P	04 22 46.0	-0.7
	44nm,0.5s						
BKZ	Black Stump Fm	22.67	198	S	S	04 26 34.8	-5.3
	44nm,0.5s						
BKZ	Black Stump Fm	22.67	198	P	P	04 22 41.7	-5.0
BKZ				S	S	04 26 43.0	+3.0
NGZ	Ngauruhoe	22.95	200	P	P	04 22 50.3	+0.9
PAE	Paea	23.82	94	eP	P	04 22 57.0	-0.3
	28nm,1.0s						
PPT2	Papeete2	23.83	93	esS	sS	04 28 06.9	+1.5
	426nm,30.8s						
PPT2				esS	Sn	04 28 14.0	+31
	272nm,31.2s						
PPT	Papeete	23.83	93	P	P	04 22 57.8	+0.4
	88nm,1.0s,baz=296,slow=8.8,SNR=7.1						
	88nm,1.0s						
TIAR	Tiarei	24.05	93	eP	P	04 23 02.0	+2.5
	190nm,1.0s						
TVO	Taravao	24.12	94	eP	P	04 23 00.1	-0.1
	39nm,0.9s						
TBI	Tubuai	24.15	107	eP	P	04 23 03.0	+2.7
	238nm,1.0s						
PMOR	Pomariorio Ree	25.75	88	eP	P	04 23 14.1	-0.7
	160nm,1.1s						
VAH	Vaihoa	25.97	88	eP	P	04 23 16.2	-0.6

	1.3nm,0.9s						
LHI	Lord Howe Isla	27.48	235	P	P	04 23 29.6	-0.5
AUWSH	Wavell State H	31.30	246	P	P	04 24 03.6	-0.3
	44nm,1.0s						
TW1H	Toowoomba 1 Ha	32.26	246	P	P	04 24 12.1	-0.3
	123nm,0.6s						
EIDS	Eidsvold	32.73	251	P	P	04 24 14.6	-1.9
EIDS				IAmb	IAmb	04 24 16.8	
	comp=Z,21nm,1.4s						
ARMA	Armidale	33.17	241	P	P	04 24 20.6	+0.3
ARMA				IAmb	IAmb	04 24 37.6	
	comp=Z,70nm,2.0s						
TAOE	Nuku Hiva Isla	34.62	80	*e*P	P	04 24 31.1	-1.8
	comp=Z,272nm,1.4s						
AULRC	Lightning Ridg	36.05	244	P	P	04 24 44.8	-0.1
	comp=Z,31nm,0.9s						
CTAO	Charters Tower	37.05	260	P	P	04 24 52.2	-1.3
CTAO				IAmb	IAmb	04 25 35.5	
	comp=Z,25nm,1.2s						
CTAO	Charters Tower	37.05	260	P	P	04 24 52.2	-1.3
CTAO				PcP	PcP	04 27 10.2	+0.2
RKT	Rikitea	37.41	105	*e*P	P	04 24 57.5	+1.0
	comp=Z,43nm,0.9s						
PMG	Port Moresby	38.04	278	P	P	04 25 01.1	-0.7
PMG				IAmb	IAmb	04 25 03.2	
	comp=Z,22nm,0.7s						
PMG	Port Moresby	38.04	278	P	P	04 25 02.9	+1.1
	comp=Z,30nm,0.8s						
PMG	Port Moresby	38.04	278	P	P	04 25 02.5	+0.7
	comp=Z,30nm,0.8s						
PMG	Port Moresby	38.04	278	⇑*i*P	P	04 25 02.1	+0.3
PMG				pmax	pmax		
	comp=Z,21nm,0.7s						
CMSA	Cobar Meteorol	38.39	241	P	P	04 25 04.6	+0.1
	comp=Z,40nm,1.0s						
QLP	Quilpie	38.98	250	P	P	04 25 08.9	-0.6
	comp=Z,53nm,0.9s						
MTSU	Mount Surprise	39.03	263	P	P	04 25 09.0	-1.1
	comp=Z,9.3nm,0.7s						
TOO	Toolangi	40.09	232	P	P	04 25 17.7	-0.9
COEN	Coen	40.74	269	P	P	04 25 23.3	-0.9
COEN	Coen	40.74	269	P	P	04 25 23.7	-0.5
	comp=Z,52nm,0.7s						
STKA	Stephens Creek	41.88	242	P	P	04 25 33.1	-0.2
	comp=Z,15nm,0.6s,baz=92,slow=9.5,SNR=25						
STKA				PcP	PcP	04 27 26.4	+1.2
	comp=Z,5.1nm,0.7s,baz=51,slow=5.1,SNR=4.0						
	comp=Z,15nm,0.6s						
STKA	Stephens Creek	41.88	242	P	P	04 25 32.7	-0.6
STKA	Stephens Creek	41.88	242	P	P	04 25 33.4	+0.1
	comp=Z,6.7nm,1.0s						
STKA	Stephens Creek	41.88	242	⇓*e*P	P	04 25 30.3	-3.0
INKA	Innaminka	42.16	248	P	P	04 25 35.6	+0.1
INKA				IAmb	IAmb	04 25 37.2	
	comp=Z,25nm,1.0s						
QIS	Mount Isa	43.25	259	P	P	04 25 43.3	-1.1
	comp=Z,7.3nm,1.0s						
AUMBR	Murray Bridge	44.34	238	P	P	04 25 52.2	-0.6
	comp=Z,64nm,0.8s						
HTT	Hallett	44.35	240	P	P	04 25 52.4	-0.7
	comp=Z,30nm,1.0s						
AUJCS	Jamestown Cent	44.57	241	P	P	04 25 54.3	-0.5
	comp=Z,27nm,1.0s						
WHYH	Whyalla	45.41	241	P	P	04 26 01.3	0.0
	comp=Z,57nm,0.8s						
BBOO	Buckleboo	46.65	241	P	P	04 26 10.2	-0.9
BBOO	Buckleboo	46.65	241	P	P	04 26 10.6	-0.5
	comp=Z,70nm,0.9s						
WRAB	Tennant Creek	48.22	259	P	P	04 26 21.8	-1.5
WRAB				IAmb	IAmb	04 26 23.3	
	comp=Z,39nm,1.2s						
WRAB	Tennant Creek	48.22	259	P	P	04 26 21.8	-1.5
	comp=Z,15nm,1.0s						
WRAB	Tennant Creek	48.22	259	*de*P	P	04 26 21.4	-1.9
WRAB				pmax	pmax		
	comp=Z,19nm,0.6s						
WRAB	Tennant Creek	48.22	259	P	P	04 26 21.9	-1.4
WRAB				PcP	PcP	04 27 47.9	+0.4
WRA	Warramunga Arr	48.23	259	P	P	04 26 22.1	-1.3
	comp=Z,11nm,0.5s,baz=96,slow=6.8,SNR=130						
	comp=Z,11nm,0.5s						
WRA	Warramunga Arr	48.23	259		P	04 26 21.6	-1.8
AS31	Alice Springs	48.32	254	P	P	04 26 23.4	-0.7
ASAR	Alice Springs	48.32	254	P	P	04 26 23.4	-0.7
	comp=Z,185nm,0.6s,baz=89,slow=8.4,SNR=2345						
ASAR				pP	pwP	04 27 09.8	+0.4
	comp=Z,14nm,0.8s,baz=83,slow=8.8,SNR=4.7						
ASAR				PcP	PcP	04 27 48.1	+0.3
	comp=Z,6.5nm,0.8s,baz=134,slow=2.9,SNR=4.4						
ASAR				S	S	04 33 05.1	-4.4
	comp=Z,3.8nm,0.8s,baz=91,slow=15,SNR=23						
MTN	Manton Dam	52.44	267	P	P	04 26 53.6	-1.4
FORT	Forrest	53.34	245	P	P	04 26 59.9	-1.6
FORT				IAmb	IAmb	04 27 02.1	
	comp=Z,12nm,0.7s						
KNRA	Kununurra	54.12	263	P	P	04 27 06.1	-1.2
FAKI	Fak Fak	54.13	279	P	P	04 27 06.4	-1.0
SWI	Sorong	55.77	281	P	P	04 27 19.1	0.0
FITZ	Fitzroy Crossi	56.63	260	P	P	04 27 24.8	-0.3
KRAI	Karang Ratu	57.64	278	P	P	04 27 31.5	-0.8
	comp=Z,18nm,0.7s						
SOEI	Soe	59.71	269	P	P	04 27 48.1	+1.4
	comp=Z,66nm,0.9s						
SOEI	Soe	59.71	269	P	P	04 27 47.3	+0.6
	comp=Z,1µmcomp=Z,66nm,0.9s						
BATI	Baumata	60.17	268	LR	LR	04 51 29.6	
	comp=Z,36nm,20.3s,baz=60,slow=33						
SANI	Sanana	60.32	278	P	P	04 27 50.6	-0.1
	comp=Z,24nm,0.7s						
SANI	Sanana	60.32	278	P	P	04 27 48.9	-1.8
	comp=Z,24nm,0.7s						
SBA	Scott Base	60.79	184	P	P	04 27 54.9	+2.1
VNDA	Vanda	60.89	186	P	P	04 27 55.7	+2.1
	comp=Z,6.1nm,0.9s,baz=6.4,slow=7.6,SNR=7.3						
	comp=Z,6.1nm,0.9s						
VNDA	Vanda	60.89	186	P	P	04 27 54.9	+1.3
PSA00	Pilbara Seismi	61.45	255	P	P	04 27 57.2	-1.0
PSA00	Pilbara Seismi	61.45	255	P	P	04 27 57.0	-1.2
PSA00				IAmb	IAmb	04 27 58.7	
	comp=Z,15nm,1.1s						
PSA00	Pilbara Seismi	61.45	255	P	P	04 27 57.9	-0.4
	comp=Z,28nm,1.6s						
MBWA	Marble Bar	61.62	255	P	P	04 27 58.2	-1.2
MBWA	Marble Bar	61.62	255	P	P	04 27 59.0	-0.4
	comp=Z,14nm,1.1s						
MBWA	Marble Bar	61.62	255	P	P	04 27 58.3	-1.2
KLBR	Kellerberrin	62.13	243	P	P	04 28 02.0	-0.7
	comp=Z,91nm,0.6s						
EDFI	Ende, Flores	62.43	269	P	P	04 28 03.3	-1.7
	comp=Z,39nm,1.0s						
NWAO	Narrogin (SRO)	62.47	242	P	P	04 28 04.1	-0.8
LBFI	Labuhan Bajo,	64.21	269	P	P	04 28 15.5	-1.1
WBSI	Waikabubak, Su	64.38	268	P	P	04 28 26.9	+9.2
BNSI	Bone	65.16	273	P	P	04 28 29.2	+6.5
KAPI	Kappang	65.32	273	P	P	04 28 22.1	-1.6
DBNI	Kabupaten Domp	65.71	269	P	P	04 28 24.8	-1.4
	comp=Z,66nm,0.7s						
CCD	Concordia, Ant	65.88	195	P	P	04 28 27.7	+0.9
CCD				PcP	PcP	04 28 56.4	+0.3
PLAI	Plampang	66.13	268	P	P	04 28 28.5	-0.4
	comp=Z,47nm,0.9s						
PLAI	Plampang	66.13	268	P	P	04 28 28.3	-0.6
	comp=Z,46nm,0.9s						
TOLI2	Tolitoli	66.28	279	P	P	04 28 28.7	-1.2
TOLI2				IAmb	IAmb	04 28 30.5	
	comp=Z,14nm,0.9s						
TOLI2	Tolitoli	66.28	279	P	P	04 28 29.6	-0.2
	comp=Z,18nm,0.8s						
GIRL	Giralia	66.41	253	P	P	04 28 30.1	-0.4
MPSI	Mapaga	66.85	278	P	P	04 28 33.0	-0.5
	comp=Z,27nm,0.8s						
TWSI	Taliwang, Sumb	67.01	268	P	P	04 28 33.6	-0.9
	comp=Z,52nm,0.8s						
KHKI	Kahang-Kahang	68.32	268	P	P	04 28 41.9	-0.8
	comp=Z,21nm,0.6s						
ADK	Adak	69.40	359	P	P	04 28 45.2	-3.2
JAGI	Jajag, Banyuwa	69.68	267	P	P	04 28 49.6	-1.5
	comp=Z,56nm,0.7s						
JAGI	Jajag, Banyuwa	69.68	267	P	P	04 28 49.7	-1.4
	comp=Z,56nm,0.7s						
ATKA	Atka Island	69.70	0	P	P	04 28 48.5	-1.7
JGF	Kuroka	69.94	320	P	P	04 28 51.8	-0.4
MJAR	Matsushiro Arr	70.05	321	P	P	04 28 52.7	-0.1
	comp=Z,9.3nm,0.8s,baz=157,slow=6.3,SNR=23						
	comp=Z,9.3nm,0.8s						
MJAR	Matsushiro Arr	70.05	321		P	04 28 52.6	-0.1
MAJO	Matsushiro	70.05	321	*ce*P	P	04 28 52.4	-0.4
MAJO				pmax	pmax		
	comp=Z,25nm,1.2s						
MJB9	Matsu-Tunnel	70.05	321	P	P	04 28 52.8	-0.1
MJB9				IAmb	IAmb	04 28 54.4	
	comp=Z,25nm,1.1s						
NIKH	Nikolski High	70.64	4	P	P	04 28 54.4	-1.6
	baz=186						
SHEM	Shemya Is, Ala	70.91	353	LR	LR	04 54 46.5	
	comp=Z,47nm,19.3s,baz=78,slow=31						
JMN	Monobe	70.97	316	P	P	04 28 58.8	+0.3
JOW	Kunigami	71.00	307	P	P	04 28 59.8	+1.1
	comp=Z,16nm,0.7s,baz=331,slow=19,SNR=1.2						
	comp=Z,16nm,0.7s						
SNJI	Sawahan-Nganju	72.14	267	P	P	04 29 05.2	-0.9
	comp=Z,47nm,1.2s						
SJI	Sawahan	72.15	267	P	P	04 29 07.4	+1.4
KKM	Kota Kinabalu	72.25	283	P	P	04 29 06.2	-0.4
KKM	Kota Kinabalu	72.25	283	P	P	04 29 07.8	+1.1
	comp=Z,58nm,0.8s						
KKM	Kota Kinabalu	72.25	283	P	P	04 29 07.8	+1.1
	comp=Z,58nm,0.8s						
QSPA	South Pole Qui	72.26	180	P	P	04 29 07.4	+1.5
	comp=Z,18nm,0.8s,baz=32,slow=1.5,SNR=69						
	comp=Z,18nm,0.8s						
QSPA	South Pole Qui	72.26	180	P	P	04 29 07.2	+1.3
QSPA				IAmb	IAmb	04 29 08.0	
	comp=Z,21nm,0.8s						
QSPA	South Pole Qui	72.26	180	P	P	04 29 07.0	+1.2
PCJI	Pacitan	72.58	267	P	P	04 29 08.1	-0.4
JNU	Nakatsue	72.62	314	P	P	04 29 08.4	+0.1
	comp=Z,17nm,0.7s,baz=142,slow=1.5,SNR=11						
	comp=Z,17nm,0.7s						
JNU	Nakatsue	72.62	314	P	P	04 29 08.2	-0.2
JNU				IAmb	IAmb	04 29 09.4	
	comp=Z,16nm,0.7s						
JKA	Kamikawa-asahi	72.98	329	P	P	04 29 11.0	+0.9
ASAJ	Asahikawa	72.98	329	P	P	04 29 12.0	+1.8
	comp=Z,23nm,0.8s,baz=150,slow=5.9,SNR=8.1						
	comp=Z,23nm,0.8s						
FALS	False Pass	72.98	7	P	P	04 29 08.7	-1.2
	baz=191						
UGM	Wanagama	73.28	267	P	P	04 29 12.3	-0.3
CHNA	Chernabura Isl	73.46	9	P	P	04 29 12.5	-0.2
	baz=195						
HULI	Fort Hunter Li	73.55	43	P	P	04 29 13.8	+0.1
SAO	San Andreas Ge	73.86	42	P	P	04 29 15.8	+0.3
SAO				IAmb	IAmb	04 29 17.5	
	comp=Z,33nm,1.0s						
PMPB	Monarch Peak	73.95	43	P	P	04 29 16.2	+0.2
PMPB				IAmb	IAmb	04 29 18.2	
	comp=Z,32nm,1.1s						
PKD	Bear Valley Ra	73.95	43	P	P	04 29 16.4	+0.3
PKD				IAmb	IAmb	04 29 18.0	
	comp=Z,37nm,1.3s						
S12K	Black Hills	73.97	7	P	P	04 29 15.6	-0.1
	baz=192						
P08K	Saint George I	74.23	3	P	P	04 29 17.5	+0.4
	baz=185						
PASC	Pasadena Art C	74.50	46	IAmb	IAmb	04 29 20.6	
	comp=Z,20nm,0.9s						
PETK	Petropavlovsk-	74.56	343	P	P	04 29 19.4	+0.3
	comp=Z,14nm,0.8s,baz=106,slow=8.6,SNR=12						
PETK				LR	LR	04 55 21.7	
	comp=Z,44nm,22.0s,baz=112,slow=30						
	comp=Z,14nm,0.8s						
PETK	Petropavlovsk-	74.56	343	P	P	04 29 17.7	-1.4
MWC	Mount Wilson	74.61	46	P	P	04 29 19.6	-0.5
MWC				IAmb	IAmb	04 29 21.4	
	comp=Z,29nm,0.9s						
DPP	Dos Picos Cty	74.70	47	P	P	04 29 20.3	-0.1
DPP				IAmb	IAmb	04 29 21.9	
	comp=Z,20nm,1.1s						
SBUM	Sibu	74.79	278	P	P	04 29 21.7	+0.4
SBUM	Sibu	74.79	278	P	P	04 29 22.3	+1.0
	comp=Z,11nm,0.9s						
SBUM	Sibu	74.79	278	P	P	04 29 22.1	+0.8
S14K	Fog Glacier	74.87	9	P	P	04 29 20.7	-0.2
	baz=195						
NACB	Ninganchiao	74.91	302	P	P	04 29 21.5	-0.3
KPJI	Karang Pucung	74.96	267	P	P	04 29 21.7	-0.6
YSS	Yuzhno-Sakhali	75.00	331	*e*P	P	04 29 21.9	+0.1
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
CHIR	Chirikof Islan	75.06	11	P	P	04 29 22.2	+0.3
	baz=199						
TPUB	Ta-pu	75.30	301	P	P	04 29 23.1	-0.9
CMB	Columbia Colle	75.30	41	P	P	04 29 23.4	-0.4
CMB				IAmb	IAmb	04 29 25.4	
	comp=Z,19nm,1.0s						
PFO	Pinyon Flats O	75.38	47	P	P	04 29 24.6	+0.2
PFO				IAmb	IAmb	04 29 26.1	
	comp=Z,22nm,1.2s						
PFO	Pinyon Flats O	75.38	47	⇓*e*P	P	04 29 24.8	+0.4
PFO				pmax	pmax		
	comp=Z,32nm,1.3s						
PFO	Pinyon Flats O	75.38	47	P	P	04 29 24.7	+0.2
PFO				PcP	PcP	04 29 37.2	+0.5
MDPB	Devils Postpil	75.90	42	P	P	04 29 27.7	+0.2
MDPB				IAmb	IAmb	04 29 29.1	
	comp=Z,21nm,0.9s						
SII	Sitkinak Islan	76.03	11	P	P	04 29 27.2	-0.2
	baz=200						
BBJI	Bungbulang	76.14	267	P	P	04 29 28.6	-0.5
	comp=Z,42nm,0.8s						
BBJI	Bungbulang	76.14	267	P	P	04 29 27.8	-1.3
	comp=Z,42nm,0.8s						
GLA	Glamis	76.23	48	IAmb	IAmb	04 29 31.3	
	comp=Z,26nm,1.1s						
PNTR	Pine Nut	76.43	41	IAmb	IAmb	04 29 32.1	
	comp=Z,28nm,0.9s						
PIX	Pinacate	76.44	50	IAmb	IAmb	04 29 32.0	
	comp=Z,27nm,1.2s						
DSP	Deep Springs	76.46	43	IAmb	IAmb	04 29 32.5	
	comp=Z,30nm,1.1s						
IRM	Iron Mountain	76.59	47	IAmb	IAmb	04 29 33.2	
	comp=Z,28nm,1.1s						
GWY	Greenwater Val	76.65	45	IAmb	IAmb	04 29 33.1	
	comp=Z,47nm,1.6s						
R17L	Mt. Peulik Vol	76.66	10	P	P	04 29 30.4	-0.5
	baz=198						
FURC	Furnace Creek,	76.68	44	IAmb	IAmb	04 29 33.4	
	comp=Z,45nm,1.4s						
SHOC	Shoshone, Teco	76.76	45	IAmb	IAmb	04 29 33.7	
	comp=Z,36nm,1.3s						
OHAK	Old Harbor	76.82	12	P	P	04 29 32.1	+0.3
	baz=201						
RYN	Ryan	76.83	42	IAmb	IAmb	04 29 34.3	
	comp=Z,18nm,1.2s						
NVAR	Mina Array Bea	76.86	42	P	P	04 29 33.6	+0.9
	comp=Z,14nm,0.8s,baz=226,slow=9.2,SNR=71						
	comp=Z,14nm,0.8s						
NVAR	Mina Array Bea	76.86	42		P	04 29 33.4	+0.6
GMN	Gold Mountain	76.89	44	IAmb	IAmb	04 29 34.6	
	comp=Z,25nm,1.0s						
NV11	Mina Array Sit	76.95	42	IAmb	IAmb	04 29 35.1	
	comp=Z,31nm,1.1s						
WCT	Wildcat Mounta	77.02	44	IAmb	IAmb	04 29 35.4	
	comp=Z,45nm,1.6s						
MTPC	Mountain Pass	77.03	46	IAmb	IAmb	04 29 35.8	
	comp=Z,33nm,1.3s						
KSRS	Korea Array	77.08	316	P	P	04 29 35.4	+1.7
	comp=Z,7.5nm,0.8s,baz=130,slow=6.0,SNR=20						
	comp=Z,7.5nm,0.8s						
KSAR	Wonju Array Be	77.10	316	P	P	04 29 34.7	+0.9
214A	Organ Pipe Nat	77.11	50	P	P	04 29 34.5	+0.4
DBJI	Dramaga	77.26	267	P	P	04 29 35.9	+0.6
Q17K	Contact Creek	77.34	10	P	P	04 29 34.6	-0.3
	baz=198						
TPNV	Topopah Spring	77.36	44	IAmb	IAmb	04 29 37.4	
	comp=Z,20nm,0.8s						
KDAK	Kodiak Island	77.48	12	P	P	04 29 35.1	-0.4
	baz=202						
TPI	Tanjungpandan	77.51	271	P	P	04 29 35.7	-1.0
	comp=Z,47nm,0.7s						
O14K	Tigyukauivet M	77.54	7	P	P	04 29 35.8	0.0
	baz=193						
Q16K	King Salmon	77.61	9	P	P	04 29 35.7	-0.4
	baz=198						
O15K	Ungalikthiuk R	77.64	8	P	P	04 29 35.9	-0.5
	baz=194						
Q18K	Katmai Hardscr	77.85	10	P	P	04 29 37.2	-0.5
	baz=199						
S11A	Rachel	78.08	44	IAmb	IAmb	04 29 41.2	
	comp=Z,25nm,1.2s						
P17K	Kvichak River	78.14	9	P	P	04 29 38.7	-0.3
	baz=198						
N14K	Kuskokwak Cree	78.15	7	P	P	04 29 39.2	+0.1
	baz=193						
M11K	Mekoryuk	78.20	4	P	P	04 29 39.9	+0.6
	baz=188						
O16K	Kokwok River B	78.28	8	P	P	04 29 39.7	-0.1
	baz=196						
Q20K	Shuyak Island	78.29	12	P	P	04 29 40.3	+0.4
	baz=202						
Q19K	Cape Douglas,	78.36	11	P	P	04 29 40.1	-0.3
	baz=200						
PRN	Pahroc Range	78.41	44	IAmb	IAmb	04 29 43.6	
	comp=Z,27nm,1.2s						
M13K	Dall Lake	78.46	6	P	P	04 29 41.7	+1.0
	baz=191						
PINE	Pine Mountain	78.49	37	IAmb	IAmb	04 29 43.0	
	comp=Z,24nm,0.9s						
P18K	Big Mountain,	78.52	10	IAmb	IAmb	04 29 41.2	
	comp=Z,21nm,0.7s						
P18K	Big Mountain,	78.52	10	P	P	04 29 40.6	-0.6
	baz=199						
N15K	Kwethluk River	78.57	7	P	P	04 29 40.4	-1.0
	baz=194						
O17K	Koliganek Bris	78.59	9	P	P	04 29 40.2	-1.3
	baz=197						
TUC	Tucson	78.78	51		P	04 29 44.5	+1.2
TUC				IAmb	IAmb	04 29 45.8	
	comp=Z,35nm,1.4s						
TUC	Tucson	78.78	51	P	P	04 29 44.4	+1.1
M14K	Bethel	78.93	6	P	P	04 29 43.0	-0.3
	baz=192						
O18K	Koktuh Hills	78.96	10	IAmb	IAmb	04 29 44.5	
	comp=Z,23nm,1.0s						
O18K	Koktuh Hills	78.96	10	P	P	04 29 43.8	+0.2
	baz=199						
WVOR	Wild Horse Val	79.00	39	IAmb	IAmb	04 29 46.0	
	comp=Z,16nm,1.0s						
M15K	Kasigluk River	79.01	7	P	P	04 29 44.2	+0.3
	baz=194						
N16K	Nishlik Lake	79.03	8	P	P	04 29 44.2	+0.2
	baz=195						
P19K	Oil Pt	79.11	11	P	P	04 29 44.5	+0.1
	baz=201						
N17K	Nushagak Hills	79.30	9	P	P	04 29 45.0	-0.4
	baz=197						
X16A	Lo Mia Camp, P	79.35	49	IAmb	IAmb	04 29 49.0	
	comp=Z,29nm,1.3s						
HOM	Homer	79.41	12	P	P	04 29 44.8	-1.2
	baz=202						
O19K	Port Alsworth	79.43	10	P	P	04 29 45.3	-0.8
	baz=200						
L14K	Kuka Creek	79.44	6	P	P	04 29 44.0	-2.0
	baz=192						
319A	Douglas	79.45	52	IAmb	IAmb	04 29 49.5	
	comp=Z,34nm,1.4s						
M16K	Timber Creek	79.54	8	P	P	04 29 47.1	+0.4
	baz=195						
N18K	Kilae Creek	79.64	9	P	P	04 29 47.1	-0.2
	baz=198						
J08A	Circle Bar Ran	79.65	38	IAmb	IAmb	04 29 49.4	
	comp=Z,24nm,1.2s						
BRSE	Bradley Lake S	79.66	12	P	P	04 29 47.6	+0.2
	baz=203						
KASI	Kota Agung	79.70	267	P	P	04 29 47.3	-1.4
	comp=Z,745nmcomp=Z,89nm,0.8s						
U15A	North Rim	79.77	47	IAmb	IAmb	04 29 51.2	
	comp=Z,27nm,1.2s						
PSUT	Pine Spring	79.81	44	IAmb	IAmb	04 29 50.9	
	comp=Z,29nm,1.7s						
K13K	Kusilvak Mount	79.85	5	P	P	04 29 48.6	+0.3
	baz=190						
L15K	Ungalak Mounta	79.89	6	P	P	04 29 48.1	-0.4
	baz=193						
WUAZ	Wupatki	79.94	48	IAmb	IAmb	04 29 53.0	
	comp=Z,49nm,1.9s						
N19K	Bonanza Creek	79.99	10	IAmb	IAmb	04 29 50.1	
	comp=Z,57nm,1.8s						
N19K	Bonanza Creek	79.99	10	P	P	04 29 48.6	-0.6
	baz=200						
M17K	Holitna River	80.11	8	P	P	04 29 50.0	+0.3
	baz=197						
L16K	Owhat River	80.14	7	P	P	04 29 50.5	+0.6
	baz=195						
SEW	Seward	80.26	12	P	P	04 29 50.1	-0.4
	baz=204						
MDSI	Maura Dua	80.31	268	P	P	04 29 50.5	-1.4
	comp=Z,707nmcomp=Z,40nm,0.8s						
Q23K	Middleton Isla	80.33	14	P	P	04 29 51.1	+0.1
	baz=207						
M18K	Stony River	80.42	9	P	P	04 29 51.5	+0.1
	baz=198						
SLKM	Skilak Lake	80.47	12	IAmb	IAmb	04 29 52.0	
	comp=Z,36nm,1.1s						
K15K	Wolf Creek Mou	80.48	6	P	P	04 29 52.5	+0.8
	baz=193,SNR=7.3						
G08A	Pilot Rock	80.53	36	IAmb	IAmb	04 29 53.9	
	comp=Z,15nm,0.9s						
CAPN	Captain Cook N	80.53	11	P	P	04 29 52.6	+0.6
	baz=203						
O22K	Cooper Landing	80.55	12	P	P	04 29 51.5	-0.5
	baz=204						
P23K	Montague Islan	80.60	13	P	P	04 29 53.1	+0.8
	baz=206						
MTPU	Mount Pierson	80.67	45	IAmb	IAmb	04 29 56.5	
	comp=Z,47nm,1.9s						
L17K	Donlin	80.70	8	P	P	04 29 53.5	+0.7
	baz=196,SNR=5.1						
NJ2	Nanjing	80.71	308	*e*P	P	04 29 55.3	+1.7
NJ2				pmax	pmax		
	comp=Z,17nm,0.6s						
N20K	Mount Spurr	80.74	11	P	P	04 29 53.1	-0.1
	baz=202						
SPCR	Spurr Chakacha	80.74	11	P	P	04 29 52.8	-0.4
	baz=202						
J14K	Nanvaranak Lak	80.74	5	P	P	04 29 52.8	-0.3
	baz=191						
HAWA	Hanford	80.88	35	IAmb	IAmb	04 29 56.5	
	comp=Z,59nm,1.9s						
W18A	Petrified Fore	80.91	49	IAmb	IAmb	04 29 58.0	
	comp=Z,45nm,2.0s						
CRAG	Craig	80.97	22	P	P	04 29 54.7	+0.3
	baz=220						
L18K	Granite Mounta	81.00	8	IAmb	IAmb	04 32 55.3	
	comp=Z,64nm,1.9s						
L18K	Granite Mounta	81.00	8	P	P	04 29 54.8	+0.3
	baz=197,SNR=5.1						
RC01	Rabbit Creek A	81.10	12	P	P	04 29 54.7	-0.3
	baz=204						
121A	Cookes Peak, D	81.11	52	IAmb	IAmb	04 29 58.7	
	comp=Z,40nm,1.8s						
DSRI	Dabo	81.12	272	P	P	04 29 56.4	+0.2
	comp=Z,47nm,1.1s						
PWL	Port Wells	81.18	13	P	P	04 29 55.5	0.0
	baz=205						
M20K	Styx River	81.22	10	P	P	04 29 55.8	0.0
	baz=201						
L19K	White Mountain	81.23	9	P	P	04 29 56.2	+0.5
	baz=199						
KAIM	Kayak Island	81.23	15	P	P	04 29 56.4	+0.7
	baz=209						
SUA	Susitna One	81.25	11	IAmb	IAmb	04 29 56.3	
	comp=Z,12nm,0.7s						
SUA	Susitna One	81.25	11	P	P	04 29 55.8	-0.2
	baz=203						
K17K	Iditarod	81.26	8	P	P	04 29 55.3	-0.5
	baz=196						
GAMB	Gambell	81.33	1	P	P	04 29 56.2	+0.1
	baz=183						
V35K	Ketchikan	81.42	23	P	P	04 29 56.8	0.0
	baz=221						
EPH	Ephrata	81.44	34	IAmb	IAmb	04 29 58.2	
	comp=Z,12nm,0.9s						
SIT	Sitka	81.45	20	P	P	04 29 56.5	-0.4
	baz=218						
GLI	Glacier Island	81.46	13	P	P	04 29 57.3	+0.4
	baz=206						
EYAK	Cordova Ski Ar	81.47	14	P	P	04 29 58.0	+1.1
	baz=208						
U33K	Whale Pass	81.47	22	P	P	04 29 57.9	+0.9
	baz=220						
J16K	Anvik River	81.55	6	P	P	04 29 57.4	0.0
	baz=194,SNR=6.3						
SKT	Skwentna	81.59	11	P	P	04 29 57.6	0.0
	baz=202						
HMU	Henry Mountain	81.60	46	IAmb	IAmb	04 30 00.5	
	comp=Z,28nm,1.6s						
KNK	Knik Glacier	81.65	12	P	P	04 29 57.6	-0.4
	baz=205						
PMR	Palmer	81.68	12	P	P	04 29 58.2	+0.2

	baz=205						
BELA	Belgrano 2	81.80	172	P	P	04 29 58.5	-0.1
BELA				IAmb	IAmb	04 29 59.8	
	comp=Z,24nm,0.9s						
J17K	VABM Dome	81.83	7	P	P	04 29 58.8	0.0
	baz=195						
S31K	Pelican	81.88	20	P	P	04 29 58.6	-0.5
	baz=217						
GHO	Glory Hole Cre	81.89	12	IAmb	IAmb	04 29 60.0	
	comp=Z,23nm,1.0s						
F10A	Beach Ranch, E	81.91	36	IAmb	IAmb	04 30 00.6	
	comp=Z,19nm,0.9s						
DIV	Divide	81.98	14	IAmb	IAmb	04 30 00.4	
	comp=Z,14nm,0.8s						
MA2	Magadan	82.10	343	LR	LR	05 00 30.2	
	comp=Z,29nm,20.8s,baz=92,slow=31						
BMRM	Bremner River	82.10	14	P	P	04 29 59.7	-0.7
	baz=209						
BNX	BinXian	82.14	323	⇑P	P	04 30 01.3	+0.5
BNX				pmax	pmax		
	comp=Z,14nm,0.8s						
J18K	Innoko River	82.19	8	P	P	04 30 00.4	-0.3
	baz=197						
HLID	Hailey	82.19	40		P	04 30 02.1	+0.8
HLID				IAmb	IAmb	04 30 03.2	
	comp=Z,14nm,0.9s						
CN2	Changchun	82.19	321	⇑P	P	04 30 01.9	+0.8
CN2				epP	pP	04 30 41.8	-5.7
CN2				eS	S	04 40 01.9	+2.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CUT	Chulitna	82.21	11	P	P	04 29 59.7	-1.1
	baz=203						
L22K	Petersville	82.23	11	IAmb	IAmb	04 30 01.1	
	comp=Z,21nm,1.1s						
KLU	Klutina	82.27	13	P	P	04 30 00.8	-0.5
	baz=208						
SCM	Sheep Creek Mo	82.27	13	P	P	04 30 00.9	-0.4
	baz=206						
CRQE	Cirque	82.28	15	P	P	04 30 00.7	-0.6
	baz=210						
PPLA	Purkeypile	82.33	10	P	P	04 30 01.4	-0.2
	baz=202						
SRU	San Rafael Swe	82.34	45	IAmb	IAmb	04 30 04.0	
	comp=Z,13nm,0.9s						
ANM	Nome	82.40	4	P	P	04 30 01.9	+0.1
	baz=189						
PINM	Pinnacle	82.45	17	P	P	04 30 01.7	-0.5
	baz=213						
K20K	Telida	82.46	9	P	P	04 30 01.7	-0.4
	baz=200						
U35K	Hyder	82.46	23	P	P	04 30 01.5	-0.7
	baz=222						
VHRN	Van Horn	82.47	54	IAmb	IAmb	04 30 04.8	
	comp=Z,11nm,0.7s						
N25K	Chitina, Valde	82.66	14	P	P	04 30 03.5	+0.2
	baz=209,SNR=6.8						
R32K	Eaglecrest	82.68	20	P	P	04 30 02.9	-0.4
	baz=218						
GLB	Gilahina Butte	82.70	14	IAmb	IAmb	04 30 07.2	
	comp=Z,42nm,1.7s						
H16K	Elim	82.72	5	P	P	04 30 03.6	+0.2
	baz=192						
M24K	Tolsona, Glenn	82.76	13	P	P	04 30 03.7	0.0
	baz=207						
P29M	Windy Craggy	82.77	18	P	P	04 30 04.4	+0.5
	baz=215						
P18A	Preston Nutter	82.78	45	IAmb	IAmb	04 30 06.5	
	comp=Z,21nm,1.4s						
PV05	Paradox Valley	82.80	46	IAmb	IAmb	04 30 07.0	
	comp=Z,28nm,1.1s						
J19K	Poorman	82.84	8	P	P	04 30 03.3	-0.7
	baz=198						
MCARA	McCarthy VSAT	82.84	15	P	P	04 30 03.9	-0.2
	baz=210						
WAT6	Susitna Watana	82.86	12	P	P	04 30 04.0	-0.4
	baz=206,SNR=7.2						
TX31	Lajitas Ar. Si	82.88	56	IAmb	IAmb	04 30 07.9	
	comp=Z,25nm,1.4s						
TXAR	Lajitas Array	82.88	56	P	P	04 30 06.8	+1.6
	comp=Z,3.8nm,0.8s,baz=223,slow=6.8,SNR=27						
	comp=Z,3.8nm,0.8s						
TXAR	Lajitas Array	82.88	56		P	04 30 06.5	+1.3
BSUT	Blindstream Ca	82.90	44	IAmb	IAmb	04 30 07.0	
	comp=Z,13nm,1.0s						
BARN	Barnard Glacie	82.90	15	IAmb	IAmb	04 30 05.8	
	comp=Z,12nm,1.0s						
CTG	Chitna Glacier	82.90	16	P	P	04 30 04.5	-0.1
	baz=212						
G15K	Niukluk	82.92	4	P	P	04 30 04.6	+0.2
	baz=190						
WAT1	Susitna Watana	82.92	12	P	P	04 30 04.4	-0.1
	baz=205						
PV17	East Wray Mesa	82.99	46	IAmb	IAmb	04 30 07.3	
	comp=Z,27nm,1.3s						
PV14	Lion Creek, Pa	82.99	46	IAmb	IAmb	04 30 07.4	
	comp=Z,18nm,1.0s						
PV13	Radium Mtn., P	83.03	46	IAmb	IAmb	04 30 07.6	
	comp=Z,17nm,1.2s						
PV16	Nyswonger Mesa	83.04	46	IAmb	IAmb	04 30 07.7	
	comp=Z,16nm,1.2s						
O28M	Mount Upton	83.04	16	P	P	04 30 04.7	-0.7
	baz=213						
PLBC	Pleasant Camp	83.04	19	P	P	04 30 05.5	+0.3
	baz=216						
PV03	Paradox Valley	83.06	46	IAmb	IAmb	04 30 07.7	
	comp=Z,16nm,1.2s						
PV11	David Mesa, Pa	83.06	46	IAmb	IAmb	04 30 07.8	
	comp=Z,30nm,1.3s						
PV04	Paradox Valley	83.08	46	IAmb	IAmb	04 30 07.9	
	comp=Z,15nm,1.0s						
O29M	Mount Kennedy	83.09	17	P	P	04 30 05.5	0.0
	baz=214						
PV02	Paradox Valley	83.11	46	IAmb	IAmb	04 30 08.1	
	comp=Z,28nm,1.1s						
PV21	Cone Mtn., Par	83.12	46	IAmb	IAmb	04 30 08.1	
	comp=Z,13nm,0.8s						
TRF	Thorofare Moun	83.17	11	IAmb	IAmb	04 30 56.8	
	comp=Z,34nm,1.5s						
TRF	Thorofare Moun	83.17	11	P	P	04 30 04.9	-1.0
	baz=203,SNR=7.6						
PV01	Paradox Valley	83.19	47	IAmb	IAmb	04 30 08.4	
	comp=Z,12nm,1.0s						
TASM	ASL Pad, Albuq	83.20	50	IAmb	IAmb	04 30 09.0	
	comp=Z,28nm,1.5s						
TASM	ASL Pad, Albuq	83.20	50	IAmb	IAmb	04 30 09.0	
	comp=Z,28nm,1.5s						
TASM	ASL Pad, Albuq	83.20	50	IAmb	IAmb	04 30 09.0	
	comp=Z,28nm,1.6s						
TASM	ASL Pad, Albuq	83.20	50	IAmb	IAmb	04 30 09.0	
	comp=Z,27nm,1.6s						
ABQ	Albuquerque	83.20	50	IAmb	IAmb	04 30 09.0	
	comp=Z,23nm,1.5s						
ANMO	Albuquerque	83.20	50		P	04 30 07.7	+0.9
ANMO				IAmb	IAmb	04 30 09.0	
	comp=Z,26nm,1.5s						
ANMO	Albuquerque	83.20	50	deP	P	04 30 07.6	+0.7
ANMO				pmax	pmax		
	comp=Z,20nm,1.6s						
ANMO	Albuquerque	83.20	50	P	P	04 30 07.6	+0.7
J20K	Nowinta River	83.22	9	IAmb	IAmb	04 30 08.2	
	comp=Z,22nm,1.4s						
J20K	Nowinta River	83.22	9	P	P	04 30 06.3	+0.3
	baz=200,SNR=5.6						
CHUM	Lake Minchumin	83.23	10	P	P	04 30 06.2	+0.2
	baz=201						
PV22	Blue Mesa, Par	83.23	46	IAmb	IAmb	04 30 08.7	
	comp=Z,13nm,1.0s						
H17K	Granite Mounta	83.23	6	P	P	04 30 05.5	-0.5
	baz=194						
HARP	HAARP	83.24	13	P	P	04 30 05.8	-0.3
	baz=208						
F14K	Arctic Creek	83.25	3	P	P	04 30 06.2	+0.1
	baz=188						
TNA	Tin City	83.25	3	P	P	04 30 06.2	+0.1
	baz=186						
PV07	Paradox Valley	83.28	46	IAmb	IAmb	04 30 08.8	
	comp=Z,16nm,1.2s						
DHY	Denali Highway	83.38	12	P	P	04 30 07.3	+0.3
	baz=206						
GCSA	Galena City Sc	83.40	8	P	P	04 30 07.2	+0.5
	baz=197						
P30M	Million Dollar	83.40	18	P	P	04 30 07.5	+0.4
	baz=216,SNR=5.3						
G16K	Koyuk River	83.45	5	P	P	04 30 06.7	-0.4
	baz=192						
S34M	Telegraph Cree	83.55	22	IAmb	IAmb	04 30 09.1	
	comp=Z,14nm,1.1s						
S34M	Telegraph Cree	83.55	22	P	P	04 30 08.1	+0.3
	baz=221						
YUK8	Steele Glacier	83.58	16	P	P	04 30 08.2	0.0
	baz=213						
F15K	North Star Dit	83.58	4	P	P	04 30 07.8	0.0
	baz=190						
PECS	Pecos	83.58	54	IAmb	IAmb	04 30 11.0	
	comp=Z,25nm,1.8s						
H18K	Honhosa River	83.61	7	P	P	04 30 07.1	-0.8
	baz=196						
BPAW	Bear Paw Mtn.	83.65	10	P	P	04 30 07.8	-0.4
	baz=203						
MCK	McKinley	83.67	11	IAmb	IAmb	04 30 08.9	
	comp=Z,18nm,1.1s						
MCK	McKinley	83.67	11	P	P	04 30 07.3	-1.0
	baz=205,SNR=5.6						
PAX	Paxson	83.68	13	P	P	04 30 08.5	0.0
	baz=208						
YUK6	Outpost Mounta	83.68	17	P	P	04 30 08.7	0.0
	baz=215						
RDMU	Red Mountain	83.70	44	IAmb	IAmb	04 30 10.0	
	comp=Z,10nm,0.8s						
G17K	Kiwalik Mounta	83.71	6	P	P	04 30 08.1	-0.3
	baz=193						
M26K	Nabesna, AK	83.73	14	IAmb	IAmb	04 30 10.0	
	comp=Z,14nm,1.1s						
M26K	Nabesna, AK	83.73	14	P	P	04 30 08.7	0.0
	baz=210,SNR=9.3						
YUK3	Moose Creek	83.81	16	P	P	04 30 08.8	-0.6
	baz=213,SNR=5.1						
HYT	Haines Junctio	83.82	17	IAmb	IAmb	04 31 55.8	
	comp=Z,44nm,1.9s						
HYT	Haines Junctio	83.82	17	P	P	04 30 09.9	+0.6
	baz=215,SNR=5.5						
TIA	Tai'an	83.89	311	P	P	04 30 11.1	+1.1
TIA				pmax	pmax		
	comp=Z,16nm,0.6s						
YUK4	Talbot Arm	83.93	17	P	P	04 30 10.1	+0.2
	baz=214						
Q32M	Nakina River	83.96	21	P	P	04 30 09.8	-0.3
	baz=220						
M27K	Edge Creek, AK	83.96	15	IAmb	IAmb	04 30 11.7	
	comp=Z,30nm,1.3s						
M27K	Edge Creek, AK	83.96	15	P	P	04 30 10.1	+0.1
	baz=211						
P32M	Atlin	83.97	20	P	P	04 30 10.4	+0.4
	baz=219						
O30N	Mendenhall	84.18	18	IAmb	IAmb	04 30 12.7	
	comp=Z,20nm,1.3s						
O30N	Mendenhall	84.18	18	P	P	04 30 11.3	+0.3
	baz=217						
L26K	Log Cabin Wild	84.19	14	IAmb	IAmb	04 30 12.4	
	comp=Z,22nm,1.4s						
L26K	Log Cabin Wild	84.19	14	P	P	04 30 11.0	0.0
	baz=210,SNR=6.2						
H19K	Roundabout Mou	84.20	7	IAmb	IAmb	04 30 12.7	
	comp=Z,26nm,1.3s						
H19K	Roundabout Mou	84.20	7	P	P	04 30 10.8	0.0
	baz=197						
BVCY	Beaver Creek	84.26	15	P	P	04 30 11.1	-0.2
	baz=212						
G18K	Tagagawik	84.30	7	P	P	04 30 11.3	-0.1
	baz=195						
K24K	Donnelly Dome	84.35	12	IAmb	IAmb	04 30 13.0	
	comp=Z,37nm,1.3s						
K24K	Donnelly Dome	84.35	12	P	P	04 30 11.9	+0.1
	baz=208						
H20K	Anotleneega Mo	84.37	8	P	P	04 30 11.4	-0.4
	baz=199						
SNOW	Snow King Moun	84.39	41	IAmb	IAmb	04 30 14.3	
	comp=Z,25nm,1.1s						
MNHN	Monahans	84.43	55	IAmb	IAmb	04 30 14.2	
	comp=Z,11nm,0.9s						
NEA2	Nenana	84.44	11	P	P	04 30 11.7	-0.4
	baz=204						
WHY	Whitehorse	84.45	18	P	P	04 30 12.6	+0.2
	baz=218						
N30M	Aishikik Lake	84.45	17	P	P	04 30 11.4	-0.9
	baz=216						
RIDG	Independent Ri	84.49	13	P	P	04 30 12.1	-0.4
	baz=208						
I21K	Tanana	84.50	9	IAmb	IAmb	04 30 13.2	
	comp=Z,22nm,1.2s						
I21K	Tanana	84.50	9	P	P	04 30 11.9	-0.5
	baz=202						
WRH	Wood River Hil	84.50	11	IAmb	IAmb	04 30 13.2	
	comp=Z,22nm,0.9s						
SEY	Seymchan	84.53	345	⇓eP	P	04 30 12.3	-0.3
SEY				pmax	pmax		
	comp=Z,22nm,1.1s						
F17K	Baldwin Pennin	84.58	5	IAmb	IAmb	04 30 14.2	
	comp=Z,24nm,1.1s						
F17K	Baldwin Pennin	84.58	5	P	P	04 30 12.6	-0.1
	baz=193						
L27K	Beaver Creek,	84.58	14	IAmb	IAmb	04 30 14.1	
	comp=Z,24nm,1.8s						
L27K	Beaver Creek,	84.58	14	P	P	04 30 12.7	-0.2
	baz=211						
DOT	Dot Lake	84.58	13	IAmb	IAmb	04 30 13.4	
	comp=Z,10nm,0.8s						
HDA	Harding Lake	84.66	12	P	P	04 30 13.1	-0.2
	baz=206,SNR=7.4						
G19K	Purcell Mounta	84.71	7	P	P	04 30 14.0	+0.5
	baz=197						
R33M	Jennings River	84.72	21	P	P	04 30 13.9	0.0
	baz=221						
P33M	Teslin, Yukon	84.74	20	P	P	04 30 13.6	-0.3
	baz=220						
YHB	Horse Butte	84.78	40	IAmb	IAmb	04 30 16.9	
	comp=Z,36nm,1.4s						
PDAR	Pinedale Array	84.80	42	P	P	04 30 14.7	-0.1
	comp=Z,3.7nm,0.8s,baz=215,slow=3.8,SNR=33						
	comp=Z,3.7nm,0.8s						
H21K	Melozitna Rive	84.82	9	IAmb	IAmb	04 30 15.6	
	comp=Z,13nm,1.0s						
H21K	Melozitna Rive	84.82	9	P	P	04 30 14.2	+0.1
	baz=201,SNR=8.0						
N31M	Braeburn, Yuko	84.85	18	P	P	04 30 14.3	0.0
	baz=217						
F18K	Selawik	84.88	6	P	P	04 30 14.1	-0.1
	baz=194						
YMR	Madison River	84.88	40	IAmb	IAmb	04 30 17.4	
	comp=Z,46nm,1.7s						
SCRK	Sand Creek	84.88	13	P	P	04 30 13.9	-0.6
	baz=209,SNR=6.2						
M29M	Somme Creek	84.89	16	IAmb	IAmb	04 30 16.8	
	comp=Z,27nm,1.6s						
M29M	Somme Creek	84.89	16	P	P	04 30 14.6	0.0
	baz=214						
I23K	Minto, Yukon-K	84.89	10	P	P	04 30 14.0	-0.4
	baz=204						
COLA	College	84.91	11	P	P	04 30 14.1	-0.4
COLA	College	84.91	11	ceP	P	04 30 13.6	-0.8
COLA				pmax	pmax		
	comp=Z,28nm,0.8s						
COLA	College	84.91	11	P	P	04 30 13.8	-0.6
	baz=206						
COLA	College	84.91	11	P	P	04 30 13.9	-0.6
ODSA	Odessa	84.92	54	IAmb	IAmb	04 30 17.3	
	comp=Z,29nm,1.1s						
BOZ	Bozeman (W)	84.96	39	IAmb	IAmb	04 30 16.9	
	comp=Z,26nm,1.6s						
IL31		85.00	12	IAmb	IAmb	04 30 15.6	
	comp=Z,28nm,1.4s						
ILAR	Eielson Array	85.00	12	P	P	04 30 14.3	-0.6
	comp=Z,5.1nm,0.6s,baz=226,slow=5.6,SNR=174						
ILAR				pP	pwP	04 31 03.9	-0.7
	comp=Z,3.7nm,1.1s,baz=217,slow=5.7,SNR=4.7						
	comp=Z,5.1nm,0.6s						
E17K	Hotham Inlet	85.15	5	P	P	04 30 15.9	+0.3
	baz=192						
J25K	Salcha River,	85.16	12	P	P	04 30 15.3	-0.5
	baz=208,SNR=14						
MAW	Mawson	85.17	199	P	P	04 30 16.9	+1.0
	comp=Z,12nm,0.6s,baz=146,slow=5.8,SNR=25						
	comp=Z,12nm,0.6s						
POKR	Poker Plat Res	85.21	11	IAmb	IAmb	04 30 16.6	
	comp=Z,29nm,1.1s						
POKR	Poker Plat Res	85.21	11	P	P	04 30 15.4	-0.6
	baz=206,SNR=5.5						
H22K	Ishtalitna Cre	85.25	9	IAmb	IAmb	04 30 17.2	
	comp=Z,28nm,1.2s						
H22K	Ishtalitna Cre	85.25	9	P	P	04 30 16.1	-0.1
	baz=202						
F19K	Shaleruckik Mo	85.30	7	IAmb	IAmb	04 30 17.6	
	comp=Z,17nm,1.1s						
F19K	Shaleruckik Mo	85.30	7	P	P	04 30 16.3	0.0
	baz=196						
N32M	Quiet Lake	85.39	19	P	P	04 30 17.3	+0.3
	baz=219						
J26L	Joseph Creek	85.43	13	IAmb	IAmb	04 30 18.8	
	comp=Z,15nm,0.8s						
J26L	Joseph Creek	85.43	13	P	P	04 30 17.6	+0.4
	baz=210						
M30M	Minto, Yukon	85.45	17	P	P	04 30 16.7	-0.6
	baz=216,SNR=5.8						
MSTX	Muleshoe	85.52	52	IAmb	IAmb	04 30 20.0	
	comp=Z,15nm,1.0s						
G21K	Allakaket	85.53	8	P	P	04 30 17.2	-0.3
	baz=200						
L29M	L29M	85.53	16	IAmb	IAmb	04 30 19.3	
	comp=Z,27nm,1.2s						
L29M	L29M	85.53	16	P	P	04 30 17.4	-0.3
	baz=215						
OZNA	Ozona	85.54	56	IAmb	IAmb	04 30 20.4	
	comp=Z,14nm,0.9s						
E18K	Tukpahlearik C	85.59	5	IAmb	IAmb	04 30 19.2	
	comp=Z,33nm,1.3s						
E18K	Tukpahlearik C	85.59	5	P	P	04 30 17.8	0.0
	baz=193						
D17K	Noatak River	85.66	4	P	P	04 30 18.0	-0.1
	baz=191						
F20K	Avaraart Lake	85.75	7	P	P	04 30 18.7	+0.2
	baz=198						
H24K	Noodor Dome	85.78	11	P	P	04 30 18.8	0.0
	baz=206						
M31M	Drury Creek, Y	85.82	18	P	P	04 30 18.6	-0.5
	baz=218						
COYC	Coyhaique	85.92	137		P	04 30 21.2	+1.1
COYC				IAmb	IAmb	04 30 22.6	
	comp=Z,15nm,0.9s						
SGCY	Sterling City	85.94	55	IAmb	IAmb	04 30 21.4	
	comp=Z,10nm,0.8s						
E19K	Redstone River	85.96	7	IAmb	IAmb	04 30 21.1	
	comp=Z,16nm,1.1s						
E19K	Redstone River	85.96	7	P	P	04 30 19.9	+0.2
	baz=197						
WTLY	Watson Lake, Y	86.00	21	P	P	04 30 20.6	+0.6
	baz=223						
DAWY	Dawson	86.01	15	P	P	04 30 20.1	+0.1
	baz=214,SNR=12						
IPM	Ipoh	86.02	276	P	P	04 30 21.9	+0.7
	comp=Z,30nm,0.7s						
RDOG	Red Dog Mine	86.03	4	P	P	04 30 19.9	0.0
	baz=191						
C16K	Lisburne Hills	86.09	3	P	P	04 30 20.7	+0.5
	baz=189						
POST	Post	86.11	54	IAmb	IAmb	04 30 22.1	
	comp=Z,16nm,0.9s						
HNS	HongShan	86.15	311	⇓P	P	04 30 22.3	+1.1
HNS				pmax	pmax		
	comp=Z,18nm,1.1s						
F21K	Alatna River	86.19	8	P	P	04 30 20.8	0.0
	baz=200						
I26K	Coal Creek Min	86.22	13	P	P	04 30 21.4	+0.5
	baz=210						
G23K	Bananza Creek	86.22	10	P	P	04 30 21.1	+0.1
	baz=204						
K29M	Barlow Dome	86.29	16	P	P	04 30 22.0	+0.5
	baz=215						
TOAD	Toad River Com	86.38	23	P	P	04 30 21.9	0.0
	baz=226						
JCT	Junction City	86.41	57	IAmb	IAmb	04 30 24.1	
	comp=Z,13nm,0.8s						
C17K	DeLong Mountai	86.42	4	P	P	04 30 21.6	-0.2
	baz=191						
LIRD	Liard River Hi	86.45	23	P	P	04 30 22.4	+0.2
	baz=226						
MAYO	Mayo, Yukon	86.51	16	P	P	04 30 22.7	+0.3
	baz=217						
LYN	LuoYang	86.61	308	P	P	04 30 24.5	+1.0
LYN				pmax	pmax		
	comp=Z,52nm,0.8s						
J29N	Klondike Camp	86.62	15	P	P	04 30 23.3	+0.3
	baz=215,SNR=5.3						
G24K	Hadweenzic Riv	86.64	10	P	P	04 30 23.7	+0.8
	baz=206						
F22K	John River	86.64	8	P	P	04 30 22.4	-0.6
	baz=201						
COLD	Coldfoot	86.67	9	P	P	04 30 22.5	-0.6
	baz=203						
BILL	Bilibino	86.72	353	P	P	04 30 23.5	+0.2
BILL				IAmb	IAmb	04 30 24.3	
	comp=Z,19nm,1.0s						
BILL	Bilibino	86.72	353	P	P	04 30 23.3	-0.1
C18K	Utukok River	86.74	5	P	P	04 30 22.9	-0.6
	baz=193						
DKNS	Dickens	86.80	53	IAmb	IAmb	04 30 31.8	
	comp=Z,23nm,1.8s						
I27K	Kandik River	86.81	13	P	P	04 30 22.9	-0.9
	baz=211						
E20K	Nigu River	86.85	7	P	P	04 30 23.7	-0.3
	baz=198						
D19K	Kuna River	86.87	6	P	P	04 30 23.6	-0.5
	baz=196						
ZEA	Zeya	86.89	330	eP	P	04 30 24.9	+0.5
ZEA				pmax	pmax		
	comp=N,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
LL02	Futaleuf	86.94	134	IAmb	IAmb	04 30 27.5	
	comp=Z,24nm,1.1s						
I28M	Miner Creek	87.05	14	P	P	04 30 24.7	-0.4
	baz=213						
J30M	Hart River	87.19	16	P	P	04 30 26.0	+0.2
	baz=216						
D20K	Etivluk River	87.24	6	P	P	04 30 25.6	-0.3
	baz=197						
ENH	Enshi	87.24	303	IAmb	IAmb	04 30 29.0	
	comp=Z,16nm,0.8s						
APMT	Aspermont	87.28	54	IAmb	IAmb	04 30 28.5	
	comp=Z,18nm,1.2s						
E22K	Anaktuvuk Pass	87.28	8	IAmb	IAmb	04 30 27.3	
	comp=Z,17nm,1.5s						
E22K	Anaktuvuk Pass	87.28	8	P	P	04 30 25.8	-0.3
	baz=202						
E21K	Killik River	87.28	7	P	P	04 30 26.0	0.0
	baz=200						
F24K	Squaw Lake	87.31	10	IAmb	IAmb	04 30 27.9	
	comp=Z,28nm,1.9s						
F24K	Squaw Lake	87.31	10	P	P	04 30 26.3	+0.1
	baz=206						
C19K	Lookout Ridge	87.33	5	P	P	04 30 26.1	-0.1
	baz=194						
I29M	Ogilvie Camp,	87.35	14	P	P	04 30 26.6	+0.2
	baz=214						
BRDY	Brady	87.36	56	IAmb	IAmb	04 30 28.9	
	comp=Z,16nm,1.0s						
H27K	Steamboat Moun	87.36	13	IAmb	IAmb	04 30 28.0	
	comp=Z,13nm,1.2s						
H27K	Steamboat Moun	87.36	13	P	P	04 30 26.5	0.0
	baz=212						
B18K	Kokolik River	87.40	5	P	P	04 30 26.9	+0.3
	baz=192						
E23K	Chandalar	87.53	9	P	P	04 30 27.8	+0.5
	baz=204						
G26K	Porcupine Rive	87.53	12	IAmb	IAmb	04 30 29.0	
	comp=Z,9.8nm,0.9s						
G26K	Porcupine Rive	87.53	12	P	P	04 30 27.1	-0.1
	baz=209						
KOTAN	Kotaneelee Air	87.70	23	P	P	04 30 28.6	+0.5
	baz=228						
I30M	Mount Dempster	87.70	15	P	P	04 30 28.1	-0.2
	baz=216						
E24K	Your Creek	87.72	10	P	P	04 30 28.4	+0.2
	baz=205						
F25K	Christian Rive	87.76	11	P	P	04 30 29.0	+0.7
	baz=208						
G27K	Doyon Strip	87.83	12	P	P	04 30 29.1	+0.4
	baz=211						
D22K	Ayikyak River	87.86	8	IAmb	IAmb	04 30 30.0	
	comp=Z,22nm,1.5s						
D22K	Ayikyak River	87.86	8	P	P	04 30 28.8	+0.1
	baz=201						
C21K	Knifeblade Rid	87.87	7	P	P	04 30 28.9	+0.1
	baz=199						
H29M	Whitestone	88.05	14	IAmb	IAmb	04 32 00.3	
	comp=Z,14nm,1.4s						
H29M	Whitestone	88.05	14	P	P	04 30 29.6	-0.1
	baz=214						
TOLK	Toolik Lake Re	88.07	9	P	P	04 30 29.8	0.0
	baz=204						
XLT	XiLinHaoTe	88.09	317	eP	P	04 30 31.3	+0.8
XLT				pP	pP	04 31 07.8	-10

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XLT                                  pmax     pmax
         comp=Z,11nm,0.9s
XLT                                  pmax     pmax
         comp=Z,190nm,5.6s
F26K   Sheenjek River     88.12  11  P        P        04 30 30.7 +0.7
         baz=209
GYA    Guiyang            88.16 298 ⇑P        P        04 30 33.3 +2.0
GYA                                  pmax     pmax
         comp=Z,17nm,1.2s
D23K   Nanushuk River     88.21   8  P        P        04 30 31.0 +0.7
         baz=203
E25K   Arctic Village     88.24  10  P        P        04 30 31.0 +0.4
         baz=208
A19K   Wainwright         88.28   5  P        P        04 30 31.2 +0.6
         baz=193
B21K   Ikpikpuk River     88.33   7  P        P        04 30 30.8 -0.1
         baz=199
HIA    Hailar             88.41 323⇑eP        P        04 30 30.6 -1.2
HIA                                  pmax     pmax
         comp=Z,9.0nm,1.1s
B20K   Meade River        88.43   6  P        P        04 30 31.2 -0.1
         baz=197
HILR   Hailar Array B     88.55 324  P        P        04 30 33.1 +0.7
         comp=Z,7.2nm,0.9s,baz=116,slow=10,SNR=8.5
         comp=Z,7.2nm,0.9s
EPYK   Eagle Plains       88.55  14  IAmb     IAmb     04 30 34.6
         comp=Z,23nm,1.5s
EPYK   Eagle Plains       88.55  14  P        P        04 30 31.9 -0.2
         baz=216
H31M   Peel River         88.68  15  P        P        04 30 32.4 -0.3
         baz=218
G29M   Pine Creek         88.70  14  P        P        04 30 32.9 +0.1
         baz=215
PLCA   Paso Flores        88.75 132  P        P        04 30 34.9 +1.1
         comp=Z,3.3nm,1.1s,baz=206,slow=3.3,SNR=6.7
         comp=Z,3.3nm,1.1s
PLCA   Paso Flores        88.75 132           P        04 30 35.0 +1.1
PLCA                                 IAmb     IAmb     04 30 46.6
         comp=Z,15nm,1.6s
PLCA   Paso Flores        88.75 132  P        P        04 30 34.7 +0.8
LAO    LASA Array         88.77  40  IAmb     IAmb     04 30 35.5
         comp=Z,11nm,0.8s
F28M   Old Crow           88.89  13  P        P        04 30 33.4 -0.2
         baz=213
RSSD   Black Hills        88.98  43           P        04 30 34.7 -0.2
C23K   Itkillik River     89.03   8  IAmb     IAmb     04 30 45.3
         comp=Z,20nm,1.5s
C23K   Itkillik River     89.03   8  P        P        04 30 34.2  0.0
         baz=203
E27K   Coleen River       89.03  12  P        P        04 30 34.5 +0.2
         baz=211
XAN    Xi'an              89.11 306 ⇑P        P        04 30 37.1 +1.6
XAN                                  pP       pP       04 31 16.6 -6.0
XAN                                  sP       sP       04 31 36.1 -6.4
XAN                                  pmax     pmax
         comp=Z,13nm,1.0s
B22K   Teshekpuk Lake     89.14   7  IAmb     IAmb     04 30 36.8
         comp=Z,11nm,1.1s
B22K   Teshekpuk Lake     89.14   7  P        P        04 30 34.6 -0.1
         baz=200
G30M   tAoh Zraii Nji     89.17  14  P        P        04 30 34.5 -0.4
         baz=216
D25K   Kavik River        89.18  10  P        P        04 30 34.8 -0.2
         baz=207
C24K   Franklin Bluff     89.19   9  IAmb     IAmb     04 30 44.4
         comp=Z,9.1nm,1.1s
C24K   Franklin Bluff     89.19   9  P        P        04 30 35.0 +0.1
         baz=205
TPTI                      89.30 274  P        P        04 30 36.0 -0.8
         comp=Z,39nm,0.8s
HKT    Hockley            89.41  58⇑iP        P        04 30 37.1 +0.3
HKT                                  pmax     pmax
         comp=Z,32nm,1.5s
G31M   Satah River        89.58  15  P        P        04 30 36.7 -0.1
         baz=218
A22K   Sinclair Lake      89.60   6  P        P        04 30 37.2 +0.4
         baz=199
ELIB   Princess Elisa     89.66 186 dP        P        04 30 37.6 +0.1
         comp=Z,16nm,0.8s
A21K   Barrow             89.74   6  P        P        04 30 37.4  0.0
         baz=197
F30M   Barrier River      89.78  14  P        P        04 30 37.8 +0.1
         baz=217
E28M   Babbage River      89.79  12  P        P        04 30 37.7 -0.1
         baz=213
HHC    Hu-ho-hao-te       89.82 313 eP        P        04 30 39.6 +0.9
HHC                                  pmax     pmax
         comp=Z,9.0nm,0.6s
HHC                                  pmax     pmax
         comp=Z,120nm,4.1s
C27K   Jago River         89.89  10  IAmb     IAmb     04 31 56.9
         comp=Z,25nm,1.9s
C27K   Jago River         89.89  10  P        P        04 30 37.9 -0.4
         baz=209
C26K   Camden Bay         89.95  10  P        P        04 30 38.7 +0.2
         baz=208
E29M   Blow River         89.95  13  P        P        04 30 38.4 -0.1
         baz=215
WRGLY  Wrigley            90.00  21  P        P        04 30 39.1 +0.2
         baz=228
SYO    Syowa Base         90.04 192⇑eP        P        04 30 39.2 +0.1
SYO    Syowa Base         90.04 192⇓ePcP      PcP      04 30 41.4 +1.2
D27M   Malcolm River      90.05  11  P        P        04 30 38.7 -0.4
         baz=212
F31M   Tsiigehtchic       90.12  15  P        P        04 30 39.3  0.0
         baz=219
R32A   Long Quarter,      90.31  50  IAmb     IAmb     04 30 42.6
         comp=Z,15nm,1.0s
TROLL  Troll, Antarti     90.40 179 ⇓P        P        04 30 41.2 +0.2
         comp=Z,413nm,0.6s
W35A   Tecumseh           90.46  53  IAmb     IAmb     04 30 57.2
         comp=Z,15nm,1.3s
D28M   Stokes Point       90.56  12  P        P        04 30 41.3  0.0
         baz=214
SNAA   Sanae              90.59 177 ⇓P        P        04 30 41.7 -0.1
         comp=Z,169nm,1.0s
SNAA   Sanae              90.59 177  P        P        04 30 42.1 +0.3
         comp=Z,7.9nm,0.9s,baz=197,slow=5.8,SNR=18
         comp=Z,7.9nm,0.9s
SNAA   Sanae              90.59 177  P        P        04 30 41.5 -0.3
SNAA                                 IAmb     IAmb     04 30 42.9
         comp=Z,14nm,1.1s
SNAA   Sanae              90.59 177⇓iP        P        04 30 41.7 -0.1
SNAA                                 pmax     pmax
         comp=Z,14nm,1.1s
VNA3   Neumayer Olymp     90.59 175 ⇓P        P        04 30 41.8 +0.1
         comp=Z,23nm,0.8s
BTO    Baotou             90.80 313 eP        P        04 30 44.3 +1.0
BTO                                  S        S        04 41 24.8 +1.6
BTO                                  pmax     pmax
         comp=Z,7.0nm,0.6s
BTO                                  pmax     pmax
         comp=Z,230nm,7.3s
INK    Inuvik             90.85  14  IAmb     IAmb     04 30 43.6
         comp=Z,11nm,1.2s
INK    Inuvik             90.85  14  P        P        04 30 42.6  0.0
         baz=219
KMI    Kunming            91.03 296  P        P        04 30 47.3 +2.4
KMI                                  pmax     pmax
         comp=Z,15nm,0.7s
VNA2   Neumayer--Watz     91.07 176 ⇓P        P        04 30 44.2 +0.3
         comp=Z,25nm,0.7s,baz=174,slow=3.8
VNA1   Neumayer--Stat     91.27 175 ⇑P        P        04 30 45.6 +0.7
         comp=Z,26nm,1.0s
NVL    N'lazarevskaya     91.56 182 eP        P        04 30 49.0 +2.8
NVL                                 eS        SKSac    04 41 06.6 +6.7
NVL                                 eSS       SS       04 47 46.2 +7.5
NVL                                 eSSS      SSS      04 51 25.7
NVL                                  pmax     pmax
         comp=Z,11nm,1.0s
CMAR   Chiang Mai Arr     92.28 289  P        P        04 30 51.7 +1.2
         comp=Z,5.0nm,0.7s,baz=100,slow=2.8,SNR=30
CMAR                                 pP       pwP      04 31 42.7 +1.9
         comp=Z,1.0nm,0.3s,baz=97,slow=2.8,SNR=1.8
         comp=Z,5.0nm,0.7s
CMAR   Chiang Mai Arr     92.28 289  P        P        04 30 50.9 +0.4
CMAR   Chiang Mai Arr     92.28 289 i P       P        04 30 52.0 +1.5
CMAR                                 pmax     pmax
         comp=Z,6.0nm,0.6s
PZH    PanZhiHua          92.33 297  P        P        04 30 52.8 +2.1
CHTO   Chiang Mai         92.39 289  P        P        04 30 51.6 +0.7
CHTO   Chiang Mai         92.39 289  P        P        04 30 52.0 +1.0
         comp=Z,12nm,0.8s
CHTO   Chiang Mai         92.39 289  P        P        04 30 51.5 +0.5
YKA    Yellowknife Ar     92.73  24  P        P        04 30 51.5  0.0
         comp=Z,2.2nm,0.9s,baz=246,slow=4.8,SNR=22
         comp=Z,2.2nm,0.9s
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JTS    Las Juntas de      92.75  80⇓iP        P        04 30 54.0 +1.2
JTS                                  pmax     pmax
         comp=Z,15nm,0.9s
U38A   Gravette           92.80  53  IAmb     IAmb     04 30 54.0
         comp=Z,9.5nm,1.2s
AC05   El Transito        93.50 122           P        04 30 58.2 +2.0
NNA    Nana               93.61 104⇓eP        P        04 30 56.9 +0.1
NNA                                  pmax     pmax
         comp=Z,59nm,1.6s
LZH    Lanzhou            93.72 307 eP        P        04 30 58.5 +1.5
LZH                                  sP       sP       04 31 59.8 -4.3
LZH                                  pmax     pmax
         comp=Z,17nm,1.0s
C36M   Paulatuk           93.96  16  P        P        04 30 57.0  0.0
         baz=228
R40A   Maddies Statio     95.00  52  IAmb     IAmb     04 31 03.6
         comp=Z,5.6nm,0.7s
A36M   Sachs Harbour      95.48  14  P        P        04 31 03.6 -0.3
         baz=227
SONM   Songino Array      95.86 318  P        P        04 31 06.1 -0.3
         comp=Z,0.3nm,0.4s,baz=104,slow=2.8,SNR=4.3
         comp=Z,0.3nm,0.4s
ULM    Lac du Bonnet      96.50  39  LR       LR       05 07 24.0
         comp=Z,53nm,19.3s,baz=11,slow=31
TIXI   Tiksi              96.99 345  LR       LR       05 11 09.9
         comp=Z,22nm,20.5s,baz=194,slow=33
TIXI   Tiksi              96.99 345⇓eP        P        04 31 08.3 -2.4
TIXI                                 pmax     pmax
         comp=Z,7.0nm,1.8s
ZALV   Zalesovo Beam     110.39 322  PKiKP    PKiKP    04 36 09.9 -0.7
         comp=Z,0.6nm,0.5s,baz=321,slow=1.9,SNR=5.1
MKAR   Makanchi Array    111.67 314  PKiKP    PKiKP    04 36 12.7 -0.7
         comp=Z,1.7nm,0.7s,baz=156,slow=0.8,SNR=16
MKAR                                 PKKPbc   PKKPbc   04 47 08.0 -0.8
         comp=Z,0.7nm,0.6s,baz=298,slow=2.6,SNR=4.5
MKAR   Makanchi Array    111.67 314c iPKIKP   PKiKP    04 36 12.5 -0.9
MKAR                                 pmax     pmax
         comp=Z,2.0nm,0.7s
KURK   Kurchatov         114.17 318⇓iPKIKP    PKPdf    04 36 17.2 -0.7
KURBB  Kurchatov Arra    114.23 318  PKP      PKPdf    04 36 17.4 -0.6
         comp=Z,1.5nm,0.6s,baz=99,slow=1.7,SNR=12
AAK    Ala-Archa         117.13 309⇓iPKIKP    PKiKP    04 36 24.4 +0.2
AAK                                  pmax     pmax
         comp=Z,8.0nm,2.5s
BVAR   Borovoye Array    119.04 321  PKP      PKPdf    04 36 27.0 -0.3
         comp=Z,5.6nm,0.6s,baz=105,slow=0.7,SNR=31
BORK   Borovoye          119.08 321d iPKIKP   PKPdf    04 36 26.6 -0.8
SPITS  Spitsbergen Ar    119.34 357  PKP      PKPdf    04 36 26.8 -0.5
         comp=Z,5.1nm,0.7s,baz=64,slow=6.6,SNR=9.8
CHGR   Chuyangaron       121.26 305⇑iPKIKP    PKPdf    04 36 31.2 -0.9
ARTI   Arti              124.85 327 i PKIKP   PKPdf    04 36 37.4 -0.9
ARTI                                                   04 38 27.0
ARTI                                                   04 43 33.5
ARTI                                 SS       SS       04 55 05.9 -2.3
ARCES  ARCESS Array B    126.80 351  PKP      PKPdf    04 36 41.6 -0.1
         comp=Z,4.9nm,0.6s,baz=11,slow=1.2,SNR=42
KIRV   Kirov             128.15 332⇑ePKIKP    PKPdf    04 36 43.2 -1.3
BOSA   Boshof            130.03 203  PKP      PKPdf    04 36 49.8 +0.4
         comp=Z,2.3nm,0.6s,baz=178,slow=3.5,SNR=8.0
KLMR   Klimovskoe        130.62 339 ePKIKP    PKPdf    04 36 48.0 -1.2
KLMR                                 pmax     pmax
         comp=Z,12nm,1.4s
BELG   Belogornoye       132.25 326⇓iPKIKP    PKPdf    04 36 52.0 -0.5
FINES  FINESS Array B    134.00 346  PKhKP    PKPpre   04 36 44.7
         comp=Z,1.8nm,0.8s,baz=64,slow=3.2,SNR=3.6
FINES                                PKP      PKPdf    04 36 55.6 +0.1
         comp=Z,2.9nm,0.6s,baz=41,slow=3.0,SNR=16
FINES  FINESS Array B    134.00 346c iPKIKP   PKPdf    04 36 56.0 +0.5
FINES                                pmax     pmax
         comp=Z,3.0nm,0.6s
OBN    Obninsk           135.81 335 i PKIKP   PKiKP    04 37 00.1 -0.6
OBN                                 e                  04 39 39.8
OBN                                 ePPP      PPP      04 42 35.0
OBN                                  pmax     pmax
         comp=Z,6.0nm,0.9s
NB2    NORSAR Subarra136.60 356      PKP      PKPdf    04 36 59.8 -0.7
         comp=Z,1.4nm,1.0s,baz=9.3,slow=2.5
NOA    NORSAR Array B 136.60 356     PKP      PKPdf    04 37 00.3 -0.2
         comp=Z,0.9nm,0.9s,baz=14,slow=4.0,SNR=3.7
HFS    Hagfors           137.29 354  PKhKP    PKPpre   04 36 47.7
         comp=Z,1.4nm,0.7s,baz=58,slow=5.4,SNR=5.0
HFS                                  PKP      PKPdf    04 37 00.3 -1.4
         comp=Z,2.5nm,0.6s,baz=122,slow=4.1,SNR=6.5
KBZ    Khabaz            139.22 318⇑iPKIKP    PKPdf    04 37 05.8 +0.1
KIV    Kislovodsk        139.25 318 ePKIKP    PKiKP    04 37 07.8 -0.5
KIV                                  pmax     pmax
         comp=Z,4.0nm,1.1s
NEUR   Neytrino          139.56 317⇑ePKIKP    PKPdf    04 37 04.6 -2.1
VSLR   Vesyoloye         141.18 319⇓iPKIKP    PKPdf    04 37 09.3  0.0
EKA    Eskdalemuir Ar    141.96   8  PKhKP    PKPpre   04 37 06.2
         comp=Z,2.2nm,0.8s,baz=320,slow=3.5,SNR=4.0
AKASG  Malin Array Be    142.06 335  PKhKP    PKPpre   04 37 05.1
         comp=Z,1.3nm,0.4s,baz=41,slow=4.2,SNR=8.1
AKASG  Malin Array Be    142.06 335c iPKIKP   PKPdf    04 37 12.0 +1.3
AKASG                                pmax     pmax
         comp=Z,1.0nm,0.6s
SIM    Simferopol'       143.83 325 ePKIKP    PKPdf    04 37 13.8 -0.2
SIM                                  pmax     pmax
         comp=Z,22nm,0.9s
SORM   Soroca            144.41 333 ⇑P        PKPab    04 37 13.4 -0.2
SORM   Soroca            144.41 333 ⇑PKIKP    PKPab    04 37 13.4 -0.2
PURM   Purcari           144.93 330 ⇑P        PKPdf    04 37 16.0 +0.1
FLTG   Flechtingen       145.23 354 ePKPbc    PKPdf    04 37 15.9 -0.3
         baz=9.3,slow=2.8
ASSE   Asse, Remlinge    145.49 354 ePKPbc    PKPab    04 37 17.2 -0.2
         baz=9.3,slow=2.8
OJC    Ojcow             145.65 344           PKPbc    04 37 17.8 +0.2
BZK    Bozkurt           145.72 321  PKPdf    PKPab    04 37 19.2 +0.5
CLZ    Clausthal         145.80 355 ePKPbc    PKPab    04 37 18.6 -0.2
         baz=9.3,slow=2.8
VASR   Vaslui            145.80 332 ⇑P        PKPbc    04 37 18.0 -0.2
KSP    Ksiaz             145.90 348 ePKP      PKPab    04 37 18.8 -0.4
STHS   Stebnicka Huta    145.96 341 ePKIKP    PKPbc    04 37 18.3 -0.4
STHS   Stebnicka Huta    145.96 341 ePKP      PKPbc    04 37 18.2 -0.4
CLL    Collm             146.02 351⇓iPKIKP    PKPbc    04 37 18.8 +0.1
CLL                                  pmax     pmax
         comp=Z,52nm,1.0s
CLL    Collm             146.02 351 ePKPbc    PKPbc    04 37 18.7 +0.1
         baz=9.3,slow=2.8
CLL    Collm             146.02 351⇓iPKPbc    PKPbc    04 37 18.8 +0.1
         comp=Z,52nm,1.0s
CLL                                 i pPKPdf  pPKPab   04 38 09.8 +2.3
         comp=Z,15nm,0.9s
BUR08  Bucovina Ar. S    146.09 336           PKPab    04 37 20.1  0.0
BURAR  Bucovina Array    146.11 336           PKPab    04 37 19.8 -0.4
BURAR  Bucovina Array    146.11 336 ⇑P        PKPab    04 37 19.9 -0.3
BURAR  Bucovina Array    146.11 336 ⇑PKP2     PKPab    04 37 19.9 -0.3
GIRR   Girov             146.12 334 ⇑P        PKPab    04 37 19.8 -0.4
GTTG   Gottingen         146.13 355 ePKPbc    PKPbc    04 37 19.2 +0.2
         baz=9.3,slow=2.8
GTTG                                epPKPbc   pPKPab   04 38 11.3 +3.4
OSTC   Ostas             146.19 348 ePKP2     PKPbc    04 37 19.7 +0.4
OSTC   Ostas             146.19 348 ePKP      PKPbc    04 37 19.7 +0.4
CHVC   Chvalec           146.19 348 ePKP2     PKPbc    04 37 19.7 +0.4
CHVC   Chvalec           146.19 348 ePKP      PKPbc    04 37 19.7 +0.4
BNN    Bunyan            146.22 315           PKPab    04 37 20.6 -0.4
UPC    Upice             146.28 348 ePKP2     PKPbc    04 37 19.8 +0.3
UPC    Upice             146.28 348 ePKP      PKPbc    04 37 19.8 +0.3
VLDR   Vladesti          146.28 331 ⇑P        PKPab    04 37 20.6 -0.1
NEUB   Neuenburg         146.28 353 ePKPbc    PKPbc    04 37 19.3 -0.2
         baz=9.3,slow=2.8
BRG    Berggiesshubel    146.30 350 ePKPbc    PKPbc    04 37 19.7 +0.2
         baz=9.3,slow=2.8
DPC    Dobruska-Polom    146.36 347 ePKP2     PKPab    04 37 20.5 -0.5
DPC    Dobruska-Polom    146.36 347 ePKP      PKPab    04 37 20.5 -0.5
BUG    Bochum--Univer    146.40 358 ePKPbc    PKPbc    04 37 19.8 +0.1
         baz=9.3,slow=2.8
TESR   Tescani           146.40 333 ⇑P        PKPbc    04 37 20.6 +0.6
TLCR                     146.42 329 ⇓P        PKPab    04 37 20.6 -0.7
GHRR                     146.42 332 ⇓P        PKPbc    04 37 19.4 -0.6
OKC    Ostrava-Krasne    146.43 345 ePKP2     PKPab    04 37 20.6 -0.6
OKC    Ostrava-Krasne    146.43 345 ePKP      PKPab    04 37 20.6 -0.6
STEB   Steborice         146.43 346 ePKP      PKPab    04 37 20.7 -0.5
KRLC   Kraliky           146.52 347 ePKP2     PKPbc    04 37 20.6 +0.3
KRLC   Kraliky           146.52 347 ePKP      PKPbc    04 37 20.6 +0.3
PVCC   Panska Ves        146.53 349 ePKP2     PKPbc    04 37 20.7 +0.5
PVCC   Panska Ves        146.53 349 ePKP      PKPbc    04 37 20.7 +0.5
KASTN  Kahler Asten      146.58 357 ePKPbc    PKPbc    04 37 20.7 +0.3
         baz=9.3,slow=2.8
KASTN                               epPKPbc   pPKPab   04 38 12.0 +2.3
RICC   Richard           146.59 350 ePKP      PKPab    04 37 21.1 -0.7
MORC   Moravsky Berou    146.63 346 ⇑P        PKPab    04 37 21.5 -0.6
MORC   Moravsky Berou    146.63 346 ePKP      PKPbc    04 37 20.9 +0.3
MORC   Moravsky Berou    146.63 346 ⇑PKP2     PKPab    04 37 21.5 -0.6
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HSKC   Hora Svate Kat    146.64 351 ePKP      PKPbc    04 37 20.8 +0.2
ONER   Baraj Valea Uz    146.65 333 ⇓P        PKPbc    04 37 20.6 -0.2
PANC   Panciu            146.68 332 ⇑P        PKPbc    04 37 20.1 -0.7
JURR   Jurilovca         146.69 329 ⇑P        PKPbc    04 37 20.6 -0.2
CFR    Carcaliu          146.75 330 ⇓P        PKPbc    04 37 21.2 +0.3
CFR    Carcaliu          146.75 330 ⇓PKP2     PKPbc    04 37 21.2 +0.3
UBBA   Unterbreizbach    146.85 355 ePKPbc    PKPbc    04 37 21.3 +0.3
         baz=9.3,slow=2.8
TPGR   Topolog           146.85 329 ⇓P        PKPbc    04 37 21.6 +0.3
MOX    Moxa              146.85 353 ePKPbc    PKPbc    04 37 21.3 +0.2
         baz=9.3,slow=2.8
MOX                                 epPKPbc   pPKPab   04 38 13.2 +2.5
VRI    Vrincioaia        146.87 332 ⇓P        PKPbc    04 37 20.7 -0.7
VRI    Vrincioaia        146.87 332 ⇓PKIKP    PKPbc    04 37 20.7 -0.7
PLOR   Plostina          146.92 332 ⇑P        PKPbc    04 37 21.1 -0.4
PLOR   Plostina          146.92 332 ⇑PKIKP    PKPbc    04 37 21.1 -0.4
MAUC   Maruska           146.94 345 ePKP      PKPab    04 37 22.4 -0.9
TANN   Tannenbergstha    146.97 352 ePKPbc    PKPbc    04 37 22.1 +0.6
         baz=9.3,slow=2.8
PRA    Prague            146.99 349 ePKP2     PKPbc    04 37 22.3 +0.8
PRA    Prague            146.99 349 ePKP      PKPbc    04 37 22.3 +0.8
TURR   Turia             147.03 333 ⇑P        PKPbc    04 37 21.2 -0.7
PRU    Pruhonice         147.05 349 ePKP2     PKPbc    04 37 21.7  0.0
PRU    Pruhonice         147.05 349 ePKP      PKPbc    04 37 21.7  0.0
UCC    Uccle             147.06   1 dPKPdf    PKPdf    04 37 19.5 +0.2
UCC                                 dPKP      PKPbc    04 37 22.1 +0.4
TIRR   Tirgusor          147.14 329 ⇑P        PKPbc    04 37 21.6 -0.5
TIRR   Tirgusor          147.14 329 ⇑PKIKP    PKPbc    04 37 21.6 -0.5
BOSR   Bodos             147.17 334 ⇓P        PKPbc    04 37 22.6 +0.4
BR131  Keskin Array S    147.22 318           PKPbc    04 37 23.1 +0.4
BR131  Keskin Array S    147.22 318⇓ePKHKP    PKPpre   04 37 18.5
BRTR   Keskin Array B    147.22 318  PKP      PKPdf    04 37 19.9 -0.3
         comp=Z,9.8nm,0.9s,baz=48,slow=2.1,SNR=38
BRTR                                 PKPbc    PKPbc    04 37 22.8 +0.1
         comp=Z,9.9nm,0.8s,baz=134,slow=3.7,SNR=46
BRTR                                 pPKPbc   pPKPab   04 38 16.0 +3.1
         comp=Z,2.5nm,0.9s,baz=246,slow=1.2,SNR=2.4
BRTR   Keskin Array B    147.22 318           PKPbc    04 37 23.0 +0.3
MEM    Membach           147.26 359 dPKP      PKPbc    04 37 22.3 +0.1
TLBR   Topalu            147.26 329 ⇑P        PKPdf    04 37 20.8 +1.0
BTNL   Ternell           147.28 359 dPKPdf    PKPdf    04 37 20.2 +0.4
BTNL                                dPKP      PKPbc    04 37 22.3  0.0
BSTI   Sart Tilman       147.28 360 dPKP      PKPbc    04 37 22.5 +0.2
VRAC   Vranov            147.28 346 ⇑P        PKPbc    04 37 22.7 +0.3
VRAC   Vranov            147.28 346 ePKP      PKPbc    04 37 22.5 +0.1
VRAC   Vranov            147.28 346 ⇑PKP2     PKPbc    04 37 22.7 +0.3
KIRS   Kirsehir-Merke    147.36 317 ⇑P        PKPbc    04 37 22.5 -0.5
DOPR   Dopca             147.37 334 ⇑P        PKPbc    04 37 21.8 -1.0
NEHR   Nehoiu            147.40 332 ⇑P        PKPbc    04 37 22.1 -0.8
MANZ   Manzenberg        147.43 352 ePKPbc    PKPbc    04 37 23.1 +0.3
         baz=9.3,slow=2.8
JAVC   Velka Javorina    147.45 345 ePKP      PKiKP    04 37 24.2 -0.7
CJR    Cluj-Napoca       147.48 336 ⇑P        PKPbc    04 37 22.9 -0.1
CJR    Cluj-Napoca       147.48 336 ⇑PKP2     PKPbc    04 37 22.9 -0.1
BGES   Gesves            147.48   0 dPKPdf    PKPdf    04 37 19.7 -0.3
MLR    Muntele Rosu      147.51 333 ⇑P        PKPbc    04 37 23.0 -0.3
MLR    Muntele Rosu      147.51 333 ⇑PKIKP    PKPbc    04 37 23.0 -0.3
BHOU   Houvegnez         147.51 359 dPKPdf    PKPdf    04 37 20.7 +0.6
TNS    Taunus Mts        147.56 356 ePKPbc    PKPbc    04 37 23.8 +0.6
         baz=9.3,slow=2.8
KRUC   Moravsky          147.56 346 ePKP      PKPbc    04 37 23.3 +0.2
BMRD   Maredsous         147.56   1 dPKP      PKPbc    04 37 23.4 +0.4
ROTZ   Rotzenmuhle       147.64 352 ePKPbc    PKPbc    04 37 23.9 +0.6
         baz=9.3,slow=2.8
ZVC    Zvikov            147.64 349 ePKP      PKPbc    04 37 23.9 +0.6
ANTO   Ankara            147.67 319 ⇓P        PKPbc    04 37 24.2 +0.4
ANTO   Ankara            147.67 319 ⇓PKP2     PKPbc    04 37 24.2 +0.4
MARR   Marisel-Cluj      147.69 337 ⇓P        PKPbc    04 37 23.2 -0.4
PSZ    Piszkesteto       147.70 342 ⇑P        PKPbc    04 37 24.0 +0.4
PSZ    Piszkesteto       147.70 342 ⇑PKP2     PKPbc    04 37 24.0 +0.4
DRGR                     147.75 337 ⇑P        PKPbc    04 37 23.8  0.0
DRGR                     147.75 337 ⇑PKP2     PKPbc    04 37 23.8  0.0
DOU    Dourbes           147.77   1 dPKP      PKPbc    04 37 23.8 +0.2
GRA1   Grafenberg Arr    147.83 353           PKPbc    04 37 24.5 +0.7
GRF    Grafenberg Arr    147.83 353 ePKPbc    PKPbc    04 37 24.4 +0.5
         baz=9.3,slow=2.8
MODS   Modra-Piesok      148.00 345 ePKP2     PKiKP    04 37 25.6 -0.4
MODS   Modra-Piesok      148.00 345 ePKP      PKiKP    04 37 25.6 -0.4
KHC    Kasperske Hory    148.05 350           PKPbc    04 37 25.0 +0.5
KHC    Kasperske Hory    148.05 350 ePKP2     PKPbc    04 37 25.0 +0.5
KHC    Kasperske Hory    148.05 350 ePKP      PKPbc    04 37 25.0 +0.5
WET    Wettzell          148.15 351 ePKPbc    PKPbc    04 37 25.1 +0.4
         baz=9.3,slow=2.8
ARR    Arges             148.17 334 ⇑P        PKPdf    04 37 22.3 +0.8
WLF    Walferdange       148.20 359 ePKPbc    PKiKP    04 37 25.8 -0.5
         baz=9.3,slow=2.8
WLF                                 epPKPbc   pPKPab   04 38 17.7 +1.7
WLF    Walferdange       148.20 359 dPKP      PKPbc    04 37 24.3 -0.5
CKRC   Cesky Krumlov     148.22 349 ePKP2     PKPbc    04 37 25.2 +0.3
CKRC   Cesky Krumlov     148.22 349 ePKP      PKPbc    04 37 25.2 +0.3
GEC2   GERESS Array S 148.30 350              PKPbc    04 37 25.5 +0.4
GEC2   GERESS Array S 148.30 350    ePKPbc    PKPbc    04 37 25.6 +0.4
         baz=9.3,slow=2.8
GERES  GERESS Array B 148.30 350     PKP      PKPdf    04 37 21.3 -0.3
         comp=Z,6.4nm,0.7s,baz=76,slow=5.6,SNR=37
GERES                                PKPbc    PKPbc    04 37 25.4 +0.2
         comp=Z,6.6nm,0.7s,baz=25,slow=3.4,SNR=43
GERES                                pPKPbc   pPKPab   04 38 16.9  0.0
         comp=Z,2.3nm,0.9s,baz=35,slow=4.9,SNR=3.5
LOT    Lotru             148.46 335 ⇑P        PKPdf    04 37 22.5 +0.6
SIRR   Siria             148.57 338 ⇑P        PKPbc    04 37 25.4 -0.5
CONA   Conrad Observa    148.75 346 i PKP     PKiKP    04 37 27.1 -0.6
         comp=Z,34nm,1.3s,SNR=9.0
RONA   Rosalia, Austr    148.86 346 i PKP     PKiKP    04 37 27.2 -0.7
         comp=Z,19nm,1.1s,SNR=5.5
GZR    Gura Zlata        148.90 336 ⇑P        PKPbc    04 37 25.1 -1.7
GZR    Gura Zlata        148.90 336 ⇑PKIKP    PKPbc    04 37 25.1 -1.7
STU    Stuttgart         148.95 355 ePKPbc    PKiKP    04 37 27.4 -0.5
         baz=9.3,slow=2.8
STU                                 epPKPbc   pPKPab   04 38 19.0  0.0
MMAI   Mount Meron Ar    149.09 305  PKPbc    PKiKP    04 37 28.4 -0.4
         comp=Z,13nm,0.7s,baz=69,slow=4.6,SNR=28
BORA   Eskisehir         149.11 321           PKPbc    04 37 27.8 +0.2
BZS    Buzias            149.14 338 ⇑P        PKPbc    04 37 26.8 -0.5
BZS    Buzias            149.14 338 ⇑PKIKP    PKPbc    04 37 26.8 -0.5
MOA    Molln             149.16 348 i PKP     PKPbc    04 37 27.5 +0.2
         comp=Z,8.1nm,1.0s
FUR    Furstenfeldbru    149.33 352 ePKPbc    PKiKP    04 37 28.5 -0.2
         baz=9.3,slow=2.8
BIOA   Bad Ischl, Aus    149.43 349 i PKP     PKPbc    04 37 27.9 -0.1
         comp=Z,13nm,1.1s
BFO    Black Forest      149.45 356 ePKPbc    PKPbc    04 37 28.3 +0.3
         baz=9.3,slow=2.8
ARSA   Arzberg           149.47 346 i PKP     PKPbc    04 37 28.3 +0.2
         comp=Z,8.5nm,1.1s
HERR   Herculane         149.47 336 ⇓P        PKPbc    04 37 27.3 -0.8
LESA   Schwarzleotal     149.85 350 i PKP     PKPbc    04 37 29.0 -0.1
         comp=Z,5.1nm,0.5s
UBR    Ueberruh          149.94 354 ePKPbc    PKiKP    04 37 29.9 -0.2
         baz=9.3,slow=2.8
RETA   Reutte            150.06 353 i PKP     PKPbc    04 37 29.7 +0.1
         comp=Z,13nm,0.8s,SNR=5.1
KBA    Koelnbreinsper    150.07 349 i PKP     PKPbc    04 37 29.1 -0.6
         comp=Z,9.0nm,0.5s
WATA   Walderalm         150.10 352 i PKP     PKPbc    04 37 29.7  0.0
         comp=Z,13nm,0.5s
SOKA   Soboth            150.12 347 i PKP     PKPbc    04 37 29.5 -0.3
         comp=Z,6.8nm,0.7s
PERS   Pernice           150.14 347 i PKPbc   PKPbc    04 37 29.4 -0.4
WTTA   Wattenberg        150.16 351 i PKP     PKPbc    04 37 30.1 +0.1
         comp=Z,25nm,0.5s,SNR=7.9
BAND   Balkesir-Ban      150.19 324 ⇑P        PKPbc    04 37 27.8 -2.3
SQTA   Sankt Quirin      150.27 352 i PKP     PKPbc    04 37 30.2  0.0
         comp=Z,20nm,0.8s,SNR=5.7
DAVA   Damuels           150.36 354 i PKP     PKiKP    04 37 30.8 -0.3
         comp=Z,44nm,1.1s,SNR=6.5
OBKA   Obir              150.38 347 i PKP     PKPbc    04 37 29.8 -0.6
         comp=Z,3.8nm,0.9s
MYKA   Terra Mystica     150.45 348 i PKP     PKPbc    04 37 29.9 -0.6
         comp=Z,12nm,0.6s
FETA   Feichten          150.52 353 i PKP     PKiKP    04 37 31.2 -0.3
         comp=Z,20nm,0.8s,SNR=6.8
ABTA   Abfaltersbach     150.53 350 ePKP      PKPbc    04 37 30.3 -0.5
         comp=Z,24nm,0.6s,SNR=6.5
LJU    Ljubljana         150.83 347 i PKPbc   PKPbc    04 37 31.4  0.0
CRNS   Crni Vrh          150.85 347 i PKPbc   PKPbc    04 37 31.1 -0.3
CIMO   Cimolais          150.97 350           PKPbc    04 37 31.5 -0.2
FUORN  Ofenpass-Fuorn    150.97 353           PKiKP    04 37 32.8 +0.3
STAL   STALIGIAL         150.97 350           PKPbc    04 37 31.1 -0.6
RDO    Rodhopi           151.01 328           PKPbc    04 37 32.0 +0.1
BLY    Banja Luka        151.37 342 ⇓P        PKPbc    04 37 30.7 -1.9
ESDC   Sonseca Array     156.73  19  PKPab    PKPab    04 38 04.2 -0.3
         comp=Z,3.1nm,1.0s,baz=340,slow=4.7,SNR=7.4
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DBIC	Dimbokro	165.08	137	PKP	PKPdf	04 37 42.7	-1.0
	comp=Z,3.8nm,0.8s,baz=162,slow=2.2,SNR=4.2						
DBIC	Dimbokro	165.08	137		PKPdf	04 37 42.9	-0.9
TORD	Torodi Ar. Bea	174.16	142	PKP	PKPdf	04 37 48.3	-0.8
	comp=Z,3.6nm,0.9s,baz=9.2,slow=3.4,SNR=12						
TORD				PKPab	PKPab	04 39 21.6	0.0
	comp=Z,3.0nm,1.0s,baz=259,slow=2.3,SNR=6.4						

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*IDC **21** 04:29:06.0±2.7, 17°.86S×178°.09W, h416^{km}±27^{km}, mb3.7/17, mbtmp4.4/17, Error ellipse: s-maj=15.6km s-min=12.6km az=101.0*

*NEIC **21** 04:29:08.2±2.0, 17°.9S±0°.1×178°.0W±0°.1, h437^{km}±7^{km}, mb4.5/25, Error ellipse: s-maj=18.2km s-min=15.5km az=124.0*

ISC 21 04:29:08.9±0.4**, 17°.85S**±0°.09×**178°.05W**±0°.09**, h450**^{km}**, n91,** σ**1^s.08**/92**, mb4.3**/27**, 16C-2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.72	271	P	P	04 30 25.3	+3.5
AFI	Afiamalu	7.19	58	P	P	04 30 54.0	-1.8
MARNC	Mare, Loyalty	13.60	252	P	P	04 32 05.1	0.0
PINNC	Pines Island,	14.42	248	P	P	04 32 14.8	+1.0
TOZ	Tahuroa Road	20.60	195	P	P	04 33 16.1	+0.5
URZ	Urewera	20.77	191	P	P	04 33 14.3	-2.9
	16nm,0.6s,baz=311,slow=1.8,SNR=9.5						
	16nm,0.6s						
FOZ	Fox Glacier	27.59	199	P	P	04 34 16.9	-1.1
MLZ	Mavora Lakes	29.77	200	P	P	04 34 37.1	0.0
ARMA	Armidale	30.27	240	P	P	04 34 42.1	+0.2
ARMA				IAmb	IAmb	04 35 00.7	
	comp=Z,22nm,1.4s						
CTA	Charters Tower	33.80	260	P	P	04 35 11.3	-0.7
	comp=Z,1.9nm,0.3s,baz=83,slow=11,SNR=6.4						
	comp=Z,1.9nm,0.3s						
CTAO	Charters Tower	33.80	260	P	P	04 35 11.4	-0.7
CTAO				IAmb	IAmb	04 35 18.4	
	comp=Z,27nm,1.5s						
CAN	Canberra	34.01	233	P	P	04 35 14.0	+0.2
CAN				IAmb	IAmb	04 35 44.4	
	comp=Z,21nm,1.1s						
COEN	Coen	37.45	270	P	P	04 35 42.6	-0.1
TOO	Toolangi	37.48	231	P	P	04 35 42.9	+0.3
TOO				IAmb	IAmb	04 35 43.5	
	comp=Z,7.1nm,0.7s						
STKA	Stephens Creek	38.96	241	P	P	04 35 54.5	-0.3
	comp=Z,5.0nm,0.5s,baz=97,slow=11,SNR=11						
	comp=Z,5.0nm,0.5s						
STKA	Stephens Creek	38.96	241	P	P	04 35 54.8	0.0
STKA				IAmb	IAmb	04 35 55.2	
	comp=Z,30nm,0.7s						
BBOO	Buckleboo	43.74	241	P	P	04 36 32.6	-0.4
BBOO				IAmb	IAmb	04 36 32.9	
	comp=Z,14nm,0.6s						
WRA	Warramunga Arr	44.98	259	P	P	04 36 40.9	-2.0
	comp=Z,1.9nm,0.8s,baz=91,slow=8.4,SNR=8.2						
WRA				PcP	PcP	04 38 14.3	-0.6
	comp=Z,0.5nm,0.4s,baz=104,slow=4.3,SNR=3.4						
	comp=Z,1.9nm,0.8s						
AS31	Alice Springs	45.14	254	P	P	04 36 43.4	-0.7
ASAR	Alice Springs	45.14	254	P	P	04 36 43.2	-0.8
	comp=Z,11nm,0.5s,baz=89,slow=8.3,SNR=72						
ASAR				PcP	PcP	04 38 15.0	-0.5
	comp=Z,0.8nm,0.4s,baz=105,slow=3.8,SNR=5.1						
ASAR				ScP	ScP	04 41 26.7	+2.0
	comp=Z,1.1nm,0.9s,baz=118,slow=4.9,SNR=5.3						
ASAR				S	S	04 42 46.1	-3.8
	comp=Z,2.9nm,0.8s,baz=91,slow=16,SNR=17						
	comp=Z,11nm,0.5s						
ASAR	Alice Springs	45.14	254	P	P	04 36 42.9	-1.2
FORT	Forrest	50.34	245	P	P	04 37 22.1	-1.1
KNRA	Kununurra	50.84	264	P	P	04 37 26.2	-0.8
SBA	Scott Base	60.50	184	P	P	04 38 35.4	+1.9
VNDA	Vanda	60.53	185	P	P	04 38 35.0	+1.3
	comp=Z,1.7nm,0.6s,baz=354,slow=6.3,SNR=11						
	comp=Z,1.7nm,0.6s						
VNDA	Vanda	60.53	185	P	P	04 38 35.0	+1.3
VNDA				IAmb	IAmb	04 38 49.6	
	comp=Z,17nm,1.5s						
MJAR	Matsushiro Arr	68.07	323	P	P	04 39 22.5	0.0
	comp=Z,2.1nm,0.4s,baz=155,slow=5.9,SNR=9.3						
	comp=Z,2.1nm,0.4s						
MJAR	Matsushiro Arr	68.07	323	P	P	04 39 22.2	-0.2
ADK	Adak	69.44	1	P	P	04 39 30.5	+0.1
JKA	Kamikawa-asahi	71.39	331	P	P	04 39 43.8	+1.6
ASAJ	Asahikawa	71.39	331	P	P	04 39 43.5	+1.3
	comp=Z,5.0nm,0.6s,baz=111,slow=17,SNR=1.7						
	comp=Z,5.0nm,0.6s						
QSPA	South Pole Qui	72.21	180	P	P	04 39 47.7	+0.9
	comp=Z,5.2nm,0.5s,baz=255,slow=1.0,SNR=32						
	comp=Z,5.2nm,0.5s						
QSPA	South Pole Qui	72.21	180	P	P	04 39 47.8	+0.9
QSPA				IAmb	IAmb	04 39 48.6	
	comp=Z,25nm,1.2s						
TPUB	Ta-pu	72.52	302	P	P	04 39 49.0	-0.3
TPUB				IAmb	IAmb	04 40 02.7	
	comp=Z,30nm,1.2s						
PETK	Petropavlovsk-	73.71	345	P	P	04 39 55.7	+0.2
	comp=Z,4.8nm,0.7s,baz=126,slow=7.9,SNR=5.0						
	comp=Z,4.8nm,0.7s						
PETK	Petropavlovsk-	73.71	345	P	P	04 39 55.5	+0.1
NVAR	Mina Array Bea	79.14	44	P	P	04 40 26.7	+0.5
	comp=Z,1.7nm,0.7s,baz=224,slow=8.7,SNR=14						
	comp=Z,1.7nm,0.7s						
NVAR	Mina Array Bea	79.14	44	P	P	04 40 25.3	-0.8
BELA	Belgrano 2	82.18	173	IAmb	IAmb	04 40 42.0	
	comp=Z,18nm,0.8s						
J20K	Nowinta River	83.83	10	P	P	04 40 49.3	-0.1
TRF	Thorofare Moun	83.88	12	IAmb	IAmb	04 40 49.9	
	comp=Z,6.0nm,0.8s						
RND	Reindeer	84.13	13	IAmb	IAmb	04 40 52.1	
	comp=Z,24nm,1.4s						
TXAR	Lajitas Array	85.67	57	P	P	04 41 01.5	+2.0
	comp=Z,0.8nm,0.8s,baz=227,slow=7.6,SNR=8.4						
	comp=Z,0.8nm,0.8s						
TXAR	Lajitas Array	85.67	57	P	P	04 41 01.3	+1.9
ILAR	Eielson Array	85.75	13	P	P	04 40 58.0	-0.8
	comp=Z,0.7nm,0.4s,baz=224,slow=5.5,SNR=22						
	comp=Z,0.7nm,0.4s						
ILAR	Eielson Array	85.75	13	P	P	04 40 58.4	-0.5
PDAR	Pinedale Array	87.07	43	P	P	04 41 06.2	+0.3
	comp=Z,0.5nm,0.6s,baz=207,slow=1.9,SNR=5.1						
	comp=Z,0.5nm,0.6s						
PDAR	Pinedale Array	87.07	43	P	P	04 41 06.0	0.0
CMAR	Chiang Mai Arr	89.19	290	P	P	04 41 17.6	+1.5
	comp=Z,1.2nm,0.2s,baz=92,slow=3.0,SNR=7.5						
	comp=Z,1.2nm,0.2s						
CMAR	Chiang Mai Arr	89.19	290	P	P	04 41 16.7	+0.6
TROLL	Troll, Antarti	90.37	180	⇑P	P	04 41 20.4	-0.3
	comp=Z,382nm,1.3s						
SNAA	Sanae	90.65	178	⇑P	P	04 41 21.1	-0.8
	comp=Z,59nm,0.8s						
SNAA	Sanae	90.65	178	P	P	04 41 21.2	-0.8
	comp=Z,2.6nm,0.8s,baz=193,slow=9.7,SNR=15						
	comp=Z,2.6nm,0.8s						
SNAA	Sanae	90.65	178	P	P	04 41 21.2	-0.8
SNAA				IAmb	IAmb	04 41 22.3	
	comp=Z,6.3nm,1.1s						
VNA3	Neumayer Olymp	90.78	176	⇑P	P	04 41 21.7	-0.8
	comp=Z,12nm,0.6s						
VNA2	Neumayer--Watz	91.22	177	⇑P	P	04 41 24.4	-0.2
	comp=Z,8.9nm,0.6s,baz=176,slow=4.3						
VNA1	Neumayer--Stat	91.45	177	⇑P	P	04 41 25.3	-0.3
	comp=Z,11nm,0.9s						
YKA	Yellowknife Ar	94.13	25	P	P	04 41 37.5	-0.4
	comp=Z,0.5nm,0.8s,baz=255,slow=5.3,SNR=7.0						
	comp=Z,0.5nm,0.8s						
ARCES	ARCESS Array B	126.32	350	PKP	PKPdf	04 47 18.1	-0.7
	comp=Z,1.9nm,0.8s,baz=358,slow=0.9,SNR=5.0						
FINES	FINESS Array B	133.22	344	PKP	PKPdf	04 47 32.0	-0.2
	comp=Z,5.1nm,1.1s,baz=42,slow=2.3,SNR=3.5						
BNN	Bunyan	143.87	312		PKPab	04 47 51.2	-0.1
BUR08	Bucovina Ar. S	144.71	332		PKPab	04 47 54.4	+0.3
BURAR	Bucovina Array	144.72	332	⇑P	PKPab	04 47 55.1	+1.0
GHRR		144.83	329	⇑P	PKPab	04 47 55.3	+0.9
TESR	Tescani	144.88	330	⇑P	PKPab	04 47 54.5	-0.1
BRTR	Keskin Array B	144.99	315	PKP	PKPab	04 47 54.9	-0.6
	comp=Z,1.3nm,0.6s,baz=137,slow=5.2,SNR=9.0						
ONER	Baraj Valea Uz	145.13	330	⇑P	PKPab	04 47 55.9	+0.3
TPGR	Topolog	145.14	326	⇑P	PKPab	04 47 56.5	+0.8
OSTC	Ostas	145.43	344	*e*PKP	PKPab	04 47 55.7	-0.9
CHVC	Chvalec	145.44	344	*e*PKP	PKPab	04 47 57.1	+0.4
CLL	Collm	145.48	348	*i* PKPbc	PKPbc	04 47 55.5	-0.2
	comp=Z,7.0nm,0.7s						
CLL				*i* PKPab	PKiKP	04 47 57.2	-1.6
TURR	Turia	145.51	330	⇓P	PKiKP	04 47 59.8	+0.7
UPC	Upice	145.53	344	*e*PKP	PKPab	04 47 56.3	-0.7
STEB	Steborice	145.55	342	*e*PKP	PKPab	04 47 56.0	-1.1
DPC	Dobruska-Polom	145.59	344	*e*PKP	PKPab	04 47 56.3	-1.0
KRLC	Kraliky	145.71	343	*e*PKP	PKPab	04 47 56.6	-1.2
PVCC	Panska Ves	145.87	346	*e*PKP	PKiKP	04 47 58.6	-1.0
DOPR	Dopca	145.88	330	⇑P	PKPab	04 47 58.1	-0.4
MARR	Marisel-Cluj	146.36	333	⇑P	PKPab	04 47 59.0	-1.5
PRU	Pruhonice	146.38	345	*e*PKP	PKiKP	04 48 00.4	-0.3
MMAI	Mount Meron Ar	146.40	303	PKPbc	PKPbc	04 47 59.6	+0.6
	comp=Z,1.8nm,0.4s,baz=72,slow=5.4,SNR=13						
DRGR		146.44	334	⇑P	PKPbc	04 47 58.8	+0.1
VRAC	Vranov	146.46	343	⇓P	PKPab	04 47 59.1	-1.5
PSZ	Piszkesteto	146.61	338	⇑P	PKiKP	04 48 00.5	-0.9
KHC	Kasperske Hory	147.40	346	*e*PKP	PKPbc	04 48 00.9	-0.3
CKRC	Cesky Krumlov	147.52	345	*e*PKP	PKPbc	04 48 01.6	+0.2
GEC2	GERESS Array S	147.64	345	PKPbc	PKPbc	04 48 01.4	-0.5
GERES	GERESS Array B	147.64	345	PKPbc	PKPbc	04 48 01.1	-0.8
	comp=Z,1.2nm,0.6s,baz=40,slow=3.5,SNR=11						
BZS	Buzias	147.83	334	⇑P	PKPbc	04 48 02.0	-0.3
HERR	Herculane	148.07	332	⇑P	PKPbc	04 48 02.7	-0.3
TORD	Torodi Ar. Bea	175.32	177	PKPab	PKPab	04 50 05.8	-0.5
	comp=Z,0.4nm,0.8s,baz=154,slow=1.9,SNR=3.6						

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*NEIC **21** 04:30:38.9±2.2, 4°.15S±0°.07×152°.89E±0°.09, h37^{km}±9^{km}, mb4.5/9, Error ellipse: s-maj=13.4km s-min=10.7km az=99.0*

*IDC **21** 04:30:43.5±3.0, 4°.02S×152°.32E, h79^{km}±24^{km}, mb3.8/5, mbtmp4.1/6, MS3.4/2, Error ellipse: s-maj=43.3km s-min=16.5km az=133.0*

ISC 21 04:30:38.3±0.7**, 4°.21S**±0°.10×**152°.8E**±0°.1**, h35**^{km}**, n25,** σ**1^s.82**/26**, mb4.2**/9**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	0.64	271		Pn	04 30 52.6	+1.7
PMG	Port Moresby	7.62	227	P	Pn	04 32 30.3	+3.3
	4.4nm,0.2s,baz=49,slow=19,SNR=3.3						
PMG				S	Sn	04 33 50.5	-1.6
	8.9nm,0.3s,baz=147,slow=17,SNR=3.7						
PMG				LR	LR	04 35 11.3	
	comp=Z,238nm,21.5s,baz=178,slow=36						
PMG	Port Moresby	7.62	227		Pn	04 32 29.2	+2.2
PATS	Pohnpei	12.27	27	Pn	Pn	04 33 30.2	-0.6
DZM	Mont Dzumac	22.14	145	P	P	04 35 30.4	-0.9
DZM				IAmb	IAmb	04 35 33.7	
	comp=Z,18nm,1.2s						
WR8	Warramunga Arr	23.73	227	P	P	04 35 46.7	-0.8
WR8				IAmb	IAmb	04 36 07.8	
	comp=Z,6.5nm,1.1s						
WRA	Warramunga Arr	23.84	227	P	P	04 35 47.8	-0.7
	comp=Z,2.1nm,0.4s,baz=54,slow=9.9,SNR=19						
WRA				S	S	04 39 56.7	-5.7
	comp=Z,0.6nm,0.7s,baz=47,slow=17,SNR=3.2						
	comp=Z,2.1nm,0.4s						
WRA	Warramunga Arr	23.84	227	P	P	04 35 47.1	-1.4
KNRA	Kununurra	26.24	243	P	P	04 36 12.0	+1.6
KNRA				IAmb	IAmb	04 36 53.0	
	comp=Z,16nm,1.4s						
ASAR	Alice Springs	26.59	222	P	P	04 36 12.8	-0.8
	comp=Z,0.7nm,0.5s,baz=54,slow=9.1,SNR=14						
	comp=Z,0.7nm,0.5s						
FITZ	Fitzroy Crossi	29.95	240	P	P	04 36 42.9	-0.6
TUWZ	Tuamarina	41.62	156	P	P	04 38 22.0	-1.1
VNDA	Vanda	73.42	178	P	P	04 42 08.2	+1.7
	comp=Z,2.0nm,0.7s,baz=0.0,slow=3.0,SNR=6.1						
	comp=Z,2.0nm,0.7s						
VNDA	Vanda	73.42	178	P	P	04 42 07.9	+1.4
ILAR	Eielson Array	81.61	22	P	P	04 42 51.3	-1.1
	comp=Z,1.0nm,0.8s,baz=254,slow=4.9,SNR=8.3						
	comp=Z,1.0nm,0.8s						
ILAR	Eielson Array	81.61	22	P	P	04 42 50.9	-1.5
QSPA	South Pole Qui	85.75	180	P	P	04 43 14.9	+1.1
	comp=Z,4.5nm,0.9s,baz=345,slow=2.4,SNR=11						
	comp=Z,4.5nm,0.9s						
QSPA	South Pole Qui	85.75	180	P	P	04 43 14.4	+0.6
QSPA				IAmb	IAmb	04 43 15.9	
	comp=Z,5.0nm,0.8s						
H31M	Peel River	86.86	23	P	P	04 43 19.4	+0.3
G31M	Satah River	87.22	22	P	P	04 43 20.8	0.0
G31M				IAmb	IAmb	04 43 52.3	
	comp=Z,8.0nm,1.5s						
ARTI	Arti	95.93	326	LR	LR	05 28 26.6	
	comp=Z,18nm,19.8s,baz=117,slow=36						
PLCA	Paso Flores	120.25	143	PKP	PKiKP	04 49 28.2	+1.8
	comp=Z,1.6nm,1.1s,baz=194,slow=4.2,SNR=3.3						
LPAZ	La Paz	134.69	118	PKP	PKPdf	04 49 55.1	0.0
	comp=Z,0.8nm,0.7s,baz=232,slow=7.5,SNR=4.4						
TORD	Torodi Ar. Bea	150.12	289	PKPbc	PKPbc	04 50 26.1	-0.5
	comp=Z,3.1nm,0.8s,baz=51,slow=4.0,SNR=16						
BDFB	Brasilia	151.48	134	PKPbc	PKPbc	04 50 29.3	-0.6
	comp=Z,4.0nm,0.8s,baz=240,slow=3.2,SNR=7.0						

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*NEIC **21** 04:33:32.1±1.4, 19°.21N±0°.05×67°.64W±0°.08, h10^{km}±2^{km}, ML2.1/6, Md2.7/9(RSPR), Error ellipse: s-maj=14.3km s-min=7.5km az=248.0*

*RSPR **21** 04:33:36.7, 19°.24N×67°.59W, h35^{km}±28^{km}, MD2.7/9*

*SDD **21** 04:33:38.2±1.9, 19°.03N×67°.59W, h0^{km}±25^{km}, MD2.7, ML2.0, Presumed earthquake*

ISC 21 04:33:35.8±1.9**, 19°.09N**±0°.09×**67°.52W**±0°.06**, h13**^{km}±10^{km}**, n31,** σ**0^s.54**/36**, 12C-4D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDE	Isla Desecheo	0.70	177		Pg	04 33 48.3	-1.2
IDE	Isla Desecheo	0.70	177	⇑*e*P	Pg	04 33 48.3	-1.2
AGPR	Aguadilla, PR	0.73	148	Pn	Pg	04 33 50.2	+0.2
AGPR	Aguadilla, PR	0.73	148	⇑*e*P	Pb	04 33 50.4	-0.1
AGPR	Aguadilla, PR	0.73	148	⇑*e*Pg	Pb	04 33 50.4	-0.1
AGPR				⇑*e*Sg	Sb	04 34 00.8	+0.4
AGPR				IAML		04 34 04.5	
	comp=N,119nm,0.1s						
LSP	Las Mesas	1.00	156		Pb	04 33 55.0	-0.1
LSP					Sg	04 34 08.8	+0.6
LSP	Las Mesas	1.00	156	⇓*e*P	Pb	04 33 55.0	-0.1
LSP	Las Mesas	1.00	156	*e*S	Sg	04 34 08.8	+0.6
AOPR	Arecibo Observ	1.04	135		Pb	04 33 55.5	-0.2
AOPR					Sn	04 34 10.4	-0.1
AOPR	Arecibo Observ	1.04	135	IAML		04 34 27.4	
	comp=E,38nm,1.3s						
AOPR	Arecibo Observ	1.04	135	⇑*e*P	Pb	04 33 55.5	-0.2
AOPR	Arecibo Observ	1.04	135	*e*S	Sn	04 34 10.4	-0.1
UUPR	Utuado, UPR, P	1.13	138		Pb	04 33 56.6	-0.6
UUPR					Sn	04 34 12.9	+0.2
UUPR	Utuado, UPR, P	1.13	138	⇓*e*P	Pb	04 33 56.6	-0.6
UUPR	Utuado, UPR, P	1.13	138	*e*S	Sn	04 34 12.9	+0.2
CRPR	Cabo Rojo, PR	1.15	160		Pn	04 33 56.1	-1.4
CRPR				IAML		04 34 09.2	
	comp=N,32nm,1.6s						
CRPR				IAML		04 34 20.3	
	comp=E,33nm,3.1s						
CRPR	Cabo Rojo, PR	1.15	160		Sn	04 34 13.7	+0.6
CRPR	Cabo Rojo, PR	1.15	160	⇑*e*P	Pn	04 33 57.4	-0.2
CRPR	Cabo Rojo, PR	1.15	160	*e*S	Sn	04 34 13.7	+0.6
CRPR	Cabo Rojo, PR	1.15	160	⇑*e*Pg	Pg	04 33 58.4	+0.5
CRPR				⇑*e*Sg	Sg	04 34 13.1	+0.2
CRPR				IAML		04 34 17.7	
	comp=N,33nm,0.1s						
MLPR	Magueyes Islan	1.20	158	⇑*e*P	Pn	04 33 58.4	+0.1
MLPR	Magueyes Islan	1.20	158	*e*S	Sg	04 34 15.3	+0.7
MLPR	Magueyes Islan	1.20	158	⇑*e*Pg	Pn	04 33 58.1	-0.2
MLPR				⇑*e*Sg	Sg	04 34 15.5	+0.9
MLPR				IAML		04 34 18.2	
	comp=N,59nm,0.3s						
ECPR	Experimental S	1.34	125	⇓*e*P	Pb	04 34 00.4	-0.4
ECPR	Experimental S	1.34	125	*e*S	Sn	04 34 17.5	-0.3
OBIP	Obispado Ponce	1.35	140		Pn	04 34 00.4	0.0
OBIP				IAML		04 34 35.8	
	comp=N,18nm,3.4s						
OBIP	Obispado Ponce	1.35	140		Sb	04 34 18.4	+0.1
OBIP	Obispado Ponce	1.35	140	IAML		04 34 12.2	
	comp=E,14nm,3.1s						
OBIP	Obispado Ponce	1.35	140	⇓*e*P	Pn	04 34 00.4	0.0
OBIP	Obispado Ponce	1.35	140	*e*S	Sb	04 34 18.4	+0.1
MIDR	Miches	1.45	266	*i* P	Pg	04 34 04.0	+0.2
MIDR				⇑*e*Sg	Sn	04 34 20.8	+0.1
MIDR				IAML		04 34 21.7	
	comp=N,8.4nm,0.3s						
MIDR				IAML		04 35 01.7	
	comp=N,18nm,1.9s						

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*AFAD **21** 04:36:29.2, 36°.74N×34°.31E, h7^{km}±1^{km}, ML1.5*

ISK 21 04:36:29.6, 36°.77N×34°.31E, h5^{km}**, ML2.0**/17**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MERS	Mersin	0.20	60	Pg	Pg	04 36 34.1	+0.6
MERS				Sg	Sg	04 36 37.5	+1.4
KIZK	Mersin	0.32	205	P	Pg	04 36 35.7	0.0
KIZK				S	Sg	04 36 40.2	+0.3
KIZK				*i* IAML		04 36 43.0	
	comp=N,50nm,0.2s						
KIZK				*i* IAML		04 36 44.0	
	comp=E,46nm,0.3s						
KIZK	Mersin	0.32	205	Pg	Pg	04 36 35.7	-0.1
SLFK	Silifke-Mersin	0.48	218	Pg	Pg	04 36 39.6	+0.8
SILI	Silifke-Mersin	0.51	218	Pg	Pg	04 36 40.1	+0.7
SILI				Sg	Sb	04 36 47.6	-1.1
KEBE	Keben-Mersin	0.58	236	Pg	Pg	04 36 41.3	+0.6
GULE	Gulek	0.63	36	P	Pg	04 36 42.3	+0.5
GULE				S	Sb	04 36 51.6	-1.0
GULE				*i* IAML		04 36 52.0	
	comp=N,50nm,0.3s						
GULE				*i* IAML		04 36 55.0	
	comp=E,46nm,0.4s						
KERG	Konya-Eregli	0.66	347	P	Pg	04 36 42.3	0.0
KERG				S	Sg	04 36 51.6	+0.7
KERG				*i* IAML		04 36 52.0	
	comp=E,47nm,0.3s						
KERG				*i* IAML		04 36 54.0	
	comp=N,57nm,0.2s						
IKL	Isikli	0.73	224	Pg	Pb	04 36 44.3	-0.5
KARA	Karaisali	0.77	50	Pg	Pb	04 36 45.5	0.0
TEVE	Tevekalti-Mers	0.77	245	Pg	Pb	04 36 45.4	-0.2
KRMN	Karaman	0.93	296	Pg	Pb	04 36 48.3	0.0
BERE	Bereket-Mersin	0.97	245	Pg	Pb	04 36 48.9	-0.1
CMRD	Camardi-Nigde	1.04	31	Pg	Pg	04 36 49.8	+0.2
YURE	YUREGIR	1.06	87	P	Pn	04 36 51.6	+0.4
YURE				S	Sn	04 37 07.9	+1.5
YESY	Yesilyurt	1.11	336	Pn	Pb	04 36 51.2	-0.1
KKBE	Karaman, Kazim	1.19	293	P	Pg	04 36 52.2	-0.2
KKBE				S	Sn	04 37 09.3	-0.2
KKBE				*i* IAML		04 37 11.0	
	comp=N,4.7nm,0.4s						
KKBE				*i* IAML		04 37 14.0	
	comp=E,7.0nm,0.4s						
KOZT	Kozan	1.40	59	Pn	Pg	04 36 56.6	+0.1
HDMB	Hadim	1.48	278	Pn	Pn	04 36 57.3	+0.2
LFK	Lefkose	1.62	203	Pn	Pb	04 36 59.9	-0.1
GAZI	Gazipasa	1.69	252	Pn	Pb	04 37 00.6	-0.7
SEYD	Seydisehir-KON	2.08	289	Pn	Pn	04 37 06.4	+1.2

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*SDD **21** 04:43:30.5±1.0, 19°.17N×67°.30W, h15^{km}±19^{km}, MD2.9, ML2.4, MW2.4, Presumed earthquake*

*RSPR **21** 04:43:31.1, 19°.29N×67°.19W, h26^{km}±19^{km}, MD2.7/11*

ISC 21 04:43:28.7±1.9**, 19°.22N**±0°.09×**67°.13W**±0°.05**, h10**^{km}**, n27,** σ**0^s.69**/29**, 13C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	0.75	179	⇑*e*P	Pb	04 43 44.4	+0.6
AGPR	Aguadilla, PR	0.75	179	*e*S	Sb	04 43 55.3	+1.2
AGPR	Aguadilla, PR	0.75	179	⇑*i*P	Pg	04 43 42.9	-0.3
AGPR				IAML		04 43 54.3	
	comp=N,238nm,0.2s						
IDE	Isla Desecheo	0.89	201	⇓*e*P	Pg	04 43 46.3	+0.4
IDE	Isla Desecheo	0.89	201	*e*S	Sg	04 43 57.8	+0.2
AOPR	Arecibo Observ	0.94	158	⇓*e*P	Pg	04 43 47.6	+0.8
AOPR	Arecibo Observ	0.94	158	*e*S	Sb	04 44 00.5	+0.9
AOPR	Arecibo Observ	0.94	158	⇑*e*Pg	Pg	04 43 47.2	+0.4
AOPR				IAML		04 44 01.8	
	comp=N,216nm,0.3s						
UUPR	Utuado, UPR, P	1.04	158	⇑*e*P	Pg	04 43 48.8	+0.2
UUPR	Utuado, UPR, P	1.04	158	*e*S	Sg	04 44 03.0	+0.8
LSP	Las Mesas	1.04	178	⇑*e*P	Pg	04 43 48.9	+0.2
LSP	Las Mesas	1.04	178	*e*S	Sg	04 44 02.4	+0.1
ECPR	Experimental S	1.16	141	⇓*e*P	Pb	04 43 50.8	0.0
ECPR	Experimental S	1.16	141	*e*S	Sb	04 44 05.2	-0.7
CRPR	Cabo Rojo, PR	1.21	179	⇑*e*P	Pn	04 43 50.9	-0.8
CRPR	Cabo Rojo, PR	1.21	179	*e*S	Sb	04 44 07.7	+0.4
CRPR	Cabo Rojo, PR	1.21	179	⇑*e*Pg	Pn	04 43 51.0	-0.6
CRPR				⇑*e*Sg	Sb	04 44 06.2	-1.2
CRPR				IAML		04 44 09.3	
	comp=N,126nm,0.4s						
MLPR	Magueyes Islan	1.25	176	⇑*e*P	Pn	04 43 52.0	-0.2
MLPR	Magueyes Islan	1.25	176	*e*S	Sb	04 44 07.7	-0.8
MLPR	Magueyes Islan	1.25	176	⇑*i*P	Pn	04 43 52.0	-0.2
MLPR				⇓*e*Sg	Sb	04 44 07.1	-1.4
MLPR				IAML		04 44 09.7	
	comp=N,38nm,0.3s						
OBIP	Obispado Ponce	1.27	157	⇑*e*P	Pn	04 43 52.4	-0.1
OBIP	Obispado Ponce	1.27	157	*e*S	Sb	04 44 09.2	-0.1
GCPR	Guaynabo City	1.34	132	⇑*e*P	Pn	04 43 53.1	-0.4
GCPR	Guaynabo City	1.34	132	*e*S	Sb	04 44 10.5	-0.7
HUMP	Col San Antoni	1.62	131	⇑*e*P	Pn	04 43 58.1	+0.8
HUMP	Col San Antoni	1.62	131	*e*S	Sn	04 44 17.1	-1.2
HATOM	Hato Mayor del	2.17	259	⇓*e*Pg	Pn	04 44 04.8	-0.1
HATOM				IAML		04 44 40.7	
	comp=N,17nm,0.3s						

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*SOF **21** 04:43:31.7, 41°.77N±0°.01×22°.78E±0°.01, h8^{km}±2^{km}, MD3.0/7*

*BEO **21** 04:43:33.7±0.4, 41°.78N×22°.82E, h13^{km}±2^{km}, ML2.5/15*

*THE **21** 04:43:33.9, 42°N±2°×2°3E±°, h2^{km}±1^{km}, M2.4/9, MLh2.4/9*

*ATH **21** 04:43:36.7, 41°.56N×22°.95E, h12^{km}±2^{km}, ML2.4/7, Manual Solution by N.Liadopoulou First location: 2019/12/21 04:44:59, This location: 2019/12/21 05:55:21 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

ISC 21 04:43:33.1±0.9**, 41°.77N**±0°.02×**22°.86E**±0°.02**, h12**^{km}±7^{km}**, n68,** σ**1^s.01**/101**, 6C-3D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKB	Krupnik	0.21	71	P	Pg	04 43 37.9	+0.2
KKB				S	Sg	04 43 40.8	-0.1
KKB	Krupnik	0.21	71	*i* P	Pg	04 43 37.7	0.0
KKB				*i* S	Sg	04 43 41.0	+0.1
MMB	Musomishta	0.70	108	P	Pg	04 43 46.9	+0.2
MMB				S	Sg	04 43 55.8	-0.2
MMB	Musomishta	0.70	108	*i* P	Pg	04 43 46.8	+0.1
MMB				*i* S	Sg	04 43 56.3	+0.3
BOSS	Bosilegrad	0.78	339	*e*Pg	Pg	04 43 47.9	-0.2
BOSS				*e*Sg	Sg	04 43 58.6	+0.3
PLNA	Plana	0.82	31	*i* P	Pg	04 43 48.7	-0.3
PLNA				*i* S	Sb	04 44 00.4	0.0
SRS	Serrai	0.85	140	P	Pg	04 43 49.4	-0.1
SRS				S	Sg	04 44 00.8	+0.1
SRS	Serrai	0.85	140	*e*Pg	Pg	04 43 49.4	-0.1
SRS				*e*Sg	Sb	04 44 01.1	-0.1
SRS	Serrai	0.85	140	P	Pg	04 43 49.5	-0.1
SRS				S	Sg	04 43 58.6	-2.1
GRG	Griva	0.88	203	P	Pg	04 43 50.0	-0.1
GRG				S	Sg	04 44 01.6	0.0
GRG	Griva	0.88	203	P	Pg	04 43 49.7	-0.4
GRG				S	Sg	04 44 00.6	-1.1
VTS	Vitosha	0.89	18	P	Pg	04 43 49.9	-0.5
VTS	Vitosha	0.89	18	*i* P	Pg	04 43 49.8	-0.5
VTS				*i* S	Sg	04 44 01.5	-0.4
VTS	Vitosha	0.89	18	*e*Pg	Pg	04 43 49.5	-0.8
VTS				*e*Sg	Sg	04 44 01.6	-0.4
TRAN	Tran	1.07	352	*i* P	Pb	04 43 53.1	-0.5
THE	Thessaloniki	1.14	176	P	Pb	04 43 54.4	-0.3
THE	Thessaloniki	1.14	176	P	Pb	04 43 54.6	0.0
THE				S	Sb	04 44 06.9	-2.5
DRA2	DRAMA	1.15	122	P	Pg	04 43 55.5	+0.4
HORT	Hortiatis	1.19	171	P	Pb	04 43 55.6	+0.1
HORT	Hortiatis	1.19	171	P	Pb	04 43 55.6	+0.1
HORT				S	Sb	04 44 08.0	-2.8
PGB	Panagyurishte	1.23	52	*i* P	Pb	04 43 56.5	+0.3
BARS	Barje	1.30	324	*e*Pg	Pn	04 43 57.3	+0.3
BARS				*e*Sg	Sb	04 44 14.0	-0.1
RZN	Rozhen	1.41	93	P	Pb	04 43 59.6	+0.2
RZN	Rozhen	1.41	93	*i* P	Pb	04 43 59.7	+0.3
PLD	Plovdiv	1.46	74	*i* P	Pg	04 44 01.6	+0.6
PLD				*i* S	Sg	04 44 21.3	+1.3
PLD	Plovdiv	1.46	74	*e*Pg	Pb	04 44 00.6	+0.5
PLD				*e*Sg	Sg	04 44 20.5	+0.5

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAVA	Kavala	1.47	121	P	Pb	04 44 00.4	+0.2
KAVA	Kavala	1.47	121	P	Pb	04 44 00.7	+0.5
PLG	Polygyros	1.47	162	P	Pb	04 44 00.2	-0.1
PLG	Polygyros	1.47	162	P	Pb	04 44 00.1	-0.1
ZAPS	Zavoj	1.51	354	*e*Pg	Pb	04 44 01.4	+0.4
ZAPS				*e*Sg	Sb	04 44 20.9	+0.8
THS1	Thassos, Thass	1.65	128	P	Pb	04 44 03.1	-0.3
OUR	Ouranopolis	1.67	149	P	Pb	04 44 02.9	-0.7
OUR	Ouranopolis	1.67	149	P	Pn	04 44 02.8	+0.8
KZN	Kozani	1.68	210	P	Pn	04 44 01.4	-0.8
OHR	Ohrid	1.68	248	*i* Pn	Pg	04 44 07.9	+2.6
OHR				*i* Sn	Sg	04 44 28.7	+1.4
LIT	Litokhoron	1.69	190	P	Pn	04 44 03.2	+0.8
MPEP	Malo Peshtene	1.71	22	*i* P	Pg	04 44 05.9	0.0
XANC	Avdira	1.76	116	P	Pb	04 44 05.4	+0.2
THAS	Thassos island	1.82	129	P	Pn	04 44 05.0	+0.9
KDZ	Kurdzhali	1.86	94	*i* P	Pg	04 44 08.1	-0.7
KDZ				*i* S	Sg	04 44 33.3	+0.4
NEST	Nestorio	1.93	226	P	Pb	04 44 08.8	+0.7
SELS	Selova	1.94	319	*e*Pn	Pn	04 44 05.1	-0.7
SELS				*e*Sn	Sn	04 44 31.4	+1.4
ZAGS	Zajecar	2.09	347	*e*Pn	Pn	04 44 09.1	+1.2
ZAGS				*e*Sn	Sn	04 44 34.4	+0.6
RDO	Rodhopi	2.11	106	P	Pb	04 44 10.9	-0.2
GOCS	Kraljevo Serbi	2.31	321	*e*Pn	Pn	04 44 11.7	+0.7
GOCS				*e*Sn	Sn	04 44 39.6	+0.2
BORS2	Bor- Borsko je	2.40	345	*e*Pn	Pn	04 44 11.1	-1.0
BORS2				*e*Sn	Sn	04 44 40.7	-0.7
SMTH	Samothraki Isl	2.40	122	P	Pn	04 44 12.9	+0.8
NEO	Neokhori	2.48	173	P	Pn	04 44 13.9	+0.7
ALN	Alexandroupoli	2.55	109	P	Pb	04 44 16.6	-2.1
LIA	Limnos Island	2.57	136	P	Pn	04 44 15.4	+0.9
SJES	Sjenica	2.60	306	*e*Pn	Pn	04 44 15.7	+0.7
GRUS	Gruza	2.64	324	*e*Pn	Pn	04 44 16.3	+0.9
GRUS				*e*Sn	Sn	04 44 47.3	0.0
IVAS	Ivanjica	2.69	313	*e*Pn	Pn	04 44 16.5	+0.3
IVAS				*e*Sn	Sn	04 44 49.6	+0.9
TETR	Tetrakomo, Epi	2.71	207	P	Pn	04 44 17.9	+1.5
AOS2	Alonissos-2	2.73	164	P	Pn	04 44 17.6	+1.0
AGG	Agios Georgios	2.78	189	P	Pn	04 44 18.4	+1.1
KUBS	Kucevo	2.78	342	*e*Pn	Pn	04 44 17.2	-0.1
KUBS				*e*Sn	Sn	04 44 49.2	-1.6
TRUS	Trudelj	3.04	325	*e*Pn	Pn	04 44 22.6	+1.7
TRUS				*e*Sn	Sn	04 44 58.0	+0.8
MDVR	Moldovita	3.12	345	⇑P	Pn	04 44 23.5	+1.4
MDVR				⇑S	Pg	04 44 31.3	-1.6
HERR	Herculane	3.12	354	⇑P	Pn	04 44 23.0	+0.9
HERR				⇓S	Pg	04 44 30.7	-2.2
DIVS	Divibare	3.14	319	*e*Pn	Pn	04 44 22.7	+0.4
DIVS				*e*Sn	Sn	04 44 58.4	-1.3
GZR	Gura Zlata	3.62	359	⇑P	Pn	04 44 29.6	+0.7
GZR				⇓S	Pg	04 44 40.1	-2.3
GZR	Gura Zlata	3.62	359	*e*Pn	Pn	04 44 29.2	+0.2
BZS	Buzias	3.95	347	⇑P	Pn	04 44 33.1	-0.3
BZS	Buzias	3.95	347	*e*Pn	Pn	04 44 33.5	+0.1
MLR	Muntele Rosu	4.34	30	⇑P	Pn	04 44 42.7	+3.8
MORH	Mrgy, Hungar	5.38	327	⇓P	Pn	04 44 53.9	+0.9

IDC ***21*** *04:51:03.6±0.8, 6°.53N×125°.18E, h0^{km}, mb3.9/8, mbtmp3.9/8, MS2.7/1, Error ellipse: s-maj=20.6km s-min=8.6km az=117.0*

DJA ***21*** *04:51:04.8±1.9, 7˚N±17˚×12˚5E±˚, h55^{km}±21^{km}, M4.7/7, mB5.0/3, mb5.0/6, MLv4.6/7, Mw(mB)4.3/3*

NEIC ***21*** *04:51:05.3±1.4, 6°.61N±0°.09×125°.2E±0°.1, h10^{km}±2^{km}, mb4.4/9, Error ellipse: s-maj=24.3km s-min=7.6km az=127.0*

ISC 21 04:51:08.4±0.8**, 6°.65N**±0°.07×**125°.2E**±0°.1**, h35^{km}, n30, σ1^{s}50**/30**, mb4.1**/13**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.53	39	Pg	Pn	04 51 17.9	-1.6
	325nm,0.3s,baz=239,slow=3.3,SNR=15						
DAV				Lg	Lg	04 51 24.4	
	1µm,0.3s,baz=259,slow=10,SNR=19						
DAV	Davao City (W)	0.53	39		Pn	04 51 17.8	-1.7
DAV	Davao City (W)	0.53	39	P	Pn	04 51 17.6	-1.9
DAV				S	Sn	04 51 27.8	+0.5
DAV	Davao City (W)	0.53	39	P	Pn	04 51 22.0	+2.5
SGSI	Sangihe	2.96	174	P	Pn	04 51 52.4	-0.5
GTOI	Gorontalo	6.38	201	P	Pn	04 52 38.9	-1.0
MRSI	Marisa	6.96	208	P	Pn	04 52 47.4	-0.5
	0.3nm860nm51nm,0.5s						
TOLI2	Tolitoli	7.08	219		Pn	04 52 47.0	-2.5
LUWI	Luwuk	8.03	198		Pn	04 53 06.4	+3.8
LUWI	Luwuk	8.03	198	P	Pn	04 53 04.2	+1.6
MTN	Manton Dam	20.23	163	P	P	04 55 40.6	-0.1
KNRA	Kununurra	22.46	171	P	P	04 56 03.9	-0.7
KNRA				IAmb	IAmb	04 56 05.4	
	comp=Z,11nm,0.5s						
FITZ	Fitzroy Crossi	24.60	179	P	P	04 56 25.0	-0.4
	comp=Z,2.5nm,0.4s,baz=6.6,slow=8.4,SNR=23						
	comp=Z,2.5nm,0.4s						
FITZ	Fitzroy Crossi	24.60	179	P	P	04 56 24.6	-0.8
COEN	Coen	27.13	139	P	P	04 56 48.1	-0.4
COEN				IAmb	IAmb	04 56 55.9	
	comp=Z,9.0nm,1.2s						
WB0	Warramunga Arr	27.75	161	P	P	04 56 52.6	-1.4
WB0				IAmb	IAmb	04 57 26.5	
	comp=Z,6.8nm,1.2s						
WRA	Warramunga Arr	27.90	161	P	P	04 56 53.8	-1.5
	comp=Z,0.9nm,0.6s,baz=328,slow=11,SNR=6.7						
	comp=Z,0.9nm,0.6s						
WR8	Warramunga Arr	27.96	161	P	P	04 56 54.9	-0.9
WR8				IAmb	IAmb	04 57 15.2	
	comp=Z,10nm,1.5s						
KSRS	Korea Array	30.76	4	LR	LR	05 12 09.9	
	comp=Z,12nm,18.6s,baz=20,slow=41						
ASAR	Alice Springs	31.30	165	P	P	04 57 24.2	-1.2
	comp=Z,1.1nm,0.6s,baz=351,slow=8.2,SNR=24						
	comp=Z,1.1nm,0.6s						
ASAR	Alice Springs	31.30	165	P	P	04 57 23.8	-1.6
BBOO	Buckleboo	40.57	166	P	P	04 58 44.6	0.0
STKA	Stephens Creek	41.37	159	P	P	04 58 51.2	0.0
	comp=Z,2.6nm,0.6s,baz=319,slow=8.8,SNR=4.4						
	comp=Z,2.6nm,0.6s						
STKA	Stephens Creek	41.37	159	P	P	04 58 50.9	-0.4
MKAR	Makanchi Array	54.33	325	P	P	05 00 33.7	+2.2
	comp=Z,0.7nm,0.5s,baz=121,slow=9.2,SNR=6.3						
	comp=Z,0.7nm,0.5s						
MKAR	Makanchi Array	54.33	325	P	P	05 00 31.1	-0.3
KURBB	Kurchatov Arra	58.50	327	P	P	05 01 01.6	+0.6
	comp=Z,0.5nm,0.3s,baz=126,slow=6.2,SNR=10						
	comp=Z,0.5nm,0.3s						
KURK	Kurchatov	58.50	327	P	P	05 01 02.3	+1.3
KURK				IAmb	IAmb	05 01 05.6	
	comp=Z,1.9nm,0.8s						
BVAR	Borovoye Array	64.08	327	P	P	05 01 38.6	-0.2
	comp=Z,0.4nm,0.5s,baz=118,slow=8.3,SNR=3.8						
	comp=Z,0.4nm,0.5s						
ILAR	Eielson Array	83.12	26	P	P	05 03 31.9	+1.5
	comp=Z,0.5nm,1.0s,baz=237,slow=5.0,SNR=4.1						
	comp=Z,0.5nm,1.0s						

GCG 21 04:52:15.8±0.7**, 13°.99N×91°.46W, h47^{km}**±24^{km}**, MD3.8, ML2.8, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG5	El Palmar, Qui	0.43	14	*e*P	Pn	04 52 29.9	+3.7
STG5				*i* S	Sn	04 52 41.1	+7.5
STG2	El Palmar, Qui	0.46	10	*e*P	Pn	04 52 30.7	+4.2
STG2				*e*S	Sn	04 52 42.0	+7.9
STG8	El Palmar, Qui	0.47	13	*e*P	Pn	04 52 30.7	+3.9
STG8				*i* S	Sn	04 52 42.9	+8.3
STG8				IAML		04 52 44.2	
	comp=E,350nm,0.2s						
APG	El Apazote	1.40	43	*e*P	Pn	04 52 39.9	+0.8
NUBE	Las Nubes	1.63	93	*e*P	Pn	04 52 40.0	-2.2

IDC ***21*** *04:59:18.8±0.8, 6°.48N×125°.30E, h0^{km}, mb3.9/8, mbtmp3.9/8, MS3.0/2, Error ellipse: s-maj=24.0km s-min=8.5km az=107.0*

NEIC ***21*** *04:59:20.3±1.4, 6°.58N±0°.10×125°.2E±0°.1, h10^{km}±2^{km}, mb4.3/8, Error ellipse: s-maj=24.0km s-min=4.7km az=131.0*

ISC 21 04:59:20.3±0.8**, 6°.61N**±0°.08×**125°.3E**±0°.2**, h10^{km}, n24, σ1^{s}49**/19**, mb4.0**/12**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.55	34	Pg	Pg	04 59 32.8	+1.7
	298nm,0.3s,baz=292,slow=1.9,SNR=13						
DAV				Lg	Lg	04 59 38.9	
	538nm,0.3s,baz=270,slow=16,SNR=10.0						
DAV				LR	LR	05 00 06.0	
	comp=Z,738nm,19.1s,baz=220,slow=73						
TOLI2	Tolitoli	7.06	220	Pn	Pn	05 01 02.0	-1.9
LUWI	Luwuk	8.00	198	Pn	Pn	05 01 19.5	+2.8
MTN	Manton Dam	20.19	163	P	P	05 03 55.5	+0.1
FITZ	Fitzroy Crossi	24.55	179	P	P	05 04 39.9	-0.6
	1.8nm,0.5s,baz=5.0,slow=7.9,SNR=20						
	1.8nm,0.5s						
FITZ	Fitzroy Crossi	24.55	179	P	P	05 04 39.7	-0.8
WRA	Warramunga Arr	27.85	161	P	P	05 05 07.3	-3.1
	0.9nm,0.6s,baz=328,slow=10,SNR=6.2						
	0.9nm,0.6s						
WR8	Warramunga Arr	27.92	161	P	P	05 05 09.6	-1.3
WR8				IAmb	IAmb	05 05 47.8	
	comp=Z,5.4nm,1.1s						
CMAR	Chiang Mai Arr	28.22	297	LR	LR	05 16 47.5	
	comp=Z,14nm,18.4s,baz=305,slow=37						
ASAR	Alice Springs	31.25	165	P	P	05 05 39.7	-0.8
	comp=Z,0.9nm,0.6s,baz=352,slow=8.6,SNR=20						
	comp=Z,0.9nm,0.6s						
ASAR	Alice Springs	31.25	165	P	P	05 05 38.6	-1.9
INKA	Innaminka	37.28	157	P	P	05 06 31.9	-0.8
INKA				IAmb	IAmb	05 06 33.6	
	comp=Z,2.2nm,0.7s						
BBOO	Buckleboo	40.52	166	P	P	05 06 59.4	-0.4
STKA	Stephens Creek	41.32	159	P	P	05 07 05.9	-0.5
	comp=Z,1.8nm,0.3s,baz=337,slow=13,SNR=1.4						
	comp=Z,1.8nm,0.3s						
SONM	Songino Array	44.12	342	P	P	05 07 26.4	-2.7
MKAR	Makanchi Array	54.38	325	P	P	05 08 48.5	+1.0
	comp=Z,0.9nm,0.8s,baz=128,slow=7.2,SNR=6.5						
	comp=Z,0.9nm,0.8s						
MKAR	Makanchi Array	54.38	325	P	P	05 08 47.2	-0.3
KURBB	Kurchatov Arra	58.55	327	P	P	05 09 17.2	+0.1
	comp=Z,0.8nm,0.4s,baz=127,slow=5.8,SNR=10						
	comp=Z,0.8nm,0.4s						
KURK	Kurchatov	58.55	327	P	P	05 09 16.5	-0.6
KURK				IAmb	IAmb	05 09 21.0	
	comp=Z,2.6nm,0.9s						
BVAR	Borovoye Array	64.13	327	P	P	05 09 56.9	+2.0
	comp=Z,0.7nm,0.7s,baz=108,slow=9.5,SNR=4.7						
	comp=Z,0.7nm,0.7s						
AB31	Akbulak array	69.02	320	P	P	05 10 24.4	-1.7
AB31				IAmb	IAmb	05 10 39.9	
	comp=Z,4.5nm,1.5s						
ABKAR	Akbulak array	69.02	320	P	P	05 10 25.1	-1.0
ILAR	Eielson Array	83.15	26	P	P	05 11 45.0	-1.3
	comp=Z,0.3nm,0.7s,baz=262,slow=6.0,SNR=4.1						
	comp=Z,0.3nm,0.7s						
BRTR	Keskin Array B	87.08	309	LR	LR	05 55 26.2	
	comp=Z,16nm,18.2s,baz=284,slow=39						

IDC ***21*** *05:10:12.7±0.9, 3°.34S×146°.31E, h0^{km}, mb4.4/16, mbtmp4.4/17, ML1.9/1, MS3.5/18, Error ellipse: s-maj=34.3km s-min=12.2km az=100.0*

NEIC ***21*** *05:10:13.7±0.9, 3°.28S±0°.07×146°.23E±0°.10, h10^{km}±1^{km}, mb4.6/30, Error ellipse: s-maj=17.3km s-min=10.9km az=115.0*

DJA ***21*** *05:10:22.6±0.9, 4˚S±6˚×14˚6E±˚, h69^{km}±8^{km}, M4.8/20, mB5.8/4, mb4.5/20, MLv4.7/2, Mw(mB)5.4/4, MwMwp5.0/2, Mwp5.2/2*

ISC 21 05:10:13.8±0.5**, 3°.28S**±0°.06×**146°.28E**±0°.09**, h10^{km}, n97, σ1^{s}23**/79**, mb4.5**/36**, MS3.5**/16**, 2D, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	1.64	42		Pn	05 10 43.2	+0.4
JAY	Jayapura	5.62	278	LR	LR	05 13 38.2	
	comp=Z,241nm,18.4s,baz=202,slow=36						
JAY	Jayapura	5.62	278	P	Pn	05 11 31.9	-5.6
PMG	Port Moresby	6.15	172	Pn	Pn	05 11 45.6	+0.9
	2.1nm,0.3s,baz=5.3,slow=8.0,SNR=8.6						
PMG				LR	LR	05 14 07.8	
	comp=Z,286nm,18.4s,baz=348,slow=39						
	37nm,1.0s						
PMG	Port Moresby	6.15	172		Pn	05 11 44.1	-0.6
PMG	Port Moresby	6.15	172	P	Pn	05 11 45.3	+0.5
	0.2nm34nm,1.1s						
SMPI	Sarmi	7.67	279	P	Pn	05 12 11.8	+6.2
	0.3nm2µm42nm,1.5s						
MMPI	Merauke	7.80	228	P	Pn	05 12 06.1	-1.4
COEN	Coen	11.04	196		Pn	05 12 52.6	+0.7
SIJI	Sorong	15.19	279	P	Pn	05 13 49.1	+0.5
	3µm8µm13nm,1.1s						
SWI	Sorong	15.20	279	P	Pn	05 13 50.1	+1.4
	4µm12nm,0.4s						
CTA	Charters Tower	16.70	180	Pn	P	05 14 12.1	+1.6
	0.2nm,0.3s,baz=327,slow=12,SNR=8.4						
CTAO	Charters Tower	16.70	180		Pn	05 14 07.5	-0.6
CTAO				IAmb	IAmb	05 14 13.3	
	comp=Z,34nm,1.1s						
MTN	Manton Dam	17.73	237		Pn	05 14 20.0	-1.1
KRAI	Karang Ratu	17.85	269	P	P	05 14 26.1	+2.9
	comp=Z,9µmcomp=Z,14nm,1.2s						
WB0	Warramunga Arr	20.07	214		P	05 14 47.5	-0.2
WB0				IAmb	IAmb	05 14 48.4	
	comp=Z,45nm,0.9s						
WR0	Warramunga Arr	20.15	214	P	P	05 14 47.2	-1.2
WR0				IAmb	IAmb	05 14 49.3	
	comp=Z,50nm,1.0s						
WR8	Warramunga Arr	20.17	214	P	P	05 14 47.8	-0.8
WR8				IAmb	IAmb	05 14 49.5	
	comp=Z,42nm,0.9s						
WRAB	Tennant Creek	20.23	214	P	P	05 14 47.5	-1.8
WRAB				IAmb	IAmb	05 14 50.3	
	comp=Z,39nm,0.8s						
WB2	Warramunga Arr	20.24	214	P	P	05 14 48.1	-1.3
WB2				IAmb	IAmb	05 14 50.5	
	comp=Z,43nm,0.9s						
WRA	Warramunga Arr	20.25	214	P	P	05 14 48.4	-1.1
	comp=Z,28nm,0.8s,baz=40,slow=12,SNR=81						
	comp=Z,28nm,0.8s						
KNRA	Kununurra	21.19	233		P	05 14 57.7	-1.9
EIDS	Eidsvold	22.44	169		P	05 15 12.2	-0.9
EIDS				IAmb	IAmb	05 15 17.2	
	comp=Z,10nm,0.8s						
SOEI	Soe	22.78	253	P	P	05 15 14.8	-2.2
SOEI	Soe	22.78	253	P	P	05 15 15.3	-1.6
BATI	Baumata	23.47	252	P	P	05 15 23.3	-0.6
AS31	Alice Springs	23.53	209		P	05 15 22.5	-1.9
ASAR	Alice Springs	23.53	209	P	P	05 15 23.1	-1.3
	comp=Z,16nm,0.8s,baz=40,slow=8.9,SNR=104						
ASAR				S	S	05 19 41.0	+2.4
	comp=Z,0.3nm,0.7s,baz=32,slow=18,SNR=4.8						
ASAR				LR	LR	05 25 43.3	
	comp=Z,188nm,20.1s,baz=20,slow=40						
	comp=Z,16nm,0.8s						
ASAR	Alice Springs	23.53	209	P	P	05 15 23.9	-0.6
MRSI	Marisa	24.61	278	P	P	05 15 35.3	+0.7
APSI	Ampana	24.72	275	P	P	05 15 36.5	+0.9
	comp=Z,27nm,0.9s						
INKA	Innaminka	24.89	192		P	05 15 36.0	-0.9
INKA				IAmb	IAmb	05 16 00.1	
	comp=Z,11nm,1.1s						
FITZ	Fitzroy Crossi	25.01	232	LR	LR	05 25 51.4	
	comp=Z,382nm,19.1s,baz=56,slow=38						
FITZ	Fitzroy Crossi	25.01	232		P	05 15 36.5	-1.7
TOLI2	Tolitoli	25.85	279	P	P	05 15 44.1	-1.8
TOLI2				IAmb	IAmb	05 16 01.1	
	comp=Z,11nm,0.9s						
BNSI	Bone	26.13	267	P	P	05 15 56.1	+7.7
BKSI	Bulukumba	26.16	265	P	P	05 15 50.1	+1.5
	comp=Z,13nm,1.3s						
TTSI	Tana Toraja	26.42	270	P	P	05 15 51.3	+0.3
	comp=Z,1µmcomp=Z,11nm,0.9s						
SPSI	Sidrap Palu	26.46	268	P	P	05 15 51.7	+0.3
	comp=Z,11nm,1.3s						
DBNI	Kabupaten Domp	28.29	258	P	P	05 16 08.4	+0.6
STKA	Stephens Creek	28.78	188	P	P	05 16 13.8	+1.8
	comp=Z,5.2nm,0.8s,baz=350,slow=13,SNR=2.9						
	comp=Z,5.2nm,0.8s						
JOW	Kunigami	34.62	331	LR	LR	05 28 08.4	
	comp=Z,86nm,20.5s,baz=346,slow=31						
JHJ	Hachijo jima 2	36.72	351	LR	LR	05 30 42.8	
	comp=Z,51nm,18.8s,baz=210,slow=34						
JNU	Nakatsue	39.03	339	LR	LR	05 31 35.7	
	comp=Z,28nm,18.3s,baz=134,slow=33						
JYT	Yasato	39.71	352	P	P	05 17 45.5	-0.9
NWAO	Narrogin (SRO)	40.11	219	LR	LR	05 35 34.9	
	comp=Z,190nm,18.4s,baz=186,slow=38						
MJAR	Matsushiro Arr	40.33	350	P	P	05 17 51.5	-0.2
	comp=Z,3.0nm,0.9s,baz=176,slow=9.7,SNR=4.9						
	comp=Z,3.0nm,0.9s						
NJ2	Nanjing	43.74	326	*e*P	P	05 18 19.3	-0.2
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
KSRS	Korea Array	43.97	339	P	P	05 18 22.4	+1.1
	comp=Z,7.4nm,1.0s,baz=154,slow=10.0,SNR=15						
KSRS				LR	LR	05 33 43.5	
	comp=Z,39nm,21.9s,baz=155,slow=32						
	comp=Z,7.4nm,1.0s						
TIA	Tai'an	47.80	328	P	P	05 18 53.0	+1.4
TIA				pmax	pmax		
	comp=Z,14nm,1.0s						
USRK	Ussuriysk Ar.	48.98	346	P	P	05 19 01.9	+1.4
	comp=Z,6.4nm,0.9s,baz=165,slow=7.8,SNR=6.1						
	comp=Z,6.4nm,0.9s						
HNS	HongShan	49.98	327	⇓P	P	05 19 08.8	+0.5
HNS				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KMI	Kunming	50.80	306	P	P	05 19 16.8	+1.8
KMI				pmax	pmax		
	comp=Z,17nm,1.3s						
CMAR	Chiang Mai Arr	51.37	297	P	P	05 19 20.1	+1.0
	comp=Z,1.3nm,0.3s,baz=111,slow=6.1,SNR=9.3						
	comp=Z,1.3nm,0.3s						
CMAR	Chiang Mai Arr	51.37	297	P	P	05 19 19.1	0.0
CHTO	Chiang Mai	51.49	297	P	P	05 19 18.4	-1.6
BNX	BinXian	51.61	343	⇓P	P	05 19 21.3	+0.9
BNX				pmax	pmax		
	comp=Z,14nm,1.2s						
PZH	PanZhiHua	52.23	307	P	P	05 19 27.3	+1.7
HHC	Hu-ho-hao-te	54.16	328	*e*P	P	05 19 40.3	+0.8
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,100nm,4.2s						
LZH	Lanzhou	55.70	319	*e*P	P	05 19 45.8	-5.1
LZH				sP	pwP	05 19 57.0	+0.8
LZH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HEH	HeiHe	55.75	345	*e*P	P	05 19 51.0	+0.3
HEH				pmax	pmax		
	comp=Z,12nm,1.1s						
PEA0B	Petropavlovsk-	57.00	8	P	P	05 19 58.0	-1.6
PETK	Petropavlovsk-	57.00	8	LR	LR	05 40 29.0	
	comp=Z,29nm,21.8s,baz=235,slow=32						
HILR	Hailar Array B	57.41	340	P	P	05 20 04.0	+1.4
	comp=Z,1.6nm,0.5s,baz=148,slow=12,SNR=7.0						
	comp=Z,1.6nm,0.5s						
GTA	Gaotai	60.21	320	*e*P	P	05 20 24.3	+1.9
GTA				sP	pwP	05 20 32.8	+5.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ULN	Ulaanbaatar	61.40	331	P	P	05 20 29.9	-0.5
ULN				IAmb	IAmb	05 20 48.4	
	comp=Z,3.5nm,1.1s						
ULN	Ulaanbaatar	61.40	331	P	P	05 20 32.1	+1.7
SONM	Songino Array	61.70	331	P	P	05 20 34.3	+1.9
	comp=Z,1.6nm,0.8s,baz=148,slow=4.8,SNR=10						
SONM				LR	LR	05 46 55.6	
	comp=Z,44nm,19.4s,baz=302,slow=36						
	comp=Z,1.6nm,0.8s						
SONM	Songino Array	61.70	331	P	P	05 20 31.2	-1.1
SONM				IAmb	IAmb	05 20 36.1	
	comp=Z,2.7nm,1.0s						
MA2	Magadan	62.77	3	LR	LR	05 46 36.7	
	comp=Z,13nm,19.3s,baz=100,slow=35						
CASY	Casey	67.68	195	P	P	05 21 10.7	-0.2
MKAR	Makanchi Array	74.96	320	P	P	05 21 57.0	+1.6
	comp=Z,3.8nm,1.1s,baz=106,slow=6.4,SNR=8.3						
	comp=Z,3.8nm,1.1s						
MKAR	Makanchi Array	74.96	320	P	P	05 21 54.0	-1.4
ZAA0	Zalesovo Array	76.34	328	P	P	05 22 02.6	-0.5
ZALV	Zalesovo Beam	76.34	328	P	P	05 22 03.6	+0.5
	comp=Z,0.4nm,0.3s,baz=93,slow=7.4,SNR=3.8						
	comp=Z,0.4nm,0.3s						
ZALV	Zalesovo Beam	76.34	328	P	P	05 22 02.9	-0.2
KDAK	Kodiak Island	77.87	29	LR	LR	05 48 36.5	
	comp=Z,69nm,21.6s,baz=244,slow=30						
KURK	Kurchatov	78.62	323		P	05 22 14.7	-1.1
KURK				IAmb	IAmb	05 22 18.2	
	comp=Z,6.1nm,1.1s						
KURBB	Kurchatov Arra	78.64	323	P	P	05 22 16.5	+0.5
	comp=Z,0.6nm,0.2s,baz=109,slow=4.4,SNR=8.4						
	comp=Z,0.6nm,0.2s						
FRU1	Bishkek	78.88	315	P	P	05 22 16.7	-0.9
NRIK	Noril'sk	82.48	342	P	P	05 22 37.4	+1.1
	comp=Z,9.2nm,0.9s,baz=112,slow=5.6,SNR=13						
NRIK				LR	LR	05 59 33.0	
	comp=Z,21nm,19.1s,baz=120,slow=36						
	comp=Z,9.2nm,0.9s						
NRIK	Noril'sk	82.48	342		P	05 22 36.3	0.0
ILAR	Eielson Array	83.29	23	P	P	05 22 40.3	-0.2
	comp=Z,2.9nm,1.0s,baz=253,slow=3.8,SNR=14						
	comp=Z,2.9nm,1.0s						
J25K	Salcha River,	83.83	24	P	P	05 22 42.0	-1.5
J25K				IAmb	IAmb	05 22 46.1	
	comp=Z,7.3nm,1.1s						
F24K	Squaw Lake	83.99	21	P	P	05 22 43.7	-0.5
F24K				IAmb	IAmb	05 22 52.5	
	comp=Z,3.6nm,0.9s						
GRNC	Granite Creek	84.13	28	P	P	05 22 43.0	-2.2
BVAR	Borovoye Array	84.16	324	P	P	05 22 44.8	-0.5
	comp=Z,1.2nm,0.7s,baz=101,slow=6.3,SNR=8.5						
	comp=Z,1.2nm,0.7s						
HYT	Haines Junctio	86.16	28	P	P	05 22 54.8	-0.5
HYT				IAmb	IAmb	05 23 03.7	
	comp=Z,7.1nm,1.0s						
S34M	Telegraph Cree	88.82	32	P	P	05 23 07.7	-0.3
S34M				IAmb	IAmb	05 23 33.3	
	comp=Z,7.1nm,1.0s						
BBB	Bella Bella	89.87	38	LR	LR	05 55 28.1	
	comp=Z,50nm,19.6s,baz=244,slow=30						
AB31	Akbulak array	90.06	319	P	P	05 23 12.7	-1.3
ABKAR	Akbulak array	90.06	319	P	P	05 23 13.7	-0.3
YBH	Yreka Blue Hor	92.92	49	LR	LR	06 00 35.2	
	comp=Z,5.4nm,18.2s,baz=281,slow=32						
NVAR	Mina Array Bea	96.27	52	LR	LR	05 58 28.0	
	comp=Z,65nm,21.0s,baz=275,slow=30						
YKA	Yellowknife Ar	97.11	28	P	Pdif	05 23 47.0	+0.8
	comp=Z,1.0nm,1.0s,baz=279,slow=5.4,SNR=8.4						
	comp=Z,1.0nm,1.0s						
PFO	Pinyon Flats O	97.86	57	LR	LR	06 01 21.2	
	comp=Z,52nm,19.0s,baz=250,slow=31						
TORD	Torodi Ar. Bea	143.65	288	PKP	PKPbc	05 29 47.8	+0.2
	comp=Z,1.6nm,0.9s,baz=87,slow=5.3,SNR=4.5						

SVSA ***21*** *05:15:53.4±0.8, 37°.38N×24°.68W, h2^{km}, ML3.6(INMG), Error ellipse: s-maj=5.5km s-min=1.6km az=82.0, #DIST_RANGE: LOCAL #IPMA_REGION: Fossa da Povoao*

ISC 21 05:15:51.2±1.4**, 37°.40N**±0°.07×**24°.65W**±0°.08**, h32^{km}**±11^{km}**, n9, σ1^{s}43**/18**, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSMN	Pico do Norte,	0.51	220	*e*P	Pn	05 16 02.3	0.0
PSMN				*e*S	Sb	05 16 08.7	-0.6
PSMN				*i* IAML		05 16 09.3	
PSMN				*i* IAML		05 16 09.4	
PSMN				*i* IAML		05 16 09.4	
BART	Pico Bartolome	0.56	313	*e*P	Pn	05 16 02.9	-0.2
BART				*e*S	Sb	05 16 10.4	-0.2
BART				*i* IAML		05 16 11.9	
BART				*i* IAML		05 16 11.9	
BART				*i* IAML		05 16 11.9	
PGRON	Lagoa das Cont	0.68	303	*e*P	Pb	05 16 04.9	+0.2
PGRON				*e*S	Sb	05 16 13.6	-0.3
PGRON				*i* IAML		05 16 14.1	
PGRON				*i* IAML		05 16 14.2	
PGRON				*i* IAML		05 16 14.3	
PCALD	Caldeiras da R	0.77	301	*e*P	Pb	05 16 06.1	-0.1
PCALD				*e*S	Sn	05 16 15.9	-0.6
CMLA	Cha da Macela	0.78	298	*e*P	Pb	05 16 06.3	-0.1
CMLA				*e*S	Sn	05 16 16.1	-0.6
CMLA				*i* IAML		05 16 17.3	
CMLA				*i* IAML		05 16 17.3	
CMLA				*i* IAML		05 16 17.9	
PDA	Ponta Delgada	0.88	294	*e*P	Pb	05 16 07.7	-0.2
PDA				*e*S	Sn	05 16 18.3	-0.6
PDA				*i* IAML		05 16 19.1	

PDA				*i* IAML		05 16 19.2	
PDA				*i* IAML		05 16 19.8	
PSCM	**Serra do Cume**	**2.34**	**305**	*e*P	**Pn**	**05 16 28.8**	**+1.3**
PSCM				*e*S	**Sn**	**05 16 54.1**	**-1.0**
PSCM				*i* IAML		05 16 56.8	
PSCM				*i* IAML		05 16 58.1	
PSCM				*i* IAML		05 16 58.7	
PAGU	**Agualva, Azore**	**2.42**	**305**	*e*P	**Pn**	**05 16 30.0**	**+1.5**
PAGU				*e*S	**Sn**	**05 16 56.4**	**-0.7**
PAGU				*i* IAML		05 16 59.4	
PAGU				*i* IAML		05 16 59.4	
PAGU				*i* IAML		05 17 01.9	
PMAR	**Madeira**	**7.87**	**124**	*e*P	**Pn**	**05 17 47.6**	**+4.0**
PMAR				*e*S	**Sn**	**05 19 09.3**	**-2.4**
PMAR				IAML		05 19 13.0	
PMAR				IAML		05 19 13.2	
PMAR				IAML		05 19 17.0	

MDD 21 05:18:08.3±1.1, 29°.24N×18°.24W, h64km±10km, mb_Lg2.3/14, Error ellipse: s-maj=13.4km s-min=9.6km az=114.0, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGOR	**Puntagorda, La**	**0.50**	**155**	P	Pn	05 18 20.1	-0.6
CGOR				*i* IVmb_Lg		05 18 42.3	
CROM	**Garafia, La Pa**	**0.56**	**147**	P	Pn	05 18 20.3	-1.3
CROM				S	Sn	05 18 30.0	-1.3
CROM				*i* IVmb_Lg		05 18 31.3	
TBT	**Taburiente**	**0.62**	**153**	P	Pn	05 18 20.9	-1.1
TBT				S	Sn	05 18 30.7	-1.2
CMIR	**El Paso, La Pa**	**0.63**	**149**	P	Pn	05 18 20.9	-1.3
CMIR				*i* IVmb_Lg		05 18 25.9	
CMIR				S	Sn	05 18 29.9	-2.4
CPUN	**Puntallana, La**	**0.65**	**140**	P	Pn	05 18 21.4	-1.0
CPUN				*i* IVmb_Lg		05 18 27.0	
CPUN				S	Sn	05 18 30.8	-1.8
CENR	**El Paso, La Pa**	**0.70**	**151**	P	Pn	05 18 21.2	-1.8
CENR				*i* IVmb_Lg		05 18 31.4	
CENR				S	Sn	05 18 32.7	-1.0
CJED	**Jedey, El Paso**	**0.73**	**154**	P	Pn	05 18 21.8	-1.5
CJED				S	Sn	05 18 32.5	-1.7
CJED				*i* IVmb_Lg		05 19 01.5	
CVIE	**Villa de Mazo,**	**0.74**	**150**	P	Pn	05 18 22.1	-1.4
CVIE				S	Sn	05 18 33.2	-1.3
EHIG	**Higuera**	**0.77**	**151**	P	Pn	05 18 22.3	-1.5
EHIG				S	Sn	05 18 33.9	-1.3
EHIG				*i* IVmb_Lg		05 18 42.0	
CTEN	**Fuencaliente,**	**0.83**	**155**	P	Pn	05 18 23.1	-1.4
CTEN				S	Sn	05 18 35.1	-1.1
CTEN				*i* IVmb_Lg		05 18 45.6	
CTIG	**El Hierro**	**1.47**	**169**	P	Pn	05 18 31.7	-1.0
CTIG				*i* IVmb_Lg		05 19 07.5	
CTAD	**Las Tabladas,**	**1.49**	**175**	S	Sn	05 18 48.8	-2.7
CJUL	**El Julan, El H**	**1.51**	**175**	S	Sn	05 18 49.1	-3.1
CBOL	**Buenavista del**	**1.54**	**126**	P	Pn	05 18 32.8	-1.0
CBOL				S	Sn	05 18 49.6	-3.3
CBOL				*i* IVmb_Lg		05 18 52.0	
CTAC	**Tacoron (Front**	**1.57**	**173**	P	Pn	05 18 33.4	-0.6
CTAC				*i* IVmb_Lg		05 18 50.1	
CTAC				S	Sn	05 18 50.5	-2.9
CNAO	**La Restinga, E**	**1.60**	**172**	P	Pn	05 18 33.7	-0.7
CNAO				*i* IVmb_Lg		05 18 52.2	
CDOS	**Garachico, Isl**	**1.61**	**125**	P	Pn	05 18 33.8	-1.1
CDOS				*i* IVmb_Lg		05 18 52.9	

MDD 21 05:18:31.0±0.8, 28°.27N×16°.65W, h8km±5km, mb_Lg0.4/11, Error ellipse: s-maj=4.0km s-min=2.9km az=148.0, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPVI	**La Orotava (Te**	**0.02**	**230**	S	Sg	05 18 34.2	-0.2
CNOR	**Icod de los Vi**	**0.04**	**342**	P	Pg	05 18 32.9	0.0
CNOR				S	Sg	05 18 34.3	+0.1
CCHO	**La Orotava (Te**	**0.06**	**208**	P	Pg	05 18 32.9	-0.2
CCHO				S	Sg	05 18 34.1	-0.4
CCHO				*i* IVmb_Lg		05 18 41.7	
CCAN	**Las Canadas**	**0.06**	**146**	P	Pg	05 18 33.2	+0.1
CCAN				S	Sg	05 18 34.6	-0.1
CCAN				*i* IVmb_Lg		05 18 36.8	
CFOR	**Fortaleza, Los**	**0.06**	**49**	P	Pg	05 18 33.1	-0.1
CFOR				S	Sg	05 18 34.3	-0.4
CFOR				*i* IVmb_Lg		05 18 35.1	
GUIA	**Guia de Isora,**	**0.07**	**249**	P	Pg	05 18 33.6	+0.4
GUIA				S	Sg	05 18 35.1	+0.3
GUIA				*i* IVmb_Lg		05 18 40.7	
CDIE	**La Orotava (Te**	**0.08**	**82**	P	Pg	05 18 33.8	+0.5
CDIE				S	Sg	05 18 35.4	+0.4
CREA	**Los Realejos,**	**0.10**	**36**	P	Pg	05 18 33.7	+0.3
CREA				S	Sg	05 18 35.4	+0.2
CREA				*i* IVmb_Lg		05 18 39.9	
CVIL	**Vilaflor**	**0.11**	**179**	S	Sg	05 18 35.9	+0.2
CVIL				*i* IVmb_Lg		05 18 39.0	
CLAJ	**Vilaflor (Tene**	**0.12**	**193**	P	Pg	05 18 34.3	+0.5
CLAJ				S	Sg	05 18 36.0	+0.2
CLAJ				*i* IVmb_Lg		05 18 41.3	
MACI	**Morro de la Ar**	**0.12**	**101**	P	Pg	05 18 34.1	+0.3
MACI				S	Sg	05 18 35.8	-0.2
MACI				*i* IVmb_Lg		05 18 37.0	
CADE	**Adeje, Tenerif**	**0.14**	**217**	P	Pg	05 18 34.5	+0.4
CADE				*i* IVmb_Lg		05 19 01.7	
CADE	**Adeje, Tenerif**	**0.14**	**217**	P	Pg	05 18 34.5	+0.4
CADE				*i* IVmb_Lg		05 18 35.6	
CBOL	**Buenavista del**	**0.17**	**284**	P	Pg	05 18 34.8	+0.3
CBOL				S	Sg	05 18 37.0	-0.1
CBOL				*i* IVmb_Lg		05 18 40.0	
CGUI	**Guimar, Teneri**	**0.18**	**75**	P	Pg	05 18 34.8	-0.1
CGUI				S	Sg	05 18 37.9	+0.4
CGUI				*i* IVmb_Lg		05 18 38.6	

WEL 21 05:35:25.9±1.2, 32°S±27°×17°9E±5°6, h435km±53km, M4.3/7, mB4.7/7, ML4.4/8, MLv4.6/7, Mw(mB)4.0/7, Error ellipse: s-maj=76.2km s-min=28.1km az=108.2, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.27**	**182**	P	P	05 36 51.9	-0.1
MXZ				S	S	05 38 02.2	-0.3
HAZ	**Te Kaha**	**5.50**	**187**	P	P	05 36 54.5	+0.2
HAZ				S	S	05 38 07.6	+1.0
WMGZ	**Waiomatatini S**	**5.53**	**181**	P	P	05 36 55.0	+0.4
WMGZ				S	S	05 38 08.0	+0.9
PKGZ	**Pakihiroa**	**5.58**	**184**	P	P	05 36 55.6	+0.3
PKGZ				S	S	05 38 10.1	+1.8
RUGZ	**Raukumara Rang**	**5.72**	**187**	P	P	05 36 56.4	-0.3
RUGZ				S	S	05 38 08.8	-2.1
TWGZ	**Tauwhareparae**	**5.90**	**185**	P	P	05 36 59.6	+1.1
TWGZ				S	S	05 38 15.4	+1.1
URZ	**Urewera**	**6.08**	**191**	P	P	05 36 59.7	-0.6
URZ				S	S	05 38 19.5	+1.9
MWZ	**Matawai**	**6.10**	**188**	P	P	05 37 01.2	+0.6
MWZ				S	S	05 38 16.9	-1.1
TKGZ	**Te Karaka**	**6.17**	**185**	P	P	05 37 00.9	-0.4
TKGZ				S	S	05 38 20.0	+0.7
CNGZ	**Carnagh Statio**	**6.19**	**183**	P	P	05 37 00.3	-1.2
RAGZ	**Rawiri**	**6.27**	**188**	P	P	05 37 03.6	+1.2

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*RSNC **21** 05:44:36.0±0.0, 8°N±6°×7°8W±°, h4km±10km, M2.5, mB4.9, ML2.4, Mw(mB)4.2*
*UPA **21** 05:44:39.0±1.5, 9°.45N×77°.99W, h5km±7km, ML3.8, MW3.7*
ISC 21 05:44:34.4±0.9, 7°.88N±0°.05×78°.47W±0°.04, h10km, n16, σ2°.83/27, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UPD2	**Meteti**	**0.80**	**34**	*e*P	**Pn**	**05 44 56.4**	**+4.7**
UPD2				*e*S	**Sn**	**05 45 10.2**	**+6.5**
PTAC	**Punta Ardita,**	**0.98**	**138**	P	**Pg**	**05 44 53.4**	**0.0**
PTAC				S	**Sb**	**05 45 07.4**	**+0.8**
TOTI	**Torti**	**1.05**	**9**	*e*P	**Pg**	**05 44 51.7**	**-3.0**
TOTI				*e*S	Sg	05 44 59.8	-8.6
CAPC	**Capurgana**	**1.33**	**56**	P	**Pn**	**05 44 58.9**	**-0.3**
CAPC				S	**Sb**	**05 45 15.0**	**-1.8**
CAP2	**Capurgana**	**1.34**	**55**	*e*P	**Pn**	**05 44 59.0**	**-0.2**
CAP2				*e*S	**Sb**	**05 45 13.9**	**-2.9**
GAMB1	**Gamboa**	**1.73**	**315**	*e*P	**Pg**	**05 45 08.2**	**+0.4**
GAMB1				*e*S	**Sn**	**05 45 26.2**	**-0.7**
FRIJ	**El Hiral**	**1.82**	**317**	*e*P	**Pg**	**05 45 09.0**	**-0.4**
FRIJ				AMP		05 45 11.4	
	comp=Z,433nm,0.2s						
BCIP	**Isla Barro Col**	**1.86**	**313**	*e*P	**Pg**	**05 45 11.0**	**+0.9**
BCIP				AMP		05 45 13.4	
	comp=Z,2μm,0.1s						
BCIP				*e*S	**Sg**	**05 45 35.0**	**+0.8**
BCIP	**Isla Barro Col**	**1.86**	**313**	P	**Pb**	**05 45 08.9**	**+0.4**
BCIP				S	**Sn**	**05 45 30.2**	**+0.3**
APAC	**Apartado, Choc**	**1.87**	**89**	P	**Pg**	**05 45 14.7**	**+4.3**
APAC				S	**Sg**	**05 45 38.8**	**+4.1**
LCBC	**Los crdobas,**	**2.29**	**65**	P	**Pn**	**05 45 09.3**	**-3.0**
LCBC				S	Sn	05 45 27.6	-13
UREC	**San Jos de Ur**	**2.91**	**92**	*e*P	**Pb**	**05 45 25.7**	**-0.8**
UREC				*e*S	**Sb**	**05 46 00.9**	**-1.3**
UREC	**San Jos de Ur**	**2.91**	**92**	P	**Pb**	**05 45 26.1**	**-0.4**
UREC				S	**Sn**	**05 45 56.8**	**+0.8**
SJCC	**San Jacinto, C**	**3.82**	**58**	P	Pn	05 45 23.8	-10
SJCC				S	Sn	05 45 53.6	-25
PTBC	**PUERTO BERRIO,**	**4.20**	**108**	P	**Pb**	**05 45 47.4**	**-1.1**
PTBC				S	**Sb**	**05 46 37.0**	**-2.3**
OCAC	**Ocana**	**5.11**	**86**	P	**Pn**	**05 45 49.9**	**-1.4**
OCAC				S	**Sn**	**05 46 43.5**	**-7.0**

DJA 21 06:02:21.9±0.4, 9°S±3°×12°4E±°, h82km±5km, M3.2/11, mb3.5/4, MLv3.1/11, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**0.54**	**160**	P	Pn	06 02 38.0	+1.7
SOEI				S	Sn	06 02 50.2	+3.2
BATI	**Baumata**	**1.03**	**203**	P	Pn	06 02 41.2	-0.4
MMRI	**Maumere**	**1.92**	**288**	P	Pn	06 02 53.1	+0.3
EDFI	**Ende, Flores**	**2.41**	**282**	P	Pn	06 02 59.6	+0.1
WSI	**Waingapu**	**3.75**	**263**	P	Pn	06 03 18.3	+0.8
KAPI	**Kappang**	**6.01**	**314**	P	Pn	06 03 48.9	+0.6
	0.0nm3.2nm,1.0s						
PLAI	**Plampang**	**6.24**	**273**	P	Pn	06 03 51.3	-0.1
	16nm,1.0s						
MTNI	**Mataram**	**7.84**	**274**	P	Pn	06 04 13.9	+0.6
	0.0nm5.1nm,1.0s						

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*IDC **21** 06:09:51.6±31.0, 44°.73N×147°.77E, h0km, mb3.7/2, mbtmp3.8/3, ML3.5/1, Error ellipse: s-maj=700.0km s-min=111.0km az=155.0*
*JMA **21** 06:10:47.2±0.5, 45°N±2°×14°2E±°, h284km±4km, MV2.9/23, SOYA REGION*
ISC 21 06:10:48.5±1.2, 44°.9N±0°.1×142°.4E±0°.1, h267km±12km, n16, σ1°.23/19, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSE	**Soyaes**	**0.14**	**64**	*e*P	**Pn**	**06 11 23.6**	**+0.9**
JWK2	**Keihoku**	**0.55**	**320**	*e*P	**Pn**	**06 11 24.1**	**+0.7**
ASAJ	**Asahikawa**	**0.79**	**170**	*e*P	**Pn**	**06 11 25.9**	**+1.4**
JKK2	**Kamakawa 2**	**1.05**	**166**	P	**Pn**	**06 11 27.3**	**+1.5**
JRBN	**Rebuntou**	**1.08**	**300**	*e*P	**Pn**	**06 11 25.6**	**-0.2**
JMP	**Maruseppu**	**1.12**	**142**	*e*P	**Pn**	**06 11 27.4**	**+1.2**
JAB	**Ashibetsu**	**1.40**	**185**	*e*P	**Pn**	**06 11 29.6**	**+1.8**
JTKR	**Abashiri--Toko**	**1.42**	**130**	*e*P	**Pn**	**06 11 29.4**	**+1.4**
JAR	**Ashorobuto**	**1.88**	**148**	*e*P	**Pn**	**06 11 32.9**	**+1.4**
JCH	**Churui**	**2.39**	**163**	*e*P	**Pn**	**06 11 35.7**	**-0.3**
JCH				*e*S	**S**	**06 12 11.6**	**-2.0**
JAK	**Akkeshi**	**2.52**	**138**	*e*P	**Pn**	**06 11 36.5**	**-0.8**
JAK				*e*S	**S**	**06 12 16.1**	**+0.2**
JNBK	**Urakawa-nobuka**	**2.63**	**174**	*e*P	**Pn**	**06 11 39.4**	**+1.0**
NEM2	**Nemuro 2**	**2.85**	**121**	*e*P	**Pn**	**06 11 40.2**	**-0.3**
NEM2				*e*S	**S**	**06 12 20.4**	**-1.4**
USRK	**Ussuriysk Ar.**	**7.47**	**268**	Pn	**Pn**	**06 12 34.8**	**-0.4**
	0.3nm,0.3s,baz=82,slow=14,SNR=4.1						
	3.8nm,0.7s						
SONM	**Songino Array**	**24.88**	**290**	P	**P**	**06 15 47.7**	**+0.5**
	0.6nm,0.6s,baz=86,slow=9.5,SNR=4.3						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**41.02**	**295**	P	**P**	**06 18 05.4**	**-0.4**
	0.6nm,0.6s,baz=77,slow=8.7,SNR=5.6						
	0.6nm,0.6s						

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*IDC **21** 06:17:51.0±0.6, 3°.15S×139°.64E, h0km, mb4.4/10, mbtmp4.5/12, ML4.2/2, MS3.7/32, Error ellipse: s-maj=15.5km s-min=11.4km az=134.0*
*DJA **21** 06:17:55.9±0.8, 3°S±3°×14°0E±°, h21km±7km, M4.9/42, mb4.8/42, mB5.3/11, MLv5.1/9, Mw(mB)4.7/11, MwMwp4.8/1, Mwp5.1/1*
*NEIC **21** 06:17:57.9±1.3, 3°.23S±0°.09×139°.63E±0°.03, h45km±8km, mb4.7/28, Error ellipse: s-maj=13.7km s-min=3.2km az=192.0*
ISC 21 06:17:56.7±0.4, 3°.32S±0°.05×139°.78E±0°.05, h35km, n136, σ1°.79/112, mb4.6/40, MS3.6/30, 1C-2D, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.82**	**28**	P	**Pn**	**06 18 10.8**	**-1.0**
WAMI	**Wamena**	**1.20**	**242**	P	**Pn**	**06 18 17.9**	**+0.9**
JAY	**Jayapura**	**1.23**	**49**	Pg	**Pn**	**06 18 15.7**	**-1.7**
	588nm,0.3s,baz=231,slow=11,SNR=712						
JAY				Lg	Lg	06 18 30.9	
	1μm,0.3s,baz=144,slow=19,SNR=12						
JAY				LR	LR	06 18 34.6	
	comp=Z,1μm,21.2s,baz=236,slow=35						
JAY	**Jayapura**	**1.23**	**49**	P	**Pn**	**06 18 15.9**	**-1.5**
SMPI	**Sarmi**	**1.70**	**321**	P	**Pn**	**06 18 24.0**	**+0.1**
SRPI	**Serui, Papua**	**3.82**	**292**	P	**Pn**	**06 18 53.1**	**+0.1**
BAKI	**Biak**	**4.23**	**300**	P	**Pn**	**06 18 59.6**	**+0.9**
MMPI	**Merauke**	**5.15**	**173**	P	**Pn**	**06 19 12.4**	**+1.1**
KMPI	**Kaimana, Papua**	**6.07**	**267**	P	**Pn**	**06 19 24.4**	**+0.4**
MWPI	**Manokwari, Pap**	**6.21**	**292**	P	**Pn**	**06 19 27.2**	**+1.3**
	1.0nm111nm,0.9s						
FAKI	**Fak Fak**	**7.53**	**273**		**Pn**	**06 19 41.7**	**-2.3**
FAKI	**Fak Fak**	**7.53**	**273**	P	**Pn**	**06 19 45.4**	**+1.4**
	0.2nm48nm,0.8s						
MANU	**Manus Island**	**7.69**	**81**	Pn	**Pn**	**06 19 48.9**	**+2.7**
PMG	**Port Moresby**	**9.50**	**130**	Pn	**Pn**	**06 20 15.2**	**+4.1**
	1.7nm,0.3s,baz=309,slow=13,SNR=19						
PMG	**Port Moresby**	**9.50**	**130**		**Pn**	**06 20 14.2**	**+3.0**
SAUI	**Saumlaki**	**9.62**	**241**	Pn	**Pn**	**06 20 12.7**	**0.0**
SAUI	**Saumlaki**	**9.62**	**241**	P	**Pn**	**06 20 14.0**	**+1.2**
MSAI	**Masohi**	**10.83**	**270**	P	**Pn**	**06 20 31.3**	**+2.0**
	3μm30nm,0.4s						
COEN	**Coen**	**11.09**	**163**		**Pn**	**06 20 35.1**	**+2.2**
KRAI	**Karang Ratu**	**11.36**	**270**	P	**Pn**	**06 20 38.4**	**+1.8**
AAI	**Ambon**	**11.57**	**268**	P	**Pn**	**06 20 41.4**	**+2.0**
	2μm38nm,0.5s						
MTN	**Manton Dam**	**12.75**	**222**		**Pn**	**06 20 54.2**	**-1.4**
SANI	**Sanana**	**13.83**	**275**	P	**Pn**	**06 21 10.7**	**+0.3**
	35nm,0.8s						
KNRA	**Kununurra**	**16.38**	**221**		**Pn**	**06 21 43.6**	**-0.4**
KNRA				IAmb	IAmb	06 21 50.5	
	comp=Z,86nm,0.9s						
SOEI	**Soe**	**16.67**	**247**		**Pn**	**06 21 47.0**	**-0.9**
SOEI	**Soe**	**16.67**	**247**	P	**Pn**	**06 21 47.7**	**-0.2**
LUWI	**Luwuk**	**17.14**	**277**	P	**Pn**	**06 21 53.8**	**+0.1**
	comp=Z,90nm,1.1s						
WB0	**Warramunga Arr**	**17.17**	**197**		**Pn**	**06 21 52.0**	**-2.0**
WB0				IAmb	IAmb	06 22 25.0	
	comp=Z,29nm,0.8s						
GTOI	**Gorontalo**	**17.21**	**283**	P	**P**	**06 21 57.0**	**+1.2**
	comp=Z,47nm,0.8s						
WR8	**Warramunga Arr**	**17.32**	**197**		**Pn**	**06 21 53.7**	**-2.1**
WR8				IAmb	IAmb	06 22 24.6	
	comp=Z,44nm,1.1s						
WRA	**Warramunga Arr**	**17.35**	**197**	P	**Pn**	**06 21 54.7**	**-1.6**
	comp=Z,1.7nm,0.3s,baz=15,slow=12,SNR=21						
WRA				S	Sn	06 24 57.2	-11
	comp=Z,11nm,0.8s,baz=12,slow=22,SNR=6.0						
WRA				Lg	Lg	06 27 01.3	
	baz=18,slow=25						
	comp=Z,11nm,0.5s						
WRA	**Warramunga Arr**	**17.35**	**197**		**Pn**	**06 21 53.0**	**-3.2**
BATI	**Baumata**	**17.39**	**246**	P	**Pn**	**06 21 57.7**	**+0.9**
	comp=Z,77nm,0.6s						
DAV	**Davao City (W)**	**17.53**	**306**	LR	LR	06 28 52.8	
	comp=Z,115nm,19.5s,baz=142,slow=38						
GUMO	**Guam**	**17.55**	**17**	LR	LR	06 27 45.6	
	comp=Z,154nm,19.4s,baz=170,slow=34						
CTA	**Charters Tower**	**17.82**	**160**	P	**P**	**06 22 04.2**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=340,slow=12,SNR=6.9						
CTA				Lg	Lg	06 27 21.4	
	comp=Z,0.1nm,0.3s,baz=59,slow=8.2,SNR=3.1						
CTA				LR	LR	06 29 15.0	
	comp=Z,538nm,19.0s,baz=5.0,slow=38						
	comp=Z,10nm,0.9s						
CTAO	**Charters Tower**	**17.82**	**160**	P	**P**	**06 22 05.2**	**+2.6**
MRSI	**Marisa**	**18.22**	**282**	P	**Pn**	**06 22 09.2**	**+2.2**
	comp=Z,54nm,0.6s						
APSI	**Ampana**	**18.27**	**277**	P	**P**	**06 22 08.4**	**+0.9**
	comp=Z,51nm,0.9s						
EDFI	**Ende, Flores**	**18.77**	**252**	P	**P**	**06 22 12.5**	**-0.6**
	comp=Z,16nm,0.8s						
TOLI2	**Tolitoli**	**19.49**	**283**		**P**	**06 22 19.9**	**-1.1**
TOLI2				IAmb	IAmb	06 22 36.2	
	comp=Z,21nm,0.9s						
BNSI	**Bone**	**19.66**	**266**	P	**Pn**	**06 22 25.6**	**+1.3**
	comp=Z,37nm,1.1s						
BKSI	**Bulukumba**	**19.70**	**264**	P	**P**	**06 22 25.1**	**+1.9**
	comp=Z,27nm,1.0s						
TTSI	**Tana Toraja**	**19.93**	**270**	P	**Pn**	**06 22 28.0**	**+0.5**
	comp=Z,1μmcomp=Z,32nm,0.9s						
SPSI	**Sidrap Palu**	**19.98**	**268**	P	**P**	**06 22 26.8**	**+0.6**
	comp=Z,18nm,0.8s						
KAPI	**Kappang**	**20.04**	**265**	P	Pn	06 22 29.8	+0.9
PCI	**Palu**	**20.07**	**276**	P	**P**	**06 22 29.3**	**+2.0**
FITZ	**Fitzroy Crossi**	**20.18**	**222**	P	**P**	**06 22 28.4**	**-0.1**
	comp=Z,44nm,0.8s,baz=42,slow=13,SNR=42						
FITZ				S	**S**	**06 26 03.9**	**-9.4**
	comp=Z,35nm,0.8s,baz=212,slow=18,SNR=7.3						
FITZ				LR	LR	06 30 55.9	
	comp=Z,567nm,19.5s,baz=33,slow=39						
	comp=Z,44nm,0.8s						
FITZ	**Fitzroy Crossi**	**20.18**	**222**		**P**	**06 22 28.6**	**+0.2**
MPSI	**Mapaga**	**20.20**	**280**	P	**P**	**06 22 28.0**	**-0.6**
MMSI	**Mamuju**	**20.85**	**271**	P	Pn	06 22 38.3	0.0
	comp=Z,46nm,1.1s						
AS31	**Alice Springs**	**21.00**	**195**		**P**	**06 22 37.6**	**+0.2**
AS31				IAmb	IAmb	06 23 00.0	
	comp=Z,15nm,0.7s						
ASAR	**Alice Springs**	**21.01**	**195**	P	**P**	**06 22 37.6**	**+0.3**
	comp=Z,32nm,0.8s,baz=27,slow=9.6,SNR=64						
ASAR				S	**S**	**06 26 28.8**	**-0.8**
	comp=Z,4.3nm,0.8s,baz=11,slow=26,SNR=4.0						
ASAR				LR	LR	06 31 13.2	
	comp=Z,414nm,18.1s,baz=17,slow=38						
	comp=Z,32nm,0.8s						
ASAR	**Alice Springs**	**21.01**	**195**		**P**	**06 22 37.4**	**0.0**
WBSI	**Waikabubak, Su**	**21.20**	**252**	P	**P**	**06 22 40.2**	**+0.7**
	comp=Z,46nm,1.0s						
DBNI	**Kabupaten Domp**	**21.95**	**255**	P	**P**	**06 22 47.1**	**-0.5**
	comp=Z,11nm,0.9s						
PLAI	**Plampang**	**22.54**	**255**	P	**P**	**06 22 55.7**	**+1.8**
	comp=Z,38nm,0.9s						
KLNI	**Mataram**	**24.09**	**257**	P	**P**	**06 23 08.6**	**-0.6**
	comp=Z,40nm,1.1s						
INKA	**Innaminka**	**24.30**	**178**		**P**	**06 23 10.8**	**-0.2**
INKA				IAmb	IAmb	06 23 34.7	
	comp=Z,16nm,1.1s						
EIDS	**Eidsvold**	**24.47**	**155**		**P**	**06 23 13.5**	**+1.0**
EIDS				IAmb	IAmb	06 23 39.0	
	comp=Z,26nm,0.8s						
KHKI	**Kahang-Kahang**	**24.55**	**257**	P	**P**	**06 23 12.8**	**-0.6**
	comp=Z,20nm,1.1s						
SRBI	**Singaraja**	**24.89**	**258**	P	**P**	**06 23 19.0**	**+2.5**
	comp=Z,31nm,1.4s						
KMMI	**Kalianget**	**25.96**	**261**	P	**P**	**06 23 28.8**	**+2.5**
	comp=Z,62nm,1.1s						
PSA00	**Pilbara Seismi**	**26.54**	**225**		**P**	**06 23 32.3**	**+0.9**
STKA	**Stephens Creek**	**28.45**	**177**	P	**P**	**06 23 50.0**	**+1.6**
	comp=Z,2.3nm,0.7s,baz=345,slow=12,SNR=3.3						
STKA				LR	LR	06 36 24.3	
	comp=Z,459nm,19.4s,baz=353,slow=39						
	comp=Z,2.3nm,0.7s						
STKA	**Stephens Creek**	**28.45**	**177**	P	**P**	**06 23 50.6**	**+2.2**
STKA				IAmb	IAmb	06 24 16.8	
	comp=Z,69nm,1.5s						
JCJ	**Chichijima**	**30.33**	**4**	LR	LR	06 34 44.0	
	comp=Z,104nm,21.1s,baz=136,slow=34						
DZM	**Mont Dzumac**	**31.89**	**128**	*e*P	**P**	**06 24 17.9**	**-1.2**
	comp=Z,35nm,23.2s						
DZM				*e*S	**S**	**06 29 21.6**	**-6.3**
	comp=Z,91nm,30.9s						
DZM				*e*LR	LR	06 32 49.8	
	comp=Z,415nm,25.6s						
JOW	**Kunigami**	**31.97**	**340**	LR	LR	06 34 24.0	
	comp=Z,143nm,21.2s,baz=177,slow=31						
NWAO	**Narrogin (SRO)**	**36.23**	**213**	LR	LR	06 41 11.1	
	comp=Z,412nm,19.7s,baz=80,slow=39						
JHJ	**Hachijo jima 2**	**36.24**	**0**	LR	LR	06 36 58.3	
	comp=Z,161nm,20.6s,baz=232,slow=32						
JNU	**Nakatsue**	**37.21**	**348**	LR	LR	06 37 42.3	
	comp=Z,132nm,20.0s,baz=156,slow=32						
MJAR	**Matsushiro Arr**	**39.69**	**358**	LR	LR	06 39 42.7	
	comp=Z,66nm,21.2s,baz=168,slow=33						
NJ2	**Nanjing**	**40.41**	**332**	*e*P	**P**	**06 25 33.8**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
PSI	**Prapat**	**41.28**	**278**	LR	LR	06 44 33.9	
	comp=Z,63nm,19.5s,baz=100,slow=39						
KSRS	**Korea Array**	**42.04**	**346**	P	**P**	**06 25 45.1**	**+0.3**
	comp=Z,2.6nm,0.7s,baz=157,slow=8.6,SNR=6.1						
KSRS				LR	LR	06 40 32.1	
	comp=Z,71nm,21.8s,baz=165,slow=32						
CMAR	**Chiang Mai Arr**	**45.66**	**300**	P	**P**	**06 26 13.1**	**-1.3**
	comp=Z,1.5nm,0.3s,baz=120,slow=5.8,SNR=12						
CMAR				LR	LR	06 45 40.1	
	comp=Z,24nm,21.2s,baz=120,slow=37						
	comp=Z,1.5nm,0.3s						
HNS	**HongShan**	**46.74**	**332**	⇓P	**P**	**06 26 21.8**	**-0.7**
HNS				pmax	pmax		
	comp=Z,7.0nm,1.4s						
XAN	**Xi'an**	**47.19**	**325**	⇑P	**P**	**06 26 26.0**	**-0.2**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PZH	**PanZhiHua**	**47.23**	**311**	P	**P**	**06 26 28.6**	**+1.9**
ASAJ	**Asahikawa**	**47.29**	**3**	LR	LR	06 45 24.1	
	comp=Z,52nm,21.8s,baz=133,slow=35						
BJI	**Beijing**	**48.28**	**336**	P	**P**	**06 26 33.8**	**-0.7**
BJI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
CD2	**Chengdu**	**48.35**	**317**	P	**P**	**06 26 33.6**	**-1.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.3s						
URZ	**Urewera**	**48.67**	**141**	LR	LR	06 47 16.3	
	comp=Z,119nm,19.5s,baz=316,slow=36						
RTZ	**Ruatahuna**	**48.80**	**141**	P	**P**	**06 26 40.0**	**+1.4**
RPZ	**Rata Peaks**	**48.83**	**150**		**P**	**06 26 40.0**	**+1.3**
MRZ	**Mangatainoka R**	**49.21**	**144**		**P**	**06 26 42.2**	**+0.6**
BNX	**BinXian**	**50.07**	**349**	⇓P	**P**	**06 26 47.9**	**-0.1**
BNX				pmax	pmax		
	comp=Z,22nm,1.0s						
HHC	**Hu-ho-hao-te**	**50.96**	**333**	*e*P	**P**	**06 26 57.0**	**+2.0**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,3.9s						
HHC				LR	LR		
	comp=N,120nm,15.1s						
HHC				LR	LR		
	comp=E,100nm,15.1s						
HHC				LR	LR		
	comp=Z,130nm,15.5s						
LZH	**Lanzhou**	**51.61**	**323**	*e*P	**P**	**06 27 00.1**	**+0.1**
LZH				pP	pP	06 27 07.9	-2.7
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZDM	**Lanzhou Array**	**51.61**	**322**	LR	LR	06 48 21.5	
	comp=Z,57nm,20.6s,baz=50,slow=36						
HEH	**HeiHe**	**54.42**	**350**	*e*P	P	06 27 27.5	+7.3
HEH				pmax	pmax		
	comp=Z,9.0nm,1.6s						
GTA	**Gaotai**	**56.19**	**323**	*e*P	**P**	**06 27 33.6**	**+0.2**
GTA				sP	pP	06 27 42.9	-1.3
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PETK	**Petropavlovsk-**	**58.22**	**13**	LR	LR	06 49 11.0	
	comp=Z,53nm,21.7s,baz=206,slow=32						
SONM	**Songino Array**	**58.73**	**334**	P	**P**	**06 27 50.6**	**-0.5**
	comp=Z,0.9nm,0.9s,baz=151,slow=6.8,SNR=4.1						
SONM				LR	LR	06 53 05.8	
	comp=Z,99nm,20.1s,baz=128,slow=36						
SONM	**Songino Array**	**58.73**	**334**	P	**P**	**06 27 49.8**	**-1.3**
PALK	**Pallekele**	**59.88**	**280**	LR	LR	06 57 49.5	
	comp=Z,24nm,18.1s,baz=104,slow=40						
RAR	**Rarotonga**	**61.31**	**112**	LR	LR	06 52 28.9	
	comp=Z,21nm,20.9s,baz=49,slow=34						
SHEM	**Shemya Is, Ala**	**62.89**	**23**	LR	LR	06 50 46.0	
	comp=Z,66nm,21.0s,baz=124,slow=32						

YAK	Yakutsk	65.63	355	LR	LR	06 55 22.9	
	comp=Z,36nm,19.7s,baz=117,slow=34						
WMQ	Urumqi	66.15	321	*e*P	P	06 28 41.1	+0.3
WMQ				pP	sP	06 29 00.5	+4.7
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
PPT	Papeete	70.56	107	LR	LR	06 59 45.4	
	comp=Z,34nm,18.1s,baz=239,slow=36						
PPT2	Papeete2	70.56	107	*e*LR	LR	06 50 47.3	
	comp=Z,77nm,25.5s						
MKAR	Makanchi Array	70.92	322	P	P	06 29 09.3	-1.1
	comp=Z,3.7nm,1.0s,baz=103,slow=8.6,SNR=14						
	comp=Z,3.7nm,1.0s						
TBI	Tubuai	71.03	113	*e*LR	LR	06 51 03.4	
	comp=Z,641nm,37.2s						
TARG	Taragay, Kyrgy	71.76	316		P	06 29 15.4	-0.7
KSH	Kashi	72.28	313	P	P	06 29 19.9	+1.0
KSH				pP	sP	06 29 34.8	+0.7
KSH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NIL	Nilore	72.54	307		P	06 29 19.4	-1.1
ZALV	Zalesovo Beam	73.00	330	P	P	06 29 20.5	-2.2
	comp=Z,1.1nm,0.6s,baz=91,slow=5.4,SNR=5.9						
ZALV				LR	LR	07 01 41.5	
	comp=Z,31nm,21.1s,baz=241,slow=36						
	comp=Z,1.1nm,0.6s						
KURK	Kurchatov	74.83	325		P	06 29 32.3	-1.2
KURBB	Kurchatov Arra	74.84	325	P	P	06 29 32.0	-1.6
	comp=Z,1.5nm,0.8s,baz=114,slow=4.9,SNR=10						
	comp=Z,1.5nm,0.8s						
VNDA	Vanda	75.08	175	P	P	06 29 35.1	+0.6
	comp=Z,5.0nm,0.7s,baz=328,slow=6.7,SNR=14						
VNDA				LR	LR	07 01 30.4	
	comp=Z,141nm,20.1s,baz=357,slow=35						
	comp=Z,5.0nm,0.7s						
CHGR	Chuyangaron	77.08	311		P	06 29 45.8	-1.0
KKAR	Karatay Array	77.31	315	P	P	06 29 46.4	-1.5
BVAR	Borovoye Array	80.42	325	P	P	06 30 02.8	-1.9
	comp=Z,3.4nm,0.7s,baz=113,slow=7.9,SNR=16						
	comp=Z,3.4nm,0.7s						
BORK	Borovoye	80.47	325		P	06 30 03.7	-1.2
BORK				IAmb	IAmb	06 30 05.4	
	comp=Z,5.5nm,1.0s						
NRIK	Noril'sk	80.61	343	LR	LR	07 06 43.4	
	comp=Z,31nm,20.1s,baz=136,slow=36						
MAW	Mawson	81.96	202	LR	LR	07 04 07.4	
	comp=Z,55nm,19.9s,baz=88,slow=34						
CCB	Clear Creek Bu	85.53	24		P	06 30 29.3	-1.6
CCB				IAmb	IAmb	06 30 33.7	
	comp=Z,4.3nm,0.9s						
AB31	Akbulak array	85.87	320		P	06 30 30.7	-2.2
AB31				IAmb	IAmb	06 30 32.7	
	comp=Z,3.5nm,1.1s						
ABKAR	Akbulak array	85.87	320	P	P	06 30 30.7	-2.2
ILAR	Eielson Array	85.95	24	P	P	06 30 30.9	-2.1
	comp=Z,2.1nm,0.8s,baz=269,slow=4.4,SNR=12						
	comp=Z,2.1nm,0.8s						
ILAR	Eielson Array	85.95	24	P	P	06 30 31.0	-2.0
D24K	Happy Valley	86.55	20	P	P	06 30 36.4	+0.6
D24K				IAmb	IAmb	06 30 48.0	
	comp=Z,7.0nm,0.9s						
QSPA	South Pole Qui	86.63	180	P	P	06 30 37.2	+0.7
	comp=Z,34nm,0.7s,baz=328,slow=1.5,SNR=72						
QSPA				LR	LR	07 10 46.6	
	comp=Z,96nm,18.5s,baz=359,slow=37						
QSPA	South Pole Qui	86.63	180	P	P	06 30 37.0	+0.5
BMAR	Burnt Mountain	87.57	22		P	06 30 41.1	+0.2
L27K	Beaver Creek,	87.70	27	P	P	06 30 41.3	-0.3
L27K				IAmb	IAmb	06 31 05.2	
	comp=Z,9.3nm,1.4s						
BCAR	Beaver Creek A	87.72	27	P	P	06 30 41.1	-0.5
I27K	Kandik River	88.31	24		P	06 30 44.8	+0.3
YBH	Yreka Blue Hor	97.81	49	LR	LR	07 06 32.6	
	comp=Z,6.6nm,19.9s,baz=284,slow=30						
BELA	Belgrano 2	98.84	181	P	P	06 31 32.9	+0.2
BELA				IAmb	IAmb	06 31 34.3	
	comp=Z,6.6nm,1.3s						
SPITS	Spitsbergen Ar	99.77	350	LR	LR	07 15 55.4	
	comp=Z,40nm,21.2s,baz=61,slow=35						
SNAA	Sanae	101.32	191	P	Pdif	06 31 44.4	+0.6
	comp=Z,1.2nm,0.8s,baz=166,slow=2.6,SNR=4.6						
DBIC	Dimbokro	144.62	277	PKP	PKPab	06 37 28.7	-0.6
	comp=Z,33nm,0.9s,baz=109,slow=3.9,SNR=25						
LPAZ	La Paz	146.22	126	PKPbc	PKPdf	06 37 35.7	+1.5
	comp=Z,6.6nm,0.9s,baz=268,slow=0.5,SNR=21						

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*ATH **21** 06:44:45.8, 36°.98N×21°.13E, h10^{km}±1^{km}, ML3.4/31, Manual Solution by N.Liadopoulou First location: 2019/12/21 06:45:48, This location: 2019/12/21 06:52:59 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*THE **21** 06:44:46.8, 37°N±3°×2°1E±°, h0^{km}±1^{km}, M3.3/40, MLh3.3/40*

*IDC **21** 06:44:49.5±3.9, 37°.05N×21°.21E, h51^{km}±43^{km}, mb3.5/9, mbtmp3.6/11, ML0.7/1, Error ellipse: s-maj=25.0km s-min=22.8km az=35.0*

ISC 21 06:44:46.1±1.0, **37°.03N**±0°.03×**21°.18E**±0°.03, **h17**^{km}±7^{km}, **n138**, σ**1^s.11**/155, **mb3.8**/8, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYL1	Pylos	0.43	105	P	Pg	06 44 54.6	-0.3
PYL1				S	Sg	06 45 00.9	+0.1
PYL	PYLOS	0.47	106	P	Pg	06 44 55.3	-0.4
PYL				S	Sg	06 45 02.4	+0.4
PYL	PYLOS	0.47	106	P	Pg	06 44 55.2	-0.4
PYL				S	Sg	06 45 02.3	+0.4
MTHA	Methoni	0.47	116	P	Pg	06 44 55.7	0.0
MTHA				S	Sg	06 45 02.2	+0.2
ZARO	Zacharo	0.59	39	P	Pg	06 44 57.7	-0.2
ZARO				S	Sb	06 45 07.4	+1.3
ITM	Ithomi	0.62	76	P	Pg	06 44 57.3	-1.0
ITM				S	Sg	06 45 05.4	-1.2
ITM	Ithomi	0.62	76	P	Pg	06 44 57.4	-1.0
ITM				S	Sb	06 45 07.2	+0.3
AMT	Artemida-Makis	0.66	40	P	Pg	06 44 58.9	-0.2
AMT				S	Sb	06 45 09.5	+1.4
LTHK	Lithakia	0.73	338	P	Pg	06 44 60.0	-0.5
LTHK				S	Sg	06 45 10.3	+0.2
LTHK	Lithakia	0.73	338	P	Pg	06 44 59.9	-0.5
LTHK				S	Sb	06 45 10.9	+0.8
ZAK2	Zakynthos	0.79	344	P	Pg	06 45 01.6	0.0
ZAK2				S	Sb	06 45 13.6	+1.8
KYPS	Kipseli, Zakin	0.84	340	P	Pg	06 45 02.0	-0.5
KYPS				S	Sb	06 45 14.3	+1.1
CLEM	Kyllini,Ilia,G	0.86	358	P	Pg	06 45 02.4	-0.5
CLEM				S	Sb	06 45 15.8	+1.9
ORTH	Orthonies,Zaky	0.91	335	P	Pg	06 45 03.6	-0.2
ORTH				S	Sn	06 45 17.6	+0.7
ORTH	Orthonies,Zaky	0.91	335	P	Pg	06 45 03.5	-0.3
ORTH				S	Sb	06 45 16.4	+1.2
LCHA	Lechaina	0.91	4	P	Pg	06 45 04.0	+0.1
LCHA				S	Sn	06 45 17.5	+0.6
DRO	Drossia	1.01	25	P	Pg	06 45 04.9	-0.8
DRO	Drossia	1.01	25	P	Pg	06 45 05.0	-0.8
VLX	Vlachokerasia	1.02	70	P	Pg	06 45 05.0	-0.9
RLS	Riolos of Patr	1.05	13	P	Pg	06 45 05.7	-0.8
RLS	Riolos of Patr	1.05	13	P	Pg	06 45 05.7	-0.8
RTZL	Ratzakli, Kefa	1.09	343	P	Pb	06 45 05.9	-0.7
RTZL	Ratzakli, Kefa	1.09	343	P	Pb	06 45 06.0	-0.6
AXS	Araxos	1.18	8	P	Pb	06 45 07.6	-0.5
AXS	Araxos	1.18	8	P	Pb	06 45 07.5	-0.5
VLS	Valsamata	1.24	338	P	Pn	06 45 08.4	-0.4
VLS	Valsamata	1.24	338	P	Pn	06 45 08.3	-0.4
KLV1	Kalavrita	1.25	36	P	Pn	06 45 09.8	+0.9
KFL1	Kefalonia,Entr	1.26	335	P	Pn	06 45 09.1	+0.1
ARG2	Argostoli	1.27	335	P	Pn	06 45 09.3	+0.2
ARG2	Argostoli	1.27	335	P	Pn	06 45 09.8	+0.7
KLV	Kalavryta, Ach	1.27	37	P	Pn	06 45 09.2	-0.1
KLV	Kalavryta, Ach	1.27	37	P	Pn	06 45 09.1	-0.1
PATG	Patra B	1.28	20	P	Pb	06 45 10.5	+0.6
SMHA	Samh	1.29	341	P	Pn	06 45 10.3	+0.9
GUR	Goura	1.30	45	P	Pn	06 45 09.4	-0.2
GUR	Goura	1.30	45	P	Pn	06 45 09.4	-0.2
PATC	Patra C	1.32	20	P	Pn	06 45 10.3	+0.5
UPR	University Cam	1.34	21	P	Pg	06 45 12.4	+0.3
UPR	University Cam	1.34	21	P	Pb	06 45 11.3	+0.5
DMLN	Damoulianata-K	1.37	332	P	Pn	06 45 11.2	+0.7
DMLN	Damoulianata-K	1.37	332	P	Pn	06 45 11.0	+0.5
ARS1	Argos	1.38	63	P	Pn	06 45 11.4	+0.8
VLI	Veliai	1.45	102	P	Pb	06 45 13.4	+0.8
VLI	Veliai	1.45	102	P	Pn	06 45 12.5	+1.0
FSK	Fiskardo	1.51	341	P	Pn	06 45 13.8	+1.4
FSK	Fiskardo	1.51	341	P	Pn	06 45 13.2	+0.8
EFP	Efpalio	1.51	22	P	Pn	06 45 13.8	+1.4
EFP	Efpalio	1.51	22	P	Pn	06 45 13.8	+1.4
MNVA	Monemvasia	1.53	102	P	Pn	06 45 13.6	+0.9
SERG	Sergoula	1.55	26	P	Pb	06 45 14.7	+0.4
SERG	Sergoula	1.55	26	P	Pb	06 45 14.5	+0.1
KALE	Kalithea	1.56	29	P	Pb	06 45 15.1	+0.5
KALE	Kalithea	1.56	29	P	Pb	06 45 14.8	+0.2
PVO	Paravola	1.61	10	P	Pb	06 45 15.9	+0.5
PVO	Paravola	1.61	10	P	Pb	06 45 15.5	+0.1
EVGI	Lefkada island	1.64	346	P	Pn	06 45 15.5	+1.2
EVGI	Lefkada island	1.64	346	P	Pn	06 45 15.3	+1.1
ANX	Ano Chora	1.67	20	P	Pb	06 45 16.6	+0.1
ANX	Ano Chora	1.67	20	P	Pn	06 45 16.4	+1.6
KTHA	Kythira Island	1.70	116	P	Pn	06 45 17.0	+2.0
KTHA	Kythira Island	1.70	116	P	Pn	06 45 16.5	+1.5
DRAG	Dragano-Lefkad	1.72	344	P	Pn	06 45 16.9	+1.6
DRAG	Dragano-Lefkad	1.72	344	P	Pn	06 45 16.7	+1.4
NYDR	Nydri-Lefkada	1.72	347	P	Pb	06 45 17.4	0.0
NYDR	Nydri-Lefkada	1.72	347	P	Pn	06 45 16.8	+1.5
LTK	Loutraki	1.73	55	P	Pn	06 45 17.1	+1.6
LTK	Loutraki	1.73	55	P	Pn	06 45 17.1	+1.6
DLFA	Delphi	1.79	35	P	Pn	06 45 17.2	+1.0
LKD2	Lefkada island	1.81	347	P	Pb	06 45 18.7	0.0
LKD2	Lefkada island	1.81	347	P	Pn	06 45 18.0	+1.5
MET2	Kameni Chora,	1.81	71	P	Pn	06 45 17.6	+1.1
MET6	Megalochori,Me	1.83	71	P	Pn	06 45 17.9	+1.2
MET5	Makryloggos,Me	1.84	71	P	Pn	06 45 18.2	+1.3
TSLK	Tsoukalades, L	1.84	347	P	Pb	06 45 19.9	+0.6
TSLK	Tsoukalades, L	1.84	347	P	Pn	06 45 18.5	+1.6
MET1	Methana Town,	1.84	72	P	Pn	06 45 18.1	+1.1
AMPL	Ampelaki	1.89	1	P	Pb	06 45 20.1	-0.2
EVR	Evrytania	1.95	15	P	Pn	06 45 20.2	+1.6
VIL2	Platees	2.04	54	P	Pn	06 45 20.7	+1.0
ANKY	Antikythira Is	2.07	123	P	Pn	06 45 20.9	+0.9
ANKY	Antikythira Is	2.07	123	P	Pn	06 45 21.2	+1.2
AXAR	Agios Charalam	2.09	34	P	Pb	06 45 23.2	-0.4
AXAR	Agios Charalam	2.09	34	P	Pn	06 45 22.8	+2.3
MAKR	Makrakomi, Fth	2.12	21	P	Pb	06 45 23.4	-0.7
MAGU	Magoula	2.13	60	P	Pn	06 45 21.6	+0.6
LKR	Lokris	2.17	41	P	Pn	06 45 23.1	+1.6
LKR	Lokris	2.17	41	P	Pn	06 45 23.1	+1.6
AGG	Agios Georgios	2.19	24	P	Pb	06 45 24.4	-0.9
AGG	Agios Georgios	2.19	24	P	Pn	06 45 23.9	+2.1
STFN	Stefani	2.20	58	P	Pn	06 45 23.4	+1.4
STFN	Stefani	2.20	58	P	Pn	06 45 23.3	+1.3
ATAL	Atalanti	2.21	41	P	Pn	06 45 23.9	+1.8
ATAL	Atalanti	2.21	41	P	Pn	06 45 23.8	+1.7
ATH	Athens Observa	2.23	64	P	Pn	06 45 24.0	+1.7
ATH	Athens Observa	2.23	64	P	Pn	06 45 23.1	+0.8
VLY	Voula,Athens	2.24	68	P	Pn	06 45 23.0	+0.5
VLY	Voula,Athens	2.24	68	P	Pn	06 45 22.9	+0.4
ATH5	Athens Parliam	2.24	64	P	Pn	06 45 22.6	+0.1
ATHU	Athens Univers	2.27	65	P	Pn	06 45 22.6	-0.3
ATHU	Athens Univers	2.27	65	P	Pn	06 45 22.6	-0.3
ATHP	Athens-Neo Psi	2.28	64	P	Pn	06 45 24.1	+1.1
TETR	Tetrakomo, Epi	2.31	2	P	Pn	06 45 26.4	+2.8
TETR	Tetrakomo, Epi	2.31	2	P	Pn	06 45 25.5	+2.0
AIDA	Aidipsos	2.35	39	P	Pn	06 45 25.3	+1.4
PTL	Penteli	2.37	64	P	Pn	06 45 25.2	+0.9
PTL	Penteli	2.37	64	P	Pn	06 45 24.8	+0.6
DION	Dionisos Attik	2.43	64	P	Pn	06 45 25.9	+0.7
DION	Dionisos Attik	2.43	64	P	Pn	06 45 25.8	+0.7
PRMD	Pramanda	2.50	359	P	Pn	06 45 28.5	+2.4
IGT	Igoumenitsa	2.59	345	P	Pn	06 45 28.4	+1.1
IGT	Igoumenitsa	2.59	345	P	Pn	06 45 28.2	+1.0
THL	Klokotos Trika	2.62	14	P	Pn	06 45 29.9	+2.3
THL	Klokotos Trika	2.62	14	P	Pn	06 45 29.6	+1.9
KARY	Karystos	2.78	68	P	Pn	06 45 30.6	+0.7
NEO	Neokhori	2.79	35	P	Pn	06 45 31.9	+1.9
NEO	Neokhori	2.79	35	P	Pn	06 45 31.9	+1.9
KYMI	Kymi, Euboea I	2.81	54	P	Pn	06 45 31.3	+0.9
KYMI	Kymi, Euboea I	2.81	54	P	Pn	06 45 31.2	+0.9
KEK	Kerkira	2.89	338	P	Pn	06 45 33.0	+1.5
AOS2	Alonissos-2	2.98	44	P	Pn	06 45 34.1	+1.5
AOS	Alonnisos	3.02	44	P	Pn	06 45 34.1	+0.9
LIT	Litokhoron	3.23	18	P	Pn	06 45 37.8	+1.6
KZN	Kozani	3.31	8	P	Pn	06 45 37.8	+0.6
NEST	Nestorio	3.38	358	P	Pn	06 45 40.7	+2.4
IDI	Anoyia	3.47	119	P	Pn	06 45 40.5	+1.0
	0.4nm,0.3s,baz=241,slow=19,SNR=2.1						
IDI				S	Sn	06 46 21.4	+1.2
	7.2nm,0.3s,baz=301,slow=9.0,SNR=7.0						
	3.7nm,0.7s						
OHR	Ohrid	4.09	356	*i* Pn	Pn	06 45 50.1	+2.2
AKASG	Malin Array Be	14.84	20	P	P	06 48 19.9	-0.9
	0.7nm,0.3s,baz=208,slow=9.4,SNR=5.3						
KBZ	Khabaz	17.82	61	P	Pn	06 48 54.6	+1.4
	1.0nm,0.8s,baz=259,slow=16,SNR=2.8						
HFS	Hagfors	23.62	351	P	P	06 49 55.0	-1.0
	0.9nm,0.5s,baz=164,slow=13,SNR=9.1						
	0.9nm,0.5s						
FINES	FINESS Array B	24.63	6	P	P	06 50 04.4	-1.0
	0.6nm,0.3s,baz=166,slow=12,SNR=13						
	0.6nm,0.3s						
NOA	NORSAR Array B	24.85	348	P	P	06 50 06.3	-1.1
	0.3nm,0.6s,baz=161,slow=9.2,SNR=1.4						
	0.3nm,0.6s						
TORD	Torodi Ar. Bea	29.49	221	P	P	06 50 49.2	-0.2
	0.3nm,0.5s,baz=41,slow=11,SNR=2.3						
	0.3nm,0.5s						
ARCES	ARCESS Array B	32.65	3	P	P	06 51 15.8	-1.0
	0.6nm,0.4s,baz=192,slow=10,SNR=14						
	0.6nm,0.4s						
SPITS	Spitsbergen Ar	41.31	358	P	P	06 52 30.5	+0.3
	1.4nm,0.5s,baz=154,slow=11,SNR=6.1						
	1.4nm,0.5s						
KURBB	Kurchatov Arra	42.50	53	P	P	06 52 39.0	-1.4
	1.0nm,0.5s,baz=277,slow=8.7,SNR=14						
	1.0nm,0.5s						
MKAR	Makanchi Array	45.47	58	P	P	06 53 03.0	-1.3
	0.3nm,0.3s,baz=270,slow=7.9,SNR=7.7						
	0.3nm,0.3s						
ZALV	Zalesovo Beam	46.08	47	P	P	06 53 07.5	-1.4
	0.4nm,0.3s,baz=257,slow=10.0,SNR=3.1						
	0.4nm,0.3s						

IDC 21 06:45:38.8±1.1, **6°.91N**×**125°.15E**, **h0**^{km}, **mb3.8**/4, **mbtmp3.8**/4, **Error ellipse: s-maj=17.4km s-min=14.8km az=59.0**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.46	69	Pg	Pg	06 45 47.6	0.0
	164nm,0.3s,baz=254,slow=20,SNR=3.8						
WRA	Warramunga Arr	28.17	161	P	P	06 51 33.4	+0.2
	1.0nm,0.6s,baz=341,slow=9.1,SNR=7.0						
	1.0nm,0.6s						
ASAR	Alice Springs	31.57	165	P	P	06 52 02.5	-0.8
	0.7nm,0.6s,baz=337,slow=7.0,SNR=17						
	0.7nm,0.6s						
MKAR	Makanchi Array	54.06	325	P	P	06 55 06.0	+0.7
	0.4nm,0.3s,baz=123,slow=7.8,SNR=14						
	0.4nm,0.3s						
KURBB	Kurchatov Arra	58.23	327	P	P	06 55 34.6	-0.3
	0.7nm,0.5s,baz=128,slow=6.5,SNR=12						
	0.7nm,0.5s						

IDC 21 07:00:01.4±2.6, **4°.37S**×**152°.16E**, **h0**^{km}, **mb3.4**/3, **mbtmp3.5**/3, **Error ellipse: s-maj=237.4km s-min=28.7km az=126.0**, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.26	227	P	P	07 05 10.2	-0.5
	1.6nm,1.1s,baz=52,slow=9.5,SNR=4.7						
	1.6nm,1.1s						
ASAR	Alice Springs	26.04	221	P	P	07 05 37.0	+0.4
	0.4nm,0.8s,baz=55,slow=8.7,SNR=4.8						
	0.4nm,0.8s						
ILAR	Eielson Array	82.01	22	P	P	07 12 23.1	0.0
	0.5nm,1.1s,baz=251,slow=2.8,SNR=3.8						
	0.5nm,1.1s						

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*NEIC **21** 07:00:14.9±2.0, 19°.3N±0°.1×64°.6W±0°.1, h10^{km}±2^{km}, ML2.7/23, Md3.8/4(RSPR), Error ellipse: s-maj=26.1km s-min=3.7km az=141.0*

RSPR 21 07:00:16.0, **19°.10N**×**64°.44W**, **h125**^{km}±9^{km}, **MD3.8**/4, **7C-2D**, **Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUMP	Col San Antoni	1.65	235		Sn	07 01 08.1	+0.2
HUMP	Col San Antoni	1.65	235		Pn	07 00 44.4	-1.1
HUMP	Col San Antoni	1.65	235	⇑*e*P	Pn	07 00 45.0	-0.4
HUMP	Col San Antoni	1.65	235	*e*S	Sn	07 01 08.1	+0.2
GCPR	Guaynabo City	1.75	244		Sn	07 01 09.8	-0.3
GCPR	Guaynabo City	1.75	244		Pn	07 00 45.7	-0.9
GCPR	Guaynabo City	1.75	244	⇑*e*P	Pn	07 00 47.1	+0.4
GCPR	Guaynabo City	1.75	244	*e*S	Sn	07 01 09.8	-0.3
SJG	San Juan	1.90	239	Pn	Pn	07 00 48.0	-0.5
SJG	San Juan	1.90	239	IAML		07 01 23.9	
	25nm,2.2s						
SJG				IAML		07 01 27.5	
	21nm,0.4s						
ECPR	Experimental S	1.99	247	Pn	Pn	07 00 48.5	-1.1
ECPR				IAML		07 01 17.8	
	58nm,0.3s						
ECPR				IAML		07 01 30.7	
	38nm,0.2s						
ECPR	Experimental S	1.99	247	⇑*e*P	Pn	07 00 47.7	-1.8
ECPR	Experimental S	1.99	247	*e*S	Sn	07 01 15.2	0.0
EMPR	Esperanza - Ma	2.08	253	Pn	Pn	07 00 50.0	-0.7
EMPR				IAML		07 01 28.6	
	96nm,1.8s						
EMPR				IAML		07 01 37.8	
	95nm,2.9s						
CELP	Cerrillos	2.28	244	Pn	Pn	07 00 51.5	-1.6
CELP				IAML		07 01 44.8	
	21nm,2.5s						
CELP				IAML		07 01 46.3	
	22nm,2.7s						
OBIP	Obispado Ponce	2.31	243		Pn	07 00 52.0	-1.6
OBIP	Obispado Ponce	2.31	243	⇓*e*P	Pn	07 00 54.1	+0.5
AOPR	Arecibo Observ	2.32	252		Pn	07 00 52.2	-1.5
AOPR				IAML		07 01 24.9	
	comp=N,51nm,1.2s						
AOPR				IAML		07 01 28.0	
	comp=E,70nm,0.3s						
AOPR	Arecibo Observ	2.32	252	⇑*e*P	Pn	07 00 53.6	-0.1
AOPR	Arecibo Observ	2.32	252	*e*S	Sn	07 01 23.7	+1.0
UUPR	Utuado, UPR, P	2.33	249		Sn	07 01 22.7	0.0
UUPR	Utuado, UPR, P	2.33	249	Pn	Pn	07 00 52.1	-1.6
UUPR	Utuado, UPR, P	2.33	249	⇑*e*P	Pn	07 00 52.9	-0.9
UUPR	Utuado, UPR, P	2.33	249	*e*S	Sn	07 01 22.7	0.0
AGPR	Aguadilla, PR	2.61	256	Pn	Pn	07 00 55.4	-2.0
LSP	Las Mesas	2.68	250		Pn	07 00 58.2	-0.1
LSP					Sn	07 01 31.2	+0.4
LSP	Las Mesas	2.68	250	⇑*e*P	Pn	07 00 58.2	-0.1
LSP	Las Mesas	2.68	250	*e*S	Sn	07 01 31.2	+0.4
PRSN	Puerto Rico Se	2.72	252	Pn	Pn	07 00 58.1	-0.7
PRSN				IAML		07 01 45.3	
	comp=E,64nm,0.3s						
MLPR	Magueyes Islan	2.72	246	⇓*e*P	Pn	07 00 58.7	-0.1
MLPR	Magueyes Islan	2.72	246	*e*S	Sn	07 01 31.5	-0.3
CRPR	Cabo Rojo, PR	2.76	247		Sn	07 01 34.1	+1.4
CRPR	Cabo Rojo, PR	2.76	247		Pn	07 00 57.9	-1.5
CRPR				IAML		07 01 40.3	
	comp=E,37nm,2.3s						
CRPR				IAML		07 02 08.6	
	comp=E,34nm,3.0s						
CRPR	Cabo Rojo, PR	2.76	247	⇑*e*P	Pn	07 00 59.0	-0.3
CRPR	Cabo Rojo, PR	2.76	247	*e*S	Sn	07 01 34.1	+1.4
DR12	Loma Pena Alta	4.69	267	Pn	Pn	07 01 22.6	-2.4

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*IDC **21** 07:05:46.0±2.3, 29°.13N×142°.22E, h0^{km}, mb3.9/9, mbtmp3.8/10, ML3.0/1, MS2.9/5, Error ellipse: s-maj=77.7km s-min=20.8km az=75.0*

ISC 21 07:05:47.3±2.3, **29°.2N**±0°.2×**142°.3E**±0°.5, **h10**^{km}, **n13**, σ**0^s.93**/10, **mb4.0**/9, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	8.11	336	Pn	Pn	07 07 44.3	-0.9
	0.2nm,0.3s,baz=156,slow=10,SNR=6.3						
MJAR				LR	LR	07 10 44.4	
	comp=Z,39nm,20.7s,baz=186,slow=37						
	1.8nm,0.3s						
JNU	Nakatsue	10.54	295	LR	LR	07 11 44.5	
	comp=Z,95nm,18.3s,baz=110,slow=34						
JOW	Kunigami	12.61	263	LR	LR	07 13 01.9	
	comp=Z,68nm,19.7s,baz=152,slow=35						
KSRS	Korea Array	14.57	308	LR	LR	07 15 14.6	
	comp=Z,40nm,18.3s,baz=95,slow=39						
SONM	Songino Array	33.32	314	P	P	07 12 27.0	+1.7
	0.5nm,0.7s,baz=118,slow=12,SNR=2.2						
SONM				LR	LR	07 25 42.8	
	comp=Z,33nm,19.3s,baz=320,slow=36						
	0.5nm,0.7s						
CMAR	Chiang Mai Arr	40.87	265	P	P	07 13 29.3	-0.4
	1.1nm,0.3s,baz=52,slow=9.7,SNR=4.3						
	1.1nm,0.3s						
ZALV	Zalesovo Beam	48.01	318	P	P	07 14 26.2	0.0
	1.3nm,0.8s,baz=76,slow=6.3,SNR=4.5						
	1.3nm,0.8s						
MKAR	Makanchi Array	49.25	308	P	P	07 14 35.0	-1.0
	0.5nm,0.6s,baz=67,slow=9.3,SNR=4.0						
	0.5nm,0.6s						
WRA	Warramunga Arr	49.43	190	P	P	07 14 36.8	-0.7
	1.1nm,0.8s,baz=12,slow=7.7,SNR=4.7						
	1.1nm,0.8s						
KURBB	Kurchatov Arra	51.68	313	P	P	07 14 54.2	0.0
	2.8nm,0.8s,baz=89,slow=7.4,SNR=23						
	2.8nm,0.8s						
ASAR	Alice Springs	53.15	190	P	P	07 15 06.0	+0.5
	0.3nm,0.9s,baz=8.2,slow=5.8,SNR=4.4						
	0.3nm,0.9s						
BVAR	Borovoye Array	56.60	317	P	P	07 15 30.7	+0.6
	1.7nm,0.8s,baz=79,slow=7.7,SNR=7.1						
	1.7nm,0.8s						
ARTI	Arti	62.96	322	P	P	07 16 14.1	+0.3
	2.1nm,0.7s,baz=46,slow=8.6,SNR=3.4						
	2.1nm,0.7s						

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*IDC **21** 07:28:46.6±2.2, 7°.80S×115°.55E, h0^{km}, mb3.7/4, mbtmp3.8/5, ML3.6/1, MS3.0/2, Error ellipse: s-maj=160.0km s-min=23.4km az=52.0*

*DJA **21** 07:28:48.0±0.2, 8°S±2°×11°5E±°, h10^{km}, M3.9/20, mb4.1/5, MLv3.9/20*

ISC 21 07:28:47.8±1.1, **8°.15S**±0°.05×**114°.89E**±0°.03, **h14**^{km}±8^{km}, **n31**, σ**1^s.39**/40, **mb3.8**/4, **Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTBI	Rangdo, Negare	0.31	171	P	Pg	07 28 53.8	-0.4
RTBI				S	Sg	07 28 59.5	+0.9
DNP	Denpasar	0.61	149	P	Pg	07 28 59.7	0.0
DNP				S	Sg	07 29 10.4	+2.6
IGBI	Denpasar	0.70	159	P	Pg	07 29 00.8	-0.8
IGBI				S	Sg	07 29 10.7	-0.2
KHKI	Kahang-Kahang	0.74	106	P	Pg	07 29 01.8	-0.3
ABJI	Asem Bagus	0.74	299	P	Pg	07 29 01.9	-0.4
JAGI	Jajag, Banyuwa	0.80	247	P	Pg	07 29 02.3	-1.0
JAGI				S	Sg	07 29 14.1	+0.3
KLNI	Mataram	1.22	103	P	Pn	07 29 09.2	-1.2
KLNI				S	Sb	07 29 26.3	+0.1
BLJI	Banyuglugur	1.35	287	P	Pn	07 29 12.0	-0.2
BLJI				S	Sg	07 29 31.4	0.0
KMMI	Kalianget	1.43	320	P	Pb	07 29 14.1	-0.1
GMJI	Gumukmas	1.44	265	P	Pn	07 29 13.1	-0.3
GMJI				S	Sn	07 29 33.0	+0.9
TWSI	Taliwang, Sumb	2.05	107	P	Pn	07 29 21.7	-0.1
TWSI				S	Sn	07 29 48.2	+1.0
PLAI	Plampang	2.93	103	P	Pn	07 29 34.6	+0.7
PLAI				S	Sn	07 30 09.5	+0.6
SJI	Sawahan	3.12	277	P	Pn	07 29 37.2	+0.5
SNJI	Sawahan-Nganju	3.13	277	P	Pn	07 29 38.7	+1.9
DBNI	Kabupaten Domp	3.40	96	P	Pn	07 29 40.8	+0.4
DBNI				S	Sn	07 30 22.0	+1.4
NGJI	Ngawi	3.49	283	P	Pn	07 29 45.2	+3.6
PCJI	Pacitan	3.68	269	P	Pn	07 29 46.8	+2.6
PCJI				S	Sn	07 30 29.5	+2.1
UGM	Wanagama	4.33	273	P	Pn	07 29 54.8	+1.5
WBSI	Waikabubak, Su	4.68	109	P	Pn	07 29 59.9	+1.8
LBFI	Labuhan Bajo,	4.96	94	P	Pn	07 30 03.3	+1.5
KAPI	Kappang	5.75	57	P	Pn	07 30 13.8	+1.1
BKSI	Bulukumba	5.91	62	P	Pn	07 30 16.2	+1.3
	0.1nm12nm,0.6s						
PMSI	Majene	6.11	41	P	Pn	07 30 17.8	0.0
EDFI	Ende, Flores	6.75	96	P	Pn	07 30 27.6	+1.0
FITZ	Fitzroy Crossi	14.39	134	Pn	Pn	07 32 09.6	-1.5

	0.2nm,0.3s,baz=311,slow=5.8,SNR=7.2						
FITZ				Sn	Sn	07 34 42.7	-7.9
	0.1nm,0.3s,baz=189,slow=13,SNR=1.7						
	1.5nm,0.6s						
WRA	**Warramunga Arr**	**22.18**	**124**	P	**P**	**07 33 40.5**	**-3.2**
	1.3nm,0.7s,baz=299,slow=12,SNR=5.0						
	1.3nm,0.7s						
ASAR	**Alice Springs**	**23.87**	**132**	P	**P**	**07 33 59.7**	**-1.3**
	2.9nm,0.8s,baz=308,slow=9.2,SNR=17						
	2.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**30.77**	**329**	LR	LR	07 47 51.1	
	comp=Z,12nm,19.4s,baz=325,slow=37						
STKA	**Stephens Creek**	**34.26**	**137**	P	**P**	**07 35 33.2**	**-0.2**
	1.6nm,0.6s,baz=323,slow=15,SNR=1.9						
	1.6nm,0.6s						
MKAR	**Makanchi Array**	**61.92**	**335**	P	**P**	**07 39 07.8**	**+0.8**
	0.3nm,0.5s,baz=137,slow=9.2,SNR=6.3						
	0.3nm,0.5s						
TSUM	**Tsumeb**	**94.19**	**250**	LR	LR	08 23 40.3	
	comp=Z,15nm,18.0s,baz=331,slow=35						

IDC 21 07:31:21.9±3.8**,6°.43N**×**125°.29E,h0^{km},mb3.6**/4**,**
mbtmp3.6/4**,Error ellipse: s-maj=129.0km s-min=9.3km az=105.0,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.69**	**24**	Pg	Pg	07 31 35.9	+0.7
	497nm,0.3s,baz=154,slow=1.5,SNR=17						
DAV				Lg	Lg	07 31 44.2	
	472nm,0.3s,baz=143,slow=20,SNR=5.9						
FITZ	**Fitzroy Crossi**	**24.38**	**179**	P	P	07 36 42.4	+0.4
	0.6nm,0.5s,baz=0.0,slow=11,SNR=1.5						
	0.6nm,0.5s						
WRA	**Warramunga Arr**	**27.68**	**161**	P	P	07 37 10.7	-1.2
	0.5nm,0.8s,baz=338,slow=8.4,SNR=1.8						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**31.08**	**165**	P	P	07 37 41.9	-0.2
	0.3nm,0.5s,baz=344,slow=7.5,SNR=7.3						
	0.3nm,0.5s						
STKA	**Stephens Creek**	**41.15**	**159**	P	P	07 39 08.4	+0.3
	1.3nm,0.5s,baz=342,slow=17,SNR=3.2						
	1.3nm,0.5s						

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*IDC **21** 07:35:28.4±1.1,29°.44N×104°.60E,h0^{km},mb3.5/7,*
mbtmp3.5/9,ML3.8/2,MS3.5/1,Error ellipse: s-maj=37.6km s-min=17.0km az=70.0

ISC 21 07:35:33.5±1.2**,29°.5N**±0°.1×**104°.6E**±0°.2**,h35^{km},n10,**
σ**0^{s}.64**/10**,mb3.4**/6**,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LZDM	**Lanzhou Array**	**6.52**	**353**	Pn	**Pn**	**07 37 07.5**	**+0.1**
	baz=165,slow=14						
LZDM				Sn	**Sn**	**07 38 20.7**	**0.0**
	baz=177,slow=28						
LZDM				Lg	Lg	07 38 56.8	
	baz=163,slow=26						
	5.1nm,0.4s						
SONM	**Songino Array**	**18.40**	**4**	P	**P**	**07 39 45.7**	**+0.1**
	0.1nm,0.3s,baz=192,slow=9.2,SNR=5.1						
	0.6nm,0.7s						
KSRS	**Korea Array**	**20.98**	**62**	P	**P**	**07 40 13.3**	**-0.3**
	1.6nm,0.8s,baz=249,slow=10,SNR=4.9						
	1.6nm,0.8s						
MKAR	**Makanchi Array**	**24.52**	**321**	P	**P**	**07 40 50.1**	**+0.5**
	0.5nm,0.6s,baz=116,slow=11,SNR=5.6						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**28.82**	**324**	P	**P**	**07 41 27.3**	**-0.9**
	0.2nm,0.4s,baz=128,slow=6.5,SNR=2.2						
	0.2nm,0.4s						
AKTO	**Aktyubinsk**	**40.59**	**314**	LR	LR	07 59 51.5	
	comp=Z,61nm,20.8s,baz=16,slow=36						
WRA	**Warramunga Arr**	**56.87**	**146**	P	**P**	**07 45 14.8**	**-0.1**
	1.0nm,0.9s,baz=329,slow=6.8,SNR=3.6						
	1.0nm,0.9s						
ASAR	**Alice Springs**	**59.86**	**149**	P	**P**	**07 45 36.0**	**+0.1**
	0.7nm,0.8s,baz=318,slow=6.6,SNR=7.3						
	0.7nm,0.8s						
ILAR	**Eielson Array**	**71.12**	**25**	P	**P**	**07 46 47.5**	**-0.6**
	0.3nm,0.8s,baz=304,slow=5.4,SNR=4.4						
	0.3nm,0.8s						
YKA	**Yellowknife Ar**	**83.13**	**17**	P	**P**	**07 47 56.6**	**+1.1**
	0.3nm,0.9s,baz=318,slow=5.1,SNR=4.5						
	0.3nm,0.9s						

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*DJA **21** 07:42:21.4±0.2,3˚S±3˚×12˚8E±˚,h10^{km},M4.1/16,mB5.4/1,*
mb4.2/6,MLv4.0/16,Mw(mB)4.8/1

*IDC **21** 07:42:24.0±2.2,3°.17S×128°.77E,h0^{km},mb3.7/2,*
mbtmp3.8/4,ML4.0/2,MS2.9/1,Error ellipse: s-maj=107.6km s-min=28.0km az=71.0

ISC 21 07:42:23.2±1.1**,3°.01S**±0°.07×**127°.73E**±0°.07**,h35^{km},n19,**
σ**1^{s}.56**/18**,Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**0.67**	**250**	P	**Pn**	**07 42 34.4**	**-1.8**
KRAI	**Karang Ratu**	**0.73**	**115**	P	**Pn**	**07 42 36.0**	**-1.1**
AAI	**Ambon**	**0.81**	**146**	P	**Pn**	**07 42 37.8**	**-0.4**
MSAI	**Masohi**	**1.24**	**106**	P	**Pn**	**07 42 46.1**	**+2.0**
SANI	**Sanana**	**1.99**	**299**	P	**Pn**	**07 42 52.3**	**-2.0**
BNDI	**Bandanaira**	**2.64**	**125**	P	**Pn**	**07 43 03.7**	**+0.4**
TNTI	**Ternate**	**3.77**	**354**	P	**Pn**	**07 43 19.1**	**+0.1**
SWI	**Sorong**	**4.12**	**59**	P	**Pn**	**07 43 24.2**	**+0.5**
SIJI	**Sorong**	**4.12**	**59**	P	**Pn**	**07 43 24.4**	**+0.6**
FAKI	**Fak Fak**	**4.51**	**89**	P	**Pn**	**07 43 30.0**	**+0.9**
APSI	**Ampana**	**6.43**	**289**	P	**Pn**	**07 43 56.0**	**+0.6**
SGSI	**Sangihe**	**7.01**	**342**	P	**Pn**	**07 44 02.5**	**-0.9**
EDFI	**Ende, Flores**	**8.28**	**226**	P	**Pn**	**07 44 25.1**	**+4.1**
MPSI	**Mapaga**	**8.51**	**293**	P	**Pn**	**07 44 25.7**	**+1.7**
FITZ	**Fitzroy Crossi**	**15.13**	**188**	Pn	**P**	**07 45 59.0**	**-0.3**
	0.2nm,0.3s,baz=5.2,slow=12,SNR=1.3						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**18.02**	**160**	P	**Pn**	**07 46 31.0**	**-0.1**
	0.8nm,0.3s,baz=341,slow=12,SNR=21						
	2.0nm,0.5s						
PMG	**Port Moresby**	**20.32**	**109**	LR	LR	07 55 52.0	
	comp=Z,34nm,18.1s,baz=336,slow=42						
ASAR	**Alice Springs**	**21.39**	**164**	P	**P**	**07 47 08.2**	**+0.2**
	4.0nm,0.7s,baz=347,slow=12,SNR=40						
ASAR				S	**S**	**07 51 02.5**	**-1.1**
	0.7nm,0.7s,baz=333,slow=10.0,SNR=4.2						
	4.0nm,0.7s						
MKAR	**Makanchi Array**	**63.67**	**327**	P	P	07 53 02.3	+11
	0.2nm,0.4s,baz=120,slow=6.8,SNR=2.6						
	0.2nm,0.4s						

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*JMA **21** 07:58:45.5±0.6,33˚N±1˚×14˚3E±˚,h75^{km},MV3.7/26,FAR E OFF IZU ISLANDS*

*IDC **21** 07:59:06.1±11.0,33°.17N×139°.69E,h0^{km},mb3.6/2,*
mbtmp3.5/3,ML2.6/1,Error ellipse: s-maj=207.1km s-min=78.7km az=108.0

ISC 21 07:58:44.5±3.4**,32°.8N**±0°.1×**142°.8E**±0°.2**,h50^{km},n18,**
σ**1^{s}.30**/23**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**2.36**	**320**	P	**Pn**	**07 59 20.9**	**+0.7**
BSO1				*e*S	**Sn**	**07 59 48.1**	**+0.3**
JHJ2	**Mitsune**	**2.52**	**277**	P	**Pn**	**07 59 23.1**	**0.0**
JHCJ	**Hachijojimakas**	**2.54**	**276**	*e*S	**Sn**	**07 59 51.4**	**-1.5**
JAOM	**Aogashimamukai**	**2.59**	**262**	P	**Pn**	**07 59 24.6**	**+0.6**
BSO3	**Boso 3**	**2.73**	**316**	P	**Pn**	**07 59 26.5**	**+0.9**
BSO3				*e*S	**Sn**	**07 59 57.0**	**-0.3**
JMKN	**Mikurajimanish**	**2.88**	**292**	*e*P	**Pn**	**07 59 27.9**	**0.0**
BSO4	**Boso 4**	**2.96**	**317**	P	**Pn**	**07 59 30.4**	**+1.4**
BSO4				*e*S	**Sn**	**08 00 03.5**	**+0.2**
JOD2	**Odawara 2**	**3.92**	**309**	P	**Pn**	**07 59 41.8**	**-0.3**
JYN	**Shimob**	**4.41**	**308**	*e*P	**Pn**	**07 59 50.0**	**+1.1**
JAG	**Ashikaga**	**4.52**	**323**	P	**Pn**	**07 59 51.6**	**+1.2**
JRY	**Ryogami san**	**4.52**	**316**	P	**Pn**	**07 59 51.8**	**+1.3**
JRY				*e*S	**Sn**	**08 00 41.2**	**-0.5**
JOTO	**OTAMA OYAMA**	**5.12**	**337**	P	**Pn**	**07 59 59.8**	**+1.1**
JOTO				S	**Sn**	**08 00 52.9**	**-3.6**
MJAR	**Matsushiro Arr**	**5.29**	**316**	Pn	**Pn**	**08 00 02.4**	**+1.5**
	0.5nm,0.3s,baz=159,slow=13,SNR=36						
MJAR				Sn	**Sn**	**08 00 58.8**	**-1.8**
	0.2nm,0.3s,baz=346,slow=5.1,SNR=5.6						
	4.0nm,0.4s						
MAT	**Matsushiro**	**5.29**	**316**	P	**Pn**	**08 00 02.5**	**+1.6**
MAT				*e*S	**Sn**	**08 01 00.9**	**+0.3**
JIE	**Ise**	**5.32**	**289**	*e*P	**Pn**	**08 00 02.3**	**+1.0**
JMK	**Ichinoseki**	**6.23**	**349**	*e*P	**Pn**	**08 00 13.7**	**-0.2**
ZALV	**Zalesovo Beam**	**45.64**	**315**	P	P	08 07 12.2	+12
	0.7nm,0.5s,baz=104,slow=8.7,SNR=3.5						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**47.40**	**306**	P	P	08 07 23.1	+9.3
	0.2nm,0.4s,baz=82,slow=8.4,SNR=1.8						
	0.2nm,0.4s						

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*NEIC **21** 08:02:59.1±0.8,61°.90N±0°.03×151°.58W±0°.07,h82^{km}±5^{km},*
Error ellipse: s-maj=4.8km s-min=4.2km az=120.0

*IDC **21** 08:02:59.7±1.4,61°.59N×149°.45W,h0^{km},mb3.1/1,*
mbtmp3.2/5,ML2.9/4,Error ellipse: s-maj=36.6km s-min=13.1km az=106.0

*AEIC **21** 08:03:00.0±0.8,61°.88N±0°.03×151°.49W±0°.07,h79^{km}±4^{km},*
ML2.9,ML3.2/160(NEIC),Error ellipse: s-maj=5.2km s-min=4.1km az=117.0

ISC 21 08:02:58.6±1.0**,61°.88N**±0°.03×**151°.50W**±0°.04**,h90^{km}**±6^{km}**,**
n127,σ**0^{s}.79**/137**,Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKT	**Skwentna**	**0.10**	**351**		**Pn**	**08 03 11.0**	**-0.4**
SKT	**Skwentna**	**0.10**	**351**		**Sn**	**08 03 20.1**	**-0.7**
STLK	**Strandline Lak**	**0.42**	**203**		**Pn**	**08 03 12.4**	**-0.4**
STLK				Sn	**Sn**	**08 03 22.7**	**-0.6**
STLK				IAML		08 03 23.4	
	comp=N,859nm,0.4s						
SUA	**Susitna One**	**0.55**	**139**		**Pn**	**08 03 14.2**	**+0.2**
SUA				Sn	**Sn**	**08 03 25.4**	**+0.1**
SUA				IAML		08 03 26.8	
	comp=N,1µm,0.7s						
SUA				IAML		08 03 26.9	
	comp=E,863nm,0.2s						
SPCG	**Spurr Capps Gl**	**0.64**	**203**		**Pn**	**08 03 14.4**	**-0.3**
SPCG					**Sn**	**08 03 25.9**	**-0.7**
M22K	**Willow**	**0.67**	**101**		**Pn**	**08 03 14.9**	**+0.2**
M22K	**Willow**	**0.67**	**101**	Sn	**Sn**	**08 03 27.2**	**+0.5**
SPCP	**Crater Peak Br**	**0.69**	**207**		**Pn**	**08 03 15.1**	**-0.2**
SPCP					**Sn**	**08 03 26.9**	**-0.7**
L22K	**Petersville**	**0.73**	**28**		**Pn**	**08 03 15.4**	**-0.1**
L22K				IAML		08 03 27.9	
	comp=E,318nm,0.3s						
L22K				Sn	**Sn**	**08 03 27.0**	**-1.0**
L22K				IAML		08 03 28.7	
	comp=N,488nm,0.4s						
SPCN	**Chakachatna No**	**0.74**	**207**		**Pn**	**08 03 15.4**	**-0.1**
SPBG	**Spurr Blockage**	**0.75**	**214**		**Pn**	**08 03 15.8**	**+0.1**
SPBG					**Sn**	**08 03 28.8**	**+0.3**
SPU	**Mount Spurr**	**0.75**	**201**		**Pn**	**08 03 15.3**	**-0.3**
SPCR	**Spurr Chakacha**	**0.77**	**207**		**Pn**	**08 03 15.4**	**-0.4**
SPCR					**Sn**	**08 03 28.0**	**-0.7**
SPCR	**Spurr Chakacha**	**0.77**	**207**		**Pn**	**08 03 15.5**	**-0.4**
SPCR					**Sn**	**08 03 27.9**	**-0.7**
SPNN	**North Nagishla**	**0.77**	**228**		**Pn**	**08 03 15.8**	**-0.2**
M20K	**Styx River**	**0.77**	**271**		**Pn**	**08 03 15.6**	**-0.3**
CUT	**Chulitna**	**0.78**	**47**		**Pn**	**08 03 16.0**	**+0.1**
CUT	**Chulitna**	**0.78**	**47**		**Sn**	**08 03 29.6**	**+0.9**
CKL	**Chakachamna La**	**0.80**	**211**		**Pn**	**08 03 15.9**	**-0.3**
PPLA	**Purkeypile**	**1.07**	**343**		**Pn**	**08 03 19.1**	**-0.1**
PPLA				IAML		08 03 34.6	
	comp=E,452nm,0.6s						
PPLA				IAML		08 03 36.0	
	comp=N,246nm,0.3s						
PPLA	**Purkeypile**	**1.07**	**343**		**Sn**	**08 03 33.8**	**-0.9**
CAPN	**Captain Cook N**	**1.13**	**171**		**Pn**	**08 03 22.0**	**+2.2**
RC01	**Rabbit Creek A**	**1.16**	**132**		**Pn**	**08 03 20.0**	**-0.1**
RC01				IAML		08 03 38.9	
	comp=N,455nm,0.3s						
RC01				IAML		08 03 39.0	
	comp=E,500nm,0.4s						
PMR	**Palmer**	**1.17**	**103**		**Pn**	**08 03 20.1**	**-0.1**
PMR				IAML		08 03 37.9	
	comp=N,468nm,0.5s						
PMR				IAML		08 03 38.9	
	comp=E,591nm,0.4s						
PMR	**Palmer**	**1.17**	**103**		**Sn**	**08 03 36.7**	**+0.4**
GHO	**Glory Hole Cre**	**1.23**	**94**		**Pn**	**08 03 21.3**	**+0.2**
GHO				IAML		08 03 41.0	
	comp=E,537nm,0.4s						
GHO				IAML		08 03 43.3	
	comp=N,564nm,0.4s						
DFR	**Drift River**	**1.42**	**204**		**Pn**	**08 03 23.6**	**+0.2**
RDJH	**Redoubt Jeurge**	**1.44**	**207**		**Pn**	**08 03 24.1**	**+0.4**
NCT	**North Crescent**	**1.50**	**208**		**Pn**	**08 03 24.9**	**+0.5**
NCT					**Sn**	**08 03 45.2**	**+1.3**
SML	**Sawmill**	**1.50**	**92**		**Pn**	**08 03 24.5**	**+0.1**
SML				IAML		08 03 49.1	
	comp=N,278nm,0.7s						
SLKM	**Skilak Lake**	**1.51**	**155**		**Pn**	**08 03 25.1**	**+0.5**
SLKM				IAML		08 03 49.2	
	comp=N,230nm,0.2s						
SLKM				IAML		08 03 49.5	
	comp=E,179nm,0.4s						
KNK	**Knik Glacier**	**1.53**	**107**		**Pn**	**08 03 24.7**	**0.0**
RDWB	**Redoubt West**	**1.54**	**205**		**Pn**	**08 03 25.4**	**+0.3**
RDWB					**Sn**	**08 03 45.7**	**+0.7**
RDSO	**Redoubt South**	**1.56**	**203**		**Pn**	**08 03 25.5**	**+0.4**
WAT7	**Susitna Watana**	**1.56**	**51**		**Pn**	**08 03 25.5**	**+0.3**
RED	**Redoubt Volcan**	**1.59**	**203**		**Pn**	**08 03 25.8**	**+0.2**
O22K	**Cooper Landing**	**1.65**	**148**		**Pn**	**08 03 26.5**	**+0.3**
TRF	**Thorofare Moun**	**1.67**	**19**		**Pn**	**08 03 27.3**	**+0.7**
WAT1	**Susitna Watana**	**1.67**	**54**		**Pn**	**08 03 27.0**	**+0.4**
KTH	**Kantishna Hill**	**1.70**	**9**		**Pn**	**08 03 27.6**	**+0.7**
KTH				IAML		08 03 49.3	
	comp=E,209nm,0.5s						
KTH				IAML		08 03 50.3	
	comp=N,241nm,0.5s						
M23K	**Glacier View**	**1.79**	**91**		**Pn**	**08 03 27.9**	**-0.2**
N19K	**Bonanza Creek**	**1.79**	**235**		**Pn**	**08 03 28.1**	**-0.1**
PWL	**Port Wells**	**1.84**	**123**		**Pn**	**08 03 28.3**	**-0.4**
WAT6	**Susitna Watana**	**1.90**	**67**		**Pn**	**08 03 29.6**	**+0.1**
RND	**Reindeer**	**1.96**	**37**		**Pn**	**08 03 30.9**	**+0.6**
RND				IAML		08 03 55.9	
	comp=N,84nm,0.4s						
RND				IAML		08 03 56.1	
	comp=E,98nm,0.5s						
SCM	**Sheep Creek Mo**	**1.98**	**90**		**Pn**	**08 03 30.4**	**-0.1**
SEW	**Seward**	**2.04**	**150**		**Pn**	**08 03 32.0**	**+0.7**
SEW				IAML		08 04 05.1	
	comp=E,198nm,0.6s						
SEW				IAML		08 04 07.1	
	comp=N,101nm,0.5s						
ILSW	**Iliamna Southw**	**2.07**	**204**	Pn	**Pn**	**08 03 32.3**	**+0.5**
ILS	**Iliamna Low So**	**2.08**	**202**		**Pn**	**08 03 32.4**	**+0.5**
O19K	**Port Alsworth**	**2.18**	**220**		**Pn**	**08 03 32.7**	**-0.4**
O19K				IAML		08 04 01.9	
	comp=N,99nm,0.5s						
O19K				IAML		08 04 02.1	
	comp=E,122nm,0.5s						
BRSE	**Bradley Lake S**	**2.18**	**170**		**Pn**	**08 03 34.0**	**+0.9**
MCK	**McKinley**	**2.20**	**31**		**Pn**	**08 03 34.0**	**+0.6**
MCK				IAML		08 04 04.0	
	comp=E,103nm,0.5s						
MCK				IAML		08 04 08.3	
	comp=N,80nm,0.6s						
BPAW	**Bear Paw Mtn.**	**2.24**	**6**	Pn	**Pn**	**08 03 34.1**	**+0.2**
BPAW				IAML		08 04 00.8	
	comp=E,87nm,0.4s						
DHY	**Denali Highway**	**2.26**	**56**		**Pn**	**08 03 34.8**	**+0.5**
DHY				IAML		08 04 04.4	
	comp=E,112nm,0.4s						
DHY				IAML		08 04 05.2	
	comp=N,127nm,0.4s						
GLI	**Glacier Island**	**2.35**	**113**	Pn	**Pn**	**08 03 34.1**	**-1.2**
CNPM	**China Poot**	**2.37**	**177**		**Pn**	**08 03 36.1**	**+0.4**
CNPM	**China Poot**	**2.37**	**177**	IAML		08 04 11.0	
	comp=E,95nm,0.3s						
CNPM				IAML		08 04 12.4	
	comp=N,118nm,0.4s						
N18K	**Kilae Creek**	**2.44**	**242**		**Pn**	**08 03 36.6**	**0.0**
L18K	**Granite Mounta**	**2.47**	**280**		**Pn**	**08 03 36.7**	**-0.2**
M24K	**Tolsona, Glenn**	**2.52**	**83**		**Pn**	**08 03 38.5**	**+0.7**
J20K	**Nowinta River**	**2.60**	**334**		**Pn**	**08 03 38.2**	**-0.4**
FID	**Port Fidalgo**	**2.67**	**113**	Pn	**Pn**	**08 03 38.1**	**-1.6**
KLU	**Klutina**	**2.69**	**96**		**Pn**	**08 03 39.5**	**-0.5**
KLU				IAML		08 04 11.6	
	comp=E,81nm,0.5s						
KLU				IAML		08 04 26.5	
	comp=N,94nm,0.4s						
O18K	**Koktuh Hills**	**2.73**	**223**		**Pn**	**08 03 40.8**	**+0.4**
P23K	**Montague Islan**	**2.75**	**132**	Pn	**Pn**	**08 03 39.4**	**-1.4**
P23K				IAML		08 04 28.8	
	comp=E,119nm,0.8s						
J19K	**Poorman**	**2.83**	**320**		**Pn**	**08 03 41.6**	**-0.3**
HIN	**Hinchinbrook I**	**2.85**	**119**	Pn	**Pn**	**08 03 40.8**	**-1.2**
HIN				IAML		08 04 34.6	
	comp=E,112nm,1.2s						
DIV	**Divide**	**2.85**	**103**	Pn	**Pn**	**08 03 40.9**	**-1.2**
DIV				IAML		08 04 16.1	
	comp=E,119nm,0.5s						
M17K	**Holitna River**	**2.88**	**263**		**Pn**	**08 03 42.3**	**-0.1**
M17K				IAML		08 04 17.0	
	comp=E,74nm,0.8s						
J18K	**Innoko River**	**2.88**	**306**		**Pn**	**08 03 42.6**	**+0.1**
NEA2	**Nenana**	**2.93**	**21**		**Pn**	**08 03 43.2**	**+0.1**
NEA2				IAML		08 04 17.2	
	comp=N,35nm,0.4s						
PAX	**Paxson**	**3.01**	**66**	Pn	**Pn**	**08 03 44.8**	**+0.5**
PAX				IAML		08 04 29.8	
	comp=E,92nm,0.3s						
WRH	**Wood River Hil**	**3.02**	**29**		**Pn**	**08 03 43.9**	**-0.5**
N17K	**Nushagak Hills**	**3.07**	**246**		**Pn**	**08 03 44.5**	**-0.5**
EYAK	**Cordova Ski Ar**	**3.09**	**113**	Pn	**Pn**	**08 03 44.8**	**-0.4**
EYAK				IAML		08 04 25.4	
	comp=N,42nm,0.6s						
EYAK				IAML		08 04 39.7	
	comp=E,38nm,0.7s						
CCB	**Clear Creek Bu**	**3.24**	**29**		**Pn**	**08 03 47.2**	**0.0**
HDA	**Harding Lake**	**3.27**	**37**		**Pn**	**08 03 47.8**	**+0.1**
HDA				IAML		08 04 30.1	
	comp=E,57nm,0.3s						
HDA				IAML		08 04 34.6	
	comp=N,69nm,0.5s						
N25K	**Chitina, Valde**	**3.29**	**92**		**Pn**	**08 03 47.8**	**-0.3**
N25K				IAML		08 04 39.7	
	comp=N,50nm,0.4s						
N25K				IAML		08 04 40.3	
	comp=E,61nm,0.5s						
SYI	**Shuyak Island**	**3.31**	**188**		**Pn**	**08 03 49.2**	**+0.9**
SYI				IAML		08 04 34.8	
	comp=N,32nm,0.6s						
SYI				IAML		08 04 36.3	
	comp=E,31nm,0.9s						
COLA	**College**	**3.42**	**27**	Pn	**Pn**	**08 03 50.0**	**+0.3**
COLA				IAML		08 05 02.8	
	comp=E,69nm,0.5s						
IL31		**3.57**	**34**		**Pn**	**08 03 51.8**	**+0.1**
ILAR	**Eielson Array**	**3.57**	**34**	Pn	**Pn**	**08 03 51.7**	**0.0**
	comp=E,1.5nm,0.3s,baz=222,slow=14,SNR=48						
ILAR				Sn	**Sn**	**08 04 30.1**	**-2.7**
	comp=E,3.0nm,0.3s,baz=238,slow=17,SNR=14						
	comp=E,1.1nm,0.3s						
ILAR	**Eielson Array**	**3.57**	**34**		**Pn**	**08 03 51.3**	**-0.4**
RIDG	**Independent Ri**	**3.58**	**56**	Pn	**Pn**	**08 03 53.0**	**+1.1**
RIDG				IAML		08 04 45.0	
	comp=N,58nm,0.5s						
P17K	**Kvichak River**	**3.64**	**224**	Pn	**Pn**	**08 03 53.5**	**+0.9**
P17K				IAML		08 04 51.8	
	comp=E,57nm,0.9s						
P17K				IAML		08 05 19.8	
	comp=N,57nm,1.0s						
KAHC	**Katmai Hardscr**	**3.69**	**210**		**Pn**	**08 03 53.3**	**-0.1**
GLB	**Gilahina Butte**	**3.69**	**93**		**Pn**	**08 03 53.3**	**-0.2**
GLB				IAML		08 04 53.1	
	comp=N,44nm,0.9s						
GLB				IAML		08 04 55.0	
	comp=E,32nm,0.4s						
KARR	**Katmai Rainbow**	**3.75**	**207**		**Pn**	**08 03 55.1**	**+0.8**
MENT	**Mentasta**	**3.77**	**70**	Pn	**Pn**	**08 03 54.7**	**+0.2**
H21K	**Melozitna Rive**	**3.83**	**352**		**Pn**	**08 03 55.1**	**-0.2**
DOT	**Dot Lake**	**3.85**	**59**	Pn	**Pn**	**08 03 55.8**	**+0.2**
DOT				IAML		08 04 49.9	
	comp=E,49nm,0.7s						
DOT				IAML		08 04 53.4	
	comp=N,47nm,0.4s						
J25K	**Salcha River,**	**3.90**	**43**		**Pn**	**08 03 57.0**	**+0.8**
J25K				IAML		08 04 48.3	
	comp=N,29nm,0.5s						
J25K				IAML		08 04 49.3	
	comp=E,30nm,0.7s						
VRDI	**Verde Repeater**	**3.91**	**96**	Pn	**Pn**	**08 03 55.4**	**-1.1**
VRDI				IAML		08 05 03.6	
	comp=N,21nm,0.9s						
L26K	**Log Cabin Wild**	**3.96**	**70**	Pn	**Pn**	**08 03 57.8**	**+0.7**
M26K	**Nabesna, AK**	**4.03**	**79**		**Pn**	**08 03 57.7**	**-0.2**
M26K				IAML		08 05 03.7	
	comp=E,28nm,0.4s						
M26K				IAML		08 05 08.7	
	comp=N,41nm,0.5s						
SCRK	**Sand Creek**	**4.03**	**55**	Pn	**Pn**	**08 03 58.2**	**+0.2**
SCRK				IAML		08 04 52.0	
	comp=N,33nm,0.5s						
SCRK				IAML		08 04 52.2	
	comp=E,39nm,0.4s						
MCARA	**McCarthy VSAT**	**4.08**	**93**		**Pn**	**08 03 58.7**	**+0.1**
KABU	**Katmai Buttres**	**4.09**	**209**		**Pn**	**08 03 58.7**	**-0.2**
KDAK	**Kodiak Island**	**4.15**	**188**	Pn	**Pn**	**08 04 00.7**	**+1.1**
	comp=E,0.4nm,0.3s,baz=33,slow=4.0,SNR=12						
KDAK				Sn	**Sn**	**08 04 43.0**	**-3.9**
	comp=E,0.9nm,0.3s,baz=103,slow=15,SNR=6.7						
	comp=E,6.2nm,0.8s						
CRQM	**Cirque**	**4.18**	**102**	Pn	**Pn**	**08 03 59.6**	**-0.6**
CRQM				IAML		08 05 14.2	
	comp=N,40nm,0.8s						
P16K	**Nushagak River**	**4.30**	**231**	Pn	**Pn**	**08 04 02.6**	**+1.0**
P16K				IAML		08 05 54.7	
	comp=N,32nm,1.1s						
P16K				IAML		08 06 41.5	
	comp=E,27nm,1.2s						
TGL	**Tana Glacier**	**4.33**	**101**	Pn	**Pn**	**08 04 01.7**	**-0.4**
TGL				IAML		08 05 10.7	
	comp=N,36nm,0.5s						
J26L	**Joseph Creek**	**4.45**	**50**		**Pn**	**08 04 04.0**	**+0.2**
J26L				IAML		08 05 02.5	
	comp=N,31nm,0.5s						
J26L				IAML		08 05 04.8	
	comp=E,27nm,0.4s						
BARN	**Barnard Glacie**	**4.79**	**96**	Pn	**Pn**	**08 04 08.2**	**-0.2**
BARN				IAML		08 05 28.9	
	comp=N,19nm,0.9s						
BARN				IAML		08 05 29.7	
	comp=E,19nm,0.7s						
GRNC	**Granite Creek**	**4.84**	**99**	Pn	**Pn**	**08 04 08.9**	**-0.3**
GRNC				IAML		08 05 06.0	
	comp=N,16nm,1.1s						
GRNC				IAML		08 05 33.5	
	comp=E,10nm,0.8s						
H17K	**Granite Mounta**	**4.87**	**313**		**Pn**	**08 04 10.1**	**+0.8**
G23K	**Bananza Creek**	**4.89**	**7**		**Pn**	**08 04 10.0**	**+0.3**
G23K	**Bananza Creek**	**4.89**	**7**	IAML		08 05 04.2	
	comp=E,8.4nm,0.9s						
G23K				IAML		08 05 05.5	
	comp=N,9.9nm,0.6s						
CTGM	**Chitina Glacie**	**4.97**	**96**	Pn	**Pn**	**08 04 10.5**	**-0.4**
CTGM				IAML		08 05 32.1	
	comp=N,12nm,0.6s						
CTGM				IAML		08 05 32.3	
	comp=E,14nm,0.8s						
YAH	**Yahtse**	**4.97**	**104**	Pn	**Pn**	**08 04 10.2**	**-0.7**
YAH				IAML		08 05 32.5	
	comp=N,15nm,0.9s						
YAH				IAML		08 05 43.9	
	comp=E,9.4nm,1.2s						
I26K	**Coal Creek Min**	**5.07**	**44**		**Pn**	**08 04 12.4**	**+0.4**
I26K				IAML		08 05 30.9	
	comp=E,19nm,1.2s						
I26K				IAML		08 05 42.9	
	comp=N,22nm,0.8s						
G18K	**Tagagawik**	**5.12**	**325**		**Pn**	**08 04 13.3**	**+0.6**
F21K	**Alatna River**	**5.43**	**352**		**Pn**	**08 04 17.4**	**+0.4**
PCA	**Pinnacle**	**5.76**	**103**	Pn	**Pn**	**08 04 20.5**	**-1.0**
DAWY	**Dawson**	**5.94**	**63**	Pn	**Pn**	**08 04 23.9**	**0.0**
H27K	**Steamboat Moun**	**6.17**	**41**		**Pn**	**08 04 27.4**	**+0.3**
BM01	**Burnt Mountain**	**6.34**	**25**		**Pn**	**08 04 29.6**	**+0.3**
E24K	**Your Creek**	**6.35**	**10**		**Pn**	**08 04 29.6**	**+0.1**
HYT	**Haines Junctio**	**6.81**	**93**	Pn	**Pn**	**08 04 35.1**	**-0.8**
O30N	**Mendenhall**	**7.50**	**92**	Pn	**Pn**	**08 04 44.1**	**-1.1**
F28M	**Old Crow**	**7.59**	**36**	Pn	**Pn**	**08 04 47.1**	**+0.7**
WHY	**Whitehorse**	**8.10**	**91**	Pn	**Pn**	**08 04 52.3**	**-1.1**
G31M	**Satah River**	**8.99**	**48**	Pn	**Pn**	**08 05 04.5**	**-0.9**
INK	**Inuvik**	**9.91**	**42**	Pn	**Pn**	**08 05 17.4**	**-0.5**
	comp=N,0.1nm,0.3s,baz=234,slow=16,SNR=6.7						
	comp=N,1.7nm,0.9s						
INK	**Inuvik**	**9.91**	**42**	Pn	**Pn**	**08 05 17.8**	**-0.1**
YKA	**Yellowknife Ar**	**17.08**	**72**	Pn	**Pn**	**08 06 49.2**	**-2.2**
	baz=284,slow=12,SNR=4.0						
	comp=N,0.5nm,0.9s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**45.02**	**114**	P	**P**	**08 11 07.7**	**+2.6**
	comp=N,0.2nm,0.6s,baz=325,slow=7.8,SNR=4.3						
	comp=N,0.2nm,0.6s						

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*NEIC **21** 08:14:42.3±2.2, 3°.40S±0°.07×146°.3E±0°.1, h10km±1km, mb4.6/21, Error ellipse: s-maj=20.0km s-min=10.7km az=112.0*

*IDC **21** 08:14:49.4±3.8, 3°.56S×146°.34E, h75km±36km, mb3.8/14, mbtmp4.1/16, ML2.8/2, MS3.7/35, Error ellipse: s-maj=34.9km s-min=20.0km az=96.0*

ISC 21 08:14:43.2±0.6, **3°.40S**±0°.06×**146°.3E**±0°.1, **h20**km, **n68**, σ**1^{s}.11**/44, **mb4.4**/21, **MS3.8**/33, **Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	**Manus Island**	**1.71**	**38**		**Pn**	**08 15 12.8**	**+0.9**
PMG	**Port Moresby**	**6.02**	**172**	P	**Pn**	**08 16 13.2**	**+1.9**
	1.7nm,0.3s,baz=344,slow=4.6,SNR=5.8						
PMG				LR	LR	08 18 22.0	
	comp=Z,256nm,21.4s,baz=340,slow=36						
	16nm,0.7s						
PMG	**Port Moresby**	**6.02**	**172**		**Pn**	**08 16 13.1**	**+1.8**
COEN	**Coen**	**10.94**	**196**	Pn	**Pn**	**08 17 21.1**	**+2.3**
CTA	**Charters Tower**	**16.59**	**180**	P	**P**	**08 18 36.3**	**-0.8**
	0.2nm,0.3s,baz=334,slow=12,SNR=4.4						
CTA				LR	LR	08 25 23.5	
	comp=Z,292nm,18.0s,baz=15,slow=39						
	6.1nm,1.0s						
MTN	**Manton Dam**	**17.71**	**237**	Pn	**Pn**	**08 18 47.1**	**-1.7**
WB0	**Warramunga Arr**	**20.00**	**215**		**P**	**08 19 14.3**	**-0.5**
WB0				IAmb	IAmb	08 19 20.5	
	comp=Z,47nm,1.4s						
WRAB	**Tennant Creek**	**20.16**	**214**	P	**P**	**08 19 17.0**	**+0.5**
WRAB				IAmb	IAmb	08 19 23.8	
	comp=Z,16nm,0.9s						
WRA	**Warramunga Arr**	**20.17**	**214**	P	**P**	**08 19 17.3**	**+0.7**
	comp=Z,13nm,1.0s,baz=40,slow=12,SNR=20						
	comp=Z,13nm,1.0s						
WRA	**Warramunga Arr**	**20.17**	**214**		**P**	**08 19 15.6**	**-1.1**
EIDS	**Eidsvold**	**22.32**	**169**	P	**P**	**08 19 39.7**	**0.0**
EIDS				IAmb	IAmb	08 19 46.2	
	comp=Z,24nm,1.4s						
DAV	**Davao City (W)**	**23.17**	**297**	LR	LR	08 29 34.7	
	comp=Z,63nm,18.6s,baz=110,slow=38						
AS31	**Alice Springs**	**23.45**	**210**		**P**	**08 19 51.4**	**-0.1**
ASAR	**Alice Springs**	**23.45**	**210**	P	**P**	**08 19 51.1**	**-0.4**
	comp=Z,2.2nm,0.7s,baz=43,slow=7.7,SNR=20						
ASAR				PcP	**PcP**	**08 23 36.0**	**-1.6**
	comp=Z,0.3nm,0.7s,baz=38,slow=2.7,SNR=2.9						
ASAR				LR	LR	08 28 51.2	
	comp=Z,265nm,21.7s,baz=26,slow=36						
	comp=Z,2.2nm,0.7s						
BATI	**Baumata**	**23.48**	**252**	LR	LR	08 28 49.2	
	comp=Z,100nm,21.5s,baz=92,slow=36						
FITZ	**Fitzroy Crossi**	**24.97**	**233**	LR	LR	08 30 29.3	
	comp=Z,578nm,19.4s,baz=54,slow=38						
DZM	**Mont Dzumac**	**26.94**	**135**	LR	LR	08 30 03.5	
	comp=Z,351nm,19.1s,baz=0.0,slow=34						
STKA	**Stephens Creek**	**28.67**	**188**	LR	LR	08 34 42.7	
	comp=Z,166nm,18.2s,baz=14,slow=42						
TGY	**Tagaytay City**	**30.59**	**305**	LR	LR	08 33 39.9	
	comp=Z,99nm,19.1s,baz=128,slow=37						
JOW	**Kunigami**	**34.75**	**331**	LR	LR	08 32 34.3	
	comp=Z,209nm,21.1s,baz=129,slow=30						
JNU	**Nakatsue**	**39.16**	**339**	LR	LR	08 35 30.6	
	comp=Z,63nm,21.6s,baz=144,slow=32						
MJAR	**Matsushiro Arr**	**40.45**	**350**	P	**P**	**08 22 19.4**	**-1.1**
MAJO	**Matsushiro**	**40.45**	**350**	P	**P**	**08 22 19.4**	**-1.1**
MAJO				IAmb	IAmb	08 22 54.9	
	comp=Z,24nm,1.4s						
KSRS	**Korea Array**	**44.10**	**339**	P	**P**	**08 22 52.3**	**+2.2**
	comp=Z,1.2nm,0.7s,baz=155,slow=12,SNR=5.1						
KSRS				LR	LR	08 38 10.6	
	comp=Z,78nm,21.6s,baz=155,slow=32						
	comp=Z,1.2nm,0.7s						
KHZ	**Kahutara**	**45.81**	**152**	P	**P**	**08 23 02.3**	**-1.4**
USRK	**Ussuriysk Ar.**	**49.10**	**346**	P	**P**	**08 23 29.8**	**+0.5**
	comp=Z,2.7nm,0.7s,baz=145,slow=7.9,SNR=2.9						
	comp=Z,2.7nm,0.7s						
CM31	**Chiang Mai Arr**	**51.46**	**297**	P	**P**	**08 23 48.3**	**+0.7**
CM31				IAmb	IAmb	08 23 49.6	
	comp=Z,6.9nm,0.5s						
CMAR	**Chiang Mai Arr**	**51.46**	**297**	P	**P**	**08 23 48.8**	**+1.1**
	comp=Z,1.5nm,0.3s,baz=98,slow=8.0,SNR=4.4						
CMAR				LR	LR	08 43 16.4	
	comp=Z,20nm,21.5s,baz=100,slow=33						
	comp=Z,1.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**51.46**	**297**	P	**P**	**08 23 47.9**	**+0.3**
PETK	**Petropavlovsk-**	**57.11**	**8**	LR	LR	08 44 58.3	
	comp=Z,50nm,21.5s,baz=197,slow=32						
HILR	**Hailar Array B**	**57.54**	**340**	P	**P**	**08 24 30.7**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=157,slow=8.0,SNR=3.9						
	comp=Z,0.9nm,0.5s						
BRDH	**Bariadhala**	**59.30**	**299**	LR	LR	08 52 24.9	
	comp=Z,36nm,18.1s,baz=256,slow=38						
SHEM	**Shemya Is, Ala**	**60.64**	**19**	LR	LR	08 46 11.8	
	comp=Z,73nm,19.6s,baz=114,slow=31						
SONM	**Songino Array**	**61.82**	**331**	P	**P**	**08 25 01.5**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=146,slow=7.1,SNR=5.4						
SONM				LR	LR	08 51 03.5	
	comp=Z,100nm,19.8s,baz=112,slow=35						
	comp=Z,1.2nm,0.8s						
SONM	**Songino Array**	**61.82**	**331**	P	**P**	**08 25 01.1**	**+0.1**
MA2	**Magadan**	**62.88**	**3**	LR	LR	08 47 36.6	
	comp=Z,27nm,21.9s,baz=58,slow=31						
ADK	**Adak**	**63.39**	**25**	P	**P**	**08 25 11.2**	**+0.1**
YAK	**Yakutsk**	**66.49**	**352**	LR	LR	08 54 35.8	
	comp=Z,24nm,18.2s,baz=280,slow=36						
MKAR	**Makanchi Array**	**75.08**	**320**	P	**P**	**08 26 24.2**	**+0.4**
	comp=Z,1.8nm,1.0s,baz=90,slow=8.5,SNR=5.8						
MKAR				LR	LR	08 57 53.7	
	comp=Z,28nm,20.9s,baz=80,slow=34						
	comp=Z,1.8nm,1.0s						
MKAR	**Makanchi Array**	**75.08**	**320**	P	**P**	**08 26 24.8**	**+1.0**
MAKZ	**Makanchi**	**75.28**	**320**	P	**P**	**08 26 25.6**	**+0.6**
MAKZ				IAmb	IAmb	08 26 46.8	
	comp=Z,8.3nm,1.2s						
M14K	**Bethel**	**75.38**	**23**	P	**P**	**08 26 25.2**	**+0.1**
ZALV	**Zalesovo Beam**	**76.47**	**328**	P	**P**	**08 26 31.7**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=132,slow=6.0,SNR=5.4						
ZALV				LR	LR	08 58 37.6	
	comp=Z,73nm,21.9s,baz=72,slow=34						
	comp=Z,0.3nm,0.3s						
L16K	**Owhat River**	**76.92**	**23**	P	**P**	**08 26 34.4**	**+0.5**
KDAK	**Kodiak Island**	**77.95**	**29**	LR	LR	08 53 14.0	
	comp=Z,86nm,21.3s,baz=260,slow=30						
J17K	**VABM Dome**	**78.01**	**22**	P	**P**	**08 26 41.4**	**+1.4**
KURK	**Kurchatov**	**78.74**	**323**	P	**P**	**08 26 43.8**	**-0.5**
KURK				IAmb	IAmb	08 27 01.0	
	comp=Z,3.7nm,0.9s						
KURBB	**Kurchatov Arra**	**78.76**	**323**	P	**P**	**08 26 45.3**	**+0.9**
	comp=Z,1.5nm,1.0s,baz=117,slow=4.4,SNR=6.0						
	comp=Z,1.5nm,1.0s						
L19K	**White Mountain**	**79.03**	**24**	P	**P**	**08 26 46.7**	**+1.0**
L19K				IAmb	IAmb	08 26 57.9	
	comp=Z,9.6nm,1.1s						
AAK	**Ala-Archa**	**79.05**	**314**	LR	LR	09 01 38.3	
	comp=Z,61nm,20.9s,baz=110,slow=36						
SLKM	**Skilak Lake**	**80.24**	**27**	P	**P**	**08 26 52.6**	**+0.2**
SLKM				IAmb	IAmb	08 26 57.0	
	comp=Z,17nm,1.3s						
E19K	**Redstone River**	**80.89**	**19**	P	**P**	**08 26 57.3**	**+1.6**
E19K				IAmb	IAmb	08 27 06.6	
	comp=Z,11nm,1.3s						
C19K	**Lookout Ridge**	**81.08**	**17**	P	**P**	**08 26 58.5**	**+1.8**
C19K				IAmb	IAmb	08 27 13.6	
	comp=Z,6.2nm,1.0s						
NRIK	**Noril'sk**	**82.61**	**342**	P	**P**	**08 27 04.9**	**+0.3**
	comp=Z,3.8nm,0.7s,baz=128,slow=4.7,SNR=4.9						
NRIK				LR	LR	09 02 07.0	
	comp=Z,42nm,21.9s,baz=136,slow=34						
	comp=Z,3.8nm,0.7s						
ILAR	**Eielson Array**	**83.38**	**23**	P	**P**	**08 27 08.6**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=252,slow=5.3,SNR=9.5						
ILAR				LR	LR	08 58 03.3	
	comp=Z,66nm,21.6s,baz=266,slow=31						
	comp=Z,0.6nm,0.7s						
BVAR	**Borovoye Array**	**84.28**	**324**	P	**P**	**08 27 14.5**	**+0.9**
	comp=Z,2.0nm,0.7s,baz=126,slow=4.6,SNR=6.1						
	comp=Z,2.0nm,0.7s						
MAW	**Mawson**	**84.37**	**202**	LR	LR	09 04 45.5	
	comp=Z,36nm,18.1s,baz=99,slow=36						
QSPA	**South Pole Qui**	**86.55**	**180**	LR	LR	09 05 27.5	
	comp=Z,49nm,19.0s,baz=38,slow=35						
INK	**Inuvik**	**89.50**	**21**	LR	LR	09 07 15.2	
	comp=Z,69nm,18.4s,baz=307,slow=35						
BBB	**Bella Bella**	**89.94**	**38**	LR	LR	08 59 09.4	
	comp=Z,94nm,20.6s,baz=234,slow=30						
YBH	**Yreka Blue Hor**	**92.96**	**49**	LR	LR	09 01 27.7	
	comp=Z,8.7nm,21.7s,baz=287,slow=30						
NVAR	**Mina Array Bea**	**96.31**	**52**	LR	LR	09 02 33.8	
	comp=Z,97nm,21.4s,baz=282,slow=30						
KIRV	**Kirov**	**96.49**	**328**	LR	LR	09 11 51.0	
	comp=Z,144nm,20.9s,baz=81,slow=35						
YKA	**Yellowknife Ar**	**97.20**	**28**	P	Pdif	08 28 15.6	+1.3
	comp=Z,0.3nm,0.9s,baz=270,slow=5.3,SNR=4.3						
YKA				LR	LR	09 09 31.0	
	comp=Z,36nm,19.9s,baz=79,slow=34						
	comp=Z,0.3nm,0.9s						
PFO	**Pinyon Flats O**	**97.88**	**57**	LR	LR	09 06 27.6	
	comp=Z,61nm,18.2s,baz=266,slow=32						
ELK	**Elko**	**98.61**	**49**	LR	LR	09 05 17.5	
	comp=Z,56nm,19.4s,baz=270,slow=31						
TORD	**Torodi Ar. Bea**	**143.73**	**288**	PKP	PKPab	08 34 15.3	+0.5
	comp=Z,2.7nm,0.3s,baz=72,slow=4.4,SNR=2.6						
DBIC	**Dimbokro**	**151.11**	**278**	PKPbc	**PKPbc**	**08 34 34.3**	**-1.8**
	comp=Z,2.6nm,0.8s,baz=180,slow=5.1,SNR=1.4						
DBIC				PKPab	**pPKPbc**	**08 34 41.4**	**-0.8**
	comp=Z,2.8nm,0.6s,baz=125,slow=1.9,SNR=4.5						

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*IDC **21** 08:24:32.8±0.8, 35°.65N×117°.34W, h0km, mb3.8/3, mbtmp3.7/9, ML3.7/6, MS3.0/7, Error ellipse: s-maj=16.8km s-min=5.9km az=77.0*

*PAS **21** 08:24:32.6±1.3, 35°.648N±0°.009×117°.459W±0°.009, h4km±2km, Mwr3.9/4, ML4.0/178(NEIC), Error ellipse: s-maj=1.3km s-min=1.1km az=177.0*

*NEIC **21** 08:24:32.0±1.2, 35°.648N±0°.007×117°.462W±0°.009, h5km±1km, Error ellipse: s-maj=1.6km s-min=1.2km az=190.0*

ISC 21 08:24:32.6±0.8, **35°.61N**±0°.02×**117°.43W**±0°.02, **h8**km±6km, **n166**, σ**1^{s}.05**/187, **mb3.6**/3, **Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSHM	**Spangler Hills**	**0.05**	**259**		**Pg**	**08 24 33.9**	**-0.4**
CCCA	**Chr Cany lake**	**0.10**	**146**		**Pg**	**08 24 35.9**	**+0.9**
CCCA				IAML		08 24 41.4	
	comp=E,87µm,0.4s						
GPO	**China Lake**	**0.19**	**282**		**Pg**	**08 24 36.2**	**-0.3**
GPO					**Sg**	**08 24 39.2**	**0.0**
LRMC	**Laurel Mtn Rad**	**0.24**	**238**		**Pg**	**08 24 37.5**	**0.0**
CLC	**China Lake**	**0.25**	**327**		**Pg**	**08 24 36.6**	**-0.9**
CLC				IAML		08 24 39.9	
	comp=N,25µm,0.3s						
CLC				IAML		08 24 40.1	
	comp=E,44µm,0.6s						
SRTC	**Snort**	**0.27**	**288**		**Pg**	**08 24 37.8**	**-0.1**
SRTC					**Sg**	**08 24 42.2**	**+0.6**
TOW	**Tower One**	**0.34**	**307**		**Pg**	**08 24 38.9**	**-0.3**
TOW					**Sg**	**08 24 43.7**	**+0.1**
RCWM	**Renegade Canyo**	**0.38**	**333**		**Pg**	**08 24 39.2**	**-0.9**
RCWM					**Sg**	**08 24 44.1**	**-1.1**
WNMM	**Nine Mile Cany**	**0.45**	**301**		**Pg**	**08 24 40.7**	**-0.6**
WVPM	**Volcano Peak E**	**0.46**	**318**		**Pg**	**08 24 40.8**	**-0.8**
WVPM					**Sg**	**08 24 46.8**	**-0.9**
DTP	**Desert Tortois**	**0.48**	**225**		**Pg**	**08 24 41.9**	**0.0**
DTP					**Sg**	**08 24 48.5**	**+0.3**
WCSM	**Coso Springs S**	**0.50**	**327**		**Pg**	**08 24 41.3**	**-1.0**
WCSM					**Sg**	**08 24 47.6**	**-1.2**
WRVM	**Rose V. Centra**	**0.54**	**317**		**Pg**	**08 24 42.3**	**-0.9**
WRVM					**Sg**	**08 24 49.2**	**-1.1**
WBSM	**Bird Springs**	**0.58**	**263**		**Pg**	**08 24 43.3**	**-0.5**
WBSM					**Sg**	**08 24 51.0**	**-0.5**
QSM	**Queen of Sheba**	**0.58**	**52**		**Pg**	**08 24 43.5**	**-0.3**
QSM				IAML		08 24 54.4	
	comp=N,6µm,0.5s						
QSM	**Queen of Sheba**	**0.58**	**52**		**Sg**	**08 24 51.4**	**0.0**
WCHM	**Chimney Peak**	**0.59**	**298**		**Pg**	**08 24 43.1**	**-0.9**
WCHM					**Sg**	**08 24 50.6**	**-1.2**
GSC	**Goldstone, Bar**	**0.60**	**121**		**Pb**	**08 24 44.5**	**-0.8**
GSC				IAML		08 24 58.0	
	comp=E,12µm,0.6s						
GSC	**Goldstone, Bar**	**0.60**	**121**		**Sb**	**08 24 53.4**	**-0.5**
MFS	**McCloud Flat S**	**0.61**	**326**		**Pg**	**08 24 43.5**	**-0.9**
MFS					**Sg**	**08 24 51.0**	**-1.5**
CCAC	**Calif City Air**	**0.66**	**226**		**Pb**	**08 24 45.3**	**-1.0**
CCAC					**Sb**	**08 24 54.6**	**-1.1**
WORM	**Onyx Ranch**	**0.66**	**278**		**Pg**	**08 24 44.5**	**-0.8**
WORM					**Sg**	**08 24 53.1**	**-0.9**
DAC	**Darwin (Calif)**	**0.68**	**349**		**Pg**	**08 24 44.2**	**-1.5**
DAC					**Sg**	**08 24 53.1**	**-1.5**
WHFM	**Hanning Flat**	**0.75**	**277**		**Pg**	**08 24 46.2**	**-0.8**
WHFM					**Sg**	**08 24 55.9**	**-0.9**
HYS	**Haystack Butte**	**0.75**	**189**		**Pb**	**08 24 47.1**	**-0.8**
HYS					**Sb**	**08 24 57.8**	**-0.6**
RRX	**Edison Barstow**	**0.81**	**154**		**Pn**	**08 24 48.7**	**-1.6**
RRX					**Sn**	**08 25 00.9**	**-1.7**
GWY	**Greenwater Val**	**0.85**	**47**		**Pg**	**08 24 48.1**	**-0.8**
GWY				IAML		08 25 04.7	
	comp=E,5µm,0.6s						
GWY				IAML		08 25 04.9	
	comp=N,6µm,0.7s						
GWY	**Greenwater Val**	**0.85**	**47**		**Sg**	**08 24 59.4**	**-0.6**
ISA	**Isabella, Lake**	**0.85**	**274**		**Pg**	**08 24 48.0**	**-0.9**
ISA				IAML		08 24 59.7	
	comp=N,5µm,0.3s						
ISA				IAML		08 24 60.0	
	comp=E,7µm,0.4s						
ISA	**Isabella, Lake**	**0.85**	**274**		**Sg**	**08 24 58.7**	**-1.2**
ALV	**Alvord Mountai**	**0.85**	**129**		**Pn**	**08 24 49.4**	**-1.5**
ALV					**Sn**	**08 25 01.4**	**-2.3**
EDW2	**Edwards Air Fo**	**0.86**	**212**		**Pb**	**08 24 48.9**	**-0.9**
EDW2					**Sb**	**08 25 00.3**	**-1.1**
WLHM	**Little Horse**	**0.90**	**307**		**Pg**	**08 24 48.5**	**-1.3**
WASM	**Alta Sierra Ca**	**0.92**	**278**		**Pg**	**08 24 49.4**	**-0.9**
WASM					**Sg**	**08 25 01.3**	**-1.1**
FURC	**Furnace Creek,**	**0.97**	**28**		**Pg**	**08 24 50.5**	**-0.7**
FURC	**Furnace Creek,**	**0.97**	**28**		**Sg**	**08 25 03.5**	**-0.4**
SBB	**Saddle Back Bu**	**0.97**	**199**		**Pn**	**08 24 51.1**	**-1.4**
SBB					**Sn**	**08 25 06.3**	**-0.3**
TPO	**Tropico Hills**	**0.98**	**222**		**Pb**	**08 24 51.0**	**-0.7**
TPO				IAML		08 25 08.4	
	comp=N,5µm,0.8s						
CWC	**Cottonwood Cre**	**0.98**	**328**		**Pg**	**08 24 50.2**	**-1.2**
CWC				IAML		08 25 07.6	
	comp=E,3µm,1.0s						
CWC	**Cottonwood Cre**	**0.98**	**328**		**Sg**	**08 25 02.8**	**-1.4**
CGO	**Cerro Gordo**	**0.99**	**342**		**Pg**	**08 24 50.0**	**-1.6**
CGO					**Sg**	**08 25 03.0**	**-1.4**
SHOC	**Shoshone, Teco**	**0.99**	**73**		**Pb**	**08 24 51.2**	**-0.6**
SHOC	**Shoshone, Teco**	**0.99**	**73**		**Sn**	**08 25 05.7**	**-1.1**
ADO	**Adelanto Recei**	**1.06**	**180**		**Pn**	**08 24 54.1**	**+0.4**
FOXC	**Fox Airport**	**1.08**	**217**		**Pn**	**08 24 53.2**	**-0.8**
TEJ	**El Tejon**	**1.09**	**250**		**Pb**	**08 24 52.3**	**-1.4**
ALPC	**Antelope**	**1.16**	**218**		**Pg**	**08 24 54.6**	**-0.2**
DSCC	**Desert Studies**	**1.18**	**113**		**Pn**	**08 24 54.4**	**-1.0**
LRRC	**Littlerock Res**	**1.19**	**204**		**Pg**	**08 24 55.0**	**-0.3**
HEC	**Hector,Ludlow**	**1.19**	**131**		**Pg**	**08 24 55.0**	**-0.4**
HOLC	**Holcomb Ridge**	**1.20**	**196**		**Pg**	**08 24 55.2**	**-0.3**
LEOC	**Leona Valley**	**1.21**	**216**		**Pg**	**08 24 55.3**	**-0.5**
TJR	**Tejon Ranch**	**1.22**	**242**		**Pn**	**08 24 54.6**	**-1.2**
CJV	**Casa Juvan**	**1.22**	**209**		**Pg**	**08 24 55.6**	**-0.4**
THC	**Tehachapi Micr**	**1.23**	**236**		**Pb**	**08 24 55.5**	**-0.6**
SPG2	**Springville 2**	**1.23**	**299**		**Pn**	**08 24 54.6**	**-1.5**
JNH	**Juniper Hills**	**1.23**	**200**		**Pg**	**08 24 55.8**	**-0.5**
ARVC	**Arvin**	**1.24**	**248**		**Pn**	**08 24 55.3**	**-0.9**
MAGC	**SCE Magundon P**	**1.24**	**259**		**Pn**	**08 24 55.5**	**-0.7**
TUQ	**Turquoise Moun**	**1.24**	**98**		**Pn**	**08 24 55.4**	**-1.0**
TMC	**Table Mountain**	**1.25**	**190**		**Pg**	**08 24 56.2**	**-0.4**
AMDNV	**Amargosa**	**1.26**	**48**		**Pn**	**08 24 55.2**	**-1.2**
BTPC	**Burnt Peak**	**1.31**	**226**		**Pb**	**08 24 56.8**	**-0.8**
WCT	**Wildcat Mounta**	**1.35**	**29**		**Pn**	**08 24 56.5**	**-1.3**
WCT				IAML		08 25 17.8	
	comp=E,2µm,0.5s						
SIL	**Silver Peak**	**1.35**	**158**		**Pg**	**08 24 57.5**	**-1.0**
CHFC	**Chilao Flat St**	**1.36**	**201**		**Pb**	**08 24 57.6**	**-0.8**
VES	**Vestal, Richgr**	**1.36**	**280**		**Pn**	**08 24 57.4**	**-0.4**
VES				IAML		08 25 18.3	
	comp=E,4µm,0.7s						
VES				IAML		08 25 23.6	
	comp=N,4µm,0.8s						
GRAC	**Grapevine Rang**	**1.39**	**2**		**Pn**	**08 24 57.5**	**-0.7**
GRAC				IAML		08 25 25.8	
	comp=E,4µm,0.8s						
BAKC	**Calstate**	**1.39**	**260**		**Pb**	**08 24 58.4**	**-0.4**
SGV	**South Grapevin**	**1.41**	**13**		**Pn**	**08 24 57.6**	**-1.0**
BBRC	**Big Bear Solar**	**1.41**	**162**		**Pb**	**08 24 58.4**	**-0.8**
OSI	**Osito Audit: C**	**1.45**	**227**		**Pn**	**08 24 58.6**	**-0.5**
OSI				IAML		08 25 21.4	
	comp=E,3µm,0.6s						
SVD	**Seven Oaks Dam**	**1.52**	**169**		**Pg**	**08 25 01.4**	**-0.3**
MTPC	**Mountain Pass**	**1.54**	**94**		**Pn**	**08 24 59.9**	**-0.5**
MTPC				IAML		08 25 23.9	
	comp=N,2µm,1.0s						
MTPC				IAML		08 25 24.1	
	comp=E,2µm,0.4s						
DECC	**Green Verdugo**	**1.54**	**209**		**Pb**	**08 25 00.6**	**-0.8**
PSRC	**Puddingstone R**	**1.54**	**192**		**Pb**	**08 25 00.8**	**-0.6**
PASC	**Pasadena Art C**	**1.56**	**204**		**Pb**	**08 25 00.6**	**-1.1**
PASC				IAML		08 25 25.3	
	comp=N,2µm,0.6s						
PASC				IAML		08 25 27.8	
	comp=E,2µm,0.6s						
MLL	**Mill Creek**	**1.57**	**165**		**Pb**	**08 25 00.7**	**-1.2**
TIN	**Tinemaha, Big**	**1.58**	**336**		**Pn**	**08 24 60.0**	**-1.0**
TIN				IAML		08 25 24.3	
	comp=E,3µm,0.7s						
TIN				IAML		08 25 31.2	
	comp=N,3µm,0.7s						
GTM	**Goat Mountain**	**1.58**	**146**		**Pn**	**08 25 00.3**	**-0.6**
OAT	**Oat Mountain**	**1.59**	**218**		**Pb**	**08 25 01.6**	**-0.6**
RVR	**Riverside**	**1.61**	**178**		**Pb**	**08 25 01.4**	**-1.2**
CHNC	**Chino**	**1.62**	**187**		**Pg**	**08 25 03.9**	**+0.3**
LOK	**Lockwood Valle**	**1.62**	**237**		**Pn**	**08 25 01.3**	**-0.2**
LCH	**Last Change Ra**	**1.63**	**354**		**Pn**	**08 25 00.9**	**-0.8**
TPNV	**Topopah Spring**	**1.64**	**35**		**Pn**	**08 25 01.2**	**-0.7**
TPNV				IAML		08 25 27.4	
	comp=N,1µm,0.7s						
TPNV				IAML		08 25 28.0	
	comp=N,2µm,0.6s						
RAY	**Raywood Flat**	**1.65**	**162**		**Pb**	**08 25 02.1**	**-1.3**
GMRC	**Granite Mounta**	**1.67**	**119**		**Pn**	**08 25 01.0**	**-1.2**
GMN	**Gold Mountain**	**1.69**	**5**		**Pn**	**08 25 01.9**	**-0.7**
BLCC	**Black Canyon**	**1.70**	**217**		**Pb**	**08 25 02.7**	**-1.4**
DJJ	**Donna J Jenkin**	**1.72**	**210**		**Pb**	**08 25 02.7**	**-1.6**
PEC	**Perris**	**1.73**	**172**		**Pb**	**08 25 03.3**	**-1.3**
VOG	**Valley Oaks Go**	**1.73**	**295**		**Pn**	**08 25 03.1**	**+0.2**
BLAC	**Blackrock camp**	**1.76**	**150**		**Pb**	**08 25 03.3**	**-1.9**
DSP	**Deep Springs**	**1.81**	**346**		**Pn**	**08 25 03.3**	**-0.7**
VG2	**Vista Grande**	**1.85**	**164**		**Pb**	**08 25 05.0**	**-1.5**
EW2	**E Wide Canyon**	**1.87**	**153**		**Pn**	**08 25 04.8**	**-0.1**
CRGC	**Crocker Grade**	**1.91**	**260**		**Pn**	**08 25 04.8**	**-0.6**
DANC	**Danby, Needles**	**1.94**	**119**		**Pn**	**08 25 05.1**	**-0.8**
ELS	**Elsinore Mount**	**1.96**	**180**		**Pn**	**08 25 06.1**	**0.0**
ELS				IAML		08 25 38.3	
	comp=E,1µm,0.4s						
ELS				IAML		08 25 44.4	
	comp=N,995nm,0.5s						
POB	**Polly Butte**	**1.96**	**167**		**Pb**	**08 25 06.5**	**-2.1**
DGR	**Domenigoni Val**	**1.99**	**170**		**Pb**	**08 25 06.7**	**-2.3**
MURC	**Murrieta**	**2.01**	**174**		**Pb**	**08 25 07.2**	**-2.3**
RPV	**Rancho Palos V**	**2.03**	**204**		**Pb**	**08 25 07.5**	**-2.1**
SHPR	**Sheep Range**	**2.05**	**63**		**Pn**	**08 25 07.0**	**-0.4**
PMD	**Palm Desert**	**2.14**	**156**		**Pn**	**08 25 08.2**	**-0.4**
DNR	**Dunn Ranch,Anz**	**2.14**	**162**		**Pn**	**08 25 09.0**	**+0.3**
DNR				IAML		08 25 44.9	
	comp=N,2µm,0.7s						
PFO	**Pinyon Flats O**	**2.15**	**158**	Pn	**Pn**	**08 25 08.6**	**-0.2**
	comp=N,5.6nm,0.3s,baz=344,slow=8.9,SNR=72						
PFO				Pg	**Pg**	**08 25 13.0**	**-0.8**
	comp=N,56nm,0.3s,baz=340,slow=16,SNR=95						
PFO				Lg	Lg	08 25 41.2	
	comp=N,126nm,0.3s,baz=59,slow=10,SNR=11						
PFO				LR	LR	08 25 56.3	
	comp=N,111nm,18.8s,baz=306,slow=39						
	comp=N,207nm,0.4s						
PFO	**Pinyon Flats O**	**2.15**	**158**		**Pn**	**08 25 08.6**	**-0.2**
IRM	**Iron Mountain**	**2.37**	**127**		**Pn**	**08 25 10.8**	**-1.0**
IRM				IAML		08 25 50.4	
	comp=E,650nm,0.5s						
IRM				IAML		08 25 54.1	
	comp=N,525nm,0.5s						
MDPB	**Devils Postpil**	**2.41**	**327**	Pn	**Pn**	**08 25 13.2**	**+0.7**
MDPB				IAML		08 25 54.4	
	comp=E,927nm,0.9s						
MDPB				IAML		08 25 55.7	
	comp=N,719nm,0.7s						
S11A	**Rachel**	**2.44**	**33**		**Pn**	**08 25 12.4**	**-0.4**
S11A				IAML		08 25 55.4	
	comp=N,1µm,1.0s						
S11A				IAML		08 26 01.9	
	comp=E,1µm,1.0s						
NEE2	**Needles Airpor**	**2.45**	**109**		**Pn**	**08 25 11.9**	**-0.9**
BORC	**Borrego Spring**	**2.48**	**160**		**Pn**	**08 25 13.4**	**+0.2**
BORC				IAML		08 26 01.8	
	comp=E,502nm,0.8s						
BORC				IAML		08 26 02.8	
	comp=N,479nm,0.8s						
BC3	**Big Chuckawall**	**2.54**	**139**		**Pn**	**08 25 13.6**	**-0.6**
BC3				IAML		08 26 00.3	
	comp=E,603nm,0.6s						
BC3				IAML		08 26 03.0	
	comp=N,778nm,0.8s						
PKD	**Bear Valley Ra**	**2.55**	**278**		**Pn**	**08 25 13.2**	**-1.0**
PKD				IAML		08 26 05.1	
	comp=E,666nm,1.5s						
PKD				IAML		08 26 12.2	
	comp=N,512nm,1.2s						
PRN	**Pahroc Range**	**2.63**	**46**		**Pn**	**08 25 15.5**	**+0.1**
PRN				IAML		08 26 04.1	
	comp=N,740nm,0.7s						
PRN				IAML		08 26 05.9	
	comp=E,705nm,0.8s						
DPP	**Dos Picos Cty**	**2.64**	**171**		**Pn**	**08 25 15.8**	**+0.4**
DPP				IAML		08 25 57.9	
	comp=E,486nm,0.6s						
CPE	**Camp Elliot**	**2.73**	**174**		**Pn**	**08 25 17.2**	**+0.6**
CPE				IAML		08 25 59.3	
	comp=E,595nm,0.6s						
CPE				IAML		08 25 59.6	
	comp=N,449nm,0.7s						
LHV	**Little Huntoon**	**2.77**	**342**		**Pn**	**08 25 17.6**	**+0.4**
LHV				IAML		08 26 10.0	
	comp=N,454nm,0.9s						
LHV				IAML		08 26 23.2	
	comp=E,503nm,1.1s						
PMPB	**Monarch Peak**	**2.80**	**283**		**Pn**	**08 25 16.9**	**-0.8**
PMPB				IAML		08 26 13.3	
	comp=E,962nm,0.9s						
NV11	**Mina Array Sit**	**2.88**	**349**		**Pn**	**08 25 18.5**	**-0.3**
NVAR	**Mina Array Bea**	**2.90**	**346**	Pn	**Pn**	**08 25 19.0**	**-0.2**
	comp=E,5.5nm,0.3s,baz=168,slow=13,SNR=88						
NVAR				Pg	**Pb**	**08 25 26.2**	**+1.6**
	comp=E,43nm,0.3s,baz=159,slow=18,SNR=55						
NVAR				Sn	**Sb**	**08 26 02.8**	**+2.5**
	comp=E,16nm,0.3s,baz=151,slow=28,SNR=3.0						
NVAR				LR	LR	08 26 38.0	
	comp=E,326nm,21.6s,baz=84,slow=44						
	comp=E,12nm,0.5s						
W13A	**Hualapai Mount**	**2.94**	**99**		**Pn**	**08 25 19.3**	**-0.5**
W13A				IAML		08 26 12.8	
	comp=E,312nm,0.9s						
W13A				IAML		08 26 17.2	
	comp=N,365nm,0.9s						
BAR	**Barrett**	**2.99**	**168**		**Pn**	**08 25 20.0**	**-0.3**
BAR				IAML		08 26 08.8	
	comp=E,344nm,0.5s						
BAR				IAML		08 26 11.2	
	comp=N,310nm,0.6s						
BLYC	**Blythe**	**3.03**	**127**		**Pn**	**08 25 19.3**	**-1.5**
BLYC				IAML		08 26 11.0	
	comp=E,379nm,0.6s						
BLYC				IAML		08 26 12.9	
	comp=N,565nm,0.8s						
BBGB	**Big Mountain B**	**3.08**	**289**		**Pn**	**08 25 19.8**	**-1.8**
TJX	**Tijuana**	**3.11**	**174**		**Pn**	**08 25 22.0**	**+0.2**
HULI	**Fort Hunter Li**	**3.12**	**279**		**Pn**	**08 25 21.0**	**-1.0**
HULI				IAML		08 26 28.8	
	comp=E,286nm,0.9s						
HULI				IAML		08 26 39.2	
	comp=N,367nm,1.0s						
RYN	**Ryan**	**3.14**	**344**		**Pn**	**08 25 21.8**	**-0.6**
YUH	**Yuha Desert**	**3.21**	**157**		**Pn**	**08 25 21.9**	**-1.3**
GLA	**Glamis**	**3.34**	**139**		**Pn**	**08 25 23.5**	**-1.6**
CBX	**Cerro Bola**	**3.35**	**169**		**Pn**	**08 25 24.9**	**-0.4**
CMB	**Columbia Colle**	**3.39**	**316**		**Pn**	**08 25 24.0**	**-1.7**
CMB				IAML		08 26 23.2	
	comp=E,518nm,0.9s						
CMB				IAML		08 26 27.6	
	comp=N,401nm,0.6s						
SAO	**San Andreas Ge**	**3.44**	**291**		**Pn**	**08 25 25.5**	**-1.0**
LCMT	**Little Creek M**	**3.66**	**66**		**Pn**	**08 25 29.8**	**+0.2**

CCX	Cicese	3.79	170		Pn	08 25 31.9	+0.7
CCX				IAML		08 26 32.8	
	comp=E,211nm,1.2s						
CCX				IAML		08 26 41.9	
	comp=N,183nm,1.1s						
ESJX	Sierra Juarez	3.80	161		Pn	08 25 31.6	0.0
ESJX				IAML		08 26 39.6	
	comp=E,216nm,1.2s						
CCUT	Cedar City	3.81	58		Pn	08 25 31.0	-0.7
KNB	Kanab	3.98	68		Pn	08 25 34.2	+0.2
Y14A	Wickenburg	4.01	113		Pn	08 25 33.0	-1.4
Y14A				IAML		08 26 42.1	
	comp=N,300nm,0.7s						
Y14A				IAML		08 26 43.9	
	comp=E,248nm,0.7s						
SZCU	Shurtz Canyon	4.02	59		Pn	08 25 34.8	+0.2
PSUT	Pine Spring	4.09	43		Pn	08 25 34.3	-1.2
PSUT				IAML		08 26 50.5	
	comp=E,136nm,1.6s						
113A	Mohawk Valley,	4.16	132		Pn	08 25 35.1	-1.2
113A				IAML		08 26 52.5	
	comp=E,120nm,1.2s						
113A				IAML		08 26 55.8	
	comp=N,118nm,0.9s						
SPR3	Spring Creek 3	4.19	35		Pn	08 25 35.4	-1.7
SPR3				IAML		08 26 46.8	
	comp=N,102nm,1.2s						
U15A	North Rim	4.25	77		Pn	08 25 38.3	+0.5
U15A				IAML		08 26 52.5	
	comp=N,104nm,1.1s						
U15A				IAML		08 27 02.5	
	comp=E,113nm,1.1s						
PAHR	Pah Rah Range	4.37	340		Pn	08 25 39.1	-0.3
PKCU	Pink Cliffs	4.51	65		Pn	08 25 43.0	+1.5
PKCU				IAML		08 27 10.0	
	comp=E,145nm,0.9s						
PKCU				IAML		08 27 11.0	
	comp=N,102nm,1.0s						
WUAZ	Wupatki	4.94	89		Pn	08 25 47.9	+0.7
WUAZ				IAML		08 27 12.8	
	comp=N,136nm,1.4s						
WUAZ				IAML		08 27 19.9	
	comp=N,150nm,0.9s						
TCRU	Three Creeks R	4.99	52		Pn	08 25 48.1	+0.2
TCRU				IAML		08 27 15.8	
	comp=E,75nm,0.8s						
X16A	Lo Mia Camp, P	5.06	102		Pn	08 25 48.7	-0.2
X16A				IAML		08 27 16.7	
	comp=E,68nm,1.2s						
X16A				IAML		08 27 23.3	
	comp=N,70nm,1.4s						
MNRC	McLaughlin Min	5.16	311		Pn	08 25 49.8	-0.3
214A	Organ Pipe Nat	5.30	132		Pn	08 25 50.4	-1.6
214A				IAML		08 27 30.2	
	comp=N,78nm,1.1s						
214A				IAML		08 27 35.6	
	comp=E,82nm,1.0s						
ELK	Elko	5.41	18	Pn	Pn	08 25 54.1	+0.4
	comp=E,1.0nm,0.3s,baz=209,slow=6.1,SNR=19						
ELK				Lg	Lg	08 27 18.4	
	comp=E,7.8nm,0.3s,baz=324,slow=9.6,SNR=8.9						
ELK				LR	LR	08 28 16.5	
	comp=E,126nm,19.7s,baz=282,slow=42						
	comp=E,3.7nm,0.5s						
ELK	Elko	5.41	18		Pn	08 25 53.4	-0.3
TUC	Tucson	6.43	119		Pn	08 26 06.4	-1.2
YBH	Yreka Blue Hor	7.38	328	Lg	Lg	08 28 22.5	
	baz=303,slow=4.1,SNR=4.0						
YBH				LR	LR	08 29 38.4	
	comp=E,11nm,18.9s,baz=168,slow=41						
ANMO	Albuquerque	9.00	91	Lg	Lg	08 29 13.9	
	comp=E,0.1nm,0.3s,baz=176,slow=19,SNR=5.3						
PDAR	Pinedale Array	9.40	38	Pn	Pn	08 26 51.8	+3.3
	comp=E,0.1nm,0.3s,baz=219,slow=12,SNR=7.6						
PDAR				Lg	Lg	08 29 26.1	
	comp=E,0.1nm,0.3s,baz=235,slow=24,SNR=2.3						
	comp=E,0.7nm,0.7s						
NEW	Newport	12.65	1	Pn	Pn	08 27 35.6	+2.9
	comp=E,0.1nm,0.3s,baz=191,slow=10,SNR=2.1						
NEW				LR	LR	08 32 28.6	
	comp=E,152nm,20.1s,baz=186,slow=38						
	comp=E,1.5nm,0.9s						
LPIG	La Paz	13.02	150	LR	LR	08 31 38.5	
	comp=E,71nm,21.1s,baz=2.0,slow=33						
TXAR	Lajitas Array	13.19	114	Pn	Pn	08 27 42.5	+2.2
	comp=E,0.4nm,0.3s,baz=292,slow=13,SNR=50						
TXAR				Lg	Lg	08 31 28.7	
	baz=303,slow=19,SNR=11						
	comp=E,0.8nm,0.4s						
ULM	Lac du Bonnet	21.41	40	P	P	08 29 21.8	+1.0
	comp=E,8.0nm,0.9s,baz=228,slow=9.8,SNR=8.7						
	comp=E,8.0nm,0.9s						
YKA	Yellowknife Ar	26.97	3	P	P	08 30 15.9	+1.6
	comp=E,0.9nm,0.8s,baz=191,slow=9.2,SNR=11						
	comp=E,0.9nm,0.8s						
ILAR	Eielson Array	34.12	338	P	P	08 31 18.8	+1.2
	comp=E,0.7nm,0.8s,baz=155,slow=6.9,SNR=9.8						
	comp=E,0.7nm,0.8s						
AKASG	Malin Array Be	89.17	20	LR	LR	09 19 42.4	
	comp=E,47nm,18.1s,baz=50,slow=37						

JMA **21** *08:27:22.4±0.4, 37°N±1°×13°5E±°, h380^{km}±3^{km}, MV2.8/22, SEA OF JAPAN*

IDC **21** *08:27:23.0±1.1, 37°.04N×134°.99E, h380^{km}±16^{km}, mb2.9/5, mbtmp3.7/9, Error ellipse: s-maj=29.4km s-min=14.5km az=55.0*

ISC 21 08:27:22.6±0.8**, 37°.06N**±0°.09×**134°.99E**±0°.08**, h372**^{km}**, n20,** σ**0^{s}.90**/22**, mb3.1**/5**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKG	Kaga	1.34	125	*e*P	Pn	08 28 13.1	+1.0
JWT	Wachi	1.81	169	*e*P	Pn	08 28 15.7	+0.9
JWT				*e*S	S	08 28 57.2	+0.4
JSZ	Suzu	1.94	78	*e*P	Pn	08 28 16.7	+1.2
JYTA	Yamagatataniai	2.04	136	P	Pn	08 28 17.1	+0.8
JYTA				*e*S	S	08 28 59.3	0.0
JHS	Saijyo	2.56	217	*e*P	Pn	08 28 20.5	+0.4
MAT	Matsushiro	2.64	100	P	Pn	08 28 21.5	+0.8
MJAR	Matsushiro Arr	2.64	100	P	Pn	08 28 22.0	+1.3
	24nm,0.7s,baz=280,slow=9.3,SNR=74						
JIE	Ise	3.01	152	*e*P	Pn	08 28 24.9	+1.2
JRY	Ryogami san	3.32	107	*e*P	Pn	08 28 27.7	+1.2
JOD2	Odawara 2	3.77	117	*e*P	Pn	08 28 31.5	+0.7
JMK	Ichinoseki	5.27	67	*e*P	Pn	08 28 46.2	+0.1
BSO1	Boso 1	5.43	114	*e*P	Pn	08 28 46.6	-0.7
KSRS	Korea Array	5.65	276	P	Pn	08 28 51.5	+1.3
	2.6nm,0.6s,baz=94,slow=12,SNR=12						
USRK	Ussuriysk Ar.	7.49	343	P	P	08 29 11.8	-0.2
	8.3nm,0.6s,baz=168,slow=8.5,SNR=9.3						
ASAJ	Asahikawa	9.12	37	P	P	08 29 30.6	-0.5
	18nm,0.5s,baz=245,slow=11,SNR=29						
SONM	Songino Array	23.55	306	P	P	08 32 00.5	-0.8
	0.6nm,0.7s,baz=93,slow=11,SNR=3.5						
	0.6nm,0.7s						
MKAR	Makanchi Array	39.73	301	P	P	08 34 19.6	-0.8
	0.2nm,0.4s,baz=85,slow=13,SNR=5.3						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	41.91	307	P	P	08 34 38.8	+0.9
	0.4nm,0.4s,baz=91,slow=7.2,SNR=4.6						
	0.4nm,0.4s						
WRA	Warramunga Arr	56.70	181	P	P	08 36 28.1	-0.7
	0.7nm,0.4s,baz=357,slow=7.5,SNR=13						
	0.7nm,0.4s						
ASAR	Alice Springs	60.41	181	P	P	08 36 53.8	-0.3
	0.3nm,0.3s,baz=16,slow=14,SNR=9.0						
	0.3nm,0.3s						

ISK **21** *08:35:47.9, 42°.88N×43°.67E, h20^{km}, ML2.8/5*

NORS **21** *08:35:49.3, 42°.49N×43°.48E, h3^{km}, MPVA4.0*

MOS **21** *08:35:50.5, 42°.53N×43°.40E, h4^{km}, MPVA3.9*

AFAD **21** *08:35:51.3, 42°.52N×43°.23E, h12^{km}±1^{km}, ML3.0*

DRS **21** *08:35:54.3, 42°.66N×43°.31E, h28^{km}*

ISC 21 08:35:49.6±1.0**, 42°.52N**±0°.01×**43°.40E**±0°.01**, h6**^{km}±9^{km}**, n84,** σ**1^{s}.03**/156**, 3C-1D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DIGR	Digorskoe uzhe	0.40	19	*e*Pg	Pg	08 35 57.4	0.0
DIGR				*e*Sg	Sg	08 36 03.0	+0.3
DIGR	Digorskoe uzhe	0.40	19	*e*PG	Pg	08 35 57.4	0.0
DIGR				*e*S	Sg	08 36 03.0	+0.3
LACR	Lac	0.73	65	*e*Pg	Pg	08 36 02.8	-0.8
LACR				*e*Sg	Sg	08 36 11.9	-1.2
LACR	Lac	0.73	65	*e*PG	Pg	08 36 02.8	-0.8
LACR				*e*S	Sg	08 36 11.9	-1.2
KORR	Kora	0.75	41	*i* Pg	Pg	08 36 04.0	+0.1
KORR				*e*Sg	Sb	08 36 15.1	-0.5
KORR	Kora	0.75	41	*i* PG	Pg	08 36 04.1	+0.1
KORR				*e*S	Sb	08 36 15.1	-0.5
LSNR	Lesken	0.82	22	*e*Pg	Pg	08 36 05.6	+0.2
LSNR				*e*Sg	Sb	08 36 17.4	-0.3
LSNR	Lesken	0.82	22	*e*PG	Pg	08 36 05.6	+0.2
LSNR				*e*S	Sb	08 36 17.4	-0.3
NEUR	Neytrino	0.90	326	*i* Pg	Pb	08 36 07.7	-0.1
NEUR				*e*Sg	Sb	08 36 19.9	-0.3
NEUR	Neytrino	0.90	326	*i* PG	Pb	08 36 07.7	-0.1
NEUR				*e*S	Sb	08 36 19.9	-0.3
ARNR	Ardon	0.93	44	*e*Pg	Pb	08 36 07.9	-0.2
ARNR				*e*Sg	Sb	08 36 21.2	+0.5
ARNR	Ardon	0.93	44	*e*PG	Pb	08 36 07.9	-0.2
ARNR				*e*S	Sb	08 36 21.2	+0.5
STDR	Stavd-Durt	0.98	30	*e*Pg	Pn	08 36 09.7	-0.3
STDR				*e*Sg	Sb	08 36 22.4	+0.2
STDR	Stavd-Durt	0.98	30	*e*PG	Pn	08 36 09.6	-0.3
STDR				*e*S	Sb	08 36 22.4	+0.2
NCK	Nalchik	0.98	8	*i* Pg	Pb	08 36 09.4	+0.3
NCK				*e*Sg	Sn	08 36 24.1	-0.2
NCK	Nalchik	0.98	8	*e*PG	Pb	08 36 09.5	+0.3
NCK				*e*S	Sn	08 36 24.1	-0.2
VLKR	Vladikavkaz	1.08	60	*e*Pg	Pb	08 36 10.6	-0.1
VLKR				*e*Sg	Sg	08 36 24.7	+0.5
VLKR	Vladikavkaz	1.08	60	*e*PG	Pb	08 36 10.6	-0.1
VLKR				*e*S	Sg	08 36 24.7	+0.5
EPOS	Posof	1.13	206	P	Pb	08 36 11.9	+0.2
EPOS				S	Sn	08 36 27.8	-0.4
BTKR	Batakoyurt	1.19	44	*e*Pg	Pn	08 36 13.5	+0.5
BTKR				*e*Sg	Sn	08 36 31.9	+2.4
BTKR	Batakoyurt	1.19	44	*e*PG	Pn	08 36 13.5	+0.5
BTKR				*e*S	Sn	08 36 31.9	+2.4
KMGR	Komgaron	1.20	63	*e*Pg	Pn	08 36 13.3	+0.2
KMGR				*e*Sg	Sn	08 36 31.3	+1.5
KMGR	Komgaron	1.20	63	*e*PG	Pn	08 36 13.3	+0.2
KMGR				*e*S	Sn	08 36 31.3	+1.5
KBZ	Khabaz	1.26	343	*i* PG	Pn	08 36 13.8	0.0
KBZ				*i* S	Sn	08 36 30.9	-0.2
TBLG	Delisi	1.27	128	Pn	Pn	08 36 13.1	-0.9
TBLG				Sn	Sn	08 36 31.1	-0.3
TBLG	Delisi	1.27	128	*e*PG	Pn	08 36 13.5	-0.5
KBTC	Kuba-Taba	1.29	0	*e*Pg	Pg	08 36 15.6	+1.1
KBTC				*e*Sg	Sn	08 36 34.0	+1.9
KBTC	Kuba-Taba	1.29	0	*e*PG	Pg	08 36 15.6	+1.1
KBTC				*e*S	Sn	08 36 34.0	+1.9
SHA1	Shidzhatmaz	1.33	336	*i* PG	Pg	08 36 15.6	+0.4
SHA1				*i* S	Sn	08 36 33.7	+0.5
PRTR	Priterechnaya	1.39	27	*e*PG	Pg	08 36 16.4	+0.2
PRTR				*e*S	Sg	08 36 36.0	+1.8
AHAN	Ardahan-Merkez	1.48	203	P	Pg	08 36 18.9	+1.0
AHAN				S	Sg	08 36 39.2	+2.1
AHAN				*i* IAML		08 36 40.0	
	comp=E,254nm,0.5s						
AHAN				*i* IAML		08 36 41.0	
	comp=N,168nm,0.4s						
KIV0	Kislovodsk Arr	1.52	340	*e*Pg	Pg	08 36 18.8	-0.1
KIV0				*e*Sg	Sg	08 36 40.2	+1.6
KIV	Kislovodsk	1.52	340	*e*PG	Pg	08 36 18.9	0.0
KIV				*e*S	Sg	08 36 39.1	+0.5
TRKR	Terskaya	1.55	39	*e*Pg	Pb	08 36 19.0	+0.3
TRKR				*e*Sg	Sg	08 36 40.7	+1.4
TRKR	Terskaya	1.55	39	*e*PG	Pb	08 36 19.0	+0.3
TRKR				*e*S	Sg	08 36 40.7	+1.4
BEYR	Belyy Ugol+	1.55	344	*e*Pg	Pb	08 36 19.1	+0.3
BEYR				*e*Sg	Sn	08 36 38.3	0.0
BEYR	Belyy Ugol+	1.55	344	*e*PG	Pb	08 36 19.1	+0.3
BEYR				*e*S	Sn	08 36 38.3	0.0
PYA1	Pyatigorsk	1.56	352	*e*Pg	Pb	08 36 19.1	+0.2
PYA1				*e*Sg	Sb	08 36 39.1	+0.2
PYA1	Pyatigorsk	1.56	352	*e*PG	Pb	08 36 19.1	+0.2
PYA1				*e*S	Sb	08 36 39.1	+0.2
DBOC	Borcka	1.75	228	P	Pb	08 36 22.4	+0.2
DBOC				S	Sg	08 36 45.7	0.0
DBOC				*i* IAML		08 36 47.0	
	comp=E,176nm,0.3s						
GOLE	Ardahan-G¶lle	1.79	200	P	Pg	08 36 24.2	+0.3
GOLE				S	Sg	08 36 48.6	+1.6
DGRG	David-gareji	1.82	125	*e*PN	Pb	08 36 24.0	+0.6
ARXR	Arkhyz	1.87	304	*e*Pg	Pg	08 36 25.7	+0.2
ARXR				*e*Sg	Sg	08 36 49.5	-0.3
ARXR	Arkhyz	1.87	304	*e*PN	Pg	08 36 25.7	+0.2
ARXR				*e*S	Sg	08 36 49.5	-0.3
GROC	Groznyy	1.89	68	*e*PN	Pb	08 36 24.5	0.0
GROC				pmax	pmax		
	comp=Z,73nm,0.3s						
BOZK	Kars-Merkez-Bo	1.96	190	P	Pb	08 36 25.4	-0.4
BOZK				S	Sg	08 36 53.3	+0.9
DBAD	Bademkaya	1.97	221	P	Pb	08 36 26.3	+0.3
DBAD				S	Sg	08 36 52.5	-0.5
DBAD				*i* IAML		08 36 54.0	
	comp=Z,191nm,0.5s						
DBAD				*i* IAML		08 36 56.0	
	comp=Z,183nm,0.5s						
DDEM	Demirkent	2.04	218	P	Pb	08 36 28.1	+0.8
DDEM				S	Sg	08 36 55.6	+0.4
DDEM				*i* IAML		08 36 57.0	
	comp=Z,176nm,0.4s						
DDEM				*i* IAML		08 37 02.0	
	comp=Z,226nm,0.4s						
DVE	Vedeno	2.06	77	*e*Pg	Pb	08 36 26.7	-0.7
DVE				*e*Sg	Sg	08 36 55.1	-0.5
DVE	Vedeno	2.06	77	*e*PN	Pb	08 36 26.9	-0.5
DVE				pmax	pmax		
	comp=Z,37nm,0.4s						
BTLR	Botlikh	2.09	85	*e*Pg	Pb	08 36 28.2	+0.2
BTLR				*e*Sg	Sb	08 36 55.3	+1.1
BTLR	Botlikh	2.09	85	*e*PN	Pb	08 36 28.8	+0.8
BTLR				*e*S	Sb	08 36 55.1	+0.9
BTLR				pmax	pmax		
	comp=Z,16nm,0.6s						
SENK	Senkaya-Erzuru	2.11	202	Pn	Pb	08 36 29.2	+0.8
SENK				Sn	Sg	08 36 58.9	+1.5
TLTR	Tlyarata	2.23	100	*e*Pg	Pb	08 36 29.9	-0.5
TLTR				*e*Sg	Sb	08 36 58.0	-0.3
TLTR	Tlyarata	2.23	100	*e*PN	Pb	08 36 30.4	0.0
TLTR				*e*S	Sb	08 36 58.6	+0.2
TLTR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ALER	Alexandrovskoy	2.27	351	*e*PN	Pb	08 36 31.7	+0.7
ALER				*e*S	Sg	08 37 01.3	-1.2
GRYR	Gornoye	2.32	314	*e*Pn	Pb	08 36 31.1	-0.8
GRYR				*e*Sn	Sb	08 37 00.8	0.0
GRYR	Gornoye	2.32	314	*e*PN	Pb	08 36 31.1	-0.8
GRYR				*e*S	Sb	08 37 00.8	0.0
CHOM	Cayeli-Rize	2.43	235	Pn	Pb	08 36 33.2	-0.6
DLMR	Dylym	2.44	76	*e*Pn	Pn	08 36 31.5	+1.4
DLMR				*e*Sn	Sn	08 37 02.2	+2.0
DLMR	Dylym	2.44	76	*e*PN	Pb	08 36 33.1	-0.8
DLMR				*e*S	Sb	08 37 02.9	-1.4
DLMR				pmax	pmax		
	comp=Z,40nm,0.2s						
XNZR	Khunzakh	2.44	88	*e*Pn	Pb	08 36 35.0	+0.9
XNZR				*e*Sn	Sb	08 37 04.2	-0.3
HNZR	Khunzah	2.45	88	*e*PN	Pb	08 36 33.2	-1.0
HNZR				*e*S	Sb	08 37 03.8	-1.0
HNZR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
UNCR	Uncukul	2.51	84	*e*Pn	Pb	08 36 34.0	-1.2
UNCR				*e*Sn	Sb	08 37 07.4	+1.0
UNCR	Uncukul	2.51	84	*e*PN	Pb	08 36 33.8	-1.4
UNCR				*e*S	Sb	08 37 05.0	-1.4
UNCR				pmax	pmax		
	comp=Z,29nm,0.5s						
RPOR	Krasnaya Polya	2.58	298	⇑*e*PN	Pb	08 36 34.8	-1.5
KRNR	Karanay	2.60	82	*e*Pn	Pb	08 36 36.2	-0.6
KRNR				*e*Sn	Sn	08 37 05.3	+0.9
KRNR	Karanay	2.60	82	*e*PN	Pb	08 36 36.2	-0.6
KRNR				*e*S	Sn	08 37 05.3	+0.9
VSLR	Vesyoloye	2.64	292	⇑*i*PN	Pn	08 36 32.4	-0.4
VSLR				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ARKR	Arakani	2.66	87	*e*Pn	Pb	08 36 36.8	-0.9
ARKR				*e*Sn	Sb	08 37 08.3	-2.2
ARKR	Arakani	2.66	87	*e*PN	Pb	08 36 36.0	-1.7
ARKR				*e*S	Sb	08 37 08.9	-1.6
ARKR				pmax	pmax		
	comp=Z,8.0nm,0.4s						
IZDR	Rize	2.74	232	P	Pn	08 36 35.6	+1.3
IZDR				S	Sb	08 37 14.2	+1.1
KMKR	Kumukh	2.77	97	*e*PN	Pb	08 36 40.4	+0.7
KMKR				*e*S	Sb	08 37 12.9	-1.1
KOPR	Koprukoy-ERZUR	2.78	205	Pn	Pb	08 36 38.8	-1.1
KOPR				Sn	Sb	08 37 15.4	+1.1
GUZR	Guzeripl'	2.81	303	*e*Pn	Pb	08 36 38.3	-2.0
GUZR				*i* Sn	Sb	08 37 14.1	-1.0
GUZR	Guzeripl'	2.81	303	*e*PN	Pb	08 36 38.3	-2.0
GUZR				*i* S	Sb	08 37 14.1	-1.0
KRIK	Erzurum-spir	2.87	221	P	Pb	08 36 41.7	+0.3
KRIK				S	Sg	08 37 20.3	-1.4
SOC	Sochi	2.90	293	*e*PN	Pn	08 36 35.7	-0.7
SOC				*e*S	Sn	08 37 09.6	-2.0
SOC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AGRB	Hanur-Agry	2.96	186	Pn	Pb	08 36 40.9	-2.0
MRNR	Maryino	3.20	298	*e*PN	Pb	08 36 44.8	-2.0
MRNR				*e*S	Sn	08 37 22.2	+3.3
AKT	Akhty	3.39	106	*e*PN	Pb	08 36 48.2	-2.0
OBN	Obninsk	13.37	343	*e*P	Pn	08 39 00.8	+1.0
OBN				pmax	pmax		
	comp=Z,16nm,0.5s						
ARTI	Arti	16.90	30	⇑*e*P	Pn	08 39 47.0	+0.4
ARTI				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AAK	Ala-Archa	22.84	79	⇓*e*P	P	08 40 50.1	-3.5

SJA **21** *08:57:08.2±0.7, 32°.00S×69°.59W, h121^{km}±3^{km}, ML3.6, MW3.7*

GUC **21** *08:57:09.3±0.7, 32°.03S×69°.99W, h129^{km}±4^{km}, ML3.8*

IDC **21** *08:57:10.0±4.1, 32°.07S×69°.55W, h112^{km}±30^{km}, mb3.1/1, mbtmp3.5/2, Error ellipse: s-maj=65.4km s-min=48.2km az=33.0*

ISC 21 08:57:09.3±0.9**, 32°.01S**±0°.02×**69°.62W**±0°.03**, h116**^{km}±6^{km}**, n72,** σ**1^{s}.65**/116**, 3C, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTLS	Leoncito	0.34	52	*e*P	Pn	08 57 25.7	-0.6
RTLS				*e*S	Sn	08 57 38.2	-0.8
ARCO	CERRO ARCO	1.01	145	*e*P	Pn	08 57 31.3	+0.1
ARCO				*e*S	Sn	08 57 48.9	+1.1
ARCO				IAML		08 57 49.5	
	comp=Z,3µm,0.3s						
SJA	San Juan	1.02	62	*e*P	Pn	08 57 20.1	-11
SJA				IAML		08 57 44.7	
	comp=Z,596nm,0.7s						
VA03	San Esteban	1.09	226	*e*P	Pn	08 57 31.6	-0.4
VA03				*e*S	Sn	08 57 48.8	-0.4
VA03	San Esteban	1.09	226	*e*P	Pn	08 57 31.6	-0.4
VA03				*e*S	Sn	08 57 49.5	+0.3
VA03				IAML		08 57 50.0	
	comp=Z,2µm,0.2s						
CO04	Los Peladeros	1.16	268	⇑*i*P	Pn	08 57 31.8	-1.1
CO04				*e*S	Sn	08 57 49.1	-1.5
RTLL	Cerro Villicun	1.19	55	*e*P	Pn	08 57 32.8	-0.2
RTLL				*e*S	Sn	08 57 51.1	+0.2
RTLL				IAML		08 57 51.9	
	comp=Z,865nm,0.3s						
CFA	Coronel Fontan	1.24	71	P	Pn	08 57 33.2	-0.3
	comp=Z,193nm,0.3s,baz=236,slow=7.8,SNR=1813						
CFA				S	Sn	08 57 51.5	-0.4
	comp=Z,185nm,0.3s,baz=151,slow=17,SNR=39						
CFA	Coronel Fontan	1.24	71	*e*P	Pn	08 57 33.2	-0.3
CFA				*e*S	Sn	08 57 51.8	-0.1
CFA				IAML		08 57 52.3	
	comp=Z,405nm,0.7s						
AAGR	Agrelo	1.26	148	*e*P	Pn	08 57 34.1	+0.3
AAGR				*e*S	Sn	08 57 52.9	+0.5
AAGR				IAML		08 57 58.6	
	comp=Z,661nm,0.5s						
CO02	Combarbal	1.43	304	⇑*i*P	Pn	08 57 35.0	-0.7
CO02				IAML		08 57 58.0	
	comp=E,4µm,0.2s						
CO02	Combarbal	1.43	304	*e*P	Pn	08 57 35.1	-0.6
CO02				*e*S	Sn	08 57 56.6	+0.8
CO02				IAML		08 57 59.0	
	comp=Z,1µm,0.3s						
PEL	Peldehue	1.45	218	*e*P	Pn	08 57 35.2	-0.6
PEL				*e*S	Sn	08 57 55.0	-1.0
PEL				IAML		08 57 57.1	
	comp=E,2µm,0.3s						
PEL	Peldehue	1.45	218	*e*P	Pn	08 57 35.2	-0.6
PEL				*e*S	Sn	08 57 55.9	-0.2
PEL				IAML		08 58 00.3	
	comp=Z,824nm,0.3s						
MT04	Ro Olivares	1.46	197	*e*P	Pn	08 57 36.6	+0.5
MT04	Ro Olivares	1.46	197	*e*P	Pn	08 57 36.7	+0.5
MT04				*e*S	Sn	08 58 07.0	+10
MT04				IAML		08 58 07.5	
	comp=Z,245nm,0.2s						
MT08	Bocatoma Ro	1.47	193	*e*P	Pn	08 57 31.6	-4.7
MT08				*e*P		08 57 36.9	
MT08				*e*S	Sn	08 57 53.3	-3.6
MT10	Hacienda Santa	1.48	211	*e*P	Pn	08 57 36.3	0.0
MT10				IAML		08 58 00.7	
	comp=E,2µm,0.2s						
CO03	El Pedregal	1.48	322	*i* P	Pn	08 57 36.2	-0.2
CO03				*i* S	Sn	08 57 57.3	+0.4
CO03				IAML		08 57 59.2	
	comp=E,1µm,0.2s						
CO03	El Pedregal	1.48	322	*e*P	Pn	08 57 36.3	0.0
CO03				*e*S	Sn	08 57 57.5	+0.6
CO03				IAML		08 57 59.9	
	comp=Z,542nm,0.3s						
ACCO	Cerro Coronel	1.49	19	*e*P	Pn	08 57 37.1	+0.4
ACCO				*e*S	Sn	08 57 58.7	+1.2
ROCH	El Roble	1.52	230	*e*P		08 57 36.1	
ROCH				*e*P	Pn	08 57 36.1	-0.8
ROCH				*e*S	Sn	08 57 56.6	-1.3
ROCH				IAML		08 57 57.6	
	comp=E,2µm,0.2s						
ROCH				IAML		08 57 57.7	
	comp=E,1µm,0.4s						
ROC1	El Roble	1.52	230	*e*P	Pn	08 57 36.0	-1.0
ROC1				*e*S	Sn	08 57 57.1	-1.0
VA06	Catapilco	1.53	248	*e*P	Pn	08 57 35.2	-1.5
VA06				*e*S	Sn	08 57 54.9	-2.7
VA06				IAML		08 57 56.4	
	comp=E,2µm,0.3s						
MT14	Cerro Cal¡n	1.58	209	*e*P	Pn	08 57 37.5	0.0
MT14				*e*S	Sn	08 57 59.1	+0.1
MT14				IAML		08 58 00.7	
	comp=E,3µm,0.6s						
MT03	Universidad Ad	1.66	207	*e*P	Pn	08 57 38.5	+0.1
MT03				*i* S	Sn	08 58 01.1	+0.4
MT03				IAML		08 58 02.5	
	comp=N,2µm,0.2s						
MT03	Universidad Ad	1.66	207	*e*P	Pn	08 57 38.6	+0.1
MT03				*e*S	Sn	08 58 01.6	+0.9
MT03				IAML		08 58 03.9	
	comp=Z,998nm,0.5s						
MT05	Renca	1.67	214	*e*P	Pn	08 57 38.2	-0.4
MT05	Renca	1.67	214	*e*P	Pn	08 57 37.7	-0.8
MT05				*e*S	Sn	08 58 01.6	+0.8
MT05				IAML		08 58 02.7	
	comp=Z,774nm,0.6s						
AVIZ	Vizcacheras	1.73	148	*e*P	Pn	08 57 39.6	+0.3
AVIZ				*e*S	Sn	08 57 55.9	-6.3
AVIZ				*e*S		08 57 57.4	
MT15	Las Vizcachas	1.75	205	*e*P	Pn	08 57 39.3	-0.2
MT15				IAML		08 58 08.9	
	comp=E,1µm,0.2s						
MT13	San Alfonso	1.82	198	*e*P	Pn	08 57 41.0	+0.6
MT13				*e*S	Sn	08 58 05.4	+1.3
MT13	San Alfonso	1.82	198	*e*P	Pn	08 57 40.9	+0.6
MT13				*e*S	Sn	08 58 05.5	+1.3
MT13				IAML		08 58 08.4	
	comp=Z,242nm,0.2s						
AROD	Rodeo	1.84	4	*e*P	Pn	08 57 41.9	+1.0
AROD				*e*S	Sn	08 58 06.1	+1.2
ACDV	Cuesta del Vie	1.88	13	*e*P	Pn	08 57 42.3	+1.1
ACDV				*e*S	Sn	08 57 58.4	-7.2
ACDV				IAML		08 58 08.2	
	comp=Z,269nm,0.7s						
LMEL	Las Melosas	1.90	195	*e*P	Pn	08 57 41.6	+0.2
LMEL	Las Melosas	1.90	195	*e*P	Pn	08 57 36.7	-4.7
LMEL				*e*P		08 57 41.7	
LMEL				*e*S	Sn	08 58 08.8	+2.9
LMEL				IAML		08 58 13.8	

	comp=Z,228nm,0.1s						
VA01	**Torpederas**	**1.99**	**239**	*e*P	**Pn**	**08 57 40.2**	**-2.2**
VA01				IAML		08 58 09.2	
	comp=E,1µm,0.3s						
VA01	**Torpederas**	**1.99**	**239**	*e*P	**Pn**	**08 57 41.5**	**-0.9**
VA01				*e*S	**Sn**	**08 58 04.8**	**-2.9**
VA01				IAML		08 58 11.3	
	comp=Z,222nm,0.2s						
CO01	**Juntas del Tor**	**2.07**	**348**	⇑*i*P	**Pn**	**08 57 44.9**	**+1.3**
CO01	**Juntas del Tor**	**2.07**	**348**	*e*P	**Pn**	**08 57 45.0**	**+1.3**
CO01				*e*S	**Sn**	**08 58 12.4**	**+2.5**
ACAN	**Cantantal**	**2.08**	**98**	*e*P	**Pn**	**08 57 42.6**	**-0.9**
ACAN				IAML		08 58 11.1	
	comp=Z,639nm,0.3s						
MT09	**Talagante**	**2.11**	**213**	*e*P	**Pn**	**08 57 43.2**	**-0.8**
MT09				*e*S	**Sn**	**08 58 09.3**	**-1.2**
MT09				IAML		08 58 10.5	
	comp=E,615nm,0.4s						
BO04	**La Punta**	**2.14**	**203**	*e*P	**Pn**	**08 57 44.4**	**0.0**
BO04				*e*S	**Sn**	**08 58 11.1**	**-0.1**
BO04				IAML		08 58 12.5	
	comp=N,761nm,0.3s						
CO06	**Fray Jorge**	**2.18**	**307**	*e*P	**Pn**	**08 57 43.2**	**-1.6**
AVFE	**Valle Fertil**	**2.29**	**54**	*e*P	**Pn**	**08 57 46.2**	**0.0**
AVFE				*e*S	**Sn**	**08 58 14.5**	**0.0**
AVFE				IAML		08 58 16.8	
	comp=Z,250nm,0.3s						
MT01	**Popeta**	**2.30**	**216**	*e*P	**Pn**	**08 57 44.9**	**-1.4**
MT01				IAML		08 58 13.9	
	comp=E,292nm,0.1s						
MT01	**Popeta**	**2.30**	**216**	*e*P	**Pn**	**08 57 45.0**	**-1.4**
MT01				*e*S	**Sn**	**08 58 16.1**	**+1.2**
MT01				IAML		08 58 18.0	
	comp=Z,189nm,0.3s						
VA05	**Santo Domingo**	**2.35**	**225**	*e*P	**Pn**	**08 57 45.3**	**-1.6**
VA05				IAML		08 58 22.4	
	comp=E,601nm,0.2s						
ACHE	**Chepes**	**2.66**	**72**	*e*P	**Pn**	**08 57 51.2**	**+0.1**
ACHE				*e*S	**Sn**	**08 58 22.7**	**-0.5**
BO01	**Tunca**	**2.68**	**207**	*e*P	**Pn**	**08 57 49.9**	**-1.2**
BO01				IAML		08 58 24.5	
	comp=E,192nm,0.2s						
BO01	**Tunca**	**2.68**	**207**	*e*P	**Pn**	**08 57 50.1**	**-1.1**
BO01				*e*S	**Sn**	**08 58 21.5**	**-1.9**
BO01				IAML		08 58 23.3	
	comp=Z,149nm,0.3s						
AGUA	**GUANDACOL**	**2.69**	**21**	*e*P	**Pn**	**08 57 52.8**	**+1.2**
AGUA				*e*S	**Sn**	**08 58 16.1**	**-8.0**
AGUA				IAML		08 58 28.3	
	comp=Z,179nm,0.7s						
RFA	**San Rafael**	**2.92**	**161**	*e*P	**Pn**	**08 57 53.7**	**-0.7**
RFA				*e*S	**Sn**	**08 58 29.2**	**0.0**
RFA				IAML		08 58 56.1	
	comp=Z,90nm,0.4s						
BO02	**Sierra Bellavi**	**2.94**	**199**	*e*P	**Pn**	**08 57 54.4**	**-0.4**
BO02				IAML		08 58 33.8	
	comp=N,261nm,0.4s						
BO02	**Sierra Bellavi**	**2.94**	**199**	*e*P	**Pn**	**08 57 54.7**	**0.0**
BO02				*e*S	**Sn**	**08 58 30.5**	**+0.8**
BO02				IAML		08 58 35.1	
	comp=Z,159nm,0.2s						
LCO	**Las Campanas**	**3.13**	**342**	*e*P	**Pn**	**08 57 56.9**	**-0.6**
LCO				*e*S	**Sn**	**08 58 33.9**	**-0.7**
LCO				IAML		08 58 35.6	
	comp=Z,396nm,0.3s						
AC05	**El Transito**	**3.21**	**350**	*e*P	**Pn**	**08 57 58.8**	**+0.4**
AC05				*e*S	**Sn**	**08 58 36.6**	**+0.3**
AC05				IAML		08 58 37.5	
	comp=Z,78nm,0.2s						
MRA	**San Martin**	**3.33**	**98**	*e*P	**Pn**	**08 57 59.3**	**-0.6**
MRA				*e*S	**Sn**	**08 58 38.9**	**-0.1**
MRA				IAML		08 59 06.1	
	comp=Z,88nm,0.4s						
ACLC	**CERRO LA CRUZ**	**3.45**	**42**	*e*P	**Pn**	**08 58 01.8**	**+0.2**
ACLC				*e*S	Sn	08 58 23.9	-18
ACLC				IAML		08 58 44.8	
	comp=Z,56nm,0.3s						
VCA	**Vinchina**	**3.48**	**21**	*e*P	**Pn**	**08 58 03.4**	**+1.4**
VCA				*e*S	Sn	08 58 26.2	-16
VCA				IAML		08 58 51.1	
	comp=Z,108nm,1.1s						
AC04	**Llanos de Chal**	**4.00**	**341**	*e*P	**Pn**	**08 58 07.8**	**-1.0**
AC04				*e*S	**Sn**	**08 58 54.4**	**-0.4**
AC04				IAML		08 58 56.9	
	comp=Z,55nm,0.9s						
ML02	**Panimavida**	**4.03**	**201**	*e*S	**Sn**	**08 58 52.9**	**-2.6**
ML02				IAML		08 59 28.8	
	comp=Z,45nm,1.1s						
TINO	**Tinogasta**	**4.32**	**25**	*e*P	**Pn**	**08 58 12.2**	**-0.9**
TCA	**Tanti**	**4.33**	**82**	*e*P	Pn	08 58 07.0	-6.3
TCA				*e*P		08 58 12.4	
TCA				*e*S	**Sn**	**08 59 00.3**	**-2.7**
TCA				IAML		08 59 01.6	
	comp=Z,45nm,0.5s						
GO03	**Copiapo**	**4.43**	**353**	*e*P	**Pn**	**08 58 14.7**	**0.0**
GO03				*e*S	**Sn**	**08 59 04.5**	**-0.9**
GO03				IAML		08 59 05.0	
	comp=Z,61nm,0.3s						
BI02	**San Fabin de**	**4.84**	**196**	*e*P	**Pn**	**08 58 20.4**	**+0.3**
BI02				IAML		08 59 28.2	
	comp=Z,13nm,0.9s						
CYA	**Choya**	**4.85**	**44**	*e*P	**Pn**	**08 58 19.5**	**-0.7**
CYA				*e*S	**Sn**	**08 59 13.1**	**-2.3**
CYA				IAML		08 59 15.5	
	comp=Z,25nm,0.7s						
AC02	**Maricunga**	**5.17**	**5**	*e*P	**Pn**	**08 58 26.5**	**+1.5**
AC02				*e*S	**Sn**	**08 59 20.4**	**-3.4**
AC02				IAML		08 59 26.0	
	comp=Z,21nm,0.8s						
LPAZ	**La Paz**	**15.71**	**5**	P	**P**	**09 00 46.7**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=187,slow=10,SNR=4.9						
TXAR	**Lajitas Array**	**69.05**	**328**	P	**P**	**09 08 04.1**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=159,slow=8.6,SNR=6.1						
	comp=Z,0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**151.46**	**32**	PKPbc	**PKiKP**	**09 16 50.4**	**+0.9**
	comp=Z,2.1nm,0.5s,baz=299,slow=3.7,SNR=10						

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*CATAC **21** 09:07:48.4±0.4, 13°N±2°×8°9W±°, h27^{km}±2^{km}, M3.6/27, MLv3.6/27, Error ellipse: s-maj=5.3km s-min=2.2km az=29.7, confirmed*

*SNET **21** 09:07:49.0±0.7, 13°03N×89°02W, h42^{km}±33^{km}, ML3.4*

*GCG **21** 09:07:50.7±0.4, 13°01N×89°22W, h45^{km}±7^{km}, MD4.1, ML2.8*

ISC 21 09:07:47.3±1.3, **12°97N**±0°05×**89°04W**±0°03, **h19**^{km}±3^{km}, **n99,** σ**0^{s}60**/110, **1C-5D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.59**	**332**	*e*P	**Pn**	**09 08 01.3**	**+0.6**
LALI				*e*S	**Sn**	**09 08 09.6**	**-0.3**
LALI	**Alcalda de L**	**0.59**	**332**	*i* P	**Pn**	**09 08 01.3**	**+0.6**
LALI				*e*S	**Sn**	**09 08 09.5**	**-0.3**
LALI	**Alcalda de L**	**0.59**	**332**	P	**Pn**	**09 08 01.5**	**+0.8**
LALI	**Alcalda de L**	**0.59**	**332**	S	**Sn**	**09 08 10.3**	**+0.5**
TECO	**Alcaldia de Te**	**0.62**	**24**	⇓*i*P	**Pn**	**09 08 01.6**	**+0.4**
TECO				*e*S	**Sn**	**09 08 10.9**	**+0.3**
TECO	**Alcaldia de Te**	**0.62**	**24**	P	**Pn**	**09 08 01.6**	**+0.4**
TECO	**Alcaldia de Te**	**0.62**	**24**	S	**Sn**	**09 08 11.2**	**+0.6**
LFRS	**El Faro**	**0.65**	**358**	*e*P	**Pn**	**09 08 02.2**	**+0.5**
LFRS				*e*S	**Sn**	**09 08 12.4**	**+0.8**
PANCS	**Alcalda de**	**0.66**	**348**	S	**Sn**	**09 08 12.1**	**+0.5**
SNVI	**San Vicente**	**0.67**	**17**	*e*P	**Pn**	**09 08 02.4**	**+0.4**
LOMA	**Loma Larga**	**0.69**	**349**	P	**Pn**	**09 08 02.3**	**+0.1**
LOMA	**Loma Larga**	**0.69**	**349**	S	**Sn**	**09 08 12.6**	**+0.2**
UESV	**Universidad de**	**0.71**	**20**	P	**Pn**	**09 08 02.7**	**+0.2**
UESV	**Universidad de**	**0.71**	**20**	S	**Sn**	**09 08 13.5**	**+0.6**
TECA	**Tecapa**	**0.74**	**45**	⇓*e*P	**Pn**	**09 08 03.9**	**+0.9**
UTEC	**Universidad Te**	**0.75**	**348**	P	**Pn**	**09 08 03.5**	**+0.5**
UTEC	**Universidad Te**	**0.75**	**348**	S	**Sn**	**09 08 14.2**	**+0.3**
PAVA	**Las Pavas**	**0.75**	**7**	*e*P	**Pn**	**09 08 03.7**	**+0.7**
PAVA	**Las Pavas**	**0.75**	**7**	P	**Pn**	**09 08 03.8**	**+0.7**
PAVA	**Las Pavas**	**0.75**	**7**	S	**Sn**	**09 08 14.5**	**+0.5**
UDBS	**Universidad Do**	**0.75**	**351**	S	**Sn**	**09 08 14.8**	**+0.8**
UDBS	**Universidad Do**	**0.75**	**351**	P	**Pn**	**09 08 03.4**	**+0.4**
IGN	**Direccin Gen**	**0.75**	**350**	P	**Pn**	**09 08 03.5**	**+0.4**
IGN	**Direccin Gen**	**0.75**	**350**	S	**Sn**	**09 08 14.8**	**+0.8**
LBRS	**Las Brisas**	**0.77**	**360**	*e*P	**Pn**	**09 08 04.0**	**+0.8**
UEES	**Universidad Ev**	**0.77**	**345**	*e*P	**Pn**	**09 08 03.8**	**+0.5**
UEES	**Universidad Ev**	**0.77**	**345**	P	**Pn**	**09 08 03.8**	**+0.5**
UEES	**Universidad Ev**	**0.77**	**345**	S	**Sn**	**09 08 14.5**	**+0.1**
PMON	**Piamonte**	**0.79**	**340**	*e*P	**Pn**	**09 08 04.0**	**+0.5**
PMON	**Piamonte**	**0.79**	**340**	P	**Pn**	**09 08 03.8**	**+0.2**
PMON	**Piamonte**	**0.79**	**340**	S	**Sn**	**09 08 15.6**	**+0.6**
SCLA	**Alcaldia de Sa**	**0.79**	**22**	⇓*e*P	**Pn**	**09 08 04.5**	**+0.9**
SCLA	**Alcaldia de Sa**	**0.79**	**22**	P	**Pn**	**09 08 04.2**	**+0.7**
SCLA	**Alcaldia de Sa**	**0.79**	**22**	S	**Sn**	**09 08 15.9**	**+1.1**
JAYA	**Jayaque - finc**	**0.79**	**330**	⇓*i*P	**Pn**	**09 08 04.1**	**+0.4**
JAYA	**Jayaque - finc**	**0.79**	**330**	*i* P	**Pn**	**09 08 04.1**	**+0.4**
JAYA				*e*S	**Sn**	**09 08 14.3**	**-0.8**
JAYA	**Jayaque - finc**	**0.79**	**330**	P	**Pn**	**09 08 04.0**	**+0.4**
JAYA	**Jayaque - finc**	**0.79**	**330**	S	**Sn**	**09 08 15.7**	**+0.5**
BOQS	**Boqueron**	**0.80**	**343**	*e*P	**Pn**	**09 08 04.5**	**+0.7**
BOQS				*e*S	**Sn**	**09 08 16.0**	**+0.6**
PQSS	**Presa 15 de Se**	**0.80**	**35**	P	**Pg**	**09 08 02.8**	**-0.2**
PQSS	**Presa 15 de Se**	**0.80**	**35**	S	**Sn**	**09 08 15.0**	**-0.1**
PIC2	**El Picacho**	**0.80**	**345**	*e*P	**Pn**	**09 08 05.0**	**+1.1**
LCY	**Lacayo**	**0.85**	**58**	*e*P	**Pn**	**09 08 05.4**	**+0.9**
PACA	**Pacayal**	**0.85**	**54**	*e*P	**Pn**	**09 08 05.7**	**+1.2**
PACA	**Pacayal**	**0.85**	**54**	S	**Sn**	**09 08 17.7**	**+1.1**
PACA	**Pacayal**	**0.85**	**54**	P	**Pn**	**09 08 05.6**	**+1.0**
RANC	**El Ranchito**	**0.86**	**57**	*e*P	**Pn**	**09 08 05.5**	**+0.8**
CEDA	**San Andres**	**0.90**	**337**	*e*P	**Pn**	**09 08 05.7**	**+0.6**
CEDA	**San Andres**	**0.90**	**337**	P	**Pn**	**09 08 05.6**	**+0.5**
CEDA	**San Andres**	**0.90**	**337**	S	**Sn**	**09 08 18.5**	**+0.8**
BLLM	**Bellamira**	**0.91**	**59**	⇑*e*P	**Pn**	**09 08 06.2**	**+0.9**
CNRM	**Centro Naciona**	**0.98**	**59**	P	**Pg**	**09 08 07.1**	**+0.7**
CNRM	**Centro Naciona**	**0.98**	**59**	S	**Sn**	**09 08 20.5**	**+0.9**
CEVE	**Cerro Verde**	**1.03**	**326**	*e*P	**Pg**	**09 08 08.1**	**+0.6**
CEVE	**Cerro Verde**	**1.03**	**326**	P	**Pg**	**09 08 08.0**	**+0.6**
CEVE	**Cerro Verde**	**1.03**	**326**	S	**Sn**	**09 08 21.4**	**+0.3**
SBLS	**San Blas**	**1.04**	**327**	*e*P	**Pg**	**09 08 07.7**	**+0.2**
SNJE	**San Jose**	**1.05**	**328**	*e*P	**Pg**	**09 08 07.9**	**+0.1**
RTR	**El Retiro**	**1.10**	**327**	*e*P	**Pg**	**09 08 08.9**	**+0.2**
UNIC	**Universidad Ca**	**1.12**	**334**	P	**Pg**	**09 08 09.2**	**0.0**
UNIC	**Universidad Ca**	**1.12**	**334**	S	**Sg**	**09 08 24.0**	**0.0**
LCND	**La Caada**	**1.17**	**73**	⇓*e*P	**Pb**	**09 08 09.4**	**+0.4**
LCND	**La Caada**	**1.17**	**73**	P	**Pb**	**09 08 09.2**	**+0.3**
LCND	**La Caada**	**1.17**	**73**	S	**Sg**	**09 08 24.8**	**-0.4**
NUBE	**Las Nubes**	**1.18**	**322**	*e*P	**Pb**	**09 08 09.4**	**+0.2**
NUBE	**Las Nubes**	**1.18**	**322**	*e*P	**Pb**	**09 08 09.4**	**+0.2**
NUBE				*e*S	**Sb**	**09 08 23.8**	**-0.3**
NUBE	**Las Nubes**	**1.18**	**322**	S	**Sg**	**09 08 25.1**	**-0.6**
NUBE	**Las Nubes**	**1.18**	**322**	P	**Pb**	**09 08 09.4**	**+0.2**
LLGN	**La Laguna**	**1.19**	**4**	*e*P	**Pg**	**09 08 10.0**	**-0.4**
LLGN	**La Laguna**	**1.19**	**4**	P	**Pg**	**09 08 09.7**	**-0.7**
LLGN	**La Laguna**	**1.19**	**4**	S	**Sg**	**09 08 25.2**	**-0.9**
CNCH	**Conchagua**	**1.21**	**75**	*e*P	**Pn**	**09 08 09.8**	**+0.4**
CNCH	**Conchagua**	**1.21**	**75**	P	**Pn**	**09 08 09.8**	**+0.4**
CNCH	**Conchagua**	**1.21**	**75**	S	**Sn**	**09 08 25.8**	**+0.4**
LOAL	**Lomas de Alarc**	**1.25**	**325**	S	**Sg**	**09 08 27.4**	**-0.6**
FAME	**Alcaldia de Sa**	**1.29**	**313**	S	**Sn**	**09 08 27.4**	**+0.2**
FAME	**Alcaldia de Sa**	**1.29**	**313**	P	**Pb**	**09 08 11.1**	**0.0**
CSGN	**Cosiguina Volc**	**1.44**	**89**	P	**Pn**	**09 08 13.2**	**+0.6**
CSGN				S	**Sn**	**09 08 30.8**	**-0.2**
MTO3	**Montecristo**	**1.46**	**348**	S	**Sb**	**09 08 31.5**	**-0.8**
MTO3	**Montecristo**	**1.46**	**348**	P	**Pb**	**09 08 13.7**	**-0.3**
POTN	**Potosi Cosigui**	**1.49**	**89**	P	**Pn**	**09 08 13.9**	**+0.8**
POTN				S	**Sn**	**09 08 32.8**	**+0.7**
ESQI	**Esquipulas**	**1.61**	**349**	P	**Pn**	**09 08 15.5**	**+0.6**
ESQI	**Esquipulas**	**1.61**	**349**	S	**Sb**	**09 08 36.1**	**-0.5**
SARH	**Santa Rosa de**	**1.82**	**8**	P	**Pb**	**09 08 18.8**	**-1.3**
CRIN	**San Cristobal**	**1.96**	**98**	P	**Pn**	**09 08 20.3**	**+0.7**
CRIN	**San Cristobal**	**1.96**	**98**	S	**Sn**	**09 08 44.7**	**+1.0**
TGUH	**Tegucigalpa,Un**	**2.03**	**58**	P	**Pn**	**09 08 21.1**	**+0.4**
TELN	**Telica**	**2.18**	**99**	P	**Pn**	**09 08 22.3**	**-0.4**
POLN	**Al Sur del Vol**	**2.19**	**98**	S	**Sn**	**09 08 49.1**	**-0.4**
CNGA	**Al SSO del Vol**	**2.33**	**101**	P	**Pn**	**09 08 24.2**	**-0.5**
CNGA				S	**Sn**	**09 08 52.2**	**-0.6**
CNGN	**Cerro Negro**	**2.33**	**101**	S	**Sn**	**09 08 52.0**	**-0.9**
CNGN	**Cerro Negro**	**2.33**	**101**	P	**Pn**	**09 08 25.2**	**+0.5**
YUSH	**Yuscaran**	**2.35**	**65**	P	**Pn**	**09 08 24.9**	**-0.1**
LIMN	**Finca el Limon**	**2.60**	**88**	P	**Pn**	**09 08 28.4**	**-0.2**
LIMN				S	**Sn**	**09 09 00.6**	**+0.9**
STG8	**El Palmar, Qui**	**2.69**	**304**	*e*P	**Pb**	**09 08 35.1**	**+0.1**
RCON	**San Juan de Ri**	**2.85**	**79**	P	**Pn**	**09 08 31.6**	**-0.4**
NANN	**Nandasmo**	**3.02**	**109**	S	**Sn**	**09 09 10.5**	**+0.4**
MATN	**Matagalpa**	**3.03**	**90**	P	**Pn**	**09 08 34.0**	**-0.5**
MATN	**Matagalpa**	**3.03**	**90**	S	**Sn**	**09 09 10.1**	**-0.3**

IDC 21 09:32:19.3±3.0, **32°44S**×**178°28W, h0**^{km}**, mb3.7**/2, **mbtmp3.7**/3, **ML3.7**/1, **MS2.5**/1, **Error ellipse: s-maj=73.5km s-min=46.0km az=123.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.92**	**212**	Pn	Pn	09 34 01.7	-0.2
	1.3nm,0.3s,baz=264,slow=2.6,SNR=6.6						
URZ				Sn	Sn	09 35 14.7	-6.7
	2.2nm,0.3s,baz=112,slow=18,SNR=7.4						
	2.7nm,0.3s						
RAR	**Rarotonga**	**19.91**	**60**	LR	LR	09 46 11.1	
	comp=Z,13nm,18.2s,baz=36,slow=42						
ASAR	**Alice Springs**	**42.80**	**269**	P	P	09 40 19.0	-0.1
	0.5nm,0.6s,baz=108,slow=7.6,SNR=12						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**43.98**	**274**	P	P	09 40 28.5	-0.1
	0.4nm,0.3s,baz=115,slow=8.0,SNR=5.3						
	0.4nm,0.3s						
FINES	**FINESS Array B**	**146.97**	**339**	PKPbc	PKPbc	09 52 02.2	-0.9
	2.2nm,0.8s,baz=72,slow=6.2,SNR=6.5						

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*IDC **21** 09:33:52.4±0.7, 30°96N×142°82E, h0^{km}, mb3.9/17, mbtmp3.9/20, ML3.2/3, MS2.6/5, Error ellipse: s-maj=20.7km s-min=16.4km az=50.0*

*NEIC **21** 09:33:54.8±2.1, 30°99N±0°07×142°7E±0°1, h10^{km}±1^{km}, mb4.3/29, Error ellipse: s-maj=16.1km s-min=10.5km az=68.0*

*JMA **21** 09:33:55.3±0.8, 31°N±3°×14°3E±°, h0^{km}, MV4.1/16, FAR E OFF IZU ISLANDS*

*NIED **21** 09:33:55.3, 31°41N×142°66E, h0^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-5.55; $M_{\theta\theta}$1.43; $M_{\phi\phi}$4.12; $M_{r\theta}$-2.92; $M_{\theta\phi}$-1.70; $M_{\phi r}$5.06; Fault plane solution: $M_0 7.85000\times10^{14}$ NP1: ϕ_s336.00000°, δ21.00000°, λ-85.00000°. NP2: ϕ_s151.00000°, δ69.00000°, λ-92.00000°.*

ISC 21 09:33:54.3±0.5, **31°07N**±0°07×**142°72E**±0°08, **h10**^{km}**, n82,** σ**1^{s}44**/82, **mb4.2**/31, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**3.19**	**310**	*e*P	**Pn**	**09 34 44.4**	**-0.1**
JHJ2	**Mitsune**	**3.20**	**310**	Pn	**Pn**	**09 34 44.2**	**-0.4**
JHJ2	**Mitsune**	**3.20**	**310**	*e*S	**Sn**	**09 35 20.9**	**-1.9**
JHJ	**Hachijo jima 2**	**3.23**	**310**	Pn	**Pn**	**09 34 44.2**	**-0.8**
	8.6nm,0.3s,baz=103,slow=23,SNR=6.2						
JHJ				Sn	**Sn**	**09 35 17.8**	**-5.7**
	19nm,0.3s,baz=270,slow=19,SNR=6.2						
	40nm,0.3s						
BSO1	**Boso 1**	**3.87**	**338**	P	**Pn**	**09 34 53.2**	**-0.2**
JCJ	**Chichijima**	**3.98**	**187**	Pn	Pn	09 34 43.2	-12
	9.0nm,0.3s,baz=283,slow=23,SNR=9.4						
JCJ				Sn	Sn	09 35 27.1	-15
	24nm,0.3s,baz=281,slow=23,SNR=6.1						
JCJ	**Chichijima**	**3.98**	**187**	Pn	**Pn**	**09 34 53.8**	**-1.6**
BSO3	**Boso 3**	**4.16**	**334**	*e*P	**Pn**	**09 34 57.3**	**-0.4**
JOD2	**Odawara 2**	**5.18**	**325**	*e*P	**Pn**	**09 35 12.0**	**+0.1**
JRY	**Ryogami san**	**5.88**	**328**	*e*P	**Pn**	**09 35 22.1**	**+0.6**
JRY				*e*S	**Sn**	**09 36 28.2**	**-0.8**
JIE	**Ise**	**6.05**	**305**	*e*P	**Pn**	**09 35 26.5**	**+2.6**
JGF	**Kuroka**	**6.37**	**317**	Pn	**Pn**	**09 35 29.7**	**+1.4**
INU	**Inuyama**	**6.41**	**313**	Pn	**Pn**	**09 35 30.2**	**+1.4**
MJAR	**Matsushiro Arr**	**6.63**	**327**	Pn	**Pn**	**09 35 31.8**	**0.0**
	0.4nm,0.3s,baz=148,slow=11,SNR=29						
MJAR				Sn	**Sn**	**09 36 44.5**	**-2.9**
	0.2nm,0.3s,baz=182,slow=33,SNR=4.7						
MJAR				LR	LR	09 38 02.8	
	comp=Z,21nm,21.3s,baz=243,slow=37						
	7.6nm,0.6s						
MJAR	**Matsushiro Arr**	**6.63**	**327**	Pn	**Pn**	**09 35 32.0**	**+0.2**
MAJO	**Matsushiro**	**6.63**	**327**	Pn	**Pn**	**09 35 32.4**	**+0.6**
MJB9	**Matsu-Tunnel**	**6.63**	**327**	Pn	**Pn**	**09 35 33.6**	**+1.7**
JMN	**Monobe**	**7.93**	**292**	Pn	**Pn**	**09 35 51.2**	**+1.4**
JNU	**Nakatsue**	**10.25**	**285**	LR	LR	09 40 00.0	
	comp=Z,60nm,19.7s,baz=108,slow=36						
JNU	**Nakatsue**	**10.25**	**285**	Pn	**Pn**	**09 36 24.4**	**+2.9**
JKA	**Kamikawa-asahi**	**13.03**	**360**	Pn	**Pn**	**09 36 57.1**	**-2.4**
ASAJ	**Asahikawa**	**13.03**	**360**	Pn	**Pn**	**09 36 57.2**	**-2.3**
	0.6nm,0.3s,baz=237,slow=9.4,SNR=6.5						
JOW	**Kunigami**	**13.33**	**255**	LR	LR	09 41 55.1	
	comp=Z,33nm,18.6s,baz=95,slow=36						
KSRS	**Korea Array**	**13.79**	**302**	Pn	**Pn**	**09 37 13.3**	**+3.5**
	0.1nm,0.3s,baz=110,slow=13,SNR=5.7						
KSRS				LR	LR	09 42 00.5	
	comp=Z,16nm,21.9s,baz=150,slow=35						
	2.5nm,0.8s						
YULB	**Yu-li**	**20.50**	**253**	P	**P**	**09 38 31.9**	**-0.7**
YULB				IAmb	IAmb	09 38 51.9	
	comp=Z,17nm,1.1s						
HILR	**Hailar Array B**	**25.29**	**323**	P	**P**	**09 39 21.6**	**+0.7**
	comp=Z,2.2nm,0.5s,baz=122,slow=11,SNR=5.8						
	comp=Z,2.2nm,0.5s						
ULN	**Ulaanbaatar**	**31.89**	**312**	P	**P**	**09 40 20.0**	**+0.1**
ULN				IAmb	IAmb	09 40 24.3	
	comp=Z,3.4nm,0.7s						
SONM	**Songino Array**	**32.30**	**312**	P	**P**	**09 40 25.7**	**+2.2**
	comp=Z,2.5nm,0.7s,baz=122,slow=8.8,SNR=17						
	comp=Z,2.5nm,0.7s						
SONM	**Songino Array**	**32.30**	**312**	P	**P**	**09 40 25.6**	**+2.0**
CMAR	**Chiang Mai Arr**	**41.44**	**263**	LR	LR	09 58 51.9	
	comp=Z,11nm,21.3s,baz=70,slow=36						
MTN	**Manton Dam**	**45.05**	**196**	P	**P**	**09 42 08.9**	**-1.6**
ZALV	**Zalesovo Beam**	**46.87**	**317**	P	**P**	**09 42 25.1**	**+0.6**
	comp=Z,1.0nm,0.5s,baz=108,slow=7.8,SNR=4.8						
ZALV				PcP	**PcP**	**09 43 56.4**	**-0.8**
	comp=Z,1.3nm,0.7s,baz=125,slow=2.0,SNR=5.5						
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**46.87**	**317**	P	**P**	**09 42 24.4**	**0.0**
MKAR	**Makanchi Array**	**48.39**	**307**	P	**P**	**09 42 37.5**	**+1.0**
	comp=Z,2.9nm,0.8s,baz=94,slow=8.8,SNR=13						
	comp=Z,2.9nm,0.8s						
MKAR	**Makanchi Array**	**48.39**	**307**	P	**P**	**09 42 36.5**	**+0.1**
J17K	**VABM Dome**	**48.54**	**31**	P	**P**	**09 42 39.0**	**+1.7**
C18K	**Utukok River**	**49.22**	**24**	P	**P**	**09 42 43.2**	**+0.7**
G18K	**Tagagawik**	**49.34**	**28**	P	**P**	**09 42 44.8**	**+1.3**
G18K				IAmb	IAmb	09 42 54.1	
	comp=Z,6.4nm,1.4s						
E19K	**Redstone River**	**50.29**	**26**	P	**P**	**09 42 51.3**	**+0.7**
KURBB	**Kurchatov Arra**	**50.67**	**312**	P	**P**	**09 42 53.6**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=89,slow=7.2,SNR=11						
	comp=Z,1.7nm,0.8s						
F20K	**Avaraart Lake**	**50.76**	**26**	P	**P**	**09 42 54.9**	**+0.7**
WB0	**Warramunga Arr**	**51.17**	**190**	P	**P**	**09 42 56.3**	**-1.4**
WB0				IAmb	IAmb	09 43 07.0	
	comp=Z,4.4nm,0.9s						
WR8	**Warramunga Arr**	**51.34**	**190**	P	**P**	**09 42 57.5**	**-1.6**
WR8				IAmb	IAmb	09 42 59.1	
	comp=Z,7.9nm,1.4s						
WRA	**Warramunga Arr**	**51.35**	**190**	P	**P**	**09 42 57.6**	**-1.5**
	comp=Z,2.6nm,0.8s,baz=10,slow=7.8,SNR=8.9						
	comp=Z,2.6nm,0.8s						
G21K	**Allakaket**	**51.51**	**27**	P	**P**	**09 43 01.2**	**+1.4**
G21K				IAmb	IAmb	09 43 19.7	
	comp=Z,8.8nm,1.5s						
FITZ	**Fitzroy Crossi**	**51.56**	**201**	P	**P**	**09 42 59.4**	**-1.3**
D22K	**Ayikyak River**	**52.27**	**24**	P	**P**	**09 43 06.3**	**+0.8**
D22K				IAmb	IAmb	09 43 08.7	
	comp=Z,5.8nm,1.2s						
E22K	**Anaktuvuk Pass**	**52.44**	**25**	P	**P**	**09 43 07.8**	**+1.0**
E22K				IAmb	IAmb	09 43 18.6	
	comp=Z,4.7nm,1.3s						
F24K	**Squaw Lake**	**53.84**	**26**	P	**P**	**09 43 18.3**	**+1.2**
F24K				IAmb	IAmb	09 43 42.6	
	comp=Z,5.7nm,1.4s						
ILAR	**Eielson Array**	**54.03**	**30**	P	**P**	**09 43 18.4**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=263,slow=5.7,SNR=11						
	comp=Z,0.5nm,0.7s						
F25K	**Christian Rive**	**54.70**	**26**	P	**P**	**09 43 25.1**	**+1.7**
ASAR	**Alice Springs**	**55.07**	**190**	P	**P**	**09 43 25.2**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=9.6,slow=6.3,SNR=16						
	comp=Z,0.8nm,0.6s						
ASAR	**Alice Springs**	**55.07**	**190**	P	**P**	**09 43 25.1**	**-1.4**
SCRK	**Sand Creek**	**55.28**	**31**	P	**P**	**09 43 28.0**	**+0.3**
SCRK				IAmb	IAmb	09 43 30.8	
	comp=Z,2.0nm,0.9s						
BVAR	**Borovoye Array**	**55.49**	**316**	P	**P**	**09 43 29.2**	**0.0**
	comp=Z,1.1nm,0.6s,baz=89,slow=6.4,SNR=6.2						
	comp=Z,1.1nm,0.6s						
C27K	**Jago River**	**55.53**	**24**	P	**P**	**09 43 30.6**	**+1.3**
H27K	**Steamboat Moun**	**56.29**	**28**	P	**P**	**09 43 36.7**	**+1.8**
PSA00	**Pilbara Seismi**	**56.76**	**206**	P	**P**	**09 43 37.5**	**-1.1**
I28M	**Miner Creek**	**56.97**	**29**	P	**P**	**09 43 41.2**	**+1.4**
I28M				IAmb	IAmb	09 44 10.9	
	comp=Z,3.3nm,1.4s						
KKAR	**Karatay Array**	**57.20**	**304**	P	**P**	**09 43 43.4**	**+1.8**
K29M	**Barlow Dome**	**58.14**	**31**	P	**P**	**09 43 49.6**	**+1.6**
K29M				IAmb	IAmb	09 43 50.5	
	comp=Z,2.4nm,0.8s						
I30M	**Mount Dempster**	**58.48**	**29**	P	**P**	**09 43 51.2**	**+0.8**
I30M				IAmb	IAmb	09 44 08.6	
	comp=Z,2.1nm,0.9s						
CHGR	**Chuyangaron**	**59.37**	**299**	P	**P**	**09 43 58.0**	**+1.1**
P33M	**Teslin, Yukon**	**60.91**	**35**	P	**P**	**09 44 08.6**	**+1.4**
AB31	**Akbulak array**	**62.70**	**313**	P	**P**	**09 44 19.5**	**+0.2**
AB31				IAmb	IAmb	09 44 26.4	
	comp=Z,2.2nm,1.1s						
ABKAR	**Akbulak array**	**62.70**	**313**	P	**P**	**09 44 18.9**	**-0.4**
YKA	**Yellowknife Ar**	**68.45**	**29**	P	**P**	**09 44 55.5**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=294,slow=6.9,SNR=8.0						
	comp=Z,0.5nm,0.8s						
YKAW1	**Yellowknife Wh**	**68.50**	**29**	P	**P**	**09 44 56.0**	**-0.5**
YKAW1				IAmb	IAmb	09 45 07.9	
	comp=Z,1.8nm,0.9s						
BLKN	**Baker Lake**	**74.45**	**23**	P	**P**	**09 45 32.8**	**+0.4**
FINES	**FINESS Array B**	**74.61**	**334**	P	**P**	**09 45 33.7**	**+0.4**
	comp=Z,1.9nm,0.8s,baz=67,slow=5.0,SNR=5.6						
	comp=Z,1.9nm,0.8s						
FINES	**FINESS Array B**	**74.61**	**334**	P	**P**	**09 45 33.3**	**0.0**
KBZ	**Khabaz**	**75.67**	**313**	P	**P**	**09 45 41.5**	**+1.8**
	comp=Z,1.2nm,0.7s,baz=79,slow=2.4,SNR=3.7						
	comp=Z,1.2nm,0.7s						
NVAR	**Mina Array Bea**	**77.72**	**53**	P	**P**	**09 45 52.2**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=288,slow=5.3,SNR=6.1						
	comp=Z,0.7nm,0.6s						
NVAR	**Mina Array Bea**	**77.72**	**53**	P	**P**	**09 45 52.6**	**+0.8**
AKASG	**Malin Array Be**	**79.70**	**324**	P	**P**	**09 46 02.3**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=52,slow=5.3,SNR=1.2						
	comp=Z,0.4nm,0.3s						
PDAR	**Pinedale Array**	**81.08**	**45**	P	**P**	**09 46 09.1**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=250,slow=4.3,SNR=3.7						
	comp=Z,0.3nm,0.7s						
PDAR	**Pinedale Array**	**81.08**	**45**	P	**P**	**09 46 09.4**	**-0.7**
BRTR	**Keskin Array B**	**83.65**	**313**	P	**P**	**09 46 24.0**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=81,slow=3.9,SNR=4.8						
	comp=Z,1.1nm,0.8s						
BRTR	**Keskin Array B**	**83.65**	**313**	P	**P**	**09 46 23.7**	**+0.2**
TXAR	**Lajitas Array**	**92.86**	**53**	P	**P**	**09 47 08.7**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=305,slow=2.4,SNR=4.5						
	comp=Z,0.3nm,0.7s						
TXAR	**Lajitas Array**	**92.86**	**53**	P	**P**	**09 47 07.2**	**-0.7**
LPAZ	**La Paz**	**148.28**	**69**	PKPbc	**PKPbc**	**09 53 42.0**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=348,slow=4.2,SNR=4.3						

IDC 21 09:52:09.5±11.0**, 13°78S**×**166°98E, h181**^{km}±104^{km}**, mb3.4**/3**, mbtmp3.9**/4**, Error ellipse: s-maj=107.4km s-min=43.3km az=171.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.27**	**183**	P	Pn	09 54 06.3	-0.1
	3.4nm,0.7s,baz=180,slow=20,SNR=1.2						
DZM				S	Sn	09 55 28.3	-11
	8.7nm,1.1s,baz=78,slow=20,SNR=2.3						
STKA	**Stephens Creek**	**29.41**	**228**	P	P	09 57 56.3	+0.3
	1.1nm,0.5s,baz=39,slow=13,SNR=3.0						
	1.1nm,0.5s						
WRA	**Warramunga Arr**	**31.80**	**254**	P	P	09 58 17.3	+0.1
	0.6nm,0.5s,baz=87,slow=9.5,SNR=7.4						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**32.76**	**248**	P	P	09 58 25.4	-0.3
	0.9nm,0.4s,baz=76,slow=9.4,SNR=21						
	0.9nm,0.4s						
ARCES	**ARCESS Array B**	**119.26**	**345**	PKP	PKPdf	10 10 36.2	-0.3
	1.4nm,0.9s,baz=54,slow=2.2,SNR=5.1						

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*MEX **21** 09:52:39.9±1.0, 13°67N×92°38W, h56^{km}±41^{km}, MD4.1*

*GCG **21** 09:52:42.1±0.7, 13°89N×92°18W, h23^{km}±11^{km}, MD4.1, ML3.4, MW3.3*

ISC 21 09:52:37.7±2.0**, 13°68N**±0°08×**92°40W**±0°05**, h27**^{km}±17^{km}**, n23,** σ**1^{s}42**/36**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**1.08**	**39**	*e*P	**Pb**	**09 52 58.3**	**+0.6**
RTAL				*e*S	**Sn**	**09 53 07.9**	**-3.3**
SMCA	**Catarina**	**1.21**	**15**	*i* P	**Pn**	**09 52 59.1**	**+0.2**

THIG		1.23	6	eP	Pn	09 52 59.4	+0.3
THIG				eS	Sn	09 53 14.8	0.0
STG2	El Palmar, Qui	1.24	53	eP	Pn	09 52 59.7	+0.2
STG5	El Palmar, Qui	1.25	55	i P	Pn	09 53 00.4	+0.9
STG8	El Palmar, Qui	1.27	53	i P	Pb	09 53 01.5	+0.3
STG8				IAML		09 53 23.2	
	comp=N,544nm,0.2s						
CHUJ	Union Juarez	1.43	11	eP	Pn	09 53 02.2	+0.1
CHUJ				eS	Sn	09 53 19.2	-1.0
PATR	El Naranjo	1.44	6	eP	Pn	09 53 02.3	+0.1
PATR				eS	Sn	09 53 20.5	+0.1
PAVE	Pavencul	1.52	8	eP	Pn	09 53 03.6	+0.2
PAVE				eS	Sn	09 53 21.7	-0.6
ESSG	Sabana Grande	1.67	65	eP	Pn	09 53 06.6	+1.3
HUEH	Huehuetenango	1.84	28	eP	Pn	09 53 09.3	+1.6
HUEH				eS	Sn	09 53 30.1	-0.3
HUEH	Huehuetenango	1.84	28	eP	Pn	09 53 09.4	+1.6
FG16	Alotenango, Sa	1.92	72	eP	Pn	09 53 06.9	-1.9
FG16				IAML		09 53 41.3	
	comp=N,2μm,0.3s						
PCIG		2.17	339	eP	Pn	09 53 12.7	+0.7
PCIG				eS	Sn	09 53 36.5	-1.5
APG	El Apazote	2.29	55	i P	Pb	09 53 17.0	-1.4
NUBE	Las Nubes	2.55	85	eP	Pn	09 53 19.4	+2.0
NUBE				eS	Sn	09 53 48.3	+0.6
CCIG	Comitan	2.60	5	eP	Pb	09 53 22.4	-1.3
CCIG				eS	Sn	09 53 49.6	+0.6
TGIG		3.16	347	eP	Pn	09 53 27.9	+2.1
TGIG				eS	Sn	09 54 04.8	+2.2
UXUV	UXUV	3.99	335	eP	Pn	09 53 39.9	+2.8
UXUV				eS	Sn	09 54 22.7	-0.4
HUIG	Huatulco	4.15	300	eP	Pn	09 53 38.3	-1.0
HUIG				eS	Sn	09 54 20.8	-6.2
CMIG	Matias Romero	4.16	325	eP	Pn	09 53 41.3	+1.9
CMIG				eS	Sn	09 54 26.4	-0.7
PEIG	Puerto Escondi	5.14	297	eP	Pn	09 53 54.5	+1.5
PEIG				eS	Sn	09 54 42.5	-8.9
NEUV	Arroyo Zacate	5.18	321	eP	Pn	09 53 54.0	+0.5
NEUV				eS	Sn	09 54 50.2	-2.2

IDC ***21*** *10:03:27.8±4.3, 32°.00N×40°.95W, h0km, mb3.4/6, mbtmp3.4/6, MS3.4/8, Error ellipse: s-maj=121.2km s-min=35.1km az=170.0*

ISC 21 10:03:29.4±3.7**, 32°.0N**±0°.7×**41°.0W**±0°.3**, h10km, n15, σ0ˢ.46**/6**, mb3.5**/6**, MS3.4**/8**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDP	Montagnes des	28.94	205	LR	LR	10 18 46.6	
	comp=Z,58nm,21.1s,baz=149,slow=32						
SCHQ	Schefferville	29.24	329	LR	LR	10 19 58.7	
	comp=Z,98nm,18.4s,baz=104,slow=34						
TKL	Tuckaleechee C	35.55	288	LR	LR	10 23 39.8	
	comp=Z,54nm,18.8s,baz=43,slow=34						
FRB	Frobisher Bay	36.15	340	LR	LR	10 23 19.2	
	comp=Z,47nm,18.8s,baz=74,slow=33						
DBIC	Dimbokro	42.04	119	LR	LR	10 27 45.2	
	comp=Z,68nm,18.7s,baz=346,slow=35						
H10N2	ASCENSION HYDR	47.00	143	T	T	11 01 39.9	
	baz=328,slow=75,SNR=54						
H10N3	ASCENSION HYDR	47.01	143	T	T	11 01 40.3	
	baz=328,slow=75,SNR=46						
H10N1	ASCENSION HYDR	47.02	143	T	T	11 01 41.5	
	baz=328,slow=75,SNR=57						
TXAR	Lajitas Array	53.33	285	P	P	10 12 49.2	+0.1
	0.1nm,0.6s,baz=59,slow=6.3,SNR=1.8						
	0.1nm,0.6s						
AKASG	Malin Array Be	53.80	48	P	P	10 12 52.0	-0.1
	1.0nm,0.6s,baz=283,slow=6.1,SNR=4.1						
	1.0nm,0.6s						
ANMO	Albuquerque	53.83	292	LR	LR	10 35 53.1	
	comp=Z,29nm,19.1s,baz=41,slow=36						
PDAR	Pinedale Array	54.18	302	P	P	10 12 55.3	0.0
	0.7nm,0.8s,baz=83,slow=5.9,SNR=6.3						
PDAR				LR	LR	10 36 05.8	
	comp=Z,41nm,18.8s,baz=48,slow=36						
	0.7nm,0.8s						
YKA	Yellowknife Ar	54.66	327	P	P	10 12 57.7	-0.5
	0.2nm,0.8s,baz=78,slow=7.7,SNR=2.4						
	0.2nm,0.8s						
NVAR	Mina Array Bea	61.79	300	P	P	10 13 48.5	-0.2
	0.1nm,0.3s,baz=68,slow=8.7,SNR=2.2						
NVAR				LR	LR	10 40 28.4	
	comp=Z,45nm,18.1s,baz=72,slow=36						
	0.1nm,0.3s						
ILAR	Eielson Array	67.86	334	P	P	10 14 28.1	+0.6
	0.4nm,0.9s,baz=82,slow=6.4,SNR=3.9						
	0.4nm,0.9s						

NDI ***21*** *10:10:13.1±2.5, 33°.61N×70°.71E, h179km±212km, ML3.6, MW3.8*

IDC ***21*** *10:10:15.5±9.7, 33°.98N×70°.81E, h59km±73km, mb3.6/6, mbtmp4.0/10, ML3.7/4, MS3.0/1, Error ellipse: s-maj=71.5km s-min=32.2km az=178.0*

ISC 21 10:10:12.8±1.2**, 33°.75N**±0°.09×**70°.78E**±0°.09**, h50km, n19, σ1ˢ.61**/27**, mb4.0**/6**, 3C-1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSSA	Tissa	4.59	100	eP	Pn	10 11 23.0	+3.1
TSSA				eS	Sn	10 12 12.2	+0.1
TSSA				IAML		10 12 16.2	
	comp=E,165nm,0.7s						
TSSA				IAML		10 12 22.6	
	comp=N,101nm,0.6s						
DHRM	DHARAMSHALA	4.88	106	eP	Pn	10 11 26.5	+2.7
DHRM				eS	Sn	10 12 18.9	-0.2
DHRM				IAML		10 12 22.0	
	comp=E,404nm,0.7s						
DHRM				IAML		10 12 22.3	
	comp=N,282nm,0.7s						
BHK	Bhakra	5.28	115	eP	Pn	10 11 28.3	-1.2
BHK				eS	Sn	10 12 29.1	-0.2
BHK				IAML		10 12 31.0	
	comp=E,100nm,0.5s						
BHK				IAML		10 12 33.1	
	comp=N,93nm,0.2s						
ALCI	Alchi Leh	5.34	83	eP	Pn	10 11 33.6	+3.2
ALCI				eS	Sn	10 12 29.8	-1.1
ALCI				IAML		10 12 59.8	
	comp=N,27nm,0.8s						
ALCI				IAML		10 13 02.2	
	comp=E,27nm,0.8s						
SDNR	Sundarnagar	5.69	112	eP	Pn	10 11 34.0	-0.8
SDNR				eS	Sn	10 12 34.6	-4.2
SDNR				IAML		10 12 37.9	
	comp=E,41nm,0.4s						
SDNR				IAML		10 12 39.4	
	comp=N,38nm,0.3s						
SMLA	Simla	6.00	114	eP	Pn	10 11 38.6	-0.4
SMLA				eS	Sn	10 12 45.1	-1.4
SMLA				IAML		10 12 47.1	
	comp=N,93nm,0.4s						
SMLA				IAML		10 12 47.5	
	comp=E,70nm,0.2s						
KK31	Karatay Array	9.34	359	⇑P	Pn	10 12 23.4	-1.4
	comp=E,2.0nm,0.3s,baz=184,slow=14,SNR=26						
KK31				⇓S	Sn	10 14 08.4	0.0
	comp=E,1.5nm,0.5s,baz=187,slow=25,SNR=4.1						
AAK	Ala-Archa	9.34	17	P	Pn	10 12 24.1	-0.8
	comp=E,1.9nm,0.3s,baz=211,slow=7.6,SNR=20						
AAK				S	Sn	10 14 07.8	-0.8
	comp=E,5.1nm,1.0s,baz=345,slow=16,SNR=2.4						
AAK				LR	LR	10 16 12.8	
	comp=E,77nm,18.1s,baz=179,slow=39						
	comp=E,7.1nm,0.4s						
AAK	Ala-Archa	9.34	17	⇑P	Pn	10 12 23.9	-1.0
	comp=E,2.5nm,0.5s						
AAK				⇑S	Sn	10 14 08.4	-0.2
	comp=E,4.0nm,0.9s						
MKAR	Makanchi Array	15.69	30	P	Pn	10 13 51.3	+0.8
	comp=E,0.6nm,0.3s,baz=214,slow=11,SNR=28						
	comp=E,2.0nm,0.6s						
KURBB	Kurchatov Arra	17.79	16	P	P	10 14 17.0	0.0
	comp=E,0.2nm,0.3s,baz=201,slow=15,SNR=1.2						
	comp=E,1.3nm,0.3s						
BVAR	Borovoye Array	19.27	359	P	P	10 14 32.9	-0.2
	comp=E,0.1nm,0.3s,baz=165,slow=9.6,SNR=6.8						
	comp=E,2.8nm,0.6s						
ZALV	Zalesovo Beam	22.51	22	P	P	10 15 06.0	-2.1
	comp=E,5.1nm,0.8s,baz=216,slow=10.0,SNR=15						
	comp=E,5.1nm,0.8s						
SONM	Songino Array	30.12	51	P	P	10 16 18.9	+1.1
	comp=E,0.4nm,0.7s,baz=244,slow=6.8,SNR=2.6						
	comp=E,0.4nm,0.7s						
AKASG	Malin Array Be	34.59	312	P	P	10 16 57.8	+1.1
	comp=E,0.5nm,0.4s,baz=91,slow=6.9,SNR=7.8						
	comp=E,0.5nm,0.4s						
FINES	FINESS Array B	39.69	328	P	P	10 17 39.5	-0.3
	comp=E,3.2nm,0.9s,baz=138,slow=8.9,SNR=4.1						
	comp=E,3.2nm,0.9s						
HFS	Hagfors	45.14	324	P	P	10 18 25.1	+1.0
	comp=E,1.8nm,0.7s,baz=95,slow=12,SNR=4.6						
	comp=E,1.8nm,0.7s						
NB2	NORSAR Subarra	46.49	325	P	P	10 18 34.3	-0.5
	comp=Z,1.7nm,0.8s,baz=98,slow=7.9						
NOA	NORSAR Array B	46.49	325	P	P	10 18 34.1	-0.6
	comp=Z,0.7nm,0.6s,baz=95,slow=3.9,SNR=3.7						
	comp=Z,0.7nm,0.6s						

CATAC ***21*** *10:25:44.8±0.6, 13°N±3°×9°0W±°, h15km±2km, M3.1/17, MLv3.1/17, Error ellipse: s-maj=6.2km s-min=4.6km az=26.9, confirmed*

GCG ***21*** *10:25:46.7±1.0, 13°.28N×89°.89W, h50km±999km, MD3.7, ML2.1*

SNET ***21*** *10:25:46.0±1.1, 13°.24N×89°.90W, h32km±9km, ML2.9*

ISC 21 10:25:45.0±2.4**, 13°.16N**±0°.09×**89°.95W**±0°.08**, h31km**±12km**, n57, σ0ˢ.74**/63**, 2C, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	Alcaldia de Sa	0.68	355	P	Pb	10 25 57.8	-0.6
FAME	Alcaldia de Sa	0.68	355	S	Sn	10 26 07.7	-0.3
JAYA	Jayaque - finc	0.69	45	⇑eP	Pn	10 25 59.0	+0.2
JAYA				eS	Sn	10 26 08.9	+0.4
JAYA	Jayaque - finc	0.69	45	i P	Pn	10 25 59.0	+0.2
JAYA				i S	Sn	10 26 08.8	+0.2
JAYA	Jayaque - finc	0.69	45	P	Pn	10 25 58.8	+0.1
JAYA	Jayaque - finc	0.69	45	S	Sn	10 26 08.0	-0.6
LALI	Alcalda de L	0.69	62	eP	Pn	10 25 58.6	0.0
LALI				eS	Sn	10 26 07.8	-0.6
LALI	Alcalda de L	0.69	62	i P	Pn	10 25 58.9	+0.2
LALI				eS	Sn	10 26 07.7	-0.6
LALI				IAML		10 26 10.9	
	comp=E,83nm,0.2s						
LALI	Alcalda de L	0.69	62	P	Pn	10 25 58.6	0.0
LALI	Alcalda de L	0.69	62	S	Sn	10 26 08.2	-0.2
CEVE	Cerro Verde	0.73	26	eP	Pn	10 25 59.8	+0.4
CEVE	Cerro Verde	0.73	26	P	Pn	10 25 59.2	-0.3
CEVE	Cerro Verde	0.73	26	S	Sn	10 26 09.4	-0.3
SBLS	San Blas	0.74	25	eP	Pn	10 25 59.7	+0.1
NUBE	Las Nubes	0.75	13	⇑eP	Pb	10 25 59.8	0.0
NUBE	Las Nubes	0.75	13	i P	Pb	10 25 59.8	0.0
NUBE				eS	Sn	10 26 10.0	-0.1
NUBE	Las Nubes	0.75	13	P	Pb	10 25 59.5	-0.3
RTR	El Retiro	0.79	22	eP	Pb	10 26 00.5	+0.1
PMON	Piamonte	0.83	49	eP	Pb	10 26 01.1	+0.2
PMON				eS	Sn	10 26 12.9	+1.1
PMON	Piamonte	0.83	49	P	Pb	10 26 01.2	+0.2
CEDA	San Andres	0.83	40	P	Pb	10 26 00.5	-0.5
CEDA	San Andres	0.83	40	S	Sn	10 26 13.0	+1.0
LOAL	Lomas de Alarc	0.85	11	eP	Pb	10 26 01.6	+0.3
LOAL	Lomas de Alarc	0.85	11	S	Sb	10 26 12.8	+0.4
LOAL	Lomas de Alarc	0.85	11	P	Pb	10 26 00.8	-0.4
BOQS	Boqueron	0.87	49	eP	Pb	10 26 01.8	+0.1
PANCS	Alcalda de	0.87	59	P	Pn	10 26 00.6	-0.6
PANCS	Alcalda de	0.87	59	S	Sb	10 26 12.9	-0.3
UEES	Universidad Ev	0.89	52	S	Sb	10 26 14.0	+0.5
UEES	Universidad Ev	0.89	52	P	Pb	10 26 01.7	-0.2
LOMA	Loma Larga	0.90	58	P	Pn	10 26 01.5	-0.1
LOMA	Loma Larga	0.90	58	S	Sb	10 26 14.0	+0.1
UTEC	Universidad Te	0.91	54	S	Sb	10 26 14.6	+0.6
UDBS	Universidad Do	0.95	55	S	Sb	10 26 16.1	+0.8
UDBS	Universidad Do	0.95	55	P	Pb	10 26 03.2	+0.2
LFRS	El Faro	0.98	62	eP	Pb	10 26 04.0	+0.5
PAVA	Las Pavas	1.13	61	P	Pb	10 26 05.4	-0.6
PAVA	Las Pavas	1.13	61	S	Sb	10 26 21.0	+0.6
TECO	Alcaldia de Te	1.20	72	S	Sb	10 26 22.5	+0.2
UESV	Universidad de	1.23	67	S	Sb	10 26 23.1	0.0
UESV	Universidad de	1.23	67	P	Pb	10 26 06.7	-0.9
SCLA	Alcaldia de Sa	1.31	66	eP	Pb	10 26 08.1	-0.8
SCLA	Alcaldia de Sa	1.31	66	P	Pb	10 26 08.2	-0.8
MTO3	Montecristo	1.36	25	P	Pn	10 26 08.5	+0.5
MTO3	Montecristo	1.36	25	S	Sb	10 26 26.7	-0.4
LLGN	La Laguna	1.40	45	P	Pb	10 26 09.2	-1.4
LLGN	La Laguna	1.40	45	S	Sb	10 26 28.2	+0.2
TECA	Tecapa	1.45	77	eP	Pn	10 26 09.7	+0.5
ESQI	Esquipulas	1.51	23	P	Pb	10 26 11.0	-1.5
ESQI	Esquipulas	1.51	23	S	Sb	10 26 30.4	-0.9
PACA	Pacayal	1.61	79	P	Pb	10 26 13.0	-1.3
PACA	Pacayal	1.61	79	S	Sb	10 26 33.5	-0.8
SARH	Santa Rosa de	1.98	36	P	Pn	10 26 17.4	+1.1
LCND	La Caada	2.01	86	P	Pn	10 26 18.0	+1.1
LCND	La Caada	2.01	86	S	Sn	10 26 42.8	+1.9
CNCH	Conchagua	2.07	87	S	Sb	10 26 44.9	-2.4
CNCH	Conchagua	2.07	87	P	Pn	10 26 19.4	+1.7

NEIC ***21*** *10:29:48.6±1.8, 9°.1N±0°.1×127°.1E±0°.1, h10km±1km, mb4.6/9, Error ellipse: s-maj=22.2km s-min=12.7km az=128.0*

IDC ***21*** *10:29:57.9±4.2, 8°.81N×126°.54E, h88km±39km, mb3.5/6, mbtmp3.8/6, MS3.1/4, Error ellipse: s-maj=63.8km s-min=18.9km az=69.0*

ISC 21 10:29:52.8±0.7**, 8°.95N**±0°.08×**126°.9E**±0°.2**, h38km, n27, σ1ˢ.21**/20**, mb4.0**/10**, MS3.0**/3**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	2.26	214	P	Pn	10 30 29.7	+2.1
	745nm,0.8s,baz=50,slow=2.8,SNR=16						
DAV				S	Sn	10 31 03.0	+8.7
	494nm,0.5s,baz=240,slow=23,SNR=6.0						
DAV				LR	LR	10 31 39.1	
	comp=Z,3μm,18.2s,baz=28,slow=51						
DAV	Davao City (W)	2.26	214		Pn	10 30 29.2	+1.6
LUWI	Luwuk	10.73	203	Pn	Pn	10 32 25.3	+1.4
TPUB	Ta-pu	15.47	338	P	P	10 33 31.0	-1.3
TPUB				IAmb	IAmb	10 33 37.5	
	comp=Z,45nm,1.3s						
JOW	Kunigami	17.84	4	LR	LR	10 40 17.8	
	comp=Z,57nm,20.1s,baz=28,slow=34						
KNRA	Kununurra	24.54	176	P	P	10 35 08.5	-0.5
FITZ	Fitzroy Crossi	26.90	183	P	P	10 35 29.4	-0.9
PMG	Port Moresby	27.21	132	LR	LR	10 48 22.8	
	comp=Z,41nm,18.3s,baz=151,slow=40						
KSRS	Korea Array	28.40	2	LR	LR	10 49 09.6	
	comp=Z,36nm,18.2s,baz=175,slow=40						
CMAR	Chiang Mai Arr	28.69	292	LR	LR	10 47 30.5	
	comp=Z,24nm,18.1s,baz=130,slow=37						
PSA00	Pilbara Seismi	31.10	193	P	P	10 36 06.3	-1.4
ASAR	Alice Springs	33.14	168	P	P	10 36 24.9	-0.7
	comp=Z,0.5nm,0.5s,baz=353,slow=8.7,SNR=8.3						
	comp=Z,0.5nm,0.5s						
USRK	Ussuriysk Ar.	35.40	6	P	P	10 36 46.7	+1.7
	comp=Z,1.2nm,0.7s,baz=188,slow=8.7,SNR=3.1						
	comp=Z,1.2nm,0.7s						
H11S3	WAKE ISLAND Hy	39.75	72	T	T	11 20 22.8	
	baz=262,slow=74,SNR=17						
H11S1	WAKE ISLAND Hy	39.76	72	T	T	11 20 25.5	
	baz=262,slow=74,SNR=14						
H11S2	WAKE ISLAND Hy	39.77	72	T	T	11 20 26.2	
	baz=262,slow=74,SNR=8.4						
BBOO	Buckleboo	42.44	169	P	P	10 37 43.3	-0.7
BBOO				IAmb	IAmb	10 37 57.1	
	comp=Z,18nm,1.2s						
STKA	Stephens Creek	42.97	161	P	P	10 37 48.5	+0.2
	comp=Z,1.2nm,0.4s,baz=348,slow=6.6,SNR=4.7						
	comp=Z,1.2nm,0.4s						
STKA	Stephens Creek	42.97	161	P	P	10 37 48.1	-0.2
MKAR	Makanchi Array	53.43	323	P	P	10 39 08.2	-0.8
	comp=Z,0.8nm,0.7s,baz=123,slow=7.0,SNR=5.6						
	comp=Z,0.8nm,0.7s						
MKAR	Makanchi Array	53.43	323	P	P	10 39 07.8	-1.2
KURK	Kurchatov	57.48	326	P	P	10 39 37.9	-0.1
KURK				IAmb	IAmb	10 39 46.6	
	comp=Z,4.1nm,0.9s						
KURBB	Kurchatov Arra	57.49	326	P	P	10 39 37.0	-1.0
	comp=Z,0.5nm,0.3s,baz=126,slow=6.7,SNR=4.4						
	comp=Z,0.5nm,0.3s						
BVAR	Borovoye Array	63.08	326	P	P	10 40 15.8	-0.5
	comp=Z,0.5nm,0.7s,baz=95,slow=8.8,SNR=1.7						
	comp=Z,0.5nm,0.7s						
ABKAR	Akbulak array	68.26	320	P	P	10 40 49.1	-0.6
D19K	Kuna River	76.24	22	P	P	10 41 39.0	+1.8
D19K				IAmb	IAmb	10 41 46.9	
	comp=Z,8.3nm,1.4s						
TOLK	Toolik Lake Re	79.38	22	P	P	10 41 55.0	+0.4
TOLK				IAmb	IAmb	10 42 15.8	
	comp=Z,10nm,1.5s						

TRN 21 10:30:01.4, 17°.48N×61°.88W, h31km, MD3.7, 1D, South-west of Barbuda., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANWB	Willy Bob	0.21	25	⇓iP	Pn	10 30 09.5	+1.0
ANWB				eS	Sn	10 30 13.9	+1.0
SKI	Saint Kitts	0.83	260	eP	Pb	10 30 18.1	+0.7
SKI				eS	Sn	10 30 28.3	-0.1
DHSZ	Broadband at M	1.20	175	eP	Pb	10 30 23.1	-0.5
DHSZ				eS	Sb	10 30 39.5	+0.8
ATGZ	Broadband at L	1.38	174	eP	Pb	10 30 26.6	0.0
ATGZ				eS	Sb	10 30 43.3	-0.5
DSDZ	La Diserade, G	1.39	146	eP	Pb	10 30 26.5	-0.3
DSDZ				eS	Sb	10 30 45.0	+0.8
MMLZ	Guadeloupe Bro	1.44	172	eP	Pb	10 30 27.9	+0.4
MMLZ				eS	Sb	10 30 44.6	-0.9
TBG	Guadaloupe-3	1.63	172	eP	Pb	10 30 30.1	-0.7
TBG				eS	Sb	10 30 51.1	+0.1
DWS	Wesley	1.97	164	eP	Pb	10 30 35.3	-1.3
DWS				eS	Sn	10 30 57.2	+0.8
DSLB	Salisbury	2.07	168	eP	Pn	10 30 35.4	+1.3
DSLB				eS	Sb	10 31 01.4	-2.3
BIM	Bigot	3.04	165	x	x	10 30 43.9	
SLBI	Saint Lucia, B	3.54	166	eS	Sn	10 31 36.6	+1.5

IDC ***21*** *10:43:59.3±0.8, 6°.50N×125°.22E, h0km, mb4.1/10, mbtmp4.1/10, MS3.4/20, Error ellipse: s-maj=18.9km s-min=9.2km az=119.0*

DJA ***21*** *10:44:00.4±0.9, 7°N±8°×12°5E±°, h53km±17km, M4.8/10, mb4.8/10, mB5.1/4, MLv4.8/7, Mw(mB)4.4/4*

NEIC ***21*** *10:44:01.3±1.5, 6°.63N±0°.08×125°.3E±0°.1, h10km±1km, mb4.6/20, Error ellipse: s-maj=21.9km s-min=8.0km az=122.0*

ISC 21 10:44:01.1±0.5**, 6°.59N**±0°.04×**125°.27E**±0°.08**, h10km, n71, σ1ˢ.60**/56**, mb4.4**/24**, MS3.3**/19**, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.57	32	Pg	Pb	10 44 12.7	-0.5
	736nm,0.3s,baz=217,slow=2.0,SNR=47						
DAV				Lg	Lg	10 44 20.4	
	956nm,0.3s,baz=252,slow=19,SNR=8.8						
DAV				LR	LR	10 44 40.7	
	comp=Z,4μm,20.0s,baz=182,slow=62						
DAV	Davao City (W)	0.57	32		Pg	10 44 12.2	-0.1
DAV	Davao City (W)	0.57	32	P	Pb	10 44 12.8	-0.5
DAV	Davao City (W)	0.57	32	P	Pg	10 44 10.0	-2.2
SGSI	Sangihe	2.89	175	P	Pb	10 44 51.3	-1.6
SGSI				S	Sn	10 45 23.9	+1.7
GTOI	Gorontalo	6.33	201	P	Pn	10 45 34.4	-0.1
MRSI	Marisa	6.92	209	P	Pn	10 45 44.0	+1.3
	0.5nm1μm88nm,0.5s						
MRSI				S	Sn	10 47 00.7	-0.8
	0.5nm1μm88nm,0.5s						
TOLI2	Tolitoli	7.04	220	Pn	Pn	10 45 44.6	+0.1
LUWI	Luwuk	7.98	198	Pn	Pn	10 45 59.6	+2.3
LUWI	Luwuk	7.98	198	P	Pn	10 46 00.8	+3.6
	128nm,0.9s						
MPSI	Mapaga	8.20	221	P	Pn	10 46 01.0	+0.7
SANI	Sanana	8.61	175	P	Pn	10 46 08.0	+2.1
	32nm,0.9s						
NLAI	Namlea	9.93	169	P	Pn	10 46 27.1	+3.1
	36nm,0.7s						
KRAI	Karang Ratu	10.32	162	P	Pn	10 46 32.7	+3.3
SBUM	Sibu	13.64	253	Pn	Pn	10 47 17.2	+2.4
SOEI	Soe	16.26	184		P	10 47 53.4	+0.3
SOEI				IAmb	IAmb	10 48 07.3	
	comp=Z,41nm,1.1s						
BATI	Baumata	16.76	186	LR	LR	10 56 11.1	
	comp=Z,79nm,18.7s,baz=18,slow=44						
MTN	Manton Dam	20.16	163	P	P	10 48 35.7	-0.1
JOW	Kunigami	20.34	8	LR	LR	10 55 51.9	
	comp=Z,100nm,21.9s,baz=262,slow=35						
KNRA	Kununurra	22.39	171	P	P	10 48 58.7	-1.1
KNRA				IAmb	IAmb	10 49 03.3	
	comp=Z,22nm,0.8s						
FITZ	Fitzroy Crossi	24.53	179	P	P	10 49 20.5	-0.5
PSI	Prapat	26.52	263	LR	LR	11 02 46.1	
	comp=Z,35nm,18.1s,baz=58,slow=43						
JNU	Nakatsue	26.91	10	LR	LR	10 59 57.3	
	comp=Z,47nm,20.1s,baz=196,slow=36						
COEN	Coen	27.06	139	P	P	10 49 43.1	-0.9
COEN				IAmb	IAmb	10 50 03.5	
	comp=Z,8.8nm,0.9s						
WRAB	Tennant Creek	27.82	161	P	P	10 49 48.5	-2.4
WRA	Warramunga Arr	27.83	161	P	P	10 49 50.3	-0.7
	comp=Z,1.8nm,0.8s,baz=340,slow=8.7,SNR=3.1						
	comp=Z,1.8nm,0.8s						
WRA	Warramunga Arr	27.83	161	P	P	10 49 49.3	-1.6
CMAR	Chiang Mai Arr	28.23	297	P	P	10 49 53.9	-0.7
	comp=Z,0.9nm,0.3s,baz=117,slow=7.0,SNR=8.0						
CMAR				LR	LR	11 01 00.9	
	comp=Z,42nm,20.4s,baz=110,slow=36						
	comp=Z,0.9nm,0.3s						
CMAR	Chiang Mai Arr	28.23	297	P	P	10 49 52.7	-1.9
JHJ	Hachijo jima 2	29.65	25	LR	LR	11 01 21.5	
	comp=Z,46nm,20.9s,baz=44,slow=35						
KSRS	Korea Array	30.82	4	LR	LR	11 02 42.5	
	comp=Z,47nm,21.9s,baz=175,slow=36						
ASAR	Alice Springs	31.23	165	P	P	10 50 20.0	-1.1
	comp=Z,1.1nm,0.6s,baz=349,slow=7.8,SNR=14						
	comp=Z,1.1nm,0.6s						
ASAR	Alice Springs	31.23	165	P	P	10 50 21.4	+0.3
MJAR	Matsushiro Arr	32.08	20	LR	LR	11 03 26.5	
	comp=Z,49nm,18.9s,baz=212,slow=36						
LZH	Lanzhou	35.32	329	eP	P	10 50 59.3	+2.4
LZH				pP	sP	10 51 05.8	+4.5
LZH				pmax	pmax		
	comp=Z,21nm,1.5s						
XLT	XiLinHaoTe	38.03	349	eP	P	10 51 20.5	+0.8
XLT				pmax	pmax		
	comp=Z,13nm,0.8s						
MDJ	Mudanjiang	38.07	5	P	P	10 51 19.6	-0.3
BNX	BinXian	39.05	2	⇑P	P	10 51 25.6	-2.5
BNX				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GTA	Gaotai	39.92	329	eP	P	10 51 37.6	+1.9
GTA				sP	sP	10 51 45.1	+5.0
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NWAO	Narrogin (SRO)	40.03	191	LR	LR	11 10 21.1	
	comp=Z,28nm,18.6s,baz=12,slow=40						
ASAJ	Asahikawa	40.35	19	LR	LR	11 10 05.3	
	comp=Z,43nm,18.7s,baz=208,slow=39						
BBOO	Buckleboo	40.50	166	P	P	10 51 39.5	-0.8
BBOO				IAmb	IAmb	10 51 54.1	
	comp=Z,16nm,1.0s						
STKA	Stephens Creek	41.30	159	P	P	10 51 44.5	-2.5
	comp=Z,3.5nm,0.9s,baz=320,slow=16,SNR=4.6						
STKA				LR	LR	11 12 07.5	
	comp=Z,65nm,19.4s,baz=10,slow=41						
	comp=Z,3.5nm,0.9s						
STKA	Stephens Creek	41.30	159	P	P	10 51 44.1	-2.8
HEH	HeiHe	43.56	2	eP	P	10 52 05.8	+0.7
HEH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SONM	Songino Array	44.15	342	LR	LR	11 12 04.4	
	comp=Z,85nm,18.9s,baz=164,slow=38						
PALK	Pallekele	44.24	274	LR	LR	11 11 34.0	
	comp=Z,17nm,21.1s,baz=78,slow=37						
PETK	Petropavlovsk-	53.38	24	P	P	10 53 22.8	+1.9
	comp=Z,7.8nm,1.0s,baz=208,slow=3.1,SNR=4.8						
PETK				LR	LR	11 16 01.7	
	comp=Z,26nm,20.3s,baz=251,slow=36						
	comp=Z,7.8nm,1.0s						
MKAR	Makanchi Array	54.40	325	P	P	10 53 29.7	+1.2
	comp=Z,1.1nm,0.6s,baz=121,slow=8.8,SNR=10.0						
	comp=Z,1.1nm,0.6s						
YAK	Yakutsk	55.43	3	LR	LR	11 19 30.9	
	comp=Z,34nm,19.2s,baz=296,slow=38						
ZALV	Zalesovo Beam	57.40	333	P	P	10 53 49.1	-0.7
	comp=Z,1.0nm,0.6s,baz=127,slow=9.4,SNR=5.0						
	comp=Z,1.0nm,0.6s						
KURBB	Kurchatov Arra	58.57	327	P	P	10 53 58.1	+0.1
	comp=Z,1.4nm,0.2s,baz=125,slow=6.2,SNR=11						
	comp=Z,1.4nm,0.2s						

KURK	Kurchatov	58.57	327	P	P	10 53 57.0	-1.0
KURK				IAmb	IAmb	10 54 02.0	
	comp=Z,3.6nm,0.6s						
GAR	Garm	58.94	312	P	P	10 54 00.6	-0.4
SIMJ	Simiganj	59.81	311	P	P	10 54 08.9	+1.9
SIMJ				IAmb	IAmb	10 54 14.7	
	comp=Z,4.8nm,0.7s						
KK31	Karatay Array	60.17	316	P	P	10 54 09.3	0.0
KK31				IAmb	IAmb	10 54 10.0	
	comp=Z,7.9nm,1.4s						
KKAR	Karatay Array	60.17	316	P	P	10 54 08.7	-0.7
BVAR	Borovoye Array	64.15	327	P	P	10 54 34.0	-1.8
	comp=Z,1.6nm,0.9s,baz=142,slow=7.5,SNR=6.9						
	comp=Z,1.6nm,0.9s						
BORK	Borovoye	64.20	327	P	P	10 54 35.1	-1.0
BORK				IAmb	IAmb	10 54 39.7	
	comp=Z,2.4nm,0.8s						
TIXI	Tiksi	65.03	1	LR	LR	11 24 26.7	
	comp=Z,44nm,19.7s,baz=197,slow=37						
NRIK	Noril'sk	67.33	346	LR	LR	11 26 22.8	
	comp=Z,56nm,19.0s,baz=167,slow=38						
AKTO	Aktyubinsk	70.54	321	LR	LR	11 28 44.2	
	comp=Z,79nm,18.2s,baz=252,slow=38						
ARTI	Arti	71.85	327	LR	LR	11 28 07.8	
	comp=Z,35nm,18.2s,baz=10,slow=37						
D19K	Kuna River	79.01	21	P	P	10 56 04.6	-0.5
B22K	Teshekpuk Lake	80.91	20	P	P	10 56 15.9	+0.7
L22K	Petersville	81.41	28	P	P	10 56 18.3	+0.1
L22K				IAmb	IAmb	10 56 42.6	
	comp=Z,6.3nm,1.2s						
ILAR	Eielson Array	83.17	26	P	P	10 56 29.4	+2.1
	comp=Z,0.8nm,1.0s,baz=239,slow=5.7,SNR=5.4						
	comp=Z,0.8nm,1.0s						
BMAR	Burnt Mountain	84.02	23	P	P	10 56 33.0	+1.3
I27K	Kandik River	85.34	25	P	P	10 56 37.7	-0.7
I28M	Miner Creek	86.05	25	P	P	10 56 40.5	-1.5
I28M				IAmb	IAmb	10 56 48.9	
	comp=Z,4.4nm,1.2s						
EIL	Elat	87.06	299	LR	LR	11 41 26.0	
	comp=Z,27nm,18.7s,baz=338,slow=40						

MOS ***21*** *10:44:55.9±1.0, 48.°68N×155.°29E, h50^{km}, mb4.4/7, Error ellipse: s-maj=12.4km s-min=3.6km az=72.6*
KRSC ***21*** *10:44:55.7±1.9, 48.°60N×156.°63E, h30^{km}±28^{km}, Ml4.8*
SKHL ***21*** *10:44:56.7±0.3, 48.°60N×155.°40E, h59^{km}±5^{km}, mb5.2/6*
NEIC ***21*** *10:44:59.6±1.6, 48.°87N±0.°09×155.°0E±0.°2, h62^{km}±5^{km}, mb4.4/29, Error ellipse: s-maj=18.8km s-min=8.8km az=129.0*
IDC ***21*** *10:45:01.6±2.8, 48.°92N×154.°97E, h81^{km}±24^{km}, mb3.5/10, mbtmp4.0/14, MS3.0/6, Error ellipse: s-maj=25.8km s-min=15.3km az=150.0*
ISC 21 10:44:56.2±0.5**, 48.°60N**±0.°06×**155.°51E**±0.°06**, h36**^{km}**, n172, σ1.**^{s}**73**/186**, mb4.3**/27**, 4C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.12	10	*e*PN	Pn	10 45 29.3	+0.2
SKR				*e*S	Sn	10 45 53.1	-1.0
SKR				pmax	pmax		
	comp=Z,519nm,0.5s						
SKR				smax	smax		
	comp=N,2µm,0.5s						
SKR				smax	smax		
	comp=E,1µm,0.4s						
SKR				MLR	MLR		
	comp=Z,1µm,18.0s						
SKR	Severo-Kuril's	2.12	10	*e*P	Pn	10 45 29.2	+0.1
SKR				*e*S	Sn	10 45 54.3	+0.1
SKR	Severo-Kuril's	2.12	10	*e*P	Pn	10 45 29.3	+0.2
SKR				AMB	AMB	10 45 31.4	
	comp=Z,520nm,0.5s						
SKR				*e*S	Sn	10 45 53.1	-1.0
SKR				A	A	10 45 59.0	
	comp=Z,2µm,0.5s						
SKR				A	A	10 45 59.0	
	comp=Z,1µm,0.5s						
PAU	Pauzhetka	2.99	16	PN	Pn	10 45 42.0	+1.0
PAU				S	Sn	10 46 16.1	+0.6
PAU	Pauzhetka	2.99	16	*e*P	Pn	10 45 42.0	+1.0
PAU				*e*S	Sn	10 46 16.1	+0.6
PAU	Pauzhetka	2.99	16	*e*P	Pn	10 45 42.0	+1.0
PAU				AMB	AMB	10 45 49.4	
	comp=Z,500nm,0.5s						
PAU				*e*S	Sn	10 46 15.9	+0.4
PAU				A	A	10 46 19.4	
	comp=Z,780nm,0.3s						
PAU				A	A	10 46 19.4	
	comp=Z,1µm,0.3s						
KDTR	Khodutka, Kamc	3.61	26	PN	Pn	10 45 50.0	+0.5
KDTR				S	Sn	10 46 29.9	-0.9
KDTR	Khodutka, Kamc	3.61	26	*e*P	Pn	10 45 50.0	+0.5
KDTR				*e*S	Sn	10 46 30.0	-0.9
KDTR	Khodutka, Kamc	3.61	26	*e*P	Pn	10 45 50.0	+0.5
KDTR				*e*S	Sn	10 46 29.9	-0.9
MIPR	Malaya Ipel'ka	3.77	12	PN	Pn	10 45 52.8	+1.2
MIPR	Malaya Ipel'ka	3.77	12	*e*P	Pn	10 45 52.9	+1.2
ASAK	Asacha	4.08	21	PN	Pn	10 45 57.7	+1.7
ASAK	Asacha	4.08	21	*e*P	Pn	10 45 57.8	+1.7
MTVR	Mutnovka	4.25	23	PN	Pn	10 45 59.8	+1.5
MTVR				S	Sn	10 46 47.2	+0.6
MTVR	Mutnovka	4.25	23	*e*P	Pn	10 45 59.9	+1.5
MTVR				*e*S	Sn	10 46 47.3	+0.6
GRL	Gorelyy	4.28	21	PN	Pn	10 46 00.9	+2.1
GRL	Gorelyy	4.28	21	*e*P	Pn	10 46 01.0	+2.1
RUS	Russkaya	4.29	25	PN	Pn	10 45 59.2	+0.4
RUS	Russkaya	4.29	25	*e*P	Pn	10 45 59.3	+0.4
RUS				*e*S	Sn	10 46 46.4	-1.2
APC	Apacha	4.46	13	PN	Pn	10 46 03.9	+2.8
APC	Apacha	4.46	13	*e*P	Pn	10 46 04.0	+2.8
KRMR	Karymshinskiy	4.55	20	PN	Pn	10 46 04.1	+1.7
KRMR	Karymshinskiy	4.55	20	*e*P	Pn	10 46 04.2	+1.7
KRMR				*e*S	Sn	10 46 52.9	-1.0
KRMR	Karymshinskiy	4.55	20	*e*P	Pn	10 46 04.1	+1.7
PEA0B	Petropavlovsk-	4.72	16	Pn	Pn	10 46 06.7	+1.9
PEA0B	Petropavlovsk-	4.72	16	PN	Pn	10 46 06.7	+1.9
PETK	Petropavlovsk-	4.72	16	P	Pn	10 46 06.4	+1.6
	comp=Z,44nm,0.4s,baz=188,slow=12,SNR=243						
PETK				S	Sn	10 47 11.8	+14
	comp=Z,21nm,0.7s,baz=198,slow=7.3,SNR=1.6						
PET	Petropavlovsk	4.86	23	Pn	Pn	10 46 07.5	+0.9
PET	Petropavlovsk	4.86	23	*e*PN	Pn	10 46 07.8	+1.2
PET				*e*S	Sn	10 47 01.8	+0.3
PET				pmax	pmax		
	comp=Z,104nm,0.5s						
PET				smax	smax		
	comp=E,248nm,0.5s						
PET				smax	smax		
	comp=N,346nm,0.7s						
PET	Petropavlovsk	4.86	23	*e*P	Pn	10 46 07.2	+0.6
PET				*e*S	Sn	10 47 02.1	+0.6
PET	Petropavlovsk	4.86	23	*e*P	Pn	10 46 07.8	+1.2
PET				AMB	AMB	10 46 11.5	
	comp=N,100nm,0.5s						
PET				*e*S	Sn	10 47 01.8	+0.3
PET				A	A	10 47 18.3	
	comp=N,340nm,0.6s						
PET				A	A	10 47 18.3	
	comp=N,250nm,0.6s						
INSR	Institute	4.88	23	PN	Pn	10 46 08.5	+1.6
INSR				S	Sn	10 47 03.6	+1.5
INSR	Institute	4.88	23	*e*P	Pn	10 46 08.6	+1.6
INSR				*e*S	Sn	10 47 03.7	+1.5
DALK	Dalny	4.89	24	PN	Pn	10 46 08.2	+1.2
DALK	Dalny	4.89	24	*e*P	Pn	10 46 08.2	+1.2
DALK				*e*S	Sn	10 47 02.1	-0.2
UGLR	Uglovaya	5.07	23	PN	Pn	10 46 11.6	+2.0
UGLR	Uglovaya	5.07	23	*e*P	Pn	10 46 11.6	+2.0
KOK	Koryaka	5.10	22	PN	Pn	10 46 12.2	+2.2
KOK	Koryaka	5.10	22	*e*P	Pn	10 46 12.3	+2.2
KOK	Koryaka	5.10	22	*e*P	Pn	10 46 12.2	+2.2
AVH	Avacha	5.10	22	PN	Pn	10 46 12.2	+2.2
AVH	Avacha	5.10	22	*e*P	Pn	10 46 12.2	+2.2
SMAR	Somma	5.11	23	PN	Pn	10 46 12.3	+2.0
SMAR	Somma	5.11	23	*e*P	Pn	10 46 12.3	+2.0
KRER	Koryakskii	5.14	22	PN	Pn	10 46 12.5	+1.9
KRER	Koryakskii	5.14	22	*e*P	Pn	10 46 12.6	+1.9
SDLR	Sedlovina	5.15	23	PN	Pn	10 46 11.9	+1.2
SDLR	Sedlovina	5.15	23	*e*P	Pn	10 46 11.9	+1.2
KRX	Arik	5.16	21	PN	Pn	10 46 13.1	+2.2
KRX	Arik	5.16	21	*e*P	Pn	10 46 13.1	+2.2
NLC	Nalytchevo	5.18	26	PN	Pn	10 46 10.7	-0.3
NLC	Nalytchevo	5.18	26	*e*P	Pn	10 46 10.7	-0.3
NLC				*e*S	Sn	10 47 06.6	-2.9
GNL	Ganaly	5.33	16	PN	Pn	10 46 15.2	+2.0
GNL	Ganaly	5.33	16	*e*P	Pn	10 46 15.2	+2.0
SPN	Mys Shipunski	5.33	31	PN	Pn	10 46 14.1	+1.0
SPN	Mys Shipunski	5.33	31	*e*P	Pn	10 46 14.2	+1.0
SPN				*e*S	Sn	10 47 11.6	-1.6
KII	Karymskiy	5.98	23	PN	Pn	10 46 23.9	+1.9
KII	Karymskiy	5.98	23	*e*P	Pn	10 46 24.0	+1.9
KUR	Kuril'sk	6.22	240	*e*PN	Pn	10 46 27.6	+2.2
KUR				*e*S	Sn	10 47 36.6	+1.4
KUR				pmax	pmax		
	comp=Z,93nm,0.5s						
KUR				smax	smax		
	comp=N,113nm,0.6s						
KUR				smax	smax		
	comp=E,66nm,0.9s						
KUR	Kuril'sk	6.22	240	*e*P	Pn	10 46 26.4	+1.0
KUR				AMB	AMB	10 46 31.7	
	comp=E,90nm,0.5s						
KUR				*e*S	Sn	10 47 33.3	-1.9
KUR				A	A	10 47 41.4	
	comp=E,140nm,0.7s						
KUR				A	A	10 47 41.4	
	comp=E,110nm,0.7s						
KZV	Kizimen	7.16	23	PN	Pn	10 46 39.4	+1.0
KZV	Kizimen	7.16	23	*e*P	Pn	10 46 39.5	+1.0
ESO	Esso	7.59	14	PN	Pn	10 46 47.8	+3.6
ESO	Esso	7.59	14	*e*P	Pn	10 46 47.8	+3.6
ESO	Esso	7.59	14	*e*P	Pn	10 46 47.8	+3.6
KMNR	Kamenistaya	7.73	20	PN	Pn	10 46 47.9	+1.8
KMNR	Kamenistaya	7.73	20	*e*P	Pn	10 46 48.0	+1.8
YUK	Yuzh-Kuril'sk	8.09	239	*e*PN	Pn	10 46 51.6	+0.6
YUK				pmax	pmax		
	comp=Z,160nm,0.7s						
YUK				pmax	pmax		
	comp=N,26nm,0.4s						
YUK	Yuzh-Kuril'sk	8.09	239	*e*P	Pn	10 46 52.0	+1.0
YUK				AMB	AMB	10 46 53.2	
	comp=N,190nm,0.8s						
YUK				*e*S	Sn	10 48 18.7	-2.4
YUK				A	A	10 48 25.1	
	comp=N,90nm,0.5s						
YUK				A	A	10 48 25.1	
	comp=N,150nm,0.5s						
RUSJ	Misakicho	8.40	241	*e*PN	Pn	10 46 58.6	+3.4
RUSJ				*e*S	Sn	10 48 32.3	+3.6
GLVR	Golovnino	8.46	239	*e*PN	Pn	10 46 55.9	-0.2
GLVR				pmax	pmax		
	comp=Z,51nm,0.2s						
GLVR	Golovnino	8.46	239	*e*P	Pn	10 46 55.9	-0.2
GLVR				AMB	AMB	10 46 57.3	
	comp=Z,50nm,0.2s						
GLVR				*e*S	Sn	10 48 26.6	-3.7
NMR	Nemuro--Hokkai	8.58	236	⇓*i*PN	Pn	10 46 55.6	-2.2
NMR	Nemuro--Hokkai	8.58	236	*i* P	Pn	10 46 55.6	-2.2
YSS	Yuzhno-Sakhali	8.75	264	Pn	Pn	10 47 01.7	+1.7
YSS	Yuzhno-Sakhali	8.75	264	*e*PN	Pn	10 46 58.4	-1.6
KBTR	Krutoberegovo	8.83	28	PN	Pn	10 47 00.8	-0.2
KBTR	Krutoberegovo	8.83	28	*e*P	Pn	10 47 00.9	-0.2
BKI	Bering	9.24	40	*e*S	Sn	10 48 40.7	-8.6
JKA	Kamikawa-asahi	9.98	248	Pn	Pn	10 47 19.4	+2.5
JKA	Kamikawa-asahi	9.98	248	*e*P	Pn	10 47 20.0	+3.0
ASAJ	Asahikawa	9.99	248	P	Pn	10 47 20.0	+3.0
	comp=Z,24nm,0.7s,baz=64,slow=14,SNR=17						
ASAJ	Asahikawa	9.99	248	PN	Pn	10 47 20.0	+3.0
ERM	Erimo	10.90	237	Pn	Pn	10 47 28.9	-0.6
ERM	Erimo	10.90	237	PN	Pn	10 47 28.9	-0.6
MA2	Magadan	11.34	348	P	Pn	10 47 35.5	+0.1
	comp=Z,8.5nm,0.6s,baz=96,slow=24,SNR=4.8						
MA2				LR	LR	10 52 39.8	
	comp=Z,67nm,18.5s,baz=112,slow=42						
MA2	Magadan	11.34	348	Pn	Pn	10 47 33.8	-1.6
MA2	Magadan	11.34	348	⇑*i*PN	Pn	10 47 35.8	+0.4
MA2				pmax	pmax		
	comp=Z,6.0nm,0.4s						
SHEM	Shemya Is, Ala	12.49	64	P	Pn	10 47 52.7	+1.6
	comp=Z,46nm,0.9s,baz=326,slow=1.8,SNR=4.2						
SHEM				S	Sn	10 50 01.4	-7.4
	comp=Z,22nm,0.4s,baz=3.6,slow=22,SNR=8.2						
SHEM				LR	LR	10 53 04.5	
	comp=Z,30nm,19.9s,baz=124,slow=38						
SHEM	Shemya Is, Ala	12.49	64	Pn	Pn	10 47 53.6	+2.4
SMY	Shemya	12.49	64	Pn	Pn	10 47 53.5	+2.4
SMY	Shemya	12.49	64	PN	Pn	10 47 53.5	+2.4
SEY	Seymchan	14.47	354	P	Pn	10 48 18.9	+0.8
	comp=Z,2.2nm,0.7s,baz=143,slow=13,SNR=5.6						
SEY				LR	LR	10 54 15.2	
	comp=Z,66nm,20.1s,baz=132,slow=39						
SEY	Seymchan	14.47	354	⇑*e*P	Pn	10 48 18.2	+0.1
SEY				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SEY	Seymchan	14.47	354	*e*P	Pn	10 48 18.2	+0.1
MJAR	Matsushiro Arr	17.49	233		P	10 48 58.1	+0.1
MJAR	Matsushiro Arr	17.49	233	P	P	10 48 58.1	+0.1
MJAR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HEH	HeiHe	18.31	286	*e*P	Pn	10 49 07.1	0.0
HEH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
YAK	Yakutsk	19.74	323	LR	LR	10 57 21.8	
	comp=Z,37nm,21.7s,baz=112,slow=38						
YAK	Yakutsk	19.74	323	⇑*e*P	P	10 49 22.1	-0.3
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
YAK	Yakutsk	19.74	323	*e*P	P	10 49 22.1	-0.3
TIXI	Tiksi	26.19	341	LR	LR	11 00 26.9	
	comp=Z,41nm,20.1s,baz=200,slow=36						
K15K	Wolf Creek Mou	27.35	44	P	P	10 50 38.8	+1.4
C16K	Lisburne Hills	27.65	30	P	P	10 50 39.7	-0.3
C16K				IAmb	IAmb	10 50 40.6	
	comp=Z,6.8nm,1.1s						
M17K	Holitna River	29.16	46	P	P	10 50 55.2	+1.6
M17K				IAmb	IAmb	10 51 19.2	
	comp=Z,17nm,1.4s						
C18K	Utukok River	29.21	31	P	P	10 50 54.2	+0.2
G18K	Tagagawik	29.33	37	P	P	10 50 56.1	+1.1
C19K	Lookout Ridge	29.91	31	P	P	10 50 59.4	-0.8
D19K	Kuna River	30.22	32	P	P	10 51 02.4	-0.5
D19K				IAmb	IAmb	10 51 18.6	
	comp=Z,12nm,1.4s						
H11N2	WAKE ISLAND Hy	30.23	158	T	T	11 22 56.8	
	baz=345,slow=76,SNR=26						
H11N1	WAKE ISLAND Hy	30.25	158	T	T	11 22 56.5	
	baz=345,slow=76,SNR=38						
H11N3	WAKE ISLAND Hy	30.25	158	T	T	11 22 59.3	
	baz=345,slow=76,SNR=28						
D20K	Etivluk River	30.82	32	P	P	10 51 07.8	-0.3
M20K	Styx River	31.24	46	P	P	10 51 14.0	+2.0
M20K				IAmb	IAmb	10 51 22.8	
	comp=Z,14nm,1.5s						
H11S1	WAKE ISLAND Hy	31.36	159	T	T	11 24 24.1	
	baz=345,slow=76,SNR=1015						
H11S3	WAKE ISLAND Hy	31.37	159	T	T	11 24 26.3	
	baz=345,slow=76,SNR=804						
H11S2	WAKE ISLAND Hy	31.38	159	T	T	11 24 26.3	
	baz=345,slow=76,SNR=848						
B21K	Ikpikpuk River	31.75	31	P	P	10 51 16.0	-0.3
B22K	Teshekpuk Lake	32.34	29	P	P	10 51 21.7	+0.3
B22K				IAmb	IAmb	10 51 22.5	
	comp=Z,4.0nm,0.7s						
E22K	Anaktuvuk Pass	32.41	34	P	P	10 51 22.7	+0.5
E22K				IAmb	IAmb	10 51 54.7	
	comp=Z,7.6nm,1.5s						
C23K	Itkillik River	33.16	31	P	P	10 51 28.8	+0.2
C23K				IAmb	IAmb	10 51 29.9	
	comp=Z,4.4nm,0.8s						
E23K	Chandalar	33.22	34	P	P	10 51 30.4	+1.1
E23K				IAmb	IAmb	10 51 44.6	
	comp=Z,4.1nm,0.8s						
SML	Sawmill	33.52	46	P	P	10 51 33.1	+1.2
D24K	Happy Valley	33.66	32	P	P	10 51 33.2	+0.3
D24K				IAmb	IAmb	10 51 46.5	
	comp=Z,3.1nm,0.6s						
COLA	College	33.68	40	⇓*e*P	P	10 51 34.3	+1.1
COLA				pmax	pmax		
	comp=Z,16nm,2.7s						
ILAR	Eielson Array	34.09	40	P	P	10 51 37.6	+0.8
	comp=Z,0.6nm,0.8s,baz=269,slow=12,SNR=5.7						
	comp=Z,0.6nm,0.8s						
ILAR	Eielson Array	34.09	40	P	P	10 51 36.7	-0.1
ILAR	Eielson Array	34.09	40	*e*P	P	10 51 40.9	+4.1
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
D25K	Kavik River	34.55	32	P	P	10 51 40.7	0.0
J25K	Salcha River,	34.74	40	P	P	10 51 42.9	+0.4
N25K	Chitina, Valde	35.30	46	P	P	10 51 48.7	+1.3
CTGM	Chitina Glacie	36.96	46	P	P	10 52 01.7	0.0
I28M	Miner Creek	37.00	39	P	P	10 52 04.0	+2.1
I28M				IAmb	IAmb	10 52 17.5	
	comp=Z,6.9nm,1.4s						
M29M	Somme Creek	38.05	44	P	P	10 52 12.3	+1.5
M29M				IAmb	IAmb	10 52 22.9	
	comp=Z,4.9nm,1.4s						
A36M	Sachs Harbour	41.47	27	P	P	10 52 39.3	+0.4
A36M				IAmb	IAmb	10 52 42.0	
	comp=Z,5.6nm,0.9s						
MK31	Makanchi Array	47.54	297	⇑*e*P	P	10 53 25.0	-2.7
MKAR	Makanchi Array	47.54	297	P	P	10 53 25.5	-2.2
	comp=Z,0.5nm,0.6s,baz=70,slow=8.4,SNR=4.5						
	comp=Z,0.5nm,0.6s						
MKAR	Makanchi Array	47.54	297	P	P	10 53 28.7	+0.9
MKAR	Makanchi Array	47.54	297	*i* P	P	10 53 28.8	+1.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	47.54	297	*e*P	P	10 53 28.8	+1.1
KURK	Kurchatov	47.70	303	P	P	10 53 26.0	-2.9
KURK	Kurchatov	47.70	303	*e*P	P	10 53 26.0	-2.9
KURBB	Kurchatov Arra	47.79	303	P	P	10 53 26.0	-3.6
	comp=Z,0.9nm,0.3s,baz=59,slow=8.5,SNR=2.8						
	comp=Z,0.9nm,0.3s						
YKAW3	Yellowknife Wh	48.44	38	P	P	10 53 34.5	+0.2
YKAW3				IAmb	IAmb	10 53 49.0	
	comp=Z,3.1nm,1.4s						
YKA	Yellowknife Ar	48.47	38	P	P	10 53 35.8	+1.2
	comp=Z,0.5nm,0.8s,baz=299,slow=8.3,SNR=6.1						
	comp=Z,0.5nm,0.8s						
YKA	Yellowknife Ar	48.47	38	P	P	10 53 34.6	0.0
BVAR	Borovoye Array	50.94	309	P	P	10 53 49.9	-3.7
	comp=Z,0.2nm,0.3s,baz=72,slow=6.2,SNR=2.5						
	comp=Z,0.2nm,0.3s						
CMAR	Chiang Mai Arr	54.37	257	P	P	10 54 19.2	-0.2
	comp=Z,0.8nm,0.3s,baz=29,slow=6.8,SNR=5.5						
	comp=Z,0.8nm,0.3s						
AAK	Ala-Archa	54.46	296	LR	LR	11 19 01.0	
	comp=Z,48nm,18.7s,baz=92,slow=38						
PMG	Port Moresby	58.22	190	P	P	10 54 47.3	+0.6
PMG	Port Moresby	58.22	190	P	P	10 54 47.3	+0.6
PMG				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ABKAR	Akbulak array	58.48	310	P	P	10 54 45.0	-3.2
FCC	Fort Churchill	58.82	35	P	P	10 54 50.1	-0.3
FCC				IAmb	IAmb	10 55 18.9	
	comp=Z,6.9nm,1.5s						
FCC	Fort Churchill	58.82	35	P	P	10 54 50.2	-0.3
FCC				pmax	pmax		
	comp=Z,7.0nm,1.5s						
PDAR	Pinedale Array	62.36	56	P	P	10 55 16.6	+1.5
	comp=Z,1.2nm,0.9s,baz=288,slow=1.4,SNR=7.9						
	comp=Z,1.2nm,0.9s						
PDAR	Pinedale Array	62.36	56	P	P	10 55 16.5	+1.3
FINES	FINESS Array B	63.05	335	P	P	10 55 16.1	-3.0
	comp=Z,2.9nm,1.0s,baz=1.4,slow=7.6,SNR=4.7						
	comp=Z,2.9nm,1.0s						
OBN	Obninsk	64.69	326	*e*P	P	10 55 29.7	-0.2
OBN				*e*		10 56 06.4	
OBN				*e*		10 57 53.4	
OBN				*e*PPP	PPP	10 59 25.1	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
OBN	Obninsk	64.69	326	*e*P	P	10 55 29.7	-0.2
PV10	Paradox Valley	65.62	59	P	P	10 55 39.3	+2.7
PV10				IAmb	IAmb	10 55 39.9	
	comp=Z,4.8nm,0.9s						
ASAR	Alice Springs	74.49	201	P	P	10 56 31.4	+0.7
	comp=Z,0.5nm,0.6s,baz=17,slow=4.8,SNR=6.6						
	comp=Z,0.5nm,0.6s						
ASAR	Alice Springs	74.49	201	P	P	10 56 31.1	+0.4
ASAR	Alice Springs	74.49	201	P	P	10 56 31.1	+0.4
TX31	Lajitas Ar. Si	75.19	63	P	P	10 56 36.2	+1.2
TXAR	Lajitas Array	75.19	63	P	P	10 56 36.6	+1.6
	comp=Z,1.0nm,0.6s,baz=299,slow=4.6,SNR=18						
	comp=Z,1.0nm,0.6s						
TXAR	Lajitas Array	75.19	63	P	P	10 56 36.4	+1.4
TXAR	Lajitas Array	75.19	63	P	P	10 56 36.4	+1.4
H03N2	Juan Fernandez	137.14	90	T	T	13 37 23.3	
	baz=310,slow=77,SNR=32						
H03N1	Juan Fernandez	137.15	90	T	T	13 37 24.6	
	baz=310,slow=77,SNR=32						
H03N3	Juan Fernandez	137.15	90	T	T	13 37 27.6	
	baz=310,slow=77,SNR=24						
PLCA	Paso Flores	146.74	94	PKPbc	PKPbc	11 04 34.0	+0.2
	comp=Z,1.1nm,0.8s,baz=260,slow=1.0,SNR=2.8						
PLCA	Paso Flores	146.74	94	PKP2	PKPbc	11 04 34.0	+0.2

INMG ***21*** *10:49:41.5±1.6, 37.°23N×3.°67W, h1^{km}±2^{km}, ML3.1, Error ellipse: s-maj=1.8km s-min=1.6km az=31.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NW Granada (ESP)*
IGIL ***21*** *10:49:41.8, 37.°26N×3.°69W, h2^{km}*
SFS ***21*** *10:49:41.7, 37.°22N×3.°68W, h0^{km}, ML3.7/15, ML3.4/20, MLv3.3/20*
MDD ***21*** *10:49:41.4±0.2, 37.°26N×3.°69W, h0^{km}, mb_Lg3.6/34, Error ellipse: s-maj=1.5km s-min=1.3km az=146.0*
CNRM ***21*** *10:49:44.5, 37.°27N×3.°81W, h76^{km}, ML3.0*
ISC 21 10:49:40.8±0.9**, 37.°23N**±0.°01×**3.°68W**±0.°01**, h4**^{km}±7^{km}**, n100, σ1.**^{s}**21**/187**, 2C-2D, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EXGRA	Granada	0.07	123	⇓Pg	Pg	10 49 43.0	+0.6
EXGRA				Sg	Sg	10 49 45.0	+1.5
EXCAB	Granada	0.09	128	Pg	Pg	10 49 40.1	-2.6
EXCAB				Sg	Sg	10 49 42.3	-1.7
EQTA	Presa de Quent	0.19	97	Pg	Pg	10 49 44.5	-0.1
EQTA				Sg	Sg	10 49 47.3	+0.2
EQUE	Quentar	0.19	98	⇑Pg	Pg	10 49 44.5	-0.1
EQUE				Sg	Sg	10 49 47.0	-0.1
EQUE				*i* IVmb_Lg		10 49 48.0	
EXAGR	Agron	0.24	212	⇑Pg	Pg	10 49 45.9	+0.5
EXAGR				Sg	Sg	10 49 49.4	+0.9
EGOR	Sierra Gorda,	0.36	251	Pg	Pg	10 49 47.8	-0.1
EGOR				Sg	Sg	10 49 54.1	+1.4
EGOR	Sierra Gorda,	0.36	251	Pg	Pg	10 49 47.8	-0.1
EGOR				Sg	Sb	10 49 54.4	-1.6
EGOR				*i* IVmb_Lg		10 49 58.8	
ELGU	Los Guajares,	0.37	173	Pg	Pg	10 49 48.1	+0.2
ELGU				Sg	Sg	10 49 52.9	+0.2
ELGU	Los Guajares,	0.37	173	Pg	Pg	10 49 48.1	+0.2
ELGU				Sg	Sb	10 49 53.5	-2.5
EQES	Quesada	0.75	40	Pg	Pg	10 49 55.3	+0.1
EQES				Sg	Sg	10 50 06.5	+1.6
E0802	Ubeda,Jaen	0.83	17	Pg	Pg	10 49 56.6	-0.1
E0802				Sg	Sg	10 50 07.9	+0.4
EXEJI	El Ejido	0.83	123	Pg	Pb	10 49 57.1	-0.7
EXEJI				Sg	Sg	10 50 06.9	-0.6
EMIJ	Mijas	1.10	233	Pn	Pg	10 50 00.8	-1.1
EMIJ				Sn	Sb	10 50 17.5	+0.5
EMIJ	Mijas	1.10	233	Pg	Pg	10 50 00.9	-1.0
EMIJ				Sg	Sg	10 50 15.4	-0.7
EMIJ				*i* IVmb_Lg		10 50 28.2	
EADA	Adamuz	1.17	323	Pn	Pg	10 50 02.7	-0.6
EADA				Sn	Sg	10 50 19.8	+1.2
EADA	Adamuz	1.17	323	Pg	Pg	10 50 02.7	-0.6
EADA				Sg	Sg	10 50 18.0	-0.6
EADA				*i* IVmb_Lg		10 50 25.4	
ENIJ	Nijar	1.21	102	Pg	Pg	10 50 03.5	-0.4
ENIJ				Sg	Sn	10 50 21.0	-0.2
ENIJ	Nijar	1.21	102	Pg	Pg	10 50 03.1	-0.8
ENIJ				Sg	Sb	10 50 19.8	-0.3
ENIJ				*i* IVmb_Lg		10 50 28.1	
UMV12	Villanueva de	1.21	262	Pg	Pn	10 50 06.5	+2.0
UMV12				Sg	Sb	10 50 20.1	-0.1
EALB	Alboran	1.39	158	Sg	Sb	10 50 24.7	-0.7
EALB	Alboran	1.39	158	Sg	Sn	10 50 25.1	-0.6
PSIM	Granatula de C	1.59	358	Pn	Pn	10 50 08.8	-0.9
PSIM				Pg	Pb	10 50 10.1	-0.6
PSIM				Sn	Sn	10 50 28.7	-2.0
ELOR	Lorca, Murcia	1.59	75	Pg	Pb	10 50 11.0	+0.2
ELOR				Sg	Sg	10 50 33.5	+1.5
ELOR				*i* IVmb_Lg		10 50 41.7	
ECAB	El Cabril	1.62	302	Pn	Pn	10 50 09.5	-0.6
ECAB				Sn	Sn	10 50 32.2	+0.8
ECAB	El Cabril	1.62	302	Pn	Pn	10 50 09.8	-0.3
ECAB				Sg	Sb	10 50 32.6	+0.6

ECAB				i IVmb_Lg		10 50 39.2	
EJIF	Jimena Fronter	1.63	242	Pg	Pg	10 50 11.7	-0.4
EJIF				Sg	Sg	10 50 34.2	+0.9
TLOR	Lorca, Murcia	1.64	74	Pn	Pb	10 50 11.8	+0.2
TLOR				Sn	Sb	10 50 33.2	+0.6
TLOR	Lorca, Murcia	1.64	74	Pg	Pb	10 50 11.7	+0.2
TLOR				Sg	Sb	10 50 32.7	+0.1
ESPR	Espera	1.78	259	Pn	Pb	10 50 13.6	-0.3
ESPR				Sn	Sb	10 50 37.1	+0.5
ESPR	Espera	1.78	259	Pg	Pb	10 50 13.6	-0.3
ESPR				Sg	Sg	10 50 39.2	+1.3
ESPR				i IVmb_Lg		10 50 48.3	
WMELI	Melilla	2.00	163	Pn	Pn	10 50 15.3	+0.1
PALE	Palemas	2.02	186	P	Pn	10 50 16.1	+0.4
PALE	Palemas	2.02	186	S	Sn	10 50 41.2	-0.1
EMUR	La Murta	2.03	72	Pn	Pn	10 50 15.5	-0.3
EMUR				Sg	Sb	10 50 43.6	-0.4
CART	Cartagena	2.16	80	Pn	Pn	10 50 18.1	+0.5
CART				Sn	Sn	10 50 45.5	+0.7
ETOB	Tobarra	2.20	49	Pn	Pn	10 50 17.8	-0.3
ETOB	Tobarra	2.20	49	Pn	Pn	10 50 17.7	-0.4
ETOB				Sg	Sb	10 50 50.3	+1.6
ETOB				i IVmb_Lg		10 51 02.5	
PAB	San Pablo	2.37	347	Pn	Pn	10 50 20.6	+0.1
PAB				Sn	Sn	10 50 49.4	-0.6
PAB				Sg	Sb	10 50 54.1	+0.5
EMIN	Mina Concepcio	2.44	284	Pn	Pn	10 50 20.8	-0.6
EMIN				Sn	Sn	10 50 51.5	-0.1
EMIN	Mina Concepcio	2.44	284	Pn	Pn	10 50 20.6	-0.8
EMIN				Sn	Sn	10 50 50.2	-1.4
EMIN				Sg	Sb	10 50 57.5	+1.9
ESDC	Sonseca Array	2.45	355	Pn	Pn	10 50 21.6	0.0
ESDC				Sn	Sn	10 50 47.8	-4.1
ESDC				Sg	Sb	10 50 55.3	-0.6
ESDC				i IVmb_Lg		10 51 03.0	
ESBB	Sonseca Array	2.45	355	Pn	Pn	10 50 21.7	+0.1
ESBB				Sn	Sn	10 50 48.8	-3.2
ESBB				Sg	Sb	10 50 57.7	+1.7
ESBB				i IVmb_Lg		10 51 03.0	
TAF	Taforalt	2.62	157	P	Pn	10 50 25.1	+1.2
TAF	Taforalt	2.62	157	S	Sb	10 50 58.3	-2.6
AKLM	AKL	2.72	183	P	Pn	10 50 26.1	+0.8
AKLM	AKL	2.72	183	S	Sn	10 50 58.0	-0.7
PBAR	Barrancos	2.83	290	Pn	Pn	10 50 26.0	-0.7
PBAR	Barrancos	2.83	290	ePn	Pn	10 50 26.0	-0.7
PBAR				eSg	Sg	10 51 11.2	-0.4
PBAR				i IAML		10 51 20.7	
PBAR				i IAML		10 51 21.4	
PBAR				i IAML		10 51 24.7	
EVIV	Cofrentes, Val	2.86	44	Pn	Pn	10 50 26.3	-0.9
EVIV				Sg	Sg	10 51 11.6	-1.2
EVIV				i IVmb_Lg		10 51 15.0	
EBAD	Badajoz	3.04	301	Pn	Pn	10 50 30.1	+0.5
EBAD	Badajoz	3.04	301	Pn	Pn	10 50 28.9	-0.7
EBAD				Sn	Sn	10 51 05.2	-1.3
EBAD				Sg	Sg	10 51 17.6	-0.9
EBAD				i IVmb_Lg		10 51 23.9	
EGRO	El Granado	3.04	277	Pn	Pn	10 50 29.0	-0.6
EGRO				Sn	Sn	10 51 07.1	+0.6
UCM	Universidad Co	3.09	6	Pg	Pb	10 50 38.3	+2.0
UCM				Sg	Sg	10 51 19.5	-0.6
EBEN2	Beniarda presa	3.11	61	Pn	Pn	10 50 30.2	-0.4
EBEN2				Sn	Sn	10 51 07.8	-0.4
PVAQ	Vaqueiros	3.22	274⇓	ePn	Pn	10 50 31.4	-0.7
PVAQ				eSn	Sn	10 51 10.1	-0.8
PVAQ				i IAML		10 51 13.5	
PVAQ				i IAML		10 51 28.1	
PVAQ				i IAML		10 51 33.6	
PVAQ	Vaqueiros	3.22	274	P	Pn	10 50 31.2	-0.9
PVAQ	Vaqueiros	3.22	274	S	Sn	10 51 08.3	-2.6
YEBES	Yebes (Guadala	3.32	8	Pn	Pn	10 50 33.8	+0.3
YEBES				Sg	Sg	10 51 25.7	-1.8
PBDV	Barranco-do-Ve	3.39	271	Pn	Pn	10 50 34.0	-0.5
PBDV				Sn	Sn	10 51 14.4	-0.8
PBDV	Barranco-do-Ve	3.39	271	ePn	Pn	10 50 34.1	-0.5
PBDV				eSn	Sn	10 51 14.6	-0.6
PBDV				i IAML		10 51 15.6	
PBDV				i IAML		10 51 41.8	
PBDV				i IAML		10 51 43.0	
EPLA	Plasencia	3.40	327	Pn	Pn	10 50 34.6	+0.1
EPLA				Sg	Sb	10 51 25.7	+2.5
EPLA				i IVmb_Lg		10 51 40.8	
PBEJ	Beja	3.42	285	ePn	Pn	10 50 35.0	+0.2
PBEJ				eSn	Sn	10 51 14.2	-1.6
PBEJ				eSg	Sg	10 51 30.4	-0.1
PBEJ				i IAML		10 51 43.0	
PBEJ				i IAML		10 51 43.2	
PBEJ				i IAML		10 51 44.6	
GUD	Guadarrama	3.43	354	Pn	Pn	10 50 34.8	-0.3
GUD				Sg	Sb	10 51 24.7	+0.5
PCVE	Castro Verde	3.49	278	Pn	Pn	10 50 36.0	+0.1
PCVE				Sn	Sn	10 51 16.4	-1.2
PCVE	Castro Verde	3.49	278	ePn	Pn	10 50 35.9	+0.1
PCVE				eSn	Sn	10 51 17.1	-0.5
PCVE				eSg	Sg	10 51 34.1	+1.1
PCVE				i IAML		10 51 38.3	
PCVE				i IAML		10 51 40.2	
PCVE				i IAML		10 51 40.8	
PESTR	Estremoz	3.49	299	eSg	Sg	10 51 35.6	+2.7
PMRV	Marv??o	3.65	308	ePn	Pn	10 50 38.8	+0.8
PMRV				eSg	Sg	10 51 38.3	+0.3
PMRV				i IAML		10 51 44.5	
PMRV				i IAML		10 51 47.6	
PMRV				i IAML		10 51 48.5	
MESJ	Messejana	3.66	281	eP	Pn	10 50 37.5	-0.6
MESJ	Messejana	3.66	281	ePn	Pn	10 50 38.1	0.0
MESJ				eSn	Sn	10 51 21.1	-0.6
MESJ				eSg	Sg	10 51 39.2	+0.9
MESJ				i IAML		10 51 44.3	
MESJ				i IAML		10 51 44.4	
MESJ				i IAML		10 51 46.1	
PARRA	Arraiolos	3.79	296	ePn	Pn	10 50 39.9	0.0
PARRA				eSn	Sn	10 51 23.5	-1.4
PARRA				eSg	Sg	10 51 43.0	+0.5
PARRA				i IAML		10 51 50.6	
PARRA				i IAML		10 51 52.2	
PARRA				i IAML		10 51 52.9	
E0901	Celadas (Terue	3.81	31	Pn	Pn	10 50 40.5	+0.2
E0901				Sn	Sn	10 51 24.9	-0.6
E0901				Sg	Sb	10 51 37.4	+2.4
MOE	Montemor	3.91	291	ePn	Pn	10 50 42.5	+0.9
MOE				eSn	Sn	10 51 27.1	-0.9
MOE				eSg	Sg	10 51 49.2	+2.7
MOE				i IAML		10 51 54.4	
MOE				i IAML		10 51 56.0	
MOE				i IAML		10 52 05.2	
PCBR	Castelo Branco	3.96	312	ePn	Pn	10 50 42.9	+0.7
PCBR				eSn	Sn	10 51 28.2	-0.8
PCBR				eSg	Sg	10 51 47.0	-0.9
PCBR				i IAML		10 51 49.2	
PCBR				i IAML		10 51 55.6	
PCBR				i IAML		10 51 57.6	
MORF	Marmelete	3.97	273	eP	Pn	10 50 41.8	-0.6
MORF	Marmelete	3.97	273	ePn	Pn	10 50 42.4	0.0
MORF				eSn	Sn	10 51 28.4	-1.0
MORF				i IAML		10 51 30.7	
MORF				i IAML		10 51 57.5	
MORF				i IAML		10 52 02.4	
EMOS	Mosqueruela	4.01	38	Pn	Pn	10 50 43.2	+0.1
EMOS				Sn	Sn	10 51 29.0	-1.5
EMOS				Sg	Sb	10 51 43.8	+2.9
EMOS				i IVmb_Lg		10 51 50.6	
PMTG	Montargil	4.03	298	ePn	Pn	10 50 43.3	+0.1
PMTG				eSn	Sn	10 51 29.6	-1.2
PMTG				eSg	Sg	10 51 50.2	+0.2
PMTG				i IAML		10 51 57.3	
PMTG				i IAML		10 51 58.8	
PMTG				i IAML		10 52 11.1	
PTEO	Sao Teotonio	4.03	276	ePn	Pn	10 50 44.1	+0.9
PTEO				eSn	Sn	10 51 30.8	0.0
PTEO				i IAML		10 52 01.8	
PTEO				i IAML		10 52 03.9	
PTEO				i IAML		10 52 07.0	
PSARD	Sardoal	4.24	305	ePn	Pn	10 50 46.9	+0.7
PSARD				eSn	Sn	10 51 36.8	+0.7
PSARD				eSg	Sg	10 51 55.8	-1.2
PSARD				i IAML		10 51 58.3	
PSARD				i IAML		10 52 01.7	
PSARD				i IAML		10 52 10.0	
EIBI	Ibiza	4.35	64	Pn	Pn	10 50 47.0	-0.6
EIBI				i IVmb_Lg		10 51 36.1	
EIBI				Sn	Sn	10 51 38.6	-0.1
MTE	Manteigas	4.37	318	eSg	Sg	10 52 01.6	+0.4
MTE				i IAML		10 52 04.8	
MTE				i IAML		10 52 12.6	
MTE				i IAML		10 52 15.8	
MD31	MD31	4.44	192	P	Pn	10 50 51.1	+2.1
MD31	MD31	4.44	192	S	Sn	10 51 42.2	+1.0
MDT	Midelt	4.47	190	P	Pn	10 50 50.9	+1.5
MDT	Midelt	4.47	190	S	Sn	10 51 43.2	+1.3
PSBE	So Bento	4.62	301	ePn	Pn	10 50 51.8	+0.5
PSBE				eSn	Sn	10 51 44.1	-1.4
PSBE				eSg	Sg	10 52 10.0	+0.8
PSBE				i IAML		10 52 17.6	
PSBE				i IAML		10 52 17.8	
PSBE				i IAML		10 52 18.8	
PCAS	Casmilo, Conde	4.71	308	ePn	Pn	10 50 53.1	+0.6
PCAS				eSn	Sn	10 51 44.8	-2.7
PCAS				eSg	Sg	10 52 10.3	-1.6
PCAS				i IAML		10 52 16.4	
PCAS				i IAML		10 52 21.4	
PCAS				i IAML		10 52 29.4	
MVO	Moncorvo	4.71	328	ePn	Pn	10 50 52.9	+0.3
MVO				eSg	Sg	10 52 13.3	+1.3
MVO				i IAML		10 52 20.9	
MVO				i IAML		10 52 23.5	
MVO				i IAML		10 52 26.6	
PVIS	Viseu	4.78	318	ePn	Pn	10 50 54.3	+0.6
PVIS				eSn	Sn	10 51 47.7	-1.8
PVIS				eSg	Sg	10 52 13.6	-0.8
PVRL	Vila Real	5.11	323	ePn	Pn	10 50 59.1	+1.0
PBRG	Braganca	5.14	334	ePn	Pn	10 50 58.6	0.0
POLO	Lamas de Olo	5.22	324	ePn	Pn	10 51 01.0	+1.3
POLO				eSg	Sg	10 52 23.6	-5.0
POLO				i IAML		10 52 37.1	
POLO				i IAML		10 52 41.0	
POLO				i IAML		10 52 42.1	
FIGM	Figuig	5.46	158	P	Pn	10 51 04.3	+1.3
FIGM	Figuig	5.46	158	S	Sn	10 52 07.7	+1.3
EPOB	Poblet	5.53	40	Pn	Pn	10 51 04.0	+0.1
EPOB				i IVmb_Lg		10 51 40.7	
ELAN	Lanestosa	6.00	2	Pn	Pn	10 51 10.0	-0.2
ELAN				i IVmb_Lg		10 54 31.2	
OUZM	OUZ	6.80	203	P	Pn	10 51 23.3	+1.8
OUZM	OUZ	6.80	203	S	Sn	10 52 42.5	+3.1
OUK	Oukaimeden	6.94	211	P	Pn	10 51 23.7	+0.2
OUK	Oukaimeden	6.94	211	S	Sn	10 52 40.1	-3.0

IDC **21** *10:53:54.3±1.1, 3°.39S×146°.22E, h0^{km}, mb4.0/9, mbtmp4.0/10, ML2.0/1, MS3.1/4, Error ellipse: s-maj=45.4km s-min=18.4km az=104.0*

NEIC **21** *10:53:55.9±2.8, 3°.37S±0°.08×146°.3E±0°.2, h10^{km}±1km, mb4.2/10, Error ellipse: s-maj=31.6km s-min=5.1km az=113.0*

ISC 21 10:53:55.4±0.7**, 3°.36S**±0°.09×**146°.3E**±0°.1**, h10^{km}, n29, σ1^s.14**/25**, mb4.0**/8**, MS3.1**/3**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	1.70	40		Pb	10 54 26.4	-0.3
JAY	Jayapura	5.64	278	LR	LR	10 57 13.1	
	comp=Z,198nm,20.1s,baz=34,slow=36						
PMG	Port Moresby	6.07	172	Pn	Pn	10 55 25.5	+0.2
	2.3nm,0.3s,baz=48,slow=2.7,SNR=9.7						
	10nm,0.5s						
PMG	Port Moresby	6.07	172		Pn	10 55 26.9	+1.7
COEN	Coen	10.97	196	Pn	Pn	10 56 34.0	+1.4
WB0	Warramunga Arr	20.02	215	P	P	10 58 28.7	+0.1
WB0				IAmb	IAmb	10 58 31.4	
	comp=Z,21nm,1.4s						
WR8	Warramunga Arr	20.11	214	P	P	10 58 29.9	+0.4
WR8				IAmb	IAmb	10 58 45.1	
	comp=Z,17nm,1.4s						
WRAB	Tennant Creek	20.17	214	P	P	10 58 29.1	-1.2
WRAB				IAmb	IAmb	10 58 35.7	
	comp=Z,16nm,1.0s						
WRA	Warramunga Arr	20.19	214	P	P	10 58 31.5	+1.1
	comp=Z,5.0nm,0.9s,baz=39,slow=12,SNR=13						
	comp=Z,5.0nm,0.9s						
WRA	Warramunga Arr	20.19	214	P	P	10 58 28.4	-2.0
KNRA	Kununurra	21.15	234	P	P	10 58 39.7	-1.2
AS31	Alice Springs	23.46	210	P	P	10 59 05.3	0.0
ASAR	Alice Springs	23.47	210	P	P	10 59 05.2	-0.1
	comp=Z,2.9nm,0.8s,baz=43,slow=7.7,SNR=18						
	comp=Z,2.9nm,0.8s						
ASAR	Alice Springs	23.47	210	P	P	10 59 04.7	-0.7
INKA	Innaminka	24.81	192	P	P	10 59 15.7	-2.2
INKA				IAmb	IAmb	10 59 24.7	
	comp=Z,3.8nm,0.9s						
FITZ	Fitzroy Crossi	24.97	233	P	P	10 59 17.6	-1.8
	comp=Z,9.8nm,1.0s,baz=45,slow=13,SNR=5.5						
	comp=Z,9.8nm,1.0s						
FITZ	Fitzroy Crossi	24.97	233	P	P	10 59 17.8	-1.7
FITZ				IAmb	IAmb	10 59 24.8	
	comp=Z,2.7nm,0.9s						
JOW	Kunigami	34.70	331	LR	LR	11 12 28.5	
	comp=Z,43nm,21.1s,baz=291,slow=32						
JNU	Nakatsue	39.11	339	LR	LR	11 14 20.2	
	comp=Z,31nm,20.1s,baz=128,slow=31						
KSRS	Korea Array	44.05	339	P	P	11 02 04.2	+0.6
	comp=Z,1.0nm,0.8s,baz=150,slow=10,SNR=5.5						
KSRS				LR	LR	11 17 23.9	
	comp=Z,19nm,21.8s,baz=150,slow=32						
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	61.77	331	P	P	11 04 15.4	+1.0
	comp=Z,0.6nm,0.7s,baz=134,slow=6.4,SNR=4.0						
	comp=Z,0.6nm,0.7s						
SONM	Songino Array	61.77	331	P	P	11 04 14.5	0.0
SONM				IAmb	IAmb	11 04 25.0	
	comp=Z,2.4nm,1.2s						
NRIK	Noril'sk	82.56	342	P	P	11 06 19.0	+0.8
	comp=Z,2.7nm,0.7s,baz=121,slow=4.3,SNR=4.3						
	comp=Z,2.7nm,0.7s						
NRIK	Noril'sk	82.56	342	P	P	11 06 17.6	-0.7
ILAR	Eielson Array	83.36	23	P	P	11 06 22.2	-0.3
	comp=Z,0.7nm,0.9s,baz=263,slow=5.4,SNR=5.6						
	comp=Z,0.7nm,0.9s						
ILAR	Eielson Array	83.36	23	P	P	11 06 21.7	-0.8
BVAR	Borovoye Array	84.23	324	P	P	11 06 27.9	+0.7
	comp=Z,0.7nm,0.7s,baz=122,slow=5.2,SNR=3.7						
	comp=Z,0.7nm,0.7s						
YKA	Yellowknife Ar	97.18	28	P	Pdif	11 07 29.3	+1.2
	comp=Z,0.4nm,1.0s,baz=280,slow=7.0,SNR=4.1						
	comp=Z,0.4nm,1.0s						
TORD	Torodi Ar. Bea	143.68	288	PKP	PKPdf	11 13 32.5	+0.7
	comp=Z,0.8nm,0.7s,baz=55,slow=5.1,SNR=3.9						

VIE **21** *10:54:07.9±0.6, 51°.38N×16°.42E, h0^{km}, mb2.4/2, ml2.6/3, Error ellipse: s-maj=6.4km s-min=4.7km az=88.0 52 km NW of Wroclaw Suspected Mining induced.*

IDC **21** *10:54:08.7±0.9, 51°.48N×15°.89E, h0^{km}, mbtmp3.2/5, ML1.9/3, Error ellipse: s-maj=20.9km s-min=9.0km az=117.0*

PRU **21** *10:54:08.9, 51°.39N×16°.18E, h0^{km}*

ISC 21 10:54:06.0±0.7**, 51°.52N**±0°.03×**16°.23E**±0°.03**, h0^{km}, n31, σ1^s.01**/60**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.67	177	ePg	Pg	10 54 18.9	0.0
KSP				eSg	Sg	10 54 27.1	-0.6
CHVC	Chvalec	0.94	187	ePG	Pg	10 54 24.1	+0.2
CHVC				eSG	Sg	10 54 35.7	-0.3
OSTC	Ostas	0.96	181	ePG	Pg	10 54 24.5	+0.1
OSTC				eSG	Sg	10 54 36.1	-0.7
	comp=Z,34nm,0.5s						
UPC	Upice	1.02	188	ePG	Pg	10 54 25.3	-0.2
UPC				eSG	Sg	10 54 38.0	-0.7
	comp=Z,71nm,0.5s						
DPC	Dobruska-Polom	1.17	177	ePG	Pg	10 54 28.0	-0.4
DPC				eSG	Sg	10 54 42.5	-1.0
	comp=Z,22nm,0.6s						
PVCC	Panska Ves	1.44	227	ePG	Pb	10 54 33.8	+0.1
PVCC				eSG	Sb	10 54 52.5	-0.1
	comp=Z,95nm,0.4s						
KRLC	Kraliky	1.48	166	ePG	Pn	10 54 33.3	-0.7
KRLC				eSG	Sg	10 54 51.9	-1.7
	comp=Z,21nm,0.6s						
STEB	Steborice	1.86	148	ePG	Pb	10 54 40.4	-0.5
STEB				eSG	Sb	10 55 04.5	-0.2
PRU	Pruhonice	1.87	216	ePG	Pb	10 54 40.5	-0.5
PRU				eSG	Sb	10 55 04.3	-0.6
	comp=Z,37nm,0.8s						
MORC	Moravsky Berou	1.93	154	ePN	Pn	10 54 39.5	-0.7
MORC				eSG	Sb	10 55 06.0	-0.7
HSKC	Hora Svate Kat	1.99	244	ePG	Pb	10 54 42.2	-0.8
HSKC				eSG	Sb	10 55 08.5	+0.2
	comp=Z,16nm,0.3s						
CLL	Collm	2.03	265	i Pn	Pb	10 54 44.0	+0.2
CLL				i Pg	Pg	10 54 45.3	+0.4
CLL				i Sg	Sg	10 55 12.1	+0.9
	comp=Z,15nm,0.6s						
VRAC	Vranov	2.22	174	ePN	Pn	10 54 44.0	-0.1
VRAC				eSG	Sb	10 55 15.1	0.0
KRUC	Moravsky	2.46	177	ePN	Pn	10 54 47.2	-0.2
KRUC				eSG	Sb	10 55 22.6	+0.7
OJC	Ojcow	2.61	118	ePg	Pg	10 54 56.5	+0.5
OJC				eSg	Sg	10 55 30.3	+0.6
JAVC	Velka Javorina	2.82	160	ePN	Pn	10 54 52.1	-0.2
KHC	Kasperske Hory	2.93	216	ePN	Pn	10 54 53.9	0.0
KHC				ePG	Pb	10 54 59.2	+0.1
KHC				eSG	Sb	10 55 37.3	+1.8
CKRC	Cesky Krumlov	2.97	205	ePN	Pn	10 54 55.0	+0.6
CKRC				ePG	Pb	10 54 59.8	0.0
CKRC				eSG	Sb	10 55 37.5	+1.0
	comp=Z,11nm,0.5s						
GERES	GERESS Array B	3.13	212	Pn	Pn	10 54 57.1	+0.5
	baz=33,slow=13,SNR=8.7						
GERES				Pg	Pb	10 55 03.2	+0.7
	comp=Z,0.4nm,0.3s,baz=30,slow=18,SNR=39						
GERES				Lg	Lg	10 55 42.6	
	comp=Z,0.1nm,0.3s,baz=29,slow=27,SNR=4.3						
	comp=Z,0.9nm,0.5s						
MODS	Modra-Piesok	3.22	167	ePN	Pn	10 55 00.4	+2.6
MODS				ePG	Pg	10 55 08.6	+1.0
MODS				eSG	Sg	10 55 49.5	+0.2
CONA	Conrad Observa	3.60	184	i Pn	Pn	10 55 03.6	+0.5
	comp=Z,0.5nm,0.2s						
CONA				eSg	Sg	10 55 59.7	-1.9
	comp=Z,9.6nm,0.6s						
BSD	Bornholm Skovb	3.69	348	i P	Pn	10 55 03.4	-0.9
BSD				i S	Sn	10 55 47.9	-0.5
STHS	Stebnicka Huta	3.83	121	ePN	Pn	10 55 03.9	-2.3
STHS				ePG	Pg	10 55 19.1	-0.3
STHS				eSG	Sg	10 56 11.9	+2.9
MOA	Molln	3.88	200	i Pn	Pn	10 55 07.3	+0.3
	comp=Z,1.6nm,0.3s						
MOA				i Sg	Sg	10 56 09.2	-1.6
	comp=Z,1.9nm,0.3s						
ARSA	Arzberg	4.29	186	Sg	Sb	10 56 16.4	+1.7
	comp=Z,12nm,0.9s						
LUNU	Lund	4.45	339	eP	Pn	10 55 14.1	-0.6
LUNU				i S	Sn	10 56 06.4	-0.6
AKASG	Malin Array Be	8.22	91	Pn	Pn	10 56 08.5	+2.1
	comp=Z,0.2nm,0.3s,baz=282,slow=12,SNR=2.8						
AKASG	Malin Array Be	8.22	91	P	Pn	10 56 08.5	+2.1
HFS	Hagfors	8.76	352	Pn	Pn	10 56 13.3	-0.4
	comp=Z,0.1nm,0.3s,baz=176,slow=8.5,SNR=1.1						
	comp=Z,1.1nm,0.7s						
FINES	FINESS Array B	11.33	25	Pn	Pn	10 56 48.0	-0.9
	comp=Z,0.1nm,0.3s,baz=220,slow=11,SNR=3.5						
	comp=Z,2.0nm,0.8s						
ARCES	ARCESS Array B	18.60	10	Pn	P	10 58 24.5	0.0
	comp=Z,1.5nm,0.9s,baz=205,slow=10,SNR=5.4						

SFS **21** *10:54:13.2, 35°.65N×9°.73W, h0^{km}, ML3.7/12, ML3.2/15, MLv2.9/15*

CNRM **21** *10:54:14.7, 35°.53N×10°.02W, h33^{km}, ML3.3*

MDD **21** *10:54:15.1±0.8, 35°.65N×10°.07W, h30^{km}, mb_Lg3.4/7, Error ellipse: s-maj=7.5km s-min=4.1km az=95.0*

INMG **21** *10:54:16.7±1.1, 35°.70N×10°.09W, h30^{km}, ML2.3, Error ellipse: s-maj=5.0km s-min=4.3km az=82.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Mar de Marrocos*

IGIL **21** *10:54:16.8, 35°.65N×10°.06W, h31^{km}, ML2.1*

ISC 21 10:54:13.9±1.4**, 35°.66N**±0°.03×**10°.04W**±0°.07**, h35^{km}, n64, σ1^s.61**/107**, 4C, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	1.77	33	Pn	Pn	10 54 43.3	+1.3
PFVI				Sn	Sn	10 55 03.0	-0.2
PFVI	Vila Bisbo	1.77	33⇑	eP	Pn	10 54 43.3	+1.3
PFVI				eS	Sn	10 55 03.2	0.0
PFVI				i IAML		10 55 03.6	
PFVI				i IAML		10 55 04.4	
MORF	Marmelete	1.98	34	eP	Pn	10 54 46.5	+1.4
MORF				eS	Sn	10 55 08.4	-0.3
MORF				IAML		10 55 09.8	
	comp=E,28nm,0.2s						
MORF	Marmelete	1.98	34	eP	Pn	10 54 46.5	+1.4
MORF				eS	Sn	10 55 08.4	-0.3
MORF				i IAML		10 55 10.6	
MORF				i IAML		10 55 10.9	
MORF				i IAML		10 55 11.8	
PTEO	Sao Teotonio	2.16	29	eP	Pn	10 54 48.8	+1.4
PTEO				eS	Sn	10 55 12.6	-0.3
PTEO				i IAML		10 55 17.2	
PBDV	Barranco-do-Ve	2.32	46	Pn	Pn	10 54 51.5	+1.9
PBDV				Sn	Sn	10 55 17.0	+0.1
PBDV	Barranco-do-Ve	2.32	46⇑	eP	Pn	10 54 51.5	+1.9
PBDV				eS	Sn	10 55 17.1	+0.1
PBDV				i IAML		10 55 19.4	
PBDV				i IAML		10 55 23.7	
PBDV				i IAML		10 55 25.0	
PCVE	Castro Verde	2.54	39	Pn	Pn	10 54 54.4	+1.7
PCVE				Sn	Sn	10 55 22.0	-0.4
PCVE	Castro Verde	2.54	39⇑	eP	Pn	10 54 54.4	+1.7
PCVE				eS	Sn	10 55 22.5	+0.1
PCVE				i IAML		10 55 24.2	
PCVE				i IAML		10 55 24.6	
PCVE				i IAML		10 55 25.9	
PVAQ	Vaqueiros	2.55	46⇑	eP	Pn	10 54 54.6	+1.8
PVAQ				eS	Sn	10 55 22.7	0.0
PVAQ				i IAML		10 55 23.9	
PVAQ				i IAML		10 55 23.9	
PVAQ				i IAML		10 55 24.3	
PVAQ	Vaqueiros	2.55	46	P	Pn	10 54 54.4	+1.6
PVAQ	Vaqueiros	2.55	46	S	Sn	10 55 26.4	+3.7
MESJ	Messejana	2.62	33	eP	Pn	10 54 55.2	+1.4
MESJ				eS	Sn	10 55 23.4	-0.9
MESJ				IAML		10 55 26.7	
	comp=E,3.6nm,0.1s						
MESJ	Messejana	2.62	33	eP	Pn	10 54 55.2	+1.4
MESJ				eS	Sn	10 55 24.4	+0.1
MESJ				i IAML		10 55 27.1	
MESJ				i IAML		10 55 27.8	
MESJ				i IAML		10 55 33.5	
EXAYA	Ayamonte	2.63	53	P	Pn	10 54 55.8	+1.9
EXAYA				S	Sn	10 55 25.1	+0.5
EGRO	El Granado	2.78	47	Pn	Pn	10 54 57.7	+1.8
EGRO				Sn	Sn	10 55 28.8	+0.6
PBEJ	Beja	2.94	36	eP	Pn	10 54 59.4	+1.3
PBEJ				eS	Sn	10 55 32.0	-0.1
PBEJ				i IAML		10 55 33.6	
PBEJ				i IAML		10 55 34.0	
PBEJ				i IAML		10 55 34.5	
MOE	Montemor	3.16	25	eP	Pn	10 55 02.2	+1.0
MOE				eS	Sn	10 55 38.2	+0.5
MOE				i IAML		10 55 39.4	
MOE				i IAML		10 55 42.6	
MOE				i IAML		10 55 57.1	
AVE	Averroes	3.20	137	Pn	Pn	10 55 03.6	+1.8
AVE				Sn	Sn	10 55 38.4	-0.2
EVO	Evora	3.29	29	Pn	Pn	10 55 03.8	+0.8
EVO	Evora	3.29	29	eP	Pn	10 55 03.8	+0.8
PMAFR	Mafra	3.34	10	Pn	Pn	10 55 04.5	+0.8
PMAFR	Mafra	3.34	10	eP	Pn	10 55 04.5	+0.8
PMAFR				eS	Sn	10 55 41.6	-0.6
PMAFR				i IAML		10 55 43.4	
PMAFR				i IAML		10 55 43.6	
PMAFR				i IAML		10 55 46.8	
EMIN	Mina Concepcio	3.43	51	Pn	Pn	10 55 06.5	+1.7
EMIN				Sn	Sn	10 55 43.4	-0.8
EMIN	Mina Concepcio	3.43	51	P	Pn	10 55 06.2	+1.4
EMIN				S	Sn	10 55 43.4	-0.8
PBAR	Barrancos	3.48	43	Pn	Pn	10 55 06.8	+1.3
PBAR				Sn	Sn	10 55 45.9	+0.5
PBAR	Barrancos	3.48	43	eP	Pn	10 55 06.8	+1.3
PBAR				eS	Sn	10 55 44.8	-0.6

PBAR				*i* IAML		10 55 47.5	
PBAR				*i* IAML		10 55 47.7	
PBAR				*i* IAML		10 55 48.9	
PARRA	Arraiolos	3.53	26	*e*P	Pn	10 55 06.8	+0.6
PARRA				*e*S	Sn	10 55 46.0	-0.8
PARRA				*i* IAML		10 55 48.8	
PARRA				*i* IAML		10 55 52.6	
ESPR	Espera	3.59	69	Pn	Pn	10 55 09.3	+2.3
ESPR				Sn	Sn	10 55 48.1	0.0
ESPR	Espera	3.59	69	P	Pn	10 55 10.0	+3.0
ESPR				S	Sn	10 55 47.9	-0.3
ESPR				*i* IVmb_Lg		10 57 30.4	
SRHM	Skhour des Reh	3.64	150	P	Pn	10 55 08.5	+0.6
SRHM	Skhour des Reh	3.64	150	S	Sn	10 55 52.8	+3.1
PMTG	Montargil	3.70	22	*e*P	Pn	10 55 09.6	+1.1
PMTG				*e*S	Sn	10 55 49.6	-1.3
PMTG				*i* IAML		10 55 49.9	
PMTG				*i* IAML		10 55 50.3	
PMTG				*i* IAML		10 55 55.0	
EBAD	Badajoz	3.92	37	Pn	Pn	10 55 12.6	+1.0
EBAD				Sn	Sn	10 55 55.5	-1.0
EBAD	Badajoz	3.92	37	P	Pn	10 55 12.5	+0.8
EBAD				S	Sn	10 55 55.8	-0.7
PSBE	So Bento	3.97	14	*e*P	Pn	10 55 13.1	+0.7
PSBE				*e*S	Sn	10 55 55.9	-1.8
PSBE				*i* IAML		10 55 57.5	
PSBE				*i* IAML		10 55 58.5	
PSBE				*i* IAML		10 56 04.7	
E1302	La Puebla de C	4.14	68	S	Sn	10 56 01.3	-0.5
PSARD	Sardoal	4.21	20	*e*P	Pn	10 55 16.6	+1.1
PSARD				*e*S	Sn	10 56 01.3	-2.2
PSARD				*i* IAML		10 56 02.9	
PSARD				*i* IAML		10 56 03.9	
PSARD				*i* IAML		10 56 05.9	
PMRV	Marv??o	4.31	28	*e*P	Pn	10 55 17.8	+0.8
PMRV				*e*S	Sn	10 56 05.2	-0.9
PMRV				*i* IAML		10 56 06.7	
PMRV				*i* IAML		10 56 07.7	
ECAB	El Cabril	4.42	56	Pn	Pn	10 55 20.1	+1.6
ECAB				Sn	Sn	10 56 06.3	-2.4
ECAB	El Cabril	4.42	56	P	Pn	10 55 19.9	+1.4
ECAB				S	Sn	10 56 06.0	-2.8
ECAB				*i* IVmb_Lg		10 56 09.6	
PCAS	Casmilo, Conde	4.55	15	*e*P	Pn	10 55 21.3	+1.0
PCAS				*e*S	Sn	10 56 09.6	-2.4
IFR	Ifrane	4.58	116	Pn	Pn	10 55 21.5	+0.7
IFR				Sn	Sn	10 56 10.0	-3.0
PCBR	Castelo Branco	4.64	25	*e*P	Pn	10 55 22.5	+1.0
PCBR				*e*S	Sn	10 56 13.9	-0.2
OUK	Oukaimeden	4.80	157	P	Pn	10 55 24.3	+0.3
OUK	Oukaimeden	4.80	157	S	Sn	10 56 17.1	-1.4
TISM	Timmit	4.94	142	P	Pn	10 55 23.2	-2.5
TISM	Timmit	4.94	142	S	Sn	10 56 21.2	-0.4
EADA	Adamuz	5.04	59	Pn	Pn	10 55 28.6	+1.6
EADA				Sn	Sn	10 56 22.9	-1.2
EADA	Adamuz	5.04	59	P	Pn	10 55 28.3	+1.3
EADA				S	Sn	10 56 21.1	-3.0
EADA				*i* IVmb_Lg		10 56 26.0	
MD31	MD31	5.18	121	P	Pn	10 55 29.8	+0.8
MD31	MD31	5.18	121	S	Sn	10 56 27.5	-0.1
TIO	Tiouine	5.26	153	Pn	Pn	10 55 31.1	+0.9
TIO				Sn	Sn	10 56 26.0	-3.7
MDT	Midelt	5.32	121	P	Pn	10 55 31.7	+0.7
MDT	Midelt	5.32	121	S	Sn	10 56 31.2	+0.2
EPLA	Plasencia	5.40	34	P	Pn	10 55 33.5	+1.5
EPLA				S	Sn	10 56 29.5	-3.4
OUZM	OUZ	5.47	149	P	Pn	10 55 33.1	0.0
OUZM	OUZ	5.47	149	S	Sn	10 56 34.0	-1.0
EQUE	Quentar	5.54	72	S	Sn	10 56 34.0	-2.4
PSIM	Granatula de C	5.92	56	P	Pn	10 55 40.5	+1.3
PSIM				S	Sn	10 56 41.0	-4.7
PAB	San Pablo	5.95	48	P	Pn	10 55 41.1	+1.4
PAB				S	Sn	10 56 42.8	-3.8
PAB				*i* IVmb_Lg		10 57 18.3	
EQES	Quesada	5.99	67	P	Pn	10 55 41.3	+1.2
EQES				S	Sn	10 56 44.2	-3.4
EQES				*i* IVmb_Lg		10 58 49.0	
ESDC	Sonseca Array	6.27	48	P	Pn	10 55 45.5	+1.6
ESDC				*i* IVmb_Lg		11 00 24.4	
GUD	Guadarrama	6.80	41	P	Pn	10 55 52.2	+0.9
GUD				*i* IVmb_Lg		10 57 08.9	

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*NEIC **21** 11:16:00.2±2.0, 3°.08S±0°.05×150°.26E±0°.05, h10^{km}±2^{km}, mb4.5/19, Error ellipse: s-maj=10.8km s-min=6.0km az=312.0*

*IDC **21** 11:16:05.4±1.1, 3°.60S×149°.89E, h0^{km}, mb4.2/10, mbtmp4.2/11, ML1.8/1, MS3.5/27, Error ellipse: s-maj=40.0km s-min=17.9km az=118.0*

ISC 21 11:16:01.7±0.7**, 3°.18S**±0°.09×**150°.15E**±0°.08**, h10**^{km}**, n77, σ2.^{s}19**/45**, mb4.4**/23**, MS3.5**/24**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RABL	Rabaul	2.25	117	Pn	Pn	11 16 36.4	-2.6
MANU	Manus Island	3.00	292		Pn	11 16 48.6	-0.8
PMG	Port Moresby	6.86	206	Pn	Pn	11 17 42.9	+0.4
	1.5nm,0.3s,baz=41,slow=8.2,SNR=10						
	56nm,1.1s						
PMG	Port Moresby	6.86	206		Pn	11 17 42.6	+0.1
PMG	Port Moresby	6.86	206	P	Pn	11 17 44.6	+2.1
JAY	Jayapura	9.46	274	LR	LR	11 21 12.8	
	comp=Z,605nm,20.7s,baz=97,slow=33						
COEN	Coen	12.73	212		Pn	11 19 02.5	-0.6
MTSU	Mount Surprise	15.92	201	P	Pn	11 19 47.2	+1.1
CTA	Charters Tower	17.23	192	Pn	P	11 20 05.1	+0.9
	0.1nm,0.3s,baz=31,slow=10,SNR=4.1						
CTA				LR	LR	11 25 49.9	
	comp=Z,154nm,21.5s,baz=28,slow=35						
CTA	Charters Tower	17.23	192	P	P	11 20 04.8	+0.6
CTAO	Charters Tower	17.23	192	P	P	11 20 05.8	+1.5
CTAO	Charters Tower	17.23	192	P	P	11 20 04.8	+0.6
GUMO	Guam	17.46	343	LR	LR	11 25 43.3	
	comp=Z,150nm,21.5s,baz=100,slow=32						
AUNRC	North Rockhamp	20.06	179	P	Pn	11 20 40.0	+3.0
QIS	Mount Isa	20.10	210	P	P	11 20 36.6	+0.8
MTN	Manton Dam	21.12	242	P	P	11 20 44.3	-2.6
DRS	Darwin Rock St	21.15	243	P	P	11 20 51.4	+4.2
EIDS	Eidsvold	22.08	178		P	11 20 56.4	-0.7
EIDS				IAmb	IAmb	11 21 07.7	
	comp=Z,16nm,0.9s						
EIDS	Eidsvold	22.08	178	P	P	11 21 00.0	+2.9
WR8	Warramunga Arr	22.61	221		P	11 21 01.3	-1.6
WR8				IAmb	IAmb	11 21 16.1	
	comp=Z,32nm,1.1s						
WRAB	Tennant Creek	22.70	222	P	P	11 21 01.7	-2.0
WRAB				IAmb	IAmb	11 21 13.1	
	comp=Z,26nm,1.0s						
WRAB	Tennant Creek	22.70	222	P	P	11 21 03.1	-0.7
WRA	Warramunga Arr	22.71	222	P	P	11 21 02.1	-1.8
	comp=Z,12nm,0.9s,baz=42,slow=11,SNR=31						
	comp=Z,12nm,0.9s						
WRA	Warramunga Arr	22.71	222		P	11 21 02.3	-1.6
QLP	Quilpie	23.95	193	P	P	11 21 18.3	+2.0
KNRA	Kununurra	24.44	238	P	P	11 21 19.4	-1.5
KNRA				IAmb	IAmb	11 21 40.2	
	comp=Z,10nm,0.9s						
DZM	Mont Dzumac	24.55	141	*e*S	S	11 25 49.9	+6.9
	comp=Z,64nm,27.6s						
DZM				*e*LR	LR	11 27 24.9	
	comp=Z,310nm,23.6s						
DZM	Mont Dzumac	24.55	141	P	P	11 21 20.5	-1.6
DZM				IAmb	IAmb	11 21 37.6	
	comp=Z,7.9nm,0.8s						
AS31	Alice Springs	25.72	216		P	11 21 32.2	-0.3
ASAR	Alice Springs	25.72	216	P	P	11 21 32.3	-0.2
	comp=Z,6.1nm,0.7s,baz=49,slow=8.1,SNR=49						
ASAR				LR	LR	11 31 48.6	
	comp=Z,282nm,19.3s,baz=37,slow=37						
	comp=Z,6.1nm,0.7s						
ASAR	Alice Springs	25.72	216		P	11 21 31.8	-0.7
INKA	Innaminka	26.02	199		P	11 21 34.9	-0.3
INKA				IAmb	IAmb	11 22 03.0	
	comp=Z,11nm,1.1s						
DAV	Davao City (W)	26.55	293	LR	LR	11 31 52.6	
	comp=Z,132nm,18.5s,baz=188,slow=36						
ARMA	Armidale	27.13	177	P	P	11 21 42.8	-2.5
ARMA				IAmb	IAmb	11 21 49.7	
	comp=Z,15nm,0.9s						
FITZ	Fitzroy Crossi	28.22	237	P	P	11 21 57.6	+2.6
	comp=Z,24nm,0.9s,baz=63,slow=8.6,SNR=37						
	comp=Z,24nm,0.9s						
STKA	Stephens Creek	29.66	195	LR	LR	11 33 43.9	
	comp=Z,184nm,20.8s,baz=21,slow=36						
BBOO	Buckleboo	32.30	203	P	P	11 22 30.8	-0.2
TOO	Toolangi	34.49	187	P	P	11 22 48.6	-1.5
TOO				IAmb	IAmb	11 22 58.1	
	comp=Z,5.8nm,1.1s						
MBWA	Marble Bar	34.57	236	P	P	11 22 50.2	-0.7
PSA00	Pilbara Seismi	34.66	236	P	P	11 22 50.3	-1.4
PSA00				IAmb	IAmb	11 22 56.2	
	comp=Z,5.0nm,0.9s						
KKM	Kota Kinabalu	35.10	285	P	P	11 22 53.8	-1.9
JOW	Kunigami	36.56	326	LR	LR	11 36 37.2	
	comp=Z,72nm,20.9s,baz=268,slow=34						
MJAR	Matsushiro Arr	41.06	345	LR	LR	11 38 38.9	
	comp=Z,61nm,21.7s,baz=152,slow=33						
NWAO	Narrogin (SRO)	42.71	222	LR	LR	11 42 31.6	
	comp=Z,180nm,20.3s,baz=63,slow=38						
URZ	Urewera	42.73	148	LR	LR	11 39 58.4	
	comp=Z,124nm,18.8s,baz=311,slow=34						
NJ2	Nanjing	45.94	322	*e*P	P	11 24 24.1	-0.9
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ASAJ	Asahikawa	47.57	353	LR	LR	11 44 35.7	
	comp=Z,29nm,19.6s,baz=174,slow=36						
PSI	Prapat	51.55	276	LR	LR	11 48 10.3	
	comp=Z,36nm,19.1s,baz=155,slow=38						
CMAR	Chiang Mai Arr	54.80	295	P	P	11 25 37.4	+5.0
	comp=Z,0.8nm,0.3s,baz=110,slow=5.0,SNR=10						
CMAR				LR	LR	11 47 23.0	
	comp=Z,20nm,20.9s,baz=95,slow=34						
	comp=Z,0.8nm,0.3s						
PZH	PanZhiHua	55.28	305	P	P	11 25 35.8	-0.1
HHC	Hu-ho-hao-te	56.21	325	*e*P	P	11 25 43.5	+1.3
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,59nm,3.5s						
PETK	Petropavlovsk-	56.44	5	LR	LR	11 46 08.8	
	comp=Z,75nm,19.5s,baz=202,slow=32						
SHEM	Shemya Is, Ala	59.26	17	LR	LR	11 47 09.7	
	comp=Z,66nm,19.6s,baz=90,slow=31						
PPT	Papeete	60.74	108	LR	LR	11 49 56.2	
	comp=Z,26nm,19.2s,baz=228,slow=33						
PPT2	Papeete2	60.74	108	*e*S	S	11 34 33.7	+1.9
	comp=Z,34nm,23.8s						
PPT2				*e*LR	LR	11 44 07.9	
	comp=Z,109nm,31.2s						
TBI	Tubuai	61.63	115	*e*LR	LR	11 44 32.6	
	comp=Z,794nm,39.8s						
MA2	Magadan	62.57	0	LR	LR	11 50 42.1	
	comp=Z,29nm,21.8s,baz=152,slow=33						
SONM	Songino Array	63.56	329	P	P	11 26 40.3	+7.6
	comp=Z,0.7nm,0.7s,baz=150,slow=6.0,SNR=3.6						
	comp=Z,0.7nm,0.7s						
SEY	Seymchan	65.96	1	LR	LR	11 55 50.4	
	comp=Z,22nm,19.0s,baz=148,slow=36						
PALK	Pallekele	70.07	279	LR	LR	11 58 13.8	
	comp=Z,20nm,19.9s,baz=99,slow=36						
VNDA	Vanda	74.55	177	P	P	11 27 39.9	-0.4
VNDA				IAmb	IAmb	11 27 50.0	
	comp=Z,5.5nm,1.1s						
RKT	Rikitea	74.85	113	*e*LR	LR	11 50 45.2	
	comp=Z,3µm,35.2s						
KDAK	Kodiak Island	75.95	28	LR	LR	11 54 05.3	
	comp=Z,89nm,22.0s,baz=238,slow=30						
ZALV	Zalesovo Beam	78.35	327	P	P	11 28 08.0	+5.8
	comp=Z,0.4nm,0.5s,baz=93,slow=7.9,SNR=3.6						
ZALV				LR	LR	12 03 22.8	
	comp=Z,13nm,20.2s,baz=244,slow=36						
	comp=Z,0.4nm,0.5s						
KURBB	Kurchatov Arra	80.90	322	P	P	11 28 21.0	+4.8
	comp=Z,0.4nm,0.4s,baz=73,slow=4.8,SNR=1.9						
	comp=Z,0.4nm,0.4s						
ILAR	Eielson Array	81.68	23	P	P	11 28 28.1	+8.0
	comp=Z,1.3nm,0.7s,baz=244,slow=4.7,SNR=13						
ILAR				LR	LR	11 57 39.8	
	comp=Z,52nm,21.9s,baz=278,slow=30						
	comp=Z,1.3nm,0.7s						
NRIK	Noril'sk	83.59	342	LR	LR	12 04 30.5	
	comp=Z,25nm,20.5s,baz=142,slow=35						
MAW	Mawson	86.04	203	LR	LR	12 06 05.6	
	comp=Z,34nm,18.6s,baz=100,slow=35						
BVAR	Borovoye Array	86.37	323	P	P	11 28 50.1	+5.9
	comp=Z,1.2nm,0.8s,baz=99,slow=6.5,SNR=5.7						
	comp=Z,1.2nm,0.8s						
QSPA	South Pole Qui	86.77	180	P	P	11 28 45.0	-1.1
QSPA				IAmb	IAmb	11 29 04.5	
	comp=Z,2.0nm,1.1s						
BBB	Bella Bella	87.42	38	LR	LR	12 00 33.6	
	comp=Z,44nm,19.9s,baz=244,slow=30						
YBH	Yreka Blue Hor	89.96	48	LR	LR	12 01 05.0	
	comp=Z,6.2nm,21.7s,baz=291,slow=30						
ARTI	Arti	93.61	326	LR	LR	12 12 13.7	
	comp=Z,22nm,19.3s,baz=40,slow=36						
YKA	Yellowknife Ar	95.23	28	P	P	11 29 34.0	+8.6
	comp=Z,0.8nm,0.9s,baz=277,slow=5.6,SNR=7.9						
	comp=Z,0.8nm,0.9s						
BELA	Belgrano 2	99.00	179	P	Pdif	11 29 39.8	-2.5
PDAR	Pinedale Array	99.71	47	P	Pdif	11 29 52.6	+6.2
	comp=Z,0.2nm,0.4s,baz=267,slow=6.8,SNR=2.7						
TORD	Torodi Ar. Bea	147.28	289	PKPbc	PKiKP	11 35 51.7	+2.7
	comp=Z,1.7nm,0.8s,baz=63,slow=4.3,SNR=8.7						

RSPR 21 11:21:39.9, 19°.08N×66°.58W, h28^{km}±13^{km}, 4C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AOPR	Arecibo Observ	0.75	193	⇓*e*P	Pb	11 21 52.4	-2.1
AOPR	Arecibo Observ	0.75	193	⇓*e*P	Pb	11 21 52.8	-1.6
AOPR	Arecibo Observ	0.75	193	*e*S	Sb	11 22 01.9	-2.5
ECPR	Experimental S	0.79	165	⇑*e*P	Pb	11 21 53.2	-1.8
ECPR	Experimental S	0.79	165	*e*S	Sb	11 22 03.4	-2.0
ECPR	Experimental S	0.79	165	⇓*e*P	Pb	11 21 53.4	-1.6
ECPR	Experimental S	0.79	165	*e*S	Sb	11 22 03.7	-1.6
CRPR	Cabo Rojo, PR	1.19	205	⇓*e*P	Pn	11 21 58.7	-1.9
CRPR	Cabo Rojo, PR	1.19	205	*e*S	Sn	11 22 13.6	-2.3
CRPR	Cabo Rojo, PR	1.19	205	⇑*e*P	Pn	11 21 58.6	-2.0
CRPR	Cabo Rojo, PR	1.19	205	*e*S	Sn	11 22 13.5	-2.3
MLPR	Magueyes Islan	1.19	202	⇑*e*P	Pn	11 21 58.9	-1.9
MLPR	Magueyes Islan	1.19	202	*e*S	Sn	11 22 13.4	-2.6
MLPR	Magueyes Islan	1.19	202	⇑*e*P	Pn	11 21 59.1	-1.6
MLPR	Magueyes Islan	1.19	202	*e*S	Sn	11 22 13.3	-2.7

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*IDC **21** 11:25:26.9±0.6, 5°.18S×134°.02E, h0^{km}, mb4.1/13, mbtmp4.2/18, ML4.3/4, MS3.4/3, Error ellipse: s-maj=23.7km s-min=14.6km az=71.0*

*NEIC **21** 11:25:28.3±1.9, 5°.10S±0°.07×134°.02E±0°.09, h10^{km}±1^{km}, mb4.5/27, Error ellipse: s-maj=16.0km s-min=10.8km az=73.0*

*DJA **21** 11:25:31.2±0.9, 5°S±2°×13°4E±°, h26^{km}±8^{km}, M5.0/48, mb4.9/48, mB5.5/23, MLv5.1/19, Mw(mB)4.9/23, MwMwp4.8/4, Mwp5.1/4*

ISC 21 11:25:30.7±0.4**, 5°.21S**±0°.05×**133°.98E**±0°.05**, h28**^{km}**, n136, σ1.^{s}59**/139**, mb4.4**/31**, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KMPI	Kaimana, Papua	1.56	350	P	Pn	11 25 55.9	-0.7
KMPI				S	Sn	11 26 13.8	-2.1
FAKI	Fak Fak	2.85	323		Pn	11 26 14.4	0.0
FAKI	Fak Fak	2.85	323	P	Pn	11 26 14.0	-0.4
FAKI	Fak Fak	2.85	323	P	Pn	11 26 14.2	-0.2
RKPI	Ransiki, Papua	3.68	3	P	Pn	11 26 26.3	+0.5
SAUI	Saumlaki	3.83	224		Pn	11 26 30.8	+2.9
SAUI	Saumlaki	3.83	224	P	Pn	11 26 31.7	+3.8
SAUI	Saumlaki	3.83	224	P	Pn	11 26 30.0	+2.1
SRPI	Serui, Papua	4.01	34	P	Pn	11 26 29.7	-0.7
BNDI	Bandanaira	4.11	279	P	Pn	11 26 33.7	+1.9
BNDI	Bandanaira	4.11	279	P	Pn	11 26 33.5	+1.7
MWPI	Manokwari, Pap	4.25	1	P	Pn	11 26 34.4	+0.7
BAKI	Biak	4.52	28	P	Pn	11 26 38.1	+0.7
SIJI	Sorong	5.09	328	P	Pn	11 26 44.1	-1.1
SWI	Sorong	5.09	328	P	Pn	11 26 44.9	-0.4
	2.0nm6µm134nm,0.6s						
MSAI	Masohi	5.36	290	P	Pn	11 26 50.0	+1.0
SMPI	Sarmi	5.70	56	P	Pn	11 26 54.4	+0.7
	0.4nm38nm,0.4s						
KRAI	Karang Ratu	5.87	288	P	Pn	11 26 56.2	+0.2
AAI	Ambon	5.96	284	P	Pn	11 26 58.0	+0.8
GENI	Genyem	6.70	67	P	Pn	11 27 08.6	+1.2
NLAI	Namlea	7.13	286	P	Pn	11 27 15.0	+1.7
MMPI	Merauke	7.14	117	P	Pn	11 27 17.1	+3.7
JAY	Jayapura	7.23	69	Pn	Pn	11 27 14.4	-0.2
	3.3nm,0.3s,baz=210,slow=8.4,SNR=10						
JAY				Sn	Sn	11 28 30.1	-5.8
	3.8nm,0.3s,baz=243,slow=9.7,SNR=11						
JAY				LR	LR	11 30 49.1	
	comp=Z,168nm,19.3s,baz=21,slow=45						
	11nm,0.5s						
JAY	Jayapura	7.23	69	P	Pn	11 27 14.6	0.0
	0.2nm25nm,0.8s						
DRS	Darwin Rock St	7.79	203	P	Pn	11 27 24.5	+2.1
MTN	Manton Dam	8.09	200		Pn	11 27 28.1	+1.6
SANI	Sanana	8.56	291	P	Pn	11 27 31.9	-1.1
SANI	Sanana	8.56	291	P	Pn	11 27 31.6	-1.4
	3µm112nm,0.5s						
TNTI	Ternate	8.88	312	P	Pn	11 27 37.3	0.0
	54nm,0.8s						
GAMI	Galela, Maluku	9.34	318	P	Pn	11 27 43.9	+0.3
	40nm,1.0s						
SOEI	Soe	10.63	244		Pn	11 28 00.7	-0.7
SOEI	Soe	10.63	244	P	Pn	11 28 02.3	+0.9
SOEI	Soe	10.63	244	P	Pn	11 28 01.0	-0.4
	1µm101nm,0.9s						
BATI	Baumata	11.36	243	Pn	Pn	11 28 11.9	+0.6
	31nm,0.3s,baz=355,slow=0.7,SNR=16						
BATI				Sn	Sn	11 30 12.2	-5.3
	15nm,0.3s,baz=161,slow=22,SNR=8.2						
BATI	Baumata	11.36	243	P	Pn	11 28 11.7	+0.4
	2µm103nm,0.6s						
KNRA	Kununurra	11.60	206		Pn	11 28 14.3	-0.2
LUWI	Luwuk	11.93	290		Pn	11 28 15.6	-3.5
LUWI	Luwuk	11.93	290	P	Pn	11 28 17.4	-1.6
LUWI	Luwuk	11.93	290	P	Pn	11 28 18.7	-0.3
	1µm104nm,1.0s						
MMRI	Maumere	12.14	253	Pn	Pn	11 28 19.7	-2.3
MMRI	Maumere	12.14	253	P	Pn	11 28 22.0	0.0
COEN	Coen	12.56	134		Pn	11 28 25.9	-1.8
EDFI	Ende, Flores	12.69	253	P	Pn	11 28 31.3	+1.7
	24nm,0.7s						
APSI	Ampana	13.03	289	P	Pn	11 28 35.3	+1.2
	1µm69nm,0.9s						
MRSI	Marisa	13.28	295	P	Pn	11 28 38.1	+0.5
	39nm,0.6s						
PMG	Port Moresby	13.72	108	Pn	Pn	11 28 42.0	-1.6
	5.2nm,0.6s,baz=274,slow=16,SNR=2.2						
PMG				LR	LR	11 35 21.2	
	comp=Z,228nm,18.1s,baz=320,slow=43						
PMG	Port Moresby	13.72	108		Pn	11 28 41.9	-1.8
PMG	Port Moresby	13.72	108	P	Pn	11 28 44.3	+0.7
	30nm,0.8s						
BKSI	Bulukumba	13.79	269	P	Pn	11 28 45.6	+1.0
	33nm,1.1s						
KAPI	Kappang	14.17	270	Pn	Pn	11 28 46.5	-3.2
KAPI	Kappang	14.17	270	P	Pn	11 28 50.7	+1.0
BASI	Baing, Sumba	14.18	249	P	Pn	11 28 51.7	+1.9
	191nm,1.1s						
SPSI	Sidrap Palu	14.21	274	P	Pn	11 28 51.0	+0.7
	1µm49nm,1.0s						
TTSI	Tana Toraja	14.28	278	P	Pn	11 28 52.3	+1.0
	13nm,0.8s						
LBFI	Labuhan Bajo,	14.36	256	P	Pn	11 28 51.7	-0.6
	21nm,0.5s						
WB0	Warramunga Arr	14.48	178		Pn	11 28 52.2	-1.8
TOLI2	Tolitoli	14.60	295		Pn	11 28 52.0	-3.5
WRAB	Tennant Creek	14.64	179		Pn	11 28 55.8	-0.4
WRA	Warramunga Arr	14.65	179	Pn	Pn	11 28 54.3	-2.0
	1.1nm,0.3s,baz=342,slow=14,SNR=20						
WRA				Sn	Sn	11 31 27.1	-11
	0.8nm,0.3s,baz=3.8,slow=22,SNR=3.4						
	1.9nm,0.4s						
WRA	Warramunga Arr	14.65	179	Pn	Pn	11 28 53.4	-2.9
WR8	Warramunga Arr	14.67	178		Pn	11 28 55.3	-1.3
PCI	Palu	14.75	286	P	Pn	11 28 59.7	+2.1
	38nm,0.4s						
MPSI	Mapaga	15.10	291	P	Pn	11 29 02.6	+0.3
	713nm14nm,0.8s						
WBSI	Waikabubak, Su	15.12	252	P	Pn	11 28 59.4	-3.2
	48nm,0.6s						
FITZ	Fitzroy Crossi	15.18	212	Pn	Pn	11 29 00.2	-3.2
	5.3nm,0.3s,baz=42,slow=12,SNR=70						
FITZ				Sn	Sn	11 31 40.0	-11
	9.0nm,0.3s,baz=186,slow=15,SNR=14						
FITZ	Fitzroy Crossi	15.18	212	Pn	Pn	11 29 01.2	-2.2
MMSI	Mamuju	15.23	279	P	Pn	11 29 04.8	+0.7
	11nm,0.6s						
DBNI	Kabupaten Domp	15.89	257	P	Pn	11 29 13.2	+0.6
	12nm,0.8s						
PLAI	Plampang	16.47	256	P	Pn	11 29 17.4	-2.7
TWSI	Taliwang, Sumb	17.32	257	P	Pn	11 29 27.5	-3.3
	19nm,0.9s						
AS31	Alice Springs	18.35	180	P	Pn	11 29 43.4	0.0
ASAR	Alice Springs	18.35	180	P	P	11 29 42.3	-1.0
	2.5nm,0.3s,baz=6.7,slow=12,SNR=83						
ASAR				S	Sn	11 32 56.5	-11
	1.2nm,0.6s,baz=358,slow=28,SNR=2.7						
	7.4nm,0.5s						
ASAR	Alice Springs	18.35	180	P	P	11 29 40.6	-2.8
CTA	Charters Tower	19.01	142	P	Pn	11 29 51.5	+0.1
	0.8nm,0.3s,baz=314,slow=11,SNR=9.6						
CTA				LR	LR	11 37 52.5	
	comp=Z,134nm,20.0s,baz=272,slow=39						
	7.5nm,0.7s						
CTAO	Charters Tower	19.01	142		P	11 29 49.1	-1.5
CTAO				IAmb	IAmb	11 30 09.2	
	comp=Z,23nm,0.9s						
BBKI	Banjar Baru	19.16	274	P	Pn	11 29 53.2	0.0
	comp=Z,79nm,1.3s						
JAGI	Jajag, Banyuwa	19.95	260		P	11 30 00.5	-0.3
JAGI				IAmb	IAmb	11 30 06.2	
	comp=Z,20nm,0.9s						
JAGI	Jajag, Banyuwa	19.95	260	P	P	11 30 01.3	+0.5
KMMI	Kalianget	19.98	264	P	Pn	11 30 04.0	+1.0
	comp=Z,93nm,1.0s						
BLJI	Banyuglugur	20.41	262	P	P	11 30 06.4	+0.6
KKM	Kota Kinabalu	20.96	302	P	P	11 30 10.6	-1.3
KKM				IAmb	IAmb	11 30 30.3	
	comp=Z,30nm,1.1s						
KKM	Kota Kinabalu	20.96	302	P	P	11 30 12.7	+0.8
	comp=Z,23nm,0.7s						
MBWA	Marble Bar	21.04	220		P	11 30 13.3	+0.8
MBWA				IAmb	IAmb	11 30 31.1	
	comp=Z,24nm,1.0s						
PSA00	Pilbara Seismi	21.27	219	P	P	11 30 15.3	+0.3
PSA00				IAmb	IAmb	11 30 34.3	
	comp=Z,15nm,0.8s						
PSA00	Pilbara Seismi	21.27	219	P	P	11 30 16.0	+1.0
PSA00				IAmb	IAmb	11 30 34.3	
	comp=Z,6.8nm,0.8s						
SNJI	Sawahan-Nganju	22.22	262	P	P	11 30 27.4	+1.9
PCJI	Pacitan	22.83	261	P	P	11 30 31.7	-0.2
	comp=Z,42nm,1.2s						
SBUM	Sibu	23.02	289	P	P	11 30 33.1	-0.7
SBUM	Sibu	23.02	289	P	P	11 30 35.0	+1.1
INKA	Innaminka	23.32	165	P	P	11 30 37.2	+0.6
INKA				IAmb	IAmb	11 30 54.1	
	comp=Z,7.2nm,0.7s						
EIDS	Eidsvold	25.90	142	P	P	11 31 01.1	+0.6
EIDS				IAmb	IAmb	11 31 18.7	
	comp=Z,7.6nm,0.8s						
FORT	Forrest	26.04	192	P	P	11 31 01.4	-0.3
FORT				IAmb	IAmb	11 31 19.5	
	comp=Z,12nm,0.8s						
BBJI	Bungbulang	26.26	264	P	P	11 31 03.8	-0.2
	comp=Z,15nm,0.8s						
STKA	Stephens Creek	27.48	166	P	P	11 31 16.2	+1.6
	comp=Z,1.0nm,0.4s,baz=328,slow=14,SNR=4.4						
	comp=Z,1.0nm,0.4s						
STKA	Stephens Creek	27.48	166	P	P	11 31 15.0	+0.3
BBOO	Buckleboo	27.53	176		P	11 31 14.5	-0.7
BBOO				IAmb	IAmb	11 31 35.4	
	comp=Z,15nm,1.0s						
JNU	Nakatsue	38.23	356	P	P	11 32 46.9	-1.6
NJ2	Nanjing	39.75	340	*e*P	P	11 33 02.3	+1.2
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CMAR	Chiang Mai Arr	41.78	305	P	P	11 33 19.1	+1.0
	comp=Z,0.6nm,0.3s,baz=134,slow=7.2,SNR=11						
	comp=Z,0.6nm,0.3s						
KSRS	Korea Array	42.81	353	P	P	11 33 26.9	+0.7
	comp=Z,4.5nm,0.8s,baz=181,slow=10,SNR=16						
	comp=Z,4.5nm,0.8s						
PZH	PanZhiHua	44.36	317	P	P	11 33 41.0	+1.9
LZH	Lanzhou	49.85	328	*e*P	P	11 34 23.5	+1.7
LZH				sP	sP	11 34 30.8	-1.4
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
HHC	Hu-ho-hao-te	50.23	338	*e*P	P	11 34 26.4	+1.9

HHC				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,53nm,3.7s						
GTA	Gaotai	54.45	328	eP	P	11 34 58.1	+2.2
GTA				sP	pwP	11 35 10.3	+2.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HILR	Hailar Array B	55.92	349	P	P	11 35 08.0	+1.8
	comp=Z,2.0nm,0.6s,baz=160,slow=9.4,SNR=1.7						
	comp=Z,2.0nm,0.6s						
SONM	Songino Array	58.12	338	P	P	11 35 22.0	+0.1
	comp=Z,0.4nm,0.7s,baz=142,slow=5.3,SNR=2.4						
SONM				PcP	PcP	11 36 13.7	+0.3
	comp=Z,0.6nm,0.7s,baz=142,slow=4.2,SNR=2.7						
	comp=Z,0.4nm,0.7s						
SONM	Songino Array	58.12	338	P	P	11 35 21.9	0.0
PETK	Petropavlovsk-	61.46	16	P	P	11 35 44.5	-0.1
	comp=Z,6.7nm,1.1s,baz=188,slow=7.5,SNR=5.8						
	comp=Z,6.7nm,1.1s						
WMQ	Urumqi	64.15	324	eP	P	11 36 04.4	+1.6
WMQ				sP	sP	11 36 13.4	0.0
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MK31	Makanchi Array	68.98	325	P	P	11 36 33.7	+0.1
MK31				IAmb	IAmb	11 36 52.3	
	comp=Z,2.2nm,1.1s						
MKAR	Makanchi Array	68.98	325	P	P	11 36 34.7	+1.1
	comp=Z,2.6nm,0.6s,baz=111,slow=7.8,SNR=40						
	comp=Z,2.6nm,0.6s						
MKAR	Makanchi Array	68.98	325	P	P	11 36 33.3	-0.3
MAKZ	Makanchi	69.17	325	P	P	11 36 34.9	+0.1
MAKZ				IAmb	IAmb	11 36 36.5	
	comp=Z,2.9nm,0.8s						
ZALV	Zalesovo Beam	71.80	332	P	P	11 36 50.5	-0.1
	comp=Z,0.5nm,0.4s,baz=103,slow=5.5,SNR=3.5						
	comp=Z,0.5nm,0.4s						
ZALV	Zalesovo Beam	71.80	332	P	P	11 36 50.7	0.0
KURBB	Kurchatov Arra	73.12	327	P	P	11 36 59.2	+0.6
	comp=Z,1.1nm,0.8s,baz=120,slow=4.6,SNR=9.0						
	comp=Z,1.1nm,0.8s						
VNDA	Vanda	73.77	174	P	P	11 37 02.6	+0.6
VNDA				IAmb	IAmb	11 37 16.4	
	comp=Z,4.6nm,1.1s						
KK31	Karatay Array	74.66	317	P	P	11 37 04.8	-3.0
KKAR	Karatay Array	74.66	317	P	P	11 37 04.7	-3.1
P08K	Saint George I	76.76	28	P	P	11 37 19.6	+0.2
UNV	Unalaska Valle	76.89	32	P	P	11 37 19.6	-0.7
BVAR	Borovoye Array	78.71	327	P	P	11 37 30.9	+0.5
	comp=Z,1.0nm,0.5s,baz=130,slow=7.1,SNR=6.2						
	comp=Z,1.0nm,0.5s						
BORK	Borovoye	78.76	327	P	P	11 37 30.9	+0.2
BORK				IAmb	IAmb	11 37 38.4	
	comp=Z,2.2nm,0.7s						
NRIK	Noril'sk	80.83	345	P	P	11 37 41.6	0.0
	comp=Z,2.6nm,0.7s,baz=151,slow=6.1,SNR=3.9						
	comp=Z,2.6nm,0.7s						
AB31	Akbulak array	83.60	321	P	P	11 37 56.9	+0.4
ABKAR	Akbulak array	83.60	321	P	P	11 37 56.6	+0.1
L16K	Owhat River	83.71	26	P	P	11 37 56.8	0.0
QSPA	South Pole Qui	84.76	180	P	P	11 38 02.9	+0.6
	comp=Z,3.4nm,0.7s,baz=298,slow=1.4,SNR=22						
	comp=Z,3.4nm,0.7s						
QSPA	South Pole Qui	84.76	180	P	P	11 38 02.8	+0.5
QSPA				IAmb	IAmb	11 38 03.8	
	comp=Z,4.1nm,0.8s						
IMAR	Indian Mountai	87.60	23	P	P	11 38 15.7	-0.4
ILAR	Eielson Array	90.06	25	P	P	11 38 26.4	-1.2
	comp=Z,0.4nm,0.6s,baz=258,slow=4.3,SNR=6.6						
	comp=Z,0.4nm,0.6s						
BMAR	Burnt Mountain	91.49	22		P	11 38 35.4	+1.1
BELA	Belgrano 2	96.79	182	P	P	11 38 59.7	+1.1
BELA				IAmb	IAmb	11 39 17.2	
	comp=Z,1.6nm,0.9s						
ARCES	ARCESS Array B	101.27	340	P	Pdif	11 39 18.1	-0.6
	comp=Z,4.6nm,1.1s,baz=65,slow=4.9,SNR=4.9						
TXAR	Lajitas Array	120.62	59	PKP	PKiKP	11 44 21.8	+0.9
	comp=Z,0.1nm,0.5s,baz=210,slow=0.7,SNR=1.9						
TORD	Torodi Ar. Bea	132.30	283	PKP	PKiKP	11 44 43.6	-0.8
	comp=Z,0.5nm,0.7s,baz=91,slow=4.7,SNR=3.6						

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*UCR **21** 11:36:00.6±0.9, 8°.55N×83°.21W, h16km±1km, MW4.2*

*CATAC **21** 11:36:00.8±0.2, 9°N±2°×8°3W±°, h5km±1km, M4.7/15, mb5.5/1, MLv4.3/15, Error ellipse: s-maj=4.5km s-min=2.9km az=174.5, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.95; $M_{\theta\theta}$-0.74; $M_{\phi\phi}$-0.22; $M_{r\theta}$0.38; $M_{\theta\phi}$0.13; $M_{\phi r}$-0.34; Fault plane solution: $M_0$1.01151×10^{15} NP1:ϕ_s115.95010°, δ59.78536°, λ100.22709°. NP2:ϕ_s276.22686°, δ31.74300°, λ73.04446°. Principal axes: T 1.1037, Plg73.1724°, Azm51.6514°; N -0.2208, Plg8.8257°, Azm290.7623°; P -0.8828, Plg14.2108°, Azm198.5088°; confirmed*

*IDC **21** 11:36:00.3±4.4, 9°.01N×82°.96W, h0km, mb3.5/2, mbtmp3.6/3, ML3.9/1 Error ellipse: s-maj=128.4km s-min=41.6km az=20.0*

*NEIC **21** 11:36:01.2±1.4, 8°.6N±0°.1×83°.17W±0°.08, h9km±11km, mb4.4/2, Error ellipse: s-maj=18.7km s-min=1.0km az=144.0*

ISC 21 11:36:01.2±0.7**, 8°.60N**±0°.02×**83°.20W**±0°.02**, h14**km±4km**, n111, σ1^s.06**/120**, mb3.9**/4**, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITO	Golfito	0.05	59	eP	Pg	11 36 03.4	-0.5
FITO				eS	Sg	11 36 05.8	+0.2
EDAD	Golfito	0.06	31	eP	Pg	11 36 03.7	-0.4
EDAD				eS	Sg	11 36 06.4	+0.5
PTJ1	Puerto Jimnez	0.12	239	P	Pg	11 36 03.9	-0.7
PTJ1	Puerto Jimnez	0.12	239	eP	Pg	11 36 03.8	-0.8
PTJ1				eS	Sg	11 36 07.0	+0.1
PIRO	Carate, Puerto	0.24	215		Pg	11 36 04.9	-1.5
PIRO				Sg	Sg	11 36 09.3	-0.5
PIRO	Carate, Puerto	0.24	215	P	Pg	11 36 04.7	-1.7
PIRO	Carate, Puerto	0.24	215	S	Sg	11 36 09.2	-0.7
PIRO	Carate, Puerto	0.24	215	eP	Pg	11 36 04.9	-1.5
NELY	Ciudad Neily	0.25	78	eP	Pg	11 36 06.7	0.0
NELY				eS	Sg	11 36 11.8	+1.4
VITO	San Vito	0.31	46	eP	Pb	11 36 08.4	-0.3
CDITO	Canoas	0.32	95	S	Sb	11 36 13.1	-0.7
CDITO	Canoas	0.32	95	P	Pg	11 36 07.4	-0.5
LPPC	Paso Canoas	0.36	100	eP	Pg	11 36 07.9	-0.7
LPPC				eS	Sb	11 36 14.0	-1.0
RSRNO	Rio Sereno	0.40	57	eP	Pb	11 36 09.8	-0.4
DMCAL	E. de Neily	0.41	80	eP	Pb	11 36 09.1	-1.1
EDP2	Potrero Grande	0.41	3	eP	Pb	11 36 10.0	-0.4
FIMO	Fila Mora	0.42	338	eP	Pb	11 36 09.5	-1.0
PANP	Palmar Norte	0.44	324	eP	Pg	11 36 09.4	-0.6
ARIEL	Armuelles	0.46	132	eP	Pn	11 36 16.8	+3.4
SCLRA	Santa Clara, W	0.47	60	eP	Pb	11 36 10.9	-0.5
ALCO	Alturas Coton,	0.50	46	eP	Pb	11 36 11.1	-0.9
PTPA	Petro Terminal	0.51	141	eP	Pg	11 36 10.1	-1.2
BRU2	Volcan	0.54	69		Pb	11 36 11.7	-0.8
BRU2				Sg	Sg	11 36 17.7	-1.4
BRU2	Volcan	0.54	69	S	Sg	11 36 18.2	-0.9
BRU2	Volcan	0.54	69	P	Pb	11 36 11.5	-1.1
BRU2	Volcan	0.54	69	eP	Pb	11 36 11.7	-0.8
BURE	Buenos Aires	0.59	346	eP	Pb	11 36 12.6	-0.7
LMNES	Limones	0.60	146	eP	Pg	11 36 11.8	-1.1
DRK0	Durika	0.66	356	P	Pg	11 36 13.4	-0.8
DRK0	Durika	0.66	356	S	Sb	11 36 23.6	-0.2
DRK0	Durika	0.66	356	eP	Pg	11 36 13.5	-0.8
JEFFS	S de V. Baru	0.66	84	eP	Pg	11 36 13.4	-0.8
EDPE	Pejibaye, P	0.67	326	eP	Pg	11 36 13.2	-1.0
BQTLY	Boquete Panama	0.75	78	eP	Pg	11 36 14.7	-1.0
SAJE	San Jernim	0.80	338	eP	Pg	11 36 15.7	-1.2
ZEDO	Perez Zeledon	0.89	328	eP	Pg	11 36 17.5	-1.0
PBNVO	Pueblo Nuevo,	1.04	74	eP	Pg	11 36 18.9	-2.3
RBALA	Bur	1.07	75	eP	Pg	11 36 19.5	-2.4
BRIBI	Bribri	1.08	20	eP	Pn	11 36 21.8	-0.1
BUS1	Rivas	1.09	330	eP	Pg	11 36 20.6	-1.9
PIEC	Cerro El Cedra	1.26	324	eP	Pn	11 36 23.3	-1.4
RAZU	San Marcos de	1.33	322	eP	Pn	11 36 24.4	-1.2
PITB	Pirrs, San	1.33	322	eP	Pn	11 36 24.0	-1.6
LCR2	La Lucha 2	1.39	325	S	Sg	11 36 45.3	-0.8
REPA	Paraso	1.39	332	eP	Pn	11 36 25.7	-0.7
VINA	Juan Vinas	1.40	337	eP	Pn	11 36 25.5	-0.9
PICV	PH. Pirrs	1.42	316	eP	Pn	11 36 26.0	-0.7
VERB	Verbena	1.42	340	eP	Pn	11 36 26.2	-0.7
PCAYA	Pacayas	1.44	335	eP	Pn	11 36 26.4	-0.8
VTCV	VTCV, Calle Va	1.47	339	eP	Pn	11 36 26.6	-0.9
RAFA	San Farael, Vo	1.48	336	Pn	Pn	11 36 27.1	-0.7
RAFA	San Farael, Vo	1.48	336	eP	Pn	11 36 27.7	-0.1
TAAN	Batan	1.48	354	eP	Pb	11 36 27.9	-0.7
RESJ	San Isidro (Tu	1.49	343	eP	Pn	11 36 27.7	0.0
ABRB	Las Abras (San	1.49	340	eP	Pn	11 36 27.8	0.0
CVTV	Tajo	1.50	339	eP	Pn	11 36 27.3	-0.7
PDCAN	Manzana , Fuen	1.52	102	eP	Pn	11 36 26.4	-1.6
LCOCO	El Coco	1.52	347	eP	Pn	11 36 27.6	-0.4
IRES	Siquirres	1.52	349	eP	Pn	11 36 27.4	-0.5
VICA	Volcano Irazu	1.52	335	eP	Pn	11 36 27.6	-0.8
ACOS	Acosta	1.52	321	eP	Pn	11 36 27.2	-1.0
AMPA	Desamparados	1.55	327	eP	Pn	11 36 27.8	-0.7
RVLA	Villa Bonita	1.55	346	eP	Pn	11 36 28.5	+0.1
ECI	Escuela Centro	1.57	328	eP	Pn	11 36 29.3	+0.4
SJS3	Mercedes San J	1.57	328	eP	Pn	11 36 29.1	+0.2
LUJA	Lujan	1.58	327	eP	Pb	11 36 29.7	-0.6
SJS	Escuela Geolog	1.58	328	eP	Pn	11 36 29.0	+0.1
CORON	Coronado	1.58	330	eP	Pn	11 36 28.7	-0.3
CENT	San Jose	1.58	327	eP	Pb	11 36 30.0	-0.4
EGUB	Earth Gu¡pi	1.65	346		Pb	11 36 30.5	-0.9
EGUB	Earth Gu¡pi	1.65	346	eP	Pn	11 36 30.0	+0.2
HDC	Heredia	1.66	327		Pn	11 36 30.4	+0.3
HDC	Heredia	1.66	327	eP	Pn	11 36 30.5	+0.4
BELE	Belen	1.68	325	eP	Pb	11 36 31.2	-0.8
TCS1	Tacares	1.80	323	P	Pn	11 36 32.2	+0.2
ATEO	Atenas	1.80	320	eP	Pn	11 36 32.4	+0.5
CARI	Cariari	1.83	343	eP	Pn	11 36 32.8	+0.4
ARZA	Esparza	2.00	314	eP	Pn	11 36 35.3	+0.6
TRT2	Tortugero	2.02	345	P	Pn	11 36 34.7	-0.1
TRT2	Tortugero	2.02	345	S	Sb	11 37 02.9	+0.2
TRT2	Tortugero	2.02	345	eP	Pn	11 36 34.7	-0.1
GMAL	Guarumal, Vera	2.12	113	eP	Pn	11 36 36.1	-0.1
SOCE	Pocosol	2.26	322	Pn	Pn	11 36 39.3	+1.1
CEDE	Laguna Cedeo	2.39	322	eP	Pn	11 36 41.4	+1.3
JTS	Las Juntas de	2.41	314	Pn	Pn	11 36 40.0	-0.3
	27nm,0.3s,baz=104,slow=10,SNR=85						
JTS				Sn	Sn	11 37 10.6	+0.9
	19nm,0.3s,baz=357,slow=20,SNR=6.4						
	141nm,0.5s						
JTS	Las Juntas de	2.41	314		Pn	11 36 40.2	-0.1
JTS	Las Juntas de	2.41	314	P	Pn	11 36 41.6	+1.3
JTS				S	Sn	11 37 12.1	+2.3
JTS	Las Juntas de	2.41	314	eP	Pn	11 36 39.5	-0.8
COVE	Coope Vega, Sa	2.42	331	P	Pn	11 36 41.9	+1.6
CMARA	Lajas Hojancha	2.61	303	P	Pn	11 36 43.6	+0.5
CMARA	Lajas Hojancha	2.61	303	S	Sn	11 37 16.3	+1.6
JUD3	Juan Diaz 3	2.79	304		Pn	11 36 46.0	+0.5
ELVJ	El Viejo (Barb	2.79	311	eP	Pn	11 36 47.5	+2.0
SAJU	San Juanillo,	2.88	301	eP	Pn	11 36 46.3	-0.4
UPAL	Upala	2.90	322	S	Sn	11 37 25.1	+3.4
ALIBA	Liberia Airpor	3.05	311	eP	Pn	11 36 51.3	+2.3
BCIP	Isla Barro Col	3.37	80	S	Sn	11 37 35.0	+1.7
BCIP	Isla Barro Col	3.37	80	eP	Pn	11 36 54.1	+0.7
BOAB	BOACO BROADBAN	4.53	328		Pn	11 37 10.5	+1.1
BOAB	BOACO BROADBAN	4.53	328	P	Pn	11 37 10.7	+1.3
MATN	Matagalpa	5.07	328	P	Pn	11 37 18.2	+1.3
SIUN	Universidad Ur	5.32	343	Pn	Pn	11 37 20.8	+0.5
YKA	Yellowknife Ar	58.44	344	P	P	11 45 55.3	-1.0
	0.4nm,1.0s,baz=138,slow=6.6,SNR=4.1						
	0.4nm,1.0s						
YKAW3	Yellowknife Wh	58.49	344	P	P	11 45 56.0	-0.7
G31M	Satah River	67.58	341	P	P	11 46 57.5	+0.5
G31M				IAmb	IAmb	11 47 12.9	
	comp=Z,6.4nm,1.4s						
BCAR	Beaver Creek A	68.47	335	P	P	11 47 03.3	+0.5
J25K	Salcha River,	70.55	336	P	P	11 47 16.3	+0.7
J25K				IAmb	IAmb	11 47 51.1	
	comp=Z,1.9nm,1.2s						
ILAR	Eielson Array	71.21	336	P	P	11 47 19.4	-0.2
	comp=Z,0.5nm,0.7s,baz=112,slow=4.4,SNR=6.9						
	comp=Z,0.5nm,0.7s						
ILAR	Eielson Array	71.21	336	P	P	11 47 20.0	+0.4
BMAR	Burnt Mountain	71.34	339	P	P	11 47 21.2	+0.8
ASAR	Alice Springs	141.49	243	PKP	PKPdf	11 55 34.5	+1.6
	comp=Z,0.2nm,0.5s,baz=100,slow=2.7,SNR=3.4						

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*BER **21** 12:19:33.2±3.5, 73°.69N×8°.49E, h12km±22km, Mw3.8, ML2.5(NAO), Confirmed Earthquake*

*NAO **21** 12:19:34.3±1.7, 73°.82N×8°.99E, h15km, ML2.5*

*KOLA **21** 12:19:39.8, 73°.29N×9°.83E, h0km, ML1.4, Error ellipse: s-maj=18.6km s-min=11.8km az=120.0, Norwegian sea*

ISC 21 12:19:28.7±1.2**, 73°.62N**±0°.06×**9°.04E**±0°.08**, h10**km**, n25, σ1^s.57**/28**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BEA1	Bear Island, N	2.89	67	Pn	Pb	12 20 19.6	-0.6
	baz=257,slow=18						
BEAR	Bear Island, N	2.89	68	Pn	Pb	12 20 19.6	-0.6
	baz=257,slow=18						
HSPB	Hornsund (broa	3.78	23	Pn	Pn	12 20 28.2	+1.3
HSPB	Hornsund (broa	3.78	23	Pn	Pn	12 20 28.2	+1.3
BRBA	Barentsburg A	4.64	13	Pn	Pn	12 20 39.4	+0.7
BRBA	Barentsburg A	4.64	13	Pn	Pn	12 20 39.4	+0.7
BRBB	Barentsburg B	4.67	13	Pn	Pn	12 20 41.2	+2.1
BRBB	Barentsburg B	4.67	13	Pn	Pn	12 20 41.2	+2.1
BRBB				eS	Sn	12 21 31.7	-1.6
SPA0	Spitsbergen Ar	4.92	18	Pn	Pn	12 20 44.8	+2.4
	baz=201,slow=14						
SPA0	Spitsbergen Ar	4.92	18	Pn	Pn	12 20 44.8	+2.4
	baz=201,slow=14						
HOPEN	Hopen	5.03	47	Pn	Pn	12 20 46.5	+2.4
HOPEN				Sn	Sn	12 21 40.4	-1.7
HOPEN	Hopen	5.03	47	eP	Pn	12 20 45.8	+1.7
HOPEN				eS	Sn	12 21 40.4	-1.7
HOPEN				IAML		12 21 45.6	
	comp=Z,7.2nm,0.7s						
TRO	Tromso	5.08	137	eP	Pn	12 20 49.8	+5.1
TRO				eS	Sn	12 21 45.1	+1.9
TRO				IAML		12 21 48.6	
	comp=Z,2.8nm,0.6s						
KBS	Kingsbay	5.38	6	Pn	Pn	12 20 50.1	+1.3
KBS	Kingsbay	5.38	6	eP	Pn	12 20 49.6	+0.8
KBS				eS	Sn	12 21 50.1	-0.6
KBS				IAML		12 21 59.3	
	comp=Z,2.3nm,0.7s						
LOF	Lofoten	5.71	163	eS	Sn	12 21 56.4	-2.4
JNW	Jan Mayen West	5.91	252	eP	Pn	12 20 57.1	+1.0
KIF	Kilpisjarvi	5.97	135	eP	Pn	12 21 02.2	+5.2
KIF				eS	Sn	12 22 06.3	+1.1
FAUS	Fauske	6.60	159	S	Sn	12 22 19.6	-1.2
FAUS	Fauske	6.60	159	eS	Sn	12 22 19.2	-1.6
FAUS				IAML		12 22 29.2	
	comp=Z,2.6nm,0.7s						
ARA0	ARCESS Array S	6.62	120	Pn	Pn	12 21 12.1	+6.3
	baz=322,slow=12						
ARA0				Sn	Sn	12 22 20.6	-0.6
	baz=307,slow=22						
ARA0	ARCESS Array S	6.62	120	eP	Pn	12 21 11.9	+6.0
ARA0				eS	Sn	12 22 21.3	+0.1
ARA0				IAML		12 22 29.5	
	comp=Z,1.1nm,0.6s						
ARCES	ARCESS Array B	6.62	120	P	Pn	12 21 11.6	+5.8
ARCES				S	Sn	12 22 20.6	-0.6
VADS	Vadso	7.22	109	P	Pn	12 21 19.9	+5.9
VADS				S	Sn	12 22 35.5	-0.4
SCO	Scoresbysund	9.98	267	i P	Pn	12 21 46.5	-5.3
SCO				i S		12 21 51.4	

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*AEIC **21** 12:27:14.7±1.0, 53°.1N±0°.2×171°.0W±0°.2, h211km±8km, Error ellipse: s-maj=36.9km s-min=9.9km az=161.0*

NEIC 21 12:27:14.2±1.0**, 52°.9N**±0°.2×**170°.8W**±0°.2**, h212**km±10km**, mb3.5**/3**, ML3.2**/14**, ML2.9**(AEIC)**, Error ellipse: s-maj=30.7km s-min=6.1km az=146.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLES	Cleveland East	0.57	99		Pn	12 27 43.1	+0.2
CLES				Sn	S	12 28 04.1	-1.2
CLES				IAML		12 28 39.4	
	comp=E,252nm,1.2s						
CLES				IAML		12 28 40.7	
	comp=N,452nm,1.2s						
CLCO	Concord Point,	0.68	100		Pn	12 27 43.7	+0.3
CLCO					S	12 28 06.8	+0.7
NIKH	Nikolski High	1.19	86		Pn	12 27 46.3	-0.2
NIKH				IAML		12 28 29.4	
	comp=N,66nm,1.0s						
NIKH	Nikolski High	1.19	86		S	12 28 10.2	-1.2
OKSP	Okmok Steeple	1.56	76		Pn	12 27 49.3	-0.2
OKSP					S	12 28 18.2	+1.4
OKTU	Okmok Mt. Tuli	1.74	73		Pn	12 27 50.9	-0.2
OKFG	Magazine Ridge	1.82	73		Pn	12 27 51.8	-0.1
KOFP	Korovin Flat P	2.10	254		Pn	12 27 54.6	0.0
KOWE	Korovin West	2.16	257		Pn	12 27 54.8	-0.5
ATKA	Atka Island	2.18	252		Pn	12 27 54.8	-0.6
MGOD	Makushin Gods	2.53	68		Pn	12 27 59.2	+0.1
MREP	Makushin Rep't	2.60	68		Pn	12 28 00.2	+0.2
MREP					S	12 28 34.8	-0.6
MNAT	Makushin Natee	2.66	67		Pn	12 28 00.5	0.0
UNV	Unalaska Valle	2.75	68		Pn	12 28 01.6	+0.1
UNV				IAML		12 28 38.9	
	comp=N,43nm,0.4s						
UNV				IAML		12 28 39.1	
	comp=E,30nm,0.6s						
UNV	Unalaska Valle	2.75	68		S	12 28 37.6	-0.6
AKMO	Akutan Morgan	3.11	66		Pn	12 28 05.9	+0.3
AHB	Akutan Harbor	3.22	66		Pn	12 28 07.3	+0.3
AKUT	Akutan	3.25	66	Pn	Pn	12 28 08.0	+0.7
AKUT				IAML		12 29 20.0	
	comp=E,40nm,1.0s						
AKUT				IAML		12 29 31.7	
	comp=N,29nm,1.0s						
GSIG	Igitkin Island	3.26	255		Pn	12 28 06.9	-0.6
ETKA	Kagalaska Isla	3.58	255		Pn	12 28 10.8	-0.5
ADK	Adak	3.73	256	Pn	Pn	12 28 12.9	-0.2
ADK				IAML		12 28 59.0	
	comp=N,70nm,1.0s						
KIWB	Kanaga Island	4.02	257	Pn	Pn	12 28 16.5	-0.1
ILAR	Eielson Array	17.02	36		P	12 30 58.2	+0.1
J25K	Salcha River,	17.49	38	P	P	12 31 02.7	-0.7
J25K				IAmb	IAmb	12 31 03.4	
	comp=Z,1.1nm,0.6s						
H29M	Whitestone	20.83	38	P	P	12 31 38.6	-0.6
J30M	Hart River	21.05	43	P	P	12 31 42.6	+1.0
J30M				IAmb	IAmb	12 32 03.0	
	comp=Z,0.6nm,0.8s						
G31M	Satah River	22.62	38	P	P	12 31 56.9	+0.3
INK	Inuvik	23.39	35	P	P	12 32 03.6	+0.1
INK				IAmb	IAmb	12 32 06.3	
	comp=Z,2.4nm,1.1s						

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*NOU **21** 12:42:49.7, 10°.87S×161°.92E, h21km, mb5.2/20, Solomon Islands*

*IDC **21** 12:42:51.0±5.4, 10°.72S×161°.90E, h79km±48km, mb3.6/7, mbtmp4.0/9, ML3.9/2, MS3.2/4, Error ellipse: s-maj=31.4km s-min=23.7km az=166.0*

*NEIC **21** 12:42:50.8±2.0, 10°.7S±0°.1×162°.1E±0°.1, h71km±9km, mb4.3/14, Error ellipse: s-maj=19.4km s-min=18.9km az=134.0*

ISC 21 12:42:49.0±0.6**, 10°.84S**±0°.07×**162°.04E**±0°.07**, h50**km**, n47, σ2^s.02**/46**, mb4.1**/12**, MS3.2**/3**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HURO	Huro Makira	0.39	340	P	Pn	12 42 59.4	+0.3
NGOA	Tingoa Renbel	2.07	250	P	Pn	12 43 20.9	-0.4
ALEG	Aligegeo Malai	2.46	327	P	Pn	12 43 29.5	+2.8
SAVO	Savo Central	2.76	307	P	Pn	12 43 31.4	+0.6
TATA	Tatamba Isabel	3.29	318	P	Pn	12 43 38.5	+0.5
SANVU	Saraoutou	6.80	133		Pn	12 44 28.6	+2.2
SANVU	Saraoutou	6.80	133	P	Pn	12 44 28.5	+2.2
DVP	Devils Point	9.07	140	P	Pn	12 45 00.0	+2.6
RTV	Rentapao	9.28	139	P	Pn	12 45 03.4	+3.2
DZM	Mont Dzumac	11.94	160	P	Pn	12 45 40.0	+3.3
	3.1nm,0.3s,baz=326,slow=19,SNR=81						
DZM				S	Sn	12 47 45.7	-2.9
	3.3nm,0.4s,baz=253,slow=19,SNR=1.6						
	5.4nm,0.3s						
DZM	Mont Dzumac	11.94	160		Pn	12 45 39.7	+3.0
DZM	Mont Dzumac	11.94	160	P	Pn	12 45 39.8	+3.1
MARNC	Mare, Loyalty	12.04	152	Pn	Pn	12 45 40.6	+2.6
MARNC	Mare, Loyalty	12.04	152	P	Pn	12 45 40.7	+2.7
YATNC	Mamie plateau,	12.09	158	P	Pn	12 45 40.4	+1.8
ONTNC	Ouen Toro	12.16	160	Pn	Pn	12 45 42.3	+2.6
ONTNC	Ouen Toro	12.16	160	P	Pn	12 45 42.3	+2.6
OUENC	Ouen Island, N	12.40	159	P	Pn	12 45 46.0	+3.1
PINNC	Pines Island,	12.80	157	Pn	Pn	12 45 52.5	+4.1
PINNC	Pines Island,	12.80	157	P	Pn	12 45 50.7	+2.4
FUNA	Funafuti	17.07	84		Pn	12 46 43.4	-0.9
CTA	Charters Tower	17.76	237	P	Pn	12 46 53.1	+0.2
	0.1nm,0.3s,baz=61,slow=15,SNR=2.7						
CTA				LR	LR	12 53 12.9	
	comp=Z,54nm,18.4s,baz=54,slow=35						
	3.6nm,0.9s						
CTAO	Charters Tower	17.76	237	P	P	12 46 53.4	+0.3
CTAO				IAmb	IAmb	12 47 12.8	
	comp=Z,22nm,1.4s						
MTSU	Mount Surprise	18.62	245	P	Pn	12 47 04.7	+1.4
WR8	Warramunga Arr	28.02	248	P	P	12 48 34.7	-0.9
WR8				IAmb	IAmb	12 49 09.9	
	comp=Z,5.6nm,1.2s						
WB0	Warramunga Arr	28.07	248	P	P	12 48 35.0	-1.0
WB0				IAmb	IAmb	12 48 51.4	
	comp=Z,5.6nm,1.1s						
WRA	Warramunga Arr	28.16	248	P	P	12 48 35.6	-1.3
	comp=Z,1.2nm,0.5s,baz=76,slow=9.1,SNR=15						
	comp=Z,1.2nm,0.5s						
WRA	Warramunga Arr	28.16	248	P	P	12 48 35.5	-1.4
STKA	Stephens Creek	28.20	219	LR	LR	12 59 41.1	
	comp=Z,65nm,18.6s,baz=27,slow=36						
AS31	Alice Springs	29.67	241	P	P	12 48 49.3	-1.0
ASAR	Alice Springs	29.67	241	P	P	12 48 48.5	-1.9
	comp=Z,0.4nm,0.4s,baz=64,slow=10.0,SNR=12						
ASAR				LR	LR	12 59 42.6	
	comp=Z,77nm,19.5s,baz=43,slow=34						
	comp=Z,0.4nm,0.4s						
ASAR	Alice Springs	29.67	241	P	P	12 48 49.0	-1.3
FAKI	Fak Fak	30.58	283	P	P	12 48 59.9	+1.5
BBOO	Buckleboo	32.39	224	P	P	12 49 14.2	+0.1
KNRA	Kununurra	32.72	258	P	P	12 49 16.0	-1.2
KNRA				IAmb	IAmb	12 49 32.3	
	comp=Z,9.8nm,1.0s						
FITZ	Fitzroy Crossi	35.93	254	P	P	12 49 43.0	-1.9
	comp=Z,2.6nm,0.6s,baz=91,slow=9.2,SNR=12						
	comp=Z,2.6nm,0.6s						
FITZ	Fitzroy Crossi	35.93	254	P	P	12 49 43.4	-1.6
ASAJ	Asahikawa	57.48	343	LR	LR	13 18 17.1	
	comp=Z,7.9nm,18.6s,baz=260,slow=37						
VNDA	Vanda	66.67	180	P	P	12 53 34.5	+0.4
	comp=Z,1.3nm,0.9s,baz=34,slow=7.3,SNR=1.5						
	comp=Z,1.3nm,0.9s						
VNDA	Vanda	66.67	180	P	P	12 53 34.7	+0.6
VNDA				IAmb	IAmb	12 53 50.6	
	comp=Z,15nm,1.5s						
QSPA	South Pole Qui	79.16	180	P	P	12 54 47.0	-1.4
	comp=Z,0.9nm,0.9s,baz=226,slow=1.3,SNR=7.0						
	comp=Z,0.9nm,0.9s						
QSPA	South Pole Qui	79.16	180	P	P	12 54 48.2	-0.2
QSPA				IAmb	IAmb	12 55 08.2	
	comp=Z,7.2nm,1.4s						
TRF	Thorofare Moun	82.51	20	P	P	12 55 04.9	-1.4
TRF				IAmb	IAmb	12 55 24.6	
	comp=Z,8.2nm,1.3s						
C18K	Utukok River	83.43	13	P	P	12 55 09.6	-1.2
C18K				IAmb	IAmb	12 55 23.5	
	comp=Z,4.0nm,1.2s						
ILAR	Eielson Array	84.50	20	P	P	12 55 14.7	-1.6
	comp=Z,0.5nm,0.6s,baz=238,slow=5.1,SNR=13						
	comp=Z,0.5nm,0.6s						
ILAR	Eielson Array	84.50	20	P	P	12 55 15.0	-1.2
YKA	Yellowknife Ar	96.47	28	P	P	12 56 10.8	-1.8
	comp=Z,0.2nm,0.6s,baz=262,slow=5.5,SNR=2.7						
	comp=Z,0.2nm,0.6s						

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*IDC **21** 12:46:36.8±1.0, 0°.50S×123°.12E, h0km, mb3.7/7, mbtmp3.7/7, MS3.0/3, Error ellipse: s-maj=90.1km s-min=17.9km az=62.0*

*DJA **21** 12:46:38.3±0.2, 1°S±2°×12°3E±°, h10km, M4.5/24, mB5.0/3, mb4.7/13, MLv4.4/24, Mw(mB)4.3/3*

ISC 21 12:46:38.8±0.7**, 0°.58S**±0°.05×**122°.64E**±0°.06**, h10**km**, n34, σ1^s.32**/33**, mb3.7**/7**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	Luwuk	0.48	164	P	Pg	12 46 48.2	0.0
LUWI				S	Sg	12 46 54.6	+0.1
APSI	Ampana	1.04	252	P	Pg	12 46 59.2	+0.3
MRSI	Marisa	1.26	326	P	Pn	12 47 00.0	-2.5
MRSI				S	Sb	12 47 15.5	-3.4
GTOI	Gorontalo	1.26	17	P	Pn	12 47 01.7	-0.8

GTOI				S	Sb	12 47 18.3	-0.7
PCI	Palu	2.82	263	P	Pn	12 47 25.3	+1.3
MPSI	Mapaga	2.89	288	P	Pn	12 47 23.9	-1.0
KDI	Kendari	3.36	180	P	Pn	12 47 30.7	-0.7
SANI	Sanana	3.65	114	P	Pn	12 47 34.0	-1.4
KKSI	Kolaka, Sulawe	3.70	195	P	Pn	12 47 35.5	-0.6
TTSI	Tana Toraja	3.73	229	P	Pn	12 47 36.7	+0.1
MMSI	Mamuju	4.28	241	P	Pn	12 47 44.4	+0.4
SPSI	Sidrap Palu	4.42	220	P	Pn	12 47 46.2	+0.2
BNSI	Bone	4.56	214	P	Pn	12 47 47.3	-0.6
PMSI	Majene	4.72	232	P	Pn	12 47 51.1	+1.0
TNTI	Ternate	4.91	74	P	Pn	12 47 51.4	-1.4
NLAI	Namlea	5.18	121	P	Pn	12 47 57.4	+0.9
KAPI	Kappang	5.27	213	P	Pn	12 47 57.5	-0.1
	24nm,0.5s						
BKSI	Bulukumba	5.34	208	P	Pn	12 47 59.6	+1.0
	0.1nm495nm25nm,0.5s						
AAI	Ambon	6.35	119	P	Pn	12 48 12.1	-0.5
MSAI	Masohi	6.86	114	P	Pn	12 48 20.9	+1.4
	0.3nm44nm,0.6s						
EDFI	Ende, Flores	8.17	187	P	Pn	12 48 36.7	-1.0
	24nm,0.6s						
BNDI	Bandanaira	8.25	118	P	Pn	12 48 40.2	+1.6
	79nm,0.7s						
SIJI	Sorong	8.63	92	P	Pn	12 48 45.2	+1.3
SOEI	Soe	9.26	170	P	Pn	12 48 52.9	+0.3
	29nm,1.0s						
BATI	Baumata	9.62	174	LR	LR	12 53 30.4	
	comp=Z,121nm,18.1s,baz=120,slow=43						
FAKI	Fak Fak	9.88	104	P	Pn	12 48 58.8	-2.2
WRA	Warramunga Arr	22.40	150	P	P	12 51 34.9	-2.7
	1.3nm,0.6s,baz=331,slow=9.6,SNR=9.7						
	1.3nm,0.6s						
ASAR	Alice Springs	25.42	155	P	P	12 52 05.8	-1.1
	1.1nm,0.6s,baz=336,slow=8.7,SNR=22						
	1.1nm,0.6s						
CMAR	Chiang Mai Arr	30.01	310	P	P	12 52 50.8	+2.8
	0.4nm,0.4s,baz=128,slow=8.4,SNR=4.7						
CMAR				LR	LR	13 06 22.1	
	comp=Z,12nm,18.1s,baz=130,slow=39						
	0.4nm,0.4s						
PALK	Pallekele	42.55	281	LR	LR	13 14 52.9	
	comp=Z,22nm,18.6s,baz=132,slow=39						
SONM	Songino Array	50.25	346	P	P	12 55 35.9	+0.5
	0.7nm,0.6s,baz=166,slow=9.9,SNR=4.0						
	0.7nm,0.6s						
MKAR	Makanchi Array	58.91	329	P	P	12 56 39.8	+1.6
	0.4nm,0.4s,baz=122,slow=8.4,SNR=9.9						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	63.28	330	P	P	12 57 06.5	-1.1
	0.2nm,0.3s,baz=115,slow=6.1,SNR=2.7						
	0.2nm,0.3s						
QSPA	South Pole Qui	89.36	180	P	P	12 59 34.8	-0.6
	0.6nm,0.6s,baz=303,slow=3.2,SNR=5.6						
	0.6nm,0.6s						

DNK ***21*** *13:03:46.0±3.4, 80°.14N×4°.98E, h15^{km}, ML1.4, Presumed earthquake*
BER ***21*** *13:03:55.5±2.5, 78°.56N×5°.42E, h10^{km}, Mw3.3, Confirmed Earthquake*
FCIAR ***21*** *13:03:59.0, 78°.40N×6°.62E, h10^{km}, station ZFI2 has station magnitude of 3.50 station OMEGA has station magnitude of 3.20*
ISC 21 13:03:53.9±1.5**, 78°.52N**±0°.07×**5°.24E**±0°.04**, h30**^{km}±15^{km}**, n15, σ2^{s}37**/28**, 1C-1D, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.38	70	⇓*i*P	Pb	13 04 18.8	-0.2
KBS				*e*S	Sn	13 04 33.4	-0.9
KBS				IAML		13 04 35.2	
	comp=Z,61nm,0.2s						
KBS	Kingsbay	1.38	70	*i* P	Pb	13 04 18.6	-0.4
KBS				*i* S	Sb	13 04 35.6	-0.6
BRBB	Barentsburg B	1.88	99	*e*P	Pb	13 04 26.1	-1.3
BRBB				*e*		13 04 41.0	
BRBB				*e*S	Sn	13 04 45.9	-0.7
SPA0	Spitsbergen Ar	2.29	93	⇑*i*P	Pb	13 04 32.6	-1.8
SPA0				*i* S	Sn	13 04 57.6	+1.0
SPA0	Spitsbergen Ar	2.29	93	*e*P	Pb	13 04 32.7	-1.7
SPA0				*e*S	Sn	13 04 57.6	+1.0
SPA0				IAML		13 05 00.7	
	comp=Z,12nm,0.3s						
HSPB	Hornsund (broa	2.67	120	*e*P	Pn	13 04 36.3	+1.5
HSPB				*e*S	Sn	13 05 04.7	-1.4
HSPB	Hornsund (broa	2.67	120	*e*P	Pn	13 04 37.2	+2.4
HSPB				*e*S	Sn	13 05 07.0	+0.9
HSPB				IAML		13 05 07.5	
	comp=Z,3.2nm,0.1s						
HOPEN	Hopen	4.72	105	*e*P	Pn	13 05 05.3	+2.3
HOPEN				*e*S	Sn	13 05 54.9	-1.7
HOPEN				IAML		13 06 02.0	
	comp=Z,8.2nm,0.6s						
NOR	Nord	4.86	320	*e*P	Pn	13 05 07.4	+2.6
DAG	Danmarks Havn	5.39	263	*e*S	Sn	13 06 10.3	-2.8
DAG	Danmarks Havn	5.39	263	*i* P	Pn	13 05 11.6	-0.6
DAG				*i* S	Sn	13 06 13.0	0.0
DAG				IAML		13 06 17.2	
	comp=Z,1.3nm,0.1s						
DBG	Daneborg	7.26	248	*e*P	Pn	13 05 39.9	+2.1
DBG				*e*S	Sn	13 06 56.2	-2.9
DBG	Daneborg	7.26	248	*i* P	Pn	13 05 40.0	+2.2
DBG				*i* S	Sn	13 07 02.0	+2.8
ZFI2	Zemlya Franca-	7.79	53	*e*P	Pn	13 05 47.1	+2.1
ZFI2				*e*S	Sn	13 07 06.9	-5.1
	comp=Z,12nm,1.9s						
OMEGA	Omega	7.81	53	*e*P	Pn	13 05 47.2	+2.0
OMEGA				*e*S	Sn	13 07 07.0	-5.4
	comp=Z,6.2nm,1.3s						

SNET ***21*** *13:10:41.2±2.0, 12°.97N×89°.68W, h19^{km}, ML3.7*
CATAC ***21*** *13:10:42.8±0.4, 13°N±2°×9°0W±°, h23^{km}±2^{km}, M3.7/22, MLv3.7/22, Error ellipse: s-maj=4.8km s-min=2.7km az=33.5, confirmed*
GCG ***21*** *13:10:43.6±0.8, 13°.10N×89°.67W, h39^{km}±4^{km}, MD3.7, ML3.3*
ISC 21 13:10:43.8±1.4**, 13°.06N**±0°.05×**89°.58W**±0°.04**, h28**^{km}±11^{km}**, n70, σ0^{s}95**/85**, 1D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.49	30	*i* P	Pb	13 10 54.2	+0.2
LALI				*e*S	Sb	13 11 02.3	+1.4
LALI				IAML		13 11 04.2	
	comp=N,383nm,0.2s						
LALI	Alcalda de L	0.49	30	P	Pb	13 10 54.2	+0.2
JAYA	Jayaque - finc	0.60	12	⇓*i*P	Pb	13 10 55.5	-0.4
JAYA				*e*S	Sn	13 11 05.3	-0.2
JAYA	Jayaque - finc	0.60	12	*i* P	Pb	13 10 55.4	-0.4
JAYA				*e*S	Sn	13 11 05.3	-0.2
JAYA	Jayaque - finc	0.60	12	S	Sb	13 11 04.8	+0.6
JAYA	Jayaque - finc	0.60	12	P	Pb	13 10 55.5	-0.4
PANCS	Alcalda de	0.67	35	P	Pb	13 10 56.5	-0.5
PANCS	Alcalda de	0.67	35	S	Sb	13 11 06.4	+0.5
LOMA	Loma Larga	0.70	34	*e*P	Pb	13 10 56.9	-0.7
LOMA				*e*S	Sb	13 11 07.6	+0.7
BOQS	Boqueron	0.73	23	*i* P	Pb	13 10 57.7	-0.4
CEDA	San Andres	0.76	13	S	Sb	13 11 09.0	+0.6
CEDA	San Andres	0.76	13	P	Pb	13 10 57.7	-0.7
IGN	Direccin Gen	0.76	31	P	Pb	13 10 57.8	-0.7
IGN	Direccin Gen	0.76	31	S	Sb	13 11 09.2	+0.7
CEVE	Cerro Verde	0.76	356	*e*P	Pb	13 10 57.9	-0.8
CEVE	Cerro Verde	0.76	356	P	Pb	13 10 57.8	-0.9
CEVE	Cerro Verde	0.76	356	S	Sn	13 11 09.3	-0.4
UDBS	Universidad Do	0.77	32	S	Sb	13 11 09.4	+0.6
UDBS	Universidad Do	0.77	32	P	Pb	13 10 58.0	-0.6
SBLS	San Blas	0.77	357	*e*P	Pb	13 10 57.9	-1.0
LBRS	Las Brisas	0.85	38	*i* P	Pb	13 10 59.6	-0.4
NUBE	Las Nubes	0.86	347	*e*P	Pb	13 10 58.7	-1.5
NUBE				*e*S	Sb	13 11 10.8	-0.7
NUBE	Las Nubes	0.86	347	*i* P	Pb	13 10 58.7	-1.5
NUBE				*i* S	Sb	13 11 10.5	-1.0
NUBE	Las Nubes	0.86	347	P	Pb	13 10 58.7	-1.5
FAME	Alcaldia de Sa	0.89	331	P	Pb	13 10 58.8	-1.8
PAVA	Las Pavas	0.90	44	*e*P	Pb	13 11 00.4	-0.4
PAVA				*e*S	Sb	13 11 13.6	+1.1
PAVA	Las Pavas	0.90	44	P	Pb	13 11 00.5	-0.4
TECO	Alcaldia de Te	0.91	59	S	Sb	13 11 12.6	0.0
TECO	Alcaldia de Te	0.91	59	P	Pn	13 10 59.9	-0.8
UNIC	Universidad Ca	0.91	2	P	Pb	13 11 00.0	-1.1
UNIC	Universidad Ca	0.91	2	S	Sn	13 11 13.8	+0.7
LOAL	Lomas de Alarc	0.95	348	P	Pb	13 11 00.5	-1.2
LOAL	Lomas de Alarc	0.95	348	S	Sn	13 11 14.5	+0.5
UESV	Universidad de	0.95	53	P	Pn	13 11 00.7	-0.7
UESV	Universidad de	0.95	53	S	Sb	13 11 14.2	+0.1
SCLA	Alcaldia de Sa	1.04	52	S	Sb	13 11 16.5	-0.1
SCLA	Alcaldia de Sa	1.04	52	P	Pn	13 11 02.4	-0.2
LLGN	La Laguna	1.25	29	S	Sn	13 11 22.1	+0.5
LLGN	La Laguna	1.25	29	P	Pn	13 11 05.6	0.0
PACA	Pacayal	1.28	72	P	Pn	13 11 06.3	+0.3
PACA	Pacayal	1.28	72	S	Sn	13 11 22.7	+0.4
LCY	Lacayo	1.30	74	*e*P	Pn	13 11 06.4	+0.2
MTO3	Montecristo	1.34	9	S	Sn	13 11 23.4	-0.6
MTO3	Montecristo	1.34	9	P	Pn	13 11 06.3	-0.6
BLLM	Bellamira	1.35	74	*e*P	Pn	13 11 07.2	+0.2
CNRM	Centro Naciona	1.43	73	S	Sn	13 11 26.5	+0.8
ESQI	Esquipulas	1.50	9	P	Pn	13 11 08.7	-0.4
ESQI	Esquipulas	1.50	9	S	Sn	13 11 28.2	+0.4
FG16	Alotenango, Sa	1.51	323	*e*P	Pb	13 11 12.3	+1.0
FG16				*e*S	Sb	13 11 36.1	+5.9
FG16				IAML		13 11 41.9	
	comp=E,1µm,0.2s						
LCND	La Caada	1.66	81	*e*P	Pn	13 11 11.2	+0.1
LCND	La Caada	1.66	81	S	Sn	13 11 31.9	+0.4
LCND	La Caada	1.66	81	P	Pn	13 11 10.9	-0.2
CNCH	Conchagua	1.71	83	*e*P	Pn	13 11 12.1	+0.2
CNCH				*e*S	Sn	13 11 33.3	+0.4
CNCH	Conchagua	1.71	83	P	Pn	13 11 11.5	-0.4
SARH	Santa Rosa de	1.88	25	*e*P	Pn	13 11 14.0	-0.2
SARH				*e*S	Sn	13 11 37.1	+0.2
SARH	Santa Rosa de	1.88	25	P	Pn	13 11 14.2	+0.1
CSGN	Cosiguina Volc	1.97	92	P	Pn	13 11 15.4	+0.1
CSGN				S	Sn	13 11 39.5	+0.3
POTN	Potosi Cosigui	2.02	92	S	Sn	13 11 40.8	+0.5
STG5	El Palmar, Qui	2.18	308	*e*P	Pb	13 11 21.3	-1.4
TGUH	Tegucigalpa,Un	2.45	66	P	Pn	13 11 22.0	-0.1
TGUH				S	Sn	13 11 51.5	+0.4
CRIN	San Cristobal	2.49	98	S	Sn	13 11 52.4	+0.3
CRIN	San Cristobal	2.49	98	P	Pn	13 11 22.0	-0.5
RTAL	Retalhuleu	2.52	305	S	Sn	13 11 53.2	+0.4
PKGN	Cerro Pekin	2.56	99	P	Pn	13 11 23.2	-0.4
PKGN				S	Sn	13 11 53.6	-0.2
POLN	Al Sur del Vol	2.73	98	P	Pn	13 11 24.7	-1.1
POLN				S	Sn	13 11 58.2	+0.4
YUSH	Yuscaran	2.80	71	S	Sn	13 12 00.6	+0.8
YUSH	Yuscaran	2.80	71	P	Pn	13 11 26.8	-0.1
CNGA	Al SSO del Vol	2.86	101	P	Pn	13 11 26.5	-1.1
CNGA				S	Sn	13 12 01.3	+0.1
CNGN	Cerro Negro	2.86	101	P	Pn	13 11 27.4	-0.2
CNGN	Cerro Negro	2.86	101	S	Sn	13 12 01.0	-0.2

IDC 21 13:18:12.7±1.3**, 30°.68S**×**178°.28W, h0**^{km}**, mb4.0**/4**, mbtmp4.0**/4**, MS3.5**/5**, Error ellipse: s-maj=34.1km s-min=25.7km az=113.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.46	12	Pn	Pb	13 18 41.2	+0.5
	84nm,0.3s,baz=236,slow=18,SNR=1.7						
RAO				Sn	Sg	13 18 56.8	-2.8
	287nm,0.3s,baz=59,slow=22,SNR=6.0						
URZ	Urewera	8.46	205	Pn	Pn	13 20 13.5	-3.0
	0.7nm,0.3s,baz=254,slow=2.8,SNR=6.2						
URZ				Sn	Sn	13 21 49.0	-3.7
	2.6nm,0.3s,baz=205,slow=22,SNR=11						
DZM	Mont Dzumac	16.14	298	LR	LR	13 27 03.7	
	comp=Z,72nm,20.6s,baz=179,slow=33						
CTA	Charters Tower	33.61	280	LR	LR	13 36 23.3	
	comp=Z,39nm,19.9s,baz=56,slow=32						
STKA	Stephens Creek	34.18	257	P	P	13 24 59.9	+0.1
	3.4nm,0.7s,baz=71,slow=10,SNR=5.7						
	3.4nm,0.7s						
ASAR	Alice Springs	42.85	267	P	P	13 26 12.8	-0.1
	1.3nm,0.8s,baz=103,slow=8.1,SNR=15						
	1.3nm,0.8s						
WRA	Warramunga Arr	43.87	273	P	P	13 26 21.0	-0.1
	0.9nm,0.4s,baz=111,slow=8.1,SNR=12						
	0.9nm,0.4s						
BATI	Baumata	57.45	278	LR	LR	13 50 46.4	
	comp=Z,46nm,21.8s,baz=122,slow=34						
QSPA	South Pole Qui	59.43	180	P	P	13 28 16.9	0.0
	0.9nm,0.6s,baz=318,slow=1.0,SNR=9.7						
	0.9nm,0.6s						
BBB	Bella Bella	93.46	28	LR	LR	14 10 57.8	
	comp=Z,27nm,18.4s,baz=192,slow=34						
JTS	Las Juntas de	98.01	83	LR	LR	14 04 52.2	
	comp=Z,94nm,20.1s,baz=264,slow=29						
FINES	FINESS Array B	145.33	340	PKPbc	PKPbc	13 37 48.9	-2.7
	1.5nm,0.5s,baz=39,slow=4.4,SNR=9.1						
AKASG	Malin Array Be	151.38	322	PKPbc	PKiKP	13 38 09.2	+0.8
	0.4nm,0.4s,baz=37,slow=2.3,SNR=2.5						

IDC ***21*** *13:27:48.4±1.1, 12°.55N×144°.07E, h0^{km}, mb3.7/5, mbtmp3.7/5, MS3.0/5, Error ellipse: s-maj=34.9km s-min=17.6km az=114.0*
ISC 21 13:27:52.3±1.2**, 12°.5N**±0°.2×**144°.1E**±0°.2**, h27**^{km}**, n17, σ0^{s}36**/7**, mb3.7**/5**, MS2.8**/5**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.29	34	Pn	Pn	13 28 14.6	+0.1
	72nm,0.3s,baz=285,slow=6.2,SNR=50						
GUMO				Sn	Sn	13 28 30.8	-0.1
	292nm,0.3s,baz=105,slow=22,SNR=18						
GUMO				LR	LR	13 28 50.6	
	comp=Z,338nm,20.2s,baz=90,slow=48						
JHJ	Hachijo jima 2	20.90	350	LR	LR	13 40 12.6	
	comp=Z,37nm,18.4s,baz=168,slow=36						
H11S3	WAKE ISLAND Hy	22.52	72	T	T	13 55 55.3	
	baz=258,slow=75,SNR=5.8						
H11S1	WAKE ISLAND Hy	22.53	72	T	T	13 55 59.3	
	baz=258,slow=75,SNR=4.3						
H11S2	WAKE ISLAND Hy	22.53	72	T	T	13 55 53.4	
	baz=258,slow=75,SNR=4.4						
H11N1	WAKE ISLAND Hy	22.99	69	T	T	13 56 33.0	
	baz=255,slow=75,SNR=12						
H11N2	WAKE ISLAND Hy	23.00	69	T	T	13 56 33.2	
	baz=255,slow=75,SNR=8.1						
H11N3	WAKE ISLAND Hy	23.00	69	T	T	13 56 32.4	
	baz=255,slow=75,SNR=8.2						
JNU	Nakatsue	23.83	332	LR	LR	13 41 14.5	
	comp=Z,27nm,18.9s,baz=132,slow=34						
MJAR	Matsushiro Arr	24.52	348	LR	LR	13 41 12.0	
	comp=Z,35nm,21.3s,baz=143,slow=33						
WRA	Warramunga Arr	33.66	197	P	P	13 34 30.9	-0.1
	0.4nm,0.6s,baz=19,slow=8.2,SNR=2.6						
	0.4nm,0.6s						
FITZ	Fitzroy Crossi	35.47	211	LR	LR	13 48 50.5	
	comp=Z,26nm,21.8s,baz=178,slow=36						
ASAR	Alice Springs	37.32	196	P	P	13 35 02.6	+0.1
	0.5nm,0.7s,baz=16,slow=11,SNR=9.4						
	0.5nm,0.7s						
SONM	Songino Array	47.21	326	LR	LR	13 56 34.3	
	comp=Z,23nm,18.2s,baz=287,slow=37						
MKAR	Makanchi Array	61.77	317	P	P	13 38 09.1	+0.4
	0.4nm,0.6s,baz=93,slow=7.8,SNR=3.9						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	64.99	320	P	P	13 38 29.5	-0.3
	0.5nm,0.3s,baz=104,slow=6.6,SNR=6.2						
	0.5nm,0.3s						
BVAR	Borovoye Array	70.33	322	P	P	13 39 03.0	-0.5
	0.9nm,0.5s,baz=100,slow=7.4,SNR=5.3						
	0.9nm,0.5s						

MOS ***21*** *13:47:43.8±1.4, 46°.53N×152°.89E, h32^{km}, mb4.0/1, Error ellipse: s-maj=27.0km s-min=12.0km az=136.5*
SKHL ***21*** *13:47:45.0±0.3, 46°.70N×152°.80E, h42^{km}±3^{km}, mb4.7/5*
IDC ***21*** *13:47:48.1±3.5, 46°.57N×152°.84E, h53^{km}±32^{km}, mb3.2/5, mbtmp3.5/7, ML3.0/2, Error ellipse: s-maj=38.7km s-min=21.8km az=132.0*
ISC 21 13:47:45.8±1.1**, 46°.5N**±0°.1×**152°.9E**±0°.1**, h40**^{km}**, n27, σ1^{s}93**/26**, mb3.3**/5**, 1C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.75	252	*e*PN	Pn	13 48 40.4	-0.7
KUR	Kuril'sk	3.75	252	*e*P	Pn	13 48 41.4	+0.3
KUR				AMB	AMB	13 48 44.2	
	100nm,0.5s						
KUR				*e*S	Sn	13 49 23.9	-0.1
KUR				A	A	13 49 30.7	
	100nm,0.3s						
KUR				A	A	13 49 30.7	
	100nm,0.3s						
YUK	Yuzh-Kuril'sk	5.56	246	*e*PN	Pn	13 49 06.0	+0.1
YUK				pmax	pmax		
	comp=N,31nm,0.2s						
YUK				pmax	pmax		
	comp=E,25nm,0.2s						
YUK				pmax	pmax		
	comp=Z,52nm,0.2s						
YUK	Yuzh-Kuril'sk	5.56	246	*e*P	Pn	13 49 06.1	+0.1
YUK				AMB	AMB	13 49 07.5	
	comp=Z,50nm,0.5s						
YUK				*e*S	Sn	13 50 06.6	-1.9
YUK				A	A	13 50 11.3	
	comp=Z,80nm,0.7s						
YUK				A	A	13 50 11.3	
	comp=Z,110nm,0.7s						
PAU	Pauzhetka	5.60	26	*e*P	Pn	13 49 05.5	-1.0
PAU				AMB	AMB	13 49 15.5	
	comp=Z,20nm,0.3s						
PAU				*e*S	Sn	13 50 05.6	-3.9
PAU				A	A	13 50 10.6	
	comp=Z,30nm,0.3s						
PAU				A	A	13 50 10.6	
	comp=Z,40nm,0.3s						
RUSJ	Misakicho	5.92	249	*e*PN	Pn	13 49 13.0	+2.1
GLVR	Golovnino	5.92	245	*e*PN	Pn	13 49 11.3	+0.4
GLVR				pmax	pmax		
	comp=Z,54nm,0.1s						
GLVR	Golovnino	5.92	245	*e*P	Pn	13 49 11.3	+0.4
GLVR				AMB	AMB	13 49 12.2	
	comp=Z,50nm,0.3s						
GLVR				*e*S	Sn	13 50 17.3	-0.1
GLVR				A	A	13 50 19.9	
	comp=Z,80nm,0.3s						
GLVR				A	A	13 50 19.9	
	comp=Z,70nm,0.3s						
NMR	Nemuro--Hokkai	5.99	241	⇑*i*PN	Pn	13 49 09.8	-2.0
NMR	Nemuro--Hokkai	5.99	241	*i* P	Pn	13 49 10.0	-1.8
NMR				*e*S	Sn	13 50 14.7	-4.3
AKK	Akkeshi	6.72	242	*e*S	Sn	13 50 34.1	-3.0
PETK	Petropavlovsk-	7.31	23	P	Pn	13 49 30.1	+0.2
	comp=Z,0.4nm,0.3s,baz=186,slow=12,SNR=11						
	comp=Z,4.6nm,0.8s						
JKA	Kamikawa-asahi	7.66	256	*e*P	Pn	13 49 37.8	+3.1
ASAJ	Asahikawa	7.66	256	P	Pn	13 49 37.8	+3.0
	comp=Z,0.4nm,0.3s,baz=94,slow=24,SNR=5.8						
	comp=Z,6.6nm,0.9s						
H11N2	WAKE ISLAND Hy	29.05	152	T	T	14 25 11.8	
	baz=340,slow=76,SNR=24						
H11N1	WAKE ISLAND Hy	29.06	152	T	T	14 25 08.1	
	baz=340,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	29.06	152	T	T	14 25 17.8	
	baz=340,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	30.13	153	T	T	14 26 32.5	
	baz=341,slow=76,SNR=15						
H11S3	WAKE ISLAND Hy	30.14	153	T	T	14 26 34.2	
	baz=341,slow=76,SNR=13						
H11S2	WAKE ISLAND Hy	30.15	153	T	T	14 26 34.3	
	baz=341,slow=76,SNR=16						
ILAR	Eielson Array	36.83	38	P	P	13 54 50.2	+0.6
	comp=Z,0.2nm,0.6s,baz=270,slow=8.4,SNR=5.1						
	comp=Z,0.2nm,0.6s						
KURK	Kurchatov	47.40	304	P	P	13 56 16.0	+0.2
KURK	Kurchatov	47.40	304	*e*P	P	13 56 16.0	+0.2
KURBB	Kurchatov Arra	47.49	304	P	P	13 56 16.0	-0.6
	comp=Z,0.1nm,0.5s,baz=64,slow=7.9,SNR=1.7						
	comp=Z,0.1nm,0.5s						
YKA	Yellowknife Ar	51.21	37	P	P	13 56 46.8	+2.1
	comp=Z,0.2nm,0.6s,baz=296,slow=7.2,SNR=2.9						
	comp=Z,0.2nm,0.6s						
FINES	FINESS Array B	64.22	335	P	P	13 58 15.6	-0.5
	comp=Z,1.6nm,0.8s,baz=41,slow=4.4,SNR=4.8						
	comp=Z,1.6nm,0.8s						
ASAR	Alice Springs	71.92	198	P	P	13 59 06.0	+1.2
	comp=Z,0.3nm,0.6s,baz=16,slow=5.3,SNR=5.3						
	comp=Z,0.3nm,0.6s						

IDC ***21*** *14:02:13.8±1.7, 12°.01N×86°.94W, h0^{km}, mb3.8/3, mbtmp3.7/4, ML3.0/1, Error ellipse: s-maj=65.8km s-min=26.5km az=48.0*
CATAC ***21*** *14:02:14.7±0.2, 11°N±2°×8°7W±°, h25^{km}, M3.8/31, MLv3.8/31, Error ellipse: s-maj=4.1km s-min=2.0km az=36.2, confirmed*
SNET ***21*** *14:02:20.0±0.6, 12°.50N×87°.09W, h140^{km}±23^{km}, ML2.8*
ISC 21 14:02:14.7±1.7**, 11°.44N**±0°.04×**87°.41W**±0°.04**, h23**^{km}±12^{km}**, n67, σ0^{s}88**/83**, mb3.5**/3**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	1.08	47	P	Pn	14 02 34.4	-0.1
AMTN	Mateare	1.24	50	S	Sb	14 02 53.5	+0.4
CNGA	Al SSO del Vol	1.25	33	P	Pn	14 02 36.9	0.0
CNGA				S	Sn	14 02 53.1	0.0
CNGN	Cerro Negro	1.26	33	P	Pn	14 02 36.7	-0.3
CNGN	Cerro Negro	1.26	33	S	Sn	14 02 53.2	0.0
QUEN	Al S del Volca	1.27	25	P	Pb	14 02 37.7	-0.2
PKGN	Cerro Pekin	1.29	19	P	Pn	14 02 37.3	-0.1
PKGN				S	Sb	14 02 54.7	+0.3
UNAN	Cigeo UNAN	1.30	59	P	Pn	14 02 36.8	-0.7
UNAN				S	Sb	14 02 55.4	+0.7
CRIN	San Cristobal	1.30	16	P	Pn	14 02 37.6	+0.1
CRIN	San Cristobal	1.30	16	S	Sn	14 02 54.1	-0.1
APYN	Apoyeque	1.30	53	P	Pn	14 02 37.7	+0.2
TISN	Laguna Tiscapa	1.31	58	P	Pb	14 02 38.8	0.0
SABN	Sabanita	1.32	67	P	Pn	14 02 36.9	-0.9
POLN	Al Sur del Vol	1.33	26	P	Pn	14 02 38.0	0.0
MGAN	Managua	1.33	58	P	Pn	14 02 37.6	-0.4
MGAN	Managua	1.33	58	S	Sn	14 02 55.2	+0.2
MAS3	Al N del Volca	1.34	64	P	Pn	14 02 37.7	-0.3
MAS3				S	Sb	14 02 55.6	-0.3
MOM2	El Cardon	1.34	42	P	Pn	14 02 38.0	0.0
MOM2				S	Sn	14 02 55.6	+0.5
NANN	Nandasmo	1.35	68	S	Sb	14 02 56.3	0.0
NANN	Nandasmo	1.35	68	P	Pn	14 02 38.7	+0.5
NADN	Granada	1.38	77	S	Sn	14 02 56.1	-0.1
CSGN	Cosiguina Volc	1.53	354	P	Pn	14 02 40.9	+0.1
CSGN				S	Sn	14 03 00.1	+0.1
POTN	Potosi Cosigui	1.55	356	P	Pn	14 02 40.9	0.0
POTN				S	Sn	14 03 01.3	+1.0
MORN	Al O del Volca	1.73	86	P	Pn	14 02 43.0	-0.4
MORN				S	Sn	14 03 04.7	0.0
CARN	Rivas	1.87	98	P	Pn	14 02 45.2	-0.1
CARN				S	Sn	14 03 07.3	-0.8
CNCH	Conchagua	1.87	347	*e*P	Pn	14 02 45.2	-0.3
CNCH	Conchagua	1.87	347	P	Pn	14 02 45.6	+0.2
CNCH	Conchagua	1.87	347	S	Sn	14 03 09.1	+0.7
LIMN	Finca el Limon	1.91	32	P	Pn	14 02 45.7	-0.2
LIMN				S	Sn	14 03 09.1	-0.1
LCND	La Caada	1.92	346	*e*P	Pn	14 02 45.1	-0.8
LCND	La Caada	1.92	346	P	Pn	14 02 46.2	+0.3
BOAB	BOACO BROADBAN	1.98	59	P	Pn	14 02 46.4	-0.4
ELI1	Hacienda Flor	1.98	113	S	Sn	14 03 10.9	-0.2
ELI1	Hacienda Flor	1.98	113	P	Pn	14 02 46.6	-0.3
MATN	Matagalpa	2.07	44	P	Pn	14 02 47.0	-1.1
MATN	Matagalpa	2.07	44	S	Sn	14 03 13.3	0.0
PACA	Pacayal	2.20	336	*e*P	Pn	14 02 50.2	+0.2
PACA				*e*S	Sn	14 03 13.1	-3.6
PACA	Pacayal	2.20	336	P	Pn	14 02 50.1	0.0
TECA	Tecapa	2.30	332	*e*P	Pn	14 02 51.7	+0.3
TECA				*e*S	Sn	14 03 17.2	-2.0
RCVN	Varillal2	2.44	29	P	Pn	14 02 53.8	+0.6
PQSS	Presa 15 de Se	2.44	333	P	Pn	14 02 52.2	-1.0
PQSS	Presa 15 de Se	2.44	333	S	Sn	14 03 22.6	+0.2
TECO	Alcaldia de Te	2.48	327	P	Pn	14 02 53.9	+0.2
TECO	Alcaldia de Te	2.48	327	S	Sn	14 03 22.5	-0.8
YUSH	Yuscaran	2.56	12	P	Pn	14 02 55.5	+0.7
UESV	Universidad de	2.56	328	S	Sn	14 03 25.5	+0.1
SCLA	Alcaldia de Sa	2.59	330	*e*P	Pn	14 02 55.4	+0.1
SCLA				*e*S	Sn	14 03 23.2	-2.9
SCLA				IAML		14 03 30.6	
	comp=Z,46nm,0.5s						
SCLA	Alcaldia de Sa	2.59	330	S	Sn	14 03 26.4	+0.3
SCLA	Alcaldia de Sa	2.59	330	P	Pn	14 02 56.1	+0.8
TGUH	Tegucigalpa,Un	2.60	3	P	Pn	14 02 56.1	+0.6
TGUH				S	Sn	14 03 26.5	-0.1
JTS	Las Juntas de	2.67	115	Pn	Pn	14 02 57.2	+0.9
	comp=Z,2.8nm,0.3s,baz=320,slow=18,SNR=6.7						
JTS				Sn	Sn	14 03 27.0	-1.0
	comp=Z,19nm,0.3s,baz=328,slow=23,SNR=12						
	comp=Z,5.6nm,0.3s						
JTS	Las Juntas de	2.67	115	P	Pn	14 02 56.6	+0.3

JTS				S	Sn	14 03 27.6	-0.4
PAVA	Las Pavas	2.71	327	S	Sn	14 03 29.3	+0.3
PMON	Piamonte	2.92	321	S	Sn	14 03 34.5	0.0
PMON	Piamonte	2.92	321	P	Pn	14 02 60.0	0.0
NUBE	Las Nubes	3.37	317	P	Pn	14 03 06.8	+0.8
NUBE	Las Nubes	3.37	317	S	Sn	14 03 44.6	-0.9
FAME	Alcaldia de Sa	3.49	313	P	Pn	14 03 07.4	-0.2
TRT2	Tortugero	3.71	103	P	Pn	14 03 10.4	-0.2
LCR2	La Lucha 2	3.75	116	P	Pn	14 03 11.2	-0.1
LCR2	La Lucha 2	3.75	116	S	Sn	14 03 54.4	-0.5
TXAR	Lajitas Array	23.38	322	P	P	14 07 23.1	+1.1
	comp=Z,1.0nm,0.6s,baz=133,slow=10,SNR=16						
	comp=Z,1.0nm,0.6s						
PDAR	Pinedale Array	36.68	332	P	P	14 09 20.0	-0.1
	comp=Z,0.3nm,0.6s,baz=124,slow=9.8,SNR=4.3						
	comp=Z,0.3nm,0.6s						
SCHQ	Schefferville	46.23	16	P	P	14 10 35.5	-2.5
	comp=Z,5.4nm,0.9s,baz=201,slow=9.2,SNR=5.4						
	comp=Z,5.4nm,0.9s						
ASAR	Alice Springs	138.93	247	PKhKP	PKPpre	14 21 39.1	
	comp=Z,0.4nm,0.9s,baz=85,slow=2.0,SNR=2.8						
ASAR				PKP	PKiKP	14 21 44.9	+2.5
	comp=Z,0.4nm,0.9s,baz=86,slow=1.6,SNR=5.0						
WRA	Warramunga Arr	139.02	253	PKP	PKiKP	14 21 45.3	+2.6
	comp=Z,0.5nm,0.6s,baz=92,slow=2.3,SNR=2.2						
CMAR	Chiang Mai Arr	149.64	348	PKPbc	PKiKP	14 22 04.0	-0.5
	comp=Z,1.2nm,0.7s,baz=350,slow=4.0,SNR=9.3						

*IDC **21** 14:09:49.4±0.9, 22°.91N×121°.37E, h0^{km}, mb3.8/9, mbtmp3.8/12, ML3.4/3, MS3.2/4, Error ellipse: s-maj=30.4km s-min=18.5km az=65.0*

*NIED **21** 14:09:55.4, 23°.02N×121°.35E, h42^{km}, MW4.0, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.30; M$_{\theta\theta}$0.98; M$_{\phi\phi}$-0.68; M$_{r\theta}$-0.40; M$_{\theta\phi}$0.20; M$_{\phi r}$-0.38; Fault plane solution: M$_0$1.03000×10^{15} NP1: φ$_s$307.00000°, δ54.00000°, λ-12.00000°. NP2: φ$_s$44.00000°, δ80.00000°, λ-143.00000°.*

*TAP **21** 14:09:55.9, 23°.01N×121°.39E, h40^{km}, ML4.4, C*

*JMA **21** 14:09:55.4±0.2, 23°.0N±0°.7×12°1E±°, h42^{km}, MV4.2/18, TAIWAN REGION*

ISC 21 14:09:55.1±0.8, **23°.00N**±0°.02×**121°.46E**±0°.02, **h33**^{km}±2^{km}, **n187**, σ**1^{s}.16**/290, **mb3.6**/9, **MS3.3**/4, **27C-29D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	Chengkung	0.13	319	⇓iP	Pb	14 10 02.5	+1.5
CHKT				i S	Sb	14 10 07.3	+2.1
CHKH	Chenggong	0.20	344	⇓iP	Pb	14 10 03.0	+1.3
CHKH				S	Sb	14 10 08.2	+2.0
ECS	Chishang	0.24	293	⇓iP	Pb	14 10 03.4	+1.2
ECS				i S	Sb	14 10 09.0	+2.1
FULB	Fuli	0.24	323	⇓P	Pb	14 10 03.2	+1.0
FULB				S	Sb	14 10 09.2	+2.1
ECBN	Changbin	0.31	359	⇑iP	Pn	14 10 04.5	+1.2
ECBN				i S	Sb	14 10 10.7	+2.2
TTN	Taitung	0.38	229	P	Pn	14 10 04.9	+0.7
TTN				i S	Sn	14 10 12.2	+2.1
TWF1	Yuli	0.38	337	⇓iP	Pb	14 10 04.3	+0.4
TWF1				S	Sb	14 10 10.1	+0.1
TWGBT	Beinan	0.39	242	P	Pb	14 10 03.9	-0.2
TWGBT	Beinan	0.39	242	S	Sb	14 10 08.6	-1.7
TWGBT	Beinan	0.39	242	⇓iP	Pb	14 10 04.2	+0.1
TWGBT				i S	Sb	14 10 10.0	-0.3
TWG	Pinlang	0.40	243	⇓iP	Pb	14 10 04.2	+0.1
TWG				i S	Sb	14 10 10.1	-0.3
YULB	Yu-li	0.41	340	P	Pb	14 10 04.4	-0.1
YULB	Yu-li	0.41	340	S	Sb	14 10 10.6	-0.3
YULB	Yu-li	0.41	340	⇓iP	Pb	14 10 04.7	+0.2
YULB				i S	Sb	14 10 10.6	-0.3
ELDTW	Lidau	0.44	295	⇓iP	Pb	14 10 04.9	0.0
ELDTW				i S	Sb	14 10 10.8	-0.9
HGSD	Ruisui	0.49	357	⇑iP	Pn	14 10 06.2	+0.5
HGSD				i S	Sn	14 10 14.7	+1.6
EHYH	Wanrong	0.50	348	⇑iP	Pn	14 10 05.8	0.0
EHYH				i S	Sb	14 10 12.4	-0.6
EHY	Hungye	0.52	346	⇑iP	Pn	14 10 05.9	-0.2
EHY				i S	Sb	14 10 12.8	-0.7
ECL	Taimali	0.61	229	⇑iP	Pn	14 10 06.6	-0.7
ECL				i S	Sn	14 10 14.3	-1.8
STYH	Taoyuan	0.65	285	⇓iP	Pn	14 10 08.2	+0.4
STYH				i S	Sn	14 10 16.7	-0.2
EGFH	Guangfu	0.66	358	eP	Pn	14 10 07.8	-0.3
YUS	Yu-Shan	0.67	316	⇓iP	Pn	14 10 08.9	+0.3
YUS				i S	Sn	14 10 17.4	-0.8
TEGC	Jichi Village	0.71	6	eP	Pb	14 10 09.7	+0.6
TEGC				eS	Sb	14 10 20.1	+1.5
ALS	Alishan	0.78	310	⇓iP	Pb	14 10 11.1	+0.6
ALS				i S	Sn	14 10 21.4	+0.7
SHUL	Shoufeng	0.79	7	eP	Pb	14 10 10.6	+0.1
SSD	Sandimen	0.80	252	⇓iP	Pn	14 10 10.1	+0.1
SSD				eS	Sn	14 10 19.3	-1.5
VWDT	VWDT	0.80	339	⇑iP	Pn	14 10 10.6	+0.6
VWDT				S	Sn	14 10 20.0	-0.8
SGST	Jiashian	0.81	276	⇓iP	Pn	14 10 10.4	+0.3
SGST				i S	Sn	14 10 21.3	+0.4
ESL	Shilin	0.81	359	⇑iP	Pn	14 10 09.6	-0.5
ESL				S	Sn	14 10 19.2	-1.8
WTP	Ta-pu	0.81	288	⇓iP	Pb	14 10 11.4	+0.6
WTP				S	Sb	14 10 22.8	+1.2
TPUB	Ta-pu	0.82	292	P	Pb	14 10 11.3	+0.4
TPUB	Ta-pu	0.82	292	⇓iP	Pb	14 10 11.4	+0.5
TPUB				i S	Sb	14 10 22.4	+0.7
TAW	Tawu	0.82	219	⇑iP	Pn	14 10 09.8	-0.5
TAW				S	Sn	14 10 19.9	-1.3
EAST	Anshuo	0.83	222	⇑iP	Pn	14 10 10.0	-0.5
MASBT	Mashibuluo	0.85	243	⇑iP	Pn	14 10 11.0	+0.3
MASBT				eS	Sn	14 10 21.2	-0.8
TEYL	Yanliau Villag	0.87	9	i P	Pb	14 10 12.3	+0.5
TEYL				S	Sb	14 10 24.8	+1.6
CHN1	Nanshi	0.87	282	⇓iP	Pb	14 10 12.5	+0.7
CHN1				S	Sb	14 10 24.4	+1.2
WHYT	Xinyi Township	0.89	321	P	Pb	14 10 12.6	+0.5
WHYT				i S	Sn	14 10 23.8	+0.9
WCKO	Fanlu	0.90	299	P	Pb	14 10 12.8	+0.5
SSLB	Suanglung	0.91	330	P	Pn	14 10 12.2	+0.7
SSLB	Suanglung	0.91	330	S	Sn	14 10 24.1	+0.6
SSLB	Suanglung	0.91	330	⇑iP	Pn	14 10 12.3	+0.7
SSLB				i S	Sn	14 10 23.4	-0.1
SNST	Tainan City	0.91	284	⇓iP	Pb	14 10 12.9	+0.5
SNST				i S	Sb	14 10 24.8	+0.6
CHN5	Tsauling	0.93	310	⇓iP	Pb	14 10 13.4	+0.6
CHN5				S	Sb	14 10 25.8	+0.9
TWK	Hsinying	0.93	287	⇓iP	Pb	14 10 13.1	+0.3
TWK				S	Sb	14 10 26.2	+1.4
SGLT	Jiouru	0.93	253	eP	Pb	14 10 13.9	+1.1
SGLT				eS	Sb	14 10 27.5	+2.7
ETM	Tongmen	0.96	2	⇑iP	Pn	14 10 11.8	-0.4
LAY	Lan-yu	0.96	175	⇑iP	Pn	14 10 12.4	+0.1
TWM1	Shoushan	0.97	260	⇓iP	Pb	14 10 15.1	+1.6
TWM1				eS	Sb	14 10 31.2	+5.2
HWA	Hwalien	0.98	8	eP	Pn	14 10 12.7	+0.2
OWD	Renai	0.98	345	⇑iP	Pn	14 10 12.9	+0.2
OWD				eS	Sn	14 10 24.1	-1.4
SCZT	Fangliau	0.99	231	⇑iP	Pn	14 10 13.1	+0.4
SCZT				S	Sb	14 10 26.6	-0.1
LYUB	Lan-yu	1.00	173	⇑iP	Pn	14 10 12.0	-0.8
LYUB				eS	Sn	14 10 24.6	-1.1
CHN3	Shinhua	1.01	274	⇓P	Pb	14 10 15.4	+1.3
CHN3				eS	Sb	14 10 30.2	+3.2
SMLT	Sun Moon Lake	1.01	330	⇑iP	Pb	14 10 14.4	+0.1
SMLT				S	Sn	14 10 26.9	+0.7
LXIB	Xiulin Townshi	1.01	358	⇑iP	Pn	14 10 12.7	-0.5
LXIB				eS	Sn	14 10 24.6	-1.7
WUSB	Renai	1.03	343	⇑iP	Pn	14 10 14.0	+0.7
WUSB				eS	Sn	14 10 26.0	-0.7
CHN2	Minshiung	1.04	301	P	Pb	14 10 15.3	+0.6
CHN2				S	Sb	14 10 28.9	+0.8
TYC	Yuchr	1.05	329	⇑iP	Pb	14 10 15.1	+0.3
TYC				i S	Sn	14 10 28.1	+1.1
WJS	Zhushan	1.05	321	P	Pb	14 10 15.3	+0.5
WJS				S	Sb	14 10 29.6	+1.2
WGK	Gukeng	1.07	310	eP	Pb	14 10 16.0	+0.9
WGK				S	Sb	14 10 30.0	+1.3
CHY	Chiayi	1.07	298	eP	Pb	14 10 15.3	+0.2
CHY				eS	Sb	14 10 28.8	0.0
TWD	Chiawan	1.08	7	eP	Pn	14 10 13.6	-0.2
SSHA	Shanhua	1.08	277	eP	Pb	14 10 16.3	+0.9
SSHA				eS	Sb	14 10 31.1	+1.9
WDLH	Douliu	1.08	309	eP	Pb	14 10 16.1	+0.7
WDLH				eS	Sb	14 10 30.9	+1.7
WDL	Douliou City	1.10	310	eP	Pb	14 10 16.4	+0.7
WDL				eS	Sb	14 10 30.6	+0.9
WNT	Mingjian	1.12	321	eP	Pb	14 10 16.5	+0.5
WNT				eS	Sb	14 10 30.5	+0.2
SMST	Manzhou Townsh	1.13	210	eP	Pn	14 10 14.6	+0.1
WHF	Hehuan Shan	1.15	351	eP	Pn	14 10 15.3	+0.1
WHF				eS	Sn	14 10 29.4	-0.6
WSSB	Gushan	1.16	252	eP	Pb	14 10 17.4	+0.8
ETL	Fush Village	1.16	8	eP	Pn	14 10 15.0	0.0
ETL				eS	Sn	14 10 28.6	-1.1
WCS	Beigang Elemen	1.16	335	eP	Pb	14 10 16.7	0.0
WCS				eS	Sn	14 10 30.5	+0.8
NACB	Ninganchiao	1.17	6	P	Pn	14 10 14.7	-0.5
NACB	Ninganchiao	1.17	6	⇑P	Pn	14 10 14.7	-0.5
NACB				eS	Sn	14 10 27.5	-2.5
SCLT	Jiali	1.17	279	P	Pb	14 10 16.7	-0.1
SCLT				eS	Sb	14 10 32.4	+0.6
WLCH	Liuqiu	1.19	237	eP	Pb	14 10 19.8	+2.8
HEN	Hengchun	1.19	214	eP	Pn	14 10 16.1	+0.7
HEN				eS	Sn	14 10 30.7	+0.2
CHN8	Yiju	1.20	287	⇓iP	Pb	14 10 16.8	-0.4
CHN8				eS	Sb	14 10 32.5	+0.1
ETLH	Xiulin Townshi	1.20	1	eP	Pn	14 10 15.2	-0.4
TWP	Hsiaoliuchiu	1.20	237	eP	Pb	14 10 19.5	+2.2
TSEB	Hengchuen, Pin	1.21	205	⇑iP	Pn	14 10 16.4	+0.7
TSEB				S	Sb	14 10 31.9	-0.9
TWKBT	Hengchun	1.21	209	⇑iP	Pn	14 10 15.9	+0.3
TWKBT				S	Sn	14 10 30.6	-0.3
TWK1	Hengchun	1.21	210	⇑iP	Pn	14 10 15.9	+0.2
TWK1				eS	Sn	14 10 30.9	-0.1
WSL	Shuilin Townsh	1.24	295	eP	Pb	14 10 17.6	-0.4
WSL				eS	Sn	14 10 32.9	+1.2
TSCK	Chigu Township	1.27	277	eP	Pb	14 10 17.9	-0.6
TSCK				eS	Sn	14 10 33.6	+1.3
TWT	Tachien	1.27	348	⇑P	Pn	14 10 17.8	+1.1
TWT				eS	Sn	14 10 31.2	-1.5
TDCB	Techi	1.27	348	⇑P	Pn	14 10 17.8	+1.1
TDCB				eS	Sn	14 10 30.9	-1.8
WSF	Szhu	1.30	299	⇓iP	Pn	14 10 18.0	+1.1
WSF				eS	Sn	14 10 34.2	+1.1
TCU	Taichung	1.34	328	eP	Pb	14 10 20.1	+0.3
TCU				S	Sb	14 10 36.9	+0.2
EAHA	Aohua	1.35	11	eP	Pn	14 10 18.2	+0.7
WCH1	Changhua City	1.35	322	eP	Pb	14 10 19.7	-0.2
WCH1				eS	Sb	14 10 37.4	+0.6
WCHH	Zhanghua	1.35	323	eP	Pb	14 10 19.4	-0.4
WCHH				eS	Sb	14 10 36.9	+0.1
WHP	Taichung City	1.35	340	eP	Pb	14 10 20.1	+0.1
WHP				eS	Sb	14 10 37.1	+0.2
EOS4	EOS4	1.37	35	eP	Pn	14 10 18.7	+1.2
EOS4				eS	Sn	14 10 35.1	+0.9
WTCT	Ta-ch'eng	1.38	309	eP	Pn	14 10 19.2	+1.2
WTCT				eS	Sn	14 10 36.5	+1.5
NNSB	Datong	1.42	357	eP	Pn	14 10 19.2	+0.5
NNSB				eS	Sn	14 10 35.5	-0.8
NNS	Nan Shan	1.43	357	eP	Pn	14 10 19.4	+0.6
ENA	Nanau	1.44	10	eP	Pn	14 10 19.0	+0.1
TWQ1	Liyutan	1.48	335	⇑P	Pb	14 10 21.5	-0.5
TWQ1				eS	Sb	14 10 40.7	+0.2
EOS3	EOS3	1.50	32	i P	Pn	14 10 21.0	+1.4
EOS3				i S	Sn	14 10 39.1	+1.2
LATG	Datong	1.53	2	eP	Pn	14 10 20.3	+0.1
NSY	Sanyi	1.54	336	eP	Pb	14 10 22.5	-0.6
NSY				eS	Sb	14 10 43.0	+0.7
EOS2	EOS2	1.58	27	eP	Pb	14 10 22.5	-1.1
EOS2				eS	Sn	14 10 41.8	+2.0
ENTT	Nioudou	1.63	4	eP	Pn	14 10 22.1	+0.5
ENTT				eS	Sn	14 10 40.8	-0.6
TWC	Suao	1.64	13	eP	Pn	14 10 22.6	+1.1
TWC				eS	Sn	14 10 42.6	+1.2
NDS	Dongshan	1.64	8	eP	Pn	14 10 22.2	+0.6
NDS				eS	Sn	14 10 41.3	-0.3
NMLH	Miaoli	1.65	338	eP	Pb	14 10 23.7	-1.1
NMLH				eS	Sb	14 10 44.4	-0.8
NFF	Wufeng Townshi	1.65	349	eP	Pb	14 10 24.0	-1.0
NFF				eS	Sb	14 10 44.5	-1.0
YHNB	Yeheng	1.66	358	P	Pn	14 10 23.2	+1.3
YHNB	Yeheng	1.66	358	eP	Pn	14 10 23.1	+1.1
YHNB				eS	Sn	14 10 42.3	+0.1
NSK	Sanguang	1.67	357	eP	Pn	14 10 23.2	+1.2
NSK				eS	Sn	14 10 42.2	-0.1
WDGT	Dungji	1.67	279	⇓P	Pn	14 10 22.5	+0.5
WDGT				eS	Sn	14 10 42.1	-0.2
NSTT	Nanjuang	1.67	346	eP	Pn	14 10 23.9	+1.9
NSTT				eS	Sn	14 10 43.2	+0.8
LIOB	Emei	1.69	346	eP	Pn	14 10 24.2	+2.0
LIOB				eS	Sn	14 10 44.5	+1.9
TWE	Neicheng	1.72	6	eP	Pn	14 10 23.4	+0.7
FUSB	Fushanzhiwuyua	1.75	4	eP	Pn	14 10 23.8	+0.6
FUSB				eS	Sn	14 10 44.0	-0.5
NWLT	Wulai	1.77	1	eP	Pn	14 10 24.4	+1.1
NWLT				eS	Sn	14 10 44.5	-0.2
KSHI	Guanxi Townshi	1.79	352	eP	Pb	14 10 26.1	-1.1
PHUB	P'eng-hu	1.81	287	⇓iP	Pn	14 10 24.3	+0.5
PHUB				eS	Sn	14 10 44.5	-1.0
SBCB	Hsinchu	1.83	347	eP	Pn	14 10 26.1	+1.9
PNG	Penghu	1.83	288	⇓P	Pn	14 10 24.9	+0.7
PNG				eS	Sn	14 10 45.6	-0.7
HSN	Hsinchu	1.85	346	eS	Sb	14 10 49.6	-1.3
VCHM	Qimei	1.88	277	⇓P	Pn	14 10 25.3	+0.5
VCHM				eS	Sn	14 10 46.2	-1.1
NHDH	Xindian Distri	1.95	2	eP	Pn	14 10 27.5	+1.6
NHDH				eS	Sn	14 10 50.0	+0.8
TATO	Taipei	1.96	1	P	Pn	14 10 27.7	+1.7
NCUH	Zhongli	1.97	353	eP	Pn	14 10 28.1	+2.0
NCUH				eS	Sb	14 10 53.0	-1.6
TWA	Mucha	1.97	3	eP	Pn	14 10 27.6	+1.4
NCU	National Centr	1.97	353	eP	Pn	14 10 26.9	+0.7
JYNG	Yonagunijimaku	1.99	43	P	Pn	14 10 28.2	+1.9
JYNG				eS	Sn	14 10 51.4	+1.4
TIPB	Shuangxi	1.99	10	eP	Pn	14 10 27.6	+1.2
YOJ	Yonaguni jima	2.04	44	P	Pn	14 10 29.0	+2.0
YOJ	Yonaguni jima	2.04	44	S	Sn	14 10 53.8	+2.5
YOJ	Yonaguni jima	2.04	44	eP	Pn	14 10 28.8	+1.8
YOJ				eS	Sn	14 10 52.8	+1.5
YOJ	Yonaguni jima	2.04	44	eP	Pb	14 10 29.4	-2.0
YOJ				S	Sn	14 10 53.2	+2.0
TWB1	Santiao Chiao	2.06	14	eP	Pn	14 10 29.3	+2.0
NWF	Wu-fen Shan	2.08	8	eP	Pn	14 10 29.0	+1.3
WFSB	Wu-fen Shan	2.08	8	eP	Pn	14 10 29.2	+1.6
WFSB				eS	Sn	14 10 53.8	+1.4
TWS1	Kuangyinshan	2.09	359	eP	Pn	14 10 29.8	+2.0
TWS1				eS	Sn	14 10 54.5	+1.9
SXI1	Grass Mountain	2.12	10	eP	Pn	14 10 29.8	+1.6
YM01	YM01	2.14	3	eP	Pn	14 10 29.5	+1.0
NTST	Danshui	2.15	360	eP	Pn	14 10 30.3	+1.7
NTST				eS	Sn	14 10 56.6	+2.5
ZUZH	Zhuzihu	2.15	2	eP	Pn	14 10 29.6	+0.9
ANP	Anpu	2.17	2	eP	Pn	14 10 30.0	+1.0
YM08	YM08	2.18	3	eP	Pn	14 10 29.6	+0.6
HATJ	Hateruma jima	2.40	64	eP	Pn	14 10 33.5	+1.5
HATJ				S	Sn	14 11 01.2	+0.9
IRIF	Iriomote-Funau	2.47	57	P	Pn	14 10 34.7	+1.7
IRIF				S	Sn	14 11 03.7	+1.7
JKRS	Kuro-shima	2.65	62	P	Pn	14 10 37.1	+1.8
JKRS				S	Sn	14 11 07.7	+1.4
JIJ	Ishigaki jima	2.81	61	P	Pn	14 10 38.8	+1.1
JIJ				S	Sn	14 11 11.4	+1.0
PTMZ	Houxiangcun	2.94	314	eP	Pn	14 10 39.8	+0.2
JISG	Ishigakijimahi	3.06	58	i P	Pn	14 10 41.9	+0.9
JISG				S	Sn	14 11 16.4	-0.1
KNM	Kinmen	3.11	298	eP	Pn	14 10 43.5	+1.7
KNMB	Chin-men Tao	3.16	298	eP	Pn	14 10 42.6	+0.1
JTJ	Tarama	3.39	61	eP	Pn	14 10 46.7	+1.1
JTJ				eS	Sn	14 11 25.8	+1.1
ZPLA	Ao Xicun	3.52	286	eP	Pn	14 10 48.0	+0.5
AXDP	Jialang	3.71	301	eP	Pn	14 10 50.3	+0.3
DSXP	Dongshan	3.77	282	⇓P	Pn	14 10 51.5	+0.7
MHZQ	Yeshan	3.79	325	eP	Pn	14 10 51.8	+0.7
LYJJ	Jianjiangzhen	3.85	337	eP	Pn	14 10 52.5	+0.5
JIRB	Irabujima	3.86	61	eP	Pn	14 10 53.3	+1.3
JIRB				eS	Sn	14 11 36.3	+0.1
JMJ2	Miyako jima3	3.94	63	eP	Pn	14 10 54.9	+1.7
JMJ2				eS	Sn	14 11 39.9	+1.5
JMJ	Miyako jima 2	3.95	62	P	Pn	14 10 55.1	+1.8
JIKM	Ikemajima	3.96	60	eP	Pn	14 10 54.6	+1.1
JIKM				eS	Sn	14 11 39.1	+0.3
JOGS	Gusukube	4.02	63	eP	Pn	14 10 56.2	+1.9
JOGS				eS	Sn	14 11 41.9	+1.7
XPSS	Dashiqiu	4.08	344	eP	Pn	14 10 55.0	0.0
SXFK	Yanhouchang	4.84	315	eP	Pn	14 11 05.6	0.0
JOW	Kunigami	7.27	57	Pn	Pn	14 11 39.0	0.0
	2.3nm,0.3s,baz=129,slow=27,SNR=12						
JOW				Sn	Sn	14 12 57.7	-2.7
	3.0nm,0.3s,baz=112,slow=26,SNR=6.2						
	6.7nm,0.3s						
JOW	Kunigami	7.27	57	P	Pn	14 11 39.4	+0.4
KSRS	Korea Array	15.44	20	Pn	Pn	14 13 31.8	+1.4
	0.3nm,0.3s,baz=198,slow=12,SNR=8.6						
	1.0nm,0.5s						
MJAR	Matsushiro Arr	19.80	43	P	P	14 14 23.5	+0.8
	baz=224,slow=9.5,SNR=4.5						
	1.2nm,0.7s						
CMAR	Chiang Mai Arr	21.53	262	LR	LR	14 23 25.6	
	comp=Z,31nm,18.1s,baz=55,slow=38						
SONM	Songino Array	27.55	338	P	P	14 15 36.8	-2.1
	1.1nm,0.8s,baz=134,slow=8.5,SNR=5.1						
SONM				LR	LR	14 27 56.4	
	comp=Z,59nm,20.2s,baz=196,slow=39						
	1.1nm,0.8s						
MKAR	Makanchi Array	39.36	317	P	P	14 17 22.6	+1.3
	0.8nm,0.7s,baz=98,slow=11,SNR=2.2						
	0.8nm,0.7s						
ZALV	Zalesovo Beam	41.37	328	P	P	14 17 37.1	-0.7
	1.8nm,0.4s,baz=116,slow=9.1,SNR=13						
	1.8nm,0.4s						
H11N1	WAKE ISLAND Hy	42.32	86	T	T	15 03 03.0	
	baz=282,slow=75,SNR=17						
H11N2	WAKE ISLAND Hy	42.32	86	T	T	15 03 02.5	
	baz=282,slow=75,SNR=19						
H11N3	WAKE ISLAND Hy	42.33	86	T	T	15 03 08.7	
	baz=282,slow=75,SNR=20						
H11S3	WAKE ISLAND Hy	42.41	87	T	T	15 03 10.1	
	baz=284,slow=75,SNR=35						
H11S1	WAKE ISLAND Hy	42.42	87	T	T	15 03 15.3	
	baz=284,slow=75,SNR=25						
H11S2	WAKE ISLAND Hy	42.43	87	T	T	15 03 15.7	
	baz=284,slow=75,SNR=31						
KURBB	Kurchatov Arra	43.17	321	P	P	14 17 53.3	+0.8
	0.4nm,0.4s,baz=106,slow=10,SNR=5.2						
	0.4nm,0.4s						
WRA	Warramunga Arr	44.50	163	P	P	14 18 02.0	-1.5
	0.5nm,0.8s,baz=344,slow=7.8,SNR=5.9						
	0.5nm,0.8s						
ASAR	Alice Springs	47.94	165	P	P	14 18 29.6	-1.0
	0.1nm,0.4s,baz=342,slow=8.3,SNR=5.1						
	0.1nm,0.4s						
BVAR	Borovoye Array	48.74	321	P	P	14 18 36.7	+0.3
	0.6nm,0.5s,baz=108,slow=8.2,SNR=6.1						
	0.6nm,0.5s						
FINES	FINESS Array B	72.59	330	P	P	14 21 17.3	-1.4
	4.8nm,1.0s,baz=67,slow=5.0,SNR=5.5						
	4.8nm,1.0s						
HFS	Hagfors	78.71	331	P	P	14 21 52.3	-1.6
	5.0nm,1.1s,baz=134,slow=8.3,SNR=1.7						
	5.0nm,1.1s						
NOA	NORSAR Array B	79.38	332	LR	LR	14 58 59.4	
	comp=Z,21nm,19.4s,baz=295,slow=37						
URZ	Urewera	80.23	139	LR	LR	14 54 27.0	
	comp=Z,19nm,20.3s,baz=195,slow=33						

*IDC **21** 14:26:11.8±1.1, 6°.54N×125°.17E, h0^{km}, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=26.0km s-min=9.8km az=123.0*

ISC 21 14:26:16.7±1.2, **6°.6N**±0°.1×**125°.4E**±0°.3, **h35**^{km}, **n6**, σ**0^{s}.99**/6, **mb3.5**/5, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.45	19	Pg	Pn	14 26 26.1	-0.6
	159nm,0.3s,baz=230,slow=3.1,SNR=11						
DAV				Lg	Lg	14 26 32.6	
	543nm,0.3s,baz=274,slow=16,SNR=14						
WRA	Warramunga Arr	27.84	162	P	P	14 32 02.6	-0.5
	0.7nm,0.8s,baz=330,slow=11,SNR=4.5						
	0.7nm,0.8s						
ASAR	Alice Springs	31.24	165	P	P	14 32 33.0	-0.3
	0.3nm,0.5s,baz=344,slow=7.1,SNR=16						
	0.3nm,0.5s						
MKAR	Makanchi Array	54.44	325	P	P	14 35 39.9	-0.8
	0.3nm,0.6s,baz=130,slow=7.1,SNR=4.4						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	58.60	327	P	P	14 36 10.7	+0.5
	2.2nm,0.2s,baz=104,slow=3.9,SNR=4.2						
	2.2nm,0.2s						
ILAR	Eielson Array	83.05	26	P	P	14 38 39.6	+1.2
	0.4nm,0.9s,baz=272,slow=7.9,SNR=2.8						
	0.4nm,0.9s						

*SJA **21** 14:28:36.3±0.6, 19°.50S×69°.83W, h77^{km}±3^{km}, ML3.6, MW3.7*

*GUC **21** 14:28:37.2±0.9, 19°.49S×69°.82W, h74^{km}±4^{km}, ML3.7*

ISC 21 14:28:37.7±1.4, **19°.49S**±0°.03×**69°.81W**±0°.05, **h75**^{km}±10^{km}, **n35**, σ**0^{s}.77**/53, **6C-4D**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	IPOC Station P	0.31	151	⇓eP	Pn	14 28 49.2	-0.5
PB11				eS	Sn	14 28 58.8	+0.2
PB11				IAML		14 28 59.8	
	comp=N,6μm,0.1s						
PB11	IPOC Station P	0.31	151	eP	Pn	14 28 49.2	-0.5
PB11				IAML		14 28 59.4	
	comp=Z,5μm,0.1s						
GO01	Chusmiza	0.61	107	eP	Pn	14 28 52.4	-0.2
GO01				eS	Sn	14 29 03.8	+0.2
GO01	Chusmiza	0.61	107	eP	Pn	14 28 52.3	-0.3
GO01				IAML		14 29 05.0	
	comp=Z,2μm,0.1s						
HMBC	Humberstone	0.79	185	⇑eP	Pn	14 28 53.9	-0.3
HMBC				eS	Sn	14 29 06.4	+0.1
HMBC				IAML		14 29 07.8	
	comp=N,3μm,0.3s						
HMBC	Humberstone	0.79	185	eP	Pn	14 28 53.6	-0.5
HMBC				IAML		14 29 10.7	
	comp=Z,3μm,0.2s						
TA02	Huaiquique	0.83	201	eP	Pn	14 28 54.2	-0.3
TA02				eS	Sn	14 29 07.0	0.0
TA02				IAML		14 29 08.3	
	comp=N,9μm,0.2s						
TA02	Huaiquique	0.83	201	eP	Pn	14 28 54.1	-0.3
TA02				eS	Sn	14 29 07.4	+0.4
TA02				IAML		14 29 08.6	
	comp=Z,3μm,0.2s						
PB08	IPOC Station P	0.90	136	⇓eP	Pn	14 28 55.7	0.0
PB08				eS	Sn	14 29 09.5	+0.5
PB08				IAML		14 29 09.9	
	comp=E,4μm,0.2s						
PB08	IPOC Station P	0.90	136	eP	Pn	14 28 55.5	-0.2
PB08				IAML		14 29 10.5	
	comp=Z,1μm,0.1s						
PX03	IPOC Station P	0.92	169	eP	Pn	14 28 55.0	-0.7
PX03				eS	Sn	14 29 09.1	+0.1
PX03				IAML		14 29 10.1	
	comp=N,6μm,0.3s						
PB12	IPOC Station P	1.00	331	⇓eP	Pn	14 28 56.2	-0.4
PB12				eS	Sn	14 29 10.7	0.0
PB12				IAML		14 29 11.4	
	comp=E,3μm,0.4s						
PB12	IPOC Station P	1.00	331	eP	Pn	14 28 56.2	-0.4
PB12				eS	Sn	14 29 11.1	+0.4
PB12				IAML		14 29 11.8	
	comp=Z,787nm,0.5s						
TA01	Diego Aracena	1.12	198	⇑eP	Pn	14 28 57.5	-0.5
TA01				eS	Sn	14 29 13.2	0.0
TA01	Diego Aracena	1.12	198	eP	Pn	14 28 57.6	-0.5
TA01				IAML		14 29 14.3	
	comp=Z,521nm,0.3s						
PB16	IPOC Station P	1.19	14	⇓eP	Pn	14 28 59.9	+0.4
PB16				eS	Sn	14 29 17.2	+1.7
PB16				IAML		14 29 18.6	
	comp=E,1μm,0.3s						
PB16	IPOC Station P	1.19	14	eP	Pn	14 28 59.8	+0.4
PB16				IAML		14 29 19.9	
	comp=Z,716nm,0.4s						
AP01	Chacalluta	1.22	336	eP	Pn	14 28 59.2	-0.1
AP01				eS	Sn	14 29 15.7	+0.3
AP01				IAML		14 29 18.4	
	comp=N,2μm,0.4s						
AP01	Chacalluta	1.22	336	eP	Pn	14 28 59.2	-0.1
AP01				eS	Sn	14 29 17.4	+1.9
AP01				IAML		14 29 17.6	

	comp=Z,949nm,0.1s						
PATCX	Punta Patache	1.36	193	⇑eP	Pn	14 29 00.7	-0.4
PATCX				eS	Sn	14 29 19.1	+0.3
PATCX				IAML		14 29 23.6	
	comp=E,2µm,0.4s						
PATCX	Punta Patache	1.36	193	eP	Pn	14 29 00.8	-0.4
PATCX				IAML		14 29 23.1	
	comp=Z,494nm,0.5s						
PB01	IPOC Station P	1.57	169	⇑eP	Pn	14 29 03.9	0.0
PB01				eS	Sn	14 29 24.4	+0.7
PB01				IAML		14 29 28.5	
	comp=E,866nm,0.4s						
PB01	IPOC Station P	1.57	169	eP	Pn	14 29 03.9	0.0
PB01				IAML		14 29 26.9	
	comp=Z,424nm,0.2s						
PB02	IPOC Station P	1.82	182	⇑eP	Pn	14 29 07.2	0.0
PB02				eS	Sn	14 29 30.4	+0.8
PB02				IAML		14 29 37.1	
	comp=E,1µm,0.3s						
PB02	IPOC Station P	1.82	182	eP	Pn	14 29 07.4	+0.2
PB02				IAML		14 29 39.3	
	comp=Z,1µm,0.5s						
PB07	IPOC Station P	2.23	182	eP	Pn	14 29 12.7	0.0
PB07				eS	Sn	14 29 41.2	+1.8
PB07				IAML		14 29 49.2	
	comp=E,566nm,0.2s						
PB07	IPOC Station P	2.23	182	eP	Pn	14 29 13.2	+0.5
PB07				IAML		14 29 49.1	
	comp=Z,399nm,0.4s						
PB09	IPOC Station P	2.35	167	⇑eP	Pn	14 29 15.2	+0.7
PB09				IAML		14 29 51.8	
	comp=E,308nm,0.4s						
PB09	IPOC Station P	2.35	167	eP	Pn	14 29 15.1	+0.6
PB09				IAML		14 29 58.3	
	comp=Z,286nm,0.4s						
PB03	IPOC Station P	2.54	179	eP	Pn	14 29 16.8	-0.2
PB03				eS	Sn	14 29 45.5	-1.6
PB03				IAML		14 29 54.7	
	comp=Z,336nm,0.9s						
PB06	IPOC Station P	3.21	176	eP	Pn	14 29 26.6	+0.6
PB06				IAML		14 30 23.1	
	comp=E,246nm,0.7s						
PB06	IPOC Station P	3.21	176	eP	Pn	14 29 26.7	+0.7
PB06				IAML		14 30 24.5	
	comp=Z,156nm,0.7s						
PB05	IPOC Station P	3.36	186	eP	Pn	14 29 27.4	-0.7
PB05				IAML		14 30 20.6	
	comp=Z,83nm,0.4s						
LPAZ	La Paz	3.57	27	eP	Pn	14 29 28.4	-2.9
PB10	IPOC Station P	4.06	190	eP	Pn	14 29 36.6	-0.8
PB10				IAML		14 30 46.9	
	comp=Z,27nm,0.5s						

IDC 21 14:32:56.3±6.3**,8°.04S**×**158°.30E,h0**km**,mb3.7**/4**,**
mbtmp3.7/4**,Error ellipse: s-maj=182.8km**
s-min=34.3km az=113.0,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.04	240	P	P	14 38 32.2	+0.6
	0.9nm,0.5s,baz=67,slow=9.4,SNR=15						
	0.9nm,0.5s						
H11S3	WAKE ISLAND Hy	27.63	17	T	T	15 07 22.2	
	baz=197,slow=76,SNR=148						
H11S2	WAKE ISLAND Hy	27.63	17	T	T	15 07 19.2	
	baz=197,slow=76,SNR=135						
H11S1	WAKE ISLAND Hy	27.65	17	T	T	15 07 22.1	
	baz=197,slow=76,SNR=96						
ASAR	Alice Springs	28.07	234	P	P	14 38 49.3	-0.5
	0.8nm,0.8s,baz=63,slow=9.5,SNR=12						
	0.8nm,0.8s						
H11N1	WAKE ISLAND Hy	28.84	17	T	T	15 08 57.4	
	baz=196,slow=76,SNR=60						
H11N3	WAKE ISLAND Hy	28.85	17	T	T	15 08 58.2	
	baz=196,slow=76,SNR=100						
H11N2	WAKE ISLAND Hy	28.86	17	T	T	15 08 58.9	
	baz=196,slow=76,SNR=101						
SONM	Songino Array	72.00	326	P	P	14 44 23.6	+1.5
	0.4nm,0.3s,baz=142,slow=7.3,SNR=2.5						
	0.4nm,0.3s						
MKAR	Makanchi Array	86.35	318	P	P	14 45 38.9	-1.6
	0.1nm,0.4s,baz=98,slow=6.9,SNR=4.6						
	0.1nm,0.4s						

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*NEIC **21** 14:49:47.4±1.4,20°.59S±0°.08×178°.4W±0°.2,h554km±9km,*
mb4.2/13,Error ellipse: s-maj=20.9km s-min=11.2km az=101.0
*NOU **21** 14:49:47.9,20°.67S×178°.10W,h570km,mb4.0/15,Fiji Islands Region*
*IDC **21** 14:49:48.7±2.4,20°.60S×178°.47W,h552km±27km,*
mb3.3/14,mbtmp4.2/15,Error ellipse: s-maj=18.3km s-min=17.1km az=171.0
ISC 21 14:49:50.0±0.5**,20°.77S**±0°.08×**178°.49W**±0°.10**,h579**km**,**
n90,σ**1s.42**/88**,mb3.9**/20**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.45	312	P	P	14 51 14.1	-3.4
MSVF	Nonsavu	4.45	312	P	P	14 51 16.6	-0.9
RAO	Raoul Island	8.46	177	P	P	14 51 51.9	-1.0
	258nm,0.3s,baz=73,slow=19,SNR=2.5						
RAO				S	S	14 53 31.3	-2.5
	413nm,0.4s,baz=276,slow=22,SNR=4.2						
RAO	Raoul Island	8.46	177	P	P	14 51 50.8	-2.2
AFI	Afiamalu	9.36	44	P	P	14 51 55.9	-6.4
AFI	Afiamalu	9.36	44	P	P	14 51 56.7	-5.6
MARNC	Mare, Loyalty	12.60	264	P	P	14 52 32.9	-1.9
MARNC	Mare, Loyalty	12.60	264	P	P	14 52 35.8	+1.0
PINNC	Pines Island,	13.20	259	P	P	14 52 42.5	+1.5
DZM	Mont Dzumac	14.09	262	P	P	14 52 50.2	0.0
	6.2nm,0.7s,baz=83,slow=19,SNR=5.4						
DZM	Mont Dzumac	14.09	262	P	P	14 52 47.9	-2.3
OUZ	Omahuta	15.99	204	P	P	14 53 09.8	+1.7
OUZ	Omahuta	15.99	204	P	P	14 53 09.9	+1.7
WCZ	Waipu Caves	16.36	201	P	P	14 53 13.9	+2.4
KUZ	Kuaotunu	16.70	196	P	P	14 53 16.4	+1.9
WIAZ	Waiheke Island	16.90	198	P	P	14 53 18.4	+2.0
MBAZ	Motutapu North	16.95	198	P	P	14 53 18.6	+1.8
ETAZ	East Tamaki Re	17.11	198	P	P	14 53 20.7	+2.4
MKAZ	Moumakai	17.19	197	P	P	14 53 20.9	+2.0
WTAZ	Waiatarua	17.20	199	P	P	14 53 21.7	+2.6
HAZ	Te Kaha	17.23	190	P	P	14 53 19.9	+0.6
HAZ				S	S	14 56 36.6	+27
AWAZ	Awhitu Peninsu	17.30	199	P	P	14 53 20.4	+0.4
TGRZ	Tauranga	17.50	194	P	P	14 53 24.4	+2.5
TWGZ	Tauwhareparae	17.61	189	P	P	14 53 24.0	+1.1
TOZ	Tahuroa Road	17.68	196	P	P	14 53 25.6	+2.1
MWZ	Matawai	17.84	190	P	P	14 53 25.1	+0.2
URZ	Urewera	17.84	191	P	P	14 53 22.0	-2.8
	5.2nm,0.5s,baz=304,slow=1.9,SNR=5.9						
URZ	Urewera	17.84	191	P	P	14 53 23.9	-1.0
URZ	Urewera	17.84	191	P	P	14 53 23.8	-1.1
TLZ	Tolley Road	18.24	195	P	P	14 53 31.3	+2.6
BKZ	Black Stump Fm	18.83	192	P	P	14 53 32.8	-1.2
BKZ	Black Stump Fm	18.83	192	P	P	14 53 32.5	-1.5
OTVZ	Oturere	19.01	194	P	P	14 53 34.8	-1.0
KWHZ	Kaweka Forest	19.10	192	P	P	14 53 35.0	-1.4
VRZ	Vera Road	19.19	196	P	P	14 53 39.1	+1.8
TSZ	Takapari Road	19.80	193	P	P	14 53 42.7	-0.1
BFZ	Birch Farm	20.35	192	P	P	14 53 47.9	+0.2
BFZ	Birch Farm	20.35	192	P	P	14 53 47.0	-0.7
MRZ	Mangatainoka R	20.46	193	P	P	14 53 46.8	-1.9
MRZ	Mangatainoka R	20.46	193	P	P	14 53 47.8	-0.8
QRZ	Quartz Range	21.40	199	P	P	14 53 57.7	+0.6
KHZ	Kahutara	22.60	195	P	P	14 54 07.3	-0.5
JCZ	Jackson Bay	25.53	202	P	P	14 54 34.3	+0.4
WHZ	Wether Hill Ro	27.42	201	P	P	14 54 50.3	0.0
WHZ	Wether Hill Ro	27.42	201	P	P	14 54 51.9	+1.6
CTA	Charters Tower	33.00	265	P	P	14 55 40.2	+1.6
CTAO	Charters Tower	33.00	265	P	P	14 55 36.8	-1.8
CTAO				IAmb	IAmb	14 56 07.9	
	comp=Z,14nm,1.1s						
CTAO	Charters Tower	33.00	265	P	P	14 55 40.2	+1.6
CMSA	Cobar Meteorol	33.75	244	P	P	14 55 46.2	+1.5
PMG	Port Moresby	34.95	284	P	P	14 55 53.8	-1.2
PMG				IAmb	IAmb	14 56 09.0	
	comp=Z,17nm,1.1s						
TOO	Toolangi	35.36	234	P	P	14 55 57.4	-0.7
TOO				IAmb	IAmb	14 56 19.5	
	comp=Z,13nm,1.4s						
STKA	Stephens Creek	37.25	244	P	P	14 56 15.5	+1.8
	comp=Z,1.4nm,0.4s,baz=86,slow=13,SNR=1.5						
	comp=Z,1.4nm,0.4s						
BBOO	Buckleboo	42.01	244	P	P	14 56 51.5	-0.3
BBOO	Buckleboo	42.01	244	P	P	14 56 52.7	+0.9
JAY	Jayapura	43.69	289	P	P	14 57 04.6	-0.6
	comp=Z,9.9nm,0.6s,baz=111,slow=4.4,SNR=5.5						
	comp=Z,9.9nm,0.6s						
WR8	Warramunga Arr	43.95	262	P	P	14 57 06.2	-0.8
WR8				IAmb	IAmb	14 57 49.7	
	comp=Z,5.7nm,1.3s						
AS31	Alice Springs	44.01	257	P	P	14 57 07.8	+0.3
ASAR	Alice Springs	44.01	257	P	P	14 57 08.4	+0.9
	comp=Z,2.9nm,0.8s,baz=88,slow=8.6,SNR=39						
ASAR				PcP	PcP	14 58 41.4	+1.3
	comp=Z,0.7nm,0.6s,baz=122,slow=2.7,SNR=6.8						
	comp=Z,2.9nm,0.8s						
ASAR	Alice Springs	44.01	257	P	P	14 57 06.3	-1.1
ASAR					PcP	14 58 41.2	+1.1
WB0	Warramunga Arr	44.09	263	P	P	14 57 08.4	+0.3
WB0				IAmb	IAmb	14 57 09.5	
	comp=Z,10.0nm,1.4s						
WRA	Warramunga Arr	44.10	262	P	P	14 57 08.7	+0.5
	comp=Z,0.8nm,0.6s,baz=97,slow=8.2,SNR=32						
	comp=Z,0.8nm,0.6s						
WRA	Warramunga Arr	44.10	262	P	P	14 57 07.8	-0.5
QSPA	South Pole Qui	69.30	180	P	P	15 00 01.7	+1.8
	comp=Z,1.0nm,0.6s,baz=246,slow=1.6,SNR=12						
	comp=Z,1.0nm,0.6s						
QSPA	South Pole Qui	69.30	180	P	P	15 00 01.1	+1.2
QSPA				IAmb	IAmb	15 00 43.5	
	comp=Z,5.1nm,1.4s						
MJAR	Matsushiro Arr	70.16	324	P	P	15 00 05.2	-0.1
	comp=Z,1.1nm,0.6s,baz=158,slow=6.1,SNR=9.6						
	comp=Z,1.1nm,0.6s						
MJAR	Matsushiro Arr	70.16	324	P	P	15 00 03.7	-1.5
PETK	Petropavlovsk-	76.42	346	P	P	15 00 40.4	-0.1
	comp=Z,4.5nm,0.8s,baz=124,slow=8.5,SNR=7.9						
	comp=Z,4.5nm,0.8s						
KSRS	Korea Array	76.79	319	P	P	15 00 44.1	+1.3
	comp=Z,0.7nm,0.6s,baz=100,slow=5.0,SNR=1.9						
	comp=Z,0.7nm,0.6s						
NVAR	Mina Array Bea	81.54	44	P	P	15 01 09.1	+0.8
	comp=Z,0.4nm,0.5s,baz=258,slow=4.7,SNR=2.3						
	comp=Z,0.4nm,0.5s						
TXAR	Lajitas Array	87.59	58	P	P	15 01 39.6	+1.8
	comp=Z,0.6nm,0.6s,baz=211,slow=7.0,SNR=6.6						
	comp=Z,0.6nm,0.6s						
CCB	Clear Creek Bu	88.38	13	P	P	15 01 38.9	-1.6
CCB				IAmb	IAmb	15 01 40.7	
	comp=Z,3.1nm,0.6s						
ILAR	Eielson Array	88.68	13	P	P	15 01 41.5	-0.4
	comp=Z,1.0nm,0.6s,baz=220,slow=5.5,SNR=19						
	comp=Z,1.0nm,0.6s						
ILAR	Eielson Array	88.68	13	P	P	15 01 40.0	-1.9
HILR	Hailar Array B	88.81	325	P	P	15 01 42.6	-0.3
	comp=Z,1.3nm,0.5s,baz=132,slow=4.9,SNR=2.7						
	comp=Z,1.3nm,0.5s						
PDAR	Pinedale Array	89.48	43	P	P	15 01 46.9	+0.4
	comp=Z,1.1nm,0.6s,baz=221,slow=3.4,SNR=13						
	comp=Z,1.1nm,0.6s						
CMAR	Chiang Mai Arr	89.77	290	P	P	15 01 49.9	+1.8
	comp=Z,1.0nm,0.8s,baz=120,slow=3.1,SNR=8.5						
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	111.05	313	PKiKP	PKiKP	15 07 17.9	-0.4
	comp=Z,0.3nm,0.5s,baz=66,slow=0.8,SNR=6.2						
KURBB	Kurchatov Arra	113.93	317	PKiKP	PKiKP	15 07 23.1	-0.5
	comp=Z,0.5nm,0.5s,baz=97,slow=2.0,SNR=5.5						
BVAR	Borovoye Array	118.99	320	PKP	PKiKP	15 07 33.5	+0.1
	comp=Z,1.1nm,0.4s,baz=119,slow=1.5,SNR=13						
ARCES	ARCESS Array B	129.10	349	PKP	PKPdf	15 07 52.4	+0.2
	comp=Z,3.2nm,1.0s,baz=3.8,slow=1.8,SNR=8.9						
ARCES	ARCESS Array B	129.10	349		PKPdf	15 07 52.2	0.0
FINES	FINESS Array B	135.90	343	PKP	PKPdf	15 08 03.9	-1.2
	comp=Z,3.7nm,1.1s,baz=73,slow=3.6,SNR=4.9						
HFS	Hagfors	139.73	351	PKhKP	PKPpre	15 08 04.7	
	comp=Z,2.2nm,0.8s,baz=60,slow=3.6,SNR=9.9						
AKASG	Malin Array Be	143.03	331	PKhKP	PKPpre	15 08 16.1	
	comp=Z,4.4nm,0.4s,baz=43,slow=4.2,SNR=27						
AKBB	Malin Array Si	143.03	331		PKPbc	15 08 16.2	-0.3
EKA	Eskdalemuir Ar	145.31	5	PKPbc	PKPbc	15 08 23.6	+0.2
	comp=Z,0.8nm,0.6s,baz=352,slow=3.8,SNR=4.0						
BRTR	Keskin Array B	146.68	312	PKPbc	PKPbc	15 08 28.5	+0.6
	comp=Z,1.6nm,0.6s,baz=133,slow=4.3,SNR=9.1						
BRTR	Keskin Array B	146.68	312		PKPbc	15 08 28.6	+0.7
MMAI	Mount Meron Ar	147.54	299	PKPbc	PKiKP	15 08 31.9	+0.1
	comp=Z,1.7nm,0.4s,baz=93,slow=4.2,SNR=7.4						
GERES	GERESS Array B	150.33	344	PKPbc	PKiKP	15 08 37.0	-0.1
	comp=Z,0.7nm,0.5s,baz=29,slow=3.0,SNR=7.4						

DJA 21 14:55:39.0±0.2**,1°S**±2°×**12°8E**±°**,h10**km**,M4.1**/13**,mB5.1**/4**,**
mb4.5/6**,MLv3.8**/13**,Mw(mB)4.4**/4**,MwMwp4.9**/1**,**
Mwp5.2/1**,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.86	331	P	Pn	14 56 10.6	-0.3
TNTI				S	Sb	14 56 36.4	0.0
KRAI	Karang Ratu	2.44	177	P	Pn	14 56 20.2	+1.3
KRAI				S	Sn	14 56 49.1	+0.3
MSAI	Masohi	2.55	165	P	Pn	14 56 22.3	+1.9
MSAI				S	Sn	14 56 53.1	+1.5
SANI	Sanana	2.56	243	P	Pn	14 56 19.3	-1.2
SANI				S	Sn	14 56 48.9	-2.8
NLAI	Namlea	2.62	206	P	Pn	14 56 21.6	+0.1
NLAI				S	Sn	14 56 53.2	-0.2
SWI	Sorong	3.00	90	P	Pn	14 56 26.1	-0.5
SWI				S	Sn	14 57 02.7	0.0
SIJI	Sorong	3.01	90	P	Pn	14 56 26.2	-0.5
SIJI				S	Sn	14 57 02.7	-0.2
FAKI	Fak Fak	4.48	117	P	Pn	14 56 45.5	-1.5
FAKI				S	Sn	14 57 35.0	-4.2
GTOI	Gorontalo	5.46	286	P	Pn	14 57 03.6	+3.1
	0.1nm13nm,0.5s						
GTOI				S	Sn	14 58 07.4	+4.0
	0.1nm13nm,0.5s						
LUWI	Luwuk	5.49	268	P	Pn	14 56 59.3	-1.6
MWPI	Manokwari, Pap	5.78	91	P	Pn	14 57 05.7	+0.8
	73nm,0.8s						
APSI	Ampana	6.61	270	P	Pn	14 57 16.4	+0.1
SPSI	Sidrap Palu	9.02	250	P	Pn	14 57 50.8	+1.4
	3µm848nm20nm,0.4s						
BKSI	Bulukumba	9.25	241	P	Pn	14 57 54.6	+2.0
SOEI	Soe	9.68	204	P	Pn	14 57 57.7	-0.9

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*NAO **21** 15:13:51.9±0.4,66°.81N×13°.99E,ML1.9*
*HEL **21** 15:13:51.9±0.1,66°.83N×13°.91E,h9km,ML1.9,*
ML1.3(BER),ML1.9(NAO),Confirmed Earthquake
*BER **21** 15:13:52.1±2.6,66°.83N×13°.91E,h0km±10km,ML1.3,*
ML1.9(NAO)
ISC 21 15:13:49.8±1.2**,66°.82N**±0°.02×**13°.91E**±0°.02**,h3**km±10km**,**
n53,σ**1s.65**/91**,4D,Northern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAGH	Vaagaholmen	0.27	250	Pg	Pb	15 13 56.8	-0.5
VAGH				Sg	Sb	15 14 00.9	-1.4
VAGH	Vaagaholmen	0.27	250	i P	Pb	15 13 56.8	-0.5
VAGH				eS	Sb	15 14 00.7	-1.6
VAGH				IAML		15 14 02.4	
	comp=Z,49nm,0.4s						
VAGH	Vaagaholmen	0.27	250	i P	Pb	15 13 56.8	-0.5
VAGH				i S	Sb	15 14 00.7	-1.6
VAGH				IAML		15 14 02.4	
	comp=Z,49nm,0.4s						
RAUS	Rausandaksla	0.39	172	eP	Pb	15 13 58.9	-0.5
RAUS				eS	Sb	15 14 04.2	-1.6
RAUS				IAML		15 14 06.6	
	comp=Z,21nm,0.2s						
KONS	Konsvik	0.45	224	⇓iP	Pb	15 14 00.1	-0.3
KONS				eS	Sb	15 14 06.2	-1.4
KONS				IAML		15 14 06.9	
	comp=Z,34nm,0.4s						
KONS				e		15 14 10.0	
KONS	Konsvik	0.45	224	⇓iP	Pb	15 14 00.1	-0.3
KONS				i S	Sb	15 14 06.2	-1.4
KONS				IAML		15 14 06.9	
	comp=Z,34nm,0.4s						
KONS				e		15 14 10.0	
STOK	Stokkvaagen	0.61	216	Pg	Pb	15 14 03.0	0.0
STOK				Sg	Sb	15 14 11.2	-0.8
STOK	Stokkvaagen	0.61	216	eP	Pb	15 14 03.0	0.0
STOK				eS	Sb	15 14 11.2	-0.8
STOK				IAML		15 14 12.9	
	comp=Z,11nm,0.3s						
STOK	Stokkvaagen	0.61	216	i P	Pb	15 14 03.0	0.0
STOK				i S	Sb	15 14 11.2	-0.8
STOK				IAML		15 14 12.9	
	comp=Z,11nm,0.3s						
MOR8	Moi Rana	0.69	162	Pg	Pg	15 14 03.6	+0.6
MOR8				Sg	Sg	15 14 11.9	0.0
MOR8	Moi Rana	0.69	162	eP	Pb	15 14 03.9	-0.5
MOR8				eS	Sg	15 14 11.2	-0.7
MOR8				IAML		15 14 13.3	
	comp=Z,13nm,0.2s						
MOR8	Moi Rana	0.69	162	i P	Pb	15 14 03.9	-0.5
MOR8				i S	Sg	15 14 11.2	-0.7
MOR8				IAML		15 14 13.3	
	comp=Z,13nm,0.2s						
FAUS	Fauske	0.78	43	Pg	Pb	15 14 05.6	-0.4
FAUS				Sg	Sg	15 14 15.4	+0.6
FAUS	Fauske	0.78	43	eP	Pb	15 14 05.5	-0.4
FAUS				eS	Sg	15 14 15.4	+0.6
FAUS				IAML		15 14 19.5	
	comp=Z,21nm,0.2s						
FAUS	Fauske	0.78	43	i P	Pb	15 14 05.5	-0.4
FAUS				i S	Sg	15 14 15.4	+0.6
FAUS				IAML		15 14 19.5	
	comp=Z,21nm,0.2s						
LEIR	Leirfjorden	0.78	204	Pg	Pn	15 14 06.2	-1.5
LEIR				Sg	Sb	15 14 16.5	-0.6
LEIR	Leirfjorden	0.78	204	⇓eP	Pb	15 14 06.1	0.0
LEIR				eS	Sb	15 14 17.1	0.0
LEIR				IAML		15 14 24.4	
	comp=Z,7.3nm,0.3s						
LEIR	Leirfjorden	0.78	204	⇓iP	Pb	15 14 06.1	0.0
LEIR				i S	Sb	15 14 17.1	0.0
LEIR				IAML		15 14 24.4	
	comp=Z,7.3nm,0.3s						
STEI	Steigen	1.23	24	Pg	Pg	15 14 14.5	+1.2
STEI				Sg	Sg	15 14 32.2	+3.1
STEI	Steigen	1.23	24	eP	Pg	15 14 14.2	+1.0
STEI				eS	Sg	15 14 32.3	+3.1
STEI				IAML		15 14 35.3	
	comp=Z,8.0nm,0.4s						
STEI	Steigen	1.23	24	ePG	Pg	15 14 14.2	+1.0
STEI				eSN	Sg	15 14 32.3	+3.1
STEI				IAML		15 14 35.3	
	comp=Z,8.0nm,0.4s						
LOF	Lofoten	1.32	354	Pg	Pg	15 14 15.8	+0.7
LOF				Sg	Sn	15 14 31.9	-1.3
LOF	Lofoten	1.32	354	eP	Pb	15 14 14.6	-0.7
LOF				eS	Sb	15 14 31.5	-1.0
LOF				IAML		15 14 45.5	
	comp=Z,8.7nm,1.2s						
LOF	Lofoten	1.32	354	eP	Pb	15 14 14.6	-0.7
LOF				eS	Sb	15 14 31.5	-1.0
LOF				IAML		15 14 45.5	
	comp=Z,8.7nm,1.2s						
SALU	Saltoluokta	1.88	71	P	Pg	15 14 25.5	-0.3
SALU				S	Sb	15 14 47.5	-1.2
SALU	Saltoluokta	1.88	71	eP	Pg	15 14 25.6	-0.3
SALU				eSg	Sg	15 14 51.8	+1.5
SALU	Saltoluokta	1.88	71	ePG	Pg	15 14 25.5	-0.3
SALU				eS	Sb	15 14 47.5	-1.2
NIKU	Nikkaluokta	2.24	60	P	Pb	15 14 31.4	+0.5
NIKU	Nikkaluokta	2.24	60	ePG	Pb	15 14 31.4	+0.5
RATU	Laukkuluspa	2.42	63	P	Pb	15 14 34.1	+0.1
RATU	Laukkuluspa	2.42	63	ePB	Pb	15 14 34.1	+0.1
KOVU	Salmi	2.78	57	P	Pb	15 14 39.9	-0.3
KOVU	Salmi	2.78	57	ePB	Pb	15 14 39.9	-0.3
HARU	Harads	2.91	100	P	Pb	15 14 40.3	-2.0
HARU	Harads	2.91	100	ePB	Pb	15 14 40.3	-2.0
ERTU	Ertsjaerv	3.30	91	P	Pn	15 14 44.6	+2.2
ERTU	Ertsjaerv	3.30	91	eP	Pn	15 14 44.6	+2.2
LANU	Lannavaara	3.35	65	MSG		15 15 39.4	
	comp=Z,3.1nm,0.4s						
KIF	Kilpisjarvi	3.40	47	Pn	Pb	15 14 46.9	-3.7
KIF				Sg	Sg	15 15 37.1	-1.9
KIF	Kilpisjarvi	3.40	47	Pn	Pb	15 14 46.9	-3.7
KIF				Sg	Sg	15 15 37.1	-1.9
KIF	Kilpisjarvi	3.40	47	ePG	Pg	15 14 53.9	-1.0
KIF				eSG	Sg	15 15 36.8	-2.1
HEF	Hetta	4.05	62	eP	Pn	15 14 56.2	+3.5
HEF				eS	Sn	15 15 42.6	+2.0
HEF				MSG		15 16 02.5	
	comp=Z,1.5nm,0.3s						
UMAU	Umeaa	4.09	133	eP	Pn	15 14 55.6	+2.5
UMAU				eS	Sn	15 15 43.1	+1.7
KTK1	Kautokeino	4.15	54	eP	Pn	15 14 57.0	+3.0
KTK1	Kautokeino	4.15	54	eP	Pn	15 14 57.0	+3.0
TOF	Tornio	4.25	95	eP	Pn	15 14 58.6	+3.4
TOF				eS	Sn	15 15 47.4	+2.1
TOF				MSG		15 16 07.2	
	comp=Z,1.8nm,0.4s						
ARA0	ARCESS Array S	5.11	53	Pn	Pn	15 15 08.4	+1.2
	baz=241,slow=12						
ARA0				Sn	Sn	15 16 05.2	-1.3
	baz=234,slow=22						
ARA0				Sg	Sg	15 16 30.1	-3.5
	baz=235,slow=28						
ARA0	ARCESS Array S	5.11	53	Pn	Pn	15 15 08.4	+1.2
	baz=241,slow=12						
ARA0				Sn	Sn	15 16 05.2	-1.3
	baz=234,slow=22						
ARA0				Sg	Sg	15 16 30.1	-3.5
	baz=235,slow=28						
ARA0	ARCESS Array S	5.11	53	eP	Pn	15 15 08.4	+1.2
ARA0				eS	Sn	15 16 05.2	-1.3
ARA0				eSG	Sg	15 16 30.1	-3.5
VAF	Ylistaro	5.32	131	eS	Sn	15 16 11.4	-0.2
NRA0	NORESS Array S	6.20	191	Pn	Pn	15 15 23.6	+1.4
	baz=0.6,slow=12						
NRA0	NORESS Array S	6.20	191	Pn	Pn	15 15 23.6	+1.4
	baz=0.6,slow=12						
NRA0	NORESS Array S	6.20	191	eP	Pn	15 15 23.6	+1.4

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*OSPL **21** 15:18:44.7±0.9,18°.51N×71°.14W,h45km±14km,ML2.1,*
Presumed earthquake
*SDD **21** 15:18:45.3±1.7,18°.49N×71°.14W,h31km±34km,MD2.9,*
ML2.9,MW2.4,Presumed earthquake
ISC 21 15:18:44.8±1.0**,18°.47N**±0°.04×**71°.14W**±0°.05**,h29**km±9km**,**
n10,σ**1s.03**/16**,4C,Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEDR	Neiba UASD	0.26	274	⇑eSg	Sn	15 18 57.9	+0.1
NEDR				IAML		15 18 58.6	
	comp=N,496nm,0.3s						
PODR	Polo	0.33	204	⇑ePg	Pb	15 18 51.6	-1.2
PODR				eSg	Sb	15 18 59.6	+1.4
PODR				IAML		15 19 02.2	
	comp=N,1µm,0.3s						
PODR	Polo	0.33	204	i P	Pb	15 18 51.5	-1.2
PODR				eS	Sb	15 18 58.3	+0.1
LONE3	El Aguacate, B	0.33	295	i P	Pb	15 18 52.6	-0.2
LONE3				eS	Sn	15 18 59.7	0.0
LONE3				IAML		15 19 01.2	
	comp=Z,857nm,0.0s						
LODU1	El Espartillar	0.33	251	i P	Pb	15 18 53.3	+0.6
LODU1				eS	Sb	15 18 59.2	+1.1
LODU1				IAML		15 19 01.6	
	comp=Z,96nm,0.3s						
SDDR	Presa de Saban	0.53	345	eSg	Sb	15 19 02.6	-0.8
SDDR				IAML		15 19 07.4	
	comp=N,1µm,0.3s						
SDDR	Presa de Saban	0.53	345	eS	Sb	15 19 02.3	-1.1
SDDR				IAML		15 19 06.0	
	comp=Z,20nm,0.2s						
LOVI	El Cajuil, Ovi	0.70	198	i P	Pn	15 18 58.3	-0.4
LOVI				IAML		15 19 05.4	
	comp=Z,81nm,1.3s						
LOVI				eS	Sb	15 19 07.4	-0.4
DR08	Loma La Naviza	1.17	65	⇑eSg	Sn	15 19 19.2	-1.1
DR08				IAML		15 19 23.6	
	comp=N,737nm,0.2s						
HATOM	Hato Mayor del	1.70	79	ePg	Pn	15 19 13.9	+1.4
HATOM				⇑eSg	Sn	15 19 34.3	+0.9
HATOM				IAML		15 19 35.6	
	comp=N,48nm,0.3s						

DJA 21 15:24:44.0±0.3**,10°S**±4°×**11°7E**±°**,h10**km**,M4.0**/18**,**
mb4.1/8**,mB5.7**/3**,MLv3.7**/18**,Mw(mB)5.2**/3**,Sumbawa**

region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWSI	**Taliwang, Sumb**	**0.96**	**343**	P	Pg	15 25 01.6	-0.8
PLAI	**Plampang**	**1.03**	**36**	P	Pg	15 25 02.7	-1.1
DBNI	**Kabupaten Domp**	**1.62**	**45**	P	Pn	15 25 12.1	-0.5
KLNI	**Mataram**	**1.62**	**319**	P	Pn	15 25 12.0	-0.6
KHKI	**Kahang-Kahang**	**2.00**	**310**	P	Pn	15 25 19.0	+1.1
IGBI	**Denpasar**	**2.16**	**293**	P	Pn	15 25 19.1	-0.9
DNP	**Denpasar**	**2.16**	**297**	P	Pn	15 25 20.3	+0.2
WBSI	**Waikabubak, Su**	**2.20**	**90**	P	Pn	15 25 20.4	-0.3
RTBI	**Rangdo, Negare**	**2.49**	**298**	P	Pn	15 25 24.8	+0.1
LBFI	**Labuhan Bajo,**	**2.94**	**67**	P	Pn	15 25 31.3	+0.5
WSI	**Waingapu**	**3.09**	**90**	P	Pn	15 25 33.7	+0.8
JAGI	**Jajag, Banyuwa**	**3.20**	**291**	P	Pn	15 25 33.7	-0.7
EDFI	**Ende, Flores**	**4.56**	**79**	P	Pn	15 25 54.0	+0.7
MMRI	**Maumere**	**5.12**	**79**	P	Pn	15 26 01.0	+0.2
	0.2nm4µm25nm,0.9s						
BKSI	**Bulukumba**	**5.21**	**34**	P	Pn	15 26 02.1	0.0
KAPI	**Kappang**	**5.28**	**29**	P	Pn	15 26 02.8	-0.3
	0.0nm10nm,1.1s						
SNJI	**Sawahan-Nganju**	**5.66**	**289**	P	Pn	15 26 08.6	+0.3
	0.2nm15nm,1.9s						
SJI	**Sawahan**	**5.66**	**289**	P	Pn	15 26 08.3	-0.1
PCJI	**Pacitan**	**6.09**	**283**	P	Pn	15 26 13.6	-0.5
	0.3nm45nm,1.2s						
UGM	**Wanagama**	**6.79**	**284**	P	Pn	15 26 24.1	+0.3
	43nm,2.0s						
SBJI	**Serang**	**11.48**	**287**	P	Pn	15 27 28.1	0.0

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*JMA **21** 15:27:32.5±0.1, 42°.9N±0°.5×146°.0E±0°.7, h46^{km}±1^{km}, MV3.2/36, OFF NEMURO PENINSULA*

*SKHL **21** 15:27:32.3±0.0, 42°.90N×146°.20E, h31^{km}±5^{km}, mb4.3/2*

ISC 21 15:27:32.9±5.7**, 42°.9N**±0°.1×**146°.0E**±0°.1**, h39**^{km}±12^{km}**, n13, σ0^{s}.39**/22**, Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.48**	**337**	P	**Pn**	**15 27 43.3**	**0.0**
NEM2				S	**Sn**	**15 27 50.9**	**+0.3**
NMR	**Nemuro--Hokkai**	**0.49**	**336**	*i* P	**Pn**	**15 27 43.3**	**-0.1**
NMR				*i* S	**Sn**	**15 27 50.6**	**-0.2**
JKHN	**Kushirohamanak**	**0.64**	**285**	P	**Pn**	**15 27 45.2**	**-0.3**
JKHN				S	**Sn**	**15 27 54.6**	**+0.2**
GLVR	**Golovnino**	**0.89**	**337**	*i* P	**Pn**	**15 27 48.7**	**-0.2**
GLVR				AMB	AMB	15 27 48.9	
	120nm,0.3s						
GLVR				*i* S	**Sn**	**15 28 01.0**	**+0.4**
GLVR				A	A	15 28 02.2	
	820nm,0.4s						
GLVR				A	A	15 28 02.2	
	740nm,0.4s						
JAK	**Akkeshi**	**0.96**	**275**	P	**Pn**	**15 27 49.7**	**-0.2**
JAK				S	**Sn**	**15 28 02.6**	**+0.3**
YUK	**Yuzh-Kuril'sk**	**1.12**	**355**	*i* P	**Pn**	**15 27 51.6**	**-0.4**
YUK				AMB	AMB	15 27 52.8	
	130nm,0.3s						
YUK				*i* S	**Sn**	**15 28 05.5**	**-0.6**
YUK				A	A	15 28 09.0	
	330nm,0.4s						
YUK				A	A	15 28 09.0	
	510nm,0.4s						
JNSB	**Nemuroshibetsu**	**1.12**	**320**	*i* P	**Pn**	**15 27 52.0**	**-0.1**
JNSB				S	**Sn**	**15 28 06.4**	**+0.1**
JNK	**Nakash**	**1.15**	**306**	*i* P	**Pn**	**15 27 52.2**	**-0.3**
JNK				S	**Sn**	**15 28 06.2**	**-0.8**
JRA	**Rausu**	**1.20**	**328**	*i* P	**Pn**	**15 27 53.2**	**+0.1**
JOB	**Onbets**	**1.59**	**270**	P	**Pn**	**15 27 58.2**	**-0.4**
JAR	**Ashorobuto**	**1.68**	**284**	P	**Pn**	**15 28 00.0**	**+0.3**
JAR				S	**Sn**	**15 28 20.2**	**+0.2**
JTKR	**Abashiri--Toko**	**1.85**	**305**	P	**Pn**	**15 28 02.9**	**+0.8**
KUR	**Kuril'sk**	**2.67**	**30**	*e*P	**Pn**	**15 28 13.6**	**+0.3**

KRSC 21 15:35:28.1±1.0**, 55°.02N**×**164°.76E, h40**^{km}±24^{km}**, Ml3.7, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.72**	**74**	*i* P	Pn	15 35 42.3	+0.4
BKI				*e*S	Sn	15 35 51.5	-0.2
KBTR	**Krutoberegovo**	**1.62**	**318**	*e*P	Pn	15 35 55.8	+1.5
KBTR				*e*S	Sn	15 36 14.8	+0.8
KBG	**Krutoberegovo**	**1.70**	**318**	*e*P	Pn	15 35 56.8	+1.6
BZGR	**Bezymyannyi-Gr**	**2.49**	**293**	*e*P	Pn	15 36 09.2	+3.0
KZV	**Kizimen**	**2.57**	**274**	*e*P	Pn	15 36 10.9	+3.6
BZWR	**Bezymyannyi-We**	**2.61**	**293**	*e*P	Pn	15 36 11.5	+3.6
KMNR	**Kamenistaya**	**2.69**	**288**	*e*P	Pn	15 36 13.3	+4.4
KOZ	**Kozyrevsk**	**2.97**	**293**	*e*P	Pn	15 36 16.8	+4.2
KII	**Karymskiy**	**3.25**	**255**	*e*P	Pn	15 36 21.3	+4.7
SPN	**Mys Shipunski**	**3.39**	**237**	*e*P	Pn	15 36 21.5	+3.0
SPN				*e*S	Sn	15 36 59.3	+1.9
ESO	**Esso**	**3.57**	**287**	*e*P	Pn	15 36 24.8	+3.9
NLC	**Nalytchevo**	**3.69**	**242**	*e*S	Sn	15 37 07.8	+3.2
SDLR	**Sedlovina**	**3.87**	**246**	*e*P	Pn	15 36 30.3	+5.1
SMAR	**Somma**	**3.92**	**246**	*e*P	Pn	15 36 30.5	+4.5
KRER	**Koryakskii**	**3.93**	**247**	*e*P	Pn	15 36 31.4	+5.3
UGLR	**Uglovaya**	**3.93**	**245**	*e*P	Pn	15 36 30.8	+4.8
AVH	**Avacha**	**3.95**	**246**	*e*P	Pn	15 36 31.4	+5.2
KRX	**Arik**	**3.96**	**248**	*e*P	Pn	15 36 31.1	+4.7
KOK	**Koryaka**	**3.99**	**247**	*e*P	Pn	15 36 31.8	+4.9
DALK	**Dalny**	**4.06**	**243**	*e*P	Pn	15 36 32.0	+4.4
PET	**Petropavlovsk**	**4.12**	**244**	*e*P	Pn	15 36 33.0	+4.6
PET				*e*S	Sn	15 37 18.3	+3.0
GNL	**Ganaly**	**4.20**	**254**	*e*P	Pn	15 36 34.8	+5.1
KRMR	**Karymshinskiy**	**4.49**	**244**	*e*P	Pn	15 36 38.5	+4.9
KRMR				*e*S	Sn	15 37 28.0	+3.6
MTVR	**Mutnovka**	**4.66**	**240**	*e*P	Pn	15 36 40.4	+4.5
GRL	**Gorelyy**	**4.67**	**241**	*e*P	Pn	15 36 40.9	+4.7
ASAK	**Asacha**	**4.85**	**240**	*e*P	Pn	15 36 43.7	+5.1
KDTR	**Khodutka, Kamc**	**5.13**	**234**	*e*P	Pn	15 36 46.0	+3.8

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*IDC **21** 15:42:59.5±0.5, 29°.44S×177°.22W, h0^{km}, mb4.5/16, mbtmp4.5/17, ML3.3/1, MS3.7/30, Error ellipse: s-maj=17.2km s-min=12.3km az=26.0*

*MOS **21** 15:43:01.2±1.2, 29°.64S×177°.27W, h16^{km}, mb4.9/15, MS4.6/4, Error ellipse: s-maj=17.1km s-min=11.1km az=126.9*

*NEIC **21** 15:43:01.1±1.5, 29°.6S±0°.1×177°.15W±0°.09, h10^{km}±1^{km}, mb4.8/16, Error ellipse: s-maj=24.6km s-min=8.3km az=26.0*

ISC 21 15:43:04.7±0.3**, 29°.57S**±0°.05×**177°.21W**±0°.05**, h31**^{km}**, n193, σ2^{s}.11**/182**, mb4.8**/35**, MS3.8**/32**, 28C-17D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**0.69**	**296**	P	**Pb**	**15 43 17.1**	**-1.2**
GLKZ				S	**Sb**	**15 43 26.4**	**-1.1**
RAO	**Raoul Island**	**0.70**	**297**	Pn	**Pb**	**15 43 17.5**	**-0.8**
	4µm,0.3s,baz=95,slow=7.7,SNR=117						
RAO				Sn	**Sb**	**15 43 26.9**	**-0.7**
	16µm,0.3s,baz=111,slow=22,SNR=30						
RIZ	**Raoul Island**	**0.71**	**297**	P	**Pb**	**15 43 17.4**	**-1.2**
RIZ				S	**Sb**	**15 43 27.1**	**-0.9**
MXZ	**Matakaoa Point**	**8.80**	**204**	S	**Sn**	**15 46 48.9**	**+1.0**
PKGZ	**Pakihiroa**	**9.15**	**204**	P	**Pn**	**15 45 11.9**	**-2.7**
PKGZ				S	**Sn**	**15 46 56.3**	**-0.3**
HAZ	**Te Kaha**	**9.17**	**206**	P	**Pn**	**15 45 12.9**	**-1.8**
HAZ				S	**Sn**	**15 47 01.4**	**+4.6**
PUZ	**Puketiti**	**9.28**	**203**	P	**Pn**	**15 45 13.8**	**-2.5**
PUZ				S	**Sn**	**15 47 01.1**	**+1.5**
KUZ	**Kuaotunu**	**9.29**	**218**	P	**Pn**	**15 45 19.9**	**+3.5**
RUGZ	**Raukumara Rang**	**9.39**	**206**	P	**Pn**	**15 45 15.1**	**-2.8**
RUGZ				S	**Sn**	**15 47 02.9**	**+0.4**
TWGZ	**Tauwhareparae**	**9.47**	**204**	P	**Pn**	**15 45 16.6**	**-2.3**
TWGZ				S	**Sn**	**15 47 06.0**	**+1.8**
WCZ	**Waipu Caves**	**9.53**	**226**	P	Pn	15 45 28.5	+8.8
OUZ	**Omahuta**	**9.60**	**232**	P	Pn	15 45 28.6	+7.9
CNGZ	**Carnagh Statio**	**9.67**	**202**	P	**Pn**	**15 45 18.5**	**-3.1**
CNGZ				S	**Sn**	**15 47 12.0**	**+2.9**
TKGZ	**Te Karaka**	**9.75**	**204**	P	**Pn**	**15 45 19.9**	**-2.8**
TKGZ				S	**Sn**	**15 47 12.1**	**+1.0**
MWZ	**Matawai**	**9.77**	**205**	P	**Pn**	**15 45 19.8**	**-3.2**
MWZ				S	**Sn**	**15 47 12.1**	**+0.4**
URZ	**Urewera**	**9.87**	**207**	Pn	**Pn**	**15 45 20.6**	**-3.6**
	0.6nm,0.3s,baz=269,slow=4.3,SNR=11						
URZ				Sn	**Sn**	**15 47 15.1**	**+1.1**
	7.3nm,0.3s,baz=191,slow=23,SNR=12						
URZ	**Urewera**	**9.87**	**207**	P	**Pn**	**15 45 20.7**	**-3.6**
URZ				S	**Sn**	**15 47 14.5**	**+0.6**
RIGZ	**Rimuhau**	**10.02**	**203**	P	**Pn**	**15 45 23.1**	**-3.4**
BKZ	**Black Stump Fm**	**10.89**	**207**	P	**Pn**	**15 45 34.4**	**-4.0**
HIZ	**Hauiti**	**11.08**	**214**	P	**Pn**	**15 45 44.1**	**+3.2**
MSVF	**Nonsavu**	**12.56**	**339**		**Pn**	**15 46 01.6**	**+0.3**
MSVF	**Nonsavu**	**12.56**	**339**	*ce*P	**Pn**	**15 46 02.8**	**+1.5**
TUWZ	**Tuamarina**	**13.84**	**209**		**Pn**	**15 46 19.9**	**+1.2**
CTZ	**Chatham Island**	**14.14**	**178**	P	**Pn**	**15 46 22.5**	**-0.3**
THZ	**Tophouse**	**14.56**	**211**		**Pn**	**15 46 29.7**	**+1.2**
OXZ	**Oxford**	**16.20**	**209**		**Pn**	**15 46 49.7**	**-0.3**
OXZ				IAmb	IAmb	15 46 51.2	
	comp=Z,54nm,0.5s						
DZM	**Mont Dzumac**	**16.49**	**293**	Pn	**Pn**	**15 46 51.6**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=122,slow=18,SNR=4.3						
DZM				LR	LR	15 51 55.0	
	comp=Z,475nm,20.1s,baz=121,slow=33						
	comp=Z,3.6nm,0.8s						
DZM	**Mont Dzumac**	**16.49**	**293**	*e*P	**Pn**	**15 46 53.0**	**-0.9**
	comp=Z,96nm,25.9s						
DZM				*e*S	**S**	**15 50 06.6**	**-0.7**
	comp=Z,427nm,26.1s						
DZM				*e*LR	LR	15 50 42.3	
	comp=Z,716nm,23.6s						
RAR	**Rarotonga**	**17.80**	**66**	P	**Pn**	**15 47 05.7**	**-4.4**
	comp=Z,16nm,0.5s,baz=246,slow=12,SNR=1.7						
RAR				LR	LR	15 52 49.2	
	comp=Z,115nm,19.6s,baz=322,slow=33						
TBI	**Tubuai**	**25.57**	**83**	*e*LR	LR	15 54 47.5	
	comp=Z,1µm,25.5s						
TBI				*e*LR	LR	15 54 49.2	
	comp=Z,582nm,27.5s						
PPT2	**Papeete2**	**27.92**	**71**	*e*P	**P**	**15 48 50.1**	**-2.1**
	comp=Z,22nm,24.2s						
PPT2				*e*S	**S**	**15 53 38.4**	**+4.2**
	comp=Z,44nm,23.8s						
PPT2				*e*LR	LR	15 55 46.2	
	comp=Z,251nm,25.0s						
PPT2				*e*LR	LR	15 55 53.8	
	comp=Z,178nm,26.8s						
PPT	**Papeete**	**27.93**	**71**	LR	LR	15 59 50.1	
	comp=Z,56nm,18.0s,baz=255,slow=36						
TOO	**Toolangi**	**31.93**	**246**	P	**P**	**15 49 26.2**	**-1.3**
TOO				IAmb	IAmb	15 50 02.3	
	comp=Z,19nm,1.6s						
CTA	**Charters Tower**	**34.36**	**277**	LR	LR	16 02 30.5	
	comp=Z,147nm,18.4s,baz=102,slow=34						
CTAO	**Charters Tower**	**34.36**	**277**	P	**P**	**15 49 46.4**	**-2.6**
CTAO				IAmb	IAmb	15 49 51.8	
	comp=Z,9.8nm,0.8s						
STKA	**Stephens Creek**	**35.34**	**256**	P	**P**	**15 49 55.6**	**-1.6**
	comp=Z,9.8nm,0.7s,baz=89,slow=8.9,SNR=15						
STKA				LR	LR	16 03 42.8	
	comp=Z,148nm,18.0s,baz=95,slow=35						
	comp=Z,9.8nm,0.7s						
STKA	**Stephens Creek**	**35.34**	**256**		**P**	**15 49 57.1**	**-0.1**
STKA	**Stephens Creek**	**35.34**	**256**	⇓*e*P	**P**	**15 49 57.4**	**+0.1**
INKA	**Innaminka**	**36.80**	**262**		**P**	**15 50 11.2**	**+1.5**
PMG	**Port Moresby**	**38.89**	**294**	LR	LR	16 04 26.4	
	comp=Z,153nm,20.1s,baz=156,slow=33						
TAOE	**Nuku Hiva Isla**	**40.35**	**67**	*e*LR	LR	16 01 40.2	
	comp=Z,199nm,26.4s						
AS31	**Alice Springs**	**43.85**	**266**		**P**	**15 51 07.3**	**-0.9**
ASAR	**Alice Springs**	**43.85**	**266**	P	**P**	**15 51 06.9**	**-1.4**
	comp=Z,4.6nm,0.8s,baz=99,slow=7.6,SNR=33						
ASAR				ScP	**ScP**	**15 56 44.0**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=103,slow=4.2,SNR=4.4						
ASAR				LR	LR	16 09 10.9	
	comp=Z,177nm,18.0s,baz=116,slow=36						
	comp=Z,4.6nm,0.8s						
ASAR	**Alice Springs**	**43.85**	**266**	P	**P**	**15 51 05.2**	**-3.1**
WR8	**Warramunga Arr**	**44.62**	**271**		**P**	**15 51 13.1**	**-1.4**
WR8				IAmb	IAmb	15 51 17.0	
	comp=Z,8.2nm,0.8s						
WRAB	**Tennant Creek**	**44.76**	**271**	P	**P**	**15 51 13.7**	**-1.9**
WRAB				IAmb	IAmb	15 51 18.5	
	comp=Z,9.4nm,0.9s						
WRAB	**Tennant Creek**	**44.76**	**271**	⇑*e*P	**P**	**15 51 14.5**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WRA	**Warramunga Arr**	**44.76**	**271**	P	**P**	**15 51 14.6**	**-1.0**
	comp=Z,9.8nm,0.8s,baz=110,slow=8.0,SNR=19						
	comp=Z,9.8nm,0.8s						
WRA	**Warramunga Arr**	**44.76**	**271**	P	**P**	**15 51 14.8**	**-0.8**
WB0	**Warramunga Arr**	**44.78**	**271**		**P**	**15 51 14.1**	**-1.6**
WB0				IAmb	IAmb	15 51 18.2	
	comp=Z,11nm,0.7s						
FORT	**Forrest**	**46.93**	**254**		**P**	**15 51 31.9**	**-0.6**
VNDA	**Vanda**	**48.99**	**186**	P	**P**	**15 51 47.8**	**0.0**
	comp=Z,1.1nm,0.6s,baz=27,slow=7.5,SNR=5.3						
VNDA				LR	LR	16 07 52.2	
	comp=Z,36nm,21.6s,baz=1.0,slow=30						
	comp=Z,1.1nm,0.6s						
VNDA	**Vanda**	**48.99**	**186**	P	**P**	**15 51 47.1**	**-0.7**
GUMO	**Guam**	**56.39**	**314**	LR	LR	16 14 48.5	
	comp=Z,40nm,19.3s,baz=88,slow=34						
BATI	**Baumata**	**58.23**	**276**	LR	LR	16 17 58.5	
	comp=Z,159nm,19.1s,baz=134,slow=36						
RPN	**Rapa Nui**	**59.00**	**106**	LR	LR	16 12 06.4	
	comp=Z,47nm,20.9s,baz=332,slow=30						
QSPA	**South Pole Qui**	**60.54**	**180**	P	**P**	**15 53 13.1**	**+1.3**
	comp=Z,22nm,0.8s,baz=37,slow=1.7,SNR=73						
QSPA				LR	LR	16 14 27.5	
	comp=Z,46nm,21.9s,baz=24,slow=31						
	comp=Z,22nm,0.8s						
QSPA	**South Pole Qui**	**60.54**	**180**	P	**P**	**15 53 13.9**	**+2.1**
PMSA	**Palmer Station**	**72.73**	**156**	LR	LR	16 21 40.1	
	comp=Z,140nm,18.1s,baz=299,slow=32						
MAW	**Mawson**	**73.32**	**200**	P	**P**	**15 54 34.5**	**+1.6**
	comp=Z,9.9nm,1.0s,baz=134,slow=8.6,SNR=7.1						
	comp=Z,9.9nm,1.0s						
JHJ	**Hachijo jima 2**	**74.48**	**324**	LR	LR	16 25 13.8	
	comp=Z,35nm,18.6s,baz=90,slow=34						
JOW	**Kunigami**	**76.62**	**312**	LR	LR	16 29 22.2	
	comp=Z,21nm,18.1s,baz=222,slow=36						
MJAR	**Matsushiro Arr**	**77.96**	**325**	P	**P**	**15 54 59.4**	**-0.3**
	comp=Z,3.6nm,0.7s,baz=158,slow=5.2,SNR=12						
MJAR				LR	LR	16 25 17.8	
	comp=Z,21nm,21.4s,baz=158,slow=33						
	comp=Z,3.6nm,0.7s						
MJAR	**Matsushiro Arr**	**77.96**	**325**	P	**P**	**15 54 59.3**	**-0.4**
MAJO	**Matsushiro**	**77.96**	**325**	⇓*e*P	**P**	**15 55 01.1**	**+1.4**
MAJO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SYO	**Syowa Base**	**78.07**	**193**	⇓*e*pP	**P**	**15 55 01.0**	**+1.0**
SYO	**Syowa Base**	**78.07**	**193**	⇑*e*sP	**P**	**15 55 04.5**	**+4.5**
SNAA	**Sanae**	**78.96**	**178**	P	**P**	**15 55 04.9**	**0.0**
	comp=Z,5.0nm,0.8s,baz=170,slow=3.9,SNR=19						
	comp=Z,5.0nm,0.8s						
SNAA	**Sanae**	**78.96**	**178**	P	**P**	**15 55 04.4**	**-0.5**
SNAA				IAmb	IAmb	15 55 07.5	
	comp=Z,5.1nm,0.8s						
SNAA	**Sanae**	**78.96**	**178**	⇑*e*P	**P**	**15 55 06.1**	**+1.2**
SNAA				pmax	pmax		
	comp=Z,9.0nm,1.3s						
VNA3	**Neumayer Olymp**	**79.08**	**176**	⇑P	**P**	**15 55 06.8**	**+1.2**
	comp=Z,12nm,0.7s						
VNA2	**Neumayer--Watz**	**79.53**	**177**	⇑P	**P**	**15 55 09.5**	**+1.6**
	comp=Z,12nm,0.8s,baz=175,slow=5.1						
NVL	**N'lazarevskaya**	**79.74**	**183**	*e*P	**P**	**15 55 04.8**	**-4.3**
NVL				*e*S	**S**	**16 05 08.2**	**-1.0**
NVL				*e*SS	**SS**	**16 10 17.7**	**+0.7**
NVL				*e*SSS	SSS	16 13 43.6	
NVL				pmax	pmax		
	comp=Z,17nm,1.6s						
NVL				MLR	MLR		
	comp=Z,518nm,20.0s						
VNA1	**Neumayer--Stat**	**79.75**	**176**	⇑P	**P**	**15 55 10.3**	**+1.2**
	comp=Z,13nm,0.9s						
H03S2	**Juan Fernandez**	**80.35**	**123**	T	T	17 24 59.7	
	baz=240,slow=74,SNR=26						
H03S1	**Juan Fernandez**	**80.36**	**123**	T	T	17 24 55.5	
	baz=240,slow=74,SNR=26						
H03S3	**Juan Fernandez**	**80.36**	**123**	T	T	17 24 44.0	
	baz=240,slow=74,SNR=27						
H03N3	**Juan Fernandez**	**80.53**	**123**	T	T	17 25 14.1	
	baz=238,slow=74,SNR=17						
H03N2	**Juan Fernandez**	**80.53**	**123**	T	T	17 25 12.3	
	baz=238,slow=74,SNR=19						
H03N1	**Juan Fernandez**	**80.55**	**123**	T	T	17 25 15.3	
	baz=238,slow=74,SNR=24						
ASAJ	**Asahikawa**	**82.03**	**332**	LR	LR	16 25 25.7	
	comp=Z,88nm,20.8s,baz=176,slow=31						
SHEM	**Shemya Is, Ala**	**82.30**	**355**	LR	LR	16 26 03.5	
	comp=Z,60nm,20.7s,baz=278,slow=31						
PLCA	**Paso Flores**	**82.57**	**133**	P	**P**	**15 55 25.5**	**+0.7**
	comp=Z,3.5nm,0.9s,baz=211,slow=5.7,SNR=8.1						
	comp=Z,3.5nm,0.9s						
PLCA	**Paso Flores**	**82.57**	**133**	P	**P**	**15 55 25.7**	**+0.8**
PLCA				IAmb	IAmb	15 55 28.2	
	comp=Z,5.0nm,1.0s						
LPIG	**La Paz**	**83.52**	**58**	LR	LR	16 31 33.0	
	comp=Z,63nm,18.0s,baz=32,slow=35						
TJN	**Taejon**	**83.74**	**318**	⇓*e*P	**P**	**15 55 31.2**	**+0.6**
KSRS	**Korea Array**	**84.17**	**319**	P	**P**	**15 55 32.6**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=130,slow=5.8,SNR=6.6						
KSRS				LR	LR	16 29 23.0	
	comp=Z,13nm,20.5s,baz=170,slow=33						
	comp=Z,2.2nm,0.8s						
YSS	**Yuzhno-Sakhali**	**84.31**	**334**	*e*P	**P**	**15 55 35.9**	**+2.7**
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,300nm,15.0s						
PFO	**Pinyon Flats O**	**85.14**	**47**	⇓*e*P	**P**	**15 55 37.6**	**-0.3**
PFO				pmax	pmax		
	comp=Z,31nm,3.8s						
PETK	**Petropavlovsk-**	**85.19**	**345**	P	**P**	**15 55 35.9**	**-1.6**
	comp=Z,7.1nm,0.9s,baz=158,slow=5.5,SNR=7.4						
PETK				LR	LR	16 25 39.0	
	comp=Z,44nm,21.6s,baz=132,slow=30						
	comp=Z,7.1nm,0.9s						
PSI	**Prapat**	**86.04**	**275**	LR	LR	16 35 15.0	
	comp=Z,35nm,20.2s,baz=120,slow=36						
USRK	**Ussuriysk Ar.**	**86.85**	**326**	P	**P**	**15 55 45.7**	**-0.3**
	comp=Z,5.9nm,0.8s,baz=114,slow=8.4,SNR=4.8						
	comp=Z,5.9nm,0.8s						
NVAR	**Mina Array Bea**	**87.17**	**42**	P	**P**	**15 55 48.6**	**+0.7**
	comp=Z,3.0nm,0.7s,baz=221,slow=8.4,SNR=14						
NVAR				LR	LR	16 35 18.1	
	comp=Z,77nm,18.1s,baz=255,slow=36						
	comp=Z,3.0nm,0.7s						
TIA	**Tai'an**	**89.91**	**313**	P	**P**	**15 56 02.3**	**+1.6**
TIA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BNX	**BinXian**	**90.22**	**325**	⇓P	**P**	**15 56 04.6**	**+2.7**
BNX				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TXAR	**Lajitas Array**	**91.36**	**57**	P	**P**	**15 56 08.0**	**+0.2**
	comp=Z,1.5nm,1.1s,baz=214,slow=8.5,SNR=6.2						
	comp=Z,1.5nm,1.1s						
TXAR	**Lajitas Array**	**91.36**	**57**	P	**P**	**15 56 08.0**	**+0.2**
LYN	**LuoYang**	**92.01**	**309**	P	**P**	**15 56 13.8**	**+3.3**
LYN				pmax	pmax		
	comp=Z,18nm,0.8s						
BBB	**Bella Bella**	**92.05**	**28**	LR	LR	16 33 44.2	
	comp=Z,28nm,18.6s,baz=3.5,slow=33						
HNS	**HongShan**	**92.18**	**312**	⇑P	**P**	**15 56 14.6**	**+3.4**
HNS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ANMO	**Albuquerque**	**92.53**	**51**	LR	LR	16 31 29.3	
	comp=Z,47nm,18.2s,baz=310,slow=32						
ANMO	**Albuquerque**	**92.53**	**51**	⇑*e*P	**P**	**15 56 13.5**	**+0.4**
ANMO				pmax	pmax		
	comp=Z,30nm,6.9s						
MA2	**Magadan**	**92.68**	**344**	LR	LR	16 37 22.8	
	comp=Z,27nm,19.3s,baz=172,slow=35						
CMAR	**Chiang Mai Arr**	**93.78**	**289**	P	**P**	**15 56 17.9**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=91,slow=4.3,SNR=5.3						
	comp=Z,0.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**93.78**	**289**	P	**P**	**15 56 18.0**	**-1.1**
ATAH	**Atahualpa**	**94.12**	**101**	LR	LR	16 29 28.6	
	comp=Z,234nm,20.8s,baz=269,slow=30						
NEW	**Newport**	**94.30**	**36**	LR	LR	16 37 29.0	
	comp=Z,46nm,18.1s,baz=210,slow=35						
PDAR	**Pinedale Array**	**95.06**	**43**	P	**P**	**15 56 24.4**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=224,slow=4.1,SNR=4.4						
PDAR				LR	LR	16 39 06.7	
	comp=Z,28nm,18.5s,baz=234,slow=36						
	comp=Z,0.6nm,0.8s						
XLT	**XiLinHaoTe**	**95.18**	**318**	*e*P	**P**	**15 56 25.9**	**+0.9**
XLT				sP	pP	15 56 33.3	-0.5
XLT				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SEY	**Seymchan**	**95.33**	**347**	⇑*e*P	**P**	**15 56 27.4**	**+2.4**
SEY				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PZH	**PanZhiHua**	**95.53**	**297**	P	**P**	**15 56 27.5**	**+0.4**
ZEA	**Zeya**	**95.86**	**331**	*e*P	**P**	**15 56 31.2**	**+3.5**
HHC	**Hu-ho-hao-te**	**96.16**	**314**	*e*P	**P**	**15 56 30.0**	**+0.5**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,78nm,5.0s						
ILAR	**Eielson Array**	**96.97**	**13**	P	**P**	**15 56 28.1**	**-4.4**
	comp=Z,0.1nm,0.5s,baz=206,slow=5.2,SNR=4.2						
ILAR				LR	LR	16 38 29.9	
	comp=Z,22nm,19.3s,baz=342,slow=34						
YKA	**Yellowknife Ar**	**104.40**	**25**	PKKPbc	PKKPbc	16 12 51.8	-2.1
	comp=Z,0.2nm,0.7s,baz=33,slow=2.9,SNR=4.5						
MK31	**Makanchi Array**	**117.76**	**310**	*d i*PKIKP	**PKPdf**	**16 01 46.2**	**-1.4**
MKAR	**Makanchi Array**	**117.76**	**310**	PKP	**PKPdf**	**16 01 46.0**	**-1.6**
	comp=Z,1.1nm,0.6s,baz=191,slow=0.8,SNR=14						
MKAR	**Makanchi Array**	**117.76**	**310**	PKPdf	**PKPdf**	**16 01 46.3**	**-1.2**
MKAR	**Makanchi Array**	**117.76**	**310**	*c i*PKIKP	**PKPdf**	**16 01 46.4**	**-1.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**117.87**	**319**	PKP	**PKPdf**	**16 01 45.4**	**-2.1**
	comp=Z,0.4nm,0.4s,baz=107,slow=1.5,SNR=5.2						
KSH	**Kashi**	**120.41**	**301**	PKP	**PKiKP**	**16 01 53.4**	**+0.2**
KURK	**Kurchatov**	**120.97**	**314**		**PKPdf**	**16 01 52.5**	**-1.2**
KURK	**Kurchatov**	**120.97**	**314**	*d i*PKIKP	**PKPdf**	**16 01 52.4**	**-1.2**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KURBB	**Kurchatov Arra**	**121.01**	**314**	PKP	**PKPdf**	**16 01 52.5**	**-1.1**
	comp=Z,2.9nm,0.7s,baz=104,slow=1.9,SNR=21						
BVAR	**Borovoye Array**	**126.29**	**316**	PKP	**PKPdf**	**16 02 03.1**	**-0.7**
	comp=Z,4.9nm,0.8s,baz=79,slow=1.0,SNR=20						
BORK	**Borovoye**	**126.33**	**316**	*d i*PKIKP	**PKPdf**	**16 02 03.1**	**-0.7**
BORK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
ARTI	**Arti**	**132.99**	**321**	*i* PKIKP	**PKPdf**	**16 02 16.5**	**+0.1**
ARTI						16 04 41.3	
ARTI				SS	SS	16 22 24.7	+1.8
ARCES	**ARCESS Array B**	**137.92**	**348**	PKP	**PKPdf**	**16 02 24.0**	**-1.2**
	comp=Z,1.5nm,0.6s,baz=51,slow=1.9,SNR=6.8						
H10S3	**ASCENSION HYDR**	**138.17**	**154**	T	T	18 37 47.7	
	baz=205,slow=74,SNR=77						
H10S2	**ASCENSION HYDR**	**138.17**	**154**	T	T	18 37 47.8	
	baz=15,slow=74,SNR=106						
H10N3	**ASCENSION HYDR**	**139.25**	**153**	T	T	18 39 12.4	
	baz=204,slow=75,SNR=64						
H10N1	**ASCENSION HYDR**	**139.25**	**153**	T	T	18 39 33.0	
	baz=204,slow=75,SNR=60						
H10N2	**ASCENSION HYDR**	**139.27**	**153**	T	T	18 39 13.7	
	baz=204,slow=75,SNR=66						
VRH	**Novokhopyorsk**	**143.90**	**318**	*e*PKIKP	**PKPdf**	**16 02 36.8**	**+0.3**
VRH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FINES	**FINESS Array B**	**144.60**	**341**	PKP	**PKPab**	**16 02 34.8**	**-1.1**
	comp=Z,6.1nm,0.7s,baz=56,slow=2.8,SNR=28						
FINES	**FINESS Array B**	**144.60**	**341**		**PKPab**	**16 02 35.0**	**-1.0**
FINES	**FINESS Array B**	**144.60**	**341**	*c i*PKIKP	**PKiKP**	**16 02 40.5**	**-0.6**
FINES				pmax	pmax		
	comp=Z,7.0nm,0.8s						
OBN	**Obninsk**	**144.88**	**326**	⇓*e*PKIKP	**PKPab**	**16 02 36.3**	**-0.9**
OBN				*e*		16 05 55.8	
OBN				pmax	pmax		
	comp=Z,12nm,1.1s						
LPSR	**Galich'ya Gora**	**144.91**	**321**	*e*PKIKP	**PKPab**	**16 02 36.6**	**-0.8**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VORR	**Voronezh**	**145.16**	**320**	*e*PKIKP	**PKPbc**	**16 02 37.8**	**-0.4**
VORR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KBZ	**Khabaz**	**145.21**	**305**	PKPbc	**PKPbc**	**16 02 38.1**	**-0.5**
	comp=Z,2.6nm,0.8s,baz=74,slow=2.9,SNR=6.2						
KIV	**Kislovodsk**	**145.32**	**306**	*i* PKIKP	**PKiKP**	**16 02 42.1**	**-1.2**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,58nm,25.0s						
VSR	**Storozhevoye**	**145.37**	**319**	*e*PKHKP	PKPpre	16 02 35.3	
VSR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VSU	**Vasula**	**146.74**	**337**	*ce*PKIKP	**PKPdf**	**16 02 40.1**	**-1.0**
VSLR	**Vesyoloye**	**147.30**	**305**	⇑*e*PKIKP	**PKPdf**	**16 02 41.4**	**-1.2**
NB2	**NORSAR Subarra**	**148.03**	**352**	PKP	**PKPbc**	**16 02 45.2**	**-1.2**
	comp=Z,5.6nm,0.8s,baz=13,slow=4.6						
NOA	**NORSAR Array B**	**148.03**	**352**	PKPbc	**PKPdf**	**16 02 44.6**	**+1.3**
	comp=Z,4.9nm,0.7s,baz=15,slow=4.5,SNR=13						
HFS	**Hagfors**	**148.56**	**350**	PKPbc	**PKPbc**	**16 02 46.0**	**-1.8**
	comp=Z,7.3nm,0.8s,baz=346,slow=0.6,SNR=14						
HFS	**Hagfors**	**148.56**	**350**	PKIKP	**PKPbc**	**16 02 46.0**	**-1.8**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNK	Minsk	149.20	331	i PKiKP	PKPab	16 02 52.8	-1.3
	comp=E,10.0nm,0.9s						
MNK				i PKiKP	PKPab	16 02 52.8	-1.3
	comp=N,14nm,0.8s						
MNK				i PKiKP	PKPab	16 02 52.8	-1.3
	comp=Z,33nm,0.8s,baz=46						
MNK				i PP	PP	16 06 23.7	+2.4
MNK				i PPP	PPP	16 09 43.7	
MNK				i SKS	SKSdf	16 09 54.8	+3.9
MNK				i SS	SS	16 25 38.2	+7.1
MNK				i SSS	SSS	16 31 16.4	
MNK				i LQ	LQ	17 03 51.0	
MNK				i LRM	MLR	17 09 48.5	
	comp=E,309nm,19.6s						
MNK				i LRM	MLR	17 09 54.8	
	comp=N,290nm,16.7s						
MNK				i LRM	MLR	17 10 40.4	
	comp=Z,75nm,13.1s						
MNK	Minsk	149.20	331	i PKP2	PKPab	16 02 52.7	-1.4
MNK				i		16 06 23.6	
MNK				i PPP	PPP	16 09 43.7	
MNK				i		16 09 54.8	
MNK				i SS	SS	16 25 38.2	+7.0
MNK				i SSS	SSS	16 31 16.3	
MNK				pmax	pmax		
	comp=Z,33nm,0.8s						
MNK				pmax	pmax		
	comp=E,10.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,14nm,0.8s						
MNK				MLR	MLR		
	comp=E,309nm,20.0s						
MNK				MLR	MLR		
	comp=N,290nm,17.0s						
MNK				MLR	MLR		
	comp=Z,75nm,13.0s						
NACGM	Naroch	149.37	333	ePKP	PKPbc	16 02 49.6	-0.4
	comp=Z,23nm,0.8s,baz=44						
SIM	Simferopol'	150.94	311	ePKIKP	PKPbc	16 02 54.0	-0.1
SIM				pmax	pmax		
	comp=Z,25nm,0.8s						
AKASG	Malin Array Be	151.04	324	PKPbc	PKPbc	16 02 53.2	-0.9
	comp=Z,5.5nm,0.5s,baz=47,slow=2.9,SNR=30						
AKBB	Malin Array Si	151.04	324	⇑i PKIKP	PKPbc	16 02 53.3	-0.8
KIEV	Kiev	151.06	324	⇑P	PKPbc	16 02 53.2	-1.0
MMAI	Mount Meron Ar	151.98	285	PKPbc	PKiKP	16 02 57.6	+0.3
	comp=Z,17nm,0.6s,baz=80,slow=4.6,SNR=25						
KIRS	Kirsehir-Merke	152.70	299	⇑P	PKPbc	16 02 57.9	-0.6
BRTR	Keskin Array B	152.79	300	PKPbc	PKPbc	16 02 57.9	-0.8
	comp=Z,2.3nm,0.6s,baz=134,slow=4.7,SNR=14						
ANTO	Ankara	153.40	301	⇓P	PKiKP	16 02 59.9	-0.1
TPGR	Topolog	154.66	314	⇑P	PKPab	16 03 20.0	+2.8
TESR	Tescani	154.87	319	⇑P	PKPab	16 03 21.4	+3.3
BURAR	Bucovina Array	155.01	322	⇑P	PKPab	16 03 21.6	+2.9
BURAR	Bucovina Array	155.01	322	⇑PKP2	PKPab	16 03 21.6	+2.8
VRI	Vrincioaia	155.18	318	⇓P	PKPab	16 03 23.1	+3.7
VRI	Vrincioaia	155.18	318	⇓PKP2	PKPab	16 03 23.1	+3.7
TURR	Turia	155.49	319	⇑P	PKPab	16 03 25.1	+4.3
MLR	Muntele Rosu	155.84	317	⇓P	PKPab	16 03 22.2	-0.2
MLR	Muntele Rosu	155.84	317	⇓PKP2	PKPab	16 03 22.2	-0.2
DOPR	Dopca	155.90	319	⇑P	PKPab	16 03 24.9	+2.4
ARR	Arges	156.68	319	⇑P	PKPab	16 03 29.3	+3.4
STEB	Steborice	156.71	335	ePKPAB	PKPab	16 03 29.2	+3.4
MARR	Marisel-Cluj	156.72	323	⇑P	PKPab	16 03 29.0	+2.9
CHVC	Chvalec	156.75	338	ePKP2	PKPab	16 03 29.3	+3.3
CHVC	Chvalec	156.75	338	ePKPAB	PKPab	16 03 29.3	+3.3
DRGR		156.85	323	⇑P	PKPab	16 03 28.5	+1.9
DRGR		156.85	323	⇑PKP2	PKPab	16 03 28.5	+1.9
DPC	Dobruska-Polom	156.87	338	ePKP2	PKPab	16 03 29.3	+2.8
DPC	Dobruska-Polom	156.87	338	ePKPAB	PKPab	16 03 29.3	+2.8
KRLC	Kraliky	156.95	337	ePKP2	PKPab	16 03 29.9	+3.0
KRLC	Kraliky	156.95	337	ePKPAB	PKPab	16 03 29.9	+3.0
PSZ	Piszkesteto	157.43	329	⇓P	PKPab	16 03 32.5	+3.5
PSZ	Piszkesteto	157.43	329	⇓PKP2	PKPab	16 03 32.6	+3.5
MODS	Modra-Piesok	158.17	333	ePKP2	PKPab	16 03 36.3	+4.1
MODS	Modra-Piesok	158.17	333	ePKP	PKPab	16 03 36.3	+4.1
HERR	Herculane	158.23	320	⇑P	PKPab	16 03 34.9	+2.3
ZVC	Zvikov	158.34	340	ePKPAB	PKPab	16 03 30.7	-2.1
KHC	Kasperske Hory	158.80	340	ePKP2	PKPab	16 03 33.4	-1.5
KHC	Kasperske Hory	158.80	340	ePKPAB	PKPab	16 03 33.4	-1.5
CKRC	Cesky Krumlov	158.85	339	ePKP2	PKPab	16 03 36.6	+1.5
CKRC	Cesky Krumlov	158.85	339	ePKPAB	PKPab	16 03 36.6	+1.5
GERES	GERESS Array B	159.02	340	PKPab	PKPab	16 03 33.9	-2.0
	comp=Z,0.4nm,0.7s,baz=18,slow=7.2,SNR=3.7						
TORD	Torodi Ar. Bea	163.62	176	PKP	PKPdf	16 03 03.0	-2.2
	comp=Z,0.8nm,0.7s,baz=322,slow=2.4,SNR=4.0						
TORD				PKPab	PKPab	16 03 57.8	+1.1
	comp=Z,2.6nm,0.7s,baz=164,slow=3.1,SNR=11						

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*IDC **21** 15:44:07.3±2.4, 4°.97S×129°.26E, h0^{km}, mb3.4/1, mbtmp3.6/3, ML3.6/2, Error ellipse: s-maj=165.4km s-min=30.5km az=69.0*

*DJA **21** 15:44:26.9±0.2, 5°S±3°×13°0E±°, h198^{km}±4^{km}, M3.7/13, mb3.8/6, MLv3.7/13*

ISC 21 15:44:26.8±0.9, **5°.15S**±0°.07×**129°.89E**±0°.08, **h200**^{km}, **n16**, σ**1^{s}.13**/18, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.62	2	P	Pn	15 44 55.4	+1.0
BNDI				S	Sn	15 45 17.1	+1.2
MSAI	Masohi	2.03	332	P	Pn	15 45 05.8	+0.2
MSAI				S	Sn	15 45 34.1	-1.8
AAI	Ambon	2.23	311	P	Pn	15 45 08.0	+0.3
KRAI	Karang Ratu	2.35	321	P	Pn	15 45 10.1	+1.1
SAUI	Saumlaki	3.15	154	P	Pn	15 45 18.7	+0.5
FAKI	Fak Fak	3.23	47	P	Pn	15 45 19.1	-0.1
NLAI	Namlea	3.36	304	P	Pn	15 45 23.1	+2.3
KMPI	Kaimana, Papua	4.08	69	P	Pn	15 45 30.3	+0.7
SIJI	Sorong	4.47	18	P	Pn	15 45 34.7	+0.2
SWI	Sorong	4.47	18	P	Pn	15 45 34.4	-0.1
SANI	Sanana	4.96	308	P	Pn	15 45 40.5	-0.2
LBFI	Labuhan Bajo,	10.46	251	P	Pn	15 46 51.4	-0.7
	13nm,0.9s						
JAY	Jayapura	11.11	77	P	Pn	15 47 00.7	+0.3
WRA	Warramunga Arr	15.33	164	Pn	Pn	15 47 51.0	-2.2
	0.2nm,0.3s,baz=344,slow=13,SNR=10						
WRA				Sn	S	15 50 31.6	-12
	0.2nm,0.3s,baz=0.3,slow=20,SNR=7.5 0.3nm,0.4s						
ASAR	Alice Springs	18.82	169	P	P	15 48 31.6	+0.1
	0.4nm,0.3s,baz=348,slow=12,SNR=30 1.9nm,0.5s						
MKAR	Makanchi Array	66.63	326	P	P	15 54 56.6	+0.8
	0.3nm,0.6s,baz=114,slow=7.3,SNR=4.1 0.3nm,0.6s						

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*NEIC **21** 15:45:23.6±2.5, 6°.80N±0°.05×73°.01W±0°.07, h154^{km}±8^{km}, mb4.2/4, Error ellipse: s-maj=11.1km s-min=6.7km az=66.0*

*IDC **21** 15:45:23.4±0.6, 6°.72N×72°.99W, h154^{km}±6^{km}, mb3.4/8, mbtmp4.1/12, MS2.1/1, Error ellipse: s-maj=15.8km s-min=7.1km az=130.0*

*VAO **21** 15:45:24.7±0.6, 6°.64N×72°.82W, h138^{km}±9^{km}, mb4.3, Presumed earthquake*

*RSNC **21** 15:45:24.7±0.0, 7°N±1°×7°3W±°, h147^{km}±2^{km}, M4.4, mb4.8, mB5.3, ML4.1, MLv4.8, Mw(mB)4.7*

ISC 21 15:45:23.0±0.6, **6°.81N**±0°.03×**73°.08W**±0°.04, **h154**^{km}±5^{km}, **n98**, σ**1^{s}.29**/124, **mb3.9**/7, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	0.64	36	P	Pn	15 45 47.5	+1.3
PAMC				S	Sn	15 46 04.4	+0.6
BRJC	Barrancabermej	0.68	283	P	Pn	15 45 46.5	+0.7
BRJC				S	Sn	15 46 03.2	+0.1
RUSC	La Rusia	0.92	180	Pn	Pn	15 45 48.8	+0.7
RUSC	La Rusia	0.92	180	P	Pn	15 45 48.6	+0.5
RUSC				S	Sn	15 46 06.6	-0.6
PTBC	PUERTO BERRIO,	1.40	259	P	Pn	15 45 51.5	-0.3
PTBC				S	Sn	15 46 12.5	-1.4
OCAC	Ocana	1.44	350	P	Pn	15 45 53.0	+0.6
OCAC				S	Sn	15 46 14.8	-0.2
SPBC	San Pablo de B	1.52	221	P	Pn	15 45 53.7	+0.5
SPBC				S	Sn	15 46 15.4	-0.9
NORC	Norcasia	2.17	235	P	Pn	15 46 00.8	+0.3
NORC				S	Sn	15 46 28.3	-1.0
CHIC	Chingaza	2.27	197	P	Pn	15 46 02.9	+0.9
CHIC				S	Sn	15 46 32.0	+0.1
ROSC	El Rosal	2.32	212	P	Pn	15 46 04.5	+1.9
	463nm,0.3s,baz=73,slow=10,SNR=98						
ROSC				S	Sn	15 46 32.8	-0.1
	3μm,0.5s,baz=151,slow=18,SNR=18						
ROSC	El Rosal	2.32	212		Pn	15 46 04.7	+2.2
ROSC	El Rosal	2.32	212	P	Pn	15 46 04.7	+2.2
ROSC				S	Sn	15 46 33.7	+0.7
HELC	Santa Helena	2.51	256	P	Pn	15 46 05.2	+0.3
HELC				S	Sn	15 46 36.4	-0.7
UREC	San Jos de Ur	2.61	291	P	Pn	15 46 05.0	-0.7
UREC				S	Sn	15 46 36.5	-2.1
VILC	Villavicencio,	2.75	193	P	Pn	15 46 08.1	+0.5
VILC				S	Sn	15 46 42.5	+0.4
NIZA	Niza - Manizal	2.95	234	P	Pn	15 46 13.0	+2.8
NIZA				S	Sn	15 46 47.2	+0.5
CBOC	Ciudad Bolivar	3.07	252	P	Pn	15 46 12.9	+1.3
CBOC				S	Sn	15 46 48.6	-0.5
DBBC	Dabeiba	3.12	274	P	Pn	15 46 12.6	+0.5
DBBC				S	Sn	15 46 49.2	-0.9
SDV	Santo Domingo	3.18	49	P	Pn	15 46 14.4	+1.4
	527nm,0.4s,baz=236,slow=9.7,SNR=209						
SDV				S	Sn	15 46 52.2	+0.5
	732nm,0.4s,baz=81,slow=22,SNR=20						
SDV				LR	LR	15 47 59.1	
	comp=Z,29nm,19.2s,baz=194,slow=49						
SDV	Santo Domingo	3.18	49	eP	Pn	15 46 13.3	+0.3
SDV				eS	Sn	15 46 50.8	-0.9
SDV	Santo Domingo	3.18	49	P	Pn	15 46 14.3	+1.4
SDV				S	Sn	15 46 51.3	-0.4
ARGC	Ariguani, Magd	3.24	339	P	Pn	15 46 15.0	+1.4
ARGC				S	Sn	15 46 52.6	-0.2
PRAC	Prado	3.57	210	P	Pn	15 46 18.5	+0.6
PRAC				S	Sn	15 47 00.5	+0.1
ORTC	Ortega, Tolima	3.60	217	P	Pn	15 46 18.6	+0.3
APAC	Apartado, Choc	3.64	287	P	Pn	15 46 19.3	+0.6
SJCC	San Jacinto, C	3.70	326	P	Pn	15 46 19.0	-0.6
SJCC				S	Sn	15 47 00.6	-3.0
URMC	La Uribe, Meta	3.77	200	P	Pn	15 46 21.7	+1.1
LCBC	Los crdobas,	3.84	302	P	Pn	15 46 21.3	0.0
GUVC	San Jose del G	4.26	174	P	Pn	15 46 27.5	+0.6
GUVC				S	Sn	15 47 14.6	-2.0
YOTC	Yotoco, Valle	4.30	229	P	Pn	15 46 27.7	+0.2
YOTC				S	Sn	15 47 15.2	-2.4
SMRC	Santa Marta, M	4.47	345		Pn	15 46 29.4	-0.1
SMRC	Santa Marta, M	4.47	345	P	Pn	15 46 29.6	+0.1
SMRC				S	Sn	15 47 19.0	-2.4
CAPC	Capurgana	4.61	293	P	Pn	15 46 30.4	-0.9
PIZC	Pizarro, Choco	4.64	247	P	Pn	15 46 34.1	+2.3
MACC	Macarena, Meta	4.70	189	P	Pn	15 46 32.0	-0.6
PTAC	Punta Ardita,	4.71	274	P	Pn	15 46 32.3	-0.4
BETC	Betania	4.73	210	P	Pn	15 46 33.3	+0.2
URIC	Uribia, Colomb	4.97	12	P	Pn	15 46 35.5	-0.7
JAMC	Jamundi, Valle	5.06	225	P	Pn	15 46 37.9	+0.3
	0.5nm2μm113nm,0.5s						
JAMC				S	Sn	15 47 33.1	-2.6
	0.5nm2μm113nm,0.5s						
GARC	Garzon, Huila	5.19	208	P	Pn	15 46 39.1	-0.2
GARC				S	Sn	15 47 35.5	-3.3
POPC	Popayan, Colom	5.56	220	P	Pn	15 46 44.9	+0.7
	850nm79nm,0.8s						
FLOC	Florencia	5.80	206		Pn	15 46 47.6	+0.4
FLOC	Florencia	5.80	206	P	Pn	15 46 47.6	+0.4
	2μm109nm,1.2s						
BBAC	Balboa, Cauca	6.32	221	P	Pn	15 46 55.0	+0.7
CRUC	La Cruz	6.49	217	P	Pn	15 47 00.0	+3.4
GCUF	Volcan Galeras	7.00	218	P	Pn	15 47 05.1	+1.6
	3μm120nm,0.4s						
OTAV	Otavalo	8.45	220		Pn	15 47 22.7	-0.2
OTAV	Otavalo	8.45	220	eP	Pn	15 47 24.7	+1.8
OTAV	Otavalo	8.45	220	P	Pn	15 47 23.3	+0.4
	16nm,0.5s						
PAC1	Pacto, Paraso	8.65	221	P	Pn	15 47 23.5	-1.8
SGC2	Sao Gabriel da	9.21	138	P	Pn	15 47 30.8	-1.9
SLOR	San Lorenzo -	9.24	216		Pn	15 47 28.5	-5.0
HOJ	Hope	11.69	342	i P	Pn	15 48 08.2	+3.0
GWJ	Greenwich	11.74	343	i P	P	15 48 13.7	+0.6
STH	Stony Hill	11.77	342	i P	P	15 48 11.5	-1.7
MTDJ	Mount Denham	12.15	339		Pn	15 48 14.7	+3.4
MTDJ	Mount Denham	12.15	339	i P	Pn	15 48 13.9	+2.7
MTDJ	Mount Denham	12.15	339	i P	P	15 48 15.2	-2.3
MTDJ	Mount Denham	12.15	339	P	Pn	15 48 13.3	+2.0
	90nm,0.7s						
JTS	Las Juntas de	12.24	287	P	Pn	15 48 14.0	+1.5
	9.5nm,0.8s,baz=62,slow=7.7,SNR=7.9						
JTS	Las Juntas de	12.24	287	Pn	Pn	15 48 13.7	+1.2
DR12	Loma Pena Alta	12.43	16	Pn	Pn	15 48 13.4	-1.5
CELP	Cerrillos	12.86	29	Pn	Pn	15 48 19.6	-0.8
SJG	San Juan	13.10	30	P	Pn	15 48 23.2	-0.2
	18nm,0.4s,baz=202,slow=19,SNR=9.6						
GTBY	Guantanamo Bay	13.18	352	eP	P	15 48 28.6	-0.3
GTBY	Guantanamo Bay	13.18	352	P	P	15 48 28.3	-0.6
	85nm,1.5s						
BOAV	Boa Vista	13.26	109		Pn	15 48 24.2	-1.3
BOAV	Boa Vista	13.26	109	eP	Pn	15 48 23.7	-1.8
BOAV	Boa Vista	13.26	109	P	Pn	15 48 24.2	-1.3
RCC	Rio Carpintero	13.35	349	eP	P	15 48 30.6	-0.1
MARVS	Santiago de Cu	13.39	348	eP	P	15 48 30.7	-0.5
ATAH	Atahualpa	14.84	201	P	Pn	15 48 44.1	-1.7
	5.0nm,0.7s,baz=326,slow=3.8,SNR=4.0						
APG	El Apazote	18.90	297	P	P	15 49 32.2	0.0
	0.2nm,0.4s,baz=132,slow=12,SNR=2.4						
TEIG	Tepich	19.88	314	P	P	15 49 41.8	-0.7
TEIG				IAmb	IAmb	15 49 58.2	
	comp=Z,29nm,1.2s						
ITTB	Itaituba	20.57	122	eP	P	15 49 50.4	+0.4
NPGB	Novo Progresso	22.41	128	eP	P	15 50 09.3	+0.2
LPAZ	La Paz	23.47	168	P	P	15 50 18.1	-1.4
	comp=Z,2.8nm,0.8s,baz=348,slow=12,SNR=7.8 comp=Z,2.8nm,0.8s						
LPAZ	La Paz	23.47	168	P	P	15 50 18.7	-0.9
LPAZ				IAmb	IAmb	15 50 21.3	
	comp=Z,4.2nm,1.0s						
LPAZ	La Paz	23.47	168	eP	P	15 50 19.9	+0.3
PDRB	Porto dos Gac	24.49	138	eP	P	15 50 28.3	+0.1
ARAG	Araguaiana, MT	30.73	137	eP	P	15 51 23.8	-0.1
BDFB	Brasilia	33.38	132	P	P	15 51 46.7	-0.4
	comp=Z,1.4nm,0.4s,baz=275,slow=11,SNR=2.0 comp=Z,1.4nm,0.4s						
TXAR	Lajitas Array	36.50	312	P	P	15 52 15.2	+1.4
	comp=Z,0.3nm,0.4s,baz=132,slow=8.1,SNR=4.5 comp=Z,0.3nm,0.4s						
ULM	Lac du Bonnet	47.31	340	P	P	15 53 41.4	+0.3
	comp=Z,1.7nm,0.5s,baz=156,slow=8.1,SNR=2.3 comp=Z,1.7nm,0.5s						
ULM	Lac du Bonnet	47.31	340	P	P	15 53 41.5	+0.4
LL01	San Ignacio de	48.96	179	P	P	15 53 52.8	-1.0
YKA	Yellowknife Ar	63.28	340	P	P	15 55 36.7	+1.6
	comp=Z,0.4nm,0.6s,baz=140,slow=5.9,SNR=9.6 comp=Z,0.4nm,0.6s						
YKA	Yellowknife Ar	63.28	340	P	P	15 55 36.3	+1.2
TORD	Torodi Ar. Bea	73.70	78	P	P	15 56 39.7	-1.0
	comp=Z,0.3nm,0.4s,baz=261,slow=7.2,SNR=1.9 comp=Z,0.3nm,0.4s						
NOA	NORSAR Array B	81.31	29	P	P	15 57 23.7	+1.6
	comp=Z,0.6nm,0.8s,baz=270,slow=5.3,SNR=2.1 comp=Z,0.6nm,0.8s						
ARCES	ARCESS Array B	86.66	20	P	P	15 57 49.9	+0.8
	comp=Z,3.2nm,1.1s,baz=282,slow=6.1,SNR=3.6 comp=Z,3.2nm,1.1s						
ZALV	Zalesovo Beam	116.67	14	PKP	PKiKP	16 03 49.5	+0.6
	comp=Z,0.4nm,0.4s,baz=336,slow=3.2,SNR=2.4						
MKAR	Makanchi Array	122.31	20	PKP	PKPdf	16 03 59.4	-0.7
	comp=Z,0.3nm,0.5s,baz=298,slow=2.3,SNR=5.7						
MKAR	Makanchi Array	122.31	20		PKPdf	16 03 59.8	-0.3
HILR	Hailar Array B	122.76	350	PKP	PKiKP	16 04 01.3	+0.2
	comp=Z,0.7nm,0.4s,baz=352,slow=2.0,SNR=3.8						
ASAR	Alice Springs	149.14	234	PKPbc	PKPbc	16 04 54.1	0.0
	comp=Z,2.0nm,0.7s,baz=121,slow=3.4,SNR=37						
WRA	Warramunga Arr	150.37	241	PKPbc	PKPbc	16 04 57.3	0.0
	comp=Z,1.2nm,0.5s,baz=109,slow=2.8,SNR=13						
CMAR	Chiang Mai Arr	153.68	17	PKPbc	PKiKP	16 05 05.4	+0.6
	comp=Z,0.9nm,0.5s,baz=347,slow=2.2,SNR=4.4						

IDC 21 16:01:24.4±1.5, **29°.84N**×**103°.04E**, **h0**^{km}, **mb3.4**/4, **mbtmp3.5**/4, **Error ellipse: s-maj=45.8km s-min=27.9km az=57.0**, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	22.02	63	P	P	16 06 19.7	-0.6
	1.3nm,0.8s,baz=264,slow=11,SNR=5.3 1.3nm,0.8s						
MKAR	Makanchi Array	23.37	322	P	P	16 06 34.7	+0.1
	0.3nm,0.5s,baz=129,slow=11,SNR=5.9 0.3nm,0.5s						
WRA	Warramunga Arr	57.95	145	P	P	16 11 18.6	-0.1
	1.1nm,0.8s,baz=324,slow=7.1,SNR=4.9 1.1nm,0.8s						
ASAR	Alice Springs	60.91	147	P	P	16 11 39.2	+0.1
	0.5nm,0.8s,baz=327,slow=6.5,SNR=5.8 0.5nm,0.8s						

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*IDC **21** 16:11:53.7±3.1, 34°.53N×24°.94E, h0^{km}, mb3.7/3, mbtmp3.6/9, ML3.1/5, Error ellipse: s-maj=50.4km s-min=20.8km az=47.0*

*ISK **21** 16:11:57.5, 34°.61N×24°.80E, h24^{km}, ML3.3/14*

*THE **21** 16:12:00.3, 35°N±2°×2°5E±°, h15^{km}±3^{km}, M3.3/8, MLh3.3/8*

*ATH **21** 16:12:00.4, 34°.74N×24°.71E, h26^{km}±3^{km}, ML3.4/6, Manual Solution by M.Charalampakis First location: 2019/12/21 16:13:05, This location: 2019/12/21 19:18:04 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 1 km*

*AFAD **21** 16:12:02.0, 34°.87N×25°.53E, h6^{km}±1^{km}, ML2.9*

ISC 21 16:11:59.5±1.3, **34°.69N**±0°.07×**24°.83E**±0°.03, **h35**^{km}±6^{km}, **n65**, σ**1^{s}.69**/81, **mb3.6**/3, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDI	Anoyia	0.60	5	P	Pn	16 12 11.0	-0.6
IDI				S	Sn	16 12 19.7	-0.5
IDI	Anoyia	0.60	5	Pn	Pn	16 12 11.3	-0.4
	96nm,0.3s,baz=220,slow=7.1,SNR=391						
IDI				Sn	Sn	16 12 20.6	+0.4
	143nm,0.3s,baz=74,slow=23,SNR=21						
IDI	Anoyia	0.60	5	Pg	Pn	16 12 11.5	-0.2
IDI	Anoyia	0.60	5	P	Pn	16 12 11.2	-0.5
IDI				S	Sn	16 12 19.9	-0.4
GVD	Gavdhos	0.63	284	P	Pn	16 12 10.6	-1.4
GVD				S	Sn	16 12 18.0	-2.7
GVD	Gavdhos	0.63	284	Pg	Pn	16 12 10.7	-1.2
GVD				Sg	Sn	16 12 20.2	-0.5
GVD	Gavdhos	0.63	284	P	Pn	16 12 10.4	-1.5
GVD				S	Sn	16 12 18.3	-2.4
IACM	Heraklion	0.65	18	P	Pn	16 12 11.9	-0.3
IACM				S	Sn	16 12 22.1	+0.8
IACM	Heraklion	0.65	18	P	Pn	16 12 13.1	+0.9
NPS	Neapolis	0.86	48	P	Pn	16 12 17.5	+2.3
NPS				S	Sn	16 12 29.7	+3.1
NPS	Neapolis	0.86	48	P	Pn	16 12 16.9	+1.8
NPS				S	Sn	16 12 29.1	+2.5
VAM	Vamos	0.88	325	P	Pn	16 12 14.7	-0.7
VAM				S	Sn	16 12 26.2	-0.9
CHNB	Souda	1.01	322	P	Pn	16 12 17.9	+0.8
IMMV	Iera Moni Meta	1.04	318	P	Pn	16 12 17.2	-0.3
IMMV	Iera Moni Meta	1.04	318	Pn	Pn	16 12 17.7	+0.2
IMMV				Sn	Sn	16 12 32.3	+1.5
CHAN	Chania	1.05	322	P	Pn	16 12 18.3	+0.7
CHAN	Chania	1.05	322	P	Pn	16 12 18.1	+0.5
CH01	Chania	1.06	322	P	Pn	16 12 18.3	+0.5
ZKR	Zakros	1.22	69	P	Pn	16 12 23.0	+2.9
ZKR	Zakros	1.22	69	Pn	Pn	16 12 20.4	+0.4
ZKR	Zakros	1.22	69	P	Pn	16 12 22.7	+2.6
ANKY	Antikythira Is	1.71	314	P	Pn	16 12 27.7	+0.9
ANKY	Antikythira Is	1.71	314	P	Pn	16 12 27.1	+0.3
KARP	Karpathos	2.10	65	P	Pn	16 12 35.3	+3.2
KARP	Karpathos	2.10	65	Pn	Pn	16 12 32.7	+0.6
KARP	Karpathos	2.10	65	P	Pn	16 12 35.2	+3.1
KTHA	Kythira Island	2.13	318	P	Pn	16 12 33.3	+0.8
KTHA	Kythira Island	2.13	318	Pn	Pn	16 12 33.3	+0.8
VLI	Veliai	2.54	323	P	Pn	16 12 38.8	+0.5
YAZI	Mula-Dat§a-	2.92	46	P	Pn	16 12 43.6	+0.1
DAT	Datca	3.03	47	Pn	Pn	16 12 45.9	+0.9
DION	Dionisos Attik	3.46	348	P	Pn	16 12 50.9	0.0
TURN	Turunc	3.47	52	P	Pn	16 12 52.4	+1.5
TURN	Turunc	3.47	52	Pn	Pn	16 12 52.5	+1.5
LTK	Loutraki	3.65	336	P	Pn	16 12 53.7	+0.3
YER	Yerkesik	3.72	48	Pn	Pn	16 12 56.2	+1.7
DALY	Dalyan (Mula)	3.77	55	Pn	Pn	16 12 56.7	+1.7
GUR	Goura	3.81	329	P	Pn	16 12 55.5	-0.3
MULA	Mugla, Merkez-	3.82	47	P	Pn	16 12 57.7	+1.8
FETY	Fethiye	3.97	60	P	Pn	16 12 50.4	-7.5
KYMI	Kymi, Euboea I	3.98	352	P	Pn	16 12 59.2	+1.2
KLV	Kalavryta, Ach	3.98	328	P	Pn	16 12 58.1	0.0
SABU	Mula-Dalaman	3.99	56	P	Pn	16 12 58.9	+0.8
SABU				S	Sn	16 13 41.4	-2.2
IZZE	Mula-Seydike	3.99	63	P	Pn	16 12 58.4	+0.3
IZZE				S	Sn	16 13 40.9	-2.8
IZZE				i IAML		16 13 44.0	
	comp=E,39nm,0.4s						
IZZE				i IAML		16 13 45.0	
	comp=N,75nm,0.5s						
AYDB	Zeytinkoy-Aydi	4.09	36	Pn	Pn	16 13 01.8	+2.2
AKAS	Kas	4.19	67	P	Pn	16 13 01.8	+0.8
AKAS				S	Sn	16 13 47.2	-1.7
AKAS				i IAML		16 13 57.0	
	comp=E,36nm,0.6s						
AKAS	Kas	4.19	67	Pn	Pn	16 13 02.9	+1.9
ESEN	Aydn-Nazilli	4.21	42	P	Pn	16 13 02.8	+1.7
DNZT	Denizli-Tavas-	4.28	52	P	Pn	16 13 02.8	+0.7
DNZT				S	Sn	16 13 46.8	-4.0
CAME	Cameli-Denizli	4.28	57	Pn	Pn	16 13 04.2	+2.0
TAVA	DENIZLI_Tavas	4.32	49	P	Pn	16 13 03.2	+0.5
KNIK	Mula-Seydike	4.42	59	P	Pn	16 13 04.5	+0.4
APMY	Acipayam-Deniz	4.57	51	Pn	Pn	16 13 08.2	+2.1
GOLH	Golhisar	4.61	55	P	Pn	16 13 07.1	+0.4
GOLH				S	Sn	16 13 56.0	-2.9
GOLH				i IAML		16 14 06.0	
	comp=N,16nm,0.5s						
ELL	Elmali	4.62	62	Pn	Pn	16 13 08.8	+1.9
AKUM	Antalya-Kumluc	4.79	68	P	Pn	16 13 05.7	-3.3
AKUM				S	Sn	16 14 00.5	-2.8
BRTR	Keskin Array B	8.64	52	Pn	Pn	16 14 02.5	+0.4
	0.1nm,0.3s,baz=230,slow=14,SNR=4.2						
BRTR				Sn	Sn	16 15 34.6	-3.7
	0.1nm,0.3s,baz=30,slow=14,SNR=1.4 0.5nm,0.6s						
MMAI	Mount Meron Ar	8.95	98	Pn	Pn	16 14 03.5	-2.9
	0.4nm,0.3s,baz=285,slow=13,SNR=2.1						
MMAI				Sn	Sn	16 15 38.0	-8.0
	0.6nm,0.3s,baz=266,slow=40,SNR=1.8 0.6nm,0.4s						
EIL	Elat	9.93	117	Pn	Pn	16 14 15.9	-3.7
	0.9nm,0.3s,baz=320,slow=16,SNR=7.9						
EIL				Sn	Sn	16 16 00.9	-9.0
	1.5nm,0.3s,baz=6.0,slow=7.3,SNR=7.0 2.6nm,0.4s						
AKASG	Malin Array Be	16.32	10	Pn	Pn	16 15 46.0	+0.3
	0.7nm,0.5s,baz=201,slow=11,SNR=6.3						
AKASG				Sn	Sn	16 18 42.9	-2.8
	1.0nm,0.3s,baz=234,slow=45,SNR=3.6						
GERES	GERESS Array B	16.37	333	Pn	Pn	16 15 47.3	+0.8
	baz=151,slow=9.0,SNR=2.0 0.3nm,0.5s						
KBZ	Khabaz	16.64	52	Pn	P	16 15 53.2	+1.3
	0.1nm,0.3s,baz=229,slow=7.2,SNR=13 5.7nm,1.0s						
HFS	Hagfors	26.48	347	P	P	16 17 35.5	+2.4
	1.7nm,0.8s,baz=159,slow=12,SNR=1.8 1.7nm,0.8s						
MKAR	Makanchi Array	44.26	56	P	P	16 20 04.2	-1.3
	0.7nm,0.7s,baz=276,slow=6.9,SNR=6.8 0.7nm,0.7s						
ZALV	Zalesovo Beam	45.53	46	P	P	16 20 13.9	-1.5
	0.4nm,0.4s,baz=282,slow=7.2,SNR=2.1 0.4nm,0.4s						

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*SNET **21** 17:47:25.3±1.1, 12°.93N×88°.97W, h31^{km}, ML4.7*

*CATAC **21** 17:47:25.6±0.2, 13°N±1°×8°9W±°, h32^{km}±2^{km}, M4.9/58, MLv4.9/58, Error ellipse: s-maj=3.5km s-min=1.4km az=31.8, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.74; $M_{\theta\theta}$1.16; $M_{\phi\phi}$0.58; $M_{r\theta}$-1.16; $M_{\theta\phi}$-0.37; $M_{\phi r}$0.42; Fault plane solution: $M_0$2.00407×10^{15} NP1: ϕ_s112.43977°, δ64.27137°, λ-92.17953°. NP2: ϕ_s297.45008°, δ25.81451°, λ-85.48750°. Principal axes: T 1.7717, Plg19.2434°, Azm204.0720°; N 0.4034, Plg1.9634°, Azm113.3863°; P -2.1751, Plg70.6488°, Azm17.7847°; confirmed*

*IDC **21** 17:47:26.2±1.2, 13°.08N×88°.75W, h76^{km}±10^{km}, mb3.9/15, mbtmp4.3/18, MS3.3/14 Error ellipse: s-maj=22.8km s-min=8.3km az=45.0*

*GCG **21** 17:47:27.2±1.6, 13°.03N×88°.97W, h43^{km}±23^{km}, MD4.3,* *ML4.5, MW3.8*

NEIC ***21*** *17:47:27.6±2.1, 13°11N±0°06×88°74W±0°06, h81^{km}±2^{km}, mb4.5/121, Error ellipse: s-maj=11.4km s-min=5.4km az=219.0*

UCR ***21*** *17:47:27.9±1.2, 14°20N×87°67W, h81^{km}, MW4.4*

ISC 21 17:47:24.9±0.6**, 12°99N**±0°04×**88°91W**±0°03**, h64**^{km}±5^{km}**, n277,** σ1^{s}39/276**, mb4.5**/56**, 2C, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TECO	Alcaldia de Te	0.55	13	P	Pn	17 47 38.4	+0.5
TECO	Alcaldia de Te	0.55	13	S	Sn	17 47 47.6	+0.4
LALI	Alcalda de L	0.63	321	eP	Pn	17 47 38.7	0.0
LALI				eS	Sn	17 47 48.2	-0.5
LALI	Alcalda de L	0.63	321	i P	Pn	17 47 38.7	0.0
LALI				i S	Sn	17 47 48.2	-0.5
LALI				IAML		17 47 49.5	
	comp=E,16µm,0.4s						
LALI	Alcalda de L	0.63	321	P	Pn	17 47 38.7	0.0
UESV	Universidad de	0.65	11	P	Pn	17 47 39.6	+0.7
UESV	Universidad de	0.65	11	S	Sn	17 47 49.6	+0.4
PANCS	Alcalda de	0.67	337	P	Pn	17 47 39.2	0.0
PANCS	Alcalda de	0.67	337	S	Sn	17 47 49.2	-0.4
LOMA	Loma Larga	0.69	339	P	Pn	17 47 39.6	+0.1
LOMA	Loma Larga	0.69	339	S	Sn	17 47 50.2	0.0
PQSS	Presa 15 de Se	0.71	28	P	Pn	17 47 38.9	-0.7
PQSS	Presa 15 de Se	0.71	28	S	Sn	17 47 50.3	-0.1
PAVA	Las Pavas	0.71	358	P	Pn	17 47 40.5	+0.8
PAVA	Las Pavas	0.71	358	S	Sn	17 47 51.9	+1.3
SCLA	Alcaldia de Sa	0.72	14	P	Pn	17 47 40.9	+1.1
SCLA	Alcaldia de Sa	0.72	14	S	Sn	17 47 52.4	+1.7
PACA	Pacayal	0.74	50	P	Pn	17 47 41.2	+1.1
PACA	Pacayal	0.74	50	S	Sn	17 47 52.9	+1.7
UDBS	Universidad Do	0.76	342	P	Pn	17 47 40.7	+0.5
UDBS	Universidad Do	0.76	342	S	Sn	17 47 52.3	+0.9
UTEC	Universidad Te	0.76	338	P	Pn	17 47 40.6	+0.4
UTEC	Universidad Te	0.76	338	S	Sn	17 47 51.8	+0.4
IGN	Direccin Gen	0.76	341	P	Pn	17 47 40.7	+0.4
IGN	Direccin Gen	0.76	341	S	Sn	17 47 51.9	+0.5
UEES	Universidad Ev	0.79	336	P	Pn	17 47 40.9	+0.3
UEES	Universidad Ev	0.79	336	S	Sn	17 47 52.5	+0.4
BLLM	Bellamira	0.79	56	⇑iP	Pn	17 47 41.6	+1.0
PMON	Piamonte	0.81	331	P	Pn	17 47 41.4	+0.4
PMON	Piamonte	0.81	331	S	Sn	17 47 53.1	+0.4
BOQS	Boqueron	0.82	334	i P	Pn	17 47 41.6	+0.5
JAYA	Jayaque - finc	0.84	321	eP	Pn	17 47 41.4	+0.1
JAYA				eS	Sn	17 47 53.5	+0.2
JAYA	Jayaque - finc	0.84	321	i P	Pn	17 47 41.4	+0.1
JAYA				i S	Sn	17 47 53.4	+0.1
JAYA	Jayaque - finc	0.84	321	P	Pn	17 47 41.6	+0.3
CNRM	Centro Naciona	0.86	56	eP	Pn	17 47 42.8	+1.4
CNRM				eS	Sn	17 47 55.5	+1.9
CNRM	Centro Naciona	0.86	56	P	Pn	17 47 42.6	+1.1
CEDA	San Andres	0.93	330	eP	Pn	17 47 42.9	+0.6
CEDA				eS	Sn	17 47 56.1	+0.8
CEDA	San Andres	0.93	330	P	Pn	17 47 43.0	+0.6
CEDA	San Andres	0.93	330	S	Sn	17 47 55.9	+0.7
CAHU	Cacacuatique	1.03	41	⇑iP	Pn	17 47 45.0	+1.3
LCND	La Caada	1.04	72	eP	Pn	17 47 44.8	+1.2
LCND				eP		17 47 45.0	
LCND				eS	Sn	17 47 59.6	+2.0
LCND	La Caada	1.04	72	P	Pn	17 47 45.0	+1.3
CEVE	Cerro Verde	1.08	320	eP	Pn	17 47 45.6	+1.2
CEVE				eS	Sn	17 48 01.0	+2.0
CEVE	Cerro Verde	1.08	320	P	Pn	17 47 45.9	+1.4
CNCH	Conchagua	1.08	75	eP	Pn	17 47 45.5	+1.1
CNCH				eS	Sn	17 48 00.5	+1.7
CNCH	Conchagua	1.08	75	P	Pn	17 47 45.5	+1.1
LLGN	La Laguna	1.16	358	P	Pn	17 47 46.4	+1.0
LLGN	La Laguna	1.16	358	S	Sn	17 48 02.9	+2.3
UNIC	Universidad Ca	1.16	328	P	Pn	17 47 46.2	+0.9
UNIC	Universidad Ca	1.16	328	S	Sn	17 48 02.1	+1.6
NUBE	Las Nubes	1.24	317	eP	Pn	17 47 47.0	+0.6
NUBE				eS	Sn	17 48 03.0	+0.5
NUBE	Las Nubes	1.24	317	i P	Pn	17 47 47.0	+0.6
NUBE				i S	Sn	17 48 02.9	+0.5
NUBE	Las Nubes	1.24	317	P	Pn	17 47 47.2	+0.8
LOAL	Lomas de Alarc	1.31	320	P	Pn	17 47 48.4	+1.1
LOAL	Lomas de Alarc	1.31	320	S	Sn	17 48 05.6	+1.7
CSGN	Cosiguina Volc	1.32	91	P	Pn	17 47 48.6	+1.2
CSGN				S	Sn	17 48 05.7	+1.6
CSGN	Cosiguina Volc	1.32	91	eP	Pn	17 47 48.0	+0.6
CSGN				eS	Sn	17 48 05.3	+1.1
FAME	Alcaldia de Sa	1.37	308	P	Pn	17 47 48.7	+0.7
FAME	Alcaldia de Sa	1.37	308	S	Sn	17 48 06.1	+0.8
POTN	Potosi Cosigui	1.37	90	P	Pn	17 47 49.6	+1.6
POTN				S	Sn	17 48 06.5	+1.2
POTN	Potosi Cosigui	1.37	90	eP	Pn	17 47 48.7	+0.8
POTN				eS	Sn	17 48 05.7	+0.4
MTO3	Montecristo	1.46	343		Pn	17 47 50.4	+1.0
MTO3				Sn	Sn	17 48 08.4	+0.6
MTO3	Montecristo	1.46	343	i P	Pn	17 47 50.5	+1.0
MTO3	Montecristo	1.46	343	P	Pn	17 47 50.6	+1.1
MTO3	Montecristo	1.46	343	S	Sn	17 48 09.0	+1.1
ESQI	Esquipulas	1.61	345		Pn	17 47 52.7	+1.4
ESQI				Sn	Sn	17 48 12.4	+1.1
ESQI	Esquipulas	1.61	345	S	Sn	17 48 12.6	+1.3
ESQI	Esquipulas	1.61	345	P	Pn	17 47 53.1	+1.8
SARH	Santa Rosa de	1.78	5	i P	Pn	17 47 55.5	+1.9
SARH	Santa Rosa de	1.78	5	P	Pn	17 47 55.7	+2.1
SARH	Santa Rosa de	1.78	5	S	Sn	17 48 16.4	+1.2
CRIN	San Cristobal	1.84	99		Pn	17 47 55.7	+1.4
CRIN				Sn	Sn	17 48 16.0	-0.6
CRIN	San Cristobal	1.84	99	S	Sn	17 48 18.6	+2.0
CRIN	San Cristobal	1.84	99	P	Pn	17 47 56.2	+1.9
CRIN	San Cristobal	1.84	99	eP	Pn	17 47 55.7	+1.4
CRIN				eS	Sn	17 48 17.8	+1.2
TGUH	Tegucigalpa,Un	1.91	56		Pn	17 47 56.8	+1.4
TGUH	Tegucigalpa,Un	1.91	56	P	Pn	17 47 57.0	+1.6
PKGN	Cerro Pekin	1.91	100	P	Pn	17 47 56.9	+1.6
PKGN				S	Sn	17 48 19.0	+0.7
QUEN	Al S del Volca	2.05	101	P	Pn	17 47 58.9	+1.8
QUEN				S	Sn	17 48 22.9	+1.2
TEL3	Telica 3	2.06	102	P	Pn	17 47 58.6	+1.3
ALEN	Leon	2.06	105	P	Pn	17 47 58.1	+0.8
HERN	Volcan Telica	2.06	100	Pn	Pn	17 47 57.9	+0.5
HERN				Sn	Sn	17 48 20.7	-1.5
POLN	Al Sur del Vol	2.07	99	P	Pn	17 47 58.9	+1.4
POLN				S	Sn	17 48 23.2	+0.9
CNGA	Al SSO del Vol	2.21	103	P	Pn	17 48 00.8	+1.4
CNGA				S	Sn	17 48 27.5	+1.8
CNGN	Cerro Negro	2.21	103		Pn	17 48 00.1	+0.6
CNGN				Sn	Sn	17 48 24.7	-1.0
CNGN	Cerro Negro	2.21	103	S	Sn	17 48 27.6	+1.8
CNGN	Cerro Negro	2.21	103	P	Pn	17 48 00.6	+1.1
CNGN	Cerro Negro	2.21	103	eP	Pn	17 47 59.9	+0.5
YUSH	Yuscaran	2.23	64	P	Pn	17 48 01.5	+1.8
YUSH	Yuscaran	2.23	64	S	Sn	17 48 28.7	+2.6
AESN	El Sauce Leon	2.31	92	S	Sn	17 48 30.2	+2.1
ESSG	Sabana Grande	2.32	307	i P	Pn	17 48 03.1	+2.2
ESSG				IAML		17 48 37.1	
	comp=E,3µm,0.6s						
COPN	Copaltepe	2.40	109	P	Pn	17 48 02.6	+0.7
MOM2	El Cardon	2.43	103	P	Pn	17 48 03.8	+1.5
MOM2				S	Sn	17 48 33.2	+2.2
OCON	Estacion meteo	2.45	75	P	Pn	17 48 03.9	+1.2
OCON				S	Sn	17 48 33.7	+2.1
LIMN	Finca el Limon	2.48	88	P	Pn	17 48 04.1	+1.0
LIMN				S	Sn	17 48 34.6	+2.3
APG	El Apazote	2.50	323	P	Pn	17 48 05.3	+1.8
	comp=E,3.8nm,0.4s,baz=126,slow=11,SNR=52						
APG				S	Sn	17 48 35.9	+2.8
	comp=E,13nm,0.5s,baz=71,slow=20,SNR=6.4						
APG	El Apazote	2.50	323	i P	Pn	17 48 05.2	+1.6
AMTN	Mateare	2.53	107	S	Sn	17 48 34.7	+1.2
SAPS	Ciudad Sandino	2.58	108	P	Pn	17 48 05.9	+1.6
SAPS	Ciudad Sandino	2.58	108	S	Sn	17 48 35.4	+0.8
APQ2	Apoyeque	2.64	107	P	Pn	17 48 06.4	+1.2
APQ2				S	Sn	17 48 37.0	+0.8
ALLN	Telcor Managua	2.71	108	P	Pn	17 48 07.0	+1.0
RCVN	Varillal2	2.71	77	S	Sn	17 48 39.4	+1.4
RCVN	Varillal2	2.71	77	P	Pn	17 48 07.7	+1.5
TISN	Laguna Tiscapa	2.71	108	P	Pn	17 48 07.6	+1.4
USIM	UNAN	2.72	108		Pn	17 48 06.6	+0.3
USIM				Sn	Sn	17 48 35.5	-2.5
UNAN	Cigeo UNAN	2.72	109	P	Pn	17 48 07.3	+0.9
UNAN				S	Sn	17 48 38.8	+0.7
RCON	San Juan de Ri	2.73	79	P	Pn	17 48 08.0	+1.5
MGAN	Managua	2.73	108		Pn	17 48 07.4	+0.9
MGAN				Sn	Sn	17 48 36.7	-1.7
MGAN	Managua	2.73	108	P	Pn	17 48 07.7	+1.3
MGAN	Managua	2.73	108	S	Sn	17 48 39.1	+0.8
IZABA	Izabal, Puerto	2.74	7	P	Pn	17 48 08.2	+1.7
STG5	El Palmar, Qui	2.75	301	i P	Pn	17 48 13.4	+6.6
STG8	El Palmar, Qui	2.78	302	i P	Pn	17 48 13.8	+6.5
STG2	El Palmar, Qui	2.79	301	i P	Pn	17 48 13.6	+6.2
STG2				i S	Sn	17 48 50.0	+10
AERN	Aeropuerto Man	2.81	107	P	Pn	17 48 08.8	+1.3
AERN	Aeropuerto Man	2.81	107	S	Sn	17 48 40.9	+0.7
MAS3	Al N del Volca	2.84	110	P	Pn	17 48 08.9	+1.0
MAS3				S	Sn	17 48 41.1	0.0
SABN	Sabanita	2.88	111	P	Pn	17 48 09.4	+1.0
MATN	Matagalpa	2.91	91	P	Pn	17 48 09.3	+0.4
NANN	Nandasmo	2.92	111	S	Sn	17 48 44.3	+1.4
SOKI	Kika Raxquin	3.03	307	i P	Pn	17 48 14.1	+3.2
SOKI				i S	Sn	17 48 50.5	+4.4
SOKI				IAML		17 49 01.4	
	comp=N,2µm,0.5s						
NADN	Granada	3.07	113	P	Pn	17 48 12.1	+1.0
NADN				S	Sn	17 48 46.4	-0.3
RTAL	Retalhuleu	3.10	300		Pn	17 48 15.7	+4.1
RTAL				Sn	Sn	17 48 50.9	+3.4
RTAL	Retalhuleu	3.10	300	P	Pn	17 48 12.1	+0.5
QUIS	Sacapulas	3.11	317	i P	Pn	17 48 14.1	+2.3
BOAB	BOACO BROADBAN	3.21	99		Pn	17 48 13.5	+0.5
BOAB	BOACO BROADBAN	3.21	99	P	Pn	17 48 13.8	+0.8
BOAB	BOACO BROADBAN	3.21	99	S	Sn	17 48 52.4	+2.4
HUEH	Huehuetenango	3.42	313		Pn	17 48 18.9	+3.0
HUEH	Huehuetenango	3.42	313	P	Pn	17 48 16.5	+0.5
MORN	Al O del Volca	3.50	114	P	Pn	17 48 18.1	+1.2
MORN				S	Sn	17 48 59.4	+2.2
PETF	Flores	4.01	347		Pn	17 48 26.7	+2.8
PETF	Flores	4.01	347	i P	Pn	17 48 27.0	+3.2
PETF	Flores	4.01	347	P	Pn	17 48 26.9	+3.1
ELI1	Hacienda Flor	4.03	125	S	Sn	17 49 11.7	+1.5
ELI1	Hacienda Flor	4.03	125	P	Pn	17 48 25.8	+1.6
SIUN	Universidad Ur	4.09	79		Pn	17 48 25.4	+0.3
SIUN	Universidad Ur	4.09	79	P	Pn	17 48 26.6	+1.6
SIUN				S	Sn	17 49 14.0	+2.4
CLARA	Aguas Claras	4.26	121	eP	Pn	17 48 29.4	+1.9
JUD3	Juan Diaz 3	4.34	130		Pn	17 48 31.0	+2.5
JTS	Las Juntas de	4.72	124	P	Pn	17 48 35.5	+1.8
	comp=N,20nm,0.3s,baz=300,slow=22,SNR=32						
JTS				S	Sn	17 49 26.4	-0.6
	comp=N,29nm,0.3s,baz=284,slow=22,SNR=1.1						
JTS				LR	LR	17 49 55.1	
	comp=N,70nm,20.2s,baz=316,slow=32						
JTS	Las Juntas de	4.72	124		Pn	17 48 36.4	+2.8
SOCE	Pocosol	4.94	121		Pn	17 48 39.1	+2.4
BILN	Bilwi Airport	5.48	78	Pn	Pn	17 48 44.7	+0.6
HDC	Heredia	5.56	122	Pn	Pn	17 48 48.0	+2.7
EGUB	Earth Gu¡pi	5.90	117	Pn	Pn	17 48 49.9	+0.1
PIEC	Cerro El Cedra	5.90	124	eP	Pn	17 48 53.8	+3.7
BUS1	Rivas	6.11	124	eP	Pn	17 48 56.6	+3.6
CMIG	Matias Romero	7.06	306	P	Pn	17 49 09.1	+3.4
	comp=N,5.4nm,0.3s,baz=101,slow=8.6,SNR=16						
CMIG				S	Sn	17 50 24.7	+0.1
	comp=N,19nm,0.6s,baz=118,slow=7.8,SNR=3.6						
PIRO	Carate, Puerto	7.13	129		Pn	17 49 08.7	+2.1
ALCO	Alturas Coton,	7.19	123	eP	Pn	17 49 11.1	+3.4
TEIG	Tepich	7.22	5	P	Pn	17 49 08.7	+0.9
	baz=313,slow=24,SNR=39						
PRVC	Isla de Provid	7.36	86	Pn	Pn	17 49 08.1	-1.7
BRU2	Volcan	7.40	124		Pn	17 49 11.9	+1.4
SOR	Soroa	11.24	29		Pn	17 50 02.5	-0.4
MTDJ	Mount Denham	12.13	63	Pn	Pn	17 50 13.3	-1.7
HBVL	Hebbronville	16.72	328	P	Pn	17 51 15.9	+0.9
HBVL				IAmb	IAmb	17 51 48.0	
	comp=Z,50nm,1.5s						
FLOC	Florencia	17.35	130		Pn	17 51 23.4	+0.5
833A	Chaparral WMA,	18.12	329	P	P	17 51 32.4	+0.6
SDV	Santo Domingo	18.40	101	P	Pn	17 51 35.6	-0.3
	comp=Z,8.8nm,0.6s,baz=281,slow=7.0,SNR=10						
SDV				LR	LR	18 00 24.8	
	comp=Z,40nm,18.6s,baz=257,slow=43						
SDV	Santo Domingo	18.40	101		P	17 51 34.2	-1.0
SDV				IAmb	IAmb	17 51 37.6	
	comp=Z,9.1nm,0.7s						
HNDO	Hondo	19.06	331		P	17 51 42.5	+0.3
VBMS	Vicksburg	19.19	356	P	P	17 51 42.8	-0.8
NATX	Nacogdoches	19.41	345	P	P	17 51 45.7	-0.2
NATX				IAmb	IAmb	17 52 00.0	
	comp=Z,42nm,1.1s						
435B	Jarrell	19.43	337		P	17 51 45.8	-0.4
DRIO	Del Rio	19.63	328		P	17 51 49.0	+0.6
DR12	Loma Pena Alta	19.64	70	P	P	17 51 47.9	-0.7
143A	Socs Landing,	19.75	354	P	P	17 51 48.8	-0.8
237A	Washetta, Mont	19.95	343	P	P	17 51 52.5	+0.7
237A				IAmb	IAmb	17 52 08.1	
	comp=Z,22nm,0.8s						
152A	Waverly Hall	19.96	10	P	P	17 51 52.1	+0.3
LRAL	Lakeview Retre	20.02	5		P	17 51 52.8	+0.2
JCT	Junction City	20.10	332	P	P	17 51 54.6	+1.1
JCT				IAmb	IAmb	17 51 57.4	
	comp=Z,8.4nm,0.6s						
Z47A	Carrollton	20.13	2	P	P	17 51 54.0	+0.3
Z47A				IAmb	IAmb	17 51 58.5	
	comp=Z,17nm,0.5s						
BRDY	Brady	20.44	335		P	17 51 58.3	+1.1
BRDY				IAmb	IAmb	17 51 60.0	
	comp=Z,15nm,0.7s						
WHTX	Lake Whitney,	20.47	339	P	P	17 51 58.1	+0.7
SAND	Sanderson	20.85	326	P	P	17 52 02.7	+1.1
GOGA	Godfrey	20.92	13	P	P	17 52 02.1	-0.2
Z38A	Mt. Pleasant	20.92	346	P	P	17 52 01.5	-0.8
Z38A				IAmb	IAmb	17 52 37.9	
	comp=Z,20nm,0.9s						
HPIG		20.95	314	P	P	17 52 03.7	+0.8
OZNA	Ozona	21.10	330		P	17 52 04.9	+0.5
OZNA				IAmb	IAmb	17 52 08.2	
	comp=Z,29nm,1.3s						
Y52A	Lilburn	21.24	11	P	P	17 52 05.5	-0.2
Y52A				IAmb	IAmb	17 52 24.2	
	comp=Z,40nm,1.3s						
TX31	Lajitas Ar. Si	21.26	322		P	17 52 06.8	+0.7
TXAR	Lajitas Array	21.26	322	P	P	17 52 08.8	+2.6
	comp=Z,4.6nm,0.6s,baz=143,slow=11,SNR=50						
TXAR				PcP	PcP	17 56 10.0	+1.0
	comp=Z,0.5nm,0.7s,baz=82,slow=2.3,SNR=3.9						
	comp=Z,4.6nm,0.6s						
TXAR	Lajitas Array	21.26	322		P	17 52 07.4	+1.3
PLPT	Palo Pinto	21.52	338		P	17 52 09.2	+0.5
PLPT				IAmb	IAmb	17 52 37.6	
	comp=Z,19nm,0.6s						
MIAR	Mount Ida	21.87	350		P	17 52 13.5	+1.1
MIAR				IAmb	IAmb	17 52 17.3	
	comp=Z,8.7nm,0.7s						
ABTX	Abilene, Hawle	21.87	335	P	P	17 52 13.0	+0.5
SGCY	Sterling City	21.92	331		P	17 52 13.5	+0.4
SGCY				IAmb	IAmb	17 52 17.1	
	comp=Z,16nm,0.6s						
MNHN	Monahans	22.27	327	IAmb	IAmb	17 52 23.7	
	comp=Z,8.9nm,0.5s						
SJG	San Juan	22.50	74	LR	LR	18 01 25.6	
	comp=Z,68nm,19.4s,baz=304,slow=38						
ATAH	Atahualpa	22.56	152	LR	LR	17 59 47.9	
	comp=Z,76nm,20.9s,baz=343,slow=33						
APMT	Aspermont	22.68	335	IAmb	IAmb	17 52 23.2	
	comp=Z,9.8nm,0.7s						
SN07	Snyder 07	22.80	333	IAmb	IAmb	17 52 25.2	
	comp=Z,14nm,0.6s						
FCAR	Ozark Folk Cen	22.98	353	P	P	17 52 24.6	+0.4
TKL	Tuckaleechee C	23.04	11	LR	LR	18 00 47.1	
	comp=Z,125nm,21.1s,baz=175,slow=35						
POST	Post	23.06	332	IAmb	IAmb	17 52 28.6	
	comp=Z,7.9nm,0.6s						
DKNS	Dickens	23.31	334		P	17 52 28.1	+0.6
DKNS				IAmb	IAmb	17 52 30.5	
	comp=Z,16nm,0.7s						
FNO	Franklin	23.46	342	IAmb	IAmb	17 52 31.4	
	comp=Z,9.3nm,0.5s						
RLO	Rose Lookout	23.72	348	IAmb	IAmb	17 52 34.4	
	comp=Z,8.8nm,0.7s						
T47A	Sharon Grove	23.95	4	P	P	17 52 33.1	-0.1
T47A				IAmb	IAmb	17 52 35.1	
	comp=Z,13nm,1.0s						
OK052	Battle Ridge R	23.98	344	IAmb	IAmb	17 52 36.7	
	comp=Z,14nm,0.5s						
QUOK	Quay	24.12	344	IAmb	IAmb	17 52 36.7	
	comp=Z,11nm,0.7s						
MGMO	Mountain Grove	24.25	353	IAmb	IAmb	17 52 40.3	
	comp=Z,11nm,0.6s						
V58A	Windy Hill, Pi	24.36	20	IAmb	IAmb	17 52 39.5	
	comp=Z,9.8nm,0.6s						
MSTX	Muleshoe	24.39	331	IAmb	IAmb	17 52 39.0	
	comp=Z,12nm,0.9s						
AMTX	Amarillo	24.67	334	IAmb	IAmb	17 52 42.2	
	comp=Z,15nm,1.1s						
CCM	Cathedral Cave	25.05	356		P	17 52 43.6	+0.5
CCM				IAmb	IAmb	17 52 45.7	
	comp=Z,17nm,0.7s						
R40A	Maddies Statio	25.37	354	IAmb	IAmb	17 52 51.0	
	comp=Z,7.7nm,0.6s						
RTBA	Rita Blanca	26.45	334	P	P	17 52 57.0	+0.9
RTBA				IAmb	IAmb	17 52 59.5	
	comp=Z,7.1nm,0.6s						
P57A	Homestead Farm	28.09	18	P	P	17 53 10.7	+0.1
P57A				IAmb	IAmb	17 53 12.7	
	comp=Z,8.8nm,0.5s						
PV02	Paradox Valley	30.69	328	IAmb	IAmb	17 54 20.5	
	comp=Z,15nm,1.5s						
PV18	Skein Mesa, Pa	30.80	328		P	17 53 35.9	+0.9
PV18				IAmb	IAmb	17 53 38.5	
	comp=Z,7.4nm,0.6s						
PV11	David Mesa, Pa	30.82	328	IAmb	IAmb	17 53 39.6	
	comp=Z,6.6nm,0.7s						
PV17	East Wray Mesa	30.86	328	IAmb	IAmb	17 53 39.2	
	comp=Z,5.8nm,0.6s						
PV20	West Nyswonger	30.91	328	IAmb	IAmb	17 53 39.5	
	comp=Z,6.0nm,0.6s						
PV04	Paradox Valley	30.91	328	IAmb	IAmb	17 53 39.9	
	comp=Z,6.8nm,0.6s						
PV10	Paradox Valley	30.97	328	P	P	17 53 36.8	+0.3
PV10				IAmb	IAmb	17 53 40.0	
	comp=Z,8.4nm,0.9s						
PV23	Carpenter Ridg	31.01	328	IAmb	IAmb	17 53 41.0	
	comp=Z,7.0nm,0.8s						
BC3	Big Chuckawall	31.73	315	P	P	17 53 44.8	+1.8
P17A	Butcher Ranch,	32.67	328	IAmb	IAmb	17 53 55.6	
	comp=Z,4.9nm,0.6s						
SADO	Sadowa	32.75	13	P	P	17 53 51.5	-0.2
	comp=Z,4.9nm,0.4s,baz=225,slow=9.6,SNR=12						
	comp=Z,4.9nm,0.4s						
SADO	Sadowa	32.75	13	IAmb	IAmb	17 53 55.9	
	comp=Z,9.2nm,0.9s						
RSSD	Black Hills	33.62	340		P	17 54 00.5	+0.9
PDAR	Pinedale Array	34.63	333	P	P	17 54 09.2	+0.9
	comp=Z,1.0nm,0.5s,baz=136,slow=8.1,SNR=6.7						
PDAR				PcP	PcP	17 56 41.8	+0.3
	comp=Z,1.0nm,0.5s,baz=140,slow=5.4,SNR=10.0						
	comp=Z,1.0nm,0.5s						
AGMN	Agassiz Nation	35.67	352	IAmb	IAmb	17 54 17.6	
	comp=Z,12nm,1.3s						
LOHW	Long Hollow	35.77	333	P	P	17 54 19.2	+1.1
LOHW				IAmb	IAmb	17 54 19.9	
	comp=Z,6.1nm,1.2s						
NVAR	Mina Array Bea	36.36	319	P	P	17 54 23.1	-0.1
	comp=Z,0.6nm,0.4s,baz=131,slow=8.0,SNR=5.0						
NVAR				PcP	PcP	17 56 48.1	+1.4
	comp=Z,2.0nm,0.7s,baz=140,slow=4.4,SNR=7.2						
NVAR				LR	LR	18 11 39.3	
	comp=Z,61nm,19.2s,baz=66,slow=40						
	comp=Z,0.6nm,0.4s						
RLMT	Red Lodge	36.41	335	IAmb	IAmb	17 54 25.6	
	comp=Z,5.5nm,0.8s						
YNE	Yellowstone No	36.62	335	IAmb	IAmb	17 54 27.3	
	comp=Z,5.8nm,0.8s						
ULM	Lac du Bonnet	37.59	353	P	P	17 54 32.1	-1.1
	comp=Z,3.3nm,0.4s,baz=157,slow=7.7,SNR=8.2						
ULM				LR	LR	18 10 48.8	
	comp=Z,67nm,21.2s,baz=193,slow=37						
	comp=Z,3.3nm,0.4s						
VILB	Vilhena	38.40	131	P	P	17 54 40.7	+0.2
YBH	Yreka Blue Hor	41.03	321	LR	LR	18 13 46.9	
	comp=Z,4.5nm,18.2s,baz=138,slow=38						
FFC	Flin Flon	42.88	349	P	P	17 55 16.9	0.0
SCHQ	Schefferville	45.18	18	P	P	17 55 34.2	-1.1
	comp=Z,4.4nm,0.5s,baz=213,slow=6.6,SNR=14						
SCHQ				LR	LR	18 15 11.4	
	comp=Z,99nm,18.1s,baz=98,slow=37						
	comp=Z,4.4nm,0.5s						
H03N2	Juan Fernandez	47.15	169	T	T	18 46 08.1	
	baz=347,slow=76,SNR=4.7						
H03N1	Juan Fernandez	47.15	169	T	T	18 46 09.8	
	baz=347,slow=76,SNR=5.0						
H03N3	Juan Fernandez	47.16	169	T	T	18 46 05.8	
	baz=347,slow=76,SNR=8.0						
BDFB	Brasilia	49.46	124	P	P	17 56 07.8	-1.5
	comp=Z,3.7nm,0.5s,baz=291,slow=12,SNR=6.7						
	comp=Z,3.7nm,0.5s						
BDFB	Brasilia	49.46	124	IAmb	IAmb	17 56 09.7	
	comp=Z,4.1nm,0.6s						
CPUP	Villa Florida	49.71	142	P	P	17 56 09.4	-1.4
	comp=Z,0.7nm,0.4s,baz=333,slow=9.0,SNR=3.1						
	comp=Z,0.7nm,0.4s						
FRB	Frobisher Bay	52.66	11	LR	LR	18 17 41.6	
	comp=Z,68nm,19.6s,baz=149,slow=34						
YKA	Yellowknife Ar	52.72	345	P	P	17 56 32.9	0.0
	comp=Z,6.8nm,0.9s,baz=147,slow=7.0,SNR=78						
YKA				LR	LR	18 21 32.9	
	comp=Z,65nm,18.1s,baz=309,slow=39						
	comp=Z,6.8nm,0.9s						
YKA	Yellowknife Ar	52.72	345	P	P	17 56 32.4	-0.5
YKAW3	Yellowknife Wh	52.78	345	P	P	17 56 32.5	-0.7
PLCA	Paso Flores	56.10	163	P	P	17 56 58.5	+0.7
	comp=Z,1.0nm,0.9s,baz=335,slow=9.8,SNR=3.3						
	comp=Z,1.0nm,0.9s						
PLCA	Paso Flores	56.10	163	IAmb	IAmb	17 57 07.4	
	comp=Z,4.8nm,1.3s						
ILON	Igloolik, Nuna	56.52	3	P	P	17 56 59.3	-0.9
SFJD	Kangerlussuaq	59.59	16	LR	LR	18 24 40.0	
	comp=Z,73nm,18.4s,baz=162,slow=38						
RES	Resolute Bay	61.77	358	P	P	17 57 35.5	-1.0
F31M	Tsiigehtchic	61.78	342	P	P	17 57 36.3	-0.3
INK	Inuvik	62.27	343	P	P	17 57 39.4	-0.4
H27K	Steamboat Moun	63.63	339	IAmb	IAmb	17 57 50.9	
	comp=Z,3.6nm,0.8s						
E28M	Babbage River	64.23	342	IAmb	IAmb	17 57 53.7	
	comp=Z,4.0nm,0.8s						
E27K	Coleen River	64.66	341	IAmb	IAmb	17 57 56.6	
	comp=Z,5.0nm,0.9s						
ILAR	Eielson Array	64.95	336	P	P	17 57 57.5	-0.2
	comp=Z,1.4nm,0.8s,baz=172,slow=4.9,SNR=26						
	comp=Z,1.4nm,0.8s						
BMAR	Burnt Mountain	65.27	339	P	P	17 57 59.5	-0.3
E25K	Arctic Village	65.92	340	P	P	17 58 04.1	+0.2
E25K				IAmb	IAmb	17 58 05.1	
	comp=Z,4.1nm,0.8s						
F21K	Alatna River	68.36	338	IAmb	IAmb	17 58 21.0	
	comp=Z,5.6nm,0.8s						
EKA	Eskdalemuir Ar	77.02	36	P	P	17 59 08.1	-2.8
	comp=Z,0.9nm,0.7s,baz=266,slow=5.8,SNR=4.1						
	comp=Z,0.9nm,0.7s						
SPITS	Spitsbergen Ar	80.46	12	P	P	17 59 29.0	-0.5
	comp=Z,1.0nm,0.4s,baz=20,slow=4.6,SNR=7.6						
	comp=Z,1.0nm,0.4s						
ARCES	ARCESS Array B	86.13	19	P	P	17 59 57.5	-1.2
	comp=Z,0.8nm,0.6s,baz=292,slow=3.8,SNR=6.5						
	comp=Z,0.8nm,0.6s						
ARCES	ARCESS Array B	86.13	19	IAmb	IAmb	18 00 17.2	
	comp=Z,7.6nm,1.2s						
TIXI	Tiksi	91.84	349	P	P	18 00 23.3	-2.3
	comp=Z,2.3nm,0.3s,baz=41,slow=5.8,SNR=5.3						
TIXI				LR	LR	18 44 13.3	
	comp=Z,20nm,21.7s,baz=5.0,slow=37						
	comp=Z,2.3nm,0.3s						
TIXI	Tiksi	91.84	349	P	P	18 00 24.4	-1.2
RAO	Raoul Island	95.39	241	LR	LR	18 36 00.8	
	comp=Z,192nm,19.9s,baz=254,slow=30						
NRIK	Noril'sk	97.84	1	LR	LR	18 47 37.6	
	comp=Z,21nm,18.5s,baz=352,slow=37						
KURBB	Kurchatov Arra	115.71	9	PKP	PKiKP	18 05 58.7	-1.4
	comp=Z,0.3nm,0.5s,baz=0.9,slow=2.7,SNR=1.5						
SONM	Songino Array	117.92	348	PKP	PKPdf	18 06 04.0	-0.7
	comp=Z,0.4nm,0.5s,baz=239,slow=1.0,SNR=4.4						
MKAR	Makanchi Array	119.97	7	PKP	PKPdf	18 06 07.1	-1.3
	comp=Z,0.2nm,0.3s,baz=320,slow=2.8,SNR=8.1						
WRA	Warramunga Arr	138.04	255	PKhKP	PKPpre	18 06 34.2	
	comp=Z,0.3nm,0.5s,baz=91,slow=3.6,SNR=5.1						
WRA				PKP	PKPdf	18 06 44.0	+0.6
	comp=Z,1.6nm,0.8s,baz=92,slow=2.2,SNR=11						
WRA	Warramunga Arr	138.04	255		PKPdf	18 06 45.5	+2.1
ASAR	Alice Springs	138.14	249	PKhKP	PKPpre	18 06 33.7	
	comp=Z,0.2nm,0.5s,baz=109,slow=4.1,SNR=4.2						
ASAR				PKP	PKPdf	18 06 43.6	+0.1
	comp=Z,0.6nm,0.5s,baz=90,slow=2.0,SNR=8.3						
ASAR	Alice Springs	138.14	249		PKPdf	18 06 42.4	-1.1
CMAR	Chiang Mai Arr	147.80	346	PKPbc	PKPdf	18 07 01.6	+1.0
	comp=Z,2.1nm,0.7s,baz=343,slow=3.7,SNR=16						
CMAR	Chiang Mai Arr	147.80	346		PKPdf	18 07 01.0	+0.4

IDC 21 17:49:23.2±21.0,40°.93N×29°.73W,h0km,mb3.8/4,mbtmp3.8/4,MS3.4/2,Error ellipse: s-maj=646.0km s-min=279.6km az=179.0

SVSA 21 17:49:39.6±1.0,38°.86N×28°.94W,h13km±5km,ML2.7(INMG),Error ellipse: s-maj=9.1km s-min=5.3km az=91.0,#DIST_RANGE: LOCAL #IPMA_REGION: W Faial

ISC 21 17:49:22.0±1.4,39°.54N±0°.06×28°.8W±0°.3,h10km,n13,σ3s.04/14,mb3.9/4,Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSA	Rosais	0.91	154	*e*P	Pn	17 49 48.8	+7.9
ROSA				*e*S	Sn	17 49 55.2	+1.2
ROSA				*i* IAML		17 49 56.3	
ROSA				*i* IAML		17 49 56.9	
ROSA				*i* IAML		17 49 57.0	
PCED	Cedros	0.91	178	*e*P	Pn	17 49 45.2	+4.3
PCED				*e*S	Sg	17 49 48.8	-2.7
PCED				*i* IAML		17 49 50.2	
PCED				*i* IAML		17 49 50.3	
PCED				*i* IAML		17 49 50.5	
CALA	Caldeira	0.96	178	*e*P	Pn	17 49 45.6	+4.0
CALA				*e*S	Sg	17 49 50.4	-2.6
CALA				*i* IAML		17 49 51.3	
CALA				*i* IAML		17 49 51.5	
CALA				*i* IAML		17 49 51.9	
HOR	Horta	1.02	175	*e*S	Sg	17 49 51.8	-3.0
HOR				*i* IAML		17 49 53.4	
HOR				*i* IAML		17 49 53.6	
HOR				*i* IAML		17 49 53.9	
PFCBR	Castelo Branco	1.02	179	*e*P	Pn	17 49 46.1	+3.8
PFCBR				*e*S	Sg	17 49 50.6	-4.2
PFCBR				*i* IAML		17 49 52.0	
PFCBR				*i* IAML		17 49 52.3	
PFCBR				*i* IAML		17 49 53.0	
PICO	Pico	1.07	166	*e*P	Pn	17 49 48.3	+5.2
PICO				*e*S	Sg	17 49 55.4	-1.0
PICO				*i* IAML		17 49 56.9	
PICO				*i* IAML		17 49 57.1	
PICO				*i* IAML		17 49 57.3	
PCAN	Candelaria	1.10	169	*e*S	Sg	17 49 55.1	-2.2
PCAN				*i* IAML		17 49 55.7	
PCAN				*i* IAML		17 49 55.9	
PCAN				*i* IAML		17 49 56.0	
ESDC	Sonseca Array	19.09	82	LR	LR	17 59 41.5	
	comp=Z,52nm,20.0s,baz=270,slow=31						
JMIC	Jan Mayen	33.19	12	LR	LR	18 05 51.1	
	comp=Z,113nm,18.9s,baz=30,slow=31						
KURBB	Kurchatov Arra	69.97	40	P	P	18 00 32.4	-0.9
	0.4nm,0.8s,baz=314,slow=6.4,SNR=4.5						
	0.4nm,0.8s						
ZALV	Zalesovo Beam	70.81	35	P	P	18 00 37.1	-1.3
	1.0nm,0.8s,baz=316,slow=6.0,SNR=5.2						
	1.0nm,0.8s						
MKAR	Makanchi Array	74.34	42	P	P	18 00 59.4	-0.2
	1.3nm,0.8s,baz=317,slow=6.1,SNR=7.3						
	1.3nm,0.8s						
SONM	Songino Array	84.30	29	P	P	18 01 52.5	-1.6
	0.6nm,0.9s,baz=335,slow=6.4,SNR=3.7						
	0.6nm,0.9s						

IDC 21 18:06:24.0±0.9,17°.10N×91°.32W,h0km,mb3.8/6,mbtmp3.7/8,ML3.1/3,MS3.3/5,Error ellipse: s-maj=24.5km s-min=14.9km az=55.0

GCG 21 18:06:25.5±1.1,17°.04N×91°.26W,h7km±13km,ML4.6

MEX 21 18:06:27.4±0.5,17°.09N×91°.41W,h4km±11km,MD4.1

NEIC 21 18:06:28.5±2.3,17°.10N±0°.06×91°.31W±0°.05,h90km±8km,mb4.1/26,Error ellipse: s-maj=8.4km s-min=7.3km az=157.0

ISC 21 18:06:22.9±1.4,17°.16N±0°.03×91°.37W±0°.04,h8km±10km,n75,σ1s.70/87,mb4.1/9,MS3.6/3,Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	Comitan	1.14	220	*e*P	Pn	18 06 45.0	-0.3
CCIG				*e*S	Sb	18 06 59.9	-0.2
PETF	Flores	1.46	99	Pn	Pg	18 06 51.2	+0.4
PETF				Sn	Sg	18 07 12.3	+2.6
PETF	Flores	1.46	99	*e*P	Pg	18 06 51.2	+0.4
PETF				*e*S	Sg	18 07 09.3	-0.4
PETF	Flores	1.46	99	*i* P	Pb	18 06 49.3	-0.9
PETF				*i* S	Sg	18 07 08.0	-1.7
PETF				IAML		18 07 17.1	
	comp=E,11µm,0.5s						
TGBT	Tuxtla Gutierr	1.69	257	*e*P	Pn	18 06 54.2	+1.4
TGBT				*e*S	Sn	18 07 14.6	0.0
SCIG	Sabancuy	1.81	5	*e*P	Pg	18 06 57.4	-0.1
SCIG				*e*S	Sg	18 07 19.9	-1.1
SCIG	Sabancuy	1.81	5	*i* P	Pg	18 06 58.1	+0.6
HUEH	Huehuetenango	1.83	184		Pn	18 06 55.7	+0.8
HUEH				Sn	Sn	18 07 19.4	+0.9
HUEH	Huehuetenango	1.83	184	*e*P	Pn	18 06 56.1	+1.1
HUEH				*i* S	Sn	18 07 17.1	-1.4
HUEH	Huehuetenango	1.83	184	*i* P	Pn	18 06 55.6	+0.7
HUEH				*i* S	Sn	18 07 19.8	+1.3
HUEH				IAML		18 07 35.3	
	comp=N,5µm,0.7s						
QUIS	Sacapulas	1.88	172	*i* P	Pn	18 06 56.6	+1.2
QUIS				*i* S	Sn	18 07 21.2	+1.8
QUIS				IAML		18 07 25.1	
	comp=N,6µm,0.5s						
PAVE	Pavencul	2.10	202	*e*P	Pn	18 06 59.7	+1.1
PAVE				*e*S	Sn	18 07 23.9	-1.3
CHUJ	Union Juarez	2.17	199	*e*P	Pn	18 07 00.3	+0.6
CHUJ				*e*S	Sn	18 07 26.2	-0.7
PATR	El Naranjo	2.19	202	*e*P	Pn	18 07 00.8	+0.9
PATR				*e*S	Sn	18 07 26.3	-1.1
PCIG		2.29	231	*e*P	Pn	18 07 01.2	+0.1
PCIG				*e*S	Sn	18 07 27.4	-2.0
APG	El Apazote	2.31	158	Pn	Pn	18 07 02.9	+1.4
	comp=N,2.1nm,0.3s,baz=143,slow=9.9,SNR=58						
APG				Sn	Sn	18 07 30.0	-0.3
	comp=N,2.4nm,0.3s,baz=218,slow=17,SNR=5.2						
APG	El Apazote	2.31	158	*i* P	Pn	18 07 02.5	+1.0
APG				*i* S	Sn	18 07 30.3	0.0
RTAL	Retalhuleu	2.64	187		Pn	18 07 07.8	+2.0
UXUV	UXUV	2.66	274	*e*P	Pn	18 07 07.0	+0.9
ESQI	Esquipulas	3.24	143		Pn	18 07 16.0	+1.8
MTO3	Montecristo	3.36	145		Pn	18 07 17.8	+1.9
CMIG	Matias Romero	3.36	269	Pn	Pn	18 07 19.1	+3.3
	comp=N,1.7nm,0.3s,baz=87,slow=13,SNR=8.0						
CMIG				Sn	Sn	18 07 56.7	+0.8
	comp=N,7.1nm,0.3s,baz=286,slow=24,SNR=6.5						
CMIG				LR	LR	18 08 53.7	
	comp=N,226nm,18.9s,baz=102,slow=44						
	comp=N,3.2nm,0.3s						
TEIG	Tepich	4.23	43	Pn	Pn	18 07 30.9	+3.2
	baz=131,slow=24,SNR=18						
TEIG				Sn	Sn	18 08 18.8	+1.4
	baz=132,slow=24,SNR=21						
TEIG	Tepich	4.23	43		Pn	18 07 29.5	+1.8
NEUV	Arroyo Zacate	4.27	278	*e*P	Pn	18 07 29.4	+1.2
HUIG	Huatulco	4.75	254	*e*P	Pn	18 07 35.6	+0.6
TGUH	Tegucigalpa,Un	5.01	127		Pn	18 07 37.8	-0.8
TOIG	Toxpalan	5.51	281	*e*P	Pn	18 07 46.4	+0.9
YOIG	Yosondua	5.92	268	*e*P	Pn	18 07 52.7	+1.5
TXIG	Tlaxiaco	6.12	272	*e*P	Pn	18 07 55.6	+1.7
HLIG	Huajuapan de L	6.18	277	*e*P	Pn	18 07 58.2	+3.5
HERN	Volcan Telica	6.30	135	Pn	Pn	18 07 50.4	-5.8
FTIG	Fresnillo de T	6.50	278	*e*P	Pn	18 08 00.3	+1.3
SIUN	Universidad Ur	7.22	117		Pn	18 08 07.4	-1.4
SOR	Soroa	9.65	53	Pn	Pn	18 08 41.4	-0.8
061Z	Ochoppi	13.03	47	Pn	Pn	18 09 28.7	+0.3
833A	Chaparral WMA,	13.35	328	Pn	Pn	18 09 31.8	-0.9
HNDO	Hondo	14.29	331	Pn	Pn	18 09 43.9	-1.8
DRIO	Del Rio	14.87	327	Pn	Pn	18 09 52.4	-1.1
BRDY	Brady	15.68	335	Pn	Pn	18 10 03.8	-0.6
OZNA	Ozona	16.33	329	Pn	Pn	18 10 11.8	-0.9
WLAR	White Oak Lake	16.53	355		Pn	18 10 14.9	-0.3
WLAR				IAmb	IAmb	18 10 28.4	
	comp=Z,13nm,0.8s						
TXAR	Lajitas Array	16.55	319	Pn	P	18 10 19.6	+1.4
	baz=139,slow=12,SNR=3.8						
	comp=Z,0.3nm,0.7s						
TXAR	Lajitas Array	16.55	319	P	Pn	18 10 15.6	-0.1
TX31	Lajitas Ar. Si	16.55	319	P	Pn	18 10 15.8	+0.2
FW06	Azle	16.71	342	P	Pn	18 10 16.9	-0.6
PLPT	Palo Pinto	16.80	339	P	Pn	18 10 17.7	-1.0
PLPT				IAmb	IAmb	18 10 52.7	
	comp=Z,8.9nm,1.0s						
MIAR	Mount Ida	17.43	354	P	Pn	18 10 25.7	-0.8
MIAR				IAmb	IAmb	18 10 54.9	
	comp=Z,7.5nm,1.0s						
APMT	Aspermont	17.93	336	P	Pn	18 10 30.0	-2.6
LPIG	La Paz	19.02	294	P	Pn	18 10 49.5	+3.5
	comp=Z,80nm,0.3s,baz=124,slow=11,SNR=5.4						
TKL	Tuckaleechee C	19.63	19	LR	LR	18 19 46.1	
	comp=Z,99nm,18.8s,baz=238,slow=41						
U49A	Red Boiling Sp	19.90	13	P	P	18 10 53.0	-2.0
U49A				IAmb	IAmb	18 11 08.2	
	comp=Z,10nm,1.2s						
AMTX	Amarillo	19.91	334	P	P	18 10 53.5	-1.7
AMTX				IAmb	IAmb	18 11 04.9	
	comp=Z,8.6nm,1.0s						
S44A	Carbondale	20.54	5	P	P	18 11 00.3	-1.6
SIUC	Southern Illin	20.57	5	P	P	18 10 59.8	-2.3
RUSC	La Rusia	21.10	120	P	P	18 11 05.5	-3.1
OLIL	Olney	21.68	7	P	P	18 11 12.2	-2.0
RTBA	Rita Blanca	21.69	335	P	P	18 11 12.6	-1.8
RTBA				IAmb	IAmb	18 11 21.5	
	comp=Z,12nm,1.2s						
BNM	Barren Site	21.76	324	P	P	18 11 13.4	-1.9
SDV	Santo Domingo	21.79	110	P	P	18 11 19.1	+3.3
	comp=Z,9.4nm,0.9s,baz=313,slow=4.2,SNR=8.7						
	comp=Z,9.4nm,0.9s						
SDV	Santo Domingo	21.79	110		P	18 11 13.0	-2.8
SDV				IAmb	IAmb	18 11 20.0	
	comp=Z,9.8nm,0.9s						
FLOC	Florencia	21.87	133	P	P	18 11 13.8	-2.7
FLOC				IAmb	IAmb	18 11 23.7	
	comp=Z,14nm,1.1s						
Q51A	Peebles	22.89	16		P	18 11 24.4	-2.7
Q51A				IAmb	IAmb	18 11 34.4	
	comp=Z,15nm,1.2s						
T25A	Trinidad	22.99	333	P	P	18 11 27.2	-1.3
SDCO	Great Sand Dun	23.98	332	P	P	18 11 35.7	-2.7
SJG	San Juan	24.05	84	LR	LR	18 21 49.7	
	comp=Z,42nm,18.2s,baz=113,slow=39						
PDAR	Pinedale Array	29.86	333	P	P	18 12 33.9	+2.7
	comp=Z,0.4nm,0.6s,baz=128,slow=9.7,SNR=4.7						
	comp=Z,0.4nm,0.6s						
NVAR	Mina Array Bea	31.69	317	P	P	18 12 50.7	+3.4
	comp=Z,0.5nm,0.6s,baz=104,slow=8.5,SNR=2.2						
	comp=Z,0.5nm,0.6s						
LPAZ	La Paz	40.36	144	P	P	18 14 02.9	+0.7
	comp=Z,1.1nm,0.5s,baz=341,slow=11,SNR=1.9						
	comp=Z,1.1nm,0.5s						
SCHQ	Schefferville	42.07	21	LR	LR	18 32 47.3	
	comp=Z,76nm,19.7s,baz=100,slow=38						
YKA	Yellowknife Ar	48.12	346	P	P	18 15 05.2	+2.2
	comp=Z,0.9nm,0.8s,baz=152,slow=7.1,SNR=9.7						
	comp=Z,0.9nm,0.8s						
YKA	Yellowknife Ar	48.12	346	P	P	18 14 59.9	-3.1
PLCA	Paso Flores	60.76	162	P	P	18 16 36.8	+1.4
	comp=Z,1.4nm,0.9s,baz=344,slow=11,SNR=3.3						
	comp=Z,1.4nm,0.9s						
ARCES	ARCESS Array B	82.96	18	LR	LR	18 59 27.3	
	comp=Z,26nm,18.2s,baz=280,slow=38						
CMAR	Chiang Mai Arr	143.18	344	PKP	PKiKP	18 25 59.7	-2.1
	comp=Z,0.4nm,0.9s,baz=48,slow=3.9,SNR=2.1						

SNET 21 18:09:51.8±1.3,13°.89N×91°.31W,h14km±11km,ML3.6

GCG 21 18:09:53.7±0.8,13°.77N×91°.44W,h18km±9km,MD3.9,ML3.8

ISC 21 18:09:55.3±2.4,13°.7N±0°.1×91°.04W±0°.10,h10km,n11,σ1s.05/13,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESSG	Sabana Grande	0.75	16	*i* P	Pg	18 10 09.3	-0.5
ESSG				*i* S	Sb	18 10 21.4	+0.6
FG16	Alotenango, Sa	0.80	40	*i* P	Pg	18 10 10.8	0.0
STG8	El Palmar, Qui	0.84	339	*i* P	Pg	18 10 11.9	+0.3
PCG5	San Vicente Pa	0.85	50	*i* P	Pg	18 10 11.2	-0.5
NUBE	Las Nubes	1.25	79	*e*P	Pn	18 10 17.9	-1.2
NUBE				*e*S	Sn	18 10 38.0	+2.0
CEVE	Cerro Verde	1.39	83	*e*P	Pn	18 10 20.5	-0.6
SBLS	San Blas	1.39	83	*e*P	Pn	18 10 20.0	-1.1
SNJE	San Jose	1.41	81	*e*P	Pn	18 10 20.7	-0.6
APG	El Apazote	1.45	23	*i* P	Pn	18 10 20.8	-1.0
JAYA	Jayaque - finc	1.55	90	*e*P	Pn	18 10 21.9	-1.2
JAYA				IAML		18 10 53.3	
	comp=Z,560nm,0.2s						
PMON	Piamonte	1.68	88	*e*P	Pn	18 10 25.6	+0.7

ISK 21 18:21:32.9,34°.01N×25°.55E,h14km,ML3.0/17

IDC 21 18:21:35.4±7.6,34°.40N×25°.98E,h0km,mb3.2/2,mbtmp3.3/5,ML3.3/3,MS3.2/1,Error ellipse: s-maj=135.6km s-min=32.0km az=35.0

HLW 21 18:21:38.0,33°.90N×25°.82E,h20km±7km,Ml3.1

AFAD 21 18:21:41.0,34°.40N×26°.07E,h115km±63km,ML2.8

ISC 21 18:21:36.2±1.0,34°.02N±0°.04×25°.68E±0°.05,h53km±19km,n44,σ2s.12/60,Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	Zakros	1.18	22	Pn	Pn	18 21 56.3	-0.2
ZKR				Sn	Sn	18 22 13.4	+1.9
IDI	Anoyia	1.43	333	Pn	Pn	18 21 58.4	-1.5
IDI				Sn	Sn	18 22 17.1	-0.5
GVD	Gavdhos	1.55	302	Pn	Pn	18 21 59.5	-2.0
GVD				Sn	Sn	18 22 19.0	-1.6
KARP	Karpathos	1.95	38	Pn	Pn	18 22 07.7	+0.7
IMMV	Iera Moni Meta	2.01	316	Pn	Pn	18 22 06.3	-1.4
IMMV				Sn	Sn	18 22 30.7	-1.0
SLUM	Salum	2.55	189	P	Pn	18 22 16.6	+1.5
SLUM				S	Sn	18 22 44.5	-0.5
ARG	Arkhangelos	2.97	42	Pn	Pn	18 22 22.5	+1.6
KTHA	Kythira Island	3.10	317	Pn	Pn	18 22 22.1	-0.6
DAT	Datca	3.12	29	P	Pn	18 22 27.5	+4.5
DAT				S	Sn	18 22 58.1	-1.0
DAT	Datca	3.12	29	Pn	Pn	18 22 24.1	+1.1
TURN	Turunc	3.46	37	P	Pn	18 22 29.2	+1.7
TURN				S	Sn	18 23 03.3	-3.9
TURN				*i* IAML		18 23 10.0	
	comp=E,17nm,0.4s						
TURN	Turunc	3.46	37	Pn	Pn	18 22 29.1	+1.6
DALY	Dalyan (Mula)	3.70	40	Pn	Pn	18 22 32.5	+1.7
YER	Yerkesik	3.76	34	Pn	Pn	18 22 33.5	+1.7
IZZE	Mula-Seydike	3.77	49	P	Pn	18 22 33.5	+1.7
IZZE				S	Sn	18 23 14.2	-0.8
IZZE				*i* IAML		18 23 16.0	
	comp=N,58nm,0.4s						
IZZE				*i* IAML		18 23 16.0	
	comp=E,52nm,0.4s						
FETY	Fethiye	3.81	46	P	Pn	18 22 26.1	-6.4
SABU	Mula-Dalaman	3.88	43	P	Pn	18 22 35.4	+2.1
SABU				S	Sn	18 23 15.8	-1.8
SABU				*i* IAML		18 23 22.0	
	comp=E,13nm,0.4s						
AKAS	Kas	3.90	54	P	Pn	18 22 35.0	+1.2
AKAS				*i* IAML		18 23 16.0	
	comp=N,32nm,1.2s						
AKAS				S	Sn	18 23 16.9	-1.5
AKAS				*i* IAML		18 23 25.0	
	comp=E,38nm,0.3s						
AKAS	Kas	3.90	54	Pn	Pn	18 22 35.8	+2.0
CAME	Cameli-Denizli	4.15	44	Pn	Pn	18 22 38.9	+1.7
DNZT	Denizli-Tavas-	4.24	39	P	Pn	18 22 39.5	+1.1
DNZT				S	Sn	18 23 25.6	-1.1
DNZT				*i* IAML		18 23 28.0	
	comp=N,12nm,0.4s						
KNIK	Mula-Seydike	4.25	47	P	Pn	18 22 38.9	+0.4
CAEL	Denizli, Camel	4.29	43	P	Pn	18 22 41.6	+2.5
AYDB	Zeytinkoy-Aydi	4.31	24	Pn	Pn	18 22 40.9	+1.5
TAVA	DENIZLI_Tavas	4.33	36	P	Pn	18 22 41.2	+1.6
TAVA				S	Sn	18 23 23.1	-5.7
ESEN	Aydn-Nazilli	4.35	29	P	Pn	18 22 40.6	+0.8
ESEN				S	Sn	18 23 26.4	-2.8
ESEN				*i* IAML		18 23 29.0	
	comp=E,7.8nm,0.8s						
ELL	Elmali	4.40	51	Pn	Pn	18 22 42.5	+1.9
AKUM	Antalya-Kumluc	4.46	58	P	Pn	18 22 42.8	+1.6
AKUM				*i* IAML		18 23 27.0	
	comp=N,12nm,1.6s						
AKUM				S	Sn	18 23 27.8	-3.9
AKUM				*i* IAML		18 23 44.0	
	comp=E,9.1nm,0.3s						
GOLH	Golhisar	4.50	43	P	Pn	18 22 44.1	+2.1
GOLH				S	Sn	18 23 32.8	-0.4
GOLH				*i* IAML		18 23 38.0	
	comp=E,18nm,0.4s						
GOLH				*i* IAML		18 23 39.0	
	comp=N,18nm,0.4s						
APMY	Acipayam-Deniz	4.53	39	Pn	Pn	18 22 44.6	+2.2
ODEM	Odemis-Izmir	4.67	24	Pn	Pn	18 22 46.1	+1.9
SWA2		4.76	182	P	Pn	18 22 47.0	+1.6
SWA2				S	Sn	18 23 37.8	-1.6
KORT	Korkueli	4.83	51	P	Pn	18 22 50.7	+4.1
GAZI	Gazipasa	5.87	66	P	Pn	18 22 59.1	-1.5
GAZI				S	Sn	18 24 02.9	-3.6
GAZI				*i* IAML		18 24 06.0	
	comp=N,17nm,0.6s						
GAZI				*i* IAML		18 24 07.0	
	comp=E,17nm,0.4s						
RYAN	Fayoum	6.29	140	P	Pn	18 23 08.2	+1.8
RYAN				S	Sn	18 24 12.9	-4.0
KKBE	Karaman, Kazim	6.72	60	P	Pn	18 23 14.6	+2.3
HFRF	Wahat Farafira	7.21	161	P	Pn	18 23 20.2	+1.2
MMAI	Mount Meron Ar	8.18	94	Pn	Pn	18 23 34.0	+1.7
	1.2nm,0.3s,baz=302,slow=11,SNR=6.8						
MMAI				Sn	Sn	18 25 03.1	-0.3
	3.1nm,0.3s,baz=268,slow=23,SNR=7.0						
	0.5nm,0.3s						
HKAT	Jabal Katrina	8.97	125	P	Pn	18 23 44.8	+1.5
AKASG	Malin Array Be	16.87	8	Pn	Pn	18 25 27.6	-1.0
	0.6nm,0.3s,baz=200,slow=10,SNR=3.0						
	0.2nm,0.3s						
GERES	GERESS Array B	17.29	333	P	P	18 25 35.2	+0.5
	baz=142,slow=12,SNR=7.1						
	0.7nm,0.7s						
KURBB	Kurchatov Arra	41.51	50	P	P	18 29 18.9	+0.8
	0.1nm,0.4s,baz=285,slow=8.5,SNR=1.7						
	0.1nm,0.4s						
MKAR	Makanchi Array	44.05	56	P	P	18 29 42.3	+3.5
	0.2nm,0.4s,baz=274,slow=7.1,SNR=4.8						
	0.2nm,0.4s						
ZALV	Zalesovo Beam	45.49	45	LR	LR	18 54 17.4	
	comp=Z,26nm,19.9s,baz=344,slow=44						

DJA 21 18:24:52.8±0.4,12°S±4°×11°8E±°,h10km,M4.2/19,mB5.1/2,mb4.3/12,MLv4.1/19,Mw(mB)4.4/2

IDC 21 18:24:53.1±3.5,11°.03S×118°.30E,h0km,mb3.6/2,mbtmp3.6/4,ML3.8/2,Error ellipse: s-maj=252.9km s-min=26.1km az=47.0

ISC 21 18:24:55.2±0.9,11°.65S±0°.07×117°.76E±0°.06,h36km,n37,σ1s.37/39,South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	Waikabubak, Su	2.56	39	P	Pn	18 25 33.3	-0.8
WBSI				S	Sn	18 26 01.7	-2.4
PLAI	Plampang	2.81	0	P	Pn	18 25 38.0	+0.5
PLAI	Plampang	2.81	0	P	Pn	18 25 37.8	+0.3
TWSI	Taliwang, Sumb	3.02	343	P	Pn	18 25 40.2	-0.3
BASI	Baing, Sumba	3.11	63	P	Pn	18 25 41.5	-0.2
DBNI	Kabupaten Domp	3.17	10	P	Pn	18 25 42.7	+0.1
WSI	Waingapu	3.17	52	P	Pn	18 25 42.1	-0.5
KLNI	Mataram	3.60	333	P	Pn	18 25 48.7	+0.2
KLNI				S	Sn	18 26 26.4	-3.4
LBFI	Labuhan Bajo,	3.78	34	P	Pn	18 25 51.2	+0.2
IGBI	Denpasar	3.82	317	P	Pn	18 25 51.1	-0.3
KHKI	Kahang-Kahang	3.90	327	P	Pn	18 25 54.6	+2.1
JAGI	Jajag, Banyuwa	4.76	311	P	Pn	18 26 04.2	-0.2
JAGI	Jajag, Banyuwa	4.76	311	P	Pn	18 26 03.6	-0.8
EDFI	Ende, Flores	4.82	54	P	Pn	18 26 04.1	-1.2
ABJI	Asem Bagus	5.17	317	P	Pn	18 26 12.9	+2.8
	0.3nm33nm,0.9s						
MMRI	Maumere	5.33	56	P	Pn	18 26 12.0	-0.2
	0.1nm24nm,1.1s						
GMJI	Gumukmas	5.42	308	P	Pn	18 26 13.6	+0.2
	0.2nm2µm20nm,0.9s						
BLJI	Banyuglugur	5.65	313	P	Pn	18 26 17.5	+0.9
KMMI	Kalianget	5.91	320	P	Pn	18 26 21.8	+1.6
	0.2nm32nm,1.1s						
BATI	Baumata	5.97	77	P	Pn	18 26 20.0	-1.0
SOEI	Soe	6.66	74	P	Pn	18 26 30.0	-0.7
SOEI	Soe	6.66	74	S	Sn	18 27 47.7	+2.2
SOEI	Soe	6.66	74	P	Pn	18 26 30.4	-0.3
	0.1nm17nm,0.6s						
BKSI	Bulukumba	6.71	21	P	Pn	18 26 32.2	+1.1
	0.1nm17nm,0.5s						
SNJI	Sawahan-Nganju	7.06	302	P	Pn	18 26 37.9	+1.8
	18nm,0.6s						
PCJI	Pacitan	7.34	297	P	Pn	18 26 39.9	0.0
UGM	Wanagama	8.04	297	P	Pn	18 26 50.2	+0.6
UGM	Wanagama	8.04	297	P	Pn	18 26 49.6	0.0
	35nm,1.6s						
MBWA	Marble Bar	9.64	169	P	Pn	18 27 09.2	-2.2
KPJI	Karang Pucung	9.71	295	P	Pn	18 27 13.4	+1.0
	25nm,1.6s						
FITZ	Fitzroy Crossi	9.95	131	P	Pn	18 27 15.0	-0.7
PSA00	Pilbara Seismi	10.07	169	P	Pn	18 27 15.7	-1.6
MEEK	Meekatharra	14.93	177	P	Pn	18 28 22.5	-1.2
WRA	Warramunga Arr	17.94	119	P	Pn	18 29 01.4	-0.6
	0.3nm,0.3s,baz=288,slow=13,SNR=8.9						
WRA				S	Sn	18 32 05.9	-15
	0.3nm,0.6s,baz=290,slow=23,SNR=1.8						
	0.3nm,0.3s						
ASAR	Alice Springs	19.45	130	P	Pn	18 29 22.5	+2.3
	0.5nm,0.3s,baz=313,slow=13,SNR=79						
ASAR				S	S	18 32 44.9	-12
	0.6nm,0.7s,baz=318,slow=26,SNR=4.3						
	3.0nm,0.6s						
MKAR	Makanchi Array	66.27	334	P	P	18 35 41.1	+1.4
	0.2nm,0.4s,baz=148,slow=6.9,SNR=4.8						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	70.81	335	P	P	18 36 09.3	+1.4
	0.4nm,0.6s,baz=145,slow=5.6,SNR=5.3						
	0.4nm,0.6s						

DJA 21 19:04:33.2±1.6,6°S±8°×14°8E±1°4,h70km±8km,M5.0/27,mb4.8/27,mB5.3/5,MLv5.2/1,Mw(mB)4.7/5

IDC 21 19:04:35.8±2.0,6°.05S×147°.40E,h52km±18km,mb3.9/17,mbtmp4.2/21,ML4.0/3,MS3.5/22,Error ellipse: s-maj=20.2km s-min=9.9km az=92.0

NEIC 21 19:04:38.8±1.9,6°.07S±0°.06×147°.29E±0°.08,h66km±7km,mb4.5/34,Error ellipse: s-maj=11.5km s-min=9.3km az=89.0

ISC 21 19:04:38.8±0.4,6°.11S±0°.05×147°.29E±0°.07,h77km,n109,σ1s.16/98,mb4.4/36,1D,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.28	182	P	Pn	19 05 27.2	-0.7
	162nm,0.5s,baz=14,slow=7.3,SNR=65						
PMG				S	Sn	19 06 04.4	-1.5
	244nm,0.5s,baz=334,slow=16,SNR=3.6						
PMG				LR	LR	19 07 05.9	
	comp=Z,1µm,20.4s,baz=28,slow=45						
PMG	Port Moresby	3.28	182		Pn	19 05 26.8	-1.1
PMG	Port Moresby	3.28	182	P	Pn	19 05 26.7	-1.2
MANU	Manus Island	4.04	1		Pn	19 05 36.2	-2.1
RABL	Rabaul	5.21	69		Pn	19 05 53.6	-0.7
JAY	Jayapura	7.48	298	P	Pn	19 06 25.1	-0.1
	0.9nm,0.3s,baz=169,slow=19,SNR=1.7						
JAY				LR	LR	19 09 44.7	
	comp=Z,560nm,20.0s,baz=158,slow=41						
	9.2nm,0.8s						
GENI	Genyem	7.92	296	P	Pn	19 06 32.3	+1.1
	48nm,1.3s						
COEN	Coen	8.79	207		Pn	19 06 41.3	-1.9
CTA	Charters Tower	13.94	184	P	Pn	19 07 50.9	-1.9
	0.5nm,0.3s,baz=346,slow=12,SNR=6.5						
CTA				S	Sn	19 10 25.1	-0.9
	1.1nm,0.5s,baz=214,slow=9.9,SNR=1.1						
CTA				LR	LR	19 12 54.7	
	comp=Z,375nm,19.9s,baz=18,slow=36						
	4.1nm,0.9s						
CTAO	Charters Tower	13.94	184	Pn	Pn	19 07 52.8	0.0
FAKI	Fak Fak	15.33	281	Pn	Pn	19 08 11.7	+0.9
FAKI	Fak Fak	15.33	281	P	P	19 08 13.3	-0.6
SAUI	Saumlaki	15.98	262	P	P	19 08 22.5	+1.3
	72nm,1.1s						
SIJI	Sorong	16.82	287	P	Pn	19 08 29.7	+0.2
	28nm,0.9s						
SWI	Sorong	16.82	287	P	Pn	19 08 29.7	+0.1
	38nm,0.8s						
MTN	Manton Dam	17.28	246	Pn	Pn	19 08 33.7	-1.5
MTN				IAmb	IAmb	19 08 37.8	

	comp=Z,34nm,1.4s						
BNDI	Bandanaira	17.39	274	P	P	19 08 39.6	+2.9
	comp=Z,90nm,1.3s						
WRA	Warramunga Arr	18.64	221	P	P	19 08 49.0	-1.6
	comp=Z,0.6nm,0.3s,baz=33,slow=11,SNR=19						
WRA				S	S	19 12 07.2	-12
	comp=Z,0.8nm,0.6s,baz=46,slow=24,SNR=2.9						
WRA				PcP	PcP	19 13 18.2	+1.7
	comp=Z,2.9nm,0.7s,baz=30,slow=1.9,SNR=4.6						
	comp=Z,3.9nm,0.8s						
WRA	Warramunga Arr	18.64	221	P	P	19 08 48.1	-2.5
KRAI	Karang Ratu	19.04	278	P	P	19 08 55.8	+0.9
	comp=Z,845nmcomp=Z,40nm,1.0s						
AAI	Ambon	19.18	276	P	Pn	19 09 00.0	+1.9
	comp=Z,57nm,0.8s						
EIDS	Eidsvold	19.49	170	P	P	19 09 00.4	+0.6
GUMO	Guam	19.72	353	LR	LR	19 15 07.1	
	comp=Z,131nm,20.1s,baz=115,slow=32						
KNRA	Kununurra	20.51	241	P	P	19 09 09.8	-1.1
KNRA				IAmb	IAmb	19 09 26.9	
	comp=Z,22nm,1.1s						
SANI	Sanana	21.63	280	P	P	19 09 23.8	+0.9
	comp=Z,23nm,0.7s						
AS31	Alice Springs	21.70	215		P	19 09 24.4	+0.8
ASAR	Alice Springs	21.70	215	P	P	19 09 22.7	-0.9
	comp=Z,10nm,0.9s,baz=52,slow=8.6,SNR=36						
ASAR				S	S	19 13 23.4	+3.7
	comp=Z,2.9nm,1.0s,baz=44,slow=22,SNR=6.3						
ASAR				LR	LR	19 17 59.4	
	comp=Z,202nm,18.8s,baz=28,slow=37						
	comp=Z,10nm,0.9s						
ASAR	Alice Springs	21.70	215		P	19 09 24.1	+0.5
INKA	Innaminka	22.40	195		P	19 09 32.0	+1.0
INKA				IAmb	IAmb	19 09 38.9	
	comp=Z,12nm,0.9s						
SOEI	Soe	23.09	259	P	P	19 09 37.4	-1.0
SOEI				IAmb	IAmb	19 09 51.3	
	comp=Z,19nm,0.8s						
SOEI	Soe	23.09	259	P	P	19 09 40.3	+1.9
	comp=Z,25nm,0.8s						
BATI	Baumata	23.74	259	LR	LR	19 22 14.6	
	comp=Z,80nm,19.1s,baz=99,slow=44						
BATI	Baumata	23.74	259	P	P	19 09 45.6	+1.3
	comp=Z,25nm,0.7s						
FITZ	Fitzroy Crossi	24.26	239	LR	LR	19 21 11.3	
	comp=Z,250nm,18.6s,baz=52,slow=41						
FITZ	Fitzroy Crossi	24.26	239		P	19 09 48.3	-0.5
DZM	Mont Dzumac	24.38	133	P	P	19 09 48.8	-1.3
	comp=Z,4.6nm,0.8s,baz=293,slow=13,SNR=1.8						
	comp=Z,4.6nm,0.8s						
DZM	Mont Dzumac	24.38	133	P	P	19 09 50.6	+0.6
DZM				IAmb	IAmb	19 10 07.3	
	comp=Z,26nm,1.5s						
ARMA	Armidale	24.53	171	P	P	19 09 52.7	+1.4
MMRI	Maumere	24.97	263	P	P	19 09 53.4	-2.0
MMRI				IAmb	IAmb	19 10 03.0	
	comp=Z,20nm,0.7s						
LUWI	Luwuk	24.98	281		P	19 09 55.6	+0.1
LUWI	Luwuk	24.98	281	P	P	19 09 56.1	+0.6
EDFI	Ende, Flores	25.52	263	P	P	19 09 59.3	-1.2
	comp=Z,25nm,0.9s						
APSI	Ampana	26.10	280	P	P	19 10 06.1	+0.4
	comp=Z,32nm,1.3s						
MRSI	Marisa	26.14	284	P	P	19 10 06.3	+0.3
	comp=Z,13nm,1.1s						
STKA	Stephens Creek	26.19	191	P	P	19 10 06.8	+0.6
	comp=Z,3.2nm,0.6s,baz=11,slow=9.0,SNR=7.6						
STKA				LR	LR	19 21 06.1	
	comp=Z,226nm,18.2s,baz=26,slow=38						
	comp=Z,3.2nm,0.6s						
STKA	Stephens Creek	26.19	191	P	P	19 10 06.9	+0.7
STKA				IAmb	IAmb	19 10 12.6	
	comp=Z,22nm,0.8s						
TOLI2	Tolitoli	27.42	284	P	P	19 10 16.3	-1.2
TOLI2				IAmb	IAmb	19 10 30.2	
	comp=Z,6.0nm,0.7s						
KAPI	Kappang	27.43	271	P	P	19 10 17.8	+0.2
TTSI	Tana Toraja	27.55	275	P	P	19 10 20.0	+1.3
	comp=Z,14nm,1.0s						
PCI	Palu	27.88	280	P	P	19 10 23.0	+1.4
MMSI	Mamuju	28.50	276	P	P	19 10 26.1	-1.1
BBOO	Buckleboo	28.56	200	P	P	19 10 28.0	+0.6
BBOO				IAmb	IAmb	19 10 29.9	
	comp=Z,8.5nm,1.0s						
MBWA	Marble Bar	30.60	238	P	P	19 10 45.3	-0.4
PSA00	Pilbara Seismi	30.68	237	P	P	19 10 46.0	-0.4
PSA00				IAmb	IAmb	19 11 13.9	
	comp=Z,26nm,1.3s						
BKB	Balikpapan	30.70	278	P	P	19 10 48.0	+1.3
H11N1	WAKE ISLAND Hy	32.10	36	T	T	19 44 47.5	
	baz=219,slow=74						
H11N3	WAKE ISLAND Hy	32.11	37	T	T	19 44 49.9	
	baz=219						
H11N2	WAKE ISLAND Hy	32.12	36	T	T	19 44 47.7	
	baz=219,slow=74						
JOW	Kunigami	37.57	331	LR	LR	19 26 38.3	
	comp=Z,42nm,20.5s,baz=110,slow=35						
NWAO	Narrogin (SRO)	38.65	222	LR	LR	19 29 14.7	
	comp=Z,202nm,20.4s,baz=10.0,slow=38						
NWAO	Narrogin (SRO)	38.65	222	P	P	19 11 55.5	+0.6
YULB	Yu-li	38.79	320	P	P	19 11 56.3	+0.1
TPUB	Ta-pu	39.15	319	P	P	19 11 58.2	-1.0
TKNZ	Takaka Hill	41.66	150	P	P	19 12 21.3	+1.6
URZ	Urewera	41.90	144	LR	LR	19 28 21.1	
	comp=Z,77nm,21.4s,baz=300,slow=34						
JNU	Nakatsue	42.01	339	LR	LR	19 26 43.8	
	comp=Z,49nm,20.6s,baz=149,slow=32						
TCW	Tory Channel	42.44	150	P	P	19 12 27.0	+1.0
JGF	Kuroka	42.53	348	P	P	19 12 27.7	+0.8
JGF				IAmb	IAmb	19 12 43.3	
	comp=Z,27nm,1.5s						
MDSI	Maura Dua	42.95	270	P	P	19 12 42.5	+12
MJAR	Matsushiro Arr	43.27	349	P	P	19 12 32.8	0.0
	comp=Z,5.5nm,1.1s,baz=167,slow=7.3,SNR=7.0						
	comp=Z,5.5nm,1.1s						
MJAR	Matsushiro Arr	43.27	349		P	19 12 33.5	+0.7
KSRS	Korea Array	46.96	339	P	P	19 13 02.2	+0.2
	comp=Z,1.6nm,0.7s,baz=152,slow=8.2,SNR=5.4						
KSRS				LR	LR	19 30 17.0	
	comp=Z,38nm,21.8s,baz=135,slow=33						
	comp=Z,1.6nm,0.7s						
KSAR	Wonju Array Be	46.96	339	P	P	19 13 03.0	+1.0
PPI	Padang Panjang	47.13	275	P	P	19 13 02.5	-1.3
KULM	Kulim	47.92	283	P	P	19 13 09.8	-0.1
KULM				IAmb	IAmb	19 13 15.5	
	comp=Z,17nm,1.4s						
ASAJ	Asahikawa	50.17	356	LR	LR	19 34 03.8	
	comp=Z,16nm,19.6s,baz=148,slow=35						
GSI	Gunungsitoli	50.18	277	P	P	19 13 26.8	-0.4
CMAR	Chiang Mai Arr	53.56	298	P	P	19 13 53.2	+1.0
	comp=Z,0.5nm,0.5s,baz=120,slow=8.7,SNR=4.7						
CMAR				LR	LR	19 35 51.6	
	comp=Z,5.7nm,21.2s,baz=105,slow=35						
	comp=Z,0.5nm,0.5s						
XAN	Xi'an	53.95	320	⇓P	P	19 13 54.6	-0.3
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PETK	Petropavlovsk-	59.65	7	P	P	19 14 33.1	-1.7
	comp=Z,12nm,1.0s,baz=224,slow=6.2,SNR=3.5						
PETK				LR	LR	19 35 38.0	
	comp=Z,44nm,21.6s,baz=199,slow=31						
	comp=Z,12nm,1.0s						
HILR	Hailar Array B	60.40	340	P	P	19 14 39.3	-0.7
	comp=Z,2.3nm,0.6s,baz=132,slow=8.6,SNR=1.9						
	comp=Z,2.3nm,0.6s						
PPT	Papeete	62.59	107	LR	LR	19 39 14.2	
	comp=Z,33nm,19.1s,baz=196,slow=33						
ULN	Ulaanbaatar	64.34	331	P	P	19 15 07.2	+0.6
ULN				IAmb	IAmb	19 15 18.6	
	comp=Z,3.8nm,1.1s						
SONM	Songino Array	64.64	331	P	P	19 15 08.4	-0.1
	comp=Z,1.4nm,0.7s,baz=145,slow=6.0,SNR=8.9						
SONM				LR	LR	19 43 04.2	
	comp=Z,28nm,19.1s,baz=153,slow=36						
	comp=Z,1.4nm,0.7s						
SONM	Songino Array	64.64	331	P	P	19 15 09.3	+0.8
MA2	Magadan	65.53	2	LR	LR	19 39 36.5	
	comp=Z,44nm,21.8s,baz=98,slow=32						
YAK	Yakutsk	69.29	351	LR	LR	19 45 11.4	
	comp=Z,26nm,19.2s,baz=128,slow=35						
VNDA	Vanda	71.79	177	P	P	19 15 52.3	-0.3
	comp=Z,1.6nm,0.6s,baz=9.5,slow=6.1,SNR=6.9						
	comp=Z,1.6nm,0.6s						
VNDA	Vanda	71.79	177	P	P	19 15 53.9	+1.3
VNDA				IAmb	IAmb	19 16 05.9	
	comp=Z,4.5nm,0.9s						
MKAR	Makanchi Array	77.77	320	P	P	19 16 26.0	-1.6
	comp=Z,0.4nm,0.7s,baz=106,slow=7.5,SNR=4.4						
	comp=Z,0.4nm,0.7s						
MKAR	Makanchi Array	77.77	320	P	P	19 16 27.1	-0.5
ZALV	Zalesovo Beam	79.26	328	P	P	19 16 34.0	-1.6
	comp=Z,1.5nm,0.7s,baz=119,slow=5.8,SNR=6.8						
ZALV				LR	LR	19 50 50.8	
	comp=Z,15nm,20.7s,baz=68,slow=35						
	comp=Z,1.5nm,0.7s						
ZALV	Zalesovo Beam	79.26	328	P	P	19 16 34.5	-1.1
KURBB	Kurchatov Arra	81.49	323	P	P	19 16 46.9	-0.7
	comp=Z,0.3nm,0.6s,baz=117,slow=4.3,SNR=3.3						
	comp=Z,0.3nm,0.6s						
QSPA	South Pole Qui	83.86	180	P	P	19 17 00.2	+0.3
	comp=Z,5.8nm,0.6s,baz=345,slow=1.3,SNR=16						
	comp=Z,5.8nm,0.6s						
QSPA	South Pole Qui	83.86	180	P	P	19 17 00.7	+0.8
QSPA				IAmb	IAmb	19 17 01.6	
	comp=Z,8.2nm,0.8s						
IL31		85.46	23	P	P	19 17 07.6	-0.1
IL31				IAmb	IAmb	19 17 32.0	
	comp=Z,6.8nm,1.5s						
ILAR	Eielson Array	85.46	23	P	P	19 17 06.8	-0.9
	comp=Z,1.8nm,0.6s,baz=251,slow=4.8,SNR=32						
	comp=Z,1.8nm,0.6s						
ILAR	Eielson Array	85.46	23	P	P	19 17 07.3	-0.4
NRIK	Noril'sk	85.47	342	P	P	19 17 07.7	+0.1
	comp=Z,3.1nm,0.8s,baz=119,slow=6.9,SNR=2.4						
NRIK				LR	LR	19 53 30.0	
	comp=Z,23nm,21.0s,baz=327,slow=34						
	comp=Z,3.1nm,0.8s						
J25K	Salcha River,	86.00	24	P	P	19 17 11.0	+0.5
J25K				IAmb	IAmb	19 17 12.6	
	comp=Z,3.2nm,0.7s						
CTGM	Chitina Glacie	86.41	28	P	P	19 17 14.0	+1.3
M27K	Edge Creek, AK	86.63	26	P	P	19 17 15.3	+1.6
M27K				IAmb	IAmb	19 17 22.8	
	comp=Z,8.6nm,1.3s						
BVAR	Borovoye Array	87.03	324	P	P	19 17 15.0	-0.7
	comp=Z,0.5nm,0.6s,baz=114,slow=5.2,SNR=4.4						
	comp=Z,0.5nm,0.6s						
BMAR	Burnt Mountain	87.39	21	P	P	19 17 18.9	+1.7
ABKAR	Akbulak array	92.85	319	P	P	19 17 41.9	-1.1
LPAZ	La Paz	138.48	123	PKP	PKPdf	19 23 57.3	-0.1
	comp=Z,2.6nm,0.8s,baz=246,slow=5.7,SNR=6.7						
TORD	Torodi Ar. Bea	145.40	284	PKPbc	PKPab	19 24 09.4	+0.2
	comp=Z,3.7nm,0.7s,baz=66,slow=6.1,SNR=17						
BDFB	Brasilia	153.60	145	PKPab	PKPab	19 24 43.3	+0.8
	comp=Z,4.2nm,0.8s,baz=218,slow=7.4,SNR=5.3						

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*NDI **21** 19:10:09.1±1.8, 24°.12N×93°.90E, h36^{km}±14^{km}, ML3.3, MW3.3*

*IDC **21** 19:10:11.2±4.3, 24°.28N×94°.52E, h85^{km}±39^{km}, mb3.2/3, mbtmp3.4/4, Error ellipse: s-maj=120.3km s-min=23.8km az=60.0*

ISC 21 19:10:08.2±1.0, **24°.13N**±0°.05×**93°.84E**±0°.06, **h70**^{km}±12^{km}, **n14,** σ**1**^{s}**32**/23, **mb3.8**/3, **Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMP	Imphal	0.71	8	*e*P	Pn	19 10 23.7	+0.4
IMP				*e*S	Sn	19 10 33.7	-0.8
IMP				IAML		19 10 35.8	
	comp=N,680nm,0.2s						
IMP				IAML		19 10 36.0	
	comp=E,254nm,0.3s						
KOHI	KOHIMA	1.61	9	*e*P	Pn	19 10 35.4	+0.7
KOHI				*e*S	Sn	19 10 54.3	-0.4
KOHI				IAML		19 10 56.6	
	comp=N,248nm,0.6s						
KOHI				IAML		19 10 56.6	
	comp=E,249nm,0.6s						
SAIH	SAIHA	1.81	206	*e*P	Pn	19 10 37.6	+0.2
SAIH				*e*S	Sn	19 11 00.2	+0.7
SAIH				IAML		19 11 04.2	
	comp=E,233nm,0.3s						
SAIH				IAML		19 11 04.4	
	comp=N,132nm,0.7s						
MOKO	MOKOCHONG	2.27	16	*e*P	Pn	19 10 44.5	+0.8
MOKO				*e*S	Sn	19 11 09.9	-0.8
MOKO				IAML		19 11 13.7	
	comp=E,292nm,0.3s						
MOKO				IAML		19 11 13.8	
	comp=N,212nm,0.2s						
SHL	Shillong	2.28	309	*e*P	Pn	19 10 44.6	+0.7
SHL				*e*S	Sn	19 11 10.8	-0.3
SHL				IAML		19 11 11.3	
	comp=N,202nm,0.1s						
SHL				IAML		19 11 11.6	
	comp=E,108nm,0.2s						
TEZP	TEZPUR	2.65	339	*e*P	Pn	19 10 50.1	+1.5
TEZP				*e*S	Sn	19 11 19.8	0.0
TEZP				IAML		19 11 20.9	
	comp=E,208nm,0.2s						
TEZP				IAML		19 11 21.1	
	comp=N,124nm,0.2s						
ITAN	ITANAGAR	3.01	358	*e*S	Sn	19 11 27.9	-0.5
ITAN				IAML		19 11 28.9	
	comp=E,159nm,0.3s						
ITAN				IAML		19 11 29.5	
	comp=N,162nm,0.3s						
ZIRO	ZIRO	3.39	0	*e*P	Pn	19 10 59.7	+0.8
ZIRO				*e*S	Sn	19 11 35.3	-2.6
ZIRO				IAML		19 11 36.5	
	comp=N,257nm,0.2s						
ZIRO				IAML		19 11 37.0	
	comp=E,259nm,0.8s						
DHUB	DHUBRI	3.96	299	*e*P	Pn	19 11 06.7	+0.2
DHUB				*e*S	Sn	19 11 49.5	-2.3
DHUB				IAML		19 11 52.4	
	comp=E,116nm,0.2s						
DHUB				IAML		19 11 52.7	
	comp=N,149nm,0.2s						
GTK	Tadong	5.69	305	*e*P	Pn	19 11 32.0	+1.7
GTK				*e*S	Sn	19 12 32.4	-2.0
GTK				IAML		19 12 40.4	
	comp=N,126nm,0.3s						
GTK				IAML		19 12 41.9	
	comp=E,130nm,0.3s						
CMAR	Chiang Mai Arr	7.38	139	P	Pn	19 11 52.6	-0.7
	comp=E,0.6nm,0.5s,baz=319,slow=13,SNR=9.7						
MKAR	Makanchi Array	24.44	341	P	P	19 15 22.6	+2.3
	comp=E,0.2nm,0.4s,baz=151,slow=12,SNR=5.7						
	comp=E,0.2nm,0.4s						
WRA	Warramunga Arr	58.95	135	P	P	19 19 59.4	-1.2
	comp=E,0.5nm,0.6s,baz=318,slow=7.0,SNR=3.2						
	comp=E,0.5nm,0.6s						
ASAR	Alice Springs	61.39	138	P	P	19 20 16.6	-0.6
	comp=E,0.5nm,0.5s,baz=318,slow=6.8,SNR=8.9						
	comp=E,0.5nm,0.5s						

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*IDC **21** 19:15:28.9±1.0, 6°.52N×125°.03E, h0^{km}, mb3.5/6, mbtmp3.5/6, Error ellipse: s-maj=23.5km s-min=9.7km az=126.0*

ISC 21 19:15:33.7±1.1, **6°.6N**±0°.1×**125°.3E**±0°.3, **h35**^{km}, **n7,** σ**1**^{s}**29**/7, **mb3.4**/6, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.57	33	Pg	Pn	19 15 45.5	+0.2
	266nm,0.3s,baz=219,slow=1.6,SNR=17						
DAV				Lg	Lg	19 15 53.2	
	390nm,0.3s,baz=242,slow=22,SNR=16						
FITZ	Fitzroy Crossi	24.53	179	P	P	19 20 51.7	+1.5
	1.6nm,0.5s,baz=355,slow=9.6,SNR=9.8						
	1.6nm,0.5s						
WRA	Warramunga Arr	27.83	161	P	P	19 21 18.9	-1.1
	0.9nm,0.9s,baz=333,slow=11,SNR=5.4						
	0.9nm,0.9s						
ASAR	Alice Springs	31.23	165	P	P	19 21 49.4	-0.8
	0.4nm,0.7s,baz=348,slow=8.7,SNR=5.3						
	0.4nm,0.7s						
MJAR	Matsushiro Arr	32.08	20	P	P	19 21 57.6	+0.1
	1.1nm,1.1s,baz=205,slow=10,SNR=1.7						
	1.1nm,1.1s						
MKAR	Makanchi Array	54.39	325	P	P	19 24 56.0	-1.3
	0.3nm,0.8s,baz=122,slow=7.3,SNR=1.8						
	0.3nm,0.8s						
KURBB	Kurchatov Arra	58.56	327	P	P	19 25 27.7	+0.9
	0.2nm,0.6s,baz=129,slow=7.3,SNR=5.2						
	0.2nm,0.6s						

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*IDC **21** 19:54:23.3±0.7, 37°.39N×21°.82E, h0^{km}, mb4.0/18, mbtmp3.9/28, ML3.2/10, MS3.0/3, Error ellipse: s-maj=14.9km s-min=12.6km az=163.0*

*NEIC **21** 19:54:25.3±2.8, 37°.38N±0°.05×21°.66E±0°.07, h10^{km}±1^{km}, mb4.4/16, Error ellipse: s-maj=12.4km s-min=3.1km az=224.0*

*THE **21** 19:54:26.0, 37°N±1°×2°2E±°, h0^{km}±1^{km}, M3.8/19, MLh3.8/19*

*ATH **21** 19:54:26.1, 37°.36N×21°.73E, h7^{km}, ML3.8/49, Manual Solution by M.Charalampakis First location: 2019/12/21 19:55:27, This location: 2020/10/09 06:26:51 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

*NAO **21** 19:54:52.1, 40°.84N×25°.29E, h10^{km}, MB3.5*

ISC 21 19:54:25.7±0.6, **37°.37N**±0°.02×**21°.71E**±0°.02, **h17**^{km}±4^{km}, **n206,** σ**1**^{s}**62**/226, **mb4.2**/22, **11C-10D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZARO	Zacharo	0.13	338	P	Pg	19 54 29.1	-0.5
ZARO				S	Sg	19 54 31.3	-0.9
AMT	Artemida-Makis	0.16	360	P	Pg	19 54 29.7	-0.4
AMT				S	Sg	19 54 32.2	-0.9
ITM	Ithomi	0.26	137	P	Pg	19 54 31.0	-0.5
ITM				S	Sg	19 54 35.1	-0.3
ITM	Ithomi	0.26	137		Pg	19 54 30.9	-0.6
ITM				Sg	Sg	19 54 35.0	-0.3
ITM	Ithomi	0.26	137	P	Pg	19 54 31.0	-0.5
ITM				S	Sg	19 54 34.2	-1.2
PYL1	Pylos	0.45	182	P	Pg	19 54 34.0	-0.9
PYL1				S	Sg	19 54 40.1	-1.0
PYL	PYLOS	0.47	177	P	Pg	19 54 34.2	-1.0
PYL				S	Sg	19 54 41.1	-0.6
MTHA	Methoni	0.55	180	P	Pg	19 54 36.6	0.0
MTHA				S	Sg	19 54 44.0	+0.1
DRO	Drossia	0.58	0	P	Pg	19 54 37.2	-0.1
DRO				S	Sb	19 54 47.2	+1.7
CLEM	Kyllini,Ilia,G	0.69	319	P	Pb	19 54 40.1	+0.8
RLS	Riolos of Patr	0.71	344	P	Pb	19 54 39.9	+0.3
RLS				S	Sb	19 54 50.5	+1.3
RLS	Riolos of Patr	0.71	344	P	Pg	19 54 39.7	0.0
RLS				S	Sb	19 54 49.9	+0.7
KLV1	Kalavrita	0.73	25	P	Pg	19 54 39.9	-0.3
KLV1				S	Sb	19 54 50.1	+0.3
GUR	Goura	0.76	41	P	Pg	19 54 40.0	-0.6
GUR				S	Sg	19 54 50.3	-0.3
KLV	Kalavryta, Ach	0.76	27	P	Pg	19 54 40.3	-0.3
KLV	Kalavryta, Ach	0.76	27	P	Pg	19 54 40.1	-0.5
KLV				S	Sb	19 54 51.1	+0.5
LTHK	Lithakia	0.77	296	P	Pg	19 54 40.8	0.0
LTHK	Lithakia	0.77	296	P	Pg	19 54 40.6	-0.3
LTHK				S	Sb	19 54 52.4	+1.5
KYPS	Kipseli, Zakin	0.84	303	P	Pb	19 54 42.3	+0.6
KYPS				S	Sb	19 54 54.1	+1.5
ARS1	Argos	0.85	72	P	Pg	19 54 42.2	-0.1
AXS	Araxos	0.87	342	P	Pb	19 54 42.6	+0.3
UPR	University Cam	0.92	4	P	Pn	19 54 44.3	+0.5
UPR	University Cam	0.92	4	P	Pb	19 54 43.9	+0.8
ORTH	Orthonies,Zaky	0.94	301	P	Pb	19 54 44.0	+0.5
ORTH				S	Sn	19 54 57.7	+0.6
RTZL	Ratzakli, Kefa	1.03	314	P	Pg	19 54 45.5	-0.2
RTZL	Ratzakli, Kefa	1.03	314	P	Pg	19 54 45.3	-0.3
EFP	Efpalio	1.07	8	P	Pn	19 54 46.3	+0.4
EFP	Efpalio	1.07	8	P	Pb	19 54 46.0	+0.3
EFP				S	Sn	19 55 01.2	+0.9
KALE	Kalithea	1.08	18	P	Pb	19 54 46.4	+0.6
KALE	Kalithea	1.08	18	P	Pg	19 54 46.1	-0.5
SERG	Sergoula	1.08	15	P	Pg	19 54 46.1	-0.5
SERG	Sergoula	1.08	15	P	Pg	19 54 45.8	-0.8
SERG				S	Sn	19 55 01.6	+1.0
VLI	Veliai	1.18	123	P	Pb	19 54 48.2	+0.7
VLI	Veliai	1.18	123	P	Pb	19 54 47.9	+0.3
LTK	Loutraki	1.19	56	P	Pn	19 54 48.3	+0.7
LTK	Loutraki	1.19	56	P	Pb	19 54 48.0	+0.2
VLS	Valsamata	1.20	313	P	Pb	19 54 48.0	0.0
VLS	Valsamata	1.20	313	P	Pb	19 54 48.0	0.0
VLS				S	Sn	19 55 05.0	+1.4
ANX	Ano Chora	1.23	8	P	Pg	19 54 49.2	-0.4
ANX	Ano Chora	1.23	8	P	Pn	19 54 48.9	+0.7
PVO	Paravola	1.25	353	P	Pg	19 54 49.7	-0.3
PVO	Paravola	1.25	353	P	Pg	19 54 49.4	-0.5
MNVA	Monemvasia	1.26	122	P	Pb	19 54 49.9	+0.9
ARG2	Argostoli	1.26	310	P	Pn	19 54 49.1	+0.7
DLFA	Delphi	1.27	29	P	Pn	19 54 48.9	+0.2
MET2	Kameni Chora,	1.31	79	P	Pn	19 54 50.1	+0.9
MET6	Megalochori,Me	1.33	80	P	Pb	19 54 50.5	+0.4
MET5	Makryloggos,Me	1.33	79	P	Pb	19 54 50.7	+0.5
DMLN	Damoulianata-K	1.37	310	P	Pg	19 54 52.3	+0.2
DMLN	Damoulianata-K	1.37	310	P	Pb	19 54 51.4	+0.5
NPS1	Neapolis Lacon	1.38	128	P	Pg	19 54 52.7	+0.4
FSK	Fiskardo	1.42	321	P	Pg	19 54 52.7	-0.4
VIL2	Platees	1.49	55	P	Pg	19 54 53.9	-0.6
VILL	Villia	1.50	57	P	Pg	19 54 54.0	-0.5
EVGI	Lefkada island	1.50	327	P	Pg	19 54 54.3	-0.3
EVGI	Lefkada island	1.50	327	P	Pb	19 54 53.6	+0.4
EVR	Evrytania	1.55	3	P	Pg	19 54 54.8	-0.8
KTHA	Kythira Island	1.55	135	P	Pb	19 54 55.0	+1.1
KTHA	Kythira Island	1.55	135	P	Pb	19 54 54.6	+0.6
NYDR	Nydri-Lefkada	1.56	330	P	Pg	19 54 55.3	-0.5
NYDR	Nydri-Lefkada	1.56	330	P	Pg	19 54 55.2	-0.6
AXAR	Agios Charalam	1.58	28	P	Pb	19 54 55.0	+0.5
AXAR	Agios Charalam	1.58	28	P	Pb	19 54 54.4	-0.1
DRAG	Dragano-Lefkad	1.59	326	P	Pb	19 54 55.2	+0.6
MAGU	Magoula	1.60	63	P	Pb	19 54 55.3	+0.6
LKD2	Lefkada island	1.64	330	P	Pb	19 54 56.0	+0.4
STFN	Stefani	1.66	60	P	Pb	19 54 56.2	+0.4
MAKR	Makrakomi, Fth	1.68	11	P	Pg	19 54 57.2	-0.8
TSLK	Tsoukalades, L	1.68	331	P	Pg	19 54 57.5	-0.5
ATAL	Atalanti	1.68	38	P	Pb	19 54 56.1	0.0
ATH	Athens Observa	1.70	69	P	Pb	19 54 57.0	+0.5
ATH5	Athens Parliam	1.72	69	P	Pb	19 54 56.4	-0.4
AGG	Agios Georgios	1.72	16	P	Pb	19 54 56.5	-0.4
VLY	Voula,Athens	1.72	73	P	Pb	19 54 57.0	+0.2
ATHU	Athens Univers	1.75	69	P	Pn	19 54 56.3	+1.0
PTL	Penteli	1.84	68	P	Pb	19 54 58.8	-0.1
DION	Dionisos Attik	1.90	67	P	Pb	19 54 59.4	-0.5
TETR	Tetrakomo, Epi	2.00	350	P	Pb	19 55 02.5	+0.8
THL	Klokotos Trika	2.21	6	P	Pb	19 55 05.0	-0.1
KARY	Karystos	2.26	72	P	Pn	19 55 04.7	+2.4
KYMI	Kymi, Euboea I	2.27	55	P	Pn	19 55 04.6	+2.2
NEO	Neokhori	2.27	31	P	Pn	19 55 04.2	+1.8
IGT	Igoumenitsa	2.42	334	P	Pb	19 55 07.3	-1.4
AOS2	Alonissos-2	2.44	43	P	Pn	19 55 06.9	+2.1
IMMV	Iera Moni Meta	2.64	135	P	Pn	19 55 10.1	+2.6
KEK	Kerkira	2.78	328	Pn	Pn	19 55 09.4	0.0
LIT	Litokhoron	2.80	12		Pn	19 55 11.4	+1.8
LIT	Litokhoron	2.80	12	P	Pn	19 55 12.1	+2.4
KZN	Kozani	2.93	1	P	Pn	19 55 13.8	+2.2
NAX1	Naxos Island	2.94	94	P	Pn	19 55 14.2	+2.6
APE	Apeiranthos	3.06	94	⇑P	Pn	19 55 16.4	+3.0
APE				⇑S	Sg	19 56 51.2	+47
NEST	Nestorio	3.08	351	P	Pb	19 55 17.7	-2.5
SNT5	Nea Kammeni, S	3.11	107	P	Pn	19 55 17.0	+3.1
THR3	Thira Island,	3.11	107	P	Pn	19 55 17.5	+3.6
GVD	Gavdhos	3.17	142	P	Pn	19 55 18.1	+3.3
THERA	Ancient Thera,	3.18	107	P	Pn	19 55 18.1	+3.1
PLG	Polygyros	3.29	24	P	Pn	19 55 18.4	+1.9
IDI	Anoyia	3.30	128	Pn	Pn	19 55 18.9	+2.3
	2.5nm,0.3s,baz=305,slow=4.6,SNR=25						
IDI				Sn	Sn	19 55 54.4	-1.1
	7.9nm,0.3s,baz=80,slow=16,SNR=5.4						
IDI	Anoyia	3.30	128		Pn	19 55 18.0	+1.4
IDI	Anoyia	3.30	128	P	Pn	19 55 18.7	+2.1
OUR	Ouranopolis	3.45	30	P	Pn	19 55 20.7	+2.1
CHOS	Chios island	3.58	72	P	Pn	19 55 22.9	+2.4
LIA	Limnos Island	3.71	46	P	Pn	19 55 23.5	+1.3
OHR	Ohrid	3.80	350	*i* Pn	Pb	19 55 29.6	-2.7
VAY	Valandovo	4.00	9	*i* Pn	Pn	19 55 30.7	+4.5
SRS	Serrai	4.02	21	P	Pn	19 55 28.8	+2.4
KAVA	Kavala	4.23	30	P	Pn	19 55 31.1	+1.8
TIP	Timpagrande	4.30	296	Pn	Pn	19 55 30.5	+0.2
TIP	Timpagrande	4.30	296	⇓P	Pn	19 55 29.3	-1.0
TIP				⇓S	Sn	19 56 17.7	-2.3
TIP	Timpagrande	4.30	296	P	Pn	19 55 31.1	+0.8
SMTH	Samothraki Isl	4.30	43	P	Pn	19 55 31.3	+1.0
KARP	Karpathos	4.75	111		Pn	19 55 38.4	+1.9
KARP	Karpathos	4.75	111	P	Pn	19 55 39.2	+2.6
RDO	Rodhopi	4.80	37		Pn	19 55 39.2	+2.1
RDO	Rodhopi	4.80	37	P	Pn	19 55 39.4	+2.2
ALN	Alexandroupoli	4.88	42	Pn	Pn	19 55 39.9	+1.7

ALN	Alexandroupoli	4.88	42	P	Pn	19 55 39.9	+1.7
MATE	Matera	5.09	312	⇓P	Pn	19 55 42.0	+0.8
MATE				⇑S	Sn	19 56 41.6	+2.1
ARG	Arkhangelos	5.28	101	Pn	Pn	19 55 46.0	+2.3
CUC	Castrocucco	5.30	301	Pn	Pn	19 55 45.2	+1.0
BALB	Balikesir	5.34	63	Pn	Pn	19 55 46.4	+1.8
PDG	Podgorica	5.40	340	Pn	Pn	19 55 46.3	+1.0
PDG	Podgorica	5.40	340	⇑P	Pn	19 55 49.0	+3.6
PDG				⇓S	Sn	19 56 52.7	+5.8
ACER	Acerenza	5.64	309	Pn	Pn	19 55 48.9	+0.1
VAE	Valguarnera	5.81	273	Pn	Pn	19 55 54.6	+3.5
	3.2nm,0.3s,baz=172,slow=10,SNR=6.4						
VAE				Sn	Sn	19 56 59.0	+1.6
	2.4nm,0.3s,baz=306,slow=16,SNR=1.9						
	6.8nm,0.5s						
RAFF	Raffo Rosso	5.86	271	Pn	Pn	19 55 50.8	-0.9
BOVS	Bovan	6.26	360	⇑P	Pn	19 56 01.5	+4.3
SGRT	San Giovanni R	6.36	315	Pn	Pn	19 55 58.9	+0.3
AKAS	Kas	6.43	98	Pn	Pn	19 56 02.1	+2.3
PAOL	Paolisi	6.64	306	Pn	Pn	19 56 03.5	+0.9
HERR	Herculane	7.53	4	⇑P	Pn	19 56 20.0	+5.4
GZR	Gura Zlata	8.06	5	⇓P	Pn	19 56 27.4	+5.5
BLY	Banja Luka	8.13	337	⇑P	Pn	19 56 24.8	+2.0
LOT	Lotru	8.22	10	⇑P	Pn	19 56 29.4	+5.2
BZS	Buzias	8.24	360	⇑P	Pn	19 56 28.4	+4.0
ARR	Arges	8.29	14	⇓P	Pn	19 56 31.3	+6.2
NRCA	Norcia	8.55	312	Pn	Pn	19 56 30.1	+1.4
FDMO	Fiordimonte	8.69	313	Pn	Pn	19 56 31.2	+0.6
MLR	Muntele Rosu	8.71	20	Pn	Pn	19 56 31.3	+0.3
	0.1nm,0.3s,baz=206,slow=5.7,SNR=3.2						
	1.3nm,0.5s						
MLR	Muntele Rosu	8.71	20	⇑P	Pn	19 56 36.9	+5.9
COVR	Voineasa-Covas	9.11	20	⇓P	Pn	19 56 42.0	+5.7
MORH	Mrgy, Hungar	9.13	346	⇑P	Pn	19 56 36.6	+0.1
PLOR	Plostina	9.24	22	⇓P	Pn	19 56 44.0	+5.8
TURR	Turia	9.26	19	⇓P	Pn	19 56 42.9	+4.6
VRI	Vrincioaia	9.28	22	⇓P	Pn	19 56 44.5	+5.9
BR131	Keskin Array S	9.64	72	Pn	Pn	19 56 45.9	+2.2
BRTR	Keskin Array B	9.64	72	Pn	Pn	19 56 47.7	+4.0
	0.3nm,0.3s,baz=254,slow=15,SNR=9.2						
BRTR				LR	LR	20 01 01.8	
	comp=Z,96nm,21.9s,baz=282,slow=42						
BRTR	Keskin Array B	9.64	72		Pn	19 56 46.9	+3.2
CSS	Mathiatis	9.70	101		Pn	19 56 44.6	+0.2
KEST	Kesra	10.08	264	Pn	Pn	19 56 49.8	+0.1
	0.1nm,0.3s,baz=94,slow=14,SNR=1.9						
KEST				Sn	Sn	19 58 39.2	-3.2
	0.1nm,0.3s,baz=358,slow=15,SNR=1.8						
	2.8nm,0.8s						
BURAR	Bucovina Array	10.56	13	Pn	Pn	19 56 58.1	+1.9
BUR08	Bucovina Ar. S	10.59	13	Pn	Pn	19 56 58.5	+1.9
PSZ	Piszkesteto	10.63	353	Pn	Pn	19 56 56.9	-0.3
CTI	Castel Tesino	11.47	322	Pn	Pn	19 57 07.7	-0.9
MOA	Molln	11.82	335	*e*Pn	Pn	19 57 16.1	+2.8
	0.6nm,0.3s						
MMAI	Mount Meron Ar	12.01	107	Pn	Pn	19 57 13.3	-2.8
	1.0nm,0.3s,baz=300,slow=11,SNR=5.9						
MMAI				Sn	Sn	19 59 23.9	-5.8
	0.6nm,0.3s,baz=296,slow=23,SNR=1.7						
	0.4nm,0.3s						
WTTA	Wattenberg	12.37	326	*e*Pn	Pn	19 57 24.9	+3.8
	1.3nm,0.4s						
WATA	Walderalm	12.45	326	*e*Pn	Pn	19 57 24.6	+2.4
	1.5nm,0.5s						
DAVOX	Davos/Dischmat	12.86	321	Pn	Pn	19 57 28.2	+0.4
	0.1nm,0.3s,baz=151,slow=19,SNR=1.4						
DAVOX				Sn	Sn	19 59 44.2	-6.3
	0.1nm,0.3s,baz=347,slow=12,SNR=1.4						
	1.2nm,0.7s						
GEC2	GERESS Array S	12.87	336	Pn	Pn	19 57 27.6	-0.1
GERES	GERESS Array B	12.87	336	Pn	Pn	19 57 29.0	+1.2
	baz=146,slow=13,SNR=5.5						
GERES				LR	LR	20 03 36.4	
	comp=Z,79nm,19.0s,baz=57,slow=43						
	0.4nm,0.5s						
GHAJ	Ghor Haditha	12.95	114	Pn	Pn	19 57 28.1	-0.7
EIL	Elat	13.44	121	Pn	Pn	19 57 35.0	-0.6
	0.5nm,0.3s,baz=323,slow=10,SNR=7.0						
EIL				Sn	Sn	19 59 52.8	-12
	0.3nm,0.3s,baz=65,slow=21,SNR=1.3						
	3.7nm,0.9s						
SENIN	Lac Senin/Sane	13.98	315	Pn	Pn	19 57 42.4	-0.8
AKASG	Malin Array Be	14.37	20	Pn	Pn	19 57 47.0	-1.2
	0.4nm,0.3s,baz=208,slow=13,SNR=2.7						
	1.1nm,0.6s						
SUW	Suwalki	16.68	3		Pn	19 58 18.6	+0.2
KVAR	Kislovodsk Arr	17.21	61	P	Pn	19 58 24.2	-1.0
	baz=234,slow=8.7						
	2.1nm,0.8s						
KBZ	Khabaz	17.29	62	P	Pn	19 58 26.5	+0.4
	0.1nm,0.3s,baz=250,slow=17,SNR=4.4						
KBZ				LR	LR	20 05 42.6	
	comp=Z,41nm,20.8s,baz=194,slow=40						
	1.1nm,0.8s						
ESDC	Sonseca Array	20.20	284	P	P	19 59 00.6	+1.0
	1.3nm,0.8s,baz=85,slow=11,SNR=4.6						
	1.3nm,0.8s						
HFS	Hagfors	23.35	350	P	P	19 59 32.1	-0.8
	1.4nm,0.4s,baz=152,slow=12,SNR=26						
	1.4nm,0.4s						
FINES	FINESS Array B	24.25	5	P	P	19 59 41.3	-0.2
	3.8nm,0.9s,baz=185,slow=9.5,SNR=11						
	3.8nm,0.9s						
FINES	FINESS Array B	24.25	5	P	P	19 59 41.1	-0.3
NC602	NORSAR Array S	24.26	348	P	P	19 59 41.7	+0.2
NC602				IAmb	IAmb	19 59 43.1	
	comp=Z,10.0nm,1.1s						
NB2	NORSAR Subarra	24.60	348	P	P	19 59 45.5	+0.8
	comp=Z,1.7nm,0.7s,baz=150,slow=11						
NOA	NORSAR Array B	24.60	348	P	P	19 59 44.6	-0.1
	comp=Z,0.3nm,0.5s,baz=162,slow=11,SNR=8.0						
	comp=Z,0.3nm,0.5s						
EKA	Eskdalemuir Ar	24.63	325	P	P	19 59 45.5	+0.5
	comp=Z,3.4nm,0.5s,baz=128,slow=9.4,SNR=26						
	comp=Z,3.4nm,0.5s						
RAYN	Ar Rayn	24.64	117	P	P	19 59 46.9	+1.5
ESK	Eskdalemuir	24.64	325	P	P	19 59 45.8	+0.7
ESK				IAmb	IAmb	19 59 56.7	
	comp=Z,30nm,1.4s						
DSB	Dublin	25.11	318	P	P	19 59 50.4	+1.0
AB31	Akbulak array	29.93	54	P	P	20 00 32.6	0.0
AB31				IAmb	IAmb	20 00 42.7	
	comp=Z,4.4nm,1.4s						
ABKAR	Akbulak array	29.93	54	P	P	20 00 33.1	+0.5
TORD	Torodi Ar. Bea	30.02	222	P	P	20 00 34.8	+1.1
	comp=Z,1.4nm,0.6s,baz=28,slow=11,SNR=12						
	comp=Z,1.4nm,0.6s						
ARTI	Arti	30.95	40	P	P	20 00 40.9	-0.6
	comp=Z,1.8nm,0.3s,baz=264,slow=14,SNR=5.9						
	comp=Z,1.8nm,0.3s						
ARTI	Arti	30.95	40	P	P	20 00 38.5	-3.0
ARTI				IAmb	IAmb	20 00 43.9	
	comp=Z,5.9nm,0.9s						
ARCES	ARCESS Array B	32.29	2	P	P	20 00 53.5	+0.3
	comp=Z,0.6nm,0.3s,baz=192,slow=11,SNR=25						
	comp=Z,0.6nm,0.3s						
ARCES	ARCESS Array B	32.29	2	P	P	20 00 52.7	-0.5
KEV	Kevo	32.57	3	P	P	20 00 55.1	-0.5
BVAR	Borovoye Array	36.93	49	P	P	20 01 34.0	+0.5
	comp=Z,1.1nm,0.6s,baz=337,slow=3.4,SNR=6.0						
	comp=Z,1.1nm,0.6s						
KKAR	Karatay Array	37.27	66	P	P	20 01 35.9	-0.5
GAR	Garm	37.88	72	P	P	20 01 42.4	+0.5
GAR				IAmb	IAmb	20 02 06.7	
	comp=Z,8.1nm,1.5s						
DBIC	Dimbokro	38.96	225	P	P	20 01 51.9	+1.0
	comp=Z,3.5nm,0.7s,baz=53,slow=10.0,SNR=4.5						
	comp=Z,3.5nm,0.7s						
DBIC	Dimbokro	38.96	225	P	P	20 01 50.9	0.0
DBIC				IAmb	IAmb	20 01 52.9	
	comp=Z,21nm,1.4s						
SPITS	Spitsbergen Ar	40.98	358	P	P	20 02 08.2	+1.1
	comp=Z,0.5nm,0.4s,baz=154,slow=10,SNR=6.3						
	comp=Z,0.5nm,0.4s						
KURBB	Kurchatov Arra	41.96	53	P	P	20 02 15.3	-0.1
	comp=Z,2.0nm,0.2s,baz=280,slow=8.6,SNR=6.2						
	comp=Z,2.0nm,0.2s						
KURK	Kurchatov	42.01	53	P	P	20 02 15.2	-0.6
MAKZ	Makanchi	44.71	58	P	P	20 02 36.9	-0.9
MAKZ				IAmb	IAmb	20 03 12.8	
	comp=Z,7.2nm,1.4s						
MKAR	Makanchi Array	44.93	58	P	P	20 02 38.9	-0.5
	comp=Z,1.2nm,0.4s,baz=273,slow=7.1,SNR=38						
	comp=Z,1.2nm,0.4s						
ZAA0	Zalesovo Array	45.53	48	P	P	20 02 43.5	-0.7
ZAA0				IAmb	IAmb	20 02 44.5	
	comp=Z,4.3nm,0.6s						
ZALV	Zalesovo Beam	45.53	48	P	P	20 02 43.8	-0.3
	comp=Z,4.3nm,0.5s,baz=271,slow=8.7,SNR=22						
	comp=Z,4.3nm,0.5s						
SCHQ	Schefferville	59.69	318	P	P	20 04 29.6	+0.7
	comp=Z,0.8nm,0.3s,baz=66,slow=7.2,SNR=6.8						
	comp=Z,0.8nm,0.3s						
SONM	Songino Array	60.24	51	P	P	20 04 33.0	0.0
	comp=Z,0.4nm,0.4s,baz=279,slow=6.3,SNR=4.3						
	comp=Z,0.4nm,0.4s						
SONM	Songino Array	60.24	51	P	P	20 04 32.3	-0.7
CMAR	Chiang Mai Arr	69.06	82	P	P	20 05 30.6	-0.2
	comp=Z,0.5nm,0.3s,baz=296,slow=7.6,SNR=8.6						
	comp=Z,0.5nm,0.3s						
KSRS	Korea Array	79.11	51	P	P	20 06 28.6	-0.7
	comp=Z,1.0nm,0.5s,baz=311,slow=4.5,SNR=7.1						
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	119.56	93	PKP	PKPdf	20 13 14.4	-0.4
	comp=Z,0.4nm,0.6s,baz=324,slow=1.6,SNR=1.8						
ASAR	Alice Springs	121.14	97	PKP	PKPdf	20 13 17.4	-0.4
	comp=Z,0.2nm,0.3s,baz=301,slow=2.0,SNR=4.4						

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*IDC **21** 20:15:46.2±3.9, 36°.12N×136°.54E, h266^{km}±59^{km}, mb3.2/2, mbtmp3.8/2, Error ellipse: s-maj=142.6km s-min=106.9km az=46.0*

*JMA **21** 20:15:46.4±0.2, 36°N±1°×13°7E±°, h283^{km}±2^{km}, MV2.7/39, NORTHERN GIFU PREF*

ISC 21 20:15:45.6±1.1, **36°.2N**±0°.1×**136°.95E**±0°.09, **h300**^{km}, **n17**, σ**1ˢ.77**/20, **Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKG	Kaga	0.51	276	*e*P	Pn	20 16 23.2	-0.9
JYTA	Yamagatataniai	0.66	196	*e*P	Pn	20 16 23.6	-1.1
JYTA				*e*S	S	20 16 51.2	-4.6
JNG	Nsakai	0.94	79	*e*P	Pn	20 16 25.1	-0.7
JNG				*e*S	S	20 16 55.5	-2.3
MAT	Matsushiro	1.06	72	*e*P	Pn	20 16 25.4	-0.9
MJAR	Matsushiro Arr	1.06	72	P	Pn	20 16 25.6	-0.6
	2.1nm,0.3s,baz=257,slow=6.9,SNR=41						
MJAR				S	S	20 16 56.9	-1.6
	0.9nm,0.6s,baz=222,slow=7.1,SNR=4.5						
JSZ	Suzu	1.26	15	*e*P	Pn	20 16 26.6	-0.6
JWT	Wachi	1.58	234	*e*P	Pn	20 16 28.1	-1.1
JIE	Ise	1.84	186	*e*P	Pn	20 16 30.7	-0.5
JAG	Ashikaga	2.03	84	*e*P	Pn	20 16 31.7	-0.8
JSD	Sado	2.09	30	*e*P	Pn	20 16 32.9	0.0
JWY	Kouya	2.29	209	*e*P	Pn	20 16 34.4	-0.5
JNS	Sasagawa	2.47	49	*e*P	Pn	20 16 36.2	-0.1
JTNC	Tanabenakahech	2.64	205	*e*P	Pn	20 16 37.4	-0.6
JOI	OKI	3.00	272	*e*P	Pn	20 16 41.0	-0.3
JHS	Saijyo	3.36	250	*e*P	Pn	20 16 44.5	-0.5
WRA	Warramunga Arr	55.92	183	P	P	20 24 55.7	+2.7
	0.8nm,0.4s,baz=359,slow=7.5,SNR=9.3						
	0.8nm,0.4s						
ASAR	Alice Springs	59.64	183	P	P	20 25 21.8	+3.1
	0.5nm,0.7s,baz=357,slow=5.5,SNR=9.8						
	0.5nm,0.7s						

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*JMA **21** 20:25:14.2±0.5, 31°N±1°×14°3E±°, h20^{km}, MV4.0/27, FAR E OFF IZU ISLANDS*

*IDC **21** 20:25:16.9±1.2, 30°.86N×142°.71E, h0^{km}, mb3.6/9, mbtmp3.6/12, ML3.1/3, MS3.2/1, Error ellipse: s-maj=41.6km s-min=18.6km az=69.0*

ISC 21 20:25:20.5±1.0, **31°.03N**±0°.07×**142°.8E**±0°.1, **h30**^{km}, **n23**, σ**2ˢ.40**/25, **mb3.7**/9, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	3.27	309	*e*P	Pn	20 26 08.4	-1.3
JHJ2	Mitsune	3.28	310	*e*P	Pn	20 26 08.4	-1.5
JHJ	Hachijo jima 2	3.30	310	Pn	Pn	20 26 08.9	-1.3
	8.6nm,0.3s,baz=98,slow=23,SNR=7.2						
JHJ				Sn	Sn	20 26 46.0	-2.5
	20nm,0.3s,baz=108,slow=22,SNR=4.6						
	102nm,0.8s						
BSO1	Boso 1	3.93	337	*e*P	Pn	20 26 17.6	-0.6
CBIJ	Chichi jima	3.96	188	*e*S	Sn	20 27 00.2	-4.4
JCJ	Chichijima	3.96	188	Pn	Pn	20 26 07.9	-11
	5.1nm,0.3s,baz=283,slow=23,SNR=6.5						
JCJ				Sn	Sn	20 26 48.9	-16
	23nm,0.3s,baz=271,slow=22,SNR=7.1						
BSO3	Boso 3	4.23	333	*e*P	Pn	20 26 21.8	-0.8
JOD2	Odawara 2	5.25	325	*e*P	Pn	20 26 36.3	-0.7
JHO	Hitachi	5.87	342	*e*P	Pn	20 26 43.9	-1.5
JRY	Ryogami san	5.95	328	*e*P	Pn	20 26 46.6	+0.1
JAG	Ashikaga	6.06	333	*e*P	Pn	20 26 47.1	-1.0
JFK	Kawauchi	6.52	346	*e*P	Pn	20 26 52.3	-2.1
JFK				*e*S	Sn	20 28 00.4	-7.4
MJAR	Matsushiro Arr	6.70	326	Pn	Pn	20 26 56.5	-0.3
	0.2nm,0.3s,baz=152,slow=11,SNR=24						
MJAR				Sn	Sn	20 28 09.4	-2.7
	0.1nm,0.3s,baz=66,slow=17,SNR=4.8						
	1.8nm,0.5s						
KSRS	Korea Array	13.87	302	Pn	Pn	20 28 36.5	+1.4
	0.1nm,0.3s,baz=107,slow=14,SNR=2.5						
	2.6nm,1.1s						
HILR	Hailar Array B	25.36	323	P	P	20 30 47.2	+2.3
	0.8nm,0.5s,baz=122,slow=14,SNR=1.8						
	0.8nm,0.5s						
SONM	Songino Array	32.38	312	P	P	20 31 49.9	+2.3
	1.1nm,0.7s,baz=114,slow=8.4,SNR=7.5						
	1.1nm,0.7s						
ZALV	Zalesovo Beam	46.94	317	P	P	20 33 49.7	+1.4
	0.3nm,0.4s,baz=86,slow=7.4,SNR=1.9						
ZALV				LR	LR	20 53 28.0	
	comp=Z,28nm,19.6s,baz=327,slow=36						
	0.3nm,0.4s						
MKAR	Makanchi Array	48.47	307	P	P	20 34 01.3	+0.9
	0.9nm,0.7s,baz=92,slow=9.5,SNR=7.3						
	0.9nm,0.7s						
KURBB	Kurchatov Arra	50.74	312	P	P	20 34 18.9	+1.3
	0.9nm,0.8s,baz=88,slow=7.0,SNR=6.2						
	0.9nm,0.8s						
WRA	Warramunga Arr	51.33	190	P	P	20 34 21.3	-0.9
	1.3nm,0.7s,baz=6.6,slow=7.6,SNR=6.0						
	1.3nm,0.7s						
ASAR	Alice Springs	55.05	190	P	P	20 34 49.4	-0.2
	0.3nm,0.5s,baz=9.2,slow=6.2,SNR=8.1						
	0.3nm,0.5s						
BVAR	Borovoye Array	55.57	316	P	P	20 34 53.0	0.0
	0.2nm,0.5s,baz=79,slow=7.8,SNR=2.2						
	0.2nm,0.5s						
YKA	Yellowknife Ar	68.44	29	P	P	20 36 21.6	+2.3
	0.2nm,0.7s,baz=294,slow=7.4,SNR=3.4						
	0.2nm,0.7s						

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*IDC **21** 20:30:02.4±1.2, 13°.15N×90°.75W, h0^{km}, mb3.8/7, mbtmp3.9/9, ML3.4/2, MS3.7/3, Error ellipse: s-maj=25.3km s-min=17.6km az=49.0*

*NEIC **21** 20:30:06.0±1.4, 13°.26N±0°.07×91°.07W±0°.07, h8^{km}±7^{km}, mb4.4/33, Error ellipse: s-maj=12.6km s-min=7.5km az=222.0*

*GCG **21** 20:30:05.0±2.5, 13°.09N×91°.20W, h30^{km}±43^{km}, MD4.1, ML4.3, MW3.9*

*SNET **21** 20:30:07.4±2.4, 13°.25N×90°.97W, h10^{km}, ML4.3*

*CATAC **21** 20:30:08.6±0.3, 13°N±2°×9°1W±°, h25^{km}, M4.3/25, MLv4.3/25, Error ellipse: s-maj=5.3km s-min=2.4km az=26.9, confirmed*

ISC 21 20:30:04.6±1.7, **13°.20N**±0°.05×**91°.01W**±0°.04, **h6**^{km}±10^{km}, **n140**, σ**1ˢ.77**/153, **mb4.4**/18, **MS3.6**/3, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESSJ	San Jos, E	0.61	54	*i* P	Pn	20 30 21.8	+2.0
ESSJ				*i* S	Sn	20 30 35.9	+5.8
FAME	Alcaldia de Sa	1.16	56	P	Pg	20 30 26.5	-0.4
FG16	Alotenango, Sa	1.18	24	*i* P	Pg	20 30 27.9	+0.7
FG16				*i* S	Sn	20 30 46.9	+2.7
PCG5	San Vicente Pa	1.19	31	*i* P	Pb	20 30 28.6	+0.9
ESSG	Sabana Grande	1.19	8	*i* P	Pg	20 30 27.3	-0.2
STG5	El Palmar, Qui	1.25	345	*i* P	Pn	20 30 32.2	+3.6
STG5				*i* S	Sn	20 30 52.6	+6.7
STG2	El Palmar, Qui	1.28	344	*i* P	Pn	20 30 33.2	+4.0
STG8	El Palmar, Qui	1.29	345	*i* P	Pn	20 30 33.2	+3.8
STG8				*i* S	Sn	20 30 55.0	+7.8
STG8				IAML		20 31 03.7	
	comp=N,3μm,0.3s						
NUBE	Las Nubes	1.39	59	S	Sb	20 30 49.5	+0.4
NUBE	Las Nubes	1.39	59	P	Pn	20 30 31.2	+0.6
LOAL	Lomas de Alarc	1.44	56	S	Sn	20 30 50.8	+0.3
LOAL	Lomas de Alarc	1.44	56	P	Pn	20 30 32.6	+1.4
SLOZ	Alcaldia de Sa	1.45	55	S	Sn	20 30 51.3	+0.5
RTAL	Retalhuleu	1.48	333		Pn	20 30 30.2	-1.6
RTAL	Retalhuleu	1.48	333	P	Pb	20 30 32.3	-0.2
RTAL	Retalhuleu	1.48	333	S	Sn	20 30 50.7	-0.8
CEVE	Cerro Verde	1.49	65	*e*P	Pn	20 30 32.8	+0.6
CEVE	Cerro Verde	1.49	65	P	Pn	20 30 32.9	+0.8
CEVE	Cerro Verde	1.49	65	S	Sn	20 30 52.1	+0.1
SBLS	San Blas	1.49	64	*e*P	Pn	20 30 32.6	+0.4
SBLS				*e*S	Sn	20 30 51.6	-0.5
JAYA	Jayaque - finc	1.58	73	*e*P	Pn	20 30 34.3	+0.9
JAYA				*e*S	Sb	20 30 56.8	+2.0
JAYA	Jayaque - finc	1.58	73	*i* P	Pn	20 30 33.9	+0.5
JAYA				*i* S	Sn	20 30 56.7	+2.3
JAYA	Jayaque - finc	1.58	73	S	Sn	20 30 55.0	+0.7
JAYA	Jayaque - finc	1.58	73	P	Pn	20 30 34.5	+1.1
UNIC	Universidad Ca	1.62	61	P	Pn	20 30 34.8	+1.0
UNIC	Universidad Ca	1.62	61	S	Sn	20 30 55.7	+0.6
SOKI	Kika Raxquin	1.66	347	*i* P	Pn	20 30 34.3	-0.3
SOKI				*i* S	Sg	20 30 56.9	-1.1
SOKI				IAML		20 31 05.3	
	comp=N,5μm,0.8s						
LALI	Alcalda de L	1.67	80	S	Sn	20 30 57.1	+1.0
LALI	Alcalda de L	1.67	80	P	Pn	20 30 35.8	+1.4
CEDA	San Andres	1.68	69	P	Pn	20 30 36.1	+1.5
CEDA	San Andres	1.68	69	S	Sn	20 30 58.0	+1.5
PMON	Piamonte	1.73	73	P	Pn	20 30 36.2	+0.9
PMON	Piamonte	1.73	73	S	Sn	20 30 59.1	+1.4
BOQS	Boqueron	1.77	72	*e*P	Pn	20 30 37.2	+1.3
UEES	Universidad Ev	1.80	73	P	Pn	20 30 37.3	+1.1
UEES	Universidad Ev	1.80	73	S	Sn	20 31 01.0	+1.5
PANCS	Alcalda de	1.83	77	S	Sn	20 31 02.2	+2.0
PANCS	Alcalda de	1.83	77	P	Pn	20 30 38.8	+2.1
LOMA	Loma Larga	1.84	76	*e*P	Pn	20 30 38.7	+1.8
LOMA				*e*S	Sn	20 31 02.8	+2.1
LOMA	Loma Larga	1.84	76	P	Pn	20 30 38.5	+1.6
LOMA	Loma Larga	1.84	76	S	Sn	20 31 01.6	+1.0
IGN	Direccin Gen	1.86	74	P	Pn	20 30 39.3	+2.2
IGN	Direccin Gen	1.86	74	S	Sn	20 31 02.2	+1.1
APG	El Apazote	1.87	16	Pn	Pn	20 30 37.7	+0.3
	comp=N,4.3nm,0.3s,baz=194,slow=14,SNR=103						
APG				Sn	Sn	20 31 01.1	-0.4
	comp=N,6.1nm,0.3s,baz=113,slow=12,SNR=15						
APG	El Apazote	1.87	16	*i* P	Pn	20 30 37.7	+0.3
APG				*i* S	Sg	20 31 04.6	-0.3
LFRS	El Faro	1.94	77	*e*P	Pn	20 30 39.8	+1.5
MTO3	Montecristo	2.00	53		Pn	20 30 39.3	+0.1
MTO3				Sn	Sn	20 31 05.5	+0.9
MTO3	Montecristo	2.00	53	*i* P	Pn	20 30 39.6	+0.4
MTO3				*i* S	Sb	20 31 07.5	+0.7
MTO3	Montecristo	2.00	53	P	Pn	20 30 40.0	+0.9
MTO3	Montecristo	2.00	53	S	Sn	20 31 05.4	+0.8
PAVA	Las Pavas	2.08	75	P	Pn	20 30 42.4	+2.2
PAVA	Las Pavas	2.08	75	S	Sn	20 31 07.8	+1.3
QUIS	Sacapulas	2.08	358	*i* P	Pb	20 30 42.2	-0.7
ESQI	Esquipulas	2.11	50		Pn	20 30 41.5	+0.9
ESQI	Esquipulas	2.11	50	*e*P	Pn	20 30 42.5	+1.9
ESQI				*e*S	Sb	20 31 10.7	+0.7
ESQI	Esquipulas	2.11	50	P	Pn	20 30 42.0	+1.4
ESQI	Esquipulas	2.11	50	S	Sn	20 31 07.9	+0.6
HUEH	Huehuetenango	2.16	347		Pn	20 30 41.2	-0.2
HUEH	Huehuetenango	2.16	347	*i* P	Pb	20 30 43.1	-1.2
HUEH				IAML		20 31 22.4	
	comp=E,6μm,1.0s						
HUEH	Huehuetenango	2.16	347	P	Pn	20 30 42.8	+1.4
HUEH	Huehuetenango	2.16	347	S	Sn	20 31 07.9	-0.8
TECO	Alcaldia de Te	2.20	81	P	Pn	20 30 43.8	+2.1
TECO	Alcaldia de Te	2.20	81	S	Sn	20 31 11.0	+1.8
UESV	Universidad de	2.21	78	P	Pn	20 30 44.5	+2.7
UESV	Universidad de	2.21	78	S	Sn	20 31 11.7	+2.2
LLGN	La Laguna	2.23	64	S	Sn	20 31 11.7	+1.7
LLGN	La Laguna	2.23	64	P	Pn	20 30 43.7	+1.5
SCLA	Alcaldia de Sa	2.28	77	S	Sn	20 31 11.8	+0.6
SCLA	Alcaldia de Sa	2.28	77	P	Pn	20 30 45.0	+2.2
PACA	Pacayal	2.63	84	P	Pn	20 30 50.1	+2.4
PACA	Pacayal	2.63	84	S	Sn	20 31 21.5	+1.4
SARH	Santa Rosa de	2.69	54	*i* P	Pn	20 30 50.2	+1.7
SARH	Santa Rosa de	2.69	54	P	Pn	20 30 50.0	+1.5
SARH	Santa Rosa de	2.69	54	S	Sn	20 31 22.7	+1.2
LCND	La Caada	3.04	88	P	Pn	20 30 54.6	+1.3
CNCH	Conchagua	3.09	88	P	Pn	20 30 55.6	+1.5
CNCH	Conchagua	3.09	88	S	Sn	20 31 33.7	+2.2
CSGN	Cosiguina Volc	3.37	93	P	Pn	20 30 59.6	+1.7
CSGN				S	Sn	20 31 40.3	+2.1
TGUH	Tegucigalpa,Un	3.73	76		Pn	20 31 04.0	+1.1
PETF	Flores	3.86	16		Pn	20 31 05.5	+0.9
CRIN	San Cristobal	3.89	97	Pn	Pn	20 31 07.1	+2.1
CNGN	Cerro Negro	4.26	99	Pn	Pn	20 31 10.4	+0.3
BOAB	BOACO BROADBAN	5.26	98		Pn	20 31 23.5	-0.4
CMIG	Matias Romero	5.38	316	Pn	Pn	20 31 25.4	-0.2
	comp=E,1.5nm,0.3s,baz=117,slow=9.5,SNR=9.9						
CMIG				Sn	Sn	20 32 29.8	+1.9
	comp=E,5.7nm,0.3s,baz=77,slow=20,SNR=4.7						
	comp=E,5.9nm,0.3s						
SIUN	Universidad Ur	6.09	84		Pn	20 31 36.2	+1.0
JUD3	Juan Diaz 3	6.15	119		Pn	20 31 37.5	+1.5
JTS	Las Juntas de	6.60	115	Pn	Pn	20 31 37.3	-4.9
	comp=E,0.7nm,0.3s,baz=285,slow=16,SNR=1.3						
JTS				Sn	Sn	20 32 53.7	-4.1
	comp=E,1.1nm,0.3s,baz=90,slow=20,SNR=1.7						
	comp=E,2.2nm,0.4s						
JTS	Las Juntas de	6.60	115		Pn	20 31 44.5	+2.3
TEIG	Tepich	7.46	20	Pn	Pn	20 31 53.1	-1.0
	baz=132,slow=24,SNR=14						
TEIG				Sn	Sn	20 33 17.2	-1.9
	baz=131,slow=24						
TEIG				Lg	Lg	20 33 56.5	
	baz=131,slow=24,SNR=2.7						
TEIG	Tepich	7.46	20		Pn	20 31 55.1	+1.0
RAFA	San Farael, Vo	7.75	114		Pn	20 32 00.6	+2.2
PIRO	Carate, Puerto	8.91	122		Pn	20 32 17.2	+3.2
BRU2	Volcan	9.26	117	Pn	Pn	20 32 21.5	+2.6
SOR	Soroa	12.20	37	Pn	Pn	20 33 00.1	+1.0
ROSC	El Rosal	18.44	115	P	P	20 34 22.9	+1.4
DRIO	Del Rio	18.45	333		P	20 34 21.4	+0.3
SLOR	San Lorenzo -	18.58	137	P	P	20 34 23.6	+0.4
JCT	Junction City	19.02	336	P	P	20 34 27.1	-0.2
FLOC	Florencia	19.09	126		P	20 34 29.5	+1.3
146A	Union	19.43	5	P	P	20 34 31.3	-0.5
BRDY	Brady	19.45	339		P	20 34 31.7	-0.4
SAND	Sanderson	19.60	330		P	20 34 34.4	+0.7
TXAR	Lajitas Array	19.90	326	P	Pn	20 34 38.0	-0.6
	comp=E,2.1nm,0.8s,baz=152,slow=13,SNR=22						
	comp=E,2.1nm,0.8s						
TXAR	Lajitas Array	19.90	326		P	20 34 37.7	+0.7
TX31	Lajitas Ar. Si	19.90	326		P	20 34 37.1	+0.1
H06E1	SOCORRO T-PHAS	19.93	289	T	T	20 54 53.8	
	SNR=19						
OZNA	Ozona	19.96	334		P	20 34 36.7	-0.9
OZNA				IAmb	IAmb	20 34 44.4	
	comp=Z,23nm,1.4s						
SDV	Santo Domingo	20.45	100	P	P	20 34 38.9	-4.4
	comp=Z,2.0nm,0.6s,baz=255,slow=6.6,SNR=5.8						
	comp=Z,2.0nm,0.6s						
PLPT	Palo Pinto	20.64	342		P	20 34 44.1	-0.8
PLPT				IAmb	IAmb	20 34 56.0	
	comp=Z,26nm,1.5s						
SGCY	Sterling City	20.82	335		P	20 34 45.9	-1.0
SGCY				IAmb	IAmb	20 34 51.3	
	comp=Z,11nm,1.0s						
ABTX	Abilene, Hawle	20.89	339	P	P	20 34 46.7	-1.0
ABTX				IAmb	IAmb	20 34 54.9	
	comp=Z,10nm,0.8s						
MIAR	Mount Ida	21.38	354	P	P	20 34 52.6	-0.3
MIAR				IAmb	IAmb	20 35 19.0	
	comp=Z,14nm,1.4s						
PECS	Pecos	21.61	329	P	P	20 34 55.1	-0.5
PECS				IAmb	IAmb	20 34 59.8	
	comp=Z,22nm,1.0s						
MNTX	Cornudas Mount	22.66	327		P	20 35 06.2	-0.5
MNTX				IAmb	IAmb	20 35 09.3	
	comp=Z,15nm,1.0s						
WVT	Waverly	23.02	7	P	P	20 35 09.0	-1.4
WVT				IAmb	IAmb	20 35 20.4	
	comp=Z,16nm,1.4s						
TKL	Tuckaleechee C	23.30	15	LR	LR	20 45 21.3	
	comp=Z,171nm,18.3s,baz=193,slow=40						
TKL	Tuckaleechee C	23.30	15	P	P	20 35 12.7	-0.6
TKL				IAmb	IAmb	20 35 17.9	
	comp=Z,17nm,1.1s						
121A	Cookes Peak, D	24.62	324		P	20 35 26.1	0.0
Y22A	Socorro	25.23	328		P	20 35 31.1	-0.5

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Y22A                                  IAmb   IAmb     20 35 41.0
       comp=Z,12nm,1.0s
DUN6  Lazy B Ranch     25.40 322   P      P        20 35 33.0  -0.1
X18A  Snowflake        27.31 324   P      P        20 35 50.5 +0.1
X18A                               IAmb   IAmb     20 36 02.5
       comp=Z,4.3nm,0.9s
X16A  Lo Mia Camp, P   28.10 322          P        20 35 57.7 +0.2
X16A                               IAmb   IAmb     20 36 02.7
       comp=Z,3.2nm,0.8s
WUAZ  Wupatki          28.83 324   P      P        20 36 04.5 +0.6
WUAZ                               IAmb   IAmb     20 36 09.2
       comp=Z,6.1nm,1.0s
HMU   Henry Mountain   30.26 328   P      P        20 36 16.0  -0.7
HMU                                IAmb   IAmb     20 36 27.9
       comp=Z,5.3nm,0.9s
SZCU  Shurtz Canyon    31.27 325   P      P        20 36 25.4  -0.2
SZCU                               IAmb   IAmb     20 36 30.5
       comp=Z,6.9nm,1.1s
CCUT  Cedar City       31.40 325          P        20 36 27.1 +0.3
BOAV  Boa Vista        32.01 107   P      P        20 36 31.7  -0.4
SPR3  Spring Creek 3   32.96 325          P        20 36 39.8  -0.8
SPR3                               IAmb   IAmb     20 36 44.6
       comp=Z,6.4nm,1.1s
PDAR  Pinedale Array   33.55 335   P      P        20 36 47.3 +1.7
       comp=Z,0.4nm,0.9s,baz=141,slow=7.0,SNR=2.1
       comp=Z,0.4nm,0.9s
NV11  Mina Array Sit   34.81 321          P        20 36 56.7 +0.2
NV11                               IAmb   IAmb     20 37 03.9
       comp=Z,7.2nm,1.1s
NVAR  Mina Array Bea   34.90 321   P      P        20 36 59.1 +1.8
       comp=Z,3.2nm,0.8s,baz=136,slow=8.0,SNR=9.8
       comp=Z,3.2nm,0.8s
NVAR  Mina Array Bea   34.90 321          P        20 36 57.4 +0.1
J08A  Circle Bar Ran   38.23 327   P      P        20 37 25.7 +0.1
NEW   Newport          41.14 333   LR     LR       20 57 57.2
       comp=Z,83nm,18.5s,baz=175,slow=41
BDFB  Brasilia         51.28 123   LR     LR       21 00 15.4
       comp=Z,105nm,18.4s,baz=198,slow=36
YKA   Yellowknife Ar   52.03 346   P      P        20 39 12.6  -2.1
       comp=Z,0.9nm,1.0s,baz=157,slow=7.2,SNR=7.3
       comp=Z,0.9nm,1.0s
ILAR  Eielson Array    63.95 337   P      P        20 40 36.3  -2.1
       comp=Z,1.2nm,1.0s,baz=133,slow=4.7,SNR=8.8
       comp=Z,1.2nm,1.0s
DBIC  Dimbokro         84.77  84   P      P        20 42 37.7  -2.9
       comp=Z,4.5nm,1.0s,baz=299,slow=6.4,SNR=2.0
       comp=Z,4.5nm,1.0s
DBIC  Dimbokro         84.77  84   P      P        20 42 40.7 +0.1
CMAR  Chiang Mai Arr  147.05 342   PKPbc  PKPdf    20 49 48.7 +1.3
       comp=Z,2.7nm,0.9s,baz=339,slow=4.0,SNR=23
```

IDC ***21*** *20:34:46.9±0.5, 57°.08S×67°.42W, h0km, mb4.9/13, mbtmp4.8/15, ML4.2/2, MS4.0/17, Error ellipse: s-maj=23.0km s-min=12.4km az=85.0*

MOS ***21*** *20:34:47.1±0.9, 57°.04S×67°.36W, h10km, mb5.3/15, Error ellipse: s-maj=26.5km s-min=8.3km az=89.2*

BJI ***21*** *20:34:49.5, 57°.00S×67°.50W, h10km, Ms5.4/5, Ms7 5.3/8*

NEIC ***21*** *20:34:49.1±1.3, 56°.97S±0°.05×67°.3W±0°.2, h10km±1km, mb5.2/75, Error ellipse: s-maj=15.7km s-min=8.9km az=259.0*

SJA ***21*** *20:34:49.9±0.7, 56°.87S×67°.20W, h22km±12km, ML5.1, MW4.6, MW5.1(GUC)*

GCMT ***21*** *20:34:52.1±0.4, 57°.17S±0°.04×67°.79W±0°.08, h28km±1km, MW5.0/52, Moment Tensor Solution. s29,c32; s52,c70; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.84±.25; $M_{\theta\theta}$-1.56±.16; $M_{\phi\phi}$-2.28±.18; $M_{r\theta}$0.62±.28; $M_{\theta\phi}$0.98±.09; $M_{\phi r}$-1.33±.34; Best double couple: $M_0$3.70200×10^{16} NP1:ϕ_s323.00000°,δ34.00000°,λ85.00000°. NP2: ϕ_s149.00000°,δ57.00000°,λ93.00000°. Principal axes: T 4.1470, Plg78.0000°, Azm69.0000°; N -0.8900, Plg3.0000°, Azm327.0000°; P -3.2570, Plg12.0000°, Azm236.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

GUC ***21*** *20:34:52.2±0.7, 56°.84S×67°.65W, h15km±12km, ML5.0*

ISC 21 20:34:49.0±2.5**, 57°.00S**±0°.04×**67°.31W**±0°.06**, h13**km±14km**, n251, **σ1^{s}**14**/251**, mb5.2**/54**, MS4.0**/18**, 11C-3D, Drake Passage**

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Code  Station Name       Δ°  AZ°    Phase ID          Time       Res
                                   Op     ISC        h  m  s    ISC
MG01  Puerto William    2.08 355          Pn       20 35 24.4 +0.8
MG01                               Sn     Sn       20 35 46.4  -3.0
MG01  Puerto William    2.08 355⇓iP       Pn       20 35 24.5 +0.9
MG01                              eS      Sn       20 35 48.8  -0.6
MG01                               IAML            20 36 03.7
       comp=N,23μm,0.8s
MG01  Puerto William    2.08 355 i P      Pn       20 35 24.6 +0.9
MG01                              eS      Sn       20 35 49.3  -0.1
MG01                               IAML            20 36 09.8
       comp=Z,8μm,0.7s
USHA  Ushuaia           2.27 343   Pn     Pn       20 35 26.9 +0.8
       comp=Z,41nm,0.3s,baz=175,slow=17,SNR=132
USHA                               Sn     Sn       20 35 53.4  -0.5
       comp=Z,140nm,0.3s,baz=248,slow=9.8,SNR=6.4
       comp=Z,198nm,0.5s
USHA  Ushuaia           2.27 343  eP      Pn       20 35 26.3 +0.1
USHA                              eS      Sn       20 35 53.4  -0.5
USHA  Ushuaia           2.27 343  eP      Pn       20 35 26.4 +0.2
USHA                              i S     Sn       20 35 54.4 +0.4
MG03  Isla Dawson       3.64 329  eP      Pn       20 35 45.7 +0.7
MG03                              eS      Sn       20 36 26.2  -1.5
MG02  Cerro Sombrero    4.38 345          Pn       20 35 56.4 +1.3
MG02                               Sn     Sn       20 36 45.5  -0.3
MG02  Cerro Sombrero    4.38 345  eP      Pn       20 35 56.9 +1.9
MG02  Cerro Sombrero    4.38 345  i P     Pn       20 35 57.0 +1.9
MG02                              i S     Sn       20 36 46.1 +0.2
MG02                               IAML            20 37 37.0
       comp=Z,1μm,1.1s
MG04  Isla Riesco       4.83 328  eP      Pn       20 36 02.2 +0.8
GO09  Cerro Castillo    6.46 331          Pn       20 36 23.5  -0.3
JUBA  Jubany            6.83 144  i P     Pn       20 36 33.2 +4.4
JUBA                              i S     Sn       20 37 45.2  -1.1
EFI   East Falkland     7.59  49          Pn       20 36 39.5 +0.3
EFI   East Falkland     7.59  49d iP      Pn       20 36 40.1 +0.9
EFI   East Falkland     7.59  49  i P     Pn       20 36 40.2 +1.0
EFI                               i S     Sn       20 37 59.5  -5.5
EFI                                IAML            20 38 05.9
       comp=Z,242nm,1.4s
PMSA  Palmer Station    7.96 170   Pn     Pn       20 36 42.4  -1.8
       comp=Z,5.1nm,0.3s,baz=326,slow=6.4,SNR=9.9
PMSA                               LR     LR       20 39 03.4
       comp=Z,1μm,18.4s,baz=298,slow=32
       comp=Z,16nm,0.4s
PMSA  Palmer Station    7.96 170   Pn     Pn       20 36 45.9 +1.7
ESPZ  Base Esperanza    8.21 146   Pn     Pn       20 36 49.0 +1.4
COYC  Coyhaique        11.83 343   Pn     Pn       20 37 36.1  -1.2
LL02  Futaleuf         14.13 346          Pn       20 38 09.2 +0.5
LL05  Los Muermos      16.11 343          Pn       20 38 35.2 +0.2
PLCA  Paso Flores      16.42 351   Pn     P        20 38 42.4 +0.5
       comp=Z,1.0nm,0.3s,baz=180,slow=13,SNR=33
PLCA                               LR     LR       20 45 43.5
       comp=Z,834nm,18.2s,baz=174,slow=40
PLCA  Paso Flores      16.42 351          Pn       20 38 39.5 +0.5
PLCA  Paso Flores      16.42 351  eP      Pn       20 38 40.0 +0.9
PLCA  Paso Flores      16.42 351  eP      P        20 38 43.6 +1.7
TRQA  Tornquist        19.28  13          Pn       20 39 15.9 +1.5
TRQA  Tornquist        19.28  13   P      Pn       20 39 15.9 +1.5
TRQA                               pmax   pmax
       comp=Z,33nm,0.8s
BI02  San Fabin de     20.52 351          P        20 39 27.2 +0.3
ML02  Panimavida       21.43 351   P      P        20 39 36.8 +0.2
ML02                               IAmb   IAmb     20 39 39.9
       comp=Z,197nm,1.6s
BO01  Tunca            22.76 352          P        20 39 50.8  -0.1
LMEL  Las Melosas      23.24 354   P      P        20 39 56.5 +0.5
MT01  Popeta           23.30 352          P        20 39 56.1  -0.3
VA05  Santo Domingo    23.53 351   P      P        20 39 59.1 +0.4
MT03  Universidad Ad   23.61 353   P      P        20 39 59.8 +0.2
MT03                               IAmb   IAmb     20 40 05.3
       comp=Z,71nm,1.0s
MT16  CCHEN            23.68 353   P      P        20 40 00.2  -0.1
MT16                               IAmb   IAmb     20 40 02.8
       comp=Z,46nm,0.8s
BELA  Belgrano 2       23.73 164          P        20 40 00.9 +0.6
BELA                               IAmb   IAmb     20 40 02.9
       comp=Z,135nm,1.8s
PEL   Peldehue         23.97 353          P        20 40 03.2 +0.2
PEL                                IAmb   IAmb     20 40 04.7
       comp=Z,55nm,0.7s
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PEL   Peldehue         23.97 353   P      P        20 40 03.2 +0.2
PEL                                pmax   pmax
       comp=Z,55nm,0.7s
VA03  San Esteban      24.34 353   P      P        20 40 07.0 +0.5
VA03                               IAmb   IAmb     20 40 09.3
       comp=Z,69nm,0.8s
VA06  Catapilco        24.60 352   P      P        20 40 08.9 +0.3
VA06                               IAmb   IAmb     20 40 34.7
       comp=Z,74nm,1.2s
CO02  Combarbal        25.92 353   P      P        20 40 21.2 +0.4
CO02                               IAmb   IAmb     20 40 22.9
       comp=Z,70nm,0.9s
CO03  El Pedregal      26.26 353          P        20 40 24.3 +0.4
CO03                               IAmb   IAmb     20 40 26.0
       comp=Z,55nm,1.0s
CO06  Fray Jorge       26.50 352   P      P        20 40 26.3 +0.4
GO04  Tololo Observa   26.93 353   P      P        20 40 29.9  -0.3
GO04                               IAmb   IAmb     20 40 32.2
       comp=Z,29nm,0.8s
CO01  Juntas del Tor   27.09 355   P      P        20 40 32.2 +0.7
CO01                               IAmb   IAmb     20 40 34.4
       comp=Z,30nm,0.8s
VNA3  Neumayer Olymp   27.53 144 ⇑P       P        20 40 36.0 +1.1
       comp=Z,42nm,0.8s
VNA1  Neumayer--Stat   28.00 142 ⇑P       P        20 40 40.4 +1.4
       comp=Z,24nm,0.8s
LCO   Las Campanas     28.08 354   P      P        20 40 41.1 +0.6
LCO   Las Campanas     28.08 354  eP      P        20 40 41.3 +0.8
AC05  El Transito      28.23 354   P      P        20 40 41.1  -0.6
AC05                               IAmb   IAmb     20 41 14.0
       comp=Z,26nm,0.9s
VNA2  Neumayer--Watz   28.27 143 ⇑P       P        20 40 42.7 +1.2
       comp=Z,20nm,0.7s,baz=258,slow=10
CPSB  Cacapava Do Su   28.30  26  eP      P        20 40 43.2 +1.1
AC04  Llanos de Chal   28.91 353          P        20 40 47.0  -0.5
SNAA  Sanae            29.70 145 ⇑P       P        20 40 55.2 +1.0
       comp=Z,371nm,0.6s
SNAA  Sanae            29.70 145   P      P        20 40 55.2 +1.0
       comp=Z,14nm,0.6s,baz=268,slow=7.1,SNR=99
SNAA                               PcP    PcP      20 43 58.1 +0.3
       comp=Z,2.8nm,0.8s,baz=308,slow=1.5,SNR=4.0
       comp=Z,14nm,0.6s
SNAA  Sanae            29.70 145          P        20 40 54.8 +0.6
SNAA                               IAmb   IAmb     20 40 55.8
       comp=Z,19nm,0.7s
SNAA  Sanae            29.70 145c iP      P        20 40 54.8 +0.6
SNAA                               pmax   pmax
       comp=Z,24nm,1.1s
AC02  Maricunga        30.18 357   P      P        20 40 58.7  -0.6
TROLL Troll, Antarti   31.33 146 ⇑P       P        20 41 09.4 +0.7
       comp=Z,646nm,0.7s
CPUP  Villa Florida    31.47  17   P      P        20 41 10.2   0.0
       comp=Z,1.7nm,0.5s,baz=193,slow=8.6,SNR=8.5
CPUP                               LR     LR       20 55 15.3
       comp=Z,135nm,18.5s,baz=208,slow=39
       comp=Z,1.7nm,0.5s
CPUP  Villa Florida    31.47  17   P      P        20 41 10.1  -0.1
ITAB  Concordia        31.66  26   P      P        20 41 11.6  -0.1
ITAB  Concordia        31.66  26  eP      P        20 41 13.5 +1.7
GO02  Mina Guanaco     31.86 356          P        20 41 14.0   0.0
GO02                               IAmb   IAmb     20 41 15.8
       comp=Z,38nm,0.8s
PB14  IPOC Station P   32.42 355   P      P        20 41 18.4  -0.6
PB14                               IAmb   IAmb     20 41 20.5
       comp=Z,68nm,1.5s
QSPA  South Pole Qui   33.23 180   P      P        20 41 25.5   0.0
       comp=Z,22nm,0.8s,baz=151,slow=3.4,SNR=63
QSPA                               LR     LR       20 54 49.2
       comp=Z,105nm,18.6s,baz=170,slow=36
       comp=Z,22nm,0.8s
QSPA  South Pole Qui   33.23 180   P      P        20 41 25.4  -0.1
QSPA                               IAmb   IAmb     20 41 26.1
       comp=Z,24nm,0.8s
PB10  IPOC Station P   33.54 355   P      P        20 41 28.6 +0.3
PB10                               IAmb   IAmb     20 41 30.1
       comp=Z,32nm,1.0s
AF01  San Pedro de A   34.02 359   P      P        20 41 32.8  -0.1
PTGB  Pitanga          34.09  25  eP      P        20 41 35.1 +1.9
PB05  IPOC Station P   34.18 355          P        20 41 33.4  -0.6
PB06  IPOC Station P   34.30 356   P      P        20 41 33.8  -1.3
PB06                               IAmb   IAmb     20 41 37.0
       comp=Z,35nm,1.0s
NVL   N'lazarevskaya   34.52 145  eP      P        20 41 37.0 +0.6
NVL                               e                20 42 50.1
NVL                               eS      S        20 47 06.4 +2.1
NVL                               eSS     SnSn     20 49 18.9 +3.8
NVL                               eSSS    SSS      20 49 34.9
NVL                                pmax   pmax
       comp=Z,32nm,0.9s
NVL                                MLR    MLR
       comp=Z,362nm,19.0s
PB09  IPOC Station P   35.19 357   P      P        20 41 42.4  -0.4
AMBA  Amambai (Brazi   35.21  20  eP      P        20 41 41.9  -0.9
PB01  IPOC Station P   35.95 357   P      P        20 41 49.6 +0.3
PB08  IPOC Station P   36.84 357   P      P        20 41 57.6 +0.4
PB08                               IAmb   IAmb     20 42 00.2
       comp=Z,28nm,1.0s
VAO   Valinhos         37.06  32   P      P        20 41 59.1 +0.3
VAO   Valinhos         37.06  32  eP      P        20 42 00.1 +1.4
PB11  IPOC Station P   37.23 356   P      P        20 42 00.8 +0.6
PB11                               IAmb   IAmb     20 42 03.0
       comp=Z,41nm,0.9s
AQDB  Aquidauana       37.48  18   P      P        20 42 01.8  -0.3
ELIB  Princess Elisa   37.50 149  dP      P        20 42 02.4 +0.4
       comp=Z,8.2nm,0.5s
PB18  Visviri          39.38 357          P        20 42 18.9   0.0
PB18                               IAmb   IAmb     20 42 23.2
       comp=Z,39nm,1.1s
PP1B  Ponte de Pedra   40.43  18  eP      P        20 42 28.1 +1.2
LPAZ  La Paz           40.65 359   P      P        20 42 31.1 +1.7
       comp=Z,22nm,0.8s,baz=154,slow=4.5,SNR=62
LPAZ                               PcP    PcP      20 44 30.2  -0.9
       comp=Z,3.0nm,0.6s,baz=181,slow=3.3,SNR=3.5
LPAZ                               LR     LR       20 59 00.7
       comp=Z,189nm,18.1s,baz=150,slow=36
       comp=Z,22nm,0.8s
LPAZ  La Paz           40.65 359          P        20 42 30.4 +1.0
LPAZ  La Paz           40.65 359  eP      P        20 42 28.9  -0.5
SBA   Scott Base       41.41 195   P      P        20 42 35.9 +1.5
SBA                                IAmb   IAmb     20 43 49.6
       comp=Z,52nm,1.4s
SBA   Scott Base       41.41 195   P      P        20 42 35.9 +1.5
SBA                                pmax   pmax
       comp=Z,52nm,1.4s
PTLB  Pontes e Lacer   41.94  12          P        20 42 39.5 +0.2
PTLB  Pontes e Lacer   41.94  12  eP      P        20 42 40.2 +0.9
SALV  Santo Antonio    41.96  17  eP      P        20 42 40.6 +1.1
VNDA  Vanda            42.34 194   P      P        20 42 40.9  -1.1
       comp=Z,0.9nm,0.8s,baz=176,slow=13,SNR=1.4
VNDA                               LR     LR       20 59 38.8
       comp=Z,100nm,18.8s,baz=238,slow=35
SYO   Syowa Base       43.66 150⇑iP       P        20 42 51.3  -1.4
BDFB  Brasilia         43.80  27   P      P        20 42 55.5 +1.0
       comp=Z,13nm,0.9s,baz=196,slow=6.4,SNR=19
       comp=Z,13nm,0.9s
BDFB  Brasilia         43.80  27          P        20 42 54.8 +0.3
BDFB  Brasilia         43.80  27   P      P        20 42 54.8 +0.3
BDFB                               pmax   pmax
       comp=Z,21nm,1.0s
VILB  Vilhena          44.30  10          P        20 42 59.0 +0.5
VILB                               IAmb   IAmb     20 43 00.9
       comp=Z,56nm,0.9s
VILB  Vilhena          44.30  10  eP      P        20 42 59.6 +1.2
JANB  Januaria         45.35  32  eP      P        20 43 07.8 +0.8
NNA   Nana             45.52 347   LR     LR       21 01 11.9
       comp=Z,85nm,18.1s,baz=131,slow=35
PDRB  Porto dos Gac    46.02  14  eP      P        20 43 12.5 +0.4
SNDB  Serra Nova Dou   46.59  22  eP      P        20 43 17.3 +0.7
CLDB  Colider          46.88  16  eP      P        20 43 19.0 +0.1
NBIT  Itapeh - BA      47.01  38  eP      P        20 43 21.4 +1.6
SDBA  SAO DESIDERIO    47.71  30  eP      P        20 43 26.1 +0.7
MAW   Mawson           50.37 158   P      P        20 43 44.7  -0.3
       comp=Z,6.1nm,0.9s,baz=199,slow=5.7,SNR=5.6
MAW                                PcP    PcP      20 45 02.9  -0.5
       comp=Z,2.1nm,0.8s,baz=198,slow=6.4,SNR=2.0
MAW                                LR     LR       21 04 25.1
       comp=Z,133nm,19.2s,baz=227,slow=35
       comp=Z,6.1nm,0.9s
SMTB  Santa Maria do   50.42  26  eP      P        20 43 47.3 +1.2
NPGB  Novo Progresso   50.70  15  eP      P        20 43 48.9 +0.7
PRPB  Parauapebas      52.53  22  eP      P        20 44 02.9 +1.0
ITTB  Itaituba         53.29  14  eP      P        20 44 07.1  -0.3
MACA  Manacapuru-AM    53.95   8          P        20 44 12.4 +0.1
MAL2  Monte Alegre,    55.82  16          P        20 44 24.5  -1.3
MAL2                               IAmb   IAmb     20 44 27.9
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       comp=Z,36nm,1.4s
OTAV  Otavalo          57.77 347  eP      P        20 44 39.0  -1.2
FLOC  Florencia        58.79 350   P      P        20 44 46.7  -0.1
FLOC                               IAmb   IAmb     20 45 19.8
       comp=Z,19nm,0.9s
BOAV  Boa Vista        59.46   8          P        20 44 51.2  -0.2
BOAV                               IAmb   IAmb     20 44 53.0
       comp=Z,23nm,1.1s
BOAV  Boa Vista        59.46   8  eP      P        20 44 50.5  -1.0
ROSC  El Rosal         61.90 352   P      P        20 45 09.4 +0.9
       comp=Z,6.6nm,0.4s,baz=94,slow=7.1,SNR=4.1
ROSC                               LR     LR       21 12 39.7
       comp=Z,153nm,19.8s,baz=239,slow=37
       comp=Z,6.6nm,0.4s
SUR   Sutherland       62.53 108   LR     LR       21 05 41.5
       comp=Z,139nm,21.1s,baz=200,slow=30
SUR   Sutherland       62.53 108   P      P        20 45 13.0 +0.6
RUSC  La Rusia         62.86 354   P      P        20 45 14.7  -0.3
MDP   Montagnes des    63.04  16   LR     LR       21 15 05.7
       comp=Z,307nm,18.2s,baz=170,slow=38
GRHM  Grahamstown, E   64.68 112   P      P        20 45 25.3  -1.1
SDV   Santo Domingo    65.71 356   P      P        20 45 33.5 +0.1
       comp=Z,5.2nm,0.7s,baz=346,slow=4.2,SNR=5.1
SDV                                LR     LR       21 16 46.6
       comp=Z,96nm,20.2s,baz=198,slow=38
       comp=Z,5.2nm,0.7s
BOSA  Boshof           67.83 108   P      P        20 45 47.0 +0.2
       comp=Z,17nm,0.7s,baz=212,slow=6.6,SNR=38
BOSA                               LR     LR       21 08 34.9
       comp=Z,116nm,21.5s,baz=201,slow=30
       comp=Z,17nm,0.7s
BOSA  Boshof           67.83 108   P      P        20 45 46.7  -0.1
BOSA                               IAmb   IAmb     20 45 48.2
       comp=Z,20nm,0.8s
BOSA  Boshof           67.83 108   P      P        20 45 46.7  -0.1
BOSA                               pmax   pmax
       comp=Z,20nm,0.8s
WIN   Windhoek         68.36  98   P      P        20 45 50.3   0.0
WIN                                IAmb   IAmb     20 45 53.3
       comp=Z,40nm,1.2s
WIN   Windhoek         68.36  98   P      P        20 45 50.3   0.0
WIN                                pmax   pmax
       comp=Z,40nm,1.2s
JTS   Las Juntas de    68.62 341⇑eP       P        20 45 50.8  -0.8
JTS                                pmax   pmax
       comp=Z,14nm,0.9s
BFZ   Birch Farm       69.01 227   P      P        20 45 53.9   0.0
BFZ                                IAmb   IAmb     20 46 06.9
       comp=Z,43nm,1.3s
LKGWB Lokgwabe         69.33 103   P      P        20 45 58.3 +2.1
KOOLE Kule             69.69 101          P        20 45 59.0 +0.5
KGCAE Kacgae           70.88 103          P        20 46 06.2 +0.4
LBTB  Lobatse          70.92 107   LR     LR       21 12 27.4
       comp=Z,66nm,18.4s,baz=196,slow=32
LBTB  Lobatse          70.92 107   P      P        20 46 06.4 +0.4
LBTB                               IAmb   IAmb     20 46 07.4
       comp=Z,34nm,0.8s
LBTB  Lobatse          70.92 107   P      P        20 46 06.4 +0.4
LBTB                               pmax   pmax
       comp=Z,34nm,0.8s
PPT2  Papeete2         71.24 267  eS      S        20 55 29.1 +4.2
       comp=Z,82nm,26.8s
PPT2  Papeete2         71.24 267  eLR     LR       21 07 45.9
       comp=Z,142nm,26.0s
PPT   Papeete          71.26 267   LR     LR       21 08 41.2
       comp=Z,87nm,19.1s,baz=194,slow=29
TSUM  Tsumeb           71.35  97   P      P        20 46 09.1 +0.5
TSUM                               IAmb   IAmb     20 46 10.6
       comp=Z,21nm,1.4s
MPOM  Morne Pois Mar   71.38   7   P      P        20 46 09.3 +0.9
BIM   Bigot            71.44   6   P      P        20 46 09.7 +0.8
GRTLG Ghanzi           71.56 101   P      P        20 46 10.6 +0.7
LPHEP Lephephe         72.41 106          P        20 46 15.2 +0.3
LPHEP                              IAmb   IAmb     20 46 16.5
       comp=Z,28nm,1.0s
RAR   Rarotonga        73.79 256   LR     LR       21 11 37.7
       comp=Z,86nm,19.3s,baz=117,slow=30
XAUDM Khaudum          73.93  99   P      P        20 46 24.6 +0.7
XAUDM                              IAmb   IAmb     20 46 25.8
       comp=Z,15nm,0.9s
CRPR  Cabo Rojo, PR    74.72   0   P      P        20 46 27.8  -0.4
CELP  Cerrillos        74.79   1   P      P        20 46 28.5  -0.1
CELP                               IAmb   IAmb     20 46 28.9
       comp=Z,32nm,0.9s
DR12  Loma Pena Alta   75.52 358   P      P        20 46 31.6  -1.2
LSZ   Lusaka           80.29 103   LR     LR       21 19 00.4
       comp=Z,66nm,18.7s,baz=146,slow=33
LSZ   Lusaka           80.29 103   P      P        20 47 00.5 +0.7
LSZ                                IAmb   IAmb     20 47 01.7
       comp=Z,13nm,0.7s
LSZ   Lusaka           80.29 103   P      P        20 47 00.5 +0.7
LSZ                                pmax   pmax
       comp=Z,13nm,0.7s
DBIC  Dimbokro         81.09  63   P      P        20 47 04.8 +1.0
       comp=Z,16nm,0.5s,baz=223,slow=5.0,SNR=30
       comp=Z,16nm,0.5s
DBIC  Dimbokro         81.09  63   P      P        20 47 04.3 +0.5
DBIC                               IAmb   IAmb     20 47 05.6
       comp=Z,17nm,0.7s
DBIC  Dimbokro         81.09  63   P      P        20 47 04.3 +0.5
DBIC                               pmax   pmax
       comp=Z,17nm,0.7s
CAN   Canberra         83.04 209   P      P        20 47 13.5  -0.5
CAN   Canberra         83.04 209   P      P        20 47 13.5  -0.5
CAN                                pmax   pmax
       comp=Z,143nm,1.9s
BBOO  Buckleboo        88.37 200   P      P        20 47 38.9  -1.5
BBOO                               IAmb   IAmb     20 47 40.0
       comp=Z,24nm,1.1s
DZM   Mont Dzumac      89.28 228  eLR     LR       21 16 08.4
       comp=Z,126nm,32.6s
TORD  Torodi Ar. Bea   89.89  65   P      P        20 47 48.4 +0.7
       comp=Z,3.3nm,0.6s,baz=216,slow=3.2,SNR=26
       comp=Z,3.3nm,0.6s
TORD  Torodi Ar. Bea   89.89  65   P      P        20 47 47.9 +0.2
TXAR  Lajitas Array    91.33 329   P      P        20 47 55.0 +0.9
       comp=Z,3.2nm,1.0s,baz=148,slow=7.6,SNR=19
       comp=Z,3.2nm,1.0s
TXAR  Lajitas Array    91.33 329   P      P        20 47 54.3 +0.3
TXAR  Lajitas Array    91.33 329   P      P        20 47 54.3 +0.3
JCT   Junction City    91.38 332   P      P        20 47 53.8  -0.4
JCT                                IAmb   IAmb     20 47 55.1
       comp=Z,11nm,0.9s
JCT   Junction City    91.38 332   P      P        20 47 53.8  -0.4
JCT                                pmax   pmax
       comp=Z,11nm,1.0s
WHAR  Wooly Hollow     94.34 340   P      P        20 48 06.6  -1.0
WHAR                               IAmb   IAmb     20 48 09.1
       comp=Z,13nm,1.0s
ANMO  Albuquerque      97.40 328⇑eP       P        20 48 21.5  -0.4
ANMO                               pmax   pmax
       comp=Z,1.0nm,1.0s
ASAR  Alice Springs    97.68 200   P      P        20 48 21.8  -1.7
       comp=Z,1.8nm,0.9s,baz=166,slow=4.3,SNR=12
       comp=Z,1.8nm,0.9s
ASAR  Alice Springs    97.68 200   P      P        20 48 21.5  -2.0
WRA   Warramunga Arr  101.22 201   P      Pdif     20 48 37.9  -1.5
       comp=Z,3.4nm,0.8s,baz=171,slow=4.5,SNR=9.1
WRAB  Tennant Creek   101.23 201⇑iP       Pdif     20 48 38.0  -1.3
WRAB                               pmax   pmax
       comp=Z,6.0nm,1.0s
PDAR  Pinedale Array  105.55 329   PP     PP       20 53 20.8  -0.1
       comp=Z,0.7nm,1.0s,baz=200,slow=4.2,SNR=3.6
EKA   Eskdalemuir Ar  123.41  38   PKP    PKPdf    20 53 43.9  -0.6
       comp=Z,1.3nm,0.6s,baz=203,slow=1.4,SNR=6.5
H11S2 WAKE ISLAND Hy 124.68 249   T      T        23 10 46.4
       baz=147,slow=76,SNR=117
YKA   Yellowknife Ar  124.69 335   PKP    PKPdf    20 53 45.9  -0.8
       comp=Z,1.3nm,0.8s,baz=165,slow=1.8,SNR=20
YKA   Yellowknife Ar  124.69 335          PKPdf    20 53 45.8  -0.9
YKA   Yellowknife Ar  124.69 335   PKIKP  PKPdf    20 53 45.8  -0.9
H11S3 WAKE ISLAND Hy 124.69 249   T      T        23 10 47.5
       baz=147,slow=76,SNR=84
H11S1 WAKE ISLAND Hy 124.70 249   T      T        23 10 47.9
       baz=147,slow=76,SNR=68
GERES GERESS Array B  124.88  53   PKP    PKPdf    20 53 47.0  -0.7
       comp=Z,1.1nm,0.6s,baz=188,slow=0.9,SNR=8.2
GERES GERESS Array B  124.88  53   PKIKP  PKPdf    20 53 47.0  -0.7
H11N3 WAKE ISLAND Hy 125.60 250   T      T        23 11 56.1
       baz=145,slow=75,SNR=22
H11N1 WAKE ISLAND Hy 125.61 250   T      T        23 12 01.0
       baz=145,slow=75,SNR=22
H11N2 WAKE ISLAND Hy 125.62 250   T      T        23 11 57.9
       baz=145,slow=75,SNR=21
BR131 Keskin Array S  127.80  73 i PKIKP  PKPdf    20 53 53.2  -0.4
BRTR  Keskin Array B  127.80  73   PKP    PKPdf    20 53 53.5  -0.2
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	comp=Z,0.5nm,0.6s,baz=186,slow=3.5,SNR=4.3						
NB2	NORSAR Subarra	132.70	40	PKPdf	PKPdf	20 54 02.1	0.0
	comp=Z,3.4nm,0.9s,baz=227,slow=1.9						
NOA	NORSAR Array B	132.70	40	PKP	PKPdf	20 54 02.1	0.0
	comp=Z,1.0nm,0.9s,baz=211,slow=1.8,SNR=4.7						
HFS	Hagfors	132.99	43	PKP	PKPdf	20 54 01.5	-1.1
	comp=Z,4.0nm,0.8s,baz=178,slow=4.3,SNR=7.6						
AKASG	Malin Array Be	133.28	60	PKP	PKPdf	20 54 02.6	-0.8
	comp=Z,1.2nm,0.7s,baz=248,slow=2.1,SNR=2.3						
INK	Inuvik	134.03	332	PKP	PKPdf	20 54 03.0	-1.3
	comp=Z,2.9nm,1.2s,baz=100,slow=4.3,SNR=3.2						
INK	Inuvik	134.03	332	PKIKP	PKPdf	20 54 03.0	-1.3
A36M	Sachs Harbour	134.84	338		PKPdf	20 54 05.8	+0.1
MNK	Minsk	135.13	55	*i* PKIKP	PKPdf	20 54 06.2	-0.6
MNK				*i*		20 56 41.3	
MNK				*i* PPP	PPP	20 59 36.7	
MNK				*i*		21 01 16.1	
MNK				*i* SS	SS	21 14 35.5	-1.8
MNK				*i* SSS	SSS	21 19 35.7	
MNK				pmax	pmax		
	comp=E,15nm,0.9s						
MNK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,6.0nm,0.9s						
IL31		135.55	323		PKPdf	20 54 06.6	-0.5
ILAR	Eielson Array	135.55	323	PKP	PKPdf	20 54 07.3	0.0
	comp=N,3.4nm,0.8s,baz=174,slow=1.5,SNR=29						
ILAR	Eielson Array	135.55	323		PKPdf	20 54 06.7	-0.5
ILAR	Eielson Array	135.55	323	PKIKP	PKPdf	20 54 06.7	-0.5
KIV	Kislovodsk	135.57	76	*e*PKIKP	PKiKP	20 54 09.7	+0.1
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
COLA	College	135.93	323	⇑*i*PKIKP	PKiKP	20 54 12.5	+3.0
VSU	Vasula	137.08	50	*i* PKIKP	PKiKP	20 54 15.1	+3.0
FINES	FINESS Array B	138.55	46	PKhKP	PKPpre	20 54 02.0	
	comp=Z,2.4nm,0.9s,baz=237,slow=6.6,SNR=3.7						
FINES				PKP	PKPdf	20 54 13.1	+0.2
	comp=Z,1.8nm,0.7s,baz=45,slow=3.0,SNR=3.9						
OBN	Obninsk	139.51	59	*i* PKIKP	PKiKP	20 54 20.1	+3.0
OBN				*e*		20 57 07.7	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CMAR	Chiang Mai Arr	140.16	159	PKP	PKPdf	20 54 17.2	0.0
	comp=Z,1.1nm,0.5s,baz=201,slow=2.5,SNR=7.0						
ARCES	ARCESS Array B	142.47	35	PKhKP	PKPpre	20 54 14.3	
	comp=Z,3.0nm,0.8s,baz=240,slow=1.8,SNR=20						
SPITS	Spitsbergen Ar	143.77	20	PKP	PKPbc	20 54 19.9	+0.3
	comp=Z,17nm,0.8s,baz=140,slow=4.4,SNR=18						
KLMR	Klimovskoe	143.84	53	*e*PKIKP	PKPab	20 54 19.0	-0.5
KLMR				pmax	pmax		
	comp=Z,28nm,0.7s						
NIL	Nilore	144.50	114		PKPab	20 54 22.8	-0.1
NIL	Nilore	144.50	114	PKIKP	PKPab	20 54 22.8	-0.1
MORE	Moreh	144.65	150		PKPab	20 54 22.8	-0.9
SHAA	Shahritus	144.87	104		PKPab	20 54 23.4	-0.9
SHL	Shillong	145.21	146		PKPbc	20 54 24.7	-1.1
SHL	Shillong	145.21	146	PKIKP	PKPbc	20 54 24.7	-1.1
CHGR	Chuyangaron	146.23	104		PKPbc	20 54 28.6	+0.1
CHGR	Chuyangaron	146.23	104	PKP2	PKPbc	20 54 28.6	+0.1
TNCH	TengChong	146.45	156	PKPbc	PKPdf	20 54 28.1	-0.2
TNCH				pPKP	pPKPdf	20 54 33.8	+1.6
TNCH				sPKP	sPKPab	20 54 36.6	+0.9
TNCH				PP	PP	20 57 55.3	+3.1
GAR	Garm	147.09	105		PKPbc	20 54 30.9	-0.1
KIRV	Kirov	147.34	60	*i* PKP2	PKPbc	20 54 30.3	-0.6
KMI	Kunming	147.35	163	PKPbc	PKPbc	20 54 31.9	-0.4
KMI				LR	LR		
	comp=Z,320nm,15.7s						
KMI				LR	LR		
	comp=Z,540nm,18.3s						
ABKAR	Akbulak array	148.14	81		PKPbc	20 54 32.5	-0.9
PZH	PanZhiHua	148.53	161	PKPbc	PKPbc	20 54 34.8	-0.5
LSA	Lhasa	148.81	142		PKPbc	20 54 35.2	-1.1
LSA	Lhasa	148.81	142	PKPbc	PKPdf	20 54 32.1	-0.4
LSA	Lhasa	148.81	142	PKP2	PKPbc	20 54 35.3	-1.1
GYA	Guiyang	149.17	169	PKPbc	PKPbc	20 54 35.4	-1.5
KKAR	Karatay Array	150.09	99		PKPbc	20 54 37.6	-1.0
KKAR	Karatay Array	150.09	99	PKIKP	PKPbc	20 54 37.6	-1.0
KSH	Kashi	150.43	110	PKPbc	PKPbc	20 54 39.3	-0.3
ARTI	Arti	150.83	68		PKPbc	20 54 38.1	-1.6
ARTI	Arti	150.83	68	*i* PKIKP	PKPbc	20 54 39.8	0.0
AAK	Ala-Archa	151.91	104	PKPbc	PKiKP	20 54 43.4	0.0
	comp=Z,10nm,0.7s,baz=190,slow=3.3,SNR=26						
AAK	Ala-Archa	151.91	104		PKPbc	20 54 42.6	-0.4
AAK	Ala-Archa	151.91	104	PKIKP	PKPbc	20 54 42.6	-0.4
CD2	Chengdu	153.18	163	PKPbc	PKPdf	20 54 38.0	-0.6
WUS	Wushi	153.33	112	PKPbc	PKPbc	20 54 45.8	-0.4
MJAR	Matsushiro Arr	153.37	231	PKPab	PKPab	20 54 57.6	-0.8
	comp=Z,2.7nm,0.7s,baz=157,slow=5.2,SNR=8.9						
NJ2	Nanjing	154.69	192	*e*PKPbc	PKPdf	20 54 42.5	+1.9
BVAR	Borovoye Array	155.71	81	PKP	PKPdf	20 54 40.9	-0.4
	comp=Z,0.7nm,0.8s,baz=263,slow=2.5,SNR=3.4						
BVAR				PKPab	PKPab	20 55 06.8	-1.2
	comp=Z,2.2nm,0.8s,baz=261,slow=2.2,SNR=5.3						
KSRS	Korea Array	157.97	214	PKPab	PKPab	20 55 17.9	0.0
	comp=Z,1.8nm,0.9s,baz=142,slow=4.5,SNR=4.4						
KSRS	Korea Array	157.97	214	PKP2	PKPab	20 55 18.0	0.0
MKAR	Makanchi Array	158.81	106	PKPab	PKPab	20 55 21.1	-0.4
	comp=Z,1.5nm,0.7s,baz=232,slow=4.5,SNR=7.4						
KURBB	Kurchatov Arra	159.01	93	PKPab	PKPab	20 55 22.1	-0.2
	comp=Z,7.8nm,0.7s,baz=245,slow=5.0,SNR=22						
KURK	Kurchatov	159.10	93	PKP2	PKPab	20 55 22.1	-0.5
WMQ	Urumqi	159.47	119	*e*PKP	PKPdf	20 54 47.3	+0.9
WMQ				LR	LR		
	comp=Z,230nm,24.1s						
BTO	Baotou	163.50	173	*e*PKP	PKPdf	20 54 47.5	-3.3
BTO				LR	LR		
	comp=Z,340nm,8.0s						
HHC	Hu-ho-hao-te	163.81	177	*e*PKP	PKPdf	20 54 48.8	-2.3
HHC				LR	LR		
	comp=Z,210nm,15.9s						
HHC				LR	LR		
	comp=Z,190nm,15.1s						
HHC				LR	LR		
	comp=Z,260nm,15.9s						
ZALV	Zalesovo Beam	163.95	89	PKPab	PKPab	20 55 42.5	-1.3
	comp=Z,2.0nm,0.7s,baz=254,slow=4.6,SNR=7.9						
CN2	Changchun	164.52	217	*e*PKP	PKPdf	20 54 48.4	-3.1

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*IDC **21** 20:39:29.1±0.8, 36°.01N×98°.88E, h0^{km}, mb3.7/13, mbtmp3.7/18, ML3.8/4, MS3.3/6, Error ellipse: s-maj=24.5km s-min=14.0km az=44.0*

ISC 21 20:39:33.7±0.8, **36°.1N**±0°.1×**98°.83E**±0°.08, **h35**^{km}, **n21**, σ**1^{s}.52**/19, **mb3.8**/11, **MS3.3**/3, **Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LZDM	Lanzhou Array	3.94	90	Pn	Pn	20 40 31.3	-0.8
	baz=259,slow=15						
LZDM				Sn	Sn	20 41 18.1	+0.8
	baz=260,slow=25						
LZDM				Lg	Lg	20 41 29.4	
	baz=271,slow=29						
	14nm,0.3s						
SONM	Songino Array	13.04	23	Pn	Pn	20 42 34.8	-1.6
	0.3nm,0.3s,baz=206,slow=15,SNR=15						
SONM				LR	LR	20 48 15.1	
	comp=Z,34nm,18.1s,baz=110,slow=40						
	1.6nm,0.6s						
MKAR	Makanchi Array	16.37	316	Pn	Pn	20 43 17.8	-2.9
	0.3nm,0.3s,baz=126,slow=14,SNR=14						
MKAR				LR	LR	20 50 07.0	
	comp=Z,44nm,18.8s,baz=264,slow=39						
	0.5nm,0.5s						
CMAR	Chiang Mai Arr	17.53	180	P	Pn	20 43 33.7	-1.7
	0.3nm,0.3s,baz=346,slow=10,SNR=9.4						
AAK	Ala-Archa	19.90	297	P	P	20 44 02.4	+0.1
	0.2nm,0.3s,baz=108,slow=6.9,SNR=5.5						
AAK				LR	LR	20 53 33.6	
	comp=Z,79nm,20.1s,baz=88,slow=42						
	1.5nm,0.7s						
ZALV	Zalesovo Beam	20.38	336	P	P	20 44 06.3	-0.9
	1.8nm,0.5s,baz=141,slow=11,SNR=10.0						
	1.8nm,0.5s						
KURBB	Kurchatov Arra	20.64	321	P	P	20 44 09.4	-0.6
	1.7nm,0.6s,baz=126,slow=12,SNR=13						
	1.7nm,0.6s						
KSRS	Korea Array	23.31	78	P	P	20 44 37.7	-0.8
	1.1nm,0.9s,baz=271,slow=8.6,SNR=5.2						
	1.1nm,0.9s						
BVAR	Borovoye Array	26.18	319	P	P	20 45 05.1	+0.3
	0.2nm,0.5s,baz=119,slow=12,SNR=6.7						
	0.2nm,0.5s						
NRIK	Noril'sk	33.91	353	P	P	20 46 12.1	-0.9
	1.8nm,0.6s,baz=138,slow=7.6,SNR=3.9						
	1.8nm,0.6s						
TIXI	Tiksi	38.92	15	LR	LR	21 04 25.0	
	comp=Z,42nm,18.1s,baz=193,slow=38						
ASF	Jabal al Asfar	50.67	285	LR	LR	21 15 07.8	
	comp=Z,30nm,20.6s,baz=203,slow=42						
ARCES	ARCESS Array B	50.93	334	P	P	20 48 32.8	+1.7
	4.8nm,1.1s,baz=87,slow=7.7,SNR=7.5						
	4.8nm,1.1s						
FINES	FINESS Array B	51.00	324	P	P	20 48 33.4	+1.7
	2.0nm,0.8s,baz=88,slow=9.0,SNR=5.7						
	2.0nm,0.8s						
HFS	Hagfors	57.20	324	P	P	20 49 19.1	+2.2
	0.4nm,0.4s,baz=81,slow=6.0,SNR=7.2						
	0.4nm,0.4s						
NOA	NORSAR Array B	58.11	325	P	P	20 49 24.8	+1.4
	0.7nm,0.8s,baz=67,slow=6.8,SNR=1.7						
	0.7nm,0.8s						
WRA	Warramunga Arr	65.05	143	P	P	20 50 10.4	-0.1
	1.0nm,0.9s,baz=339,slow=6.9,SNR=4.6						
	1.0nm,0.9s						
ILAR	Eielson Array	67.25	25	P	P	20 50 26.1	+1.8
	0.6nm,0.7s,baz=296,slow=4.3,SNR=5.9						
	0.6nm,0.7s						
ASAR	Alice Springs	68.03	145	P	P	20 50 30.0	+0.4
	0.6nm,0.6s,baz=332,slow=6.6,SNR=9.0						
	0.6nm,0.6s						
MBAR	Mbarara	72.77	256	LR	LR	21 25 52.3	
	comp=Z,82nm,18.3s,baz=240,slow=38						
YKA	Yellowknife Ar	78.17	15	P	P	20 51 30.6	+1.6
	0.4nm,0.9s,baz=330,slow=5.6,SNR=4.4						
	0.4nm,0.9s						

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*IDC **21** 20:41:31.6±0.8, 56°.58N×152°.31W, h0^{km}, mb4.1/23, mbtmp4.1/24, ML3.3/1, MS2.9/2, Error ellipse: s-maj=19.6km s-min=16.5km az=27.0*

*NEIC **21** 20:41:31.3±1.6, 56°.42N±0°.05×152°.25W±0°.09, h10^{km}±1^{km}, mb4.5/21, ML3.9/70, ML3.9(AEIC), Error ellipse: s-maj=8.7km s-min=8.0km az=233.0*

*AEIC **21** 20:41:34.9±2.1, 56°.30N±0°.05×152°.10W±0°.09, h12^{km}±4^{km}, Error ellipse: s-maj=9.0km s-min=5.3km az=139.0*

ISC 21 20:41:33.7±0.5, **56°.58N**±0°.06×**152°.21W**±0°.05, **h18**^{km}, **n452**, σ**0^{s}.93**/447, **mb4.4**/33, **Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHAK	Old Harbor	0.88	318		Pb	20 41 50.1	-0.3
OHAK				IAML		20 42 13.1	
	comp=N,3µm,1.0s						
OHAK				IAML		20 42 13.8	
	comp=E,4µm,1.0s						
OHAK	Old Harbor	0.88	318	P	Pb	20 41 49.9	-0.5
	baz=130,SNR=256						
SII	Sitkinak Islan	1.09	270		Pb	20 41 51.8	-2.3
SII	Sitkinak Islan	1.09	270	P	Pg	20 41 55.7	+0.9
	baz=82,SNR=32						
KDAK	Kodiak Island	1.23	351	Pn	Pn	20 41 56.1	+0.1
	comp=E,23nm,0.3s,baz=174,slow=5.9,SNR=153						
KDAK				Sn	Sn	20 42 11.9	-0.1
	comp=E,35nm,0.3s,baz=255,slow=11,SNR=5.1						
KDAK				LR	LR	20 42 38.9	
	comp=E,553nm,19.1s,baz=40,slow=55						
KDAK	Kodiak Island	1.23	351		Pn	20 41 56.0	+0.1
KDAK	Kodiak Island	1.23	351	P	Pn	20 41 55.9	-0.1
	baz=168						
Q20K	Shuyak Island	2.04	357	P	Pn	20 42 06.8	-0.4
	baz=176						
SYI	Shuyak Island	2.04	357		Pn	20 42 05.9	-1.3
SYI					Sn	20 42 32.0	-0.2
SYI				IAML		20 43 04.0	
	comp=N,644nm,1.1s						
CHIR	Chirikof Islan	2.05	250	Pn	Pn	20 42 04.3	-2.9
CHIR				IAML		20 43 05.3	
	comp=E,755nm,1.2s						
MGLS	Mageik Landsli	2.24	316		Pn	20 42 10.5	+0.6
CAHL	Cahill	2.24	313		Pn	20 42 09.8	-0.1
KAWH	Katmai	2.29	323		Pn	20 42 11.0	+0.4
KAHG	Katmai Hook Gl	2.30	328		Pn	20 42 12.5	+1.7
KAKN	Katmai Knife C	2.31	319		Pn	20 42 11.2	+0.2
KARR	Katmai Rainbow	2.35	326		Pn	20 42 12.8	+1.4
KJL	Kejulik	2.35	310		Pn	20 42 11.5	+0.1
ACHA	Angle Creek He	2.35	315		Pn	20 42 12.2	+0.7
KABU	Katmai Buttres	2.38	317		Pn	20 42 13.1	+1.2
ANCK	Angle Creek	2.41	314		Pn	20 42 13.1	+0.8
PLK3	Peulik 3	2.48	298		Pn	20 42 12.7	-0.5
Q19K	Cape Douglas,	2.48	343		Pn	20 42 14.6	+1.3
Q19K	Cape Douglas,	2.48	343	P	Pn	20 42 13.8	+0.6
	baz=160,SNR=10						
PLK4	Peulik 4	2.50	297		Pn	20 42 13.0	-0.5
R17L	Mt. Peulik Vol	2.50	297	P	Pn	20 42 15.1	+1.6
	baz=110,SNR=39						
KAHC	Katmai Hardscr	2.57	325		Pn	20 42 15.4	+1.0
Q18K	Katmai Hardscr	2.57	325	P	Pn	20 42 15.4	+0.9
	baz=141,SNR=18						
Q17K	Contact Creek	2.61	312	P	Pn	20 42 16.1	+1.0
	baz=126,SNR=6.3						
PLK1	Peulik 1	2.69	299		Pn	20 42 17.1	+1.0
PLBL	Peulik Blue Cr	2.75	296		Pn	20 42 17.1	+0.2
AUJK	Augustine Jueg	2.86	348		Pn	20 42 19.3	+0.9
PLK5	Peulik 5	2.91	301		Pn	20 42 20.2	+1.2
CNPM	China Poot	3.00	10		Pn	20 42 20.8	+0.4
P19K	Oil Pt	3.13	350	P	Pn	20 42 23.7	+1.6
	baz=169,SNR=21						
Q16K	King Salmon	3.19	313		Pn	20 42 23.7	+0.9
Q16K	King Salmon	3.19	313	P	Pn	20 42 23.5	+0.6
	baz=128						
P18K	Big Mountain,	3.25	332		Pn	20 42 24.5	+0.7
P18K	Big Mountain,	3.25	332	P	Pn	20 42 24.3	+0.5
	baz=148,SNR=14						
BRSE	Bradley Lake S	3.27	13	P	Pn	20 42 23.9	-0.1
	baz=195,SNR=10						
BRLK	Bradley Lake	3.27	12		Pn	20 42 23.9	-0.2
BRLK				IAML		20 43 44.0	
	comp=E,268nm,1.0s						
ILS	Iliamna Low So	3.42	353		Pn	20 42 27.2	+1.0
ILSW	Iliamna Southw	3.45	352		Pn	20 42 27.0	+0.3
ILSW				IAML		20 43 50.0	
	comp=E,245nm,1.1s						
ILSW				IAML		20 43 51.0	
	comp=N,244nm,1.1s						
P17K	Kvichak River	3.46	321		Pn	20 42 27.6	+0.9
P17K	Kvichak River	3.46	321	P	Pn	20 42 27.7	+1.1
	baz=136,SNR=17						
O20K	Slope Mountain	3.52	357	P	Pn	20 42 29.0	+1.4
	baz=176,SNR=15						
O18K	Koktuh Hills	3.65	336		Pn	20 42 29.9	+0.7
O18K				IAML		20 43 46.1	
	comp=E,190nm,1.1s						
O18K				IAML		20 43 48.8	
	comp=N,162nm,0.9s						
O18K	Koktuh Hills	3.65	336	P	Pn	20 42 30.2	+1.0
	baz=152,SNR=18						
O19K	Port Alsworth	3.80	344		Pn	20 42 32.3	+1.0
O19K				IAML		20 43 17.7	
	comp=N,199nm,0.6s						
O19K	Port Alsworth	3.80	344	P	Pn	20 42 32.2	+1.0
	baz=161,SNR=12						
SEW	Seward	3.83	21		Pn	20 42 30.7	-0.9
SEW	Seward	3.83	21	P	Pn	20 42 30.9	-0.8
	baz=204						
RED	Redoubt Volcan	3.87	356		Pn	20 42 32.6	+0.3
RED				IAML		20 43 59.0	
	comp=E,212nm,1.2s						
RED				IAML		20 44 01.9	
	comp=N,139nm,1.8s						
RDSO	Redoubt South	3.90	356		Pn	20 42 33.4	+0.5
RDWB	Redoubt West	3.94	355		Pn	20 42 33.8	+0.5
P16K	Nushagak River	3.95	311		Pn	20 42 34.1	+0.7
P16K	Nushagak River	3.95	311	P	Pn	20 42 33.4	0.0
	baz=124						
RDJH	Redoubt Jeurge	4.04	356		Pn	20 42 35.5	+0.8
SLKM	Skilak Lake	4.08	14		Pn	20 42 34.6	-0.6
SLKM				IAML		20 43 40.1	
	comp=N,108nm,0.8s						
SLKM				IAML		20 44 17.8	
	comp=E,137nm,1.5s						
S14K	Fog Glacier	4.09	269	P	Pn	20 42 36.4	+1.0
	baz=81						
O17K	Koliganek Bris	4.12	323		Pn	20 42 36.8	+1.1
O17K	Koliganek Bris	4.12	323	P	Pn	20 42 35.9	+0.2
	baz=138,SNR=12						
O22K	Cooper Landing	4.13	17		Pn	20 42 35.3	-0.5
O22K	Cooper Landing	4.13	17	P	Pn	20 42 34.8	-1.0
	baz=200						
P23K	Montague Islan	4.27	34		Pn	20 42 37.1	-0.6
P23K				IAML		20 44 09.9	
	comp=E,159nm,3.5s						
P23K				IAML		20 44 52.9	
	comp=N,145nm,2.3s						
P23K	Montague Islan	4.27	34	P	Pn	20 42 37.4	-0.3
	baz=219						
O16K	Kokwok River B	4.35	317		Pn	20 42 39.1	+0.3
O16K				IAML		20 44 23.0	
	comp=E,91nm,1.5s						
O16K	Kokwok River B	4.35	317	P	Pn	20 42 40.1	+1.3
	baz=130						
N19K	Bonanza Creek	4.41	345		Pn	20 42 41.0	+1.2
N19K				IAML		20 43 56.1	
	comp=N,94nm,0.9s						
N19K				IAML		20 44 21.3	
	comp=E,112nm,1.4s						
N19K	Bonanza Creek	4.41	345	P	Pn	20 42 40.8	+1.0
	baz=163,SNR=22						
CHNA	Chernabura Isl	4.53	250	P	Pn	20 42 44.0	+2.7
	baz=63						
CNBA	Chernabura Isl	4.53	250		Pn	20 42 39.8	-1.5
CNBA				IAML		20 43 32.3	
	comp=N,98nm,0.8s						
N18K	Kilae Creek	4.54	336		Pn	20 42 42.2	+0.7
N18K				IAML		20 44 17.3	
	comp=E,156nm,1.1s						
N18K				IAML		20 44 27.6	
	comp=N,76nm,1.1s						
N18K	Kilae Creek	4.54	336	P	Pn	20 42 42.7	+1.1
	baz=152,SNR=20						
SPU	Mount Spurr	4.62	1		Pn	20 42 42.2	-0.4
CKL	Chakachamna La	4.64	359		Pn	20 42 43.4	+0.5
N20K	Mount Spurr	4.64	0	P	Pn	20 42 43.8	+0.9
	baz=180						
RC01	Rabbit Creek A	4.71	15		Pn	20 42 42.8	-1.0
RC01				IAML		20 43 41.3	
	comp=E,78nm,0.6s						
RC01				IAML		20 44 30.1	
	comp=N,72nm,1.0s						
RC01	Rabbit Creek A	4.71	15	P	Pn	20 42 44.1	+0.4
	baz=197						
N17K	Nushagak Hills	4.74	329		Pn	20 42 44.5	+0.2
N17K				IAML		20 44 25.2	
	comp=E,72nm,1.4s						
N17K				IAML		20 44 31.3	
	comp=N,88nm,1.8s						
N17K	Nushagak Hills	4.74	329	P	Pn	20 42 45.0	+0.7
	baz=144						
PWL	Port Wells	4.75	24		Pn	20 42 43.8	-0.5
PWL				IAML		20 43 38.4	
	comp=N,110nm,1.0s						
PWL				IAML		20 43 47.0	
	comp=E,99nm,0.9s						
PWL	Port Wells	4.75	24	P	Pn	20 42 44.0	-0.3
	baz=207,SNR=5.8						
SDPT	Sand Point	4.80	259		Pn	20 42 43.6	-1.5
SDPT	Sand Point	4.80	259	P	Pn	20 42 46.6	+1.6
	baz=70,SNR=6.2						
O15K	Ungalikthiuk R	4.83	306		Pn	20 42 45.6	+0.2
O15K				IAML		20 44 28.9	
	comp=E,92nm,1.3s						
O15K				IAML		20 44 38.0	
	comp=N,77nm,1.2s						
O15K	Ungalikthiuk R	4.83	306	P	Pn	20 42 46.0	+0.6
	baz=118						
HIN	Hinchinbrook I	4.86	36		Pn	20 42 45.0	-0.9
HIN				IAML		20 44 05.4	
	comp=E,108nm,2.3s						
STLK	Strandline Lak	4.94	2		Pn	20 42 46.8	-0.3
SUA	Susitna One	4.96	8		Pn	20 42 46.0	-1.4
SUA				IAML		20 44 26.8	
	comp=N,108nm,1.1s						
SUA	Susitna One	4.96	8	P	Pn	20 42 46.3	-1.1
	baz=189						
GLI	Glacier Island	5.07	30	Pn	Pn	20 42 48.0	-0.8
GLI				IAML		20 43 33.3	
	comp=N,62nm,1.1s						
GLI				IAML		20 43 38.6	
	comp=E,60nm,1.0s						
GLI	Glacier Island	5.07	30	P	Pn	20 42 48.6	-0.2
	baz=214						
FID	Port Fidalgo	5.14	33		Pn	20 42 48.6	-1.2
FID				IAML		20 43 34.0	
	comp=N,61nm,2.2s						
FID				IAML		20 44 05.5	
	comp=E,78nm,2.7s						
N16K	Nishlik Lake	5.21	321	P	Pn	20 42 51.7	+1.1
	baz=135						
EYAK	Cordova Ski Ar	5.22	38	P	Pn	20 42 50.6	-0.2
	baz=224,SNR=6.3						
KNK	Knik Glacier	5.22	20	P	Pn	20 42 50.7	-0.2
	baz=204						
M18K	Stony River	5.27	341	P	Pn	20 42 52.0	+0.5
	baz=157						
PMR	Palmer	5.28	16	P	Pn	20 42 51.9	+0.4
	baz=199,SNR=6.0						
KAIM	Kayak Island	5.31	48		Pn	20 42 51.8	-0.3
KAIM	Kayak Island	5.31	48	P	Pn	20 42 52.5	+0.5
	baz=235						
M20K	Styx River	5.34	355	P	Pn	20 42 53.0	+0.4
	baz=174						
SKT	Skwentna	5.43	3		Pn	20 42 54.1	+0.4
SKT	Skwentna	5.43	3	P	Pn	20 42 54.3	+0.6
	baz=184						
GHO	Glory Hole Cre	5.48	17		Pn	20 42 54.4	0.0
N15K	Kwethluk River	5.49	314		Pn	20 42 55.3	+0.7
N15K	Kwethluk River	5.49	314	P	Pn	20 42 55.9	+1.4
	baz=126,SNR=10.0						
RAGM	Ragged Mountai	5.50	43		Pn	20 42 54.3	-0.3
O14K	Tigyukauivet M	5.52	303		Pn	20 42 55.2	+0.3
O14K	Tigyukauivet M	5.52	303	P	Pn	20 42 57.1	+2.2
	baz=114						
M17K	Holitna River	5.54	333		Pn	20 42 56.4	+1.2
M17K	Holitna River	5.54	333	P	Pn	20 42 56.2	+1.0
	baz=148						
S12K	Black Hills	5.58	265	Pn	Pn	20 42 53.5	-2.3
GOAT	Goat Mountain	5.61	41		Pn	20 42 55.2	-0.9
SML	Sawmill	5.61	19		Pn	20 42 55.8	-0.4
SML	Sawmill	5.61	19	P	Pn	20 42 55.9	-0.4
	baz=203,SNR=9.6						
M16K	Timber Creek	5.67	325	P	Pn	20 42 58.3	+1.3
	baz=138						
M23K	Glacier View	5.72	22		Pn	20 42 57.8	+0.1
M23K	Glacier View	5.72	22	P	Pn	20 42 58.1	+0.5
	baz=206,SNR=11						
L19K	White Mountain	5.78	348		Pn	20 42 59.3	+0.8
L19K	White Mountain	5.78	348	P	Pn	20 42 59.5	+0.9
	baz=165,SNR=32						
SCM	Sheep Creek Mo	5.84	23	P	Pn	20 42 59.5	+0.1
	baz=208,SNR=13						
BERG	Berg Lake	5.88	46		Pn	20 42 59.6	-0.2
KLU	Klutina	5.90	31		Pn	20 42 59.8	-0.4
KLU	Klutina	5.90	31	P	Pn	20 42 59.8	-0.4
	baz=217,SNR=6.0						
BMRM	Bremner River	5.92	39	P	Pn	20 43 00.7	+0.3
	baz=226,SNR=13						
CUT	Chulitna	5.93	9		Pn	20 42 59.4	-1.1
CUT	Chulitna	5.93	9	P	Pn	20 43 00.6	+0.1
	baz=190						
L22K	Petersville	6.01	6		Pn	20 43 01.7	0.0
N14K	Kuskokwak Cree	6.02	308		Pn	20 43 02.3	+0.5
N14K	Kuskokwak Cree	6.02	308	P	Pn	20 43 03.3	+1.5
	baz=119						
M15K	Kasigluk River	6.05	317	P	Pn	20 43 03.5	+1.3
	baz=128						
L18K	Granite Mounta	6.11	340		Pn	20 43 03.4	+0.5
L18K	Granite Mounta	6.11	340	P	Pn	20 43 03.9	+1.0
	baz=156						
CRQM	Cirque	6.32	45		Pn	20 43 06.9	+0.8
CRQE	Cirque	6.33	45	P	Pn	20 43 06.3	+0.1
	baz=233						
PPLA	Purkeypile	6.34	0		Pn	20 43 06.5	+0.2
PPLA	Purkeypile	6.34	0	P	Pn	20 43 07.1	+0.8
	baz=180						
M24K	Tolsona, Glenn	6.35	27	P	Pn	20 43 07.0	+0.7
	baz=212,SNR=5.7						
L16K	Owhat River	6.36	327		Pn	20 43 07.2	+0.8
L16K	Owhat River	6.36	327	P	Pn	20 43 07.4	+1.0
	baz=140,SNR=22						
L17K	Donlin	6.38	333	P	Pn	20 43 07.4	+0.6
	baz=148						
N25K	Chitina, Valde	6.39	35	P	Pn	20 43 07.3	+0.4
	baz=222,SNR=9.7						
WAT6	Susitna Watana	6.44	19		Pn	20 43 07.8	+0.1

WAT6	Susitna Watana	6.44	19	P	Pn	20 43 08.4	+0.8
	baz=203						
TGL	Tana Glacier	6.44	46		Pn	20 43 07.7	0.0
WAT7	Susitna Watana	6.50	14		Pn	20 43 09.0	+0.5
VRDI	Verde Repeater	6.50	41		Pn	20 43 08.4	-0.2
GLB	Gilahina Butte	6.53	38		Pn	20 43 08.4	-0.4
WAT1	Susitna Watana	6.54	15	P	Pn	20 43 10.1	+1.2
	baz=198						
FALS	False Pass	6.56	259	P	Pn	20 43 12.6	+3.4
	baz=69						
M14K	Bethel	6.59	314		Pn	20 43 10.4	+1.0
M14K	Bethel	6.59	314	P	Pn	20 43 11.3	+1.8
	baz=124						
YAH	Yahtse	6.67	51		Pn	20 43 10.7	-0.3
KIAG	Kiagna River	6.73	46		Pn	20 43 11.4	-0.2
WACK	Wrangell Chich	6.76	33		Pn	20 43 12.1	-0.1
MCARA	McCarthy VSAT	6.76	41		Pn	20 43 11.8	-0.1
MCARA	McCarthy VSAT	6.76	41	P	Pn	20 43 13.1	+1.1
	baz=229						
PTPK	Patty Peak	6.84	43		Pn	20 43 13.3	+0.1
HARP	HAARP	6.85	29	P	Pn	20 43 14.5	+1.3
	baz=215						
GRNC	Granite Creek	6.86	48		Pn	20 43 13.2	-0.3
K20K	Telida	6.87	353	P	Pn	20 43 13.5	+0.1
	baz=171						
K17K	Iditarod	6.89	336	P	Pn	20 43 15.2	+1.6
	baz=150,SNR=8.1						
DHY	Denali Highway	6.96	18		Pn	20 43 15.1	+0.3
DHY	Denali Highway	6.96	18	P	Pn	20 43 14.9	+0.1
	baz=203						
TRF	Thorofare Moun	6.96	7		Pn	20 43 15.0	+0.1
TRF	Thorofare Moun	6.96	7	P	Pn	20 43 15.2	+0.4
	baz=189						
M13K	Dall Lake	6.99	308		Pn	20 43 16.1	+1.1
M13K	Dall Lake	6.99	308	P	Pn	20 43 16.7	+1.6
	baz=118						
L15K	Ungalak Mounta	6.99	321	P	Pn	20 43 16.6	+1.4
	baz=132						
KTH	Kantishna Hill	7.03	5		Pn	20 43 15.8	+0.1
RND	Reindeer	7.06	12		Pn	20 43 16.5	+0.5
BARN	Barnard Glacie	7.08	46		Pn	20 43 16.4	-0.1
CTG	Chitna Glacier	7.16	48	P	Pn	20 43 18.4	+0.9
	baz=238						
CTGM	Chitina Glacie	7.16	48		Pn	20 43 17.6	+0.1
PCA	Pinnacle	7.21	56		Pn	20 43 18.6	+0.5
PINM	Pinnacle	7.21	56	P	Pn	20 43 18.8	+0.6
	baz=247						
L14K	Kuka Creek	7.22	316		Pn	20 43 18.9	+0.7
L14K	Kuka Creek	7.22	316	P	Pn	20 43 19.7	+1.6
	baz=126,SNR=6.9						
LOGN	Logan Glacier	7.22	49		Pn	20 43 18.3	-0.2
PAX	Paxson	7.26	25		Pn	20 43 19.5	+0.7
PAX	Paxson	7.26	25	P	Pn	20 43 19.7	+0.9
	baz=211						
J18K	Innoko River	7.27	344		Pn	20 43 19.5	+0.6
J18K	Innoko River	7.27	344	P	Pn	20 43 19.9	+1.0
	baz=160						
CHUM	Lake Minchumin	7.33	360	P	Pn	20 43 20.6	+0.9
	baz=179						
MCK	McKinley	7.36	11		Pn	20 43 19.1	-1.1
MCK	McKinley	7.36	11	P	Pn	20 43 20.7	+0.5
	baz=194						
K15K	Wolf Creek Mou	7.44	324		Pn	20 43 22.5	+1.3
K15K	Wolf Creek Mou	7.44	324	P	Pn	20 43 22.7	+1.5
	baz=136						
BCPM	Bancas Point	7.44	58		Pn	20 43 21.1	-0.2
M26K	Nabesna, AK	7.49	35		Pn	20 43 21.7	-0.3
M26K	Nabesna, AK	7.49	35	P	Pn	20 43 22.9	+1.0
	baz=223						
O28M	Mount Upton	7.54	51		Pn	20 43 22.9	0.0
O28M	Mount Upton	7.54	51	P	Pn	20 43 22.9	0.0
	baz=242						
BPAW	Bear Paw Mtn.	7.57	4		Pn	20 43 22.4	-0.7
BPAW	Bear Paw Mtn.	7.57	4	P	Pn	20 43 22.4	-0.7
	baz=185						
J19K	Poorman	7.63	349		Pn	20 43 24.5	+0.6
J19K	Poorman	7.63	349	P	Pn	20 43 24.0	+0.1
	baz=165,SNR=5.8						
J17K	VABM Dome	7.66	336	P	Pn	20 43 25.6	+1.4
	baz=150						
J20K	Nowinta River	7.69	354	P	Pn	20 43 24.8	+0.2
	baz=172,SNR=7.4						
M27K	Edge Creek, AK	7.82	38		Pn	20 43 27.4	+0.8
M27K	Edge Creek, AK	7.82	38	P	Pn	20 43 27.7	+1.1
	baz=227						
K24K	Donnelly Dome	7.92	21		Pn	20 43 29.3	+1.4
K24K	Donnelly Dome	7.92	21	P	Pn	20 43 29.2	+1.3
	baz=207						
J16K	Anvik River	7.93	331		Pn	20 43 29.3	+1.3
J16K	Anvik River	7.93	331	P	Pn	20 43 29.7	+1.7
	baz=144						
YUK3	Moose Creek	7.97	44	P	Pn	20 43 29.4	+0.7
	baz=235						
YUK8	Steele Glacier	7.98	49	P	Pn	20 43 30.8	+1.9
	baz=240,SNR=7.3						
RIDG	Independent Ri	8.06	24	P	Pn	20 43 31.0	+1.1
	baz=211						
O29M	Mount Kennedy	8.07	57		Pn	20 43 30.9	+0.9
O29M	Mount Kennedy	8.07	57	P	Pn	20 43 31.2	+1.2
	baz=249						
DOT	Dot Lake	8.17	26		Pn	20 43 29.2	-2.1
NEA2	Nenana	8.19	10	P	Pn	20 43 32.1	+0.5
	baz=192						
BVCY	Beaver Creek	8.21	40	P	Pn	20 43 32.7	+0.8
	baz=230						
P29M	Windy Craggy	8.25	62		Pn	20 43 32.9	+0.5
P29M	Windy Craggy	8.25	62	P	Pn	20 43 32.9	+0.5
	baz=255						
HDA	Harding Lake	8.27	16	P	Pn	20 43 33.7	+1.0
	baz=201,SNR=13						
I20K	Naaghedeneel	8.32	353		Pn	20 43 33.9	+0.6
I20K	Naaghedeneel	8.32	353	P	Pn	20 43 30.6	-2.7
	baz=171						
K13K	Kusilvak Mount	8.33	315	P	Pn	20 43 33.2	-0.3
	baz=124						
L27K	Beaver Creek,	8.34	34		Pn	20 43 33.4	-0.2
L27K	Beaver Creek,	8.34	34	P	Pn	20 43 32.6	-1.0
	baz=224						
YUK6	Outpost Mounta	8.42	53	P	Pn	20 43 34.5	-0.4
	baz=245						
J14K	Nanvaranak Lak	8.44	322		Pn	20 43 35.6	+0.8
J14K	Nanvaranak Lak	8.44	322	P	Pn	20 43 34.4	-0.4
	baz=132						
I17K	Unalakleet	8.46	334		Pn	20 43 35.9	+0.8
I17K	Unalakleet	8.46	334	P	Pn	20 43 34.7	-0.4
	baz=146,SNR=6.3						
SCRK	Sand Creek	8.47	25	P	Pn	20 43 34.7	-0.7
	baz=213						
YUK4	Talbot Arm	8.48	50	P	Pn	20 43 36.4	+0.8
	baz=242						
GCSA	Galena City Sc	8.51	346	P	Pn	20 43 34.8	-1.1
	baz=162						
COLA	College	8.59	13	P	Pn	20 43 37.0	0.0
	baz=196						
UNV	Unalaska Valle	8.62	257	Pn	Pn	20 43 35.6	-1.8
UNV	Unalaska Valle	8.62	257	P	Pn	20 43 38.9	+1.5
	baz=65						
ILAR	Eielson Array	8.62	15	Pn	Pn	20 43 38.0	+0.6
	comp=E,1.6nm,0.3s,baz=199,slow=13,SNR=123						
ILAR				Sn	Sn	20 45 10.8	-3.3
	comp=E,0.6nm,0.3s,baz=204,slow=22,SNR=5.0						
ILAR				LR	LR	20 47 34.4	
	comp=E,352nm,18.0s,baz=208,slow=42						
I21K	Tanana	8.64	1		Pn	20 43 37.6	0.0
I21K	Tanana	8.64	1	P	Pn	20 43 37.1	-0.5
	baz=181,SNR=9.4						
I23K	Minto, Yukon-K	8.71	8	P	Pn	20 43 37.8	-0.9
	baz=190						
J25K	Salcha River,	8.73	20	P	Pn	20 43 38.3	-0.7
	baz=206						
HYT	Haines Junctio	8.75	55		Pn	20 43 39.9	+0.5
HYT	Haines Junctio	8.75	55	P	Pn	20 43 39.1	-0.3
	baz=248						
P30M	Million Dollar	8.77	60		Pn	20 43 40.6	+1.2
P30M	Million Dollar	8.77	60	P	Pn	20 43 39.4	0.0
	baz=253						
S31K	Pelican	8.77	74	Pn	Pn	20 43 38.4	-1.1
S31K	Pelican	8.77	74	P	Pn	20 43 38.2	-1.2
	baz=268						
POKR	Poker Plat Res	8.88	13	P	Pn	20 43 39.5	-1.5
	baz=197						
PLBC	Pleasant Camp	8.89	64	P	Pn	20 43 41.6	+0.5
	baz=259,SNR=5.1						
J26L	Joseph Creek	9.01	25		Pn	20 43 42.8	-0.1
J26L	Joseph Creek	9.01	25	P	Pn	20 43 42.2	-0.7
	baz=212						
H20K	Anotleneega Mo	9.04	353	P	Pn	20 43 42.4	-0.8
	baz=170,SNR=6.2						
H18K	Honhosa River	9.11	343		Pn	20 43 44.2	+0.1
H18K	Honhosa River	9.11	343	P	Pn	20 43 44.2	+0.1
	baz=158,SNR=5.4						
H21K	Melozitna Rive	9.12	358	P	Pn	20 43 43.5	-0.7
	baz=178,SNR=15						
M29M	Somme Creek	9.12	44		Pn	20 43 44.9	+0.5
M29M	Somme Creek	9.12	44	P	Pn	20 43 44.5	+0.1
	baz=236						
H17K	Granite Mounta	9.19	339	P	Pn	20 43 44.9	-0.3
	baz=152,SNR=6.8						
N30M	Aishikik Lake	9.20	52	P	Pn	20 43 45.7	+0.3
	baz=245						
H19K	Roundabout Mou	9.21	349	P	Pn	20 43 45.8	+0.3
	baz=165						
SIT	Sitka	9.27	80	P	Pn	20 43 47.1	+0.7
	baz=275						
H22K	Ishtalitna Cre	9.36	2	P	Pn	20 43 47.5	-0.1
	baz=183						
O30N	Mendenhall	9.38	57		Pn	20 43 48.2	+0.3
O30N	Mendenhall	9.38	57	P	Pn	20 43 48.5	+0.7
	baz=251						
SKAG	Skagway	9.41	65	Pn	Pn	20 43 49.3	+1.1
SKAG	Skagway	9.41	65	P	Pn	20 43 48.3	+0.1
	baz=260						
H16K	Elim	9.46	333	P	Pn	20 43 50.0	+1.1
	baz=144,SNR=5.9						
IMAR	Indian Mountai	9.47	356		Pn	20 43 48.9	-0.2
H24K	Noodor Dome	9.52	11	P	Pn	20 43 50.3	+0.4
	baz=195						
BESE	Bessie Mountai	9.53	71	Pn	Pn	20 43 50.4	+0.4
L29M	L29M	9.63	41	P	Pn	20 43 52.0	+0.7
	baz=234						
S32K	Killisnoo	9.66	77	Pn	Pn	20 43 51.1	-0.5
S32K	Killisnoo	9.66	77	P	Pn	20 43 51.8	+0.2
	baz=273						
R32K	Eaglecrest	9.69	73	P	Pn	20 43 53.2	+1.1
	baz=268						
N31M	Braeburn, Yuko	9.78	53	P	Pn	20 43 54.2	+0.9
	baz=248						
I26K	Coal Creek Min	9.79	23	P	Pn	20 43 54.5	+1.1
	baz=211						
DAWY	Dawson	9.82	35	P	Pn	20 43 55.0	+1.1
	baz=226						
G17K	Kiwalik Mounta	9.84	339	P	Pn	20 43 55.0	+1.0
	baz=151						
G18K	Tagagawik	9.85	344		Pn	20 43 54.4	+0.2
G18K	Tagagawik	9.85	344	P	Pn	20 43 54.7	+0.6
	baz=158						
M30M	Minto, Yukon	9.85	46	P	Pn	20 43 54.3	0.0
	baz=240						
G19K	Purcell Mounta	9.88	348	P	Pn	20 43 55.5	+0.9
	baz=164						
WHY	Whitehorse	9.91	58	P	Pn	20 43 56.4	+1.2
	baz=254						
G21K	Allakaket	10.00	357	P	Pn	20 43 55.9	-0.4
	baz=176						
G15K	Niukluk	10.21	331	P	Pn	20 44 00.8	+1.7
	baz=140						
G23K	Bananza Creek	10.22	5		Pn	20 43 59.1	-0.3
G23K	Bananza Creek	10.22	5	P	Pn	20 43 58.7	-0.7
	baz=187,SNR=12						
P32M	Atlin	10.24	65	P	Pn	20 43 59.6	0.0
	baz=262						
ANM	Nome	10.28	327	P	Pn	20 44 00.7	+0.6
	baz=135						
K29M	Barlow Dome	10.30	39	P	Pn	20 44 00.4	0.0
	baz=232						
I27K	Kandik River	10.39	25	P	Pn	20 44 01.9	+0.3
	baz=215						
G24K	Hadweenzic Riv	10.40	10	P	Pn	20 44 01.4	-0.4
	baz=195						
J29N	Klondike Camp	10.46	35	P	Pn	20 44 02.3	-0.3
	baz=228						
U33K	Whale Pass	10.60	85	Pn	Pn	20 44 02.0	-2.5
U33K	Whale Pass	10.60	85	P	Pn	20 44 06.5	+2.0
	baz=281						
F19K	Shaleruckik Mo	10.62	348		Pn	20 44 05.2	+0.4
F19K	Shaleruckik Mo	10.62	348	P	Pn	20 44 05.0	+0.3
	baz=163						
G25K	Bearman Lake	10.62	13	P	Pn	20 44 03.9	-0.9
	baz=199						
F20K	Avaraart Lake	10.64	353		Pn	20 44 05.0	0.0
F20K	Avaraart Lake	10.64	353	P	Pn	20 44 05.4	+0.4
	baz=169						
F18K	Selawik	10.65	344	P	Pn	20 44 05.8	+0.6
	baz=157						
M31M	Drury Creek, Y	10.67	51	P	Pn	20 44 05.5	0.0
	baz=247						
I28M	Miner Creek	10.69	29	P	Pn	20 44 06.5	+0.8
	baz=220						
F21K	Alatna River	10.70	357	P	Pn	20 44 06.2	+0.3
	baz=176						
COLD	Coldfoot	10.73	4		Pn	20 44 05.6	-0.7
COLD	Coldfoot	10.73	4	P	Pn	20 44 06.2	-0.1
	baz=186						
CRAG	Craig	10.74	88	P	Pn	20 44 08.5	+2.1
	baz=284						
P33M	Teslin, Yukon	10.80	62	P	Pn	20 44 08.6	+1.3
	baz=259						
N32M	Quiet Lake	10.89	57	P	Pn	20 44 08.8	+0.2
	baz=254						
Q32M	Nakina River	10.91	69	Pn	Pn	20 44 09.2	+0.3
F15K	North Star Dit	10.93	332	P	Pn	20 44 10.2	+1.2
	baz=141						
H27K	Steamboat Moun	10.94	23	P	Pn	20 44 10.1	+1.0
	baz=213						
F22K	John River	10.97	0	P	Pn	20 44 07.3	-2.3
	baz=180						
I29M	Ogilvie Camp,	11.07	32	P	Pn	20 44 08.6	-2.3
	baz=224						
FARO	Faro, Yukon	11.13	52	P	Pn	20 44 11.5	-0.4
	baz=248						
G26K	Porcupine Rive	11.13	17	P	Pn	20 44 10.5	-1.2
	baz=205						
J30M	Hart River	11.16	38	P	Pn	20 44 12.2	-0.1
	baz=232						
F24K	Squaw Lake	11.16	9	P	Pn	20 44 10.9	-1.3
	baz=192						
E19K	Redstone River	11.17	350	P	Pn	20 44 12.3	+0.1
	baz=165,SNR=9.4						
G27K	Doyon Strip	11.40	22	P	Pn	20 44 14.7	-0.8
	baz=211						
BMAR	Burnt Mountain	11.45	15	Pn	Pn	20 44 16.5	+0.3
E17K	Hotham Inlet	11.46	341	P	Pn	20 44 16.3	0.0
	baz=152						
F25K	Christian Rive	11.47	13		Pn	20 44 16.4	0.0
F25K	Christian Rive	11.47	13	P	Pn	20 44 15.6	-0.8
	baz=199						
S34M	Telegraph Cree	11.49	75	P	Pn	20 44 16.8	+0.2
	baz=273						
E18K	Tukpahlearik C	11.56	344		Pn	20 44 17.7	+0.1
E18K	Tukpahlearik C	11.56	344	P	Pn	20 44 17.2	-0.4
	baz=156						
I30M	Mount Dempster	11.56	35	P	Pn	20 44 17.5	-0.3
	baz=229						
E23K	Chandalar	11.59	5	P	Pn	20 44 16.7	-1.4
	baz=187						
E22K	Anaktuvuk Pass	11.61	1		Pn	20 44 18.5	+0.2
E22K	Anaktuvuk Pass	11.61	1	P	Pn	20 44 17.5	-0.8
	baz=181						
V35K	Ketchikan	11.61	88	P	Pn	20 44 18.4	+0.1
	baz=285						
R33M	Jennings River	11.61	67	P	Pn	20 44 18.6	+0.2
	baz=266						
E24K	Your Creek	11.67	7	P	Pn	20 44 18.8	-0.3
	baz=190						
H29M	Whitestone	11.69	29	P	Pn	20 44 17.9	-1.5
	baz=221						
TNA	Tin City	11.75	326	P	Pn	20 44 19.6	-0.6
	baz=132						
F26K	Sheenjek River	11.76	15	P	Pn	20 44 19.6	-0.8
	baz=202						
E20K	Nigu River	11.87	353	P	Pn	20 44 21.1	-0.7
	baz=169						
E21K	Killik River	11.94	357	P	Pn	20 44 22.3	-0.5
	baz=175						
E25K	Arctic Village	11.98	12	P	Pn	20 44 22.6	-0.8
	baz=198						
T35M	Bob Quinn	12.04	79	P	Pn	20 44 25.1	+0.9
	baz=278						
GAMB	Gambell	12.05	315	P	Pn	20 44 23.9	-0.4
	baz=117						
TOLK	Toolik Lake Re	12.17	5		Pn	20 44 27.0	+1.0
TOLK	Toolik Lake Re	12.17	5	P	Pn	20 44 25.2	-0.8
	baz=187						
D17K	Noatak River	12.24	340	P	Pn	20 44 26.8	0.0
	baz=150						
EPYK	Eagle Plains	12.26	30	P	Pn	20 44 27.0	-0.1
	baz=224						
D19K	Kuna River	12.26	350	P	Pn	20 44 27.4	+0.2
	baz=164						
G29M	Pine Creek	12.31	27	P	Pn	20 44 28.3	+0.4
	baz=220						
D20K	Etivluk River	12.35	352	P	Pn	20 44 27.6	-0.7
	baz=168						
D22K	Ayikyak River	12.35	359	P	Pn	20 44 27.1	-1.3
	baz=179						
F28M	Old Crow	12.46	22	P	Pn	20 44 30.5	+0.7
	baz=213						
D23K	Nanushuk River	12.46	3	P	Pn	20 44 30.3	+0.5
	baz=184						
RDOG	Red Dog Mine	12.52	341	P	Pn	20 44 30.6	0.0
	baz=151						
H31M	Peel River	12.59	35	P	Pn	20 44 32.0	+0.3
	baz=231						
E27K	Coleen River	12.62	18	P	Pn	20 44 33.6	+1.5
	baz=208						
C21K	Knifeblade Rid	12.68	356	P	Pn	20 44 33.6	+0.7
	baz=173						
D24K	Happy Valley	12.72	6	P	Pn	20 44 33.6	+0.2
	baz=188						
WTLY	Watson Lake, Y	12.77	64	P	Pn	20 44 34.6	+0.4
	baz=265						
C18K	Utukok River	12.78	345	P	Pn	20 44 34.6	+0.3
	baz=157						
G30M	tAoh Zraii Nji	12.84	29	P	Pn	20 44 36.6	+1.5
	baz=224						
C17K	DeLong Mountai	12.94	342	P	Pn	20 44 38.1	+1.7
	baz=152						
C19K	Lookout Ridge	13.00	348		Pn	20 44 38.6	+1.2
C19K	Lookout Ridge	13.00	348	P	Pn	20 44 37.8	+0.5
	baz=161						
D25K	Kavik River	13.06	9	P	Pn	20 44 39.5	+1.4
	baz=194						
B21K	Ikpikpuk River	13.14	356	P	Pn	20 44 40.7	+1.5
	baz=174						
C16K	Lisburne Hills	13.18	338	P	Pn	20 44 41.6	+2.0
	baz=146						
C24K	Franklin Bluff	13.29	5		Pn	20 44 40.4	-0.8
C24K	Franklin Bluff	13.29	5	P	Pn	20 44 42.9	+1.8
	baz=188						
C23K	Itkillik River	13.33	2	P	Pn	20 44 42.7	+1.0
	baz=184						
G31M	Satah River	13.34	32	P	Pn	20 44 42.6	+0.8
	baz=228						
E28M	Babbage River	13.36	20	P	Pn	20 44 43.5	+1.3
	baz=212						
F30M	Barrier River	13.41	28	P	Pn	20 44 43.4	+0.5
	baz=223						
E29M	Blow River	13.52	23	P	Pn	20 44 45.8	+1.5
	baz=216						
B18K	Kokolik River	13.53	345	P	Pn	20 44 45.0	+0.6
	baz=157,SNR=9.4						
C27K	Jago River	13.63	13		Pn	20 44 47.0	+1.2
C27K	Jago River	13.63	13	P	Pn	20 44 46.5	+0.6
	baz=200						
D27M	Malcolm River	13.67	17	P	Pn	20 44 47.0	+0.6
	baz=207						
C26K	Camden Bay	13.77	11	P	Pn	20 44 49.0	+1.2
	baz=197						
B22K	Teshekpuk Lake	13.83	358	P	Pn	20 44 48.1	-0.4
	baz=177						
F31M	Tsiigehtchic	13.85	31	P	Pn	20 44 49.8	+1.0
	baz=227						
D28M	Stokes Point	14.13	20	P	Pn	20 44 53.9	+1.2
	baz=212						
A19K	Wainwright	14.22	348	P	Pn	20 44 55.0	+1.2
	baz=160						
INK	Inuvik	14.51	28	Pn	P	20 45 02.7	-1.6
	comp=E,0.1nm,0.3s,baz=237,slow=16,SNR=5.6						
A22K	Sinclair Lake	14.54	356	P	Pn	20 44 58.3	+0.2
	baz=174						
TOAD	Toad River Com	14.55	70	P	Pn	20 44 59.9	+1.3
	baz=273						
A21K	Barrow	14.93	354	P	Pn	20 45 03.5	+0.1
	baz=170						
KOTAN	Kotaneelee Air	15.14	65	P	Pn	20 45 07.1	+0.7
	baz=269						
WRGLY	Wrigley	15.78	53	P	Pn	20 45 15.5	+0.8
	baz=259						
C36M	Paulatuk	17.85	33		Pn	20 45 39.5	-1.2
C36M	Paulatuk	17.85	33	P	Pn	20 45 40.6	-0.1
	baz=238						
A36M	Sachs Harbour	19.09	26		P	20 45 54.0	-0.8
A36M				IAmb	IAmb	20 46 12.2	
	comp=Z,22nm,0.9s						
A36M	Sachs Harbour	19.09	26	P	P	20 45 55.4	+0.6
	baz=230,SNR=11						
YKAW3	Yellowknife Wh	19.73	57	P	P	20 45 59.6	-2.4
YKA	Yellowknife Ar	19.74	57	P	Pn	20 46 03.6	0.0
	comp=Z,0.1nm,0.3s,baz=275,slow=11,SNR=20						
YKA				PcP	PcP	20 50 20.1	+0.4
	comp=Z,0.2nm,0.8s,baz=272,slow=2.4,SNR=4.6						
	comp=Z,0.9nm,0.8s						
YKA	Yellowknife Ar	19.74	57	P	P	20 45 58.6	-3.4
YKAW1	Yellowknife Wh	19.79	57	P	P	20 46 01.6	-1.1
BILL	Bilibino	21.94	318		P	20 46 24.4	-1.4
BILL				IAmb	IAmb	20 46 41.5	
	comp=Z,18nm,1.1s						
YBH	Yreka Blue Hor	24.09	115	LR	LR	20 53 51.5	
	comp=Z,6.0nm,18.8s,baz=228,slow=31						
PDAR	Pinedale Array	30.32	99	P	P	20 47 45.5	+1.4
	comp=Z,0.4nm,0.6s,baz=322,slow=6.6,SNR=3.7						
	comp=Z,0.4nm,0.6s						
PDAR	Pinedale Array	30.32	99	P	P	20 47 42.9	-1.3
TXAR	Lajitas Array	43.46	108	P	P	20 49 37.4	+1.8
	comp=Z,0.8nm,0.9s,baz=316,slow=5.2,SNR=4.6						
	comp=Z,0.8nm,0.9s						
TXAR	Lajitas Array	43.46	108	P	P	20 49 35.7	+0.1
SPITS	Spitsbergen Ar	45.32	3	P	P	20 49 50.2	+0.3
	comp=Z,6.1nm,0.8s,baz=27,slow=5.6,SNR=6.7						
	comp=Z,6.1nm,0.8s						
SPB2	Spitsbergen Ar	45.32	3	P	P	20 49 49.8	-0.1
NRIK	Noril'sk	47.17	335	P	P	20 50 05.2	+0.8
	comp=Z,2.7nm,0.5s,baz=58,slow=7.8,SNR=5.3						
	comp=Z,2.7nm,0.5s						
NRIK	Noril'sk	47.17	335		P	20 50 03.7	-0.8
NRIK				IAmb	IAmb	20 50 06.1	
	comp=Z,5.3nm,0.9s						
H11N2	WAKE ISLAND Hy	47.65	237	T	T	21 41 15.1	
	baz=29						
H11N3	WAKE ISLAND Hy	47.66	237	T	T	21 41 16.2	
	baz=29						
H11N1	WAKE ISLAND Hy	47.67	237	T	T	21 41 19.3	
	baz=29						
H11S1	WAKE ISLAND Hy	48.81	236	T	T	21 42 44.4	
	baz=28,slow=76,SNR=5.8						
H11S2	WAKE ISLAND Hy	48.82	236	T	T	21 42 41.0	
	baz=28,slow=76,SNR=5.1						
H11S3	WAKE ISLAND Hy	48.83	236	T	T	21 42 44.3	
	baz=28,slow=76,SNR=4.0						
MJAR	Matsushiro Arr	49.52	277	P	P	20 50 23.6	+0.6
	comp=Z,0.6nm,0.6s,baz=40,slow=8.8,SNR=4.9						
	comp=Z,0.6nm,0.6s						
ARCES	ARCESS Array B	54.18	1	P	P	20 50 57.5	+0.2
	comp=Z,1.4nm,0.5s,baz=10,slow=7.2,SNR=13						
	comp=Z,1.4nm,0.5s						
ARCES	ARCESS Array B	54.18	1	P	P	20 50 57.3	-0.1
ARCES				IAmb	IAmb	20 51 03.2	
	comp=Z,7.6nm,1.1s						
KSRS	Korea Array	54.42	286	P	P	20 51 00.7	+1.2
	comp=Z,0.4nm,0.4s,baz=36,slow=7.0,SNR=2.1						
	comp=Z,0.4nm,0.4s						
XLT	XiLinHaoTe	55.70	299	*e*P	P	20 51 07.0	-1.7
XLT				sP	sP	20 51 25.9	+9.3
XLT				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SONM	Songino Array	57.19	308	P	P	20 51 20.4	+1.0
	comp=Z,4.6nm,0.8s,baz=46,slow=6.4,SNR=32						
	comp=Z,4.6nm,0.8s						
SONM	Songino Array	57.19	308	P	P	20 51 19.6	+0.3
SONM				IAmb	IAmb	20 51 21.3	
	comp=Z,4.2nm,0.8s						
ZAA0	Zalesovo Array	60.41	325		P	20 51 41.8	+0.4
ZAA0				IAmb	IAmb	20 51 43.0	
	comp=Z,4.0nm,0.8s						
ZALV	Zalesovo Beam	60.41	325	P	P	20 51 41.9	+0.5
	comp=Z,3.7nm,0.7s,baz=28,slow=7.3,SNR=20						
	comp=Z,3.7nm,0.7s						
ZALV	Zalesovo Beam	60.41	325		P	20 51 41.2	-0.2
NC405	NORSAR Array S	61.97	9	P	P	20 51 52.3	+0.3
NC405				IAmb	IAmb	20 51 60.0	
	comp=Z,4.0nm,0.8s						

NB2	NORSAR Subarra	62.00	9	P	P	20 51 53.1	+0.9
	comp=Z,9.5nm,1.1s,baz=349,slow=6.9						
NOA	NORSAR Array B	62.00	9	P	P	20 51 53.0	+0.9
	comp=Z,1.7nm,0.8s,baz=350,slow=6.8,SNR=9.0						
	comp=Z,1.7nm,0.8s						
FIA1	FINESS Array S	62.31	1	P	P	20 51 54.3	+0.2
FINES	FINESS Array B	62.31	1	P	P	20 51 54.9	+0.7
	comp=Z,2.3nm,0.7s,baz=352,slow=9.3,SNR=11						
	comp=Z,2.3nm,0.7s						
FINES	FINESS Array B	62.31	1	P	P	20 51 53.5	-0.7
HFS	Hagfors	63.10	8	P	P	20 51 59.7	+0.3
	comp=Z,2.6nm,0.6s,baz=36,slow=5.5,SNR=19						
	comp=Z,2.6nm,0.6s						
ARTI	Arti	64.71	342		P	20 52 09.8	-0.3
KURK	Kurchatov	65.12	327	P	P	20 52 12.9	0.0
KURK				IAmb	IAmb	20 52 13.6	
	comp=Z,2.1nm,0.8s						
KURBB	Kurchatov Arra	65.23	327	P	P	20 52 14.1	+0.6
	comp=Z,1.7nm,0.6s,baz=29,slow=6.2,SNR=10						
	comp=Z,1.7nm,0.6s						
BORK	Borovoye	65.31	333	P	P	20 52 13.8	-0.2
BORK				IAmb	IAmb	20 52 15.2	
	comp=Z,3.1nm,0.8s						
BVAR	Borovoye Array	65.31	333	P	P	20 52 14.6	+0.5
	comp=Z,4.4nm,0.7s,baz=28,slow=7.1,SNR=29						
	comp=Z,4.4nm,0.7s						
EKA	Eskdalemuir Ar	65.65	19	P	P	20 52 17.4	+1.2
	comp=Z,0.8nm,0.6s,baz=320,slow=6.3,SNR=5.4						
	comp=Z,0.8nm,0.6s						
GTA	Gaotai	66.78	307	*e*P	P	20 52 24.0	+0.1
GTA				pP	sP	20 52 30.0	-1.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MKAR	Makanchi Array	67.39	323	P	P	20 52 27.8	+0.2
	comp=Z,2.4nm,0.7s,baz=30,slow=6.3,SNR=24						
	comp=Z,2.4nm,0.7s						
MKAR	Makanchi Array	67.39	323	P	P	20 52 27.6	0.0
MAKZ	Makanchi	67.49	323	P	P	20 52 28.0	-0.2
AB31	Akbulak array	71.20	338	P	P	20 52 50.8	-0.2
AB31				IAmb	IAmb	20 52 52.4	
	comp=Z,3.1nm,0.8s						
ABKAR	Akbulak array	71.20	338	P	P	20 52 50.8	-0.3
AKASG	Malin Array Be	73.08	359	P	P	20 53 02.6	+0.4
	comp=Z,1.7nm,0.5s,baz=4.8,slow=5.9,SNR=8.4						
	comp=Z,1.7nm,0.5s						
AAK	Ala-Archa	73.62	326	P	P	20 53 06.6	+0.8
	comp=Z,1.1nm,0.5s,baz=21,slow=14,SNR=5.8						
	comp=Z,1.1nm,0.5s						
AAK	Ala-Archa	73.62	326	P	P	20 53 06.1	+0.3
GERES	GERESS Array B	74.29	10	P	P	20 53 10.7	+1.2
	comp=Z,0.7nm,0.7s,baz=3.9,slow=5.9,SNR=9.2						
	comp=Z,0.7nm,0.7s						
KK31	Karatay Array	74.38	329	P	P	20 53 10.4	+0.4
KKAR	Karatay Array	74.38	329	P	P	20 53 10.2	+0.1
KSH	Kashi	75.97	324	P	P	20 53 22.9	+3.5
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CHGR	Chuyangaron	78.88	328		P	20 53 35.3	-0.3
CHGR				IAmb	IAmb	20 53 36.9	
	comp=Z,6.4nm,0.7s						
KBZ	Khabaz	79.26	349	P	P	20 53 38.4	+0.9
	comp=Z,2.2nm,0.8s,baz=348,slow=9.3,SNR=6.8						
	comp=Z,2.2nm,0.8s						
ESDC	Sonseca Array	80.42	24	P	P	20 53 44.8	+0.9
	comp=Z,1.5nm,0.7s,baz=341,slow=4.7,SNR=5.8						
	comp=Z,1.5nm,0.7s						
BRTR	Keskin Array B	83.94	355	P	P	20 54 03.8	+1.2
	comp=Z,0.9nm,0.7s,baz=341,slow=2.5,SNR=6.6						
	comp=Z,0.9nm,0.7s						
BRTR	Keskin Array B	83.94	355	P	P	20 54 02.6	+0.1
CMAR	Chiang Mai Arr	84.70	296	P	P	20 54 06.5	+0.1
	comp=Z,1.0nm,0.7s,baz=29,slow=5.2,SNR=12						
	comp=Z,1.0nm,0.7s						
CMAR	Chiang Mai Arr	84.70	296	P	P	20 54 05.8	-0.7
QSPA	South Pole Qui	146.37	180	PKPbc	PKPab	21 01 11.6	-1.2
	comp=Z,5.0nm,0.9s,baz=56,slow=1.6,SNR=11						

TRN 21 20:41:38.6,17.°63N×61.°96W,h24^{km},MD3.7,East of Barbuda.,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.17	77	*e*P	Pn	20 41 45.1	-0.6
ANWB				*e*S	Sb	20 41 48.6	+1.4
SKI	Saint Kitts	0.80	249	*e*P	Pn	20 41 56.3	+1.9
SKI				*e*S	Sn	20 42 07.9	+2.2
MBFL	Flemmings, Mon	0.91	196	*e*S	Sn	20 42 10.6	+2.2
MBWH	Windy Hill	0.91	194	*e*P	Pn	20 41 57.9	+1.9
MBWH				*e*S	Sn	20 42 10.7	+2.3
DHSZ	Broadband at M	1.36	172	*e*P	Pb	20 42 03.7	+0.3
DHSZ				*e*S	Sb	20 42 22.7	+2.3
ATGZ	Broadband at L	1.54	172	*e*P	Pb	20 42 06.7	+0.3
ATGZ				*e*S	Sb	20 42 25.9	+0.4
DSDZ	La Diserade, G	1.56	147	*e*P	Pn	20 42 05.7	+0.8
DSDZ				*e*S	Sb	20 42 26.4	+0.2
MMLZ	Guadeloupe Bro	1.60	170	*e*P	Pb	20 42 07.4	-0.1
MMLZ				*e*S	Sb	20 42 27.9	+0.6
TBG	Guadaloupe-3	1.79	170	*e*P	Pb	20 42 10.4	-0.3
TBG				*e*S	Sb	20 42 32.4	-0.5
DWS	Wesley	2.14	163	*e*P	Pn	20 42 14.7	+1.8
DSLB	Salisbury	2.24	167	*e*P	Pb	20 42 16.8	-1.6
DSLB				*e*S	Sb	20 42 44.9	-0.8
ILAM	Ilet Lapin Mar	3.02	160	*e*	Pn	20 42 26.6	+1.6
BIM	Bigot	3.21	164	*e*P	Pn	20 42 30.4	+2.8
SLBI	Saint Lucia, B	3.71	165	*e*P	Pn	20 42 37.0	+2.6
SLBI				*e*S	Sn	20 43 18.6	+1.2

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*JMA **21** 20:42:47.6±0.4,32.°9N±1.°0×14°3E±°,h20^{km},MV3.5/19, FAR E OFF IZU ISLANDS*

*IDC **21** 20:42:52.0±3.7,32.°94N×142.°06E,h0^{km},mb3.4/4, mbtmp3.4/5,ML2.8/1,Error ellipse: s-maj=62.7km s-min=41.8km az=168.0*

ISC 21 20:42:54.4±1.9,**33.°11N**±0.°08×**142.°4E**±0.°1,**h33^{km},n19, σ2.^{s}20**/29,**mb3.5**/4,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.94	323	*e*P	Pn	20 43 23.2	-1.3
BSO1				*e*S	Sb	20 43 49.5	-2.8
JHJ2	Mitsune	2.17	271	*e*P	Pn	20 43 25.3	-2.8
JHCJ	Hachijojimakas	2.18	270	*e*P	Pn	20 43 25.2	-3.1
JHCJ				*e*S	Sn	20 43 54.1	-0.1
JHJ	Hachijo jima 2	2.19	271	Pn	Pn	20 43 25.3	-3.2
	12nm,0.3s,baz=84,slow=19,SNR=18						
JHJ				Sn	Sn	20 43 52.8	-1.7
	12nm,0.3s,baz=241,slow=23,SNR=1.4						
BSO3	Boso 3	2.30	318	*e*P	Pn	20 43 28.6	-1.1
JMKN	Mikurajimanish	2.47	289	*e*P	Pn	20 43 30.5	-1.8
JMKN				*e*S	Sn	20 44 01.3	-0.1
BSO4	Boso 4	2.54	318	*e*P	Pn	20 43 32.6	-0.5
JOD2	Odawara 2	3.48	309	*e*P	Pn	20 43 44.0	-2.2
JOD2				*e*S	Sn	20 44 26.8	+0.5
JYN	Shimob	3.98	308	*e*P	Pn	20 43 52.7	-0.4
JYN				*e*S	Sn	20 44 41.8	+3.1
JRY	Ryogami san	4.09	316	*e*P	Pn	20 43 54.0	-0.6
JRY				*e*S	Sn	20 44 43.4	+2.1
JAG	Ashikaga	4.10	325	*e*P	Pn	20 43 53.8	-0.9
JAG				*e*S	Sn	20 44 41.6	+0.1
JOTO	OTAMA OYAMA	4.75	340	*e*P	Pn	20 44 01.9	-1.7
JOTO				*e*S	Sn	20 44 55.0	-2.6
MJAR	Matsushiro Arr	4.85	316	Pn	Pn	20 44 04.2	-0.9
	0.4nm,0.3s,baz=158,slow=12,SNR=48						
MJAR				Sn	Sn	20 45 01.4	+1.3
	0.2nm,0.3s,baz=140,slow=15,SNR=2.2						
	1.4nm,0.3s						
MAT	Matsushiro	4.86	316	*e*P	Pn	20 44 04.8	-0.3
JMK	Ichinoseki	5.90	351	*e*S	Sn	20 45 20.6	-5.3
SONM	Songino Array	30.77	309	P	P	20 49 09.0	+2.2
	0.2nm,0.4s,baz=120,slow=8.5,SNR=1.5						
	0.2nm,0.4s						
ZALV	Zalesovo Beam	45.21	315	P	P	20 51 11.3	+3.3
	0.4nm,0.4s,baz=81,slow=9.5,SNR=2.2						
	0.4nm,0.4s						
MKAR	Makanchi Array	46.96	305	P	P	20 51 21.7	-0.4
	0.2nm,0.5s,baz=86,slow=8.8,SNR=5.5						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	49.11	311	P	P	20 51 40.7	+2.2
	0.3nm,0.6s,baz=85,slow=7.4,SNR=2.0						
	0.3nm,0.6s						

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*IDC **21** 21:10:37.4±10.0,21.°49S×177.°55W,h363^{km}±90^{km}, mb3.1/5,mbtmp3.8/5,Error ellipse: s-maj=113.8km s-min=32.9km az=145.0*

ISC 21 21:10:39.2±2.0,**21.°5S**±0.°7×**177.°6W**±0.°4,**h381^{km},n14, σ0.^{s}73**/15,**mb3.2**/5,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	44.65	258	P	P	21 18 16.1	+0.1
	1.0nm,0.7s,baz=95,slow=8.3,SNR=13						
ASAR				PcP	PcP	21 19 51.9	+0.7
	1.1nm,0.6s,baz=108,slow=3.8,SNR=14						
	1.0nm,0.7s						
WRA	Warramunga Arr	44.82	263	P	P	21 18 17.1	-0.3
	0.5nm,0.5s,baz=95,slow=6.7,SNR=20						
WRA				PcP	PcP	21 19 52.1	+0.3
	0.4nm,0.5s,baz=97,slow=3.3,SNR=1.8						
	0.5nm,0.5s						
ILAR	Eielson Array	89.20	13	P	P	21 22 52.7	+0.5
	0.6nm,0.6s,baz=222,slow=6.0,SNR=6.9						
	0.6nm,0.6s						
PDAR	Pinedale Array	89.44	43	P	P	21 22 54.8	+0.6
	0.1nm,0.5s,baz=264,slow=3.0,SNR=1.9						
	0.1nm,0.5s						
CMAR	Chiang Mai Arr	90.78	289	P	P	21 23 01.6	+1.0
	1.1nm,0.8s,baz=124,slow=2.7,SNR=9.0						
	1.1nm,0.8s						
BVAR	Borovoye Array	120.06	320	PKP	PKPdf	21 28 44.5	-0.4
	1.0nm,0.3s,baz=114,slow=2.7,SNR=14						
ARCES	ARCESS Array B	129.95	350	PKP	PKPdf	21 29 03.3	-0.1
	2.3nm,1.0s,baz=108,slow=1.5,SNR=3.6						
FINES	FINESS Array B	136.82	344	PKP	PKiKP	21 29 17.5	-0.9
	3.1nm,1.0s,baz=119,slow=3.2,SNR=6.5						
HFS	Hagfors	140.57	351	PKhKP	PKPpre	21 29 15.8	
	0.6nm,0.3s,baz=67,slow=2.3,SNR=12						
AKASG	Malin Array Be	144.04	331	PKP	PKPab	21 29 27.4	-1.2
	4.7nm,0.5s,baz=45,slow=4.3,SNR=26						
EKA	Eskdalemuir Ar	145.95	6	PKPbc	PKPdf	21 29 32.0	-1.0
	1.5nm,0.8s,baz=4.3,slow=3.3,SNR=1.8						
BRTR	Keskin Array B	147.76	311	PKPbc	PKPbc	21 29 39.5	-0.6
	1.2nm,0.7s,baz=128,slow=3.5,SNR=8.7						
MMAI	Mount Meron Ar	148.60	298	PKPbc	PKPbc	21 29 42.9	+0.5
	2.1nm,0.5s,baz=73,slow=5.7,SNR=11						
GERES	GERESS Array B	151.24	344	PKPbc	PKPbc	21 29 48.0	-0.1
	0.8nm,0.6s,baz=27,slow=3.3,SNR=6.9						

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*IDC **21** 21:16:20.0±0.5,45.°86N×27.°61W,h0^{km},mb4.2/28, mbtmp4.2/30,ML4.1/2,MS3.8/50,Error ellipse: s-maj=14.6km s-min=11.9km az=160.0*

*NEIC **21** 21:16:21.0±1.1,45.°78N±0.°05×27.°6W±0.°1,h10^{km}±1^{km}, mb4.8/72,Error ellipse: s-maj=15.3km s-min=8.8km az=263.0*

*GCMT **21** 21:16:23.0±0.3,45.°77N±0.°03×27.°58W±0.°03,h12^{km}, MW4.8/96,Moment Tensor Solution. s13,c16; s96,c128; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.93±.06; M$_{\theta\theta}$0.56±.07; M$_{\phi\phi}$1.37±.05; M$_{r\theta}$-0.71±.28; M$_{\theta\phi}$0.71±.05; M$_{\phi r}$0.65±.23; Best double couple: M$_0$2.05100×10^{16} NP1:φ$_s$49.00000°,δ45.00000°,λ-60.00000°. NP2: φ$_s$189.00000°,δ52.00000°,λ-117.00000°. Principal axes: T 1.7980, Plg4.0000°, Azm298.0000°; N 0.5070, Plg21.0000°, Azm207.0000°; P -2.3030, Plg69.0000°, Azm38.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 21:16:21.3±0.3,**45.°79N**±0.°06×**27.°59W**±0.°05,**h13^{km},n430, σ0.^{s}99**/396,**mb4.7**/61,**MS3.9**/49,**Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CALA	Caldeira	7.25	187	*e*S	Sb	21 19 41.5	-12
CALA				IAML		21 19 42.1	
CALA				IAML		21 19 42.1	
CALA				IAML		21 19 42.2	
CMLA	Cha da Macela	8.17	168	Pn	Pn	21 18 17.4	-2.0
PMOZ	Porto Moniz, M	15.22	145	Pn	Pn	21 19 55.0	-0.9
PMOZ	Porto Moniz, M	15.22	145	*e*P	Pn	21 19 56.5	+0.6
PMOZ				*i* IAmb	IAmb	21 20 08.7	
	171nm,1.2s						
PMAR	Madeira	15.43	144	*e*P	Pn	21 19 58.5	-0.2
PSARD	Sardoal	15.55	107	*e*P	Pn	21 19 58.5	-1.6
PMTG	Montargil	15.78	108	*e*P	Pn	21 20 01.5	-1.5
PARRA	Arraiolos	16.03	109	*e*P	Pn	21 20 04.6	-1.7
PMRV	Marv??o	16.15	106	*e*P	Pn	21 20 07.8	0.0
EVO	Evora	16.20	110	*e*P	Pn	21 20 06.8	-1.8
PESTR	Estremoz	16.30	108	Pn	Pn	21 20 09.0	-0.8
PESTR	Estremoz	16.30	108	*e*P	Pn	21 20 09.3	-0.6
MESJ	Messejana	16.45	112	Pn	Pn	21 20 11.7	-0.1
MESJ				IAmb	IAmb	21 20 18.4	
	comp=Z,111nm,1.9s						
PVAQ	Vaqueiros	17.03	112	Pn	Pn	21 20 17.6	-1.4
PVAQ				IAmb	IAmb	21 20 20.8	
	comp=Z,133nm,1.8s						
PVAQ	Vaqueiros	17.03	112	*e*P	P	21 20 20.1	-0.7
PBAR	Barrancos	17.04	109	*e*P	Pn	21 20 18.4	-0.8
ESK	Eskdalemuir	18.10	49		Pn	21 20 31.7	-0.5
ESK				IAmb	IAmb	21 20 35.7	
	comp=Z,110nm,2.0s						
EKA	Eskdalemuir Ar	18.13	49	P	P	21 20 33.6	+0.8
	baz=243,slow=10						
EKA				LR	LR	21 26 06.8	
	comp=Z,202nm,21.0s,baz=240,slow=32						
	comp=Z,4.0nm,0.8s						
PAB	San Pablo	18.16	102	Pn	Pn	21 20 31.2	-2.0
ESBB	Sonseca Array	18.37	101	Pn	Pn	21 20 32.0	-3.6
ESDC	Sonseca Array	18.37	101	P	P	21 20 37.0	+1.4
	comp=Z,0.3nm,0.3s,baz=294,slow=13,SNR=11						
ESDC				LR	LR	21 26 03.8	
	comp=Z,550nm,21.0s,baz=320,slow=32						
	comp=Z,1.9nm,0.5s						
BORG	Borgarnes	19.31	8	LR	LR	21 26 11.8	
	comp=Z,185nm,19.7s,baz=164,slow=31						
IVI	Ivigtut	19.56	329	P	P	21 20 46.8	-1.7
IVI				IAmb	IAmb	21 20 58.3	
	comp=Z,58nm,1.3s						
MACI	Morro de la Ar	19.58	150	P	P	21 20 48.2	-1.0
MACI				IAmb	IAmb	21 20 48.3	
	comp=Z,91nm,1.4s						
MD01	Midelt array s	21.78	118		P	21 21 11.2	-1.7
MD31	MD31	21.78	118	P	P	21 21 13.1	+0.3
ECH	Echery	23.70	72	P	P	21 21 31.9	-0.7
ECH				IAmb	IAmb	21 21 49.1	
	comp=Z,52nm,1.9s						
DAVOX	Davos/Dischmat	25.75	74	LR	LR	21 31 01.1	
	comp=Z,185nm,19.7s,baz=260,slow=34						
SCHQ	Schefferville	26.33	304	P	P	21 21 56.9	+0.3
	comp=Z,6.8nm,0.7s,baz=111,slow=5.8,SNR=6.6						
SCHQ				LR	LR	21 30 13.9	
	comp=Z,455nm,20.9s,baz=108,slow=32						
	comp=Z,6.8nm,0.7s						
SCHQ	Schefferville	26.33	304	P	P	21 21 57.0	+0.4
NOA	NORSAR Array B	27.19	42	P	P	21 22 04.8	+0.5
	comp=Z,1.9nm,1.0s,baz=254,slow=9.6,SNR=2.5						
NOA				LR	LR	21 31 05.1	
	comp=Z,76nm,20.1s,baz=250,slow=33						
	comp=Z,1.9nm,1.0s						
GERES	GERESS Array B	27.91	69	P	P	21 22 11.6	+0.7
	comp=Z,1.0nm,0.9s,baz=287,slow=9.2,SNR=4.9						
GERES				LR	LR	21 32 19.7	
	comp=Z,210nm,19.9s,baz=272,slow=34						
	comp=Z,1.0nm,0.9s						
HFS	Hagfors	28.15	44	LR	LR	21 32 35.4	
	comp=Z,97nm,18.2s,baz=249,slow=35						
D62A	Allapoint, All	28.37	288	P	P	21 22 14.7	-0.2
FRB	Frobisher Bay	28.97	323	LR	LR	21 30 59.5	
	comp=Z,299nm,19.1s,baz=100,slow=30						
UPC	Upice	29.14	65	*e*P	P	21 22 22.7	+0.9
DPC	Dobruska-Polom	29.36	65	*e*P	P	21 22 24.6	+0.8
KEST	Kesra	29.49	97	LR	LR	21 32 27.1	
	comp=Z,499nm,21.7s,baz=267,slow=33						
KRLC	Kraliky	29.70	65	*e*P	P	21 22 27.9	+1.2
VRAC	Vranov	29.70	67	LR	LR	21 33 55.7	
	comp=Z,276nm,18.6s,baz=268,slow=36						
STEB	Steborice	30.35	65	*e*P	P	21 22 34.0	+1.5
M65A	Busby, Falmout	31.15	278	P	P	21 22 39.2	-0.4
	baz=67						
R9F13	Warsaw-Wawer	32.09	60	*e*P	P	21 23 50.0	+62
VAE	Valguarnera	32.16	90	LR	LR	21 35 40.7	
	comp=Z,252nm,18.6s,baz=300,slow=36						
TRQ	Mont Tremblant	32.25	288	P	P	21 22 49.6	+0.3
TRQ				IAmb	IAmb	21 22 57.5	
	comp=Z,23nm,1.3s						
SUW	Suwalki	33.08	57	P	P	21 22 56.0	-0.3
FINES	FINESS Array B	34.33	43	P	P	21 23 07.5	+0.4
	comp=Z,3.8nm,0.9s,baz=247,slow=10,SNR=5.6						
FINES				LR	LR	21 35 05.7	
	comp=Z,85nm,20.2s,baz=262,slow=33						
	comp=Z,3.8nm,0.9s						
FINES	FINESS Array B	34.33	43	P	P	21 23 06.5	-0.6
TULEG	Thule	35.13	344	P	P	21 23 13.6	-0.3
ARCES	ARCESS Array B	35.25	29	P	P	21 23 14.9	-0.2
	comp=Z,4.3nm,1.0s,baz=270,slow=6.9,SNR=5.6						
ARCES				LR	LR	21 35 45.8	
	comp=Z,63nm,20.7s,baz=290,slow=33						
	comp=Z,4.3nm,1.0s						
ARCES	ARCESS Array B	35.25	29	P	P	21 23 14.3	-0.8
POIN	Pond Inlet	35.39	337	P	P	21 23 16.2	0.0
ILON	Igloolik, Nuna	35.61	330	P	P	21 23 18.2	+0.1
BURAR	Bucovina Array	35.68	68	P	P	21 23 18.9	-0.3
MNK	Minsk	35.74	55	*i* P	P	21 23 18.4	-1.0
	comp=E,16nm,1.1s						
MNK				*i* P	P	21 23 18.4	-1.0
	comp=N,11nm,0.8s						
MNK				*i* P	P	21 23 18.4	-1.0
	comp=Z,4.0nm,0.6s,baz=279						
MNK				*i* PP	PnPn	21 24 38.1	-1.0
MNK				*i* PPP	PPP	21 24 51.5	
MNK				*i* S	S	21 28 55.9	+0.1
MNK				*i* SS	SnSn	21 31 18.6	+1.0
MNK				*i* SSS	SSS	21 31 34.8	
MNK				*i* LQ	LQ	21 35 13.8	
MNK				*i* LR	LR	21 38 11.4	
MNK				*i* LRM	MLR	21 39 22.9	
	comp=Z,102nm,17.0s						
MNK				*i* LRM	MLR	21 40 04.1	
	comp=N,89nm,15.3s						
MNK				*i* LRM	MLR	21 40 11.7	
	comp=E,240nm,19.8s						
SPB2	Spitsbergen Ar	36.59	14	P	P	21 23 26.2	-0.2
MLR	Muntele Rosu	36.84	71	LR	LR	21 39 35.7	
	comp=E,174nm,18.2s,baz=272,slow=38						
AKASG	Malin Array Be	37.35	61	P	P	21 23 33.1	-0.1
	comp=E,2.7nm,0.7s,baz=284,slow=8.6,SNR=5.4						
AKASG				LR	LR	21 38 36.9	
	comp=E,78nm,21.4s,baz=260,slow=36						
	comp=E,2.7nm,0.7s						
RES	Resolute Bay	40.49	338	LR	LR	21 38 13.5	
	comp=E,176nm,20.3s,baz=47,slow=32						
RES	Resolute Bay	40.49	338		P	21 23 59.5	+0.3
TORD	Torodi Ar. Bea	40.89	133	P	P	21 24 03.9	+0.7
	comp=E,7.6nm,0.9s,baz=336,slow=7.0,SNR=27						
	comp=E,7.6nm,0.9s						
TORD	Torodi Ar. Bea	40.89	133	P	P	21 24 02.8	-0.3
BLKN	Baker Lake	40.95	322	P	P	21 24 02.9	-0.2
BLKN				IAmb	IAmb	21 24 51.6	
	comp=Z,30nm,2.0s						
FCC	Fort Churchill	40.96	313	P	P	21 24 03.2	0.0
FCC				IAmb	IAmb	21 24 10.5	
	comp=Z,27nm,1.6s						
SJG	San Juan	42.18	242	LR	LR	21 37 55.8	
	comp=Z,63nm,20.9s,baz=25,slow=31						
TKL	Tuckaleechee C	42.97	277	LR	LR	21 40 54.8	
	comp=Z,125nm,19.3s,baz=66,slow=34						
DBIC	Dimbokro	43.66	146	P	P	21 24 26.8	+1.1
	comp=Z,4.3nm,0.8s,baz=337,slow=4.2,SNR=3.3						
	comp=Z,4.3nm,0.8s						
DBIC	Dimbokro	43.66	146	P	P	21 24 25.4	-0.2
DBIC				IAmb	IAmb	21 24 56.3	
	comp=Z,26nm,1.6s						
BRTR	Keskin Array B	44.39	75	P	P	21 24 33.1	+1.6
	comp=Z,0.5nm,0.7s,baz=272,slow=4.5,SNR=3.8						
BRTR				PcP	PcP	21 26 15.8	+0.6
	comp=Z,1.1nm,1.0s,baz=241,slow=4.1,SNR=4.1						
BRTR				LR	LR	21 43 34.3	
	comp=Z,81nm,19.6s,baz=290,slow=37						
	comp=Z,0.5nm,0.7s						
BRTR	Keskin Array B	44.39	75	P	P	21 24 31.1	-0.5
ULM	Lac du Bonnet	44.44	302	P	P	21 24 33.0	+1.4
	comp=Z,1.8nm,0.8s,baz=73,slow=8.8,SNR=3.5						
ULM				LR	LR	21 41 22.4	
	comp=Z,288nm,18.8s,baz=74,slow=34						
	comp=Z,1.8nm,0.8s						
ULM	Lac du Bonnet	44.44	302	P	P	21 24 32.4	+0.8
ULM				IAmb	IAmb	21 26 01.4	
	comp=Z,35nm,1.8s						
SPMN	Marine on St.	44.54	294		P	21 24 33.1	+0.6
SPMN				IAmb	IAmb	21 24 34.5	
	comp=Z,8.8nm,0.7s						
MDP	Montagnes des	46.02	216	LR	LR	21 39 56.9	
	comp=Z,68nm,18.5s,baz=2.5,slow=31						
FFC	Flin Flon	46.28	309	P	P	21 24 46.2	+0.1
FFC				IAmb	IAmb	21 24 50.4	
	comp=Z,14nm,1.5s						
ECSD	EROS Data Cent	47.65	294	P	P	21 24 57.4	+0.4
ECSD				IAmb	IAmb	21 24 59.0	
	comp=Z,5.9nm,0.9s						
KBZ	Khabaz	48.58	66	P	P	21 25 03.5	-0.6
	comp=Z,1.7nm,0.9s,baz=283,slow=6.2,SNR=3.7						
KBZ				LR	LR	21 46 18.2	
	comp=Z,72nm,19.9s,baz=314,slow=37						
	comp=Z,1.7nm,0.9s						
MMAI	Mount Meron Ar	49.12	82	P	P	21 25 09.2	+0.6
	comp=Z,0.7nm,0.5s,baz=285,slow=5.7,SNR=2.9						
	comp=Z,0.7nm,0.5s						
YKA	Yellowknife Ar	49.48	322	P	P	21 25 11.0	+0.2
	comp=Z,1.2nm,1.0s,baz=66,slow=6.4,SNR=8.6						
YKA				PcP	PcP	21 26 32.6	0.0
	comp=Z,0.5nm,0.8s,baz=56,slow=3.4,SNR=6.3						
YKA				LR	LR	21 42 37.4	
	comp=Z,156nm,18.6s,baz=57,slow=32						
	comp=Z,1.2nm,1.0s						
C36M	Paulatuk	50.21	333	P	P	21 25 14.8	-1.4
	baz=65						
ARTI	Arti	51.60	45	LR	LR	21 45 37.7	
	comp=Z,53nm,18.1s,baz=310,slow=34						
ARTI	Arti	51.60	45		P	21 25 26.5	-0.4
SDV	Santo Domingo	52.05	239	LR	LR	21 45 17.6	
	comp=Z,53nm,19.8s,baz=42,slow=33						
WRGLY	Wrigley	52.80	326	P	P	21 25 34.8	-0.9
	baz=61						
INK	Inuvik	53.71	334	LR	LR	21 46 40.5	
	comp=Z,138nm,19.1s,baz=8.5,slow=34						
INK	Inuvik	53.71	334		P	21 25 41.9	-0.4
INK	Inuvik	53.71	334	P	P	21 25 42.2	-0.2
	baz=56,SNR=5.6						
F31M	Tsiigehtchic	54.27	333	P	P	21 25 45.5	-0.9
	baz=56						
AKTO	Aktyubinsk	54.30	52	LR	LR	21 48 37.2	
	comp=Z,89nm,19.1s,baz=152,slow=36						
H10N2	ASCENSION HYDR	54.65	164	T	T	22 24 29.4	
	baz=349,slow=75,SNR=8.9						
H10N3	ASCENSION HYDR	54.66	164	T	T	22 24 29.0	
	baz=349,slow=75,SNR=9.0						
D28M	Stokes Point	54.67	336	P	P	21 25 48.8	-0.5
	baz=53,SNR=6.9						
H10N1	ASCENSION HYDR	54.67	164	T	T	22 24 32.3	
	baz=349,slow=75,SNR=9.7						
G31M	Satah River	54.73	332		P	21 25 49.7	0.0
G31M				IAmb	IAmb	21 25 50.7	
	comp=Z,12nm,0.9s						
G31M	Satah River	54.73	332	P	P	21 25 47.9	-1.9
	baz=55,SNR=6.9						
F30M	Barrier River	54.81	334		P	21 25 50.5	+0.1
F30M	Barrier River	54.81	334	P	P	21 25 49.6	-0.8
	baz=54						
E29M	Blow River	54.99	335		P	21 25 51.5	-0.2
E29M				IAmb	IAmb	21 25 52.8	
	comp=Z,5.8nm,0.8s						
E29M	Blow River	54.99	335	P	P	21 25 51.4	-0.2
	baz=53,SNR=6.1						
G30M	tAoh Zraii Nji	55.32	333	P	P	21 25 54.2	+0.1
G30M	tAoh Zraii Nji	55.32	333	P	P	21 25 53.7	-0.4
	baz=54						
E28M	Babbage River	55.34	336		P	21 25 54.3	+0.1
E28M				IAmb	IAmb	21 25 55.4	
	comp=Z,7.6nm,0.8s						
E28M	Babbage River	55.34	336	P	P	21 25 53.5	-0.7
	baz=52,SNR=9.1						
D27M	Malcolm River	55.35	337	P	P	21 25 54.4	+0.1
D27M				IAmb	IAmb	21 25 56.0	
	comp=Z,7.4nm,0.8s						
D27M	Malcolm River	55.35	337	P	P	21 25 54.0	-0.3
	baz=51						
H31M	Peel River	55.40	331	P	P	21 25 54.0	-0.7
	baz=54						
NRIK	Noril'sk	55.77	23	P	P	21 25 57.8	+0.5
	comp=Z,1.2nm,0.2s,baz=298,slow=4.7,SNR=5.0						
	comp=Z,1.2nm,0.2s						
NRIK	Noril'sk	55.77	23		P	21 25 57.6	+0.3
TOAD	Toad River Com	55.81	321	P	P	21 25 57.4	-0.4
	baz=57						
EPYK	Eagle Plains	55.85	333		P	21 25 57.6	-0.3

EPYK				IAmb	IAmb	21 26 04.2	
	comp=Z,13nm,1.1s						
EPYK	**Eagle Plains**	**55.85**	**333**	P	**P**	**21 25 56.9**	**-1.0**
	baz=53						
C27K	**Jago River**	**55.85**	**338**	P	**P**	**21 25 58.0**	**+0.2**
C27K				IAmb	IAmb	21 25 59.4	
	comp=Z,6.2nm,0.8s						
C27K	**Jago River**	**55.85**	**338**	P	**P**	**21 25 57.6**	**-0.3**
	baz=49						
G29M	**Pine Creek**	**55.93**	**334**	P	**P**	**21 25 58.3**	**-0.2**
	baz=52						
C26K	**Camden Bay**	**55.98**	**338**	P	**P**	**21 25 58.5**	**-0.2**
	baz=48						
AB31	**Akbulak array**	**55.98**	**52**		**P**	**21 25 59.1**	**0.0**
ABKAR	**Akbulak array**	**55.98**	**52**		**P**	**21 25 59.6**	**+0.6**
F28M	**Old Crow**	**56.06**	**335**		**P**	**21 25 59.3**	**-0.1**
F28M				IAmb	IAmb	21 26 00.3	
	comp=Z,7.6nm,0.8s						
F28M	**Old Crow**	**56.06**	**335**	P	**P**	**21 25 58.9**	**-0.5**
	baz=51,SNR=7.2						
E27K	**Coleen River**	**56.20**	**336**	P	**P**	**21 25 60.0**	**-0.4**
	baz=50						
PDAR	**Pinedale Array**	**56.27**	**299**	P	**P**	**21 26 00.5**	**-1.0**
	comp=Z,1.1nm,0.9s,baz=49,slow=9.2,SNR=7.5						
PDAR				LR	LR	21 48 25.6	
	comp=Z,225nm,19.9s,baz=36,slow=34						
	comp=Z,1.1nm,0.9s						
PDAR	**Pinedale Array**	**56.27**	**299**	P	**P**	**21 26 00.1**	**-1.4**
I30M	**Mount Dempster**	**56.43**	**331**	P	**P**	**21 26 01.2**	**-1.0**
	baz=53						
H29M	**Whitestone**	**56.47**	**333**	P	**P**	**21 26 01.0**	**-1.3**
	baz=52						
WTLY	**Watson Lake, Y**	**56.61**	**324**	P	**P**	**21 26 03.2**	**-0.3**
	baz=55						
D25K	**Kavik River**	**56.76**	**338**	P	**P**	**21 26 03.9**	**-0.5**
	baz=47						
J30M	**Hart River**	**56.81**	**331**	P	**P**	**21 26 04.8**	**-0.1**
	baz=52						
I29M	**Ogilvie Camp,**	**56.98**	**332**	P	**P**	**21 26 05.8**	**-0.2**
	baz=51,SNR=8.5						
C24K	**Franklin Bluff**	**57.07**	**339**	P	**P**	**21 26 06.0**	**-0.5**
	baz=46,SNR=6.2						
G27K	**Doyon Strip**	**57.11**	**334**	P	**P**	**21 26 06.3**	**-0.6**
	baz=50						
FARO	**Faro, Yukon**	**57.16**	**328**	P	**P**	**21 26 06.6**	**-0.8**
	baz=53						
F26K	**Sheenjek River**	**57.25**	**336**	P	**P**	**21 26 07.9**	**0.0**
	baz=48						
E25K	**Arctic Village**	**57.36**	**337**	P	**P**	**21 26 08.5**	**-0.1**
	baz=47,SNR=6.3						
H27K	**Steamboat Moun**	**57.45**	**334**	P	**P**	**21 26 09.3**	**0.0**
	baz=49						
I28M	**Miner Creek**	**57.46**	**333**	P	**P**	**21 26 09.1**	**-0.3**
	baz=50						
C23K	**Itkillik River**	**57.46**	**340**	P	**P**	**21 26 09.2**	**-0.1**
	baz=44						
ROSC	**El Rosal**	**57.47**	**239**	LR	LR	21 47 11.0	
	comp=Z,65nm,21.6s,baz=66,slow=32						
D24K	**Happy Valley**	**57.50**	**339**	P	**P**	**21 26 09.1**	**-0.5**
	baz=45,SNR=8.4						
RDMU	**Red Mountain**	**57.51**	**297**	P	**P**	**21 26 10.5**	**+0.2**
RDMU				IAmb	IAmb	21 26 18.4	
	comp=Z,13nm,1.4s						
J29N	**Klondike Camp**	**57.53**	**331**	P	**P**	**21 26 09.8**	**-0.1**
	baz=51						
M31M	**Drury Creek, Y**	**57.57**	**328**	P	**P**	**21 26 08.6**	**-1.6**
	baz=52						
A22K	**Sinclair Lake**	**57.59**	**342**	P	**P**	**21 26 08.4**	**-1.7**
	baz=41						
NEW	**Newport**	**57.63**	**308**	LR	LR	21 48 34.7	
	comp=Z,140nm,19.7s,baz=58,slow=34						
G26K	**Porcupine Rive**	**57.65**	**335**	P	**P**	**21 26 09.9**	**-0.7**
	baz=48						
K29M	**Barlow Dome**	**57.67**	**330**	P	**P**	**21 26 11.0**	**0.0**
	baz=51						
A21K	**Barrow**	**57.70**	**343**	P	**P**	**21 26 10.8**	**0.0**
	baz=40,SNR=5.8						
N32M	**Quiet Lake**	**57.71**	**326**	P	**P**	**21 26 10.9**	**-0.3**
	baz=53						
F25K	**Christian Rive**	**57.74**	**336**	P	**P**	**21 26 10.4**	**-1.0**
	baz=47						
B22K	**Teshekpuk Lake**	**57.75**	**341**	P	**P**	**21 26 10.3**	**-1.0**
	baz=42						
I27K	**Kandik River**	**57.89**	**333**	P	**P**	**21 26 12.2**	**-0.3**
	baz=49						
R33M	**Jennings River**	**57.93**	**324**	P	**P**	**21 26 12.8**	**-0.1**
	baz=53						
TOLK	**Toolik Lake Re**	**58.06**	**339**	P	**P**	**21 26 13.9**	**+0.4**
TOLK				IAmb	IAmb	21 26 20.9	
	comp=Z,12nm,1.1s						
TOLK	**Toolik Lake Re**	**58.06**	**339**	P	**P**	**21 26 13.3**	**-0.3**
	baz=44,SNR=6.0						
D23K	**Nanushuk River**	**58.11**	**339**	P	**P**	**21 26 13.5**	**-0.3**
	baz=44						
DAWY	**Dawson**	**58.17**	**331**	P	**P**	**21 26 13.9**	**-0.5**
	baz=50,SNR=6.1						
P33M	**Teslin, Yukon**	**58.18**	**325**	P	**P**	**21 26 14.2**	**-0.4**
	baz=52						
E24K	**Your Creek**	**58.18**	**338**	P	**P**	**21 26 14.0**	**-0.4**
	baz=45						
M30M	**Minto, Yukon**	**58.22**	**329**	P	**P**	**21 26 14.3**	**-0.5**
	baz=51						
L29M	**L29M**	**58.35**	**330**	P	**P**	**21 26 15.6**	**-0.1**
	baz=50						
F24K	**Squaw Lake**	**58.41**	**337**	P	**P**	**21 26 15.5**	**-0.6**
	baz=45						
G25K	**Bearman Lake**	**58.45**	**336**	P	**P**	**21 26 16.1**	**0.0**
	baz=46						
E23K	**Chandalar**	**58.49**	**338**	P	**P**	**21 26 16.4**	**-0.2**
	baz=44						
N31M	**Braeburn, Yuko**	**58.53**	**328**	P	**P**	**21 26 16.1**	**-0.9**
	baz=51						
B21K	**Ikpikpuk River**	**58.56**	**341**	P	**P**	**21 26 16.2**	**-0.7**
	baz=41						
I26K	**Coal Creek Min**	**58.57**	**334**	P	**P**	**21 26 16.1**	**-1.0**
	baz=48						
D22K	**Ayikyak River**	**58.66**	**340**	P	**P**	**21 26 17.1**	**-0.6**
	baz=42						
WHY	**Whitehorse**	**58.71**	**327**	P	**P**	**21 26 17.5**	**-0.8**
	baz=51						
Q32M	**Nakina River**	**58.72**	**324**	P	**P**	**21 26 18.1**	**-0.4**
	baz=52						
ANMO	**Albuquerque**	**58.78**	**290**	LR	LR	21 51 01.5	
	comp=Z,221nm,19.2s,baz=52,slow=35						
B20K	**Meade River**	**58.83**	**342**	P	**P**	**21 26 17.9**	**-0.9**
	baz=39						
G24K	**Hadweenzic Riv**	**58.88**	**336**	P	**P**	**21 26 19.4**	**+0.1**
	baz=45						
S34M	**Telegraph Cree**	**58.89**	**323**	P	**P**	**21 26 19.4**	**0.0**
	baz=52						
M29M	**Somme Creek**	**58.90**	**330**	P	**P**	**21 26 19.3**	**-0.3**
	baz=50						
P32M	**Atlin**	**58.92**	**325**	P	**P**	**21 26 19.6**	**-0.1**
	baz=52						
C21K	**Knifeblade Rid**	**58.95**	**341**	P	**P**	**21 26 19.6**	**-0.1**
	baz=40						
E22K	**Anaktuvuk Pass**	**59.00**	**339**		**P**	**21 26 20.3**	**+0.2**
E22K	**Anaktuvuk Pass**	**59.00**	**339**	P	**P**	**21 26 20.2**	**+0.1**
	baz=42						
N30M	**Aishikik Lake**	**59.04**	**328**	P	**P**	**21 26 20.1**	**-0.4**
	baz=50						
T35M	**Bob Quinn**	**59.08**	**321**	P	**P**	**21 26 21.1**	**+0.3**
	baz=53						
O30N	**Mendenhall**	**59.10**	**327**	P	**P**	**21 26 20.9**	**0.0**
	baz=50						
BORK	**Borovoye**	**59.24**	**44**		**P**	**21 26 22.2**	**+0.3**
BORK				IAmb	IAmb	21 26 24.1	
	comp=Z,8.1nm,0.8s						
J26L	**Joseph Creek**	**59.24**	**333**	P	**P**	**21 26 21.5**	**-0.4**
	baz=47						
COLD	**Coldfoot**	**59.25**	**338**	P	**P**	**21 26 21.2**	**-0.6**
	baz=43,SNR=5.7						
BVAR	**Borovoye Array**	**59.29**	**44**	P	**P**	**21 26 23.7**	**+1.5**
	comp=Z,8.1nm,0.9s,baz=310,slow=5.6,SNR=33						
	comp=Z,8.1nm,0.9s						
E21K	**Killik River**	**59.30**	**340**	P	**P**	**21 26 21.9**	**-0.3**
	baz=41						
A19K	**Wainwright**	**59.49**	**343**	P	**P**	**21 26 23.2**	**-0.2**
	baz=36						
F22K	**John River**	**59.56**	**338**	P	**P**	**21 26 22.8**	**-1.2**
	baz=42						
G23K	**Bananza Creek**	**59.58**	**337**	P	**P**	**21 26 22.4**	**-1.8**
	baz=43						
HYT	**Haines Junctio**	**59.60**	**328**	P	**P**	**21 26 24.6**	**+0.1**
	baz=50						
H24K	**Noodor Dome**	**59.61**	**336**	P	**P**	**21 26 24.4**	**+0.1**
	baz=44						
SKAG	**Skagway**	**59.64**	**326**	P	**P**	**21 26 24.0**	**-0.6**
	baz=50						
L27K	**Beaver Creek,**	**59.65**	**331**	P	**P**	**21 26 24.6**	**-0.1**
	baz=48						
YUK4	**Talbot Arm**	**59.68**	**329**	P	**P**	**21 26 23.1**	**-2.0**
	baz=49						
D20K	**Etivluk River**	**59.72**	**341**	P	**P**	**21 26 24.4**	**-0.6**
	baz=39						
J25K	**Salcha River,**	**59.73**	**334**	P	**P**	**21 26 24.9**	**-0.3**
	baz=46						
SCRK	**Sand Creek**	**59.74**	**333**		**P**	**21 26 26.1**	**+0.7**
SCRK				IAmb	IAmb	21 26 27.4	
	comp=Z,8.6nm,0.9s						
SCRK	**Sand Creek**	**59.74**	**333**	P	**P**	**21 26 24.3**	**-1.0**
	baz=46,SNR=7.1						
BVCY	**Beaver Creek**	**59.76**	**330**	P	**P**	**21 26 24.5**	**-0.9**
	baz=48						
SBM	**South Baldy**	**59.84**	**289**	P	**P**	**21 26 27.5**	**+0.7**
YUK6	**Outpost Mounta**	**59.84**	**328**	P	**P**	**21 26 25.3**	**-0.9**
	baz=49						
P30M	**Million Dollar**	**59.85**	**327**	P	**P**	**21 26 25.8**	**-0.4**
	baz=50						
E20K	**Nigu River**	**59.98**	**340**	P	**P**	**21 26 26.3**	**-0.5**
	baz=39						
POKR	**Poker Plat Res**	**60.00**	**335**	P	**P**	**21 26 26.9**	**-0.1**
	baz=44						
YUK3	**Moose Creek**	**60.05**	**330**	P	**P**	**21 26 27.3**	**-0.4**
	baz=48						
PLBC	**Pleasant Camp**	**60.05**	**326**	P	**P**	**21 26 27.6**	**+0.2**
	baz=50						
C19K	**Lookout Ridge**	**60.07**	**342**	P	**P**	**21 26 27.7**	**+0.3**
	baz=37						
R32K	**Eaglecrest**	**60.07**	**324**	P	**P**	**21 26 27.1**	**-0.5**
	baz=50						
IL31		**60.08**	**334**		**P**	**21 26 27.7**	**+0.2**
ILAR	**Eielson Array**	**60.08**	**334**	P	**P**	**21 26 28.2**	**+0.6**
	comp=Z,2.5nm,0.8s,baz=45,slow=5.8,SNR=35						
ILAR				PcP	**PcP**	**21 27 13.8**	**+0.5**
	comp=Z,1.3nm,0.9s,baz=35,slow=2.3,SNR=5.1						
	comp=Z,2.5nm,0.8s						
ILAR	**Eielson Array**	**60.08**	**334**	P	**P**	**21 26 28.0**	**+0.5**
F21K	**Alatna River**	**60.11**	**339**	P	**P**	**21 26 27.5**	**-0.3**
	baz=41						
JTS	**Las Juntas de**	**60.12**	**253**	LR	LR	21 49 29.3	
	comp=Z,24nm,20.0s,baz=71,slow=33						
YUK8	**Steele Glacier**	**60.13**	**329**	P	**P**	**21 26 28.2**	**-0.1**
	baz=48						
M27K	**Edge Creek, AK**	**60.15**	**331**	P	**P**	**21 26 28.3**	**+0.1**
	baz=47						
RIDG	**Independent Ri**	**60.18**	**333**	P	**P**	**21 26 28.8**	**+0.5**
	baz=46						
L26K	**Log Cabin Wild**	**60.19**	**332**	P	**P**	**21 26 28.2**	**-0.1**
	baz=46						
D19K	**Kuna River**	**60.23**	**341**	P	**P**	**21 26 28.8**	**+0.2**
	baz=38,SNR=5.6						
COLA	**College**	**60.30**	**335**	P	**P**	**21 26 29.2**	**+0.2**
	baz=44						
TXAR	**Lajitas Array**	**60.32**	**283**	P	**P**	**21 26 30.8**	**+0.9**
	comp=Z,1.6nm,0.7s,baz=46,slow=9.0,SNR=11						
TXAR				LR	LR	21 52 13.2	
	comp=Z,472nm,20.0s,baz=50,slow=36						
	comp=Z,1.6nm,0.7s						
B18K	**Kokolik River**	**60.32**	**343**	P	**P**	**21 26 29.4**	**+0.2**
	baz=35						
O29M	**Mount Kennedy**	**60.34**	**328**	P	**P**	**21 26 29.3**	**-0.2**
	baz=49						
HDA	**Harding Lake**	**60.36**	**334**	P	**P**	**21 26 28.9**	**-0.6**
	baz=44						
K24K	**Donnelly Dome**	**60.43**	**333**	P	**P**	**21 26 29.5**	**-0.5**
	baz=45,SNR=6.1						
CCB	**Clear Creek Bu**	**60.45**	**335**		**P**	**21 26 30.1**	**+0.1**
P29M	**Windy Craggy**	**60.47**	**327**	P	**P**	**21 26 29.4**	**-0.9**
	baz=49						
M26K	**Nabesna, AK**	**60.50**	**331**	P	**P**	**21 26 29.9**	**-0.6**
	baz=46						
I23K	**Minto, Yukon-K**	**60.54**	**336**	P	**P**	**21 26 30.5**	**-0.2**
	baz=43,SNR=5.6						
H22K	**Ishtalitna Cre**	**60.55**	**337**	P	**P**	**21 26 30.0**	**-0.8**
	baz=42						
S32K	**Killisnoo**	**60.61**	**324**	P	**P**	**21 26 30.2**	**-1.0**
	baz=50						
O28M	**Mount Upton**	**60.63**	**329**	P	**P**	**21 26 30.0**	**-1.7**
	baz=48						
G21K	**Allakaket**	**60.65**	**338**	P	**P**	**21 26 30.6**	**-0.8**
	baz=40						
WRH	**Wood River Hil**	**60.66**	**335**	P	**P**	**21 26 31.9**	**+0.4**
WRH				IAmb	IAmb	21 26 33.1	
	comp=Z,9.2nm,0.8s						
V35K	**Ketchikan**	**60.70**	**321**	P	**P**	**21 26 31.2**	**-0.7**
	baz=51						
C18K	**Utukok River**	**60.78**	**342**	P	**P**	**21 26 31.9**	**-0.4**
	baz=35,SNR=5.8						
F20K	**Avaraart Lake**	**60.81**	**339**	P	**P**	**21 26 32.0**	**-0.4**
	baz=39						
E19K	**Redstone River**	**60.85**	**340**	P	**P**	**21 26 31.7**	**-1.1**
	baz=38						
NEA2	**Nenana**	**60.86**	**335**	P	**P**	**21 26 32.2**	**-0.7**
	baz=43,SNR=10						
U33K	**Whale Pass**	**60.86**	**322**	P	**P**	**21 26 32.4**	**-0.6**
	baz=50						
CTG	**Chitna Glacier**	**60.91**	**329**	P	**P**	**21 26 31.9**	**-1.5**
	baz=47						
PAX	**Paxson**	**60.92**	**332**	P	**P**	**21 26 32.0**	**-1.5**
	baz=45						
S31K	**Pelican**	**60.97**	**325**	P	**P**	**21 26 31.7**	**-1.9**
	baz=49						
BBB	**Bella Bella**	**61.03**	**316**	LR	LR	21 50 50.9	
	comp=Z,166nm,18.5s,baz=34,slow=34						
PINM	**Pinnacle**	**61.10**	**328**	P	**P**	**21 26 33.2**	**-1.5**
	baz=47						
H21K	**Melozitna Rive**	**61.12**	**337**	P	**P**	**21 26 33.8**	**-0.8**
	baz=41						
IMAR	**Indian Mountai**	**61.12**	**338**	P	**P**	**21 26 35.2**	**+0.6**
SIT	**Sitka**	**61.19**	**324**	P	**P**	**21 26 34.5**	**-0.7**
	baz=49						
MCARA	**McCarthy VSAT**	**61.21**	**330**	P	**P**	**21 26 34.7**	**-0.7**
	baz=46						
HARP	**HAARP**	**61.22**	**332**	P	**P**	**21 26 35.4**	**0.0**
	baz=45						
I21K	**Tanana**	**61.26**	**337**	P	**P**	**21 26 35.9**	**+0.4**
	baz=41						
CRAG	**Craig**	**61.27**	**321**	P	**P**	**21 26 35.3**	**-0.4**
	baz=50						
C17K	**DeLong Mountai**	**61.34**	**343**	P	**P**	**21 26 35.7**	**-0.4**
	baz=34,SNR=5.7						
DHY	**Denali Highway**	**61.45**	**333**	P	**P**	**21 26 36.2**	**-0.9**
	baz=44						
MCK	**McKinley**	**61.45**	**334**	P	**P**	**21 26 36.6**	**-0.4**
	baz=43						
F19K	**Shaleruckik Mo**	**61.48**	**340**	P	**P**	**21 26 36.5**	**-0.4**
	baz=37						
N25K	**Chitina, Valde**	**61.60**	**331**	P	**P**	**21 26 36.8**	**-1.2**
	baz=45						
RDOG	**Red Dog Mine**	**61.64**	**343**	P	**P**	**21 26 37.7**	**-0.4**
	baz=34						
E18K	**Tukpahlearik C**	**61.66**	**341**	P	**P**	**21 26 38.6**	**+0.3**
	baz=36						
TIXI	**Tiksi**	**61.67**	**8**		**P**	**21 26 38.9**	**+0.7**
TIXI				IAmb	IAmb	21 26 40.8	
	comp=Z,6.0nm,0.8s						
CRQE	**Cirque**	**61.68**	**330**	P	**P**	**21 26 38.0**	**-0.6**
	baz=46						
M24K	**Tolsona, Glenn**	**61.77**	**332**	P	**P**	**21 26 38.6**	**-0.5**
	baz=44						
BPAW	**Bear Paw Mtn.**	**61.79**	**335**	P	**P**	**21 26 39.5**	**+0.3**
	baz=41						
H20K	**Anotleneega Mo**	**61.80**	**338**	P	**P**	**21 26 39.6**	**+0.3**
	baz=39						
G19K	**Purcell Mounta**	**61.86**	**339**	P	**P**	**21 26 39.5**	**-0.1**
	baz=38						
WAT6	**Susitna Watana**	**61.93**	**333**	P	**P**	**21 26 40.2**	**-0.1**
	baz=43						
C16K	**Lisburne Hills**	**61.95**	**344**	P	**P**	**21 26 40.1**	**0.0**
	baz=32						
D17K	**Noatak River**	**61.97**	**342**	P	**P**	**21 26 40.1**	**-0.2**
	baz=34						
WAT1	**Susitna Watana**	**62.00**	**334**	P	**P**	**21 26 40.7**	**+0.1**
	baz=43						
BMRM	**Bremner River**	**62.05**	**331**	P	**P**	**21 26 40.7**	**-0.4**
	baz=45						
TRF	**Thorofare Moun**	**62.07**	**335**		**P**	**21 26 41.6**	**+0.3**
TRF				IAmb	IAmb	21 26 48.3	
	comp=Z,9.3nm,0.9s						
TRF	**Thorofare Moun**	**62.07**	**335**	P	**P**	**21 26 40.4**	**-0.9**
	baz=42						
F18K	**Selawik**	**62.11**	**340**	P	**P**	**21 26 40.2**	**-1.0**
	baz=36,SNR=5.4						
KLU	**Klutina**	**62.12**	**331**	P	**P**	**21 26 40.4**	**-1.1**
	baz=44						
CMIG	**Matias Romero**	**62.16**	**266**	LR	LR	21 50 20.0	
	comp=Z,92nm,21.7s,baz=359,slow=33						
H19K	**Roundabout Mou**	**62.18**	**338**	P	**P**	**21 26 41.8**	**0.0**
	baz=38						
E17K	**Hotham Inlet**	**62.21**	**342**	P	**P**	**21 26 41.1**	**-0.8**
	baz=34						
I20K	**Naaghedeneel**	**62.24**	**337**	P	**P**	**21 26 41.5**	**-0.7**
	baz=39						
CHUM	**Lake Minchumin**	**62.34**	**336**	P	**P**	**21 26 43.0**	**+0.1**
	baz=40						
SCM	**Sheep Creek Mo**	**62.34**	**332**	P	**P**	**21 26 42.9**	**-0.1**
	baz=43						
G18K	**Tagagawik**	**62.44**	**340**	P	**P**	**21 26 43.0**	**-0.5**
	baz=36						
M23K	**Glacier View**	**62.50**	**332**	P	**P**	**21 26 41.8**	**-2.2**
	baz=43						
F17K	**Baldwin Pennin**	**62.61**	**341**	P	**P**	**21 26 41.9**	**-2.7**
	baz=35						
J20K	**Nowinta River**	**62.63**	**337**		**P**	**21 26 45.1**	**+0.3**
J20K	**Nowinta River**	**62.63**	**337**	P	**P**	**21 26 40.9**	**-3.9**
	baz=39						
KAIM	**Kayak Island**	**62.73**	**330**	P	**P**	**21 26 41.7**	**-3.8**
	baz=44						
EYAK	**Cordova Ski Ar**	**62.75**	**331**	P	**P**	**21 26 45.0**	**-0.6**
	baz=44						
CUT	**Chulitna**	**62.85**	**334**	P	**P**	**21 26 44.9**	**-1.4**
	baz=41						
GCSA	**Galena City Sc**	**62.91**	**338**	P	**P**	**21 26 45.0**	**-1.7**
	baz=37						
GLI	**Glacier Island**	**62.96**	**331**	P	**P**	**21 26 45.8**	**-1.3**
	baz=43						
H18K	**Honhosa River**	**62.97**	**339**	P	**P**	**21 26 46.3**	**-0.7**
	baz=36						
KNK	**Knik Glacier**	**63.02**	**332**	P	**P**	**21 26 48.2**	**+0.8**
KNK	**Knik Glacier**	**63.02**	**332**	P	**P**	**21 26 46.4**	**-1.1**
	baz=42						
PPLA	**Purkeypile**	**63.06**	**335**	P	**P**	**21 26 46.8**	**-1.0**
	baz=40						
PMR	**Palmer**	**63.10**	**333**	P	**P**	**21 26 47.1**	**-0.9**
	baz=42						
J19K	**Poorman**	**63.18**	**337**	P	**P**	**21 26 48.0**	**-0.5**
	baz=38						
G17K	**Kiwalik Mounta**	**63.24**	**340**	P	**P**	**21 26 48.5**	**-0.4**
	baz=35						
K20K	**Telida**	**63.24**	**336**	P	**P**	**21 26 48.1**	**-0.8**
	baz=39						
PWL	**Port Wells**	**63.39**	**332**	P	**P**	**21 26 49.5**	**-0.4**
	baz=42						
H17K	**Granite Mounta**	**63.53**	**339**	P	**P**	**21 26 50.3**	**-0.5**
	baz=35						
SKT	**Skwentna**	**63.56**	**334**		**P**	**21 26 51.1**	**+0.1**
SKT	**Skwentna**	**63.56**	**334**	P	**P**	**21 26 50.3**	**-0.7**
	baz=40						
RC01	**Rabbit Creek A**	**63.67**	**333**	P	**P**	**21 26 50.4**	**-1.4**
	baz=41						
SUA	**Susitna One**	**63.71**	**333**	P	**P**	**21 26 50.5**	**-1.6**
	baz=41						
P23K	**Montague Islan**	**63.71**	**331**	P	**P**	**21 26 51.5**	**-0.6**
	baz=42						
Q23K	**Middleton Isla**	**63.77**	**330**	P	**P**	**21 26 51.4**	**-1.0**
	baz=43						
BDFB	**Brasilia**	**63.88**	**202**	P	**P**	**21 26 55.9**	**+2.2**
	comp=Z,1.8nm,0.6s,baz=46,slow=6.7,SNR=4.5						
BDFB				LR	LR	21 51 03.1	
	comp=Z,108nm,19.3s,baz=334,slow=33						
	comp=Z,1.8nm,0.6s						
J18K	**Innoko River**	**63.89**	**337**	P	**P**	**21 26 52.2**	**-1.0**
	baz=37						
F15K	**North Star Dit**	**63.99**	**342**	P	**P**	**21 26 52.0**	**-1.8**
	baz=32						
M20K	**Styx River**	**64.12**	**335**	P	**P**	**21 26 54.1**	**-0.7**
	baz=39						
O22K	**Cooper Landing**	**64.13**	**332**	P	**P**	**21 26 54.5**	**-0.2**
	baz=41						
SEW	**Seward**	**64.32**	**332**	P	**P**	**21 26 55.1**	**-0.9**
	baz=41						
H16K	**Elim**	**64.34**	**340**	P	**P**	**21 26 55.6**	**-0.5**
	baz=33						
N20K	**Mount Spurr**	**64.37**	**334**	P	**P**	**21 26 55.5**	**-0.9**
	baz=40						
SPCR	**Spurr Chakacha**	**64.37**	**334**	P	**P**	**21 26 55.2**	**-1.3**
	baz=40						
CAPN	**Captain Cook N**	**64.37**	**333**	P	**P**	**21 26 55.3**	**-1.0**
	baz=40						
L19K	**White Mountain**	**64.39**	**336**	P	**P**	**21 26 54.9**	**-1.7**
	baz=38						
G15K	**Niukluk**	**64.46**	**341**	P	**P**	**21 26 55.6**	**-1.3**
	baz=32						
J17K	**VABM Dome**	**64.58**	**338**	P	**P**	**21 26 56.7**	**-0.9**
	baz=35						
I17K	**Unalakleet**	**64.59**	**339**	P	**P**	**21 26 57.1**	**-0.6**
	baz=34						
KURK	**Kurchatov**	**64.70**	**42**		**P**	**21 26 58.6**	**0.0**
KURK				IAmb	IAmb	21 27 00.2	
	comp=Z,8.0nm,0.8s						
KURBB	**Kurchatov Arra**	**64.72**	**43**	P	**P**	**21 26 59.4**	**+0.6**
	comp=Z,7.1nm,0.8s,baz=315,slow=7.0,SNR=47						
	comp=Z,7.1nm,0.8s						
YBH	**Yreka Blue Hor**	**64.72**	**304**	LR	LR	21 52 57.6	
	comp=Z,9.8nm,20.1s,baz=44,slow=34						
TNA	**Tin City**	**64.81**	**343**	P	**P**	**21 26 58.8**	**-0.4**
	baz=30						
L18K	**Granite Mounta**	**64.89**	**336**	P	**P**	**21 26 59.0**	**-0.7**
	baz=37						
K17K	**Iditarod**	**64.93**	**337**	P	**P**	**21 26 59.1**	**-0.8**
	baz=36						
J16K	**Anvik River**	**65.06**	**339**	P	**P**	**21 26 57.7**	**-3.2**
	baz=34						
ANM	**Nome**	**65.13**	**341**	P	**P**	**21 26 59.5**	**-1.7**
	baz=31						
MPMC	**Manual Prospec**	**65.19**	**297**	P	**P**	**21 27 02.5**	**+0.2**
MPMC				IAmb	IAmb	21 27 10.8	
	comp=Z,16nm,1.8s						
M18K	**Stony River**	**65.22**	**335**	P	**P**	**21 26 59.2**	**-2.7**
	baz=37						
ZAA0	**Zalesovo Array**	**65.25**	**37**		**P**	**21 27 02.1**	**-0.1**
ZAA0				IAmb	IAmb	21 27 04.5	
	comp=Z,9.7nm,1.4s						
ZALV	**Zalesovo Beam**	**65.25**	**37**	P	**P**	**21 27 02.9**	**+0.7**
	comp=Z,2.2nm,0.6s,baz=303,slow=8.2,SNR=14						
	comp=Z,2.2nm,0.6s						
ZALV	**Zalesovo Beam**	**65.25**	**37**		**P**	**21 27 02.1**	**-0.1**
N19K	**Bonanza Creek**	**65.36**	**334**	P	**P**	**21 27 01.7**	**-1.3**
	baz=38						
L17K	**Donlin**	**65.40**	**337**	P	**P**	**21 27 01.6**	**-1.4**
	baz=36						
KK31	**Karatay Array**	**65.53**	**53**		**P**	**21 27 04.5**	**+0.3**
KK31				IAmb	IAmb	21 27 06.3	
	comp=Z,4.5nm,0.8s						
KKAR	**Karatay Array**	**65.53**	**53**		**P**	**21 27 04.6**	**+0.4**
M17K	**Holitna River**	**65.76**	**336**	P	**P**	**21 27 04.3**	**-1.1**
	baz=36						
O19K	**Port Alsworth**	**65.80**	**334**	P	**P**	**21 27 04.0**	**-1.6**
	baz=38						
N18K	**Kilae Creek**	**65.89**	**335**	P	**P**	**21 27 04.5**	**-1.7**
	baz=37						
P19K	**Oil Pt**	**65.89**	**333**	P	**P**	**21 27 04.3**	**-2.0**
	baz=38						
L16K	**Owhat River**	**66.07**	**337**	P	**P**	**21 27 05.2**	**-2.2**
	baz=35						
PFO	**Pinyon Flats O**	**66.10**	**294**	LR	LR	21 56 24.9	
	comp=Z,124nm,18.7s,baz=70,slow=36						
K15K	**Wolf Creek Mou**	**66.13**	**338**	P	**P**	**21 27 05.5**	**-2.2**
	baz=33						
J14K	**Nanvaranak Lak**	**66.25**	**340**	P	**P**	**21 27 06.6**	**-1.9**
	baz=32						
O18K	**Koktuh Hills**	**66.35**	**334**	P	**P**	**21 27 07.6**	**-1.5**
	baz=37						
N17K	**Nushagak Hills**	**66.39**	**335**	P	**P**	**21 27 08.3**	**-1.2**
	baz=36						
Q20K	**Shuyak Island**	**66.44**	**332**	P	**P**	**21 27 07.6**	**-2.1**
	baz=39						
M16K	**Timber Creek**	**66.49**	**337**	P	**P**	**21 27 09.7**	**-0.4**
	baz=35						
Q19K	**Cape Douglas,**	**66.59**	**333**	P	**P**	**21 27 09.8**	**-1.0**
	baz=38						
L15K	**Ungalak Mounta**	**66.63**	**338**	P	**P**	**21 27 10.0**	**-0.9**
	baz=33						
P18K	**Big Mountain,**	**66.72**	**334**	P	**P**	**21 27 09.6**	**-2.0**
	baz=37						
N16K	**Nishlik Lake**	**66.89**	**336**	P	**P**	**21 27 10.2**	**-2.5**
	baz=35						
O17K	**Koliganek Bris**	**66.98**	**335**	P	**P**	**21 27 12.2**	**-0.9**
	baz=36						
KDAK	**Kodiak Island**	**67.15**	**332**	P	**P**	**21 27 13.6**	**-0.7**
	baz=38						
GAMB	**Gambell**	**67.16**	**344**	P	**P**	**21 27 13.6**	**-0.6**
	baz=26						

FURI	**Furi**	**67.17**	**101**	LR	LR	21 56 23.3	
	comp=Z,74nm,19.9s,baz=11,slow=36						
K13K	**Kusilvak Mount**	**67.22**	**340**	P	**P**	**21 27 14.0**	**-0.7**
	baz=31						
L14K	**Kuka Creek**	**67.23**	**338**	P	**P**	**21 27 14.1**	**-0.6**
	baz=32						
M15K	**Kasigluk River**	**67.24**	**337**	P	**P**	**21 27 14.5**	**-0.3**
	baz=34						
Q18K	**Katmai Hardscr**	**67.25**	**333**	P	**P**	**21 27 14.2**	**-0.9**
	baz=37						
P17K	**Kvichak River**	**67.25**	**334**	P	**P**	**21 27 14.2**	**-0.7**
	baz=36						
PTLB	**Pontes e Lacer**	**67.30**	**213**	P	**P**	**21 27 15.9**	**+0.3**
PTLB				IAmb	IAmb	21 27 25.5	
	comp=Z,19nm,1.7s						
O16K	**Kokwok River B**	**67.42**	**335**	P	**P**	**21 27 15.3**	**-0.7**
	baz=35						
N15K	**Kwethluk River**	**67.52**	**336**	P	**P**	**21 27 16.4**	**-0.2**
	baz=34						
M14K	**Bethel**	**67.54**	**338**	P	**P**	**21 27 16.2**	**-0.5**
	baz=33						
CHGR	**Chuyangaron**	**67.66**	**57**		**P**	**21 27 18.4**	**+0.4**
Q16K	**King Salmon**	**67.74**	**334**	P	**P**	**21 27 17.2**	**-0.7**
	baz=36						
OHAK	**Old Harbor**	**67.83**	**332**	P	**P**	**21 27 18.2**	**-0.3**
	baz=38						
Q17K	**Contact Creek**	**67.83**	**333**	P	**P**	**21 27 18.0**	**-0.7**
	baz=36						
P16K	**Nushagak River**	**67.85**	**335**	P	**P**	**21 27 17.9**	**-0.7**
	baz=35						
R18K	**Karluk**	**67.94**	**332**	P	**P**	**21 27 18.7**	**-0.5**
	baz=37						
AAK	**Ala-Archa**	**68.03**	**51**	P	**P**	**21 27 20.4**	**0.0**
ARSB	**Arslanbob**	**68.08**	**53**		**P**	**21 27 21.2**	**+0.6**
ARSB				IAmb	IAmb	21 27 23.2	
	comp=Z,8.9nm,0.8s						
GAR	**Garm**	**68.11**	**56**	P	**P**	**21 27 21.5**	**+0.7**
N14K	**Kuskokwak Cree**	**68.16**	**337**	P	**P**	**21 27 19.4**	**-1.2**
	baz=33						
M13K	**Dall Lake**	**68.19**	**338**	P	**P**	**21 27 19.8**	**-0.9**
	baz=32						
LPIG	**La Paz**	**68.21**	**283**	LR	LR	21 57 03.2	
	comp=Z,240nm,19.3s,baz=32,slow=36						
O15K	**Ungalikthiuk R**	**68.27**	**336**	P	**P**	**21 27 20.5**	**-0.8**
	baz=34						
R17L	**Mt. Peulik Vol**	**68.50**	**333**	P	**P**	**21 27 21.7**	**-1.1**
	baz=36						
O14K	**Tigyukauivet M**	**68.61**	**336**	P	**P**	**21 27 21.9**	**-1.5**
	baz=33						
SII	**Sitkinak Islan**	**68.65**	**331**	P	**P**	**21 27 22.1**	**-1.8**
	baz=37						
MBAR	**Mbarara**	**68.90**	**114**	LR	LR	21 55 33.1	
	comp=Z,84nm,22.0s,baz=358,slow=34						
R16K	**Pilot Point**	**68.93**	**334**	P	**P**	**21 27 23.3**	**-2.1**
	baz=35						
M11K	**Mekoryuk**	**68.94**	**339**	P	**P**	**21 27 23.8**	**-1.6**
	baz=30						
MKAR	**Makanchi Array**	**69.17**	**44**	P	**P**	**21 27 28.1**	**+0.9**
	comp=Z,5.2nm,0.7s,baz=316,slow=6.8,SNR=11						
	comp=Z,5.2nm,0.7s						
MKAR	**Makanchi Array**	**69.17**	**44**	P	**P**	**21 27 27.3**	**+0.1**
ATAH	**Atahualpa**	**69.48**	**235**	LR	LR	21 55 58.1	
	comp=Z,44nm,20.3s,baz=31,slow=34						
CHIR	**Chirikof Islan**	**69.72**	**332**	P	**P**	**21 27 28.8**	**-1.7**
	baz=36						
MANEM	**Manem**	**69.88**	**57**		**P**	**21 27 32.7**	**+0.6**
MANEM				IAmb	IAmb	21 27 35.4	
	comp=Z,23nm,0.7s						
S14K	**Fog Glacier**	**70.60**	**334**	P	**P**	**21 27 33.7**	**-2.2**
	baz=33						
KSH	**Kashi**	**70.98**	**53**	P	**P**	**21 27 40.8**	**+2.2**
KSH				pmax	pmax		
	comp=Z,24nm,1.0s						
SDPT	**Sand Point**	**71.67**	**334**	P	**P**	**21 27 40.4**	**-1.8**
	baz=33						
CHNA	**Chernabura Isl**	**71.83**	**333**	P	**P**	**21 27 41.2**	**-2.1**
	baz=33						
S12K	**Black Hills**	**71.85**	**335**	P	**P**	**21 27 41.5**	**-1.9**
	baz=32						
LPAZ	**La Paz**	**71.85**	**221**	P	**P**	**21 27 45.8**	**+1.2**
	comp=Z,4.3nm,1.3s,baz=17,slow=7.0,SNR=4.3						
LPAZ				LR	LR	21 55 19.9	
	comp=Z,37nm,21.9s,baz=12,slow=32						
	comp=Z,4.3nm,1.3s						
LPAZ	**La Paz**	**71.85**	**221**	P	**P**	**21 27 44.6**	**+0.1**
SPIA	**Saint Paul Isl**	**72.77**	**340**	P	**P**	**21 27 47.0**	**-1.8**
	baz=26						
P08K	**Saint George I**	**73.11**	**339**	P	**P**	**21 27 48.8**	**-2.0**
	baz=27						
NIL	**Nilore**	**73.48**	**59**		**P**	**21 27 54.1**	**+0.6**
WMQ	**Urumqi**	**73.94**	**43**	*e*P	**P**	**21 27 58.1**	**+2.0**
WMQ				LR	LR		
	comp=Z,260nm,24.0s						
PB16	**IPOC Station P**	**74.27**	**221**		**P**	**21 27 58.3**	**-0.5**
PB16				IAmb	IAmb	21 29 49.2	
	comp=Z,5.2nm,0.7s						
UNV	**Unalaska Valle**	**74.75**	**336**	P	**P**	**21 27 58.5**	**-1.9**
	baz=28						
CPUP	**Villa Florida**	**76.70**	**207**	P	**P**	**21 28 12.6**	**+0.8**
	comp=Z,2.6nm,0.7s,baz=51,slow=7.7,SNR=5.3						
	comp=Z,2.6nm,0.7s						
CPUP	**Villa Florida**	**76.70**	**207**	P	**P**	**21 28 11.6**	**-0.3**
CPUP				IAmb	IAmb	21 29 01.8	
	comp=Z,20nm,1.8s						
SONM	**Songino Array**	**78.43**	**30**	P	**P**	**21 28 22.1**	**+0.5**
	comp=Z,3.9nm,0.8s,baz=317,slow=5.7,SNR=24						
	comp=Z,3.9nm,0.8s						
SONM	**Songino Array**	**78.43**	**30**	P	**P**	**21 28 21.4**	**-0.2**
LSZ	**Lusaka**	**78.89**	**126**	LR	LR	22 02 14.7	
	comp=Z,88nm,20.9s,baz=340,slow=35						
HILR	**Hailar Array B**	**80.87**	**21**	P	**P**	**21 28 34.4**	**-0.4**
	comp=Z,1.8nm,0.7s,baz=318,slow=2.0,SNR=3.7						
	comp=Z,1.8nm,0.7s						
HEH	**HeiHe**	**81.91**	**16**	*e*P	**P**	**21 28 41.3**	**+1.2**
GTA	**Gaotai**	**82.96**	**38**	P	**P**	**21 28 46.6**	**+0.6**
GTA				sP	pwP	21 28 55.3	+2.7
GTA				pmax	pmax		
	comp=Z,12nm,1.2s						
LBTB	**Lobatse**	**85.41**	**133**	LR	LR	22 05 13.0	
	comp=Z,69nm,21.7s,baz=340,slow=34						
HHC	**Hu-ho-hao-te**	**86.33**	**30**	*e*P	**P**	**21 29 02.6**	**-0.4**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,4.6s						
LSA	**Lhasa**	**86.59**	**50**	P	**P**	**21 29 04.9**	**0.0**
LZH	**Lanzhou**	**87.48**	**37**	*e*P	**P**	**21 29 10.3**	**+1.5**
LZH				sP	pwP	21 29 17.5	+2.2
LZDM	**Lanzhou Array**	**87.53**	**38**	P	**P**	**21 29 10.3**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=260,slow=8.9,SNR=3.6						
	comp=Z,0.7nm,0.3s						
BOSA	**Boshof**	**88.21**	**135**	LR	LR	22 06 37.3	
	comp=Z,80nm,20.3s,baz=17,slow=34						
SUR	**Sutherland**	**89.30**	**141**	LR	LR	22 06 45.9	
	comp=Z,40nm,19.7s,baz=341,slow=34						
OPO	**Ambohidratompo**	**92.97**	**114**	LR	LR	22 12 43.6	
	comp=Z,85nm,18.1s,baz=170,slow=36						
PLCA	**Paso Flores**	**94.32**	**211**	P	**P**	**21 29 41.1**	**+1.1**
	comp=Z,3.5nm,1.1s,baz=85,slow=2.8,SNR=3.8						
	comp=Z,3.5nm,1.1s						
PZH	**PanZhiHua**	**94.60**	**44**	P	**P**	**21 29 42.3**	**+0.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,200nm,5.2s						
NJ2	**Nanjing**	**96.76**	**28**	*e*P	**P**	**21 29 50.3**	**-1.3**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**99.81**	**51**	LR	LR	22 19 42.4	
	comp=Z,18nm,18.2s,baz=250,slow=38						
PPT2	**Papeete2**	**124.62**	**281**	*e*LR	LR	22 14 01.6	
	comp=Z,176nm,26.0s						
PPT2				*e*LR	LR	22 14 08.5	
	comp=Z,156nm,23.8s						
TBI	**Tubuai**	**128.40**	**275**	*e*LR	LR	22 15 51.1	
	comp=Z,733nm,35.8s						
QSPA	**South Pole Qui**	**135.67**	**180**	PKP	**PKiKP**	**21 35 41.4**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=243,slow=4.5,SNR=3.6						
VNDA	**Vanda**	**147.94**	**184**	PKPbc	**PKiKP**	**21 36 05.6**	**-0.9**
	comp=Z,4.7nm,1.1s,baz=111,slow=1.7,SNR=3.8						
WRA	**Warramunga Arr**	**150.23**	**36**	PKPbc	**PKPbc**	**21 36 11.4**	**-0.7**
	comp=Z,9.4nm,1.1s,baz=335,slow=2.5,SNR=5.8						
WRA	**Warramunga Arr**	**150.23**	**36**		**PKPbc**	**21 36 11.6**	**-0.5**
ASAR	**Alice Springs**	**153.32**	**40**	PKPbc	**PKiKP**	**21 36 19.6**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=343,slow=1.8,SNR=4.2						
ASAR	**Alice Springs**	**153.32**	**40**		**PKPbc**	**21 36 18.0**	**-1.1**
DZM	**Mont Dzumac**	**153.71**	**329**	*e*LR	LR	22 27 29.8	
	comp=Z,168nm,37.5s						

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*IDC **21** 21:25:56.5±0.6, 30.°17S×177.°74W, h0^{km}, mb4.2/11, mbtmp4.2/12, ML4.0/1, MS3.9/2, Error ellipse: s-maj=25.7km s-min=15.6km az=92.0*

*NEIC **21** 21:26:01.4±1.9, 30.°0S±0.°1×177.°5W±0.°2, h35^{km}±2^{km}, mb4.7/11, Error ellipse: s-maj=32.0km s-min=11.3km az=63.0*

ISC 21 21:26:01.6±0.5,**30.°17S**±0.°05×**177.°8W**±0.°1,**h35**^{km},**n90**, σ**2.^{s}13**/90,**mb4.4**/19,**4C**,**Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**0.92**	**353**	P	**Pn**	**21 26 16.1**	**-1.8**
GLKZ				S	**Sn**	**21 26 26.1**	**-3.8**
RAO	**Raoul Island**	**0.93**	**353**	Pn	**Pn**	**21 26 16.6**	**-1.5**
	2μm,0.3s,baz=92,slow=9.0,SNR=50						
RAO				Sn	**Sn**	**21 26 26.1**	**-4.0**
	11μm,0.3s,baz=81,slow=20,SNR=28						
RAO				LR	LR	21 26 37.7	
	comp=Z,1μm,20.0s,baz=195,slow=45						
RAO	**Raoul Island**	**0.93**	**353**	P	**Pn**	**21 26 16.4**	**-1.6**
RAO				S	**Sn**	**21 26 26.7**	**-3.4**
RIZ	**Raoul Island**	**0.93**	**352**	P	**Pn**	**21 26 16.6**	**-1.5**
RIZ				S	**Sn**	**21 26 27.5**	**-2.8**
MXZ	**Matakaoa Point**	**8.05**	**203**	P	**Pn**	**21 27 53.2**	**-2.8**
MXZ				S	**Sn**	**21 29 24.6**	**-1.2**
WMGZ	**Waiomatatini S**	**8.25**	**201**	P	**Pn**	**21 27 55.8**	**-2.9**
PKGZ	**Pakihiroa**	**8.40**	**203**	P	**Pn**	**21 27 57.9**	**-3.0**
PKGZ				S	**Sn**	**21 29 31.2**	**-3.3**
HAZ	**Te Kaha**	**8.41**	**205**	P	**Pn**	**21 27 58.4**	**-2.5**
HAZ				S	**Sn**	**21 29 35.2**	**+0.6**
PUZ	**Puketiti**	**8.53**	**202**	P	**Pn**	**21 27 59.1**	**-3.5**
PUZ				S	**Sn**	**21 29 37.2**	**-0.4**
RUGZ	**Raukumara Rang**	**8.63**	**205**	P	**Pn**	**21 28 01.3**	**-2.7**
RUGZ				S	**Sn**	**21 29 40.0**	**-0.2**
TWGZ	**Tauwhareparae**	**8.72**	**203**	P	**Pn**	**21 28 01.9**	**-3.2**
TWGZ				S	**Sn**	**21 29 41.8**	**-0.4**
WCZ	**Waipu Caves**	**8.75**	**227**	P	Pn	21 28 12.5	+6.9
OUZ	**Omahuta**	**8.83**	**233**	P	Pn	21 28 13.9	+7.2
CNGZ	**Carnagh Statio**	**8.93**	**201**	P	**Pn**	**21 28 04.4**	**-3.6**
CNGZ				S	**Sn**	**21 29 47.3**	**0.0**
TKGZ	**Te Karaka**	**9.00**	**202**	P	**Pn**	**21 28 04.8**	**-4.1**
TKGZ				S	**Sn**	**21 29 46.5**	**-2.6**
MWZ	**Matawai**	**9.02**	**204**	P	**Pn**	**21 28 05.5**	**-3.7**
MWZ				S	**Sn**	**21 29 47.1**	**-2.4**
URZ	**Urewera**	**9.10**	**206**	Pn	**Pn**	**21 28 10.0**	**-0.4**
	1.4nm,0.3s,baz=13,slow=2.9,SNR=5.1						
URZ				Sn	**Sn**	**21 29 50.2**	**-1.3**
	4.3nm,0.3s,baz=203,slow=23,SNR=14						
	6.5nm,0.6s						
URZ	**Urewera**	**9.10**	**206**	P	**Pn**	**21 28 06.8**	**-3.6**
URZ				S	**Sn**	**21 29 50.3**	**-1.2**
PRGZ	**Paritu Road**	**9.43**	**201**	P	**Pn**	**21 28 10.3**	**-4.6**
PRGZ				S	**Sn**	**21 29 55.1**	**-4.5**
SNGZ	**Shannon Statio**	**9.48**	**204**	P	**Pn**	**21 28 11.9**	**-3.7**
SNGZ				S	**Sn**	**21 29 59.6**	**-1.4**
KNZ	**Kokohu**	**9.59**	**202**	P	**Pn**	**21 28 13.2**	**-3.8**
MHGZ	**Mahia Peninsul**	**9.63**	**200**	P	Pn	21 28 12.6	-5.0
MHGZ				S	**Sn**	**21 30 02.4**	**-2.2**
MTHZ	**Maungataniwha**	**9.72**	**206**	P	**Pn**	**21 28 16.0**	**-2.9**
BFZ	**Birch Farm**	**11.55**	**203**	P	Pn	21 28 37.1	-6.9
MRZ	**Mangatainoka R**	**11.78**	**206**	P	Pn	21 28 39.2	-7.8
NNZ	**Nelson**	**13.14**	**211**	P	**Pn**	**21 29 08.7**	**+3.1**
CTZ	**Chatham Island**	**13.57**	**176**	Pn	**Pn**	**21 29 08.8**	**-2.6**
CTZ	**Chatham Island**	**13.57**	**176**	P	**Pn**	**21 29 09.2**	**-2.2**
THZ	**Tophouse**	**13.79**	**211**	P	**Pn**	**21 29 11.6**	**-2.9**
GVZ	**Greta Valley S**	**14.73**	**207**	P	**Pn**	**21 29 25.3**	**-2.0**
DZM	**Mont Dzumac**	**16.29**	**296**	Pn	**P**	**21 29 53.9**	**+3.4**
	0.4nm,0.3s,baz=122,slow=16,SNR=2.2						
DZM	**Mont Dzumac**	**16.29**	**296**	*e*P	**Pn**	**21 29 47.8**	**0.0**
	51nm,1.4s						
DZM				*e*LR	LR	21 33 25.1	
	439nm,25.2s						
FOZ	**Fox Glacier**	**16.59**	**213**	P	**Pn**	**21 29 49.6**	**-1.8**
JCZ	**Jackson Bay**	**17.49**	**214**	P	**Pn**	**21 29 59.6**	**-3.1**
TBI	**Tubuai**	**26.15**	**82**	*e*LR	LR	21 38 01.3	
	432nm,24.5s						
EIDS	**Eidsvold**	**27.91**	**272**	P	**P**	**21 31 49.5**	**+1.1**
EIDS				IAmb	IAmb	21 31 56.2	
	comp=Z,8.6nm,1.1s						
PPT2	**Papeete2**	**28.59**	**70**	*e*LR	LR	21 38 49.8	
	comp=Z,78nm,24.2s						
PPT2				*e*LR	LR	21 38 53.0	
	comp=Z,79nm,28.5s						
CTAO	**Charters Tower**	**33.95**	**279**	P	**P**	**21 32 43.5**	**+1.8**
STKA	**Stephens Creek**	**34.71**	**257**	P	**P**	**21 32 50.0**	**+1.8**
	comp=Z,3.4nm,0.7s,baz=92,slow=9.9,SNR=6.3						
	comp=Z,3.4nm,0.7s						
BBOO	**Buckleboo**	**39.21**	**254**	P	**P**	**21 33 27.7**	**+1.2**
BBOO				IAmb	IAmb	21 33 34.5	
	comp=Z,9.0nm,1.1s						
TAOE	**Nuku Hiva Isla**	**41.05**	**67**	*e*LR	LR	21 44 39.0	
	comp=Z,270nm,26.4s						
ASAR	**Alice Springs**	**43.30**	**267**	P	**P**	**21 33 59.8**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=113,slow=8.1,SNR=2.4						
	comp=Z,1.3nm,0.7s						
WRA	**Warramunga Arr**	**44.27**	**272**	P	**P**	**21 34 07.8**	**-0.2**
	comp=Z,4.8nm,0.6s,baz=110,slow=8.2,SNR=4.9						
	comp=Z,4.8nm,0.6s						
WRA	**Warramunga Arr**	**44.27**	**272**	P	**P**	**21 34 08.8**	**+0.8**
WB0	**Warramunga Arr**	**44.30**	**272**	P	**P**	**21 34 08.3**	**+0.1**
WB0				IAmb	IAmb	21 34 21.0	
	comp=Z,14nm,0.8s						
VNDA	**Vanda**	**48.34**	**186**	P	**P**	**21 34 39.9**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=3.0,slow=9.2,SNR=1.5						
	comp=Z,1.1nm,0.7s						
VNDA	**Vanda**	**48.34**	**186**	P	**P**	**21 34 41.0**	**+1.9**
VNDA				IAmb	IAmb	21 34 51.2	
	comp=Z,10nm,1.4s						
QSPA	**South Pole Qui**	**59.94**	**180**	P	**P**	**21 36 06.2**	**+2.2**
	comp=Z,3.5nm,0.7s,baz=24,slow=2.0,SNR=9.2						
	comp=Z,3.5nm,0.7s						
QSPA	**South Pole Qui**	**59.94**	**180**	P	**P**	**21 36 04.6**	**+0.6**
QSPA				IAmb	IAmb	21 36 13.2	
	comp=Z,8.4nm,0.9s						
BELA	**Belgrano 2**	**69.98**	**172**	P	**P**	**21 37 08.9**	**0.0**
BELA				IAmb	IAmb	21 37 10.1	
	comp=Z,3.2nm,0.8s						
KKM	**Kota Kinabalu**	**72.66**	**288**	P	**P**	**21 37 25.4**	**-0.8**
JGF	**Kuroka**	**77.85**	**324**	P	**P**	**21 37 55.9**	**+0.4**
JGF				IAmb	IAmb	21 38 16.7	
	comp=Z,17nm,1.3s						
TROLL	**Troll, Antarti**	**78.10**	**180**	⇑P	**P**	**21 37 57.8**	**+1.2**
	comp=Z,251nm,0.8s						
MJAR	**Matsushiro Arr**	**78.16**	**325**	P	**P**	**21 37 56.9**	**-0.2**
	comp=Z,3.9nm,1.1s,baz=152,slow=7.8,SNR=4.2						
	comp=Z,3.9nm,1.1s						
SNAA	**Sanae**	**78.38**	**178**	P	**P**	**21 37 58.6**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=195,slow=22,SNR=5.8						
	comp=Z,1.8nm,0.8s						
SNAA	**Sanae**	**78.38**	**178**	P	**P**	**21 37 58.6**	**+0.6**
VNA3	**Neumayer Olymp**	**78.52**	**176**	⇑P	**P**	**21 37 59.3**	**+0.6**
	comp=Z,5.3nm,0.8s						
VNA2	**Neumayer--Watz**	**78.95**	**177**	⇑P	**P**	**21 38 02.2**	**+1.0**
	comp=Z,4.6nm,0.7s,baz=168,slow=4.4						
VNA1	**Neumayer--Stat**	**79.18**	**176**	⇑P	**P**	**21 38 02.6**	**+0.2**
	comp=Z,4.4nm,1.0s						
JNU	**Nakatsue**	**79.51**	**318**	LR	LR	22 09 47.1	
	comp=Z,44nm,18.8s,baz=56,slow=33						
H03S2	**Juan Fernandez**	**80.44**	**123**	T	T	23 07 40.0	
	baz=239,slow=74,SNR=44						
H03S1	**Juan Fernandez**	**80.45**	**124**	T	T	23 07 41.2	
	baz=239,slow=74,SNR=54						
H03S3	**Juan Fernandez**	**80.45**	**123**	T	T	23 07 40.1	
	baz=239,slow=74,SNR=63						
H03N3	**Juan Fernandez**	**80.63**	**123**	T	T	23 07 39.4	
	baz=242,slow=72,SNR=17						
H03N2	**Juan Fernandez**	**80.63**	**123**	T	T	23 07 38.3	
	baz=242,slow=72,SNR=15						
H03N1	**Juan Fernandez**	**80.64**	**123**	T	T	23 07 37.5	
	baz=242,slow=72,SNR=22						
SHEM	**Shemya Is, Ala**	**82.86**	**355**	LR	LR	22 06 20.1	
	comp=Z,108nm,20.8s,baz=321,slow=29						
KSRS	**Korea Array**	**84.30**	**320**	P	**P**	**21 38 30.6**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=134,slow=7.5,SNR=3.1						
	comp=Z,1.0nm,0.8s						
PETK	**Petropavlovsk-**	**85.64**	**345**	P	**P**	**21 38 38.0**	**+1.9**
	comp=Z,4.3nm,0.6s,baz=121,slow=6.0,SNR=5.0						
	comp=Z,4.3nm,0.6s						
PETK	**Petropavlovsk-**	**85.64**	**345**	P	**P**	**21 38 36.1**	**+0.1**
NVAR	**Mina Array Bea**	**87.95**	**43**	P	**P**	**21 38 48.9**	**+0.9**
	comp=Z,0.9nm,0.8s,baz=237,slow=4.5,SNR=4.0						
	comp=Z,0.9nm,0.8s						
TXAR	**Lajitas Array**	**92.11**	**57**	P	**P**	**21 39 09.5**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=216,slow=1.8,SNR=1.5						
	comp=Z,0.1nm,0.3s						
MKAR	**Makanchi Array**	**117.77**	**310**	PKP	**PKPdf**	**21 44 42.8**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=107,slow=1.4,SNR=4.6						
MKAR	**Makanchi Array**	**117.77**	**310**		**PKPdf**	**21 44 42.5**	**-1.4**
KURBB	**Kurchatov Arra**	**121.06**	**314**	PKP	**PKPdf**	**21 44 49.0**	**-1.0**
	comp=Z,0.8nm,0.3s,baz=87,slow=1.9,SNR=6.6						
BVAR	**Borovoye Array**	**126.37**	**316**	PKP	**PKPdf**	**21 44 59.9**	**-0.3**
	comp=Z,1.3nm,0.5s,baz=106,slow=1.1,SNR=9.6						
ARCES	**ARCESS Array B**	**138.41**	**348**	PKP	**PKPdf**	**21 45 22.4**	**0.0**
	comp=Z,0.9nm,0.6s,baz=8.8,slow=8.7,SNR=4.7						
FINES	**FINESS Array B**	**145.00**	**340**	PKPbc	PKPbc	21 45 32.9	-0.8
	comp=Z,14nm,0.8s,baz=60,slow=3.1,SNR=49						
FINES	**FINESS Array B**	**145.00**	**340**		PKPbc	21 45 32.7	-1.0
KBZ	**Khabaz**	**145.14**	**304**	PKPbc	**PKPbc**	**21 45 34.5**	**-0.2**
	comp=Z,1.8nm,0.6s,baz=167,slow=2.8,SNR=11						
NB2	**NORSAR Subarra**	**148.56**	**352**	PKP	**PKPbc**	**21 45 43.3**	**-0.8**
	comp=Z,7.1nm,0.9s,baz=7.4,slow=3.8						
NOA	**NORSAR Array B**	**148.56**	**352**	PKPbc	**PKPbc**	**21 45 43.1**	**-1.0**
	comp=Z,1.2nm,0.7s,baz=338,slow=2.4,SNR=11						
HFS	**Hagfors**	**149.06**	**349**	PKPbc	**PKPbc**	**21 45 44.7**	**-0.6**
	comp=Z,4.3nm,0.7s,baz=64,slow=3.4,SNR=10						
AKASG	**Malin Array Be**	**151.23**	**323**	PKPbc	**PKPbc**	**21 45 50.2**	**-0.6**
	comp=Z,5.2nm,0.7s,baz=50,slow=2.8,SNR=10						
AKASG	**Malin Array Be**	**151.23**	**323**		**PKPbc**	**21 45 50.1**	**-0.8**
MMAI	**Mount Meron Ar**	**151.65**	**284**	PKPbc	**PKiKP**	**21 45 53.9**	**+1.0**
	comp=Z,2.6nm,0.5s,baz=77,slow=7.2,SNR=18						
BRTR	**Keskin Array B**	**152.65**	**299**	PKPbc	**PKPbc**	**21 45 54.2**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=133,slow=5.3,SNR=5.2						
CSS	**Mathiatis**	**153.40**	**289**	PKPbc	**PKiKP**	**21 45 56.4**	**0.0**
EKA	**Eskdalemuir Ar**	**154.56**	**7**	PKPab	**PKPab**	**21 46 12.1**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=345,slow=2.9,SNR=4.3						
TORD	**Torodi Ar. Bea**	**163.05**	**178**	PKPab	**PKPab**	**21 46 51.1**	**+0.7**
	comp=Z,1.3nm,0.9s,baz=150,slow=2.3,SNR=4.3						

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*IDC **21** 21:26:49.5±0.6, 6.°40N×125.°20E, h0^{km}, mb4.3/24, mbtmp4.3/24, MS3.9/48, Error ellipse: s-maj=14.6km s-min=8.8km az=107.0*

*NEIC **21** 21:26:52.1±1.5, 6.°53N±0.°04×125.°28E±0.°07, h13^{km}±2^{km}, mb4.9/73, Error ellipse: s-maj=10.0km s-min=4.7km az=112.0*

*GCMT **21** 21:26:53.1±0.3, 6.°57N±0.°01×125.°29E±0.°02, h12^{km}, MW5.0/80, Moment Tensor Solution. s22,c22; s80,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.69±.10; $M_{\theta\theta}$1.68±.08; $M_{\phi\phi}$-0.99±.10; $M_{r\theta}$-2.63±.29; $M_{\theta\phi}$-2.03±.08; $M_{\phi r}$0.93±.27; Best double couple: $M_0$3.41800×10^{16} NP1:ϕ_s348.00000°,δ35.00000°,λ-14.00000°. NP2: ϕ_s89.00000°,δ82.00000°,λ-124.00000°. Principal axes: T 4.3050, Plg29.0000°, Azm206.0000°; N -1.7690, Plg34.0000°, Azm94.0000°; P -2.5310, Plg42.0000°, Azm327.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **21** 21:26:53.7±0.3, 7°N±3°×12°5E±°, h10^{km}, M4.9/44, mb5.0/44, mB5.4/27, MLv5.5/8, Mw(mB)4.8/27, MwMwp4.5/1, Mwp4.9/1*

*BJI **21** 21:26:53.2, 6.°45N×125.°24E, h34^{km}, mB5.2/15, mb4.8/68, Ms4.4/38, Ms7 4.2/38*

ISC 21 21:26:51.5±0.3,**6.°54N**±0.°03×**125.°30E**±0.°05,**h10**^{km},**n226**, σ**1.^{s}70**/202,**mb4.8**/72,**MS4.1**/62,**3C-2D**,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.60**	**28**	Pg	**Pg**	**21 27 03.9**	**+0.6**
	3μm,0.3s,baz=196,slow=1.6,SNR=776						
DAV				Lg	Lg	21 27 15.0	
	2μm,0.3s,baz=311,slow=20,SNR=9.3						
DAV				LR	LR	21 27 33.5	
	comp=Z,20μm,20.2s,baz=310,slow=58						
DAV	**Davao City (W)**	**0.60**	**28**		**Pg**	**21 27 03.8**	**+0.6**
DAV				Sg	**Sb**	**21 27 13.5**	**+0.7**
DAV	**Davao City (W)**	**0.60**	**28**	P	**Pg**	**21 27 03.8**	**+0.6**
DAV	**Davao City (W)**	**0.60**	**28**	P	Pg	21 26 56.0	-7.2
SGSI	**Sangihe**	**2.84**	**175**	P	**Pn**	**21 27 37.6**	**+0.6**
SGSI				S	**Sn**	**21 28 12.7**	**+1.4**
TNTI	**Ternate**	**6.09**	**160**		**Pn**	**21 28 22.1**	**+0.4**
TNTI	**Ternate**	**6.09**	**160**	P	**Pn**	**21 28 23.8**	**+2.2**
	2μm143nm,0.9s						
GTOI	**Gorontalo**	**6.29**	**201**	P	**Pn**	**21 28 23.7**	**-0.7**
MRSI	**Marisa**	**6.89**	**209**	P	**Pn**	**21 28 32.4**	**-0.2**
TOLI2	**Tolitoli**	**7.02**	**220**		**Pn**	**21 28 32.1**	**-2.4**
LUWI	**Luwuk**	**7.94**	**199**		**Pn**	**21 28 49.1**	**+2.1**
LUWI	**Luwuk**	**7.94**	**199**	P	**Pn**	**21 28 49.7**	**+2.6**
MPSI	**Mapaga**	**8.18**	**221**	P	**Pn**	**21 28 54.1**	**+3.7**
	33nm,0.6s						
APSI	**Ampana**	**8.24**	**206**	P	**Pn**	**21 28 53.0**	**+1.7**
SANI	**Sanana**	**8.56**	**175**	P	**Pn**	**21 28 55.4**	**-0.2**
	1μm111nm,0.8s						
KKM	**Kota Kinabalu**	**9.04**	**267**		**Pn**	**21 29 02.3**	**0.0**
KKM	**Kota Kinabalu**	**9.04**	**267**	P	**Pn**	**21 29 04.6**	**+2.3**
	50nm,0.9s						
PCI	**Palu**	**9.18**	**217**	P	**Pn**	**21 29 05.8**	**+1.6**
	3μm50nm,0.8s						
I39PW	**PALAU INFRASON**	**9.24**	**83**	I	I	22 29 10.0	
	baz=265,slow=306,SNR=0.8						
SWI	**Sorong**	**9.46**	**141**	P	**Pn**	**21 29 10.1**	**+2.1**
	52nm,0.8s						
SIJI	**Sorong**	**9.47**	**141**	P	**Pn**	**21 29 10.2**	**+2.1**
	40nm,0.8s						
NLAI	**Namlea**	**9.88**	**169**	P	**Pn**	**21 29 12.9**	**-0.8**
	1μm96nm,0.7s						
KRAI	**Karang Ratu**	**10.27**	**162**	P	**Pn**	**21 29 20.1**	**+1.1**
	76nm,0.7s						
MSAI	**Masohi**	**10.46**	**160**	P	**Pn**	**21 29 21.8**	**0.0**
	74nm,0.8s						
AAI	**Ambon**	**10.56**	**164**	P	**Pn**	**21 29 23.1**	**0.0**
	930nm66nm,1.0s						
KDI	**Kendari**	**10.76**	**194**	P	**Pn**	**21 29 28.6**	**+2.8**
TTSI	**Tana Toraja**	**10.97**	**210**	P	**Pn**	**21 29 31.4**	**+2.7**
	2μm124nm,1.2s						
MMSI	**Mamuju**	**11.16**	**215**	P	**Pn**	**21 29 31.2**	**-0.1**
	501nm42nm,1.2s						
KKSI	**Kolaka, Sulawe**	**11.24**	**199**	P	**Pn**	**21 29 34.4**	**+2.0**
	27nm,0.6s						
FAKI	**Fak Fak**	**11.68**	**143**		**Pn**	**21 29 37.2**	**-1.2**
FAKI	**Fak Fak**	**11.68**	**143**	P	**Pn**	**21 29 40.1**	**+1.7**
	40nm,0.8s						
SPSI	**Sidrap Palu**	**11.80**	**208**	P	**Pn**	**21 29 43.3**	**+3.3**
	38nm,1.0s						
PMSI	**Majene**	**11.83**	**213**	P	**Pn**	**21 29 43.8**	**+3.3**
	54nm,1.5s						
BNDI	**Bandanaira**	**11.91**	**157**	P	**Pn**	**21 29 45.3**	**+3.8**
	116nm,1.1s						
RKPI	**Ransiki, Papua**	**11.94**	**132**	P	**Pn**	**21 29 43.6**	**+1.7**
KAPI	**Kappang**	**12.74**	**206**		**Pn**	**21 29 52.2**	**-0.7**
KAPI	**Kappang**	**12.74**	**206**	P	**Pn**	**21 29 56.0**	**+3.1**
BKSI	**Bulukumba**	**12.86**	**204**	P	**Pn**	**21 29 57.9**	**+3.4**
KMPI	**Kaimana, Papua**	**13.16**	**140**	P	**Pn**	**21 30 00.0**	**+1.4**
	55nm,0.5s						
SBUM	**Sibu**	**13.65**	**253**		**Pn**	**21 30 04.5**	**-0.8**
SBUM	**Sibu**	**13.65**	**253**	P	**Pn**	**21 30 08.6**	**+3.3**
BBKI	**Banjar Baru**	**14.41**	**227**	P	**Pn**	**21 30 19.4**	**+3.7**
	152nm,1.0s						
MMRI	**Maumere**	**15.38**	**191**		**Pn**	**21 30 29.0**	**+0.3**
MMRI				IAmb	IAmb	21 30 34.8	
	comp=Z,118nm,2.0s						
MMRI	**Maumere**	**15.38**	**191**	P	**P**	**21 30 31.6**	**-1.9**
	comp=Z,69nm,1.2s						
EDFI	**Ende, Flores**	**15.60**	**193**	P	**Pn**	**21 30 34.0**	**+2.2**
SAUI	**Saumlaki**	**15.62**	**157**		**Pn**	**21 30 31.6**	**-0.3**
SAUI				IAmb	IAmb	21 30 34.2	
	comp=Z,64nm,0.7s						
SAUI	**Saumlaki**	**15.62**	**157**	P	**Pn**	**21 30 34.6**	**+2.7**
	comp=Z,5μmcomp=Z,105nm,0.7s						
LBFI	**Labuhan Bajo,**	**15.86**	**200**	P	**P**	**21 30 37.6**	**-1.2**
	comp=Z,2μmcomp=Z,141nm,1.6s						
SOEI	**Soe**	**16.22**	**184**		**Pn**	**21 30 39.6**	**-0.1**
SOEI				IAmb	IAmb	21 30 48.6	
	comp=Z,98nm,1.2s						
SOEI	**Soe**	**16.22**	**184**	P	**Pn**	**21 30 41.5**	**+1.7**
	comp=Z,2μmcomp=Z,144nm,1.2s						
DBNI	**Kabupaten Domp**	**16.48**	**205**	P	**P**	**21 30 45.5**	**-0.2**
	comp=Z,1μmcomp=Z,75nm,1.3s						
BATI	**Baumata**	**16.71**	**186**	Pn	**Pn**	**21 30 46.2**	**+0.2**
	comp=Z,6.2nm,0.3s,baz=294,slow=3.3,SNR=15						
BATI				LR	LR	21 38 03.3	
	comp=Z,538nm,19.5s,baz=346,slow=41						
BATI	**Baumata**	**16.71**	**186**	P	**Pn**	**21 30 46.9**	**+0.9**
	comp=Z,1μmcomp=Z,148nm,0.9s						
WSI	**Waingapu**	**16.85**	**197**	P	**P**	**21 30 52.1**	**+2.3**
	comp=Z,6μmcomp=Z,84nm,1.4s						

PLAI	**Plampang**	**17.00**	**206**	P	**P**	**21 30 53.8**	**+2.3**
	comp=Z,1µmcomp=Z,123nm,1.5s						
WBSI	**Waikabubak, Su**	**17.11**	**200**	P	**P**	**21 30 56.0**	**+3.2**
	comp=Z,2µmcomp=Z,52nm,1.4s						
YULB	**Yu-li**	**17.20**	**347**		**Pn**	**21 30 50.0**	**-2.0**
KLNI	**Mataram**	**17.46**	**212**	P	**P**	**21 30 58.3**	**+1.7**
	comp=Z,1µmcomp=Z,63nm,1.0s						
SSLB	**Suanglung**	**17.65**	**347**		**Pn**	**21 30 56.4**	**-1.4**
JAY	**Jayapura**	**17.82**	**120**	LR	LR	21 36 51.4	
	comp=Z,242nm,21.2s,baz=301,slow=34						
IGBI	**Denpasar**	**18.30**	**214**	P	**P**	**21 31 09.4**	**+3.5**
	comp=Z,3µmcomp=Z,104nm,0.8s						
JAGI	**Jajag, Banyuwa**	**18.59**	**217**	P	**P**	**21 31 08.4**	**-0.6**
JAGI				IAmb	IAmb	21 31 20.1	
	comp=Z,52nm,0.8s						
JAGI	**Jajag, Banyuwa**	**18.59**	**217**	P	**Pn**	**21 31 12.2**	**+2.9**
	comp=Z,68nm,1.5s						
QZH	**Quanzhou**	**19.40**	**341**	*e*P	**Pn**	**21 31 20.1**	**+1.1**
QZH				S	**Sn**	**21 34 57.1**	**+0.4**
QZH				LR	LR		
	comp=Z,770nm,17.2s						
QIZ	**Qiongzhong**	**19.50**	**311**	P	**P**	**21 31 18.9**	**-0.2**
QIZ	**Qiongzhong**	**19.50**	**311**	P	**P**	**21 31 19.8**	**+0.7**
QIZ				S	**Sn**	**21 34 57.8**	**-1.5**
QIZ				LR	LR		
	comp=Z,740nm,14.6s						
QIZ				LR	LR		
	comp=Z,490nm,16.9s						
QIZ				LR	LR		
	comp=Z,790nm,18.7s						
SNJI	**Sawahan-Nganju**	**19.61**	**224**	P	**Pn**	**21 31 22.5**	**+0.8**
	comp=Z,53nm,1.1s						
MTN	**Manton Dam**	**20.11**	**163**	P	**P**	**21 31 24.9**	**-0.8**
JOW	**Kunigami**	**20.38**	**8**	P	**P**	**21 31 29.8**	**+1.2**
	comp=Z,22nm,0.9s,baz=185,slow=11,SNR=1.6						
JOW				LR	LR	21 38 32.6	
	comp=Z,326nm,21.5s,baz=154,slow=34						
	comp=Z,22nm,0.9s						
JOW	**Kunigami**	**20.38**	**8**	P	**P**	**21 31 28.8**	**+0.2**
JOW				IAmb	IAmb	21 31 38.4	
	comp=Z,68nm,1.1s						
CTJI	**Waduk Cacaban**	**20.96**	**230**	P	Pn	21 31 39.1	+1.6
KNRA	**Kununurra**	**22.34**	**171**	P	**P**	**21 31 47.9**	**-1.8**
KNRA				IAmb	IAmb	21 31 55.5	
	comp=Z,57nm,0.8s						
IPM	**Ipoh**	**24.24**	**266**	P	**P**	**21 32 06.8**	**-2.2**
IPM				IAmb	IAmb	21 32 18.4	
	comp=Z,94nm,1.7s						
FITZ	**Fitzroy Crossi**	**24.48**	**179**	P	**P**	**21 32 09.1**	**-1.9**
KULM	**Kulim**	**24.54**	**268**	P	**P**	**21 32 10.5**	**-1.2**
KULM				IAmb	IAmb	21 32 21.5	
	comp=Z,57nm,1.4s						
JCJ	**Chichijima**	**26.00**	**36**	LR	LR	21 42 21.2	
	comp=Z,132nm,20.3s,baz=122,slow=36						
WHN	**Wuhan**	**26.00**	**338**	P	**P**	**21 32 26.3**	**+1.6**
NJ2	**Nanjing**	**26.09**	**347**	*e*P	**P**	**21 32 28.6**	**+3.1**
NJ2				pmax	pmax		
	comp=Z,26nm,1.0s						
PSI	**Prapat**	**26.54**	**263**	LR	LR	21 44 23.7	
	comp=Z,185nm,20.1s,baz=90,slow=40						
PMG	**Port Moresby**	**26.93**	**126**	P	**P**	**21 32 31.7**	**-1.7**
COEN	**Coen**	**27.01**	**139**	P	**P**	**21 32 32.4**	**-1.6**
COEN				IAmb	IAmb	21 32 39.9	
	comp=Z,57nm,1.3s						
WRAB	**Tennant Creek**	**27.77**	**161**	P	**P**	**21 32 38.8**	**-1.9**
WRAB				IAmb	IAmb	21 32 52.9	
	comp=Z,22nm,0.8s						
WRA	**Warramunga Arr**	**27.78**	**161**	P	**P**	**21 32 39.2**	**-1.6**
	comp=Z,7.6nm,1.0s,baz=328,slow=11,SNR=19						
	comp=Z,7.6nm,1.0s						
WRA	**Warramunga Arr**	**27.78**	**161**	P	**P**	**21 32 38.6**	**-2.2**
ENH	**Enshi**	**27.90**	**330**	P	**P**	**21 32 41.4**	**-0.5**
ENH				IAmb	IAmb	21 33 09.3	
	comp=Z,15nm,1.1s						
MBWA	**Marble Bar**	**28.06**	**191**	P	**P**	**21 32 42.0**	**-1.3**
MBWA				IAmb	IAmb	21 33 37.5	
	comp=Z,42nm,1.3s						
GSI	**Gunungsitoli**	**28.13**	**261**	P	**P**	**21 32 42.6**	**-1.5**
GSI				IAmb	IAmb	21 33 08.7	
	comp=Z,37nm,1.1s						
CM31	**Chiang Mai Arr**	**28.27**	**297**	P	**P**	**21 32 45.1**	**-0.2**
CMAR	**Chiang Mai Arr**	**28.27**	**297**	P	**P**	**21 32 45.5**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=121,slow=7.4,SNR=9.4						
CMAR				LR	LR	21 45 55.2	
	comp=Z,251nm,18.2s,baz=105,slow=41						
	comp=Z,1.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**28.27**	**297**	P	**P**	**21 32 44.3**	**-1.0**
CHTO	**Chiang Mai**	**28.41**	**298**	P	**P**	**21 32 45.6**	**-0.9**
KMI	**Kunming**	**28.41**	**313**	P	**P**	**21 32 48.5**	**+1.7**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KMI				LR	LR		
	comp=Z,320nm,15.7s						
KMI				LR	LR		
	comp=Z,500nm,18.5s						
KMI				LR	LR		
	comp=Z,540nm,17.8s						
PSA00	**Pilbara Seismi**	**28.44**	**191**	P	**P**	**21 32 45.4**	**-1.4**
PSA00				IAmb	IAmb	21 32 52.1	
	comp=Z,15nm,1.1s						
JHJ	**Hachijo jima 2**	**29.68**	**25**	LR	LR	21 46 39.7	
	comp=Z,255nm,18.1s,baz=211,slow=40						
PZH	**PanZhiHua**	**29.96**	**314**	P	**P**	**21 33 01.3**	**+0.9**
PZH				pP	**sP**	**21 33 07.8**	**+3.0**
PZH				S	**S**	**21 37 54.6**	**-3.7**
PZH				ScS	ScS	21 43 30.3	-11
PZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PZH				LR	LR		
	comp=Z,350nm,17.5s						
PZH				LR	LR		
	comp=Z,210nm,19.4s						
PZH				LR	LR		
	comp=Z,410nm,17.3s						
TIA	**Tai'an**	**30.47**	**347**	P	**P**	**21 33 04.4**	**-0.2**
TIA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KSAR	**Wonju Array Be**	**30.86**	**4**	P	**P**	**21 33 07.8**	**-0.2**
KSRS	**Korea Array**	**30.87**	**4**	P	**P**	**21 33 08.6**	**+0.5**
	comp=Z,2.2nm,0.9s,baz=184,slow=9.0,SNR=16						
	comp=Z,2.2nm,0.9s						
AS31	**Alice Springs**	**31.17**	**165**	P	**P**	**21 33 09.4**	**-1.6**
ASAR	**Alice Springs**	**31.17**	**165**	P	**P**	**21 33 09.4**	**-1.6**
	comp=Z,1.5nm,0.4s,baz=342,slow=6.9,SNR=34						
ASAR				LR	LR	21 46 18.6	
	comp=Z,136nm,21.1s,baz=332,slow=38						
	comp=Z,1.5nm,0.4s						
XAN	**Xi'an**	**31.28**	**333**	⇑P	**P**	**21 33 12.4**	**+0.5**
XAN				pP	sP	21 33 21.1	+4.8
XAN				pmax	pmax		
	comp=Z,34nm,0.9s						
XAN				LR	LR		
	comp=Z,420nm,19.9s						
XAN				LR	LR		
	comp=Z,510nm,18.6s						
XAN				LR	LR		
	comp=Z,290nm,19.2s						
TNCH	**TengChong**	**31.54**	**309**	⇑P	**P**	**21 33 15.6**	**+1.2**
TNCH				pP	sP	21 33 21.8	+3.0
TNCH				sP	pP	21 33 27.3	+10
TNCH				S	**S**	**21 38 22.5**	**-0.7**
TNCH				sS	sS	21 38 38.0	+10
TNCH				ScS	**ScS**	**21 43 43.9**	**-5.0**
TNCH				pmax	pmax		
	comp=Z,10.0nm,2.1s						
TNCH				pmax	pmax		
	comp=Z,71nm,2.6s						
TNCH				LR	LR		
	comp=Z,180nm,12.7s						
TNCH				LR	LR		
	comp=Z,230nm,9.6s						
TNCH				LR	LR		
	comp=Z,420nm,18.5s						
CD2	**Chengdu**	**31.55**	**323**	P	**P**	**21 33 15.3**	**+1.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CD2				LR	LR		
	comp=Z,930nm,13.3s						
CD2				LR	LR		
	comp=Z,1µm,15.9s						
CD2				LR	LR		
	comp=Z,600nm,18.4s						
MJAR	**Matsushiro Arr**	**32.12**	**20**	P	**P**	**21 33 19.7**	**+0.5**
	comp=Z,3.0nm,1.0s,baz=186,slow=9.0,SNR=4.8						
MJAR				LR	LR	21 44 33.1	
	comp=Z,219nm,21.6s,baz=210,slow=33						
	comp=Z,3.0nm,1.0s						
HNS	**HongShan**	**32.20**	**344**	⇑P	**P**	**21 33 20.6**	**+0.8**
HNS				pmax	pmax		
	comp=Z,19nm,1.1s						
HNS				LR	LR		
	comp=Z,250nm,22.3s						
HNS				LR	LR		
	comp=Z,410nm,18.1s						
HNS				LR	LR		
	comp=Z,350nm,16.7s						
DL2	**Dalian**	**32.40**	**355**	P	**P**	**21 33 22.8**	**+1.3**
DL2				S	**S**	**21 38 35.6**	**-0.2**
DL2				pmax	pmax		
	comp=Z,72nm,1.0s						
DL2				pmax	pmax		
	comp=Z,280nm,4.1s						
DL2				LR	LR		
	comp=Z,260nm,15.8s						
DL2				LR	LR		
	comp=Z,300nm,14.6s						
DL2				LR	LR		
	comp=Z,310nm,14.5s						
CTA	**Charters Tower**	**33.54**	**143**	LR	LR	21 46 57.5	
	comp=Z,262nm,20.5s,baz=304,slow=36						
CTAO	**Charters Tower**	**33.54**	**143**	P	**P**	**21 33 31.8**	**+0.1**
BJT	**Baijiatuau**	**34.33**	**348**	P	**P**	**21 33 38.5**	**+0.1**
BJI	**Beijing**	**34.35**	**348**	P	**P**	**21 33 39.4**	**+0.9**
BJI				pmax	pmax		
	comp=Z,16nm,0.9s						
LZDM	**Lanzhou Array**	**35.35**	**329**	P	**P**	**21 33 48.5**	**+0.8**
	comp=Z,8.0nm,0.7s,baz=156,slow=11,SNR=15						
	comp=Z,8.0nm,0.7s						
LZH	**Lanzhou**	**35.38**	**329**	SKS	**S**	**21 39 26.8**	**+4.3**
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
LZH				LR	LR		
	comp=N,480nm,19.1s						
LZH				LR	LR		
	comp=E,490nm,20.1s						
LZH				LR	LR		
	comp=Z,560nm,18.9s						
LZH	**Lanzhou**	**35.38**	**329**	*e*P	**P**	**21 33 49.5**	**+1.8**
LZH				sP	sP	21 34 00.3	+8.1
LZH				PcP	**PcP**	**21 36 17.3**	**-0.5**
LZH				S	**S**	**21 39 25.3**	**+2.8**
LZH				pmax	pmax		
	comp=Z,74nm,1.2s						
LZH				pmax	pmax		
	comp=Z,240nm,4.3s						
LZH				LR	LR		
	comp=Z,480nm,18.5s						
LZH				LR	LR		
	comp=Z,490nm,17.7s						
LZH				LR	LR		
	comp=Z,570nm,19.1s						
BRDH	**Bariadhala**	**36.17**	**300**	LR	LR	21 51 47.8	
	comp=Z,178nm,18.1s,baz=195,slow=41						
HHC	**Hu-ho-hao-te**	**36.31**	**342**	*e*P	**P**	**21 33 56.3**	**+0.8**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,80nm,3.5s						
HHC				LR	LR		
	comp=Z,130nm,16.9s						
HHC				LR	LR		
	comp=Z,300nm,16.5s						
HHC				LR	LR		
	comp=Z,280nm,17.2s						
BTO	**Baotou**	**36.58**	**340**	*e*P	**P**	**21 33 54.3**	**-3.5**
BTO				pP	**sP**	**21 34 04.3**	**+2.0**
BTO				S	**S**	**21 39 33.8**	**-6.8**
BTO				pmax	pmax		
	comp=Z,12nm,0.7s						
BTO				pmax	pmax		
	comp=Z,220nm,5.1s						
BTO				LR	LR		
	comp=Z,460nm,9.9s						
BTO				LR	LR		
	comp=Z,950nm,13.7s						
BTO				LR	LR		
	comp=Z,710nm,20.7s						
SHL	**Shillong**	**37.09**	**304**	P	**P**	**21 34 01.8**	**-0.8**
SHL				IAmb	IAmb	21 34 20.5	
	comp=Z,17nm,0.9s						
CN2	**Changchun**	**37.12**	**0**	*e*P	**P**	**21 34 03.8**	**+1.5**
CN2				*e*pP	sP	21 34 12.8	+6.1
CN2				*e*S	**S**	**21 39 47.9**	**-0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,100nm,11.0s						
CN2				LR	LR		
	comp=Z,100nm,11.0s						
CN2				LR	LR		
	comp=Z,300nm,12.0s						
FORT	**Forrest**	**37.20**	**176**	P	**P**	**21 34 02.3**	**-0.8**
FORT				IAmb	IAmb	21 34 08.6	
	comp=Z,24nm,0.7s						
INKA	**Innaminka**	**37.20**	**157**	P	**P**	**21 34 01.8**	**-1.4**
USRK	**Ussuriysk Ar.**	**37.97**	**8**	P	**P**	**21 34 10.6**	**+1.1**
	comp=Z,12nm,0.9s,baz=188,slow=9.1,SNR=6.6						
	comp=Z,12nm,0.9s						
XLT	**XiLinHaoTe**	**38.09**	**349**	*e*P	**P**	**21 34 11.8**	**+1.2**
XLT				sP	sP	21 34 23.8	+8.8
XLT				pmax	pmax		
	comp=Z,39nm,1.1s						
XLT				pmax	pmax		
	comp=Z,250nm,4.2s						
XLT				LR	LR		
	comp=Z,310nm,18.7s						
XLT				LR	LR		
	comp=Z,160nm,15.7s						
MDJ	**Mudanjiang**	**38.12**	**5**	P	**P**	**21 34 10.4**	**-0.4**
MDJ	**Mudanjiang**	**38.12**	**5**	P	**P**	**21 34 15.1**	**+4.4**
MDJ				pmax	pmax		
	comp=Z,45nm,1.4s						
BNX	**BinXian**	**39.10**	**2**	⇓P	**P**	**21 34 21.8**	**+2.9**
BNX				pmax	pmax		
	comp=Z,18nm,1.2s						
LSA	**Lhasa**	**39.54**	**310**	P	**P**	**21 34 23.5**	**0.0**
LSA	**Lhasa**	**39.54**	**310**	P	**P**	**21 34 21.0**	**-2.5**
GTA	**Gaotai**	**39.97**	**329**	*e*P	**P**	**21 34 28.3**	**+1.8**
GTA				sP	sP	21 34 41.1	+10
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GTA				LR	LR		
	comp=Z,250nm,18.7s						
GTA				LR	LR		
	comp=Z,350nm,18.7s						
GTA				LR	LR		
	comp=Z,450nm,20.7s						
NWAO	**Narrogin (SRO)**	**39.99**	**191**	LR	LR	21 52 59.6	
	comp=Z,102nm,18.4s,baz=296,slow=39						
ASAJ	**Asahikawa**	**40.39**	**19**	LR	LR	21 49 23.0	
	comp=Z,254nm,21.9s,baz=194,slow=33						
EIDS	**Eidsvold**	**40.43**	**143**	P	**P**	**21 34 29.8**	**-0.5**
EIDS				IAmb	IAmb	21 35 02.9	
	comp=Z,72nm,2.0s						
BBOO	**Buckleboo**	**40.45**	**166**	P	**P**	**21 34 29.2**	**-1.2**
GOMU	**GeErMu**	**40.62**	**321**	P	**P**	**21 34 32.3**	**+0.1**
GOMU				S	**S**	**21 40 41.0**	**-1.3**
GOMU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GOMU				LR	LR		
	comp=Z,530nm,16.2s						
GOMU				LR	LR		
	comp=Z,380nm,16.6s						
GOMU				LR	LR		
	comp=Z,490nm,16.3s						
STKA	**Stephens Creek**	**41.24**	**159**	P	**P**	**21 34 36.0**	**-0.8**
	comp=Z,21nm,0.9s,baz=337,slow=9.0,SNR=10						
STKA				LR	LR	21 53 17.8	
	comp=Z,123nm,19.9s,baz=358,slow=39						
	comp=Z,21nm,0.9s						
STKA	**Stephens Creek**	**41.24**	**159**	P	**P**	**21 34 36.1**	**-0.8**
HIA	**Hailar**	**42.84**	**355**	P	**P**	**21 34 50.2**	**+0.4**
HIA				IAmb	IAmb	21 34 56.1	
	comp=Z,38nm,1.2s						
HILR	**Hailar Array B**	**43.13**	**355**	P	**P**	**21 34 53.4**	**+1.3**
	comp=Z,28nm,1.0s,baz=159,slow=13,SNR=18						
	comp=Z,28nm,1.0s						
HEH	**HeiHe**	**43.61**	**2**	*e*P	**P**	**21 34 56.3**	**+0.4**
HEH				pmax	pmax		
	comp=Z,12nm,0.8s						
HEH				LR	LR		
	comp=Z,180nm,13.7s						
HEH				LR	LR		
	comp=Z,260nm,13.9s						
HEH				LR	LR		
	comp=Z,340nm,13.3s						
SONM	**Songino Array**	**44.20**	**342**	P	**P**	**21 35 00.8**	**-0.1**
	comp=Z,1.5nm,0.9s,baz=165,slow=7.7,SNR=6.9						
SONM				LR	LR	21 54 46.6	
	comp=Z,240nm,21.1s,baz=156,slow=38						
	comp=Z,1.5nm,0.9s						
SONM	**Songino Array**	**44.20**	**342**	P	**P**	**21 35 00.4**	**-0.6**
PALK	**Pallekele**	**44.26**	**274**	LR	LR	21 52 34.0	
	comp=Z,93nm,21.9s,baz=90,slow=35						
ARMA	**Armidale**	**44.58**	**147**	P	**P**	**21 35 03.7**	**-0.5**
CAN	**Canberra**	**47.24**	**153**	P	**P**	**21 35 25.2**	**+0.2**
TOO	**Toolangi**	**47.76**	**158**	P	**P**	**21 35 28.8**	**-0.2**
DZM	**Mont Dzumac**	**49.33**	**126**	P	**P**	**21 35 40.9**	**-0.5**
	comp=Z,5.0nm,0.6s,baz=282,slow=8.5,SNR=7.3						
DZM				LR	LR	21 57 35.4	
	comp=Z,46nm,19.2s,baz=234,slow=37						
	comp=Z,5.0nm,0.6s						
DZM	**Mont Dzumac**	**49.33**	**126**	*e*LR	LR	21 49 46.9	
	comp=Z,265nm,28.8s						
DZM	**Mont Dzumac**	**49.33**	**126**	P	**P**	**21 35 40.9**	**-0.5**
DZM				IAmb	IAmb	21 35 44.4	
	comp=Z,27nm,1.3s						
WMQ	**Urumqi**	**49.62**	**325**	*e*P	**P**	**21 35 43.8**	**+0.5**
WMQ				sP	sP	21 35 58.8	+11
WMQ				PP	**PP**	**21 37 41.3**	**+3.5**
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				LR	LR		
	comp=Z,250nm,19.9s						
PETK	**Petropavlovsk-**	**53.42**	**24**	P	**P**	**21 36 13.2**	**+1.6**
	comp=Z,12nm,1.0s,baz=173,slow=3.7,SNR=3.8						
PETK				LR	LR	21 59 38.5	
	comp=Z,65nm,20.0s,baz=216,slow=37						
	comp=Z,12nm,1.0s						
WUS	**Wushi**	**53.54**	**317**	P	**P**	**21 36 12.7**	**-0.1**
MKAR	**Makanchi Array**	**54.45**	**325**	P	**P**	**21 36 19.2**	**0.0**
	comp=Z,2.2nm,0.7s,baz=126,slow=8.0,SNR=17						
MKAR				LR	LR	21 59 28.7	
	comp=Z,182nm,21.6s,baz=125,slow=36						
	comp=Z,2.2nm,0.7s						
MKAR	**Makanchi Array**	**54.45**	**325**	P	**P**	**21 36 18.6**	**-0.7**
MAKZ	**Makanchi**	**54.64**	**325**	P	**P**	**21 36 20.1**	**-0.4**
MAKZ				IAmb	IAmb	21 36 41.7	
	comp=Z,12nm,1.2s						
TARG	**Taragay, Kyrgy**	**54.72**	**317**	P	**P**	**21 36 21.1**	**-0.7**
KSH	**Kashi**	**55.07**	**314**	P	**P**	**21 36 25.6**	**+1.7**
KSH				pmax	pmax		
	comp=Z,6.0nm,1.2s						
NIL	**Nilore**	**55.10**	**307**	P	**P**	**21 36 23.4**	**-0.7**
YAK	**Yakutsk**	**55.48**	**3**	LR	LR	22 02 23.4	
	comp=Z,78nm,19.7s,baz=158,slow=38						
YAK	**Yakutsk**	**55.48**	**3**	P	**P**	**21 36 26.5**	**+0.3**
MA2	**Magadan**	**56.37**	**15**	LR	LR	22 01 05.3	
	comp=Z,66nm,21.0s,baz=194,slow=36						
AAK	**Ala-Archa**	**57.34**	**317**	LR	LR	22 01 33.9	
	comp=Z,124nm,21.5s,baz=102,slow=36						
AAK	**Ala-Archa**	**57.34**	**317**	P	**P**	**21 36 39.0**	**-1.2**
MSVF	**Nonsavu**	**57.39**	**116**	P	**P**	**21 36 39.9**	**-0.9**
MSVF				IAmb	IAmb	21 36 46.7	
	comp=Z,22nm,1.1s						
ZAA0	**Zalesovo Array**	**57.46**	**333**	P	**P**	**21 36 38.8**	**-1.8**
ZALV	**Zalesovo Beam**	**57.46**	**333**	P	**P**	**21 36 39.1**	**-1.4**
	comp=Z,2.9nm,0.9s,baz=139,slow=7.9,SNR=7.8						
	comp=Z,2.9nm,0.9s						
ZALV	**Zalesovo Beam**	**57.46**	**333**	P	**P**	**21 36 39.0**	**-1.6**
MANEM	**Manem**	**57.51**	**311**		**P**	**21 36 41.2**	**-0.4**
MANEM				IAmb	IAmb	21 36 51.5	
	comp=Z,26nm,1.1s						
ARSB	**Arslanbob**	**57.87**	**315**	P	**P**	**21 36 42.6**	**-1.3**
ARSB				IAmb	IAmb	21 37 01.0	
	comp=Z,28nm,1.7s						
KURBB	**Kurchatov Arra**	**58.62**	**327**	P	**P**	**21 36 48.1**	**-0.7**
	comp=Z,3.8nm,0.7s,baz=125,slow=6.1,SNR=23						
	comp=Z,3.8nm,0.7s						
KURK	**Kurchatov**	**58.62**	**327**	P	**P**	**21 36 47.6**	**-1.2**
KURK				IAmb	IAmb	21 37 07.0	
	comp=Z,15nm,1.1s						
KBL	**Kabul**	**58.70**	**307**	P	**P**	**21 36 48.1**	**-1.8**
KBL				IAmb	IAmb	21 36 50.7	
	comp=Z,7.2nm,1.1s						
BTK	**Batken**	**58.96**	**313**	P	**P**	**21 36 51.4**	**-0.1**
GAR	**Garm**	**58.99**	**312**	P	**P**	**21 36 51.6**	**-0.2**
SEY	**Seymchan**	**59.65**	**14**	LR	LR	22 05 28.3	
	comp=Z,53nm,18.1s,baz=191,slow=39						
KK31	**Karatay Array**	**60.22**	**316**	P	**P**	**21 36 59.5**	**-0.6**
KK31				IAmb	IAmb	21 37 06.6	
	comp=Z,11nm,0.9s						
KKAR	**Karatay Array**	**60.22**	**316**	P	**P**	**21 36 59.7**	**-0.4**
HRA	**Herat**	**64.15**	**305**	P	**P**	**21 37 25.6**	**-1.3**
BVAR	**Borovoye Array**	**64.20**	**327**	P	**P**	**21 37 25.4**	**-1.2**
	comp=Z,1.4nm,0.9s,baz=106,slow=9.4,SNR=7.3						
BVAR				LR	LR	22 06 45.5	
	comp=Z,187nm,20.2s,baz=122,slow=37						
	comp=Z,1.4nm,0.9s						
BORK	**Borovoye**	**64.25**	**327**	P	**P**	**21 37 25.8**	**-1.1**
BORK				IAmb	IAmb	21 37 41.7	
	comp=Z,5.9nm,0.8s						
THZ	**Tophouse**	**64.78**	**142**	P	**P**	**21 37 30.3**	**-0.2**
TIXI	**Tiksi**	**65.08**	**1**	LR	LR	22 05 44.7	
	comp=Z,168nm,21.6s,baz=198,slow=36						
TIXI	**Tiksi**	**65.08**	**1**	P	**P**	**21 37 31.1**	**-0.8**
TIXI				IAmb	IAmb	21 37 50.8	
	comp=Z,14nm,1.3s						
URZ	**Urewera**	**65.56**	**137**	LR	LR	22 08 33.3	
	comp=Z,90nm,18.5s,baz=285,slow=38						
NRIK	**Noril'sk**	**67.38**	**346**	P	**P**	**21 37 48.7**	**+2.0**
	comp=Z,2.0nm,0.6s,baz=108,slow=4.7,SNR=2.9						
NRIK				LR	LR	22 09 02.7	
	comp=Z,241nm,19.9s,baz=148,slow=38						
	comp=Z,2.0nm,0.6s						
NRIK	**Noril'sk**	**67.38**	**346**	P	**P**	**21 37 47.0**	**+0.3**
NRIK				IAmb	IAmb	21 38 02.2	
	comp=Z,5.5nm,1.0s						
AB31	**Akbulak array**	**69.09**	**320**	P	**P**	**21 37 56.1**	**-1.7**
AB31				IAmb	IAmb	21 38 04.4	
	comp=Z,6.7nm,1.1s						
ABKAR	**Akbulak array**	**69.09**	**320**	P	**P**	**21 37 56.6**	**-1.2**
AKTO	**Aktyubinsk**	**70.59**	**321**	LR	LR	22 11 21.1	
	comp=Z,196nm,20.4s,baz=106,slow=38						
ARTI	**Arti**	**71.90**	**327**	LR	LR	22 11 28.3	
	comp=Z,132nm,19.4s,baz=116,slow=37						
M14K	**Bethel**	**75.92**	**29**	P	**P**	**21 38 38.9**	**+0.6**
KIRV	**Kirov**	**77.10**	**329**	LR	LR	22 16 04.9	
	comp=Z,129nm,19.2s,baz=105,slow=38						
RAYN	**Ar Rayn**	**78.08**	**293**	P	**P**	**21 38 49.8**	**-1.5**
C19K	**Lookout Ridge**	**78.63**	**21**	P	**P**	**21 38 53.5**	**+0.1**
C19K				IAmb	IAmb	21 39 30.8	
	comp=Z,8.1nm,1.0s						
D20K	**Etivluk River**	**79.62**	**21**	P	**P**	**21 38 58.7**	**-0.2**
D20K				IAmb	IAmb	21 39 11.1	
	comp=Z,12nm,1.2s						
KBZ	**Khabaz**	**80.03**	**313**	LR	LR	22 18 33.1	
	comp=Z,68nm,19.5s,baz=69,slow=39						
E21K	**Killik River**	**80.55**	**22**	P	**P**	**21 39 03.6**	**-0.2**
GURO	**Guroymak-BITLI**	**80.70**	**308**	P	**P**	**21 39 03.8**	**-1.7**
GURO				IAmb	IAmb	21 39 39.5	
	comp=Z,10nm,1.2s						
D22K	**Ayikyak River**	**81.06**	**21**	P	**P**	**21 39 06.8**	**+0.2**
D22K				IAmb	IAmb	21 39 50.1	
	comp=Z,38nm,2.0s						
L22K	**Petersville**	**81.44**	**28**	P	**P**	**21 39 07.8**	**-1.0**
L22K				IAmb	IAmb	21 39 29.9	
	comp=Z,15nm,1.0s						
TOLK	**Toolik Lake Re**	**82.18**	**22**	P	**P**	**21 39 12.9**	**+0.3**
TOLK				IAmb	IAmb	21 39 25.8	
	comp=Z,7.5nm,1.1s						
ILAR	**Eielson Array**	**83.20**	**26**	P	**P**	**21 39 17.4**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=250,slow=5.7,SNR=9.1						
	comp=Z,1.0nm,0.6s						
ASF	**Jabal al Asfar**	**85.21**	**302**	LR	LR	22 26 03.9	
	comp=Z,42nm,18.4s,baz=30,slow=42						
I27K	**Kandik River**	**85.38**	**25**	P	**P**	**21 39 28.8**	**-0.1**
FURI	**Furi**	**85.68**	**278**	LR	LR	22 17 58.9	
	comp=Z,43nm,18.6s,baz=64,slow=36						
VNDA	**Vanda**	**86.37**	**173**	LR	LR	22 19 02.2	
	comp=Z,84nm,19.0s,baz=338,slow=36						
MMAI	**Mount Meron Ar**	**86.39**	**303**	P	**P**	**21 39 33.3**	**-1.4**
	comp=Z,0.1nm,0.2s,baz=123,slow=5.3,SNR=1.4						
MMAI				LR	LR	22 22 15.3	
	comp=Z,65nm,21.9s,baz=72,slow=38						
	comp=Z,0.1nm,0.2s						
EIL	**Elat**	**87.11**	**299**	LR	LR	22 25 50.5	
	comp=Z,63nm,18.4s,baz=61,slow=41						

BRTR	Keskin Array B	87.14	309	P	P	21 39 39.9	+1.5
	comp=Z,0.6nm,0.7s,baz=35,slow=4.5,SNR=4.0						
BRTR				LR	LR	22 25 28.2	
	comp=Z,32nm,19.2s,baz=71,slow=40						
	comp=Z,0.6nm,0.7s						
BRTR	Keskin Array B	87.14	309	P	P	21 39 38.2	-0.2
PPT2	Papeete2	87.33	108	*e*LR	LR	22 07 18.8	
	comp=Z,107nm,26.5s						
PPT2				*e*LR	LR	22 07 19.3	
	comp=Z,119nm,32.0s						
ARCES	ARCESS Array B	87.34	340	P	P	21 39 38.2	-0.3
	comp=Z,2.5nm,0.9s,baz=78,slow=4.9,SNR=1.8						
ARCES				LR	LR	22 21 28.4	
	comp=Z,100nm,20.9s,baz=84,slow=38						
	comp=Z,2.5nm,0.9s						
SPITS	Spitsbergen Ar	87.47	349	LR	LR	22 22 28.0	
	comp=Z,112nm,21.2s,baz=48,slow=38						
TBI	Tubuai	88.22	114	*e*LR	LR	22 07 43.0	
	comp=Z,693nm,34.0s						
FINES	FINESS Array B	88.70	332	P	P	21 39 43.6	-1.5
	comp=Z,2.1nm,0.9s,baz=62,slow=4.5,SNR=4.3						
FINES				LR	LR	22 21 44.3	
	comp=Z,109nm,21.4s,baz=48,slow=37						
	comp=Z,2.1nm,0.9s						
AKASG	Malin Array Be	88.83	321	LR	LR	22 22 08.5	
	comp=Z,86nm,19.0s,baz=70,slow=37						
MLR	Muntele Rosu	91.90	316	LR	LR	22 25 42.2	
	comp=Z,166nm,19.6s,baz=73,slow=38						
SYO	Syowa Base	94.51	201	⇓*e*pP	pP	21 40 18.2	+3.0
MBAR	Mbarara	94.59	270	LR	LR	22 20 14.3	
	comp=Z,58nm,21.0s,baz=76,slow=34						
HFS	Hagfors	94.89	332	LR	LR	22 24 59.1	
	comp=Z,108nm,22.0s,baz=58,slow=37						
NOA	NORSAR Array B	95.66	333	LR	LR	22 27 33.0	
	comp=Z,98nm,18.3s,baz=35,slow=38						
QSPA	South Pole Qui	96.42	180	LR	LR	22 25 04.9	
	comp=Z,44nm,19.0s,baz=0.0,slow=36						
VRAC	Vranov	97.07	321	LR	LR	22 26 54.4	
	comp=Z,67nm,19.3s,baz=66,slow=37						
YKA	Yellowknife Ar	97.54	24	P	Pdif	21 40 27.8	+2.0
	comp=Z,0.5nm,0.8s,baz=296,slow=5.3,SNR=4.9						
	comp=Z,0.5nm,0.8s						
GERES	GERESS Array B	99.01	322	LR	LR	22 26 45.9	
	comp=Z,47nm,21.8s,baz=51,slow=36						
PLCA	Paso Flores	143.12	160	PKP	PKPdf	21 46 25.5	-0.9
	comp=Z,1.2nm,0.8s,baz=273,slow=4.3,SNR=4.0						
PLCA	Paso Flores	143.12	160		PKPbc	21 46 24.8	+1.6
LPAZ	La Paz	163.67	128	PKP	PKPdf	21 46 56.4	-0.2
	comp=Z,0.4nm,0.4s,baz=297,slow=6.8,SNR=3.7						
LPAZ				PKPab	PKPab	21 47 47.4	-1.0
	comp=Z,0.6nm,0.5s,baz=194,slow=4.2,SNR=1.7						

JMA 21 21:42:48.9±0.1,35°.6N±0°.6×135°.9E±0°.4,h12^{km},MV0.2/4, WESTERN FUKUI PREF,Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFM	Mihama	0.09	111	P	Pg	21 42 51.6	0.0

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*IDC **21** 21:43:17.6±0.6,32°.35N×142°.41E,h0^{km},mb4.2/24, mbtmp4.2/29,ML3.8/5,MS3.5/8,Error ellipse: s-maj=16.6km s-min=13.5km az=36.0*

*BJI **21** 21:43:17.2,32°.44N×142°.43E,h10^{km},mB4.8/6,mb4.4/46, Ms4.4/4,Ms7 4.2/3*

*NEIC **21** 21:43:19.1±1.1,32°.36N±0°.06×142°.45E±0°.04,h10^{km}±1^{km}, mb4.7/36,Error ellipse: s-maj=11.1km s-min=4.6km az=156.0*

*MOS **21** 21:43:19.2±1.0,32°.38N×142°.43E,h24^{km},mb4.8/25,Error ellipse: s-maj=13.6km s-min=6.2km az=120.5*

*JMA **21** 21:43:21.5±0.2,32°.5N±0°.7×14 °2E± °,h73^{km},MV4.0/33, FAR E OFF IZU ISLANDS*

*NIED **21** 21:43:21.5,32°.49N×142°.38E,h73^{km},MW4.3,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-2.17; M$_{\theta\theta}$0.54; M$_{\phi\phi}$1.63; M$_{r\theta}$-2.44; M$_{\theta\phi}$-0.38; M$_{\phi r}$0.64; Fault plane solution: M$_0$3.06000×10^{15} NP1: ϕ_s343.00000°,δ24.00000°,λ-50.00000°. NP2: ϕ_s121.00000°,δ72.00000°,λ-106.00000°.*

ISC 21 21:43:17.7±1.2,32°.41N±0°.05×142°.49E±0°.05,h4^{km}±7^{km}, n186,σ1^{s}25/199,mb4.5/68,MS3.8/7,12C-9D,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	Aogashimamukai	2.30	272	P	Pn	21 43 56.8	+0.3
JAOM				*e*S	Sn	21 44 23.2	-2.2
JHJ2	Mitsune	2.36	288		Pn	21 43 57.2	0.0
JHJ2				Sn	Sn	21 44 23.8	-2.8
JHJ2	Mitsune	2.36	288	P	Pn	21 43 57.6	+0.4
JHJ2	Mitsune	2.36	288	P	Pn	21 43 57.6	+0.4
JHJ2				*e*S	Sn	21 44 24.7	-1.9
JHCJ	Hachijojimakas	2.36	287	P	Pn	21 43 57.3	+0.1
JHCJ				S	Sn	21 44 24.1	-2.6
JHJ	Hachijo jima 2	2.38	288	Pn	Pn	21 43 57.5	-0.1
	35nm,0.3s,baz=108,slow=22,SNR=38						
JHJ				Sn	Sn	21 44 26.1	-1.2
	88nm,0.3s,baz=74,slow=23,SNR=8.2						
	106nm,0.3s						
BSO1	Boso 1	2.57	331	P	Pn	21 44 00.2	+0.6
JMKN	Mikurajimanish	2.84	302	*e*P	Pn	21 44 03.7	-0.2
JMKN				*e*S	Sn	21 44 36.3	-2.3
BSO3	Boso 3	2.90	326	P	Pn	21 44 05.4	+0.9
JMYK	Miyake Tsubota	2.96	305	P	Pn	21 44 05.3	-0.2
JMYK				*e*S	Sn	21 44 38.7	-2.9
JOD2	Odawara 2	4.01	316	P	Pn	21 44 19.7	-0.3
JOD2				*e*S	Sn	21 45 04.5	-3.0
JYN	Shimob	4.50	314	P	Pn	21 44 27.4	+0.7
JRY	Ryogami san	4.67	321	P	Pn	21 44 29.7	+0.7
JRY				*e*S	Sn	21 45 23.1	-0.5
JAG	Ashikaga	4.73	329	P	Pn	21 44 30.4	+0.6
JAG				S	Sn	21 45 22.4	-2.7
CBIJ	Chichi jima	5.30	183	*e*P	Pn	21 44 36.3	-1.4
JCJ	Chichijima	5.30	183	Pn	Pn	21 44 25.6	-12
	9.4nm,0.3s,baz=292,slow=22,SNR=24						
JCJ				Sn	Sn	21 45 20.0	-19
	24nm,0.3s,baz=294,slow=21,SNR=5.8						
JCJ	Chichijima	5.30	183	Pn	Pn	21 44 35.8	-1.9
JGF	Kuroka	5.32	308		Pn	21 44 38.8	+0.9
JGF	Kuroka	5.32	308	P	Pn	21 44 40.2	+2.2
INU	Inuyama	5.41	304		Pn	21 44 40.0	+0.9
INU	Inuyama	5.41	304	P	Pn	21 44 41.7	+2.5
MJAR	Matsushiro Arr	5.43	321	Pn	Pn	21 44 39.7	+0.3
	1.5nm,0.3s,baz=200,slow=26,SNR=88						
MJAR				Sn	Sn	21 45 41.7	-0.8
	1.0nm,0.3s,baz=19,slow=21,SNR=7.2						
	11nm,0.4s						
MJAR	Matsushiro Arr	5.43	321		Pn	21 44 40.2	+0.8
MJAR	Matsushiro Arr	5.43	321	P	Pn	21 44 40.3	+0.8
MAJO	Matsushiro	5.43	321		Pn	21 44 40.6	+1.1
MAJO	Matsushiro	5.43	321	P	Pn	21 44 41.6	+2.1
MAJO	Matsushiro	5.43	321	*c i*P	Pn	21 44 40.5	+1.1
MAT	Matsushiro	5.43	321	P	Pn	21 44 40.8	+1.3
MAT				*e*S	Sn	21 45 40.6	-1.9
JOTO	OTAMA OYAMA	5.43	342	P	Pn	21 44 40.0	+0.5
JOTO				*e*S	Sn	21 45 38.8	-3.8
MJB9	Matsu-Tunnel	5.43	321		Pn	21 44 41.1	+1.5
JYTA	Yamagatataniai	5.74	305	*e*P	Pn	21 44 46.1	+2.5
JTNC	Tanabenakahech	5.94	286	*e*P	Pn	21 44 48.8	+2.3
JSD	Sado	6.59	330		Pn	21 44 55.5	+0.1
JSD	Sado	6.59	330	P	Pn	21 44 55.7	+0.3
JMK	Ichinoseki	6.61	351	P	Pn	21 44 54.5	-1.1
JMK				*e*S	Sn	21 46 06.0	-5.4
JMN	Monobe	7.34	283	Pn	Pn	21 45 06.3	+0.5
JMN	Monobe	7.34	283	P	Pn	21 45 07.9	+2.1
ERM	Erimo	9.60	3	Pn	Pn	21 45 34.6	-2.1
ERM	Erimo	9.60	3	P	Pn	21 45 34.3	-2.4
ERM	Erimo	9.60	3	P	Pn	21 45 34.6	-2.1
JEM	Erimo	9.60	3	P	Pn	21 45 34.2	-2.5
ASAJ	Asahikawa	11.69	0	Pn	Pn	21 46 04.5	-0.7
	3.0nm,0.3s,baz=232,slow=13,SNR=5.7						
	9.9nm,0.4s						
ASAJ	Asahikawa	11.69	0	P	Pn	21 46 03.9	-1.3
JKA	Kamikawa-asahi	11.69	0	Pn	Pn	21 46 03.9	-1.3
KSRS	Korea Array	12.96	297	Pn	Pn	21 46 23.6	+1.0
	0.1nm,0.3s,baz=102,slow=12,SNR=6.1						
	1.4nm,0.7s						
JOW	Kunigami	13.55	249	LR	LR	21 51 07.8	
	comp=Z,102nm,18.3s,baz=102,slow=35						
USRK	Ussuriysk Ar.	14.35	328	Pn	Pn	21 46 41.3	-0.4
	0.5nm,0.3s,baz=128,slow=13,SNR=4.9						
	4.1nm,0.6s						
BNX	BinXian	17.69	323	⇓P	Pn	21 47 23.8	-1.1
BNX				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GRNR	Gornyy	18.89	348	⇓*i*P	P	21 47 38.3	-0.7
GRNR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,230nm,18.0s						
GRNR				MLR	MLR		
	comp=N,140nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,170nm,14.0s						
NJ2	Nanjing	19.99	275	*e*P	Pn	21 47 53.5	+0.6
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SSLB	Suanglung	20.82	251	P	P	21 47 58.6	-1.8
HEH	HeiHe	21.05	332	*e*P	P	21 48 02.3	-0.2
HNS	HongShan	23.28	290	⇑P	P	21 48 26.3	-0.1
HNS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
XLT	XiLinHaoTe	23.62	307	*e*P	P	21 48 28.1	-1.8
XLT				pP	sP	21 48 32.4	+4.2
XLT				sP	pP	21 48 35.5	+6.8
XLT				PP	PnPn	21 48 58.4	+1.8
XLT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ZEA	Zeya	23.95	337	*e*P	P	21 48 33.9	+1.1
ZEA				pmax	pmax		
	comp=N,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.7s						
HILR	Hailar Array B	24.10	322	P	P	21 48 35.9	+1.5
	comp=Z,6.3nm,0.7s,baz=125,slow=13,SNR=8.2						
	comp=Z,6.3nm,0.7s						
HHC	Hu-ho-hao-te	26.10	298	*e*P	P	21 48 52.3	-0.4
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,200nm,4.9s						
HHC				LR	LR		
	comp=Z,85nm,8.0s						
HHC				LR	LR		
	comp=Z,150nm,9.8s						
HHC				LR	LR		
	comp=Z,120nm,9.8s						
BTO	Baotou	27.23	297	*e*P	P	21 49 03.8	+0.9
BTO				sP	pwP	21 49 12.0	+0.5
BTO				S	S	21 53 46.1	+3.5
BTO				pmax	pmax		
	comp=Z,15nm,0.7s						
BTO				LR	LR		
	comp=Z,290nm,7.5s						
BTO				LR	LR		
	comp=Z,320nm,6.1s						
MA2	Magadan	27.73	9	⇑*e*P	P	21 49 04.6	-2.4
MA2				pmax	pmax		
	comp=Z,239nm,3.1s						
XAN	Xi'an	28.06	283	⇑P	P	21 49 09.3	-1.0
XAN				pP	sP	21 49 13.6	+4.9
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
YAK	Yakutsk	30.77	348	⇓*e*P	P	21 49 33.9	0.0
YAK				pmax	pmax		
	comp=Z,18nm,2.5s						
ULN	Ulaanbaatar	30.86	310	⇑*e*P	P	21 49 37.0	+1.8
ULN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SEY	Seymchan	31.18	9	⇑*e*P	P	21 49 38.8	+1.2
SEY				pmax	pmax		
	comp=Z,8.0nm,1.4s						
SONM	Songino Array	31.28	310	P	P	21 49 40.5	+1.7
	comp=Z,3.8nm,0.9s,baz=115,slow=8.1,SNR=23						
	comp=Z,3.8nm,0.9s						
SONM	Songino Array	31.28	310	P	P	21 49 38.2	-0.6
LZH	Lanzhou	32.01	287	*e*P	P	21 49 55.3	+10
LZH				pP	pwP	21 50 01.5	+7.5
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
LZDM	Lanzhou Array	32.14	287	P	P	21 49 45.7	-1.1
	comp=Z,0.9nm,0.4s,baz=144,slow=8.9,SNR=4.3						
LZDM				LR	LR	22 05 08.5	
	comp=Z,98nm,18.9s,baz=35,slow=41						
	comp=Z,0.9nm,0.4s						
GTA	Gaotai	35.01	294	*e*P	P	21 50 11.8	+0.3
GTA				sP	pwP	21 50 24.5	+4.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KMI	Kunming	35.44	269	P	P	21 50 16.3	+0.9
KMI				pmax	pmax		
	comp=Z,10.0nm,0.4s						
PZH	PanZhiHua	35.80	271	P	P	21 50 18.8	+0.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TOLI2	Tolitoli	37.25	218	P	P	21 50 29.0	-1.6
KNGR	Kungurtug, Tuv	37.59	312	⇑*e*P	P	21 50 35.2	+1.8
KNGR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TNCH	TengChong	39.04	271	P	P	21 50 46.1	+0.1
TNCH				pP	sP	21 50 48.8	+4.5
TNCH				sP	pP	21 50 50.6	+5.8
TNCH				S	S	21 56 45.3	-0.7
TNCH				sS	sS	21 56 50.6	+6.5
TNCH				pmax	pmax		
	comp=Z,8.0nm,0.5s						
TNCH				LR	LR		
	comp=Z,120nm,4.8s						
TNCH				LR	LR		
	comp=Z,94nm,5.5s						
TIXI	Tiksi	39.98	353		P	21 50 53.0	0.0
TIXI	Tiksi	39.98	353	⇑*e*P	P	21 50 53.6	+0.7
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CMAR	Chiang Mai Arr	41.42	261	P	P	21 51 04.5	-1.1
	comp=Z,0.8nm,0.7s,baz=48,slow=7.3,SNR=9.2						
CMAR				LR	LR	22 08 29.6	
	comp=Z,18nm,19.8s,baz=315,slow=37						
	comp=Z,0.8nm,0.7s						
WMQ	Urumqi	43.86	301	*e*P	P	21 51 27.8	+2.6
WMQ				pP	sP	21 51 30.8	+7.3
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
DGZ	Jazzator, Alta	43.92	310	⇓*i*P	P	21 51 26.2	+0.5
DGZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ANM	Nome	45.15	29	P	P	21 51 35.9	+0.8
ANM				IAmb	IAmb	21 51 39.9	
	comp=Z,11nm,1.0s						
ANM	Nome	45.15	29	P	P	21 51 35.9	+0.8
ANM				pmax	pmax		
	comp=Z,11nm,1.0s						
ZAA0	Zalesovo Array	45.76	316		P	21 51 39.0	-1.2
ZALV	Zalesovo Beam	45.76	316	P	P	21 51 40.5	+0.3
	comp=Z,2.1nm,0.7s,baz=86,slow=6.3,SNR=10						
ZALV				PcP	PcP	21 53 17.9	+0.1
	comp=Z,1.4nm,0.6s,baz=88,slow=4.7,SNR=5.0						
	comp=Z,2.1nm,0.7s						
ZALV	Zalesovo Beam	45.76	316		P	21 51 39.4	-0.7
MK31	Makanchi Array	47.44	306	*ce*P	P	21 51 53.8	+0.4
MKAR	Makanchi Array	47.44	306	P	P	21 51 54.2	+0.8
	comp=Z,4.0nm,0.7s,baz=90,slow=10,SNR=14						
	comp=Z,4.0nm,0.7s						
MKAR	Makanchi Array	47.44	306		P	21 51 53.6	+0.2
MAKZ	Makanchi	47.65	306	P	P	21 51 55.5	+0.4
MAKZ				IAmb	IAmb	21 52 39.5	
	comp=Z,13nm,1.4s						
MAKZ	Makanchi	47.65	306	P	P	21 51 55.5	+0.4
MAKZ				pmax	pmax		
	comp=Z,13nm,1.5s						
K17K	Iditarod	47.71	32	P	P	21 51 56.8	+1.5
NRIK	Noril'sk	47.84	337	P	P	21 51 56.3	+0.1
	comp=Z,6.5nm,0.9s,baz=116,slow=6.2,SNR=7.9						
	comp=Z,6.5nm,0.9s						
NRIK	Noril'sk	47.84	337		P	21 51 55.7	-0.5
NRIK				IAmb	IAmb	21 51 58.3	
	comp=Z,12nm,1.1s						
NRIK	Noril'sk	47.84	337	*d i*P	P	21 51 56.7	+0.5
NRIK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
M17K	Holitna River	47.88	34	P	P	21 51 57.4	+0.7
KURK	Kurchatov	49.56	311		P	21 52 09.8	+0.1
KURK				IAmb	IAmb	21 52 11.2	
	comp=Z,8.9nm,0.9s						
KURK	Kurchatov	49.56	311	*d i*P	P	21 52 09.6	-0.1
KURK				pmax	pmax		
	comp=Z,12nm,1.0s						
KNRA	Kununurra	49.59	197	P	P	21 52 09.6	-0.5
KURBB	Kurchatov Arra	49.63	311	P	P	21 52 10.6	+0.4
	comp=Z,5.3nm,0.9s,baz=87,slow=7.5,SNR=35						
	comp=Z,5.3nm,0.9s						
GSI	Gunungsitoli	52.34	243	P	P	21 52 29.9	-1.1
WB0	Warramunga Arr	52.46	190	P	P	21 52 30.6	-1.1
WB0				IAmb	IAmb	21 52 44.8	
	comp=Z,5.6nm,0.8s						
WRA	Warramunga Arr	52.64	190	P	P	21 52 32.8	-0.3
	comp=Z,3.0nm,0.7s,baz=6.5,slow=7.7,SNR=9.2						
	comp=Z,3.0nm,0.7s						
WRA	Warramunga Arr	52.64	190	P	P	21 52 31.8	-1.3
WRA	Warramunga Arr	52.64	190	P	P	21 52 31.8	-1.3
FITZ	Fitzroy Crossi	52.75	200	P	P	21 52 33.5	-0.4
ILAR	Eielson Array	52.97	30	P	P	21 52 35.9	+0.8
	comp=Z,0.6nm,0.7s,baz=263,slow=6.7,SNR=9.0						
	comp=Z,0.6nm,0.7s						
ILAR	Eielson Array	52.97	30	P	P	21 52 35.5	+0.4
ILAR	Eielson Array	52.97	30	P	P	21 52 35.5	+0.4
KSH	Kashi	53.22	298	P	P	21 52 41.5	+4.1
KSH				sP	pwP	21 52 53.9	+7.9
KSH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AAK	Ala-Archa	53.57	302	P	P	21 52 39.9	-0.1
AAK				IAmb	IAmb	21 52 42.0	
	comp=Z,4.5nm,1.1s						
AAK	Ala-Archa	53.57	302	*de*P	P	21 52 41.4	+1.4
AAK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
BMAR	Burnt Mountain	53.99	27	P	P	21 52 44.0	+1.4
BVAR	Borovoye Array	54.40	315	P	P	21 52 46.2	+0.5
	comp=Z,3.1nm,0.8s,baz=91,slow=7.7,SNR=16						
	comp=Z,3.1nm,0.8s						
BORK	Borovoye	54.44	315		P	21 52 46.2	+0.2
BORK	Borovoye	54.44	315	*ce*P	P	21 52 46.5	+0.5
BORK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BCAR	Beaver Creek A	55.26	32	P	P	21 52 51.9	0.0
KK31	Karatay Array	56.30	303		P	21 52 59.4	-0.2
KK31				IAmb	IAmb	21 53 01.2	
	comp=Z,9.5nm,0.9s						
KK31	Karatay Array	56.30	303	P	P	21 52 59.4	-0.2
KK31				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KKAR	Karatay Array	56.30	303		P	21 52 59.8	+0.2
KKAR	Karatay Array	56.30	303	P	P	21 52 59.8	+0.2
ASAR	Alice Springs	56.36	189	P	P	21 53 00.1	0.0
	comp=Z,0.7nm,0.7s,baz=15,slow=10,SNR=8.5						
	comp=Z,0.7nm,0.7s						
ASAR	Alice Springs	56.36	189	P	P	21 52 59.5	-0.6
MANEM	Manem	57.00	296		P	21 53 04.8	-0.1
MANEM				IAmb	IAmb	21 53 29.0	
	comp=Z,8.0nm,0.8s						
NIL	Nilore	57.02	292		P	21 53 04.5	-0.4
NIL				IAmb	IAmb	21 53 09.4	
	comp=Z,7.9nm,0.9s						
NIL	Nilore	57.02	292	P	P	21 53 04.5	-0.4
NIL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
G30M	tAoh Zraii Nji	57.26	28	P	P	21 53 07.0	+1.0
G30M				IAmb	IAmb	21 53 08.6	
	comp=Z,7.4nm,1.1s						
MBWA	Marble Bar	57.54	205	P	P	21 53 08.1	-0.4
GAR	Garm	57.58	299	P	P	21 53 08.4	-0.5
PSA00	Pilbara Seismi	57.88	205	P	P	21 53 10.0	-0.8
PSA00				IAmb	IAmb	21 53 24.2	
	comp=Z,8.5nm,0.9s						
INK	Inuvik	58.12	26	P	P	21 53 12.8	+0.8
INK	Inuvik	58.12	26	P	P	21 53 12.8	+0.8
INK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CHGR	Chuyangaron	58.55	298		P	21 53 15.6	0.0
CHGR	Chuyangaron	58.55	298	P	P	21 53 15.6	0.0
CHGR				pmax	pmax		
	comp=Z,29nm,0.8s						
SHAA	Shahritus	59.67	298		P	21 53 23.5	+0.1
SHAA				IAmb	IAmb	21 53 25.4	
	comp=Z,20nm,1.1s						
ARTI	Arti	60.55	321		P	21 53 29.0	0.0
ARTI	Arti	60.55	321	*c i*P	P	21 53 29.3	+0.3
ARTI						21 54 17.6	
ARTI				S	S	22 01 46.0	+0.7
ARTI				SS	SS	22 05 42.6	-0.2
ARTI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
AB31	Akbulak array	61.65	312		P	21 53 36.6	0.0
AB31				IAmb	IAmb	21 53 37.6	
	comp=Z,3.8nm,0.8s						
ABKAR	Akbulak array	61.65	312	P	P	21 53 36.6	0.0
PALK	Pallekele	62.37	261	*de*P	P	21 53 42.6	+0.6
PALK				pmax	pmax		
	comp=Z,43nm,1.3s						
KIRV	Kirov	64.49	325	⇓*e*P	P	21 53 55.6	+0.3
SPITS	Spitsbergen Ar	65.22	349	P	P	21 54 00.6	+0.8
	comp=Z,2.8nm,0.8s,baz=90,slow=8.6,SNR=1.9						
	comp=Z,2.8nm,0.8s						
YKAW3	Yellowknife Wh	67.34	29	P	P	21 54 13.0	-0.6
YKAW3				IAmb	IAmb	21 54 17.1	
	comp=Z,5.0nm,1.2s						
YKA	Yellowknife Ar	67.38	29	P	P	21 54 14.6	+0.8
	comp=Z,1.5nm,1.0s,baz=297,slow=7.2,SNR=9.5						
	comp=Z,1.5nm,1.0s						
YKA	Yellowknife Ar	67.38	29	P	P	21 54 13.8	0.0
YKA	Yellowknife Ar	67.38	29	*i* P	P	21 54 14.6	+0.8
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ARCES	ARCESS Array B	68.63	340	P	P	21 54 22.2	+0.6
	comp=Z,2.3nm,0.8s,baz=50,slow=6.6,SNR=5.7						
	comp=Z,2.3nm,0.8s						
OBN	Obninsk	72.34	325	*e*P	P	21 54 43.4	-1.1
OBN				*e*		21 55 01.1	
OBN				*e*		21 57 26.4	
OBN				*e*PPP	PPP	21 59 10.3	
OBN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
AKT	Akhty	72.59	308	*e*P	P	21 54 46.3	-0.1
AKT				*e*		21 55 01.4	
AKT				pmax	pmax		
	comp=Z,16nm,1.3s						
FINES	FINESS Array B	73.32	333	P	P	21 54 50.8	+0.6
	comp=Z,5.4nm,0.9s,baz=47,slow=6.3,SNR=13						
	comp=Z,5.4nm,0.9s						
FINES	FINESS Array B	73.32	333	P	P	21 54 49.9	-0.3
KBZ	Khabaz	74.62	312	P	P	21 54 58.9	+0.8
	comp=Z,3.7nm,0.9s,baz=42,slow=3.3,SNR=10						
	comp=Z,3.7nm,0.9s						
KBZ	Khabaz	74.62	312	⇑*e*P	P	21 54 59.4	+1.3
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIV	Kislovodsk	74.64	312	*e*P	P	21 54 57.1	-1.3
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LRM	Limekiln Ridge	76.84	44	P	P	21 55 11.1	-0.1
NVAR	Mina Array Bea	77.06	53	P	P	21 55 14.1	+1.6
	comp=Z,1.2nm,0.7s,baz=276,slow=6.1,SNR=4.5						
	comp=Z,1.2nm,0.7s						
NVAR	Mina Array Bea	77.06	53	P	P	21 55 12.4	-0.1
GURO	Guroymak-BITLI	77.84	308		P	21 55 16.6	-0.1
GURO				IAmb	IAmb	21 55 19.0	
	comp=Z,6.6nm,1.0s						
AKASG	Malin Array Be	78.51	323	P	P	21 55 19.8	-0.2
	comp=Z,0.8nm,0.5s,baz=51,slow=5.7,SNR=6.8						
	comp=Z,0.8nm,0.5s						
AKASG	Malin Array Be	78.51	323	*i* P	P	21 55 21.3	+1.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NB2	NORSAR Subarra	78.79	338	P	P	21 55 21.9	+0.5
	comp=Z,1.4nm,0.8s,baz=40,slow=5.6						
NOA	NORSAR Array B	78.79	338	P	P	21 55 21.9	+0.5
	comp=Z,3.1nm,1.0s,baz=40,slow=5.4,SNR=7.3						
	comp=Z,3.1nm,1.0s						
NOA	NORSAR Array B	78.79	338	P	P	21 55 22.0	+0.5
MARD	Mardin	79.33	307		P	21 55 24.1	-0.8
MARD				IAmb	IAmb	21 55 26.8	
	comp=Z,6.4nm,0.8s						
PDAR	Pinedale Array	80.28	45	P	P	21 55 30.8	+0.6
	comp=Z,0.8nm,0.9s,baz=281,slow=2.3,SNR=5.6						
	comp=Z,0.8nm,0.9s						
PDAR	Pinedale Array	80.28	45	P	P	21 55 30.2	0.0
SFJD	Kangerlussuaq	80.40	5	LR	LR	22 30 29.5	
	comp=Z,47nm,21.9s,baz=21,slow=35						
FRB	Frobisher Bay	81.06	13	LR	LR	22 31 19.3	
	comp=Z,58nm,21.7s,baz=330,slow=36						
BNN	Bunyan	81.72	311		P	21 55 37.2	-0.6
BNN				IAmb	IAmb	21 55 40.1	
	comp=Z,4.6nm,0.9s						
SRU	San Rafael Swe	81.79	49	P	P	21 55 37.8	-0.5
SRU				IAmb	IAmb	21 55 53.2	

	comp=Z,4.7nm,0.8s						
SRU	**San Rafael Swe**	**81.79**	**49**	P	**P**	**21 55 37.8**	**-0.5**
SRU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRTR	**Keskin Array B**	**82.60**	**313**	P	**P**	**21 55 43.0**	**+0.6**
	comp=Z,1.9nm,0.9s,baz=110,slow=5.1,SNR=10						
	comp=Z,1.9nm,0.9s						
BRTR	**Keskin Array B**	**82.60**	**313**	P	**P**	**21 55 42.2**	**-0.2**
ULM	**Lac du Bonnet**	**82.87**	**33**	LR	LR	22 37 08.9	
	comp=Z,31nm,18.1s,baz=352,slow=39						
RAYN	**Ar Rayn**	**83.27**	**293**	P	**P**	**21 55 45.8**	**-0.2**
RAYN				IAmb	IAmb	21 55 46.7	
	comp=Z,3.2nm,0.9s						
RAYN	**Ar Rayn**	**83.27**	**293**	P	**P**	**21 55 45.8**	**-0.2**
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LANS	**Liptovska Anna**	**84.28**	**326**	*e*P	**P**	**21 55 52.2**	**+1.5**
LANS	**Liptovska Anna**	**84.28**	**326**	*e*P	**P**	**21 55 52.2**	**+1.5**
MMAI	**Mount Meron Ar**	**85.38**	**306**	P	**P**	**21 55 57.3**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=67,slow=11,SNR=4.0						
	comp=Z,1.0nm,0.6s						
CLL	**Collm**	**85.55**	**331**	*i* P	**P**	**21 55 57.7**	**+0.7**
CLL				pmax	pmax		
	comp=Z,15nm,1.5s						
CLL	**Collm**	**85.55**	**331**	*i* P	**P**	**21 55 57.7**	**+0.7**
	comp=Z,15nm,1.5s						
SCHQ	**Schefferville**	**89.52**	**16**	LR	LR	22 43 09.5	
	comp=Z,34nm,18.1s,baz=354,slow=40						
TXAR	**Lajitas Array**	**92.21**	**53**	P	**P**	**21 56 30.0**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=322,slow=5.5,SNR=7.3						
	comp=Z,0.6nm,0.7s						
TXAR	**Lajitas Array**	**92.21**	**53**	P	**P**	**21 56 29.7**	**+0.5**
TXAR	**Lajitas Array**	**92.21**	**53**	P	**P**	**21 56 29.7**	**+0.5**
SADO	**Sadowa**	**94.36**	**28**	LR	LR	22 40 24.1	
	comp=Z,32nm,21.6s,baz=308,slow=36						
QSPA	**South Pole Qui**	**122.16**	**180**	PKP	**PKPdf**	**22 02 12.3**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=203,slow=3.6,SNR=3.9						
LPAZ	**La Paz**	**147.97**	**67**	PKPbc	**PKPbc**	**22 03 06.0**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=309,slow=3.6,SNR=4.7						
PLCA	**Paso Flores**	**152.32**	**117**	PKPab	**PKPab**	**22 03 26.4**	**+1.5**
	comp=Z,1.4nm,0.8s,baz=0.0,slow=3.0,SNR=3.0						

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*SOME **21** 22:07:47.1, 39°.52N×75°.67E, h5^{km}*

*KRNET **21** 22:07:57.6±0.1, 39°.68N×75°.79E, mb3.3*

*NNC **21** 22:08:02.8±6.4, 39°.97N×75°.80E, h1^{km}±32^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=46.4km s-min=26.8km az=179.0*

ISC 21 22:07:59.0±1.9, **39°.71N**±0°.10×**75°.66E**±0°.04, **h10**^{km}**, n31,** σ**1ˢ.55**/51**, 19C-19D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**1.69**	**281**	⇓*i*P	**Pb**	**22 08 30.4**	**+0.2**
SFK				⇓*i*S	**Sg**	**22 08 54.3**	**+1.1**
SALK	**Salom-Alik**	**1.83**	**310**	⇑*e*P	**Pb**	**22 08 32.4**	**-0.2**
SALK				⇑*e*S	**Sg**	**22 08 57.8**	**0.0**
OHH	**Osh**	**2.35**	**291**	⇓*i*P	**Pb**	**22 08 39.4**	**-2.0**
OHH				⇓*i*S	**Sb**	**22 09 10.5**	**0.0**
ARLS	**Aral**	**2.38**	**335**	⇓*i*P	**Pn**	**22 08 39.3**	**+1.2**
ARLS				⇓*i*S	**Sb**	**22 09 10.1**	**-1.3**
ULHL	**Ulahol**	**2.57**	**10**	⇓*i*P	**Pn**	**22 08 41.8**	**+0.9**
ULHL				⇓*i*S	**Sn**	**22 09 13.5**	**+1.2**
ARSB	**Arslanbob**	**2.60**	**309**	⇑*e*P	**Pb**	**22 08 43.1**	**-2.6**
ARSB				⇑*e*S	**Sb**	**22 09 16.3**	**-1.5**
UCH	**Uchtor**	**2.66**	**341**	P	**Pn**	**22 08 43.8**	**+1.5**
	SNR=24						
UCH	**Uchtor**	**2.66**	**341**	⇑*i*P	**Pn**	**22 08 43.5**	**+1.2**
UCH				⇑*i*S	**Sb**	**22 09 17.1**	**-2.7**
KDJ	**Kajisay**	**2.68**	**25**	⇓*i*P	**Pn**	**22 08 42.4**	**+0.1**
KDJ				⇓*i*S	**Sn**	**22 09 15.5**	**+0.6**
BOOM	**Boomskoye usch**	**2.79**	**4**	⇑*i*P	**Pn**	**22 08 44.8**	**+1.0**
BOOM				⇑*i*S	**Sn**	**22 09 18.6**	**+1.0**
KBK	**Karagaybulak**	**2.99**	**350**	P	**Pn**	**22 08 48.8**	**+2.1**
	SNR=11						
KBK	**Karagaybulak**	**2.99**	**350**	⇓*i*P	**Pn**	**22 08 47.9**	**+1.3**
KBK				⇓*i*S	**Sn**	**22 09 24.4**	**+1.8**
AAK	**Ala-Archa**	**3.05**	**344**	P	**Pn**	**22 08 49.5**	**+1.9**
	SNR=13						
AAK	**Ala-Archa**	**3.05**	**344**	⇓*e*P	**Pn**	**22 08 49.1**	**+1.6**
AAK				⇓*i*S	**Sn**	**22 09 26.0**	**+1.9**
AAK	**Ala-Archa**	**3.05**	**344**	⇑Pn	**Pn**	**22 08 49.4**	**+1.9**
	5.0nm,0.5s						
AAK				⇑Lg	Lg	22 09 32.0	
	22nm,1.0s						
FRU1	**Bishkek**	**3.19**	**346**	⇓*e*P	**Pn**	**22 08 50.9**	**+1.6**
FRU1				⇓*e*S	**Sn**	**22 09 29.0**	**+1.6**
TKM2	**Tokmak 2**	**3.21**	**359**	P	**Pn**	**22 08 51.4**	**+1.7**
	SNR=9.2						
EKS2	**Erkin-Say**	**3.27**	**335**	⇑*i*P	**Pn**	**22 08 52.1**	**+1.7**
EKS2				⇑*i*S	**Sn**	**22 09 31.6**	**+2.1**
CHMS	**Chumysh**	**3.36**	**349**	P	**Pn**	**22 08 53.4**	**+1.9**
	SNR=7.0						
CHMS	**Chumysh**	**3.36**	**349**	⇑*i*P	**Pn**	**22 08 52.9**	**+1.4**
CHMS				⇑*i*S	**Sn**	**22 09 32.7**	**+1.3**
IZV	**Izvestkoviy**	**3.40**	**12**	*e*P	**Pn**	**22 08 53.2**	**+1.0**
	2.4nm,0.6s						
IZV				*e*S	**Sb**	**22 09 41.3**	**+0.4**
	18nm,0.3s						
TNSS	**Tian-Shan**	**3.46**	**16**	*e*P	**Pn**	**22 08 54.3**	**+1.0**
	1.0nm,0.3s						
TNSS				*e*S	**Sb**	**22 09 43.1**	**+0.2**
	7.5nm,1.0s						
MTBS	**Maitube**	**3.47**	**9**	*e*P	**Pn**	**22 08 54.8**	**+1.8**
	5.0nm,0.2s						
MTBS				*e*S	**Sb**	**22 09 44.1**	**+1.4**
	17nm,0.2s						
MRKS	**Merke**	**3.54**	**330**	*e*P	**Pn**	**22 08 55.6**	**+1.5**
	2.6nm,0.4s						
MRKS				*e*S	**Sb**	**22 09 45.1**	**+0.2**
	16nm,0.6s						
KNDC	**Almaty**	**3.64**	**15**	⇑Pg	**Pg**	**22 09 06.5**	**-2.2**
	23nm,0.7s						
KNDC				⇓Lg	Lg	22 09 50.1	
	45nm,0.6s						
MNAS	**Manas**	**3.66**	**320**	⇑*e*P	**Pn**	**22 08 57.4**	**+1.7**
MNAS				⇑*e*S	**Sn**	**22 09 41.3**	**+2.3**
USP	**Ospenovka**	**3.66**	**347**	P	**Pn**	**22 08 57.6**	**+2.0**
	SNR=5.8						
KOTS	**Kotyrbulak**	**3.69**	**17**	*e*P	**Pn**	**22 08 57.9**	**+1.8**
	4.0nm,0.2s						
KOTS				*e*S	**Sb**	**22 09 49.0**	**-0.1**
	47nm,0.8s						
KPKS	**Kokpek**	**4.39**	**30**	*e*P	Pb	22 09 10.3	-5.9
	0.3nm,0.1s						
KPKS				*e*S	**Sb**	**22 10 09.9**	**+0.8**
	14nm,0.4s						
PDGK	**Podgornoye**	**4.62**	**37**	⇓Pg	**Pb**	**22 09 19.2**	**-1.0**
	4.3nm,0.7s						
PDGK				⇓Lg	Lg	22 10 20.2	
	8.8nm,0.6s						
KK31	**Karatay Array**	**5.14**	**313**	⇑Pg	**Pg**	**22 09 35.2**	**-2.2**
	0.5nm,0.5s,baz=124,slow=12,SNR=5.2						
KK31				⇑Lg	Lg	22 10 40.2	
	3.4nm,0.7s,baz=126,slow=29,SNR=4.6						

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*IDC **21** 22:08:34.1±1.1, 6°.44N×125°.12E, h0^{km}, mb3.5/5, mbtmp3.5/5, MS2.9/2, Error ellipse: s-maj=27.2km s-min=10.1km az=118.0*

ISC 21 22:08:38.6±1.1, **6°.6N**±0°.1×**125°.5E**±0°.4, **h35**^{km}**, n8,** σ**0ˢ.51**/6, **mb3.2**/5**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.50**	**4**	Pg	**Pn**	**22 08 49.2**	**0.0**
	483nm,0.3s,baz=191,slow=1.6,SNR=27						
DAV				Lg	Lg	22 08 59.6	
	563nm,0.3s,baz=259,slow=24,SNR=7.1						
DAV				LR	LR	22 09 19.2	
	comp=Z,487nm,20.9s,baz=324,slow=58						
FITZ	**Fitzroy Crossi**	**24.51**	**180**	P	**P**	**22 13 55.3**	**+0.4**
	3.4nm,1.1s,baz=8.2,slow=9.9,SNR=2.0						
	3.4nm,1.1s						
PSI	**Prapat**	**26.79**	**263**	LR	LR	22 25 37.9	
	comp=Z,60nm,21.1s,baz=158,slow=39						
WRA	**Warramunga Arr**	**27.73**	**162**	P	**P**	**22 14 24.6**	**+0.6**
	0.4nm,0.8s,baz=332,slow=11,SNR=5.1						
	0.4nm,0.8s						
KSRS	**Korea Array**	**30.82**	**4**	LR	LR	22 28 39.7	
	comp=Z,11nm,18.6s,baz=155,slow=39						
ASAR	**Alice Springs**	**31.14**	**165**	P	**P**	**22 14 53.8**	**-0.4**
	0.2nm,0.4s,baz=345,slow=7.0,SNR=7.1						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**54.56**	**325**	P	**P**	**22 18 03.5**	**+0.1**
	0.2nm,0.7s,baz=125,slow=8.5,SNR=1.6						
	0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**58.73**	**327**	P	**P**	**22 18 32.7**	**-0.1**
	0.4nm,0.7s,baz=121,slow=6.7,SNR=4.1						
	0.4nm,0.7s						

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*IDC **21** 22:10:52.9±2.6, 49°.02N×128°.90W, h0^{km}, mb3.8/1, mbtmp3.4/6, ML3.4/3, MS3.3/3, Error ellipse: s-maj=39.9km s-min=14.5km az=66.0*

ISC 21 22:10:55.0±1.7, **49°.1N**±0°.1×**128°.9W**±0°.2, **h11**^{km}**, n14,** σ**0ˢ.60**/8**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBB	**Bella Bella**	**3.10**	**9**	Pn	**Pn**	**22 11 43.6**	**-0.1**
	124nm,0.3s,baz=206,slow=14,SNR=344						
BBB				Sn	**Sn**	**22 12 20.8**	**+0.1**
	12nm,0.3s,baz=99,slow=15,SNR=8.1						
NEW	**Newport**	**7.83**	**92**	Pn	**Pn**	**22 12 48.4**	**-0.3**
	0.2nm,0.3s,baz=284,slow=14,SNR=2.6						
NEW				LR	LR	22 15 55.5	
	comp=Z,142nm,21.1s,baz=265,slow=39						
	0.9nm,0.4s						
YBH	**Yreka Blue Hor**	**8.57**	**147**	Pn	**Pn**	**22 12 58.6**	**-0.4**
	baz=348,slow=11,SNR=4.6						
YBH				LR	LR	22 15 56.6	
	comp=Z,8.3nm,18.6s,baz=314,slow=36						
PDAR	**Pinedale Array**	**14.85**	**108**	Pn	**Pn**	**22 14 25.6**	**+0.7**
	baz=295,slow=10,SNR=3.6						
	0.3nm,0.8s						
YKA	**Yellowknife Ar**	**15.55**	**25**	Pn	**Pn**	**22 14 33.0**	**-0.9**
	0.1nm,0.3s,baz=223,slow=12,SNR=4.7						
	0.2nm,0.8s						
ILAR	**Eielson Array**	**18.38**	**335**	P	**P**	**22 15 09.6**	**+0.1**
	0.3nm,0.8s,baz=148,slow=10,SNR=2.4						
ULM	**Lac du Bonnet**	**21.29**	**74**	P	**P**	**22 15 41.8**	**+0.6**
	4.2nm,0.8s,baz=299,slow=13,SNR=4.4						
ULM				LR	LR	22 24 29.2	
	comp=Z,113nm,21.1s,baz=328,slow=38						
	4.2nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**58.53**	**264**	T	T	23 24 02.0	
	baz=44,slow=76,SNR=15						
H11N3	**WAKE ISLAND Hy**	**58.53**	**264**	T	T	23 24 00.5	
	baz=44,slow=76,SNR=16						
H11N1	**WAKE ISLAND Hy**	**58.55**	**264**	T	T	23 24 05.6	
	baz=44,slow=76,SNR=16						
H11S1	**WAKE ISLAND Hy**	**59.54**	**263**	T	T	23 25 26.7	
	baz=44						
H11S2	**WAKE ISLAND Hy**	**59.55**	**263**	T	T	23 25 28.5	
	baz=44						
H11S3	**WAKE ISLAND Hy**	**59.56**	**263**	T	T	23 25 29.5	
	baz=44						
MDP	**Montagnes des**	**77.15**	**97**	LR	LR	22 58 20.3	
	comp=Z,25nm,21.7s,baz=134,slow=37						

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*IDC **21** 22:12:31.2±1.1, 17°.45S×64°.84W, h0^{km}, mb3.5/5, mbtmp3.5/8, ML3.2/3, Error ellipse: s-maj=29.5km s-min=15.7km az=19.0*

*SCB **21** 22:12:32.5±1.4, 17°.27S×64°.78W, h28^{km}±5^{km}, ML3.5/3, Error ellipse: s-maj=4.5km s-min=3.7km az=2.0*

ISC 21 22:12:36.7±0.8, **17°.39S**±0°.06×**64°.75W**±0°.05, **h35**^{km}**, n22,** σ**1ˢ.49**/25, **mb3.6**/4**, Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AOEA	**Aiquile**	**0.91**	**210**	Pg	**Pn**	**22 12 52.4**	**-1.0**
AOEA	**Aiquile**	**0.91**	**210**	Pg	**Pn**	**22 12 52.6**	**-0.8**
AOEA				Sg	**Sn**	**22 13 05.4**	**-0.1**
AOEA				IAML		22 13 07.2	
	2µm,0.4s						
SOET	**ToroToro**	**1.24**	**234**	Pg	**Pn**	**22 12 57.8**	**-0.2**
SOET				Sg	**Sn**	**22 13 14.8**	**+1.1**
SOET				IAML		22 13 19.5	
	481nm,0.3s						
BBOE	**La Paz, Chanca**	**3.15**	**280**	Pn	**Pn**	**22 13 26.0**	**+1.7**
SOEO	**Opoqueri**	**3.21**	**248**	Pn	**Pn**	**22 13 27.5**	**+2.4**
BBOJ	**La Paz, Jacaqu**	**3.32**	**277**	Pn	**Pn**	**22 13 27.9**	**+1.3**
LPAZ	**La Paz**	**3.42**	**288**	Pn	**Pn**	**22 13 27.7**	**-0.5**
	1.1nm,0.3s,baz=108,slow=6.4,SNR=45						
LPAZ				Pg		22 13 33.7	
	2.5nm,0.3s,baz=120,slow=14,SNR=17						
LPAZ				Sn	**Sn**	**22 14 08.5**	**+0.7**
	9.2nm,0.3s,baz=180,slow=21,SNR=7.3						
LPAZ				Lg	Lg	22 14 17.6	
	9.3nm,0.3s,baz=268,slow=16,SNR=13						
	2.7nm,0.3s						
LPAZ	**La Paz**	**3.42**	**288**	Pn	**Pn**	**22 13 28.5**	**+0.4**
BBOB	**La Paz, Bander**	**3.47**	**290**	Pn	**Pn**	**22 13 29.5**	**+0.8**
BBOD	**La Paz, Gloria**	**3.76**	**281**	Pn	**Pn**	**22 13 33.4**	**+0.7**
SIV	**San Ignacio**	**3.79**	**69**	Pn	**Pn**	**22 13 34.0**	**+1.3**
	0.4nm,0.3s,baz=264,slow=8.6,SNR=77						
SIV				Lg	Lg	22 14 30.8	
	2.2nm,0.3s,baz=331,slow=24,SNR=16						
	15nm,0.3s						
SIV	**San Ignacio**	**3.79**	**69**	Pn	**Pn**	**22 13 33.6**	**+0.9**
MOCB	**Mochara**	**3.93**	**192**	Pn	**Pn**	**22 13 38.2**	**+3.2**
MOCB				Sn	Sn	22 14 28.0	+7.8
MOCB				IAML		22 14 43.0	
	72nm,0.4s						
PB16	**IPOC Station P**	**4.63**	**258**	Pn	**Pn**	**22 13 46.4**	**+1.7**
YJA	**Yavi**	**4.82**	**188**	Pn	**Pn**	**22 13 49.7**	**+2.5**
YJA				IAML		22 15 12.4	
PTLB	**Pontes e Lacer**	**5.72**	**71**	Pn	**Pn**	**22 14 00.8**	**+1.6**
CPUP	**Villa Florida**	**11.25**	**144**	Pn	**Pn**	**22 15 12.4**	**-2.6**
	baz=321,slow=13,SNR=1.5						
	0.6nm,0.5s						
PLCA	**Paso Flores**	**23.80**	**191**	P	**P**	**22 17 45.2**	**-1.1**
	2.0nm,0.9s,baz=21,slow=8.6,SNR=4.8						
	2.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**72.27**	**70**	P	**P**	**22 23 59.9**	**+0.8**
	0.5nm,0.9s,baz=274,slow=4.0,SNR=2.6						
	0.5nm,0.9s						
PDAR	**Pinedale Array**	**72.67**	**327**	P	**P**	**22 24 00.4**	**-0.8**
	0.1nm,0.5s,baz=132,slow=7.1,SNR=2.0						
	0.1nm,0.5s						
NVAR	**Mina Array Bea**	**74.83**	**319**	P	**P**	**22 24 13.8**	**-0.1**
	0.3nm,0.5s,baz=114,slow=5.2,SNR=1.9						
	0.3nm,0.5s						
YKA	**Yellowknife Ar**	**88.70**	**339**	P	**P**	**22 25 25.5**	**-0.6**
	0.3nm,0.8s,baz=128,slow=4.2,SNR=4.8						
	0.3nm,0.8s						

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*TIR **21** 22:18:20.9, 41°.50N×19°.30E, h7^{km}, Ml2.6/2*

*BEO **21** 22:18:23.4±0.3, 41°.55N×19°.50E, h0^{km}, ML2.2/11*

*PDG **21** 22:18:24.4±0.1, 41°.67N×19°.53E, h10^{km}, ML2.7/10, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*

ISC 21 22:18:22.6±1.3, **41°.56N**±0°.03×**19°.46E**±0°.03, **h2**^{km}±10^{km}, **n36,** σ**0ˢ.78**/64**, 2C-4D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.37**	**124**	Pg	**Pg**	**22 18 30.2**	**+0.5**
TIR				Sg	**Sb**	**22 18 36.5**	**-1.6**
TIR				AML	AML	22 18 37.5	
	2.6nm,0.5s						
ULC	**Ulcinj**	**0.44**	**338**	⇑*i*Pg	**Pg**	**22 18 31.1**	**0.0**
ULC				*i* Sg	**Sg**	**22 18 36.9**	**+0.1**
SDA	**Shkodra**	**0.50**	**3**	Pg	**Pg**	**22 18 32.1**	**-0.1**
SDA				Sg	**Sb**	**22 18 40.5**	**-1.3**
DRME	**Dracevica, Mon**	**0.67**	**342**	*e*Pg	**Pg**	**22 18 35.5**	**+0.1**
DRME				*e*Sg	**Sg**	**22 18 44.3**	**+0.3**
DRME	**Dracevica, Mon**	**0.67**	**342**	⇓*i*Pg	**Pg**	**22 18 35.1**	**-0.3**
DRME				*e*Sg	**Sg**	**22 18 44.1**	**+0.1**
PHP	**Peshkopia**	**0.74**	**80**	Pg	**Pg**	**22 18 36.9**	**0.0**
PHP				Sg	**Sb**	**22 18 50.1**	**+1.1**
PHP				AML	AML	22 18 54.8	
	0.8nm,0.5s						
BUM	**Brajici-Budva**	**0.86**	**331**	⇓*i*Pg	**Pg**	**22 18 38.9**	**-0.2**
BUM				*i* Sg	**Sg**	**22 18 51.5**	**+1.3**
PDG	**Podgorica**	**0.89**	**350**	*e*Pg	**Pg**	**22 18 39.3**	**-0.3**
PDG				*e*Sg	**Sg**	**22 18 51.5**	**+0.3**
PDG	**Podgorica**	**0.89**	**350**	*e*Pg	**Pg**	**22 18 39.1**	**-0.5**
PDG				*i* Sg	**Sg**	**22 18 51.7**	**+0.5**
HCY	**Herceg Novi**	**1.15**	**321**	⇓*i*Pg	**Pg**	**22 18 44.7**	**+0.1**
HCY				*i* Sg	**Sn**	**22 19 01.8**	**-0.2**
NKME	**Niksic**	**1.27**	**343**	⇑*i*Pg	**Pg**	**22 18 46.1**	**-0.8**
NKME				*e*Sg	**Sb**	**22 19 04.5**	**+0.4**
KOME	**Kolasin**	**1.29**	**2**	*e*Pg	**Pg**	**22 18 46.9**	**-0.6**
KOME				*e*Sg	**Sg**	**22 19 04.7**	**+0.5**
KOME	**Kolasin**	**1.29**	**2**	*e*Pg	**Pg**	**22 18 46.3**	**-1.1**
KOME				*e*Sg	**Sb**	**22 19 05.0**	**+0.1**
BEY	**Berane**	**1.35**	**14**	*e*Pg	**Pn**	**22 18 47.3**	**-1.4**
BEY				*e*Sg	**Sb**	**22 19 06.8**	**+0.2**
IVA	**Berane**	**1.35**	**14**	⇓*i*Pg	**Pn**	**22 18 46.9**	**-1.8**
IVA				*i* Sg	**Sg**	**22 19 06.4**	**+0.3**
TREB	**Trebinje**	**1.43**	**325**	*e*Pg	**Pn**	**22 18 49.1**	**-0.5**
TREB				*e*Sg	**Sn**	**22 19 09.3**	**+0.4**
BRY	**Bratogost**	**1.51**	**333**	*e*Pg	**Pn**	**22 18 50.8**	**0.0**
BRY				*i* Sg	**Sg**	**22 19 12.9**	**+1.7**
SJES	**Sjenica**	**1.75**	**12**	*e*Pg	**Pn**	**22 18 54.2**	**+0.1**
SJES				*e*Sg	**Sg**	**22 19 18.5**	**-0.2**
PLE	**Pljevlja**	**1.77**	**358**	*e*Pn	**Pn**	**22 18 55.1**	**+0.6**
PLE				*i* Sn	**Sb**	**22 19 19.2**	**+0.5**
STON	**Ston**	**1.86**	**316**	*e*Pn	**Pb**	**22 18 56.7**	**-0.5**
STON				*e*Sn	**Sb**	**22 19 21.7**	**+0.8**
RUDO	**Rudo**	**2.06**	**358**	*e*Pn	**Pn**	**22 18 58.2**	**-0.1**
RUDO				*e*Sn	**Sn**	**22 19 25.8**	**+1.2**
SELS	**Selova**	**2.07**	**36**	*e*Pn	**Pn**	**22 18 58.6**	**+0.2**
SELS				*e*Sn	**Sb**	**22 19 25.9**	**-1.2**
IVAS	**Ivanjica**	**2.08**	**14**	*e*Pn	**Pn**	**22 18 58.8**	**+0.1**
IGT	**Igoumenitsa**	**2.13**	**162**	*e*Pn	**Pn**	**22 18 58.8**	**-0.4**
IGT				*e*Sn	**Sb**	**22 19 28.1**	**-0.6**
BARS	**Barje**	**2.16**	**53**	*e*Pn	**Pn**	**22 18 59.3**	**-0.3**
BARS				*e*Sn	**Sn**	**22 19 27.4**	**+0.5**
GOCS	**Kraljevo Serbi**	**2.26**	**27**	*e*Pn	**Pn**	**22 19 02.3**	**+1.2**
GOCS				*e*Sn	**Sn**	**22 19 29.5**	**-0.1**
BBLS	**Lazi&#263i**	**2.31**	**359**	*e*Pn	**Pb**	**22 19 04.5**	**-0.6**
BBLS				*e*Sn	**Sb**	**22 19 32.7**	**-1.4**
BOSS	**Bosilegrad**	**2.44**	**66**	*e*Pn	**Pn**	**22 19 04.2**	**+0.7**
BOSS				*e*Sn	**Sn**	**22 19 34.3**	**+0.4**
GRUS	**Gruza**	**2.51**	**21**	*e*Pn	**Pn**	**22 19 06.0**	**+1.6**
DIVS	**Divibare**	**2.57**	**9**	*e*Pn	**Pn**	**22 19 05.5**	**+0.1**
TRUS	**Trudelj**	**2.76**	**14**	*e*Pn	**Pn**	**22 19 08.2**	**+0.4**
ZAPS	**Zavoj**	**2.91**	**53**	*e*Pn	**Pn**	**22 19 10.9**	**+0.9**
ZAPS				*e*Sn	**Sn**	**22 19 46.4**	**+0.8**
TEKS	**Tekeris**	**2.99**	**1**	*e*Pn	**Pn**	**22 19 12.8**	**+1.7**
ZAGS	**Zajecar**	**3.04**	**41**	*e*Pn	**Pn**	**22 19 12.0**	**+0.2**
SRS	**Serrai**	**3.14**	**97**	*e*Pn	**Pn**	**22 19 13.0**	**-0.1**
KUBS	**Kucevo**	**3.29**	**29**	*e*Pn	**Pn**	**22 19 14.6**	**-0.5**

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*NEIC **21** 22:52:09.7±1.9, 56°.36N±0°.04×152°.25W±0°.08, h10^{km}±1^{km}, mb4.6/55, ML4.6(AEIC), Error ellipse: s-maj=9.0km s-min=4.6km az=232.0*

*IDC **21** 22:52:10.7±0.7, 56°.67N×152°.42W, h0^{km}, mb4.2/23, mbtmp4.1/25, ML3.4/2, Error ellipse: s-maj=18.0km s-min=13.1km az=36.0*

*AEIC **21** 22:52:13.3±1.8, 56°.33N±0°.06×152°.22W±0°.09, h8^{km}±4^{km}, Error ellipse: s-maj=8.8km s-min=7.6km az=190.0*

ISC 21 22:52:12.2±0.4, **56°.49N**±0°.06×**152°.24W**±0°.04, **h18**^{km}**, n570,** σ**0ˢ.96**/569, **mb4.5**/50**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**0.94**	**322**		**Pb**	**22 52 28.2**	**-1.6**
OHAK					**Sn**	**22 52 43.3**	**-0.1**
OHAK	**Old Harbor**	**0.94**	**322**	P	**Pb**	**22 52 28.9**	**-1.0**
OHAK	**Old Harbor**	**0.94**	**322**	P	**Pb**	**22 52 28.3**	**-1.6**
	baz=134,SNR=427						
SII	**Sitkinak Islan**	**1.08**	**275**		**Pb**	**22 52 29.5**	**-2.9**
SII	**Sitkinak Islan**	**1.08**	**275**	P	**Pb**	**22 52 29.6**	**-2.8**
	baz=85,SNR=48						
KDAK	**Kodiak Island**	**1.31**	**352**	Pg	**Pn**	**22 52 34.1**	**-1.5**
	29nm,0.3s,baz=260,slow=0.7,SNR=179						
KDAK				Lg	Lg	22 52 42.7	
	185nm,0.3s,baz=194,slow=9.2,SNR=52						
KDAK	**Kodiak Island**	**1.31**	**352**	P	**Pn**	**22 52 33.8**	**-1.8**
	baz=169						
R18K	**Karluk**	**1.62**	**313**		**Pn**	**22 52 39.1**	**-0.7**
R18K	**Karluk**	**1.62**	**313**	P	**Pn**	**22 52 39.5**	**-0.4**
	baz=126						
CHIR	**Chirikof Islan**	**2.01**	**252**		**Pn**	**22 52 42.3**	**-2.9**
CHIR	**Chirikof Islan**	**2.01**	**252**	P	**Pn**	**22 52 42.7**	**-2.5**
CHIR	**Chirikof Islan**	**2.01**	**252**	P	**Pn**	**22 52 42.1**	**-3.1**
	baz=66						
Q20K	**Shuyak Island**	**2.13**	**358**	P	**Pn**	**22 52 46.0**	**-0.9**
	baz=176,SNR=5.7						
SYI	**Shuyak Island**	**2.13**	**358**		**Pn**	**22 52 46.4**	**-0.4**
CAHL	**Cahill**	**2.29**	**315**		**Pn**	**22 52 48.4**	**-0.7**
MGLS	**Mageik Landsli**	**2.29**	**317**		**Pn**	**22 52 48.7**	**-0.3**
KAWH	**Katmai**	**2.35**	**325**		**Pn**	**22 52 49.8**	**-0.2**
KAWH					**Sb**	**22 53 25.0**	**+2.2**
KAHG	**Katmai Hook Gl**	**2.37**	**329**		**Pn**	**22 52 50.2**	**0.0**
KAKN	**Katmai Knife C**	**2.37**	**321**		**Pn**	**22 52 50.1**	**-0.2**
KJL	**Kejulik**	**2.40**	**312**		**Pn**	**22 52 50.3**	**-0.3**
KAPH	**Katmai Pasha**	**2.40**	**333**		**Pn**	**22 52 51.3**	**+0.7**
ACHA	**Angle Creek He**	**2.41**	**317**		**Pn**	**22 52 50.6**	**-0.1**
KARR	**Katmai Rainbow**	**2.42**	**328**		**Pn**	**22 52 50.9**	**+0.1**
KABU	**Katmai Buttres**	**2.43**	**319**		**Pn**	**22 52 51.2**	**+0.1**
ANCK	**Angle Creek**	**2.46**	**316**		**Pn**	**22 52 51.1**	**-0.4**
PLK3	**Peulik 3**	**2.51**	**300**		**Pn**	**22 52 50.8**	**-1.3**
PLK4	**Peulik 4**	**2.52**	**299**		**Pn**	**22 52 51.5**	**-0.8**
R17L	**Mt. Peulik Vol**	**2.53**	**299**	P	**Pn**	**22 52 51.9**	**-0.4**
	baz=112						
Q19K	**Cape Douglas,**	**2.56**	**343**		**Pn**	**22 52 53.1**	**+0.3**
Q19K	**Cape Douglas,**	**2.56**	**343**	P	**Pn**	**22 52 52.4**	**-0.4**
	baz=160,SNR=18						
PLK2	**Peulik 2**	**2.57**	**302**		**Pn**	**22 52 52.3**	**-0.6**
KAHC	**Katmai Hardscr**	**2.63**	**327**		**Pn**	**22 52 54.0**	**+0.2**
Q18K	**Katmai Hardscr**	**2.63**	**327**	P	**Pn**	**22 52 53.4**	**-0.5**
	baz=142,SNR=25						
CNTC	**Contact Creek**	**2.66**	**314**		**Pn**	**22 52 53.8**	**-0.4**
Q17K	**Contact Creek**	**2.66**	**314**	P	**Pn**	**22 52 54.0**	**-0.2**
	baz=128,SNR=12						
PLK1	**Peulik 1**	**2.72**	**301**		**Pn**	**22 52 54.3**	**-0.7**
PLK5	**Peulik 5**	**2.94**	**303**		**Pn**	**22 52 57.9**	**0.0**
AUCH	**Augustine Cone**	**2.95**	**348**		**Pn**	**22 52 59.2**	**+0.9**
AUW	**Augustine West**	**2.96**	**348**		**Pn**	**22 52 59.2**	**+0.9**
CNPM	**China Poot**	**3.09**	**10**		**Pn**	**22 52 59.1**	**-1.0**
HOM	**Homer**	**3.19**	**5**		**Pn**	**22 53 01.1**	**-0.3**
HOM	**Homer**	**3.19**	**5**	P	**Pn**	**22 53 00.3**	**-1.1**
	baz=185,SNR=5.2						
P19K	**Oil Pt**	**3.22**	**351**		**Pn**	**22 53 02.4**	**+0.6**
P19K	**Oil Pt**	**3.22**	**351**	P	**Pn**	**22 53 02.0**	**+0.2**
	baz=169,SNR=25						
ANNE	**Aniakchak Nort**	**3.24**	**280**		**Pn**	**22 53 00.3**	**-1.8**
P18K	**Big Mountain,**	**3.32**	**333**	Pn	**Pn**	**22 53 02.8**	**-0.4**
P18K	**Big Mountain,**	**3.32**	**333**	P	**Pn**	**22 53 02.7**	**-0.6**
	baz=148,SNR=25						
AZAC	**Aniakchak**	**3.33**	**280**		**Pn**	**22 53 01.9**	**-1.6**
ANPB	**Aniakchak Plen**	**3.35**	**278**		**Pn**	**22 53 02.0**	**-1.7**
BRSE	**Bradley Lake S**	**3.36**	**13**		**Pn**	**22 53 02.7**	**-1.1**
BRSE	**Bradley Lake S**	**3.36**	**13**	P	**Pn**	**22 53 02.7**	**-1.1**
	baz=194,SNR=8.5						
BRLK	**Bradley Lake**	**3.36**	**12**		**Pn**	**22 53 02.2**	**-1.6**
ILS	**Iliamna Low So**	**3.51**	**353**		**Pn**	**22 53 05.6**	**-0.3**
P17K	**Kvichak River**	**3.52**	**322**		**Pn**	**22 53 05.8**	**-0.1**
P17K	**Kvichak River**	**3.52**	**322**	P	**Pn**	**22 53 05.5**	**-0.4**
	baz=137,SNR=21						
ILSW	**Iliamna Southw**	**3.54**	**353**		**Pn**	**22 53 05.9**	**-0.4**
O20K	**Slope Mountain**	**3.61**	**357**	P	**Pn**	**22 53 07.1**	**-0.1**
	baz=176,SNR=42						
O18K	**Koktuh Hills**	**3.72**	**336**		**Pn**	**22 53 08.6**	**-0.2**
O18K	**Koktuh Hills**	**3.72**	**336**	P	**Pn**	**22 53 08.7**	**-0.2**
	baz=152,SNR=25						
O19K	**Port Alsworth**	**3.88**	**344**		**Pn**	**22 53 09.7**	**-1.1**
O19K	**Port Alsworth**	**3.88**	**344**	P	**Pn**	**22 53 10.4**	**-0.4**
	baz=162,SNR=14						
SEW	**Seward**	**3.91**	**21**		**Pn**	**22 53 08.9**	**-2.4**
SEW	**Seward**	**3.91**	**21**	P	**Pn**	**22 53 09.7**	**-1.6**
	baz=204						
RED	**Redoubt Volcan**	**3.95**	**356**		**Pn**	**22 53 10.3**	**-1.7**
P16K	**Nushagak River**	**4.00**	**312**		**Pn**	**22 53 11.2**	**-1.3**
P16K	**Nushagak River**	**4.00**	**312**	P	**Pn**	**22 53 12.0**	**-0.5**
	baz=125						
RDWB	**Redoubt West**	**4.02**	**356**		**Pn**	**22 53 12.2**	**-0.8**
S14K	**Fog Glacier**	**4.07**	**270**	P	**Pn**	**22 53 14.2**	**+0.6**
	baz=82						
SLKM	**Skilak Lake**	**4.17**	**14**		**Pn**	**22 53 14.0**	**-0.8**
O17K	**Koliganek Bris**	**4.18**	**324**		**Pn**	**22 53 14.8**	**-0.2**
O17K	**Koliganek Bris**	**4.18**	**324**	P	**Pn**	**22 53 15.0**	**0.0**
	baz=138,SNR=13						
O22K	**Cooper Landing**	**4.22**	**17**		**Pn**	**22 53 14.9**	**-0.6**
O22K	**Cooper Landing**	**4.22**	**17**	P	**Pn**	**22 53 14.5**	**-1.0**
	baz=199						
Q23K	**Middleton Isla**	**4.30**	**44**	P	**Pn**	**22 53 15.7**	**-1.0**
	baz=230						
MID	**Middleton Isla**	**4.31**	**44**		**Pn**	**22 53 14.8**	**-1.9**
CAPN	**Captain Cook N**	**4.33**	**7**	P	**Pn**	**22 53 15.6**	**-1.5**
	baz=188						
P23K	**Montague Islan**	**4.35**	**34**		**Pn**	**22 53 15.2**	**-2.1**
P23K	**Montague Islan**	**4.35**	**34**	P	**Pn**	**22 53 16.3**	**-1.0**
	baz=219						
O16K	**Kokwok River B**	**4.40**	**317**		**Pn**	**22 53 17.3**	**-0.8**
O16K	**Kokwok River B**	**4.40**	**317**	P	**Pn**	**22 53 17.9**	**-0.1**

	baz=131						
CHNA	Chernabura Isl	4.48	251	P	Pn	22 53 17.0	-2.1
CHNA	Chernabura Isl	4.48	251	P	Pn	22 53 21.4	+2.2
	baz=64						
CNBA	Chernabura Isl	4.49	251	Pn	Pn	22 53 16.1	-3.1
N19K	Bonanza Creek	4.49	346		Pn	22 53 19.4	0.0
N19K	Bonanza Creek	4.49	346	P	Pn	22 53 19.0	-0.4
	baz=163,SNR=22						
N18K	Kilae Creek	4.62	337		Pn	22 53 20.8	-0.2
N18K	Kilae Creek	4.62	337	P	Pn	22 53 20.3	-0.8
	baz=153,SNR=27						
SPU	Mount Spurr	4.71	1		Pn	22 53 21.6	-0.8
N20K	Mount Spurr	4.73	0	P	Pn	22 53 21.5	-1.1
	baz=180						
SPCR	Spurr Chakacha	4.73	0	P	Pn	22 53 21.4	-1.2
	baz=180						
SDPT	Sand Point	4.77	260		Pn	22 53 21.1	-2.1
SDPT	Sand Point	4.77	260	P	Pn	22 53 21.2	-1.9
SDPT	Sand Point	4.77	260	P	Pn	22 53 23.7	+0.6
	baz=71						
RC01	Rabbit Creek A	4.79	15		Pn	22 53 22.5	-0.9
RC01	Rabbit Creek A	4.79	15	P	Pn	22 53 22.0	-1.4
	baz=197						
N17K	Nushagak Hills	4.81	329		Pn	22 53 23.2	-0.4
N17K	Nushagak Hills	4.81	329	P	Pn	22 53 23.1	-0.6
	baz=144,SNR=22						
PWL	Port Wells	4.83	23		Pn	22 53 22.2	-1.9
PWL	Port Wells	4.83	23	P	Pn	22 53 22.1	-1.9
	baz=207						
O15K	Ungalikthiuk R	4.87	307		Pn	22 53 23.4	-1.1
O15K	Ungalikthiuk R	4.87	307	P	Pn	22 53 24.2	-0.3
	baz=119						
SPNN	North Nagishla	4.90	357		Pn	22 53 24.4	-0.6
HIN	Hinchinbrook I	4.94	35		Pn	22 53 23.7	-1.8
STLK	Strandline Lak	5.03	2		Pn	22 53 26.1	-0.6
SUA	Susitna One	5.05	8	P	Pn	22 53 25.9	-1.2
	baz=189						
GLI	Glacier Island	5.16	29		Pn	22 53 26.4	-2.0
GLI	Glacier Island	5.16	29	P	Pn	22 53 26.9	-1.5
	baz=214						
FID	Port Fidalgo	5.23	33		Pn	22 53 27.2	-2.1
N16K	Nishlik Lake	5.26	322		Pn	22 53 29.9	0.0
N16K	Nishlik Lake	5.26	322	P	Pn	22 53 29.8	-0.1
	baz=135						
EYAK	Cordova Ski Ar	5.30	37		Pn	22 53 29.3	-1.1
EYAK	Cordova Ski Ar	5.30	37	P	Pn	22 53 29.8	-0.6
	baz=223						
KNK	Knik Glacier	5.31	20		Pn	22 53 29.0	-1.6
KNK	Knik Glacier	5.31	20	P	Pn	22 53 30.0	-0.6
	baz=203						
M18K	Stony River	5.35	341		Pn	22 53 30.6	-0.5
M18K	Stony River	5.35	341	P	Pn	22 53 31.1	+0.1
	baz=157						
PMR	Palmer	5.36	16	P	Pn	22 53 31.4	+0.2
PMR	Palmer	5.36	16	P	Pn	22 53 31.1	-0.2
	baz=199						
KAIM	Kayak Island	5.38	47		Pn	22 53 30.4	-1.1
KAIM	Kayak Island	5.38	47	P	Pn	22 53 31.6	+0.1
	baz=234						
M22K	Willow	5.39	11		Pn	22 53 31.5	-0.1
M22K	Willow	5.39	11	P	Pn	22 53 30.8	-0.8
	baz=192						
M20K	Styx River	5.43	356		Pn	22 53 32.0	-0.2
M20K	Styx River	5.43	356	P	Pn	22 53 32.2	-0.1
	baz=174,SNR=10						
PS1A	Pavlof South-1	5.45	263		Pn	22 53 30.4	-2.0
SKT	Skwentna	5.52	3		Pn	22 53 33.0	-0.4
SKT	Skwentna	5.52	3	P	Pn	22 53 33.5	+0.1
	baz=184						
PS4A	Pavlof South-4	5.53	262		Pn	22 53 31.3	-2.3
N15K	Kwethluk River	5.54	315		Pn	22 53 33.3	-0.4
N15K	Kwethluk River	5.54	315	P	Pn	22 53 33.9	+0.1
	baz=127,SNR=12						
S12K	Black Hills	5.56	266		Pn	22 53 31.4	-2.6
S12K	Black Hills	5.56	266	P	Pn	22 53 35.7	+1.8
	baz=76						
O14K	Tigyukauivet M	5.56	304	Pn	Pn	22 53 33.9	0.0
O14K	Tigyukauivet M	5.56	304	P	Pn	22 53 34.5	+0.6
	baz=115						
GHO	Glory Hole Cre	5.57	16		Pn	22 53 33.8	-0.3
RAGM	Ragged Mountai	5.57	42		Pn	22 53 32.7	-1.5
DOL	Dolgoi Island	5.59	260		Pn	22 53 31.5	-2.9
M17K	Holitna River	5.61	334		Pn	22 53 35.0	+0.3
M17K	Holitna River	5.61	334	P	Pn	22 53 34.5	-0.1
	baz=148						
GOAT	Goat Mountain	5.68	41		Pn	22 53 34.0	-1.7
SML	Sawmill	5.70	19		Pn	22 53 35.2	-0.7
SML	Sawmill	5.70	19	P	Pn	22 53 35.2	-0.7
	baz=202,SNR=8.3						
M16K	Timber Creek	5.74	325		Pn	22 53 36.7	+0.3
M16K	Timber Creek	5.74	325	P	Pn	22 53 36.1	-0.3
	baz=138,SNR=25						
DIV	Divide	5.74	33		Pn	22 53 35.3	-1.2
DTNA	Dutton South F	5.80	261		Pn	22 53 34.7	-2.7
M23K	Glacier View	5.80	22		Pn	22 53 36.1	-1.3
M23K	Glacier View	5.80	22	P	Pn	22 53 36.6	-0.7
	baz=206,SNR=17						
L19K	White Mountain	5.87	348		Pn	22 53 38.0	-0.1
L19K	White Mountain	5.87	348	P	Pn	22 53 37.1	-1.0
	baz=165,SNR=44						
SCM	Sheep Creek Mo	5.92	23		Pn	22 53 38.3	-0.7
SCM	Sheep Creek Mo	5.92	23	P	Pn	22 53 38.3	-0.7
	baz=208,SNR=12						
BERG	Berg Lake	5.95	45		Pn	22 53 38.3	-1.0
KLU	Klutina	5.99	30		Pn	22 53 38.8	-1.1
KLU	Klutina	5.99	30	P	Pn	22 53 39.0	-0.8
	baz=216						
BMRM	Bremner River	6.00	38		Pn	22 53 39.2	-0.8
BMRM	Bremner River	6.00	38	P	Pn	22 53 39.1	-0.9
	baz=225,SNR=14						
N14K	Kuskokwak Cree	6.07	309		Pn	22 53 40.4	-0.5
N14K	Kuskokwak Cree	6.07	309	P	Pn	22 53 41.9	+1.0
	baz=119						
L22K	Petersville	6.10	6		Pn	22 53 40.5	-0.9
M15K	Kasigluk River	6.11	317		Pn	22 53 41.2	-0.2
M15K	Kasigluk River	6.11	317	P	Pn	22 53 41.2	-0.2
	baz=129						
SNH	Sunshine Point	6.18	49		Pn	22 53 41.8	-0.7
L18K	Granite Mounta	6.18	340		Pn	22 53 42.0	-0.5
L18K	Granite Mounta	6.18	340	P	Pn	22 53 42.2	-0.3
	baz=156						
CRQM	Cirque	6.39	44		Pn	22 53 43.9	-1.7
CRQE	Cirque	6.41	44	P	Pn	22 53 45.3	-0.4
	baz=233						
L16K	Owhat River	6.42	328		Pn	22 53 45.9	+0.1
L16K	Owhat River	6.42	328	P	Pn	22 53 45.9	+0.1
	baz=140						
PPLA	Purkeypile	6.43	0		Pn	22 53 46.3	+0.3
PPLA	Purkeypile	6.43	0	P	Pn	22 53 44.1	-1.9
	baz=180						
M24K	Tolsona, Glenn	6.43	26		Pn	22 53 46.0	0.0
M24K	Tolsona, Glenn	6.43	26	P	Pn	22 53 44.6	-1.4
	baz=212						
L17K	Donlin	6.45	334		Pn	22 53 46.2	0.0
L17K	Donlin	6.45	334	P	Pn	22 53 45.6	-0.6
	baz=148						
N25K	Chitina, Valde	6.47	34		Pn	22 53 45.8	-0.7
N25K	Chitina, Valde	6.47	34	P	Pn	22 53 45.9	-0.6
	baz=221,SNR=11						
TGL	Tana Glacier	6.51	45		Pn	22 53 47.0	-0.2
WAT6	Susitna Watana	6.52	19		Pn	22 53 46.7	-0.6
WAT6	Susitna Watana	6.52	19	P	Pn	22 53 45.9	-1.4
	baz=203						
FALS	False Pass	6.53	260		Pn	22 53 44.9	-2.3
FALS	False Pass	6.53	260	P	Pn	22 53 49.6	+2.3
	baz=70						
VRDI	Verde Repeater	6.58	40		Pn	22 53 46.5	-1.7
GLB	Gilahina Butte	6.61	38		Pn	22 53 47.0	-1.3
WAT1	Susitna Watana	6.63	15	P	Pn	22 53 48.3	-0.4
	baz=198						
M14K	Bethel	6.63	314		Pn	22 53 48.9	+0.3
M14K	Bethel	6.63	314	P	Pn	22 53 49.2	+0.6
	baz=125						
YAH	Yahtse	6.74	50		Pn	22 53 49.7	-0.6
KIAG	Kiagna River	6.80	45		Pn	22 53 50.0	-1.2
MCARA	McCarthy VSAT	6.84	40		Pn	22 53 50.9	-0.7
MCARA	McCarthy VSAT	6.84	40	P	Pn	22 53 51.0	-0.6
	baz=229,SNR=6.0						
BALM	Baldy	6.87	44		Pn	22 53 50.8	-1.2
GRNC	Granite Creek	6.93	48		Pn	22 53 52.5	-0.5
HARP	HAARP	6.94	28		Pn	22 53 52.8	0.0
HARP	HAARP	6.94	28	P	Pn	22 53 52.9	0.0
	baz=215						
K20K	Telida	6.95	353		Pn	22 53 52.8	-0.3
K20K	Telida	6.95	353	P	Pn	22 53 53.0	0.0
	baz=171,SNR=15						
K17K	Iditarod	6.96	336		Pn	22 53 53.5	+0.3
K17K	Iditarod	6.96	336	P	Pn	22 53 53.7	+0.5
	baz=150						
M13K	Dall Lake	7.03	309		Pn	22 53 54.1	0.0
M13K	Dall Lake	7.03	309	P	Pn	22 53 55.1	+1.0
	baz=118						
DHY	Denali Highway	7.05	18		Pn	22 53 55.0	+0.5
DHY	Denali Highway	7.05	18	P	Pn	22 53 53.5	-0.9
	baz=203,SNR=15						
L15K	Ungalak Mounta	7.05	321		Pn	22 53 54.5	+0.1
L15K	Ungalak Mounta	7.05	321	P	Pn	22 53 55.7	+1.3
	baz=132						
TRF	Thorofare Moun	7.05	7		Pn	22 53 53.9	-0.7
TRF	Thorofare Moun	7.05	7	P	Pn	22 53 54.6	0.0
	baz=189						
KTH	Kantishna Hill	7.12	5		Pn	22 53 55.7	+0.3
BARN	Barnard Glacie	7.15	46		Pn	22 53 55.1	-0.9
CTG	Chitna Glacier	7.23	47	P	Pn	22 53 56.3	-0.7
	baz=237						
CTGM	Chitina Glacie	7.23	47		Pn	22 53 57.0	0.0
L14K	Kuka Creek	7.27	316		Pn	22 53 56.6	-0.8
L14K	Kuka Creek	7.27	316	P	Pn	22 53 58.3	+0.9
	baz=126,SNR=8.7						
PCA	Pinnacle	7.27	55		Pn	22 53 57.1	-0.5
PINM	Pinnacle	7.28	55	P	Pn	22 53 57.1	-0.5
	baz=246,SNR=8.9						
LOGN	Logan Glacier	7.29	49		Pn	22 53 57.6	-0.3
PAX	Paxson	7.34	25		Pn	22 53 58.4	-0.1
PAX	Paxson	7.34	25	P	Pn	22 53 58.3	-0.2
	baz=211,SNR=6.4						
J18K	Innoko River	7.35	344		Pn	22 53 58.4	-0.1
J18K	Innoko River	7.35	344	P	Pn	22 53 58.1	-0.4
	baz=160						
CHUM	Lake Minchumin	7.42	360	P	Pn	22 53 59.0	-0.5
	baz=179						
MCK	McKinley	7.45	11		Pn	22 53 60.0	+0.1
MCK	McKinley	7.45	11	P	Pn	22 53 59.4	-0.5
	baz=194						
BCPM	Bancas Point	7.50	57		Pn	22 54 00.1	-0.5
K15K	Wolf Creek Mou	7.50	325		Pn	22 54 00.8	+0.2
K15K	Wolf Creek Mou	7.50	325	P	Pn	22 54 01.0	+0.4
	baz=136						
M26K	Nabesna, AK	7.57	35		Pn	22 54 01.0	-0.5
M26K	Nabesna, AK	7.57	35	P	Pn	22 54 01.6	+0.1
	baz=223						
O28M	Mount Upton	7.61	51		Pn	22 54 01.0	-1.3
O28M	Mount Upton	7.61	51	P	Pn	22 54 01.8	-0.5
	baz=242						
BPAW	Bear Paw Mtn.	7.66	4		Pn	22 54 01.5	-1.3
BPAW	Bear Paw Mtn.	7.66	4	P	Pn	22 54 02.1	-0.7
	baz=185						
J19K	Poorman	7.71	349		Pn	22 54 02.9	-0.6
J19K	Poorman	7.71	349	P	Pn	22 54 03.9	+0.4
	baz=165,SNR=7.5						
J17K	VABM Dome	7.73	337		Pn	22 54 03.9	+0.2
J17K	VABM Dome	7.73	337	P	Pn	22 54 04.1	+0.4
	baz=150,SNR=10						
J20K	Nowinta River	7.77	354		Pn	22 54 03.9	-0.4
J20K	Nowinta River	7.77	354	P	Pn	22 54 03.7	-0.5
	baz=172,SNR=10						
M27K	Edge Creek, AK	7.90	38		Pn	22 54 06.1	-0.1
M27K	Edge Creek, AK	7.90	38	P	Pn	22 54 05.6	-0.6
	baz=227						
L26K	Log Cabin Wild	7.94	31	P	Pn	22 54 06.2	-0.4
	baz=219						
J16K	Anvik River	8.00	332		Pn	22 54 07.3	-0.2
J16K	Anvik River	8.00	332	P	Pn	22 54 08.4	+0.9
	baz=144						
K24K	Donnelly Dome	8.01	21		Pn	22 54 07.9	+0.4
K24K	Donnelly Dome	8.01	21	P	Pn	22 54 07.3	-0.3
	baz=207						
YUK3	Moose Creek	8.04	44	P	Pn	22 54 08.7	+0.5
	baz=234						
YUK8	Steele Glacier	8.05	48	P	Pn	22 54 09.2	+0.9
	baz=239						
O29M	Mount Kennedy	8.13	56		Pn	22 54 09.4	+0.1
O29M	Mount Kennedy	8.13	56	P	Pn	22 54 10.0	+0.7
	baz=249,SNR=12						
RIDG	Independent Ri	8.15	24		Pn	22 54 09.3	-0.2
RIDG	Independent Ri	8.15	24	P	Pn	22 54 09.6	+0.1
	baz=210						
DOT	Dot Lake	8.26	26		Pn	22 54 11.6	+0.7
WRH	Wood River Hil	8.27	13		Pn	22 54 10.4	-0.6
NEA2	Nenana	8.28	10		Pn	22 54 10.8	-0.4
NEA2	Nenana	8.28	10	P	Pn	22 54 11.2	-0.1
	baz=192						
BVCY	Beaver Creek	8.29	40	P	Pn	22 54 11.5	+0.1
	baz=230						
M11K	Mekoryuk	8.30	304	P	Pn	22 54 11.6	+0.1
	baz=111						
P29M	Windy Craggy	8.31	62		Pn	22 54 10.9	-0.8
P29M	Windy Craggy	8.31	62	P	Pn	22 54 11.8	+0.1
	baz=255						
HDA	Harding Lake	8.36	16		Pn	22 54 12.6	+0.3
HDA	Harding Lake	8.36	16	P	Pn	22 54 13.0	+0.6
	baz=201,SNR=14						
K13K	Kusilvak Mount	8.38	316	P	Pn	22 54 14.0	+1.4
	baz=124						
I20K	Naaghedeneel	8.41	353		Pn	22 54 12.5	-0.5
I20K	Naaghedeneel	8.41	353	P	Pn	22 54 13.0	0.0
	baz=171						
L27K	Beaver Creek,	8.42	34	P	Pn	22 54 12.6	-0.6
	baz=224						
BCAR	Beaver Creek A	8.44	34	Pn	Pn	22 54 13.5	0.0
CCB	Clear Creek Bu	8.47	13		Pn	22 54 13.1	-0.7
YUK6	Outpost Mounta	8.48	53	P	Pn	22 54 14.6	+0.4
	baz=245						
J14K	Nanvaranak Lak	8.49	322		Pn	22 54 13.8	-0.3
J14K	Nanvaranak Lak	8.49	322	P	Pn	22 54 14.5	+0.4
	baz=132						
I17K	Unalakleet	8.53	334		Pn	22 54 14.8	+0.2
I17K	Unalakleet	8.53	334	P	Pn	22 54 15.5	+0.9
	baz=146,SNR=17						
YUK4	Talbot Arm	8.54	50	P	Pn	22 54 16.1	+1.0
	baz=242						
SCRK	Sand Creek	8.55	25		Pn	22 54 14.9	-0.2
SCRK	Sand Creek	8.55	25	P	Pn	22 54 15.0	-0.1
	baz=212						
UNV	Unalaska Valle	8.59	258	P	Pn	22 54 13.6	-1.8
UNV	Unalaska Valle	8.59	258	P	Pn	22 54 18.1	+2.6
	baz=65						
GCSA	Galena City Sc	8.59	347	P	Pn	22 54 15.8	+0.3
	baz=162						
MLY	Manley	8.60	4		Pn	22 54 15.0	-0.7
MLY	Manley	8.60	4	P	Pn	22 54 15.5	-0.3
	baz=185,SNR=5.2						
COLA	College	8.68	12		Pn	22 54 17.0	+0.3
COLA	College	8.68	12	P	Pn	22 54 17.4	+0.7
COLA	College	8.68	12	P	Pn	22 54 17.3	+0.7
	baz=196						
IL31		8.71	15		Pn	22 54 17.4	+0.3
ILAR	Eielson Array	8.71	15	Pn	Pn	22 54 16.1	-1.0
	1.3nm,0.3s,baz=198,slow=14,SNR=40						
ILAR				Sn	Sn	22 55 50.4	-4.5
	baz=208,slow=20						
ILAR	Eielson Array	8.71	15		Pn	22 54 17.2	0.0
I21K	Tanana	8.72	1		Pn	22 54 17.1	-0.2
I21K	Tanana	8.72	1	P	Pn	22 54 17.5	+0.2
	baz=181,SNR=10.0						
I23K	Minto, Yukon-K	8.80	8	P	Pn	22 54 17.5	-0.8
	baz=190,SNR=7.3						
S31K	Pelican	8.81	74		Pn	22 54 16.9	-1.5
S31K	Pelican	8.81	74	P	Pn	22 54 18.3	-0.2
	baz=268						
HYT	Haines Junctio	8.82	54		Pn	22 54 17.6	-1.1
HYT	Haines Junctio	8.82	54	P	Pn	22 54 18.7	0.0
	baz=248						
J25K	Salcha River,	8.82	20		Pn	22 54 18.5	-0.2
J25K	Salcha River,	8.82	20	P	Pn	22 54 19.0	+0.3
	baz=206,SNR=8.4						
P30M	Million Dollar	8.82	59	P	Pn	22 54 19.4	+0.6
	baz=253						
PLBC	Pleasant Camp	8.94	64	P	Pn	22 54 20.6	+0.3
	baz=258,SNR=5.8						
POKR	Poker Plat Res	8.97	13		Pn	22 54 21.5	+0.8
POKR	Poker Plat Res	8.97	13	P	Pn	22 54 20.4	-0.3
	baz=197						
J26L	Joseph Creek	9.10	24		Pn	22 54 22.1	-0.4
J26L	Joseph Creek	9.10	24	P	Pn	22 54 21.9	-0.6
	baz=212						
H20K	Anotleneega Mo	9.12	353	P	Pn	22 54 21.9	-1.0
	baz=170						
H18K	Honhosa River	9.19	344		Pn	22 54 23.0	-0.7
H18K	Honhosa River	9.19	344	P	Pn	22 54 23.5	-0.2
	baz=158						
M29M	Somme Creek	9.20	44		Pn	22 54 23.1	-0.8
M29M	Somme Creek	9.20	44	P	Pn	22 54 23.2	-0.7
	baz=236						
H21K	Melozitna Rive	9.21	359		Pn	22 54 23.7	-0.2
H21K	Melozitna Rive	9.21	359	P	Pn	22 54 23.3	-0.7
	baz=178						
H17K	Granite Mounta	9.26	339		Pn	22 54 24.9	+0.2
H17K	Granite Mounta	9.26	339	P	Pn	22 54 25.3	+0.6
	baz=152						
H19K	Roundabout Mou	9.29	349		Pn	22 54 25.3	+0.2
H19K	Roundabout Mou	9.29	349	P	Pn	22 54 24.5	-0.6
	baz=165						
SIT	Sitka	9.30	79	Pn	Pn	22 54 23.7	-1.6
SIT	Sitka	9.30	79	P	Pn	22 54 25.8	+0.5
SIT	Sitka	9.30	79	P	Pn	22 54 26.1	+0.9
	baz=274						
O30N	Mendenhall	9.44	56	P	Pn	22 54 27.5	+0.3
	baz=251						
H22K	Ishtalitna Cre	9.45	2		Pn	22 54 26.6	-0.6
H22K	Ishtalitna Cre	9.45	2	P	Pn	22 54 27.1	-0.2
	baz=183						
SKAG	Skagway	9.46	65	P	Pn	22 54 28.1	+0.7
SKAG	Skagway	9.46	65	P	Pn	22 54 27.5	+0.1
	baz=260						
H16K	Elim	9.53	333	P	Pn	22 54 28.9	+0.5
	baz=144,SNR=12						
IMAR	Indian Mountai	9.56	356		Pn	22 54 27.5	-1.2
P08K	Saint George I	9.56	278	P	Pn	22 54 30.2	+1.4
	baz=82						
H24K	Noodor Dome	9.61	11		Pn	22 54 29.9	+0.4
H24K	Noodor Dome	9.61	11	P	Pn	22 54 29.2	-0.3
	baz=195						
S32K	Killisnoo	9.69	77	P	Pn	22 54 31.0	+0.4
	baz=272						
L29M	L29M	9.71	41		Pn	22 54 30.4	-0.5
L29M	L29M	9.71	41	P	Pn	22 54 30.9	+0.1
	baz=234						
R32K	Eaglecrest	9.73	72	Pn	Pn	22 54 31.1	-0.1
R32K	Eaglecrest	9.73	72	P	Pn	22 54 32.0	+0.8
	baz=268						
N31M	Braeburn, Yuko	9.85	53		Pn	22 54 32.4	-0.4
N31M	Braeburn, Yuko	9.85	53	P	Pn	22 54 33.0	+0.3
	baz=247						
I26K	Coal Creek Min	9.88	23		Pn	22 54 33.1	0.0
I26K	Coal Creek Min	9.88	23	P	Pn	22 54 33.3	+0.2
	baz=211						
SPIA	Saint Paul Isl	9.89	281	P	Pn	22 54 34.5	+1.2
	baz=86						
DAWY	Dawson	9.90	35		Pn	22 54 32.5	-1.0
DAWY	Dawson	9.90	35	P	Pn	22 54 33.2	-0.3
	baz=226						
G17K	Kiwalik Mounta	9.91	339	P	Pn	22 54 33.9	+0.4
	baz=151						
M30M	Minto, Yukon	9.92	46		Pn	22 54 33.5	-0.3
M30M	Minto, Yukon	9.92	46	P	Pn	22 54 33.2	-0.5
	baz=240						
G18K	Tagagawik	9.93	345		Pn	22 54 32.9	-0.9
G18K	Tagagawik	9.93	345	P	Pn	22 54 33.8	0.0
	baz=158						
G19K	Purcell Mounta	9.96	349		Pn	22 54 33.7	-0.6
G19K	Purcell Mounta	9.96	349	P	Pn	22 54 33.7	-0.6
	baz=164						
WHY	Whitehorse	9.97	58	P	Pn	22 54 34.5	0.0
	baz=254						
G21K	Allakaket	10.08	357		Pn	22 54 35.0	-0.9
G21K	Allakaket	10.08	357	P	Pn	22 54 35.3	-0.6
	baz=176						
NIKH	Nikolski High	10.23	257	P	Pn	22 54 39.7	+1.7
	baz=62						
G15K	Niukluk	10.28	331	P	Pn	22 54 38.9	+0.3
	baz=140						
P32M	Atlin	10.29	65	P	Pn	22 54 39.0	+0.2
	baz=261						
G23K	Bananza Creek	10.31	5		Pn	22 54 38.4	-0.7
G23K	Bananza Creek	10.31	5	P	Pn	22 54 37.7	-1.4
	baz=187						
ANM	Nome	10.34	327	Pn	Pn	22 54 39.9	+0.4
ANM	Nome	10.34	327	P	Pn	22 54 39.6	+0.1
	baz=135						
K29M	Barlow Dome	10.38	39	P	Pn	22 54 39.9	-0.2
	baz=232						
I27K	Kandik River	10.47	25	P	Pn	22 54 40.9	-0.4
	baz=214						
G24K	Hadweenzic Riv	10.49	10		Pn	22 54 40.4	-1.1
G24K	Hadweenzic Riv	10.49	10	P	Pn	22 54 40.4	-1.1
	baz=195						
J29N	Klondike Camp	10.54	35	P	Pn	22 54 41.8	-0.4
	baz=228						
U33K	Whale Pass	10.63	84	Pn	Pn	22 54 40.8	-2.6
U33K	Whale Pass	10.63	84	P	Pn	22 54 43.8	+0.4
	baz=281						
F19K	Shaleruckik Mo	10.70	348		Pn	22 54 44.6	+0.2
F19K	Shaleruckik Mo	10.70	348	P	Pn	22 54 44.1	-0.2
	baz=163						
G25K	Bearman Lake	10.71	13	P	Pn	22 54 43.2	-1.3
	baz=199						
F20K	Avaraart Lake	10.72	353		Pn	22 54 43.8	-0.8
F20K	Avaraart Lake	10.72	353	P	Pn	22 54 43.7	-1.0
	baz=169						
F18K	Selawik	10.73	344	P	Pn	22 54 44.4	-0.4
	baz=157						
M31M	Drury Creek, Y	10.74	50		Pn	22 54 45.5	+0.5
M31M	Drury Creek, Y	10.74	50	P	Pn	22 54 44.6	-0.4
	baz=246						
CRAG	Craig	10.76	87	Pn	Pn	22 54 43.6	-1.6
CRAG	Craig	10.76	87	P	Pn	22 54 45.3	+0.1
CRAG	Craig	10.76	87	P	Pn	22 54 46.0	+0.8
	baz=284						
I28M	Miner Creek	10.77	28	P	Pn	22 54 44.5	-0.9
	baz=219						
F21K	Alatna River	10.79	357		Pn	22 54 44.3	-1.3
F21K	Alatna River	10.79	357	P	Pn	22 54 44.8	-0.8
	baz=176						
COLD	Coldfoot	10.82	4		Pn	22 54 46.5	+0.5
COLD	Coldfoot	10.82	4	P	Pn	22 54 44.9	-1.1
	baz=186						
P33M	Teslin, Yukon	10.85	62		Pn	22 54 46.7	+0.2
P33M	Teslin, Yukon	10.85	62	P	Pn	22 54 46.9	+0.4
	baz=259						
Q32M	Nakina River	10.95	69	P	Pn	22 54 48.1	+0.1
	baz=266						
N32M	Quiet Lake	10.96	57	P	Pn	22 54 47.0	-0.9
	baz=254						
F15K	North Star Dit	11.00	332		Pn	22 54 47.2	-1.2
F15K	North Star Dit	11.00	332	P	Pn	22 54 48.5	0.0
	baz=141						
WRAK	Wrangell Islan	11.01	82	P	Pn	22 54 48.5	0.0
	baz=279						
H27K	Steamboat Moun	11.02	23		Pn	22 54 48.5	-0.3
H27K	Steamboat Moun	11.02	23	P	Pn	22 54 47.9	-0.9
	baz=213						
F22K	John River	11.06	0	P	Pn	22 54 48.2	-1.1
	baz=180						
FARO	Faro, Yukon	11.20	51		Pn	22 54 51.3	0.0
FARO	Faro, Yukon	11.20	51	P	Pn	22 54 51.5	+0.3
	baz=248						
G26K	Porcupine Rive	11.22	17	P	Pn	22 54 51.4	0.0
	baz=205						
J30M	Hart River	11.24	37	P	Pn	22 54 50.3	-1.6
	baz=232						
E19K	Redstone River	11.25	350		Pn	22 54 51.2	-0.7
E19K	Redstone River	11.25	350	P	Pn	22 54 50.6	-1.2
	baz=165						
F24K	Squaw Lake	11.25	9	P	Pn	22 54 51.3	-0.6
	baz=192						
G27K	Doyon Strip	11.49	21	P	Pn	22 54 54.7	-0.4
	baz=211						
S34M	Telegraph Cree	11.53	74	P	Pn	22 54 55.6	-0.1
	baz=272						
E17K	Hotham Inlet	11.54	341	P	Pn	22 54 55.3	-0.5
	baz=152						
BMAR	Burnt Mountain	11.54	15		Pn	22 54 55.3	-0.6
F25K	Christian Rive	11.56	13		Pn	22 54 55.3	-0.8
F25K	Christian Rive	11.56	13	P	Pn	22 54 55.2	-0.9
	baz=198						
V35K	Ketchikan	11.63	87	P	Pn	22 54 56.9	-0.1
	baz=285						
E18K	Tukpahlearik C	11.64	344	P	Pn	22 54 56.5	-0.7
	baz=156						
I30M	Mount Dempster	11.64	35	P	Pn	22 54 56.8	-0.5
	baz=229						
R33M	Jennings River	11.66	67	Pn	Pn	22 54 58.2	+0.6
R33M	Jennings River	11.66	67	P	Pn	22 54 57.0	-0.6
	baz=265						

E23K	Chandalar	11.68	5	P	Pn	22 54 56.6	-1.1
	baz=187						
E22K	Anaktuvuk Pass	11.69	1		Pn	22 54 57.7	-0.3
E22K	Anaktuvuk Pass	11.69	1	P	Pn	22 54 56.7	-1.3
	baz=181,SNR=7.9						
E24K	Your Creek	11.76	7		Pn	22 54 58.1	-0.7
E24K	Your Creek	11.76	7	P	Pn	22 54 57.9	-1.0
	baz=190						
H29M	Whitestone	11.78	28	P	Pn	22 54 58.0	-1.1
	baz=221						
TNA	Tin City	11.82	327	P	Pn	22 54 59.5	-0.1
	baz=132						
F26K	Sheenjek River	11.85	15		Pn	22 54 59.9	-0.2
F26K	Sheenjek River	11.85	15	P	Pn	22 54 58.5	-1.6
	baz=202,SNR=5.2						
E20K	Nigu River	11.95	353	P	Pn	22 55 00.6	-0.9
	baz=169						
E21K	Killik River	12.02	357		Pn	22 55 00.4	-2.1
E21K	Killik River	12.02	357	P	Pn	22 55 00.5	-2.0
	baz=175						
E25K	Arctic Village	12.07	12		Pn	22 55 02.3	-0.8
E25K	Arctic Village	12.07	12	P	Pn	22 55 01.2	-1.8
	baz=198						
T35M	Bob Quinn	12.08	78	P	Pn	22 55 03.4	+0.2
	baz=278						
GAMB	Gambell	12.10	315	P	Pn	22 55 03.2	-0.2
	baz=118						
TOLK	Toolik Lake Re	12.26	5	P	Pn	22 55 04.1	-1.6
	baz=187,SNR=6.7						
D17K	Noatak River	12.31	340	P	Pn	22 55 04.8	-1.6
	baz=150						
EPYK	Eagle Plains	12.34	30	P	Pn	22 55 05.9	-0.9
	baz=224						
D19K	Kuna River	12.34	350		Pn	22 55 06.4	-0.4
D19K	Kuna River	12.34	350	P	Pn	22 55 06.4	-0.4
	baz=164						
G29M	Pine Creek	12.40	27	P	Pn	22 55 06.9	-0.7
	baz=220						
D20K	Etivluk River	12.43	353		Pn	22 55 06.3	-1.7
D20K	Etivluk River	12.43	353	P	Pn	22 55 07.7	-0.3
	baz=168						
D22K	Ayikyak River	12.44	359		Pn	22 55 07.3	-0.8
D22K	Ayikyak River	12.44	359	P	Pn	22 55 07.7	-0.4
	baz=179						
F28M	Old Crow	12.54	22		Pn	22 55 09.4	-0.1
F28M	Old Crow	12.54	22	P	Pn	22 55 08.6	-0.9
	baz=213						
D23K	Nanushuk River	12.54	3		Pn	22 55 08.4	-1.2
D23K	Nanushuk River	12.54	3	P	Pn	22 55 08.6	-0.9
	baz=184						
RDOG	Red Dog Mine	12.59	341	P	Pn	22 55 09.0	-1.3
	baz=152						
H31M	Peel River	12.67	35	P	Pn	22 55 09.6	-1.7
	baz=231						
E27K	Coleen River	12.71	18		Pn	22 55 11.4	-0.4
E27K	Coleen River	12.71	18	P	Pn	22 55 11.0	-0.8
	baz=208						
C21K	Knifeblade Rid	12.77	356	P	Pn	22 55 12.0	-0.6
	baz=173						
D24K	Happy Valley	12.80	6		Pn	22 55 12.8	-0.3
D24K	Happy Valley	12.80	6	P	Pn	22 55 12.9	-0.2
	baz=188						
WTLY	Watson Lake, Y	12.82	64	P	Pn	22 55 14.0	+0.6
	baz=264						
C18K	Utukok River	12.86	345		Pn	22 55 13.7	-0.2
C18K	Utukok River	12.86	345	P	Pn	22 55 13.8	-0.2
	baz=157						
G30M	tAoh Zraii Nji	12.92	29	P	Pn	22 55 14.3	-0.4
	baz=223						
C17K	DeLong Mountai	13.02	342	P	Pn	22 55 15.9	0.0
	baz=152						
C19K	Lookout Ridge	13.09	348		Pn	22 55 16.2	-0.8
C19K	Lookout Ridge	13.09	348	P	Pn	22 55 16.7	-0.3
	baz=162						
D25K	Kavik River	13.15	9	P	Pn	22 55 17.0	-0.8
	baz=194						
B21K	Ikpikpuk River	13.23	356	P	Pn	22 55 18.5	-0.3
	baz=174						
C16K	Lisburne Hills	13.25	338	P	Pn	22 55 19.2	+0.1
	baz=146						
C24K	Franklin Bluff	13.38	5		Pn	22 55 19.2	-1.6
C24K	Franklin Bluff	13.38	5	P	Pn	22 55 20.0	-0.8
	baz=188						
C23K	Itkillik River	13.42	2		Pn	22 55 20.0	-1.4
C23K	Itkillik River	13.42	2	P	Pn	22 55 20.9	-0.6
	baz=184						
G31M	Satah River	13.42	32		Pn	22 55 21.4	-0.1
G31M	Satah River	13.42	32	P	Pn	22 55 20.7	-0.7
	baz=228						
E28M	Babbage River	13.45	20	P	Pn	22 55 20.5	-1.4
	baz=212						
F30M	Barrier River	13.50	28	P	Pn	22 55 22.4	-0.1
	baz=222						
E29M	Blow River	13.61	23	P	Pn	22 55 23.6	-0.4
	baz=216						
B18K	Kokolik River	13.61	346	P	Pn	22 55 24.2	+0.1
	baz=157						
C27K	Jago River	13.72	13	P	Pn	22 55 25.3	-0.3
	baz=200						
B20K	Meade River	13.74	353	P	Pn	22 55 24.3	-1.6
	baz=168						
D27M	Malcolm River	13.76	17	P	Pn	22 55 25.7	-0.4
	baz=207						
C26K	Camden Bay	13.86	11	P	Pn	22 55 27.5	+0.1
	baz=197,SNR=9.5						
B22K	Teshekpuk Lake	13.92	358	P	Pn	22 55 27.2	-1.0
	baz=177						
F31M	Tsiigehtchic	13.93	31	P	Pn	22 55 28.3	-0.1
	baz=227						
D28M	Stokes Point	14.22	20	P	Pn	22 55 31.9	-0.4
	baz=212						
A19K	Wainwright	14.30	348	P	Pn	22 55 33.0	-0.5
	baz=160						
INK	Inuvik	14.59	28	Pn	Pn	22 55 36.9	-0.6
	0.1nm,0.3s,baz=224,slow=18,SNR=5.7						
	2.8nm,1.1s						
INK	Inuvik	14.59	28		Pn	22 55 37.3	-0.1
INK	Inuvik	14.59	28	P	Pn	22 55 37.0	-0.4
	baz=225						
TOAD	Toad River Com	14.60	69	P	Pn	22 55 36.4	-1.3
	baz=273						
A22K	Sinclair Lake	14.62	356	P	Pn	22 55 37.0	-0.8
	baz=174						
A21K	Barrow	15.01	355	P	Pn	22 55 41.1	-2.0
	baz=170						
WRGLY	Wrigley	15.84	53	P	Pn	22 55 52.2	-1.8
	baz=258						
C36M	Paulatuk	17.93	33	P	Pn	22 56 19.8	-0.4
C36M	Paulatuk	17.93	33	P	Pn	22 56 19.2	-1.0
	baz=238						
A36M	Sachs Harbour	19.17	25	P	P	22 56 34.5	+0.2
A36M				IAmb	IAmb	22 56 45.8	
	comp=Z,38nm,0.9s						
A36M	Sachs Harbour	19.17	25	P	Pn	22 56 35.0	-0.2
	baz=230,SNR=24						
YKAW3	Yellowknife Wh	19.80	57	P	Pn	22 56 42.1	-0.7
YKA	Yellowknife Ar	19.80	57	Pn	Pn	22 56 43.4	+0.6
	comp=Z,0.1nm,0.3s,baz=273,slow=10,SNR=30						
	comp=Z,4.4nm,1.0s						
YKA	Yellowknife Ar	19.80	57	P	P	22 56 41.5	+0.2
B08A	Colville Reser	21.48	98	P	P	22 56 59.2	-0.3
BILL	Bilibino	21.99	318	P	P	22 57 03.7	-1.2
BILL				IAmb	IAmb	22 57 06.9	
	comp=Z,25nm,1.1s						
EDM	Edmonton	22.41	82	P	P	22 57 08.9	-0.7
HAWA	Hanford	22.54	103	P	P	22 57 10.0	-1.0
OVMT	Ovando	25.72	95	P	P	22 57 41.9	+0.5
PETK	Petropavlovsk-	28.54	285	P	P	22 58 07.7	+1.2
	comp=Z,4.1nm,0.9s,baz=70,slow=12,SNR=5.3						
	comp=Z,4.1nm,0.9s						
NVAR	Mina Array Bea	28.78	114	P	P	22 58 12.7	+3.7
	comp=Z,2.1nm,0.8s,baz=294,slow=9.2,SNR=6.6						
	comp=Z,2.1nm,0.8s						
PDAR	Pinedale Array	30.32	99	P	P	22 58 25.3	+2.7
	comp=Z,1.0nm,0.7s,baz=309,slow=4.8,SNR=7.3						
	comp=Z,1.0nm,0.7s						
PDAR	Pinedale Array	30.32	99	P	P	22 58 22.1	-0.6
GWY	Greenwater Val	31.34	115	P	P	22 58 30.0	-1.6
POIN	Pond Inlet	32.97	32	P	P	22 58 45.7	+0.4
POIN				IAmb	IAmb	22 58 59.3	
	comp=Z,5.3nm,1.1s						
ULM	Lac du Bonnet	33.36	76	P	P	22 58 50.0	+1.0
	comp=Z,3.0nm,0.7s,baz=300,slow=8.9,SNR=4.1						
	comp=Z,3.0nm,0.7s						
ULM	Lac du Bonnet	33.36	76	P	P	22 58 49.0	0.0
ULM				IAmb	IAmb	22 58 58.5	
	comp=Z,9.1nm,1.3s						
AGMN	Agassiz Nation	34.47	79	P	P	22 58 58.9	+0.4
AGMN				IAmb	IAmb	22 59 02.0	
	comp=Z,11nm,0.9s						
TIXI	Tiksi	34.61	327	P	P	22 58 59.7	+0.1
L40A	Anamosa	40.93	84	P	P	22 59 53.4	+0.1
L40A				IAmb	IAmb	22 59 56.5	
	comp=Z,18nm,1.0s						
I42A	Draeger Farm,	40.98	80	P	P	22 59 53.9	+0.2
I42A				IAmb	IAmb	23 00 04.6	
	comp=Z,9.1nm,0.9s						
R40A	Maddies Statio	42.95	89	P	P	23 00 10.0	+0.1
R40A				IAmb	IAmb	23 00 21.0	
	comp=Z,5.4nm,0.8s						
TX31	Lajitas Ar. Si	43.45	108	P	P	23 00 13.4	-0.6
TXAR	Lajitas Array	43.45	108	P	P	23 00 16.0	+2.0
	comp=Z,2.0nm,0.9s,baz=316,slow=5.6,SNR=15						
	comp=Z,2.0nm,0.9s						
TXAR	Lajitas Array	43.45	108	P	P	23 00 13.8	-0.2
OZNA	Ozona	43.55	104	P	P	23 00 14.0	-0.8
OZNA				IAmb	IAmb	23 00 17.7	
	comp=Z,9.6nm,1.4s						
FCAR	Ozark Folk Cen	44.76	91	P	P	23 00 23.8	-0.5
FCAR				IAmb	IAmb	23 00 36.2	
	comp=Z,6.5nm,1.4s						
N47A	Urbana	44.77	81	P	P	23 00 24.7	+0.3
N47A				IAmb	IAmb	23 00 26.4	
	comp=Z,7.9nm,0.7s						
MIAR	Mount Ida	44.94	94	P	P	23 00 25.8	-0.1
DRIO	Del Rio	45.00	105	P	P	23 00 25.4	-0.9
DRIO				IAmb	IAmb	23 00 28.8	
	comp=Z,3.6nm,0.7s						
SPITS	Spitsbergen Ar	45.41	3	P	P	23 00 28.9	-0.2
	comp=Z,1.4nm,0.5s,baz=46,slow=3.6,SNR=8.9						
	comp=Z,1.4nm,0.5s						
SPB2	Spitsbergen Ar	45.41	3	P	P	23 00 29.4	+0.4
N49A	Columbus Grove	45.57	80	P	P	23 00 31.0	+0.2
P48A	Milroy	45.91	82	P	P	23 00 33.6	+0.1
P48A				IAmb	IAmb	23 00 35.0	
	comp=Z,13nm,1.3s						
ACSO	Alum Creek Sta	46.71	80	P	P	23 00 39.9	+0.2
NRIK	Noril'sk	47.25	335	P	P	23 00 43.0	-0.5
	comp=Z,3.7nm,0.7s,baz=55,slow=6.8,SNR=9.1						
	comp=Z,3.7nm,0.7s						
NRIK	Noril'sk	47.25	335	P	P	23 00 43.0	-0.5
NRIK				IAmb	IAmb	23 00 56.9	
	comp=Z,7.7nm,1.0s						
R50A	Paris	47.35	83	P	P	23 00 45.0	+0.2
Q51A	Peebles	47.36	81	P	P	23 00 44.5	-0.3
P53A	Whipple	48.10	79	P	P	23 00 50.7	+0.1
L56A	Greenwood	48.30	74	P	P	23 00 52.0	-0.1
SSPA	Standing Stone	49.18	76		P	23 00 59.1	+0.3
SSPA				IAmb	IAmb	23 01 07.2	
	comp=Z,9.6nm,1.1s						
Y49A	Blount Mountai	49.42	88	P	P	23 01 00.7	-0.2
Y49A				IAmb	IAmb	23 01 11.7	
	comp=Z,8.7nm,1.0s						
L59A	Walton	49.60	72		P	23 01 02.1	0.0
N58A	Sunbury	49.67	75	P	P	23 01 02.8	+0.2
F64A	Sherman	50.47	64	P	P	23 01 08.7	+0.1
BATG	Bathurst New B	50.61	62	P	P	23 01 10.0	+0.3
ARCES	ARCESS Array B	54.27	1	P	P	23 01 36.1	-0.3
	comp=Z,3.9nm,0.9s,baz=7.6,slow=8.2,SNR=7.1						
	comp=Z,3.9nm,0.9s						
ARCES	ARCESS Array B	54.27	1	P	P	23 01 36.3	-0.1
ARCES				IAmb	IAmb	23 01 44.2	
	comp=Z,7.8nm,1.1s						
KSRS	Korea Array	54.43	286	P	P	23 01 38.4	+0.4
	comp=Z,0.6nm,0.6s,baz=36,slow=8.1,SNR=5.1						
	comp=Z,0.6nm,0.6s						
ULN	Ulaanbaatar	56.92	308	P	P	23 01 55.3	-0.7
SONM	Songino Array	57.23	308	P	P	23 01 58.6	+0.5
	comp=Z,5.1nm,0.9s,baz=48,slow=6.3,SNR=26						
	comp=Z,5.1nm,0.9s						
SONM	Songino Array	57.23	308	P	P	23 01 58.1	-0.1
SONM				IAmb	IAmb	23 02 06.7	
	comp=Z,7.4nm,1.0s						
HHC	Hu-ho-hao-te	60.22	300	*e*P	P	23 02 25.3	+6.3
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,35nm,4.1s						
ZAA0	Zalesovo Array	60.47	325	P	P	23 02 20.5	+0.1
ZAA0				IAmb	IAmb	23 02 22.4	
	comp=Z,3.5nm,0.9s						
ZALV	Zalesovo Beam	60.47	325	P	P	23 02 20.4	+0.1
	comp=Z,3.6nm,0.8s,baz=33,slow=6.2,SNR=16						
	comp=Z,3.6nm,0.8s						
ZALV	Zalesovo Beam	60.47	325	P	P	23 02 20.3	-0.1
NC405	NORSAR Array S	62.06	9	P	P	23 02 31.4	+0.4
NC405				IAmb	IAmb	23 02 42.1	
	comp=Z,5.1nm,1.2s						
NOA	NORSAR Array B	62.09	9	P	P	23 02 31.8	+0.5
	comp=Z,1.0nm,0.7s,baz=350,slow=6.7,SNR=6.0						
	comp=Z,1.0nm,0.7s						
FINES	FINESS Array B	62.40	1	P	P	23 02 34.5	+1.3
	comp=Z,2.5nm,0.8s,baz=347,slow=5.9,SNR=9.5						
	comp=Z,2.5nm,0.8s						
FINES	FINESS Array B	62.40	1	P	P	23 02 34.3	+1.0
HFS	Hagfors	63.19	8	P	P	23 02 38.9	+0.4
	comp=Z,2.6nm,0.6s,baz=42,slow=4.6,SNR=12						
	comp=Z,2.6nm,0.6s						
NJ2	Nanjing	63.36	288	*e*P	P	23 02 39.1	-1.0
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,370nm,5.2s						
ARTI	Arti	64.78	342	P	P	23 02 48.5	-0.6
ARTI				IAmb	IAmb	23 03 00.6	
	comp=Z,4.7nm,0.8s						
KURK	Kurchatov	65.19	327	P	P	23 02 51.5	-0.3
KURK				IAmb	IAmb	23 03 03.1	
	comp=Z,4.5nm,1.1s						
KURBB	Kurchatov Arra	65.29	327	P	P	23 02 52.2	-0.3
	comp=Z,1.6nm,0.8s,baz=28,slow=6.1,SNR=11						
	comp=Z,1.6nm,0.8s						
BORK	Borovoye	65.38	333	P	P	23 02 53.0	-0.1
BORK				IAmb	IAmb	23 02 54.2	
	comp=Z,3.4nm,0.8s						
BVAR	Borovoye Array	65.38	333	P	P	23 02 52.0	-1.0
	comp=Z,4.0nm,0.7s,baz=51,slow=12,SNR=20						
	comp=Z,4.0nm,0.7s						
EKA	Eskdalemuir Ar	65.73	19	P	P	23 02 56.1	+0.8
	comp=Z,4.1nm,1.1s,baz=330,slow=5.2,SNR=5.0						
	comp=Z,4.1nm,1.1s						
MK31	Makanchi Array	67.45	323	P	P	23 03 06.1	-0.3
MK31				IAmb	IAmb	23 03 16.9	
	comp=Z,4.4nm,1.1s						
MKAR	Makanchi Array	67.45	323	P	P	23 03 06.0	-0.5
	comp=Z,2.1nm,0.9s,baz=33,slow=6.6,SNR=11						
	comp=Z,2.1nm,0.9s						
MKAR	Makanchi Array	67.45	323	P	P	23 03 06.1	-0.3
MAKZ	Makanchi	67.55	323	P	P	23 03 06.4	-0.6
MAKZ				IAmb	IAmb	23 03 16.6	
	comp=Z,7.3nm,1.1s						
WMQ	Urumqi	68.10	318	*e*P	P	23 03 19.4	+8.8
WMQ				pP	sP	23 03 23.3	+5.1
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
WMQ				LR	LR		
	comp=N,2μm,14.5s						
WMQ				LR	LR		
	comp=E,2μm,15.7s						
WMQ				LR	LR		
	comp=Z,920nm,18.7s						
AB31	Akbulak array	71.28	338	P	P	23 03 29.6	-0.4
AB31				IAmb	IAmb	23 03 37.8	
	comp=Z,5.7nm,1.4s						
ABKAR	Akbulak array	71.28	338	P	P	23 03 29.8	-0.2
AKASG	Malin Array Be	73.17	359	P	P	23 03 40.6	-0.7
	comp=Z,1.8nm,0.6s,baz=1.8,slow=5.6,SNR=6.5						
	comp=Z,1.8nm,0.6s						
AKASG	Malin Array Be	73.17	359	IAmb	IAmb	23 03 50.9	
	comp=Z,5.5nm,1.4s						
GERES	GERESS Array B	74.38	10	P	P	23 03 48.7	+0.2
	comp=Z,0.3nm,0.6s,baz=0.0,slow=5.3,SNR=4.8						
	comp=Z,0.3nm,0.6s						
PZH	PanZhiHua	76.58	298	P	P	23 04 08.3	+6.8
PZH				pmax	pmax		
	comp=Z,10.0nm,1.6s						
LSA	Lhasa	78.81	308	P	P	23 04 17.6	+3.2
LSA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CHGR	Chuyangaron	78.94	328	P	P	23 04 14.4	0.0
ESDC	Sonseca Array	80.50	24	P	P	23 04 24.0	+1.1
	comp=Z,1.0nm,0.7s,baz=341,slow=5.6,SNR=4.5						
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	84.02	355	P	P	23 04 42.1	+0.7
	comp=Z,0.8nm,0.9s,baz=350,slow=4.1,SNR=4.9						
	comp=Z,0.8nm,0.9s						
BRTR	Keskin Array B	84.02	355	P	P	23 04 41.7	+0.2
CMAR	Chiang Mai Arr	84.72	296	P	P	23 04 46.1	+1.0
	comp=Z,1.2nm,0.3s,baz=6.7,slow=6.7,SNR=5.2						
	comp=Z,1.2nm,0.3s						
CMAR	Chiang Mai Arr	84.72	296	P	P	23 04 44.6	-0.5
BNN	Bunyan	84.78	354	P	P	23 04 45.7	+0.4
BNN				IAmb	IAmb	23 04 55.0	
	comp=Z,3.5nm,0.8s						
MARD	Mardin	85.91	350	P	P	23 04 51.7	+0.8
QSPA	South Pole Qui	146.28	180	PKPbc	PKPbc	23 11 50.0	-0.1
	comp=Z,3.8nm,0.7s,baz=68,slow=1.2,SNR=14						

IDC ***21*** *22:52:34.4±0.5, 56°.61N×152°.43W, h0^{km}, mb4.8/33, mbtmp4.8/35, ML4.1/2, MS4.5/4, Error ellipse: s-maj=14.1km s-min=10.6km az=28.0*

BJI ***21*** *22:52:34.6, 56°.78N×152°.58W, h13^{km}, mB5.4/29, mb4.9/60, Ms5.5/58, Ms7 5.3/56*

AEIC ***21*** *22:52:36.9±3.3, 56°.35N±0°.07×152°.19W±0°.10, h2^{km}±4^{km}, Error ellipse: s-maj=9.6km s-min=7.7km az=163.0*

NEIC ***21*** *22:52:36.1±1.9, 56°.58N±0°.03×152°.32W±0°.06, h10^{km}±1^{km}, mb5.2/164, ML4.7/56, Mww5.0/55, ML4.7(AEIC), Error ellipse: s-maj=7.4km s-min=2.8km az=129.0*

NEIC ***21*** *22:52:37.2, 56°.63N×152°.34W, h26^{km}*

NEIC ***21*** *22:52:37.2, 56°.33N×151°.97W, h26^{km}, Moment Tensor Solution. Duration: 1^{s}6 Moment tensor: Scale 10^{16}Nm; M_{rr}2.11; $M_{\theta\theta}$-1.33; $M_{\phi\phi}$-0.78; $M_{r\theta}$2.39; $M_{\theta\phi}$-0.47; $M_{\phi r}$2.53; Fault plane solution: $M_0$3.97000×10^{16} NP1: ϕ_s242.89000°, δ14.45000°, λ106.78000°. NP2: ϕ_s45.59000°, δ76.17000°, λ85.74000°. Principal axes: T 4.2311, Plg59.0000°, Azm310.0000°; N -0.5851, Plg4.0000°, Azm47.0000°; P -3.6460, Plg31.0000°, Azm139.0000°;*

GFZ ***21*** *22:52:37.1, 56°.67N×152°.50W, h10^{km}, MW5.2, Moment Tensor Solution. s98 Moment tensor: M_{rr}-0.63; $M_{\theta\theta}$0.05; $M_{\phi\phi}$0.57; $M_{r\theta}$7.56; $M_{\theta\phi}$-1.93; $M_{\phi r}$3.42; Fault plane solution: NP1:ϕ_s68.00000°, δ89.00000°, λ98.00000°. NP2:ϕ_s164.00000°, δ8.00000°, λ6.00000°. Principal axes: T 7.4400, Plg45.0000°, Azm347.0000°; N 1.8900, Plg8.0000°, Azm248.0000°; P -9.3300, Plg44.0000°, Azm150.0000°;*

BGR ***21*** *22:52:37.3, 56°.46N×159°.20W, h29^{km}±2^{km}, mb4.9*

GCMT ***21*** *22:52:38.1±0.2, 56°.04N±0°.02×151°.69W±0°.03, h30^{km}±1^{km}, MW5.1/94, Moment Tensor Solution. s66,c97; s94,c148; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.16±.15; $M_{\theta\theta}$-2.84±.12; $M_{\phi\phi}$-0.32±.11; $M_{r\theta}$3.30±.22; $M_{\theta\phi}$-1.97±.08; $M_{\phi r}$1.71±.17; Best double couple: $M_0$5.13300×10^{16} NP1:ϕ_s240.00000°, δ22.00000°, λ88.00000°. NP2: ϕ_s62.00000°, δ68.00000°, λ91.00000°. Principal axes: T 4.7540, Plg67.0000°, Azm334.0000°; N 0.7560, Plg1.0000°, Azm242.0000°; P -5.5110, Plg23.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***21*** *22:52:38.8±0.9, 56°.68N×152°.35W, h39^{km}, mb5.3/88, MS4.8/9 Error ellipse: s-maj=9.7km s-min=4.1km az=97.4*

ISC 21 22:52:38.1±0.5**, 56°.49N**±0°.04×**152°.27W**±0°.03**, h29**^{km}±2^{km}**, h28**^{km}**:pP-P, n602,** σ1^{s}**59**/676**, mb5.1**/230**, MS5.1**/38**, 62C-47D, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHAK	Old Harbor	0.93	323	Pg	Pn	22 52 52.0	-3.1
KDAK	Kodiak Island	1.31	353	Pg	Pn	22 52 58.9	-1.5
	102nm,0.3s,baz=286,slow=4.3,SNR=6.1						
KDAK				Lg	Lg	22 53 08.6	
	452nm,0.3s,baz=175,slow=8.7,SNR=15						
KDAK	Kodiak Island	1.31	353		Pn	22 52 59.6	-0.8
CHIR	Chirikof Islan	1.99	252	Pn	Pn	22 53 08.1	-1.6
CHIR				IAML		22 54 18.1	
	comp=N,4μm,2.2s						
CHIR				IAML		22 54 22.8	
	comp=E,4μm,2.4s						
SYI	Shuyak Island	2.13	358	Pn	Pn	22 53 10.5	-1.2
KAWH	Katmai	2.34	325		Pb	22 53 18.1	-1.5
KAWH					Sb	22 53 51.5	+3.5
KAHG	Katmai Hook Gl	2.36	330		Pb	22 53 18.1	-1.8
KAHG					Sb	22 53 52.0	+3.5
KAKN	Katmai Knife C	2.36	321		Pn	22 53 14.8	-0.1
KAKN					Pb	22 53 18.2	-1.7
KABU	Katmai Buttres	2.42	319		Pb	22 53 18.7	-2.2
KABU					Sb	22 53 53.5	+3.2
PLK3	Peulik 3	2.49	301		Sb	22 53 54.1	+1.8
PLK2	Peulik 2	2.55	302		Pn	22 53 19.9	+2.4
KAHC	Katmai Hardscr	2.62	327		Pb	22 53 21.9	-2.4
CNPM	China Poot	3.10	10	Pn	Pn	22 53 24.1	-0.9
HOM	Homer	3.20	6	Pn	Pn	22 53 25.6	-0.8
P19K	Oil Pt	3.22	351	Pn	Pn	22 53 26.1	-0.5
P19K				IAML		22 54 45.7	
	comp=N,2μm,1.3s						
P18K	Big Mountain,	3.31	333	Pn	Pn	22 53 27.5	-0.5
ILSW	Iliamna Southw	3.54	353	Pn	Pn	22 53 30.3	-0.8
ILSW				IAML		22 55 09.6	
	comp=N,1μm,2.0s						
ILSW				IAML		22 55 20.9	
	comp=E,2μm,2.1s						
O18K	Koktuh Hills	3.72	337	Pn	Pn	22 53 32.6	-0.9
O18K				IAML		22 55 01.0	
	comp=N,1μm,2.7s						
O18K				IAML		22 55 02.5	
	comp=E,1μm,1.8s						
O19K	Port Alsworth	3.87	345	Pn	Pn	22 53 35.2	-0.4
O19K				IAML		22 55 00.9	
	comp=E,2μm,0.5s						
SEW	Seward	3.92	21	Pn	Pn	22 53 34.1	-2.2
SEW				IAML		22 55 38.4	
	comp=E,866nm,3.2s						
RED	Redoubt Volcan	3.95	356	Pn	Pn	22 53 35.8	-1.0
RED				IAML		22 55 36.4	
	comp=N,1μm,2.0s						
RDWB	Redoubt West	4.03	356		Pn	22 53 34.9	-3.0
O22K	Cooper Landing	4.22	17	Pn	Pn	22 53 38.5	-1.9
MID	Middleton Isla	4.32	45	Pn	Pn	22 53 40.2	-1.5
MID				IAML		22 56 13.3	
	comp=E,598nm,4.5s						
P23K	Montague Islan	4.36	34	Pn	Pn	22 53 39.6	-2.7
P23K				IAML		22 56 12.0	
	comp=N,929nm,2.3s						
P23K				IAML		22 56 20.2	
	comp=E,902nm,4.9s						
CNBA	Chernabura Isl	4.47	251	Pn	Pn	22 53 43.1	-0.6
CNBA				IAML		22 55 56.1	
	comp=N,612nm,2.0s						
CNBA				IAML		22 55 58.3	
	comp=E,917nm,2.3s						
N19K	Bonanza Creek	4.49	346	Pn	Pn	22 53 43.1	-1.1
N19K				IAML		22 55 24.7	
	comp=E,980nm,4.4s						
N19K				IAML		22 55 37.6	
	comp=N,587nm,2.8s						
N18K	Kilae Creek	4.61	337	Pn	Pn	22 53 43.8	-2.0
N18K				IAML		22 55 33.7	
	comp=E,850nm,3.9s						
N18K				IAML		22 55 37.1	
	comp=N,641nm,2.5s						
SPU	Mount Spurr	4.71	1	Pn	Pn	22 53 46.4	-0.8
RC01	Rabbit Creek A	4.80	15	Pn	Pn	22 53 46.3	-2.1
RC01				IAML		22 54 22.5	
	comp=N,625nm,1.4s						
PWL	Port Wells	4.84	23	Pn	Pn	22 53 46.8	-2.2
PWL				IAML		22 54 45.8	
	comp=E,591nm,0.6s						
HIN	Hinchinbrook I	4.96	35	Pn	Pn	22 53 48.3	-2.2
HIN				IAML		22 54 50.4	
	comp=N,729nm,1.2s						
HIN				IAML		22 56 11.0	
	comp=E,525nm,1.4s						
STLK	Strandline Lak	5.03	2	Pn	Pn	22 53 50.8	-0.8
STLK				IAML		22 55 51.0	
	comp=E,377nm,2.2s						
SUA	Susitna One	5.05	8	Pn	Pn	22 53 50.1	-1.9
FID	Port Fidalgo	5.24	33	Pn	Pn	22 53 51.3	-3.1
FID				IAML		22 54 49.7	
	comp=E,461nm,0.9s						
FID				IAML		22 54 53.7	
	comp=N,367nm,0.9s						
N16K	Nishlik Lake	5.25	322		Pn	22 53 54.3	-0.3

EYAK	Cordova Ski Ar	5.32	37	Pn	Pn	22 53 53.5	-1.9
EYAK				IAML		22 54 57.1	
	comp=N,298nm,1.0s						
EYAK				IAML		22 54 59.2	
	comp=E,363nm,1.1s						
M18K	Stony River	5.34	341		Pn	22 53 54.4	-1.4
KAIM	Kayak Island	5.40	47	Pn	Pn	22 53 55.4	-1.2
M22K	Willow	5.40	11	Pn	Pn	22 53 55.5	-1.0
S12K	Black Hills	5.54	266	Pn	Pn	22 53 58.0	-0.5
GHO	Glory Hole Cre	5.58	17	Pn	Pn	22 53 58.0	-1.1
RAGM	Ragged Mountai	5.59	42	Pn	Pn	22 53 57.6	-1.6
M17K	Holitna River	5.61	334	Pn	Pn	22 53 59.0	-0.4
GOAT	Goat Mountain	5.70	41		Pn	22 53 58.4	-2.4
SML	Sawmill	5.71	19		Pn	22 53 59.0	-1.9
M16K	Timber Creek	5.72	325		Pn	22 54 00.9	-0.1
DIV	Divide	5.75	33	Pn	Pn	22 54 00.1	-1.4
L19K	White Mountain	5.86	348	Pn	Pn	22 54 01.2	-1.7
SCM	Sheep Creek Mo	5.93	23	Pn	Pn	22 54 02.2	-1.8
SCM	Sheep Creek Mo	5.93	23	P	Pn	22 54 02.2	-1.8
BERG	Berg Lake	5.96	45	Pn	Pn	22 54 02.5	-1.9
KLU	Klutina	6.00	31	Pn	Pn	22 54 02.9	-1.9
BMRM	Bremner River	6.01	38	Pn	Pn	22 54 02.9	-2.1
L22K	Petersville	6.11	7		Pn	22 54 04.3	-2.1
SNH	Sunshine Point	6.20	49	Pn	Pn	22 54 05.8	-1.7
CRQM	Cirque	6.41	44	Pn	Pn	22 54 08.9	-1.7
L16K	Owhat River	6.42	328		Pn	22 54 10.2	-0.3
M24K	Tolsona, Glenn	6.44	26	Pn	Pn	22 54 09.7	-1.3
BARK	Barkley Ridge	6.46	49		Pn	22 54 07.7	-3.5
TGL	Tana Glacier	6.53	45	Pn	Pn	22 54 10.6	-1.6
WAT7	Susitna Watana	6.60	14		Pn	22 54 12.6	-0.5
GLB	Gilahina Butte	6.62	38		Pn	22 54 11.1	-2.2
YAH	Yahtse	6.76	51	Pn	Pn	22 54 14.0	-1.4
KIAG	Kiagna River	6.81	45		Pn	22 54 14.9	-1.2
MCARA	McCarthy VSAT	6.85	40	Pn	Pn	22 54 15.0	-1.5
WACK	Wrangell Chich	6.85	33		Pn	22 54 15.1	-1.6
WASW	Wrangell South	6.86	34		Pn	22 54 15.4	-1.4
BALM	Baldy	6.89	44		Pn	22 54 15.9	-1.2
PCA	Pinnacle	7.29	55		Pn	22 54 20.8	-1.8
BCPM	Bancas Point	7.52	57	Pn	Pn	22 54 24.1	-1.6
M27K	Edge Creek, AK	7.92	38	Pn	Pn	22 54 30.6	-0.6
BCAR	Beaver Creek A	8.45	34		Pn	22 54 36.8	-1.6
COLA	College	8.69	13	*de*P	Pn	22 54 40.2	-1.4
ILAR	Eielson Array	8.72	15	Pn	Pn	22 54 41.6	-0.5
	comp=E,7.6nm,0.3s,baz=205,slow=14,SNR=26						
ILAR				Sn	Sn	22 56 13.2	-6.0
	comp=E,2.1nm,0.3s,baz=192,slow=27,SNR=4.7						
ILAR	Eielson Array	8.72	15		Pn	22 54 41.1	-1.0
ILAR	Eielson Array	8.72	15	P	Pn	22 54 41.1	-1.0
S31K	Pelican	8.83	74	Pn	Pn	22 54 41.3	-2.2
SIT	Sitka	9.32	79		Pn	22 54 48.1	-2.2
SIT	Sitka	9.32	79	P	Pn	22 54 48.1	-2.2
S32K	Killisnoo	9.71	77		Pn	22 54 55.1	-0.6
L29M	L29M	9.72	41	Pn	Pn	22 54 55.0	-0.9
U33K	Whale Pass	10.65	84		Pn	22 55 07.2	-1.3
CRAG	Craig	10.78	87		Pn	22 55 10.3	+0.1
S34M	Telegraph Cree	11.55	74		Pn	22 55 20.2	-0.5
R33M	Jennings River	11.68	67	Pn	Pn	22 55 23.1	+0.4
MOBC	Moresby Island	12.17	97		Pn	22 55 28.7	-0.6
D23K	Nanushuk River	12.55	3	Pn	Pn	22 55 32.7	-1.6
RDOG	Red Dog Mine	12.59	341		Pn	22 55 34.8	-0.2
C18K	Utukok River	12.86	345	Pn	Pn	22 55 38.5	-0.2
C23K	Itkillik River	13.42	2	Pn	Pn	22 55 44.8	-1.4
C27K	Jago River	13.72	13	Pn	Pn	22 55 50.6	+0.2
INK	Inuvik	14.60	28	Pn	Pn	22 56 02.8	+0.4
	comp=E,0.7nm,0.3s,baz=218,slow=12,SNR=8.4						
	comp=E,17nm,0.9s						
KIWB	Kanaga Island	15.25	263	Pn	Pn	22 56 12.7	+1.6
KIWB				IAmb	IAmb	22 56 15.6	
	comp=Z,161nm,1.6s						
HOLB	Holberg	15.45	102		Pn	22 56 14.6	+0.8
HOLB				IAmb	IAmb	22 56 22.0	
	comp=Z,217nm,1.1s						
C36M	Paulatuk	17.95	33		Pn	22 56 44.6	-0.4
LLLB	Lillooet	18.89	95		P	22 56 56.3	+0.3
A36M	Sachs Harbour	19.18	25	P	P	22 56 59.1	+0.1
A36M				IAmb	IAmb	22 57 01.3	
	comp=Z,118nm,0.8s						
NLWA	Neilton Lookou	19.61	106	P	Pn	22 57 06.3	+0.9
YKA	Yellowknife Ar	19.82	57	P	P	22 57 06.3	+0.3
	comp=Z,0.6nm,0.3s,baz=272,slow=12,SNR=17						
YKA				PcP	PcP	23 01 22.9	+0.4
	comp=Z,2.6nm,1.0s,baz=268,slow=2.7,SNR=4.7						
	comp=Z,13nm,0.8s						
YKA	Yellowknife Ar	19.82	57	P	P	22 57 06.6	+0.6
BILL	Bilibino	21.98	318	P	P	22 57 28.8	-0.5
BILL				IAmb	IAmb	22 57 30.4	
	comp=Z,57nm,0.8s						
BILL	Bilibino	21.98	318	*c i*P	P	22 57 28.8	-0.5
BILL				pmax	pmax		
	comp=Z,73nm,0.9s						
HAWA	Hanford	22.56	103	P	P	22 57 36.2	+0.5
NEW	Newport	22.77	96	P	P	22 57 39.7	+1.8
NEW	Newport	22.77	96	P	P	22 57 39.7	+1.8
NEW				pmax	pmax		
	comp=Z,36nm,1.1s						
K04D	Chiloquin, OR	23.92	112	P	P	22 57 51.3	+1.9
K04D				IAmb	IAmb	22 57 53.5	
	comp=Z,68nm,0.8s						
JTMT	Jette	24.63	95	P	P	22 57 57.9	+2.0
BMO	Blue Mountains	24.75	103	P	P	22 57 58.7	+1.7
BMO	Blue Mountains	24.75	103	P	P	22 57 58.7	+1.7
BMO				pmax	pmax		
	comp=Z,28nm,1.4s						
J08A	Circle Bar Ran	25.12	107	P	P	22 58 02.8	+2.5
MNRC	McLaughlin Min	26.40	119	P	P	22 58 14.1	+2.2
MNRC				IAmb	IAmb	22 58 24.9	
	comp=Z,75nm,1.2s						
HLID	Hailey	27.16	102	P	P	22 58 20.6	+1.8
MCMT	McKenzie Canyo	27.19	99	P	P	22 58 20.6	+1.4
SEY	Seymchan	27.85	306	⇑*i*P	P	22 58 22.6	-2.0
SEY				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BLKN	Baker Lake	27.98	51	P	P	22 58 25.4	-0.3
PET	Petropavlovsk	28.04	284	P	P	22 58 26.9	+0.4
PET	Petropavlovsk	28.04	284	*e*P	P	22 58 23.2	-3.2
PET				*e*S	S	23 03 03.8	-5.1
PET				pmax	pmax		
	comp=Z,40nm,1.3s						
PET				pmax	pmax		
	comp=Z,300nm,13.4s						
PET				MLR	MLR		
	comp=Z,1µm,16.0s						
PET				MLR	MLR		
	comp=Z,2µm,15.0s						
PEA0B	Petropavlovsk-	28.52	285	⇑*i*P	P	22 58 32.4	+1.7
PETK	Petropavlovsk-	28.52	285	P	P	22 58 29.2	-1.5
	comp=Z,5.9nm,0.7s,baz=71,slow=12,SNR=9.1						
	comp=Z,5.9nm,0.7s						
PETK	Petropavlovsk-	28.52	285	P	P	22 58 29.6	-1.1
ELK	Elko	28.67	107	P	P	22 58 34.3	+1.9
ELK	Elko	28.67	107	P	P	22 58 34.3	+1.9
ELK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
H17A	Grant Village	28.71	97	P	P	22 58 35.3	+2.5
NVAR	Mina Array Bea	28.80	114	P	P	22 58 35.5	+1.9
	comp=Z,9.6nm,0.9s,baz=303,slow=8.2,SNR=21						
NVAR				PcP	PcP	23 01 44.2	+1.5
	comp=Z,2.8nm,0.8s,baz=349,slow=4.3,SNR=4.9						
	comp=Z,9.6nm,0.9s						
NVAR	Mina Array Bea	28.80	114	P	P	22 58 35.7	+2.1
NV11	Mina Array Sit	28.87	114	P	P	22 58 36.7	+2.5
LOHW	Long Hollow	29.21	98	P	P	22 58 39.5	+2.3
MA2	Magadan	29.52	300	LR	LR	23 11 11.3	
	comp=Z,1µm,21.0s,baz=84,slow=38						
MA2	Magadan	29.52	300	P	P	22 58 40.6	+1.0
MA2	Magadan	29.52	300	⇓*e*P	P	22 58 39.8	+0.3
MA2				pmax	pmax		
	comp=Z,12nm,0.7s						
PD31	Pinedale Array	30.34	99	P	P	22 58 47.5	+0.3
PDAR	Pinedale Array	30.34	99	P	P	22 58 48.8	+1.6
	comp=Z,5.5nm,0.8s,baz=315,slow=5.3,SNR=21						
	comp=Z,5.5nm,0.8s						
PDAR	Pinedale Array	30.34	99	P	P	22 58 47.7	+0.5
TPNV	Topopah Spring	30.97	114	P	P	22 58 54.7	+1.9
TPNV				IAmb	IAmb	22 58 57.4	
	comp=Z,37nm,1.3s						
TPNV	Topopah Spring	30.97	114	P	P	22 58 54.7	+1.9
TPNV				pmax	pmax		
	comp=Z,37nm,1.3s						
GWY	Greenwater Val	31.36	115	P	P	22 58 58.2	+2.1
GWY				IAmb	IAmb	22 59 00.5	
	comp=Z,93nm,1.9s						
ILON	Igloolik, Nuna	32.45	38	P	P	22 59 05.3	+0.1
ILON				IAmb	IAmb	22 59 14.2	
	comp=Z,37nm,1.2s						
RSSD	Black Hills	32.51	92	P	P	22 59 07.3	+1.1
RSSD	Black Hills	32.51	92	P	P	22 59 07.3	+1.1
RSSD				pmax	pmax		
	comp=Z,21nm,1.1s						
HMU	Henry Mountain	33.10	106	P	P	22 59 13.2	+1.7
HMU				IAmb	IAmb	22 59 15.7	
	comp=Z,26nm,0.9s						
HAYD	Hayden	33.13	99	P	P	22 59 13.5	+1.8
ULM	Lac du Bonnet	33.38	76	P	P	22 59 13.9	+0.4
	comp=Z,16nm,0.9s,baz=297,slow=9.6,SNR=14						
	comp=Z,16nm,0.9s						
ULM	Lac du Bonnet	33.38	76	P	P	22 59 14.8	+1.2
ULM				IAmb	IAmb	22 59 23.2	
	comp=Z,43nm,1.2s						
ULM	Lac du Bonnet	33.38	76	⇑*e*P	P	22 59 14.3	+0.8
PFO	Pinyon Flats O	33.51	118	P	P	22 59 16.9	+1.9
PFO				IAmb	IAmb	22 59 18.9	
	comp=Z,41nm,1.5s						
PFO	Pinyon Flats O	33.51	118	⇓*e*P	P	22 59 16.9	+1.9
PFO				pmax	pmax		
	comp=Z,51nm,1.5s						
CPE	Camp Elliot	33.78	119	P	P	22 59 18.5	+1.3
CPE				IAmb	IAmb	22 59 21.6	
	comp=Z,23nm,0.9s						
BLYC	Blythe	34.35	115	P	P	22 59 23.9	+1.7
WUAZ	Wupatki	34.59	110	P	P	22 59 26.0	+1.7
TIXI	Tiksi	34.60	327	P	P	22 59 23.6	-0.3
TIXI				IAmb	IAmb	22 59 36.7	
	comp=Z,34nm,1.5s						
TIXI	Tiksi	34.60	327	*ce*P	P	22 59 25.1	+1.3
TIXI				pmax	pmax		
	comp=Z,17nm,1.3s						
SDCO	Great Sand Dun	36.06	101	P	P	22 59 39.0	+1.8
PIX	Pinacate	36.65	116	P	P	22 59 44.1	+2.3
PIX				IAmb	IAmb	22 59 46.1	
	comp=Z,30nm,1.1s						
ECSD	EROS Data Cent	36.87	86	P	P	22 59 44.4	+0.8
EYMN	Ely	37.06	77	P	P	22 59 46.2	+0.9
EYMN				IAmb	IAmb	22 59 54.4	
	comp=Z,40nm,0.8s						
TUC	Tucson	37.40	113	P	P	22 59 49.5	+1.2
TUC	Tucson	37.40	113	P	P	22 59 49.5	+1.2
TUC				pmax	pmax		
	comp=Z,18nm,0.9s						
ANMO	Albuquerque	37.62	105	P	P	22 59 52.2	+1.9
ANMO	Albuquerque	37.62	105	⇑*e*P	P	22 59 53.2	+2.8
ANMO				pmax	pmax		
	comp=Z,9.0nm,1.5s						
SBM	South Baldy	37.98	107	P	P	22 59 54.8	+1.2
YAK	Yakutsk	38.01	311	P	P	22 59 52.0	-1.0
YAK	Yakutsk	38.01	311	*e*P	P	22 59 51.4	-1.6
YAK				*e*		23 01 17.3	
YAK				*e*		23 02 07.4	
YAK				*e*S	S	23 05 42.4	-0.6
YAK				*e**SS	sS	23 05 58.9	+2.0
YAK				*e*SS	SnSn	23 08 20.9	-5.1
YAK				*e*		23 10 04.6	
YAK				pmax	pmax		
	comp=Z,58nm,1.2s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,12nm,0.9s						
YAK				pmax	pmax		
	comp=N,132nm,3.0s						
YAK				pmax	pmax		
	comp=Z,171nm,3.5s						
YAK				pmax	pmax		
	comp=E,168nm,3.5s						
YAK				smax	smax		
	comp=E,200nm,5.2s						
YAK				smax	smax		
	comp=N,99nm,2.7s						
YAK				MLR	MLR		
	comp=Z,2µm,24.0s						
YAK				MLR	MLR		
	comp=N,1µm,23.0s						
YAK				MLR	MLR		
	comp=E,436nm,10.0s						
YSS	Yuzhno-Sakhali	39.92	285	*e*P	P	23 00 12.4	+3.2
YSS				*e*S	S	23 06 13.0	+0.8
YSS						23 09 35.0	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
YSS				MLR	MLR		
	comp=Z,2µm,16.0s						
YSS				MLR	MLR		
	comp=N,900nm,17.0s						
YSS				MLR	MLR		
	comp=E,600nm,15.0s						
AMTX	Amarillo	40.25	101	P	P	23 00 14.4	+2.1
N38A	Joes South For	40.70	87	P	P	23 00 16.8	+1.0
N38A				IAmb	IAmb	23 00 26.4	
	comp=Z,30nm,0.9s						
GRNR	Gornyy	40.92	293	⇑*i*P	P	23 00 16.4	-1.0
GRNR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,690nm,15.0s						
GRNR				MLR	MLR		
	comp=N,950nm,23.0s						
GRNR				MLR	MLR		
	comp=Z,960nm,16.0s						
JFWS	Jewell Farm	40.92	82	P	P	23 00 18.5	+1.0
JFWS				IAmb	IAmb	23 00 26.9	
	comp=Z,39nm,0.8s						
JFWS	Jewell Farm	40.92	82	P	P	23 00 18.5	+1.0
JFWS				pmax	pmax		
	comp=Z,39nm,0.8s						
WMOK	Wichita Mounta	41.95	98	P	P	23 00 27.2	+1.1
WMOK	Wichita Mounta	41.95	98	P	P	23 00 27.2	+1.1
WMOK				pmax	pmax		
	comp=Z,22nm,1.0s						
KUQ	Kuujjuuaa	42.56	51	P	P	23 00 30.4	-0.3
KUQ				IAmb	IAmb	23 00 33.5	
	comp=Z,79nm,1.6s						
HDIL	Hopedale	43.04	84	P	P	23 00 36.0	+1.1
SUMG	Summit	43.46	24	P	P	23 00 37.9	-0.4
SUMG				IAmb	IAmb	23 00 41.2	
	comp=Z,63nm,1.4s						
SUMG	Summit	43.46	24	P	P	23 00 37.9	-0.4
SUMG				pmax	pmax		
	comp=Z,63nm,1.4s						
TXAR	Lajitas Array	43.46	108	P	P	23 00 40.5	+2.0
	comp=Z,10nm,0.9s,baz=319,slow=5.6,SNR=33						
TXAR				PcP	PcP	23 02 27.1	+0.8
	comp=Z,0.8nm,0.7s,baz=327,slow=4.4,SNR=3.6						
	comp=Z,10nm,0.9s						
TXAR	Lajitas Array	43.46	108	P	P	23 00 39.9	+1.4
ZEA	Zeya	43.63	302	*e*P	P	23 00 39.4	-0.1
ZEA				*e*S	S	23 07 07.0	+0.2
ZEA				*e*SS	SS	23 10 27.2	+5.4
ZEA				pmax	pmax		
	comp=Z,200nm,4.8s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ZEA				smax	smax		
	comp=N,100nm,5.7s						
ZEA				MLR	MLR		
	comp=E,600nm,13.0s						
ZEA				MLR	MLR		
	comp=N,1µm,14.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,14.0s						
CCM	Cathedral Cave	43.71	88	P	P	23 00 41.1	+0.8
CCM	Cathedral Cave	43.71	88	P	P	23 00 41.1	+0.8
CCM				pmax	pmax		
	comp=Z,25nm,1.2s						
SFJD	Kangerlussuaq	43.86	34	P	P	23 00 40.9	-0.2
SFJD	Kangerlussuaq	43.86	34	P	P	23 00 40.9	-0.2
SFJD				pmax	pmax		
	comp=Z,128nm,1.8s						
HPIG		44.35	112	P	P	23 00 47.2	+1.5
KBS	Kingsbay	44.51	4	P	P	23 00 46.8	+0.6
KBS				IAmb	IAmb	23 00 49.2	
	comp=Z,18nm,0.8s						
KBS	Kingsbay	44.51	4	⇑*e*P	P	23 00 47.7	+1.5
KBS				pmax	pmax		
	comp=Z,23nm,0.9s						
JCT	Junction City	44.63	103	P	P	23 00 49.4	+1.6
JCT				IAmb	IAmb	23 00 51.2	
	comp=Z,38nm,1.0s						
JCT	Junction City	44.63	103	P	P	23 00 49.4	+1.6
JCT				pmax	pmax		
	comp=Z,38nm,1.0s						
FCAR	Ozark Folk Cen	44.78	91	P	P	23 00 49.2	+0.4
MIAR	Mount Ida	44.96	94	P	P	23 00 51.5	+1.2
MIAR				IAmb	IAmb	23 00 53.4	
	comp=Z,19nm,0.9s						
MIAR	Mount Ida	44.96	94	P	P	23 00 51.6	+1.2
MIAR				pmax	pmax		
	comp=Z,19nm,1.0s						
SCHQ	Schefferville	45.24	54	P	P	23 00 52.1	-0.2
	comp=Z,6.6nm,0.6s,baz=294,slow=8.9,SNR=9.1						
	comp=Z,6.6nm,0.6s						
SPITS	Spitsbergen Ar	45.41	3	P	P	23 00 52.9	-0.5
	comp=Z,12nm,0.6s,baz=22,slow=5.5,SNR=15						
	comp=Z,12nm,0.6s						
SPB2	Spitsbergen Ar	45.41	3	P	P	23 00 53.1	-0.4
SPB2				IAmb	IAmb	23 00 55.0	
	comp=Z,21nm,0.8s						
BLO	Bloomington	45.53	83	P	P	23 00 55.9	+1.1
BLO	Bloomington	45.53	83	P	P	23 00 55.9	+1.1
BLO				pmax	pmax		
	comp=Z,32nm,0.7s						
435B	Jarrell	45.60	101	P	P	23 00 56.8	+1.3
HEH	HeiHe	45.74	298	*e*P	P	23 00 54.9	-1.4
HEH				pP	pP	23 01 01.8	-3.1
HEH				PcP	PcP	23 02 34.6	+1.0
HEH				S	S	23 07 39.1	+1.6
HEH				ScS	ScS	23 10 51.8	+2.1
HEH				pmax	pmax		
	comp=Z,15nm,1.0s						
HEH				LR	LR		
	comp=Z,2µm,13.8s						
HEH				LR	LR		
	comp=Z,2µm,13.4s						
HEH				LR	LR		
	comp=Z,3µm,12.6s						
WCI	Wyandotte Cave	46.33	84	P	P	23 01 01.4	+0.3
WCI				IAmb	IAmb	23 01 11.6	
	comp=Z,42nm,1.3s						
WCI	Wyandotte Cave	46.33	84	P	P	23 01 01.4	+0.3
WCI				pmax	pmax		
	comp=Z,42nm,1.3s						
ACSO	Alum Creek Sta	46.73	80	P	P	23 01 04.5	+0.2
ACSO				IAmb	IAmb	23 01 13.3	
	comp=Z,31nm,1.1s						
HNVL	Huntsville, TX	46.78	99	P	P	23 01 06.3	+1.6
BOD	Bodaibo	46.88	313	*e*P	P	23 01 03.8	-1.3
BOD				pmax	pmax		
	comp=Z,42nm,1.6s						
ERPA	Erie	47.04	76	P	P	23 01 07.2	+0.5
HKT	Hockley	47.20	100	*ce*P	P	23 01 10.2	+2.3
HKT				pmax	pmax		
	comp=Z,31nm,1.4s						
NRIK	Noril'sk	47.24	335	P	P	23 01 07.5	-0.3
	comp=Z,20nm,0.8s,baz=51,slow=8.5,SNR=18						
	comp=Z,20nm,0.8s						
NRIK	Noril'sk	47.24	335	P	P	23 01 07.8	0.0
NRIK	Noril'sk	47.24	335	*c i*P	P	23 01 07.0	-0.8
NRIK				pmax	pmax		
	comp=Z,29nm,1.0s						
OXF	Oxford	47.30	90	P	P	23 01 09.9	+1.2
OXF	Oxford	47.30	90	P	P	23 01 09.9	+1.2
OXF				pmax	pmax		
	comp=Z,87nm,1.3s						
USRK	Ussuriysk Ar.	47.44	289	P	P	23 01 09.8	+0.1
	comp=Z,5.5nm,0.7s,baz=60,slow=8.1,SNR=4.6						
	comp=Z,5.5nm,0.7s						
H11N2	WAKE ISLAND Hy	47.58	237	T	T	23 52 28.7	
	baz=30						
H11N3	WAKE ISLAND Hy	47.58	237	T	T	23 52 28.6	
	baz=30						
H11N1	WAKE ISLAND Hy	47.59	237	T	T	23 52 30.3	
	baz=30						
CLTN	Cedars of Leba	47.84	86	P	P	23 01 14.7	+1.7
P53A	Whipple	48.12	79	P	P	23 01 16.3	+1.3
P53A				IAmb	IAmb	23 01 23.7	
	comp=Z,26nm,0.9s						
H11S1	WAKE ISLAND Hy	48.73	236	T	T	23 53 49.2	
	baz=29,slow=76,SNR=25						
H11S2	WAKE ISLAND Hy	48.74	236	T	T	23 53 47.3	
	baz=29,slow=76,SNR=26						
H11S3	WAKE ISLAND Hy	48.74	236	T	T	23 53 47.6	
	baz=29,slow=76,SNR=19						
BNX	BinXian	48.76	293	⇓P	P	23 01 19.4	-0.5
BNX				pP	pP	23 01 26.0	-2.5
BNX				sP	sP	23 01 27.9	-4.0
BNX				PP	PP	23 03 12.6	-0.2
BNX				S	S	23 08 23.6	+3.0
BNX				sS	sS	23 08 33.4	-1.4
BNX				pmax	pmax		
	comp=Z,21nm,1.3s						
BNX				LR	LR		
	comp=Z,2µm,22.2s						
BNX				LR	LR		
	comp=Z,1µm,21.1s						
BNX				LR	LR		
	comp=Z,1µm,15.2s						
M57A	Sunshine Farm,	49.11	74	P	P	23 01 23.9	+1.2
M57A				IAmb	IAmb	23 01 31.4	
	comp=Z,31nm,1.0s						
BINY	Binghamton	49.12	73	P	P	23 01 23.4	+0.7
BINY				IAmb	IAmb	23 01 34.5	
	comp=Z,32nm,1.0s						
SSPA	Standing Stone	49.20	76	P	P	23 01 25.0	+1.6
SSPA				IAmb	IAmb	23 01 32.5	
	comp=Z,38nm,1.0s						
MJAR	Matsushiro Arr	49.49	277	P	P	23 01 26.4	+0.8
	comp=Z,3.7nm,0.7s,baz=41,slow=6.2,SNR=10						
	comp=Z,3.7nm,0.7s						
MJAR	Matsushiro Arr	49.49	277	P	P	23 01 26.4	+0.8
MJAR				IAmb	IAmb	23 01 35.5	
	comp=Z,34nm,1.6s						
MJB9	Matsu-Tunnel	49.49	277	P	P	23 01 26.9	+1.3
MJB9				IAmb	IAmb	23 01 30.5	
	comp=Z,24nm,1.1s						
MAJO	Matsushiro	49.49	277	P	P	23 01 26.5	+0.9
MAJO				IAmb	IAmb	23 01 29.5	
	comp=Z,24nm,1.1s						
MAJO	Matsushiro	49.49	277	⇓*e*P	P	23 01 26.5	+0.9
MAJO				pmax	pmax		
	comp=Z,15nm,1.0s						
L59A	Walton	49.62	72	P	P	23 01 27.2	+0.6
L59A				IAmb	IAmb	23 01 35.5	
	comp=Z,21nm,0.9s						
HILR	Hailar Array B	49.90	302	P	P	23 01 27.9	-0.7
	comp=Z,14nm,0.8s,baz=74,slow=11,SNR=8.8						
	comp=Z,14nm,0.8s						
HIA	Hailar	50.10	301	P	P	23 01 30.6	+0.5
HIA	Hailar	50.10	301	*de*P	P	23 01 31.1	+1.0
HIA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PAGS	Pennsylvania G	50.12	75	P	P	23 01 30.9	+0.6
F64A	Sherman	50.49	64	P	P	23 01 32.2	-0.8
BATG	Bathurst New B	50.63	62	P	P	23 01 34.9	+0.8
BATG				IAmb	IAmb	23 01 44.0	
	comp=Z,36nm,1.1s						
JGF	Kuroka	50.65	277	P	P	23 01 34.8	+0.4
KSCT	Kent School, K	50.77	71	P	P	23 01 35.9	+0.6
KSCT				IAmb	IAmb	23 01 46.0	
	comp=Z,18nm,0.9s						
BRNJ	Basking Ridge	50.94	73	P	P	23 01 37.0	+0.5
BRNJ				IAmb	IAmb	23 01 45.3	
	comp=Z,19nm,0.8s						
CIT	Chita	51.01	308	*e*P	P	23 01 37.2	+0.2
CIT				*e*		23 01 45.2	
CIT				*e*		23 03 00.6	
CIT				pmax	pmax		
	comp=Z,124nm,1.9s						
CN2	Changchun	51.11	293	⇑P	P	23 01 37.1	-0.6
CN2				*e*sP	pP	23 01 44.0	-2.4
CN2				*e*S	S	23 08 51.1	-2.3
CN2				pmax	pmax		
	comp=Z,30nm,0.7s						
CN2				pmax	pmax		
	comp=Z,300nm,5.0s						
CN2				LR	LR		
	comp=Z,600nm,13.0s						
CN2				LR	LR		
	comp=Z,500nm,13.0s						
CN2				LR	LR		
	comp=Z,600nm,13.0s						
KMSC	Kings Mountain	51.30	83	P	P	23 01 40.6	+1.3
KMSC				IAmb	IAmb	23 01 42.2	
	comp=Z,26nm,1.1s						
WES	Weston	51.43	69	P	P	23 01 41.5	+1.3
WES				IAmb	IAmb	23 01 43.2	

	comp=Z,26nm,1.1s						
WES	**Weston**	**51.43**	**69**	P	**P**	**23 01 41.5**	**+1.3**
WES				pmax	pmax		
	comp=Z,26nm,1.1s						
EMMW	**East Machias**	**51.75**	**65**	P	**P**	**23 01 42.8**	**+0.3**
EMMW				IAmb	IAmb	23 03 09.1	
	comp=Z,61nm,1.7s						
T59A	**Double "B" Far**	**52.02**	**79**	P	**P**	**23 01 45.0**	**+0.3**
T59A				IAmb	IAmb	23 01 56.0	
	comp=Z,68nm,1.8s						
JRQG	**Juriquilla Cam**	**52.16**	**111**	P	**P**	**23 01 47.1**	**+0.9**
LMN	**Caledonia Moun**	**52.25**	**62**	P	**P**	**23 01 45.5**	**-0.8**
KEV	**Kevo**	**54.06**	**0**	P	**P**	**23 01 58.4**	**-0.8**
KEV				IAmb	IAmb	23 02 00.7	
	comp=Z,21nm,0.8s						
KEV	**Kevo**	**54.06**	**0**	P	**P**	**23 01 58.4**	**-0.8**
KEV				pmax	pmax		
	comp=Z,21nm,0.8s						
ARCES	**ARCESS Array B**	**54.27**	**1**	P	**P**	**23 02 00.3**	**-0.5**
	comp=Z,5.8nm,0.6s,baz=353,slow=6.1,SNR=3.6						
ARCES				PcP	**PcP**	**23 03 02.7**	**-1.9**
	comp=Z,5.8nm,0.9s,baz=29,slow=2.8,SNR=4.1						
	comp=Z,5.8nm,0.6s						
ARCES	**ARCESS Array B**	**54.27**	**1**	P	**P**	**23 02 00.1**	**-0.7**
ARCES				IAmb	IAmb	23 02 09.1	
	comp=Z,19nm,1.1s						
ARCES	**ARCESS Array B**	**54.27**	**1**	P	**P**	**23 02 00.1**	**-0.7**
ARCES				pmax	pmax		
	comp=Z,19nm,1.2s						
KSRS	**Korea Array**	**54.41**	**286**	P	**P**	**23 02 02.2**	**0.0**
	comp=Z,5.8nm,1.0s,baz=48,slow=6.9,SNR=9.2						
	comp=Z,5.8nm,1.0s						
KSAR	**Wonju Array Be**	**54.44**	**286**	P	**P**	**23 02 02.4**	**0.0**
KSAR	**Wonju Array Be**	**54.44**	**286**	P	**P**	**23 02 02.4**	**0.0**
IRK	**Irkutsk**	**54.77**	**313**	*e*P	**P**	**23 02 04.4**	**-0.3**
IRK				pmax	pmax		
	comp=Z,61nm,2.4s						
TLY	**Talaya**	**55.45**	**313**	P	**P**	**23 02 09.9**	**+0.3**
TLY	**Talaya**	**55.45**	**313**	*c i*P	**P**	**23 02 11.2**	**+1.6**
TLY				pmax	pmax		
	comp=Z,13nm,0.9s						
XLT	**XiLinHaoTe**	**55.71**	**299**	*e*P	**P**	**23 02 12.0**	**+0.4**
XLT				pP	pP	23 02 18.9	-1.4
XLT				sP	sP	23 02 21.6	-2.1
XLT				PP	**PP**	**23 04 17.1**	**+1.4**
XLT				S	**S**	**23 09 59.4**	**+3.4**
XLT				sS	sS	23 10 09.3	-1.1
XLT				pmax	pmax		
	comp=Z,13nm,0.9s						
XLT				pmax	pmax		
	comp=Z,240nm,3.2s						
XLT				LR	LR		
	comp=Z,180nm,20.4s						
XLT				LR	LR		
	comp=Z,1µm,20.0s						
XLT				LR	LR		
	comp=Z,2µm,14.5s						
LVZ	**Lovozero**	**55.82**	**357**	*de*P	**P**	**23 02 12.5**	**+0.5**
LVZ				pmax	pmax		
	comp=Z,76nm,1.7s						
APA	**Apatity**	**56.19**	**357**	⇓*e*P	**P**	**23 02 12.1**	**-2.5**
APA				*e*		23 03 10.3	
APA				*e*		23 04 15.5	
APA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
APA				MLR	MLR		
	comp=Z,1µm,24.7s						
MOY	**Mondy**	**56.53**	**314**	*e*P	**P**	**23 02 19.3**	**+1.9**
MOY				pmax	pmax		
	comp=Z,43nm,2.8s						
ZAK	**Zakamensk**	**56.59**	**312**	*e*P	**P**	**23 02 17.6**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,18nm,1.7s						
DL2	**Dalian**	**56.64**	**291**	P	P	23 02 11.9	-6.3
DL2				S	**S**	**23 10 01.4**	**-6.9**
DL2				pmax	pmax		
	comp=Z,31nm,1.3s						
DL2				pmax	pmax		
	comp=Z,170nm,7.7s						
DL2				LR	LR		
	comp=N,2µm,19.3s						
DL2				LR	LR		
	comp=E,1µm,16.5s						
DL2				LR	LR		
	comp=Z,1µm,21.9s						
ULN	**Ulaanbaatar**	**56.91**	**308**	P	**P**	**23 02 20.2**	**0.0**
ULN	**Ulaanbaatar**	**56.91**	**308**	*ce*P	**P**	**23 02 20.2**	**0.0**
ULN				pmax	pmax		
	comp=Z,17nm,0.8s						
SONM	**Songino Array**	**57.22**	**308**	P	**P**	**23 02 22.9**	**+0.5**
	comp=Z,33nm,0.8s,baz=44,slow=6.5,SNR=31						
	comp=Z,33nm,0.8s						
SONM	**Songino Array**	**57.22**	**308**	P	**P**	**23 02 22.7**	**+0.3**
SONM	**Songino Array**	**57.22**	**308**	P	**P**	**23 02 22.7**	**+0.3**
SONM				pmax	pmax		
	comp=Z,38nm,0.9s						
KNGR	**Kungurtug, Tuv**	**58.73**	**316**	⇑*e*P	**P**	**23 02 34.1**	**+1.2**
KNGR				pmax	pmax		
	comp=Z,18nm,0.9s						
HHC	**Hu-ho-hao-te**	**60.20**	**300**	*e*P	**P**	**23 02 44.3**	**+1.1**
HHC				sP	pP	23 02 51.8	-0.2
HHC				S	**S**	**23 10 53.1**	**-1.8**
HHC				sS	pS	23 11 02.8	-2.8
HHC				ScS	SKKSac	23 12 28.6	-2.8
HHC				SS	**SS**	**23 14 51.3**	**-0.2**
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,4.7s						
HHC				LR	LR		
	comp=Z,650nm,16.3s						
HHC				LR	LR		
	comp=Z,1µm,16.4s						
HHC				LR	LR		
	comp=Z,2µm,16.7s						
ZAA0	**Zalesovo Array**	**60.46**	**325**	P	**P**	**23 02 44.4**	**-0.2**
ZALV	**Zalesovo Beam**	**60.46**	**325**	P	**P**	**23 02 44.7**	**+0.1**
	comp=Z,27nm,0.8s,baz=32,slow=6.5,SNR=36						
	comp=Z,27nm,0.8s						
ZALV	**Zalesovo Beam**	**60.46**	**325**	P	**P**	**23 02 44.5**	**-0.1**
ZALV	**Zalesovo Beam**	**60.46**	**325**	P	**P**	**23 02 44.5**	**-0.1**
TIA	**Tai'an**	**61.01**	**292**	P	**P**	**23 02 45.1**	**-3.5**
TIA				S	**S**	**23 11 09.4**	**+4.3**
TIA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
TIA				LR	LR		
	comp=Z,1µm,24.4s						
TIA				LR	LR		
	comp=Z,940nm,22.7s						
TIA				LR	LR		
	comp=Z,1µm,19.2s						
BTO	**Baotou**	**61.13**	**301**	*e*P	**P**	**23 02 49.4**	**-0.1**
BTO				S	**S**	**23 11 07.9**	**+1.1**
BTO				pmax	pmax		
	comp=Z,20nm,1.1s						
BTO				pmax	pmax		
	comp=Z,540nm,3.9s						
BTO				LR	LR		
	comp=Z,3µm,22.7s						
BTO				LR	LR		
	comp=Z,4µm,17.5s						
BTO				LR	LR		
	comp=Z,1µm,15.3s						
HNS	**HongShan**	**61.32**	**295**	⇓P	**P**	**23 02 50.5**	**-0.2**
HNS				S	**S**	**23 11 14.9**	**+6.0**
HNS				pmax	pmax		
	comp=Z,20nm,1.0s						
HNS				LR	LR		
	comp=Z,1µm,17.5s						
HNS				LR	LR		
	comp=Z,830nm,19.1s						
HNS				LR	LR		
	comp=Z,1µm,17.5s						
NC204	**NORSAR Array S**	**61.82**	**9**	P	**P**	**23 02 53.5**	**-0.3**
NB2	**NORSAR Subarra**	**62.09**	**9**	P	**P**	**23 02 55.5**	**-0.1**
	comp=Z,19nm,0.8s,baz=349,slow=6.9						
NB2	**NORSAR Subarra**	**62.09**	**9**	P	**P**	**23 02 55.5**	**-0.1**
	baz=349,slow=6.9						
NOA	**NORSAR Array B**	**62.09**	**9**	P	**P**	**23 02 55.5**	**-0.1**
	comp=Z,11nm,0.8s,baz=350,slow=6.8,SNR=8.8						
	comp=Z,11nm,0.8s						
NAO01	**NORSAR Array S**	**62.26**	**9**	P	**P**	**23 02 56.5**	**-0.2**
FIA1	**FINESS Array S**	**62.40**	**1**	P	**P**	**23 02 57.5**	**-0.1**
FINES	**FINESS Array B**	**62.40**	**1**	P	**P**	**23 02 57.6**	**+0.1**
	comp=Z,20nm,0.8s,baz=15,slow=8.1,SNR=27						
	comp=Z,20nm,0.8s						
FINES	**FINESS Array B**	**62.40**	**1**	P	**P**	**23 02 57.0**	**-0.5**
FINES	**FINESS Array B**	**62.40**	**1**	*ce*P	**P**	**23 02 57.5**	**-0.1**
FINES				pmax	pmax		
	comp=Z,20nm,0.8s						
KLMR	**Klimovskoe**	**62.63**	**354**	*e*P	**P**	**23 02 57.4**	**-1.7**
KLMR				pmax	pmax		
	comp=Z,51nm,1.1s						
SSE	**Sheshan**	**62.85**	**286**	P	**P**	**23 03 03.5**	**+2.5**
SSE				S	**S**	**23 11 34.8**	**+6.4**
SSE				pmax	pmax		
	comp=Z,12nm,0.9s						
SSE				pmax	pmax		
	comp=Z,250nm,4.7s						
SSE				LR	LR		
	comp=Z,460nm,15.1s						
SSE				LR	LR		
	comp=Z,330nm,15.5s						
DGZ	**Jazzator, Alta**	**63.19**	**321**	⇑*e*P	**P**	**23 03 04.0**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,38nm,1.8s						
HFS	**Hagfors**	**63.19**	**8**	P	**P**	**23 03 02.8**	**-0.1**
	comp=Z,26nm,0.8s,baz=5.5,slow=4.6,SNR=21						
HFS				LR	LR	23 32 31.4	
	comp=Z,225nm,18.3s,baz=350,slow=38						
	comp=Z,26nm,0.8s						
MTO3	**Montecristo**	**63.23**	**105**	P	**P**	**23 03 04.9**	**+0.9**
MTO3				IAmb	IAmb	23 03 07.9	
	comp=Z,14nm,1.0s						
KONO	**Kongsberg**	**63.32**	**10**	P	**P**	**23 03 03.9**	**+0.2**
KONO				IAmb	IAmb	23 03 07.6	
	comp=Z,23nm,0.9s						
KONO	**Kongsberg**	**63.32**	**10**	P	**P**	**23 03 03.9**	**+0.2**
KONO				pmax	pmax		
	comp=Z,23nm,1.0s						
NJ2	**Nanjing**	**63.34**	**288**	*e*P	**P**	**23 03 04.8**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,15nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,300nm,3.5s						
NJ2				LR	LR		
	comp=Z,890nm,21.8s						
NJ2				LR	LR		
	comp=Z,1µm,19.4s						
NJ2				LR	LR		
	comp=Z,610nm,24.2s						
SVE	**Sverdlovsk**	**63.96**	**341**	*e*P	**P**	**23 03 08.1**	**+0.1**
SVE				pmax	pmax		
	comp=Z,37nm,1.4s						
KIRV	**Kirov**	**63.97**	**348**	*ce*P	**P**	**23 03 07.3**	**-0.7**
TGUH	**Tegucigalpa,Un**	**64.64**	**103**	P	**P**	**23 03 14.9**	**+1.7**
LYN	**LuoYang**	**64.67**	**295**	P	**P**	**23 03 13.3**	**+0.3**
LYN				pP	pP	23 03 19.8	-2.1
LYN				S	**S**	**23 11 50.5**	**-0.5**
LYN				pmax	pmax		
	comp=Z,44nm,0.9s						
LYN				pmax	pmax		
	comp=Z,360nm,3.7s						
LYN				LR	LR		
	comp=Z,2µm,24.4s						
LYN				LR	LR		
	comp=Z,1µm,23.4s						
LYN				LR	LR		
	comp=Z,1µm,19.6s						
ARTI	**Arti**	**64.78**	**342**	P	**P**	**23 03 12.7**	**-0.7**
ARTI	**Arti**	**64.78**	**342**	*c i*P	**P**	**23 03 12.9**	**-0.5**
ARTI						23 03 46.2	
ARTI				S	**S**	**23 11 52.8**	**+1.1**
ARTI				SS	**SS**	**23 15 57.5**	**-4.5**
ARTI				pmax	pmax		
	comp=Z,32nm,0.9s						
ARTI				MLR	MLR		
	comp=Z,964nm,21.0s						
KURK	**Kurchatov**	**65.18**	**327**	P	**P**	**23 03 15.4**	**-0.6**
KURK				IAmb	IAmb	23 03 18.1	
	comp=Z,18nm,1.1s						
KURK	**Kurchatov**	**65.18**	**327**	⇓*e*P	**P**	**23 03 15.6**	**-0.4**
KURK				pmax	pmax		
	comp=Z,15nm,0.8s						
KURBB	**Kurchatov Arra**	**65.28**	**327**	P	**P**	**23 03 16.4**	**-0.3**
	comp=Z,13nm,0.9s,baz=27,slow=5.8,SNR=30						
	comp=Z,13nm,0.9s						
BORK	**Borovoye**	**65.37**	**333**	P	**P**	**23 03 16.8**	**-0.4**
BORK				IAmb	IAmb	23 03 19.2	
	comp=Z,17nm,0.8s						
BORK	**Borovoye**	**65.37**	**333**	*ce*P	**P**	**23 03 16.3**	**-1.0**
BORK				pmax	pmax		
	comp=Z,32nm,1.3s						
BVAR	**Borovoye Array**	**65.37**	**333**	P	**P**	**23 03 16.7**	**-0.6**
	comp=Z,31nm,0.8s,baz=31,slow=6.9,SNR=38						
	comp=Z,31nm,0.8s						
VSU	**Vasula**	**65.40**	**1**	*ce*P	**P**	**23 03 16.2**	**-1.1**
VSU				pmax	pmax		
	comp=Z,49nm,0.8s						
EKA	**Eskdalemuir Ar**	**65.74**	**19**	P	**P**	**23 03 19.9**	**+0.3**
	comp=Z,9.5nm,0.8s,baz=340,slow=5.2,SNR=15						
	comp=Z,9.5nm,0.8s						
TAOE	**Nuku Hiva Isla**	**65.88**	**167**	*e*LR	LR	23 22 38.6	
	comp=Z,415nm,21.9s						
ZSN	**Zaisan**	**66.00**	**321**	⇑*i*P	**P**	**23 03 21.7**	**+0.3**
	comp=Z,12nm,0.9s						
ZSN	**Zaisan**	**66.00**	**321**	*c i*P	**P**	**23 03 21.6**	**+0.2**
ZSN				pmax	pmax		
	comp=Z,12nm,0.9s						
SIUN	**Universidad Ur**	**66.28**	**101**	P	**P**	**23 03 24.8**	**+1.3**
SIUN				IAmb	IAmb	23 03 33.6	
	comp=Z,13nm,0.9s						
GTA	**Gaotai**	**66.80**	**307**	P	**P**	**23 03 26.3**	**-0.5**
GTA				pP	pP	23 03 34.3	-1.4
GTA				S	**S**	**23 12 18.3**	**+1.2**
GTA				pmax	pmax		
	comp=Z,13nm,0.9s						
GTA				pmax	pmax		
	comp=Z,240nm,6.8s						
GTA				LR	LR		
	comp=Z,1µm,17.5s						
GTA				LR	LR		
	comp=Z,2µm,17.9s						
GTA				LR	LR		
	comp=Z,4µm,16.7s						
XAN	**Xi'an**	**66.85**	**297**	⇑P	**P**	**23 03 26.4**	**-0.7**
XAN				sP	pP	23 03 34.0	-2.0
XAN				S	**S**	**23 12 15.5**	**-2.3**
XAN				pmax	pmax		
	comp=Z,13nm,1.1s						
XAN				LR	LR		
	comp=Z,2µm,13.7s						
XAN				LR	LR		
	comp=Z,1µm,12.8s						
XAN				LR	LR		
	comp=Z,1µm,14.4s						
WHN	**Wuhan**	**66.89**	**291**	P	**P**	**23 03 30.5**	**+3.2**
MK31	**Makanchi Array**	**67.44**	**323**	*ce*P	**P**	**23 03 30.8**	**+0.1**
MKAR	**Makanchi Array**	**67.44**	**323**	P	**P**	**23 03 30.3**	**-0.4**
	comp=Z,14nm,0.9s,baz=39,slow=7.7,SNR=8.6						
	comp=Z,14nm,0.9s						
MKAR	**Makanchi Array**	**67.44**	**323**	P	**P**	**23 03 29.9**	**-0.8**
MAKZ	**Makanchi**	**67.54**	**323**	P	**P**	**23 03 30.7**	**-0.6**
MAKZ				IAmb	IAmb	23 03 33.4	
	comp=Z,18nm,0.9s						
MAKZ	**Makanchi**	**67.54**	**323**	P	**P**	**23 03 30.7**	**-0.6**
MAKZ				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH	**Lanzhou**	**67.66**	**302**	*e*P	**P**	**23 03 33.6**	**+1.2**
LZH				sP	pP	23 03 40.6	-0.6
LZH				S	**S**	**23 12 32.0**	**+4.4**
LZH				pmax	pmax		
	comp=Z,28nm,1.1s						
LZH				pmax	pmax		
	comp=Z,220nm,5.3s						
LZH				LR	LR		
	comp=Z,2µm,17.0s						
LZH				LR	LR		
	comp=Z,990nm,15.5s						
LZH				LR	LR		
	comp=Z,2µm,15.5s						
LZDM	**Lanzhou Array**	**67.83**	**302**	P	**P**	**23 03 33.0**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=90,slow=7.2,SNR=4.7						
	comp=Z,1.3nm,0.5s						
MOS	**Moscow**	**67.84**	**354**	*e*P	**P**	**23 03 31.7**	**-1.3**
MOS				pmax	pmax		
	comp=Z,32nm,1.0s						
WMQ	**Urumqi**	**68.09**	**318**	*e*P	**P**	**23 03 37.3**	**+2.5**
WMQ				pP	pP	23 03 43.4	-0.3
WMQ				S	**S**	**23 12 32.4**	**0.0**
WMQ				sS	pS	23 12 42.8	-0.6
WMQ				pmax	pmax		
	comp=Z,19nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,260nm,6.9s						
WMQ				LR	LR		
	comp=Z,2µm,20.3s						
WMQ				LR	LR		
	comp=Z,2µm,22.9s						
WMQ				LR	LR		
	comp=Z,740nm,20.3s						
WMQ	**Urumqi**	**68.09**	**318**	PcP	P	23 03 43.3	+8.5
PABE	**Paberze**	**68.32**	**2**	P	**P**	**23 03 35.7**	**-0.3**
OBN	**Obninsk**	**68.53**	**355**	P	**P**	**23 03 36.5**	**-0.7**
OBN	**Obninsk**	**68.53**	**355**	⇓P	**P**	**23 03 37.0**	**-0.2**
OBN	**Obninsk**	**68.53**	**355**	*e*P	**P**	**23 03 37.2**	**0.0**
OBN				*e*PPP	PPP	23 07 52.3	
OBN				pmax	pmax		
	comp=Z,107nm,2.5s						
OBN				MLR	MLR		
	comp=Z,539nm,17.0s						
BSEG	**Bad Segeberg**	**69.02**	**11**	*e*P	**P**	**23 03 41.4**	**+1.1**
	comp=Z,9.1nm,0.8s,baz=354,slow=5.9						
MNK	**Minsk**	**69.37**	**360**	*i* P	**P**	**23 03 42.4**	**-0.1**
MNK				*i*		23 04 06.2	
MNK				*i*		23 06 14.8	
MNK				*i* PPP	PPP	23 07 54.9	
MNK				*i* S	**S**	**23 12 46.5**	**-0.5**
MNK				*i*		23 13 41.1	
MNK				*i* SS	**SS**	**23 17 13.5**	**+0.5**
MNK				pmax	pmax		
	comp=Z,46nm,0.9s						
MNK				pmax	pmax		
	comp=E,31nm,1.0s						
MNK				pmax	pmax		
	comp=N,18nm,0.9s						
MNK				MLR	MLR		
	comp=N,317nm,20.0s						
MNK				MLR	MLR		
	comp=E,316nm,24.0s						
MNK				MLR	MLR		
	comp=Z,226nm,15.0s						
SUW	**Suwalki**	**69.80**	**3**	P	**P**	**23 03 45.1**	**0.0**
SUW	**Suwalki**	**69.80**	**3**	P	**P**	**23 03 45.1**	**0.0**
BELG	**Belogornoye**	**70.25**	**347**	*de*P	**P**	**23 03 47.8**	**-0.1**
BELG				pmax	pmax		
	comp=Z,14nm,1.0s						
TDK	**Taldyqorghan**	**70.31**	**324**	*e*P	**P**	**23 03 48.8**	**+0.3**
	comp=Z,16nm,0.8s						
TDK	**Taldyqorghan**	**70.31**	**324**	*e*P	**P**	**23 03 48.8**	**+0.3**
TDK				pmax	pmax		
	comp=Z,16nm,0.8s						
FLTG	**Flechtingen**	**70.70**	**11**	*e*P	**P**	**23 03 51.2**	**+0.5**
	comp=Z,11nm,0.8s,baz=354,slow=5.9						
RUE	**Ruedersdorf**	**70.79**	**9**	*e*P	**P**	**23 03 50.9**	**-0.3**
	comp=Z,18nm,0.9s,baz=354,slow=5.9						
ASSE	**Asse, Remlinge**	**70.84**	**11**	*e*P	**P**	**23 03 52.0**	**+0.6**
	comp=Z,11nm,0.8s,baz=354,slow=5.9						
LPSR	**Galich'ya Gora**	**70.89**	**353**	*e*P	**P**	**23 03 51.2**	**-0.6**
LPSR				pmax	pmax		
	comp=Z,38nm,1.7s						
CLZ	**Clausthal**	**71.09**	**11**	*e*P	**P**	**23 03 53.5**	**+0.4**
	comp=Z,15nm,0.8s,baz=354,slow=5.9						
BUG	**Bochum--Univer**	**71.12**	**13**	*e*P	**P**	**23 03 54.3**	**+1.1**
	comp=Z,26nm,0.8s,baz=354,slow=5.9						
AB31	**Akbulak array**	**71.27**	**338**	P	**P**	**23 03 53.8**	**-0.4**
AB31				IAmb	IAmb	23 03 55.9	
	comp=Z,21nm,0.8s						
ABKAR	**Akbulak array**	**71.27**	**338**	P	**P**	**23 03 53.9**	**-0.4**
GTTG	**Gottingen**	**71.34**	**12**	*e*P	**P**	**23 03 55.5**	**+0.9**
	comp=Z,14nm,0.9s,baz=354,slow=5.9						
KASTN	**Kahler Asten**	**71.49**	**13**	*e*P	**P**	**23 03 56.9**	**+1.3**
	comp=Z,10nm,0.9s,baz=354,slow=5.9						
SHLS	**Shalkode**	**71.60**	**323**	⇑*i*P	**P**	**23 03 56.0**	**-0.5**
	comp=Z,17nm,1.2s						
SHLS	**Shalkode**	**71.60**	**323**	*c i*P	**P**	**23 03 56.0**	**-0.5**
SHLS				pmax	pmax		
	comp=Z,17nm,1.2s						
BSTI	**Sart Tilman**	**71.73**	**15**	*d*P	**P**	**23 03 57.9**	**+0.9**
	comp=Z,7.2nm,0.9s						
UZB	**Uzynbulak**	**71.75**	**323**	*e*P	**P**	**23 03 57.8**	**+0.3**
	comp=Z,12nm,1.2s						
UZB	**Uzynbulak**	**71.75**	**323**	*e*P	**P**	**23 03 57.8**	**+0.3**
UZB				pmax	pmax		
	comp=Z,12nm,1.2s						
MEM	**Membach**	**71.76**	**14**	*d*P	**P**	**23 03 57.2**	**+0.1**
	comp=Z,17nm,1.0s						
CHKK	**Chushkaly**	**71.79**	**325**	*e*P	**P**	**23 03 57.9**	**+0.4**
CHKK	**Chushkaly**	**71.79**	**325**	*e*P	**P**	**23 03 57.9**	**+0.4**
VORR	**Voronezh**	**71.79**	**353**	*e*P	**P**	**23 03 57.1**	**-0.2**
VORR				pmax	pmax		
	comp=Z,17nm,1.4s						
BTNL	**Ternell**	**71.80**	**14**	*d*P	**P**	**23 03 58.6**	**+1.2**
	comp=Z,12nm,1.0s						
BGES	**Gesves**	**71.85**	**15**	*d*P	**P**	**23 03 58.7**	**+1.0**
	comp=Z,11nm,0.9s						
NEUB	**Neuenburg**	**71.86**	**10**	*e*P	**P**	**23 03 58.4**	**+0.6**
	comp=Z,20nm,0.8s,baz=354,slow=5.9						
NEUB				*e*pP	**pP**	**23 04 06.4**	**-0.3**
CLL	**Collm**	**71.88**	**10**	P	**P**	**23 03 57.6**	**-0.3**
CLL				IAmb	IAmb	23 04 00.8	
	comp=Z,21nm,1.2s						
CLL	**Collm**	**71.88**	**10**	P	**P**	**23 03 57.6**	**-0.3**
CLL				*i* *PP	**pP**	**23 04 05.8**	**-1.0**
CLL				pmax	pmax		
	comp=Z,21nm,1.2s						
CLL				MLR	MLR		
	comp=Z,500nm,27.7s						
CLL	**Collm**	**71.88**	**10**	*e*P	**P**	**23 03 57.5**	**-0.4**
	comp=Z,7.4nm,0.8s,baz=354,slow=5.9						
CLL				*e*pP	**pP**	**23 04 06.1**	**-0.7**
CLL	**Collm**	**71.88**	**10**	*i* P	**P**	**23 03 58.3**	**+0.4**
	comp=Z,93nm,2.3s						
CLL				*i* (pP)	**pP**	**23 04 05.8**	**-1.0**
	comp=Z,16nm,1.0s						
CLL				*e*PP	PP	23 06 46.0	+9.1
CLL				*e*S	**SKiKP**	**23 13 26.0**	**-6.8**
CLL				*e*SS	SS	23 18 06.0	+14
CLL				*e*x	x	23 22 00.0	
CLL				AMS	AMS	23 39 00.0	
	comp=Z,400nm,21.8s						
BMRD	**Maredsous**	**71.89**	**15**	*d*P	**P**	**23 03 58.6**	**+0.7**
	comp=Z,18nm,0.9s						
CD2	**Chengdu**	**71.93**	**299**	P	**P**	**23 03 59.6**	**+1.0**
CD2				S	**S**	**23 13 16.3**	**-1.4**
CD2				pmax	pmax		
	comp=Z,30nm,0.8s						
CD2				pmax	pmax		
	comp=Z,210nm,3.5s						
CD2				LR	LR		
	comp=Z,1µm,10.8s						
CD2				LR	LR		
	comp=Z,1µm,14.6s						
CD2				LR	LR		
	comp=Z,1µm,13.3s						
SATY	**Saty**	**72.04**	**323**	⇑*i*P	**P**	**23 03 59.4**	**+0.2**
	comp=Z,13nm,1.4s						
SATY	**Saty**	**72.04**	**323**	*c i*P	**P**	**23 03 59.3**	**+0.2**
SATY				pmax	pmax		
	comp=Z,13nm,1.4s						
VRH	**Novokhopyorsk**	**72.05**	**351**	*e*P	**P**	**23 03 57.4**	**-1.5**
VRH				pmax	pmax		
	comp=Z,35nm,1.9s						
UBBA	**Unterbreizbach**	**72.06**	**12**	*e*P	**P**	**23 04 00.0**	**+1.2**
	comp=Z,3.3nm,0.8s,baz=354,slow=5.9						
DOU	**Dourbes**	**72.06**	**15**	*d*P	**P**	**23 03 59.6**	**+0.6**
	comp=Z,13nm,0.9s						
RCHB	**Rochefort**	**72.10**	**15**	*d*P	**P**	**23 03 59.3**	**+0.1**
	comp=Z,19nm,0.9s						
VSR	**Storozhevoye**	**72.25**	**352**	*e*P	**P**	**23 03 57.6**	**-2.4**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MDOK	**Medeo**	**72.39**	**324**	*e*P	**P**	**23 04 01.4**	**+0.1**
MDOK	**Medeo**	**72.39**	**324**	*e*P	**P**	**23 04 01.3**	**+0.1**
AAA	**Alma-Ata**	**72.39**	**325**	*e*P	**P**	**23 04 01.5**	**+0.3**
	comp=Z,16nm,0.9s						
AAA	**Alma-Ata**	**72.39**	**325**	*e*P	**P**	**23 04 01.5**	**+0.3**
AAA				pmax	pmax		
	comp=Z,16nm,0.9s						
BRG	**Berggiesshubel**	**72.40**	**9**	*e*P	**P**	**23 04 01.0**	**+0.1**
	comp=Z,6.9nm,0.9s,baz=354,slow=5.9						
MOX	**Moxa**	**72.40**	**11**	*e*P	**P**	**23 04 01.5**	**+0.5**
	comp=Z,11nm,0.8s,baz=354,slow=5.9						
MOX				*e*pP	**pP**	**23 04 09.5**	**-0.4**
TNS	**Taunus Mts**	**72.46**	**13**	*e*P	**P**	**23 04 02.5**	**+1.1**
	comp=Z,11nm,0.8s,baz=354,slow=5.9						
TNS				*e*pP	**pP**	**23 04 10.9**	**+0.6**
VORD	**Divnogorie**	**72.49**	**352**	*e*P	**P**	**23 04 00.4**	**-1.1**

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VORD                                pmax    pmax
      comp=Z,10.0nm,0.8s
TNSS  Tian-Shan          72.53 324  eP      P        23 04 02.5  0.0
TNSS  Tian-Shan          72.53 324  eP      P        23 04 02.4  0.0
HSKC  Hora Svate Kat     72.62   9  eP      P        23 04 03.2 +0.9
HSKC                                epP     pP       23 04 11.4 +0.1
WLF   Walferdange        72.71  14  eP      P        23 04 05.5 +2.6
      comp=Z,11nm,0.9s,baz=354,slow=5.9
WLF   Walferdange        72.71  14  dP      P        23 04 05.0 +2.1
      comp=Z,12nm,1.2s
TANN  Tannenbergstha     72.72  10  eP      P        23 04 03.0 +0.1
      comp=Z,4.7nm,0.9s,baz=354,slow=5.9
PVCC  Panska Ves         72.80   9  eP      P        23 04 04.1 +0.8
PVCC                                e*PP    pP       23 04 12.8 +0.5
PVCC  Panska Ves         72.80   9  eP      P        23 04 04.1 +0.8
PVCC                                epP     pP       23 04 12.8 +0.5
CHVC  Chvalec            72.85   8  eP      P        23 04 04.4 +0.7
CHVC  Chvalec            72.85   8  eP      P        23 04 04.4 +0.7
OSTC  Ostas              72.90   8  eP      P        23 04 04.9 +0.9
OSTC                                e*PP    pP       23 04 13.3 +0.4
OSTC  Ostas              72.90   8  eP      P        23 04 04.9 +0.9
OSTC                                epP     pP       23 04 13.3 +0.4
UPC   Upice              72.93   8  eP      P        23 04 05.0 +0.8
UPC   Upice              72.93   8  eP      P        23 04 05.0 +0.8
MANZ  Manzenberg         73.10  10  eP      P        23 04 05.5 +0.3
      comp=Z,1.0nm,0.8s,baz=354,slow=5.9
DPC   Dobruska-Polom     73.11   8  eP      P        23 04 06.4 +1.1
DPC                                 e*PP    pP       23 04 14.6 +0.4
DPC   Dobruska-Polom     73.11   8  eP      P        23 04 06.4 +1.1
DPC                                 epP     pP       23 04 14.6 +0.4
AKASG Malin Array Be     73.17 359   P      P        23 04 05.0 -0.5
      comp=Z,18nm,0.8s,baz=4.6,slow=5.9,SNR=24
      comp=Z,18nm,0.8s
AKASG Malin Array Be     73.17 359   P      P        23 04 05.2 -0.4
AKBB  Malin Array Si     73.17 359ceP       P        23 04 05.3 -0.2
KIEV  Kiev               73.18 359   P      P        23 04 05.0 -0.6
KIEV                                 IAmb   IAmb     23 04 14.5
      comp=Z,23nm,0.8s
KIEV  Kiev               73.18 359 ⇑P       P        23 04 05.0 -0.6
KIEV  Kiev               73.18 359 ⇑P       P        23 04 05.0 -0.6
GRF   Grafenberg Arr     73.30  11  eP      P        23 04 07.4 +1.0
      comp=Z,8.9nm,0.8s,baz=354,slow=5.9
PRU   Pruhonice          73.33   9  eP      P        23 04 07.3 +0.8
PRU                                 e*PP    pP       23 04 15.2 -0.3
PRU   Pruhonice          73.33   9  eP      P        23 04 07.3 +0.8
PRU                                 epP     pP       23 04 15.2 -0.3
ROTZ  Rotzenmuhle        73.33  10  eP      P        23 04 06.9 +0.4
      comp=Z,2.0nm,0.8s,baz=354,slow=5.9
KRLC  Kraliky            73.42   7  eP      P        23 04 07.8 +0.7
KRLC                                e*PP    pP       23 04 16.2 +0.2
KRLC  Kraliky            73.42   7  eP      P        23 04 07.8 +0.7
KRLC                                epP     pP       23 04 16.2 +0.2
WUS   Wushi              73.42 322   P      P        23 04 07.1 -0.3
WUS                                  IAmb   IAmb     23 04 09.8
      comp=Z,22nm,1.1s
OJC   Ojcow              73.46   5   P      P        23 04 07.7 +0.4
OJC   Ojcow              73.46   5   P      P        23 04 07.7 +0.4
FRU1  Bishkek            73.47 326   P      P        23 04 07.5 -0.1
FRU1                                 IAmb   IAmb     23 04 10.3
      comp=Z,24nm,1.0s
FRU1  Bishkek            73.47 326   P      P        23 04 07.5 -0.1
FRU1                                 pmax   pmax
      comp=Z,24nm,1.0s
STEB  Steborice          73.62   7  eP      P        23 04 08.8 +0.5
STEB                                epP     pP       23 04 17.3 +0.1
AAK   Ala-Archa          73.67 326   P      P        23 04 08.6 -0.3
AAK   Ala-Archa          73.67 326⇑eP       P        23 04 07.4 -1.5
AAK                                  pmax   pmax
      comp=Z,12nm,0.9s
OKC   Ostrava-Krasne     73.75   6  eP      P        23 04 09.9 +1.0
OKC   Ostrava-Krasne     73.75   6  eP      P        23 04 09.9 +1.0
MORC  Moravsky Berou     73.77   7   P      P        23 04 09.0 -0.1
MORC                                 IAmb   IAmb     23 04 40.4
      comp=Z,30nm,1.7s
MORC  Moravsky Berou     73.77   7 ⇑P       P        23 04 09.3 +0.2
MORC  Moravsky Berou     73.77   7  eP      P        23 04 09.3 +0.2
MORC  Moravsky Berou     73.77   7   P      P        23 04 09.0 -0.1
MORC                                 pmax   pmax
      comp=Z,30nm,1.7s
PPT2  Papeete2           73.82 177  eP      P        23 03 55.9  -14
      comp=Z,83nm,24.0s
PPT2                                eS      SKiKP    23 13 28.5 -7.9
      comp=Z,197nm,24.8s
PPT2                                eSS     SS       23 18 16.2 -7.8
      comp=Z,89nm,26.2s
PPT2                                eLQ     LQ       23 23 13.3
      comp=Z,455nm,24.5s
PPT2                                eLR     LR       23 26 20.9
      comp=Z,407nm,25.2s
PPT2                                eLR     LR       23 26 28.1
      comp=Z,500nm,23.8s
ZVC   Zvikov             73.84   9  eP      P        23 04 10.4 +0.9
ZVC                                 epP     pP       23 04 18.8 +0.3
STU   Stuttgart          73.98  13  eP      P        23 04 11.8 +1.4
      comp=Z,32nm,1.0s,baz=354,slow=5.9
STU                                 epP     pP       23 04 19.4  0.0
WET   Wettzell           74.01  10  eP      P        23 04 10.4 -0.2
      comp=Z,4.4nm,0.9s,baz=354,slow=5.9
KHC   Kasperske Hory     74.09  10   P      P        23 04 11.9 +0.8
KHC   Kasperske Hory     74.09  10ceP       P        23 04 12.2 +1.1
KHC                                  pmax   pmax
      comp=Z,22nm,1.3s
KHC   Kasperske Hory     74.09  10  eP      P        23 04 12.1 +1.0
KHC                                 epP     pP       23 04 18.7 -1.3
KHC                                  AMS    AMS      23 43 10.0
      comp=Z,800nm,15.9s
GYA   Guiyang            74.14 294   P      P        23 04 11.8  0.0
GYA                                  S      S        23 13 42.9 -0.1
GYA                                  SS     SS       23 18 24.4 -3.3
GYA                                  LR     LR
      comp=Z,970nm,21.7s
VRAC  Vranov             74.17   8 ⇓P       P        23 04 12.4 +0.9
VRAC  Vranov             74.17   8  eP      P        23 04 11.9 +0.4
VRAC  Vranov             74.17   8 ⇓P       P        23 04 12.4 +0.9
MAUC  Maruska            74.19   7  eP      P        23 04 12.6 +1.0
ECH   Echery             74.26  14   P      P        23 04 12.4 +0.3
ECH                                  IAmb   IAmb     23 04 22.1
      comp=Z,22nm,1.0s
ECH   Echery             74.26  14   P      P        23 04 12.4 +0.3
ECH                                  pmax   pmax
      comp=Z,22nm,1.0s
BFO   Black Forest       74.31  13  eP      P        23 04 12.7 +0.4
      comp=Z,5.8nm,0.9s,baz=354,slow=5.9
BFO                                 epP     pP       23 04 21.9 +0.6
STHS  Stebnicka Huta     74.33   4  eP      P        23 04 12.8 +0.4
STHS                                e                23 04 21.1
STHS                                 pmax   pmax
      comp=Z,12nm,0.8s
STHS  Stebnicka Huta     74.33   4  eP      P        23 04 12.8 +0.4
STHS                                e                23 04 21.1
GEC2  GERESS Array S     74.39  10   P      P        23 04 12.8  0.0
GEC2  GERESS Array S     74.39  10  eP      P        23 04 12.9  0.0
      comp=Z,6.8nm,0.8s,baz=354,slow=5.9
GERES GERESS Array B     74.39  10   P      P        23 04 13.5 +0.6
      comp=Z,5.3nm,0.7s,baz=352,slow=5.4,SNR=27
      comp=Z,5.3nm,0.7s
DZA   Taraz              74.39 328  eP      P        23 04 13.2 +0.3
DZA   Taraz              74.39 328  eP      P        23 04 13.2 +0.3
KRUC  Moravsky           74.40   8  eP      P        23 04 14.4 +1.6
KK31  Karatay Array      74.43 329   P      P        23 04 12.4 -0.7
KK31                                 IAmb   IAmb     23 04 14.9
      comp=Z,17nm,0.9s
KK31  Karatay Array      74.43 329   P      P        23 04 12.5 -0.7
KK31                                 pmax   pmax
      comp=Z,17nm,0.9s
KKAR  Karatay Array      74.43 329   P      P        23 04 12.8 -0.3
KKAR  Karatay Array      74.43 329   P      P        23 04 12.8 -0.3
CKRC  Cesky Krumlov      74.47   9  eP      P        23 04 13.7 +0.5
CKRC  Cesky Krumlov      74.47   9  eP      P        23 04 13.7 +0.5
LANS  Liptovska Anna     74.51   6  eP      P        23 04 14.8 +1.3
LANS                                e                23 04 22.9
LANS                                 pmax   pmax
      comp=Z,31nm,1.8s
LANS  Liptovska Anna     74.51   6  eP      P        23 04 14.8 +1.3
LANS                                e                23 04 22.9
FUR   Furstenfeldbru     74.82  11  eP      P        23 04 15.5 +0.3
      comp=Z,9.3nm,0.8s,baz=354,slow=5.9
SMOL  Smolenice          75.02   7  eP      P        23 04 18.8 +2.4
SMOL                                 pmax   pmax
      comp=Z,8.0nm,1.0s
MODS  Modra-Piesok       75.14   7  eP      P        23 04 18.7 +1.6
MODS  Modra-Piesok       75.14   7  eP      P        23 04 18.7 +1.6
UBR   Ueberruh           75.16  12  eP      P        23 04 17.5 +0.2
      comp=Z,4.2nm,0.8s,baz=354,slow=5.9
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KECS  Kecovo             75.22   5  eP      P        23 04 20.0 +2.4
KECS  Kecovo             75.22   5  eP      P        23 04 20.0 +2.4
MOA   Molln              75.43   9   P      P        23 04 19.8 +1.1
      comp=Z,12nm,1.2s
IUG   Iuzhnay            75.45 329⇑iP       P        23 04 19.4 +0.3
      comp=Z,13nm,0.9s
IUG   Iuzhnay            75.45 329c iP      P        23 04 19.4 +0.3
IUG                                  pmax   pmax
      comp=Z,13nm,0.9s
CONA  Conrad Observa     75.48   8  i P     P        23 04 20.6 +1.4
      comp=Z,16nm,1.1s
DAVA  Damuels            75.52  12  eP      P        23 04 20.5 +1.0
      comp=Z,14nm,1.2s
BIOA  Bad Ischl, Aus     75.53  10  i P     P        23 04 20.4 +1.1
      comp=Z,12nm,1.1s
WATA  Walderalm          75.67  11  eP      P        23 04 21.5 +1.2
      comp=Z,24nm,1.1s
LESA  Schwarzleotal      75.70  10  i P     P        23 04 21.5 +1.1
      comp=Z,11nm,1.1s
SQTA  Sankt Quirin       75.74  12  i P     P        23 04 22.1 +1.4
      comp=Z,45nm,1.7s
RONA  Rosalia, Austr     75.74   8  i P     P        23 04 21.3 +0.7
      comp=Z,8.4nm,0.9s
SORM  Soroca             75.75 360 ⇓P       P        23 04 20.2 -0.3
SORM  Soroca             75.75 360 ⇓P       P        23 04 20.2 -0.3
WTTA  Wattenberg         75.75  11  i P     P        23 04 21.4 +0.6
      comp=Z,19nm,0.9s
PSZ   Piszkesteto        75.76   5   P      P        23 04 21.2 +0.5
PSZ                                  IAmb   IAmb     23 04 30.7
      comp=Z,22nm,1.1s
PSZ   Piszkesteto        75.76   5 ⇑P       P        23 04 21.1 +0.3
PSZ   Piszkesteto        75.76   5 ⇑P       P        23 04 21.1 +0.3
FETA  Feichten           75.89  12  i P     P        23 04 23.1 +1.5
      comp=Z,12nm,0.9s
KSH   Kashi              76.02 324   P      P        23 04 25.5 +3.0
KSH                                  pP     sP       23 04 33.9 -0.9
KSH                                  pmax   pmax
      comp=Z,18nm,1.5s
KSH                                  LR     LR
      comp=Z,3μm,13.4s
KSH                                  LR     LR
      comp=Z,1μm,12.7s
KSH                                  LR     LR
      comp=Z,4μm,14.1s
SENIN Lac Senin/Sane     76.10  14   P      P        23 04 23.3 +0.4
SENIN                                IAmb   IAmb     23 04 30.5
      comp=Z,26nm,1.3s
KBA   Koelnbreinsper     76.10  10  eP      P        23 04 24.4 +1.5
      comp=Z,25nm,1.0s
ARSA  Arzberg            76.13   9  i P     P        23 04 23.7 +0.9
      comp=Z,6.4nm,0.9s
BURAR Bucovina Array     76.25   2   P      P        23 04 23.5  0.0
BURAR Bucovina Array     76.25   2 ⇑P       P        23 04 22.3 -1.3
BURAR Bucovina Array     76.25   2 ⇑P       P        23 04 22.3 -1.3
TUE   Stuetta            76.26  13   P      P        23 04 24.4 +0.6
TUE                                  IAmb   IAmb     23 06 19.7
      comp=Z,50nm,1.9s
ABTA  Abfaltersbach      76.35  11  eP      P        23 04 25.4 +1.2
      comp=Z,17nm,1.1s
PZH   PanZhiHua          76.56 298   P      P        23 04 25.3 -0.4
PZH                                  pP     pP       23 04 33.3 -1.4
PZH                                  S      S        23 14 09.3 -0.6
PZH                                  sS     pS       23 14 22.9 +1.8
PZH                                  pmax   pmax
      comp=Z,20nm,1.2s
PZH                                  pmax   pmax
      comp=Z,180nm,3.7s
PZH                                  LR     LR
      comp=Z,370nm,18.4s
PZH                                  LR     LR
      comp=Z,670nm,19.0s
PZH                                  LR     LR
      comp=Z,900nm,15.1s
MESR  Meseseni           76.66   3 ⇑P       P        23 04 27.2 +1.5
SOKA  Soboth             76.66   9  eP      P        23 04 27.3 +1.4
      comp=Z,22nm,1.2s
OBKA  Obir               76.78   9  i P     P        23 04 27.8 +1.2
      comp=Z,30nm,0.7s
GIRR  Girov              76.92   1 ⇓P       P        23 04 27.3  0.0
MILM  Milestii Mici      76.96 359 ⇑P       P        23 04 26.0 -1.4
MILM  Milestii Mici      76.96 359 ⇑P       P        23 04 26.0 -1.4
DRGR                     77.01   4 ⇓P       P        23 04 28.3 +0.5
DRGR                     77.01   4 ⇓P       P        23 04 28.3 +0.5
KMI   Kunming            77.22 296   P      P        23 04 30.8 +1.3
KMI                                  S      S        23 14 19.8 +2.5
KMI                                  pmax   pmax
      comp=Z,11nm,1.6s
KMI                                  LR     LR
      comp=Z,1μm,20.9s
KMI                                  LR     LR
      comp=Z,740nm,19.7s
KMI                                  LR     LR
      comp=Z,430nm,27.4s
PURM  Purcari            77.34 358 ⇓P       P        23 04 30.3 +0.8
MORH  Mrgy, Hungar       77.39   6 ⇑P       P        23 04 29.0 -0.8
ONER  Baraj Valea Uz     77.54   1 ⇑P       P        23 04 32.1 +1.3
TEOL  Teolo              77.63  12   P      P        23 04 30.9 -0.4
RAR   Rarotonga          77.65 187   P      P        23 04 33.5 +2.1
      comp=Z,38nm,0.9s,baz=36,slow=21,SNR=1.8
      comp=Z,38nm,0.9s
OZUR                     77.78   1 ⇓P       P        23 04 32.7 +0.6
TURR  Turia              77.82   1 ⇑P       P        23 04 37.4 +5.1
GHRR                     77.82   0 ⇑P       P        23 04 33.1 +0.8
DOPR  Dopca              77.90   2 ⇑P       P        23 04 34.2 +1.4
GOF   Gofitskoye         78.01 349ceP       P        23 04 33.6 +0.2
VRI   Vrincioaia         78.01   1 ⇓P       P        23 04 34.7 +1.3
VRI   Vrincioaia         78.01   1 ⇓P       P        23 04 34.7 +1.3
PLOR  Plostina           78.03   1 ⇓P       P        23 04 35.9 +2.4
PLOR  Plostina           78.03   1 ⇓P       P        23 04 35.9 +2.4
COVR  Voineasa-Covas     78.03   1 ⇓P       P        23 04 34.7 +1.2
SDV   Santo Domingo      78.03  92   LR     LR       23 40 02.1
      comp=Z,506nm,20.9s,baz=342,slow=36
VLDR  Vladesti           78.04 360 ⇑P       P        23 04 34.2 +0.7
BZS   Buzias             78.14   4 ⇓P       P        23 04 34.5 +0.4
BZS   Buzias             78.14   4 ⇓P       P        23 04 34.5 +0.4
GAR   Garm               78.27 327   P      P        23 04 35.0 -0.1
LOT   Lotru              78.38   3 ⇓P       P        23 04 36.2 +0.6
MLR   Muntele Rosu       78.38   1   P      P        23 04 36.4 +0.8
MLR                                  IAmb   IAmb     23 04 46.2
      comp=Z,32nm,1.4s
MLR   Muntele Rosu       78.38   1 ⇑P       P        23 04 37.7 +2.1
MLR   Muntele Rosu       78.38   1 ⇑P       P        23 04 37.7 +2.1
GZR   Gura Zlata         78.41   4 ⇓P       P        23 04 36.2 +0.6
GZR   Gura Zlata         78.41   4 ⇓P       P        23 04 36.2 +0.6
NEHR  Nehoiu             78.45   1 ⇓P       P        23 04 37.1 +1.3
ARR   Arges              78.48   2 ⇑P       P        23 04 37.2 +1.1
QIZ   Qiongzhong         78.60 287   P      P        23 04 37.8 +0.8
QIZ                                  S      S        23 14 36.5 +4.7
QIZ                                  SS     SS       23 19 33.3 -1.9
QIZ                                  LR     LR
      comp=Z,440nm,22.0s
QIZ                                  LR     LR
      comp=Z,490nm,19.2s
QIZ                                  LR     LR
      comp=Z,450nm,20.6s
TLCR                     78.69 359 ⇑P       P        23 04 37.1  0.0
TLCR                     78.69 359 ⇑P       P        23 04 37.1  0.0
CFR   Carcaliu           78.70 360 ⇓P       P        23 04 37.6 +0.5
CFR   Carcaliu           78.70 360 ⇓P       P        23 04 37.6 +0.5
ANN   Anapa              78.75 353  eP      P        23 04 37.0 -0.4
ANN                                  pmax   pmax
      comp=Z,71nm,1.2s
LSA   Lhasa              78.80 308   P      P        23 04 39.0 +0.4
LSA                                  IAmb   IAmb     23 04 48.4
      comp=Z,24nm,1.1s
LSA   Lhasa              78.80 308   P      P        23 04 39.0 +0.4
LSA                                  pmax   pmax
      comp=Z,24nm,1.1s
HERR  Herculane          78.90   4 ⇓P       P        23 04 38.5 +0.2
CHGR  Chuyangaron        78.93 328   P      P        23 04 38.3 -0.4
CHGR  Chuyangaron        78.93 328   P      P        23 04 38.3 -0.4
CHGR                                 pmax   pmax
      comp=Z,49nm,0.9s
MDVR  Moldovita          78.97   4 ⇑P       P        23 04 40.5 +1.8
KIV   Kislovodsk         79.14 349   P      P        23 04 39.8 +0.1
KIV                                  IAmb   IAmb     23 04 48.8
      comp=Z,31nm,0.9s
KIV   Kislovodsk         79.14 349  eP      P        23 04 39.8 +0.1
KIV                                 eS      S        23 14 36.4 -0.7
KIV                                 eSSS    SSS      23 23 09.1
KIV                                  pmax   pmax
      comp=Z,26nm,1.0s
RUSC  La Rusia           79.14  96   P      P        23 04 40.5 -0.1
RUSC                                 IAmb   IAmb     23 04 48.5
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      comp=Z,36nm,1.2s
MANEM Manem              79.20 326   P      P        23 04 40.8 +0.4
MANEM                                IAmb   IAmb     23 04 49.9
      comp=Z,22nm,1.1s
ROSC  El Rosal           79.33  97   P      P        23 04 44.3 +2.8
      comp=Z,3.7nm,0.3s,baz=133,slow=18,SNR=1.6
ROSC                                 LR     LR       23 44 44.8
      comp=Z,210nm,19.0s,baz=12,slow=39
      comp=Z,3.7nm,0.3s
ROSC  El Rosal           79.33  97   P      P        23 04 41.8 +0.3
ROSC                                 IAmb   IAmb     23 04 55.0
      comp=Z,44nm,1.6s
ROSC  El Rosal           79.33  97   P      P        23 04 41.8 +0.3
ROSC                                 pmax   pmax
      comp=Z,44nm,1.6s
KBZ   Khabaz             79.34 349   P      P        23 04 41.7 +1.0
      comp=Z,17nm,0.8s,baz=346,slow=5.3,SNR=26
      comp=Z,17nm,0.8s
KBZ   Khabaz             79.34 349deP       P        23 04 41.4 +0.7
KBZ                                  pmax   pmax
      comp=Z,19nm,0.9s
SHA1  Shidzhatmaz        79.36 349ceP       P        23 04 42.1 +1.0
TNCH  TengChong          79.37 299 ⇑P       P        23 04 42.6 +1.2
TNCH                                 pP     PcP      23 04 49.1 -0.4
TNCH                                 sP     pP       23 04 51.4 +1.0
TNCH                                 S      S        23 14 37.6 -2.7
TNCH                                 sS     sS       23 14 53.5 -1.7
TNCH                                 SS     SS       23 19 48.8 +2.1
TNCH                                 pmax   pmax
      comp=Z,22nm,0.6s
TNCH                                 LR     LR
      comp=Z,730nm,17.6s
TNCH                                 LR     LR
      comp=Z,560nm,13.9s
TNCH                                 LR     LR
      comp=Z,690nm,21.5s
MAK   Makhachkala        79.53 345  eP      P        23 04 38.3 -3.4
MAK                                 e                23 07 41.7
MAK                                 ePPP    PPP      23 09 36.9
MAK                                 eS      S        23 14 36.7 -4.3
MAK                                 eSS     SS       23 19 46.2 -1.3
MAK                                 eSSS    SSS      23 23 13.2
MAK                                  pmax   pmax
      comp=Z,149nm,1.8s
TBI   Tubuai             79.55 177  eS      S        23 14 36.1 -5.3
      comp=Z,651nm,25.2s
TBI                                 eSS     SS       23 19 40.5  -10
      comp=Z,1μm,24.0s
TBI                                 eLQ     LQ       23 25 25.7
      comp=Z,2μm,32.0s
TBI                                 eLR     LR       23 28 54.6
      comp=Z,630nm,29.5s
TBI                                 eLR     LR       23 28 59.3
      comp=Z,2μm,25.5s
SOC   Sochi              79.79 351  eP      P        23 04 42.1 -1.0
SOC                                 e*PP    PcP      23 04 48.2 -2.6
SOC                                 e                23 07 49.2
SOC                                 eS      S        23 14 43.7 -0.1
SOC                                 eSS     SS       23 19 48.8 -2.7
SOC                                  pmax   pmax
      comp=Z,21nm,0.8s
VSLR  Vesyoloye          79.88 351ceP       P        23 04 44.4 +0.7
VSLR                                 pmax   pmax
      comp=Z,15nm,0.9s
BOVS  Bovan              80.12   4 ⇑P       P        23 04 45.6 +0.7
SHAA  Shahritus          80.25 328   P      P        23 04 46.0 +0.2
SHAA                                 IAmb   IAmb     23 04 56.1
      comp=Z,29nm,0.8s
ESBB  Sonseca Array      80.51  24   P      P        23 04 47.8 +0.6
ESBB                                 IAmb   IAmb     23 04 49.9
      comp=Z,32nm,1.1s
ESDC  Sonseca Array      80.52  24   P      P        23 04 48.1 +0.9
      comp=Z,11nm,0.8s,baz=340,slow=5.4,SNR=21
      comp=Z,11nm,0.8s
ESDC  Sonseca Array      80.52  24   P      P        23 04 47.8 +0.6
RKT   Rikitea            80.63 164  eLR     LR       23 29 27.3
      comp=Z,4μm,27.8s
OTAV  Otavalo            80.91 103   P      P        23 04 51.2 +1.1
OTAV  Otavalo            80.91 103 ⇑P       P        23 04 58.4 +8.3
AKT   Akhty              80.95 345  eP      P        23 04 49.9 +0.3
AKT                                 e                23 04 56.9
AKT                                 eS      S        23 15 00.2 +3.9
AKT                                  pmax   pmax
      comp=Z,66nm,2.2s
FLOC  Florencia          81.31 100   P      P        23 04 53.0 +1.3
FLOC                                 IAmb   IAmb     23 05 00.6
      comp=Z,18nm,1.0s
SHL   Shillong           82.03 305   P      P        23 04 54.7 -0.9
SHL   Shillong           82.03 305   P      P        23 04 54.7 -0.9
SHL                                  pmax   pmax
      comp=Z,9.0nm,1.0s
NIL   Nilore             82.26 323   P      P        23 04 56.2 -0.3
NIL                                  IAmb   IAmb     23 04 58.6
      comp=Z,19nm,0.8s
NIL   Nilore             82.26 323   P      P        23 04 56.2 -0.3
NIL                                  pmax   pmax
      comp=Z,19nm,0.8s
PMG   Port Moresby       82.31 240   P      P        23 04 58.2 +1.4
PMG                                  IAmb   IAmb     23 05 07.5
      comp=Z,19nm,0.9s
PMG   Port Moresby       82.31 240   P      P        23 04 58.2 +1.4
PMG                                  pmax   pmax
      comp=Z,19nm,1.0s
KARS  Kars               82.38 348   P      P        23 04 58.0 +0.8
KARS  Kars               82.38 348   P      P        23 04 58.0 +0.8
KARS                                 pmax   pmax
      comp=Z,58nm,1.4s
KBL   Kabul              82.78 327   P      P        23 04 58.2 -1.2
KBL   Kabul              82.78 327   P      P        23 04 58.2 -1.2
KBL                                  pmax   pmax
      comp=Z,13nm,1.3s
KOPT  Kop Dagi           83.25 350   P      P        23 05 02.5 +0.6
KOPT                                 IAmb   IAmb     23 05 24.1
      comp=Z,23nm,1.2s
TOKA  Tokat              83.27 353   P      P        23 05 02.7 +1.0
ANTO  Ankara             83.92 356   P      P        23 05 05.1  0.0
ANTO                                 IAmb   IAmb     23 05 07.7
      comp=Z,15nm,0.8s
ANTO  Ankara             83.92 356 ⇓P       P        23 05 06.0 +1.0
ANTO  Ankara             83.92 356 ⇓P       P        23 05 06.0 +1.0
BORA  Eskisehir          83.97 358   P      P        23 05 05.5 +0.2
BORA                                 IAmb   IAmb     23 05 14.5
      comp=Z,25nm,1.3s
BR131 Keskin Array S     84.02 355   P      P        23 05 05.7  0.0
BR131                                IAmb   IAmb     23 05 08.4
      comp=Z,14nm,0.9s
BR131 Keskin Array S     84.02 355d iP      P        23 05 05.9 +0.2
BRTR  Keskin Array B     84.02 355   P      P        23 05 05.8 +0.2
      comp=Z,8.0nm,0.8s,baz=10,slow=2.8,SNR=4.3
      comp=Z,8.0nm,0.8s
CHTO  Chiang Mai         84.40 296   P      P        23 05 08.1 +0.4
CHTO                                 IAmb   IAmb     23 05 17.7
      comp=Z,30nm,1.7s
CHTO  Chiang Mai         84.40 296   P      P        23 05 08.1 +0.4
CHTO                                 pmax   pmax
      comp=Z,30nm,1.7s
GURO  Guroymak-BITLI     84.55 349   P      P        23 05 09.3 +1.0
GURO                                 IAmb   IAmb     23 05 19.6
      comp=Z,14nm,1.2s
KIRS  Kirsehir-Merke     84.60 355 ⇑P       P        23 05 09.7 +1.2
CM31  Chiang Mai Arr     84.70 296   P      P        23 05 08.8 -0.5
CMAR  Chiang Mai Arr     84.70 296   P      P        23 05 08.8 -0.4
      comp=Z,5.6nm,0.8s,baz=10,slow=5.9,SNR=16
      comp=Z,5.6nm,0.8s
CMAR  Chiang Mai Arr     84.70 296   P      P        23 05 09.1 -0.1
BNN   Bunyan             84.78 354   P      P        23 05 09.7 +0.2
HRA   Herat              84.85 332   P      P        23 05 11.0 +1.0
DZM   Mont Dzumac        85.65 218  eS      SKSac    23 15 32.1 -4.8
      comp=Z,142nm,21.8s
DZM                                 eSS     SS       23 21 16.5 -4.7
      comp=Z,188nm,24.6s
DZM                                 eLQ     LQ       23 28 13.0
      comp=Z,3μm,36.8s
DZM                                 eLR     LR       23 32 08.9
      comp=Z,563nm,21.0s
MARD  Mardin             85.91 350   P      P        23 05 16.2 +1.0
GAZ   Gaziantep          86.36 352   P      P        23 05 17.1 -0.2
MD01  Midelt array s     86.81  27   P      P        23 05 20.2 +0.5
MD31  MD31               86.81  27   P      P        23 05 20.4 +0.8
MD31                                 IAmb   IAmb     23 05 29.3
      comp=Z,18nm,1.1s
KEST  Kesra              86.82  15   P      P        23 05 20.2 +0.6
      comp=Z,4.6nm,0.8s,baz=310,slow=3.1,SNR=4.2
      comp=Z,4.6nm,0.8s
CSS   Mathiatis          88.78 355   P      P        23 05 29.7 +0.8
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MMAI	**Mount Meron Ar**	**90.61**	**354**	P	**P**	**23 05 37.4**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=313,slow=9.0,SNR=5.2						
	comp=Z,0.3nm,0.3s						
LPAZ	**La Paz**	**100.23**	**104**	P	**Pdif**	**23 06 24.4**	**+2.4**
	comp=Z,0.8nm,0.6s,baz=187,slow=3.8,SNR=3.5						
QSPA	**South Pole Qui**	**146.28**	**180**	PKPbc	**PKPbc**	**23 12 14.2**	**-0.1**
	comp=Z,16nm,1.0s,baz=48,slow=2.2,SNR=9.4						
BOSA	**Boshof**	**152.09**	**5**	PKP	**PKPdf**	**23 12 24.8**	**+1.1**
	comp=Z,4.9nm,0.9s,baz=349,slow=5.2,SNR=4.6						
SNAA	**Sanae**	**160.12**	**152**	PKPab	**PKPab**	**23 13 12.3**	**-0.9**
	comp=Z,2.8nm,0.9s,baz=169,slow=2.5,SNR=7.1						
NVL	**N'lazarevskaya**	**164.12**	**161**	*e*PKIKP	**PKPdf**	**23 12 39.7**	**+2.9**
NVL				*e*		23 17 18.9	
NVL				*e*PPP	PPP	23 21 09.8	
NVL				*e*SS	SS	23 37 53.0	+8.4
NVL				*e*SSS	SSS	23 44 16.5	
NVL				pmax	pmax		
	comp=Z,9.0nm,1.1s						

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*AEIC **21** 22:55:50.2±1.7, 56°.3N±0°.1×152°.1W±0°.1, h10^{km}±8^{km},*
Error ellipse: s-maj=17.4km s-min=7.4km az=153.0
NEIC 21 22:55:47.2±1.8**, 56°.33N**±0°.03×**152°.2W**±0°.1**, h10**^{km}±2^{km}**,**
ML3.5/45**, ML3.2**(AEIC)**, Error ellipse: s-maj=9.9km**
s-min=4.7km az=108.0, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.09**	**326**		Pb	22 56 07.8	-0.3
OHAK				IAML		22 56 37.7	
	comp=E,817nm,0.9s						
SII	**Sitkinak Islan**	**1.15**	**282**		Pb	22 56 09.1	-0.1
SII	**Sitkinak Islan**	**1.15**	**282**		Sb	22 56 22.7	-1.4
KDAK	**Kodiak Island**	**1.48**	**351**		Pn	22 56 13.0	-0.8
R18K	**Karluk**	**1.77**	**316**		Pn	22 56 18.2	+0.4
R18K				IAML		22 56 54.2	
	comp=E,788nm,0.7s						
CHIR	**Chirikof Islan**	**2.01**	**257**		Pn	22 56 20.3	-0.8
SYI	**Shuyak Island**	**2.29**	**357**		Pn	22 56 24.7	-0.3
KAKN	**Katmai Knife C**	**2.53**	**323**		Pn	22 56 28.9	+0.5
KJL	**Kejulik**	**2.54**	**314**		Pn	22 56 29.6	+1.1
ACHA	**Angle Creek He**	**2.56**	**319**	Pn	Pn	22 56 29.9	+1.2
PLK4	**Peulik 4**	**2.65**	**301**	Pn	Pn	22 56 31.3	+1.3
PLK4				IAML		22 57 34.3	
	comp=N,326nm,1.0s						
Q19K	**Cape Douglas,**	**2.73**	**344**	Pn	Pn	22 56 31.0	0.0
CNPM	**China Poot**	**3.25**	**8**	Pn	Pn	22 56 37.0	-1.2
CNPM				IAML		22 57 02.3	
	comp=N,80nm,1.2s						
CNPM				IAML		22 57 18.8	
	comp=E,81nm,0.9s						
P19K	**Oil Pt**	**3.38**	**351**	Pn	Pn	22 56 40.7	+0.6
P18K	**Big Mountain,**	**3.48**	**333**	Pn	Pn	22 56 41.4	-0.1
P17K	**Kvichak River**	**3.68**	**323**	Pn	Pn	22 56 44.2	+0.1
ILSW	**Iliamna Southw**	**3.70**	**352**	Pn	Pn	22 56 44.3	-0.2
ILSW				IAML		22 57 31.9	
	comp=E,78nm,1.1s						
ILSW				IAML		22 57 35.1	
	comp=N,49nm,0.9s						
SEW	**Seward**	**4.05**	**20**	Pn	Pn	22 56 48.0	-1.1
SEW				IAML		22 57 59.2	
	comp=E,46nm,1.2s						
SLKM	**Skilak Lake**	**4.31**	**13**	Pn	Pn	22 56 52.4	-0.4
SLKM				IAML		22 57 44.7	
	comp=E,80nm,0.9s						
SLKM				IAML		22 58 52.0	
	comp=N,34nm,1.1s						
P23K	**Montague Islan**	**4.46**	**32**	Pn	Pn	22 56 53.4	-1.3
P23K				IAML		22 57 38.0	
	comp=E,54nm,1.0s						
P23K				IAML		22 59 08.4	
	comp=N,61nm,0.8s						
N19K	**Bonanza Creek**	**4.66**	**346**	Pn	Pn	22 56 57.7	+0.1
N19K				IAML		22 57 37.0	
	comp=N,39nm,1.1s						
N19K				IAML		22 58 09.9	
	comp=E,44nm,1.1s						
SPU	**Mount Spurr**	**4.87**	**1**	Pn	Pn	22 57 00.1	-0.4
PWL	**Port Wells**	**4.96**	**22**	Pn	Pn	22 57 00.8	-0.9
HIN	**Hinchinbrook I**	**5.05**	**34**	Pn	Pn	22 57 02.1	-0.8
HIN				IAML		22 58 14.0	
	comp=E,42nm,1.2s						
HIN				IAML		23 00 15.1	
	comp=N,41nm,1.1s						
STLK	**Strandline Lak**	**5.19**	**2**	Pn	Pn	22 57 04.8	0.0
STLK				IAML		22 57 47.2	
	comp=E,16nm,1.2s						
STLK				IAML		22 59 27.3	
	comp=N,16nm,1.2s						
GLI	**Glacier Island**	**5.28**	**28**	Pn	Pn	22 57 04.9	-1.0
GLI				IAML		22 57 58.4	
	comp=N,34nm,0.9s						
GLI				IAML		22 59 38.8	
	comp=E,42nm,1.2s						
FID	**Port Fidalgo**	**5.34**	**31**	Pn	Pn	22 57 05.1	-1.8
FID				IAML		22 58 10.1	
	comp=E,29nm,1.1s						
FID				IAML		22 58 23.8	
	comp=N,28nm,1.2s						
EYAK	**Cordova Ski Ar**	**5.41**	**36**	Pn	Pn	22 57 07.0	-0.7
KNK	**Knik Glacier**	**5.45**	**19**	Pn	Pn	22 57 08.4	0.0
KAIM	**Kayak Island**	**5.46**	**45**	Pn	Pn	22 57 08.5	0.0
RAGM	**Ragged Mountai**	**5.66**	**41**	Pn	Pn	22 57 11.1	-0.2
GHO	**Glory Hole Cre**	**5.71**	**16**	Pn	Pn	22 57 13.1	+1.1
SCM	**Sheep Creek Mo**	**6.06**	**22**	Pn	Pn	22 57 17.0	+0.3
BMRM	**Bremner River**	**6.09**	**37**	Pn	Pn	22 57 17.2	0.0
KLU	**Klutina**	**6.10**	**29**	Pn	Pn	22 57 17.6	+0.2
CRQM	**Cirque**	**6.48**	**43**	Pn	Pn	22 57 22.8	+0.2
TGL	**Tana Glacier**	**6.60**	**44**	Pn	Pn	22 57 24.1	-0.1
GLB	**Gilahina Butte**	**6.71**	**37**	Pn	Pn	22 57 25.4	-0.3
GRNC	**Granite Creek**	**7.01**	**47**	Pn	Pn	22 57 30.7	+0.8
PCA	**Pinnacle**	**7.33**	**54**	Pn	Pn	22 57 35.6	+1.4
BCPM	**Bancas Point**	**7.55**	**56**	Pn	Pn	22 57 38.7	+1.5

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*AEIC **21** 22:57:15.5±1.5, 56°.21N±0°.08×151°.93W±0°.05, h5^{km}±8^{km},*
Error ellipse: s-maj=11.9km s-min=1.4km az=200.0
NEIC 21 22:57:09.4±2.1**, 56°.08N**±0°.10×**151°.87W**±0°.05**, h10**^{km}±2^{km}**,**
ML3.5/42**, ML3.3**(AEIC)**, Error ellipse: s-maj=16.6km**
s-min=4.8km az=184.0, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SII	**Sitkinak Islan**	**1.38**	**292**		Pb	22 57 35.2	-0.1
SII					Sb	22 57 52.9	-0.1
SII	**Sitkinak Islan**	**1.38**	**292**	IAML		22 57 58.5	
	comp=N,1µm,0.7s						
SII				IAML		22 58 07.6	
	comp=E,1µm,0.8s						
OHAK	**Old Harbor**	**1.39**	**326**		Pn	22 57 33.1	-1.7
OHAK				IAML		22 57 59.8	
	comp=E,1µm,0.8s						
OHAK				IAML		22 58 03.2	
	comp=N,614nm,0.8s						
KDAK	**Kodiak Island**	**1.76**	**347**		Pn	22 57 37.9	-1.9
KDAK	**Kodiak Island**	**1.76**	**347**	IAML		22 58 19.2	
	comp=N,366nm,1.1s						
R18K	**Karluk**	**2.06**	**318**		Pn	22 57 43.6	-0.5
CHIR	**Chirikof Islan**	**2.13**	**265**		Pb	22 57 46.7	-1.3
CHIR	**Chirikof Islan**	**2.13**	**265**		Sn	22 58 10.0	-1.4
SYI	**Shuyak Island**	**2.56**	**354**		Pn	22 57 50.1	-0.8
SYI				IAML		22 58 44.5	
	comp=E,142nm,1.1s						
KAWH	**Katmai**	**2.81**	**327**		Pn	22 57 56.6	+2.1
KAKN	**Katmai Knife C**	**2.83**	**323**		Pn	22 57 54.6	0.0
KAHG	**Katmai Hook Gl**	**2.83**	**330**		Pn	22 57 56.5	+1.8
KJL	**Kejulik**	**2.83**	**316**		Pn	22 57 56.6	+1.8
ACHA	**Angle Creek He**	**2.85**	**320**		Pn	22 57 56.4	+1.4
KARR	**Katmai Rainbow**	**2.88**	**329**		Pn	22 57 55.8	+0.5
KARR					Pb	22 57 59.0	-1.8
PLK3	**Peulik 3**	**2.91**	**306**		Pn	22 57 57.3	+1.5
PLK3					Pb	22 57 59.5	-1.8
PLK4	**Peulik 4**	**2.92**	**304**	Pn	Pn	22 57 56.1	+0.2
Q19K	**Cape Douglas,**	**3.02**	**342**	Pn	Pn	22 57 56.5	-0.8
KAHC	**Katmai Hardscr**	**3.09**	**328**		Pn	22 57 59.7	+1.4
KAHC					Pb	22 58 02.3	-2.2
CNPM	**China Poot**	**3.48**	**5**		Pn	22 58 02.9	-0.7
CNPM				IAML		22 59 16.9	
	comp=N,72nm,0.9s						
P19K	**Oil Pt**	**3.66**	**349**	Pn	Pn	22 58 04.6	-1.5
P18K	**Big Mountain,**	**3.78**	**333**	Pn	Pn	22 58 06.7	-1.1
ILS	**Iliamna Low So**	**3.95**	**351**		Pn	22 58 10.2	+0.2
ILSW	**Iliamna Southw**	**3.98**	**351**	Pn	Pn	22 58 09.7	-0.9
P17K	**Kvichak River**	**3.98**	**324**	Pn	Pn	22 58 10.1	-0.3
SEW	**Seward**	**4.24**	**17**	Pn	Pn	22 58 14.0	+0.1
RED	**Redoubt Volcan**	**4.38**	**354**	Pn	Pn	22 58 16.0	-0.1
P16K	**Nushagak River**	**4.43**	**314**	Pn	Pn	22 58 15.8	-0.8
P23K	**Montague Islan**	**4.59**	**29**	Pn	Pn	22 58 18.9	+0.1
P23K				IAML		22 59 14.6	
	comp=E,33nm,0.6s						
N19K	**Bonanza Creek**	**4.95**	**345**	Pn	Pn	22 58 23.0	-0.8
N19K				IAML		22 59 27.4	
	comp=N,30nm,1.0s						
PWL	**Port Wells**	**5.14**	**20**	Pn	Pn	22 58 26.2	-0.3
PWL				IAML		22 59 25.5	
	comp=E,43nm,1.0s						
HIN	**Hinchinbrook I**	**5.18**	**31**	Pn	Pn	22 58 27.2	+0.3
HIN				IAML		23 00 41.2	
	comp=E,35nm,1.1s						
HIN				IAML		23 00 49.7	
	comp=N,26nm,1.2s						
STLK	**Strandline Lak**	**5.44**	**0**	Pn	Pn	22 58 30.7	+0.2
EYAK	**Cordova Ski Ar**	**5.52**	**33**	Pn	Pn	22 58 32.6	+1.0
KAIM	**Kayak Island**	**5.53**	**43**	Pn	Pn	22 58 34.1	+2.4
RAGM	**Ragged Mountai**	**5.75**	**38**	Pn	Pn	22 58 36.5	+1.7

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*NEIC **21** 22:57:52.6±1.8, 56°.4N±0°.1×152°.2W±0°.2, h11^{km}±14^{km},*
ML3.4/36, Error ellipse: s-maj=18.5km s-min=8.3km
az=138.0
*IDC **21** 22:57:53.9±1.7, 56°.58N×152°.36W, h0^{km}, mb3.9/7,*
mbtmp3.9/7, Error ellipse: s-maj=53.7km s-min=22.2km
az=92.0
ISC 21 22:57:56.0±1.3**, 56°.5N**±0°.1×**152°.16W**±0°.07**, h18**^{km}**, n42,**
σ1^{s}.03/43**, mb4.1**/7**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**0.94**	**319**		**Pb**	**22 58 13.3**	**-0.4**
OHAK				IAML		22 58 36.3	
	comp=N,937nm,0.8s						
OHAK				IAML		22 58 37.6	
	comp=E,932nm,0.8s						
KDAK	**Kodiak Island**	**1.29**	**350**	Pg	**Pn**	**22 58 18.4**	**-0.6**
	baz=327,slow=4.2						
KDAK				Lg	Lg	22 58 33.9	
	comp=E,30nm,0.3s,baz=254,slow=16,SNR=1.9						
KDAK	**Kodiak Island**	**1.29**	**350**		**Pn**	**22 58 18.6**	**-0.5**
KDAK				IAML		22 58 56.2	
	comp=E,341nm,0.8s						
KDAK				IAML		22 58 57.5	
	comp=E,287nm,0.9s						
CHIR	**Chirikof Islan**	**2.06**	**252**	Pn	**Pn**	**22 58 26.1**	**-3.5**
CHIR				IAML		22 58 50.8	
	comp=N,508nm,0.9s						
SYI	**Shuyak Island**	**2.10**	**357**	Pn	**Pn**	**22 58 29.6**	**-0.6**
P19K	**Oil Pt**	**3.19**	**350**	Pn	**Pn**	**22 58 43.2**	**-2.1**
P19K				IAML		22 59 10.8	
	comp=N,142nm,0.7s						
ILSW	**Iliamna Southw**	**3.51**	**352**	Pn	**Pn**	**22 58 48.8**	**-0.9**
ILSW				IAML		23 00 10.3	
	comp=N,66nm,1.0s						
ILSW				IAML		23 00 11.4	
	comp=E,66nm,1.1s						
P17K	**Kvichak River**	**3.53**	**321**	Pn	**Pn**	**22 58 48.1**	**-1.7**
SEW	**Seward**	**3.87**	**21**	Pn	**Pn**	**22 58 53.2**	**-1.2**
RED	**Redoubt Volcan**	**3.92**	**356**	Pn	**Pn**	**22 58 55.0**	**-0.4**
RED				IAML		22 59 40.7	
	comp=E,60nm,0.9s						
RED				IAML		22 59 49.6	
	comp=N,47nm,1.1s						
P16K	**Nushagak River**	**4.01**	**311**	Pn	**Pn**	**22 58 54.4**	**-2.0**
P16K				IAML		23 00 21.8	
	comp=N,62nm,0.9s						
P23K	**Montague Islan**	**4.30**	**34**	Pn	**Pn**	**22 58 59.2**	**-1.2**
P23K				IAML		23 00 04.0	
	comp=N,27nm,1.0s						
P23K				IAML		23 01 17.8	
	comp=E,25nm,0.9s						
N19K	**Bonanza Creek**	**4.47**	**345**	Pn	**Pn**	**22 59 03.3**	**+0.3**
N19K				IAML		23 00 01.1	
	comp=N,28nm,1.1s						
N19K				IAML		23 00 39.6	
	comp=E,26nm,1.0s						
PWL	**Port Wells**	**4.79**	**23**	Pn	**Pn**	**22 59 06.3**	**-0.8**
PWL				IAML		23 02 22.4	
	comp=E,39nm,0.7s						
O15K	**Ungalikthiuk R**	**4.88**	**306**	Pn	**Pn**	**22 59 08.0**	**-0.5**
O15K				IAML		23 02 27.6	
	comp=E,29nm,1.1s						
STLK	**Strandline Lak**	**5.00**	**2**	Pn	**Pn**	**22 59 10.4**	**+0.3**
STLK				IAML		23 02 34.7	
	comp=N,24nm,0.9s						
GLI	**Glacier Island**	**5.11**	**29**	Pn	**Pn**	**22 59 10.3**	**-1.2**
GLI				IAML		23 02 35.4	
	comp=N,26nm,0.5s						
FID	**Port Fidalgo**	**5.18**	**33**	Pn	**Pn**	**22 59 10.9**	**-1.6**
EYAK	**Cordova Ski Ar**	**5.25**	**37**	Pn	**Pn**	**22 59 12.9**	**-0.6**
EYAK				IAML		23 02 41.3	
	comp=N,27nm,1.1s						
KNK	**Knik Glacier**	**5.27**	**20**	Pn	**Pn**	**22 59 13.3**	**-0.5**
KAIM	**Kayak Island**	**5.33**	**47**	Pn	**Pn**	**22 59 14.8**	**+0.3**
RAGM	**Ragged Mountai**	**5.52**	**42**	Pn	**Pn**	**22 59 16.8**	**-0.5**
N15K	**Kwethluk River**	**5.55**	**315**	Pn	**Pn**	**22 59 17.7**	**0.0**
M17K	**Holitna River**	**5.61**	**333**	Pn	**Pn**	**22 59 19.4**	**+1.0**
M16K	**Timber Creek**	**5.74**	**325**	Pn	**Pn**	**22 59 20.9**	**+0.8**
SCM	**Sheep Creek Mo**	**5.88**	**23**	Pn	**Pn**	**22 59 22.2**	**0.0**
BERG	**Berg Lake**	**5.90**	**45**	Pn	**Pn**	**22 59 22.1**	**-0.3**
ILAR	**Eielson Array**	**8.67**	**15**	Pn	**Pn**	**23 00 00.4**	**0.0**
	comp=N,0.7nm,0.3s,baz=201,slow=14,SNR=5.1						
ILAR				Sn	**Sn**	**23 01 36.3**	**-1.3**
	comp=N,0.2nm,0.3s,baz=201,slow=22,SNR=2.0						
ILAR	**Eielson Array**	**8.67**	**15**		**Pn**	**22 59 59.9**	**-0.4**
H21K	**Melozitna Rive**	**9.18**	**358**	Pn	**Pn**	**23 00 07.6**	**+0.3**
L29M	**L29M**	**9.66**	**41**	Pn	**Pn**	**23 00 14.6**	**+0.7**
G23K	**Bananza Creek**	**10.28**	**5**	Pn	**Pn**	**23 00 23.0**	**+0.6**
G24K	**Hadweenzic Riv**	**10.45**	**10**	Pn	**Pn**	**23 00 24.4**	**-0.4**
G27K	**Doyon Strip**	**11.44**	**21**	Pn	**Pn**	**23 00 38.8**	**+0.5**
E24K	**Your Creek**	**11.72**	**7**	Pn	**Pn**	**23 00 42.3**	**+0.1**
SONM	**Songino Array**	**57.25**	**308**	P	**P**	**23 07 42.3**	**+0.3**
	comp=N,1.6nm,0.7s,baz=46,slow=6.4,SNR=5.4						
	comp=N,1.6nm,0.7s						
ZALV	**Zalesovo Beam**	**60.47**	**325**	P	**P**	**23 08 04.5**	**+0.3**
	comp=N,1.2nm,0.7s,baz=29,slow=8.2,SNR=3.9						
	comp=N,1.2nm,0.7s						
FINES	**FINESS Array B**	**62.37**	**1**	P	**P**	**23 08 17.7**	**+0.9**
	comp=N,1.4nm,0.8s,baz=352,slow=8.8,SNR=1.8						
	comp=N,1.4nm,0.8s						
HFS	**Hagfors**	**63.15**	**8**	P	**P**	**23 08 22.4**	**+0.3**
	comp=N,1.3nm,0.6s,baz=333,slow=8.1,SNR=4.4						
	comp=N,1.3nm,0.6s						
BVAR	**Borovoye Array**	**65.37**	**333**	P	**P**	**23 08 36.9**	**+0.1**
	comp=N,1.4nm,0.7s,baz=27,slow=6.8,SNR=4.9						
	comp=N,1.4nm,0.7s						
MKAR	**Makanchi Array**	**67.46**	**323**	P	**P**	**23 08 49.6**	**-0.7**
	comp=N,0.5nm,0.6s,baz=30,slow=5.9,SNR=1.9						
	comp=N,0.5nm,0.6s						
GERES	**GERESS Array B**	**74.34**	**10**	P	**P**	**23 09 33.2**	**+1.0**
	comp=N,0.4nm,0.7s,baz=357,slow=3.9,SNR=2.9						
	comp=N,0.4nm,0.7s						

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*NEIC **21** 23:01:01.3±1.3, 56°.43N±0°.04×152°.28W±0°.07, h10^{km}±1^{km},*
mb4.5/22, ML4.0/74, ML4.0(AEIC), Error ellipse:
s-maj=7.0km s-min=6.2km az=189.0
*IDC **21** 23:01:01.2±0.6, 56°.64N×152°.27W, h0^{km}, mb4.1/31,*
mbtmp4.0/32, ML3.6/1, Error ellipse: s-maj=17.5km
s-min=11.6km az=22.0
*AEIC **21** 23:01:05.0±1.5, 56°.34N±0°.04×152°.16W±0°.07, h15^{km}±4^{km},*
Error ellipse: s-maj=7.4km s-min=4.2km az=137.0
ISC 21 23:01:03.3±0.4**, 56°.51N**±0°.05×**152°.26W**±0°.04**, h20**^{km}**,**
n493, σ0^{s}.90/489**, mb4.2**/40**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**0.91**	**322**		**Pb**	**23 01 19.8**	**-0.7**
OHAK					**Sb**	**23 01 32.1**	**0.0**
OHAK				IAML		23 01 44.3	
	comp=N,3µm,0.9s						
OHAK				IAML		23 01 51.2	
	comp=E,4µm,0.9s						
OHAK	**Old Harbor**	**0.91**	**322**	P	**Pn**	**23 01 21.0**	**+0.1**
OHAK	**Old Harbor**	**0.91**	**322**	P	**Pb**	**23 01 19.7**	**-0.7**
	baz=132						
SII	**Sitkinak Islan**	**1.07**	**273**		**Pb**	**23 01 21.4**	**-1.7**
SII					**Sb**	**23 01 35.7**	**-0.9**
SII	**Sitkinak Islan**	**1.07**	**273**	P	**Pn**	**23 01 25.1**	**+2.0**
	baz=84						
KDAK	**Kodiak Island**	**1.29**	**352**	Pn	**Pn**	**23 01 25.4**	**-0.7**
	comp=E,35nm,0.3s,baz=161,slow=9.5,SNR=11						
KDAK				Sn	**Sn**	**23 01 41.5**	**-1.3**
	comp=E,202nm,0.3s,baz=142,slow=19,SNR=6.4						
KDAK	**Kodiak Island**	**1.29**	**352**		**Sn**	**23 01 41.9**	**-0.8**
KDAK	**Kodiak Island**	**1.29**	**352**		**Pn**	**23 01 25.6**	**-0.5**
KDAK	**Kodiak Island**	**1.29**	**352**	P	**Pn**	**23 01 25.3**	**-0.7**
	baz=168						
R18K	**Karluk**	**1.60**	**312**		**Pn**	**23 01 30.7**	**+0.3**
R18K				IAML		23 02 10.8	
	comp=E,4µm,0.6s						
R18K	**Karluk**	**1.60**	**312**	P	**Pb**	**23 01 31.8**	**-0.4**
	baz=125						
CHIR	**Chirikof Islan**	**2.01**	**251**		**Pn**	**23 01 34.2**	**-1.8**
CHIR					**Sn**	**23 01 56.6**	**-3.8**
CHIR				IAML		23 01 58.8	
	comp=N,1µm,0.7s						
CHIR				IAML		23 01 58.9	
	comp=E,1µm,0.6s						
CHIR	**Chirikof Islan**	**2.01**	**251**	P	**Pn**	**23 01 34.4**	**-1.6**
CHIR	**Chirikof Islan**	**2.01**	**251**	P	**Pn**	**23 01 34.2**	**-1.8**
	baz=65						
Q20K	**Shuyak Island**	**2.11**	**358**	P	**Pn**	**23 01 37.9**	**+0.6**
	baz=176						
SYI	**Shuyak Island**	**2.11**	**358**		**Sn**	**23 02 02.1**	**-0.8**
SYI	**Shuyak Island**	**2.11**	**358**	Pn	**Pn**	**23 01 37.1**	**-0.2**
SYI				IAML		23 02 02.6	
	comp=E,851nm,0.5s						
CAHL	**Cahill**	**2.26**	**314**		**Pn**	**23 01 39.7**	**+0.1**
KAWH	**Katmai**	**2.33**	**325**		**Pn**	**23 01 41.3**	**+0.9**
KAHG	**Katmai Hook Gl**	**2.34**	**329**		**Pn**	**23 01 42.3**	**+1.6**
KAKN	**Katmai Knife C**	**2.35**	**321**		**Pn**	**23 01 41.2**	**+0.4**
KJL	**Kejulik**	**2.38**	**312**		**Pn**	**23 01 41.4**	**+0.3**
KAPH	**Katmai Pasha**	**2.38**	**333**		**Pn**	**23 01 41.9**	**+0.7**
ACHA	**Angle Creek He**	**2.38**	**317**		**Pn**	**23 01 41.2**	**0.0**
KARR	**Katmai Rainbow**	**2.39**	**327**		**Pn**	**23 01 42.1**	**+0.8**
KABU	**Katmai Buttres**	**2.41**	**318**		**Pn**	**23 01 42.3**	**+0.7**
ANCK	**Angle Creek**	**2.44**	**315**		**Pn**	**23 01 43.0**	**+1.0**
PLK3	**Peulik 3**	**2.49**	**300**		**Pn**	**23 01 42.5**	**-0.1**
PLK4	**Peulik 4**	**2.51**	**298**		**Pn**	**23 01 42.6**	**-0.4**
PLK4				IAML		23 02 38.1	
	comp=N,1µm,0.8s						
PLK4				IAML		23 02 46.8	
	comp=E,1µm,0.9s						
R17L	**Mt. Peulik Vol**	**2.51**	**298**	P	**Pb**	**23 01 44.9**	**-2.7**
	baz=112						
Q19K	**Cape Douglas,**	**2.54**	**343**		**Pn**	**23 01 43.9**	**+0.6**
Q19K	**Cape Douglas,**	**2.54**	**343**	P	**Pn**	**23 01 44.5**	**+1.1**
	baz=160						
PLK2	**Peulik 2**	**2.55**	**301**		**Pn**	**23 01 44.2**	**+0.7**
KAHC	**Katmai Hardscr**	**2.61**	**326**		**Pn**	**23 01 45.1**	**+0.8**
Q18K	**Katmai Hardscr**	**2.61**	**326**	P	**Pn**	**23 01 45.4**	**+1.0**
	baz=141						
CNTC	**Contact Creek**	**2.64**	**313**		**Pn**	**23 01 45.3**	**+0.5**
Q17K	**Contact Creek**	**2.64**	**313**	P	**Pn**	**23 01 46.2**	**+1.5**
	baz=127						
PLK1	**Peulik 1**	**2.70**	**300**		**Pn**	**23 01 45.3**	**-0.2**
PLBL	**Peulik Blue Cr**	**2.76**	**297**		**Pn**	**23 01 47.4**	**+1.0**
AUI	**Augustine Isla**	**2.90**	**348**		**Pn**	**23 01 49.2**	**+1.0**
AUJK	**Augustine Jueg**	**2.91**	**348**		**Pn**	**23 01 49.7**	**+1.3**
CNPM	**China Poot**	**3.07**	**10**	Pn	**Pn**	**23 01 50.3**	**-0.3**
CNPM				IAML		23 02 14.6	
	comp=N,320nm,0.9s						
CNPM				IAML		23 03 09.6	
	comp=E,338nm,1.0s						
R16K	**Pilot Point**	**3.09**	**292**		**Pn**	**23 01 50.5**	**-0.4**
HOM	**Homer**	**3.17**	**6**		**Pn**	**23 01 52.0**	**0.0**
HOM	**Homer**	**3.17**	**6**	P	**Pn**	**23 01 52.7**	**+0.7**
	baz=185						
P19K	**Oil Pt**	**3.19**	**351**		**Pn**	**23 01 53.1**	**+0.8**
P19K				IAML		23 02 31.8	
	comp=N,772nm,0.6s						
P19K				IAML		23 02 34.5	
	comp=E,711nm,0.5s						
P19K	**Oil Pt**	**3.19**	**351**	P	**Pn**	**23 01 53.4**	**+1.0**
	baz=169						
ANNE	**Aniakchak Nort**	**3.23**	**280**		**Pn**	**23 01 51.6**	**-1.2**
P18K	**Big Mountain,**	**3.29**	**332**		**Pn**	**23 01 54.0**	**+0.3**
P18K	**Big Mountain,**	**3.29**	**332**	P	**Pn**	**23 01 54.1**	**+0.3**
	baz=148						
AZAC	**Aniakchak**	**3.32**	**279**		**Pn**	**23 01 53.4**	**-0.7**
BRSE	**Bradley Lake S**	**3.34**	**13**		**Pn**	**23 01 52.9**	**-1.4**
BRSE	**Bradley Lake S**	**3.34**	**13**	P	**Pn**	**23 01 53.5**	**-0.8**
	baz=194						
ANPB	**Aniakchak Plen**	**3.34**	**278**		**Pn**	**23 01 53.7**	**-0.7**
BRLK	**Bradley Lake**	**3.34**	**12**		**Pn**	**23 01 53.5**	**-0.9**
ILS	**Iliamna Low So**	**3.48**	**353**		**Pn**	**23 01 55.8**	**-0.6**
P17K	**Kvichak River**	**3.50**	**322**		**Pn**	**23 01 57.5**	**+1.0**
P17K	**Kvichak River**	**3.50**	**322**	P	**Pn**	**23 01 57.3**	**+0.8**
	baz=136						
ILSW	**Iliamna Southw**	**3.51**	**353**	Pn	**Pn**	**23 01 57.1**	**+0.3**
ILSW				IAML		23 03 10.0	
	comp=E,290nm,1.0s						
ILSW				IAML		23 03 11.4	
	comp=N,211nm,1.4s						
IVE	**Iliamna Volcan**	**3.54**	**354**		**Pn**	**23 01 57.1**	**0.0**
O20K	**Slope Mountain**	**3.59**	**357**	P	**Pn**	**23 01 58.7**	**+0.9**
	baz=176						
O18K	**Koktuh Hills**	**3.70**	**336**		**Pn**	**23 01 59.6**	**+0.3**
O18K				IAML		23 03 28.1	
	comp=N,183nm,1.0s						
O18K	**Koktuh Hills**	**3.70**	**336**	P	**Pn**	**23 01 59.8**	**+0.5**
	baz=152						
O19K	**Port Alsworth**	**3.85**	**344**		**Pn**	**23 02 01.8**	**+0.5**
O19K	**Port Alsworth**	**3.85**	**344**	P	**Pn**	**23 02 02.0**	**+0.7**
	baz=161						
VNHG	**Veniaminof 1**	**3.85**	**269**		**Pn**	**23 02 00.2**	**-1.2**
SEW	**Seward**	**3.90**	**21**		**Pn**	**23 02 00.5**	**-1.4**
SEW	**Seward**	**3.90**	**21**	P	**Pn**	**23 02 00.6**	**-1.3**
	baz=204						
P16K	**Nushagak River**	**3.98**	**312**		**Pn**	**23 02 02.6**	**-0.4**
P16K	**Nushagak River**	**3.98**	**312**	P	**Pn**	**23 02 03.2**	**+0.2**
	baz=125						
S14K	**Fog Glacier**	**4.06**	**270**	P	**Pn**	**23 02 06.9**	**+2.6**
	baz=82						
RDJH	**Redoubt Jeurge**	**4.10**	**356**		**Pn**	**23 02 05.2**	**+0.3**
SLKM	**Skilak Lake**	**4.15**	**14**		**Pn**	**23 02 04.9**	**-0.5**
SLKM				IAML		23 02 54.3	
	comp=E,182nm,0.8s						
SLKM				IAML		23 03 39.6	
	comp=N,168nm,1.3s						
O17K	**Koliganek Bris**	**4.16**	**324**		**Pn**	**23 02 06.4**	**+0.9**
O17K	**Koliganek Bris**	**4.16**	**324**	P	**Pn**	**23 02 06.1**	**+0.6**
	baz=138						
O22K	**Cooper Landing**	**4.20**	**17**		**Pn**	**23 02 06.5**	**+0.4**
O22K	**Cooper Landing**	**4.20**	**17**	P	**Pn**	**23 02 05.9**	**-0.2**
	baz=199						
MID	**Middleton Isla**	**4.30**	**45**	Pn	**Pn**	**23 02 06.9**	**-0.5**
MID				IAML		23 03 04.5	
	comp=N,134nm,1.4s						
MID				IAML		23 03 13.2	
	comp=E,164nm,1.5s						
CAPN	**Captain Cook N**	**4.31**	**7**	P	**Pn**	**23 02 07.7**	**+0.1**
	baz=188						
P23K	**Montague Islan**	**4.33**	**34**		**Pn**	**23 02 06.7**	**-1.3**
P23K				IAML		23 02 58.9	
	comp=N,226nm,0.9s						
P23K				IAML		23 02 59.3	
	comp=E,170nm,0.8s						
P23K	**Montague Islan**	**4.33**	**34**	P	**Pn**	**23 02 06.8**	**-1.1**
	baz=219						
O16K	**Kokwok River B**	**4.38**	**317**	Pn	**Pn**	**23 02 08.7**	**+0.1**
O16K	**Kokwok River B**	**4.38**	**317**	P	**Pn**	**23 02 09.0**	**+0.5**
	baz=131						
N19K	**Bonanza Creek**	**4.47**	**346**		**Pn**	**23 02 10.2**	**+0.3**
N19K				IAML		23 03 50.5	
	comp=E,122nm,0.9s						
N19K	**Bonanza Creek**	**4.47**	**346**	P	**Pn**	**23 02 09.9**	**0.0**
	baz=163						
CHNA	**Chernabura Isl**	**4.48**	**251**	P	**Pn**	**23 02 09.3**	**-0.7**
CHNA	**Chernabura Isl**	**4.48**	**251**	P	**Pn**	**23 02 09.5**	**-0.4**
	baz=64						
CNBA	**Chernabura Isl**	**4.49**	**251**	Pn	**Pn**	**23 02 08.1**	**-1.9**
CNBA				IAML		23 02 59.6	
	comp=N,222nm,0.6s						
CNBA				IAML		23 03 02.7	
	comp=E,128nm,0.4s						
N18K	**Kilae Creek**	**4.59**	**337**		**Pn**	**23 02 12.2**	**+0.7**
N18K				IAML		23 03 41.3	
	comp=N,96nm,1.3s						
N18K				IAML		23 03 52.1	
	comp=E,101nm,1.3s						
N18K	**Kilae Creek**	**4.59**	**337**	P	**Pn**	**23 02 11.6**	**+0.1**
	baz=153						
SPU	**Mount Spurr**	**4.69**	**1**		**Pn**	**23 02 12.6**	**-0.3**

N20K	Mount Spurr	4.70	0	P	Pn	23 02 12.8	-0.3
	baz=180						
SPCR	Spurr Chakacha	4.70	0	P	Pn	23 02 12.8	-0.3
	baz=180						
SPBG	Spurr Blockage	4.76	359		Pn	23 02 14.3	+0.4
SDPT	Sand Point	4.77	259	Pn	Pn	23 02 12.4	-1.5
SDPT				IAML		23 04 00.5	
	comp=E,211nm,1.5s						
SDPT	Sand Point	4.77	259	P	Pn	23 02 13.6	-0.3
SDPT	Sand Point	4.77	259	P	Pn	23 02 14.0	+0.1
	baz=71						
RC01	Rabbit Creek A	4.78	15		Pn	23 02 12.6	-1.4
RC01				IAML		23 03 10.3	
	comp=E,96nm,0.6s						
RC01				IAML		23 03 12.9	
	comp=N,82nm,0.9s						
RC01	Rabbit Creek A	4.78	15	P	Pn	23 02 13.7	-0.4
	baz=197						
N17K	Nushagak Hills	4.79	329		Pn	23 02 14.9	+0.8
N17K				IAML		23 04 09.0	
	comp=N,81nm,1.1s						
N17K	Nushagak Hills	4.79	329	P	Pn	23 02 14.9	+0.8
	baz=144						
SPCG	Spurr Capps Gl	4.80	1		Pn	23 02 14.4	0.0
PWL	Port Wells	4.82	23		Pn	23 02 13.2	-1.5
PWL				IAML		23 03 05.5	
	comp=N,192nm,0.6s						
PWL				IAML		23 03 06.2	
	comp=E,143nm,0.8s						
PWL	Port Wells	4.82	23	P	Pn	23 02 13.4	-1.2
	baz=207						
O15K	Ungalikthiuk R	4.85	307	Pn	Pn	23 02 15.2	+0.2
O15K				IAML		23 04 04.4	
	comp=E,110nm,1.4s						
O15K	Ungalikthiuk R	4.85	307	P	Pn	23 02 15.5	+0.5
	baz=118						
SUA	Susitna One	5.03	8	P	Pn	23 02 16.7	-0.9
	baz=189						
GLI	Glacier Island	5.14	29	P	Pn	23 02 17.6	-1.4
	baz=214						
FID	Port Fidalgo	5.21	33		Pn	23 02 17.9	-2.2
FID				IAML		23 03 16.0	
	comp=N,86nm,0.7s						
FID				IAML		23 03 16.5	
	comp=E,98nm,0.8s						
N16K	Nishlik Lake	5.24	322		Pn	23 02 21.2	+0.8
N16K	Nishlik Lake	5.24	322	P	Pn	23 02 21.0	+0.6
	baz=135						
EYAK	Cordova Ski Ar	5.29	37		Pn	23 02 20.0	-1.1
EYAK				IAML		23 03 22.2	
	comp=E,76nm,0.6s						
EYAK	Cordova Ski Ar	5.29	37	P	Pn	23 02 20.2	-0.9
EYAK	Cordova Ski Ar	5.29	37	P	Pn	23 02 20.0	-1.1
	baz=223						
KNK	Knik Glacier	5.29	20		Pn	23 02 19.9	-1.3
KNK	Knik Glacier	5.29	20	IAML		23 03 17.9	
	comp=E,98nm,1.2s						
KNK				IAML		23 04 36.4	
	comp=N,69nm,1.4s						
KNK	Knik Glacier	5.29	20	P	Pn	23 02 20.5	-0.6
	baz=203						
M18K	Stony River	5.32	341		Pn	23 02 21.8	+0.3
M18K	Stony River	5.32	341	P	Pn	23 02 22.0	+0.5
	baz=157						
PMR	Palmer	5.34	16	Pn	Pn	23 02 21.7	-0.1
PMR	Palmer	5.34	16	P	Pn	23 02 22.6	+0.8
PMR	Palmer	5.34	16	P	Pn	23 02 21.2	-0.6
	baz=199						
KAIM	Kayak Island	5.37	47	Pn	Pn	23 02 21.7	-0.5
KAIM	Kayak Island	5.37	47	P	Pn	23 02 23.0	+0.8
	baz=234						
M20K	Styx River	5.41	356	Pn	Pn	23 02 22.6	-0.2
M20K	Styx River	5.41	356	P	Pn	23 02 22.9	+0.1
	baz=174						
PS1A	Pavlof South-1	5.44	262		Pn	23 02 22.4	-0.7
SKT	Skwentna	5.50	4		Pn	23 02 23.4	-0.6
SKT	Skwentna	5.50	4	P	Pn	23 02 24.1	+0.2
	baz=184						
N15K	Kwethluk River	5.52	315		Pn	23 02 25.0	+0.7
N15K	Kwethluk River	5.52	315	P	Pn	23 02 25.3	+1.0
	baz=127						
PS4A	Pavlof South-4	5.52	262		Pn	23 02 23.1	-1.2
O14K	Tigyukauivet M	5.54	304	Pn	Pn	23 02 24.6	+0.2
O14K	Tigyukauivet M	5.54	304	P	Pn	23 02 27.1	+2.7
	baz=114						
GHO	Glory Hole Cre	5.55	17		Pn	23 02 24.2	-0.5
S12K	Black Hills	5.55	266	Pn	Pn	23 02 23.6	-1.1
S12K	Black Hills	5.55	266	P	Pn	23 02 24.7	+0.1
	baz=76						
HAG	Hague Volcano	5.56	262		Pn	23 02 23.6	-1.2
RAGM	Ragged Mountai	5.56	43		Pn	23 02 23.8	-1.1
DOL	Dolgoi Island	5.59	260		Pn	23 02 23.2	-1.9
M17K	Holitna River	5.59	333		Pn	23 02 25.6	+0.4
M17K	Holitna River	5.59	333	P	Pn	23 02 26.1	+1.0
	baz=148						
GOAT	Goat Mountain	5.67	41		Pn	23 02 25.2	-1.2
SML	Sawmill	5.68	19	Pn	Pn	23 02 25.9	-0.7
SML	Sawmill	5.68	19	P	Pn	23 02 26.1	-0.5
	baz=202						
M16K	Timber Creek	5.71	325		Pn	23 02 27.8	+0.9
M16K	Timber Creek	5.71	325	P	Pn	23 02 28.0	+1.2
	baz=138						
DIV	Divide	5.72	33		Pn	23 02 26.2	-0.9
M23K	Glacier View	5.79	22		Pn	23 02 27.3	-0.6
M23K	Glacier View	5.79	22	P	Pn	23 02 27.7	-0.2
	baz=206						
DTNA	Dutton South F	5.80	261		Pn	23 02 26.2	-1.8
L19K	White Mountain	5.84	348	Pn	Pn	23 02 29.0	+0.3
L19K	White Mountain	5.84	348	P	Pn	23 02 28.9	+0.3
	baz=165						
SCM	Sheep Creek Mo	5.91	23		Pn	23 02 29.3	-0.3
SCM	Sheep Creek Mo	5.91	23	P	Pn	23 02 29.3	-0.3
	baz=208						
KLU	Klutina	5.97	31		Pn	23 02 29.4	-1.0
KLU	Klutina	5.97	31	P	Pn	23 02 30.5	0.0
	baz=216						
BMRM	Bremner River	5.98	39		Pn	23 02 29.7	-0.9
BMRM	Bremner River	5.98	39	P	Pn	23 02 30.4	-0.3
	baz=226						
CUT	Chulitna	6.00	9	P	Pn	23 02 30.1	-0.6
	baz=190						
N14K	Kuskokwak Cree	6.04	308		Pn	23 02 31.7	+0.4
N14K	Kuskokwak Cree	6.04	308	P	Pn	23 02 32.9	+1.5
	baz=119						
L22K	Petersville	6.08	7		Pn	23 02 31.7	-0.3
M15K	Kasigluk River	6.08	317		Pn	23 02 32.9	+0.9
M15K	Kasigluk River	6.08	317	P	Pn	23 02 33.2	+1.3
	baz=129						
L18K	Granite Mounta	6.16	340		Pn	23 02 33.5	+0.5
L18K	Granite Mounta	6.16	340	P	Pn	23 02 33.8	+0.8
	baz=156						
SNH	Sunshine Point	6.17	50	Pn	Pn	23 02 33.0	-0.3
CRQE	Cirque	6.40	45	P	Pn	23 02 36.2	-0.2
	baz=233						
L16K	Owhat River	6.40	328	P	Pn	23 02 37.0	+0.7
	baz=140						
PPLA	Purkeypile	6.41	0		Pn	23 02 36.7	+0.1
PPLA	Purkeypile	6.41	0	P	Pn	23 02 36.9	+0.4
	baz=180						
M24K	Tolsona, Glenn	6.42	26		Pn	23 02 36.4	-0.2
M24K	Tolsona, Glenn	6.42	26	P	Pn	23 02 36.4	-0.2
	baz=212						
L17K	Donlin	6.43	334		Pn	23 02 37.8	+1.1
L17K	Donlin	6.43	334	P	Pn	23 02 37.6	+0.9
	baz=148						
N25K	Chitina, Valde	6.45	35		Pn	23 02 36.3	-0.9
N25K	Chitina, Valde	6.45	35	P	Pn	23 02 36.8	-0.4
	baz=221						
TGL	Tana Glacier	6.50	45	Pn	Pn	23 02 37.3	-0.6
WAT6	Susitna Watana	6.50	19		Pn	23 02 37.6	-0.3
WAT6	Susitna Watana	6.50	19	P	Pn	23 02 38.0	+0.1
	baz=203						
FALS	False Pass	6.53	260	Pn	Pn	23 02 37.0	-1.1
FALS	False Pass	6.53	260	P	Pn	23 02 39.4	+1.4
	baz=70						
VRDI	Verde Repeater	6.57	40	Pn	Pn	23 02 37.9	-0.9
WAT7	Susitna Watana	6.57	14		Pn	23 02 38.9	+0.1
WAT1	Susitna Watana	6.61	15	P	Pn	23 02 39.8	+0.6
	baz=198						
M14K	Bethel	6.61	314	P	Pn	23 02 40.9	+1.7
	baz=125						
YAH	Yahtse	6.73	51	Pn	Pn	23 02 40.7	-0.4
MCARA	McCarthy VSAT	6.83	41	P	Pn	23 02 41.6	-0.6
	baz=229						
WACK	Wrangell Chich	6.83	33		Pn	23 02 41.9	-0.5
HARP	HAARP	6.92	29		Pn	23 02 43.4	-0.1
HARP	HAARP	6.92	29	P	Pn	23 02 44.0	+0.6
	baz=215						
GRNC	Granite Creek	6.92	48		Pn	23 02 43.0	-0.7
K20K	Telida	6.93	353		Pn	23 02 43.9	+0.4
K20K	Telida	6.93	353	P	Pn	23 02 43.9	+0.4
	baz=171						
K17K	Iditarod	6.94	336		Pn	23 02 44.8	+1.1
K17K	Iditarod	6.94	336	P	Pn	23 02 44.2	+0.5
	baz=150						
M13K	Dall Lake	7.01	309	Pn	Pn	23 02 45.1	+0.4
M13K	Dall Lake	7.01	309	P	Pn	23 02 46.3	+1.7
	baz=118						
DHY	Denali Highway	7.03	18		Pn	23 02 44.8	-0.3
DHY	Denali Highway	7.03	18	P	Pn	23 02 45.0	0.0
	baz=203						
L15K	Ungalak Mounta	7.03	321		Pn	23 02 45.8	+0.9
L15K	Ungalak Mounta	7.03	321	P	Pn	23 02 46.2	+1.3
	baz=132						
TRF	Thorofare Moun	7.03	7		Pn	23 02 44.7	-0.4
TRF	Thorofare Moun	7.03	7	P	Pn	23 02 45.5	+0.4
	baz=189						
KTH	Kantishna Hill	7.10	5		Pn	23 02 46.0	0.0
BARN	Barnard Glacie	7.14	46	Pn	Pn	23 02 45.8	-1.0
CTG	Chitna Glacier	7.22	47	P	Pn	23 02 47.5	-0.2
	baz=237						
L14K	Kuka Creek	7.25	316	Pn	Pn	23 02 48.3	+0.4
L14K	Kuka Creek	7.25	316	P	Pn	23 02 49.5	+1.6
	baz=126						
PCA	Pinnacle	7.27	55	Pn	Pn	23 02 48.1	-0.2
PINM	Pinnacle	7.27	55	P	Pn	23 02 49.1	+0.8
	baz=246						
J18K	Innoko River	7.32	344		Pn	23 02 49.5	+0.5
J18K	Innoko River	7.32	344	P	Pn	23 02 50.0	+1.0
	baz=160						
PAX	Paxson	7.33	25	P	Pn	23 02 49.1	0.0
	baz=211						
CHUM	Lake Minchumin	7.40	360	P	Pn	23 02 51.2	+1.2
	baz=179						
MCK	McKinley	7.43	11	P	Pn	23 02 50.7	+0.2
	baz=194						
K15K	Wolf Creek Mou	7.48	325		Pn	23 02 52.5	+1.4
K15K	Wolf Creek Mou	7.48	325	P	Pn	23 02 52.2	+1.1
	baz=136						
BCPM	Bancas Point	7.50	57	Pn	Pn	23 02 51.2	-0.1
M26K	Nabesna, AK	7.55	35	P	Pn	23 02 52.6	+0.4
	baz=223						
O28M	Mount Upton	7.60	51	Pn	Pn	23 02 52.7	-0.4
O28M	Mount Upton	7.60	51	P	Pn	23 02 53.1	0.0
	baz=242						
BPAW	Bear Paw Mtn.	7.64	4		Pn	23 02 51.7	-1.6
BPAW	Bear Paw Mtn.	7.64	4	P	Pn	23 02 53.4	0.0
	baz=185						
J19K	Poorman	7.69	349	Pn	Pn	23 02 54.5	+0.5
J19K	Poorman	7.69	349	P	Pn	23 02 54.1	+0.1
	baz=165						
J17K	VABM Dome	7.71	336	Pn	Pn	23 02 55.1	+0.9
J17K	VABM Dome	7.71	336	P	Pn	23 02 54.8	+0.7
	baz=150						
J20K	Nowinta River	7.75	354		Pn	23 02 55.1	+0.3
J20K	Nowinta River	7.75	354	P	Pn	23 02 55.3	+0.5
	baz=172						
M27K	Edge Creek, AK	7.89	38	P	Pn	23 02 56.9	0.0
	baz=227						
J16K	Anvik River	7.98	332	P	Pn	23 02 59.3	+1.4
	baz=144						
K24K	Donnelly Dome	7.99	21	P	Pn	23 02 58.9	+0.7
	baz=207						
YUK3	Moose Creek	8.03	44	P	Pn	23 02 58.9	0.0
	baz=235						
YUK8	Steele Glacier	8.04	48	P	Pn	23 02 59.4	+0.3
	baz=240						
O29M	Mount Kennedy	8.12	56	Pn	Pn	23 03 00.4	+0.3
O29M	Mount Kennedy	8.12	56	P	Pn	23 03 00.1	0.0
	baz=249						
RIDG	Independent Ri	8.13	24	P	Pn	23 03 01.1	+0.9
	baz=210						
NEA2	Nenana	8.26	10	P	Pn	23 03 02.5	+0.7
	baz=192						
M11K	Mekoryuk	8.28	304	P	Pn	23 03 02.0	+0.1
	baz=111						
BVCY	Beaver Creek	8.28	40	P	Pn	23 03 02.9	+0.8
	baz=230						
P29M	Windy Craggy	8.30	62		Pn	23 03 02.6	+0.1
P29M	Windy Craggy	8.30	62	P	Pn	23 03 03.3	+0.9
	baz=255						
HDA	Harding Lake	8.34	16		Pn	23 03 03.1	+0.2
HDA	Harding Lake	8.34	16	P	Pn	23 03 03.5	+0.5
	baz=201						
K13K	Kusilvak Mount	8.36	316	P	Pn	23 03 04.3	+1.1
	baz=124						
I20K	Naaghedeneel	8.38	353	P	Pn	23 03 02.9	-0.5
	baz=171						
L27K	Beaver Creek,	8.40	34	P	Pn	23 03 03.7	-0.2
	baz=224						
BCAR	Beaver Creek A	8.42	34	Pn	Pn	23 03 04.1	0.0
CCB	Clear Creek Bu	8.45	13		Pn	23 03 03.6	-0.8
J14K	Nanvaranak Lak	8.47	322	P	Pn	23 03 05.4	+0.7
	baz=132						
YUK6	Outpost Mounta	8.48	53	P	Pn	23 03 05.4	+0.4
	baz=245						
I17K	Unalakleet	8.50	334	P	Pn	23 03 05.8	+0.8
	baz=146						
SCRK	Sand Creek	8.54	25	P	Pn	23 03 05.8	+0.1
	baz=212						
YUK4	Talbot Arm	8.54	50	P	Pn	23 03 06.3	+0.5
	baz=242						
GCSA	Galena City Sc	8.57	347	P	Pn	23 03 06.2	+0.3
	baz=162						
MLY	Manley	8.58	4	P	Pn	23 03 06.8	+0.6
	baz=185						
UNV	Unalaska Valle	8.58	258	Pn	Pn	23 03 04.6	-1.6
UNV	Unalaska Valle	8.58	258	P	Pn	23 03 06.5	+0.3
UNV	Unalaska Valle	8.58	258	P	Pn	23 03 08.3	+2.1
	baz=65						
COLA	College	8.66	13	P	Pn	23 03 08.1	+0.8
COLA	College	8.66	13	P	Pn	23 03 06.9	-0.3
	baz=196						
IL31		8.69	15	Pn	Pn	23 03 08.4	+0.7
ILAR	Eielson Array	8.69	15	Pn	Pn	23 03 07.8	+0.1
	comp=N,1.8nm,0.3s,baz=199,slow=14,SNR=26						
ILAR				Sn	Sn	23 04 38.1	-6.9
	comp=N,1.4nm,0.3s,baz=208,slow=23,SNR=6.0						
ILAR	Eielson Array	8.69	15		Pn	23 03 07.6	-0.2
I21K	Tanana	8.70	1	P	Pn	23 03 08.4	+0.6
	baz=181						
I23K	Minto, Yukon-K	8.78	8	P	Pn	23 03 08.1	-0.7
	baz=190						
J25K	Salcha River,	8.80	20		Pn	23 03 09.3	+0.1
J25K	Salcha River,	8.80	20	P	Pn	23 03 09.0	-0.3
	baz=206						
S31K	Pelican	8.81	74	P	Pn	23 03 07.5	-1.8
	baz=268						
HYT	Haines Junctio	8.81	55	P	Pn	23 03 09.1	-0.4
	baz=248						
P30M	Million Dollar	8.82	59	P	Pn	23 03 09.8	+0.3
	baz=253						
POKR	Poker Plat Res	8.95	13	P	Pn	23 03 09.7	-1.5
	baz=197						
J26L	Joseph Creek	9.08	24		Pn	23 03 13.1	-0.1
J26L	Joseph Creek	9.08	24	P	Pn	23 03 12.8	-0.3
	baz=212						
H20K	Anotleneega Mo	9.10	353	P	Pn	23 03 13.2	-0.2
	baz=170						
H18K	Honhosa River	9.16	344		Pn	23 03 14.1	0.0
H18K	Honhosa River	9.16	344	P	Pn	23 03 14.7	+0.5
	baz=158						
H21K	Melozitna Rive	9.18	359	P	Pn	23 03 14.3	-0.1
	baz=178						
M29M	Somme Creek	9.19	44		Pn	23 03 14.8	+0.2
M29M	Somme Creek	9.19	44	P	Pn	23 03 14.7	+0.2
	baz=236						
H17K	Granite Mounta	9.24	339		Pn	23 03 15.7	+0.5
H17K	Granite Mounta	9.24	339	P	Pn	23 03 15.4	+0.2
	baz=152						
N30M	Aishikik Lake	9.26	51	P	Pn	23 03 14.0	-1.5
	baz=245						
H19K	Roundabout Mou	9.27	349	Pn	Pn	23 03 16.0	+0.4
H19K	Roundabout Mou	9.27	349	P	Pn	23 03 14.9	-0.7
	baz=165						
SIT	Sitka	9.31	80	P	Pn	23 03 13.6	-2.6
H22K	Ishtalitna Cre	9.43	2	P	Pn	23 03 18.4	+0.6
	baz=183						
SKAG	Skagway	9.46	65	Pn	Pn	23 03 18.0	-0.2
SKAG	Skagway	9.46	65	P	Pn	23 03 19.4	+1.2
SKAG	Skagway	9.46	65	P	Pn	23 03 18.4	+0.2
	baz=260						
H16K	Elim	9.51	333		Pn	23 03 19.8	+1.0
H16K	Elim	9.51	333	P	Pn	23 03 19.7	+0.8
	baz=144						
IMAR	Indian Mountai	9.53	356	Pn	Pn	23 03 19.1	-0.2
BESE	Bessie Mountai	9.58	70	Pn	Pn	23 03 19.5	-0.5
H24K	Noodor Dome	9.59	11	P	Pn	23 03 19.5	-0.5
	baz=194						
S32K	Killisnoo	9.70	77	P	Pn	23 03 21.0	-0.4
	baz=272						
L29M	L29M	9.70	41		Pn	23 03 21.6	+0.1
L29M	L29M	9.70	41	P	Pn	23 03 20.3	-1.2
	baz=234						
JIS	Juneau Island	9.81	72	P	Pn	23 03 23.8	+0.8
N31M	Braeburn, Yuko	9.84	53	P	Pn	23 03 23.4	-0.1
	baz=247						
I26K	Coal Creek Min	9.86	23	P	Pn	23 03 24.1	+0.4
	baz=211						
SPIA	Saint Paul Isl	9.88	281	P	Pn	23 03 26.1	+2.1
	baz=85						
G17K	Kiwalik Mounta	9.89	339	P	Pn	23 03 24.5	+0.4
	baz=151						
DAWY	Dawson	9.89	35	P	Pn	23 03 23.4	-0.7
	baz=226						
G18K	Tagagawik	9.90	345	P	Pn	23 03 23.8	-0.5
	baz=158						
M30M	Minto, Yukon	9.91	46	P	Pn	23 03 24.4	0.0
	baz=240						
G19K	Purcell Mounta	9.94	349	Pn	Pn	23 03 25.1	+0.4
G19K	Purcell Mounta	9.94	349	P	Pn	23 03 24.7	-0.1
	baz=164						
WHY	Whitehorse	9.97	58	P	Pn	23 03 25.1	-0.2
	baz=254						
G21K	Allakaket	10.06	357	Pn	Pn	23 03 26.0	-0.5
G21K	Allakaket	10.06	357	P	Pn	23 03 26.3	-0.1
	baz=176						
NIKH	Nikolski High	10.23	257	P	Pn	23 03 31.2	+2.5
	baz=62						
G15K	Niukluk	10.26	331	P	Pn	23 03 30.2	+1.1
	baz=140						
G23K	Bananza Creek	10.29	5	P	Pn	23 03 29.4	-0.2
	baz=187						
P32M	Atlin	10.29	65	Pn	Pn	23 03 28.5	-1.2
P32M	Atlin	10.29	65	P	Pn	23 03 29.5	-0.2
	baz=261						
ANM	Nome	10.32	327	P	Pn	23 03 30.7	+0.7
	baz=135						
K29M	Barlow Dome	10.36	39	P	Pn	23 03 30.6	-0.1
	baz=232						
I27K	Kandik River	10.46	25	P	Pn	23 03 31.1	-0.9
	baz=214						
G24K	Hadweenzic Riv	10.47	11	P	Pn	23 03 32.0	-0.1
	baz=195						
J29N	Klondike Camp	10.53	35	P	Pn	23 03 32.7	-0.2
	baz=228						
U33K	Whale Pass	10.63	84	P	Pn	23 03 32.1	-2.2
	baz=281						
F19K	Shaleruckik Mo	10.68	348	P	Pn	23 03 33.9	-1.0
	baz=163						
G25K	Bearman Lake	10.69	13	P	Pn	23 03 35.1	+0.1
	baz=199						
F20K	Avaraart Lake	10.70	353	P	Pn	23 03 34.9	-0.3
	baz=169						
F18K	Selawik	10.71	344	P	Pn	23 03 35.6	+0.4
	baz=157						
M31M	Drury Creek, Y	10.73	51	P	Pn	23 03 35.0	-0.7
	baz=246						
I28M	Miner Creek	10.75	29	P	Pn	23 03 36.2	+0.2
	baz=219						
CRAG	Craig	10.77	88	P	Pn	23 03 35.0	-1.1
F21K	Alatna River	10.77	357	Pn	Pn	23 03 35.2	-0.9
F21K	Alatna River	10.77	357	P	Pn	23 03 35.8	-0.3
	baz=176						
P33M	Teslin, Yukon	10.85	62	P	Pn	23 03 37.0	-0.3
	baz=259						
Q32M	Nakina River	10.95	69	Pn	Pn	23 03 38.2	-0.7
Q32M	Nakina River	10.95	69	P	Pn	23 03 39.3	+0.4
	baz=266						
F15K	North Star Dit	10.97	332	P	Pn	23 03 39.4	+0.4
	baz=141						
H27K	Steamboat Moun	11.00	23	Pn	Pn	23 03 39.7	+0.3
H27K	Steamboat Moun	11.00	23	P	Pn	23 03 39.1	-0.3
	baz=213						
F22K	John River	11.04	0	P	Pn	23 03 39.5	-0.3
	baz=180						
FARO	Faro, Yukon	11.19	51	Pn	Pn	23 03 41.6	-0.3
FARO	Faro, Yukon	11.19	51	P	Pn	23 03 41.9	-0.1
	baz=248						
G26K	Porcupine Rive	11.20	17	Pn	Pn	23 03 41.8	-0.2
G26K	Porcupine Rive	11.20	17	P	Pn	23 03 41.7	-0.4
	baz=205						
E19K	Redstone River	11.23	350	P	Pn	23 03 42.3	-0.1
	baz=165						
J30M	Hart River	11.23	37	P	Pn	23 03 41.3	-1.3
	baz=232						
F24K	Squaw Lake	11.23	9	P	Pn	23 03 41.7	-0.8
	baz=192						
G27K	Doyon Strip	11.47	21	P	Pn	23 03 45.0	-0.8
	baz=211						
E17K	Hotham Inlet	11.51	341	P	Pn	23 03 45.9	-0.3
	baz=152						
S34M	Telegraph Cree	11.53	74	P	Pn	23 03 46.2	-0.4
	baz=273						
F25K	Christian Rive	11.54	13	P	Pn	23 03 46.1	-0.5
	baz=198						
E18K	Tukpahlearik C	11.62	344	P	Pn	23 03 47.4	-0.3
	baz=156						
I30M	Mount Dempster	11.63	35	P	Pn	23 03 47.8	-0.2
	baz=229						
V35K	Ketchikan	11.63	87	P	Pn	23 03 48.5	+0.5
	baz=285						
E23K	Chandalar	11.65	5	P	Pn	23 03 47.8	-0.5
	baz=187						
R33M	Jennings River	11.66	67	Pn	Pn	23 03 47.1	-1.3
R33M	Jennings River	11.66	67	P	Pn	23 03 48.4	-0.1
	baz=265						
E22K	Anaktuvuk Pass	11.67	1	Pn	Pn	23 03 48.8	+0.3
E22K	Anaktuvuk Pass	11.67	1	P	Pn	23 03 48.1	-0.4
	baz=181						
E24K	Your Creek	11.73	7	P	Pn	23 03 48.8	-0.6
	baz=190						
H29M	Whitestone	11.76	29	P	Pn	23 03 49.4	-0.3
	baz=221						
F26K	Sheenjek River	11.83	15	P	Pn	23 03 50.2	-0.5
	baz=202						
H02S2	DAWSON INLET T	11.86	98	T	T	23 15 54.1	
	SNR=5.0						
E20K	Nigu River	11.93	353	P	Pn	23 03 51.7	-0.3
	baz=169						
E21K	Killik River	12.00	357	P	Pn	23 03 52.6	-0.3
	baz=175						
E25K	Arctic Village	12.05	12	Pn	Pn	23 03 52.8	-0.8
E25K	Arctic Village	12.05	12	P	Pn	23 03 53.0	-0.6
	baz=198						
GAMB	Gambell	12.08	315	P	Pn	23 03 54.3	+0.3
	baz=118						
T35M	Bob Quinn	12.08	79	P	Pn	23 03 54.1	0.0
	baz=278						
TOLK	Toolik Lake Re	12.24	5	P	Pn	23 03 55.9	-0.3
	baz=187						
D17K	Noatak River	12.29	340	P	Pn	23 03 57.2	+0.3
	baz=150						
D19K	Kuna River	12.32	350	P	Pn	23 03 57.0	-0.4
	baz=164						
EPYK	Eagle Plains	12.32	30	P	Pn	23 03 57.2	-0.2
	baz=224						
D20K	Etivluk River	12.41	353	P	Pn	23 03 58.7	+0.2
	baz=168						
D22K	Ayikyak River	12.42	359	Pn	Pn	23 03 57.8	-0.8
D22K	Ayikyak River	12.42	359	P	Pn	23 03 59.0	+0.3
	baz=179						
D23K	Nanushuk River	12.52	3	P	Pn	23 03 59.2	-0.9
	baz=184						
F28M	Old Crow	12.52	22	P	Pn	23 03 59.4	-0.7
	baz=213						
H31M	Peel River	12.66	35	P	Pn	23 04 00.7	-1.2
	baz=231						
E27K	Coleen River	12.69	18	P	Pn	23 04 01.4	-0.9
	baz=208						
C21K	Knifeblade Rid	12.74	356	P	Pn	23 04 02.8	-0.3
	baz=173						
D24K	Happy Valley	12.78	6	P	Pn	23 04 03.9	+0.3
	baz=188						
C18K	Utukok River	12.84	345	P	Pn	23 04 04.2	-0.2
	baz=157						
G30M	tAoh Zraii Nji	12.90	29	P	Pn	23 04 04.8	-0.5
	baz=223						

C17K	DeLong Mountai	12.99	342	P	Pn	23 04 06.4	-0.1
	baz=152						
C19K	Lookout Ridge	13.06	348	Pn	Pn	23 04 07.2	-0.3
C19K	Lookout Ridge	13.06	348	P	Pn	23 04 07.1	-0.3
	baz=161						
D25K	Kavik River	13.12	9	P	Pn	23 04 08.4	+0.1
	baz=194						
B21K	Ikpikpuk River	13.20	356	P	Pn	23 04 09.2	-0.1
	baz=174						
C16K	Lisburne Hills	13.23	338	P	Pn	23 04 09.9	+0.3
	baz=146						
C24K	Franklin Bluff	13.35	5	P	Pn	23 04 11.2	-0.1
	baz=188						
C23K	Itkillik River	13.40	2	P	Pn	23 04 11.0	-1.0
	baz=184						
G31M	Satah River	13.41	32	P	Pn	23 04 12.1	0.0
	baz=228						
E28M	Babbage River	13.43	20	P	Pn	23 04 12.4	0.0
	baz=212						
F30M	Barrier River	13.48	28	P	Pn	23 04 13.1	-0.1
	baz=222						
B18K	Kokolik River	13.58	346	P	Pn	23 04 13.8	-0.7
	baz=157						
E29M	Blow River	13.59	23	P	Pn	23 04 14.3	-0.3
	baz=216						
C27K	Jago River	13.70	13	P	Pn	23 04 15.6	-0.4
	baz=200						
B20K	Meade River	13.72	353	P	Pn	23 04 16.4	0.0
	baz=168						
D27M	Malcolm River	13.74	17	P	Pn	23 04 15.3	-1.4
	baz=207						
C26K	Camden Bay	13.84	11	P	Pn	23 04 18.0	0.0
	baz=197						
B22K	Teshekpuk Lake	13.89	358	P	Pn	23 04 17.8	-0.9
	baz=177						
F31M	Tsiigehtchic	13.91	31	P	Pn	23 04 18.3	-0.7
	baz=227						
D28M	Stokes Point	14.20	20	P	Pn	23 04 23.1	+0.2
	baz=212						
A19K	Wainwright	14.28	348	P	Pn	23 04 24.5	+0.6
	baz=160						
INK	Inuvik	14.58	28	Pn	P	23 04 31.6	-2.8
	comp=N,0.2nm,0.3s,baz=210,slow=13,SNR=4.8						
INK	Inuvik	14.58	28		Pn	23 04 28.8	+0.8
INK	Inuvik	14.58	28	P	Pn	23 04 27.5	-0.6
	baz=225						
A22K	Sinclair Lake	14.60	356	P	Pn	23 04 28.5	+0.2
	baz=174						
TOAD	Toad River Com	14.60	70	P	Pn	23 04 28.9	+0.4
	baz=273						
A21K	Barrow	14.99	355	P	Pn	23 04 33.8	+0.2
	baz=170						
WRGLY	Wrigley	15.84	53	P	Pn	23 04 44.8	+0.1
	baz=258						
C36M	Paulatuk	17.92	33		Pn	23 05 10.9	+0.1
C36M	Paulatuk	17.92	33	P	P	23 05 11.4	0.0
	baz=238						
A36M	Sachs Harbour	19.16	26		Pn	23 05 25.4	-0.5
A36M	Sachs Harbour	19.16	26	P	Pn	23 05 26.0	+0.1
	baz=230						
YKAW3	Yellowknife Wh	19.79	57	P	Pn	23 05 32.4	-1.2
YKA	Yellowknife Ar	19.79	57	P	Pn	23 05 33.1	-0.4
	comp=N,0.2nm,0.3s,baz=272,slow=9.3,SNR=13						
YKA				PcP	PcP	23 09 48.1	-0.9
	comp=N,0.3nm,0.6s,baz=276,slow=2.5,SNR=3.5						
	comp=N,1.4nm,0.9s						
YKA	Yellowknife Ar	19.79	57	P	P	23 05 32.1	+0.2
BILL	Bilibino	21.97	318		P	23 05 54.5	-0.9
BILL				IAmb	IAmb	23 06 05.5	
	comp=Z,22nm,1.1s						
JTMT	Jette	24.62	95	P	P	23 06 22.5	+0.3
SEY	Seymchan	27.84	306	P	P	23 06 50.8	-0.2
	comp=Z,1.9nm,0.8s,baz=84,slow=13,SNR=2.2						
	comp=Z,1.9nm,0.8s						
PETK	Petropavlovsk-	28.52	285	P	P	23 06 57.3	+0.2
	comp=Z,2.2nm,0.6s,baz=71,slow=12,SNR=5.0						
	comp=Z,2.2nm,0.6s						
PETK	Petropavlovsk-	28.52	285	P	P	23 06 56.3	-0.8
NVAR	Mina Array Bea	28.80	114	P	P	23 07 02.3	+2.4
	comp=Z,1.9nm,0.7s,baz=310,slow=9.0,SNR=6.8						
	comp=Z,1.9nm,0.7s						
NVAR	Mina Array Bea	28.80	114	P	P	23 06 57.1	-2.8
MA2	Magadan	29.52	300	P	P	23 07 07.2	+1.3
	comp=Z,7.4nm,0.9s,baz=147,slow=22,SNR=1.8						
	comp=Z,7.4nm,0.9s						
PDAR	Pinedale Array	30.33	99	P	P	23 07 15.3	+1.8
	comp=Z,1.0nm,0.6s,baz=312,slow=5.1,SNR=12						
	comp=Z,1.0nm,0.6s						
PDAR	Pinedale Array	30.33	99	P	P	23 07 13.9	+0.4
BSUT	Blindstream Ca	31.21	103	P	P	23 07 20.1	-1.3
BSUT				IAmb	IAmb	23 07 25.9	
	comp=Z,7.3nm,1.4s						
LRMC	Laurel Mtn Rad	31.41	117	P	P	23 07 22.3	-0.6
LRMC				IAmb	IAmb	23 07 26.2	
	comp=Z,3.9nm,0.8s						
ULM	Lac du Bonnet	33.37	76	P	P	23 07 41.6	+1.8
	comp=Z,2.4nm,0.8s,baz=310,slow=6.0,SNR=3.1						
	comp=Z,2.4nm,0.8s						
AGMN	Agassiz Nation	34.47	79		P	23 07 49.2	-0.2
AGMN				IAmb	IAmb	23 07 51.8	
	comp=Z,8.8nm,0.8s						
YAK	Yakutsk	38.00	311	P	P	23 08 19.2	-0.1
	comp=Z,6.0nm,0.4s,baz=37,slow=6.4,SNR=4.9						
	comp=Z,6.0nm,0.4s						
YAK	Yakutsk	38.00	311	P	P	23 08 19.0	-0.4
R40A	Maddies Statio	42.96	89	P	P	23 09 00.7	+0.1
TXAR	Lajitas Array	43.46	108	P	P	23 09 07.0	+2.1
	comp=Z,1.4nm,0.8s,baz=310,slow=5.9,SNR=12						
TXAR				PcP	PcP	23 10 53.4	+0.6
	comp=Z,0.7nm,0.8s,baz=288,slow=0.7,SNR=5.1						
	comp=Z,1.4nm,0.8s						
TXAR	Lajitas Array	43.46	108	P	P	23 09 05.5	+0.6
SCHQ	Schefferville	45.22	54	P	P	23 09 19.2	+0.6
	comp=Z,4.1nm,0.9s,baz=287,slow=6.9,SNR=5.4						
	comp=Z,4.1nm,0.9s						
SPITS	Spitsbergen Ar	45.38	3	P	P	23 09 20.0	+0.4
	comp=Z,0.9nm,0.4s,baz=350,slow=3.4,SNR=5.7						
	comp=Z,0.9nm,0.4s						
NRIK	Noril'sk	47.22	335	P	P	23 09 34.4	+0.3
	comp=Z,1.6nm,0.5s,baz=24,slow=6.5,SNR=4.3						
	comp=Z,1.6nm,0.5s						
NRIK	Noril'sk	47.22	335		P	23 09 34.4	+0.3
NRIK				IAmb	IAmb	23 09 45.2	
	comp=Z,4.6nm,0.8s						
USRK	Ussuriysk Ar.	47.44	289	P	P	23 09 37.2	+1.1
	comp=Z,2.2nm,0.6s,baz=55,slow=9.7,SNR=1.9						
	comp=Z,2.2nm,0.6s						
H11N2	WAKE ISLAND Hy	47.60	237	T	T	00 00 45.3	
	baz=30						
H11N3	WAKE ISLAND Hy	47.60	237	T	T	00 00 44.0	
	baz=30						
H11N1	WAKE ISLAND Hy	47.62	237	T	T	00 00 46.1	
	baz=30						
H11S1	WAKE ISLAND Hy	48.75	236	T	T	00 02 08.3	
	baz=29,slow=74						
H11S2	WAKE ISLAND Hy	48.76	236	T	T	00 02 07.6	
	baz=29,slow=74						
H11S3	WAKE ISLAND Hy	48.77	236	T	T	00 02 08.1	
	baz=29						
MJAR	Matsushiro Arr	49.50	277	P	P	23 09 54.2	+2.1
	comp=Z,0.4nm,0.4s,baz=42,slow=5.7,SNR=4.3						
	comp=Z,0.4nm,0.4s						
HILR	Hailar Array B	49.89	302	P	P	23 09 57.2	+2.2
	comp=Z,0.3nm,0.3s,baz=63,slow=9.9,SNR=1.2						
	comp=Z,0.3nm,0.3s						
ARCES	ARCESS Array B	54.25	1	P	P	23 10 26.9	-0.1
	comp=Z,1.6nm,0.7s,baz=10,slow=7.4,SNR=8.1						
	comp=Z,1.6nm,0.7s						
ARCES	ARCESS Array B	54.25	1	P	P	23 10 27.2	+0.1
KSRS	Korea Array	54.41	286	P	P	23 10 30.8	+2.1
	comp=Z,0.7nm,0.5s,baz=46,slow=8.9,SNR=4.3						
	comp=Z,0.7nm,0.5s						
SONM	Songino Array	57.21	308	P	P	23 10 49.9	+1.1
	comp=Z,1.8nm,0.7s,baz=46,slow=6.6,SNR=11						
	comp=Z,1.8nm,0.7s						
SONM	Songino Array	57.21	308	P	P	23 10 49.8	+1.0
SONM				IAmb	IAmb	23 10 58.1	
	comp=Z,5.3nm,0.8s						
ZAA0	Zalesovo Array	60.45	325	P	P	23 11 11.2	+0.2
ZAA0				IAmb	IAmb	23 11 19.5	
	comp=Z,2.6nm,0.7s						
ZALV	Zalesovo Beam	60.45	325	P	P	23 11 11.2	+0.2
	comp=Z,1.5nm,0.7s,baz=35,slow=5.4,SNR=6.0						
	comp=Z,1.5nm,0.7s						
ZALV	Zalesovo Beam	60.45	325		P	23 11 11.1	+0.1
NC405	NORSAR Array S	62.04	9	P	P	23 11 22.3	+0.6
NOA	NORSAR Array B	62.07	9	P	P	23 11 22.1	+0.2
	comp=Z,0.8nm,0.6s,baz=350,slow=6.7,SNR=5.3						
	comp=Z,0.8nm,0.6s						
FINES	FINESS Array B	62.38	1	P	P	23 11 24.0	+0.1
	comp=Z,1.9nm,0.8s,baz=358,slow=6.7,SNR=7.1						
	comp=Z,1.9nm,0.8s						
FINES	FINESS Array B	62.38	1	P	P	23 11 24.3	+0.4
HFS	Hagfors	63.17	8	P	P	23 11 29.8	+0.6
	comp=Z,1.5nm,0.5s,baz=35,slow=3.6,SNR=15						
	comp=Z,1.5nm,0.5s						
ARTI	Arti	64.76	342	P	P	23 11 39.6	-0.1
ARTI				IAmb	IAmb	23 11 49.1	
	comp=Z,5.2nm,0.7s						
KURK	Kurchatov	65.16	327	P	P	23 11 42.3	0.0
KURK				IAmb	IAmb	23 11 51.4	
	comp=Z,2.4nm,0.8s						
KURBB	Kurchatov Arra	65.27	327	P	P	23 11 43.4	+0.3
	comp=Z,1.8nm,1.0s,baz=28,slow=6.7,SNR=5.1						
	comp=Z,1.8nm,1.0s						
BORK	Borovoye	65.36	333	P	P	23 11 43.7	+0.1
BORK				IAmb	IAmb	23 11 53.1	
	comp=Z,1.6nm,0.7s						
BVAR	Borovoye Array	65.36	333	P	P	23 11 44.2	+0.5
	comp=Z,1.6nm,0.8s,baz=38,slow=7.5,SNR=7.3						
	comp=Z,1.6nm,0.8s						
EKA	Eskdalemuir Ar	65.72	19	P	P	23 11 46.5	+0.6
	comp=Z,0.7nm,0.6s,baz=333,slow=5.8,SNR=5.6						
	comp=Z,0.7nm,0.6s						
MK31	Makanchi Array	67.43	323	P	P	23 11 56.9	-0.1
MK31				IAmb	IAmb	23 12 01.6	
	comp=Z,6.6nm,1.2s						
MKAR	Makanchi Array	67.43	323	P	P	23 11 57.1	+0.1
	comp=Z,1.0nm,0.7s,baz=31,slow=6.2,SNR=14						
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	67.43	323	P	P	23 11 57.3	+0.3
MAKZ	Makanchi	67.52	323	P	P	23 11 58.1	+0.5
AB31	Akbulak array	71.25	338	P	P	23 12 20.8	+0.2
ABKAR	Akbulak array	71.25	338	P	P	23 12 20.7	+0.1
AKASG	Malin Array Be	73.15	359	P	P	23 12 31.6	-0.2
	comp=Z,0.6nm,0.4s,baz=5.2,slow=6.0,SNR=3.3						
	comp=Z,0.6nm,0.4s						
GEC2	GERESS Array S	74.36	10	P	P	23 12 40.0	+0.8
GEC2				IAmb	IAmb	23 13 03.1	
	comp=Z,7.9nm,1.4s						
GERES	GERESS Array B	74.36	10	P	P	23 12 38.2	-0.9
	comp=Z,0.3nm,0.6s,baz=15,slow=5.5,SNR=5.3						
	comp=Z,0.3nm,0.6s						
KKAR	Karatay Array	74.42	329	P	P	23 12 39.7	+0.2
KBZ	Khabaz	79.32	349	P	P	23 13 06.5	-0.5
	comp=Z,1.2nm,0.9s,baz=348,slow=11,SNR=2.9						
	comp=Z,1.2nm,0.9s						
ESDC	Sonseca Array	80.49	24	P	P	23 13 14.1	+0.6
	comp=Z,0.7nm,0.7s,baz=339,slow=6.6,SNR=4.1						
	comp=Z,0.7nm,0.7s						
BRTR	Keskin Array B	84.00	355	P	P	23 13 31.2	-0.8
	comp=Z,0.4nm,0.6s,baz=346,slow=2.4,SNR=5.3						
	comp=Z,0.4nm,0.6s						
BRTR	Keskin Array B	84.00	355	P	P	23 13 32.0	0.0
CMAR	Chiang Mai Arr	84.70	296	P	P	23 13 36.2	+0.5
	comp=Z,2.1nm,0.3s,baz=32,slow=5.4,SNR=4.9						
	comp=Z,2.1nm,0.3s						
CMAR	Chiang Mai Arr	84.70	296	P	P	23 13 35.3	-0.5
H03N2	Juan Fernandez	108.87	122	T	T	01 17 35.8	
	baz=323,slow=77,SNR=6.2						
H03N1	Juan Fernandez	108.88	122	T	T	01 17 36.5	
	baz=323,slow=77,SNR=7.7						
H03N3	Juan Fernandez	108.89	122	T	T	01 17 34.0	
	baz=323,slow=77,SNR=11						
QSPA	South Pole Qui	146.30	180	PKPbc	PKPab	23 20 41.0	-0.8
	comp=Z,5.0nm,0.8s,baz=65,slow=0.6,SNR=18						
QSPA	South Pole Qui	146.30	180		PKPab	23 20 41.1	-0.7
BOSA	Boshof	152.06	5	PKPbc	PKiKP	23 20 57.6	+0.4
	comp=Z,3.9nm,1.0s,baz=337,slow=15,SNR=2.3						
BOSA	Boshof	152.06	5	PKPbc	PKiKP	23 20 57.0	-0.1

AEIC ***21*** *23:05:22.0±1.1, 56°.40N±0°.05×152°.18W±0°.09, h3km±7km, Error ellipse: s-maj=8.6km s-min=6.2km az=222.0*

NEIC 21 23:05:19.6±1.7**, 56°.48N**±0°.05×**152°.2W**±0°.1**, h11**km±9km, **ML2.3**/12, **ML2.5**(AEIC)**, Error ellipse: s-maj=11.2km s-min=2.8km az=54.0, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHAK	Old Harbor	0.97	321		Pg	23 05 37.5	-0.7
OHAK				IAML		23 06 01.2	
	comp=N,64nm,1.1s						
OHAK				IAML		23 06 08.4	
	comp=E,63nm,1.0s						
OHAK	Old Harbor	0.97	321		Sg	23 05 50.8	-0.1
KDAK	Kodiak Island	1.32	350		Pn	23 05 43.4	-0.6
R18K	Karluk	1.66	312		Sn	23 06 09.2	-0.7
R18K	Karluk	1.66	312		Pn	23 05 48.7	+0.1
R18K				IAML		23 06 46.2	
	comp=N,72nm,0.6s						
SYI	Shuyak Island	2.14	357	Pn	Pn	23 05 55.8	+0.6
SYI				IAML		23 07 14.9	
	comp=E,24nm,1.0s						
KAWH	Katmai	2.38	324		Pn	23 05 58.5	-0.1
KAKN	Katmai Knife C	2.40	320		Pn	23 05 59.1	+0.1
ACHA	Angle Creek He	2.44	317		Pn	23 05 58.8	-0.6
ACHA				IAML		23 06 58.7	
	comp=N,12nm,1.1s						
PLK3	Peulik 3	2.55	300		Pn	23 06 00.8	0.0
PLK4	Peulik 4	2.57	298	Pn	Pn	23 06 00.2	-0.9
CNTC	Contact Creek	2.69	313		Pn	23 06 03.1	+0.2
CNPM	China Poot	3.09	9		Pn	23 06 08.1	-0.2
P18K	Big Mountain,	3.34	332		Pn	23 06 12.2	+0.4
P17K	Kvichak River	3.55	322	Pn	Pn	23 06 15.2	+0.6
IVE	Iliamna Volcan	3.57	353		Pn	23 06 15.7	+0.7
RED	Redoubt Volcan	3.96	356	Pn	Pn	23 06 20.5	+0.2
P16K	Nushagak River	4.04	312	Pn	Pn	23 06 21.1	-0.1
SLKM	Skilak Lake	4.16	13		Pn	23 06 23.9	+0.9
P23K	Montague Islan	4.33	34	Pn	Pn	23 06 24.6	-0.7
N19K	Bonanza Creek	4.51	345	Pn	Pn	23 06 28.3	+0.4
PWL	Port Wells	4.82	23	Pn	Pn	23 06 31.4	-0.7
HIN	Hinchinbrook I	4.92	35	Pn	Pn	23 06 32.6	-0.9
FID	Port Fidalgo	5.21	32	Pn	Pn	23 06 36.2	-1.2
KAIM	Kayak Island	5.36	47	Pn	Pn	23 06 39.6	+0.2
M17K	Holitna River	5.64	333	Pn	Pn	23 06 44.5	+1.3
M16K	Timber Creek	5.76	325	Pn	Pn	23 06 46.1	+1.1

WEL 21 23:07:06.6±1.0**, 35°S**±21°×**18°0E**±3°9**, h456**km±16km, **M3.8**/6, **ML3.5**/6, **MLv3.8**/6**, Error ellipse: s-maj=55.8km s-min=12.8km az=116.5, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.04	200	P	P	23 08 12.1	-2.2
MXZ				S	S	23 09 07.6	-1.9
HAZ	Te Kaha	3.38	205	P	P	23 08 13.7	-3.2
HAZ				S	S	23 09 12.7	-1.5
PKGZ	Pakihiroa	3.39	201	P	P	23 08 13.5	-3.5
PKGZ				S	S	23 09 13.2	-1.2
PUZ	Puketiti	3.53	198	P	P	23 08 18.3	+0.2
PUZ				S	S	23 09 15.9	-0.6
RUGZ	Raukumara Rang	3.61	205	P	P	23 08 17.9	-1.0
RUGZ				S	S	23 09 18.9	+1.1
TWGZ	Tauwhareparae	3.71	200	P	P	23 08 20.9	+1.3
TWGZ				S	S	23 09 20.9	+1.8
CNGZ	Carnagh Statio	3.94	196	P	P	23 08 21.5	0.0
TKGZ	Te Karaka	3.99	200	P	P	23 08 21.0	-0.9
TKGZ				S	S	23 09 27.1	+3.7
MWZ	Matawai	3.99	204	P	P	23 08 21.3	-0.8
MWZ				S	S	23 09 24.6	+1.1
URZ	Urewera	4.08	209	P	P	23 08 21.0	-1.7
URZ				S	S	23 09 25.1	+0.4
RIGZ	Rimuhau	4.26	200	P	P	23 08 26.5	+2.1
RIGZ				S	S	23 09 31.0	+3.2
RTZ	Ruatahuna	4.44	208	P	P	23 08 26.0	0.0
RTZ				S	S	23 09 33.7	+2.9
ETVZ	East Tongariro	5.41	214	P	P	23 08 35.7	+0.4
GLKZ	Green Lake	5.82	22	P	P	23 08 42.8	+3.4

NEIC ***21*** *23:14:53.4±1.7, 18°.99N±0°.04×67°.55W±0°.04, h16km±4km, mb4.2/10, ML3.7/30, ML3.6/15(RSPR), Error ellipse: s-maj=6.3km s-min=4.3km az=218.0*

SDD ***21*** *23:14:53.3±3.5, 19°.05N×67°.62W, h20km±123km, MD3.9, ML3.7, MW3.9, Presumed earthquake*

OSPL ***21*** *23:14:55.6±2.4, 19°.05N×67°.39W, h0km±23km, ML3.3, Presumed earthquake*

RSPR ***21*** *23:14:56.1, 18°.89N×67°.65W, h23km±31km, MD3.4/15*

ISC 21 23:14:51.7±1.2**, 18°.98N**±0°.04×**67°.61W**±0°.02**, h5**km±9km**, n87, σ0s.71**/112**, mb4.3/4, 17C-20D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.61	168		Pb	23 15 04.8	0.0
IDE					Sb	23 15 13.3	-0.4
IDE	Isla Desecheo	0.61	168	⇓iP	Pb	23 15 04.8	0.0
IDE	Isla Desecheo	0.61	168	eS	Sb	23 15 13.3	-0.4
AGPR	Aguadilla, PR	0.70	137		Pb	23 15 06.5	+0.3
AGPR				Sg	Sb	23 15 16.7	+0.5
AGPR				IAML		23 15 17.8	
	3µm,0.5s						
AGPR	Aguadilla, PR	0.70	137	⇑iP	Pb	23 15 06.6	+0.3
AGPR	Aguadilla, PR	0.70	137	eS	Sb	23 15 16.0	-0.2
AGPR	Aguadilla, PR	0.70	137	⇑ePg	Pb	23 15 06.6	+0.3
AGPR				⇑eSg	Sb	23 15 16.1	-0.2
AGPR				IAML		23 15 18.0	
	comp=N,2µm,0.2s						
AGPR	Aguadilla, PR	0.70	137	i P	Pb	23 15 06.6	+0.3
AGPR				eS	Sb	23 15 16.1	-0.2
AGPR				IAML		23 15 20.1	
	comp=Z,1µm,0.2s						
PCDR	Punta Cana, DR	0.87	238	⇑ePg	Pg	23 15 08.7	+0.2
PCDR				⇓eSg	Sg	23 15 19.4	-0.3
PCDR				IAML		23 15 29.1	
	comp=N,2µm,0.8s						
PRSN	Puerto Rico Se	0.88	150		Pb	23 15 09.9	+0.5
PRSN					Sb	23 15 21.4	-0.1
PRSN	Puerto Rico Se	0.88	150	Pg	Pg	23 15 09.4	+0.7
PRSN				IAML		23 15 32.4	
	comp=N,6µm,0.2s						
PRSN				IAML		23 15 34.2	
	comp=N,7µm,0.3s						
PRSN	Puerto Rico Se	0.88	150	⇓iP	Pb	23 15 09.9	+0.5
PRSN	Puerto Rico Se	0.88	150	eS	Sb	23 15 21.4	-0.1
PRSN	Puerto Rico Se	0.88	150	⇑ePg	Pb	23 15 09.8	+0.3
PRSN				IAML		23 15 34.2	
	comp=N,4µm,0.3s						
LSP	Las Mesas	0.94	148		Pb	23 15 10.9	+0.3
LSP					Sn	23 15 25.8	+0.3
LSP	Las Mesas	0.94	148	⇓eP	Pb	23 15 10.9	+0.3
LSP	Las Mesas	0.94	148	eS	Sn	23 15 25.8	+0.3
AOPR	Arecibo Observ	1.03	128		Pg	23 15 11.7	+0.2
AOPR					Sg	23 15 25.2	+0.4
AOPR				IAML		23 15 27.5	
	comp=E,2µm,0.4s						
AOPR				IAML		23 15 39.6	
	comp=N,2µm,0.5s						
AOPR	Arecibo Observ	1.03	128	⇑iP	Pg	23 15 12.0	+0.5
AOPR	Arecibo Observ	1.03	128	eS	Sg	23 15 25.4	+0.6
AOPR	Arecibo Observ	1.03	128	⇑ePg	Pg	23 15 11.7	+0.2
AOPR				⇑eSg	Sn	23 15 28.1	+0.5
AOPR				IAML		23 15 33.1	
	comp=N,2µm,0.2s						
CRPR	Cabo Rojo, PR	1.08	154		Pg	23 15 12.2	-0.3
CRPR					Sn	23 15 29.3	+0.5
CRPR	Cabo Rojo, PR	1.08	154	IAML		23 15 31.8	
	comp=N,3µm,0.5s						
CRPR				IAML		23 15 32.7	
	comp=N,2µm,0.7s						
CRPR	Cabo Rojo, PR	1.08	154	⇑eP	Pg	23 15 12.9	+0.4
CRPR	Cabo Rojo, PR	1.08	154	eS	Sn	23 15 29.4	+0.6
CRPR	Cabo Rojo, PR	1.08	154	⇑ePg	Pg	23 15 12.2	-0.3
CRPR				i Sg	Sn	23 15 28.9	+0.1
CRPR				IAML		23 15 32.3	
	comp=N,2µm,0.4s						
CRPR	Cabo Rojo, PR	1.08	154	i P	Pg	23 15 13.1	+0.6
CRPR				eS	Sn	23 15 29.3	+0.5
CRPR				IAML		23 15 32.3	
	comp=Z,2µm,0.3s						
UUPR	Utuado, UPR, P	1.11	131		Pb	23 15 13.3	-0.1
UUPR					Sb	23 15 28.6	+0.4
UUPR	Utuado, UPR, P	1.11	131		Pb	23 15 13.0	-0.4
UUPR				Sn	Sn	23 15 29.5	-0.1
UUPR				IAML		23 15 33.5	
	comp=Z,10µm,0.4s						
UUPR				IAML		23 15 36.2	
	comp=Z,15µm,0.4s						
UUPR	Utuado, UPR, P	1.11	131	⇓iP	Pb	23 15 13.3	-0.1
UUPR	Utuado, UPR, P	1.11	131	eS	Sb	23 15 28.6	+0.4
HIDR	Higuey Centro	1.12	250	⇑ePg	Pb	23 15 12.2	-1.4
HIDR				⇓eSg	Sg	23 15 26.6	-1.1
HIDR				IAML		23 15 31.4	
	comp=N,2µm,0.2s						
EMPR	Esperanza - Ma	1.14	116		Pn	23 15 14.6	+0.3
EMPR					Sn	23 15 30.8	+0.5
EMPR	Esperanza - Ma	1.14	116		Pb	23 15 13.8	-0.1
EMPR				IAML		23 15 36.0	
	comp=N,2µm,0.5s						
EMPR				IAML		23 15 40.2	
	comp=N,1µm,0.7s						
EMPR	Esperanza - Ma	1.14	116	⇓iP	Pn	23 15 14.6	+0.3
EMPR	Esperanza - Ma	1.14	116	eS	Sn	23 15 30.8	+0.5
MLPR	Magueyes Islan	1.14	152	⇓eP	Pb	23 15 13.9	0.0
MLPR	Magueyes Islan	1.14	152	eS	Sn	23 15 31.1	+0.8
MLPR	Magueyes Islan	1.14	152	⇑ePg	Pb	23 15 13.3	-0.6
MLPR				⇓eSg	Sn	23 15 32.7	+2.4
MLPR				IAML		23 15 33.5	
	comp=N,695nm,0.4s						
GBPR	Guanica, Bosqu	1.22	145		Pn	23 15 15.6	+0.2
GBPR					Sb	23 15 30.8	-0.4
GBPR	Guanica, Bosqu	1.22	145	⇓iP	Pn	23 15 15.6	+0.2
GBPR	Guanica, Bosqu	1.22	145	eS	Sb	23 15 30.8	-0.4
CELP	Cerrillos	1.33	133	Pn	Pn	23 15 16.6	-0.3
CELP				IAML		23 15 42.0	
	comp=N,1µm,0.4s						
CELP				IAML		23 15 44.0	
	comp=N,1µm,0.7s						
OBIP	Obispado Ponce	1.33	134		Pn	23 15 16.6	-0.4
OBIP					Sb	23 15 33.5	-1.1
OBIP				IAML		23 15 39.3	
	comp=N,872nm,0.5s						
OBIP	Obispado Ponce	1.33	134	⇓iP	Pn	23 15 16.8	-0.2
OBIP	Obispado Ponce	1.33	134	eS	Sb	23 15 33.7	-0.9
ECPR	Experimental S	1.35	119	Pn	Pn	23 15 16.7	-0.6
ECPR				IAML		23 15 41.0	
	comp=N,2µm,0.2s						
ECPR				IAML		23 15 42.9	
	comp=N,2µm,0.2s						
ECPR	Experimental S	1.35	119	⇓iP	Pn	23 15 16.9	-0.3
ECPR	Experimental S	1.35	119	eS	Sb	23 15 33.7	-1.4
MIDR	Miches	1.36	270	⇑ePg	Pb	23 15 17.9	+0.2
MIDR				⇓iSg	Sb	23 15 35.0	-0.4
MIDR				IAML		23 15 39.1	
	comp=N,556nm,0.4s						
SMDR	Samana, DR	1.52	282	⇓iP	Pn	23 15 19.6	0.0
SMDR	Samana, DR	1.52	282	eS	Sb	23 15 40.5	+0.4
SMDR	Samana, DR	1.52	282	⇓ePg	Pn	23 15 19.5	-0.1
SMDR				⇑eSg	Sg	23 15 41.0	+0.2
SMDR				IAML		23 15 43.2	
	comp=N,1µm,0.9s						
GCPR	Guaynabo City	1.59	115		Pn	23 15 19.9	-0.6
GCPR	Guaynabo City	1.59	115		Sn	23 15 40.9	-0.6
GCPR	Guaynabo City	1.59	115	⇓eP	Pn	23 15 20.6	+0.1
GCPR	Guaynabo City	1.59	115	eS	Sn	23 15 40.9	-0.6
SJG	San Juan	1.63	122		Pn	23 15 20.7	-0.4
SJG				IAML		23 15 46.6	
	comp=N,687nm,0.5s						
SJG				IAML		23 15 51.5	
	comp=N,697nm,0.5s						
SJG	San Juan	1.63	122	⇑iP	Pn	23 15 21.3	+0.2
SJG	San Juan	1.63	122	eS	Sn	23 15 42.3	-0.1
SJG	San Juan	1.63	122	⇑ePg	Pn	23 15 20.7	-0.4
SJG				⇑eSg	Sb	23 15 44.2	+1.0
SJG	San Juan	1.63	122	i P	Pn	23 15 21.0	-0.1
SJG				eS	Sn	23 15 42.3	-0.2
SJG				IAML		23 15 46.5	
	comp=Z,374nm,0.3s						
DR12	Loma Pena Alta	1.69	264		Pn	23 15 21.9	-0.1
HATOM	Hato Mayor del	1.69	264	⇑ePg	Pn	23 15 22.3	+0.3
HATOM				⇓eSg	Sg	23 15 46.0	-0.1
HATOM				IAML		23 15 49.0	
	comp=N,530nm,0.3s						
HUMP	Col San Antoni	1.87	116		Pn	23 15 24.2	-0.1
HUMP	Col San Antoni	1.87	116	⇑eP	Pn	23 15 24.5	+0.2
HUMP	Col San Antoni	1.87	116	eS	Sb	23 15 50.2	+0.3
SDD	Santo Domingo	2.25	257	Pn	Pn	23 15 30.5	+1.0
SDD				IAML		23 16 06.7	
	comp=N,323nm,1.0s						
SDD	Santo Domingo	2.25	257	ePg	Pn	23 15 29.8	+0.3
SDD				⇓eSg	Sb	23 16 01.1	+0.3
SDD				IAML		23 16 12.4	
	comp=N,104nm,0.8s						

DR08	Loma La Naviza	2.28	270	⇓ePg	Pb	23 15 32.2	-1.3
DR08				⇓eSg	Sb	23 16 00.8	-1.3
DR08				IAML		23 16 08.8	
	comp=N,13µm,0.2s						
SC01	Santiago de lo	2.98	279		Pn	23 15 41.3	+1.6
SC01	Santiago de lo	2.98	279	iP	Pb	23 15 45.8	+0.5
SDDR	Presa de Saban	3.48	271		Pn	23 15 48.9	+2.3
SDDR				IAML		23 16 48.8	
	comp=N,282nm,0.6s						
SDDR	Presa de Saban	3.48	271	⇑eP	Pn	23 15 49.7	+3.1
BBSR	BB Station	13.59	11	Pn	Pn	23 18 04.0	-1.2
RUSC	La Rusia	14.06	203	Pn	Pn	23 18 11.6	-0.6
BOAV	Boa Vista	17.89	156	P	Pn	23 19 00.9	-0.5
V61A	Roper	18.52	336	P	Pn	23 19 09.3	+0.2
V58A	Windy Hill, Pi	19.59	331	P	P	23 19 20.2	-0.5
V58A				IAmb	IAmb	23 19 29.4	
	comp=Z,11nm,1.2s						
T57A	Hurt	20.65	333	P	P	23 19 32.1	-0.1
T57A				IAmb	IAmb	23 19 36.1	
	comp=Z,13nm,1.3s						
R58B	Mineral	20.93	337	P	P	23 19 36.3	+1.0
S57A	Dark Hollow, R	21.17	334	P	P	23 19 38.5	+0.6
S57A				IAmb	IAmb	23 20 00.2	
	comp=Z,10nm,1.3s						
R55A	Marlinton	22.10	333	P	P	23 19 48.7	+0.7
Q56A	Snyder Ridge,	22.37	336	P	P	23 19 52.0	+1.3
Q56A				IAmb	IAmb	23 20 02.3	
	comp=Z,16nm,1.2s						
UCCT	U. Connecticut	23.08	351	P	P	23 19 58.6	+0.4
UCCT				IAmb	IAmb	23 20 05.6	
	comp=Z,9.0nm,1.0s						
KSCT	Kent School, K	23.22	349	P	P	23 20 00.6	+1.0
KSCT				IAmb	IAmb	23 20 02.5	
	comp=Z,11nm,1.2s						
TXAR	Lajitas Array	34.35	294	P	P	23 21 39.6	-0.2

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*NEIC **21** 23:24:22.3±2.1, 56°.33N±0°.06×152°.26W±0°.08, h10^{km}±1^{km}, ML3.4/62, ML3.4(AEIC), Error ellipse: s-maj=10.0km s-min=7.3km az=331.0*

*AEIC **21** 23:24:24.2±1.8, 56°.19N±0°.04×151°.97W±0°.09, h3^{km}±7^{km}, Error ellipse: s-maj=8.1km s-min=4.9km az=122.0*

*IDC **21** 23:24:25.4±1.1, 56°.83N×153°.00W, h0^{km}, mb3.7/8, mbtmp3.6/10, ML3.0/2, Error ellipse: s-maj=25.4km s-min=22.0km az=109.0*

ISC 21 23:24:23.7±0.9**, 56°.50N**±0°.08×**152°.32W**±0°.06**, h10**^{km}**, n104,** σ**1^{s}27**/103**, mb3.7**/8**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHAK	Old Harbor	0.90	324		Pg	23 24 42.2	+1.3
OHAK				IAML		23 25 11.2	
	comp=N,902nm,0.9s						
OHAK				IAML		23 25 14.3	
	comp=E,1µm,1.0s						
SII	Sitkinak Islan	1.03	274		Pn	23 24 43.8	-0.4
KDAK	Kodiak Island	1.29	354	Pn	Pn	23 24 47.2	-0.6
	comp=E,1.5nm,0.3s,baz=195,slow=8.3,SNR=27						
KDAK				Sn	Sn	23 24 58.6	-6.6
	comp=E,29nm,0.3s,baz=172,slow=19,SNR=20						
KDAK	Kodiak Island	1.29	354	Pn	Pn	23 24 47.0	-0.8
KDAK				IAML		23 25 33.6	
	comp=E,429nm,1.1s						
CHIR	Chirikof Islan	1.97	251		Pn	23 24 56.2	-0.9
CHIR					Sn	23 25 19.1	-2.6
CHIR				IAML		23 25 26.6	
	comp=N,300nm,1.4s						
SYI	Shuyak Island	2.12	359	Pn	Pn	23 24 59.8	+0.7
CAHL	Cahill	2.25	315		Pn	23 25 02.2	+1.3
CAHL					Pb	23 25 02.8	-1.6
KAWH	Katmai	2.32	326		Pn	23 25 03.6	+1.7
KAHG	Katmai Hook Gl	2.33	330		Pn	23 25 04.8	+2.7
KAHG					Pb	23 25 05.4	-0.5
KAKN	Katmai Knife C	2.33	322		Pn	23 25 03.8	+1.6
KJL	Kejulik	2.35	313		Pn	23 25 04.4	+1.9
ACHA	Angle Creek He	2.37	318		Pn	23 25 03.9	+1.2
KAPH	Katmai Pasha	2.37	333		Pb	23 25 05.9	-0.5
KARR	Katmai Rainbow	2.38	328		Pn	23 25 05.1	+2.3
KARR					Pb	23 25 05.9	-0.7
KABU	Katmai Buttres	2.39	319		Pn	23 25 05.2	+2.2
ANCK	Angle Creek	2.42	316		Pn	23 25 05.5	+2.1
PLK3	Peulik 3	2.46	301		Pn	23 25 05.0	+1.2
PLK4	Peulik 4	2.48	299		Pn	23 25 05.1	+0.9
Q19K	Cape Douglas,	2.54	344		Pn	23 25 06.2	+1.3
KAHC	Katmai Hardscr	2.59	327		Pn	23 25 07.5	+1.7
CNTC	Contact Creek	2.62	314		Pn	23 25 07.7	+1.6
CNTC					Pb	23 25 09.3	-1.4
PLK1	Peulik 1	2.68	301		Pn	23 25 08.3	+1.6
CNPM	China Poot	3.09	10		Pn	23 25 12.8	+0.3
CNPM				IAML		23 26 37.7	
	comp=E,77nm,1.3s						
CNPM				IAML		23 26 38.8	
	comp=N,92nm,1.4s						
P19K	Oil Pt	3.20	352	Pn	Pn	23 25 14.8	+0.8
P19K				IAML		23 26 32.2	
	comp=E,137nm,1.0s						
P18K	Big Mountain,	3.29	333		Pn	23 25 16.3	+1.0
P18K				IAML		23 26 30.9	
	comp=N,68nm,1.3s						
BRSE	Bradley Lake S	3.36	14		Pn	23 25 15.1	-1.0
BRLK	Bradley Lake	3.36	12		Pn	23 25 15.7	-0.5
BRLK				IAML		23 26 01.8	
	comp=N,60nm,1.4s						
BRLK				IAML		23 26 54.5	
	comp=E,63nm,1.4s						
P17K	Kvichak River	3.49	323		Pn	23 25 19.4	+1.5
ILS	Iliamna Low So	3.49	354		Pn	23 25 19.4	+1.3
ILSW	Iliamna Southw	3.52	353		Pn	23 25 18.4	-0.1
ILSW				IAML		23 26 36.8	
	comp=E,78nm,1.1s						
ILSW				IAML		23 26 45.4	
	comp=N,54nm,1.3s						
IVE	Iliamna Volcan	3.55	354		Pn	23 25 20.1	+1.3
O18K	Koktuh Hills	3.69	337		Pn	23 25 21.3	+0.5
O18K				IAML		23 26 41.2	
	comp=E,46nm,1.0s						
O18K				IAML		23 26 48.5	
	comp=N,50nm,0.9s						
SEW	Seward	3.92	22		Pn	23 25 23.1	-0.7
RED	Redoubt Volcan	3.94	357		Pn	23 25 24.6	+0.4
RED				IAML		23 26 54.6	
	comp=N,62nm,1.4s						
RED				IAML		23 26 55.7	
	comp=E,60nm,1.3s						
P16K	Nushagak River	3.96	312	Pn	Pn	23 25 25.6	+1.2
DFR	Drift River	4.11	357		Pn	23 25 27.7	+1.2
SLKM	Skilak Lake	4.17	14	Pn	Pn	23 25 27.5	+0.2
SLKM				IAML		23 26 10.6	
	comp=N,36nm,0.9s						
SLKM				IAML		23 26 38.0	
	comp=E,42nm,1.5s						
O16K	Kokwok River B	4.36	318		Pn	23 25 31.0	+1.1
P23K	Montague Islan	4.36	34	Pn	Pn	23 25 29.1	-0.8
P23K				IAML		23 27 10.0	
	comp=E,53nm,1.5s						
P23K				IAML		23 27 49.9	
	comp=N,38nm,1.3s						
CNBA	Chernabura Isl	4.45	251	Pn	Pn	23 25 31.2	+0.1
CNBA				IAML		23 26 37.7	
	comp=E,32nm,1.0s						
CNBA				IAML		23 26 57.7	
	comp=N,33nm,1.3s						
N19K	Bonanza Creek	4.47	346		Pn	23 25 32.3	+0.8
N19K				IAML		23 27 06.8	
	comp=E,34nm,1.4s						
N19K				IAML		23 27 10.6	
	comp=N,29nm,1.1s						
N18K	Kilae Creek	4.59	337		Pn	23 25 34.3	+1.2
N18K				IAML		23 27 16.9	
	comp=E,26nm,1.4s						
SPU	Mount Spurr	4.70	2		Pn	23 25 34.5	-0.2
N17K	Nushagak Hills	4.78	330		Pn	23 25 36.9	+1.2
N17K				IAML		23 27 20.1	
	comp=N,35nm,1.5s						
RC01	Rabbit Creek A	4.79	15	Pn	Pn	23 25 36.3	+0.4
RC01				IAML		23 27 32.2	
	comp=E,28nm,1.5s						
PWL	Port Wells	4.84	24	Pn	Pn	23 25 35.9	-0.7
PWL				IAML		23 26 36.0	
	comp=E,36nm,1.3s						
HIN	Hinchinbrook I	4.96	36	Pn	Pn	23 25 37.4	-0.8
HIN				IAML		23 27 00.6	
	comp=N,33nm,1.4s						
STLK	Strandline Lak	5.02	3		Pn	23 25 38.5	-0.5
STLK				IAML		23 26 45.3	
	comp=E,18nm,0.7s						
SUA	Susitna One	5.04	9		Pn	23 25 39.7	+0.3
SUA				IAML		23 27 41.4	
	comp=E,36nm,1.5s						
SUA				IAML		23 27 48.1	
	comp=N,34nm,1.4s						
FID	Port Fidalgo	5.24	33	Pn	Pn	23 25 40.6	-1.4
KAIM	Kayak Island	5.41	47	Pn	Pn	23 25 44.6	+0.3
M20K	Styx River	5.42	356		Pn	23 25 44.6	+0.1
N15K	Kwethluk River	5.50	315		Pn	23 25 45.8	+0.2
SKT	Skwentna	5.51	4		Pn	23 25 46.1	+0.3
GHO	Glory Hole Cre	5.57	17		Pn	23 25 47.8	+1.2
M17K	Holitna River	5.58	334		Pn	23 25 48.6	+1.9
RAGM	Ragged Mountai	5.59	43	Pn	Pn	23 25 46.5	-0.5
M16K	Timber Creek	5.70	325		Pn	23 25 50.3	+2.0
SML	Sawmill	5.70	19	Pn	Pn	23 25 49.1	+0.6
L19K	White Mountain	5.84	348		Pn	23 25 51.0	+0.7
BERG	Berg Lake	5.97	46	Pn	Pn	23 25 51.8	-0.3
KLU	Klutina	6.00	31	Pn	Pn	23 25 52.0	-0.5
BMRM	Bremner River	6.01	39	Pn	Pn	23 25 51.8	-0.9
L22K	Petersville	6.10	7	Pn	Pn	23 25 54.2	+0.4
L18K	Granite Mounta	6.16	341		Pn	23 25 54.9	+0.4
SNH	Sunshine Point	6.21	50	Pn	Pn	23 25 56.2	+0.9
N25K	Chitina, Valde	6.48	35		Pn	23 25 58.5	-0.7
GLB	Gilahina Butte	6.62	38		Pn	23 26 00.7	-0.4
DHY	Denali Highway	7.05	19	Pn	Pn	23 26 07.9	+0.9
PCA	Pinnacle	7.30	55	Pn	Pn	23 26 10.5	+0.1
LOGN	Logan Glacier	7.32	49	Pn	Pn	23 26 11.1	+0.4
MCK	McKinley	7.45	12		Pn	23 26 13.0	+0.7
O28M	Mount Upton	7.64	51	Pn	Pn	23 26 16.3	+1.2
J16K	Anvik River	7.97	332	Pn	Pn	23 26 20.5	+1.1
O29M	Mount Kennedy	8.16	56	Pn	Pn	23 26 24.1	+2.0
WRH	Wood River Hil	8.26	13	Pn	Pn	23 26 23.4	-0.1
P29M	Windy Craggy	8.34	62	Pn	Pn	23 26 25.2	+0.6
CCB	Clear Creek Bu	8.47	13	Pn	Pn	23 26 25.8	-0.4
ILAR	Eielson Array	8.71	16	Pn	Pn	23 26 29.8	+0.2
	comp=N,0.2nm,0.3s,baz=201,slow=11,SNR=4.8						
ILAR				Sn	Sn	23 28 02.4	-5.4
	comp=N,0.2nm,0.3s,baz=178,slow=29,SNR=4.6						
ILAR	Eielson Array	8.71	16	Pn	Pn	23 26 30.7	+1.1
S32K	Killisnoo	9.73	77	Pn	Pn	23 26 44.2	+0.7
G18K	Tagagawik	9.90	345	Pn	Pn	23 26 46.6	+0.7
DAWY	Dawson	9.92	35	Pn	Pn	23 26 46.2	+0.1
WHY	Whitehorse	10.00	58	Pn	Pn	23 26 48.3	+0.9
P33M	Teslin, Yukon	10.89	62	Pn	Pn	23 27 00.1	+0.6
BMAR	Burnt Mountain	11.54	15	Pn	Pn	23 27 09.2	+0.9
INK	Inuvik	14.60	28	Pn	P	23 27 54.5	-2.0
	baz=276,slow=7.9,SNR=2.2						
	comp=N,1.0nm,0.9s						
INK	Inuvik	14.60	28		Pn	23 27 49.7	-0.4
YKA	Yellowknife Ar	19.83	57	P	Pn	23 28 59.2	+3.5
	comp=N,0.1nm,0.3s,baz=273,slow=10.0,SNR=7.2						
	comp=N,0.6nm,0.8s						
PDAR	Pinedale Array	30.37	99	P	P	23 30 42.3	+6.5
	comp=N,0.3nm,0.6s,baz=0.0,slow=2.1,SNR=3.6						
	comp=N,0.3nm,0.6s						
H11N2	WAKE ISLAND Hy	47.56	236	T	T	00 24 20.5	
	baz=33						
H11N3	WAKE ISLAND Hy	47.57	236	T	T	00 24 21.2	
	baz=33						
H11N1	WAKE ISLAND Hy	47.58	236	T	T	00 24 23.8	
	baz=33						
H11S1	WAKE ISLAND Hy	48.71	236	T	T	00 25 48.2	
	baz=28						
H11S2	WAKE ISLAND Hy	48.73	236	T	T	00 25 44.2	
	baz=28						
H11S3	WAKE ISLAND Hy	48.73	236	T	T	00 25 42.0	
	baz=28						
SONM	Songino Array	57.19	308	P	P	23 34 11.6	+1.0
	comp=N,0.6nm,0.7s,baz=45,slow=6.6,SNR=4.1						
	comp=N,0.6nm,0.7s						
ZALV	Zalesovo Beam	60.44	325	P	P	23 34 32.7	-0.2
	comp=N,0.6nm,0.8s,baz=31,slow=8.6,SNR=1.7						
	comp=N,0.6nm,0.8s						
FINES	FINESS Array B	62.39	1	P	P	23 34 46.4	+0.5
	comp=N,2.6nm,1.1s,baz=338,slow=9.6,SNR=2.0						
	comp=N,2.6nm,1.1s						
HFS	Hagfors	63.18	8	P	P	23 34 52.2	+0.9
	comp=N,1.7nm,0.9s,baz=336,slow=3.2,SNR=4.0						
	comp=N,1.7nm,0.9s						
BVAR	Borovoye Array	65.35	333	P	P	23 35 05.7	+0.1
	comp=N,0.3nm,0.5s,baz=17,slow=5.4,SNR=4.3						
	comp=N,0.3nm,0.5s						
MKAR	Makanchi Array	67.42	323	P	P	23 35 18.4	-0.6
	comp=N,0.5nm,0.8s,baz=38,slow=8.8,SNR=4.1						
	comp=N,0.5nm,0.8s						
GERES	GERESS Array B	74.38	10	P	P	23 36 02.2	+0.8
	comp=N,0.2nm,0.7s,baz=310,slow=4.6,SNR=2.1						
	comp=N,0.2nm,0.7s						
QSPA	South Pole Qui	146.29	180	PKPbc	PKiKP	23 44 07.3	+1.3
	comp=N,1.5nm,0.8s,baz=60,slow=2.1,SNR=7.1						

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*UCR **21** 23:28:18.7±1.1, 10°.50N×85°.21W, h3^{km}±2^{km}, MW3.7*

*CATAC **21** 23:28:19.5±0.3, 10°N±2°×8°5W±°, h5^{km}±1^{km}, M3.0/9, MLv3.0/9, Error ellipse: s-maj=5.1km s-min=3.1km az=52.6, confirmed*

ISC 21 23:28:19.7±0.9**, 10°.49N**±0°.02×**85°.20W**±0°.02**, h14**^{km}±5^{km}**, n70,** σ**0^{s}63**/75**, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNAS	Canas	0.12	118	eP	Pg	23 28 22.8	-0.3
CNAS				eS	Sg	23 28 25.6	+0.3
INVE	Universidad In	0.13	94	eP	Pg	23 28 23.0	-0.3
INVE				eS	Sg	23 28 26.0	+0.3
CUI	Cuipilapa	0.17	10	eP	Pg	23 28 23.3	-0.7
CUI				eS	Sg	23 28 26.4	-0.4
COLC	Colonia	0.18	357	eP	Pg	23 28 23.4	-0.7
COLC				eS	Sg	23 28 26.4	-0.5
TIMP	Tierras Morena	0.20	61	eP	Pg	23 28 23.8	-0.5
PLVR	Palo Verde	0.21	228	eP	Pg	23 28 23.9	-0.7
TILA	Tilaran	0.22	94	eP	Pg	23 28 25.2	+0.5
HORNC	Hornillas	0.23	4	eP	Pg	23 28 24.2	-0.6
MOTZ	Rio Naranjo	0.23	31	eP	Pg	23 28 24.7	-0.2
MESS	Mesas	0.25	0	eP	Pg	23 28 24.8	-0.4
ERIA	Liberia	0.28	302	eP	Pb	23 28 25.6	-1.0
CHIK	Chiripa	0.29	99	eP	Pb	23 28 27.9	+1.2
CLARA	Aguas Claras	0.30	4	eP	Pg	23 28 25.5	-0.5
TENO	El Achiote	0.30	45	eP	Pg	23 28 24.6	-1.5
GPS2	Hotel Rincn d	0.31	330	eP	Pb	23 28 27.0	0.0
JTS	Las Juntas de	0.31	129	P	Pg	23 28 25.8	-0.3
JTS				S	Sg	23 28 30.7	+0.2
JTS	Las Juntas de	0.31	129	eP	Pg	23 28 25.8	-0.3
JUNT	Juntas	0.31	131	eP	Pg	23 28 25.9	-0.3
GPS3	Bodega del ICE	0.32	328	eP	Pb	23 28 28.7	+1.5
GPS1	Guardaparques	0.33	332	eP	Pb	23 28 27.3	0.0
QUEB	Quebradon, Cot	0.33	65	eP	Pg	23 28 26.2	-0.2
VMAR	Armenia, Volca	0.33	14	eP	Pg	23 28 26.3	-0.3
VRLE	La Escondida,	0.34	331	eP	Pg	23 28 26.3	-0.5
ALIBA	Liberia Airpor	0.36	287	eP	Pg	23 28 26.9	-0.2
LAPC	Finca la Perla	0.36	320	eP	Pg	23 28 26.6	-0.6
ELI1	Hacienda Flor	0.39	294	P	Pg	23 28 27.2	-0.3
BUAI	Buenos Aires	0.41	341	eP	Pg	23 28 27.4	-0.7
TABAC	Tabacon	0.42	88	eP	Pb	23 28 28.4	-0.6
PEJA	Penjamo Buenos	0.42	344	eP	Pg	23 28 27.7	-0.5
NICO	Nicoya	0.43	215	eP	Pg	23 28 28.2	-0.1
UPAL	Upala	0.45	24	S	Sb	23 28 35.7	-0.2
UPAL	Upala	0.45	24	P	Pg	23 28 28.5	-0.1
UPAL	Upala	0.45	24	eP	Pg	23 28 28.3	-0.3
CASO	Castillo	0.46	96	eP	Pg	23 28 28.9	+0.1
JUD3	Juan Diaz 3	0.46	227	eP	Pg	23 28 29.1	+0.1
ARE1	Arenal 1	0.47	93	eP	Pb	23 28 29.4	-0.4
VARE2	V. Arenal	0.47	93	eP	Pb	23 28 29.4	-0.5
CEDE	Laguna Cedeo	0.48	90	eP	Pb	23 28 30.1	+0.1
VACR	Volcan Arenal	0.51	91	eP	Pb	23 28 30.3	-0.1
CMARA	Lajas Hojancha	0.52	206	P	Pb	23 28 30.2	-0.4
CMARA	Lajas Hojancha	0.52	206	eP	Pg	23 28 29.7	-0.2
FORC	Fortuna	0.52	92	eP	Pb	23 28 30.3	-0.3
SOCE	Pocosol	0.58	100	P	Pg	23 28 30.8	-0.3
SOCE	Pocosol	0.58	100	S	Sb	23 28 39.5	-0.2
SOCE	Pocosol	0.58	100	eP	Pg	23 28 30.7	-0.3
SAJU	San Juanillo,	0.66	231	eP	Pg	23 28 32.1	-0.4
ARZA	Esparza	0.71	133	eP	Pg	23 28 33.1	-0.6
LCRUZ	La Cruz	0.73	324	eP	Pg	23 28 33.3	-0.6
COVE	Coope Vega, Sa	0.81	73	P	Pg	23 28 34.7	-0.8
VPL2	V. Platanar	0.82	103	eP	Pb	23 28 35.8	0.0
TCS1	Tacares	0.98	117	P	Pg	23 28 38.6	-0.2
VPS8	V Poas	0.99	108	eP	Pb	23 28 38.9	+0.1
ACOS	Acosta	1.23	124	eP	Pg	23 28 42.2	-1.2
PICV	PH. Pirrs	1.30	131	eP	Pg	23 28 42.9	-2.0
LCR2	La Lucha 2	1.39	122	S	Sg	23 29 03.3	-1.2
VICA	Volcano Irazu	1.42	110	eP	Pg	23 28 46.4	-0.7
TRT2	Tortugero	1.44	87	P	Pn	23 28 45.1	-0.2
TRT2	Tortugero	1.44	87	S	Sb	23 29 05.3	+0.8
VTUN	Crater Central	1.48	108	eP	Pn	23 28 47.1	+0.7
CVTQ	Turrialba Volc	1.48	109	eP	Pb	23 28 47.5	+0.2
CVTR	Volcan Turrial	1.49	108	eP	Pn	23 28 46.8	+0.4
VTR0	Volcan Turrial	1.49	108	eP	Pb	23 28 47.7	+0.3
PIEC	Cerro El Cedra	1.49	125	eP	Pn	23 28 46.3	0.0
CVTV	Tajo	1.50	108	eP	Pn	23 28 47.1	+0.6
VTCV	VTCV, Calle Va	1.53	109	eP	Pb	23 28 48.0	+0.1
ABRB	Las Abras (San	1.53	108	eP	Pn	23 28 47.3	+0.5
BUS1	Rivas	1.70	123	eP	Pn	23 28 49.9	+0.6
BOAB	BOACO BROADBAN	2.00	347	P	Pn	23 28 54.4	+1.2
BOAB	BOACO BROADBAN	2.00	347	S	Sb	23 29 20.8	0.0
DRK0	Durika	2.27	122	eP	Pn	23 28 58.4	+1.4

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*SJA **21** 23:28:17.4±0.8, 22°.85S×68°.85W, h107^{km}±4^{km}, ML3.6, MW3.7*

*GUC **21** 23:28:18.6±0.8, 22°.82S×68°.87W, h97^{km}±4^{km}, ML3.6*

ISC 21 23:28:19.7±1.4**, 22°.85S**±0°.03×**68°.93W**±0°.04**, h94**^{km}±9^{km}**, n33,** σ**1^{s}96**/52**, 6C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB06	IPOC Station P	0.61	283	⇑iP	Pn	23 28 35.9	0.0
PB06				eS	Sn	23 28 49.4	+1.4
PB06				IAML		23 28 50.0	
	comp=E,6µm,0.3s						
PB06	IPOC Station P	0.61	283	eP	Pn	23 28 36.0	0.0
PB06				eS	Sn	23 28 49.8	+1.7
PB06				IAML		23 28 50.0	
	comp=Z,3µm,0.2s						
AF01	San Pedro de A	0.70	99	⇓iP	Pn	23 28 35.9	-1.0
AF01				eS	Sn	23 28 49.0	-0.7
AF01				IAML		23 28 49.8	
	comp=N,5µm,0.2s						
AF01	San Pedro de A	0.70	99	eP	Pn	23 28 36.1	-0.8
AF01				eS	Sn	23 28 49.3	-0.4
AF01				IAML		23 29 04.2	
	comp=Z,2µm,0.7s						
PB09	IPOC Station P	1.08	344	⇑iP	Pn	23 28 41.0	+0.2
PB09				eS	Sn	23 28 57.3	+0.6
PB09	IPOC Station P	1.08	344	eP	Pn	23 28 41.1	+0.2
PB09				eS	Sn	23 28 58.0	+1.3
PB09				IAML		23 29 01.0	
	comp=Z,776nm,0.4s						
PB03	IPOC Station P	1.10	316	⇑iP	Pn	23 28 41.0	0.0
PB03				eS	Sn	23 28 57.5	+0.5
PB03				IAML		23 29 01.3	
	comp=E,1µm,0.2s						
PB03	IPOC Station P	1.10	316	eP	Pn	23 28 40.9	-0.2
PB03				eS	Sn	23 28 57.3	+0.3
PB03				IAML		23 29 01.9	
	comp=Z,1µm,0.2s						
PB05	IPOC Station P	1.18	269	⇑iP	Pn	23 28 42.1	+0.3
PB05				eS	Sn	23 28 59.5	+1.0
PB05				IAML		23 29 08.5	
	comp=E,721nm,0.4s						
PB05	IPOC Station P	1.18	269	eP	Pn	23 28 42.2	+0.3
PB05				eS	Sn	23 28 51.6	-6.9
PB05				IAML		23 29 07.9	
	comp=Z,365nm,0.9s						
PB07	IPOC Station P	1.42	321	⇑iP	Pn	23 28 45.0	+0.1
PB07				eS	Sn	23 29 04.5	+0.5
PB07				IAML		23 29 07.5	
	comp=E,1µm,0.2s						
PB07	IPOC Station P	1.42	321	eP	Pn	23 28 44.3	-0.6
PB07				eS	Sn	23 29 04.8	+0.8
PB07				IAML		23 29 05.9	
	comp=Z,869nm,0.2s						
PB10	IPOC Station P	1.64	246	eP	Pn	23 28 47.6	+0.3
PB10				eS	Sn	23 29 09.2	+0.8
PB10	IPOC Station P	1.64	246	eP	Pn	23 28 47.7	+0.3
PB10				eS	Sn	23 29 04.6	-3.8
PB10				IAML		23 29 14.4	
	comp=Z,196nm,0.3s						
PB02	IPOC Station P	1.76	329	eP	Pn	23 28 49.1	-0.1
PB02				eS	Sn	23 29 11.8	+0.4
PB02				IAML		23 29 15.7	
	comp=N,1µm,0.3s						
PB02	IPOC Station P	1.76	329	eP	Pn	23 28 48.5	-0.6
PB02				eS	Sn	23 29 12.5	+1.1
PB02				IAML		23 29 22.5	
	comp=Z,934nm,0.3s						
PB01	IPOC Station P	1.87	344	eP	Pn	23 28 50.3	-0.1
PB01				eS	Sn	23 29 13.7	-0.1
PB01				IAML		23 29 17.0	
	comp=E,1µm,0.3s						
PB01	IPOC Station P	1.87	344	eP	Pn	23 28 50.2	-0.3
PB01				eS	Sn	23 29 14.4	+0.6
PB01				IAML		23 29 17.1	
	comp=Z,742nm,0.2s						
PB14	IPOC Station P	2.23	217	eP	Pn	23 28 56.1	+0.8
PB14				IAML		23 29 32.4	
	comp=N,182nm,0.2s						
PB14	IPOC Station P	2.23	217	eP	Pn	23 28 55.6	+0.2
PB14				eS	Sn	23 29 28.0	+5.4
PB14				IAML		23 29 31.9	
	comp=Z,450nm,0.4s						
PATCX	Punta Patache	2.31	330	eP	Pn	23 28 55.4	-0.9
PATCX				eS	Sn	23 29 30.2	+5.9
PATCX				IAML		23 29 30.8	
	comp=Z,208nm,0.7s						
GO02	Mina Guanaco	2.38	195	eP	Pn	23 28 57.5	0.0
GO02				eS	Sn	23 29 14.4	-12
GO02				IAML		23 29 24.4	
	comp=Z,274nm,0.6s						
TA01	Diego Aracena	2.55	333	eP	Pn	23 28 58.0	-1.3
TA01				eS	Sn	23 29 18.9	-11
TA01				IAML		23 29 35.3	
	comp=Z,177nm,1.1s						
PB08	IPOC Station P	2.70	355	⇑iP	Pn	23 29 01.3	-0.4
PB08				IAML		23 29 40.0	
	comp=E,114nm,0.3s						
PB08	IPOC Station P	2.70	355	eP	Pn	23 29 01.3	-0.4
PB08				eS	Sn	23 29 28.2	-5.6
SALTA		2.74	121	eP	Pn	23 28 46.0	-16
SALTA				eP		23 29 08.8	
PB11	IPOC Station P	3.14	347	eP	Pn	23 28 55.1	-12
PB11				eS	Sn	23 29 34.4	-10
PB11				IAML		23 29 36.5	
	comp=Z,102nm,0.5s						
YJA	Yavi	3.23	79	eP	Pn	23 29 10.3	+1.5
HJA	Humahuaca	3.26	97	eP	Pn	23 29 09.9	+0.8
AC01	Pan de Azucar	3.62	205	eP	Pn	23 29 12.4	-1.3
AC01				eS	Sn	23 29 44.3	-11
AC01				IAML		23 30 11.5	
	comp=Z,111nm,0.4s						
AZAP	Zapla	3.80	112	eP	Pn	23 29 16.6	+0.3
AC02	Maricunga	3.98	183	eP	Pn	23 29 18.0	-0.9
AC02				eS	Sn	23 30 14.2	+9.5
AC02				IAML		23 30 41.0	
	comp=Z,38nm,0.3s						
GO03	Copiapo	4.87	194	eP	Pn	23 29 29.2	-1.5
GO03				eS	Sn	23 30 36.6	+11
GO03				IAML		23 30 48.0	
	comp=Z,36nm,0.5s						

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*IDC **21** 23:40:04.6±5.4, 20°.99S×178°.29W, h612^{km}±66^{km}, mb2.9/5, mbtmp4.0/7, Error ellipse: s-maj=49.2km s-min=33.6km az=174.0*

ISC 21 23:40:03.9±1.0**, 21°.0S**±0°.2×**178°.3W**±0°.2**, h600**^{km}**, n12,** σ**0^{s}79**/10**, mb3.5**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.23	263	P	P	23 43 05.2	0.0
	3.1nm,0.5s,baz=76,slow=17,SNR=2.0						
URZ	Urewera	17.69	192	P	P	23 43 36.1	-0.4
	6.6nm,0.6s,baz=45,slow=1.4,SNR=2.1						
STKA	Stephens Creek	37.33	245	P	P	23 46 27.1	+0.1
	0.9nm,0.5s,baz=53,slow=10,SNR=1.5						
	0.9nm,0.5s						
ASAR	Alice Springs	44.13	257	P	P	23 47 21.2	+0.3
	1.1nm,0.5s,baz=95,slow=7.8,SNR=8.1						
	1.1nm,0.5s						
WRA	Warramunga Arr	44.25	263	P	P	23 47 21.4	-0.4
	0.5nm,0.3s,baz=98,slow=6.7,SNR=4.5						
	0.5nm,0.3s						
ILAR	Eielson Array	88.82	13	P	P	23 51 53.6	-0.9

	0.2nm,0.5s,baz=216,slow=5.1,SNR=4.9						
	0.2nm,0.5s						
PDAR	Pinedale Array	89.49	43	P	P	23 51 58.9	+0.4
	0.4nm,0.6s,baz=190,slow=4.5,SNR=4.0						
	0.4nm,0.6s						
BVAR	Borovoye Array	119.24	320	PKP	PKPdf	23 57 45.4	-0.2
	0.3nm,0.3s,baz=111,slow=2.0,SNR=4.8						
HFS	Hagfors	139.94	351	PKhKP	PKPpre	23 58 18.3	
	1.4nm,0.6s,baz=108,slow=4.8,SNR=2.0						
AKASG	Malin Array Be	143.27	331	PKP	PKPab	23 58 28.3	-0.6
	1.4nm,0.5s,baz=46,slow=3.9,SNR=7.0						
BRTR	Keskin Array B	146.93	312	PKPbc	PKPdf	23 58 39.1	+1.7
	0.5nm,0.7s,baz=81,slow=1.9,SNR=3.7						
GERES	GERESS Array B	150.56	344	PKPbc	PKPbc	23 58 48.7	-0.3
	0.2nm,0.5s,baz=347,slow=1.3,SNR=2.2						

KRNET 21 23:50:46.8±0.1,40.°84N×71.°00E,h10km,mb2.5
ISU 21 23:50:50,40.°82N×70.°84E,h16km
ISC 21 23:50:51.0±1.2,40.°74N±0.°03×71.°06E±0.°03,h14km±10km, n22,σ1.s77/38,13C-13D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHDK	Chadak	0.33	314	S	Sb	23 51 04.1	+0.2
NAM	Namangan	0.52	61	P	Pb	23 51 02.5	+0.6
NAM				S	Sb	23 51 11.8	+2.5
CHMI	Chimion	0.59	143	P	Pg	23 51 00.7	-1.8
CHMI				S	Sb	23 51 11.0	-0.4
FRG	Fergana	0.66	124	P	Pg	23 51 02.6	-1.3
FRG				S	Sb	23 51 14.4	+0.9
BTK	Batken	0.71	195	⇓eP	Pg	23 51 02.0	-2.8
BTK				⇓eS	Sb	23 51 13.6	-1.2
TSTA	Tashata	1.09	98	P	Pg	23 51 10.7	-1.3
TSTA				S	Sn	23 51 28.3	+1.4
CHRV	Charvak	1.23	317	P	Pg	23 51 14.2	-0.4
CHRV				S	Sb	23 51 29.1	-0.6
ARK	Arkit	1.25	33	⇑eP	Pn	23 51 10.0	-4.3
ARK				⇑eS	Sb	23 51 26.7	-3.9
OHH	Osh	1.33	99	⇓iP	Pn	23 51 13.6	-1.7
OHH				⇓iS	Sb	23 51 32.4	-0.3
TGS	TashGRES	1.35	301	S	Sg	23 51 38.7	+4.3
TVKS	Tavaksay	1.35	308	P	Pg	23 51 15.8	-1.1
NZBK	Nazarbek	1.55	289	S	Sg	23 51 43.4	+2.6
ARSB	Arslanbob	1.56	68	⇓eP	Pn	23 51 16.5	-2.0
ARSB				⇓eS	Sn	23 51 38.6	-0.1
SFK	Sufi-Kurgan	2.00	111	⇑iP	Pn	23 51 25.4	+0.7
SFK				⇑iS	Sb	23 51 53.3	+1.0
MNAS	Manas	2.05	31	⇑iP	Pn	23 51 24.1	-1.1
MNAS				⇑iS	Sn	23 51 51.4	+0.7
SALK	Salom-Alik	2.10	85	⇓eP	Pn	23 51 26.3	+0.4
SALK				⇓eS	Sb	23 51 55.0	0.0
KK31	Karatay Array	2.39	350	⇓Pg	Pb	23 51 33.4	-0.5
	0.2nm,0.3s,baz=155,slow=15,SNR=12						
KK31				⇑Lg	Lg	23 52 04.3	
	1.2nm,0.3s,baz=156,slow=26,SNR=12						
CHGR	Chuyangaron	2.55	216	⇓iP	Pn	23 51 32.7	+0.7
CHGR				⇓iS	Sb	23 52 06.1	-1.7
ARLS	Aral	2.70	65	⇑iP	Pn	23 51 34.3	+0.1
ARLS				⇑iS	Sn	23 52 08.4	+1.6
EKS2	Erkin-Say	2.79	46	⇑iP	Pn	23 51 34.4	-1.0
EKS2				⇑iS	Sn	23 52 09.6	+0.6
UCH	Uchtor	2.99	59	⇑iP	Pn	23 51 37.5	-0.9
UCH				⇑iS	Sn	23 52 14.8	+0.5
AAK	Ala-Archa	3.19	53	⇓Pg	Pb	23 51 48.2	+0.6
	0.4nm,0.5s						
AAK				⇓Lg	Lg	23 52 24.6	
	1.1nm,0.7s						

IDC 21 23:51:32.2±0.6,34.°83N×27.°47E,h0km,mb4.2/23, mbtmp4.1/34,ML3.5/9,Error ellipse: s-maj=12.9km s-min=11.9km az=169.0
HLW 21 23:51:34.8,34.°81N×27.°80E,h22km±2km,Ml4.2
NIC 21 23:51:37.5,34.°66N×27.°71E,h35km±28km,Ml4.0/16
ATH 21 23:51:37.2,34.°70N×27.°67E,h28km±2km,ML3.7/9, Manual Solution by M.Kolligri First location: 2019/12/21 23:52:25, This location: 2019/12/21 23:56:40 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 1 km
ISK 21 23:51:37.7,34.°86N×27.°79E,h22km,ML3.6/14
NEIC 21 23:51:38.7±2.2,34.°77N±0.°06×27.°64E±0.°07,h46km±7km, mb4.3/38,Error ellipse: s-maj=8.9km s-min=8.1km az=172.0
THE 21 23:51:39.4,35°N±5°×2°8E±°,h25km,M3.6/9,MLh3.6/9
AFAD 21 23:51:40.0,35.°03N×27.°74E,h50km,MW3.9
GII 21 23:51:40.5±0.0,34.°370N±0.°004×27.°876E±0.°001,h30km, Mws4.1,confirmed
NAO 21 23:52:07.5,37.°95N×24.°15E,h10km,MB3.6
ISC 21 23:51:36.4±1.1,34.°70N±0.°03×27.°65E±0.°03,h32km±8km, n290,σ1.s41/326,mb4.3/35,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.94	335	P	Pb	23 51 54.7	+0.5
KARP				S	Sb	23 52 06.9	+0.6
KARP	Karpathos	0.94	335	Pg	Pb	23 51 54.9	+0.7
KARP				Sg	Sb	23 52 07.4	+1.1
KARP	Karpathos	0.94	335		Pb	23 51 54.6	+0.4
KARP				Sn	Sb	23 52 06.1	-0.2
KARP	Karpathos	0.94	335	P	Pb	23 51 54.8	+0.6
KARP				AML	AML	23 52 08.3	
	10nm,0.5s						
KARP				S	Sb	23 52 08.7	+2.4
KARP				AML	AML	23 52 13.6	
	8.2nm,0.4s						
KARP	Karpathos	0.94	335	P	Pb	23 51 54.7	+0.5
KARP				S	Sb	23 52 07.5	+1.1
ZKR	Zakros	1.25	290	P	Pb	23 51 59.1	-0.3
ZKR	Zakros	1.25	290	P	Pb	23 51 58.9	-0.5
ZKR				S	Sb	23 52 16.1	+0.9
ZKR				AML	AML	23 52 24.7	
	2.4nm,0.5s						
ZKR				AML	AML	23 52 32.2	
	3.2nm,0.7s						
ZKR	Zakros	1.25	290	P	Pb	23 51 58.9	-0.5
ARG	Arkhangelos	1.56	14	P	Pb	23 52 03.8	-0.9
ARG				S	Sb	23 52 22.8	-1.3
ARG	Arkhangelos	1.56	14	Pn	Pn	23 52 02.5	+0.5
ARG	Arkhangelos	1.56	14	Pn	Pb	23 52 03.5	-1.2
ARG	Arkhangelos	1.56	14	P	Pb	23 52 03.8	-0.9
ARG				S	Sb	23 52 23.5	-0.5
ARG				AML	AML	23 52 40.4	
	1.3nm,0.7s						
ARG				AML	AML	23 52 45.6	
	1.5nm,0.7s						
ARG	Arkhangelos	1.56	14	P	Pb	23 52 03.7	-1.0
NPS	Neapolis	1.77	289	P	Pb	23 52 06.8	-1.4
NPS				S	Sn	23 52 27.1	+0.9
NPS	Neapolis	1.77	289	P	Pn	23 52 06.4	+1.6
NISR	Nisiros	1.96	347	P	Pn	23 52 09.0	+1.6
NISR	Nisiros	1.96	347	P	Pn	23 52 08.7	+1.3
DAT	Datca	2.02	358	Pn	Pn	23 52 09.4	+0.9
DAT				Sn	Sn	23 52 32.5	-0.3
DATC	Datca-Mugla	2.05	0	Pn	Pn	23 52 09.8	+1.0
TURN	Turunc	2.12	13	Pn	Pn	23 52 10.5	+0.8
TURN				Sn	Sn	23 52 34.3	-0.7
IZZE	Mula-Seydike	2.15	36	P	Pn	23 52 11.2	+1.0
IZZE				S	Sn	23 52 36.0	+0.1
IZZE				i IAML		23 52 38.0	
	comp=E,414nm,0.3s						
AKAS	Kas	2.21	46	P	Pn	23 52 12.3	+1.3
AKAS				S	Sn	23 52 34.8	-2.4
AKAS				i IAML		23 52 40.0	
	comp=E,178nm,0.3s						
AKAS	Kas	2.21	46	Pn	Pn	23 52 11.3	+0.3
AKAS				Sn	Sn	23 52 35.9	-1.4
AKAS	Kas	2.21	46		Pn	23 52 12.5	+1.5
FETY	Fethiye	2.25	31	P	Pn	23 52 02.9	-8.7
DALY	Dalyan (Mula)	2.26	21	Pn	Pn	23 52 12.4	+0.8
IDI	Anoyia	2.34	285	P	Pn	23 52 14.5	+1.8
IDI	Anoyia	2.34	285	Pn	Pn	23 52 14.8	+2.0
	15nm,0.3s,baz=100,slow=15,SNR=188						
IDI				Sn	Sn	23 52 41.6	+1.0
	42nm,0.3s,baz=90,slow=20,SNR=8.7						
IDI	Anoyia	2.34	285		Pn	23 52 14.4	+1.6
IDI	Anoyia	2.34	285	P	Pn	23 52 14.6	+1.8
IDI				S	Sn	23 52 41.1	+0.5
SABU	Mula-Dalaman	2.37	26	P	Pn	23 52 14.3	+1.1
THERA	Ancient Thera,	2.43	314	P	Pn	23 52 14.2	+0.2
YKAV	Yalikavak-Bodr	2.44	353	Pn	Pn	23 52 15.5	+1.5
YER	Yerkesik	2.48	12	P	Pn	23 52 16.1	+1.4
YER	Yerkesik	2.48	12	Pn	Pn	23 52 15.6	+0.9
CAME	Cameli-Denizli	2.61	30	Pn	Pn	23 52 17.0	+0.5
KNIK	Mula-Seydike	2.65	36	P	Pn	23 52 18.6	+1.6
AKUM	Antalya-Kumluc	2.73	53	P	Pn	23 52 19.3	+1.3
ELL	Elmali	2.75	41		Pn	23 52 20.6	+2.2
ELL	Elmali	2.75	41	P	Pn	23 52 20.1	+1.7
ELL				S	Sn	23 52 52.1	+1.5
CAEL	Denizli, Camel	2.77	29	P	Pn	23 52 20.8	+2.1
CAEL				S	Sn	23 52 49.8	-1.4
CAEL				i IAML		23 52 57.0	
	comp=E,369nm,0.7s						
DNZT	Denizli-Tavas-	2.80	23	P	Pn	23 52 20.0	+0.8
VAM	Vamos	2.92	285	P	Pn	23 52 22.8	+2.1
VAM	Vamos	2.92	285	P	Pn	23 52 22.5	+1.9
GVD	Gavdhos	2.94	274	P	Pn	23 52 22.4	+1.5
GVD	Gavdhos	2.94	274	P	Pn	23 52 22.1	+1.2
TAVA	DENIZLI_Tavas	2.94	20	P	Pn	23 52 23.0	+1.9
TAVA				S	Sn	23 52 53.5	-1.9
TAVA				i IAML		23 53 00.0	
	comp=N,128nm,0.4s						
AYDN	Tasoluk	2.96	3	P	Pn	23 52 22.4	+1.1
GOLH	Golhisar	2.97	31	P	Pn	23 52 23.9	+2.5
GOLH				S	Sn	23 52 56.3	+0.3
GOLH				i IAML		23 52 58.0	
	comp=E,176nm,0.8s						
GCAM	G?zelcaml?	3.01	354	Pn	Pn	23 52 23.5	+1.6
APMY	Acipayam-Deniz	3.07	25	Pn	Pn	23 52 23.7	+0.9
CHAN	Chania	3.07	286	P	Pn	23 52 24.6	+1.8
IMMV	Iera Moni Meta	3.11	285	P	Pn	23 52 25.5	+2.2
IMMV	Iera Moni Meta	3.11	285	P	Pn	23 52 25.4	+2.2
DNIZ	Denizli-Tavas-	3.13	21	P	Pn	23 52 25.0	+1.4
ESEN	Aydn-Nazilli	3.14	10	P	Pn	23 52 25.2	+1.5
KORT	Korkueli	3.17	43	P	Pn	23 52 25.9	+1.6
KORT				S	Sn	23 53 03.1	+2.0
KORT				i IAML		23 53 06.0	
	comp=E,142nm,0.6s						
OSC1	CSNet OBS 1	3.24	111	P	Pn	23 52 25.8	+0.8
OSC1				S	Sn	23 53 02.1	-0.3
OSC1				AML	AML	23 53 14.5	
	0.3nm,0.3s						
OSC1				AML	AML	23 53 16.9	
	0.4nm,0.6s						
AYDB	Zeytinkoy-Aydi	3.25	3	Pn	Pn	23 52 26.6	+1.3
NAZL	Nazilli-Aydin	3.30	9	Pn	Pn	23 52 27.1	+1.2
MATC	Matruh	3.36	186	P	Pn	23 52 28.1	+1.3
INCE	Denizli-Bozkur	3.38	27	P	Pn	23 52 28.1	+1.0
BUCA	Burdur, Bucak-	3.52	41	P	Pn	23 52 31.6	+2.5
BUCA				S	Sn	23 53 08.1	-1.5
BUCA				i IAML		23 53 13.0	
	comp=N,38nm,0.5s						
KIRA	zmir-Kiraz	3.54	10	P	Pn	23 52 30.2	+0.9
BRDR	BURDUR-Merkez	3.57	32	P	Pn	23 52 30.5	+0.8
ODEM	Odemis-Izmir	3.58	5	Pn	Pn	23 52 31.5	+1.6
ANKY	Antikythira Is	3.75	289	P	Pn	23 52 32.2	+0.2
SLUM	Salum	3.80	213	P	Pn	23 52 34.4	+1.6
MANT	Manisa	3.85	11	Pn	Pn	23 52 33.7	0.0
AKMS	Akamas	3.86	84	P	Pn	23 52 34.8	+1.1
AKMS				S	Sn	23 53 18.6	+0.6
AKMS				AML	AML	23 53 19.2	
	1.7nm,0.3s						
AKMS				AML	AML	23 53 19.6	
	2.3nm,0.3s						
AKMS	Akamas	3.86	84	P	Pn	23 52 34.8	+1.1
ISP	Isparta	3.88	36	Pn	Pn	23 52 34.2	+0.1
ISP	Isparta	3.88	36	P	Pn	23 52 35.0	+1.0
CHOS	Chios island	3.90	341	P	Pn	23 52 35.4	+1.3
PASA	Karahalli, USA	3.93	22	P	Pn	23 52 35.5	+0.9
NATA	Nata	4.05	87	P	Pn	23 52 37.5	+1.3
NATA				S	Sn	23 53 24.8	+2.3
NATA				AML	AML	23 53 25.8	
	4.7nm,0.4s						
NATA				AML	AML	23 53 27.0	
	1.7nm,0.7s						
NATA	Nata	4.05	87	P	Pn	23 52 37.2	+1.0
ALFC	Alefka	4.09	82	P	Pn	23 52 37.8	+1.0
ALFC				S	Sn	23 53 23.9	+0.3
ALFC				AML	AML	23 53 24.8	
	3.1nm,0.5s						
ALFC				AML	AML	23 53 25.1	
	2.3nm,0.4s						
ALFC	Alefka	4.09	82	P	Pn	23 52 37.5	+0.8
GAZI	Gazipasa	4.10	67	P	Pn	23 52 37.3	+0.3
BAGO	Egridir - ISPA	4.14	37	P	Pn	23 52 37.9	+0.3
OSC2	CSNet OBS 4	4.17	112	P	Pn	23 52 38.6	+0.8
OSC2				S	Sn	23 53 26.4	+1.0
OSC2				AML	AML	23 53 36.2	
	0.4nm,0.4s						
OSC2				AML	AML	23 53 44.1	
	0.5nm,0.7s						
KARY	Karystos	4.22	323	P	Pn	23 52 39.7	+1.2
APOL	The Sanctuary	4.29	89	P	Pn	23 52 40.3	+0.8
APOL				S	Sn	23 53 29.1	+0.6
APOL				AML	AML	23 53 34.5	
	0.9nm,0.3s						
APOL				AML	AML	23 53 35.0	
	0.7nm,0.5s						
TROD	Troodos	4.29	85	P	Pn	23 52 40.4	+0.6
TROD				S	Sn	23 53 29.9	+1.0
TROD				AML	AML	23 53 37.1	
	1.2nm,0.5s						
TROD				AML	AML	23 53 37.3	
	1.3nm,0.5s						
SEDI	Konya, Seydise	4.31	49	P	Pn	23 52 42.7	+2.9
VLI	Veliai	4.33	299	P	Pn	23 52 40.0	-0.2
VLY	Voula,Athens	4.43	316	P	Pn	23 52 42.8	+1.4
VLY	Voula,Athens	4.43	316	P	Pn	23 52 42.3	+0.9
XYLS	Xyliatos	4.45	84	P	Pn	23 52 42.6	+0.9
XYLS				S	Sn	23 53 33.4	+1.0
XYLS				AML	AML	23 53 35.0	
	1.0nm,0.3s						
XYLS				AML	AML	23 53 37.9	
	0.9nm,0.5s						
DION	Dionisos Attik	4.51	319	P	Pn	23 52 43.9	+1.3
DION	Dionisos Attik	4.51	319	P	Pn	23 52 44.0	+1.4
ATHU	Athens Univers	4.51	317	P	Pn	23 52 42.6	0.0
MET6	Megalochori,Me	4.52	311	P	Pn	23 52 43.6	+1.0
PTL	Penteli	4.53	319	P	Pn	23 52 43.9	+1.1
MET5	Makryloggos,Me	4.54	311	P	Pn	23 52 44.3	+1.4
MET2	Kameni Chora,	4.55	311	P	Pn	23 52 43.8	+0.8
ATH	Athens Observa	4.56	317	P	Pn	23 52 45.0	+1.8
ASGA	Asgata	4.61	87	P	Pn	23 52 45.0	+1.1
ASGA				S	Sn	23 53 37.7	+1.4
ASGA				AML	AML	23 53 41.2	
	1.3nm,0.6s						
ASGA				AML	AML	23 53 41.5	
	1.4nm,0.4s						
ASGA	Asgata	4.61	87	P	Pn	23 52 45.1	+1.3
CSS	Mathiatis	4.68	85		Pn	23 52 45.6	+0.8
CSS	Mathiatis	4.68	85	P	Pn	23 52 46.0	+1.2
CSS	Mathiatis	4.68	85	P	Pn	23 52 46.0	+1.2
CSS				S	Sn	23 53 38.9	+0.8
CSS				AML	AML	23 53 40.4	
	0.8nm,0.6s						
CSS				AML	AML	23 53 43.2	
	0.8nm,0.5s						
CSS	Mathiatis	4.68	85	P	Pn	23 52 45.8	+1.0
ATHAL	Athalassa	4.74	83	P	Pn	23 52 47.1	+1.4
ATHAL				S	Sn	23 53 41.6	+2.1
ATHAL				AML	AML	23 53 44.6	
	1.6nm,0.7s						
ATHAL				AML	AML	23 53 46.3	
	1.0nm,0.5s						
MVOU	Mavrovouni	4.92	85	P	Pn	23 52 50.2	+2.0
MVOU				S	Sn	23 53 45.3	+1.2
MVOU				AML	AML	23 53 50.9	
	0.2nm,0.4s						
MVOU				AML	AML	23 53 51.5	
	0.4nm,0.5s						
BALB	Balikesir	4.93	2	Pn	Pn	23 52 48.9	+0.6
PARAL	Paralimni	5.26	85	P	Pn	23 52 54.9	+2.0
PARAL				S	Sn	23 53 54.1	+1.7
PARAL				AML	AML	23 54 02.3	
	0.5nm,0.6s						
PARAL				AML	AML	23 54 05.3	
	0.4nm,0.9s						
ITM	Ithomi	5.26	300		Pn	23 52 53.0	+0.1
BORA	Eskisehir	5.63	23	Pn	Pn	23 52 58.3	+0.3
SWA2		5.75	200	P	Pn	23 53 01.3	+1.7
KOT	Kottamia	5.93	142	P	Pn	23 53 01.4	-0.6
KOT				S	Sn	23 54 04.6	-4.3
RYAN	Fayoum	6.03	158	P	Pn	23 53 03.5	+0.1
ALN	Alexandroupoli	6.32	349	Pn	Pn	23 53 07.0	-0.3
OFRI	\`Ofer	6.46	107	P	Pn	23 53 10.5	+1.2
HNTI	Hanita	6.46	102	P	Pn	23 53 10.8	+1.5
SUZ	Suez	6.53	136	P	Pn	23 53 10.2	-0.2
SLTI	Sal'it	6.64	110	P	Pn	23 53 12.7	+0.8
RDO	Rodhopi	6.65	346	Pn	Pn	23 53 11.5	-0.3
MMAI	Mount Meron Ar	6.66	102	Pn	Pn	23 53 13.5	+1.4
	4.7nm,0.3s,baz=284,slow=11,SNR=16						
MMAI				Sn	Sn	23 54 24.2	-2.8
	16nm,0.3s,baz=281,slow=14,SNR=9.4						
	2.6nm,0.3s						
QRWL	Qaraoun	6.76	98	eP	Pn	23 53 14.5	+1.0
LIT	Litokhoron	6.78	324	Pn	Pn	23 53 14.0	+0.3
NBNS	Bani Suef	6.81	152	P	Pn	23 53 14.0	-0.1
ZAF	Zafarana	6.82	141	P	Pn	23 53 14.1	-0.2
GEM	Giv'at Ha'Em	6.82	100	P	Pn	23 53 15.0	+0.8
GEM	Giv'at Ha'Em	6.82	100	S	Sn	23 54 29.3	-1.5
KZIT	Kziot	6.82	122	P	Pn	23 53 14.0	-0.3
KZIT	Kziot	6.82	122	S	Sn	23 54 27.8	-3.1
SHBL	Chebaa	6.85	99	eP	Pn	23 53 15.7	+0.8
HWQ	Hawqa	6.86	91	eP	Pn	23 53 17.0	+2.0
AMAZ	Amatzia	6.86	115	P	Pn	23 53 15.4	+0.6
AMAZ	Amatzia	6.86	115	S	Sn	23 54 29.1	-2.8
MMLI	Mount Malkishu	6.86	107	P	Pn	23 53 15.9	+1.0
NATI	Neve Ativ	6.87	100	P	Pn	23 53 16.3	+1.4
ZAHL	Zahle	6.87	95	eP	Pn	23 53 16.3	+1.3
RCY	Rachaya	6.89	98	eP	Pn	23 53 15.8	+0.4
ZNM	Zenema	6.91	139	P	Pn	23 53 15.6	0.0
BR131	Keskin Array S	6.92	42		Pn	23 53 15.4	-0.4
BRTR	Keskin Array B	6.92	42	Pn	Pn	23 53 16.9	+1.1
	0.5nm,0.3s,baz=218,slow=15,SNR=21						
BRTR				Sn	Sn	23 54 31.2	-2.4
	0.6nm,0.3s,baz=212,slow=27,SNR=10						
	2.3nm,0.6s						
BRTR	Keskin Array B	6.92	42	Pn	Pn	23 53 16.3	+0.5
KSHT	Keshet	7.00	102	P	Pn	23 53 18.4	+1.6
KSHT	Keshet	7.00	102	S	Sn	23 54 34.5	-0.8
HMDT	Nahal Hemdat	7.01	108	P	Pn	23 53 18.4	+1.4
HMDT	Nahal Hemdat	7.01	108	S	Sn	23 54 34.3	-1.3
BEIL	Beino	7.04	89	eP	Pn	23 53 17.4	+0.2
UJAP	Al Uja	7.09	111	P	Pn	23 53 18.7	+0.8
UJAP	Al Uja	7.09	111	S	Sn	23 54 35.5	-1.8
DSI	Dead Sea	7.19	114	P	Pn	23 53 20.1	+0.7
DSI	Dead Sea	7.19	114	S	Sn	23 54 37.4	-2.6
GHAJ	Ghor Haditha	7.46	115		Pn	23 53 24.2	+1.2
KRMI	Paran Flat	7.52	125	P	Pn	23 53 24.3	+0.3
KRMI	Paran Flat	7.52	125	S	Sn	23 54 43.7	-4.5
TAMRE	El Minia	7.53	157	P	Pn	23 53 24.5	+0.4
HFRF	Wahat Farafira	7.55	176	P	Pn	23 53 25.2	+0.9
PRNI	Paran	7.57	123	P	Pn	23 53 24.9	+0.3
PRNI	Paran	7.57	123	S	Sn	23 54 45.1	-4.2
BNN	Bunyan	7.77	55		Pn	23 53 28.9	+1.5
HRFI	Mount Harif	7.79	125	P	Pn	23 53 27.9	+0.3
HRFI	Mount Harif	7.79	125	S	Sn	23 54 51.4	-3.2
EIL	Elat	7.96	127	Pn	Pn	23 53 30.2	+0.2
	2.6nm,0.3s,baz=331,slow=4.8,SNR=41						
EIL				Sn	Sn	23 54 54.6	-4.4
	9.1nm,0.3s,baz=335,slow=17,SNR=8.9						
	5.6nm,0.3s						
EIL	Elat	7.96	127	P	Pn	23 53 29.9	-0.1
EIL	Elat	7.96	127	S	Sn	23 54 54.5	-4.4
ASUT		8.01	154	P	Pn	23 53 31.0	+0.3
KEK	Kerkira	8.02	311	Pn	Pn	23 53 29.3	-1.4
ASF	Jabal al Asfar	8.13	105	Pn	Pn	23 53 33.6	+1.3
	0.8nm,0.3s,baz=294,slow=19,SNR=14						
ASF				Sn	Sn	23 55 00.4	-2.7
	1.3nm,0.3s,baz=344,slow=20,SNR=2.3						
	1.9nm,0.3s						
HBST	Basata	8.13	130	P	Pn	23 53 32.2	0.0
GAZ	Gaziantep	8.13	70	Pn	Pn	23 53 31.6	-0.8
HKAT	Jabal Katrina	8.19	137	P	Pn	23 53 32.6	-0.7
NUB	Nuweibaa	8.21	132	P	Pn	23 53 33.6	+0.3
HDHB	Dhahab	8.41	133	P	Pn	23 53 35.8	-0.2
HHRG	Al Ghardaqah	9.02	144	P	Pn	23 53 46.7	+2.2
TIP	Timpagrande	9.80	300	Pn	Pn	23 53 52.7	-2.5
PDG	Podgorica	10.13	322	Pn	Pn	23 53 59.0	-0.7
CUC	Castrocucco	10.80	303	Pn	Pn	23 54 06.9	-1.9
MLR	Muntele Rosu	10.86	354	Pn	Pn	23 54 07.6	-2.0
	0.1nm,0.3s,baz=120,slow=17,SNR=1.9						
	1.9nm,0.9s						
RAFF	Raffo Rosso	11.06	287	Pn	Pn	23 54 10.9	-1.5
VAE	Valguarnera	11.07	288	Pn	Pn	23 54 11.6	-0.9
	7.1nm,0.6s,baz=64,slow=23,SNR=1.7						
VAE				Sn	Sn	23 56 02.3	-13
	4.4nm,0.3s,baz=146,slow=8.2,SNR=3.5						
ACER	Acerenza	11.08	307	Pn	Pn	23 54 09.3	-3.4
INTR	Introdacqua	13.02	308	Pn	Pn	23 54 36.0	-3.2
NRCA	Norcia	13.94	310	Pn	Pn	23 54 49.9	-1.9
FDMO	Fiordimonte	14.06	311	Pn	Pn	23 54 52.8	-0.6
PSZ	Piszkesteto	14.42	339	Pn	Pn	23 54 58.3	-0.1
KIV	Kislovodsk	14.84	47		Pn	23 55 04.3	+0.3
KBZ	Khabaz	14.84	48	Pn	P	23 55 11.4	+2.0
	0.3nm,0.3s,baz=222,slow=7.6,SNR=24						
KVAR	Kislovodsk Arr	14.84	47	Pn	Pn	23 55 06.4	+2.3
	baz=268,slow=11						
	3.0nm,1.0s						
KEST	Kesra	15.00	279	Pn	Pn	23 55 07.2	+0.9
	0.1nm,0.3s,baz=115,slow=18,SNR=1.8						
KEST				Sn	Sn	23 57 39.1	-12
	0.1nm,0.3s,baz=54,slow=18,SNR=1.3						
KEST	Kesra	15.00	279		Pn	23 55 05.0	-1.3
OBKA	Obir	15.41	324	ePn	Pn	23 55 13.0	+1.5
	5.0nm,0.5s						
STHS	Stebnicka Huta	15.45	344	ePN	P	23 55 16.3	+0.2
KIEV	Kiev	16.02	4		Pn	23 55 18.8	-0.5
AKASG	Malin Array Be	16.03	4	Pn	Pn	23 55 18.1	-1.3
	0.7nm,0.3s,baz=194,slow=12,SNR=7.6						
AKASG	Malin Array Be	16.03	4	Pn	Pn	23 55 19.4	0.0
AKBB	Malin Array Si	16.03	4		Pn	23 55 18.1	-1.3
STAL	STALIGIAL	16.17	320		P	23 55 22.9	-1.3
STAL				IAmb	IAmb	23 55 27.2	
	comp=Z,13nm,1.1s						
MAUC	Maruska	16.35	337	eP	P	23 55 25.3	-0.8
MOA	Molln	16.52	327	i Pn	Pn	23 55 23.9	-1.7
	comp=Z,0.8nm,0.5s						
ABTA	Abfaltersbach	16.59	321	i Pn	Pn	23 55 24.8	-1.9
	comp=Z,2.9nm,0.6s						
CTI	Castel Tesino	16.61	318	Pn	Pn	23 55 26.7	-0.3
CTI				IAmb	IAmb	23 55 33.5	
	comp=Z,15nm,1.3s						
BIOA	Bad Ischl, Aus	16.69	325	i Pn	Pn	23 55 26.8	-1.0
	comp=Z,1.0nm,0.4s						
VRAC	Vranov	16.72	334	Pn	Pn	23 55 26.3	-1.9
	comp=Z,0.1nm,0.3s,baz=199,slow=14,SNR=1.9						
	comp=Z,1.2nm,0.6s						
LESA	Schwarzleotal	16.96	323	i Pn	Pn	23 55 31.4	+0.1
	comp=Z,2.4nm,0.6s						
CKRC	Cesky Krumlov	17.23	329	eP	Pn	23 55 33.2	-1.4
KRLC	Kraliky	17.31	336	eP	Pn	23 55 35.9	+0.4
GEC2	GERESS Array S	17.51	328		Pn	23 55 37.8	-0.4
GERES	GERESS Array B	17.51	328	P	Pn	23 55 37.2	-0.9
	baz=133,slow=12,SNR=11						
	comp=Z,1.4nm,0.7s						
SQTA	Sankt Quirin	17.58	320	i Pn	Pn	23 55 38.7	-0.4
	comp=Z,2.7nm,0.5s						
DPC	Dobruska-Polom	17.70	336	eP	Pn	23 55 39.1	-1.3
FETA	Feichten	17.71	319	i Pn	Pn	23 55 40.5	-0.2
	comp=Z,1.1nm,0.7s						
FUORN	Ofenpass-Fuorn	17.73	317	Pn	Pn	23 55 39.5	-1.5
KHC	Kasperske Hory	17.78	328	eP	Pn	23 55 38.1	-3.3
RETA	Reutte	17.98	320	i Pn	Pn	23 55 43.1	-0.9
	comp=Z,1.5nm,0.5s						
DAVOX	Davos/Dischmat	18.03	317	P	Pn	23 55 43.2	-1.5
	comp=Z,0.1nm,0.3s,baz=187,slow=14,SNR=1.9						
	comp=Z,1.0nm,0.4s						
TUE	Stuetta	18.16	316		Pn	23 55 45.6	-0.7
DAVA	Damuels	18.33	319	i Pn	P	23 55 47.1	-1.1
	comp=Z,2.4nm,0.5s						
BNI	Bardonecchia	19.08	309	P	P	23 55 56.4	0.0
BNI				IAmb	IAmb	23 56 08.7	
	comp=Z,14nm,1.2s						
RAYN	Ar Rayn	19.13	121	P	P	23 55 57.2	+0.2
GRA1	Grafenberg Arr	19.24	326	P	P	23 55 58.1	+0.1
GRA1				IAmb	IAmb	23 56 19.8	
	comp=Z,19nm,1.2s						
SENIN	Lac Senin/Sane	19.31	313	P	P	23 55 58.3	-0.6
SENIN				IAmb	IAmb	23 56 08.0	
	comp=Z,16nm,1.1s						
SUW	Suwalki	19.56	352	P	P	23 56 00.3	-1.1
CLL	Collm	19.69	332	epP	pP	23 56 15.0	+4.3
BFO	Black Forest	19.80	319	P	P	23 56 04.1	0.0
BFO				IAmb	IAmb	23 56 22.6	
	comp=Z,12nm,1.2s						

PABE	Paberze	20.96	354	P	P	23 56 14.0	-2.5
PABE				IAmb	IAmb	23 56 22.6	
	comp=Z,19nm,1.1s						
OBN	Obninsk	21.33	14	P	P	23 56 19.6	-0.9
	comp=Z,8.3nm,0.4s,baz=214,slow=18,SNR=2.4						
	comp=Z,8.3nm,0.4s						
OBN	Obninsk	21.33	14	P	P	23 56 19.8	-0.8
TAM	Tamanrasset	22.69	244		P	23 56 35.8	+0.3
TAM				IAmb	IAmb	23 56 39.2	
	comp=Z,7.9nm,0.5s						
ESDC	Sonseca Array	25.60	291	P	P	23 57 02.0	-0.8
	comp=Z,1.7nm,0.7s,baz=83,slow=10.0,SNR=9.2						
	comp=Z,1.7nm,0.7s						
FINES	FINESS Array B	26.78	358	P	P	23 57 11.7	-1.5
	comp=Z,2.2nm,0.4s,baz=158,slow=12,SNR=25						
	comp=Z,2.2nm,0.4s						
FIA1	FINESS Array S	26.78	358	P	P	23 57 11.8	-1.3
HFS	Hagfors	27.02	345	P	P	23 57 13.3	-2.1
	comp=Z,1.6nm,0.5s,baz=138,slow=11,SNR=15						
	comp=Z,1.6nm,0.5s						
KONO	Kongsberg	27.63	340	*e*P	P	23 57 18.6	-2.2
AB31	Akbulak array	27.81	49	P	P	23 57 22.4	-0.2
ABKAR	Akbulak array	27.81	49	P	P	23 57 21.7	-0.9
NC602	NORSAR Array S	28.05	343	P	P	23 57 21.9	-2.7
NC602	NORSAR Array S	28.05	343	*e*P	P	23 57 22.2	-2.4
NB2	NORSAR Subarra	28.40	343	P	P	23 57 25.7	-2.0
	comp=Z,1.0nm,0.5s,baz=155,slow=10						
NB2	NORSAR Subarra	28.40	343	P	P	23 57 25.7	-2.0
	baz=155,slow=10						
NOA	NORSAR Array B	28.40	343	P	P	23 57 25.1	-2.7
	comp=Z,0.4nm,0.5s,baz=146,slow=9.3,SNR=9.1						
	comp=Z,0.4nm,0.5s						
EKA	Eskdalemuir Ar	29.61	324	P	P	23 57 36.9	-1.6
	comp=Z,0.4nm,0.4s,baz=122,slow=11,SNR=9.5						
	comp=Z,0.4nm,0.4s						
DOMB	Dombas	29.79	342	*e*P	P	23 57 39.5	-0.6
ARTI	Arti	30.13	34	P	P	23 57 43.3	+0.2
ARTI				IAmb	IAmb	23 57 54.3	
	comp=Z,4.8nm,1.1s						
TORD	Torodi Ar. Bea	31.82	234	P	P	23 57 58.0	-0.4
	comp=Z,2.2nm,0.6s,baz=36,slow=12,SNR=18						
	comp=Z,2.2nm,0.6s						
TORD	Torodi Ar. Bea	31.82	234	P	P	23 57 56.9	-1.5
CHGR	Chuyangaron	33.32	71	P	P	23 58 11.1	-0.3
CHGR				IAmb	IAmb	23 58 15.3	
	comp=Z,5.6nm,0.8s						
KK31	Karatay Array	34.09	63		P	23 58 17.7	-0.3
KK31				IAmb	IAmb	23 58 20.8	
	comp=Z,4.5nm,0.7s						
KKAR	Karatay Array	34.09	63		P	23 58 18.1	+0.1
KTK1	Kautokeino	34.45	357	*e*P	P	23 58 19.8	-1.1
ARA0	ARCESS Array S	34.91	359	*e*P	P	23 58 24.1	-0.7
ARCES	ARCESS Array B	34.91	359	P	P	23 58 23.5	-1.3
	comp=Z,2.9nm,0.5s,baz=170,slow=8.3,SNR=50						
ARCES				PcP	PcP	00 00 57.1	+0.4
	comp=Z,0.5nm,0.3s,baz=189,slow=4.0,SNR=7.0						
	comp=Z,2.9nm,0.5s						
ARCES	ARCESS Array B	34.91	359	P	P	23 58 23.6	-1.1
JETT	Jettan, Norway	35.14	356	*e*P	P	23 58 25.6	-1.2
BVAR	Borovoye Array	35.20	45	P	P	23 58 28.4	+0.9
	comp=Z,0.8nm,0.7s,baz=240,slow=5.0,SNR=6.1						
	comp=Z,0.8nm,0.7s						
VADS	Vadso	35.49	1	*e*P	P	23 58 29.4	-0.3
AAK	Ala-Archa	37.03	63		P	23 58 45.0	+1.5
AAK				IAmb	IAmb	23 58 46.8	
	comp=Z,3.8nm,0.8s						
KURBB	Kurchatov Arra	39.82	50	P	P	23 59 07.8	+1.2
	comp=Z,6.4nm,0.6s,baz=275,slow=8.7,SNR=41						
KURBB				PcP	PcP	00 01 13.3	+1.1
	comp=Z,0.9nm,0.5s,baz=279,slow=4.1,SNR=2.9						
	comp=Z,6.4nm,0.6s						
KURK	Kurchatov	39.89	50	P	P	23 59 08.1	+1.0
KURK				IAmb	IAmb	23 59 09.4	
	comp=Z,5.6nm,0.7s						
DBIC	Dimbokro	40.93	235	P	P	23 59 16.4	+0.3
	comp=Z,3.0nm,0.5s,baz=65,slow=9.1,SNR=13						
	comp=Z,3.0nm,0.5s						
DBIC	Dimbokro	40.93	235	P	P	23 59 16.1	0.0
MAKZ	Makanchi	42.10	56	P	P	23 59 26.5	+1.0
MAKZ				IAmb	IAmb	23 59 53.5	
	comp=Z,12nm,1.4s						
MKAR	Makanchi Array	42.32	56	P	P	23 59 28.9	+1.6
	comp=Z,5.9nm,0.6s,baz=273,slow=7.4,SNR=60						
MKAR				PcP	PcP	00 01 21.5	+1.1
	comp=Z,0.4nm,0.7s,baz=280,slow=3.2,SNR=1.4						
	comp=Z,5.9nm,0.6s						
MKAR	Makanchi Array	42.32	56	P	P	23 59 28.6	+1.4
ZAA0	Zalesovo Array	43.85	46	P	P	23 59 39.9	+0.4
ZAA0				IAmb	IAmb	23 59 41.0	
	comp=Z,3.1nm,0.6s						
ZALV	Zalesovo Beam	43.85	46	P	P	23 59 40.3	+0.9
	comp=Z,3.3nm,0.5s,baz=266,slow=8.7,SNR=20						
	comp=Z,3.3nm,0.5s						
ZALV	Zalesovo Beam	43.85	46	P	P	23 59 39.8	+0.4
SPITS	Spitsbergen Ar	43.85	357	P	P	23 59 38.4	-0.8
	comp=Z,7.5nm,1.1s,baz=153,slow=13,SNR=1.4						
	comp=Z,7.5nm,1.1s						
NRIK	Noril'sk	47.43	25	P	P	00 00 08.3	+0.8
	comp=Z,1.2nm,0.4s,baz=230,slow=5.5,SNR=6.1						
	comp=Z,1.2nm,0.4s						
NRIK	Noril'sk	47.43	25	P	P	00 00 07.9	+0.3
NRIK				IAmb	IAmb	00 00 10.0	
	comp=Z,3.6nm,1.1s						
SONM	Songino Array	58.19	51	P	P	00 01 29.1	+1.6
	comp=Z,1.6nm,0.5s,baz=283,slow=7.8,SNR=12						
	comp=Z,1.6nm,0.5s						
SONM	Songino Array	58.19	51	P	P	00 01 28.6	+1.2
SONM				IAmb	IAmb	00 01 30.0	
	comp=Z,1.5nm,0.6s						
LBTB	Lobatse	59.42	182	P	P	00 01 37.8	+1.7
PZH	PanZhiHua	63.00	75	P	P	00 02 02.0	+1.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BOSA	Boshof	63.01	182	P	P	00 02 02.3	+1.9
	comp=Z,5.1nm,1.0s,baz=14,slow=6.1,SNR=7.9						
	comp=Z,5.1nm,1.0s						
BOSA	Boshof	63.01	182	P	P	00 02 00.4	0.0
HHC	Hu-ho-hao-te	64.18	57	*e*P	P	00 02 09.3	+1.1
HHC	Hu-ho-hao-te	64.18	57	LR	LR		
	comp=Z,130nm,9.9s						
HHC	Hu-ho-hao-te	64.18	57	LR	LR		
	comp=E,85nm,9.5s						
HHC	Hu-ho-hao-te	64.18	57	LR	LR		
	comp=N,160nm,9.8s						
HHC	Hu-ho-hao-te	64.18	57	pmax	pmax		
	comp=Z,170nm,5.9s						
HHC	Hu-ho-hao-te	64.18	57	pmax	pmax		
	comp=Z,6.0nm,0.6s						
CMAR	Chiang Mai Arr	64.58	84	P	P	00 02 11.9	+1.0
	comp=Z,1.2nm,0.3s,baz=290,slow=7.9,SNR=5.2						
	comp=Z,1.2nm,0.3s						
SCHQ	Schefferville	64.85	320	P	P	00 02 11.1	-1.1
	comp=Z,1.2nm,0.4s,baz=95,slow=3.6,SNR=6.7						
	comp=Z,1.2nm,0.4s						
SCHQ	Schefferville	64.85	320	P	P	00 02 11.2	-0.9
HILR	Hailar Array B	65.77	46	P	P	00 02 19.3	+1.1
	comp=Z,0.8nm,0.6s,baz=290,slow=6.0,SNR=2.1						
	comp=Z,0.8nm,0.6s						
SUR	Sutherland	67.04	186	P	P	00 02 28.1	+1.5
USRK	Ussuriysk Ar.	75.70	46	P	P	00 03 18.7	+0.1
	comp=Z,2.2nm,0.7s,baz=295,slow=2.8,SNR=1.7						
	comp=Z,2.2nm,0.7s						
KSRS	Korea Array	76.92	54	P	P	00 03 27.1	+1.4
	comp=Z,1.3nm,0.8s,baz=316,slow=4.7,SNR=4.2						
	comp=Z,1.3nm,0.8s						
D19K	Kuna River	77.03	2	P	P	00 03 26.1	+0.3
D19K				IAmb	IAmb	00 03 31.4	
	comp=Z,2.1nm,0.9s						
E21K	Killik River	77.16	1	P	P	00 03 27.1	+0.5
E21K				IAmb	IAmb	00 03 53.5	
	comp=Z,7.4nm,1.5s						
G31M	Satah River	77.76	353	P	P	00 03 29.1	-0.8
G31M				IAmb	IAmb	00 03 30.8	
	comp=Z,2.1nm,1.2s						
ILAR	Eielson Array	80.76	358	P	P	00 03 46.1	-0.3
	comp=Z,0.4nm,1.0s,baz=334,slow=3.0,SNR=2.3						
	comp=Z,0.4nm,1.0s						
ASAR	Alice Springs	115.95	102	PKP	PKPdf	00 10 16.3	0.0
	comp=Z,0.3nm,0.9s,baz=298,slow=1.8,SNR=4.1						

DJA 21 23:54:02.2±0.2**,3°S**±2°×**11°9E**±°**,h10km,M3.7**/13**,mB5.1**/1**, mb3.7**/4**,MLv3.6**/13**,Mw(mB)4.5**/1**,Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTSI	Tana Toraja	0.42	112	P	Pg	23 54 09.3	-1.1
TTSI				S	Sg	23 54 15.5	-0.5
MMSI	Mamuju	0.56	291	P	Pg	23 54 12.7	-0.3
MMSI				S	Sb	23 54 21.4	-0.7
PMSI	Majene	0.80	220	P	Pb	23 54 18.2	0.0
SPSI	Sidrap Palu	1.12	162	P	Pb	23 54 22.2	-1.5
SPSI				S	Sb	23 54 37.6	-0.7
PCI	Palu	2.01	12	P	Pn	23 54 37.4	+1.1
PCI				S	Sb	23 55 03.6	-0.5
KAPI	Kappang	2.13	171	P	Pn	23 54 38.6	+0.7
KAPI				S	Sn	23 55 05.2	+0.7
BKSI	Bulukumba	2.51	164	P	Pb	23 54 45.7	-1.7
BKSI				S	Sb	23 55 17.5	-1.0
KKSI	Kolaka, Sulawe	2.56	120	P	Pn	23 54 45.1	+1.4
APSI	Ampana	2.96	48	P	Pn	23 54 50.1	+0.8
BKB	Balikpapan	3.00	303	P	Pn	23 54 51.4	+1.5
MPSI	Mapaga	3.24	8	P	Pn	23 54 54.2	+1.1
GTOI	Gorontalo	5.01	46	P	Pn	23 55 18.5	+1.0
DBNI	Kabupaten Domp	5.69	191	P	Pn	23 55 26.2	-0.6
	0.1nm3.8nm,2.0s						
PLAI	Plampang	6.12	196	P	Pn	23 55 31.4	-1.4
	13nm,1.2s						
EDFI	Ende, Flores	6.24	159	P	Pn	23 55 34.7	+0.2
	0.0nm6.1nm,1.2s						
KLNI	Mataram	6.42	211	P	Pn	23 55 36.8	-0.1

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*IDC **22** 00:12:40.2±2.4,56°.46N×152°.51W,h0km,mb3.5/3, mbtmp3.4/5,ML3.1/2,Error ellipse: s-maj=42.6km s-min=31.0km az=131.0*

*NEIC **22** 00:12:40.4±1.6,56°.41N±0°.05×152°.23W±0°.07,h10km±2km, ML3.2/64,ML3.2(AEIC),Error ellipse: s-maj=8.4km s-min=6.2km az=145.0*

*AEIC **22** 00:12:45.2±2.2,56°.44N±0°.03×152°.31W±0°.07,h6km±3km, Error ellipse: s-maj=7.1km s-min=2.7km az=126.0*

ISC 22 00:12:40.6±0.9**,56°.42N**±0°.06×**152°.19W**±0°.05**,h18km, n123,σ1s.34**/123**,mb3.6**/3**,Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHAK	Old Harbor	1.01	324		Pb	00 12 59.6	+0.1
OHAK				IAML		00 13 27.3	
	comp=E,798nm,1.1s						
OHAK				IAML		00 13 28.7	
	comp=N,454nm,0.8s						
SII	Sitkinak Islan	1.12	278	Pn	Pn	00 13 01.2	-0.2
SII					Sb	00 13 15.1	-0.5
KDAK	Kodiak Island	1.39	351	Pn	Pn	00 13 05.5	+0.5
	comp=N,3.3nm,0.3s,baz=195,slow=8.5,SNR=33						
KDAK				Sn	Sn	00 13 21.7	-1.3
	comp=N,20nm,0.3s,baz=232,slow=16,SNR=7.3						
KDAK	Kodiak Island	1.39	351		Pn	00 13 05.2	+0.2
KDAK	Kodiak Island	1.39	351		Sn	00 13 21.6	-1.4
CHIR	Chirikof Islan	2.01	254	Pn	Pn	00 13 14.0	+0.3
CHIR				Sn	Sn	00 13 36.8	-1.5
CHIR				IAML		00 13 38.6	
	comp=E,171nm,0.7s						
CHIR				IAML		00 13 40.4	
	comp=N,195nm,0.8s						
SYI	Shuyak Island	2.20	357		Pn	00 13 16.3	+0.1
SYI				IAML		00 13 42.7	
	comp=E,103nm,1.3s						
SYI	Shuyak Island	2.20	357		Sn	00 13 41.5	-1.5
CAHL	Cahill	2.36	315		Pn	00 13 19.5	+1.0
CAHL					Pb	00 13 20.4	-2.2
KAWH	Katmai	2.43	325		Pn	00 13 20.4	+0.9
KAHG	Katmai Hook Gl	2.44	330		Pb	00 13 22.8	-1.2
KAKN	Katmai Knife C	2.45	322		Pn	00 13 21.6	+1.9
KJL	Kejulik	2.47	313		Pn	00 13 22.0	+2.0
ACHA	Angle Creek He	2.48	318	Pn	Pn	00 13 20.5	+0.4
KARR	Katmai Rainbow	2.49	328		Pb	00 13 23.4	-1.4
ANCK	Angle Creek	2.53	316		Pn	00 13 23.0	+2.2
PLK3	Peulik 3	2.57	302		Pn	00 13 22.4	+1.1
PLK4	Peulik 4	2.59	300		Pn	00 13 22.2	+0.6
PLK2	Peulik 2	2.63	303		Pn	00 13 23.2	+1.0
Q19K	Cape Douglas,	2.64	343		Pn	00 13 23.6	+1.3
KAHC	Katmai Hardscr	2.71	327		Pn	00 13 25.0	+1.7
CNTC	Contact Creek	2.73	314		Pn	00 13 25.3	+1.7
PLK1	Peulik 1	2.78	302		Pn	00 13 25.3	+1.1
PLBL	Peulik Blue Cr	2.84	299		Pn	00 13 26.6	+1.6
CNPM	China Poot	3.16	9		Pn	00 13 30.4	+0.9
CNPM				IAML		00 13 51.9	
	comp=E,42nm,1.5s						
CNPM				IAML		00 14 14.0	
	comp=N,39nm,1.5s						
CNPM	China Poot	3.16	9		Sn	00 14 05.4	-1.3
HOM	Homer	3.27	5		Sn	00 14 08.3	-0.9
P19K	Oil Pt	3.29	351		Pn	00 13 32.1	+0.8
P19K				IAML		00 14 19.1	
	comp=E,95nm,1.0s						
P19K				IAML		00 14 41.8	
	comp=N,79nm,0.8s						
P18K	Big Mountain,	3.40	333		Pn	00 13 33.9	+1.2
P18K				IAML		00 14 45.5	
	comp=E,34nm,1.4s						
BRSE	Bradley Lake S	3.42	12		Pn	00 13 33.9	+0.9
BRLK	Bradley Lake	3.43	11		Pn	00 13 33.1	0.0
BRLK				IAML		00 15 00.7	
	comp=E,44nm,1.1s						
BRLK				IAML		00 15 20.8	
	comp=N,34nm,1.3s						
ILS	Iliamna Low So	3.58	353		Pn	00 13 36.6	+1.3
P17K	Kvichak River	3.60	323		Pn	00 13 35.9	+0.5
ILSW	Iliamna Southw	3.61	352		Pn	00 13 36.6	+0.8
ILSW				IAML		00 15 05.0	
	comp=N,29nm,1.3s						
ILSW				IAML		00 15 09.8	
	comp=E,32nm,1.1s						
ILSW	Iliamna Southw	3.61	352		Sn	00 14 18.0	0.0
IVE	Iliamna Volcan	3.64	353		Pn	00 13 37.0	+0.9
VNHG	Veniaminof 1	3.89	270		Pn	00 13 40.6	+1.1
SEW	Seward	3.97	20	Pn	Pn	00 13 40.2	-0.3
RDSO	Redoubt South	4.06	356		Pn	00 13 43.1	+1.1
RDSO					Sn	00 14 27.3	-1.8
P16K	Nushagak River	4.07	313		Pn	00 13 42.6	+0.8
P16K				IAML		00 15 15.6	
	comp=N,60nm,1.2s						
RDWB	Redoubt West	4.10	355		Pn	00 13 43.6	+1.1
VNFG	Fog Glacier, M	4.10	271		Pn	00 13 43.3	+0.9
SLKM	Skilak Lake	4.23	13	Pn	Pn	00 13 45.2	+1.0
SLKM				IAML		00 14 36.3	
	comp=N,33nm,1.4s						
SLKM				IAML		00 14 39.0	
	comp=E,27nm,0.8s						
O17K	Koliganek Bris	4.26	324		Pn	00 13 45.7	+1.3
P23K	Montague Islan	4.39	33	Pn	Pn	00 13 46.1	-0.2
P23K				IAML		00 15 34.0	
	comp=E,31nm,1.2s						
P23K				IAML		00 16 18.6	
	comp=N,20nm,1.3s						
O16K	Kokwok River B	4.47	318		Pn	00 13 48.1	+0.7
CNBA	Chernabura Isl	4.49	252	Pn	Pn	00 13 46.7	-1.0
CNBA				IAML		00 14 42.5	
	comp=E,27nm,1.2s						
CNBA				IAML		00 15 11.7	
	comp=N,25nm,1.5s						
N19K	Bonanza Creek	4.57	346	Pn	Pn	00 13 49.7	+0.8
N18K	Kilae Creek	4.70	337		Pn	00 13 51.2	+0.6
SPU	Mount Spurr	4.78	1	Pn	Pn	00 13 51.9	+0.2
SDPT	Sand Point	4.79	261	Pn	Pn	00 13 51.8	0.0
SDPT				IAML		00 15 15.3	
	comp=N,36nm,1.5s						
SDPT				IAML		00 16 38.1	
	comp=E,33nm,1.4s						
RC01	Rabbit Creek A	4.86	14		Pn	00 13 52.8	0.0
RC01				IAML		00 14 53.9	
	comp=E,17nm,1.1s						
RC01				IAML		00 16 23.2	
	comp=N,18nm,0.9s						
N17K	Nushagak Hills	4.89	330		Pn	00 13 53.6	+0.5
N17K				IAML		00 15 33.0	
	comp=N,13nm,1.4s						
PWL	Port Wells	4.89	23	Pn	Pn	00 13 53.7	+0.5
PWL				IAML		00 14 53.0	
	comp=N,32nm,1.2s						
O15K	Ungalikthiuk R	4.94	307		Pn	00 13 54.7	+1.0
O15K				IAML		00 15 35.4	
	comp=N,12nm,1.2s						
O15K				IAML		00 16 04.2	
	comp=E,15nm,1.5s						
HIN	Hinchinbrook I	4.99	34	Pn	Pn	00 13 54.9	+0.4
STLK	Strandline Lak	5.10	2		Pn	00 13 56.8	+0.7
STLK				IAML		00 14 58.7	
	comp=E,10nm,0.7s						
FID	Port Fidalgo	5.27	32	Pn	Pn	00 13 58.0	-0.4
N16K	Nishlik Lake	5.34	322		Pn	00 14 00.1	+0.8
EYAK	Cordova Ski Ar	5.35	36	Pn	Pn	00 13 59.3	-0.1
EYAK				IAML		00 15 22.5	
	comp=N,13nm,1.5s						
EYAK				IAML		00 17 07.8	
	comp=E,11nm,1.4s						
KAIM	Kayak Island	5.41	46		Pn	00 14 01.1	+0.8
M18K	Stony River	5.43	341		Pn	00 14 01.2	+0.6
M20K	Styx River	5.51	355		Pn	00 14 02.4	+0.7
SKT	Skwentna	5.59	3		Pn	00 14 03.6	+0.8
RAGM	Ragged Mountai	5.61	42	Pn	Pn	00 14 03.4	+0.4
N15K	Kwethluk River	5.62	315		Pn	00 14 04.8	+1.7
GHO	Glory Hole Cre	5.63	16	Pn	Pn	00 14 04.2	+0.8
M17K	Holitna River	5.69	334		Pn	00 14 05.4	+1.3
GOAT	Goat Mountain	5.72	40		Pn	00 14 05.1	+0.5
SML	Sawmill	5.76	19	Pn	Pn	00 14 05.9	+0.8
DIV	Divide	5.79	33	Pn	Pn	00 14 06.1	+0.6
M16K	Timber Creek	5.81	325		Pn	00 14 07.5	+1.7
DTNA	Dutton South F	5.82	262		Pn	00 14 07.2	+1.2
DT1	Dutton Round H	5.85	261		Pn	00 14 07.3	+1.1
L19K	White Mountain	5.94	348		Pn	00 14 08.7	+1.1
SCM	Sheep Creek Mo	5.98	23		Pn	00 14 08.7	+0.5
KLU	Klutina	6.03	30	Pn	Pn	00 14 09.7	+0.7
BMRM	Bremner River	6.04	38	Pn	Pn	00 14 09.6	+0.6
L22K	Petersville	6.17	6	Pn	Pn	00 14 12.4	+1.6
SNH	Sunshine Point	6.21	49	Pn	Pn	00 14 12.9	+1.7
L18K	Granite Mounta	6.26	340	Pn	Pn	00 14 13.7	+1.7
BARK	Barkley Ridge	6.47	48		Pn	00 14 15.7	+0.7
L16K	Owhat River	6.50	328	Pn	Pn	00 14 16.5	+1.2
PPLA	Purkeypile	6.50	360	Pn	Pn	00 14 17.0	+1.6
N25K	Chitina, Valde	6.51	34	Pn	Pn	00 14 16.1	+0.5
TGL	Tana Glacier	6.54	44	Pn	Pn	00 14 16.7	+0.8
VRDI	Verde Repeater	6.62	40	Pn	Pn	00 14 17.5	+0.4
GLB	Gilahina Butte	6.65	37	Pn	Pn	00 14 17.8	+0.5
YAH	Yahtse	6.76	50	Pn	Pn	00 14 20.5	+1.4
KIAG	Kiagna River	6.83	45		Pn	00 14 21.0	+1.0
CHX	Chaix Hills	6.89	53		Pn	00 14 22.7	+2.0
BALM	Baldy	6.91	44		Pn	00 14 22.2	+1.3
PTPK	Patty Peak	6.95	43		Pn	00 14 22.8	+1.2
BARN	Barnard Glacie	7.19	45		Pn	00 14 26.2	+1.3
CTGM	Chitina Glacie	7.26	47	Pn	Pn	00 14 26.7	+0.9
PCA	Pinnacle	7.29	55		Pn	00 14 27.9	+1.7
LOGN	Logan Glacier	7.32	48		Pn	00 14 27.9	+1.3
BCPM	Bancas Point	7.52	57	Pn	Pn	00 14 31.0	+1.8
M27K	Edge Creek, AK	7.94	37	Pn	Pn	00 14 37.0	+1.8
O29M	Mount Kennedy	8.14	56	Pn	Pn	00 14 40.1	+2.2
P29M	Windy Craggy	8.32	61		Pn	00 14 42.2	+2.0
UNV	Unalaska Valle	8.60	259		Pn	00 14 45.2	+1.2
IL31		8.78	15	Pn	Pn	00 14 48.5	+2.1
ILAR	Eielson Array	8.78	15	Pn	Pn	00 14 46.9	+0.4
	comp=E,0.1nm,0.3s,baz=200,slow=14,SNR=11						
ILAR				Sn	Sn	00 16 17.1	-7.7
	comp=E,0.2nm,0.3s,baz=204,slow=22,SNR=5.1						
ILAR	Eielson Array	8.78	15	Pn	Pn	00 14 48.2	+1.7
S31K	Pelican	8.80	73	Pn	Pn	00 14 46.8	0.0
HYT	Haines Junctio	8.84	54	Pn	Pn	00 14 46.6	-0.8
M29M	Somme Creek	9.23	43	Pn	Pn	00 14 53.5	+0.7
N30M	Aishikik Lake	9.29	51	Pn	Pn	00 14 54.0	+0.5
O30N	Mendenhall	9.46	56	Pn	Pn	00 14 57.0	+1.1
G23K	Bananza Creek	10.38	5	Pn	Pn	00 15 09.5	+1.0
INK	Inuvik	14.64	28	Pn	P	00 16 12.4	-0.3
	comp=E,0.1nm,0.3s,baz=224,slow=9.1,SNR=3.7						
	comp=E,3.6nm,1.4s						
INK	Inuvik	14.64	28	Pn	Pn	00 16 07.3	+0.7
YKA	Yellowknife Ar	19.82	57	P	Pn	00 17 12.3	+0.9
	comp=E,0.1nm,0.3s,baz=274,slow=10,SNR=3.9						
	comp=E,0.3nm,0.8s						
H11N2	WAKE ISLAND Hy	47.58	237	T	T	01 12 31.2	
	baz=29						
H11N3	WAKE ISLAND Hy	47.58	237	T	T	01 12 31.1	
	baz=29						
H11N1	WAKE ISLAND Hy	47.59	237	T	T	01 12 36.0	
	baz=29						
H11S1	WAKE ISLAND Hy	48.73	236	T	T	01 13 50.4	
	baz=29						
H11S2	WAKE ISLAND Hy	48.74	236	T	T	01 13 50.2	
	baz=29						
H11S3	WAKE ISLAND Hy	48.74	236	T	T	01 13 50.0	
	baz=29						
SONM	Songino Array	57.30	308	P	P	00 22 28.4	+1.4
	comp=E,0.3nm,0.5s,baz=46,slow=8.5,SNR=4.1						
	comp=E,0.3nm,0.5s						
ZALV	Zalesovo Beam	60.55	325	P	P	00 22 49.8	+0.5
	comp=E,0.3nm,0.4s,baz=36,slow=7.5,SNR=1.7						
	comp=E,0.3nm,0.4s						
MKAR	Makanchi Array	67.53	323	P	P	00 23 37.5	+2.2
	comp=E,0.3nm,0.6s,baz=29,slow=7.1,SNR=1.1						
	comp=E,0.3nm,0.6s						

IDC 22 00:17:30.8±3.6**,22°.48N**×**144°.62E,h200km**±30km**,mb3.1**/9**, mbtmp3.6**/10**,Error ellipse: s-maj=42.9km s-min=24.6km az=77.0,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	5.10	335	P	Pn	00 18 45.5	-0.9
	24nm,0.5s,baz=208,slow=17,SNR=1.4						
JCJ				S	Sn	00 19 41.4	-4.7
	30nm,0.6s,baz=289,slow=22,SNR=1.1						
KSRS	Korea Array	20.73	320	P	P	00 21 57.5	+1.6
	0.9nm,0.7s,baz=146,slow=8.4,SNR=4.8						
	0.9nm,0.7s						
SONM	Songino Array	39.60	319	P	P	00 24 42.9	0.0
	0.2nm,0.3s,baz=120,slow=5.2,SNR=2.5						
	0.2nm,0.3s						
WRA	Warramunga Arr	43.34	194	P	P	00 25 13.3	-0.1
	0.4nm,0.7s,baz=8.2,slow=7.7,SNR=1.9						
	0.4nm,0.7s						
ZALV	Zalesovo Beam	54.43	321	P	P	00 26 36.4	-0.8
	0.4nm,0.4s,baz=111,slow=7.9,SNR=2.7						
	0.4nm,0.4s						
MKAR	Makanchi Array	55.15	312	P	P	00 26 40.9	-1.7
	0.5nm,0.8s,baz=79,slow=9.1,SNR=2.3						
	0.5nm,0.8s						
KURBB	Kurchatov Arra	57.86	317	P	P	00 27 00.7	-0.8
	0.6nm,0.5s,baz=93,slow=7.8,SNR=7.2						
	0.6nm,0.5s						
BVAR	Borovoye Array	62.94	319	P	P	00 27 36.5	+0.5
	0.5nm,0.4s,baz=104,slow=6.6,SNR=2.8						
	0.5nm,0.4s						
YKA	Yellowknife Ar	75.14	28	P	P	00 28 50.0	-0.7
	0.2nm,0.7s,baz=299,slow=7.4,SNR=2.6						
	0.2nm,0.7s						
FINES	FINESS Array B	83.04	335	P	P	00 29 35.4	+1.9
	1.7nm,0.8s,baz=57,slow=5.2,SNR=11						
	1.7nm,0.8s						

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*HEL **22** 00:20:11.1±0.3,67°.83N×20°.01E,h0km,ML1.7,Suspected explosion*

*UPP **22** 00:20:11.8±0.2,67°.84N×20°.21E,h0km,ML1.9,Suspected explosion*

*IDC **22** 00:20:14.5±1.1,67°.79N×20°.85E,h0km,mbtmp3.0/4, ML1.7/4,Error ellipse: s-maj=18.8km s-min=8.8km az=114.0*

ISC 22 00:20:12.3±0.8**,67°.81N**±0°.02×**20°.26E**±0°.02**,h0km,n40, σ1s.11**/67**,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.15	12	P	Pg	00 20 14.5	-0.6
	baz=229						
KUA				S	Sg	00 20 16.4	-0.5
KUA	Kurravaara	0.15	12	P	Pg	00 20 14.8	-0.3
	baz=226						
KUA				S	Sg	00 20 16.7	-0.3
RATU	Laukkuluspa	0.25	273	P	Pg	00 20 16.4	-0.6
RATU				S	Sg	00 20 19.8	-0.5
RATU	Laukkuluspa	0.25	273	P	Pg	00 20 16.6	-0.4
RATU				S	Sg	00 20 20.0	-0.3
KOVU	Salmi	0.41	355	P	Pg	00 20 19.3	-0.9
KOVU				S	Sg	00 20 24.8	-0.8
KOVU	Salmi	0.41	355	P	Pg	00 20 19.5	-0.6
KOVU				S	Sg	00 20 25.2	-0.4
LANU	Lannavaara	0.70	69	P	Pg	00 20 25.4	-0.3
LANU				S	Sg	00 20 34.9	+0.3
LANU	Lannavaara	0.70	69	PG	Pg	00 20 25.1	-0.5
LANU				SG	Sg	00 20 35.0	+0.3
DUNU	Dundret	0.70	170	P	Pg	00 20 25.6	-0.1
DUNU				S	Sg	00 20 35.4	+0.6
MASU	Masugnsbyn	0.76	117	P	Pg	00 20 26.6	-0.1
MASU				S	Sg	00 20 37.6	+1.2
SALU	Saltoluokta	0.80	238	P	Pg	00 20 26.9	-0.6

SALU				S	Sg	00 20 37.5	-0.3
SALU	Saltoluokta	0.80	238	*e*P	Pg	00 20 27.0	-0.5
KIF	Kilpisjarvi	1.22	9	*e*P	Pg	00 20 35.0	-0.5
KIF	Kilpisjarvi	1.22	9	PN	Pg	00 20 35.0	-0.5
KIF				MSG		00 20 49.0	
	comp=Z,9.6nm,0.2s						
KIF				SB	Sg	00 20 50.7	-0.5
PAJU	Pajala	1.36	124	P	Pg	00 20 37.4	-0.9
PAJU	Pajala	1.36	124	PG	Pg	00 20 37.0	-1.3
	baz=304						
PAJU				SG	Sg	00 20 55.7	-0.1
HEF	Hetta	1.41	63	PG	Pn	00 20 37.8	-1.3
	baz=250						
HEF				MSG		00 20 55.7	
	comp=Z,5.8nm,0.2s						
HEF				SG	Sg	00 20 56.6	-0.9
ERTU	Ertsjaerv	1.47	148	P	Pn	00 20 39.3	-0.7
ERTU	Ertsjaerv	1.47	148	PG	Pn	00 20 39.4	-0.7
ERTU				SN	Sn	00 21 00.1	+0.2
KLF	Kolari	1.54	110	PG	Pn	00 20 40.2	-0.7
KLF				MSG		00 21 00.1	
	comp=Z,4.2nm,0.2s						
KLF				SG	Sg	00 21 01.8	+0.2
KTK1	Kautokeino	1.64	41	PG	Pn	00 20 41.7	-0.5
KTK1				SG	Sn	00 21 03.2	-0.8
HARU	Harads	1.68	170	P	Pn	00 20 43.1	+0.2
KALU	Kalix	2.31	147	PB	Pn	00 20 52.5	+1.0
KALU				SG	Sb	00 21 23.8	0.0
TOF	Tornio	2.36	135	PG	Pn	00 20 53.7	+1.5
TOF				MSG		00 21 23.4	
	comp=Z,3.0nm,0.2s						
TOF				SG	Sb	00 21 24.8	-0.5
RNF	Rovaniemi	2.55	116	PB	Pn	00 20 56.5	+1.8
	baz=304						
RNF				SG	Sb	00 21 30.7	+0.1
ARA0	ARCESS Array S	2.58	46	PB	Pn	00 20 56.1	+0.9
ARA0				SB	Sn	00 21 29.4	+2.0
ARCES	ARCESS Array B	2.58	46	Pn	Pn	00 20 55.9	+0.6
	comp=Z,0.3nm,0.3s,baz=227,slow=15,SNR=42						
ARCES				Sn	Sn	00 21 28.0	+0.6
	comp=Z,0.8nm,0.3s,baz=227,slow=24,SNR=14						
	comp=Z,0.7nm,0.3s						
RAJF	Raja-Jooseppi	3.09	74	PN	Pn	00 21 02.2	0.0
RAJF				SB	Sb	00 21 45.6	-0.5
KEV	Kevo	3.14	48	PB	Pn	00 21 04.2	+1.4
KEV				SN	Sn	00 21 41.7	+0.8
RANF	Ranua	3.14	122	PG	Pb	00 21 07.6	-1.3
BURU	Burvik	3.27	171	PB	Pn	00 21 06.8	+2.1
OUL	Oulu	3.55	138	SG	Sb	00 22 01.4	+2.0
VRF	Varrio	3.56	87	PG	Pb	00 21 16.1	+0.2
OBF8	Ulkokalla	3.73	158	SN	Sn	00 21 51.5	-4.0
OLKF	Oulanka, Finla	3.88	108	PG	Pb	00 21 22.5	+1.0
MSF	Maaselka	3.96	115	PN	Pn	00 21 15.2	+1.1
MSF				SG	Sg	00 22 17.9	-1.3
KU6	Riekki	4.20	111	PG	Pb	00 21 27.6	+0.8
	baz=301						
KU6				SG	Sg	00 22 24.5	-2.4
FINES	FINESS Array B	6.86	156	Pn	Pn	00 21 55.0	+1.0
	comp=Z,0.1nm,0.3s,baz=347,slow=11,SNR=3.4						
FINES				Sn	Sn	00 23 11.4	-1.3
	comp=Z,0.1nm,0.3s,baz=348,slow=24,SNR=1.2						
FINES				Lg	Lg	00 23 46.4	
	comp=Z,0.2nm,0.3s,baz=345,slow=30,SNR=6.7						
	comp=Z,3.0nm,1.1s						
NOA	NORSAR Array B	7.83	214	Pn	Pn	00 22 10.5	+3.1
	baz=24,slow=18,SNR=1.9						
NOA				Lg	Lg	00 24 24.8	
	baz=29,slow=18,SNR=1.3						
	comp=Z,1.0nm,1.1s						
HFS	Hagfors	8.22	204	Pn	Pn	00 22 12.8	+0.1
	baz=20,slow=14,SNR=1.3						
	comp=Z,1.3nm,0.8s						

IDC 22 00:39:16.4±4.7**, 36°.52N**×**99°.23E, h0**^{km}**, mb3.0**/1**, mbtmp3.2**/3**, ML3.3**/2**, Error ellipse: s-maj=97.6km s-min=20.4km az=23.0, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LZDM	Lanzhou Array	3.65	98	Pn	Pn	00 40 14.5	+0.1
	baz=277,slow=13						
LZDM				Sn	Sn	00 40 59.1	+0.7
	baz=280,slow=26						
LZDM				Lg	Lg	00 41 12.9	
	baz=278,slow=23						
	3.4nm,0.3s						
MKAR	Makanchi Array	16.26	314	Pn	Pn	00 43 02.8	-3.3
	baz=122,slow=14,SNR=4.4						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	20.10	335	P	P	00 43 50.5	-0.8
	0.4nm,0.5s,baz=145,slow=10,SNR=2.1						
	0.4nm,0.5s						

DJA 22 00:48:12.9±0.2**, 3°S**±2°×**11°9E**±°**, h10**^{km}**, M3.8**/10**, mb3.9**/2**, MLv3.8**/10**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTSI	Tana Toraja	0.40	114	P	Pg	00 48 19.9	-1.0
TTSI				S	Sg	00 48 26.1	-0.1
MMSI	Mamuju	0.57	289	P	Pg	00 48 23.7	-0.3
MMSI				S	Sg	00 48 32.4	+0.8
PMSI	Majene	0.82	221	P	Pg	00 48 28.9	+0.2
SPSI	Sidrap Palu	1.12	164	P	Pb	00 48 33.3	-1.1
SPSI				S	Sb	00 48 49.1	0.0
KAPI	Kappang	2.14	172	P	Pb	00 48 50.6	-1.2
KAPI				S	Sb	00 49 17.2	-1.3
MPSI	Mapaga	3.23	8	P	Pn	00 49 04.7	+1.0
MPSI				S	Sn	00 49 42.9	+0.7
LUWI	Luwuk	3.79	61	P	Pn	00 49 11.3	-0.1
MRSI	Marisa	4.16	37	P	Pn	00 49 18.5	+2.0
GTOI	Gorontalo	4.99	46	P	Pn	00 49 27.7	-0.2
DBNI	Kabupaten Domp	5.70	191	P	Pn	00 49 37.1	-0.6
	0.1nm8.2nm,1.0s						
PLAI	Plampang	6.14	196	P	Pn	00 49 43.3	-0.4

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*IDC **22** 00:57:32.4±1.4, 56°.33N×152°.70W, h0^{km}, mb3.6/10, mbtmp3.6/11, ML3.1/1, Error ellipse: s-maj=34.9km s-min=21.9km az=27.0*

*NEIC **22** 00:57:33.5±1.4, 56°.42N±0°.05×152°.23W±0°.09, h10^{km}±2^{km}, ML3.4/66, ML3.3(AEIC), Error ellipse: s-maj=8.7km s-min=7.2km az=126.0*

*AEIC **22** 00:57:38.2±1.3, 56°.47N±0°.06×152°.16W±0°.10, h10^{km}±7^{km}, Error ellipse: s-maj=10.1km s-min=6.3km az=143.0*

ISC 22 00:57:35.6±0.7**, 56°.49N**±0°.06×**152°.29W**±0°.05**, h20**^{km}**, n104,** σ**0ˢ.98**/108**, mb3.7**/9**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHAK	Old Harbor	0.92	324		Pb	00 57 52.0	-0.7
OHAK				IAML		00 58 19.8	
	comp=E,1µm,0.7s						
OHAK				IAML		00 58 21.2	
	comp=N,819nm,0.8s						
SII	Sitkinak Islan	1.05	274		Pb	00 57 54.0	-1.1
SII				IAML		00 58 29.6	
	comp=E,1µm,0.7s						
KDAK	Kodiak Island	1.30	353	Pn	Pn	00 57 57.8	-0.8
	comp=E,5.0nm,0.3s,baz=326,slow=1.6,SNR=116						
KDAK				Sn	Sn	00 58 13.9	-1.5
	comp=E,31nm,0.3s,baz=154,slow=10.0,SNR=6.5						
KDAK				LR	LR	00 58 41.4	
	comp=E,172nm,20.2s,baz=13,slow=47						
KDAK	Kodiak Island	1.30	353		Pn	00 57 57.8	-0.8
CHIR	Chirikof Islan	1.98	252	Pn	Pn	00 58 06.7	-1.2
CHIR					Sn	00 58 29.6	-2.5
CHIR				IAML		00 58 31.2	
	comp=N,299nm,1.2s						
CHIR				IAML		00 58 31.4	
	comp=E,242nm,0.7s						
SYI	Shuyak Island	2.12	359	Pn	Pn	00 58 09.9	0.0
SYI	Shuyak Island	2.12	359		Sn	00 58 34.5	-1.2
CAHL	Cahill	2.26	315		Pn	00 58 12.3	+0.4
MGLS	Mageik Landsli	2.27	318		Pn	00 58 12.8	+0.9
KAWH	Katmai	2.33	325		Pn	00 58 13.3	+0.5
KAHG	Katmai Hook Gl	2.35	330		Pb	00 58 15.4	-1.8
KAKN	Katmai Knife C	2.35	321		Pn	00 58 13.8	+0.7
KJL	Kejulik	2.37	313		Pn	00 58 13.5	+0.2
ACHA	Angle Creek He	2.38	318		Pn	00 58 13.9	+0.4
KARR	Katmai Rainbow	2.40	328		Pb	00 58 15.9	-2.1
KABU	Katmai Buttres	2.41	319		Pn	00 58 15.7	+1.8
PLK3	Peulik 3	2.48	301		Pn	00 58 14.8	0.0
PLK4	Peulik 4	2.50	299		Pn	00 58 15.0	-0.1
PLK2	Peulik 2	2.54	302		Pn	00 58 16.2	+0.6
Q19K	Cape Douglas,	2.55	344		Pn	00 58 16.6	+0.8
Q19K				IAML		00 59 29.7	
	comp=N,261nm,1.1s						
KAHC	Katmai Hardscr	2.61	327		Pn	00 58 17.9	+1.2
CNTC	Contact Creek	2.63	314		Pn	00 58 17.8	+0.8
PLK1	Peulik 1	2.69	301		Pn	00 58 18.3	+0.6
PLBL	Peulik Blue Cr	2.75	298		Pn	00 58 19.6	+1.1
CNPM	China Poot	3.09	10		Pn	00 58 22.9	-0.3
P19K	Oil Pt	3.21	351		Pn	00 58 23.3	-1.5
P19K				IAML		00 59 11.6	
	comp=E,141nm,0.9s						
P19K				IAML		00 59 34.0	
	comp=N,134nm,1.3s						
Q16K	King Salmon	3.21	315		Pn	00 58 24.8	0.0
P18K	Big Mountain,	3.30	333		Pn	00 58 26.4	+0.3
BRSE	Bradley Lake S	3.36	13		Pn	00 58 25.7	-1.2
BRLK	Bradley Lake	3.37	12		Pn	00 58 25.3	-1.7
BRLK				IAML		00 59 13.1	
	comp=N,61nm,1.5s						
BRLK				IAML		00 59 49.7	
	comp=E,70nm,1.1s						
ILS	Iliamna Low So	3.50	354		Pn	00 58 29.1	+0.2
P17K	Kvichak River	3.50	322		Pn	00 58 29.4	+0.6
ILSW	Iliamna Southw	3.53	353		Pn	00 58 29.7	+0.4
ILSW				IAML		00 59 43.8	
	comp=E,62nm,1.4s						
O18K	Koktuh Hills	3.71	337		Pn	00 58 31.5	-0.2
O18K				IAML		01 00 30.9	
	comp=N,54nm,0.7s						
VNHG	Veniaminof 1	3.83	269		Pn	00 58 33.1	-0.4
VNHG					Sn	00 59 16.8	-1.1
SEW	Seward	3.92	21	Pn	Pn	00 58 33.3	-1.2
SEW				IAML		01 00 53.5	
	comp=N,48nm,0.7s						
SEW				IAML		01 00 59.0	
	comp=E,52nm,0.8s						
RED	Redoubt Volcan	3.95	357		Pn	00 58 34.9	-0.1
RED				IAML		01 00 26.8	
	comp=N,61nm,1.2s						
RED				IAML		01 00 27.6	
	comp=E,60nm,0.7s						
P16K	Nushagak River	3.98	312		Pn	00 58 35.8	+0.5
RDSO	Redoubt South	3.98	357		Pn	00 58 35.0	-0.5
VNSW	Veniaminof 7	4.07	267		Sn	00 59 22.3	-1.5
DFR	Drift River	4.12	357		Pn	00 58 37.5	+0.1
O17K	Koliganek Bris	4.16	324		Pn	00 58 38.6	+0.7
SLKM	Skilak Lake	4.17	14		Pn	00 58 37.3	-0.7
SLKM				IAML		01 00 39.0	
	comp=N,61nm,0.8s						
SLKM				IAML		01 00 39.6	
	comp=E,41nm,0.9s						
P23K	Montague Islan	4.36	34		Pn	00 58 38.9	-1.7
P23K				IAML		00 59 39.6	
	comp=N,35nm,1.0s						
P23K				IAML		01 00 29.3	
	comp=E,37nm,1.5s						
O16K	Kokwok River B	4.38	318		Pn	00 58 41.2	+0.3
CNBA	Chernabura Isl	4.46	251		Pn	00 58 40.9	-1.0
CNBA				IAML		00 59 44.7	
	comp=N,32nm,1.4s						
N19K	Bonanza Creek	4.48	346		Pn	00 58 42.5	+0.2
N18K	Kilae Creek	4.60	337		Pn	00 58 44.2	+0.2
N18K				IAML		01 00 22.3	
	comp=E,26nm,1.4s						
N18K				IAML		01 00 55.8	
	comp=N,30nm,0.9s						
SPU	Mount Spurr	4.71	1	Pn	Pn	00 58 45.3	-0.1
SDPT	Sand Point	4.75	259	Pn	Pn	00 58 44.2	-1.7
SDPT				IAML		01 00 39.8	
	comp=E,44nm,1.2s						
N17K	Nushagak Hills	4.79	330	Pn	Pn	00 58 46.9	+0.4
N17K				IAML		01 01 12.1	
	comp=N,30nm,0.8s						
N17K				IAML		01 01 16.8	
	comp=E,24nm,1.3s						
PWL	Port Wells	4.84	24	Pn	Pn	00 58 46.0	-1.3
PWL				IAML		00 59 45.1	
	comp=E,34nm,1.5s						
PWL				IAML		01 01 01.3	
	comp=N,39nm,0.8s						
O15K	Ungalikthiuk R	4.84	307		Pn	00 58 47.3	+0.1
O15K				IAML		01 00 49.0	
	comp=E,23nm,1.4s						
HIN	Hinchinbrook I	4.96	35	Pn	Pn	00 58 47.4	-1.4
HIN				IAML		01 00 49.5	
	comp=N,36nm,1.3s						
HIN				IAML		01 01 35.8	
	comp=E,39nm,1.2s						
STLK	Strandline Lak	5.03	2		Pn	00 58 49.3	-0.5
GLI	Glacier Island	5.17	29	Pn	Pn	00 58 50.3	-1.4
FID	Port Fidalgo	5.24	33	Pn	Pn	00 58 50.7	-2.0
FID				IAML		00 59 41.3	
	comp=N,16nm,1.4s						
FID				IAML		01 02 07.1	
	comp=E,24nm,1.4s						
N16K	Nishlik Lake	5.24	322		Pn	00 58 53.0	+0.3
KNK	Knik Glacier	5.32	20	Pn	Pn	00 58 53.8	0.0
KNK				IAML		01 01 02.5	
	comp=N,27nm,0.8s						
M18K	Stony River	5.34	341		Pn	00 58 53.9	-0.1
KAIM	Kayak Island	5.40	47	Pn	Pn	00 58 54.5	-0.3
M20K	Styx River	5.42	356		Pn	00 58 54.7	-0.6
SKT	Skwentna	5.52	4	Pn	Pn	00 58 55.7	-0.8
N15K	Kwethluk River	5.52	315		Pn	00 58 57.2	+0.7
GHO	Glory Hole Cre	5.57	17	Pn	Pn	00 58 57.2	-0.1
M17K	Holitna River	5.60	334		Pn	00 58 58.2	+0.6
GOAT	Goat Mountain	5.70	41		Pn	00 58 57.1	-1.9
SML	Sawmill	5.71	19	Pn	Pn	00 58 58.7	-0.4
M16K	Timber Creek	5.72	325		Pn	00 59 00.3	+1.1
DIV	Divide	5.75	33	Pn	Pn	00 58 59.0	-0.8
DTNA	Dutton South F	5.78	261		Pn	00 58 59.9	-0.2
L19K	White Mountain	5.86	348		Pn	00 59 01.2	+0.1
SCM	Sheep Creek Mo	5.93	23		Pn	00 59 01.7	-0.6
KLU	Klutina	6.00	31	Pn	Pn	00 59 02.5	-0.7
BMRM	Bremner River	6.01	39		Pn	00 59 02.1	-1.2
N14K	Kuskokwak Cree	6.04	309	Pn	Pn	00 59 04.6	+0.9
L22K	Petersville	6.10	7	Pn	Pn	00 59 04.5	-0.1
L16K	Owhat River	6.41	328		Pn	00 59 09.4	+0.7
TGL	Tana Glacier	6.53	45	Pn	Pn	00 59 10.0	-0.4
VRDI	Verde Repeater	6.60	40		Pn	00 59 10.3	-1.2
YAH	Yahtse	6.76	51	Pn	Pn	00 59 13.5	-0.3
K20K	Telida	6.95	353		Pn	00 59 16.7	+0.6
GRNC	Granite Creek	6.95	48	Pn	Pn	00 59 15.7	-0.6
DHY	Denali Highway	7.05	19	Pn	Pn	00 59 18.0	+0.3
TRF	Thorofare Moun	7.05	7		Pn	00 59 18.0	+0.3
PCA	Pinnacle	7.30	55	Pn	Pn	00 59 20.6	-0.4
J18K	Innoko River	7.34	344	Pn	Pn	00 59 21.7	+0.2
BCPM	Bancas Point	7.53	57	Pn	Pn	00 59 23.8	-0.2
O29M	Mount Kennedy	8.15	56	Pn	Pn	00 59 32.4	-0.3
P29M	Windy Craggy	8.33	62		Pn	00 59 34.7	-0.4
IL31		8.72	15		Pn	00 59 40.7	+0.5
ILAR	Eielson Array	8.72	15	Pn	Pn	00 59 41.0	+0.7
	comp=N,0.2nm,0.3s,baz=198,slow=14,SNR=14						
ILAR				Sn	Sn	01 01 15.8	-2.1
	comp=N,0.3nm,0.3s,baz=270,slow=30,SNR=5.1						
S31K	Pelican	8.84	74	Pn	Pn	00 59 40.4	-1.5
INK	Inuvik	14.60	28	Pn	P	01 01 07.0	+0.1
	comp=N,0.1nm,0.3s,baz=222,slow=9.8,SNR=4.5						
	comp=N,1.3nm,0.9s						
YKA	Yellowknife Ar	19.82	57	P	Pn	01 02 06.0	-0.2
	comp=N,0.5nm,0.9s,baz=271,slow=10,SNR=6.0						
	comp=N,0.5nm,0.9s						
PDAR	Pinedale Array	30.35	99	P	P	01 03 47.9	+1.9
	comp=N,0.3nm,0.7s,baz=315,slow=9.7,SNR=2.8						
	comp=N,0.3nm,0.7s						
TXAR	Lajitas Array	43.47	108	P	P	01 05 38.3	+1.0
	comp=N,0.3nm,0.8s,baz=322,slow=5.5,SNR=2.7						
	comp=N,0.3nm,0.8s						
SONM	Songino Array	57.21	308	P	P	01 07 20.1	-0.9
	comp=N,0.6nm,0.7s,baz=45,slow=6.5,SNR=4.3						
	comp=N,0.6nm,0.7s						
ZALV	Zalesovo Beam	60.45	325	P	P	01 07 42.4	-0.9
	comp=N,0.2nm,0.4s,baz=38,slow=5.7,SNR=1.4						
	comp=N,0.2nm,0.4s						
FINES	FINESS Array B	62.40	1	P	P	01 07 58.4	+2.1
	comp=N,5.9nm,1.2s,baz=330,slow=8.0,SNR=1.4						
	comp=N,5.9nm,1.2s						
HFS	Hagfors	63.19	8	P	P	01 08 02.9	+1.3
	comp=N,1.6nm,1.0s,baz=22,slow=4.7,SNR=4.5						
	comp=N,1.6nm,1.0s						
BVAR	Borovoye Array	65.36	333	P	P	01 08 16.5	+0.5
	comp=N,0.6nm,0.6s,baz=358,slow=4.6,SNR=3.8						
	comp=N,0.6nm,0.6s						
MKAR	Makanchi Array	67.43	323	P	P	01 08 29.7	+0.4
	comp=N,0.4nm,0.7s,baz=28,slow=6.2,SNR=7.6						
	comp=N,0.4nm,0.7s						
AKASG	Malin Array Be	73.17	359	P	P	01 09 06.2	+1.9
	comp=N,0.2nm,0.3s,baz=3.1,slow=5.1,SNR=1.3						
	comp=N,0.2nm,0.3s						

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*NEIC **22** 01:01:11.9±2.3, 56°.36N±0°.04×152°.28W±0°.10, h10^{km}±1^{km}, ML3.5/74, ML3.4(AEIC), Error ellipse: s-maj=9.2km s-min=7.3km az=114.0*

*IDC **22** 01:01:12.4±1.2, 56°.57N×152°.42W, h0^{km}, mb3.6/11, mbtmp3.6/13, ML3.2/2, MS3.8/1, Error ellipse: s-maj=30.1km s-min=19.7km az=42.0*

*AEIC **22** 01:01:15.6±1.8, 56°.42N±0°.06×152°.04W±0°.10, h5^{km}±5^{km}, Error ellipse: s-maj=9.7km s-min=6.9km az=212.0*

ISC 22 01:01:14.1±0.7**, 56°.51N**±0°.06×**152°.26W**±0°.05**, h20**^{km}**, n121,** σ**1ˢ.55**/124**, mb3.7**/11**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHAK	Old Harbor	0.91	322	Pg	Pb	01 01 30.4	-0.7
OHAK				IAML		01 01 57.7	
	comp=N,870nm,0.6s						
OHAK				IAML		01 01 58.2	
	comp=E,2µm,0.7s						
OHAK	Old Harbor	0.91	322		Sn	01 01 47.0	+2.8
SII	Sitkinak Islan	1.07	273	Pn	Pn	01 01 32.3	-1.7
SII				IAML		01 02 10.1	
	comp=E,2µm,0.8s						
KDAK	Kodiak Island	1.29	352	Pn	Pn	01 01 36.4	-0.5
	comp=E,15nm,0.3s,baz=156,slow=6.3,SNR=14						
KDAK				Sn	Sn	01 01 51.7	-1.8
	comp=E,44nm,0.3s,baz=163,slow=20,SNR=8.4						
KDAK	Kodiak Island	1.29	352	Pn	Pn	01 01 36.7	-0.2
KDAK				IAML		01 02 17.2	
	comp=E,545nm,0.9s						
CHIR	Chirikof Islan	2.01	251	Pn	Pn	01 01 44.9	-1.9
CHIR	Chirikof Islan	2.01	251		Sn	01 02 08.2	-3.1
SYI	Shuyak Island	2.10	358	Pn	Pn	01 01 47.9	-0.2
SYI				IAML		01 02 41.7	
	comp=N,168nm,0.9s						
SYI				IAML		01 02 42.3	
	comp=E,185nm,1.2s						
SYI	Shuyak Island	2.10	358		Sn	01 02 12.9	-0.7
CAHL	Cahill	2.26	314		Pn	01 01 50.7	+0.3
CAHL					Pb	01 01 51.4	-2.9
MGLS	Mageik Landsli	2.26	317		Pn	01 01 52.0	+1.6
KAWH	Katmai	2.33	325		Pn	01 01 52.1	+0.8
KAWH					Pb	01 01 52.9	-2.4
KAKN	Katmai Knife C	2.35	321		Pn	01 01 52.3	+0.8
KAKN					Pb	01 01 52.6	-3.1
ACHA	Angle Creek He	2.38	317	Pn	Pn	01 01 52.6	+0.6
KARR	Katmai Rainbow	2.39	327		Pn	01 01 52.7	+0.6
KARR					Pb	01 01 53.1	-3.3
PLK3	Peulik 3	2.49	300		Pn	01 01 54.1	+0.7
PLK4	Peulik 4	2.50	298		Pn	01 01 54.1	+0.4
Q19K	Cape Douglas,	2.54	343	Pn	Pn	01 01 55.6	+1.5
PLK2	Peulik 2	2.55	301		Pn	01 01 55.1	+0.8
KAHC	Katmai Hardscr	2.60	326		Pn	01 01 55.7	+0.5
KAHC					Pb	01 01 56.3	-3.8
CNTC	Contact Creek	2.63	313		Pn	01 01 56.1	+0.6
CNTC					Pb	01 01 56.5	-4.2
PLK1	Peulik 1	2.70	300		Pn	01 01 57.0	+0.7
PLK1					Pb	01 01 57.2	-4.5
PLBL	Peulik Blue Cr	2.76	297		Pn	01 01 57.8	+0.7
PLBL					Pb	01 01 58.9	-3.8
AUI	Augustine Isla	2.90	348		Pn	01 01 58.9	-0.2
PLK5	Peulik 5	2.92	303		Pn	01 01 59.9	+0.6
CNPM	China Poot	3.07	10	Pn	Pn	01 02 01.2	-0.3
CNPM				IAML		01 02 39.1	
	comp=E,74nm,0.6s						
CNPM				IAML		01 02 40.2	
	comp=N,83nm,0.8s						
CNPM	China Poot	3.07	10		Sn	01 02 36.0	-1.5
R16K	Pilot Point	3.09	292	Pn	Pn	01 02 03.3	+1.6
R16K				IAML		01 02 38.8	
	comp=E,179nm,1.0s						
HOM	Homer	3.17	6		Pn	01 02 03.2	+0.4
P19K	Oil Pt	3.19	351	Pn	Pn	01 02 02.2	-0.9
P19K				IAML		01 02 49.5	
	comp=E,163nm,0.6s						
P19K				IAML		01 03 21.0	
	comp=N,175nm,1.0s						
P18K	Big Mountain,	3.29	332	Pn	Pn	01 02 05.2	+0.6
BRSE	Bradley Lake S	3.34	13		Pn	01 02 03.9	-1.2
BRSE					Pb	01 02 05.4	-7.1
BRSE					Sn	01 02 40.9	-3.2
ILS	Iliamna Low So	3.48	353		Pn	01 02 08.1	+0.9
P17K	Kvichak River	3.50	322	Pn	Pn	01 02 08.4	+1.2
ILSW	Iliamna Southw	3.51	353		Pn	01 02 07.9	+0.3
ILSW				IAML		01 03 33.5	
	comp=E,71nm,0.9s						
ILSW				IAML		01 03 34.6	
	comp=N,69nm,1.0s						
IVE	Iliamna Volcan	3.54	354		Pn	01 02 07.9	0.0
IVE					Pb	01 02 08.5	-7.5
O18K	Koktuh Hills	3.70	336		Pn	01 02 09.6	-0.4
O18K				IAML		01 03 37.0	
	comp=N,56nm,0.9s						
O19K	Port Alsworth	3.85	344		Pn	01 02 13.1	+1.0
O19K				IAML		01 02 59.3	
	comp=N,94nm,0.5s						
VNHG	Veniaminof 1	3.85	269		Pn	01 02 12.0	-0.3
SEW	Seward	3.89	21	Pn	Pn	01 02 11.6	-1.1
RED	Redoubt Volcan	3.93	356	Pn	Pn	01 02 13.2	-0.1
RED				IAML		01 03 00.7	
	comp=E,56nm,1.1s						
RED				IAML		01 03 30.8	
	comp=N,52nm,1.1s						
RDSO	Redoubt South	3.96	357		Pn	01 02 13.1	-0.7
RDSO					Pb	01 02 14.0	-9.3
P16K	Nushagak River	3.98	312	Pn	Pn	01 02 13.9	+0.1
P16K				IAML		01 04 13.2	
	comp=N,68nm,1.1s						
RDWB	Redoubt West	4.00	356		Pn	01 02 13.8	-0.5
RDWB					Pb	01 02 14.9	-9.0
SLKM	Skilak Lake	4.15	14	Pn	Pn	01 02 15.7	-0.5
SLKM				IAML		01 03 03.7	
	comp=E,52nm,0.7s						
SLKM				IAML		01 03 07.7	
	comp=N,45nm,0.4s						
O17K	Koliganek Bris	4.16	324		Pn	01 02 16.5	+0.2
O17K					Pb	01 02 16.8	-10
O22K	Cooper Landing	4.20	17	Pn	Pn	01 02 17.9	+1.0
MID	Middleton Isla	4.30	45	Pn	Pn	01 02 15.9	-2.3
P23K	Montague Islan	4.33	34	Pn	Pn	01 02 17.6	-1.2
P23K				IAML		01 03 07.0	
	comp=N,61nm,0.5s						
P23K				IAML		01 03 12.7	
	comp=E,59nm,1.1s						
O16K	Kokwok River B	4.38	317	Pn	Pn	01 02 19.9	+0.5
N19K	Bonanza Creek	4.47	346		Pn	01 02 21.6	+0.9
CNBA	Chernabura Isl	4.49	251		Pn	01 02 19.7	-1.1
N18K	Kilae Creek	4.59	337	Pn	Pn	01 02 22.0	-0.3
N18K				IAML		01 03 57.1	
	comp=E,39nm,1.2s						
SDPT	Sand Point	4.77	259	Pn	Pn	01 02 22.8	-1.9
SDPT				IAML		01 04 20.3	
	comp=N,31nm,1.1s						
SDPT				IAML		01 04 21.5	
	comp=E,40nm,1.1s						
RC01	Rabbit Creek A	4.77	15	Pn	Pn	01 02 24.1	-0.7
RC01				IAML		01 03 22.2	
	comp=N,24nm,0.3s						
RC01				IAML		01 03 25.3	
	comp=E,27nm,0.5s						
N17K	Nushagak Hills	4.78	329	Pn	Pn	01 02 26.3	+1.4
N17K				IAML		01 03 59.1	
	comp=N,23nm,1.1s						
PWL	Port Wells	4.81	24	Pn	Pn	01 02 24.4	-1.0
O15K	Ungalikthiuk R	4.84	307		Pn	01 02 26.5	+0.7
O15K	Ungalikthiuk R	4.84	307	IAML		01 04 10.8	
	comp=E,29nm,1.0s						
O15K				IAML		01 04 14.9	
	comp=N,25nm,1.1s						
HIN	Hinchinbrook I	4.93	35	Pn	Pn	01 02 25.9	-1.0
HIN				IAML		01 03 25.8	
	comp=N,30nm,0.8s						
HIN				IAML		01 03 27.8	
	comp=E,36nm,1.1s						

STLK	**Strandline Lak**	**5.01**	**2**	Pn	**Pn**	**01 02 27.3**	**-0.7**
STLK				IAML		01 03 27.5	
	comp=N,19nm,0.6s						
STLK				IAML		01 03 29.4	
	comp=E,17nm,0.6s						
GLI	**Glacier Island**	**5.14**	**29**	Pn	**Pn**	**01 02 28.7**	**-1.1**
GLI				IAML		01 03 27.4	
	comp=E,27nm,1.2s						
GLI				IAML		01 03 29.4	
	comp=N,30nm,1.1s						
FID	**Port Fidalgo**	**5.21**	**33**	Pn	**Pn**	**01 02 29.5**	**-1.3**
FID				IAML		01 03 26.5	
	comp=E,36nm,1.0s						
FID				IAML		01 03 29.3	
	comp=N,35nm,0.7s						
N16K	**Nishlik Lake**	**5.24**	**322**		**Pn**	**01 02 31.0**	**-0.2**
N16K					Pb	01 02 31.8	-13
EYAK	**Cordova Ski Ar**	**5.29**	**37**	Pn	**Pn**	**01 02 31.5**	**-0.3**
M18K	**Stony River**	**5.32**	**341**		**Pn**	**01 02 32.4**	**+0.1**
KAIM	**Kayak Island**	**5.37**	**47**		**Pn**	**01 02 32.9**	**-0.2**
M20K	**Styx River**	**5.41**	**356**		**Pn**	**01 02 34.2**	**+0.7**
GHO	**Glory Hole Cre**	**5.55**	**17**	Pn	**Pn**	**01 02 35.2**	**-0.3**
RAGM	**Ragged Mountai**	**5.56**	**43**		**Pn**	**01 02 35.2**	**-0.5**
PN7A	**Pavlof North-7**	**5.58**	**263**		**Pn**	**01 02 35.4**	**-0.5**
M17K	**Holitna River**	**5.59**	**333**		**Pn**	**01 02 37.0**	**+1.1**
GOAT	**Goat Mountain**	**5.67**	**41**		**Pn**	**01 02 33.8**	**-3.4**
SML	**Sawmill**	**5.68**	**19**	Pn	**Pn**	**01 02 37.9**	**+0.6**
M16K	**Timber Creek**	**5.71**	**325**		**Pn**	**01 02 38.4**	**+0.8**
DT1	**Dutton Round H**	**5.83**	**260**		**Pn**	**01 02 38.8**	**-0.5**
L19K	**White Mountain**	**5.84**	**348**		**Pn**	**01 02 39.4**	**-0.1**
SCM	**Sheep Creek Mo**	**5.91**	**23**		**Pn**	**01 02 39.0**	**-1.4**
BMRM	**Bremner River**	**5.98**	**39**		**Pn**	**01 02 41.0**	**-0.4**
L22K	**Petersville**	**6.08**	**7**	Pn	**Pn**	**01 02 44.2**	**+1.5**
L16K	**Owhat River**	**6.40**	**328**		**Pn**	**01 02 48.5**	**+1.4**
BARK	**Barkley Ridge**	**6.44**	**49**		**Pn**	**01 02 47.6**	**-0.2**
N25K	**Chitina, Valde**	**6.45**	**35**	Pn	**Pn**	**01 02 46.9**	**-1.0**
VRDI	**Verde Repeater**	**6.57**	**40**	Pn	**Pn**	**01 02 49.1**	**-0.6**
GLB	**Gilahina Butte**	**6.59**	**38**	Pn	**Pn**	**01 02 49.7**	**-0.1**
YAH	**Yahtse**	**6.73**	**51**	Pn	**Pn**	**01 02 51.5**	**-0.3**
MCARA	**McCarthy VSAT**	**6.83**	**41**	Pn	**Pn**	**01 02 53.2**	**+0.2**
DHY	**Denali Highway**	**7.03**	**18**		**Pn**	**01 02 55.4**	**-0.4**
TRF	**Thorofare Moun**	**7.03**	**7**	Pn	**Pn**	**01 02 57.1**	**+1.2**
PCA	**Pinnacle**	**7.27**	**55**	Pn	**Pn**	**01 02 59.3**	**+0.2**
BCPM	**Bancas Point**	**7.50**	**57**	Pn	**Pn**	**01 03 02.3**	**+0.1**
O28M	**Mount Upton**	**7.60**	**51**	Pn	**Pn**	**01 03 03.4**	**-0.5**
J16K	**Anvik River**	**7.98**	**332**	Pn	**Pn**	**01 03 10.2**	**+1.5**
ILAR	**Eielson Array**	**8.69**	**15**	Pn	**Pn**	**01 03 18.2**	**-0.3**
	comp=N,0.2nm,0.3s,baz=200,slow=14,SNR=5.2						
ILAR				Sn	**Sn**	**01 04 49.1**	**-6.7**
	comp=N,0.3nm,0.3s,baz=228,slow=15,SNR=4.5						
N30M	**Aishikik Lake**	**9.26**	**51**	Pn	**Pn**	**01 03 26.1**	**-0.2**
WHY	**Whitehorse**	**9.97**	**58**	Pn	**Pn**	**01 03 36.3**	**+0.2**
INK	**Inuvik**	**14.58**	**28**	Pn	**P**	**01 04 42.9**	**-2.3**
	comp=N,0.1nm,0.3s,baz=241,slow=7.7,SNR=4.4						
	comp=N,1.5nm,0.9s						
YKA	**Yellowknife Ar**	**19.79**	**57**	P	**Pn**	**01 05 44.5**	**+0.1**
	comp=N,0.1nm,0.3s,baz=274,slow=11,SNR=13						
	comp=N,0.7nm,0.8s						
PDAR	**Pinedale Array**	**30.33**	**99**	P	**P**	**01 07 26.0**	**+1.7**
	comp=N,0.3nm,0.6s,baz=321,slow=6.2,SNR=3.6						
	comp=N,0.3nm,0.6s						
PDAR	**Pinedale Array**	**30.33**	**99**	P	**P**	**01 07 25.5**	**+1.2**
TXAR	**Lajitas Array**	**43.46**	**108**	P	**P**	**01 09 18.3**	**+2.5**
	comp=N,0.6nm,0.9s,baz=322,slow=3.8,SNR=4.5						
	comp=N,0.6nm,0.9s						
TXAR	**Lajitas Array**	**43.46**	**108**	P	**P**	**01 09 18.0**	**+2.3**
H11N2	**WAKE ISLAND Hy**	**47.60**	**237**	T	T	02 00 58.1	
	baz=29						
H11N3	**WAKE ISLAND Hy**	**47.60**	**237**	T	T	02 01 01.7	
	baz=29						
H11N1	**WAKE ISLAND Hy**	**47.62**	**237**	T	T	02 00 58.5	
	baz=29						
H11S1	**WAKE ISLAND Hy**	**48.75**	**236**	T	T	02 02 22.8	
	baz=29						
H11S2	**WAKE ISLAND Hy**	**48.76**	**236**	T	T	02 02 22.3	
	baz=29						
H11S3	**WAKE ISLAND Hy**	**48.77**	**236**	T	T	02 02 24.0	
	baz=29						
HILR	**Hailar Array B**	**49.89**	**302**	LR	LR	01 30 13.3	
	comp=N,96nm,18.4s,baz=60,slow=35						
ARCES	**ARCESS Array B**	**54.24**	**1**	P	**P**	**01 10 38.3**	**+0.5**
	comp=N,1.5nm,0.6s,baz=0.0,slow=8.1,SNR=1.8						
	comp=N,1.5nm,0.6s						
ARCES	**ARCESS Array B**	**54.24**	**1**	P	**P**	**01 10 37.6**	**-0.2**
SONM	**Songino Array**	**57.21**	**308**	P	**P**	**01 11 00.6**	**+1.1**
	comp=N,0.5nm,0.7s,baz=36,slow=4.0,SNR=4.1						
	comp=N,0.5nm,0.7s						
SONM	**Songino Array**	**57.21**	**308**	P	**P**	**01 11 00.8**	**+1.2**
ZALV	**Zalesovo Beam**	**60.45**	**325**	P	**P**	**01 11 22.9**	**+1.1**
	comp=N,0.4nm,0.4s,baz=52,slow=26,SNR=1.5						
	comp=N,0.4nm,0.4s						
NOA	**NORSAR Array B**	**62.07**	**9**	P	**P**	**01 11 33.6**	**+1.0**
	comp=N,0.5nm,0.8s,baz=337,slow=3.5,SNR=1.3						
	comp=N,0.5nm,0.8s						
HFS	**Hagfors**	**63.17**	**8**	P	**P**	**01 11 41.1**	**+1.2**
	comp=N,2.0nm,0.9s,baz=20,slow=9.5,SNR=4.5						
	comp=N,2.0nm,0.9s						
BVAR	**Borovoye Array**	**65.36**	**333**	P	**P**	**01 11 55.5**	**+1.1**
	comp=N,0.7nm,0.7s,baz=22,slow=5.6,SNR=5.2						
	comp=N,0.7nm,0.7s						
MKAR	**Makanchi Array**	**67.43**	**323**	P	**P**	**01 12 08.6**	**+0.7**
	comp=N,0.3nm,0.6s,baz=23,slow=5.7,SNR=4.4						
	comp=N,0.3nm,0.6s						
MKAR	**Makanchi Array**	**67.43**	**323**	P	**P**	**01 12 08.5**	**+0.6**
AKASG	**Malin Array Be**	**73.14**	**359**	P	**P**	**01 12 43.2**	**+0.6**
	comp=N,0.4nm,0.4s,baz=359,slow=4.6,SNR=2.1						
	comp=N,0.4nm,0.4s						
GERES	**GERESS Array B**	**74.36**	**10**	P	**P**	**01 12 51.6**	**+1.6**
	comp=N,0.2nm,0.6s,baz=359,slow=3.9,SNR=2.0						
	comp=N,0.2nm,0.6s						

*MDD **22** 01:34:37.6±0.9, 36°.70N×13°.69W, h20^{km}±18^{km}, Mb4.6/6, M_mb4.1/6, Error ellipse: s-maj=20.4km s-min=14.4km az=55.0*

*INMG **22** 01:34:39.0±1.4, 36°.92N×14°.01W, h10^{km}, ML2.5, Error ellipse: s-maj=10.2km s-min=7.6km az=175.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Josephine*

*CNRM **22** 01:34:43.9, 36°.52N×12°.77W, h7^{km}*

ISC 22 01:34:31.6±3.1**, 36°.71N**±0°.06×**13°.8W**±0°.2**, h10**^{km}**, n47, σ2^{s}.85**/77**, 5C, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**3.98**	**82**	Pn	**Pn**	**01 35 35.7**	**+3.1**
PFVI				Sn	**Sn**	**01 36 18.7**	**-0.6**
PFVI	**Vila Bisbo**	**3.98**	**82**	*e*P	**Pn**	**01 35 36.5**	**+3.9**
PFVI				*e*S	**Sn**	**01 36 19.1**	**-0.2**
PFVI				*i* IAML		01 36 20.7	
PFVI				*i* IAML		01 36 28.6	
PFVI				*i* IAML		01 36 39.8	
PTEO	**Sao Teotonio**	**4.11**	**77**	*e*P	**Pn**	**01 35 38.8**	**+4.3**
PTEO				*e*S	**Sn**	**01 36 21.9**	**-0.7**
PTEO				*i* IAML		01 36 26.3	
PTEO				*i* IAML		01 36 35.0	
PTEO				*i* IAML		01 36 46.0	
MORF	**Marmelete**	**4.13**	**80**	*e*P	**Pn**	**01 35 38.7**	**+3.9**
MORF				*e*S	**Sn**	**01 36 23.4**	**+0.1**
MORF				*i* IAML		01 36 30.3	
MORF				*i* IAML		01 36 30.5	
MORF				*i* IAML		01 36 33.5	
PMAFR	**Mafra**	**4.20**	**56**	Pn	**Pn**	**01 35 37.7**	**+2.0**
PMAFR	**Mafra**	**4.20**	**56**	*e*P	**Pn**	**01 35 38.0**	**+2.4**
PMAFR				*e*S	**Sn**	**01 36 21.8**	**-2.9**
PMAFR				*i* IAML		01 36 25.3	
PMAFR				*i* IAML		01 36 31.6	
PMAFR				*i* IAML		01 36 39.7	
MESJ	**Messejana**	**4.56**	**74**	*e*P	**Pn**	**01 35 43.5**	**+2.8**
MESJ				*e*S	**Sn**	**01 36 32.7**	**-1.1**
MESJ				*i* IAML		01 36 34.5	
MESJ				*i* IAML		01 36 36.4	
MESJ				*i* IAML		01 36 40.8	
MOE	**Montemor**	**4.66**	**66**	*e*P	**Pn**	**01 35 44.3**	**+2.3**
MOE				*e*S	**Sn**	**01 36 34.2**	**-2.0**
MOE				*i* IAML		01 36 37.2	
MOE				*i* IAML		01 36 40.1	
MOE				*i* IAML		01 36 49.6	
PCVE	**Castro Verde**	**4.66**	**77**	Pn	**Pn**	**01 35 45.3**	**+3.2**
PCVE				Sn	**Sn**	**01 36 34.3**	**-1.9**
PCVE	**Castro Verde**	**4.66**	**77**	*e*P	**Pn**	**01 35 45.0**	**+2.9**
PCVE				*e*S	**Sn**	**01 36 34.7**	**-1.5**
PCVE				*i* IAML		01 36 36.9	
PCVE				*i* IAML		01 36 39.1	
PCVE				*i* IAML		01 36 41.5	
PBDV	**Barranco-do-Ve**	**4.70**	**82**	Pn	**Pn**	**01 35 45.4**	**+2.9**
PBDV				Sn	**Sn**	**01 36 37.5**	**+0.3**
PBDV	**Barranco-do-Ve**	**4.70**	**82**	*e*P	**Pn**	**01 35 45.7**	**+3.1**
PBDV				*e*S	**Sn**	**01 36 37.0**	**-0.1**
PBDV				*i* IAML		01 36 40.7	
PBDV				*i* IAML		01 36 42.2	
PBDV				*i* IAML		01 36 42.8	
PSBE	**So Bento**	**4.81**	**53**	*e*P	**Pn**	**01 35 45.9**	**+1.7**
PSBE				*e*S	**Sn**	**01 36 39.3**	**-0.7**
PSBE				*i* IAML		01 36 45.8	
PSBE				*i* IAML		01 36 47.3	
PSBE				*i* IAML		01 37 02.2	
PBEJ	**Beja**	**4.88**	**73**	*e*S	**Sn**	**01 36 39.8**	**-1.7**
PBEJ				*i* IAML		01 36 42.0	
PBEJ				*i* IAML		01 36 48.0	
PBEJ				*i* IAML		01 36 57.3	
PVAQ	**Vaqueiros**	**4.88**	**80**	*e*P	**Pn**	**01 35 49.4**	**+4.3**
PVAQ				*e*S	**Sn**	**01 36 41.2**	**-0.5**
PVAQ				*i* IAML		01 36 43.5	
PVAQ				*i* IAML		01 36 46.4	
PVAQ				*i* IAML		01 36 47.1	
PVAQ	**Vaqueiros**	**4.88**	**80**	P	**Pn**	**01 35 47.3**	**+2.2**
PVAQ	**Vaqueiros**	**4.88**	**80**	S	**Sn**	**01 36 37.0**	**-4.7**
EVO	**Evora**	**4.91**	**67**	Sn	**Sn**	**01 36 40.1**	**-2.3**
EVO				Pn	**Pn**	**01 35 48.2**	**+2.7**
EVO	**Evora**	**4.91**	**67**	*e*P	**Pn**	**01 35 48.0**	**+2.5**
EVO				*e*S	**Sn**	**01 36 40.6**	**-1.8**
EVO				*i* IAML		01 36 42.8	
EVO				*i* IAML		01 36 44.8	
EVO				*i* IAML		01 36 46.6	
PMTG	**Montargil**	**4.97**	**60**	*e*P	**Pn**	**01 35 48.2**	**+1.9**
PMTG				*e*S	**Sn**	**01 36 41.1**	**-2.8**
PMTG				*i* IAML		01 36 43.8	
PMTG				*i* IAML		01 36 44.8	
PMTG				*i* IAML		01 36 54.2	
PARRA	**Arraiolos**	**5.00**	**63**	*e*P	**Pn**	**01 35 48.7**	**+2.1**
PARRA				*e*S	**Sn**	**01 36 41.2**	**-3.3**
PARRA				*i* IAML		01 36 45.0	
PARRA				*i* IAML		01 36 45.9	
PARRA				*i* IAML		01 36 46.9	
EGRO	**El Granado**	**5.08**	**79**	Sn	**Sn**	**01 36 45.1**	**-1.6**
PSARD	**Sardoal**	**5.27**	**55**	*e*P	**Pn**	**01 35 52.3**	**+1.8**
PSARD				*e*S	**Sn**	**01 36 50.0**	**-1.3**
PSARD				*i* IAML		01 36 52.5	
PSARD				*i* IAML		01 36 56.0	
PSARD				*i* IAML		01 37 10.3	
PCAS	**Casmilo, Conde**	**5.32**	**49**	*e*P	**Pn**	**01 35 52.0**	**+1.0**
PCAS				*e*S	**Sn**	**01 36 49.7**	**-2.6**
PCAS				*i* IAML		01 36 54.1	
PCAS				*i* IAML		01 36 55.6	
PBAR	**Barrancos**	**5.55**	**73**	Pn	**Pn**	**01 35 57.8**	**+3.6**
PBAR				Sn	**Sn**	**01 36 56.1**	**-2.0**
PBAR	**Barrancos**	**5.55**	**73**	*e*P	**Pn**	**01 35 57.9**	**+3.7**
PBAR				*e*S	**Sn**	**01 36 56.0**	**-2.0**
PBAR				*i* IAML		01 36 58.0	
PBAR				*i* IAML		01 36 58.6	
PBAR				*i* IAML		01 37 16.0	
PMRV	**Marv??o**	**5.71**	**60**	*e*P	**Pn**	**01 35 59.4**	**+2.9**
PMRV				*e*S	**Sn**	**01 36 59.2**	**-2.9**
PMRV				*i* IAML		01 37 00.9	
PMRV				*i* IAML		01 37 02.0	
PMRV				*i* IAML		01 37 03.1	
EBAD	**Badajoz**	**5.73**	**67**	Sn	**Sn**	**01 36 58.1**	**-4.4**
EBAD	**Badajoz**	**5.73**	**67**	⇑*i*IVmb_VC		01 35 59.5	
	455nm,SNR=1.8						
EBAD				Pn	**Pn**	**01 35 59.9**	**+3.3**
EBAD				Sn	**Sn**	**01 36 59.5**	**-2.9**
EMIN	**Mina Concepcio**	**5.75**	**77**	Sn	**Sn**	**01 37 01.1**	**-2.1**
EMIN	**Mina Concepcio**	**5.75**	**77**	Pn	**Pn**	**01 35 59.6**	**+2.6**
EMIN				⇑*i*IVmb_VC		01 36 01.2	
	203nm,SNR=1.1						
EMIN				Sn	**Sn**	**01 36 59.8**	**-3.3**
PCBR	**Castelo Branco**	**5.85**	**56**	*e*P	**Pn**	**01 36 00.2**	**+1.8**
PCBR				*e*S	**Sn**	**01 37 03.0**	**-2.4**
PCBR				*i* IAML		01 37 22.4	
PVIS	**Viseu**	**6.09**	**47**	*e*P	**Pn**	**01 36 02.8**	**+1.1**
PVIS				*e*S	**Sn**	**01 37 07.3**	**-4.0**
MTE	**Manteigas**	**6.11**	**51**	*e*P	**Pn**	**01 36 03.5**	**+1.5**
ESPR	**Espera**	**6.35**	**86**	Sn	**Sn**	**01 37 19.5**	**+1.8**
ECAB	**El Cabril**	**6.78**	**76**	Pn	**Pn**	**01 36 14.4**	**+3.3**
ECAB				⇑*i*IVmb_VC		01 36 23.4	
	342nm,SNR=1.5						
ECAB				Sn	**Sn**	**01 37 24.9**	**-3.6**
MVO	**Moncorvo**	**6.88**	**48**	*e*P	**Pn**	**01 36 13.3**	**+0.8**
MVO				*e*S	**Sn**	**01 37 26.0**	**-4.9**
EPLA	**Plasencia**	**6.90**	**59**	Pn	**Pn**	**01 36 15.9**	**+3.0**
EPLA				⇑*i*IVmb_VC		01 36 20.1	
	362nm,SNR=1.3						
EPLA				Sn	**Sn**	**01 37 29.9**	**-1.6**
EADA	**Adamuz**	**7.45**	**76**	Pn	**Pn**	**01 36 23.6**	**+3.2**
EADA				⇑*i*IVmb_VC		01 36 29.0	
	210nm,SNR=1.0						
EADA				Sn	**Sn**	**01 37 41.2**	**-3.8**
TIO	**Tiouine**	**7.90**	**135**	P	**Pn**	**01 36 30.3**	**+3.6**
TIO	**Tiouine**	**7.90**	**135**	S	**Sn**	**01 37 54.1**	**-2.2**
OUZM	**OUZ**	**8.21**	**133**	P	**Pn**	**01 36 34.1**	**+3.2**
OUZM	**OUZ**	**8.21**	**133**	S	**Sn**	**01 38 00.6**	**-3.1**
MD31	**MD31**	**8.34**	**115**	P	**Pn**	**01 36 34.4**	**+1.8**
MD31	**MD31**	**8.34**	**115**	S	**Sn**	**01 38 02.0**	**-4.9**
MDT	**Midelt**	**8.47**	**115**	P	**Pn**	**01 36 35.1**	**+0.6**
MDT	**Midelt**	**8.47**	**115**	S	**Sn**	**01 38 03.0**	**-7.2**

*IDC **22** 01:55:47.6±6.2, 35°.46N×69°.58E, h114^{km}±50^{km}, mb3.6/6, mbtmp3.8/9, Error ellipse: s-maj=54.7km s-min=28.9km az=163.0*

ISC 22 01:55:49.0±1.5**, 35°.9N**±0°.2×**69°.3E**±0°.2**, h100**^{km}**, n12, σ1^{s}.84**/15**, mb4.1**/5**, 3C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**7.27**	**7**	⇑Pn	**Pn**	**01 57 32.6**	**+0.2**
	0.9nm,0.3s,baz=200,slow=15,SNR=36						
KK31				⇓Sn	**Sn**	**01 58 50.5**	**-2.9**
	1.1nm,0.3s,baz=192,slow=20,SNR=6.2						
AAK	**Ala-Archa**	**7.86**	**29**	P	**Pn**	**01 57 41.7**	**+1.1**
	3.1nm,0.3s,baz=170,slow=4.1,SNR=21						
AAK				S	**Sn**	**01 59 07.1**	**-0.9**
	5.0nm,0.6s,baz=144,slow=20,SNR=6.7						
AAK	**Ala-Archa**	**7.86**	**29**	⇑Pn	**Pn**	**01 57 41.1**	**+0.5**
	1.4nm,0.6s						
AAK				⇑Sn	**Sn**	**01 59 07.0**	**-0.9**
	1.9nm,0.5s						
MKAR	**Makanchi Array**	**14.62**	**38**	P	**Pn**	**01 59 11.7**	**+0.9**
	0.4nm,0.6s,baz=213,slow=11,SNR=9.4						
KURBB	**Kurchatov Arra**	**16.18**	**22**	P	**P**	**01 59 34.3**	**+2.8**
	1.7nm,0.6s,baz=211,slow=10,SNR=10						
BVAR	**Borovoye Array**	**17.15**	**2**	P	**P**	**01 59 44.9**	**+2.5**
	0.3nm,0.3s,baz=188,slow=9.6,SNR=2.3						
ZALV	**Zalesovo Beam**	**21.06**	**26**	P	**P**	**02 00 26.8**	**+1.9**
	2.5nm,0.4s,baz=222,slow=10,SNR=18						
	2.5nm,0.4s						
FINES	**FINESS Array B**	**37.22**	**327**	P	**P**	**02 02 51.1**	**+0.7**
	2.5nm,1.1s,baz=102,slow=17,SNR=1.7						
	2.5nm,1.1s						
HFS	**Hagfors**	**42.69**	**322**	P	**P**	**02 03 36.8**	**+1.2**
	4.0nm,1.1s,baz=108,slow=14,SNR=1.7						
	4.0nm,1.1s						
NOA	**NORSAR Array B**	**44.03**	**324**	P	**P**	**02 03 46.8**	**+0.4**
	0.3nm,0.6s,baz=97,slow=8.0,SNR=1.7						
	0.3nm,0.6s						
PETK	**Petropavlovsk-**	**61.37**	**43**	P	**P**	**02 05 51.4**	**-2.7**
	6.7nm,1.0s,baz=270,slow=7.1,SNR=4.1						
	6.7nm,1.0s						
TORD	**Torodi Ar. Bea**	**64.30**	**268**	P	**P**	**02 06 13.1**	**-1.0**
	0.3nm,0.6s,baz=44,slow=8.4,SNR=6.2						
	0.3nm,0.6s						

*IDC **22** 01:56:23.1±3.5, 36°.57S×71°.61W, h0^{km}, mb3.8/1, mbtmp3.9/2, ML4.6/1, Error ellipse: s-maj=133.1km s-min=29.8km az=92.0*

*GUC **22** 01:56:38.6±0.6, 37°.38S×71°.30W, h134^{km}±4^{km}, ML3.8*

ISC 22 01:56:38.2±1.0**, 37°.41S**±0°.04×**71°.34W**±0°.10**, h127**^{km}**, n23, σ1^{s}.02**/23**, 8C, Southern Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BI02	**San Fabin de**	**0.75**	**4**	⇑*e*P	**Pn**	**01 56 59.6**	**+0.8**
BI02				*e*S	**Sn**	**01 57 14.9**	**+0.7**
LC01	**Cunco**	**1.55**	**196**	*e*P	**Pn**	**01 57 07.5**	**+0.9**
BI05	**Punta Hualpn**	**1.62**	**293**	*e*P	**Pn**	**01 57 08.1**	**+0.6**
BI05				IAML		01 57 30.8	
	comp=E,1µm,0.2s						
ML02	**Panimavida**	**1.65**	**358**	⇑*i*P	**Pn**	**01 57 08.6**	**+0.8**
ML02				*e*S	**Sn**	**01 57 30.5**	**+0.2**
ML02				IAML		01 57 31.8	
	comp=E,1µm,0.5s						
GO06	**Curarrehue**	**2.17**	**183**	⇑*i*P	**Pn**	**01 57 15.6**	**+1.3**
BI04	**Isla Mocha**	**2.25**	**243**	⇑*e*P	**Pn**	**01 57 14.8**	**-0.3**
BI04				IAML		01 57 44.3	
	comp=E,1µm,0.3s						
GO05	**Hualane**	**2.44**	**348**	*e*P	**Pn**	**01 57 17.8**	**+0.2**
GO05				IAML		01 57 47.8	
	comp=E,339nm,0.3s						
BO02	**Sierra Bellavi**	**2.65**	**10**	⇑*e*P	**Pn**	**01 57 20.9**	**+0.6**
BO02				IAML		01 57 59.0	
	comp=E,284nm,0.5s						
BO03	**Pichilemu**	**2.95**	**350**	*e*P	**Pn**	**01 57 23.8**	**-0.3**
BO03				IAML		01 58 00.9	
	comp=N,284nm,0.3s						
BO01	**Tunca**	**3.02**	**4**	⇑*e*P	**Pn**	**01 57 24.6**	**-0.3**
BO01				IAML		01 58 01.0	
	comp=E,102nm,0.2s						
PLCA	**Paso Flores**	**3.37**	**170**	Pn	**Pn**	**01 57 30.5**	**+0.9**
	comp=E,8.0nm,0.3s,baz=348,slow=12,SNR=260						
PLCA				Pg		01 57 39.0	
	comp=E,2.8nm,0.3s,baz=348,slow=9.9,SNR=6.8						
PLCA				Sn	**Sn**	**01 58 06.0**	**-3.4**
	comp=E,2.3nm,0.3s,baz=355,slow=16,SNR=2.2						
PLCA				Lg	Lg	01 58 29.3	
	comp=E,1.1nm,0.3s,baz=254,slow=17,SNR=1.3						
	comp=E,25nm,0.5s						
BO04	**La Punta**	**3.46**	**10**	*e*P	**Pn**	**01 57 30.9**	**0.0**
BO04				IAML		01 58 16.8	
	comp=N,56nm,0.2s						
MT01	**Popeta**	**3.54**	**1**	*e*P	**Pn**	**01 57 30.9**	**-0.9**
MT09	**Talagante**	**3.64**	**5**	⇑*i*P	**Pn**	**01 57 32.3**	**-0.9**
LMEL	**Las Melosas**	**3.67**	**15**	*e*P	**Pn**	**01 57 33.9**	**+0.2**
MT15	**Las Vizcachas**	**3.86**	**10**	*e*P	**Pn**	**01 57 35.8**	**-0.4**
MT03	**Universidad Ad**	**3.96**	**10**	⇑*e*P	**Pn**	**01 57 36.7**	**-0.9**
H03S1	**Juan Fernandez**	**7.12**	**298**	T	T	02 04 18.1	
	baz=113,slow=76,SNR=9.3						
H03S3	**Juan Fernandez**	**7.13**	**298**	T	T	02 04 07.5	
	baz=113,slow=76,SNR=8.4						
H03S2	**Juan Fernandez**	**7.13**	**298**	T	T	02 04 17.8	
	baz=113,slow=76,SNR=9.0						
TORD	**Torodi Ar. Bea**	**84.86**	**69**	P	**P**	**02 08 59.5**	**+0.6**
	comp=N,0.5nm,0.6s,baz=221,slow=4.1,SNR=8.3						
	comp=N,0.5nm,0.6s						
BVAR	**Borovoye Array**	**149.28**	**47**	PKPbc	**PKPbc**	**02 16 11.1**	**-0.2**
	comp=N,0.2nm,0.4s,baz=259,slow=3.8,SNR=2.3						
MKAR	**Makanchi Array**	**158.39**	**56**	PKPab	**PKPab**	**02 16 55.2**	**0.0**
	comp=N,0.3nm,0.5s,baz=270,slow=4.0,SNR=4.6						

*KRSC **22** 02:09:24.9±0.9, 53°.99N×159°.39E, h155^{km}±9^{km}, Ml3.6*

*IDC **22** 02:09:26.4±1.1, 54°.21N×158°.89E, h155^{km}±11^{km}, mb3.2/11, mbtmp3.6/11, MS2.7/1, Error ellipse: s-maj=22.2km s-min=20.1km az=73.0*

ISC 22 02:09:25.7±0.7**, 54°.02N**±0°.05×**159°.30E**±0°.06**, h156**^{km}±6^{km}**, n42, σ0^{s}.91**/54**, mb3.4**/11**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KII	**Karymskiy**	**0.09**	**78**	*e*P	**Pn**	**02 09 46.6**	**0.0**
KRX	**Arik**	**0.77**	**211**	*e*P	**Pn**	**02 09 49.8**	**+0.4**
KRX				*e*S	**Sn**	**02 10 08.1**	**+0.7**
SDLR	**Sedlovina**	**0.78**	**199**	*e*P	**Pn**	**02 09 49.7**	**+0.2**
SDLR				*e*S	**Sn**	**02 10 08.0**	**+0.3**
KRER	**Koryakskii**	**0.79**	**205**	*e*P	**Pn**	**02 09 50.3**	**+0.7**
KRER				*e*S	**Sn**	**02 10 08.7**	**+0.9**
SMAR	**Somma**	**0.81**	**202**	*e*P	**Pn**	**02 09 50.2**	**+0.3**
AVH	**Avacha**	**0.82**	**204**	*e*P	**Pn**	**02 09 50.5**	**+0.7**
KOK	**Koryaka**	**0.83**	**209**	*e*P	**Pn**	**02 09 50.3**	**+0.5**
NLC	**Nalytchevo**	**0.85**	**178**	*e*P	**Pn**	**02 09 49.7**	**-0.1**
NLC				*e*S	**Sn**	**02 10 07.9**	**-0.3**
UGLR	**Uglovaya**	**0.86**	**199**	*e*P	**Pn**	**02 09 50.5**	**+0.4**
GNL	**Ganaly**	**0.87**	**249**	*e*P	**Pn**	**02 09 50.1**	**0.0**
GNL				*e*S	**Sn**	**02 10 08.5**	**-0.2**
SPN	**Mys Shipunski**	**1.02**	**155**	*e*P	**Pn**	**02 09 50.3**	**-0.8**
SPN				*e*S	**Sn**	**02 10 08.6**	**-2.0**
DALK	**Dalny**	**1.04**	**198**	*e*P	**Pn**	**02 09 51.3**	**0.0**
DALK				*e*S	**Sn**	**02 10 10.3**	**-0.6**
KZV	**Kizimen**	**1.24**	**27**	*e*P	**Pn**	**02 09 53.9**	**+0.6**
PETK	**Petropavlovsk-**	**1.32**	**227**	P	**Pn**	**02 09 53.0**	**-0.9**
	11nm,0.4s,baz=49,slow=13,SNR=76						
PETK				S	**Sn**	**02 10 16.3**	**+0.8**
	6.8nm,0.5s,baz=10,slow=18,SNR=6.5						
KRMR	**Karymshinskiy**	**1.38**	**211**	*e*P	**Pn**	**02 09 54.8**	**+0.3**
KRMR				*e*S	**Sn**	**02 10 16.8**	**+0.3**
GRL	**Gorelyy**	**1.64**	**207**	*e*P	**Pn**	**02 09 58.1**	**+0.8**
GRL				*e*S	**Sn**	**02 10 22.3**	**+0.7**
RUS	**Russkaya**	**1.66**	**197**	*e*P	**Pn**	**02 09 57.2**	**-0.1**
RUS				*e*S	**Sn**	**02 10 20.7**	**-0.8**
MTVR	**Mutnovka**	**1.68**	**204**	*e*P	**Pn**	**02 09 58.7**	**+1.0**
APC	**Apacha**	**1.68**	**230**	*e*P	**Pn**	**02 09 58.1**	**+0.5**
APC				*e*S	**Sn**	**02 10 22.8**	**+0.7**
KMNR	**Kamenistaya**	**1.82**	**17**	*e*P	**Pn**	**02 10 00.3**	**+1.1**
ASAK	**Asacha**	**1.84**	**208**	*e*P	**Pn**	**02 10 00.2**	**+0.7**
ASAK				*e*S	**Sn**	**02 10 27.0**	**+1.7**
ESO	**Esso**	**1.94**	**350**	*e*P	**Pn**	**02 10 00.7**	**+0.2**
KOZ	**Kozyrevsk**	**2.07**	**9**	*e*P	**Pn**	**02 10 02.4**	**+0.5**
BZGR	**Bezymyannyi-Gr**	**2.09**	**22**	*e*P	**Pn**	**02 10 03.4**	**+1.2**
KDTR	**Khodutka, Kamc**	**2.33**	**199**	*e*P	**Pn**	**02 10 04.6**	**-0.5**
PAU	**Pauzhetka**	**2.97**	**212**	*e*P	**Pn**	**02 10 13.8**	**+0.9**
KBG	**Krutoberegovo**	**2.97**	**40**	*e*P	**Pn**	**02 10 13.3**	**+0.4**
KBTR	**Krutoberegovo**	**2.98**	**41**	*e*P	**Pn**	**02 10 13.3**	**+0.3**
SKR	**Severo-Kuril's**	**3.87**	**212**	*e*P	**Pn**	**02 10 24.7**	**+0.4**
BKI	**Bering**	**4.06**	**70**	*e*P	**Pn**	**02 10 26.5**	**-0.2**
SHEM	**Shemya Is, Ala**	**8.94**	**92**	LR	LR	02 15 19.5	
	comp=Z,49nm,19.1s,baz=302,slow=38						
MKAR	**Makanchi Array**	**47.33**	**294**	P	**P**	**02 17 42.0**	**-1.4**
	0.6nm,0.6s,baz=58,slow=7.3,SNR=7.3						
	0.6nm,0.6s						
BVAR	**Borovoye Array**	**49.45**	**307**	P	**P**	**02 17 58.1**	**-1.3**
	0.6nm,0.4s,baz=49,slow=8.1,SNR=6.6						
	0.6nm,0.4s						
PDAR	**Pinedale Array**	**57.48**	**61**	P	**P**	**02 19 00.2**	**+1.7**
	0.2nm,0.5s,baz=343,slow=2.0,SNR=3.7						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**59.08**	**336**	P	**P**	**02 19 08.3**	**-0.6**
	0.8nm,0.7s,baz=33,slow=6.0,SNR=7.3						
	0.8nm,0.7s						
NOA	**NORSAR Array B**	**62.52**	**343**	P	**P**	**02 19 31.2**	**-1.0**
	0.1nm,0.4s,baz=32,slow=7.2,SNR=1.4						
	0.1nm,0.4s						
HFS	**Hagfors**	**62.92**	**341**	P	**P**	**02 19 33.4**	**-1.4**
	1.2nm,0.8s,baz=28,slow=6.5,SNR=4.4						
	1.2nm,0.8s						
AKASG	**Malin Array Be**	**67.58**	**328**	P	**P**	**02 20 03.3**	**-1.6**
	0.2nm,0.3s,baz=29,slow=7.2,SNR=2.7						
	0.2nm,0.3s						
EKA	**Eskdalemuir Ar**	**70.06**	**349**	P	**P**	**02 20 19.8**	**-0.3**
	0.5nm,0.6s,baz=14,slow=5.2,SNR=4.1						
	0.5nm,0.6s						
TXAR	**Lajitas Array**	**70.71**	**67**	P	**P**	**02 20 26.8**	**+2.2**
	0.2nm,0.5s,baz=291,slow=4.5,SNR=5.1						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**76.73**	**204**	P	**P**	**02 21 00.4**	**+0.9**
	0.6nm,0.7s,baz=10,slow=6.0,SNR=2.5						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**80.41**	**204**	P	**P**	**02 21 21.0**	**+1.4**
	0.7nm,0.7s,baz=19,slow=4.8,SNR=7.5						
	0.7nm,0.7s						

*IDC **22** 02:21:48.4±0.4, 1°.37S×69°.40E, h0^{km}, mb4.5/35, mbtmp4.5/36, ML5.1/1, MS4.0/51, Error ellipse: s-maj=13.9km s-min=12.0km az=64.0*

*NEIC **22** 02:21:50.7±2.4, 1°.35S±0°.07×69°.50E±0°.09, h10^{km}±1^{km}, mb4.9/47, Error ellipse: s-maj=15.4km s-min=11.8km az=292.0*

*GCMT **22** 02:21:52.7±0.2, 1°.35S±0°.01×69°.31E±0°.02, h17^{km}±1^{km}, MW5.0/95, Moment Tensor Solution. s43,c56; s95,c163; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.84±.18; $M_{\theta\theta}$4.24±.13; $M_{\phi\phi}$-1.40±.12; $M_{r\theta}$2.19±.30; $M_{\theta\phi}$-0.81±.08; $M_{\phi r}$0.40±.36; Best double couple: $M_0$4.28200×10^{16} NP1:ϕ_s119.00000°, δ33.00000°, λ-58.00000°. NP2: ϕ_s263.00000°, δ62.00000°, λ-109.00000°. Principal axes: T 4.9350, Plg15.0000°, Azm6.0000°; N -1.3040, Plg17.0000°, Azm272.0000°; P -3.6300, Plg67.0000°,* *Azm137.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR **22** *02:22:21.9, 3°.29N×66°.83E, h10km, mb5.1*

ISC 22 02:21:49.5±0.7**, 1°.34S**±0°.06×**69°.44E**±0°.05**, h5**km±4km**, n234, σ1s.41**/226**, mb4.8**/101**, MS4.0**/58**, 23C-5D, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAAM	**Kaadhehdhoo**	**3.99**	**63**		**Pn**	**02 22 49.3**	**-2.2**
KAAM				Sn	**Sn**	**02 23 33.4**	**-5.3**
KAAM	**Kaadhehdhoo**	**3.99**	**63**	P	**Pn**	**02 22 51.8**	**+0.4**
DGAR	**Diego Garcia**	**6.74**	**154**		**Pn**	**02 23 29.3**	**+0.1**
H08S1	**Diego Carcia H**	**6.95**	**154**	Pn	**Pn**	**02 23 31.9**	**0.0**
HMDM	**Hanimaadhoo**	**8.88**	**25**		**Pn**	**02 23 59.6**	**+1.0**
HMDM	**Hanimaadhoo**	**8.88**	**25**	P	**Pn**	**02 24 00.4**	**+1.7**
PALK	**Pallekele**	**14.12**	**53**	Pn	**Pn**	**02 25 11.3**	**+0.8**
	9.2nm,0.3s,baz=246,slow=13,SNR=43						
PALK				Sn	**Sn**	**02 27 38.8**	**-9.0**
	3.5nm,0.3s,baz=303,slow=7.6,SNR=5.2						
PALK				LR	LR	02 29 18.1	
	comp=Z,838nm,21.2s,baz=230,slow=32						
	30nm,0.5s						
PALK	**Pallekele**	**14.12**	**53**		**Pn**	**02 25 11.1**	**+0.6**
PALK	**Pallekele**	**14.12**	**53**	P	**Pn**	**02 25 11.9**	**+1.4**
	22nm,0.8s						
ATD	**Arta Tunnel**	**29.36**	**297**	LR	LR	02 37 34.4	
	comp=Z,6.6nm,18.5s,baz=94,slow=32						
PSI	**Prapat**	**29.76**	**82**	LR	LR	02 37 32.0	
	comp=Z,339nm,21.6s,baz=246,slow=32						
BRDH	**Bariadhala**	**32.22**	**41**	LR	LR	02 42 33.3	
	comp=Z,393nm,18.8s,baz=202,slow=39						
FURI	**Furi**	**32.30**	**289**	LR	LR	02 40 06.3	
	comp=Z,343nm,18.9s,baz=120,slow=34						
FURI	**Furi**	**32.30**	**289**	P	**P**	**02 28 20.8**	**+0.6**
FURI				IAmb	IAmb	02 29 34.0	
	comp=Z,25nm,1.2s						
LODK	**Lodwar**	**34.39**	**278**	P	**P**	**02 28 38.9**	**+0.7**
SHL	**Shillong**	**34.45**	**38**	P	**P**	**02 28 39.0**	**+0.4**
SHL				IAmb	IAmb	02 28 41.4	
	comp=Z,20nm,1.2s						
LWLI	**Liwa**	**34.75**	**97**	P	**P**	**02 28 42.7**	**+1.4**
MDSI	**Maura Dua**	**34.83**	**96**	P	**P**	**02 28 43.5**	**+1.7**
	comp=Z,27nm,1.1s						
NIL	**Nilore**	**34.99**	**6**	P	**P**	**02 28 44.1**	**+1.1**
NIL				IAmb	IAmb	02 28 53.6	
	comp=Z,14nm,0.9s						
CMAR	**Chiang Mai Arr**	**35.06**	**54**	P	**P**	**02 28 45.2**	**+1.4**
	comp=Z,4.5nm,0.8s,baz=246,slow=11,SNR=29						
CMAR				PcP	**PcP**	**02 31 16.2**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=243,slow=4.3,SNR=8.4						
CMAR				LR	LR	02 42 56.6	
	comp=Z,135nm,18.1s,baz=245,slow=36						
	comp=Z,4.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**35.06**	**54**	P	**P**	**02 28 44.0**	**+0.3**
KASI	**Kota Agung**	**35.23**	**98**	P	**P**	**02 28 47.1**	**+1.8**
	comp=Z,41nm,0.9s						
CHTO	**Chiang Mai**	**35.24**	**54**	P	**P**	**02 28 45.4**	**0.0**
CHTO				IAmb	IAmb	02 28 48.6	
	comp=Z,18nm,1.0s						
CHTO	**Chiang Mai**	**35.24**	**54**	P	**P**	**02 28 47.1**	**+1.7**
	comp=Z,19nm,1.0s						
KBL	**Kabul**	**35.70**	**359**	P	**P**	**02 28 50.0**	**+0.7**
TNCH	**TengChong**	**38.48**	**45**	*e*P	**P**	**02 29 15.9**	**+2.8**
TNCH				pmax	pmax		
	comp=Z,83nm,0.8s						
TNCH				pmax	pmax		
	comp=Z,250nm,4.3s						
MBAR	**Mbarara**	**38.71**	**271**	LR	LR	02 42 38.1	
	comp=Z,170nm,19.4s,baz=78,slow=32						
MBAR	**Mbarara**	**38.71**	**271**	P	**P**	**02 29 15.7**	**+0.5**
MANEM	**Manem**	**38.74**	**3**	P	**P**	**02 29 16.4**	**+1.2**
MANEM				IAmb	IAmb	02 29 32.3	
	comp=Z,16nm,0.8s						
GAR	**Garm**	**40.15**	**1**	P	**P**	**02 29 22.8**	**-4.0**
GAR				IAmb	IAmb	02 29 32.8	
	comp=Z,64nm,1.8s						
KSH	**Kashi**	**41.10**	**8**	P	**P**	**02 29 32.5**	**-2.1**
KSH				pP	pwP	02 29 37.1	-2.8
KSH				PcP	**PcP**	**02 31 33.9**	**-0.4**
KSH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KMI	**Kunming**	**41.61**	**49**	P	**P**	**02 29 41.6**	**+2.4**
KMI				pmax	pmax		
	comp=Z,15nm,1.1s						
KMI				LR	LR		
	comp=Z,300nm,19.3s						
KMI				LR	LR		
	comp=Z,150nm,19.5s						
KMI				LR	LR		
	comp=Z,190nm,18.3s						
PZH	**PanZhiHua**	**41.68**	**46**	P	**P**	**02 29 41.8**	**+2.2**
PZH				S	**S**	**02 35 59.0**	**+1.9**
PZH				pmax	pmax		
	comp=Z,30nm,1.0s						
PZH				pmax	pmax		
	comp=Z,190nm,6.0s						
LSZ	**Lusaka**	**42.99**	**249**	LR	LR	02 45 33.5	
	comp=Z,564nm,18.1s,baz=84,slow=33						
LSZ	**Lusaka**	**42.99**	**249**	P	**P**	**02 29 49.2**	**-1.3**
LSZ				IAmb	IAmb	02 29 53.6	
	comp=Z,16nm,0.8s						
WUS	**Wushi**	**43.27**	**11**	IAmb	IAmb	02 29 59.6	
	comp=Z,28nm,1.5s						
AAK	**Ala-Archa**	**44.02**	**5**	LR	LR	02 48 46.1	
	comp=Z,146nm,18.8s,baz=201,slow=37						
GOMU	**GeErMu**	**44.20**	**30**	P	**P**	**02 30 01.5**	**+1.4**
GOMU				S	**S**	**02 36 37.3**	**+2.9**
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
FRU1	**Bishkek**	**44.20**	**5**	P	**P**	**02 29 59.9**	**+0.2**
FRU1				IAmb	IAmb	02 30 23.7	
	comp=Z,34nm,1.3s						
KK31	**Karatay Array**	**44.26**	**1**	P	**P**	**02 30 00.4**	**+0.3**
KKAR	**Karatay Array**	**44.26**	**1**	P	**P**	**02 29 59.0**	**-1.1**
QIZ	**Qiongzhong**	**44.55**	**61**	P	**P**	**02 30 02.8**	**0.0**
QIZ				S	**S**	**02 36 41.3**	**+2.1**
QIZ				LR	LR		
	comp=Z,340nm,20.0s						
QIZ				LR	LR		
	comp=Z,250nm,21.3s						
QIZ				LR	LR		
	comp=Z,220nm,16.2s						
EIL	**Elat**	**45.12**	**316**	LR	LR	02 46 39.4	
	comp=Z,252nm,19.4s,baz=69,slow=33						
GYA	**Guiyang**	**45.30**	**50**	⇑P	**P**	**02 30 09.9**	**+1.1**
GYA				pmax	pmax		
	comp=Z,25nm,1.0s						
GYA				pmax	pmax		
	comp=Z,240nm,5.1s						
ASF	**Jabal al Asfar**	**45.38**	**320**	LR	LR	02 48 03.4	
	comp=Z,104nm,18.1s,baz=112,slow=35						
MARD	**Mardin**	**46.74**	**328**	P	**P**	**02 30 20.2**	**+0.2**
MARD				IAmb	IAmb	02 30 24.7	
	comp=Z,9.2nm,0.7s						
MMAI	**Mount Meron Ar**	**46.89**	**320**	P	**P**	**02 30 21.8**	**+0.6**
	comp=Z,4.2nm,0.8s,baz=119,slow=9.6,SNR=8.6						
MMAI				PcP	**PcP**	**02 31 55.2**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=45,slow=4.3,SNR=2.9						
MMAI				LR	LR	02 47 01.5	
	comp=Z,108nm,21.8s,baz=126,slow=32						
	comp=Z,4.2nm,0.8s						
GURO	**Guroymak-BITLI**	**47.04**	**330**	P	**P**	**02 30 23.3**	**+0.9**
GURO				IAmb	IAmb	02 30 33.4	
	comp=Z,6.0nm,0.8s						
LPHEP	**Lephephe**	**47.57**	**239**	P	**P**	**02 30 26.0**	**-0.8**
GULI	**GuiLin**	**47.63**	**53**	P	**P**	**02 30 29.8**	**+2.8**
GULI				pmax	pmax		
	comp=Z,15nm,1.1s						
WMQ	**Urumqi**	**47.84**	**18**	*e*P	**P**	**02 30 30.5**	**+2.1**
WMQ				LR	LR		
	comp=Z,370nm,15.9s						
WMQ				LR	LR		
	comp=Z,220nm,22.7s						
LBTB	**Lobatse**	**48.40**	**237**	LR	LR	02 49 02.8	
	comp=Z,148nm,18.3s,baz=67,slow=34						
GAZ	**Gaziantep**	**48.59**	**325**	P	**P**	**02 30 35.5**	**+1.2**
GAZ				IAmb	IAmb	02 30 39.2	
	comp=Z,11nm,1.2s						
PLAI	**Plampang**	**48.67**	**101**	P	**P**	**02 30 34.8**	**-0.4**
	comp=Z,22nm,1.1s						
KOPT	**Kop Dagi**	**48.93**	**330**	P	**P**	**02 30 38.3**	**+1.1**
KOPT				IAmb	IAmb	02 30 42.4	
	comp=Z,12nm,1.1s						
LZDM	**Lanzhou Array**	**48.94**	**37**	LR	LR	02 51 32.5	
	comp=Z,134nm,21.8s,baz=315,slow=36						
LZH	**Lanzhou**	**49.12**	**37**	*e*P	**P**	**02 30 41.3**	**+2.8**
LZH				sP	pwP	02 30 50.8	+7.0
LZH				PcP	**PcP**	**02 32 06.4**	**+4.3**
LZH				S	**S**	**02 37 48.4**	**+3.9**
LZH				pmax	pmax		
	comp=Z,14nm,1.5s						
LZH				pmax	pmax		
	comp=Z,270nm,5.0s						
LZH				LR	LR		
	comp=Z,330nm,15.6s						
LZH				LR	LR		
	comp=Z,140nm,15.3s						
LZH				LR	LR		
	comp=Z,310nm,15.3s						
DBNI	**Kabupaten Domp**	**49.16**	**100**	P	**P**	**02 30 38.2**	**-0.8**
	comp=Z,8.5nm,1.0s						
GTA	**Gaotai**	**49.19**	**31**	*e*P	**P**	**02 30 40.3**	**+1.3**
GTA				sP	pwP	02 30 53.0	+8.7
GTA				S	**S**	**02 37 46.1**	**+0.7**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				LR	LR		
	comp=Z,210nm,20.7s						
GTA				LR	LR		
	comp=Z,210nm,19.5s						
GTA				LR	LR		
	comp=Z,330nm,21.1s						
MAKZ	**Makanchi**	**49.20**	**11**	P	**P**	**02 30 38.6**	**-0.2**
MK31	**Makanchi Array**	**49.25**	**12**	P	**P**	**02 30 38.6**	**-0.5**
MKAR	**Makanchi Array**	**49.25**	**12**	P	**P**	**02 30 38.6**	**-0.5**
	comp=Z,3.5nm,0.8s,baz=192,slow=7.5,SNR=32						
MKAR				PcP	**PcP**	**02 32 02.1**	**0.0**
	comp=Z,5.6nm,0.8s,baz=223,slow=4.8,SNR=12						
MKAR				LR	LR	02 52 09.9	
	comp=Z,108nm,21.0s,baz=233,slow=37						
	comp=Z,3.5nm,0.8s						
CSS	**Mathiatis**	**49.45**	**320**	P	**P**	**02 30 40.4**	**-0.5**
	comp=Z,6.8nm,1.6s						
BOSA	**Boshof**	**50.11**	**233**	P	**P**	**02 30 45.2**	**-0.9**
	comp=Z,1.9nm,0.6s,baz=39,slow=8.0,SNR=6.3						
BOSA				LR	LR	02 48 11.0	
	comp=Z,102nm,21.3s,baz=67,slow=32						
	comp=Z,1.9nm,0.6s						
BOSA	**Boshof**	**50.11**	**233**	P	**P**	**02 30 44.8**	**-1.4**
BOSA				IAmb	IAmb	02 32 23.9	
	comp=Z,29nm,1.6s						
MPSI	**Mapaga**	**50.48**	**88**	P	**P**	**02 30 49.8**	**+0.8**
	comp=Z,31nm,0.9s						
KBZ	**Khabaz**	**50.78**	**335**	P	**P**	**02 30 51.2**	**+0.5**
	comp=Z,24nm,0.9s,baz=156,slow=7.7,SNR=23						
	comp=Z,24nm,0.9s						
AB31	**Akbulak array**	**51.06**	**352**	P	**P**	**02 30 52.8**	**-0.1**
AB31				IAmb	IAmb	02 30 54.3	
	comp=Z,12nm,0.8s						
ABKAR	**Akbulak array**	**51.06**	**352**	P	**P**	**02 30 53.1**	**+0.3**
XAN	**Xi'an**	**51.11**	**43**	⇑P	**P**	**02 30 53.4**	**-0.1**
XAN				pmax	pmax		
	comp=Z,25nm,0.8s						
KURBB	**Kurchatov Arra**	**52.35**	**7**	P	**P**	**02 31 02.2**	**-0.1**
	comp=Z,6.2nm,0.8s,baz=202,slow=7.7,SNR=22						
KURBB				PcP	**PcP**	**02 32 13.0**	**-0.5**
	comp=Z,3.4nm,0.8s,baz=208,slow=3.8,SNR=6.1						
KURBB				LR	LR	02 54 10.2	
	comp=Z,72nm,18.0s,baz=184,slow=37						
	comp=Z,6.2nm,0.8s						
BR104	**Keskin Array S**	**52.36**	**325**	P	**P**	**02 31 02.6**	**-0.3**
	comp=Z,4.2nm,0.9s						
BRTR	**Keskin Array B**	**52.37**	**325**	P	**P**	**02 31 02.6**	**-0.4**
	comp=Z,3.3nm,1.0s,baz=137,slow=12,SNR=14						
BRTR				LR	LR	02 53 04.0	
	comp=Z,94nm,19.2s,baz=131,slow=36						
	comp=Z,3.3nm,1.0s						
BR105	**Keskin Array S**	**52.38**	**325**	P	**P**	**02 31 02.4**	**-0.7**
	comp=Z,4.1nm,1.4s						
BR106	**Keskin Array S**	**52.39**	**325**	P	**P**	**02 31 02.8**	**-0.3**
	comp=Z,46nmcomp=Z,5.3nm,1.1s						
KURK	**Kurchatov**	**52.45**	**7**	P	**P**	**02 31 02.4**	**-0.7**
KURK				IAmb	IAmb	02 31 04.3	
	comp=Z,11nm,0.9s						
EDFI	**Ende, Flores**	**52.51**	**100**	P	**P**	**02 31 03.3**	**-1.1**
	comp=Z,9.4nm,1.1s						
WHN	**Wuhan**	**53.19**	**50**	P	**P**	**02 31 10.1**	**+1.1**
H01W3	**Cape Leeuwin H**	**53.31**	**134**	T	T	03 28 32.5	
	baz=298,slow=75,SNR=20						
H01W2	**Cape Leeuwin H**	**53.31**	**134**	T	T	03 28 34.3	
	baz=298,slow=75,SNR=19						
H01W1	**Cape Leeuwin H**	**53.33**	**134**	T	T	03 28 32.3	
	baz=298,slow=75,SNR=17						
TSUM	**Tsumeb**	**53.76**	**247**	LR	LR	02 51 49.3	
	comp=Z,220nm,19.2s,baz=69,slow=34						
LYN	**LuoYang**	**53.84**	**44**	P	**P**	**02 31 15.1**	**+1.4**
LYN				pmax	pmax		
	comp=Z,14nm,0.8s						
BVAR	**Borovoye Array**	**54.18**	**1**	P	**P**	**02 31 15.6**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=160,slow=9.0,SNR=8.6						
BVAR				PcP	**PcP**	**02 32 20.1**	**-0.3**
	comp=Z,2.2nm,0.9s,baz=165,slow=6.2,SNR=5.0						
BVAR				LR	LR	02 56 10.9	
	comp=Z,85nm,18.3s,baz=199,slow=38						
	comp=Z,1.6nm,0.7s						
BATI	**Baumata**	**54.59**	**102**	LR	LR	02 54 05.5	
	comp=Z,211nm,21.1s,baz=282,slow=36						
SUR	**Sutherland**	**55.15**	**231**	LR	LR	02 51 26.7	
	comp=Z,319nm,20.0s,baz=68,slow=32						
BTO	**Baotou**	**55.73**	**37**	*e*P	**P**	**02 31 28.3**	**+0.8**
BTO				sP	**pwP**	**02 31 35.4**	**+2.6**
BTO				PP	**PP**	**02 33 34.5**	**+2.5**
BTO				S	**S**	**02 39 15.5**	**+0.6**
BTO				pmax	pmax		
	comp=Z,22nm,0.5s						
BTO				pmax	pmax		
	comp=Z,310nm,5.8s						
BTO				LR	LR		
	comp=Z,320nm,5.3s						
BTO				LR	LR		
	comp=Z,350nm,6.4s						
BTO				LR	LR		
	comp=Z,340nm,12.4s						
ZAA0	**Zalesovo Array**	**56.56**	**11**	P	**P**	**02 31 32.1**	**-0.9**
ZAA0				IAmb	IAmb	02 31 33.5	
	comp=Z,9.9nm,0.7s						
ZALV	**Zalesovo Beam**	**56.56**	**11**	P	**P**	**02 31 32.4**	**-0.6**
	comp=Z,8.0nm,0.6s,baz=203,slow=7.3,SNR=46						
ZALV				LR	LR	02 55 10.8	
	comp=Z,92nm,21.7s,baz=236,slow=35						
	comp=Z,8.0nm,0.6s						
ZALV	**Zalesovo Beam**	**56.56**	**11**		**P**	**02 31 32.0**	**-1.0**
DAV	**Davao City (W)**	**56.63**	**81**	LR	LR	02 54 50.3	
	comp=Z,68nm,21.2s,baz=356,slow=35						
HHC	**Hu-ho-hao-te**	**56.81**	**37**	*e*P	P	02 31 40.4	+5.2
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,3.8s						
HNS	**HongShan**	**56.89**	**42**	⇑P	**P**	**02 31 36.8**	**+1.2**
HNS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NJ2	**Nanjing**	**57.31**	**50**	*e*P	**P**	**02 31 39.6**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,11nm,0.9s						
FITZ	**Fitzroy Crossi**	**57.58**	**111**	LR	LR	02 56 16.4	
	comp=Z,134nm,18.1s,baz=270,slow=36						
ARTI	**Arti**	**58.24**	**353**	LR	LR	02 57 12.4	
	comp=Z,85nm,18.2s,baz=234,slow=36						
SONM	**Songino Array**	**58.59**	**28**	P	**P**	**02 31 48.1**	**+0.4**
	comp=Z,4.3nm,0.7s,baz=219,slow=7.5,SNR=29						
SONM				LR	LR	02 57 03.5	
	comp=Z,400nm,21.3s,baz=238,slow=36						
	comp=Z,4.3nm,0.7s						
SONM	**Songino Array**	**58.59**	**28**	P	**P**	**02 31 47.7**	**+0.1**
KRAI	**Karang Ratu**	**58.93**	**93**	P	**P**	**02 31 50.3**	**-0.1**
PURM	**Purcari**	**58.99**	**329**	⇑P	**P**	**02 31 47.6**	**-2.6**
MILM	**Milestii Mici**	**59.79**	**329**	⇑P	**P**	**02 31 52.5**	**-3.2**
VRI	**Vrincioaia**	**60.22**	**327**	⇑P	**P**	**02 31 59.4**	**+0.6**
PLOR	**Plostina**	**60.26**	**327**	⇑P	**P**	**02 31 59.0**	**0.0**
MLR	**Muntele Rosu**	**60.42**	**326**	LR	LR	02 58 41.6	
	comp=Z,96nm,19.4s,baz=201,slow=37						
MLR	**Muntele Rosu**	**60.42**	**326**	⇑P	**P**	**02 31 58.8**	**-1.5**
COVR	**Voineasa-Covas**	**60.50**	**327**	⇑P	**P**	**02 32 00.2**	**-0.5**
TESR	**Tescani**	**60.67**	**327**	⇑P	**P**	**02 32 01.1**	**-0.7**
TURR	**Turia**	**60.73**	**327**	⇑P	**P**	**02 32 02.3**	**0.0**
SORM	**Soroca**	**60.83**	**330**	⇑P	**P**	**02 32 01.2**	**-1.6**
OZUR		**60.88**	**327**	⇑P	**P**	**02 32 02.7**	**-0.7**
DOPR	**Dopca**	**61.02**	**326**	⇑P	**P**	**02 32 03.3**	**-1.0**
ARR	**Arges**	**61.09**	**325**	⇑P	**P**	**02 32 03.6**	**-1.2**
PRAR	**RASCA**	**61.43**	**328**	⇑P	**P**	**02 32 06.4**	**-0.6**
LOT	**Lotru**	**61.63**	**325**	⇑P	**P**	**02 32 07.7**	**-0.7**
KIRV	**Kirov**	**61.83**	**348**	LR	LR	03 00 00.4	
	comp=Z,91nm,18.2s,baz=207,slow=37						
AK07	**Malin Array Si**	**62.03**	**332**	P	**P**	**02 32 09.8**	**-1.1**
AK09	**Malin Array Si**	**62.04**	**332**	P	**P**	**02 32 09.8**	**-1.2**
AK10	**Malin Array Si**	**62.05**	**332**	P	**P**	**02 32 09.9**	**-1.1**
AK06	**Malin Array Si**	**62.06**	**332**	P	**P**	**02 32 10.0**	**-1.1**
KMPD	**K-Podol'skiy**	**62.07**	**329**	P	**pP**	**02 32 09.7**	**-1.8**
KMPD				P	**P**	**02 32 09.4**	**-1.8**
BURAR	**Bucovina Array**	**62.12**	**328**	P	**P**	**02 32 11.4**	**-0.4**
AKASG	**Malin Array Be**	**62.13**	**332**	P	**P**	**02 32 10.3**	**-1.3**
	comp=Z,2.8nm,0.6s,baz=139,slow=5.6,SNR=11						
	comp=Z,2.8nm,0.6s						
AKBB	**Malin Array Si**	**62.13**	**332**	P	**P**	**02 32 09.7**	**-1.9**
AKBB				IAmb	IAmb	02 32 14.3	
	comp=Z,11nm,0.9s						
AKBB	**Malin Array Si**	**62.13**	**332**	P	**P**	**02 32 10.5**	**-1.1**
KIEV	**Kiev**	**62.13**	**332**	P	**P**	**02 32 10.5**	**-1.1**
	comp=Z,58nm,0.8s						
AK16	**Malin Array Si**	**62.16**	**332**	P	**P**	**02 32 10.6**	**-1.2**
LUBAR	**Lubar, Ukraine**	**62.30**	**331**	P	**P**	**02 32 11.6**	**-1.1**
MDVR	**Moldovita**	**62.45**	**324**	⇓P	**P**	**02 32 11.9**	**-2.1**
KSV	**Kosov**	**62.63**	**328**	P	**P**	**02 32 14.4**	**-0.7**
MI30	**MI30,Zelenitsa**	**62.64**	**332**	P	**P**	**02 32 13.5**	**-1.5**
BZS	**Buzias**	**62.97**	**324**	⇑P	**P**	**02 32 16.3**	**-1.0**
DRGR		**63.01**	**326**	⇑P	**P**	**02 32 17.8**	**+0.2**
STNU	**Starunia**	**63.17**	**328**	P	**P**	**02 32 17.8**	**-0.8**
BRIU	**Brid**	**63.74**	**327**	P	**P**	**02 32 22.0**	**-0.3**
RNPP5	**Staryi Chortor**	**64.06**	**331**	P	**P**	**02 32 23.6**	**-0.8**
MORH	**Mrgy, Hungar**	**65.04**	**324**	⇑P	**P**	**02 32 30.1**	**-0.8**
MNK	**Minsk**	**65.33**	**335**	*i* P	**P**	**02 32 32.6**	**0.0**
	comp=E,5.0nm,0.8s						
MNK				*i* P	**P**	**02 32 32.6**	**0.0**
	comp=N,7.0nm,0.8s						
MNK				*i* P	**P**	**02 32 32.6**	**0.0**
	comp=Z,7.0nm,0.6s,baz=133						
MNK				*i* PcP	**PcP**	**02 33 04.8**	**0.0**
MNK				*i* PP	**PP**	**02 34 56.0**	**-0.4**
MNK				*i* PPP	PPP	02 36 28.5	
MNK				*i* S	**S**	**02 41 16.7**	**-0.3**
MNK				*i* SS	SS	02 45 13.2	-17
MNK				*i* LQ	LQ	02 56 23.2	
MNK				*i* LR	LR	03 00 39.3	
MNK				*i* LRM	MLR	03 03 08.7	
	comp=Z,63nm,10.8s						
MNK				*i* LRM	MLR	03 03 50.3	
	comp=E,149nm,14.7s						
MNK				*i* LRM	MLR	03 04 14.2	
	comp=N,146nm,15.7s						
WRA	**Warramunga Arr**	**65.99**	**111**	P	**P**	**02 32 36.9**	**-0.7**
	comp=N,5.7nm,0.8s,baz=283,slow=6.0,SNR=23						
	comp=N,5.7nm,0.8s						
WRA	**Warramunga Arr**	**65.99**	**111**	P	**P**	**02 32 35.9**	**-1.7**
WB0	**Warramunga Arr**	**66.02**	**111**	P	**P**	**02 32 36.1**	**-1.7**
WB0				IAmb	IAmb	02 32 39.0	
	comp=Z,17nm,1.3s						
LANS	**Liptovska Anna**	**66.13**	**327**	*e*P	**P**	**02 32 38.2**	**+0.2**
ASAR	**Alice Springs**	**66.14**	**115**	P	**P**	**02 32 37.6**	**-0.9**
	comp=Z,4.3nm,0.7s,baz=285,slow=6.3,SNR=52						
ASAR				LR	LR	02 57 42.2	
	comp=Z,103nm,20.2s,baz=278,slow=33						
	comp=Z,4.3nm,0.7s						
AS31	**Alice Springs**	**66.14**	**115**	P	**P**	**02 32 37.0**	**-1.6**
MAW	**Mawson**	**66.29**	**183**	P	**P**	**02 32 38.6**	**0.0**
	comp=Z,4.0nm,0.8s,baz=306,slow=4.8,SNR=4.6						
MAW				LR	LR	02 54 28.5	
	comp=Z,99nm,21.3s,baz=32,slow=30						
	comp=Z,4.0nm,0.8s						
KSRS	**Korea Array**	**66.31**	**48**	P	**P**	**02 32 38.9**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=252,slow=7.5,SNR=5.8						
KSRS				LR	LR	03 03 11.6	
	comp=Z,75nm,19.4s,baz=260,slow=37						
	comp=Z,1.4nm,0.7s						
HILR	**Hailar Array B**	**66.54**	**33**	P	**P**	**02 32 41.2**	**+0.6**
	comp=Z,8.1nm,0.7s,baz=221,slow=6.4,SNR=9.0						
	comp=Z,8.1nm,0.7s						
MODS	**Modra-Piesok**	**66.95**	**325**	*e*P	**P**	**02 32 42.2**	**-1.0**
MODS				*e*		02 32 45.4	
JAVC	**Velka Javorina**	**66.98**	**326**	*e*P	**P**	**02 32 43.0**	**-0.4**
FDMO	**Fiordimonte**	**67.03**	**318**	P	**P**	**02 32 42.8**	**-1.0**
JNU	**Nakatsue**	**67.14**	**53**	LR	LR	03 03 45.0	
	comp=Z,98nm,18.4s,baz=244,slow=38						
RONA	**Rosalia, Austr**	**67.18**	**324**	*i* P	**P**	**02 32 43.7**	**-1.0**
	comp=Z,9.6nm,2.0s						
ARSA	**Arzberg**	**67.42**	**323**	*i* P	**P**	**02 32 47.3**	**+1.0**
	comp=Z,6.0nm,1.1s						
STEB	**Steborice**	**67.49**	**327**	*e*P	**P**	**02 32 45.3**	**-1.3**
MORC	**Moravsky Berou**	**67.53**	**326**	⇑P	**P**	**02 32 45.7**	**-1.2**
MORC	**Moravsky Berou**	**67.53**	**326**	*e*P	**P**	**02 32 45.8**	**-1.1**
CONA	**Conrad Observa**	**67.55**	**324**	*i* P	**P**	**02 32 45.9**	**-1.2**
	comp=Z,13nm,1.1s						
KRUC	**Moravsky**	**67.80**	**325**	*e*P	**P**	**02 32 47.4**	**-1.2**
VRAC	**Vranov**	**67.82**	**326**	LR	LR	03 06 35.2	
	comp=Z,67nm,18.2s,baz=238,slow=40						
VRAC	**Vranov**	**67.82**	**326**	⇑P	**P**	**02 32 48.1**	**-0.6**
VRAC	**Vranov**	**67.82**	**326**	*e*P	**P**	**02 32 47.5**	**-1.2**
KRLC	**Kraliky**	**68.11**	**326**	*e*P	**P**	**02 32 49.6**	**-0.9**
MOA	**Molln**	**68.45**	**324**	*i* P	**P**	**02 32 51.6**	**-1.1**
	comp=Z,7.9nm,1.2s						
DPC	**Dobruska-Polom**	**68.50**	**327**	*e*P	**P**	**02 32 51.5**	**-1.5**
OSTC	**Ostas**	**68.66**	**327**	*e*P	**P**	**02 32 52.7**	**-1.3**
TORD	**Torodi Ar. Bea**	**68.68**	**285**	P	**P**	**02 32 54.1**	**-0.6**
	comp=Z,3.5nm,1.1s,baz=89,slow=7.5,SNR=10.0						
	comp=Z,3.5nm,1.1s						
BIOA	**Bad Ischl, Aus**	**68.75**	**323**	*i* P	**P**	**02 32 52.7**	**-1.9**
	comp=Z,9.9nm,1.3s						
UPC	**Upice**	**68.75**	**327**	*e*P	**P**	**02 32 53.4**	**-1.1**
ZCCA	**Zocca**	**68.97**	**319**	P	**P**	**02 32 56.6**	**+0.6**
ABTA	**Abfaltersbach**	**69.01**	**322**	*e*P	**P**	**02 32 54.9**	**-1.4**
	comp=Z,12nm,1.3s						
LESA	**Schwarzleotal**	**69.21**	**323**	*e*P	**P**	**02 32 59.4**	**+1.9**
	comp=Z,1.1nm,0.4s						
BNX	**BinXian**	**69.22**	**39**	⇑P	**P**	**02 32 57.8**	**+0.3**
BNX				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZVC	**Zvikov**	**69.25**	**325**	*e*P	**P**	**02 32 58.0**	**+0.4**
GERES	**GERESS Array B**	**69.25**	**324**	P	**P**	**02 32 58.6**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=138,slow=12,SNR=3.2						
GERES				LR	LR	03 05 29.5	
	comp=Z,95nm,18.5s,baz=270,slow=38						
	comp=Z,0.3nm,0.5s						
KHC	**Kasperske Hory**	**69.45**	**325**	*e*P	**P**	**02 32 57.3**	**-1.7**
WTTA	**Wattenberg**	**69.77**	**322**	*e*P	**P**	**02 32 58.9**	**-2.2**
	comp=Z,13nm,1.1s						
WATA	**Walderalm**	**69.84**	**322**	*e*P	**P**	**02 33 01.6**	**+0.1**
	comp=Z,5.7nm,1.0s						
SQTA	**Sankt Quirin**	**70.02**	**322**	*e*P	**P**	**02 33 00.7**	**-1.9**
	comp=Z,7.0nm,1.0s						
FETA	**Feichten**	**70.23**	**322**	*e*P	**P**	**02 33 02.7**	**-1.3**
	comp=Z,11nm,1.0s						
FUORN	**Ofenpass-Fuorn**	**70.36**	**321**	P	**P**	**02 33 03.8**	**-1.0**
RETA	**Reutte**	**70.41**	**322**	*e*P	**P**	**02 33 03.6**	**-1.3**
	comp=Z,13nm,2.0s						
FIA1	**FINESS Array S**	**70.80**	**340**	P	**P**	**02 33 06.2**	**-0.7**
FINES	**FINESS Array B**	**70.80**	**340**	P	**P**	**02 33 06.2**	**-0.7**
	comp=Z,4.3nm,0.6s,baz=120,slow=6.5,SNR=18						
FINES				LR	LR	03 07 28.4	
	comp=Z,62nm,18.2s,baz=204,slow=39						
	comp=Z,4.3nm,0.6s						
FINES	**FINESS Array B**	**70.80**	**340**	P	**P**	**02 33 05.6**	**-1.3**
CLL	**Collm**	**70.81**	**326**	*i* P	**P**	**02 33 07.0**	**-0.1**
	comp=Z,17nm,1.2s						
DAVA	**Damuels**	**70.87**	**322**	*i* P	**P**	**02 33 06.3**	**-1.6**
	comp=Z,11nm,0.8s						
GRF	**Grafenberg Arr**	**71.08**	**324**	*e*P	**P**	**02 33 08.0**	**-0.9**
	comp=Z,14nm,1.0s,baz=118,slow=7.6						
HEH	**HeiHe**	**71.18**	**35**	*e*P	**P**	**02 33 08.8**	**-0.6**
HEH				pmax	pmax		
	comp=Z,11nm,0.9s						
NRIK	**Noril'sk**	**71.61**	**7**	P	**P**	**02 33 12.2**	**+0.6**
	comp=Z,2.9nm,0.8s,baz=170,slow=5.3,SNR=5.9						
NRIK				LR	LR	03 07 06.6	
	comp=Z,82nm,18.0s,baz=196,slow=38						
	comp=Z,2.9nm,0.8s						
USRK	**Ussuriysk Ar.**	**71.62**	**42**	P	**P**	**02 33 11.4**	**-0.8**
	comp=Z,3.2nm,0.8s,baz=168,slow=3.0,SNR=5.2						
	comp=Z,3.2nm,0.8s						
BNI	**Bardonecchia**	**72.07**	**319**	P	**P**	**02 33 13.9**	**-1.2**
SENIN	**Lac Senin/Sane**	**72.14**	**320**	P	**P**	**02 33 14.1**	**-1.5**
INKA	**Innaminka**	**72.85**	**119**	P	**P**	**02 33 20.3**	**+0.3**
INKA				IAmb	IAmb	02 33 21.7	
	comp=Z,11nm,1.0s						
MJAR	**Matsushiro Arr**	**73.87**	**51**	P	**P**	**02 33 26.0**	**+0.2**
	comp=Z,2.2nm,0.8s,baz=255,slow=8.3,SNR=5.4						
MJAR				LR	LR	03 07 54.4	
	comp=Z,76nm,18.4s,baz=250,slow=37						

	comp=Z,2.2nm,0.8s						
STKA	Stephens Creek	74.16	123	P	P	02 33 27.2	-0.4
	comp=Z,8.8nm,0.8s,baz=305,slow=5.8,SNR=14						
STKA				LR	LR	03 04 24.6	
	comp=Z,140nm,18.4s,baz=211,slow=34						
	comp=Z,8.8nm,0.8s						
STKA	Stephens Creek	74.16	123	P	P	02 33 27.1	-0.4
JHJ	Hachijo jima 2	74.36	55	LR	LR	03 06 50.3	
	comp=Z,61nm,18.2s,baz=58,slow=36						
DBIC	Dimbokro	74.57	277	P	P	02 33 29.4	-0.9
	comp=Z,6.6nm,0.8s,baz=117,slow=6.0,SNR=5.1						
DBIC				LR	LR	03 05 38.6	
	comp=Z,104nm,18.6s,baz=92,slow=35						
	comp=Z,6.6nm,0.8s						
HFS	Hagfors	74.84	335	P	P	02 33 29.9	-1.0
	comp=Z,4.4nm,0.7s,baz=142,slow=5.6,SNR=10						
HFS				LR	LR	03 05 34.5	
	comp=Z,90nm,19.7s,baz=179,slow=35						
	comp=Z,4.4nm,0.7s						
ELIB	Princess Elisa	76.22	193	*d*P	P	02 33 39.6	+0.8
	comp=Z,4.2nm,1.2s						
NB2	NORSAR Subarra	76.36	335	P	P	02 33 39.1	-0.6
	comp=Z,3.8nm,1.0s,baz=119,slow=5.9						
NOA	NORSAR Array B	76.36	335	P	P	02 33 38.4	-1.3
	comp=Z,3.5nm,1.0s,baz=112,slow=6.2,SNR=8.0						
	comp=Z,3.5nm,1.0s						
ARCES	ARCESS Array B	76.62	345	P	P	02 33 40.4	-0.5
	comp=Z,3.9nm,0.6s,baz=123,slow=6.0,SNR=24						
ARCES				LR	LR	03 08 18.7	
	comp=Z,73nm,21.3s,baz=118,slow=36						
	comp=Z,3.9nm,0.6s						
ARCES	ARCESS Array B	76.62	345	P	P	02 33 40.2	-0.8
CTA	Charters Tower	77.15	110	LR	LR	03 07 59.5	
	comp=Z,99nm,18.4s,baz=222,slow=36						
MDT	Midelt	77.36	304	LR	LR	03 06 57.7	
	comp=Z,91nm,20.1s,baz=342,slow=35						
PMG	Port Moresby	77.66	99	P	P	02 33 48.6	+0.7
	comp=Z,16nm,1.0s						
ESDC	Sonseca Array	78.14	311	P	P	02 33 49.8	-0.4
	comp=Z,3.3nm,0.9s,baz=96,slow=5.3,SNR=7.7						
	comp=Z,3.3nm,0.9s						
ASAJ	Asahikawa	78.90	45	LR	LR	03 11 17.8	
	comp=Z,44nm,18.5s,baz=128,slow=38						
EKA	Eskdalemuir Ar	81.27	327	P	P	02 34 06.2	-0.6
	comp=Z,2.3nm,0.6s,baz=122,slow=5.8,SNR=13						
	comp=Z,2.3nm,0.6s						
TROLL	Troll, Antarti	81.72	197	⇓P	P	02 34 10.0	+1.0
	comp=Z,158nm,0.7s						
TIXI	Tiksi	82.01	16	P	P	02 34 09.6	-0.7
	comp=Z,19nm,0.7s,baz=250,slow=2.0,SNR=10						
TIXI				LR	LR	03 11 38.6	
	comp=Z,86nm,21.7s,baz=204,slow=36						
	comp=Z,19nm,0.7s						
TIXI	Tiksi	82.01	16	P	P	02 34 10.0	-0.3
ARMA	Armidale	82.58	120	P	P	02 34 15.0	+0.6
SNAA	Sanae	83.20	198	P	P	02 34 16.5	-0.2
SNAA	Sanae	83.20	198	P	P	02 34 16.3	-0.3
	comp=Z,3.2nm,1.1s,baz=73,slow=3.9,SNR=5.5						
	comp=Z,3.2nm,1.1s						
SPITS	Spitsbergen Ar	84.20	350	P	P	02 34 21.5	0.0
	comp=Z,9.7nm,1.0s,baz=105,slow=4.9,SNR=2.6						
SPITS				LR	LR	03 14 57.4	
	comp=Z,47nm,18.9s,baz=194,slow=38						
	comp=Z,9.7nm,1.0s						
VNA2	Neumayer--Watz	84.44	199	⇓P	P	02 34 23.2	+0.2
	comp=Z,4.7nm,0.6s,baz=71,slow=5.5						
VNA3	Neumayer Olymp	85.23	199	⇓P	P	02 34 26.4	-0.5
	comp=Z,3.9nm,0.7s						
MA2	Magadan	86.75	30	LR	LR	03 15 07.9	
	comp=Z,74nm,19.0s,baz=278,slow=37						
SEY	Seymchan	87.96	27	P	P	02 34 40.1	-0.3
	comp=Z,6.4nm,0.9s,baz=254,slow=5.7,SNR=8.1						
SEY				LR	LR	03 15 08.6	
	comp=Z,162nm,21.2s,baz=294,slow=36						
	comp=Z,6.4nm,0.9s						
QSPA	South Pole Qui	88.65	180	P	P	02 34 43.7	0.0
	comp=Z,5.0nm,0.6s,baz=269,slow=2.2,SNR=17						
QSPA				LR	LR	03 08 15.8	
	comp=Z,98nm,18.0s,baz=310,slow=32						
	comp=Z,5.0nm,0.6s						
QSPA	South Pole Qui	88.65	180	P	P	02 34 43.6	-0.2
QSPA				IAmb	IAmb	02 34 44.9	
	comp=Z,9.9nm,0.9s						
VNDA	Vanda	89.22	167	P	P	02 34 46.2	+0.1
	comp=Z,1.8nm,0.8s,baz=262,slow=1.7,SNR=5.1						
VNDA				LR	LR	03 09 54.5	
	comp=Z,83nm,18.7s,baz=312,slow=32						
	comp=Z,1.8nm,0.8s						
VNDA	Vanda	89.22	167	P	P	02 34 46.4	+0.3
VNDA				IAmb	IAmb	02 36 49.0	
	comp=Z,13nm,1.5s						
DZM	Mont Dzumac	95.99	112	*e*LR	LR	03 06 16.6	
	comp=Z,330nm,29.9s						
YKAW3	Yellowknife Wh	118.85	2		PKPdf	02 40 37.3	-1.6
YKA	Yellowknife Ar	118.92	2	PKP	PKPdf	02 40 37.5	-1.5
	comp=Z,1.7nm,0.8s,baz=333,slow=2.6,SNR=28						
YKA	Yellowknife Ar	118.92	2	PKPdf	PKPdf	02 40 38.0	-1.0
YKAW1	Yellowknife Wh	118.94	2	PKPdf	PKPdf	02 40 38.0	-1.1
LPAZ	La Paz	134.60	246	PKP	PKPdf	02 41 10.8	-0.2
	comp=Z,0.8nm,0.6s,baz=135,slow=1.4,SNR=3.6						
PPT2	Papeete2	137.21	118	*e*LR	LR	03 25 24.4	
	comp=Z,81nm,32.0s						
PPT2				*e*LR	LR	03 25 27.4	
	comp=Z,108nm,29.0s						
PDAR	Pinedale Array	138.75	359	PKP	PKPdf	02 41 17.1	-0.4
	comp=Z,3.3nm,0.7s,baz=58,slow=1.6,SNR=26						
NVAR	Mina Array Bea	142.41	10	PKP	PKPdf	02 41 22.0	-2.3
	comp=Z,1.7nm,0.8s,baz=350,slow=3.0,SNR=5.8						
TXAR	Lajitas Array	151.40	347	PKP	PKPdf	02 41 38.8	-0.6
	comp=Z,5.2nm,0.7s,baz=189,slow=0.7,SNR=14						
TXAR				PKPbc	pPKPbc	02 41 45.4	-0.5
	comp=Z,14nm,0.8s,baz=10,slow=3.1,SNR=91						
TXAR				PKPab	sPKPab	02 41 54.0	0.0
	comp=Z,3.4nm,0.7s,baz=98,slow=1.3,SNR=5.7						

TRN 22 02:40:34.2,10°.85N×62°.92W,h132^{km},MD3.6,North of the Paria peninsula.,Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMDM	Guralp CMG5TDE	1.35	96	*e*P	Pn	02 41 00.3	-0.5
DMDM				*e*S	Sn	02 41 21.2	+0.1
TRN	Trinidad (W)	1.50	97	*e*P	Pn	02 41 02.4	-0.1
TRN				*e*S	Sn	02 41 23.8	-0.2
GRFF	Grenada Fort F	1.67	44	*e*P	Pn	02 41 03.0	-1.4
GRFF				*e*S	Sn	02 41 25.8	-1.5
GRGR	Grenville	1.78	44	*e*P	Pn	02 41 04.4	-1.3
GRGR				*e*S	Sn	02 41 28.9	-0.9
PCRV	Puerto La Cruz	1.81	249	*e*P	Pn	02 41 06.9	+0.8
GRSS	Sisters	1.93	42	*e*P	Pn	02 41 07.1	-0.4
GCMP	Grenada, Carri	2.19	42	*e*P	Pn	02 41 10.2	-0.4
GCMP				*e*S	Sn	02 41 38.3	-0.3
SVB	Belmont	2.91	34	*e*P	Pn	02 41 20.6	+0.8
SVB				*e*S	Sn	02 41 53.4	-1.6
MCLT	Moule a Chique	3.44	34	*e*P	Pn	02 41 26.6	-0.1
MCLT				*e*S	Sn	02 42 06.1	-1.2
SLBI	Saint Lucia, B	3.69	31	*e*P	Pn	02 41 30.1	+0.2
SLBI				*e*S	Sn	02 42 10.0	-3.0
BIM	Bigot	4.07	26	*e*P	Pn	02 41 35.5	+0.4
BIM				*e*S	Sn	02 42 19.9	-2.3

IDC ***22*** *02:44:18.9±0.9, 56°.54N×152°.50W, h0^{km}, mb4.0/18, mbtmp3.9/20, ML3.3/2, Error ellipse: s-maj=22.1km s-min=17.2km az=36.0*

NEIC ***22*** *02:44:19.6±2.4, 56°.48N±0°.04×152°.31W±0°.07, h10^{km}±1^{km}, ML3.7/82, ML3.7(AEIC), Error ellipse: s-maj=7.6km s-min=5.9km az=153.0*

AEIC ***22*** *02:44:22.3±2.1, 56°.39N±0°.06×152°.16W±0°.10, h7^{km}±4^{km}, Error ellipse: s-maj=9.4km s-min=6.1km az=137.0*

ISC 22 02:44:21.9±0.6,56°.62N±0°.06×152°.22W±0°.04,h18^{km},n181,σ1^{s}.26/158,mb4.1/18,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHAK	Old Harbor	0.84	316		Pb	02 44 37.1	-0.8
OHAK				IAML		02 45 01.6	
	comp=N,2µm,0.8s						
OHAK				IAML		02 45 07.5	
	comp=E,3µm,1.0s						
SII	Sitkinak Islan	1.09	268		Pn	02 44 39.6	-2.6
SII				IAML		02 45 05.5	
	comp=E,3µm,0.6s						
SII	Sitkinak Islan	1.09	268		Sb	02 44 53.8	-2.2
KDAK	Kodiak Island	1.18	351	Pn	Pn	02 44 43.0	-0.5
	comp=E,15nm,0.3s,baz=178,slow=6.6,SNR=27						
KDAK				Sn	Sb	02 44 59.2	+0.4
	comp=E,29nm,0.3s,baz=210,slow=23,SNR=5.9						
KDAK				LR	LR	02 45 26.2	
	comp=E,412nm,18.0s,baz=353,slow=54						
KDAK	Kodiak Island	1.18	351		Pn	02 44 43.4	-0.1
R18K	Karluk	1.54	309		Pn	02 44 48.3	-0.2
R18K	Karluk	1.54	309	IAML		02 45 21.8	
	comp=E,1µm,0.5s						
SYI	Shuyak Island	2.00	357		Pn	02 44 54.8	+0.1
SYI					Sn	02 45 19.9	+0.6
CHIR	Chirikof Islan	2.06	249		Pn	02 44 52.6	-3.0
CHIR				IAML		02 45 16.8	
	comp=N,615nm,0.5s						
CHIR				IAML		02 45 16.9	
	comp=E,637nm,0.6s						
CHIR	Chirikof Islan	2.06	249		Sn	02 45 14.4	-6.3
KAWH	Katmai	2.25	323		Pn	02 44 58.8	+0.6
KAHG	Katmai Hook Gl	2.26	327		Pn	02 45 00.7	+2.3
KAKN	Katmai Knife C	2.28	319		Pn	02 44 58.9	+0.3
KARR	Katmai Rainbow	2.31	326		Pn	02 45 01.1	+2.0
ACHA	Angle Creek He	2.32	315		Pn	02 45 00.4	+1.2
KABU	Katmai Buttres	2.34	316		Pn	02 45 00.7	+1.2
KVTA	Katmai Vly 10	2.42	318		Pn	02 45 02.1	+1.5
Q19K	Cape Douglas,	2.44	342		Pn	02 45 02.1	+1.2
PLK3	Peulik 3	2.45	298		Pn	02 45 00.3	-0.7
PLK3					Pb	02 45 01.4	-4.0
PLK4	Peulik 4	2.47	296		Pn	02 45 02.1	+0.8
PLK4				IAML		02 45 18.5	
	comp=N,547nm,0.8s						
PLK2	Peulik 2	2.51	299		Pn	02 45 00.8	-1.0
KAHC	Katmai Hardscr	2.53	325		Pn	02 45 01.8	-0.3
CNTC	Contact Creek	2.58	311		Pn	02 45 02.1	-0.7
KELA	Mount Kelaz	2.63	315		Pn	02 45 04.5	+1.0
PLK1	Peulik 1	2.67	298		Pn	02 45 02.6	-1.3
PLBL	Peulik Blue Cr	2.73	295		Pn	02 45 03.6	-1.2
AUI	Augustine Isla	2.80	347		Pn	02 45 05.9	+0.2
AUI					Pb	02 45 07.9	-3.4
PLK5	Peulik 5	2.88	301		Pn	02 45 05.6	-1.2
CNPM	China Poot	2.96	10		Pn	02 45 07.9	-0.1
CNPM	China Poot	2.96	10	IAML		02 45 28.5	
	comp=N,219nm,0.7s						
HOM	Homer	3.06	6		Pn	02 45 10.1	+0.7
P19K	Oil Pt	3.09	350		Pn	02 45 10.8	+1.0
Q16K	King Salmon	3.15	313		Pn	02 45 10.3	-0.3
P18K	Big Mountain,	3.21	331		Pn	02 45 11.7	+0.3
BRLK	Bradley Lake	3.23	12		Pn	02 45 11.2	-0.5
BRLK				IAML		02 45 39.0	
	comp=N,115nm,1.0s						
BRLK				IAML		02 46 41.9	
	comp=E,116nm,1.1s						
ANNW	Aniakchak Nort	3.31	279		Pn	02 45 10.8	-2.1
AZAC	Aniakchak	3.32	277		Pn	02 45 10.8	-2.2
ILS	Iliamna Low So	3.38	353		Pn	02 45 14.2	+0.4
ILSW	Iliamna Southw	3.41	352		Pn	02 45 14.6	+0.4
ILSW				IAML		02 46 31.9	
	comp=E,148nm,1.0s						
ILSW				IAML		02 46 35.3	
	comp=N,152nm,1.0s						
P17K	Kvichak River	3.43	321		Pn	02 45 15.3	+1.0
IVE	Iliamna Volcan	3.44	353		Pn	02 45 15.0	+0.4
O18K	Koktuh Hills	3.61	335		Pn	02 45 17.6	+0.8
O18K				IAML		02 46 38.6	
	comp=N,110nm,0.9s						
O18K				IAML		02 46 44.5	
	comp=E,92nm,1.0s						
O19K	Port Alsworth	3.75	344		Pn	02 45 19.3	+0.5
O19K				IAML		02 45 57.0	
	comp=N,136nm,0.5s						
O19K				IAML		02 46 42.0	
	comp=E,187nm,0.5s						
SEW	Seward	3.79	21	Pn	Pn	02 45 20.5	+1.2
RED	Redoubt Volcan	3.82	356		Pn	02 45 19.9	0.0
VNSG	Veniaminof 6	3.85	265		Sn	02 46 01.6	-3.3
RDSO	Redoubt South	3.86	356		Pn	02 45 20.4	0.0
P16K	Nushagak River	3.92	311		Pn	02 45 22.9	+1.8
DFR	Drift River	3.99	357		Pn	02 45 22.4	+0.2
VNKR	Veniaminof 5	4.02	265		Pn	02 45 19.4	-3.2
SLKM	Skilak Lake	4.04	14		Pn	02 45 22.6	-0.2
SLKM	Skilak Lake	4.04	14	IAML		02 45 56.6	
	comp=N,62nm,0.9s						
SLKM				IAML		02 47 11.5	
	comp=E,98nm,1.2s						
O17K	Koliganek Bris	4.08	323		Pn	02 45 23.4	+0.1
VNFG	Fog Glacier, M	4.08	268		Pn	02 45 20.5	-2.9
O22K	Cooper Landing	4.09	18		Pn	02 45 24.7	+1.2
P23K	Montague Islan	4.24	35		Pn	02 45 24.3	-1.1
P23K					Sn	02 46 12.0	-2.4
P23K	Montague Islan	4.24	35	IAML		02 46 16.5	
	comp=N,89nm,0.8s						
P23K				IAML		02 46 18.7	
	comp=E,96nm,1.0s						
O16K	Kokwok River B	4.31	316		Pn	02 45 25.9	-0.6
N19K	Bonanza Creek	4.37	345		Pn	02 45 28.1	+0.7
N19K	Bonanza Creek	4.37	345	IAML		02 47 03.4	
	comp=N,68nm,1.2s						
N19K				IAML		02 47 07.5	
	comp=E,59nm,1.0s						
N18K	Kilae Creek	4.50	336		Pn	02 45 29.7	+0.6
N18K	Kilae Creek	4.50	336	IAML		02 47 06.9	
	comp=E,75nm,1.2s						
N18K				IAML		02 47 09.7	
	comp=N,45nm,1.0s						
CNBA	Chernabura Isl	4.54	250		Pn	02 45 27.1	-2.5
CNBA				IAML		02 46 17.6	
	comp=N,81nm,0.8s						
CNBA				IAML		02 46 18.4	
	comp=E,51nm,1.1s						
CKL	Chakachamna La	4.59	359		Pn	02 45 30.4	-0.1
RC01	Rabbit Creek A	4.67	15		Pn	02 45 31.4	+0.1
RC01				IAML		02 46 37.1	
	comp=N,41nm,0.7s						
SPCG	Spurr Capps Gl	4.69	1		Pn	02 45 31.9	+0.1
N17K	Nushagak Hills	4.70	329	IAML		02 47 17.4	
	comp=N,42nm,0.9s						
PWL	Port Wells	4.71	24		Pn	02 45 31.3	-0.7
PWL	Port Wells	4.71	24	IAML		02 46 30.1	
	comp=N,86nm,0.8s						
PWL				IAML		02 46 35.9	
	comp=E,69nm,0.8s						
SPNN	North Nagishla	4.77	357		Pn	02 45 33.0	+0.1
O15K	Ungalikthiuk R	4.80	305		Pn	02 45 32.8	-0.4
O15K	Ungalikthiuk R	4.80	305	IAML		02 47 02.1	
	comp=N,43nm,1.1s						
SDPT	Sand Point	4.81	258		Pn	02 45 29.9	-3.4
SDPT	Sand Point	4.81	258	IAML		02 46 08.9	
	comp=E,66nm,1.2s						
HIN	Hinchinbrook I	4.83	36	Pn	Pn	02 45 33.1	-0.6
HIN				IAML		02 46 33.3	
	comp=N,76nm,1.0s						
SUA	Susitna One	4.92	8		Pn	02 45 35.4	+0.5
SUA				IAML		02 47 24.6	
	comp=N,72nm,1.1s						
GLI	Glacier Island	5.04	30	Pn	Pn	02 45 35.5	-1.0
GLI				IAML		02 46 38.9	
	comp=N,42nm,1.0s						
GLI				IAML		02 46 40.1	
	comp=E,50nm,0.8s						
FID	Port Fidalgo	5.11	33	Pn	Pn	02 45 36.1	-1.4
FID				IAML		02 46 36.4	
	comp=N,50nm,0.7s						
FID				IAML		02 46 44.5	
	comp=E,56nm,1.2s						
FID	Port Fidalgo	5.11	33		Sn	02 46 31.9	-4.1
N16K	Nishlik Lake	5.17	321		Pn	02 45 38.5	+0.2
KNK	Knik Glacier	5.19	20		Pn	02 45 38.4	-0.1
KNK				IAML		02 46 41.4	
	comp=E,36nm,0.8s						
KNK				IAML		02 47 38.7	
	comp=N,35nm,1.0s						
EYAK	Cordova Ski Ar	5.20	38		Pn	02 45 38.3	-0.3
EYAK				IAML		02 46 40.0	
	comp=E,41nm,0.9s						
EYAK				IAML		02 46 40.4	
	comp=N,43nm,1.0s						
M18K	Stony River	5.23	341		Pn	02 45 39.5	+0.4
PMR	Palmer	5.24	16		Pn	02 45 40.3	+1.1
KAIM	Kayak Island	5.29	48	Pn	Pn	02 45 40.4	+0.5
KAIM	Kayak Island	5.29	48		Sn	02 46 38.6	-1.7
M20K	Styx River	5.30	355		Pn	02 45 40.0	-0.1
SKT	Skwentna	5.39	3		Pn	02 45 41.9	+0.6
GHO	Glory Hole Cre	5.44	17		Pn	02 45 42.8	+0.7
N15K	Kwethluk River	5.46	314		Pn	02 45 42.8	+0.6
RAGM	Ragged Mountai	5.47	43		Pn	02 45 42.4	0.0
SML	Sawmill	5.57	19		Pn	02 45 43.5	-0.4
GOAT	Goat Mountain	5.58	41		Pn	02 45 42.7	-1.2
GOAT					Sn	02 46 44.9	-2.7
DIV	Divide	5.62	34		Pn	02 45 44.0	-0.6
L19K	White Mountain	5.74	348		Pn	02 45 46.8	+0.6
SCM	Sheep Creek Mo	5.80	24		Pn	02 45 46.6	-0.4
DTNA	Dutton South F	5.83	260		Pn	02 45 44.2	-3.2
KLU	Klutina	5.87	31		Pn	02 45 47.2	-0.7
CUT	Chulitna	5.89	9	Pn	Pn	02 45 48.2	+0.1
L22K	Petersville	5.97	6		Pn	02 45 48.9	-0.4
L18K	Granite Mounta	6.06	340		Pn	02 45 51.2	+0.7
SNH	Sunshine Point	6.09	50	Pn	Pn	02 45 49.1	-1.8
CRQM	Cirque	6.29	45		Pn	02 45 52.9	-1.0
PPLA	Purkeypile	6.30	0		Pn	02 45 53.9	0.0
M24K	Tolsona, Glenn	6.31	27		Pn	02 45 54.0	0.0
L16K	Owhat River	6.32	327		Pn	02 45 53.8	-0.3
N25K	Chitina, Valde	6.36	35		Pn	02 45 54.2	-0.4
WAT6	Susitna Watana	6.40	19		Pn	02 45 54.9	-0.3
WAT7	Susitna Watana	6.46	14		Pn	02 45 55.7	-0.4
VRDI	Verde Repeater	6.48	41		Pn	02 45 55.4	-1.0
M14K	Bethel	6.55	313		Pn	02 45 59.3	+2.1
WACK	Wrangell Chich	6.73	34		Pn	02 45 58.7	-1.2
MCARA	McCarthy VSAT	6.74	41		Pn	02 45 58.4	-1.3
BALM	Baldy	6.77	45		Pn	02 45 59.4	-0.9
HARP	HAARP	6.82	29		Pn	02 46 00.3	-0.6
PTPK	Patty Peak	6.82	44		Pn	02 45 59.6	-1.5
K20K	Telida	6.82	353		Pn	02 46 01.0	0.0
K17K	Iditarod	6.84	336		Pn	02 46 02.5	+1.3
DHY	Denali Highway	6.92	19		Pn	02 46 02.6	+0.2
TRF	Thorofare Moun	6.92	7		Pn	02 46 03.0	+0.5
KTH	Kantishna Hill	6.99	5		Pn	02 46 03.9	+0.6
RND	Reindeer	7.01	13		Pn	02 46 04.3	+0.7
PAX	Paxson	7.22	25		Pn	02 46 08.0	+1.5
BCPM	Bancas Point	7.43	58		Pn	02 46 07.2	-2.0
J20K	Nowinta River	7.64	354		Pn	02 46 12.0	-0.2
WRH	Wood River Hil	8.14	13		Pn	02 46 19.3	+0.3
HDA	Harding Lake	8.23	16		Pn	02 46 19.9	-0.4
AKRB	Akutan Reef Bi	8.27	258		Pn	02 46 16.9	-3.9
J14K	Nanvaranak Lak	8.40	322	Pn	Pn	02 46 23.8	+1.3
I17K	Unalakleet	8.41	334		Pn	02 46 24.0	+1.3
SCRK	Sand Creek	8.43	26	Pn	Pn	02 46 23.6	+0.4
ILAR	Eielson Array	8.59	15	Pn	Pn	02 46 24.6	-0.5
	comp=N,1.0nm,0.3s,baz=198,slow=14,SNR=58						
ILAR				Sn	Sn	02 47 53.2	-8.1
	comp=N,0.3nm,0.3s,baz=203,slow=22,SNR=4.6						
I21K	Tanana	8.59	1		Pn	02 46 25.9	+0.7
I23K	Minto, Yukon-K	8.67	8		Pn	02 46 28.5	+2.2
S31K	Pelican	8.76	75	Pn	Pn	02 46 26.4	-1.1
J26L	Joseph Creek	8.97	25		Pn	02 46 30.5	-0.1
H21K	Melozitna Rive	9.07	358		Pn	02 46 31.5	-0.3
IMAR	Indian Mountai	9.43	356		Pn	02 46 36.5	-0.2
G21K	Allakaket	9.95	357		Pn	02 46 43.5	-0.3
G23K	Bananza Creek	10.18	5		Pn	02 46 46.2	-0.8
G24K	Hadweenzic Riv	10.36	11		Pn	02 46 49.1	-0.3
F19K	Shaleruckik Mo	10.58	348		Pn	02 46 53.1	+0.7
C27K	Jago River	13.59	13		Pn	02 47 37.4	+3.9
INK	Inuvik	14.47	28	Pn	Pn	02 47 49.8	+4.3
	comp=N,0.2nm,0.3s,baz=229,slow=13,SNR=8.5						
	comp=N,1.5nm,0.5s						
YKA	Yellowknife Ar	19.72	57	P	P	02 48 51.5	+1.5
	comp=N,0.1nm,0.3s,baz=271,slow=12,SNR=7.5						
	comp=N,0.6nm,0.8s						
YKA	Yellowknife Ar	19.72	57	P	P	02 48 50.6	+0.6
PDAR	Pinedale Array	30.33	99	P	P	02 50 32.9	+0.5
	comp=N,0.4nm,0.7s,baz=319,slow=4.2,SNR=4.7						
	comp=N,0.4nm,0.7s						
PDAR	Pinedale Array	30.33	99	P	P	02 50 32.8	+0.4
TXAR	Lajitas Array	43.48	108	P	P	02 52 24.9	+1.0
	comp=N,0.6nm,0.8s,baz=317,slow=6.5,SNR=7.0						
	comp=N,0.6nm,0.8s						
TXAR	Lajitas Array	43.48	108	P	P	02 52 23.9	0.0
NRIK	Noril'sk	47.13	335	P	P	02 52 52.0	-0.3
	comp=N,2.0nm,0.5s,baz=51,slow=3.2,SNR=4.5						
	comp=N,2.0nm,0.5s						
NRIK	Noril'sk	47.13	335	P	P	02 52 52.5	+0.2
H11N2	WAKE ISLAND Hy	47.67	237	T	T	03 44 31.3	
	baz=30						
H11N3	WAKE ISLAND Hy	47.68	236	T	T	03 44 22.2	
	baz=30						
H11N1	WAKE ISLAND Hy	47.69	237	T	T	03 44 15.5	
	baz=30						
H11S1	WAKE ISLAND Hy	48.83	236	T	T	03 45 33.1	
	baz=29						
H11S2	WAKE ISLAND Hy	48.84	236	T	T	03 45 35.7	
	baz=29						
H11S3	WAKE ISLAND Hy	48.84	236	T	T	03 45 38.4	
	baz=29						
ARCES	ARCESS Array B	54.14	1	P	P	02 53 44.8	-0.3
	comp=N,1.8nm,0.8s,baz=23,slow=6.6,SNR=5.9						
	comp=N,1.8nm,0.8s						
ARCES	ARCESS Array B	54.14	1	P	P	02 53 45.3	+0.2
KSRS	Korea Array	54.40	286	P	P	02 53 45.1	-2.3
	comp=N,0.4nm,0.4s,baz=34,slow=10.0,SNR=1.6						
	comp=N,0.4nm,0.4s						
SONM	Songino Array	57.16	308	P	P	02 54 07.6	+0.3
	comp=N,2.8nm,0.7s,baz=44,slow=7.0,SNR=16						
	comp=N,2.8nm,0.7s						
SONM	Songino Array	57.16	308	P	P	02 54 07.5	+0.2
ZALV	Zalesovo Beam	60.37	325	P	P	02 54 29.3	-0.1
	comp=N,2.2nm,0.7s,baz=28,slow=6.8,SNR=9.5						
	comp=N,2.2nm,0.7s						
ZALV	Zalesovo Beam	60.37	325	P	P	02 54 29.4	+0.1
NB2	NORSAR Subarra	61.96	9	P	P	02 54 40.7	+0.6
	comp=Z,0.5nm,0.6s,baz=350,slow=6.9						
NOA	NORSAR Array B	61.96	9	P	P	02 54 40.4	+0.3
	comp=Z,1.2nm,0.8s,baz=350,slow=6.7,SNR=4.3						
	comp=Z,1.2nm,0.8s						
FINES	FINESS Array B	62.27	1	P	P	02 54 42.7	+0.6
	comp=Z,3.0nm,1.0s,baz=356,slow=5.7,SNR=7.3						
	comp=Z,3.0nm,1.0s						
HFS	Hagfors	63.06	8	P	P	02 54 47.7	+0.4
	comp=Z,1.6nm,0.7s,baz=40,slow=4.8,SNR=13						
	comp=Z,1.6nm,0.7s						
KURBB	Kurchatov Arra	65.19	327	P	P	02 55 01.3	-0.2
	comp=Z,1.1nm,0.6s,baz=29,slow=5.8,SNR=6.9						
	comp=Z,1.1nm,0.6s						
BVAR	Borovoye Array	65.27	333	P	P	02 55 02.0	0.0
	comp=Z,2.6nm,0.7s,baz=28,slow=7.7,SNR=14						
	comp=Z,2.6nm,0.7s						
EKA	Eskdalemuir Ar	65.61	19	P	P	02 55 04.7	+0.6
	comp=Z,0.7nm,0.6s,baz=338,slow=6.3,SNR=4.8						
	comp=Z,0.7nm,0.6s						
MKAR	Makanchi Array	67.36	323	P	P	02 55 15.0	-0.5
	comp=Z,1.2nm,0.7s,baz=31,slow=6.0,SNR=10						
	comp=Z,1.2nm,0.7s						
MKAR	Makanchi Array	67.36	323	P	P	02 55 15.3	-0.2
AKASG	Malin Array Be	73.04	359	P	P	02 55 49.4	-0.7
	comp=Z,0.8nm,0.5s,baz=4.5,slow=5.9,SNR=2.9						
	comp=Z,0.8nm,0.5s						
GERES	GERESS Array B	74.25	10	P	P	02 55 58.4	+0.9
	comp=Z,0.7nm,0.7s,baz=328,slow=4.7,SNR=5.5						
	comp=Z,0.7nm,0.7s						
KKAR	Karatay Array	74.34	329	P	P	02 55 58.4	+0.4
ESDC	Sonseca Array	80.38	24	P	P	02 56 32.5	+0.6
	comp=Z,0.6nm,0.6s,baz=336,slow=11,SNR=1.3						
	comp=Z,0.6nm,0.6s						
BRTR	Keskin Array B	83.89	355	P	P	02 56 51.1	+0.6
	comp=Z,0.7nm,0.8s,baz=353,slow=5.0,SNR=4.5						
	comp=Z,0.7nm,0.8s						
BRTR	Keskin Array B	83.89	355	P	P	02 56 51.0	+0.5
QSPA	South Pole Qui	146.41	180	PKPbc	PKPdf	03 03 59.8	+1.0
	comp=Z,0.9nm,0.2s,baz=49,slow=0.5,SNR=4.2						

IDC ***22*** *02:49:11.8±1.2, 56°.53N×163°.69E, h0^{km}, mb3.6/7, mbtmp3.6/8, ML2.2/1, Error ellipse: s-maj=106.6km s-min=17.3km az=139.0*

KRSC ***22*** *02:49:12.2±1.3, 56°.24N×164°.28E, h48^{km}±18^{km}, Ml3.7*

ISC 22 02:49:13.2±0.9,56°.32N±0°.05×164°.17E±0°.04,h23^{km},n38,σ2^{s}.10/35,mb3.6/7,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.76	262	*e*P	Pn	02 49 27.0	-1.6
KBTR				*e*S	Sn	02 49 38.0	-1.4
KBG	Krutoberegovo	0.82	266	*e*P	Pn	02 49 27.9	-1.5
KBG				*e*S	Sn	02 49 39.6	-1.1
BKI	Bering	1.51	137	*e*P	Pb	02 49 37.6	-2.9
BKI				*e*S	Sn	02 49 55.6	-2.2
SMKR	Semkarok	1.52	281	*e*P	Pb	02 49 40.8	0.0
KLY	Klyuchi	1.96	271	*e*P	Pn	02 49 45.2	+0.2
KLY				*e*S	Sn	02 50 09.1	+0.3
BZGR	Bezymyannyi-Gr	1.98	260	*e*P	Pb	02 49 48.5	-0.2
BZWR	Bezymyannyi-We	2.09	262	*e*P	Pb	02 49 48.2	-2.3
KIRR	Kirishev	2.17	262	*e*P	Pb	02 49 50.2	-1.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMNR	**Kamenistaya**	**2.28**	**257**	*e*P	**Pb**	**02 49 51.9**	**-1.8**
TUMD	**Tumrok D**	**2.41**	**244**	*e*S	**Sb**	**02 50 21.3**	**-3.8**
KOZ	**Kozyrevsk**	**2.42**	**266**	*e*P	**Pb**	**02 49 53.9**	**-2.1**
SRDR	**Sredinnyy**	**2.48**	**272**	*e*P	**Pb**	**02 49 54.9**	**-2.3**
KZV	**Kizimen**	**2.51**	**243**	*e*P	**Pb**	**02 49 53.7**	**-3.9**
OSSR	**Ossora**	**3.00**	**349**	*e*P	**Pb**	**02 50 01.5**	**-4.3**
OSSR				*e*S	**Sn**	**02 50 36.0**	**+1.6**
ESO	**Esso**	**3.09**	**265**	*e*P	**Pb**	**02 50 04.1**	**-3.3**
SPN	**Mys Shipunski**	**4.03**	**218**	*e*P	**Pn**	**02 50 14.3**	**+0.9**
SDLR	**Sedlovina**	**4.32**	**227**	*e*P	**Pn**	**02 50 18.7**	**+1.1**
KRX	**Arik**	**4.36**	**229**	*e*P	**Pn**	**02 50 18.8**	**+0.7**
SMAR	**Somma**	**4.37**	**228**	*e*P	**Pn**	**02 50 18.2**	**-0.1**
AVH	**Avacha**	**4.39**	**228**	*e*P	**Pn**	**02 50 20.6**	**+2.1**
UGLR	**Uglovaya**	**4.39**	**227**	*e*P	**Pn**	**02 50 19.7**	**+1.1**
KOK	**Koryaka**	**4.41**	**229**	*e*P	**Pn**	**02 50 20.8**	**+2.0**
GNL	**Ganaly**	**4.45**	**236**	*e*P	**Pn**	**02 50 21.3**	**+2.0**
PETK	**Petropavlovsk-**	**4.94**	**232**	Pn	**Pn**	**02 50 26.9**	**+0.9**
	0.5nm,0.3s,baz=72,slow=16,SNR=7.4						
PETK				Sn	**Sn**	**02 51 24.1**	**+1.7**
	baz=236,slow=40						
	6.4nm,1.1s						
MTVR	**Mutnovka**	**5.20**	**225**	*e*P	**Pn**	**02 50 31.3**	**+1.7**
ILAR	**Eielson Array**	**24.89**	**50**	P	**P**	**02 54 35.4**	**+1.6**
	0.3nm,0.8s,baz=271,slow=8.4,SNR=2.2						
	0.3nm,0.8s						
MJAR	**Matsushiro Arr**	**26.40**	**232**	P	**P**	**02 54 48.7**	**+0.9**
	0.8nm,0.6s,baz=41,slow=7.5,SNR=1.5						
	0.8nm,0.6s						
INK	**Inuvik**	**29.87**	**41**	P	**P**	**02 55 20.3**	**+1.9**
	1.7nm,1.2s,baz=259,slow=5.2,SNR=1.7						
	1.7nm,1.2s						
H11N2	**WAKE ISLAND Hy**	**36.59**	**176**	T	T	03 34 59.6	
	baz=357,slow=76,SNR=131						
H11N3	**WAKE ISLAND Hy**	**36.61**	**176**	T	T	03 35 08.8	
	baz=357,slow=76,SNR=30						
H11N1	**WAKE ISLAND Hy**	**36.61**	**176**	T	T	03 35 04.1	
	baz=357,slow=76,SNR=65						
H11S1	**WAKE ISLAND Hy**	**37.80**	**176**	T	T	03 36 35.4	
	baz=358,slow=74						
H11S3	**WAKE ISLAND Hy**	**37.81**	**176**	T	T	03 36 39.3	
	baz=358						
H11S2	**WAKE ISLAND Hy**	**37.82**	**176**	T	T	03 36 44.0	
	baz=358,slow=74						
YKA	**Yellowknife Ar**	**39.20**	**47**	P	P	02 56 42.3	+3.3
	0.7nm,1.0s,baz=301,slow=9.1,SNR=7.0						
	0.7nm,1.0s						
PDAR	**Pinedale Array**	**53.95**	**65**	P	P	02 58 38.5	+3.5
	0.5nm,0.6s,baz=314,slow=2.5,SNR=4.5						
	0.5nm,0.6s						
TXAR	**Lajitas Array**	**67.27**	**71**	P	P	03 00 09.1	+3.2
	0.3nm,0.6s,baz=300,slow=4.7,SNR=4.9						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**80.03**	**208**	P	**P**	**03 01 23.5**	**+2.9**
	0.9nm,0.9s,baz=360,slow=5.7,SNR=3.8						
	0.9nm,0.9s						

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*IDC **22** 02:50:41.2±1.6, 3°.23S×101°.54E, h0^{km}, mb3.7/8, mbtmp3.7/8, Error ellipse: s-maj=66.6km s-min=21.3km az=50.0*

ISC 22 02:50:48.4±1.5**, 3°.2S**±0°.3×**101°.6E**±0°.3**, h53**^{km}**, n15, σ0^{s}52**/9**, mb3.7**/8**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**29.32**	**260**	T	T	03 26 23.6	
	baz=84						
H08S3	**Diego Garcia H**	**29.33**	**260**	T	T	03 26 16.7	
	baz=84						
H08S1	**Diego Carcia H**	**29.34**	**260**	T	T	03 26 38.9	
	baz=84						
WRA	**Warramunga Arr**	**35.98**	**120**	P	**P**	**02 57 43.8**	**-0.8**
	0.5nm,0.7s,baz=299,slow=7.9,SNR=2.1						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**37.23**	**126**	P	**P**	**02 57 55.9**	**+0.7**
	0.3nm,0.5s,baz=297,slow=7.6,SNR=6.4						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**52.64**	**343**	P	**P**	**02 59 57.0**	**-0.2**
	0.5nm,0.6s,baz=135,slow=7.3,SNR=5.2						
	0.5nm,0.6s						
USRK	**Ussuriysk Ar.**	**54.48**	**27**	P	**P**	**03 00 11.1**	**+0.3**
	1.6nm,0.6s,baz=246,slow=14,SNR=4.4						
	1.6nm,0.6s						
KURBB	**Kurchatov Arra**	**57.18**	**343**	P	**P**	**03 00 30.0**	**+0.2**
	0.4nm,0.6s,baz=163,slow=6.8,SNR=2.6						
	0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**58.66**	**348**	P	**P**	**03 00 40.2**	**0.0**
	0.7nm,0.4s,baz=157,slow=4.2,SNR=5.4						
	0.7nm,0.4s						
H04N2	**CROZET ISLANDS**	**60.81**	**217**	T	T	04 05 49.0	
	baz=61,slow=75,SNR=20						
H04N1	**CROZET ISLANDS**	**60.82**	**217**	T	T	04 05 54.2	
	baz=61,slow=75,SNR=19						
H04N3	**CROZET ISLANDS**	**60.83**	**217**	T	T	04 05 46.9	
	baz=61,slow=75,SNR=22						
BVAR	**Borovoye Array**	**61.88**	**339**	P	**P**	**03 01 01.8**	**-0.5**
	0.3nm,0.5s,baz=116,slow=3.4,SNR=1.6						
	0.3nm,0.5s						
BRTR	**Keskin Array B**	**75.33**	**312**	P	**P**	**03 02 26.7**	**+0.1**
	0.4nm,0.5s,baz=120,slow=5.2,SNR=2.9						
	0.4nm,0.5s						
TXAR	**Lajitas Array**	**144.63**	**40**	PKP	**PKPdf**	**03 10 19.8**	**-0.3**
	0.3nm,0.5s,baz=213,slow=1.8,SNR=8.6						

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*RSPR **22** 02:56:10.7, 19°.19N×67°.93W, h30^{km}±31^{km}, MD3.7/12*
*IDC **22** 02:56:11.7±0.6, 19°.10N×67°.55W, h0^{km}, mb3.9/14, mbtmp4.0/17, ML3.4/3, MS3.5/4, Error ellipse: s-maj=16.5km s-min=13.7km az=64.0*
*NEIC **22** 02:56:12.5±1.6, 18°.99N±0°.04×67°.59W±0°.03, h7^{km}±4^{km}, mb4.3/22, ML4.3/26, ML4.1/12(RSPR), Error ellipse: s-maj=5.1km s-min=4.1km az=189.0*
*SDD **22** 02:56:12.7±2.2, 19°.11N×67°.64W, h20^{km}±22^{km}, MD3.7, ML4.2, MW4.0, Presumed earthquake*
*OSPL **22** 02:56:15.5±1.9, 18°.95N×67°.50W, h0^{km}±11^{km}, ML4.2, Presumed earthquake*

ISC 22 02:56:14.6±0.4**, 19°.00N**±0°.04×**67°.68W**±0°.02**, h27**^{km}**, n137, σ2^{s}06**/156**, mb4.1**/20**, MS3.7**/3**, 17C-8D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.64**	**162**		**Pb**	**02 56 25.0**	**-2.2**
IDE	**Isla Desecheo**	**0.64**	**162**	⇓*i*P	**Pb**	**02 56 25.0**	**-2.2**
AGPR	**Aguadilla, PR**	**0.75**	**134**		**Pb**	**02 56 26.8**	**-2.2**
AGPR				IAML		02 56 39.3	
	11μm,0.4s						
AGPR	**Aguadilla, PR**	**0.75**	**134**	⇑*i*P	**Pb**	**02 56 26.9**	**-2.2**
AGPR	**Aguadilla, PR**	**0.75**	**134**	⇑*e*Pg	**Pb**	**02 56 26.9**	**-2.2**
AGPR				⇑*e*Sg	**Sb**	**02 56 37.8**	**-1.1**
AGPR				IAML		02 56 44.5	
	comp=N,9μm,0.6s						
AGPR	**Aguadilla, PR**	**0.75**	**134**	*i* P	**Pb**	**02 56 26.9**	**-2.2**
AGPR				*e*S	**Sb**	**02 56 34.5**	**-4.5**
AGPR				IAML		02 56 39.1	
	comp=Z,5μm,0.3s						
PCDR	**Punta Cana, DR**	**0.82**	**234**	⇑*e*Pg	**Pn**	**02 56 28.7**	**-1.7**
PCDR				⇑*e*Sg	**Sb**	**02 56 40.2**	**-0.8**
PCDR				IAML		02 56 43.2	
	comp=N,11μm,0.3s						
PRSN	**Puerto Rico Se**	**0.93**	**147**		**Pn**	**02 56 29.5**	**-2.3**
PRSN					**Sb**	**02 56 45.1**	**+1.2**
PRSN	**Puerto Rico Se**	**0.93**	**147**	IAML		02 56 49.5	
	comp=N,18μm,0.3s						
PRSN	**Puerto Rico Se**	**0.93**	**147**	⇑*e*P	**Pn**	**02 56 29.5**	**-2.3**
PRSN	**Puerto Rico Se**	**0.93**	**147**	*e*S	**Sb**	**02 56 45.1**	**+1.2**
LSP	**Las Mesas**	**0.99**	**146**		**Pn**	**02 56 30.8**	**-2.0**
LSP					**Sn**	**02 56 45.0**	**-0.9**
LSP	**Las Mesas**	**0.99**	**146**	⇑*e*P	**Pn**	**02 56 30.8**	**-2.0**
LSP	**Las Mesas**	**0.99**	**146**	*e*S	**Sn**	**02 56 45.0**	**-0.9**
HIDR	**Higuey Centro**	**1.06**	**248**	⇑*e*Pg	**Pn**	**02 56 32.3**	**-1.5**
HIDR				⇑*e*Sg	**Sn**	**02 56 46.5**	**-1.2**
HIDR				IAML		02 56 46.9	
	comp=N,9μm,0.2s						
AOPR	**Arecibo Observ**	**1.09**	**126**		**Pn**	**02 56 31.9**	**-2.1**
AOPR					**Sn**	**02 56 45.0**	**-3.3**
AOPR				IAML		02 56 55.5	
	comp=E,12μm,0.4s						
AOPR				IAML		02 57 00.3	
	comp=N,7μm,0.4s						
AOPR	**Arecibo Observ**	**1.09**	**126**	⇑*i*P	**Pn**	**02 56 32.1**	**-2.0**
AOPR	**Arecibo Observ**	**1.09**	**126**	*e*P	**Pn**	**02 56 32.2**	**-1.8**
AOPR				*e*S	**Sn**	**02 56 47.3**	**-0.9**
AOPR	**Arecibo Observ**	**1.09**	**126**	⇑*e*Pg	**Pn**	**02 56 32.0**	**-2.1**
AOPR				⇓*e*Sg	**Sn**	**02 56 47.4**	**-0.9**
AOPR				IAML		02 57 00.2	
	comp=N,6μm,0.6s						
CRPR	**Cabo Rojo, PR**	**1.12**	**151**		**Pn**	**02 56 32.4**	**-2.2**
CRPR				Sn	**Sn**	**02 56 48.0**	**-1.1**
CRPR	**Cabo Rojo, PR**	**1.12**	**151**	IAML		02 56 52.6	
	comp=N,8μm,0.9s						
CRPR				IAML		02 56 54.4	
	comp=N,8μm,0.6s						
CRPR	**Cabo Rojo, PR**	**1.12**	**151**	⇑*e*P	**Pn**	**02 56 32.7**	**-1.9**
CRPR	**Cabo Rojo, PR**	**1.12**	**151**	*e*S	**Sn**	**02 56 50.4**	**+1.3**
CRPR	**Cabo Rojo, PR**	**1.12**	**151**	*i* P	**Pn**	**02 56 32.4**	**-2.2**
CRPR				⇓*i*Sg	**Sb**	**02 56 51.4**	**+1.9**
CRPR				IAML		02 56 54.5	
	comp=N,8μm,0.7s						
CRPR	**Cabo Rojo, PR**	**1.12**	**151**	*i* P	**Pn**	**02 56 33.3**	**-1.3**
CRPR				*e*S	**Sn**	**02 56 47.4**	**-1.7**
CRPR				IAML		02 56 52.1	
	comp=Z,9μm,0.5s						
UUPR	**Utuado, UPR, P**	**1.17**	**129**		**Pn**	**02 56 33.7**	**-1.5**
UUPR					**Sn**	**02 56 48.9**	**-1.4**
UUPR	**Utuado, UPR, P**	**1.17**	**129**	⇓*i*P	**Pn**	**02 56 33.7**	**-1.5**
UUPR	**Utuado, UPR, P**	**1.17**	**129**	*e*S	**Sn**	**02 56 48.9**	**-1.4**
MLPR	**Magueyes Islan**	**1.19**	**150**	⇑*e*P	**Pn**	**02 56 33.6**	**-1.8**
MLPR	**Magueyes Islan**	**1.19**	**150**	*e*S	**Sn**	**02 56 51.8**	**+1.1**
MLPR	**Magueyes Islan**	**1.19**	**150**	⇑*e*Pg	**Pn**	**02 56 33.5**	**-1.9**
MLPR				⇓*e*Sg	**Sn**	**02 56 51.8**	**+1.1**
MLPR				IAML		02 56 53.9	
	comp=N,2μm,0.6s						
EMPR	**Esperanza - Ma**	**1.20**	**115**		**Pn**	**02 56 34.2**	**-1.5**
EMPR					**Sb**	**02 56 51.0**	**-0.9**
EMPR	**Esperanza - Ma**	**1.20**	**115**	IAML		02 56 56.6	
	comp=N,7μm,0.4s						
EMPR				IAML		02 56 57.5	
	comp=N,5μm,0.5s						
EMPR	**Esperanza - Ma**	**1.20**	**115**	⇑*i*P	**Pn**	**02 56 34.2**	**-1.5**
EMPR	**Esperanza - Ma**	**1.20**	**115**	*e*S	**Sb**	**02 56 51.0**	**-0.9**
GBPR	**Guanica, Bosqu**	**1.27**	**143**		**Pn**	**02 56 35.8**	**-0.7**
GBPR					**Sn**	**02 56 53.3**	**+0.7**
GBPR	**Guanica, Bosqu**	**1.27**	**143**	⇑*i*P	**Pn**	**02 56 35.8**	**-0.7**
GBPR	**Guanica, Bosqu**	**1.27**	**143**	*e*S	**Sn**	**02 56 53.3**	**+0.7**
MIDR	**Miches**	**1.30**	**270**	⇓*e*Pg	**Pn**	**02 56 36.3**	**-0.6**
MIDR				IAML		02 56 58.8	
	comp=N,3μm,0.4s						
OBIP	**Obispado Ponce**	**1.39**	**133**		**Pn**	**02 56 36.8**	**-1.4**
OBIP				IAML		02 56 59.6	
	comp=N,3μm,0.6s						
OBIP	**Obispado Ponce**	**1.39**	**133**		**Sn**	**02 56 56.8**	**+1.0**
OBIP	**Obispado Ponce**	**1.39**	**133**	⇑*e*P	**Pn**	**02 56 37.0**	**-1.2**
OBIP	**Obispado Ponce**	**1.39**	**133**	*e*S	**Sn**	**02 56 56.8**	**+1.0**
ECPR	**Experimental S**	**1.42**	**118**	⇑*i*P	**Pn**	**02 56 37.0**	**-1.6**
ECPR	**Experimental S**	**1.42**	**118**	*e*S	**Sb**	**02 56 58.2**	**+0.2**
SMDR	**Samana, DR**	**1.46**	**282**	⇑*e*Pg	**Pb**	**02 56 39.5**	**-1.5**
SMDR				IAML		02 57 06.1	
	comp=N,3μm,0.6s						
DR12	**Loma Pena Alta**	**1.63**	**263**		**Pn**	**02 56 41.9**	**+0.3**
HATOM	**Hato Mayor del**	**1.63**	**263**	⇑*e*Pg	**Pn**	**02 56 41.6**	**+0.1**
HATOM				⇓*e*Sg	**Sb**	**02 57 04.4**	**+0.3**
HATOM				IAML		02 57 07.1	
	comp=N,2μm,0.9s						
GCPR	**Guaynabo City**	**1.66**	**114**		**Pn**	**02 56 40.2**	**-1.7**
GCPR	**Guaynabo City**	**1.66**	**114**		**Sb**	**02 57 03.5**	**-1.5**
GCPR	**Guaynabo City**	**1.66**	**114**	⇑*e*P	**Pn**	**02 56 41.2**	**-0.7**
GCPR	**Guaynabo City**	**1.66**	**114**	*e*S	**Sb**	**02 57 03.5**	**-1.5**
SJG	**San Juan**	**1.69**	**121**	Pn	**Pn**	**02 56 41.0**	**-1.4**
	comp=N,145nm,0.3s,baz=306,slow=11,SNR=250						
SJG				Sn	**Sb**	**02 57 04.4**	**-1.6**
	comp=N,216nm,0.3s,baz=329,slow=19,SNR=12						
SJG				LR	LR	02 57 08.0	
	comp=N,210nm,20.1s,baz=28,slow=34						
SJG	**San Juan**	**1.69**	**121**		**Pn**	**02 56 40.7**	**-1.6**
SJG				IAML		02 57 07.5	
	comp=N,2μm,0.6s						
SJG				IAML		02 57 07.9	
	comp=N,3μm,0.4s						
SJG	**San Juan**	**1.69**	**121**	⇑*e*P	**Pn**	**02 56 41.0**	**-1.4**
SJG	**San Juan**	**1.69**	**121**	*e*S	**Sb**	**02 57 04.9**	**-1.1**
SJG	**San Juan**	**1.69**	**121**	*e*P	**Pn**	**02 56 40.8**	**-1.6**
SJG	**San Juan**	**1.69**	**121**	*i* P	**Pn**	**02 56 41.1**	**-1.4**
SJG				*e*S	**Sn**	**02 57 02.1**	**-1.1**
SJG				IAML		02 57 08.8	
	comp=Z,2μm,0.4s						
HUMP	**Col San Antoni**	**1.93**	**116**		**Pn**	**02 56 43.7**	**-1.9**
HUMP	**Col San Antoni**	**1.93**	**116**		**Sn**	**02 57 09.7**	**+0.7**
HUMP	**Col San Antoni**	**1.93**	**116**	⇓*e*P	**Pn**	**02 56 44.8**	**-0.8**
HUMP	**Col San Antoni**	**1.93**	**116**	*e*S	**Sn**	**02 57 09.7**	**+0.7**
SDD	**Santo Domingo**	**2.19**	**256**		**Pn**	**02 56 51.0**	**+1.9**
SDD				IAML		02 57 27.4	
	comp=E,1μm,0.6s						
SDD				IAML		02 57 29.4	
	comp=N,1μm,0.7s						
SDD	**Santo Domingo**	**2.19**	**256**	*i* P	**Pb**	**02 56 52.2**	**-1.2**
SDD				*e*S	**Sb**	**02 57 20.4**	**+0.2**
SC01	**Santiago de lo**	**2.92**	**279**		**Pn**	**02 57 00.6**	**+1.3**
SC01	**Santiago de lo**	**2.92**	**279**	*i* P	**Pb**	**02 57 04.3**	**-1.6**
SC01				*e*S	**Sb**	**02 57 40.6**	**-0.6**
SC01				IAML		02 57 55.8	
	comp=Z,2μm,0.7s						
SDDR	**Presa de Saban**	**3.42**	**270**		**Pn**	**02 57 08.1**	**+2.0**
SDDR				IAML		02 58 04.7	
	comp=Z,1μm,0.6s						
SDDR	**Presa de Saban**	**3.42**	**270**	*e*P	**Pb**	**02 57 10.1**	**-4.4**
SDDR	**Presa de Saban**	**3.42**	**270**	*e*P	**Pn**	**02 57 09.1**	**+2.9**
SDDR	**Presa de Saban**	**3.42**	**270**	*e*S	**Sb**	**02 57 55.7**	**0.0**
LOPP1	**Punta Rusia, P**	**3.43**	**285**	*i* P	**Pb**	**02 57 10.5**	**-4.2**
LOVI	**El Cajuil, Ovi**	**3.70**	**252**	*i* P	**Pn**	**02 57 13.7**	**+3.7**
GRTK	**Grand Turk**	**4.10**	**308**	*e*P	**Pn**	**02 57 16.2**	**+0.8**
GRTK				*e*S	**Sn**	**02 58 00.9**	**-1.6**
SKI	**Saint Kitts**	**4.98**	**109**	*e*	**Pn**	**02 57 30.1**	**+2.5**
MBWH	**Windy Hill**	**5.69**	**112**	*e*P	**Pn**	**02 57 37.9**	**+0.6**
ANWB	**Willy Bob**	**5.75**	**102**	*e*P	**Pn**	**02 57 37.2**	**-1.0**
ANWB	**Willy Bob**	**5.75**	**102**	*e*	**Sn**	**02 58 44.8**	**+1.5**
GDHS	**Morne Mazeau,**	**6.25**	**115**	Pn	**Pn**	**02 57 43.9**	**-1.3**
MASC	**Masc**	**6.29**	**282**	*e*P	**Pn**	**02 57 45.4**	**-0.2**
MASC				*e*S	**Sn**	**02 58 52.2**	**-4.4**
ATGZ	**Broadband at L**	**6.37**	**116**	*e*	**Pn**	**02 57 46.1**	**-0.5**
CBE	**Ff, Capester**	**6.48**	**116**	Pn	**Pn**	**02 57 45.9**	**-2.4**
QMBU	**Quimbuelo**	**6.83**	**281**	*i* P	**Pn**	**02 57 52.0**	**-1.1**
QMBU				*i* S	**Sn**	**02 59 06.0**	**-4.0**
DSLB	**Salisbury**	**6.95**	**120**	*e*	**Pn**	**02 57 52.9**	**-1.8**
MOAC	**Moa**	**7.05**	**285**	*e*S	**Sn**	**02 59 11.6**	**-3.9**
GTBY	**Guantanamo Bay**	**7.08**	**279**	*e*P	**Pn**	**02 57 57.5**	**+1.1**
GTBY				*e*S	**Sn**	**02 59 08.5**	**-7.5**
BIM	**Bigot**	**7.74**	**124**	Pn	**Pn**	**02 58 04.4**	**-1.2**
BIM	**Bigot**	**7.74**	**124**	*e*	**Pn**	**02 58 04.6**	**-1.0**
BIM	**Bigot**	**7.74**	**124**	*e*	**Sn**	**02 59 25.1**	**-7.3**
PINC	**Pinares de May**	**7.79**	**282**	*i* P	**Pn**	**02 58 02.7**	**-3.4**
PINC				*e*S	**Sn**	**02 59 29.3**	**-4.1**
SLBI	**Saint Lucia, B**	**8.11**	**127**	*e*	**Pn**	**02 58 11.4**	**+0.8**
SLBI	**Saint Lucia, B**	**8.11**	**127**	*e*	**Sn**	**02 59 36.4**	**-5.1**
SVB	**Belmont**	**8.40**	**132**	*e*	**Pn**	**02 58 17.9**	**+3.3**
CCCC	**Cccc**	**9.73**	**285**	*i* S	Sn	03 00 03.2	-18
SMRC	**Santa Marta, M**	**10.03**	**220**	Pn	**Pn**	**02 58 33.1**	**-3.9**
SDV	**Santo Domingo**	**10.45**	**196**	Pn	**Pn**	**02 58 45.4**	**+2.4**
	comp=Z,1.7nm,0.3s,baz=32,slow=9.4,SNR=13						
SDV				Sn	**Sn**	**03 00 39.1**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=24,slow=17,SNR=2.2						
SDV				LR	LR	03 03 50.1	
	comp=Z,55nm,18.3s,baz=54,slow=43						
	comp=Z,8.5nm,0.5s						
SDV	**Santo Domingo**	**10.45**	**196**		**Pn**	**02 58 42.8**	**-0.2**
RUSC	**La Rusia**	**14.05**	**203**		**Pn**	**02 59 30.3**	**-2.1**
ROSC	**El Rosal**	**15.49**	**206**	Pn	**P**	**02 59 55.0**	**-0.9**
	comp=Z,1.6nm,0.3s,baz=36,slow=19,SNR=11						
ROSC				Sn	**Sn**	**03 02 49.9**	**+7.0**
	comp=Z,0.8nm,0.3s,baz=338,slow=16,SNR=1.2						
	comp=Z,4.6nm,0.4s						
ROSC	**El Rosal**	**15.49**	**206**		**Pn**	**02 59 52.3**	**+0.5**
ROSC				IAmb	IAmb	03 00 07.1	
	comp=Z,30nm,0.8s						
656A	**Willston**	**17.02**	**310**	Pn	**P**	**03 00 10.7**	**-1.7**
Y60A	**Bolivia**	**17.66**	**330**	Pn	**P**	**03 00 18.3**	**-1.1**
BOAV	**Boa Vista**	**17.93**	**156**		**Pn**	**03 00 21.1**	**-1.0**
JTS	**Las Juntas de**	**18.81**	**245**	P	**Pn**	**03 00 36.1**	**+3.2**
	comp=Z,0.6nm,0.3s,baz=48,slow=16,SNR=5.0						
	comp=Z,14nm,1.0s						
FLOC	**Florencia**	**18.99**	**205**		**Pn**	**03 00 34.9**	**-0.2**
FLOC				IAmb	IAmb	03 00 55.8	
	comp=Z,18nm,0.9s						
T57A	**Hurt**	**20.61**	**333**	P	Pn	03 00 51.5	-2.6
T57A				IAmb	IAmb	03 01 21.7	
	comp=Z,16nm,1.4s						
V53A	**Saluda**	**21.32**	**324**	P	**P**	**03 00 59.7**	**+0.2**
V53A				IAmb	IAmb	03 01 19.0	
	comp=Z,14nm,1.2s						
OTAV	**Otavalo**	**21.43**	**211**		**P**	**03 01 01.6**	**+0.3**
OTAV				IAmb	IAmb	03 01 09.6	
	comp=Z,14nm,1.0s						
SDMD	**Soldier's Deli**	**21.83**	**341**	P	**P**	**03 01 05.7**	**+0.8**
TKL	**Tuckaleechee C**	**21.86**	**323**	P	**P**	**03 01 07.6**	**+2.4**
	comp=Z,3.0nm,0.8s,baz=129,slow=9.8,SNR=1.8						
TKL				S	**S**	**03 05 05.5**	**+0.1**
	comp=Z,4.0nm,0.4s,baz=143,slow=20,SNR=5.4						
	comp=Z,3.0nm,0.8s						
TKL	**Tuckaleechee C**	**21.86**	**323**	P	**P**	**03 01 05.7**	**+0.5**
TKL				IAmb	IAmb	03 01 28.3	
	comp=Z,29nm,1.5s						
S54A	**Dingess, Beckl**	**22.20**	**330**	P	**P**	**03 01 09.2**	**+0.3**
S54A				IAmb	IAmb	03 01 49.1	
	comp=Z,35nm,1.5s						
MACA	**Manacapuru-AM**	**23.07**	**162**	P	**P**	**03 01 17.8**	**-0.4**
MACA				IAmb	IAmb	03 01 26.2	
	comp=Z,7.8nm,0.8s						
WMOK	**Wichita Mounta**	**31.71**	**306**	P	**P**	**03 02 36.3**	**+0.1**
WMOK				IAmb	IAmb	03 03 19.1	
	comp=Z,3.4nm,1.1s						
TXAR	**Lajitas Array**	**34.29**	**294**	P	**P**	**03 02 59.9**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=112,slow=8.3,SNR=11						
	comp=Z,0.6nm,0.6s						
TXAR	**Lajitas Array**	**34.29**	**294**	P	**P**	**03 02 59.7**	**+0.8**
TX31	**Lajitas Ar. Si**	**34.29**	**294**		**P**	**03 02 58.5**	**-0.4**
LPAZ	**La Paz**	**35.07**	**181**	P	**P**	**03 03 09.9**	**+3.7**
	comp=Z,2.3nm,0.9s,baz=353,slow=8.7,SNR=4.5						
	comp=Z,2.3nm,0.9s						
LPAZ	**La Paz**	**35.07**	**181**	P	**P**	**03 03 06.1**	**0.0**
SCHQ	**Schefferville**	**35.78**	**1**	P	**P**	**03 03 12.4**	**+1.1**
	comp=Z,5.3nm,1.0s,baz=188,slow=8.0,SNR=7.9						
	comp=Z,5.3nm,1.0s						
SDCO	**Great Sand Dun**	**37.84**	**308**	P	**P**	**03 03 29.7**	**+0.3**
LPIG	**La Paz**	**39.87**	**285**	LR	LR	03 23 43.3	
	comp=Z,45nm,18.1s,baz=36,slow=41						
PV18	**Skein Mesa, Pa**	**40.56**	**307**	P	**P**	**03 03 52.6**	**+0.6**
PV18				IAmb	IAmb	03 03 54.7	
	comp=Z,5.5nm,0.9s						
PDAR	**Pinedale Array**	**42.47**	**313**	P	**P**	**03 04 08.4**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=118,slow=7.7,SNR=2.0						
	comp=Z,0.2nm,0.4s						
CPUP	**Villa Florida**	**46.16**	**167**	P	**P**	**03 04 38.2**	**+1.2**
	comp=Z,1.7nm,0.8s,baz=325,slow=11,SNR=3.5						
CPUP				LR	LR	03 26 27.2	
	comp=Z,78nm,18.5s,baz=74,slow=39						
	comp=Z,1.7nm,0.8s						
YKA	**Yellowknife Ar**	**54.08**	**335**	P	**P**	**03 05 37.0**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=122,slow=5.8,SNR=13						
	comp=Z,1.0nm,0.7s						
ESDC	**Sonseca Array**	**58.05**	**55**	P	**P**	**03 06 06.6**	**+1.0**
	comp=Z,1.5nm,0.8s,baz=274,slow=7.3,SNR=4.7						
	comp=Z,1.5nm,0.8s						
ESDC	**Sonseca Array**	**58.05**	**55**	IAmb	IAmb	03 06 19.0	
	comp=Z,6.5nm,1.5s						
EKA	**Eskdalemuir Ar**	**60.12**	**37**	P	**P**	**03 06 18.7**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=300,slow=5.7,SNR=6.4						
	comp=Z,1.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**66.56**	**84**	P	**P**	**03 07 03.1**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=299,slow=6.4,SNR=6.8						
	comp=Z,0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**66.56**	**84**	IAmb	IAmb	03 07 19.7	
	comp=Z,2.4nm,1.1s						
NOA	**NORSAR Array B**	**68.20**	**31**	P	**P**	**03 07 13.5**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=272,slow=6.5,SNR=3.7						
	comp=Z,0.5nm,0.6s						
ILAR	**Eielson Array**	**68.39**	**333**	P	**P**	**03 07 14.2**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=90,slow=4.7,SNR=18						
	comp=Z,0.8nm,0.5s						
ARCES	**ARCESS Array B**	**73.47**	**21**	P	**P**	**03 07 45.3**	**+0.9**
	comp=Z,1.2nm,0.5s,baz=262,slow=3.7,SNR=11						
	comp=Z,1.2nm,0.5s						
ARCES	**ARCESS Array B**	**73.47**	**21**	IAmb	IAmb	03 07 50.8	
	comp=Z,30nm,1.5s						
FINES	**FINESS Array B**	**75.28**	**30**	P	**P**	**03 07 55.9**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=262,slow=4.1,SNR=6.0						
	comp=Z,0.8nm,0.6s						
PETK	**Petropavlovsk-**	**98.20**	**334**	LR	LR	03 58 57.2	
	comp=Z,91nm,18.1s,baz=192,slow=38						
ASAR	**Alice Springs**	**159.37**	**253**	PKPab	**PKPab**	**03 16 48.8**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=97,slow=3.8,SNR=11						

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*IDC **22** 03:03:15.4±1.1, 32°.78N×142°.57E, h0^{km}, mb3.3/6, mbtmp3.5/9, ML3.4/3, Error ellipse: s-maj=23.3km s-min=21.6km az=57.0*
*JMA **22** 03:03:17.8±0.5, 33°.0N±0°.9×14°2E±°, h0^{km}, MV3.8/29, FAR E OFF IZU ISLANDS*

ISC 22 03:03:20.3±1.0**, 32°.83N**±0°.07×**142°.57E**±0°.09**, h33**^{km}**, n20, σ0^{s}76**/25**, mb3.5**/6**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**2.25**	**324**	*e*P	**Pn**	**03 03 54.4**	**-0.4**
BSO1				*e*S	**Sn**	**03 04 21.1**	**0.0**
JHJ2	**Mitsune**	**2.33**	**278**	*e*P	**Pn**	**03 03 56.4**	**0.0**
JHJ2				*e*S	**Sn**	**03 04 24.6**	**+0.7**
JHJ	**Hachijo jima 2**	**2.36**	**278**	Pn	**Pn**	**03 03 56.2**	**-0.5**
	17nm,0.3s,baz=90,slow=20,SNR=25						
JHJ				Sn	**Sn**	**03 04 24.6**	**0.0**
	17nm,0.3s,baz=80,slow=22,SNR=1.7						
	87nm,0.5s						
JAOM	**Aogashimamukai**	**2.40**	**262**	*e*P	**Pn**	**03 03 57.9**	**+0.6**
BSO2	**Boso 2**	**2.44**	**322**	*e*S	**Sn**	**03 04 26.6**	**+0.4**
BSO3	**Boso 3**	**2.61**	**319**	*e*P	**Pn**	**03 03 59.8**	**-0.2**
JMKN	**Mikurajimanish**	**2.71**	**294**	*e*P	**Pn**	**03 04 01.3**	**-0.3**
JMKN				*e*S	**Sn**	**03 04 32.8**	**-0.4**
BSO4	**Boso 4**	**2.85**	**320**	*e*P	**Pn**	**03 04 03.6**	**+0.3**
JOD2	**Odawara 2**	**3.78**	**311**	*e*P	**Pn**	**03 04 15.1**	**-1.2**
JYT	**Yasato**	**3.92**	**331**	*e*P	**Pn**	**03 04 19.2**	**+1.0**
JYT				*e*S	**Sn**	**03 05 03.1**	**+0.1**
JYN	**Shimob**	**4.27**	**310**	*e*P	**Pn**	**03 04 23.8**	**+0.7**
MJAR	**Matsushiro Arr**	**5.16**	**317**	Pn	**Pn**	**03 04 35.2**	**-0.1**
	0.5nm,0.3s,baz=159,slow=12,SNR=32						
MJAR				Sn	**Sn**	**03 05 35.0**	**+1.4**
	0.3nm,0.3s,baz=162,slow=25,SNR=5.0						
	1.7nm,0.3s						
JCJ	**Chichijima**	**5.72**	**183**	Pn	Pn	03 04 30.4	-13
	4.6nm,0.3s,baz=18,slow=20,SNR=1.8						
JCJ				Sn	Sn	03 05 31.8	-16
	4.1nm,0.3s,baz=288,slow=23,SNR=1.8						
ASAJ	**Asahikawa**	**11.27**	**0**	Pn	**Pn**	**03 05 56.9**	**-2.1**
	0.7nm,0.3s,baz=195,slow=20,SNR=1.8						
	8.6nm,0.9s						
MKAR	**Makanchi Array**	**47.25**	**306**	P	**P**	**03 11 49.6**	**-0.6**
	0.3nm,0.6s,baz=88,slow=10,SNR=4.6						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**49.41**	**311**	P	**P**	**03 12 06.6**	**-0.2**
	0.3nm,0.5s,baz=86,slow=7.1,SNR=2.4						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**52.58**	**31**	P	**P**	**03 12 31.2**	**+0.8**
	0.2nm,0.6s,baz=264,slow=6.5,SNR=5.8						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**53.06**	**190**	P	**P**	**03 12 34.0**	**-0.4**
	0.5nm,0.6s,baz=7.8,slow=7.5,SNR=2.1						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**56.78**	**190**	P	**P**	**03 13 00.9**	**-0.4**
	0.1nm,0.3s,baz=1.3,slow=6.4,SNR=1.4						
	0.1nm,0.3s						
YKA	**Yellowknife Ar**	**66.98**	**29**	P	**P**	**03 14 09.9**	**+0.5**
	0.3nm,0.8s,baz=299,slow=7.7,SNR=4.7						
	0.3nm,0.8s						

IDC 22 03:08:56.1±55.0**, 18°.29S**×**179°.02W, h0**^{km}**, mb4.2**/3**, mbtmp4.2**/3**, MS3.8**/1**, Error ellipse: s-maj=994.0km s-min=163.3km az=79.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.94**	**241**	P	P	03 16 16.4	+0.8
	1.7nm,0.7s,baz=82,slow=7.8,SNR=3.6						
	1.7nm,0.7s						
WRA	**Warramunga Arr**	**43.99**	**260**	P	P	03 17 05.3	-0.3
	0.6nm,0.5s,baz=97,slow=8.6,SNR=13						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**44.13**	**255**	P	P	03 17 06.2	-0.6
	5.2nm,0.4s,baz=90,slow=8.4,SNR=154						
	5.2nm,0.4s						
GUMO	**Guam**	**47.66**	**309**	LR	LR	03 36 06.8	
	comp=Z,100nm,19.6s,baz=83,slow=34						

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*UPP **22** 03:15:40.7±0.0, 67°.85N×20°.22E, h0^{km}, ML2.3, Confirmed Induced event*
*HEL **22** 03:15:41.4±0.2, 67°.83N×20°.22E, h0^{km}, ML1.4, Suspected explosion*

*IDC **22** 03:15:42.2±1.2, 67°.84N×20°.77E, h0^{km}, mbtmp2.8/4, ML1.7/4, Error ellipse: s-maj=18.6km s-min=7.2km az=119.0*

ISC 22 03:15:41.0±0.8**, 67°.84N**±0°.02×**20°.23E**±0°.03**, h0^{km}, n30,** σ**1^s.12**/47**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	0.12	20	P	Pg	03 15 43.1	-0.2
	baz=156						
KUA				S	Sg	03 15 44.8	-0.1
RATU	**Laukkuluspa**	0.24	266	P	Pg	03 15 45.4	-0.2
RATU				S	Sg	03 15 48.8	+0.1
KOVU	**Salmi**	0.38	356	P	Pg	03 15 47.9	-0.5
KOVU				S	Sg	03 15 53.6	+0.3
LANU	**Lannavaara**	0.70	72	P	Pg	03 15 53.7	-0.6
LANU	**Lannavaara**	0.70	72	PG	Pg	03 15 54.0	-0.4
LANU				SG	Sg	03 16 03.0	-0.3
DUNU	**Dundret**	0.73	170	P	Pg	03 15 54.7	-0.3
MASU	**Masugnsbyn**	0.78	119	P	Pg	03 15 55.6	-0.3
SALU	**Saltoluokta**	0.81	236	*e*P	Pg	03 15 55.5	-0.9
KIF	**Kilpisjarvi**	1.19	10	*e*P	Pg	03 16 03.4	-0.3
KIF	**Kilpisjarvi**	1.19	10	PG	Pb	03 16 03.9	-0.4
KIF				MSG		03 16 19.0	
	comp=Z,4.6nm,0.2s						
KIF				SB	Sb	03 16 19.8	-0.5
PAJU	**Pajala**	1.38	125	PG	Pg	03 16 06.0	-1.4
	baz=304						
PAJU				SN	Sn	03 16 26.6	+0.1
HEF	**Hetta**	1.41	65	PG	Pn	03 16 06.8	-1.1
HEF				MSG		03 16 23.9	
	comp=Z,2.1nm,0.2s						
HEF				SN	Sb	03 16 26.4	-0.2
ERTU	**Ertsjaerv**	1.50	149	PG	Pn	03 16 08.2	-0.9
	baz=333						
ERTU				SN	Sn	03 16 30.4	+1.0
KLF	**Kolari**	1.56	111	PG	Pn	03 16 09.6	-0.3
	baz=298						
KLF				MSG		03 16 28.1	
	comp=Z,2.1nm,0.2s						
KLF				SN	Sg	03 16 32.3	+1.3
KTK1	**Kautokeino**	1.62	42	PN	Pb	03 16 11.5	-0.2
KTK1				SN	Sg	03 16 34.1	+1.2
TRO	**Tromso**	1.86	346	PG	Pn	03 16 14.7	+0.6
TRO				SG	Sb	03 16 39.5	-0.1
KALU	**Kalix**	2.34	147	PG	Pn	03 16 21.6	+0.9
	baz=326						
KALU				SG	Sb	03 16 53.6	+0.1
TOF	**Tornio**	2.39	136	PB	Pn	03 16 22.8	+1.4
TOF				MSG		03 16 52.1	
	comp=Z,1.4nm,0.2s						
TOF				SG	Sb	03 16 56.1	+1.2
RNF	**Rovaniemi**	2.57	116	PB	Pn	03 16 25.5	+1.7
RNF				SG	Sb	03 16 59.8	-0.1
ARA0	**ARCESS Array S**	2.57	46	PB	Pb	03 16 25.8	-2.1
ARA0				SB	Sb	03 16 58.5	-1.5
ARCES	**ARCESS Array B**	2.57	46	Pn	Pn	03 16 24.4	+0.5
	comp=Z,0.2nm,0.3s,baz=230,slow=15,SNR=27						
ARCES				Lg	Lg	03 16 57.8	
	comp=Z,1.0nm,0.3s,baz=229,slow=24,SNR=15						
	comp=Z,0.7nm,0.2s						
RAJF	**Raja-Jooseppi**	3.09	74	PN	Pn	03 16 31.8	+0.9
RAJF				SG	Sb	03 17 16.6	+1.7
KEV	**Kevo**	3.12	49	SN	Sn	03 17 10.6	+1.3
RANF	**Ranua**	3.17	122	SG	Sg	03 17 20.9	-1.7
BURU	**Burvik**	3.31	171	PB	Pn	03 16 36.3	+2.4
	baz=355						
VRF	**Varrio**	3.56	87	PG	Pb	03 16 45.8	+1.0
KU6	**Riekki**	4.21	111	PN	Pn	03 16 48.0	+1.6
	baz=301						
FINES	**FINESS Array B**	6.89	156	Pn	Pn	03 17 23.5	+0.3
	baz=338,slow=22,SNR=1.5						
FINES				Sn	Sn	03 18 39.2	-2.9
	baz=346,slow=27,SNR=1.4						
FINES				Lg	Lg	03 19 16.9	
	comp=Z,0.2nm,0.3s,baz=345,slow=30,SNR=6.2						
	comp=Z,0.9nm,0.8s						
NOA	**NORSAR Array B**	7.85	214	Pn	Pn	03 17 38.0	+1.6
	baz=21,slow=11,SNR=1.5						
NOA				Lg	Lg	03 19 53.8	
	baz=20,slow=16,SNR=4.4						
	comp=Z,0.5nm,0.9s						
HFS	**Hagfors**	8.25	203	Pn	Pn	03 17 41.3	-0.4
	comp=Z,0.1nm,0.3s,baz=16,slow=7.8,SNR=1.3						
	comp=Z,1.0nm,0.8s						

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*IDC **22** 03:23:10.4±0.5, 6°.53N×125°.11E, h0^{km}, mb4.3/25, mbtmp4.3/25, MS4.0/45, Error ellipse: s-maj=12.3km s-min=8.1km az=116.0*

*DJA **22** 03:23:12.2±0.5, 7°N±3°×12°5E±°, h10^{km}, M5.1/14, mb5.2/14, mB5.4/12, MLv5.4/9, Mw(mB)4.9/12, MwMwp4.6/3, Mwp5.0/3*

*BJI **22** 03:23:12.4, 6°.43N×125°.30E, h29^{km}, mB5.1/19, mb4.6/51, Ms4.5/34, Ms7 4.3/34*

*NEIC **22** 03:23:13.1±2.1, 6°.62N±0°.06×125°.20E±0°.07, h10^{km}±1^{km}, mb4.8/48, Error ellipse: s-maj=14.7km s-min=6.0km az=127.0*

*GCMT **22** 03:23:16.1±0.3, 6°.61N±0°.01×125°.20E±0°.02, h22^{km}±1^{km}, MW4.9/95, Moment Tensor Solution. s19,c20; s95,c141; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.75±.17; M$_{\theta\theta}$2.28±.12; M$_{\phi\phi}$-1.53±.13; M$_{r\theta}$-1.17±.20; M$_{\theta\phi}$-2.16±.09; M$_{\phi r}$0.70±.20; Best double couple: M$_0$3.09500×10^{16} NP1:φ$_s$248.00000°, δ74.00000°, λ172.00000°. NP2: φ$_s$340.00000°, δ82.00000°, λ16.00000°. Principal axes: T 3.6700, Plg17.0000°, Azm205.0000°; N -1.1450, Plg72.0000°, Azm4.0000°; P -2.5210, Plg6.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 03:23:12.4±0.3**, 6°.64N**±0°.04×**125°.21E**±0°.05**, h10^{km}, n159,** σ**1^s.56**/132**, mb4.6**/61**, MS4.1**/54**, 3C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	0.56	41	Pg	Pg	03 23 24.3	+0.8
	3μm,0.3s,baz=219,slow=1.4,SNR=362						
DAV				Lg	Lg	03 23 34.7	
	4μm,0.3s,baz=278,slow=23,SNR=19						
DAV				LR	LR	03 23 53.3	
	comp=Z,21μm,20.4s,baz=125,slow=60						
DAV	**Davao City (W)**	0.56	41		Pg	03 23 24.3	+0.8
DAV					Sb	03 23 33.3	+0.7
DAV	**Davao City (W)**	0.56	41	P	Pg	03 23 24.2	+0.8
DAV				S	Sg	03 23 32.4	+1.5
DAV	**Davao City (W)**	0.56	41	P	Pg	03 23 18.0	-5.4
SGSI	**Sangihe**	2.95	174	P	Pn	03 24 00.8	+1.4
SGSI				S	Sn	03 24 37.1	+2.2
GAMI	**Galela, Maluku**	5.42	152	P	Pn	03 24 34.9	+1.5
	2.6nm4μm288nm,1.1s						
TNTI	**Ternate**	6.21	160		Pn	03 24 45.3	+1.0
TNTI	**Ternate**	6.21	160	P	Pn	03 24 47.2	+2.9
	0.7nm2μm187nm,1.0s						
GTOI	**Gorontalo**	6.35	200	P	Pn	03 24 45.8	-0.4
MRSI	**Marisa**	6.94	208	P	Pn	03 24 54.1	-0.1
	2.1nm4μm342nm,0.6s						
TOLI2	**Tolitoli**	7.05	219	Pn	Pn	03 24 53.9	-1.9
LUWI	**Luwuk**	8.01	198		Pn	03 25 12.7	+3.7
LUWI	**Luwuk**	8.01	198	P	Pn	03 25 10.8	+1.9
	4μm290nm,0.8s						
MPSI	**Mapaga**	8.20	220	P	Pn	03 25 11.0	-0.6
APSI	**Ampana**	8.30	205	P	Pn	03 25 15.0	+2.1
	2μm224nm,1.1s						
SANI	**Sanana**	8.67	175	P	Pn	03 25 18.1	+0.1
	1μm100nm,0.6s						
I39PW	**PALAU INFRASON**	9.31	84	I	I	04 24 50.0	
	baz=262,slow=288,SNR=0.8						
SWI	**Sorong**	9.59	141	P	Pn	03 25 34.0	+3.3
	2μm39nm,0.9s						
SIJI	**Sorong**	9.60	141	P	Pn	03 25 32.7	+1.9
NLAI	**Namlea**	9.99	169	P	Pn	03 25 36.8	+0.6
	3μm105nm,0.8s						
KRAI	**Karang Ratu**	10.39	162	P	Pn	03 25 43.3	+1.7
	55nm,0.6s						
MSAI	**Masohi**	10.59	159	P	Pn	03 25 46.2	+1.8
FAKI	**Fak Fak**	11.81	143		Pn	03 25 59.5	-1.6
KAPI	**Kappang**	12.79	205		Pn	03 26 18.4	+3.9
MMRI	**Maumere**	15.46	191		P	03 26 54.9	-0.4
MMRI				IAmb	IAmb	03 26 57.3	
	comp=Z,33nm,0.8s						
SOEI	**Soe**	16.31	183		Pn	03 27 02.5	+0.6
BATI	**Baumata**	16.80	185	Pn	P	03 27 12.0	+1.7
	comp=Z,2.4nm,0.3s,baz=236,slow=6.6,SNR=4.2						
JAY	**Jayapura**	17.95	120	LR	LR	03 33 55.8	
	comp=Z,335nm,20.6s,baz=2.0,slow=36						
JAGI	**Jajag, Banyuwa**	18.62	216		Pn	03 27 31.7	+1.1
JAGI				IAmb	IAmb	03 27 35.9	
	comp=Z,114nm,1.4s						
QIZ	**Qiongzhong**	19.37	311	P	P	03 27 38.3	-0.2
QIZ				S	Sn	03 31 15.4	-1.7
QIZ				sS	sS	03 31 26.8	+4.4
QIZ				LR	LR		
	comp=Z,630nm,12.4s						
QIZ				LR	LR		
	comp=Z,310nm,13.6s						
QIZ				LR	LR		
	comp=Z,670nm,18.6s						
JOW	**Kunigami**	20.29	8	LR	LR	03 34 50.1	
	comp=Z,341nm,21.5s,baz=196,slow=34						
MYKOM	**Kota Tinggi**	21.83	258	P	P	03 28 06.0	+0.8
MYKOM				IAmb	IAmb	03 28 11.0	
	comp=Z,66nm,1.6s						
KNRA	**Kununurra**	22.45	171		P	03 28 12.1	+0.3
KULM	**Kulim**	24.46	268	P	P	03 28 32.7	+0.8
KULM				IAmb	IAmb	03 28 50.9	
	comp=Z,43nm,1.5s						
FITZ	**Fitzroy Crossi**	24.58	179	P	P	03 28 31.9	-0.9
	comp=Z,12nm,0.8s,baz=7.3,slow=7.3,SNR=76						
	comp=Z,12nm,0.8s						
FITZ	**Fitzroy Crossi**	24.58	179		P	03 28 33.1	+0.2
MNAI	**Manna**	24.76	244	P	P	03 28 35.7	+1.1
JCJ	**Chichijima**	25.97	36	LR	LR	03 38 59.4	
	comp=Z,256nm,20.4s,baz=125,slow=36						
NJ2	**Nanjing**	25.97	348	*e*P	P	03 28 46.0	+0.7
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
JNU	**Nakatsue**	26.87	11	LR	LR	03 38 46.7	
	comp=Z,174nm,21.5s,baz=194,slow=35						
PMG	**Port Moresby**	27.07	126	P	P	03 28 54.7	-0.7
	comp=Z,12nm,0.6s,baz=295,slow=5.5,SNR=5.3						
	comp=Z,12nm,0.6s						
PMG	**Port Moresby**	27.07	126		P	03 28 54.1	-1.3
PMG				IAmb	IAmb	03 29 09.3	
	comp=Z,22nm,0.9s						
COEN	**Coen**	27.14	139		P	03 28 55.3	-0.8
COEN				IAmb	IAmb	03 29 00.2	
	comp=Z,23nm,0.8s						
WB0	**Warramunga Arr**	27.75	161		P	03 29 01.6	+0.1
WRA	**Warramunga Arr**	27.90	161	P	P	03 29 01.3	-1.5
	comp=Z,2.0nm,0.6s,baz=341,slow=9.2,SNR=11						
	comp=Z,2.0nm,0.6s						
WR8	**Warramunga Arr**	27.96	161		P	03 29 04.5	+1.1
WR8				IAmb	IAmb	03 29 41.9	
	comp=Z,14nm,0.9s						
CMAR	**Chiang Mai Arr**	28.15	297	P	P	03 29 06.0	+0.8
	comp=Z,1.4nm,0.4s,baz=122,slow=7.3,SNR=11						
CMAR				LR	LR	03 42 03.3	
	comp=Z,247nm,18.5s,baz=105,slow=40						
	comp=Z,1.4nm,0.4s						
CMAR	**Chiang Mai Arr**	28.15	297	P	P	03 29 05.6	+0.5
CHTO	**Chiang Mai**	28.28	298	P	P	03 29 05.9	-0.4
JHJ	**Hachijo jima 2**	29.62	25	LR	LR	03 41 39.9	
	comp=Z,157nm,19.4s,baz=236,slow=37						
PZH	**PanZhiHua**	29.83	314	P	P	03 29 20.5	+0.4
LYN	**LuoYang**	30.16	339	P	P	03 29 24.1	+1.3
LYN				pmax	pmax		
	comp=Z,12nm,0.5s						
KSRS	**Korea Array**	30.77	4	P	P	03 29 29.0	+0.9
	comp=Z,2.9nm,1.1s,baz=184,slow=9.6,SNR=5.6						
KSRS				LR	LR	03 40 47.2	
	comp=Z,244nm,21.7s,baz=190,slow=34						
	comp=Z,2.9nm,1.1s						
XAN	**Xi'an**	31.15	333	⇑P	P	03 29 32.3	+0.7
XAN				pP	sP	03 29 41.8	+5.8
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
XAN				LR	LR		
	comp=Z,440nm,17.2s						
XAN				LR	LR		
	comp=Z,320nm,16.5s						
XAN				LR	LR		
	comp=Z,470nm,16.5s						
AS31	**Alice Springs**	31.29	165	P	P	03 29 32.9	0.0
ASAR	**Alice Springs**	31.30	165	P	P	03 29 31.3	-1.6
	comp=Z,2.2nm,0.5s,baz=341,slow=7.0,SNR=12						
ASAR				PcP	PcP	03 32 28.2	+0.9
	comp=Z,0.8nm,0.7s,baz=352,slow=3.2,SNR=2.4						
	comp=Z,2.2nm,0.5s						
ASAR	**Alice Springs**	31.30	165	P	P	03 29 32.6	-0.4
MJAR	**Matsushiro Arr**	32.05	20	P	P	03 29 38.3	-1.1
	comp=Z,2.5nm,0.8s,baz=190,slow=9.6,SNR=6.2						
MJAR				LR	LR	03 40 52.0	
	comp=Z,198nm,21.5s,baz=215,slow=33						
	comp=Z,2.5nm,0.8s						
HNS	**HongShan**	32.08	344	⇑P	P	03 29 40.6	+1.0
HNS				S	S	03 34 55.1	+3.3
HNS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HNS				LR	LR		
	comp=Z,510nm,19.1s						
HNS				LR	LR		
	comp=Z,300nm,19.9s						
CTA	**Charters Tower**	33.68	143	P	P	03 29 52.5	-1.3
	comp=Z,7.2nm,1.1s,baz=354,slow=8.0,SNR=3.2						
CTA				LR	LR	03 46 32.4	
	comp=Z,145nm,18.4s,baz=280,slow=42						
	comp=Z,7.2nm,1.1s						
BJT	**Baijiatuau**	34.21	348		P	03 29 57.9	-0.4
BJT				IAmb	IAmb	03 30 02.1	
	comp=Z,12nm,0.9s						
BJI	**Beijing**	34.23	348	P	P	03 29 59.1	+0.7
BJI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LZDM	**Lanzhou Array**	35.22	329	P	P	03 30 08.4	+0.9
	comp=Z,2.6nm,0.5s,baz=148,slow=8.7,SNR=5.0						
LZDM				LR	LR	03 45 36.3	
	comp=Z,420nm,20.4s,baz=70,slow=38						
	comp=Z,2.6nm,0.5s						
LZH	**Lanzhou**	35.24	329	*e*P	P	03 30 09.8	+2.3
LZH				sP	sP	03 30 21.5	+10
LZH				S	S	03 35 41.3	0.0
LZH				pmax	pmax		
	comp=Z,30nm,1.0s						
LZH				LR	LR		
	comp=Z,580nm,17.2s						
LZH				LR	LR		
	comp=Z,380nm,17.9s						
LZH				LR	LR		
	comp=Z,800nm,17.2s						
BRDH	**Bariadhala**	36.05	300	LR	LR	03 46 51.4	
	comp=Z,245nm,19.7s,baz=209,slow=40						
HHC	**Hu-ho-hao-te**	36.18	342	*e*P	P	03 30 17.3	+1.9
HHC				pmax	pmax		
	comp=Z,15nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,4.3s						
HHC				LR	LR		
	comp=Z,220nm,18.0s						
HHC				LR	LR		
	comp=Z,330nm,17.6s						
HHC				LR	LR		
	comp=Z,360nm,21.8s						
BTO	**Baotou**	36.45	340	*e*P	P	03 30 20.8	+3.1
BTO				PP	PP	03 31 41.8	+1.1
BTO				S	S	03 36 03.4	+3.8
BTO				pmax	pmax		
	comp=Z,13nm,0.6s						
BTO				pmax	pmax		
	comp=Z,160nm,4.2s						
BTO				LR	LR		
	comp=Z,560nm,11.0s						
BTO				LR	LR		
	comp=Z,770nm,18.5s						
BTO				LR	LR		
	comp=Z,840nm,18.8s						
SHL	**Shillong**	36.97	304		P	03 30 21.8	-0.6
SHL				IAmb	IAmb	03 30 28.4	
	comp=Z,29nm,1.3s						
CN2	**Changchun**	37.02	0	*e*P	P	03 30 21.9	-0.4
CN2				*e*S	S	03 36 02.1	-5.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,100nm,10.0s						
CN2				LR	LR		
	comp=Z,200nm,10.0s						
CN2				LR	LR		
	comp=Z,200nm,11.0s						
FORT	**Forrest**	37.30	176	P	P	03 30 24.3	-0.6
FORT				IAmb	IAmb	03 30 33.8	
	comp=Z,17nm,1.1s						
INKA	**Innaminka**	37.33	157	P	P	03 30 25.1	-0.1
USRK	**Ussuriysk Ar.**	37.88	8	P	P	03 30 29.9	+0.3
	comp=Z,6.7nm,0.8s,baz=182,slow=8.1,SNR=7.7						
	comp=Z,6.7nm,0.8s						
XLT	**XiLinHaoTe**	37.97	349	*e*P	P	03 30 31.6	+1.1
XLT				pmax	pmax		
	comp=Z,8.0nm,1.1s						
XLT				pmax	pmax		
	comp=Z,180nm,3.9s						
XLT				LR	LR		
	comp=Z,290nm,15.2s						
XLT				LR	LR		
	comp=Z,150nm,19.4s						
MDJ	**Mudanjiang**	38.02	5	P	P	03 30 30.9	+0.1
MDJ				S	S	03 36 25.4	+2.2
MDJ				pmax	pmax		
	comp=Z,15nm,1.4s						
BNX	**BinXian**	39.00	2	⇑P	P	03 30 39.6	+0.6
BNX				pmax	pmax		
	comp=Z,8.0nm,1.2s						
LSA	**Lhasa**	39.41	310	P	P	03 30 44.7	+1.5
GTA	**Gaotai**	39.84	329	*e*P	P	03 30 48.6	+2.3
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GTA				LR	LR		
	comp=Z,530nm,18.3s						
GTA				LR	LR		
	comp=Z,480nm,17.1s						
GTA				LR	LR		
	comp=Z,620nm,19.5s						
NWAO	**Narrogin (SRO)**	40.07	190	LR	LR	03 51 28.4	
	comp=Z,117nm,18.6s,baz=214,slow=42						
GOMU	**GeErMu**	40.48	321	P	P	03 30 50.8	-1.2
GOMU				S	S	03 36 57.3	-3.9
GOMU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GOMU				LR	LR		
	comp=Z,470nm,17.3s						
GOMU				LR	LR		
	comp=Z,440nm,19.0s						
EIDS	**Eidsvold**	40.56	143	P	P	03 30 52.3	0.0
EIDS				IAmb	IAmb	03 31 11.3	
	comp=Z,29nm,1.6s						
BBOO	**Buckleboo**	40.57	166		P	03 30 51.1	-1.1
BBOO				IAmb	IAmb	03 30 58.8	
	comp=Z,23nm,0.8s						
STKA	**Stephens Creek**	41.37	159	P	P	03 30 58.0	-0.8
	comp=Z,5.3nm,0.7s,baz=344,slow=9.3,SNR=9.5						
	comp=Z,5.3nm,0.7s						
STKA	**Stephens Creek**	41.37	159		P	03 30 58.1	-0.7
HILR	**Hailar Array B**	43.02	355	P	P	03 31 12.8	+0.6
	comp=Z,3.8nm,0.8s,baz=171,slow=10,SNR=4.3						
	comp=Z,3.8nm,0.8s						
HEH	**HeiHe**	43.51	2	*e*P	P	03 31 16.6	+0.6
HEH				pmax	pmax		
	comp=Z,14nm,1.1s						
ULN	**Ulaanbaatar**	43.90	342	P	P	03 31 20.0	+0.5
SONM	**Songino Array**	44.08	342	P	P	03 31 20.6	-0.2
	comp=Z,1.4nm,1.0s,baz=169,slow=8.0,SNR=6.7						
SONM				LR	LR	03 50 19.1	
	comp=Z,375nm,21.1s,baz=155,slow=37						
	comp=Z,1.4nm,1.0s						
SONM	**Songino Array**	44.08	342	P	P	03 31 19.5	-1.3
PALK	**Pallekele**	44.17	274	LR	LR	03 50 31.8	
	comp=Z,122nm,19.3s,baz=86,slow=37						
TOO	**Toolangi**	47.88	158	P	P	03 31 51.4	+0.5
TOO				IAmb	IAmb	03 32 20.7	
	comp=Z,16nm,1.5s						
DZM	**Mont Dzumac**	49.46	126	LR	LR	03 52 18.2	
	comp=Z,96nm,20.2s,baz=254,slow=35						
DZM	**Mont Dzumac**	49.46	126	*e*LR	LR	03 46 07.8	
	comp=Z,316nm,24.9s						
DZM	**Mont Dzumac**	49.46	126	P	P	03 32 03.2	-0.1
DZM				IAmb	IAmb	03 32 15.4	
	comp=Z,9.7nm,0.8s						
WMQ	**Urumqi**	49.49	325	*e*P	P	03 32 03.8	+0.6
WMQ				pP	sP	03 32 11.3	+3.6
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ				LR	LR		
	comp=Z,400nm,16.7s						
WMQ				LR	LR		
	comp=Z,300nm,16.7s						
WMQ				LR	LR		
	comp=Z,270nm,21.3s						
PEA0B	**Petropavlovsk-**	53.36	24	P	P	03 32 32.2	+0.3
PETK	**Petropavlovsk-**	53.36	24	P	P	03 32 32.8	+0.8
	comp=Z,4.9nm,0.8s,baz=207,slow=3.0,SNR=3.7						
	comp=Z,4.9nm,0.8s						
PETK	**Petropavlovsk-**	53.36	24	P	P	03 32 32.1	+0.2
MKAR	**Makanchi Array**	54.32	325	P	P	03 32 39.4	+0.2
	comp=Z,2.0nm,0.5s,baz=122,slow=8.0,SNR=25						
MKAR				LR	LR	03 58 03.7	
	comp=Z,153nm,18.0s,baz=118,slow=38						
	comp=Z,2.0nm,0.5s						
MKAR	**Makanchi Array**	54.32	325		P	03 32 39.7	+0.6
MAKZ	**Makanchi**	54.51	325		P	03 32 40.4	-0.1
MAKZ				IAmb	IAmb	03 32 48.1	
	comp=Z,13nm,1.4s						
KSH	**Kashi**	54.93	314	P	P	03 32 46.4	+2.5
KSH				pmax	pmax		
	comp=Z,7.0nm,1.2s						
NIL	**Nilore**	54.97	307		P	03 32 43.1	-1.0
YAK	**Yakutsk**	55.38	3	P	P	03 32 45.7	-0.7
AAK	**Ala-Archa**	57.20	317	LR	LR	03 57 52.8	
	comp=Z,189nm,21.6s,baz=104,slow=36						
ZALV	**Zalesovo Beam**	57.33	333	P	P	03 32 59.6	-0.9
	comp=Z,2.2nm,0.8s,baz=134,slow=6.4,SNR=8.4						
ZALV				LR	LR	03 59 23.9	
	comp=Z,134nm,18.9s,baz=106,slow=38						
	comp=Z,2.2nm,0.8s						
ZALV	**Zalesovo Beam**	57.33	333	P	P	03 32 59.4	-1.1
MANEM	**Manem**	57.38	311		P	03 33 02.0	+0.4
MANEM				IAmb	IAmb	03 33 23.8	
	comp=Z,15nm,0.7s						
KURBB	**Kurchatov Arra**	58.49	327	P	P	03 33 08.2	-0.6
	comp=Z,4.3nm,0.7s,baz=125,slow=6.2,SNR=42						
	comp=Z,4.3nm,0.7s						
KURK	**Kurchatov**	58.49	327		P	03 33 07.7	-1.1
KURK				IAmb	IAmb	03 33 09.8	
	comp=Z,6.2nm,0.8s						
GAR	**Garm**	58.86	312	P	P	03 33 12.1	+0.3
SEY	**Seymchan**	59.58	14	LR	LR	03 58 20.7	
	comp=Z,38nm,21.5s,baz=208,slow=35						
KK31	**Karatay Array**	60.09	316		P	03 33 19.5	-0.5
KKAR	**Karatay Array**	60.09	316		P	03 33 19.5	-0.5
BVAR	**Borovoye Array**	64.07	327	P	P	03 33 46.2	-0.3
	comp=Z,4.1nm,0.8s,baz=125,slow=7.8,SNR=11						
BVAR				LR	LR	04 03 03.9	
	comp=Z,170nm,20.1s,baz=155,slow=37						
	comp=Z,4.1nm,0.8s						
BORK	**Borovoye**	64.12	327		P	03 33 46.3	-0.5
BORK				IAmb	IAmb	03 33 47.6	
	comp=Z,6.4nm,0.9s						
TIXI	**Tiksi**	64.98	1	P	P	03 33 49.0	-3.1
TIXI				IAmb	IAmb	03 33 59.2	
	comp=Z,7.3nm,1.1s						
URZ	**Urewera**	65.69	137	LR	LR	04 03 06.1	
	comp=Z,135nm,18.8s,baz=300,slow=36						
NRIK	**Noril'sk**	67.26	346	P	P	03 34 05.4	-1.5
	comp=Z,0.8nm,0.3s,baz=142,slow=2.7,SNR=3.8						
NRIK				LR	LR	04 05 31.3	
	comp=Z,257nm,19.6s,baz=152,slow=38						
	comp=Z,0.8nm,0.3s						
NRIK	**Noril'sk**	67.26	346	IAmb	IAmb	03 34 26.7	
	comp=Z,18nm,1.9s						
AB31	**Akbulak array**	68.95	320		P	03 34 16.7	-1.2
ABKAR	**Akbulak array**	68.95	320	P	P	03 34 16.8	-1.1
AKTO	**Aktyubinsk**	70.45	321	LR	LR	04 07 48.7	
	comp=Z,291nm,20.3s,baz=5.0,slow=38						
ARTI	**Arti**	71.77	327	LR	LR	04 09 20.0	
	comp=Z,114nm,18.5s,baz=213,slow=39						
RAYN	**Ar Rayn**	77.96	293	P	P	03 35 11.2	-0.3
RAYN				IAmb	IAmb	03 35 19.6	
	comp=Z,6.7nm,1.0s						
RAR	**Rarotonga**	78.56	113	LR	LR	04 06 53.5	
	comp=Z,35nm,19.6s,baz=266,slow=33						
KBZ	**Khabaz**	79.89	313	LR	LR	04 16 56.6	
	comp=Z,68nm,18.4s,baz=23,slow=40						
KDAK	**Kodiak Island**	80.26	33	LR	LR	04 04 34.2	
	comp=Z,53nm,21.7s,baz=238,slow=31						
GURO	**Guroymak-BITLI**	80.57	308		P	03 35 24.9	-0.7
L22K	**Petersville**	81.39	28	P	P	03 35 28.8	-0.6

L22K				IAmb	IAmb	03 35 38.5	
	comp=Z,8.2nm,0.9s						
ILAR	Eielson Array	83.15	26	P	P	03 35 38.9	+0.4
	comp=Z,0.9nm,0.8s,baz=234,slow=5.5,SNR=14						
	comp=Z,0.9nm,0.8s						
E27K	Coleen River	85.08	22	P	P	03 35 51.8	+3.5
E27K				IAmb	IAmb	03 36 00.7	
	comp=Z,6.6nm,1.1s						
ASF	Jabal al Asfar	85.08	302	LR	LR	04 18 32.5	
	comp=Z,45nm,20.2s,baz=44,slow=39						
FURI	Furi	85.58	278	LR	LR	04 15 51.9	
	comp=Z,60nm,18.0s,baz=32,slow=37						
E28M	Babbage River	85.79	21		P	03 35 52.8	+1.0
E28M				IAmb	IAmb	03 36 48.2	
	comp=Z,16nm,1.7s						
F28M	Old Crow	85.79	22	IAmb	IAmb	03 36 02.0	
	comp=Z,5.6nm,0.9s						
MAW	Mawson	85.95	200	LR	LR	04 09 07.8	
	comp=Z,44nm,19.7s,baz=79,slow=32						
MMAI	Mount Meron Ar	86.27	303	LR	LR	04 18 45.1	
	comp=Z,69nm,21.8s,baz=70,slow=39						
VNDA	Vanda	86.49	173	P	P	03 35 54.8	-0.2
	comp=Z,2.2nm,0.9s,baz=342,slow=2.0,SNR=4.2						
VNDA				LR	LR	04 15 14.6	
	comp=Z,41nm,18.5s,baz=335,slow=36						
	comp=Z,2.2nm,0.9s						
EIL	Elat	86.98	299	LR	LR	04 20 28.8	
	comp=Z,68nm,19.4s,baz=41,slow=40						
BRTR	Keskin Array B	87.01	309	P	P	03 35 57.3	-1.3
	comp=Z,0.6nm,0.8s,baz=104,slow=5.2,SNR=4.8						
BRTR				LR	LR	04 20 51.4	
	comp=Z,61nm,19.3s,baz=348,slow=40						
	comp=Z,0.6nm,0.8s						
ARCES	ARCESS Array B	87.21	340	LR	LR	04 17 45.9	
	comp=Z,113nm,20.8s,baz=92,slow=38						
SPITS	Spitsbergen Ar	87.35	349	LR	LR	04 20 03.4	
	comp=Z,89nm,19.3s,baz=68,slow=39						
PPT2	Papeete2	87.45	108	*e*LR	LR	04 03 44.9	
	comp=Z,113nm,39.8s						
PPT2				*e*LR	LR	04 03 45.6	
	comp=Z,108nm,25.8s						
FINES	FINESS Array B	88.57	332	P	P	03 36 03.4	-2.0
	comp=Z,2.6nm,0.9s,baz=60,slow=7.7,SNR=4.6						
	comp=Z,2.6nm,0.9s						
FINES	FINESS Array B	88.57	332	P	P	03 36 02.9	-2.4
AKASG	Malin Array Be	88.69	321	LR	LR	04 17 47.9	
	comp=Z,85nm,19.3s,baz=14,slow=37						
MLR	Muntele Rosu	91.77	316	LR	LR	04 22 56.8	
	comp=Z,151nm,20.1s,baz=104,slow=39						
MBAR	Mbarara	94.51	270	LR	LR	04 15 24.6	
	comp=Z,48nm,19.6s,baz=28,slow=33						
HFS	Hagfors	94.75	332	LR	LR	04 22 37.4	
	comp=Z,158nm,18.0s,baz=224,slow=38						
RES	Resolute Bay	95.23	10	LR	LR	04 23 47.5	
	comp=Z,40nm,18.9s,baz=6.0,slow=38						
NOA	NORSAR Array B	95.52	333	P	P	03 36 39.4	+1.7
	comp=Z,0.4nm,0.7s,baz=39,slow=6.8,SNR=2.3						
NOA				LR	LR	04 23 35.3	
	comp=Z,114nm,19.3s,baz=60,slow=38						
	comp=Z,0.4nm,0.7s						
TAOE	Nuku Hiva Isla	95.57	98	*e*LR	LR	04 07 24.5	
	comp=Z,128nm,27.2s						
QSPA	South Pole Qui	96.53	180	LR	LR	04 21 42.5	
	comp=Z,61nm,19.1s,baz=6.5,slow=36						
VRAC	Vranov	96.93	321	LR	LR	04 21 59.1	
	comp=Z,70nm,19.0s,baz=253,slow=36						
YKA	Yellowknife Ar	97.48	24	P	Pdif	03 36 48.5	+2.0
	comp=Z,0.2nm,0.6s,baz=300,slow=5.0,SNR=5.1						
	comp=Z,0.2nm,0.6s						
GERES	GERESS Array B	98.88	322	LR	LR	04 23 39.8	
	comp=Z,99nm,18.2s,baz=270,slow=37						
TORD	Torodi Ar. Bea	120.55	289	PKP	PKPdf	03 42 04.7	-0.9
	comp=Z,0.8nm,0.9s,baz=58,slow=4.5,SNR=4.1						
TXAR	Lajitas Array	120.97	50	PKP	PKPdf	03 42 05.8	-0.3
	comp=Z,0.2nm,0.8s,baz=311,slow=8.2,SNR=3.8						
PLCA	Paso Flores	143.24	160	PKP	PKPdf	03 42 46.5	-0.9
	comp=Z,0.8nm,0.7s,baz=211,slow=5.9,SNR=4.9						

IDC 22 03:50:51.9±4.4**, 9°.78N×126°.75E, h0^{km}, mb3.6**/3**, mbtmp3.6**/3**, MS3.1**/1**, Error ellipse: s-maj=350.2km s-min=28.3km az=66.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	20.09	189	LR	LR	04 02 33.6	
	comp=Z,57nm,21.2s,baz=273,slow=35						
WRA	Warramunga Arr	30.46	166	P	P	03 57 05.7	-0.8
	0.5nm,0.7s,baz=344,slow=8.9,SNR=1.3						
	0.5nm,0.7s						
ASAR	Alice Springs	33.96	168	P	P	03 57 37.7	+0.5
	0.2nm,0.3s,baz=350,slow=7.3,SNR=9.0						
	0.2nm,0.3s						
H11S3	WAKE ISLAND Hy	39.61	73	T	T	04 41 28.4	
	baz=262,slow=75,SNR=24						
H11S1	WAKE ISLAND Hy	39.62	73	T	T	04 41 28.5	
	baz=262,slow=75,SNR=18						
H11S2	WAKE ISLAND Hy	39.62	73	T	T	04 41 29.6	
	baz=262,slow=75,SNR=19						
H11N1	WAKE ISLAND Hy	39.96	71	T	T	04 41 52.0	
	baz=263,slow=74,SNR=21						
H11N2	WAKE ISLAND Hy	39.97	71	T	T	04 41 55.9	
	baz=263,slow=74,SNR=30						
H11N3	WAKE ISLAND Hy	39.98	71	T	T	04 41 56.1	
	baz=263,slow=74,SNR=23						
MKAR	Makanchi Array	52.71	323	P	P	04 00 08.2	-0.1
	0.4nm,0.5s,baz=115,slow=8.3,SNR=4.8						
	0.4nm,0.5s						

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*NOU **22** 03:57:54.8, 20°.16S×176°.81W, h577^{km}, mb4.3/17, Fiji Islands Region*

*NEIC **22** 03:58:10.2±1.8, 21°.3S±0°.1×178°.7W±0°.1, h569^{km}±7^{km}, mb4.5/187, Error ellipse: s-maj=17.8km s-min=16.0km az=128.0*

*IDC **22** 03:58:10.2±1.4, 21°.23S×178°.79W, h572^{km}±15^{km}, mb3.7/16, mbtmp4.6/17, Error ellipse: s-maj=14.1km s-min=10.2km az=152.0*

ISC 22 03:58:08.5±0.4**, 21°.31S**±0°.08×**178°.65W**±0°.08**, h550^{km}, n366,** σ1^{s}.**53**/358**, mb4.4**/114**, 43C-13D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.72	318		P	03 59 39.8	+3.6
AFI	Afiamalu	9.85	43	P	P	04 00 24.3	-0.8
DZM	Mont Dzumac	13.88	264	P	P	04 01 08.0	+1.4
	5.3nm,0.8s,baz=63,slow=4.6,SNR=6.0						
DZM	Mont Dzumac	13.88	264	P	P	04 01 09.3	+2.7
DZM	Mont Dzumac	13.88	264	P	P	04 01 10.3	+3.7
SANVU	Saraoutou	14.63	291	P	P	04 01 15.3	+1.0
OUZ	Omahuta	15.45	205	P	P	04 01 24.8	+2.4
WCZ	Waipu Caves	15.82	201	P	P	04 01 28.6	+2.5
KUZ	Kuaotunu	16.15	196	P	P	04 01 30.1	+0.8
WIAZ	Waiheke Island	16.36	198	P	P	04 01 32.8	+1.6
MXZ	Matakaoa Point	16.41	189	P	P	04 01 31.0	-0.7
MXZ	Matakaoa Point	16.41	189	P	P	04 01 30.3	-1.4
MXZ	Matakaoa Point	16.41	189	P	P	04 01 30.7	-1.0
ETAZ	East Tamaki Re	16.56	198	P	P	04 01 34.7	+1.6
MKAZ	Moumakai	16.64	198	P	P	04 01 35.3	+1.6
WTAZ	Waiatarua	16.65	199	P	P	04 01 35.8	+1.9
WMGZ	Waiomatatini S	16.65	188	P	P	04 01 30.9	-3.0
HAZ	Te Kaha	16.68	190	P	P	04 01 32.2	-2.0
PKGZ	Pakihiroa	16.75	189	P	P	04 01 33.8	-1.0
AWAZ	Awhitu Peninsu	16.75	199	P	P	04 01 36.2	+1.5
RUGZ	Raukumara Rang	16.91	190	P	P	04 01 35.0	-1.3
TWGZ	Tauwhareparae	17.07	189	P	P	04 01 36.7	-1.0
TOZ	Tahuroa Road	17.14	196		P	04 01 39.4	+1.2
TOZ	Tahuroa Road	17.14	196	P	P	04 01 39.7	+1.4
MWZ	Matawai	17.29	190	P	P	04 01 38.0	-1.7
URZ	Urewera	17.29	191	P	P	04 01 37.6	-2.0
	13nm,0.3s,baz=263,slow=2.2,SNR=25						
URZ	Urewera	17.29	191	P	P	04 01 37.8	-1.8
URZ	Urewera	17.29	191	P	P	04 01 37.4	-2.2
CNGZ	Carnagh Statio	17.33	188	P	P	04 01 40.5	+0.4
TLZ	Tolley Road	17.69	195	P	P	04 01 45.7	+2.3
HIZ	Hauiti	18.04	197	P	P	04 01 46.9	+0.3
BKZ	Black Stump Fm	18.28	192	P	P	04 01 46.3	-2.5
BKZ	Black Stump Fm	18.28	192	P	P	04 01 46.6	-2.3
NGZ	Ngauruhoe	18.48	194	P	P	04 01 51.3	+0.5
PXZ	Pawanui	19.06	191	P	P	04 01 54.9	-0.9
TSZ	Takapari Road	19.25	193	P	P	04 01 57.1	-0.5
BFZ	Birch Farm	19.80	192	P	P	04 02 01.4	-1.1
BFZ	Birch Farm	19.80	192	P	P	04 02 00.8	-1.7
MRZ	Mangatainoka R	19.91	193	P	P	04 02 01.7	-1.9
SNZO	South Karori	20.72	194	P	P	04 02 10.3	-0.6
QRZ	Quartz Range	20.85	199	P	P	04 02 12.3	+0.2
QRZ	Quartz Range	20.85	199	P	P	04 02 12.1	0.0
NNZ	Nelson	20.97	197	P	P	04 02 12.3	-0.8
THZ	Tophouse	21.61	197		P	04 02 18.7	-0.2
THZ	Tophouse	21.61	197	P	P	04 02 18.0	-1.0
DSZ	Denniston Nort	21.91	199	P	P	04 02 20.6	-1.1
KHZ	Kahutara	22.05	196	P	P	04 02 21.4	-1.4
KHZ	Kahutara	22.05	196	P	P	04 02 21.6	-1.2
GVZ	Greta Valley S	22.70	196	P	P	04 02 26.8	-1.8
LTZ	Lake Taylor	22.73	198	P	P	04 02 27.0	-1.9
INZ	Inchbonnie	22.92	199	P	P	04 02 29.1	-1.5
OXZ	Oxford	23.30	197	P	P	04 02 32.2	-1.7
WVZ	Waitaha Valley	23.45	200	P	P	04 02 34.4	-0.9
RPZ	Rata Peaks	23.93	199	P	P	04 02 39.5	-0.1
FOZ	Fox Glacier	24.16	201	P	P	04 02 40.1	-1.4
JCZ	Jackson Bay	24.99	202	P	P	04 02 48.7	-0.3
JCZ	Jackson Bay	24.99	202	P	P	04 02 48.4	-0.6
MLZ	Mavora Lakes	26.35	201	P	P	04 03 00.4	-0.5
WHZ	Wether Hill Ro	26.87	201	P	P	04 03 06.5	+1.0
CTA	Charters Tower	32.82	266	P	P	04 03 56.6	-0.5
	4.4nm,0.4s,baz=95,slow=10,SNR=17						
	4.4nm,0.4s						
CTA	Charters Tower	32.82	266	P	P	04 03 57.4	+0.2
CTAO	Charters Tower	32.82	266	P	P	04 03 57.4	+0.2
CMSA	Cobar Meteorol	33.39	245	P	P	04 04 02.6	+0.7
WR8	Warramunga Arr	43.74	263		P	04 05 24.9	-0.9
AS31	Alice Springs	43.75	258		P	04 05 25.3	-0.5
ASAR	Alice Springs	43.75	258	P	P	04 05 25.1	-0.8
	5.8nm,0.6s,baz=91,slow=7.9,SNR=64						
ASAR				PcP	PcP	04 06 59.6	-0.9
	1.7nm,0.7s,baz=100,slow=3.4,SNR=8.8						
ASAR				ScP	ScP	04 09 58.5	-1.4
	0.7nm,0.7s,baz=97,slow=4.4,SNR=6.1						
ASAR				S	S	04 11 13.6	-3.1
	1.7nm,0.8s,baz=93,slow=15,SNR=12						
	5.8nm,0.6s						
ASAR	Alice Springs	43.75	258	P	P	04 05 25.2	-0.7
WB0	Warramunga Arr	43.88	263	P	P	04 05 26.2	-0.6
WB0				IAmb	IAmb	04 05 26.6	
	comp=Z,9.5nm,0.9s						
WRA	Warramunga Arr	43.90	263	P	P	04 05 25.7	-1.3
	comp=Z,2.7nm,0.3s,baz=96,slow=6.9,SNR=47						
WRA				ScP	ScP	04 09 59.4	-1.2
	comp=Z,0.5nm,0.7s,baz=96,slow=3.0,SNR=1.7						
WRA				S	S	04 11 13.8	-5.0
	comp=Z,1.6nm,0.9s,baz=95,slow=14,SNR=4.6						
	comp=Z,2.7nm,0.3s						
WRA	Warramunga Arr	43.90	263	P	P	04 05 25.7	-1.3
MTN	Manton Dam	48.57	271	P	P	04 06 01.4	-1.1
MTN				IAmb	IAmb	04 06 02.1	
	comp=Z,6.8nm,0.7s						
KNRA	Kununurra	50.01	267	P	P	04 06 12.3	-0.7
KNRA				IAmb	IAmb	04 06 18.3	
	comp=Z,9.6nm,1.1s						
FITZ	Fitzroy Crossi	52.33	263	P	P	04 06 29.1	-0.6
	comp=Z,1.4nm,0.3s,baz=90,slow=9.2,SNR=31						
	comp=Z,1.4nm,0.3s						
FITZ	Fitzroy Crossi	52.33	263	P	P	04 06 29.4	-0.4
SOEI	Soe	55.92	273		P	04 06 55.8	+0.5
PSA00	Pilbara Seismi	56.90	258	P	P	04 07 00.9	-0.9
PSA00				IAmb	IAmb	04 07 12.3	
	comp=Z,41nm,1.5s						
SBA	Scott Base	57.03	184	P	P	04 07 04.0	+2.3
SBA				IAmb	IAmb	04 07 14.1	
	comp=Z,34nm,1.4s						
VNDA	Vanda	57.06	185	P	P	04 07 03.0	+1.1
	comp=Z,1.9nm,0.6s,baz=3.0,slow=6.1,SNR=13						
	comp=Z,1.9nm,0.6s						
VNDA	Vanda	57.06	185	P	P	04 07 03.3	+1.4
MBWA	Marble Bar	57.09	258	P	P	04 07 02.3	-0.8
MBWA				IAmb	IAmb	04 07 03.0	
	comp=Z,21nm,1.0s						
LUWI	Luwuk	60.49	281	P	P	04 07 26.3	+0.3
TOLI2	Tolitoli	63.18	283	P	P	04 07 44.2	+0.7
TOLI2				IAmb	IAmb	04 07 45.0	
	comp=Z,6.3nm,0.6s						
QSPA	South Pole Qui	68.77	180	P	P	04 08 17.5	0.0
	comp=Z,7.0nm,0.7s,baz=36,slow=1.7,SNR=27						
	comp=Z,7.0nm,0.7s						
QSPA	South Pole Qui	68.77	180	P	P	04 08 17.9	+0.4
QSPA				IAmb	IAmb	04 08 18.4	
	comp=Z,7.0nm,0.7s						
UGM	Wanagama	69.34	269	P	P	04 08 20.6	-1.2
MJAR	Matsushiro Arr	70.50	324	P	P	04 08 27.2	-0.9
	comp=Z,5.5nm,0.7s,baz=157,slow=6.0,SNR=23						
	comp=Z,5.5nm,0.7s						
MJAR	Matsushiro Arr	70.50	324	P	P	04 08 27.5	-0.6
MAJO	Matsushiro	70.50	324	P	P	04 08 27.1	-1.0
MAJO				IAmb	IAmb	04 08 27.9	
	comp=Z,6.3nm,0.8s						
MJB9	Matsu-Tunnel	70.51	324	P	P	04 08 28.0	-0.2
MJB9				IAmb	IAmb	04 08 28.9	
	comp=Z,6.1nm,0.7s						
TPUB	Ta-pu	73.91	303		P	04 08 45.8	-2.4
SSLB	Suanglung	73.91	304	P	P	04 08 46.5	-1.6
SSLB				IAmb	IAmb	04 08 50.1	
	comp=Z,15nm,0.9s						
JKA	Kamikawa-asahi	74.14	332	P	P	04 08 49.6	+0.6
PEA0B	Petropavlovsk-	76.89	346	P	P	04 09 03.5	-0.5
PETK	Petropavlovsk-	76.89	346	P	P	04 09 03.4	-0.6
	comp=Z,9.7nm,0.7s,baz=126,slow=7.4,SNR=8.9						
	comp=Z,9.7nm,0.7s						
KSRS	Korea Array	77.09	319	P	P	04 09 05.3	-0.1
	comp=Z,1.6nm,0.8s,baz=130,slow=5.6,SNR=4.5						
	comp=Z,1.6nm,0.8s						
SDPT	Sand Point	77.91	10	P	P	04 09 08.3	-1.1
BELA	Belgrano 2	78.84	173		P	04 09 13.8	-0.5
USRK	Ussuriysk Ar.	79.29	326	P	P	04 09 17.5	+0.5
	comp=Z,8.8nm,0.8s,baz=146,slow=2.9,SNR=7.5						
	comp=Z,8.8nm,0.8s						
HOPS	Hopland Field	79.37	41	P	P	04 09 18.0	+0.4
HOPS				IAmb	IAmb	04 09 46.3	
	comp=Z,38nm,1.2s						
KMPM	Mount Pierce	79.64	39	P	P	04 09 19.6	+0.4
MNRC	McLaughlin Min	79.69	41	P	P	04 09 19.8	+0.4
CBX	Cerro Bola	79.70	49	P	P	04 09 19.8	+0.1
KMRM	Mail Ridge	79.76	40	P	P	04 09 20.1	+0.4
BAR	Barrett	79.90	49	P	P	04 09 20.5	-0.1
ESJX	Sierra Juarez	80.05	50	P	P	04 09 22.1	+0.5
O02D	Mt. Diablo Mer	80.28	40	P	P	04 09 23.3	+0.8
O02D				IAmb	IAmb	04 09 50.1	
	comp=Z,31nm,1.4s						
YUH	Yuha Desert	80.41	50	P	P	04 09 23.8	+0.5
CMB	Columbia Colle	80.46	43	P	P	04 09 23.1	-0.4
KSXB	Camp Six Broad	80.68	38	P	P	04 09 24.9	+0.4
PLK4	Peulik 4	80.82	12	P	P	04 09 24.1	-0.7
PLK4				IAmb	IAmb	04 09 24.8	
	comp=Z,15nm,0.7s						
M02C	Callahan	81.00	39	P	P	04 09 27.6	+1.4
M02C				IAmb	IAmb	04 09 33.9	
	comp=Z,10nm,1.1s						
CLC	China Lake	81.00	46	P	P	04 09 26.2	-0.2
YBH	Yreka Blue Hor	81.29	39	P	P	04 09 28.4	+0.7
YBH				IAmb	IAmb	04 09 29.1	
	comp=Z,9.0nm,0.9s						
ACHA	Angle Creek He	81.56	12	P	P	04 09 28.1	-0.6
ACHA				IAmb	IAmb	04 09 40.6	
	comp=Z,15nm,1.4s						
PNTR	Pine Nut	81.58	42	P	P	04 09 29.8	+0.4
PNTR				IAmb	IAmb	04 09 30.8	
	comp=Z,12nm,0.8s						
DSP	Deep Springs	81.63	45	P	P	04 09 29.8	+0.4
IRM	Iron Mountain	81.77	49	P	P	04 09 31.0	+0.7
GRAC	Grapevine Rang	81.82	45	P	P	04 09 31.0	+0.5
GWY	Greenwater Val	81.83	46	P	P	04 09 30.7	0.0
L04D	Klamath Falls	81.83	39	P	P	04 09 30.6	+0.1
L04D				IAmb	IAmb	04 09 32.0	
	comp=Z,18nm,1.0s						
P16K	Nushagak River	81.83	11	P	P	04 09 29.1	-0.8
NVAR	Mina Array Bea	82.02	44	P	P	04 09 31.6	-0.1
	comp=Z,3.0nm,0.6s,baz=222,slow=8.4,SNR=13						
	comp=Z,3.0nm,0.6s						
NVAR	Mina Array Bea	82.02	44	P	P	04 09 32.2	+0.5
PAHR	Pah Rah Range	82.08	42	P	P	04 09 32.2	+0.4
NV11	Mina Array Sit	82.12	44	P	P	04 09 32.5	+0.4
I03D	Drain, OR	82.16	37	P	P	04 09 32.1	+0.1
WCT	Wildcat Mounta	82.20	46	P	P	04 09 32.8	+0.4
TPNV	Topopah Spring	82.54	46	P	P	04 09 34.4	+0.2
Q19K	Cape Douglas,	82.56	13	P	P	04 09 31.6	-2.1
N15K	Kwethluk River	82.58	9	P	P	04 09 34.0	+0.3
N15K				IAmb	IAmb	04 09 34.8	
	comp=Z,16nm,0.7s						
IPM	Ipoh	82.64	278	P	P	04 09 35.0	-0.1
IPM				IAmb	IAmb	04 09 35.8	
	comp=Z,12nm,0.7s						
BUCK	Buck Mountain	82.68	37	P	P	04 09 35.4	+0.7
BNX	BinXian	82.73	325	⇑P	P	04 09 34.6	-0.2
BNX				pmax	pmax		
	comp=Z,14nm,0.7s						
M14K	Bethel	82.88	8	P	P	04 09 35.2	+0.1
M14K				IAmb	IAmb	04 09 42.4	
	comp=Z,20nm,1.4s						
K05A	Summer Lake	82.97	39	P	P	04 09 36.5	+0.2
H04D	Lebanon	83.03	37	P	P	04 09 36.1	-0.2
H04D				IAmb	IAmb	04 10 15.4	
	comp=Z,15nm,1.3s						
SHPR	Sheep Range	83.03	47	P	P	04 09 37.0	+0.3
O18K	Koktuh Hills	83.11	12	P	P	04 09 35.5	-0.8
O18K				IAmb	IAmb	04 09 36.4	
	comp=Z,16nm,0.8s						
J05D	Fort Rock, OR	83.11	38		P	04 09 37.4	+0.5
J05D				IAmb	IAmb	04 09 38.6	
	comp=Z,14nm,0.7s						
WIFE	Three Sisters-	83.25	37	P	P	04 09 38.3	+0.5
WIFE				IAmb	IAmb	04 09 39.2	
	comp=Z,8.7nm,0.8s						
TIA	Tai'an	83.37	313	P	P	04 09 38.3	+0.1
TIA				pmax	pmax		
	comp=Z,13nm,1.1s						
H04A	Detroit Lake	83.43	37	P	P	04 09 38.5	+0.2
H04A				IAmb	IAmb	04 09 38.9	
	comp=Z,7.5nm,0.6s						
PINE	Pine Mountain	83.59	38		P	04 09 39.5	+0.1
PINE				IAmb	IAmb	04 09 40.8	
	comp=Z,9.0nm,0.8s						
O19K	Port Alsworth	83.59	12		P	04 09 37.9	-0.8
CNPM	China Poot	83.62	14	P	P	04 09 38.3	-0.6
CNPM				IAmb	IAmb	04 10 09.6	
	comp=Z,28nm,1.3s						
I05D	Terrebonne, OR	83.70	37		P	04 09 40.2	+0.4
BRLK	Bradley Lake	83.91	14	P	P	04 09 39.4	-0.9
HG4B	Hotspring	84.13	27	P	P	04 09 41.9	+0.3
WVOR	Wild Horse Val	84.13	40	P	P	04 09 42.4	+0.3
N19K	Bonanza Creek	84.14	12	P	P	04 09 40.3	-1.2
N19K				IAmb	IAmb	04 10 20.5	
	comp=Z,25nm,1.4s						
L16K	Owhat River	84.15	9	P	P	04 09 41.6	+0.2
G05A	Wamic	84.26	37	P	P	04 09 42.2	-0.2
GSI	Gunungsitoli	84.67	273	P	P	04 09 45.1	-0.1
SLKM	Skilak Lake	84.73	14	P	P	04 09 44.0	-0.4
SLKM				IAmb	IAmb	04 09 45.3	
	comp=Z,16nm,1.0s						
GNW	Green Mountain	84.90	34	P	P	04 09 46.1	+0.7
GNW				IAmb	IAmb	04 09 59.8	
	comp=Z,9.8nm,1.3s						
U15A	North Rim	84.95	48		P	04 09 46.8	+0.5
U15A				IAmb	IAmb	04 09 47.8	
	comp=Z,6.2nm,0.8s						
SPU	Mount Spurr	84.95	13	P	P	04 09 43.4	-2.0
SPU				IAmb	IAmb	04 10 16.9	
	comp=Z,11nm,1.4s						
CLRS	Cowichan Lake	85.03	33	P	P	04 09 45.7	-0.3
PGC	Sidney	85.26	33	P	P	04 09 47.4	+0.3
L19K	White Mountain	85.34	11	P	P	04 09 47.5	+0.2
L19K				IAmb	IAmb	04 09 50.0	
	comp=Z,7.1nm,1.0s						
RC01	Rabbit Creek A	85.36	14	P	P	04 09 46.7	-0.6
M20K	Styx River	85.38	12	P	P	04 09 47.4	-0.2
M20K				IAmb	IAmb	04 09 52.0	
	comp=Z,15nm,1.5s						
PWL	Port Wells	85.47	14	P	P	04 09 46.5	-1.4
SUA	Susitna One	85.48	13	IAmb	IAmb	04 09 48.0	
	comp=Z,8.7nm,0.7s						
G08A	Pilot Rock	85.62	38		P	04 09 49.8	+0.6
G08A				IAmb	IAmb	04 09 50.4	
	comp=Z,7.6nm,1.1s						
MXC	Moxie City	85.64	36	P	P	04 09 49.5	+0.4
HNS	HongShan	85.64	313	⇓P	P	04 09 49.0	-0.3
HNS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HEH	HeiHe	85.68	329	*e*P	P	04 09 47.3	-1.8
ELIB	Princess Elisa	85.78	187	*d*P	P	04 09 48.7	-0.9
	comp=Z,2.2nm,0.9s						
GLI	Glacier Island	85.78	15	P	P	04 09 48.3	-1.1
SKT	Skwentna	85.78	12	P	P	04 09 48.0	-1.4
SKT				IAmb	IAmb	04 10 16.9	
	comp=Z,11nm,1.4s						
LYN	LuoYang	85.79	309	P	P	04 09 50.8	+0.7
LYN				pmax	pmax		
	comp=Z,15nm,0.9s						
J17K	VABM Dome	85.81	9	P	P	04 09 49.2	-0.3
MTPU	Mount Pierson	85.85	47	P	P	04 09 51.9	+1.1
KNK	Knik Glacier	85.93	14	P	P	04 09 49.9	-0.2
KNK				IAmb	IAmb	04 09 50.2	
	comp=Z,10nm,0.8s						
PMR	Palmer	85.94	14	P	P	04 09 49.4	-0.7
PMR				IAmb	IAmb	04 10 05.8	
	comp=Z,7.9nm,1.2s						
ANM	Nome	86.21	6	P	P	04 09 50.3	-1.0
ANM				IAmb	IAmb	04 10 19.0	
	comp=Z,20nm,1.5s						
SML	Sawmill	86.31	14	P	P	04 09 51.1	-0.8
SML				IAmb	IAmb	04 09 54.4	
	comp=Z,11nm,1.3s						
CUT	Chulitna	86.42	13	P	P	04 09 51.4	-1.0
L22K	Petersville	86.43	13	IAmb	IAmb	04 09 51.8	
	comp=Z,8.4nm,0.8s						
PPLA	Purkeypile	86.49	12		P	04 09 50.9	-2.0
PPLA				IAmb	IAmb	04 09 53.8	
	comp=Z,11nm,1.2s						
SCM	Sheep Creek Mo	86.56	14	P	P	04 09 52.6	-0.6
K20K	Telida	86.57	11	P	P	04 09 52.2	-0.9
K20K				IAmb	IAmb	04 09 53.1	
	comp=Z,5.7nm,0.9s						
KLU	Klutina	86.59	15	P	P	04 09 52.5	-0.9
KLU				IAmb	IAmb	04 10 20.6	
	comp=Z,7.3nm,1.1s						
CRQM	Cirque	86.67	17	P	P	04 09 53.9	0.0
CRQM				IAmb	IAmb	04 10 19.1	
	comp=Z,13nm,1.0s						
D08A	Wollman Farm,	86.69	36	P	P	04 09 54.4	+0.4
D08A				IAmb	IAmb	04 09 54.9	
	comp=Z,5.6nm,0.7s						
YAH	Yahtse	86.72	17	P	P	04 09 54.2	0.0
TGL	Tana Glacier	86.75	17	P	P	04 09 53.3	-0.8
TGL				IAmb	IAmb	04 09 54.5	
	comp=Z,8.3nm,1.0s						
J19K	Poorman	86.90	10	P	P	04 09 54.5	-0.1
J19K				IAmb	IAmb	04 10 25.5	
	comp=Z,8.7nm,1.5s						
VRDI	Verde Repeater	86.99	16	P	P	04 09 55.0	-0.3
VRDI				IAmb	IAmb	04 09 55.2	
	comp=Z,5.2nm,0.8s						
F10A	Beach Ranch, E	87.01	38	IAmb	IAmb	04 09 56.8	
	comp=Z,10nm,0.9s						
N25K	Chitina, Valde	87.02	16	IAmb	IAmb	04 09 55.6	
	comp=Z,8.0nm,0.7s						
GRNC	Granite Creek	87.03	17	P	P	04 09 55.1	-0.5
GRNC				IAmb	IAmb	04 09 56.2	
	comp=Z,19nm,1.2s						
M24K	Tolsona, Glenn	87.07	15	P	P	04 09 55.1	-0.4
GLB	Gilahina Butte	87.08	16	P	P	04 09 55.1	-0.4
GLB				IAmb	IAmb	04 09 55.3	
	comp=Z,6.8nm,0.6s						
PLID	Pearl Lake	87.22	39	P	P	04 09 56.6	-0.3
MCARA	McCarthy VSAT	87.23	16	P	P	04 09 57.9	+1.7
MCARA				IAmb	IAmb	04 10 38.6	
	comp=Z,14nm,1.2s						
B08A	Colville Reser	87.23	35		P	04 09 56.1	-0.5
B08A				IAmb	IAmb	04 09 57.0	
	comp=Z,5.9nm,0.8s						
J20K	Nowinta River	87.31	10	P	P	04 09 55.8	-0.7
LOGN	Logan Glacier	87.31	17	P	P	04 09 56.5	-0.3
BARN	Barnard Glacie	87.33	17	P	P	04 09 56.7	-0.2
BARN				IAmb	IAmb	04 09 57.5	
	comp=Z,10.0nm,0.8s						
KTH	Kantishna Hill	87.33	12		P	04 09 55.1	-1.6
KTH				IAmb	IAmb	04 09 56.5	
	comp=Z,10nm,0.8s						
HLID	Hailey	87.33	41		P	04 09 57.4	0.0
CTGM	Chitina Glacie	87.34	17	P	P	04 09 56.6	-0.3
CTGM				IAmb	IAmb	04 09 57.3	
	comp=Z,8.1nm,0.7s						
TRF	Thorofare Moun	87.36	12		P	04 09 55.8	-1.2
O28M	Mount Upton	87.50	18	IAmb	IAmb	04 09 58.4	
	comp=Z,8.9nm,0.8s						
VHRN	Van Horn	87.61	56		P	04 09 59.2	+0.2
VHRN				IAmb	IAmb	04 10 00.6	

	comp=Z,8.1nm,1.3s						
RND	Reindeer	87.61	13	P	P	04 09 56.3	-1.8
MNTX	Cornudas Mount	87.71	55		P	04 09 59.6	+0.4
I20K	Naaghedeneel	87.83	10	P	P	04 09 58.1	-0.8
MCK	McKinley	87.89	13		P	04 09 58.3	-1.0
MCK				IAmb	IAmb	04 10 00.3	
	comp=Z,12nm,1.0s						
TCUT	Toone Canyon	87.94	44	P	P	04 09 60.0	-0.4
TCUT				IAmb	IAmb	04 10 01.0	
	comp=Z,9.3nm,1.3s						
TX31	Lajitas Ar. Si	88.00	58	P	P	04 10 00.0	-0.7
TX31				IAmb	IAmb	04 10 02.5	
	comp=Z,4.8nm,1.1s						
TXAR	Lajitas Array	88.00	58	P	P	04 10 01.0	+0.3
	comp=Z,2.5nm,0.9s,baz=216,slow=5.9,SNR=21						
	comp=Z,2.5nm,0.9s						
TXAR	Lajitas Array	88.00	58	P	P	04 10 01.1	+0.4
BSUT	Blindstream Ca	88.07	45	P	P	04 10 01.4	+0.3
XAN	Xi'an	88.14	308	⇓P	P	04 10 01.6	+0.4
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
M27K	Edge Creek, AK	88.35	16	IAmb	IAmb	04 10 02.5	
	comp=Z,13nm,1.2s						
TASM	ASL Pad, Albuq	88.38	51	P	P	04 10 02.1	-0.3
TASM				IAmb	IAmb	04 10 03.5	
	comp=Z,5.3nm,1.3s						
TASM	ASL Pad, Albuq	88.38	51	P	P	04 10 02.4	-0.1
TASM				IAmb	IAmb	04 10 03.5	
	comp=Z,4.8nm,1.2s						
TASM	ASL Pad, Albuq	88.38	51	P	P	04 10 01.8	-0.6
TASM				IAmb	IAmb	04 10 03.5	
	comp=Z,4.6nm,1.3s						
TASM	ASL Pad, Albuq	88.38	51	P	P	04 10 02.0	-0.5
TASM				IAmb	IAmb	04 10 03.5	
	comp=Z,4.6nm,1.2s						
ABQ	Albuquerque	88.38	51	P	P	04 10 02.0	-0.5
ANMO	Albuquerque	88.38	51		P	04 10 01.8	-0.7
L26K	Log Cabin Wild	88.53	15	P	P	04 10 01.7	-0.7
L26K				IAmb	IAmb	04 10 08.3	
	comp=Z,6.7nm,1.3s						
I21K	Tanana	88.61	11	P	P	04 10 01.7	-0.8
I21K				IAmb	IAmb	04 10 02.5	
	comp=Z,7.0nm,0.8s						
NEA2	Nenana	88.63	12	P	P	04 10 01.6	-1.0
NEA2				IAmb	IAmb	04 10 02.0	
	comp=Z,3.6nm,0.6s						
K24K	Donnelly Dome	88.63	14	P	P	04 10 02.1	-0.7
O30N	Mendenhall	88.72	19	P	P	04 10 02.8	-0.5
O30N				IAmb	IAmb	04 10 04.0	
	comp=Z,3.7nm,0.6s						
WRH	Wood River Hil	88.72	13	P	P	04 10 01.9	-1.2
RIDG	Independent Ri	88.79	14	P	P	04 10 02.2	-1.3
RIDG				IAmb	IAmb	04 10 04.0	
	comp=Z,5.6nm,1.0s						
DOT	Dot Lake	88.89	15	P	P	04 10 03.2	-0.8
DOT				IAmb	IAmb	04 10 04.0	
	comp=Z,4.8nm,0.8s						
H21K	Melozitna Rive	88.90	10	P	P	04 10 03.4	-0.6
H21K				IAmb	IAmb	04 10 03.8	
	comp=Z,3.6nm,0.7s						
CCB	Clear Creek Bu	88.93	13		P	04 10 02.8	-1.3
WHY	Whitehorse	89.01	20	P	P	04 10 05.2	+0.5
WHY				IAmb	IAmb	04 10 05.5	
	comp=Z,6.7nm,0.8s						
IMAR	Indian Mountai	89.05	10	P	P	04 10 03.4	-1.2
COLA	College	89.12	13	P	P	04 10 03.6	-1.3
HILR	Hailar Array B	89.16	325	P	P	04 10 04.3	-1.2
	comp=Z,3.8nm,0.6s,baz=116,slow=5.1,SNR=5.0						
	comp=Z,3.8nm,0.6s						
SCRK	Sand Creek	89.19	15	P	P	04 10 04.7	-0.8
SCRK				IAmb	IAmb	04 10 19.6	
	comp=Z,7.3nm,1.4s						
IL31		89.23	13	IAmb	IAmb	04 10 04.4	
	comp=Z,4.5nm,0.8s						
ILAR	Eielson Array	89.23	13	P	P	04 10 03.9	-1.6
	comp=Z,2.0nm,0.4s,baz=219,slow=5.1,SNR=59						
	comp=Z,2.0nm,0.4s						
ILAR	Eielson Array	89.23	13	P	P	04 10 04.3	-1.2
F19K	Shaleruckik Mo	89.26	8	IAmb	IAmb	04 10 05.4	
	comp=Z,4.7nm,0.7s						
M29M	Somme Creek	89.34	17	IAmb	IAmb	04 10 06.8	
	comp=Z,5.7nm,0.8s						
H22K	Ishtalitna Cre	89.36	11	IAmb	IAmb	04 10 06.1	
	comp=Z,7.0nm,0.8s						
E18K	Tukpahlearik C	89.47	7	IAmb	IAmb	04 10 06.8	
	comp=Z,6.3nm,0.8s						
HHC	Hu-ho-hao-te	89.48	315	eP	P	04 10 10.4	+3.0
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,93nm,4.2s						
SNOW	Snow King Moun	89.55	42	P	P	04 10 08.1	+0.3
SNOW				IAmb	IAmb	04 10 08.9	
	comp=Z,6.6nm,0.8s						
G21K	Allakaket	89.58	10	IAmb	IAmb	04 10 07.2	
	comp=Z,5.6nm,0.8s						
MOOW	Moose Ponds	89.70	42	P	P	04 10 08.0	-0.5
J26L	Joseph Creek	89.73	14	IAmb	IAmb	04 10 08.6	
	comp=Z,7.6nm,0.8s						
F20K	Avaraart Lake	89.74	9	IAmb	IAmb	04 10 08.0	
	comp=Z,4.0nm,0.8s						
CMAR	Chiang Mai Arr	89.81	290	P	P	04 10 10.1	+0.8
	comp=Z,5.0nm,0.9s,baz=132,slow=2.9,SNR=21						
	comp=Z,5.0nm,0.9s						
BW06	Boulder Array	89.96	43	P	P	04 10 09.5	-0.2
PD31	Pinedale Array	89.96	43		P	04 10 09.6	-0.1
PDAR	Pinedale Array	89.96	43	P	P	04 10 09.1	-0.6
	comp=Z,2.2nm,0.7s,baz=213,slow=3.2,SNR=25						
	comp=Z,2.2nm,0.7s						
PDAR	Pinedale Array	89.96	43	P	P	04 10 09.3	-0.4
L29M	L29M	89.97	17	IAmb	IAmb	04 10 09.4	
	comp=Z,6.2nm,0.8s						
YHL	Hebgen Lake	89.98	41	P	P	04 10 10.9	+1.1
DAWY	Dawson	90.40	16	P	P	04 10 10.7	-0.3
DAWY				IAmb	IAmb	04 10 10.9	
	comp=Z,3.0nm,0.6s						
I26K	Coal Creek Min	90.51	14	P	P	04 10 11.1	-0.3
I26K				IAmb	IAmb	04 10 14.0	
	comp=Z,3.2nm,0.8s						
PZH	PanZhiHua	90.55	298	P	P	04 10 12.4	-0.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
C19K	Lookout Ridge	91.20	7	IAmb	IAmb	04 10 14.6	
	comp=Z,4.7nm,0.7s						
B21K	Ikpikpuk River	92.29	8	IAmb	IAmb	04 10 24.2	
	comp=Z,4.9nm,0.8s						
B22K	Teshekpuk Lake	93.12	8		P	04 10 22.4	-0.8
KURBB	Kurchatov Arra	114.22	317	PKP	PKPdf	04 15 42.9	-2.6
	comp=Z,0.2nm,0.3s,baz=76,slow=2.9,SNR=5.0						
BVAR	Borovoye Array	119.30	320	PKP	PKPdf	04 15 53.0	-2.2
	comp=Z,1.7nm,0.5s,baz=94,slow=1.1,SNR=9.2						
SPITS	Spitsbergen Ar	122.63	356	PKP	PKPdf	04 15 59.3	-1.7
	comp=Z,5.3nm,0.7s,baz=88,slow=5.9,SNR=7.3						
ARCES	ARCESS Array B	129.60	349	PKP	PKPdf	04 16 12.7	-1.8
	comp=Z,1.6nm,0.4s,baz=68,slow=1.8,SNR=19						
FINES	FINESS Array B	136.37	343	PKhKP	PKPpre	04 16 12.6	
	comp=Z,3.3nm,1.0s,baz=53,slow=1.8,SNR=4.6						
FINES				PKP	PKPdf	04 16 24.8	-2.5
	comp=Z,1.8nm,0.6s,baz=42,slow=2.0,SNR=7.9						
FINES				SKPbc	SKPbc	04 19 05.8	-2.4
	comp=Z,1.9nm,0.7s,baz=31,slow=4.4,SNR=5.7						
NB2	NORSAR Subarra	139.70	353	PKP	PKPdf	04 16 24.5	-9.0
	comp=Z,4.6nm,0.9s,baz=19,slow=3.8						
NOA	NORSAR Array B	139.70	353	PKhKP	PKPpre	04 16 23.7	
	comp=Z,0.4nm,0.5s,baz=20,slow=1.1,SNR=8.1						
NOA				PKP	PKPdf	04 16 34.1	+0.6
	comp=Z,0.7nm,0.6s,baz=14,slow=4.1,SNR=3.8						
HFS	Hagfors	140.23	350	PKhKP	PKPpre	04 16 26.4	
	comp=Z,3.0nm,0.3s,baz=60,slow=3.6,SNR=38						
NACGM	Naroch	141.38	337	ePKP	PKPdf	04 16 31.0	-5.7
	comp=Z,12nm,1.0s,baz=40						
AKASG	Malin Array Be	143.41	330	PKP	PKPab	04 16 37.0	-1.8
	comp=Z,15nm,0.6s,baz=44,slow=4.3,SNR=68						
AKASG	Malin Array Be	143.41	330		PKPab	04 16 36.9	-1.9
KIEV	Kiev	143.43	330		PKPab	04 16 37.2	-1.6
KIEV	Kiev	143.43	330	⇓P	PKPab	04 16 37.2	-1.6
MCD	Coleburn Disti	143.61	4	eP	PKPab	04 16 37.6	-1.7
DRUM	Mains of Drumt	144.33	4	eP	PKPbc	04 16 40.0	-1.6
INVG	Invergeldie, C	144.70	5	eP	PKPdf	04 16 41.3	-1.2
LAWE	Loch Awe, Argy	144.73	7	eP	PKPdf	04 16 40.9	-1.6
SORM	Soroca	145.56	327	⇑P	PKPdf	04 16 44.1	0.0
EKB	Eskdalemuir	145.85	5	PKPdf	PKPdf	04 16 44.4	0.0
EKA	Eskdalemuir Ar	145.85	5	PKPbc	PKPdf	04 16 44.5	0.0
	comp=Z,5.9nm,0.7s,baz=337,slow=2.7,SNR=26						
ESK	Eskdalemuir	145.87	5	PKPdf	PKPdf	04 16 44.5	0.0
NEWG	New Galloway	145.98	6	eP	PKPdf	04 16 45.1	+0.4
GAL1	Galloway	146.18	6	eP	PKPdf	04 16 45.5	+0.6
EDMD	Edmundbyers	146.43	3	eP	PKPdf	04 16 46.5	+1.0
BRTR	Keskin Array B	146.92	311	PKPbc	PKPdf	04 16 48.3	+1.4
	comp=Z,3.4nm,0.7s,baz=128,slow=4.3,SNR=25						
BRTR	Keskin Array B	146.92	311		PKPdf	04 16 48.4	+1.5
VLDR	Vladesti	147.19	325	⇑P	PKPdf	04 16 49.5	+2.5
TLCR		147.19	323	⇑P	PKPdf	04 16 49.5	+2.5
GIRR	Girov	147.28	327	⇑P	PKPdf	04 16 49.5	+2.4
GHRR		147.41	325	⇑P	PKPdf	04 16 50.5	+3.2
ANTO	Ankara	147.45	312	⇑P	PKPdf	04 16 50.6	+2.9
TESR	Tescani	147.51	327	⇑P	PKPdf	04 16 49.7	+2.2
CFR	Carcaliu	147.58	324	⇑P	PKPdf	04 16 49.8	+2.2
TPGR	Topolog	147.62	323	⇑P	PKPdf	04 16 50.6	+2.8
PANC	Panciu	147.67	325	⇑P	PKPdf	04 16 51.1	+3.3
MMAI	Mount Meron Ar	147.67	298	PKPbc	PKPdf	04 16 51.2	+2.9
	comp=Z,5.7nm,0.5s,baz=88,slow=2.9,SNR=12						
ONER	Baraj Valea Uz	147.76	327	⇓P	PKPdf	04 16 51.1	+3.2
ODBI	Odobesti	147.79	325	⇑P	PKPdf	04 16 50.3	+2.3
STHS	Stebnicka Huta	147.80	335	ePKP	PKiKP	04 16 55.4	+2.3
VRI	Vrincioaia	147.90	326	⇑P	PKPdf	04 16 51.1	+2.9
PLOR	Plostina	147.95	326	⇓P	PKPdf	04 16 51.1	+2.8
TURR	Turia	148.14	327	⇑P	PKPdf	04 16 52.3	+3.7
MANR	Mangalia	148.14	321	⇑P	PKPdf	04 16 52.1	+3.5
COVR	Voineasa-Covas	148.19	326	⇑P	PKPdf	04 16 51.1	+2.4
FOEL	Foel Wylfa	148.28	5	eP	PKPdf	04 16 51.4	+2.8
BOSR	Bodos	148.31	327	⇑P	PKPbc	04 16 52.7	-0.4
DOPR	Dopca	148.52	327	⇓P	PKPbc	04 16 53.3	-0.3
OSTC	Ostas	148.55	342	⇑ePKP	PKPbc	04 16 53.5	0.0
STEB	Steborice	148.61	339	⇑ePKP	PKPdf	04 16 53.0	+3.8
STEB				ePKPAB	PKPab	04 16 59.1	-0.3
UPC	Upice	148.65	342	⇑ePKP	PKPdf	04 16 53.0	+3.8
LANS	Liptovska Anna	148.69	337	ePKP	PKPbc	04 16 54.2	+0.3
CLL	Collm	148.70	346	⇓iPKPbc	PKPdf	04 16 52.9	+3.6
	comp=Z,13nm,0.7s						
CLL				i PKPab	PKiKP	04 16 58.7	+3.9
	comp=Z,8.0nm,0.8s						
DPC	Dobruska-Polom	148.70	341	⇑ePKP	PKPbc	04 16 53.3	-0.6
DPC				ePKPAB	PKPab	04 16 59.6	-0.2
KRLC	Kraliky	148.80	341	⇑ePKP	PKPbc	04 16 53.6	-0.6
KRLC				ePKPAB	PKPab	04 17 00.0	-0.2
MORC	Moravsky Berou	148.82	340	⇑P	PKPbc	04 16 53.8	-0.5
MORC	Moravsky Berou	148.82	340	ePKP	PKPbc	04 16 53.6	-0.6
CJR	Cluj-Napoca	148.87	330	⇑P	PKPdf	04 16 53.7	+3.9
MDB	Medias	148.90	328	⇓P	PKPbc	04 16 54.2	-0.3
PVCC	Panska Ves	149.03	344	⇑ePKP	PKPbc	04 16 53.9	-0.7
MAUC	Maruska	149.08	339	⇑ePKP	PKPbc	04 16 54.6	-0.3
MARR	Marisel-Cluj	149.12	330	⇑P	PKPdf	04 16 54.3	+4.1
MCH1	Michaelchurch	149.18	5	eP	PKPdf	04 16 53.5	+3.5
DRGR		149.22	331	⇑P	PKPdf	04 16 54.5	+4.1
HSKC	Hora Svate Kat	149.25	345	⇑ePKP	PKPdf	04 16 54.3	+4.1
ARR	Arges	149.32	327	⇓P	PKPbc	04 16 54.7	-0.9
PRU	Pruhonice	149.53	343	⇑ePKP	PKPbc	04 16 55.2	-0.7
VRAC	Vranov	149.54	340	⇑P	PKPbc	04 16 55.0	-0.9
VRAC	Vranov	149.54	340	ePKP	PKPdf	04 16 54.8	+4.1
PSZ	Piszkesteto	149.54	335	⇑P	PKPdf	04 16 54.2	+3.4
JAVC	Velka Javorina	149.57	339	ePKP	PKPbc	04 16 56.0	-0.1
LOT	Lotru	149.70	328	⇑P	PKPdf	04 16 54.8	+3.6
DEV	Deva	149.80	329	⇑P	PKPbc	04 16 55.7	-0.9
KRUC	Moravsky	149.81	340	ePKP	PKPdf	04 16 55.3	+4.2
TREC	Trest	149.89	341	⇑ePKP	PKPbc	04 16 55.7	-1.1
SIRR	Siria	150.09	331	⇑P	PKPbc	04 16 56.5	-0.8
MODS	Modra-Piesok	150.12	338	ePKP	PKPbc	04 16 57.1	-0.2
ZVC	Zvikov	150.13	343	⇑ePKP	PKPbc	04 16 56.4	-0.9
GZR	Gura Zlata	150.22	329	⇓P	PKPbc	04 16 56.5	-1.2
SRO	Srobarova	150.23	337	ePKP	PKPbc	04 16 57.2	-0.3
SRE	Strehaia	150.54	327	⇑P	PKPdf	04 16 56.8	+4.4
KHC	Kasperske Hory	150.57	344		PKPbc	04 16 57.6	-0.8
KHC	Kasperske Hory	150.57	344	⇑ePKP	PKPbc	04 16 57.6	-0.8
KHC				ePKPAB	PKPab	04 17 06.8	-0.8
BZS	Buzias	150.60	330	⇑P	PKPbc	04 16 57.4	-1.1
CKRC	Cesky Krumlov	150.66	342	⇑ePKP	PKPbc	04 16 57.8	-0.8
HERR	Herculane	150.77	328	⇓P	PKPbc	04 16 57.6	-1.3
GERES	GERESS Array B	150.80	343	PKPbc	PKPdf	04 16 57.5	+4.7
	comp=Z,3.0nm,0.7s,baz=29,slow=3.0,SNR=26						
CONA	Conrad Observa	150.98	340	i PKP	PKPbc	04 16 58.5	-0.9
	comp=Z,5.3nm,0.6s						
CONA				i PKP	PKPab	04 17 09.0	-0.4
	comp=Z,3.5nm,0.8s						
RONA	Rosalia, Austr	151.04	339	i PKP	PKPbc	04 16 58.5	-1.0
	comp=Z,7.1nm,0.5s						
RONA				i PKP	PKPab	04 17 10.0	+0.4
	comp=Z,6.3nm,0.9s						
MDVR	Moldovita	151.18	329	⇓P	PKPbc	04 16 58.6	-1.3
MORH	Mrgy, Hungar	151.42	334	⇑P	PKPbc	04 16 58.8	-1.5
MOA	Molln	151.54	342	i PKP	PKPbc	04 16 59.3	-1.3
	comp=Z,0.9nm,0.5s						
MOA				ePKP	PKPab	04 17 10.9	-0.8
	comp=Z,4.6nm,1.1s						
ARSA	Arzberg	151.69	339	ePKiKP	PKPbc	04 17 00.8	-0.1
	comp=Z,0.8nm,0.4s						
ARSA				i PKP	PKPab	04 17 11.8	-0.6
	comp=Z,2.0nm,0.7s						
BIOA	Bad Ischl, Aus	151.87	342	ePKP	PKPbc	04 16 59.6	-1.7
	comp=Z,0.5nm,0.2s						
BIOA				i PKP	PKPab	04 17 13.4	+0.3
	comp=Z,14nm,1.5s						
BOVS	Bovan	152.03	327	⇑P	PKPdf	04 16 59.6	+5.0
LESA	Schwarzleotal	152.38	343	i PKP	PKPbc	04 17 01.1	-1.5
	comp=Z,2.7nm,0.6s						
WATA	Walderalm	152.74	345	i PKP	PKPbc	04 17 01.8	-1.7
	comp=Z,1.0nm,0.3s						
RETA	Reutte	152.79	346	ePKP	PKPbc	04 17 02.1	-1.4
	comp=Z,0.3nm,0.2s						
RETA				i PKP	PKPab	04 17 16.5	-0.6
	comp=Z,7.1nm,1.1s						
WTTA	Wattenberg	152.79	345	i PKP	PKPbc	04 17 02.1	-1.5
	comp=Z,2.6nm,0.3s						
WTTA				i PKP	PKPab	04 17 16.2	-1.1
	comp=Z,5.2nm,0.6s						
ABTA	Abfaltersbach	153.04	343	i PKP	PKPbc	04 17 02.1	-1.9
	comp=Z,3.1nm,0.6s						
DAVA	Damuels	153.18	347	i PKP	PKPab	04 17 18.1	-0.7
	comp=Z,4.2nm,0.7s						
FETA	Feichten	153.24	346	ePKP	PKPdf	04 16 54.8	-1.7
	comp=Z,1.2nm,0.6s						

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*NEIC **22** 04:00:42.7±0.9, 19°.08N±0°.03×67°.73W±0°.03, h10^{km}±1^{km}, ML2.3/14, Md3.5/8(RSPR), Error ellipse: s-maj=6.6km s-min=3.9km az=225.0*

*RSPR **22** 04:00:44.8, 19°.12N×67°.83W, h30^{km}±28^{km}, MD3.5/8*

*SDD **22** 04:00:44.9±1.1, 19°.25N×67°.43W, h15^{km}±17^{km}, MD3.3, ML2.7, MW3.1, Presumed earthquake*

ISC 22 04:00:41.2±3.0**, 19°.2N**±0°.1×**67°.71W**±0°.09**, h11**^{km}±10^{km}**, n40,** σ**0.^{s}57**/46**, 9C-7D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.81	164		Pb	04 00 57.0	-0.2
IDE					Sg	04 01 06.2	-1.1
IDE	Isla Desecheo	0.81	164	⇑eP	Pb	04 00 57.0	-0.2
IDE	Isla Desecheo	0.81	164	eS	Sg	04 01 06.2	-1.1
AGPR	Aguadilla, PR	0.90	141		Pb	04 00 59.0	+0.2
AGPR				IAML		04 01 11.2	
	100nm,0.2s						
AGPR				IAML		04 01 28.0	
	116nm,1.7s						
AGPR	Aguadilla, PR	0.90	141	⇑eP	Pb	04 00 59.0	+0.2
AGPR	Aguadilla, PR	0.90	141	eS	Sg	04 01 10.0	-0.1
AGPR	Aguadilla, PR	0.90	141	⇓ePg	Pn	04 00 59.5	-0.2
AGPR				⇑eSg	Sg	04 01 10.0	-0.1
AGPR				IAML		04 01 13.0	
	comp=N,149nm,3.4s						
LSP	Las Mesas	1.15	149		Pn	04 01 03.3	0.0
LSP					Sb	04 01 17.8	-0.2
LSP	Las Mesas	1.15	149	⇑eP	Pn	04 01 03.3	0.0
LSP	Las Mesas	1.15	149	eS	Sb	04 01 17.8	-0.2
AOPR	Arecibo Observ	1.22	132		Pg	04 01 04.3	-0.3
AOPR					Sb	04 01 19.7	-0.3
AOPR	Arecibo Observ	1.22	132	IAML		04 01 32.2	
	comp=N,78nm,0.3s						
AOPR	Arecibo Observ	1.22	132	⇓eP	Pg	04 01 04.3	-0.3
AOPR	Arecibo Observ	1.22	132	eS	Sb	04 01 19.7	-0.3
AOPR	Arecibo Observ	1.22	132	⇓ePg	Pg	04 01 04.4	-0.2
AOPR				IAML		04 01 32.5	
	comp=N,62nm,0.3s						
CRPR	Cabo Rojo, PR	1.29	154		Pn	04 01 05.1	0.0
CRPR					Sn	04 01 22.3	0.0
CRPR	Cabo Rojo, PR	1.29	154	IAML		04 01 24.1	
	comp=N,62nm,0.6s						
CRPR				IAML		04 01 24.9	
	comp=N,58nm,0.7s						
CRPR	Cabo Rojo, PR	1.29	154	⇓eP	Pn	04 01 05.1	0.0
CRPR	Cabo Rojo, PR	1.29	154	eS	Sn	04 01 22.3	0.0
CRPR	Cabo Rojo, PR	1.29	154	⇓ePg	Pg	04 01 07.7	+1.8
CRPR				⇓eSg	Sg	04 01 23.7	+1.1
CRPR				IAML		04 01 27.1	
	comp=N,275nm,0.3s						
UUPR	Utuado, UPR, P	1.30	134		Pb	04 01 05.8	0.0
UUPR					Sb	04 01 22.5	-0.1
UUPR	Utuado, UPR, P	1.30	134	⇑eP	Pb	04 01 05.8	0.0
UUPR	Utuado, UPR, P	1.30	134	eS	Sb	04 01 22.5	-0.1
MLPR	Magueyes Islan	1.35	152	⇓eP	Pb	04 01 06.2	-0.2
MLPR	Magueyes Islan	1.35	152	eS	Sb	04 01 22.9	-0.9
MLPR	Magueyes Islan	1.35	152	i P	Pb	04 01 06.3	-0.2
MLPR				⇑eSg	Sg	04 01 24.9	+0.4
MLPR				IAML		04 01 27.4	
	comp=N,338nm,0.3s						
ECPR	Experimental S	1.53	123	⇑iP	Pb	04 01 09.3	-0.3
ECPR	Experimental S	1.53	123	eS	Sn	04 01 28.3	-0.1
OBIP	Obispado Ponce	1.53	137		Pb	04 01 09.4	-0.2
OBIP					Sn	04 01 28.0	-0.4
OBIP	Obispado Ponce	1.53	137	⇑eP	Pb	04 01 09.4	-0.2
OBIP	Obispado Ponce	1.53	137	eS	Sn	04 01 28.0	-0.4
GCPR	Guaynabo City	1.76	119		Pb	04 01 13.6	+0.1
GCPR				IAML		04 01 46.2	
	comp=N,28nm,2.6s						
GCPR	Guaynabo City	1.76	119		Sb	04 01 36.3	+0.7
GCPR	Guaynabo City	1.76	119	IAML		04 01 35.7	
	comp=E,25nm,2.6s						
GCPR	Guaynabo City	1.76	119	⇑eP	Pb	04 01 13.6	+0.1
GCPR	Guaynabo City	1.76	119	eS	Sb	04 01 36.3	+0.7
HUMP	Col San Antoni	2.04	120		Pb	04 01 17.1	-1.1
HUMP					Sn	04 01 41.8	+0.9
HUMP	Col San Antoni	2.04	120	IAML		04 01 46.6	
	comp=E,23nm,2.4s						
HUMP				IAML		04 02 03.3	
	comp=E,24nm,3.0s						
HUMP	Col San Antoni	2.04	120	⇑eP	Pb	04 01 17.1	-1.1
HUMP	Col San Antoni	2.04	120	eS	Sn	04 01 41.8	+0.9

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*NEIC **22** 04:01:40.9±2.5, 17°.12N±0°.03×95°.39W±0°.04, h106^{km}±7^{km}, mb4.4/7, Md4.3/98(MEX), Error ellipse: s-maj=6.1km s-min=2.6km az=123.0*

*MEX **22** 04:01:41.5±1.0, 17°.07N×95°.42W, h110^{km}±8^{km}, MD4.3*

ISC 22 04:01:40.1±0.9**, 17°.14N**±0°.03×**95°.41W**±0°.02**, h116**^{km}±7^{km}**, n91,** σ**2.^{s}14**/147**, mb4.4**/4**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.50	96		Pn	04 01 57.5	-0.2
CMIG					Sn	04 02 09.2	-1.7
CMIG	Matias Romero	0.50	96	i P	Pn	04 01 57.5	-0.2
CMIG				eS	Sn	04 02 09.2	-1.7
NEUV	Arroyo Zacate	0.68	326		Pn	04 01 58.9	-0.1
NEUV					Sn	04 02 12.0	-1.2
NEUV	Arroyo Zacate	0.68	326	i P	Pn	04 01 58.9	-0.1
NEUV				eS	Sn	04 02 12.0	-1.2
MIHL	Minatitlan	1.18	44		Sn	04 02 20.9	-0.7
MIHL	Minatitlan	1.18	44	eS	Sn	04 02 20.9	-0.7
UXUV	UXUV	1.22	82		Pn	04 02 04.7	+0.5
UXUV					Sn	04 02 20.8	-1.6
UXUV	UXUV	1.22	82	eP	Pn	04 02 04.7	+0.5
UXUV				eS	Sn	04 02 20.8	-1.6
OXBJ	Oaxaca	1.26	267	eP	Pn	04 02 11.1	+6.3
OXBJ				eS	Sn	04 02 29.7	+6.2
OXIG	Oaxaca	1.27	267		Pn	04 02 05.7	+0.8
OXIG					Sn	04 02 24.5	+0.8
VHO	Vista Hermosa	1.27	267	eP	Pn	04 02 05.7	+0.8
VHO				eS	Sn	04 02 24.5	+0.8
TUIG	Tuzandepetl	1.29	47		Pn	04 02 05.5	+0.5
TUIG					Sn	04 02 23.6	-0.1
TUIG	Tuzandepetl	1.29	47	eP	Pn	04 02 05.5	+0.5
TUIG				eS	Sn	04 02 23.6	-0.1
PMUV	Sontecomapan	1.42	11		Pn	04 02 06.6	+0.1
PMUV					Sn	04 02 24.2	-2.3
PMUV	Sontecomapan	1.42	11	eP	Pn	04 02 06.6	+0.1
PMUV				eS	Sn	04 02 24.2	-2.3
HUIG	Huatulco	1.52	206		Pn	04 02 06.1	-1.5
HUIG					Sn	04 02 26.2	-2.3
HUIG	Huatulco	1.52	206	eP	Pn	04 02 06.1	-1.5
HUIG				eS	Sn	04 02 26.2	-2.3
PANG	Puerto Angel	1.79	215		Pn	04 02 09.1	-1.8
PANG					Sn	04 02 32.1	-2.1
PANG	Puerto Angel	1.79	215	eP	Pn	04 02 09.1	-1.8
PANG				eS	Sn	04 02 32.1	-2.1
TOIG	Toxpalan	1.84	301		Pn	04 02 13.2	+1.7
TOIG					Sn	04 02 35.9	+0.4
TOIG	Toxpalan	1.84	301	eP	Pn	04 02 13.2	+1.7
TOIG				eS	Sn	04 02 35.9	+0.4
PEIG	Puerto Escondi	2.02	236		Pn	04 02 11.9	-1.8
PEIG	Puerto Escondi	2.02	236	eP	Pn	04 02 11.9	-1.8
PEIG				eS	Sn	04 02 37.3	-2.0
YOIG	Yosondua	2.06	262		Pn	04 02 14.7	+0.2
YOIG					Sn	04 02 40.7	0.0
YOIG	Yosondua	2.06	262	eP	Pn	04 02 14.7	+0.2
YOIG				eS	Sn	04 02 40.7	0.0
TGIG		2.22	99		Pn	04 02 16.9	+0.7
TGIG					Sn	04 02 42.0	-1.9
TGIG		2.22	99	eP	Pn	04 02 16.9	+0.7
TGIG				eS	Sn	04 02 42.0	-1.9
TGBT	Tuxtla Gutierr	2.25	99		Sn	04 02 43.1	-1.3
TGBT	Tuxtla Gutierr	2.25	99	eS	Sn	04 02 43.1	-1.3
TPIG	Tehuac#an	2.25	305		Pn	04 02 19.1	+2.3
TPIG					Sn	04 02 45.3	+0.5
TPIG	Tehuac#an	2.25	305	eP	Pn	04 02 19.1	+2.3
TPIG				eS	Sn	04 02 45.3	+0.5
TXIG	Tlaxiaco	2.26	273		Pn	04 02 18.0	+1.0
TXIG					Sn	04 02 44.8	-0.3
TXIG	Tlaxiaco	2.26	273	eP	Pn	04 02 18.0	+1.0
TXIG				eS	Sn	04 02 44.8	-0.3
HLIG	Huajuapan de L	2.38	287		Pn	04 02 20.1	+1.6
HLIG					Sn	04 02 47.2	-0.8
HLIG	Huajuapan de L	2.38	287	eP	Pn	04 02 20.1	+1.6
HLIG				eS	Sn	04 02 47.2	-0.8
PCIG		2.54	124		Pn	04 02 21.0	+0.7
PCIG					Sn	04 02 50.7	-0.5
PCIG		2.54	124	eP	Pn	04 02 21.0	+0.7
PCIG				eS	Sn	04 02 50.7	-0.5
JAUV	Jalcomulco	2.58	329		Pn	04 02 20.5	-0.3
JAUV					Sn	04 02 50.8	-1.4
JAUV	Jalcomulco	2.58	329	eP	Pn	04 02 20.5	-0.3
JAUV				eS	Sn	04 02 50.8	-1.4
FTIG	Fresnillo de T	2.71	287		Pn	04 02 24.4	+1.8
FTIG	Fresnillo de T	2.71	287	eP	Pn	04 02 24.4	+1.8
FTIG				eS	Sn	04 02 54.5	-0.8
PNIG	Pinotepa	2.71	254		Pn	04 02 21.3	-1.2
PNIG	Pinotepa	2.71	254	eP	Pn	04 02 21.3	-1.2
PNIG				eS	Sn	04 02 52.1	-3.1
LVIG	Laguna Verde	2.74	340		Pn	04 02 22.0	-0.9
LVIG	Laguna Verde	2.74	340	eP	Pn	04 02 22.0	-0.9
LVIG				eS	Sn	04 02 52.7	-3.1
TLIG	Tlapa	3.04	278		Pn	04 02 28.1	+1.1
TLIG	Tlapa	3.04	278	eP	Pn	04 02 28.1	+1.1
TLIG				eS	Sn	04 03 01.5	-1.7
MGIG	Malinaltepec	3.08	272		Pn	04 02 28.5	+0.9
MGIG	Malinaltepec	3.08	272	eP	Pn	04 02 28.5	+0.9
MGIG				eS	Sn	04 03 02.3	-1.9
CCIG	Comitan	3.25	105		Pn	04 02 31.1	+1.3
CCIG					Sn	04 03 06.5	-1.6
CCIG	Comitan	3.25	105	eP	Pn	04 02 31.1	+1.3
CCIG				eS	Sn	04 03 06.5	-1.6
PPCL	Tochimilco	3.52	300	eP	Pn	04 02 34.0	+0.5
PPCL				eS	Sn	04 03 12.1	-2.7
PPSX	Xalitzintla	3.52	304	eS	Sn	04 03 07.0	-7.8
PPPT	Popocatepetl	3.56	301	eP	Pn	04 02 37.3	+3.1
PPPT				eS	Sn	04 03 15.8	-0.1
CRIG	Cruz Grande	3.59	264		Pn	04 02 33.2	-0.9
CRIG	Cruz Grande	3.59	264	eP	Pn	04 02 33.2	-0.9
CRIG				eS	Sn	04 03 13.8	-2.0
PPM	Popocatepetl	3.61	302	eP	Pn	04 02 38.8	+3.9
PPM				eS	Sn	04 03 10.0	-7.1
PPIG	Popocatepetl	3.61	302		Pn	04 02 38.8	+3.9
CXUV	Coxquihui	3.65	326		Pn	04 02 36.3	+1.3
CXUV	Coxquihui	3.65	326	eP	Pn	04 02 36.3	+1.3
CXUV				eS	Sn	04 03 10.4	-7.1
PATR	El Naranjo	3.66	123		Pn	04 02 37.4	+2.1
PATR					Sn	04 03 18.9	+1.0
PATR	El Naranjo	3.66	123	eP	Pn	04 02 37.4	+2.1
PATR				eS	Sn	04 03 18.9	+1.0
PATR				eS		04 03 19.6	

PAVE	Pavencul	3.66	122		Pn	04 02 37.2	+1.9
PAVE					Sn	04 03 19.0	+1.0
PAVE	Pavencul	3.66	122	eP	Pn	04 02 37.2	+1.9
PAVE				eS	Sn	04 03 19.0	+1.0
CHUJ	Union Juarez	3.77	122	eP	Pn	04 02 38.8	+2.0
CHUJ				eS	Sn	04 03 20.8	+0.1
YAIG	Yautepec	3.88	297		Pn	04 02 40.8	+2.7
YAIG	Yautepec	3.88	297	eP	Pn	04 02 40.8	+2.7
YAIG				eS	Sn	04 03 22.1	-0.9
DAIG	Los Arroyos	4.06	269		Pn	04 02 40.3	-0.1
DAIG	Los Arroyos	4.06	269	eP	Pn	04 02 40.3	-0.1
DAIG				eS	Sn	04 03 23.9	-3.2
MEIG	Mezcala	4.09	282		Pn	04 02 42.9	+2.0
MEIG	Mezcala	4.09	282	eP	Pn	04 02 42.9	+2.0
MEIG				eS	Sn	04 03 25.1	-3.0
PLIG	Platanillo	4.09	288	eP	Pn	04 02 32.9	-8.0
PLIG				eS	Sn	04 03 25.2	-2.9
UNM	Universidad Na	4.19	302	Pn	Pn	04 02 41.7	-0.7
SCIG	Sabancuy	4.41	65		Pn	04 02 45.1	0.0
SCIG	Sabancuy	4.41	65	eP	Pn	04 02 45.1	0.0
SCIG				eS	Sn	04 03 30.7	-4.8
CAIG	El Cayaco	4.65	270		Pn	04 02 48.1	-0.1
CAIG	El Cayaco	4.65	270	eP	Pn	04 02 48.1	-0.1
CAIG				eS	Sn	04 03 38.8	-2.5
PETF	Flores	5.31	92		Pn	04 02 55.0	-2.2
PETF	Flores	5.31	92	eP	Pn	04 02 54.7	-2.5
PETF				eS	Sn	04 03 51.3	-5.9
ZIIG	Zihuatanejo	5.80	275		Pn	04 03 05.3	+1.4
ZIIG	Zihuatanejo	5.80	275	eP	Pn	04 03 05.3	+1.4
MOIG	Morelia	6.04	296	eP	Pn	04 03 01.7	-5.6
TEIG	Tepich	7.42	65	Pn	Pn	04 03 24.5	-1.3
MMIG	Aquila	7.65	280		Pn	04 03 30.8	+1.9
MMIG	Aquila	7.65	280	eP	Pn	04 03 30.8	+1.9
MMIG				eS	Sn	04 04 46.6	-7.4
U49A	Red Boiling Sp	21.09	22	P	P	04 06 18.5	+3.2
V55A	Taylorsville	22.50	31	P	P	04 06 30.3	+0.2
V55A				IAmb	IAmb	04 06 40.6	
	comp=Z,25nm,1.5s						
O49A	Covington	24.89	20	P	P	04 06 52.9	+0.8
O49A				IAmb	IAmb	04 07 17.4	
	comp=Z,20nm,1.5s						
R55A	Marlinton	24.96	29	P	P	04 06 54.9	+2.0
R55A				IAmb	IAmb	04 07 37.2	
	comp=Z,21nm,1.4s						
O54A	Avella	26.40	27	P	P	04 07 06.3	+0.6
O54A				IAmb	IAmb	04 07 39.1	
	comp=Z,13nm,1.1s						
KMRM	Mail Ridge	33.59	319	P	P	04 08 10.0	+0.7

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*NEIC **22** 04:06:39.5±1.4, 18°.4S±0°.3×178°.17W±0°.08, h488km±16km, mb4.2/10, Error ellipse: s-maj=38.6km s-min=8.3km az=169.0*

*IDC **22** 04:06:42.0±6.6, 18°.45S×178°.22W, h520km±77km, mb3.2/8, mbtmp4.1/9, Error ellipse: s-maj=34.6km s-min=27.4km az=31.0*

ISC 22 04:06:44.2±0.8**, 18°.5S**±0°.2×**178°.3W**±0°.1**, h557**km**, n22, σ1s.09**/21**, mb4.0**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.70	55	P	P	04 08 30.9	-8.4
DZM	Mont Dzumac	14.80	253	P	P	04 09 51.1	-0.6
	6.5nm,1.0s,baz=75,slow=16,SNR=1.5						
RAR	Rarotonga	17.59	102	P	P	04 10 15.7	-2.4
URZ	Urewera	20.12	191	P	P	04 10 39.8	-1.0
	11nm,0.9s,baz=112,slow=18,SNR=2.7						
	11nm,0.9s						
CTA	Charters Tower	33.51	261	P	P	04 12 38.5	+0.2
	4.5nm,0.9s,baz=84,slow=15,SNR=2.6						
	4.5nm,0.9s						
CTAO	Charters Tower	33.51	261	P	P	04 12 38.3	0.0
CTAO				IAmb	IAmb	04 12 39.2	
	comp=Z,15nm,1.3s						
COEN	Coen	37.27	271	P	P	04 13 07.9	-1.7
COEN				IAmb	IAmb	04 13 10.1	
	comp=Z,8.3nm,1.1s						
STKA	Stephens Creek	38.50	242	P	P	04 13 20.7	+1.4
	comp=Z,1.5nm,0.5s,baz=78,slow=14,SNR=5.7						
	comp=Z,1.5nm,0.5s						
STKA	Stephens Creek	38.50	242	P	P	04 13 20.6	+1.2
STKA				IAmb	IAmb	04 14 02.6	
	comp=Z,15nm,1.2s						
BBOO	Buckleboo	43.27	242	P	P	04 13 57.9	+0.6
WR8	Warramunga Arr	44.53	260	P	P	04 14 06.7	-0.5
WR8				IAmb	IAmb	04 14 28.4	
	comp=Z,6.2nm,1.2s						
WRA	Warramunga Arr	44.69	260	P	P	04 14 08.1	-0.3
	comp=Z,0.8nm,0.5s,baz=96,slow=6.7,SNR=9.0						
	comp=Z,0.8nm,0.5s						
WRA	Warramunga Arr	44.69	260	P	P	04 14 07.4	-0.9
AS31	Alice Springs	44.79	255	P	P	04 14 08.9	-0.3
AS31				IAmb	IAmb	04 14 10.2	
	comp=Z,2.2nm,0.6s						
ASAR	Alice Springs	44.79	255	P	P	04 14 09.4	+0.3
	comp=Z,6.1nm,0.5s,baz=89,slow=8.6,SNR=125						
	comp=Z,6.1nm,0.5s						
ASAR	Alice Springs	44.79	255	P	P	04 14 09.1	-0.1
KNRA	Kununurra	50.59	265	P	P	04 14 51.9	-0.6
KNRA				IAmb	IAmb	04 15 25.8	
	comp=Z,28nm,1.5s						
QSPA	South Pole Qui	71.58	180	P	P	04 17 10.8	+1.4
	comp=Z,2.1nm,1.2s,baz=54,slow=3.9,SNR=2.1						
	comp=Z,2.1nm,1.2s						
QSPA	South Pole Qui	71.58	180	P	P	04 17 10.4	+1.1
TXAR	Lajitas Array	86.17	58	P	P	04 18 28.7	+1.5
	comp=Z,0.4nm,0.7s,baz=239,slow=4.6,SNR=4.7						
	comp=Z,0.4nm,0.7s						
TXAR	Lajitas Array	86.17	58	P	P	04 18 27.9	+0.6
ILAR	Eielson Array	86.40	13	P	P	04 18 27.8	+0.4
	comp=Z,0.6nm,1.0s,baz=206,slow=6.2,SNR=4.7						
	comp=Z,0.6nm,1.0s						

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*IDC **22** 04:07:52.1±5.4, 35°.78N×70°.31E, h93km±47km, mb3.5/7, mbtmp3.8/11, MS3.4/1, Error ellipse: s-maj=36.4km s-min=28.2km az=20.0*

*NNC **22** 04:07:56.3±4.9, 36°.60N×69°.93E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=39.6km s-min=29.7km az=166.0*

*NEIC **22** 04:07:56.4±1.6, 36°.07N±0°.05×70°.16E±0°.08, h118km±12km, mb4.1/5, Error ellipse: s-maj=9.1km s-min=7.9km az=108.0*

ISC 22 04:07:54.6±0.6**, 36°.11N**±0°.05×**70°.29E**±0°.05**, h110**km**, n57, σ2s.52**/69**, mb3.9**/7**, 5C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANEM	Manem	1.81	37		Pn	04 08 29.7	+4.1
MANEM				Sn	Sn	04 08 54.1	+5.0
KBL	Kabul	1.87	214		Pn	04 08 27.5	+1.3
KBL				Sn	Sn	04 08 51.7	+1.6
SHAA	Shahritus	2.27	311		Pn	04 08 32.7	+1.6
SHAA				Sn	Sn	04 08 58.2	-0.8
CHGR	Chuyangaron	2.70	341		Pn	04 08 38.6	+1.9
GAR	Garm	2.89	0		Pn	04 08 41.8	+2.6
NIL	Nilore	3.45	134		Pn	04 08 49.1	+2.4
ARSB	Arslanbob	5.62	21		Pn	04 09 17.1	+1.2
KSH	Kashi	5.64	51	Pn	Pn	04 09 15.3	-0.9
KSH				Sn	Sn	04 10 13.3	-6.4
KSH				smax	smax		
	comp=N,140nm,0.6s						
KSH				smax	smax		
	comp=E,87nm,0.5s						
THN	Thein Dam	5.82	127	eP	Pn	04 09 22.3	+4.1
THN				eS	Sn	04 10 23.4	+0.1
THN				IAML		04 10 25.4	
	comp=N,205nm,0.3s						
THN				IAML		04 10 26.0	
	comp=E,173nm,0.5s						
TSSA	Tissa	5.83	122	eP	Pn	04 09 22.6	+3.7
TSSA				eS	Sn	04 10 23.7	-0.9
TSSA				IAML		04 10 24.3	
	comp=E,207nm,0.0s						
TSSA				IAML		04 10 24.6	
	comp=N,288nm,0.1s						
DHRM	DHARAMSHALA	6.29	126	eP	Pn	04 09 27.6	+2.4
DHRM				eS	Sn	04 10 34.0	-1.7
DHRM				IAML		04 10 35.2	
	comp=N,343nm,0.9s						
DHRM				IAML		04 10 35.7	
	comp=E,338nm,0.5s						
UCH	Uchtor	6.94	27	P	Pn	04 09 35.6	+1.6
	SNR=20						
KK31	Karatay Array	6.99	1		Pn	04 09 35.7	+1.3
KK31	Karatay Array	6.99	1	⇓P	Pn	04 09 35.0	+0.6
	comp=E,11nm,0.3s,baz=176,slow=13,SNR=193						
KK31				⇓S	Sn	04 10 51.1	-1.2
	comp=E,4.8nm,0.3s,baz=196,slow=24,SNR=4.5						
KKAR	Karatay Array	6.99	1		Pn	04 09 35.7	+1.4
EKS2	Erkin-Say	7.08	21	P	Pn	04 09 37.6	+1.9
	SNR=13						
AAK	Ala-Archa	7.29	25	P	Pn	04 09 40.5	+1.9
	SNR=23						
AAK	Ala-Archa	7.29	25	P	Pn	04 09 40.4	+1.9
	comp=E,15nm,0.3s,baz=194,slow=5.9,SNR=61						
AAK				S	Sn	04 10 57.7	-2.0
	comp=E,4.6nm,0.3s,baz=180,slow=20,SNR=3.5						
AAK	Ala-Archa	7.29	25		Pn	04 09 40.6	+2.1
AAK	Ala-Archa	7.29	25	⇓P	Pn	04 09 39.7	+1.2
	comp=E,4.2nm,0.5s						
AAK				⇑S	Sn	04 10 59.4	-0.4
	comp=E,10nm,0.7s						
KBK	Karagaybulak	7.47	27	P	Pn	04 09 43.2	+2.2
	SNR=12						
FRU1	Bishkek	7.49	25	Pn	Pn	04 09 43.9	+2.7
SMLA	Simla	7.58	129	eP	Pn	04 09 45.0	+2.5
SMLA				eS	Sn	04 11 03.6	-3.1
SMLA				IAML		04 11 06.1	
	comp=N,103nm,0.2s						
SMLA				IAML		04 11 06.5	
	comp=E,106nm,0.2s						
ULHL	Ulahol	7.67	35	P	Pn	04 09 46.7	+2.9
	SNR=20						
CHMS	Chumysh	7.70	25	P	Pn	04 09 45.7	+1.8
	SNR=16						
BOOM	Boomskoye usch	7.73	33	Pn	Pn	04 09 47.1	+2.6
USP	Ospenovka	7.85	23	P	Pn	04 09 47.9	+1.8
	SNR=24						
TKM2	Tokmak 2	7.94	29	P	Pn	04 09 49.1	+1.7
	SNR=12						
KLP	Kalpa	8.04	122	eP	Pn	04 09 50.8	+1.8
KLP				eS	Sn	04 11 14.2	-4.1
KLP				IAML		04 11 20.4	
	comp=N,63nm,0.2s						
KLP				IAML		04 11 23.0	
	comp=E,62nm,0.2s						
WUS	Wushi	8.64	51		Pn	04 09 59.1	+2.3
PRZ	Przheval'sk	8.94	42	Pn	Pn	04 10 04.2	+3.2
KUDL	Kundal	9.52	145	eP	Pn	04 10 10.0	+1.4
KUDL				eS	Sn	04 11 46.1	-7.7
KUDL				IAML		04 11 49.1	
	comp=N,37nm,0.3s						
KUDL				IAML		04 11 49.4	
	comp=E,44nm,0.3s						
MAKZ	Makanchi	13.81	36		P	04 11 08.0	-2.3
MKAR	Makanchi Array	13.95	36	P	Pn	04 11 08.8	+1.5
	comp=E,0.9nm,0.7s,baz=235,slow=14,SNR=7.9						
MKAR	Makanchi Array	13.95	36		P	04 11 09.6	-2.2
AB31	Akbulak array	15.16	333		Pn	04 11 23.0	+0.3
AB31				IAmb	IAmb	04 11 24.2	
	comp=Z,6.0nm,0.7s						
AB31	Akbulak array	15.16	333	⇑P	Pn	04 11 22.5	-0.2
	comp=Z,3.7nm,0.5s,baz=148,slow=12,SNR=119						
AB31				⇑S	Sn	04 14 04.2	-6.0
	comp=Z,2.5nm,0.6s,baz=149,slow=23,SNR=5.4						
ABKAR	Akbulak array	15.16	333		Pn	04 11 22.9	+0.2
WMQ	Urumqi	15.39	55	eP	P	04 11 29.0	+1.1
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
KURBB	Kurchatov Arra	15.68	20	P	Pn	04 11 29.6	+0.4
	comp=Z,0.7nm,0.5s,baz=211,slow=11,SNR=18						
AKTO	Aktyubinsk	16.85	332	⇑P	P	04 11 45.5	+1.6
	comp=Z,4.7nm,1.2s						
AKTO				⇑S	Sn	04 14 47.2	-3.6
	comp=Z,1.6nm,0.8s						
BVAR	Borovoye Array	16.92	0	P	P	04 11 45.5	+0.8
	comp=Z,1.6nm,0.4s,baz=166,slow=13,SNR=11						
BORK	Borovoye	16.94	0	P	P	04 11 45.7	+0.8
ZAA0	Zalesovo Array	20.51	25	P	Pn	04 12 25.6	-1.3
ZAA0				IAmb	IAmb	04 12 29.0	
	comp=Z,5.3nm,0.7s						
ZALV	Zalesovo Beam	20.51	25	P	Pn	04 12 25.8	-1.2
	comp=Z,6.8nm,0.4s,baz=214,slow=10,SNR=23						
	comp=Z,6.8nm,0.4s						
SHL	Shillong	21.27	114		P	04 12 32.3	-0.1
SHL				IAmb	IAmb	04 12 36.3	
	comp=Z,9.1nm,0.9s						
PZH	PanZhiHua	28.42	101	P	P	04 13 41.0	+1.9
HHC	Hu-ho-hao-te	32.44	69	eP	P	04 14 15.1	+0.8
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				AMB	AMB		
	comp=Z,8.0nm,5.9s						
FINES	FINESS Array B	37.49	327	P	P	04 15 00.1	+2.9
	comp=Z,2.8nm,1.0s,baz=103,slow=8.1,SNR=3.3						
	comp=Z,2.8nm,1.0s						
FINES	FINESS Array B	37.49	327	P	P	04 14 58.3	+1.0
ARCES	ARCESS Array B	41.29	338	P	P	04 15 30.4	+1.6
	comp=Z,1.2nm,0.5s,baz=115,slow=7.7,SNR=11						
	comp=Z,1.2nm,0.5s						
ARCES	ARCESS Array B	41.29	338	P	P	04 15 30.4	+1.6
PSI	Prapat	42.40	135	LR	LR	04 33 35.8	
	comp=Z,44nm,19.4s,baz=298,slow=36						
HFS	Hagfors	43.02	322	P	P	04 15 44.0	+1.1
	comp=Z,1.0nm,0.8s,baz=161,slow=9.4,SNR=1.4						
	comp=Z,1.0nm,0.8s						
TORD	Torodi Ar. Bea	65.14	268	P	P	04 18 22.8	-1.3
	comp=Z,0.3nm,0.4s,baz=51,slow=7.5,SNR=6.6						
	comp=Z,0.3nm,0.4s						
ILAR	Eielson Array	75.31	16	P	P	04 19 25.6	+0.3
	comp=Z,0.1nm,0.5s,baz=325,slow=5.8,SNR=1.8						
	comp=Z,0.1nm,0.5s						
ASAR	Alice Springs	84.50	124	P	P	04 20 14.4	-1.0
	comp=Z,0.3nm,0.8s,baz=313,slow=4.9,SNR=4.2						
	comp=Z,0.3nm,0.8s						

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*IDC **22** 04:10:55.2±0.8, 6°.64N×72°.90W, h165km±9km, mb3.1/3, mbtmp3.7/5, Error ellipse: s-maj=24.5km s-min=7.7km az=133.0*

*RSNC **22** 04:10:56.6±0.0, 7°N±1°×7°3W±°, h147km±2km, M3.7, ML3.3*

ISC 22 04:10:55.5±1.0**, 6°.83N**±0°.03×**73°.13W**±0°.04**, h154**km±6km**, n34, σ1s.13**/64**, mb3.5**/3**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.24	191	P	Pn	04 11 16.7	0.0
BARC				S	Sn	04 11 31.9	-0.9
BRJC	Barrancabermej	0.62	283	P	Pn	04 11 18.4	+0.5
BRJC				S	Sn	04 11 34.5	-0.5
PAMC	Pamplona, Colo	0.66	41	P	Pn	04 11 19.6	+0.8
PAMC				S	Sn	04 11 36.4	-0.1
RUSC	La Rusia	0.94	177	P	Pn	04 11 20.6	-0.1
RUSC				S	Sn	04 11 38.6	-1.4
PTBC	PUERTO BERRIO,	1.35	258	P	Pn	04 11 23.1	-0.7
PTBC				S	Sn	04 11 44.6	-0.9
OCAC	Ocana	1.41	352	P	Pn	04 11 24.7	+0.1
OCAC				S	Sn	04 11 47.2	+0.2
SPBC	San Pablo de B	1.50	219	P	Pn	04 11 25.5	0.0
SPBC				S	Sn	04 11 47.9	-0.5
CHIC	Chingaza	2.27	195	P	Pn	04 11 34.6	+0.1
CHIC				S	Sn	04 12 04.1	-0.4
ROSC	El Rosal	2.31	211	P	Pn	04 11 36.3	+1.5
	196nm,0.3s,baz=72,slow=20,SNR=286						
ROSC				S	Sn	04 12 05.8	+0.6
	323nm,0.3s,baz=40,slow=23,SNR=17						
ROSC	El Rosal	2.31	211	P	Pn	04 11 36.3	+1.5
ROSC				S	Sn	04 12 06.2	+1.0
MEDEC	Medelln, Ant	2.50	257	P	Pn	04 11 37.6	+0.6
MEDEC				S	Sn	04 12 08.8	-0.2
UREC	San Jos de Ur	2.55	291	P	Pn	04 11 36.2	-1.2
UREC				S	Sn	04 12 07.7	-2.1
VILC	Villavicencio,	2.76	192	P	Pn	04 11 40.0	-0.2
VILC				S	Sn	04 12 14.0	-0.7
NIZA	Niza - Manizal	2.92	233	P	Pn	04 11 44.2	+1.9
NIZA				S	Sn	04 12 19.9	+1.5
CBOC	Ciudad Bolivar	3.02	252	P	Pn	04 11 44.2	+0.8
CBOC				S	Sn	04 12 20.9	+0.4
DBBC	Dabeiba	3.06	274	P	Pn	04 11 44.0	+0.2
DBBC				S	Sn	04 12 19.8	-1.5
ARGC	Ariguani, Magd	3.20	340	P	Pn	04 11 46.8	+1.2
ARGC				S	Sn	04 12 24.7	+0.3
SDV	Santo Domingo	3.21	50	P	Pn	04 11 47.0	+1.2
	12nm,0.3s,baz=244,slow=3.7,SNR=20						
SDV				S	Sn	04 12 24.2	-0.7
	44nm,0.4s,baz=253,slow=19,SNR=31						
SDV	Santo Domingo	3.21	50	P	Pn	04 11 46.3	+0.5
SDV				S	Sn	04 12 24.0	-0.8
PRAC	Prado	3.56	209	P	Pn	04 11 49.9	-0.3
PRAC				S	Sn	04 12 32.9	+0.3
APAC	Apartado, Choc	3.58	287	P	Pn	04 11 50.5	+0.1
APAC				S	Sn	04 12 33.0	0.0
ORTC	Ortega, Tolima	3.59	216	P	Pn	04 11 50.8	+0.2
ORTC				S	Sn	04 12 33.6	+0.3
SJCC	San Jacinto, C	3.66	327	P	Pn	04 11 50.3	-1.1
SJCC				S	Sn	04 12 31.9	-3.0
PLMC	San Jos del P	3.67	239	P	Pn	04 11 52.5	+0.8
PLMC				S	Sn	04 12 34.9	-0.4
URMC	La Uribe, Meta	3.77	199	P	Pn	04 11 53.7	+0.7
URMC				S	Sn	04 12 36.6	-1.1
LCBC	Los crdobas,	3.78	302	P	Pn	04 11 51.8	-1.2
LCBC				S	Sn	04 12 38.2	+0.4
YOTC	Yotoco, Valle	4.27	229	P	Pn	04 11 59.8	+0.3
YOTC				S	Sn	04 12 49.7	+0.3
SOLC	Bahia Solano	4.29	262	P	Pn	04 12 01.2	+1.6
SOLC				S	Sn	04 12 49.8	+0.2
PIZC	Pizarro, Choco	4.60	246	P	Pn	04 12 03.2	-0.5
PIZC				S	Sn	04 12 56.2	-0.6
PTAC	Punta Ardita,	4.65	274	P	Pn	04 12 04.2	-0.2
PTAC				S	Sn	04 12 56.2	-1.9
MACC	Macarena, Meta	4.71	189	P	Pn	04 12 03.5	-1.7
MACC				S	Sn	04 12 55.2	-4.4
BDFB	Brasilia	33.43	132	P	P	04 17 15.7	-4.3
	0.8nm,0.4s,baz=308,slow=9.7,SNR=3.1						
	0.8nm,0.4s						
TXAR	Lajitas Array	36.44	312	P	P	04 17 46.4	+0.7
	0.2nm,0.9s,baz=118,slow=11,SNR=2.1						
	0.2nm,0.9s						
YKA	Yellowknife Ar	63.25	340	P	P	04 21 07.5	+0.2
	0.4nm,0.7s,baz=138,slow=5.9,SNR=8.7						
	0.4nm,0.7s						

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*UPA **22** 04:14:35.7±1.0, 8°.79N×77°.15W, h9km±4km, MW3.9*

*CATAC **22** 04:14:35.6±0.4, 9°N±4°×7°7W±°, h12km±2km, M3.9/12, MLv3.9/12, Error ellipse: s-maj=8.4km s-min=2.9km az=9.6, confirmed*

*RSNC **22** 04:14:36.5±0.0, 9°N±1°×7°7W±°, h10km±2km, M3.5, mB4.5, mb4.3, ML3.1, Mw(mB)3.7*

ISC 22 04:14:35.5±1.0**, 8°.80N**±0°.03×**77°.15W**±0°.02**, h11**km±8km**, n46, σ1s.12**/82**, 2C-3D, Panama-Colombia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAP2	Capurgana	0.26	234	⇓iP	Pg	04 14 41.1	+0.3
CAP2	Capurgana	0.26	234	P	Pg	04 14 40.9	+0.1
CAP2				S	Sg	04 14 45.1	+0.7
CAPC	Capurgana	0.26	230	P	Pg	04 14 40.9	+0.1
CAPC				S	Sg	04 14 43.8	-0.6
LCBC	Los crdobas,	0.78	86	P	Pn	04 14 53.2	+0.9
LCBC				S	Sb	04 15 03.5	+2.0
UPD2	Meteti	0.89	254	⇓iP	Pg	04 14 52.3	-0.4
UPD2				eS	Sb	04 15 05.8	+1.0
APAC	Apartado, Choc	1.06	148	P	Pg	04 14 56.0	+0.1
APAC				S	Sn	04 15 12.2	+1.2
TOTI	Torti	1.15	276	⇑iP	Pb	04 14 56.3	-1.1
TOTI				eS	Sg	04 15 12.5	-0.1
CNTA3	Canitas, Panam	1.77	284	eP	Pn	04 15 05.4	-0.6
CNTA3				eS	Sn	04 15 27.9	-0.6
PTAC	Punta Ardita,	1.77	202	⇓iP	Pn	04 15 05.5	-0.6
PTAC				eS	Sn	04 15 28.4	-0.1
PTAC	Punta Ardita,	1.77	202	P	Pn	04 15 05.3	-0.7
PTAC				S	Sn	04 15 28.4	-0.1
UREC	San Jos de Ur	1.91	123	⇑iP	Pn	04 15 07.8	-0.2
UREC				eS	Sn	04 15 31.2	-0.8
UREC	San Jos de Ur	1.91	123	P	Pn	04 15 07.6	-0.4
UREC				S	Sn	04 15 29.4	-2.7
DBBC	Dabeiba	2.00	152	P	Pn	04 15 07.8	-1.5
DBBC				S	Sg	04 15 39.6	-0.4
SJCC	San Jacinto, C	2.23	61	eP	Pn	04 15 12.5	+0.1
SJCC	San Jacinto, C	2.23	61	P	Pn	04 15 12.6	+0.2
SJCC				S	Sn	04 15 40.5	+0.6
SJCC	San Jacinto, C	2.23	61	P	Pn	04 15 12.3	-0.1
SJCC				S	Sn	04 15 40.4	+0.4
FLAM	Flamenco Islan	2.36	273	eP	Pn	04 15 14.6	+0.4
FLAM				eS	Sn	04 15 43.1	0.0
GAMB1	Gamboa	2.55	277	eP	Pn	04 15 17.2	+0.5
SOLC	Bahia Solano	2.57	186	P	Pn	04 15 17.2	+0.1
SOLC				S	Sn	04 15 50.1	+1.8
FRIJ	El Hiral	2.58	280	eP	Pn	04 15 17.6	+0.5
CHOR3	La Chorrera	2.58	272	eP	Pn	04 15 17.7	+0.4
CHOR3				eS	Sn	04 15 49.2	+0.5
BCIP	Isla Barro Col	2.68	278	eP	Pn	04 15 19.1	+0.6
BCIP				eS	Sn	04 15 51.6	+0.7
BCIP	Isla Barro Col	2.68	278	P	Pn	04 15 19.2	+0.6
BCIP				S	Sn	04 15 51.2	+0.2
BCIP	Isla Barro Col	2.68	278	P	Pn	04 15 19.1	+0.6
BCIP				S	Sn	04 15 50.1	-0.9
ARGC	Ariguani, Magd	3.05	70	P	Pn	04 15 24.3	+0.6
ARGC				S	Sn	04 16 00.4	+0.1
CBOC	Ciudad Bolivar	3.13	159	P	Pn	04 15 25.4	+0.5
CBOC				S	Sn	04 16 04.1	+1.7
PTBC	PUERTO BERRIO,	3.49	130	P	Pn	04 15 28.7	-1.1
PTBC				S	Sn	04 16 08.9	-2.2
OCAC	Ocana	3.83	98	P	Pn	04 15 34.7	+0.1
OCAC				S	Sn	04 16 18.2	-1.5
BRJC	Barrancabermej	3.83	118	P	Pn	04 15 35.6	+1.2
BRJC				S	Sn	04 16 19.5	0.0
PLMC	San Jos del P	3.97	167	P	Pn	04 15 35.5	-0.8
PLMC				S	Sn	04 16 24.6	+1.7
SPBC	San Pablo de B	4.37	135	P	Pn	04 15 42.2	+0.2
SPBC				S	Sn	04 16 29.0	-4.0
BARC	Barichara	4.50	119	P	Pn	04 15 44.9	+1.0
BARC				S	Sn	04 16 36.8	+0.4
PAMC	Pamplona, Colo	4.64	108	P	Pn	04 15 46.8	+0.8
PAMC				S	Sn	04 16 40.1	0.0
ROSC	El Rosal	4.84	144	P	Pn	04 15 49.1	+0.5
ROSC				S	Sn	04 16 46.8	+2.0
YOTC	Yotoco, Valle	4.85	170	P	Pn	04 15 48.1	-0.5
YOTC				S	Sn	04 16 43.2	-1.7
RUSC	La Rusia	4.96	125	P	Pn	04 15 52.5	+2.1
RUSC				S	Sn	04 16 47.0	-1.1
RUSC	La Rusia	4.96	125	P	Pn	04 15 51.7	+1.3
RUSC				S	Sn	04 16 46.5	-1.6
ORTC	Ortega, Tolima	5.22	159	P	Pn	04 15 55.0	+1.5
	33nm,0.8s						
ORTC				S	Sn	04 16 55.6	+1.9
	33nm,0.8s						
CHIC	Chingaza	5.36	140	P	Pn	04 15 55.7	-0.1
	19nm,0.5s						
CHIC				S	Sn	04 16 58.2	+0.5
	19nm,0.5s						
JAMC	Jamundi, Valle	5.57	175	P	Pn	04 15 57.8	-0.8
	13nm,0.7s						
VILC	Villavicencio,	5.79	143	P	Pn	04 16 01.9	+0.4
	425nm27nm,0.5s						
URIC	Uribia, Colomb	5.84	60	P	Pn	04 16 02.2	+0.2
URIC				S	Sn	04 17 06.8	-2.2
RCC	Rio Carpintero	11.21	7	eP	Pn	04 17 15.9	+0.1
GTBY	Guantanamo Bay	11.23	10	eP	Pn	04 17 14.2	-1.9
QMBU	Quimbuelo	11.55	11	eP	Pn	04 17 21.5	+1.0
QMBU				eS	Sn	04 19 15.6	-14
MASC	Masc	11.65	14	eP	Pn	04 17 23.2	+1.4
MASC				eS	Sn	04 19 08.2	-24

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*SJA **22** 04:14:56.2±0.7, 23°.68S×69°.62W, h100km±4km, ML3.5, MW3.6*

*GUC **22** 04:14:58.3±0.7, 23°.70S×69°.53W, h79km±5km, ML3.6*

ISC 22 04:14:58.8±1.3**, 23°.67S**±0°.03×**69°.63W**±0°.05**, h84**km±13km**, n35, σ1s.46**/49**, 3C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB10	IPOC Station P	0.86	280	⇑iP	Pn	04 15 16.5	0.0
PB10				eS	Sn	04 15 30.2	+0.6
PB10				IAML		04 15 33.6	
	comp=E,1μm,0.4s						
PB10	IPOC Station P	0.86	280	eP	Pn	04 15 16.0	-0.5
PB10				eS	Sn	04 15 31.0	+1.3
PB10				IAML		04 15 33.7	
	comp=Z,981nm,0.4s						
PB06	IPOC Station P	0.96	3	iP	Pn	04 15 17.1	-0.7
PB06				eS	Sn	04 15 31.3	-0.6
PB06				IAML		04 15 32.3	
	comp=E,6μm,0.2s						
PB06	IPOC Station P	0.96	3	eP	Pn	04 15 16.9	-0.9
PB06				⇓iS	Sn	04 15 32.2	+0.3
PB06				IAML		04 15 32.3	

	comp=Z,3µm,0.1s						
PB05	IPOC Station P	0.96	327	*e*P	Pn	04 15 17.8	0.0
PB05				*e*S	Sn	04 15 32.0	0.0
PB05				IAML		04 15 35.4	
	comp=E,1µm,0.2s						
PB05	IPOC Station P	0.96	327	*e*P	Pn	04 15 17.6	-0.2
PB05				*e*S	Sn	04 15 33.0	+1.1
PB05				IAML		04 15 33.9	
	comp=Z,854nm,0.1s						
PB14	IPOC Station P	1.19	216	*e*P	Pn	04 15 20.2	-0.5
PB14				IAML		04 15 37.8	
	comp=E,1µm,0.4s						
PB14	IPOC Station P	1.19	216	*e*P	Pn	04 15 20.0	-0.7
PB14				*e*S	Sn	04 15 37.3	+0.2
PB14				IAML		04 15 38.2	
	comp=Z,1µm,0.9s						
GO02	Mina Guanaco	1.49	178⇑	*e*P	Pn	04 15 23.4	-1.1
GO02				IAML		04 15 44.5	
	comp=E,832nm,0.1s						
AF01	San Pedro de A	1.52	62	*e*P	Pn	04 15 24.1	-0.7
AF01				IAML		04 15 47.0	
	comp=N,4µm,0.2s						
AF01	San Pedro de A	1.52	62	*e*P	Pn	04 15 24.3	-0.5
AF01				*e*S	Sn	04 15 44.6	+0.3
AF01				IAML		04 16 03.4	
	comp=Z,2µm,0.5s						
PB03	IPOC Station P	1.61	356⇑	*i*P	Pn	04 15 25.4	-0.5
PB03				IAML		04 15 51.2	
	comp=E,645nm,0.2s						
PB03	IPOC Station P	1.61	356	*e*P	Pn	04 15 25.4	-0.5
PB03				*i* S	Sn	04 15 46.8	+0.3
PB03				IAML		04 15 49.2	
	comp=Z,479nm,0.2s						
PB09	IPOC Station P	1.90	11	*e*P	Pn	04 15 29.5	-0.2
PB09				IAML		04 16 04.7	
	comp=N,468nm,0.4s						
PB09	IPOC Station P	1.90	11	*e*P	Pn	04 15 29.7	+0.1
PB09				IAML		04 16 02.9	
	comp=Z,488nm,0.3s						
PB07	IPOC Station P	1.94	353	*e*P	Pn	04 15 29.5	-0.8
PB07				IAML		04 16 02.8	
	comp=E,415nm,0.4s						
PB07	IPOC Station P	1.94	353	*e*P	Pn	04 15 29.6	-0.7
PB07				*e*S	Sn	04 15 54.6	+0.5
PB07				IAML		04 16 10.0	
	comp=Z,366nm,0.7s						
PB02	IPOC Station P	2.35	354	*e*P	Pn	04 15 34.7	-0.9
PB02	IPOC Station P	2.35	354	*e*P	Pn	04 15 34.7	-0.9
PB02				*e*S	Sn	04 15 50.1	-14
PB02				IAML		04 16 18.5	
	comp=Z,448nm,0.2s						
PB01	IPOC Station P	2.61	3	*i* P	Pn	04 15 38.4	-0.8
PB01				IAML		04 16 18.1	
	comp=E,393nm,0.3s						
PB01	IPOC Station P	2.61	3	*e*P	Pn	04 15 38.5	-0.7
PB01				*i* S	Sn	04 16 09.5	-0.6
PB01				IAML		04 16 18.1	
	comp=Z,286nm,0.3s						
AC01	Pan de Azucar	2.62	199	IAML		04 16 27.6	
	comp=Z,143nm,0.5s						
PATCX	Punta Patache	2.87	350	IAML		04 16 27.2	
	comp=N,210nm,0.3s						
PATCX	Punta Patache	2.87	350	*e*P	Pn	04 15 41.2	-1.4
PATCX				*i* S	Sn	04 16 15.6	-0.7
PATCX				IAML		04 16 26.2	
	comp=Z,131nm,0.6s						
SALTA		3.06	101	*e*P	Pn	04 15 43.0	-2.6
SALTA				*e*P		04 15 47.2	
SALTA				*e*P		04 15 52.0	
SALTA				IAML		04 16 38.2	
	comp=Z,24nm,1.4s						
TA01	Diego Aracena	3.13	351	*e*P	Pn	04 15 43.3	-2.6
TA01				*e*S	Sn	04 16 25.1	+2.8
TA01				IAML		04 16 40.7	
	comp=Z,109nm,0.5s						
AC02	Maricunga	3.19	172	*e*P	Pn	04 15 47.5	+0.2
AC02	Maricunga	3.19	172	*e*P	Pn	04 15 47.3	0.0
AC02				*e*S	Sn	04 16 26.2	+1.7
AC02				IAML		04 16 45.9	
	comp=Z,139nm,0.6s						
TA02	Huaiquique	3.41	352	*i* P	Pn	04 15 48.9	-1.0
TA02				IAML		04 16 47.4	
	comp=Z,135nm,0.6s						
PB08	IPOC Station P	3.54	7	*e*P	Pn	04 15 50.6	-1.2
PB08				IAML		04 16 58.7	
	comp=E,88nm,0.3s						
PB08	IPOC Station P	3.54	7	*i* P	Pn	04 15 50.8	-1.0
PB08				*i* S	Sn	04 16 32.2	-0.6
PB08				IAML		04 16 53.8	
	comp=Z,85nm,0.4s						
PB11	IPOC Station P	3.88	360	*e*P	Pn	04 15 54.2	-2.2
PB11				*e*S	Sn	04 16 47.2	+6.2
PB11				IAML		04 17 03.8	
	comp=Z,84nm,0.7s						
HJA	Humahuaca	3.91	84	*e*P	Pn	04 15 58.8	+1.9
HJA				IAML		04 17 10.0	
	comp=Z,5.5nm,3.7s						
GO03	Copiapo	3.95	188	*e*P	Pn	04 15 55.7	-1.5
GO03	Copiapo	3.95	188	*e*P	Pn	04 15 55.7	-1.5

IDC 22 04:23:13.5±1.8, 6°.63S×129°.41E, h0km, mb3.9/2, mbtmp3.9/4, ML3.8/2, Error ellipse: s-maj=118.2km s-min=29.3km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.07	161	Pn	Pn	04 26 34.9	+0.5
	0.4nm,0.3s,baz=339,slow=13,SNR=9.2						
WRA				Sn	Sn	04 28 55.1	-16
	0.8nm,0.3s,baz=328,slow=24,SNR=9.6						
	0.6nm,0.4s						
ASAR	Alice Springs	17.48	166	P	Pn	04 27 18.5	-0.4
	0.5nm,0.3s,baz=346,slow=10,SNR=39						
ASAR				S	Sn	04 30 22.0	-12
	0.5nm,0.5s,baz=336,slow=12,SNR=5.6						
	1.9nm,0.5s						
MKAR	Makanchi Array	67.60	327	P	P	04 34 12.3	+0.3
	1.2nm,0.5s,baz=117,slow=8.1,SNR=13						
	1.2nm,0.5s						
KURBB	Kurchatov Arra	71.89	329	P	P	04 34 38.1	-0.3
	0.5nm,0.6s,baz=132,slow=5.3,SNR=4.2						
	0.5nm,0.6s						

IDC ***22*** *04:33:41.8±3.8, 52°.04N×173°.47W, h27km±25km, mb3.9/18, mbtmp4.1/21, ML4.1/3, MS3.0/3, Error ellipse: s-maj=19.2km s-min=10.4km az=164.0*

NEIC ***22*** *04:33:42.9±2.1, 51°.60N±0°.05×173°.51W±0°.06, h35km±2km, mb4.4/213, ML3.9(AEIC), Error ellipse: s-maj=8.4km s-min=6.8km az=180.0*

AEIC ***22*** *04:33:43.8±2.4, 51°.58N±0°.05×173°.58W±0°.06, h20km±5km, Error ellipse: s-maj=7.5km s-min=5.5km az=189.0*

ISC 22 04:33:44.0±1.2, 51°.80N±0°.09×173°.50W±0°.04, h52km±9km, n265, σ1^{s}17/233, mb4.4/89, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ATKA	Atka Island	0.59	313		Pn	04 33 56.6	+0.1
ATKA				Sn	Sn	04 34 05.4	-0.1
ATKA	Atka Island	0.59	313	P	Pn	04 33 56.5	+0.1
ATKA	Atka Island	0.59	313	S	Sn	04 34 04.4	-1.1
KOFP	Korovin Flat P	0.61	322		Pn	04 33 57.4	+0.7
KOFP					Sn	04 34 08.6	+2.7
KOSE	Korovin Southe	0.65	328		Pn	04 33 58.2	+1.0
KOSE					Sn	04 34 10.0	+3.2
KOKL	Mount Kliuchef	0.68	321		Pn	04 33 58.3	+0.6
KOKL					Sn	04 34 10.2	+2.7
KOKV	Korovin Volcan	0.70	324		Pn	04 33 58.9	+1.0
KONE	Korovin Northe	0.71	327		Pn	04 33 59.0	+1.0
KONE					Sn	04 34 11.1	+3.0
KOWE	Korovin West	0.73	321		Pn	04 33 59.1	+0.8
GSIG	Igitkin Island	1.52	278		Pn	04 34 07.9	-0.8
GSIG					Sn	04 34 25.9	-1.5
GSMY	Great Sitkin M	1.60	280		Pn	04 34 09.5	-0.4
GSMY					Sn	04 34 30.1	+0.6
GSTR	Great Sitkin T	1.61	282		Pn	04 34 09.5	-0.5
GSTR				Sn	Sn	04 34 29.8	0.0
GSTD	Great Sitkin T	1.66	280		Pn	04 34 10.1	-0.7
GSCK	Great Sitkin C	1.67	278		Pn	04 34 09.9	-0.8
GSCK					Sn	04 34 30.6	-0.4
ETKA	Kagalaska Isla	1.81	273		Pn	04 34 11.8	-0.8
ADAG	Mount Adagdak	1.93	277		Pn	04 34 14.2	-0.2
ADAG					Sn	04 34 37.7	+0.2
ADK	Adak	1.98	274		Pn	04 34 14.6	-0.4
ADK				Sn	Sn	04 34 38.0	-0.6
ADK	Adak	1.98	274	P	Pn	04 34 14.7	-0.3
ADK	Adak	1.98	274	S	Sn	04 34 38.3	-0.3
KINC	Kanaga Island	2.26	275		Pn	04 34 18.9	+0.1
KIWB	Kanaga Island	2.27	273		Pn	04 34 18.9	-0.1
KIWB				Sn	Sn	04 34 45.7	-0.1
KIKV	Kanaga Island	2.28	273		Pn	04 34 18.6	-0.5
KIMD	Kanaga Island	2.32	271		Pn	04 34 19.1	-0.6
TAFP	Tanaga Falls P	2.79	274		Pn	04 34 25.7	-0.3
NIKH	Nikolski High	3.08	66	Pn	Pn	04 34 30.5	+0.5
NIKH					Sn	04 35 06.5	+0.9
NIKH	Nikolski High	3.08	66	P	Pn	04 34 31.2	+1.2
NIKH	Nikolski High	3.08	66	S	Sn	04 35 06.2	+0.6
GANE	Gareloi Northe	3.28	272		Pn	04 34 32.3	-0.5
OKWE	Okmok W'ng Wal	3.62	60		Pn	04 34 39.2	+1.8
MGOD	Makushin Gods	4.49	61		Pn	04 34 50.7	+1.3
MSW	Makushin Switc	4.59	60		Pn	04 34 52.3	+1.5
UNV	Unalaska Valle	4.71	61	Pn	Pn	04 34 53.8	+1.4
AKMO	Akutan Morgan	5.08	60		Pn	04 34 59.6	+2.2
LVA	Lava Point	5.09	59	Pn	Pn	04 34 58.9	+1.2
ZRO	Akutan Zero	5.09	60		Pn	04 34 59.9	+2.2
AKUT	Akutan	5.22	60	Pn	Pn	04 35 01.1	+1.8
DTNA	Dutton South F	7.50	59		Pn	04 35 31.9	+1.3
SDPT	Sand Point	8.52	60	Pn	Pn	04 35 45.7	+1.1
SDPT	Sand Point	8.52	60	P	Pn	04 35 45.0	+0.4
SDPT	Sand Point	8.52	60	S	Sn	04 37 16.1	-3.1
CNBA	Chernabura Isl	8.86	65	Pn	Pn	04 35 49.2	0.0
CHNA	Chernabura Isl	8.86	65	P	Pn	04 35 49.6	+0.4
VNFG	Fog Glacier, M	9.35	56		Pn	04 35 57.2	+1.2
VNKR	Veniaminof 5	9.35	58		Pn	04 35 57.0	+1.0
M11K	Mekoryuk	9.52	22		Pn	04 36 01.0	+2.9
M14K	Bethel	11.01	31	Pn	Pn	04 36 22.6	+4.1
CHIR	Chirikof Islan	11.30	62	Pn	Pn	04 36 20.7	-1.8
CHIR	Chirikof Islan	11.30	62	P	Pn	04 36 20.7	-1.8
P16K	Nushagak River	11.39	44		Pn	04 36 26.1	+2.4
PLK4	Peulik 4	11.49	53	Pn	Pn	04 36 25.6	+0.4
ACHA	Angle Creek He	12.22	51	Pn	Pn	04 36 36.7	+1.4
SII	Sitkinak Islan	12.26	60	Pn	Pn	04 36 34.4	-1.3
SII	Sitkinak Islan	12.26	60	P	Pn	04 36 34.8	-0.9
OHAK	Old Harbor	12.91	57	P	Pn	04 36 42.5	-2.0
KDAK	Kodiak Island	13.44	55	Pn	Pn	04 36 49.7	-2.0
	1.0nm,0.3s,baz=80,slow=1.6,SNR=7.7						
	3.4nm,0.2s						
J18K	Innoko River	14.68	31	P	P	04 37 14.0	+0.7
CNPM	China Poot	14.70	50	Pn	Pn	04 37 09.1	+0.6
BRLK	Bradley Lake	14.95	49	Pn	Pn	04 37 13.1	+1.2
BRLK				IAmb	IAmb	04 37 15.8	
	comp=Z,49nm,1.5s						
SPU	Mount Spurr	15.04	43	P	P	04 37 17.2	-0.2
J19K	Poorman	15.40	31	P	P	04 37 22.5	+1.2
J19K				IAmb	IAmb	04 37 24.8	
	comp=Z,14nm,0.9s						
K20K	Telida	15.49	34	P	P	04 37 23.5	+1.2
SLKM	Skilak Lake	15.55	47		Pn	04 37 20.1	+0.5
SLKM				IAmb	IAmb	04 37 22.6	
	comp=Z,17nm,1.1s						
SKT	Skwentna	15.66	41		P	04 37 24.6	+0.4
SUA	Susitna One	15.73	43	Pn	Pn	04 37 23.1	+1.1
SUA				IAmb	IAmb	04 38 02.4	
	comp=Z,16nm,1.1s						
SEW	Seward	15.75	49	Pn	Pn	04 37 20.7	-1.3
SEW				IAmb	IAmb	04 37 45.9	
	comp=Z,15nm,1.0s						
PPLA	Purkeypile	15.90	37	Pn	P	04 37 26.8	-0.2
RC01	Rabbit Creek A	16.00	45	Pn	Pn	04 37 24.9	-0.4
L22K	Petersville	16.25	40	Pn	P	04 37 30.5	-0.3
PMR	Palmer	16.48	44	Pn	Pn	04 37 32.1	+0.7
GHO	Glory Hole Cre	16.65	44	Pn	Pn	04 37 33.5	-0.1
GHO				IAmb	IAmb	04 37 35.7	
	comp=Z,8.9nm,0.5s						
KNK	Knik Glacier	16.70	45	Pn	Pn	04 37 33.0	-1.1
KNK				IAmb	IAmb	04 37 52.3	
	comp=Z,34nm,1.5s						
KTH	Kantishna Hill	16.74	37	Pn	P	04 37 36.5	+0.3
SML	Sawmill	16.92	44	Pn	Pn	04 37 35.2	-1.7
TRF	Thorofare Moun	16.92	37	Pn	P	04 37 38.5	+0.2
BPAW	Bear Paw Mtn.	17.03	35		P	04 37 39.3	-0.1
FID	Port Fidalgo	17.36	48	Pn	Pn	04 37 40.6	-1.6
FID				IAmb	IAmb	04 38 20.6	
	comp=Z,45nm,1.4s						
SCM	Sheep Creek Mo	17.37	45	Pn	Pn	04 37 42.4	0.0
SCM				IAmb	IAmb	04 37 44.3	
	comp=Z,15nm,0.6s						
RND	Reindeer	17.45	39	Pn	Pn	04 37 42.9	-0.5
PEA0B	Petropavlovsk-	17.56	286		P	04 37 45.0	-0.3
PEA0B				IAmb	IAmb	04 38 01.4	
	comp=Z,31nm,1.1s						
PETK	Petropavlovsk-	17.56	286	P	P	04 37 45.3	+0.1
	comp=Z,0.9nm,0.3s,baz=86,slow=16,SNR=10						
PETK				LR	LR	04 45 30.2	
	comp=Z,26nm,18.1s,baz=79,slow=40						
	comp=Z,3.5nm,0.5s						
MCK	McKinley	17.59	38		Pn	04 37 44.6	-0.4
MCK				IAmb	IAmb	04 37 46.4	
	comp=Z,19nm,1.3s						
EYAK	Cordova Ski Ar	17.63	49	P	Pn	04 37 43.5	-2.1
KLU	Klutina	17.86	46	Pn	Pn	04 37 48.2	-0.2
DHY	Denali Highway	17.88	41		Pn	04 37 48.7	0.0
M24K	Tolsona, Glenn	17.98	44	P	Pn	04 37 48.9	-1.0
M24K				IAmb	IAmb	04 37 53.6	
	comp=Z,19nm,0.6s						
NEA2	Nenana	18.00	35	P	Pn	04 37 49.9	-0.2
KAIM	Kayak Island	18.11	52	P	P	04 37 51.5	+0.3
I23K	Minto, Yukon-K	18.22	34	P	Pn	04 37 53.5	+0.8
I23K				IAmb	IAmb	04 37 55.8	
	comp=Z,8.7nm,0.5s						
WRH	Wood River Hil	18.29	36	P	P	04 37 51.9	-1.3
CCB	Clear Creek Bu	18.49	36		P	04 37 54.5	-0.8
N25K	Chitina, Valde	18.50	47	P	P	04 37 55.2	-0.3
BERG	Berg Lake	18.57	51	P	P	04 37 56.4	+0.1
BERG				IAmb	IAmb	04 37 57.7	
	comp=Z,20nm,1.1s						
PAX	Paxson	18.62	42	P	P	04 37 57.2	+0.3
HDA	Harding Lake	18.68	37	P	Pn	04 37 58.1	-0.2
HDA				IAmb	IAmb	04 37 59.2	
	comp=Z,22nm,0.5s						
GLB	Gilahina Butte	18.80	48	P	P	04 37 58.3	-0.6
K24K	Donnelly Dome	18.85	40	P	P	04 37 59.2	-0.1
K24K				IAmb	IAmb	04 38 00.6	
	comp=Z,20nm,0.5s						
IL31		18.89	36		P	04 37 57.9	-1.8
IL31				IAmb	IAmb	04 38 02.9	
	comp=Z,6.2nm,0.5s						
ILAR	Eielson Array	18.89	36	P	P	04 37 57.7	-2.1
	comp=Z,2.1nm,0.3s,baz=240,slow=9.9,SNR=85						
ILAR				S	Sn	04 41 27.2	-4.0
	comp=Z,0.1nm,0.5s,baz=319,slow=34,SNR=1.6						
ILAR				PcP	PcP	04 42 23.7	0.0
	comp=Z,0.3nm,0.6s,baz=256,slow=2.4,SNR=2.0						
ILAR				ScP	ScP	04 45 57.9	+3.1
	comp=Z,0.2nm,0.5s,baz=240,slow=2.8,SNR=4.7						
	comp=Z,3.8nm,0.5s						
ILAR	Eielson Array	18.89	36		P	04 37 58.2	-1.6
VRDI	Verde Repeater	18.91	48	P	P	04 38 00.1	-0.1
CRQM	Cirque	18.93	50	P	Pn	04 38 01.0	-0.5
SNH	Sunshine Point	18.94	52	P	Pn	04 38 01.6	+0.2
H24K	Noodor Dome	19.12	33	IAmb	IAmb	04 38 04.7	
	comp=Z,20nm,1.5s						
RIDG	Independent Ri	19.19	40	P	P	04 38 03.7	+0.6
RIDG				IAmb	IAmb	04 38 04.9	
	comp=Z,13nm,0.5s						
J25K	Salcha River,	19.38	38	IAmb	IAmb	04 38 05.6	
	comp=Z,31nm,0.8s						
M26K	Nabesna, AK	19.47	45	IAmb	IAmb	04 38 08.8	
	comp=Z,5.8nm,0.5s						
DOT	Dot Lake	19.47	41	P	P	04 38 05.8	-0.4
YAH	Yahtse	19.51	52	P	Pn	04 38 07.5	-0.9
YAH				IAmb	IAmb	04 38 28.9	
	comp=Z,15nm,0.7s						
L26K	Log Cabin Wild	19.53	43	IAmb	IAmb	04 38 10.0	
	comp=Z,5.8nm,0.4s						
GRNC	Granite Creek	19.58	50	IAmb	IAmb	04 38 14.9	
	comp=Z,10nm,0.7s						
BARN	Barnard Glacie	19.70	50	P	P	04 38 09.0	+0.2
D22K	Ayikyak River	19.80	22		Pn	04 38 10.8	-0.7
CTGM	Chitina Glacie	19.84	50	P	P	04 38 10.0	-0.2
CTGM				IAmb	IAmb	04 38 15.1	
	comp=Z,12nm,1.0s						
M27K	Edge Creek, AK	19.95	46	P	Pn	04 38 12.6	-1.0
O28M	Mount Upton	20.34	51	IAmb	IAmb	04 38 18.5	
	comp=Z,11nm,1.2s						
TOLK	Toolik Lake Re	20.40	25	P	P	04 38 17.5	+1.3
I26K	Coal Creek Min	20.54	37	IAmb	IAmb	04 38 18.1	
	comp=Z,10nm,1.0s						
B22K	Teshekpuk Lake	20.78	19	IAmb	IAmb	04 38 23.8	
	comp=Z,24nm,0.9s						
O29M	Mount Kennedy	21.05	53	IAmb	IAmb	04 38 25.5	
	comp=Z,9.4nm,0.4s						
E25K	Arctic Village	21.20	29	P	P	04 38 27.1	+2.3
SEY	Seymchan	21.23	315	P	P	04 38 24.4	-0.6
	comp=Z,2.0nm,0.8s,baz=82,slow=15,SNR=4.2						
	comp=Z,2.0nm,0.8s						
I27K	Kandik River	21.25	37	IAmb	IAmb	04 38 27.5	
	comp=Z,7.4nm,0.7s						
MA2	Magadan	21.37	305	LR	LR	04 46 07.3	
	comp=Z,46nm,18.7s,baz=82,slow=35						
P29M	Windy Craggy	21.39	55	IAmb	IAmb	04 38 43.2	
	comp=Z,10nm,0.9s						
DAWY	Dawson	21.55	42	IAmb	IAmb	04 38 32.4	
	comp=Z,5.6nm,0.5s						
HYT	Haines Junctio	21.65	51		P	04 38 29.9	+0.1
L29M	L29M	21.82	45	P	P	04 38 32.6	+1.2
I28M	Miner Creek	21.82	38	IAmb	IAmb	04 38 33.6	
	comp=Z,8.0nm,0.7s						
S31K	Pelican	22.09	59	P	P	04 38 33.2	-1.1
S31K				IAmb	IAmb	04 38 48.2	
	comp=Z,37nm,1.4s						
J29N	Klondike Camp	22.16	42	P	P	04 38 36.2	+1.0
J29N				IAmb	IAmb	04 38 41.3	
	comp=Z,6.5nm,0.4s						
K29M	Barlow Dome	22.28	43	IAmb	IAmb	04 38 39.4	
	comp=Z,15nm,1.4s						
M30M	Minto, Yukon	22.29	47	P	P	04 38 37.4	+0.8
N31M	Braeburn, Yuko	22.57	50	P	P	04 38 43.0	+3.5
N31M				IAmb	IAmb	04 39 04.2	
	comp=Z,19nm,1.5s						
SIT	Sitka	22.60	61	P	P	04 38 41.7	+1.9
SIT				IAmb	IAmb	04 39 03.8	
	comp=Z,26nm,1.0s						
H29M	Whitestone	22.72	37	IAmb	IAmb	04 38 49.0	
	comp=Z,6.3nm,0.7s						
F28M	Old Crow	22.77	33	P	P	04 38 42.1	+0.6
JIS	Juneau Island	23.07	58	P	P	04 38 46.0	+1.4
I30M	Mount Dempster	23.15	40	IAmb	IAmb	04 38 45.1	
	comp=Z,5.3nm,0.6s						
EPYK	Eagle Plains	23.39	37		P	04 38 47.5	-0.3
EPYK				IAmb	IAmb	04 39 02.9	
	comp=Z,21nm,1.4s						
E29M	Blow River	23.78	32	IAmb	IAmb	04 38 53.2	
	comp=Z,15nm,1.4s						
P33M	Teslin, Yukon	23.90	53	P	P	04 38 53.2	+0.6
G31M	Satah River	24.50	37	P	P	04 38 57.1	-0.8
DIB	Dawson Inlet,	24.77	70	P	P	04 39 01.8	+1.3
S34M	Telegraph Cree	24.81	59	P	P	04 39 03.2	+2.4
S34M				IAmb	IAmb	04 39 04.0	
	comp=Z,6.5nm,0.8s						
BBB	Bella Bella	27.60	71	LR	LR	04 47 55.5	
	comp=Z,48nm,21.3s,baz=31,slow=31						
GNW	Green Mountain	32.52	77	P	P	04 40 11.4	+2.0
GNW				IAmb	IAmb	04 40 46.6	
	comp=Z,11nm,1.5s						
YKA	Yellowknife Ar	32.52	48	P	P	04 40 08.8	-0.5
	comp=Z,0.3nm,0.5s,baz=258,slow=23,SNR=10						
YKA				PcP	PcP	04 42 55.5	+0.7
	comp=Z,0.8nm,0.8s,baz=279,slow=3.7,SNR=9.5						
	comp=Z,0.3nm,0.5s						
B08A	Colville Reser	34.26	74		P	04 40 25.7	+1.0
WAH2	Wahluke Slope	34.86	76	P	P	04 40 31.4	+1.5
I05D	Terrebonne, OR	34.98	81	P	P	04 40 32.9	+1.9
HAWA	Hanford	35.06	77		P	04 40 33.0	+1.4
F07A	Phinny Hill Vi	35.06	78	P	P	04 40 32.9	+1.3
F07A				IAmb	IAmb	04 40 34.6	
	comp=Z,7.6nm,0.9s						
D08A	Wollman Farm,	35.11	76		P	04 40 32.3	+0.3
D08A				IAmb	IAmb	04 40 33.5	
	comp=Z,5.4nm,0.8s						
H11N2	WAKE ISLAND Hy	35.50	213	T	T	05 18 23.6	
	baz=21,slow=76						
H11N3	WAKE ISLAND Hy	35.51	213	T	T	05 18 27.8	
	baz=21,slow=76						
H11N1	WAKE ISLAND Hy	35.52	213	T	T	05 18 28.9	
	baz=21,slow=76						
J05D	Fort Rock, OR	35.60	83	P	P	04 40 38.1	+1.6
J05D				IAmb	IAmb	04 41 05.2	
	comp=Z,6.7nm,1.0s						
NEW	Newport	35.62	73		P	04 40 37.4	+1.0
EDM	Edmonton	35.69	63		P	04 40 38.3	+1.3
E09A	Wood Farm, Sta	35.84	76	IAmb	IAmb	04 40 39.6	
	comp=Z,3.5nm,0.9s						
H11S1	WAKE ISLAND Hy	36.70	213	T	T	05 19 54.6	
	baz=20,slow=76						
H11S2	WAKE ISLAND Hy	36.72	213	T	T	05 19 55.8	
	baz=20,slow=76						
H11S3	WAKE ISLAND Hy	36.72	213	T	T	05 19 55.8	
	baz=20,slow=76						
MJAR	Matsushiro Arr	37.12	265	P	P	04 40 50.2	+1.0
	comp=Z,1.8nm,0.5s,baz=37,slow=6.3,SNR=14						
	comp=Z,1.8nm,0.5s						
J08A	Circle Bar Ran	37.26	81		P	04 40 52.0	+1.4
J08A				IAmb	IAmb	04 40 52.8	
	comp=Z,4.8nm,0.7s						
WVOR	Wild Horse Val	37.67	82	P	P	04 40 55.2	+1.2
WVOR				IAmb	IAmb	04 40 55.9	
	comp=Z,4.3nm,0.8s						
PAHR	Pah Rah Range	38.78	86	P	P	04 41 04.2	+0.8
PAHR				IAmb	IAmb	04 41 05.7	
	comp=Z,7.3nm,0.9s						
BCYI	Bear Canyon	39.83	76	IAmb	IAmb	04 41 14.0	
	comp=Z,7.9nm,1.1s						
BOZ	Bozeman (W)	40.21	74	IAmb	IAmb	04 41 16.7	
	comp=Z,7.9nm,0.7s						
NVAR	Mina Array Bea	40.22	87	P	P	04 41 16.2	+0.8
	comp=Z,1.3nm,0.7s,baz=288,slow=9.4,SNR=7.0						
	comp=Z,1.3nm,0.7s						
MDPB	Devils Postpil	40.23	89	P	P	04 41 14.3	-1.4
MDPB				IAmb	IAmb	04 41 30.3	
	comp=Z,5.9nm,1.2s						
ELK	Elko	40.73	82	P	P	04 41 20.4	+0.7
YHL	Hebgen Lake	40.87	74	P	P	04 41 21.8	+0.9
YHL				IAmb	IAmb	04 41 22.6	
	comp=Z,5.9nm,0.7s						
YHB	Horse Butte	40.92	74	P	P	04 41 22.2	+1.0
YHB				IAmb	IAmb	04 41 22.9	
	comp=Z,5.6nm,0.7s						
DSP	Deep Springs	41.08	88	P	P	04 41 23.9	+1.6
YMR	Madison River	41.10	74	IAmb	IAmb	04 41 24.9	
	comp=Z,7.1nm,0.6s						
FFC	Flin Flon	41.18	57	P	P	04 41 23.6	+0.7
FFC				IAmb	IAmb	04 41 24.0	
	comp=Z,6.4nm,1.1s						
VES	Vestal, Richgr	41.36	91	P	P	04 41 25.2	+0.6
VES				IAmb	IAmb	04 41 56.2	
	comp=Z,16nm,1.3s						
H17A	Grant Village	41.48	74	P	P	04 41 28.4	+2.5
H17A				IAmb	IAmb	04 41 29.0	
	comp=Z,5.2nm,0.6s						
YNE	Yellowstone No	41.49	73	P	P	04 41 26.4	+0.5
YNE				IAmb	IAmb	04 41 27.3	
	comp=Z,3.5nm,0.6s						
HVU	Hansel Valley	41.63	79	IAmb	IAmb	04 41 28.9	
	comp=Z,4.6nm,0.7s						
MOOW	Moose Ponds	41.74	75	P	P	04 41 29.2	+1.3
RLMT	Red Lodge	41.87	73	IAmb	IAmb	04 41 31.1	
	comp=Z,14nm,1.1s						
TPNV	Topopah Spring	42.41	87	IAmb	IAmb	04 41 36.0	
	comp=Z,3.4nm,0.9s						
DUG	Dugway, Tooele	42.54	81	P	P	04 41 34.8	+0.4
DUG				IAmb	IAmb	04 41 36.4	
	comp=Z,7.0nm,1.1s						
PSUT	Pine Spring	42.91	84	P	P	04 41 39.6	+2.2
KSRS	Korea Array	42.92	274	P	P	04 41 38.2	+0.9
	comp=Z,3.0nm,0.6s,baz=55,slow=7.6,SNR=9.6						
	comp=Z,3.0nm,0.6s						
BW06	Boulder Array	43.01	76	IAmb	IAmb	04 41 39.8	
	comp=Z,7.9nm,0.7s						
PD31	Pinedale Array	43.01	76	IAmb	IAmb	04 41 39.8	
	comp=Z,7.5nm,0.7s						
PDAR	Pinedale Array	43.01	76	P	P	04 41 39.0	+0.6
	comp=Z,7.9nm,0.7s,baz=315,slow=3.2,SNR=94						
	comp=Z,7.9nm,0.7s						
GSC	Goldstone, Bar	43.12	90	IAmb	IAmb	04 41 40.5	
	comp=Z,2.7nm,0.7s						
MPU	Maple Canyon	43.37	80	P	P	04 41 42.2	+1.0
MPU				IAmb	IAmb	04 41 42.9	
	comp=Z,4.4nm,0.8s						
ILON	Igloolik, Nuna	43.41	31	P	P	04 41 40.1	-0.7
ILON				IAmb	IAmb	04 42 14.9	

	comp=Z,6.9nm,1.2s						
BSUT	Blindstream Ca	43.59	79	P	P	04 41 44.3	+1.1
CCUT	Cedar City	43.82	84	P	P	04 41 45.6	+0.7
JNU	Nakatsue	43.90	267	P	P	04 41 45.6	+0.3
TJN	Taejon	43.95	273	P	P	04 41 45.5	-0.1
TMUT	Trail Mountain	44.07	81	P	P	04 41 48.1	+1.2
TMUT				IAmb	IAmb	04 41 48.9	
	comp=Z,6.8nm,0.9s						
P17A	Butcher Ranch,	44.25	80	P	P	04 41 49.4	+1.2
P17A				IAmb	IAmb	04 41 50.0	
	comp=Z,5.1nm,0.7s						
RDMU	Red Mountain	44.30	78	P	P	04 41 49.3	+0.7
RDMU				IAmb	IAmb	04 41 51.0	
	comp=Z,14nm,1.2s						
Q16A	Castle Valley	44.32	81	P	P	04 41 50.3	+1.5
Q16A				IAmb	IAmb	04 41 50.9	
	comp=Z,7.3nm,1.1s						
P18A	Preston Nutter	44.46	80	IAmb	IAmb	04 41 52.0	
	comp=Z,6.6nm,0.9s						
SRU	San Rafael Swe	44.60	81	IAmb	IAmb	04 41 53.3	
	comp=Z,7.0nm,0.7s						
HMU	Henry Mountain	45.20	82	IAmb	IAmb	04 41 57.7	
	comp=Z,8.3nm,0.8s						
U15A	North Rim	45.20	85	P	P	04 41 57.1	+1.2
U15A				IAmb	IAmb	04 41 57.7	
	comp=Z,6.7nm,1.2s						
RSSD	Black Hills	45.52	71	P	P	04 41 58.6	+0.4
RSSD				IAmb	IAmb	04 41 59.4	
	comp=Z,4.9nm,1.2s						
PV21	Cone Mtn., Par	45.89	80	P	P	04 42 01.9	+0.6
PV21				IAmb	IAmb	04 42 02.4	
	comp=Z,4.2nm,0.6s						
PV23	Carpenter Ridg	45.94	80	IAmb	IAmb	04 42 06.9	
	comp=Z,6.2nm,0.6s						
PV14	Lion Creek, Pa	45.98	81	P	P	04 42 02.6	+0.5
PV14				IAmb	IAmb	04 42 04.4	
	comp=Z,8.2nm,1.2s						
PV22	Blue Mesa, Par	46.02	80	P	P	04 42 02.8	+0.4
PV22				IAmb	IAmb	04 42 03.5	
	comp=Z,4.7nm,0.8s						
PV20	West Nyswonger	46.03	81	IAmb	IAmb	04 42 03.5	
	comp=Z,5.6nm,0.6s						
PV17	East Wray Mesa	46.08	81	P	P	04 42 03.2	+0.4
PV16	Nyswonger Mesa	46.08	81	IAmb	IAmb	04 42 04.0	
	comp=Z,4.7nm,0.7s						
PV05	Paradox Valley	46.12	81	P	P	04 42 04.2	+1.1
PV05				IAmb	IAmb	04 42 05.9	
	comp=Z,3.6nm,0.8s						
PV03	Paradox Valley	46.16	81	IAmb	IAmb	04 42 04.5	
	comp=Z,5.6nm,0.7s						
WUAZ	Wupatki	46.35	85	P	P	04 42 06.0	+1.1
WUAZ				IAmb	IAmb	04 42 15.0	
	comp=Z,7.7nm,1.4s						
ULM	Lac du Bonnet	46.65	60	P	P	04 42 05.9	-1.0
	comp=Z,3.1nm,0.5s,baz=304,slow=7.4,SNR=6.0						
	comp=Z,3.1nm,0.5s						
ULM	Lac du Bonnet	46.65	60	P	P	04 42 06.5	-0.4
ULM				IAmb	IAmb	04 42 07.6	
	comp=Z,5.8nm,1.0s						
EPLO	Experimental L	48.12	59	P	P	04 42 18.1	-0.1
SDCO	Great Sand Dun	48.53	79	P	P	04 42 22.6	+0.7
SDCO				IAmb	IAmb	04 42 23.6	
	comp=Z,2.3nm,0.8s						
ULN	Ulaanbaatar	49.00	299	P	P	04 42 24.6	-0.7
ULN				IAmb	IAmb	04 42 25.0	
	comp=Z,2.3nm,0.5s						
SONM	Songino Array	49.38	299	P	P	04 42 27.8	-0.3
	comp=Z,1.6nm,0.5s,baz=55,slow=6.2,SNR=16						
	comp=Z,1.6nm,0.5s						
SONM	Songino Array	49.38	299	P	P	04 42 28.0	-0.1
SONM				IAmb	IAmb	04 42 28.5	
	comp=Z,1.1nm,0.5s						
T25A	Trinidad	49.58	79	P	P	04 42 31.3	+1.4
VHRN	Van Horn	53.49	85	P	P	04 42 59.5	+0.5
VHRN				IAmb	IAmb	04 43 00.1	
	comp=Z,2.1nm,0.7s						
MNHN	Monahans	54.48	83	IAmb	IAmb	04 43 06.8	
	comp=Z,3.9nm,0.6s						
WMOK	Wichita Mounta	54.59	77	IAmb	IAmb	04 43 08.0	
	comp=Z,4.6nm,0.8s						
SGCY	Sterling City	55.09	81	P	P	04 43 10.5	-0.1
TX31	Lajitas Ar. Si	55.32	85	P	P	04 43 11.8	-0.4
TX31				IAmb	IAmb	04 43 13.2	
	comp=Z,2.0nm,0.8s						
TXAR	Lajitas Array	55.32	85	P	P	04 43 12.3	0.0
	comp=Z,2.3nm,0.7s,baz=303,slow=6.5,SNR=35						
	comp=Z,2.3nm,0.7s						
TXAR	Lajitas Array	55.32	85	P	P	04 43 11.9	-0.4
Z38A	Mt. Pleasant	57.89	76	P	P	04 43 30.7	+0.3
WHAR	Wooly Hollow	58.10	72	P	P	04 43 32.1	+0.3
ARCES	ARCESS Array B	58.18	352	P	P	04 43 29.5	-2.4
	comp=Z,1.4nm,0.8s,baz=15,slow=7.3,SNR=1.3						
	comp=Z,1.4nm,0.8s						
ARCES	ARCESS Array B	58.18	352	P	P	04 43 32.6	+0.7
LCAR	Lake Charles	58.23	71	P	P	04 43 31.8	-0.9
LCAR				IAmb	IAmb	04 43 34.0	
	comp=Z,7.9nm,1.4s						
BUKO	Buck Lake	58.30	56	P	P	04 43 32.3	-0.8
WLAR	White Oak Lake	58.72	74	P	P	04 43 36.5	+0.3
KURK	Kurchatov	61.07	316	P	P	04 43 52.0	+0.1
KURK	Kurchatov	61.07	316	IAmb	IAmb	04 43 52.6	
	comp=Z,1.8nm,0.5s						
KURBB	Kurchatov Arra	61.17	316	P	P	04 43 52.0	-0.7
	comp=Z,1.4nm,0.5s,baz=42,slow=6.8,SNR=6.6						
	comp=Z,1.4nm,0.5s						
MKAR	Makanchi Array	62.31	311	P	P	04 43 59.7	-0.8
	comp=Z,0.8nm,0.4s,baz=46,slow=6.7,SNR=20						
	comp=Z,0.8nm,0.4s						
BVAR	Borovoye Array	62.64	322	P	P	04 44 02.2	-0.3
	comp=Z,5.1nm,0.5s,baz=51,slow=6.5,SNR=38						
	comp=Z,5.1nm,0.5s						
L59A	Walton	62.83	56	P	P	04 44 05.0	+0.9
G62A	West of Eustis	62.87	51	P	P	04 44 04.1	-0.1
KSPA	Keystone Colle	62.91	57	P	P	04 44 05.2	+0.7
R55A	Marlinton	62.95	62	P	P	04 44 05.1	+0.2
H62A	Milan	63.04	52	P	P	04 44 05.1	-0.2
BATG	Bathurst New B	63.43	47	P	P	04 44 07.2	-0.7
F64A	Sherman	63.43	49	P	P	04 44 07.1	-0.8
MVL	Millersville	63.74	58	P	P	04 44 10.3	+0.3
MVL				IAmb	IAmb	04 44 22.4	
	comp=Z,6.3nm,1.2s						
ARTI	Arti	64.01	331	P	P	04 44 10.6	-0.9
FINES	FINESS Array B	66.03	350	P	P	04 44 23.8	-0.7
	comp=Z,2.2nm,0.9s,baz=48,slow=2.8,SNR=4.3						
	comp=Z,2.2nm,0.9s						
HFS	Hagfors	68.27	356	P	P	04 44 38.6	-0.1
	comp=Z,0.5nm,0.4s,baz=45,slow=2.5,SNR=5.3						
	comp=Z,0.5nm,0.4s						
AB31	Akbulak array	69.53	326	P	P	04 44 46.2	-0.5
AB31				IAmb	IAmb	04 44 47.9	
	comp=Z,3.0nm,0.6s						
KKAR	Karatay Array	70.47	316	P	P	04 44 52.0	-0.6
CMAR	Chiang Mai Arr	74.23	280	P	P	04 45 16.2	+0.8
	comp=Z,1.3nm,0.5s,baz=30,slow=7.2,SNR=8.1						
	comp=Z,1.3nm,0.5s						
AKASG	Malin Array Be	76.08	345	P	P	04 45 24.6	-0.9
	comp=Z,0.4nm,0.3s,baz=19,slow=6.1,SNR=2.5						
	comp=Z,0.4nm,0.3s						
AKBB	Malin Array Si	76.08	345	P	P	04 45 23.9	-1.6
AKBB				IAmb	IAmb	04 45 40.7	
	comp=Z,8.2nm,1.3s						
KIEV	Kiev	76.08	345	P	P	04 45 23.8	-1.7
KIEV				IAmb	IAmb	04 45 40.7	
	comp=Z,7.4nm,1.3s						
ASAR	Alice Springs	88.11	227	P	P	04 46 30.1	+1.4
	comp=Z,0.4nm,0.8s,baz=37,slow=4.6,SNR=4.4						
	comp=Z,0.4nm,0.8s						
H03N2	Juan Fernandez	118.11	109	T	T	07 02 05.2	
	baz=317,slow=77						
H03N1	Juan Fernandez	118.13	109	T	T	07 02 04.7	
	baz=317,slow=77						
H03N3	Juan Fernandez	118.13	109	T	T	07 02 01.5	
	baz=317,slow=77						
BOSA	Boshof	152.93	322	PKPbc	PKPbc	04 53 34.8	-0.4
	comp=Z,1.9nm,0.8s,baz=333,slow=2.3,SNR=3.6						

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*WEL **22** 04:42:15.6±0.3, 44°S±2°×17°0E±°, h5^{km}, M3.4/13, ML3.3/13, MLv3.4/13, Error ellipse: s-maj=3.1km s-min=2.9km az=16.7, confirmed*

*NOU **22** 04:42:16.0, 43°.64S×170°.22E, h4^{km}, MLv4.0/12, South Island, New Zealand*

ISC 22 04:42:15.8±1.1**, 43°.61S**±0°.02×**170°.23E**±0°.02**, h3**^{km}±10^{km}**, n69,** σ1^{s}.**12**/74**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCNS	Mount Cook Ann	0.16	217	P	Pg	04 42 19.3	+0.4
MCNS				S	Sg	04 42 21.9	+0.8
FGPS	Fox Glacier Pa	0.21	314	P	Pg	04 42 20.0	+0.2
FGPS				S	Sg	04 42 23.3	+0.7
FJDS	Franz Josef DO	0.22	352	P	Pg	04 42 19.8	-0.3
FJDS				S	Sg	04 42 22.8	-0.2
FOZ	Fox Glacier	0.31	284	P	Pg	04 42 22.0	+0.3
FOZ				S	Sg	04 42 26.2	+0.4
RPZ	Rata Peaks	0.61	100	P	Pg	04 42 27.3	-0.1
RPZ	Rata Peaks	0.61	100	P	Pg	04 42 27.6	+0.2
WVZ	Waitaha Valley	0.65	35	P	Pg	04 42 27.6	-0.7
TWAS	Twizel Area Sc	0.65	188	P	Pg	04 42 28.8	+0.5
TWAS				S	Sg	04 42 37.4	+0.7
ARCZ	Arundel	0.77	116	P	Pg	04 42 30.5	0.0
ARCZ				S	Sg	04 42 40.6	+0.2
LBZ	Lake Benmore	0.78	182	P	Pg	04 42 30.9	+0.3
MAYC	Mayfield Schoo	0.89	104	P	Pg	04 42 33.4	+0.5
HDWS	Haast DOC Work	0.90	252	P	Pg	04 42 33.0	0.0
TMZ	Timaru	0.96	144	P	Pg	04 42 34.1	0.0
MHCZ	Mount Hutt	0.98	86	P	Pg	04 42 34.5	0.0
MTHS	Methven North	1.05	88	P	Pg	04 42 36.2	+0.3
JCZ	Jackson Bay	1.14	246	P	Pg	04 42 37.1	-0.5
JCZ	Jackson Bay	1.14	246	P	Pg	04 42 37.2	-0.5
NSBS	Neils Beach	1.20	251	P	Pb	04 42 38.9	-0.2
WACZ	Wakanui South	1.21	106	P	Pg	04 42 39.2	+0.2
INZ	Inchbonnie	1.25	46	P	Pg	04 42 38.4	-1.4
OXZ	Oxford	1.35	78	P	Pn	04 42 41.1	-0.3
RACZ	Rakaia	1.39	96	P	Pb	04 42 42.3	-0.1
ODZ	Otahua Downs	1.47	168	P	Pn	04 42 42.6	-0.4
ODZ	Otahua Downs	1.47	168	S	Sb	04 43 02.4	-0.2
ODZ	Otahua Downs	1.47	168	P	Pn	04 42 42.6	-0.4
WKZ	Wanaka	1.50	215	P	Pn	04 42 43.6	+0.1
LTZ	Lake Taylor	1.71	62	P	Pn	04 42 46.7	+0.3
EAZ	Earnscleugh	1.75	202	P	Pn	04 42 46.6	-0.4
MQZ	McQueen’s Vall	1.76	94	P	Pn	04 42 46.7	-0.5
AMCZ	Amberley	1.82	77	P	Pn	04 42 48.2	+0.3
AKCZ	Akaroa Harbour	1.96	99	P	Pb	04 42 51.4	-0.7
MSZ	Milford Sound	1.97	237	P	Pb	04 42 50.9	-1.3
OKCZ	Okains Bay	2.06	94	P	Pg	04 42 55.2	0.0
GVZ	Greta Valley S	2.15	74	P	Pn	04 42 52.3	-0.1
DSZ	Denniston Nort	2.20	32	P	Pn	04 42 52.9	-0.3
HHSZ	Highcliff Hill	2.29	174	P	Pn	04 42 54.7	+0.3
MLZ	Mavora Lakes	2.32	220	P	Pn	04 42 55.2	+0.4
TUZ	Tuapeka	2.38	190	P	Pn	04 42 54.8	-0.8
THZ	Tophouse	2.70	48	P	Pn	04 43 01.0	+0.9
KHZ	Kahutara	2.71	65	P	Pn	04 43 00.2	+0.1
KHZ	Kahutara	2.71	65	S	Sn	04 43 34.5	+1.2
KHZ	Kahutara	2.71	65	P	Pn	04 43 00.7	+0.6
WHZ	Wether Hill Ro	2.80	215	P	Pn	04 43 00.5	-0.9
DCZ	Deep Cove	2.88	229	P	Pn	04 43 03.4	+1.0
MRNZ	Matariki Terra	2.90	41	P	Pn	04 43 04.1	+1.4
SYZ	Scrubby Hill	3.03	194	P	Pn	04 43 03.2	-1.2
SYZ	Scrubby Hill	3.03	194	S	Sn	04 43 41.1	-0.1
SYZ	Scrubby Hill	3.03	194	P	Pn	04 43 03.3	-1.2
QRZ	Quartz Range	3.27	32	P	Pn	04 43 07.8	0.0
QRZ	Quartz Range	3.27	32	P	Pn	04 43 07.8	0.0
TKNZ	Takaka Hill	3.28	39	P	Pn	04 43 08.4	+0.4
BSWZ	Blackbirch Sta	3.29	56	P	Pb	04 43 12.0	-2.7
NNZ	Nelson	3.34	45	P	Pn	04 43 10.0	+1.2
APZ	The Paps	3.59	205	P	Pn	04 43 10.7	-1.6
PYZ	Puysegur Point	3.59	223	P	Pn	04 43 12.3	+0.1
PYZ	Puysegur Point	3.59	223	P	Pn	04 43 13.6	+1.3
TCW	Tory Channel	3.84	53	P	Pn	04 43 19.2	+3.6
DUWZ	D’Urville Isla	3.92	46	P	Pn	04 43 17.9	+1.1
NBEZ	Newall Road No	5.13	33	P	Pn	04 43 34.2	+0.8
KHEZ	Kahui Hut	5.17	35	P	Pn	04 43 35.0	+1.1
KHEZ	Kahui Hut	5.17	35	P	Pn	04 43 35.1	+1.1
PKE	Pukeiti	5.24	34	P	Pn	04 43 36.2	+1.3
WAZ	Wanganui	5.25	44	P	Pn	04 43 40.9	+5.9
VRZ	Vera Road	5.63	39	P	Pn	04 43 41.6	+1.4
WNVZ	Wahianoa	5.88	45	P	Pn	04 43 47.1	+3.2
NGZ	Ngauruhoe	6.00	44	P	Pn	04 43 48.7	+3.2
OTVZ	Oturere	6.04	44	P	Pn	04 43 49.5	+3.5
HIZ	Hauiti	6.18	36	P	Pn	04 43 49.0	+1.2
HIZ	Hauiti	6.18	36	P	Pn	04 43 47.6	-0.2

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*JMA **22** 04:44:37.4±0.1, 31°.6N±0°.3×131°.8E±0°.7, h23^{km}±1^{km}, MD4.0/40, MV4.2/40, HYUGANADA REGION*

JMA Felt I J1 at HYUGANADA REGION .

*NIED **22** 04:44:37.4, 31°.59N×131°.83E, h23^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.10; $M_{\theta\theta}$0.61; $M_{\phi\phi}$-1.71; $M_{r\theta}$1.07; $M_{\theta\phi}$-0.40; $M_{\phi r}$1.16; Fault plane solution: $M_0$2.21000×10^{15} NP1: ϕ_s158.00000°, δ32.00000°, λ36.00000°. NP2: ϕ_s37.00000°, δ72.00000°, λ117.00000°.*

*IDC **22** 04:44:37.8±0.8, 31°.62N×131°.63E, h30^{km}±4^{km}, mb3.8/18, mbtmp4.0/21, ML3.4/3, MS3.3/7 Error ellipse: s-maj=17.2km s-min=13.3km az=56.0*

*NEIC **22** 04:44:39.0±1.2, 31°.55N±0°.04×131°.75E±0°.06, h48^{km}±9^{km}, mb4.5/15, Error ellipse: s-maj=9.7km s-min=2.9km az=127.0*

ISC 22 04:44:37.4±0.6**, 31°.60N**±0°.04×**131°.78E**±0°.04**, h30**^{km}±3^{km}**, n84,** σ1^{s}.**29**/77**, mb4.2**/26**, MS3.4**/5**, 7D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNKG	Nichinankitago	0.35	281	⇓P	Pb	04 44 45.2	-0.3
JNKG				⇓S	Sb	04 44 51.5	+0.4
JNKG	Nichinankitago	0.35	281	A	A	04 44 45.2	
	comp=N,32nm,0.6s,comp=E,28nm,0.6s						
JNAR	Kushima--Naru	0.44	261	⇓P	Pb	04 44 47.1	+0.3
JNAR				⇓S	Sn	04 44 53.9	-0.7
JNAR	Kushima--Naru	0.44	261	A	A	04 44 47.1	
	comp=N,20nm,0.5s,comp=E,21nm,0.9s						
JTZ	Takazaki	0.66	298	P	Pb	04 44 50.7	+0.2
JTZ				S	Sn	04 45 00.2	+0.1
JTZ	Takazaki	0.66	298	A	A	04 44 50.7	
	comp=N,13nm,1.5s,comp=E,12nm,1.3s						
JTSN	Tsuno	0.69	340	⇓*i*P	Pb	04 44 51.0	0.0
JTSN				⇓S	Sb	04 45 00.7	+0.5
JTSN	Tsuno	0.69	340	A	A	04 44 51.0	
	comp=N,9.0nm,0.4s,comp=E,12nm,0.8s						
JHHC	Hyugahichiya	0.85	352	A	A	04 44 53.5	
	comp=N,7.0nm,2.7s,comp=E,10.0nm,0.7s						
JKIT	Kitakata	1.06	345	A	A	04 44 57.0	
	comp=N,8.0nm,1.5s,comp=E,11nm,1.1s						
JSU	Suzuyama	1.13	266		Pb	04 44 58.1	-0.3
JSU				Sn	Sb	04 45 14.0	+1.2
JSU	Suzuyama	1.13	266	P	Pb	04 44 58.4	0.0
JSU	Suzuyama	1.13	266	*i* P	Pb	04 44 58.0	-0.3
JSU	Suzuyama	1.13	266	A	A	04 44 58.0	
	comp=N,5.0nm,3.2s,comp=E,4.0nm,3.0s						
JZO	Okuchi	1.14	299	*i* P	Pn	04 44 58.0	+0.6
JZO	Okuchi	1.14	299	A	A	04 44 58.0	
	comp=N,4.0nm,3.4s,comp=E,5.0nm,6.0s						
JTN	Tanegashima 3	1.16	216	*e*P	Pb	04 44 58.5	-0.5
JTN				*e*S	Sb	04 45 14.7	+1.1
JSKE	Saikikamae	1.20	5	A	A	04 44 59.0	
	comp=N,5.0nm,0.4s,comp=E,10.0nm,0.7s						
JIU3	Izumi3	1.25	320	*i* P	Pb	04 45 00.1	-0.4
JIU3	Izumi3	1.25	320	A	A	04 45 00.1	
	comp=N,4.0nm,0.7s,comp=E,6.0nm,0.8s						
JUS	Usuki	1.47	359	A	A	04 45 03.1	
	comp=N,3.0nm,1.7s,comp=E,6.0nm,0.7s						
JHD	Hondo	1.64	302	A	A	04 45 06.2	
	comp=N,5.0nm,2.2s,comp=E,2.0nm,2.5s						
JNU	Nakatsue	1.70	334	Pg	Pb	04 45 07.0	-1.0
	comp=E,144nm,0.3s,baz=200,slow=14,SNR=1099						
JNU				Lg	Lg	04 45 31.8	
	comp=E,62nm,0.3s,baz=253,slow=22,SNR=21						
JNU				LR	LR	04 45 36.3	
	comp=E,239nm,21.4s,baz=196,slow=36						
JNU	Nakatsue	1.70	334		Pn	04 45 06.8	+1.6
JNU	Nakatsue	1.70	334	P	Pn	04 45 06.5	+1.4
JTA	Tamana	1.72	323	A	A	04 45 07.3	
	comp=N,4.0nm,3.5s,comp=E,4.0nm,2.3s						
JBEP	Beppuamama	1.76	350	A	A	04 45 07.6	
	comp=N,7.0nm,0.8s,comp=E,9.0nm,0.8s						
JKI	Kunimi	2.04	355	A	A	04 45 11.6	
	comp=N,5.0nm,1.2s,comp=E,3.0nm,1.7s						
JMN	Monobe	2.77	39		Pn	04 45 20.4	+0.6
JMN	Monobe	2.77	39	P	Pn	04 45 20.4	+0.6
JTU	Tsushima	3.54	326	P	Pn	04 45 31.0	+0.7
INU	Inuyama	5.76	48		Pn	04 46 02.7	+1.8
INU	Inuyama	5.76	48	P	Pn	04 46 03.6	+2.7
JGF	Kuroka	6.13	48		Pn	04 46 07.3	+1.2
JGF	Kuroka	6.13	48	P	Pn	04 46 08.0	+1.9
KSRS	Korea Array	6.65	333	Pn	Pn	04 46 14.1	+1.0
	comp=E,1.0nm,0.3s,baz=146,slow=15,SNR=9.3						
KSRS				Sn	Sn	04 47 27.7	-0.1
	comp=E,0.2nm,0.3s,baz=148,slow=17,SNR=4.4						
KSRS				LR	LR	04 49 06.5	
	comp=E,374nm,19.1s,baz=150,slow=41						
	comp=E,1.6nm,0.3s						
JHJ	Hachijo jima 2	6.94	75	Pn	Pn	04 46 19.3	+2.2
	comp=E,8.9nm,0.3s,baz=109,slow=16,SNR=1.8						
JHJ				Sn	Sn	04 47 31.4	-3.8
	comp=E,8.3nm,0.3s,baz=233,slow=21,SNR=1.1						
JHJ				LR	LR	04 48 26.2	
	comp=E,63nm,21.8s,baz=3.0,slow=32						
	comp=E,118nm,0.9s						
JHJ2	Mitsune	6.97	75	Pn	Pn	04 46 18.1	+0.6
JHJ2	Mitsune	6.97	75	P	Pn	04 46 22.7	+5.2
MAJO	Matsushiro	7.27	46		Pn	04 46 22.8	+1.2
MAJO	Matsushiro	7.27	46	P	Pn	04 46 23.6	+2.0
MJAR	Matsushiro Arr	7.27	46	Pn	Pn	04 46 23.5	+1.9
	comp=E,0.1nm,0.3s,baz=250,slow=14,SNR=6.4						
MJAR				Sn	Sn	04 47 43.6	+0.5
	comp=E,0.1nm,0.3s,baz=230,slow=23,SNR=2.2						
	comp=E,0.9nm,0.3s						
MJB9	Matsu-Tunnel	7.27	45		Pn	04 46 24.3	+2.7
BNX	BinXian	14.52	348	⇓P	P	04 48 08.8	+1.7
BNX				pmax	pmax		
	comp=Z,18nm,0.8s						
BTO	Baotou	19.70	303	*e*P	P	04 49 03.8	-0.7
BTO				S	Sn	04 52 49.9	+3.4
BTO				pmax	pmax		
	comp=Z,15nm,0.6s						
BTO				pmax	pmax		
	comp=Z,170nm,3.9s						
BTO				LR	LR		
	comp=N,590nm,10.4s						
BTO				LR	LR		
	comp=E,510nm,8.6s						
BTO				LR	LR		
	comp=Z,810nm,15.0s						
HILR	Hailar Array B	20.09	337	P	P	04 49 08.4	-0.1
	comp=Z,5.1nm,0.8s,baz=142,slow=14,SNR=6.7						
	comp=Z,5.1nm,0.8s						
LZDM	Lanzhou Array	23.70	288	P	P	04 49 47.2	+0.1
	comp=Z,2.2nm,0.4s,baz=169,slow=10,SNR=7.0						
	comp=Z,2.2nm,0.4s						
SONM	Songino Array	25.21	317	P	P	04 50 00.1	-0.5
	comp=Z,2.5nm,0.7s,baz=134,slow=9.5,SNR=15						
SONM				pP	pP	04 50 09.4	+0.1
	comp=Z,2.7nm,0.9s,baz=116,slow=6.8,SNR=6.8						
SONM				LR	LR	04 59 51.3	
	comp=Z,89nm,19.9s,baz=102,slow=36						
	comp=Z,2.5nm,0.7s						
SONM	Songino Array	25.21	317	P	P	04 49 59.6	-1.1
YAK	Yakutsk	30.48	358	LR	LR	05 03 26.8	
	comp=Z,94nm,18.4s,baz=248,slow=37						
MA2	Magadan	30.75	19	LR	LR	05 04 44.0	
	comp=Z,22nm,18.6s,baz=143,slow=39						
CMAR	Chiang Mai Arr	32.37	254	P	P	04 51 05.3	+0.9
	comp=Z,1.0nm,0.3s,baz=54,slow=8.0,SNR=2.6						
	comp=Z,1.0nm,0.3s						
BRDH	Bariadhala	36.64	266	LR	LR	05 07 55.8	
	comp=Z,61nm,18.9s,baz=326,slow=38						
MKAR	Makanchi Array	40.56	307	P	P	04 52 13.1	-1.0
	comp=Z,1.9nm,0.7s,baz=91,slow=10,SNR=16						
MKAR				pP	pP	04 52 22.4	-0.5
	comp=Z,1.6nm,0.7s,baz=98,slow=9.7,SNR=6.9						
MKAR				LR	LR	05 10 33.1	
	comp=Z,148nm,19.5s,baz=331,slow=38						
	comp=Z,1.9nm,0.7s						
MKAR	Makanchi Array	40.56	307	P	P	04 52 13.4	-0.7
KURBB	Kurchatov Arra	43.35	312	P	P	04 52 36.1	-0.6
	comp=Z,2.0nm,0.2s,baz=98,slow=9.0,SNR=6.2						
KURBB				pP	pP	04 52 45.5	-0.1
	comp=Z,2.6nm,0.8s,baz=99,slow=9.0,SNR=2.4						
	comp=Z,2.0nm,0.2s						
NRIK	Noril'sk	45.21	340	P	P	04 52 52.4	+1.0
	comp=Z,1.3nm,0.3s,baz=178,slow=4.9,SNR=7.3						
NRIK				pP	pP	04 52 59.9	-0.4
	comp=Z,3.3nm,0.4s,baz=327,slow=20,SNR=5.9						
	comp=Z,1.3nm,0.3s						
AAK	Ala-Archa	46.19	301	P	P	04 52 58.4	-1.3
AAK				IAmb	IAmb	04 53 18.9	
	comp=Z,8.0nm,1.4s						
BVAR	Borovoye Array	48.52	315	P	P	04 53 16.0	-1.5
	comp=Z,1.0nm,0.4s,baz=94,slow=7.9,SNR=8.4						
	comp=Z,1.0nm,0.4s						
BORK	Borovoye	48.56	315		P	04 53 16.8	-1.1
BORK				IAmb	IAmb	04 53 19.4	
	comp=Z,2.0nm,0.6s						
KKAR	Karatay Array	49.05	302	P	P	04 53 20.1	-1.6
GAR	Garm	49.87	296	P	P	04 53 27.5	-0.7
GAR				IAmb	IAmb	04 53 34.5	
	comp=Z,9.4nm,1.5s						
C18K	Utukok River	52.62	25	P	P	04 53 49.7	+1.4
E19K	Redstone River	53.97	27	IAmb	IAmb	04 54 01.6	
	comp=Z,3.6nm,0.8s						
ASAR	Alice Springs	54.99	178	P	P	04 54 07.2	+1.2
	comp=Z,0.4nm,0.8s,baz=13,slow=8.1,SNR=5.2						
	comp=Z,0.4nm,0.8s						
E21K	Killik River	55.25	26	IAmb	IAmb	04 54 10.2	
	comp=Z,4.5nm,0.8s						
AB31	Akbulak array	55.38	311	P	P	04 54 07.7	-0.9
ABKAR	Akbulak array	55.38	311	P	P	04 54 07.6	-1.0
E22K	Anaktuvuk Pass	56.05	26	P	P	04 54 14.7	+1.5
E22K				IAmb	IAmb	04 54 16.4	
	comp=Z,4.8nm,1.0s						
E24K	Your Creek	57.30	26	IAmb	IAmb	04 54 24.9	
	comp=Z,3.0nm,0.7s						
F24K	Squaw Lake	57.56	27	IAmb	IAmb	04 54 36.6	
	comp=Z,2.2nm,0.8s						
D25K	Kavik River	57.97	25	IAmb	IAmb	04 54 29.2	
	comp=Z,2.2nm,0.7s						
ILAR	Eielson Array	58.25	30	P	P	04 54 29.6	+0.9
	comp=Z,0.5nm,0.8s,baz=263,slow=6.2,SNR=8.1						
	comp=Z,0.5nm,0.8s						
ILAR	Eielson Array	58.25	30	P	P	04 54 29.1	+0.4
KBZ	Khabaz	68.21	309	P	P	04 55 35.4	+0.4
	comp=Z,1.9nm,0.8s,baz=252,slow=3.9,SNR=3.9						
	comp=Z,1.9nm,0.8s						
FINES	FINESS Array B	69.74	330	P	P	04 55 42.8	-1.4
	comp=Z,1.2nm,0.4s,baz=60,slow=5.6,SNR=23						
FINES				pP	pP	04 55 52.4	-1.2
	comp=Z,2.1nm,0.6s,baz=64,slow=4.4,SNR=2.9						
	comp=Z,1.2nm,0.4s						
FINES	FINESS Array B	69.74	330	P	P	04 55 42.9	-1.3
YKA	Yellowknife Ar	72.36	27	P	P	04 56 00.9	+0.8
	comp=Z,0.8nm,0.8s,baz=304,slow=6.3,SNR=10						
YKA				pP	pP	04 56 10.7	+1.3
	comp=Z,0.4nm,0.8s,baz=304,slow=6.0,SNR=5.2						
	comp=Z,0.8nm,0.8s						
AKASG	Malin Array Be	73.47	320	P	P	04 56 05.1	-1.8
	comp=Z,0.7nm,0.4s,baz=57,slow=6.2,SNR=4.2						
AKASG				pP	pP	04 56 15.4	-0.9
	comp=Z,0.6nm,0.4s,baz=56,slow=6.6,SNR=3.0						
	comp=Z,0.7nm,0.4s						
HFS	Hagfors	75.50	333	P	P	04 56 17.8	-0.8
	comp=Z,2.2nm,0.9s,baz=75,slow=6.3,SNR=5.5						
	comp=Z,2.2nm,0.9s						
BRTR	Keskin Array B	76.19	308	P	P	04 56 22.1	-1.0
	comp=Z,0.4nm,0.7s,baz=93,slow=3.1,SNR=3.9						
	comp=Z,0.4nm,0.7s						
BRTR	Keskin Array B	76.19	308	P	P	04 56 21.9	-1.2
EKA	Eskdalemuir Ar	85.21	336	P	P	04 57 09.4	-1.4
	comp=Z,0.2nm,0.4s,baz=43,slow=5.0,SNR=1.5						
	comp=Z,0.2nm,0.4s						
PDAR	Pinedale Array	87.06	40	P	P	04 57 21.9	+1.3
	comp=Z,0.2nm,0.6s,baz=348,slow=41,SNR=2.8						
	comp=Z,0.2nm,0.6s						

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*TEH **22** 04:45:34.2, 27°.63N×53°.28E, h5^{km}±19^{km}*

*IDC **22** 04:45:37.0±14.0, 28°.03N×53°.38E, h0^{km}, mb3.5/5, mbtmp3.5/5, MS3.6/1, Error ellipse: s-maj=277.0km s-min=36.8km az=2.0*

ISC 22 04:45:34.5±1.4**, 27°.62N**±0°.06×**53°.31E**±0°.09**, h2**^{km}±9^{km}**, n14,** σ1^{s}.**37**/13**, mb3.6**/4**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHL1	Khalili_Fars	0.01	340	Pg	Pg	04 45 34.8	-0.2
LMD1	Lamerd	0.31	204	Pg	Pg	04 45 41.0	+0.6
QIR1	Qir	0.88	345	Pg	Pn	04 45 52.9	-1.1
LAR1	LAR	0.95	87	Pg	Pn	04 45 54.6	-0.4
KLNJ	Kolanjah	3.69	336	Pn	Pn	04 46 34.3	+1.3
IMEH	Mehriz	3.92	17	Pn	Pn	04 46 38.2	+2.1
IRAM	Ramesheh	4.25	349	Pn	Pn	04 46 41.7	+1.2
IBAF	Bafgh	4.42	26	Pn	Pn	04 46 44.5	+1.7

ICHK	**Chekchek**	**4.70**	**11**	Pn	**Pn**	**04 46 48.2**	**+1.5**
BRTR	**Keskin Array B**	**20.29**	**312**	P	Pn	04 50 13.5	-0.2
	0.5nm,1.0s,baz=114,slow=13,SNR=2.4						
	0.5nm,1.0s						
BVAR	**Borovoye Array**	**28.37**	**22**	P	**P**	**04 51 30.2**	**+0.2**
	0.5nm,0.4s,baz=211,slow=8.1,SNR=5.9						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**29.73**	**42**	P	**P**	**04 51 41.8**	**-0.4**
	0.3nm,0.6s,baz=236,slow=10,SNR=4.6						
	0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**35.00**	**33**	P	**P**	**04 52 27.5**	**-0.7**
	0.5nm,0.5s,baz=231,slow=9.1,SNR=2.1						
ZALV				LR	LR	05 09 55.1	
	comp=Z,104nm,20.9s,baz=54,slow=42						
	0.5nm,0.5s						
FINES	**FINESS Array B**	**38.41**	**339**	P	**P**	**04 52 55.8**	**-1.3**
	0.7nm,0.5s,baz=137,slow=9.4,SNR=11						
	0.7nm,0.5s						

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*BJI **22** 04:56:40.4, 29°.15N×142°.31E, h15^{km}, mB4.8/11, mb4.3/23, Ms4.2/10, Ms7 4.0/12*
*IDC **22** 04:56:41.0±0.6, 29°.24N×142°.20E, h0^{km}, mb4.2/24, mbtmp4.2/27, ML3.5/3, MS3.7/15, Error ellipse: s-maj=18.5km s-min=13.5km az=70.0*
*NIED **22** 04:56:43.8, 29°.34N×142°.29E, h54^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.77; $M_{\theta\theta}$-0.13; $M_{\phi\phi}$-1.63; $M_{r\theta}$0.95; $M_{\theta\phi}$-0.96; $M_{\phi r}$3.17; Fault plane solution: $M_0$3.84000×10^{15} NP1: ϕ_s217.00000°, δ16.00000°, λ109.00000°. NP2: ϕ_s18.00000°, δ75.00000°, λ85.00000°.*
*JMA **22** 04:56:43.8±0.2, 29°.3N±0°.7×14°2E±°, h54^{km}, MV4.2/25, NEAR TORISHIMA IS*
*NEIC **22** 04:56:44.3±1.2, 29°.25N±0°.06×142°.1E±0°.1, h20^{km}±4^{km}, mb4.6/35, Error ellipse: s-maj=17.3km s-min=8.1km az=78.0*
ISC 22 04:56:45.5±0.5**, 29°.29N**±0°.05×**142°.20E**±0°.09**, h30^{km}, n102, σ1^{s}17**/97**, mb4.5**/42**, MS3.8**/15**, 1C-2D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.19**	**180**	*e*P	**Pn**	**04 57 19.2**	**-0.6**
CBIJ				*e*S	**Sn**	**04 57 45.0**	**-0.8**
JCJ	**Chichijima**	**2.19**	**180**	Pn	Pn	04 57 08.2	-12
	38nm,0.3s,baz=282,slow=22,SNR=9.0						
JCJ				Sn	Sn	04 57 30.9	-15
	56nm,0.3s,baz=277,slow=24,SNR=6.0						
JCJ	**Chichijima**	**2.19**	**180**		**Pn**	**04 57 18.2**	**-1.6**
JHH2	**Haha-jima-NKT2**	**2.65**	**181**	*e*S	**Sn**	**04 57 56.9**	**-0.3**
JHJ2	**Mitsune**	**4.32**	**332**	Pn	**Pn**	**04 57 48.4**	**-0.8**
JHJ2	**Mitsune**	**4.32**	**332**	*e*P	**Pn**	**04 57 48.7**	**-0.4**
JHJ2				*e*S	**Sn**	**04 58 37.6**	**-1.0**
JHJ	**Hachijo jima 2**	**4.34**	**332**	Pn	**Pn**	**04 57 49.0**	**-0.5**
	11nm,0.3s,baz=237,slow=16,SNR=1.5						
JHJ				Sn	**Sn**	**04 58 35.9**	**-3.2**
	18nm,0.3s,baz=265,slow=18,SNR=2.5						
JHJ				LR	LR	04 59 33.9	
	comp=Z,770nm,18.8s,baz=128,slow=40						
	90nm,0.8s						
JMKN	**Mikurajimanish**	**5.10**	**335**	*e*P	**Pn**	**04 58 00.1**	**+0.3**
BSO1	**Boso 1**	**5.45**	**349**	*e*P	**Pn**	**04 58 02.8**	**-1.3**
BSO3	**Boso 3**	**5.68**	**346**	*e*P	**Pn**	**04 58 07.3**	**-0.3**
BSO4	**Boso 4**	**5.90**	**345**	*e*P	**Pn**	**04 58 11.3**	**+0.6**
JOD2	**Odawara 2**	**6.51**	**337**	*e*P	**Pn**	**04 58 19.6**	**+0.3**
JOD2				*e*S	**Sn**	**04 59 32.8**	**+0.3**
JRY	**Ryogami san**	**7.26**	**338**	P	**Pn**	**04 58 29.9**	**+0.4**
JRY				*e*S	**Sn**	**04 59 51.3**	**+0.3**
JHO	**Hitachi**	**7.43**	**350**	P	**Pn**	**04 58 30.4**	**-1.4**
JHO				*e*S	**Sn**	**04 59 50.5**	**-4.5**
JAG	**Ashikaga**	**7.48**	**343**	*e*P	**Pn**	**04 58 31.4**	**-1.1**
JAG				*e*S	**Sn**	**04 59 53.2**	**-3.1**
JGF	**Kuroka**	**7.51**	**328**	Pn	**Pn**	**04 58 33.4**	**+0.4**
MJAR	**Matsushiro Arr**	**7.97**	**336**	Pn	**Pn**	**04 58 39.3**	**0.0**
	0.4nm,0.3s,baz=157,slow=9.4,SNR=40						
MJAR				Sn	**Sn**	**05 00 08.5**	**+0.1**
	0.1nm,0.3s,baz=339,slow=20,SNR=1.9						
MJAR				LR	LR	05 01 57.5	
	comp=Z,201nm,18.5s,baz=178,slow=40						
	15nm,0.8s						
MJAR	**Matsushiro Arr**	**7.97**	**336**		**Pn**	**04 58 38.9**	**-0.4**
MAJO	**Matsushiro**	**7.97**	**336**		**Pn**	**04 58 39.0**	**-0.3**
MJB9	**Matsu-Tunnel**	**7.98**	**336**		**Pn**	**04 58 39.4**	**0.0**
JSD	**Sado**	**9.32**	**340**	Pn	**Pn**	**04 58 56.6**	**-1.2**
JNU	**Nakatsue**	**10.42**	**294**	LR	LR	05 03 08.7	
	comp=Z,354nm,18.2s,baz=95,slow=37						
KSRS	**Korea Array**	**14.43**	**308**	Pn	**Pn**	**05 00 07.4**	**-0.3**
	0.2nm,0.3s,baz=112,slow=12,SNR=8.4						
KSRS				LR	LR	05 05 34.7	
	comp=Z,167nm,18.5s,baz=120,slow=37						
	0.5nm,0.5s						
INCN	**Inchon**	**15.35**	**306**	Pn	**Pn**	**05 00 18.0**	**-1.9**
INCN				IAmb	IAmb	05 00 25.1	
	comp=Z,68nm,1.4s						
YHNB	**Yeheng**	**19.12**	**261**	P	**P**	**05 01 04.2**	**-2.0**
YHNB				IAmb	IAmb	05 01 42.0	
	comp=Z,67nm,1.5s						
YULB	**Yu-li**	**19.62**	**257**	P	**P**	**05 01 10.7**	**-0.9**
YULB				IAmb	IAmb	05 01 26.9	
	comp=Z,57nm,1.5s						
CN2	**Changchun**	**19.72**	**322**	*e*P	**Pn**	**05 01 15.1**	**+1.0**
CN2				*e*S	**S**	**05 04 53.0**	**-0.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,100nm,4.0s						
CN2				LR	LR		
	comp=Z,200nm,12.0s						
CN2				LR	LR		
	comp=Z,300nm,12.0s						
CN2				LR	LR		
	comp=Z,200nm,11.0s						
SSLB	**Suanglung**	**19.78**	**259**	P	**P**	**05 01 12.6**	**-0.7**
SSLB				IAmb	IAmb	05 01 19.6	
	comp=Z,88nm,1.5s						
BNX	**BinXian**	**20.13**	**329**	⇓P	**P**	**05 01 16.4**	**-0.5**
BNX				pmax	pmax		
	comp=Z,15nm,0.9s						
NJ2	**Nanjing**	**20.27**	**284**	*e*P	**P**	**05 01 18.8**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HEH	**HeiHe**	**23.74**	**336**	*e*P	**P**	**05 01 54.6**	**-0.3**
HEH				pmax	pmax		
	comp=Z,12nm,1.1s						
HNS	**HongShan**	**24.29**	**297**	⇓P	**P**	**05 02 00.4**	**+0.2**
HNS				LR	LR		
	comp=Z,290nm,12.7s						
HNS				LR	LR		
	comp=Z,260nm,15.1s						
H11N2	**WAKE ISLAND Hy**	**24.36**	**107**	T	T	05 27 02.0	
	baz=297,slow=75						
H11N1	**WAKE ISLAND Hy**	**24.36**	**107**	T	T	05 26 59.7	
	baz=297,slow=75						
H11N3	**WAKE ISLAND Hy**	**24.37**	**107**	T	T	05 27 00.8	
	baz=297,slow=75						
HILR	**Hailar Array B**	**26.48**	**326**	P	**P**	**05 02 20.7**	**+0.7**
	comp=Z,3.6nm,0.6s,baz=128,slow=12,SNR=6.1						
	comp=Z,3.6nm,0.6s						
HHC	**Hu-ho-hao-te**	**27.46**	**303**	*e*P	P	05 02 20.5	-8.5
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,78nm,5.8s						
HHC				LR	LR		
	comp=N,160nm,16.6s						
HHC				LR	LR		
	comp=E,230nm,15.7s						
HHC				LR	LR		
	comp=Z,230nm,14.8s						
BTO	**Baotou**	**28.54**	**302**	*e*P	**P**	**05 02 40.3**	**+1.7**
BTO				S	**S**	**05 07 30.4**	**+5.6**
BTO				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BTO				pmax	pmax		
	comp=Z,120nm,4.1s						
BTO				LR	LR		
	comp=Z,590nm,12.7s						
BTO				LR	LR		
	comp=Z,620nm,11.3s						
BTO				LR	LR		
	comp=Z,810nm,12.2s						
XAN	**Xi'an**	**28.64**	**288**	⇑P	**P**	**05 02 37.8**	**-1.7**
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
XAN				LR	LR		
	comp=Z,220nm,8.9s						
XAN				LR	LR		
	comp=Z,270nm,10.3s						
XAN				LR	LR		
	comp=Z,180nm,13.1s						
SONM	**Songino Array**	**33.18**	**314**	P	**P**	**05 03 20.7**	**+1.2**
	comp=Z,2.8nm,0.9s,baz=114,slow=7.5,SNR=11						
SONM				LR	LR	05 17 18.5	
	comp=Z,132nm,18.3s,baz=46,slow=37						
	comp=Z,2.8nm,0.9s						
SONM	**Songino Array**	**33.18**	**314**	IAmb	IAmb	05 03 26.1	
	comp=Z,4.0nm,1.1s						
PZH	**PanZhiHua**	**35.75**	**275**	P	**P**	**05 03 43.1**	**+1.2**
CHTO	**Chiang Mai**	**40.66**	**265**		**P**	**05 04 21.8**	**-1.4**
CHTO				IAmb	IAmb	05 04 23.2	
	comp=Z,9.7nm,0.9s						
CMAR	**Chiang Mai Arr**	**40.80**	**265**	P	**P**	**05 04 24.0**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=64,slow=6.1,SNR=12						
CMAR				LR	LR	05 23 13.9	
	comp=Z,81nm,18.1s,baz=55,slow=39						
	comp=Z,0.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**40.80**	**265**	P	**P**	**05 04 23.5**	**-0.9**
MTN	**Manton Dam**	**43.23**	**196**		**P**	**05 04 42.4**	**-1.7**
MTN				IAmb	IAmb	05 04 44.2	
	comp=Z,9.0nm,0.6s						
ZAA0	**Zalesovo Array**	**47.86**	**318**		**P**	**05 05 20.2**	**-0.3**
ZAA0				IAmb	IAmb	05 05 21.3	
	comp=Z,6.4nm,1.0s						
ZALV	**Zalesovo Beam**	**47.86**	**318**	P	**P**	**05 05 20.6**	**+0.1**
	comp=Z,1.2nm,0.3s,baz=100,slow=6.6,SNR=11						
ZALV				LR	LR	05 26 26.1	
	comp=Z,84nm,18.6s,baz=28,slow=37						
	comp=Z,1.2nm,0.3s						
ZALV	**Zalesovo Beam**	**47.86**	**318**		**P**	**05 05 19.6**	**-0.9**
MKAR	**Makanchi Array**	**49.12**	**308**	P	**P**	**05 05 29.9**	**-0.3**
	comp=Z,2.1nm,0.7s,baz=91,slow=9.9,SNR=11						
MKAR				LR	LR	05 27 50.0	
	comp=Z,65nm,18.9s,baz=339,slow=38						
	comp=Z,2.1nm,0.7s						
MAKZ	**Makanchi**	**49.33**	**308**	P	**P**	**05 05 31.9**	**+0.1**
MAKZ				IAmb	IAmb	05 05 34.0	
	comp=Z,9.1nm,1.5s						
WB0	**Warramunga Arr**	**49.35**	**190**	P	**P**	**05 05 30.9**	**-1.3**
WR8	**Warramunga Arr**	**49.52**	**190**	P	**P**	**05 05 32.7**	**-0.8**
WR8				IAmb	IAmb	05 05 33.2	
	comp=Z,8.5nm,0.8s						
WRAB	**Tennant Creek**	**49.52**	**190**	P	**P**	**05 05 33.1**	**-0.3**
WRAB				IAmb	IAmb	05 05 33.2	
	comp=Z,6.8nm,0.8s						
WRA	**Warramunga Arr**	**49.53**	**190**	P	**P**	**05 05 32.6**	**-1.0**
	comp=Z,6.0nm,0.7s,baz=11,slow=8.1,SNR=30						
WRA				PcP	**PcP**	**05 06 55.6**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=3.0,slow=3.8,SNR=2.4						
	comp=Z,6.0nm,0.7s						
WRA	**Warramunga Arr**	**49.53**	**190**	P	**P**	**05 05 33.0**	**-0.6**
NRIK	**Noril'sk**	**50.62**	**338**	P	**P**	**05 05 42.0**	**+0.7**
	comp=Z,2.6nm,0.5s,baz=106,slow=9.1,SNR=6.3						
NRIK				LR	LR	05 27 09.8	
	comp=Z,86nm,20.4s,baz=320,slow=36						
	comp=Z,2.6nm,0.5s						
NRIK	**Noril'sk**	**50.62**	**338**		**P**	**05 05 41.1**	**-0.1**
NRIK				IAmb	IAmb	05 05 42.4	
	comp=Z,4.8nm,0.9s						
KURK	**Kurchatov**	**51.48**	**313**		**P**	**05 05 47.8**	**-0.2**
KURBB	**Kurchatov Arra**	**51.54**	**313**	P	**P**	**05 05 48.6**	**+0.2**
	comp=Z,9.4nm,0.8s,baz=90,slow=7.4,SNR=38						
	comp=Z,9.4nm,0.8s						
ASAR	**Alice Springs**	**53.25**	**190**	P	**P**	**05 06 00.6**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=3.9,slow=5.3,SNR=20						
ASAR				LR	LR	05 28 07.1	
	comp=Z,82nm,18.8s,baz=112,slow=36						
	comp=Z,0.9nm,0.6s						
KSH	**Kashi**	**54.49**	**300**	P	P	05 06 15.6	+5.0
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
G23K	**Bananza Creek**	**54.69**	**27**	P	**P**	**05 06 11.8**	**+0.3**
G23K				IAmb	IAmb	05 06 26.1	
	comp=Z,3.8nm,0.9s						
AAK	**Ala-Archa**	**55.04**	**304**	LR	LR	05 33 14.8	
	comp=Z,62nm,18.8s,baz=356,slow=40						
F24K	**Squaw Lake**	**55.62**	**26**		**P**	**05 06 18.5**	**+0.4**
ILAR	**Eielson Array**	**55.79**	**29**	P	**P**	**05 06 18.9**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=253,slow=6.2,SNR=8.4						
	comp=Z,0.6nm,0.7s						
DZM	**Mont Dzumac**	**56.15**	**153**	*e*LR	LR	05 22 42.6	
	comp=Z,63nm,23.7s						
D25K	**Kavik River**	**56.37**	**24**	IAmb	IAmb	05 06 38.9	
	comp=Z,5.1nm,1.1s						
BVAR	**Borovoye Array**	**56.46**	**316**	P	**P**	**05 06 24.7**	**+0.3**
	comp=Z,4.1nm,0.6s,baz=92,slow=7.4,SNR=20						
BVAR				LR	LR	05 32 02.8	
	comp=Z,145nm,18.8s,baz=299,slow=38						
	comp=Z,4.1nm,0.6s						
BORK	**Borovoye**	**56.50**	**317**		**P**	**05 06 24.6**	**0.0**
F26K	**Sheenjek River**	**57.06**	**26**	P	**P**	**05 06 29.2**	**+0.7**
C27K	**Jago River**	**57.33**	**24**	IAmb	IAmb	05 06 38.5	
	comp=Z,6.2nm,1.2s						
KK31	**Karatay Array**	**57.83**	**305**	P	**P**	**05 06 34.0**	**-0.3**
KK31				IAmb	IAmb	05 06 35.9	
	comp=Z,4.4nm,0.7s						
KKAR	**Karatay Array**	**57.83**	**305**	P	**P**	**05 06 34.0**	**-0.3**
GAR	**Garm**	**58.89**	**300**	P	**P**	**05 06 41.3**	**-0.6**
GAR				IAmb	IAmb	05 06 44.2	
	comp=Z,6.3nm,0.8s						
CHGR	**Chuyangaron**	**59.85**	**300**	P	**P**	**05 06 47.9**	**-0.5**
STKA	**Stephens Creek**	**60.83**	**181**	P	**P**	**05 06 55.2**	**+0.3**
	comp=Z,2.3nm,0.9s,baz=334,slow=11,SNR=3.7						
	comp=Z,2.3nm,0.9s						
PALK	**Pallekele**	**61.66**	**262**	LR	LR	05 35 14.2	
	comp=Z,38nm,18.3s,baz=76,slow=38						
ARTI	**Arti**	**62.82**	**322**	P	**P**	**05 07 08.5**	**+0.5**
	comp=Z,5.4nm,0.6s,baz=102,slow=2.5,SNR=13						
	comp=Z,5.4nm,0.6s						
ARTI	**Arti**	**62.82**	**322**	P	**P**	**05 07 07.6**	**-0.5**
AB31	**Akbulak array**	**63.59**	**314**	P	**P**	**05 07 12.3**	**-1.1**
AB31				IAmb	IAmb	05 07 16.0	
	comp=Z,3.8nm,0.8s						
ABKAR	**Akbulak array**	**63.59**	**314**	P	**P**	**05 07 12.9**	**-0.4**
AKTO	**Aktyubinsk**	**64.48**	**315**	P	**P**	**05 07 19.8**	**+0.6**
	comp=Z,3.6nm,0.7s,baz=91,slow=5.8,SNR=7.2						
AKTO				LR	LR	05 38 42.0	
	comp=Z,91nm,19.3s,baz=4.5,slow=39						
	comp=Z,3.6nm,0.7s						
YKA	**Yellowknife Ar**	**70.21**	**29**	P	**P**	**05 07 55.1**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=296,slow=7.0,SNR=16						
	comp=Z,0.6nm,0.6s						
FINES	**FINESS Array B**	**75.99**	**334**	P	**P**	**05 08 29.5**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=246,slow=14,SNR=8.6						
	comp=Z,1.4nm,0.6s						
KBZ	**Khabaz**	**76.53**	**313**	P	**P**	**05 08 33.5**	**+0.7**
	comp=Z,5.0nm,0.8s,baz=75,slow=5.7,SNR=13						
	comp=Z,5.0nm,0.8s						
NVAR	**Mina Array Bea**	**79.16**	**52**	P	**P**	**05 08 48.8**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=303,slow=6.2,SNR=4.6						
	comp=Z,0.5nm,0.5s						
ELK	**Elko**	**80.09**	**49**	LR	LR	05 38 46.7	
	comp=Z,41nm,19.3s,baz=56,slow=32						
PPT2	**Papeete2**	**80.62**	**116**	*e*LR	LR	05 34 04.9	
	comp=Z,45nm,23.8s						
PPT2				*e*LR	LR	05 34 06.7	
	comp=Z,109nm,37.8s						
AKASG	**Malin Array Be**	**80.86**	**324**	P	**P**	**05 08 55.9**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=93,slow=33,SNR=4.2						
	comp=Z,0.4nm,0.4s						
HFS	**Hagfors**	**81.42**	**337**	P	**P**	**05 08 59.2**	**0.0**
	comp=Z,1.3nm,0.6s,baz=113,slow=3.4,SNR=6.9						
	comp=Z,1.3nm,0.6s						
NOA	**NORSAR Array B**	**81.58**	**338**	P	**P**	**05 08 60.0**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=44,slow=6.1,SNR=3.2						
	comp=Z,0.4nm,0.6s						
LAO	**LASA Array**	**82.42**	**40**	P	**P**	**05 09 05.8**	**+0.9**
PDAR	**Pinedale Array**	**82.65**	**45**	P	**P**	**05 09 06.8**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=341,slow=3.1,SNR=4.5						
	comp=Z,0.5nm,0.8s						
BNN	**Bunyan**	**83.57**	**311**	P	**P**	**05 09 09.5**	**-1.6**
BNN				IAmb	IAmb	05 09 12.8	
	comp=Z,4.1nm,0.8s						
TAOE	**Nuku Hiva Isla**	**83.67**	**104**	*e*LR	LR	05 35 30.8	
	comp=Z,43nm,26.0s						
RAYN	**Ar Rayn**	**84.28**	**294**	P	**P**	**05 09 14.9**	**+0.1**
BR131	**Keskin Array S**	**84.53**	**313**	P	**P**	**05 09 15.7**	**-0.3**
BR131				IAmb	IAmb	05 09 37.1	
	comp=Z,5.2nm,0.9s						
BRTR	**Keskin Array B**	**84.53**	**313**	P	**P**	**05 09 16.5**	**+0.5**
	comp=Z,2.5nm,0.9s,baz=119,slow=4.0,SNR=12						
	comp=Z,2.5nm,0.9s						
BRTR	**Keskin Array B**	**84.53**	**313**	P	**P**	**05 09 15.9**	**-0.1**
TXAR	**Lajitas Array**	**94.28**	**53**	P	**P**	**05 10 03.5**	**+1.2**
	comp=Z,1.0nm,1.0s,baz=290,slow=2.4,SNR=5.5						
	comp=Z,1.0nm,1.0s						
LPAZ	**La Paz**	**149.29**	**72**	PKPbc	**PKiKP**	**05 16 34.8**	**+1.0**
	comp=Z,1.3nm,0.9s,baz=297,slow=3.7,SNR=3.7						

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*IDC **22** 05:09:16.0±1.3, 5°.34S×146°.72E, h218^{km}±11^{km}, mb3.2/8, mbtmp3.8/11, Error ellipse: s-maj=17.8km s-min=10.3km az=96.0*
ISC 22 05:09:14.2±0.8**, 5°.26S**±0°.08×**146°.8E**±0°.1**, h200^{km}, n11, σ1^{s}65**/15**, mb3.3**/8**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.13**	**175**	P	**Pn**	**05 10 19.5**	**+1.8**
	7.2nm,0.3s,baz=4.0,slow=14,SNR=6.5						
PMG				S	**Sn**	**05 11 08.8**	**+1.1**
	36nm,0.7s,baz=339,slow=17,SNR=5.8						
JAY	**Jayapura**	**6.68**	**294**	P	**Pn**	**05 10 51.9**	**+1.5**
	20nm,1.1s,baz=161,slow=20,SNR=1.4						
JAY				S	**Sn**	**05 12 06.8**	**+0.2**
	25nm,1.0s,baz=163,slow=19,SNR=2.1						
WRA	**Warramunga Arr**	**18.98**	**219**	P	**P**	**05 13 21.5**	**+0.7**
	6.1nm,0.8s,baz=46,slow=12,SNR=15						
WRA				S	**S**	**05 16 41.8**	**-4.0**
	2.2nm,1.0s,baz=39,slow=20,SNR=5.9						
ASAR	**Alice Springs**	**22.13**	**213**	P	**P**	**05 13 54.6**	**+0.8**
	2.6nm,0.6s,baz=44,slow=7.7,SNR=33						
ASAR				S	**S**	**05 17 40.4**	**-2.6**
	1.7nm,1.1s,baz=33,slow=16,SNR=5.1						
	2.6nm,0.6s						
MJAR	**Matsushiro Arr**	**42.36**	**350**	P	**P**	**05 16 48.8**	**0.0**
	0.9nm,0.9s,baz=137,slow=9.6,SNR=2.3						
	0.9nm,0.9s						
VNDA	**Vanda**	**72.66**	**177**	P	**P**	**05 20 18.6**	**-0.9**
	0.4nm,0.3s,baz=360,slow=9.6,SNR=1.3						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**76.81**	**320**	P	**P**	**05 20 44.2**	**+0.3**
	0.3nm,0.9s,baz=108,slow=4.7,SNR=1.1						
	0.3nm,0.9s						
ZALV	**Zalesovo Beam**	**78.29**	**328**	P	**P**	**05 20 51.3**	**-0.6**
	0.2nm,0.4s,baz=107,slow=5.0,SNR=1.4						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**84.88**	**23**	P	**P**	**05 21 25.8**	**-0.4**
	0.5nm,0.8s,baz=256,slow=5.6,SNR=5.0						
	0.5nm,0.8s						
BVAR	**Borovoye Array**	**86.07**	**324**	P	**P**	**05 21 32.5**	**+0.2**
	0.2nm,0.5s,baz=99,slow=8.0,SNR=1.6						
	0.2nm,0.5s						
NVAR	**Mina Array Bea**	**97.06**	**52**	P	**P**	**05 22 22.9**	**-1.0**
	0.2nm,0.3s,baz=217,slow=1.5,SNR=1.7						
	0.2nm,0.3s						

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*IDC **22** 05:11:15.4±1.4, 5°.30N×93°.06E, h0^{km}, mb3.9/11, mbtmp3.9/13, ML3.5/2, MS3.4/2, Error ellipse: s-maj=45.3km s-min=23.0km az=49.0*
ISC 22 05:11:19.7±1.0**, 5°.3N**±0°.1×**93°.2E**±0°.1**, h28^{km}, n31, σ0^{s}52**/17**, mb3.9**/11**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.26**	**113**	Pn	**Pn**	**05 12 50.7**	**+0.3**
	0.7nm,0.3s,baz=340,slow=19,SNR=1.9						
PSI				Sn	**Sn**	**05 14 00.3**	**-0.9**
	1.0nm,0.3s,baz=6.0,slow=23,SNR=3.6						
	1.9nm,0.3s						
PALK	**Pallekele**	**12.54**	**280**	Sn	Sn	05 16 24.8	-11
	1.0nm,0.3s,baz=192,slow=20,SNR=4.3						
CMAR	**Chiang Mai Arr**	**14.23**	**23**	Pn	**Pn**	**05 14 39.5**	**+0.1**
	0.1nm,0.3s,baz=220,slow=13,SNR=2.0						
	1.1nm,0.3s						
H08S3	**Diego Garcia H**	**24.31**	**238**	T	T	05 41 56.7	
	baz=59,slow=76,SNR=672						
H08S2	**Diego Garcia H**	**24.32**	**238**	T	T	05 41 59.9	
	baz=59,slow=76,SNR=103						
H08S1	**Diego Carcia H**	**24.33**	**238**	T	T	05 41 59.2	
	baz=59,slow=76,SNR=46						
DAV	**Davao City (W)**	**32.27**	**85**	LR	LR	05 35 17.6	
	comp=Z,30nm,18.1s,baz=122,slow=45						
MKAR	**Makanchi Array**	**42.38**	**349**	P	**P**	**05 19 11.6**	**0.0**
	0.9nm,0.5s,baz=168,slow=8.5,SNR=11						
	0.9nm,0.5s						
SONM	**Songino Array**	**43.85**	**13**	P	**P**	**05 19 23.5**	**-0.2**
	0.6nm,0.8s,baz=201,slow=4.3,SNR=4.5						
	0.6nm,0.8s						
H01W3	**Cape Leeuwin H**	**44.60**	**155**	T	T	06 07 16.6	
	baz=331,slow=75,SNR=4.9						
H01W2	**Cape Leeuwin H**	**44.61**	**155**	T	T	06 07 17.3	
	baz=331,slow=75,SNR=3.8						
H01W1	**Cape Leeuwin H**	**44.62**	**155**	T	T	06 07 17.7	
	baz=331,slow=75,SNR=4.2						
KSRS	**Korea Array**	**45.03**	**40**	P	**P**	**05 19 33.6**	**+0.6**
	0.5nm,0.7s,baz=245,slow=11,SNR=2.0						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**46.79**	**347**	P	**P**	**05 19 46.5**	**-0.2**
	0.8nm,0.2s,baz=169,slow=6.4,SNR=7.7						
	0.8nm,0.2s						
WRA	**Warramunga Arr**	**47.63**	**123**	P	**P**	**05 19 54.4**	**+0.7**
	0.6nm,0.7s,baz=304,slow=8.6,SNR=2.5						
	0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**48.96**	**353**	P	**P**	**05 20 03.4**	**-0.1**
	1.2nm,0.5s,baz=163,slow=6.9,SNR=8.1						
	1.2nm,0.5s						
BVAR	**Borovoye Array**	**51.10**	**343**	P	**P**	**05 20 19.6**	**-0.1**
	0.8nm,0.6s,baz=140,slow=7.8,SNR=6.7						
	0.8nm,0.6s						
H04N2	**CROZET ISLANDS**	**63.05**	**211**	T	T	06 30 27.9	
	baz=47,slow=75,SNR=201						
H04N1	**CROZET ISLANDS**	**63.06**	**211**	T	T	06 30 29.0	
	baz=47,slow=75,SNR=224						
H04N3	**CROZET ISLANDS**	**63.07**	**211**	T	T	06 30 27.3	
	baz=47,slow=75,SNR=240						
BRTR	**Keskin Array B**	**63.38**	**312**	LR	LR	05 51 13.4	
	comp=Z,50nm,18.4s,baz=290,slow=38						
H04S1	**CROZET ISLANDS**	**63.45**	**210**	T	T	06 31 02.1	
	baz=47,slow=75,SNR=14						
H04S3	**CROZET ISLANDS**	**63.46**	**210**	T	T	06 30 57.1	
	baz=47,slow=75,SNR=35						
H04S2	**CROZET ISLANDS**	**63.47**	**210**	T	T	06 31 00.9	
	baz=47,slow=75,SNR=23						
NRIK	**Noril'sk**	**64.04**	**358**	P	**P**	**05 21 50.1**	**-0.4**
	1.0nm,0.4s,baz=160,slow=12,SNR=2.1						
	1.0nm,0.4s						
FINES	**FINESS Array B**	**74.52**	**333**	P	**P**	**05 22 55.5**	**-0.1**
	1.2nm,0.9s,baz=62,slow=5.6,SNR=3.4						
	1.2nm,0.9s						
ARCES	**ARCESS Array B**	**77.33**	**341**	P	**P**	**05 23 11.8**	**+0.3**
	3.3nm,1.0s,baz=90,slow=4.9,SNR=8.5						
	3.3nm,1.0s						
HFS	**Hagfors**	**80.17**	**330**	P	**P**	**05 23 27.5**	**+0.2**
	1.0nm,0.7s,baz=114,slow=3.6,SNR=1.6						
	1.0nm,0.7s						
PDAR	**Pinedale Array**	**127.89**	**21**	PKP	**PKPdf**	**05 30 23.6**	**+0.1**
	0.1nm,0.4s,baz=293,slow=3.6,SNR=1.6						
PLCA	**Paso Flores**	**141.83**	**200**	PKP	**PKPdf**	**05 30 49.2**	**-0.1**
	1.0nm,1.0s,baz=247,slow=5.5,SNR=3.3						
TXAR	**Lajitas Array**	**141.94**	**24**	PKP	**PKPdf**	**05 30 48.6**	**-1.3**
	0.2nm,0.9s,baz=340,slow=1.3,SNR=1.5						

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*IDC **22** 05:20:40.5±2.4, 4°.77S×101°.67E, h0^{km}, mb3.9/9, mbtmp3.9/9, Error ellipse: s-maj=99.9km s-min=18.5km az=54.0*
*DJA **22** 05:20:47.6±0.6, 4°S±3°×10°2E±°, h19^{km}±5^{km}, M4.0/9, MLv4.0/9*
ISC 22 05:20:48.6±1.3**, 4°.41S**±0°.06×**102°.18E**±0°.06**, h41^{km}**±13^{km}**, n30, σ0^{s}77**/26**, mb3.9**/9**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UBSI	**University, Be**	**0.65**	**8**	P	**Pn**	**05 21 01.0**	**-0.4**
UBSI				S	**Sn**	**05 21 10.3**	**-0.3**
MNAI	**Manna**	**0.78**	**86**	P	**Pn**	**05 21 02.8**	**-0.3**
MNAI				S	**Sn**	**05 21 13.5**	**-0.1**
KSI	**Kapahiang**	**0.86**	**29**	P	**Pn**	**05 21 03.9**	**-0.4**
KSI				S	**Sn**	**05 21 15.5**	**-0.3**
EGSI	**Enggano, Bengk**	**0.94**	**174**	P	**Pn**	**05 21 05.0**	**-0.4**
MASI	**Maura Aman, Be**	**1.26**	**3**	P	**Pn**	**05 21 10.4**	**+0.6**
LWLI	**Liwa**	**1.97**	**108**	P	**Pn**	**05 21 19.8**	**+0.2**
LWLI				S	**Sn**	**05 21 43.3**	**+0.2**
MDSI	**Maura Dua**	**2.00**	**92**	P	**Pn**	**05 21 20.5**	**+0.7**
MDSI				S	**Sn**	**05 21 45.3**	**+1.7**
KLSI		**2.56**	**96**	P	**Pn**	**05 21 27.9**	**+0.3**
KASI	**Kota Agung**	**2.56**	**116**	P	**Pn**	**05 21 28.0**	**+0.4**

PPSI	**Pulau Pagai**	2.71	307	P	Pn	05 21 30.5	+0.8
SISI	**Saibi**	4.35	315	P	Pn	05 21 52.7	+0.5
CMAR	**Chiang Mai Arr**	22.95	352	P	P	05 25 50.5	+1.0
	0.8nm,0.3s,baz=171,slow=8.7,SNR=4.4						
	0.8nm,0.3s						
H01W3	**Cape Leeuwin H**	32.28	161	T	T	06 01 05.6	
	baz=338,slow=76,SNR=23						
H01W2	**Cape Leeuwin H**	32.30	161	T	T	06 01 03.5	
	baz=338,slow=76,SNR=28						
H01W1	**Cape Leeuwin H**	32.30	161	T	T	06 01 04.1	
	baz=338,slow=76,SNR=20						
WRA	**Warramunga Arr**	34.92	119	P	P	05 27 36.4	-0.3
	1.6nm,0.7s,baz=297,slow=8.7,SNR=9.4						
	1.6nm,0.7s						
ASAR	**Alice Springs**	36.09	125	P	P	05 27 46.0	-0.8
	0.6nm,0.3s,baz=296,slow=8.5,SNR=14						
	0.6nm,0.3s						
SONM	**Songino Array**	52.16	4	P	P	05 29 55.6	+0.5
	0.5nm,0.5s,baz=187,slow=9.6,SNR=2.7						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	53.94	343	P	P	05 30 07.3	-0.8
	0.7nm,0.4s,baz=153,slow=9.2,SNR=13						
	0.7nm,0.4s						
HILR	**Hailar Array B**	55.87	14	P	P	05 30 22.3	+0.2
	0.8nm,0.4s,baz=188,slow=9.6,SNR=1.7						
	0.8nm,0.4s						
KURBB	**Kurchatov Arra**	58.47	343	P	P	05 30 39.4	-1.0
	0.5nm,0.5s,baz=158,slow=7.4,SNR=3.2						
	0.5nm,0.5s						
ZALV	**Zalesovo Beam**	59.94	348	P	P	05 30 50.1	-0.3
	1.2nm,0.3s,baz=154,slow=4.5,SNR=7.5						
	1.2nm,0.3s						
H04N2	**CROZET ISLANDS**	60.21	218	T	T	06 36 19.8	
	baz=64,slow=75,SNR=28						
H04N1	**CROZET ISLANDS**	60.22	218	T	T	06 36 19.6	
	baz=64,slow=75,SNR=29						
H04N3	**CROZET ISLANDS**	60.22	218	T	T	06 36 18.3	
	baz=64,slow=75,SNR=30						
H04S1	**CROZET ISLANDS**	60.46	217	T	T	06 36 34.9	
	baz=62,slow=75,SNR=4.2						
H04S3	**CROZET ISLANDS**	60.47	217	T	T	06 36 33.3	
	baz=62,slow=75,SNR=5.4						
H04S2	**CROZET ISLANDS**	60.47	217	T	T	06 36 34.6	
	baz=62,slow=75,SNR=5.6						
BVAR	**Borovoye Array**	63.19	339	P	P	05 31 10.5	-1.9
	0.4nm,0.5s,baz=132,slow=6.0,SNR=3.0						
	0.4nm,0.5s						
TXAR	**Lajitas Array**	145.16	42	PKPbc	PKPdf	05 40 23.0	+0.4
	0.6nm,0.4s,baz=284,slow=2.3,SNR=24						

*IDC **22** 05:24:49.5±0.7, 41°.93N×140°.35E, h0^{km}, mb3.7/15, mbtmp3.7/18, ML3.4/3, MS2.8/2, Error ellipse: s-maj=18.6km s-min=15.2km az=105.0*

*NIED **22** 05:24:51.1, 42°.07N×140°.44E, h10^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.49; $M_{\theta\theta}$2.18; $M_{\phi\phi}$-4.67; $M_{r\theta}$-3.30; $M_{\theta\phi}$3.08; $M_{\phi r}$0.10; Fault plane solution: $M_0$6.06000×10^{14} NP1: ϕ_s196.00000°, δ54.00000°, λ154.00000°. NP2: ϕ_s302.00000°, δ69.00000°, λ39.00000°.*

*JMA **22** 05:24:51.1±0.1, 42°.1N±0°.2×140°.4E±0°.3, h10^{km}±1^{km}, MD4.2/19, MV4.1/19, OSHIMA PEN REG HOKKAIDO*

JMA Felt III J1 at OSHIMA PEN REG HOKKAIDO .

ISC 22 05:24:50.7±1.0**, 42°.03N**±0°.04×**140°.43E**±0°.03**, h6**^{km}±6^{km}**, n36, σ0^s.99**/39**, mb3.8**/15**, 5D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYM2	**Yakumo 2**	0.10	330	*e*P	Pg	05 24 53.1	+0.2
JYM2				*e*S	Sg	05 24 54.6	+0.2
JYM2	**Yakumo 2**	0.10	330	A	A	05 24 53.1	
	comp=N,291nm,0.6s,comp=E,262nm,0.5s						
JKB	**Kayabe**	0.47	108	⇓*i*P	Pg	05 25 00.3	+0.5
JKB				⇓S	Sg	05 25 06.6	+0.7
JSR	**Shiriuchi**	0.50	181	*i* P	Pb	05 25 01.4	-0.5
JSR				S	Sb	05 25 08.8	-0.7
JSR	**Shiriuchi**	0.50	181	A	A	05 25 01.4	
	comp=N,9.0nm,0.2s,comp=E,12nm,0.3s						
JHST	**Hiyamasetana**	0.57	313	*i* P	Pg	05 25 01.7	+0.1
JHST				*e*S	Sg	05 25 09.1	0.0
JOMM	**Oshimamatsumae**	0.60	212	*i* P	Pb	05 25 03.0	-0.6
JOMM				S	Sb	05 25 11.3	-1.0
JNB	**Noboribetsu**	0.62	46	⇓*i*P	Pg	05 25 02.4	-0.4
JNB				⇓S	Sg	05 25 10.3	-0.6
JSH	**Shimam**	0.67	335	*i* P	Pg	05 25 03.4	-0.3
JOSM	**Okushiri--Mats**	0.72	274	⇓*i*P	Pb	05 25 04.7	-0.8
JOSM	**Okushiri--Mats**	0.72	274	A	A	05 25 04.7	
	comp=N,16nm,0.2s,comp=E,16nm,0.3s						
JOT	**Ohata**	0.80	145	*i* P	Pb	05 25 06.1	-0.8
JHHS	**Hirosakihyakuz**	1.38	182	A	A	05 25 16.8	
	comp=N,18nm,0.8s,comp=E,15nm,0.7s						
JIW	**Iwasaki**	1.48	193	A	A	05 25 18.2	
	comp=N,6.0nm,0.6s,comp=E,10.0nm,0.4s						
ASAJ	**Asahikawa**	2.62	37	Pn	Pn	05 25 34.7	+1.3
	comp=E,8.8nm,0.3s,baz=218,slow=16,SNR=21						
ASAJ				Sn	Sb	05 26 09.2	-1.1
	comp=E,5.8nm,0.3s,baz=223,slow=17,SNR=3.6						
	comp=E,20nm,0.3s						
MJAR	**Matsushiro Arr**	5.75	198	Pn	Pn	05 26 14.6	-1.9
	comp=E,0.2nm,0.3s,baz=12,slow=14,SNR=10						
MJAR				Sn	Sn	05 27 22.1	-0.7
	baz=3.0,slow=26,SNR=1.5						
	comp=E,0.8nm,0.4s						
USRK	**Ussuriysk Ar.**	6.55	292	Pn	Pn	05 26 26.4	-1.1
	comp=E,1.3nm,0.3s,baz=100,slow=15,SNR=12						
	comp=E,2.7nm,0.3s						
KSRS	**Korea Array**	10.66	249	Pn	Pn	05 27 27.4	+3.5
	comp=E,0.7nm,0.3s,baz=60,slow=13,SNR=5.9						
KSRS				Sn	Sn	05 29 22.9	-0.6
	comp=E,0.4nm,0.3s,baz=57,slow=23,SNR=4.1						
KSRS				LR	LR	05 30 52.3	
	comp=E,41nm,21.2s,baz=95,slow=34						
ZALV	**Zalesovo Beam**	38.12	308	P	P	05 32 10.2	+0.1
	comp=E,0.7nm,0.4s,baz=92,slow=8.0,SNR=5.6						
	comp=E,0.7nm,0.4s						
MKAR	**Makanchi Array**	40.99	297	P	P	05 32 34.2	-0.1
	comp=E,0.6nm,0.8s,baz=73,slow=9.0,SNR=4.2						
	comp=E,0.6nm,0.8s						
CMAR	**Chiang Mai Arr**	42.30	249	LR	LR	05 51 09.1	
	comp=E,16nm,19.8s,baz=200,slow=37						
KURBB	**Kurchatov Arra**	42.46	304	P	P	05 32 46.0	-0.2
	comp=E,2.8nm,1.0s,baz=77,slow=8.7,SNR=8.2						
	comp=E,2.8nm,1.0s						
ILAR	**Eielson Array**	45.75	35	P	P	05 33 13.0	+0.6
	comp=E,0.7nm,1.1s,baz=279,slow=7.0,SNR=2.6						
	comp=E,0.7nm,1.1s						
BVAR	**Borovoye Array**	46.75	309	P	P	05 33 21.1	+0.7
	comp=E,0.4nm,0.3s,baz=63,slow=9.9,SNR=2.9						
	comp=E,0.4nm,0.3s						
YKA	**Yellowknife Ar**	59.90	31	P	P	05 34 57.8	+0.9
	comp=E,0.1nm,0.7s,baz=306,slow=8.5,SNR=4.0						
	comp=E,0.1nm,0.7s						
WRA	**Warramunga Arr**	61.92	186	P	P	05 35 10.1	-1.0
	comp=E,1.4nm,0.5s,baz=5.4,slow=6.6,SNR=17						
	comp=E,1.4nm,0.5s						
FINES	**FINESS Array B**	64.06	331	P	P	05 35 24.0	-0.9
	comp=E,2.1nm,0.9s,baz=69,slow=6.9,SNR=9.9						
	comp=E,2.1nm,0.9s						
ASAR	**Alice Springs**	65.65	187	P	P	05 35 34.2	-1.4
	comp=E,0.4nm,0.6s,baz=2.9,slow=5.7,SNR=4.4						
	comp=E,0.4nm,0.6s						
HFS	**Hagfors**	69.24	335	P	P	05 35 57.6	-0.4
	comp=E,2.8nm,0.9s,baz=46,slow=8.3,SNR=4.5						
	comp=E,2.8nm,0.9s						
NB2	**NORSAR Subarra**	69.30	336	P	P	05 35 59.3	+0.9
	comp=Z,4.7nm,1.1s,baz=40,slow=6.2						
NOA	**NORSAR Array B**	69.30	336	P	P	05 35 58.4	0.0
	comp=Z,0.9nm,0.8s,baz=40,slow=6.0,SNR=3.8						
	comp=Z,0.9nm,0.8s						
AKASG	**Malin Array Be**	69.91	321	P	P	05 36 03.2	+0.9
	comp=Z,0.7nm,0.5s,baz=46,slow=8.2,SNR=2.5						
	comp=Z,0.7nm,0.5s						
NVAR	**Mina Array Bea**	72.62	54	P	P	05 36 19.9	+0.7
	comp=Z,0.2nm,0.4s,baz=304,slow=5.1,SNR=1.7						
	comp=Z,0.2nm,0.4s						
PDAR	**Pinedale Array**	74.72	46	P	P	05 36 32.1	+0.7
	comp=Z,0.4nm,0.6s,baz=280,slow=4.9,SNR=4.7						
	comp=Z,0.4nm,0.6s						
TXAR	**Lajitas Array**	87.65	52	P	P	05 37 40.7	+0.4
	comp=Z,0.1nm,0.4s,baz=312,slow=5.7,SNR=1.4						
	comp=Z,0.1nm,0.4s						
SNAA	**Sanae**	145.26	199	PKPbc	PKPbc	05 44 27.1	-0.7
	comp=Z,0.8nm,0.8s,baz=153,slow=2.3,SNR=2.3						

*SOME **22** 05:32:04.8, 42°.78N×77°.82E, h15^{km}*

*NNC **22** 05:32:04.6±0.6, 42°.83N×77°.87E, h0^{km}, mb2.2, mpv2.6, Error ellipse: s-maj=6.0km s-min=1.0km az=3.0*

*KRNET **22** 05:32:06.3±0.1, 42°.77N×77°.58E, h11^{km}, mb2.5*

ISC 22 05:32:03.8±1.4**, 42°.82N**±0°.06×**77°.82E**±0°.03**, h7**^{km}±12^{km}**, n13, σ0^s.85**/26**, 6C-8D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	0.50	61	P	Pg	05 32 13.3	-0.1
	4.8nm,0.1s						
SATY				S	Sg	05 32 19.9	-0.1
	24nm,0.2s						
PRZ	**Przheval'sk**	0.55	128	⇓*e*P	Pn	05 32 19.4	+1.2
PRZ				⇓*e*S	Sn	05 32 29.0	+1.3
KNDC	**Almaty**	0.74	303	⇑P	Pg	05 32 19.5	+1.5
	11nm,0.4s						
KNDC				⇓S	Sb	05 32 30.4	+1.0
	4.4nm,0.3s						
KPKS	**Kokpek**	0.91	44	P	Pg	05 32 20.8	-0.5
	0.3nm,0.1s						
KPKS				S	Sg	05 32 32.8	-0.3
	4.1nm,0.2s						
KPKS	**Kokpek**	0.91	44	*e*P	Pg	05 32 20.8	-0.5
	0.2nm,0.0s						
KPKS				*e*S	Sg	05 32 32.8	-0.3
	3.1nm,0.1s						
UZB	**Uzynbulak**	0.94	69	P	Pg	05 32 21.6	-0.4
	2.0nm,0.1s						
UZB				S	Sg	05 32 34.1	-0.2
	4.0nm,0.1s						
UZB	**Uzynbulak**	0.94	69	*e*P	Pg	05 32 21.6	-0.4
	2.5nm,0.1s						
UZB				*e*S	Sg	05 32 34.1	-0.2
	3.9nm,0.1s						
TARG	**Taragay, Kyrgy**	1.09	180	⇑*e*P	Pn	05 32 26.6	+0.7
TARG				⇑*e*S	Sn	05 32 41.4	0.0
ULHL	**Ulahol**	1.30	244	⇓*e*P	Pn	05 32 27.8	-0.7
ULHL				⇓*e*S	Sb	05 32 43.7	-1.9
PDGK	**Podgornoye**	1.33	67	⇓P	Pn	05 32 28.9	0.0
	5.1nm,1.1s						
PDGK				⇑S	Sb	05 32 46.6	+0.2
	9.1nm,1.4s						
BOOM	**Boomskoye usch**	1.42	257	⇓*e*P	Pn	05 32 30.0	-0.2
BOOM				⇓*e*S	Sn	05 32 47.5	-1.7
DGS	**Degeres**	1.56	286	*e*P	Pn	05 32 32.3	+0.3
	0.5nm,0.1s						
DGS				*e*S	Sn	05 32 52.4	-0.1
	1.9nm,0.3s						
TKM2	**Tokmak 2**	1.63	274	⇑*e*P	Pn	05 32 34.0	+0.8
TKM2				⇑*e*S	Sn	05 32 54.4	-0.1

*IDC **22** 06:05:52.4±1.7, 6°.79S×103°.09E, h0^{km}, mb3.6/7, mbtmp3.6/7, Error ellipse: s-maj=75.5km s-min=22.6km az=51.0*

ISC 22 06:05:55.9±1.5**, 6°.8S**±0°.3×**103°.1E**±0°.4**, h24**^{km}**, n19, σ0^s.19**/10**, mb3.8**/8**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	25.43	351	P	P	06 11 21.8	-0.2
	0.6nm,0.3s,baz=181,slow=9.8,SNR=5.2						
	0.6nm,0.3s						
H01W3	**Cape Leeuwin H**	29.73	162	T	T	06 43 32.7	
	baz=340						
H01W2	**Cape Leeuwin H**	29.75	162	T	T	06 43 24.7	
	baz=340						
H01W1	**Cape Leeuwin H**	29.75	162	T	T	06 43 20.9	
	baz=340						
WRA	**Warramunga Arr**	32.97	116	P	P	06 12 29.0	-0.2
	0.2nm,0.5s,baz=289,slow=10.0,SNR=1.3						
	0.2nm,0.5s						
ASAR	**Alice Springs**	33.98	123	P	P	06 12 38.1	+0.2
	0.2nm,0.5s,baz=302,slow=7.7,SNR=2.2						
	0.2nm,0.5s						
SONM	**Songino Array**	54.47	3	P	P	06 15 21.6	0.0
	0.9nm,0.9s,baz=184,slow=7.7,SNR=3.2						
	0.9nm,0.9s						
MKAR	**Makanchi Array**	56.48	343	P	P	06 15 36.1	+0.1
	0.3nm,0.6s,baz=147,slow=9.0,SNR=4.4						
	0.3nm,0.6s						
H04N2	**CROZET ISLANDS**	58.95	219	T	T	07 20 27.1	
	baz=66,slow=75,SNR=84						
H04N1	**CROZET ISLANDS**	58.96	219	T	T	07 20 29.7	
	baz=66,slow=75,SNR=89						
H04N3	**CROZET ISLANDS**	58.97	219	T	T	07 20 26.3	
	baz=66,slow=75,SNR=72						
H04S1	**CROZET ISLANDS**	59.17	219	T	T	07 20 39.5	
	baz=65,slow=76,SNR=7.0						
H04S3	**CROZET ISLANDS**	59.19	219	T	T	07 20 39.4	
	baz=65,slow=76,SNR=12						
H04S2	**CROZET ISLANDS**	59.19	219	T	T	07 20 41.0	
	baz=65,slow=76,SNR=7.6						
ZALV	**Zalesovo Beam**	62.46	348	P	P	06 16 17.0	0.0
	0.5nm,0.3s,baz=146,slow=4.9,SNR=4.2						
	0.5nm,0.3s						
BVAR	**Borovoye Array**	65.74	339	P	P	06 16 38.7	+0.1
	0.3nm,0.4s,baz=126,slow=9.7,SNR=2.2						
	0.3nm,0.4s						
KEST	**Kesra**	96.99	305	P	P	06 19 26.0	-0.1
	1.7nm,0.4s,baz=74,slow=4.1,SNR=5.5						
NVAR	**Mina Array Bea**	131.11	44	PKP	PKiKP	06 25 07.2	-0.3
	0.2nm,0.4s,baz=268,slow=5.0,SNR=1.8						
TXAR	**Lajitas Array**	146.23	45	PKPbc	PKPab	06 25 36.1	+0.2
	0.3nm,0.5s,baz=319,slow=2.0,SNR=8.7						

*SCB **22** 06:06:19.2±1.2, 17°.46S×69°.24W, h158^{km}±13^{km}, ML2.7/3, Error ellipse: s-maj=7.8km s-min=7.7km az=2.0*

ISC 22 06:06:20.0±1.4**, 17°.48S**±0°.06×**69°.20W**±0°.08**, h153**^{km}**, n22, σ0^s.87**/27**, 1C, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB18	**Visviri**	0.29	247	*e*P	Pn	06 06 43.2	+1.6
PB16	**IPOC Station P**	0.90	199	*e*P	Pn	06 06 46.6	+1.6
PB16				IAML		06 07 09.9	
	comp=N,6.0nm,0.5s						
PB16	**IPOC Station P**	0.90	199	Pg	Pn	06 06 45.8	+0.8
BBOD	**La Paz, Gloria**	1.01	35	Pg	Pn	06 06 46.0	+0.2
BBOJ	**La Paz, Jacaqu**	1.09	63	Pg	Pn	06 06 47.4	+1.0
BBOE	**La Paz, Chanca**	1.34	61	Pg	Pn	06 06 49.5	+0.7
PB12	**IPOC Station P**	1.56	223	⇑*e*P	Pn	06 06 50.4	-0.2
PB12				*e*S	Sn	06 07 13.3	-0.7
PB12				IAML		06 07 15.0	
	comp=E,27nm,0.2s						
LPAZ	**La Paz**	1.56	41	Pg	Pn	06 06 51.0	-0.2
SOEO	**Opoqueri**	1.66	131	Pg	Pn	06 06 52.6	+0.7
BBOB	**La Paz, Bander**	1.68	38	Pg	Pn	06 06 52.1	-0.1
GO01	**Chusmiza**	2.18	180	*e*P	Pn	06 06 59.1	+1.2
GO01				IAML		06 07 36.8	
	comp=N,23nm,0.2s						
GO01	**Chusmiza**	2.18	180	Pg	Pn	06 06 58.8	+0.9
PB11	**IPOC Station P**	2.31	191	*e*P	Pn	06 06 59.6	+0.4
PB11				*e*S	Sn	06 07 29.8	+0.4
PB11				IAML		06 07 34.7	
	comp=E,16nm,0.3s						
PB11	**IPOC Station P**	2.31	191	Pg	Pn	06 06 59.6	+0.4
PB11				Sg	Sn	06 07 29.8	+0.4
PB11				IAML		06 07 34.6	
	comp=E,14nm,0.2s						
PB08	**IPOC Station P**	2.65	179	Pg	Pn	06 07 04.2	+0.7
SOET	**ToroToro**	3.29	102	Pg	Pn	06 07 11.5	0.0
PB01	**IPOC Station P**	3.56	184	Pg	Pn	06 07 15.2	+0.5
PB01				Sg	Sn	06 07 55.9	-1.4
PB01				IAML		06 08 00.7	
	comp=E,11nm,0.3s						
AOEA	**Aiquile**	3.84	101	Pg	Pn	06 07 19.1	+0.5
PB02	**IPOC Station P**	3.88	190	Pg	Pn	06 07 19.2	+0.3
PB02				Sg	Sn	06 08 03.0	-1.7
PB02				IAML		06 08 08.0	
	comp=E,16nm,0.3s						
PB09	**IPOC Station P**	4.30	180	Pg	Pn	06 07 24.6	+0.2
MOCB	**Mochara**	5.04	139	Pg	Pn	06 07 35.3	+0.8
PB06	**IPOC Station P**	5.22	184	Pg	Pn	06 07 35.8	-0.7

*BUL **22** 06:08:06.0±1.9, 20°.62S×32°.96E, h10^{km}, MD3.9*

*PRE **22** 06:08:06.2±4.4, 20°.76S×32°.71E, h5^{km}±142^{km}, ML3.1*

ISC 22 06:08:02.4±2.0**, 20°.77S**±0°.07×**32°.8E**±0°.1**, h10**^{km}**, n18, σ2^s.60**/29**, Zimbabwe**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MUSN	**Musina, Limpop**	3.12	240	*e*P	Pn	06 08 53.8	+2.0
MUSN				*e*S	Sn	06 09 29.1	0.0
MUSN				IAML		06 09 47.1	
	comp=Z,182nm,0.3s						
MUSN	**Musina, Limpop**	3.12	240	*i* P	Pb	06 08 57.5	-0.5
MUSN				*i* S	Sb	06 09 35.0	-1.2
BROLN	**Tlhalogang**	5.11	265	*i* P	Pn	06 09 22.9	+3.7
BROLN				*i* S	Sn	06 10 19.7	+1.3
BROLN				IAML		06 10 56.6	
	comp=N,116nm,0.9s						
MREMI	**Moremi**	5.29	249	*i* P	Pb	06 09 29.6	-5.3
MREMI				*i* S	Sn	06 10 24.7	+2.1
MREMI				IAML		06 10 57.7	
	comp=N,899nm,0.2s						
LEPH	**Lephalale, Lim**	5.55	235	*e*P	Pn	06 09 26.5	+1.3
LEPH				*e*S	Sn	06 10 27.6	-1.6
LEPH				IAML		06 11 11.8	
	comp=Z,54nm,0.4s						
HRAO	**HartRAO**	6.93	222	*e*P	Pn	06 09 46.2	+2.1
HRAO				*e*S	Sn	06 11 00.7	-2.5
HRAO				IAML		06 11 45.8	
	comp=Z,17nm,0.6s						
LPHEP	**Lephephe**	6.93	247	*i* P	Pn	06 09 49.7	+5.6
LPHEP				*i* S	Sn	06 11 03.6	+0.4
LPHEP				IAML		06 11 42.5	
	comp=N,43nm,0.6s						
KHWEE	**KHWEE**	6.95	259	*i* P	Pn	06 09 50.5	+6.1
KHWEE				*i* S	Sn	06 11 02.9	-0.7
KHWEE				IAML		06 11 49.5	
	comp=E,403nm,0.3s						
LSZ	**Lusaka**	7.00	321	*e*P	Pn	06 09 47.1	+1.9
LSZ				*e*S	Sn	06 11 02.4	-2.6
LSZ				IAML		06 11 46.1	
	comp=Z,36nm,0.6s						
LSZ	**Lusaka**	7.00	321	*i* P	Pn	06 09 47.5	+2.3
LSZ				*i* S	Sn	06 11 02.5	-2.5
PHDHD	**Phuduhudu**	7.76	273	*i* P	Pn	06 09 59.9	+4.4
PHDHD				*i* S	Sn	06 11 19.9	-3.7
KSANE	**Kasane**	7.79	291	*i* P	Pn	06 10 00.2	+4.3
LBTB	**Lobatse**	7.87	236	*e*P	Pn	06 09 58.6	+1.7
LBTB				*e*S	Sn	06 11 21.7	-4.4
LBTB				IAML		06 12 21.9	
	comp=Z,18nm,0.5s						
LBTB	**Lobatse**	7.87	236	*i* P	Pn	06 10 01.9	+4.9
LBTB				*i* S	Sn	06 11 26.2	+0.1
PRYS	**Parys**	7.89	218	*e*P	Pn	06 10 00.2	+2.8
PRYS				*e*S	Sn	06 11 23.7	-3.2
PRYS				IAML		06 12 26.9	
	comp=Z,9.4nm,0.5s						
MAKGR	**Makgori**	8.90	234	*i* P	Pn	06 10 13.0	+1.8
KSTD	**Kokstad**	10.30	197	*e*P	Pn	06 10 34.3	+3.9
KSTD				*e*S	Sn	06 12 22.2	-3.8
KSTD				IAML		06 12 38.1	
	comp=Z,2.9nm,0.9s						
BOSA	**Boshof**	10.39	220	*i* P	Pn	06 10 34.3	+2.7
BOSA				*i* S	Sn	06 12 27.7	-0.5

*BER **22** 06:18:51.9±2.9, 80°.14N×0°.45W, h10^{km}, Mw3.1, ML2.6(NAO), Confirmed Earthquake*

*KOLA **22** 06:18:53.6, 80°.37N×1°.68E, h0^{km}, ML1.6, Greenland sea,Knipovich ridge, north*

*FCIAR **22** 06:18:55.0, 79°.71N×0°.03E, h10^{km}, station ZFI2 has station magnitude of 3.40 station OMEGA has station magnitude of 3.40*

ISC 22 06:18:47.9±1.1**, 80°.09N**±0°.05×**0°.38W**±0°.05**, h10**^{km}**, n28, σ2^s.79**/57**, 1D, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	2.54	111	Pn	Pn	06 19 31.9	+2.9
KBS				Sn	Sn	06 19 58.9	-1.1
KBS	**Kingsbay**	2.54	111	P	Pn	06 19 30.4	+1.4
KBS				S	Sn	06 19 58.5	-1.4
KBS	**Kingsbay**	2.54	111	*e*P	Pn	06 19 31.5	+2.5
KBS				*e*S	Sn	06 19 58.8	-1.1
KBS				IAML		06 20 01.5	
	comp=Z,6.8nm,0.3s						
NOR	**Nord**	3.00	308	Pn	Pn	06 19 38.4	+3.0
NOR				Sn	Sn	06 20 10.6	-0.8
NOR	**Nord**	3.00	308	*e*P	Pn	06 19 38.2	+2.8
NOR				*e*S	Sn	06 20 09.8	-1.6
NOR	**Nord**	3.00	308	*e*	Pn	06 19 35.9	+0.5
	baz=264,slow=16						
NOR				*i* P	Pb	06 19 37.5	-3.9
NOR				*i* S	Sn	06 20 09.0	-2.4
NOR				IAML		06 20 12.4	
	comp=Z,1.4nm,0.3s						
BRBB	**Barentsburg B**	3.42	119	Pn	Pn	06 19 45.7	+4.6
BRBB				Sn	Sn	06 20 22.7	+1.3
BRBB	**Barentsburg B**	3.42	119	P	Pn	06 19 44.5	+3.5
BRBB				S	Sn	06 20 21.9	+0.5
BRBB	**Barentsburg B**	3.42	119	*e*	Pn	06 19 45.0	+3.9
BRBB				*e*P	Pb	06 19 45.5	-2.8
BRBB				*e*S	Sn	06 20 22.4	+0.9
BRBA	**Barentsburg A**	3.44	119	Pn	Pn	06 19 45.8	+4.5
BRBA				Sn	Sn	06 20 23.4	+1.3
BRBA	**Barentsburg A**	3.44	119	Pn	Pn	06 19 45.8	+4.5
BRBA				Sn	Sn	06 20 23.4	+1.3
SPA0	**Spitsbergen Ar**	3.70	113	Pn	Pn	06 19 48.0	+3.1
	baz=318,slow=11						
SPA0				Sn	Sn	06 20 27.7	-0.7
	baz=321,slow=22						
SPA0	**Spitsbergen Ar**	3.70	113	⇓*i*P	Pn	06 19 48.2	+3.2
SPA0				*i* S	Sn	06 20 27.8	-0.7
SPA0	**Spitsbergen Ar**	3.70	113	Pn	Pn	06 19 48.0	+3.1
	baz=318,slow=11						
SPA0				Sn	Sn	06 20 27.7	-0.7
	baz=321,slow=22						
SPA0				IAML		06 20 32.6	
	comp=Z,4.2nm,0.4s						
SPITS	**Spitsbergen Ar**	3.70	113	P	Pn	06 19 47.8	+2.9
SPITS				S	Sn	06 20 27.1	-1.4
HSPB	**Hornsund (broa**	4.42	126	Pn	Pn	06 19 58.4	+3.5
HSPB				Sn	Sn	06 20 45.6	-0.6
HSPB	**Hornsund (broa**	4.42	126	P	Pn	06 19 58.3	+3.5
HSPB				S	Sn	06 20 48.1	+1.9
HSPB	**Hornsund (broa**	4.42	126	*e*P	Pn	06 19 57.4	+2.6
HSPB				*e*S	Sn	06 20 43.9	-2.3
HSPB	**Hornsund (broa**	4.42	126	*e*P	Pn	06 19 58.8	+4.0
HSPB				Sn	Sn	06 20 45.6	-0.6
DAG	**Danmarks Havn**	4.94	237	*e*P	Pn	06 20 04.2	+2.2
DAG				*e*S	Sn	06 20 55.9	-3.1
DAG	**Danmarks Havn**	4.94	237	*i* P	Pn	06 20 04.0	+2.1
DAG				*i* S	Sn	06 20 56.7	-2.2
DAG				IAML		06 21 02.3	
	comp=Z,4.3nm,0.3s						
HOPEN	**Hopen**	6.23	112	Pn	Pn	06 20 21.8	+2.1
HOPEN				Sn	Sn	06 21 28.5	-2.2
HOPEN	**Hopen**	6.23	112	*e*P	Pn	06 20 21.6	+1.9
HOPEN				*e*S	Sn	06 21 28.7	-2.1
HOPEN				IAML		06 21 35.2	
	comp=Z,7.5nm,0.7s						
DBG	**Daneborg**	7.23	227	Pn	Pn	06 20 35.6	+2.2
DBG				Sn	Sn	06 21 50.2	-5.2
DBG	**Daneborg**	7.23	227	*e*P	Pn	06 20 36.0	+2.6
DBG				*e*S	Sn	06 21 50.8	-4.6
DBG	**Daneborg**	7.23	227	*i* P	Pn	06 20 35.9	+2.5
DBG				*i* S	Sn	06 21 50.3	-5.1
ZFI2	**Zemlya Franca-**	7.82	61	*e*P	Pn	06 20 43.5	+2.0
ZFI2				*e*S	Sn	06 22 05.9	-3.9
	comp=Z,9.9nm,3.0s						
OMEGA	**Omega**	7.84	62	*e*P	Pn	06 20 43.6	+1.9
OMEGA				*e*S	Sn	06 22 06.4	-4.0
	comp=Z,10nm,2.6s						

*UPA **22** 06:19:34.8±1.1, 8°.41N×82°.90W, h32^{km}±3^{km}, MW3.4*

*CATAC **22** 06:19:34.7±0.6, 8°N±3°×8°3W±°, h16^{km}±1^{km}, M3.4/7, MLv3.4/7, Error ellipse: s-maj=7.6km s-min=4.6km az=160.4, confirmed*

*UCR **22** 06:19:34.7±1.0, 8°.39N×82°.90W, h31^{km}±2^{km}, MW3.6*

ISC 22 06:19:34.1±0.9**, 8°.40N**±0°.02×**82°.91W**±0°.02**, h31**^{km}±1^{km}**, n76, σ0^s.75**/105**, 4C-9D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	**La Esperanza,**	0.12	87	⇑*i*P	Pb	06 19 40.0	+0.3
LESP3				*e*S	Sn	06 19 43.5	+0.3
LPPC	**Paso Canoas**	0.15	27	*e*P	Pb	06 19 40.2	+0.3
LPPC				*e*S	Sn	06 19 44.9	+0.8
CDITO	**Canoas**	0.18	11	P	Pb	06 19 40.5	+0.3

CDITO	Canoas	0.18	11	S	Sn	06 19 45.6	+0.9
PTPM	Petroterminale	0.20	172	⇓iP	Pb	06 19 41.2	+0.7
PTPM				eS	Sn	06 19 46.5	+1.3
PTPA	Petro Terminal	0.20	169	eP	Pb	06 19 41.1	+0.7
PTPA				eS	Sn	06 19 47.0	+1.7
NELY	Ciudad Neily	0.25	351	eP	Pb	06 19 41.4	+0.3
NELY				eS	Sb	06 19 47.0	+1.2
DMCAL	E. de Neily	0.29	23	eP	Pb	06 19 42.2	+0.5
LIMO3	Limones	0.30	172	eP	Pn	06 19 42.7	+0.4
LMNES	Limones	0.30	171	⇑iP	Pb	06 19 42.5	+0.8
LMNES				eS	Sn	06 19 47.8	0.0
LMNES	Limones	0.30	171	eP	Pb	06 19 42.4	+0.8
FITO	Golfito	0.33	313	eP	Pb	06 19 41.7	-0.4
FITO				eS	Sb	06 19 47.6	+0.1
EDAD	Golfito	0.36	314	eP	Pb	06 19 42.2	-0.3
EDAD				eS	Sb	06 19 48.5	+0.3
BAGA3	Bagala, Chiriq	0.38	80	⇓iP	Pb	06 19 43.4	+0.6
BAGA3				eS	Sn	06 19 49.8	0.0
MLIR3	Monte Lirio, C	0.40	12	eP	Pb	06 19 44.0	+0.8
MLIR3				eS	Sb	06 19 49.6	+0.3
PTJ1	Puerto Jimnez	0.41	289	eP	Pb	06 19 43.2	-0.1
PTJ1				eS	Sn	06 19 51.0	+0.4
PTJ1	Puerto Jimnez	0.41	289	P	Pb	06 19 43.8	+0.5
PTJ1	Puerto Jimnez	0.41	289	S	Sn	06 19 51.6	+1.1
RSRNO	Rio Sereno	0.42	6	⇑iP	Pb	06 19 44.3	+0.8
RSRNO				eS	Sn	06 19 52.3	+1.5
RSRNO	Rio Sereno	0.42	6	eP	Pb	06 19 44.3	+0.8
VITO	San Vito	0.42	352	eP	Pb	06 19 44.2	+0.7
PIRO	Carate, Puerto	0.42	271	⇓iP	Pb	06 19 43.5	+0.1
PIRO				eS	Sn	06 19 51.2	+0.4
PIRO	Carate, Puerto	0.42	271	S	Sn	06 19 52.1	+1.3
PIRO	Carate, Puerto	0.42	271	P	Pb	06 19 43.6	+0.2
PIRO	Carate, Puerto	0.42	271	eP	Pb	06 19 43.5	+0.1
BRU2	Volcan	0.45	29	eP	Pb	06 19 44.4	+0.4
BRU2				eS	Sn	06 19 52.3	+0.7
BRU2	Volcan	0.45	29	P	Pb	06 19 44.4	+0.4
BRU2	Volcan	0.45	29	eP	Pb	06 19 44.3	+0.4
BRU2				eS	Sn	06 19 52.0	+0.4
SCLRA	Santa Clara, W	0.45	16	⇑iP	Pb	06 19 44.6	+0.7
SCLRA				eS	Sn	06 19 52.6	+1.0
SCLRA	Santa Clara, W	0.45	16	eP	Pb	06 19 44.6	+0.7
DVD	David	0.45	85	⇓iP	Pb	06 19 44.0	+0.2
DVD				eS	Sb	06 19 50.6	+0.1
JEFFS	S de V. Baru	0.46	54	eP	Pb	06 19 44.4	+0.4
LOCO3	Loma Colorada,	0.48	89	⇓iP	Pb	06 19 44.5	+0.1
LOCO3				eS	Sn	06 19 52.6	+0.3
PTAR3	Potrerillos Ar	0.50	54	eP	Pb	06 19 45.1	+0.4
PTAR3				eS	Sb	06 19 52.6	+0.7
LOMA3	Las Lomas, Chi	0.51	86	⇓iP	Pb	06 19 44.8	0.0
LOMA3				eS	Sb	06 19 52.9	+0.8
ALCO	Alturas Coton,	0.55	8	eP	Pb	06 19 45.6	0.0
ALCO				eS	Sb	06 19 54.0	+0.6
BQTLY	Boquete Panama	0.57	51	⇓iP	Pb	06 19 45.8	0.0
BQTLY	Boquete Panama	0.57	51	eP	Pb	06 19 45.7	0.0
CHIR3	Chiriqui UPA,	0.57	90	eP	Pb	06 19 45.6	-0.2
CHIR3				eS	Sn	06 19 54.6	+0.1
BQSF3	Alto Boquete,	0.58	54	i P	Pb	06 19 45.9	-0.1
BQSF3				eS	Sn	06 19 55.1	+0.2
LNBQ3	Los Naranjos,	0.60	50	eP	Pb	06 19 46.0	-0.4
LNBQ3				eS	Sb	06 19 55.3	+0.6
PSOM3	Paja de Sombre	0.65	64	⇓iP	Pb	06 19 46.6	-0.4
PSOM3				eS	Sb	06 19 56.0	+0.2
EDP2	Potrero Grande	0.67	337	eP	Pb	06 19 47.7	+0.3
FIMO	Fila Mora	0.73	323	eP	Pn	06 19 48.7	+0.2
FIMO				eS	Sn	06 19 59.7	+1.0
PANP	Palmar Norte	0.78	316	eP	Pn	06 19 49.0	0.0
PBNVO	Pueblo Nuevo,	0.86	55	eP	Pn	06 19 49.7	-0.3
BURE	Buenos Aires	0.88	331	eP	Pn	06 19 50.6	+0.2
RBALA	Bur	0.89	57	⇓iP	Pn	06 19 50.4	0.0
RBALA	Bur	0.89	57	eP	Pn	06 19 50.4	0.0
DRK0	Durika	0.92	339	eP	Pn	06 19 50.9	-0.2
DRK0				eS	Sn	06 20 03.9	+0.5
DRK0	Durika	0.92	339	S	Sb	06 20 04.8	+1.1
DRK0	Durika	0.92	339	P	Pn	06 19 50.8	-0.2
DRK0	Durika	0.92	339	eP	Pn	06 19 50.7	-0.4
CHGR2	Aguacate	0.93	55	eP	Pn	06 19 50.9	-0.1
CHGR2				eS	Sn	06 20 03.2	0.0
EDPE	Pejibaye, P	1.00	319	eP	Pn	06 19 52.4	+0.4
OCHAL	Ojochal	1.01	314	S	Sb	06 20 07.1	+1.1
OCHAL	Ojochal	1.01	314	P	Pn	06 19 52.6	+0.4
REME3	Remedios, Chir	1.08	99	eP	Pn	06 19 53.6	+0.5
CNI2	El Empalme, Bo	1.11	23	eP	Pn	06 19 53.7	+0.3
CNI2				eS	Sn	06 20 06.4	-1.3
SAJE	San Jernim	1.11	328	eP	Pn	06 19 53.8	0.0
BRIBI	Bribri	1.22	4	eP	Pb	06 19 57.5	+1.0
BUS1	Rivas	1.42	324	eP	Pn	06 19 58.8	+0.6
PIEC	Cerro El Cedra	1.60	320	eP	Pn	06 20 01.4	+0.9
LCR2	La Lucha 2	1.72	321	S	Sb	06 20 26.7	+0.2
PICV	PH. Pirrs	1.76	314	eP	Pn	06 20 03.4	+0.8
VTCV	VTCV, Calle Va	1.77	333	eP	Pn	06 20 03.5	+0.7
GMAL	Guarumal, Vera	1.77	111	eP	Pn	06 20 02.6	-0.1
GMAL	Guarumal, Vera	1.77	111	eP	Pn	06 20 02.5	-0.1
ABRB	Las Abras (San	1.79	333	eP	Pn	06 20 05.0	+1.9
CVTV	Tajo	1.80	333	eP	Pn	06 20 04.7	+1.4
VTR0	Volcan Turrial	1.81	332	eP	Pn	06 20 05.3	+1.7
CVTR	Volcan Turrial	1.82	332	eP	Pn	06 20 05.5	+1.9
ACOS	Acosta	1.86	318	eP	Pn	06 20 06.2	+2.2
SOCE	Pocosol	2.59	320	S	Sb	06 20 50.3	-1.2
SOCE	Pocosol	2.59	320	P	Pb	06 20 18.5	-1.5
JTS	Las Juntas de	2.76	313	eP	Pn	06 20 17.1	+0.9

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*TEH **22** 06:21:34.7, 36°.39N×45°.14E, h10^{km}±999^{km}*
*ISN **22** 06:21:35.9±2.1, 36°.40N×45°.11E, h19^{km}±21^{km}, ML2.8*
ISC 22 06:21:36.8±1.1, **36°.35N**±0°.08×**45°.12E**±0°.07, **h20**^{km}, **n7**,
σ**1^{s}.09**/10, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKRK	Kirkuk	1.14	214	ePg	Pn	06 21 56.5	-1.1
	baz=32						
IKRK				eSg	Sn	06 22 14.0	+1.4
IKRK				AML	AML	06 22 25.4	
	comp=N,199nm,0.5s						
IKRK				AML	AML	06 22 29.9	
	comp=E,198nm,0.4s						
IAZR	Azarshahr	1.50	27	Pg	Pb	06 22 04.3	+0.2
IAZR				Sg	Sb	06 22 23.7	+1.0
MSL	Mosul	1.63	272	ePn	Pn	06 22 04.0	-0.3
MSL				eSn	Sb	06 22 27.0	+0.8
IHSH	Hashtrud	1.97	60	Pn	Pb	06 22 11.4	-0.7
ISHB	Shabestar	1.97	11	Pn	Pb	06 22 10.5	-1.7
IHRS	Heris	2.49	37	Pn	Pb	06 22 21.5	+0.4
ISRB	Sarab	2.51	53	Pn	Pb	06 22 21.4	0.0

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*IDC **22** 06:41:56.8±1.0, 6°.24S×103°.85E, h0^{km}, mb3.9/16, mbtmp4.0/16, ML5.6/1, MS2.8/1, Error ellipse: s-maj=38.6km s-min=14.6km az=49.0*
*DJA **22** 06:41:58.0±0.3, 7°S±3°×10°4E±°, h10^{km}, M4.3/16, mb4.7/5, MLv4.2/16*
*NEIC **22** 06:42:02.0±2.4, 6°.4S±0°.1×103°.8E±0°.1, h35^{km}±2^{km}, mb4.2/7, Error ellipse: s-maj=27.0km s-min=10.7km az=229.0*
ISC 22 06:42:02.4±0.6, **6°.44S**±0°.07×**103°.79E**±0°.06, **h48**^{km}, **n65**,
σ**1^{s}.01**/55, **mb4.0**/19, **Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	1.16	38	P	Pn	06 42 20.9	-1.3
KASI				S	Sn	06 42 36.8	-0.1
LWLI	Liwa	1.44	11	P	Pn	06 42 26.2	0.0
LWLI				S	Sn	06 42 44.7	+0.6
BLSI	Bandar Lampung	1.80	54	P	Pn	06 42 31.3	+0.2
EGSI	Enggano, Bengk	1.85	306	P	Pn	06 42 31.0	-0.7
KLI	Kotabumi	1.90	34	P	Pn	06 42 32.4	0.0
KLSI		1.98	28	P	Pn	06 42 34.2	+0.7
MDSI	Maura Dua	1.98	11	P	Pn	06 42 33.7	+0.2
MNAI	Manna	2.23	338		Pn	06 42 36.9	0.0
MNAI				Sn	Sn	06 43 04.3	+1.1
MNAI	Manna	2.23	338	P	Pn	06 42 36.4	-0.5
DBJI	Dramaga	2.95	92	P	Pn	06 42 45.9	-0.9
KSI	Kapahiang	3.02	337	P	Pn	06 42 47.5	-0.3
UBSI	University, Be	3.06	330	P	Pn	06 42 48.5	+0.2
CNJI	Cibinong	3.43	105	P	Pn	06 42 52.6	-0.8
MASI	Maura Aman, Be	3.62	335	P	Pn	06 42 55.4	-0.7
BBJI	Bungbulang	3.97	105	P	Pn	06 42 59.5	-1.3
KRJI	Kerinci	4.91	332	P	Pn	06 43 13.7	-0.1
KPJI	Karang Pucung	5.18	100	P	Pn	06 43 15.1	-2.4
PPSI	Pulau Pagai	5.25	314	P	Pn	06 43 16.3	-2.0
	0.7nm94nm,1.0s						
UGM	Wanagama	6.84	103	Pn	Pn	06 43 41.0	+0.8
UGM	Wanagama	6.84	103	P	Pn	06 43 42.2	+1.9
	61nm,1.8s						
COCO	West Island	8.92	230	P	Pn	06 44 03.4	-5.4
JAGI	Jajag, Banyuwa	10.47	102	Pn	Pn	06 44 29.3	-0.8
BATI	Baumata	20.02	102	P	P	06 46 31.0	-0.5
	16nm,0.3s,baz=296,slow=3.0,SNR=3.8						
SOEI	Soe	20.54	101	P	P	06 46 35.7	-1.5
FITZ	Fitzroy Crossi	24.26	120	P	P	06 47 15.8	+0.6
	2.4nm,1.0s,baz=243,slow=4.5,SNR=2.5						
	2.4nm,1.0s						
FITZ	Fitzroy Crossi	24.26	120	P	P	06 47 14.3	-1.0
FITZ				IAmb	IAmb	06 47 18.0	
	comp=Z,2.5nm,1.4s						
CMAR	Chiang Mai Arr	25.20	349	P	P	06 47 22.6	-1.1
	comp=Z,1.4nm,0.4s,baz=179,slow=8.9,SNR=16						
CMAR				LR	LR	06 57 36.7	
	comp=Z,20nm,19.1s,baz=350,slow=38						
	comp=Z,1.4nm,0.4s						
CMAR	Chiang Mai Arr	25.20	349	P	P	06 47 21.1	-2.7
H01W3	Cape Leeuwin H	29.87	163	T	T	07 19 21.2	
	baz=340,slow=76,SNR=6.2						
H01W2	Cape Leeuwin H	29.88	163	T	T	07 19 23.6	
	baz=340,slow=76,SNR=5.6						
H01W1	Cape Leeuwin H	29.88	163	T	T	07 19 20.8	
	baz=340,slow=76,SNR=6.1						
H08S2	Diego Garcia H	31.07	266	T	T	07 20 41.5	
	baz=90						
H08S3	Diego Garcia H	31.09	266	T	T	07 20 49.4	
	baz=90						
H08S1	Diego Carcia H	31.09	266	T	T	07 20 51.4	
	baz=90						
WB0	Warramunga Arr	32.54	117	P	P	06 48 29.2	-0.1
WB0				IAmb	IAmb	06 48 48.7	
	comp=Z,4.1nm,1.2s						
WRA	Warramunga Arr	32.55	117	P	P	06 48 29.6	+0.3
	comp=Z,1.0nm,0.7s,baz=292,slow=8.3,SNR=4.6						
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	32.55	117	P	P	06 48 29.1	-0.3
ASAR	Alice Springs	33.63	124	P	P	06 48 39.9	+1.2
	comp=Z,0.9nm,0.9s,baz=297,slow=6.8,SNR=8.1						
	comp=Z,0.9nm,0.9s						
ASAR	Alice Springs	33.63	124	P	P	06 48 39.6	+0.9
STKA	Stephens Creek	43.40	131	P	P	06 50 01.8	+1.3
	comp=Z,1.0nm,0.5s,baz=326,slow=9.7,SNR=3.9						
	comp=Z,1.0nm,0.5s						
KSRS	Korea Array	49.14	25	P	P	06 50 43.8	-1.6
	comp=Z,1.1nm,0.7s,baz=218,slow=8.4,SNR=5.5						
	comp=Z,1.1nm,0.7s						
MJAR	Matsushiro Arr	53.55	34	P	P	06 51 18.4	-0.2
	comp=Z,0.6nm,0.5s,baz=236,slow=4.3,SNR=2.0						
	comp=Z,0.6nm,0.5s						
SONM	Songino Array	54.09	2	P	P	06 51 22.4	-0.1
	comp=Z,1.6nm,0.7s,baz=178,slow=8.4,SNR=9.7						
	comp=Z,1.6nm,0.7s						
SONM	Songino Array	54.09	2	P	P	06 51 22.9	+0.4
SONM				IAmb	IAmb	06 51 23.9	
	comp=Z,2.3nm,0.9s						
MKAR	Makanchi Array	56.34	342	P	P	06 51 38.4	-0.1
	comp=Z,0.8nm,0.7s,baz=157,slow=8.7,SNR=7.6						
	comp=Z,0.8nm,0.7s						
MKAR	Makanchi Array	56.34	342	P	P	06 51 38.0	-0.6
HILR	Hailar Array B	57.48	12	P	P	06 51 46.1	-0.4
	comp=Z,0.5nm,0.3s,baz=256,slow=5.8,SNR=1.7						
	comp=Z,0.5nm,0.3s						
H04N2	CROZET ISLANDS	59.63	219	T	T	07 56 28.4	
	baz=66,slow=75,SNR=358						
H04N1	CROZET ISLANDS	59.65	219	T	T	07 56 28.6	
	baz=66,slow=75,SNR=324						
H04N3	CROZET ISLANDS	59.65	219	T	T	07 56 27.0	
	baz=66,slow=75,SNR=358						
H04S1	CROZET ISLANDS	59.85	219	T	T	07 56 40.4	
	baz=64,slow=76,SNR=29						
H04S3	CROZET ISLANDS	59.86	219	T	T	07 56 39.9	
	baz=64,slow=76,SNR=26						
H04S2	CROZET ISLANDS	59.87	219	T	T	07 56 42.4	
	baz=64,slow=76,SNR=27						
KURBB	Kurchatov Arra	60.88	342	P	P	06 52 09.5	-0.5
	comp=Z,0.3nm,0.3s,baz=155,slow=6.9,SNR=1.8						
	comp=Z,0.3nm,0.3s						
ZAA0	Zalesovo Array	62.25	347	P	P	06 52 17.4	-1.8
ZAA0				IAmb	IAmb	06 52 19.5	
	comp=Z,4.0nm,1.3s						
ZALV	Zalesovo Beam	62.25	347	P	P	06 52 18.6	-0.5
	comp=Z,1.0nm,0.6s,baz=157,slow=4.8,SNR=6.6						
	comp=Z,1.0nm,0.6s						
BVAR	Borovoye Array	65.65	339	P	P	06 52 40.5	-1.1
	comp=Z,1.5nm,0.7s,baz=134,slow=8.4,SNR=7.1						
	comp=Z,1.5nm,0.7s						
AB31	Akbulak array	67.33	331	P	P	06 52 52.4	0.0
AB31				IAmb	IAmb	06 52 52.7	
	comp=Z,2.6nm,1.1s						
ABKAR	Akbulak array	67.33	331	P	P	06 52 52.2	-0.1
KBZ	Khabaz	74.11	319	P	P	06 53 34.2	+0.5
	comp=Z,1.7nm,0.7s,baz=121,slow=5.9,SNR=2.9						
	comp=Z,1.7nm,0.7s						
MMAI	Mount Meron Ar	75.69	306	P	P	06 53 44.6	+1.4
	comp=Z,0.8nm,0.3s,baz=76,slow=6.1,SNR=1.9						
	comp=Z,0.8nm,0.3s						
FINES	FINESS Array B	89.78	332	P	P	06 54 56.4	+0.9
	comp=Z,2.4nm,0.9s,baz=131,slow=6.3,SNR=2.2						
	comp=Z,2.4nm,0.9s						
NVAR	Mina Array Bea	130.41	44	PKP	PKiKP	07 01 10.2	+1.0
	comp=Z,0.3nm,0.3s,baz=304,slow=4.6,SNR=1.3						
PDAR	Pinedale Array	133.38	34	PKP	PKiKP	07 01 15.0	-0.2
	comp=Z,0.2nm,0.2s,baz=292,slow=1.5,SNR=5.3						
TXAR	Lajitas Array	145.52	45	PKPbc	PKPab	07 01 37.9	+1.3
	comp=Z,1.4nm,0.8s,baz=312,slow=1.2,SNR=15						

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*IDC **22** 06:50:02.0±1.8, 8°.87S×124°.62E, h0^{km}, mb3.8/1, mbtmp3.4/4, ML3.2/3, Error ellipse: s-maj=37.2km s-min=23.0km az=95.0*
*DJA **22** 06:50:14.9±1.6, 9°S±3°×12°3E±°, h16^{km}±18^{km}, M3.2/7, MLv3.2/7*
ISC 22 06:50:01.9±1.3, **8°.9S**±0°.1×**124°.44E**±0°.09, **h10**^{km}, **n10**,
σ**2^{s}.15**/11, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.87	191	P	Pn	06 50 34.6	+14
SOEI				S	Sn	06 50 50.3	+17
BATI	Baumata	1.52	210	Pg	Pb	06 50 31.4	+1.3
	166nm,0.3s,baz=338,slow=2.8,SNR=66						
BATI				Lg	Lg	06 50 46.6	
	59nm,0.3s,baz=5.1,slow=12,SNR=6.4						
BATI	Baumata	1.52	210	P	Pg	06 50 32.0	+0.9
MMRI	Maumere	2.20	277	P	Pn	06 50 37.8	-0.7
MMRI				S	Sn	06 50 55.2	-11
EDFI	Ende, Flores	2.73	273	P	Pn	06 50 42.7	-3.2
LBFI	Labuhan Bajo,	4.52	275	P	Pn	06 51 07.4	-3.1
FITZ	Fitzroy Crossi	9.22	173	Pn	Pn	06 52 15.4	+0.3
	0.3nm,0.3s,baz=357,slow=11,SNR=12						
	0.9nm,0.3s						
WRA	Warramunga Arr	14.57	140	Pn	Pn	06 53 28.1	-0.2
	0.1nm,0.3s,baz=323,slow=17,SNR=4.7						
WRA				Sn	Sn	06 56 08.7	-1.3
	0.5nm,0.3s,baz=314,slow=25,SNR=8.8						
	0.8nm,0.9s						
ASAR	Alice Springs	17.26	149	P	P	06 54 05.3	+0.6
	0.1nm,0.3s,baz=340,slow=12,SNR=9.4						
ASAR				S	Sn	06 57 12.7	-2.7
	0.9nm,0.6s,baz=319,slow=24,SNR=7.2						
	0.2nm,0.5s						
MKAR	Makanchi Array	66.94	330	P	P	07 00 56.9	+2.2
	0.8nm,0.7s,baz=144,slow=8.1,SNR=5.1						
	0.8nm,0.7s						

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*IDC **22** 07:05:29.7±1.0, 5°.47N×125°.56E, h0^{km}, mb3.7/8, mbtmp3.7/8, MS3.1/1, Error ellipse: s-maj=59.2km s-min=19.5km az=70.0*
ISC 22 07:05:34.9±1.1, **5°.4N**±0°.2×**125°.6E**±0°.4, **h35**^{km}, **n9**, σ**0^{s}.86**/8,
mb3.8/8, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	17.05	117	LR	LR	07 15 45.6	
	comp=Z,65nm,19.9s,baz=246,slow=36						
WRA	Warramunga Arr	26.66	161	P	P	07 11 11.3	+0.7
	1.6nm,0.7s,baz=339,slow=10,SNR=5.6						
	1.6nm,0.7s						
ASAR	Alice Springs	30.05	165	P	P	07 11 40.8	-0.1
	0.2nm,0.5s,baz=341,slow=7.5,SNR=4.3						
	0.2nm,0.5s						
KSRS	Korea Array	31.94	4	P	P	07 11 57.3	-0.1
	0.7nm,0.6s,baz=185,slow=8.8,SNR=2.9						
	0.7nm,0.6s						
SONM	Songino Array	45.32	342	P	P	07 13 50.9	+1.3
	0.2nm,0.3s,baz=119,slow=11,SNR=1.9						
	0.2nm,0.3s						
MKAR	Makanchi Array	55.50	325	P	P	07 15 06.7	+0.2
	0.8nm,0.4s,baz=111,slow=7.7,SNR=11						
	0.8nm,0.4s						
KURBB	Kurchatov Arra	59.69	327	P	P	07 15 34.8	-1.0
	0.7nm,0.6s,baz=126,slow=5.8,SNR=9.9						
	0.7nm,0.6s						
BVAR	Borovoye Array	65.27	327	P	P	07 16 12.5	-0.6
	0.5nm,0.5s,baz=113,slow=11,SNR=3.2						
	0.5nm,0.5s						
ILAR	Eielson Array	84.06	25	P	P	07 18 01.4	-0.4
	0.3nm,0.5s,baz=258,slow=5.0,SNR=8.4						
	0.3nm,0.5s						

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*UCR **22** 07:19:57.6±0.7, 11°.62N×85°.83W, h222^{km}±33^{km}, MW4.2*
*CATAC **22** 07:20:04.8±0.5, 11°N±3°×8°6W±°, h187^{km}±3^{km}, M3.0/19, MLv3.0/19, Error ellipse: s-maj=9.9km s-min=3.3km az=47.0, confirmed*
ISC 22 07:20:03.6±1.2, **11°.21N**±0°.07×**85°.52W**±0°.09, **h200**^{km}, **n45**,
σ**0^{s}.66**/47, **Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORN	Al O del Volca	0.35	339	P	Pn	07 20 30.6	+0.3
VRLE	La Escondida,	0.45	160	eP	Pn	07 20 30.8	0.0
LAPC	Finca la Perla	0.45	169	eP	Pn	07 20 30.2	-0.4
VMAR	Armenia, Volca	0.57	135	eP	Pn	07 20 31.3	+0.2
ELI1	Hacienda Flor	0.57	183	P	Pn	07 20 31.2	+0.2
ELI1	Hacienda Flor	0.57	183	S	Sn	07 20 52.1	-0.2
MESS	Mesas	0.57	146	eP	Pn	07 20 31.1	-0.1
UPAL	Upala	0.59	122	S	Sn	07 20 51.5	-0.8
ALIBA	Liberia Airpor	0.62	182	eP	Pn	07 20 31.3	0.0
CUI	Cuipilapa	0.66	148	eP	Pn	07 20 32.0	+0.5
DELF	Filadelfia	0.76	182	eP	Pn	07 20 32.2	+0.2
ELVJ	El Viejo (Barb	0.78	166	eP	Pn	07 20 32.4	+0.3
INVE	Universidad In	0.86	148	eP	Pn	07 20 33.0	+0.4
PLVR	Palo Verde	0.88	169	eP	Pn	07 20 33.1	+0.3
NANN	Nandasmo	0.93	321	P	Pn	07 20 34.0	+1.0
NANN	Nandasmo	0.93	321	S	Sn	07 20 57.0	+1.2
JUD3	Juan Diaz 3	1.04	181	eP	Pn	07 20 34.1	+0.3
JTS	Las Juntas de	1.07	149	P	Pn	07 20 34.5	+0.5
JTS				S	Sn	07 20 55.8	-1.8
JTS	Las Juntas de	1.07	149	eP	Pn	07 20 34.3	+0.3
ARE1	Arenal 1	1.09	133	eP	Pn	07 20 35.3	+1.3
VARE2	V. Arenal	1.09	133	eP	Pn	07 20 35.3	+1.2
UNAN	Cigeo UNAN	1.16	321	P	Pn	07 20 35.0	+0.5
UNAN				S	Sn	07 20 59.6	+1.0
MGAN	Managua	1.17	323	P	Pn	07 20 35.1	+0.5
MGAN	Managua	1.17	323	S	Sn	07 20 59.0	+0.3
TISN	Laguna Tiscapa	1.18	322	P	Pn	07 20 34.0	-0.7
CMARA	Lajas Hojancha	1.19	175	S	Sn	07 20 58.0	-1.2
CMARA	Lajas Hojancha	1.19	175	P	Pn	07 20 35.1	+0.2
CMARA	Lajas Hojancha	1.19	175	eP	Pn	07 20 35.2	+0.3
COVE	Coope Vega, Sa	1.20	114	S	Sn	07 20 58.7	-0.4
COVE	Coope Vega, Sa	1.20	114	P	Pn	07 20 34.8	-0.1
SOCE	Pocosol	1.21	133	P	Pn	07 20 36.0	+1.0
SOCE	Pocosol	1.21	133	S	Sn	07 20 59.4	+0.1
BOAB	BOACO BROADBAN	1.23	353	P	Pn	07 20 35.0	-0.1
BOAB	BOACO BROADBAN	1.23	353	S	Sn	07 20 58.7	-1.1
APQ2	Apoyeque	1.25	321	P	Pn	07 20 35.5	+0.3
APQ2				S	Sn	07 21 01.0	+1.1
COPN	Copaltepe	1.42	313	P	Pn	07 20 36.2	-0.5
MOM2	El Cardon	1.54	322	S	Sn	07 21 04.5	+0.3
CNGN	Cerro Negro	1.72	318	P	Pn	07 20 39.5	+0.1
CNGN	Cerro Negro	1.72	318	S	Sn	07 21 06.9	-0.4
MATN	Matagalpa	1.75	347	P	Pn	07 20 39.0	-0.8
TRT2	Tortugero	1.87	110	S	Sn	07 21 09.9	+0.2
PKGN	Cerro Pekin	2.03	316	S	Sn	07 21 12.5	-0.2
LCR2	La Lucha 2	2.09	134	S	Sn	07 21 14.0	-0.2
CRIN	San Cristobal	2.10	315	S	Sn	07 21 13.6	-0.6
CSGN	Cosiguina Volc	2.65	312	eP	Pn	07 20 40.4	-8.9

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*IDC **22** 07:39:35.3±0.6, 6°.58N×125°.08E, h0^{km}, mb4.1/20, mbtmp4.1/20, MS2.8/2, Error ellipse: s-maj=13.9km s-min=8.8km az=130.0*
*BJI **22** 07:39:35.7, 6°.48N×125°.29E, h13^{km}, mB4.9/2, mb4.6/21, Ms4.2/1, Ms7 4.1/1*
*NEIC **22** 07:39:37.7±1.0, 6°.62N±0°.07×125°.17E±0°.08, h10^{km}±1^{km}, mb4.7/33, Error ellipse: s-maj=17.1km s-min=6.1km az=129.0*
ISC 22 07:39:37.2±0.4, **6°.58N**±0°.05×**125°.23E**±0°.08, **h10**^{km}, **n75**,
σ**1^{s}.17**/76, **mb4.5**/46, **1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.59	36	Pg	Pg	07 39 49.7	+0.9
	4μm,0.3s,baz=231,slow=2.0,SNR=174						
DAV				Lg	Lg	07 39 58.4	
	3μm,0.3s,baz=242,slow=23,SNR=7.6						
DAV	Davao City (W)	0.59	36		Pg	07 39 49.6	+0.9
DAV				Sg	Sg	07 39 57.1	+0.6
TOLI2	Tolitoli	7.02	219		Pn	07 41 19.8	-0.3
LUWI	Luwuk	7.96	198		Pn	07 41 34.4	+1.3
BATI	Baumata	16.75	185	LR	LR	07 51 46.3	
	comp=Z,37nm,18.3s,baz=174,slow=44						
SSLB	Suanglung	17.59	347		P	07 43 43.8	+0.1
MTN	Manton Dam	20.17	163		P	07 44 12.9	+0.9
KNRA	Kununurra	22.39	171		P	07 44 36.4	+0.4
KNRA				IAmb	IAmb	07 44 57.9	
	comp=Z,11nm,0.8s						
FITZ	Fitzroy Crossi	24.53	179	P	P	07 44 57.5	+0.4
	comp=Z,3.7nm,0.5s,baz=357,slow=7.9,SNR=13						
	comp=Z,3.7nm,0.5s						
FITZ	Fitzroy Crossi	24.53	179		P	07 44 57.0	-0.1
JCJ	Chichijima	26.00	36	P	P	07 45 09.3	-1.1
NJ2	Nanjing	26.03	348	eP	P	07 45 11.5	+0.9
NJ2				pmax	pmax		
	comp=Z,12nm,1.0s						
PMG	Port Moresby	27.01	126	P	P	07 45 19.8	+0.1
PMG				IAmb	IAmb	07 45 21.1	
	comp=Z,13nm,0.9s						
WB0	Warramunga Arr	27.70	161	P	P	07 45 25.3	-0.5
WRA	Warramunga Arr	27.84	161	P	P	07 45 26.2	-0.8
	comp=Z,1.3nm,0.8s,baz=332,slow=11,SNR=10.0						
	comp=Z,1.3nm,0.8s						
WRA	Warramunga Arr	27.84	161	P	P	07 45 25.6	-1.5
WR8	Warramunga Arr	27.91	161	P	P	07 45 26.9	-0.7
CMAR	Chiang Mai Arr	28.20	297	P	P	07 45 30.6	+0.3
	comp=Z,1.0nm,0.3s,baz=122,slow=7.3,SNR=6.6						
	comp=Z,1.0nm,0.3s						
PZH	PanZhiHua	29.88	314	P	P	07 45 46.5	+1.2
KSRS	Korea Array	30.83	4	P	P	07 45 53.1	-0.3
	comp=Z,1.4nm,0.9s,baz=181,slow=7.9,SNR=3.4						
KSRS				LR	LR	07 57 21.0	
	comp=Z,16nm,21.1s,baz=320,slow=35						
	comp=Z,1.4nm,0.9s						
XAN	Xi'an	31.21	333	⇑P	P	07 45 57.3	+0.4
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AS31	Alice Springs	31.23	165	P	P	07 45 57.2	+0.1
ASAR	Alice Springs	31.24	165	P	P	07 45 56.6	-0.6
	comp=Z,0.7nm,0.5s,baz=345,slow=7.4,SNR=14						
	comp=Z,0.7nm,0.5s						
ASAR	Alice Springs	31.24	165	P	P	07 45 57.1	-0.1
MJAR	Matsushiro Arr	32.09	20	P	P	07 46 03.1	-1.5
	comp=Z,0.7nm,0.7s,baz=181,slow=11,SNR=1.2						
	comp=Z,0.7nm,0.7s						
CTAO	Charters Tower	33.62	142	P	P	07 46 16.4	-1.7
CTAO				IAmb	IAmb	07 46 49.0	
	comp=Z,26nm,1.6s						
LZDM	Lanzhou Array	35.28	329	P	P	07 46 31.1	-1.6
	comp=Z,0.9nm,0.4s,baz=117,slow=5.0,SNR=1.5						
	comp=Z,0.9nm,0.4s						
LZH	Lanzhou	35.30	329	eP	P	07 46 35.0	+2.3
LZH				sP	sP	07 46 43.0	+5.9
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC	Hu-ho-hao-te	36.24	342	eP	P	07 46 42.0	+1.4
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,5.3s						
BTO	Baotou	36.51	340	eP	P	07 46 45.8	+2.9
BTO				PP	PP	07 48 10.6	+4.5
BTO				pmax	pmax		
	comp=Z,11nm,0.6s						

CN2	Changchun	37.07	0	eP	P	07 46 50.6	+3.1
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GTA	Gaotai	39.90	329	eP	P	07 47 13.8	+2.2
GTA				pP	sP	07 47 19.5	+3.5
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BBOO	Buckleboo	40.51	166	P	P	07 47 16.5	0.0
BBOO				IAmb	IAmb	07 47 18.0	
	comp=Z,13nm,0.9s						
STKA	Stephens Creek	41.31	159	P	P	07 47 24.2	+1.0
	comp=Z,4.4nm,0.7s,baz=340,slow=8.5,SNR=11						
	comp=Z,4.4nm,0.7s						
STKA	Stephens Creek	41.31	159		P	07 47 23.5	+0.3
HEH	HeiHe	43.56	2	eP	P	07 47 40.3	-0.9
SONM	Songino Array	44.14	342	P	P	07 47 45.2	-0.9
	comp=Z,0.4nm,0.5s,baz=103,slow=4.6,SNR=1.6						
	comp=Z,0.4nm,0.5s						
ARMA	Armidale	44.66	147	P	P	07 47 50.9	+0.5
ARMA				IAmb	IAmb	07 48 22.6	
	comp=Z,26nm,1.4s						
CAN	Canberra	47.31	153	P	P	07 48 11.7	+0.5
TOO	Toolangi	47.83	158	P	P	07 48 15.9	+0.8
TOO				IAmb	IAmb	07 48 30.1	
	comp=Z,10nm,1.6s						
WMQ	Urumqi	49.55	325	eP	P	07 48 29.0	+0.6
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
PEA0B	Petropavlovsk-	53.40	24	P	P	07 48 56.9	-0.1
PETK	Petropavlovsk-	53.40	24	P	P	07 48 56.0	-1.1
	comp=Z,10.0nm,1.1s,baz=176,slow=2.4,SNR=4.8						
	comp=Z,10.0nm,1.1s						
PETK	Petropavlovsk-	53.40	24	P	P	07 48 57.1	+0.1
MKAR	Makanchi Array	54.38	325	P	P	07 49 04.7	+0.4
	comp=Z,1.9nm,0.5s,baz=124,slow=8.2,SNR=20						
	comp=Z,1.9nm,0.5s						
MKAR	Makanchi Array	54.38	325	P	P	07 49 04.0	-0.3
MAKZ	Makanchi	54.56	325	P	P	07 49 05.7	0.0
MAKZ				IAmb	IAmb	07 49 42.6	
	comp=Z,6.5nm,1.4s						
KSH	Kashi	54.99	314	P	P	07 49 10.3	+1.3
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BOOM	Boomskoye usch	56.23	318	P	P	07 49 17.7	-0.2
BOOM				IAmb	IAmb	07 49 59.9	
	comp=Z,10nm,1.1s						
ZALV	Zalesovo Beam	57.38	333	P	P	07 49 24.2	-1.5
	comp=Z,0.4nm,0.3s,baz=120,slow=8.8,SNR=4.9						
	comp=Z,0.4nm,0.3s						
KURBB	Kurchatov Arra	58.55	327	P	P	07 49 33.2	-0.7
	comp=Z,4.0nm,0.7s,baz=124,slow=6.4,SNR=38						
	comp=Z,4.0nm,0.7s						
KURK	Kurchatov	58.55	327		P	07 49 33.1	-0.8
KURK				IAmb	IAmb	07 49 34.7	
	comp=Z,5.3nm,0.7s						
GAR	Garm	58.91	312	P	P	07 49 36.8	-0.1
CHGR	Chuyangaron	59.67	311	P	P	07 49 41.5	-0.5
CHGR				IAmb	IAmb	07 50 03.1	
	comp=Z,6.3nm,0.8s						
KK31	Karatay Array	60.14	316	P	P	07 49 44.8	-0.4
KK31				IAmb	IAmb	07 49 46.1	
	comp=Z,5.5nm,0.9s						
KKAR	Karatay Array	60.14	316		P	07 49 44.5	-0.6
BVAR	Borovoye Array	64.13	327	P	P	07 50 11.1	-0.6
	comp=Z,2.2nm,0.7s,baz=120,slow=8.8,SNR=7.2						
	comp=Z,2.2nm,0.7s						
BORK	Borovoye	64.18	327	P	P	07 50 11.2	-0.8
BORK				IAmb	IAmb	07 50 12.4	
	comp=Z,4.4nm,0.8s						
BKZ	Black Stump Fm	65.69	138	P	P	07 50 22.5	+0.3
NRIK	Noril'sk	67.32	346	P	P	07 50 30.6	-1.4
	comp=Z,1.4nm,0.7s,baz=97,slow=8.1,SNR=1.9						
	comp=Z,1.4nm,0.7s						
AB31	Akbulak array	69.01	320	P	P	07 50 42.2	-0.8
ABKAR	Akbulak array	69.01	320	P	P	07 50 42.0	-1.0
L16K	Owhat River	77.27	28	P	P	07 51 32.2	+0.6
E18K	Tukpahlearik C	77.89	22	P	P	07 51 35.5	+0.6
E18K				IAmb	IAmb	07 51 58.7	
	comp=Z,13nm,1.6s						
C18K	Utukok River	77.94	21	P	P	07 51 35.2	-0.1
C18K				IAmb	IAmb	07 51 43.8	
	comp=Z,9.7nm,1.5s						
F19K	Shaleruckik Mo	78.87	23	P	P	07 51 40.9	+0.6
F19K				IAmb	IAmb	07 51 59.2	
	comp=Z,11nm,1.8s						
D20K	Etivluk River	79.60	21	P	P	07 51 45.0	+0.6
D20K				IAmb	IAmb	07 52 03.7	
	comp=Z,14nm,1.6s						
ILAR	Eielson Array	83.19	26	P	P	07 52 03.5	+0.1
	comp=Z,0.7nm,0.6s,baz=237,slow=5.5,SNR=19						
	comp=Z,0.7nm,0.6s						
ILAR	Eielson Array	83.19	26	P	P	07 52 02.8	-0.6
MMAI	Mount Meron Ar	86.31	303	P	P	07 52 19.9	-0.1
	comp=Z,0.5nm,0.3s,baz=165,slow=6.0,SNR=1.4						
	comp=Z,0.5nm,0.3s						
DAWY	Dawson	86.48	26	P	P	07 52 19.7	-0.4
DAWY				IAmb	IAmb	07 52 35.9	
	comp=Z,10nm,1.7s						
BRTR	Keskin Array B	87.06	309	P	P	07 52 22.4	-1.2
	comp=Z,0.7nm,0.8s,baz=89,slow=6.2,SNR=2.7						
	comp=Z,0.7nm,0.8s						
ARCES	ARCESS Array B	87.27	340	P	P	07 52 22.1	-1.7
	comp=Z,6.8nm,1.1s,baz=74,slow=5.0,SNR=3.7						
	comp=Z,6.8nm,1.1s						
ARCES	ARCESS Array B	87.27	340	P	P	07 52 23.5	-0.3
FINES	FINESS Array B	88.63	332	P	P	07 52 27.9	-2.4
	comp=Z,1.9nm,0.9s,baz=27,slow=5.8,SNR=5.6						
	comp=Z,1.9nm,0.9s						

IDC 22 07:52:47.5±2.7, 9°.28N×122°.36E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=371.9km s-min=22.8km az=63.0, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.34	158	P	P	07 59 10.2	+0.3
	0.8nm,0.4s,baz=337,slow=10.0,SNR=11						
	0.8nm,0.4s						
ASAR	Alice Springs	34.63	161	P	P	07 59 38.3	-0.4
	0.2nm,0.5s,baz=344,slow=6.9,SNR=4.8						
	0.2nm,0.5s						
MKAR	Makanchi Array	50.55	325	P	P	08 01 48.3	+0.4
	0.7nm,0.7s,baz=127,slow=8.1,SNR=5.2						
	0.7nm,0.7s						
KURBB	Kurchatov Arra	54.76	327	P	P	08 02 18.1	-0.8
	0.2nm,0.2s,baz=128,slow=6.2,SNR=2.6						
	0.2nm,0.2s						

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*RSNC **22** 07:55:05.0±1.2, 10°N±5°×7°0W±°, h0km, M2.7, mb3.9, ML2.5*

*FUNV **22** 07:55:11.1, 9°.75N×69°.79W, h5km, MW2.6*

ISC 22 07:55:06.6±1.3, 9°.74N±0°.05×69°.95W±0°.03, h3km±11km, n11, σ1ˢ01/20, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEPV	Terepaima	0.78	73	eP	Pg	07 55 22.0	+0.5
TEPV				eS	Sg	07 55 31.6	0.0
SDV	Santo Domingo	1.08	219	P	Pg	07 55 27.0	-0.3
SDV				S	Sg	07 55 42.0	+0.6
MAPV	Macapo	1.47	86	eP	Pg	07 55 35.4	+0.6
MAPV				eS	Sn	07 55 53.1	-0.7
JACV	Jacura	1.74	39	eP	Pg	07 55 39.7	-0.2
JACV				eS	Sg	07 56 02.3	-0.1
TURV	Turiamo	2.19	71	eP	Pn	07 55 45.1	+1.2
TURV				eS	Sn	07 56 11.4	-0.3
BENV	Beln	2.33	84	eP	Pn	07 55 47.6	+1.8
BENV				eS	Sn	07 56 14.5	-0.5
URIC	Uribia, Colomb	2.80	314	P	Pn	07 55 51.9	-0.5
TACV	Tcata	2.91	82	eP	Pn	07 55 55.2	+1.4
TACV				eS	Sn	07 56 28.4	-0.9
OCAC	Ocana	3.65	246	P	Pn	07 56 04.4	+0.3
CACV	CAICARA DEL OR	4.00	122	eP	Pb	07 56 16.7	-1.0
CACV				eS	Sb	07 57 05.6	-0.9
SJCC	San Jacinto, C	5.16	272	P	Pn	07 56 25.3	+0.5
SJCC				S	Sn	07 57 27.1	+2.1

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*NEIC **22** 07:58:10.2±1.1, 19°.39N±0°.07×68°.65W±0°.03, h5km±5km, ML2.7/22, Md3.4/11(RSPR), Error ellipse: s-maj=10.3km s-min=4.0km az=169.0*

*RSPR **22** 07:58:12.9, 19°.67N×68°.57W, h10km±4km, MD3.4/11*

*SDD **22** 07:58:14.9±1.8, 19°.05N×68°.62W, h23km±19km, MD2.9, ML2.8, MW3.1, Presumed earthquake*

ISC 22 07:58:14.3±1.5, 19°.10N±0°.06×68°.68W±0°.03, h16km±10km, n48, σ1ˢ03/62, 4C-11D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIDR	Miches	0.37	252	⇓ePg	Pg	07 58 22.5	+0.6
MIDR				⇑eSg	Sb	07 58 29.2	+1.2
MIDR				IAML		07 58 30.2	
	comp=N,206nm,0.2s						
HIDR	Higuey Centro	0.50	184	ePg	Pb	07 58 25.2	+0.5
HIDR				eSg	Sg	07 58 30.2	-0.9
HIDR				IAML		07 58 31.1	
	comp=N,222nm,0.3s						
HIDR				IAML		07 58 31.6	
	comp=N,760nm,0.2s						
SMDR	Samana, DR	0.52	292	⇓eP	Pb	07 58 25.7	+0.6
SMDR	Samana, DR	0.52	292	eS	Sn	07 58 35.2	-0.4
SMDR	Samana, DR	0.52	292	ePg	Pb	07 58 25.2	+0.2
SMDR				eSg	Sn	07 58 35.1	-0.5
SMDR				IAML		07 58 48.0	
	comp=N,143nm,0.8s						
PCDR	Punta Cana, DR	0.64	154	ePg	Pb	07 58 25.2	-1.9
PCDR				eSg	Sb	07 58 34.4	-1.5
PCDR				IAML		07 58 55.7	
	comp=N,190nm,2.2s						
DR12	Loma Pena Alta	0.73	245	Pg	Pb	07 58 28.0	-0.7
DR12				Sg	Sb	07 58 38.7	+0.2
HATOM	Hato Mayor del	0.73	245	ePg	Pb	07 58 28.1	-0.7
HATOM				eSg	Sb	07 58 39.0	+0.4
HATOM				IAML		07 58 39.4	
	comp=N,45nm,0.5s						
HATOM				IAML		07 58 39.5	
	comp=N,538nm,0.3s						
DR08	Loma La Naviza	1.28	264	ePg	Pn	07 58 37.6	0.0
DR08				eSg	Sb	07 58 55.2	+0.9
DR08				IAML		07 59 01.7	
	comp=E,796nm,0.2s						
DR08				IAML		07 59 02.8	
	comp=N,752nm,0.1s						
DR08				IAML		07 59 03.4	
	comp=N,2µm,0.2s						
AGPR	Aguadilla, PR	1.61	113	Pn	Pn	07 58 40.5	-1.6
AGPR				Sn	Sn	07 59 03.2	+0.6
AGPR				IAML		07 59 07.7	
	comp=N,84nm,0.5s						
AGPR				IAML		07 59 08.8	
	comp=N,96nm,1.4s						
AGPR	Aguadilla, PR	1.61	113	⇓eP	Pn	07 58 41.6	-0.5
AGPR	Aguadilla, PR	1.61	113	eS	Sb	07 59 03.8	0.0
PRSN	Puerto Rico Se	1.70	121		Pn	07 58 43.2	-0.1
PRSN					Sb	07 59 07.9	+1.7
PRSN	Puerto Rico Se	1.70	121	Pn	Pn	07 58 43.0	-0.3
PRSN				Sn	Sb	07 59 07.7	+1.4
PRSN				IAML		07 59 09.4	
	comp=N,132nm,0.3s						
PRSN				IAML		07 59 09.0	
	comp=N,196nm,0.2s						
PRSN	Puerto Rico Se	1.70	121	⇓eP	Pn	07 58 43.2	-0.1
PRSN	Puerto Rico Se	1.70	121	eS	Sb	07 59 07.9	+1.7
LSP	Las Mesas	1.77	121		Pn	07 58 43.7	-0.6
LSP					Sb	07 59 09.6	+1.3
LSP	Las Mesas	1.77	121	⇓eP	Pn	07 58 43.7	-0.6
LSP	Las Mesas	1.77	121	eS	Sb	07 59 09.6	+1.3
CRPR	Cabo Rojo, PR	1.84	126		Pn	07 58 44.2	-1.0
CRPR					Sb	07 59 09.8	-0.6
CRPR	Cabo Rojo, PR	1.84	126	⇑eP	Pn	07 58 45.6	+0.4
CRPR	Cabo Rojo, PR	1.84	126	eS	Sb	07 59 11.8	+1.4
MLPR	Magueyes Islan	1.91	126	⇓eP	Pn	07 58 46.4	+0.1
MLPR	Magueyes Islan	1.91	126	eS	Sb	07 59 13.5	+1.0
AOPR	Arecibo Observ	1.97	112		Pn	07 58 45.8	-1.3
AOPR					Sn	07 59 11.4	-0.1
AOPR				IAML		07 59 18.1	
	comp=N,71nm,0.3s						
AOPR	Arecibo Observ	1.97	112	⇓eP	Pn	07 58 46.5	-0.5
AOPR	Arecibo Observ	1.97	112	eS	Sn	07 59 12.2	+0.7
UUPR	Utuado, UPR, P	2.04	114		Pn	07 58 47.8	-0.2
UUPR					Sn	07 59 14.4	+1.3
UUPR	Utuado, UPR, P	2.04	114	Pn	Pn	07 58 46.8	-1.2
UUPR				IAML		07 59 16.2	
	comp=N,568nm,0.4s						
UUPR				IAML		07 59 19.3	
	comp=N,592nm,0.3s						
UUPR	Utuado, UPR, P	2.04	114	⇓eP	Pn	07 58 47.8	-0.2
UUPR	Utuado, UPR, P	2.04	114	eS	Sn	07 59 14.4	+1.3
OBIP	Obispado Ponce	2.23	118		Pn	07 58 49.6	-0.9
OBIP				IAML		07 59 24.8	
	comp=N,24nm,1.1s						
OBIP	Obispado Ponce	2.23	118	⇓eP	Pn	07 58 50.8	+0.2
OBIP	Obispado Ponce	2.23	118	eS	Sn	07 59 19.6	+1.8
CELP	Cerrillos	2.23	117	Pn	Pn	07 58 49.9	-0.8
CELP				IAML		07 59 25.4	
	comp=N,47nm,0.7s						
CELP				IAML		07 59 25.9	
	comp=N,35nm,0.4s						
ECPR	Experimental S	2.33	109	Pn	Pn	07 58 50.1	-1.9
ECPR				IAML		07 59 24.4	
	comp=N,53nm,0.2s						
ECPR	Experimental S	2.33	109	⇓eP	Pn	07 58 51.3	-0.6
ECPR	Experimental S	2.33	109	eS	Sn	07 59 19.3	-0.9
GCPR	Guaynabo City	2.58	107		Pn	07 58 53.8	-1.7
GCPR					Sn	07 59 25.7	-0.8
GCPR				IAML		08 00 31.2	
	comp=N,16nm,1.5s						
GCPR	Guaynabo City	2.58	107	⇑eP	Pn	07 58 54.0	-1.4
GCPR	Guaynabo City	2.58	107	eS	Sn	07 59 25.4	-1.1
SJG	San Juan	2.59	112		Pn	07 58 54.0	-1.6
SJG				IAML		07 59 32.4	
	comp=N,19nm,1.1s						
SJG				IAML		07 59 33.6	
	comp=N,22nm,0.2s						
SJG	San Juan	2.59	112	⇑eP	Pn	07 58 55.0	-0.6
SJG	San Juan	2.59	112	eS	Sn	07 59 27.1	+0.4
HUMP	Col San Antoni	2.84	109		Pn	07 58 57.2	-1.9
HUMP					Sn	07 59 32.4	-0.7
HUMP	Col San Antoni	2.84	109	IAML		07 59 40.4	
	comp=N,15nm,1.0s						
HUMP	Col San Antoni	2.84	109	⇓eP	Pn	07 58 57.5	-1.5
HUMP	Col San Antoni	2.84	109	eS	Sn	07 59 33.4	+0.4

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*CATAC **22** 08:37:24.8±0.4, 10°N±2°×8°4W±°, h25km±3km, M4.0/16, MLv4.0/16, Error ellipse: s-maj=6.7km s-min=2.8km az=45.4, confirmed*

*UCR **22** 08:37:24.6±1.1, 9°.62N×84°.04W, h58km±2km, MW3.8*

ISC 22 08:37:26.2±1.2, 9°.62N±0°.03×84°.03W±0°.03, h47km±5km, n141, σ1ˢ07/168, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAZU	San Marcos de	0.04	11	eP	Pn	08 37 33.1	-0.7
RAZU				eS	Sn	08 37 39.9	+0.9
PITB	Pirrs, San	0.05	10	eP	Pn	08 37 33.1	-0.7
PITB				eS	Sn	08 37 39.8	+0.8
PIEC	Cerro El Cedra	0.07	84	eP	Pn	08 37 33.2	-0.6
PIEC				eS	Sn	08 37 40.0	+0.7
PICV	PH. Pirrs	0.16	274	eP	Pn	08 37 33.2	-0.8
ACOS	Acosta	0.22	324	eP	Pn	08 37 33.6	-0.9
SVQ2	Quepos	0.23	216	eP	Pn	08 37 33.7	-0.7
SVQ2				eS	Sn	08 37 40.8	+0.7
REPA	Paraso	0.27	37	eP	Pn	08 37 34.2	-0.7
REPA				eS	Sn	08 37 41.7	+0.6
TAGO	Cartago	0.27	23	eP	Pn	08 37 34.3	-0.7
TAGO				eS	Sn	08 37 41.9	+0.7
AMPA	Desamparados	0.28	354	eP	Pn	08 37 34.0	-1.0
AMPA				eS	Sn	08 37 41.6	+0.3
BUS1	Rivas	0.29	102	eP	Pn	08 37 34.6	-0.9
BUS1				eS	Sn	08 37 42.4	+0.5
TRIO	Tres Rios	0.29	7	eP	Pn	08 37 34.2	-0.9
TRIO				eS	Sn	08 37 42.0	+0.5
LUJA	Lujan	0.31	353	eP	Pn	08 37 34.5	-0.8
CENT	San Jose	0.32	351	eP	Pn	08 37 35.5	+0.1
SJS3	Mercedes San J	0.32	356	eP	Pn	08 37 34.7	-0.7
SJS	Escuela Geolog	0.32	356	eP	Pn	08 37 34.6	-0.8
MEXI	Barrio Mexico	0.33	351	eP	Pn	08 37 34.0	-1.5
SANTA	Santa Ana	0.35	334	eP	Pn	08 37 34.7	-1.0
SANTA				eS	Sn	08 37 42.5	+0.1
CORON	Coronado	0.36	5	eP	Pn	08 37 35.3	-0.5
PCAYA	Pacayas	0.37	36	eP	Pn	08 37 35.1	-0.9
PCAYA				eS	Sn	08 37 43.3	+0.3
BELE	Belen	0.39	337	eP	Pn	08 37 35.1	-0.9
HDC	Heredia	0.39	348	eP	Pn	08 37 35.0	-1.2
HDC				eS	Sn	08 37 43.8	+0.6
HEME	Heredia, Merce	0.39	345	eP	Pn	08 37 36.5	+0.3
HEME				eS	Sn	08 37 44.9	+1.8
VINA	Juan Vinas	0.40	45	eP	Pn	08 37 35.3	-0.9
VINA				eS	Sn	08 37 43.8	+0.6
RAFA	San Farael, Vo	0.40	33	eP	Pn	08 37 35.5	-1.0
VICA	Volcano Irazu	0.41	27	eP	Pn	08 37 35.8	-0.9
CVIMO	Finca Echandi	0.42	12	eP	Pn	08 37 35.8	-0.7
CVIMO				eS	Sn	08 37 44.7	+1.0
TURIB	Turrialba	0.45	50	eP	Pn	08 37 35.5	-1.2
CVTQ	Turrialba Volc	0.47	34	eP	Pn	08 37 36.4	-0.8
VERB	Verbena	0.47	45	eP	Pn	08 37 36.1	-0.9
VTCV	VTCV, Calle Va	0.47	39	eP	Pn	08 37 36.3	-0.9
CVTV	Tajo	0.48	36	eP	Pn	08 37 36.5	-0.8
VTR0	Volcan Turrial	0.48	34	eP	Pn	08 37 36.5	-0.9
VTUN	Crater Central	0.48	33	eP	Pn	08 37 36.5	-0.9
CVTR	Volcan Turrial	0.48	34	eP	Pn	08 37 36.5	-1.0
ABRB	Las Abras (San	0.50	39	eP	Pn	08 37 36.7	-0.8
ATEO	Atenas	0.50	316	eP	Pn	08 37 36.1	-1.2
TCS1	Tacares	0.50	328	P	Pn	08 37 36.7	-0.7
TCS1	Tacares	0.50	328	eP	Pn	08 37 36.6	-0.7
POAS	San Pedro de P	0.50	336	eP	Pn	08 37 36.8	-0.7
GREC	Grecia	0.53	329	eP	Pn	08 37 37.1	-0.7
SARCI	Sarchi	0.56	327	eP	Pn	08 37 37.6	-0.6
SARCI				eS	Sn	08 37 48.0	+1.3
OROT	Orotina	0.57	301	eP	Pn	08 37 36.8	-1.4
SAJE	San Jernim	0.58	117	eP	Pn	08 37 37.2	-1.3
NARAN	Naranjo de Ala	0.59	325	eP	Pn	08 37 37.8	-0.7
PALD	Palmares	0.59	318	eP	Pn	08 37 37.2	-1.4
VPS8	V Poas	0.60	340	eP	Pn	08 37 38.1	-0.7
RAMO	San Ramon	0.64	318	eP	Pn	08 37 38.0	-1.1
RAMO				eS	Sn	08 37 48.6	+0.2
OCHAL	Ojochal	0.64	143	P	Pn	08 37 38.1	-0.9
OCHAL	Ojochal	0.64	143	S	Sn	08 37 49.3	+1.0
EDPE	Pejibaye, P	0.64	135	eP	Pn	08 37 38.3	-0.8
PILE	Guapiles	0.64	22	eP	Pn	08 37 38.4	-0.7
PILE				eS	Sn	08 37 48.7	+0.3
RVLA	Villa Bonita	0.66	42	eP	Pn	08 37 38.6	-0.6
LCOCO	El Coco	0.66	45	eP	Pn	08 37 38.5	-0.8
ZARE	Zarcero	0.67	328	eP	Pn	08 37 38.8	-0.8
IRES	Siquirres	0.70	47	eP	Pn	08 37 39.1	-0.8
ARZA	Esparza	0.73	301	eP	Pn	08 37 39.0	-1.2
EGUB	Earth Gu¡pi	0.74	36	eP	Pn	08 37 39.7	-0.6
EGUB				eS	Sn	08 37 51.3	+0.8
ARTO	Ro Cuarto	0.75	346	eP	Pn	08 37 39.5	-1.0
VPL2	V. Platanar	0.77	333	eP	Pn	08 37 40.0	-0.9
CARI	Cariari	0.80	21	eP	Pn	08 37 40.3	-0.8
QUEU	Ciudad Quesada	0.81	331	eP	Pn	08 37 41.0	-0.4
BURE	Buenos Aires	0.81	123	eP	Pn	08 37 40.2	-1.2
BURE				eS	Sn	08 37 52.4	0.0
TAAN	Batan	0.82	55	eP	Pn	08 37 40.7	-0.7
TAAN				eS	Sn	08 37 54.0	+1.5
SARA	Sarapiqu	0.83	1	eP	Pn	08 37 40.5	-1.1
SARA				eS	Sn	08 37 53.0	+0.2
DRK0	Durika	0.85	114	P	Pn	08 37 40.5	-1.6
DRK0	Durika	0.85	114	S	Sn	08 37 53.1	-0.5
DRK0	Durika	0.85	114	eP	Pn	08 37 40.2	-1.9
DRK0				eS	Sn	08 37 52.9	-0.7
PANP	Palmar Norte	0.86	139	eP	Pn	08 37 40.6	-1.4
ITAL	Pital	0.86	344	eP	Pn	08 37 41.2	-0.8
ITAL				eS	Sn	08 37 54.1	+0.5
PAQE	Paquera	0.91	283	eP	Pn	08 37 41.8	-0.9
FIMO	Fila Mora	0.91	133	eP	Pn	08 37 42.1	-0.7
SOCE	Pocosol	0.96	323	P	Pn	08 37 42.7	-0.6
SOCE	Pocosol	0.96	323	S	Sn	08 37 57.8	+1.9
SOCE	Pocosol	0.96	323	eP	Pn	08 37 42.6	-0.7
TRT2	Tortugero	0.98	17	eP	Pn	08 37 42.3	-1.3
EDP2	Potrero Grande	1.03	125	eP	Pn	08 37 43.7	-0.6
FORC	Fortuna	1.05	323	eP	Pn	08 37 44.0	-0.6
VACR	Volcan Arenal	1.06	323	eP	Pn	08 37 44.1	-0.7
CASO	Castillo	1.07	320	eP	Pn	08 37 44.2	-0.7
ARE1	Arenal 1	1.08	321	eP	Pn	08 37 44.6	-0.4
VARE2	V. Arenal	1.08	321	eP	Pn	08 37 44.6	-0.5
CEDE	Laguna Cedeo	1.09	323	eP	Pn	08 37 44.7	-0.4
REZ	Monterrey de S	1.12	324	eP	Pn	08 37 45.1	-0.4
JTS	Las Juntas de	1.13	307	P	Pn	08 37 44.8	-0.8
JTS				S	Sn	08 38 00.3	+0.3
JTS	Las Juntas de	1.13	307	eP	Pn	08 37 44.6	-1.0
JUNT	Juntas	1.13	306	eP	Pn	08 37 44.3	-1.3
TABAC	Tabacon	1.14	321	eP	Pn	08 37 45.4	-0.5
COVE	Coope Vega, Sa	1.16	342	P	Pn	08 37 44.6	-1.4
COVE	Coope Vega, Sa	1.16	342	S	Sn	08 38 03.7	+3.0
TILA	Tilaran	1.25	313	eP	Pn	08 37 46.7	-0.7
PTJ1	Puerto Jimnez	1.29	146	P	Pn	08 37 47.9	0.0
PTJ1	Puerto Jimnez	1.29	146	S	Sn	08 38 07.8	+3.9
FITO	Golfito	1.31	139	eP	Pn	08 37 45.8	-2.3
QUEB	Quebradon, Cot	1.31	320	eP	Pn	08 37 47.5	-0.7
CNAS	Canas	1.32	308	eP	Pn	08 37 47.7	-0.6
INVE	Universidad In	1.33	310	eP	Pn	08 37 47.7	-0.7
ALCO	Alturas Coton,	1.35	119	eP	Pn	08 37 47.4	-1.5
TIMP	Tierras Morena	1.37	315	eP	Pn	08 37 48.1	-0.8
PIRO	Carate, Puerto	1.39	150	P	Pn	08 37 49.1	-0.1
PIRO	Carate, Puerto	1.39	150	S	Sn	08 38 09.4	+3.2
PIRO	Carate, Puerto	1.39	150	eP	Pn	08 37 47.8	-1.3
TENO	El Achiote	1.43	319	eP	Pn	08 37 49.0	-0.8
CMARA	Lajas Hojancha	1.43	286	P	Pn	08 37 47.9	-1.8
CMARA	Lajas Hojancha	1.43	286	S	Sn	08 38 07.0	-0.5
CMARA	Lajas Hojancha	1.43	286	eP	Pn	08 37 47.7	-2.1
MOTZ	Rio Naranjo	1.48	316	eP	Pn	08 37 49.0	-1.4
PLVR	Palo Verde	1.49	299	eP	Pn	08 37 49.0	-1.7
ELVJ	El Viejo (Barb	1.52	303	eP	Pn	08 37 50.5	-0.4
CUI	Cuipilapa	1.52	313	eP	Pn	08 37 50.2	-0.9
DMCAL	E. de Neily	1.54	127	eP	Pn	08 37 49.5	-1.8
CDITO	Canoas	1.54	132	P	Pn	08 37 51.1	-0.2
CDITO	Canoas	1.54	132	S	Sn	08 38 11.3	+1.2
BRU2	Volcan	1.56	122	P	Pn	08 37 50.5	-1.1
BRU2	Volcan	1.56	122	S	Sn	08 38 10.8	+0.1
BRU2	Volcan	1.56	122	eP	Pn	08 37 50.3	-1.3
COLC	Colonia	1.56	312	eP	Pn	08 37 50.6	-0.9
HORNC	Hornillas	1.57	314	eP	Pn	08 37 50.7	-1.0
JUD3	Juan Diaz 3	1.58	290	eP	Pn	08 37 50.0	-1.9
VMAR	Armenia, Volca	1.60	318	eP	Pn	08 37 51.5	-0.5
MESS	Mesas	1.60	314	eP	Pn	08 37 51.1	-1.0
GPS2	Hotel Rincn d	1.72	311	eP	Pn	08 37 52.6	-1.2
JEFFS	S de V. Baru	1.75	122	eP	Pn	08 37 52.8	-1.4
VRLE	La Escondida,	1.76	312	eP	Pn	08 37 53.0	-1.2
BQTLY	Boquete Panama	1.77	119	eP	Pn	08 37 53.3	-1.2
ALIBA	Liberia Airpor	1.78	303	eP	Pn	08 37 54.0	-0.6
BUAI	Buenos Aires	1.79	315	eP	Pn	08 37 53.6	-1.1
LAPC	Finca la Perla	1.79	310	eP	Pn	08 37 53.3	-1.4
PTPA	Petro Terminal	1.81	141	eP	Pn	08 37 55.4	+0.4
LMNES	Limones	1.90	142	eP	Pn	08 37 55.7	-0.4
PBNVO	Pueblo Nuevo,	1.95	111	eP	Pn	08 37 56.1	-0.8
RBALA	Bur	1.99	111	eP	Pn	08 37 56.7	-0.8
LCRUZ	La Cruz	2.14	313	eP	Pn	08 37 58.3	-1.2
BOAB	BOACO BROADBAN	3.24	330	P	Pn	08 38 13.4	-1.2
BOAB	BOACO BROADBAN	3.24	330	S	Sn	08 38 52.1	+0.2
MATN	Matagalpa	3.78	331	P	Pn	08 38 20.4	-1.7
LIMN	Finca el Limon	4.12	326	P	Pn	08 38 26.0	-0.7
LIMN				S	Sn	08 39 14.7	+0.9
RCON	San Juan de Ri	4.37	332	P	Pn	08 38 30.2	0.0
RCPN	Sur Rio San Ju	4.38	333	P	Pn	08 38 30.2	-0.1
RCVN	Varillal2	4.48	332	P	Pn	08 38 31.6	-0.1
RCVN	Varillal2	4.48	332	S	Sn	08 39 24.0	+1.4
OCON	Estacion meteo	4.66	329	P	Pn	08 38 33.9	-0.1
OCON				S	Sn	08 39 28.6	+1.7

IDC 22 08:44:57.5±2.2, 7°.71S×127°.39E, h0km, mb3.5/1, mbtmp3.3/3, ML3.1/2, Error ellipse: s-maj=190.4km s-min=34.0km az=63.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.90	152	Pn	Pn	08 48 14.5	-1.6
	0.1nm,0.3s,baz=325,slow=13,SNR=2.7						
WRA				Sn	Sn	08 50 42.0	-9.3
	baz=335,slow=21,SNR=1.9						
	0.6nm,0.8s						
ASAR	Alice Springs	17.06	159	P	P	08 48 58.8	-0.7
	0.1nm,0.3s,baz=336,slow=11,SNR=7.6						
	0.2nm,0.6s						
MKAR	Makanchi Array	67.42	328	P	P	08 55 55.0	0.0
	0.4nm,0.6s,baz=139,slow=7.7,SNR=3.0						
	0.4nm,0.6s						

IDC 22 08:46:41.2±1.3, 19°.83N×121°.39E, h0km, mb3.3/4, mbtmp3.4/5, ML3.7/1, MS2.5/1, Error ellipse: s-maj=71.0km s-min=22.5km az=73.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**18.46**	**17**	P	P	08 50 59.7	+1.2
	0.2nm,0.3s,baz=198,slow=10,SNR=7.5						
KSRS				LR	LR	08 58 45.5	
	comp=Z,13nm,19.9s,baz=320,slow=39						
	1.1nm,0.5s						
SONM	**Songino Array**	**30.47**	**340**	P	P	08 52 55.2	-0.7
	0.3nm,0.5s,baz=151,slow=8.8,SNR=1.7						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**41.52**	**161**	P	P	08 54 30.0	-0.5
	0.4nm,0.6s,baz=355,slow=7.9,SNR=2.4						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**41.67**	**319**	P	P	08 54 31.2	-0.3
	0.2nm,0.6s,baz=111,slow=8.0,SNR=1.9						
	0.2nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**42.72**	**82**	T	T	09 40 33.8	
	baz=277						
H11N2	**WAKE ISLAND Hy**	**42.72**	**82**	T	T	09 40 32.3	
	baz=277						
H11N3	**WAKE ISLAND Hy**	**42.73**	**82**	T	T	09 40 34.6	
	baz=277						
ASAR	**Alice Springs**	**44.92**	**164**	P	P	08 54 58.3	+0.2
	0.2nm,0.7s,baz=342,slow=7.7,SNR=5.5						
	0.2nm,0.7s						

IDC 22 08:59:36.4±8.2**, 5°.99S**×**154°.57E, h214**^{km}±63^{km}**, mb3.2**/4**, mbtmp3.8**/5**, Error ellipse: s-maj=64.3km s-min=38.9km az=89.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.09**	**245**	P	Pn	09 01 29.9	-1.0
	6.7nm,0.4s,baz=49,slow=20,SNR=2.7						
PMG				S	S	09 03 04.9	+2.5
	3.4nm,0.4s,baz=8.9,slow=16,SNR=2.0						
WRA	**Warramunga Arr**	**24.06**	**233**	P	P	09 04 32.5	+0.1
	1.4nm,0.6s,baz=58,slow=10.0,SNR=17						
	1.4nm,0.6s						
ASAR	**Alice Springs**	**26.54**	**226**	P	P	09 04 54.4	-0.3
	0.6nm,0.5s,baz=56,slow=9.3,SNR=21						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**82.38**	**319**	P	P	09 11 34.9	+0.4
	0.3nm,0.6s,baz=95,slow=5.9,SNR=2.8						
	0.3nm,0.6s						
QSPA	**South Pole Qui**	**83.98**	**180**	P	P	09 11 42.6	+0.1
	0.4nm,0.5s,baz=0.0,slow=2.0,SNR=6.1						
	0.4nm,0.5s						

IDC ***22*** *09:11:48.5±0.8, 17°.37S×174°.20W, h0*^{km}*, mb4.0/8, mbtmp4.0/8, Error ellipse: s-maj=36.2km s-min=20.5km az=129.0*

NEIC ***22*** *09:11:59.6±1.1, 17°.45S±0°.09×174°.16W±0°.03, h85*^{km}*±8*^{km}*, mb4.4/17, Error ellipse: s-maj=13.9km s-min=2.5km az=162.0*

ISC 22 09:12:01.3±0.6**, 17°.59S**±0°.08×**174°.2W**±0°.1**, h108**^{km}**, n53, σ2**^{s}**.21**/53**, mb4.0**/17**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.27**	**111**		**Pn**	**09 13 03.1**	**-1.1**
NIUE	**Niue**	**4.27**	**111**	P	**Pn**	**09 13 03.0**	**-1.2**
NIUE				S	Sn	09 13 46.4	-6.7
AFI	**Afiamalu**	**4.31**	**32**		**Pn**	**09 13 01.4**	**-3.5**
MSVF	**Nonsavu**	**7.44**	**268**	Pn	Pn	09 13 53.6	+6.3
WCZ	**Waipu Caves**	**20.94**	**207**	P	**P**	**09 16 37.3**	**+1.9**
KUZ	**Kuaotunu**	**21.08**	**203**	P	**P**	**09 16 39.3**	**+2.5**
WMGZ	**Waiomatatini S**	**21.19**	**196**	P	**P**	**09 16 40.7**	**+2.7**
HAZ	**Te Kaha**	**21.31**	**198**	P	**P**	**09 16 41.6**	**+2.3**
HAZ				S	**S**	**09 20 24.7**	**-5.1**
PKGZ	**Pakihiroa**	**21.32**	**197**	P	**P**	**09 16 43.2**	**+3.7**
WIAZ	**Waiheke Island**	**21.34**	**204**	P	**P**	**09 16 42.2**	**+2.4**
RUGZ	**Raukumara Rang**	**21.53**	**198**	P	**P**	**09 16 43.5**	**+1.6**
CNGZ	**Carnagh Statio**	**21.87**	**196**	P	**P**	**09 16 48.5**	**+3.3**
MWZ	**Matawai**	**21.92**	**198**	P	**P**	**09 16 48.8**	**+3.0**
MWZ				S	**S**	**09 20 37.0**	**-4.3**
TKGZ	**Te Karaka**	**21.92**	**197**	P	**P**	**09 16 48.6**	**+2.7**
URZ	**Urewera**	**21.97**	**199**	P	**P**	**09 16 47.5**	**+1.2**
	14nm,0.5s,baz=72,slow=6.4,SNR=9.4						
URZ				S	**S**	**09 20 37.3**	**-4.9**
	7.5nm,1.0s,baz=3.8,slow=15,SNR=1.6						
	14nm,0.5s						
URZ	**Urewera**	**21.97**	**199**	P	**P**	**09 16 47.7**	**+1.3**
TOZ	**Tahuroa Road**	**22.03**	**202**	P	**P**	**09 16 48.0**	**+1.0**
TOZ				IAmb	IAmb	09 16 51.8	
	comp=Z,16nm,0.9s						
TOZ	**Tahuroa Road**	**22.03**	**202**	P	**P**	**09 16 49.2**	**+2.2**
RAGZ	**Rawiri**	**22.10**	**198**	P	**P**	**09 16 49.2**	**+1.4**
RIGZ	**Rimuhau**	**22.20**	**197**	P	**P**	**09 16 50.9**	**+2.1**
RIGZ				S	**S**	**09 20 40.0**	**-6.1**
RTZ	**Ruatahuna**	**22.34**	**199**	P	**P**	**09 16 50.7**	**+0.4**
RTZ				IAmb	IAmb	09 16 53.3	
	comp=Z,17nm,0.7s						
RTZ	**Ruatahuna**	**22.34**	**199**	P	**P**	**09 16 51.9**	**+1.6**
SNGZ	**Shannon Statio**	**22.39**	**198**	P	**P**	**09 16 54.1**	**+3.4**
ALRZ	**Allen Road**	**22.49**	**200**	P	**P**	**09 16 53.7**	**+1.9**
BBOO	**Buckleboo**	**47.12**	**241**	P	**P**	**09 20 23.1**	**+0.3**
BBOO				IAmb	IAmb	09 20 57.3	
	comp=Z,6.9nm,1.0s						
WR8	**Warramunga Arr**	**48.53**	**259**	P	**P**	**09 20 33.1**	**-0.7**
WRA	**Warramunga Arr**	**48.68**	**259**	P	**P**	**09 20 34.4**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=98,slow=7.3,SNR=18						
	comp=Z,0.4nm,0.4s						
WRA	**Warramunga Arr**	**48.68**	**259**	P	**P**	**09 20 34.0**	**-0.9**
AS31	**Alice Springs**	**48.78**	**254**	P	**P**	**09 20 35.6**	**-0.2**
AS31				IAmb	IAmb	09 20 41.3	
	comp=Z,2.0nm,1.1s						
ASAR	**Alice Springs**	**48.78**	**254**	P	**P**	**09 20 35.5**	**-0.2**
	comp=Z,3.8nm,0.6s,baz=90,slow=8.3,SNR=103						
	comp=Z,3.8nm,0.6s						
ASAR	**Alice Springs**	**48.78**	**254**	P	**P**	**09 20 35.0**	**-0.8**
KNRA	**Kununurra**	**54.56**	**263**	P	**P**	**09 21 20.8**	**+2.0**
KNRA				IAmb	IAmb	09 21 34.6	
	comp=Z,5.8nm,1.1s						
ADK	**Adak**	**69.21**	**358**	P	**P**	**09 22 57.4**	**+1.3**
QSPA	**South Pole Qui**	**72.47**	**180**	P	**P**	**09 23 17.4**	**+1.4**
	comp=Z,1.3nm,0.7s,baz=139,slow=1.4,SNR=9.2						
	comp=Z,1.3nm,0.7s						
QSPA	**South Pole Qui**	**72.47**	**180**	P	**P**	**09 23 16.9**	**+0.9**
N18K	**Kilae Creek**	**79.38**	**9**	P	**P**	**09 23 56.1**	**+1.2**
N18K				IAmb	IAmb	09 24 06.6	
	comp=Z,6.4nm,1.0s						
K15K	**Wolf Creek Mou**	**80.24**	**6**	P	**P**	**09 23 58.6**	**-0.9**
K15K				IAmb	IAmb	09 24 15.0	
	comp=Z,9.9nm,1.1s						
L18K	**Granite Mounta**	**80.74**	**8**	P	**P**	**09 24 02.2**	**0.0**
STLK	**Strandline Lak**	**80.81**	**11**	P	**P**	**09 24 01.9**	**-0.8**
STLK				IAmb	IAmb	09 24 09.5	
	comp=Z,2.6nm,1.0s						
SUA	**Susitna One**	**80.97**	**11**	P	**P**	**09 24 04.0**	**+0.4**
J16K	**Anvik River**	**81.30**	**6**	P	**P**	**09 24 06.2**	**+1.0**
J16K				IAmb	IAmb	09 24 22.0	
	comp=Z,3.1nm,1.1s						
GHO	**Glory Hole Cre**	**81.60**	**12**	P	**P**	**09 24 06.9**	**+0.1**
CUT	**Chulitna**	**81.93**	**11**	P	**P**	**09 24 08.1**	**-0.3**
TXAR	**Lajitas Array**	**82.42**	**56**	P	**P**	**09 24 12.1**	**+0.1**
	comp=Z,0.2nm,0.8s,baz=265,slow=6.7,SNR=2.7						
	comp=Z,0.2nm,0.8s						
PDAR	**Pinedale Array**	**84.36**	**42**	P	**P**	**09 24 22.4**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=196,slow=2.6,SNR=9.7						
	comp=Z,0.7nm,0.7s						
PDAR	**Pinedale Array**	**84.36**	**42**	P	**P**	**09 24 21.9**	**+0.1**
H03S2	**Juan Fernandez**	**84.59**	**124**	T	T	10 57 37.9	
	baz=249,slow=75,SNR=9.4						
H03S1	**Juan Fernandez**	**84.61**	**124**	T	T	10 57 38.1	
	baz=249,slow=75,SNR=8.2						
H03S3	**Juan Fernandez**	**84.61**	**124**	T	T	10 57 36.5	
	baz=249,slow=75,SNR=7.2						
ILAR	**Eielson Array**	**84.72**	**11**	P	**P**	**09 24 22.8**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=229,slow=5.7,SNR=16						
	comp=Z,0.7nm,0.6s						
YKA	**Yellowknife Ar**	**92.38**	**24**	P	**P**	**09 25 00.5**	**+1.3**
	comp=Z,0.3nm,0.9s,baz=221,slow=5.3,SNR=3.8						
	comp=Z,0.3nm,0.9s						
FINES	**FINESS Array B**	**133.91**	**347**	PKP	**PKiKP**	**09 31 06.8**	**+0.2**
	comp=Z,2.3nm,1.1s,baz=289,slow=5.8,SNR=1.4						
GERES	**GERESS Array B**	**148.18**	**350**	PKPbc	**PKiKP**	**09 31 35.6**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=38,slow=2.4,SNR=3.8						

IDC 22 09:25:22.2±2.1**, 0°.58S**×**127°.30E, h0**^{km}**, mb3.3**/4**, mbtmp3.3**/4**, 1C, Error ellipse: s-maj=208.8km s-min=23.9km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.44**	**161**	P	P	09 29 59.7	-1.7
	0.2nm,0.7s,baz=338,slow=9.8,SNR=1.6						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**23.83**	**165**	P	P	09 30 37.9	+0.7
	1.5nm,0.9s,baz=345,slow=7.6,SNR=13						
	1.5nm,0.9s						
MK31	**Makanchi Array**	**61.41**	**326**	⇑Pg	P	09 35 47.0	+6.6
	0.4nm,0.6s,baz=147,slow=17,SNR=4.7						
MK31				Lg	Lg	09 36 19.8	
	0.2nm,0.2s,baz=144,slow=29,SNR=11						
MKAR	**Makanchi Array**	**61.41**	**326**	P	P	09 35 41.3	+1.0
	0.3nm,0.6s,baz=123,slow=8.4,SNR=2.3						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**65.66**	**328**	P	P	09 36 07.5	-0.8
	0.3nm,0.6s,baz=124,slow=6.4,SNR=2.9						
	0.3nm,0.6s						

IDC ***22*** *09:46:03.8±3.6, 36°.00N×70°.98E, h0*^{km}*, mb3.6/6, mbtmp3.6/11, ML3.5/5, MS3.7/1, Error ellipse: s-maj=61.8km s-min=28.4km az=155.0*

NNC ***22*** *09:46:19.1±3.2, 37°.15N×70°.46E, h0*^{km}*, mb4.1, mpv3.9, Error ellipse: s-maj=24.3km s-min=20.4km az=157.0*

ISC 22 09:46:12.9±2.0**, 36°.8N**±0°.1×**70°.4E**±0°.1**, h10**^{km}**, n22, σ2**^{s}**.63**/23**, mb3.5**/5**, 2C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**6.32**	**29**	P	**Pn**	**09 47 49.0**	**+2.4**
	SNR=12						
KK31	**Karatay Array**	**6.33**	**1**	⇓Pn	**Pn**	**09 47 50.0**	**+3.6**
	4.5nm,0.3s,baz=177,slow=12,SNR=85						
KK31				⇑Pg	Pg	09 48 08.0	-6.2
	4.3nm,0.4s,baz=168,slow=18,SNR=3.6						
KK31				⇓Sn	**Sn**	**09 48 58.0**	**-0.7**
	8.7nm,0.5s						
KK31				⇓Lg	Lg	09 49 29.7	
	7.2nm,0.4s,baz=182,slow=27,SNR=4.5						
EKS2	**Erkin-Say**	**6.44**	**23**	P	**Pn**	**09 47 51.1**	**+3.1**
	SNR=37						
AAK	**Ala-Archa**	**6.66**	**27**	P	**Pn**	**09 47 53.9**	**+2.9**
	SNR=15						
AAK	**Ala-Archa**	**6.66**	**27**	Pn	**Pn**	**09 47 53.7**	**+2.6**
	4.9nm,0.3s,baz=187,slow=5.8,SNR=46						
AAK				Sn	**Sn**	**09 49 07.5**	**+0.4**
	1.6nm,0.3s,baz=180,slow=20,SNR=5.6						
	13nm,0.4s						
AAK	**Ala-Archa**	**6.66**	**27**	⇓Pn	**Pn**	**09 47 53.1**	**+2.1**
	3.0nm,0.4s						
AAK				⇓Sn	**Sn**	**09 49 06.6**	**-0.5**
	4.8nm,0.6s						
AAK				⇑Lg	Lg	09 49 42.6	
	14nm,1.2s						
KBK	**Karagaybulak**	**6.85**	**29**	P	**Pn**	**09 47 56.4**	**+2.8**
	SNR=6.2						
CHMS	**Chumysh**	**7.07**	**27**	P	**Pn**	**09 47 58.9**	**+2.4**
	SNR=15						
USP	**Ospenovka**	**7.22**	**25**	P	**Pn**	**09 48 00.6**	**+2.1**
	SNR=10						
TKM2	**Tokmak 2**	**7.34**	**31**	P	**Pn**	**09 48 02.2**	**+1.8**
	SNR=5.7						
MKAR	**Makanchi Array**	**13.37**	**38**	Pn	**Pn**	**09 49 21.5**	**-1.3**
	0.1nm,0.3s,baz=224,slow=15,SNR=5.3						
	0.3nm,0.5s						
AB31	**Akbulak array**	**14.62**	**332**	⇓Pn	**Pn**	**09 49 40.5**	**+0.7**
	0.7nm,0.3s,baz=167,slow=11,SNR=60						
AB31				Sn	**Sn**	**09 52 23.9**	**+2.2**
	0.8nm,0.5s,baz=156,slow=22,SNR=4.0						
KURBB	**Kurchatov Arra**	**15.04**	**20**	Pn	Pn	09 49 41.1	-4.3
	0.1nm,0.3s,baz=208,slow=10,SNR=7.2						
	0.2nm,0.7s						
BVAR	**Borovoye Array**	**16.26**	**360**	Pn	**Pn**	**09 50 00.5**	**-0.8**
	0.1nm,0.3s,baz=163,slow=12,SNR=6.6						
	1.5nm,0.5s						
AKTO	**Aktyubinsk**	**16.31**	**331**	Pn	**Pn**	**09 50 03.3**	**+1.4**
	0.5nm,0.3s,baz=133,slow=10.0,SNR=7.4						
AKTO				Sn	**Sn**	**09 52 55.9**	**-7.0**
	0.2nm,0.3s,baz=237,slow=17,SNR=1.5						
	2.1nm,0.5s						
ZALV	**Zalesovo Beam**	**19.88**	**26**	P	**P**	**09 50 41.2**	**-3.0**
	1.1nm,0.3s,baz=210,slow=12,SNR=6.6						
	1.1nm,0.3s						
AKASG	**Malin Array Be**	**32.40**	**309**	LR	LR	10 08 30.9	
	comp=Z,128nm,18.6s,baz=286,slow=40						
FINES	**FINESS Array B**	**36.99**	**326**	P	**P**	**09 53 22.3**	**+0.1**
	1.2nm,0.9s,baz=132,slow=14,SNR=1.2						
	1.2nm,0.9s						
ARCES	**ARCESS Array B**	**40.72**	**338**	P	**P**	**09 53 53.0**	**-0.3**
	1.6nm,0.9s,baz=122,slow=8.3,SNR=4.1						
	1.6nm,0.9s						
HFS	**Hagfors**	**42.56**	**322**	P	**P**	**09 54 08.2**	**-0.4**
	0.5nm,0.5s,baz=108,slow=14,SNR=4.3						
	0.5nm,0.5s						
NOA	**NORSAR Array B**	**43.88**	**323**	P	P	09 54 18.3	-0.9
	0.3nm,0.6s,baz=74,slow=8.4,SNR=3.5						
	0.3nm,0.6s						
YKA	**Yellowknife Ar**	**81.00**	**2**	P	P	09 58 24.2	-3.2
	0.2nm,0.8s,baz=352,slow=5.6,SNR=5.3						
	0.2nm,0.8s						

DJA ***22*** *09:52:40.0±0.5, 3°S±4°×12°7E±°, h12*^{km}*±7*^{km}*, M4.1/12, mb4.3/2, MLv4.0/12*

IDC ***22*** *09:52:41.6±2.0, 3°.14S×127°.85E, h0*^{km}*, mb3.6/2, mbtmp3.8/4, ML3.8/2, Error ellipse: s-maj=95.9km s-min=18.4km az=67.0*

ISC 22 09:52:40.8±1.3**, 3°.03S**±0°.08×**127°.17E**±0°.07**, h32**^{km}±10^{km}**, n13, σ1**^{s}**.35**/16**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.22**	**197**	P	**Pb**	**09 52 47.0**	**-0.5**
AAI	**Ambon**	**1.22**	**122**	P	**Pn**	**09 53 02.7**	**+1.1**
AAI				S	**Sn**	**09 53 18.1**	**+1.1**
KRAI	**Karang Ratu**	**1.26**	**103**	P	**Pn**	**09 53 02.8**	**+0.6**
SANI	**Sanana**	**1.53**	**310**	P	**Pn**	**09 53 06.3**	**+0.4**
SANI				S	**Sn**	**09 53 25.9**	**+1.2**
MSAI	**Masohi**	**1.79**	**100**	P	**Pn**	**09 53 11.0**	**+1.5**
BNDI	**Bandanaira**	**3.11**	**119**	P	**Pn**	**09 53 29.2**	**+1.5**
SWI	**Sorong**	**4.62**	**62**	P	**Pn**	**09 53 48.3**	**-0.2**
SIJI	**Sorong**	**4.63**	**62**	P	**Pn**	**09 53 48.3**	**-0.3**
FAKI	**Fak Fak**	**5.08**	**89**	P	**Pn**	**09 53 53.9**	**-0.9**
	0.1nm15nm,0.5s						
FITZ	**Fitzroy Crossi**	**15.05**	**186**	Pn	**P**	**09 56 16.2**	**-0.1**
	0.2nm,0.3s,baz=9.0,slow=10,SNR=5.1						
	2.5nm,0.8s						
WRA	**Warramunga Arr**	**18.21**	**158**	P	**Pn**	**09 56 51.5**	**+0.2**
	0.5nm,0.3s,baz=340,slow=11,SNR=26						
WRA				S	**Sn**	**10 00 12.8**	**-1.0**
	0.5nm,0.9s,baz=332,slow=27,SNR=1.9						
	1.3nm,0.5s						
ASAR	**Alice Springs**	**21.53**	**163**	P	**P**	**09 57 28.1**	**+0.6**
	3.9nm,0.7s,baz=346,slow=12,SNR=52						
ASAR				S	**S**	**10 01 21.4**	**-3.2**
	1.1nm,1.1s,baz=352,slow=23,SNR=6.0						
	3.9nm,0.7s						
MKAR	**Makanchi Array**	**63.38**	**327**	P	P	10 03 16.6	+9.4
	0.3nm,0.7s,baz=142,slow=7.3,SNR=1.9						
	0.3nm,0.7s						

IDC ***22*** *09:57:32.4±0.8, 6°.86N×73°.10W, h154*^{km}*±13*^{km}*, mb2.7/1, mbtmp3.5/3, Error ellipse: s-maj=40.3km s-min=7.6km az=132.0*

RSNC ***22*** *09:57:33.6±0.0, 7°N±1°×7°3W±°, h145*^{km}*±1*^{km}*, M3.4, mb3.3, ML3.1*

ISC 22 09:57:32.0±1.0**, 6°.83N**±0°.03×**73°.13W**±0°.04**, h153**^{km}±6^{km}**, n38, σ1**^{s}**.24**/71**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**193**	P	**Pn**	**09 57 53.5**	**+0.5**
BARC				S	**Sn**	**09 58 07.6**	**-1.4**
BRJC	**Barrancabermej**	**0.63**	**283**	P	**Pn**	**09 57 55.3**	**+1.0**
BRJC				S	**Sn**	**09 58 11.9**	**+0.6**
PAMC	**Pamplona, Colo**	**0.67**	**40**	P	**Pn**	**09 57 56.3**	**+1.2**
PAMC				S	**Sn**	**09 58 13.0**	**+0.2**
RUSC	**La Rusia**	**0.93**	**177**	P	**Pn**	**09 57 57.4**	**+0.4**
RUSC				S	**Sn**	**09 58 15.6**	**-0.5**
PTBC	**PUERTO BERRIO,**	**1.35**	**258**	P	**Pn**	**09 57 59.9**	**-0.3**
PTBC				S	**Sn**	**09 58 21.0**	**-0.8**
OCAC	**Ocana**	**1.42**	**352**	P	**Pn**	**09 58 01.7**	**+0.6**
OCAC				S	**Sn**	**09 58 23.1**	**-0.3**
SPBC	**San Pablo de B**	**1.50**	**219**	P	**Pn**	**09 58 02.1**	**+0.3**
SPBC				S	**Sn**	**09 58 23.8**	**-0.9**
CHIC	**Chingaza**	**2.26**	**195**	P	**Pn**	**09 58 11.7**	**+0.9**
CHIC				S	**Sn**	**09 58 40.2**	**-0.5**
ROSC	**El Rosal**	**2.30**	**211**	P	**Pn**	**09 58 13.6**	**+2.4**
	53nm,0.3s,baz=113,slow=19,SNR=79						
ROSC				S	**Sn**	**09 58 43.2**	**+1.7**
	180nm,0.3s,baz=359,slow=22,SNR=34						
ROSC	**El Rosal**	**2.30**	**211**	P	**Pn**	**09 58 13.2**	**+2.0**
ROSC				S	**Sn**	**09 58 41.8**	**+0.3**
BOG	**Bogota**	**2.38**	**203**	P	**Pn**	**09 58 09.0**	**-3.1**
MEDEC	**Medelln, Ant**	**2.50**	**258**	P	**Pn**	**09 58 15.6**	**+2.1**
MEDEC				S	**Sn**	**09 58 44.9**	**-0.6**
UREC	**San Jos de Ur**	**2.56**	**291**	P	**Pn**	**09 58 13.3**	**-0.6**
UREC				S	**Sn**	**09 58 43.5**	**-2.8**
VILC	**Villavicencio,**	**2.75**	**192**	P	**Pn**	**09 58 16.8**	**+0.3**
VILC				S	**Sn**	**09 58 49.4**	**-1.6**
NIZA	**Niza - Manizal**	**2.92**	**233**	P	**Pn**	**09 58 19.1**	**+0.4**
NIZA				S	**Sn**	**09 58 55.0**	**+0.2**
CMAN1	**Manizales, Cal**	**2.95**	**234**	P	**Pn**	**09 58 19.3**	**+0.2**
CMAN1				S	**Sn**	**09 58 55.7**	**+0.1**
CBOC	**Ciudad Bolivar**	**3.02**	**252**	P	**Pn**	**09 58 21.4**	**+1.5**
CBOC				S	**Sn**	**09 58 55.5**	**-1.4**
DBBC	**Dabeiba**	**3.06**	**274**	P	**Pn**	**09 58 21.2**	**+0.9**
DBBC				S	**Sn**	**09 58 56.4**	**-1.4**
ARGC	**Ariguani, Magd**	**3.21**	**340**	P	**Pn**	**09 58 23.6**	**+1.5**
ARGC				S	**Sn**	**09 59 01.0**	**0.0**
SDV	**Santo Domingo**	**3.21**	**50**	P	**Pn**	**09 58 23.0**	**+0.7**
	22nm,0.3s,baz=225,slow=5.7,SNR=26						
SDV				S	**Sn**	**09 59 00.8**	**-0.5**
	56nm,0.4s,baz=251,slow=23,SNR=35						
SDV	**Santo Domingo**	**3.21**	**50**	P	**Pn**	**09 58 22.9**	**+0.6**
PRAC	**Prado**	**3.55**	**210**	P	**Pn**	**09 58 26.9**	**+0.3**
PRAC				S	**Sn**	**09 59 09.1**	**+0.1**
ORTC	**Ortega, Tolima**	**3.58**	**216**	P	**Pn**	**09 58 27.3**	**+0.3**
ORTC				S	**Sn**	**09 59 10.9**	**+1.2**
SJCC	**San Jacinto, C**	**3.66**	**327**	P	**Pn**	**09 58 27.5**	**-0.5**
SJCC				S	**Sn**	**09 59 09.2**	**-2.4**
PLMC	**San Jos del P**	**3.67**	**239**	P	**Pn**	**09 58 29.0**	**+0.9**
PLMC				S	**Sn**	**09 59 12.2**	**+0.5**
URMC	**La Uribe, Meta**	**3.77**	**199**	P	**Pn**	**09 58 30.3**	**+0.9**
URMC				S	**Sn**	**09 59 14.2**	**+0.2**
LCBC	**Los crdobas,**	**3.79**	**302**	P	**Pn**	**09 58 30.3**	**+0.7**
LCBC				S	**Sn**	**09 59 15.7**	**+1.3**
YOTC	**Yotoco, Valle**	**4.27**	**229**	P	**Pn**	**09 58 36.0**	**0.0**
YOTC				S	**Sn**	**09 59 26.1**	**+0.3**
PTAC	**Punta Ardita,**	**4.66**	**274**	P	**Pn**	**09 58 39.8**	**-1.1**
PTAC				S	**Sn**	**09 59 35.1**	**+0.5**
MACC	**Macarena, Meta**	**4.71**	**189**	P	**Pn**	**09 58 40.7**	**-0.9**
MACC				S	**Sn**	**09 59 32.1**	**-3.8**
URIC	**Uribia, Colomb**	**4.97**	**13**	P	**Pn**	**09 58 44.2**	**-0.9**
URIC				S	**Sn**	**09 59 40.0**	**-2.2**
JAMC	**Jamundi, Valle**	**5.03**	**225**	P	**Pn**	**09 58 46.4**	**+0.3**
	8.4nm,1.7s						
JAMC				S	**Sn**	**09 59 41.8**	**-2.2**
	8.4nm,1.7s						
GARC	**Garzon, Huila**	**5.18**	**207**	P	**Pn**	**09 58 47.5**	**-0.5**
GARC				S	**Sn**	**09 59 45.1**	**-2.3**
POPC	**Popayan, Colom**	**5.53**	**220**	P	**Pn**	**09 58 53.4**	**+0.6**
	3.9nm,0.9s						
POPC				S	**Sn**	**09 59 56.0**	**+0.1**
	3.9nm,0.9s						
FLOC	**Florencia**	**5.79**	**206**	P	**Pn**	**09 58 56.1**	**+0.2**
FLOC				S	**Sn**	**10 00 01.2**	**-0.4**
TXAR	**Lajitas Array**	**36.45**	**312**	P	**P**	**10 04 23.2**	**+0.8**
	0.2nm,0.5s,baz=125,slow=8.0,SNR=5.5						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**149.11**	**234**	PKPbc	**PKPbc**	**10 17 02.8**	**-0.4**
	0.3nm,0.6s,baz=106,slow=2.5,SNR=5.5						
WRA	**Warramunga Arr**	**150.33**	**241**	PKPbc	**PKPbc**	**10 17 05.6**	**-0.6**
	0.4nm,0.4s,baz=105,slow=3.2,SNR=1.9						

JMA ***22*** *09:58:33.1±0.3, 24°.7N±0°.9×122°.1E±0°.5, h68*^{km}*±3*^{km}*, MV2.4/12, TAIWAN REGION*

TAP ***22*** *09:58:34.0, 24°.69N×122°.02E, h59*^{km}*, ML3.1, C*

ISC 22 09:58:33.6±1.3**, 24°.71N**±0°.03×**122°.12E**±0°.02**, h61**^{km}±6^{km}**, n85, σ0**^{s}**.82**/150**, 5C-2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.26**	**248**	⇑P	**Pn**	**09 58 43.1**	**-0.4**
TWC				S	**Sn**	**09 58 49.9**	**-0.8**
EOS2	**EOS2**	**0.31**	**160**	P	**Pn**	**09 58 44.3**	**+0.6**
EOS2				S	**Sn**	**09 58 52.4**	**+1.4**
TWB1	**Santiao Chiao**	**0.32**	**339**	P	**Pn**	**09 58 43.9**	**0.0**
TWB1				*e*S	**Sn**	**09 58 51.2**	**-0.3**
ILA	**Ilan**	**0.34**	**280**	*e*S	**Sn**	**09 58 51.5**	**-0.2**
NDS	**Dongshan**	**0.37**	**259**	P	**Pn**	**09 58 44.4**	**0.0**
NDS				*e*S	**Sn**	**09 58 51.7**	**-0.5**
TIPB	**Shuangxi**	**0.37**	**315**	P	**Pn**	**09 58 44.4**	**-0.1**
TIPB				S	**Sn**	**09 58 52.0**	**-0.3**
EWUT	**Wuta**	**0.40**	**230**	P	**Pn**	**09 58 44.7**	**0.0**
EWUT				S	**Sn**	**09 58 52.2**	**-0.4**
TWE	**Neicheng**	**0.41**	**272**	⇑*i*P	**Pn**	**09 58 44.8**	**+0.1**
TWE				*e*S	**Sn**	**09 58 52.3**	**-0.4**
ENA	**Nanau**	**0.44**	**231**	P	**Pn**	**09 58 45.0**	**0.0**
ENA				S	**Sn**	**09 58 53.2**	**-0.1**
SXI1	**Grass Mountain**	**0.44**	**330**	P	**Pn**	**09 58 45.5**	**+0.3**
SXI1				S	**Sn**	**09 58 54.1**	**+0.6**
EOS3	**EOS3**	**0.46**	**156**	*e*P	**Pn**	**09 58 45.8**	**+0.8**
EOS3				*e*S	**Sn**	**09 58 54.1**	**+0.8**
NWF	**Wu-fen Shan**	**0.47**	**320**	*e*P	**Pn**	**09 58 45.5**	**0.0**
NWF				S	**Sn**	**09 58 53.8**	**-0.2**
WFSB	**Wu-fen Shan**	**0.47**	**320**	*e*P	**Pn**	**09 58 45.5**	**+0.1**
WFSB				*e*S	**Sn**	**09 58 53.8**	**-0.1**
FUSB	**Fushanzhiwuyua**	**0.48**	**276**	P	**Pn**	**09 58 45.6**	**+0.1**
FUSB				S	**Sn**	**09 58 54.0**	**-0.2**
ENTT	**Nioudou**	**0.51**	**262**	⇑P	**Pn**	**09 58 45.9**	**+0.2**
EAHA	**Aohua**	**0.51**	**222**	*e*P	**Pn**	**09 58 45.8**	**+0.1**
EAHA				*e*S	**Sn**	**09 58 55.0**	**+0.4**
TWA	**Mucha**	**0.56**	**299**	*e*P	**Pn**	**09 58 46.3**	**+0.1**
TWA				*e*S	**Sn**	**09 58 54.5**	**-0.9**
NWLT	**Wulai**	**0.56**	**277**	⇑*e*P	**Pn**	**09 58 46.4**	**0.0**
NWLT				*e*S	**Sn**	**09 58 54.7**	**-0.9**
LATG	**Datong**	**0.56**	**252**	⇑*i*P	**Pn**	**09 58 46.8**	**+0.4**
LATG				S	**Sn**	**09 58 56.4**	**+0.6**
NHDH	**Xindian Distri**	**0.59**	**295**	P	**Pn**	**09 58 46.1**	**-0.6**
NHDH				S	**Sn**	**09 58 55.7**	**-0.5**
EOS4	**EOS4**	**0.61**	**163**	*e*P	**Pn**	**09 58 47.4**	**+0.9**
EOS4				*e*S	**Sn**	**09 58 56.5**	**+0.6**
TATO	**Taipei**	**0.63**	**295**	P	**Pn**	**09 58 47.0**	**-0.1**
YM01	**YM01**	**0.66**	**311**	*e*P	**Pn**	**09 58 47.6**	**+0.1**
YM01				*e*S	**Sn**	**09 58 55.7**	**-1.9**
YHNB	**Yeheng**	**0.68**	**267**	P	**Pn**	**09 58 48.0**	**+0.4**
YHNB	**Yeheng**	**0.68**	**267**	⇓*i*P	**Pn**	**09 58 48.1**	**+0.4**
YHNB				*e*S	**Sn**	**09 58 58.0**	**0.0**
YM08	**YM08**	**0.68**	**315**	*e*P	**Pn**	**09 58 47.3**	**-0.4**
YM08				*e*S	**Sn**	**09 58 57.1**	**-0.8**
ZUZH	**Zhuzihu**	**0.69**	**311**	*e*P	**Pn**	**09 58 47.7**	**-0.1**
ZUZH				*e*S	**Sn**	**09 58 57.2**	**-1.0**
NSK	**Sanguang**	**0.69**	**268**	⇓P	**Pn**	**09 58 48.2**	**+0.3**
NSK				*e*S	**Sn**	**09 58 58.4**	**+0.2**
ETL	**Fush Village**	**0.71**	**220**	*e*P	**Pn**	**09 58 47.6**	**-0.4**
NACB	**Ninganchiao**	**0.71**	**222**	P	**Pn**	**09 58 47.6**	**-0.5**
NACB	**Ninganchiao**	**0.71**	**222**	*e*P	**Pn**	**09 58 47.3**	**-0.8**
NACB				*e*S	**Sn**	**09 58 58.3**	**-0.4**
ANP	**Anpu**	**0.72**	**311**	*e*P	**Pn**	**09 58 48.2**	**0.0**
ANP				*e*S	**Sn**	**09 58 58.4**	**-0.6**
NNSB	**Datong**	**0.72**	**248**	*e*P	**Pn**	**09 58 48.4**	**+0.1**
NNSB				*e*S	**Sn**	**09 58 59.1**	**0.0**
NNS	**Nan Shan**	**0.73**	**249**	*e*P	**Pn**	**09 58 48.5**	**+0.2**
NNS				*e*S	**Sn**	**09 58 59.0**	**-0.1**
TWS1	**Kuangyinshan**	**0.75**	**302**	*e*P	**Pn**	**09 58 48.6**	**+0.1**
TWS1				*e*S	**Sn**	**09 58 59.3**	**-0.1**
NTST	**Danshui**	**0.76**	**307**	*e*P	**Pn**	**09 58 48.8**	**+0.2**
NTST				*e*S	**Sn**	**09 58 59.6**	**0.0**
ETLH	**Xiulin Townshi**	**0.76**	**229**	*e*P	**Pn**	**09 58 48.4**	**-0.4**
ETLH				*e*S	**Sn**	**09 58 59.6**	**-0.3**
TWD	**Chiawan**	**0.79**	**217**	*e*S	**Sn**	**09 58 59.8**	**-0.3**
JYNG	**Yonagunijimaku**	**0.80**	**109**	P	**Pn**	**09 58 49.0**	**0.0**
JYNG				S	**Sn**	**09 59 00.3**	**-0.1**
YOJ	**Yonaguni jima**	**0.85**	**107**	*e*P	**Pn**	**09 58 49.4**	**-0.3**
YOJ				*e*S	**Sn**	**09 59 01.6**	**0.0**
YOJ	**Yonaguni jima**	**0.85**	**107**	*e*P	**Pn**	**09 58 49.6**	**-0.1**
YOJ				S	**Sn**	**09 59 01.6**	**0.0**
KSHI	**Guanxi Townshi**	**0.86**	**275**	*e*P	**Pn**	**09 58 50.3**	**+0.5**
KSHI				*e*S	**Sn**	**09 59 03.5**	**+1.7**
NCUH	**Zhongli**	**0.89**	**287**	*e*P	**Pn**	**09 58 50.7**	**+0.6**
NCUH				*e*S	**Sn**	**09 59 02.2**	**-0.2**
NFF	**Wufeng Townshi**	**0.91**	**265**	*e*P	**Pn**	**09 58 50.9**	**+0.3**
NFF				*e*S	**Sn**	**09 59 03.7**	**+0.6**

FUSS	Fushou	0.92	240	*e*P	Pn	09 58 51.0	+0.1
FUSS				*e*S	Sn	09 59 03.1	-0.4
ETM	Tongmen	0.93	218	*e*P	Pn	09 58 49.7	-1.1
LXIB	Xiulin Townshi	0.94	223	*e*P	Pn	09 58 50.0	-1.0
LXIB				*e*S	Sn	09 59 02.5	-1.4
WHF	Hehuan Shan	0.96	234	*e*P	Pn	09 58 51.2	-0.3
WHF				*e*S	Sn	09 59 04.4	-0.3
TWT	Tachien	0.97	242	*e*P	Pn	09 58 52.2	+0.8
TWT				*e*S	Sn	09 59 04.9	+0.3
TDCB	Techi	0.98	243	*e*P	Pn	09 58 52.0	+0.4
TDCB				*e*S	Sn	09 59 04.7	-0.2
LIOB	Emei	1.00	267	*e*P	Pn	09 58 52.2	+0.5
LIOB				*e*S	Sn	09 59 06.0	+0.8
NSTT	Nanjuang	1.02	266	*e*P	Pn	09 58 52.2	+0.3
NSTT				*e*S	Sn	09 59 06.2	+0.8
SBCB	Hsinchu	1.03	275	*e*S	Sn	09 59 06.5	+0.8
SHUL	Shoufeng	1.05	209	*e*P	Pn	09 58 51.6	-0.7
SHUL				*e*S	Sn	09 59 06.4	+0.3
ESL	Shilin	1.09	215	*e*P	Pn	09 58 51.6	-1.2
ESL				*e*S	Sn	09 59 05.2	-1.9
OWD	Renai	1.14	229	*e*P	Pn	09 58 53.3	-0.3
OWD				*e*S	Sn	09 59 07.5	-1.0
WHP	Taichung City	1.15	248	*e*P	Pn	09 58 54.8	+1.1
WHP				*e*S	Sn	09 59 09.5	+0.8
WUSB	Renai	1.16	232	*e*P	Pn	09 58 53.8	0.0
WUSB				*e*S	Sn	09 59 08.6	-0.4
EGFH	Guangfu	1.21	211	*e*S	Sn	09 59 07.7	-2.2
NMLH	Miaoli	1.22	262	*e*S	Sn	09 59 10.0	-0.2
NSY	Sanyi	1.27	257	*e*P	Pn	09 58 54.4	-0.8
NSY				*e*S	Sn	09 59 12.2	+0.9
TWQ1	Liyutan	1.27	254	*e*S	Sn	09 59 10.7	-0.8
WCS	Beigang Elemen	1.27	240	*e*P	Pn	09 58 56.0	+0.7
WCS				*e*S	Sn	09 59 11.8	+0.3
VWDT	VWDT	1.30	223	*e*P	Pn	09 58 55.6	-0.1
VWDT				*e*S	Sn	09 59 11.0	-1.1
HGSD	Ruisui	1.37	208	*e*P	Pn	09 58 55.5	-1.1
HGSD				*e*S	Sn	09 59 12.9	-0.7
SMLT	Sun Moon Lake	1.38	234	*e*P	Pn	09 58 58.0	+1.2
SMLT				*e*S	Sn	09 59 16.3	+2.1
EHY	Hungye	1.40	211	*e*S	Sn	09 59 11.6	-2.9
SSLB	Suanglung	1.40	229	P	Pn	09 58 58.3	+1.3
SSLB	Suanglung	1.40	229	*e*P	Pn	09 58 58.1	+1.1
SSLB				*e*S	Sn	09 59 14.7	+0.1
YULB	Yu-li	1.51	210	P	Pn	09 58 57.7	-0.7
YULB	Yu-li	1.51	210	*e*P	Pn	09 58 56.9	-1.6
YULB				*e*S	Sn	09 59 14.2	-2.9
IRIF	Iriomote-Funau	1.52	104	P	Pn	09 58 58.3	-0.2
IRIF				S	Sn	09 59 17.1	-0.1
TWF1	Yuli	1.54	209	*e*P	Pn	09 58 57.4	-1.5
WJS	Zhushan	1.54	235	*e*S	Sn	09 59 19.4	+1.4
ALS	Alishan	1.69	225	*e*P	Pn	09 59 01.9	+0.8
ALS				*e*S	Sn	09 59 22.6	+0.6
CHN5	Tsauling	1.72	230	*e*P	Pn	09 59 02.2	+0.9
CHN5				*e*S	Sn	09 59 23.6	+1.3
JKRS	Kuro-shima	1.79	105	P	Pn	09 59 02.5	+0.3
JKRS				S	Sn	09 59 24.1	+0.2
JIJ	Ishigaki jima	1.88	100	P	Pn	09 59 03.4	0.0
JIJ				S	Sn	09 59 25.4	-0.6
CHN4	Tsaushan	1.94	226	*e*S	Sn	09 59 29.4	+1.8
TPUB	Ta-pu	1.95	224	P	Pn	09 59 05.6	+1.1
TPUB	Ta-pu	1.95	224	*e*P	Pn	09 59 05.5	+1.1
TPUB				*e*S	Sn	09 59 29.4	+1.4
STYH	Taoyuan	1.96	219	*e*P	Pn	09 59 05.0	+0.5
JISG	Ishigakijimahi	2.00	93	P	Pn	09 59 05.5	+0.4
JISG				*e*S	Sn	09 59 29.0	0.0
MASBT	Mashibuluo	2.49	213	*e*P	Pn	09 59 12.4	+0.6
MASBT				*e*S	Sn	09 59 41.1	0.0
PTMZ	Houxiangcun	2.74	278	*i* P	Pn	09 59 15.0	-0.2
PTMZ				*e*S	Sn	09 59 45.1	-2.0

SOME ***22*** *10:08:13.4, 43°.72N×84°.30E, h5^{km}*

IDC ***22*** *10:08:15.7±1.9, 43°.88N×84°.81E, h0^{km}, mb3.7/3, mbtmp3.4/9, ML2.9/6, Error ellipse: s-maj=21.9km s-min=18.2km az=93.0*

NNC ***22*** *10:08:20.8±4.3, 43°.87N×83°.99E, h0^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=38.1km s-min=21.3km az=126.0*

ISC 22 10:08:17.2±1.3**, 43°.61N**±0°.07×**84°.72E**±0°.07**, h32^{km}, n28, σ2^{s}.18**/41**, mb3.8**/3**, 7C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	3.18	269	*e*P	Pn	10 09 06.3	+1.3
	2.7nm,0.1s						
KTMS				*e*S	Sn	10 09 44.4	+2.5
	67nm,0.3s						
MK31	Makanchi Array	3.62	333	Pn	Pn	10 09 12.1	+1.1
	1.9nm,0.3s,baz=149,slow=14,SNR=641						
MK31				⇑Pg	Pb	10 09 20.2	-0.2
	3.3nm,0.2s,baz=153,slow=15,SNR=39						
MK31				⇑Lg	Lg	10 10 04.7	
	52nm,0.7s,baz=147,slow=28,SNR=7.1						
MKAR	Makanchi Array	3.62	333	Pn	Pn	10 09 12.2	+1.2
	2.1nm,0.3s,baz=152,slow=14,SNR=180						
MKAR				Pg	Pb	10 09 19.2	-1.2
	8.8nm,0.3s,baz=150,slow=17,SNR=48						
MKAR				Lg	Lg	10 10 04.0	
	14nm,0.3s,baz=147,slow=29,SNR=11						
	3.4nm,0.3s						
MAKZ	Makanchi	3.74	330	⇑Pn	Pn	10 09 13.4	+0.7
	1.3nm,0.5s						
MAKZ				⇑Pg	Pb	10 09 22.6	+0.1
	3.5nm,0.2s						
MAKZ				⇑Lg	Lg	10 10 08.2	
	35nm,0.6s						
PDGK	Podgornoye	3.82	268	⇓Pn	Pn	10 09 16.9	+3.1
	11nm,0.6s						
PDGK				⇓Lg	Lg	10 10 10.5	
	31nm,0.4s						
ZSN	Zaisan	3.84	1	Pg	Pb	10 09 21.7	-2.6
	4.1nm,0.2s						
ZSN				Lg	Lg	10 10 10.8	
	27nm,0.4s						
ZSN	Zaisan	3.84	1	*e*P	Pb	10 09 22.8	-1.5
	4.6nm,0.2s						
ZSN				*e*S	Sb	10 10 12.3	+2.0
	134nm,0.5s						
SHLS	Shalkode	3.86	265	*e*P	Pn	10 09 14.1	-0.2
	7.4nm,0.2s						
SHLS				*e*S	Sn	10 09 57.9	-0.8
	222nm,0.5s						
KNOS	Konyrlen	4.07	283	Pg	Pn	10 09 19.6	+2.3
	10.0nm,0.1s						
KNOS				Lg	Lg	10 10 06.8	
	18nm,0.2s						
UZB	Uzynbulak	4.18	266	*e*P	Pb	10 09 25.1	-4.9
	3.7nm,0.2s						
UZB				*e*S	Sb	10 10 16.4	-3.6
	38nm,0.2s						
KAPS	Kapalarasan	4.19	295	Pg	Pn	10 09 21.7	+2.8
	2.6nm,0.0s						
KAPS				Lg	Lg	10 10 10.5	
	23nm,0.2s						
KPKS	Kokpek	4.39	270	Pg	Pn	10 09 24.3	+2.7
	0.4nm,0.1s						
KPKS				Lg	Lg	10 10 15.5	
	24nm,0.5s						
KPKS	Kokpek	4.39	270	*e*P	Pb	10 09 28.9	-4.7
	0.3nm,0.0s						
KPKS				*e*S	Sb	10 10 23.0	-3.1
	71nm,0.3s						
TDK	Taldyqorghan	4.74	289	*e*P	Pb	10 09 35.7	-3.8
	24nm,0.2s						
TDK				*e*S	Sb	10 10 34.6	-1.4
	72nm,0.2s						
KOTS	Kotyrbulak	5.55	269	*e*P	Pb	10 09 50.2	-3.2
	2.3nm,0.1s						
KOTS				*e*S	Sb	10 10 59.8	+0.2
	64nm,0.6s						
TNSS	Tian-Shan	5.70	267	*e*P	Pb	10 09 53.9	-2.1
	0.7nm,0.2s						
TNSS				*e*S	Sb	10 11 06.0	+2.0
	2.1nm,0.6s						
MTBS	Maitube	6.06	268	*e*P	Pb	10 10 00.4	-1.6
	2.5nm,0.2s						
MTBS				*e*S	Sb	10 11 17.2	+3.1
	9.0nm,0.6s						
KUU	Kurty	6.08	276	*e*P	Pb	10 10 01.3	-0.9
	3.3nm,0.0s						
KUU				*e*S	Sb	10 11 18.6	+4.1
	4.1nm,0.1s						
AAK	Ala-Archa	7.54	266	Pn	Pn	10 10 11.4	+6.4
	0.2nm,0.3s,baz=41,slow=9.3,SNR=2.0						
AAK				Pg	Pb	10 10 33.5	+6.2
	0.4nm,0.3s,baz=110,slow=14,SNR=4.6						
AAK				Lg	Lg	10 12 15.4	
	0.5nm,0.3s,baz=6.0,slow=19,SNR=4.7						
	0.5nm,0.3s						
KURBB	Kurchatov Arra	8.19	331	Pn	Pn	10 10 13.6	-0.1
	0.1nm,0.3s,baz=141,slow=14,SNR=7.5						
KURBB				Sn	Sn	10 11 41.9	-3.0
	0.1nm,0.3s,baz=91,slow=18,SNR=1.4						
KURBB				Lg	Lg	10 12 29.0	
	0.3nm,0.3s,baz=149,slow=29,SNR=7.6						
	0.8nm,0.6s						
KURBB	Kurchatov Arra	8.19	331	⇓Pn	Pn	10 10 13.1	-0.5
	1.0nm,0.3s						
KURBB				⇑Sn	Sn	10 11 45.9	+0.9
	8.1nm,0.8s						
KURBB				⇑Lg	Lg	10 12 28.1	
	46nm,0.9s						
KURK	Kurchatov	8.23	332	⇓Pn	Pn	10 10 14.0	-0.3
	0.6nm,0.7s						
KURK				⇓Lg	Lg	10 12 30.6	
	6.3nm,0.8s						
ZALV	Zalesovo Beam	10.35	0	Pn	Pn	10 10 41.2	-2.0
	0.5nm,0.3s,baz=182,slow=11,SNR=5.8						
ZALV				Sn	Sn	10 12 33.9	-4.1
	0.5nm,0.3s,baz=176,slow=23,SNR=5.9						
ZALV				Lg	Lg	10 13 35.5	
	0.2nm,0.3s,baz=113,slow=34,SNR=1.8						
	1.0nm,0.4s						
BVAR	Borovoye Array	13.38	320	Pn	Pn	10 11 24.9	+0.2
	baz=126,slow=14,SNR=1.8						
BVAR				Lg	Lg	10 15 13.6	
	baz=206,slow=16,SNR=2.3						
	0.4nm,0.5s						
SONM	Songino Array	15.70	67	Pn	Pn	10 11 55.7	-0.3
	baz=276,slow=11,SNR=1.9						
	0.2nm,0.5s						
ARCES	ARCESS Array B	39.27	331	P	P	10 15 44.2	+1.8
	1.7nm,0.8s,baz=106,slow=7.1,SNR=3.9						
	1.7nm,0.8s						
HFS	Hagfors	44.50	318	P	P	10 16 25.8	+0.6
	2.3nm,1.0s,baz=58,slow=5.8,SNR=2.0						
	2.3nm,1.0s						
NOA	NORSAR Array B	45.51	319	P	P	10 16 35.0	+1.8
	0.4nm,0.8s,baz=66,slow=6.4,SNR=2.5						
	0.4nm,0.8s						

PRE 22 10:38:20.9±4.5**, 25°.93S×29°.29E, h31^{km}**±78^{km}**, ML2.2, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRLN	Carolina, Mapu	0.67	95	*e*P	Pb	10 38 33.8	-0.5
CRLN				*e*S	Sb	10 38 42.8	-0.6
CRLN				IAML		10 38 51.9	
	comp=Z,34nm,0.7s						
HRAO	HartRAO	1.44	271	*e*P	Pb	10 38 47.2	0.0
HRAO				*e*S	Sn	10 39 02.6	-0.3
HRAO				IAML		10 39 09.2	
	comp=Z,28nm,0.3s						
HRAO	HartRAO	1.44	271	*e*P	Pb	10 38 46.5	-0.8
HRAO				*e*S	Sb	10 39 05.2	-0.1
HRAO				IAML		10 39 09.1	
	comp=Z,28nm,0.3s						
NWCL	Newcastle	1.88	163	*e*P	Pb	10 38 54.0	-0.6
NWCL				*e*S	Sn	10 39 13.8	+0.2
NWCL				IAML		10 39 18.0	
	comp=Z,87nm,0.4s						
NWCL	Newcastle	1.88	163	*e*P	Pn	10 38 52.8	+1.8
NWCL				*e*S	Sb	10 39 16.6	-1.1
NWCL				IAML		10 39 18.0	
	comp=Z,87nm,0.4s						
PRYS	Parys	1.99	240	*e*P	Pb	10 38 55.5	-1.0
PRYS				*e*S	Sn	10 39 13.8	-2.7
PRYS				IAML		10 39 23.5	
	comp=Z,37nm,0.4s						
PRYS	Parys	1.99	240	*e*P	Pn	10 38 54.5	+1.9
PRYS				*e*S	Sn	10 39 17.9	+1.4
PRYS				IAML		10 39 23.5	
	comp=Z,37nm,0.4s						
LEPH	Lephalale, Lim	2.47	327	*e*P	Pb	10 39 06.1	+1.4
LEPH				*e*S	Sb	10 39 37.4	+2.7
LEPH				IAML		10 39 43.2	
	comp=Z,17nm,0.5s						
SNKL	Senekal, Frees	2.69	210	*e*P	Pn	10 39 03.1	+0.9
SNKL				*e*S	Sn	10 39 34.5	+0.6
SNKL				IAML		10 39 48.7	
	comp=Z,14nm,0.4s						
LBTB	Lobatse	3.46	285	*e*P	Pb	10 39 17.2	-4.3
LBTB				*e*S	Sn	10 39 57.6	+5.0
LBTB				IAML		10 40 10.5	
	comp=Z,12nm,0.3s						
PMBG	Pietermaritzbu	3.73	163	*e*P	Pn	10 39 19.3	+3.0
PMBG				*e*S	Sn	10 40 01.1	+2.0
PMBG				IAML		10 40 16.0	
	comp=Z,12nm,0.3s						
BOSA	Boshof	4.47	232	*e*P	Pn	10 39 29.1	+2.5
BOSA				*e*S	Sn	10 40 17.1	-0.6
BOSA				IAML		10 40 46.3	
	comp=Z,6.9nm,0.6s						
KSTD	Kokstad	4.67	180	*e*P	Pn	10 39 32.1	+2.7
KSTD				*e*S	Sn	10 40 22.5	0.0
KSTD				IAML		10 40 44.5	
	comp=Z,4.0nm,0.4s						

NEIC ***22*** *11:23:44.5±1.1, 18°.82N±0°.08×145°.4E±0°.2, h177^{km}±10^{km}, mb4.2/20, Error ellipse: s-maj=26.9km s-min=11.6km az=89.0*

IDC ***22*** *11:23:46.0±2.4, 18°.72N×145°.79E, h199^{km}±23^{km}, mb3.1/4, mbtmp3.7/6, Error ellipse: s-maj=59.8km s-min=16.0km az=99.0*

ISC 22 11:23:45.8±0.7**, 18°.75N**±0°.07×**145°.5E**±0°.2**, h200^{km}, n31, σ0^{s}.87**/31**, mb4.1**/14**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DPSS	Saipan	3.50	175	Pn	Pn	11 24 39.7	-1.8
GUMO	Guam	5.16	186	P	Pn	11 25 03.6	+1.3
	28nm,0.3s,baz=0.0,slow=20,SNR=1.4						
GUMO				S	Sn	11 26 03.3	+0.6
	45nm,0.6s,baz=17,slow=19,SNR=1.2						
GUMO	Guam	5.16	186		Pn	11 25 01.4	-0.9
JCJ	Chichijima	8.84	341	Pn	Pn	11 25 46.5	-3.5
JGF	Kuroka	18.25	339	Pn	P	11 27 45.2	+0.8
MJAR	Matsushiro Arr	18.84	342	P	P	11 27 51.8	+1.0
	1.1nm,0.8s,baz=155,slow=13,SNR=4.4						
MJAR	Matsushiro Arr	18.84	342	P	P	11 27 49.6	-1.2
KSAR	Wonju Array Be	24.16	324	P	P	11 28 43.9	+0.3
MTN	Manton Dam	34.42	205	P	P	11 30 14.7	+0.3
MTN				IAmb	IAmb	11 30 37.9	
	comp=Z,8.6nm,1.2s						
KNRA	Kununurra	37.95	207	P	P	11 30 45.9	+1.5
KNRA				IAmb	IAmb	11 31 17.2	
	comp=Z,7.5nm,1.2s						
WB0	Warramunga Arr	39.78	196	P	P	11 31 00.7	+1.1
WB0				IAmb	IAmb	11 31 01.4	
	comp=Z,4.6nm,0.7s						
WRAB	Tennant Creek	39.95	196	P	P	11 31 01.3	+0.4
WRAB				IAmb	IAmb	11 31 03.2	
	comp=Z,5.5nm,0.6s						
WRA	Warramunga Arr	39.96	196	P	P	11 31 01.8	+0.8
	comp=Z,3.9nm,0.6s,baz=22,slow=9.1,SNR=42						
	comp=Z,3.9nm,0.6s						
WRA	Warramunga Arr	39.96	196	P	P	11 31 01.3	+0.2
FITZ	Fitzroy Crossi	41.47	209	P	P	11 31 13.6	+0.3
AS31	Alice Springs	43.63	195	P	P	11 31 31.2	+0.5
ASAR	Alice Springs	43.63	195	P	P	11 31 31.2	+0.5
	comp=Z,0.7nm,0.7s,baz=19,slow=8.8,SNR=10						
	comp=Z,0.7nm,0.7s						
ASAR	Alice Springs	43.63	195	P	P	11 31 31.5	+0.8
MBWA	Marble Bar	46.98	214	P	P	11 31 56.9	-0.2
PBA	Port Blair	51.20	270	P	P	11 32 27.9	-1.3
TIXI	Tiksi	53.80	354	P	P	11 32 47.8	+0.4
TIXI				IAmb	IAmb	11 32 49.3	
	comp=Z,2.4nm,1.1s						
ZAA0	Zalesovo Array	57.84	323	P	P	11 33 15.8	-0.5
C18K	Utukok River	59.71	20	P	P	11 33 29.2	+0.1
C18K				IAmb	IAmb	11 34 01.7	
	comp=Z,4.6nm,1.4s						
C19K	Lookout Ridge	60.44	20	P	P	11 33 35.2	+1.2
C19K				IAmb	IAmb	11 34 09.1	
	comp=Z,3.0nm,1.4s						
STLK	Strandline Lak	60.75	29	P	P	11 33 36.7	+0.4
STLK				IAmb	IAmb	11 34 07.2	
	comp=Z,7.2nm,1.4s						
SKT	Skwentna	61.01	29	P	P	11 33 37.9	-0.1
SKT				IAmb	IAmb	11 34 04.2	
	comp=Z,7.0nm,1.2s						
D20K	Etivluk River	61.24	21	P	P	11 33 40.1	+0.7
D20K				IAmb	IAmb	11 33 40.7	
	comp=Z,3.9nm,1.4s						
L22K	Petersville	61.50	28	P	P	11 33 41.0	-0.2
H21K	Melozitna Rive	61.53	25	P	P	11 33 42.4	+1.0
ILAR	Eielson Array	63.71	26	P	P	11 33 55.1	-0.6
	comp=Z,0.2nm,0.6s,baz=265,slow=6.8,SNR=2.5						
	comp=Z,0.2nm,0.6s						
YKA	Yellowknife Ar	78.06	28	P	P	11 35 22.0	-0.1
	comp=Z,0.1nm,0.6s,baz=296,slow=7.1,SNR=1.4						
	comp=Z,0.1nm,0.6s						

ISN ***22*** *11:27:26.9±0.9, 32°.41N×48°.74E, h10^{km}±23^{km}, ML4.9*

NAO ***22*** *11:27:26.3, 31°.83N×48°.88E, h33^{km}, MB4.7*

BJI ***22*** *11:27:27.0, 32°.40N×48°.70E, h10^{km}, mB5.3/20, mb4.9/71, Ms4.9/47, Ms7 4.7/50*

MOS ***22*** *11:27:28.6±1.0, 32°.52N×48°.75E, h19^{km}, mb5.1/53, MS4.3/15, Error ellipse: s-maj=5.2km s-min=3.4km az=112.7*

OMAN ***22*** *11:27:29.6±0.0, 32°.51N×48°.90E, h10^{km}, mb4.9/42, Error ellipse: s-maj=1.4km s-min=0.7km az=38.0*

NEIC ***22*** *11:27:29.4±1.6, 32°.55N±0°.06×48°.91E±0°.05, h10^{km}±1^{km}, mb5.0/82, Mww4.9/8, Error ellipse: s-maj=11.0km s-min=5.4km az=27.0*

THR ***22*** *11:27:29.9±0.0, 32°.54N×48°.74E, h10^{km}±3^{km}, ML5.0*

TEH ***22*** *11:27:30.8, 32°.57N×48°.71E, h18^{km}±28^{km}*

GCMT ***22*** *11:27:31.4±0.3, 32°.37N±0°.02×48°.68E±0°.03, h24^{km}±1^{km}, MW5.0/77, Moment Tensor Solution. s30,c33; s77,c110; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.49±.19; M$_{θθ}$-2.65±.12; M$_{φφ}$0.16±.11; M$_{rθ}$1.87±.16; M$_{θφ}$1.05±.08; M$_{φr}$-0.91±.20; Best double couple: M$_{0}$3.44600×10^{16} NP1:φ$_{s}$282.00000°, δ27.00000°, λ79.00000°. NP2: φ$_{s}$114.00000°, δ64.00000°, λ95.00000°. Principal axes: T 3.2030, Plg71.0000°, Azm35.0000°; N 0.4860, Plg5.0000°, Azm291.0000°; P -3.6890, Plg18.0000°, Azm200.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***22*** *11:27:32.5±1.2, 32°.54N×48°.71E, h34^{km}±8^{km}, mb4.6/40, mbtmp4.7/48, ML4.3/8, MS4.3/63 Error ellipse: s-maj=11.0km s-min=8.1km az=172.0*

ISC 22 11:27:30.3±0.4**, 32°.48N**±0°.03×**48°.75E**±0°.03**, h20^{km}**±3^{km}**, h20^{km}:pP-P, n987, σ1^{s}.38**/1027**, mb4.9**/192**, MS4.4**/82**, 46C-44D, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTMR	Gotvand	0.31	92	*e*Pg	Pb	11 27 37.0	-0.1
GTMR				IAML		11 27 49.7	
	comp=Z,55µm,1.0s						
AHWZ	Ahwaz	1.15	184	Pg	Pb	11 27 53.3	+1.8
AHWZ				Sg	Sn	11 28 13.2	+6.7
IDOB	Doab	1.39	340	Pg	Pn	11 27 55.1	+0.4
BDRS	Dareh Seyedi	1.47	4	Pg	Pn	11 27 56.5	+0.6
KHMZ	Khomeyn	1.61	39	*e*Pn	Pn	11 27 58.7	+0.9
KHMZ				IAML		11 28 25.7	
	comp=Z,18µm,1.0s						
JHBN	Jahan bin	1.64	98	Pg	Pb	11 28 01.6	+1.6
IPIR	Pirpir	1.82	83	Pn	Pb	11 28 03.3	+0.2
ZNGN	Zangian	1.82	101	Pn	Pb	11 28 04.0	+0.9
IBZA	Bozab	2.12	340	Pn	Pb	11 28 06.7	-1.3
IBRJ	Brojen	2.21	104	Pn	Pb	11 28 09.3	-0.3
ABEH	Behbahan	2.28	145	Pn	Pb	11 28 10.0	-0.7
KCHF	Cheshme Sefid,	2.29	322	Pn	Pn	11 28 08.6	+1.5
ASAO	Ashtian	2.32	27	*e*Pn	Pb	11 28 10.8	-0.7
ASAO				IAML		11 28 48.5	
	comp=Z,8µm,1.0s						
HAGD	Aghdareh	2.35	8	Pn	Pn	11 28 09.4	+1.4
RAFI	Al-Rafai	2.36	252	*e*Pn	Pn	11 28 09.0	+1.1
RAFI				*e*Sn	Sb	11 28 39.0	-1.8
RAFI				AML	AML	11 28 46.8	
	comp=E,9µm,0.6s						
RAFI				AML	AML	11 29 05.5	
	comp=N,9µm,0.5s						
IBDR	Badra	2.46	285	*e*Pn	Pn	11 28 10.0	+0.9
IBDR				*e*Sn	Sb	11 28 42.0	-1.5
IKLH	Kolahrood	2.52	70	Pn	Pb	11 28 13.2	-1.8
SNQR	Sonqor, Kerman	2.54	339	Pn	Pn	11 28 12.7	+2.0
QAMS	Qamsar	2.55	60	Pn	Pb	11 28 13.7	-1.7
IGHG	Ghaleghazi	2.59	316	Pn	Pn	11 28 12.7	+1.5
KLNJ	Kolanjah	2.83	121	Pn	Pb	11 28 18.0	-2.4
KLNJ	Kolanjah	2.83	121	*e*Pn	Pn	11 28 17.2	+2.5
KLNJ				IAML		11 29 12.2	
	comp=Z,4µm,1.0s						
SNGE	Sanandaj	2.85	336	*e*Pn	Pn	11 28 16.9	+2.1
SNGE				IAML		11 29 24.2	
	comp=Z,14nm,1.0s						
GLG1	Gilan-e-Gharb	2.88	305	Pn	Pn	11 28 16.3	+1.2
GHVR	GHOM	2.91	46	*e*Pn	Pb	11 28 19.3	-2.3
GHVR				IAML		11 28 50.2	
	comp=Z,4µm,1.0s						
IDHR	Dehrash	2.96	319	Pn	Pn	11 28 17.7	+1.3
HGHA	Hamedan- Ghaye	3.00	2	Pn	Pn	11 28 18.9	+2.0
IQOM	Qom	3.05	39	Pn	Pn	11 28 19.7	+2.2
IZEF	Zefreh	3.05	81	Pn	Pn	11 28 20.4	+2.9
IRAM	Ramesheh	3.15	101	Pn	Pn	11 28 21.9	+2.9
KRSH	Karshahi	3.20	62	Pn	Pn	11 28 22.7	+3.1
QABG	Abgarm-Qazvin	3.29	12	Pn	Pn	11 28 23.0	+2.1
NASN	Na'in	3.44	84	*e*Pn	Pn	11 28 26.0	+3.0
NASN				IAML		11 29 30.4	
	comp=Z,1µm,1.0s						
ISFB	Sefidab	3.46	57	Pn	Pn	11 28 25.5	+2.4
IVRN	Varamin	3.53	44	Pn	Pn	11 28 26.4	+2.5
IHSB	Hasanabad	3.62	35	Pn	Pn	11 28 27.5	+2.2
BHD	Baghdad	3.76	283	*e*Pn	Pn	11 28 28.0	+0.9
BHD				*e*Sn	Sn	11 29 13.0	+2.3
KAZ2	Kazeron-Fars-I	3.80	138	Pn	Pn	11 28 31.2	+3.5
THKV	Tehran--Karaj	3.85	27	*e*Pn	Pn	11 28 31.1	+2.6
THKV				IAML		11 29 44.9	
	comp=Z,960nm,1.0s						
TEH	Tehran	3.91	33	Pn	Pn	11 28 31.6	+2.3
CHTH	Charan	3.94	29	*e*Pn	Pn	11 28 32.3	+2.4
CHTH				IAML		11 29 59.2	
	comp=Z,14nm,1.0s						
IGZV	Ghazvin	4.08	17	Pn	Pn	11 28 33.5	+1.8
IDMV	Damavand	4.12	41	Pn	Pn	11 28 34.6	+2.3
DAMV	Damavand	4.12	40	*e*Pn	Pn	11 28 34.6	+2.3
DAMV				IAML		11 29 22.2	
	comp=Z,3.8nm,1.0s						
ZNJK	Zanjan	4.18	359	Pn	Pn	11 28 34.9	+1.9
ZNJK	Zanjan	4.18	359	*e*Pn	Pn	11 28 35.6	+2.5
ZNJK				IAML		11 30 44.7	
	comp=Z,4.9nm,1.0s						
ANAR	Anarak	4.25	79	Pn	Pn	11 28 36.7	+2.7
JIR1	Jirandeh	4.30	11	Pn	Pn	11 28 36.7	+2.0
GIDE	GILAN DEYLAMAN	4.53	12	Pn	Pn	11 28 39.9	+2.1
GIDE	GILAN DEYLAMAN	4.53	12	*e*Pn	Pn	11 28 40.2	+2.3
GIDE				IAML		11 30 10.9	
	comp=Z,3µm,1.0s						
ILAS	Lasjerd	4.54	49	Pn	Pn	11 28 40.5	+2.4
IFIR	Firoozkooh	4.58	45	Pn	Pn	11 28 41.0	+2.3
MZPU	Pul - Mazandar	4.58	30	Pn	Pn	11 28 41.6	+3.0
SRSL	SARDASHT	4.62	325	*e*Pn	Pn	11 28 41.2	+2.1
SRSL				IAML		11 29 44.6	
	comp=Z,1µm,1.0s						
DSBU	Dashti - Bushe	4.64	152	Pn	Pn	11 28 42.5	+3.2
IKRK	Kirkuk	4.68	310	*e*Pn	Pn	11 28 41.0	+1.3
IKRK				*e*Sn	Sn	11 29 36.0	+2.6
IPRN	Peran	4.78	37	Pn	Pn	11 28 43.6	+2.4
ICHK	Chekchek	4.79	91	Pn	Pn	11 28 44.5	+3.0
LHJ2	Lahijan - Gila	4.79	13	Pn	Pn	11 28 43.4	+2.1
IALA	Alasht	4.92	42	Pn	Pn	11 28 45.7	+2.4
YZKH	Yazd	4.94	90	*e*Pn	Pn	11 28 46.3	+2.9
YZKH				IAML		11 30 29.0	
	comp=Z,410nm,1.0s						
MAHB	Mahabad	4.95	330	Pn	Pn	11 28 45.2	+1.5
IHSH	Hashtrud	4.96	346	Pn	Pn	11 28 45.4	+1.4
IMEH	Mehriz	5.10	101	Pn	Pn	11 28 48.5	+2.7
IANJ	Anjilo	5.22	54	Pn	Pn	11 28 50.0	+2.6
ISRB	Sarab	5.40	351	Pn	Pn	11 28 51.7	+1.8
IKIA	Kiasar	5.52	46	Pn	Pn	11 28 54.0	+2.5
IAZR	Azarshahr	5.66	337	Pn	Pn	11 28 55.2	+1.8
IGLO	Ghaloghah	5.80	45	Pn	Pn	11 28 58.3	+2.9
IBAF	Bafgh	5.86	97	Pn	Pn	11 28 58.9	+2.8
GAS1	Astara - Iran	5.89	1	Pn	Pn	11 28 57.7	+1.4

IHRS	Heris	5.99	347	Pn	Pn	11 28 59.4	+1.5
MSL	Mosul	6.08	312	ePn	Pn	11 29 01.0	+2.0
MSL				eSn	Sn	11 30 09.0	+1.1
ITBZ	Tabriz	6.12	340	Pn	Pn	11 29 01.7	+2.1
GRMI	Germi	6.35	354	Pn	Pn	11 29 05.0	+2.2
GRMI	Germi	6.35	354	ePn	Pn	11 29 05.0	+2.2
GRMI				IAML		11 31 05.0	
	comp=Z,180nm,1.0s						
IMRD	Marand	6.69	339	Pn	Pn	11 29 09.7	+2.2
TPRV	Parvadeh(Tabas	6.71	83	Pn	Pn	11 29 10.2	+2.5
TNSJ	Nastanj	6.75	75	Pn	Pn	11 29 10.3	+2.0
SHMA	Al-Shehemyia	6.88	163	P	Pn	11 29 11.6	+1.6
	SNR=10						
SHRO	Shahrood	6.96	58	ePn	Pn	11 29 13.7	+2.6
SHRO				IAML		11 31 05.8	
	comp=Z,2.2nm,1.0s						
TKDS	Koohdasht(Taba	7.12	79	Pn	Pn	11 29 15.3	+1.9
TABS	Tabas	7.12	78	ePn	Pn	11 29 15.7	+2.3
TABS				IAML		11 31 37.1	
	comp=Z,200nm,1.0s						
KRBR	Kerman	7.30	108	Pn	Pn	11 29 20.0	+3.9
KRBR	Kerman	7.30	108	ePn	Pn	11 29 20.5	+4.5
KRBR				IAML		11 31 28.4	
	comp=Z,170nm,1.0s						
TAPT	Tabas- Tapeh t	7.41	69	Pn	Pn	11 29 19.0	+1.7
NGRK	Negar Kerman	7.41	110	Pn	Pn	11 29 20.3	+2.7
MAKU	Maku	7.61	335	Pn	Pn	11 29 22.2	+2.1
SMRA	Abu-Samra	7.92	166	P	Pn	11 29 25.2	+0.8
	SNR=7.5						
MRVT	Maraveh tapeh	7.93	47	ePn	Pn	11 29 27.1	+2.7
MRVT				IAML		11 31 52.3	
	comp=Z,45nm,1.0s						
TRNA	Turayna	8.02	164	P	Pn	11 29 26.6	+1.0
	SNR=42						
TRNA				S	Sn	11 30 55.2	-0.5
MARD	Mardin	8.13	309		Pn	11 29 26.5	-0.7
GURO	Guroymak-BITLI	8.16	320		Pn	11 29 28.1	+0.4
JRN	Qarnain Island	8.33	153	P	Pn	11 29 30.9	+1.0
	SNR=6.9						
JRN				S	Sn	11 31 02.2	-1.2
ITEG	Tejag	8.44	85	Pn	Pn	11 29 34.1	+2.6
IKOO	Kooshah	8.67	88	Pn	Pn	11 29 37.0	+2.2
AFRZ	Afriz	8.68	81	Pn	Pn	11 29 37.3	+2.4
SLWR	Sila	8.78	162	P	Pn	11 29 37.1	+1.1
SLWR				S	Sn	11 31 12.9	-1.4
BJRD	Bojnurd	8.80	51	ePn	Pn	11 29 39.0	+2.6
BSRN	Basiran	8.81	91	ePn	Pn	11 29 38.6	+2.0
AKT	Akhty	9.02	355	eP	Pn	11 29 42.7	+3.3
AKT				eS	Sn	11 31 25.7	+5.4
AKT				pmax	pmax		
	comp=Z,23nm,0.7s						
AKT				smax	smax		
	comp=E,14nm,0.8s						
AKT				smax	smax		
	comp=N,13nm,0.6s						
AKT				MLR	MLR		
	comp=Z,3µm,10.0s						
SHME	Shamm	9.10	133	P	Pn	11 29 40.6	+0.2
SHME	Shamm	9.10	133	Pn	Pn	11 29 40.0	-0.5
IAKL	Akhelmad	9.22	61	Pn	Pn	11 29 45.0	+2.6
GHWR	Ruwais	9.23	156	P	Pn	11 29 43.4	+1.0
BANOM	Banah	9.29	133	P	Pn	11 29 42.9	-0.2
BANOM	Banah	9.29	133	i Pn	Pn	11 29 42.7	-0.3
	SNR=48						
BANOM				Sn	Sn	11 31 21.3	-5.6
RAYN	Ar Rayn	9.38	199	P	Pn	11 29 44.3	0.0
RAYN	Ar Rayn	9.38	199		Pn	11 29 43.5	-0.8
RAYN	Ar Rayn	9.38	199	Pn	Pn	11 29 43.9	-0.4
RAYN	Ar Rayn	9.38	199	P	Pn	11 29 43.5	-0.8
IEMG	Emamgholi	9.50	56	Pn	Pn	11 29 48.9	+2.7
MASF	Masafi	9.61	136	P	Pn	11 29 47.6	+0.2
	SNR=8.0						
AJN	Ajban	9.61	144	P	Pn	11 29 48.7	+1.2
	SNR=13						
AJN				S	Sn	11 31 32.6	-2.3
AJN	Ajban	9.61	144	i Pn	Pn	11 29 48.4	+0.9
	SNR=13						
MSFE	Esma-Masafi	9.62	136	i Pn	Pn	11 29 46.9	-0.8
	SNR=6.9						
NAZ	Nazwa, Dubai	9.62	139	P	Pn	11 29 49.0	+1.4
	SNR=33						
NAZ	Nazwa, Dubai	9.62	139	i Pn	Pn	11 29 47.9	+0.3
	SNR=33						
ASUD	Al Ashush, Dub	9.73	142	P	Pn	11 29 51.0	+1.8
	SNR=17						
ASUD	Al Ashush, Dub	9.73	142	i Pn	Pn	11 29 50.0	+0.8
	SNR=17						
MDH	Madha	9.74	135	P	Pn	11 29 49.2	-0.1
	SNR=15						
MDH	Madha	9.74	135	i Pn	Pn	11 29 48.8	-0.5
	SNR=15						
SHRT	Shahrakht	9.76	80	ePn	Pn	11 29 52.4	+2.9
FAQ	Al Faqa, Dubai	9.78	140	P	Pn	11 29 50.6	+0.9
FAQ	Al Faqa, Dubai	9.78	140	Pn	Pn	11 29 50.6	+0.9
MZWR	Madinat Zayed	9.80	151	P	Pn	11 29 51.0	+1.0
IKRD	Kardeh	9.85	61	Pn	Pn	11 29 53.9	+3.0
UOSS	Minazif	9.96	137	P	Pn	11 29 52.9	+0.7
UOSS	Minazif	9.96	137		Pn	11 29 51.7	-0.5
UOSS	Minazif	9.96	137	i Pn	Pn	11 29 52.0	-0.2
	SNR=10						
HATD	Hatta, Dubai	10.01	138	P	Pn	11 29 53.5	+0.5
	SNR=7.4						
HATD				S	Sn	11 31 40.8	-3.9
HATD	Hatta, Dubai	10.01	138	i Pn	Pn	11 29 53.0	+0.1
	SNR=16						
TBJM	Torbat-e-JAM	10.02	71	Pn	Pn	11 29 55.9	+2.7
ASF	Jabal al Asfar	10.03	271	Pn	Pn	11 29 51.9	-1.4
	comp=Z,8.1nm,0.3s,baz=82,slow=12,SNR=15						
ASF				Sn	Sn	11 31 40.4	-5.0
	comp=Z,12nm,0.3s,baz=183,slow=19,SNR=7.1						
ASF				Lg	Lg	11 32 51.3	
	comp=Z,8.7nm,0.3s,baz=137,slow=19,SNR=1.8						
ASF				LR	LR	11 34 54.1	
	comp=Z,945nm,20.2s,baz=74,slow=44						
	comp=Z,9.7nm,0.3s						
KOPT	Kop Dagi	10.04	321		Pn	11 29 57.3	+3.7
ASHO	Ashiyiah	10.08	139	P	Pn	11 29 54.2	+0.2
	SNR=9.4						
ASHO	Ashiyiah	10.08	139	i Pn	Pn	11 29 53.3	-0.7
	SNR=42						
IMYA	Miami	10.14	65	Pn	Pn	11 29 57.8	+3.0
JRKH	Jarkhoshk	10.20	67	Pn	Pn	11 29 58.0	+2.4
MZR	Muzera	10.33	155	P	Pn	11 29 58.4	+1.0
	SNR=65						
MZR	Muzera	10.33	155	i Pn	Pn	11 29 58.1	+0.7
	SNR=10						
ALNE	Al Ain	10.42	142	P	Pn	11 29 59.0	+0.5
	SNR=28						
ALNE				S	Sn	11 31 52.4	-2.3
ALNE	Al Ain	10.42	142	i Pn	Pn	11 29 58.6	+0.1
	SNR=28						
MAK	Makhachkala	10.51	355	eP	Pn	11 29 53.4	-6.2
MAK				eS	Sn	11 31 49.9	-6.8
MAK				pmax	pmax		
	comp=Z,152nm,1.2s						
MAK				MLR	MLR		
	comp=Z,3µm,15.0s						
GAZ	Gaziantep	10.57	299		Pn	11 29 59.7	-0.9
SOHO	SOHO	10.78	139	P	Pn	11 30 02.8	-0.7
SOHO	SOHO	10.78	139	i Pn	Pn	11 30 02.1	-1.4
	SNR=15						
MMAI	Mount Meron Ar	11.25	276	Pn	Pn	11 30 10.6	+0.6
	comp=Z,3.9nm,0.3s,baz=96,slow=14,SNR=8.5						
MMAI				Sn	Sn	11 32 12.3	-2.9
	comp=Z,4.8nm,0.3s,baz=68,slow=17,SNR=1.3						
MMAI				Lg	Lg	11 33 30.1	
	comp=Z,2.8nm,0.3s,baz=140,slow=26,SNR=1.4						
MMAI				LR	LR	11 35 52.2	
	comp=Z,1µm,18.4s,baz=82,slow=45						
	comp=Z,1.0nm,0.3s						
GHAJ	Ghor Haditha	11.27	268		Pn	11 30 11.6	+1.5
UMZA	Um Al Zommool	11.27	148	P	Pn	11 30 10.4	+0.2
ARQ	Araqi	11.41	141	P	Pn	11 30 12.0	-0.2
	SNR=25						
HOQ	Hoqain	11.65	137	P	Pn	11 30 15.1	-0.3
HOQ				P	Pn	11 30 15.1	-0.3
NCK	Nalchik	11.72	341	i P	Pn	11 30 17.6	+1.3
NCK				pmax	pmax		
	comp=Z,61nm,0.3s						
KBZ	Khabaz	12.13	339	Pn	Pn	11 30 25.5	+3.7
	comp=Z,0.2nm,0.3s,baz=163,slow=9.0,SNR=7.2						
	comp=Z,4.7nm,0.8s						
KBZ	Khabaz	12.13	339	ceP	Pn	11 30 24.6	+2.8
EIL	Elat	12.16	260	Pn	Pn	11 30 21.2	-1.1
	comp=Z,3.0nm,0.3s,baz=101,slow=5.5,SNR=10						
EIL				Sn	Sn	11 32 31.5	-5.8
	comp=Z,2.1nm,0.3s,baz=45,slow=19,SNR=1.1						
EIL				Lg	Lg	11 33 59.3	
	comp=Z,4.4nm,0.3s,baz=53,slow=20,SNR=1.9						
EIL				LR	LR	11 36 19.6	
	comp=Z,2µm,18.1s,baz=80,slow=44						
	comp=Z,10nm,0.5s						
BIDO	Bidbid	12.17	135	P	Pn	11 30 21.4	-1.2
BSY	Bisya	12.25	140	P	Pn	11 30 23.1	-0.6
	SNR=10						
BNN	Bunyan	12.26	305	Pn	Pn	11 30 26.5	+2.7
KIV	Kislovodsk	12.40	339	eP	Pn	11 30 25.8	+0.1
KIV				pmax	pmax		
	comp=Z,35nm,1.0s						
KIV				MLR	MLR		
	comp=Z,744nm,13.0s						
SMDO	Samad	12.48	136	P	Pn	11 30 26.0	-0.8
	SNR=24						
WSAR	Wadi Sarin	12.69	134	LR	LR	11 36 04.6	
	comp=Z,4.8nm,21.2s,baz=336,slow=40						
WSAR	Wadi Sarin	12.69	134	P	Pn	11 30 28.5	-1.1
	SNR=7.9						
VSLR	Vesyoloye	12.93	330	i P	Pn	11 30 34.3	+1.5
NGCH	Negor - Chabah	12.96	120	P	Pn	11 30 32.3	-1.0
	SNR=6.5						
JMDO	Jabal Madar	13.05	138	P	Pn	11 30 33.9	-0.7
	SNR=21						
CSS	Mathiatis	13.07	285		Pn	11 30 36.7	+1.9
CSS	Mathiatis	13.07	285	P	Pn	11 30 37.1	+2.3
	comp=Z,36nm,0.8s						
SOC	Sochi	13.16	330	eP	Pn	11 30 34.2	-1.7
SOC				eS	Sn	11 33 00.8	-0.8
SOC				pmax	pmax		
	comp=Z,32nm,0.7s						
SOC				MLR	MLR		
	comp=Z,2µm,16.0s						
WBK	Wadi Bani Khal	13.37	135	P	Pn	11 30 37.5	-1.4
LABN	Labinsk	13.65	335	eP	Pn	11 30 45.2	+2.5
LABN				pmax	pmax		
	comp=Z,102nm,0.9s						
LABN				MLR	MLR		
	comp=Z,2µm,12.0s						
LABN				MLR	MLR		
	comp=N,2µm,11.0s						
LABN				MLR	MLR		
	comp=E,3µm,10.0s						
KIRS	Kirsehir-Merke	13.74	303	⇑P	Pn	11 30 47.5	+3.6
JLN	Jalan Bani Buh	13.98	135	P	Pn	11 30 45.2	-2.0
MHTO	MHTO	14.10	142	P	Pn	11 30 47.5	-1.3
	SNR=15						
BR104	Keskin Array S	14.17	305	P	Pn	11 30 51.0	+1.1
	comp=E,250nmcomp=E,37nm,0.9s						
BR131	Keskin Array S	14.18	305	P	Pn	11 30 51.8	+1.6
	SNR=6.8						
BR131	Keskin Array S	14.18	305	Pn	Pn	11 30 51.7	+1.6
BR131	Keskin Array S	14.18	305	P	Pn	11 30 51.7	+1.6
BRTR	Keskin Array B	14.18	305	Pn	Pn	11 30 51.9	+1.8
	comp=E,0.4nm,0.3s,baz=126,slow=11,SNR=26						
BRTR				ScP	ScP	11 39 40.5	-0.3
	comp=E,2.0nm,0.8s,baz=108,slow=3.5,SNR=8.3						
	comp=E,5.5nm,0.8s						
BRTR	Keskin Array B	14.18	305		Pn	11 30 51.6	+1.6
BRTR	Keskin Array B	14.18	305	i P	Pn	11 30 51.7	+1.6
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BR105	Keskin Array S	14.19	305	P	Pn	11 30 51.5	+1.3
	comp=Z,259nmcomp=Z,39nm,0.9s						
BR106	Keskin Array S	14.20	305	P	Pn	11 30 51.5	+1.2
	comp=Z,213nmcomp=Z,32nm,0.9s						
DOK	Doka	14.63	159	P	Pn	11 30 54.1	-2.1
	SNR=29						
ERBR	Yeremizino-Bor	14.68	337	eP	Pn	11 30 59.0	+2.4
ERBR				pmax	pmax		
	comp=Z,137nm,0.8s						
ERBR				MLR	MLR		
	comp=N,4µm,13.0s						
ERBR				MLR	MLR		
	comp=Z,2µm,13.0s						
ERBR				MLR	MLR		
	comp=E,1µm,11.0s						
ILGA	Ilgaz	14.76	310	Pn	Pn	11 30 59.9	+1.9
DQM	DQM	14.77	146	P	Pn	11 30 55.8	-2.3
ANTO	Ankara	14.83	304	P	Pn	11 31 00.2	+1.3
ANTO	Ankara	14.83	304	Pn	Pn	11 31 00.4	+1.6
ANTO	Ankara	14.83	304	⇓P	Pn	11 31 01.1	+2.3
ANTO	Ankara	14.83	304	P	Pn	11 31 01.1	+2.3
ANTO	Ankara	14.83	304	P	Pn	11 31 01.2	+2.3
	comp=E,27nm,0.9s						
ANN	Anapa	15.12	328	eP	Pn	11 31 02.4	-0.3
ANN				pmax	pmax		
	comp=Z,44nm,0.8s						
ANN				MLR	MLR		
	comp=E,502nm,10.0s						
ANN				MLR	MLR		
	comp=Z,849nm,13.0s						
ANN				MLR	MLR		
	comp=N,1µm,13.0s						
WHFO	Wadi Hawf	15.19	161	P	Pn	11 31 01.2	-2.6
	SNR=20						
ABTO	Aybut	15.62	164	P	Pn	11 31 07.0	-2.3
	SNR=7.9						
SHAO	Shalim	15.68	155	P	Pn	11 31 07.6	-2.5
	SNR=6.9						
RBK	Rabkut	15.71	160	P	Pn	11 31 08.3	-2.3
	SNR=19						
DMTO	DMTO	15.73	158	P	Pn	11 31 09.1	-1.6
	SNR=12						
ISP	Isparta	15.82	295	Pn	Pn	11 31 13.3	+1.3
ISP				IAmb	IAmb	11 31 19.6	
	comp=Z,166nm,1.1s						
ISP	Isparta	15.82	295	ceP	Pn	11 31 12.0	0.0
ISP				pmax	pmax		
	comp=Z,83nm,0.8s						
ELL	Elmali	16.08	291		Pn	11 31 15.8	+0.6
ELL	Elmali	16.08	291	P	Pn	11 31 15.9	+0.6
ELL				pmax	pmax		
	comp=Z,26nm,0.7s						
MDUB	Mudurnu	16.19	304	Pn	Pn	11 31 17.6	+0.9
MDUB				IAmb	IAmb	11 31 22.0	
	comp=Z,99nm,0.8s						
AKAS	Kas	16.24	289	Pn	P	11 31 19.3	-1.1
BORA	Eskisehir	16.50	302	Pn	Pn	11 31 20.8	+0.3
SHAA	Shahritus	16.65	67	P	Pn	11 31 22.3	-0.2
SHAA				IAmb	IAmb	11 31 28.2	
	comp=Z,124nm,0.9s						
SIM	Simferopol'	16.86	322	eP	P	11 31 28.3	+1.4
SIM				pmax	pmax		
	comp=Z,34nm,0.6s						
SIM				MLR	MLR		
	comp=Z,450nm,21.0s						
KBL	Kabul	17.05	78	P	Pn	11 31 25.0	-2.7
	SNR=18						
MANT	Manisa	17.49	296	P	P	11 31 33.9	-0.3
CHGR	Chuyangaron	17.70	64	P	Pn	11 31 35.8	+0.2
CHGR	Chuyangaron	17.70	64	P	Pn	11 31 35.8	+0.2
CHGR				pmax	pmax		
	comp=Z,27nm,0.9s						
KARP	Karpathos	18.15	286	P	P	11 31 41.4	+0.1
KARP				IAmb	IAmb	11 31 45.2	
	comp=Z,91nm,0.9s						
KARP	Karpathos	18.15	286	P	P	11 31 42.2	+0.8
	comp=Z,143nm,0.8s						
BALB	Balikesir	18.30	299		Pn	11 31 42.4	-0.4
GAR	Garm	18.66	64	P	P	11 31 45.5	-1.4
AB31	Akbulak array	18.74	23		P	11 31 47.8	+0.2
ABKAR	Akbulak array	18.74	23		P	11 31 47.8	+0.2
AKTO	Aktyubinsk	19.20	18	P	P	11 31 53.1	+0.4
	comp=Z,3.2nm,0.3s,baz=205,slow=9.2,SNR=83						
AKTO				ScP	ScP	11 39 47.6	-2.8
	comp=Z,4.7nm,0.6s,baz=165,slow=2.9,SNR=8.4						
	comp=Z,31nm,0.7s						
CHM	Chimkent	19.21	53	eP	Pn	11 31 53.7	-0.3
CHM	Chimkent	19.21	53	eP	Pn	11 31 53.6	-0.3
VRH	Novokhopyorsk	19.41	347	eP	P	11 31 52.9	-2.0
VRH				pmax	pmax		
	comp=Z,200nm,0.9s						
IUG	Iuzhnay	19.44	54	eP	P	11 31 56.2	+0.6
IUG	Iuzhnay	19.44	54	eP	P	11 31 56.1	+0.6
MFTR	Murfatlar	19.70	312	⇓P	Pn	11 31 59.5	-0.3
JURR	Jurilovca	19.72	314	⇑P	P	11 31 58.5	+0.1
VORD	Divnogorie	19.74	342	eP	P	11 31 55.9	-2.7
VORD				pmax	pmax		
	comp=Z,60nm,0.8s						
KHAM	Kharkiv	19.82	336	P	P	11 31 59.7	+0.2
TIRR	Tirgusor	19.85	313	P	P	11 31 59.9	0.0
TIRR	Tirgusor	19.85	313	⇓P	P	11 31 59.8	0.0
TIRR	Tirgusor	19.85	313	P	P	11 31 59.9	0.0
TIRR				pmax	pmax		
	comp=Z,30nm,0.7s						
TIRR	Tirgusor	19.85	313	P	P	11 31 59.7	-0.1
	comp=Z,46nm,0.8s						
PRD	Provadia	19.89	308	P	Pn	11 32 04.1	+2.1
BELG	Belogornoye	19.91	358	P	P	11 32 00.2	-0.2
	comp=Z,7.7nm,0.3s,baz=234,slow=8.7,SNR=22						
BELG				LR	LR	11 42 13.8	
	comp=Z,680nm,20.9s,baz=206,slow=44						
	comp=Z,87nm,0.7s						
TLCR		19.98	315	⇓P	P	11 32 01.1	-0.3
TLCR		19.98	315	P	P	11 32 01.0	-0.3
IDI	Anoyia	20.00	285	P	P	11 32 02.3	+0.7
	comp=Z,5.3nm,0.3s,baz=76,slow=8.2,SNR=20						
IDI				LR	LR	11 43 30.0	
	comp=Z,237nm,20.1s,baz=106,slow=48						
	comp=Z,32nm,0.5s						
IDI	Anoyia	20.00	285	P	P	11 32 02.0	+0.4
IDI				IAmb	IAmb	11 32 18.2	
	comp=Z,69nm,0.7s						
VSR	Storozhevoye	20.00	342	eP	P	11 31 58.1	-3.3
VSR				pmax	pmax		
	comp=Z,60nm,1.0s						
ALN	Alexandroupoli	20.01	301	P	Pn	11 32 03.0	-0.4
ALN				IAmb	IAmb	11 32 04.6	
	comp=Z,105nm,0.8s						
ALN	Alexandroupoli	20.01	301	P	Pn	11 32 03.0	-0.4
ALN				pmax	pmax		
	comp=Z,105nm,0.8s						
NEF	NEVSHA	20.02	309	P	Pn	11 32 04.5	+0.9
TPGR	Topolog	20.05	314	⇑P	P	11 32 02.4	+0.4
KK31	Karatay Array	20.15	52	P	P	11 32 03.2	0.0
KK31	Karatay Array	20.15	52	P	P	11 32 03.2	0.0
KK31				pmax	pmax		
	comp=Z,43nm,1.0s						
KKAR	Karatay Array	20.15	52	P	P	11 32 04.2	+1.0
KKAR	Karatay Array	20.15	52	P	P	11 32 04.2	+1.0
PURM	Purcari	20.15	320	⇑P	P	11 32 02.5	-0.6
CFR	Carcaliu	20.39	314	⇓P	P	11 32 05.4	-0.3
CFR	Carcaliu	20.39	314	P	P	11 32 05.3	-0.3
VORR	Voronezh	20.41	343	eP	P	11 32 03.6	-2.2
VORR				pmax	pmax		
	comp=Z,200nm,0.9s						
RDO	Rodhopi	20.45	302		P	11 32 07.2	+0.7
RDO				IAmb	IAmb	11 32 21.5	
	comp=Z,51nm,0.8s						
DZA	Taraz	20.61	53	eP	P	11 32 08.9	+0.6
DZA	Taraz	20.61	53	eP	P	11 32 08.8	+0.6
DIM	Dimitrovgrad	20.71	304	P	Pn	11 32 10.9	-0.7
VLDR	Vladesti	20.77	316	⇓P	P	11 32 09.6	-0.3
SZH	Strazhitsa	20.89	308	P	P	11 32 12.1	+1.0
VARL	Varlezi	20.94	316	⇓P	P	11 32 12.2	+0.5
PGOR	Pogoanele	20.96	313	⇑P	P	11 32 13.2	+1.3
MILM	Milestii Mici	20.97	319	⇑P	P	11 32 09.7	-2.2
MILM	Milestii Mici	20.97	319	P	P	11 32 09.7	-2.2
BAL3X	Bal3x, Balta	21.17	322	P	P	11 32 13.3	-0.8
ARSB	Arslanbob	21.24	59		P	11 32 15.5	+0.4
ARSB	Arslanbob	21.24	59	P	P	11 32 15.5	+0.4
ARSB				pmax	pmax		
	comp=Z,24nm,0.8s						
BIR	Birlad	21.27	316	⇑P	P	11 32 15.2	0.0
BIR	Birlad	21.27	316	P	P	11 32 15.2	0.0
GHRR		21.29	316	⇓P	P	11 32 16.4	+1.0
SGRR	Singureni	21.29	310	⇓P	P	11 32 16.1	+0.7
SULR		21.31	311	⇑P	P	11 32 16.9	+1.3
LPSR	Galich'ya Gora	21.33	343	eP	P	11 32 14.1	-1.7
LPSR				pmax	pmax		
	comp=Z,500nm,0.8s						
ISR	Istrita	21.33	313	⇑P	P	11 32 17.5	+1.6
ISR	Istrita	21.33	313	P	P	11 32 17.6	+1.6
ODBI	Odobesti	21.34	315	⇓P	P	11 32 17.5	+1.5
PANC	Panciu	21.34	315	⇑P	P	11 32 16.8	+0.8
VASR	Vaslui	21.38	317	⇓P	P	11 32 16.3	-0.1
BISRR	Bisoca	21.44	314	⇓P	P	11 32 18.6	+1.5
ATD	Arta Tunnel	21.55	196	P	P	11 32 19.1	+0.6
	comp=Z,1.4nm,0.8s,baz=326,slow=6.0,SNR=10.0						
ATD				LR	LR	11 41 21.3	
	comp=Z,66nm,20.3s,baz=7.0,slow=38						
VRI	Vrincioaia	21.59	315	⇑P	P	11 32 19.0	+0.3
VRI	Vrincioaia	21.59	315	P	P	11 32 19.1	+0.4
PLOR	Plostina	21.63	314	⇓P	P	11 32 19.7	+0.6
PLOR	Plostina	21.63	314	P	P	11 32 19.7	+0.6
NEHR	Nehoiu	21.64	313	⇓P	P	11 32 20.7	+1.5
MMB	Musomishta	21.86	302	P	P	11 32 22.7	+1.1
MLR	Muntele Rosu	21.88	313	P	P	11 32 22.9	+0.9
	comp=Z,21nm,0.5s,baz=125,slow=18,SNR=48						
MLR				LR	LR	11 42 57.6	
	comp=Z,803nm,19.6s,baz=124,slow=42						
	comp=Z,21nm,0.5s						
MLR	Muntele Rosu	21.88	313		P	11 32 22.2	+0.2
MLR				IAmb	IAmb	11 32 39.6	
	comp=Z,80nm,0.9s						
MLR	Muntele Rosu	21.88	313	⇓P	P	11 32 23.3	+1.3
MLR	Muntele Rosu	21.88	313	P	P	11 32 22.2	+0.2
MLR				pmax	pmax		
	comp=Z,79nm,0.9s						
COVR	Voineasa-Covas	21.90	314	⇑P	P	11 32 23.0	+1.0
TESR	Tescani	21.97	316	⇑P	P	11 32 22.6	-0.2
ONER	Baraj Valea Uz	22.03	315	⇑P	P	11 32 24.4	+1.0
TURR	Turia	22.11	314	⇑P	P	11 32 25.5	+1.1
OZUR		22.27	314	⇑P	P	11 32 27.2	+1.1
MTUR	Matau	22.31	312	⇑P	P	11 32 28.0	+1.4
MTUR	Matau	22.31	312	P	P	11 32 27.9	+1.4
BOSR	Bodos	22.34	314	⇓P	P	11 32 28.0	+1.3
MPEP	Malo Peshtene	22.43	306	P	P	11 32 29.0	+1.2
DOPR	Dopca	22.45	314	⇑P	P	11 32 29.2	+1.2
ITM	Ithomi	22.48	289		P	11 32 29.0	+0.7
ITM				IAmb	IAmb	11 32 38.6	
	comp=Z,70nm,0.9s						
UCH	Uchtor	22.60	57	P	P	11 32 32.9	+2.9
	SNR=7.8						
ARR	Arges	22.65	312	⇓P	P	11 32 30.8	+0.7
VAY	Valandovo	22.65	300	i P	P	11 32 32.9	+2.9
PRAR	RASCA	22.67	318	⇓P	P	11 32 29.6	-0.6
AAK	Ala-Archa	22.71	56	P	P	11 32 32.4	+1.5
	comp=Z,8.5nm,0.9s,baz=209,slow=4.4,SNR=10						
AAK				ScP	ScP	11 39 57.8	-1.4
	comp=Z,2.8nm,0.8s,baz=180,slow=3.8,SNR=5.1						
AAK				LR	LR	11 42 43.2	
	comp=Z,2µm,18.5s,baz=266,slow=40						
	comp=Z,8.5nm,0.9s						
AAK	Ala-Archa	22.71	56	ceP	P	11 32 29.0	-1.9
AAK				pmax	pmax		
	comp=Z,13nm,1.0s						
USP	Ospenovka	22.91	55	P	P	11 32 35.6	+2.7
	SNR=12						
CHMS	Chumysh	23.00	55	P	P	11 32 35.6	+1.8
	SNR=6.6						
KBK	Karagaybulak	23.03	56	P	P	11 32 36.8	+2.5
	SNR=9.2						
KSH	Kashi	23.06	65	P	P	11 32 33.6	-0.9
KSH				sP	pP	11 32 38.5	-2.1
KSH				S	S	11 36 38.6	-5.9
KSH				pmax	pmax		
	comp=Z,27nm,1.0s						
KSH				LR	LR		
	comp=Z,2µm,17.9s						
KSH				LR	LR		
	comp=Z,3µm,17.9s						
KSH				LR	LR		
	comp=Z,3µm,18.5s						
SGDS	Sogindy	23.07	54	eP	P	11 32 35.0	+0.5
MDB	Medias	23.15	313	⇓P	P	11 32 35.7	+0.4
MDB	Medias	23.15	313	P	P	11 32 35.6	+0.4
AK12	Malin Array Si	23.20	327	P	P	11 32 35.8	+0.1
AK12				pP	sP	11 32 46.2	+1.8
AKASG	Malin Array Be	23.21	327	P	P	11 32 33.7	-2.0
	comp=Z,4.0nm,0.4s,baz=129,slow=8.2,SNR=21						
AKASG				PcP	PcP	11 36 23.2	-0.1
	comp=Z,2.1nm,0.5s,baz=83,slow=2.4,SNR=4.2						
AKASG				ScP	ScP	11 39 58.4	-1.8
	comp=Z,1.5nm,0.5s,baz=96,slow=2.6,SNR=5.6						
AKASG				LR	LR	11 42 50.0	
	comp=Z,730nm,20.7s,baz=133,slow=40						
	comp=Z,4.0nm,0.4s						
AKASG	Malin Array Be	23.21	327	P	P	11 32 34.5	-1.3
AKASG				IAmb	IAmb	11 32 42.3	
	comp=Z,26nm,0.9s						
AKASG	Malin Array Be	23.21	327	i P	P	11 32 34.2	-1.6
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKBB	Malin Array Si	23.21	327		P	11 32 34.4	-1.4
AKBB				IAmb	IAmb	11 32 44.2	

	comp=Z,51nm,1.1s						
AKBB	Malin Array Si	23.21	327	*ce*P	P	11 32 34.4	-1.4
AKBB				pmax	pmax		
	comp=Z,41nm,1.0s						
AKBB	Malin Array Si	23.21	327	P	P	11 32 35.4	-0.4
KIEV	Kiev	23.21	327	P	P	11 32 35.5	-0.3
KIEV				IAmb	IAmb	11 32 44.2	
	comp=Z,46nm,1.1s						
KIEV	Kiev	23.21	327	⇓P	P	11 32 35.3	-0.6
KIEV	Kiev	23.21	327	P	P	11 32 35.5	-0.3
KIEV				pmax	pmax		
	comp=Z,46nm,1.1s						
KIEV	Kiev	23.21	327	P	P	11 32 35.2	-0.6
	comp=Z,188nm,1.0s						
AK14	Malin Array Si	23.22	327	P	P	11 32 36.3	+0.5
AK11	Malin Array Si	23.22	327	P	P	11 32 35.9	0.0
AK13	Malin Array Si	23.23	327	P	P	11 32 36.0	+0.1
LOT	Lotru	23.23	311	⇓P	P	11 32 36.2	0.0
AK16	Malin Array Si	23.24	327	P	P	11 32 36.0	-0.1
SRE	Strehaia	23.28	309	⇑P	P	11 32 38.2	+1.7
SRE	Strehaia	23.28	309	P	P	11 32 38.2	+1.7
LUBAR	Lubar, Ukraine	23.38	324	P	P	11 32 36.3	-1.2
BURAR	Bucovina Array	23.39	317	P	P	11 32 36.9	-0.8
BURAR	Bucovina Array	23.39	317	⇓P	P	11 32 37.7	0.0
BURAR	Bucovina Array	23.39	317	P	P	11 32 37.7	0.0
BUR08	Bucovina Ar. S	23.41	317		P	11 32 36.3	-1.7
TKM2	Tokmak 2	23.57	56	P	P	11 32 41.8	+2.1
	SNR=8.8						
ARCR	ARCALIA	23.62	315	⇓P	P	11 32 40.7	+0.9
MI30	MI30,Zelenitsa	23.72	326	P	P	11 32 39.0	-1.8
	comp=Z,73nm,0.7s						
GZR	Gura Zlata	23.84	310	⇑P	P	11 32 42.1	0.0
GZR	Gura Zlata	23.84	310	P	P	11 32 42.6	+0.5
HERR	Herculane	23.88	309	⇑P	P	11 32 42.8	+0.4
CJR	Cluj-Napoca	23.90	314	⇓P	P	11 32 43.5	+0.9
CJR	Cluj-Napoca	23.90	314	P	P	11 32 43.5	+0.9
OHR	Ohrid	23.90	299	*i* P	P	11 32 44.3	+1.6
BOVS	Bovan	23.92	306	⇑P	P	11 32 44.2	+1.4
MARR	Marisel-Cluj	24.18	313	⇑P	P	11 32 45.9	+0.6
OBN	Obninsk	24.20	343	P	P	11 32 44.2	-1.0
	comp=Z,26nm,0.4s,baz=129,slow=2.0,SNR=7.0						
OBN				LR	LR	11 43 02.0	
	comp=Z,900nm,18.9s,baz=100,slow=38						
	comp=Z,26nm,0.4s						
OBN	Obninsk	24.20	343	⇓*e*P	P	11 32 45.3	+0.1
OBN				*e*		11 33 15.3	
OBN				*e*S	S	11 37 06.6	+4.3
OBN				*e*SS	SnSn	11 37 52.2	+7.5
OBN				pmax	pmax		
	comp=Z,46nm,1.0s						
OBN				MLR	MLR		
	comp=Z,886nm,17.0s						
OBN	Obninsk	24.20	343	P	P	11 32 45.4	+0.2
	comp=Z,54nm,0.7s						
MDVR	Moldovita	24.31	308	⇓P	P	11 32 46.4	-0.1
DRGR		24.48	313	⇑P	P	11 32 48.9	+0.8
DRGR		24.48	313	P	P	11 32 48.8	+0.8
MESR	Meseseni	24.50	314	⇓P	P	11 32 49.4	+1.4
MOS	Moscow	24.52	345	*e*P	P	11 32 47.1	-1.0
MOS				*e*S	S	11 37 11.7	+4.3
MOS				pmax	pmax		
	comp=Z,123nm,0.9s						
MOS				MLR	MLR		
	comp=Z,1µm,17.0s						
TNSS	Tian-Shan	24.55	56	*e*P	P	11 32 49.5	+0.4
TNSS	Tian-Shan	24.55	56	*e*P	P	11 32 49.4	+0.4
MDOK	Medeo	24.66	56	*e*P	P	11 32 50.5	+0.7
MDOK	Medeo	24.66	56	*e*P	P	11 32 50.4	+0.7
BZS	Buzias	24.68	310	⇓P	P	11 32 50.6	+0.8
BZS	Buzias	24.68	310	P	P	11 32 50.5	+0.8
ARTI	Arti	24.82	13	P	P	11 32 50.8	-0.1
	comp=Z,10nm,0.5s,baz=210,slow=4.8,SNR=14						
ARTI				LR	LR	11 45 36.8	
	comp=Z,609nm,20.7s,baz=204,slow=44						
	comp=Z,10nm,0.5s						
ARTI	Arti	24.82	13		P	11 32 51.1	+0.2
ARTI				IAmb	IAmb	11 33 03.7	
	comp=Z,53nm,1.1s						
ARTI	Arti	24.82	13	*c i*P	P	11 32 51.2	+0.3
ARTI						11 33 21.8	
ARTI				S	S	11 37 13.9	+1.6
ARTI				pmax	pmax		
	comp=Z,28nm,1.0s						
ARTI				MLR	MLR		
	comp=Z,732nm,20.0s						
SIRR	Siria	24.91	311	⇑P	P	11 32 52.9	+1.1
BRIU	Brid	25.02	317	P	P	11 32 53.8	+1.0
FURI	Furi	25.26	204	LR	LR	11 43 26.7	
	comp=Z,1µm,19.7s,baz=12,slow=38						
MUKU	Mukachevo	25.27	317	P	P	11 32 56.6	+1.6
SVE	Sverdlovsk	25.69	15	*e*P	P	11 32 59.1	+0.4
SVE				pmax	pmax		
	comp=Z,30nm,0.8s						
BORK	Borovoye	25.76	31		P	11 33 00.0	+0.6
BORK				IAmb	IAmb	11 33 07.6	
	comp=Z,23nm,0.7s						
BORK	Borovoye	25.76	31	*ce*P	P	11 33 00.2	+0.8
BORK				pmax	pmax		
	comp=Z,33nm,1.0s						
BVAR	Borovoye Array	25.77	31	P	P	11 32 59.8	+0.3
	comp=Z,27nm,0.7s,baz=224,slow=7.9,SNR=30						
BVAR				PcP	PcP	11 36 29.1	+0.2
	comp=Z,5.2nm,0.8s,baz=195,slow=2.5,SNR=4.6						
BVAR				ScP	ScP	11 40 05.3	-1.9
	comp=Z,3.9nm,0.6s,baz=227,slow=2.3,SNR=14						
BVAR				LR	LR	11 45 13.3	
	comp=Z,1µm,18.4s,baz=239,slow=41						
	comp=Z,27nm,0.7s						
UZB	Uzynbulak	26.05	57	*e*P	P	11 33 03.2	+0.8
	comp=Z,22nm,1.3s						
UZB	Uzynbulak	26.05	57	*e*P	P	11 33 03.1	+0.8
UZB				pmax	pmax		
	comp=Z,22nm,1.3s						
KIRV	Kirov	26.11	1	P	P	11 33 02.6	+0.1
	comp=Z,91nm,0.8s,baz=195,slow=0.4,SNR=26						
	comp=Z,91nm,0.8s						
KIRV	Kirov	26.11	1	*ce*P	P	11 33 02.8	+0.3
TDK	Taldyqorghan	26.14	53	*e*P	P	11 33 03.9	+0.9
	comp=Z,29nm,0.9s						
TDK	Taldyqorghan	26.14	53	*e*P	P	11 33 03.8	+0.9
TDK				pmax	pmax		
	comp=Z,29nm,0.9s						
SHLS	Shalkode	26.36	57	*e*P	P	11 33 08.7	+3.5
SHLS	Shalkode	26.36	57	*e*P	P	11 33 08.7	+3.5
MNK	Minsk	26.52	332	*i* P	P	11 33 07.4	+1.1
	comp=E,92nm,0.8s						
MNK				*i* P	P	11 33 07.4	+1.1
	comp=N,121nm,0.8s						
MNK				*i* P	P	11 33 07.4	+1.1
	comp=Z,236nm,0.8s,baz=138						
MNK				*i* PP	PnPn	11 33 54.4	+7.8
MNK				*i* PPP	PPP	11 34 07.9	
MNK				*i* S	S	11 37 42.4	+3.1
MNK				*i* SS	SnSn	11 38 35.8	-5.6
MNK				*i* SSS	SSS	11 39 12.4	
MNK				*i* LQ	LQ	11 41 31.5	
MNK				*i* LR	LR	11 42 55.8	
MNK				*i* LRM	MLR	11 44 39.5	
	comp=N,396nm,14.4s						
MNK				*i* LRM	MLR	11 44 43.6	
	comp=E,306nm,13.8s						
MNK				*i* LRM	MLR	11 44 43.6	
	comp=Z,477nm,12.6s						
MNK	Minsk	26.52	332	*i* P	P	11 33 07.3	+1.1
MNK				*i*		11 33 54.4	
MNK				*i* PPP	PPP	11 34 07.9	
MNK				*i* S	S	11 37 42.3	+3.1
MNK				*i* SSS	SSS	11 39 12.3	
MNK				pmax	pmax		
	comp=Z,236nm,0.8s						
MNK				pmax	pmax		
	comp=N,121nm,0.8s						
MNK				pmax	pmax		
	comp=E,92nm,0.8s						
MNK				MLR	MLR		
	comp=N,396nm,14.0s						
MNK				MLR	MLR		
	comp=Z,477nm,13.0s						
MNK				MLR	MLR		
	comp=E,306nm,14.0s						
STHS	Stebnicka Huta	26.58	318	*e*P	P	11 33 07.4	+0.5
STHS	Stebnicka Huta	26.58	318	*e*P	P	11 33 07.4	+0.5
KECS	Kecovo	26.58	315	*e*P	P	11 33 08.0	+1.1
KECS				pmax	pmax		
	comp=Z,17nm,1.0s						
KECS	Kecovo	26.58	315	*e*P	P	11 33 08.0	+1.1
TIP	Timpagrande	26.69	294	⇑P	P	11 33 09.0	+0.9
PSZ	Piszkesteto	26.69	314		P	11 33 08.2	+0.2
PSZ				IAmb	IAmb	11 33 31.2	
	comp=Z,25nm,0.9s						
PSZ	Piszkesteto	26.69	314	⇓P	P	11 33 08.8	+0.8
PSZ	Piszkesteto	26.69	314	P	P	11 33 08.2	+0.2
PSZ				pmax	pmax		
	comp=Z,25nm,0.9s						
MORH	Mrgy, Hungar	26.83	310	⇓P	P	11 33 10.0	+0.9
MORH	Mrgy, Hungar	26.83	310	P	P	11 33 09.2	0.0
MATE	Matera	26.88	297	⇑P	P	11 33 10.8	+1.1
NIE	Niedzica	27.12	317	P	P	11 33 12.7	+0.9
	comp=Z,11nm,1.0s						
NACGM	Naroch	27.25	332	*e*P	P	11 33 12.7	-0.2
LANS	Liptovska Anna	27.48	316	*e*P	P	11 33 16.0	+0.9
LANS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LANS	Liptovska Anna	27.48	316	*e*P	P	11 33 16.0	+0.9
SRO	Srobarova	27.62	313	*e*P	P	11 33 17.3	+1.0
OJC	Ojcow	27.78	318		P	11 33 17.1	-0.6
OJC	Ojcow	27.78	318	P	P	11 33 17.1	-0.6
OJC	Ojcow	27.78	318	P	P	11 33 17.7	0.0
	comp=Z,24nm,0.9s						
MPLH	Magyarpolny	27.88	311	P	P	11 33 19.2	+0.6
	comp=Z,60nm,1.0s						
SUW	Suwalki	28.18	327	*e*P	P	11 33 21.0	-0.2
JAVC	Velka Javorina	28.43	314	*e*P	P	11 33 24.2	+0.6
SMOL	Smolenice	28.44	313	*e*P	P	11 33 23.9	+0.3
SMOL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KURBB	Kurchatov Arra	28.44	42	P	P	11 33 25.1	+1.5
	comp=Z,12nm,0.8s,baz=245,slow=9.4,SNR=31						
KURBB				ScP	ScP	11 40 13.3	-2.1
	comp=Z,1.3nm,0.6s,baz=236,slow=4.4,SNR=6.2						
KURBB				LR	LR	11 47 09.9	
	comp=Z,260nm,18.6s,baz=198,slow=41						
	comp=Z,12nm,0.8s						
VAE	Valguarnera	28.47	290	P	P	11 33 26.2	+2.1
	comp=Z,17nm,0.8s,baz=22,slow=2.5,SNR=3.7						
	comp=Z,17nm,0.8s						
MODS	Modra-Piesok	28.48	313	*e*P	P	11 33 24.2	+0.2
MODS	Modra-Piesok	28.48	313	*e*P	P	11 33 24.2	+0.2
KURK	Kurchatov	28.54	42	P	P	11 33 24.9	+0.5
KURK				IAmb	IAmb	11 33 26.9	
	comp=Z,30nm,1.1s						
KURK	Kurchatov	28.54	42	*ce*P	P	11 33 26.3	+1.9
KURK				pmax	pmax		
	comp=Z,39nm,1.3s						
MAUC	Maruska	28.54	315	*e*P	P	11 33 25.2	+0.7
OKC	Ostrava-Krasne	28.56	316	*e*P	P	11 33 24.2	-0.4
OKC	Ostrava-Krasne	28.56	316	*e*P	P	11 33 24.2	-0.4
STEB	Steborice	28.82	316	*e*P	P	11 33 26.4	-0.5
PABE	Paberze	28.82	330		P	11 33 26.9	+0.1
RONA	Rosalia, Austr	28.85	311	*i* P	P	11 33 27.5	+0.2
	comp=Z,4.6nm,0.5s,SNR=8.6						
MORC	Moravsky Berou	28.88	316		P	11 33 27.2	-0.4
MORC	Moravsky Berou	28.88	316	⇑P	P	11 33 27.7	+0.2
MORC	Moravsky Berou	28.88	316	*e*P	P	11 33 27.1	-0.5
MORC	Moravsky Berou	28.88	316	P	P	11 33 27.2	-0.4
MORC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KLMR	Klimovskoe	29.02	351	*e*P	P	11 33 26.7	-1.8
KLMR				pmax	pmax		
	comp=Z,35nm,1.1s						
KLMR				MLR	MLR		
	comp=Z,800nm,11.0s						
MAKZ	Makanchi	29.07	51	P	P	11 33 29.6	+0.5
MAKZ				IAmb	IAmb	11 33 31.9	
	comp=Z,23nm,1.4s						
MAKZ	Makanchi	29.07	51	P	P	11 33 29.7	+0.5
MAKZ				pmax	pmax		
	comp=Z,23nm,1.4s						
ARSA	Arzberg	29.20	310	*i* P	P	11 33 30.6	+0.2
	comp=Z,3.4nm,0.6s,SNR=4.1						
CONA	Conrad Observa	29.20	312	*i* P	P	11 33 30.7	+0.2
	comp=Z,8.2nm,1.0s,SNR=4.1						
VRAC	Vranov	29.26	315	P	P	11 33 31.0	+0.2
	comp=Z,5.2nm,0.7s,baz=102,slow=8.2,SNR=5.7						
VRAC				LR	LR	11 47 56.0	
	comp=Z,575nm,19.0s,baz=110,slow=42						
	comp=Z,5.2nm,0.7s						
VRAC	Vranov	29.26	315	⇑P	P	11 33 31.4	+0.5
VRAC	Vranov	29.26	315	*e*P	P	11 33 31.1	+0.2
VRAC	Vranov	29.26	315	P	P	11 33 31.3	+0.5
MK31	Makanchi Array	29.27	51	P	P	11 33 32.1	+1.1
MK31				IAmb	IAmb	11 33 33.4	
	comp=Z,25nm,0.8s						
MK31	Makanchi Array	29.27	51	P	P	11 33 32.1	+1.1
MK31				pmax	pmax		
	comp=Z,25nm,0.8s						
MKAR	Makanchi Array	29.27	51	P	P	11 33 32.2	+1.2
	comp=Z,24nm,0.7s,baz=247,slow=7.9,SNR=219						
MKAR				ScP	ScP	11 40 15.2	-2.9
	comp=Z,1.2nm,0.8s,baz=273,slow=4.5,SNR=4.0						
MKAR				LR	LR	11 46 38.8	
	comp=Z,712nm,18.2s,baz=253,slow=39						
	comp=Z,24nm,0.7s						
MKAR	Makanchi Array	29.27	51		P	11 33 32.4	+1.5
MKAR	Makanchi Array	29.27	51	*i* P	P	11 33 32.5	+1.5
MKAR				pmax	pmax		
	comp=Z,25nm,0.7s						
KRUC	Moravsky	29.28	314	*e*P	P	11 33 31.1	0.0
SOKA	Soboth	29.35	309	*e*P	P	11 33 32.5	+0.7
	comp=Z,7.9nm,1.1s						
KRLC	Kraliky	29.45	316	*e*P	P	11 33 32.6	0.0
KRLC				P	pP	11 33 38.7	-0.3
KRLC	Kraliky	29.45	316	*e*P	P	11 33 32.6	0.0
KRLC				*e*pP	pP	11 33 38.7	-0.3
OBKA	Obir	29.62	308	*e*P	P	11 33 34.8	+0.6
	comp=Z,8.1nm,1.0s						
DPC	Dobruska-Polom	29.84	316	*e*P	P	11 33 35.9	-0.1
DPC	Dobruska-Polom	29.84	316	*e*P	P	11 33 35.9	-0.1
DPC	Dobruska-Polom	29.84	316	P	P	11 33 35.5	-0.5
	comp=Z,15nm,0.9s						
TREC	Trest	29.92	314	*e*P	P	11 33 37.7	+0.9
TREC	Trest	29.92	314	*e*P	P	11 33 37.7	+0.9
VSU	Vasula	29.94	337	*ce*P	P	11 33 36.0	-0.7
VSU				pmax	pmax		
	comp=Z,32nm,0.7s						
OSTC	Ostas	29.99	317	*e*P	P	11 33 37.5	+0.2
OSTC				*e**PP	pP	11 33 43.4	-0.2
OSTC	Ostas	29.99	317	*e*P	P	11 33 37.5	+0.2
OSTC				*e*pP	pP	11 33 43.4	-0.2
KSP	Ksiaz	30.06	317	P	P	11 33 37.6	-0.3
	comp=Z,18nm,0.9s						
UPC	Upice	30.08	316	*e*P	P	11 33 38.3	+0.2
UPC	Upice	30.08	316	*e*P	P	11 33 38.3	+0.2
CHVC	Chvalec	30.09	317	*e*P	P	11 33 38.5	+0.3
CHVC	Chvalec	30.09	317	*e*P	P	11 33 38.5	+0.3
MOA	Molln	30.20	311	*i* P	P	11 33 39.6	+0.4
	comp=Z,11nm,0.6s,SNR=17						
CESX	Cesi	30.20	300		P	11 33 40.0	+0.7
MYKA	Terra Mystica	30.25	308	*e*P	P	11 33 40.8	+1.0
	comp=Z,20nm,1.7s						
CKRC	Cesky Krumlov	30.48	313	*e*P	P	11 33 41.5	-0.2
CKRC	Cesky Krumlov	30.48	313	*e*P	P	11 33 41.5	-0.2
BIOA	Bad Ischl, Aus	30.55	310	*i* P	P	11 33 42.7	+0.4
	comp=Z,19nm,0.5s,SNR=20						
KBA	Koelnbreinsper	30.57	309	*i* P	P	11 33 43.2	+0.5
	comp=Z,20nm,0.6s						
PRU	Pruhonice	30.75	315	*e*P	P	11 33 43.5	-0.5
PRU	Pruhonice	30.75	315	*e*P	P	11 33 43.5	-0.5
ZVC	Zvikov	30.76	314	*e*P	P	11 33 44.4	+0.2
GEC2	GERESS Array S	30.87	312	*e*P	P	11 33 44.7	-0.5
	comp=Z,2.7nm,0.8s,baz=108,slow=9.3						
GERES	GERESS Array B	30.87	312	P	P	11 33 44.5	-0.7
	comp=Z,2.3nm,0.5s,baz=113,slow=8.2,SNR=23						
GERES				PcP	PcP	11 36 41.7	0.0
	comp=Z,1.7nm,0.8s,baz=102,slow=3.1,SNR=5.4						
GERES				ScP	ScP	11 40 20.6	-2.7
	comp=Z,0.7nm,0.8s,baz=146,slow=2.6,SNR=3.7						
GERES				LR	LR	11 48 56.7	
	comp=Z,391nm,19.5s,baz=3.5,slow=42						
	comp=Z,2.3nm,0.5s						
ABTA	Abfaltersbach	31.04	308	*i* P	P	11 33 47.3	+0.6
	comp=Z,13nm,0.8s,SNR=7.2						
KHC	Kasperske Hory	31.04	313		P	11 33 45.9	-0.7
KHC	Kasperske Hory	31.04	313	*ce*P	P	11 33 47.4	+0.8
KHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KHC	Kasperske Hory	31.04	313	*e*P	P	11 33 46.2	-0.4
KHC				*e*pP	pP	11 33 53.1	+0.1
LESA	Schwarzleotal	31.10	309	*i* P	P	11 33 47.1	-0.1
	comp=Z,9.7nm,0.5s,SNR=14						
ZSN	Zaisan	31.14	51	*e*P	P	11 33 48.4	+0.8
ZSN	Zaisan	31.14	51	*e*P	P	11 33 48.3	+0.8
BRG	Berggiesshubel	31.44	316	*e*P	P	11 33 49.3	-0.8
	comp=Z,3.1nm,0.7s,baz=108,slow=9.3						
CTI	Castel Tesino	31.46	306		P	11 33 50.8	+0.4
CTI				IAmb	IAmb	11 33 51.5	
	comp=Z,19nm,0.9s						
CTI	Castel Tesino	31.46	306	P	P	11 33 50.8	+0.4
CTI				pmax	pmax		
	comp=Z,19nm,0.9s						
WET	Wettzell	31.48	313	*e*P	P	11 33 50.1	-0.4
	comp=Z,7.9nm,0.8s,baz=108,slow=9.3						
LODK	Lodwar	31.52	206	P	P	11 33 53.6	+2.4
	SNR=14						
LODK	Lodwar	31.52	206	P	P	11 33 51.9	+0.7
ZCCA	Zocca	31.61	303	P	P	11 33 52.9	+1.2
HSKC	Hora Svate Kat	31.64	315	*e*P	P	11 33 51.0	-0.9
WTTA	Wattenberg	31.75	309	*i* P	P	11 33 52.8	-0.2
	comp=Z,19nm,0.5s,SNR=16						
WATA	Walderalm	31.80	309	*i* P	P	11 33 52.9	-0.6
	comp=Z,12nm,0.6s,SNR=18						
SQTA	Sankt Quirin	32.02	308	*i* P	P	11 33 55.0	-0.3
	comp=Z,26nm,0.5s,SNR=27						
ROTZ	Rotzenmuhle	32.09	313	*e*P	P	11 33 56.0	+0.2
	comp=Z,3.5nm,0.9s,baz=108,slow=9.3						
CLL	Collm	32.15	316	*i* P	P	11 33 55.9	-0.4
CLL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CLL	Collm	32.15	316	*e*P	P	11 33 56.0	-0.3
	comp=Z,7.8nm,0.9s,baz=108,slow=9.3						
CLL	Collm	32.15	316	P	P	11 33 55.8	-0.5
	comp=Z,11nm,0.9s						
CLL	Collm	32.15	316	*i* P	P	11 33 55.9	-0.4
	comp=Z,10.0nm,1.0s						
CLL				*i* x	x	11 34 02.2	
CLL				AMS	AMS	11 48 00.0	
	comp=Z,400nm,19.0s						
FUR	Furstenfeldbru	32.21	310	*e*P	P	11 33 56.8	-0.2
	comp=Z,51nm,0.8s,baz=108,slow=9.3						
MANZ	Manzenberg	32.22	314	*e*P	P	11 33 56.8	-0.3
	comp=Z,83nm,2.2s,baz=108,slow=9.3						
FETA	Feichten	32.29	308	*i* P	P	11 33 57.6	-0.2
	comp=Z,24nm,0.8s						
WMQ	Urumqi	32.37	58	*e*P	P	11 34 00.1	+1.6
WMQ				pmax	pmax		
	comp=Z,19nm,1.1s						
WMQ				LR	LR		
	comp=Z,690nm,14.1s						
WMQ				LR	LR		
	comp=Z,1µm,11.5s						
WMQ				LR	LR		
	comp=Z,490nm,17.5s						
RETA	Reutte	32.38	309	*i* P	P	11 33 57.6	-0.9
	comp=Z,8.0nm,0.5s						
FIA1	FINESS Array S	32.49	340		P	11 33 58.8	-0.4
FINES	FINESS Array B	32.49	340	P	P	11 33 58.9	-0.2
	comp=Z,12nm,0.6s,baz=145,slow=9.7,SNR=61						
FINES				ScP	ScP	11 40 26.2	-2.1
	comp=Z,2.9nm,0.7s,baz=121,slow=4.8,SNR=5.9						
FINES				LR	LR	11 48 09.5	
	comp=Z,410nm,18.6s,baz=154,slow=38						
	comp=Z,12nm,0.6s						
FUORN	Ofenpass-Fuorn	32.52	307	P	P	11 34 00.2	+0.3
KEST	Kesra	32.64	287	P	P	11 34 02.4	+1.5
	comp=Z,21nm,0.8s,baz=357,slow=1.8,SNR=10.0						
	comp=Z,21nm,0.8s						
GRF	Grafenberg Arr	32.68	313	*e*P	P	11 34 01.1	+0.1
	comp=Z,20nm,0.8s,baz=108,slow=9.3						
DAVOX	Davos/Dischmat	32.81	307	P	P	11 34 02.3	-0.1
	comp=Z,7.9nm,0.5s,baz=113,slow=4.3,SNR=21						
	comp=Z,7.9nm,0.5s						
UBR	Ueberruh	32.85	309	*e*P	P	11 34 02.3	-0.3
	comp=Z,23nm,0.9s,baz=108,slow=9.3						
DAVA	Damuels	32.91	308	*i* P	P	11 34 02.9	-0.4
	comp=Z,46nm,0.8s						
TUE	Stuetta	33.11	307		P	11 34 04.9	-0.2
ZAA0	Zalesovo Array	33.39	39		P	11 34 06.5	-0.7
ZAA0				IAmb	IAmb	11 34 09.1	
	comp=Z,19nm,0.7s						
ZALV	Zalesovo Beam	33.39	39	P	P	11 34 07.6	+0.4
	comp=Z,15nm,0.6s,baz=255,slow=9.3,SNR=93						
ZALV				PP	PP	11 35 19.1	-3.6
	comp=Z,10.0nm,0.9s,baz=262,slow=11,SNR=3.5						
ZALV				ScP	ScP	11 40 28.3	-3.4
	comp=Z,1.2nm,0.6s,baz=224,slow=4.1,SNR=3.8						
ZALV				LR	LR	11 50 30.2	
	comp=Z,156nm,18.1s,baz=245,slow=41						
	comp=Z,15nm,0.6s						
ZALV	Zalesovo Beam	33.39	39	*i* P	P	11 34 07.5	+0.4
ZALV				pmax	pmax		
	comp=Z,14nm,0.6s						
DGZ	Jazzator, Alta	33.40	48	*c i*P	P	11 34 08.3	+0.9
DGZ				pmax	pmax		
	comp=Z,16nm,0.8s						
FLTG	Flechtingen	33.55	317	*e*P	P	11 34 08.0	-0.5
	comp=Z,5.0nm,0.8s,baz=108,slow=9.3						
CLZ	Clausthal	33.87	316	*e*P	P	11 34 11.0	-0.4
	comp=Z,14nm,0.8s,baz=108,slow=9.3						
SENIN	Lac Senin/Sane	34.48	306		P	11 34 15.9	-1.1
SENIN				IAmb	IAmb	11 34 24.0	
	comp=Z,25nm,1.2s						
TNS	Taunus Mts	34.54	313	*e*P	P	11 34 18.0	+0.7
	comp=Z,7.3nm,0.8s,baz=108,slow=9.3						
BSEG	Bad Segeberg	34.66	320	*e*P	P	11 34 18.4	+0.3
	comp=Z,3.4nm,0.8s,baz=108,slow=9.3						
KASTN	Kahler Asten	34.84	315	*e*P	P	11 34 20.8	+1.1
	comp=Z,12nm,0.8s,baz=108,slow=9.3						
BUG	Bochum--Univer	35.59	315	*e*P	P	11 34 27.0	+0.8
	comp=Z,11nm,0.8s,baz=108,slow=9.3						
WLF	Walferdange	35.85	311		P	11 34 27.9	-0.6
WLF				IAmb	IAmb	11 34 29.2	
	comp=Z,27nm,0.9s						
WLF	Walferdange	35.85	311	P	P	11 34 27.9	-0.6
WLF				pmax	pmax		
	comp=Z,27nm,0.9s						
WLF	Walferdange	35.85	311	*d*P	P	11 34 27.8	-0.6
	comp=Z,20nm,0.9s						
HFS	Hagfors	36.00	331	P	P	11 34 29.5	-0.1
	comp=Z,38nm,0.4s,baz=116,slow=10,SNR=355						
HFS				LR	LR	11 50 18.8	
	comp=Z,685nm,20.5s,baz=126,slow=38						
	comp=Z,38nm,0.4s						
BTNL	Ternell	36.07	313	*d*P	P	11 34 32.1	+1.7
	comp=Z,11nm,0.8s						
KIBK	Kibwezi	36.09	198	P	P	11 34 33.7	+2.8
	SNR=9.8						
BHOU	Houvegnez	36.09	312	*d*P	P	11 34 31.2	+0.6
	comp=Z,9.5nm,0.9s						
MEM	Membach	36.15	313	*d*P	P	11 34 33.2	+2.1
LSA	Lhasa	36.24	83	P	P	11 34 30.0	-2.6
APA	Apatity	36.26	350	⇓*e*P	P	11 34 32.7	+1.0
APA				*e*		11 35 51.5	
APA				pmax	pmax		
	comp=Z,11nm,1.0s						
APA				MLR	MLR		
	comp=Z,1µm,8.0s						
LVZ	Lovozero	36.39	351	*ce*P	P	11 34 33.1	+0.2
LVZ				pmax	pmax		
	comp=Z,73nm,2.5s						
RCHB	Rochefort	36.54	312	*d*P	P	11 34 34.3	0.0
	comp=Z,10nm,1.0s						
BCLA	Clavier	36.55	312	*d*P	P	11 34 35.1	+0.7
	comp=Z,9.7nm,0.9s						
BGES	Gesves	36.67	312	*d*P	P	11 34 35.6	+0.1
BMRD	Maredsous	36.86	312	*d*P	P	11 34 37.8	+0.8
	comp=Z,11nm,0.9s						
DOU	Dourbes	36.92	312	*d*P	P	11 34 37.5	-0.1
	comp=Z,15nm,0.9s						
MBAR	Mbarara	37.05	211	LR	LR	11 50 27.6	
	comp=Z,509nm,20.4s,baz=40,slow=37						
MBAR	Mbarara	37.05	211	P	P	11 34 41.3	+2.1
MBAR	Mbarara	37.05	211	P	P	11 34 39.8	+0.6
MBAR				IAmb	IAmb	11 34 48.2	
	comp=Z,47nm,1.5s						
MBAR	Mbarara	37.05	211	*i* P	P	11 34 40.5	+1.3
MBAR				pmax	pmax		
	comp=Z,18nm,1.1s						
OSL	Oslo	37.16	329	*e*P	P	11 34 39.5	+0.1
UCC	Uccle	37.22	313	*d*P	P	11 34 40.7	+0.6
	comp=Z,21nm,0.9s						
NC602	NORSAR Array S	37.22	331	*e*P	P	11 34 39.3	-0.8
KONO	Kongsberg	37.51	328	*e*P	P	11 34 41.8	-0.6
NB2	NORSAR Subarra	37.52	331	P	P	11 34 42.1	-0.5
	comp=Z,6.5nm,0.5s,baz=123,slow=8.6						
NB2	NORSAR Subarra	37.52	331	P	P	11 34 42.1	-0.5
	baz=123,slow=8.6						
NOA	NORSAR Array B	37.52	331	P	P	11 34 42.1	-0.5

	comp=Z,11nm,0.7s,baz=123,slow=8.4,SNR=64						
NOA				PP	**PP**	**11 36 06.5**	**-1.8**
	comp=Z,5.9nm,0.9s,baz=126,slow=11,SNR=4.4						
NOA				LR	LR	11 51 16.3	
	comp=Z,611nm,19.8s,baz=130,slow=38						
	comp=Z,11nm,0.7s						
NC303	**NORSAR Array S**	**37.56**	**331**		**P**	**11 34 42.2**	**-0.6**
NC303				IAmb	IAmb	11 34 49.2	
	comp=Z,56nm,1.4s						
NBO00	**NORSAR Array S**	**37.70**	**331**	P	**P**	**11 34 44.0**	**-0.1**
NBO00				IAmb	IAmb	11 34 49.3	
	comp=Z,54nm,1.4s						
GOMU	**GeErMu**	**37.94**	**71**	P	**P**	**11 34 46.4**	**-0.5**
GOMU				S	**S**	**11 40 37.5**	**-0.5**
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GOMU				LR	LR		
	comp=Z,530nm,16.6s						
GOMU				LR	LR		
	comp=Z,450nm,17.4s						
SHL	**Shillong**	**38.14**	**89**		**P**	**11 34 48.2**	**-0.3**
SHL				IAmb	IAmb	11 34 49.6	
	comp=Z,29nm,1.0s						
SHL	**Shillong**	**38.14**	**89**	P	**P**	**11 34 48.2**	**-0.3**
SHL				pmax	pmax		
	comp=Z,29nm,1.0s						
SKAR	**Skarslia**	**38.57**	**329**	*e*P	**P**	**11 34 52.0**	**+0.5**
DOMB	**Dombas**	**38.93**	**331**	*e*P	**P**	**11 34 54.3**	**-0.1**
ODD1	**Odda**	**38.96**	**327**	*e*P	**P**	**11 34 55.8**	**+1.0**
BRDH	**Bariadhala**	**39.03**	**93**	LR	LR	11 52 53.3	
	comp=Z,142nm,18.9s,baz=326,slow=39						
VADS	**Vadso**	**39.20**	**350**	*e*P	**P**	**11 34 56.7**	**+0.2**
NSS	**Namsos**	**39.23**	**336**	*e*P	**P**	**11 34 56.9**	**+0.1**
ARA0	**ARCESS Array S**	**39.33**	**347**	*e*P	**P**	**11 34 58.1**	**+0.4**
ARCES	**ARCESS Array B**	**39.33**	**347**	P	**P**	**11 34 57.2**	**-0.4**
	comp=Z,2.7nm,0.5s,baz=152,slow=8.8,SNR=34						
ARCES				PP	**PP**	**11 36 25.6**	**-2.2**
	comp=Z,5.5nm,0.8s,baz=153,slow=13,SNR=5.3						
ARCES				ScP	**ScP**	**11 40 51.6**	**-1.8**
	comp=Z,4.6nm,0.8s,baz=160,slow=3.9,SNR=6.6						
ARCES				LR	LR	11 52 43.4	
	comp=Z,794nm,18.8s,baz=152,slow=38						
	comp=Z,2.7nm,0.5s						
MOR8	**Moi Rana**	**39.46**	**339**	*e*P	**P**	**11 34 58.3**	**-0.5**
BER	**Bergen**	**39.75**	**328**	*e*P	**P**	**11 35 01.8**	**+0.6**
RAUS	**Rausandaksla**	**39.76**	**339**	*e*P	**P**	**11 35 01.0**	**-0.3**
MOL	**Molde**	**39.80**	**332**	*e*P	**P**	**11 35 02.2**	**+0.6**
LEIR	**Leirfjorden**	**39.83**	**338**	*e*P	**P**	**11 35 01.9**	**0.0**
AKN	**Aaknes**	**39.84**	**331**	*e*P	**P**	**11 35 03.3**	**+1.3**
ASK	**Askoy**	**39.85**	**328**	*e*P	**P**	**11 35 02.0**	**-0.1**
KNGR	**Kungurtug, Tuv**	**39.92**	**48**	*i* P	**P**	**11 35 05.4**	**+2.4**
KNGR				pmax	pmax		
	comp=Z,36nm,0.9s						
STOK	**Stokkvaagen**	**40.01**	**338**	*e*P	**P**	**11 35 03.3**	**0.0**
FAUS	**Fauske**	**40.04**	**341**	*e*P	**P**	**11 35 03.4**	**-0.1**
VAGH	**Vaagaholmen**	**40.19**	**339**	*e*P	**P**	**11 35 05.0**	**+0.2**
JETT	**Jettan, Norway**	**40.38**	**345**	*e*P	**P**	**11 35 06.4**	**0.0**
FOO	**Floro**	**40.40**	**329**	*e*P	**P**	**11 35 06.9**	**+0.3**
STEI	**Steigen**	**40.43**	**341**	*e*P	**P**	**11 35 06.5**	**-0.3**
HAMF	**Hammerfest**	**40.61**	**347**	*e*P	**P**	**11 35 08.7**	**+0.5**
TRO	**Tromso**	**40.77**	**345**	*e*P	**P**	**11 35 09.4**	**-0.1**
CWF	**Charnwood Fore**	**41.04**	**315**	*e*P	**P**	**11 35 11.4**	**-0.6**
CWF				IAmb	IAmb	11 35 12.5	
	comp=Z,18nm,0.8s						
SWN1	**Swindon**	**41.16**	**313**	*e*P	**P**	**11 35 13.0**	**0.0**
SWN1				IAmb	IAmb	11 35 14.2	
	comp=Z,56nm,0.5s						
STRD	**Stroud**	**41.42**	**313**	*e*P	**P**	**11 35 14.6**	**-0.5**
STRD				IAmb	IAmb	11 35 16.2	
	comp=Z,42nm,0.8s						
HPK	**Haverah Park**	**41.43**	**317**	*e*P	**P**	**11 35 14.8**	**-0.5**
HPK				IAmb	IAmb	11 35 16.0	
	comp=Z,15nm,0.8s						
GTA	**Gaotai**	**41.46**	**66**	P	**P**	**11 35 16.8**	**+1.0**
GTA				pP	pP	11 35 21.8	-0.6
GTA				ScP	**ScP**	**11 41 01.3**	**-1.1**
GTA				pmax	pmax		
	comp=Z,11nm,1.3s						
GTA				LR	LR		
	comp=Z,390nm,16.3s						
GTA				LR	LR		
	comp=Z,500nm,19.5s						
GTA				LR	LR		
	comp=Z,600nm,19.5s						
EDMD	**Edmundbyers**	**41.79**	**318**	*e*P	**P**	**11 35 17.8**	**-0.4**
EDMD				IAmb	IAmb	11 35 18.5	
	comp=Z,15nm,0.8s						
MONM	**Monmouth**	**41.82**	**313**	*e*P	**P**	**11 35 17.7**	**-0.7**
MONM				IAmb	IAmb	11 35 18.8	
	comp=Z,16nm,0.7s						
HLM1	**Long Mynd**	**41.95**	**314**	*e*P	**P**	**11 35 18.5**	**-1.0**
HLM1				IAmb	IAmb	11 35 20.7	
	comp=Z,17nm,0.7s						
MCH1	**Michaelchurch**	**41.96**	**313**	*e*P	**P**	**11 35 18.8**	**-0.8**
MCH1				IAmb	IAmb	11 35 19.7	
	comp=Z,28nm,0.6s						
FOEL	**Foel Wylfa**	**42.20**	**315**	*e*P	**P**	**11 35 21.2**	**-0.3**
FOEL				IAmb	IAmb	11 35 23.8	
	comp=Z,12nm,0.7s						
MOY	**Mondy**	**42.23**	**47**	*e*P	**P**	**11 35 22.8**	**+0.9**
MOY				pmax	pmax		
	comp=Z,47nm,2.2s						
DRUM	**Mains of Drumt**	**42.51**	**321**	*e*P	**P**	**11 35 23.5**	**-0.5**
DRUM				IAmb	IAmb	11 35 24.6	
	comp=Z,11nm,0.6s						
EKA	**Eskdalemuir Ar**	**42.56**	**318**	P	**P**	**11 35 23.5**	**-0.9**
	comp=Z,7.6nm,0.7s,baz=104,slow=7.9,SNR=39						
EKA				PcP	**PcP**	**11 37 16.9**	**+0.4**
	comp=Z,5.7nm,1.0s,baz=96,slow=4.6,SNR=3.8						
	comp=Z,7.6nm,0.7s						
EDI	**Edinburgh**	**42.69**	**319**	*e*P	**P**	**11 35 24.9**	**-0.5**
EDI				IAmb	IAmb	11 35 26.9	
	comp=Z,17nm,0.6s						
ESDC	**Sonseca Array**	**42.69**	**295**	P	**P**	**11 35 26.2**	**+0.4**
	comp=Z,8.3nm,0.9s,baz=71,slow=8.4,SNR=18						
	comp=Z,8.3nm,0.9s						
NRIK	**Noril'sk**	**42.82**	**19**	P	**P**	**11 35 26.9**	**+0.6**
	comp=Z,14nm,0.9s,baz=226,slow=5.7,SNR=24						
NRIK				LR	LR	11 57 17.9	
	comp=Z,401nm,19.3s,baz=242,slow=42						
	comp=Z,14nm,0.9s						
NRIK	**Noril'sk**	**42.82**	**19**	P	**P**	**11 35 27.0**	**+0.6**
NRIK				IAmb	IAmb	11 35 28.3	
	comp=Z,21nm,1.1s						
NRIK	**Noril'sk**	**42.82**	**19**	P	**P**	**11 35 27.0**	**+0.6**
NRIK				pmax	pmax		
	comp=Z,21nm,1.1s						
MCD	**Coleburn Disti**	**43.06**	**322**	*e*P	**P**	**11 35 27.9**	**-0.6**
MCD				IAmb	IAmb	11 35 28.8	
	comp=Z,18nm,0.6s						
INVG	**Invergeldie, C**	**43.25**	**320**	*e*P	**P**	**11 35 29.2**	**-0.8**
INVG				IAmb	IAmb	11 35 30.5	
	comp=Z,15nm,0.9s						
ZAK	**Zakamensk**	**43.57**	**49**	*e*P	**P**	**11 35 33.1**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BIGH	**Upper Bighouse**	**43.61**	**323**	*e*P	**P**	**11 35 31.5**	**-1.3**
BIGH				IAmb	IAmb	11 35 33.2	
	comp=Z,15nm,1.1s						
TNCH	**TengChong**	**43.94**	**86**	⇑P	**P**	**11 35 37.3**	**+1.1**
TNCH				sP	pP	11 35 42.1	-0.6
TNCH				S	**S**	**11 42 01.0**	**-6.1**
TNCH				pmax	pmax		
	comp=Z,48nm,0.7s						
TNCH				LR	LR		
	comp=Z,250nm,6.3s						
TNCH				LR	LR		
	comp=Z,260nm,5.5s						
TNCH				LR	LR		
	comp=Z,300nm,15.1s						
MD01	**Midelt array s**	**44.63**	**286**	P	**P**	**11 35 42.9**	**+1.3**
MD31	**MD31**	**44.63**	**286**	P	**P**	**11 35 42.7**	**+1.2**
LZDM	**Lanzhou Array**	**45.07**	**70**	P	**P**	**11 35 46.0**	**+0.7**
	comp=Z,2.0nm,0.4s,baz=269,slow=7.4,SNR=5.0						
LZDM				LR	LR	11 57 48.5	
	comp=Z,518nm,19.5s,baz=345,slow=40						
	comp=Z,2.0nm,0.4s						
PBAR	**Barrancos**	**45.29**	**293**	*e*P	**P**	**11 35 47.2**	**+0.6**
PBAR				*i* IAmb	IAmb	11 35 48.2	
	comp=Z,54nm,1.0s						
MTE	**Manteigas**	**45.31**	**297**	*e*P	**P**	**11 35 48.1**	**+1.3**
MTE				*i* IAmb	IAmb	11 35 53.9	
	comp=Z,127nm,1.6s						
PCBR	**Castelo Branco**	**45.35**	**296**	*e*P	**P**	**11 35 48.0**	**+1.0**
PCBR				*i* IAmb	IAmb	11 35 58.3	
	comp=Z,53nm,1.0s						
PMRV	**Marv??o**	**45.35**	**295**	*e*P	**P**	**11 35 47.5**	**+0.5**
PMRV				*i* IAmb	IAmb	11 35 49.8	
	comp=Z,82nm,1.4s						
PVIS	**Viseu**	**45.53**	**297**	*e*P	**P**	**11 35 49.5**	**+1.0**
PESTR	**Estremoz**	**45.59**	**295**	*e*P	**P**	**11 35 49.8**	**+0.7**
PESTR				*i* IAmb	IAmb	11 35 52.3	
	comp=Z,71nm,2.2s						
SONM	**Songino Array**	**45.60**	**53**	P	**P**	**11 35 50.1**	**+1.1**
	comp=Z,6.0nm,0.9s,baz=282,slow=11,SNR=28						
SONM				ScP	**ScP**	**11 41 16.0**	**-3.0**
	comp=Z,0.9nm,0.8s,baz=239,slow=4.3,SNR=4.6						
SONM				LR	LR	11 55 39.6	
	comp=Z,252nm,18.7s,baz=266,slow=37						
	comp=Z,6.0nm,0.9s						
SONM	**Songino Array**	**45.60**	**53**	P	**P**	**11 35 49.8**	**+0.7**
SONM	**Songino Array**	**45.60**	**53**	P	**P**	**11 35 49.8**	**+0.7**
SONM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PGAV	**Gavieira, Arco**	**45.64**	**299**	*e*P	**P**	**11 35 50.3**	**+0.9**
PGAV				*i* IAmb	IAmb	11 35 56.2	
	comp=Z,203nm,1.8s						
PSARD	**Sardoal**	**45.91**	**296**	*e*P	**P**	**11 35 52.8**	**+1.3**
PSARD				*i* IAmb	IAmb	11 35 55.5	
	comp=Z,48nm,1.8s						
PBEJ	**Beja**	**45.96**	**293**	*e*P	**P**	**11 35 52.8**	**+0.9**
PBEJ				*i* IAmb	IAmb	11 36 10.8	
	comp=Z,50nm,1.9s						
ULN	**Ulaanbaatar**	**46.04**	**53**	P	**P**	**11 35 53.5**	**+0.9**
ULN	**Ulaanbaatar**	**46.04**	**53**	*ce*P	**P**	**11 35 53.7**	**+1.1**
ULN				pmax	pmax		
	comp=Z,29nm,1.0s						
PCAS	**Casmilo, Conde**	**46.09**	**296**	*e*P	**P**	**11 35 54.0**	**+1.1**
PCAS				*i* IAmb	IAmb	11 35 57.4	
	comp=Z,140nm,1.6s						
PZH	**PanZhiHua**	**46.12**	**83**	P	**P**	**11 35 53.4**	**-0.1**
PZH				S	**S**	**11 42 41.5**	**+2.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MOE	**Montemor**	**46.24**	**294**	*e*P	**P**	**11 35 56.0**	**+1.9**
MOE				*i* IAmb	IAmb	11 35 57.0	
	comp=Z,110nm,1.7s						
CD2	**Chengdu**	**46.39**	**77**	P	**P**	**11 35 56.1**	**+0.7**
CD2				S	**S**	**11 42 43.3**	**+1.2**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				LR	LR		
	comp=Z,370nm,9.0s						
PSBE	**So Bento**	**46.40**	**296**	*e*P	**P**	**11 35 56.8**	**+1.3**
PSBE				*i* IAmb	IAmb	11 36 02.6	
	comp=Z,173nm,1.8s						
CHTO	**Chiang Mai**	**46.85**	**94**	P	**P**	**11 35 59.0**	**-0.2**
CHTO				IAmb	IAmb	11 36 05.7	
	comp=Z,6.9nm,0.8s						
CHTO	**Chiang Mai**	**46.85**	**94**	P	**P**	**11 35 59.9**	**+0.7**
	comp=Z,9.5nm,0.9s						
CHTO	**Chiang Mai**	**46.85**	**94**	P	**P**	**11 35 59.0**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**47.02**	**95**	P	**P**	**11 36 00.8**	**+0.4**
	comp=Z,4.5nm,0.8s,baz=294,slow=8.6,SNR=16						
CMAR				PcP	**PcP**	**11 37 32.1**	**-0.5**
	comp=Z,2.4nm,0.8s,baz=283,slow=5.4,SNR=4.4						
CMAR				ScP	**ScP**	**11 41 24.5**	**-0.8**
	comp=Z,1.0nm,0.3s,baz=298,slow=3.4,SNR=2.1						
CMAR				LR	LR	11 59 39.9	
	comp=Z,84nm,19.6s,baz=305,slow=41						
	comp=Z,4.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**47.02**	**95**	P	**P**	**11 36 00.6**	**+0.2**
TORD	**Torodi Ar. Bea**	**47.02**	**257**	P	**P**	**11 36 00.8**	**+0.3**
	comp=Z,15nm,1.0s,baz=56,slow=8.9,SNR=57						
TORD				ScP	**ScP**	**11 41 23.9**	**-1.4**
	comp=Z,1.4nm,0.8s,baz=44,slow=3.7,SNR=4.7						
TORD				LR	LR	11 58 39.0	
	comp=Z,527nm,18.5s,baz=52,slow=40						
	comp=Z,15nm,1.0s						
KMI	**Kunming**	**47.46**	**84**	P	**P**	**11 36 01.9**	**-2.2**
KMI				S	**S**	**11 43 06.3**	**+8.4**
KMI				pmax	pmax		
	comp=Z,22nm,0.8s						
KMI				LR	LR		
	comp=Z,410nm,23.7s						
KMI				LR	LR		
	comp=Z,220nm,16.1s						
KMI				LR	LR		
	comp=Z,330nm,22.7s						
SPB2	**Spitsbergen Ar**	**47.91**	**351**	P	**P**	**11 36 06.6**	**0.0**
SPA0	**Spitsbergen Ar**	**47.92**	**351**	*e*P	**P**	**11 36 07.1**	**+0.4**
SPITS	**Spitsbergen Ar**	**47.92**	**351**	P	**P**	**11 36 07.1**	**+0.4**
	comp=Z,6.2nm,0.4s,baz=142,slow=9.6,SNR=70						
SPITS				ScP	**ScP**	**11 41 26.4**	**-1.6**
	comp=Z,2.4nm,0.6s,baz=110,slow=6.6,SNR=5.3						
SPITS				LR	LR	11 58 19.4	
	comp=Z,331nm,19.4s,baz=159,slow=39						
	comp=Z,6.2nm,0.4s						
SPITS	**Spitsbergen Ar**	**47.92**	**351**	P	**P**	**11 36 07.3**	**+0.6**
SPITS				pmax	pmax		
	comp=Z,36nm,1.4s						
BTO	**Baotou**	**49.02**	**62**	*e*P	**P**	**11 36 15.9**	**+0.1**
BTO				PP	**PP**	**11 38 10.5**	**+1.3**
BTO				S	**S**	**11 43 20.8**	**+1.5**
BTO				pmax	pmax		
	comp=Z,120nm,0.7s						
BTO				pmax	pmax		
	comp=Z,500nm,5.0s						
BTO				LR	LR		
	comp=Z,950nm,13.2s						
BTO				LR	LR		
	comp=Z,920nm,15.5s						
BTO				LR	LR		
	comp=Z,1µm,12.8s						
XAN	**Xi'an**	**49.69**	**71**	⇑P	**P**	**11 36 19.9**	**-1.1**
XAN				pmax	pmax		
	comp=Z,15nm,0.8s						
XAN				LR	LR		
	comp=Z,330nm,17.2s						
XAN				LR	LR		
	comp=Z,690nm,16.5s						
XAN				LR	LR		
	comp=Z,560nm,17.9s						
HHC	**Hu-ho-hao-te**	**50.12**	**62**	*e*P	**P**	**11 36 25.3**	**+1.1**
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,190nm,6.4s						
BOD	**Bodaibo**	**50.15**	**39**	*e*P	**P**	**11 36 23.9**	**-0.1**
BOD				pmax	pmax		
	comp=Z,18nm,1.4s						
GYA	**Guiyang**	**50.26**	**81**	⇓P	**P**	**11 36 25.8**	**+0.3**
GYA				pmax	pmax		
	comp=Z,24nm,0.9s						
GYA				LR	LR		
	comp=Z,420nm,18.8s						
OPO	**Ambohidratompo**	**50.79**	**182**	LR	LR	11 59 47.4	
	comp=Z,324nm,18.0s,baz=158,slow=38						
LSZ	**Lusaka**	**51.41**	**206**	LR	LR	11 59 48.8	
	comp=Z,553nm,20.7s,baz=342,slow=38						
LSZ	**Lusaka**	**51.41**	**206**	P	**P**	**11 36 35.2**	**+1.2**
LSZ				IAmb	IAmb	11 36 43.4	
	comp=Z,12nm,1.0s						
LSZ	**Lusaka**	**51.41**	**206**	P	**P**	**11 36 35.2**	**+1.2**
LSZ				pmax	pmax		
	comp=Z,12nm,1.0s						
LYN	**LuoYang**	**52.37**	**69**	P	**P**	**11 36 42.4**	**+1.4**
LYN				pmax	pmax		
	comp=Z,45nm,1.0s						
LYN				LR	LR		
	comp=Z,640nm,14.4s						
LYN				LR	LR		
	comp=Z,690nm,21.0s						
LYN				LR	LR		
	comp=Z,990nm,21.3s						
BORG	**Borgarnes**	**52.67**	**330**	LR	LR	11 59 45.1	
	comp=Z,153nm,18.2s,baz=99,slow=37						
XLT	**XiLinHaoTe**	**52.79**	**57**	*e*P	**P**	**11 36 45.1**	**+1.0**
XLT				pmax	pmax		
	comp=Z,11nm,0.9s						
XLT				pmax	pmax		
	comp=Z,140nm,7.7s						
XLT				LR	LR		
	comp=Z,560nm,11.5s						
XLT				LR	LR		
	comp=Z,670nm,12.3s						
HNS	**HongShan**	**53.31**	**65**	⇑P	**P**	**11 36 48.6**	**+0.7**
HNS				pmax	pmax		
	comp=Z,12nm,1.0s						
HNS				LR	LR		
	comp=Z,310nm,17.5s						
HNS				LR	LR		
	comp=Z,580nm,13.2s						
HNS				LR	LR		
	comp=Z,610nm,15.9s						
BJI	**Beijing**	**53.73**	**62**	P	**P**	**11 36 51.9**	**+0.9**
BJI				pP	**pP**	**11 36 56.5**	**-1.1**
BJI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BJI				LR	LR		
	comp=Z,290nm,18.1s						
BJI				LR	LR		
	comp=Z,210nm,18.1s						
BJI				LR	LR		
	comp=Z,230nm,14.4s						
HILR	**Hailar Array B**	**54.21**	**49**	P	**P**	**11 36 55.2**	**+0.7**
	comp=Z,9.7nm,0.7s,baz=261,slow=5.9,SNR=16						
	comp=Z,9.7nm,0.7s						
KSANE	**Kasane**	**54.86**	**208**	P	**P**	**11 37 01.3**	**+1.8**
KSANE				IAmb	IAmb	11 37 09.1	
	comp=Z,29nm,1.3s						
WHN	**Wuhan**	**55.15**	**73**	⇓P	**P**	**11 37 02.3**	**+0.9**
GSI	**Gunungsitoli**	**55.37**	**114**	P	**P**	**11 37 04.2**	**+1.1**
	comp=Z,3µmcomp=Z,24nm,0.9s						
KULM	**Kulim**	**55.37**	**108**	P	**P**	**11 37 04.4**	**+1.2**
	comp=Z,12nm,1.1s						
PSI	**Prapat**	**55.49**	**111**	P	**P**	**11 37 05.0**	**+0.8**
	comp=Z,1.6nm,0.4s,baz=250,slow=15,SNR=3.7						
PSI				LR	LR	12 02 11.6	
	comp=Z,135nm,21.4s,baz=339,slow=37						
	comp=Z,1.6nm,0.4s						
PSI	**Prapat**	**55.49**	**111**	P	**P**	**11 37 05.0**	**+0.8**
TIA	**Tai'an**	**55.51**	**66**	P	**P**	**11 37 04.8**	**+0.8**
TIA				pmax	pmax		
	comp=Z,67nm,0.9s						
DBIC	**Dimbokro**	**55.96**	**255**	P	**P**	**11 37 07.3**	**-0.1**
	comp=Z,6.0nm,0.8s,baz=79,slow=7.9,SNR=6.4						
DBIC				LR	LR	12 04 03.9	
	comp=Z,396nm,19.7s,baz=65,slow=39						
	comp=Z,6.0nm,0.8s						
DBIC	**Dimbokro**	**55.96**	**255**	P	**P**	**11 37 08.1**	**+0.7**
DBIC				IAmb	IAmb	11 37 20.6	
	comp=Z,9.1nm,0.8s						
DBIC	**Dimbokro**	**55.96**	**255**	P	**P**	**11 37 08.1**	**+0.7**
DBIC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
QIZ	**Qiongzhong**	**55.96**	**88**	P	**P**	**11 37 06.5**	**-0.9**
QIZ				S	**S**	**11 44 53.9**	**-0.8**
QIZ				LR	LR		
	comp=Z,220nm,12.0s						
QIZ				LR	LR		
	comp=Z,280nm,18.0s						
QIZ				LR	LR		
	comp=Z,220nm,15.7s						
IPM	**Ipoh**	**56.15**	**108**	P	**P**	**11 37 08.0**	**-0.8**
IPM				IAmb	IAmb	11 37 19.1	
	comp=Z,16nm,0.8s						
IPM	**Ipoh**	**56.15**	**108**	P	**P**	**11 37 08.0**	**-0.8**
	comp=Z,24nm,1.1s						
TIXI	**Tiksi**	**56.43**	**22**	LR	LR	12 05 31.6	
	comp=Z,340nm,18.0s,baz=2.0,slow=40						
TIXI	**Tiksi**	**56.43**	**22**	P	**P**	**11 37 09.5**	**-0.4**
TIXI				IAmb	IAmb	11 37 16.2	
	comp=Z,20nm,1.1s						
TIXI	**Tiksi**	**56.43**	**22**	*ce*P	**P**	**11 37 10.0**	**0.0**
TIXI				pmax	pmax		
	comp=Z,15nm,1.0s						
YAK	**Yakutsk**	**57.71**	**33**	LR	LR	12 06 56.8	
	comp=Z,261nm,19.1s,baz=279,slow=41						
YAK	**Yakutsk**	**57.71**	**33**	P	**P**	**11 37 18.8**	**-0.3**
YAK	**Yakutsk**	**57.71**	**33**	*e*P	**P**	**11 37 19.1**	**-0.1**
YAK				*e*		11 38 11.8	
YAK				*e*		11 39 27.1	
YAK				*e*S	**S**	**11 45 18.4**	**+1.9**
YAK				*e*		11 47 09.6	
YAK				*e*SS	**SS**	**11 49 07.9**	**+1.4**
YAK				pmax	pmax		
	comp=Z,33nm,1.1s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,12nm,1.4s						
YAK				pmax	pmax		
	comp=Z,138nm,3.4s						
YAK				pmax	pmax		
	comp=N,108nm,3.2s						
YAK				pmax	pmax		
	comp=E,102nm,3.1s						
YAK				smax	smax		
	comp=N,155nm,4.2s						
YAK				smax	smax		
	comp=E,84nm,4.4s						
ZEA	**Zeya**	**57.99**	**43**	*e*P	**P**	**11 37 22.6**	**+1.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA				MLR	MLR		
	comp=Z,200nm,17.0s						
DL2	**Dalian**	**58.10**	**61**	P	**P**	**11 37 22.6**	**+0.3**
DL2				pmax	pmax		
	comp=Z,120nm,0.9s						
NJ2	**Nanjing**	**58.23**	**70**	*e*P	**P**	**11 37 23.8**	**+0.5**
NJ2				pP	**pP**	**11 37 27.1**	**-2.9**
NJ2				pmax	pmax		
	comp=Z,22nm,0.6s						
SUMG	**Summit**	**58.53**	**339**		**P**	**11 37 25.9**	**+0.7**
SUMG	**Summit**	**58.53**	**339**	P	**P**	**11 37 25.9**	**+0.7**
SUMG				pmax	pmax		
	comp=Z,67nm,0.9s						
HEH	**HeiHe**	**58.90**	**47**	*e*P	**P**	**11 37 28.3**	**+0.6**
HEH				pmax	pmax		
	comp=Z,32nm,0.9s						
HEH				LR	LR		
	comp=Z,410nm,14.5s						
HEH				LR	LR		
	comp=Z,560nm,12.9s						
HEH				LR	LR		
	comp=Z,940nm,14.7s						
PDSI	**Padang**	**58.99**	**114**	P	**P**	**11 37 29.7**	**+0.9**
CN2	**Changchun**	**59.37**	**55**	*e*P	**P**	**11 37 30.3**	**-0.8**
CN2				*e*S	**S**	**11 45 37.8**	**-1.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,400nm,13.0s						
CN2				LR	LR		
	comp=Z,200nm,13.0s						
CN2				LR	LR		
	comp=Z,200nm,12.0s						
TSUM	**Tsumeb**	**59.42**	**215**	LR	LR	12 05 19.5	
	comp=Z,234nm,18.2s,baz=333,slow=38						
TSUM	**Tsumeb**	**59.42**	**215**	P	**P**	**11 37 33.0**	**+1.2**
TSUM				IAmb	IAmb	11 37 36.7	
	comp=Z,20nm,1.3s						
GRTLG	**Ghanzi**	**59.67**	**210**		**P**	**11 37 33.6**	**+0.2**
BNX	**BinXian**	**60.13**	**52**	⇓P	**P**	**11 37 36.4**	**+0.1**
BNX				pmax	pmax		
	comp=Z,13nm,0.7s						
KGCAE	**Kacgae**	**60.59**	**208**	P	**P**	**11 37 41.5**	**+1.8**
LBTB	**Lobatse**	**61.30**	**204**	LR	LR	12 04 54.0	
	comp=Z,325nm,20.9s,baz=30,slow=36						
LBTB	**Lobatse**	**61.30**	**204**	P	**P**	**11 37 45.8**	**+1.4**
LBTB	**Lobatse**	**61.30**	**204**	P	**P**	**11 37 45.8**	**+1.4**
LBTB				pmax	pmax		
	comp=Z,22nm,1.0s						
KOOLE	**Kule**	**61.54**	**210**		**P**	**11 37 47.0**	**+0.8**
LKGWB	**Lokgwabe**	**62.12**	**209**		**P**	**11 37 50.2**	**+0.2**
YHNB	**Yeheng**	**63.16**	**77**	P	**P**	**11 37 56.4**	**-0.7**
KS19	**Wonju Array Si**	**63.20**	**61**	P	**P**	**11 37 56.5**	**-0.6**
EGSI	**Enggano, Bengk**	**63.21**	**116**	P	**P**	**11 37 59.1**	**+1.7**
KSAR	**Wonju Array Be**	**63.23**	**61**	P	**P**	**11 37 57.1**	**-0.2**
KSAR	**Wonju Array Be**	**63.23**	**61**	P	**P**	**11 37 57.1**	**-0.2**
KSRS	**Korea Array**	**63.26**	**61**	P	**P**	**11 37 57.4**	**-0.1**
	comp=Z,15nm,0.8s,baz=284,slow=7.0,SNR=68						
KSRS				LR	LR	12 09 44.6	
	comp=Z,199nm,19.2s,baz=285,slow=40						
	comp=Z,15nm,0.8s						
USRK	**Ussuriysk Ar.**	**63.71**	**53**	P	**P**	**11 37 59.5**	**-0.8**
	comp=Z,10nm,0.7s,baz=276,slow=7.9,SNR=15						
	comp=Z,10nm,0.7s						
SFJD	**Kangerlussuaq**	**64.06**	**334**	LR	LR	12 06 07.9	
	comp=Z,261nm,18.4s,baz=75,slow=36						
TULEG	**Thule**	**64.66**	**347**		**P**	**11 38 05.8**	**-0.3**
TULEG				IAmb	IAmb	11 38 13.9	
	comp=Z,15nm,0.9s						
BOSA	**Boshof**	**64.73**	**203**	P	**P**	**11 38 07.9**	**+0.7**

	comp=Z,12nm,0.9s,baz=18,slow=7.7,SNR=12						
BOSA				LR	LR	12 07 25.1	
	comp=Z,973nm,18.5s,baz=21,slow=37						
	comp=Z,12nm,0.9s						
BOSA	Boshof	64.73	203		P	11 38 08.8	+1.6
BOSA	Boshof	64.73	203	P	P	11 38 08.8	+1.6
BOSA				pmax	pmax		
	comp=Z,21nm,1.0s						
JNU	Nakatsue	67.18	64	LR	LR	12 10 51.0	
	comp=Z,210nm,21.8s,baz=302,slow=39						
SEY	Seymchan	67.41	29	LR	LR	12 14 01.8	
	comp=Z,224nm,18.8s,baz=312,slow=41						
SEY	Seymchan	67.41	29	*e*P	P	11 38 23.7	-0.2
SEY				pmax	pmax		
	comp=Z,30nm,1.3s						
JOW	Kunigami	67.84	72	LR	LR	12 12 19.8	
	comp=Z,379nm,19.3s,baz=303,slow=40						
MA2	Magadan	68.25	32	LR	LR	12 12 34.8	
	comp=Z,151nm,19.3s,baz=302,slow=40						
POIN	Pond Inlet	68.97	345		P	11 38 33.7	+0.2
POIN				IAmb	IAmb	11 38 40.7	
	comp=Z,11nm,0.9s						
YSS	Yuzhno-Sakhali	69.58	47	P	P	11 38 37.7	0.0
YSS	Yuzhno-Sakhali	69.58	47	*e*P	P	11 38 38.1	+0.4
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				MLR	MLR		
	comp=Z,400nm,19.0s						
BILL	Bilibino	69.61	21		P	11 38 38.1	+0.5
BILL				IAmb	IAmb	11 38 47.9	
	comp=Z,18nm,1.3s						
BILL	Bilibino	69.61	21	*i* P	P	11 38 39.2	+1.6
BILL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,198nm,17.0s						
SUR	Sutherland	69.70	205	LR	LR	12 10 08.2	
	comp=Z,415nm,18.4s,baz=23,slow=37						
RES	Resolute Bay	70.47	350		P	11 38 42.9	+0.2
RES	Resolute Bay	70.47	350	P	P	11 38 42.9	+0.2
RES				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ASAJ	Asahikawa	70.73	50	LR	LR	12 13 44.5	
	comp=Z,296nm,18.4s,baz=300,slow=39						
MJAR	Matsushiro Arr	71.14	58	P	P	11 38 46.7	-0.8
	comp=Z,0.9nm,0.6s,baz=308,slow=9.5,SNR=5.4						
MJAR				LR	LR	12 12 32.7	
	comp=Z,186nm,18.7s,baz=318,slow=38						
	comp=Z,0.9nm,0.6s						
FRB	Frobisher Bay	72.16	335	LR	LR	12 11 52.8	
	comp=Z,196nm,18.2s,baz=65,slow=37						
ILON	Igloolik, Nuna	72.24	344		P	11 38 53.5	-0.1
BKB	Balikpapan	72.37	103	P	P	11 38 55.3	+0.1
MPSI	Mapaga	73.97	100	P	P	11 39 05.5	+0.9
	comp=Z,693nmcomp=Z,8.4nm,1.2s						
PETK	Petropavlovsk-	74.87	36	LR	LR	12 15 11.4	
	comp=Z,142nm,18.4s,baz=290,slow=38						
A21K	Barrow	74.93	8	P	P	11 39 09.9	+0.6
	baz=338						
DAV	Davao City (W)	75.14	91	LR	LR	12 15 09.9	
	comp=Z,81nm,21.3s,baz=340,slow=38						
A19K	Wainwright	75.36	10	P	P	11 39 12.8	+1.0
	baz=334						
A22K	Sinclair Lake	75.42	8	P	P	11 39 12.6	+0.5
	baz=339						
KUQ	Kuujjuuaa	75.63	331	P	P	11 39 13.2	-0.3
A36M	Sachs Harbour	75.73	358	P	P	11 39 13.8	-0.1
	baz=5.2,SNR=51						
B18K	Kokolik River	76.01	11	P	P	11 39 16.6	+1.1
	baz=334,SNR=39						
B20K	Meade River	76.09	9	P	P	11 39 16.6	+0.7
	baz=338						
B22K	Teshekpuk Lake	76.23	8	P	P	11 39 17.4	+0.7
	baz=341,SNR=11						
C16K	Lisburne Hills	76.38	12	P	P	11 39 17.4	-0.2
	baz=331,SNR=7.1						
C17K	DeLong Mountai	76.58	12	P	P	11 39 19.2	+0.4
	baz=333						
C19K	Lookout Ridge	76.58	10	P	P	11 39 19.4	+0.6
C19K				IAmb	IAmb	11 39 20.6	
	comp=Z,11nm,0.9s						
C19K	Lookout Ridge	76.58	10	P	P	11 39 19.5	+0.6
	baz=336,SNR=7.8						
C18K	Utukok River	76.75	11	P	P	11 39 20.1	+0.3
	baz=334						
B21K	Ikpikpuk River	76.77	8	P	P	11 39 20.6	+0.7
	baz=340						
RDOG	Red Dog Mine	77.00	12	P	P	11 39 21.1	-0.1
	baz=333						
C23K	Itkillik River	77.01	7	P	P	11 39 22.0	+0.8
	baz=343						
SCHQ	Schefferville	77.01	328	P	P	11 39 20.4	-1.1
	comp=Z,11nm,0.8s,baz=47,slow=2.6,SNR=16						
SCHQ				LR	LR	12 13 12.2	
	comp=Z,109nm,18.8s,baz=66,slow=36						
	comp=Z,11nm,0.8s						
C21K	Knifeblade Rid	77.19	8	P	P	11 39 23.2	+0.9
	baz=340,SNR=19						
D17K	Noatak River	77.29	12	P	P	11 39 22.9	+0.1
	baz=333,SNR=21						
C24K	Franklin Bluff	77.30	6	P	P	11 39 23.7	+0.9
	baz=345						
D19K	Kuna River	77.36	10		P	11 39 23.0	-0.3
D19K				IAmb	IAmb	11 39 24.6	
	comp=Z,21nm,1.0s						
D19K	Kuna River	77.36	10	P	P	11 39 23.6	+0.3
	baz=337,SNR=14						
D20K	Etivluk River	77.37	9	P	P	11 39 23.8	+0.5
	baz=338,SNR=11						
C26K	Camden Bay	77.41	5	P	P	11 39 24.0	+0.6
	baz=348						
D22K	Ayikyak River	77.70	8	P	P	11 39 25.7	+0.6
	baz=342						
C27K	Jago River	77.78	4	P	P	11 39 26.4	+0.9
	baz=349,SNR=18						
D23K	Nanushuk River	77.84	7	P	P	11 39 26.6	+0.8
	baz=343,SNR=11						
D24K	Happy Valley	77.84	6	P	P	11 39 26.5	+0.7
	baz=345						
E20K	Nigu River	77.85	9	P	P	11 39 26.4	+0.4
	baz=339,SNR=16						
D25K	Kavik River	77.89	5	P	P	11 39 26.7	+0.5
	baz=347						
E18K	Tukpahlearik C	77.96	11		P	11 39 26.3	-0.2
E18K				IAmb	IAmb	11 39 27.6	
	comp=Z,12nm,0.7s						
E18K	Tukpahlearik C	77.96	11	P	P	11 39 26.5	0.0
	baz=335,SNR=10						
E17K	Hotham Inlet	78.06	12	P	P	11 39 27.0	-0.2
	baz=334,SNR=7.5						
TNA	Tin City	78.23	15	P	P	11 39 28.0	-0.1
	baz=329						
TOLK	Toolik Lake Re	78.26	7	P	P	11 39 28.6	+0.4
	baz=344,SNR=23						
D27M	Malcolm River	78.32	4	P	P	11 39 29.1	+0.5
	baz=352,SNR=11						
C36M	Paulatuk	78.33	357	P	P	11 39 27.8	-0.8
	baz=6.1,SNR=9.3						
D28M	Stokes Point	78.34	3	P	P	11 39 29.2	+0.6
	baz=354,SNR=12						
E19K	Redstone River	78.45	10	P	P	11 39 29.5	+0.2
	baz=338						
E22K	Anaktuvuk Pass	78.51	8	P	P	11 39 30.0	+0.3
	baz=342,SNR=12						
F14K	Arctic Creek	78.64	14	P	P	11 39 31.2	+0.8
	baz=330						
F15K	North Star Dit	78.77	13	P	P	11 39 31.3	+0.2
	baz=332						
E23K	Chandalar	78.82	7	P	P	11 39 31.8	+0.3
	baz=344						
F18K	Selawik	78.87	11	P	P	11 39 31.4	-0.2
	baz=336,SNR=11						
F19K	Shaleruckik Mo	78.95	10	P	P	11 39 31.6	-0.4
	baz=337						
E28M	Babbage River	79.03	3	P	P	11 39 32.9	+0.4
	baz=353						
F20K	Avaraart Lake	79.05	10	P	P	11 39 32.7	+0.2
	baz=339						
F22K	John River	79.07	8	P	P	11 39 33.6	+0.9
	baz=342						
E25K	Arctic Village	79.13	5	P	P	11 39 33.5	+0.5
	baz=348,SNR=14						
F21K	Alatna River	79.18	9	P	P	11 39 33.9	+0.5
	baz=341,SNR=15						
E29M	Blow River	79.31	3	P	P	11 39 34.4	+0.4
	baz=354						
E27K	Coleen River	79.34	4	P	P	11 39 34.8	+0.6
	baz=351,SNR=18						
G16K	Koyuk River	79.49	13	P	P	11 39 35.1	+0.2
	baz=334						
INK	Inuvik	79.50	1	LR	LR	12 21 10.0	
	comp=Z,100nm,19.4s,baz=324,slow=40						
INK	Inuvik	79.50	1	P	P	11 39 34.5	-0.4
	baz=358						
F24K	Squaw Lake	79.52	6	P	P	11 39 35.8	+0.6
	baz=346,SNR=7.4						
G15K	Niukluk	79.53	14	P	P	11 39 35.3	+0.1
	baz=332						
COLD	Coldfoot	79.56	7	P	P	11 39 35.9	+0.5
	baz=344,SNR=10						
ANM	Nome	79.63	14	P	P	11 39 36.2	+0.4
	baz=331,SNR=6.8						
F25K	Christian Rive	79.64	6	P	P	11 39 36.5	+0.6
	baz=348,SNR=11						
F26K	Sheenjek River	79.66	5	P	P	11 39 36.2	+0.3
	baz=349						
G18K	Tagagawik	79.68	11	P	P	11 39 35.8	-0.3
	baz=337,SNR=6.0						
G19K	Purcell Mounta	79.69	10	P	P	11 39 36.2	+0.1
	baz=338,SNR=19						
G17K	Kiwalik Mounta	79.70	12	P	P	11 39 36.0	-0.1
	baz=335,SNR=5.0						
G21K	Allakaket	79.85	9	P	P	11 39 37.0	0.0
	baz=341						
BMAR	Burnt Mountain	79.89	5	P	P	11 39 38.1	+0.9
F28M	Old Crow	80.00	3	P	P	11 39 37.9	+0.1
	baz=353,SNR=9.6						
G23K	Bananza Creek	80.08	7	P	P	11 39 38.5	+0.2
	baz=344						
F30M	Barrier River	80.16	2	P	P	11 39 38.7	+0.1
	baz=356						
H16K	Elim	80.19	13	P	P	11 39 38.8	0.0
	baz=334						
IMAR	Indian Mountai	80.32	9	P	P	11 39 39.6	+0.1
H17K	Granite Mounta	80.35	12	P	P	11 39 39.5	-0.2
	baz=336						
G24K	Hadweenzic Riv	80.35	6	P	P	11 39 40.5	+0.8
	baz=346,SNR=5.9						
H19K	Roundabout Mou	80.37	10	P	P	11 39 39.8	+0.1
	baz=339,SNR=7.2						
F31M	Tsiigehtchic	80.37	1	P	P	11 39 39.6	-0.1
	baz=358,SNR=15						
H18K	Honhosa River	80.41	11	P	P	11 39 39.9	-0.1
	baz=337						
G25K	Bearman Lake	80.41	6	P	P	11 39 40.0	+0.1
	baz=347						
G26K	Porcupine Rive	80.42	5	P	P	11 39 40.5	+0.5
	baz=349						
H20K	Anotleneega Mo	80.63	10	P	P	11 39 41.4	+0.2
	baz=340						
G27K	Doyon Strip	80.70	4	P	P	11 39 42.3	+0.8
	baz=351,SNR=8.1						
H22K	Ishtalitna Cre	80.71	8	P	P	11 39 42.5	+0.9
	baz=343						
H21K	Melozitna Rive	80.76	9	P	P	11 39 42.4	+0.5
	baz=342,SNR=9.5						
G30M	tAoh Zraii Nji	80.78	2	P	P	11 39 41.8	-0.2
	baz=356,SNR=11						
G29M	Pine Creek	80.78	3	P	P	11 39 41.8	-0.2
	baz=354						
G31M	Satah River	80.88	1	P	P	11 39 42.2	-0.2
	baz=357,SNR=31						
GCSA	Galena City Sc	81.03	11	P	P	11 39 43.5	+0.3
	baz=338						
H24K	Noodor Dome	81.15	7	P	P	11 39 44.7	+0.6
	baz=346						
I17K	Unalakleet	81.16	13	P	P	11 39 44.4	+0.4
	baz=335						
H27K	Steamboat Moun	81.28	4	P	P	11 39 45.3	+0.6
	baz=351,SNR=9.2						
I21K	Tanana	81.32	9	P	P	11 39 45.4	+0.6
	baz=342						
I20K	Naaghedeneel	81.35	10	P	P	11 39 45.6	+0.7
	baz=340						
EPYK	Eagle Plains	81.37	2	P	P	11 39 44.7	-0.4
	baz=355,SNR=7.7						
H29M	Whitestone	81.46	3	P	P	11 39 45.7	+0.1
	baz=354,SNR=8.4						
J14K	Nanvaranak Lak	81.62	14	P	P	11 39 46.7	+0.3
	baz=333						
I23K	Minto, Yukon-K	81.67	8	P	P	11 39 47.2	+0.5
	baz=345						
J16K	Anvik River	81.73	13	P	P	11 39 47.3	+0.3
	baz=335						
I27K	Kandik River	81.90	4	P	P	11 39 48.0	+0.1
	baz=351						
POKR	Poker Plat Res	81.90	7	P	P	11 39 48.3	+0.4
	baz=346						
J17K	VABM Dome	81.91	12	P	P	11 39 48.1	+0.1
	baz=336						
J19K	Poorman	81.93	11	P	P	11 39 48.5	+0.4
	baz=339						
J20K	Nowinta River	81.98	10	P	P	11 39 48.9	+0.5
	baz=341						
H31M	Peel River	82.00	1	P	P	11 39 48.3	-0.2
	baz=357						
I26K	Coal Creek Min	82.09	5	P	P	11 39 49.1	+0.2
	baz=350						
COLA	College	82.09	7	P	P	11 39 49.4	+0.5
COLA				IAmb	IAmb	11 39 55.5	
	comp=Z,12nm,0.7s						
COLA	College	82.09	7	P	P	11 39 49.4	+0.5
COLA				pmax	pmax		
	comp=Z,12nm,0.7s						
COLA	College	82.09	7	P	P	11 39 49.0	+0.1
	baz=346						
K13K	Kusilvak Mount	82.11	15	P	P	11 39 48.9	-0.1
	baz=332						
NEA2	Nenana	82.24	8	P	P	11 39 49.4	-0.3
	baz=345						
J18K	Innoko River	82.25	11	P	P	11 39 49.8	0.0
	baz=338						
ILAR	Eielson Array	82.29	7	P	P	11 39 49.4	-0.6
	comp=Z,2.7nm,0.7s,baz=329,slow=4.1,SNR=29						
ILAR				PP	PP	11 42 55.6	-2.2
	comp=Z,1.3nm,1.0s,baz=342,slow=6.1,SNR=4.5						
ILAR				LR	LR	12 24 05.9	
	comp=Z,46nm,18.2s,baz=348,slow=41						
	comp=Z,2.7nm,0.7s						
K15K	Wolf Creek Mou	82.45	14	P	P	11 39 51.3	+0.4
	baz=334						
BPAW	Bear Paw Mtn.	82.48	9	P	P	11 39 51.1	+0.1
	baz=343,SNR=9.7						
CHUM	Lake Minchumin	82.52	9	P	P	11 39 51.3	+0.1
	baz=342						
I30M	Mount Dempster	82.53	2	P	P	11 39 51.3	-0.1
	baz=356						
J25K	Salcha River,	82.59	6	P	P	11 39 51.6	0.0
	baz=348						
HDA	Harding Lake	82.64	7	P	P	11 39 51.0	-0.8
	baz=347						
K17K	Iditarod	82.68	12	P	P	11 39 52.0	0.0
	baz=337						
K20K	Telida	82.77	10	P	P	11 39 52.4	-0.1
	baz=341,SNR=6.5						
J26L	Joseph Creek	82.85	5	P	P	11 39 52.9	-0.1
	baz=350						
BATI	Baumata	82.97	107	LR	LR	12 21 59.1	
	comp=Z,63nm,18.3s,baz=288,slow=39						
L15K	Ungalak Mounta	83.02	14	P	P	11 39 53.5	-0.2
	baz=335						
L14K	Kuka Creek	83.07	15	P	P	11 39 53.8	-0.3
	baz=334						
MCK	McKinley	83.09	8	P	P	11 39 53.7	-0.5
	baz=345						
M11K	Mekoryuk	83.12	17	P	P	11 39 53.9	-0.4
	baz=331						
J30M	Hart River	83.18	2	P	P	11 39 54.7	-0.1
	baz=356						
TRF	Thorofare Moun	83.20	8	P	P	11 39 54.2	-0.7
	baz=344						
L17K	Donlin	83.22	12	P	P	11 39 54.8	0.0
	baz=337						
J29N	Klondike Camp	83.23	3	P	P	11 39 54.9	-0.1
	baz=354						
SCRK	Sand Creek	83.34	6	P	P	11 39 55.8	+0.2
	baz=349						
K24K	Donnelly Dome	83.35	6	P	P	11 39 55.3	-0.3
	baz=348						
L16K	Owhat River	83.39	13	P	P	11 39 55.4	-0.2
	baz=336						
L18K	Granite Mounta	83.42	12	P	P	11 39 55.6	-0.3
	baz=338						
PPLA	Purkeypile	83.48	9	P	P	11 39 55.9	-0.5
	baz=342						
RIDG	Independent Ri	83.50	6	P	P	11 39 56.1	-0.2
	baz=348						
DAWY	Dawson	83.56	4		P	11 39 57.0	+0.3
DAWY				IAmb	IAmb	11 40 04.4	
	comp=Z,8.3nm,1.0s						
DAWY	Dawson	83.56	4	P	P	11 39 56.5	-0.1
	baz=353						
M13K	Dall Lake	83.76	15	P	P	11 39 57.5	-0.1
	baz=333						
M14K	Bethel	83.76	15	P	P	11 39 57.2	-0.3
	baz=334						
L19K	White Mountain	83.76	11	P	P	11 39 57.5	-0.2
	baz=340						
K29M	Barlow Dome	83.87	3	P	P	11 39 58.0	-0.3
	baz=355						
DHY	Denali Highway	83.90	7	P	P	11 39 58.0	-0.5
	baz=346						
WAT1	Susitna Watana	84.01	8	P	P	11 39 58.9	0.0
	baz=345						
M17K	Holitna River	84.05	12	P	P	11 39 58.8	-0.3
	baz=338						
M15K	Kasigluk River	84.08	14	P	P	11 39 59.2	0.0
	baz=335						
M16K	Timber Creek	84.12	13	P	P	11 39 59.2	-0.2
	baz=337						
MAYO	Mayo, Yukon	84.18	2	P	P	11 39 59.4	-0.3
	baz=356						
PAX	Paxson	84.19	6	P	P	11 39 59.4	-0.6
	baz=348						
CUT	Chulitna	84.21	9	P	P	11 39 59.5	-0.4
	baz=344						
M18K	Stony River	84.25	12	P	P	11 39 59.9	-0.3
	baz=339						
M20K	Styx River	84.31	10	P	P	11 40 00.0	-0.5
	baz=342						
L26K	Log Cabin Wild	84.33	6	P	P	11 40 00.2	-0.4
	baz=350						
WAT6	Susitna Watana	84.34	8	P	P	11 40 00.2	-0.6
	baz=346						
BCAR	Beaver Creek A	84.41	5		P	11 40 01.6	+0.6
L27K	Beaver Creek,	84.41	5	P	P	11 40 00.9	0.0
	baz=351						
YKA	Yellowknife Ar	84.41	352	P	P	11 40 00.2	-0.7
	comp=Z,4.8nm,0.8s,baz=3.2,slow=5.2,SNR=72						
	comp=Z,4.8nm,0.8s						
YKA	Yellowknife Ar	84.41	352	P	P	11 40 00.4	-0.5
YKA	Yellowknife Ar	84.41	352	*i* P	P	11 40 00.4	-0.5
YKA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WRGLY	Wrigley	84.41	356	P	P	11 40 01.2	+0.3
	baz=6.5						
SKT	Skwentna	84.45	9	P	P	11 40 00.7	-0.4
	baz=343						
N14K	Kuskokwak Cree	84.56	15	P	P	11 40 01.5	-0.2
	baz=334						
L29M	L29M	84.58	3	P	P	11 40 01.7	-0.2
	baz=354						
N16K	Nishlik Lake	84.66	13	P	P	11 40 02.2	-0.1
	baz=337						
N15K	Kwethluk River	84.68	14	P	P	11 40 01.8	-0.5
	baz=336						
HARP	HAARP	84.79	6	P	P	11 40 02.9	+0.1
	baz=348						
SPIA	Saint Paul Isl	84.81	20	P	P	11 40 03.3	+0.4
	baz=328						
M22K	Willow	84.86	9	P	P	11 40 03.2	0.0
	baz=344						
N17K	Nushagak Hills	84.91	13	P	P	11 40 03.5	0.0
	baz=338						
M24K	Tolsona, Glenn	84.97	7	P	P	11 40 03.9	0.0
	baz=347						
M26K	Nabesna, AK	84.97	5	P	P	11 40 04.0	+0.1
	baz=350						
N18K	Kilae Creek	85.00	12	P	P	11 40 03.6	-0.3
	baz=339						
SML	Sawmill	85.03	8	P	P	11 40 04.0	-0.1
	baz=346						
SUA	Susitna One	85.05	9	P	P	11 40 04.2	-0.2
	baz=344,SNR=5.6						
N20K	Mount Spurr	85.10	10	P	P	11 40 04.5	-0.1
	baz=342						
SPCR	Spurr Chakacha	85.10	10	P	P	11 40 04.5	0.0
	baz=342						
M27K	Edge Creek, AK	85.10	5	P	P	11 40 04.5	-0.1
	baz=351						
M23K	Glacier View	85.11	8	P	P	11 40 04.3	-0.2
	baz=346						
N19K	Bonanza Creek	85.11	11	P	P	11 40 04.7	+0.1
	baz=340						
SCM	Sheep Creek Mo	85.12	8	P	P	11 40 04.8	+0.2
	baz=346						
BVCY	Beaver Creek	85.12	4	P	P	11 40 04.7	+0.1
	baz=352						
PMR	Palmer	85.14	8	P	P	11 40 04.6	0.0
	baz=345						
M30M	Minto, Yukon	85.17	3	P	P	11 40 04.8	0.0
	baz=355						
M29M	Somme Creek	85.23	3	P	P	11 40 05.1	0.0
	baz=354						
O14K	Tigyukauivet M	85.27	15	P	P	11 40 05.5	+0.2
	baz=335						
KNK	Knik Glacier	85.39	8	P	P	11 40 06.1	+0.2
	baz=345						
P08K	Saint George I	85.50	20	P	P	11 40 06.5	0.0
	baz=328						
RC01	Rabbit Creek A	85.55	9	P	P	11 40 06.6	-0.1
	baz=344,SNR=5.9						
KLU	Klutina	85.60	7	P	P	11 40 07.8	+0.7
	baz=348,SNR=6.6						
FARO	Faro, Yukon	85.60	1	P	P	11 40 07.3	+0.3
	baz=358						
O16K	Kokwok River B	85.61	13	P	P	11 40 06.8	-0.1
	baz=338						
M31M	Drury Creek, Y	85.61	1	P	P	11 40 07.2	+0.2
	baz=357						
N25K	Chitina, Valde	85.62	6	P	P	11 40 07.3	+0.2
	baz=349						
O17K	Koliganek Bris	85.63	13	P	P	11 40 07.2	+0.2
	baz=338						
O15K	Ungalikthiuk R	85.64	14	P	P	11 40 07.2	0.0
	baz=336						
O19K	Port Alsworth	85.72	11	P	P	11 40 07.6	+0.1
	baz=341						
YUK3	Moose Creek	85.78	4	P	P	11 40 08.3	+0.2
	baz=352,SNR=7.8						
O18K	Koktuh Hills	85.89	12	P	P	11 40 08.2	-0.2
	baz=340						
PWL	Port Wells	85.95	8	P	P	11 40 08.5	-0.2
	baz=346						
MCARA	McCarthy VSAT	85.98	6	P	P	11 40 09.1	+0.3
	baz=350						
GLI	Glacier Island	86.07	8	P	P	11 40 09.5	+0.2
	baz=347						
O20K	Slope Mountain	86.10	11	P	P	11 40 09.8	+0.2
	baz=342						
O22K	Cooper Landing	86.14	9	P	P	11 40 09.7	+0.1
	baz=344						
P16K	Nushagak River	86.15	13	P	P	11 40 09.8	+0.1
	baz=338						
BMRM	Bremner River	86.25	6	P	P	11 40 10.5	+0.3
	baz=349						
N30M	Aishikik Lake	86.27	3	P	P	11 40 10.4	+0.1
	baz=355						
P17K	Kvichak River	86.29	13	P	P	11 40 10.5	+0.1
	baz=339						
N31M	Braeburn, Yuko	86.29	2	P	P	11 40 10.8	+0.4
	baz=356						
YUK8	Steele Glacier	86.31	4	P	P	11 40 10.7	-0.1
	baz=353						
YUK4	Talbot Arm	86.31	4	P	P	11 40 10.6	-0.1
	baz=354,SNR=7.3						
P18K	Big Mountain,	86.33	12	P	P	11 40 10.7	+0.1
	baz=340						
P19K	Oil Pt	86.42	11	P	P	11 40 11.1	+0.1
	baz=342						
CTG	Chitna Glacier	86.52	5	P	P	11 40 11.8	+0.2
	baz=351						
SEW	Seward	86.54	9	P	P	11 40 11.7	+0.2
	baz=345						
EYAK	Cordova Ski Ar	86.54	7	P	P	11 40 11.6	+0.1
	baz=348						
CRQE	Cirque	86.59	6	P	P	11 40 11.9	-0.1
	baz=350						
N32M	Quiet Lake	86.69	1	P	P	11 40 12.4	+0.1
	baz=358						
BRSE	Bradley Lake S	86.71	10	P	P	11 40 12.5	+0.1
	baz=344						
YUK6	Outpost Mounta	86.73	3	P	P	11 40 12.7	-0.1
	baz=354						

Q16K	King Salmon	86.74	13	P	P	11 40 12.6	+0.1
	baz=339						
O28M	Mount Upton	86.79	4	P	P	11 40 13.1	-0.1
	baz=352						
HYT	Haines Junctio	86.89	3	P	P	11 40 14.2	+0.7
	baz=355,SNR=5.2						
P23K	Montague Islan	86.90	8	P	P	11 40 13.4	+0.1
	baz=346						
O30N	Mendenhall	87.00	2	P	P	11 40 13.7	-0.2
	baz=356						
Q19K	Cape Douglas,	87.04	11	P	P	11 40 13.6	-0.5
	baz=341						
Q18K	Katmai Hardscr	87.07	12	P	P	11 40 14.1	-0.2
	baz=340						
WHY	Whitehorse	87.15	2	P	P	11 40 14.4	-0.3
	baz=357						
Q17K	Contact Creek	87.27	13	P	P	11 40 14.8	-0.5
	baz=339						
KAIM	Kayak Island	87.29	7	P	P	11 40 15.5	+0.3
	baz=349						
O29M	Mount Kennedy	87.36	4	P	P	11 40 15.6	-0.1
	baz=354						
PINM	Pinnacle	87.46	5	P	P	11 40 16.0	-0.2
	baz=352						
Q20K	Shuyak Island	87.55	11	P	P	11 40 16.4	0.0
	baz=342						
R16K	Pilot Point	87.59	14	P	P	11 40 16.5	-0.1
	baz=338						
P30M	Million Dollar	87.61	3	P	P	11 40 16.8	-0.1
	baz=355						
P33M	Teslin, Yukon	87.64	1	P	P	11 40 17.0	0.0
	baz=359,SNR=5.8						
WTLY	Watson Lake, Y	87.72	359	P	P	11 40 17.7	+0.3
	baz=2.0,SNR=8.6						
R17L	Mt. Peulik Vol	87.77	13	P	P	11 40 17.8	+0.2
	baz=339						
P29M	Windy Craggy	88.07	3	P	P	11 40 19.2	+0.2
	baz=354						
P32M	Atlin	88.25	1	P	P	11 40 19.7	-0.2
	baz=358						
S12K	Black Hills	88.30	17	P	P	11 40 19.9	-0.2
	baz=334						
KDAK	Kodiak Island	88.30	11	LR	LR	12 25 40.3	
	comp=Z,52nm,19.9s,baz=341,slow=40						
KDAK	Kodiak Island	88.30	11	P	P	11 40 20.5	+0.4
	baz=342						
PLBC	Pleasant Camp	88.30	3	P	P	11 40 20.6	+0.6
	baz=356						
SKAG	Skagway	88.34	2	P	P	11 40 20.8	+0.6
	baz=356						
LIRD	Liard River Hi	88.35	357	P	P	11 40 21.0	+0.7
	baz=4.3,SNR=16						
R33M	Jennings River	88.46	360	P	P	11 40 21.5	+0.5
	baz=0.2						
FALS	False Pass	88.72	18	P	P	11 40 22.2	+0.1
	baz=333						
OHAK	Old Harbor	88.72	12	P	P	11 40 22.2	+0.2
	baz=342						
UNV	Unalaska Valle	88.76	20	P	P	11 40 22.4	0.0
	baz=331						
NIKH	Nikolski High	88.81	22	P	P	11 40 22.4	-0.2
	baz=329						
TOAD	Toad River Com	88.87	357	P	P	11 40 23.2	+0.4
	baz=5.0,SNR=11						
Q32M	Nakina River	88.90	1	P	P	11 40 23.0	-0.1
	baz=359						
SDPT	Sand Point	89.00	16	P	P	11 40 23.1	-0.3
	baz=336						
SII	Sitkinak Islan	89.19	12	P	P	11 40 24.2	-0.1
	baz=341						
R32K	Eaglecrest	89.55	2	P	P	11 40 26.0	0.0
	baz=357						
CHIR	Chirikof Islan	89.61	13	P	P	11 40 26.5	+0.2
	baz=340						
CHNA	Chernabura Isl	89.68	16	P	P	11 40 26.6	0.0
	baz=336						
SADO	Sadowa	89.69	326	LR	LR	12 22 12.2	
	comp=Z,120nm,18.3s,baz=72,slow=37						
S31K	Pelican	89.80	3	P	P	11 40 26.9	-0.2
	baz=356						
S34M	Telegraph Cree	89.95	360	P	P	11 40 27.9	+0.1
	baz=0.0						
S32K	Killisnoo	90.35	2	P	P	11 40 29.8	+0.1
	baz=357						
SIT	Sitka	90.74	2	P	P	11 40 31.5	0.0
	baz=356						
T35M	Bob Quinn	90.88	359	P	P	11 40 32.2	0.0
	baz=0.8						
WRAK	Wrangell Islan	91.44	1	P	P	11 40 35.2	+0.4
	baz=359						
U33K	Whale Pass	91.74	1	P	P	11 40 36.2	0.0
	baz=358						
ULM	Lac du Bonnet	91.87	338	P	P	11 40 35.4	-1.5
	comp=Z,6.1nm,0.8s,baz=26,slow=5.2,SNR=12						
ULM				LR	LR	12 25 09.2	
	comp=Z,85nm,18.8s,baz=13,slow=38						
	comp=Z,6.1nm,0.8s						
CRAG	Craig	92.39	1	P	P	11 40 38.9	-0.3
	baz=358						
V35K	Ketchikan	92.54	0	P	P	11 40 39.8	0.0
	baz=360						
JAY	Jayapura	92.99	91	LR	LR	12 25 45.6	
	comp=Z,62nm,20.5s,baz=340,slow=38						
BBB	Bella Bella	95.65	358	LR	LR	12 28 22.4	
	comp=Z,49nm,21.9s,baz=40,slow=38						
WRA	Warramunga Arr	96.90	109	P	P	11 41 00.6	+0.2
	comp=Z,0.5nm,0.7s,baz=317,slow=4.0,SNR=3.0						
	comp=Z,0.5nm,0.7s						
ASAR	Alice Springs	98.50	113	P	P	11 41 06.4	-1.2
	comp=Z,0.7nm,0.8s,baz=309,slow=4.4,SNR=8.9						
ASAR				PKiKP	PKiKP	11 45 39.1	-0.5
	comp=Z,0.4nm,0.6s,baz=281,slow=1.2,SNR=7.2						
ASAR				PKKPbc	PKKPbc	11 57 37.2	+0.3
	comp=Z,0.4nm,0.7s,baz=114,slow=3.7,SNR=4.8						
ASAR				LR	LR	12 31 11.8	
	comp=Z,70nm,18.1s,baz=138,slow=39						
	comp=Z,0.7nm,0.8s						
NEW	Newport	98.63	351	LR	LR	12 27 26.5	
	comp=Z,193nm,20.4s,baz=24,slow=36						
TKL	Tuckaleechee C	98.92	323	LR	LR	12 29 32.6	
	comp=Z,105nm,18.0s,baz=44,slow=38						
NVAR	Mina Array Bea	108.42	349	PKiKP	PKiKP	11 45 58.0	+0.3
	comp=Z,0.5nm,0.5s,baz=61,slow=0.4,SNR=3.7						
TXAR	Lajitas Array	113.18	334	PKiKP	PKiKP	11 46 06.5	-0.2
	comp=Z,0.4nm,0.8s,baz=56,slow=0.6,SNR=4.9						
QSPA	South Pole Qui	122.32	180	PKP	PKPdf	11 46 22.8	-0.2
	comp=Z,5.6nm,0.9s,baz=276,slow=1.4,SNR=23						
DZM	Mont Dzumac	124.34	96	*e*LR	LR	12 25 08.6	
	comp=Z,95nm,22.1s						
PLCA	Paso Flores	131.43	242	PKP	PKiKP	11 46 42.2	0.0
	comp=Z,0.8nm,0.7s,baz=117,slow=2.3,SNR=1.8						
PLCA				SKPab	SKPab	11 50 05.8	+0.1
	comp=Z,1.8nm,1.1s,baz=97,slow=14,SNR=3.0						
TAOE	Nuku Hiva Isla	155.08	21	*e*LR	LR	12 39 13.6	
	comp=Z,107nm,23.1s						
PPT2	Papeete2	157.79	52	*e*LR	LR	12 40 31.9	
	comp=Z,62nm,22.5s						
TBI	Tubuai	161.53	65	*e*LR	LR	12 42 08.7	
	comp=Z,851nm,37.0s						

SJA ***22*** *11:31:02.7±0.7, 27°.85S×71°.52W, h8^{km}±3^{km}, ML4.0, MW3.6*

IDC ***22*** *11:31:04.1±1.2, 27°.82S×71°.37W, h0^{km}, mb3.7/4, mbtmp3.7/7, ML3.9/3, Error ellipse: s-maj=39.1km s-min=22.4km az=73.0*

NEIC ***22*** *11:31:06.9±1.0, 27°.86S±0°.03×71°.33W±0°.07, h18^{km}±5^{km}, mb4.3/4, ML3.9(GUC), Error ellipse: s-maj=9.8km s-min=3.9km az=71.0*

GUC ***22*** *11:31:07.9±0.7, 27°.91S×71°.29W, h26^{km}±4^{km}, ML3.9*

ISC 22 11:31:03.4±1.5,**27°.84S**±0°.04×**71°.56W**±0°.05,**h7**^{km}±9^{km},**n83,**σ**2**^{s}**.07**/99,**mb4.1**/4,**Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC04	Llanos de Chal	0.56	130		Pg	11 31 15.3	+1.0
AC04	Llanos de Chal	0.56	130	*i* P	Pg	11 31 15.3	+1.0
AC04				*e*S	Sg	11 31 20.1	-1.6
AC04				IAML		11 31 20.6	
	comp=E,25µm,0.2s						
AC04	Llanos de Chal	0.56	130	*i* P	Pg	11 31 15.1	+0.8
AC04				IAML		11 31 20.9	
	comp=Z,5µm,0.4s						
AC04				*i* S	Sg	11 31 21.1	-0.6
GO03	Copiapo	1.20	79	Pn	Pn	11 31 25.1	-1.6
GO03	Copiapo	1.20	79	*e*P	Pn	11 31 25.1	-1.6
GO03				IAML		11 31 43.4	
	comp=E,3µm,0.1s						
GO03	Copiapo	1.20	79	*i* P	Pn	11 31 25.4	-1.4
GO03				IAML		11 31 42.2	
	comp=Z,2µm,0.4s						
GO03				*i* S	Sb	11 31 42.3	-0.1
LCO	Las Campanas	1.39	147		Pn	11 31 29.3	-0.3
LCO	Las Campanas	1.39	147	*e*P	Pn	11 31 29.2	-0.3
LCO				*e*S	Sn	11 31 45.0	-3.3
LCO	Las Campanas	1.39	147	*i* P	Pn	11 31 29.2	-0.3
LCO				IAML		11 31 47.3	
	comp=Z,3µm,0.3s						
LCO				*i* S	Sn	11 31 48.0	-0.3
AC05	El Transito	1.51	131		Pn	11 31 30.6	-0.4
AC05	El Transito	1.51	131	*e*P	Pn	11 31 30.4	-0.7
AC05				*e*S	Sn	11 31 47.2	-3.8
AC05				IAML		11 31 51.5	
	comp=E,2µm,0.6s						
AC05	El Transito	1.51	131	*i* P	Pn	11 31 30.8	-0.3
AC05				IAML		11 31 53.1	
	comp=Z,765nm,0.3s						
AC01	Pan de Azucar	1.89	27		Pn	11 31 37.5	+1.3
AC01	Pan de Azucar	1.89	27	*e*P	Pn	11 31 37.4	+1.3
AC01				IAML		11 32 09.8	
	comp=E,688nm,0.4s						
AC01	Pan de Azucar	1.89	27	*i* P	Pn	11 31 37.2	+1.0
AC01				*i* S	Sb	11 32 03.5	+1.3
AC01				IAML		11 32 06.5	
	comp=Z,487nm,0.6s						
CO05	La Serena	2.09	172		Pn	11 31 40.9	+2.0
CO05	La Serena	2.09	172	*e*P	Pn	11 31 40.8	+1.9
CO05				*e*S	Sn	11 32 07.4	+2.3
CO05				IAML		11 32 15.8	
	comp=E,2µm,0.4s						
AC02	Maricunga	2.39	66		Pn	11 31 45.3	+1.9
AC02	Maricunga	2.39	66	*e*P	Pn	11 31 45.3	+1.9
AC02				*e*S	Sn	11 32 13.2	+0.1
AC02				IAML		11 32 17.4	
	comp=E,2µm,0.2s						
AC02	Maricunga	2.39	66	*i* P	Pn	11 31 44.7	+1.3
AC02				*i* S	Sb	11 32 15.9	-0.9
AC02				IAML		11 32 19.5	
	comp=Z,752nm,0.2s						
GO04	Tololo Observa	2.42	164		Pn	11 31 45.6	+2.0
GO04	Tololo Observa	2.42	164	*e*P	Pn	11 31 45.7	+2.1
GO04				IAML		11 32 25.3	
	comp=N,2µm,0.3s						
GO04	Tololo Observa	2.42	164	*i* P	Pn	11 31 45.2	+1.6
GO04				*i* S	Sn	11 32 16.4	+2.7
GO04				IAML		11 32 25.0	
	comp=Z,2µm,0.5s						
CO01	Juntas del Tor	2.49	149		Pn	11 31 46.7	+2.2
CO01	Juntas del Tor	2.49	149	*e*P	Pn	11 31 46.8	+2.2
CO01				IAML		11 32 24.1	
	comp=N,644nm,0.7s						
CO01	Juntas del Tor	2.49	149	*i* P	Pn	11 31 46.6	+2.0
CO01				*i* S	Sn	11 32 17.9	+2.5
CO01				IAML		11 32 22.7	
	comp=Z,477nm,0.5s						
CO06	Fray Jorge	2.83	181		Pn	11 31 50.1	+1.1
CO03	El Pedregal	3.08	166		Pn	11 31 54.7	+2.1
CO03	El Pedregal	3.08	166	*e*P	Pn	11 31 54.5	+1.9
CO03				IAML		11 32 46.3	
	comp=N,599nm,0.5s						
CO03	El Pedregal	3.08	166	*i* P	Pn	11 31 54.0	+1.4
CO03				IAML		11 32 51.9	
	comp=Z,340nm,0.5s						
AGUA	GUANDACOL	3.16	122	*i* P	Pn	11 31 57.8	+4.1
AGUA				IAML		11 32 50.2	
	comp=Z,446nm,0.6s						
GO02	Mina Guanaco	3.20	34		Pn	11 31 56.0	+1.6
GO02	Mina Guanaco	3.20	34	*e*P	Pn	11 31 55.9	+1.4
GO02	Mina Guanaco	3.20	34	*i* P	Pn	11 31 56.2	+1.8
GO02				IAML		11 32 50.8	
	comp=Z,593nm,0.6s						
PB14	IPOC Station P	3.37	18		Pn	11 31 57.7	+1.0
PB14	IPOC Station P	3.37	18	*i* P	Pn	11 31 57.5	+0.8
PB14				IAML		11 32 57.1	
	comp=Z,298nm,0.5s						
CO02	Combarbal	3.39	172		Pn	11 31 58.3	+1.4
CO02	Combarbal	3.39	172	*e*P	Pn	11 31 58.2	+1.4
CO02	Combarbal	3.39	172	*i* P	Pn	11 31 58.4	+1.6
CO02				IAML		11 32 54.3	
	comp=Z,626nm,0.5s						
ACCO	Cerro Coronel	3.50	142	*i* P	Pn	11 32 01.4	+2.7
TINO	Tinogasta	3.54	95	*i* P	Pn	11 32 00.8	+1.8
PB10	IPOC Station P	4.40	12	*i* P	Pn	11 32 10.7	0.0
PB10				IAML		11 33 44.7	
	comp=Z,66nm,1.2s						
RTLS	Leoncito	4.41	154	*i* P	Pn	11 32 14.3	+3.2
RTLS				IAML		11 33 27.5	
	comp=Z,474nm,0.5s						
VA06	Catapilco	4.71	177	Pn	Pn	11 32 16.2	+1.3
CFA	Coronel Fontan	4.74	143	Pn	Pn	11 32 17.8	+2.5
	comp=Z,6.2nm,0.3s,baz=319,slow=12,SNR=25						
CFA				Sn	Sn	11 33 13.5	+3.0
	comp=Z,5.5nm,0.3s,baz=241,slow=19,SNR=5.3						
	comp=Z,13nm,0.3s						
VA03	San Esteban	4.99	170		Pn	11 32 20.0	+1.2
VA03	San Esteban	4.99	170	*i* P	Pn	11 32 21.4	+2.6
VA03				IAML		11 33 46.9	
	comp=Z,155nm,0.8s						
PB05	IPOC Station P	5.12	14		Pn	11 32 20.8	+0.2
PEL	Peldehue	5.34	172		Pn	11 32 25.3	+1.7
PB06	IPOC Station P	5.42	20		Pn	11 32 25.3	+0.4
PB03	IPOC Station P	6.00	16		Pn	11 32 32.9	+0.2
BO04	La Punta	6.18	173	Pn	Pn	11 32 35.0	-0.2
PB07	IPOC Station P	6.27	14		Pn	11 32 36.1	-0.5
PB09	IPOC Station P	6.38	20		Pn	11 32 39.8	+1.8
PB02	IPOC Station P	6.67	14		Pn	11 32 41.5	-0.4
PB01	IPOC Station P	7.03	16		Pn	11 32 47.0	+0.2
TA01	Diego Aracena	7.35	10	Pn	Pn	11 32 52.0	+0.9
HMBC	Humberstone	7.68	12		Pn	11 32 55.3	-0.6
H03N1	Juan Fernandez	8.44	227	Pn	Pn	11 33 07.6	+1.7
	baz=108,slow=16						
H03N1				Sn	Sn	11 34 37.3	-3.9
H03N1				T	T	11 42 04.1	
	baz=55,slow=72,SNR=3268						
H03N2	Juan Fernandez	8.45	227	Pn	Pn	11 33 07.6	+1.6
	baz=108,slow=16						
H03N2				Sn	Sn	11 34 37.3	-4.2
H03N2				T	T	11 42 03.8	
	baz=55,slow=72,SNR=2275						
H03N3	Juan Fernandez	8.46	227	Pn	Pn	11 33 07.3	+1.2
	baz=108,slow=16						
H03N3				Sn	Sn	11 34 36.9	-4.8
H03N3				T	T	11 42 03.1	
	baz=55,slow=72,SNR=1674						
H03S3	Juan Fernandez	8.69	225	Pn	Pn	11 33 10.0	+0.8
	baz=174,slow=18						
H03S3				Sn	Sn	11 34 42.4	-4.9
H03S1	Juan Fernandez	8.70	225	Pn	Pn	11 33 09.8	+0.5
	baz=174,slow=18						
H03S1				Sn	Sn	11 34 42.0	-5.5
H03S2	Juan Fernandez	8.70	225	Pn	Pn	11 33 10.0	+0.6
	baz=174,slow=18						
H03S2				Sn	Sn	11 34 42.4	-5.3
BI02	San Fabin de	8.80	178	Pn	Pn	11 33 12.5	+1.4
LPAZ	La Paz	11.93	16	Pn	Pn	11 33 54.6	+0.1
	comp=Z,0.4nm,0.3s,baz=164,slow=7.5,SNR=6.0						
	comp=Z,0.9nm,0.4s						
LPAZ	La Paz	11.93	16	Pn	Pn	11 33 54.4	-0.1
CPUP	Villa Florida	12.77	87	Pn	Pn	11 34 04.8	-0.6
	comp=Z,0.1nm,0.3s,baz=259,slow=17,SNR=5.1						
	comp=Z,0.4nm,0.5s						
CPUP	Villa Florida	12.77	87	Pn	Pn	11 34 04.5	-1.0
TRQA	Tornquist	12.97	144	Pn	Pn	11 34 08.8	+0.6
SIV	San Ignacio	15.28	42	Pn	Pn	11 34 33.7	-6.0
	baz=229,slow=12,SNR=6.4						
VAO	Valinhos	22.72	83	P	P	11 36 04.7	-1.4
VAO				IAmb	IAmb	11 36 05.3	
	comp=Z,7.7nm,0.7s						
SNAA	Sanae	57.16	159	P	P	11 40 51.4	+0.9
	comp=Z,0.9nm,0.6s,baz=264,slow=10,SNR=4.0						
	comp=Z,0.9nm,0.6s						
SNAA	Sanae	57.16	159	P	P	11 40 51.1	+0.6
QSPA	South Pole Qui	62.38	180	P	P	11 41 27.9	+1.3
	comp=Z,0.9nm,0.8s,baz=120,slow=1.1,SNR=1.9						
	comp=Z,0.9nm,0.8s						
QSPA	South Pole Qui	62.38	180	P	P	11 41 28.3	+1.6
QSPA				IAmb	IAmb	11 41 50.0	
	comp=Z,2.8nm,1.1s						
TXAR	Lajitas Array	64.62	329	P	P	11 41 44.8	+2.9
	comp=Z,0.2nm,0.7s,baz=142,slow=6.3,SNR=2.1						
	comp=Z,0.2nm,0.7s						
DBIC	Dimbokro	72.89	73	P	P	11 42 32.9	-0.7
TORD	Torodi Ar. Bea	81.75	70	P	P	11 43 23.3	0.0
	comp=Z,1.4nm,0.9s,baz=251,slow=4.4,SNR=5.5						
	comp=Z,1.4nm,0.9s						
H11S2	WAKE ISLAND Hy	126.05	273	T	T	14 09 19.2	
	baz=111,slow=75						
H11S1	WAKE ISLAND Hy	126.06	273	T	T	14 09 20.0	
	baz=111,slow=75						
H11S3	WAKE ISLAND Hy	126.06	273	T	T	14 09 19.3	
	baz=111,slow=75						
ZALV	Zalesovo Beam	148.68	27	PKPbc	PKiKP	11 50 53.0	+0.5
	comp=Z,1.4nm,0.6s,baz=336,slow=3.3,SNR=8.5						

IDC ***22*** *11:48:55.9±1.4, 32°.57N×48°.71E, h0^{km}, mb3.8/14, mbtmp3.8/18, ML3.0/4, Error ellipse: s-maj=31.2km s-min=16.7km az=178.0*

NEIC ***22*** *11:48:57.0±0.8, 32°.57N±0°.07×48°.6E±0°.1, h10^{km}±1^{km}, mb4.3/17, Error ellipse: s-maj=16.1km s-min=10.9km az=105.0*

TEH ***22*** *11:48:58.2, 32°.59N×48°.79E, h8^{km}±48^{km}*

ISC 22 11:48:58.6±0.5,**32°.56N**±0°.04×**48°.57E**±0°.05,**h17**^{km},**n77,** σ**1**^{s}**.44**/79,**mb4.1**/22,**Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AHWZ	Ahwaz	1.23	177	Pg	Pg	11 49 22.5	+0.3
AHWZ				Sg	Sg	11 49 41.5	+3.3
IDOB	Doab	1.27	345	Pg	Pg	11 49 24.1	+1.0
BDRS	Dareh Seyedi	1.42	10	Pg	Pb	11 49 25.2	+0.5
JHBN	Jahan bin	1.80	100	Pg	Pn	11 49 30.2	+1.1
IPIR	Pirpir	1.96	86	Pg	Pn	11 49 32.1	+0.8
ZNGN	Zangian	1.98	102	Pn	Pn	11 49 32.6	+1.0
IBZA	Bozab	2.00	343	Pn	Pb	11 49 35.0	+0.4
KCHF	Cheshme Sefid,	2.14	324	Pn	Pg	11 49 38.5	-1.1
HAGD	Aghdareh	2.31	12	Pn	Pb	11 49 38.8	-1.0
IBRJ	Brojen	2.37	105	Pn	Pn	11 49 37.5	+0.7
SNQR	Sonqor, Kerman	2.42	341	Pn	Pb	11 49 41.9	0.0
IGHG	Ghaleghazi	2.43	317	Pn	Pb	11 49 42.6	+0.6
IKLH	Kolahrood	2.64	73	Pn	Pn	11 49 41.8	+1.2
QAMS	Qamsar	2.64	63	Pn	Pn	11 49 42.2	+1.6
IDHR	Dehrash	2.81	320	Pn	Pb	11 49 47.3	-1.1
HGHA	Hamedan- Ghaye	2.93	5	Pn	Pn	11 49 46.8	+2.2
KLNJ	Kolanjah	3.00	120	Pn	Pn	11 49 46.9	+1.3
IQOM	Qom	3.08	42	Pn	Pn	11 49 48.3	+1.6
IZEF	Zefreh	3.18	83	Pn	Pn	11 49 49.5	+1.4
QABG	Abgarm-Qazvin	3.25	15	Pn	Pn	11 49 51.7	+2.7
KRSH	Karshahi	3.30	64	Pn	Pn	11 49 51.3	+1.7
IRAM	Ramesheh	3.31	102	Pn	Pn	11 49 50.7	+0.8
ISFB	Sefidab	3.55	59	Pn	Pn	11 49 54.3	+1.3
IVRN	Varamin	3.58	46	Pn	Pn	11 49 55.3	+1.9
IGZV	Ghazvin	4.05	19	Pn	Pn	11 50 02.3	+2.3
ZNJK	Zanjan	4.10	1	Pn	Pn	11 50 03.6	+2.9
IDMV	Damavand	4.16	43	Pn	Pn	11 50 03.5	+1.9
ANAR	Anarak	4.38	80	Pn	Pn	11 50 04.9	+0.4
MZPU	Pul - Mazandar	4.59	32	Pn	Pn	11 50 10.2	+2.8
ILAS	Lasjerd	4.61	51	Pn	Pn	11 50 09.3	+1.7
IFIR	Firoozkooh	4.63	47	Pn	Pn	11 50 09.9	+1.8
IANJ	Anjilo	5.30	55	Pn	Pn	11 50 17.9	+0.8
IGLO	Ghaloghah	5.86	46	Pn	Pn	11 50 26.9	+2.1
TPRV	Parvadeh(Tabas	6.85	84	Pn	Pn	11 50 39.1	+0.8
TKDS	Koohdasht(Taba	7.25	79	Pn	Pn	11 50 44.4	+0.5
MARD	Mardin	7.96	309	Pn	Pn	11 50 52.9	-0.7
RAYN	Ar Rayn	9.40	198		Pn	11 51 12.6	-0.7
ASF	Jabal al Asfar	9.88	271	Pn	Pn	11 51 22.3	+2.3
	0.3nm,0.3s,baz=134,slow=11,SNR=3.5						
ASF				Sn	Sn	11 53 06.3	-4.3
	0.7nm,0.3s,baz=153,slow=11,SNR=2.1						
	0.9nm,0.3s						
UOSS	Minazif	10.12	137	Pn	Pn	11 51 22.0	-1.0
BR131	Keskin Array S	14.02	305	Pn	Pn	11 52 19.9	+3.5
BRTR	Keskin Array B	14.02	305	Pn	Pn	11 52 19.4	+3.0
	0.1nm,0.3s,baz=121,slow=17,SNR=1.8						
	0.3nm,0.7s						
ARG	Arkhangelos	17.26	288		P	11 53 01.0	+0.8
SIMJ	Simiganj	17.68	64		Pn	11 53 03.7	-0.5
AB31	Akbulak array	18.73	24		Pn	11 53 17.3	+0.7
ABKAR	Akbulak array	18.73	24	P	Pn	11 53 17.5	+0.8
AKTO	Aktyubinsk	19.18	19	P	P	11 53 21.1	-0.1
	0.1nm,0.3s,baz=212,slow=6.6,SNR=3.9						
	0.8nm,0.3s						
IDI	Anoyia	19.83	284	P	Pn	11 53 31.4	+1.2
	0.3nm,0.3s,baz=22,slow=19,SNR=3.6						
	15nm,1.1s						
BVAR	Borovoye Array	25.79	31	P	P	11 54 26.6	-1.8
	0.6nm,0.5s,baz=207,slow=8.9,SNR=3.0						
	0.6nm,0.5s						
SGRT	San Giovanni R	27.59	299	P	P	11 54 44.8	-0.1
KURBB	Kurchatov Arra	28.49	42	P	P	11 54 52.3	-0.4
	0.3nm,0.4s,baz=240,slow=9.3,SNR=4.5						
	0.3nm,0.4s						
MAKZ	Makanchi	29.13	51	P	P	11 54 56.5	-2.0
MKAR	Makanchi Array	29.33	51	P	P	11 55 00.5	+0.2
	1.2nm,0.6s,baz=248,slow=8.5,SNR=8.6						
	1.2nm,0.6s						
MKAR	Makanchi Array	29.33	51	P	P	11 55 00.2	-0.1
NRCA	Norcia	29.68	300	P	P	11 55 03.1	-0.4
NRCA				IAmb	IAmb	11 55 22.4	
	comp=Z,8.5nm,1.1s						
FINES	FINESS Array B	32.37	340	P	P	11 55 27.3	+0.5
	comp=Z,1.9nm,0.8s,baz=134,slow=8.2,SNR=4.6						
	comp=Z,1.9nm,0.8s						
FINES	FINESS Array B	32.37	340	P	P	11 55 26.8	-0.1
ZALV	Zalesovo Beam	33.43	39	P	P	11 55 35.7	-0.5
	comp=Z,0.5nm,0.3s,baz=260,slow=8.9,SNR=4.7						
	comp=Z,0.5nm,0.3s						
HFS	Hagfors	35.86	331	P	P	11 55 57.9	+0.7
	comp=Z,1.1nm,0.4s,baz=120,slow=9.0,SNR=15						
	comp=Z,1.1nm,0.4s						
NC405	NORSAR Array S	37.22	331	P	P	11 56 08.3	-0.5
NC405				IAmb	IAmb	11 56 32.6	
	comp=Z,5.8nm,1.0s						
NOA	NORSAR Array B	37.38	331	P	P	11 56 10.3	+0.1
	comp=Z,0.4nm,0.7s,baz=125,slow=8.8,SNR=3.3						
	comp=Z,0.4nm,0.7s						
ARCES	ARCESS Array B	39.23	347	P	P	11 56 25.3	-0.3
	comp=Z,2.6nm,1.0s,baz=146,slow=13,SNR=1.6						
	comp=Z,2.6nm,1.0s						
EKA	Eskdalemuir Ar	42.40	318	P	P	11 56 51.8	-0.1
	comp=Z,0.7nm,0.7s,baz=100,slow=7.6,SNR=2.0						
	comp=Z,0.7nm,0.7s						
TORD	Torodi Ar. Bea	46.89	257	P	P	11 57 28.5	+0.2
	comp=Z,0.4nm,0.7s,baz=49,slow=9.0,SNR=1.8						
	comp=Z,0.4nm,0.7s						
CMAR	Chiang Mai Arr	47.17	95	P	P	11 57 29.6	-0.8
	comp=Z,0.3nm,0.3s,baz=306,slow=9.0,SNR=1.1						
	comp=Z,0.3nm,0.3s						
CMAR	Chiang Mai Arr	47.17	95	P	P	11 57 28.8	-1.6
SPITS	Spitsbergen Ar	47.82	351	P	P	11 57 35.0	+0.3
	comp=Z,8.0nm,1.1s,baz=134,slow=13,SNR=6.4						
	comp=Z,8.0nm,1.1s						
GRTLG	Ghanzi	59.66	210	P	P	11 59 03.0	+0.9
KS19	Wonju Array Si	63.29	61	P	P	11 59 25.1	-1.4
KS19				IAmb	IAmb	11 59 44.0	
	comp=Z,6.2nm,1.1s						
KSRS	Korea Array	63.35	61	P	P	11 59 25.9	-1.0
	comp=Z,1.2nm,0.6s,baz=298,slow=7.4,SNR=5.4						
	comp=Z,1.2nm,0.6s						
A36M	Sachs Harbour	75.65	358	P	P	12 00 41.7	-0.5
A36M				IAmb	IAmb	12 00 45.0	
	comp=Z,2.5nm,1.0s						
C18K	Utukok River	76.71	11	P	P	12 00 48.2	-0.2
C18K				IAmb	IAmb	12 00 49.2	
	comp=Z,1.5nm,0.7s						
D22K	Ayikyak River	77.65	8	P	P	12 00 52.9	-0.7
D22K				IAmb	IAmb	12 01 16.6	
	comp=Z,2.1nm,1.1s						
TOLK	Toolik Lake Re	78.21	7	P	P	12 00 56.2	-0.6
TOLK				IAmb	IAmb	12 01 20.3	
	comp=Z,2.9nm,1.1s						
E19K	Redstone River	78.40	10	P	P	12 00 57.0	-0.9
E19K				IAmb	IAmb	12 01 04.8	
	comp=Z,2.3nm,1.1s						
G19K	Purcell Mounta	79.65	10	P	P	12 01 04.3	-0.4
F31M	Tsiigehtchic	80.30	1	P	P	12 01 07.5	-0.6
F31M				IAmb	IAmb	12 01 20.6	
	comp=Z,1.9nm,1.1s						
YKA	Yellowknife Ar	84.31	352	P	P	12 01 28.7	-0.6
	comp=Z,0.2nm,0.8s,baz=11,slow=5.0,SNR=5.1						
	comp=Z,0.2nm,0.8s						

DSN ***22*** *12:02:21.9±1.3, 27°.27N×57°.84E, h10^{km}, ML2.5/5, Error ellipse: s-maj=34.1km s-min=8.8km az=147.0*

*TEH **22** 12:02:21.3, 27°.44N×57°.45E, h10km±63km*

ISC 22 12:02:21.6±1.4**, 27°.41N**±0°.05×**57°.62E**±0°.09**, h25**km**, n11, σ1s.06**/14**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHNJ	Kahnooj	0.54	8	Pg	Pb	12 02 32.9	+0.3
KHNJ				Sg	Sn	12 02 41.2	-0.9
IBND	Bandar-abas	0.96	272	Pg	Pb	12 02 39.5	-0.1
GENO	Geno	1.29	270	Pg	Pb	12 02 44.9	-0.4
BNDS	Bandar-Abbas	1.29	270	Pg	Pn	12 02 44.0	-0.2
SHME	Shamm	1.89	225	P	Pb	12 02 55.1	-0.5
SHME				S	Sb	12 03 20.1	+1.3
BANOM	Banah	1.90	219	P	Pb	12 02 54.7	-0.9
BANOM				S	Sb	12 03 20.2	+1.3
NGRK	Negar Kerman	2.36	341	Pn	Pb	12 03 02.6	-1.1
MDH	Madha	2.42	210	P	Pn	12 03 00.7	+1.1
MSFE	Esma-Masafi	2.43	213	P	Pb	12 03 02.7	-2.0
CHMN	Cheshme madani	2.44	358	Pn	Pb	12 03 04.6	-0.5
KHGB	Koh Gabri	3.12	342	Pn	Pb	12 03 16.2	-0.4

IDC 22 12:12:06.8±2.4**, 2°.00N**×**126°.74E, h0**km**, mb3.3**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=199.4km s-min=27.6km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.05	161	P	P	12 17 14.0	+0.1
	0.9nm,0.5s,baz=340,slow=11,SNR=15						
	0.9nm,0.5s						
ASAR	Alice Springs	26.45	165	P	P	12 17 45.6	0.0
	0.2nm,0.4s,baz=341,slow=9.3,SNR=13						
	0.2nm,0.4s						
MKAR	Makanchi Array	58.98	326	P	P	12 22 08.1	-0.1
	0.1nm,0.6s,baz=113,slow=9.6,SNR=1.5						
	0.1nm,0.6s						

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*SJA **22** 12:14:00.7±0.5, 30°.61S×72°.03W, h22km±4km, ML4.1, MW4.1*

*GUC **22** 12:14:02.8±0.8, 30°.72S×71°.79W, h34km±2km, ML4.0*

*NEIC **22** 12:14:03.6±2.3, 30°.66S±0°.05×71°.71W±0°.05, h28km±7km, mb4.4/4, ML4.0(GUC), Error ellipse: s-maj=7.7km s-min=4.8km az=147.0*

*IDC **22** 12:14:05.2±3.6, 30°.65S×72°.00W, h49km±30km, mb3.8/5, mbtmp3.9/9, ML3.6/4, Error ellipse: s-maj=29.9km s-min=21.0km az=110.0*

ISC 22 12:14:03.0±0.9**, 30°.68S**±0°.02×**71°.80W**±0°.05**, h30**km±5km**, n100, σ1s.70**/115**, mb4.2**/4**, 6D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.14	89		Pb	12 14 08.4	-0.2
CO06	Fray Jorge	0.14	89	⇓iP	Pb	12 14 08.4	-0.2
CO06				eS	Sb	12 14 12.0	-0.6
CO06				IAML		12 14 12.5	
	comp=E,57µm,0.3s						
CO02	Combarbal	0.87	128		Pb	12 14 18.5	-1.1
CO02	Combarbal	0.87	128	eP	Pb	12 14 18.4	-1.2
CO02				eS	Sb	12 14 29.5	-1.5
CO02				IAML		12 14 33.7	
	comp=N,20µm,0.2s						
CO02	Combarbal	0.87	128	iP	Pb	12 14 18.5	-1.1
CO02				IAML		12 14 33.6	
	comp=Z,6µm,0.3s						
CO05	La Serena	0.90	33	Pn	Pn	12 14 19.2	-0.4
CO05	La Serena	0.90	33	eP	Pn	12 14 19.6	+0.1
CO05				eS	Sn	12 14 32.0	+0.5
CO05				IAML		12 14 33.1	
	comp=E,4µm,0.3s						
CO03	El Pedregal	0.97	100	Pn	Pn	12 14 19.6	-1.1
CO03	El Pedregal	0.97	100	⇓iP	Pn	12 14 20.0	-0.6
CO03				eS	Sn	12 14 32.6	-0.9
CO03				IAML		12 14 34.1	
	comp=E,5µm,0.3s						
CO03	El Pedregal	0.97	100	iP	Pn	12 14 20.1	-0.6
CO03				IAML		12 14 36.6	
	comp=Z,2µm,0.7s						
GO04	Tololo Observa	1.00	60	Pn	Pb	12 14 20.9	-1.0
GO04	Tololo Observa	1.00	60	⇓iP	Pb	12 14 21.2	-0.7
GO04				eS	Sn	12 14 35.1	+0.7
CO04	Los Peladeros	1.54	153	eP	Pn	12 14 28.7	+0.2
CO04				eS	Sn	12 14 48.3	+0.6
CO04				IAML		12 14 54.5	
	comp=N,5µm,0.3s						
CO01	Juntas del Tor	1.63	65		Pb	12 14 31.5	-1.1
CO01	Juntas del Tor	1.63	65	eP	Pb	12 14 31.4	-1.3
CO01				eS	Sb	12 14 52.2	-0.7
CO01				IAML		12 14 54.2	
	comp=N,1µm,0.3s						
CO01	Juntas del Tor	1.63	65	iP	Pb	12 14 31.3	-1.3
CO01				IAML		12 14 54.7	
	comp=Z,944nm,0.7s						
LCO	Las Campanas	1.92	30	Pn	Pn	12 14 34.5	+0.8
LCO	Las Campanas	1.92	30	eP	Pb	12 14 34.9	-2.5
LCO				eS	Sb	12 15 00.1	-0.9
LCO	Las Campanas	1.92	30	iP	Pb	12 14 35.5	-1.9
LCO				iS	Sb	12 15 00.8	-0.2
LCO				IAML		12 15 04.2	
	comp=Z,1µm,1.1s						
VA06	Catapilco	1.93	167	Pn	Pn	12 14 34.1	+0.4
VA06	Catapilco	1.93	167	eP	Pn	12 14 33.8	+0.1
VA06				eS	Sn	12 14 58.7	+1.8
VA06				IAML		12 15 07.8	
	comp=E,4µm,0.4s						
AC05	El Transito	2.26	36	Pn	Pn	12 14 39.8	+1.4
AC05	El Transito	2.26	36	eP	Pb	12 14 40.4	-2.9
AC05				eS	Sb	12 15 08.8	-2.1
AC05				IAML		12 15 19.6	
	comp=N,802nm,0.2s						
AC05	El Transito	2.26	36	iP	Pb	12 14 40.4	-2.9
AC05				iS	Sb	12 15 09.8	-1.1
AC05				IAML		12 15 13.4	
	comp=Z,455nm,0.8s						
VA03	San Esteban	2.34	153	Pn	Pn	12 14 41.1	+1.6
VA03	San Esteban	2.34	153	eP	Pn	12 14 40.8	+1.4
VA03				eS	Sn	12 15 09.2	+2.0
VA03	San Esteban	2.34	153	iP	Pb	12 14 42.4	-2.1
VA03				iS	Sb	12 15 13.5	+0.5
VA03				IAML		12 15 17.2	
	comp=Z,613nm,0.5s						
VA01	Torpederas	2.34	177	eP	Pn	12 14 42.4	+3.0
ACCO	Cerro Coronel	2.36	89	iP	Pb	12 14 44.5	-0.5
ACCO				iS	Sb	12 15 16.2	+2.3
ROCH	El Roble	2.39	164	eP	Pn	12 14 40.7	+0.5
RTLS	Leoncito	2.42	118	iP	Pb	12 14 45.0	-1.0
RTLS				iS	Sb	12 15 17.9	+2.4
RTLS				IAML		12 15 25.2	
	comp=Z,6µm,0.7s						
AC04	Llanos de Chal	2.54	15	Pn	Pn	12 14 42.4	+0.2
AC04	Llanos de Chal	2.54	15	eP	Pn	12 14 42.5	+0.3
AC04	Llanos de Chal	2.54	15	⇓iP	Pn	12 14 42.9	+0.7
AC04				IAML		12 15 27.2	
	comp=Z,252nm,0.7s						
PEL	Peldehue	2.64	159	Pn	Pn	12 14 45.1	+1.6
MT10	Hacienda Santa	2.80	158	⇓eP	Pn	12 14 47.2	+1.3
MT05	Renca	2.85	162	Pn	Pn	12 14 47.9	+1.4
MT05	Renca	2.85	162	eP	Pn	12 14 49.1	+2.6
MT05	Renca	2.85	162	iP	Pn	12 14 49.8	+3.3
MT05				iS	Sb	12 15 25.9	-1.9
MT05				IAML		12 15 33.7	
	comp=Z,906nm,0.6s						
MT14	Cerro Cal¡n	2.92	159	eP	Pn	12 14 49.3	+1.9
MT16	CCHEN	2.95	159	eP	Pn	12 14 51.5	+3.7
VA05	Santo Domingo	2.98	177		Pn	12 14 46.9	-1.2
MT03	Universidad Ad	3.02	159		Pn	12 14 49.2	+0.4
MT03	Universidad Ad	3.02	159	eP	Pn	12 14 50.5	+1.7
MT04	Ro Olivares	3.07	153	eP	Pn	12 14 52.3	+2.7
MT04	Ro Olivares	3.07	153	iP	Pn	12 14 52.9	+3.3
MT04				iS	Sb	12 15 31.9	-2.1
MT04				IAML		12 15 38.5	
	comp=Z,395nm,0.6s						
AGUA	GUANDACOL	3.10	68	iP	Pb	12 14 55.0	-2.6
AGUA				IAML		12 15 45.1	
	comp=Z,574nm,0.6s						
MT15	Las Vizcachas	3.12	160	eP	Pn	12 14 51.6	+1.5
MT08	Bocatoma Ro	3.15	152	⇓eP	Pn	12 14 53.9	+3.2
MT08	Bocatoma Ro	3.15	152	iP	Pn	12 14 54.1	+3.4
MT08				iS	Sb	12 15 33.8	-2.6
MT08				IAML		12 15 47.6	
	comp=Z,390nm,0.7s						
MT09	Talagante	3.17	168		Pn	12 14 51.6	+0.7
MT09	Talagante	3.17	168	eP	Pn	12 14 51.7	+0.8
CFA	Coronel Fontan	3.19	108	P	Pb	12 14 55.3	-3.7
	comp=Z,18nm,0.3s,baz=276,slow=12,SNR=174						
CFA				S	Sb	12 15 34.9	-2.7
	comp=Z,104nm,0.4s,baz=272,slow=13,SNR=5.9						
	comp=Z,38nm,0.3s						
CFA	Coronel Fontan	3.19	108	iP	Pb	12 14 55.5	-3.5
CFA				iS	Sb	12 15 36.0	-1.5
CFA				IAML		12 15 42.3	
	comp=Z,498nm,0.6s						
MT01	Popeta	3.21	172		Pn	12 14 51.7	+0.3
MT01	Popeta	3.21	172	eP	Pn	12 14 51.3	0.0
MT13	San Alfonso	3.32	158		Pn	12 14 55.0	+2.1
MT13	San Alfonso	3.32	158	eP	Pn	12 14 54.8	+1.9
MT13	San Alfonso	3.32	158	iP	Pn	12 14 55.2	+2.3
MT13				IAML		12 15 56.8	
	comp=Z,293nm,0.4s						
GO03	Copiapo	3.36	24		Pn	12 14 53.8	+0.3
GO03	Copiapo	3.36	24	eP	Pn	12 14 54.3	+0.8
LMEL	Las Melosas	3.44	157		Pn	12 14 56.0	+1.3
LMEL	Las Melosas	3.44	157	eP	Pn	12 14 57.0	+2.3
LMEL	Las Melosas	3.44	157	iP	Pn	12 14 58.0	+3.3
LMEL				iS	Sb	12 15 40.8	-3.9
LMEL				IAML		12 15 55.1	
	comp=Z,394nm,0.6s						
BO04	La Punta	3.46	163		Pn	12 14 55.0	+0.2
BO04	La Punta	3.46	163	eP	Pn	12 14 55.6	+0.9
BO01	Tunca	3.75	171		Pn	12 14 59.2	+0.3
BO01	Tunca	3.75	171	eP	Pn	12 14 59.1	+0.3
BO03	Pichilemu	3.81	182	eP	Pn	12 14 58.1	-1.5
BO02	Sierra Bellavi	4.19	168		Pn	12 15 05.4	+0.5
AC02	Maricunga	4.49	32	Pn	Pn	12 15 10.9	+1.5
AC02	Maricunga	4.49	32	eP	Pn	12 15 10.8	+1.4
AC01	Pan de Azucar	4.63	14	Pn	Pn	12 15 09.7	-1.2
BI02	San Fabin de	5.99	176		Pn	12 15 29.4	-0.2
PB14	IPOC Station P	6.15	12	Pn	Pn	12 15 30.0	-2.1
TCA	Tanti	6.22	98	eP	Pn	12 15 33.6	+0.8
H03N1	Juan Fernandez	6.63	244	T	T	12 22 32.2	
	baz=72,slow=72,SNR=4381						
H03N2	Juan Fernandez	6.65	244	T	T	12 22 32.2	
	baz=72,slow=72,SNR=3250						
H03N3	Juan Fernandez	6.65	244	T	T	12 22 31.1	
	baz=72,slow=72,SNR=2708						
PLCA	Paso Flores	10.09	175	P	Pn	12 16 27.1	+1.3
	comp=Z,0.1nm,0.3s,baz=345,slow=10,SNR=3.3						
	comp=Z,1.1nm,0.8s						
PLCA	Paso Flores	10.09	175		Pn	12 16 24.9	-0.8
TRQA	Tornquist	10.95	135	Pn	Pn	12 16 38.8	+1.2
CPUP	Villa Florida	13.44	75	P	P	12 17 17.6	-3.0
	comp=Z,0.7nm,0.4s,baz=238,slow=12,SNR=3.1						
CPUP				S	Sn	12 19 49.4	+9.3
	comp=Z,3.3nm,0.8s,baz=168,slow=20,SNR=3.1						
LPAZ	La Paz	14.71	14	P	Pn	12 17 31.8	+2.2
	comp=Z,0.1nm,0.3s,baz=172,slow=7.8,SNR=3.5						
	comp=Z,0.8nm,0.5s						
SIV	San Ignacio	17.61	36	P	P	12 18 08.1	+1.1
	baz=218,slow=13,SNR=7.0						
	comp=Z,1.8nm,0.9s						
BDFB	Brasilia	26.42	61	P	P	12 19 37.2	0.0
	comp=Z,2.9nm,0.8s,baz=211,slow=5.0,SNR=4.0						
	comp=Z,2.9nm,0.8s						
BDFB	Brasilia	26.42	61	P	P	12 19 38.3	+1.0
SNAA	Sanae	54.59	159	P	P	12 23 28.4	+0.2
	comp=Z,0.7nm,0.3s,baz=26,slow=6.5,SNR=3.3						
	comp=Z,0.7nm,0.3s						
SNAA	Sanae	54.59	159	P	P	12 23 29.5	+1.3
QSPA	South Pole Qui	59.55	180	P	P	12 24 03.7	+0.3
	comp=Z,1.2nm,0.9s,baz=164,slow=1.5,SNR=6.8						
	comp=Z,1.2nm,0.9s						
QSPA	South Pole Qui	59.55	180	P	P	12 24 04.1	+0.7
QSPA				IAmb	IAmb	12 24 15.1	
	comp=Z,2.1nm,1.1s						
DBIC	Dimbokro	73.94	72	P	P	12 25 36.8	+1.1
	comp=Z,1.3nm,0.5s,baz=254,slow=8.0,SNR=1.7						
	comp=Z,1.3nm,0.5s						
DBIC	Dimbokro	73.94	72	P	P	12 25 36.1	+0.4
DBIC				IAmb	IAmb	12 25 47.0	
	comp=Z,7.8nm,1.3s						
TORD	Torodi Ar. Bea	82.90	70	P	P	12 26 25.4	+0.3
	comp=Z,0.3nm,0.5s,baz=273,slow=4.8,SNR=5.6						
	comp=Z,0.3nm,0.5s						
H11S2	WAKE ISLAND Hy	125.95	271	T	T	14 51 44.7	
	baz=116,slow=75,SNR=20						
H11S1	WAKE ISLAND Hy	125.97	271	T	T	14 51 42.1	
	baz=116,slow=75,SNR=20						
H11S3	WAKE ISLAND Hy	125.97	271	T	T	14 51 45.3	
	baz=116,slow=75,SNR=21						
BVAR	Borovoye Array	144.66	40	PKP	PKPbc	12 33 35.9	+0.8
	comp=Z,0.8nm,0.5s,baz=298,slow=3.1,SNR=5.1						
KURBB	Kurchatov Arra	150.25	39	PKPbc	PKPbc	12 33 50.7	+0.1
	comp=Z,0.3nm,0.7s,baz=301,slow=3.1,SNR=5.1						
ZALV	Zalesovo Beam	151.27	29	PKPbc	PKPbc	12 33 53.2	+0.3
	comp=Z,1.3nm,0.6s,baz=281,slow=2.0,SNR=9.0						

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*IDC **22** 12:21:32.5±3.6, 38°.04N×29°.47W, h0km, mb3.7/8, mbtmp3.7/8, Error ellipse: s-maj=118.9km s-min=29.9km az=170.0*

ISC 22 12:21:34.5±3.5**, 38°.2N**±0°.8×**29°.5W**±0°.2**, h10**km**, n8,** σ1s.**25**/8**, mb3.7**/8**, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FINES	FINESS Array B	41.08	37	P	P	12 29 16.4	-1.5
	1.6nm,0.9s,baz=251,slow=4.3,SNR=3.5						
	1.6nm,0.9s						
AKASG	Malin Array Be	42.67	53	P	P	12 29 31.4	+0.3
	0.3nm,0.3s,baz=277,slow=8.1,SNR=2.0						
	0.3nm,0.3s						
TXAR	Lajitas Array	60.83	286	P	P	12 31 46.2	-0.9
	0.4nm,0.8s,baz=72,slow=7.0,SNR=4.2						
	0.4nm,0.8s						
ILAR	Eielson Array	66.40	335	P	P	12 32 24.6	+1.3
	0.5nm,0.9s,baz=50,slow=7.2,SNR=4.6						
	0.5nm,0.9s						
KURBB	Kurchatov Arra	71.39	40	P	P	12 32 55.2	+0.6
	0.6nm,0.8s,baz=310,slow=7.3,SNR=5.7						
	0.6nm,0.8s						
ZALV	Zalesovo Beam	72.27	34	P	P	12 32 58.7	-1.1
	0.3nm,0.4s,baz=321,slow=5.9,SNR=3.6						
	0.3nm,0.4s						
MKAR	Makanchi Array	75.75	41	P	P	12 33 21.4	+1.0
	1.4nm,0.8s,baz=309,slow=5.4,SNR=12						
	1.4nm,0.8s						
SONM	Songino Array	85.79	28	P	P	12 34 14.6	+0.5
	0.4nm,0.8s,baz=328,slow=5.1,SNR=3.7						
	0.4nm,0.8s						

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*IDC **22** 12:22:49.5±0.9, 6°.25S×143°.22E, h0km, mb3.9/9, mbtmp3.9/12, ML1.4/1, Error ellipse: s-maj=28.2km s-min=16.5km az=74.0*

ISC 22 12:22:54.6±0.7**, 6°.34S**±0°.09×**143°.1E**±0°.1**, h35**km**, n14,** σ1s.**22**/15**, mb4.0**/8**, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	4.49	328	Pn	Pn	12 23 59.1	-1.2
	11nm,0.7s,baz=178,slow=10,SNR=5.9						
JAY				Sn	Sn	12 24 52.1	+0.7
	4.2nm,0.3s,baz=328,slow=12,SNR=3.6						
PMG	Port Moresby	5.04	127	Pn	Pn	12 24 07.7	0.0
	1.0nm,0.3s,baz=99,slow=9.3,SNR=3.9						
PMG				Sn	Sn	12 25 04.6	-0.1
	1.1nm,0.3s,baz=222,slow=23,SNR=1.8						
	4.9nm,0.4s						
CTA	Charters Tower	14.00	168	Lg	Lg	12 30 17.2	
	baz=42,slow=16,SNR=1.7						
WRA	Warramunga Arr	15.98	211	Pn	Pn	12 26 33.9	-3.0
	0.3nm,0.3s,baz=31,slow=13,SNR=9.0						
WRA				Sn	Sn	12 29 20.2	-13
	0.1nm,0.3s,baz=34,slow=22,SNR=2.5						
WRA				Lg	Lg	12 31 16.5	
	0.1nm,0.3s,baz=16,slow=27,SNR=5.2						
ASAR	Alice Springs	19.37	206	P	P	12 27 19.1	+1.7
	6.0nm,0.8s,baz=31,slow=11,SNR=88						
ASAR				S	S	12 30 46.7	-8.1
	0.8nm,0.8s,baz=19,slow=28,SNR=4.7						
ASAR				Lg	Lg	12 33 10.6	
	baz=34,slow=32,SNR=4.5						
FITZ	Fitzroy Crossi	20.66	234	P	P	12 27 31.9	+0.4
	3.2nm,0.6s,baz=49,slow=8.6,SNR=17						
FITZ				S	S	12 31 11.7	-9.1
	2.7nm,0.7s,baz=175,slow=9.1,SNR=3.6						
FITZ				Lg	Lg	12 33 37.1	
	baz=199,slow=4.3						
	3.2nm,0.6s						
STKA	Stephens Creek	25.44	183	P	P	12 28 20.0	+0.8
	1.7nm,0.7s,baz=24,slow=4.6,SNR=3.1						
	1.7nm,0.7s						
CMAR	Chiang Mai Arr	50.04	300	P	P	12 31 46.5	+0.2
	0.6nm,0.3s,baz=112,slow=8.0,SNR=1.7						
	0.6nm,0.3s						
SONM	Songino Array	62.89	333	P	P	12 33 17.3	-0.1
	0.3nm,0.6s,baz=131,slow=6.5,SNR=2.4						
	0.3nm,0.6s						
MKAR	Makanchi Array	75.33	322	P	P	12 34 35.2	+0.7
	1.2nm,0.6s,baz=98,slow=8.8,SNR=11						
	1.2nm,0.6s						
KURBB	Kurchatov Arra	79.21	324	P	P	12 34 56.7	+0.7
	0.6nm,0.7s,baz=108,slow=4.8,SNR=4.4						
	0.6nm,0.7s						
QSPA	South Pole Qui	83.63	180	P	P	12 35 19.8	+0.4
	1.8nm,1.1s,baz=308,slow=1.6,SNR=5.7						
	1.8nm,1.1s						
BVAR	Borovoye Array	84.78	325	P	P	12 35 26.1	+0.8
	3.1nm,0.7s,baz=103,slow=6.3,SNR=15						
	3.1nm,0.7s						
ILAR	Eielson Array	87.33	24	P	P	12 35 36.5	-1.2
	0.6nm,0.8s,baz=255,slow=3.8,SNR=4.7						
	0.6nm,0.8s						

GUC 22 12:23:43.1±0.7**, 24°.18S**×**66°.96W, h204**km±6km**, ML3.9, 5C-1D, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALTA		0.57	95	eP	Pn	12 24 11.2	-0.4
SLA	San Lorenzo	1.43	112	⇓eP	Pn	12 24 16.4	-0.3
SLA				eS	S	12 24 41.6	-0.9
GO02	Mina Guanaco	2.58	247	⇑eP	Pn	12 24 28.8	+0.3
GO02				eS	S	12 25 03.5	+0.3
GO02				IAML		12 25 06.7	
	comp=E,369nm,0.1s						
PB06	IPOC Station P	2.81	301	⇑eP	Pn	12 24 31.3	+0.3
PB06				eS	S	12 25 07.0	-0.7
PB06				IAML		12 25 10.4	
	comp=N,172nm,0.1s						
PB09	IPOC Station P	3.17	318	eP	Pn	12 24 35.9	+0.8
PB09				eS	S	12 25 15.6	+0.3
PB14	IPOC Station P	3.17	261	eP	Pn	12 24 35.2	-0.1
PB14				eS	S	12 25 13.7	-1.7
PB05	IPOC Station P	3.25	293	eP	Pn	12 24 36.2	+0.1
PB05				eS	S	12 25 14.9	-2.0
AC02	Maricunga	3.29	216	⇑eP	Pn	12 24 37.2	+0.4
PB03	IPOC Station P	3.33	309	eP	Pn	12 24 37.3	+0.2
PB03				eS	S	12 25 17.1	-1.7
PB10	IPOC Station P	3.36	281	⇑eP	Pn	12 24 37.3	+0.2
PB10				eS	S	12 25 18.2	-0.7
PB07	IPOC Station P	3.64	312	eP	Pn	12 24 40.7	-0.1
PB07				eS	S	12 25 23.4	-2.0
AC01	Pan de Azucar	3.83	238	⇑eP	Pn	12 24 42.0	-1.0
PB01	IPOC Station P	3.90	323	eP	Pn	12 24 43.5	-0.4
PB02	IPOC Station P	3.93	316	eP	Pn	12 24 44.2	-0.1
GO03	Copiapo	4.50	220	eP	Pn	12 24 49.1	-2.2
GO01	Chusmiza	4.94	335	eP	Pn	12 24 57.6	+0.2

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*IDC **22** 12:28:11.2±0.8, 6°.40S×103°.60E, h0km, mb4.2/17, mbtmp4.2/17, MS3.2/1, Error ellipse: s-maj=35.6km s-min=14.6km az=51.0*

*DJA **22** 12:28:14.7±0.4, 6°S±3°×10°4E±°, h10km, M4.4/13, mb4.8/1, MLv4.2/13*

*NEIC **22** 12:28:17.5±1.3, 6°.3S±0°.1×103°.8E±0°.1, h35km±2km, mb4.5/20, Error ellipse: s-maj=25.3km s-min=11.7km az=228.0*

ISC 22 12:28:14.5±2.3**, 6°.40S**±0°.06×**103°.73E**±0°.05**, h18**km±12km**, n79,** σ1s.**12**/71**, mb4.5**/28**, 1D, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	1.16	41	P	Pb	12 28 35.9	-0.2
KASI				S	Sg	12 28 52.3	+0.1
LWLI	Liwa	1.41	14	P	Pb	12 28 40.4	-0.1
LWLI				S	Sg	12 28 59.9	-0.4
BLSI	Bandar Lampung	1.83	56	P	Pn	12 28 45.6	+0.5
BLSI				S	Sb	12 29 10.2	+0.2
KLI	Kotabumi	1.90	36	P	Pn	12 28 47.2	+1.2
MDSI	Maura Dua	1.96	13	P	Pb	12 28 48.4	-1.2
MDSI				S	Sb	12 29 14.2	+0.5
KLSI		1.97	31	P	Pb	12 28 49.3	-0.6
KLSI				S	Sb	12 29 14.2	0.0
MNAI	Manna	2.17	339		Pn	12 28 51.2	+1.5
MNAI	Manna	2.17	339	P	Pn	12 28 51.1	+1.3
KSI	Kapahiang	2.96	338	P	Pn	12 29 02.1	+1.5
UBSI	University, Be	3.00	331	P	Pn	12 29 02.1	+1.0
DBJI	Dramaga	3.01	93	P	Pn	12 29 02.9	+1.6
CNJI	Cibinong	3.50	105	P	Pn	12 29 09.6	+1.5
MASI	Maura Aman, Be	3.56	335	P	Pn	12 29 10.8	+1.8
BBJI	Bungbulang	4.04	105	P	Pn	12 29 15.9	+0.4
PPSI	Pulau Pagai	5.17	314	P	Pn	12 29 31.8	+0.7
UGM	Wanagama	6.91	103	Pn	Pn	12 29 57.0	+2.0
JAGI	Jajag, Banyuwa	10.54	102	Pn	Pn	12 30 44.6	-0.3
KULM	Kulim	12.01	345	Pn	Pn	12 31 04.8	-0.2
TOLI2	Tolitoli	18.59	67		Pn	12 32 31.1	-0.1
BATI	Baumata	20.09	102	P	Pn	12 32 48.4	-0.8
	17nm,0.4s,baz=254,slow=1.9,SNR=6.9						
	17nm,0.4s						
SOEI	Soe	20.61	101		P	12 32 52.5	-0.7
CM31	Chiang Mai Arr	25.15	349	P	P	12 33 37.5	-1.4
CM31				IAmb	IAmb	12 33 39.9	
	comp=Z,12nm,0.9s						
CMAR	Chiang Mai Arr	25.15	349	P	P	12 33 37.6	-1.2
	comp=Z,6.2nm,0.7s,baz=181,slow=8.9,SNR=55						
CMAR				LR	LR	12 44 46.4	
	comp=Z,52nm,18.6s,baz=175,slow=40						
	comp=Z,6.2nm,0.7s						
CMAR	Chiang Mai Arr	25.15	349		P	12 33 37.5	-1.3
CHTO	Chiang Mai	25.50	349	P	P	12 33 41.1	-0.9
H01W3	Cape Leeuwin H	29.93	163	T	T	13 05 52.0	
	baz=340,slow=76,SNR=8.5						
H01W2	Cape Leeuwin H	29.94	163	T	T	13 05 52.1	
	baz=340,slow=76,SNR=10						
H01W1	Cape Leeuwin H	29.94	163	T	T	13 05 50.8	
	baz=340,slow=76,SNR=9.0						
H08S2	Diego Garcia H	31.02	266	T	T	13 06 57.0	
	baz=90,slow=76,SNR=11						
H08S3	Diego Garcia H	31.03	266	T	T	13 07 00.6	
	baz=90,slow=76,SNR=45						
H08S1	Diego Carcia H	31.04	266	T	T	13 06 58.9	
	baz=90,slow=76,SNR=16						
WB0	Warramunga Arr	32.61	117	P	P	12 34 45.8	+0.3
WRA	Warramunga Arr	32.63	117	P	P	12 34 45.5	-0.1
	comp=Z,2.0nm,0.8s,baz=290,slow=8.7,SNR=6.8						
	comp=Z,2.0nm,0.8s						
WRA	Warramunga Arr	32.63	117	P	P	12 34 45.5	-0.1
WRAB	Tennant Creek	32.63	117	P	P	12 34 45.8	+0.1
PZH	PanZhiHua	32.77	357	P	P	12 34 49.8	+3.0
ASAR	Alice Springs	33.70	124	P	P	12 34 55.0	0.0
	comp=Z,1.9nm,0.9s,baz=294,slow=7.9,SNR=5.6						
	comp=Z,1.9nm,0.9s						
YHNB	Yeheng	35.35	28	P	P	12 35 06.8	-2.4
YOJ	Yonaguni jima	35.98	31	P	P	12 35 12.9	-1.6
NJ2	Nanjing	40.87	20	eP	P	12 35 56.3	+0.7
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
STKA	Stephens Creek	43.48	131	P	P	12 36 17.1	+0.2
	comp=Z,2.5nm,0.6s,baz=286,slow=8.6,SNR=5.2						
	comp=Z,2.5nm,0.6s						
HHC	Hu-ho-hao-te	47.57	8	eP	P	12 36 53.3	+4.0
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,85nm,3.7s						
KSRS	Korea Array	49.13	26	P	P	12 37 01.1	-0.1
	comp=Z,2.7nm,0.8s,baz=210,slow=7.0,SNR=5.2						
	comp=Z,2.7nm,0.8s						
KSH	Kashi	52.40	333	P	P	12 37 24.6	-1.4
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SONM	Songino Array	54.05	2	P	P	12 37 38.2	+0.2
	comp=Z,4.3nm,0.8s,baz=178,slow=9.4,SNR=27						
	comp=Z,4.3nm,0.8s						
SONM	Songino Array	54.05	2	P	P	12 37 38.3	+0.2
SONM				IAmb	IAmb	12 37 39.0	
	comp=Z,4.1nm,0.8s						
ARSB	Arslanbob	55.22	332	P	P	12 37 46.8	+0.1
BNX	BinXian	56.06	20	⇓P	P	12 37 52.9	+0.5
BNX				pmax	pmax		
	comp=Z,7.0nm,1.1s						

MKAR	Makanchi Array	56.28	342	P	P	12 37 53.4	-0.6
	comp=Z,2.7nm,0.8s,baz=146,slow=7.4,SNR=17						
	comp=Z,2.7nm,0.8s						
MKAR	Makanchi Array	56.28	342		P	12 37 53.2	-0.8
H04N2	CROZET ISLANDS	59.63	219	T	T	13 42 42.4	
	baz=66,slow=74,SNR=347						
H04N1	CROZET ISLANDS	59.64	219	T	T	13 42 43.1	
	baz=66,slow=74,SNR=283						
H04N3	CROZET ISLANDS	59.65	219	T	T	13 42 41.4	
	baz=66,slow=74,SNR=364						
H04S1	CROZET ISLANDS	59.85	219	T	T	13 42 55.1	
	baz=64,slow=76,SNR=56						
H04S3	CROZET ISLANDS	59.86	219	T	T	13 42 54.6	
	baz=64,slow=76,SNR=80						
H04S2	CROZET ISLANDS	59.86	219	T	T	13 42 56.0	
	baz=64,slow=76,SNR=74						
HEH	HeiHe	60.05	17	*e*P	P	12 38 18.5	-1.8
KURBB	Kurchatov Arra	60.83	342	P	P	12 38 25.0	-0.6
	comp=Z,1.6nm,0.8s,baz=154,slow=6.4,SNR=8.7						
	comp=Z,1.6nm,0.8s						
KURK	Kurchatov	60.88	342	P	P	12 38 25.1	-0.9
KURK				IAmb	IAmb	12 38 51.0	
	comp=Z,5.0nm,1.2s						
ZAA0	Zalesovo Array	62.20	347		P	12 38 33.8	-1.0
ZAA0				IAmb	IAmb	12 38 34.7	
	comp=Z,7.1nm,1.1s						
ZALV	Zalesovo Beam	62.20	347	P	P	12 38 33.4	-1.4
	comp=Z,4.8nm,0.9s,baz=156,slow=4.7,SNR=18						
	comp=Z,4.8nm,0.9s						
ZALV	Zalesovo Beam	62.20	347		P	12 38 33.9	-0.9
BVAR	Borovoye Array	65.59	339	P	P	12 38 56.2	-0.9
	comp=Z,3.6nm,0.7s,baz=141,slow=9.1,SNR=20						
	comp=Z,3.6nm,0.7s						
BORK	Borovoye	65.63	339		P	12 38 56.8	-0.7
BORK				IAmb	IAmb	12 38 57.3	
	comp=Z,3.2nm,0.7s						
AB31	Akbulak array	67.27	331		P	12 39 07.7	-0.3
AB31				IAmb	IAmb	12 39 08.3	
	comp=Z,3.9nm,0.8s						
ABKAR	Akbulak array	67.27	331		P	12 39 07.4	-0.6
ARTI	Arti	72.75	336		P	12 39 41.4	-0.1
KBZ	Khabaz	74.04	319	P	P	12 39 49.1	-0.2
	comp=Z,1.2nm,0.4s,baz=167,slow=5.0,SNR=5.2						
	comp=Z,1.2nm,0.4s						
NRIK	Noril'sk	76.39	354	P	P	12 40 01.3	-1.1
	comp=Z,0.8nm,0.3s,baz=142,slow=2.0,SNR=3.7						
	comp=Z,0.8nm,0.3s						
BRTR	Keskin Array B	79.01	312	P	P	12 40 17.2	-0.7
	comp=Z,0.4nm,0.6s,baz=142,slow=9.1,SNR=3.6						
	comp=Z,0.4nm,0.6s						
QSPA	South Pole Qui	83.59	180	P	P	12 40 41.4	-0.3
	comp=Z,1.0nm,1.0s,baz=231,slow=4.6,SNR=1.6						
	comp=Z,1.0nm,1.0s						
QSPA	South Pole Qui	83.59	180	P	P	12 40 41.3	-0.3
QSPA				IAmb	IAmb	12 40 51.0	
	comp=Z,6.0nm,1.4s						
AKASG	Malin Array Be	85.22	322	P	P	12 40 49.3	-0.7
	comp=Z,0.9nm,0.5s,baz=98,slow=4.9,SNR=3.0						
	comp=Z,0.9nm,0.5s						
BURAR	Bucovina Array	87.00	318	P	P	12 40 58.5	-0.4
BURAR				IAmb	IAmb	12 41 01.6	
	comp=Z,2.6nm,0.8s						
BUR08	Bucovina Ar. S	87.01	318		P	12 40 58.8	-0.3
BUR08				IAmb	IAmb	12 41 01.3	
	comp=Z,3.4nm,0.8s						
FINES	FINESS Array B	89.71	332	P	P	12 41 11.6	+0.2
	comp=Z,1.9nm,1.0s,baz=64,slow=3.2,SNR=1.6						
	comp=Z,1.9nm,1.0s						
FINES	FINESS Array B	89.71	332	P	P	12 41 12.1	+0.7
BELA	Belgrano 2	92.79	188	P	P	12 41 27.4	+1.9
BELA				IAmb	IAmb	12 42 09.8	
	comp=Z,3.4nm,1.5s						
TXAR	Lajitas Array	145.54	45	PKPbc	PKPbc	12 47 52.7	+0.1
	comp=Z,3.3nm,0.8s,baz=294,slow=1.4,SNR=23						

DJA 22 12:30:12.9±0.5, 2°N±3°×9°9E±°, h143^{km}±5^{km}, M3.3/12, MLv3.3/12, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBSI	Sibolga	0.66	208	P	Pn	12 30 36.2	+1.8
SBSI				S	Sn	12 30 54.3	+3.5
PSI	Prapat	0.71	337	Pn	Pn	12 30 35.3	+0.4
	27nm,0.3s,baz=153,slow=8.8,SNR=45						
PSI	Prapat	0.71	337	P	Pn	12 30 35.1	+0.2
PSI				S	Sn	12 30 51.9	+0.3
MNSI	Mandailing Nat	1.39	164	P	Pn	12 30 41.7	+0.9
MNSI				S	Sn	12 31 02.9	+0.8
GSI	Gunungsitoli	1.82	243	P	Pn	12 30 46.0	+0.4
KCSI	Kotacane, Aceh	1.98	314	P	Pn	12 30 47.4	0.0
TPTI		2.30	299	P	Pn	12 30 51.9	+0.6
PBSI	Pulau Batu	2.37	203	P	Pn	12 30 52.1	0.0
SNSI	Sinabang, Aceh	2.88	275	P	Pn	12 30 59.0	+0.5
SISI	Saibi	3.44	182	P	Pn	12 31 03.5	-2.3
KULM	Kulim	3.45	25	P	Pn	12 31 05.7	-0.1
MLSI	Meulaboh, Aceh	3.50	307	P	Pn	12 31 06.6	+0.1

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*NIED **22** 12:33:43.9, 38°.98N×140°.90E, h7^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.94; $M_{\theta\theta}$-1.18; $M_{\phi\phi}$0.24; $M_{r\theta}$-0.02; $M_{\theta\phi}$0.57; $M_{\phi r}$-0.53; Fault plane solution: $M_0$1.33000×10^{15} NP1: ϕ_s261.00000°, δ49.00000°, λ46.00000°. NP2: ϕ_s137.00000°, δ57.00000°, λ129.00000°.*

*JMA **22** 12:33:43.9±0.0, 39°.0N±0°.1×140°.9E±0°.2, h7^{km}, MD4.4/20, MV4.4/20, SOUTHERN IWATE PREF*

JMA Felt III J1 at SOUTHERN IWATE PREF .

*NEIC **22** 12:33:44.4±1.1, 38°.99N±0°.05×140°.81E±0°.10, h10^{km}±1^{km}, mb4.6/50, Error ellipse: s-maj=13.7km s-min=7.0km az=113.0*

*BJI **22** 12:33:47.6, 38°.90N×140°.89E, h61^{km}, mB4.7/7, mb4.3/25, Ms3.6/1, Ms7 3.5/1*

*IDC **22** 12:33:48.4±1.3, 38°.97N×140°.76E, h43^{km}±12^{km}, mb4.0/26, mbtmp4.2/33, ML3.8/5, MS3.0/6, Error ellipse: s-maj=12.9km s-min=7.9km az=106.0*

ISC 22 12:33:44.0±0.9, 38°.96N±0°.03×140°.89E±0°.03, h13^{km}±6^{km}, n196, σ0^s.95/178, mb4.5/67, 20D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMK	Ichinoseki	0.26	92	⇓P	Pg	12 33 48.9	-0.5
JMK				⇓S	Sg	12 33 52.5	-0.6
JMK	Ichinoseki	0.26	92	A	A	12 33 48.9	
	comp=N,41nm,0.7s,comp=E,20nm,4.8s						
JOFO	Osakifurukawao	0.36	177	⇓*i*P	Pg	12 33 51.6	+0.4
JOFO	Osakifurukawao	0.36	177	A	A	12 33 51.6	
	comp=N,94nm,3.6s,comp=E,82nm,4.3s						
JYK	Kaneyama	0.41	264	⇓*i*P	Pg	12 33 52.3	0.0
JYK				⇓*e*S	Sg	12 33 57.8	-0.1
JYK	Kaneyama	0.41	264	A	A	12 33 52.3	
	comp=N,35nm,2.4s,comp=E,28nm,2.7s						
JRG	Rokugo	0.48	336	⇓*i*P	Pg	12 33 53.1	-0.4
JRG				⇓S	Sg	12 33 59.9	+0.1
JRG	Rokugo	0.48	336	A	A	12 33 53.1	
	comp=N,27nm,0.6s,comp=E,36nm,0.4s						
JKMT	Kesennumamotoy	0.48	108	*i* P	Pg	12 33 53.1	-0.4
JKMT				S	Sg	12 34 00.0	+0.1
JKMT	Kesennumamotoy	0.48	108	A	A	12 33 53.1	
	comp=N,20nm,0.5s,comp=E,15nm,0.4s						
JOM	Ohasama	0.60	32	⇓*i*P	Pg	12 33 54.9	-0.8
JOM	Ohasama	0.60	32	A	A	12 33 54.9	
	comp=N,17nm,0.3s,comp=E,20nm,0.3s						
OFUJ	Ofunato	0.62	79	⇓P	Pg	12 33 55.5	-0.7
OFUJ				⇓S	Sg	12 34 03.5	-0.8
OFUJ	Ofunato	0.62	79	A	A	12 33 55.5	
	comp=N,22nm,0.3s,comp=E,17nm,0.3s						
JIO	Ouri	0.62	144	⇓*i*P	Pg	12 33 55.7	-0.5
JIO				⇓S	Sg	12 34 04.1	-0.3
JOU	Okura	0.62	196	⇓*i*P	Pg	12 33 56.1	-0.1
JOU				⇓S	Sb	12 34 04.6	-0.8
JOU	Okura	0.62	196	A	A	12 33 56.1	
	comp=N,17nm,3.4s,comp=E,15nm,2.3s						
JYYZ	Yamagatayuza	0.75	274	A	A	12 33 58.4	
	comp=N,42nm,5.1s,comp=E,32nm,4.4s						
JSZI	Iwateshizukuis	0.78	4	A	A	12 33 58.6	
	comp=N,42nm,3.9s,comp=E,33nm,2.8s						
JYW	Yuwa	0.78	318	A	A	12 33 58.9	
	comp=N,22nm,4.6s,comp=E,28nm,4.4s						
JIKH	Ishinomakikobu	0.79	145	A	A	12 33 59.3	
	comp=N,13nm,0.2s,comp=E,13nm,0.5s						
MIYJ	Miyakonagasawa	0.95	49	A	A	12 34 01.7	
	comp=N,15nm,3.7s,comp=E,13nm,0.5s						
JYS	Shirataka	0.98	221	⇓*i*P	Pb	12 34 02.6	-0.3
JYS				⇓S	Sn	12 34 16.3	-1.0
JYA	Atsumi	0.99	248	⇓*i*P	Pb	12 34 02.6	-0.4
JYA				⇓S	Sb	12 34 15.9	-0.1
JYA	Atsumi	0.99	248	A	A	12 34 02.6	
	comp=N,10.0nm,0.9s,comp=E,12nm,0.6s						
JYAR	Yonezawaarcadi	1.20	209	A	A	12 34 06.7	
	comp=N,14nm,0.8s,comp=E,9.0nm,1.6s						
JTH	Tanohata	1.23	37	A	A	12 34 06.7	
	comp=N,15nm,0.6s,comp=E,11nm,0.3s						
JMST	Minamisoumatoc	1.24	180	A	A	12 34 07.3	
	comp=N,11nm,0.3s,comp=E,16nm,0.4s						
JAH	Hinai	1.24	351	A	A	12 34 06.8	
	comp=N,15nm,0.9s,comp=E,20nm,0.8s						
JKEN	Kujiedanarisaw	1.39	27	A	A	12 34 09.3	
	comp=N,29nm,0.3s,comp=E,20nm,0.5s						
JNTW	Noshirotokiwa	1.42	337	A	A	12 34 09.8	
	comp=N,22nm,4.8s,comp=E,18nm,3.3s						
JANG	Nango	1.49	19	A	A	12 34 10.8	
	comp=N,6.0nm,3.2s,comp=E,7.0nm,0.7s						
JNS	Sasagawa	1.68	228	A	A	12 34 14.3	
	comp=N,3.0nm,2.2s,comp=E,4.0nm,4.4s						
JOG3	Oga3	1.69	305	A	A	12 34 07.4	
	comp=N,15nm,3.1s,comp=E,11nm,1.2s						
JHHS	Hirosakihyakuz	1.74	347	A	A	12 34 14.6	
	comp=N,14nm,1.7s,comp=E,11nm,4.2s						
JIW	Iwasaki	1.76	338	A	A	12 34 15.1	
	comp=N,7.0nm,1.1s,comp=E,10.0nm,1.1s						
ONAJ	Iwakimizuishiy	1.86	182	A	A	12 34 16.9	
	comp=N,10.0nm,0.3s,comp=E,12nm,0.3s						
JARK	Aomorirokkasho	2.08	10	A	A	12 34 19.6	
	comp=N,4.0nm,5.1s,comp=E,5.0nm,1.3s						
JSB	Shiboa	2.13	201	A	A	12 34 20.9	
	comp=N,6.0nm,1.2s,comp=E,7.0nm,2.9s						
JSD	Sado	2.26	247		Pn	12 34 21.3	+0.2
MAJO	Matsushiro	3.22	222		Pn	12 34 35.8	+1.5
MJAR	Matsushiro Arr	3.22	222	P	Pn	12 34 36.2	+1.9
	comp=E,4.6nm,0.3s,baz=231,slow=14,SNR=44						
MJAR				S	Sn	12 35 12.4	-0.1
	comp=E,12nm,0.5s,baz=354,slow=33,SNR=5.7						
MJAR				LR	LR	12 36 15.1	
	comp=E,299nm,21.5s,baz=44,slow=46						
MJAR	Matsushiro Arr	3.22	222		Pn	12 34 35.1	+0.8
MJB9	Matsu-Tunnel	3.22	222		Pn	12 34 36.5	+2.2
ERM	Erimo	3.51	29		Pn	12 34 39.3	+1.0
JGF	Kuroka	4.38	221		Pn	12 34 53.8	+3.5
INU	Inuyama	4.75	222	Pn	Pn	12 34 57.9	+2.5
JSG	Sagara	4.80	208	Pn	Pn	12 34 57.3	+1.3
ASAJ	Asahikawa	5.31	13	P	Pn	12 35 05.1	+2.1
	comp=E,4.1nm,0.3s,baz=206,slow=14,SNR=29						
ASAJ				S	Sn	12 36 06.8	+2.9
	comp=E,20nm,0.5s,baz=180,slow=31,SNR=3.8						
ASAJ				LR	LR	12 37 58.9	
	comp=E,37nm,21.5s,baz=166,slow=47						
	comp=E,9.7nm,0.3s						
JKA	Kamikawa-asahi	5.31	13		Pn	12 35 04.9	+1.9
JHJ	Hachijo jima 2	5.90	189	P	Pn	12 35 12.8	+1.6
	comp=E,27nm,0.3s,baz=271,slow=22,SNR=12						
JHJ				S	Sn	12 36 19.1	+0.5
	comp=E,113nm,0.3s,baz=82,slow=24,SNR=7.4						
	comp=E,65nm,0.3s						
JHJ2	Mitsune	5.90	189	Pn	Pn	12 35 12.8	+1.6
JMN	Monobe	7.70	229	Pn	Pn	12 35 36.3	+0.4
YSS	Yuzhno-Sakhali	8.10	9	Pn	Pn	12 35 42.9	+1.6
USRK	Ussuriysk Ar.	8.47	311	P	Pn	12 35 47.1	+0.6
	comp=E,0.5nm,0.3s,baz=81,slow=28,SNR=5.6						
	comp=E,1.4nm,0.4s						
JNU	Nakatsue	9.98	237	P	Pn	12 36 09.9	+2.7
	comp=E,0.2nm,0.3s,baz=98,slow=11,SNR=4.1						
	comp=E,6.2nm,0.7s						
JNU	Nakatsue	9.98	237	Pn	Pn	12 36 07.1	-0.1
KSRS	Korea Array	10.31	266	P	Pn	12 36 15.8	+4.1
	comp=E,6.8nm,0.5s,baz=77,slow=14,SNR=44						
KSAR	Wonju Array Be	10.35	266	Pn	Pn	12 36 13.1	+1.0
KS19	Wonju Array Si	10.35	266	Pn	Pn	12 36 13.3	+1.1
BNX	BinXian	12.05	309	⇓P	Pn	12 36 40.5	+5.1
BNX				pmax	pmax		
	comp=E,12nm,1.0s						
HEH	HeiHe	14.79	324	*e*P	Pn	12 37 15.6	+2.8
JOW	Kunigami	16.06	225	LR	LR	12 43 59.8	
	comp=E,76nm,18.5s,baz=306,slow=38						
PETK	Petropavlovsk-	18.27	34	P	P	12 37 59.4	+2.1
	comp=E,6.2nm,1.0s,baz=224,slow=8.1,SNR=2.3						
PETK				LR	LR	12 44 19.5	
	comp=E,54nm,20.5s,baz=238,slow=34						
HILR	Hailar Array B	18.41	312	P	P	12 37 57.2	-1.7
	baz=118,slow=12						
	comp=E,2.5nm,0.5s						
NJ2	Nanjing	19.19	256	*e*P	Pn	12 38 09.0	+0.5
NJ2				pmax	pmax		
	comp=E,7.0nm,0.9s						
XLT	XiLinHaoTe	19.21	293	*e*P	Pn	12 38 08.5	-0.3
XLT				pmax	pmax		
	comp=E,9.0nm,1.3s						
XLT				pmax	pmax		
	comp=E,250nm,7.3s						
HNS	HongShan	20.62	274	⇓P	Pn	12 38 24.4	-0.9
MA2	Magadan	21.57	14	P	P	12 38 33.1	0.0
	comp=E,12nm,0.8s,baz=212,slow=8.0,SNR=7.9						
MA2				LR	LR	12 47 43.3	
	comp=E,52nm,20.6s,baz=355,slow=39						
	comp=E,12nm,0.8s						
MA2	Magadan	21.57	14	P	P	12 38 32.6	-0.5
MA2				IAmb	IAmb	12 38 38.6	
	comp=Z,18nm,0.8s						
HHC	Hu-ho-hao-te	22.53	284	*e*P	P	12 38 43.6	-0.1
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,5.9s						
SSLB	Suanglung	22.70	234	P	P	12 38 45.0	-0.5
YAK	Yakutsk	24.10	347	LR	LR	12 48 56.4	
	comp=Z,80nm,19.6s,baz=94,slow=38						
YAK	Yakutsk	24.10	347		P	12 38 55.9	-3.2
YAK				IAmb	IAmb	12 39 01.8	
	comp=Z,17nm,0.8s						
SONM	Songino Array	26.40	301	P	P	12 39 18.8	-1.5
	comp=Z,1.0nm,0.8s,baz=107,slow=7.6,SNR=4.8						
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	26.40	301	P	P	12 39 19.8	-0.5
TIXI	Tiksi	33.33	353		P	12 40 20.3	-0.9
PZH	PanZhiHua	34.94	261	P	P	12 40 37.3	+1.4
GOMU	GeErMu	36.32	280	P	P	12 40 46.3	-1.7
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ZAA0	Zalesovo Array	40.33	311		P	12 41 20.5	-0.5
ZALV	Zalesovo Beam	40.33	311	P	P	12 41 20.4	-0.6
	comp=Z,10.0nm,1.1s,baz=81,slow=7.5,SNR=18						
ZALV				PcP	PcP	12 43 24.0	-0.2
	comp=Z,0.8nm,0.4s,baz=90,slow=2.4,SNR=3.3						
	comp=Z,10.0nm,1.1s						
ZALV	Zalesovo Beam	40.33	311		P	12 41 20.7	-0.3
C16K	Lisburne Hills	41.17	27		P	12 41 28.1	+0.4
C16K				IAmb	IAmb	12 41 32.5	
	comp=Z,8.6nm,1.1s						
CMAR	Chiang Mai Arr	41.63	253	P	P	12 41 32.3	+0.2
	comp=Z,0.2nm,0.4s,baz=44,slow=6.0,SNR=4.5						
CMAR				PcP	PcP	12 43 28.9	-0.1
	comp=Z,0.5nm,0.5s,baz=25,slow=1.8,SNR=4.8						
	comp=Z,0.2nm,0.4s						
C18K	Utukok River	42.74	27		P	12 41 41.1	+0.4
MKAR	Makanchi Array	42.77	300	P	P	12 41 41.0	-0.2
	comp=Z,3.5nm,0.8s,baz=87,slow=9.7,SNR=20						
	comp=Z,3.5nm,0.8s						
MKAR	Makanchi Array	42.77	300		P	12 41 40.9	-0.3
MAKZ	Makanchi	42.97	300		P	12 41 42.6	-0.2
G18K	Tagagawik	43.21	31	P	P	12 41 45.6	+1.2
G18K				IAmb	IAmb	12 41 46.5	
	comp=Z,6.0nm,0.7s						
C19K	Lookout Ridge	43.41	27	P	P	12 41 46.6	+0.5
F19K	Shaleruckik Mo	43.69	30	P	P	12 41 48.4	+0.1
E19K	Redstone River	43.99	29	P	P	12 41 51.8	+1.1
E19K				IAmb	IAmb	12 41 52.9	
	comp=Z,6.8nm,0.8s						
KURK	Kurchatov	44.44	307		P	12 41 54.1	-0.4
KURBB	Kurchatov Arra	44.51	306	P	P	12 41 55.0	-0.1
	comp=Z,8.2nm,0.6s,baz=82,slow=8.4,SNR=50						
	comp=Z,8.2nm,0.6s						
IMAR	Indian Mountai	45.22	32	P	P	12 42 02.1	+1.6
E22K	Anaktuvuk Pass	46.10	29		P	12 42 08.6	+1.1
C23K	Itkillik River	46.65	26	P	P	12 42 12.6	+0.9
D24K	Happy Valley	47.24	27	P	P	12 42 17.5	+1.1
ILAR	Eielson Array	48.10	33	P	P	12 42 23.6	+0.5
	comp=Z,3.1nm,0.7s,baz=271,slow=6.3,SNR=14						
	comp=Z,3.1nm,0.7s						
F25K	Christian Rive	48.44	29	P	P	12 42 27.5	+1.7
F25K				IAmb	IAmb	12 42 31.5	
	comp=Z,6.2nm,1.3s						
BMAR	Burnt Mountain	48.85	30	P	P	12 42 30.8	+1.9
BVAR	Borovoye Array	48.98	311	P	P	12 42 29.4	-0.7
	comp=Z,1.7nm,0.5s,baz=73,slow=8.6,SNR=9.7						
BVAR				PcP	PcP	12 43 53.4	-0.6
	comp=Z,1.0nm,0.6s,baz=72,slow=4.7,SNR=2.5						
	comp=Z,1.7nm,0.5s						
BORK	Borovoye	49.02	311		P	12 42 29.9	-0.5
BORK				IAmb	IAmb	12 42 33.4	
	comp=Z,3.8nm,0.9s						
KSH	Kashi	49.27	292	P	P	12 42 38.9	+6.3
KSH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SCRK	Sand Creek	49.44	34	P	P	12 42 33.9	+0.4
SCRK				IAmb	IAmb	12 42 35.2	
	comp=Z,6.5nm,1.2s						
ARSB	Arslanbob	50.74	296	P	P	12 42 44.0	+0.2
ARSB				IAmb	IAmb	12 42 48.0	
	comp=Z,7.3nm,0.8s						
G30M	tAoh Zraii Nji	52.14	30	P	P	12 42 54.5	+0.8
G30M				IAmb	IAmb	12 42 59.8	
	comp=Z,7.2nm,0.9s						
G31M	Satah River	52.90	29		P	12 43 00.1	+0.8
G31M				IAmb	IAmb	12 43 03.2	
	comp=Z,5.8nm,1.1s						
F31M	Tsiigehtchic	52.98	29	P	P	12 43 00.5	+0.6
F31M				IAmb	IAmb	12 43 14.0	
	comp=Z,11nm,1.1s						
CHGR	Chuyangaron	54.48	294		P	12 43 10.4	-1.1
ARTI	Arti	54.76	318		P	12 43 13.1	0.0
KNRA	Kununurra	55.52	194		P	12 43 19.6	+0.6
KNRA				IAmb	IAmb	12 43 23.1	
	comp=Z,9.9nm,0.9s						
KBL	Kabul	56.36	290		P	12 43 25.1	-0.1
AB31	Akbulak array	56.39	309		P	12 43 24.5	-0.4
AB31				IAmb	IAmb	12 43 25.6	
	comp=Z,6.2nm,0.7s						
ABKAR	Akbulak array	56.39	309		P	12 43 24.7	-0.2
SPITS	Spitsbergen Ar	58.55	349	P	P	12 43 39.6	-0.1
	comp=Z,4.1nm,0.8s,baz=81,slow=11,SNR=7.3						
	comp=Z,4.1nm,0.8s						
WRAB	Tennant Creek	58.91	187	P	P	12 43 42.7	-0.1
WRAB				IAmb	IAmb	12 43 43.4	
	comp=Z,5.8nm,0.9s						
WRA	Warramunga Arr	58.91	187	P	P	12 43 42.4	-0.5
	comp=Z,3.7nm,0.5s,baz=0.8,slow=7.3,SNR=12						
WRA				PcP	PcP	12 44 31.7	-0.3
	comp=Z,1.5nm,1.0s,baz=190,slow=4.4,SNR=2.1						
	comp=Z,3.7nm,0.5s						
WRA	Warramunga Arr	58.91	187	P	P	12 43 42.9	0.0
RES	Resolute Bay	60.84	15		P	12 43 55.3	-0.2
RES				IAmb	IAmb	12 43 58.4	
	comp=Z,7.0nm,0.9s						
KEV	Kevo	61.49	339	P	P	12 44 00.1	+0.1
ARCES	ARCESS Array B	62.05	339	P	P	12 44 03.7	0.0
	comp=Z,1.1nm,0.5s,baz=53,slow=7.5,SNR=13						
	comp=Z,1.1nm,0.5s						
ARCES	ARCESS Array B	62.05	339	P	P	12 44 03.8	0.0
YKA	Yellowknife Ar	62.35	30	P	P	12 44 06.0	+0.1
	comp=Z,0.4nm,0.6s,baz=303,slow=7.3,SNR=9.1						
YKA				PcP	PcP	12 44 45.2	-0.2
	comp=Z,0.5nm,0.7s,baz=302,slow=4.8,SNR=6.4						
	comp=Z,0.4nm,0.6s						
AS31	Alice Springs	62.64	187		P	12 44 08.6	+0.3
ASAR	Alice Springs	62.64	187	P	P	12 44 08.4	+0.1
	comp=Z,3.2nm,0.6s,baz=8.5,slow=4.6,SNR=42						
	comp=Z,3.2nm,0.6s						
POIN	Pond Inlet	65.42	12	P	P	12 44 25.8	-0.1
POIN				IAmb	IAmb	12 44 58.6	
	comp=Z,11nm,1.5s						
INKA	Innaminka	66.36	180		P	12 44 33.0	+0.6
INKA				IAmb	IAmb	12 44 33.9	
	comp=Z,2.2nm,0.7s						
FIA1	FINESS Array S	66.92	332	P	P	12 44 35.9	+0.2
FINES	FINESS Array B	66.92	332	P	P	12 44 35.5	-0.2
	comp=Z,5.8nm,0.8s,baz=40,slow=8.8,SNR=17						
	comp=Z,5.8nm,0.8s						
FINES	FINESS Array B	66.92	332	P	P	12 44 35.9	+0.2
ILON	Igloolik, Nuna	67.50	15	P	P	12 44 38.7	-0.6
ILON				IAmb	IAmb	12 44 41.4	
	comp=Z,2.7nm,0.7s						
KBZ	Khabaz	69.34	310	P	P	12 44 51.9	+0.7
	comp=Z,8.2nm,0.8s,baz=16,slow=6.7,SNR=13						
	comp=Z,8.2nm,0.8s						
STKA	Stephens Creek	70.48	179	P	P	12 44 58.6	+0.5
	comp=Z,2.7nm,0.7s,baz=10,slow=6.9,SNR=4.9						
	comp=Z,2.7nm,0.7s						
HFS	Hagfors	72.16	335	P	P	12 45 07.5	-0.6
	comp=Z,5.0nm,0.7s,baz=46,slow=6.9,SNR=21						
	comp=Z,5.0nm,0.7s						
NB2	NORSAR Subarra	72.25	337	P	P	12 45 08.4	-0.2
	comp=Z,8.2nm,0.9s,baz=39,slow=6.2						
NOA	NORSAR Array B	72.25	337	P	P	12 45 08.5	-0.2
	comp=Z,3.0nm,0.8s,baz=40,slow=6.0,SNR=15						
	comp=Z,3.0nm,0.8s						
AK03	Malin Array Si	72.51	322	P	P	12 45 09.8	-0.5
AKASG	Malin Array Be	72.52	322	P	P	12 45 09.4	-1.1
	comp=Z,1.2nm,0.4s,baz=47,slow=5.9,SNR=9.9						
	comp=Z,1.2nm,0.4s						
AKBB	Malin Array Si	72.52	322		P	12 45 10.1	-0.3
AKBB				IAmb	IAmb	12 45 14.7	
	comp=Z,7.8nm,0.9s						
AKBB	Malin Array Si	72.52	322	P	P	12 45 09.5	-0.9
AK23	Malin Array Si	72.53	322	P	P	12 45 10.1	-0.4
AK01	Malin Array Si	72.54	322	P	P	12 45 09.9	-0.6
KIEV	Kiev	72.54	322		P	12 45 10.1	-0.4
KIEV				IAmb	IAmb	12 45 14.7	
	comp=Z,7.0nm,0.9s						
KIEV	Kiev	72.54	322	P	P	12 45 09.5	-1.0
	comp=Z,33nm,0.8s						
AK04	Malin Array Si	72.54	322	P	P	12 45 09.8	-0.7
AK09	Malin Array Si	72.55	322	P	P	12 45 09.3	-1.3
AK08	Malin Array Si	72.55	322	P	P	12 45 10.2	-0.4
AK22	Malin Array Si	72.56	322	P	P	12 45 09.9	-0.7
AK02	Malin Array Si	72.56	322	P	P	12 45 10.1	-0.6
AK11	Malin Array Si	72.57	322	P	P	12 45 10.1	-0.6
AK12	Malin Array Si	72.59	322	P	P	12 45 10.2	-0.7
AK20	Malin Array Si	72.60	322	P	P	12 45 09.8	-1.1
AK06	Malin Array Si	72.61	322	P	P	12 45 10.2	-0.8
AK19	Malin Array Si	72.61	322	P	P	12 45 10.2	-0.8
GURO	Guroymak-BITLI	72.87	306		P	12 45 13.2	+0.3
LRM	Limekiln Ridge	73.06	44	P	P	12 45 14.9	+0.8
DLMT	Dillon	73.27	45		P	12 45 16.0	+0.8
DLMT				IAmb	IAmb	12 45 19.3	
	comp=Z,3.8nm,0.7s						
RNPP9	Sopachiv	73.63	324	P	P	12 45 17.0	+0.1
LUBAR	Lubar, Ukraine	73.75	322	P	P	12 45 16.9	-0.8
BAL3X	Bal3x, Balta	74.14	319	P	P	12 45 19.8	-0.2
NVAR	Mina Array Bea	74.17	53	P	P	12 45 22.1	+1.5
	comp=Z,2.4nm,0.8s,baz=300,slow=6.2,SNR=8.2						
	comp=Z,2.4nm,0.8s						
HORU	Horodok	74.86	322	P	P	12 45 23.9	-0.3
KMPD	K-Podol'skiy	75.29	321	P	P	12 45 26.1	-0.6
BUR08	Bucovina Ar. S	76.53	321		P	12 45 34.0	+0.1
BUR08				IAmb	IAmb	12 45 39.5	
	comp=Z,6.7nm,1.1s						
BW06	Boulder Array	76.61	46	P	P	12 45 35.1	+0.5
PD31	Pinedale Array	76.61	46		P	12 45 34.6	0.0
PDAR	Pinedale Array	76.61	46	P	P	12 45 35.3	+0.6
	comp=Z,1.7nm,0.7s,baz=267,slow=1.6,SNR=15						
	comp=Z,1.7nm,0.7s						
STHS	Stebnicka Huta	77.15	324	*e*P	P	12 45 39.3	+2.0
BRTR	Keskin Array B	77.27	311	P	P	12 45 38.2	0.0
	comp=Z,1.1nm,0.7s,baz=80,slow=2.8,SNR=6.9						
	comp=Z,1.1nm,0.7s						
BR104	Keskin Array S	77.28	311	P	P	12 45 38.6	+0.3
ULM	Lac du Bonnet	78.12	33	P	P	12 45 41.5	-1.1
	comp=Z,1.3nm,0.6s,baz=268,slow=7.0,SNR=2.9						
	comp=Z,1.3nm,0.6s						
CLL	Collm	79.22	330	*e*P	P	12 45 49.0	+0.3
RAYN	Ar Rayn	79.55	292	P	P	12 45 50.7	-0.3
RAYN				IAmb	IAmb	12 45 54.3	
	comp=Z,3.3nm,0.8s						
PV10	Paradox Valley	79.81	49	P	P	12 45 53.5	+1.0
RONA	Rosalia, Austr	80.63	326	*i* P	P	12 45 54.9	-1.5
	comp=Z,2.1nm,0.6s						
CONA	Conrad Observa	80.65	326	*i* P	P	12 45 55.5	-1.1
	comp=Z,4.0nm,1.4s						
GERES	GERESS Array B	80.86	328	P	P	12 45 57.8	0.0
	comp=Z,1.0nm,0.7s,baz=38,slow=6.8,SNR=7.7						
	comp=Z,1.0nm,0.7s						
EKA	Eskdalemuir Ar	81.18	340	P	P	12 45 59.5	+0.3
	comp=Z,0.7nm,0.6s,baz=25,slow=5.8,SNR=2.1						
	comp=Z,0.7nm,0.6s						
ARSA	Arzberg	81.31	326	*e*P	P	12 45 58.5	-1.6
	comp=Z,11nm,1.6s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MOA	Molln	81.39	327	eP	P	12 46 00.1	-0.4
	comp=Z,7.2nm,1.5s						
BIOA	Bad Ischl, Aus	81.78	327	i P	P	12 46 00.9	-1.7
	comp=Z,2.2nm,0.5s						
SOKA	Soboth	81.97	326	i P	P	12 46 02.2	-1.4
	comp=Z,8.1nm,1.1s						
OBKA	Obir	82.31	326	eP	P	12 46 04.3	-1.1
	comp=Z,3.0nm,0.5s						
KBA	Koelnbreinsper	82.39	327	eP	P	12 46 04.6	-1.3
	comp=Z,5.6nm,0.6s						
LESA	Schwarzleotal	82.40	327	eP	P	12 46 04.8	-1.0
	comp=Z,7.2nm,0.8s						
WTTA	Wattenberg	82.96	328	eP	P	12 46 08.5	-0.4
	comp=Z,11nm,1.3s						
ABTA	Abfaltersbach	83.00	327	eP	P	12 46 07.9	-1.1
	comp=Z,8.1nm,1.4s						
RETA	Reutte	83.14	329	i P	P	12 46 10.0	+0.3
	comp=Z,8.4nm,1.3s						
FETA	Feichten	83.53	328	i P	P	12 46 11.7	-0.1
	comp=Z,7.3nm,1.2s						
SGCY	Sterling City	88.95	49		P	12 46 39.0	+0.3
SGCY				IAmb	IAmb	12 46 41.0	
	comp=Z,5.4nm,1.0s						
TX31	Lajitas Ar. Si	89.27	52	P	P	12 46 40.1	-0.2
TX31				IAmb	IAmb	12 46 41.5	
	comp=Z,2.3nm,1.1s						
TXAR	Lajitas Array	89.27	52	P	P	12 46 40.8	+0.6
	comp=Z,0.7nm,0.7s,baz=296,slow=3.4,SNR=11						
	comp=Z,0.7nm,0.7s						
DBIC	Dimbokro	124.60	317	PKP	PKPdf	12 52 43.2	-0.5
	comp=Z,2.5nm,0.7s,baz=204,slow=2.7,SNR=2.4						
QSPA	South Pole Qui	128.70	180	PKP	PKPdf	12 52 49.4	-0.7
	comp=Z,0.9nm,0.9s,baz=238,slow=1.8,SNR=7.3						
LPAZ	La Paz	146.03	56	PKPbc	PKPdf	12 53 24.1	+0.1
	comp=Z,4.5nm,0.7s,baz=344,slow=3.3,SNR=14						

IDC 22 12:53:32.2±2.0, 0°.69N×125°.33E, h0^{km}, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=262.3km s-min=22.2km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.32	157	P	P	12 58 30.8	-0.8
	0.5nm,0.6s,baz=334,slow=10,SNR=1.8						
	0.5nm,0.6s						
ASAR	Alice Springs	25.60	162	P	P	12 59 03.8	+0.4
	0.2nm,0.6s,baz=345,slow=12,SNR=8.5						
	0.2nm,0.6s						
MKAR	Makanchi Array	59.29	327	P	P	13 03 35.9	+0.1
	0.2nm,0.4s,baz=122,slow=7.8,SNR=8.8						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	63.57	329	P	P	13 04 04.3	-0.3
	0.3nm,0.6s,baz=128,slow=6.2,SNR=4.2						
	0.3nm,0.6s						

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*IDC **22** 13:02:02.8±0.9, 7°.17S×80°.94W, h0^{km}, mb3.9/6, mbtmp3.9/9, ML3.8/3, MS2.8/1, Error ellipse: s-maj=29.1km s-min=20.4km az=50.0*

*NEIC **22** 13:02:07.6±2.1, 7°.15S±0°.08×80°.88W±0°.10, h36^{km}±7^{km}, mb4.2/10, Error ellipse: s-maj=15.4km s-min=10.6km az=58.0*

ISC 22 13:02:06.3±0.6, 7°.28S±0°.08×80°.91W±0°.09, h35^{km}, n31, σ2^{s}.22/25, mb4.1/8, Off coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	2.50	87	Pn	Pn	13 02 46.4	+1.6
	14nm,0.3s,baz=16,slow=2.8,SNR=216						
ATAH				Sn	Sn	13 03 18.5	+4.2
	36nm,0.3s,baz=128,slow=20,SNR=4.4						
	37nm,0.3s						
COHC	Cochancay	5.06	19	Pn	Pn	13 03 17.4	-2.3
NNA	Nana	6.16	140	Pn	Pn	13 03 36.1	+1.2
	3.8nm,0.3s,baz=315,slow=8.1,SNR=8.7						
NNA				Sn	Sn	13 04 39.2	-5.0
	4.2nm,0.3s,baz=294,slow=14,SNR=2.0						
	9.2nm,0.2s						
OTAV	Otavalo	7.86	18	Pn	Pn	13 03 57.6	-1.0
TUMC	Tumaco	9.30	14	Pn	Pn	13 04 18.1	+0.1
PAYG	Puerto Ayora	11.42	305	Pn	Pn	13 04 47.2	+0.2
LPAZ	La Paz	15.37	127	Pn	P	13 05 41.5	-4.2
	0.2nm,0.3s,baz=187,slow=15,SNR=1.8						
LPAZ				LR	LR	13 11 38.2	
	comp=Z,32nm,18.8s,baz=314,slow=37						
	0.7nm,0.5s						
LPAZ	La Paz	15.37	127		Pn	13 05 39.3	-2.0
PB05	IPOC Station P	18.60	148	P	Pn	13 06 22.2	+0.9
H03N2	Juan Fernandez	26.10	176	T	T	13 35 01.4	
	baz=356,slow=76,SNR=72						
H03N1	Juan Fernandez	26.10	176	T	T	13 35 02.4	
	baz=356,slow=76,SNR=70						
H03N3	Juan Fernandez	26.11	176	T	T	13 35 01.1	
	baz=356,slow=76,SNR=84						
PLCA	Paso Flores	34.57	166	P	P	13 08 54.4	+2.6
	0.9nm,0.8s,baz=347,slow=14,SNR=3.1						
	0.9nm,0.8s						
PLCA	Paso Flores	34.57	166	P	P	13 08 54.0	+2.2
PLCA				IAmb	IAmb	13 09 30.2	
	comp=Z,6.7nm,1.3s						
TASM	ASL Pad, Albuq	48.43	332	P	P	13 10 43.9	-1.7
TASM				IAmb	IAmb	13 10 48.5	
	comp=Z,1.4nm,0.8s						
TASM	ASL Pad, Albuq	48.43	332	P	P	13 10 43.9	-1.7
TASM				IAmb	IAmb	13 10 48.5	
	comp=Z,1.3nm,0.8s						
PDAR	Pinedale Array	56.23	335	P	P	13 11 44.5	+1.2
	comp=Z,0.7nm,0.8s,baz=120,slow=8.8,SNR=5.7						
	comp=Z,0.7nm,0.8s						
PDAR	Pinedale Array	56.23	335	P	P	13 11 43.4	0.0
YKA	Yellowknife Ar	74.23	344	P	P	13 13 40.3	+0.9
	comp=Z,0.4nm,0.8s,baz=146,slow=4.8,SNR=5.9						
	comp=Z,0.4nm,0.8s						
YKA	Yellowknife Ar	74.23	344	P	P	13 13 38.0	-1.4
YKAW3	Yellowknife Wh	74.29	345	P	P	13 13 40.0	+0.4
YKAW3				IAmb	IAmb	13 13 40.1	
	comp=Z,4.2nm,1.4s						
DBIC	Dimbokro	77.11	81	P	P	13 13 58.7	+1.8
	comp=Z,1.9nm,0.7s,baz=262,slow=7.1,SNR=3.0						
	comp=Z,1.9nm,0.7s						
DBIC	Dimbokro	77.11	81	P	P	13 13 56.9	0.0
S32K	Killisnoo	77.78	334	P	P	13 14 00.2	+0.6
SNAA	Sanae	79.38	162	P	P	13 14 10.7	+2.2
	comp=Z,0.9nm,0.3s,baz=209,slow=3.3,SNR=4.7						
	comp=Z,0.9nm,0.3s						
QSPA	South Pole Qui	82.82	180	P	P	13 14 30.2	+3.3
	comp=Z,2.6nm,1.0s,baz=128,slow=2.1,SNR=6.6						
	comp=Z,2.6nm,1.0s						
QSPA	South Pole Qui	82.82	180	P	P	13 14 28.4	+1.5
QSPA				IAmb	IAmb	13 14 33.4	
	comp=Z,5.2nm,1.4s						
ASAR	Alice Springs	134.15	227	PKP	PKiKP	13 21 22.9	+0.5
	comp=Z,0.6nm,0.7s,baz=126,slow=1.9,SNR=4.6						
ASAR	Alice Springs	134.15	227		PKiKP	13 21 20.8	-1.7
WRA	Warramunga Arr	136.01	231	PKP	PKiKP	13 21 26.6	+0.3
	comp=Z,0.6nm,0.8s,baz=122,slow=1.7,SNR=4.7						
WRA	Warramunga Arr	136.01	231		PKiKP	13 21 24.1	-2.2

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*KRSC **22** 13:07:40.0±0.4, 54°.24N×160°.87E, h85^{km}±10^{km}, Mc4.7, Ml5.1, Felt [IV-V] at kordon Kronoki, HMS Semyachik; [II-III] at kordon Istok; [II] at Petropavlovsk.*

*MOS **22** 13:07:40.7±0.9, 54°.30N×160°.67E, h102^{km}, mb4.5/12, Error ellipse: s-maj=9.2km s-min=3.8km az=74.6*

*IDC **22** 13:07:42.3±0.5, 54°.53N×160°.23E, h99^{km}±3^{km}, mb3.9/33, mbtmp4.3/36, MS3.4/13, Error ellipse: s-maj=11.0km s-min=6.5km az=135.0*

*NEIC **22** 13:07:42.0±1.2, 54°.51N±0°.10×160°.1E±0°.1, h97^{km}±6^{km}, mb4.6/277, Error ellipse: s-maj=15.5km s-min=9.6km az=145.0*

ISC 22 13:07:41.0±0.4, 54°.30N±0°.03×160°.60E±0°.03, h95^{km}±3^{km}, h95^{km}:pP-P, n383, σ1^{s}.55/317, mb4.6/168, 8C-2D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KII	Karymskiy	0.73	249	PN	Pn	13 07 58.7	+0.4
KII	Karymskiy	0.73	249	i P	Pn	13 07 58.8	+0.4
KZV	Kizimen	0.83	348	PN	Pn	13 08 00.0	+0.6
KZV	Kizimen	0.83	348	i P	Pn	13 08 00.1	+0.6
TUMD	Tumrok D	0.91	353	PN	Pn	13 08 00.3	+0.3
TUMD				S	Sn	13 08 14.6	+0.2
TUMD	Tumrok D	0.91	353	i P	Pn	13 08 00.4	+0.3
TUMD				eS	Sn	13 08 14.7	+0.2
SPN	Mys Shipunski	1.25	196	PN	Pn	13 08 03.5	-0.4
SPN				S	Sn	13 08 20.0	-1.3
SPN	Mys Shipunski	1.25	196	i P	Pn	13 08 03.6	-0.4
SPN				eS	Sn	13 08 20.1	-1.3
NLC	Nalytchevo	1.36	214	PN	Pn	13 08 05.7	+0.6
NLC				S	Sn	13 08 24.1	+0.7
NLC	Nalytchevo	1.36	214	eP	Pn	13 08 05.8	+0.6
NLC				eS	Sn	13 08 24.2	+0.7
SDLR	Sedlovina	1.45	226	PN	Pn	13 08 07.4	+1.0
SDLR	Sedlovina	1.45	226	eP	Pn	13 08 07.5	+1.0
KMNR	Kamenistaya	1.47	352	PN	Pn	13 08 08.2	+1.6
KMNR	Kamenistaya	1.47	352	eP	Pn	13 08 08.3	+1.6
KRER	Koryakskii	1.49	228	PN	Pn	13 08 08.4	+1.5
KRER	Koryakskii	1.49	228	eP	Pn	13 08 08.5	+1.5
SMAR	Somma	1.49	226	PN	Pn	13 08 08.2	+1.1
SMAR	Somma	1.49	226	eP	Pn	13 08 08.2	+1.1
KRX	Arik	1.50	232	PN	Pn	13 08 08.4	+1.4
KRX	Arik	1.50	232	eP	Pn	13 08 08.4	+1.4
AVH	Avacha	1.52	228	PN	Pn	13 08 08.6	+1.4
AVH	Avacha	1.52	228	i P	Pn	13 08 08.7	+1.4
UGLR	Uglovaya	1.52	225	PN	Pn	13 08 08.5	+1.2
UGLR	Uglovaya	1.52	225	eP	Pn	13 08 08.5	+1.2
KOK	Koryaka	1.54	230	PN	Pn	13 08 08.9	+1.3
KOK	Koryaka	1.54	230	eP	Pn	13 08 08.9	+1.3
BZGR	Bezymyannyi-Gr	1.64	2	PN	Pn	13 08 10.1	+1.3
BZGR	Bezymyannyi-Gr	1.64	2	eP	Pn	13 08 10.1	+1.3
KIRR	Kirishev	1.66	355	PN	Pn	13 08 10.5	+1.4
KIRR	Kirishev	1.66	355	eP	Pn	13 08 10.6	+1.4
BZWR	Bezymyannyi-We	1.67	358	PN	Pn	13 08 10.5	+1.3
BZWR	Bezymyannyi-We	1.67	358	eP	Pn	13 08 10.6	+1.3
DALK	Dalny	1.68	222	PN	Pn	13 08 10.2	+1.0
DALK				S	Sn	13 08 31.7	+1.1
DALK	Dalny	1.68	222	eP	Pn	13 08 10.3	+1.0
DALK				eS	Sn	13 08 31.8	+1.1
GNL	Ganaly	1.68	250	PN	Pn	13 08 11.0	+1.7
GNL	Ganaly	1.68	250	eP	Pn	13 08 11.1	+1.7
INSR	Institute	1.72	225	PN	Pn	13 08 10.8	+1.1
INSR				S	Sn	13 08 33.1	+1.7
INSR	Institute	1.72	225	eP	Pn	13 08 10.8	+1.1
INSR				eS	Sn	13 08 33.2	+1.7
ZLN	Zelenaya	1.72	4	PN	Pn	13 08 11.4	+1.6
ZLN	Zelenaya	1.72	4	eP	Pn	13 08 11.5	+1.6
PET	Petropavlovsk	1.73	223		Pn	13 08 10.8	+1.1
PET				Sn	Sn	13 08 32.2	+0.5
PET	Petropavlovsk	1.73	223	PN	Pn	13 08 10.9	+1.1
PET				S	Sn	13 08 33.0	+1.3
PET	Petropavlovsk	1.73	223	i P	Pn	13 08 10.9	+1.1
PET				eS	Sn	13 08 33.1	+1.3
PET	Petropavlovsk	1.73	223	P	Pn	13 08 11.1	+1.3
KOZ	Kozyrevsk	1.81	347	PN	Pn	13 08 12.1	+1.3
KOZ	Kozyrevsk	1.81	347	eP	Pn	13 08 12.2	+1.3
CIRR	Tsirk	1.82	3	PN	Pn	13 08 12.7	+1.6
CIRR	Tsirk	1.82	3	eP	Pn	13 08 12.8	+1.6
ESO	Esso	1.96	327	PN	Pn	13 08 14.0	+1.2
ESO	Esso	1.96	327	eP	Pn	13 08 14.0	+1.2
KLY	Klyuchi	2.02	1	PN	Pn	13 08 14.9	+1.4
KLY				S	Sn	13 08 40.5	+2.2
KLY	Klyuchi	2.02	1	eP	Pn	13 08 14.9	+1.4
KLY				eS	Sn	13 08 40.5	+2.2
SRDR	Sredinnyy	2.08	346	PN	Pn	13 08 15.3	+0.9
SRDR	Sredinnyy	2.08	346	eP	Pn	13 08 15.3	+0.9
KRMR	Karymshinskiy	2.09	226	PN	Pn	13 08 15.4	+1.0
KRMR				S	Sn	13 08 41.1	+1.1
KRMR	Karymshinskiy	2.09	226	eP	Pn	13 08 15.5	+1.0
KRMR				eS	Sn	13 08 41.1	+1.1
PEA0B	Petropavlovsk-	2.10	236		Pn	13 08 15.8	+1.1
PEA0B	Petropavlovsk-	2.10	236	PN	Pn	13 08 16.1	+1.5
PETK	Petropavlovsk-	2.10	236	P	Pn	13 08 15.8	+1.1
	204nm,0.6s,baz=72,slow=18,SNR=719						
PETK				S	Sn	13 08 42.5	+2.1
	202nm,0.5s,baz=195,slow=32,SNR=7.9						
PETK				LR	LR	13 08 49.7	
	comp=Z,175nm,18.8s,baz=82,slow=33						
PETK	Petropavlovsk-	2.10	236		Pn	13 08 14.9	+0.3
RUS	Russkaya	2.25	215	PN	Pn	13 08 17.1	+0.5
RUS	Russkaya	2.25	215	eP	Pn	13 08 17.1	+0.5
KBTR	Krutoberegovo	2.29	33	PN	Pn	13 08 17.5	+0.4
KBTR	Krutoberegovo	2.29	33	eP	Pn	13 08 17.6	+0.4
KBG	Krutoberegovo	2.30	31	PN	Pn	13 08 17.4	+0.3
KBG	Krutoberegovo	2.30	31	eP	Pn	13 08 17.4	+0.3
GRL	Gorelyy	2.32	222	PN	Pn	13 08 19.2	+1.7
GRL	Gorelyy	2.32	222	eP	Pn	13 08 19.3	+1.7
MTVR	Mutnovka	2.33	219	PN	Pn	13 08 19.1	+1.4
MTVR	Mutnovka	2.33	219	eP	Pn	13 08 19.2	+1.4
SMKR	Semkarok	2.34	12	PN	Pn	13 08 19.3	+1.5
SMKR	Semkarok	2.34	12	eP	Pn	13 08 19.3	+1.5
SRKR	Sorokina	2.38	8	PN	Pn	13 08 20.0	+1.7
SRKR	Sorokina	2.38	8	eP	Pn	13 08 20.1	+1.7
APC	Apacha	2.47	237	PN	Pn	13 08 21.3	+1.8
APC	Apacha	2.47	237	eP	Pn	13 08 21.3	+1.8
ASAK	Asacha	2.51	221	PN	Pn	13 08 21.8	+1.7
ASAK	Asacha	2.51	221	i P	Pn	13 08 21.8	+1.7
KDTR	Khodutka, Kamc	2.93	212	PN	Pn	13 08 25.8	+0.3
KDTR	Khodutka, Kamc	2.93	212	eP	Pn	13 08 25.9	+0.3
BKI	Bering	3.24	72	PN	Pn	13 08 29.4	-0.3
BKI				S	Sn	13 09 04.2	-3.1
BKI	Bering	3.24	72	i P	Pn	13 08 29.5	-0.3
BKI				eS	Sn	13 09 04.2	-3.1
PAU	Pauzhetka	3.65	220	PN	Pn	13 08 36.9	+1.6
PAU	Pauzhetka	3.65	220	eP	Pn	13 08 37.0	+1.6
SKR	Severo-Kuril’s	4.54	219	ePN	Pn	13 08 49.1	+1.8
SKR				eS	Sn	13 09 39.2	+0.3
SKR				pmax	pmax		
	comp=Z,217nm,0.7s						
SKR				smax	smax		
	comp=N,344nm,0.7s						
SKR				smax	smax		
	comp=E,305nm,0.6s						
MA2	Magadan	7.54	318	P	Pn	13 09 29.9	+2.0
	comp=E,78nm,0.7s,baz=133,slow=9.4,SNR=49						
MA2				LR	LR	13 13 00.0	
	comp=E,96nm,19.4s,baz=134,slow=44						
MA2	Magadan	7.54	318	cePN	Pn	13 09 29.2	+1.2
MA2				pmax	pmax		
	comp=Z,100nm,0.8s						
SHEM	Shemya Is, Ala	8.20	96	P	Pn	13 09 37.5	+0.6
	comp=Z,24nm,0.3s,baz=281,slow=16,SNR=1.5						
SHEM				S	Sn	13 11 01.7	-6.2
	comp=Z,72nm,0.5s,baz=275,slow=20,SNR=3.9						
SHEM	Shemya Is, Ala	8.20	96	Pn	Pn	13 09 38.0	+1.0
SMY	Shemya	8.20	96	Pn	Pn	13 09 37.9	+0.9
SMY	Shemya	8.20	96	PN	Pn	13 09 37.9	+0.9
SEY	Seymchan	9.65	337	P	Pn	13 09 59.5	+2.9
	comp=Z,1.0nm,0.6s,baz=143,slow=11,SNR=6.8						
SEY				LR	LR	13 13 57.3	
	comp=Z,95nm,21.4s,baz=94,slow=40						
TYV	Tymovskoe	11.44	260	ePN	Pn	13 10 24.6	+3.5
TYV				pmax	pmax		
	comp=Z,19nm,1.3s						
TYV				pmax	pmax		
	comp=Z,300nm,3.6s						
YSS	Yuzhno-Sakhali	13.48	244	eP	P	13 10 58.2	+4.3
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BILL	Bilibino	14.04	9		Pn	13 10 55.5	+0.3
BILL	Bilibino	14.04	9	ceP	Pn	13 10 56.2	+1.0
BILL				pmax	pmax		
	comp=Z,13nm,0.4s						
YUK	Yuzh-Kuril'sk	14.06	229	eP	Pn	13 10 53.6	-2.0
YUK				pmax	pmax		
	comp=Z,109nm,0.6s						
YUK				pmax	pmax		
	comp=N,29nm,0.5s						
YUK				pmax	pmax		
	comp=E,72nm,0.5s						
YUK				pmax	pmax		
	comp=Z,191nm,1.5s						
GRNR	Gornyy	15.11	266	⇓iP	P	13 11 13.9	+1.9
GRNR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
JKA	Kamikawa-asahi	15.52	236	P	Pn	13 11 15.2	+1.0
ASAJ	Asahikawa	15.52	236	P	P	13 11 15.9	-0.7
	comp=Z,10nm,0.7s,baz=62,slow=10,SNR=11						
ASAJ				LR	LR	13 17 58.2	
	comp=Z,54nm,20.2s,baz=10,slow=40						
ASAJ	Asahikawa	15.52	236	P	Pn	13 11 15.2	+0.9
ASAJ				pmax	pmax		
	comp=Z,15nm,0.8s						
ERM	Erimo	16.87	230	Pn	Pn	13 11 28.1	-2.9
ERM				IAmb	IAmb	13 11 36.9	
	comp=Z,102nm,1.4s						
ERM	Erimo	16.87	230	P	Pn	13 11 28.1	-2.9
ERM				pmax	pmax		
	comp=Z,102nm,1.4s						
YAK	Yakutsk	17.90	308	P	P	13 11 41.7	-0.9
	comp=Z,59nm,0.5s,baz=113,slow=1.2,SNR=23						
YAK				LR	LR	13 19 02.7	
	comp=Z,98nm,20.8s,baz=102,slow=39						
YAK	Yakutsk	17.90	308		P	13 11 40.8	-1.9
YAK	Yakutsk	17.90	308	eP	P	13 11 42.0	-0.7
YAK				eS	S	13 15 03.6	+0.8
YAK				pmax	pmax		
	comp=Z,39nm,0.8s						
YAK				pmax	pmax		
	comp=E,12nm,1.0s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				smax	smax		
	comp=E,144nm,4.8s						
YAK				smax	smax		
	comp=N,107nm,4.3s						
TNA	Tin City	19.13	42	P	Pn	13 11 58.9	+0.9
TNA				IAmb	IAmb	13 12 24.7	
	comp=Z,35nm,1.3s						
ZEA	Zeya	19.51	282	i P	Pn	13 12 01.8	-0.6
AKUT	Akutan	19.56	77	Pn	Pn	13 12 07.0	+3.9
K13K	Kusilvak Mount	19.66	53	P	Pn	13 12 03.7	-0.6
M13K	Dall Lake	20.18	58	P	Pn	13 12 10.1	-0.1
F15K	North Star Dit	20.47	42	P	Pn	13 12 13.2	-0.4
HEH	HeiHe	20.59	272	eP	P	13 12 10.6	-1.4
HEH				pP	pP	13 12 31.9	+1.4
HEH				pmax	pmax		
	comp=Z,13nm,0.5s						
M14K	Bethel	20.88	57	P	Pn	13 12 17.2	-1.1
M14K				IAmb	IAmb	13 12 31.6	
	comp=Z,31nm,1.1s						
USRK	Ussuriysk Ar.	21.10	253	P	P	13 12 16.5	-1.0
	comp=Z,4.8nm,0.8s,baz=52,slow=8.5,SNR=4.2						
	comp=Z,4.8nm,0.8s						
K15K	Wolf Creek Mou	21.16	53	P	P	13 12 19.8	+1.7
K15K				IAmb	IAmb	13 12 53.9	
	comp=Z,45nm,1.4s						
J16K	Anvik River	21.69	50	P	P	13 12 25.6	+2.0
N15K	Kwethluk River	21.81	58	P	P	13 12 26.6	+1.7
N15K				IAmb	IAmb	13 12 29.6	
	comp=Z,21nm,0.8s						
TIXI	Tiksi	22.12	334	P	P	13 12 26.3	-1.8
	comp=Z,5.8nm,0.7s,baz=134,slow=10.0,SNR=20						
TIXI				LR	LR	13 22 15.1	
	comp=Z,48nm,19.8s,baz=192,slow=40						
	comp=Z,5.8nm,0.7s						
TIXI	Tiksi	22.12	334	P	P	13 12 24.7	-3.4
TIXI	Tiksi	22.12	334	ceP	P	13 12 28.0	-0.1
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.5s						
E18K	Tukpahlearik C	22.51	39		P	13 12 33.4	+1.1
C18K	Utukok River	22.69	36	P	P	13 12 34.5	+0.4
BNX	BinXian	22.80	262	⇑P	P	13 12 34.0	-1.5
BNX				pmax	pmax		
	comp=Z,14nm,0.7s						
H18K	Honhosa River	22.90	45	P	P	13 12 37.5	+1.2
M17K	Holitna River	23.08	55	P	P	13 12 39.6	+1.7
M17K				IAmb	IAmb	13 12 41.5	
	comp=Z,32nm,1.0s						
C19K	Lookout Ridge	23.39	35	P	P	13 12 41.7	+0.8
C19K				IAmb	IAmb	13 12 46.6	
	comp=Z,28nm,1.3s						
J18K	Innoko River	23.45	50		P	13 12 42.4	+1.0
MJA0	Matsu Arr-Jizo	23.53	230	eP	P	13 12 43.6	+1.2
MJA0				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MAJO	Matsushiro	23.55	230	i P	P	13 12 43.5	+1.0
MJAR	Matsushiro Arr	23.55	230	P	P	13 12 43.6	+1.1
	comp=Z,4.2nm,0.6s,baz=21,slow=8.9,SNR=18						
MJAR				LR	LR	13 21 26.0	
	comp=Z,42nm,21.0s,baz=351,slow=35						
	comp=Z,4.2nm,0.6s						
D19K	Kuna River	23.72	37		P	13 12 44.4	+0.6
D20K	Etivluk River	24.31	37		P	13 12 49.8	+0.8
D20K				IAmb	IAmb	13 12 54.0	
	comp=Z,18nm,0.9s						
B20K	Meade River	24.49	34	IAmb	IAmb	13 12 55.6	
	comp=Z,14nm,0.6s						
J20K	Nowinta River	24.62	48	IAmb	IAmb	13 12 55.2	
	comp=Z,14nm,0.8s						
K20K	Telida	24.63	50	P	P	13 12 54.1	+2.0
IMAR	Indian Mountai	24.91	44	P	P	13 12 55.5	+0.9
B21K	Ikpikpuk River	25.23	35	IAmb	IAmb	13 13 02.9	
	comp=Z,16nm,0.7s						
HILR	Hailar Array B	25.37	276	P	P	13 12 57.4	-1.6
	comp=Z,1.9nm,0.4s,baz=72,slow=9.5,SNR=3.9						
	comp=Z,1.9nm,0.4s						
E22K	Anaktuvuk Pass	25.93	39		P	13 13 04.9	+1.0
C23K	Itkillik River	26.64	36	P	P	13 13 11.1	+1.0
C23K				IAmb	IAmb	13 13 34.9	
	comp=Z,16nm,1.1s						
NEA2	Nenana	26.83	47	P	P	13 13 11.6	-0.3
WRH	Wood River Hil	27.25	48	P	P	13 13 16.9	+1.2
WRH				IAmb	IAmb	13 13 17.8	
	comp=Z,12nm,0.8s						
KNK	Knik Glacier	27.38	54	IAmb	IAmb	13 13 19.1	
	comp=Z,13nm,0.8s						
SML	Sawmill	27.38	53	IAmb	IAmb	13 13 19.4	
	comp=Z,22nm,1.1s						
IL31		27.76	47		P	13 13 20.8	+0.7
ILAR	Eielson Array	27.76	47	P	P	13 13 21.0	+0.8
	comp=Z,5.3nm,0.8s,baz=267,slow=8.1,SNR=58						
ILAR				PcP	PcP	13 16 34.2	+0.2
	comp=Z,0.4nm,0.7s,baz=283,slow=3.7,SNR=2.3						
	comp=Z,5.3nm,0.8s						
ILAR	Eielson Array	27.76	47	eP	P	13 13 21.0	+0.8
ILAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KSRS	Korea Array	27.97	246	P	P	13 13 23.0	+0.7
	comp=Z,1.5nm,0.7s,baz=37,slow=9.9,SNR=6.0						
KSRS				PcP	PcP	13 16 34.7	-0.3
	comp=Z,1.2nm,0.8s,baz=50,slow=2.0,SNR=4.1						
	comp=Z,1.5nm,0.7s						
D25K	Kavik River	28.04	37	IAmb	IAmb	13 13 55.2	
	comp=Z,7.6nm,0.7s						
SCRK	Sand Creek	29.08	48		P	13 13 32.2	+0.1
L27K	Beaver Creek,	30.18	50	IAmb	IAmb	13 13 48.9	
	comp=Z,8.7nm,1.0s						
BCAR	Beaver Creek A	30.20	50	P	P	13 13 43.6	+1.7
DAWY	Dawson	31.07	48		P	13 13 50.9	+1.3
L29M	L29M	31.82	49	IAmb	IAmb	13 13 59.2	
	comp=Z,6.9nm,0.8s						
INK	Inuvik	32.73	39	P	P	13 14 05.1	+1.2
INK	Inuvik	32.73	39	P	P	13 14 05.1	+1.2
INK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ULN	Ulaanbaatar	33.54	281	i P	P	13 14 12.6	+1.2
M31M	Drury Creek, Y	33.72	50	P	P	13 14 14.7	+2.0
SONM	Songino Array	33.93	282	P	P	13 14 13.2	-1.6
	comp=Z,0.8nm,0.5s,baz=67,slow=7.9,SNR=4.9						
SONM				PcP	PcP	13 16 51.5	+0.6
	comp=Z,0.8nm,0.5s,baz=69,slow=1.9,SNR=2.0						
SONM				ScP	ScP	13 20 26.1	-0.7
	comp=Z,1.5nm,0.8s,baz=92,slow=2.6,SNR=7.4						
	comp=Z,0.8nm,0.5s						
SONM	Songino Array	33.93	282	P	P	13 14 12.3	-2.5
H11N2	WAKE ISLAND Hy	34.85	170	T	T	13 51 48.6	
	baz=354,slow=76,SNR=524						
H11N3	WAKE ISLAND Hy	34.86	170	T	T	13 51 49.6	
	baz=354,slow=76,SNR=816						
H11N1	WAKE ISLAND Hy	34.86	170	T	T	13 51 49.9	
	baz=354,slow=76,SNR=603						
A36M	Sachs Harbour	34.93	32	IAmb	IAmb	13 14 48.3	
	comp=Z,4.9nm,0.8s						
HHC	Hu-ho-hao-te	34.98	268	eP	P	13 14 23.8	-0.1
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,100nm,4.5s						
NRIK	Noril'sk	35.10	324	i P	P	13 14 25.4	+1.0
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
C36M	Paulatuk	35.88	36	IAmb	IAmb	13 15 03.5	
	comp=Z,6.2nm,0.8s						
H11S1	WAKE ISLAND Hy	36.03	170	T	T	13 53 17.1	
	baz=352,slow=76,SNR=39						
H11S3	WAKE ISLAND Hy	36.05	170	T	T	13 53 10.6	
	baz=352,slow=76,SNR=44						
H11S2	WAKE ISLAND Hy	36.05	170	T	T	13 53 17.3	
	baz=352,slow=76,SNR=44						
NJ2	Nanjing	36.94	250	eP	P	13 14 38.3	-2.3
NJ2				pmax	pmax		
	comp=Z,8.0nm,1.0s						

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T35M  Bob Quinn        37.60  57    IAmb     IAmb     13 15 12.1
        comp=Z,14nm,1.4s
YKAW3 Yellowknife Wh   42.03  44             P        13 15 23.9 +1.4
YKA   Yellowknife Ar   42.07  44    P        P        13 15 24.3 +1.5
        comp=Z,2.0nm,0.7s,baz=301,slow=8.4,SNR=38
YKA                                 pP       pP       13 15 46.1 +1.0
        comp=Z,1.4nm,0.7s,baz=299,slow=8.7,SNR=5.5
YKA                                 PcP      PcP      13 17 15.9 +0.3
        comp=Z,0.5nm,0.6s,baz=306,slow=4.3,SNR=5.4
YKA                                 ScP      ScP      13 20 57.5 +0.4
        comp=Z,0.5nm,1.1s,baz=308,slow=4.9,SNR=3.5
        comp=Z,2.0nm,0.7s
YKA   Yellowknife Ar   42.07  44  i P        ScP      13 21 02.5 +5.4
YKA   Yellowknife Ar   42.07  44    pmax     pmax
        comp=Z,1.0nm,1.1s
RES   Resolute Bay     42.09  23    P        P        13 15 23.6 +0.9
RES   Resolute Bay     42.09  23    P        P        13 15 23.6 +0.9
RES                                 pmax     pmax
        comp=Z,9.0nm,1.4s
ZALV  Zalesovo Beam    42.39 302    P        P        13 15 22.4 -3.0
        comp=Z,1.0nm,0.6s,baz=69,slow=8.1,SNR=4.9
ZALV                                pP       pP       13 15 47.4 -0.6
        comp=Z,0.9nm,0.7s,baz=90,slow=7.4,SNR=2.5
ZALV                                PcP      PcP      13 17 17.0 +0.2
        comp=Z,1.1nm,0.6s,baz=66,slow=3.6,SNR=5.0
        comp=Z,1.0nm,0.6s
GTA   Gaotai           42.78 275  eP         P        13 15 27.9 -1.1
GTA                                 pP       pP       13 15 52.1 +0.5
GTA                                 pmax     pmax
        comp=Z,6.0nm,1.0s
LZDM  Lanzhou Array    42.84 269    P        P        13 15 29.0 -0.7
        comp=Z,3.1nm,0.4s,baz=312,slow=8.8,SNR=1.7
        comp=Z,3.1nm,0.4s
LLLB  Lillooet         45.15  61    IAmb     IAmb     13 15 51.1
        comp=Z,6.9nm,1.0s
SPITS Spitsbergen Ar   45.99 350    P        P        13 15 52.4 -1.5
        comp=Z,2.7nm,0.5s,baz=63,slow=9.9,SNR=2.2
        comp=Z,2.7nm,0.5s
NLWA  Neilton Lookou   46.05  66    P        P        13 15 57.2 +2.4
WMQ   Urumqi           46.86 289  eP         P        13 15 58.1 -3.1
WMQ                                 pmax     pmax
        comp=Z,8.0nm,0.7s
POIN  Pond Inlet       47.02  20    P        P        13 16 02.1 +0.2
KURK  Kurchatov        47.36 301             P        13 16 02.3 -2.6
KURK                                IAmb     IAmb     13 16 28.9
        comp=Z,19nm,1.3s
KURK  Kurchatov        47.36 301    P        P        13 16 03.2 -1.7
KURK                                *PP      pP       13 16 28.4 +0.5
KURK                                                  13 17 34.1
KURBB Kurchatov Arra   47.46 301    P        P        13 16 03.1 -2.5
        comp=Z,1.9nm,0.5s,baz=59,slow=7.6,SNR=16
KURBB                               pP       pP       13 16 28.4 -0.3
        comp=Z,3.2nm,0.6s,baz=59,slow=7.6,SNR=8.3
KURBB                               PcP      PcP      13 17 34.1 -0.3
        comp=Z,1.5nm,0.7s,baz=52,slow=3.1,SNR=6.5
        comp=Z,1.9nm,0.5s
B08A  Colville Reser   47.84  62    IAmb     IAmb     13 16 11.2
        comp=Z,9.2nm,0.8s
GOMU  GeErMu           47.87 276    P        P        13 16 05.6 -3.9
GOMU                                pmax     pmax
        comp=Z,6.0nm,0.6s
MK31  Makanchi Array   47.91 295ceP          P        13 16 07.1 -2.2
MKAR  Makanchi Array   47.91 295    P        P        13 16 06.9 -2.3
        comp=Z,2.6nm,0.6s,baz=57,slow=7.8,SNR=33
MKAR                                pP       pP       13 16 31.4 -0.8
        comp=Z,3.0nm,0.7s,baz=56,slow=7.8,SNR=10
        comp=Z,2.6nm,0.6s
MKAR  Makanchi Array   47.91 295    P        P        13 16 07.0 -2.2
BLKN  Baker Lake       47.92  35             P        13 16 09.8 +0.7
BLKN                                IAmb     IAmb     13 16 14.1
        comp=Z,10nm,0.6s
MAKZ  Makanchi         48.07 295    P        P        13 16 08.0 -2.5
MAKZ  Makanchi         48.07 295    P        P        13 16 08.0 -2.5
MAKZ                                pmax     pmax
        comp=Z,3.0nm,0.8s
EPH   Ephrata          48.34  64    P        P        13 16 13.7 +1.2
EPH                                 IAmb     IAmb     13 16 14.2
        comp=Z,4.5nm,0.7s
MXC   Moxie City       48.47  65    P        P        13 16 15.5 +1.9
MXC                                 IAmb     IAmb     13 16 15.8
        comp=Z,10.0nm,1.3s
ILON  Igloolik, Nuna   48.58  25    P        P        13 16 14.7 +0.6
ILON                                IAmb     IAmb     13 16 38.5
        comp=Z,5.2nm,0.8s
H04A  Detroit Lake     48.67  68    P        P        13 16 16.6 +1.5
H04A                                IAmb     IAmb     13 16 17.7
        comp=Z,8.1nm,1.2s
E07A  Sunnyside        48.71  65    IAmb     IAmb     13 16 18.0
        comp=Z,6.8nm,0.9s
C09A  Chrisman Ranch   48.75  62    IAmb     IAmb     13 16 17.9
        comp=Z,5.3nm,0.7s
D08A  Wollman Farm,    48.88  64    IAmb     IAmb     13 16 18.8
        comp=Z,12nm,1.5s
HAWA  Hanford          48.99  65    P        P        13 16 18.9 +1.4
HAWA                                IAmb     IAmb     13 16 19.9
        comp=Z,6.2nm,1.0s
WIFE  Three Sisters-   49.28  68    IAmb     IAmb     13 16 23.0
        comp=Z,11nm,0.9s
YPT   Yellepit         49.52  65    IAmb     IAmb     13 16 23.9
        comp=Z,4.4nm,0.7s
E09A  Wood Farm, Sta   49.64  64    P        P        13 16 23.8 +1.4
BVAR  Borovoye Array   49.88 308    P        P        13 16 22.0 -2.2
        comp=Z,1.5nm,0.4s,baz=58,slow=8.1,SNR=14
BVAR                                pP       pP       13 16 47.3  0.0
        comp=Z,2.2nm,0.6s,baz=57,slow=7.9,SNR=6.6
BVAR                                PcP      PcP      13 17 42.4 -0.8
        comp=Z,3.0nm,0.5s,baz=70,slow=3.1,SNR=9.9
BVAR                                ScP      ScP      13 21 29.2 -0.5
        comp=Z,0.5nm,0.6s,baz=73,slow=4.8,SNR=2.1
        comp=Z,1.5nm,0.4s
BORK  Borovoye         49.90 308ceP          P        13 16 23.0 -1.3
BORK                                pmax     pmax
        comp=Z,6.0nm,1.7s
PINE  Pine Mountain    49.93  68    IAmb     IAmb     13 16 28.2
        comp=Z,7.3nm,0.9s
G08A  Pilot Rock       50.01  65             P        13 16 26.9 +1.5
F10A  Beach Ranch, E   50.48  64    IAmb     IAmb     13 16 31.3
        comp=Z,5.5nm,0.8s
PZH   PanZhiHua        50.86 261    P        P        13 16 31.8 -0.2
BMO   Blue Mountains   51.18  65    IAmb     IAmb     13 16 36.8
        comp=Z,6.0nm,0.8s
J08A  Circle Bar Ran   51.56  67    IAmb     IAmb     13 16 40.7
        comp=Z,7.3nm,1.2s
MSO   Missoula         51.62  61    IAmb     IAmb     13 16 40.7
        comp=Z,3.4nm,0.8s
O03E  Paynes Creek     51.81  72    P        P        13 16 41.2 +2.3
WVOR  Wild Horse Val   52.09  68    IAmb     IAmb     13 16 44.1
        comp=Z,7.2nm,1.0s
ARCES ARCESS Array B   52.23 342    P        P        13 16 40.5 -1.0
        comp=Z,0.5nm,0.4s,baz=46,slow=8.7,SNR=5.2
ARCES                               PcP      PcP      13 17 53.1 +1.4
        comp=Z,2.0nm,0.7s,baz=15,slow=5.1,SNR=6.9
        comp=Z,0.5nm,0.4s
FCC   Fort Churchill   52.35  39             P        13 16 43.5 +1.0
FCC                                 IAmb     IAmb     13 17 06.3
        comp=Z,7.8nm,1.0s
FCC   Fort Churchill   52.35  39    P        P        13 16 43.5 +1.0
FCC                                 pmax     pmax
        comp=Z,8.0nm,1.0s
ARTI  Arti             52.81 317    LR       LR       13 40 51.0
        comp=Z,131nm,18.3s,baz=296,slow=38
ARTI  Arti             52.81 317d iP         P        13 16 45.7 -0.3
ARTI                                *PP      pP       13 17 08.8 -0.5
ARTI                                                  13 18 44.4
ARTI                                S        S        13 24 04.1 -2.7
ARTI                                SS       SS       13 27 39.9 -6.0
ARTI                                pmax     pmax
        comp=Z,27nm,3.8s
MFID  Camas Ranch      52.94  65    IAmb     IAmb     13 16 50.0
        comp=Z,7.1nm,1.2s
BOZ   Bozeman (W)      53.63  61    IAmb     IAmb     13 16 55.1
        comp=Z,5.4nm,0.8s
YHL   Hebgen Lake      54.37  61    IAmb     IAmb     13 17 00.9
        comp=Z,6.1nm,0.9s
YMR   Madison River    54.61  61    IAmb     IAmb     13 17 02.6
        comp=Z,8.6nm,0.8s
YNE   Yellowstone No   54.87  60    IAmb     IAmb     13 17 04.3
        comp=Z,6.6nm,0.8s
LKWY  Lake             54.97  61    IAmb     IAmb     13 17 06.5
        comp=Z,7.4nm,0.8s
H17A  Grant Village    55.00  61    IAmb     IAmb     13 17 06.9
        comp=Z,6.3nm,0.7s
NVAR  Mina Array Bea   55.05  71    P        P        13 17 05.6 +2.8
        comp=Z,12nm,0.7s,baz=301,slow=7.3,SNR=58
NVAR  Mina Array Bea   55.05  71    P        P        13 17 05.5 +2.6
ELK   Elko             55.10  67    IAmb     IAmb     13 17 06.7
        comp=Z,8.0nm,0.7s

NV11  Mina Array Sit   55.13  71    IAmb     IAmb     13 17 07.0
        comp=Z,9.6nm,0.8s
MOOW  Moose Ponds      55.37  62             P        13 17 07.0 +2.0
LOHW  Long Hollow      55.54  62    IAmb     IAmb     13 17 09.7
        comp=Z,4.0nm,0.8s
HVU   Hansel Valley    55.69  65    IAmb     IAmb     13 17 10.8
        comp=Z,5.5nm,0.8s
KLMR  Klimovskoe       56.05 330  eP         P        13 17 06.2 -3.2
KLMR                              e*PP       pP       13 17 30.0 -2.9
KLMR                                pmax     pmax
        comp=Z,11nm,1.3s
BGU   Big Grassy Mou   56.16  66    IAmb     IAmb     13 17 13.5
        comp=Z,3.2nm,0.7s
CWC   Cottonwood Cre   56.60  73    IAmb     IAmb     13 17 17.2
        comp=Z,6.9nm,1.0s
BW06  Boulder Array    56.67  62    IAmb     IAmb     13 17 17.4
        comp=Z,8.0nm,0.9s
PD31  Pinedale Array   56.67  62    IAmb     IAmb     13 17 17.4
        comp=Z,7.2nm,0.9s
PDAR  Pinedale Array   56.67  62    P        P        13 17 16.4 +2.0
        comp=Z,5.0nm,0.8s,baz=326,slow=2.8,SNR=46
        comp=Z,5.0nm,0.8s
PDAR  Pinedale Array   56.67  62             P        13 17 16.2 +1.8
ISA   Isabella, Lake   56.94  74    IAmb     IAmb     13 17 19.2
        comp=Z,7.5nm,1.1s
CTU   Camp Tracy       57.01  65    IAmb     IAmb     13 17 19.8
        comp=Z,6.8nm,0.8s
WCT   Wildcat Mounta   57.15  71    IAmb     IAmb     13 17 20.9
        comp=Z,4.8nm,0.7s
AKTO  Aktyubinsk       57.23 312    LR       LR       13 46 24.6
        comp=Z,136nm,18.4s,baz=254,slow=41
AB31  Akbulak array    57.24 310    P        P        13 17 15.9 -2.0
ABKAR Akbulak array    57.24 310    P        P        13 17 16.0 -1.9
TPNV  Topopah Spring   57.25  71    IAmb     IAmb     13 17 22.3
        comp=Z,7.2nm,0.8s
CLC   China Lake       57.32  73    IAmb     IAmb     13 17 22.0
        comp=Z,9.0nm,0.8s
PSUT  Pine Spring      57.42  68    IAmb     IAmb     13 17 23.0
        comp=Z,6.5nm,1.1s
LRMC  Laurel Mtn Rad   57.51  73    IAmb     IAmb     13 17 23.2
        comp=Z,6.6nm,0.7s
MPU   Maple Canyon     57.55  65    IAmb     IAmb     13 17 24.1
        comp=Z,9.9nm,1.0s
QSM   Queen of Sheba   57.62  72    IAmb     IAmb     13 17 23.7
        comp=Z,6.6nm,0.6s
BSUT  Blindstream Ca   57.64  64    IAmb     IAmb     13 17 25.1
        comp=Z,6.0nm,0.8s
ULM   Lac du Bonnet    57.77  48    P        P        13 17 22.9 +1.3
        comp=Z,2.1nm,0.4s,baz=332,slow=7.0,SNR=5.1
ULM                                 pP       pP       13 17 45.0 -0.2
        comp=Z,3.5nm,0.9s,baz=333,slow=2.3,SNR=2.6
        comp=Z,2.1nm,0.4s
ULM   Lac du Bonnet    57.77  48    IAmb     IAmb     13 17 45.4
        comp=Z,5.9nm,1.1s
GSC   Goldstone, Bar   58.13  73    IAmb     IAmb     13 17 27.8
        comp=Z,8.9nm,0.9s
TMUT  Trail Mountain   58.30  66    IAmb     IAmb     13 17 29.6
        comp=Z,7.8nm,0.9s
CCUT  Cedar City       58.40  69             P        13 17 28.5 +2.0
CCUT                                IAmb     IAmb     13 17 30.0
        comp=Z,5.4nm,0.9s
P17A  Butcher Ranch,   58.42  65    IAmb     IAmb     13 17 30.8
        comp=Z,3.6nm,0.8s
RSSD  Black Hills      58.49  57    P        P        13 17 28.6 +1.6
RSSD  Black Hills      58.49  57    P        P        13 17 28.6 +1.6
RSSD                                pmax     pmax
        comp=Z,9.0nm,0.8s
P18A  Preston Nutter   58.57  65    IAmb     IAmb     13 17 36.5
        comp=Z,7.9nm,1.1s
Q16A  Castle Valley    58.59  66    IAmb     IAmb     13 17 31.8
        comp=Z,5.8nm,0.8s
MTPU  Mount Pierson    58.69  67    IAmb     IAmb     13 17 32.5
        comp=Z,5.5nm,1.0s
CMAR  Chiang Mai Arr   58.73 258    P        P        13 17 29.3 +0.6
        comp=Z,0.7nm,0.7s,baz=18,slow=7.7,SNR=6.0
CMAR                                pP       pP       13 17 53.3 +0.9
        comp=Z,0.8nm,0.7s,baz=20,slow=6.4,SNR=2.9
        comp=Z,0.7nm,0.7s
LCMT  Little Creek M   58.86  69    IAmb     IAmb     13 17 33.3
        comp=Z,11nm,1.2s
ELS   Elsinore Mount   58.99  75    IAmb     IAmb     13 17 33.3
        comp=Z,6.1nm,0.9s
KNB   Kanab            59.09  69    IAmb     IAmb     13 17 35.1
        comp=Z,7.8nm,1.0s
FIA1  FINESS Array S   59.13 336    P        P        13 17 29.0 -1.9
FINES FINESS Array B   59.13 336    P        P        13 17 29.7 -1.2
        comp=Z,1.2nm,0.5s,baz=31,slow=7.8,SNR=18
FINES                               pP       pP       13 17 54.4 -0.2
        comp=Z,2.9nm,0.7s,baz=28,slow=8.6,SNR=3.8
FINES                               LR       LR       13 46 02.3
        comp=Z,177nm,18.2s,baz=240,slow=39
        comp=Z,1.2nm,0.5s
FINES FINESS Array B   59.13 336    P        P        13 17 29.0 -1.8
PMD   Palm Desert      59.58  74    P        P        13 17 36.3 +1.9
PMD                                 IAmb     IAmb     13 17 37.0
        comp=Z,5.7nm,0.9s
U15A  North Rim        59.81  69    IAmb     IAmb     13 17 39.8
        comp=Z,4.2nm,1.0s
BORC  Borrego Spring   59.84  74    IAmb     IAmb     13 17 39.3
        comp=Z,6.8nm,0.9s
IRM   Iron Mountain    59.90  72    IAmb     IAmb     13 17 40.1
        comp=Z,10nm,1.2s
BC3   Big Chuckawall   60.10  73    P        P        13 17 39.8 +1.7
BC3                                 IAmb     IAmb     13 17 41.0
        comp=Z,7.4nm,1.1s
PV22  Blue Mesa, Par   60.15  65    IAmb     IAmb     13 17 42.2
        comp=Z,5.3nm,0.7s
PV16  Nyswonger Mesa   60.24  65    IAmb     IAmb     13 17 42.2
        comp=Z,6.9nm,0.8s
PV07  Paradox Valley   60.29  65    IAmb     IAmb     13 17 42.4
        comp=Z,7.4nm,0.9s
PV03  Paradox Valley   60.32  65    IAmb     IAmb     13 17 42.8
        comp=Z,7.6nm,0.9s
BLYC  Blythe           60.55  72    IAmb     IAmb     13 17 43.9
        comp=Z,6.2nm,0.8s
PV01  Paradox Valley   60.56  65    IAmb     IAmb     13 17 43.9
        comp=Z,3.3nm,0.7s
ISCO  Idaho Springs    60.87  62    IAmb     IAmb     13 17 47.1
        comp=Z,5.9nm,1.1s
WUAZ  Wupatki          60.98  69    IAmb     IAmb     13 17 48.4
        comp=Z,7.8nm,1.1s
ESJX  Sierra Juarez    61.04  75    IAmb     IAmb     13 17 47.3
        comp=Z,5.7nm,0.8s
Y14A  Wickenburg       61.25  71    IAmb     IAmb     13 17 49.2
        comp=Z,5.0nm,1.0s
MVCO  Mesa Verde       61.28  66    IAmb     IAmb     13 17 49.2
        comp=Z,4.1nm,0.7s
EYMN  Ely              61.40  47    P        P        13 17 47.6 +0.9
VTX   Valle De La Tr   61.59  75    IAmb     IAmb     13 17 50.9
        comp=Z,6.3nm,0.9s
OBN   Obninsk          61.66 327  eP         P        13 17 49.9 +1.7
OBN                                 pmax     pmax
        comp=Z,4.0nm,0.8s
X16A  Lo Mia Camp, P   61.76  70    IAmb     IAmb     13 17 52.6
        comp=Z,3.4nm,0.8s
NC204 NORSAR Array S   62.31 344    P        P        13 17 51.5 -1.1
ECSD  EROS Data Cent   62.34  53    IAmb     IAmb     13 17 54.4
        comp=Z,3.1nm,0.7s
NB201 NORSAR Array S   62.44 344    P        P        13 17 52.4 -1.0
SDCO  Great Sand Dun   62.46  63    IAmb     IAmb     13 17 57.4
        comp=Z,9.2nm,1.4s
NB2   NORSAR Subarra   62.46 344    P        P        13 17 51.9 -1.7
        comp=Z,0.6nm,0.4s,baz=21,slow=6.9
NOA   NORSAR Array B   62.46 344    P        P        13 17 51.9 -1.7
        comp=Z,0.5nm,0.4s,baz=19,slow=6.5,SNR=12
NOA                                 pP       pP       13 18 15.6 -2.0
        comp=Z,0.7nm,0.9s,baz=17,slow=6.3,SNR=1.9
        comp=Z,0.5nm,0.4s
X18A  Snowflake        62.49  69    IAmb     IAmb     13 17 58.0
        comp=Z,9.2nm,0.8s
HFS   Hagfors          62.89 342    P        P        13 17 54.6 -1.8
        comp=Z,1.3nm,0.4s,baz=29,slow=4.2,SNR=14
HFS                                 pP       pP       13 18 20.3  0.0
        comp=Z,0.8nm,0.5s,baz=40,slow=4.7,SNR=1.5
        comp=Z,1.3nm,0.4s
TASM  ASL Pad, Albuq   64.07  66    IAmb     IAmb     13 18 07.7
        comp=Z,3.8nm,0.8s
TASM  ASL Pad, Albuq   64.07  66    IAmb     IAmb     13 18 07.7
        comp=Z,3.8nm,0.8s
ANMO  Albuquerque      64.07  66    LR       LR       13 46 52.8
        comp=Z,74nm,18.0s,baz=45,slow=37
ANMO  Albuquerque      64.07  66    P        P        13 18 06.2 +1.5
ANMO  Albuquerque      64.07  66ceP          P        13 18 05.1 +0.4
ANMO                                pmax     pmax
        comp=Z,7.0nm,1.7s
SCHQ  Schefferville    64.44  28    P        P        13 18 07.0 +0.4
        comp=Z,2.5nm,0.6s,baz=300,slow=9.3,SNR=3.8
        comp=Z,2.5nm,0.6s

Y22A  Socorro          64.56  67    IAmb     IAmb     13 18 11.6
        comp=Z,5.2nm,0.9s
RTBA  Rita Blanca      64.89  62    IAmb     IAmb     13 18 12.2
        comp=Z,7.4nm,0.9s
319A  Douglas          65.24  70    IAmb     IAmb     13 18 15.7
        comp=Z,12nm,1.0s
MSTX  Muleshoe         66.77  64    IAmb     IAmb     13 18 24.9
        comp=Z,9.9nm,1.0s
MNTX  Cornudas Mount   67.13  67    IAmb     IAmb     13 18 27.4
        comp=Z,12nm,1.4s
SMWD  Samnorwood       67.21  61    IAmb     IAmb     13 18 27.1
        comp=Z,12nm,0.9s
AK21  Malin Array Si   67.72 329    P        P        13 18 27.1 -0.5
AK22  Malin Array Si   67.72 329    P        P        13 18 26.4 -1.3
AKASG Malin Array Be   67.73 329    P        P        13 18 25.9 -1.8
        comp=Z,1.0nm,0.4s,baz=29,slow=6.8,SNR=4.8
AKASG                               pP       pP       13 18 51.0 -1.0
        comp=Z,2.1nm,0.7s,baz=31,slow=6.1,SNR=3.8
        comp=Z,1.0nm,0.4s
P40A  Paris            67.76  53    IAmb     IAmb     13 18 29.7
        comp=Z,9.4nm,0.9s
AK02  Malin Array Si   67.78 329    P        P        13 18 26.5 -1.5
AK09  Malin Array Si   67.79 329    P        P        13 18 26.6 -1.5
AK16  Malin Array Si   67.79 329    P        P        13 18 27.3 -0.8
AK05  Malin Array Si   67.81 329    P        P        13 18 26.5 -1.7
AK10  Malin Array Si   67.81 329    P        P        13 18 26.6 -1.6
AK14  Malin Array Si   67.83 329    P        P        13 18 27.2 -1.1
AK06  Malin Array Si   67.84 329    P        P        13 18 26.8 -1.6
AK06                                pP       pP       13 18 52.9 +0.2
AK07  Malin Array Si   67.87 329    P        P        13 18 27.4 -1.2
DKNS  Dickens          67.97  63    IAmb     IAmb     13 18 31.6
        comp=Z,7.0nm,0.9s
VHRN  Van Horn         68.05  68    IAmb     IAmb     13 18 33.2
        comp=Z,7.3nm,1.1s
WMOK  Wichita Mounta   68.24  61    IAmb     IAmb     13 18 33.3
        comp=Z,7.8nm,0.8s
R40A  Maddies Statio   68.64  54    IAmb     IAmb     13 18 34.9
        comp=Z,9.0nm,0.7s
APMT  Aspermont        68.66  63    IAmb     IAmb     13 18 35.5
        comp=Z,6.4nm,0.6s
MNHN  Monahans         68.81  66    IAmb     IAmb     13 18 37.2
        comp=Z,9.5nm,0.6s
LUBAR Lubar, Ukraine   68.86 329    P        P        13 18 33.9 -0.9
KBZ   Khabaz           68.86 317    P        P        13 18 34.7 -0.2
        comp=Z,1.6nm,0.7s,baz=326,slow=9.5,SNR=2.2
KBZ                                 pP       pP       13 19 00.2 +1.0
        comp=Z,3.9nm,0.8s,baz=176,slow=4.3,SNR=4.4
        comp=Z,1.6nm,0.7s
KBZ   Khabaz           68.86 317  i P        P        13 18 33.9 -1.0
KBZ                                 pmax     pmax
        comp=Z,2.0nm,1.0s
RLO   Rose Lookout     69.00  57    P        P        13 18 36.7 +0.8
RLO                                 IAmb     IAmb     13 18 37.0
        comp=Z,6.1nm,0.6s
HHAR  Hobbs            69.44  56             P        13 18 39.1 +0.5
MGMO  Mountain Grove   69.55  55    IAmb     IAmb     13 18 39.9
        comp=Z,5.5nm,0.6s
TX31  Lajitas Ar. Si   69.89  68    IAmb     IAmb     13 18 44.0
        comp=Z,5.9nm,0.6s
TXAR  Lajitas Array    69.89  68    P        P        13 18 43.5 +2.0
        comp=Z,5.9nm,0.6s,baz=299,slow=4.7,SNR=26
        comp=Z,5.9nm,0.6s
TXAR  Lajitas Array    69.89  68             P        13 18 43.3 +1.7
EKA   Eskdalemuir Ar   69.91 350    P        P        13 18 40.8 -0.4
        comp=Z,0.8nm,0.4s,baz=16,slow=4.8,SNR=13
        comp=Z,0.8nm,0.4s
PLPT  Palo Pinto       69.99  62    IAmb     IAmb     13 18 43.4
        comp=Z,4.8nm,0.7s
T42A  Van Buren        70.21  54    P        P        13 18 43.8 +0.5
SAND  Sanderson        70.24  66    IAmb     IAmb     13 18 46.2
        comp=Z,7.8nm,1.1s
SIUC  Southern Illin   70.53  52    IAmb     IAmb     13 18 46.8
        comp=Z,10.0nm,0.8s
FCAR  Ozark Folk Cen   70.64  55    IAmb     IAmb     13 18 47.0
        comp=Z,8.6nm,0.9s
PBMO  Poplar Bluff     70.73  54    IAmb     IAmb     13 18 48.1
        comp=Z,7.6nm,0.7s
JCT   Junction City    71.06  64    IAmb     IAmb     13 18 50.6
        comp=Z,8.3nm,0.9s
CLL   Collm            71.33 339  eP         P        13 18 49.0 -0.8
DRIO  Del Rio          71.46  65    P        P        13 18 52.7 +1.7
BUR08 Bucovina Ar. S   71.66 330    P        P        13 18 50.7 -1.3
BURAR Bucovina Array   71.68 330    P        P        13 18 51.0 -1.1
WVT   Waverly          72.47  52    P        P        13 18 58.0 +1.1
WVT                                 IAmb     IAmb     13 18 58.9
        comp=Z,7.2nm,0.8s
WVT   Waverly          72.47  52    P        P        13 18 58.0 +1.1
WVT                                 pmax     pmax
        comp=Z,7.0nm,0.8s
GERES GERESS Array B   73.50 338    P        P        13 19 02.8 -0.2
        comp=Z,0.5nm,0.6s,baz=76,slow=5.6,SNR=4.3
GERES                               PP       PP       13 21 47.2 +0.1
        comp=Z,0.3nm,0.7s,baz=234,slow=4.5,SNR=3.6
        comp=Z,0.5nm,0.6s
SWET  Sewanee          74.09  51    P        P        13 19 07.1 +0.6
SWET                                IAmb     IAmb     13 19 07.7
        comp=Z,12nm,0.7s
FPAL  Fort Paine       74.80  52    IAmb     IAmb     13 19 12.6
        comp=Z,9.3nm,1.0s
BRTR  Keskin Array B   75.88 321    P        P        13 19 16.4 -0.5
        comp=Z,0.8nm,0.6s,baz=14,slow=3.3,SNR=3.9
BRTR                                LR       LR       13 55 28.2
        comp=Z,59nm,18.5s,baz=293,slow=38
        comp=Z,0.8nm,0.6s
BRTR  Keskin Array B   75.88 321  eP         P        13 19 16.6 -0.3
BRTR                                pmax     pmax
        comp=Z,1.0nm,0.6s
WB0   Warramunga Arr   77.12 205    P        P        13 19 24.5 +0.8
WR8   Warramunga Arr   77.28 205    P        P        13 19 25.5 +0.9
WRAB  Tennant Creek    77.30 205    P        P        13 19 25.7 +1.0
WRAB  Tennant Creek    77.30 205ceP          P        13 19 24.2 -0.5
WRAB                                pmax     pmax
        comp=Z,8.0nm,1.7s
WRA   Warramunga Arr   77.31 205    P        P        13 19 25.6 +0.8
        comp=Z,2.1nm,0.5s,baz=23,slow=6.0,SNR=16
WRA                                 pP       pP       13 19 47.9 -1.5
        comp=Z,1.5nm,0.6s,baz=19,slow=5.7,SNR=4.4
        comp=Z,2.1nm,0.5s
ASAR  Alice Springs    80.99 205    P        P        13 19 46.1 +1.3
        comp=Z,1.8nm,0.5s,baz=17,slow=5.0,SNR=59
ASAR                                pP       pP       13 20 10.5 +1.0
        comp=Z,1.9nm,0.6s,baz=17,slow=5.7,SNR=5.8
        comp=Z,1.8nm,0.5s
MMAI  Mount Meron Ar   81.05 316    pP       pP       13 20 10.2 -0.2
        comp=Z,2.2nm,0.3s,baz=160,slow=27,SNR=3.9
ASF   Jabal al Asfar   81.17 314    LR       LR       14 00 31.6
        comp=Z,50nm,18.1s,baz=298,slow=39
ESDC  Sonseca Array    85.46 348    P        P        13 20 08.3 +0.5
        comp=Z,4.8nm,0.8s,baz=3.0,slow=4.9,SNR=16
ESDC                                pP       pP       13 20 31.9 -1.0
        comp=Z,1.3nm,0.8s,baz=9.7,slow=5.6,SNR=2.2
        comp=Z,4.8nm,0.8s
ESDC  Sonseca Array    85.46 348    IAmb     IAmb     13 20 09.4
        comp=Z,7.3nm,1.0s
KEST  Kesra            86.96 337    P        P        13 20 15.2 -0.1
        comp=Z,8.5nm,0.8s,baz=25,slow=7.5,SNR=2.7
        comp=Z,8.5nm,0.8s
KEST  Kesra            86.96 337    IAmb     IAmb     13 20 15.7
        comp=Z,22nm,1.1s
STKA  Stephens Creek   87.39 196    P        P        13 20 17.9 +1.0
        comp=Z,2.3nm,0.7s,baz=333,slow=9.4,SNR=4.8
        comp=Z,2.3nm,0.7s
STKA  Stephens Creek   87.39 196    IAmb     IAmb     13 20 19.2
        comp=Z,24nm,1.1s
VNDA  Vanda           131.56 180    PKP      PKPdf    13 26 40.5  0.0
        comp=Z,1.5nm,0.9s,baz=134,slow=2.5,SNR=2.6
PLCA  Paso Flores     143.71  89    PKP      PKPbc    13 27 02.3 +0.4
        comp=Z,1.1nm,0.6s,baz=300,slow=5.0,SNR=9.2
PLCA  Paso Flores     143.71  89  ePKIKP     PKPab    13 27 01.3 +0.2
PLCA                                pmax     pmax
        comp=Z,1.0nm,0.6s
QSPA  South Pole Qui  144.05 180    PKhKP    PKPpre   13 27 01.7
        comp=Z,11nm,0.7s,baz=336,slow=1.3,SNR=94
NVL   N'lazarevskaya  158.52 208  ePKIKP     PKPdf    13 27 26.0 +0.6
NVL                               eSS        SS       13 51 37.6 +2.1
NVL                               eSSS       SSS      13 57 44.1
NVL                                 pmax     pmax
        comp=Z,10.0nm,1.2s
SNAA  Sanae           161.15 196    PKPab    PKPab    13 28 12.5  0.0
        comp=Z,1.4nm,0.8s,baz=187,slow=4.0,SNR=4.9
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*TIF **22** 13:09:34.6, 43.°17N×46.°41E, h82km±4km*

*NORS **22** 13:09:35.4, 43.°03N×46.°21E, h87km±2km, MPVA3.6*

*MOS **22** 13:09:35.0, 43.°16N×46.°23E, h81km±1km, MPVA3.8*

*DRS **22** 13:09:37.6, 43.°27N×46.°31E, h69km*

ISC 22 13:09:36.1±1.3**, 43.°18N**±0.°04×**46.°25E**±0.°03**, h84**^{km}±6^{km}**,**
n71, σ**1**^{s}**.06**/142**, 1C-4D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVE	Vedeno	0.24	202	*i* Pg	Pn	13 09 48.4	-0.3
DVE				*e*Sg	Sn	13 09 57.7	-0.1
DVE	Vedeno	0.24	202	⇓*i*P	Pn	13 09 48.3	-0.3
DVE				*e*S	Sn	13 09 57.7	-0.1
DVE				pmax	pmax		
	comp=Z,169nm,0.5s						
DLMR	Dylym	0.30	111	*i* Pg	Pn	13 09 48.7	-0.2
DLMR				*e*Sg	Sn	13 09 58.2	-0.1
DLMR	Dylym	0.30	111	⇓*i*P	Pn	13 09 48.6	-0.2
DLMR				*e*S	Sn	13 09 58.2	-0.1
DLMR				pmax	pmax		
	comp=Z,220nm,0.2s						
GROC	Groznyy	0.33	275	*e*Pg	Pn	13 09 49.0	0.0
GROC				*e*Sg	Sn	13 09 58.9	+0.3
GROC	Groznyy	0.33	275	P	Pn	13 09 49.0	0.0
GROC				*e*S	Sn	13 09 58.9	+0.3
BTLR	Botlikh	0.51	182	*e*Pg	Pn	13 09 50.1	-0.4
BTLR				*e*Sg	Sn	13 10 00.6	-0.5
BTLR	Botlikh	0.51	182	*e*P	Pn	13 09 50.0	-0.4
BTLR				*e*S	Sn	13 10 00.5	-0.5
BTLR				pmax	pmax		
	comp=Z,85nm,0.4s						
KRNR	Karanay	0.60	126	⇓*i*P	Pn	13 09 50.5	-0.7
KRNR				*e*S	Sn	13 10 01.6	-0.8
KRNR				pmax	pmax		
	comp=Z,160nm,0.2s						
UNCR	Uncukul	0.61	139	*e*P	Pn	13 09 50.7	-0.6
UNCR				*e*S	Sn	13 10 01.8	-0.7
UNCR				pmax	pmax		
	comp=Z,52nm,0.2s						
HNZR	Khunzah	0.71	151	*e*P	Pn	13 09 52.4	0.0
HNZR				*e*S	Sn	13 10 04.9	+0.5
HNZR				pmax	pmax		
	comp=Z,213nm,0.3s						
XNZR	Khunzakh	0.72	152	*e*Pg	Pn	13 09 52.4	0.0
XNZR				*e*Sg	Sn	13 10 04.9	+0.3
BUJR	Buynaksk	0.72	119	*e*Pg	Pn	13 09 52.5	+0.2
BUJR				*e*Sg	Sn	13 10 05.4	+1.0
BUJR	Buynaksk	0.72	119	*e*P	Pn	13 09 52.5	+0.2
BUJR				*e*S	Sn	13 10 05.4	+1.0
ARKR	Arakani	0.79	136	*e*P	Pn	13 09 52.6	-0.5
ARKR				*e*S	Sn	13 10 05.5	-0.3
ARKR				pmax	pmax		
	comp=Z,133nm,0.6s						
MAK	Makhachkala	0.95	103	*e*Pg	Pn	13 09 53.2	-1.5
MAK				*e*Sg	Sn	13 10 09.4	+0.7
MAK	Makhachkala	0.95	103	⇑*i*P	Pn	13 09 53.9	-0.8
MAK				*e*S	Sn	13 10 08.3	-0.3
MAK				pmax	pmax		
	comp=Z,149nm,0.3s						
MAK				smax	smax		
	comp=N,375nm,0.4s						
MAK				smax	smax		
	comp=N,468nm,0.4s						
KMGR	Komgaron	1.02	264	*e*Pg	Pn	13 09 57.0	+1.3
KMGR				*e*Sg	Sn	13 10 10.4	+0.1
KMGR	Komgaron	1.02	264	*e*P	Pn	13 09 57.0	+1.3
KMGR				*e*S	Sn	13 10 10.4	+0.1
TLTR	Tlyarata	1.07	176	*e*Pg	Pn	13 09 56.1	-0.3
TLTR				*e*Sg	Sn	13 10 12.1	+0.5
TLTR	Tlyarata	1.07	176	*e*P	Pn	13 09 56.1	-0.3
TLTR				*e*S	Sn	13 10 12.1	+0.5
VLKR	Vladikavkaz	1.16	264	*e*Pg	Pn	13 09 53.3	-4.0
VLKR				*e*Sg	Sn	13 10 14.8	+1.5
VLKR	Vladikavkaz	1.16	264	*e*P	Pn	13 09 53.3	-4.0
VLKR				*e*S	Sn	13 10 14.8	+1.5
KMKR	Kumukh	1.22	149	*e*Pg	Pn	13 09 58.1	-0.1
KMKR				*e*Sg	Sn	13 10 15.7	+0.9
KMKR	Kumukh	1.22	149	*e*P	Pn	13 09 58.1	-0.1
KMKR				*e*S	Sn	13 10 15.7	+0.9
KMKR				pmax	pmax		
	comp=Z,39nm,0.2s						
BTKR	Batakoyurt	1.26	279	*e*Pg	Pn	13 09 59.8	+1.2
BTKR				*e*Sg	Sn	13 10 16.5	+1.0
BTKR	Batakoyurt	1.26	279	*e*P	Pn	13 09 59.8	+1.2
BTKR				*e*S	Sn	13 10 16.5	+1.0
SGKR	Sergokala	1.26	124	*e*Pg	Pn	13 09 58.3	-0.3
SGKR				*e*Sg	Sn	13 10 16.2	+0.7
SGKR	Sergokala	1.26	124	*e*P	Pn	13 09 58.3	-0.3
SGKR				*e*S	Sn	13 10 16.2	+0.7
CHRG	Chargali	1.29	229	P	Pn	13 09 59.9	+0.9
CHRG				S	Sn	13 10 18.7	+2.5
LGD	Lagodekhi	1.34	180	P	Pn	13 09 58.8	-0.7
LGD				S	Sn	13 10 17.0	-0.3
LGD	Lagodekhi	1.34	180	*e*P	Pn	13 09 58.8	-0.7
LGD				*e*S	Sn	13 10 16.9	-0.3
ARNR	Ardon	1.44	271	*e*P	Pn	13 10 01.8	+1.1
ARNR				*e*S	Sn	13 10 21.4	+2.0
URKR	Urkarakh	1.44	134	*e*Pg	Pn	13 10 01.1	+0.2
URKR				*e*Sg	Sn	13 10 21.1	+1.5
URKR	Urkarakh	1.44	134	*e*P	Pn	13 10 01.1	+0.2
URKR				*e*S	Sn	13 10 21.1	+1.5
LACR	Lac	1.47	257	*e*Pg	Pn	13 10 00.6	-0.7
LACR				*e*Sg	Sn	13 10 19.6	-0.8
LACR	Lac	1.47	257	*e*P	Pn	13 10 00.6	-0.7
LACR				*e*S	Sn	13 10 19.6	-0.8
KORR	Kora	1.60	267	*e*Pg	Pn	13 10 04.5	+1.7
KORR				*e*Sg	Sn	13 10 23.9	+0.8
KORR	Kora	1.60	267	*e*P	Pn	13 10 04.5	+1.7
KORR				*e*S	Sn	13 10 23.9	+0.8
STDR	Stavd-Durt	1.61	278	*e*P	Pn	13 10 03.3	+0.4
STDR				*e*S	Sn	13 10 25.2	+1.9
LSNR	Lesken	1.77	274	*e*Pg	Pn	13 10 06.1	+1.0
LSNR				*e*Sg	Sn	13 10 28.0	+0.8
LSNR	Lesken	1.77	274	*e*P	Pn	13 10 06.1	+1.0
LSNR				*e*S	Sn	13 10 28.0	+0.8
DGRG	David-gareji	1.84	201	P	Pn	13 10 05.7	-0.4
DGRG				S	Sn	13 10 29.2	+0.4
DGRG	David-gareji	1.84	201	*e*P	Pn	13 10 05.6	-0.4
DGRG				*e*S	Sn	13 10 29.2	+0.4
DRN	Derbent	1.92	126	*e*Pg	Pn	13 10 04.8	-2.1
DRN				*e*Sg	Sn	13 10 31.4	+1.0
DRN	Derbent	1.92	126	*i* P	Pn	13 10 06.7	-0.2
DRN				*i* S	Sn	13 10 29.9	-0.5
DRN				pmax	pmax		
	comp=Z,179nm,1.4s						
VSHL	Vashlovani	1.95	177	P	Pn	13 10 07.1	-0.4
VSHL				S	Sn	13 10 29.2	-2.1
NCK	Nalchik	1.96	280	*e*Pg	Pn	13 10 08.1	+0.5
NCK				*e*Sg	Sn	13 10 32.9	+1.3
NCK	Nalchik	1.96	280	*e*P	Pn	13 10 08.1	+0.5
NCK				*e*S	Sn	13 10 32.9	+1.3
DIGR	Digorskoe uzhe	1.98	263	*e*Pg	Pn	13 10 07.6	-0.3
DIGR				*e*Sg	Sn	13 10 30.3	-1.9
DIGR	Digorskoe uzhe	1.98	263	*e*P	Pn	13 10 07.6	-0.3
DIGR				*e*S	Sn	13 10 30.3	-1.9
AKT	Akhty	2.02	147	*e*Pg	Pn	13 10 07.9	-0.6
AKT				*e*Sg	Sn	13 10 34.5	+1.4
AKT	Akhty	2.02	147	*e*P	Pn	13 10 08.4	-0.1
AKT				*e*S	Sn	13 10 33.3	+0.2
AKT				pmax	pmax		
	comp=Z,39nm,0.2s						
AKT				smax	smax		
	comp=E,103nm,0.2s						
AKT				smax	smax		
	comp=N,89nm,0.4s						
AKT				smax	smax		
	comp=N,106nm,0.3s						
KSMR	Kasumkent	2.10	138	*e*Pg	Pn	13 10 09.9	+0.4
KSMR				*e*Sg	Sn	13 10 36.4	+1.5
KSMR	Kasumkent	2.10	138	*e*P	Pn	13 10 09.9	+0.4
KSMR				*e*S	Sn	13 10 36.4	+1.5
GARIG	Gari	2.12	255	P	Pn	13 10 10.3	+0.6
GARIG				S	Sn	13 10 36.5	+1.1
KBTC	Kuba-Taba	2.16	288	*e*Pg	Pn	13 10 10.7	+0.5
KBTC				*e*Sg	Sn	13 10 37.2	+0.8
KBTC	Kuba-Taba	2.16	288	*e*P	Pn	13 10 10.7	+0.5
KBTC				*e*S	Sn	13 10 37.2	+0.8
PYA1	Pyatigorsk	2.45	292	*e*Pn	Pn	13 10 14.1	0.0
PYA1				*e*Sn	Sn	13 10 42.4	-0.9
PYA1	Pyatigorsk	2.45	292	*e*P	Pn	13 10 14.1	0.0
PYA1				*e*S	Sn	13 10 42.4	-0.9
KBZ	Khabaz	2.50	284	*e*Pn	Pn	13 10 14.3	-0.4
KBZ				*e*Sn	Sn	13 10 42.7	-1.6
KBZ	Khabaz	2.50	284	*e*P	Pn	13 10 14.3	-0.4
KBZ				*e*S	Sn	13 10 42.7	-1.6
BEYR	Belyy Ugol+	2.63	290	*e*Pn	Pn	13 10 16.3	-0.2
BEYR				*e*Sn	Sn	13 10 45.8	-1.7
BEYR	Belyy Ugol+	2.63	290	*e*P	Pn	13 10 16.3	-0.2
BEYR				*e*S	Sn	13 10 45.8	-1.7
SHA1	Shidzhatmaz	2.67	283	*e*Pn	Pn	13 10 17.1	-0.2
SHA1				*e*Sn	Sn	13 10 47.3	-1.6
SHA1	Shidzhatmaz	2.67	283	*e*P	Pn	13 10 17.1	-0.2
SHA1				*e*S	Sn	13 10 47.3	-1.6
KIV0	Kislovodsk Arr	2.70	288	*e*Pn	Pn	13 10 17.0	-0.4
KIV0				*e*Sn	Sn	13 10 47.7	-1.6
KIV	Kislovodsk	2.70	288	*e*Pn	Pn	13 10 17.5	0.0
KIV				*e*Sn	Sn	13 10 47.9	-1.5
KIV	Kislovodsk	2.70	288	⇓*e*P	Pn	13 10 17.0	-0.5
KIV				*e*S	Sn	13 10 47.7	-1.7
ALER	Alexandrovskoy	2.88	305	*e*Pn	Pn	13 10 20.6	+0.7
ALER				*e*Sn	Sn	13 10 54.0	+0.4
ALER	Alexandrovskoy	2.88	305	*e*P	Pn	13 10 20.6	+0.7
ALER				*e*S	Sn	13 10 54.0	+0.4

NIED ***22*** *13:12:19.6, 39.°28N×144.°54E, h48*^{km}*, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale* 10^{14}*Nm;* M_{rr}*-0.59;* $M_{\theta\theta}$*-1.04;* $M_{\phi\phi}$*1.63;* $M_{r\theta}$*-1.44;* $M_{\theta\phi}$*0.11;* $M_{\phi r}$*2.10; Fault plane solution:* M_0*2.91000×*10^{14} *NP1:*ϕ_s*43.00000°, δ27.00000°, λ-16.00000°. NP2:*ϕ_s*147.00000°, δ83.00000°, λ-116.00000°.*

JMA 22 13:12:19.6±0.3**, 39°N**±1°×**14°5E**±°**, h48**^{km}**, MV3.6**/26**, FAR E OFF NORTH HONSHU, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	2.12	279	P	Pn	13 12 53.6	+1.0
MIYJ				S	Sn	13 13 19.0	+1.2
JTH	Tanohata	2.17	288	P	Pn	13 12 54.2	+1.0
OFUJ	Ofunato	2.24	266	*i* P	Pn	13 12 55.2	+1.0
OFUJ				S	Sn	13 13 21.6	+1.0
JOM	Ohasama	2.52	275	P	Pn	13 12 59.6	+1.6
JOM				S	Sn	13 13 29.4	+1.8
JMK	Ichinoseki	2.60	264	P	Pn	13 13 00.3	+1.1
JMK				S	Sn	13 13 30.6	+1.1
JYK	Kaneyama	3.27	265	P	Pn	13 13 10.3	+2.0
JOT	Ohata	3.39	309	*e*P	Pn	13 13 11.3	+1.4
JCH	Churui	3.44	345	*e*P	Pn	13 13 10.0	-0.7
JCH				*e*S	Sn	13 13 48.5	-1.7
NEM2	Nemuro 2	4.18	12	P	Pn	13 13 17.8	-2.9
NEM2				S	Sn	13 14 03.5	-4.7
JTKR	Abashiri--Toko	4.71	354	*e*P	Pn	13 13 28.1	0.0
JTKR				*e*S	Sn	13 14 18.7	-2.6
BSO1	Boso 1	5.43	213	P	Pn	13 13 36.4	-1.1
JRY	Ryogami san	5.53	236	P	Pn	13 13 39.6	+0.1
JOD2	Odawara 2	5.91	229	*e*S	Sn	13 14 47.8	-3.3

KRSC ***22*** *13:18:33.8±1.1, 55.°76N×162.°76E, h8*^{km}*±22*^{km}*, Ml4.5*

NEIC ***22*** *13:18:37.8±1.3, 55.°86N±0.°09×162.°4E±0.°2, h22*^{km}*±5*^{km}*, mb4.5/157, Error ellipse: s-maj=17.4km s-min=6.1km az=135.0*

MOS ***22*** *13:18:38.1±0.8, 55.°83N×162.°60E, h37*^{km}*, mb4.5/18, Error ellipse: s-maj=7.5km s-min=4.1km az=70.8*

IDC ***22*** *13:18:40.5±3.0, 55.°86N×162.°37E, h44*^{km}*±29*^{km}*, mb3.8/26, mbtmp4.1/28, ML3.8/2, MS3.0/3, Error ellipse: s-maj=15.5km s-min=12.0km az=148.0*

ISC 22 13:18:34.4±1.4**, 55.°83N**±0.°03×**162.°64E**±0.°03**, h1**^{km}±8^{km}**,**
n294, σ**1**^{s}**.42**/246**, mb4.5**/105**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.39	15	PN	Pb	13 18 43.4	-0.7
KBTR	Krutoberegovo	0.39	15	*e*P	Pb	13 18 43.4	-0.7
KBG	Krutoberegovo	0.42	5	PN	Pb	13 18 44.0	-0.7
KBG	Krutoberegovo	0.42	5	*e*P	Pb	13 18 44.0	-0.7
KBG				*e*S	Sb	13 18 51.7	0.0
SMKR	Semkarok	1.00	319	PN	Pb	13 18 54.3	-0.2
SMKR	Semkarok	1.00	319	*e*P	Pb	13 18 54.3	-0.2
ZLN	Zelenaya	1.05	281	PN	Pn	13 18 56.2	-0.1
ZLN	Zelenaya	1.05	281	*e*P	Pn	13 18 56.3	-0.1
BZGR	Bezymyannyi-Gr	1.10	276	PN	Pb	13 18 56.1	-0.2
BZGR				S	Sn	13 19 11.9	-1.0
BZGR	Bezymyannyi-Gr	1.10	276	*e*P	Pb	13 18 56.1	-0.2
BZGR				*e*S	Sn	13 19 11.9	-1.0
CIRR	Tsirk	1.10	286	PN	Pn	13 18 56.5	-0.6
CIRR	Tsirk	1.10	286	*e*P	Pn	13 18 56.5	-0.6
SRKR	Sorokina	1.16	316	PN	Pb	13 18 57.1	-0.2
SRKR	Sorokina	1.16	316	*e*P	Pb	13 18 57.2	-0.2
KLY	Klyuchi	1.21	294	PN	Pg	13 18 56.2	-1.4
KLY				S	Sg	13 19 12.8	-0.6
KLY	Klyuchi	1.21	294	*e*P	Pg	13 18 56.2	-1.4
KLY				*e*S	Sg	13 19 12.8	-0.6
BZWR	Bezymyannyi-We	1.21	277	PN	Pb	13 18 58.0	-0.3
BZWR	Bezymyannyi-We	1.21	277	*e*P	Pb	13 18 58.0	-0.3
KIRR	Kirishev	1.30	276	PN	Pn	13 18 59.4	-0.4
KIRR	Kirishev	1.30	276	*e*P	Pn	13 18 59.4	-0.4
KMNR	Kamenistaya	1.36	268	PN	Pn	13 19 00.3	-0.3
KMNR	Kamenistaya	1.36	268	*e*P	Pn	13 19 00.3	-0.3
TUMD	Tumrok D	1.42	245	PN	Pn	13 19 00.9	-0.5
TUMD	Tumrok D	1.42	245	*e*P	Pn	13 19 01.0	-0.5
KZV	Kizimen	1.52	243	PN	Pn	13 19 02.4	-0.4
KZV	Kizimen	1.52	243	*e*P	Pn	13 19 02.4	-0.4
TUMR	Tumrok	1.52	250	PN	Pb	13 19 03.2	-0.2
TUMR	Tumrok	1.52	250	*e*P	Pb	13 19 03.2	-0.2
KOZ	Kozyrevsk	1.57	279	PN	Pb	13 19 04.1	-0.1
KOZ				S	Sg	13 19 27.4	+2.6
KOZ	Kozyrevsk	1.57	279	*e*P	Pb	13 19 04.2	-0.1
KOZ				*e*S	Sg	13 19 27.5	+2.6
SRDR	Sredinnyy	1.71	288	PN	Pb	13 19 05.9	-0.7
SRDR	Sredinnyy	1.71	288	*e*P	Pb	13 19 06.0	-0.7
BKI	Bering	2.00	107	PN	Pn	13 19 08.3	-0.9
BKI				S	Sn	13 19 33.6	-1.2
BKI	Bering	2.00	107	*e*P	Pn	13 19 08.4	-0.9
BKI				*e*S	Sn	13 19 33.7	-1.2
ESO	Esso	2.22	274	PN	Pn	13 19 12.4	0.0
ESO	Esso	2.22	274	*e*P	Pn	13 19 12.4	0.0
KII	Karymskiy	2.57	227	PN	Pn	13 19 17.3	0.0
KII	Karymskiy	2.57	227	*e*P	Pn	13 19 17.4	0.0
SPN	Mys Shipunski	3.14	210	PN	Pn	13 19 23.4	-1.5
SPN	Mys Shipunski	3.14	210	*e*P	Pn	13 19 23.5	-1.5
SDLR	Sedlovina	3.37	222	PN	Pn	13 19 28.9	+0.7
SDLR	Sedlovina	3.37	222	*e*P	Pn	13 19 29.0	+0.7
KRX	Arik	3.40	225	PN	Pb	13 19 32.9	-2.5
KRX	Arik	3.40	225	*e*P	Pb	13 19 32.9	-2.5
KRER	Koryakskii	3.40	223	PN	Pn	13 19 29.6	+0.9
KRER	Koryakskii	3.40	223	*e*P	Pn	13 19 29.7	+0.9
SMAR	Somma	3.41	223	PN	Pn	13 19 29.5	+0.6
SMAR	Somma	3.41	223	*e*P	Pn	13 19 29.5	+0.6
AVH	Avacha	3.43	223	PN	Pn	13 19 31.5	+2.5
AVH	Avacha	3.43	223	*e*P	Pn	13 19 31.6	+2.5
OSSR	Ossora	3.44	4	PN	Pn	13 19 30.7	+1.7
OSSR	Ossora	3.44	4	*e*P	Pn	13 19 30.7	+1.7
UGLR	Uglovaya	3.44	222	PN	Pn	13 19 30.0	+0.8
UGLR	Uglovaya	3.44	222	*e*P	Pn	13 19 30.1	+0.8
KOK	Koryaka	3.45	224	PN	Pn	13 19 31.6	+2.3
KOK	Koryaka	3.45	224	*e*P	Pn	13 19 31.7	+2.3
GNL	Ganaly	3.46	234	PN	Pn	13 19 30.3	+0.8
GNL	Ganaly	3.46	234	*e*P	Pn	13 19 30.3	+0.8
PALN	Palana	3.57	337	PN	Pb	13 19 35.5	-2.8
PALN	Palana	3.57	337	*e*P	Pb	13 19 35.6	-2.8
DALK	Dalny	3.61	221	PN	Pn	13 19 30.1	-1.3
DALK	Dalny	3.61	221	*e*P	Pn	13 19 30.2	-1.3
INSR	Institute	3.64	222	PN	Pn	13 19 34.4	+2.6
INSR	Institute	3.64	222	*e*P	Pn	13 19 34.4	+2.6
PET	Petropavlovsk	3.65	221		Pn	13 19 32.2	+0.2
PET	Petropavlovsk	3.65	221	*e*PN	Pn	13 19 33.3	+1.3
PET				*e*S	Sn	13 20 18.0	+2.3
PET				pmax	pmax		
	comp=Z,238nm,0.7s						
PET				smax	smax		
	comp=N,301nm,0.6s						
PET				smax	smax		
	comp=E,222nm,0.8s						
PET				MLR	MLR		
	comp=Z,600nm,6.0s						
PET				MLR	MLR		
	comp=Z,1μm,5.0s						
PET	Petropavlovsk	3.65	221	Pn	Pn	13 19 33.8	+1.8
PEA0B	Petropavlovsk-	3.97	229		Pn	13 19 37.1	+0.7
PEA0B	Petropavlovsk-	3.97	229	PN	Pn	13 19 39.1	+2.7
PETK	Petropavlovsk-	3.97	229	P	Pn	13 19 37.1	+0.7
	comp=Z,4.4nm,0.3s,baz=70,slow=16,SNR=40						
PETK				S	Sb	13 20 31.4	-2.2
	comp=Z,26nm,0.8s,baz=64,slow=40,SNR=2.0						
	comp=Z,14nm,0.6s						
PETK	Petropavlovsk-	3.97	229		Pn	13 19 36.5	+0.1
PETK	Petropavlovsk-	3.97	229	PN	Pn	13 19 36.5	+0.1
PETK						13 20 31.4	
KRMR	Karymshinskiy	4.00	223	PN	Pn	13 19 38.2	+1.4
KRMR	Karymshinskiy	4.00	223	*e*P	Pn	13 19 38.2	+1.4
RUS	Russkaya	4.18	217	PN	Pn	13 19 43.8	+4.5
RUS	Russkaya	4.18	217	*e*P	Pn	13 19 43.8	+4.5
GRL	Gorelyy	4.24	221	PN	Pn	13 19 43.2	+3.0
GRL	Gorelyy	4.24	221	*e*P	Pn	13 19 43.2	+3.0
MTVR	Mutnovka	4.26	220	PN	Pn	13 19 42.0	+1.6
MTVR	Mutnovka	4.26	220	*e*P	Pn	13 19 42.1	+1.6
APC	Apacha	4.33	230	PN	Pn	13 19 44.1	+2.8
APC	Apacha	4.33	230	*e*P	Pn	13 19 44.1	+2.8
ASAK	Asacha	4.44	221	PN	Pn	13 19 44.7	+1.8
ASAK	Asacha	4.44	221	*e*P	Pn	13 19 44.7	+1.8
KDTR	Khodutka, Kamc	4.85	216	PN	Pn	13 19 50.1	+1.6
KDTR	Khodutka, Kamc	4.85	216	*e*P	Pn	13 19 50.1	+1.6
PAU	Pauzhetka	5.58	221	PN	Pn	13 20 01.8	+3.3
PAU	Pauzhetka	5.58	221	*e*P	Pn	13 20 01.8	+3.3
MA2	Magadan	7.38	305	LR	LR	13 23 42.6	
	comp=Z,68nm,19.5s,baz=226,slow=42						
BILL	Bilibino	12.37	6	Pn	Pn	13 21 34.0	+2.6
BILL	Bilibino	12.37	6	*i* PN	Pn	13 21 36.3	+4.9
TYV	Tymovskoe	12.91	256	*e*PN	Pn	13 21 44.4	+5.5
TYV				*e*S	Sn	13 24 09.0	+5.8
TYV				pmax	pmax		
	comp=Z,11nm,1.3s						
TYV				pmax	pmax		
	comp=Z,300nm,4.5s						
TYV				smax	smax		
	comp=N,5.0nm,1.5s						
TYV				smax	smax		
	comp=E,6.0nm,1.5s						
TYV				smax	smax		
	comp=E,300nm,4.5s						
GRNR	Gornyy	16.42	263	*e*P	P	13 22 31.0	+2.2
JKA	Kamikawa-asahi	17.35	236		Pn	13 22 37.6	0.0
JKA				IAmb	IAmb	13 22 44.8	
	comp=Z,54nm,1.3s						
ASAJ	Asahikawa	17.35	236	P	P	13 22 38.6	-0.5
	comp=Z,1.6nm,0.3s,baz=64,slow=11,SNR=18						
	comp=Z,20nm,0.8s						
YAK	Yakutsk	17.95	304	*e*P	P	13 22 47.6	+2.0
YAK				*e*S	S	13 26 07.5	-4.6
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK				smax	smax		
	comp=N,196nm,3.7s						
YAK				smax	smax		
	comp=E,83nm,4.0s						
M13K	Dall Lake	18.40	62	P	P	13 22 53.4	+2.8
M13K				IAmb	IAmb	13 23 27.2	
	comp=Z,87nm,1.4s						
F15K	North Star Dit	18.55	45	P	Pn	13 22 54.9	+2.6
M14K	Bethel	19.08	60	P	Pn	13 23 00.1	+1.4
M14K				IAmb	IAmb	13 23 13.8	
	comp=Z,53nm,1.4s						
K15K	Wolf Creek Mou	19.32	56	P	Pn	13 23 02.8	+1.2
K15K				IAmb	IAmb	13 23 21.1	
	comp=Z,28nm,1.3s						
N15K	Kwethluk River	20.03	62	P	Pn	13 23 10.2	0.0
N15K				IAmb	IAmb	13 23 17.0	
	comp=Z,31nm,1.1s						
E18K	Tukpahlearik C	20.59	41		Pn	13 23 16.1	-0.6
C18K	Utukok River	20.76	38		Pn	13 23 17.7	-1.0
G18K	Tagagawik	21.00	46	P	P	13 23 19.8	+0.9
H18K	Honhosa River	21.00	48	P	P	13 23 19.7	+0.8
TIXI	Tiksi	21.30	331	P	P	13 23 23.1	+1.0
	comp=Z,24nm,0.7s,baz=124,slow=11,SNR=55						
	comp=Z,24nm,0.7s						
TIXI	Tiksi	21.30	331	*i* P	P	13 23 24.2	+2.1
TIXI				pmax	pmax		
	comp=Z,24nm,0.9s						
C19K	Lookout Ridge	21.46	37	P	P	13 23 25.0	+1.1
G19K	Purcell Mounta	21.67	45		P	13 23 28.3	+2.2
HEH	HeiHe	21.73	270	*e*P	P	13 23 26.1	-0.8
H19K	Roundabout Mou	21.84	47	P	P	13 23 30.3	+2.4
H19K				IAmb	IAmb	13 23 37.3	
	comp=Z,12nm,0.9s						
D20K	Etivluk River	22.38	39	P	P	13 23 34.3	+0.6
IMAR	Indian Mountai	23.00	46	P	P	13 23 39.7	-0.5
F21K	Alatna River	23.24	43		P	13 23 42.1	-0.7
B21K	Ikpikpuk River	23.30	37	IAmb	IAmb	13 23 49.4	
	comp=Z,16nm,0.8s						
D22K	Ayikyak River	23.81	39		P	13 23 49.0	+0.6
E22K	Anaktuvuk Pass	24.00	41		P	13 23 50.4	+0.1
SYI	Shuyak Island	24.16	65	P	P	13 23 52.1	+0.4
D23K	Nanushuk River	24.54	39	P	P	13 23 55.5	+0.3
G23K	Bananza Creek	24.55	45		P	13 23 55.6	+0.3
C23K	Itkillik River	24.71	37	IAmb	IAmb	13 24 07.3	
	comp=Z,11nm,0.9s						
E23K	Chandalar	24.81	42	P	P	13 23 58.0	+0.3
E23K				IAmb	IAmb	13 24 05.1	
	comp=Z,11nm,0.8s						
TOLK	Toolik Lake Re	24.89	40	P	P	13 23 58.5	+0.1
TOLK				IAmb	IAmb	13 24 00.8	
	comp=Z,10nm,0.8s						
WRH	Wood River Hil	25.36	50	P	P	13 24 02.9	+0.3
WRH				IAmb	IAmb	13 24 06.7	
	comp=Z,13nm,1.4s						
MJA0	Matsu Arr-Jizo	25.41	231	*e*P	P	13 24 03.4	+0.1
MJA0				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MAJO	Matsushiro	25.43	231		P	13 24 02.9	-0.5
MAJO	Matsushiro	25.43	231	P	P	13 24 02.9	-0.5
MAJO				pmax	pmax		
	comp=Z,25nm,1.1s						
MJAR	Matsushiro Arr	25.43	231	P	P	13 24 03.1	-0.4
	comp=Z,8.5nm,0.8s,baz=25,slow=8.6,SNR=23						
MJAR				LR	LR	13 35 14.6	
	comp=Z,58nm,19.3s,baz=19,slow=39						
	comp=Z,8.5nm,0.8s						
MJAR	Matsushiro Arr	25.43	231		P	13 24 03.0	-0.4
MJAR	Matsushiro Arr	25.43	231	P	P	13 24 03.0	-0.4
MJAR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CCB	Clear Creek Bu	25.48	50		P	13 24 03.2	-0.4
G24K	Hadweenzic Riv	25.56	45	IAmb	IAmb	13 24 07.5	
	comp=Z,18nm,1.1s						
IL31		25.86	49		P	13 24 06.9	-0.2
ILAR	Eielson Array	25.86	49	P	P	13 24 06.8	-0.3
	comp=Z,2.8nm,0.9s,baz=284,slow=9.9,SNR=16						
	comp=Z,2.8nm,0.9s						
ILAR	Eielson Array	25.86	49	*e*P	P	13 24 07.0	-0.2
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SCM	Sheep Creek Mo	26.01	56	IAmb	IAmb	13 24 15.2	
	comp=Z,9.9nm,0.8s						
D25K	Kavik River	26.11	39	IAmb	IAmb	13 24 12.3	
	comp=Z,8.5nm,0.6s						
E25K	Arctic Village	26.33	42	IAmb	IAmb	13 24 13.3	
	comp=Z,18nm,1.4s						
BMAR	Burnt Mountain	26.70	43		P	13 24 15.9	+1.2
G26K	Porcupine Rive	27.02	44	IAmb	IAmb	13 24 19.4	
	comp=Z,6.2nm,0.8s						
H27K	Steamboat Moun	27.97	46	IAmb	IAmb	13 24 38.3	
	comp=Z,17nm,1.4s						
D27M	Malcolm River	28.03	39	P	P	13 24 27.4	+0.7
L27K	Beaver Creek,	28.30	52	IAmb	IAmb	13 24 33.6	
	comp=Z,7.5nm,1.1s						
G29M	Pine Creek	29.29	44	IAmb	IAmb	13 25 01.2	
	comp=Z,11nm,1.1s						
KSRS	Korea Array	29.65	246	LR	LR	13 35 44.7	
	comp=Z,35nm,19.8s,baz=55,slow=35						
INK	Inuvik	30.80	41		P	13 24 51.9	+0.8
INK	Inuvik	30.80	41	P	P	13 24 51.9	+0.8
INK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
F31M	Tsiigehtchic	30.86	42		P	13 24 52.2	+0.5
F31M				IAmb	IAmb	13 24 53.0	
	comp=Z,4.6nm,0.6s						
C36M	Paulatuk	33.95	37		P	13 25 19.4	+0.7
C36M				IAmb	IAmb	13 25 20.2	
	comp=Z,5.3nm,0.8s						
NRIK	Noril'sk	34.57	323	*i* P	P	13 25 25.0	+0.9
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM	Songino Array	34.78	281	P	P	13 25 25.9	-0.4
	comp=Z,0.4nm,0.6s,baz=78,slow=5.7,SNR=2.9						

	comp=Z,0.4nm,0.6s						
H11N2	WAKE ISLAND Hy	36.19	173	T	T	14 04 02.0	
	baz=356,slow=76,SNR=1142						
H11N3	WAKE ISLAND Hy	36.20	173	T	T	14 04 11.3	
	baz=356,slow=76,SNR=803						
H11N1	WAKE ISLAND Hy	36.20	173	T	T	14 04 11.4	
	baz=356,slow=76,SNR=655						
HHC	Hu-ho-hao-te	36.21	267	eP	P	13 25 35.8	-2.8
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,180nm,6.1s						
H11S1	WAKE ISLAND Hy	37.39	174	T	T	14 05 33.7	
	baz=357,slow=75						
H11S3	WAKE ISLAND Hy	37.40	174	T	T	14 05 54.0	
	baz=357,slow=75						
H11S2	WAKE ISLAND Hy	37.41	174	T	T	14 05 44.3	
	baz=357,slow=75						
NJ2	Nanjing	38.56	250	eP	P	13 25 56.8	-1.7
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YKAW3	Yellowknife Wh	40.12	45		P	13 26 11.9	+0.7
YKA	Yellowknife Ar	40.16	46	P	P	13 26 12.3	+0.8
	comp=Z,2.3nm,0.7s,baz=301,slow=8.7,SNR=48						
	comp=Z,2.3nm,0.7s						
YKA	Yellowknife Ar	40.16	46	eP	P	13 26 12.3	+0.8
YKA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
RES	Resolute Bay	40.22	24		P	13 26 12.2	+0.4
RES	Resolute Bay	40.22	24	P	P	13 26 12.2	+0.4
RES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LLLB	Lillooet	43.41	64	IAmb	IAmb	13 26 44.9	
	comp=Z,8.8nm,1.1s						
DGZ	Jazzator, Alta	43.83	295	i P	P	13 26 40.3	-1.5
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SPITS	Spitsbergen Ar	44.67	351	P	P	13 26 48.0	-0.1
	comp=Z,13nm,0.8s,baz=67,slow=9.2,SNR=20						
	comp=Z,13nm,0.8s						
SPITS	Spitsbergen Ar	44.67	351	P	P	13 26 47.9	-0.2
SPITS				pmax	pmax		
	comp=Z,30nm,1.2s						
EDM	Edmonton	45.97	56		P	13 26 59.6	+0.9
EDM	Edmonton	45.97	56	P	P	13 26 59.6	+0.9
EDM				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BLKN	Baker Lake	46.00	36		P	13 26 59.1	+0.4
BLKN				IAmb	IAmb	13 27 00.1	
	comp=Z,5.9nm,0.7s						
LTY	Liberty	46.14	67	IAmb	IAmb	13 27 04.8	
	comp=Z,4.2nm,0.7s						
KURK	Kurchatov	47.57	301	P	P	13 27 09.6	-1.6
KURK	Kurchatov	47.57	301	i P	P	13 27 11.8	+0.6
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KURBB	Kurchatov Arra	47.67	301	P	P	13 27 09.6	-2.4
	comp=Z,0.7nm,0.7s,baz=53,slow=7.7,SNR=6.4						
	comp=Z,0.7nm,0.7s						
E09A	Wood Farm, Sta	47.93	66	P	P	13 27 15.2	+1.1
E09A				IAmb	IAmb	13 27 19.4	
	comp=Z,5.7nm,1.0s						
MKAR	Makanchi Array	48.33	295	P	P	13 27 14.9	-2.3
	comp=Z,0.5nm,0.6s,baz=46,slow=6.1,SNR=4.5						
	comp=Z,0.5nm,0.6s						
MKAR	Makanchi Array	48.33	295	P	P	13 27 14.5	-2.7
MKAR	Makanchi Array	48.33	295	eP	P	13 27 17.8	+0.6
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
J05D	Fort Rock, OR	48.48	71	P	P	13 27 19.4	+0.9
J05D				IAmb	IAmb	13 27 33.8	
	comp=Z,10nm,1.2s						
GOMU	GeErMu	48.87	276	P	P	13 27 19.4	-2.5
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
JTMT	Jette	49.07	62		P	13 27 23.8	+0.8
BVAR	Borovoye Array	49.86	308	P	P	13 27 26.3	-2.5
	comp=Z,0.7nm,0.5s,baz=54,slow=7.5,SNR=6.3						
	comp=Z,0.7nm,0.5s						
BORK	Borovoye	49.88	308	i P	P	13 27 29.6	+0.7
BORK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
PLID	Pearl Lake	50.00	66	P	P	13 27 31.1	+0.8
FCC	Fort Churchill	50.42	41	P	P	13 27 33.5	+0.6
FCC				IAmb	IAmb	13 27 37.4	
	comp=Z,8.0nm,1.1s						
FCC	Fort Churchill	50.42	41	P	P	13 27 33.5	+0.6
FCC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
LYMT	Lyon Mountain	50.59	62	P	P	13 27 35.9	+1.2
LVZ	Lovozero	50.74	337	P	P	13 27 34.8	-0.5
	comp=Z,33nm,1.6s						
ARCES	ARCESS Array B	51.14	342	P	P	13 27 38.9	+0.6
	comp=Z,4.3nm,1.1s,baz=51,slow=12,SNR=1.8						
	comp=Z,4.3nm,1.1s						
DLMT	Dillon	51.55	64	P	P	13 27 42.8	+0.9
DLMT				IAmb	IAmb	13 27 59.9	
	comp=Z,5.8nm,1.3s						
PZH	PanZhiHua	52.24	262	P	P	13 27 44.8	-2.3
PNTR	Pine Nut	52.30	74	P	P	13 27 48.0	+0.4
YNE	Yellowstone No	53.10	62	IAmb	IAmb	13 27 55.5	
	comp=Z,3.0nm,0.8s						
LKWY	Lake	53.22	63	IAmb	IAmb	13 28 00.9	
	comp=Z,9.1nm,1.4s						
NVAR	Mina Array Bea	53.48	74	P	P	13 27 56.9	+0.6
	comp=Z,1.8nm,0.8s,baz=304,slow=7.1,SNR=8.0						
	comp=Z,1.8nm,0.8s						
FXWY	Fox Creek	53.56	64	P	P	13 27 58.2	+1.4
BW06	Boulder Array	54.94	64	P	P	13 28 07.9	+1.0
BW06				IAmb	IAmb	13 28 12.2	
	comp=Z,3.5nm,1.1s						
PD31	Pinedale Array	54.94	64		P	13 28 07.8	+1.0
PD31				IAmb	IAmb	13 28 12.2	
	comp=Z,4.8nm,1.2s						
PDAR	Pinedale Array	54.94	64	P	P	13 28 08.2	+1.3
	comp=Z,1.4nm,0.6s,baz=328,slow=2.6,SNR=17						
	comp=Z,1.4nm,0.6s						
SPR3	Spring Creek 3	55.19	70	IAmb	IAmb	13 28 15.5	
	comp=Z,4.7nm,0.7s						
AAK	Ala-Archa	55.20	296	i P	P	13 28 09.7	+1.0
AAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KLMR	Klimovskoe	55.32	330	eP	P	13 28 07.4	-1.7
KLMR				pmax	pmax		
	comp=Z,20nm,1.6s						
WCT	Wildcat Mounta	55.58	74	IAmb	IAmb	13 28 14.0	
	comp=Z,2.3nm,0.7s						
CLC	China Lake	55.77	75	IAmb	IAmb	13 28 25.7	
	comp=Z,5.0nm,1.3s						
PSUT	Pine Spring	55.79	70	IAmb	IAmb	13 28 21.5	
	comp=Z,3.1nm,0.7s						
ULM	Lac du Bonnet	55.88	49	P	P	13 28 14.2	+1.0
	comp=Z,1.7nm,0.5s,baz=249,slow=8.1,SNR=3.4						
	comp=Z,1.7nm,0.5s						
ULM	Lac du Bonnet	55.88	49	IAmb	IAmb	13 28 38.0	
	comp=Z,4.5nm,1.0s						
BSUT	Blindstream Ca	55.94	67	IAmb	IAmb	13 28 20.3	
	comp=Z,2.9nm,0.9s						
LRMC	Laurel Mtn Rad	55.97	76	IAmb	IAmb	13 28 17.9	
	comp=Z,5.4nm,1.1s						
WSHM	Spangler Hills	55.99	75	IAmb	IAmb	13 28 18.2	
	comp=Z,4.0nm,0.9s						
QSM	Queen of Sheba	56.06	75	P	P	13 28 16.5	+1.7
QSM				IAmb	IAmb	13 28 23.7	
	comp=Z,3.5nm,0.7s						
TMUT	Trail Mountain	56.62	68	IAmb	IAmb	13 28 23.7	
	comp=Z,5.0nm,0.8s						
P17A	Butcher Ranch,	56.74	68	IAmb	IAmb	13 28 23.8	
	comp=Z,3.1nm,0.8s						
P18A	Preston Nutter	56.88	67	IAmb	IAmb	13 28 25.2	
	comp=Z,4.4nm,0.8s						
Q16A	Castle Valley	56.92	68	IAmb	IAmb	13 28 25.4	
	comp=Z,3.7nm,0.8s						
AB31	Akbulak array	57.15	310	P	P	13 28 20.7	-1.6
LCMT	Little Creek M	57.24	71	IAmb	IAmb	13 28 28.1	
	comp=Z,4.3nm,1.1s						
HMU	Henry Mountain	57.87	69		P	13 28 28.9	+0.9
PMD	Palm Desert	58.05	76	P	P	13 28 29.8	+0.8
PMD				IAmb	IAmb	13 28 30.4	
	comp=Z,2.7nm,0.7s						
FINES	FINESS Array B	58.18	337	P	P	13 28 28.7	-0.7
	comp=Z,2.0nm,0.7s,baz=30,slow=8.1,SNR=18						
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	58.18	337	P	P	13 28 28.8	-0.6
FINES	FINESS Array B	58.18	337	eP	P	13 28 29.6	+0.2
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BORC	Borrego Spring	58.32	76	IAmb	IAmb	13 28 32.7	
	comp=Z,2.8nm,0.8s						
IRM	Iron Mountain	58.34	75		P	13 28 32.4	+1.4
IRM				IAmb	IAmb	13 28 34.9	
	comp=Z,5.9nm,1.1s						
PV04	Paradox Valley	58.49	67	IAmb	IAmb	13 28 36.7	
	comp=Z,8.2nm,1.1s						
PV16	Nyswonger Mesa	58.55	67	IAmb	IAmb	13 28 36.5	
	comp=Z,3.7nm,0.8s						
PV03	Paradox Valley	58.63	67	IAmb	IAmb	13 28 36.9	
	comp=Z,7.6nm,1.1s						
PV13	Radium Mtn., P	58.71	67	IAmb	IAmb	13 28 38.2	
	comp=Z,5.7nm,0.9s						
ISCO	Idaho Springs	59.13	64	IAmb	IAmb	13 28 39.8	
	comp=Z,4.5nm,1.1s						
WUAZ	Wupatki	59.35	71	IAmb	IAmb	13 28 42.4	
	comp=Z,9.1nm,1.3s						
EYMN	Ely	59.50	49	P	P	13 28 39.7	+0.9
BELG	Belogornoye	59.59	320	i P	P	13 28 39.9	+0.7
BELG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
X16A	Lo Mia Camp, P	60.15	72	IAmb	IAmb	13 28 46.7	
	comp=Z,2.8nm,0.8s						
CMAR	Chiang Mai Arr	60.19	259	P	P	13 28 43.1	-0.8
	comp=Z,0.5nm,0.3s,baz=32,slow=7.1,SNR=4.4						
	comp=Z,0.5nm,0.3s						
SDCO	Great Sand Dun	60.74	65	IAmb	IAmb	13 28 50.6	
	comp=Z,4.8nm,1.4s						
X18A	Snowflake	60.86	71	IAmb	IAmb	13 28 51.6	
	comp=Z,4.0nm,0.8s						
OBN	Obninsk	60.99	328	eP	P	13 28 48.7	-0.1
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NB2	NORSAR Subarra	61.31	345	P	P	13 28 51.9	+0.9
	comp=Z,4.2nm,1.4s,baz=18,slow=6.9						
NOA	NORSAR Array B	61.31	345	P	P	13 28 50.1	-0.9
	comp=Z,0.3nm,0.5s,baz=22,slow=6.7,SNR=4.3						
	comp=Z,0.3nm,0.5s						
NOA	NORSAR Array B	61.31	345	eP	P	13 28 52.1	+1.1
NOA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
HFS	Hagfors	61.78	343	P	P	13 28 53.3	-0.8
	comp=Z,1.4nm,0.8s,baz=64,slow=3.4,SNR=6.6						
	comp=Z,1.4nm,0.8s						
TASM	ASL Pad, Albuq	62.39	68	IAmb	IAmb	13 29 02.5	
	comp=Z,3.0nm,1.1s						
TASM	ASL Pad, Albuq	62.39	68	IAmb	IAmb	13 29 02.5	
	comp=Z,3.3nm,1.1s						
TASM	ASL Pad, Albuq	62.39	68	IAmb	IAmb	13 29 02.5	
	comp=Z,3.2nm,1.1s						
TASM	ASL Pad, Albuq	62.39	68	IAmb	IAmb	13 29 02.5	
	comp=Z,2.8nm,1.1s						
ANMO	Albuquerque	62.39	68		P	13 29 00.3	+1.4
ANMO				IAmb	IAmb	13 29 02.5	
	comp=Z,4.5nm,1.3s						
ANMO	Albuquerque	62.39	68	i P	P	13 28 59.6	+0.7
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.3s						
ABQ	Albuquerque	62.39	68	IAmb	IAmb	13 29 02.6	
	comp=Z,4.2nm,1.3s						
SCHQ	Schefferville	62.53	30	P	P	13 28 58.1	-1.2
	comp=Z,3.9nm,0.6s,baz=1.8,slow=8.4,SNR=5.7						
	comp=Z,3.9nm,0.6s						
Y22A	Socorro	62.90	69	IAmb	IAmb	13 29 05.3	
	comp=Z,3.2nm,0.8s						
RTBA	Rita Blanca	63.16	64	IAmb	IAmb	13 29 06.8	
	comp=Z,5.4nm,1.0s						
VLDQ	Val d'Or	64.89	40	P	P	13 29 13.2	-1.7
MNTX	Cornudas Mount	65.47	69	IAmb	IAmb	13 29 21.8	
	comp=Z,4.3nm,0.9s						
WMOK	Wichita Mounta	66.48	63		P	13 29 26.1	+0.7
WMOK				IAmb	IAmb	13 29 31.7	
	comp=Z,6.0nm,0.9s						
WMOK	Wichita Mounta	66.48	63	P	P	13 29 26.1	+0.7
WMOK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AK04	Malin Array Si	67.00	330	P	P	13 29 28.3	-0.2
AKASG	Malin Array Be	67.01	330	P	P	13 29 27.5	-1.0
	comp=Z,0.7nm,0.5s,baz=28,slow=6.6,SNR=2.0						
	comp=Z,0.7nm,0.5s						
AKASG	Malin Array Be	67.01	330	IAmb	IAmb	13 30 00.3	
	comp=Z,7.5nm,1.5s						
AKBB	Malin Array Si	67.01	330	P	P	13 29 27.7	-0.8
KIEV	Kiev	67.02	330	P	P	13 29 27.7	-0.8
	comp=Z,19nm,1.2s						
AK01	Malin Array Si	67.02	330	P	P	13 29 27.7	-0.9
AK19	Malin Array Si	67.05	330	P	P	13 29 27.8	-0.9
AK09	Malin Array Si	67.07	330	P	P	13 29 28.6	-0.3
AK10	Malin Array Si	67.09	330	P	P	13 29 28.6	-0.4
LDAQ	Lac Daran	67.18	36	P	P	13 29 29.6	-0.1
RNPP8	Varash	67.35	332	P	P	13 29 29.5	-1.2
RNPP5	Staryi Chortor	67.44	332	P	P	13 29 31.0	-0.2
MGMO	Mountain Grove	67.72	56		P	13 29 33.3	+0.1
MGMO				IAmb	IAmb	13 29 34.2	
	comp=Z,3.9nm,0.7s						
LMQ	La Malbaie	67.84	36	P	P	13 29 33.8	0.0
LUBAR	Lubar, Ukraine	68.12	330	P	P	13 29 34.6	-0.9
TX31	Lajitas Ar. Si	68.24	70		P	13 29 37.7	+0.9
TX31				IAmb	IAmb	13 29 39.4	
	comp=Z,3.8nm,0.7s						
TXAR	Lajitas Array	68.24	70	P	P	13 29 38.0	+1.2
	comp=Z,3.1nm,0.6s,baz=299,slow=4.5,SNR=44						
	comp=Z,3.1nm,0.6s						
TXAR	Lajitas Array	68.24	70		P	13 29 37.7	+0.9
TXAR	Lajitas Array	68.24	70	P	P	13 29 37.7	+0.9
KBZ	Khabaz	68.54	317	i P	P	13 29 39.6	+1.4
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
EKA	Eskdalemuir Ar	68.59	351	P	P	13 29 38.5	+0.1
	comp=Z,0.5nm,0.5s,baz=14,slow=6.6,SNR=4.2						
	comp=Z,0.5nm,0.5s						
D62A	Allapoint, All	68.67	35	P	P	13 29 39.2	+0.2
JCT	Junction City	69.35	66	IAmb	IAmb	13 29 45.8	
	comp=Z,5.0nm,0.8s						
KMPD	K-Podol'skiy	69.71	331	P	P	13 29 44.5	-0.9
L56A	Greenwood	69.92	43	P	P	13 29 46.9	0.0
WVT	Waverly	70.61	54	P	P	13 29 52.0	+0.8
WVT	Waverly	70.61	54	P	P	13 29 52.0	+0.8
WVT				pmax	pmax		
	comp=Z,13nm,1.5s						
GERES	GERESS Array B	72.51	339	P	P	13 30 02.2	-0.3
	comp=Z,0.3nm,0.6s,baz=33,slow=5.8,SNR=3.9						
	comp=Z,0.3nm,0.6s						
LRAL	Lakeview Retre	73.56	55	P	P	13 30 08.3	-0.6
BRTR	Keskin Array B	75.42	322	P	P	13 30 19.1	-0.7
	comp=Z,1.2nm,0.8s,baz=25,slow=4.5,SNR=4.4						
	comp=Z,1.2nm,0.8s						
WRA	Warramunga Arr	79.20	207	P	P	13 30 41.1	+0.2
	comp=Z,1.3nm,1.0s,baz=16,slow=5.8,SNR=4.4						
	comp=Z,1.3nm,1.0s						
FITZ	Fitzroy Crossi	80.00	216	P	P	13 30 44.5	-0.7
ASAR	Alice Springs	82.87	206	P	P	13 30 59.0	-1.4
	comp=Z,1.0nm,0.8s,baz=14,slow=4.9,SNR=10						
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	82.87	206	P	P	13 31 00.2	-0.2
ASAR	Alice Springs	82.87	206	P	P	13 30 59.0	-1.4
ESDC	Sonseca Array	84.18	350	P	P	13 31 06.8	-0.3
	comp=Z,0.4nm,0.6s,baz=353,slow=4.1,SNR=1.2						
	comp=Z,0.4nm,0.6s						
ESDC	Sonseca Array	84.18	350	IAmb	IAmb	13 31 08.6	
	comp=Z,0.5nm,1.1s						
QSPA	South Pole Qui	145.58	180	PKPbc	PKPdf	13 38 11.9	-1.0
	comp=Z,3.3nm,0.6s,baz=304,slow=1.1,SNR=53						

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*VIE **22** 13:30:02.5±0.9, 49°.69N×18°.55E, h0^{km}, mb2.8/3, ml2.4/6, Error ellipse: s-maj=10.9km s-min=4.0km az=168.0 27 km SE of Ostrava Suspected Mining induced.*

*IPEC **22** 13:30:03.5±0.3, 49°.83N×18°.55E, h1^{km}, ML2.2/6, Error ellipse: s-maj=1.8km s-min=1.4km az=71.0, Mining explosion.*

*PRU **22** 13:30:05.0, 49°.83N×18°.46E, h0^{km}, Mining Induced Event Csm, E=2.2e+05*

ISC 22 13:30:02.6±0.8**, 49°.79N**±0°.03×**18°.52E**±0°.02**, h0^{km}, n31, σ1.^{s}03**/60**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.24	282	ePG	Pb	13 30 08.9	+1.6
OKC				eSG	Sb	13 30 12.7	+2.3
	comp=Z,111nm,0.5s						
STEB	Steborice	0.50	287	ePG	Pb	13 30 13.3	-1.1
STEB				eSG	Sg	13 30 20.4	+1.6
	comp=Z,81nm,0.4s						
MORC	Moravsky Berou	0.63	269	ePg	Pb	13 30 16.1	-0.5
	baz=85						
MORC				eSg	Sg	13 30 24.0	+1.1
	55nm,0.4s,baz=85						
LOSC	Losov	0.76	258	ePg	Pb	13 30 18.7	-0.1
	baz=74						
LOSC				eSg	Sg	13 30 28.4	+1.4
	44nm,0.3s,baz=74						
ANAC	Anensky vrch	0.79	292	ePg	Pb	13 30 18.8	-0.5
	baz=108						
ANAC				eSg	Sg	13 30 28.5	+0.5
	44nm,0.4s,baz=108						
LANS	Liptovska Anna	0.89	135	ePG	Pb	13 30 21.1	+0.1
LANS				eSG	Sb	13 30 34.1	+0.7
LANS				eLG	Lg	13 30 37.4	
OJC	Ojcow	0.93	62	ePg	Pg	13 30 20.1	-0.4
OJC				eSg	Sn	13 30 35.3	-1.8
JAVC	Velka Javorina	1.08	211	ePg	Pn	13 30 25.2	+0.1
	baz=30						
KRLC	Kraliky	1.16	285	ePG	Pg	13 30 24.4	-0.4
KRLC				eSG	Sb	13 30 40.7	-0.4
	comp=Z,50nm,0.4s						
NIE	Niedzica	1.22	107	ePg	Pn	13 30 26.6	-0.3
NIE				eSg	Sn	13 30 45.5	+1.3
VRAC	Vranov	1.34	250	ePg	Pb	13 30 29.1	+0.5
	baz=67						
VRAC				eSg	Sb	13 30 46.6	+0.3
	44nm,0.4s,baz=67						
DPC	Dobruska-Polom	1.52	293	ePG	Pb	13 30 31.4	-0.3
DPC				eSG	Sg	13 30 51.4	-0.1
	comp=Z,24nm,0.5s						
KRUC	Moravsky	1.56	243	ePg	Pb	13 30 32.5	+0.1
	baz=61						
KRUC				eSg	Sg	13 30 53.6	+0.8
	28nm,0.5s,baz=61						
MODS	Modra-Piesok	1.63	210	ePG	Pb	13 30 33.8	+0.2
MODS				eSG	Sg	13 30 56.3	+1.3
OSTC	Ostas	1.67	298	ePG	Pb	13 30 33.9	-0.3
OSTC				eSG	Sg	13 30 56.0	-0.2
	comp=Z,58nm,0.8s						
UPC	Upice	1.76	295	ePG	Pb	13 30 35.7	-0.2
UPC				eSG	Sb	13 30 58.5	0.0
	comp=Z,23nm,0.7s						
CHVC	Chvalec	1.77	298	ePG	Pb	13 30 35.4	-0.6
KSP	Ksiaz	1.77	307	ePg	Pg	13 30 37.8	+1.2
KSP				eSn	Sn	13 30 57.5	-0.4
KSP				eSg	Sg	13 31 00.1	+0.6
STHS	Stebnicka Huta	1.81	101	ePN	Pb	13 30 36.4	-0.3
STHS				eSG	Sg	13 31 02.8	+1.9
STHS				eLG	Lg	13 31 05.8	
KECS	Kecovo	1.84	135	ePN	Pn	13 30 35.6	+0.1
KECS				eSN	Sb	13 31 00.3	-0.4
KECS				eLG	Lg	13 31 02.6	
TREC	Trest	2.03	257	eSG	Sg	13 31 07.8	-0.1
RONA	Rosalia, Austr	2.55	216	i Pn	Pn	13 30 46.1	+0.8
	2.2nm,0.5s						
RONA				eSn	Sn	13 31 13.1	-4.0
	4.6nm,0.4s						
CONA	Conrad Observa	2.56	224	i Pn	Pn	13 30 45.6	+0.2
	1.4nm,0.3s						
CONA				i Sn	Sn	13 31 16.0	-1.2
	3.1nm,0.3s						
PVCC	Panska Ves	2.64	288	eSG	Sg	13 31 27.8	+0.3
CKRC	Cesky Krumlov	2.92	252	ePG	Pg	13 30 57.2	-1.3
CKRC				eSG	Sg	13 31 36.0	-0.3
ARSA	Arzberg	3.23	219	ePn	Pn	13 30 55.7	+1.2
	1.0nm,0.3s						
ARSA				eSn	Sn	13 31 32.6	-1.1
	1.1nm,0.5s						
KHC	Kasperske Hory	3.29	260	ePN	Pn	13 30 55.8	+0.4
KHC				ePG	Pb	13 31 03.6	+1.8
KHC				eSG	Sg	13 31 46.7	-1.5
MOA	Molln	3.41	237	i Pn	Pn	13 30 57.1	0.0
	0.4nm,0.2s						
MOA				eSn	Sn	13 31 37.8	-0.4
	1.0nm,0.3s						
CLL	Collm	3.83	296	ePg	Pg	13 31 15.0	-1.0
CLL				eSg	Sg	13 32 06.0	+0.4
BIOA	Bad Ischl, Aus	3.85	239	ePn	Pn	13 31 03.0	-0.2
	1.8nm,0.4s						
BIOA				eSn	Sn	13 31 49.3	+0.2
	4.6nm,0.5s						
LESA	Schwarzleotal	4.54	241	ePn	Pn	13 31 12.5	-0.1
	0.8nm,0.3s						
LESA				eSn	Sn	13 32 06.1	0.0
	0.5nm,0.2s						

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*IDC **22** 13:58:12.6±0.9, 52°.98S×11°.75E, h0^{km}, mb4.2/7, mbtmp4.2/8, ML3.9/1, MS3.6/12, Error ellipse: s-maj=33.4km s-min=20.4km az=85.0*

*NEIC **22** 13:58:13.3±2.3, 52°.9S±0°.1×11°.8E±0°.2, h10^{km}±1^{km}, mb4.6/17, Error ellipse: s-maj=24.1km s-min=17.4km az=136.0*

ISC 22 13:58:13.2±0.5**, 52°.89S**±0°.09×**11°.8E**±0°.1**, h10^{km}, n45, σ0.^{s}95**/31**, mb4.6**/11**, MS3.4**/11**, 4D, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TROLL	Troll, Antarti	19.61	189	⇓P	Pn	14 02 43.4	+0.6
	comp=Z,990nm,0.7s						
SNAA	Sanae	19.92	194	⇓P	Pn	14 02 45.5	-0.9
	comp=Z,162nm,0.6s						
SNAA	Sanae	19.92	194	P	P	14 02 44.5	-0.2
	comp=Z,0.3nm,0.3s,baz=22,slow=10,SNR=28						
SNAA				LR	LR	14 08 52.5	
	comp=Z,120nm,21.3s,baz=355,slow=32						
	comp=Z,7.0nm,0.7s						
SNAA	Sanae	19.92	194	P	P	14 02 45.0	+0.3
VNA1	Neumayer--Stat	19.99	199	P	P	14 02 46.0	+0.6
VNA2	Neumayer--Watz	20.04	198	⇓P	P	14 02 46.0	0.0
	comp=Z,43nm,0.7s,baz=29,slow=13						
VNA3	Neumayer Olymp	20.74	199	⇓P	P	14 02 53.5	-0.1
	comp=Z,26nm,0.7s						
SUR	Sutherland	21.52	21	P	P	14 03 03.9	+1.6
	comp=Z,15nm,1.1s,baz=161,slow=6.5,SNR=3.7						
SUR				LR	LR	14 10 14.0	
	comp=Z,102nm,18.4s,baz=210,slow=33						
	comp=Z,15nm,1.1s						
SUR	Sutherland	21.52	21	P	P	14 03 03.1	+0.7
SUR				IAmb	IAmb	14 03 05.7	
	comp=Z,68nm,1.4s						
BOSA	Boshof	26.23	28	LR	LR	14 12 17.7	
	comp=Z,87nm,19.5s,baz=212,slow=32						
BOSA	Boshof	26.23	28	P	P	14 03 49.1	+0.9
H04S2	CROZET ISLANDS	26.30	93	T	T	14 31 42.1	
	baz=243,slow=76,SNR=33						
H04S3	CROZET ISLANDS	26.30	93	T	T	14 31 47.2	
	baz=243,slow=76,SNR=32						
H04S1	CROZET ISLANDS	26.32	93	T	T	14 31 45.1	
	baz=243,slow=76,SNR=34						
MAW	Mawson	28.30	141	LR	LR	14 13 05.2	
	comp=Z,91nm,21.3s,baz=284,slow=32						
LBTB	Lobatse	29.73	26	LR	LR	14 13 50.1	
	comp=Z,72nm,20.4s,baz=214,slow=31						
LBTB	Lobatse	29.73	26	P	P	14 04 16.6	-3.0
LBTB				IAmb	IAmb	14 04 39.7	
	comp=Z,10nm,1.4s						
BELA	Belgrano 2	30.02	198	P	P	14 04 21.4	-0.2
TSUM	Tsumeb	33.92	10	LR	LR	14 16 48.0	
	comp=Z,174nm,19.4s,baz=149,slow=33						
ESPZ	Base Esperanza	35.98	226	P	P	14 05 13.4	-0.3
QSPA	South Pole Qui	37.35	180	P	P	14 05 25.8	+0.2
	comp=Z,2.7nm,0.7s,baz=220,slow=4.5,SNR=17						
QSPA				LR	LR	14 19 41.1	
	comp=Z,133nm,21.2s,baz=209,slow=35						
	comp=Z,2.7nm,0.7s						
QSPA	South Pole Qui	37.35	180	P	P	14 05 25.7	+0.2
QSPA				IAmb	IAmb	14 05 27.5	
	comp=Z,13nm,1.4s						
LSZ	Lusaka	39.71	25	LR	LR	14 20 02.4	
	comp=Z,63nm,20.9s,baz=336,slow=33						
VOI	Vohitsoka	40.90	55	P	P	14 05 56.0	+0.4
VOI				IAmb	IAmb	14 06 34.9	
	comp=Z,21nm,1.4s						
AIS	Amsterdam Isla	46.99	99	P	P	14 06 44.0	-0.2
VNDA	Vanda	48.54	172	P	P	14 06 55.9	+0.1
	comp=Z,5.4nm,0.7s,baz=241,slow=5.3,SNR=11						
VNDA				LR	LR	14 26 09.6	
	comp=Z,96nm,20.7s,baz=195,slow=35						
	comp=Z,5.4nm,0.7s						
VNDA	Vanda	48.54	172	P	P	14 06 56.1	+0.4
VNDA				IAmb	IAmb	14 07 00.3	
	comp=Z,6.1nm,0.8s						
MBAR	Mbarara	54.46	24	LR	LR	14 28 56.7	
	comp=Z,130nm,19.6s,baz=318,slow=34						
PLCA	Paso Flores	54.64	247	LR	LR	14 28 56.4	

	comp=Z,32nm,19.9s,baz=67,slow=34						
CPUP	Villa Florida	56.97	269	P	P	14 07 59.5	+0.9
	comp=Z,2.6nm,0.9s,baz=155,slow=6.9,SNR=4.4						
	comp=Z,2.6nm,0.9s						
CPUP	Villa Florida	56.97	269	P	P	14 07 58.4	-0.3
BI02	San Fabin de	57.85	251	P	P	14 08 05.4	+0.5
BI02				IAmb	IAmb	14 08 06.2	
	comp=Z,12nm,1.2s						
BO04	La Punta	59.37	253	P	P	14 08 14.0	-1.4
TORD	Torodi Ar. Bea	66.33	349	P	P	14 09 03.5	+1.7
	comp=Z,0.5nm,0.8s,baz=180,slow=5.1,SNR=2.4						
	comp=Z,0.5nm,0.8s						
H01W2	Cape Leeuwin H	69.74	121	T	T	15 26 10.0	
	baz=219,slow=75,SNR=1181						
H01W3	Cape Leeuwin H	69.75	121	T	T	15 26 10.0	
	baz=219,slow=75,SNR=1246						
H01W1	Cape Leeuwin H	69.76	121	T	T	15 26 10.0	
	baz=219,slow=75,SNR=1218						
LPAZ	La Paz	71.10	268	P	P	14 09 33.2	+0.8
	comp=Z,3.7nm,1.0s,baz=137,slow=5.2,SNR=4.6						
	comp=Z,3.7nm,1.0s						
LPAZ	La Paz	71.10	268	P	P	14 09 33.0	+0.5
LPAZ				IAmb	IAmb	14 09 38.9	
	comp=Z,5.6nm,0.8s						
BOAV	Boa Vista	81.30	286	P	P	14 10 28.6	-1.1
BOAV				IAmb	IAmb	14 10 36.3	
	comp=Z,7.9nm,1.1s						
RAYN	Ar Rayn	81.56	31	P	P	14 10 29.8	-1.0
RAYN				IAmb	IAmb	14 10 36.3	
	comp=Z,4.6nm,1.2s						
MMAI	Mount Meron Ar	87.99	20	LR	LR	14 50 42.2	
	comp=Z,46nm,18.0s,baz=280,slow=36						
ASAR	Alice Springs	88.75	129	P	P	14 11 07.8	+0.6
	comp=Z,0.8nm,0.8s,baz=215,slow=4.2,SNR=8.6						
	comp=Z,0.8nm,0.8s						
KARP	Karpathos	89.08	13	P	P	14 11 07.5	-0.6
YKA	Yellowknife Ar	150.61	310	PKPbc	PKiKP	14 18 05.1	+0.5
	comp=Z,1.6nm,1.0s,baz=87,slow=1.5,SNR=10						

OSPL **22** *14:03:55.9±1.6, 18°.49N×70°.58W, h40km±197km, ML1.9, Presumed earthquake*

SDD **22** *14:03:57.7±1.9, 18°.50N×70°.72W, h28km±17km, MD2.8, ML2.4, MW2.7, Presumed earthquake*

ISC 22 14:03:56.7±1.2**, 18°.50N**±0°.05×**70°.74W**±0°.04**, h33**km±4km**,** **n12, σ1^{s}11**/22**, 10C-2D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABDR	Alto Bandera	0.33	20	⇓ePg	Pb	14 04 04.4	-0.7
ABDR				⇑eSg	Sb	14 04 10.7	-0.2
ABDR				IAML		14 04 28.7	
	comp=N,0.2nm,0.7s						
PODR	Polo	0.61	237	⇑ePg	Pb	14 04 08.2	-1.0
PODR				⇑eSg	Sb	14 04 18.9	+1.1
PODR				IAML		14 04 21.3	
	comp=N,1μm,0.3s						
PODR	Polo	0.61	237	i P	Pb	14 04 08.7	-0.5
PODR				eS	Sb	14 04 16.9	-0.9
NEDR	Neiba UASD	0.64	268	⇑eSg	Sb	14 04 20.3	+2.0
NEDR				IAML		14 04 23.8	
	comp=N,145nm,0.4s						
LONE3	El Aguacate, B	0.69	278	i P	Pn	14 04 09.9	-0.2
LONE3				eS	Sb	14 04 21.4	+1.7
LONE3				IAML		14 04 23.8	
	comp=Z,26nm,2.9s						
SDDR	Presa de Saban	0.70	313	⇑ePg	Pn	14 04 10.1	-0.2
SDDR				⇑eSg	Sb	14 04 19.9	-0.1
SDDR				IAML		14 04 24.2	
	comp=N,1μm,0.3s						
SDDR	Presa de Saban	0.70	313	i P	Pn	14 04 10.6	+0.3
SDDR				eS	Sb	14 04 20.7	+0.6
SDDR				IAML		14 04 24.0	
	comp=Z,29nm,0.3s						
LODU1	El Espartillar	0.71	258	i P	Pn	14 04 10.6	+0.2
LODU1				eS	Sb	14 04 21.8	+1.6
LODU1				IAML		14 04 28.3	
	comp=Z,50nm,2.1s						
SDD	Santo Domingo	0.79	93	IAML		14 04 06.3	
	comp=N,328nm,0.3s						
SDD				⇑eSg	Sn	14 04 20.0	-2.1
DR08	Loma La Naviza	0.82	56	⇑ePg	Pn	14 04 11.9	-0.1
DR08				⇑eSg	Sn	14 04 22.9	-0.1
DR08				IAML		14 04 23.7	
	comp=N,2μm,0.2s						
LOVI	El Cajuil, Ovi	0.92	220	i P	Pn	14 04 13.1	-0.1
LOVI				eS	Sn	14 04 25.1	-0.2
LOVI				IAML		14 04 27.2	
	comp=Z,349nm,0.1s						
HATOM	Hato Mayor del	1.32	77	⇑ePg	Pn	14 04 20.8	+2.0
HATOM				⇓eSg	Sn	14 04 35.9	+0.6
HATOM				IAML		14 04 38.9	
	comp=N,80nm,0.2s						

IDC **22** *14:19:27.3±1.0, 15°.03S×174°.02W, h0km, mb3.9/6, mbtmp3.9/6, MS3.4/2, Error ellipse: s-maj=42.5km s-min=24.3km az=136.0*

NEIC **22** *14:19:42.8±1.7, 15°.23S±0°.09×173°.74W±0°.10, h125km±6km, mb4.6/42, Error ellipse: s-maj=15.5km s-min=11.2km az=133.0*

ISC 22 14:19:40.0±0.5**, 15°.15S**±0°.09×**174°.01W**±0°.08**, h100**km**,** **n61, σ0^{s}97**/59**, mb4.5**/28**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.49	61		Pn	14 20 20.9	+1.9
AFI				Sn	Sn	14 20 48.8	-0.2
NIUE	Niue	5.52	136		Pn	14 20 59.9	0.0
MSVF	Nonsavu	8.04	250		Pn	14 21 40.1	+5.9
MARNC	Mare, Loyalty	18.17	247	P	Pn	14 23 47.4	+1.5
DZM	Mont Dzumac	19.75	247	P	Pn	14 24 07.0	+2.3
DZM				IAmb	IAmb	14 24 49.0	
	comp=Z,23nm,1.3s						
TOZ	Tahuroa Road	24.34	200	P	P	14 24 49.4	+1.0
TOZ				IAmb	IAmb	14 25 17.8	
	comp=Z,24nm,1.2s						
RTZ	Ruatahuna	24.69	197	P	P	14 24 52.4	+0.6
RTZ				IAmb	IAmb	14 25 00.9	
	comp=Z,27nm,1.3s						
QRZ	Quartz Range	28.14	202	P	P	14 25 23.6	+1.0
CTA	Charters Tower	38.13	257	LR	LR	14 42 21.5	
	comp=Z,62nm,18.2s,baz=222,slow=36						
CTAO	Charters Tower	38.13	257	P	P	14 26 49.4	-0.3
CTAO				IAmb	IAmb	14 27 14.1	
	comp=Z,8.4nm,1.1s						
TOO	Toolangi	42.17	230	P	P	14 27 22.9	0.0
STKA	Stephens Creek	43.65	240	P	P	14 27 34.8	-0.2
	comp=Z,0.9nm,0.5s,baz=45,slow=10.0,SNR=2.0						
	comp=Z,0.9nm,0.5s						
STKA	Stephens Creek	43.65	240	P	P	14 27 34.7	-0.2
INKA	Innaminka	43.71	246	P	P	14 27 35.7	+0.3
WR8	Warramunga Arr	49.18	257	P	P	14 28 17.7	-0.7
WR8				IAmb	IAmb	14 28 18.8	
	comp=Z,11nm,1.4s						
WB0	Warramunga Arr	49.29	257	P	P	14 28 18.1	-1.1
WB0				IAmb	IAmb	14 28 19.9	
	comp=Z,6.3nm,1.0s						
WRAB	Tennant Creek	49.32	257	P	P	14 28 19.0	-0.4
WRA	Warramunga Arr	49.33	257	P	P	14 28 19.0	-0.5
	comp=Z,2.9nm,0.6s,baz=91,slow=7.2,SNR=31						
	comp=Z,2.9nm,0.6s						
WRA	Warramunga Arr	49.33	257	P	P	14 28 18.7	-0.8
AS31	Alice Springs	49.63	252	P	P	14 28 20.9	-0.8
AS31				IAmb	IAmb	14 28 22.1	
	comp=Z,7.3nm,0.7s						
ASAR	Alice Springs	49.63	252	P	P	14 28 20.8	-1.0
	comp=Z,27nm,0.6s,baz=89,slow=7.6,SNR=662						
ASAR	Alice Springs	49.63	252	P	P	14 28 21.0	-0.8
MTN	Manton Dam	53.17	265	P	P	14 28 47.5	-0.7
MTN				IAmb	IAmb	14 28 59.0	
	comp=Z,18nm,1.4s						
FORT	Forrest	55.01	243	P	P	14 29 00.1	-1.3
FORT				IAmb	IAmb	14 29 37.7	
	comp=Z,13nm,1.2s						
FITZ	Fitzroy Crossi	57.69	258	P	P	14 29 20.4	-0.2
SOEI	Soe	60.35	267	P	P	14 29 39.9	+0.7
PSA00	Pilbara Seismi	62.71	253	P	P	14 29 53.8	-1.1
MBWA	Marble Bar	62.87	254	P	P	14 29 54.6	-1.3
NIKH	Nikolski High	67.98	3	P	P	14 30 28.1	0.0
JNU	Nakatsue	71.20	313	P	P	14 30 48.3	-0.1
PETK	Petropavlovsk-	72.21	343	P	P	14 30 54.5	+0.5
KMRM	Mail Ridge	72.23	38	P	P	14 30 53.8	-0.6
QSPA	South Pole Qui	74.89	180	P	P	14 31 10.7	+1.0
	comp=Z,2.0nm,1.0s,baz=347,slow=1.4,SNR=7.5						
	comp=Z,2.0nm,1.0s						
QSPA	South Pole Qui	74.89	180	P	P	14 31 10.8	+1.0
J05D	Fort Rock, OR	75.57	37	P	P	14 31 11.0	-3.1
J05D				IAmb	IAmb	14 31 28.7	
	comp=Z,13nm,1.4s						
K15K	Wolf Creek Mou	77.81	6	P	P	14 31 26.7	+0.7
K15K				IAmb	IAmb	14 31 33.3	
	comp=Z,29nm,1.4s						
K17K	Iditarod	78.58	7	P	P	14 31 30.9	+0.7
K17K				IAmb	IAmb	14 31 37.5	
	comp=Z,29nm,1.4s						
J16K	Anvik River	78.88	6	P	P	14 31 33.3	+1.4
J16K				IAmb	IAmb	14 32 03.1	
	comp=Z,17nm,1.4s						
S31K	Pelican	79.21	19	P	P	14 31 33.5	-0.2
S31K				IAmb	IAmb	14 31 45.0	
	comp=Z,30nm,1.4s						
L22K	Petersville	79.54	11	P	P	14 31 35.5	-0.1
L22K				IAmb	IAmb	14 31 36.2	
	comp=Z,10nm,1.4s						
GLB	Gilahina Butte	80.02	14	P	P	14 31 38.3	+0.1
GLB				IAmb	IAmb	14 31 56.0	
	comp=Z,12nm,1.4s						
CCB	Clear Creek Bu	82.03	11	P	P	14 31 49.0	+0.4
MNAI	Manna	82.16	268	P	P	14 31 51.3	+0.8
IMAR	Indian Mountai	82.31	8	P	P	14 31 50.8	+0.7
ILAR	Eielson Array	82.31	11	P	P	14 31 50.3	+0.1
	comp=Z,0.4nm,0.6s,baz=217,slow=5.7,SNR=10						
	comp=Z,0.4nm,0.6s						
PDAR	Pinedale Array	82.47	42	P	P	14 31 52.3	+0.5
	comp=Z,0.3nm,0.8s,baz=243,slow=4.2,SNR=2.7						
	comp=Z,0.3nm,0.8s						
H22K	Ishtalitna Cre	82.57	9	P	P	14 31 51.5	0.0
E19K	Redstone River	83.29	6	P	P	14 31 55.5	+0.4
E19K				IAmb	IAmb	14 32 00.7	
	comp=Z,8.2nm,1.4s						
DAWY	Dawson	83.33	15	P	P	14 31 55.6	+0.1
D19K	Kuna River	84.20	6	P	P	14 32 00.2	+0.4
D20K	Etivluk River	84.56	6	P	P	14 32 02.4	+0.8
D20K				IAmb	IAmb	14 32 03.0	
	comp=Z,6.3nm,1.2s						
D22K	Ayikyak River	85.18	8	P	P	14 32 05.1	+0.3
D22K				IAmb	IAmb	14 32 22.3	
	comp=Z,5.8nm,1.4s						
H29M	Whitestone	85.36	14	P	P	14 32 06.3	+0.6
H29M				IAmb	IAmb	14 32 10.3	
	comp=Z,9.5nm,1.4s						
D23K	Nanushuk River	85.53	8	P	P	14 32 06.6	+0.1
D23K				IAmb	IAmb	14 32 08.7	
	comp=Z,4.9nm,1.1s						
APG	El Apazote	87.82	74	LR	LR	15 02 33.5	
	comp=Z,12nm,19.6s,baz=274,slow=30						
INK	Inuvik	88.17	14	P	P	14 32 19.1	-0.1
CMAR	Chiang Mai Arr	91.98	288	P	P	14 32 39.0	+0.8
	comp=Z,0.6nm,0.7s,baz=98,slow=2.5,SNR=5.1						
	comp=Z,0.6nm,0.7s						
A36M	Sachs Harbour	92.79	14		P	14 32 41.7	+1.0
A36M				IAmb	IAmb	14 32 42.5	
	comp=Z,3.6nm,0.8s						
FINES	FINESS Array B	131.57	347	PKP	PKiKP	14 38 39.3	-2.3
	comp=Z,2.7nm,0.9s,baz=3.8,slow=4.2,SNR=4.5						
BRTR	Keskin Array B	145.59	321	PKPbc	PKPab	14 39 06.7	-1.2
	comp=Z,0.6nm,0.6s,baz=62,slow=1.4,SNR=4.0						
GERES	GERESS Array B	145.80	351	PKPbc	PKPab	14 39 07.1	-1.2
	comp=Z,0.9nm,1.0s,baz=321,slow=2.5,SNR=3.4						

MOS **22** *14:27:46.4±0.9, 43°.12N×147°.03E, h46km, mb4.0/7, Error ellipse: s-maj=15.3km s-min=8.2km az=122.2*

NIED **22** *14:27:46.9, 43°.12N×146°.99E, h41km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.94; $M_{\theta\theta}$-1.87; $M_{\phi\phi}$-1.06; $M_{r\theta}$1.30; $M_{\theta\phi}$-1.08; $M_{\phi r}$2.46; Fault plane solution: $M_0$3.91000×10^{14} NP1: ϕ_s246.00000°, δ25.00000°, λ116.00000°. NP2: ϕ_s37.00000°, δ68.00000°, λ78.00000°.*

JMA **22** *14:27:46.9±0.3, 43°N±1°×14°7E±°, h41km±3km, MV3.6/32, E OFF HOKKAIDO*

SKHL **22** *14:27:48.0±0.6, 43°.20N×147°.00E, h47km±7km, mb4.7/3*

IDC **22** *14:27:52.4±3.2, 43°.07N×146°.62E, h70km±27km, mb3.3/12, mbtmp3.6/15, Error ellipse: s-maj=23.2km s-min=20.0km az=63.0*

ISC 22 14:27:49.6±1.8**, 43°.17N**±0°.07×**146°.83E**±0°.08**, h44**km±15km**,** **n61, σ0^{s}94**/67**, mb3.7**/19**, 1C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.82	284	P	Pn	14 28 04.0	-0.7
NEM2				eS	Sn	14 28 16.3	+0.6
NMR	Nemuro--Hokkai	0.83	284	⇑iPN	Pn	14 28 04.0	-0.9
NMR				i S	Sn	14 28 16.4	+0.4
NMR	Nemuro--Hokkai	0.83	284	i P	Pn	14 28 04.0	-0.9
NMR				i S	Sn	14 28 16.4	+0.4
GLVR	Golovnino	1.11	301	ePN	Pn	14 28 08.2	-0.5
GLVR				i S	Sn	14 28 23.2	+0.3
GLVR				pmax	pmax		
	comp=N,80nm,0.4s						
GLVR				pmax	pmax		
	comp=E,45nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,346nm,0.4s						
GLVR				smax	smax		
	comp=E,492nm,0.4s						
GLVR				smax	smax		
	comp=N,1μm,0.3s						
GLVR	Golovnino	1.11	301	eP	Pn	14 28 08.2	-0.5
GLVR				AMB	AMB	14 28 08.6	
	comp=N,50nm,0.4s						
GLVR				AMB	AMB	14 28 08.6	
	comp=N,350nm,0.4s						
GLVR				i S	Sn	14 28 23.2	+0.3
GLVR				A	A	14 28 28.0	
	comp=N,1μm,0.4s						
GLVR				A	A	14 28 28.0	
	comp=N,490nm,0.4s						
YUK	Yuzh-Kuril'sk	1.12	321	ePN	Pn	14 28 07.9	-0.9
YUK				i S	Sn	14 28 23.1	+0.1
YUK				pmax	pmax		
	comp=Z,483nm,0.3s						
YUK				pmax	pmax		
	comp=N,218nm,0.1s						
YUK				pmax	pmax		
	comp=E,160nm,0.1s						
YUK				smax	smax		
	comp=E,3μm,0.5s						
YUK				smax	smax		
	comp=N,3μm,0.6s						
YUK	Yuzh-Kuril'sk	1.12	321	eP	Pn	14 28 08.2	-0.6
YUK				AMB	AMB	14 28 10.5	
	comp=N,480nm,0.3s						
YUK				i S	Sn	14 28 22.8	-0.2
YUK				A	A	14 28 25.9	
	comp=N,3μm,0.6s						
YUK				A	A	14 28 25.9	
	comp=N,3μm,0.6s						
JKHN	Kushirohamanak	1.23	267	eP	Pn	14 28 10.4	+0.1
JKHN				eS	Sn	14 28 27.1	+1.4
JRA	Rausu	1.46	302	P	Pn	14 28 13.4	-0.1
JNSB	Nemuroshibetsu	1.46	295	P	Pn	14 28 13.2	-0.3
JNSB				eS	Sn	14 28 32.1	+0.6
RUSJ	Misakicho	1.48	310	ePN	Pn	14 28 13.8	0.0
RUSJ				i S	Sn	14 28 34.6	+2.6
JAK	Akkeshi	1.57	264	P	Pn	14 28 14.7	-0.4
JAK				eS	Sn	14 28 35.9	+1.7
JNK	Nakash	1.60	286	P	Pn	14 28 14.8	-0.6
JNK				eS	Sn	14 28 35.9	+1.1
KUR	Kuril'sk	2.20	19	ePN	Pn	14 28 19.3	-4.2
KUR				eS	Sn	14 28 49.8	+0.3
KUR				smax	smax		
	comp=E,159nm,0.4s						
KUR				smax	smax		
	comp=N,68nm,0.2s						
KUR	Kuril'sk	2.20	19	eP	Pn	14 28 20.6	-2.9
KUR				AMB	AMB	14 28 22.1	
	comp=N,50nm,0.4s						
KUR				i S	Sn	14 28 45.1	-4.4
KUR				A	A	14 28 52.7	
	comp=N,120nm,0.3s						
KUR				A	A	14 28 52.7	
	comp=N,170nm,0.3s						
JOB	Onbets	2.21	264	P	Pn	14 28 23.8	0.0
JAR	Ashorobuto	2.24	274	P	Pn	14 28 24.4	+0.2
JTKR	Abashiri--Toko	2.27	292	P	Pn	14 28 25.4	+0.8
JCH	Churui	2.61	259	P	Pn	14 28 29.7	+0.5
JMP	Maruseppu	2.66	290	P	Pn	14 28 30.9	+0.9
JEM	Erimo	2.95	248	eP	Pn	14 28 34.8	+0.9
JFR	Furan	3.10	271	P	Pn	14 28 36.8	+0.8
JKA	Kamikawa-asahi	3.21	289	eP	Pn	14 28 39.8	+2.2
ASAJ	Asahikawa	3.22	289	P	Pn	14 28 39.8	+2.2
	comp=N,22nm,0.5s,baz=148,slow=10.0,SNR=26						
ASAJ				S	Sn	14 29 15.5	+0.8
	comp=N,24nm,0.7s,baz=28,slow=27,SNR=1.7						
YSS	Yuzhno-Sakhali	4.76	324	ePN	Pn	14 28 59.7	+0.9
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS	Yuzhno-Sakhali	4.76	324	eP	Pn	14 28 59.7	+0.9
MJAR	Matsushiro Arr	9.36	228	P	Pn	14 30 00.6	-1.3
	comp=Z,1.0nm,0.9s,baz=25,slow=14,SNR=2.8						
HILR	Hailar Array B	19.69	298	P	P	14 32 14.7	-0.3
	comp=Z,1.3nm,0.5s,baz=96,slow=8.9,SNR=2.4						
YAK	Yakutsk	21.45	338	i P	P	14 32 32.4	-1.3
YAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YAK	Yakutsk	21.45	338	eP	P	14 32 32.4	-1.3
ULN	Ulaanbaatar	28.04	294	i P	P	14 33 36.2	-0.5
ULN				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ULN	Ulaanbaatar	28.04	294	eP	P	14 33 36.2	-0.5
SONM	Songino Array	28.49	294	P	P	14 33 39.9	-0.7
	comp=Z,0.9nm,0.9s,baz=97,slow=7.3,SNR=4.2						
	comp=Z,0.9nm,0.9s						
H11N2	WAKE ISLAND Hy	28.82	138	T	T	15 04 35.9	
	baz=329,slow=75,SNR=8.2						
H11N1	WAKE ISLAND Hy	28.83	138	T	T	15 04 33.5	
	baz=329,slow=75,SNR=7.4						
H11N3	WAKE ISLAND Hy	28.84	138	T	T	15 04 33.9	
	baz=329,slow=75,SNR=6.7						
H11S1	WAKE ISLAND Hy	29.77	139	T	T	15 05 41.7	
	baz=330,slow=76,SNR=40						
H11S3	WAKE ISLAND Hy	29.77	140	T	T	15 05 51.2	
	baz=330,slow=76,SNR=36						
H11S2	WAKE ISLAND Hy	29.79	140	T	T	15 05 40.4	
	baz=330,slow=76,SNR=26						
NRIK	Noril'sk	39.65	331	i P	P	14 35 15.4	-1.2
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ZALV	Zalesovo Beam	41.17	308	P	P	14 35 29.1	-0.2
	comp=Z,0.5nm,0.6s,baz=104,slow=6.1,SNR=1.8						
	comp=Z,0.5nm,0.6s						
ILAR	Eielson Array	42.09	36	P	P	14 35 39.4	+2.5
	comp=Z,0.3nm,0.6s,baz=278,slow=8.2,SNR=2.5						
	comp=Z,0.3nm,0.6s						
MK31	Makanchi Array	44.65	298	i P	P	14 35 57.6	-0.1
MKAR	Makanchi Array	44.65	298	P	P	14 35 57.6	-0.1
	comp=Z,1.7nm,0.7s,baz=81,slow=10,SNR=17						
	comp=Z,1.7nm,0.7s						
MKAR	Makanchi Array	44.65	298	i P	P	14 35 58.2	+0.5
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	44.65	298	eP	P	14 35 58.2	+0.5
KURK	Kurchatov	45.66	304	i P	P	14 36 05.3	-0.3
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK	Kurchatov	45.66	304	eP	P	14 36 05.3	-0.3
KURBB	Kurchatov Arra	45.75	304	P	P	14 36 06.0	-0.3
	comp=Z,0.7nm,0.5s,baz=84,slow=8.5,SNR=4.0						
	comp=Z,0.7nm,0.5s						
BVAR	Borovoye Array	49.70	310	P	P	14 36 37.2	+0.4
	comp=Z,0.4nm,0.4s,baz=69,slow=7.9,SNR=3.3						
	comp=Z,0.4nm,0.4s						
YKA	Yellowknife Ar	56.41	33	P	P	14 37 26.6	+0.5
	comp=Z,0.1nm,0.6s,baz=301,slow=7.6,SNR=2.2						
	comp=Z,0.1nm,0.6s						
BELG	Belogornoye	62.16	317	i P	P	14 38 05.2	-0.8
BELG				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	Warramunga Arr	63.84	193	P	P	14 38 16.5	-0.9
	comp=Z,0.2nm,0.8s,baz=10,slow=6.7,SNR=1.3						
	comp=Z,0.2nm,0.8s						
FINES	FINESS Array B	65.29	333	P	P	14 38 25.9	-0.5
	comp=Z,1.5nm,1.0s,baz=330,slow=11,SNR=3.4						
	comp=Z,1.5nm,1.0s						
ASAR	Alice Springs	67.56	193	P	P	14 38 40.9	-0.4
	comp=Z,0.3nm,0.9s,baz=15,slow=6.4,SNR=1.9						
	comp=Z,0.3nm,0.9s						
KIV	Kislovodsk	69.98	312	eP	P	14 38 55.9	-0.5
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV	Kislovodsk	69.98	312	eP	P	14 38 55.9	-0.5
KBZ	Khabaz	70.01	312	i P	P	14 38 57.3	+0.8
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KBZ	Khabaz	70.01	312	eP	P	14 38 57.3	+0.8
HFS	Hagfors	70.14	337	P	P	14 38 56.1	-0.8
	comp=Z,1.0nm,0.7s,baz=61,slow=9.0,SNR=1.8						
	comp=Z,1.0nm,0.7s						
TXAR	Lajitas Array	83.17	56	P	P	14 40 12.2	+1.0
	comp=Z,0.2nm,0.6s,baz=316,slow=4.7,SNR=5.5						
	comp=Z,0.2nm,0.6s						

KRSC **22** *14:36:50.2±1.4, 53°.32N×161°.27E, h58km±22km, Ml4.2*

MOS **22** *14:36:51.5±0.8, 53°.31N×161°.32E, h47km, mb4.2/7, Error ellipse: s-maj=6.9km s-min=4.8km az=84.0*

NEIC **22** *14:37:01.6±1.7, 53°.6N±0°.1×159°.4E±0°.2, h86km±7km, mb4.2/20, Error ellipse: s-maj=16.7km s-min=12.0km az=139.0*

IDC **22** *14:37:04.0±1.4, 53°.56N×159°.37E, h114km±13km, mb3.3/15, mbtmp3.8/17, Error ellipse: s-maj=19.2km s-min=15.8km az=123.0*

ISC 22 14:37:00.8±0.7**, 53°.57N**±0°.04×**160°.06E**±0°.07**, h85**km±6km**,** **n147, σ2^{s}58**/144**, mb3.9**/26**, 4C, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.47	183	PN	Pn	14 37 06.2	-8.6
SPN				S	Sn	14 37 16.4	-8.7
SPN	Mys Shipunski	0.47	183	eP	Pn	14 37 06.3	-8.5
SPN				eS	Sn	14 37 16.6	-8.5
NLC	Nalytchevo	0.59	227	PN	Pn	14 37 11.7	-4.0
NLC				S	Sn	14 37 26.1	-0.7
NLC	Nalytchevo	0.59	227	eP	Pn	14 37 11.8	-4.0
NLC				eS	Sn	14 37 26.3	-0.5
KII	Karymskiy	0.59	322	PN	Pn	14 37 13.3	-2.5
KII				S	Sn	14 37 28.9	+1.8
KII	Karymskiy	0.59	322	eP	Pn	14 37 13.4	-2.5
KII				eS	Sn	14 37 29.0	+2.0
SDLR	Sedlovina	0.76	248	PN	Pn	14 37 16.0	-1.6
SDLR				S	Sn	14 37 33.7	+3.6
SDLR	Sedlovina	0.76	248	eP	Pn	14 37 16.0	-1.6
SDLR				eS	Sn	14 37 33.1	+3.0
SMAR	Somma	0.81	248	PN	Pn	14 37 16.6	-1.7
SMAR				S	Sn	14 37 35.4	+4.2
SMAR	Somma	0.81	248	eP	Pn	14 37 16.7	-1.5
SMAR				eS	Sn	14 37 34.8	+3.6
UGLR	Uglovaya	0.82	244	PN	Pn	14 37 16.7	-1.5
UGLR				S	Sn	14 37 34.7	+3.4
UGLR	Uglovaya	0.82	244	eP	Pn	14 37 16.8	-1.5
UGLR				eS	Sn	14 37 34.5	+3.2
KRER	Koryakskii	0.83	252	PN	Pn	14 37 17.6	-0.8
KRER				S	Sn	14 37 36.5	+5.0
KRER	Koryakskii	0.83	252	eP	Pn	14 37 17.7	-0.8
KRER				eS	Sn	14 37 36.4	+4.9
AVH	Avacha	0.85	249	PN	Pn	14 37 17.7	-0.8
AVH				S	Sn	14 37 36.5	+4.8
AVH	Avacha	0.85	249	eP	Pn	14 37 17.6	-0.8
AVH				eS	Sn	14 37 36.5	+4.8
KRX	Arik	0.87	257	PN	Pn	14 37 18.0	-0.8
KRX				S	Sn	14 37 36.7	+4.5
KRX	Arik	0.87	257	eP	Pn	14 37 17.9	-0.8
KRX				eS	Sn	14 37 36.9	+4.7
KOK	Koryaka	0.90	252	PN	Pn	14 37 18.3	-0.8
KOK				S	Sn	14 37 37.5	+4.9
KOK	Koryaka	0.90	252	eP	Pn	14 37 18.2	-0.8
KOK				eS	Sn	14 37 37.4	+4.7
DALK	Dalny	0.95	236	PN	Pn	14 37 16.9	-2.6
DALK				S	Sn	14 37 35.6	+2.0
DALK	Dalny	0.95	236	eP	Pn	14 37 17.1	-2.5
DALK				eS	Sn	14 37 35.5	+2.0
PET	Petropavlovsk	1.01	238	Pn	Pn	14 37 17.8	-2.4
PET	Petropavlovsk	1.01	238	ePN	Pn	14 37 18.6	-1.6
PET				eS	Sn	14 37 37.2	+2.5
PET				smax	smax		
	comp=E,641nm,0.5s						
PET				smax	smax		
	comp=N,682nm,0.5s						

PET	Petropavlovsk	1.01	238	*e*P	Pn	14 37 18.1	-2.0
PET				*e*S	Sn	14 37 38.2	+3.6
INSR	Institute	1.01	241	PN	Pn	14 37 19.1	-1.1
INSR				S	Sn	14 37 38.3	+3.6
INSR	Institute	1.01	241	*e*P	Pn	14 37 20.1	-0.1
INSR				*e*S	Sn	14 37 38.3	+3.6
GNL	Ganaly	1.27	277	PN	Pn	14 37 25.0	+1.5
GNL				S	Sn	14 37 49.1	+8.6
GNL	Ganaly	1.27	277	*e*P	Pn	14 37 25.0	+1.6
GNL				*e*S	Sn	14 37 48.9	+8.4
KRMR	Karymshinskiy	1.38	238	PN	Pn	14 37 23.9	-0.8
KRMR				S	Sn	14 37 46.6	+3.9
KRMR	Karymshinskiy	1.38	238	*e*P	Pn	14 37 23.9	-0.8
KRMR				*e*S	Sn	14 37 46.4	+3.7
RUS	Russkaya	1.47	220	PN	Pn	14 37 22.5	-3.5
RUS				S	Sn	14 37 45.0	+0.1
RUS	Russkaya	1.47	220	*e*P	Pn	14 37 22.4	-3.5
RUS				*e*S	Sn	14 37 45.1	+0.1
PEA0B	Petropavlovsk-	1.49	253		Pn	14 37 24.7	-1.4
PEA0B	Petropavlovsk-	1.49	253	PN	Pn	14 37 27.1	+0.9
PEA0B				S	Sn	14 37 52.7	+7.4
PETK	Petropavlovsk-	1.49	253	P	Pn	14 37 26.1	-0.1
	comp=N,68nm,0.5s,baz=84,slow=18,SNR=256						
PETK				S	Sn	14 37 50.1	+4.8
	comp=N,70nm,0.5s,baz=331,slow=1.9,SNR=8.0						
PETK	Petropavlovsk-	1.49	253		Pn	14 37 24.0	-2.1
KZV	Kizimen	1.55	5	PN	Pn	14 37 22.8	-4.3
KZV	Kizimen	1.55	5	*e*P	Pn	14 37 22.5	-4.6
KZV				*e*S	Sn	14 37 44.7	-2.3
MTVR	Mutnovka	1.57	227	PN	Pn	14 37 24.8	-2.6
MTVR				S	Sn	14 37 49.8	+2.4
MTVR	Mutnovka	1.57	227	*e*P	Pn	14 37 24.7	-2.6
MTVR				*e*S	Sn	14 37 49.9	+2.4
GRL	Gorelyy	1.57	230	PN	Pn	14 37 26.2	-1.1
GRL				S	Sn	14 37 51.5	+4.1
GRL	Gorelyy	1.57	230	*e*P	Pn	14 37 26.2	-1.1
TUMD	Tumrok D	1.65	7	PN	Pn	14 37 23.2	-5.0
TUMD				S	Sn	14 37 46.2	-2.8
TUMD	Tumrok D	1.65	7	*e*P	Pn	14 37 23.3	-4.9
TUMD				*e*S	Sn	14 37 46.3	-2.6
ASAK	Asacha	1.77	229	PN	Pn	14 37 28.4	-1.4
ASAK				S	Sn	14 37 55.1	+3.3
ASAK	Asacha	1.77	229	*e*P	Pn	14 37 28.4	-1.4
APC	Apacha	1.86	251	PN	Pn	14 37 32.5	+1.6
APC				S	Sn	14 38 01.9	+8.0
APC	Apacha	1.86	251	*e*P	Pn	14 37 31.4	+0.5
APC				*e*S	Sn	14 38 01.3	+7.5
KDTR	Khodutka, Kamc	2.14	215	PN	Pn	14 37 30.5	-4.1
KDTR				S	Sn	14 37 58.2	-2.2
KDTR	Khodutka, Kamc	2.14	215	*e*P	Pn	14 37 30.6	-4.1
KDTR				*e*S	Sn	14 37 57.8	-2.6
KMNR	Kamenistaya	2.19	3	PN	Pn	14 37 32.5	-2.9
KMNR	Kamenistaya	2.19	3	*e*P	Pn	14 37 32.5	-2.9
KIRR	Kirishev	2.39	4	PN	Pn	14 37 34.5	-3.6
KIRR	Kirishev	2.39	4	*e*P	Pn	14 37 34.7	-3.4
BZGR	Bezymyannyi-Gr	2.40	9	PN	Pn	14 37 33.9	-4.3
BZGR	Bezymyannyi-Gr	2.40	9	*e*P	Pn	14 37 34.0	-4.3
BZWR	Bezymyannyi-We	2.41	6	PN	Pn	14 37 34.6	-3.8
BZWR	Bezymyannyi-We	2.41	6	*e*P	Pn	14 37 34.5	-3.9
ESO	Esso	2.49	342	PN	Pn	14 37 38.2	-1.1
ESO	Esso	2.49	342	*e*P	Pn	14 37 38.4	-0.9
KOZ	Kozyrevsk	2.50	358	PN	Pn	14 37 36.6	-2.8
KOZ	Kozyrevsk	2.50	358	*e*P	Pn	14 37 36.8	-2.6
SRDR	Sredinnyy	2.76	356	PN	Pn	14 37 39.9	-3.1
SRDR	Sredinnyy	2.76	356	*e*P	Pn	14 37 39.9	-3.1
KLY	Klyuchi	2.77	7	PN	Pn	14 37 38.4	-4.6
KLY	Klyuchi	2.77	7	*e*P	Pn	14 37 38.3	-4.7
PAU	Pauzhetka	2.90	225	PN	Pn	14 37 42.7	-2.0
PAU	Pauzhetka	2.90	225	*e*P	Pn	14 37 42.5	-2.2
KBTR	Krutoberegovo	3.09	30	PN	Pn	14 37 38.1	-9.2
KBTR	Krutoberegovo	3.09	30	*e*P	Pn	14 37 38.2	-9.1
KBG	Krutoberegovo	3.09	28	PN	Pn	14 37 38.8	-8.6
KBG	Krutoberegovo	3.09	28	*e*P	Pn	14 37 39.0	-8.4
SMKR	Semkarok	3.12	14	PN	Pn	14 37 42.4	-5.5
SMKR	Semkarok	3.12	14	*e*P	Pn	14 37 42.5	-5.4
SRKR	Sorokina	3.15	11	PN	Pn	14 37 43.2	-5.1
SRKR	Sorokina	3.15	11	*e*P	Pn	14 37 43.5	-4.9
SKR	Severo-Kuril's	3.78	222	*i* PN	Pn	14 37 53.7	-3.0
SKR	Severo-Kuril's	3.78	222	*e*P	Pn	14 37 53.5	-3.2
SKR				*e*S	Sn	14 38 37.7	-2.3
BKI	Bering	3.82	62	PN	Pn	14 37 42.4	-15
BKI	Bering	3.82	62	*e*P	Pn	14 37 42.6	-15
BKI				*e*S	Sn	14 38 17.1	-24
BILL	Bilibino	14.82	9	Pn	Pn	14 40 26.7	+1.2
BILL	Bilibino	14.82	9	*i* P	Pn	14 40 26.5	+1.0
BILL				pmax	pmax		
	comp=Z,2.0nm,0.4s						
JKA	Kamikawa-asahi	14.85	237	Pn	Pn	14 40 22.7	-3.4
ASAJ	Asahikawa	14.85	237	P	P	14 40 25.3	-4.5
	comp=Z,5.2nm,0.7s,baz=21,slow=28,SNR=4.7						
ERM	Erimo	16.16	231	Pn	Pn	14 40 37.6	-5.0
ERM				IAmb	IAmb	14 41 05.7	
	comp=Z,46nm,1.2s						
ERM	Erimo	16.16	231	P	Pn	14 40 37.6	-5.0
ERM				pmax	pmax		
	comp=Z,46nm,1.3s						
YAK	Yakutsk	18.11	310	P	Pn	14 41 03.5	-2.9
	comp=Z,4.1nm,0.3s,baz=93,slow=3.0,SNR=4.5						
YAK	Yakutsk	18.11	310	P	P	14 40 58.6	-7.0
YAK				IAmb	IAmb	14 41 09.2	
	comp=Z,8.8nm,0.7s						
YAK	Yakutsk	18.11	310	*ce*P	Pn	14 41 08.2	+1.8
YAK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
M11K	Mekoryuk	19.44	56	P	P	14 41 23.9	+3.8
N14K	Kuskokwak Cree	21.67	58	P	P	14 41 49.5	+5.4
TIXI	Tiksi	22.64	335	P	P	14 41 52.6	-1.7
TIXI	Tiksi	22.64	335	P	P	14 41 52.6	-1.7
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.2s						
MAJO	Matsushiro	22.83	231	*i* P	P	14 41 56.2	-0.5
MAJO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MJAR	Matsushiro Arr	22.83	231	P	P	14 41 55.2	-1.5
	comp=Z,3.4nm,0.9s,baz=26,slow=10,SNR=8.5						
	comp=Z,3.4nm,0.9s						
MJAR	Matsushiro Arr	22.83	231	P	P	14 41 54.5	-2.2
MJAR	Matsushiro Arr	22.83	231	P	P	14 41 54.5	-2.2
MJAR				pmax	pmax		
	comp=Z,6.0nm,1.5s						
J19K	Poorman	24.69	48	P	P	14 42 17.7	+4.3
J19K				IAmb	IAmb	14 42 46.3	
	comp=Z,6.9nm,1.2s						
P19K	Oil Pt	25.95	58	P	P	14 42 28.4	+3.5
ILAR	Eielson Array	28.49	46	P	P	14 42 51.1	+3.5
	comp=Z,0.2nm,0.6s,baz=273,slow=9.5,SNR=5.5						
	comp=Z,0.2nm,0.6s						
G26K	Porcupine Rive	29.70	41	P	P	14 43 00.7	+2.5
G26K				IAmb	IAmb	14 43 02.9	
	comp=Z,7.6nm,1.4s						
F28M	Old Crow	31.19	40	P	P	14 43 15.3	+3.9
F28M				IAmb	IAmb	14 43 22.1	
	comp=Z,2.9nm,1.5s						
H11N2	WAKE ISLAND Hy	34.19	168	T	T	15 20 00.9	
	baz=353,slow=76,SNR=19						
H11N3	WAKE ISLAND Hy	34.20	168	T	T	15 19 55.5	
	baz=353,slow=76,SNR=16						
H11N1	WAKE ISLAND Hy	34.20	169	T	T	15 20 00.3	
	baz=353,slow=76,SNR=17						
H11S1	WAKE ISLAND Hy	35.37	169	T	T	15 21 26.2	
	baz=351						
H11S3	WAKE ISLAND Hy	35.38	169	T	T	15 21 27.4	
	baz=351						
H11S2	WAKE ISLAND Hy	35.39	169	T	T	15 21 26.9	
	baz=351						
Q32M	Nakina River	36.49	54	P	P	14 44 02.1	+4.5
Q32M				IAmb	IAmb	14 44 46.4	
	comp=Z,11nm,1.4s						
SPITS	Spitsbergen Ar	46.66	350	P	P	14 45 19.1	-1.1
	comp=Z,1.9nm,0.5s,baz=68,slow=8.0,SNR=5.2						
	comp=Z,1.9nm,0.5s						
KURK	Kurchatov	47.47	301	P	P	14 45 25.7	-1.0
KURBB	Kurchatov Arra	47.57	301	P	P	14 45 25.7	-1.8
	comp=Z,0.7nm,0.2s,baz=59,slow=7.5,SNR=2.9						
	comp=Z,0.7nm,0.2s						
MKAR	Makanchi Array	47.93	295	P	P	14 45 28.8	-1.6
	comp=Z,0.4nm,0.6s,baz=54,slow=6.2,SNR=4.8						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	47.93	295	*ce*P	P	14 45 35.9	+5.5
BVAR	Borovoye Array	50.08	308	P	P	14 45 44.6	-2.0
	comp=Z,0.4nm,0.4s,baz=52,slow=7.9,SNR=4.2						
	comp=Z,0.4nm,0.4s						
PDAR	Pinedale Array	57.31	61	P	P	14 46 43.7	+3.9
	comp=Z,0.2nm,0.7s,baz=289,slow=4.5,SNR=4.3						
	comp=Z,0.2nm,0.7s						
PDAR	Pinedale Array	57.31	61	P	P	14 46 42.5	+2.7
CMAR	Chiang Mai Arr	58.26	258	*ce*P	P	14 46 48.5	+2.0
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	FINESS Array B	59.67	336	P	P	14 46 54.9	-0.8
	comp=Z,0.6nm,0.5s,baz=53,slow=7.4,SNR=6.2						
	comp=Z,0.6nm,0.5s						
FINES	FINESS Array B	59.67	336	P	P	14 46 55.1	-0.5
FINES	FINESS Array B	59.67	336	*i* P	P	14 46 55.7	+0.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YUH	Yuha Desert	61.09	73	P	P	14 47 09.6	+3.8
YUH				IAmb	IAmb	14 47 16.0	
	comp=Z,5.5nm,1.4s						
OBN	Obninsk	62.10	327	*e*P	P	14 47 13.4	+1.2
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NC405	NORSAR Array S	62.92	343	P	P	14 47 16.5	-1.1
NC204	NORSAR Array S	62.93	344	P	P	14 47 16.9	-0.9
NB201	NORSAR Array S	63.05	344	P	P	14 47 17.9	-0.6
NB2	NORSAR Subarra	63.08	344	P	P	14 47 17.9	-0.8
	comp=Z,1.3nm,0.6s,baz=23,slow=6.9						
NOA	NORSAR Array B	63.08	344	P	P	14 47 17.9	-0.8
	comp=Z,0.4nm,0.6s,baz=20,slow=6.2,SNR=5.2						
	comp=Z,0.4nm,0.6s						
HFS	Hagfors	63.49	342	P	P	14 47 20.1	-1.2
	comp=Z,1.1nm,0.7s,baz=18,slow=5.2,SNR=6.1						
	comp=Z,1.1nm,0.7s						
AKASG	Malin Array Be	68.19	329	P	P	14 47 50.0	-1.7
	comp=Z,0.3nm,0.3s,baz=33,slow=7.0,SNR=2.8						
	comp=Z,0.3nm,0.3s						
AKASG	Malin Array Be	68.19	329	IAmb	IAmb	14 47 52.8	
	comp=Z,2.3nm,1.1s						
AKASG	Malin Array Be	68.19	329	P	P	14 47 50.0	-1.7
KBZ	Khabaz	69.18	316	*i* P	P	14 47 59.9	+2.0
KBZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TXAR	Lajitas Array	70.47	67	P	P	14 48 08.8	+2.6
	comp=Z,0.1nm,0.7s,baz=318,slow=6.4,SNR=6.3						
	comp=Z,0.1nm,0.7s						
EKA	Eskdalemuir Ar	70.58	350	P	P	14 48 04.7	-1.6
	comp=Z,0.8nm,0.7s,baz=23,slow=6.2,SNR=3.8						
	comp=Z,0.8nm,0.7s						
BURAR	Bucovina Array	72.15	330	P	P	14 48 14.8	-1.3
BFO	Black Forest	75.69	341	*ce*P	P	14 48 38.8	+2.3
WR8	Warramunga Arr	76.48	205	P	P	14 48 38.9	-2.4
WR8				IAmb	IAmb	14 49 06.4	
	comp=Z,4.5nm,1.2s						
WRAB	Tennant Creek	76.50	205	P	P	14 48 39.1	-2.1
WRAB				IAmb	IAmb	14 48 43.9	
	comp=Z,5.7nm,1.5s						
WRAB	Tennant Creek	76.50	205	P	P	14 48 39.2	-2.1
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.5s						
WRA	Warramunga Arr	76.51	205	P	P	14 48 39.0	-2.4
	comp=Z,0.4nm,0.6s,baz=19,slow=5.5,SNR=2.9						
	comp=Z,0.4nm,0.6s						
WRA	Warramunga Arr	76.51	205	P	P	14 48 39.0	-2.4
FITZ	Fitzroy Crossi	77.28	213	P	P	14 48 44.7	-1.0
ASAR	Alice Springs	80.19	204	P	P	14 49 00.2	-1.4
	comp=Z,0.7nm,0.7s,baz=18,slow=6.1,SNR=11						
	comp=Z,0.7nm,0.7s						
ASAR	Alice Springs	80.19	204	P	P	14 48 59.7	-1.9
ASAR	Alice Springs	80.19	204	P	P	14 48 59.7	-1.9

IDC ***22*** *14:41:55.2±0.8, 25°.58N×142°.79E, h0km, mb3.9/9, mbtmp3.9/9, Error ellipse: s-maj=38.0km s-min=19.9km az=88.0*

NEIC ***22*** *14:41:57.3±1.2, 25°.61N±0°.07×142°.8E±0°.2, h10km±1km, mb4.4/12, Error ellipse: s-maj=23.1km s-min=12.4km az=92.0*

ISC 22 14:42:00.9±0.7, **25°.67N**±0°.09×**142°.7E**±0°.1, **h38**km, **n34**, σ**1^{s}14**/31, **mb4.2**/15, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	1.50	341	Pn	Pn	14 42 16.8	-8.6
	99nm,0.3s,baz=104,slow=23,SNR=37						
JCJ				Sn	Sn	14 42 41.1	-2.6
	89nm,0.3s,baz=320,slow=23,SNR=7.8						
JCJ	Chichijima	1.50	341	Pn	Pn	14 42 27.0	+1.6
JMN	Monobe	11.12	318	Pn	Pn	14 44 37.0	-0.3
JSU	Suzuyama	12.25	301	Pn	Pn	14 44 52.1	-0.8
H11N2	WAKE ISLAND Hy	23.05	100	T	T	15 10 38.1	
	baz=291						
H11N1	WAKE ISLAND Hy	23.05	100	T	T	15 10 37.5	
	baz=291						
H11N3	WAKE ISLAND Hy	23.07	100	T	T	15 10 39.3	
	baz=291						
PATS	Pohnpei	23.92	139	P	P	14 47 11.8	+0.3
KIWB	Kanaga Island	40.01	38	P	P	14 49 30.4	-1.6
WB0	Warramunga Arr	45.88	191	P	P	14 50 19.0	-0.7
WB0				IAmb	IAmb	14 50 20.0	
	comp=Z,4.5nm,1.1s						
WR8	Warramunga Arr	46.05	191	P	P	14 50 20.3	-0.8
WR8				IAmb	IAmb	14 50 53.7	
	comp=Z,5.8nm,1.2s						
WRAB	Tennant Creek	46.05	191	P	P	14 50 20.2	-0.8
WRAB				IAmb	IAmb	14 50 47.7	
	comp=Z,5.8nm,1.3s						
WRA	Warramunga Arr	46.06	191	P	P	14 50 20.5	-0.7
	comp=Z,1.6nm,0.7s,baz=13,slow=8.6,SNR=10						
	comp=Z,1.6nm,0.7s						
WRA	Warramunga Arr	46.06	191	P	P	14 50 19.2	-2.0
FITZ	Fitzroy Crossi	46.57	203	P	P	14 50 24.8	-0.4
ASAR	Alice Springs	49.78	191	P	P	14 50 48.6	-1.3
	comp=Z,0.3nm,0.6s,baz=20,slow=12,SNR=10						
	comp=Z,0.3nm,0.6s						
ASAR	Alice Springs	49.78	191	P	P	14 50 48.0	-1.9
N15K	Kwethluk River	51.86	32	P	P	14 51 05.8	+0.6
KURK	Kurchatov	54.34	315	P	P	14 51 23.7	+0.2
KURK				IAmb	IAmb	14 51 25.2	
	comp=Z,1.8nm,0.8s						
KURBB	Kurchatov Arra	54.39	315	P	P	14 51 24.8	+0.8
	comp=Z,1.7nm,0.3s,baz=94,slow=8.2,SNR=8.2						
	comp=Z,1.7nm,0.3s						
TOLK	Toolik Lake Re	58.25	23	P	P	14 51 50.7	-0.5
TOLK				IAmb	IAmb	14 52 17.4	
	comp=Z,6.8nm,1.5s						
ILAR	Eielson Array	58.73	28	P	P	14 51 53.6	-1.0
	comp=Z,0.4nm,0.8s,baz=269,slow=7.5,SNR=4.4						
	comp=Z,0.4nm,0.8s						
BVAR	Borovoye Array	59.42	318	P	P	14 51 59.9	+0.3
	comp=Z,1.0nm,0.5s,baz=89,slow=7.8,SNR=9.0						
	comp=Z,1.0nm,0.5s						
AB31	Akbulak array	66.44	315	P	P	14 52 47.5	+1.2
ABKAR	Akbulak array	66.44	315	P	P	14 52 47.2	+1.0
YKA	Yellowknife Ar	73.17	28	P	P	14 53 28.5	+1.2
	comp=Z,0.4nm,0.8s,baz=294,slow=6.7,SNR=4.6						
	comp=Z,0.4nm,0.8s						
FIA1	FINESS Array S	79.44	334	P	P	14 54 04.2	+1.3
FINES	FINESS Array B	79.44	334	P	P	14 54 04.3	+1.3
	comp=Z,1.1nm,0.4s,baz=60,slow=4.9,SNR=20						
	comp=Z,1.1nm,0.4s						
FINES	FINESS Array B	79.44	334	P	P	14 54 04.1	+1.1
NC405	NORSAR Array S	84.89	338	P	P	14 54 32.4	+0.8
NC405				IAmb	IAmb	14 54 58.1	
	comp=Z,5.8nm,1.2s						
HFS	Hagfors	84.92	337	P	P	14 54 32.3	+0.6
	comp=Z,1.3nm,0.5s,baz=46,slow=5.1,SNR=6.3						
	comp=Z,1.3nm,0.5s						
NB2	NORSAR Subarra	85.11	339	P	P	14 54 33.3	+0.6
	comp=Z,0.6nm,0.7s,baz=44,slow=5.1						
NOA	NORSAR Array B	85.11	339	P	P	14 54 33.0	+0.3
	comp=Z,0.6nm,0.6s,baz=48,slow=4.7,SNR=4.3						
	comp=Z,0.6nm,0.6s						
PLCA	Paso Flores	148.58	127	PKPbc	PKPbc	15 01 44.3	+0.4
	comp=Z,1.5nm,1.0s,baz=97,slow=1.5,SNR=3.4						

IDC ***22*** *14:58:34.3±4.6, 36°.14N×70°.98E, h96km±39km, mb3.5/11, mbtmp3.8/16, Error ellipse: s-maj=29.3km s-min=18.4km az=25.0*

NNC ***22*** *14:58:40.7±6.7, 36°.96N×70°.65E, h0km, mb4.1, mpv3.9, Error ellipse: s-maj=53.2km s-min=40.4km az=166.0*

NEIC ***22*** *14:58:40.1±1.0, 36°.48N±0°.07×70°.96E±0°.05, h152km±5km, mb4.1/8, Error ellipse: s-maj=9.9km s-min=6.0km az=165.0*

ISC 22 14:58:39.6±0.6, **36°.46N**±0°.05×**71°.03E**±0°.06, **h150**km, **n63**, σ**2^{s}30**/75, **mb3.8**/12, **2C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANEM	Manem	1.20	26		Pn	14 59 07.2	+0.7
KBL	Kabul	2.50	221		Pn	14 59 20.7	-0.3
SHAA	Shahritus	2.57	296		Pn	14 59 21.0	-0.6
GAR	Garm	2.60	348		Pn	14 59 22.2	+0.2
CHGR	Chuyangaron	2.65	327		Pn	14 59 22.2	-0.4
NIL	Nilore	3.34	146		Pn	14 59 32.0	+0.7
SRNI	Srinagar	3.91	127	*e*P	Pn	14 59 38.4	-0.3
SRNI				*e*S	Sn	15 00 22.8	-1.7
SRNI				IAML		15 02 47.3	
	comp=N,1μm,0.4s						
SRNI				IAML		15 02 49.0	
	comp=E,2μm,0.3s						
JMU	Jammu	4.83	138	*e*P	Pn	14 59 51.0	-0.8
JMU				*e*S	Sn	15 00 43.4	-4.7
JMU				IAML		15 00 48.1	
	comp=N,328nm,0.5s						
JMU				IAML		15 00 48.3	
	comp=E,306nm,0.6s						
KSH	Kashi	4.96	50	Pn	Pn	14 59 48.9	-3.6
KSH				Sn	Sn	15 00 40.1	-9.3
KSH				smax	smax		
	comp=N,250nm,0.6s						
KSH				smax	smax		
	comp=E,170nm,0.5s						
ARSB	Arslanbob	5.09	17		Pn	14 59 54.3	0.0
ALCI	Alchi Leh	5.51	112	*e*P	Pn	14 59 59.0	-1.1
ALCI				*e*S	Sn	15 00 58.6	-4.2
ALCI				IAML		15 01 07.0	
	comp=E,164nm,0.1s						
ALCI				IAML		15 01 07.7	
	comp=N,158nm,0.4s						
TSSA	Tissa	5.56	129	*e*P	Pn	15 00 01.3	+0.8
TSSA				*e*S	Sn	15 01 00.0	-3.7
DHRM	DHARAMSHALA	6.05	132	*e*P	Pn	15 00 06.8	-0.3
DHRM				IAML		15 00 29.2	
	comp=E,76nm,0.5s						
DHRM				IAML		15 00 29.5	
	comp=N,93nm,0.7s						
DHRM				*e*S	Sn	15 01 11.4	-4.3
UCH	Uchtor	6.37	24	P	Pn	15 00 12.3	+0.8
	SNR=16						
EKS2	Erkin-Say	6.55	18	P	Pn	15 00 14.4	+0.7
	SNR=25						
KK31	Karatay Array	6.65	357		Pn	15 00 15.1	+0.2
KK31	Karatay Array	6.65	357	⇓P	Pn	15 00 15.1	+0.2
	comp=N,5.1nm,0.2s,baz=177,slow=12,SNR=312						
KK31				⇑S	Sn	15 01 26.4	-3.2
	comp=N,8.4nm,0.5s,baz=39,slow=60,SNR=4.4						
KKAR	Karatay Array	6.65	357		Pn	15 00 15.1	+0.2
AAK	Ala-Archa	6.73	22	P	Pn	15 00 17.8	+1.7
	SNR=8.9						
AAK	Ala-Archa	6.73	22	P	Pn	15 00 16.6	+0.6
	comp=N,8.7nm,0.4s,baz=187,slow=7.4,SNR=30						
AAK				S	Sn	15 01 30.7	-0.9
	comp=N,9.2nm,0.5s,baz=336,slow=22,SNR=12						
AAK	Ala-Archa	6.73	22	⇓P	Pn	15 00 16.7	+0.6
	comp=N,1.9nm,0.4s						
AAK				⇓S	Sn	15 01 29.4	-2.3
	comp=N,20nm,0.8s						
BHK	Bhakra	6.73	137	*e*P	Pn	15 00 19.1	+3.0
BHK				*e*S	Sn	15 01 33.0	+1.4
BHK				IAML		15 01 33.8	
	comp=N,62nm,0.5s						
BHK				IAML		15 01 37.2	
	comp=E,73nm,0.1s						
BOOM	Boomskoye usch	7.12	31	Pn	Pn	15 00 21.7	+0.3
CHMS	Chumysh	7.14	23	P	Pn	15 00 24.8	+3.4
	SNR=12						
USP	Ospenovka	7.31	20	P	Pn	15 00 24.3	+0.7
	SNR=6.5						
TKM2	Tokmak 2	7.35	27	P	Pn	15 00 27.7	+3.2
	SNR=5.4						
SMLA	Simla	7.37	134	*e*P	Pn	15 00 24.0	-0.6
SMLA				*e*S	Sn	15 01 41.3	-5.7
SMLA				IAML		15 01 46.1	
	comp=E,143nm,0.4s						
SMLA				IAML		15 01 50.9	
	comp=N,155nm,0.9s						
KLP	Kalpa	7.75	127	*e*P	Pn	15 00 28.8	-1.1
KLP				*e*S	Sn	15 01 50.3	-6.3
KLP				IAML		15 01 57.1	
	comp=E,166nm,1.3s						
KLP				IAML		15 01 57.8	
	comp=N,168nm,1.0s						
WUS	Wushi	7.96	51		Pn	15 00 32.0	-0.4
MKAR	Makanchi Array	13.31	36	P	Pn	15 01 43.6	+1.0
	comp=N,0.5nm,0.7s,baz=228,slow=16,SNR=6.9						
MKAR	Makanchi Array	13.31	36	Pn	Pn	15 01 43.1	+0.5
WMQ	Urumqi	14.71	55	*e*P	Pn	15 01 59.6	-0.6
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
AB31	Akbulak array	15.13	331	Pn	Pn	15 02 04.5	-0.9
AB31				IAmb	IAmb	15 02 07.2	
	comp=Z,3.4nm,0.9s						
AB31	Akbulak array	15.13	331	P	Pn	15 02 05.6	+0.2
	comp=Z,0.8nm,0.3s,baz=166,slow=11,SNR=92						
AB31				S	Sn	15 04 49.2	-4.3
	comp=Z,4.3nm,0.7s,baz=153,slow=23,SNR=9.8						
ABKAR	Akbulak array	15.13	331	P	P	15 02 06.3	-0.7
KURBB	Kurchatov Arra	15.16	19	P	P	15 02 08.3	+1.1
	comp=Z,0.7nm,0.3s,baz=206,slow=11,SNR=4.9						
KURK	Kurchatov	15.27	19		Pn	15 02 07.2	+0.2
BVAR	Borovoye Array	16.57	359	P	Pn	15 02 24.6	+1.5
	comp=Z,0.9nm,0.4s,baz=169,slow=10,SNR=8.0						
AKTO	Aktyubinsk	16.83	330	P	Pn	15 02 26.2	+0.1
	comp=Z,2.3nm,0.6s,baz=148,slow=4.7,SNR=8.4						
AKTO				S	S	15 05 25.2	-7.9
	comp=Z,1.7nm,0.5s,baz=136,slow=22,SNR=5.8						
AKTO	Aktyubinsk	16.83	330	⇓P	Pn	15 02 27.3	+1.1
	comp=Z,1.2nm,0.5s						
AKTO				⇑S	S	15 05 29.8	-3.3
	comp=Z,2.0nm,0.6s						
ZAA0	Zalesovo Array	19.95	24	P	P	15 02 60.0	+0.3
ZAA0				IAmb	IAmb	15 03 03.9	
	comp=Z,4.2nm,0.5s						
ZALV	Zalesovo Beam	19.95	24	P	Pn	15 03 01.9	-1.0
	comp=Z,4.2nm,0.5s,baz=222,slow=11,SNR=23						
	comp=Z,4.2nm,0.5s						
ZALV	Zalesovo Beam	19.95	24	P	P	15 03 00.1	+0.5
PZH	PanZhiHua	27.91	102	P	P	15 04 16.4	+0.7
BRTR	Keskin Array B	29.47	288	P	P	15 04 30.1	+0.7
	comp=Z,0.2nm,0.4s,baz=101,slow=7.5,SNR=2.2						
	comp=Z,0.2nm,0.4s						
CSS	Mathiatis	30.52	279	P	P	15 04 37.0	-1.6
CSS				IAmb	IAmb	15 04 37.4	
	comp=Z,7.6nm,1.4s						
HHC	Hu-ho-hao-te	31.76	70	*e*P	P	15 04 53.9	+4.4
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,180nm,6.6s						
FINES	FINESS Array B	37.53	326	P	P	15 05 41.0	+2.4
	comp=Z,4.7nm,1.1s,baz=122,slow=9.7,SNR=12						
	comp=Z,4.7nm,1.1s						
ARCES	ARCESS Array B	41.19	338	P	P	15 06 11.7	+2.7
	comp=Z,0.5nm,0.5s,baz=106,slow=8.1,SNR=6.8						
	comp=Z,0.5nm,0.5s						
HFS	Hagfors	43.11	322	P	P	15 06 26.6	+2.0
	comp=Z,2.7nm,0.5s,baz=98,slow=11,SNR=17						
	comp=Z,2.7nm,0.5s						
NB2	NORSAR Subarra	44.43	323	P	P	15 06 36.6	+1.5
	comp=Z,1.1nm,0.5s,baz=95,slow=7.9						
NOA	NORSAR Array B	44.43	323	P	P	15 06 36.9	+1.8
	comp=Z,2.0nm,0.7s,baz=96,slow=7.8,SNR=12						
	comp=Z,2.0nm,0.7s						
NBO00	NORSAR Array S	44.64	323	P	P	15 06 35.5	-1.2
SPITS	Spitsbergen Ar	47.54	347	P	P	15 07 02.0	+2.8
	comp=Z,1.7nm,0.6s,baz=135,slow=14,SNR=1.5						
	comp=Z,1.7nm,0.6s						
TORD	Torodi Ar. Bea	65.74	269	P	P	15 09 07.9	-0.6
	comp=Z,0.5nm,0.5s,baz=49,slow=7.2,SNR=6.8						
	comp=Z,0.5nm,0.5s						
TORD	Torodi Ar. Bea	65.74	269	IAmb	IAmb	15 09 51.0	
	comp=Z,1.7nm,0.5s						
PMR	Palmer	77.00	18	P	P	15 10 15.5	+0.2
YKA	Yellowknife Ar	81.29	3	P	P	15 10 41.1	+2.5
	comp=Z,0.3nm,0.8s,baz=349,slow=5.6,SNR=4.6						
	comp=Z,0.3nm,0.8s						
YKA	Yellowknife Ar	81.29	3	P	P	15 10 38.4	-0.2
WRA	Warramunga Arr	81.95	122	P	P	15 10 42.7	0.0
	comp=Z,0.2nm,0.4s,baz=324,slow=4.9,SNR=5.5						
	comp=Z,0.2nm,0.4s						
WRA	Warramunga Arr	81.95	122	IAmb	IAmb	15 10 51.9	
	comp=Z,0.2nm,1.2s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**84.21**	**125**	P	**P**	**15 10 54.6**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=304,slow=4.6,SNR=7.8						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**84.21**	**125**	P	**P**	**15 10 54.3**	**0.0**

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*IDC **22** 14:59:22.5±1.6, 20°.58N×93°.89E, h0km, mb3.4/4, mbtmp3.5/5, ML4.3/1, MS4.2/1, Error ellipse: s-maj=123.1km s-min=19.4km az=52.0*

*NDI **22** 14:59:29.9±0.7, 23°.64N×94°.11E, h10km, ML3.8, MW3.5, mb3.8(NEIC)*

*NEIC **22** 14:59:31.8±2.1, 23°.66N±0°.04×94°.06E±0°.04, h10km±2km, mb3.8/1, Error ellipse: s-maj=8.0km s-min=5.1km az=312.0*

ISC 22 14:59:32.9±1.5**, 23°.71N**±0°.06×**94°.05E**±0°.07**, h28**km±15km**, n16, σ0ˢ.86**/17**, mb3.5**/4**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORE	**Moreh**	**0.57**	**23**		**Pb**	**14 59 44.4**	**-0.1**
IMP	**Imphal**	**1.12**	**355**	*e*P	**Pn**	**14 59 52.7**	**-0.2**
IMP				*e*S	**Sn**	**15 00 09.5**	**+2.0**
IMP				IAML		15 00 11.7	
	comp=N,872nm,0.2s						
IMP				IAML		15 00 12.0	
	comp=E,843nm,0.2s						
KOHI	**KOHIMA**	**2.00**	**1**	*e*P	**Pn**	**15 00 05.4**	**+0.3**
KOHI				*e*S	**Sn**	**15 00 30.1**	**+0.7**
KOHI				IAML		15 00 30.2	
	comp=N,513nm,0.3s						
KOHI				IAML		15 00 31.5	
	comp=E,577nm,0.5s						
BRDH	**Bariadhala**	**2.44**	**246**	Pn	**Pn**	**15 00 11.7**	**+0.7**
	comp=E,39nm,0.3s,baz=259,slow=17,SNR=1.0						
BRDH				Sn	**Sb**	**15 00 46.0**	**+0.2**
	comp=E,73nm,0.3s,baz=74,slow=22,SNR=1.9						
	comp=E,131nm,0.3s						
BRDH	**Bariadhala**	**2.44**	**246**		**Pn**	**15 00 11.7**	**+0.7**
BRDH					**Sb**	**15 00 46.0**	**+0.2**
MOKO	**MOKOCHONG**	**2.63**	**9**	*e*P	**Pn**	**15 00 13.7**	**-0.1**
MOKO				*e*S	**Sn**	**15 00 45.6**	**+0.7**
MOKO				IAML		15 00 46.3	
	comp=N,671nm,0.2s						
MOKO				IAML		15 00 46.4	
	comp=E,659nm,0.2s						
SHL	**Shillong**	**2.71**	**314**	Pn	**Pn**	**15 00 15.0**	**+0.2**
SHL	**Shillong**	**2.71**	**314**	*e*P	**Pn**	**15 00 13.9**	**-0.9**
SHL				*e*S	**Sn**	**15 00 46.1**	**-0.6**
SHL				IAML		15 00 50.7	
	comp=N,657nm,0.1s						
SHL				IAML		15 00 51.8	
	comp=E,608nm,0.2s						
DHUB	**DHUBRI**	**4.34**	**303**	*e*S	**Sn**	**15 01 25.9**	**-0.9**
DHUB				IAML		15 01 33.1	
	comp=N,634nm,0.3s						
DHUB				IAML		15 01 33.5	
	comp=E,609nm,0.2s						
CMAR	**Chiang Mai Arr**	**6.94**	**138**	Pn	**Pn**	**15 01 12.4**	**-0.5**
KULM	**Kulim**	**19.38**	**160**	P	**P**	**15 03 55.9**	**-0.9**
KULM				IAmb	IAmb	15 04 07.5	
	comp=Z,7.1nm,1.1s						
MKAR	**Makanchi Array**	**24.90**	**341**	P	P	15 05 14.5	+21
	comp=Z,0.1nm,0.4s,baz=152,slow=8.2,SNR=1.5						
	comp=Z,0.1nm,0.4s						
BVAR	**Borovoye Array**	**34.34**	**335**	P	P	15 06 33.4	+16
	comp=Z,0.2nm,0.4s,baz=144,slow=10,SNR=2.0						
	comp=Z,0.2nm,0.4s						
JHJ	**Hachijo jima 2**	**41.03**	**66**	LR	LR	15 25 11.3	
	comp=Z,336nm,21.5s,baz=82,slow=36						
WRA	**Warramunga Arr**	**58.52**	**134**	P	P	15 09 05.9	-21
	comp=Z,0.3nm,0.7s,baz=320,slow=6.6,SNR=2.0						
	comp=Z,0.3nm,0.7s						
ASAR	**Alice Springs**	**60.95**	**138**	P	P	15 09 22.9	-21
	comp=Z,0.3nm,0.5s,baz=319,slow=6.7,SNR=16						
	comp=Z,0.3nm,0.5s						

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*IDC **22** 15:15:34.0±1.9, 7°.43S×128°.21E, h0km, mb3.8/1, mbtmp3.5/5, ML3.3/4, Error ellipse: s-maj=50.9km s-min=22.5km az=71.0*

*NEIC **22** 15:15:42.5±1.0, 7°.81S±0°.07×127°.82E±0°.06, h64km±5km, mb4.4/15, Error ellipse: s-maj=12.5km s-min=4.8km az=220.0*

ISC 22 15:15:44.7±0.6**, 7°.88S**±0°.07×**127°.84E**±0°.07**, h100**km**, n27, σ1ˢ.35**/30**, mb4.5**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**4.00**	**242**	Pn	**Pn**	**15 16 41.6**	**-2.4**
BATI	**Baumata**	**4.73**	**240**	Pn	**Pn**	**15 16 53.3**	**-0.6**
	3.6nm,0.3s,baz=114,slow=1.8,SNR=5.2						
BATI				Sn	**Sn**	**15 17 49.5**	**+1.9**
	1.0nm,0.3s,baz=120,slow=16,SNR=1.6						
	11nm,0.5s						
MTN	**Manton Dam**	**5.90**	**147**	Pn	**Pn**	**15 17 08.2**	**-1.5**
KNRA	**Kununurra**	**7.80**	**173**	Pn	**Pn**	**15 17 33.9**	**-1.7**
FITZ	**Fitzroy Crossi**	**10.38**	**192**	Pn	**Pn**	**15 18 11.4**	**+0.7**
	0.1nm,0.3s,baz=16,slow=8.0,SNR=1.9						
FITZ				Sn	**Sn**	**15 20 04.4**	**-0.7**
	baz=331,slow=19,SNR=1.7						
	1.3nm,0.8s						
FITZ	**Fitzroy Crossi**	**10.38**	**192**		**Pn**	**15 18 08.8**	**-1.9**
WB0	**Warramunga Arr**	**13.42**	**152**	Pn	**Pn**	**15 18 50.1**	**-1.1**
WRA	**Warramunga Arr**	**13.54**	**153**	Pn	**Pn**	**15 18 50.4**	**-2.4**
	0.2nm,0.3s,baz=328,slow=14,SNR=14						
WRA				Sn	**Sn**	**15 21 22.9**	**+0.9**
	0.1nm,0.3s,baz=148,slow=5.6,SNR=1.8						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	**13.54**	**153**		**Pn**	**15 18 50.8**	**-2.1**
WR8	**Warramunga Arr**	**13.63**	**152**	Pn	**Pn**	**15 18 53.2**	**-0.8**
COEN	**Coen**	**16.22**	**113**	Pn	**P**	**15 19 26.5**	**-1.6**
COEN				IAmb	IAmb	15 19 55.8	
	comp=Z,16nm,1.4s						
AS31	**Alice Springs**	**16.74**	**160**		**P**	**15 19 34.5**	**+0.7**
ASAR	**Alice Springs**	**16.74**	**160**	P	**P**	**15 19 35.1**	**+1.2**
	baz=334,slow=9.8,SNR=8.6						
ASAR				S	**S**	**15 22 45.5**	**+1.9**
	comp=Z,0.3nm,0.9s,baz=358,slow=24,SNR=2.3						
	comp=Z,0.6nm,1.0s						
MANU	**Manus Island**	**20.29**	**74**	P	Pn	15 20 13.1	-2.5
MANU				IAmb	IAmb	15 20 18.2	
	comp=Z,27nm,1.4s						
FORT	**Forrest**	**22.79**	**180**	P	**P**	**15 20 39.9**	**+1.0**
FORT				IAmb	IAmb	15 20 53.4	
	comp=Z,8.8nm,1.0s						
INKA	**Innaminka**	**23.23**	**150**	P	**P**	**15 20 42.9**	**-0.3**
MORW	**Morawa**	**23.83**	**206**	P	**P**	**15 20 48.6**	**-0.1**
MORW				IAmb	IAmb	15 21 00.7	
	comp=Z,27nm,1.4s						
RABL	**Rabaul**	**24.46**	**83**	P	**P**	**15 20 54.9**	**+0.3**
RABL				IAmb	IAmb	15 21 35.4	
	comp=Z,27nm,1.2s						
GSI	**Gunungsitoli**	**31.53**	**286**	P	**P**	**15 21 57.6**	**-0.2**
GSI				IAmb	IAmb	15 22 19.2	
	comp=Z,12nm,1.0s						
LHI	**Lord Howe Isla**	**37.40**	**133**	P	**P**	**15 22 47.5**	**-0.6**
SANVU	**Saraoutou**	**39.22**	**105**	P	**P**	**15 23 04.1**	**+0.5**
JYT	**Yasato**	**45.38**	**14**	P	**P**	**15 23 53.9**	**+0.6**
FUNA	**Funafuti**	**50.80**	**95**	P	**P**	**15 24 36.5**	**+1.1**
LBZ	**Lake Benmore**	**51.69**	**142**	P	**P**	**15 24 42.9**	**+1.3**
MKAR	**Makanchi Array**	**67.81**	**328**	P	**P**	**15 26 32.9**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=116,slow=8.2,SNR=5.5						
	comp=Z,0.6nm,0.7s						
KBL	**Kabul**	**69.71**	**311**	P	**P**	**15 26 43.0**	**-1.4**
MSEY	**Mahe Island**	**71.93**	**268**	P	**P**	**15 26 57.1**	**-0.9**

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*IDC **22** 15:20:50.7±1.3, 44°.60S×15°.13W, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=132.3km s-min=30.1km az=94.0*

*NEIC **22** 15:20:52.6±1.7, 44°.7S±0°.1×15°.1W±0°.2, h10km±1km, mb4.4/8, Error ellipse: s-maj=27.3km s-min=5.1km az=132.0*

ISC 22 15:20:51.9±0.6**, 44°.6S**±0°.1×**15°.1W**±0°.1**, h10**km**, n27, σ1ˢ.15**/20**, mb4.3**/3**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**16.89**	**228**	Sn	**Sn**	**15 27 55.1**	**-0.7**
SUR	**Sutherland**	**30.37**	**79**	P	**P**	**15 27 02.3**	**-1.9**
BELA	**Belgrano 2**	**34.26**	**187**	P	**P**	**15 27 37.5**	**0.0**
H10S2	**ASCENSION HYDR**	**35.54**	**1**	T	T	16 05 34.4	
	baz=180,slow=74,SNR=6.4						
H10S3	**ASCENSION HYDR**	**35.55**	**1**	T	T	16 05 34.7	
	baz=40,slow=74,SNR=6.9						
LKGWB	**Lokgwabe**	**35.86**	**67**	P	**P**	**15 27 55.3**	**+3.3**
KGCAE	**Kacgae**	**37.38**	**67**	P	**P**	**15 28 06.1**	**+1.1**
LL02	**Futaleuf**	**40.23**	**251**	P	**P**	**15 28 29.9**	**+1.3**
LL02				IAmb	IAmb	15 28 40.8	
	comp=Z,9.7nm,1.2s						
H04S2	**CROZET ISLANDS**	**45.48**	**118**	T	T	16 18 28.6	
	baz=248,slow=76,SNR=5.5						
H04S3	**CROZET ISLANDS**	**45.48**	**118**	T	T	16 18 32.9	
	baz=248,slow=76,SNR=4.0						
H04S1	**CROZET ISLANDS**	**45.50**	**118**	T	T	16 18 35.6	
	baz=248,slow=76,SNR=3.7						
QSPA	**South Pole Qui**	**45.63**	**180**	P	**P**	**15 29 12.7**	**+0.5**
	comp=Z,2.8nm,0.9s,baz=218,slow=7.0,SNR=4.1						
	comp=Z,2.8nm,0.9s						
QSPA	**South Pole Qui**	**45.63**	**180**	IAmb	IAmb	15 29 13.7	
	comp=Z,12nm,1.5s						
LCO	**Las Campanas**	**46.32**	**270**	P	**P**	**15 29 16.8**	**-1.5**
VNDA	**Vanda**	**58.11**	**179**	P	**P**	**15 30 45.5**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=185,slow=7.4,SNR=3.6						
	comp=Z,1.4nm,0.8s						
VNDA	**Vanda**	**58.11**	**179**	IAmb	IAmb	15 31 05.2	
	comp=Z,6.7nm,1.4s						
TORD	**Torodi Ar. Bea**	**59.48**	**19**	P	**P**	**15 30 55.4**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=190,slow=6.4,SNR=2.4						
	comp=Z,0.5nm,0.8s						
SMRC	**Santa Marta, M**	**77.04**	**300**	P	**P**	**15 32 44.9**	**-0.4**
C27K	**Jago River**	**144.29**	**332**		**PKPdf**	**15 40 26.0**	**-0.8**
I26K	**Coal Creek Min**	**145.13**	**325**		**PKPbc**	**15 40 27.4**	**-0.5**
BMAR	**Burnt Mountain**	**145.22**	**329**		**PKPdf**	**15 40 28.8**	**+0.3**
J26L	**Joseph Creek**	**145.45**	**323**		**PKPab**	**15 40 29.6**	**+0.3**
F25K	**Christian Rive**	**145.56**	**329**		**PKPab**	**15 40 30.1**	**+0.5**
TOLK	**Toolik Lake Re**	**146.60**	**332**	PKPdf	**PKPbc**	**15 40 32.2**	**-0.2**
ILAR	**Eielson Array**	**146.79**	**324**	PKPbc	**PKPbc**	**15 40 32.5**	**-0.5**
	comp=Z,1.5nm,0.9s,baz=64,slow=2.1,SNR=9.1						
ILAR	**Eielson Array**	**146.79**	**324**	PKPdf	**PKPdf**	**15 40 31.7**	**+0.5**
G23K	**Bananza Creek**	**147.47**	**328**		**PKPbc**	**15 40 35.4**	**+0.5**

IDC 22 15:25:02.4±3.6**, 9°.98S**×**161°.57E, h0**km**, mb3.5**/5**, mbtmp3.5**/5**, Error ellipse: s-maj=146.0km s-min=32.6km az=135.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**28.07**	**246**	P	P	15 30 56.0	+0.1
	0.2nm,0.6s,baz=76,slow=8.8,SNR=1.3						
	0.2nm,0.6s						
H11S2	**WAKE ISLAND Hy**	**28.74**	**10**	T	T	16 02 01.6	
	baz=188,slow=76,SNR=24						
H11S3	**WAKE ISLAND Hy**	**28.74**	**10**	T	T	16 02 02.2	
	baz=188,slow=76,SNR=28						
H11S1	**WAKE ISLAND Hy**	**28.75**	**10**	T	T	16 02 02.9	
	baz=188,slow=76,SNR=20						
ASAR	**Alice Springs**	**29.70**	**239**	P	P	15 31 09.8	-0.6
	0.2nm,0.7s,baz=64,slow=10,SNR=5.2						
	0.2nm,0.7s						
H11N1	**WAKE ISLAND Hy**	**29.96**	**10**	T	T	16 03 33.8	
	baz=188,slow=76,SNR=5.6						
H11N3	**WAKE ISLAND Hy**	**29.97**	**10**	T	T	16 03 25.3	
	baz=188,slow=76,SNR=5.8						
H11N2	**WAKE ISLAND Hy**	**29.98**	**10**	T	T	16 03 31.5	
	baz=188,slow=76,SNR=5.5						
FITZ	**Fitzroy Crossi**	**35.73**	**253**	P	P	15 32 04.1	+1.0
	2.1nm,1.1s,baz=84,slow=9.2,SNR=2.2						
	2.1nm,1.1s						
ILAR	**Eielson Array**	**83.86**	**20**	P	P	15 37 34.3	+0.7
	0.5nm,1.0s,baz=238,slow=5.1,SNR=2.2						
	0.5nm,1.0s						
MKAR	**Makanchi Array**	**89.95**	**318**	P	P	15 38 02.4	-1.3
	0.4nm,0.7s,baz=102,slow=6.1,SNR=2.9						
	0.4nm,0.7s						

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*NEIC **22** 15:27:20.8±1.8, 24°.4S±0°.1×179°.9W±0°.1, h508km±6km, mb4.2/21, Error ellipse: s-maj=17.9km s-min=15.7km az=110.0*

*IDC **22** 15:27:23.9±3.2, 24°.40S×179°.85E, h531km±35km, mb3.3/11, mbtmp4.2/11, Error ellipse: s-maj=20.0km s-min=17.2km az=19.0*

ISC 22 15:27:20.4±0.5**, 24°.41S**±0°.07×**179°.94W**±0°.09**, h505**km**, n43, σ1ˢ.05**/44**, mb4.1**/19**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.15**	**160**	P	**P**	**15 28 50.0**	**+1.1**
MSVF	**Nonsavu**	**6.90**	**344**	P	**P**	**15 29 07.3**	**+1.3**
AFI	**Afiamalu**	**12.97**	**38**	P	**P**	**15 30 07.2**	**-2.3**
URZ	**Urewera**	**14.04**	**190**	P	**P**	**15 30 19.2**	**-1.0**
	7.5nm,0.5s,baz=33,slow=2.5,SNR=8.0						
URZ				S	**S**	**15 32 47.0**	**-1.5**
	5.2nm,0.7s,baz=15,slow=22,SNR=7.7						
RTZ	**Ruatahuna**	**14.40**	**190**	P	**P**	**15 30 24.7**	**+0.6**
FUNA	**Funafuti**	**15.82**	**357**	P	**P**	**15 30 38.3**	**-0.8**
MRZ	**Mangatainoka R**	**16.64**	**192**	P	**P**	**15 30 44.9**	**-2.4**
THZ	**Tophouse**	**18.30**	**197**	P	**P**	**15 31 01.7**	**-1.5**
EIDS	**Eidsvold**	**26.29**	**262**	P	**P**	**15 32 15.3**	**+0.3**
EIDS				IAmb	IAmb	15 32 16.5	
	comp=Z,8.8nm,1.2s						
PPTF	**Pamatai, Papee**	**29.11**	**82**	P	**P**	**15 32 39.2**	**-0.8**
CTA	**Charters Tower**	**31.54**	**271**	P	**P**	**15 33 01.7**	**+0.8**
	comp=Z,7.9nm,0.4s,baz=90,slow=10,SNR=24						
	comp=Z,7.9nm,0.4s						
CTAO	**Charters Tower**	**31.54**	**271**	P	**P**	**15 33 01.7**	**+0.8**
STKA	**Stephens Creek**	**34.59**	**249**	P	**P**	**15 33 26.8**	**+0.2**
	comp=Z,1.3nm,0.4s,baz=93,slow=9.3,SNR=8.2						
	comp=Z,1.3nm,0.4s						
STKA	**Stephens Creek**	**34.59**	**249**	P	**P**	**15 33 26.9**	**+0.3**
COEN	**Coen**	**36.25**	**280**	P	**P**	**15 33 41.4**	**+0.7**
COEN				IAmb	IAmb	15 33 59.2	
	comp=Z,15nm,1.2s						
BBOO	**Buckleboo**	**39.30**	**247**	P	**P**	**15 34 04.6**	**-0.8**
BBOO				IAmb	IAmb	15 34 34.2	
	comp=Z,19nm,1.4s						
AS31	**Alice Springs**	**42.01**	**261**		**P**	**15 34 26.9**	**-0.3**
ASAR	**Alice Springs**	**42.01**	**261**	P	**P**	**15 34 27.0**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=91,slow=6.5,SNR=65						
ASAR				S	**S**	**15 40 07.5**	**-1.9**
	comp=Z,0.1nm,0.6s,baz=99,slow=16,SNR=1.6						
	comp=Z,0.7nm,0.4s						
ASAR	**Alice Springs**	**42.01**	**261**	P	**P**	**15 34 26.8**	**-0.4**
WR8	**Warramunga Arr**	**42.28**	**267**	P	**P**	**15 34 28.8**	**-0.6**
WR8				IAmb	IAmb	15 34 43.1	
	comp=Z,9.6nm,1.5s						
WB0	**Warramunga Arr**	**42.43**	**267**	P	**P**	**15 34 29.9**	**-0.6**
WB0				IAmb	IAmb	15 34 30.6	
	comp=Z,4.4nm,0.7s						
WRA	**Warramunga Arr**	**42.43**	**267**	P	**P**	**15 34 30.1**	**-0.5**
	comp=Z,2.9nm,0.5s,baz=99,slow=6.8,SNR=64						
	comp=Z,2.9nm,0.5s						
WRA	**Warramunga Arr**	**42.43**	**267**	P	**P**	**15 34 29.6**	**-0.9**
FORT	**Forrest**	**46.19**	**250**	P	**P**	**15 34 58.5**	**-0.9**
FORT				IAmb	IAmb	15 35 41.4	
	comp=Z,8.9nm,1.0s						
KNRA	**Kununurra**	**48.74**	**270**	P	**P**	**15 35 18.8**	**0.0**
KNRA				IAmb	IAmb	15 35 28.8	
	comp=Z,19nm,1.5s						
FITZ	**Fitzroy Crossi**	**50.85**	**266**	P	**P**	**15 35 34.3**	**0.0**
	comp=Z,2.4nm,0.6s,baz=112,slow=6.4,SNR=9.8						
	comp=Z,2.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**50.85**	**266**	P	**P**	**15 35 34.4**	**+0.1**
MORW	**Morawa**	**56.76**	**250**	P	**P**	**15 36 15.8**	**-0.3**
MORW				IAmb	IAmb	15 36 47.2	
	comp=Z,30nm,1.4s						
QSPA	**South Pole Qui**	**65.68**	**180**	P	**P**	**15 37 15.8**	**+1.7**
	comp=Z,1.6nm,0.6s,baz=338,slow=0.4,SNR=16						
	comp=Z,1.6nm,0.6s						
QSPA	**South Pole Qui**	**65.68**	**180**	P	**P**	**15 37 15.6**	**+1.5**
QSPA				IAmb	IAmb	15 37 46.5	
	comp=Z,7.3nm,1.5s						
MJAR	**Matsushiro Arr**	**72.35**	**326**	P	**P**	**15 37 55.4**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=128,slow=3.2,SNR=4.4						
	comp=Z,1.2nm,0.8s						
MJAR	**Matsushiro Arr**	**72.35**	**326**	P	**P**	**15 37 54.8**	**+0.2**
MJAR				IAmb	IAmb	15 38 19.1	
	comp=Z,3.1nm,1.3s						
PETK	**Petropavlovsk-**	**79.61**	**347**	P	**P**	**15 38 35.1**	**+0.7**
	comp=Z,4.9nm,1.0s,baz=166,slow=5.6,SNR=4.4						
	comp=Z,4.9nm,1.0s						
SNAA	**Sanae**	**84.16**	**179**	P	**P**	**15 38 57.7**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=170,slow=7.8,SNR=2.4						
	comp=Z,0.5nm,0.6s						
SNAA	**Sanae**	**84.16**	**179**	IAmb	IAmb	15 39 07.3	
	comp=Z,3.1nm,1.4s						
PAHR	**Pah Rah Range**	**85.17**	**42**	P	**P**	**15 39 02.6**	**-0.5**
CMAR	**Chiang Mai Arr**	**89.75**	**290**	P	**P**	**15 39 25.4**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=133,slow=3.3,SNR=5.2						
	comp=Z,0.6nm,0.8s						
TXAR	**Lajitas Array**	**90.65**	**58**	P	**P**	**15 39 31.0**	**+2.0**
	comp=Z,0.3nm,0.8s,baz=252,slow=4.5,SNR=3.0						
	comp=Z,0.3nm,0.8s						
HFS	**Hagfors**	**143.05**	**349**	PKP	**PKPdf**	**15 45 54.6**	**-1.3**
	comp=Z,1.9nm,0.4s,baz=79,slow=3.2,SNR=26						
AKASG	**Malin Array Be**	**145.43**	**327**	PKPbc	**PKPbc**	**15 46 00.9**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=46,slow=4.4,SNR=2.1						
BRTR	**Keskin Array B**	**147.93**	**307**	PKPbc	**PKiKP**	**15 46 09.2**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=133,slow=5.4,SNR=4.2						
BRTR	**Keskin Array B**	**147.93**	**307**		**PKPbc**	**15 46 08.5**	**-0.3**
TORD	**Torodi Ar. Bea**	**168.69**	**188**	PKPab	**PKPab**	**15 47 44.3**	**+1.1**
	comp=Z,0.3nm,0.8s,baz=199,slow=2.0,SNR=1.8						

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*KRNET **22** 15:28:45.1±0.1, 43°.90N×75°.78E, h23km, mb2.6*

*SOME **22** 15:28:45.2, 43°.90N×75°.72E, h20km*

ISC 22 15:28:43.6±1.1**, 43°.99N**±0°.03×**75°.79E**±0°.02**, h10**km±8km**, n23, σ0ˢ.82**/46**, 16C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBS	**Karabastau**	**0.30**	**195**	*e*P	**Pg**	**15 28 50.6**	**+0.8**
KRBS				*e*S	**Sg**	**15 28 54.2**	**+0.4**
KRBS	**Karabastau**	**0.30**	**195**	*e*P	**Pg**	**15 28 50.6**	**+0.8**
	2.6nm,0.0s						
KRBS				*e*S	**Sg**	**15 28 54.2**	**+0.4**
	64nm,0.1s						
KUU	**Kurty**	**0.41**	**103**	*e*P	**Pb**	**15 28 52.4**	**-0.6**
	4.2nm,0.1s						
KUU				*e*S	**Sg**	**15 28 57.3**	**+0.1**
	57nm,0.1s						
DGS	**Degeres**	**0.74**	**181**	*e*P	**Pg**	**15 28 57.8**	**-0.2**
DGS				*e*S	**Sg**	**15 29 06.8**	**-1.0**
DGS	**Degeres**	**0.74**	**181**	*e*P	**Pg**	**15 28 57.8**	**-0.2**
	0.7nm,0.1s						
DGS				*e*S	**Sg**	**15 29 06.8**	**-1.0**
	17nm,0.2s						
CHKK	**Chushkaly**	**0.88**	**98**	*e*P	**Pb**	**15 29 00.9**	**-0.1**
	0.3nm,0.1s						
CHKK				*e*S	**Sb**	**15 29 11.8**	**-0.9**
	14nm,0.3s						
TKM2	**Tokmak 2**	**1.07**	**187**	⇑*e*P	**Pb**	**15 29 03.6**	**-0.8**
TKM2				⇑*e*S	**Sg**	**15 29 17.1**	**-1.2**
USP	**Ospenovka**	**1.18**	**233**	⇑*e*P	**Pn**	**15 29 05.7**	**-0.5**
USP				⇑*e*S	**Sb**	**15 29 20.8**	**-0.6**
KOTS	**Kotyrbulak**	**1.22**	**128**	*e*P	**Pg**	**15 29 07.3**	**+0.2**
KOTS				*e*S	**Sg**	**15 29 22.8**	**-0.2**
KOTS	**Kotyrbulak**	**1.22**	**128**	*e*P	**Pg**	**15 29 07.3**	**+0.2**
	1.7nm,0.1s						
KOTS				*e*S	**Sg**	**15 29 22.8**	**-0.2**
	14nm,0.3s						
MDOK	**Medeo**	**1.23**	**131**	*e*P	**Pb**	**15 29 06.8**	**-0.3**
MDOK				*e*S	**Sb**	**15 29 22.0**	**-1.1**
CHMS	**Chumysh**	**1.24**	**218**	⇓*e*P	**Pn**	**15 29 06.6**	**-0.4**
CHMS				⇓*e*S	**Sb**	**15 29 22.4**	**-0.8**
FRU1	**Bishkek**	**1.45**	**216**	⇓*e*P	**Pn**	**15 29 10.3**	**+0.4**
FRU1				⇓*e*S	**Sn**	**15 29 29.3**	**+0.4**
KBK	**Karagaybulak**	**1.46**	**205**	⇓*e*P	**Pn**	**15 29 10.6**	**+0.4**
KBK				⇓*e*S	**Sn**	**15 29 29.0**	**-0.5**
BOOM	**Boomskoye usch**	**1.50**	**176**	⇑*e*P	**Pn**	**15 29 11.2**	**+0.5**
BOOM				⇑*e*S	**Sn**	**15 29 30.2**	**-0.2**
BTLS	**Baital**	**1.63**	**311**	*e*P	**Pg**	**15 29 14.4**	**-0.5**
	2.9nm,0.4s						
BTLS				*e*S	**Sg**	**15 29 35.3**	**-0.7**
	1.4nm,0.4s						
AAK	**Ala-Archa**	**1.65**	**215**	⇑*e*P	**Pb**	**15 29 13.7**	**-0.4**
AAK				⇑*e*S	**Sn**	**15 29 34.7**	**+0.7**
ULHL	**Ulahol**	**1.77**	**169**	⇑*e*P	**Pb**	**15 29 15.9**	**-0.4**
ULHL				⇑*e*S	**Sb**	**15 29 38.6**	**0.0**
KURS	**Kuram**	**1.80**	**105**	*e*P	**Pg**	**15 29 17.6**	**-0.5**
KURS				*e*S	**Sg**	**15 29 40.5**	**-1.0**
EKS2	**Erkin-Say**	**1.98**	**229**	⇑*e*P	**Pb**	**15 29 19.0**	**-0.7**
EKS2				⇑*e*S	**Sn**	**15 29 43.7**	**+1.6**
UCH	**Uchtor**	**1.99**	**208**	⇑*e*P	**Pb**	**15 29 19.2**	**-1.0**
UCH				⇑*e*S	**Sn**	**15 29 44.2**	**+1.3**
KPKS	**Kokpek**	**2.17**	**103**	*e*P	**Pb**	**15 29 23.4**	**+0.5**
	0.1nm,0.1s						
KPKS				*e*S	**Sb**	**15 29 50.7**	**+0.9**
	8.6nm,0.2s						
MNAS	**Manas**	**2.83**	**239**	⇑*e*P	**Pn**	**15 29 31.3**	**+2.4**
MNAS				⇑*e*S	**Sn**	**15 30 04.7**	**+1.6**

IDC 22 15:36:28.1±21.0**, 19°.78S**×**174°.62W, h0**km**, mb3.8**/3**, mbtmp3.8**/3**, Error ellipse: s-maj=544.3km s-min=57.6km az=121.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**47.77**	**256**	P	P	15 45 07.8	+0.3
	1.1nm,0.5s,baz=94,slow=8.5,SNR=57						
	1.1nm,0.5s						
WRA	**Warramunga Arr**	**47.84**	**261**	P	P	15 45 07.5	-0.5
	0.3nm,0.3s,baz=97,slow=8.1,SNR=12						
	0.3nm,0.3s						
MJAR	**Matsushiro Arr**	**71.57**	**321**	P	P	15 47 51.1	-0.2
	1.0nm,0.8s,baz=142,slow=5.8,SNR=1.9						
	1.0nm,0.8s						

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*NOU **22** 16:00:47.5, 38°.27S×175°.81E, h214km, MLv4.0/11, North Island, New Zealand*

*WEL **22** 16:00:49.1±1.6, 38°S±14°×17°6E±1°7, h202km±14km, M3.4/80, ML2.1/8, MLv3.4/80, Error ellipse: s-maj=22.2km s-min=17.5km az=105.9, confirmed*

ISC 22 16:00:48.6±1.3**, 38°.25S**±0°.04×**175°.93E**±0°.05**, h203**km**, n143, σ1ˢ.27**/143**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UTU	**Utuhina**	**0.22**	**71**	P	**Pn**	**16 01 16.4**	**+1.0**
NGRZ	**Ngongotaha**	**0.25**	**54**	P	**Pn**	**16 01 16.3**	**+0.8**
HSRZ	**Hossack Road**	**0.26**	**105**	P	**Pn**	**16 01 16.4**	**+1.0**
KUTZ	**Kaahu Road**	**0.26**	**199**	P	**Pn**	**16 01 16.7**	**+1.3**
HRRZ	**Handcock Road**	**0.31**	**117**	P	**Pn**	**16 01 16.6**	**+1.1**
TLZ	**Tolley Road**	**0.32**	**255**	P	**Pn**	**16 01 16.9**	**+1.3**
WPRZ	**Whakapapatarin**	**0.33**	**146**	P	**Pn**	**16 01 16.7**	**+1.2**
HLRZ	**Highlands Stat**	**0.33**	**91**	P	**Pn**	**16 01 17.0**	**+1.4**
KARZ	**Kaharoa**	**0.34**	**48**	P	**Pn**	**16 01 16.3**	**+0.6**
OMRZ	**Omania**	**0.37**	**68**	P	**Pn**	**16 01 16.5**	**+0.7**
KMRZ	**Kaimai**	**0.40**	**1**	P	**Pn**	**16 01 16.5**	**+0.6**
LIRZ	**Lichensteins R**	**0.43**	**56**	P	**Pn**	**16 01 16.5**	**+0.6**
MKRZ	**Makatiti**	**0.44**	**76**	P	**Pn**	**16 01 17.3**	**+1.3**
PRRZ	**Plateau Road**	**0.44**	**125**	P	**Pn**	**16 01 16.9**	**+1.0**
ALRZ	**Allen Road**	**0.45**	**134**	P	**Pn**	**16 01 17.0**	**+1.0**
TARZ	**Mount Tarawera**	**0.45**	**89**	P	**Pn**	**16 01 17.0**	**+0.9**
RRRZ	**Republican Roa**	**0.47**	**102**	P	**Pn**	**16 01 16.8**	**+0.8**
RRRZ				S	**S**	**16 01 39.2**	**+1.9**
WATZ	**Wairara**	**0.49**	**199**	P	**Pn**	**16 01 17.5**	**+1.4**
TGRZ	**Tauranga**	**0.58**	**27**	P	**Pn**	**16 01 16.8**	**+0.3**
TOZ	**Tahuroa Road**	**0.62**	**326**	P	**Pn**	**16 01 17.3**	**+0.8**
RATZ	**Rangitukua**	**0.63**	**191**	P	**Pn**	**16 01 17.9**	**+1.2**
OPRZ	**Ohinepanea**	**0.64**	**51**	P	**Pn**	**16 01 16.9**	**+0.2**
OPRZ				S	**S**	**16 01 39.1**	**+0.8**
MARZ	**Manawahe**	**0.64**	**66**	P	**Pn**	**16 01 17.3**	**+0.6**
EDRZ	**Edgecumbe**	**0.65**	**78**	P	**Pn**	**16 01 17.2**	**+0.4**
MUGZ	**Murupara**	**0.70**	**109**	P	**Pn**	**16 01 17.4**	**+0.5**
MRHZ	**Matea Rd**	**0.70**	**147**	P	**Pn**	**16 01 17.8**	**+0.9**
RITZ	**Rihia Road**	**0.73**	**184**	P	**Pn**	**16 01 18.7**	**+1.6**
NTVZ	**North Tongarir**	**0.87**	**193**	P	**Pn**	**16 01 19.4**	**+1.3**
KRVZ	**Karewarewa**	**0.88**	**195**	P	Pn	16 01 22.5	+4.5
HIZ	**Hauiti**	**0.89**	**252**	P	**Pn**	**16 01 19.1**	**+1.1**
HIZ	**Hauiti**	**0.89**	**252**	P	**Pn**	**16 01 19.3**	**+1.3**
TMVZ	**Te Maari**	**0.89**	**192**	P	**Pn**	**16 01 19.5**	**+1.4**
RTZ	**Ruatahuna**	**0.90**	**114**	P	**Pn**	**16 01 18.7**	**+0.6**
ETVZ	**East Tongariro**	**0.90**	**191**	P	**Pn**	**16 01 19.6**	**+1.4**
WTVZ	**West Tongariro**	**0.91**	**197**	P	**Pn**	**16 01 19.7**	**+1.5**
TWVZ	**Taurewa**	**0.91**	**205**	P	**Pn**	**16 01 19.5**	**+1.3**
NNVZ	**North Ngauruho**	**0.92**	**196**	P	**Pn**	**16 01 19.8**	**+1.5**
URZ	**Urewera**	**0.93**	**91**	P	**Pn**	**16 01 18.0**	**-0.2**
URZ	**Urewera**	**0.93**	**91**	P	**Pn**	**16 01 18.2**	**-0.1**
MTHZ	**Maungataniwha**	**0.94**	**131**	P	**Pn**	**16 01 19.2**	**+0.9**
OTVZ	**Oturere**	**0.94**	**193**	P	**Pn**	**16 01 20.0**	**+1.5**
NGZ	**Ngauruhoe**	**0.96**	**195**	P	**Pn**	**16 01 20.0**	**+1.4**
SNVZ	**South Ngauruho**	**0.96**	**194**	P	**Pn**	**16 01 20.2**	**+1.5**
MYRZ	**Mayor Island**	**1.00**	**14**	P	**Pn**	**16 01 18.9**	**+0.1**
COVZ	**Chateau Observ**	**1.00**	**198**	P	**Pn**	**16 01 20.0**	**+1.2**
BKZ	**Black Stump Fm**	**1.02**	**155**	P	**Pn**	**16 01 20.0**	**+1.1**
BKZ	**Black Stump Fm**	**1.02**	**155**	S	**S**	**16 01 43.6**	**+1.3**
BKZ	**Black Stump Fm**	**1.02**	**155**	P	**Pn**	**16 01 19.9**	**+1.0**

TUVZ	Tukino	1.04	192	P	Pn	16 01 20.4	+1.3
FWVZ	Far West T-bar	1.05	196	P	Pn	16 01 20.5	+1.2
MAVZ	Matarangi	1.06	196	P	Pn	16 01 20.8	+1.3
WHVZ	Whangaehu Hut	1.07	194	P	Pn	16 01 20.7	+1.2
NMHZ	Naumai	1.09	141	P	Pn	16 01 21.3	+1.9
TRVZ	Turoa	1.09	196	P	Pn	16 01 20.9	+1.3
WNVZ	Wahianoa	1.11	193	P	Pn	16 01 20.8	+1.2
RAHZ	Arahi	1.12	127	P	Pn	16 01 20.9	+1.3
PKVZ	Pokaka	1.14	204	P	Pn	16 01 20.9	+1.2
MOVZ	Moawhango	1.17	187	P	Pn	16 01 20.8	+0.9
MTVZ	Mangateitei	1.19	197	P	Pn	16 01 21.4	+1.3
RAGZ	Rawiri	1.19	102	P	Pn	16 01 20.7	+0.5
SNGZ	Shannon Statio	1.23	116	P	Pn	16 01 21.4	+1.0
KWHZ	Kaweka Forest	1.24	162	P	Pn	16 01 21.8	+1.3
MWZ	Matawai	1.26	94	P	Pn	16 01 20.8	+0.1
VRZ	Vera Road	1.27	226	P	Pn	16 01 22.5	+1.8
MKAZ	Moumakai	1.29	332	P	Pn	16 01 21.3	+0.4
ARHZ	Aropaoanui	1.31	141	P	Pn	16 01 22.6	+1.6
WHHZ	Waihua	1.31	130	P	Pn	16 01 22.4	+1.4
MCHZ	McNeill Hill	1.34	154	P	Pn	16 01 23.0	+1.9
RUGZ	Raukumara Rang	1.41	79	P	Pn	16 01 20.9	-1.1
KRHZ	Kereru	1.44	166	P	Pn	16 01 23.3	+1.3
KUZ	Kuaotunu	1.51	354	P	Pn	16 01 22.4	-0.3
KUZ	Kuaotunu	1.51	354	P	Pn	16 01 22.4	-0.3
RIGZ	Rimuhau	1.51	108	P	Pn	16 01 23.6	+0.9
ETAZ	East Tamaki Re	1.52	328	P	Pn	16 01 22.9	+0.1
TKGZ	Te Karaka	1.52	98	P	Pn	16 01 23.2	+0.5
HAZ	Te Kaha	1.54	72	P	Pn	16 01 22.0	-1.0
AWAZ	Awhitu Peninsu	1.56	319	P	Pn	16 01 23.5	+0.4
KNZ	Kokohu	1.57	120	P	Pn	16 01 24.1	+0.9
WIAZ	Waiheke Island	1.58	336	P	Pn	16 01 23.5	+0.1
TWGZ	Tauwhareparae	1.61	88	P	Pn	16 01 24.0	+0.4
DREZ	Durham Road	1.65	235	P	Pn	16 01 28.0	+4.1
CKHZ	Cape Kidnapper	1.67	148	P	Pn	16 01 25.5	+1.4
PRGZ	Paritu Road	1.67	114	P	Pn	16 01 24.8	+0.7
WAZ	Wanganui	1.68	206	P	Pn	16 01 25.4	+1.3
PNHZ	Pukenui	1.68	173	P	Pn	16 01 25.2	+1.0
MBAZ	Motutapu North	1.69	331	P	Pn	16 01 24.4	0.0
WTAZ	Waiatarua	1.70	320	P	Pn	16 01 25.0	+0.5
LREZ	Lake Rotokare	1.70	224	P	Pn	16 01 28.2	+3.9
KAHZ	Kahuranaki	1.71	155	P	Pn	16 01 26.0	+1.4
PKGZ	Pakihiroa	1.74	78	P	Pn	16 01 24.4	-0.4
PREZ	Palmer Road	1.77	231	P	Pn	16 01 28.9	+3.8
MHGZ	Mahia Peninsul	1.79	121	P	Pn	16 01 26.2	+1.0
PKE	Pukeiti	1.79	238	P	Pn	16 01 27.9	+2.6
CNGZ	Carnagh Statio	1.80	98	P	Pn	16 01 26.3	+0.9
TSZ	Takapari Road	1.81	179	P	Pn	16 01 26.4	+0.9
RVAZ	Riverhead Bore	1.82	323	P	Pn	16 01 25.7	+0.1
KHEZ	Kahui Hut	1.83	234	P	Pn	16 01 28.9	+3.2
PUZ	Puketiti	1.84	85	P	Pn	16 01 25.4	-0.4
WPHZ	Waipukurau	1.86	168	P	Pn	16 01 26.8	+0.9
ABAZ	Army Bay	1.86	332	P	Pn	16 01 26.3	+0.3
NBEZ	Newall Road No	1.91	237	P	Pn	16 01 30.4	+4.0
PXZ	Pawanui	1.92	158	P	Pn	16 01 27.5	+1.0
NMEZ	Namu Road	1.98	233	P	Pn	16 01 30.8	+3.7
MXZ	Matakaoa Point	2.00	71	P	Pn	16 01 25.4	-2.0
WMGZ	Waiomatatini S	2.01	78	P	Pn	16 01 27.1	-0.3
GRZ	Great Barrier	2.03	349	P	Pn	16 01 27.2	-0.5
DVHZ	Dannevirke	2.06	175	P	Pn	16 01 28.5	+0.5
PRHZ	Porangahau	2.09	165	P	Pn	16 01 29.0	+0.8
POWZ	Post Office Ro	2.15	183	P	Pn	16 01 29.6	+0.8
ANWZ	Angora Road	2.25	169	P	Pn	16 01 30.7	+0.8
PRWZ	Pori Road	2.31	179	P	Pn	16 01 31.2	+0.7
MRZ	Mangatainoka R	2.43	186	P	Pn	16 01 32.0	+0.1
BFZ	Birch Farm	2.44	174	P	Pn	16 01 32.3	+0.2
TIWZ	Tintock	2.53	181	P	Pn	16 01 33.2	+0.3
WCZ	Waipu Caves	2.63	331	P	Pn	16 01 33.9	-0.3
OGWZ	Otaki Gorge	2.63	193	P	Pn	16 01 34.4	+0.3
HOWZ	Holdsworth Sta	2.67	187	P	Pn	16 01 34.4	-0.2
CPWZ	Castlepoint	2.67	176	P	Pn	16 01 35.4	+0.9
KIW	Kapiti Island	2.73	197	P	Pn	16 01 35.3	0.0
TMWZ	Te Maipa	2.86	181	P	Pn	16 01 36.8	+0.1
MTW	Mount Morrison	2.93	186	P	Pn	16 01 37.0	-0.5
CAW	Cannon Point	2.93	193	P	Pn	16 01 37.4	-0.2
DUWZ	D'Urville Isla	2.99	211	P	Pn	16 01 37.7	-0.5
TRWZ	Traveller	3.15	183	P	Pn	16 01 39.8	-0.4
WEL	Wellington	3.16	196	P	Pn	16 01 40.2	-0.1
MSWZ	Moikau Station	3.21	189	P	Pn	16 01 40.1	-0.8
TCW	Tory Channel	3.22	203	P	Pn	16 01 40.6	-0.3
TUWZ	Tuamarina	3.53	205	P	Pn	16 01 44.1	-0.5
OUZ	Omahuta	3.56	327	P	Pn	16 01 44.9	-0.2
NNZ	Nelson	3.56	213	P	Pn	16 01 44.0	-1.0
TKNZ	Takaka Hill	3.61	219	P	Pn	16 01 44.0	-1.6
QRZ	Quartz Range	3.68	225	P	Pn	16 01 44.2	-2.3
QRZ	Quartz Range	3.68	225	S	S	16 02 30.2	-1.3
QRZ	Quartz Range	3.68	225	P	Pn	16 01 44.9	-1.6
CMWZ	Cape Campbell	3.74	200	P	Pn	16 01 47.3	0.0
BSWZ	Blackbirch Sta	3.81	204	P	Pn	16 01 47.6	-0.5
MRNZ	Matariki Terra	3.98	217	P	Pn	16 01 48.8	-1.5
THZ	Tophouse	4.21	213	P	Pn	16 01 51.5	-1.6
KHZ	Kahutara	4.55	203	P	Pn	16 01 55.9	-1.4
KHZ	Kahutara	4.55	203	S	S	16 02 49.8	-1.1
KHZ	Kahutara	4.55	203	P	Pn	16 01 56.5	-0.8
RPZ	Rata Peaks	6.59	212	P	Pn	16 02 21.4	-2.1
ODZ	Otahua Downs	7.86	209	P	Pn	16 02 38.3	-1.6

TEH ***22*** *16:14:52.6, 28°.20N×51°.55E, h16^{km}±39^{km}*

ISC 22 16:14:53.3±1.2**, 28°.21N**±0°.09×**51°.56E**±0°.10**, h16**^{km}**, n11, σ0^s.74**/10**, mb3.5**/4**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DSBU	Dashti - Bushe	0.31	300	Pg	Pg	16 14 59.1	-0.7
QIR1	Qir	1.33	78	Pg	Pn	16 15 17.6	+0.4
KAZ2	Kazeron-Fars-I	1.40	3	Pg	Pb	16 15 19.1	0.0
KHL1	Khalili_Fars	1.64	110	Pg	Pb	16 15 23.0	-0.1
SHI	Shiraz	1.65	30	Pg	Pb	16 15 22.7	-0.8
LMD1	Lamerd	1.66	121	Pg	Pb	16 15 23.2	-0.3
KLNJ	Kolanjah	2.79	0	Pn	Pn	16 15 38.6	+1.0
ZALV	Zalesovo Beam	35.36	34	P	P	16 22 48.9	+61
	0.3nm,0.4s,baz=238,slow=8.2,SNR=2.1						
	0.3nm,0.4s						
FINES	FINESS Array B	37.33	340	P	P	16 22 03.9	-0.6
	1.6nm,0.9s,baz=132,slow=7.3,SNR=5.1						
	1.6nm,0.9s						
HFS	Hagfors	40.91	332	P	P	16 22 34.9	+0.4
	0.3nm,0.3s,baz=132,slow=9.9,SNR=5.2						
	0.3nm,0.3s						
NOA	NORSAR Array B	42.43	332	P	P	16 22 48.0	+0.9
	0.2nm,0.6s,baz=131,slow=11,SNR=3.2						
	0.2nm,0.6s						

JMA ***22*** *16:30:20.6±0.1, 34°N±1°×13°7E±°, h361^{km}, MV2.7/26, SE OFF KII PENINSULA*

IDC ***22*** *16:30:21.1±2.8, 34°.60N×137°.46E, h398^{km}±300^{km}, mb2.7/2, mbtmp3.3/3, Error ellipse: s-maj=571.9km s-min=130.0km az=19.0*

ISC 22 16:30:21.1±1.2**, 34°.1N**±0°.1×**137°.0E**±0°.2**, h350**^{km}**, n11, σ0^s.65**/13**, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIE	Ise	0.36	322	eP	Pn	16 31 06.0	+1.0
JKN2	Miekihoku	0.59	283	eP	Pn	16 31 06.2	+0.7
TSUJ	Tsu 2	0.76	323	eP	Pn	16 31 06.7	+0.8
JMMH	Miemihama	0.84	250	eP	Pn	16 31 06.8	+0.6
JHE	Heguri	1.20	298	eP	Pn	16 31 07.9	+0.3
JYTA	Yamagatataniai	1.50	353	eP	Pn	16 31 09.3	+0.2
JFM	Mihama	1.64	330	eP	Pn	16 31 10.0	+0.1
JSGW	Sagamiharawaka	2.37	50	eP	Pn	16 31 15.6	+0.5
JSGW				eS	S	16 31 58.7	+0.3
MJAR	Matsushiro Arr	2.63	22	P	Pn	16 31 17.0	-0.2
	4.2nm,0.7s,baz=201,slow=9.2,SNR=24						
MJAR				S	S	16 32 02.6	+0.3
	1.0nm,0.6s,baz=128,slow=7.9,SNR=2.3						
WRA	Warramunga Arr	53.81	183	P	P	16 39 08.1	-0.8
	0.3nm,0.3s,baz=2.9,slow=7.2,SNR=5.7						
	0.3nm,0.3s						
ASAR	Alice Springs	57.53	183	P	P	16 39 34.4	-0.6
	0.4nm,1.0s,baz=13,slow=8.8,SNR=4.3						
	0.4nm,1.0s						

VIE ***22*** *16:32:58.6±0.3, 50°.27N×18°.79E, h0^{km}, mb2.6/1, ml1.9/2, Error ellipse: s-maj=4.1km s-min=2.0km az=171.0 14 km W of Katowice Suspected Mining induced.*

IPEC ***22*** *16:32:58.7±0.2, 50°.27N×18°.82E, h1^{km}, ML2.0/6, Error ellipse: s-maj=1.8km s-min=0.8km az=176.0*

PRU ***22*** *16:32:59.2, 50°.29N×18°.76E, h0^{km}*

ISC 22 16:32:58.7±0.9**, 50°.27N**±0°.04×**18°.77E**±0°.02**, h0**^{km}**, n25, σ0^s.57**/47**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.59	223	ePG	Pg	16 33 10.6	+0.6
OKC				eSG	Sg	16 33 17.5	-0.2
	comp=Z,16nm,0.4s						
OJC	Ojcow	0.66	94	ePg	Pg	16 33 11.3	-0.1
OJC				eSg	Sg	16 33 20.0	+0.1
STEB	Steborice	0.73	243	ePG	Pg	16 33 13.6	+1.0
STEB				eSG	Sb	16 33 23.8	-1.0
ANAC	Anensky vrch	0.92	258	ePg	Pg	16 33 16.8	+0.5
	baz=77						
ANAC				eSg	Sg	16 33 28.6	+0.4
	34nm,0.4s,baz=77						
MORC	Moravsky Berou	0.94	239	ePG	Pg	16 33 17.0	+0.3
MORC				eSG	Sg	16 33 29.0	+0.2
MORC	Moravsky Berou	0.94	239	ePg	Pg	16 33 16.9	+0.3
	baz=58						
MORC				eSg	Sg	16 33 28.9	+0.2
	27nm,0.6s,baz=58						
LOSC	Losov	1.11	235	ePg	Pg	16 33 20.4	+0.3
	baz=54						
LOSC				eSg	Sg	16 33 34.4	-0.1
	18nm,0.5s,baz=54						
LANS	Liptovska Anna	1.21	158	ePG	Pg	16 33 22.1	+0.3
LANS				eSG	Sb	16 33 38.1	-0.5
LANS				eLG	Lg	16 33 42.3	
KRLC	Kraliky	1.30	262	ePG	Pg	16 33 23.0	-0.5
KRLC				eSG	Sg	16 33 40.8	+0.5
NIE	Niedzica	1.30	130	ePg	Pg	16 33 23.6	-0.1
NIE				eSg	Sn	16 33 42.7	+0.3
DPC	Dobruska-Polom	1.57	274	ePG	Pn	16 33 27.8	-0.2
DPC				eSG	Sb	16 33 49.4	+0.2
JAVC	Velka Javorina	1.58	207	ePN	Pn	16 33 28.2	+0.1
JAVC	Velka Javorina	1.58	207	ePn	Pn	16 33 28.1	0.0
	baz=27						
OSTC	Ostas	1.66	281	ePG	Pn	16 33 29.3	+0.2
OSTC				eSG	Sn	16 33 50.8	-0.4
KSP	Ksiaz	1.68	291	ePg	Pg	16 33 31.3	+0.4
KSP				eSg	Sg	16 33 54.3	+1.5
VRAC	Vranov	1.71	237	ePn	Pn	16 33 30.1	+0.3
	baz=55						
VRAC				eSg	Sb	16 33 53.2	+0.1
	10nm,0.4s,baz=55						
CHVC	Chvalec	1.77	281	ePG	Pn	16 33 30.3	-0.3
CHVC				eSG	Sn	16 33 53.8	0.0
UPC	Upice	1.78	279	ePG	Pn	16 33 31.2	+0.4
STHS	Stebnicka Huta	1.81	117	ePG	Pn	16 33 31.5	+0.3
STHS				eSG	Sg	16 33 57.3	+0.4
STHS				eLG	Lg	16 34 00.6	
KRUC	Moravsky	1.96	233	ePn	Pn	16 33 33.5	+0.3
	baz=51						
KRUC				eSg	Sb	16 34 00.9	+0.6
	6.6nm,0.5s,baz=51						
TREC	Trest	2.34	247	eSG	Sg	16 34 12.9	-1.1
CONA	Conrad Observa	3.03	220	i Pn	Pn	16 33 47.7	-0.3
	0.3nm,0.3s						
CONA				eSn	Sn	16 34 26.2	+1.4
	1.6nm,0.5s						
RONA	Rosalia, Austr	3.05	213	i Pn	Pn	16 33 48.6	+0.5
	0.2nm,0.2s						
RONA				eSn	Sn	16 34 25.3	-0.1
	0.4nm,0.3s						
ZVC	Zvikov	3.08	256	ePG	Pb	16 33 54.2	-0.2
ZVC				eSG	Sg	16 34 36.1	-1.5
KHC	Kasperske Hory	3.56	253	ePN	Pn	16 33 54.6	-0.6
KHC				ePG	Pb	16 34 01.8	-0.8
KHC				eSG	Sg	16 34 52.5	-0.5

SOME ***22*** *16:48:48.8, 41°.53N×71°.42E, h15^{km}*

KRNET ***22*** *16:48:48.3±0.1, 41°.55N×71°.40E, h30^{km}, mb2.6*

ISU ***22*** *16:48:52, 41°.51N×71°.21E, h27^{km}*

ISC 22 16:48:49.3±1.1**, 41°.65N**±0°.02×**71°.41E**±0°.02**, h20**^{km}±4^{km}**, n26, σ1^s.20**/51**, 21C-9D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	Arkit	0.44	70	⇑eP	Pb	16 48 58.6	+0.1
ARK				⇑eS	Sb	16 49 05.9	+1.1
KSNS	Kasansay	0.49	170	P	Pg	16 48 59.0	-0.4
KSNS				S	Sg	16 49 06.2	+0.1
NAM	Namangan	0.68	164	P	Pg	16 49 03.2	+0.4
NAM				S	Sg	16 49 12.3	+0.4
CHDK	Chadak	0.84	216	P	Pb	16 49 03.5	-1.7
CHDK				S	Sb	16 49 12.4	-3.6
CHMG	Chimgan	1.05	265	P	Pn	16 49 10.4	+1.3
CHMG				S	Sn	16 49 23.1	-0.2
CHRV	Charvak	1.09	270	P	Pg	16 49 10.6	+0.1
CHRV				S	Sn	16 49 24.5	+0.4
MNAS	Manas	1.17	44	⇓eP	Pg	16 49 11.4	-0.6
MNAS				⇓eS	Sn	16 49 28.1	+1.9
ARSB	Arslanbob	1.23	105	⇑eP	Pn	16 49 10.6	-0.9
ARSB				⇑eS	Sb	16 49 26.8	-0.5
FRG	Fergana	1.30	167	P	Pg	16 49 15.0	+0.5
FRG				S	Sg	16 49 32.8	+1.3
TVKS	Tavaksay	1.32	267	P	Pg	16 49 14.3	-0.5
TVKS				S	Sg	16 49 31.3	-0.7
TSTA	Tashata	1.34	143	P	Pn	16 49 12.7	-0.2
TSTA				S	Sn	16 49 31.9	+1.8
CHMI	Chimion	1.38	176	P	Pb	16 49 15.3	+0.9
CHMI				S	Sb	16 49 33.8	+2.2
CHM	Chimkent	1.50	297	eP	Pg	16 49 18.5	+0.2
	32nm,0.1s						
CHM				eS	Sg	16 49 39.6	+1.6
	87nm,0.2s						
OHH	Osh	1.53	137	⇑eP	Pn	16 49 14.6	-1.0
OHH				⇑eS	Sn	16 49 33.8	-1.1
KK31	Karatay Array	1.60	336	⇑P	Pg	16 49 19.2	-0.9
	1.7nm,0.3s,baz=158,slow=17,SNR=53						
KK31				⇑S	Sg	16 49 41.0	0.0
	4.1nm,0.2s,baz=153,slow=27,SNR=16						
MRKS	Merke	1.74	50	eP	Pg	16 49 21.7	-1.1
	6.3nm,0.2s						
MRKS				eS	Sg	16 49 45.0	-0.4
	26nm,0.3s						
SALK	Salom-Alik	1.97	112	⇑eP	Pn	16 49 21.5	-0.2
SALK				⇑eS	Sn	16 49 46.2	+0.2
EKS2	Erkin-Say	2.03	59	⇑eP	Pb	16 49 23.7	-1.9
EKS2				⇑eS	Sb	16 49 49.5	-1.0
ARLS	Aral	2.19	83	⇑eP	Pn	16 49 25.4	+0.7
ARLS				⇑eS	Sn	16 49 52.5	+1.1
SFK	Sufi-Kurgan	2.28	135	⇑eP	Pn	16 49 25.6	-0.4
SFK				⇑eS	Sn	16 49 52.8	-0.8
UCH	Uchtor	2.39	75	⇓eP	Pn	16 49 28.5	+0.8
UCH				⇓eS	Sn	16 49 57.8	+1.1
AAK	Ala-Archa	2.50	66	⇓eP	Pn	16 49 30.1	+1.1
AAK				⇓eS	Sn	16 50 00.5	+1.5
AAK	Ala-Archa	2.50	66	⇓Pg	Pg	16 49 35.5	-1.8
	5.1nm,1.1s						
AAK				⇑Lg	Lg	16 50 07.4	
	5.5nm,1.2s						
USP	Ospenovka	2.80	54	⇑eP	Pn	16 49 34.4	+1.4
USP				⇑eS	Sn	16 50 08.0	+1.7
TKM2	Tokmak 2	3.36	66	⇑eP	Pn	16 49 42.1	+1.3
TKM2				⇑eS	Sn	16 50 21.3	+1.1
BOOM	Boomskoye usch	3.48	74	⇓eP	Pn	16 49 43.2	+0.8
BOOM				⇓eS	Sn	16 50 23.7	+0.6

NEIC ***22*** *16:49:26.5±2.7, 20°.09S±0°.10×173°.48W±0°.08, h10^{km}±1^{km}, mb5.2/171, Mww5.1/10, Error ellipse: s-maj=16.3km s-min=12.1km az=181.0*

BJI ***22*** *16:49:26.4, 19°.87S×173°.53W, h10^{km}, mB5.7/19, mb5.4/53, Ms5.2/24, Ms7 4.9/24*

IDC ***22*** *16:49:26.3±0.4, 20°.14S×174°.00W, h0^{km}, mb4.7/21, mbtmp4.7/22, ML5.0/1, MS4.5/52, Error ellipse: s-maj=16.8km s-min=14.2km az=113.0*

NEIC ***22*** *16:49:26.4, 20°.08S×173°.44W, h14^{km}*

NEIC ***22*** *16:49:26.4, 20°.08S×173°.44W, h14^{km}, Moment Tensor Solution. Duration: 1^s.9 Moment tensor: Scale 10^{16}Nm; M_{rr}3.38; $M_{\theta\theta}$-0.67; $M_{\phi\phi}$-2.72; $M_{r\theta}$4.17; $M_{\theta\phi}$-1.34; $M_{\phi r}$2.15; Fault plane solution: $M_0$5.78000×10^{16} NP1: ϕ_s189.89000°, δ22.70000°, λ48.51000°. NP2: ϕ_s53.68000°, δ73.20000°, λ105.49000°. Principal axes: T 6.1419, Plg59.0000°, Azm345.0000°; N -0.8011, Plg15.0000°, Azm229.0000°; P -5.3408, Plg27.0000°, Azm131.0000°;*

NOU ***22*** *16:49:28.7, 20°.42S×173°.45W, h32^{km}, mb5.3/75, Tonga Islands*

BGR ***22*** *16:49:29.4, 21°.09S×172°.38W, h33^{km}*

MOS ***22*** *16:49:30.3±3.2, 19°.94S×174°.70W, h10^{km}, mb5.4/23, MS4.9/5, Error ellipse: s-maj=14.0km s-min=10.4km az=117.1*

GCMT ***22*** *16:49:33.5±0.2, 20°.22S±0°.01×173°.55W±0°.01, h22^{km}, MW5.2/107, Moment Tensor Solution. s68,c101; s107,c181; Duration: 1^s.0 Moment tensor: Scale 10^{16} Nm; M_{rr}5.81±.19; $M_{\theta\theta}$-0.63±.13; $M_{\phi\phi}$-5.18±.13; $M_{r\theta}$3.12±.23; $M_{\theta\phi}$-2.73±.08; $M_{\phi r}$3.56±.20; Best double couple: $M_0$7.75900×10^{16} NP1: ϕ_s194.00000°, δ28.00000°, λ71.00000°. NP2: ϕ_s35.00000°, δ64.00000°, λ100.00000°. Principal axes: T 7.5380, Plg69.0000°, Azm326.0000°; N 0.4420, Plg9.0000°, Azm211.0000°; P -7.9800, Plg18.0000°, Azm118.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 16:49:28.0±0.2**, 20°.30S**±0°.05×**173°.48W**±0°.04**, h21**^{km}**, n897, σ1^s.66**/793**, mb5.3**/192**, MS4.6**/66**, 63C-45D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	3.56	71	P	Pn	16 50 20.7	-1.3
NIUE				S	Sn	16 50 58.9	-4.6
NIUE	Niue	3.56	71		Pn	16 50 20.4	-1.6
NIUE	Niue	3.56	71	P	Pn	16 50 21.1	-0.9
AFI	Afiamalu	6.56	15		Pn	16 50 58.7	-4.6
AFI	Afiamalu	6.56	15	P	Pn	16 51 03.8	+0.5
MSVF	Nonsavu	8.41	286		Pn	16 51 30.5	+1.8
MSVF	Nonsavu	8.41	286	P	Pn	16 51 30.3	+1.5
RAO	Raoul Island	9.79	203	Sn	Sn	16 53 32.0	-4.8
	200nm,0.3s,baz=253,slow=22,SNR=4.5						
GLKZ	Green Lake	9.79	203	P	Pn	16 51 49.7	+2.0
GLKZ				S	Sn	16 53 32.3	-4.7
RAR	Rarotonga	12.86	96	Pn	Pn	16 52 28.7	-0.8
	12nm,0.3s,baz=277,slow=7.2,SNR=30						
RAR				Sn	Sn	16 54 42.6	-10
	2.9nm,0.3s,baz=331,slow=18,SNR=1.5						
RAR	Rarotonga	12.86	96		Pn	16 52 28.2	-1.3
RAR	Rarotonga	12.86	96	P	Pn	16 52 28.9	-0.7
MARNC	Mare, Loyalty	17.32	263		P	16 53 29.3	-0.6
MARNC				IAmb	IAmb	16 53 36.8	
	comp=Z,273nm,1.2s						
MARNC	Mare, Loyalty	17.32	263	P	P	16 53 29.5	-0.4
PINNC	Pines Island,	17.91	259		Pn	16 53 35.9	+0.1
PINNC	Pines Island,	17.91	259	P	P	16 53 36.8	+0.4
YATNC	Mamie plateau,	18.39	261	P	P	16 53 41.8	0.0
OUENC	Ouen Island, N	18.45	260	P	P	16 53 42.3	-0.1
ONTNC	Ouen Toro	18.80	260	P	P	16 53 45.0	-1.2
ONTNC	Ouen Toro	18.80	260	P	P	16 53 45.9	-0.4
DZM	Mont Dzumac	18.81	261	P	P	16 53 45.3	-1.1
	baz=78,slow=17						
DZM				LR	LR	17 00 04.5	
	comp=Z,3μm,18.8s,baz=91,slow=35						
DZM	Mont Dzumac	18.81	261	eP	P	16 53 44.2	-2.2
	comp=Z,262nm,1.4s						
DZM				eLR	LR	16 58 13.0	
	comp=Z,3μm,22.8s						
DZM	Mont Dzumac	18.81	261		P	16 53 45.3	-1.1
DZM	Mont Dzumac	18.81	261	P	P	16 53 46.0	-0.4
WCZ	Waipu Caves	18.90	212	P	Pn	16 53 49.1	+1.2
KUZ	Kuaotunu	18.91	208	P	P	16 53 45.8	-1.5
PKGZ	Pakihiroa	18.98	201	P	P	16 53 45.7	-2.4
PKGZ				S	Sn	16 57 02.6	-18
HAZ	Te Kaha	18.98	202	P	Pn	16 53 51.4	+2.5
HAZ				S	Sn	16 57 07.4	-13
SANVU	Saraoutou	19.00	282	P	P	16 53 48.4	-0.1
SANVU	Saraoutou	19.00	282	P	P	16 53 48.3	-0.2
PUZ	Puketiti	19.11	200	P	Pn	16 53 53.0	+2.5
PUZ				S	Sn	16 57 09.0	-15
RUGZ	Raukumara Rang	19.21	202	P	Pn	16 53 53.1	+1.4
RUGZ				S	Sn	16 57 14.2	-12
WIAZ	Waiheke Island	19.21	209	P	Pn	16 53 54.0	+2.3
TWGZ	Tauwhareparae	19.30	201	P	Pn	16 53 59.5	+6.8
TWGZ				S	Sn	16 57 17.9	-11
MKAZ	Moumakai	19.46	208	P	Pn	16 53 56.8	+2.2
CNGZ	Carnagh Statio	19.50	200	P	Pn	16 53 59.0	+3.9
MWZ	Matawai	19.59	202	P	Pn	16 53 57.6	+1.4
URZ	Urewera	19.67	202	P	P	16 53 55.8	+0.2
	comp=Z,4.2nm,0.3s,baz=284,slow=1.2,SNR=18						
URZ				S	S	16 57 24.3	-12
	comp=Z,29nm,0.7s,baz=192,slow=19,SNR=7.8						
	comp=Z,17nm,0.4s						
URZ	Urewera	19.67	202	P	Pn	16 53 57.7	+0.6
RAGZ	Rawiri	19.77	202	P	Pn	16 54 01.3	+2.9
TOZ	Tahuroa Road	19.84	207		Pn	16 54 00.0	+0.9
TOZ	Tahuroa Road	19.84	207	P	Pn	16 54 01.5	+2.4
RIGZ	Rimuhau	19.85	201	P	Pn	16 54 02.4	+3.1
RTZ	Ruatahuna	20.03	202	P	P	16 53 60.0	+0.3
SNGZ	Shannon Statio	20.06	201	P	Pn	16 54 04.5	+2.8
MTHZ	Maungataniwha	20.30	202	P	Pn	16 54 06.1	+1.6
TLZ	Tolley Road	20.33	206	P	Pn	16 54 06.4	+1.4
BKZ	Black Stump Fm	20.70	203		P	16 54 07.1	+0.2
BKZ	Black Stump Fm	20.70	203	P	P	16 54 06.7	-0.2
KOUNC	Koumac, New Ca	20.84	265	P	P	16 54 07.8	-0.7
NTVZ	North Tongarir	20.94	204	P	Pn	16 54 11.6	-0.5
ETVZ	East Tongariro	20.96	204	P	Pn	16 54 12.4	-0.1
WNVZ	Wahianoa	21.17	204	P	P	16 54 13.9	+1.8
PKVZ	Pokaka	21.23	205	P	P	16 54 14.2	+1.5
BFZ	Birch Farm	22.13	201	P	P	16 54 23.3	+1.0
BFZ				IAmb	IAmb	16 54 45.4	
	comp=Z,45nm,0.8s						
BFZ	Birch Farm	22.13	201	P	P	16 54 18.7	-3.5
MRZ	Mangatainoka R	22.35	202		P	16 54 25.4	+0.9
TBI	Tubuai	22.50	102	eP	P	16 54 22.8	-3.5
	comp=Z,2μm,39.0s						
TBI				eS	S	16 58 27.6	-4.6
	comp=Z,7μm,26.5s						
TBI				eLR	LR	16 59 49.1	
	comp=Z,3μm,29.8s						
TBI				eLR	LR	16 59 56.2	
	comp=Z,12μm,27.5s						
PPT2	Papeete2	22.76	87	eP	P	16 54 21.0	-8.2
	comp=Z,189nm,23.8s						
PPT2				eS	S	16 58 30.8	-6.4
	comp=Z,514nm,24.0s						
PPT2				eLR	LR	16 59 57.7	
	comp=Z,2μm,26.2s						
PPT2				eLR	LR	16 59 58.8	
	comp=Z,3μm,26.5s						
PPT	Papeete	22.77	87	P	P	16 54 34.2	+5.0
	comp=Z,24nm,0.7s,baz=147,slow=4.6,SNR=5.0						
PPT				LR	LR	17 01 08.9	
	comp=Z,800nm,20.9s,baz=256,slow=30						
	comp=Z,24nm,0.7s						
MSWZ	Moikau Station	23.13	202	P	P	16 54 34.6	+1.8
TUWZ	Tuamarina	23.62	204	P	P	16 54 36.7	-0.9
NNZ	Nelson	23.66	205	IAmb	IAmb	16 54 55.3	
	comp=Z,158nm,1.6s						
QRZ	Quartz Range	23.69	207	IAmb	IAmb	16 54 59.1	
	comp=Z,104nm,1.1s						
THZ	Tophouse	24.31	205	IAmb	IAmb	16 54 54.2	
	comp=Z,44nm,0.8s						
DSZ	Denniston Nort	24.75	207	P	P	16 54 48.8	+0.7
LTZ	Lake Taylor	25.42	205	IAmb	IAmb	16 55 05.8	
	comp=Z,71nm,0.8s						
OXZ	Oxford	25.98	205	P	P	16 55 00.1	+0.9
LHI	Lord Howe Isla	27.04	240	P	P	16 55 07.8	-1.1
LHI				IAmb	IAmb	16 55 23.7	
	comp=Z,72nm,1.4s						
FOZ	Fox Glacier	27.06	207	IAmb	IAmb	16 55 33.5	
	comp=Z,65nm,0.7s						
JCZ	Jackson Bay	27.94	208	P	P	16 55 15.8	-1.2
SAVO	Savo Central	28.06	289	P	P	16 55 18.3	+0.1
TW1H	Toowoomba 1 Ha	32.32	250	P	P	16 55 54.7	-1.2
ARMA	Armidale	32.99	245	P	P	16 55 59.4	-2.4
	comp=Z,24nm,0.8s						
ARMA	Armidale	32.99	245	P	P	16 55 59.3	-2.4
ARMA	Armidale	32.99	245	P	P	16 56 00.3	-1.5
EIDS	Eidsvold	32.99	254	P	P	16 55 58.3	-3.4
	comp=Z,15nm,1.9s						
EIDS	Eidsvold	32.99	254	P	P	16 55 58.7	-3.0
TAOE	Nuku Hiva Isla	34.13	75	eP	P	16 56 14.2	+2.4
	comp=Z,67nm,24.4s						
TAOE				eS	S	17 01 30.3	-6.8
	comp=Z,160nm,25.9s						
TAOE				eLR	LR	17 05 08.3	
	comp=Z,1μm,27.1s						
RKT	Rikitea	35.82	102	eP	P	16 56 25.2	-1.0
	comp=Z,3μm,34.8s						

RKT				*e*S	S	17 01 59.8	-3.0
	comp=Z,4µm,38.8s						
RKT				*e*LR	LR	17 05 52.8	
	comp=Z,5µm,26.2s						
CNB	Canberra Magne	35.88	237	P	P	16 56 25.4	-1.3
	comp=Z,29nm,1.0s						
CNB	Canberra Magne	35.88	237	P	P	16 56 25.9	-0.8
AULRC	Lightning Ridg	36.00	248	P	P	16 56 25.4	-2.3
AUDAR	Daramalan Coll	36.04	238	P	P	16 56 26.9	-1.2
AUMHS	Melrose High S	36.11	237	P	P	16 56 27.3	-1.3
CAN	Canberra	36.17	238	P	P	16 56 26.9	-2.3
	comp=Z,24nm,1.4s						
CAN	Canberra	36.17	238	P	P	16 56 28.5	-0.7
YNG	Young	36.42	239	P	P	16 56 29.6	-1.6
	comp=Z,14nm,0.8s						
CTA	Charters Tower	37.73	263	P	P	16 56 39.0	-3.6
	comp=Z,8.8nm,0.6s						
CTA	Charters Tower	37.73	263	LR	LR	17 11 10.7	
	comp=Z,1µm,18.1s,baz=84,slow=35						
CTA	Charters Tower	37.73	263	P	P	16 56 40.1	-2.5
CTAO	Charters Tower	37.73	263	P	P	16 56 39.2	-3.4
CTAO	Charters Tower	37.73	263	P	P	16 56 40.1	-2.5
CTAO	Charters Tower	37.73	263	P	P	16 56 39.2	-3.4
CTAO				pmax	pmax		
	comp=Z,14nm,0.8s						
CMSA	Cobar Meteorol	38.19	245	P	P	16 56 44.2	-2.2
	comp=Z,46nm,0.7s						
CMSA	Cobar Meteorol	38.19	245	P	P	16 56 43.7	-2.6
QLP	Quilpie	39.17	253	P	P	16 56 51.7	-2.8
	comp=Z,28nm,0.8s						
QLP	Quilpie	39.17	253	P	P	16 56 51.8	-2.8
PMG	Port Moresby	39.46	280	LR	LR	17 11 00.2	
	comp=Z,1µm,18.7s,baz=159,slow=33						
PMG	Port Moresby	39.46	280	P	P	16 56 54.3	-2.7
PMG	Port Moresby	39.46	280	P	P	16 56 56.3	-0.8
PMG	Port Moresby	39.46	280	P	P	16 56 57.1	0.0
PMG	Port Moresby	39.46	280	P	P	16 56 54.4	-2.7
	comp=Z,38nm,0.8s						
PMG	Port Moresby	39.46	280	*ce*P	P	16 56 54.4	-2.7
PMG				pmax	pmax		
	comp=Z,35nm,1.0s						
TOO	Toolangi	39.47	235	P	P	16 56 55.5	-1.5
	comp=Z,10.0nm,1.1s						
MTSU	Mount Surprise	39.84	266	P	P	16 56 56.7	-3.6
	comp=Z,32nm,0.8s						
MTSU	Mount Surprise	39.84	266	P	P	16 56 57.5	-2.8
BRAT	Ballarat	40.67	236	P	P	16 57 06.4	-0.5
AUMTC	Mt Clear Colle	40.72	236	P	P	16 57 07.6	+0.3
STKA	Stephens Creek	41.70	245	P	P	16 57 13.0	-2.5
	comp=Z,85nm,1.0s						
STKA	Stephens Creek	41.70	245	P	P	16 57 13.7	-1.8
	comp=Z,9.6nm,0.7s,baz=90,slow=9.5,SNR=18						
STKA				PcP	PcP	16 59 13.8	+1.8
	comp=Z,5.3nm,0.8s,baz=62,slow=2.3,SNR=3.7						
STKA				LR	LR	17 14 08.8	
	comp=Z,573nm,18.1s,baz=74,slow=36						
	comp=Z,9.6nm,0.7s						
STKA	Stephens Creek	41.70	245	P	P	16 57 12.4	-3.1
STKA				IAmb	IAmb	16 57 26.4	
	comp=Z,48nm,0.7s						
STKA	Stephens Creek	41.70	245	P	P	16 57 13.5	-2.0
COEN	Coen	41.81	272	P	P	16 57 13.1	-3.5
	comp=Z,28nm,1.1s						
COEN	Coen	41.81	272	P	P	16 57 13.3	-3.3
COEN	Coen	41.81	272	P	P	16 57 13.7	-2.9
INKA	Innaminka	42.27	251	P	P	16 57 18.6	-1.6
QIS	Mount Isa	43.84	261	P	P	16 57 30.0	-3.1
	comp=Z,7.6nm,0.8s						
QIS	Mount Isa	43.84	261	P	P	16 57 32.8	-0.3
AUMBR	Murray Bridge	43.95	240	P	P	16 57 32.6	-1.1
HTT	Hallett	44.08	243	P	P	16 57 33.0	-1.9
	comp=Z,7.5nm,0.8s						
HTT	Hallett	44.08	243	P	P	16 57 33.9	-0.9
JAY	Jayapura	48.04	286	LR	LR	17 16 39.8	
	comp=Z,461nm,21.4s,baz=114,slow=34						
JAY	Jayapura	48.04	286	P	P	16 58 04.2	-2.0
	comp=Z,52nm,0.7s						
GENI	Genyem	48.49	285	P	P	16 58 08.9	-0.8
GENI	Genyem	48.49	285	P	P	16 58 08.4	-1.3
ASAR	Alice Springs	48.69	256	P	P	16 58 08.0	-3.2
	comp=Z,7.3nm,0.7s,baz=95,slow=8.0,SNR=78						
ASAR				PcP	PcP	16 59 36.6	+0.3
	comp=Z,9.1nm,0.7s,baz=100,slow=4.1,SNR=12						
ASAR				ScP	ScP	17 03 32.2	+2.0
	comp=Z,0.7nm,0.9s,baz=88,slow=5.2,SNR=3.1						
ASAR				S	S	17 05 02.6	-10
	comp=Z,0.5nm,0.9s,baz=95,slow=14,SNR=3.8						
ASAR				LR	LR	17 19 02.4	
	comp=Z,663nm,18.4s,baz=97,slow=37						
	comp=Z,7.3nm,0.7s						
ASAR	Alice Springs	48.69	256	P	P	16 58 07.8	-3.4
WB0	Warramunga Arr	48.80	261	IAmb	IAmb	16 58 13.3	
	comp=Z,22nm,0.7s						
WRAB	Tennant Creek	48.82	261	P	P	16 58 08.5	-3.6
WRAB				IAmb	IAmb	16 58 13.4	
	comp=Z,19nm,0.8s						
WRAB	Tennant Creek	48.82	261	P	P	16 58 10.1	-2.0
WRAB	Tennant Creek	48.82	261	*ce*P	P	16 58 08.5	-3.6
WRAB				pmax	pmax		
	comp=Z,21nm,0.8s						
WRA	Warramunga Arr	48.82	261	P	P	16 58 08.8	-3.4
	comp=Z,20nm,0.8s,baz=97,slow=9.3,SNR=58						
WRA				PcP	PcP	16 59 37.5	+0.7
	comp=Z,4.6nm,0.7s,baz=96,slow=3.3,SNR=4.6						
	comp=Z,20nm,0.8s						
WRA	Warramunga Arr	48.82	261	P	P	16 58 08.5	-3.8
SMPI	Sarmi	50.07	285	P	P	16 58 20.6	-1.1
	comp=Z,42nm,1.1s						
KDU	Kakadu	52.19	269	P	P	16 58 33.5	-4.2
	comp=Z,11nm,0.7s						
GUMO	Guam	53.02	306	LR	LR	17 19 22.5	
	comp=Z,337nm,19.7s,baz=158,slow=34						
FORT	Forrest	53.26	246	P	P	16 58 44.6	-0.9
	comp=Z,27nm,0.7s						
FORT	Forrest	53.26	246	IAmb	IAmb	16 58 59.0	
	comp=Z,19nm,0.8s						
MTN	Manton Dam	53.40	269	P	P	16 58 42.9	-3.8
	comp=Z,28nm,0.7s						
MTN	Manton Dam	53.40	269	IAmb	IAmb	16 58 45.1	
	comp=Z,19nm,0.7s						
WRKA	Warakurna	53.59	253	P	P	16 58 44.9	-3.2
	comp=Z,11nm,0.7s						
SAUI	Saumlaki	54.70	275	P	P	16 58 54.8	-1.3
SAUI	Saumlaki	54.70	275	P	P	16 58 53.9	-2.2
	comp=Z,63nm,0.9s						
KNRA	Kununurra	54.90	265	P	P	16 58 54.0	-3.5
	comp=Z,25nm,1.1s						
KNRA	Kununurra	54.90	265	IAmb	IAmb	16 59 01.4	
	comp=Z,16nm,0.8s						
FAKI	Fak Fak	55.61	281	P	P	16 58 59.4	-3.3
	comp=Z,24nm,0.9s						
BNDI	Bandanaira	57.19	278	P	P	16 59 12.5	-1.5
FITZ	Fitzroy Crossi	57.25	261	LR	LR	17 23 01.1	
	comp=Z,1µm,18.9s,baz=98,slow=36						
SIJI	Sorong	57.31	283	P	P	16 59 12.1	-2.7
	comp=Z,62nm,0.8s						
SWI	Sorong	57.32	283	P	P	16 59 12.5	-2.4
SBA	Scott Base	58.39	185		P	16 59 25.7	+4.3
SBA				IAmb	IAmb	16 59 45.2	
	comp=Z,41nm,1.3s						
SBA	Scott Base	58.39	185	P	P	16 59 25.7	+4.3
SBA				pmax	pmax		
	comp=Z,41nm,1.3s						
VNDA	Vanda	58.53	186	P	P	16 59 26.1	+3.7
	comp=Z,3.5nm,1.0s,baz=358,slow=5.6,SNR=6.7						
VNDA				LR	LR	17 24 22.5	
	comp=Z,196nm,18.0s,baz=11,slow=36						
	comp=Z,3.5nm,1.0s						
VNDA	Vanda	58.53	186		P	16 59 25.6	+3.2
VNDA				IAmb	IAmb	16 59 51.3	
	comp=Z,30nm,1.6s						
VNDA	Vanda	58.53	186	P	P	16 59 25.6	+3.2
VNDA				pmax	pmax		
	comp=Z,30nm,1.6s						
RPN	Rapa Nui	58.59	110	LR	LR	17 18 18.3	
	comp=Z,496nm,21.1s,baz=304,slow=29						
KRAI	Karang Ratu	59.02	279	P	P	16 59 25.0	-1.9
	comp=Z,22nm,0.9s						
AAI	Ambon	59.08	278	P	P	16 59 25.1	-2.1
	comp=Z,28nm,0.7s						
NLAI	Namlea	60.26	278	P	P	16 59 31.6	-3.7
	comp=Z,34nm,1.3s						
SOEI	Soe	60.74	270	P	P	16 59 37.3	-1.5
SOEI	Soe	60.74	270	P	P	16 59 37.8	-1.0
SOEI	Soe	60.74	270	P	P	16 59 36.1	-2.7
BATI	Baumata	61.17	269	LR	LR	17 25 39.4	
	comp=Z,397nm,19.5s,baz=128,slow=36						
BATI	Baumata	61.17	269	P	P	16 59 40.1	-1.5
	comp=Z,39nm,0.8s						
TNTI	Ternate	61.53	282	P	P	16 59 43.8	-0.2
TNTI	Ternate	61.53	282	P	P	16 59 40.7	-3.3
	comp=Z,871nmcomp=Z,51nm,0.9s						
SANI	Sanana	61.72	279	P	P	16 59 42.9	-2.4
SANI	Sanana	61.72	279	P	P	16 59 42.7	-2.6
	comp=Z,25nm,1.2s						
PSAB3	Pilbara Seismi	61.82	256	P	P	16 59 43.7	-2.3
	comp=Z,26nm,1.0s						
PSA00	Pilbara Seismi	61.84	256	P	P	16 59 44.6	-1.4
	comp=Z,30nm,0.9s						
PSA00	Pilbara Seismi	61.84	256	P	P	16 59 43.4	-2.6
PSA00	Pilbara Seismi	61.84	256	P	P	16 59 45.1	-0.9
KLBR	Kellerberrin	61.97	244	P	P	16 59 46.0	-0.8
	comp=Z,80nm,0.8s						
KLBR	Kellerberrin	61.97	244	P	P	16 59 47.1	+0.3
MBWA	Marble Bar	62.03	256	P	P	16 59 44.5	-2.8
NWAO	Narrogin (SRO)	62.24	243	LR	LR	17 26 44.6	
	comp=Z,516nm,18.7s,baz=78,slow=36						
MMRI	Maumere	62.99	271	P	P	16 59 50.1	-3.7
MUN	Mundaring	63.23	244	P	P	16 59 55.2	+0.1
EDFI	Ende, Flores	63.47	270	P	P	16 59 54.4	-2.7
	comp=Z,34nm,0.8s						
JCJ	Chichijima	63.75	316	LR	LR	17 23 37.5	
	comp=Z,464nm,19.3s,baz=128,slow=32						
LUWI	Luwuk	65.08	279	P	P	17 00 06.3	-1.2
LUWI	Luwuk	65.08	279	P	P	17 00 03.7	-3.8
	comp=Z,48nm,1.3s						
LBFI	Labuhan Bajo,	65.24	270	P	P	17 00 06.1	-2.5
WBSI	Waikabubak, Su	65.35	268	P	P	17 00 19.6	+10
GTOI	Gorontalo	65.49	280	P	P	17 00 09.9	-0.3
	comp=Z,32nm,0.9s						
DAV	Davao City (W)	65.78	288	LR	LR	17 25 12.0	
	comp=Z,321nm,21.7s,baz=91,slow=33						
BKSI	Bulukumba	66.05	273	P	P	17 00 12.3	-1.5
	comp=Z,14nm,0.8s						
APSI	Ampana	66.17	278	P	P	17 00 12.9	-1.7
	comp=Z,41nm,1.0s						
MRSI	Marisa	66.42	280	P	P	17 00 13.9	-2.3
	comp=Z,13nm,0.6s						
DBNI	Kabupaten Domp	66.71	269	P	P	17 00 14.0	-4.1
	comp=Z,66nm,0.8s						
SPSI	Sidrap Palu	66.84	274	P	P	17 00 17.1	-1.8
	comp=Z,19nm,0.8s						
PLAI	Plampang	67.11	269	P	P	17 00 18.7	-1.9
PLAI	Plampang	67.11	269	P	P	17 00 18.6	-2.0
	comp=Z,80nm,1.1s						
TOLI2	Tolitoli	67.73	280	IAmb	IAmb	17 00 24.7	
	comp=Z,19nm,0.8s						
TOLI2	Tolitoli	67.73	280	P	P	17 00 22.8	-1.7
PCI	Palu	67.86	278	P	P	17 00 25.1	-0.3
	comp=Z,1µmcomp=Z,87nm,1.0s						
TWSI	Taliwang, Sumb	67.98	269	P	P	17 00 24.0	-2.1
	comp=Z,59nm,0.8s						
MPSI	Mapaga	68.26	279	P	P	17 00 26.3	-1.5
	comp=Z,713nmcomp=Z,54nm,0.8s						
KLNI	Mataram	68.82	269	P	P	17 00 29.4	-2.0
	comp=Z,2µmcomp=Z,32nm,0.7s						
KHKI	Kahang-Kahang	69.30	269	P	P	17 00 34.2	-0.1
	comp=Z,28nm,0.8s						
QSPA	South Pole Qui	69.78	180	P	P	17 00 39.7	+3.1
	comp=Z,16nm,1.1s,baz=41,slow=2.5,SNR=20						
QSPA				LR	LR	17 30 38.4	
	comp=Z,262nm,18.1s,baz=36,slow=35						
	comp=Z,16nm,1.1s						
QSPA	South Pole Qui	69.78	180	P	P	17 00 38.1	+1.6
JAGI	Jajag, Banyuwa	70.63	268	P	P	17 00 43.9	+1.4
JAGI	Jajag, Banyuwa	70.63	268	P	P	17 00 40.3	-2.2
	comp=Z,55nm,1.0s						
KMMI	Kalianget	71.25	269	P	P	17 00 45.0	-1.3
	comp=Z,30nm,0.8s						
MTKI	Muara Teweh, K	72.45	276	P	P	17 00 52.1	-1.4
MJAR	Matsushiro Arr	72.64	321	P	P	17 00 53.0	-1.2
	comp=Z,28nm,0.8s,baz=153,slow=6.3,SNR=68						
MJAR				LR	LR	17 27 20.3	
	comp=Z,220nm,21.4s,baz=134,slow=32						
	comp=Z,28nm,0.8s						
MJAR	Matsushiro Arr	72.64	321	P	P	17 00 53.0	-1.2
MJAR				IAmb	IAmb	17 00 54.9	
	comp=Z,26nm,0.8s						
MJAR	Matsushiro Arr	72.64	321	P	P	17 00 53.0	-1.2
MAJO	Matsushiro	72.64	321	P	P	17 00 54.9	+0.7
MJB9	Matsu-Tunnel	72.65	321	P	P	17 00 51.7	-2.5
TGY	Tagaytay City	72.96	292	LR	LR	17 29 16.6	
	comp=Z,366nm,20.4s,baz=118,slow=33						
NIKH	Nikolski High	73.07	3	P	P	17 00 57.1	+0.9
	baz=185						
SNJI	Sawahan-Nganju	73.09	268	P	P	17 00 57.6	+0.1
	comp=Z,52nm,1.0s						
SJI	Sawahan	73.10	268	P	P	17 00 56.9	-0.6
	comp=Z,31nm,1.0s						
JOW	Kunigami	73.35	308	LR	LR	17 29 45.7	
	comp=Z,199nm,19.0s,baz=88,slow=33						
PCJI	Pacitan	73.50	267	P	P	17 00 58.6	-1.1
SHEM	Shemya Is, Ala	73.52	352	LR	LR	17 29 04.7	
	comp=Z,672nm,18.8s,baz=146,slow=32						
JSD	Sado	73.63	322	P	P	17 00 58.2	-1.7
JSD				IAmb	IAmb	17 01 01.0	
	comp=Z,20nm,0.8s						
JSD	Sado	73.63	322	P	P	17 00 59.6	-0.3
KKM	Kota Kinabalu	73.83	283	P	P	17 01 00.4	-1.4
	comp=Z,20nm,0.8s						
JNU	Nakatsue	75.11	314	LR	LR	17 28 51.8	
	comp=Z,242nm,21.2s,baz=106,slow=32						
JNU	Nakatsue	75.11	314	P	P	17 01 07.6	-1.1
JNU				IAmb	IAmb	17 01 09.4	
	comp=Z,45nm,1.0s						
JNU	Nakatsue	75.11	314	P	P	17 01 09.2	+0.5
	comp=Z,47nm,1.9s						
JKA	Kamikawa-asahi	75.65	329	IAmb	IAmb	17 01 13.6	
	comp=Z,34nm,0.8s						
ASAJ	Asahikawa	75.66	329	LR	LR	17 28 49.8	
	comp=Z,290nm,21.4s,baz=162,slow=31						
LPIG	La Paz	75.69	57	LR	LR	17 30 22.4	
	comp=Z,455nm,18.1s,baz=216,slow=32						
CTJI	Waduk Cacaban	75.76	268	P	P	17 01 12.5	-0.3
	comp=Z,53nm,1.4s						
CHNA	Chernabura Isl	75.76	8	P	P	17 01 13.4	+1.6
	baz=194						
KPJI	Karang Pucung	75.89	267	P	P	17 01 12.8	-0.8
	comp=Z,52nm,0.9s						
SDPT	Sand Point	76.15	8	P	P	17 01 15.6	+1.5
	baz=193						
SBUM	Sibu	76.17	278	P	P	17 01 15.3	+0.1
SBUM	Sibu	76.17	278	P	P	17 01 13.9	-1.3
S12K	Black Hills	76.31	7	P	P	17 01 15.9	+0.9
	baz=191						
PFO	Pinyon Flats O	76.32	46	LR	LR	17 32 20.1	
	comp=Z,262nm,18.2s,baz=252,slow=34						
P08K	Saint George I	76.67	2	P	P	17 01 18.3	+1.4
	baz=184						
BBJI	Bungbulang	77.05	267	P	P	17 01 19.9	-0.3
BBJI	Bungbulang	77.05	267	P	P	17 01 18.4	-1.8
	comp=Z,37nm,0.8s						
NACB	Ninganchiao	77.12	302	P	P	17 01 20.1	-0.2
S14K	Fog Glacier	77.18	8	P	P	17 01 21.0	+1.0
	baz=193						
SPIA	Saint Paul Isl	77.22	2	P	P	17 01 20.8	+0.7
	baz=183						
PEA0B	Petropavlovsk-	77.25	343	*ce*P	P	17 01 20.2	-0.2
PETK	Petropavlovsk-	77.25	343	P	P	17 01 20.2	-0.2
	comp=Z,29nm,0.8s,baz=107,slow=9.2,SNR=35						
	comp=Z,29nm,0.8s						
PETK	Petropavlovsk-	77.25	343	P	P	17 01 19.7	-0.7
PETK	Petropavlovsk-	77.25	343	P	P	17 01 19.7	-0.7
CHIR	Chirikof Islan	77.32	10	P	P	17 01 21.5	+0.9
	baz=197						
SSLB	Suanglung	77.45	301	IAmb	IAmb	17 01 25.0	
	comp=Z,26nm,0.9s						
SSLB	Suanglung	77.45	301	P	P	17 01 21.4	-0.8
TPUB	Ta-pu	77.47	301	P	P	17 01 20.2	-2.1
TPUB	Ta-pu	77.47	301	P	P	17 01 21.0	-1.3
YBH	Yreka Blue Hor	77.54	36	LR	LR	17 33 23.1	
	comp=Z,22nm,18.1s,baz=252,slow=34						
YSS	Yuzhno-Sakhali	77.69	331	P	P	17 01 22.4	-0.6
YSS	Yuzhno-Sakhali	77.69	331	P	P	17 01 23.7	+0.8
YSS	Yuzhno-Sakhali	77.69	331	*e*P	P	17 01 23.4	+0.5
YSS				*e*		17 01 31.7	
YSS				*e*S	S	17 11 14.7	+0.9
YSS				*e*PS	PnS	17 11 32.8	-23
YSS				pmax	pmax		
	comp=Z,60nm,0.8s						
YSS				pmax	pmax		
	comp=Z,300nm,7.2s						
YSS				MLR	MLR		
	comp=Z,500nm,19.0s						
YSS				MLR	MLR		
	comp=E,300nm,18.0s						
NVAR	Mina Array Bea	78.02	41	P	P	17 01 28.4	+3.1
	comp=E,1.1nm,0.5s,baz=219,slow=9.8,SNR=5.5						
NVAR				LR	LR	17 31 47.3	
	comp=E,353nm,18.3s,baz=271,slow=32						
	comp=E,1.1nm,0.5s						
NVAR	Mina Array Bea	78.02	41	P	P	17 01 25.0	-0.3
DBJI	Dramaga	78.19	267	P	P	17 01 25.5	-1.1
	comp=E,7µmcomp=E,66nm,0.8s						
SII	Sitkinak Islan	78.27	11	P	P	17 01 26.8	+0.8
	baz=198						
R16K	Pilot Point	78.70	9	P	P	17 01 29.3	+1.0
	baz=195						
SHPR	Sheep Range	78.87	44		P	17 01 28.7	-1.3
R17L	Mt. Peulik Vol	78.94	9	P	P	17 01 30.2	+0.5
	baz=196						
OHAK	Old Harbor	79.06	11	P	P	17 01 31.0	+0.8
	baz=199						
BELA	Belgrano 2	79.19	172	P	P	17 01 32.7	+1.8
BELA				IAmb	IAmb	17 01 46.8	
	comp=Z,42nm,1.9s						
KSRS	Korea Array	79.61	316	P	P	17 01 34.4	+0.7
	comp=Z,14nm,0.8s,baz=129,slow=5.7,SNR=41						
KSRS				LR	LR	17 30 45.4	
	comp=Z,249nm,21.8s,baz=125,slow=31						
	comp=Z,14nm,0.8s						
Q17K	Contact Creek	79.62	9	P	P	17 01 34.4	+1.0
	baz=197						
KSAR	Wonju Array Be	79.62	316	P	P	17 01 33.4	-0.4
KSAR	Wonju Array Be	79.62	316	P	P	17 01 33.4	-0.4
KS19	Wonju Array Si	79.67	316	IAmb	IAmb	17 01 46.0	
	comp=Z,44nm,1.2s						
KDAK	Kodiak Island	79.71	11	LR	LR	17 29 41.4	
	comp=Z,454nm,20.8s,baz=211,slow=30						
KDAK	Kodiak Island	79.71	11	P	P	17 01 35.0	+1.2
	baz=200						
PMSA	Palmer Station	79.76	156	LR	LR	17 35 39.9	
	comp=Z,149nm,18.3s,baz=294,slow=35						
O14K	Tigyukauivet M	79.89	6	P	P	17 01 36.1	+1.4
	baz=192						
Q16K	King Salmon	79.90	9	P	P	17 01 35.7	+0.9
	baz=196						
O15K	Ungalikthiuk R	79.97	7	P	P	17 01 35.9	+0.7
	baz=193						
P16K	Nushagak River	80.06	8	P	P	17 01 36.8	+1.1
	baz=195						
Q18K	Katmai Hardscr	80.12	10	P	P	17 01 37.0	+0.8
	baz=198						
X16A	Lo Mia Camp, P	80.22	48	IAmb	IAmb	17 01 50.6	
	comp=Z,42nm,1.9s						
P17K	Kvichak River	80.43	9	P	P	17 01 37.1	-0.6
P17K	Kvichak River	80.43	9	P	P	17 01 38.6	+0.9
	baz=196						
N14K	Kuskokwak Cree	80.51	6	P	P	17 01 39.3	+1.3
	baz=191						
Q20K	Shuyak Island	80.53	11	P	P	17 01 39.2	+1.0
	baz=200						
O16K	Kokwok River B	80.59	8	P	P	17 01 40.1	+1.6
	baz=195						
M11K	Mekoryuk	80.61	4	P	P	17 01 39.4	+0.8
	baz=187						
Q19K	Cape Douglas,	80.61	10	P	P	17 01 39.6	+0.9
	baz=199						
KASI	Kota Agung	80.64	268	P	P	17 01 39.0	-0.9
	comp=Z,57nm,0.8s						
TYV	Tymovskoe	80.67	334	*e*P	P	17 01 39.5	+0.4
TYV				*e*S	S	17 11 46.8	+1.5
TYV				pmax	pmax		
	comp=Z,24nm,0.7s						
TYV				pmax	pmax		
	comp=Z,300nm,3.6s						
TYV				smax	smax		
	comp=N,300nm,6.5s						
TYV				smax	smax		
	comp=E,500nm,6.5s						
P18K	Big Mountain,	80.80	9	P	P	17 01 40.5	+0.8
	baz=197						
M13K	Dall Lake	80.84	5	P	P	17 01 41.0	+1.2
	baz=190						
O17K	Koliganek Bris	80.90	8	P	P	17 01 41.0	+0.9
	baz=196						
N15K	Kwethluk River	80.91	7	P	P	17 01 41.1	+0.8
	baz=193						
PSTR	Posyet	80.95	322	*i* P	P	17 01 41.7	+0.9
LWLI	Liwa	81.22	268	P	P	17 01 41.4	-1.8
O18K	Koktuh Hills	81.25	9	P	P	17 01 42.9	+0.8
	baz=197						
USRK	Ussuriysk Ar.	81.25	324	P	P	17 01 42.2	-0.2
	comp=E,5.7nm,0.7s,baz=112,slow=4.2,SNR=16						
	comp=E,5.7nm,0.7s						
MDSI	Maura Dua	81.29	268	P	P	17 01 41.7	-1.7
	comp=E,41nm,0.8s						
M14K	Bethel	81.30	6	P	P	17 01 43.5	+1.3
	baz=191						
ELK	Elko	81.30	41	LR	LR	17 33 59.4	
	comp=E,391nm,18.2s,baz=238,slow=33						
N16K	Nishlik Lake	81.36	7	P	P	17 01 43.7	+1.0
	baz=194						
M15K	Kasigluk River	81.36	6	P	P	17 01 43.9	+1.2
	baz=192						
P19K	Oil Pt	81.37	10	P	P	17 01 43.7	+1.0
	baz=199						
N17K	Nushagak Hills	81.61	8	P	P	17 01 44.7	+0.7
	baz=196						
HOM	Homer	81.65	11	P	P	17 01 44.5	+0.4
	baz=201						
ILSW	Iliamna Southw	81.69	10	IAmb	IAmb	17 01 46.6	
	comp=Z,40nm,1.0s						
O19K	Port Alsworth	81.71	10	P	P	17 01 45.2	+0.8
	baz=198						
L14K	Kuka Creek	81.81	5	P	P	17 01 45.9	+0.9
	baz=190						
O20K	Slope Mountain	81.87	10	P	P	17 01 46.5	+1.1
	baz=200						
M16K	Timber Creek	81.88	7	P	P	17 01 46.1	+0.7
	baz=194						
BRSE	Bradley Lake S	81.89	11	P	P	17 01 46.2	+0.7
	baz=202						
G08A	Pilot Rock	81.93	35	P	P	17 01 45.6	-0.5
N18K	Kilae Creek	81.94	9	P	P	17 01 46.6	+0.9
	baz=197						
RED	Redoubt Volcan	82.17	10	IAmb	IAmb	17 01 51.4	
	comp=Z,18nm,0.8s						
K13K	Kusilvak Mount	82.25	4	P	P	17 01 48.1	+0.9
	baz=188						
L15K	Ungalak Mounta	82.25	6	P	P	17 01 47.8	+0.5
	baz=191,SNR=5.9						
N19K	Bonanza Creek	82.27	9	P	P	17 01 48.4	+0.8
	baz=198						
BBB	Bella Bella	82.28	26	LR	LR	17 31 42.0	
	comp=Z,163nm,18.7s,baz=228,slow=31						
M17K	Holitna River	82.43	8	P	P	17 01 49.1	+0.8
	baz=195						
SEW	Seward	82.47	12	P	P	17 01 49.3	+0.9
	baz=203						
L16K	Owhat River	82.49	7	P	P	17 01 49.5	+1.0
	baz=193						
Q23K	Middleton Isla	82.49	14	P	P	17 01 49.7	+1.1
	baz=206						
H03S2	Juan Fernandez	82.58	123	T	T	18 34 23.6	
	baz=249,slow=75,SNR=43						
H03S1	Juan Fernandez	82.60	123	T	T	18 34 26.1	
	baz=249,slow=75,SNR=47						
H03S3	Juan Fernandez	82.60	123	T	T	18 34 31.0	
	baz=249,slow=75,SNR=54						
H03N2	Juan Fernandez	82.71	123	T	T	18 34 26.9	
	baz=257,slow=72,SNR=20						
H03N3	Juan Fernandez	82.71	123	T	T	18 34 28.0	
	baz=257,slow=72,SNR=17						
H03N1	Juan Fernandez	82.72	123	T	T	18 34 22.5	
	baz=257,slow=72,SNR=8.0						
M18K	Stony River	82.73	8	P	P	17 01 50.7	+1.0
	baz=197						
O22K	Cooper Landing	82.77	12	P	P	17 01 50.4	+0.4
	baz=202						
CAPN	Captain Cook N	82.77	11	P	P	17 01 50.5	+0.5
	baz=201						
P23K	Montague Islan	82.78	13	P	P	17 01 50.6	+0.5
	baz=205						
MDJ	Mudanjiang	82.85	323	P	P	17 01 52.0	+1.2
MDJ				pmax	pmax		
	comp=Z,37nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,350nm,8.0s						
MDJ	Mudanjiang	82.85	323	P	P	17 01 52.0	+1.2

K15K	Wolf Creek Mou	82.86	6	P	P	17 01 51.1	+0.6
	baz=191						
CRAG	Craig	82.89	22	P	P	17 01 51.3	+0.6
	baz=218						
N20K	Mount Spurr	83.00	10	P	P	17 01 52.0	+0.7
	baz=200						
SPCR	Spurr Chakacha	83.00	10	P	P	17 01 52.0	+0.7
	baz=200						
L17K	Donlin	83.03	7	P	P	17 01 52.3	+1.0
	baz=194						
KSI	Kapahiang	83.06	269	P	P	17 01 52.0	-0.7
NJ2	Nanjing	83.06	308	*e*P	P	17 01 53.3	+1.1
NJ2				pmax	pmax		
	comp=Z,14nm,0.7s						
J14K	Nanvaranak Lak	83.14	5	P	P	17 01 52.6	+0.8
	baz=189						
MAW	Mawson	83.16	199	P	P	17 01 53.8	+1.7
	comp=Z,3.1nm,1.2s						
MAW	Mawson	83.16	199	P	P	17 01 54.0	+1.9
	comp=Z,7.3nm,0.7s,baz=138,slow=8.0,SNR=9.3						
MAW				LR	LR	17 37 58.8	
	comp=Z,390nm,18.9s,baz=112,slow=35						
	comp=Z,7.3nm,0.7s						
V35K	Ketchikan	83.31	23	P	P	17 01 53.4	+0.5
	baz=219						
L18K	Granite Mounta	83.31	8	P	P	17 01 53.4	+0.6
	baz=196						
RC01	Rabbit Creek A	83.33	11	P	P	17 01 53.4	+0.5
	baz=202						
GRNR	Gornyy	83.34	331	⇑*i*P	P	17 01 54.1	+0.9
GRNR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KAIM	Kayak Island	83.38	14	P	P	17 01 53.5	+0.3
	baz=207						
PWL	Port Wells	83.38	12	P	P	17 01 53.8	+0.5
	baz=204						
U33K	Whale Pass	83.40	21	P	P	17 01 53.9	+0.6
	baz=218						
TXAR	Lajitas Array	83.41	56	P	P	17 01 58.0	+3.8
	comp=Z,2.3nm,0.9s,baz=217,slow=7.3,SNR=11						
TXAR				LR	LR	17 34 21.6	
	comp=Z,218nm,18.1s,baz=274,slow=32						
	comp=Z,2.3nm,0.9s						
SIT	Sitka	83.42	20	P	P	17 01 54.1	+0.6
	baz=216						
PLID	Pearl Lake	83.45	37	IAmb	IAmb	17 02 19.8	
	comp=Z,38nm,2.0s						
M20K	Styx River	83.50	10	P	P	17 01 54.5	+0.6
	baz=199						
SUA	Susitna One	83.50	11	IAmb	IAmb	17 01 56.7	
	comp=Z,15nm,0.7s						
SUA	Susitna One	83.50	11	P	P	17 01 54.6	+0.7
	baz=201						
L19K	White Mountain	83.53	9	P	P	17 01 54.5	+0.5
	baz=198						
MASI	Maura Aman, Be	83.56	269	P	P	17 01 54.6	-0.7
	comp=Z,71nm,1.0s						
K17K	Iditarod	83.60	7	P	P	17 01 55.0	+0.7
	baz=194						
EYAK	Cordova Ski Ar	83.64	13	P	P	17 01 55.3	+0.8
	baz=206						
GLI	Glacier Island	83.65	13	P	P	17 01 55.5	+0.9
	baz=205						
MYKOM	Kota Tinggi	83.74	274	P	P	17 01 57.0	+0.8
MYKOM	Kota Tinggi	83.74	274	P	P	17 01 55.4	-0.8
	comp=Z,33nm,1.4s						
GAMB	Gambell	83.81	1	P	P	17 01 55.9	+0.7
	baz=182						
SKT	Skwentna	83.84	10	P	P	17 01 56.2	+0.7
	baz=201						
KNK	Knik Glacier	83.87	12	P	P	17 01 56.6	+0.9
	baz=204						
S31K	Pelican	83.88	19	P	P	17 01 57.0	+1.2
	baz=215						
WRAK	Wrangell Islan	83.90	22	P	P	17 01 57.2	+1.3
	baz=218						
PMR	Palmer	83.91	11	P	P	17 01 57.1	+1.3
	baz=203						
J16K	Anvik River	83.92	6	P	P	17 01 56.8	+1.0
	baz=192						
PV18	Skein Mesa, Pa	83.98	46	IAmb	IAmb	17 02 22.2	
	comp=Z,23nm,1.1s						
S32K	Killisnoo	84.00	20	P	P	17 01 57.3	+1.0
	baz=216						
ANMO	Albuquerque	84.01	50	LR	LR	17 36 28.5	
	comp=Z,214nm,18.1s,baz=260,slow=34						
ANMO	Albuquerque	84.01	50	*ce*P	P	17 01 57.7	+0.4
ANMO				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GHO	Glory Hole Cre	84.11	11	IAmb	IAmb	17 01 59.5	
	comp=Z,19nm,0.8s						
DIV	Divide	84.16	13	IAmb	IAmb	17 02 00.3	
	comp=Z,16nm,0.8s						
J17K	VABM Dome	84.18	6	IAmb	IAmb	17 02 15.1	
	comp=Z,15nm,1.0s						
J17K	VABM Dome	84.18	6	P	P	17 01 58.1	+0.9
	baz=194						
SML	Sawmill	84.26	12	P	P	17 01 58.3	+0.6
	baz=204						
BMRM	Bremner River	84.26	14	P	P	17 01 58.5	+0.7
	baz=207						
U35K	Hyder	84.34	23	P	P	17 01 58.8	+0.7
	baz=220						
M23K	Glacier View	84.36	12	P	P	17 01 58.8	+0.6
	baz=204						
R31K	City Hall, Gus	84.40	19	P	P	17 01 58.9	+0.5
	baz=215						
CRQE	Cirque	84.42	14	P	P	17 01 59.2	+0.6
	baz=208						
KLU	Klutina	84.45	13	P	P	17 01 59.3	+0.5
	baz=206						
CUT	Chulitna	84.46	11	P	P	17 01 59.5	+0.8
	baz=202						
SCM	Sheep Creek Mo	84.47	12	P	P	17 01 59.6	+0.8
	baz=205						
I17K	Unalakleet	84.50	6	P	P	17 01 59.6	+0.9
	baz=192						
J18K	Innoko River	84.51	7	IAmb	IAmb	17 02 02.2	
	comp=Z,23nm,1.1s						
J18K	Innoko River	84.51	7	P	P	17 01 59.6	+0.7
	baz=196						
PINM	Pinnacle	84.55	16	P	P	17 01 60.0	+0.7
	baz=211						
PPLA	Purkeypile	84.60	10	P	P	17 02 00.3	+0.7
	baz=200						
R32K	Eaglecrest	84.67	19	P	P	17 02 00.5	+0.7
	baz=216						
QIZ	Qiongzhong	84.67	292	P	P	17 02 00.0	-0.7
QIZ				S	S	17 12 28.3	+0.8
QIZ				LR	LR		
	comp=Z,150nm,18.5s						
QIZ				LR	LR		
	comp=Z,210nm,22.1s						
QIZ				LR	LR		
	comp=Z,250nm,25.1s						
K20K	Telida	84.76	9	P	P	17 02 01.4	+1.2
	baz=198						
BNX	BinXian	84.76	323	⇑P	P	17 02 01.0	+0.4
BNX				pmax	pmax		
	comp=Z,53nm,0.8s						
NEW	Newport	84.78	34	LR	LR	17 36 18.5	
	comp=Z,341nm,18.0s,baz=232,slow=33						
CN2	Changchun	84.78	320	*e*P	P	17 02 01.8	+1.1
CN2				*e*S	S	17 12 32.0	+4.4
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,300nm,15.0s						
CN2				LR	LR		
	comp=Z,400nm,15.0s						
CN2				LR	LR		
	comp=Z,200nm,14.0s						
MA2	Magadan	84.79	343	*ce*P	P	17 01 59.7	-0.7
MA2				pmax	pmax		
	comp=Z,85nm,2.5s						
ANM	Nome	84.82	4	P	P	17 02 01.7	+1.3
	baz=188						
P29M	Windy Craggy	84.83	17	P	P	17 02 01.6	+1.0
	baz=213						
N25K	Chitina, Valde	84.84	13	IAmb	IAmb	17 02 04.0	
	comp=Z,9.8nm,0.7s						
N25K	Chitina, Valde	84.84	13	P	P	17 02 01.3	+0.6
	baz=207,SNR=5.8						
M24K	Tolsona, Glenn	84.95	13	P	P	17 02 01.7	+0.4
	baz=206						
MCARA	McCarthy VSAT	84.99	14	P	P	17 02 02.1	+0.7
	baz=209						
CTG	Chitna Glacier	85.02	15	P	P	17 02 02.6	+0.9
	baz=210						
CTGM	Chitina Glacie	85.03	15	IAmb	IAmb	17 02 17.5	
	comp=Z,14nm,0.8s						
BARN	Barnard Glacie	85.03	15	IAmb	IAmb	17 02 10.9	
	comp=Z,24nm,1.1s						
T35M	Bob Quinn	85.07	22	P	P	17 02 02.6	+0.7
	baz=220						
PLBC	Pleasant Camp	85.08	18	P	P	17 02 02.2	+0.4
	baz=215						
WAT6	Susitna Watana	85.08	12	P	P	17 02 02.9	+0.9
	baz=204,SNR=5.7						
H16K	Elim	85.11	5	P	P	17 02 03.4	+1.5
	baz=191,SNR=20						
O28M	Mount Upton	85.14	16	P	P	17 02 03.3	+0.8
	baz=211						
WAT1	Susitna Watana	85.16	11	P	P	17 02 03.0	+0.8
	baz=203						
J19K	Poorman	85.16	8	P	P	17 02 03.0	+0.8
	baz=197						
O29M	Mount Kennedy	85.17	17	P	P	17 02 03.0	+0.5
	baz=213						
G15K	Niukluk	85.33	4	P	P	17 02 04.5	+1.5
	baz=189						
SKAG	Skagway	85.38	18	P	P	17 02 03.8	+0.5
SKAG	Skagway	85.38	18	P	P	17 02 04.8	+1.5
	baz=216						
HARP	HAARP	85.43	13	P	P	17 02 05.2	+1.6
	baz=207						
TRF	Thorofare Moun	85.43	10	IAmb	IAmb	17 02 20.4	
	comp=Z,26nm,0.9s						
TRF	Thorofare Moun	85.43	10	P	P	17 02 04.9	+1.1
	baz=202						
P30M	Million Dollar	85.46	17	P	P	17 02 04.3	+0.5
	baz=214						
S34M	Telegraph Cree	85.48	21	P	P	17 02 04.8	+0.9
	baz=219						
CHUM	Lake Minchumin	85.51	9	P	P	17 02 05.2	+1.3
	baz=200						
J20K	Nowinta River	85.53	8	IAmb	IAmb	17 02 07.1	
	comp=Z,27nm,0.9s						
J20K	Nowinta River	85.53	8	P	P	17 02 05.1	+1.1
	baz=198						
CMIG	Matias Romero	85.59	70	LR	LR	17 33 26.2	
	comp=Z,154nm,19.1s,baz=180,slow=31						
DHY	Denali Highway	85.60	12	IAmb	IAmb	17 02 22.9	
	comp=Z,12nm,1.0s						
DHY	Denali Highway	85.60	12	P	P	17 02 05.6	+1.0
	baz=204						
H17K	Granite Mounta	85.60	6	IAmb	IAmb	17 02 07.3	
	comp=Z,17nm,0.9s						
H17K	Granite Mounta	85.60	6	P	P	17 02 05.1	+0.8
	baz=193,SNR=10						
F14K	Arctic Creek	85.67	3	P	P	17 02 06.5	+1.8
	baz=187						
YUK8	Steele Glacier	85.69	16	P	P	17 02 06.6	+1.4
	baz=212						
TNA	Tin City	85.69	2	P	P	17 02 06.2	+1.5
	baz=185,SNR=5.7						
GCSA	Galena City Sc	85.73	7	P	P	17 02 06.1	+1.2
	baz=196,SNR=10						
YUK6	Outpost Mounta	85.76	16	P	P	17 02 06.3	+0.7
	baz=213						
WHN	Wuhan	85.78	305	P	P	17 02 06.8	+0.8
WHN				sP	sP	17 02 14.3	+1.4
DRIO	Del Rio	85.83	57		P	17 02 05.1	-1.2
PAX	Paxson	85.88	12	P	P	17 02 06.8	+1.0
	baz=206						
HYT	Haines Junctio	85.89	17	P	P	17 02 06.7	+0.6
	baz=214						
M26K	Nabesna, AK	85.89	14	P	P	17 02 06.9	+1.0
	baz=208						
MCK	McKinley	85.92	11	P	P	17 02 06.8	+0.8
	baz=203,SNR=12						
BPAW	Bear Paw Mtn.	85.92	10	P	P	17 02 06.8	+0.8
	baz=201						
Q32M	Nakina River	85.93	20	P	P	17 02 06.8	+0.5
	baz=218						
YUK3	Moose Creek	85.94	15	P	P	17 02 07.1	+0.8
	baz=211,SNR=7.6						
BW06	Boulder Array	85.95	42	P	P	17 02 07.1	+0.2
BW06				IAmb	IAmb	17 02 39.7	
	comp=Z,23nm,2.0s						
PDAR	Pinedale Array	85.95	42	P	P	17 02 09.3	+2.4
	comp=Z,0.6nm,0.5s,baz=211,slow=4.9,SNR=7.2						
PDAR				LR	LR	17 36 04.2	
	comp=Z,177nm,19.2s,baz=252,slow=32						
	comp=Z,0.6nm,0.5s						
PDAR	Pinedale Array	85.95	42	P	P	17 02 06.0	-0.9
H18K	Honhosa River	85.97	6	IAmb	IAmb	17 02 08.4	
	comp=Z,19nm,1.0s						
H18K	Honhosa River	85.97	6	P	P	17 02 07.0	+0.9
	baz=194,SNR=6.3						
P32M	Atlin	85.97	19	P	P	17 02 06.8	+0.5
	baz=217						
PDSI	Padang	85.99	271	P	P	17 02 06.0	-1.5
	comp=Z,2µmcomp=Z,23nm,0.9s						
F15K	North Star Dit	86.00	4	IAmb	IAmb	17 02 09.1	
	comp=Z,22nm,1.1s						
YUK4	Talbot Arm	86.03	16	P	P	17 02 07.8	+1.0
	baz=213						
I20K	Naaghedeneel	86.08	8	P	P	17 02 07.3	+0.6
	baz=198						
G17K	Kiwalik Mounta	86.09	5	P	P	17 02 07.6	+0.9
	baz=192,SNR=11						
M27K	Edge Creek, AK	86.11	14	P	P	17 02 08.1	+1.0
	baz=210						
MENT	Mentasta	86.21	13	P	P	17 02 07.3	-0.2
O30N	Mendenhall	86.24	17	P	P	17 02 08.5	+0.8
	baz=215						
PLCA	Paso Flores	86.30	132	P	P	17 02 13.3	+4.7
	comp=Z,1.6nm,0.9s,baz=1.3,slow=18,SNR=3.7						
PLCA				LR	LR	17 34 33.7	
	comp=Z,228nm,19.0s,baz=248,slow=31						
	comp=Z,1.6nm,0.9s						
PLCA	Paso Flores	86.30	132	P	P	17 02 08.9	+0.2
PLCA				IAmb	IAmb	17 03 03.4	
	comp=Z,36nm,1.9s						
PLCA	Paso Flores	86.30	132	P	P	17 02 08.9	+0.2
PLCA				pmax	pmax		
	comp=Z,36nm,2.0s						
TIA	Tai'an	86.31	311	P	P	17 02 09.3	+0.7
TIA				pmax	pmax		
	comp=Z,37nm,0.9s						
L26K	Log Cabin Wild	86.37	13	IAmb	IAmb	17 02 21.2	
	comp=Z,31nm,1.6s						
L26K	Log Cabin Wild	86.37	13	P	P	17 02 08.8	+0.6
	baz=208						
BVCY	Beaver Creek	86.39	15	P	P	17 02 09.6	+1.2
	baz=210,SNR=6.2						
WHY	Whitehorse	86.49	18	P	P	17 02 09.8	+0.9
	baz=216						
N30M	Aishikik Lake	86.53	17	P	P	17 02 10.5	+1.4
	baz=214						
H19K	Roundabout Mou	86.54	7	P	P	17 02 09.7	+0.8
	baz=196						
K24K	Donnelly Dome	86.57	12	IAmb	IAmb	17 02 25.8	
	comp=Z,26nm,0.9s						
K24K	Donnelly Dome	86.57	12	P	P	17 02 09.9	+0.7
	baz=206						
G18K	Tagagawik	86.66	6	P	P	17 02 10.3	+0.8
	baz=194						
R33M	Jennings River	86.69	20	IAmb	IAmb	17 02 29.6	
	comp=Z,17nm,1.4s						
R33M	Jennings River	86.69	20	P	P	17 02 11.4	+1.4
	baz=220						
H20K	Anotleneega Mo	86.69	8	P	P	17 02 10.8	+1.1
	baz=198,SNR=13						
NEA2	Nenana	86.69	10	IAmb	IAmb	17 02 34.9	
	comp=Z,19nm,1.2s						
NEA2	Nenana	86.69	10	P	P	17 02 11.6	+1.9
	baz=203						
RIDG	Independent Ri	86.69	12	P	P	17 02 11.4	+1.6
	baz=207						
L27K	Beaver Creek,	86.73	14	P	P	17 02 12.2	+2.1
	baz=210						
GULI	GuiLin	86.74	298	P	P	17 02 13.6	+2.7
GULI				pmax	pmax		
	comp=Z,32nm,1.1s						
P33M	Teslin, Yukon	86.75	19	P	P	17 02 11.9	+1.7
	baz=218						
BCAR	Beaver Creek A	86.75	14	P	P	17 02 11.3	+1.2
DOT	Dot Lake	86.77	13	IAmb	IAmb	17 02 24.7	
	comp=Z,12nm,0.9s						
I21K	Tanana	86.79	9	IAmb	IAmb	17 02 12.9	
	comp=Z,22nm,1.1s						
I21K	Tanana	86.79	9	P	P	17 02 12.2	+2.0
	baz=200,SNR=5.2						
HDA	Harding Lake	86.90	11	IAmb	IAmb	17 02 28.0	
	comp=Z,19nm,0.8s						
HDA	Harding Lake	86.90	11	P	P	17 02 12.4	+1.6
	baz=205,SNR=12						
N31M	Braeburn, Yuko	86.91	17	IAmb	IAmb	17 02 26.4	
	comp=Z,12nm,0.8s						
N31M	Braeburn, Yuko	86.91	17	P	P	17 02 12.5	+1.6
	baz=215						
CCB	Clear Creek Bu	86.96	11	IAmb	IAmb	17 02 27.3	
	comp=Z,18nm,0.8s						
F17K	Baldwin Pennin	86.96	5	P	P	17 02 12.4	+1.4
	baz=192						
M29M	Somme Creek	87.00	15	P	P	17 02 12.9	+1.4
	baz=213						
G19K	Purcell Mounta	87.06	7	P	P	17 02 13.3	+1.8
	baz=195						
SCRK	Sand Creek	87.08	13	P	P	17 02 13.1	+1.3
	baz=208						
UBPT	Khong Chiam	87.10	287	P	P	17 02 12.7	-0.1
H21K	Melozitna Rive	87.12	8	IAmb	IAmb	17 02 15.1	
	comp=Z,17nm,1.0s						
H21K	Melozitna Rive	87.12	8	P	P	17 02 13.6	+1.8
	baz=199						
SISI	Saibi	87.14	270	P	P	17 02 13.2	+0.1
	comp=Z,27nm,0.8s						
I23K	Minto, Yukon-K	87.16	10	IAmb	IAmb	17 02 14.6	
	comp=Z,26nm,1.3s						
I23K	Minto, Yukon-K	87.16	10	P	P	17 02 13.2	+1.2
	baz=203,SNR=6.6						
COLA	College	87.16	11	P	P	17 02 12.8	+0.8
COLA	College	87.16	11	P	P	17 02 11.9	-0.1
COLA	College	87.16	11	*i* P	P	17 02 11.4	-0.6
COLA				pmax	pmax		
	comp=Z,26nm,1.0s						
COLA	College	87.16	11	P	P	17 02 13.3	+1.3
	baz=204						
SEY	Seymchan	87.20	345	*ce*P	P	17 02 11.1	-1.1
SEY				pmax	pmax		
	comp=Z,35nm,0.8s						
ILAR	Eielson Array	87.24	11	P	P	17 02 13.6	+1.2
	comp=Z,3.7nm,0.6s,baz=227,slow=6.1,SNR=84						
ILAR				PP	PP	17 05 37.9	+1.1
	comp=Z,0.7nm,0.9s,baz=215,slow=7.7,SNR=2.5						
ILAR				LR	LR	17 33 36.1	
	comp=Z,188nm,20.1s,baz=172,slow=30						
	comp=Z,3.7nm,0.6s						
ILAR	Eielson Array	87.24	11	P	P	17 02 13.0	+0.6
ILAR	Eielson Array	87.24	11	P	P	17 02 13.0	+0.6
ILAR						17 05 37.9	
F18K	Selawik	87.25	5	P	P	17 02 14.1	+1.7
	baz=193,SNR=9.8						
ELIB	Princess Elisa	87.28	185	*d*P	P	17 02 14.3	+1.4
	comp=Z,8.8nm,1.3s						
IMAR	Indian Mountai	87.31	8	P	P	17 02 13.7	+1.0
IPM	Ipoh	87.32	276	P	P	17 02 13.6	-0.4
IPM	Ipoh	87.32	276	P	P	17 02 14.8	+0.8
J25K	Salcha River,	87.38	12	P	P	17 02 14.7	+1.5
	baz=206,SNR=7.0						
MNSI	Mandailing Nat	87.40	272	P	P	17 02 13.1	-1.3
	comp=Z,20nm,1.1s						
N32M	Quiet Lake	87.41	18	P	P	17 02 14.6	+1.2
	baz=218						
HEH	HeiHe	87.42	327	*e*P	P	17 02 13.4	-0.2
HEH				LR	LR		
	comp=Z,530nm,19.0s						
HEH				LR	LR		
	comp=Z,460nm,19.4s						
HEH				LR	LR		
	comp=Z,930nm,19.1s						
POKR	Poker Plat Res	87.46	11	IAmb	IAmb	17 02 16.1	
	comp=Z,34nm,1.3s						
POKR	Poker Plat Res	87.46	11	P	P	17 02 14.7	+1.3
	baz=204						
M30M	Minto, Yukon	87.54	16	P	P	17 02 15.5	+1.5
	baz=214,SNR=5.7						
H22K	Ishtalitna Cre	87.55	9	IAmb	IAmb	17 02 16.8	
	comp=Z,27nm,1.2s						
H22K	Ishtalitna Cre	87.55	9	P	P	17 02 15.6	+1.7
	baz=201						
E17K	Hotham Inlet	87.55	5	P	P	17 02 15.3	+1.5
	baz=191,SNR=17						
J26L	Joseph Creek	87.63	12	IAmb	IAmb	17 02 31.5	
	comp=Z,16nm,0.8s						
J26L	Joseph Creek	87.63	12	P	P	17 02 16.1	+1.7
	baz=208,SNR=12						
L29M	L29M	87.65	15	P	P	17 02 16.2	+1.7
	baz=213						
F19K	Shaleruckik Mo	87.66	6	P	P	17 02 15.9	+1.6
	baz=195						
SYO	Syowa Base	87.81	191	⇑*e*P	P	17 02 15.4	+0.1
SYO	Syowa Base	87.81	191	⇑*e*PcP	PcP	17 02 17.4	+0.3
SYO	Syowa Base	87.81	191	⇑*e*pP	pP	17 02 18.8	-1.2
G21K	Allakaket	87.84	8	P	P	17 02 16.7	+1.4
	baz=199						
M31M	Drury Creek, Y	87.88	17	P	P	17 02 17.3	+1.7
	baz=216						
TROLL	Troll, Antarti	87.89	179	P	P	17 02 17.5	+1.6
KULM	Kulim	87.95	276	P	P	17 02 15.7	-1.3
KULM	Kulim	87.95	276	P	P	17 02 17.3	+0.3
	comp=Z,453nmcomp=Z,34nm,1.1s						
E18K	Tukpahlearik C	87.98	5	P	P	17 02 17.7	+1.8
	baz=192						
VNA3	Neumayer Olymp	88.01	175	⇓P	P	17 02 18.8	+2.5
	comp=Z,7.4nm,0.8s						
H24K	Noodor Dome	88.04	10	P	P	17 02 17.8	+1.5
	baz=204						
SNAA	Sanae	88.05	177	⇓P	P	17 02 19.1	+2.6
	comp=Z,206nm,0.8s						
SNAA	Sanae	88.05	177	P	P	17 02 18.6	+2.1
	comp=Z,5.8nm,0.9s,baz=212,slow=4.9,SNR=11						
SNAA				LR	LR	17 40 54.3	
	comp=Z,179nm,18.5s,baz=184,slow=35						
	comp=Z,5.8nm,0.9s						
SNAA	Sanae	88.05	177	P	P	17 02 17.8	+1.3
SNAA				IAmb	IAmb	17 02 24.9	
	comp=Z,10nm,0.8s						
SNAA	Sanae	88.05	177	*ce*P	P	17 02 17.9	+1.3
SNAA				pmax	pmax		
	comp=Z,14nm,1.0s						
D17K	Noatak River	88.07	4	P	P	17 02 18.2	+1.9
	baz=190,SNR=9.6						
F20K	Avaraart Lake	88.09	7	P	P	17 02 18.2	+1.8
	baz=197						
DAWY	Dawson	88.16	14	IAmb	IAmb	17 02 34.4	
	comp=Z,11nm,0.8s						
DAWY	Dawson	88.16	14	P	P	17 02 18.6	+1.7
	baz=212,SNR=6.1						
FARO	Faro, Yukon	88.19	18	P	P	17 02 18.9	+1.8
	baz=217						
TOAD	Toad River Com	88.26	23	P	P	17 02 19.3	+1.8
	baz=224						
E19K	Redstone River	88.32	6	P	P	17 02 19.1	+1.6
	baz=195						
K29M	Barlow Dome	88.42	15	IAmb	IAmb	17 02 37.8	
	comp=Z,27nm,1.4s						
K29M	Barlow Dome	88.42	15	P	P	17 02 19.7	+1.5
	baz=214,SNR=6.7						
I26K	Coal Creek Min	88.43	12	P	P	17 02 19.4	+1.4
	baz=208						
RDOG	Red Dog Mine	88.43	4	IAmb	IAmb	17 02 21.0	
	comp=Z,9.7nm,0.8s						
RDOG	Red Dog Mine	88.43	4	P	P	17 02 19.4	+1.4
	baz=190						
VNA2	Neumayer--Watz	88.50	175	P	P	17 02 21.3	+2.7
	comp=Z,9.9nm,0.7s,baz=192,slow=2.9						
G23K	Bananza Creek	88.51	9	P	P	17 02 19.8	+1.3
	baz=202						
C16K	Lisburne Hills	88.51	3	P	P	17 02 20.5	+2.1
	baz=188						
F21K	Alatna River	88.52	8	P	P	17 02 20.3	+1.8
	baz=199						
HNS	HongShan	88.58	311	⇑P	P	17 02 20.6	+1.2
HNS				pmax	pmax		
	comp=Z,16nm,1.2s						
HNS				LR	LR		
	comp=Z,250nm,19.1s						
HNS				LR	LR		
	comp=Z,320nm,19.1s						
MAYO	Mayo, Yukon	88.62	16	P	P	17 02 21.2	+2.2
	baz=215						
VNA1	Neumayer--Stat	88.71	175	⇓P	P	17 02 23.1	+3.6
	comp=Z,20nm,1.1s						
PSI	Prapat	88.71	273	LR	LR	17 45 16.0	
	comp=Z,113nm,18.2s,baz=153,slow=38						
PSI	Prapat	88.71	273	P	P	17 02 19.7	-1.1
	comp=Z,18nm,1.2s						

J29N	Klondike Camp	88.76	15	P	P	17 02 21.1	+1.3
	baz=213						
BJT	Baijiatuau	88.77	314	P	P	17 02 21.2	+0.9
BJI	Beijing	88.77	314	P	P	17 02 21.3	+1.0
BJI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
C17K	DeLong Mountai	88.83	4	P	P	17 02 21.4	+1.5
	baz=190						
G24K	Hadweenzic Riv	88.90	10	P	P	17 02 22.0	+1.7
	baz=204						
F22K	John River	88.96	8	P	P	17 02 22.1	+1.6
	baz=200						
LYN	LuoYang	88.96	307	P	P	17 02 22.3	+1.0
LYN				pmax	pmax		
	comp=Z,30nm,0.7s						
COLD	Coldfoot	88.97	9	P	P	17 02 22.8	+2.3
	baz=202						
I27K	Kandik River	89.00	13	P	P	17 02 22.2	+1.4
	baz=210						
NVL	N'lazarevskaya	89.11	182	eP	P	17 02 17.7	-3.7
NVL				eSS	SS	17 19 07.8	+6.8
NVL				eSSS	SSS	17 22 43.1	
NVL				pmax	pmax		
	comp=Z,12nm,1.3s						
NVL				MLR	MLR		
	comp=Z,519nm,19.0s						
C18K	Utukok River	89.14	4	P	P	17 02 22.9	+1.4
	baz=192						
G25K	Bearman Lake	89.19	11	P	P	17 02 23.7	+2.1
	baz=206						
E20K	Nigu River	89.20	6	P	P	17 02 23.7	+2.0
	baz=196,SNR=23						
I28M	Miner Creek	89.22	13	IAmb	IAmb	17 02 36.1	
	comp=Z,9.7nm,1.1s						
I28M	Miner Creek	89.22	13	P	P	17 02 23.8	+1.9
	baz=211						
D19K	Kuna River	89.24	6	P	P	17 02 23.8	+1.9
	baz=194,SNR=18						
J30M	Hart River	89.32	15	P	P	17 02 24.4	+1.9
	baz=215						
BILL	Bilibino	89.33	353	P	P	17 02 22.7	+0.5
BILL				IAmb	IAmb	17 02 24.0	
	comp=Z,10nm,0.8s						
BILL	Bilibino	89.33	353	ceP	P	17 02 21.4	-0.8
BILL				pmax	pmax		
	comp=Z,26nm,1.7s						
BILL				MLR	MLR		
	comp=Z,598nm,19.0s						
GSI	Gunungsitoli	89.46	272	P	P	17 02 22.9	-1.2
GSI	Gunungsitoli	89.46	272	P	P	17 02 24.6	+0.5
I29M	Ogilvie Camp,	89.51	14	IAmb	IAmb	17 02 43.0	
	comp=Z,31nm,1.6s						
I29M	Ogilvie Camp,	89.51	14	P	P	17 02 25.3	+2.1
	baz=213						
H27K	Steamboat Moun	89.56	12	P	P	17 02 26.0	+2.5
	baz=210						
ZEA	Zeya	89.57	329	eP	P	17 02 25.0	+1.3
ZEA				pmax	pmax		
	comp=N,20nm,0.8s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,40nm,0.8s						
F24K	Squaw Lake	89.58	10	P	P	17 02 26.0	+2.5
	baz=204						
E22K	Anaktuvuk Pass	89.59	8	IAmb	IAmb	17 02 26.7	
	comp=Z,14nm,0.9s						
E22K	Anaktuvuk Pass	89.59	8	P	P	17 02 25.7	+2.1
	baz=200,SNR=15						
D20K	Etivluk River	89.60	6	IAmb	IAmb	17 02 26.6	
	comp=Z,22nm,0.8s						
D20K	Etivluk River	89.60	6	P	P	17 02 25.6	+2.0
	baz=196,SNR=20						
E21K	Killik River	89.62	7	P	P	17 02 25.6	+1.9
	baz=198						
C19K	Lookout Ridge	89.71	5	P	P	17 02 25.6	+1.6
	baz=193,SNR=30						
G26K	Porcupine Rive	89.76	11	P	P	17 02 26.1	+1.8
	baz=208						
B18K	Kokolik River	89.80	4	P	P	17 02 26.7	+2.3
	baz=191,SNR=9.8						
E23K	Chandalar	89.82	9	P	P	17 02 26.7	+2.1
	baz=202						
I30M	Mount Dempster	89.84	15	P	P	17 02 26.9	+2.1
	baz=214						
E24K	Your Creek	90.00	9	P	P	17 02 27.6	+2.1
	baz=203						
F25K	Christian Rive	90.01	10	P	P	17 02 27.7	+2.2
	baz=206						
KCSI	Kotacane, Aceh	90.03	274	P	P	17 02 26.5	-0.4
	comp=Z,13nm,0.9s						
G27K	Doyon Strip	90.04	12	P	P	17 02 27.6	+2.0
	baz=210						
D22K	Ayikyak River	90.19	7	P	P	17 02 28.2	+1.9
	baz=200						
C21K	Knifeblade Rid	90.21	7	P	P	17 02 28.2	+1.8
	baz=198,SNR=11						
H29M	Whitestone	90.22	13	P	P	17 02 28.6	+2.1
	baz=213						
GYA	Guiyang	90.27	298	⇓P	P	17 02 29.1	+1.3
GYA				pmax	pmax		
	comp=Z,11nm,1.2s						
GYA				pmax	pmax		
	comp=Z,310nm,4.4s						
F26K	Sheenjek River	90.36	11	P	P	17 02 29.2	+2.1
	baz=207						
TOLK	Toolik Lake Re	90.37	9	IAmb	IAmb	17 02 44.9	
	comp=Z,9.2nm,0.9s						
TOLK	Toolik Lake Re	90.37	9	P	P	17 02 29.3	+2.1
	baz=202						
TPTI		90.50	273	P	P	17 02 29.1	+0.1
	comp=Z,45nm,1.0s						
E25K	Arctic Village	90.50	10	IAmb	IAmb	17 02 30.9	
	comp=Z,12nm,1.2s						
E25K	Arctic Village	90.50	10	P	P	17 02 29.6	+1.9
	baz=206,SNR=5.2						
D23K	Nanushuk River	90.52	8	IAmb	IAmb	17 02 31.4	
	comp=Z,11nm,0.9s						
D23K	Nanushuk River	90.52	8	P	P	17 02 30.0	+2.2
	baz=201,SNR=7.4						
XLT	XiLinHaoTe	90.64	317	eP	P	17 02 30.0	+1.0
XLT				pmax	pmax		
	comp=Z,11nm,0.8s						
XLT				pmax	pmax		
	comp=Z,120nm,5.6s						
B21K	Ikpikpuk River	90.68	7	P	P	17 02 30.7	+2.2
	baz=198						
A19K	Wainwright	90.68	4	P	P	17 02 30.6	+2.1
	baz=192,SNR=8.5						
EPYK	Eagle Plains	90.71	14	IAmb	IAmb	17 02 45.6	
	comp=Z,11nm,0.9s						
EPYK	Eagle Plains	90.71	14	P	P	17 02 30.7	+1.9
	baz=214						
B20K	Meade River	90.80	6	P	P	17 02 31.1	+2.1
	baz=195						
H31M	Peel River	90.81	15	P	P	17 02 31.2	+1.9
	baz=216						
G29M	Pine Creek	90.88	13	IAmb	IAmb	17 02 59.6	
	comp=Z,12nm,1.1s						
G29M	Pine Creek	90.88	13	P	P	17 02 31.6	+2.1
	baz=213						
D24K	Happy Valley	90.95	9	P	P	17 02 31.4	+1.6
	baz=203,SNR=15						
F28M	Old Crow	91.09	12	IAmb	IAmb	17 02 34.0	
	comp=Z,14nm,1.4s						
F28M	Old Crow	91.09	12	P	P	17 02 32.6	+2.1
	baz=211						
HILR	Hailar Array B	91.18	323	P	P	17 02 31.9	+0.5
	comp=Z,7.1nm,0.7s,baz=126,slow=7.7,SNR=13						
HILR				LR	LR	17 39 23.5	
	comp=Z,416nm,20.4s,baz=115,slow=33						
	comp=Z,7.1nm,0.7s						
E27K	Coleen River	91.26	11	P	P	17 02 33.4	+2.1
	baz=210						
G30M	tAoh Zraii Nji	91.33	14	P	P	17 02 33.6	+1.9
	baz=215						
C23K	Itkillik River	91.35	8	IAmb	IAmb	17 02 35.0	
	comp=Z,12nm,1.0s						
C23K	Itkillik River	91.35	8	P	P	17 02 33.7	+2.1
	baz=201						
XAN	Xi'an	91.42	306	⇑P	P	17 02 33.9	+1.0
XAN				pP	sP	17 02 38.9	-0.9
XAN				sP	pP	17 02 41.3	+3.1
XAN				pmax	pmax		
	comp=Z,31nm,0.9s						
XAN				LR	LR		
	comp=Z,220nm,16.5s						
XAN				LR	LR		
	comp=Z,290nm,17.9s						
XAN				LR	LR		
	comp=Z,260nm,18.5s						
D25K	Kavik River	91.46	9	P	P	17 02 34.2	+2.0
	baz=205						
C24K	Franklin Bluff	91.49	8	P	P	17 02 34.4	+2.2
	baz=203						
B22K	Teshekpuk Lake	91.49	7	IAmb	IAmb	17 02 35.8	
	comp=Z,25nm,1.4s						
B22K	Teshekpuk Lake	91.49	7	P	P	17 02 34.0	+1.7
	baz=199						
G31M	Satah River	91.73	14	P	P	17 02 35.5	+2.1
	baz=216,SNR=6.9						
F30M	Barrier River	91.95	14	IAmb	IAmb	17 02 54.4	
	comp=Z,8.8nm,0.9s						
F30M	Barrier River	91.95	14	P	P	17 02 36.2	+1.7
	baz=215						
A22K	Sinclair Lake	91.97	6	P	P	17 02 36.4	+2.0
	baz=197						
NNA	Nana	92.00	103	LR	LR	17 34 30.5	
	comp=Z,144nm,20.4s,baz=246,slow=29						
E28M	Babbage River	92.01	12	IAmb	IAmb	17 02 51.6	
	comp=Z,12nm,0.9s						
E28M	Babbage River	92.01	12	P	P	17 02 36.7	+2.0
	baz=212,SNR=8.9						
A21K	Barrow	92.12	5	P	P	17 02 37.1	+2.0
	baz=196						
JTS	Las Juntas de	92.15	80	LR	LR	17 34 21.6	
	comp=Z,163nm,20.5s,baz=282,slow=29						
E29M	Blow River	92.15	12	P	P	17 02 37.5	+2.1
	baz=213						
C27K	Jago River	92.16	10	P	P	17 02 37.3	+1.9
	baz=208						
C26K	Camden Bay	92.23	10	P	P	17 02 37.6	+1.9
	baz=207						
F31M	Tsiigehtchic	92.27	14	P	P	17 02 37.8	+1.9
	baz=217,SNR=12						
HHC	Hu-ho-hao-te	92.28	313	⇓iP	P	17 02 38.4	+1.6
HHC				pmax	pmax		
	comp=Z,25nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,4.0s						
HHC				LR	LR		
	comp=Z,130nm,17.1s						
HHC				LR	LR		
	comp=Z,240nm,17.1s						
HHC				LR	LR		
	comp=Z,220nm,20.8s						
D27M	Malcolm River	92.29	11	P	P	17 02 38.2	+2.1
	baz=210						
ATAH	Atahualpa	92.29	98	LR	LR	17 33 51.5	
	comp=Z,227nm,21.7s,baz=244,slow=29						
D28M	Stokes Point	92.78	12	P	P	17 02 40.1	+1.9
	baz=212,SNR=7.2						
INK	Inuvik	93.01	14	LR	LR	17 38 11.4	
	comp=Z,230nm,20.7s,baz=224,slow=32						
INK	Inuvik	93.01	14	IAmb	IAmb	17 02 59.0	
	comp=Z,9.4nm,1.1s						
INK	Inuvik	93.01	14	P	P	17 02 40.6	+1.3
	baz=217						
KMI	Kunming	93.06	296	⇑P	P	17 02 41.8	+0.9
KMI				pmax	pmax		
	comp=Z,22nm,1.4s						
KMI				LR	LR		
	comp=Z,240nm,20.4s						
KMI				LR	LR		
	comp=Z,360nm,19.2s						
KMI				LR	LR		
	comp=Z,560nm,21.7s						
BTO	Baotou	93.25	312	eP	P	17 02 42.8	+1.5
BTO				sP	sP	17 02 49.8	+1.6
BTO				S	S	17 13 51.8	+4.3
BTO				pmax	pmax		
	comp=Z,28nm,0.9s						
BTO				pmax	pmax		
	comp=Z,460nm,5.3s						
BTO				LR	LR		
	comp=Z,810nm,19.1s						
BTO				LR	LR		
	comp=Z,320nm,12.1s						
BTO				LR	LR		
	comp=Z,620nm,20.6s						
YAK	Yakutsk	93.56	337	LR	LR	17 42 42.6	
	comp=Z,120nm,18.5s,baz=104,slow=34						
YAK	Yakutsk	93.56	337	P	P	17 02 40.4	-1.5
YAK	Yakutsk	93.56	337	eP	P	17 02 41.5	-0.4
YAK				e		17 06 22.4	
YAK				eS	SKSac	17 13 15.4	+0.6
YAK				e		17 13 51.2	
YAK				eSS	SS	17 20 00.7	-6.3
YAK				pmax	pmax		
	comp=Z,18nm,0.8s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,297nm,5.6s						
YAK				pmax	pmax		
	comp=N,200nm,5.6s						
YAK				pmax	pmax		
	comp=E,102nm,3.7s						
YAK				smax	smax		
	comp=N,178nm,4.3s						
YAK				smax	smax		
	comp=E,163nm,4.2s						
CM31	Chiang Mai Arr	94.06	288	IAmb	IAmb	17 02 58.0	
	comp=Z,21nm,1.1s						
CMAR	Chiang Mai Arr	94.06	288	P	P	17 02 46.2	+0.8
	comp=Z,11nm,1.0s,baz=114,slow=2.9,SNR=68						
CMAR				LR	LR	17 42 05.1	
	comp=Z,116nm,20.4s,baz=115,slow=34						
	comp=Z,11nm,1.0s						
CMAR	Chiang Mai Arr	94.06	288	P	P	17 02 44.8	-0.5
CMAR	Chiang Mai Arr	94.06	288	i P	P	17 02 46.7	+1.3
CMAR				pmax	pmax		
	comp=Z,11nm,1.0s						
CHTO	Chiang Mai	94.18	288	P	P	17 02 45.3	-0.6
CHTO				IAmb	IAmb	17 02 48.0	
	comp=Z,20nm,1.1s						
CHTO	Chiang Mai	94.18	288	P	P	17 02 45.4	-0.6
CHTO	Chiang Mai	94.18	288	P	P	17 02 46.9	+1.0
	comp=Z,18nm,1.2s						
CHTO	Chiang Mai	94.18	288	P	P	17 02 45.3	-0.6
CHTO				pmax	pmax		
	comp=Z,20nm,1.2s						
CD2	Chengdu	94.28	301	eP	P	17 02 46.5	+0.3
PZH	PanZhiHua	94.39	296	P	P	17 02 48.8	+2.0
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YKA	Yellowknife Ar	94.59	23	P	P	17 02 47.9	+1.1
	comp=Z,0.6nm,0.7s,baz=247,slow=4.8,SNR=11						
YKA				PP	PP	17 06 37.7	+2.6
	comp=Z,0.3nm,0.9s,baz=243,slow=8.1,SNR=2.7						
YKA				PKKP	PKKPdf	17 19 50.3	+2.7
	comp=Z,0.2nm,0.6s,baz=26,slow=2.1,SNR=3.8						
	comp=Z,0.6nm,0.7s						
LZH	Lanzhou	96.04	306	eP	P	17 02 55.6	+1.4
LZH				sP	sP	17 03 02.8	+1.6
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				LR	LR		
	comp=Z,240nm,15.1s						
LZH				LR	LR		
	comp=Z,360nm,16.7s						
LZH				LR	LR		
	comp=Z,430nm,17.2s						
C36M	Paulatuk	96.07	16	P	P	17 02 55.3	+2.0
	baz=226						
LZDM	Lanzhou Array	96.11	306	LR	LR	17 46 55.8	
	comp=Z,144nm,18.3s,baz=165,slow=36						
A36M	Sachs Harbour	97.65	14	P	Pdif	17 03 02.3	+1.9
	baz=225						
ULM	Lac du Bonnet	97.76	39	LR	LR	17 42 49.5	
	comp=Z,359nm,19.1s,baz=195,slow=33						
ULN	Ulaanbaatar	98.01	318	P	P	17 03 02.5	-0.4
ULN				IAmb	IAmb	17 03 05.7	
	comp=Z,6.2nm,1.2s						
ULN	Ulaanbaatar	98.01	318	P	Pdif	17 03 03.3	+0.4
ULN	Ulaanbaatar	98.01	318	ceP	Pdif	17 03 03.8	+0.9
ULN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
LPAZ	La Paz	98.19	111	PKKPbc	PKKPbc	17 19 36.0	-0.6
	comp=Z,2.6nm,0.3s,baz=285,slow=5.8,SNR=4.6						
LPAZ				LR	LR	17 39 49.6	
	comp=Z,178nm,19.7s,baz=259,slow=31						
SONM	Songino Array	98.42	318	P	Pdif	17 03 04.7	0.0
	comp=Z,1.5nm,0.9s,baz=132,slow=4.5,SNR=8.8						
SONM				PP	PP	17 07 05.0	-0.2
	comp=Z,0.8nm,0.9s,baz=124,slow=7.4,SNR=3.5						
SONM				LR	LR	17 43 06.4	
	comp=Z,220nm,21.8s,baz=104,slow=33						
	comp=Z,1.5nm,0.9s						
SONM	Songino Array	98.42	318	IAmb	IAmb	17 03 26.3	
	comp=Z,13nm,2.0s						
TIXI	Tiksi	99.67	344	LR	LR	17 43 28.3	
	comp=Z,171nm,20.8s,baz=189,slow=33						
TIXI	Tiksi	99.67	344	P	Pdif	17 03 10.1	+0.6
TIXI	Tiksi	99.67	344	ceP	Pdif	17 03 08.4	-1.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA	Gaotai	100.15	308	eP	Pdif	17 03 13.6	+1.0
GTA				sP	pwP	17 03 22.3	-2.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ZALV	Zalesovo Beam	113.00	321	PKiKP	PKiKP	17 08 03.4	+0.1
	comp=Z,2.9nm,0.6s,baz=74,slow=0.5,SNR=15						
MK31	Makanchi Array	114.15	313	c iPKIKP	PKiKP	17 08 06.4	+0.6
MKAR	Makanchi Array	114.15	313	Pdiff	Pdif	17 04 14.9	+0.4
	comp=Z,1.0nm,1.0s,baz=95,slow=7.5,SNR=3.9						
MKAR				PKiKP	PKiKP	17 08 06.0	+0.2
	comp=Z,2.5nm,0.7s,baz=162,slow=0.6,SNR=23						
MKAR				PKKPbc	PKKPbc	17 18 49.9	+2.3
	comp=Z,0.4nm,0.8s,baz=302,slow=7.0,SNR=3.6						
MKAR	Makanchi Array	114.15	313	i PKIKP	PKiKP	17 08 06.0	+0.2
BDFB	Brasilia	115.61	120	PKKPbc	PKKPbc	17 18 40.7	-1.3
	comp=Z,1.9nm,0.6s,baz=190,slow=7.4,SNR=3.8						
KURK	Kurchatov	116.72	317	c iPKIKP	PKiKP	17 08 11.4	+0.9
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURBB	Kurchatov Arra	116.78	317	PKP	PKiKP	17 08 10.7	0.0
	comp=Z,2.5nm,0.6s,baz=92,slow=1.7,SNR=31						
KURBB				PP	PP	17 09 21.0	+1.7
	comp=Z,1.3nm,0.9s,baz=90,slow=7.6,SNR=5.1						
AAK	Ala-Archa	119.50	308	i PKIKP	PKPdf	17 08 15.4	-1.0
BVAR	Borovoye Array	121.64	320	PKP	PKiKP	17 08 20.3	+0.2
	comp=Z,7.3nm,0.6s,baz=105,slow=1.6,SNR=41						
BORK	Borovoye	121.68	320	c iPKIKP	PKiKP	17 08 20.9	+0.7
BORK				pmax	pmax		
	comp=Z,18nm,2.5s						
SPITS	Spitsbergen Ar	121.88	358	PKP	PKiKP	17 08 21.8	+1.8
	comp=Z,7.3nm,0.9s,baz=135,slow=30,SNR=10						
ARTI	Arti	127.51	327	i PKIKP	PKiKP	17 08 31.4	-0.3
ARTI						17 10 32.4	
ARTI						17 15 42.4	
ARTI				SP	SP	17 20 32.9	-1.1
ARTI				SS	SS	17 27 29.7	-11
BOSA	Boshof	128.12	201	PKP	PKiKP	17 08 35.5	+1.5
	comp=Z,2.2nm,0.8s,baz=119,slow=1.5,SNR=4.3						
ARCES	ARCESS Array B	129.42	351	PKP	PKiKP	17 08 35.5	+0.4
	comp=Z,2.1nm,0.7s,baz=276,slow=0.8,SNR=7.0						
KIRV	Kirov	130.84	332	c iPKIKP	PKPdf	17 08 37.1	-0.2
BELG	Belogornoye	134.91	325	i PKIKP	PKPdf	17 08 44.5	-0.7
FINES	FINESS Array B	136.67	346	PKhKP	PKPpre	17 08 32.2	
	comp=Z,1.0nm,0.7s,baz=29,slow=4.4,SNR=6.3						
FINES				PKP	PKiKP	17 08 49.3	-0.7
	comp=Z,2.3nm,0.6s,baz=20,slow=6.7,SNR=7.4						
OBN	Obninsk	138.51	334	c iPKIKP	PKiKP	17 08 53.0	-0.9
OBN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NB2	NORSAR Subarra	139.16	357	PKP	PKPdf	17 08 45.9	-7.0
	comp=Z,9.2nm,1.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	139.16	357	PKhKP	PKPpre	17 08 42.9	
	comp=Z,0.7nm,0.8s,baz=20,slow=4.4,SNR=4.0						
NOA				PKP	PKiKP	17 08 54.2	-0.9
	comp=Z,1.0nm,0.8s,baz=18,slow=4.0,SNR=4.6						
AKT	Akhty	139.30	311	ePKIKP	PKPdf	17 08 53.5	-0.4
AKT				pmax	pmax		
	comp=Z,25nm,2.2s						
HFS	Hagfors	139.88	354	PKhKP	PKPpre	17 08 45.3	
	comp=Z,2.4nm,0.7s,baz=57,slow=5.5,SNR=9.4						
KBZ	Khabaz	141.76	316	PKP	PKPdf	17 08 56.6	-1.5
	comp=Z,2.9nm,1.0s,baz=83,slow=5.8,SNR=4.7						
NEUR	Neytrino	142.09	315	i PKIKP	PKPdf	17 08 59.0	+0.1
MNK	Minsk	142.18	340	i PKIKP	PKiKP	17 09 01.7	+0.2
MNK				i		17 12 04.1	
MNK				pmax	pmax		
	comp=N,7.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,12nm,0.8s						
MNK				pmax	pmax		
	comp=E,9.0nm,0.8s						
MNK				MLR	MLR		
	comp=N,90nm,11.0s						
MNK				MLR	MLR		
	comp=Z,280nm,17.0s						
MNK				MLR	MLR		
	comp=E,170nm,18.0s						
EKA	Eskdalemuir Ar	144.26	9	PKP	PKPdf	17 09 01.7	-0.5
	comp=E,4.6nm,0.6s,baz=331,slow=2.7,SNR=28						
AK03	Malin Array Si	144.75	335	PKP	PKPab	17 09 01.5	-0.4
AK23	Malin Array Si	144.75	335	PKP	PKPab	17 09 01.9	-0.1
AKASG	Malin Array Be	144.76	335	PKP	PKPab	17 09 01.9	-0.1
	comp=E,22nm,0.7s,baz=42,slow=4.5,SNR=88						
AKBB	Malin Array Si	144.76	335		PKPbc	17 09 02.1	+0.1
AKBB	Malin Array Si	144.76	335	PKHKP	PKPpre	17 09 02.2	
AKBB	Malin Array Si	144.76	335	PKP	PKPbc	17 09 02.0	-0.1
AK04	Malin Array Si	144.77	335	PKP	PKPab	17 09 01.8	-0.2
KIEV	Kiev	144.78	335		PKPbc	17 09 02.1	0.0
KIEV	Kiev	144.78	335	⇑P	PKPab	17 09 01.8	-0.2
KIEV	Kiev	144.78	335	⇑PKHKP	PKPpre	17 09 01.8	
KIEV	Kiev	144.78	335	PKP	PKPbc	17 09 02.1	0.0
AK01	Malin Array Si	144.78	335	PKP	PKPab	17 09 02.0	0.0
AK21	Malin Array Si	144.78	335	PKP	PKPbc	17 09 02.1	0.0
AK22	Malin Array Si	144.78	335	PKP	PKPab	17 09 01.9	-0.1
ILTH	Belurgan, Co L	144.92	13	eP	PKPdf	17 09 03.9	+0.6
EDMD	Edmundbyers	144.92	9	eP	PKPdf	17 09 03.9	+0.6
RNPP9	Sopachiv	145.43	339	PKP	PKPab	17 09 04.5	+0.1
GDLE	Glaisdale, N Y	145.47	8	eP	PKPab	17 09 06.1	+1.6
RNPP8	Varash	145.50	338	PKP	PKPab	17 09 04.8	+0.1
RNPP5	Staryi Chortor	145.58	338	PKP	PKPab	17 09 04.9	-0.1
HPK	Haverah Park	145.82	9	eP	PKPab	17 09 07.3	+1.5
LUBAR	Lubar, Ukraine	145.96	335	PKP	PKPbc	17 09 05.7	-0.2
WLF1	Llynfaes	146.01	12	eP	PKPab	17 09 07.5	+1.1
R9F13	Warsaw-Wawer	146.16	344	ePKP	PKiKP	17 09 08.6	-1.1
BSEG	Bad Segeberg	146.29	356	ePKPbc	PKiKP	17 09 08.9	-1.0
	baz=7.0,slow=2.4						
SIM	Simferopol'	146.46	323	ePKIKP	PKiKP	17 09 09.7	-0.9
SIM						17 09 11.0	
SIM				pmax	pmax		
	comp=Z,20nm,0.7s						
SIM				MLR	MLR		
	comp=Z,200nm,19.0s						
FOEL	Foel Wylfa	146.61	11	eP	PKPab	17 09 09.3	+0.5
HLM1	Long Mynd	147.02	11	eP	PKPab	17 09 10.5	0.0
SORM	Soroca	147.11	333	⇓P	PKPab	17 09 10.4	-0.5
SORM	Soroca	147.11	333	⇓PKIKP	PKPab	17 09 10.4	-0.5
RUE	Ruedersdorf	147.38	352	ePKPbc	PKiKP	17 09 12.0	-0.2
	baz=7.0,slow=2.4						
MCH1	Michaelchurch	147.50	11	eP	PKPab	17 09 11.6	-0.7
PURM	Purcari	147.61	329	⇓P	PKiKP	17 09 12.5	-0.4
FLTG	Flechtingen	147.82	355	ePKPbc	PKiKP	17 09 13.1	0.0
	baz=7.0,slow=2.4						
MILM	Milestii Mici	147.82	331	⇓P	PKPbc	17 09 11.1	-0.2
MILM	Milestii Mici	147.82	331	⇓PKIKP	PKPbc	17 09 11.1	-0.2
ASSE	Asse, Remlinge	148.06	355	ePKPbc	PKiKP	17 09 13.8	+0.2
	baz=7.0,slow=2.4						
CLZ	Clausthal	148.37	355	ePKPbc	PKiKP	17 09 14.6	+0.3
	baz=7.0,slow=2.4						
CLL	Collm	148.63	352	i PKIKP	PKiKP	17 09 15.1	+0.3
CLL				pmax	pmax		
	comp=Z,38nm,1.0s						
CLL	Collm	148.63	352	ePKPbc	PKiKP	17 09 15.0	+0.1
	baz=7.0,slow=2.4						
CLL	Collm	148.63	352	i PKPbc	PKiKP	17 09 15.1	+0.3
	comp=Z,38nm,1.0s						
STHS	Stebnicka Huta	148.65	341	ePKIKP	PKiKP	17 09 14.8	-0.2
STHS	Stebnicka Huta	148.65	341	ePKP	PKiKP	17 09 14.8	-0.2
GTTG	Gottingen	148.70	356	ePKPbc	PKiKP	17 09 15.4	+0.4
	baz=7.0,slow=2.4						
BURAR	Bucovina Array	148.81	335	⇑P	PKiKP	17 09 16.0	+0.5
BURAR	Bucovina Array	148.81	335	⇑PKP2	PKiKP	17 09 16.0	+0.5
GIRR	Girov	148.82	333	⇑P	PKiKP	17 09 15.4	0.0
OSTC	Ostas	148.84	348	ePKP2	PKiKP	17 09 16.1	+0.8
OSTC	Ostas	148.84	348	⇑ePKP	PKiKP	17 09 16.1	+0.8
NEUB	Neuenburg	148.87	354	ePKPbc	PKiKP	17 09 16.3	+1.0
	baz=7.0,slow=2.4						
BUG	Bochum--Univer	148.91	359	ePKPbc	PKiKP	17 09 15.7	+0.3
	baz=7.0,slow=2.4						
BRG	Berggiesshubel	148.93	351	ePKPbc	PKiKP	17 09 16.4	+0.9
	baz=7.0,slow=2.4						
UPC	Upice	148.93	348	ePKP2	PKiKP	17 09 16.3	+0.8
UPC	Upice	148.93	348	⇑ePKP	PKiKP	17 09 16.3	+0.8
VLDR	Vladesti	148.96	330	⇑P	PKiKP	17 09 15.7	0.0

DPC	**Dobruska-Polom**	**149.02**	**348**	ePKP2	**PKiKP**	**17 09 16.7**	**+0.9**
DPC	**Dobruska-Polom**	**149.02**	**348**	⇑ePKP	**PKiKP**	**17 09 16.7**	**+0.9**
TLCR		**149.09**	**329**	⇓P	**PKiKP**	**17 09 16.3**	**+0.3**
TLCR		**149.09**	**329**	⇓PKP2	**PKiKP**	**17 09 16.3**	**+0.3**
STEB	**Steborice**	**149.10**	**346**	⇑ePKP	**PKiKP**	**17 09 16.3**	**+0.4**
TESR	**Tescani**	**149.10**	**332**	⇑P	**PKiKP**	**17 09 16.1**	**+0.1**
KASTN	**Kahler Asten**	**149.12**	**358**	ePKPbc	**PKiKP**	**17 09 16.2**	**+0.3**
	baz=7.0,slow=2.4						
PVCC	**Panska Ves**	**149.16**	**350**	ePKIKP	**PKiKP**	**17 09 16.8**	**+0.8**
PVCC	**Panska Ves**	**149.16**	**350**	⇑ePKP	**PKiKP**	**17 09 16.8**	**+0.8**
KRLC	**Kraliky**	**149.19**	**347**	ePKP2	**PKiKP**	**17 09 16.9**	**+0.8**
KRLC	**Kraliky**	**149.19**	**347**	⇑ePKP	**PKiKP**	**17 09 16.9**	**+0.8**
HSKC	**Hora Svate Kat**	**149.26**	**351**	⇑ePKP	**PKiKP**	**17 09 17.5**	**+1.3**
MORC	**Moravsky Berou**	**149.30**	**346**	⇓P	**PKiKP**	**17 09 17.5**	**+1.1**
MORC	**Moravsky Berou**	**149.30**	**346**	ePKP	**PKiKP**	**17 09 16.5**	**+0.1**
MORC	**Moravsky Berou**	**149.30**	**346**	⇓PKP2	**PKiKP**	**17 09 17.5**	**+1.1**
ONER	**Baraj Valea Uz**	**149.35**	**332**	⇓P	**PKiKP**	**17 09 17.8**	**+1.3**
LANS	**Liptovska Anna**	**149.40**	**343**	ePKP2	**PKiKP**	**17 09 18.0**	**+1.4**
LANS	**Liptovska Anna**	**149.40**	**343**	ePKP	**PKiKP**	**17 09 18.0**	**+1.4**
UBBA	**Unterbreizbach**	**149.42**	**356**	ePKPbc	**PKiKP**	**17 09 17.4**	**+1.1**
	baz=7.0,slow=2.4						
CFR	**Carcaliu**	**149.43**	**329**	⇑P	**PKiKP**	**17 09 16.3**	**-0.4**
CFR	**Carcaliu**	**149.43**	**329**	⇑PKIKP	**PKiKP**	**17 09 16.3**	**-0.4**
MOX	**Moxa**	**149.45**	**354**	ePKPbc	**PKiKP**	**17 09 17.4**	**+0.9**
	baz=7.0,slow=2.4						
ODBI	**Odobesti**	**149.49**	**331**	⇑P	**PKiKP**	**17 09 17.9**	**+1.1**
UCC	**Uccle**	**149.51**	**3**	dPKP	**PKiKP**	**17 09 17.6**	**+1.0**
TPGR	**Topolog**	**149.52**	**328**	⇑P	**PKiKP**	**17 09 18.2**	**+1.2**
VRI	**Vrincioaia**	**149.56**	**332**	⇑P	**PKiKP**	**17 09 17.8**	**+0.8**
VRI	**Vrincioaia**	**149.56**	**332**	⇑PKP2	**PKiKP**	**17 09 17.8**	**+0.8**
TANN	**Tannenbergstha**	**149.58**	**352**	ePKPbc	**PKiKP**	**17 09 18.0**	**+1.1**
	baz=7.0,slow=2.4						
PLOR	**Plostina**	**149.61**	**332**	⇓P	**PKiKP**	**17 09 17.6**	**+0.5**
PLOR	**Plostina**	**149.61**	**332**	⇓PKP2	**PKiKP**	**17 09 17.6**	**+0.5**
MAUC	**Maruska**	**149.62**	**345**	⇑ePKP	**PKiKP**	**17 09 18.2**	**+1.2**
PRU	**Pruhonice**	**149.69**	**350**	ePKIKP	**PKiKP**	**17 09 17.5**	**+0.4**
PRU	**Pruhonice**	**149.69**	**350**	⇑ePKP	**PKiKP**	**17 09 17.5**	**+0.4**
TURR	**Turia**	**149.73**	**333**	⇓P	**PKiKP**	**17 09 18.6**	**+1.2**
MEM	**Membach**	**149.75**	**1**	dPKP	**PKiKP**	**17 09 17.2**	**0.0**
BRTR	**Keskin Array B**	**149.75**	**316**	PKPbc	**PKiKP**	**17 09 17.4**	**-0.4**
	comp=Z,7.2nm,0.7s,baz=139,slow=2.9,SNR=40						
BRTR				PP	**PP**	**17 12 49.4**	**-0.6**
	comp=Z,1.0nm,0.9s,baz=20,slow=4.6,SNR=3.9						
BTNL	**Ternell**	**149.77**	**0**	dPKP	**PKPbc**	**17 09 15.4**	**-0.8**
OZUR		**149.80**	**333**	⇓P	**PKiKP**	**17 09 18.7**	**+1.2**
COVR	**Voineasa-Covas**	**149.81**	**332**	⇓P	**PKiKP**	**17 09 17.9**	**+0.4**
BISRR	**Bisoca**	**149.81**	**331**	⇓P	**PKPbc**	**17 09 17.0**	**+0.4**
KIRS	**Kirsehir-Merke**	**149.87**	**315**	⇓P	**PKiKP**	**17 09 17.8**	**-0.1**
VRAC	**Vranov**	**149.95**	**347**	⇓P	**PKiKP**	**17 09 19.0**	**+1.4**
VRAC	**Vranov**	**149.95**	**347**	ePKP	**PKiKP**	**17 09 18.0**	**+0.3**
VRAC	**Vranov**	**149.95**	**347**	⇓PKP2	**PKiKP**	**17 09 19.0**	**+1.4**
MANZ	**Manzenberg**	**150.04**	**353**	ePKPbc	**PKiKP**	**17 09 18.9**	**+1.1**
	baz=7.0,slow=2.4						
MESR	**Meseseni**	**150.06**	**337**	⇑P	**PKiKP**	**17 09 19.6**	**+1.6**
DOPR	**Dopca**	**150.07**	**333**	⇑P	**PKiKP**	**17 09 18.9**	**+0.9**
NEHR	**Nehoiu**	**150.09**	**331**	⇑P	**PKiKP**	**17 09 18.5**	**+0.4**
TNS	**Taunus Mts**	**150.10**	**358**	ePKPbc	**PKiKP**	**17 09 19.2**	**+1.2**
	baz=7.0,slow=2.4						
JAVC	**Velka Javorina**	**150.13**	**345**	ePKP	**PKiKP**	**17 09 19.6**	**+1.5**
FKH	**Fakeheh**	**150.15**	**304**	eP	**PKiKP**	**17 09 19.1**	**+0.4**
CJR	**Cluj-Napoca**	**150.18**	**336**	⇓P	**PKiKP**	**17 09 19.5**	**+1.2**
CJR	**Cluj-Napoca**	**150.18**	**336**	⇓PKP2	**PKiKP**	**17 09 19.5**	**+1.2**
TREC	**Trest**	**150.19**	**348**	ePKHKP	PKPpre	17 09 18.9	
TREC	**Trest**	**150.19**	**348**	⇑ePKP	**PKiKP**	**17 09 18.9**	**+0.7**
MLR	**Muntele Rosu**	**150.20**	**332**	⇑P	**PKiKP**	**17 09 19.6**	**+1.2**
MLR	**Muntele Rosu**	**150.20**	**332**	⇑PKP2	**PKiKP**	**17 09 19.6**	**+1.2**
BEIL	**Beino**	**150.22**	**305**	eP	**PKiKP**	**17 09 19.1**	**+0.4**
ISR	**Istrita**	**150.22**	**331**	⇓P	**PKiKP**	**17 09 19.5**	**+1.1**
ISR	**Istrita**	**150.22**	**331**	⇓PKP2	**PKiKP**	**17 09 19.5**	**+1.1**
ANTO	**Ankara**	**150.22**	**317**	⇑P	**PKiKP**	**17 09 19.2**	**+0.6**
ANTO	**Ankara**	**150.22**	**317**	⇑PKP2	**PKiKP**	**17 09 19.2**	**+0.6**
KRUC	**Moravsky**	**150.23**	**347**	ePKP	**PKiKP**	**17 09 18.6**	**+0.4**
ROTZ	**Rotzenmuhle**	**150.25**	**353**	ePKPbc	**PKiKP**	**17 09 19.2**	**+0.9**
	baz=7.0,slow=2.4						
ZVC	**Zvikov**	**150.28**	**350**	⇑ePKP	**PKiKP**	**17 09 19.8**	**+1.5**
MDB	**Medias**	**150.35**	**334**	⇓P	**PKiKP**	**17 09 19.6**	**+1.1**
MDB	**Medias**	**150.35**	**334**	⇓PKHKP	PKPpre	17 09 19.6	
PSZ	**Piszkesteto**	**150.39**	**342**	⇑P	**PKiKP**	**17 09 19.7**	**+1.0**
PSZ	**Piszkesteto**	**150.39**	**342**	⇑PKHKP	PKPpre	17 09 19.7	
MARR	**Marisel-Cluj**	**150.40**	**337**	⇑P	**PKiKP**	**17 09 19.6**	**+0.8**
GRF	**Grafenberg Arr**	**150.43**	**354**	ePKPbc	**PKiKP**	**17 09 19.5**	**+0.9**
	baz=7.0,slow=2.4						
DRGR		**150.45**	**337**	⇓P	**PKiKP**	**17 09 19.9**	**+1.0**
DRGR		**150.45**	**337**	⇓PKHKP	PKPpre	17 09 19.9	
HWQ	**Hawqa**	**150.50**	**304**	eP	**PKiKP**	**17 09 19.7**	**+0.2**
MODS	**Modra-Piesok**	**150.68**	**345**	ePKIKP	**PKiKP**	**17 09 20.8**	**+1.6**
MODS	**Modra-Piesok**	**150.68**	**345**	ePKP	**PKiKP**	**17 09 20.8**	**+1.6**
KHC	**Kasperske Hory**	**150.68**	**351**	ePKIKP	**PKiKP**	**17 09 20.2**	**+1.0**
KHC	**Kasperske Hory**	**150.68**	**351**	⇑ePKP	**PKiKP**	**17 09 20.2**	**+1.0**
KHC				ex	x	17 09 32.0	
ZAHL	**Zahle**	**150.69**	**304**	eP	**PKiKP**	**17 09 20.6**	**+0.8**
WLF	**Walferdange**	**150.69**	**0**	ePKPbc	**PKiKP**	**17 09 20.6**	**+1.4**
	baz=7.0,slow=2.4						
WLF	**Walferdange**	**150.69**	**0**	dPKP	**PKiKP**	**17 09 20.4**	**+1.2**
WET	**Wettzell**	**150.77**	**351**	ePKPbc	**PKiKP**	**17 09 20.5**	**+1.1**
	baz=7.0,slow=2.4						
RCY	**Rachaya**	**150.85**	**303**	eP	**PKiKP**	**17 09 21.1**	**+0.9**
BHL	**Bhannes**	**150.85**	**304**	eP	**PKiKP**	**17 09 20.7**	**+0.6**
CKRC	**Cesky Krumlov**	**150.86**	**349**	ePKIKP	**PKiKP**	**17 09 21.0**	**+1.4**
CKRC	**Cesky Krumlov**	**150.86**	**349**	⇑ePKP	**PKiKP**	**17 09 21.0**	**+1.4**
ARR	**Arges**	**150.87**	**333**	⇓P	**PKiKP**	**17 09 21.5**	**+1.7**
SRO	**Srobarova**	**150.93**	**344**	ePKIKP	**PKiKP**	**17 09 21.4**	**+1.7**
SRO	**Srobarova**	**150.93**	**344**	ePKP	**PKiKP**	**17 09 21.4**	**+1.7**
GEC2	**GERESS Array S**	**150.94**	**350**	ePKPbc	**PKiKP**	**17 09 21.2**	**+1.3**
	baz=7.0,slow=2.4						
GERES	**GERESS Array B**	**150.94**	**350**	PKPbc	**PKiKP**	**17 09 20.8**	**+0.9**
	comp=Z,4.5nm,0.7s,baz=25,slow=3.5,SNR=22						
QRWL	**Qaraoun**	**150.95**	**303**	eP	**PKiKP**	**17 09 21.2**	**+0.9**
SHBL	**Chebaa**	**150.97**	**303**	eP	**PKiKP**	**17 09 21.5**	**+1.0**
DQRL	**Deir Qamar**	**150.99**	**303**	eP	**PKiKP**	**17 09 21.2**	**+0.8**
DEV	**Deva**	**151.14**	**336**	⇑P	**PKiKP**	**17 09 21.3**	**+1.1**
DEV	**Deva**	**151.14**	**336**	⇑PKIKP	**PKiKP**	**17 09 21.3**	**+1.1**
LOT	**Lotru**	**151.16**	**334**	⇓P	**PKiKP**	**17 09 20.9**	**+0.5**
MMAI	**Mount Meron Ar**	**151.35**	**302**	PKPbc	**PKiKP**	**17 09 21.9**	**+0.8**
	comp=Z,21nm,0.8s,baz=72,slow=2.7,SNR=33						
HUMR	**Humele**	**151.38**	**332**	⇑P	**PKiKP**	**17 09 21.7**	**+1.0**
CONA	**Conrad Observa**	**151.41**	**347**	i PKiKP	**PKiKP**	**17 09 22.1**	**+1.2**
	comp=Z,14nm,0.7s						
RONA	**Rosalia, Austr**	**151.53**	**346**	i PKiKP	**PKiKP**	**17 09 22.1**	**+1.0**
	comp=Z,15nm,0.6s,SNR=21						
GZR	**Gura Zlata**	**151.60**	**336**	⇓P	**PKiKP**	**17 09 21.8**	**+0.5**
GZR	**Gura Zlata**	**151.60**	**336**	⇓PKIKP	**PKiKP**	**17 09 21.8**	**+0.5**
MOA	**Molln**	**151.81**	**349**	i PKiKP	**PKiKP**	**17 09 22.2**	**+0.7**
	comp=Z,5.2nm,0.7s						
BZS	**Buzias**	**151.85**	**337**	⇓P	**PKiKP**	**17 09 22.5**	**+0.9**
BZS	**Buzias**	**151.85**	**337**	⇓PKIKP	**PKiKP**	**17 09 22.5**	**+0.9**
FUR	**Furstenfeldbru**	**151.93**	**353**	ePKPbc	**PKiKP**	**17 09 23.3**	**+1.5**
	baz=7.0,slow=2.4						
BFO	**Black Forest**	**151.99**	**357**	ePKPbc	**PKiKP**	**17 09 23.1**	**+1.2**
	baz=7.0,slow=2.4						
BIOA	**Bad Ischl, Aus**	**152.07**	**350**	i PKiKP	**PKiKP**	**17 09 23.2**	**+1.1**
	comp=Z,27nm,1.5s						
ARSA	**Arzberg**	**152.13**	**347**	i PKiKP	**PKiKP**	**17 09 23.8**	**+1.6**
	comp=Z,5.7nm,0.8s						
HERR	**Herculane**	**152.17**	**335**	⇓P	**PKiKP**	**17 09 23.0**	**+0.7**
MORH	**Mrgy, Hungar**	**152.30**	**342**	⇓P	**PKiKP**	**17 09 24.0**	**+1.4**
LESA	**Schwarzleotal**	**152.48**	**351**	i PKiKP	**PKiKP**	**17 09 23.8**	**+0.7**
	comp=Z,8.3nm,1.2s						
MDVR	**Moldovita**	**152.52**	**336**	⇑P	**PKiKP**	**17 09 23.7**	**+0.6**
UBR	**Ueberruh**	**152.53**	**355**	ePKPbc	**PKiKP**	**17 09 24.7**	**+1.6**
	baz=7.0,slow=2.4						
RETA	**Reutte**	**152.66**	**354**	i PKiKP	**PKiKP**	**17 09 24.9**	**+1.5**
	comp=Z,18nm,1.6s						
KBA	**Koelnbreinsper**	**152.71**	**350**	i PKiKP	**PKiKP**	**17 09 23.8**	**+0.1**
	comp=Z,18nm,0.8s						
WATA	**Walderalm**	**152.72**	**352**	i PKiKP	**PKiKP**	**17 09 24.6**	**+1.0**
	comp=Z,8.4nm,1.0s						
WTTA	**Wattenberg**	**152.78**	**352**	i PKiKP	**PKiKP**	**17 09 25.1**	**+1.4**
	comp=Z,14nm,0.9s,SNR=8.2						
SOKA	**Soboth**	**152.78**	**347**	i PKiKP	**PKiKP**	**17 09 23.9**	**+0.3**
	comp=Z,12nm,1.0s,SNR=4.3						
SQTA	**Sankt Quirin**	**152.87**	**353**	ePKiKP	**PKiKP**	**17 09 25.1**	**+1.2**
	comp=Z,13nm,0.9s						
DAVA	**Damuels**	**152.94**	**355**	i PKiKP	**PKiKP**	**17 09 25.6**	**+1.5**
	comp=Z,9.5nm,1.0s						
OBKA	**Obir**	**153.04**	**348**	i PKiKP	**PKiKP**	**17 09 25.7**	**+1.5**
	comp=Z,11nm,0.7s						
MYKA	**Terra Mystica**	**153.09**	**349**	i PKiKP	**PKiKP**	**17 09 24.8**	**+0.5**
	comp=Z,4.9nm,0.6s						
FETA	**Feichten**	**153.12**	**354**	i PKiKP	**PKiKP**	**17 09 25.5**	**+1.1**
	comp=Z,16nm,1.1s						
ABTA	**Abfaltersbach**	**153.16**	**351**	i PKiKP	**PKiKP**	**17 09 25.0**	**+0.5**
	comp=Z,10nm,0.7s,SNR=4.7						
ESDC	**Sonseca Array**	**158.69**	**23**	PKPab	**PKPab**	**17 10 02.0**	**+2.3**
	comp=Z,1.1nm,1.0s,baz=335,slow=4.5,SNR=2.1						
TORD	**Torodi Ar. Bea**	**171.52**	**146**	PKP	**PKPdf**	**17 09 35.5**	**-0.4**
	comp=Z,2.2nm,0.9s,baz=26,slow=1.9,SNR=5.9						
TORD				PKPab	**pPKPab**	**17 10 59.8**	**-1.9**
	comp=Z,1.6nm,0.9s,baz=235,slow=2.4,SNR=4.4						

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*IDC **22** 17:05:10.4±3.1, 11°.62N×141°.86E, h80^{km}±32^{km}, mb3.4/11, mbtmp3.7/12, MS2.8/1, Error ellipse: s-maj=27.1km s-min=16.5km az=106.0*

ISC 22 17:05:05.1±0.9**, 11°.6N**±0°.2×**141°.6E**±0°.1**, h27**^{km}**, n12,** σ**1^{s}29**/13**, mb3.9**/11**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.73**	**58**	P	**Pn**	**17 06 02.2**	**+1.2**
	115nm,0.9s,baz=217,slow=19,SNR=1.8						
GUMO				S	**Sn**	**17 06 44.7**	**+0.6**
	74nm,0.8s,baz=250,slow=22,SNR=1.4						
GUMO				LR	LR	17 07 27.3	
	comp=Z,158nm,20.8s,baz=324,slow=39						
WRA	**Warramunga Arr**	**32.16**	**193**	P	**P**	**17 11 29.9**	**-0.9**
	0.8nm,0.8s,baz=13,slow=9.0,SNR=3.9						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**35.86**	**192**	P	**P**	**17 12 04.0**	**+1.1**
	0.3nm,0.7s,baz=19,slow=12,SNR=12						
	0.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**41.70**	**285**	P	**P**	**17 12 54.0**	**+1.9**
	0.3nm,0.7s,baz=83,slow=7.9,SNR=2.1						
	0.3nm,0.7s						
SONM	**Songino Array**	**46.61**	**328**	P	**P**	**17 13 31.8**	**+0.7**
	0.3nm,0.5s,baz=138,slow=8.8,SNR=3.6						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**60.75**	**317**	P	**P**	**17 15 15.0**	**+0.4**
	0.9nm,0.9s,baz=106,slow=6.6,SNR=4.9						
	0.9nm,0.9s						
ZALV	**Zalesovo Beam**	**61.42**	**326**	P	**P**	**17 15 18.4**	**-0.5**
	0.3nm,0.3s,baz=94,slow=5.9,SNR=2.0						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**64.12**	**321**	P	**P**	**17 15 37.1**	**+0.2**
	1.5nm,0.6s,baz=104,slow=6.7,SNR=14						
	1.5nm,0.6s						
BVAR	**Borovoye Array**	**69.53**	**322**	P	**P**	**17 16 11.6**	**+0.2**
	1.1nm,0.6s,baz=118,slow=8.3,SNR=7.2						
	1.1nm,0.6s						
ILAR	**Eielson Array**	**71.70**	**25**	P	**P**	**17 16 22.6**	**-1.9**
	0.6nm,0.5s,baz=248,slow=6.2,SNR=17						
	0.6nm,0.5s						
YKA	**Yellowknife Ar**	**86.06**	**27**	P	**P**	**17 17 42.9**	**-0.3**
	0.2nm,0.6s,baz=295,slow=6.5,SNR=3.7						
	0.2nm,0.6s						
FINES	**FINESS Array B**	**91.59**	**334**	P	**P**	**17 18 07.3**	**-2.1**
	1.4nm,0.9s,baz=58,slow=5.2,SNR=1.7						
	1.4nm,0.9s						

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*IDC **22** 17:17:44.0±4.0, 5°.74N×126°.58E, h73^{km}±30^{km}, mb3.4/8, mbtmp3.7/8, Error ellipse: s-maj=119.2km s-min=13.9km az=68.0*

ISC 22 17:17:43.9±1.2**, 5°.7N**±0°.2×**126°.6E**±0°.4**, h71**^{km}**, n9,** σ**0^{s}67**/12**, mb3.5**/8**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.64**	**323**	P	**Pn**	**17 18 10.4**	**-0.4**
	340nm,0.4s,baz=252,slow=6.4,SNR=19						
DAV				S	**Sn**	**17 18 31.8**	**+0.6**
	313nm,0.4s,baz=250,slow=23,SNR=14						
FITZ	**Fitzroy Crossi**	**23.71**	**182**	P	**P**	**17 22 49.6**	**+0.1**
	0.7nm,0.5s,baz=2.2,slow=9.1,SNR=5.6						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**26.65**	**164**	P	**P**	**17 23 15.6**	**-0.5**
	0.4nm,0.6s,baz=342,slow=10.0,SNR=5.6						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**30.10**	**166**	P	**P**	**17 23 46.8**	**-0.1**
	0.2nm,0.8s,baz=337,slow=7.0,SNR=9.9						
ASAR				PcP	**PcP**	**17 26 47.8**	**+0.6**
	0.4nm,0.5s,baz=346,slow=2.5,SNR=7.6						
	0.2nm,0.8s						
MKAR	**Makanchi Array**	**55.83**	**325**	P	**P**	**17 27 12.9**	**-1.0**
	0.2nm,0.4s,baz=121,slow=7.6,SNR=7.3						
MKAR				PcP	**PcP**	**17 28 13.0**	**+0.8**
	0.4nm,0.7s,baz=122,slow=4.2,SNR=3.0						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**58.73**	**333**	P	**P**	**17 27 34.6**	**+0.3**
	0.3nm,0.5s,baz=116,slow=8.2,SNR=1.9						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**59.97**	**327**	P	**P**	**17 27 41.9**	**-0.9**
	0.2nm,0.5s,baz=131,slow=7.1,SNR=2.9						
	0.2nm,0.5s						
ARCES	**ARCESS Array B**	**88.51**	**340**	P	**P**	**17 30 28.1**	**-0.2**
	3.7nm,1.0s,baz=61,slow=5.9,SNR=2.3						
	3.7nm,1.0s						
FINES	**FINESS Array B**	**89.99**	**332**	P	**P**	**17 30 35.7**	**+0.3**
	1.7nm,0.9s,baz=116,slow=4.4,SNR=4.7						
	1.7nm,0.9s						

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*TEH **22** 17:25:19.6, 27°.73N×53°.18E, h5^{km}*

*IDC **22** 17:25:20.4±1.0, 27°.71N×53°.00E, h0^{km}, mb3.7/14, mbtmp3.7/14, MS3.5/2, Error ellipse: s-maj=24.0km s-min=18.4km az=169.0*

*OMAN **22** 17:25:24.5±0.8, 27°.57N×53°.21E, h10^{km}, mb4.0/3, ml3.8/13, Error ellipse: s-maj=10.1km s-min=3.1km az=0.0*

*DSN **22** 17:25:26.7±1.7, 27°.43N×53°.40E, h10^{km}, ML3.3/14, Error ellipse: s-maj=20.1km s-min=6.4km az=168.0*

ISC 22 17:25:20.7±1.5**, 27°.70N**±0°.03×**53°.18E**±0°.04**, h1**^{km}±10^{km}**, n79,** σ**1^{s}33**/88**, mb3.7**/12**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHL1	**Khalili_Fars**	**0.13**	**118**	Pg	**Pg**	**17 25 23.1**	**0.0**
LMD1	**Lamerd**	**0.36**	**182**	Pg	**Pg**	**17 25 28.1**	**+0.5**
QIR1	**Qir**	**0.79**	**352**	Pg	**Pg**	**17 25 36.0**	**+0.2**
JHRM	**Jahrom**	**0.88**	**24**	Pg	**Pg**	**17 25 37.9**	**+0.3**
LAR1	**LAR**	**1.06**	**91**	Pg	**Pn**	**17 25 43.0**	**+0.2**
LAR1				Sg	**Sn**	**17 26 01.7**	**+3.4**
DSBU	**Dashti - Bushe**	**1.82**	**292**	Pn	**Pb**	**17 25 54.7**	**-0.1**
SHI	**Shiraz**	**2.02**	**343**	Pn	**Pn**	**17 25 56.8**	**+0.6**
BNDS	**Bandar-Abbas**	**2.68**	**96**	Pn	**Pn**	**17 26 05.7**	**+0.6**
GENO	**Geno**	**2.68**	**96**	Pn	**Pn**	**17 26 06.2**	**+1.1**
SHMA	**Al-Shehemyia**	**2.70**	**228**	P	**Pn**	**17 26 07.8**	**+2.6**
SHMA				S	**Sn**	**17 26 41.0**	**+2.5**
SAKB	**Bahrain**	**2.91**	**235**	P	**Pn**	**17 26 10.2**	**+2.0**
SAKB				S	**Sn**	**17 26 46.5**	**+2.7**
SHME	**Shamm**	**3.12**	**121**	P	**Pn**	**17 26 12.6**	**+1.6**
SHME				S	**Sn**	**17 26 51.0**	**+2.2**
SHME	**Shamm**	**3.12**	**121**	P	**Pn**	**17 26 12.1**	**+1.1**
BANOM	**Banah**	**3.30**	**122**	P	**Pn**	**17 26 15.3**	**+1.7**
BANOM				S	**Sn**	**17 26 55.2**	**+1.7**
BANOM	**Banah**	**3.30**	**122**	eP	**Pn**	**17 26 14.7**	**+1.1**
	SNR=16						
BANOM				S	**Sn**	**17 26 51.2**	**-2.3**
TRNA	**Turayna**	**3.44**	**211**	P	**Pn**	**17 26 16.6**	**+1.2**
	SNR=8.1						
NAZ	**Nazwa, Dubai**	**3.50**	**140**	P	**Pn**	**17 26 17.7**	**+1.5**
NAZ				S	**Sn**	**17 26 58.6**	**+0.2**
AJN	**Ajban**	**3.52**	**152**	P	**Pn**	**17 26 18.7**	**+2.2**
	SNR=5.7						
AJN				S	**Sn**	**17 26 59.4**	**+0.6**
AJN	**Ajban**	**3.52**	**152**	i P	**Pn**	**17 26 17.9**	**+1.3**
	SNR=5.7						
MASF	**Masafi**	**3.54**	**130**	P	**Pn**	**17 26 18.1**	**+1.3**
MASF				S	**Sn**	**17 26 59.7**	**+0.4**
KLNJ	**Kolanjah**	**3.58**	**338**	Pn	**Pn**	**17 26 18.8**	**+1.1**
ASUD	**Al Ashush, Dub**	**3.62**	**147**	P	**Pn**	**17 26 19.7**	**+1.8**
ASUD	**Al Ashush, Dub**	**3.62**	**147**	P	**Pn**	**17 26 17.0**	**-0.9**
SMRA	**Abu-Samra**	**3.62**	**216**	P	**Pn**	**17 26 19.3**	**+1.4**
MDH	**Madha**	**3.68**	**130**	P	**Pn**	**17 26 20.3**	**+1.6**
UOSS	**Minazif**	**3.86**	**135**	P	**Pn**	**17 26 22.5**	**+1.3**
UOSS	**Minazif**	**3.86**	**135**	i P	**Pn**	**17 26 21.2**	**0.0**
	SNR=8.6						
HATD	**Hatta, Dubai**	**3.90**	**136**	P	**Pn**	**17 26 22.6**	**+0.7**
HATD	**Hatta, Dubai**	**3.90**	**136**	P	**Pn**	**17 26 22.5**	**+0.7**
KHGB	**Koh Gabri**	**3.93**	**46**	Pn	**Pn**	**17 26 24.1**	**+1.7**
ASHO	**Ashiyiah**	**3.96**	**139**	P	**Pn**	**17 26 23.6**	**+0.9**
	SNR=6.7						
ASHO	**Ashiyiah**	**3.96**	**139**	i P	**Pn**	**17 26 23.0**	**+0.4**
	SNR=18						
MZWR	**Madinat Zayed**	**3.97**	**171**	P	**Pn**	**17 26 23.4**	**+0.7**
KHNJ	**Kahnooj**	**4.02**	**85**	Pn	**Pn**	**17 26 25.3**	**+1.8**
IRAM	**Ramesheh**	**4.16**	**351**	Pn	**Pn**	**17 26 26.2**	**+0.7**
ALNE	**Al Ain**	**4.30**	**147**	P	**Pn**	**17 26 28.2**	**+0.8**
	SNR=7.3						
ALNE	**Al Ain**	**4.30**	**147**	i P	**Pn**	**17 26 27.5**	**+0.1**
	SNR=7.2						
ZRDN	**Zarand Kerman**	**4.38**	**41**	Pn	**Pn**	**17 26 29.7**	**+1.1**
CHMN	**Cheshme madani**	**4.39**	**60**	Pn	**Pn**	**17 26 30.8**	**+1.9**
IBAF	**Bafgh**	**4.40**	**28**	Pn	**Pn**	**17 26 30.4**	**+1.6**
KRM1	**Kerman Provinc**	**4.54**	**51**	Pn	**Pn**	**17 26 32.1**	**+1.2**
SOHO	**SOHO**	**4.66**	**139**	P	**Pn**	**17 26 32.6**	**+0.3**
SOHO	**SOHO**	**4.66**	**139**	P	**Pn**	**17 26 32.2**	**0.0**
IZEF	**Zefreh**	**5.23**	**352**	Pn	**Pn**	**17 26 41.2**	**+0.9**
ARQ	**Araqi**	**5.29**	**144**	P	**Pn**	**17 26 41.5**	**+0.6**
	SNR=17						
IPIR	**Pirpir**	**5.35**	**339**	Pn	**Pn**	**17 26 43.3**	**+1.4**
ANAR	**Anarak**	**5.50**	**5**	Pn	**Pn**	**17 26 44.7**	**+0.9**
HOQ	**Hoqain**	**5.54**	**137**	P	**Pn**	**17 26 45.0**	**+0.7**
HOQ	**Hoqain**	**5.54**	**137**	Pn	**Pn**	**17 26 45.3**	**+0.9**
IKLH	**Kolahrood**	**5.77**	**347**	Pn	**Pn**	**17 26 48.8**	**+1.1**
BIDO	**Bidbid**	**6.10**	**132**	P	**Pn**	**17 26 53.3**	**+1.2**
TPRV	**Parvadeh(Tabas**	**6.12**	**29**	Pn	**Pn**	**17 26 53.1**	**+0.8**
KRSH	**Karshahi**	**6.32**	**352**	Pn	**Pn**	**17 26 56.0**	**+0.9**
WSAR	**Wadi Sarin**	**6.63**	**131**	P	**Pn**	**17 26 59.6**	**+0.3**
	SNR=6.7						
ISFB	**Sefidab**	**6.68**	**353**	Pn	**Pn**	**17 27 00.7**	**+0.6**
TKDS	**Koohdasht(Taba**	**6.81**	**29**	Pn	**Pn**	**17 27 02.7**	**+0.9**
TNSJ	**Nastanj**	**6.91**	**24**	Pn	**Pn**	**17 27 03.9**	**+0.7**
WBK	**Wadi Bani Khal**	**7.29**	**133**	P	**Pn**	**17 27 08.1**	**-0.3**
	SNR=9.8						
SRVN	**Saravan**	**8.19**	**90**	Pn	**Pn**	**17 27 22.1**	**+1.2**
DOK	**Doka**	**9.08**	**174**	P	**Pn**	**17 27 31.4**	**-1.5**
	SNR=7.1						
WHFO	**Wadi Hawf**	**9.75**	**177**	P	**Pn**	**17 27 40.3**	**-1.8**
	SNR=15						
SHAO	**Shalim**	**9.89**	**166**	P	**Pn**	**17 27 42.4**	**-1.7**
DMTO	**DMTO**	**10.07**	**170**	P	**Pn**	**17 27 44.8**	**-1.7**
	SNR=9.2						
ABTO	**Aybut**	**10.29**	**179**	P	**Pn**	**17 27 48.3**	**-1.3**
	SNR=10						
BRTR	**Keskin Array B**	**20.15**	**312**	P	**P**	**17 29 56.3**	**-0.2**
	0.5nm,0.6s,baz=127,slow=14,SNR=4.5						
	0.5nm,0.6s						
AAK	**Ala-Archa**	**22.84**	**44**	P	**P**	**17 30 27.9**	**+2.5**
	1.0nm,0.7s,baz=225,slow=6.6,SNR=4.7						
	1.0nm,0.7s						
IDI	**Anoyia**	**25.22**	**295**	LR	LR	17 43 34.0	
	comp=Z,69nm,20.6s,baz=212,slow=44						
BVAR	**Borovoye Array**	**28.35**	**22**	P	**P**	**17 31 16.1**	**+0.1**
	0.5nm,0.4s,baz=216,slow=8.9,SNR=6.4						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**29.75**	**42**	P	**P**	**17 31 28.8**	**+0.1**
	0.5nm,0.7s,baz=230,slow=9.5,SNR=11						
MKAR				PcP	**PcP**	**17 34 30.8**	**-1.7**
	0.1nm,0.6s,baz=230,slow=2.0,SNR=1.8						
	0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**35.00**	**33**	P	**P**	**17 32 14.2**	**-0.3**
	0.6nm,0.5s,baz=243,slow=6.3,SNR=4.7						
	0.6nm,0.5s						
FINES	**FINESS Array B**	**38.30**	**339**	P	**P**	**17 32 41.4**	**-1.1**
	0.7nm,0.4s,baz=142,slow=9.0,SNR=18						
	0.7nm,0.4s						
HFS	**Hagfors**	**42.03**	**332**	P	**P**	**17 33 12.8**	**-0.7**
	1.0nm,0.7s,baz=134,slow=8.5,SNR=5.1						
	1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**42.89**	**92**	P	**P**	**17 33 23.1**	**+2.0**
	0.3nm,0.4s,baz=282,slow=9.3,SNR=4.1						
	0.3nm,0.4s						
NOA	**NORSAR Array B**	**43.55**	**332**	P	**P**	**17 33 24.7**	**-1.2**
	0.3nm,0.7s,baz=121,slow=8.3,SNR=13						
NOA				LR	LR	17 54 30.4	
	comp=Z,86nm,18.1s,baz=240,slow=40						
	0.3nm,0.7s						
ARCES	**ARCESS Array B**	**44.85**	**347**	P	**P**	**17 33 36.1**	**0.0**
	5.2nm,1.1s,baz=134,slow=8.1,SNR=2.3						
	5.2nm,1.1s						
SONM	**Songino Array**	**45.62**	**49**	P	**P**	**17 33 43.2**	**+0.4**
	0.7nm,0.8s,baz=278,slow=9.7,SNR=5.2						
	0.7nm,0.8s						
EKA	**Eskdalemuir Ar**	**48.68**	**321**	P	**P**	**17 34 05.8**	**-0.5**
	0.3nm,0.4s,baz=102,slow=8.3,SNR=7.4						
	0.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**50.03**	**264**	P	**P**	**17 34 15.1**	**-2.1**
	1.3nm,0.8s,baz=61,slow=8.8,SNR=5.6						
	1.3nm,0.8s						
LBTB	**Lobatse**	**58.76**	**209**	P	**P**	**17 35 20.4**	**-0.1**
	1.7nm,0.6s,baz=26,slow=6.9,SNR=1.8						
	1.7nm,0.6s						

IDC 22 17:27:26.0±1.8**, 20°.06S**×**174°.19W, h0**^{km}**, mb3.5**/3**, mbtmp3.7**/4**, ML4.3**/1**, MS3.6**/2**, Error ellipse: s-maj=67.7km s-min=35.1km az=129.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**19.64**	**201**	P	P	17 31 56.3	+0.1
	0.8nm,0.3s,baz=330,slow=3.5,SNR=1.9						
URZ				S	S	17 35 26.9	-12
	3.3nm,0.8s,baz=78,slow=17,SNR=1.4						
	3.1nm,0.4s						
ASAR	**Alice Springs**	**48.10**	**256**	P	P	17 36 07.8	0.0
	0.7nm,0.8s,baz=112,slow=8.1,SNR=4.8						
ASAR				PcP	PcP	17 37 36.1	+0.4
	0.2nm,0.5s,baz=91,slow=3.4,SNR=1.5						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	**48.20**	**261**	P	P	17 36 08.3	-0.4
	0.2nm,0.4s,baz=99,slow=8.2,SNR=6.8						
	0.2nm,0.4s						
VNDA	**Vanda**	**58.69**	**186**	LR	LR	18 02 42.6	
	comp=Z,29nm,18.8s,baz=242,slow=36						
NWAO	**Narrogin (SRO)**	**61.76**	**243**	LR	LR	18 01 47.8	
	comp=Z,68nm,19.5s,baz=96,slow=33						
H03S2	**Juan Fernandez**	**83.27**	**123**	T	T	19 12 20.4	
	baz=249,slow=75,SNR=4.5						
H03S1	**Juan Fernandez**	**83.28**	**123**	T	T	19 12 25.0	
	baz=249,slow=75,SNR=3.7						
H03S3	**Juan Fernandez**	**83.28**	**123**	T	T	19 12 24.8	
	baz=249,slow=75,SNR=3.7						
ILAR	**Eielson Array**	**87.14**	**11**	P	P	17 40 13.3	0.0
	0.3nm,1.0s,baz=207,slow=5.3,SNR=4.5						
	0.3nm,1.0s						
BVAR	**Borovoye Array**	**121.03**	**320**	PKP	PKPdf	17 46 19.8	-0.5
	0.3nm,0.3s,baz=94,slow=3.7,SNR=4.2						

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*IDC **22** 17:29:10.1±1.4, 3°.39S×150°.49E, h0^{km}, mb3.9/10, mbtmp3.9/10, MS3.5/11, Error ellipse: s-maj=46.7km s-min=22.0km az=114.0*

ISC 22 17:29:13.6±0.9**, 3°.2S**±0°.1×**150°.6E**±0°.2**, h21**^{km}**, n34,** σ**1^{s}80**/19**, mb3.9**/11**, MS3.6**/7**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.07**	**209**	LR	LR	17 33 43.0	
	comp=Z,225nm,18.6s,baz=30,slow=40						
PMG	**Port Moresby**	**7.07**	**209**	P	**Pn**	**17 30 59.3**	**+3.4**
PMG	**Port Moresby**	**7.07**	**209**	P	**Pn**	**17 30 58.3**	**+2.4**
MISM	**Misima Island**	**7.75**	**164**	P	Pn	17 31 14.2	+8.9
JAY	**Jayapura**	**9.94**	**274**	LR	LR	17 34 49.5	
	comp=Z,475nm,20.4s,baz=74,slow=35						
CTA	**Charters Tower**	**17.32**	**194**	LR	LR	17 39 13.7	
	comp=Z,114nm,18.6s,baz=344,slow=35						
GUMO	**Guam**	**17.63**	**341**	LR	LR	17 39 13.9	
	comp=Z,118nm,18.1s,baz=151,slow=34						
SAUI	**Saumlaki**	**19.82**	**255**	P	**Pn**	**17 33 45.2**	**+0.5**
QIS	**Mount Isa**	**20.33**	**211**	P	**P**	**17 33 47.8**	**-0.8**
WRA	**Warramunga Arr**	**23.02**	**222**	P	**P**	**17 34 14.6**	**-2.9**
	4.4nm,1.0s,baz=49,slow=9.9,SNR=13						
	4.4nm,1.0s						
QLP	**Quilpie**	**24.05**	**194**	P	**P**	**17 34 25.7**	**-1.7**
SANI	**Sanana**	**24.65**	**272**	P	**P**	**17 34 32.4**	**-0.7**
ASAR	**Alice Springs**	**26.00**	**217**	P	**P**	**17 34 42.4**	**-2.8**
	1.2nm,0.8s,baz=52,slow=7.9,SNR=15						
	1.2nm,0.8s						
AULRC	**Lightning Ridg**	**26.21**	**185**	P	**P**	**17 34 44.4**	**-2.6**
BATI	**Baumata**	**27.66**	**254**	LR	LR	17 47 04.8	
	comp=Z,136nm,18.0s,baz=106,slow=39						
H11N1	**WAKE ISLAND Hy**	**27.81**	**34**	T	T	18 03 32.7	
	baz=218,slow=76,SNR=44						
H11N3	**WAKE ISLAND Hy**	**27.83**	**34**	T	T	18 03 35.4	
	baz=218,slow=76,SNR=37						
H11N2	**WAKE ISLAND Hy**	**27.83**	**34**	T	T	18 03 33.6	
	baz=218,slow=76,SNR=125						
FITZ	**Fitzroy Crossi**	**28.62**	**237**	LR	LR	17 48 03.9	
	comp=Z,159nm,20.4s,baz=88,slow=40						
STKA	**Stephens Creek**	**29.77**	**196**	LR	LR	17 46 15.7	
	comp=Z,111nm,18.7s,baz=2.7,slow=35						
JOW	**Kunigami**	**36.85**	**325**	LR	LR	17 51 40.5	
	comp=Z,85nm,18.7s,baz=11,slow=37						
KSRS	**Korea Array**	**45.62**	**335**	LR	LR	17 54 50.1	
	comp=Z,37nm,21.1s,baz=165,slow=34						

ASAJ	Asahikawa	47.65	352	LR	LR	17 54 10.7	
	comp=Z,54nm,21.9s,baz=1.0,slow=31						
CMAR	Chiang Mai Arr	55.25	295	P	P	17 38 45.4	-0.4
	0.7nm,0.4s,baz=108,slow=7.5,SNR=6.8						
	0.7nm,0.4s						
PETK	Petropavlovsk-	56.41	5	P	P	17 38 52.0	-1.4
	1.7nm,0.8s,baz=210,slow=7.7,SNR=6.8						
MA2	Magadan	62.58	0	LR	LR	18 06 59.4	
	comp=Z,38nm,18.6s,baz=126,slow=36						
SONM	Songino Array	63.83	328	P	P	17 39 45.0	+0.4
	1.1nm,0.7s,baz=142,slow=6.8,SNR=8.2						
	1.1nm,0.7s						
MKAR	Makanchi Array	77.71	319	P	P	17 41 09.8	+0.9
	0.6nm,0.7s,baz=106,slow=4.6,SNR=4.9						
	0.6nm,0.7s						
ZALV	Zalesovo Beam	78.63	327	P	P	17 41 14.2	+0.3
	0.4nm,0.4s,baz=106,slow=4.9,SNR=4.2						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	81.22	322	P	P	17 41 28.2	+0.3
	0.5nm,0.7s,baz=119,slow=4.9,SNR=4.6						
	0.5nm,0.7s						
ILAR	Eielson Array	81.51	23	P	P	17 41 29.9	+0.7
	1.2nm,0.9s,baz=247,slow=6.0,SNR=7.1						
	1.2nm,0.9s						
BVAR	Borovoye Array	86.67	323	P	P	17 41 55.4	-0.4
	2.3nm,0.7s,baz=101,slow=4.7,SNR=10.0						
	2.3nm,0.7s						
YKA	Yellowknife Ar	95.02	28	P	P	17 42 36.3	+1.8
	0.5nm,1.0s,baz=279,slow=5.5,SNR=5.6						
	0.5nm,1.0s						
TORD	Torodi Ar. Bea	147.75	290	PKPbc	PKPbc	17 48 57.9	0.0
	1.3nm,0.9s,baz=60,slow=4.6,SNR=5.3						

IDC 22 17:29:55.6±1.5**,52°.23S**×**16°.41E,h0^{km},mb3.8**/3**,**
mbtmp3.9/3**,MS3.3**/1**,Error ellipse: s-maj=60.2km**
s-min=38.7km az=88.0,Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	Sutherland	20.09	11	LR	LR	17 41 04.1	
	comp=Z,76nm,18.1s,baz=235,slow=33						
SNAA	Sanae	21.30	197	P	P	17 34 43.3	-0.2
	2.1nm,0.2s,baz=20,slow=11,SNR=10.0						
	2.1nm,0.2s						
H04S2	CROZET ISLANDS	23.48	91	T	T	17 59 47.2	
	baz=244,slow=75,SNR=14						
H04S3	CROZET ISLANDS	23.49	91	T	T	17 59 49.4	
	baz=244,slow=75,SNR=11						
H04S1	CROZET ISLANDS	23.50	91	T	T	17 59 47.5	
	baz=244,slow=75,SNR=14						
QSPA	South Pole Qui	38.00	180	P	P	17 37 14.8	-0.2
	1.9nm,1.0s,baz=255,slow=5.4,SNR=3.1						
	1.9nm,1.0s						
H10S2	ASCENSION HYDR	50.02	318	T	T	18 32 35.6	
	baz=154,slow=74,SNR=10.0						
H10S3	ASCENSION HYDR	50.03	318	T	T	18 32 37.3	
	baz=66,slow=74,SNR=9.0						
H01W2	Cape Leeuwin H	67.60	118	T	T	18 55 25.8	
	baz=221						
H01W3	Cape Leeuwin H	67.61	118	T	T	18 55 32.7	
	baz=221						
H01W1	Cape Leeuwin H	67.61	118	T	T	18 55 28.0	
	baz=221						
ASAR	Alice Springs	86.89	125	P	P	17 42 42.5	+0.2
	0.2nm,0.6s,baz=207,slow=5.6,SNR=7.1						
	0.2nm,0.6s						
PDAR	Pinedale Array	143.08	277	PKhKP	PKPpre	17 49 25.8	
	0.4nm,0.6s,baz=128,slow=6.4,SNR=5.2						
NVAR	Mina Array Bea	145.88	264	PKPbc	PKPab	17 49 36.9	-0.2
	2.0nm,0.6s,baz=114,slow=2.9,SNR=4.8						
YKA	Yellowknife Ar	152.34	311	PKPbc	PKPbc	17 49 50.9	-1.1
	0.1nm,0.6s,baz=86,slow=1.8,SNR=5.1						

NEIC ***22*** *17:31:40.8±1.2, 19°.21N±0°.03×67°.45W±0°.03, h10^{km}±1^{km},*
ML2.1/14, Error ellipse: s-maj=5.8km s-min=3.7km
az=130.0
SDD ***22*** *17:31:43.7±2.2, 19°.10N×67°.59W, h15^{km}±29^{km}, MD3.1,*
ML2.6, Presumed earthquake
RSPR ***22*** *17:31:44.0, 17°.46N×65°.73W, h25^{km}±10^{km}, MD2.9/4*
ISC 22 17:31:41.9±2.1**,19°.13N**±0°.10×**67°.51W**±0°.05**,h14**^{km}±10^{km}**,**
n26,σ**1^{s}.00**/34**,9C-4D,Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.76	150	Pg	Pg	17 31 56.7	0.0
AGPR				Sg	Sg	17 32 06.9	+0.3
AGPR				IAML		17 32 08.1	
	85nm,0.5s						
AGPR				IAML		17 32 08.5	
	55nm,0.4s						
AGPR	Aguadilla, PR	0.76	150	*e*Sg	Sb	17 32 07.6	+0.6
AGPR				IAML		17 32 08.0	
	comp=N,405nm,0.1s						
PRSN	Puerto Rico Se	0.97	159	Pg	Pb	17 31 59.8	-0.7
PRSN				IAML		17 32 16.9	
	comp=N,123nm,0.2s						
PRSN				IAML		17 32 19.8	
	comp=N,120nm,0.2s						
PCDR	Punta Cana, DR	1.03	234	⇑*i*Sg	Sb	17 32 11.0	-3.9
AOPR	Arecibo Observ	1.06	137		Pb	17 32 02.0	0.0
AOPR					Sn	17 32 17.4	+0.6
AOPR	Arecibo Observ	1.06	137	IAML		17 32 36.5	
	comp=N,40nm,1.1s						
AOPR	Arecibo Observ	1.06	137	⇑*e*P	Pb	17 32 02.0	0.0
AOPR	Arecibo Observ	1.06	137	*e*S	Sn	17 32 17.4	+0.6
AOPR	Arecibo Observ	1.06	137	⇓*i*P	Pb	17 32 01.5	-0.4
AOPR				⇓*i*Sg	Sn	17 32 16.8	0.0
AOPR				IAML		17 32 20.5	
	comp=N,144nm,0.1s						
UUPR	Utuado, UPR, P	1.15	139		Pb	17 32 03.4	-0.1
UUPR					Sg	17 32 18.6	-0.4
UUPR	Utuado, UPR, P	1.15	139		Pb	17 32 02.4	-1.1
UUPR				Sg	Sb	17 32 17.6	-0.7
UUPR				IAML		17 32 23.1	
	comp=N,136nm,0.3s						
UUPR				IAML		17 32 29.1	
	comp=N,106nm,0.4s						
UUPR	Utuado, UPR, P	1.15	139	⇓*i*P	Pb	17 32 03.4	-0.1
UUPR	Utuado, UPR, P	1.15	139	*e*S	Sg	17 32 18.6	-0.4
CRPR	Cabo Rojo, PR	1.18	161		Pb	17 32 04.9	+0.9
CRPR					Sg	17 32 20.8	+0.8
CRPR	Cabo Rojo, PR	1.18	161	Pn	Pb	17 32 03.8	-0.2
CRPR				IAML		17 32 20.9	
	comp=N,30nm,0.6s						
CRPR				IAML		17 32 25.1	
	comp=N,21nm,0.4s						
CRPR	Cabo Rojo, PR	1.18	161	⇑*e*P	Pb	17 32 04.9	+0.9
CRPR	Cabo Rojo, PR	1.18	161	*e*S	Sg	17 32 20.8	+0.8
CRPR	Cabo Rojo, PR	1.18	161	⇑*e*Pg	Pb	17 32 04.9	+0.9
CRPR				⇑*e*Sg	Sn	17 32 20.1	+0.4
CRPR				IAML		17 32 24.2	
	comp=N,105nm,0.1s						
MLPR	Magueyes Islan	1.24	159	⇓*e*P	Pn	17 32 05.5	+0.8
MLPR	Magueyes Islan	1.24	159	*e*S	Sn	17 32 21.5	+0.4
MLPR	Magueyes Islan	1.24	159	⇑*e*Pg	Pn	17 32 04.8	+0.1
MLPR				⇑*e*Sg	Sn	17 32 21.8	+0.6
MLPR				IAML		17 32 25.3	
	comp=N,91nm,0.1s						
ECPR	Experimental S	1.35	127	Pn	Pn	17 32 06.8	+0.5
ECPR				IAML		17 32 34.4	
	comp=N,39nm,0.2s						
ECPR				IAML		17 32 36.9	
	comp=N,44nm,0.8s						
CELP	Cerrillos	1.37	140	Pn	Pn	17 32 06.7	+0.1
CELP				IAML		17 32 29.8	
	comp=N,12nm,0.3s						
CELP				IAML		17 32 31.5	
	comp=N,19nm,1.1s						
OBIP	Obispado Ponce	1.38	142	Pn	Pn	17 32 05.0	-1.7
OBIP				IAML		17 32 28.8	
	comp=N,6.3nm,0.8s						
DR12	Loma Pena Alta	1.81	259	Pn	Pn	17 32 12.8	+0.2
HATOM	Hato Mayor del	1.81	259	⇑*e*Pg	Pn	17 32 13.7	+1.2
HATOM				⇑*e*Sg	Sn	17 32 36.6	+1.3
HATOM				IAML		17 32 38.1	
	comp=N,28nm,0.2s						

IDC ***22*** *18:19:09.5±2.0, 4°.51S×101°.69E, h0^{km}, mb3.9/10,*
mbtmp3.9/10, Error ellipse: s-maj=83.7km s-min=15.5km
az=53.0
NEIC ***22*** *18:19:19.3±1.8, 4°.2S±0°.1×102°.12E±0°.05, h73^{km}±9^{km},*
mb4.2/8, Error ellipse: s-maj=18.8km s-min=7.3km
az=187.0
DJA ***22*** *18:19:19.8±0.2, 4°S±3°×10°2E±°, h50^{km}±6^{km}, M4.3/20,*
mb4.3/17, mB4.9/2, MLv4.2/20, Mw(mB)4.2/2
ISC 22 18:19:16.3±0.8**,4°.40S**±0°.07×**101°.94E**±0°.07**,h37**^{km}**,n85,**
σ**2^{s}.16**/72**,mb4.0**/13**,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UBSI	University, Be	0.71	28	P	Pn	18 19 32.6	+2.7
UBSI				S	Sn	18 19 42.1	+2.5
KSI	Kapahiang	0.99	41	P	Pn	18 19 35.2	+1.6
KSI				S	Sn	18 19 46.3	-0.1
EGSI	Enggano, Bengk	1.01	161	P	Pn	18 19 39.7	+5.9
MNAI	Manna	1.01	88		Pn	18 19 36.0	+2.1
MNAI				Sn	Sn	18 19 48.9	+2.0
MNAI	Manna	1.01	88	P	Pn	18 19 36.2	+2.3
MNAI	Manna	1.01	88	P	Sn	18 19 49.0	+2.1
MNAI	Manna	1.01	88	P	Pn	18 19 36.2	+2.3
MNAI				S	Sn	18 19 47.5	+0.6
MASI	Maura Aman, Be	1.28	13	P	Pn	18 19 40.5	+2.8
LWLI	Liwa	2.20	106	P	Pn	18 19 53.2	+2.9
MDSI	Maura Dua	2.23	92	P	Pn	18 19 52.9	+2.2
KRJI	Kerinci	2.34	348	P	Pn	18 19 56.3	+4.0
PPSI	Pulau Pagai	2.52	310	P	Pn	18 20 00.6	+6.0
KASI	Kota Agung	2.78	114	P	Pn	18 20 01.0	+2.8
KLSI		2.80	96	P	Pn	18 20 01.5	+3.0
KLI	Kotabumi	2.94	99	P	Pn	18 20 02.7	+2.2
BLSI	Bandar Lampung	3.43	106	P	Pn	18 20 10.1	+2.9
PDSI	Padang	3.77	337	P	Pn	18 20 15.3	+3.5
SISI	Saibi	4.17	317	P	Pn	18 20 21.8	+4.4
PPI	Padang Panjang	4.21	338	P	Pn	18 20 21.8	+3.9
DSRI	Dabo	4.70	34	P	Pn	18 20 26.5	+1.8
PBSI	Pulau Batu	5.66	320	P	Pn	18 20 41.6	+3.8
	0.3nm35nm,0.9s						
MNSI	Mandailing Nat	5.67	335	P	Pn	18 20 40.8	+2.8
	0.2nm30nm,0.5s						
CNJI	Cibinong	5.92	119	P	Pn	18 20 41.9	+0.5
	0.2nm797nm22nm,1.2s						
TPI	Tanjungpandan	5.93	74	P	Pn	18 20 42.6	+1.0
	0.1nm25nm,1.3s						
MYKOM	Kota Tinggi	6.44	17	P	Pn	18 20 50.4	+1.9
BBJI	Bungbulang	6.44	118	P	Pn	18 20 50.5	+1.8
BBJI	Bungbulang	6.44	118	P	Pn	18 20 49.9	+1.2
GSI	Gunungsitoli	7.15	322		Pn	18 21 00.8	+2.4
GSI	Gunungsitoli	7.15	322	P	Pn	18 21 01.1	+2.8
GSI	Gunungsitoli	7.15	322	P	Pn	18 21 00.7	+2.4
	0.2nm900nm34nm,0.5s						
KPJI	Karang Pucung	7.54	113	P	Pn	18 21 06.9	+3.2
SNSI	Sinabang, Aceh	8.79	320	P	Pn	18 21 24.2	+3.4
	35nm,0.6s						
KCSI	Kotacane, Aceh	8.90	332	P	Pn	18 21 23.8	+1.4
	3.8nm,0.5s						
TPTI		8.97	328	P	Pn	18 21 25.6	+2.3
	23nm,1.1s						
UGM	Wanagama	9.22	113	Pn	Pn	18 21 27.2	+0.5
UGM	Wanagama	9.22	113	P	Pn	18 21 28.9	+2.1
UGM	Wanagama	9.22	113	P	Pn	18 21 28.8	+2.0
COCO	West Island	9.24	213	Pn	Pn	18 21 32.8	+5.8
COCO	West Island	9.24	213	P	Pn	18 21 33.0	+6.0
COCO	West Island	9.24	213	P	Pn	18 21 32.8	+5.8
PCJI	Pacitan	9.93	113	P	Pn	18 21 37.1	+0.7
	33nm,1.0s						
SJI	Sawahan	10.32	109	P	Pn	18 21 44.2	+2.3
SNJI	Sawahan-Nganju	10.32	109	P	Pn	18 21 45.2	+3.1
GMJI	Gumukmas	12.06	109	P	Pn	18 22 08.1	+2.4
	30nm,1.4s						
JAGI	Jajag, Banyuwa	12.79	109	Pn	Pn	18 22 15.7	0.0
JAGI	Jajag, Banyuwa	12.79	109	P	Pn	18 22 15.9	+0.2
JAGI	Jajag, Banyuwa	12.79	109	P	Pn	18 22 15.7	0.0
	23nm,1.0s						
KLNI	Mataram	14.62	107	P	Pn	18 22 39.7	-0.9
PLAI	Plampang	16.33	106	P	P	18 23 05.9	+0.4
KKM	Kota Kinabalu	17.63	54	P	P	18 23 20.7	+0.8
TOLI2	Tolitoli	19.61	74		P	18 23 40.6	-1.0
TOLI2	Tolitoli	19.61	74	P	P	18 23 41.6	0.0
BATI	Baumata	22.30	106	P	P	18 24 11.2	+0.5
	5.6nm,0.3s,baz=277,slow=4.1,SNR=2.5						
	5.6nm,0.3s						
CMAR	Chiang Mai Arr	22.90	353	P	P	18 24 17.1	+0.1
	0.6nm,0.7s,baz=170,slow=8.8,SNR=8.1						
	0.6nm,0.7s						
FITZ	Fitzroy Crossi	26.89	122	P	P	18 24 51.5	-2.3
KNRA	Kununurra	28.65	115	P	P	18 25 06.9	-2.8
H08S2	Diego Garcia H	29.46	262	T	T	18 55 25.0	
	baz=85,slow=74						
H08S3	Diego Garcia H	29.46	262	T	T	18 55 16.4	
	baz=85,slow=74						
H08S1	Diego Carcia H	29.48	262	T	T	18 55 18.9	
	baz=85						
H01W3	Cape Leeuwin H	32.37	161	T	T	18 59 33.1	
	baz=339,slow=76,SNR=5.0						
H01W2	Cape Leeuwin H	32.38	161	T	T	18 59 33.7	
	baz=339,slow=76,SNR=5.0						
H01W1	Cape Leeuwin H	32.39	161	T	T	18 59 34.7	
	baz=339,slow=76,SNR=4.8						
WB0	Warramunga Arr	35.11	119	P	P	18 26 05.4	-1.0
WB0				IAmb	IAmb	18 26 15.9	
	comp=Z,7.1nm,1.4s						
WRA	Warramunga Arr	35.13	119	P	P	18 26 06.0	-0.6
	comp=Z,0.4nm,0.5s,baz=298,slow=7.8,SNR=10						
	comp=Z,0.4nm,0.5s						
WR8	Warramunga Arr	35.28	119	P	P	18 26 05.7	-2.2
AS31	Alice Springs	36.29	125	P	P	18 26 16.3	-0.2
AS31				IAmb	IAmb	18 26 24.7	
	comp=Z,1.0nm,0.5s						
ASAR	Alice Springs	36.29	125	P	P	18 26 16.1	-0.5
	comp=Z,0.6nm,0.8s,baz=297,slow=8.4,SNR=10						
	comp=Z,0.6nm,0.8s						
ASAR	Alice Springs	36.29	125	P	P	18 26 16.2	-0.3
STKA	Stephens Creek	46.12	131	P	P	18 27 38.0	+0.9
	comp=Z,1.9nm,0.7s,baz=299,slow=12,SNR=3.2						
	comp=Z,1.9nm,0.7s						
SONM	Songino Array	52.16	4	P	P	18 28 22.7	-0.5
	comp=Z,0.8nm,0.7s,baz=175,slow=7.2,SNR=6.8						
	comp=Z,0.8nm,0.7s						
SONM	Songino Array	52.16	4	P	P	18 28 20.2	-3.0
SONM				IAmb	IAmb	18 28 38.7	
	comp=Z,2.5nm,1.4s						
MKAR	Makanchi Array	53.85	343	P	P	18 28 34.8	-0.8
	comp=Z,1.7nm,0.7s,baz=146,slow=8.2,SNR=20						
	comp=Z,1.7nm,0.7s						
MKAR	Makanchi Array	53.85	343	P	P	18 28 33.0	-2.6
KURBB	Kurchatov Arra	58.39	343	P	P	18 29 06.9	-0.9
	comp=Z,0.7nm,0.7s,baz=158,slow=6.6,SNR=7.3						
	comp=Z,0.7nm,0.7s						
KURK	Kurchatov	58.45	343	P	P	18 29 06.8	-1.5
KURK				IAmb	IAmb	18 29 08.5	
	comp=Z,1.5nm,0.8s						
ZALV	Zalesovo Beam	59.88	348	P	P	18 29 16.9	-1.3
	comp=Z,2.0nm,0.5s,baz=176,slow=5.4,SNR=11						
	comp=Z,2.0nm,0.5s						
H04N2	CROZET ISLANDS	60.07	218	T	T	19 34 17.0	
	baz=61						
H04N1	CROZET ISLANDS	60.08	218	T	T	19 34 14.7	
	baz=61,slow=74						
H04N3	CROZET ISLANDS	60.09	218	T	T	19 34 10.6	
	baz=61,slow=74						
H04S1	CROZET ISLANDS	60.32	217	T	T	19 34 33.9	
	baz=61						
H04S3	CROZET ISLANDS	60.34	217	T	T	19 34 29.1	
	baz=61						
H04S2	CROZET ISLANDS	60.34	217	T	T	19 34 30.3	
	baz=61						
BVAR	Borovoye Array	63.09	339	P	P	18 29 38.7	-1.2
	comp=Z,0.6nm,0.5s,baz=151,slow=6.8,SNR=4.8						
	comp=Z,0.6nm,0.5s						
ABKAR	Akbulak array	64.66	331	P	P	18 29 47.6	-2.6
TXAR	Lajitas Array	145.31	42	PKPbc	PKPbc	18 38 49.5	-1.3
	comp=Z,0.2nm,0.4s,baz=304,slow=3.7,SNR=7.0						

IDC ***22*** *18:27:44.7±11.0, 19°.15S×177°.38W, h525^{km}±121^{km},*
mb3.0/4, mbtmp3.9/4, Error ellipse: s-maj=61.7km
s-min=42.3km az=65.0
ISC 22 18:27:48.5±1.1**,19°.1S**±0°.3×**177°.5W**±0°.3**,h570**^{km}**,n10,**
σ**0^{s}.31**/10**,mb3.5**/4**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.79	243	P	P	18 34 25.1	-0.1
	1.4nm,0.7s,baz=77,slow=14,SNR=2.9						
	1.4nm,0.7s						
ASAR	Alice Springs	45.28	255	P	P	18 35 16.4	+0.1
	1.4nm,0.4s,baz=95,slow=7.9,SNR=6.9						
	1.4nm,0.4s						
QSPA	South Pole Qui	70.93	180	P	P	18 38 08.8	+0.1
	0.6nm,0.6s,baz=50,slow=5.5,SNR=1.3						
	0.6nm,0.6s						
ILAR	Eielson Array	86.89	13	P	P	18 39 33.0	+0.3
	0.4nm,0.7s,baz=236,slow=5.2,SNR=2.0						
	0.4nm,0.7s						
MKAR	Makanchi Array	110.58	314	PKiKP	PKiKP	18 45 16.3	-0.5
	0.1nm,0.4s,baz=133,slow=0.2,SNR=4.6						
BVAR	Borovoye Array	118.31	321	PKP	PKiKP	18 45 31.4	0.0
	0.3nm,0.3s,baz=129,slow=4.1,SNR=4.5						
ARCES	ARCESS Array B	127.66	350	PKP	PKiKP	18 45 49.1	-0.4
	1.0nm,0.6s,baz=25,slow=3.7,SNR=4.5						
BRTR	Keskin Array B	146.23	314	PKPbc	PKPbc	18 46 26.5	+0.4
	0.7nm,0.6s,baz=90,slow=3.7,SNR=4.3						
MMAI	Mount Meron Ar	147.50	302	PKPbc	PKiKP	18 46 31.0	-0.1
	1.0nm,0.4s,baz=83,slow=3.4,SNR=4.2						
GERES	GERESS Array B	149.00	346	PKPbc	PKiKP	18 46 33.6	-0.2
	0.3nm,0.6s,baz=1.7,slow=5.4,SNR=2.8						

IDC ***22*** *18:28:56.9±8.8, 7°.01S×130°.08E, h93^{km}±83^{km}, mb3.5/4,*
mbtmp4.1/8, ML4.6/4, MS3.5/1, Error ellipse: s-maj=98.0km
s-min=29.8km az=50.0
DJA ***22*** *18:29:02.1±0.2, 7°S±2°×13°0E±°, h150^{km}±4^{km}, M4.4/24,*
mb4.4/24, mB5.0/8, MLv4.5/19, Mw(mB)4.3/8
NEIC ***22*** *18:29:03.1±2.4, 7°.04S±0°.08×129°.8E±0°.1, h142^{km}±11^{km},*
mb4.1/13, Error ellipse: s-maj=14.5km s-min=11.7km
az=89.0
ISC 22 18:29:01.9±0.6**,7°.19S**±0°.05×**129°.72E**±0°.05**,h150**^{km}**,n75,**
σ**1^{s}.97**/80**,mb3.9**/7**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.76	117	Pn	Pn	18 29 35.3	+1.0
SAUI				Sn	Sn	18 29 57.5	-1.6
SAUI	Saumlaki	1.76	117	P	Pn	18 29 36.0	+1.7
SAUI	Saumlaki	1.76	117	P	Pn	18 29 35.2	+1.0
SAUI				S	Sn	18 29 57.7	-1.4
BNDI	Bandanaira	2.65	4	P	Pn	18 29 45.9	+0.9
BNDI	Bandanaira	2.65	4	P	Pn	18 29 45.7	+0.7
AAI	Ambon	3.79	336	P	Pn	18 30 00.7	+1.2
MSAI	Masohi	3.90	348	P	Pn	18 30 02.2	+1.4
KRAI	Karang Ratu	4.06	341	P	Pn	18 30 05.1	+2.1
NLAI	Namlea	4.71	326	P	Pn	18 30 14.3	+2.8
FAKI	Fak Fak	4.93	31	Pn	Pn	18 30 12.1	-2.4
FAKI				Sn	Sn	18 31 05.0	-6.1
FAKI	Fak Fak	4.93	31	P	Pn	18 30 12.4	-2.1
FAKI	Fak Fak	4.93	31	P	Pn	18 30 12.0	-2.4
KMPI	Kaimana, Papua	5.29	49	P	Pn	18 30 19.6	+0.3
	4µm81nm,0.7s						
DRS	Darwin Rock St	5.34	167	P	Pn	18 30 20.3	+0.4
MTN	Manton Dam	5.79	166		Pn	18 30 26.2	+0.3
SOEI	Soe	5.96	244		Pn	18 30 29.6	+1.3
SOEI				Sn	Sn	18 31 31.5	-4.3
SOEI	Soe	5.96	244	P	Pn	18 30 29.9	+1.6
SOEI	Soe	5.96	244	P	Pn	18 30 29.7	+1.4
SANI	Sanana	6.31	324	P	Pn	18 30 34.9	+2.1
SANI	Sanana	6.31	324	P	Pn	18 30 34.8	+2.0
SIJI	Sorong	6.46	14	P	Pn	18 30 32.9	-2.0
SWI	Sorong	6.47	14	P	Pn	18 30 33.0	-1.9
BATI	Baumata	6.70	243	P	Pn	18 30 39.2	+1.3
	39nm,0.3s,baz=108,slow=6.4,SNR=47						
BATI				S	Sn	18 31 51.0	-2.2
	130nm,0.5s,baz=97,slow=19,SNR=14						
	96nm,0.4s						
BATI	Baumata	6.70	243	P	Pn	18 30 39.3	+1.3
RKPI	Ransiki, Papua	7.18	38	P	Pn	18 30 43.2	-1.2
	1µm50nm,0.5s						
MMRI	Maumere	7.55	259	Pn	Pn	18 30 49.2	-0.1
MMRI	Maumere	7.55	259	P	Pn	18 30 50.4	+1.1
	0.2nm28nm,0.9s						
MWPI	Manokwari, Pap	7.56	35	P	Pn	18 30 49.0	-0.6
	56nm,1.3s						
EDFI	Ende, Flores	8.10	258	P	Pn	18 30 58.9	+2.1
	10nm,0.8s						
KNRA	Kununurra	8.49	186		Pn	18 31 01.4	-0.5
BAKI	Biak	8.72	47	P	Pn	18 31 06.5	+1.5
	53nm,0.9s						
WSI	Waingapu	9.64	255	P	Pn	18 31 16.9	-0.3
BKSI	Bulukumba	9.72	280	P	Pn	18 31 20.4	+2.2
LBFI	Labuhan Bajo,	9.82	262	P	Pn	18 31 20.7	+1.1
WBSI	Waikabubak, Su	10.50	256	P	Pn	18 31 28.1	-0.6
DBNI	Kabupaten Domp	11.37	263	P	Pn	18 31 39.6	-0.5
	10nm,0.5s						
FITZ	Fitzroy Crossi	11.55	200	P	Pn	18 31 40.9	-1.5
	2.2nm,0.3s,baz=26,slow=11,SNR=53						
FITZ				S	Sn	18 33 41.0	-9.1
	9.3nm,0.5s,baz=185,slow=19,SNR=3.6						
	6.9nm,0.4s						
PLAI	Plampang	11.94	261	P	Pn	18 31 46.6	-0.9
	24nm,0.6s						
TWSI	Taliwang, Sumb	12.80	262	P	Pn	18 31 57.2	-1.5
	12nm,0.7s						
WB0	Warramunga Arr	13.30	161		Pn	18 32 03.4	-1.7
WRAB	Tennant Creek	13.45	161		Pn	18 32 04.8	-2.0
WRA	Warramunga Arr	13.45	161	P	Pn	18 32 05.0	-2.0
	2.4nm,0.3s,baz=341,slow=14,SNR=81						
WRA				S	Sn	18 34 25.4	-11
	8.3nm,0.5s,baz=330,slow=24,SNR=12						
	7.3nm,0.8s						
WRA	Warramunga Arr	13.45	161		Pn	18 32 04.3	-2.6
WR8	Warramunga Arr	13.52	160		Pn	18 32 05.2	-2.6
WR0	Warramunga Arr	13.53	160	Pn	Pn	18 32 05.3	-2.7
KLNI	Mataram	13.55	264	P	Pn	18 32 07.7	-0.6
	20nm,1.5s						
COEN	Coen	14.84	118	Pn	Pn	18 32 24.6	+0.2
JAGI	Jajag, Banyuwa	15.47	264	Pn	Pn	18 32 28.6	-3.7
JAGI	Jajag, Banyuwa	15.47	264	P	Pn	18 32 31.3	-1.0
	25nm,1.3s						
AS31	Alice Springs	16.87	167		Pn	18 32 49.8	+0.4
AS31				IAmb	IAmb	18 32 57.4	
	comp=Z,3.3nm,0.4s						
ASAR	Alice Springs	16.87	167	P	Pn	18 32 49.6	+0.3
	comp=Z,1.1nm,0.3s,baz=335,slow=9.5,SNR=106						
ASAR				S	S	18 35 49.8	-7.3
	comp=Z,3.4nm,0.6s,baz=359,slow=26,SNR=6.8						
	comp=Z,2.1nm,0.3s						
ASAR	Alice Springs	16.87	167		Pn	18 32 50.0	+0.6
MBWA	Marble Bar	16.92	214	P	P	18 32 49.5	+0.1
MBWA				IAmb	IAmb	18 33 02.1	
	comp=Z,9.0nm,1.1s						
PSA00	Pilbara Seismi	17.19	213		P	18 32 51.8	-0.6
PSA00				IAmb	IAmb	18 32 57.8	
	comp=Z,10nm,0.9s						
PSA00	Pilbara Seismi	17.19	213		P	18 32 51.7	-0.7
PSA00				IAmb	IAmb	18 32 59.2	
	comp=Z,3.7nm,1.1s						
SJI	Sawahan	17.81	267	P	Pn	18 33 00.2	-0.5
	comp=Z,18nm,1.2s						
SNJI	Sawahan-Nganju	17.82	267	P	Pn	18 33 02.0	+1.1
PCJI	Pacitan	18.40	266	P	P	18 33 06.0	+0.3
	comp=Z,59nm,1.7s						
UGM	Wanagama	19.04	267	P	Pn	18 33 14.6	-0.5
	comp=Z,104nm,2.0s						
SBUM	Sibu	19.91	298	P	Pn	18 33 24.9	-0.4
SBUM				IAmb	IAmb	18 33 26.6	
	comp=Z,5.1nm,0.7s						
FORT	Forrest	23.52	184	P	P	18 34 01.9	+3.5
FORT				IAmb	IAmb	18 34 12.6	
	comp=Z,9.9nm,1.1s						
MORW	Morawa	25.30	209	P	P	18 34 15.2	+0.5
MORW				IAmb	IAmb	18 34 20.6	
	comp=Z,6.6nm,1.1s						
BBOO	Buckleboo	26.17	168	P	P	18 34 24.9	+2.5
STKA	Stephens Creek	26.95	157	P	P	18 34 31.4	+2.0
CMAR	Chiang Mai Arr	39.64	310	P	P	18 36 20.8	+1.6
	comp=Z,0.4nm,0.3s,baz=125,slow=8.2,SNR=2.4						
	comp=Z,0.4nm,0.3s						
PALK	Pallekele	50.95	285	LR	LR	18 59 36.7	
	comp=Z,46nm,21.0s,baz=298,slow=36						
MK31	Makanchi Array	68.23	327	P	P	18 39 47.5	+1.2
MKAR	Makanchi Array	68.23	327	P	P	18 39 48.4	+2.0
	comp=Z,1.0nm,0.6s,baz=117,slow=7.8,SNR=17						
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	68.23	327	P	P	18 39 47.8	+1.4
ARSB	Arslanbob	70.84	318	P	P	18 40 03.7	+1.0
ARSB				IAmb	IAmb	18 40 07.4	
	comp=Z,2.3nm,1.0s						
ZALV	Zalesovo Beam	71.62	334	P	P	18 40 08.3	+1.5
	comp=Z,0.4nm,0.5s,baz=130,slow=7.9,SNR=2.0						
	comp=Z,0.4nm,0.5s						
KURBB	Kurchatov Arra	72.52	329	P	P	18 40 13.5	+1.2
	comp=Z,0.5nm,0.7s,baz=125,slow=4.8,SNR=9.2						
	comp=Z,0.5nm,0.7s						
AB31	Akbulak array	82.48	322	P	P	18 41 09.3	+1.7
ABKAR	Akbulak array	82.48	322	P	P	18 41 09.3	+1.7

TORD	Torodi Ar. Bea	128.57	281	PKP	PKiKP	18 47 54.7	+1.9
	comp=Z,0.4nm,0.7s,baz=44,slow=3.3,SNR=2.3						

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*IDC **22** 18:43:59.8±0.9, 39°.86N×117°.33E, h0^{km}, mb3.5/9, mbtmp3.6/13, ML3.6/4, MS3.7/2, Error ellipse: s-maj=29.4km s-min=17.4km az=50.0*

*KEA **22** 18:44:17.9, 39°.66N×118°.59E, h3^{km}, ML3.6/1*

ISC 22 18:44:00.6±0.8, **40°.0N**±0°.1×**117°.46E**±0°.08, **h10**^{km}, **n16**, σ**2**^{s}**.58**/16, **mb3.7**/9, **Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYS	Pyongsong	6.53	94	Pg	Pg	18 46 05.3	-0.2
PYS				AML	AML		
	comp=N,131nm,0.3s						
PYS				AML	AML		
	comp=E,68nm,0.2s						
PYS				AML	AML		
	comp=Z,60nm,0.5s						
KSRS	Korea Array	8.56	104	Pn	Pn	18 46 05.6	+1.0
	comp=Z,1.2nm,0.3s,baz=286,slow=14,SNR=12						
KSRS				Sn	Sn	18 47 36.3	-4.9
	comp=Z,0.4nm,0.3s,baz=286,slow=23,SNR=2.6						
KSRS				Lg	Lg	18 48 28.7	
	comp=Z,1.2nm,0.3s,baz=293,slow=29,SNR=6.7						
	comp=Z,2.4nm,0.3s						
HILR	Hailar Array B	9.71	9	Pn	Pn	18 46 22.8	+2.5
	baz=179,slow=12						
HILR				Lg	Lg	18 49 08.4	
	baz=184,slow=33						
	comp=Z,1.2nm,0.3s						
SONM	Songino Array	11.19	318	Pn	Pn	18 46 41.0	+0.4
	comp=Z,0.5nm,0.3s,baz=135,slow=14,SNR=12						
SONM				Sn	Sn	18 48 38.8	-6.9
	comp=Z,0.3nm,0.3s,baz=145,slow=28,SNR=4.0						
SONM				Lg	Lg	18 49 49.0	
	comp=Z,1.1nm,0.3s,baz=140,slow=29,SNR=9.0						
	comp=Z,0.8nm,0.4s						
USRK	Ussuriysk Ar.	11.59	64	Lg	Lg	18 50 12.2	
	comp=Z,0.4nm,0.3s,baz=258,slow=27,SNR=4.8						
MJAR	Matsushiro Arr	16.65	95	Pn	P	18 47 56.7	+0.2
	baz=290,slow=10.0,SNR=8.9						
	comp=Z,1.4nm,0.7s						
MKAR	Makanchi Array	26.29	297	P	P	18 49 36.9	+0.7
	comp=Z,0.3nm,0.7s,baz=97,slow=13,SNR=2.6						
MKAR				LR	LR	19 00 42.0	
	comp=Z,60nm,20.0s,baz=303,slow=38						
	comp=Z,0.3nm,0.7s						
CMAR	Chiang Mai Arr	26.75	222	P	P	18 49 39.4	-1.1
	comp=Z,0.3nm,0.6s,baz=42,slow=7.0,SNR=2.0						
	comp=Z,0.3nm,0.6s						
KURBB	Kurchatov Arra	29.06	305	P	P	18 50 02.2	+1.4
	comp=Z,1.2nm,0.8s,baz=96,slow=9.3,SNR=13						
	comp=Z,1.2nm,0.8s						
BVAR	Borovoye Array	34.29	308	P	P	18 50 47.8	+0.9
	comp=Z,0.7nm,0.5s,baz=90,slow=12,SNR=4.4						
	comp=Z,0.7nm,0.5s						
FINES	FINESS Array B	56.47	325	P	P	18 53 43.2	+1.0
	comp=Z,0.7nm,0.7s,baz=89,slow=7.1,SNR=3.4						
	comp=Z,0.7nm,0.7s						
WRA	Warramunga Arr	61.66	162	P	P	18 54 18.1	-0.6
	comp=Z,0.5nm,0.9s,baz=346,slow=7.1,SNR=2.2						
	comp=Z,0.5nm,0.9s						
HFS	Hagfors	62.45	327	P	P	18 54 23.4	-0.1
	comp=Z,0.6nm,0.4s,baz=69,slow=7.9,SNR=1.8						
	comp=Z,0.6nm,0.4s						
NOA	NORSAR Array B	62.97	328	P	P	18 54 28.1	+1.0
	comp=Z,0.3nm,0.8s,baz=62,slow=8.6,SNR=4.3						
	comp=Z,0.3nm,0.8s						
ASAR	Alice Springs	65.15	163	P	P	18 54 42.9	+1.1
	comp=Z,0.2nm,0.8s,baz=345,slow=8.0,SNR=1.8						
	comp=Z,0.2nm,0.8s						
SFJD	Kangerlussuaq	72.96	355	LR	LR	19 30 32.0	
	comp=Z,99nm,18.2s,baz=108,slow=38						

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*IDC **22** 18:56:17.0±1.7, 2°.31S×139°.18E, h0^{km}, mb2.9/2, mbtmp3.1/3, ML3.3/1, Error ellipse: s-maj=31.1km s-min=15.3km az=1.0*

*DJA **22** 18:56:19.7±0.6, 2°S±10°×13°9E±°, h10^{km}±5^{km}, M3.8/7, mb4.3/2, MLv3.5/7*

ISC 22 18:56:20.2±1.0, **2°.13S**±0°.09×**139°.34E**±0°.05, **h27**^{km}, **n11**, σ**1**^{s}**.35**/12, **Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.64	282	P	Pb	18 56 32.2	-0.7
SMPI				S	Sb	18 56 41.1	-0.3
GENI	Genyem	0.95	119	P	Pb	18 56 38.7	+0.6
JAY	Jayapura	1.42	106	Pg	Pb	18 56 45.9	-0.3
	9.2nm,0.3s,baz=250,slow=14,SNR=33						
JAY				Lg	Lg	18 57 05.5	
	17nm,0.3s,baz=114,slow=19,SNR=15						
JAY	Jayapura	1.42	106	P	Pb	18 56 45.5	-0.6
WAMI	Wamena	1.85	200	P	Pb	18 56 54.1	+0.7
BAKI	Biak	3.36	286	P	Pn	18 57 12.3	+1.3
KMPI	Kaimana, Papua	5.83	255	P	Pn	18 57 46.1	+1.2
	51nm,0.8s						
FAKI	Fak Fak	7.12	264	P	Pn	18 58 02.8	0.0
WRA	Warramunga Arr	18.37	195	P	P	19 00 30.9	-2.1
	0.1nm,0.3s,baz=18,slow=12,SNR=8.2						
	0.5nm,0.7s						
ASAR	Alice Springs	22.05	193	P	P	19 01 10.7	-2.3
	0.1nm,0.5s,baz=27,slow=11,SNR=8.0						
	0.1nm,0.5s						
MKAR	Makanchi Array	69.71	322	P	P	19 07 29.0	+1.2
	0.2nm,0.6s,baz=110,slow=8.1,SNR=1.6						
	0.2nm,0.6s						

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*IDC **22** 19:02:58.5±2.2, 24°.16N×121°.94E, h0^{km}, mb3.2/4, mbtmp3.2/4, MS2.9/1, Error ellipse: s-maj=188.3km s-min=24.5km az=65.0*

*JMA **22** 19:03:02.8±0.1, 24°.1N±0°.5×122°.0E±0°.3, h36^{km}±1^{km}, MV3.3/13, TAIWAN REGION*

*TAP **22** 19:03:03.2, 24°.19N×121°.96E, h27^{km}, ML4.2, B*

ISC 22 19:03:03.3±0.8, **24°.15N**±0°.02×**121°.99E**±0°.02, **h31**^{km}±5^{km}, **n163**, σ**0**^{s}**.89**/274, **mb3.2**/4, **6C-13D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.28	305	⇓*i*P	Pb	19 03 10.0	-0.7
EHP				*e*S	Sb	19 03 15.7	+0.1
EAHA	Aohua	0.29	308	⇓*i*P	Pb	19 03 10.1	-0.7
EAHA				*i* S	Sb	19 03 15.4	-0.5
EOS4	EOS4	0.30	95	*i* P	Pb	19 03 10.9	+0.5
EOS4				S	Sb	19 03 16.6	+1.3
EOS3	EOS3	0.33	65	*e*P	Pn	19 03 12.0	+0.3
ETL	Fush Village	0.34	272	⇑*i*P	Pb	19 03 11.0	-0.4
ETL				*i* S	Sn	19 03 17.2	-0.8
EOS2	EOS2	0.34	39	*e*P	Pn	19 03 12.0	0.0
EWUT	Wuta	0.35	326	⇓*i*P	Pb	19 03 11.1	-0.5
EWUT				S	Sn	19 03 16.9	-1.4
ENA	Nanau	0.36	320	⇓*i*P	Pb	19 03 11.0	-0.7
ENA				S	Sn	19 03 16.7	-1.7
NACB	Ninganchiao	0.37	274	P	Pb	19 03 11.0	-0.8
NACB	Ninganchiao	0.37	274	⇑*i*P	Pb	19 03 11.2	-0.5
NACB				S	Sn	19 03 17.2	-1.3
TWD	Chiawan	0.37	259	*i* P	Pb	19 03 11.4	-0.4
TWD				*e*S	Sn	19 03 18.3	-0.3
HWA	Hwalien	0.40	244	*i* P	Pn	19 03 12.6	-0.2
ESAO	Su ao	0.45	342	P	Pb	19 03 12.5	-0.5
ESAO				S	Sb	19 03 18.9	-0.7
TEYL	Yanliau Villag	0.46	232	P	Pb	19 03 13.2	+0.1
TEYL				*e*S	Sn	19 03 20.5	-0.3
ETLH	Xiulin Townshi	0.47	277	⇑*i*P	Pb	19 03 12.9	-0.5
ETLH				*i* S	Sn	19 03 20.6	-0.7
TWC	Suao	0.48	344	*i* P	Pb	19 03 12.8	-0.6
TWC				S	Sb	19 03 19.4	-1.0
ETM	Tongmen	0.49	248	⇑*i*P	Pb	19 03 13.4	-0.3
ETM				S	Sn	19 03 21.2	-0.5
SHUL	Shoufeng	0.53	228	P	Pb	19 03 14.4	+0.1
NDS	Dongshan	0.55	332	⇓*i*P	Pn	19 03 14.1	-0.8
NDS				S	Sn	19 03 22.4	-0.6
LXIB	Xiulin Townshi	0.55	257	⇑*i*P	Pb	19 03 14.2	-0.5
LXIB				S	Sn	19 03 22.6	-0.6
LATG	Datong	0.57	312	⇓*i*P	Pb	19 03 14.3	-0.8
LATG				S	Sn	19 03 22.5	-1.4
TEGC	Jichi Village	0.60	224	P	Pb	19 03 15.4	-0.1
TEGC				*e*S	Sn	19 03 25.4	+0.9
ESL	Shilin	0.61	237	*i* P	Pb	19 03 15.0	-0.6
ESL				S	Sn	19 03 24.3	-0.3
NNSB	Datong	0.62	297	⇓*i*P	Pb	19 03 15.3	-0.6
NNSB				S	Sn	19 03 24.2	-0.9
ENTT	Nioudou	0.62	321	⇓*i*P	Pb	19 03 15.2	-0.7
ENTT				*i* S	Sn	19 03 24.6	-0.4
NNS	Nan Shan	0.64	297	*i* P	Pb	19 03 15.5	-0.6
NNS				S	Sn	19 03 24.6	-0.9
TWE	Neicheng	0.64	332	⇓*i*P	Pn	19 03 15.6	-0.6
TWE				*i* S	Sn	19 03 25.0	-0.4
ILA	Ilan	0.65	340	*i* P	Pb	19 03 15.6	-0.7
ILA				S	Sn	19 03 25.6	-0.1
WHF	Hehuan Shan	0.67	270	*e*P	Pb	19 03 16.3	-0.5
WHF				*i* S	Sn	19 03 25.7	-0.8
FUSS	Fushou	0.69	278	P	Pn	19 03 16.7	-0.5
FUSS				S	Sn	19 03 26.4	-0.6
EGS		0.69	355	*e*P	Pn	19 03 16.7	-0.3
EGS				*i* S	Sn	19 03 26.9	+0.3
EGFH	Guangfu	0.71	227	P	Pb	19 03 16.5	-0.7
EGFH				S	Sb	19 03 26.9	+0.3
FUSB	Fushanzhiwuyua	0.71	329	⇓*i*P	Pn	19 03 16.7	-0.6
FUSB				S	Sn	19 03 26.6	-0.6
NTC	Toucheng	0.72	348	P	Pn	19 03 17.0	-0.3
NTC				*e*S	Sn	19 03 27.6	+0.4
TWT	Tachien	0.75	278	P	Pn	19 03 17.9	-0.1
TWT				*e*S	Sn	19 03 28.2	-0.1
YHNB	Yeheng	0.77	313	P	Pn	19 03 17.6	-0.5
YHNB	Yeheng	0.77	313	⇓*i*P	Pn	19 03 17.5	-0.5
YHNB				S	Sn	19 03 27.8	-0.7
NWLT	Wulai	0.77	324	P	Pb	19 03 17.4	-0.9
NWLT				S	Sn	19 03 28.1	-0.5
TDCB	Techi	0.77	278	P	Pn	19 03 17.9	-0.3
TDCB				*e*S	Sn	19 03 28.6	-0.1
OWD	Renai	0.77	256	⇑*i*P	Pb	19 03 17.7	-0.7
OWD				S	Sb	19 03 28.1	-0.6
NSK	Sanguang	0.78	312	*i* P	Pn	19 03 17.7	-0.5
NSK				*i* S	Sn	19 03 28.3	-0.7
WUSB	Renai	0.82	259	*i* P	Pb	19 03 18.6	-0.5
WUSB				*e*S	Sn	19 03 30.2	+0.3
TIPB	Shuangxi	0.83	349	*i* P	Pn	19 03 19.0	+0.1
TIPB				S	Sn	19 03 30.1	0.0
HGSD	Ruisui	0.84	219	*e*P	Pb	19 03 18.2	-1.2
HGSD				*e*S	Sb	19 03 30.1	-0.2
TWB1	Santiao Chiao	0.85	360	P	Pn	19 03 19.5	+0.4
TWB1				*e*S	Sn	19 03 30.7	+0.1
VWDT	VWDT	0.87	243	*i* P	Pb	19 03 19.5	-0.4
VWDT				S	Sb	19 03 30.8	-0.5
EHYH	Wanrong	0.88	222	*e*P	Pn	19 03 18.8	-0.7
EHYH				*e*S	Sb	19 03 31.6	0.0
EHY	Hungye	0.89	224	*i* P	Pn	19 03 18.8	-0.8
EHY				S	Sb	19 03 31.3	-0.5
TWA	Mucha	0.91	336	*i* P	Pn	19 03 20.5	+0.5
TWA				*i* S	Sn	19 03 33.2	+1.3
NHDH	Xindian Distri	0.92	332	P	Pb	19 03 20.5	-0.2
NHDH				S	Sn	19 03 33.2	+1.0
JYNG	Yonagunijimaku	0.92	71	P	Pn	19 03 20.0	-0.1
JYNG				*e*S	Sb	19 03 32.3	-0.3
NFF	Wufeng Townshi	0.93	301	P	Pb	19 03 20.6	-0.4
NFF				S	Sn	19 03 33.1	+0.4
NWF	Wu-fen Shan	0.94	348	*i* P	Pb	19 03 21.1	-0.1
NWF				S	Sn	19 03 34.2	+1.4
WFSB	Wu-fen Shan	0.94	348	⇓*i*P	Pb	19 03 21.2	+0.1
WFSB				S	Sn	19 03 34.0	+1.3
TATO	Taipei	0.94	331	P	Pb	19 03 20.7	-0.4
TATO	Taipei	0.94	331	S	Sn	19 03 34.7	+1.9
SXI1	Grass Mountain	0.95	353	⇓*e*P	Pb	19 03 21.1	-0.2
SXI1				*e*S	Sn	19 03 33.9	+0.8
NHY	Taipei	0.97	337	P	Pb	19 03 21.8	+0.3
NHY				S	Sn	19 03 35.0	+1.7
WHP	Taichung City	0.97	278	*i* P	Pb	19 03 21.4	-0.1
WHP				S	Sn	19 03 34.6	+1.1
ECBN	Changbin	0.97	211	*e*P	Pn	19 03 20.1	-0.6
ECBN				*e*S	Sb	19 03 32.6	-1.3
KSHI	Guanxi Townshi	0.97	310	P	Pb	19 03 21.8	+0.2
YOJ	Yonaguni jima	0.98	71	P	Pn	19 03 20.8	-0.1
YOJ	Yonaguni jima	0.98	71	*e*P	Pn	19 03 20.8	-0.1
YOJ				*e*S	Sb	19 03 33.8	-0.5
YOJ	Yonaguni jima	0.98	71	P	Pn	19 03 20.8	-0.1
YOJ				*e*S	Sb	19 03 33.6	-0.7
YULB	Yu-li	0.99	220	P	Pn	19 03 20.2	-0.8
YULB	Yu-li	0.99	220	*e*P	Pn	19 03 20.2	-0.8
WCS	Beigang Elemen	0.99	265	*e*P	Pb	19 03 21.4	-0.6
WCS				*e*S	Sn	19 03 34.0	0.0
TNOU	National Taiwa	1.02	349	P	Pb	19 03 22.1	-0.3
TNOU				S	Sn	19 03 35.2	+0.6
SSLB	Suanglung	1.02	249	P	Pn	19 03 21.3	-0.1
SSLB	Suanglung	1.02	249	S	Sn	19 03 35.7	+1.0
SSLB	Suanglung	1.02	249	*e*P	Pn	19 03 21.5	+0.1
SSLB				S	Sb	19 03 34.5	-1.0
TWF1	Yuli	1.02	219	*e*P	Pn	19 03 20.6	-0.8
TWF1				*e*S	Sn	19 03 33.4	-1.3
LIOB	Emei	1.02	299	*i* P	Pb	19 03 22.7	+0.2
LIOB				S	Sn	19 03 36.1	+1.4
NSTT	Nanjuang	1.02	298	*i* P	Pb	19 03 22.6	+0.1
NSTT				S	Sn	19 03 35.7	+0.8
SMLT	Sun Moon Lake	1.03	255	*i* P	Pb	19 03 22.1	-0.7
SMLT				*e*S	Sn	19 03 36.4	+1.1
YM01	YM01	1.06	339	*e*P	Pb	19 03 22.6	-0.6
YM01				*e*S	Sb	19 03 37.6	+0.8
TYC	Yuchr	1.07	257	*i* P	Pb	19 03 22.5	-0.7
TYC				*e*S	Sb	19 03 36.8	0.0
TWS1	Kuangyinshan	1.08	331	*e*P	Pb	19 03 23.1	-0.4
TWS1				S	Sb	19 03 38.1	+0.9
ZUZH	Zhuzihu	1.09	338	P	Pb	19 03 22.7	-0.9
ZUZH				S	Sb	19 03 37.5	0.0
YM08	YM08	1.10	340	P	Pb	19 03 22.6	-1.2
NCUH	Zhongli	1.10	318	*e*P	Pb	19 03 23.0	-0.7
NCUH				*e*S	Sb	19 03 38.2	+0.5
CHKH	Chenggong	1.10	210	*e*P	Pn	19 03 22.5	0.0
CHKH				*e*S	Sn	19 03 37.4	+0.7
ANP	Anpu	1.12	337	*e*P	Pb	19 03 23.3	-0.8
SBCB	Hsinchu	1.12	305	*e*P	Pb	19 03 23.8	-0.3
SBCB				*e*S	Sb	19 03 40.1	+1.7
NTST	Danshui	1.12	334	*e*P	Pb	19 03 24.1	-0.1
NTST				*e*S	Sb	19 03 39.8	+1.3
TWQ1	Liyutan	1.13	280	*e*P	Pb	19 03 24.6	+0.3
TWQ1				*i* S	Sb	19 03 39.9	+1.2
HSN	Hsinchu	1.14	305	P	Pb	19 03 23.8	-0.6
HSN				S	Sb	19 03 39.6	+0.7
FULB	Fuli	1.14	214	*e*P	Pn	19 03 23.3	+0.1
FULB				*e*S	Sb	19 03 39.3	+0.3
NSY	Sanyi	1.16	284	*i* P	Pb	19 03 25.2	+0.4
NSY				*e*S	Sb	19 03 40.8	+1.4
NMLH	Miaoli	1.16	290	*i* P	Pb	19 03 25.1	+0.3
NMLH				*e*S	Sb	19 03 41.2	+1.6
TWY	Chenhua	1.18	342	*e*P	Pb	19 03 24.6	-0.4
TWY				*e*S	Sb	19 03 40.0	0.0
TCU	Taichung	1.20	270	P	Pb	19 03 25.6	+0.1
TCU				*e*S	Sb	19 03 42.4	+1.7
WNT	Mingjian	1.23	258	P	Pb	19 03 26.0	+0.1
WNT				*e*S	Sb	19 03 43.0	+1.6
EHD	Haiduan	1.23	216	*e*P	Pn	19 03 23.1	-1.3
ALS	Alishan	1.26	240	*e*P	Pb	19 03 25.9	-0.7
ALS				*e*S	Sb	19 03 42.5	-0.2
ECS	Chishang	1.27	214	*e*P	Pn	19 03 24.5	-0.4
ELDTW	Lidau	1.31	223	*e*P	Pn	19 03 24.8	-0.7
WCHH	Zhanghua	1.31	267	*e*P	Pb	19 03 26.6	-0.7
WCHH				*e*S	Sb	19 03 44.9	+1.1
CHN5	Tsauling	1.32	246	*i* P	Pb	19 03 27.0	-0.6
CHN5				*e*S	Sb	19 03 45.4	+1.1
WCH1	Changhua City	1.32	267	*i* P	Pb	19 03 27.3	-0.3
WCH1				S	Sb	19 03 45.9	+1.7
WGK	Gukeng	1.39	251	*e*P	Pb	19 03 28.4	-0.2
WDL	Douliou City	1.40	252	*e*P	Pb	19 03 28.6	-0.2
WDL				*e*S	Sb	19 03 47.6	+1.3
WDLH	Douliu	1.41	251	*i* P	Pb	19 03 28.6	-0.3
WDLH				*e*S	Sb	19 03 48.0	+1.4
WCKO	Fanlu	1.46	241	*e*P	Pb	19 03 29.4	-0.4
WCKO				*e*S	Sb	19 03 48.0	0.0
PCYT	Pengchaiyu	1.48	3	*e*P	Pn	19 03 28.0	+0.3
STYH	Taoyuan	1.48	229	P	Pn	19 03 28.7	+0.9
STYH				*e*S	Sb	19 03 48.1	-0.6
TPUB	Ta-pu	1.51	236	P	Pb	19 03 29.5	-1.2
TPUB	Ta-pu	1.51	236	S	Sb	19 03 48.7	-0.8
TPUB	Ta-pu	1.51	236	*i* P	Pb	19 03 29.7	-1.0
TPUB				*e*S	Sb	19 03 49.7	+0.2
CHN2	Minshiung	1.52	246	*e*P	Pb	19 03 30.8	-0.1
WTP	Ta-pu	1.55	235	*e*P	Pb	19 03 30.2	-1.2
WTP				*e*S	Sb	19 03 50.8	+0.1
TWGBT	Beinan	1.57	213	P	Pn	19 03 28.0	-1.0
TWGBT	Beinan	1.57	213	*e*P	Pn	19 03 27.9	-1.1
TWG	Pinlang	1.57	213	*e*P	Pn	19 03 28.1	-0.9
CHY	Chiayi	1.58	246	P	Pb	19 03 31.5	-0.3
CHY				*e*S	Sb	19 03 52.3	+0.9
TTN	Taitung	1.59	209	*e*P	Pn	19 03 29.5	+0.2
TTN				*e*S	Sn	19 03 49.5	+0.7
WTCT	Ta-ch'eng	1.59	260	*e*P	Pb	19 03 30.8	-1.2
WTCT				*e*S	Sb	19 03 52.0	+0.2
IRIF	Iriomote-Funau	1.59	83	P	Pn	19 03 29.4	+0.1
TWK	Hsinying	1.64	238	*e*P	Pb	19 03 31.4	-1.4
TWK				*e*S	Sn	19 03 51.1	+1.1
CHN1	Nanshi	1.65	235	*i* P	Pn	19 03 31.7	+1.5
CHN1				*e*S	Sb	19 03 54.0	+0.5
SNST	Tainan City	1.66	236	*e*P	Pb	19 03 31.9	-1.3
SNST				*e*S	Sb	19 03 53.9	+0.2
HATJ	Hateruma jima	1.66	93	*e*P	Pn	19 03 30.7	+0.5
SGST	Jiashian	1.68	231	*e*P	Pn	19 03 31.3	+0.9
SGST				*e*S	Sb	19 03 54.2	0.0
WSF	Szhu	1.70	253	*e*P	Pn	19 03 32.0	+1.2
WSF				*e*S	Sb	19 03 55.1	+0.2
WSL	Shuilin Townsh	1.73	249	*e*P	Pb	19 03 33.3	-1.2
ECL	Taimali	1.82	212	*e*P	Pn	19 03 31.2	-1.3
CHN8	Yiju	1.82	244	*e*P	Pn	19 03 33.8	+1.4
CHN8				*e*S	Sb	19 03 58.0	-0.4
CHN3	Shinhua	1.84	235	*e*P	Pb	19 03 35.6	-0.6
JKRS	Kuro-shima	1.84	87	*e*P	Pn	19 03 33.4	+0.7
JKRS				*e*S	Sn	19 03 56.3	+1.3
SSHA	Shanhua	1.86	238	*e*P	Pb	19 03 35.3	-1.4
SSHA				*e*S	Sb	19 03 59.5	-0.1
SSD	Sandimen	1.88	222	*e*P	Pn	19 03 34.2	+1.0
SSD				*e*S	Sn	19 03 57.9	+2.0
SHHT	Tainan City	1.88	234	*e*P	Pb	19 03 35.4	-1.6
SCLT	Jiali	1.91	240	*e*P	Pn	19 03 35.1	+1.4
SCLT				S	Sb	19 04 00.1	-1.0
TWM1	Shoushan	1.96	228	*e*P	Pb	19 03 38.0	-0.3
JIJ	Ishigaki jima	1.97	83	*e*P	Pn	19 03 34.2	-0.3
JIJ				*e*S	Sn	19 03 58.0	-0.2
MASBT	Mashibuluo	1.98	220	*e*P	Pn	19 03 35.1	+0.5
MASBT				*e*S	Sb	19 04 02.0	-0.9
SGLT	Jiouru	1.98	225	*e*P	Pb	19 03 37.9	-0.8
TSCK	Chigu Township	2.01	241	*e*P	Pn	19 03 36.3	+1.2
TSCK				*e*S	Sn	19 04 01.4	+2.1
EAST	Anshuo	2.05	211	*e*P	Pn	19 03 34.7	-1.0
TAWH	Dawu Township	2.07	210	*e*P	Pn	19 03 35.5	-0.4
LAY	Lan-yu	2.14	191	*e*P	Pn	19 03 36.6	-0.3
JISG	Ishigakijimahi	2.16	78	P	Pn	19 03 36.8	-0.3
JISG				*e*S	Sn	19 04 01.9	-0.8
SCZT	Fangliau	2.17	216	*e*P	Pn	19 03 38.2	+0.9
SCZT				*e*S	Sn	19 04 06.3	+3.1
WSSB	Gushan	2.19	227	*e*P	Pn	19 03 39.5	+1.9
SLIU	Shizi	2.22	210	*e*P	Pn	19 03 39.0	+1.1
PHUB	P'eng-hu	2.31	255	*e*P	Pn	19 03 39.4	+0.3
PHUB				*e*S	Sn	19 04 07.2	+0.8
PNG	Penghu	2.31	256	*e*P	Pn	19 03 39.3	+0.2
PNG				*e*S	Sn	19 04 07.0	+0.6
WDGT	Dungji	2.31	248	*e*P	Pn	19 03 40.5	+1.3
WDGT				S	Sn	19 04 08.3	+1.6
TWP	Hsiaoliuchiu	2.34	220	*e*P	Pn	19 03 42.4	+2.8
SMST	Manzhou Townsh	2.37	207	*e*P	Pn	19 03 41.5	+1.5
HEN	Hengchun	2.43	209	*e*P	Pn	19 03 43.3	+2.5
TWKBT	Hengchun	2.45	207	*e*P	Pn	19 03 41.4	+0.2
TWKBT				*e*S	Sn	19 04 09.8	-0.2
TWK1	Hengchun	2.45	207	*e*P	Pn	19 03 43.4	+2.3
TSEB	Hengchuen, Pin	2.46	204	*e*P	Pn	19 03 44.1	+2.9
TSEB				*e*S	Sn	19 04 10.4	+0.3
JTJ	Tarama	2.52	78	*e*P	Pn	19 03 42.5	+0.5
JTJ				*e*S	Sn	19 04 12.7	+1.0
VCHM	Qimei	2.53	249	*e*P	Pn	19 03 43.0	+0.8
VCHM				*e*S	Sn	19 04 13.1	+1.0
KNM	Kinmen	3.26	275	*e*P	Pn	19 03 53.9	+1.6
DSXP	Dongshan	4.20	265	*e*P	Pn	19 04 05.4	+0.2
DAV	Davao City (W)	17.33	168	LR	LR	19 13 55.6	
	comp=Z,36nm,18.5s,baz=300,slow=38						
SONM	Songino Array	26.69	336	P	P	19 08 39.2	-0.5
	0.4nm,0.7s,baz=151,slow=9.2,SNR=2.6						
	0.4nm,0.7s						
MKAR	Makanchi Array	38.88	316	P	P	19 10 25.2	-0.6
	0.2nm,0.7s,baz=102,slow=10.0,SNR=1.7						
	0.2nm,0.7s						
WRA	Warramunga Arr	45.45	164	P	P	19 11 18.5	-1.0
	0.5nm,0.8s,baz=344,slow=8.0,SNR=1.9						
	0.5nm,0.8s						
ASAR	Alice Springs	48.92	165	P	P	19 11 47.3	+0.7
	0.2nm,0.7s,baz=345,slow=8.4,SNR=5.0						
	0.2nm,0.7s						

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*IDC **22** 19:12:38.4±0.9, 0°.95N×97°.07E, h0^{km}, mb4.1/15, mbtmp4.1/17, ML3.7/2, MS3.3/4, Error ellipse: s-maj=20.4km s-min=16.8km az=67.0*

*NEIC **22** 19:12:39.9±2.4, 0°.96N±0°.02×97°.04E±0°.05, h10^{km}±1^{km}, mb4.4/8, Error ellipse: s-maj=7.8km s-min=4.2km az=276.0*

*DJA **22** 19:12:41.6±0.8, 1°N±3°×9°7E±°, h14^{km}±5^{km}, M4.2/16, mb4.4/6, MLv4.1/16*

ISC 22 19:12:42.5±0.6, **0°.96N**±0°.05×**97°.17E**±0°.07, **h25**^{km}, **n73**, σ**2**^{s}**.29**/65, **mb4.3**/22, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.54	50		Pb	19 12 52.9	-0.5
GSI				Sg	Sb	19 13 01.8	+1.0
GSI	Gunungsitoli	0.54	50	P	Pb	19 12 53.1	-0.3
PBSI	Pulau Batu	1.50	132	P	Pb	19 13 09.2	-0.5
SNSI	Sinabang, Aceh	1.67	330	P	Pn	19 13 08.9	-1.3
TPTI		2.29	0	P	Pn	19 13 16.7	-2.0
MNSI	Mandailing Nat	2.42	94	P	Pn	19 13 21.1	+0.6
PSI	Prapat	2.54	44	Pn	Pn	19 13 21.1	-1.2
	3.9nm,0.3s,baz=201,slow=7.9,SNR=14						
PSI				Lg	Lg	19 14 00.0	
	4.4nm,0.3s,baz=338,slow=19,SNR=4.6						
PSI				LR	LR	19 14 08.1	
	comp=Z,168nm,18.8s,baz=300,slow=35						
	7.2nm,0.3s						
PSI	Prapat	2.54	44	P	Pn	19 13 21.4	-0.9
KCSI	Kotacane, Aceh	2.62	13	P	Pn	19 13 22.9	-0.4
TSI	Tuntungan	2.89	29	P	Pn	19 13 27.6	+0.6
SISI	Saibi	2.97	140	P	Pb	19 13 32.0	-2.8
MLSI	Meulaboh, Aceh	3.38	347	P	Pn	19 13 32.2	-1.5
PPI	Padang Panjang	3.52	113	P	Pn	19 13 37.8	+2.1
LHMI	Lhok Sumawe	4.25	357	P	Pn	19 13 44.7	-1.0
IPM	Ipoh	5.21	48		Pn	19 13 58.0	-0.9
IPM	Ipoh	5.21	48	P	Pn	19 13 59.5	+0.6
	0.1nm34nm,0.7s						
KULM	Kulim	5.53	39		Pn	19 14 02.5	-0.9
KULM	Kulim	5.53	39	P	Pn	19 14 03.0	-0.4
	0.2nm42nm,0.8s						
MASI	Maura Aman, Be	6.50	129	P	Pn	19 14 18.6	+1.9
	29nm,0.6s						
MYKOM	Kota Tinggi	6.73	83	Pn	Pn	19 14 19.4	-0.5
MYKOM	Kota Tinggi	6.73	83	P	Pn	19 14 20.8	+0.9
CMBY	CAMPBELL BAY	6.83	332	*e*P	Pn	19 14 25.7	+4.5
CMBY				*e*S	Sn	19 15 40.6	+2.4
CMBY				IAML		19 24 38.5	
	comp=N,182nm,1.2s						
CMBY				IAML		19 24 49.0	
	comp=E,164nm,1.2s						
MNAI	Manna	7.83	132	Pn	Pn	19 14 35.6	+0.6
EGSI	Enggano, Bengk	8.08	141	P	Pn	19 14 39.3	+0.9
MDSI	Maura Dua	8.85	128	P	Pn	19 14 49.8	+0.9
PBA	Port Blair	11.50	338	IAML		19 14 18.7	
	comp=E,82nm,0.6s						
PBA				IAML		19 14 24.1	
	comp=N,78nm,0.9s						
PBA				*e*P	Pn	19 15 28.9	+3.6
PBA				*e*S	Sn	19 17 29.0	-4.0
DGPR	DIGLIPUR	12.85	341	IAML		19 15 09.7	
	comp=N,78nm,3.2s						
DGPR				IAML		19 15 22.3	
	comp=E,51nm,3.5s						
DGPR				*e*P	Pn	19 15 46.5	+2.8
DGPR				*e*S	Sn	19 18 00.9	-5.1
CMAR	Chiang Mai Arr	17.48	6	P	Pn	19 16 43.2	-1.5
	comp=E,0.3nm,0.3s,baz=195,slow=12,SNR=19						
CMAR				LR	LR	19 24 39.9	
	comp=E,96nm,18.3s,baz=185,slow=41						
	comp=E,1.6nm,0.6s						
CMAR	Chiang Mai Arr	17.48	6	Pn	Pn	19 16 40.1	-4.6
CHTO	Chiang Mai	17.83	6		Pn	19 16 47.9	-1.2
AGT	Agartala	23.50	346	IAmb	IAmb	19 15 31.7	
	comp=Z,4.8nm,0.4s						
AGT				*e*P	P	19 17 54.9	+4.2
AGT				*e*S	S	19 22 09.5	+6.5
TOLI2	Tolitoli	23.61	89	P	P	19 17 50.2	-1.6

TOLI2				IAmb	IAmb	19 17 51.8	
	comp=Z,8.2nm,0.7s						
IMP	**Imphal**	23.94	353	IAmb	IAmb	19 15 15.6	
	comp=Z,6.2nm,0.8s						
IMP				*e*P	P	19 17 59.3	+4.4
IMP				*e*S	S	19 22 16.8	+6.6
KOHI	**KOHIMA**	24.80	353	*e*P	P	19 18 07.3	+4.4
KOHI				IAmb	IAmb	19 18 12.2	
	comp=Z,5.8nm,0.9s						
KOHI				*e*S	S	19 22 30.7	+6.5
SHL	**Shillong**	24.99	349		P	19 18 04.9	+0.2
H08S2	**Diego Garcia H**	26.05	250	T	T	19 45 20.4	
	baz=72,slow=76,SNR=314						
H08S3	**Diego Garcia H**	26.05	250	T	T	19 45 15.9	
	baz=72,slow=76,SNR=1611						
H08S1	**Diego Carcia H**	26.07	250	T	T	19 45 18.7	
	baz=72,slow=76,SNR=226						
TGY	**Tagaytay City**	26.89	60	LR	LR	19 28 40.2	
	comp=Z,74nm,18.4s,baz=26,slow=36						
GTA	**Gaotai**	38.35	3	*e*P	P	19 20 02.1	+0.4
GTA				pP	pP	19 20 08.5	-0.7
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
H01W3	**Cape Leeuwin H**	39.03	158	T	T	20 01 26.9	
	baz=334,slow=76,SNR=33						
H01W2	**Cape Leeuwin H**	39.05	158	T	T	20 01 35.1	
	baz=334,slow=76,SNR=35						
H01W1	**Cape Leeuwin H**	39.05	158	T	T	20 01 25.9	
	baz=334,slow=76,SNR=26						
WRA	**Warramunga Arr**	41.94	122	P	P	19 20 30.7	-0.9
	comp=Z,0.5nm,0.7s,baz=297,slow=8.0,SNR=2.8						
	comp=Z,0.5nm,0.7s						
WRA	**Warramunga Arr**	41.94	122	P	P	19 20 29.9	-1.7
ASAR	**Alice Springs**	43.28	127	P	P	19 20 42.8	+0.3
	comp=Z,0.7nm,0.7s,baz=299,slow=7.5,SNR=15						
	comp=Z,0.7nm,0.7s						
KSRS	**Korea Array**	46.07	34	P	P	19 21 04.2	-0.3
	comp=Z,2.4nm,0.8s,baz=224,slow=8.8,SNR=7.4						
	comp=Z,2.4nm,0.8s						
SONM	**Songino Array**	47.38	8	P	P	19 21 14.5	-0.2
	comp=Z,2.1nm,0.5s,baz=190,slow=9.4,SNR=18						
SONM				PcP	PcP	19 22 46.0	+0.8
	comp=Z,1.0nm,0.7s,baz=215,slow=3.0,SNR=5.6						
	comp=Z,2.1nm,0.5s						
SONM	**Songino Array**	47.38	8	P	P	19 21 14.4	-0.3
SONM				IAmb	IAmb	19 21 18.1	
	comp=Z,2.7nm,1.0s						
MKAR	**Makanchi Array**	47.47	346	P	P	19 21 15.9	+0.6
	comp=Z,1.8nm,0.7s,baz=160,slow=9.0,SNR=26						
	comp=Z,1.8nm,0.7s						
MKAR	**Makanchi Array**	47.47	346	P	P	19 21 15.7	+0.3
KURBB	**Kurchatov Arra**	51.96	345	P	P	19 21 49.1	-0.3
	comp=Z,1.3nm,0.8s,baz=166,slow=7.0,SNR=9.8						
	comp=Z,1.3nm,0.8s						
KURK	**Kurchatov**	52.02	345	P	P	19 21 48.8	-1.1
KURK				IAmb	IAmb	19 21 51.1	
	comp=Z,6.2nm,1.4s						
HILR	**Hailar Array B**	52.14	18	P	P	19 21 50.6	-0.2
	comp=Z,1.7nm,0.5s,baz=210,slow=8.3,SNR=2.4						
	comp=Z,1.7nm,0.5s						
STKA	**Stephens Creek**	53.22	132	P	P	19 22 00.9	+1.8
	comp=Z,1.6nm,0.7s,baz=296,slow=10.0,SNR=3.2						
	comp=Z,1.6nm,0.7s						
STKA	**Stephens Creek**	53.22	132	P	P	19 21 59.6	+0.5
ZAA0	**Zalesovo Array**	53.79	351	P	P	19 22 01.4	-1.5
ZAA0				IAmb	IAmb	19 22 03.9	
	comp=Z,3.6nm,0.9s						
ZALV	**Zalesovo Beam**	53.79	351	P	P	19 22 02.9	0.0
	comp=Z,1.6nm,0.3s,baz=174,slow=6.1,SNR=16						
	comp=Z,1.6nm,0.3s						
ZALV	**Zalesovo Beam**	53.79	351		P	19 22 01.7	-1.2
BVAR	**Borovoye Array**	56.47	341	P	P	19 22 21.9	-0.4
	comp=Z,1.1nm,0.6s,baz=132,slow=11,SNR=5.5						
	comp=Z,1.1nm,0.6s						
H04N2	**CROZET ISLANDS**	61.55	214	T	T	20 29 44.0	
	baz=55,slow=75,SNR=1613						
H04N1	**CROZET ISLANDS**	61.56	214	T	T	20 29 46.4	
	baz=55,slow=75,SNR=2256						
H04N3	**CROZET ISLANDS**	61.57	214	T	T	20 29 43.2	
	baz=55,slow=75,SNR=2190						
H04S1	**CROZET ISLANDS**	61.89	214	T	T	20 30 06.1	
	baz=54,slow=75,SNR=96						
H04S3	**CROZET ISLANDS**	61.90	214	T	T	20 30 03.8	
	baz=54,slow=75,SNR=144						
H04S2	**CROZET ISLANDS**	61.91	214	T	T	20 30 06.7	
	baz=54,slow=75,SNR=74						
YAK	**Yakutsk**	65.66	16	P	P	19 23 23.4	-1.0
	comp=Z,4.5nm,0.6s,baz=308,slow=1.2,SNR=4.2						
	comp=Z,4.5nm,0.6s						
NRIK	**Noril'sk**	68.57	356	P	P	19 23 42.5	-0.4
	comp=Z,1.4nm,0.5s,baz=149,slow=6.2,SNR=3.6						
	comp=Z,1.4nm,0.5s						
TIXI	**Tiksi**	73.43	10	P	P	19 24 11.1	-1.2
	comp=Z,3.6nm,0.3s,baz=180,slow=0.9,SNR=9.6						
	comp=Z,3.6nm,0.3s						
FINES	**FINESS Array B**	80.20	333	P	P	19 24 50.1	-0.5
	comp=Z,0.2nm,0.5s,baz=114,slow=3.4,SNR=4.0						
	comp=Z,0.2nm,0.5s						
ARCES	**ARCESS Array B**	82.75	340	P	P	19 25 04.1	+0.1
	comp=Z,6.1nm,1.2s,baz=109,slow=5.5,SNR=3.9						
	comp=Z,6.1nm,1.2s						
SPITS	**Spitsbergen Ar**	87.18	348	LR	LR	20 09 52.8	
	comp=Z,53nm,18.6s,baz=230,slow=39						
TXAR	**Lajitas Array**	143.89	32	PKP	PKPdf	19 32 14.6	-2.1
	comp=Z,0.1nm,0.5s,baz=326,slow=2.6,SNR=2.0						

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*BEO **22** 19:14:16.8±0.4, 44°.89N×17°.16E, h0km±2km, ML2.2/13*
*RHSSO **22** 19:14:17.0±0.3, 44°.77N×17°.27E, h4km, ML2.1/5*
*VIE **22** 19:14:20.5±0.9, 45°.26N×17°.35E, h10km, mb2.7/3, ml2.1/6, Error ellipse: s-maj=7.2km s-min=6.0km az=142.0 54 km WNW of Slavonski Brod*
ISC 22 19:14:15.6±0.9**, 44°.87N**±0°.02×**17°.19E**±0°.02**, h9**km±6km**, n42, σ1ˢ08**/80**, 1C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLY	**Banja Luka**	0.12	181	⇑*i*Pg	Pg	19 14 18.5	+0.1
BLY				*e*Sg	Sg	19 14 20.2	-0.1
BLY	**Banja Luka**	0.12	181	*e*Pg	Pg	19 14 18.5	+0.1
BLY				*e*Sg	Sg	19 14 20.5	+0.2
MOSL	**Moslavina**	0.81	338	*e*Pg	Pb	19 14 31.8	0.0
MOSL				Sg	Sb	19 14 41.9	-0.8
KIJV	**Kijevo**	1.03	213	*e*Pg	Pg	19 14 34.3	-1.1
KIJV				Sg	Sg	19 14 46.9	-1.8
UDBI	**Udbina**	1.07	252	*e*Pg	Pg	19 14 35.1	-1.1
UDBI				Sg	Sg	19 14 48.6	-1.4
PLIT	**Plitvice**	1.11	271	*e*Pg	Pg	19 14 35.8	-1.1
PLIT				Sg	Sg	19 14 51.5	+0.1
PTJ	**Puntijarka**	1.35	321	*e*Pg	Pg	19 14 41.9	+0.4
PTJ				Sg	Sn	19 15 00.0	+1.3
KALN	**Kalnik**	1.36	338	*e*Pg	Pg	19 14 41.8	0.0
KALN				Sg	Sg	19 15 00.2	+0.7
RICI	**Ricice**	1.37	182	*e*Pg	Pn	19 14 40.7	-0.2
RICI				Sg	Sb	19 14 59.3	+0.2
MORI	**Morici**	1.46	227	*e*Pn	Pn	19 14 42.5	+0.5
MORI				Sg	Sn	19 15 01.2	0.0
LOBO	**Lobor**	1.51	329	Sg	Sg	19 15 04.6	+0.5
BEHE	**Becsehely**	1.63	350	*e*Pn	Pg	19 14 48.0	+1.2
BEHE				*e*Sn	Sg	19 15 10.5	+2.5
VIRC	**Vir**	1.63	250	*e*Pn	Pb	19 14 45.7	-0.1
VIRC				Sg	Sn	19 15 05.9	+0.5
ZIRJ	**Zirje**	1.64	223	Sg	Sn	19 15 06.3	+0.5
NVLJ	**Novalja**	1.68	260	*e*Pn	Pn	19 14 45.6	+0.5
NVLJ				Sn	Sb	19 15 08.4	+0.6
MORH	**Mrgy, Hungar**	1.69	37	*e*Pn	Pg	19 14 47.4	-0.7
MORH				*e*Sn	Sg	19 15 10.5	+0.5
MORH	**Mrgy, Hungar**	1.69	37	*e*Pg	Pg	19 14 47.9	-0.2
MORH				*e*Sg	Sg	19 15 10.5	+0.5
TEKS	**Tekeris**	1.70	100	*e*Pn	Pn	19 14 46.0	+0.6
TEKS				*e*Sn	Sg	19 15 10.0	-0.3
RABC	**Rab**	1.71	267	*e*Pn	Pn	19 14 46.3	+0.7
RABC				Sn	Sn	19 15 08.7	+1.1
HVAR	**Hvar**	1.77	198	*e*Pn	Pb	19 14 47.9	-0.3
HVAR				Sg	Sn	19 15 10.5	+1.5
BBLS	**Lazi&#263i**	1.88	121	*e*Pn	Pb	19 14 50.3	+0.2
BBLS				*e*Sn	Sb	19 15 14.9	+1.2
FRGS	**Fruska Gora**	1.88	80	*e*Pn	Pn	19 14 48.4	+0.4
FRGS				*e*Sn	Sg	19 15 14.8	-1.3
RIY	**Rijeka**	1.97	284	*e*Pn	Pb	19 14 50.9	-0.7
RIY				*e*Sn	Sb	19 15 16.2	0.0
RUDO	**Rudo**	2.01	128	*e*Pn	Pn	19 14 50.6	+1.0
RUDO				*e*Sn	Sn	19 15 14.2	-0.6
RUDO	**Rudo**	2.01	128	*e*Pn	Pb	19 14 51.8	-0.4
RUDO				*e*Sn	Sb	19 15 18.2	+0.9
STON	**Ston**	2.03	169	*e*Pn	Pn	19 14 50.6	+0.7
STON				Sn	Sn	19 15 16.7	+1.3
STON	**Ston**	2.03	169	*e*Pn	Pb	19 14 52.9	+0.3
STON				*e*Sn	Sb	19 15 18.5	+0.6
LSTV	**Lastovo**	2.11	186	*e*Pn	Pn	19 14 52.1	+1.1
LSTV				Sn	Sn	19 15 18.5	+1.2
DIVS	**Divibare**	2.15	110	*e*Pn	Pb	19 14 54.2	-0.5
DIVS				*e*Sn	Sb	19 15 21.6	+0.1
PLE	**Pljevlja**	2.21	133	*e*Pn	Pb	19 14 56.2	+0.4
TREB	**Trebinje**	2.31	158	*e*Pn	Pn	19 14 54.7	+0.9
TREB				*e*Sn	Sn	19 15 21.5	-0.8
SOKA	**Soboth**	2.35	321	*i* Pn	Pb	19 14 57.4	-0.9
	0.4nm,0.2s						
SOKA				*e*Sn	Sn	19 15 22.5	-1.0
	3.1nm,0.6s						
TRUS	**Trudelj**	2.39	104	*e*Pn	Pb	19 14 58.7	-0.1
TRUS				*e*Sn	Sb	19 15 28.3	-0.1
OBKA	**Obir**	2.47	313	*e*Pn	Pb	19 14 58.5	-1.7
	2.8nm,0.3s						
OBKA				*e*Sn	Sn	19 15 28.6	+2.2
	4.3nm,0.5s						
IVAS	**Ivanjica**	2.49	120	*e*Pn	Pb	19 14 59.7	-0.9
IVAS				*e*Sn	Sb	19 15 31.8	+0.5
ARSA	**Arzberg**	2.65	335	*e*Pn	Pn	19 14 58.4	-0.1
	0.3nm,0.2s						
ARSA				*e*Sn	Sn	19 15 28.7	-2.0
	3.1nm,0.4s						
GRUS	**Gruza**	2.71	110	*e*Pn	Pb	19 15 02.0	-2.3
GRUS				*e*Sn	Sb	19 15 36.2	-1.4
RONA	**Rosalia, Austr**	2.90	348	*e*Pn	Pn	19 15 02.6	+0.7
	1.0nm,0.2s						
RONA				*i* Sn	Sn	19 15 34.2	-2.7
	2.2nm,0.4s						
GOCS	**Kraljevo Serbi**	2.96	115	*e*Pn	Pn	19 15 04.6	+1.9
GOCS				*e*Sn	Sb	19 15 42.4	-2.3
CONA	**Conrad Observa**	3.19	344	*e*Pn	Pn	19 15 07.3	+1.2
	0.7nm,0.4s						
CONA				*e*Sn	Sn	19 15 42.1	-2.2
	0.9nm,0.4s						
SELS	**Selova**	3.28	119	*e*Pn	Pn	19 15 08.3	+1.2
MOA	**Molln**	3.60	327	*i* Pn	Pn	19 15 13.3	+1.7
	0.8nm,0.3s						
MOA				*i* Sn	Sn	19 15 53.8	-0.4
	1.0nm,0.3s						

IDC 22 19:16:25.8±1.6**, 15°.34N**×**122°.80E, h0**km**, mb3.4**/5**, mbtmp3.4**/5**, Error ellipse: s-maj=68.8km s-min=22.2km az=57.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	23.03	281	P	P	19 21 32.9	+0.1
	0.2nm,0.3s,baz=93,slow=9.2,SNR=5.7						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	36.85	162	P	P	19 23 35.4	-0.7
	0.4nm,0.8s,baz=342,slow=8.4,SNR=2.0						
	0.4nm,0.8s						
ASAR	**Alice Springs**	40.26	164	P	P	19 24 05.0	+0.3
	0.2nm,0.5s,baz=336,slow=8.0,SNR=4.8						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	45.97	322	P	P	19 24 49.8	-0.9
	0.3nm,0.6s,baz=107,slow=9.8,SNR=2.8						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	50.00	325	P	P	19 25 22.3	+0.4
	1.7nm,0.7s,baz=120,slow=8.3,SNR=9.7						
	1.7nm,0.7s						

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*NOU **22** 19:16:35.5, 38°.32S×175°.99E, h227km, MLv3.9/11, North Island, New Zealand*
*WEL **22** 19:16:42.6±0.9, 38°S±5°×17°6E±°, h159km±8km, M3.0/60, MLv3.0/60, Error ellipse: s-maj=7.1km s-min=6.7km az=139.7, confirmed*
ISC 22 19:16:36.0±1.8**, 38°.41S**±0°.06×**175°.86E**±0°.05**, h212**km±10km**, n128, σ1ˢ71**/141**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATZ	**Rangitukua**	0.46	189	P	Pn	19 17 05.9	+1.5
TARZ	**Mount Tarawera**	0.53	71	P	Pn	19 17 06.0	+1.3
MKRZ	**Makatiti**	0.55	60	P	Pn	19 17 06.4	+1.6
KMRZ	**Kaimai**	0.57	6	P	Pn	19 17 06.0	+1.1
KATZ	**Kakaramea**	0.58	193	P	Pn	19 17 06.7	+1.8
MRHZ	**Matea Rd**	0.60	134	P	Pn	19 17 06.1	+1.2
MRHZ				S	S	19 17 24.5	-3.1
KRVZ	**Karewarewa**	0.70	194	P	Pn	19 17 07.1	+1.6
TMVZ	**Te Maari**	0.71	190	P	Pn	19 17 07.4	+1.8
WTVZ	**West Tongariro**	0.73	197	P	Pn	19 17 07.3	+1.7
TOZ	**Tahuroa Road**	0.74	337	P	Pn	19 17 07.1	+1.6
TWVZ	**Taurewa**	0.74	207	P	Pn	19 17 07.2	+1.6
NNVZ	**North Ngauruho**	0.75	195	P	Pn	19 17 07.4	+1.7
EDRZ	**Edgecumbe**	0.75	66	P	Pn	19 17 06.6	+0.9
OTVZ	**Oturere**	0.77	192	P	Pn	19 17 07.5	+1.7
OPRZ	**Ohinepanea**	0.79	44	P	Pn	19 17 06.9	+1.1
NGZ	**Ngauruhoe**	0.79	195	P	Pn	19 17 07.7	+1.8
SNVZ	**South Ngauruho**	0.79	193	P	Pn	19 17 07.9	+2.0
HIZ	**Hauiti**	0.80	262	P	Pn	19 17 07.6	+1.8
HIZ	**Hauiti**	0.80	262	P	Pn	19 17 07.6	+1.8
TUVZ	**Tukino**	0.87	191	P	Pn	19 17 08.2	+1.8
FWVZ	**Far West T-bar**	0.88	196	P	Pn	19 17 08.2	+1.7
MTHZ	**Maungataniwha**	0.88	120	P	Pn	19 17 07.8	+1.5
MTHZ				S	S	19 17 27.9	-2.0
MAVZ	**Matarangi**	0.89	195	P	Pn	19 17 08.4	+1.7
WHVZ	**Whangaehu Hut**	0.90	194	P	Pn	19 17 08.4	+1.8
RTZ	**Ruatahuna**	0.90	103	P	Pn	19 17 07.7	+1.2
RTZ				S	S	19 17 27.9	-2.1
BKZ	**Black Stump Fm**	0.90	147	P	Pn	19 17 07.8	+1.4
BKZ	**Black Stump Fm**	0.90	147	P	Pn	19 17 08.0	+1.5
BKZ				S	S	19 17 27.9	-2.3
TRVZ	**Turoa**	0.92	195	P	Pn	19 17 08.5	+1.7
WNVZ	**Wahianoa**	0.94	193	P	Pn	19 17 08.5	+1.8
PKVZ	**Pokaka**	0.97	205	P	Pn	19 17 08.6	+1.8
URZ	**Urewera**	0.99	82	P	Pn	19 17 07.6	+0.7
URZ	**Urewera**	0.99	82	P	Pn	19 17 07.7	+0.8
URZ				S	S	19 17 27.8	-3.0
MOVZ	**Moawhango**	1.00	185	P	Pn	19 17 08.5	+1.5
MOVZ				S	S	19 17 28.7	-2.6
NMHZ	**Naumai**	1.01	133	P	Pn	19 17 09.6	+2.5
NMHZ				S	S	19 17 30.9	-0.4
MTVZ	**Mangateitei**	1.02	197	P	Pn	19 17 09.1	+1.9
RAHZ	**Arahi**	1.08	118	P	Pn	19 17 09.6	+2.1
RAHZ				S	S	19 17 31.1	-0.9
KWHZ	**Kaweka Forest**	1.10	157	P	Pn	19 17 09.8	+2.1
KWHZ				S	S	19 17 31.3	-1.2
VRZ	**Vera Road**	1.12	230	P	Pn	19 17 09.8	+2.0
SNGZ	**Shannon Statio**	1.21	108	P	Pn	19 17 10.4	+1.9
SNGZ				S	S	19 17 32.0	-1.6
MCHZ	**McNeill Hill**	1.22	148	P	Pn	19 17 11.1	+2.6
MCHZ				S	S	19 17 33.5	-0.3
RAGZ	**Rawiri**	1.22	94	P	Pn	19 17 10.1	+1.5
ARHZ	**Aropaoanui**	1.23	134	P	Pn	19 17 10.9	+2.4
ARHZ				S	S	19 17 33.2	-0.7
WHHZ	**Waihua**	1.26	122	P	Pn	19 17 11.1	+2.3
KRHZ	**Kereru**	1.29	162	P	Pn	19 17 11.1	+2.0
MWZ	**Matawai**	1.31	87	P	Pn	19 17 10.5	+1.3
MWZ				S	S	19 17 32.6	-2.3
MKAZ	**Moumakai**	1.42	337	P	Pn	19 17 12.1	+2.0
RUGZ	**Raukumara Rang**	1.50	73	P	Pn	19 17 11.3	+0.4
WAZ	**Wanganui**	1.51	207	P	Pn	19 17 13.0	+2.2
RIGZ	**Rimuhau**	1.52	102	P	Pn	19 17 12.9	+2.0
PNHZ	**Pukenui**	1.52	170	P	Pn	19 17 12.9	+1.9
KNZ	**Kokohu**	1.54	114	P	Pn	19 17 13.1	+2.0
LREZ	**Lake Rotokare**	1.55	227	P	Pn	19 17 13.9	+2.8
TKGZ	**Te Karaka**	1.56	92	P	Pn	19 17 13.3	+2.1
CKHZ	**Cape Kidnapper**	1.56	143	P	Pn	19 17 13.8	+2.5
KAHZ	**Kahuranaki**	1.59	151	P	Pn	19 17 14.1	+2.6
TSZ	**Takapari Road**	1.65	177	P	Pn	19 17 14.1	+2.0
HAZ	**Te Kaha**	1.65	67	P	Pn	19 17 12.7	+0.7
AWAZ	**Awhitu Peninsu**	1.66	324	P	Pn	19 17 14.4	+2.2
PRGZ	**Paritu Road**	1.66	109	P	Pn	19 17 14.2	+2.0
PKE	**Pukeiti**	1.66	241	P	Pn	19 17 14.8	+2.6
KUZ	**Kuaotunu**	1.67	356	P	Pn	19 17 14.0	+1.7
TWGZ	**Tauwhareparae**	1.68	83	P	Pn	19 17 14.3	+1.9
KHEZ	**Kahui Hut**	1.69	238	P	Pn	19 17 15.2	+2.7
KHEZ	**Kahui Hut**	1.69	238	P	Pn	19 17 15.1	+2.6
WPHZ	**Waipukurau**	1.71	165	P	Pn	19 17 14.7	+2.1
WIAZ	**Waiheke Island**	1.72	340	P	Pn	19 17 14.8	+2.1
MHGZ	**Mahia Peninsul**	1.76	116	P	Pn	19 17 15.5	+2.4
NBEZ	**Newall Road No**	1.78	241	P	Pn	19 17 15.8	+2.6
PXZ	**Pawanui**	1.79	155	P	Pn	19 17 15.7	+2.4
PKGZ	**Pakihiroa**	1.83	73	P	Pn	19 17 15.1	+1.3
CNGZ	**Carnagh Statio**	1.84	93	P	Pn	19 17 16.2	+2.4
DVHZ	**Dannevirke**	1.90	173	P	Pn	19 17 16.1	+1.8
PUZ	**Puketiti**	1.92	81	P	Pn	19 17 16.1	+1.5
PRHZ	**Porangahau**	1.95	162	P	Pn	19 17 16.9	+2.1
POWZ	**Post Office Ro**	1.98	182	P	Pn	19 17 16.9	+1.8
WMGZ	**Waiomatatini S**	2.10	74	P	Pn	19 17 17.9	+1.6
ANWZ	**Angora Road**	2.10	167	P	Pn	19 17 18.5	+2.2
PRWZ	**Pori Road**	2.14	178	P	Pn	19 17 18.9	+2.1
MRZ	**Mangatainoka R**	2.26	186	P	Pn	19 17 19.6	+1.6
BFZ	**Birch Farm**	2.29	173	P	Pn	19 17 20.0	+1.7
BFZ	**Birch Farm**	2.29	173	P	Pn	19 17 19.9	+1.7
TIWZ	**Tintock**	2.36	180	P	Pn	19 17 20.8	+1.7
OGWZ	**Otaki Gorge**	2.46	192	P	Pn	19 17 21.8	+1.7
HOWZ	**Holdsworth Sta**	2.50	186	P	Pn	19 17 21.9	+1.4
KIW	**Kapiti Island**	2.56	196	P	Pn	19 17 22.6	+1.4
TMWZ	**Te Maipa**	2.69	180	P	Pn	19 17 24.1	+1.3
MTW	**Mount Morrison**	2.76	186	P	Pn	19 17 24.6	+1.1
CAW	**Cannon Point**	2.76	193	P	Pn	19 17 24.9	+1.5
DUWZ	**D’Urville Isla**	2.82	212	P	Pn	19 17 25.5	+1.4
TRWZ	**Traveller**	2.99	183	P	Pn	19 17 27.3	+1.3
WEL	**Wellington**	2.99	196	P	Pn	19 17 27.7	+1.6
SNZO	**South Karori**	3.03	197	P	Pn	19 17 27.9	+1.4
MSWZ	**Moikau Station**	3.04	189	P	Pn	19 17 27.7	+1.0
TCW	**Tory Channel**	3.05	203	P	Pn	19 17 28.1	+1.4
BHW	**Baring Head**	3.09	194	P	Pn	19 17 28.4	+1.2
TUWZ	**Tuamarina**	3.36	205	P	Pn	19 17 31.9	+1.5
NNZ	**Nelson**	3.39	214	P	Pn	19 17 31.8	+1.0
TKNZ	**Takaka Hill**	3.45	220	P	Pn	19 17 32.0	+0.6
QRZ	**Quartz Range**	3.53	226	P	Pn	19 17 33.5	+1.1
QRZ	**Quartz Range**	3.53	226	P	Pn	19 17 32.9	+0.5
CMWZ	**Cape Campbell**	3.57	200	P	Pn	19 17 35.2	+2.3
BSWZ	**Blackbirch Sta**	3.64	204	P	Pn	19 17 35.2	+1.5
MRNZ	**Matariki Terra**	3.82	218	P	Pn	19 17 36.8	+0.8
THZ	**Tophouse**	4.04	213	P	Pn	19 17 40.0	+1.3
KHZ	**Kahutara**	4.38	203	P	Pn	19 17 44.3	+1.6
KHZ	**Kahutara**	4.38	203	P	Pn	19 17 44.3	+1.6
DSZ	**Denniston Nort**	4.56	222	P	Pn	19 17 45.3	+0.2
GVZ	**Greta Valley S**	5.03	204	P	Pn	19 17 52.1	+1.1
LTZ	**Lake Taylor**	5.15	211	P	Pn	19 17 53.2	+0.6
AMCZ	**Amberley**	5.35	206	P	Pn	19 17 55.7	+0.8
INZ	**Inchbonnie**	5.47	217	P	Pn	19 17 57.7	+1.2
OXZ	**Oxford**	5.70	209	P	Pn	19 17 59.5	0.0
OKCZ	**Okains Bay**	5.71	201	P	Pn	19 18 00.7	+1.0
MQZ	**McQueen’s Vall**	5.82	204	P	Pn	19 18 00.9	0.0
AKCZ	**Akaroa Harbour**	5.89	201	P	Pn	19 18 02.6	+0.6
RACZ	**Rakaia**	6.01	207	P	Pn	19 18 03.5	+0.1
MHCZ	**Mount Hutt**	6.06	211	P	Pn	19 18 04.6	+0.5
WACZ	**Wakanui South**	6.30	207	P	Pn	19 18 07.7	+0.5
RPZ	**Rata Peaks**	6.42	213	P	Pn	19 18 10.1	+1.3
RPZ	**Rata Peaks**	6.42	213	P	Pn	19 18 09.5	+0.7
ARCZ	**Arundel**	6.56	211	P	Pn	19 18 11.4	+0.8
FOZ	**Fox Glacier**	6.86	220	P	Pn	19 18 15.2	+0.8
TMZ	**Timaru**	6.99	210	P	Pn	19 18 16.5	+0.4
LBZ	**Lake Benmore**	7.34	214	P	Pn	19 18 21.0	+0.5
ODZ	**Otahua Downs**	7.69	209	P	Pn	19 18 26.5	+1.4
ODZ	**Otahua Downs**	7.69	209	P	Pn	19 18 26.2	+1.1
JCZ	**Jackson Bay**	7.77	221	P	Pn	19 18 27.4	+1.2
	36nm,1.9s						
JCZ	**Jackson Bay**	7.77	221	P	Pn	19 18 27.2	+1.0

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*SNET **22** 19:47:52.7±1.7, 14°.15N×86°.65W, h6km, ML3.9*
*CATAC **22** 19:47:53.6±0.2, 14°.2N±1°.0×86°.6W±0°.9, h1km, M4.2/30, MLv4.2/30, Error ellipse: s-maj=2.3km s-min=1.7km az=39.0, confirmed*
ISC 22 19:47:50.1±1.3**, 14°.27N**±0°.04×**86°.62W**±0°.02**, h6**km±10km**, n68, σ0ˢ60**/86**, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUSH	**Yuscaran**	0.38	216	P	Pg	19 47 58.4	+0.8
YUSH				S	Sg	19 48 02.1	-0.4
OCON	**Estacion meteo**	0.65	168	P	Pg	19 48 03.1	+0.5
OCON				S	Sg	19 48 10.2	-0.7
TGUH	**Tegucigalpa,Un**	0.67	252	P	Pb	19 48 04.7	+0.3
TGUH				S	Sb	19 48 13.1	-0.9
RCVN	**Varillal2**	0.79	149	P	Pb	19 48 06.6	+0.1
RCVN	**Varillal2**	0.79	149	S	Sg	19 48 16.5	+0.8
RCFN	**Al S de San Ju**	0.83	152	P	Pb	19 48 07.0	0.0
RCFN				S	Sg	19 48 17.2	+0.4
RCPN	**Sur Rio San Ju**	0.89	145	P	Pb	19 48 08.5	+0.4
RCPN	**Sur Rio San Ju**	0.89	145	S	Sb	19 48 19.8	-0.6
RCON	**San Juan de Ri**	0.90	150	P	Pn	19 48 08.7	-0.8
RCON	**San Juan de Ri**	0.90	150	S	Sb	19 48 20.4	-0.1
LIMN	**Finca el Limon**	1.22	169	P	Pn	19 48 13.8	-0.1
LIMN				S	Sg	19 48 29.2	-0.2
AESN	**El Sauce Leon**	1.37	177	P	Pb	19 48 16.1	-0.1
AESN	**El Sauce Leon**	1.37	177	S	Sb	19 48 32.8	-1.2
MATN	**Matagalpa**	1.49	153	P	Pb	19 48 17.8	-0.5
MATN	**Matagalpa**	1.49	153	S	Sn	19 48 37.0	-0.4
POTN	**Potosi Cosigui**	1.53	215	P	Pb	19 48 18.4	-0.5
POTN				S	Sb	19 48 38.9	+0.4
CNCH	**Conchagua**	1.54	230	*e*P	Pn	19 48 18.4	+0.1
CNCH				*e*S	Sn	19 48 38.4	-0.4
CNCH	**Conchagua**	1.54	230	P	Pg	19 48 19.5	-0.2
CNCH	**Conchagua**	1.54	230	S	Sg	19 48 40.1	+0.5
LCND	**La Caada**	1.56	233	*e*P	Pn	19 48 18.7	+0.2
LCND	**La Caada**	1.56	233	P	Pg	19 48 19.9	-0.2
CSGN	**Cosiguina Volc**	1.58	216	P	Pg	19 48 20.7	+0.3
CSGN				S	Sn	19 48 40.1	+0.5
CRIN	**San Cristobal**	1.61	195	S	Sn	19 48 40.8	+0.4
CRIN	**San Cristobal**	1.61	195	P	Pb	19 48 20.3	-0.2
POLN	**Al Sur del Vol**	1.62	187	P	Pb	19 48 20.1	-0.3
POLN				S	Sn	19 48 40.6	+0.1
PKGN	**Cerro Pekin**	1.62	193	P	Pg	19 48 21.0	-0.3
PKGN				S	Sn	19 48 40.5	-0.1
CNRM	**Centro Naciona**	1.70	243	S	Sg	19 48 45.1	+0.2
CNGN	**Cerro Negro**	1.76	183	S	Sn	19 48 44.5	+0.5
CNGN	**Cerro Negro**	1.76	183	P	Pb	19 48 23.0	+0.1
BLLM	**Bellamira**	1.78	243	*e*P	Pb	19 48 23.1	-0.1
BLLM				*e*S	Sn	19 48 45.2	+0.7
ALEN	**Leon**	1.81	188	S	Sb	19 48 47.0	+0.2
MOM2	**El Cardon**	1.82	176	P	Pb	19 48 23.7	-0.2
MOM2				S	Sb	19 48 46.7	-0.3
LCY	**Lacayo**	1.83	243	*e*P	Pb	19 48 24.3	+0.1
SIUN	**Universidad Ur**	1.87	107	P	Pg	19 48 26.2	+0.2
SIUN				S	Sg	19 48 51.1	+0.9
TECA	**Tecapa**	1.99	248	*e*P	Pb	19 48 27.1	+0.2
PQSS	**Presa 15 de Se**	1.99	252	*e*P	Pb	19 48 26.2	-0.6
PQSS				*e*S	Sn	19 48 50.3	+0.5
PQSS	**Presa 15 de Se**	1.99	252	P	Pb	19 48 26.2	-0.6
PQSS	**Presa 15 de Se**	1.99	252	S	Sb	19 48 52.5	+0.5
AMTN	**Mateare**	2.02	175	S	Sb	19 48 53.7	+0.9
BOAB	**BOACO BROADBAN**	2.03	153	P	Pb	19 48 26.9	-0.5
BOAB	**BOACO BROADBAN**	2.03	153	S	Sb	19 48 53.6	+0.7
APYN	**Apoyeque**	2.04	173	P	Pb	19 48 27.3	-0.3
APYN				S	Sb	19 48 53.0	-0.2
COPN	**Copaltepe**	2.07	179	P	Pb	19 48 27.5	-0.7
APQ2	**Apoyeque**	2.08	172	P	Pb	19 48 27.8	-0.5
APQ2				S	Sg	19 48 56.0	-0.9
SAPS	**Ciudad Sandino**	2.09	174	P	Pb	19 48 28.5	-0.1
SAPS	**Ciudad Sandino**	2.09	174	S	Sb	19 48 56.0	+1.1
ALLN	**Telcor Managua**	2.12	171	S	Sb	19 48 55.9	+0.1
ALLN	**Telcor Managua**	2.12	171	P	Pb	19 48 29.5	+0.4
SCLA	**Alcaldia de Sa**	2.13	255	*e*P	Pb	19 48 28.7	-0.5
SCLA	**Alcaldia de Sa**	2.13	255	P	Pg	19 48 30.1	-0.8
SCLA	**Alcaldia de Sa**	2.13	255	S	Sg	19 48 58.5	0.0
MGAN	**Managua**	2.14	170	P	Pb	19 48 28.8	-0.5
MGAN	**Managua**	2.14	170	S	Sb	19 48 56.5	+0.5
TISN	**Laguna Tiscapa**	2.14	171	P	Pb	19 48 28.2	-1.1
SARH	**Santa Rosa de**	2.14	284	P	Pg	19 48 31.1	0.0
SARH	**Santa Rosa de**	2.14	284	S	Sg	19 48 57.9	-1.0
AERN	**Aeropuerto Man**	2.15	168	S	Sb	19 48 57.4	+0.8
AERN	**Aeropuerto Man**	2.15	168	P	Pb	19 48 29.0	-0.5
UNAN	**Cigeo UNAN**	2.17	171	P	Pb	19 48 28.9	-0.9
UNAN				S	Sb	19 48 57.8	+0.8
UESV	**Universidad de**	2.20	254	S	Sb	19 48 59.3	+1.4
UESV	**Universidad de**	2.20	254	P	Pb	19 48 30.7	+0.3
TECO	**Alcaldia de Te**	2.22	251	S	Sb	19 49 00.2	+1.5
LLGN	**La Laguna**	2.26	268	P	Pb	19 48 30.8	-0.7
MAS3	**Al N del Volca**	2.27	169	P	Pb	19 48 30.9	-0.7
MAS3				S	Sb	19 49 00.4	+0.5
PAVA	**Las Pavas**	2.32	257	*e*P	Pb	19 48 31.8	-0.7
PAVA	**Las Pavas**	2.32	257	P	Pb	19 48 33.0	+0.5
NANN	**Nandasmo**	2.36	168	P	Pb	19 48 33.4	+0.2
NANN	**Nandasmo**	2.36	168	S	Sb	19 49 01.5	-1.1

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*AEIC **22** 19:50:18.6±1.6, 69°.03N±0°.02×146°.35W±0°.06, h13km±5km,* *ML3.2, ML3.3/130(NEIC), Error ellipse: s-maj=3.3km s-min=2.8km az=145.0*

*NEIC **22** 19:50:19.9±1.3, 69°.10N±0°.03×146°.29W±0°.05, h10^{km}±1^{km}, Error ellipse: s-maj=4.5km s-min=2.9km az=24.0*

*IDC **22** 19:50:22.1±4.9, 69°.00N×146°.36W, h0^{km}, mb3.5/1, mbtmp3.5/4, ML3.3/3, MS3.4/1, Error ellipse: s-maj=64.8km s-min=26.4km az=140.0*

ISC 22 19:50:19.5±0.9**, 69°.05N**±0°.03×**146°.30W**±0°.02**, h17**^{km}±7^{km}**, n127, σ1^{s}.75**/107**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
D25K	Kavik River	0.28	355		Pg	19 50 24.8	-0.8
D25K					Sg	19 50 28.8	-0.9
D25K	Kavik River	0.28	355	IAML		19 50 30.7	
	comp=N,2μm,0.6s						
D25K				IAML		19 50 31.2	
	comp=E,7μm,0.8s						
D24K	Happy Valley	0.91	278		Pg	19 50 36.4	-0.8
D24K					Sb	19 50 49.2	+0.5
D24K	Happy Valley	0.91	278	IAML		19 50 54.1	
	comp=E,1μm,0.7s						
D24K				IAML		19 50 54.5	
	comp=N,728nm,1.0s						
E25K	Arctic Village	0.97	164		Pg	19 50 37.7	-0.6
E25K					Sn	19 50 51.9	+0.1
C26K	Camden Bay	1.00	29		Pb	19 50 39.1	+0.8
C26K	Camden Bay	1.00	29	IAML		19 50 59.9	
	comp=N,544nm,0.7s						
C24K	Franklin Bluff	1.08	310		Pb	19 50 39.9	+0.1
C24K	Franklin Bluff	1.08	310	IAML		19 50 58.5	
	comp=N,1μm,0.7s						
C24K				IAML		19 50 58.7	
	comp=E,903nm,1.0s						
C27K	Jago River	1.09	57		Pb	19 50 39.6	-0.2
C27K					Sb	19 50 55.3	+1.6
TOLK	Toolik Lake Re	1.25	252		Pn	19 50 41.8	-0.5
TOLK				IAML		19 51 03.2	
	comp=N,634nm,0.7s						
TOLK				IAML		19 51 04.8	
	comp=E,673nm,0.7s						
TOLK	Toolik Lake Re	1.25	252		Sn	19 51 00.3	+1.5
E24K	Your Creek	1.27	220		Pn	19 50 41.6	-0.8
E24K	Your Creek	1.27	220	IAML		19 51 02.8	
	comp=E,366nm,0.8s						
F25K	Christian Rive	1.48	170		Pb	19 50 46.7	0.0
F25K	Christian Rive	1.48	170		Sg	19 51 08.2	+0.8
E23K	Chandalar	1.57	232		Pn	19 50 47.4	+0.7
E23K					Sg	19 51 11.3	+1.1
E23K	Chandalar	1.57	232	IAML		19 51 13.4	
	comp=N,353nm,0.9s						
E23K				IAML		19 51 13.5	
	comp=E,542nm,0.9s						
D23K	Nanushuk River	1.58	269		Pb	19 50 48.2	0.0
D23K					Sg	19 51 11.5	+1.2
F26K	Sheenjek River	1.58	149		Pb	19 50 48.0	-0.2
F26K					Sg	19 51 10.5	+0.1
F24K	Squaw Lake	1.65	202		Pn	19 50 48.9	+1.2
F24K					Sg	19 51 12.4	-0.1
F24K	Squaw Lake	1.65	202	IAML		19 51 15.8	
	comp=N,255nm,0.8s						
F24K				IAML		19 51 15.9	
	comp=E,294nm,0.9s						
C23K	Itkillik River	1.71	299		Pn	19 50 50.0	+1.4
C23K					Sg	19 51 14.2	-0.4
BM01	Burnt Mountain	1.74	157		Pb	19 50 50.7	-0.2
BMAR	Burnt Mountain	1.75	158		Pb	19 50 50.7	-0.4
D27M	Malcolm River	1.92	82		Pb	19 50 54.1	0.0
D27M	Malcolm River	1.92	82	IAML		19 51 29.6	
	comp=E,156nm,0.8s						
D27M				IAML		19 51 30.2	
	comp=N,175nm,1.0s						
E27K	Coleen River	1.93	114		Pn	19 50 53.1	+1.5
E22K	Anaktuvuk Pass	2.22	248		Pn	19 50 56.6	+1.1
E22K				IAML		19 51 31.2	
	comp=N,216nm,0.9s						
E22K				IAML		19 51 34.5	
	comp=E,143nm,0.6s						
E22K	Anaktuvuk Pass	2.22	248		Sb	19 51 26.3	-0.1
D22K	Ayikyak River	2.31	269		Pn	19 50 57.9	+1.1
G26K	Porcupine Rive	2.31	155		Pn	19 50 58.3	+1.5
G26K				IAML		19 51 40.5	
	comp=E,138nm,0.9s						
G26K				IAML		19 51 42.5	
	comp=N,166nm,0.9s						
COLD	Coldfoot	2.34	220		Pn	19 50 59.3	+2.1
COLD				IAML		19 51 38.4	
	comp=N,121nm,1.1s						
COLD				IAML		19 51 38.6	
	comp=E,122nm,1.0s						
G24K	Hadweenzic Riv	2.40	191		Pn	19 50 59.6	+1.6
G24K				IAML		19 51 44.2	
	comp=N,157nm,1.0s						
G24K				IAML		19 51 44.8	
	comp=E,140nm,0.7s						
E28M	Babbage River	2.50	97		Pn	19 51 02.1	+2.8
F22K	John River	2.68	237		Pn	19 51 03.9	+2.1
D28M	Stokes Point	2.72	81		Pn	19 51 04.9	+2.6
G23K	Bananza Creek	2.74	213		Pn	19 51 04.9	+2.2
G23K	Bananza Creek	2.74	213	IAML		19 51 57.0	
	comp=E,80nm,0.8s						
F28M	Old Crow	2.79	118		Pn	19 51 05.5	+2.2
B22K	Teshekpuk Lake	2.80	301		Pn	19 51 04.6	+1.2
G27K	Doyon Strip	2.85	140		Pn	19 51 06.0	+1.7
E21K	Killik River	2.86	261		Pn	19 51 05.6	+1.3
B21K	Ikpikpuk River	3.00	285		Pn	19 51 07.8	+1.6
C21K	Knifeblade Rid	3.04	276		Pn	19 51 08.6	+1.8
E29M	Blow River	3.14	98		Pn	19 51 10.4	+2.3
E29M	Blow River	3.14	98	IAML		19 52 04.7	
	comp=N,96nm,1.1s						
E29M				IAML		19 52 08.9	
	comp=E,71nm,0.8s						
F21K	Alatna River	3.25	239		Pn	19 51 11.6	+1.9
F21K	Alatna River	3.25	239	IAML		19 52 09.4	
	comp=N,100nm,0.6s						
H24K	Noodor Dome	3.28	191		Pn	19 51 11.6	+1.4
H24K				IAML		19 52 08.4	
	comp=E,52nm,1.1s						
H27K	Steamboat Moun	3.37	145		Pn	19 51 13.2	+1.9
A22K	Sinclair Lake	3.56	307		Pn	19 51 15.2	+1.3
E20K	Nigu River	3.70	262		Pn	19 51 16.9	+1.0
G21K	Allakaket	3.73	230		Pn	19 51 18.2	+1.9
G21K	Allakaket	3.73	230	IAML		19 52 22.3	
	comp=E,82nm,1.2s						
G21K				IAML		19 52 26.4	
	comp=N,80nm,0.6s						
D20K	Etivluk River	3.75	270		Pn	19 51 18.3	+1.8
D20K	Etivluk River	3.75	270	IAML		19 52 26.8	
	comp=E,81nm,1.0s						
D20K				IAML		19 52 37.8	
	comp=N,75nm,1.1s						
G29M	Pine Creek	3.79	121		Pn	19 51 19.0	+1.9
G29M	Pine Creek	3.79	121	IAML		19 52 13.1	
	comp=E,71nm,0.7s						
G29M				IAML		19 52 33.6	
	comp=N,78nm,1.1s						
I27K	Kandik River	3.91	150		Pn	19 51 20.8	+2.0
I27K	Kandik River	3.91	150	IAML		19 52 38.8	
	comp=E,51nm,0.8s						
I27K				IAML		19 52 42.2	
	comp=N,44nm,1.0s						
B20K	Meade River	3.93	289		Pn	19 51 20.5	+1.5
I26K	Coal Creek Min	3.96	160		Pn	19 51 20.8	+1.5
I26K	Coal Creek Min	3.96	160	IAML		19 52 34.9	
	comp=E,40nm,1.0s						
I26K				IAML		19 52 46.0	
	comp=N,50nm,1.1s						
POKR	Poker Plat Res	3.98	187		Pn	19 51 21.0	+1.4
POKR	Poker Plat Res	3.98	187	IAML		19 52 30.9	
	comp=E,36nm,1.1s						
POKR				IAML		19 52 32.4	
	comp=N,25nm,0.7s						
F20K	Avaraart Lake	4.07	245		Pn	19 51 22.7	+1.9
F20K	Avaraart Lake	4.07	245	IAML		19 52 29.4	
	comp=E,43nm,0.9s						
F20K				IAML		19 52 31.5	
	comp=N,58nm,1.1s						
I23K	Minto, Yukon-K	4.10	198		Pn	19 51 22.9	+1.6
I23K	Minto, Yukon-K	4.10	198	IAML		19 52 31.5	
	comp=E,38nm,1.2s						
I23K				IAML		19 52 43.9	
	comp=N,47nm,1.0s						
H29M	Whitestone	4.16	129		Pn	19 51 24.1	+2.0
H29M	Whitestone	4.16	129	IAML		19 52 41.1	
	comp=E,31nm,0.7s						
H29M				IAML		19 52 46.4	
	comp=N,30nm,1.0s						
F30M	Barrier River	4.16	105	IAML		19 52 19.6	
	comp=E,31nm,1.1s						
F30M				IAML		19 52 44.1	
	comp=N,35nm,0.9s						
H21K	Melozitna Rive	4.23	219		Pn	19 51 25.1	+2.0
H21K	Melozitna Rive	4.23	219	IAML		19 52 34.5	
	comp=E,41nm,1.1s						
H21K				IAML		19 52 42.6	
	comp=N,26nm,1.1s						
COLA	College	4.24	189		Pn	19 51 25.8	+2.6
IL31		4.30	183		Pn	19 51 25.9	+1.8
ILAR	Eielson Array	4.30	183	Pn	Pn	19 51 26.1	+1.9
	comp=N,1.4nm,0.3s,baz=0.5,slow=13,SNR=72						
ILAR				Sn	Sn	19 52 15.4	+1.5
	comp=N,1.2nm,0.3s,baz=1.4,slow=22,SNR=5.4						
ILAR				Lg	Lg	19 52 32.8	
	comp=N,1.4nm,0.3s,baz=359,slow=29,SNR=4.5						
	comp=N,7.2nm,0.8s						
ILAR	Eielson Array	4.30	183		Pn	19 51 25.9	+1.7
G30M	tAoh Zraii Nji	4.32	114		Pn	19 51 26.1	+1.7
G30M	tAoh Zraii Nji	4.32	114	IAML		19 52 20.5	
	comp=N,28nm,1.0s						
G30M				IAML		19 53 01.4	
	comp=E,25nm,1.1s						
D19K	Kuna River	4.33	268		Pn	19 51 25.9	+1.4
E19K	Redstone River	4.37	254		Pn	19 51 26.0	+1.0
I28M	Miner Creek	4.38	143		Pn	19 51 27.4	+2.1
CCB	Clear Creek Bu	4.46	188		Pn	19 51 28.0	+1.7
J25K	Salcha River,	4.47	175		Pn	19 51 28.2	+1.7
J25K	Salcha River,	4.47	175	IAML		19 52 26.0	
	comp=N,17nm,0.8s						
J25K				IAML		19 52 46.9	
	comp=E,17nm,0.6s						
I21K	Tanana	4.47	212		Pn	19 51 28.4	+2.0
I21K				IAML		19 52 45.1	
	comp=E,43nm,1.0s						
EPYK	Eagle Plains	4.53	122		Pn	19 51 29.2	+1.9
EPYK	Eagle Plains	4.53	122	IAML		19 52 47.4	
	comp=E,41nm,0.7s						
WRH	Wood River Hil	4.65	190		Pn	19 51 30.8	+1.9
WRH	Wood River Hil	4.65	190	IAML		19 52 49.2	
	comp=E,16nm,1.1s						
WRH				IAML		19 52 54.8	
	comp=N,20nm,0.9s						
HDA	Harding Lake	4.67	183		Pn	19 51 28.7	-0.5
HDA				IAML		19 52 58.8	
	comp=E,22nm,1.0s						
HDA				IAML		19 53 05.2	
	comp=N,23nm,0.9s						
J26L	Joseph Creek	4.70	165		Pn	19 51 31.3	+1.7
INK	Inuvik	4.72	93	Pn	Pn	19 51 32.7	+2.9
	comp=N,0.4nm,0.3s,baz=289,slow=10,SNR=13						
INK				Sn	Sn	19 52 24.3	+0.2
	comp=N,0.2nm,0.3s,baz=226,slow=22,SNR=1.6						
	comp=N,1.5nm,0.3s						
INK	Inuvik	4.72	93		Pn	19 51 32.6	+2.8
C19K	Lookout Ridge	4.76	277		Pn	19 51 31.5	+1.1
C19K	Lookout Ridge	4.76	277	IAML		19 52 28.4	
	comp=E,31nm,0.6s						
F19K	Shaleruckik Mo	4.86	248		Pn	19 51 33.5	+1.8
F19K	Shaleruckik Mo	4.86	248	IAML		19 53 04.3	
	comp=N,36nm,1.1s						
H20K	Anotleneega Mo	4.88	227		Pn	19 51 33.7	+1.7
G31M	Satah River	5.00	110		Pn	19 51 35.7	+2.0
G31M	Satah River	5.00	110	IAML		19 53 17.1	
	comp=E,17nm,1.0s						
G31M				IAML		19 53 25.0	
	comp=N,23nm,1.1s						
G19K	Purcell Mounta	5.05	240		Pn	19 51 35.2	+0.9
SCRK	Sand Creek	5.18	169		Pn	19 51 38.4	+2.1
SCRK	Sand Creek	5.18	169	IAML		19 53 20.9	
	comp=E,14nm,1.1s						
K24K	Donnelly Dome	5.27	177		Pn	19 51 38.2	+0.7
K24K				IAML		19 53 28.6	
	comp=N,26nm,1.1s						
A19K	Wainwright	5.29	290		Pn	19 51 38.9	+1.4
C18K	Utukok River	5.41	273		Pn	19 51 39.6	+0.4
C18K				IAML		19 53 33.7	
	comp=E,23nm,1.0s						
MCK	McKinley	5.44	192		Pn	19 51 41.9	+2.1
DAWY	Dawson	5.71	148		Pn	19 51 46.1	+2.6
RND	Reindeer	5.76	192		Pn	19 51 45.9	+1.7
KTH	Kantishna Hill	5.83	201		Pn	19 51 47.0	+1.9
TRF	Thorofare Moun	5.85	198		Pn	19 51 47.7	+2.2
J30M	Hart River	5.97	134		Pn	19 51 48.9	+1.8
DHY	Denali Highway	6.02	185		Pn	19 51 49.3	+1.5
BC01	Beaver Creek A	6.28	161		Pn	19 51 52.6	+1.3
L27K	Beaver Creek,	6.28	161		Pn	19 51 52.9	+1.6
PPLA	Purkeypile	6.63	204		Pn	19 51 58.2	+2.1
M26K	Nabesna, AK	6.81	167		Pn	19 52 01.4	+2.8
C16K	Lisburne Hills	6.98	273		Pn	19 52 00.8	-0.1
BVCY	Beaver Creek	7.03	159		Pn	19 52 03.5	+2.0
A36M	Sachs Harbour	7.61	58		Pn	19 52 10.5	+1.2
YUK3	Moose Creek	7.70	159		Pn	19 52 12.4	+1.5
YKA	Yellowknife Ar	14.42	102	Pn	Pn	19 53 42.3	-0.2
	comp=E,0.2nm,0.3s,baz=315,slow=13,SNR=15						
YKA				Sn	Sn	19 56 14.2	-7.6
	comp=E,0.1nm,0.3s,baz=308,slow=23,SNR=5.2						
	comp=E,1.2nm,0.8s						
SEY	Seymchan	24.67	286	LR	LR	20 06 12.6	
	comp=E,88nm,18.9s,baz=150,slow=38						
PDAR	Pinedale Array	32.49	125	P	P	19 56 55.4	+6.4
	comp=E,0.5nm,0.8s,baz=335,slow=7.6,SNR=3.7						
	comp=E,0.5nm,0.8s						

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*IDC **22** 19:56:04.8±5.5, 30°.64N×137°.66E, h499^{km}±27^{km}, mb2.5/3, mbtmp3.5/7, Error ellipse: s-maj=90.9km s-min=36.6km az=124.0*

ISC 22 19:56:04.4±3.4**, 30°.6N**±0°.3×**137°.7E**±0°.3**, h496**^{km}**, n7, σ0^{s}.42**/7**, mb3.1**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	5.96	4	P	P	19 57 39.7	-0.3
	0.7nm,0.5s,baz=190,slow=9.9,SNR=1.9						
JNU	Nakatsue	6.32	295	P	P	19 57 43.9	+0.2
	3.1nm,0.3s,baz=23,slow=4.4,SNR=8.2						
KSRS	Korea Array	10.60	313	P	P	19 58 27.7	-0.3
	1.0nm,0.6s,baz=127,slow=11,SNR=2.5						
USRK	Ussuriysk Ar.	14.32	343	P	P	19 59 07.7	+0.4
	3.7nm,0.7s,baz=141,slow=9.3,SNR=5.0						
CMAR	Chiang Mai Arr	37.08	260	P	P	20 02 32.1	+0.1
	0.4nm,0.6s,baz=67,slow=8.3,SNR=4.6						
	0.4nm,0.6s						
ZALV	Zalesovo Beam	44.27	318	P	P	20 03 28.5	-0.4
	0.4nm,0.5s,baz=90,slow=7.2,SNR=1.6						
	0.4nm,0.5s						
MKAR	Makanchi Array	45.22	307	P	P	20 03 36.1	-0.4
	0.3nm,0.7s,baz=77,slow=7.6,SNR=2.1						
	0.3nm,0.7s						

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*JMA **22** 19:56:11.3±0.4, 30°N±2°×13°8E±°, h530^{km}±4^{km}, MV3.8/28, SHIKOKU BASIN*

*IDC **22** 19:56:16.1±1.2, 30°.60N×137°.43E, h493^{km}±13^{km}, mb3.5/21, mbtmp4.4/26, Error ellipse: s-maj=18.0km s-min=9.2km az=74.0*

*NEIC **22** 19:56:16.5±0.8, 30°.6N±0°.1×137°.4E±0°.2, h496^{km}±9^{km}, mb4.2/23, Error ellipse: s-maj=18.8km s-min=16.1km az=95.0*

ISC 22 19:56:15.3±0.5**, 30°.58N**±0°.06×**137°.64E**±0°.07**, h496**^{km}**, n81, σ1^{s}.48**/89**, mb4.1**/33**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTO1	TONANKAI O.B.S	3.12	347	*e*P	P	19 57 27.7	+1.4
JTNC	Tanabenakahech	3.66	332	P	P	19 57 30.9	+0.2
JTNC				*e*S	S	19 58 31.2	-1.1
JIE	Ise	3.89	349	P	P	19 57 33.2	+0.8
JMN	Monobe	4.48	316		P	19 57 38.0	+0.5
JTO	Tosashimizu	4.71	300	P	P	19 57 39.5	+0.1
INU	Inuyama	4.79	354		P	19 57 40.8	+0.7
JOD2	Odawara 2	4.83	14	*e*P	P	19 57 40.2	-0.3
JOD2				*e*S	S	19 58 46.5	-3.6
BSO1	Boso 1	4.95	34	*e*P	P	19 57 39.7	-1.2
BSO1				*e*S	S	19 58 47.7	-3.2
JGF	Kuroka	5.02	357		P	19 57 42.8	+0.6
CBIJ	Chichi jima	5.28	130	*e*S	S	19 58 52.8	-4.9
JRY	Ryogami san	5.53	11	*e*P	P	19 57 46.7	-0.2
JRY				*e*S	S	19 58 57.5	-4.3
JHS	Saijyo	5.83	320	*e*P	P	19 57 49.8	0.0
JHS				*e*S	S	19 59 06.7	-0.3
MJAR	Matsushiro Arr	5.97	4	P	P	19 57 50.3	-0.8
	23nm,0.5s,baz=178,slow=10,SNR=132						
MJAR				S	S	19 59 05.3	-4.1
	6.8nm,0.8s,baz=192,slow=19,SNR=6.3						
MAJO	Matsushiro	5.97	4		P	19 57 50.6	-0.5
MJB9	Matsu-Tunnel	5.97	4	P	P	19 57 51.5	+0.4
JNU	Nakatsue	6.29	296	P	P	19 57 54.3	0.0
	31nm,0.5s,baz=98,slow=2.1,SNR=30						
JNU	Nakatsue	6.29	296		P	19 57 54.5	+0.2
JOI	OKI	6.78	328	*e*P	P	19 57 58.9	-0.2
JSJ	Shimokoshiki	6.88	281	*e*P	P	19 57 59.2	-1.0
JSD	Sado	7.46	4	P	P	19 58 05.2	-0.7
JAMN	Amaminishikomi	7.74	255	*e*P	P	19 58 08.0	-1.0
JMK	Ichinoseki	8.86	18	*e*S	S	19 59 59.3	-4.0
JKE	Kume jima 2	10.45	249	*e*P	P	19 58 36.1	-1.4
KSRS	Korea Array	10.59	313	P	P	19 58 38.5	-0.3
	4.7nm,0.6s,baz=125,slow=10,SNR=16						
JOT	Ohata	11.13	13	*e*P	P	19 58 45.5	+1.1
JOSM	Okushiri--Mats	11.58	7	*e*P	P	19 58 49.9	+0.7
JCH	Churui	12.86	19	*e*P	P	19 59 04.4	+1.6
JCH				*e*S	S	20 01 22.9	+2.0
ASAJ	Asahikawa	14.07	15	P	P	19 59 17.9	+2.2
	8.9nm,0.3s,baz=226,slow=11,SNR=28						
JKA	Kamikawa-asahi	14.07	15		P	19 59 17.5	+1.9
JTKR	Abashiri--Toko	14.26	19	*e*P	P	19 59 19.9	+2.2
USRK	Ussuriysk Ar.	14.32	343	P	P	19 59 18.5	+0.3
	34nm,0.6s,baz=163,slow=11,SNR=55						
YULB	Yu-li	16.22	248		P	19 59 34.9	-3.7
SSLB	Suanglung	16.31	250	P	P	19 59 36.6	-2.8
ENH	Enshi	24.26	277	P	P	20 00 51.4	-1.2
LZDM	Lanzhou Array	28.80	290	P	P	20 01 31.5	-1.3
	3.8nm,0.5s,baz=134,slow=6.4,SNR=3.7						
	3.8nm,0.5s						
SONM	Songino Array	29.45	315	P	P	20 01 37.2	-0.9
	0.5nm,0.6s,baz=122,slow=8.4,SNR=4.3						
SONM				PcP	PcP	20 04 29.3	+1.0
	0.3nm,0.4s,baz=139,slow=2.7,SNR=2.9						
	0.5nm,0.6s						
MA2	Magadan	30.33	13	P	P	20 01 47.0	+1.6
	5.8nm,0.6s,baz=169,slow=10,SNR=2.7						
	5.8nm,0.6s						
CHTO	Chiang Mai	36.89	261		P	20 02 40.4	-0.9
CHTO				IAmb	IAmb	20 02 41.9	
	comp=Z,12nm,0.7s						
CM31	Chiang Mai Arr	37.05	260	P	P	20 02 41.6	-1.0
CM31				IAmb	IAmb	20 02 43.3	
	comp=Z,6.9nm,0.7s						
CMAR	Chiang Mai Arr	37.05	260	P	P	20 02 42.5	-0.1
	comp=Z,4.1nm,0.6s,baz=66,slow=8.0,SNR=48						
	comp=Z,4.1nm,0.6s						
CMAR	Chiang Mai Arr	37.05	260	P	P	20 02 41.6	-1.1
ZALV	Zalesovo Beam	44.25	318	P	P	20 03 39.1	-0.6
	comp=Z,1.0nm,0.5s,baz=106,slow=9.1,SNR=5.7						
ZALV				PcP	PcP	20 05 13.7	+0.2
	comp=Z,1.1nm,0.5s,baz=114,slow=1.4,SNR=4.6						
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	45.20	307	P	P	20 03 47.2	-0.1
	comp=Z,1.3nm,0.4s,baz=87,slow=9.6,SNR=41						
MKAR				PcP	PcP	20 05 17.2	+0.1
	comp=Z,0.5nm,0.3s,baz=103,slow=1.9,SNR=10						
	comp=Z,1.3nm,0.4s						
MKAR	Makanchi Array	45.20	307	P	P	20 03 46.5	-0.7
KURK	Kurchatov	47.71	313		P	20 04 05.5	-0.6
KURK				IAmb	IAmb	20 04 06.5	
	comp=Z,8.4nm,1.1s						
KURBB	Kurchatov Arra	47.76	312	P	P	20 04 06.5	-0.1
	comp=Z,4.9nm,0.4s,baz=92,slow=8.0,SNR=28						
	comp=Z,4.9nm,0.4s						
NRIK	Noril'sk	47.97	338	P	P	20 04 07.9	+0.1
	comp=Z,1.8nm,0.5s,baz=116,slow=9.9,SNR=3.0						
	comp=Z,1.8nm,0.5s						
NRIK	Noril'sk	47.97	338	P	P	20 04 07.8	0.0
WB0	Warramunga Arr	50.15	184	P	P	20 04 25.1	+0.5
WB0				IAmb	IAmb	20 04 25.9	
	comp=Z,7.6nm,0.9s						
WRAB	Tennant Creek	50.32	184	P	P	20 04 26.4	+0.5
WRAB				IAmb	IAmb	20 04 27.0	
	comp=Z,8.2nm,1.1s						
WRA	Warramunga Arr	50.33	184	P	P	20 04 26.4	+0.5
	comp=Z,3.2nm,0.4s,baz=1.0,slow=7.4,SNR=39						
	comp=Z,3.2nm,0.4s						
WRA	Warramunga Arr	50.33	184	P	P	20 04 26.2	+0.2
WR8	Warramunga Arr	50.33	184		P	20 04 26.5	+0.5
WR8				IAmb	IAmb	20 04 26.9	
	comp=Z,5.5nm,0.6s						
BVAR	Borovoye Array	52.79	316	P	P	20 04 43.5	+0.1
	comp=Z,2.8nm,0.4s,baz=97,slow=7.9,SNR=36						
BVAR				PcP	PcP	20 05 45.3	+0.5
	comp=Z,1.2nm,0.5s,baz=88,slow=4.3,SNR=5.9						
	comp=Z,2.8nm,0.4s						
BORK	Borovoye	52.83	316		P	20 04 43.7	0.0
BORK				IAmb	IAmb	20 04 45.0	
	comp=Z,4.2nm,0.4s						
KK31	Karatay Array	53.84	303		P	20 04 51.2	+0.1
KKAR	Karatay Array	53.84	303		P	20 04 51.1	0.0
AS31	Alice Springs	54.05	184		P	20 04 53.4	+0.7
ASAR	Alice Springs	54.05	184	P	P	20 04 53.4	+0.7
	comp=Z,0.9nm,0.5s,baz=13,slow=13,SNR=27						
ASAR				ScP	ScP	20 09 02.1	+1.8
	comp=Z,0.2nm,0.6s,baz=3.8,slow=5.5,SNR=1.9						
	comp=Z,0.9nm,0.5s						
ASAR	Alice Springs	54.05	184	P	P	20 04 53.1	+0.4
GAR	Garm	54.81	298	IAmb	IAmb	20 04 59.0	
	comp=Z,7.1nm,0.8s						
CHGR	Chuyangaron	55.77	298	IAmb	IAmb	20 05 05.7	
	comp=Z,20nm,0.7s						
SHAA	Shahritus	56.84	297	IAmb	IAmb	20 05 13.6	
	comp=Z,10nm,0.7s						
DZM	Mont Dzumac	59.21	149	P	P	20 05 31.4	+3.0
	comp=Z,8.6nm,0.8s,baz=358,slow=6.4,SNR=5.2						
	comp=Z,8.6nm,0.8s						
DZM	Mont Dzumac	59.21	149	P	P	20 05 30.4	+2.0
AB31	Akbulak array	59.82	312	IAmb	IAmb	20 05 32.8	
	comp=Z,6.0nm,0.6s						
ABKAR	Akbulak array	59.82	312		P	20 05 32.0	-0.1
STKA	Stephens Creek	62.22	176	P	P	20 05 49.2	+1.2
	comp=Z,3.4nm,1.1s,baz=333,slow=11,SNR=2.2						
	comp=Z,3.4nm,1.1s						
STKA	Stephens Creek	62.22	176	P	P	20 05 47.9	-0.2
STKA				IAmb	IAmb	20 06 20.0	
	comp=Z,23nm,1.3s						
ARCES	ARCESS Array B	68.93	340	P	P	20 06 30.6	+0.9
	comp=Z,1.4nm,0.4s,baz=60,slow=8.2,SNR=22						
	comp=Z,1.4nm,0.4s						
ARCES	ARCESS Array B	68.93	340	P	P	20 06 30.6	+0.9
KBZ	Khabaz	72.73	311	P	P	20 06 53.1	+0.7
	comp=Z,4.7nm,0.8s,baz=133,slow=4.1,SNR=11						
	comp=Z,4.7nm,0.8s						
FINES	FINESS Array B	73.05	332	P	P	20 06 54.3	+0.3
	comp=Z,2.6nm,0.5s,baz=67,slow=5.5,SNR=43						
	comp=Z,2.6nm,0.5s						
AKASG	Malin Array Be	77.45	322	P	P	20 07 18.7	-0.1
	comp=Z,1.4nm,0.4s,baz=53,slow=5.6,SNR=7.1						
	comp=Z,1.4nm,0.4s						
HFS	Hagfors	78.63	335	P	P	20 07 25.1	+0.1
	comp=Z,2.8nm,0.4s,baz=110,slow=3.5,SNR=49						
	comp=Z,2.8nm,0.4s						
NB2	NORSAR Subarra	78.88	336	P	P	20 07 26.6	+0.2
	comp=Z,1.1nm,0.5s,baz=47,slow=5.1						
NOA	NORSAR Array B	78.88	336	P	P	20 07 26.8	+0.4
	comp=Z,2.0nm,0.7s,baz=54,slow=6.6,SNR=14						
	comp=Z,2.0nm,0.7s						
RAYN	Ar Rayn	80.14	291	P	P	20 07 33.3	-0.5
RAYN				IAmb	IAmb	20 07 34.9	
	comp=Z,9.5nm,1.4s						
BRTR	Keskin Array B	80.72	311	P	P	20 07 36.8	+0.1
	comp=Z,0.8nm,0.7s,baz=112,slow=2.9,SNR=5.0						
	comp=Z,0.8nm,0.7s						
MMAI	Mount Meron Ar	83.06	304	P	P	20 07 49.4	+0.8
	comp=Z,1.3nm,0.6s,baz=328,slow=3.0,SNR=4.5						
	comp=Z,1.3nm,0.6s						
TORD	Torodi Ar. Bea	119.30	309	PKP	PKPdf	20 14 08.4	-0.2
	comp=Z,0.2nm,0.4s,baz=58,slow=1.8,SNR=1.7						

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*IDC **22** 19:59:25.1±1.4, 24°.38S×115°.69W, h0^{km}, mb3.8/3, mbtmp3.8/3, MS3.9/25, Error ellipse: s-maj=60.2km s-min=39.8km az=16.0*

*GCMT **22** 19:59:32.0±0.3, 24°.27S±0°.02×115°.60W±0°.02, h14^{km}±1^{km}, MW4.9/79, Moment Tensor Solution. s23,c26; s79,c111; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.65±.11; $M_{\theta\theta}$-1.44±.10; $M_{\phi\phi}$2.09±.12; $M_{r\theta}$-0.85±.24; $M_{\theta\phi}$1.55±.08; $M_{\phi r}$-0.59±.23; Best double couple: $M_0$2.57300×10^{16}*

NP1:ϕ_s156.00000°,δ64.00000°,λ-174.00000°. NP2: ϕ_s63.00000°,δ85.00000°,λ-26.00000°. Principal axes: T 2.8860, Plg14.0000°, Azm112.0000°; N -0.6240, Plg64.0000°, Azm232.0000°; P -2.2600, Plg22.0000°, Azm17.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function

ISC 22 19:59:25.5±1.4**,24.°6S**±0.°4×**115.°9W**±0.°3**,h10**km**,n44,** σ**0.s73**/9**,mb3.9**/3**,MS3.9**/24**,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	6.40	115	LR	LR	20 02 58.6	
	comp=Z,3μm,19.1s,baz=312,slow=34						
RKT	Rikitea	17.55	271	*e*LR	LR	20 07 22.6	
	3μm,25.5s						
TAOE	Nuku Hiva Isla	27.95	300	*e*LR	LR	20 12 15.3	
	929nm,26.6s						
TBI	Tubuai	30.69	265	*e*LR	LR	20 13 33.8	
	2μm,28.2s						
PPT2	Papeete2	32.16	276	*e*LR	LR	20 13 57.8	
	575nm,28.5s						
PPT2				*e*LR	LR	20 14 06.1	
	320nm,31.0s						
PPT	Papeete	32.17	276	LR	LR	20 14 28.0	
	comp=Z,140nm,18.5s,baz=106,slow=28						
H03N2	Juan Fernandez	33.34	114	T	T	20 41 17.4	
	baz=281,slow=75,SNR=144						
H03N3	Juan Fernandez	33.34	114	T	T	20 41 14.5	
	baz=281,slow=75,SNR=147						
H03N1	Juan Fernandez	33.35	114	T	T	20 41 14.4	
	baz=281,slow=75,SNR=178						
NNA	Nana	38.97	78	LR	LR	20 18 42.1	
	comp=Z,259nm,18.6s,baz=246,slow=30						
ATAH	Atahualpa	39.81	71	LR	LR	20 18 58.2	
	comp=Z,240nm,20.9s,baz=248,slow=30						
RAR	Rarotonga	40.47	266	LR	LR	20 17 35.7	
	comp=Z,58nm,21.8s,baz=86,slow=27						
PLCA	Paso Flores	40.93	124	LR	LR	20 19 49.8	
	comp=Z,326nm,21.9s,baz=282,slow=30						
LPAZ	La Paz	45.30	89	P	P	20 07 44.5	-0.1
	2.3nm,0.9s,baz=268,slow=3.7,SNR=6.1						
LPAZ				LR	LR	20 22 39.6	
	comp=Z,105nm,18.5s,baz=260,slow=31						
	2.3nm,0.9s						
JTS	Las Juntas de	45.95	45	LR	LR	20 21 54.3	
	comp=Z,122nm,19.0s,baz=224,slow=30						
CMIG	Matias Romero	46.20	28	LR	LR	20 22 55.9	
	comp=Z,126nm,21.3s,baz=176,slow=31						
LPIG	La Paz	48.70	7	LR	LR	20 24 01.2	
	comp=Z,99nm,18.1s,baz=164,slow=30						
CPUP	Villa Florida	52.48	105	LR	LR	20 26 39.5	
	comp=Z,133nm,21.3s,baz=261,slow=31						
PFO	Pinyon Flats O	57.88	359	LR	LR	20 29 00.5	
	comp=Z,77nm,21.6s,baz=184,slow=31						
ANMO	Albuquerque	59.87	9	LR	LR	20 31 06.3	
	comp=Z,103nm,18.0s,baz=118,slow=32						
NVAR	Mina Array Bea	62.73	358	LR	LR	20 30 17.4	
	comp=Z,85nm,19.0s,baz=299,slow=30						
BDFB	Brasilia	63.79	96	LR	LR	20 33 41.5	
	comp=Z,116nm,21.3s,baz=213,slow=32						
VNDA	Vanda	64.51	194	LR	LR	20 33 49.5	
	comp=Z,77nm,18.8s,baz=115,slow=32						
QSPA	South Pole Qui	65.57	180	LR	LR	20 34 58.8	
	comp=Z,98nm,18.3s,baz=92,slow=32						
TKL	Tuckaleechee C	67.17	28	LR	LR	20 33 20.4	
	comp=Z,72nm,20.8s,baz=74,slow=30						
PDAR	Pinedale Array	67.27	5	P	P	20 10 21.1	+0.7
	0.5nm,0.6s,baz=165,slow=6.2,SNR=6.1						
	0.5nm,0.6s						
MDP	Montagnes des	68.16	73	LR	LR	20 36 36.0	
	comp=Z,64nm,20.0s,baz=332,slow=33						
DZM	Mont Dzumac	70.46	254	*e*LR	LR	20 32 03.5	
	159nm,26.7s						
NEW	Newport	72.52	359	LR	LR	20 38 16.5	
	comp=Z,87nm,18.9s,baz=55,slow=32						
ULM	Lac du Bonnet	76.58	13	LR	LR	20 40 44.2	
	comp=Z,50nm,19.3s,baz=39,slow=32						
H11S2	WAKE ISLAND Hy	86.70	292	T	T	21 48 14.9	
	baz=118,slow=75,SNR=67						
H11S1	WAKE ISLAND Hy	86.72	292	T	T	21 48 10.0	
	baz=118,slow=75,SNR=81						
H11S3	WAKE ISLAND Hy	86.72	292	T	T	21 48 11.1	
	baz=118,slow=75,SNR=55						
YKA	Yellowknife Ar	86.78	1	P	P	20 12 08.3	-1.2
	0.3nm,0.8s,baz=184,slow=5.1,SNR=5.9						
	0.3nm,0.8s						
MAW	Mawson	88.09	180	LR	LR	20 48 19.7	
	comp=Z,83nm,19.6s,baz=212,slow=33						
CTA	Charters Tower	88.63	249	LR	LR	20 49 09.1	
	comp=Z,44nm,18.2s,baz=88,slow=34						
SCHQ	Schefferville	89.55	26	LR	LR	20 47 20.0	
	comp=Z,99nm,20.9s,baz=112,slow=32						
PMG	Port Moresby	92.41	259	LR	LR	20 48 11.3	
	comp=Z,88nm,19.8s,baz=180,slow=32						
ZALV	Zalesovo Beam	146.85	338	PKPbc	PKPab	20 19 09.1	+0.1
	1.3nm,0.8s,baz=45,slow=4.4,SNR=5.7						
CMAR	Chiang Mai Arr	147.12	266	PKPbc	PKPab	20 19 11.0	-0.2
	0.3nm,0.4s,baz=87,slow=1.1,SNR=4.0						
BRTR	Keskin Array B	150.26	52	PKPbc	PKPbc	20 19 17.5	+0.2
	0.6nm,0.8s,baz=282,slow=2.4,SNR=4.3						
BVAR	Borovoye Array	151.21	352	PKPbc	PKPbc	20 19 18.4	-0.5
	0.4nm,0.5s,baz=341,slow=3.1,SNR=5.2						
KURBB	Kurchatov Arra	151.72	340	PKPbc	PKiKP	20 19 21.5	+1.0
	0.6nm,0.2s,baz=12,slow=2.1,SNR=5.4						
MKAR	Makanchi Array	153.51	331	PKPbc	PKPbc	20 19 24.4	+0.1
	0.6nm,0.9s,baz=64,slow=2.8,SNR=3.9						

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*NEIC **22** 20:03:15.5±1.4, 69.°05N±0.°02×146.°42W±0.°06, h10km±1km, Error ellipse: s-maj=3.9km s-min=3.6km az=198.0*

AEIC 22 20:03:14.1±1.7**,69.°03N**±0.°02×**146.°41W**±0.°04**,h14**km±5km**, ML2.6,ML2.7**/80(NEIC)**,Error ellipse: s-maj=3.4km s-min=0.7km az=210.0,Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
D25K	Kavik River	0.29	2		Pg	20 03 20.1	-0.1
D25K					Sg	20 03 24.3	0.0
D25K	Kavik River	0.29	2	IAML		20 03 25.6	
	comp=E,1μm,0.8s						
D25K				IAML		20 03 27.5	
	comp=N,697nm,0.7s						
D24K	Happy Valley	0.88	279		Pn	20 03 31.6	-0.3
D24K					Sn	20 03 43.9	-0.5
D24K	Happy Valley	0.88	279	IAML		20 03 49.0	
	comp=E,288nm,0.7s						
D24K				IAML		20 03 51.3	
	comp=N,244nm,0.6s						
E25K	Arctic Village	0.97	161		Pn	20 03 33.1	-0.1
E25K					Sn	20 03 46.6	-0.2
E25K	Arctic Village	0.97	161	IAML		20 03 48.9	
	comp=E,156nm,0.6s						
C26K	Camden Bay	1.03	30		Pn	20 03 34.7	+0.7
C26K					Sn	20 03 49.5	+1.3
C26K	Camden Bay	1.03	30	IAML		20 03 54.8	
	comp=E,182nm,0.5s						
C26K				IAML		20 03 54.9	
	comp=N,157nm,0.6s						
C24K	Franklin Bluff	1.07	311		Pg	20 03 35.4	+0.7
C24K	Franklin Bluff	1.07	311	IAML		20 03 55.1	
	comp=E,270nm,0.6s						
C27K	Jago River	1.13	57		Pn	20 03 35.5	+0.1
C27K					Sn	20 03 51.2	+0.6
TOLK	Toolik Lake Re	1.22	253		Pg	20 03 37.4	-0.1
TOLK	Toolik Lake Re	1.22	253		Sg	20 03 54.8	+1.5
TOLK	Toolik Lake Re	1.22	253	IAML		20 03 59.8	
	comp=E,167nm,0.6s						
TOLK				IAML		20 04 01.0	
	comp=N,189nm,0.6s						
E24K	Your Creek	1.23	219		Pb	20 03 37.0	-0.1
E24K	Your Creek	1.23	219	IAML		20 04 01.0	
	comp=E,117nm,0.7s						
F25K	Christian Rive	1.48	169		Pg	20 03 42.4	0.0
F25K					Sg	20 04 03.4	+1.9
F25K	Christian Rive	1.48	169	IAML		20 04 05.9	
	comp=E,76nm,0.8s						
F25K				IAML		20 04 07.5	
	comp=N,87nm,0.7s						
E23K	Chandalar	1.53	232		Pb	20 03 42.6	+0.4
E23K	Chandalar	1.53	232	IAML		20 04 07.7	
	comp=N,99nm,0.6s						
D23K	Nanushuk River	1.54	269		Pg	20 03 43.7	0.0
D23K	Nanushuk River	1.54	269	IAML		20 04 08.5	
	comp=E,141nm,0.5s						
D23K				IAML		20 04 09.7	
	comp=N,136nm,1.0s						
F26K	Sheenjek River	1.58	147		Pg	20 03 43.9	-0.6
F24K	Squaw Lake	1.62	201		Pb	20 03 44.2	+0.5
F24K	Squaw Lake	1.62	201	IAML		20 04 10.8	
	comp=E,116nm,0.7s						
F24K				IAML		20 04 10.9	
	comp=N,116nm,0.5s						
C23K	Itkillik River	1.69	300		Pb	20 03 45.2	+0.3
BMAR	Burnt Mountain	1.75	156		Pb	20 03 46.2	+0.3
E27K	Coleen River	1.96	114		Pb	20 03 49.9	+0.4
D27M	Malcolm River	1.96	81		Pb	20 03 49.7	+0.2
D27M	Malcolm River	1.96	81	IAML		20 04 19.4	
	comp=N,69nm,0.4s						
D27M				IAML		20 04 21.3	
	comp=E,56nm,0.6s						
E22K	Anaktuvuk Pass	2.18	248		Pb	20 03 52.2	-1.1
E22K	Anaktuvuk Pass	2.18	248	IAML		20 04 28.2	
	comp=N,55nm,0.6s						
D22K	Ayikyak River	2.27	269		Pb	20 03 53.4	-1.4
G25K	Bearman Lake	2.28	177		Pb	20 03 53.9	-1.1
COLD	Coldfoot	2.31	220		Pb	20 03 53.9	-1.5
G26K	Porcupine Rive	2.31	154		Pb	20 03 54.3	-1.2
G26K	Porcupine Rive	2.31	154	IAML		20 04 35.0	
	comp=E,40nm,0.6s						
G26K				IAML		20 04 37.3	
	comp=N,48nm,0.8s						
G24K	Hadweenzic Riv	2.38	190		Pb	20 03 54.6	-2.0
G24K	Hadweenzic Riv	2.38	190	IAML		20 04 33.9	
	comp=N,43nm,0.5s						
G24K				IAML		20 04 34.9	
	comp=E,34nm,0.6s						
E28M	Babbage River	2.53	97		Pb	20 03 57.2	-2.0
E28M	Babbage River	2.53	97	IAML		20 04 39.5	
	comp=N,29nm,0.8s						
B22K	Teshekpuk Lake	2.78	301		Pn	20 04 00.1	+2.1
F28M	Old Crow	2.81	117		Pb	20 04 01.3	-2.7
F28M	Old Crow	2.81	117	IAML		20 04 53.4	
	comp=N,34nm,0.7s						
F28M				IAML		20 04 53.7	
	comp=E,26nm,0.5s						
H24K	Noodor Dome	3.26	191		Pn	20 04 06.4	+1.7
H22K	Ishtalitna Cre	3.69	214		Pn	20 04 13.4	+2.8
H22K				IAML		20 05 22.1	
	comp=N,11nm,1.0s						
G21K	Allakaket	3.70	230		Pn	20 04 13.8	+3.2
G21K				IAML		20 05 21.7	
	comp=N,14nm,0.8s						
G29M	Pine Creek	3.81	120		Pn	20 04 14.3	+2.1
B20K	Meade River	3.90	289		Pn	20 04 15.8	+2.3
B20K				IAML		20 05 35.6	
	comp=E,15nm,0.8s						
I27K	Kandik River	3.91	149		Pn	20 04 16.3	+2.6
I27K				IAML		20 05 27.3	
	comp=N,12nm,0.9s						
I26K	Coal Creek Min	3.95	160		Pn	20 04 16.3	+2.1
I26K				IAML		20 05 26.3	
	comp=N,14nm,0.7s						
I26K				IAML		20 05 29.2	
	comp=E,16nm,0.8s						
IMAR	Indian Mountai	4.16	226		Pn	20 04 20.1	+3.1
H29M	Whitestone	4.17	129	IAML		20 05 44.8	
	comp=N,8.4nm,0.6s						
H29M				IAML		20 05 51.3	
	comp=E,9.1nm,1.2s						
F30M	Barrier River	4.19	105		Pn	20 04 14.3	-3.1
F30M				IAML		20 05 26.4	
	comp=E,11nm,1.1s						
F30M				IAML		20 05 43.0	
	comp=N,8.5nm,0.8s						
D19K	Kuna River	4.29	268		Pn	20 04 21.0	+2.1
D19K				IAML		20 05 50.0	
	comp=E,12nm,1.0s						
E19K	Redstone River	4.33	254		Pn	20 04 20.8	+1.4
EPYK	Eagle Plains	4.56	121		Pn	20 04 24.4	+1.9
WRH	Wood River Hil	4.63	189		Pn	20 04 25.5	+2.0
G31M	Satah River	5.03	109		Pn	20 04 31.0	+2.0
G31M				IAML		20 05 56.5	
	comp=E,5.1nm,0.9s						
G31M				IAML		20 06 05.9	
	comp=N,4.7nm,0.8s						
SCRK	Sand Creek	5.17	168		Pn	20 04 33.6	+2.6
C18K	Utukok River	5.37	273		Pn	20 04 35.4	+1.8
C18K				IAML		20 08 02.1	
	comp=E,322nm,0.8s						
C18K	Utukok River	5.37	273		Pn	20 04 35.5	+1.8
I30M	Mount Dempster	5.47	130		Pn	20 04 37.0	+1.9
E18K	Tukpahlearik C	5.52	260	Pn	Pn	20 04 38.1	+2.4
KTH	Kantishna Hill	5.80	200		Pn	20 04 42.5	+2.9
L26K	Log Cabin Wild	6.16	167		Pn	20 04 46.9	+2.4
MENT	Mentasta	6.22	169		Pn	20 04 47.1	+1.8
K29M	Barlow Dome	6.31	141		Pn	20 04 49.1	+2.5
L29M	L29M	6.83	147	Pn	Pn	20 04 54.9	+1.2
C16K	Lisburne Hills	6.95	273	Pn	Pn	20 04 56.2	+1.0

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*IDC **22** 20:07:27.7±4.6, 68.°52N×160.°01W, h0km, mb3.1/1, mbtmp3.1/4, ML3.2/3, Error ellipse: s-maj=55.5km s-min=54.5km az=125.0*

*AEIC **22** 20:07:29.0±1.6, 67.°81N±0.°02×160.°14W±0.°05, h16km±5km, ML3.0, ML3.1/90(NEIC), Error ellipse: s-maj=3.6km s-min=3.0km az=168.0*

*NEIC **22** 20:07:30.4±1.4, 67.°816N±0.°005×160.°04W±0.°05, h10km±1km, Error ellipse: s-maj=3.6km s-min=2.9km az=281.0*

ISC 22 20:07:30.0±1.1**,67.°82N**±0.°02×**160.°02W**±0.°03**,h13**km±9km**, n109,** σ**1.s46**/95**,Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
E18K	Tukpahlearik C	0.46	210		Pg	20 07 38.8	-0.1
E18K					Sg	20 07 45.4	+0.4
E18K	Tukpahlearik C	0.46	210	IAML		20 07 46.8	
	comp=E,745nm,0.3s						
E18K				IAML		20 07 50.9	
	comp=N,569nm,0.4s						
C18K	Utukok River	0.94	333		Pg	20 07 47.9	-0.3
C18K					Sb	20 08 00.7	+0.1
C18K	Utukok River	0.94	333	IAML		20 08 06.6	
	comp=N,418nm,0.6s						
D19K	Kuna River	0.99	45		Pg	20 07 48.4	-0.6
D19K					Sn	20 08 04.1	+0.7
E17K	Hotham Inlet	1.01	224		Pg	20 07 48.2	-1.2
E17K					Sg	20 08 02.8	+0.2
RDOG	Red Dog Mine	1.12	284		Pb	20 07 50.5	-0.6
E19K	Redstone River	1.13	107		Pb	20 07 50.5	-0.7
E19K					Sb	20 08 05.5	-0.3
E19K	Redstone River	1.13	107	IAML		20 08 12.0	
	comp=E,471nm,0.6s						
D17K	Noatak River	1.17	266		Pb	20 07 51.0	-1.0
D17K					Sg	20 08 07.9	+0.2
F18K	Selawik	1.23	173		Pn	20 07 52.3	-0.5
F18K					Sb	20 08 09.9	+1.2
C19K	Lookout Ridge	1.30	7		Pg	20 07 54.8	-0.2
C19K	Lookout Ridge	1.30	7	IAML		20 08 16.1	
	comp=E,435nm,0.5s						
C19K				IAML		20 08 17.0	
	comp=N,348nm,0.7s						
F19K	Shaleruckik Mo	1.32	138		Pn	20 07 54.8	+0.8
F19K					Sb	20 08 11.6	+0.4
C17K	DeLong Mountai	1.36	301		Pb	20 07 55.2	+0.1
C17K					Sg	20 08 14.1	+0.5
F17K	Baldwin Pennin	1.46	200		Pn	20 07 56.7	+0.7
F17K					Sn	20 08 15.9	+1.0
E20K	Nigu River	1.51	71		Pn	20 07 57.6	+0.9
D20K	Etivluk River	1.56	53		Pn	20 07 58.1	+0.8
D20K	Etivluk River	1.56	53	IAML		20 08 27.9	
	comp=N,341nm,0.8s						
B18K	Kokolik River	1.69	338		Pn	20 07 59.3	+0.2
F20K	Avaraart Lake	1.83	113		Pn	20 08 01.8	+0.8
F20K	Avaraart Lake	1.83	113	IAML		20 08 32.7	
	comp=N,200nm,0.8s						
G18K	Tagagawik	2.00	164		Pn	20 08 04.5	+1.0
G18K					Sn	20 08 29.4	+1.1
G18K	Tagagawik	2.00	164	IAML		20 08 35.8	
	comp=E,139nm,0.6s						
G19K	Purcell Mounta	2.04	144		Pn	20 08 05.2	+1.3
G19K	Purcell Mounta	2.04	144	IAML		20 08 35.6	
	comp=E,124nm,0.3s						
G19K				IAML		20 08 38.3	
	comp=N,170nm,0.5s						
C16K	Lisburne Hills	2.05	285		Pn	20 08 04.9	+0.8
C16K	Lisburne Hills	2.05	285	IAML		20 08 40.6	
	comp=N,122nm,0.9s						
C16K				IAML		20 08 41.8	
	comp=E,116nm,0.8s						
G17K	Kiwalik Mounta	2.34	186		Pn	20 08 08.4	+0.3
G17K					Sn	20 08 37.4	+0.8
E21K	Killik River	2.35	72		Pb	20 08 10.9	-1.3
E21K	Killik River	2.35	72	IAML		20 08 45.8	
	comp=E,106nm,0.8s						
A19K	Wainwright	2.43	352		Pn	20 08 10.4	+1.2
B20K	Meade River	2.43	24		Pn	20 08 09.9	+0.6
B20K					Sn	20 08 40.6	+1.7
B20K	Meade River	2.43	24	IAML		20 08 48.9	
	comp=N,105nm,0.5s						
B20K				IAML		20 08 56.5	
	comp=E,93nm,0.7s						
F21K	Alatna River	2.58	100		Pn	20 08 13.0	+1.6
F21K	Alatna River	2.58	100	IAML		20 08 59.6	
	comp=N,80nm,0.8s						
F21K				IAML		20 09 02.2	
	comp=E,94nm,0.7s						
G16K	Koyuk River	2.60	202		Pn	20 08 12.2	+0.5
B21K	Ikpikpuk River	2.68	45		Pn	20 08 14.2	+1.5
B21K	Ikpikpuk River	2.68	45	IAML		20 09 00.1	
	comp=E,98nm,0.9s						
H19K	Roundabout Mou	2.70	147		Pn	20 08 14.4	+1.4
H19K	Roundabout Mou	2.70	147	IAML		20 08 55.0	
	comp=E,80nm,0.5s						
H18K	Honhosa River	2.76	165		Pn	20 08 14.8	+0.9
H18K				IAML		20 08 59.2	
	comp=N,94nm,0.7s						
H18K				IAML		20 09 02.3	
	comp=E,85nm,0.8s						
H18K	Honhosa River	2.76	165		Sn	20 08 48.8	+1.9
F15K	North Star Dit	2.80	223		Pn	20 08 14.7	+0.3
F15K	North Star Dit	2.80	223	IAML		20 09 03.5	
	comp=E,52nm,0.7s						
G21K	Allakaket	2.86	114		Pn	20 08 15.7	+0.5
G21K	Allakaket	2.86	114	IAML		20 09 03.2	
	comp=E,72nm,0.9s						
G21K				IAML		20 09 06.5	
	comp=N,62nm,1.0s						
H17K	Granite Mounta	2.89	179		Pn	20 08 15.5	-0.2
H17K				IAML		20 09 07.6	
	comp=E,57nm,0.6s						
H17K				IAML		20 09 08.2	
	comp=N,59nm,1.0s						
D22K	Ayikyak River	2.92	65		Pn	20 08 18.1	+2.0
F22K	John River	3.01	92		Pn	20 08 19.2	+1.9
IMAR	Indian Mountai	3.08	124		Pn	20 08 19.1	+0.8
H20K	Anotleneega Mo	3.10	136		Pn	20 08 19.5	+0.9
E22K	Anaktuvuk Pass	3.11	80		Pn	20 08 21.2	+2.5
E22K	Anaktuvuk Pass	3.11	80	IAML		20 09 14.4	
	comp=E,56nm,0.8s						
G15K	Niukluk	3.26	212		Pn	20 08 21.4	+0.7
H16K	Elim	3.32	197		Pn	20 08 21.6	+0.1
GCSA	Galena City Sc	3.33	156		Sn	20 09 03.3	+2.2
F14K	Arctic Creek	3.44	230		Pn	20 08 24.4	+1.2
B22K	Teshekpuk Lake	3.47	40		Pn	20 08 24.4	+0.9
B22K	Teshekpuk Lake	3.47	40	IAML		20 09 20.7	
	comp=N,50nm,0.9s						
H21K	Melozitna Rive	3.59	124		Pn	20 08 26.1	+0.8
H21K	Melozitna Rive	3.59	124	IAML		20 09 27.6	
	comp=E,25nm,1.1s						
D23K	Nanushuk River	3.64	67		Pn	20 08 28.3	+2.3
A22K	Sinclair Lake	3.67	27		Pn	20 08 26.7	+0.5
A21K	Barrow	3.72	17		Pn	20 08 26.9	-0.1
H22K	Ishtalitna Cre	3.92	115		Pn	20 08 30.6	+0.8
ANM	Nome	3.92	216		Pn	20 08 30.6	+0.8
ANM	Nome	3.92	216	IAML		20 09 44.7	
	comp=N,20nm,0.7s						
E23K	Chandalar	3.93	82		Pn	20 08 31.4	+1.4
C23K	Itkillik River	3.97	55		Pn	20 08 31.7	+1.3
TOLK	Toolik Lake Re	3.98	73		Pn	20 08 32.8	+2.2
TOLK	Toolik Lake Re	3.98	73	IAML		20 09 49.9	
	comp=E,38nm,1.1s						
TOLK				IAML		20 09 50.1	
	comp=N,36nm,0.8s						
J19K	Poorman	4.24	153		Pn	20 08 35.8	+1.6
J19K	Poorman	4.24	153	IAML		20 09 54.2	
	comp=N,16nm,1.0s						
E24K	Your Creek	4.36	81		Pn	20 08 37.5	+1.6
E24K	Your Creek	4.36	81	IAML		20 09 51.8	
	comp=N,20nm,0.7s						
E24K				IAML		20 10 01.3	
	comp=E,25nm,1.1s						
J20K	Nowinta River	4.37	144		Pn	20 08 38.4	+2.5
J20K	Nowinta River	4.37	144	IAML		20 09 59.1	
	comp=N,14nm,0.6s						
J20K				IAML		20 10 00.1	
	comp=E,19nm,0.8s						
J17K	VABM Dome	4.46	175		Pn	20 08 38.6	+1.5
J17K	VABM Dome	4.46	175	IAML		20 09 49.7	
	comp=N,23nm,1.2s						
J17K				IAML		20 09 52.2	
	comp=E,22nm,0.6s						
C24K	Franklin Bluff	4.54	60		Pn	20 08 39.7	+1.5
C24K	Franklin Bluff	4.54	60	IAML		20 10 13.9	
	comp=N,18nm,1.1s						
J16K	Anvik River	4.56	183		Pn	20 08 39.9	+1.4
J16K	Anvik River	4.56	183	IAML		20 09 50.8	
	comp=N,16nm,0.6s						
J16K				IAML		20 10 01.8	
	comp=E,22nm,1.0s						
J18K	Innoko River	4.58	161		Pn	20 08 40.2	+1.4
J18K	Innoko River	4.58	161	IAML		20 09 50.9	
	comp=E,14nm,0.9s						
F24K	Squaw Lake	4.64	88		Pn	20 08 41.5	+1.8
G24K	Hadweenzic Riv	4.99	97		Pn	20 08 45.2	+0.7
I23K	Minto, Yukon-K	5.04	117	Pn	Pn	20 08 46.4	+1.3
I23K				IAML		20 10 13.3	
	comp=E,15nm,1.1s						
I23K				IAML		20 10 15.3	
	comp=N,11nm,1.1s						
H24K	Noodor Dome	5.19	107	Pn	Pn	20 08 47.1	-0.1
H24K				IAML		20 10 16.5	
	comp=E,10nm,0.9s						
H24K				IAML		20 10 29.9	
	comp=N,9.9nm,1.2s						
BPAW	Bear Paw Mtn.	5.25	131		Pn	20 08 49.4	+1.4
E25K	Arctic Village	5.45	80		Pn	20 08 52.2	+1.5
F25K	Christian Rive	5.48	86		Pn	20 08 52.2	+1.0
G25K	Bearman Lake	5.49	95		Pn	20 08 52.4	+1.1
KTH	Kantishna Hill	5.69	134		Pn	20 08 55.5	+1.3
CCB	Clear Creek Bu	5.87	117		Pn	20 08 57.2	+0.7
BMAR	Burnt Mountain	5.91	87	Pn	Pn	20 08 58.4	+1.2
PPLA	Purkeypile	5.92	143		Pn	20 08 59.4	+2.0
IL31		6.11	114		Pn	20 09 00.1	+0.3
ILAR	Eielson Array	6.11	114	Pn	Pn	20 09 00.1	+0.3
	comp=N,0.2nm,0.3s,baz=309,slow=14,SNR=8.1						
ILAR				Sn	Sn	20 10 09.7	+0.2
	comp=N,0.1nm,0.3s,baz=311,slow=23,SNR=1.7						
ILAR				Lg	Lg	20 10 39.4	
	comp=N,0.2nm,0.3s,baz=312,slow=32,SNR=4.6						
	comp=N,0.5nm,0.4s						
G26K	Porcupine Rive	6.32	90	Pn	Pn	20 09 04.3	+1.6
L22K	Petersville	6.58	139		Pn	20 09 09.5	+3.2
SKT	Skwentna	6.88	144		Pn	20 09 13.1	+2.7
E27K	Coleen River	6.92	78		Pn	20 09 11.9	+0.8
D27M	Malcolm River	7.13	70		Pn	20 09 14.4	+0.6
SPNN	North Nagishla	7.19	151		Pn	20 09 15.5	+0.6
INK	Inuvik	9.89	75	Pn	Pn	20 09 44.7	-6.8
	comp=N,0.2nm,0.3s,baz=236,slow=7.3,SNR=5.7						
INK				Sn	Sn	20 11 34.7	-7.6
	comp=N,0.2nm,0.3s,baz=170,slow=26,SNR=6.2						
	comp=N,0.6nm,0.4s						
YKA	Yellowknife Ar	19.42	84	P	P	20 11 55.3	-0.2
	comp=N,0.1nm,0.3s,baz=310,slow=11,SNR=5.3						
	comp=N,0.3nm,0.9s						
TXAR	Lajitas Array	50.61	110	P	P	20 16 29.6	+1.3
	comp=N,0.2nm,0.6s,baz=338,slow=7.1,SNR=2.6						
	comp=N,0.2nm,0.6s						

GUC 22 20:15:05.7±0.6**,21.°22S**×**68.°85W,h105**km±3km**,ML2.8,2C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.62	286	*e*P	Pn	20 15 22.2	-0.8
PB01				*e*S	Sn	20 15 35.5	-0.6
PB01				IAML		20 15 37.1	
	comp=E,286nm,0.2s						
PB09	IPOC Station P	0.68	212	*e*P	Pn	20 15 23.7	0.0
PB09				*e*S	Sn	20 15 37.5	+0.3
PB09				IAML		20 15 38.5	
	comp=N,302nm,0.5s						
PB02	IPOC Station P	0.98	264	⇑*i*P	Pn	20 15 25.8	-0.6

PB02				*e*S	Sn	20 15 41.6	-0.4
PB02				IAML		20 15 43.5	
	comp=E,341nm,0.2s						
PB07	**IPOC Station P**	**1.09**	**242**	*e*P	Pn	20 15 27.1	-0.6
PB07				*e*S	Sn	20 15 43.8	-0.5
PB07				IAML		20 15 45.5	
	comp=N,275nm,0.1s						
PB03	**IPOC Station P**	**1.18**	**225**	*e*P	Pn	20 15 28.1	-0.5
PB03				*e*S	Sn	20 15 45.4	-0.6
PB03				IAML		20 15 46.1	
	comp=E,282nm,0.2s						
PATCX	**Punta Patache**	**1.28**	**288**	*e*P	Pn	20 15 29.2	-0.5
PATCX				*e*S	Sn	20 15 47.6	-0.3
PATCX				IAML		20 15 49.6	
	comp=N,169nm,0.3s						
HMBC	**Humberstone**	**1.35**	**314**	*e*P	Pn	20 15 29.6	-1.0
HMBC				*e*S	Sn	20 15 48.4	-0.9
HMBC				IAML		20 15 49.0	
	comp=N,374nm,0.5s						
TA01	**Diego Aracena**	**1.40**	**297**		Pn	20 15 30.6	-0.5
TA01	**Diego Aracena**	**1.40**	**297**	⇑*i*P	Pn	20 15 30.4	-0.6
TA01				*e*S	Sn	20 15 49.4	-0.9
TA01				IAML		20 15 50.6	
	comp=E,250nm,0.2s						
TA02	**Huaiquique**	**1.52**	**308**	*e*P	Pn	20 15 31.8	-0.8
TA02				*e*S	Sn	20 15 53.0	+0.2
GO01	**Chusmiza**	**1.57**	**348**	*e*P	Pn	20 15 33.3	-0.3
GO01				*e*S	Sn	20 15 54.6	-0.2
GO01				IAML		20 15 57.3	
	comp=N,287nm,0.1s						
PB06	**IPOC Station P**	**1.63**	**204**	*e*P	Pn	20 15 33.6	-0.4
PB06				*e*S	Sn	20 15 55.5	+0.1
PB06				IAML		20 15 56.5	
	comp=E,113nm,0.4s						
PB11	**IPOC Station P**	**1.63**	**332**	*e*P	Pn	20 15 33.3	-0.7
PB11				*e*S	Sn	20 15 54.8	-0.8
PB11				IAML		20 15 55.4	
	comp=E,206nm,0.3s						
PB05	**IPOC Station P**	**2.06**	**217**	*e*P	Pn	20 15 38.6	-0.7

*IDC **22** 20:21:09.5±2.2, 44°.01N×86°.95E, h0^{km}, mb3.9/6, mbtmp3.8/9, ML3.2/3, MS3.4/2, Error ellipse: s-maj=40.5km s-min=25.2km az=44.0*

*NNC **22** 20:21:10.3±2.4, 43°.94N×86°.92E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=18.4km s-min=13.5km az=97.0*

ISC 22 20:21:12.0±1.8**, 44°.0N**±0°.1×**87°.1E**±0°.1**, h20^{km}, n16, σ1^s.28**/22**, mb3.8**/6**, 7C-6D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**4.42**	**311**	Pn	**Pn**	**20 22 18.5**	**+0.5**
	1.6nm,0.5s,baz=128,slow=14,SNR=140						
MK31				⇑Sn	**Sn**	**20 23 09.9**	**+1.0**
	4.8nm,0.4s						
MK31				Lg	Lg	20 23 30.6	
	12nm,0.6s,baz=134,slow=29,SNR=5.0						
MKAR	**Makanchi Array**	**4.42**	**311**	Pn	**Pn**	**20 22 18.8**	**+0.8**
	1.6nm,0.3s,baz=126,slow=14,SNR=72						
MKAR				Sn	**Sn**	**20 23 10.0**	**+1.1**
	1.8nm,0.3s,baz=137,slow=24,SNR=4.8						
MKAR				Lg	Lg	20 23 25.0	
	4.4nm,0.3s,baz=128,slow=28,SNR=5.9						
	2.2nm,0.3s						
MAKZ	**Makanchi**	**4.60**	**310**	⇓Pn	**Pn**	**20 22 20.9**	**+0.4**
	4.2nm,0.4s						
MAKZ				⇓Sn	**Sn**	**20 23 14.9**	**+1.6**
	5.2nm,0.7s						
MAKZ				⇓Lg	Lg	20 23 34.1	
	20nm,0.8s						
PDGK	**Podgornoye**	**5.58**	**266**	⇑Pn	**Pn**	**20 22 33.7**	**-0.2**
	7.6nm,0.9s						
PDGK				⇑Sn	**Sn**	**20 23 36.0**	**-1.4**
	13nm,0.9s						
PDGK				⇑Lg	Lg	20 24 01.9	
	35nm,0.9s						
KURBB	**Kurchatov Arra**	**8.85**	**322**	Pn	**Pn**	**20 23 16.7**	**-1.9**
	0.3nm,0.3s,baz=136,slow=12,SNR=10						
KURBB				Lg	Lg	20 25 48.3	
	0.1nm,0.3s,baz=134,slow=31,SNR=5.3						
	1.2nm,0.4s						
KURBB	**Kurchatov Arra**	**8.85**	**322**	⇑Pn	**Pn**	**20 23 16.2**	**-2.4**
	1.1nm,0.3s						
KURBB				⇑Sn	**Sn**	**20 24 58.1**	**+0.4**
	6.2nm,0.6s						
KURBB				⇑Lg	Lg	20 25 49.8	
	13nm,0.7s						
KURK	**Kurchatov**	**8.88**	**322**	⇓Pn	**Pn**	**20 23 16.6**	**-2.4**
	1.6nm,1.1s						
KURK				⇓Sn	**Sn**	**20 24 58.1**	**-0.2**
	2.3nm,0.7s						
KURK				⇓Lg	Lg	20 25 52.2	
	5.7nm,1.0s						
ZALV	**Zalesovo Beam**	**10.10**	**352**	Pn	**Pn**	**20 23 34.5**	**-1.2**
	0.5nm,0.3s,baz=175,slow=14,SNR=8.4						
ZALV				Sn	**Sn**	**20 25 30.3**	**+1.9**
	0.2nm,0.3s,baz=170,slow=29,SNR=2.5						
ZALV				Lg	Lg	20 26 28.8	
	0.1nm,0.3s,baz=169,slow=30,SNR=2.0						
ZALV				LR	LR	20 27 28.4	
	comp=Z,82nm,18.2s,baz=276,slow=38						
	1.2nm,0.4s						
BVAR	**Borovoye Array**	**14.29**	**315**	Pn	**Pn**	**20 24 32.2**	**-0.8**
	0.1nm,0.3s,baz=124,slow=10,SNR=8.9						
ARTI	**Arti**	**22.02**	**314**	P	**P**	**20 26 03.8**	**-1.0**
	1.3nm,0.4s,baz=149,slow=6.1,SNR=4.1						
	1.3nm,0.4s						
NRIK	**Noril'sk**	**25.44**	**0**	P	**P**	**20 26 38.3**	**+0.3**
	1.2nm,0.4s,baz=156,slow=5.6,SNR=5.0						
	1.2nm,0.4s						
FINES	**FINESS Array B**	**39.22**	**318**	P	**P**	**20 28 38.3**	**-0.1**
	1.9nm,1.0s,baz=81,slow=10.0,SNR=1.9						
	1.9nm,1.0s						
ARCES	**ARCESS Array B**	**39.79**	**331**	P	**P**	**20 28 43.2**	**0.0**
	3.1nm,1.0s,baz=106,slow=6.9,SNR=1.9						
	3.1nm,1.0s						
HFS	**Hagfors**	**45.41**	**318**	P	**P**	**20 29 28.2**	**-0.6**
	1.1nm,0.8s,baz=98,slow=11,SNR=1.7						
	1.1nm,0.8s						
NOA	**NORSAR Array B**	**46.37**	**319**	P	**P**	**20 29 35.8**	**-0.7**
	0.9nm,1.0s,baz=74,slow=7.9,SNR=2.3						
	0.9nm,1.0s						
BATI	**Baumata**	**63.30**	**139**	LR	LR	21 00 29.2	
	comp=Z,71nm,21.1s,baz=186,slow=37						

IDC 22 20:22:19.0±8.6**, 33°.32S**×**56°.68E, h0^{km}, mb3.6**/2**, mbtmp3.6**/2**, Error ellipse: s-maj=612.5km s-min=58.9km az=31.0, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H04N2	**CROZET ISLANDS**	**13.36**	**195**	T	T	20 38 17.1	
	baz=17,slow=74,SNR=171						
H04N1	**CROZET ISLANDS**	**13.36**	**195**	T	T	20 38 14.7	
	baz=17,slow=74,SNR=203						
H04N3	**CROZET ISLANDS**	**13.38**	**195**	T	T	20 38 15.6	
	baz=17,slow=74,SNR=274						
ASAR	**Alice Springs**	**67.17**	**104**	P	P	20 33 16.0	+0.9
	0.7nm,1.1s,baz=238,slow=6.3,SNR=2.3						
	0.7nm,1.1s						
WRA	**Warramunga Arr**	**69.28**	**101**	P	P	20 33 27.7	-0.7
	0.6nm,0.8s,baz=241,slow=6.2,SNR=2.0						
	0.6nm,0.8s						
YKA	**Yellowknife Ar**	**150.29**	**352**	PKPbc	PKPbc	20 42 10.9	-0.4
	0.2nm,0.7s,baz=355,slow=2.0,SNR=4.3						

IDC 22 20:35:17.9±1.7**, 28°.40N**×**104°.85E, h0^{km}, mb3.4**/3**, mbtmp3.3**/4**, ML3.5**/1**, Error ellipse: s-maj=78.5km s-min=30.4km az=63.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**19.44**	**3**	P	P	20 39 46.1	+0.1
	0.1nm,0.3s,baz=185,slow=11,SNR=2.0						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**25.47**	**322**	P	P	20 40 47.8	+0.1
	0.6nm,0.7s,baz=124,slow=10,SNR=6.1						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**55.88**	**146**	P	P	20 44 57.5	0.0
	0.7nm,1.0s,baz=335,slow=7.5,SNR=1.4						
	0.7nm,1.0s						
YKA	**Yellowknife Ar**	**84.08**	**17**	P	P	20 47 50.0	-0.2
	0.2nm,0.8s,baz=334,slow=5.2,SNR=2.7						
	0.2nm,0.8s						

*IDC **22** 20:46:40.6±1.1, 26°.20N×128°.25E, h0^{km}, mb3.5/8, mbtmp3.5/8, MS3.1/1, Error ellipse: s-maj=57.7km s-min=21.1km az=68.0*

*JMA **22** 20:46:45.2±0.3, 26°N±1°×12°8E±°, h27^{km}±4^{km}, MV3.1/13, NEAR OKINAWAJIMA ISLAND*

ISC 22 20:46:44.5±1.7**, 26°.22N**±0°.07×**128°.41E**±0°.07**, h26^{km}**±11^{km}**, n20, σ0^s.76**/26**, mb3.5**/8**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNTH	**Nagotoyohara**	**0.46**	**311**	*i* P	**Pb**	**20 46 53.7**	**-0.4**
JNTH				S	**Sb**	**20 46 60.0**	**-0.6**
JJT3	**Tamagusuku3**	**0.57**	**262**	*i* P	**Pb**	**20 46 55.9**	**+0.1**
JJT3				S	**Sb**	**20 47 04.6**	**+1.0**
JOW	**Kunigami**	**0.62**	**349**	*i* P	**Pb**	**20 46 57.0**	**+0.2**
JOW				S	**Sb**	**20 47 05.4**	**+0.2**
JYRO	**Yoronjima**	**0.80**	**3**	*i* P	**Pb**	**20 46 59.9**	**0.0**
JYRO				S	**Sb**	**20 47 10.6**	**+0.3**
JIH	**Iheya**	**0.90**	**334**	*i* P	**Pn**	**20 47 01.6**	**+0.1**
JIH				S	**Sn**	**20 47 14.6**	**+0.9**
JAGN	**Aguni-jima**	**1.11**	**290**	*i* P	**Pn**	**20 47 04.5**	**+0.2**
JOKE	**Okinoerabujima**	**1.15**	**7**	P	**Pn**	**20 47 04.7**	**-0.2**
JKE	**Kume jima 2**	**1.46**	**275**	P	**Pn**	**20 47 08.4**	**-0.7**
JTK	**Tokunoshima**	**1.63**	**17**	P	**Pn**	**20 47 11.6**	**0.0**
JTK				S	**Sn**	**20 47 31.8**	**0.0**
JAMN	**Amaminishikomi**	**2.13**	**19**	P	**Pn**	**20 47 18.8**	**+0.4**
JAM	**Amami Oshima**	**2.43**	**26**	P	**Pn**	**20 47 22.0**	**-0.5**
JAM				*e*S	**Sn**	**20 47 50.5**	**-0.8**
DAV	**Davao City (W)**	**19.23**	**189**	LR	LR	20 57 35.6	
	comp=Z,67nm,21.7s,baz=54,slow=34						
SONM	**Songino Array**	**27.65**	**327**	P	**P**	**20 52 31.4**	**+1.3**
	0.5nm,0.5s,baz=140,slow=10,SNR=8.3						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**41.66**	**312**	P	**P**	**20 54 29.9**	**-0.9**
	0.8nm,0.6s,baz=92,slow=9.2,SNR=11						
	0.8nm,0.6s						
KURBB	**Kurchatov Arra**	**44.97**	**316**	P	**P**	**20 54 55.8**	**-1.6**
	0.3nm,0.4s,baz=105,slow=9.0,SNR=5.7						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**46.25**	**172**	P	**P**	**20 55 07.2**	**-0.5**
	0.3nm,0.6s,baz=348,slow=7.8,SNR=1.6						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**49.88**	**173**	P	**P**	**20 55 36.5**	**+0.7**
	0.2nm,0.7s,baz=4.5,slow=13,SNR=4.9						
	0.2nm,0.7s						
FINES	**FINESS Array B**	**72.95**	**331**	P	**P**	**20 58 10.1**	**-1.2**
	1.2nm,0.7s,baz=68,slow=6.5,SNR=7.1						
	1.2nm,0.7s						
YKA	**Yellowknife Ar**	**78.47**	**25**	P	**P**	**20 58 43.6**	**+0.8**
	0.1nm,0.5s,baz=306,slow=6.5,SNR=1.5						
	0.1nm,0.5s						
NOA	**NORSAR Array B**	**79.39**	**334**	P	**P**	**20 58 48.8**	**+0.8**
	0.3nm,0.6s,baz=57,slow=4.8,SNR=1.5						
	0.3nm,0.6s						

*SSNC **22** 21:07:19.3±1.3, 19°.50N×78°.12W, h8^{km}±11^{km}, MD3.2, ML3.1, MW2.9*

*JSN **22** 21:07:21.5±1.2, 19°.44N×78°.02W, h47^{km}±12^{km}, MD4.1*

*OSPL **22** 21:07:21.6±1.2, 19°.36N×77°.93W, h2^{km}±999^{km}, ML3.2, Presumed earthquake*

ISC 22 21:07:16.0±1.6**, 19°.54N**±0°.04×**78°.07W**±0°.04**, h9^{km}**±13^{km}**, n18, σ1^s.56**/35**, 1C-1D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMGC	**Las Mercedes**	**1.13**	**62**	*e*P	**Pn**	**21 07 39.2**	**+1.3**
LMGC				*e*S	**Sn**	**21 07 53.4**	**-0.2**
MTDJ	**Mount Denham**	**1.40**	**159**	*e*P	**Pb**	**21 07 42.6**	**+0.2**
MTDJ				*e*S	**Sn**	**21 07 58.8**	**-1.6**
MTDJ				IAML		21 08 00.6	
	comp=Z,1μm,0.3s						
MTDJ				IAML		21 08 00.8	
	801nm,0.2s						
MTDJ	**Mount Denham**	**1.40**	**159**	*i* P	**Pb**	**21 07 42.6**	**+0.2**
MTDJ				*e*S	**Sn**	**21 07 58.8**	**-1.6**
MTDJ				IAML		21 08 00.8	
	comp=Z,444nm,0.8s						
CHIV	**Chivirico**	**1.62**	**74**	*e*P	**Pb**	**21 07 45.5**	**-0.4**
CHIV				*e*S	**Sn**	**21 08 03.8**	**-1.8**
CHIV				IAML		21 08 06.7	
	comp=E,197nm,0.2s						
CHIV				IAML		21 08 06.7	
	comp=N,270nm,0.2s						
CCCC	**Cccc**	**1.68**	**10**	*e*P	**Pg**	**21 07 48.2**	**+0.1**
CCCC				*e*S	**Sg**	**21 08 09.4**	**-0.5**
CCCC				IAML		21 08 16.8	
	comp=N,41nm,0.2s						
CCCC				IAML		21 08 20.5	
	comp=E,72nm,0.4s						
YAR	**Yar**	**1.81**	**62**	*e*P	**Pb**	**21 07 49.4**	**+0.1**
YAR				*e*S	**Sb**	**21 08 11.7**	**-0.3**
YAR				IAML		21 08 12.3	
	comp=E,456nm,0.3s						
YAR				IAML		21 08 12.7	
	comp=N,200nm,0.2s						
STH	**Stony Hill**	**1.88**	**140**	⇑*i*P	**Pn**	**21 07 49.2**	**+0.9**
MARVS	**Santiago de Cu**	**2.09**	**77**	*e*P	**Pn**	**21 07 52.5**	**+1.3**
MARVS				*e*S	**Sn**	**21 08 15.8**	**-1.5**
MARVS				IAML		21 08 18.7	
	comp=E,128nm,0.2s						
MARVS				IAML		21 08 19.0	
	comp=N,110nm,0.1s						
RCC	**Rio Carpintero**	**2.28**	**78**	*e*P	**Pn**	**21 07 55.1**	**+1.3**
RCC				*e*S	**Sn**	**21 08 21.4**	**-0.5**
RCC				IAML		21 08 23.4	
	comp=N,43nm,0.1s						
RCC				IAML		21 08 24.4	
	comp=E,41nm,0.1s						
HLGC	**Holguin**	**2.32**	**54**	*e*P	**Pb**	**21 07 57.9**	**0.0**
HLGC				*e*S	**Sb**	**21 08 25.3**	**-1.3**
HLGC				IAML		21 08 30.6	
	comp=N,48nm,0.2s						
HLGC				IAML		21 08 33.7	
	comp=E,46nm,0.2s						
GTBY	**Guantanamo Bay**	**2.81**	**82**	*e*P	**Pn**	**21 08 03.3**	**+2.2**
GTBY				*e*S	**Sn**	**21 08 35.3**	**+0.2**
GTBY				IAML		21 08 37.4	
	comp=E,98nm,0.3s						
GTBY				IAML		21 08 38.4	
	comp=E,151nm,0.3s						
GTBY	**Guantanamo Bay**	**2.81**	**82**	*i* P	**Pn**	**21 08 03.7**	**+2.6**
GTBY				*e*S	**Sn**	**21 08 35.8**	**+0.7**
GTBY				IAML		21 08 37.7	
	comp=Z,102nm,0.5s						
MGV	**Manicaragua**	**3.12**	**325**	*e*P	**Pn**	**21 08 06.5**	**+1.2**
MGV				*e*S	**Sn**	**21 08 41.0**	**-1.7**
MGV				IAML		21 08 45.2	
	comp=N,20nm,0.2s						
MGV				IAML		21 08 45.3	
	comp=E,24nm,0.2s						
MOAC	**Moa**	**3.13**	**69**	*e*P	**Pn**	**21 08 07.8**	**+2.4**
MOAC				*e*S	**Sn**	**21 08 43.7**	**+0.8**
MOAC				IAML		21 08 51.1	
	comp=N,18nm,0.1s						
MOAC				IAML		21 08 51.2	
	comp=E,8.1nm,0.1s						
QMBU	**Quimbuelo**	**3.13**	**77**	*e*P	**Pn**	**21 08 07.0**	**+1.5**
QMBU				*e*S	**Sn**	**21 08 41.3**	**-1.8**
QMBU				IAML		21 08 47.4	
	comp=E,65nm,0.2s						
QMBU				IAML		21 08 48.7	
	comp=N,57nm,0.3s						
CAIB	**Caibarien**	**3.22**	**336**	*e*P	**Pn**	**21 08 08.6**	**+2.0**
CAIB				*e*S	**Sn**	**21 08 44.6**	**-0.6**
CAIB				IAML		21 08 46.0	
	comp=N,27nm,0.3s						
CAIB				IAML		21 08 47.4	
	comp=E,30nm,0.4s						
MASC	**Masc**	**3.67**	**79**	*e*P	**Pn**	**21 08 15.9**	**+3.1**
MASC				⇓*e*S	**Sn**	**21 08 56.4**	**+0.2**
MASC				IAML		21 09 03.3	
	comp=E,55nm,0.2s						
MASC				IAML		21 09 03.9	
	comp=N,74nm,0.3s						
MASC	**Masc**	**3.67**	**79**	*i* P	**Pb**	**21 08 17.2**	**-3.7**
MASC				*e*S	**Sn**	**21 08 57.0**	**+0.8**
MASC				IAML		21 09 05.1	
	comp=Z,48nm,0.7s						

*IDC **22** 21:18:08.4±13.0, 21°.55S×176°.05W, h287^{km}±125^{km}, mb3.4/5, mbtmp4.1/5, Error ellipse: s-maj=55.3km s-min=29.9km az=54.0*

ISC 22 21:17:58.6±1.3**, 21°.4S**±0°.2×**175°.9W**±0°.2**, h200^{km}, n7, σ1^s.47**/8**, mb4.0**/5**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**35.33**	**265**	P	**P**	**21 24 35.2**	**+0.1**
	1.8nm,0.5s,baz=107,slow=11,SNR=1.9						
	1.8nm,0.5s						
ASAR	**Alice Springs**	**46.20**	**257**	P	**P**	**21 26 05.2**	**+1.3**
	3.4nm,0.5s,baz=94,slow=7.6,SNR=78						
ASAR				PcP	**PcP**	**21 27 35.7**	**-0.6**
	0.3nm,0.5s,baz=98,slow=4.0,SNR=4.8						
	3.4nm,0.5s						
WRA	**Warramunga Arr**	**46.39**	**262**	P	**P**	**21 26 05.4**	**-0.1**
	2.5nm,0.4s,baz=96,slow=6.9,SNR=45						
	2.5nm,0.4s						
VNDA	**Vanda**	**57.16**	**186**	P	**P**	**21 27 24.0**	**0.0**
	0.8nm,0.5s,baz=18,slow=6.2,SNR=6.9						
	0.8nm,0.5s						
ILAR	**Eielson Array**	**88.81**	**12**	P	**P**	**21 30 30.9**	**+1.6**
	0.1nm,0.5s,baz=206,slow=3.8,SNR=1.3						
	0.1nm,0.5s						
AKASG	**Malin Array Be**	**144.76**	**332**	PKP	**PKPab**	**21 37 08.4**	**-2.4**
	0.6nm,0.5s,baz=64,slow=2.2,SNR=1.7						
MMAI	**Mount Meron Ar**	**149.96**	**299**	PKPbc	**PKPbc**	**21 37 25.1**	**-0.7**
	0.4nm,0.6s,baz=96,slow=2.9,SNR=4.8						

*NAO **22** 21:19:16.6±0.5, 66°.86N×9°.53E, h10^{km}, ML3.0*

*BER **22** 21:19:18.9±3.2, 66°.88N×9°.36E, h29^{km}±22^{km}, Mw3.6, ML3.0(NAO), Confirmed Earthquake*

*UPP **22** 21:19:20.1±3.0, 66°.83N×10°.26E, h0^{km}, ML2.3, Presumed earthquake*

ISC 22 21:19:13.6±1.6**, 66°.88N**±0°.04×**9°.33E**±0°.08**, h10^{km}, n59, σ2^s.44**/97**, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAGH	**Vaagaholmen**	**1.57**	**94**	Pb	**Pn**	**21 19 42.9**	**+1.5**
VAGH				Sb	**Sn**	**21 20 01.1**	**-0.6**
VAGH	**Vaagaholmen**	**1.57**	**94**	*e*P	**Pn**	**21 19 42.6**	**+1.2**
VAGH				*e*S	**Sn**	**21 20 00.5**	**-1.2**
VAGH				IAML		21 20 02.2	
	comp=Z,27nm,0.2s						
STOK	**Stokkvaagen**	**1.57**	**109**	Pb	**Pn**	**21 19 43.1**	**+1.7**
STOK				Sb	**Sn**	**21 20 01.6**	**-0.1**
STOK	**Stokkvaagen**	**1.57**	**109**	*e*P	**Pn**	**21 19 43.1**	**+1.7**
STOK				*e*S	**Sn**	**21 20 01.6**	**-0.1**
STOK				IAML		21 20 02.7	
	comp=Z,32nm,0.1s						
LEIR	**Leirfjorden**	**1.70**	**115**	Pb	**Pn**	**21 19 45.1**	**+1.9**
LEIR				Sb	**Sn**	**21 20 04.2**	**-0.8**
LEIR	**Leirfjorden**	**1.70**	**115**	*e*P	**Pn**	**21 19 45.1**	**+1.9**
LEIR				*e*S	**Sn**	**21 20 04.2**	**-0.8**
LEIR				IAML		21 20 05.7	
	comp=Z,30nm,0.2s						
RAUS	**Rausandaksla**	**1.93**	**101**	*e*P	**Pn**	**21 19 48.6**	**+2.2**
RAUS				*e*S	**Sn**	**21 20 11.0**	**+0.3**
RAUS				IAML		21 20 12.1	
	comp=Z,59nm,0.1s						
LOF	**Lofoten**	**2.05**	**50**	Pn	**Pn**	**21 19 49.2**	**+1.1**
LOF				Sn	**Sn**	**21 20 11.6**	**-2.0**
LOF	**Lofoten**	**2.05**	**50**	*e*P	**Pn**	**21 19 48.9**	**+0.8**
LOF				*e*S	**Sn**	**21 20 11.0**	**-2.7**
LOF				IAML		21 20 22.4	
	comp=Z,14nm,0.6s						
MOR8	**Moi Rana**	**2.17**	**107**	Pn	**Pn**	**21 19 53.1**	**+3.5**
MOR8				Sn	**Sn**	**21 20 19.0**	**+2.5**
MOR8	**Moi Rana**	**2.17**	**107**	*e*P	**Pn**	**21 19 53.1**	**+3.5**
MOR8				*e*S	**Sn**	**21 20 18.9**	**+2.3**
MOR8				IAML		21 20 20.3	
	comp=Z,76nm,0.3s						
FAUS	**Fauske**	**2.38**	**75**	Pn	**Pn**	**21 19 54.3**	**+1.7**
FAUS				Sn	**Sn**	**21 20 22.0**	**+0.2**
FAUS	**Fauske**	**2.38**	**75**	*e*P	**Pn**	**21 19 54.5**	**+1.9**
FAUS				*e*S	**Sn**	**21 20 21.1**	**-0.7**
FAUS				IAML		21 20 23.2	
	comp=Z,17nm,0.1s						
STEI	**Steigen**	**2.52**	**62**	Pn	**Pn**	**21 19 56.4**	**+1.9**
STEI				Sn	**Sn**	**21 20 24.5**	**-0.5**
STEI	**Steigen**	**2.52**	**62**	*e*P	**Pn**	**21 19 56.0**	**+1.6**
STEI				*e*S	**Sn**	**21 20 23.6**	**-1.5**
STEI				IAML		21 20 25.2	
	comp=Z,14nm,0.3s						
NSS	**Namsos**	**2.60**	**154**	*e*P	**Pn**	**21 19 58.0**	**+2.4**
NSS				*e*S	**Sn**	**21 20 27.0**	**-0.1**
NSS				IAML		21 20 30.0	
	comp=Z,17nm,0.1s						
SALU	**Saltoluokta**	**3.62**	**78**	P	**Pn**	**21 20 12.3**	**+2.7**
SALU				S	**Sn**	**21 20 52.1**	**-0.2**
RATU	**Laukkuluspa**	**4.08**	**72**	P	**Pn**	**21 20 18.9**	**+2.9**
KOVU	**Salmi**	**4.37**	**67**	P	**Pn**	**21 20 23.1**	**+3.2**
KUA	**Kurravaara**	**4.38**	**71**	P	**Pn**	**21 20 22.8**	**+2.8**
	baz=248						
MOL	**Molde**	**4.39**	**191**	*e*P	**Pn**	**21 20 21.6**	**+1.4**
DUNU	**Dundret**	**4.42**	**82**	P	**Pn**	**21 20 22.9**	**+2.4**
HARU	**Harads**	**4.71**	**93**	P	**Pn**	**21 20 27.0**	**+2.4**
AKN	**Aaknes**	**4.83**	**193**	Pn	**Pn**	**21 20 27.6**	**+1.4**
AKN				Sn	**Sn**	**21 21 19.5**	**-2.6**
AKN	**Aaknes**	**4.83**	**193**	Pn	**Pn**	**21 20 27.6**	**+1.4**
AKN				Sn	**Sn**	**21 21 19.5**	**-2.6**
DOMB	**Dombas**	**4.86**	**181**	*e*P	**Pn**	**21 20 28.6**	**+1.9**
DOMB				*e*S	**Sn**	**21 21 19.2**	**-3.6**
JETT	**Jettan, Norway**	**4.92**	**52**	Pn	**Pn**	**21 20 29.7**	**+2.2**
JETT				Sn	**Sn**	**21 21 23.6**	**-0.9**
JETT	**Jettan, Norway**	**4.92**	**52**	Pn	**Pn**	**21 20 29.7**	**+2.2**
JETT				Sn	**Sn**	**21 21 23.6**	**-0.9**
MASU	**Masugnsbyn**	**4.97**	**77**	P	**Pn**	**21 20 30.2**	**+2.0**
LANU	**Lannavaara**	**5.01**	**71**	P	**Pn**	**21 20 31.4**	**+2.6**
ERTU	**Ertsjaerv**	**5.11**	**88**	P	**Pn**	**21 20 31.9**	**+1.8**
PAJU	**Pajala**	**5.42**	**82**	P	**Pn**	**21 20 36.3**	**+2.0**
KTK1	**Kautokeino**	**5.66**	**61**	*e*P	**Pn**	**21 20 39.8**	**+2.2**
KTK1				*e*S	**Sn**	**21 21 39.6**	**-2.9**
NC2	**NORSAR Subarra**	**5.66**	**173**	Pn	**Pn**	**21 20 40.2**	**+2.5**
NC2				Sn	**Sn**	**21 21 39.4**	**-3.3**
NC2	**NORSAR Subarra**	**5.66**	**173**	Pn	**Pn**	**21 20 40.2**	**+2.5**
NC2				Sn	**Sn**	**21 21 39.4**	**-3.3**
HEF	**Hetta**	**5.68**	**68**	*e*P	**Pn**	**21 20 40.3**	**+2.4**
HEF				*e*S	**Sn**	**21 21 40.5**	**-2.6**
NC3	**NORSAR Subarra**	**5.71**	**170**	Pn	**Pn**	**21 20 41.4**	**+3.0**
NC3				Sn	**Sn**	**21 21 40.8**	**-3.1**
NC3	**NORSAR Subarra**	**5.71**	**170**	Pn	**Pn**	**21 20 41.4**	**+3.0**
NC3				Sn	**Sn**	**21 21 40.8**	**-3.1**
NBO	**NORSAR Subarra**	**5.91**	**173**	Pn	**Pn**	**21 20 43.0**	**+2.0**
NBO	**NORSAR Subarra**	**5.91**	**173**	Pn	**Pn**	**21 20 43.0**	**+2.0**
NC4	**NORSAR Subarra**	**5.92**	**169**	Pn	**Pn**	**21 20 43.1**	**+2.0**
NC4	**NORSAR Subarra**	**5.92**	**169**	Pn	**Pn**	**21 20 43.1**	**+2.0**
NB2	**NORSAR Subarra**	**5.92**	**171**	Pn	**Pn**	**21 20 43.3**	**+2.1**
NB2				Pn	Pb	21 20 43.5	-13
	baz=350,slow=14						
NB2	**NORSAR Subarra**	**5.92**	**171**	Pn	**Pn**	**21 20 43.3**	**+2.1**
NB2				Pn	Pb	21 20 43.5	-13
	baz=350,slow=14						
NAO	**NORSAR Subarra**	**6.12**	**173**	Pn	**Pn**	**21 20 45.0**	**+1.1**
NAO	**NORSAR Subarra**	**6.12**	**173**	Pn	**Pn**	**21 20 45.0**	**+1.1**
NC6	**NORSAR Subarra**	**6.23**	**170**	Pn	**Pn**	**21 20 47.5**	**+2.1**
NC6				Sn	**Sn**	**21 21 52.6**	**-3.9**
NC6	**NORSAR Subarra**	**6.23**	**170**	Pn	**Pn**	**21 20 47.5**	**+2.1**
NC6				Sn	**Sn**	**21 21 52.6**	**-3.9**
NRA0	**NORESS Array S**	**6.24**	**170**	Pn	**Pn**	**21 20 47.4**	**+1.8**
	baz=352,slow=16						
NRA0				Sn	**Sn**	**21 21 52.9**	**-4.0**
	baz=359,slow=28						
NRA0	**NORESS Array S**	**6.24**	**170**	Pn	**Pn**	**21 20 47.4**	**+1.8**
	baz=352,slow=16						
NRA0				Sn	**Sn**	**21 21 52.9**	**-4.0**
	baz=359,slow=28						
ARA0	**ARCESS Array S**	**6.58**	**59**	Pn	**Pn**	**21 20 51.5**	**+1.3**
	baz=247,slow=14						
ARA0				Sn	**Sn**	**21 22 01.3**	**-3.9**
	baz=243,slow=28						
ARA0	**ARCESS Array S**	**6.58**	**59**	Pn	**Pn**	**21 20 51.5**	**+1.3**
	baz=247,slow=14						
ARA0				Sn	**Sn**	**21 22 01.3**	**-3.9**
	baz=243,slow=28						
HFS	**Hagfors**	**7.04**	**162**	Pn	**Pn**	**21 20 58.5**	**+1.9**
	baz=349,slow=14						
HFS				Sn	**Sn**	**21 22 11.6**	**-5.0**
	baz=354,slow=28						
HFS	**Hagfors**	**7.04**	**162**	Pn	**Pn**	**21 20 58.5**	**+1.9**
	baz=349,slow=14						
HFS				Sn	**Sn**	**21 22 11.6**	**-5.0**
	baz=354,slow=28						

VADS	Vadso	8.02	57	*e*P	Pn	21 21 11.2	+1.2
FIA0	FINESS Array S	9.10	119	Pn	Pn	21 21 26.1	+1.4
	baz=313,slow=12						
FIA0				Sn	Sn	21 23 01.8	-5.2
	baz=329,slow=28						
FIA0	FINESS Array S	9.10	119	Pn	Pn	21 21 26.1	+1.4
	baz=313,slow=12						
FIA0				Sn	Sn	21 23 01.8	-5.2
	baz=329,slow=28						
APA0	Apatity Array	9.18	75	Pn	Pn	21 21 26.3	+0.5
	baz=290,slow=8.6						
APA0				Sn	Sn	21 23 00.3	-8.7
	baz=286,slow=22						
APA0	Apatity Array	9.18	75	Pn	Pn	21 21 26.3	+0.5
	baz=290,slow=8.6						
APA0				Sn	Sn	21 23 00.3	-8.7
	baz=286,slow=22						

IDC ***22*** *21:30:18.3±0.5, 18°.81N×145°.63E, h220^{km}±3^{km}, mb4.4/32, mbtmp4.9/34, Error ellipse: s-maj=10.2km s-min=6.3km az=83.0*

NEIC ***22*** *21:30:19.0±1.9, 18°.80N±0°.06×145°.65E±0°.10, h221^{km}±5^{km}, mb4.8/363, Error ellipse: s-maj=13.5km s-min=9.2km az=86.0*

BJI ***22*** *21:30:18.5, 18°.84N×145°.90E, h253^{km}, mB4.7/19, mb4.5/69*

DJA ***22*** *21:30:19.3±0.5, 19°N±3°×14°6E±°, h227^{km}±5^{km}, M5.2/116, mb5.4/116, mB5.7/61, Mw(mB)5.2/61, MwMwp5.1/1, Mwp5.3/1*

GCMT ***22*** *21:30:20.0±0.3, 18°.86N±0°.02×145°.60E±0°.02, h215^{km}±2^{km}, MW5.1/104, Moment Tensor Solution. s54,c69; s104,c141; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.42±.17; $M_{\theta\theta}$-3.79±.22; $M_{\phi\phi}$0.36±.23; $M_{r\theta}$-4.26±.14; $M_{\theta\phi}$0.61±.20; $M_{\phi r}$2.82±.15; Best double couple: $M_0$6.29000×10^{16} NP1:ϕ_s79.00000°, δ22.00000°, λ52.00000°. NP2:ϕ_s298.00000°, δ73.00000°, λ104.00000°. Principal axes: T 6.3250, Plg60.0000°, Azm228.0000°; N -0.0720, Plg13.0000°, Azm114.0000°; P -6.2550, Plg27.0000°, Azm18.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 21:30:18.4±0.3**, 18°.76N**±0°.03×**145°.72E**±0°.05**, h225**^{km}±2^{km}**,**
h225^{km}**:pP-P, n768,** σ1^{s}.**26**/749**, mb4.8**/313**, 3C-5D,**
Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DPSS	Saipan	3.50	179		Pn	21 31 13.7	-1.6
DPSS				Sn	S	21 31 56.0	-3.9
GUMO	Guam	5.21	189	P	Pn	21 31 36.0	-0.1
	314nm,0.3s,baz=344,slow=4.6,SNR=23						
GUMO				S	S	21 32 35.0	-2.7
	684nm,0.3s,baz=174,slow=21,SNR=7.8						
GUMO	Guam	5.21	189		Pn	21 31 36.1	0.0
GUMO					S	21 32 35.6	-2.0
JCJ	Chichijima	8.91	339	P	Pn	21 32 10.1	-13
	143nm,0.4s,baz=282,slow=22,SNR=15						
JCJ				S	S	21 33 43.0	-21
	545nm,0.5s,baz=285,slow=23,SNR=9.4						
JCJ	Chichijima	8.91	339		Pn	21 32 20.7	-2.7
JOW	Kunigami	17.96	300	P	Pn	21 34 13.8	-1.0
	143nm,0.5s,baz=144,slow=9.8,SNR=37						
JOW	Kunigami	17.96	300		P	21 34 13.3	+1.1
JOW	Kunigami	17.96	300	P	Pn	21 34 14.4	-0.4
JOW	Kunigami	17.96	300	S	S	21 37 27.4	+0.8
JYT	Yasato	18.07	345	P	P	21 34 12.3	-1.0
INU	Inuyama	18.23	337		P	21 34 14.5	-0.6
INU	Inuyama	18.23	337	P	Pn	21 34 17.2	-0.7
INU	Inuyama	18.23	337	S	S	21 37 34.7	+2.9
JMN	Monobe	18.28	327	P	P	21 34 14.5	-1.1
JGF	Kuroka	18.33	338		P	21 34 16.3	+0.1
JGF	Kuroka	18.33	338	P	P	21 34 17.3	+1.1
JGF	Kuroka	18.33	338	S	S	21 37 36.8	+3.0
MJAR	Matsushiro Arr	18.91	341	P	P	21 34 22.2	-0.1
	32nm,0.7s,baz=166,slow=9.5,SNR=51						
MJAR				S	S	21 37 33.5	-12
	7.8nm,0.8s,baz=161,slow=12,SNR=3.1						
MJAR				ScP	ScP	21 41 50.3	-2.3
	3.2nm,0.7s,baz=172,slow=3.4,SNR=6.7						
MJAR	Matsushiro Arr	18.91	341		P	21 34 20.3	-2.1
MJAR					ScP	21 41 54.0	+1.4
MAJO	Matsushiro	18.91	341		P	21 34 22.1	-0.3
MAJO	Matsushiro	18.91	341	P	P	21 34 22.8	+0.4
MJB9	Matsu-Tunnel	18.91	341	P	P	21 34 22.6	+0.1
JNU	Nakatsue	19.52	320	P	P	21 34 28.6	-0.5
	19nm,0.9s,baz=322,slow=20,SNR=6.2						
JNU	Nakatsue	19.52	320	P	Pn	21 34 31.2	-2.0
JNU	Nakatsue	19.52	320	S	S	21 37 59.7	+2.3
H11S3	WAKE ISLAND Hy	19.88	87	T	T	21 55 46.4	
	baz=273,slow=74						
H11S1	WAKE ISLAND Hy	19.89	87	T	T	21 55 43.2	
	baz=273,slow=74						
H11S2	WAKE ISLAND Hy	19.89	87	T	T	21 55 59.4	
	baz=273,slow=74						
H11N1	WAKE ISLAND Hy	20.02	84	T	T	21 56 17.2	
	baz=267,slow=74						
H11N2	WAKE ISLAND Hy	20.02	84	T	T	21 56 20.6	
	baz=267,slow=74						
H11N3	WAKE ISLAND Hy	20.04	84	T	T	21 56 31.8	
	baz=267,slow=74						
JSD	Sado	20.28	343	P	P	21 34 36.7	-0.3
JSD	Sado	20.28	343	P	P	21 34 36.9	-0.1
MANU	Manus Island	20.74	175		P	21 34 43.0	+0.9
JAY	Jayapura	21.71	194	P	P	21 34 52.8	+0.8
	106nm,0.9s,baz=347,slow=3.3,SNR=17						
	106nm,0.9s						
JAY	Jayapura	21.71	194	P	P	21 34 53.0	+1.0
	118nm,1.0s						
SMPI	Sarmi	21.74	199	P	P	21 34 53.3	+1.1
	6µm352nm,1.6s						
GENI	Genyem	21.91	195	P	P	21 34 55.2	+1.4
GENI	Genyem	21.91	195	P	P	21 34 55.5	+1.7
	4µm264nm,1.4s						
BAKI	Biak	21.96	207	P	P	21 34 57.3	+3.0
	4µm288nm,0.9s						
SRPI	Serui, Papua	22.52	205	P	P	21 35 01.4	+1.9
	4µm384nm,1.0s						
MWPI	Manokwari, Pap	22.68	212	P	P	21 35 03.2	+2.3
DAV	Davao City (W)	22.78	242	P	P	21 35 02.9	+1.1
	219nm,0.5s,baz=130,slow=1.8,SNR=7.9						
DAV	Davao City (W)	22.78	242	P	P	21 35 03.2	+1.4
DAV	Davao City (W)	22.78	242		P	21 35 01.6	-0.2
DAV	Davao City (W)	22.78	242	P	P	21 35 03.3	+1.4
DAV	Davao City (W)	22.78	242	P	P	21 35 02.9	+1.1
	384nm,0.7s						
NACB	Ninganchiao	23.07	288		P	21 35 04.0	-0.4
NACB	Ninganchiao	23.07	288	P	P	21 35 04.8	+0.4
RKPI	Ransiki, Papua	23.12	211	P	P	21 35 06.7	+1.8
	89nm,0.7s						
YULB	Yu-li	23.23	286	P	P	21 35 05.5	-0.4
YULB	Yu-li	23.23	286	P	P	21 35 06.1	+0.2
YHNB	Yeheng	23.35	289	P	P	21 35 06.5	-0.5
YHNB	Yeheng	23.35	289	P	P	21 35 08.4	+1.4
TWGBT	Beinan	23.37	284	P	P	21 35 07.3	+0.2
TWG	Pinlang	23.38	284	P	P	21 35 06.6	-0.6
WAMI	Wamena	23.54	198	P	P	21 35 13.7	+5.1
	240nm,0.7s						
SSLB	Suanglung	23.60	287	P	P	21 35 09.4	+0.2
SSLB	Suanglung	23.60	287	P	P	21 35 09.4	+0.2
RABL	Rabaul	23.68	164		P	21 35 10.2	+0.3
TPUB	Ta-pu	23.83	285	P	P	21 35 10.6	-0.8
TPUB	Ta-pu	23.83	285	P	P	21 35 11.3	-0.1
SWI	Sorong	24.13	218	P	P	21 35 14.6	+0.6
	124nm,1.1s						
SIJI	Sorong	24.13	218	P	P	21 35 14.8	+0.7
	103nm,1.1s						
TGY	Tagaytay City	24.20	263	P	P	21 35 17.0	+2.1
	169nm,0.4s,baz=162,slow=2.6,SNR=6.7						
KSRS	Korea Array	24.28	324	P	P	21 35 14.6	-0.6
	10.0nm,0.7s,baz=142,slow=8.6,SNR=25						
KSRS				pP	pP	21 35 57.5	+1.2
	26nm,0.8s,baz=144,slow=8.5,SNR=6.7						
KSRS				PcP	PcP	21 38 49.3	+0.5
	4.5nm,1.0s,baz=142,slow=0.7,SNR=4.9						
KSRS				ScP	ScP	21 42 04.8	-1.2
	3.8nm,1.0s,baz=108,slow=3.1,SNR=6.9						
	10.0nm,0.7s						
KSAR	Wonju Array Be	24.29	324	P	P	21 35 13.7	-1.6
KSAR				pP	pP	21 35 56.4	-0.1
KSAR				PcP	PcP	21 38 48.0	-0.8
KSAR				ScP	ScP	21 42 03.7	-2.3
KS19	Wonju Array Si	24.34	324	P	P	21 35 14.0	-1.8
KS19				IAmb	IAmb	21 35 19.9	
	comp=Z,60nm,1.4s						
KMPI	Kaimana, Papua	25.23	209	P	P	21 35 25.3	+1.3
	comp=Z,2µmcomp=Z,174nm,0.9s						
FAKI	Fak Fak	25.30	213	P	P	21 35 24.1	-0.5
FAKI	Fak Fak	25.30	213	P	P	21 35 25.3	+0.7
FAKI	Fak Fak	25.30	213	P	P	21 35 25.0	+0.4
	comp=Z,1µmcomp=Z,121nm,0.8s						
JKA	Kamikawa-asahi	25.41	355	P	P	21 35 27.2	+1.8
JKA					pP	21 36 08.3	-0.3
ASAJ	Asahikawa	25.42	355	P	P	21 35 26.1	+0.8
	comp=Z,16nm,0.6s,baz=198,slow=11,SNR=17						
ASAJ				pP	pP	21 36 08.2	-0.3
	comp=Z,17nm,0.8s,baz=183,slow=7.9,SNR=2.5						
	comp=Z,16nm,0.6s						
MSAI	Masohi	27.49	219	P	P	21 35 45.5	+1.3
	comp=Z,100nm,1.0s						
NJ2	Nanjing	27.55	304	*e*P	P	21 35 44.5	-0.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KRAI	Karang Ratu	27.79	220	P	P	21 35 47.0	+0.1
	comp=Z,4µmcomp=Z,61nm,1.1s						
USRK	Ussuriysk Ar.	27.85	339	P	P	21 35 47.0	-0.1
	comp=Z,6.0nm,0.7s,baz=140,slow=8.3,SNR=6.5						
USRK				pP	pP	21 36 30.1	-1.4
	comp=Z,11nm,1.0s,baz=173,slow=10,SNR=3.2						
	comp=Z,6.0nm,0.7s						
BNDI	Bandanaira	27.89	215	P	P	21 35 48.4	+0.6
BNDI	Bandanaira	27.89	215	P	P	21 35 47.2	-0.6
	comp=Z,202nm,1.0s						
PMG	Port Moresby	28.02	177	P	P	21 35 48.0	-0.9
PMG	Port Moresby	28.02	177	P	P	21 35 49.4	+0.5
PMG	Port Moresby	28.02	177	P	P	21 35 49.8	+0.9
	comp=Z,98nm,0.9s						
AAI	Ambon	28.20	219	P	P	21 35 52.0	+1.5
	comp=Z,1µmcomp=Z,136nm,0.9s						
SANI	Sanana	28.36	225	P	P	21 35 50.8	-1.1
SANI	Sanana	28.36	225	P	P	21 35 50.9	-1.0
	comp=Z,28nm,0.8s						
NLAI	Namlea	28.53	222	P	P	21 35 54.6	+1.2
	comp=Z,60nm,1.2s						
GTOI	Gorontalo	28.65	234	P	P	21 35 54.9	+0.4
MRSI	Marisa	29.57	235	P	P	21 36 02.4	-0.3
	comp=Z,1µmcomp=Z,148nm,0.9s						
LUWI	Luwuk	29.93	231	P	P	21 36 04.0	-1.8
LUWI	Luwuk	29.93	231	P	P	21 36 05.6	-0.2
LUWI	Luwuk	29.93	231	P	P	21 36 05.8	0.0
	comp=Z,2µmcomp=Z,89nm,0.6s						
TOLI2	Tolitoli	30.09	237	P	P	21 36 07.3	+0.1
TOLI2				PcP	PcP	21 39 02.0	-1.2
TOLI2	Tolitoli	30.09	237	P	P	21 36 07.9	+0.6
SAUI	Saumlaki	30.14	209	P	P	21 36 08.3	+0.7
SAUI				PcP	PcP	21 39 04.2	+0.9
SAUI	Saumlaki	30.14	209	P	P	21 36 09.6	+2.0
SAUI	Saumlaki	30.14	209	P	P	21 36 08.9	+1.3
CN2	Changchun	30.22	330	*e*P	P	21 36 08.8	+0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TATA	Tatamba Isabel	30.34	152	P	P	21 36 10.8	+1.4
TIA	Tai'an	30.59	310	P	pP	21 36 59.0	+3.7
APSI	Ampana	30.68	233	P	P	21 36 13.2	+0.8
	comp=Z,1µmcomp=Z,134nm,1.2s						
WHN	Wuhan	30.72	298	P	P	21 36 12.1	-0.5
BNX	BinXian	30.89	335	⇓P	P	21 36 13.4	-0.5
BNX				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SAVO	Savo Central	31.02	152	P	P	21 36 16.0	+0.6
MPSI	Mapaga	31.26	237	P	P	21 36 17.6	+0.1
	comp=Z,807nmcomp=Z,78nm,0.9s						
KKM	Kota Kinabalu	31.40	250	P	P	21 36 18.7	-0.1
KKM	Kota Kinabalu	31.40	250	P	P	21 36 19.5	+0.7
KKM	Kota Kinabalu	31.40	250	P	P	21 36 18.5	-0.3
	comp=Z,1µmcomp=Z,139nm,0.8s						
PCI	Palu	32.07	235	P	P	21 36 25.3	+0.7
	comp=Z,2µmcomp=Z,60nm,1.1s						
COEN	Coen	32.61	185	P	P	21 36 29.0	-0.2
	comp=Z,73nm,0.8s						
COEN	Coen	32.61	185	P	P	21 36 29.9	+0.7
COEN	Coen	32.61	185	P	P	21 36 29.6	+0.4
HNS	HongShan	32.85	311	⇓P	P	21 36 30.9	-0.2
HNS				pP	pwP	21 37 18.5	-2.2
HNS				S	S	21 41 34.6	+3.0
HNS				pmax	pmax		
	comp=Z,17nm,1.1s						
KKSI	Kolaka, Sulawe	32.88	229	P	P	21 36 31.4	-0.2
	comp=Z,1µmcomp=Z,93nm,1.2s						
BJT	Baijiatuau	33.09	316	P	P	21 36 32.8	-0.4
BJT	Baijiatuau	33.09	316	P	P	21 36 32.9	-0.3
BJI	Beijing	33.10	316	P	P	21 36 32.8	-0.4
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GULI	GuiLin	33.34	288	P	P	21 36 38.4	+2.9
GULI				pmax	pmax		
	comp=Z,32nm,1.0s						
LYN	LuoYang	33.43	305	P	P	21 36 36.8	+0.6
LYN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TTSI	Tana Toraja	33.45	232	P	P	21 36 38.1	+1.5
KDU	Kakadu	33.87	204	P	P	21 36 40.0	0.0
	comp=Z,19nm,1.5s						
QIZ	Qiongzhong	33.91	276	P	P	21 36 40.3	-0.1
QIZ				S	S	21 41 49.0	+0.7
QIZ				pmax	pmax		
	comp=Z,28nm,1.9s						
MMSI	Mamuju	33.91	234	P	P	21 36 41.3	+0.8
	comp=Z,888nmcomp=Z,84nm,0.7s						
SPSI	Sidrap Palu	34.10	231	P	P	21 36 42.1	0.0
	comp=Z,2µmcomp=Z,216nm,0.9s						
DRS	Darwin Rock St	34.27	206	P	P	21 36 44.2	+0.7
PMSI	Majene	34.43	233	P	P	21 36 45.2	+0.2
	comp=Z,1µmcomp=Z,117nm,0.8s						
MTN	Manton Dam	34.54	206	P	P	21 36 45.4	-0.4
	comp=Z,121nm,0.8s						
MTN	Manton Dam	34.54	206	P	P	21 36 46.2	+0.4
BKB	Balikpapan	34.62	238	P	P	21 36 47.7	+1.2
	comp=Z,222nm,1.1s						
HEH	HeiHe	34.66	339	*e*P	P	21 36 46.3	-0.1
HEH				PcP	PcP	21 39 15.8	+0.6
HEH				ScP	ScP	21 42 36.1	-2.9
HEH				pmax	pmax		
	comp=Z,30nm,1.0s						
ENH	Enshi	34.76	296	P	P	21 36 47.1	-0.5
ENH				IAmb	IAmb	21 36 49.3	
	comp=Z,20nm,1.1s						
BKSI	Bulukumba	34.77	229	P	P	21 36 47.7	-0.1
	comp=Z,987nmcomp=Z,67nm,0.8s						
KAPI	Kappang	34.82	230	P	P	21 36 49.4	+1.1
KAPI	Kappang	34.82	230	P	P	21 36 48.9	+0.5
KAPI	Kappang	34.82	230	P	P	21 36 49.4	+1.1
KAPI	Kappang	34.82	230	P	P	21 36 49.2	+0.9
	comp=Z,67nm,1.1s						
KAPI	Kappang	34.82	230	P	P	21 36 49.1	+0.9
SOEI	Soe	35.36	219	P	P	21 36 52.2	-0.8
SOEI	Soe	35.36	219	P	P	21 36 51.6	-1.4
	comp=Z,2µmcomp=Z,121nm,0.8s						
PETK	Petropavlovsk-	35.53	12	P	P	21 36 55.4	+1.6
	comp=Z,7.3nm,0.6s,baz=165,slow=5.9,SNR=10						
PETK				PcP	PcP	21 39 17.7	0.0
	comp=Z,2.9nm,0.6s,baz=218,slow=6.7,SNR=5.5						
	comp=Z,7.3nm,0.6s						
PET	Petropavlovsk	35.65	13	P	P	21 36 55.9	+1.1
PET				IAmb	IAmb	21 36 58.0	
	comp=Z,22nm,0.9s						
MMRI	Maumere	35.74	222	P	P	21 36 55.6	-0.5
MMRI	Maumere	35.74	222	P	P	21 36 56.6	+0.5
MMRI	Maumere	35.74	222	P	P	21 36 56.4	+0.3
	comp=Z,2µmcomp=Z,122nm,1.1s						
MTKI	Muara Teweh, K	36.06	240	P	P	21 37 00.7	+1.8
BATI	Baumata	36.08	219	P	P	21 36 59.6	+0.6
	comp=Z,1µmcomp=Z,151nm,0.9s						
XAN	Xi'an	36.08	302	⇑P	P	21 36 59.3	+0.4
XAN				pP	pwP	21 37 47.5	-1.1
XAN				PcP	PcP	21 39 20.3	+0.5
XAN				ScP	ScP	21 42 42.5	-2.2
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
EDFI	Ende, Flores	36.18	223	P	P	21 37 00.0	+0.1
HHC	Hu-ho-hao-te	36.57	314	*e*P	P	21 37 05.6	+2.6
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,200nm,5.7s						
SBUM	Sibu	36.58	248	P	P	21 37 04.2	+0.9
SBUM	Sibu	36.58	248	P	P	21 37 04.4	+1.1
SBUM	Sibu	36.58	248	P	P	21 37 03.3	0.0
	comp=Z,898nmcomp=Z,75nm,1.2s						
MTSU	Mount Surprise	36.69	182	P	P	21 37 05.0	+0.9
GYA	Guiyang	36.75	289	⇓P	P	21 37 05.9	+1.2
GYA				PcP	PcP	21 39 22.4	+0.3
GYA				S	S	21 42 31.3	-0.4
GYA				ScP	ScP	21 42 47.3	-0.1
GYA				pmax	pmax		
	comp=Z,12nm,1.0s						
HILR	Hailar Array B	37.12	332	P	P	21 37 06.8	-0.6
	comp=Z,6.4nm,0.5s,baz=133,slow=9.2,SNR=15						
HILR				PcP	PcP	21 39 23.8	+1.1
	comp=Z,9.1nm,0.6s,baz=138,slow=6.7,SNR=10						
HILR				ScP	ScP	21 42 46.4	-1.8
	comp=Z,12nm,0.8s,baz=141,slow=7.6,SNR=18						
	comp=Z,6.4nm,0.5s						
LBFI	Labuhan Bajo,	37.17	226	P	P	21 37 07.9	-0.3
	comp=Z,1µmcomp=Z,129nm,0.8s						
BTO	Baotou	37.52	313	*e*P	P	21 37 11.8	+0.8
BTO				pP	pwP	21 38 00.8	-0.6
BTO				S	S	21 42 44.3	+1.3
BTO				pmax	pmax		
	comp=Z,14nm,0.7s						
BTO				pmax	pmax		
	comp=Z,210nm,4.3s						
BTO				LR	LR		
	comp=Z,360nm,6.0s						
BTO				LR	LR		
	comp=Z,310nm,6.2s						
BTO				LR	LR		
	comp=Z,350nm,5.4s						
BBKI	Banjar Baru	37.57	237	P	P	21 37 11.7	+0.1
WSI	Waingapu	37.77	224	P	P	21 37 11.7	-1.5
TV1H	Townsville Har	37.80	178	P	P	21 37 14.2	+0.9
BASI	Baing, Sumba	38.00	223	P	P	21 37 14.5	-0.6
	comp=Z,213nm,0.8s						
KNRA	Kununurra	38.07	207	P	P	21 37 16.8	+1.2
	comp=Z,203nm,0.9s						
KNRA	Kununurra	38.07	207	P	P	21 37 16.4	+0.7
DBNI	Kabupaten Domp	38.27	227	P	P	21 37 16.7	-0.7
WBSI	Waikabubak, Su	38.35	225	P	P	21 37 16.4	-1.7
	comp=Z,2µmcomp=Z,221nm,0.8s						
UBPT	Khong Chiam	38.58	271	P	P	21 37 21.5	+1.5
CTA	Charters Tower	38.61	179	P	P	21 37 21.0	+0.8
CTAO	Charters Tower	38.61	179	P	P	21 37 20.5	+0.3
CTAO				IAmb	IAmb	21 37 23.8	
	comp=Z,34nm,0.8s						
CTAO	Charters Tower	38.61	179	P	P	21 37 20.9	+0.8
CTAO	Charters Tower	38.61	179	P	P	21 37 20.6	+0.5
CTAO				PcP	PcP	21 39 29.9	+2.3
PLAI	Plampang	38.87	228	P	P	21 37 22.4	0.0
PLAI	Plampang	38.87	228	P	P	21 37 21.9	-0.5
	comp=Z,2µmcomp=Z,127nm,0.7s						
TWSI	Taliwang, Sumb	39.44	229	P	P	21 37 26.9	-0.2
QIS	Mount Isa	39.53	189	P	P	21 37 28.3	+0.6
KLNI	Mataram	39.79	230	P	P	21 37 31.0	+1.0
WB0	Warramunga Arr	39.87	197	P	P	21 37 31.3	+0.8
WR8	Warramunga Arr	40.02	197	P	P	21 37 32.3	+0.6
WRAB	Tennant Creek	40.04	197	P	P	21 37 32.6	+0.8
WRAB	Tennant Creek	40.04	197	P	P	21 37 32.7	+0.8
SANVU	Saraoutou	40.04	147	P	P	21 37 33.0	+1.1
SANVU	Saraoutou	40.04	147	P	P	21 37 33.4	+1.5
SANVU	Saraoutou	40.04	147	P	P	21 37 33.2	+1.3
WRA	Warramunga Arr	40.05	197	P	P	21 37 33.0	+1.0
	comp=Z,94nm,0.6s,baz=360,slow=8.8,SNR=271						
WRA				PcP	PcP	21 39 32.8	+0.5
	comp=Z,15nm,0.6s,baz=19,slow=3.5,SNR=8.6						
WRA				ScP	ScP	21 42 59.1	-0.7
	comp=Z,4.0nm,0.7s,baz=26,slow=3.8,SNR=7.7						
WRA				S	S	21 43 20.1	-0.9
	comp=Z,1.9nm,1.0s,baz=18,slow=15,SNR=4.1						
WRA	Warramunga Arr	40.05	197	P	P	21 37 31.7	-0.3
WRA					PcP	21 39 31.9	-0.4
WRA					ScP	21 42 57.6	-2.3
KHKI	Kahang-Kahang	40.10	230	P	P	21 37 33.9	+1.4
KMI	Kunming	40.23	287	⇑P	P	21 37 34.9	+1.1
KMI				S	S	21 43 22.8	-1.4
KMI				pmax	pmax		
	comp=Z,16nm,0.9s						
KMMI	Kalianget	40.47	234	P	P	21 37 38.0	+2.5
	comp=Z,97nm,1.1s						
DNP	Denpasar	40.60	230	P	P	21 37 37.3	+0.7
LZH	Lanzhou	40.63	304	*e*P	P	21 37 37.6	+0.8
LZH				PcP	PcP	21 39 35.1	+0.9
LZH				pmax	pmax		
	comp=Z,28nm,1.0s						
RTBI	Rangdo, Negare	40.66	231	P	P	21 37 38.0	+0.9
	comp=Z,3µmcomp=Z,260nm,1.0s						
LZDM	Lanzhou Array	40.71	304	P	P	21 37 38.4	+0.7
	comp=Z,19nm,0.6s,baz=142,slow=7.5,SNR=25						
LZDM				pP	pP	21 38 23.3	-0.3
	comp=Z,7.0nm,0.5s,baz=134,slow=6.4,SNR=1.7						
	comp=Z,19nm,0.6s						
IGBI	Denpasar	40.74	230	P	P	21 37 37.8	0.0
	comp=Z,3µmcomp=Z,248nm,1.2s						
ABJI	Asem Bagus	40.75	232	P	P	21 37 39.0	+1.2
	comp=Z,67nm,1.7s						
PZH	PanZhiHua	41.15	289	P	P	21 37 41.8	+0.6
PZH				S	S	21 43 34.5	-3.1
PZH				pmax	pmax		
	comp=Z,30nm,0.7s						
BLJI	Banyuglugur	41.20	233	P	P	21 37 41.4	-0.1
	comp=Z,3µmcomp=Z,177nm,1.1s						
JAGI	Jajag, Banyuwa	41.25	232	P	P	21 37 40.5	-1.4
JAGI	Jajag, Banyuwa	41.25	232	P	P	21 37 41.5	-0.4
JAGI	Jajag, Banyuwa	41.25	232	P	P	21 37 41.5	-0.4
	comp=Z,107nm,1.1s						
FITZ	Fitzroy Crossi	41.60	209	P	P	21 37 45.1	+0.4
FITZ	Fitzroy Crossi	41.60	209	P	P	21 37 45.5	+0.8
GMJI	Gumukmas	41.65	233	P	P	21 37 46.0	+0.9
	comp=Z,64nm,1.1s						
AUNRC	North Rockhamp	42.12	173	P	P	21 37 48.8	+0.1
SJI	Sawahan	42.59	235	P	P	21 37 53.8	+0.9
NGJI	Ngawi	42.60	236	P	P	21 37 55.1	+2.3
	comp=Z,78nm,1.6s						
SNJI	Sawahan-Nganju	42.62	235	P	P	21 37 53.7	+0.5
	comp=Z,3µmcomp=Z,150nm,0.5s						
ULN	Ulaanbaatar	42.73	322	P	P	21 37 53.6	-0.1
ULN	Ulaanbaatar	42.73	322	P	P	21 37 53.1	-0.5
ULN	Ulaanbaatar	42.73	322	P	P	21 37 52.4	-1.3
ULN	Ulaanbaatar	42.73	322	P	P	21 37 53.5	-0.1
ULN				pP	pP	21 38 40.7	+0.6
ULN				sP	sP	21 39 04.6	-0.5
ULN				PcP	PcP	21 39 41.3	+0.4
KOUNC	Koumac, New Ca	43.10	154	P	P	21 37 58.8	+2.1
SONM	Songino Array	43.10	321	P	P	21 37 56.2	-0.5
	comp=Z,4.9nm,0.6s,baz=138,slow=9.1,SNR=48						
SONM				pP	pP	21 38 43.7	+0.6
	comp=Z,3.2nm,0.5s,baz=134,slow=7.2,SNR=2.2						
SONM				PcP	PcP	21 39 42.7	+0.6
	comp=Z,6.2nm,0.9s,baz=115,slow=5.1,SNR=2.6						
SONM				ScP	ScP	21 43 09.4	-2.4
	comp=Z,3.0nm,0.9s,baz=131,slow=3.7,SNR=8.4						
	comp=Z,4.9nm,0.6s						
SONM	Songino Array	43.10	321	P	P	21 37 55.8	-0.8
SONM					pP	21 38 41.6	-1.6
SONM					PP	21 39 41.6	0.0
SONM					ScP	21 43 09.1	-2.8
TPI	Tanjungpandan	43.12	244	P	P	21 37 57.5	+0.5
	comp=Z,1µmcomp=Z,74nm,1.1s						
SMRI	Semarang	43.21	237	P	P	21 37 58.4	+0.6
	comp=Z,123nm,1.2s						
PCJI	Pacitan	43.33	235	P	P	21 37 58.1	-0.6
	comp=Z,3µmcomp=Z,231nm,0.8s						
UGM	Wanagama	43.67	236	P	P	21 38 01.4	0.0
UGM	Wanagama	43.67	236	P	P	21 38 01.8	+0.4
UGM	Wanagama	43.67	236	P	P	21 38 01.3	-0.1
	comp=Z,179nm,1.2s						
AS31	Alice Springs	43.72	196	P	P	21 38 02.3	+0.7
AS31				IAmb	IAmb	21 38 04.3	
	comp=Z,17nm,0.5s						
ASAR	Alice Springs	43.72	196	P	P	21 38 02.4	+0.8
	comp=Z,22nm,0.5s,baz=9.9,slow=7.4,SNR=343						
ASAR				PcP	PcP	21 39 45.1	+0.7
	comp=Z,9.7nm,0.6s,baz=24,slow=2.9,SNR=9.7						
ASAR				ScP	ScP	21 43 13.9	-0.5
	comp=Z,1.9nm,0.7s,baz=20,slow=4.2,SNR=4.8						
ASAR				S	S	21 44 14.6	0.0
	comp=Z,2.6nm,0.9s,baz=17,slow=16,SNR=7.8						
	comp=Z,22nm,0.5s						
ASAR	Alice Springs	43.72	196	P	P	21 38 01.6	0.0
ASAR					PcP	21 39 44.6	+0.2
ASAR					ScP	21 43 13.1	-1.4
ASAR					S	21 44 14.4	-0.2
YOGI	Yogyakarta	43.79	236	P	P	21 38 01.3	-1.1

TNCH	TengChong	44.06	287	⇑P	P	21 38 05.1	+0.4
TNCH				PcP	PcP	21 39 46.6	+0.7
TNCH				S	S	21 44 21.5	+1.3
TNCH				pmax	pmax		
	comp=Z,31nm,0.8s						
TNCH				pmax	pmax		
	comp=Z,170nm,3.9s						
TNCH				LR	LR		
	comp=Z,200nm,5.0s						
TNCH				LR	LR		
	comp=Z,230nm,6.5s						
TNCH				LR	LR		
	comp=Z,150nm,5.8s						
TPRI	Tanjung Pinang	44.11	251	P	P	21 38 06.5	+1.6
	comp=Z,73nm,1.0s						
EIDS	Eidsvold	44.17	173	P	P	21 38 05.3	+0.1
EIDS	Eidsvold	44.17	173	P	P	21 38 05.5	+0.3
CHTO	Chiang Mai	44.18	278	P	P	21 38 06.2	+0.7
CHTO	Chiang Mai	44.18	278	P	P	21 38 05.5	+0.1
CHTO	Chiang Mai	44.18	278	P	P	21 38 05.9	+0.5
CHTO	Chiang Mai	44.18	278	P	P	21 38 06.1	+0.7
CHTO	Chiang Mai	44.18	278	P	P	21 38 05.3	-0.1
CHTO				PcP	PcP	21 39 46.5	+0.3
CTJI	Waduk Cacaban	44.19	238	P	P	21 38 05.1	-0.4
	comp=Z,89nm,1.0s						
CM31	Chiang Mai Arr	44.23	277	P	P	21 38 06.6	+0.7
	SNR=12						
CM31	Chiang Mai Arr	44.23	277	P	P	21 38 07.1	+1.3
CM31				IAmb	IAmb	21 38 08.1	
	comp=Z,30nm,1.1s						
CMAR	Chiang Mai Arr	44.23	277	P	P	21 38 06.8	+1.0
	comp=Z,13nm,0.8s,baz=68,slow=6.8,SNR=99						
CMAR				pP	pP	21 38 53.0	+0.5
	comp=Z,20nm,1.1s,baz=66,slow=7.0,SNR=6.0						
CMAR				PcP	PcP	21 39 47.6	+1.2
	comp=Z,11nm,0.9s,baz=96,slow=2.9,SNR=13						
	comp=Z,13nm,0.8s						
CMAR	Chiang Mai Arr	44.23	277	P	P	21 38 06.5	+0.7
CMAR					PcP	21 39 46.9	+0.5
MYKOM	Kota Tinggi	44.34	253	P	P	21 38 07.0	+0.3
MYKOM	Kota Tinggi	44.34	253	P	P	21 38 08.4	+1.7
MYKOM	Kota Tinggi	44.34	253	P	P	21 38 07.6	+0.9
	comp=Z,1μmcomp=Z,146nm,1.1s						
GTA	Gaotai	44.52	307	P	P	21 38 09.4	+1.4
GTA				PcP	PcP	21 39 48.8	+1.6
GTA				ScP	ScP	21 43 16.5	-1.3
GTA				S	S	21 44 26.8	+0.5
GTA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
INH	Isangel	44.54	147	P	P	21 38 10.0	+1.9
KPJI	Karang Pucung	44.59	238	P	P	21 38 08.2	-0.4
	comp=Z,164nm,1.1s						
YAK	Yakutsk	44.66	349	P	P	21 38 08.7	+0.2
YAK	Yakutsk	44.66	349	P	P	21 38 08.5	0.0
QLP	Quilpie	45.09	182	P	P	21 38 12.2	-0.2
DZM	Mont Dzumac	45.37	153	P	P	21 38 16.4	+1.7
DZM	Mont Dzumac	45.37	153	P	P	21 38 17.1	+2.4
DZM	Mont Dzumac	45.37	153	P	P	21 38 16.8	+2.1
DZM				PcP	PcP	21 39 52.3	+2.1
YATNC	Mamie plateau,	45.55	152	P	P	21 38 18.4	+2.3
ONTNC	Ouen Toro	45.58	153	P	P	21 38 16.9	+0.7
ONTNC	Ouen Toro	45.58	153	P	P	21 38 18.9	+2.6
BBJI	Bungbulang	45.69	239	P	P	21 38 15.8	-1.6
BBJI	Bungbulang	45.69	239	P	P	21 38 15.8	-1.6
OUENC	Ouen Island, N	45.84	152	P	P	21 38 21.0	+2.7
IPM	Ipoh	45.86	258	P	P	21 38 18.7	-0.1
IPM				IAmb	IAmb	21 38 21.3	
	comp=Z,52nm,0.9s						
IPM	Ipoh	45.86	258	P	P	21 38 20.3	+1.6
IPM	Ipoh	45.86	258	P	P	21 38 20.3	+1.6
	comp=Z,70nm,1.1s						
DBJI	Dramaga	45.91	240	P	P	21 38 18.8	-0.3
	comp=Z,3μmcomp=Z,72nm,1.4s						
KULM	Kulim	45.92	259	P	P	21 38 20.0	+0.8
KULM				IAmb	IAmb	21 38 22.0	
	comp=Z,65nm,1.0s						
KULM	Kulim	45.92	259	P	P	21 38 21.0	+1.8
KULM	Kulim	45.92	259	P	P	21 38 21.0	+1.8
	comp=Z,84nm,1.0s						
JMBI	JAMBI	46.05	248	P	P	21 38 22.5	+2.3
SBJI	Serang	46.19	241	P	P	21 38 21.5	+0.3
	comp=Z,215nm,1.3s						
PINNC	Pines Island,	46.28	152	P	P	21 38 23.4	+1.6
PINNC	Pines Island,	46.28	152	P	P	21 38 23.7	+2.0
TW1H	Toowoomba 1 Ha	46.43	172	P	P	21 38 24.0	+1.1
INKA	Innaminka	46.48	186	P	P	21 38 22.8	-0.4
BLSI	Bandar Lampung	46.53	243	P	P	21 38 24.1	+0.2
KLI	Kotabumi	46.59	244	P	P	21 38 23.4	-1.0
	comp=Z,3μmcomp=Z,102nm,0.4s						
KLSI		46.61	244	P	P	21 38 23.4	-1.1
	comp=Z,1μmcomp=Z,87nm,0.8s						
MDSI	Maura Dua	46.98	245	P	P	21 38 25.6	-1.8
	comp=Z,35nm,1.0s						
MBWA	Marble Bar	47.13	214	P	P	21 38 29.4	+1.0
MBWA	Marble Bar	47.13	214	P	P	21 38 28.9	+0.6
MBWA	Marble Bar	47.13	214	P	P	21 38 29.2	+0.8
MBWA	Marble Bar	47.13	214	P	P	21 38 29.4	+1.0
MBWA				PcP	PcP	21 39 57.1	+0.7
KASI	Kota Agung	47.24	243	P	P	21 38 27.7	-1.7
	comp=Z,2μmcomp=Z,106nm,1.2s						
LWLI	Liwa	47.35	244	P	P	21 38 29.4	-1.0
	comp=Z,2μmcomp=Z,111nm,0.8s						
PSA00	Pilbara Seismi	47.41	213	P	P	21 38 30.3	-0.2
PSA00				IAmb	IAmb	21 38 33.6	
	comp=Z,84nm,1.1s						
PSA00	Pilbara Seismi	47.41	213	P	P	21 38 30.5	0.0
PSA00				IAmb	IAmb	21 38 34.0	
	comp=Z,40nm,0.8s						
PSA00				PcP	PcP	21 39 56.6	-0.7
PSA00	Pilbara Seismi	47.41	213	P	P	21 38 31.8	+1.3
GOMU	GeErMu	47.83	302	P	P	21 38 36.1	+2.0
GOMU				pmax	pmax		
	comp=Z,44nm,0.7s						
KSI	Kapahiang	47.94	247	P	P	21 38 34.1	-0.7
	comp=Z,192nm,0.8s						
AULRC	Lightning Ridg	47.96	177	P	P	21 38 34.5	-0.1
MNAI	Manna	47.97	246	P	P	21 38 32.5	-2.5
	comp=Z,180nm,1.2s						
MASI	Maura Aman, Be	48.00	248	P	P	21 38 34.6	-0.7
	comp=Z,146nm,1.1s						
KRJI	Kerinci	48.19	249	P	P	21 38 35.7	-1.1
	comp=Z,136nm,1.1s						
MSVF	Nonsavu	48.22	137	P	P	21 38 38.0	+1.1
MSVF				IAmb	IAmb	21 38 41.7	
	comp=Z,51nm,1.1s						
MSVF	Nonsavu	48.22	137	P	P	21 38 39.8	+2.9
UBSI	University, Be	48.27	247	P	P	21 38 35.7	-1.6
	comp=Z,239nm,1.1s						
PPI	Padang Panjang	48.42	252	P	P	21 38 37.4	-1.0
PSI	Prapat	48.43	257	P	P	21 38 39.0	+0.3
PDSI	Padang	48.56	251	P	P	21 38 38.7	-0.8
MNSI	Mandailing Nat	48.63	254	P	P	21 38 41.1	+1.1
	comp=Z,117nm,1.1s						
KCSI	Kotacane, Aceh	49.23	258	P	P	21 38 43.7	-0.9
LHMI	Lhok Sumawe	49.39	261	P	P	21 38 46.2	+0.4
LHMI	Lhok Sumawe	49.39	261	P	P	21 38 48.0	+2.2
LHMI	Lhok Sumawe	49.39	261	P	P	21 38 44.8	-1.0
	comp=Z,91nm,0.8s						
AUPHS	Peel High Scho	49.82	174	P	P	21 38 49.6	+0.9
SISI	Saibi	49.97	252	P	P	21 38 48.7	-1.5
	comp=Z,962nmcomp=Z,98nm,0.9s						
CMSA	Cobar Meteorol	50.01	180	P	P	21 38 50.5	+0.4
SHL	Shillong	50.04	288	P	P	21 38 50.7	-0.1
	SNR=7.1						
SHL	Shillong	50.04	288	P	P	21 38 50.0	-0.8
SHL				IAmb	IAmb	21 38 52.1	
	comp=Z,25nm,0.9s						
GSI	Gunungsitoli	50.26	256	P	P	21 38 52.5	+0.2
GSI	Gunungsitoli	50.26	256	P	P	21 38 52.8	+0.5
GSI	Gunungsitoli	50.26	256	P	P	21 38 53.0	+0.7
	comp=Z,2μmcomp=Z,135nm,0.9s						
STKA	Stephens Creek	50.50	185	P	P	21 38 54.1	+0.4
	comp=Z,14nm,0.5s,baz=0.6,slow=7.9,SNR=62						
	comp=Z,14nm,0.5s						
STKA	Stephens Creek	50.50	185	P	P	21 38 53.7	-0.1
STKA	Stephens Creek	50.50	185	P	P	21 38 54.0	+0.2
LSA	Lhasa	50.54	293	P	P	21 38 56.2	+1.4
LSA	Lhasa	50.54	293	P	P	21 38 56.2	+1.4
LSA				IAmb	IAmb	21 38 58.0	
	comp=Z,27nm,0.6s						
LSA	Lhasa	50.54	293	P	P	21 38 56.4	+1.6
LSA	Lhasa	50.54	293	P	P	21 38 55.9	+1.1
AUDCS	Dubbo College	50.78	177	P	P	21 38 56.2	+0.4
BILL	Bilibino	50.96	10	P	P	21 38 58.7	+2.0
BILL				pP	pP	21 39 46.4	+1.5
WHYH	Whyalla	52.09	189	P	P	21 39 06.5	+1.0
FORT	Forrest	52.10	199	P	P	21 39 05.9	+0.3
BBOO	Buckleboo	52.10	190	P	P	21 39 05.5	-0.1
BBOO				IAmb	IAmb	21 39 10.7	
	comp=Z,37nm,1.2s						
BBOO	Buckleboo	52.10	190	P	P	21 39 05.8	+0.2
MEEK	Meekatharra	52.24	211	P	P	21 39 07.1	+0.3
HTT	Hallett	52.30	187	P	P	21 39 08.1	+1.0
DHH	Diamond Head	52.90	77	P	P	21 39 11.1	-0.7
TIXI	Tiksi	53.81	353	P	P	21 39 17.5	-0.1
AUDAR	Daramalan Coll	53.81	177	P	P	21 39 19.3	+1.2
AUMTS	Mt Stromlo	53.87	177	P	P	21 39 20.1	+1.6
CAN	Canberra	53.87	177	P	P	21 39 19.6	+1.0
CAN				IAmb	IAmb	21 39 22.6	
	comp=Z,21nm,0.9s						
CAN	Canberra	53.87	177	P	P	21 39 19.8	+1.2
CNB	Canberra Magne	53.89	176	P	P	21 39 19.7	+1.0
AUMHS	Melrose High S	53.92	177	P	P	21 39 20.3	+1.4
WMQ	Urumqi	54.28	311	*e*P	P	21 39 22.0	+0.4
WMQ				pP	pwP	21 40 13.8	-1.1
WMQ				S	S	21 46 41.8	+0.3
WMQ				pmax	pmax		
	comp=Z,20nm,1.7s						
WMQ	Urumqi	54.28	311	P	P	21 39 22.1	+0.6
WMQ				PcP	PcP	21 40 22.4	-0.3
K13K	Kusilvak Mount	55.11	26	P	P	21 39 29.4	+2.3
MORW	Morawa	55.52	212	P	P	21 39 30.8	+0.4
MORW	Morawa	55.52	212	P	P	21 39 31.0	+0.6
MILA	Mila	55.61	177	P	P	21 39 31.8	+0.8
TOO	Toolangi	56.03	180	P	P	21 39 34.6	+0.7
BRAT	Ballarat	56.03	182	P	P	21 39 35.0	+1.2
AUMTC	Mt Clear Colle	56.09	182	P	P	21 39 35.7	+1.4
BLDU	Ballidu	56.47	210	P	P	21 39 37.5	+0.4
ZSN	Zaisan	56.77	315	*e*P	P	21 39 38.5	-0.6
KLBR	Kellerberrin	56.80	209	P	P	21 39 39.8	+0.4
MUN	Mundaring	57.84	210	P	P	21 39 47.7	+1.0
ZAA0	Zalesovo Array	57.98	322	P	P	21 39 46.8	-0.5
ZAA0				IAmb	IAmb	21 40 41.8	
	comp=Z,14nm,0.9s						
ZALV	Zalesovo Beam	57.98	322	P	P	21 39 46.5	-0.8
	comp=Z,12nm,0.6s,baz=105,slow=7.2,SNR=58						
ZALV				pP	pP	21 40 34.0	-2.8
	comp=Z,10nm,0.8s,baz=100,slow=6.6,SNR=4.1						
ZALV				ScP	ScP	21 44 13.1	-2.2
	comp=Z,2.3nm,0.8s,baz=125,slow=7.4,SNR=3.7						
ZALV				S	S	21 47 29.7	+0.1
	comp=Z,0.8nm,0.8s,baz=68,slow=13,SNR=4.0						
ZALV				PKPPKP	P'P'df	22 09 24.9	-5.1
	comp=Z,0.5nm,0.7s,baz=336,slow=3.2,SNR=4.0						
	comp=Z,12nm,0.6s						
ZALV	Zalesovo Beam	57.98	322	P	P	21 39 45.9	-1.5
ZALV					pP	21 40 34.8	-2.0
ZALV					ScP	21 44 11.9	-3.3
ZALV					S	21 47 26.7	-2.9
MTKN	Mount Kenneth	58.01	210	P	P	21 39 49.0	+1.2
C16K	Lisburne Hills	58.10	19	P	P	21 39 49.4	+1.4
C16K				IAmb	IAmb	21 40 40.4	
	comp=Z,14nm,0.8s						
NWAO	Narrogin (SRO)	58.16	208	P	P	21 39 50.0	+1.1
NWAO	Narrogin (SRO)	58.16	208	P	P	21 39 48.9	0.0
NWAO	Narrogin (SRO)	58.16	208	P	P	21 39 50.1	+1.2
NWAO	Narrogin (SRO)	58.16	208	P	P	21 39 50.0	+1.1
NWAO	Narrogin (SRO)	58.16	208	P	P	21 39 49.9	+0.9
NWAO				PcP	pP	21 40 39.1	+0.7
H17K	Granite Mounta	58.38	24	P	P	21 39 51.5	+1.5
MKAR	Makanchi Array	58.43	314	P	P	21 39 50.8	0.0
	comp=Z,16nm,0.5s,baz=90,slow=8.8,SNR=159						
MKAR				pP	PcP	21 40 39.0	+0.1
	comp=Z,7.1nm,0.7s,baz=85,slow=5.7,SNR=4.4						
MKAR				ScP	ScP	21 44 15.0	-2.5
	comp=Z,3.4nm,0.9s,baz=91,slow=5.8,SNR=5.1						
MKAR				S	S	21 47 36.1	+0.2
	comp=Z,0.3nm,0.6s,baz=87,slow=12,SNR=2.6						
MKAR				SKKP	SKKPdf	22 04 18.1	+1.3
	comp=Z,0.4nm,0.7s,baz=286,slow=7.0,SNR=4.8						
	comp=Z,16nm,0.5s						
MKAR	Makanchi Array	58.43	314	P	P	21 39 50.4	-0.3
MKAR					PcP	21 40 38.7	-0.1
MKAR					ScP	21 44 15.4	-2.1
MKAR					S	21 47 35.7	-0.2
F17K	Baldwin Pennin	58.55	22	P	P	21 39 53.3	+2.2
F17K				IAmb	IAmb	21 40 04.0	
	comp=Z,57nm,1.7s						
MAKZ	Makanchi	58.65	314	P	P	21 39 52.0	-0.2
MAKZ	Makanchi	58.65	314	P	P	21 39 52.2	0.0
MAKZ				pP	pP	21 40 41.5	-0.2
RDOG	Red Dog Mine	58.76	20	P	P	21 39 54.1	+1.6
RDOG				IAmb	IAmb	21 40 42.5	
	comp=Z,18nm,1.1s						
AUHAR	St Anne's Scho	58.91	209	P	P	21 39 56.2	+2.2
H18K	Honhosa River	59.06	24	P	P	21 39 56.4	+1.7
H18K				IAmb	IAmb	21 41 28.7	
	comp=Z,34nm,1.6s						
E18K	Tukpahlearik C	59.23	21	P	P	21 39 57.2	+1.5
G18K	Tagagawik	59.26	23	P	P	21 39 57.7	+1.7
G18K				IAmb	IAmb	21 41 29.6	
	comp=Z,38nm,1.7s						
C18K	Utukok River	59.61	20	P	P	21 39 59.3	+0.9
OUZ	Omahuta	59.85	154	P	P	21 40 03.0	+2.6
G19K	Purcell Mounta	59.95	23	P	P	21 40 02.9	+2.2
H19K	Roundabout Mou	59.95	24	P	P	21 40 02.2	+1.5
SHLS	Shalkode	60.19	309	*e*P	P	21 40 00.2	-2.7
	comp=Z,12nm,0.8s						
WUS	Wushi	60.34	307	P	P	21 40 03.4	-0.6
C19K	Lookout Ridge	60.34	20	P	P	21 40 04.1	+0.7
C19K				IAmb	IAmb	21 40 56.6	
	comp=Z,16nm,0.9s						
J20K	Nowinta River	60.40	26	P	P	21 40 05.6	+1.9
J20K				IAmb	IAmb	21 40 56.6	
	comp=Z,39nm,1.4s						
E19K	Redstone River	60.42	22	P	P	21 40 06.0	+2.1
UZB	Uzynbulak	60.51	309	*e*P	P	21 40 04.3	-0.9
D19K	Kuna River	60.55	21	P	P	21 40 06.7	+1.9
F20K	Avaraart Lake	60.80	23	P	P	21 40 08.4	+2.1
PRZ	Przheval'sk	60.96	309	P	P	21 40 09.8	+1.6
SATY	Saty	60.96	309	*e*P	P	21 40 07.3	-0.9
	comp=Z,23nm,1.3s						
TDK	Taldyqorghan	61.01	312	*e*P	P	21 40 07.6	-0.7
	comp=Z,18nm,0.7s						
D20K	Etivluk River	61.14	21	P	P	21 40 10.6	+1.8
D20K				IAmb	IAmb	21 41 02.4	
	comp=Z,27nm,1.0s						
KURK	Kurchatov	61.24	318	P	P	21 40 09.1	-0.6
KURK	Kurchatov	61.24	318	P	P	21 40 09.3	-0.3
KURK				IAmb	IAmb	21 40 10.8	
	comp=Z,33nm,0.9s						
KURK					pP	21 40 59.0	-0.6
KURK	Kurchatov	61.24	318	P	P	21 40 09.1	-0.6
KURBB	Kurchatov Arra	61.28	318	P	P	21 40 09.3	-0.7
	comp=Z,42nm,0.8s,baz=94,slow=7.4,SNR=267						
KURBB				pP	pP	21 40 57.9	-2.0
	comp=Z,10nm,0.8s,baz=97,slow=6.6,SNR=2.6						
KURBB				S	S	21 48 09.0	-2.9
	comp=Z,2.3nm,1.0s,baz=95,slow=10,SNR=6.3						
KURBB				PKPPKP	P'P'df	22 09 19.4	-5.3
	comp=Z,0.8nm,0.8s,baz=281,slow=3.3,SNR=6.6						
	comp=Z,42nm,0.8s						
O22K	Cooper Landing	61.36	31	P	P	21 40 10.9	+0.7
L22K	Petersville	61.37	28	P	P	21 40 11.7	+1.3
H21K	Melozitna Rive	61.41	25	P	P	21 40 12.8	+2.2
H21K				IAmb	IAmb	21 40 22.4	
	comp=Z,21nm,1.4s						
RC01	Rabbit Creek A	61.49	30	P	P	21 40 12.3	+1.2
NRIK	Noril'sk	61.56	340	P	P	21 40 11.3	-0.1
	comp=Z,31nm,0.8s,baz=106,slow=7.2,SNR=59						
	comp=Z,31nm,0.8s						
NRIK	Noril'sk	61.56	340	P	P	21 40 11.4	-0.1
I21K	Tanana	61.59	25	P	P	21 40 14.2	+2.4
I21K				IAmb	IAmb	21 40 29.5	
	comp=Z,46nm,1.8s						
TRF	Thorofare Moun	61.82	27	P	P	21 40 14.8	+1.2
TRF				IAmb	IAmb	21 41 03.8	
	comp=Z,14nm,0.8s						
WIAZ	Waiheke Island	61.84	153	P	P	21 40 16.3	+2.5
PMR	Palmer	61.89	29	P	P	21 40 14.6	+0.8
PMR				IAmb	IAmb	21 40 54.2	
	comp=Z,13nm,0.8s						
E21K	Killik River	61.93	21	P	P	21 40 15.6	+1.5
E21K				IAmb	IAmb	21 40 55.5	
	comp=Z,15nm,0.9s						
MDOK	Medeo	61.96	309	*e*P	P	21 40 14.1	-0.8
CHKK	Chushkaly	62.01	310	*e*P	P	21 40 14.3	-0.7
GHO	Glory Hole Cre	62.03	29	P	P	21 40 15.3	+0.5
GHO				IAmb	IAmb	21 40 55.6	
	comp=Z,18nm,0.9s						
TNSS	Tian-Shan	62.03	309	*e*P	P	21 40 14.6	-1.0
MLY	Manley	62.05	25	P	P	21 40 16.8	+1.9
MLY				IAmb	IAmb	21 41 09.2	
	comp=Z,32nm,1.6s						
AAA	Alma-Ata	62.06	309	*e*P	P	21 40 14.7	-0.7
	comp=Z,15nm,0.9s						
PWL	Port Wells	62.11	30	P	P	21 40 16.6	+1.3
PWL				IAmb	IAmb	21 41 37.1	
	comp=Z,36nm,1.1s						
B21K	Ikpikpuk River	62.16	20	P	P	21 40 15.8	+0.4
B21K				IAmb	IAmb	21 40 56.2	
	comp=Z,13nm,0.8s						
KNK	Knik Glacier	62.17	30	P	P	21 40 17.2	+1.5
SML	Sawmill	62.31	29	P	P	21 40 17.3	+0.6
RND	Reindeer	62.43	28	P	P	21 40 18.8	+1.3
RND				IAmb	IAmb	21 40 56.7	
	comp=Z,17nm,0.9s						
D22K	Ayikyak River	62.53	21	P	P	21 40 19.9	+1.9
D22K				IAmb	IAmb	21 41 13.2	
	comp=Z,16nm,0.7s						
E22K	Anaktuvuk Pass	62.58	22	P	P	21 40 20.2	+1.8
E22K				IAmb	IAmb	21 40 58.0	
	comp=Z,13nm,0.9s						
I23K	Minto, Yukon-K	62.65	26	P	P	21 40 20.3	+1.5
H23K	Yukon River	62.75	25	P	P	21 40 21.2	+1.7
BOOM	Boomskoye usch	62.78	309	P	P	21 40 20.0	-0.3
SCM	Sheep Creek Mo	62.78	29	P	P	21 40 21.4	+1.5
TOZ	Tahuroa Road	62.79	154	P	P	21 40 21.8	+1.8
B22K	Teshekpuk Lake	62.81	19	P	P	21 40 21.0	+1.2
B22K				IAmb	IAmb	21 41 12.8	
	comp=Z,21nm,1.3s						
G23K	Bananza Creek	62.81	24	P	P	21 40 21.8	+1.9
KSH	Kashi	62.85	305	P	P	21 40 23.6	+2.9
KSH				pmax	pmax		
	comp=Z,21nm,1.0s						
TKM2	Tokmak 2	63.02	309	P	P	21 40 22.5	+0.5
	SNR=19						
CCB	Clear Creek Bu	63.17	26	P	P	21 40 23.2	+1.0
CCB				PcP	PcP	21 40 58.2	+0.7
CCB				IAmb	IAmb	21 40 58.8	
	comp=Z,15nm,0.8s						
COLA	College	63.20	26	P	P	21 40 25.2	+2.8
D23K	Nanushuk River	63.24	21	IAmb	IAmb	21 41 45.3	
	comp=Z,19nm,1.2s						
E23K	Chandalar	63.34	22	IAmb	IAmb	21 41 21.8	
	comp=Z,13nm,0.8s						
KLU	Klutina	63.38	30	IAmb	IAmb	21 41 15.5	
	comp=Z,18nm,1.0s						
HDA	Harding Lake	63.48	27	IAmb	IAmb	21 41 38.5	
	comp=Z,9.8nm,0.6s						
KBK	Karagaybulak	63.51	309	P	P	21 40 25.5	+0.4
	SNR=16						
C23K	Itkillik River	63.54	20	IAmb	IAmb	21 41 15.0	
	comp=Z,17nm,0.8s						
ILAR	Eielson Array	63.58	26	P	P	21 40 25.2	+0.3
	comp=Z,3.4nm,0.8s,baz=246,slow=5.3,SNR=40						
ILAR				pP	pP	21 41 13.0	-2.2
	comp=Z,5.9nm,0.8s,baz=256,slow=5.2,SNR=5.1						
	comp=Z,3.4nm,0.8s						
ILAR	Eielson Array	63.58	26	P	P	21 40 24.6	-0.3
CHMS	Chumysh	63.64	309	P	P	21 40 25.7	-0.1
	SNR=8.6						
TARZ	Mount Tarawera	63.64	153	P	P	21 40 28.2	+2.5
HAZ	Te Kaha	63.80	152	P	P	21 40 26.9	+0.3
USP	Ospenovka	63.82	310	P	P	21 40 26.9	0.0
	SNR=12						
F24K	Squaw Lake	63.83	23	IAmb	IAmb	21 41 03.5	
	comp=Z,16nm,0.7s						
AAK	Ala-Archa	63.84	309	P	P	21 40 27.5	+0.3
	SNR=8.6						
AAK	Ala-Archa	63.84	309	P	P	21 40 27.4	+0.1
AAK	Ala-Archa	63.84	309	P	P	21 40 27.1	-0.2
AAK				IAmb	IAmb	21 40 28.2	
	comp=Z,10nm,0.6s						
AAK	Ala-Archa	63.84	309	*i* P	P	21 40 27.4	+0.1
	SNR=11						
UCH	Uchtor	63.84	308	P	P	21 40 28.7	+1.0
	SNR=25						
PAX	Paxson	63.84	28	IAmb	IAmb	21 41 18.2	
	comp=Z,16nm,1.2s						
TWVZ	Taurewa	63.90	155	P	P	21 40 29.3	+1.8
URZ	Urewera	63.92	153	P	P	21 40 27.8	+0.3
RUGZ	Raukumara Rang	63.93	152	P	P	21 40 27.5	-0.2
KATZ	Kakaramea	63.93	154	P	P	21 40 29.8	+2.2
D24K	Happy Valley	63.94	21	IAmb	IAmb	21 41 22.9	
	comp=Z,18nm,0.8s						
WTVZ	West Tongariro	64.00	154	P	P	21 40 29.9	+1.8
PKGZ	Pakihiroa	64.02	152	P	P	21 40 28.4	+0.3
OTVZ	Oturere	64.08	154	P	P	21 40 30.3	+1.7
FWVZ	Far West T-bar	64.11	155	P	P	21 40 30.7	+1.7
MAVZ	Matarangi	64.12	155	P	P	21 40 30.7	+1.6
C24K	Franklin Bluff	64.14	21	IAmb	IAmb	21 41 33.3	
	comp=Z,23nm,1.3s						
TRVZ	Turoa	64.14	155	P	P	21 40 30.8	+1.6
WHVZ	Whangaehu Hut	64.15	155	P	P	21 40 30.9	+1.7
RTZ	Ruatahuna	64.16	153	P	P	21 40 28.9	-0.2
RTZ	Ruatahuna	64.16	153	P	P	21 40 29.8	+0.7
MWZ	Matawai	64.17	153	P	P	21 40 29.5	+0.4
MTVZ	Mangateitei	64.18	155	P	P	21 40 30.4	+1.1
WNVZ	Wahianoa	64.19	155	P	P	21 40 31.0	+1.7
TWGZ	Tauwhareparae	64.23	152	P	P	21 40 30.2	+0.7
PUZ	Puketiti	64.27	152	P	P	21 40 29.7	0.0
MTHZ	Maungataniwha	64.30	153	P	P	21 40 30.6	+0.6
QRZ	Quartz Range	64.31	158	P	P	21 40 31.0	+1.1
MOVZ	Moawhango	64.32	155	P	P	21 40 30.7	+0.6
EKS2	Erkin-Say	64.37	309	P	P	21 40 31.1	+0.4
	SNR=5.3						
BKZ	Black Stump Fm	64.42	154	P	P	21 40 30.9	+0.1
BKZ	Black Stump Fm	64.42	154	P	P	21 40 31.2	+0.4
BKZ	Black Stump Fm	64.42	154	P	P	21 40 31.2	+0.4
SNGZ	Shannon Statio	64.46	153	P	P	21 40 31.4	+0.5
NMHZ	Naumai	64.49	154	P	P	21 40 32.5	+1.2
RIGZ	Rimuhau	64.58	153	P	P	21 40 32.5	+0.7
CRQM	Cirque	64.61	31	IAmb	IAmb	21 41 23.9	
	comp=Z,20nm,0.9s						
KWHZ	Kaweka Forest	64.61	154	P	P	21 40 32.9	+1.0
TKNZ	Takaka Hill	64.65	157	P	P	21 40 32.8	+0.7
MCARA	McCarthy VSAT	64.74	30	IAmb	IAmb	21 41 28.2	
	comp=Z,16nm,0.8s						
KRHZ	Kereru	64.77	154	P	P	21 40 33.4	+0.4
DUWZ	D'Urville Isla	64.80	157	P	P	21 40 34.2	+1.1
KNZ	Kokohu	64.80	153	P	P	21 40 33.7	+0.6
L26K	Log Cabin Wild	64.81	28	IAmb	IAmb	21 41 35.1	
	comp=Z,36nm,1.7s						
D25K	Kavik River	64.82	21	IAmb	IAmb	21 41 27.3	
	comp=Z,13nm,0.8s						
DSZ	Denniston Nort	64.86	159	P	P	21 40 34.4	+0.9
MRNZ	Matariki Terra	64.89	158	P	P	21 40 34.3	+0.6
J26L	Joseph Creek	64.94	27	IAmb	IAmb	21 41 07.8	
	comp=Z,16nm,1.1s						
TSZ	Takapari Road	64.96	155	P	P	21 40 34.5	+0.4
NNZ	Nelson	64.96	157	P	P	21 40 34.5	+0.5
BRZS	Berezniki	65.00	317	*e*P	P	21 40 34.1	-0.3
BMAR	Burnt Mountain	65.05	24	P	P	21 40 37.0	+2.5
KIW	Kapiti Island	65.23	156	P	P	21 40 36.3	+0.5
THZ	Tophouse	65.27	158	P	P	21 40 36.3	+0.1
F26K	Sheenjek River	65.27	23	IAmb	IAmb	21 41 09.7	
	comp=Z,11nm,0.8s						
TCW	Tory Channel	65.29	157	P	P	21 40 37.0	+0.8
OGWZ	Otaki Gorge	65.29	156	P	P	21 40 37.0	+0.7
MRZ	Mangatainoka R	65.32	155	P	P	21 40 36.7	+0.3
TUWZ	Tuamarina	65.35	157	P	P	21 40 36.8	+0.2
TUWZ	Tuamarina	65.35	157	P	P	21 40 37.5	+0.9
PRWZ	Pori Road	65.38	155	P	P	21 40 37.7	+0.8
HOWZ	Holdsworth Sta	65.49	156	P	P	21 40 38.4	+0.8
CAW	Cannon Point	65.50	156	P	P	21 40 38.2	+0.6
L27K	Beaver Creek,	65.50	29	IAmb	IAmb	21 41 10.4	
	comp=Z,12nm,0.8s						
NIL	Nilore	65.52	299	P	P	21 40 38.2	+0.2
NIL	Nilore	65.52	299	P	P	21 40 37.4	-0.6
BFZ	Birch Farm	65.60	155	P	P	21 40 38.0	-0.2
WVZ	Waitaha Valley	65.69	160	P	P	21 40 39.2	+0.4
TMWZ	Te Maipa	65.82	155	P	P	21 40 40.0	+0.3
MSWZ	Moikau Station	65.83	156	P	P	21 40 40.2	+0.4
LTZ	Lake Taylor	65.94	159	P	P	21 40 40.5	+0.1
TRWZ	Traveller	65.99	156	P	P	21 40 41.2	+0.5
JCZ	Jackson Bay	66.00	162	P	P	21 40 41.3	+0.5
H27K	Steamboat Moun	66.04	25	IAmb	IAmb	21 40 50.0	
	comp=Z,14nm,0.8s						
O28M	Mount Upton	66.05	31	IAmb	IAmb	21 41 33.7	
	comp=Z,18nm,0.9s						
KHZ	Kahutara	66.06	158	P	P	21 40 40.3	-0.8

DRK	Karamyk	66.07	306	IAmb	IAmb	21 40 43.1	
	comp=Z,14nm,0.8s						
DZA	Taraz	66.16	309	*e*P	P	21 40 41.4	-0.6
E27K	Coleen River	66.30	23	IAmb	IAmb	21 41 13.9	
	comp=Z,21nm,1.2s						
OXZ	Oxford	66.35	159	P	P	21 40 42.6	-0.3
MANEM	Manem	66.35	303	IAmb	IAmb	21 40 45.6	
	comp=Z,53nm,0.7s						
GVZ	Greta Valley S	66.37	158	P	P	21 40 43.3	+0.2
RPZ	Rata Peaks	66.37	160	P	P	21 40 42.8	-0.2
RPZ	Rata Peaks	66.37	160	P	P	21 40 42.9	-0.2
BVAR	Borovoye Array	66.44	320	P	P	21 40 43.4	-0.1
	comp=Z,54nm,0.6s,baz=95,slow=7.2,SNR=118						
BVAR				pP	pP	21 41 32.5	-1.8
	comp=Z,20nm,0.9s,baz=93,slow=7.4,SNR=2.7						
BVAR				S	S	21 49 13.3	-2.0
	comp=Z,3.5nm,1.0s,baz=81,slow=8.9,SNR=11						
BVAR				PKPPKP	P'P'df	22 09 11.3	-5.0
	comp=Z,1.1nm,0.9s,baz=338,slow=3.5,SNR=4.3						
	comp=Z,54nm,0.6s						
BORK	Borovoye	66.48	320	P	P	21 40 43.7	-0.1
BORK	Borovoye	66.48	320	P	P	21 40 43.5	-0.3
BORK				PcP	PcP	21 41 11.3	-0.2
I28M	Miner Creek	66.59	26	IAmb	IAmb	21 41 14.8	
	comp=Z,12nm,0.9s						
ARCZ	Arundel	66.62	160	P	P	21 40 44.4	-0.3
D27M	Malcolm River	66.69	22	IAmb	IAmb	21 41 39.3	
	comp=Z,33nm,1.6s						
LBZ	Lake Benmore	66.70	161	P	P	21 40 45.0	-0.2
KKAR	Karatay Array	66.74	310	P	P	21 40 45.3	-0.4
O29M	Mount Kennedy	66.81	32	IAmb	IAmb	21 41 39.0	
	comp=Z,19nm,0.9s						
DCZ	Deep Cove	66.82	164	P	P	21 40 45.9	+0.1
MQZ	McQueen's Vall	66.89	159	P	P	21 40 47.2	+0.9
TMZ	Timaru	66.96	161	P	P	21 40 46.5	-0.2
M29M	Somme Creek	66.99	29	IAmb	IAmb	21 41 39.6	
	comp=Z,14nm,0.8s						
MLZ	Mavora Lakes	67.00	163	P	P	21 40 47.0	0.0
E28M	Babbage River	67.12	23	IAmb	IAmb	21 41 42.6	
	comp=Z,27nm,1.5s						
IUG	Iuzhnay	67.17	309	*e*P	P	21 40 47.9	-0.6
	comp=Z,27nm,1.5s						
L29M	L29M	67.18	29	IAmb	IAmb	21 41 39.5	
	comp=Z,20nm,1.1s						
HYT	Haines Junctio	67.37	31	IAmb	IAmb	21 41 42.4	
	comp=Z,18nm,0.9s						
ODZ	Otahua Downs	67.44	161	P	P	21 40 50.2	+0.4
CHM	Chimkent	67.47	309	*e*P	P	21 40 49.9	-0.4
	comp=Z,12nm,0.7s						
K29M	Barlow Dome	67.50	28	IAmb	IAmb	21 41 18.9	
	comp=Z,14nm,1.0s						
G29M	Pine Creek	67.51	24	IAmb	IAmb	21 41 48.4	
	comp=Z,21nm,1.2s						
I30M	Mount Dempster	68.06	26	IAmb	IAmb	21 42 28.0	
	comp=Z,25nm,1.6s						
G30M	tAoh Zraii Nji	68.22	24	IAmb	IAmb	21 41 21.1	
	comp=Z,20nm,1.2s						
F30M	Barrier River	68.43	24	IAmb	IAmb	21 41 04.5	
	comp=Z,20nm,0.9s						
KBL	Kabul	68.86	301	P	P	21 40 58.6	-0.6
	SNR=14						
KBL	Kabul	68.86	301	P	P	21 40 59.1	-0.1
M31M	Drury Creek, Y	68.88	30	IAmb	IAmb	21 41 57.7	
	comp=Z,33nm,1.6s						
H31M	Peel River	68.93	26	IAmb	IAmb	21 41 51.5	
	comp=Z,26nm,1.2s						
G31M	Satah River	68.99	25	IAmb	IAmb	21 41 07.8	
	comp=Z,18nm,1.0s						
SHAA	Shahritus	69.15	304	IAmb	IAmb	21 41 02.6	
	comp=Z,52nm,0.6s						
WTLY	Watson Lake, Y	71.70	32	IAmb	IAmb	21 41 25.1	
	comp=Z,52nm,1.8s						
A36M	Sachs Harbour	72.02	19	IAmb	IAmb	21 41 25.3	
	comp=Z,16nm,0.8s						
C36M	Paulatuk	72.69	22	IAmb	IAmb	21 41 23.4	
	comp=Z,16nm,1.0s						
ARTI	Arti	73.13	325	P	P	21 41 23.7	-0.4
ARTI	Arti	73.13	325	P	P	21 41 23.3	-0.9
ABKAR	Akbulak array	73.31	317	P	P	21 41 24.4	-1.0
WRGLY	Wrigley	73.81	28	IAmb	IAmb	21 42 28.3	
	comp=Z,14nm,0.7s						
HRA	Herat	74.41	301	IAmb	IAmb	21 41 33.6	
	comp=Z,11nm,0.7s						
GNW	Green Mountain	77.36	44	IAmb	IAmb	21 41 58.7	
	comp=Z,18nm,0.9s						
YKA	Yellowknife Ar	77.93	28	P	P	21 41 52.6	+1.3
	comp=Z,4.9nm,0.7s,baz=292,slow=6.2,SNR=68						
YKA				pP	pP	21 42 42.3	-1.4
	comp=Z,0.8nm,0.5s,baz=188,slow=6.1,SNR=2.4						
YKA				S	S	21 51 22.0	-3.3
	comp=Z,0.6nm,1.0s,baz=283,slow=10,SNR=4.6						
	comp=Z,4.9nm,0.7s						
YKA	Yellowknife Ar	77.93	28	P	P	21 41 51.8	+0.5
ALE	Alert	78.05	4	P	P	21 41 52.9	+1.3
H04A	Detroit Lake	78.50	47	IAmb	IAmb	21 42 56.1	
	comp=Z,36nm,1.5s						
HOOD	Mount Hood Mea	78.70	46	IAmb	IAmb	21 42 02.6	
	comp=Z,16nm,1.0s						
WIFE	Three Sisters-	78.92	47	IAmb	IAmb	21 42 01.0	
	comp=Z,22nm,1.1s						
L04D	Klamath Falls	79.06	49	IAmb	IAmb	21 42 58.2	
	comp=Z,39nm,1.2s						
SPA0	Spitsbergen Ar	79.11	351	*e*P	P	21 41 57.9	+0.4
SPITS	Spitsbergen Ar	79.11	351	P	P	21 41 57.8	+0.3
	comp=Z,2.1nm,0.3s,baz=97,slow=6.8,SNR=20						
	comp=Z,2.1nm,0.3s						
KBS	Kingsbay	79.23	352	*i* P	P	21 41 58.2	+0.1
RES	Resolute Bay	79.36	14	IAmb	IAmb	21 42 01.0	
	comp=Z,11nm,0.8s						
NOR	Nord	79.43	357	*i* P	P	21 41 59.0	-0.2
NOR				IAmb	IAmb	21 42 00.1	
	comp=Z,5.0nm,0.7s						
M03C	McCloud	79.45	50	IAmb	IAmb	21 42 04.2	
	comp=Z,29nm,1.1s						
EPH	Ephrata	79.53	44	IAmb	IAmb	21 42 03.2	
	comp=Z,14nm,0.9s						
J05D	Fort Rock, OR	79.54	48	IAmb	IAmb	21 42 04.3	
	comp=Z,18nm,0.9s						
E07A	Sunnyside	79.58	44	P	P	21 42 01.7	+1.0
E07A				IAmb	IAmb	21 42 09.6	
	comp=Z,12nm,0.7s						
PINE	Pine Mountain	79.61	47	IAmb	IAmb	21 42 59.8	
	comp=Z,29nm,0.9s						
WAH2	Wahluke Slope	79.72	44	IAmb	IAmb	21 42 04.6	
	comp=Z,18nm,0.7s						
JLN	Jalan Bani Buh	79.84	290	P	P	21 42 02.7	+0.3
HAWA	Hanford	79.84	44	P	P	21 42 03.6	+1.6
K05A	Summer Lake	79.93	48	IAmb	IAmb	21 42 17.0	
	comp=Z,21nm,0.9s						
D08A	Wollman Farm,	80.05	44	P	P	21 42 04.4	+1.3
WBK	Wadi Bani Khal	80.10	291	P	P	21 42 04.3	+0.5
ORV	Oroville	80.38	52	IAmb	IAmb	21 42 08.0	
	comp=Z,18nm,1.2s						
BIDO	Bidbid	80.59	292	P	P	21 42 07.2	+0.8
E09A	Wood Farm, Sta	80.72	44	IAmb	IAmb	21 42 09.9	
	comp=Z,12nm,0.8s						
SMDO	Samad	80.79	291	P	P	21 42 08.2	+0.5
NEW	Newport	80.86	42	IAmb	IAmb	21 42 16.1	
	comp=Z,13nm,0.9s						
JMDO	Jabal Madar	80.94	291	P	P	21 42 09.4	+1.1
VADS	Vadso	81.00	342	*e*P	P	21 42 07.6	0.0
HOQ	Hoqain	81.29	292	P	P	21 42 10.8	+0.6
	SNR=5.7						
MHTO	MHTO	81.45	289	P	P	21 42 11.2	+0.2
BANOM	Banah	81.51	294	P	P	21 42 12.3	+1.1
BANOM	Banah	81.51	294	*i* P	P	21 42 11.8	+0.6
	SNR=8.1						
EDM	Edmonton	81.53	37	IAmb	IAmb	21 42 18.7	
	comp=Z,10nm,0.6s						
SHME	Shamm	81.61	295	P	P	21 42 12.7	+0.9
SHME	Shamm	81.61	295	P	P	21 42 11.3	-0.4
BSY	Bisya	81.63	291	P	P	21 42 12.3	+0.3
MASF	Masafi	81.79	294	P	P	21 42 13.3	+0.5
	SNR=5.0						
MSFE	Esma-Masafi	81.79	294	*i* P	P	21 42 13.1	+0.3
	SNR=9.2						
SOHO	SOHO	81.82	293	P	P	21 42 13.4	+0.5
SOHO	SOHO	81.82	293	*i* P	P	21 42 12.7	-0.1
	SNR=15						
UOSS	Minazif	81.87	294	P	P	21 42 13.5	+0.4
UOSS	Minazif	81.87	294	P	P	21 42 12.8	-0.3
UOSS				IAmb	IAmb	21 42 14.7	
	comp=Z,30nm,1.1s						
UOSS	Minazif	81.87	294	*i* P	P	21 42 12.7	-0.5
	SNR=7.9						
UOSS	Minazif	81.87	294	P	P	21 42 11.8	-1.4
PNTR	Pine Nut	81.92	52	IAmb	IAmb	21 42 17.4	
	comp=Z,20nm,0.8s						
HATD	Hatta, Dubai	81.97	293	P	P	21 42 14.4	+0.7
HATD	Hatta, Dubai	81.97	293	*i* P	P	21 42 14.3	+0.6
	SNR=7.9						
ARQ	Araqi	82.06	292	P	P	21 42 14.8	+0.7
ASHO	Ashiyiah	82.07	293	P	P	21 42 14.7	+0.5
ASHO	Ashiyiah	82.07	293	*i* P	P	21 42 13.1	-1.1
	SNR=12						
DQM	DQM	82.14	288	P	P	21 42 16.5	+1.9
HAMF	Hammerfest	82.31	343	*e*P	P	21 42 14.7	+0.2
NAZ	Nazwa, Dubai	82.33	294	P	P	21 42 16.4	+0.9
NAZ	Nazwa, Dubai	82.33	294	P	P	21 42 15.9	+0.4
ARA0	ARCESS Array S	82.44	342	*e*P	P	21 42 15.4	+0.2
ARCES	ARCESS Array B	82.44	342	P	P	21 42 15.3	+0.1
	comp=Z,8.1nm,0.5s,baz=84,slow=8.4,SNR=39						
	comp=Z,8.1nm,0.5s						
ARCES	ARCESS Array B	82.44	342	P	P	21 42 15.3	+0.1
ALNE	Al Ain	82.52	293	P	P	21 42 17.4	+0.8
TULEG	Thule	82.65	8	*i* P	P	21 42 17.0	+0.8
TULEG				IAmb	IAmb	21 42 18.1	
	comp=Z,36nm,1.0s						
RYN	Ryan	82.86	52	IAmb	IAmb	21 42 22.0	
	comp=Z,13nm,0.6s						
NVAR	Mina Array Bea	83.09	52	P	P	21 42 21.9	+2.4
	comp=Z,19nm,0.7s,baz=263,slow=6.1,SNR=50						
NVAR				pP	pP	21 43 12.3	-0.3
	comp=Z,7.2nm,0.7s,baz=264,slow=5.7,SNR=4.1						
	comp=Z,19nm,0.7s						
NVAR	Mina Array Bea	83.09	52	P	P	21 42 21.2	+1.7
NV11	Mina Array Sit	83.20	52	IAmb	IAmb	21 42 23.7	
	comp=Z,14nm,0.8s						
MFID	Camas Ranch	83.26	47	IAmb	IAmb	21 42 28.6	
	comp=Z,16nm,0.8s						
KTK1	Kautokeino	83.40	342	*e*P	P	21 42 20.0	-0.2
NEEM	North Greenlan	83.48	4	*i* P	P	21 42 20.9	+0.1
NEEM				IAmb	IAmb	21 42 22.8	
	comp=Z,47nm,0.9s						
DSP	Deep Springs	83.67	53	IAmb	IAmb	21 43 20.5	
	comp=Z,19nm,1.3s						
JETT	Jettan, Norway	83.86	343	*e*P	P	21 42 23.1	+0.5
CWC	Cottonwood Cre	83.89	54	IAmb	IAmb	21 42 34.0	
	comp=Z,26nm,1.6s						
DAG	Danmarks Havn	84.21	356	*i* P	P	21 42 23.0	-1.1
DAG				IAmb	IAmb	21 42 25.3	
	comp=Z,13nm,1.2s						
TRO	Tromso	84.22	344	*e*P	P	21 42 23.7	-0.5
POIN	Pond Inlet	84.26	12	IAmb	IAmb	21 42 26.2	
	comp=Z,20nm,1.0s						
LRMC	Laurel Mtn Rad	84.50	55	IAmb	IAmb	21 42 29.9	
	comp=Z,7.8nm,0.6s						
ELK	Elko	84.57	49	PKKPbc	PKKPbc	22 00 37.0	+0.4
	comp=Z,1.2nm,0.7s,baz=278,slow=19,SNR=5.8						
ELK	Elko	84.57	49	IAmb	IAmb	21 42 30.1	
	comp=Z,11nm,0.8s						
BLKN	Baker Lake	84.72	23	IAmb	IAmb	21 42 28.0	
	comp=Z,10.0nm,0.5s						
CCCA	Chr Cany lake	84.73	54	IAmb	IAmb	21 43 24.0	
	comp=Z,28nm,1.4s						
DLMT	Dillon	84.76	44	IAmb	IAmb	21 42 31.2	
	comp=Z,30nm,1.6s						
MZR	Muzera	84.83	292	P	P	21 42 28.7	+0.5
	SNR=5.1						
MZR	Muzera	84.83	292	*i* P	P	21 42 28.5	+0.2
	SNR=15						
WCT	Wildcat Mounta	84.88	53	IAmb	IAmb	21 42 31.9	
	comp=Z,13nm,0.8s						
GWY	Greenwater Val	85.05	54	IAmb	IAmb	21 43 26.1	
	comp=Z,14nm,1.2s						
TPNV	Topopah Spring	85.11	53	IAmb	IAmb	21 42 33.1	
	comp=Z,15nm,0.7s						
DMTO	DMTO	85.15	287	P	P	21 42 30.2	+0.3
DRV	Dumont d'Urvil	85.28	182	P	P	21 42 29.4	+0.1
DOK	Doka	85.61	288	P	P	21 42 33.0	+0.9
KULLO	Kullorsuaq	85.72	6	*i* P	P	21 42 32.9	+1.2
KULLO				IAmb	IAmb	21 42 33.8	
	comp=Z,18nm,0.9s						
SPR3	Spring Creek 3	85.83	50	IAmb	IAmb	21 43 30.7	
	comp=Z,18nm,1.4s						
YHL	Hebgen Lake	85.88	44	IAmb	IAmb	21 42 37.0	
	comp=Z,16nm,0.8s						
RBK	Rabkut	85.89	287	P	P	21 42 34.2	+0.6
YHB	Horse Butte	85.91	44	IAmb	IAmb	21 42 37.1	
	comp=Z,17nm,0.8s						
HVU	Hansel Valley	85.94	47	IAmb	IAmb	21 43 30.9	
	comp=Z,12nm,1.1s						
YMR	Madison River	86.09	44	IAmb	IAmb	21 42 38.1	
	comp=Z,18nm,0.8s						
KBZ	Khabaz	86.11	315	P	P	21 42 33.1	-1.0
	comp=Z,8.8nm,0.8s,baz=129,slow=2.5,SNR=15						
	comp=Z,8.8nm,0.8s						
KIV	Kislovodsk	86.17	315	P	P	21 42 33.5	-1.1
KIV				IAmb	IAmb	21 42 37.5	
	comp=Z,10nm,0.7s						
STEI	Steigen	86.36	343	*e*P	P	21 42 34.2	-0.6
DUG	Dugway, Tooele	86.49	49	IAmb	IAmb	21 42 39.3	
	comp=Z,9.6nm,0.7s						
DANC	Danby, Needles	86.56	55	IAmb	IAmb	21 42 39.9	
	comp=Z,12nm,0.9s						
DBG	Daneborg	86.71	356	*i* P	P	21 42 36.2	-0.3
DBG				IAmb	IAmb	21 42 37.1	
	comp=Z,9.6nm,0.7s						
FAUS	Fauske	86.72	343	*e*P	P	21 42 36.2	-0.4
ABTO	Aybut	86.76	287	P	P	21 42 37.7	-0.1
FINES	FINESS Array B	86.83	335	P	P	21 42 35.6	-1.6
	comp=Z,21nm,0.4s,baz=66,slow=4.5,SNR=209						
FINES				pP	pP	21 43 30.0	-1.4
	comp=Z,7.9nm,0.6s,baz=72,slow=6.2,SNR=3.9						
FINES				PKKP	PKKPdf	22 00 25.1	+1.4
	comp=Z,1.4nm,0.8s,baz=241,slow=4.6,SNR=4.1						
	comp=Z,21nm,0.4s						
BC3	Big Chuckawall	86.85	56	IAmb	IAmb	21 43 36.0	
	comp=Z,28nm,1.6s						
HWUT	Hardware Ranch	86.85	47	IAmb	IAmb	21 43 35.5	
	comp=Z,12nm,0.9s						
IRM	Iron Mountain	86.91	55	IAmb	IAmb	21 43 36.3	
	comp=Z,17nm,1.5s						
FFC	Flin Flon	87.03	33	P	P	21 42 39.3	+0.9
FFC				IAmb	IAmb	21 42 40.9	
	comp=Z,24nm,0.9s						
FFC	Flin Flon	87.03	33	P	P	21 42 39.9	+1.5
CTU	Camp Tracy	87.06	48	IAmb	IAmb	21 43 37.9	
	comp=Z,14nm,1.2s						
TCUT	Toone Canyon	87.14	48	IAmb	IAmb	21 43 37.1	
	comp=Z,12nm,0.8s						
KARS	Kars	87.16	312	IAmb	IAmb	21 42 43.4	
	comp=Z,12nm,0.9s						
RAUS	Rausandaksla	87.74	343	*e*P	P	21 42 40.3	-1.2
MTPU	Mount Pierson	87.75	51	IAmb	IAmb	21 43 39.6	
	comp=Z,16nm,1.4s						
PDAR	Pinedale Array	87.77	45	P	P	21 42 43.1	+0.6
	comp=Z,1.1nm,0.4s,baz=145,slow=0.6,SNR=27						
PDAR				pP	pP	21 43 35.5	-0.7
	comp=Z,1.4nm,0.7s,baz=240,slow=1.6,SNR=2.7						
	comp=Z,1.1nm,0.4s						
PDAR	Pinedale Array	87.77	45	P	P	21 42 43.6	+1.1
MOR8	Moi Rana	87.81	342	*e*P	P	21 42 40.3	-1.6
Q16A	Castle Valley	88.15	49	IAmb	IAmb	21 43 41.8	
	comp=Z,18nm,1.1s						
LEIR	Leirfjorden	88.24	343	*e*P	P	21 42 43.1	-0.7
P17A	Butcher Ranch,	88.24	49	IAmb	IAmb	21 43 41.9	
	comp=Z,13nm,1.1s						
LAO	LASA Array	88.30	41	IAmb	IAmb	21 43 49.8	
	comp=Z,17nm,1.1s						
SRU	San Rafael Swe	88.54	49	IAmb	IAmb	21 42 53.7	
	comp=Z,11nm,0.6s						
FCC	Fort Churchill	88.60	27	IAmb	IAmb	21 42 47.6	
	comp=Z,16nm,0.8s						
RDMU	Red Mountain	88.64	47	IAmb	IAmb	21 43 43.7	
	comp=Z,9.8nm,0.9s						
Y14A	Wickenburg	88.65	55	IAmb	IAmb	21 42 49.8	
	comp=Z,17nm,0.8s						
GURO	Guroymak-BITLI	88.70	310	IAmb	IAmb	21 42 47.8	
	comp=Z,14nm,1.1s						
HMU	Henry Mountain	88.84	50	IAmb	IAmb	21 42 50.2	
	comp=Z,8.9nm,0.7s						
SUMG	Summit	88.85	1	IAmb	IAmb	21 42 52.6	
	comp=Z,14nm,1.1s						
SUMG	Summit	88.85	1	*i* P	P	21 42 47.0	-0.1
SUMG				IAmb	IAmb	21 42 48.6	
	comp=Z,9.8nm,0.8s						
KOPT	Kop Dagi	89.21	312	IAmb	IAmb	21 42 50.7	
	comp=Z,14nm,1.1s						
WUAZ	Wupatki	89.30	53	IAmb	IAmb	21 42 53.9	
	comp=Z,14nm,0.8s						
214A	Organ Pipe Nat	89.53	56	IAmb	IAmb	21 43 49.3	
	comp=Z,20nm,1.2s						
NSS	Namsos	89.72	342	*e*P	P	21 42 50.1	-0.6
PV21	Cone Mtn., Par	89.87	49	IAmb	IAmb	21 43 49.6	
	comp=Z,17nm,0.9s						
MNK	Minsk	89.91	329	*i* P	P	21 42 51.1	-0.8
	comp=E,12nm,0.9s						
MNK				*i* P	P	21 42 51.1	-0.8
	comp=N,8.0nm,0.8s						
MNK				*i* P	P	21 42 51.1	-0.8
	comp=Z,30nm,0.9s,baz=57						
MNK				*i* pP	pP	21 43 46.0	+0.3
MNK				*i* sP	sP	21 44 09.8	+0.9
MNK				*i* PP	PP	21 46 26.7	-0.6
MNK				*i* PPP	PPP	21 48 28.2	
MNK				*i* SKS	S	21 52 30.0	-55
MNK				*i* S	SKSac	21 53 02.0	+1.1
MNK				*i* sS	pS	21 54 40.9	+7.5
MNK				*i* PS	PS	21 55 00.0	-0.4
MNK				*i* SS	SS	21 59 30.7	+3.8
MNK				*i* SSS	SSS	22 03 08.3	
PV14	Lion Creek, Pa	89.91	49	IAmb	IAmb	21 43 50.2	
	comp=Z,18nm,0.9s						
PV04	Paradox Valley	89.98	49	IAmb	IAmb	21 43 50.1	
	comp=Z,20nm,1.1s						
PV17	East Wray Mesa	89.99	49	IAmb	IAmb	21 43 50.1	
	comp=Z,16nm,0.9s						
PV16	Nyswonger Mesa	90.01	49	IAmb	IAmb	21 43 50.7	
	comp=Z,17nm,0.9s						
PV22	Blue Mesa, Par	90.01	49	IAmb	IAmb	21 43 51.0	
	comp=Z,27nm,1.7s						
PV03	Paradox Valley	90.08	49	IAmb	IAmb	21 43 50.4	
	comp=Z,14nm,0.9s						
MARD	Mardin	90.10	310	IAmb	IAmb	21 42 53.7	
	comp=Z,23nm,1.1s						
PV13	Radium Mtn., P	90.14	49	IAmb	IAmb	21 43 01.8	
	comp=Z,11nm,0.7s						
NACGM	Naroch	90.22	330	*e*P	P	21 42 52.2	-1.1
	comp=Z,49nm,0.8s,baz=56						
HAYD	Hayden	90.26	47	IAmb	IAmb	21 43 02.8	
	comp=Z,6.6nm,0.8s						
PV01	Paradox Valley	90.33	49	IAmb	IAmb	21 42 57.1	
	comp=Z,10.0nm,0.6s						
SCO	Scoresbysund	90.57	356	*i* P	P	21 42 54.1	-0.5
SCO				IAmb	IAmb	21 42 57.5	
	comp=Z,9.4nm,0.9s						
MVCO	Mesa Verde	90.76	50	IAmb	IAmb	21 43 01.1	
	comp=Z,14nm,1.4s						
RSSD	Black Hills	90.83	43	P	P	21 42 57.1	+0.4
RSSD				IAmb	IAmb	21 42 59.9	
	comp=Z,27nm,1.6s						
TUC	Tucson	90.99	55	P	P	21 42 59.4	+1.9
TUC				IAmb	IAmb	21 43 55.7	
	comp=Z,16nm,1.3s						
GDH	Godhavn	91.15	7	*i* P	P	21 42 57.0	-0.3
GDH				IAmb	IAmb	21 43 00.7	
	comp=Z,10.0nm,0.7s						
AKASG	Malin Array Be	91.26	325	P	P	21 42 57.0	-1.3
	comp=Z,0.6nm,0.4s,baz=57,slow=4.5,SNR=6.5						
AKASG				pP	pP	21 43 51.4	-0.9
	comp=Z,0.5nm,0.4s,baz=53,slow=5.0,SNR=1.6						
	comp=Z,0.6nm,0.4s						
AKASG	Malin Array Be	91.26	325	P	P	21 42 55.9	-2.3
ILULI	Ilulissat	91.44	6	*i* P	P	21 42 59.9	+1.2
ILULI				IAmb	IAmb	21 43 01.7	
	comp=Z,18nm,0.7s						
RAYN	Ar Rayn	91.57	295	P	P	21 42 59.5	-0.8
RAYN	Ar Rayn	91.57	295	P	P	21 42 58.8	-1.5
RAYN	Ar Rayn	91.57	295	*i* P	P	21 42 58.9	-1.4
	SNR=6.6						
S22A	4UR Ranch, Cre	91.74	49	IAmb	IAmb	21 44 01.6	
	comp=Z,17nm,1.6s						
HFS	Hagfors	92.33	338	P	P	21 43 01.3	-1.7
	comp=Z,4.0nm,0.3s,baz=93,slow=2.4,SNR=71						
HFS				PKKP	PKKPdf	22 00 14.2	0.0
	comp=Z,1.0nm,0.4s,baz=180,slow=2.9,SNR=14						
	comp=Z,4.0nm,0.3s						
DOMB	Dombas	92.45	341	*e*P	P	21 43 03.3	-0.3
NB2	NORSAR Subarra	92.52	340	P	P	21 43 02.9	-1.0
	comp=Z,2.7nm,0.5s,baz=45,slow=5.1						
NB2	NORSAR Subarra	92.52	340	P	P	21 43 02.9	-1.0
	baz=45,slow=5.1						
NOA	NORSAR Array B	92.52	340	P	P	21 43 02.9	-1.0
	comp=Z,1.4nm,0.5s,baz=47,slow=4.5,SNR=15						
NOA				pP	pP	21 43 56.8	-1.7
	comp=Z,0.5nm,0.6s,baz=42,slow=4.8,SNR=2.3						
	comp=Z,1.4nm,0.5s						
319A	Douglas	92.53	56	IAmb	IAmb	21 44 02.9	
	comp=Z,7.5nm,0.9s						
ULM	Lac du Bonnet	92.54	34	P	P	21 43 04.8	+0.7
	comp=Z,8.0nm,0.9s,baz=306,slow=4.4,SNR=6.7						
	comp=Z,8.0nm,0.9s						
ULM	Lac du Bonnet	92.54	34	IAmb	IAmb	21 43 05.9	
	comp=Z,13nm,1.0s						
TASM	ASL Pad, Albuq	93.21	52	IAmb	IAmb	21 44 05.5	
	comp=Z,8.1nm,1.1s						
TASM	ASL Pad, Albuq	93.21	52	IAmb	IAmb	21 44 05.5	
	comp=Z,7.8nm,1.0s						
TASM	ASL Pad, Albuq	93.21	52	IAmb	IAmb	21 44 05.5	
	comp=Z,7.6nm,1.1s						
TASM	ASL Pad, Albuq	93.21	52	IAmb	IAmb	21 44 05.5	
	comp=Z,7.6nm,1.1s						
ANMO	Albuquerque	93.21	52	P	P	21 43 08.8	+1.0
ANMO				IAmb	IAmb	21 44 05.5	
	comp=Z,7.5nm,1.0s						
ABQ	Albuquerque	93.21	52	IAmb	IAmb	21 44 05.5	
	comp=Z,7.8nm,1.0s						
121A	Cookes Peak, D	93.22	54	IAmb	IAmb	21 44 06.3	
	comp=Z,15nm,1.1s						
AGMN	Agassiz Nation	93.62	36	IAmb	IAmb	21 44 01.7	
	comp=Z,14nm,1.2s						
SFJD	Kangerlussuaq	93.64	6	*i* P	P	21 43 09.0	+0.1
SFJD				IAmb	IAmb	21 43 10.4	
	comp=Z,18nm,1.1s						
EPLO	Experimental L	94.01	34	IAmb	IAmb	21 43 12.6	
	comp=Z,10nm,1.1s						
BR131	Keskin Array S	94.08	314	P	P	21 43 10.8	-0.9
BRTR	Keskin Array B	94.08	314	P	P	21 43 10.3	-1.3
	comp=Z,8.3nm,0.8s,baz=93,slow=3.6,SNR=47						
BRTR				PKKPbc	PKKPbc	22 00 12.4	-0.7
	comp=Z,0.3nm,0.5s,baz=211,slow=3.2,SNR=3.6						
	comp=Z,8.3nm,0.8s						
BRTR	Keskin Array B	94.08	314	P	P	21 43 09.9	-1.8
ANTO	Ankara	94.58	315	P	P	21 43 13.1	-0.8
MNTX	Cornudas Mount	95.42	54	IAmb	IAmb	21 44 15.5	
	comp=Z,5.1nm,0.9s						
MMAI	Mount Meron Ar	95.91	308	P	P	21 43 18.6	-1.5
	comp=Z,2.0nm,0.8s,baz=20,slow=10,SNR=4.1						
	comp=Z,2.0nm,0.8s						
VNDA	Vanda	96.55	177	P	P	21 43 20.8	-1.0
	comp=Z,1.4nm,0.7s,baz=336,slow=5.1,SNR=6.2						
	comp=Z,1.4nm,0.7s						
VNDA	Vanda	96.55	177	IAmb	IAmb	21 46 23.8	
	comp=Z,15nm,1.7s						
TXAR	Lajitas Array	97.79	56	P	Pdif	21 43 30.0	+1.3
	comp=Z,0.3nm,0.7s,baz=304,slow=3.1,SNR=5.8						
TXAR				pP	pP	21 44 23.2	+0.5
	comp=Z,0.3nm,0.6s,baz=288,slow=3.1,SNR=2.4						
	comp=Z,0.3nm,0.7s						
TXAR	Lajitas Array	97.79	56	P	P	21 43 26.2	-2.5
GERES	GERESS Array B	100.31	330	P	Pdif	21 43 37.0	-2.5
	comp=Z,1.2nm,0.8s,baz=10,slow=6.5,SNR=4.3						
TEIG	Tepich	114.41	57	PKKPab	PKKPab	21 59 19.2	-1.0
	comp=Z,0.6nm,0.9s,baz=311,slow=24,SNR=16						
ESDC	Sonseca Array	115.34	334	PKKPab	PKKPab	21 59 16.4	-0.5
	comp=Z,2.0nm,0.9s,baz=226,slow=5.0,SNR=5.7						
TROLL	Troll, Antarti	122.66	193	P	PKiKP	21 48 47.2	+0.2
SNAA	Sanae	123.99	191	⇓P	PKPdf	21 48 49.2	0.0
	comp=Z,257nm,0.6s						
SNAA	Sanae	123.99	191	PKP	PKPdf	21 48 49.1	-0.1
	comp=Z,7.4nm,0.6s,baz=188,slow=2.4,SNR=32						
VNA2	Neumayer--Watz	125.43	191	P	PKPdf	21 48 51.9	0.0
	comp=Z,24nm,0.6s,baz=135,slow=1.9						
VNA3	Neumayer Olymp	125.53	190	⇓P	PKPdf	21 48 51.9	-0.2
	comp=Z,13nm,0.7s						
VNA1	Neumayer--Stat	125.82	190	P	PKPdf	21 48 52.7	+0.1
	comp=Z,7.3nm,0.6s						
TORD	Torodi Ar. Bea	132.43	309	PKhKP	PKPpre	21 48 59.3	
	comp=Z,0.6nm,0.5s,baz=20,slow=4.2,SNR=4.9						
TORD				PKP	PKPdf	21 49 06.5	-0.3
	comp=Z,2.1nm,0.6s,baz=29,slow=3.9,SNR=14						
TORD				SKPbc	SKPbc	21 52 10.3	-2.2
	comp=Z,8.3nm,1.0s,baz=34,slow=5.0,SNR=12						
TORD	Torodi Ar. Bea	132.43	309		PKPdf	21 49 07.0	+0.2
SDV	Santo Domingo	134.83	56	*e*P	PKPdf	21 49 09.6	-2.0
DBIC	Dimbokro	141.52	308	PKhKP	PKPpre	21 49 18.4	
	comp=Z,3.3nm,0.4s,baz=61,slow=2.9,SNR=14						
DBIC				SKP	SKPdf	21 52 37.0	+0.1
	comp=Z,4.3nm,0.8s,baz=94,slow=1.7,SNR=4.6						

PLCA	Paso Flores	142.03	133	PKhKP	PKPpre	21 49 20.0	
	comp=Z,5.7nm,0.6s,baz=236,slow=3.9,SNR=18						
PLCA				SKPbc	SKPbc	21 52 40.7	+0.6
	comp=Z,3.3nm,0.9s,baz=227,slow=5.9,SNR=3.2						
PLCA	Paso Flores	142.03	133		PKPdf	21 49 20.6	-3.3
PLCA	Paso Flores	142.03	133	*e*P	PKPdf	21 49 21.9	-2.0
TEFE	Tefe	146.68	67	*e*P	PKPdf	21 49 32.5	-0.2
BOAV	Boa Vista	146.71	54	*e*P	PKPdf	21 49 32.6	-0.1
LPAZ	La Paz	147.66	91	PKPbc	PKPbc	21 49 36.6	-1.4
	comp=Z,36nm,0.8s,baz=329,slow=2.5,SNR=62						
LPAZ	La Paz	147.66	91	*e*P	PKPdf	21 49 33.6	-1.3
TRQA	Tornquist	149.15	134	*e*P	PKPdf	21 49 36.7	+0.7
BBSD	Serra de San D	154.92	91	*e*P	PKPdf	21 49 42.9	-2.3
CPUP	Villa Florida	157.44	114	PKP	PKPdf	21 49 47.8	-0.4
	comp=Z,2.2nm,0.9s,baz=280,slow=6.1,SNR=4.0						
CPUP				PKPab	PKPab	21 50 23.6	+2.5
	comp=Z,9.9nm,0.9s,baz=261,slow=7.6,SNR=13						
CPUP	Villa Florida	157.44	114		PKPdf	21 49 48.3	+0.1
SNDB	Serra Nova Dou	162.27	70	*e*P	PKPdf	21 49 53.3	-0.6
BDFB	Brasilia	166.52	79	PKP	PKPdf	21 49 57.8	0.0
	comp=Z,3.3nm,0.9s,baz=306,slow=3.6,SNR=4.5						
BDFB	Brasilia	166.52	79		PKPdf	21 49 58.0	+0.2
SDBA	SAO DESIDERIO	167.98	60	*e*P	PKPdf	21 49 58.4	-0.4

*AEIC **22** 21:57:50.3±0.5, 51°.8N±0°.2×179°.82W±0°.07, h104^{km}±6^{km}, Error ellipse: s-maj=23.9km s-min=5.6km az=173.0*

NEIC 22 21:57:50.6±0.6**, 51°.7N**±0°.1×**179°.85W**±0°.07**, h107**^{km}±9^{km}**, ML3.5**/8**, ML3.2**(AEIC)**, Error ellipse: s-maj=18.7km s-min=4.1km az=163.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CERB	Semis' Cerberu	0.40	307		Pn	21 58 06.8	+0.3
CERB					Sn	21 58 19.6	+1.1
CEPE	Semis' Perret	0.41	311		Pn	21 58 06.6	0.0
CESW	Semis' Southwe	0.42	300		Pn	21 58 06.3	-0.4
AMKA	Amchitka	0.62	240		Pn	21 58 08.0	0.0
AMKA					Sn	21 58 20.4	-0.6
AMKA				IAML		21 58 21.9	
	comp=N,1μm,0.3s						
AMKA				IAML		21 58 21.9	
	comp=E,1μm,0.3s						
GAKI	Gareloi-Kavalg	0.66	102		Pn	21 58 08.5	+0.2
GAKI					Sn	21 58 21.8	+0.2
GANO	Gareloi North	0.66	79		Pn	21 58 08.0	-0.4
GANO					Sn	21 58 21.3	-0.5
GALAA	Gareloi Lava P	0.67	84		Pn	21 58 08.6	+0.2
GANE	Gareloi Northe	0.68	79		Pn	21 58 08.3	-0.2
GANE					Sn	21 58 21.5	-0.4
GAEA	Gareloi East	0.69	82		Pn	21 58 08.7	+0.1
GAEA					Sn	21 58 22.3	+0.2
LSSE	Little Sitkin	1.01	284		Pn	21 58 11.8	+0.1
LSPA	Little Sitkin	1.01	286		Pn	21 58 11.8	+0.1
LSNW	Little Sitkin	1.05	286		Pn	21 58 11.9	-0.2
TASE	Tanaga Southea	1.14	82		Pn	21 58 13.1	0.0
TASE					Sn	21 58 29.3	-0.7
TAFP	Tanaga Falls P	1.18	79		Pn	21 58 13.1	-0.4
TAFL	Tanaga Flats	1.22	86		Pn	21 58 13.9	0.0
TAFL					Sn	21 58 31.4	0.0
TAPA	Tanaga Point A	1.27	84		Pn	21 58 14.5	-0.1
TAPA					Sn	21 58 32.3	-0.4
KIMD	Kanaga Island	1.63	87		Pn	21 58 18.8	0.0
KIMD					Sn	21 58 39.7	-0.5
KIKV	Kanaga Island	1.67	83		Pn	21 58 19.4	0.0
KIWB	Kanaga Island	1.68	83	Pn	Pn	21 58 19.4	-0.1
ADK	Adak	1.98	83		Pn	21 58 23.0	-0.1
ADK					Sn	21 58 47.2	-0.7
ADK	Adak	1.98	83	IAML		21 58 48.5	
	comp=E,269nm,0.7s						
ADK				IAML		21 59 27.3	
	comp=E,223nm,4.7s						
GSMY	Great Sitkin M	2.38	80		Pn	21 58 27.9	-0.4
ATKA	Atka Island	3.54	79	Pn	Pn	21 58 43.8	+0.2
NIKH	Nikolski High	6.86	75	Pn	Pn	21 59 30.6	+2.1

*IDC **22** 22:17:19.2±3.7, 6°.58S×103°.37E, h0^{km}, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=152.0km s-min=29.3km az=51.0*

*DJA **22** 22:17:20.2±1.6, 7°S±11°×10°4E±1°2, h10^{km}, M3.5/7, MLv3.5/7*

ISC 22 22:17:24.2±1.3**, 6°.6S**±0°.1×**103°.7E**±0°.1**, h35**^{km}**, n20,** σ1^{s}.**04**/14**, mb3.7**/6**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	1.35	37	P	Pn	22 17 45.6	-1.0
LWLI	Liwa	1.63	14	P	Pn	22 17 49.9	-0.6
KLI	Kotabumi	2.10	34	P	Pn	22 17 57.4	+0.6
MDSI	Maura Dua	2.17	13	P	Pn	22 17 57.8	0.0
KLSI		2.18	29	P	Pn	22 17 57.8	-0.2
MNAI	Manna	2.35	342	P	Pn	22 18 00.0	-0.3
CNJI	Cibinong	3.50	102	P	Pn	22 18 14.6	-1.5
CMAR	Chiang Mai Arr	25.34	349	P	P	22 22 47.8	-0.3
	1.2nm,0.3s,baz=170,slow=9.2,SNR=6.5						
	1.2nm,0.3s						
WRA	Warramunga Arr	32.58	117	P	P	22 23 54.8	+2.3
	0.2nm,0.5s,baz=290,slow=9.4,SNR=1.8						
	0.2nm,0.5s						
SONM	Songino Array	54.26	2	P	P	22 26 46.5	-0.4
	0.3nm,0.5s,baz=172,slow=11,SNR=2.7						
	0.3nm,0.5s						
MKAR	Makanchi Array	56.46	343	P	P	22 27 01.7	-0.9
	0.3nm,0.6s,baz=156,slow=8.8,SNR=9.3						
	0.3nm,0.6s						
H04N2	CROZET ISLANDS	59.44	219	T	T	23 31 51.7	
	baz=66,slow=75,SNR=97						
H04N1	CROZET ISLANDS	59.45	219	T	T	23 31 52.0	
	baz=66,slow=75,SNR=103						
H04N3	CROZET ISLANDS	59.45	219	T	T	23 31 50.7	
	baz=66,slow=75,SNR=102						
H04S1	CROZET ISLANDS	59.65	219	T	T	23 32 04.3	
	baz=64,slow=76,SNR=14						
H04S3	CROZET ISLANDS	59.67	219	T	T	23 32 03.8	
	baz=64,slow=76,SNR=9.4						
H04S2	CROZET ISLANDS	59.67	219	T	T	23 32 05.2	
	baz=64,slow=76,SNR=9.5						
ZALV	Zalesovo Beam	62.39	348	P	P	22 27 42.6	-0.7
	0.4nm,0.3s,baz=143,slow=6.9,SNR=2.8						
	0.4nm,0.3s						
BVAR	Borovoye Array	65.76	339	P	P	22 28 05.1	-0.4
	0.4nm,0.5s,baz=112,slow=6.4,SNR=2.2						
	0.4nm,0.5s						
TXAR	Lajitas Array	145.72	45	PKPbc	PKPab	22 37 01.5	+0.8
	0.4nm,0.7s,baz=330,slow=5.0,SNR=4.6						

*NEIC **22** 22:28:59.2±0.7, 17°.6S±0°.2×177°.2W±0°.1, h421^{km}±10^{km}, mb4.1/17, Error ellipse: s-maj=26.3km s-min=15.0km az=147.0*

*IDC **22** 22:29:10.3±20.0, 17°.38S×177°.99W, h520^{km}±186^{km}, mb3.3/3, mbtmp4.2/3, Error ellipse: s-maj=151.2km s-min=85.2km az=111.0*

ISC 22 22:28:56.1±1.2**, 17°.6S**±0°.2×**177°.2W**±0°.2**, h400**^{km}**, n26,** σ0^{s}.**79**/28**, mb4.1**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COEN	Coen	38.27	270	P	P	22 35 40.9	+0.6
COEN				IAmb	IAmb	22 35 56.3	
	comp=Z,14nm,1.2s						
TOO	Toolangi	38.28	231	P	P	22 35 41.3	+1.1
STKA	Stephens Creek	39.81	241	P	P	22 35 53.5	+0.8
	comp=Z,2.4nm,0.8s,baz=80,slow=12,SNR=3.3						
	comp=Z,2.4nm,0.8s						
STKA	Stephens Creek	39.81	241	P	P	22 35 53.6	+0.8
BBOO	Buckleboo	44.58	241	P	P	22 36 30.9	+0.2
BBOO				IAmb	IAmb	22 36 36.2	
	comp=Z,16nm,1.4s						
WR8	Warramunga Arr	45.69	259	P	P	22 36 39.3	-0.2
WB0	Warramunga Arr	45.80	259	P	P	22 36 40.3	-0.1
WB0				IAmb	IAmb	22 36 42.2	
	comp=Z,7.9nm,1.4s						
WRAB	Tennant Creek	45.83	259	P	P	22 36 40.2	-0.3
WRAB				IAmb	IAmb	22 37 08.3	
	comp=Z,6.1nm,1.4s						
WRA	Warramunga Arr	45.84	259	P	P	22 36 40.3	-0.3
	comp=Z,1.0nm,0.4s,baz=93,slow=7.4,SNR=28						
WRA				PcP	PcP	22 38 08.9	-1.4
	comp=Z,0.1nm,0.4s,baz=84,slow=3.2,SNR=1.8						
	comp=Z,1.0nm,0.4s						
WRA	Warramunga Arr	45.84	259	P	P	22 36 39.9	-0.7
AS31	Alice Springs	46.00	254	P	P	22 36 42.0	+0.1
AS31				IAmb	IAmb	22 36 42.9	
	comp=Z,1.9nm,0.5s						
ASAR	Alice Springs	46.00	254	P	P	22 36 42.0	+0.2
	comp=Z,4.2nm,0.5s,baz=86,slow=8.8,SNR=72						
ASAR				PcP	PcP	22 38 09.4	-1.4
	comp=Z,0.4nm,0.4s,baz=98,slow=3.2,SNR=4.9						
	comp=Z,4.2nm,0.5s						
ASAR	Alice Springs	46.00	254	P	P	22 36 41.9	0.0
MTN	Manton Dam	49.98	268	P	P	22 37 11.9	0.0
MTN				IAmb	IAmb	22 37 14.9	
	comp=Z,18nm,1.3s						
KNRA	Kununurra	51.68	264	P	P	22 37 24.4	0.0
KNRA				IAmb	IAmb	22 37 49.1	
	comp=Z,16nm,1.3s						
FITZ	Fitzroy Crossi	54.23	260	P	P	22 37 42.8	0.0
SBA	Scott Base	60.82	184	P	P	22 38 27.9	+0.8
SBA				IAmb	IAmb	22 39 09.3	
	comp=Z,12nm,1.2s						
MORW	Morawa	61.68	246	P	P	22 38 32.8	-1.0
MORW				IAmb	IAmb	22 38 59.5	
	comp=Z,19nm,1.3s						
MJB9	Matsu-Tunnel	68.36	323	P	P	22 39 16.5	+0.6
AMKA	Amchitka	68.73	358	P	P	22 39 19.1	+1.3
SPIA	Saint Paul Isl	74.70	4	P	P	22 39 53.8	+1.0
BUR08	Bucovina Ar. S	144.84	333	PKPdf	PKPab	22 47 46.4	-0.5
BRTR	Keskin Array B	145.37	316	PKP	PKPab	22 47 48.7	-0.4
	comp=Z,0.6nm,0.8s,baz=52,slow=2.4,SNR=3.7						
BRTR	Keskin Array B	145.37	316		PKPab	22 47 48.6	-0.6
MMAI	Mount Meron Ar	146.94	304	PKPbc	PKiKP	22 47 53.9	-1.1
	comp=Z,0.5nm,0.3s,baz=61,slow=6.8,SNR=2.0						
GERES	GERESS Array B	147.58	347	PKPbc	PKPbc	22 47 53.2	-1.0
	comp=Z,0.3nm,0.5s,baz=19,slow=3.4,SNR=1.1						

*IDC **22** 22:31:34.2±0.7, 13°.89N×120°.84E, h149^{km}±8^{km}, mb3.3/6, mbtmp3.7/6, MS3.6/1, Error ellipse: s-maj=49.2km s-min=15.6km az=59.0*

ISC 22 22:31:34.5±1.0**, 13°.9N**±0°.2×**120°.8E**±0°.3**, h152**^{km}**, n8,** σ0^{s}.**50**/8**, mb3.7**/6**, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.26	29	P	Pn	22 31 55.6	+0.4
	746nm,0.3s,baz=199,slow=2.0,SNR=11						
TGY				S	Sn	22 32 10.9	-0.2
	359nm,0.4s,baz=306,slow=20,SNR=6.3						
CMAR	Chiang Mai Arr	21.48	285	P	P	22 36 11.1	-0.2
	1.6nm,0.3s,baz=88,slow=7.5,SNR=5.2						
	1.6nm,0.3s						
SONM	Songino Array	35.92	343	LR	LR	22 53 02.3	
	comp=Z,93nm,18.6s,baz=330,slow=36						
WRA	Warramunga Arr	36.15	158	P	P	22 38 21.6	-0.6
	0.7nm,0.6s,baz=338,slow=9.2,SNR=6.6						
	0.7nm,0.6s						
ASAR	Alice Springs	39.45	161	P	P	22 38 50.5	+0.5
	0.2nm,0.3s,baz=335,slow=6.7,SNR=6.3						
	0.2nm,0.3s						
MKAR	Makanchi Array	45.95	323	P	P	22 39 42.5	+0.3
	0.3nm,0.5s,baz=119,slow=9.0,SNR=6.3						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	48.95	333	P	P	22 40 04.6	-0.5
	0.6nm,0.3s,baz=136,slow=5.5,SNR=3.1						
	0.6nm,0.3s						
KURBB	Kurchatov Arra	50.10	326	P	P	22 40 14.0	+0.1
	0.9nm,0.5s,baz=128,slow=7.7,SNR=8.2						
	0.9nm,0.5s						

*IDC **22** 23:11:54.4±2.1, 7°.71S×129°.95E, h0^{km}, mb4.0/1, mbtmp3.6/3, ML3.5/2, MS3.3/1, Error ellipse: s-maj=139.1km s-min=30.8km az=68.0*

*DJA **22** 23:11:58.5±0.4, 7°S±4°×13°0E±°, h10^{km}, M4.2/6, mB5.0/2, mb4.2/4, MLv4.3/6, Mw(mB)4.3/2*

ISC 22 23:11:53.7±1.2**, 7°.79S**±0°.08×**129°.9E**±0°.1**, h10**^{km}**, n10,** σ3^{s}.**39**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.37	98	P	Pg	23 12 22.0	+2.0
FAKI	Fak Fak	5.37	26	P	Pn	23 13 10.5	-3.4
KMPI	Kaimana, Papua	5.56	43	P	Pn	23 13 14.5	-2.1
	0.3nm44nm,0.4s						
SOEI	Soe	5.92	250	P	Pb	23 13 32.1	-5.1
	0.1nm14nm,1.3s						
SIJI	Sorong	7.01	11	P	Pn	23 13 34.3	-2.1
SWI	Sorong	7.01	11	P	Pn	23 13 34.8	-1.7
WRA	Warramunga Arr	12.81	161	Pn	Pn	23 14 58.5	+2.5
	0.3nm,0.3s,baz=344,slow=13,SNR=15						
WRA				Sn	Sn	23 17 16.0	-2.8
	0.9nm,0.3s,baz=326,slow=24,SNR=13						
	0.4nm,0.5s						
ASAR	Alice Springs	16.24	167	Pn	P	23 15 45.7	+0.5
	0.2nm,0.3s,baz=341,slow=9.4,SNR=13						
ASAR				Sn	Sn	23 18 36.5	-5.9
	0.2nm,0.3s,baz=345,slow=13,SNR=9.0						
	0.5nm,0.5s						
JOW	Kunigami	34.46	357	LR	LR	23 32 05.5	
	comp=Z,54nm,19.8s,baz=109,slow=35						
MKAR	Makanchi Array	68.85	327	P	P	23 23 00.5	+2.0
	0.6nm,0.4s,baz=115,slow=7.5,SNR=24						
	0.6nm,0.4s						

*IDC **22** 23:16:40.4±1.7, 51°.72N×175°.88W, h0^{km}, mb3.4/5, mbtmp3.6/7, ML4.2/2, MS3.3/1, Error ellipse: s-maj=54.1km s-min=22.5km az=179.0*

*NEIC **22** 23:16:47.6±2.4, 51°.58N±0°.05×175°.65W±0°.05, h35^{km}±2^{km}, mb4.0/73, ML3.8(AEIC), Error ellipse: s-maj=9.1km s-min=5.0km az=177.0*

*AEIC **22** 23:16:48.9±4.0, 51°.55N±0°.07×175°.65W±0°.06, h19^{km}±4^{km}, Error ellipse: s-maj=11.1km s-min=4.4km az=165.0*

ISC 22 23:16:46.1±1.2**, 51°.54N**±0°.06×**175°.59W**±0°.03**, h18**^{km}±4^{km}**, n145,** σ1^{s}.**59**/148**, mb4.0**/15**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSIG	Igitkin Island	0.50	335		Pn	23 16 58.0	-0.2
GSIG					Sn	23 17 05.4	-1.0
GSMY	Great Sitkin M	0.59	330		Pg	23 16 59.1	+1.4
GSMY					Sn	23 17 07.4	-1.2
GSCK	Great Sitkin C	0.60	323		Pg	23 16 59.3	+1.3
GSCK					Sn	23 17 07.7	-1.1
ETKA	Kagalaska Isla	0.60	303		Pn	23 16 59.6	-0.1
ETKA					Sn	23 17 07.6	-1.4
GSTD	Great Sitkin T	0.63	327		Pg	23 16 59.6	+1.1
GSTD					Sn	23 17 08.3	-1.3
GSTR	Great Sitkin T	0.63	333		Pn	23 17 00.0	-0.1
GSTR					Sn	23 17 08.9	-0.8
GSSP	Great Sitkin S	0.67	327		Pg	23 17 00.3	+1.1
ADK	Adak	0.77	298		Pg	23 17 01.6	+0.5
ADK					Sg	23 17 11.5	+0.3
ADAG	Mount Adagdak	0.77	306		Pg	23 17 02.2	+1.0
ADAG					Sn	23 17 12.5	-0.6
KIRH	Kanaga Island	1.00	292		Pb	23 17 05.3	+0.5
KIWB	Kanaga Island	1.02	289		Pb	23 17 05.2	0.0
KIWB					Sb	23 17 18.3	0.0
KINC	Kanaga Island	1.04	293		Pb	23 17 05.6	+0.2
KIKV	Kanaga Island	1.04	290		Sb	23 17 18.9	0.0
ATKA	Atka Island	1.09	52		Pn	23 17 06.7	+0.4
ATKA					Sb	23 17 21.5	+1.3
KOKL	Mount Kliuchef	1.17	47		Sb	23 17 24.2	+1.7
KOWE	Korovin West	1.17	44		Pn	23 17 08.8	+1.2
KOFP	Korovin Flat P	1.18	51		Pn	23 17 09.0	+1.3
KONW	Korovin Northw	1.22	44		Pn	23 17 09.4	+1.3
KOSE	Korovin Southe	1.25	49		Pn	23 17 10.1	+1.5
TAPA	Tanaga Point A	1.41	282		Pn	23 17 11.2	+0.4
TAPA					Sn	23 17 29.0	0.0
TAFL	Tanaga Flats	1.46	280		Pn	23 17 11.8	+0.4
TAFP	Tanaga Falls P	1.53	285		Pn	23 17 13.0	+0.5
TASE	Tanaga Southea	1.55	282		Sn	23 17 33.0	+0.5
GAEA	Gareloi East	1.98	278		Pn	23 17 19.6	+0.9
GALAA	Gareloi Lava P	2.00	278		Pn	23 17 19.8	+1.0
GANE	Gareloi Northe	2.01	279		Pn	23 17 19.7	+0.8
GANE					Sn	23 17 44.2	+0.6
GAKI	Gareloi-Kavalg	2.01	272		Pn	23 17 20.3	+1.3
GANO	Gareloi North	2.02	279		Pn	23 17 19.9	+0.7
CEPE	Semis' Perret	2.99	280		Pn	23 17 33.1	+0.6
CERB	Semis' Cerberu	3.00	279		Pn	23 17 33.6	+0.9
AMKA	Amchitka	3.20	269	Pn	Pn	23 17 35.9	+0.6
AMKA					Sn	23 18 13.4	+0.4
LSPA	Little Sitkin	3.65	279		Pn	23 17 42.9	+1.3
LSPA					Sn	23 18 26.5	+2.3
LSSE	Little Sitkin	3.66	279		Pn	23 17 42.5	+0.8
CLCO	Concord Point,	3.82	69		Pn	23 17 46.0	+2.1
UNV	Unalaska Valle	5.99	64	Pn	Pn	23 18 16.5	+2.9
SPIA	Saint Paul Isl	6.46	27		Pn	23 18 21.2	+1.2
DT1	Dutton Round H	8.73	61		Pn	23 18 52.5	+1.3
DTNA	Dutton South F	8.76	60		Pn	23 18 53.0	+1.3
SDPT	Sand Point	9.79	61		Pn	23 19 05.9	+0.2
P16K	Nushagak River	12.50	46	Pn	Pn	23 19 45.9	+3.1
PLK4	Peulik 4	12.69	54	Pn	Pn	23 19 48.0	+2.5
M16K	Timber Creek	13.21	38	Pn	Pn	23 19 54.9	+2.5
ACHA	Angle Creek He	13.41	52	Pn	Pn	23 19 55.4	+0.2
ANM	Nome	14.11	18	Pn	Pn	23 20 06.0	+1.3
O18K	Koktuh Hills	14.14	46	Pn	Pn	23 20 05.8	+0.7
J16K	Anvik River	14.23	28	Pn	Pn	23 20 08.3	+2.0
Q19K	Cape Douglas,	14.49	51	Pn	Pn	23 20 09.2	-0.8
KDAK	Kodiak Island	14.66	56	Pn	Pn	23 20 09.3	-2.9
	0.8nm,0.3s,baz=263,slow=8.1,SNR=14						
KDAK				Sn	Sn	23 22 57.8	+3.7
	0.1nm,0.3s,baz=297,slow=15,SNR=2.5						
	3.8nm,0.3s						
J17K	VABM Dome	14.78	30	P	P	23 20 19.3	-0.4
L18K	Granite Mounta	14.81	36	P	P	23 20 18.7	-1.3
N19K	Bonanza Creek	14.91	43	P	Pn	23 20 18.8	+3.1
RED	Redoubt Volcan	15.49	46	Pn	Pn	23 20 24.7	+1.4
CNPM	China Poot	15.86	50	Pn	Pn	23 20 27.4	-0.8
SPU	Mount Spurr	16.13	44		Pn	23 20 33.4	+1.7
J19K	Poorman	16.31	32	P	Pn	23 20 36.5	+2.7
SLKM	Skilak Lake	16.68	48	Pn	Pn	23 20 37.2	-1.4
SKT	Skwentna	16.72	42	P	Pn	23 20 41.1	+2.1
SUA	Susitna One	16.82	44		Pn	23 20 41.2	+0.8
O22K	Cooper Landing	16.90	48	Pn	Pn	23 20 40.6	-0.7
SEW	Seward	16.90	49	Pn	Pn	23 20 38.4	-3.0
PPLA	Purkeypile	16.91	39		Pn	23 20 43.4	+1.9
PPLA				IAmb	IAmb	23 20 51.1	
	comp=Z,8.2nm,0.8s						
J20K	Nowinta River	16.93	33		Pn	23 20 42.8	+1.2
H19K	Roundabout Mou	17.11	28		Pn	23 20 45.1	+1.3
H19K				IAmb	IAmb	23 20 47.8	
	comp=Z,13nm,1.3s						
RC01	Rabbit Creek A	17.12	46	Pn	Pn	23 20 42.7	-1.4
RC01				IAmb	IAmb	23 20 59.9	
	comp=Z,20nm,1.1s						
L22K	Petersville	17.29	41		Pn	23 20 46.5	+0.3
C16K	Lisburne Hills	17.51	13		Pn	23 20 48.9	0.0
PWL	Port Wells	17.68	48	Pn	Pn	23 20 48.7	-2.3
PWL				IAmb	IAmb	23 21 18.5	
	comp=Z,22nm,1.2s						
KTH	Kantishna Hill	17.74	38		Pn	23 20 52.0	+0.1
GHO	Glory Hole Cre	17.75	44	Pn	Pn	23 20 50.4	-1.5
GHO				IAmb	IAmb	23 21 11.1	
	comp=Z,16nm,1.3s						
KNK	Knik Glacier	17.82	46	Pn	Pn	23 20 50.3	-2.4
KNK				IAmb	IAmb	23 20 56.1	
	comp=Z,24nm,1.4s						
TRF	Thorofare Moun	17.93	39		Pn	23 20 54.4	+0.1
TRF				IAmb	IAmb	23 21 05.0	
	comp=Z,17nm,1.4s						
SML	Sawmill	18.02	45	Pn	Pn	23 20 53.0	-2.2
SML				IAmb	IAmb	23 21 35.7	
	comp=Z,28nm,1.4s						
H21K	Melozitna Rive	18.30	31	P	Pn	23 20 58.4	-0.3
E19K	Redstone River	18.35	23	P	Pn	23 20 58.5	-0.7
HIN	Hinchinbrook I	18.40	50	P	P	23 20 58.4	-1.4
SCM	Sheep Creek Mo	18.47	45	P	P	23 20 58.9	-1.8
SCM				IAmb	IAmb	23 21 35.8	
	comp=Z,16nm,1.2s						
RND	Reindeer	18.48	40	P	P	23 20 59.8	-0.9
RND				IAmb	IAmb	23 21 02.6	
	comp=Z,6.2nm,0.6s						
FID	Port Fidalgo	18.51	49	P	P	23 20 57.2	-3.8
MCK	McKinley	18.60	39		P	23 21 00.3	-1.7
MCK				IAmb	IAmb	23 21 03.6	
	comp=Z,5.0nm,0.6s						
MLY	Manley	18.62	34	P	P	23 21 01.7	-0.5
G21K	Allakaket	18.66	28	P	P	23 21 02.2	-0.3
G21K				IAmb	IAmb	23 21 06.1	
	comp=Z,16nm,1.1s						
H22K	Ishtalitna Cre	18.91	31	P	P	23 21 05.3	-0.1
DHY	Denali Highway	18.93	42	P	P	23 21 04.0	-1.8
DHY				IAmb	IAmb	23 21 05.4	
	comp=Z,6.2nm,0.6s						
KLU	Klutina	18.99	47	P	P	23 21 05.1	-1.2
KLU				IAmb	IAmb	23 21 26.3	
	comp=Z,18nm,1.5s						
M24K	Tolsona, Glenn	19.08	45	P	P	23 21 06.8	-0.5
I23K	Minto, Yukon-K	19.17	35	P	P	23 21 07.2	-0.9
I23K				IAmb	IAmb	23 21 29.6	
	comp=Z,13nm,1.2s						
C19K	Lookout Ridge	19.20	17	P	P	23 21 08.0	-0.6
WRH	Wood River Hil	19.28	37	P	P	23 21 09.3	-0.1
BMRM	Bremner River	19.45	49	P	P	23 21 09.1	-2.2
BMRM				IAmb	IAmb	23 21 09.2	
	comp=Z,13nm,1.1s						
CCB	Clear Creek Bu	19.48	37		P	23 21 10.4	-1.1
N25K	Chitina, Valde	19.63	47	P	P	23 21 12.2	-1.1
N25K				IAmb	IAmb	23 21 21.1	
	comp=Z,20nm,1.4s						
HDA	Harding Lake	19.69	38	P	P	23 21 13.2	-0.7
HDA				IAmb	IAmb	23 21 14.2	
	comp=Z,7.7nm,0.7s						
PAX	Paxson	19.69	43	P	P	23 21 13.4	-0.6
PAX				IAmb	IAmb	23 21 28.6	
	comp=Z,13nm,1.4s						
IL31		19.88	37		P	23 21 15.4	-0.5
ILAR	Eielson Array	19.88	37	P	P	23 21 12.8	-3.2
	comp=Z,0.8nm,0.3s,baz=219,slow=10,SNR=37						
	comp=Z,1.4nm,0.5s						
ILAR	Eielson Array	19.88	37	P	P	23 21 15.9	-0.1
K24K	Donnelly Dome	19.89	40	P	P	23 21 14.3	-1.8
GLB	Gilahina Butte	19.95	48	P	P	23 21 16.4	-0.3
GLB				IAmb	IAmb	23 21 19.9	
	comp=Z,6.4nm,1.0s						
VRDI	Verde Repeater	20.06	49	P	P	23 21 17.6	-0.5
VRDI				IAmb	IAmb	23 21 45.8	
	comp=Z,14nm,1.4s						
H24K	Noodor Dome	20.06	34	P	P	23 21 17.0	-1.0
H24K				IAmb	IAmb	23 21 20.5	
	comp=Z,8.7nm,0.9s						
CRQM	Cirque	20.09	50	P	P	23 21 17.4	-1.1
COLD	Coldfoot	20.11	29		P	23 21 18.6	+0.1
COLD				IAmb	IAmb	23 21 23.8	
	comp=Z,11nm,0.9s						
E22K	Anaktuvuk Pass	20.25	26	P	P	23 21 19.3	-0.7
E22K				IAmb	IAmb	23 21 38.7	
	comp=Z,7.0nm,1.0s						
J25K	Salcha River,	20.39	39	P	P	23 21 19.4	-2.2
J25K				IAmb	IAmb	23 21 26.5	
	comp=Z,12nm,1.4s						
DOT	Dot Lake	20.53	42	P	P	23 21 21.9	-1.2
M26K	Nabesna, AK	20.58	46	P	P	23 21 23.6	-0.1
M26K				IAmb	IAmb	23 21 37.6	
	comp=Z,10nm,1.4s						
SCRK	Sand Creek	20.69	41		P	23 21 22.6	-2.2
BARN	Barnard Glacie	20.86	50	P	P	23 21 26.2	-0.6
BARN				IAmb	IAmb	23 21 35.5	
	comp=Z,9.1nm,1.1s						
F24K	Squaw Lake	21.00	30	P	P	23 21 27.3	-0.8
F24K				IAmb	IAmb	23 21 47.3	
	comp=Z,8.2nm,1.2s						
J26L	Joseph Creek	21.06	40	P	P	23 21 27.0	-1.8
M27K	Edge Creek, AK	21.07	46	P	P	23 21 28.9	-0.1
M27K				IAmb	IAmb	23 21 44.1	
	comp=Z,11nm,1.2s						
BCAR	Beaver Creek A	21.31	44	P	P	23 21 29.6	-1.9
BMAR	Burnt Mountain	22.02	32	P	P	23 21 37.5	-1.5
G26K	Porcupine Rive	22.05	34	P	P	23 21 37.3	-1.9
G26K				IAmb	IAmb	23 21 41.5	
	comp=Z,4.4nm,0.8s						
E25K	Arctic Village	22.07	30	P	P	23 21 38.0	-1.5
C24K	Franklin Bluff	22.15	25	P	P	23 21 39.1	-1.3
C24K				IAmb	IAmb	23 21 58.0	
	comp=Z,13nm,1.2s						
DAWY	Dawson	22.63	42		P	23 21 43.9	-1.7
DAWY				IAmb	IAmb	23 21 54.5	
	comp=Z,5.8nm,1.2s						
L29M	L29M	22.93	45	P	P	23 21 46.3	-2.5
L29M				IAmb	IAmb	23 21 53.5	
	comp=Z,8.3nm,1.5s						
K29M	Barlow Dome	23.36	44	P	P	23 21 50.7	-2.5
I29M	Ogilvie Camp,	23.46	40		P	23 21 51.2	-2.8
I29M				IAmb	IAmb	23 21 51.7	
	comp=Z,2.9nm,0.6s						
H29M	Whitestone	23.72	38	P	P	23 21 52.7	-3.8

H29M				IAmb	IAmb	23 21 56.1	
	comp=Z,7.1nm,1.1s						
J30M	Hart River	24.05	42	P	P	23 21 57.3	-2.5
J30M				IAmb	IAmb	23 22 01.1	
	comp=Z,3.7nm,0.9s						
I30M	Mount Dempster	24.19	41	P	P	23 21 58.1	-3.1
I30M				IAmb	IAmb	23 22 01.9	
	comp=Z,5.3nm,0.7s						
CRAG	Craig	25.27	64	P	P	23 22 11.4	+0.6
INK	Inuvik	26.18	34	P	P	23 22 15.8	-3.2
TIXI	Tiksi	31.50	330	LR	LR	23 36 32.4	
	comp=Z,51nm,18.1s,baz=19,slow=38						
YKAW3	Yellowknife Wh	33.65	47	P	P	23 23 22.1	-3.0
YKA	Yellowknife Ar	33.66	47	P	P	23 23 22.5	-2.7
	comp=Z,0.2nm,0.7s,baz=288,slow=9.3,SNR=5.8						
	comp=Z,0.2nm,0.7s						
H11N2	WAKE ISLAND Hy	34.60	210	T	T	00 00 07.7	
	baz=18,slow=76						
H11N3	WAKE ISLAND Hy	34.60	210	T	T	00 00 20.4	
	baz=18,slow=76						
H11N1	WAKE ISLAND Hy	34.61	210	T	T	00 00 21.1	
	baz=18,slow=76						
B08A	Colville Reser	35.58	72	P	P	23 23 41.6	-0.4
H04A	Detroit Lake	35.62	80	P	P	23 23 43.1	+0.7
H11S1	WAKE ISLAND Hy	35.81	210	T	T	00 01 39.4	
	baz=18,slow=76						
H11S2	WAKE ISLAND Hy	35.82	210	T	T	00 02 08.7	
	baz=18,slow=76						
H11S3	WAKE ISLAND Hy	35.82	210	T	T	00 02 09.2	
	baz=18,slow=76						
LYMT	Lyon Mountain	40.42	71	P	P	23 24 21.9	-1.2
PDAR	Pinedale Array	44.34	74	P	P	23 24 53.8	-1.3
	comp=Z,0.7nm,0.5s,baz=332,slow=2.9,SNR=14						
	comp=Z,0.7nm,0.5s						
TXAR	Lajitas Array	56.64	84	P	P	23 26 26.1	-1.9
	comp=Z,0.4nm,0.8s,baz=298,slow=5.8,SNR=4.9						
	comp=Z,0.4nm,0.8s						
MKAR	Makanchi Array	61.49	310	P	P	23 26 56.9	-4.4
	comp=Z,0.1nm,0.5s,baz=46,slow=6.2,SNR=5.9						
	comp=Z,0.1nm,0.5s						
BVAR	Borovoye Array	62.05	321	P	P	23 27 00.6	-4.3
	comp=Z,0.3nm,0.4s,baz=41,slow=6.6,SNR=2.9						
	comp=Z,0.3nm,0.4s						
H03N2	Juan Fernandez	119.27	108	T	T	01 46 11.7	
	baz=317,slow=77						
H03N1	Juan Fernandez	119.28	108	T	T	01 46 12.1	
	baz=317,slow=77						
H03N3	Juan Fernandez	119.28	108	T	T	01 46 23.9	
	baz=317,slow=77						
BOSA	Boshof	152.29	318	PKPbc	PKPdf	23 36 36.8	+3.1
	comp=Z,1.4nm,0.5s,baz=36,slow=1.2,SNR=6.5						

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*IDC **22** 23:30:00.6±1.2, 37°.28N×20°.91E, h0^{km}, mb3.4/6, mbtmp3.4/11, ML3.5/3, Error ellipse: s-maj=22.0km s-min=19.9km az=3.0*

*ATH **22** 23:30:03.2, 37°.20N×20°.73E, h5^{km}±1^{km}, ML3.5/11, Manual Solution by K.Orfanogiannaki First location: 2019/12/22 23:31:08, This location: 2019/12/23 05:41:20 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*

*THE **22** 23:30:04.5, 37°N±2°×2°1E±°, h0^{km}±1^{km}, M3.4/22, MLh3.4/22*

ISC 22 23:30:03.8±0.8**, 37°.22N**±0°.05×**20°.75E**±0°.04**, h22**^{km}±5^{km}**, n58, σ0^s.85**/68**, mb3.4**/5**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTHK	Lithakia	0.49	8	P	Pb	23 30 13.2	-0.6
LTHK				S	Sb	23 30 20.7	0.0
LTHK	Lithakia	0.49	8	P	Pb	23 30 12.9	-0.9
LTHK				S	Sb	23 30 19.8	-0.9
ZAK2	Zakynthos	0.58	12	P	Pb	23 30 15.2	-0.2
ZAK2				S	Sb	23 30 23.9	+0.7
KYPS	Kipseli, Zakin	0.60	6	P	Pb	23 30 15.2	-0.5
KYPS				S	Sb	23 30 23.4	-0.4
ORTH	Orthonies,Zaky	0.63	356	P	Pb	23 30 16.0	-0.3
ORTH				S	Sb	23 30 25.0	+0.3
ORTH	Orthonies,Zaky	0.63	356	P	Pb	23 30 15.8	-0.5
ORTH				S	Sb	23 30 24.8	+0.1
CLEM	Kyllini,Ilia,G	0.74	25	P	Pb	23 30 17.7	-0.3
CLEM				S	Sb	23 30 27.8	+0.2
ZARO	Zacharo	0.77	69	P	Pn	23 30 20.1	+0.7
AMT	Artemida-Makis	0.83	68	P	Pn	23 30 20.2	0.0
PYL	PYLOS	0.86	112	P	Pb	23 30 20.2	+0.1
PYL				S	Sn	23 30 33.4	+0.9
PYL	PYLOS	0.86	112	P	Pb	23 30 20.1	0.0
ITM	Ithomi	0.94	92	P	Pn	23 30 22.2	+0.4
ITM	Ithomi	0.94	92	P	Pb	23 30 21.7	+0.2
VLS	Valsamata	0.96	353	P	Pb	23 30 21.1	-0.8
VLS	Valsamata	0.96	353	P	Pb	23 30 20.6	-1.3
ARG2	Argostoli	0.98	348	P	Pb	23 30 22.2	+0.1
ARG2				S	Sn	23 30 35.7	+0.3
LXR1	Lixouri, Cepha	1.01	346	P	Pn	23 30 24.0	+1.4
RLS	Riolos of Patr	1.01	34	P	Pb	23 30 22.7	0.0
RLS	Riolos of Patr	1.01	34	P	Pb	23 30 22.6	0.0
DMLN	Damoulianata-K	1.06	344	P	Pb	23 30 24.0	+0.6
DRO	Drossia	1.06	46	P	Pb	23 30 23.8	+0.3
DRO	Drossia	1.06	46	P	Pb	23 30 23.7	+0.3
VSK1	VASILIKIADES	1.20	353	P	Pb	23 30 27.2	+1.4
FSK	Fiskardo	1.25	353	P	Pb	23 30 27.9	+1.3
VLX	Vlachokerasia	1.31	83	P	Pb	23 30 29.5	+1.7
UPR	University Cam	1.34	38	P	Pb	23 30 29.6	+1.2
AST1	Astakos	1.35	12	P	Pb	23 30 29.7	+1.3
KLV	Kalavryta, Ach	1.39	53	P	Pb	23 30 29.6	+0.6
KLV	Kalavryta, Ach	1.39	53	P	Pb	23 30 29.4	+0.3
GUR	Goura	1.46	60	P	Pb	23 30 31.2	+0.9
GUR	Goura	1.46	60	P	Pb	23 30 30.5	+0.2
DRAG	Dragano-Lefkad	1.47	355	P	Pb	23 30 31.2	+0.7
NYDR	Nydri-Lefkada	1.49	359	P	Pb	23 30 31.0	+0.1
EFP	Efpalio	1.52	37	P	Pb	23 30 32.4	+1.2
EFP	Efpalio	1.52	37	P	Pb	23 30 32.0	+0.8
PVO	Paravola	1.52	24	P	Pb	23 30 32.3	+0.9
PVO	Paravola	1.52	24	P	Pb	23 30 31.5	+0.1
LKD2	Lefkada island	1.57	358	P	Pb	23 30 33.0	+0.9
SERG	Sergoula	1.58	41	P	Pb	23 30 32.9	+0.5
ANX	Ano Chora	1.66	34	P	Pb	23 30 34.3	+0.5
ANX	Ano Chora	1.66	34	P	Pb	23 30 34.2	+0.5
AMPL	Ampelaki	1.74	12	P	Pb	23 30 35.2	+0.2
VLI	Veliai	1.82	105	P	Pb	23 30 36.6	+0.1
EVR	Evrytania	1.89	26	P	Pb	23 30 37.4	-0.3
LTK	Loutraki	1.94	65	P	Pb	23 30 37.5	-1.0
MAKR	Makrakomi, Fth	2.10	31	P	Pn	23 30 39.3	+1.6
VIL2	Platees	2.23	63	P	Pn	23 30 41.4	+1.9
IDI	Anoyia	3.87	119	Pn	Pn	23 30 59.0	-3.0
	11nm,0.8s,baz=202,slow=9.7,SNR=2.3						
IDI				Sn	Sn	23 31 45.7	-1.0
	0.8nm,0.3s,baz=316,slow=18,SNR=2.1						
VAE	Valguarnera	5.05	275	Pn	Pn	23 31 19.0	+0.7
	16nm,0.6s,baz=164,slow=21,SNR=7.5						
VAE				Sn	Sn	23 32 13.8	-2.2
	4.1nm,0.3s,baz=137,slow=23,SNR=5.9						
MLR	Muntele Rosu	9.14	24	Pn	Pn	23 32 12.8	-1.6
	0.1nm,0.3s,baz=218,slow=19,SNR=2.3						
	2.5nm,0.9s						
MMAI	Mount Meron Ar	12.71	105	Pn	Pn	23 33 02.1	-1.2
	0.1nm,0.3s,baz=285,slow=13,SNR=1.2						
	1.2nm,0.8s						
ESDC	Sonseca Array	19.49	285	P	Pn	23 34 31.6	+0.8
	baz=91,slow=12,SNR=1.3						
	0.7nm,0.7s						
HFS	Hagfors	23.37	351	P	P	23 35 10.1	-0.5
	0.8nm,0.6s,baz=176,slow=9.4,SNR=4.8						
	0.8nm,0.6s						
FINES	FINESS Array B	24.48	6	P	P	23 35 20.7	-0.3
	0.8nm,0.8s,baz=180,slow=11,SNR=4.7						
	0.8nm,0.8s						
NOA	NORSAR Array B	24.59	349	P	P	23 35 21.6	-0.5
	0.3nm,0.6s,baz=154,slow=9.3,SNR=3.8						
	0.3nm,0.6s						
TORD	Torodi Ar. Bea	29.41	220	P	P	23 36 06.7	+1.0
	0.2nm,0.5s,baz=30,slow=11,SNR=1.6						
	0.2nm,0.5s						
MKAR	Makanchi Array	45.66	58	P	P	23 38 21.9	-0.8
	0.2nm,0.6s,baz=270,slow=6.8,SNR=2.4						
	0.2nm,0.6s						
ZALV	Zalesovo Beam	46.20	47	P	P	23 38 26.6	-0.3
	0.5nm,0.4s,baz=269,slow=10,SNR=1.8						
	0.5nm,0.4s						

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*NIED **22** 23:46:11.2, 32°.59N×132°.21E, h32^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.91; $M_{\theta\theta}$0.09; $M_{\phi\phi}$1.82; $M_{r\theta}$-0.10; $M_{\theta\phi}$0.40; $M_{\phi r}$1.35; Fault plane solution: $M_0$2.34000×10^{14} NP1:ϕ_s21.00000°, δ28.00000°, λ-74.00000°. NP2:ϕ_s183.00000°, δ63.00000°, λ-99.00000°.*

JMA 22 23:46:11.2±0.0**, 32°.6N**±0°.2×**132°.2E**±0°.1**, h32**^{km}**, MD3.5**/39**, MV3.6**/39**, 8D, HYUGANADA REGION, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSKE	Saikikamae	0.33	309	⇓iP	Pb	23 46 19.0	-0.3
JSKE				⇓S	Sb	23 46 24.4	-0.4
JSKE	Saikikamae	0.33	309	A	A	23 46 19.0	
	comp=N,8.0nm,0.4s,comp=E,14nm,0.6s						
JHHC	Hyugahichiya	0.50	254	iP	Pb	23 46 21.4	-0.4
JHHC				S	Sb	23 46 28.9	-0.2
JHHC	Hyugahichiya	0.50	254	A	A	23 46 21.4	
	comp=N,5.0nm,0.4s,comp=E,7.0nm,0.5s						
JTO	Tosashimizu	0.57	61	iP	Pb	23 46 22.5	-0.3
JTO				S	Sb	23 46 30.6	-0.2
JUS	Usuki	0.61	321	iP	Pb	23 46 23.4	-0.2
JUS				S	Sb	23 46 32.1	+0.1
JUS	Usuki	0.61	321	A	A	23 46 23.4	
	comp=N,6.0nm,0.4s,comp=E,8.0nm,0.6s						
JKIT	Kitakata	0.64	273	iP	Pb	23 46 23.6	-0.4
JKIT				S	Sb	23 46 32.8	+0.1
JKIT	Kitakata	0.64	273	A	A	23 46 23.6	
	comp=N,3.0nm,0.7s,comp=E,3.0nm,0.6s						
JTSN	Tsuno	0.69	240	iP	Pn	23 46 24.2	-0.5
JTSN				S	Sb	23 46 34.0	0.0
UWA2	Uwa jima 2	0.72	29	⇓iP	Pn	23 46 24.5	-0.6
UWA2				⇓S	Sb	23 46 34.3	-0.6
UWA2	Uwa jima 2	0.72	29	A	A	23 46 24.5	
	comp=N,4.0nm,1.7s,comp=E,3.0nm,1.4s						
JNA	Nagahama	0.99	13	⇓P	Pn	23 46 28.6	-0.4
JNA				⇓S	Sn	23 46 40.9	-1.0
JKU	Kubokawa	1.02	45	⇓iP	Pn	23 46 28.9	-0.3
JKU				⇓S	Sn	23 46 41.4	-1.1
JTZ	Takazaki	1.17	235	P	Pn	23 46 31.6	+0.3
JTZ				S	Sb	23 46 48.2	+0.5
JIU3	Izumi3	1.18	269	iP	Pn	23 46 32.3	+0.8
JIU3				eS	Sb	23 46 48.0	+0.1
JET	Tanbara	1.38	30	eP	Pn	23 46 34.4	0.0

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*ISK **22** 23:58:02.2, 39°.46N×40°.03E, h5^{km}, ML4.3/15*

*AFAD **22** 23:58:03.1, 39°.47N×40°.02E, h13^{km}±1^{km}, MW4.2*

*TIF **22** 23:58:03.7, 39°.49N×40°.15E, h8^{km}±1^{km}*

*IDC **22** 23:58:04.1±0.6, 39°.50N×40°.01E, h0^{km}, mb4.1/21, mbtmp4.0/32, ML3.6/11, MS3.3/14, Error ellipse: s-maj=11.8km s-min=7.7km az=143.0*

*MOS **22** 23:58:04.4±1.1, 39°.49N×40°.14E, h14^{km}, mb4.5/16, Error ellipse: s-maj=6.1km s-min=3.8km az=95.7*

*NEIC **22** 23:58:05.9±1.9, 39°.47N±0°.05×40°.14E±0°.03, h10^{km}±1^{km}, mb4.3/30, Error ellipse: s-maj=8.8km s-min=4.3km az=169.0*

*MCSM **22** 23:58:13.0±0.9, 40°N±3°×3°9E±°, h10^{km}±3^{km}, mb4.1, mB3.2, MLv4.0, Mw(mB)1.9*

ISC 22 23:58:04.7±0.8**, 39°.47N**±0°.02×**40°.07E**±0°.02**, h4**^{km}±5^{km}**, n264, σ1^s.64**/267**, mb4.2**/44**, MS3.4**/11**, 17C-1D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EUZM	Uzumlu	0.38	310	P	Pg	23 58 10.3	-1.8
EUZM				S	Sg	23 58 16.1	-0.8
EUZM				i IAML		23 58 22.0	
	comp=E,2μm,0.8s						
TNCL	Tunceli-Merkez	0.54	230	P	Pg	23 58 13.6	-1.5
TNCL				S	Sg	23 58 22.8	+0.7
TNCL				i IAML		23 58 27.0	
	comp=E,1μm,0.8s						
TNCL				i IAML		23 58 28.0	
	comp=N,1μm,0.8s						
KOPT	Kop Dagi	0.64	31	P	Pg	23 58 16.0	-1.1
KOPT				i IAML		23 58 35.0	
	comp=E,7μm,1.0s						
KOPT				i IAML		23 58 39.0	
	comp=N,9μm,1.3s						
KOPT	Kop Dagi	0.64	31		Pg	23 58 16.1	-1.0
BNGB	Bingl	0.67	135	Pg	Pg	23 58 16.2	-1.4
BNGB				Sg	Sg	23 58 27.4	+1.1
ECAT	Cat-ERZURUM	0.71	78	P	Pg	23 58 17.2	-1.2
ECAT				S	Sg	23 58 28.8	+1.0
ECAT				i IAML		23 58 38.0	
	comp=E,1μm,0.7s						
ECAT				i IAML		23 58 42.0	
	comp=N,1μm,1.0s						
KARO	Karliova-Bingo	0.78	101	Pg	Pg	23 58 19.1	-0.5
KOVA	Elazig, Kovanc	0.79	195	P	Pg	23 58 18.3	-1.5
BAYB	BAYBURT	0.81	10	P	Pg	23 58 18.6	-1.6
BAYB				i IAML		23 58 42.0	
	comp=E,3μm,0.9s						
BAYB				i IAML		23 58 45.0	
	comp=N,3μm,1.1s						
EMRE	Erzurum,Aziziy	0.90	51	P	Pg	23 58 20.8	-1.2
EMRE				i IAML		23 58 50.0	
	comp=E,8μm,0.7s						
EMRE				i IAML		23 58 55.0	
	comp=N,7μm,0.8s						
KELT	Kelkit	0.93	318	P	Pg	23 58 19.9	-2.6
KELT				S	Sg	23 58 34.1	-0.5
KELT				i IAML		23 58 36.0	
	comp=N,3μm,0.7s						
KELT				i IAML		23 58 37.0	
	comp=E,2μm,0.7s						
BAYT	Aydıntepe-Bayb	0.93	3	Pg	Pg	23 58 21.1	-1.5
EKONA	Konakl - Erz	0.95	70	P	Pg	23 58 22.4	-0.6
EKONA				S	Sn	23 58 42.6	+3.2
EKONA				i IAML		23 58 52.0	
	comp=E,7μm,0.9s						
EKONA				i IAML		23 58 54.0	
	comp=N,5μm,1.1s						
EDAM	Erzurum-Paland	1.02	65	P	Pg	23 58 23.6	-0.7
EDAM	Erzurum-Paland	1.02	65	Pg	Pg	23 58 23.3	-1.0
EJDE	Erzurum, Palan	1.02	69	P	Pg	23 58 23.1	-1.2
EJDE				i IAML		23 58 47.0	
	comp=N,1μm,0.9s						
EJDE				i IAML		23 58 47.0	
	comp=E,2μm,0.7s						
ERZM	Erzurum	1.09	66	P	Pg	23 58 24.4	-1.3
KRIK	Erzurum-spir	1.09	37	P	Pg	23 58 24.1	-1.6
KRIK				i IAML		23 58 48.0	
	comp=N,3μm,0.9s						
KRIK				i IAML		23 58 55.0	
	comp=E,3μm,1.0s						
VRTB	Varto-Mus	1.12	105	P	Pg	23 58 25.5	-0.8
VRTB				i IAML		23 58 58.0	
	comp=N,6μm,1.0s						
VRTB				i IAML		23 59 05.0	
	comp=E,2μm,1.2s						
VRTB	Varto-Mus	1.12	105	Pn	Pg	23 58 25.4	-0.8
ILIC	ilic-Erzincan	1.16	270	Pn	Pg	23 58 24.6	-2.4
ILIC				Sn	Sg	23 58 42.2	+0.1
AKDA	Akdag	1.18	57	P	Pg	23 58 25.5	-1.9
AKDA				S	Sn	23 58 45.7	+0.7
AKDA				i IAML		23 58 52.0	
	comp=N,8μm,1.0s						
AKDA				i IAML		23 58 56.0	
	comp=E,1μm,0.9s						
SVRC	Sivrice-ELAZID	1.24	209	Pn	Pg	23 58 26.1	-2.4
ELZG	Elazig	1.28	222	P	Pg	23 58 26.7	-2.7
ALUC	Giresun/Alucra	1.33	312	P	Pn	23 58 27.8	-2.5
ALUC				i IAML		23 58 58.0	
	comp=N,4μm,0.8s						
ALUC				i IAML		23 59 03.0	
	comp=E,5μm,0.8s						
MUSM	Mu-Merkez	1.34	123	P	Pn	23 58 28.6	-1.8
IZDR	Rize	1.37	16	P	Pn	23 58 28.7	-2.0
IZDR				i IAML		23 58 56.0	
	comp=E,1μm,0.8s						
IZDR				i IAML		23 58 58.0	
	comp=N,1μm,0.7s						
ARPR	Arapgir-MALATY	1.40	255	Pn	Pn	23 58 29.4	-1.8
ARPR	Arapgir-MALATY	1.40	255	Pn	Pn	23 58 30.9	-0.2
KOPR	Koprukoy-ERZUR	1.47	69	Pn	Pn	23 58 31.2	-1.1
SVAN	Silvan-Diyarba	1.58	146	P	Pn	23 58 33.4	-0.2
SVAN	Silvan-Diyarba	1.58	146	Pn	Pn	23 58 32.9	-0.7
SUSE	Susehri	1.62	298	P	Pn	23 58 33.2	-1.0
CHOM	Cayeli-Rize	1.71	18	Pn	Pn	23 58 34.9	-0.5
MAYA	Malatya/Merkez	1.71	229	P	Pn	23 58 33.4	-2.1
HEKM	Malatya_Hekimh	1.74	251	P	Pn	23 58 35.8	-0.1
GURO	Guroymak-BITLI	1.78	120	Pn	Pn	23 58 36.0	-0.5
GURO	Guroymak-BITLI	1.78	120		Pn	23 58 36.2	-0.2
NARI	Adyaman-Kaht	1.88	213	P	Pn	23 58 37.6	-0.1
DDEM	Demirkent	1.92	42	P	Pn	23 58 37.2	-1.2
MLAZ	Malazgirt-MUS	1.95	99	Pn	Pn	23 58 38.3	-0.5
DBAD	Bademkaya	1.99	38	P	Pn	23 58 38.2	-1.1
AKCD	Akcadag	2.04	236	P	Pn	23 58 39.2	-0.8
SENK	Senkaya-Erzuru	2.07	57	Pn	Pn	23 58 40.1	-0.3
MARD	Mardin	2.22	165		Pn	23 58 42.7	+0.2
AGRB	Hanur-Agry	2.26	86	Pn	Pn	23 58 42.9	-0.2
ORDU	Ordu-Boztepe	2.28	313	P	Pn	23 58 43.7	+0.5
SCER	sogukcermik	2.30	281	P	Pn	23 58 43.7	0.0
SVSK	Karacayir	2.41	282	Pn	Pn	23 58 44.2	-0.8
KARS	Kars	2.59	62		Pn	23 58 46.8	-0.7
KARS	Kars	2.59	62	P	Pn	23 58 46.8	-0.7
TOKT	Tokat	2.84	289	Pn	Pn	23 58 50.2	-0.8
TOKA	Tokat	2.89	288		Pn	23 58 52.0	+0.3
GAZ	Gaziantep	3.21	225		Pn	23 58 56.3	+0.3
BGD	Bogdanovka	3.24	55	P	Pb	23 59 02.8	-0.2
BGD	Bogdanovka	3.24	55	eP	Pb	23 59 02.7	-0.2
BNN	Bunyan	3.34	261		Pn	23 58 58.9	+1.0
TKB	Tkibuli	3.64	37	P	Pn	23 59 02.4	+0.5
TKB	Tkibuli	3.64	37	eP	Pn	23 59 02.3	+0.5
TRLG	Trialeti	3.71	55	P	Pn	23 59 03.5	+0.6
TRLG	Trialeti	3.71	55	eP	Pn	23 59 03.5	+0.6
SOC	Sochi	4.12	356	eP	Pn	23 59 08.8	+0.3
SOC				pmax	pmax		
	comp=Z,112nm,0.7s						
SOC				MLR	MLR		
	comp=Z,307nm,15.0s						
TBLG	Delisi	4.21	56	P	Pn	23 59 10.4	+0.6
TBLG	Delisi	4.21	56	eP	Pn	23 59 10.4	+0.6
NEUR	Neytrino	4.28	27	iP	Pn	23 59 10.1	-0.7
DGRG	David-gareji	4.51	62	P	Pn	23 59 15.4	+1.5
DGRG	David-gareji	4.51	62	eP	Pn	23 59 15.3	+1.5
SHA1	Shidzhatmaz	4.69	24	iP	Pn	23 59 15.8	-0.7
KBZ	Khabaz	4.76	26	Pn	Pn	23 59 18.4	+1.2
	comp=Z,0.4nm,0.3s,baz=148,slow=4.1,SNR=11						
KBZ				Lg	Lg	00 00 35.8	
	baz=218,slow=19						
KBZ				LR	LR	00 01 19.2	
	comp=Z,202nm,18.7s,baz=208,slow=41						
	comp=Z,2.3nm,0.5s						
KBZ	Khabaz	4.76	26	ceP	Pn	23 59 16.3	-0.9
KIV	Kislovodsk	4.89	23	eP	Pn	23 59 19.8	+0.6
KIV				pmax	pmax		
	comp=Z,22nm,1.0s						
KIV				MLR	MLR		
	comp=Z,26nm,7.0s						
KVAR	Kislovodsk Arr	4.90	23	Pn	Pn	23 59 21.1	+1.9
	baz=270,slow=18						
KVAR				Lg	Lg	00 00 36.1	
	baz=273,slow=14						
	comp=Z,7.1nm,0.4s						
BR104	Keskin Array S	4.97	275	Pn	Pn	23 59 20.6	+0.3
BR131	Keskin Array S	4.97	275		Pn	23 59 20.3	-0.1
BR131	Keskin Array S	4.97	275	P	Pn	23 59 20.3	-0.1
BRTR	Keskin Array B	4.97	275	Pn	Pn	23 59 20.6	+0.3
	comp=Z,0.7nm,0.3s,baz=106,slow=14,SNR=26						
BRTR				Lg	Lg	00 00 42.3	
	baz=104,slow=22						
	comp=Z,6.2nm,0.7s						
BR105	Keskin Array S	4.99	275	Pn	Pn	23 59 20.9	+0.3
BR106	Keskin Array S	4.99	275	Pn	Pn	23 59 20.7	+0.1
ILGA	Ilgaz	5.11	290	Pn	Pn	23 59 23.6	+1.3
VSHL	Vashlovani	5.15	68	P	Pn	23 59 27.3	+4.7
LABN	Labinsk	5.20	5	eP	Pn	23 59 23.2	0.0
LABN				pmax	pmax		
	comp=Z,56nm,0.8s						
BZK	Bozkurt	5.24	300		Pn	23 59 27.7	+3.9
ANTO	Ankara	5.63	276	Pn	Pn	23 59 31.3	+2.0
ANTO	Ankara	5.63	276	P	Pn	23 59 31.3	+2.0
ANTO	Ankara	5.63	276	Pn	Pn	23 59 30.4	+1.1
	comp=Z,0.2nmcomp=Z,36nm,1.1s						
ANN	Anapa	5.68	341	eP	Pn	23 59 35.0	+5.2
ANN				pmax	pmax		
	comp=Z,93nm,1.0s						
ANN				MLR	MLR		
	comp=E,215nm,11.0s						
ANN				MLR	MLR		
	comp=N,323nm,12.0s						
ANN				MLR	MLR		
	comp=Z,293nm,13.0s						
BEIL	Beino	5.81	214	eP	Pn	23 59 33.0	+1.2
FKH	Fakeheh	5.98	210	eP	Pn	23 59 34.9	+0.7
GOF	Gofitskoye	6.01	21	ceP	Pn	23 59 31.7	-2.7
GOF				eS	Sb	00 00 54.6	-7.6
HWQ	Hawqa	6.14	214	eP	Pn	23 59 37.4	+1.1
ERBR	Yeremizino-Bor	6.25	3	eP	Pn	23 59 38.6	+0.8
ERBR				pmax	pmax		
	comp=Z,41nm,0.8s						
ERBR				MLR	MLR		
	comp=N,157nm,11.0s						
ERBR				MLR	MLR		
	comp=E,497nm,10.0s						
ERBR				MLR	MLR		
	comp=Z,175nm,11.0s						
ZAHL	Zahle	6.53	212	eP	Pn	23 59 43.7	+2.0
FEO	Feodosiya	6.54	329	eP	Pn	23 59 43.0	+1.3
FEO				eS	Sn	00 01 00.0	+3.2
BHL	Bhannes	6.59	214	eP	Pn	23 59 43.7	+1.2
SUDU	Sudak	6.60	327	eP	Pn	23 59 45.5	+3.0
SUDU				eS	Sn	00 01 03.1	+5.0
YAL	Yalta	6.68	321	eP	Pn	23 59 45.5	+2.0
YAL				eS	Sn	00 01 07.3	+7.3
DQRL	Deir Qamar	6.79	214	eP	Pn	23 59 46.2	+0.9
RCY	Rachaya	6.86	211	eP	Pn	23 59 49.2	+2.9
QRWL	Qaraoun	6.88	212	eP	Pn	23 59 48.8	+2.3
MDUB	Mudurnu	6.89	281		Pn	23 59 47.8	+1.2
SEV	Sevastopol'	6.96	319	eP	Pn	23 59 51.6	+4.1
SEV				eS	Sn	00 01 13.2	+6.1
CSS	Mathiatis	7.01	232		Pn	23 59 48.7	+0.6
CSS	Mathiatis	7.01	232	Pn	Pn	23 59 51.9	+3.7
	comp=Z,0.1nmcomp=Z,17nm,0.9s						
SHBL	Chebaa	7.03	211	eP	Pn	23 59 51.0	+2.5
BORA	Eskisehir	7.43	276	Pn	Pn	23 59 55.6	+1.6
MMAI	Mount Meron Ar	7.46	212	Pn	Pn	23 59 55.6	+1.2
	comp=Z,0.9nm,0.3s,baz=45,slow=11,SNR=8.7						
MMAI				Lg	Lg	00 02 01.4	
	baz=15,slow=22						
MMAI				LR	LR	00 03 01.1	
	comp=Z,53nm,20.0s,baz=35,slow=40						
	comp=Z,17nm,1.0s						
ASF	Jabal al Asfar	7.72	200	Pn	Pn	23 59 59.4	+1.4
	comp=Z,0.7nm,0.3s,baz=355,slow=22,SNR=21						
ASF				Lg	Lg	00 02 09.9	
	comp=Z,0.2nm,0.3s,baz=175,slow=23,SNR=3.7						
ASF				LR	LR	00 03 25.9	
	comp=Z,161nm,18.8s,baz=12,slow=42						
	comp=Z,5.1nm,0.6s						
EIL	Elat	10.64	205	Pn	Pn	00 00 39.5	+1.5
	comp=Z,0.1nm,0.3s,baz=9.2,slow=18,SNR=1.8						
EIL				Lg	Lg	00 03 41.4	
	comp=Z,0.1nm,0.3s,baz=164,slow=20,SNR=1.0						
EIL				LR	LR	00 04 46.6	
	comp=Z,132nm,21.5s,baz=358,slow=38						
	comp=Z,2.0nm,0.6s						
VORD	Divnogorie	11.51	358	eP	Pn	00 00 48.4	-1.4
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR	Storozhevoye	11.77	357	eP	Pn	00 00 50.7	-2.6
VSR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VRH	Novokhopyorsk	11.79	5	eP	Pn	00 00 53.2	-0.4
VRH				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MLR	Muntele Rosu	12.03	305	Pn	Pn	00 00 58.9	+1.8
	comp=Z,0.1nm,0.3s,baz=120,slow=20,SNR=1.4						
	comp=Z,0.8nm,0.5s						
VORR	Voronezh	12.22	357	eP	Pn	00 00 59.9	+0.4
VORR				pmax	pmax		
	comp=Z,25nm,0.5s						
KMPD	K-Podol'skiy	13.35	317	Pn	Pn	00 01 17.7	+2.8
AK07	Malin Array Si	13.47	329	Pn	Pn	00 01 20.3	+3.8
AK09	Malin Array Si	13.49	329	Pn	Pn	00 01 19.7	+2.9
AK10	Malin Array Si	13.49	329	Pn	Pn	00 01 19.7	+2.9
AK06	Malin Array Si	13.50	329	Pn	Pn	00 01 20.1	+3.2
BUR08	Bucovina Ar. S	13.51	312		Pn	00 01 17.6	+0.4
AK08	Malin Array Si	13.52	329	Pn	Pn	00 01 19.7	+2.6
AK05	Malin Array Si	13.52	329	Pn	Pn	00 01 19.7	+2.4
AK02	Malin Array Si	13.55	329	Pn	Pn	00 01 20.1	+2.4
AK14	Malin Array Si	13.57	329	Pn	Pn	00 01 20.5	+2.6
AKASG	Malin Array Be	13.58	329	Pn	Pn	00 01 16.5	-1.5
	comp=Z,1.1nm,0.3s,baz=150,slow=10,SNR=8.6						
AKASG				LR	LR	00 06 33.8	

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      comp=Z,92nm,18.4s,baz=150,slow=38
      comp=Z,0.8nm,0.4s
AKASG Malin Array Be   13.58 329ceP     Pn     00 01 18.5 +0.5
AKBB  Malin Array Si   13.58 329ceP     Pn     00 01 17.4 -0.6
LUBAR Lubar, Ukraine   13.62 324 Pn     Pn     00 01 20.5 +2.0
AK18  Malin Array Si   13.66 329 Pn     Pn     00 01 21.4 +2.3
AK22  Malin Array Si   13.69 329 Pn     Pn     00 01 21.9 +2.4
BELG  Belogornoye      13.95  20 Pn     Pn     00 01 22.2 -0.8
      comp=Z,0.3nm,0.3s,baz=142,slow=19,SNR=2.4
      comp=Z,3.2nm,0.6s
BELG  Belogornoye      13.95  20 i P    Pn     00 01 22.7 -0.3
BELG                             pmax   pmax
      comp=Z,1.0nm,0.9s
OBN   Obninsk          15.83 353 Pn     Pn     00 01 44.9 -3.4
      comp=Z,1.3nm,0.3s,baz=121,slow=20,SNR=3.1
      comp=Z,8.3nm,0.5s
OBN   Obninsk          15.83 353 IAmb   IAmb   00 01 51.1
      comp=Z,23nm,0.6s
OBN   Obninsk          15.83 353⇑eP     Pn     00 01 47.8 -0.5
OBN                             i S     Sn     00 04 47.8 +3.8
OBN                              pmax   pmax
      comp=Z,16nm,0.8s
OBN                              MLR    MLR
      comp=Z,96nm,16.0s
MOS   Moscow           16.36 355 eP     Pn     00 01 52.0 -3.1
RAYN  Ar Rayn          16.55 162        Pn     00 01 56.4 -1.4
RAYN  Ar Rayn          16.55 162 P      Pn     00 01 56.4 -1.4
RAYN                             pmax   pmax
      comp=Z,3.0nm,0.9s
STHS  Stebnicka Huta   16.68 313 eP     P      00 02 02.9 +1.2
AKTO  Aktyubinsk       16.74  43 Pn     Pn     00 01 57.4 -2.6
      comp=Z,0.2nm,0.3s,baz=252,slow=9.6,SNR=6.0
AKTO                             Lg     Lg     00 06 55.0
      comp=Z,0.2nm,0.3s,baz=205,slow=19,SNR=1.4
      comp=Z,0.9nm,0.4s
PSZ   Piszkesteto      16.82 307 P      Pn     00 02 00.6 -0.5
PSZ   Piszkesteto      16.82 307 P      Pn     00 02 00.6 -0.5
PSZ                              pmax   pmax
      comp=Z,6.0nm,1.0s
MNK   Minsk            17.15 335 i P    Pn     00 02 05.8 +0.7
MNK                              i S    Sn     00 05 17.2 +1.2
MNK                              pmax   pmax
      comp=Z,13nm,0.7s
MNK                              pmax   pmax
      comp=E,10.0nm,0.7s
MNK                              pmax   pmax
      comp=N,13nm,0.8s
MNK                              MLR    MLR
      comp=N,71nm,13.0s
MNK                              MLR    MLR
      comp=Z,92nm,14.0s
MNK                              MLR    MLR
      comp=E,86nm,15.0s
AB31  Akbulak array    17.21  49        Pn     00 02 03.9 -2.0
ABKAR Akbulak array    17.21  49        Pn     00 02 04.2 -1.7
SUW   Suwalki          18.52 327        Pn     00 02 23.1 +1.1
SUW   Suwalki          18.52 327 P      Pn     00 02 23.1 +1.1
JAVC  Velka Javorina   18.55 308 eP     Pn     00 02 23.6 +1.0
MODS  Modra-Piesok     18.62 306 eP     Pn     00 02 25.3 +1.9
MAUC  Maruska          18.66 309 eP     Pn     00 02 24.9 +1.1
STEB  Steborice        18.92 311 eP     Pn     00 02 27.3 +0.3
MORC  Moravsky Berou   18.99 310        Pn     00 02 28.2 +0.3
MORC  Moravsky Berou   18.99 310 eP     P      00 02 26.7 -0.5
MORC  Moravsky Berou   18.99 310 P      Pn     00 02 28.2 +0.3
MORC                             pmax   pmax
      comp=Z,5.0nm,1.1s
RONA  Rosalia, Austr   19.03 303 ePn    Pn     00 02 29.0 +0.6
      comp=Z,4.0nm,0.9s
VRAC  Vranov           19.38 308 eP     P      00 02 30.1 -1.3
CONA  Conrad Observa   19.38 304 eP     P      00 02 32.1 +0.5
      comp=Z,31nm,1.3s
KRUC  Moravsky         19.41 307 eP     P      00 02 30.9 -0.9
ARSA  Arzberg          19.41 302 eP     P      00 02 31.5 -0.3
      comp=Z,6.8nm,1.3s
UOSS  Minazif          19.85 132        P      00 02 36.2 -0.5
UOSS                             IAmb   IAmb   00 02 41.5
      comp=Z,10.0nm,0.8s
DPC   Dobruska-Polom   19.94 311 eP     Pn     00 02 41.1 +1.8
DPC   Dobruska-Polom   19.94 311 eP     Pn     00 02 41.1 +1.8
DPC   Dobruska-Polom   19.94 311 P      Pn     00 02 40.1 +0.8
      comp=Z,7.4nm,2.9s
DPC                              pP     sP     00 02 43.0 +2.9
      comp=Z,7.4nm,2.9s
KIRV  Kirov            20.06  14 P      P      00 02 36.1 -2.6
      comp=Z,9.3nm,0.4s,baz=222,slow=1.7,SNR=4.1
KIRV  Kirov            20.06  14ceP     P      00 02 37.5 -1.2
OSTC  Ostas            20.09 311 eP     Pn     00 02 42.7 +1.7
OSTC  Ostas            20.09 311 eP     Pn     00 02 42.7 +1.7
KSP   Ksiaz            20.17 312 P      Pn     00 02 42.1 +0.3
      comp=Z,11nm,1.2s
KSP                              pP     sP     00 02 45.4 +2.9
      comp=Z,11nm,1.2s
UPC   Upice            20.19 311 eP     Pn     00 02 43.2 +1.1
UPC   Upice            20.19 311 eP     Pn     00 02 43.2 +1.1
CHVC  Chvalec          20.20 311 eP     P      00 02 40.8 +0.4
CHVC  Chvalec          20.20 311 eP     P      00 02 40.8 +0.4
MOA   Molln            20.39 303 eP     P      00 02 43.5 +1.0
      comp=Z,16nm,1.2s
CKRC  Cesky Krumlov    20.63 305 eP     P      00 02 46.3 +1.2
CKRC  Cesky Krumlov    20.63 305 eP     P      00 02 46.3 +1.2
BIOA  Bad Ischl, Aus   20.76 302 eP     P      00 02 46.9 +0.4
      comp=Z,7.4nm,0.7s
ARTI  Arti             20.80  29 P      P      00 02 46.2 -0.6
      comp=Z,8.5nm,0.6s,baz=220,slow=7.0,SNR=19
ARTI                             Lg     Lg     00 08 54.1
      comp=Z,0.1nm,0.3s,baz=143,slow=20,SNR=1.8
      comp=Z,8.5nm,0.6s
ARTI  Arti             20.80  29        P      00 02 46.9 +0.1
ARTI                             IAmb   IAmb   00 02 52.6
      comp=Z,15nm,0.6s
ARTI  Arti             20.80  29d iP    P      00 02 46.7 -0.1
ARTI                                           00 03 03.0
ARTI                             S      S      00 06 40.4 +1.2
ARTI                             SS     SnSn   00 06 58.9 +0.1
ARTI                             pmax   pmax
      comp=Z,10.0nm,0.7s
KBA   Koelnbreinsper   20.82 300 ePn    Pn     00 02 49.4 -0.4
      comp=Z,19nm,0.7s
PRU   Pruhonice        20.87 309 eP     P      00 02 48.9 +1.3
PRU   Pruhonice        20.87 309 eP     P      00 02 48.9 +1.3
ZVC   Zvikov           20.90 307 eP     P      00 02 49.1 +1.2
GEC2  GERESS Array S   21.02 305 P      P      00 02 49.7 +0.3
GEC2                             IAmb   IAmb   00 03 02.3
      comp=Z,7.5nm,1.2s
GERES GERESS Array B   21.02 305 P      P      00 02 48.0 -1.4
      comp=Z,3.3nm,1.1s,baz=117,slow=7.9,SNR=6.6
      comp=Z,3.3nm,1.1s
GERES GERESS Array B   21.02 305 P      P      00 02 48.0 -1.4
STAL  STALIGIAL        21.11 298 P      P      00 02 50.1 -0.1
STAL                             IAmb   IAmb   00 03 00.7
      comp=Z,20nm,1.2s
KHC   Kasperske Hory   21.18 306        P      00 02 51.4 +0.4
KHC   Kasperske Hory   21.18 306ceP     P      00 02 52.3 +1.2
KHC                              pmax   pmax
      comp=Z,8.0nm,1.3s
KHC   Kasperske Hory   21.18 306 eP     P      00 02 51.0 -0.1
CIMO  Cimolais         21.30 298 P      P      00 02 52.6 +0.3
CIMO                             IAmb   IAmb   00 03 09.5
      comp=Z,12nm,1.2s
ABTA  Abfaltersbach    21.32 299 eP     P      00 02 53.1 +0.5
      comp=Z,11nm,1.3s
LESA  Schwarzleotal    21.34 301 ePn    P      00 02 54.8 +1.9
      comp=Z,16nm,1.2s
KLMR  Klimovskoe       21.42 359 eP     P      00 02 51.6 -1.8
KLMR                             pmax   pmax
      comp=Z,53nm,1.5s
TEOL  Teolo            21.71 295        P      00 02 56.9 +0.2
CTI   Castel Tesino    21.81 297 P      P      00 02 57.8 -0.1
CTI                              IAmb   IAmb   00 03 35.3
      comp=Z,7.8nm,1.0s
CTI   Castel Tesino    21.81 297 P      P      00 02 57.8 -0.1
CTI                              pmax   pmax
      comp=Z,8.0nm,1.0s
SVE   Sverdlovsk       21.99  31 eP     P      00 02 59.5 -0.1
SVE                              pmax   pmax
      comp=Z,20nm,1.1s
WATA  Walderalm        22.06 300 eP     P      00 03 02.5 +1.9
      comp=Z,11nm,1.0s
CLL   Collm            22.26 311        P      00 03 02.1 -0.4
CLL                              IAmb   IAmb   00 03 06.3
      comp=Z,14nm,1.0s
CLL   Collm            22.26 311 i P    P      00 03 03.8 +1.3
CLL                              pmax   pmax
      comp=Z,20nm,1.2s
CLL   Collm            22.26 311 P      P      00 03 04.7 +2.2
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      comp=Z,13nm,1.4s
CLL   Collm            22.26 311 i P    P      00 03 03.8 +1.3
      comp=Z,20nm,1.2s
FETA  Feichten         22.57 299 eP     P      00 03 05.6 -0.6
      comp=Z,3.0nm,0.7s
GRA1  Grafenberg Arr   22.82 306 P      P      00 03 08.6 +0.1
GRF   Grafenberg Arr   22.82 306 P      P      00 03 08.6 +0.1
GRF                              pmax   pmax
      comp=Z,25nm,0.9s
FUORN Ofenpass-Fuorn   22.83 298 P      P      00 03 10.8 +1.8
FUORN                            IAmb   IAmb   00 03 15.5
      comp=Z,6.2nm,1.0s
DAVA  Damuels          23.19 300 eP     P      00 03 12.2 -0.4
      comp=Z,13nm,1.3s
FIA1  FINESS Array S   23.64 343 P      P      00 03 17.8 +1.1
FINES FINESS Array B   23.64 343 P      P      00 03 16.9 +0.2
      comp=Z,4.6nm,0.7s,baz=144,slow=8.1,SNR=16
FINES                            LR     LR     00 12 47.0
      comp=Z,127nm,18.5s,baz=234,slow=37
      comp=Z,4.6nm,0.7s
KEST  Kesra            24.57 271 P      P      00 03 25.9 +0.1
      comp=Z,6.7nm,1.0s,baz=111,slow=14,SNR=2.4
      comp=Z,6.7nm,1.0s
KEST  Kesra            24.57 271 IAmb   IAmb   00 03 30.5
      comp=Z,16nm,1.1s
BORK  Borovoye         24.72  47        P      00 03 27.1 +0.2
BORK                             IAmb   IAmb   00 03 29.2
      comp=Z,5.9nm,1.0s
BORK  Borovoye         24.72  47ceP     P      00 03 25.7 -1.2
BORK                             pmax   pmax
      comp=Z,15nm,2.5s
BVAR  Borovoye Array   24.75  47 P      P      00 03 27.2  0.0
      comp=Z,5.3nm,1.0s,baz=242,slow=6.2,SNR=13
      comp=Z,5.3nm,1.0s
BNI   Bardonecchia     25.22 294        P      00 03 31.8 +0.1
BNI   Bardonecchia     25.22 294 P      P      00 03 31.8 +0.1
BNI                              pmax   pmax
      comp=Z,20nm,1.1s
WLF   Walferdange      26.02 304 P      P      00 03 39.0 +0.2
WLF                              IAmb   IAmb   00 04 09.2
      comp=Z,10nm,1.0s
WLF   Walferdange      26.02 304 P      P      00 03 39.0 +0.2
WLF                              pmax   pmax
      comp=Z,10.0nm,1.0s
AAK   Ala-Archa        26.05  72 LR     LR     00 16 14.4
      comp=Z,52nm,19.1s,baz=289,slow=42
HFS   Hagfors          26.47 330 P      P      00 03 42.0 -0.6
      comp=Z,8.4nm,1.0s,baz=147,slow=6.7,SNR=7.1
HFS                              LR     LR     00 16 04.3
      comp=Z,145nm,20.3s,baz=256,slow=41
      comp=Z,8.4nm,1.0s
NOA   NORSAR Array B   27.99 330 P      P      00 03 55.5 -0.9
      comp=Z,0.7nm,0.8s,baz=125,slow=9.1,SNR=3.4
NOA                              LR     LR     00 15 28.5
      comp=Z,46nm,19.5s,baz=260,slow=37
      comp=Z,0.7nm,0.8s
KURBB Kurchatov Arra   29.06  55 P      P      00 04 06.2 +0.3
      comp=Z,1.0nm,0.6s,baz=268,slow=9.7,SNR=5.8
      comp=Z,1.0nm,0.6s
KURK  Kurchatov        29.13  54 P      P      00 04 06.2 -0.4
KURK  Kurchatov        29.13  54 IAmb   IAmb   00 04 15.8
      comp=Z,2.9nm,1.1s
KURK  Kurchatov        29.13  54ceP     P      00 04 06.9 +0.3
KURK                             pmax   pmax
      comp=Z,2.0nm,0.8s
FURI  Furi             30.46 183 LR     LR     00 16 43.0
      comp=Z,58nm,18.1s,baz=5.0,slow=37
ARCES ARCESS Array B   31.11 350 P      P      00 04 24.0  0.0
      comp=Z,3.4nm,0.8s,baz=144,slow=8.7,SNR=6.3
      comp=Z,3.4nm,0.8s
ARCES ARCESS Array B   31.11 350 IAmb   IAmb   00 04 58.5
      comp=Z,3.8nm,0.9s
ARCES ARCESS Array B   31.11 350 P      P      00 04 24.0  0.0
MKAR  Makanchi Array   31.37  63 P      P      00 04 27.1 +0.7
      comp=Z,1.1nm,0.7s,baz=3.8,slow=3.6,SNR=5.0
      comp=Z,1.1nm,0.7s
MKAR  Makanchi Array   31.37  63ceP     P      00 04 26.7 +0.2
MKAR                             pmax   pmax
      comp=Z,1.0nm,0.9s
EKA   Eskdalemuir Ar   32.67 314 P      P      00 04 36.9 -0.8
      comp=Z,3.6nm,0.7s,baz=105,slow=8.4,SNR=10
      comp=Z,3.6nm,0.7s
ZALV  Zalesovo Beam    33.32  49 P      P      00 04 43.2 -0.2
      comp=Z,1.0nm,0.6s,baz=266,slow=5.9,SNR=6.6
ZALV                             LR     LR     00 20 12.2
      comp=Z,58nm,18.0s,baz=345,slow=40
      comp=Z,1.0nm,0.6s
ESDC  Sonseca Array    33.69 285 P      P      00 04 45.0 -1.9
      comp=Z,2.1nm,0.9s,baz=75,slow=8.0,SNR=10
      comp=Z,2.1nm,0.9s
DGZ   Jazzator, Alta   34.72  57 i P    P      00 04 55.2 -0.7
DGZ                              pmax   pmax
      comp=Z,4.0nm,1.2s
WMQ   Urumqi           35.47  67 eP     P      00 05 04.0 +1.7
WMQ                              LR     LR
      comp=Z,76nm,18.9s
NRIK  Noril'sk         38.97  25 P      P      00 05 31.6  0.0
      comp=Z,3.2nm,0.8s,baz=275,slow=6.1,SNR=6.4
      comp=Z,3.2nm,0.8s
NRIK  Noril'sk         38.97  25        P      00 05 32.3 +0.8
NRIK                             IAmb   IAmb   00 05 36.4
      comp=Z,3.4nm,0.8s
NRIK  Noril'sk         38.97  25 i P    P      00 05 31.5  0.0
NRIK                             pmax   pmax
      comp=Z,4.0nm,1.0s
MBAR  Mbarara          40.78 194 LR     LR     00 24 03.2
      comp=Z,70nm,18.3s,baz=348,slow=38
TORD  Torodi Ar. Bea   42.76 243 P      P      00 06 01.9 -1.5
      comp=Z,1.8nm,0.8s,baz=44,slow=8.9,SNR=6.9
      comp=Z,1.8nm,0.8s
TORD  Torodi Ar. Bea   42.76 243 P      P      00 06 02.6 -0.8
SHL   Shillong         45.26  92        P      00 06 16.4 -7.2
SONM  Songino Array    47.37  57 P      P      00 06 39.3 -0.6
      comp=Z,0.5nm,0.8s,baz=282,slow=7.8,SNR=3.9
SONM                             LR     LR     00 29 30.4
      comp=Z,93nm,19.1s,baz=290,slow=40
      comp=Z,0.5nm,0.8s
ULN   Ulaanbaatar      47.79  57 P      P      00 06 43.1 -0.1
ULN                              IAmb   IAmb   00 06 45.0
      comp=Z,4.0nm,1.0s
ULN   Ulaanbaatar      47.79  57ceP     P      00 06 42.3 -1.0
ULN                              pmax   pmax
      comp=Z,6.0nm,1.3s
PZH   PanZhiHua        52.40  85 P      P      00 07 18.5  0.0
TIXI  Tiksi            52.73  23ceP     P      00 07 19.8 -0.3
TIXI                             pmax   pmax
      comp=Z,5.0nm,1.7s
HHC   Hu-ho-hao-te     53.21  64 eP     P      00 07 22.9 -1.4
HHC                              pmax   pmax
      comp=Z,5.0nm,0.6s
HHC                              pmax   pmax
      comp=Z,190nm,5.4s
CMAR  Chiang Mai Arr   54.62  95 P      P      00 07 34.1 -0.6
      comp=Z,0.4nm,0.3s,baz=302,slow=8.3,SNR=4.9
CMAR                             LR     LR     00 33 54.2
      comp=Z,25nm,18.2s,baz=105,slow=39
      comp=Z,0.4nm,0.3s
CMAR  Chiang Mai Arr   54.62  95ceP     P      00 07 35.5 +0.8
CMAR                             pmax   pmax
      comp=Z,1.0nm,0.3s
HILR  Hailar Array B   55.20  51 P      P      00 07 39.4 +0.8
      comp=Z,1.2nm,0.7s,baz=261,slow=5.9,SNR=5.0
      comp=Z,1.2nm,0.7s
YAK   Yakutsk          55.89  35ceP     P      00 07 43.5 +0.3
YAK                              pmax   pmax
      comp=Z,8.0nm,0.7s
TULEG Thule            56.17 345 P      P      00 07 44.9 -0.2
TULEG                            IAmb   IAmb   00 07 45.5
      comp=Z,4.4nm,0.8s
HEH   HeiHe            59.44  48 eP     P      00 08 09.0 +0.6
SEY   Seymchan         64.63  28 P      P      00 08 43.6 +0.5
      comp=Z,7.6nm,0.8s,baz=300,slow=6.4,SNR=9.2
      comp=Z,7.6nm,0.8s
SEY   Seymchan         64.63  28ceP     P      00 08 44.9 +1.8
SEY                              pmax   pmax
      comp=Z,40nm,2.5s
BILL  Bilibino         65.51  19 i P    P      00 08 49.1 +0.4
BILL                             pmax   pmax
      comp=Z,5.0nm,1.0s
BILL                             MLR    MLR
      comp=Z,92nm,16.0s
BOSA  Boshof           69.12 194 P      P      00 09 12.7 +0.6
      comp=Z,3.5nm,0.9s,baz=37,slow=2.8,SNR=4.0
      comp=Z,3.5nm,0.9s
BOSA  Boshof           69.12 194 P      P      00 09 12.0 -0.1
BOSA  Boshof           69.12 194 P      P      00 09 12.0 -0.1
BOSA                             pmax   pmax
      comp=Z,5.0nm,1.1s
```

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COCO  West Island      73.62 122ceP     P      00 09 39.5  0.0
YKA   Yellowknife Ar   76.36 348 P      P      00 09 54.5 -0.1
      comp=Z,0.8nm,1.0s,baz=14,slow=6.2,SNR=9.7
      comp=Z,0.8nm,1.0s
YKA   Yellowknife Ar   76.36 348ceP     P      00 09 56.0 +1.3
YKA                              pmax   pmax
      comp=Z,1.0nm,0.7s
```

IDC ***23*** *00:00:57.8±1.3, 38°.43N×69°.09E, h0^{km}, mb3.7/10, mbtmp3.8/13, ML3.7/3, Error ellipse: s-maj=28.5km s-min=12.0km az=157.0*

NNC ***23*** *00:00:59.9±2.5, 38°.57N×68°.99E, h3^{km}±12^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=20.2km s-min=16.2km az=68.0*

ISC 23 00:00:58.9±1.0**, 38°.4N**±0°.1×**69°.03E**±0°.08**, h10^{km}, n33,** σ1^{s}**71**/36**, mb3.6**/8**, 6C-2D, Tajikistan**

```
Code  Station Name       Δ°   AZ°   Phase ID            Time     Res
                                    Op     ISC        h  m  s    ISC
KK31  Karatay Array     4.84  13 ⇓Pn    Pn     00 02 12.8 +1.0
      2.6nm,0.3s,baz=176,slow=11,SNR=63
KK31                             ⇑Pg    Pb     00 02 25.0 +1.2
      6.3nm,0.3s,baz=199,slow=20,SNR=12
KK31                             ⇓Sn    Sn     00 03 06.8 -1.0
      8.3nm,0.4s,baz=57,slow=34,SNR=2.5
KK31                              Lg    Lg     00 03 27.6
      134nm,0.8s,baz=193,slow=25,SNR=7.1
EKS2  Erkin-Say         5.59  39  P     Pn     00 02 25.8 +3.6
      SNR=18
UCH   Uchtor            5.67  46  P     Pn     00 02 25.9 +2.2
      SNR=30
AAK   Ala-Archa         5.94  43  P     Pn     00 02 30.2 +3.1
      SNR=37
AAK   Ala-Archa         5.94  43  Pn    Pn     00 02 27.8 +0.7
      9.3nm,0.3s,baz=212,slow=8.8,SNR=84
AAK                               Sn    Sn     00 03 35.2  0.0
      1.6nm,0.3s,baz=282,slow=9.3,SNR=1.5
      28nm,0.5s
AAK   Ala-Archa         5.94  43 ⇑Pn    Pn     00 02 28.6 +1.5
      8.5nm,0.5s
AAK                              ⇑Pg    Pb     00 02 47.0 +4.3
      6.0nm,0.5s
AAK                              ⇑Sn    Sn     00 03 36.9 +1.7
      13nm,0.8s
AAK                              ⇑Lg    Lg     00 04 04.0
      8.8nm,0.6s
KBK   Karagaybulak      6.20  45  P     Pn     00 02 33.2 +2.5
      SNR=37
CHMS  Chumysh           6.33  42  P     Pn     00 02 35.8 +3.5
      SNR=22
USP   Ospenovka         6.39  39  P     Pn     00 02 36.3 +3.1
      SNR=31
TKM2  Tokmak 2          6.73  46  P     Pn     00 02 38.2 +0.2
      SNR=10
DGS   Degeres           7.04  44  P     Pn     00 02 43.2 +1.1
      6.8nm,0.5s
KRBS  Karabastau        7.30  41  P     Pn     00 02 46.7 +1.1
      6.7nm,0.5s
MTBS  Maitube           7.34  48  P     Pn     00 02 46.2  0.0
      2.7nm,0.3s
BTLS  Baital            7.63  28  P     Pn     00 02 56.1 +6.1
      9.4nm,1.8s
KOTS  Kotyrbulak        7.80  49  P     Pn     00 02 51.5 -1.1
      7.6nm,0.6s
PDGK  Podgornoye        9.33  55 ⇑P     Pn     00 03 12.5 -1.1
      7.9nm,1.2s
AB31  Akbulak array    12.68 332  P     Pn     00 03 57.6 -1.6
      1.0nm,0.3s,baz=165,slow=11,SNR=68
MK31  Makanchi Array   12.87  45  P     Pn     00 04 00.8 -1.1
      0.8nm,0.5s,baz=238,slow=8.5,SNR=14
MKAR  Makanchi Array   12.87  45  Pn    Pn     00 04 00.9 -0.9
      0.1nm,0.3s,baz=237,slow=13,SNR=10
      1.1nm,0.7s
KURBB Kurchatov Arra   13.96  26  Pn    Pn     00 04 15.1 -1.6
      baz=216,slow=9.2,SNR=4.6
AKTO  Aktyubinsk       14.36 330  Pn    P      00 04 26.4 -2.9
      0.6nm,0.3s,baz=133,slow=13,SNR=5.7
BVAR  Borovoye Array   14.66   3  Pn    P      00 04 30.9 -1.7
      0.1nm,0.3s,baz=168,slow=7.3,SNR=8.8
ZALV  Zalesovo Beam    18.94  30  P     P      00 05 18.3 -1.6
      0.8nm,0.3s,baz=223,slow=11,SNR=15
      2.4nm,0.4s
BELG  Belogornoye      20.43 320  P     P      00 05 35.8 -0.4
      2.2nm,0.3s,baz=297,slow=2.3,SNR=4.5
      2.2nm,0.3s
BRTR  Keskin Array B   27.41 284  P     P      00 06 46.5 +1.7
      0.6nm,0.5s,baz=91,slow=8.6,SNR=7.3
      0.6nm,0.5s
SONM  Songino Array    28.62  59  P     P      00 06 55.0 -0.5
      0.7nm,0.8s,baz=271,slow=9.1,SNR=3.9
      0.7nm,0.8s
FINES FINESS Array B   35.04 325  P     P      00 07 52.2 +0.7
      1.0nm,0.4s,baz=126,slow=9.9,SNR=7.9
      1.0nm,0.4s
ARCES ARCESS Array B   38.80 337  P     P      00 08 23.7 +0.3
      3.2nm,0.9s,baz=100,slow=6.7,SNR=9.2
      3.2nm,0.9s
HFS   Hagfors          40.61 321  P     P      00 08 39.1 +0.6
      1.1nm,0.6s,baz=98,slow=11,SNR=8.2
      1.1nm,0.6s
NOA   NORSAR Array B   41.93 322  P     P      00 08 49.1 -0.3
      0.2nm,0.4s,baz=95,slow=8.1,SNR=1.7
      0.2nm,0.4s
ESDC  Sonseca Array    55.20 296  P     P      00 10 31.5 -0.5
      0.4nm,0.6s,baz=71,slow=7.2,SNR=4.5
      0.4nm,0.6s
TORD  Torodi Ar. Bea   64.23 267  P     P      00 11 35.8 +1.4
      0.1nm,0.4s,baz=43,slow=7.1,SNR=1.1
      0.1nm,0.4s
WRA   Warramunga Arr   84.31 121  P     P      00 13 31.3 +0.1
      0.3nm,0.7s,baz=318,slow=4.2,SNR=2.3
      0.3nm,0.7s
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NEIC ***23*** *00:02:52.9±2.0, 51°.48N±0°.09×177°.24E±0°.03, h13^{km}±4^{km}, mb4.4/130, ML4.0/10, ML3.8(AEIC), Error ellipse: s-maj=13.6km s-min=3.0km az=177.0*

AEIC ***23*** *00:02:54.7±1.9, 51°.43N±0°.06×177°.22E±0°.06, h27^{km}±3^{km}, Error ellipse: s-maj=9.8km s-min=3.9km az=202.0*

IDC ***23*** *00:02:56.6±2.6, 51°.68N×177°.35E, h40^{km}±20^{km}, mb3.9/24, mbtmp4.2/26, ML4.4/2, MS3.3/6, Error ellipse: s-maj=23.9km s-min=10.9km az=2.0*

ISC 23 00:02:50.9±1.3**, 51°.50N**±0°.09×**177°.18E**±0°.03**, h5^{km}**±7^{km}**, n429,** σ0^{s}**87**/414**, mb4.4**/76**, MS3.2**/4**, Rat Islands**

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Code  Station Name       Δ°   AZ°   Phase ID            Time     Res
                                    Op     ISC        h  m  s    ISC
LSNW  Little Sitkin     0.95  60         Pn     00 03 11.7 +0.7
LSSE  Little Sitkin     0.97  63         Pn     00 03 12.0 +0.8
LSPA  Little Sitkin     0.98  62         Pn     00 03 12.2 +0.8
LSPA                                     Sb     00 03 24.5 +0.8
AMKA  Amchitka          1.33  94         Pg     00 03 17.0 +0.5
AMKA                              IAML          00 03 39.8
      comp=N,2µm,0.5s
AMKA  Amchitka          1.33  94         Sb     00 03 33.8  0.0
CESW  Semis' Southwe    1.54  74         Pg     00 03 20.4  0.0
CERB  Semis' Cerberu    1.58  73         Pg     00 03 21.2  0.0
CERB                                     Sn     00 03 40.8 +0.2
CEPE  Semis' Perret     1.60  72         Pg     00 03 21.7  0.0
SHEM  Shemya Is, Ala    2.26 304  P      Pb     00 03 31.7 -0.6
      comp=N,92nm,0.3s,baz=94,slow=1.6,SNR=26
SHEM                              S      Sn     00 03 58.4 +1.1
      comp=N,543nm,0.7s,baz=300,slow=21,SNR=11
SHEM                              LR     LR     00 04 31.7
      comp=N,456nm,18.2s,baz=130,slow=42
      comp=N,283nm,0.3s
SHEM  Shemya Is, Ala    2.26 304  IAML          00 04 07.8
      comp=E,421nm,0.6s
SMY   Shemya            2.26 304         Pb     00 03 31.0 -1.3
SMY                               Sn     Sn     00 03 58.3 +1.0
SMY                               IAML          00 04 05.2
      comp=N,740nm,1.2s
SMY                               IAML          00 04 06.8
      comp=E,921nm,1.0s
GAKI  Gareloi-Kavalg    2.50  87         Pn     00 03 34.0 +1.7
GAKI                                     Pb     00 03 34.1 -2.3
GAKI                                     Sn     00 04 04.4 +1.2
GANO  Gareloi North     2.52  81         Pn     00 03 34.0 +1.4
GALAA Gareloi Lava P    2.54  82         Pn     00 03 34.6 +1.8
GANE  Gareloi Northe    2.54  81         Pn     00 03 34.6 +1.8
GANE                                     Sn     00 04 05.1 +1.0
GAEA  Gareloi East      2.55  82         Pn     00 03 34.9 +1.9
GAEA                                     Pb     00 03 36.1 -1.2
GAEA                                     Sn     00 04 06.2 +1.6
TASE  Tanaga Southea    3.00  82         Pn     00 03 41.1 +1.9
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TASE                                     Sn    00 04 16.8 +1.3
TAPA  Tanaga Point A     3.13  82        Pn    00 03 43.1 +2.0
TAPA                                     Sn    00 04 20.1 +1.3
KIMD  Kanaga Island      3.49  84        Pn    00 03 48.0 +2.1
KIMD                                     Sn    00 04 28.9 +1.4
KIWB  Kanaga Island      3.55  82        Pn    00 03 47.4 +0.7
KIWB                               Sn    Sn    00 04 30.8 +1.8
ADK   Adak               3.84  82        Pn    00 03 51.7 +1.0
ADK                                IAML        00 04 53.1
      comp=E,301nm,1.0s
ADK                                IAML        00 04 55.9
      comp=E,346nm,1.0s
ADK   Adak               3.84  82        Sn    00 04 36.1  0.0
ETKA  Kagalaska Isla     4.01  82        Pn    00 03 55.5 +2.5
ETKA                                     Pn    00 03 56.5 +3.5
ETKA                                     Sn    00 04 42.1 +1.8
NIKH  Nikolski High      8.70  75  P     Pn    00 04 57.1 -0.3
      baz=266
SPIA  Saint Paul Isl     9.28  47  P     Pn    00 05 05.6 +0.3
      baz=237
P08K  Saint George I     9.32  52  P     Pn    00 05 06.2 +0.3
      baz=242
UNV   Unalaska Valle    10.18  70  Pn    Pn    00 05 18.6 +0.9
UNV   Unalaska Valle    10.18  70  P     Pn    00 05 17.3 -0.4
      baz=263
PETK  Petropavlovsk-    12.03 285  LR    LR    00 11 27.5
      comp=E,84nm,18.1s,baz=80,slow=42
FALS  False Pass        12.11  66  P     Pn    00 05 43.6 -0.4
      baz=262
M11K  Mekoryuk          12.85  40  P     Pn    00 05 54.6 +0.6
      baz=233
S12K  Black Hills       13.01  63  P     Pn    00 05 55.9 -0.5
      baz=260
GAMB  Gambell           13.64  21  P     Pn    00 06 06.0 +1.2
      baz=210
SDPT  Sand Point        13.85  65  P     Pn    00 06 07.3 -0.4
      baz=263
M13K  Dall Lake         14.04  43  P     Pn    00 06 10.0 -0.3
      baz=239
CHNA  Chernabura Isl    14.31  67  P     Pn    00 06 13.7 -0.3
      baz=266
K13K  Kusilvak Mount    14.38  36  P     Pn    00 06 15.2 +0.2
      baz=231
O14K  Tigyukauivet M    14.45  49  P     Pn    00 06 15.9 -0.1
      baz=247
S14K  Fog Glacier       14.50  62  P     Pn    00 06 16.4 -0.3
      baz=260
N14K  Kuskokwak Cree    14.54  46  P     Pn    00 06 17.4 +0.2
      baz=244
M14K  Bethel            14.80  43  P     Pn    00 06 21.2 +0.4
      baz=240
L14K  Kuka Creek        14.81  40  P     Pn    00 06 21.6 +0.9
      baz=237
O15K  Ungalikthiuk R    15.11  50  P     Pn    00 06 25.1 +0.2
      baz=249
J14K  Nanvaranak Lak    15.30  35  P     Pn    00 06 27.7 +0.4
      baz=231
M15K  Kasigluk River    15.33  45  P     Pn    00 06 28.3 +0.5
      baz=243
N15K  Kwethluk River    15.37  47  P     Pn    00 06 28.5 +0.2
      baz=246
L15K  Ungalak Mounta    15.47  41  P     Pn    00 06 30.1 +0.5
      baz=238
K15K  Wolf Creek Mou    15.79  39  P     Pn    00 06 34.0 +0.2
      baz=236
R16K  Pilot Point       15.80  58  P     Pn    00 06 33.9 -0.1
      baz=258
ANM   Nome              15.94  28  P     Pn    00 06 36.4 +0.7
      baz=223
P16K  Nushagak River    15.96  52  P     Pn    00 06 35.7 -0.3
      baz=252
TNA   Tin City          16.03  23  P     Pn    00 06 37.4 +0.5
      baz=215
O16K  Kokwok River B    16.09  50  P     Pn    00 06 37.7 +0.1
      baz=250
N16K  Nishlik Lake      16.09  47  P     Pn    00 06 37.2 -0.5
      baz=247
M16K  Timber Creek      16.23  45  P     Pn    00 06 39.4 -0.1
      baz=245
L16K  Owhat River       16.32  42  P     Pn    00 06 41.0 +0.4
      baz=242
F14K  Arctic Creek      16.36  25  P     Pn    00 06 42.7 +1.6
      baz=219
R17L  Mt. Peulik Vol    16.46  58  P     Pn    00 06 42.4  0.0
      baz=259
Q16K  King Salmon       16.53  54  P     Pn    00 06 44.0 +0.7
      baz=256
O17K  Koliganek Bris    16.62  50  P     Pn    00 06 44.6 +0.1
      baz=251
CHIR  Chirikof Islan    16.64  64  P     Pn    00 06 44.1 -0.6
      baz=266
G15K  Niukluk           16.65  29  P     Pn    00 06 45.1 +0.3
      baz=224
J16K  Anvik River       16.70  36  P     Pn    00 06 46.1 +0.7
      baz=235
P17K  Kvichak River     16.77  52  P     Pn    00 06 46.9 +0.5
      baz=254
N17K  Nushagak Hills    16.84  48  P     Pn    00 06 48.0 +0.8
      baz=249
F15K  North Star Dit    16.99  26  P     P     00 06 51.0 -0.1
      baz=222
L17K  Donlin            17.01  42  P     Pn    00 06 50.3 +0.9
      baz=242
I17K  Unalakleet        17.02  35  P     P     00 06 50.9 -0.4
      baz=233
M17K  Holitna River     17.06  45  P     Pn    00 06 50.7 +0.7
      baz=246
K17K  Iditarod          17.29  40  P     P     00 06 53.9 -0.4
      baz=241
J17K  VABM Dome         17.33  37  P     P     00 06 54.5 -0.3
      baz=238
BILL  Bilibino          17.42 346        P     00 06 57.6 +1.8
P18K  Big Mountain,     17.43  52  P     Pn    00 06 55.3 +0.7
      baz=255
G16K  Koyuk River       17.44  29  P     Pn    00 06 55.2 +0.5
      baz=227
N18K  Kilae Creek       17.49  48  P     Pn    00 06 56.1 +0.7
      baz=250
SII   Sitkinak Islan    17.49  62  P     Pn    00 06 55.5  0.0
      baz=265
O18K  Koktuh Hills      17.56  51  P     Pn    00 06 56.7 +0.5
      baz=254
L18K  Granite Mounta    17.73  43  P     P     00 06 58.9 -0.3
      baz=244
M18K  Stony River       17.81  45  P     Pn    00 06 59.8 +0.5
      baz=248
H17K  Granite Mounta    17.92  33  P     P     00 07 01.6 +0.3
      baz=232
G17K  Kiwalik Mounta    18.04  31  P     P     00 07 03.5 +0.9
      baz=229
OHAK  Old Harbor        18.04  60  P     Pn    00 07 02.5 +0.3
      baz=264
O19K  Port Alsworth     18.08  50  P     P     00 07 03.5 +0.4
      baz=254
Q19K  Cape Douglas,     18.11  54  P     P     00 07 04.0 +0.4
      baz=258
N19K  Bonanza Creek     18.19  48  P     P     00 07 06.4 +2.0
N19K  Bonanza Creek     18.19  48  P     P     00 07 04.9 +0.5
      baz=252
J18K  Innoko River      18.28  39  P     P     00 07 07.0 +1.7
J18K  Innoko River      18.28  39  P     P     00 07 06.3 +1.0
      baz=241
P19K  Oil Pt            18.48  52  P     Pn    00 07 07.9 +0.3
      baz=257
KDAK  Kodiak Island     18.48  58  P     P     00 07 05.9 -1.6
      comp=E,1.6nm,0.3s,baz=244,slow=2.8,SNR=21
      comp=E,29nm,1.2s
KDAK  Kodiak Island     18.48  58  P     P     00 07 06.0 -1.6
KDAK                               IAmb  IAmb  00 07 24.3
      comp=Z,19nm,1.0s
KDAK  Kodiak Island     18.48  58  P     Pn    00 07 07.7 +0.1
      baz=263
F17K  Baldwin Pennin    18.49  28  P     Pn    00 07 08.6 +1.1
      baz=226
L19K  White Mountain    18.50  44  P     Pn    00 07 08.9 +1.1
      baz=247
H18K  Honhosa River     18.58  33  P     Pn    00 07 09.3 +0.6
      baz=234
ILSW  Iliamna Southw    18.60  51  P     P     00 07 07.6 -1.3
ILSW                               IAmb  IAmb  00 07 11.0
      comp=Z,18nm,1.0s
Q20K  Shuyak Island     18.70  56  P     P     00 07 10.1 +0.2
      baz=261
E17K  Hotham Inlet      18.78  26  P     Pn    00 07 12.1 +0.9
      baz=224
C16K  Lisburne Hills    18.84  20        Pn    00 07 13.7 +1.9
C16K  Lisburne Hills    18.84  20  P     Pn    00 07 13.1 +1.3
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      baz=215
GCSA  Galena City Sc    18.88  35  P     Pn    00 07 12.7 +0.4
      baz=238
RED   Redoubt Volcan    18.89  50  P     Pn    00 07 13.6 +1.0
RED                                IAmb  IAmb  00 07 15.0
      comp=Z,26nm,1.0s
D17K  Noatak River      18.91  23  P     Pn    00 07 13.6 +0.9
      baz=220,SNR=6.3
G18K  Tagagawik         18.93  31  P     Pn    00 07 13.2 +0.2
      baz=232
J19K  Poorman           18.96  38  P     Pn    00 07 13.6 +0.2
      baz=241
F18K  Selawik           19.07  29  P     Pn    00 07 15.0 +0.3
      baz=229
M20K  Styx River        19.15  46  P     Pn    00 07 15.6 -0.2
      baz=250
RDOG  Red Dog Mine      19.22  23  P     Pn    00 07 17.5 +0.9
RDOG                               IAmb  IAmb  00 07 19.2
      comp=Z,16nm,0.9s
RDOG  Red Dog Mine      19.22  23  P     Pn    00 07 17.0 +0.4
      baz=220
E18K  Tukpahlearik C    19.36  26        Pn    00 07 20.2 +2.1
E18K                               IAmb  IAmb  00 07 21.1
      comp=Z,14nm,1.0s
E18K  Tukpahlearik C    19.36  26  P     Pn    00 07 19.3 +1.2
      baz=225,SNR=6.7
N20K  Mount Spurr       19.36  48  P     Pn    00 07 18.3  0.0
      baz=254
SPCR  Spurr Chakacha    19.36  48  P     Pn    00 07 18.3  0.0
      baz=254
SPU   Mount Spurr       19.43  48  P     Pn    00 07 20.3 +1.2
CNPM  China Poot        19.44  53  P     P     00 07 18.7 +0.6
CNPM                               IAmb  IAmb  00 07 33.4
      comp=Z,18nm,1.0s
H19K  Roundabout Mou    19.45  34  IAmb  IAmb  00 07 26.0
      comp=Z,28nm,0.9s
H19K  Roundabout Mou    19.45  34  P     Pn    00 07 19.9 +0.6
      baz=236
C17K  DeLong Mountai    19.49  22  P     Pn    00 07 20.0 +0.4
      baz=219
G19K  Purcell Mounta    19.59  32  P     Pn    00 07 21.3 +0.3
      baz=234
J20K  Nowinta River     19.62  39  IAmb  IAmb  00 07 23.2
      comp=Z,11nm,0.8s
J20K  Nowinta River     19.62  39  P     Pn    00 07 20.9 -0.4
      baz=243
BRSE  Bradley Lake S    19.73  53  P     P     00 07 21.6 +0.4
      baz=259
CAPN  Captain Cook N    19.75  50  P     Pn    00 07 22.4 -0.3
      baz=256
I20K  Naaghedeneel      19.79  37  P     Pn    00 07 23.5 +0.3
      baz=241
F19K  Shaleruckik Mo    19.79  30  P     Pn    00 07 23.5 +0.2
      baz=231
SKT   Skwentna          19.90  46        Pn    00 07 25.3 +0.7
SKT   Skwentna          19.90  46  P     Pn    00 07 24.3 -0.3
      baz=252
PPLA  Purkeypile        19.91  43  P     Pn    00 07 26.0 +1.1
PPLA                               IAmb  IAmb  00 07 36.0
      comp=Z,30nm,1.2s
PPLA  Purkeypile        19.91  43  P     P     00 07 24.1 +0.8
      baz=249
H20K  Anotleneega Mo    19.99  35  P     Pn    00 07 25.3 -0.4
      baz=239
C18K  Utukok River      20.09  23  P     Pn    00 07 26.6 -0.3
      baz=222,SNR=5.2
SUA   Susitna One       20.11  48  P     P     00 07 26.3 +0.8
SUA                                IAmb  IAmb  00 07 31.5
      comp=Z,32nm,1.2s
SUA   Susitna One       20.11  48  P     P     00 07 26.3 +0.8
      baz=255
CHUM  Lake Minchumin    20.23  41  P     P     00 07 27.5 +1.0
      baz=246
E19K  Redstone River    20.35  29  P     Pn    00 07 29.4 -0.5
      baz=231
O22K  Cooper Landing    20.37  51  P     P     00 07 29.1 +0.9
      baz=258
L22K  Petersville       20.40  45        Pn    00 07 29.9 -0.8
SEW   Seward            20.43  52  P     P     00 07 28.2 -0.6
SEW                                IAmb  IAmb  00 07 47.6
      comp=Z,30nm,1.2s
SEW   Seward            20.43  52  P     P     00 07 28.9 +0.1
      baz=260
M22K  Willow            20.48  47  P     P     00 07 29.5 +0.2
      baz=255
B18K  Kokolik River     20.49  21  P     P     00 07 29.2 -0.2
      baz=220
RC01  Rabbit Creek A    20.49  49  P     P     00 07 30.6 +1.1
RC01                               IAmb  IAmb  00 07 38.2
      comp=Z,18nm,1.1s
RC01  Rabbit Creek A    20.49  49  P     P     00 07 29.5  0.0
      baz=257
F20K  Avaraart Lake     20.57  31  P     P     00 07 30.8 +0.6
      baz=234
CUT   Chulitna          20.59  45  P     P     00 07 30.6 +0.1
      baz=253
IMAR  Indian Mountai    20.64  34  P     Pn    00 07 32.5 -0.8
KTH   Kantishna Hill    20.68  42        Pn    00 07 33.5 -0.4
KTH                                IAmb  IAmb  00 07 36.6
      comp=Z,15nm,0.8s
D19K  Kuna River        20.78  26  P     P     00 07 33.0 +0.5
      baz=227
H21K  Melozitna Rive    20.82  36  P     P     00 07 33.2 +0.2
      baz=242
C19K  Lookout Ridge     20.82  23  P     P     00 07 33.7 +0.6
      baz=224
BPAW  Bear Paw Mtn.     20.85  41  P     P     00 07 33.6 +0.2
      baz=248
PMR   Palmer            20.89  48  P     Pn    00 07 35.1 -1.1
PMR   Palmer            20.89  48  P     P     00 07 33.5 -0.3
      baz=256
I21K  Tanana            20.91  37  P     P     00 07 34.0 +0.1
      baz=244
TRF   Thorofare Moun    20.91  43        Pn    00 07 36.0 -0.6
TRF                                IAmb  IAmb  00 07 37.7
      comp=Z,17nm,0.7s
TRF   Thorofare Moun    20.91  43  P     P     00 07 33.8 -0.4
      baz=250,SNR=5.6
G21K  Allakaket         21.00  33  P     P     00 07 35.2 +0.2
      baz=238
GHO   Glory Hole Cre    21.03  48  P     P     00 07 36.1 +0.7
PWL   Port Wells        21.11  50  P     P     00 07 35.5 -0.8
PWL                                IAmb  IAmb  00 07 42.7
      comp=Z,21nm,1.1s
PWL   Port Wells        21.11  50  P     P     00 07 36.2 -0.1
      baz=259
E20K  Nigu River        21.16  28  P     P     00 07 37.7 +1.0
      baz=231
KNK   Knik Glacier      21.17  49  P     P     00 07 38.0 +1.2
KNK                                IAmb  IAmb  00 07 38.8
      comp=Z,11nm,0.9s
KNK   Knik Glacier      21.17  49  P     P     00 07 36.8  0.0
      baz=258
A19K  Wainwright        21.30  20  P     P     00 07 39.1 +0.9
      baz=220
SML   Sawmill           21.31  48        P     00 07 38.4  0.0
SML                                IAmb  IAmb  00 07 42.8
      comp=Z,14nm,0.8s
SML   Sawmill           21.31  48  P     P     00 07 38.7 +0.3
      baz=257
MLY   Manley            21.32  38  P     P     00 07 38.8 +0.4
      baz=246
D20K  Etivluk River     21.34  26  P     P     00 07 39.1 +0.6
      baz=229
F21K  Alatna River      21.39  32  P     P     00 07 39.0 -0.1
      baz=237
P23K  Montague Islan    21.43  53  P     P     00 07 39.1 -0.5
P23K  Montague Islan    21.43  53  P     P     00 07 40.8 +1.1
      baz=262
H22K  Ishtalitna Cre    21.45  36  P     P     00 07 41.8 +2.0
H22K  Ishtalitna Cre    21.45  36  P     P     00 07 41.4 +1.6
      baz=243
WAT1  Susitna Watana    21.47  45  P     P     00 07 41.5 +1.4
      baz=254
RND   Reindeer          21.51  43  P     P     00 07 41.5 +1.0
MCK   McKinley          21.58  42  P     P     00 07 41.4 +0.2
MCK                                IAmb  IAmb  00 07 43.8
      comp=Z,9.6nm,1.0s
MCK   McKinley          21.58  42  P     P     00 07 42.0 +0.9
      baz=251
M23K  Glacier View      21.59  48  P     P     00 07 42.1 +0.8
      baz=257
GLI   Glacier Island    21.71  51  P     P     00 07 43.4 +0.7
      baz=260
WAT6  Susitna Watana    21.77  46  P     P     00 07 44.6 +1.2
      baz=256
SCM   Sheep Creek Mo    21.78  48  P     P     00 07 43.6 +0.1
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SCM                                IAmb  IAmb  00 08 02.0
      comp=Z,18nm,1.0s
SCM   Sheep Creek Mo    21.78  48  P     P     00 07 44.3 +0.8
      baz=258
NEA2  Nenana            21.81  40  P     P     00 07 44.5 +0.8
NEA2                               IAmb  IAmb  00 07 45.8
      comp=Z,12nm,0.6s
NEA2  Nenana            21.81  40  P     P     00 07 44.8 +1.1
      baz=249,SNR=5.6
I23K  Minto, Yukon-K    21.90  39  P     P     00 07 46.5 +1.9
I23K  Minto, Yukon-K    21.90  39  P     P     00 07 46.1 +1.5
      baz=247
E21K  Killik River      21.93  29  P     P     00 07 46.2 +1.2
      baz=234
F22K  John River        21.97  32  P     P     00 07 46.5 +1.2
      baz=238
FID   Port Fidalgo      21.99  51  P     P     00 07 45.0 -0.7
DHY   Denali Highway    22.06  45  P     P     00 07 46.7 +0.2
DHY                                IAmb  IAmb  00 07 48.4
      comp=Z,12nm,0.7s
DHY   Denali Highway    22.06  45  P     P     00 07 47.2 +0.8
      baz=255,SNR=10.0
B20K  Meade River       22.07  23  P     P     00 07 48.1 +1.7
      baz=226
H23K  Yukon River       22.10  37  P     P     00 07 48.1 +1.3
      baz=246
C21K  Knifeblade Rid    22.13  27  P     P     00 07 48.5 +1.4
      baz=231
WRH   Wood River Hil    22.17  41  P     P     00 07 48.3 +0.8
WRH                                IAmb  IAmb  00 07 52.0
      comp=Z,6.7nm,0.8s
G23K  Bananza Creek     22.31  35  P     P     00 07 50.2 +1.2
      baz=243
EYAK  Cordova Ski Ar    22.32  52  P     P     00 07 50.0 +0.8
EYAK                               IAmb  IAmb  00 08 01.4
      comp=Z,17nm,1.2s
CCB   Clear Creek Bu    22.34  41  P     P     00 07 49.3 -0.1
CCB                                      pP    00 07 50.0 -0.1
M24K  Tolsona, Glenn    22.37  48  P     P     00 07 50.6 +0.8
M24K  Tolsona, Glenn    22.37  48  P     P     00 07 50.5 +0.8
      baz=258
KLU   Klutina           22.38  49  P     P     00 07 50.2 +0.3
      baz=260
E22K  Anaktuvuk Pass    22.42  30        P     00 07 51.5 +1.3
E22K  Anaktuvuk Pass    22.42  30  P     P     00 07 51.0 +0.8
      baz=238,SNR=11
B21K  Ikpikpuk River    22.47  26  P     P     00 07 51.4 +0.7
      baz=230
COLD  Coldfoot          22.49  33  P     P     00 07 51.6 +0.7
      baz=242
D22K  Ayikyak River     22.57  28  IAmb  IAmb  00 07 54.5
      comp=Z,8.3nm,0.8s
D22K  Ayikyak River     22.57  28  P     P     00 07 53.2 +1.4
      baz=235
HDA   Harding Lake      22.62  41  P     P     00 07 53.2 +0.9
      baz=252
POKR  Poker Plat Res    22.65  40  IAmb  IAmb  00 07 54.5
      comp=Z,8.8nm,0.8s
POKR  Poker Plat Res    22.65  40  P     P     00 07 53.3 +0.6
      baz=250
H24K  Noodor Dome       22.74  38  P     P     00 07 54.6 +0.9
      baz=248
IL31                    22.76  41        P     00 07 53.5 -0.2
ILAR  Eielson Array     22.76  41  P     P     00 07 52.5 -1.3
      comp=Z,2.6nm,0.8s,baz=248,slow=8.6,SNR=57
ILAR                               LR    LR    00 16 59.7
      comp=Z,128nm,18.0s,baz=270,slow=37
      comp=Z,2.6nm,0.8s
ILAR  Eielson Array     22.76  41  P     P     00 07 53.8  0.0
PAX   Paxson            22.87  45        P     00 07 55.5 +0.3
PAX                                IAmb  IAmb  00 07 56.7
      comp=Z,10nm,0.9s
PAX   Paxson            22.87  45  P     P     00 07 55.3 +0.1
      baz=257
HARP  HAARP             22.90  47  P     P     00 07 55.4 +0.1
      baz=259
KAIM  Kayak Island      22.92  53  P     P     00 07 54.7 -0.8
KAIM  Kayak Island      22.92  53  P     P     00 07 55.2 -0.3
      baz=266
BMRM  Bremner River     22.93  51  P     P     00 07 55.2 -0.5
BMRM                               IAmb  IAmb  00 07 55.8
      comp=Z,9.1nm,0.9s
BMRM  Bremner River     22.93  51  P     P     00 07 55.5 -0.2
      baz=263
K24K  Donnelly Dome     22.94  43        P     00 07 55.5 -0.2
K24K                               IAmb  IAmb  00 08 05.8
      comp=Z,9.8nm,0.8s
K24K  Donnelly Dome     22.94  43  P     P     00 07 55.2 -0.5
      baz=255
N25K  Chitina, Valde    23.02  49  P     P     00 07 56.0 -0.6
N25K                               IAmb  IAmb  00 08 02.2
      comp=Z,7.6nm,0.8s
N25K  Chitina, Valde    23.02  49  P     P     00 07 56.1 -0.6
      baz=261
E23K  Chandalar         23.09  32  P     P     00 07 57.1 -0.2
      baz=241
A21K  Barrow            23.13  21  P     P     00 07 57.4 -0.1
      baz=224,SNR=5.8
D23K  Nanushuk River    23.22  29  P     P     00 07 58.4 -0.1
      baz=237
G24K  Hadweenzic Riv    23.22  36  P     P     00 07 58.7 +0.1
      baz=246
B22K  Teshekpuk Lake    23.25  25        P     00 07 58.9 +0.2
B22K                               IAmb  IAmb  00 07 60.0
      comp=Z,11nm,0.8s
B22K  Teshekpuk Lake    23.25  25  P     P     00 07 58.9 +0.2
      baz=231,SNR=6.3
A22K  Sinclair Lake     23.29  23  P     P     00 07 59.1 -0.1
      baz=228,SNR=7.3
RIDG  Independent Ri    23.32  44  P     P     00 07 59.6 -0.1
      baz=256
J25K  Salcha River,     23.33  41  P     P     00 07 58.6 -1.2
J25K  Salcha River,     23.33  41  P     P     00 07 59.1 -0.7
      baz=254
GLB   Gilahina Butte    23.37  50  P     P     00 08 00.0 -0.2
TOLK  Toolik Lake Re    23.39  30  P     P     00 08 01.2 +0.9
TOLK  Toolik Lake Re    23.39  30  P     P     00 07 59.8 -0.5
      baz=240,SNR=12
F24K  Squaw Lake        23.42  34  IAmb  IAmb  00 08 03.7
      comp=Z,7.0nm,0.7s
F24K  Squaw Lake        23.42  34  P     P     00 08 00.5 -0.1
      baz=244,SNR=10
E24K  Your Creek        23.47  32  P     P     00 08 00.6 -0.5
      baz=242
VRDI  Verde Repeater    23.52  50  P     P     00 08 01.5 -0.3
VRDI                               IAmb  IAmb  00 08 09.6
      comp=Z,7.5nm,1.0s
CRQM  Cirque            23.62  51  P     P     00 08 02.9 +0.1
DOT   Dot Lake          23.64  44  P     P     00 08 02.2 -0.7
DOT                                IAmb  IAmb  00 08 04.2
      comp=Z,8.5nm,0.7s
CRQE  Cirque            23.64  51  P     P     00 08 02.1 -0.9
      baz=265
MENT  Mentasta          23.65  46  P     P     00 08 03.8 +0.9
MENT                               IAmb  IAmb  00 08 06.1
      comp=Z,7.8nm,0.6s
C23K  Itkillik River    23.72  27  P     P     00 08 03.3 -0.2
      baz=236
MCARA McCarthy VSAT     23.74  50  P     P     00 08 03.9 +0.1
MCARA McCarthy VSAT     23.74  50  P     P     00 08 02.6 -1.2
      baz=263
SCRK  Sand Creek        23.75  43        P     00 08 03.0 -0.9
SCRK  Sand Creek        23.75  43  P     P     00 08 03.1 -0.9
      baz=257
G25K  Bearman Lake      23.75  36  P     P     00 08 03.5 -0.3
      baz=248
TGL   Tana Glacier      23.77  52  P     P     00 08 04.2  0.0
TGL                                IAmb  IAmb  00 08 22.0
      comp=Z,8.9nm,0.9s
L26K  Log Cabin Wild    23.83  46  IAmb  IAmb  00 08 07.4
      comp=Z,9.7nm,0.6s
L26K  Log Cabin Wild    23.83  46  P     P     00 08 04.3 -0.4
      baz=259,SNR=6.8
D24K  Happy Valley      23.89  30  P     P     00 08 05.0 -0.1
      baz=240
M26K  Nabesna, AK       23.89  47  P     P     00 08 04.6 -0.6
      baz=261
J26L  Joseph Creek      24.05  42  P     P     00 08 06.4 -0.4
J26L  Joseph Creek      24.05  42  P     P     00 08 06.2 -0.7
      baz=256,SNR=16
C24K  Franklin Bluff    24.21  28  P     P     00 08 08.9 +0.8
C24K                               IAmb  IAmb  00 08 11.7
      comp=Z,5.3nm,0.8s
C24K  Franklin Bluff    24.21  28  P     P     00 08 06.9 -1.3
      baz=239
F25K  Christian Rive    24.24  34  P     P     00 08 07.8 -0.7
      baz=247
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YAH	Yahtse	24.28	53	P	P	00 08 09.6	+0.4
GRNC	Granite Creek	24.30	52	P	P	00 08 09.8	+0.5
BARN	Barnard Glacie	24.37	51	P	P	00 08 10.4	+0.5
BARN				IAmb	IAmb	00 08 11.8	
	comp=Z,12nm,1.0s						
M27K	Edge Creek, AK	24.40	48	P	P	00 08 09.4	-0.7
	baz=262						
I26K	Coal Creek Min	24.43	40	P	P	00 08 09.6	-0.6
I26K				IAmb	IAmb	00 08 10.1	
	comp=Z,7.6nm,1.0s						
I26K	Coal Creek Min	24.43	40	P	P	00 08 09.3	-0.9
	baz=255						
E25K	Arctic Village	24.47	33	P	P	00 08 11.1	+0.5
E25K				IAmb	IAmb	00 08 13.7	
	comp=Z,9.0nm,0.8s						
E25K	Arctic Village	24.47	33	P	P	00 08 09.9	-0.7
	baz=246,SNR=11						
CTG	Chitna Glacier	24.52	51	P	P	00 08 10.0	-1.2
	baz=266						
CTGM	Chitina Glacie	24.52	51	P	P	00 08 11.5	+0.2
CTGM				IAmb	IAmb	00 08 13.3	
	comp=Z,11nm,1.1s						
L27K	Beaver Creek,	24.52	46	P	P	00 08 10.3	-0.8
	baz=261						
BCAR	Beaver Creek A	24.54	46		P	00 08 11.8	+0.5
BMAR	Burnt Mountain	24.55	35	P	P	00 08 11.8	+0.4
LOGN	Logan Glacier	24.67	52	P	P	00 08 12.3	-0.3
LOGN				IAmb	IAmb	00 08 27.7	
	comp=Z,10nm,0.9s						
G26K	Porcupine Rive	24.68	36	P	P	00 08 12.7	+0.4
	baz=250						
D25K	Kavik River	24.73	30	P	P	00 08 12.3	-0.6
	baz=242						
F26K	Sheenjek River	24.80	35	P	P	00 08 14.2	+0.6
F26K	Sheenjek River	24.80	35	P	P	00 08 13.3	-0.3
	baz=248,SNR=16						
BVCY	Beaver Creek	24.88	48	P	P	00 08 13.1	-1.2
	baz=263						
YUK3	Moose Creek	25.00	49	P	P	00 08 14.7	-1.0
	baz=265,SNR=9.9						
PCA	Pinnacle	25.02	53	P	P	00 08 15.1	-0.5
PINM	Pinnacle	25.02	53	P	P	00 08 14.2	-1.4
	baz=269						
O28M	Mount Upton	25.07	52	P	P	00 08 15.1	-1.2
	baz=268						
I27K	Kandik River	25.12	40	IAmb	IAmb	00 08 19.3	
	comp=Z,3.6nm,0.8s						
I27K	Kandik River	25.12	40	P	P	00 08 15.5	-1.0
	baz=256						
YUK8	Steele Glacier	25.30	50	P	P	00 08 17.4	-1.0
	baz=267,SNR=7.8						
H27K	Steamboat Moun	25.32	39	P	P	00 08 18.0	-0.3
	baz=255						
BCPM	Bancas Point	25.33	54	P	P	00 08 19.2	+0.9
G27K	Doyon Strip	25.43	37	P	P	00 08 19.0	-0.3
	baz=253						
C26K	Camden Bay	25.46	30	P	P	00 08 18.9	-0.5
	baz=243						
C27K	Jago River	25.71	31	P	P	00 08 21.4	-0.4
	baz=245						
DAWY	Dawson	25.75	44		P	00 08 22.8	+0.6
DAWY	Dawson	25.75	44	P	P	00 08 22.1	-0.1
	baz=261,SNR=14						
I28M	Miner Creek	25.77	41	IAmb	IAmb	00 08 23.0	
	comp=Z,6.5nm,0.8s						
I28M	Miner Creek	25.77	41	P	P	00 08 22.1	-0.4
	baz=258,SNR=7.5						
YUK4	Talbot Arm	25.84	50	P	P	00 08 24.1	+0.8
	baz=268,SNR=9.5						
O29M	Mount Kennedy	25.86	53	P	P	00 08 23.2	-0.1
O29M				IAmb	IAmb	00 08 28.9	
	comp=Z,7.8nm,1.0s						
O29M	Mount Kennedy	25.86	53	P	P	00 08 23.2	-0.1
	baz=270						
E27K	Coleen River	25.88	34	P	P	00 08 23.9	+0.6
	baz=251						
YUK6	Outpost Mounta	25.97	51	P	P	00 08 23.9	-0.5
	baz=269						
M29M	Somme Creek	25.99	48	P	P	00 08 24.2	-0.3
	baz=266						
L29M	L29M	26.20	46	P	P	00 08 26.2	-0.1
	baz=265						
J29N	Klondike Camp	26.32	43	P	P	00 08 29.2	+1.9
J29N				IAmb	IAmb	00 08 35.2	
	comp=Z,5.3nm,0.6s						
J29N	Klondike Camp	26.32	43	P	P	00 08 27.7	+0.3
	baz=262						
F28M	Old Crow	26.32	36		P	00 08 28.1	+0.8
F28M				IAmb	IAmb	00 08 31.8	
	comp=Z,4.6nm,0.7s						
F28M	Old Crow	26.32	36	P	P	00 08 26.9	-0.4
	baz=254,SNR=7.1						
HYT	Haines Junctio	26.39	52		P	00 08 31.4	+3.3
HYT				IAmb	IAmb	00 08 32.1	
	comp=Z,8.3nm,0.8s						
HYT	Haines Junctio	26.39	52	P	P	00 08 27.7	-0.4
	baz=270,SNR=5.8						
I29M	Ogilvie Camp,	26.42	41		P	00 08 28.8	+0.5
I29M				IAmb	IAmb	00 08 31.1	
	comp=Z,11nm,0.8s						
I29M	Ogilvie Camp,	26.42	41	P	P	00 08 28.1	-0.2
	baz=260						
D27M	Malcolm River	26.46	32	IAmb	IAmb	00 08 30.3	
	comp=Z,3.7nm,0.8s						
D27M	Malcolm River	26.46	32	P	P	00 08 28.5	0.0
	baz=249						
K29M	Barlow Dome	26.55	45	P	P	00 08 29.5	0.0
	baz=264						
H29M	Whitestone	26.56	39	P	P	00 08 29.5	0.0
	baz=258						
N30M	Aishikik Lake	26.59	50	P	P	00 08 29.3	-0.5
	baz=269						
P30M	Million Dollar	26.67	53	P	P	00 08 29.9	-0.6
	baz=272						
E28M	Babbage River	26.74	34	P	P	00 08 30.8	-0.3
	baz=252						
M30M	Minto, Yukon	26.77	48	P	P	00 08 33.1	+1.7
M30M	Minto, Yukon	26.77	48	P	P	00 08 31.7	+0.2
	baz=267						
G29M	Pine Creek	26.84	38	P	P	00 08 32.1	+0.1
	baz=257						
PLBC	Pleasant Camp	27.00	55	P	P	00 08 33.5	0.0
	baz=274						
O30N	Mendenhall	27.08	52	P	P	00 08 35.2	+1.0
O30N	Mendenhall	27.08	52	P	P	00 08 34.1	-0.1
	baz=271						
J30M	Hart River	27.14	43	P	P	00 08 34.0	-0.8
	baz=263						
S31K	Pelican	27.20	58	P	P	00 08 34.2	-1.1
	baz=276						
I30M	Mount Dempster	27.20	42		P	00 08 35.1	-0.3
I30M	Mount Dempster	27.20	42	P	P	00 08 35.4	0.0
	baz=262						
D28M	Stokes Point	27.23	33	P	P	00 08 35.4	-0.1
	baz=252						
MAYO	Mayo, Yukon	27.24	46	P	P	00 08 35.6	-0.1
	baz=266						
EPYK	Eagle Plains	27.25	39		P	00 08 35.3	-0.4
EPYK				IAmb	IAmb	00 08 35.9	
	comp=Z,6.1nm,0.8s						
EPYK	Eagle Plains	27.25	39	P	P	00 08 35.2	-0.4
	baz=260						
E29M	Blow River	27.25	35	P	P	00 08 35.3	-0.4
	baz=254						
YAK	Yakutsk	27.44	311	LR	LR	00 18 46.0	
	comp=Z,54nm,19.2s,baz=288,slow=35						
G30M	tAoh Zraii Nji	27.55	38	P	P	00 08 38.8	+0.4
G30M				IAmb	IAmb	00 08 42.1	
	comp=Z,3.9nm,0.8s						
G30M	tAoh Zraii Nji	27.55	38	P	P	00 08 37.7	-0.8
	baz=259						
WHY	Whitehorse	27.68	52	P	P	00 08 38.6	-1.0
	baz=272						
SIT	Sitka	27.81	60	P	P	00 08 39.7	-1.0
	baz=279						
F30M	Barrier River	27.84	37	P	P	00 08 40.6	-0.4
	baz=258						
M31M	Drury Creek, Y	27.88	49	P	P	00 08 44.2	+2.8
R32K	Eaglecrest	28.07	57	P	P	00 08 42.0	-1.0
	baz=277						
H31M	Peel River	28.12	41	P	P	00 08 42.9	-0.6
	baz=263						
S32K	Killisnoo	28.15	59	P	P	00 08 42.7	-1.0
	baz=279						
G31M	Satah River	28.30	39		P	00 08 45.2	+0.2
G31M				IAmb	IAmb	00 08 46.0	
	comp=Z,6.9nm,0.8s						
G31M	Satah River	28.30	39	P	P	00 08 43.8	-1.2
	baz=261,SNR=5.4						
P32M	Atlin	28.33	54	P	P	00 08 44.1	-1.4
	baz=275						
N32M	Quiet Lake	28.53	51	P	P	00 08 45.9	-1.3
	baz=273						
F31M	Tsiigehtchic	28.59	38		P	00 08 47.3	-0.2
F31M				IAmb	IAmb	00 08 49.3	
	comp=Z,4.3nm,0.6s						
F31M	Tsiigehtchic	28.59	38	P	P	00 08 46.8	-0.7
	baz=261						
INK	Inuvik	28.82	36	P	P	00 08 50.4	+0.8
INK				IAmb	IAmb	00 08 58.3	
	comp=Z,3.8nm,0.8s						
INK	Inuvik	28.82	36	P	P	00 08 48.9	-0.7
	baz=259						
U33K	Whale Pass	29.18	61	P	P	00 08 51.7	-1.2
	baz=282						
CRAG	Craig	29.32	62	P	P	00 08 53.0	-1.1
	baz=283						
R33M	Jennings River	29.75	54	P	P	00 08 56.6	-1.5
	baz=278						
S34M	Telegraph Cree	29.90	57	P	P	00 08 58.1	-1.2
	baz=280						
V35K	Ketchikan	30.19	62	P	P	00 09 00.8	-1.1
	baz=284						
T35M	Bob Quinn	30.55	59	P	P	00 09 04.2	-0.9
	baz=282						
A36M	Sachs Harbour	32.21	30	P	P	00 09 20.0	+0.5
A36M	Sachs Harbour	32.21	30	P	P	00 09 18.8	-0.7
	baz=262						
C36M	Paulatuk	32.34	35	P	P	00 09 21.4	+0.7
C36M				IAmb	IAmb	00 09 24.4	
	comp=Z,7.1nm,1.1s						
C36M	Paulatuk	32.34	35	P	P	00 09 20.3	-0.4
	baz=267						
H11N2	WAKE ISLAND Hy	32.72	198	T	T	00 44 46.3	
	baz=11,slow=76,SNR=38						
H11N3	WAKE ISLAND Hy	32.73	198	T	T	00 44 53.4	
	baz=11,slow=76,SNR=32						
H11N1	WAKE ISLAND Hy	32.74	198	T	T	00 44 43.3	
	baz=11,slow=76,SNR=36						
TOAD	Toad River Com	32.76	54	P	P	00 09 23.7	-0.8
	baz=283						
WRGLY	Wrigley	32.84	46	P	P	00 09 25.0	-0.1
	baz=277						
KOTAN	Kotaneelee Air	33.07	52	P	P	00 09 27.2	0.0
	baz=282						
BBB	Bella Bella	33.13	67	LR	LR	00 23 39.4	
	comp=Z,58nm,18.1s,baz=241,slow=38						
H11S1	WAKE ISLAND Hy	33.95	198	T	T	00 46 24.0	
	baz=11,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	33.96	198	T	T	00 46 21.4	
	baz=11,slow=76,SNR=11						
H11S2	WAKE ISLAND Hy	33.97	198	T	T	00 46 23.5	
	baz=11,slow=76,SNR=8.2						
JCJ	Chichijima	35.89	241	LR	LR	00 21 30.7	
	comp=Z,27nm,21.1s,baz=132,slow=31						
YKAW3	Yellowknife Wh	36.94	46	P	P	00 10 00.1	-0.4
YKA	Yellowknife Ar	36.96	46	P	P	00 09 59.5	-1.1
	comp=Z,0.8nm,0.7s,baz=295,slow=12,SNR=13						
YKA				PcP	PcP	00 12 21.3	-0.3
	comp=Z,0.2nm,0.5s,baz=285,slow=3.8,SNR=6.7						
	comp=Z,0.8nm,0.7s						
YKA	Yellowknife Ar	36.96	46	P	P	00 10 00.7	0.0
YKAW1	Yellowknife Wh	37.02	46		P	00 10 01.3	+0.1
SONM	Songino Array	44.32	294	P	P	00 11 03.0	+1.2
	comp=Z,1.7nm,0.6s,baz=67,slow=7.5,SNR=16						
SONM				PcP	PcP	00 12 46.0	+0.1
	comp=Z,0.6nm,0.6s,baz=75,slow=2.7,SNR=4.2						
	comp=Z,1.7nm,0.6s						
SONM	Songino Array	44.32	294	IAmb	IAmb	00 11 03.4	
	comp=Z,1.4nm,0.7s						
LYMT	Lyon Mountain	44.64	67	P	P	00 11 03.3	-1.2
HHC	Hu-ho-hao-te	45.22	283	*e*P	P	00 11 09.9	+0.9
HHC				pmax	pmax		
	comp=Z,15nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,4.8s						
NVAR	Mina Array Bea	46.02	80	P	P	00 11 15.8	+0.3
	comp=Z,0.7nm,0.5s,baz=294,slow=7.7,SNR=3.9						
	comp=Z,0.7nm,0.5s						
ILON	Igloolik, Nuna	46.55	29		P	00 11 18.4	-0.6
ILON				IAmb	IAmb	00 11 21.6	
	comp=Z,3.3nm,0.7s						
YHH	Holmes Hill	46.70	68	P	P	00 11 20.2	-0.7
PDAR	Pinedale Array	48.65	70	P	P	00 11 34.3	-1.7
	comp=Z,0.5nm,0.4s,baz=323,slow=2.2,SNR=8.7						
	comp=Z,0.5nm,0.4s						
SPITS	Spitsbergen Ar	50.05	355	P	P	00 11 44.9	-1.0
	comp=Z,14nm,1.1s,baz=46,slow=6.0,SNR=15						
	comp=Z,14nm,1.1s						
PV13	Radium Mtn., P	51.97	74	P	P	00 12 00.3	-0.8
PV13				IAmb	IAmb	00 12 02.3	
	comp=Z,5.2nm,0.7s						
PV02	Paradox Valley	51.99	74	P	P	00 12 01.1	-0.3
ZALV	Zalesovo Beam	52.09	312	P	P	00 12 00.5	-1.0
	comp=Z,0.4nm,0.4s,baz=68,slow=3.9,SNR=2.0						
ZALV				PcP	PcP	00 13 12.6	-0.8
	comp=Z,0.7nm,0.7s,baz=35,slow=5.3,SNR=3.0						
	comp=Z,0.4nm,0.4s						
LZH	Lanzhou	52.92	283	*e*P	P	00 12 09.8	+1.6
LZH				pP	pwP	00 12 18.9	+7.3
LZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KURK	Kurchatov	57.09	312	P	P	00 12 37.9	+0.1
KURBB	Kurchatov Arra	57.19	311	P	P	00 12 39.0	+0.4
	comp=Z,4.0nm,0.6s,baz=43,slow=6.7,SNR=14						
	comp=Z,4.0nm,0.6s						
ARCES	ARCESS Array B	57.51	349	P	P	00 12 38.6	-2.0
	comp=Z,3.2nm,0.9s,baz=22,slow=6.1,SNR=1.9						
	comp=Z,3.2nm,0.9s						
ARCES	ARCESS Array B	57.51	349	IAmb	IAmb	00 12 54.6	
	comp=Z,4.4nm,1.1s						
MKAR	Makanchi Array	57.96	306	P	P	00 12 43.3	-0.8
	comp=Z,1.0nm,0.5s,baz=53,slow=6.1,SNR=26						
	comp=Z,1.0nm,0.5s						
BVAR	Borovoye Array	59.14	318	P	P	00 12 52.4	+0.2
	comp=Z,4.3nm,0.6s,baz=52,slow=7.3,SNR=25						
	comp=Z,4.3nm,0.6s						
BORK	Borovoye	59.15	318		P	00 12 52.6	+0.3
PZH	PanZhiHua	60.84	277	P	P	00 13 04.3	-0.1
TX31	Lajitas Ar. Si	61.11	78	P	P	00 13 05.3	-0.8
TXAR	Lajitas Array	61.11	78	P	P	00 13 05.9	-0.3
	comp=Z,0.8nm,0.5s,baz=300,slow=5.1,SNR=16						
	comp=Z,0.8nm,0.5s						
ARTI	Arti	61.23	326	P	P	00 13 06.7	+0.2
	comp=Z,2.3nm,0.8s,baz=54,slow=6.1,SNR=4.9						
	comp=Z,2.3nm,0.8s						
ARTI	Arti	61.23	326	IAmb	IAmb	00 13 07.1	
	comp=Z,3.7nm,0.6s						
SCHQ	Schefferville	61.43	36	P	P	00 13 08.2	+0.4
	comp=Z,5.1nm,0.9s,baz=251,slow=9.0,SNR=3.6						
	comp=Z,5.1nm,0.9s						
SCHQ	Schefferville	61.43	36	IAmb	IAmb	00 13 10.2	
	comp=Z,88nm,1.0s						
FINES	FINESS Array B	65.06	345	P	P	00 13 30.7	-1.1
	comp=Z,1.6nm,0.9s,baz=40,slow=4.5,SNR=5.0						
	comp=Z,1.6nm,0.9s						
AKTO	Aktyubinsk	66.09	322	P	P	00 13 38.9	+0.3
	comp=Z,3.4nm,0.5s,baz=49,slow=6.5,SNR=8.3						
	comp=Z,3.4nm,0.5s						
AB31	Akbulak array	66.28	320	P	P	00 13 40.2	+0.3
AB31				IAmb	IAmb	00 13 41.0	
	comp=Z,3.1nm,1.1s						
KK31	Karatay Array	66.41	310	P	P	00 13 40.9	0.0
KK31				IAmb	IAmb	00 13 41.4	
	comp=Z,2.5nm,0.8s						
KKAR	Karatay Array	66.41	310	P	P	00 13 41.2	+0.3
L56A	Greenwood	66.46	52	P	P	00 13 42.0	+0.8
NC204	NORSAR Array S	67.05	353	P	P	00 13 43.5	-1.2
NC204				IAmb	IAmb	00 13 50.9	
	comp=Z,3.6nm,1.1s						
NC405	NORSAR Array S	67.14	352	P	P	00 13 44.9	-0.3
NC405				IAmb	IAmb	00 13 52.2	
	comp=Z,3.1nm,1.1s						
NB201	NORSAR Array S	67.23	353	P	P	00 13 44.5	-1.3
NB201				IAmb	IAmb	00 14 02.7	
	comp=Z,1.9nm,0.8s						
NB2	NORSAR Subarra	67.25	353	P	P	00 13 45.4	-0.5
	comp=Z,0.7nm,0.7s,baz=8.7,slow=6.5						
NOA	NORSAR Array B	67.25	353	P	P	00 13 44.2	-1.7
	comp=Z,0.8nm,0.7s,baz=0.5,slow=3.6,SNR=7.2						
	comp=Z,0.8nm,0.7s						
SSPA	Standing Stone	67.43	53	P	P	00 13 47.0	-0.3
H62A	Milan	67.60	46	P	P	00 13 49.4	+1.0
HFS	Hagfors	67.92	351	P	P	00 13 49.1	-1.1
	comp=Z,1.4nm,0.7s,baz=46,slow=4.8,SNR=8.4						
	comp=Z,1.4nm,0.7s						
BELG	Belogornoye	68.11	329	P	P	00 13 51.7	+0.3
	comp=Z,4.3nm,0.6s,baz=294,slow=3.6,SNR=3.5						
	comp=Z,4.3nm,0.6s						
CMAR	Chiang Mai Arr	68.49	273	P	P	00 13 55.4	+1.0
	comp=Z,1.1nm,0.3s,baz=22,slow=7.7,SNR=7.5						
	comp=Z,1.1nm,0.3s						
L61B	Northampton	68.55	48	P	P	00 13 53.5	-0.9
CHGR	Chuyangaron	70.48	308	P	P	00 14 06.1	-0.3
EKA	Eskdalemuir Ar	73.53	0	P	P	00 14 23.9	-0.5
	comp=Z,1.4nm,0.6s,baz=8.5,slow=6.2,SNR=5.0						
	comp=Z,1.4nm,0.6s						
AKASG	Malin Array Be	74.60	340	P	P	00 14 30.3	-0.4
	comp=Z,0.3nm,0.3s,baz=23,slow=5.8,SNR=3.0						
	comp=Z,0.3nm,0.3s						
AKASG	Malin Array Be	74.60	340	IAmb	IAmb	00 14 43.9	
	comp=Z,2.5nm,1.0s						
BUR08	Bucovina Ar. S	78.35	341	IAmb	IAmb	00 14 53.8	
	comp=Z,4.8nm,1.1s						
BRTR	Keskin Array B	83.73	333	P	P	00 15 21.9	+0.9
	comp=Z,1.2nm,0.8s,baz=56,slow=1.7,SNR=6.8						
	comp=Z,1.2nm,0.8s						
ASAR	Alice Springs	83.93	219	P	P	00 15 22.2	+0.4
	comp=Z,1.0nm,0.6s,baz=26,slow=5.3,SNR=7.4						
	comp=Z,1.0nm,0.6s						
BOSA	Boshof	148.96	307	PKPbc	PKPbc	00 22 39.6	-0.2
	comp=Z,2.4nm,0.8s,baz=65,slow=4.3,SNR=2.1						

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*IDC **23** 00:06:34.6±0.8, 28°.97S×177°.77W, h0^{km}, mb4.4/4, mbtmp4.4/4, MS3.5/4, Error ellipse: s-maj=30.3km s-min=13.7km az=106.0*

ISC 23 00:06:40.5±0.8**, 28°.98S**±0°.09×**177°.9W**±0°.2**, h35^{km}, n34, σ1^{s}16**/24**, mb4.4**/5**, MS3.4**/3**, 5D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.28	189	Pn	Pn	00 06 46.1	-2.0
	4μm,0.3s,baz=25,slow=3.1,SNR=54						
RAO				Sn	Sn	00 06 51.8	-1.6
	11μm,0.3s,baz=49,slow=19,SNR=26						
URZ	Urewera	10.16	203	Pn	Pn	00 09 04.9	+1.1
	0.5nm,0.3s,baz=195,slow=20,SNR=1.3						
URZ				Sn	Sn	00 10 55.7	-0.7
	1.8nm,0.3s,baz=188,slow=24,SNR=8.3						
DZM	Mont Dzumac	15.73	292	LR	LR	00 14 41.0	
	comp=Z,152nm,19.3s,baz=77,slow=31						
STKA	Stephens Creek	34.93	255	P	P	00 13 30.4	+1.3
	3.4nm,0.7s,baz=87,slow=12,SNR=6.7						
	3.4nm,0.7s						
PMG	Port Moresby	38.12	294	LR	LR	00 26 15.7	
	comp=Z,97nm,20.6s,baz=129,slow=31						
ASAR	Alice Springs	43.32	265	P	P	00 14 39.1	-0.2
	3.1nm,0.7s,baz=95,slow=7.8,SNR=37						
	3.1nm,0.7s						
WRA	Warramunga Arr	44.18	271	P	P	00 14 46.0	-0.3
	8.4nm,0.7s,baz=110,slow=8.1,SNR=46						
	8.4nm,0.7s						
VNDA	Vanda	49.52	186	LR	LR	00 33 52.1	
	comp=Z,35nm,19.5s,baz=316,slow=33						
GUMO	Guam	55.56	314	LR	LR	00 36 56.9	
	comp=Z,33nm,21.1s,baz=99,slow=33						
QSPA	South Pole Qui	61.13	180	P	P	00 16 53.6	+2.5
	2.3nm,0.6s,baz=49,slow=1.4,SNR=10						
TROLL	Troll, Antarti	79.29	180	⇓P	P	00 18 43.4	+1.3
SNAA	Sanae	79.57	178	⇓P	P	00 18 44.3	+0.8
SNAA	Sanae	79.57	178	P	P	00 18 43.9	+0.3
	2.4nm,0.8s,baz=178,slow=3.2,SNR=7.6						
	2.4nm,0.8s						
VNA3	Neumayer Olymp	79.71	176	⇓P	P	00 18 44.9	+0.6
VNA2	Neumayer--Watz	80.15	177	⇓P	P	00 18 47.6	+1.0
	baz=165,slow=5.0						
VNA1	Neumayer--Stat	80.38	177	⇓P	P	00 18 48.8	+1.0
H03S2	Juan Fernandez	81.15	124	T	T	01 48 19.2	
	baz=240,slow=74,SNR=463						
H03S1	Juan Fernandez	81.16	124	T	T	01 48 20.4	
	baz=240,slow=74,SNR=395						
H03S3	Juan Fernandez	81.17	124	T	T	01 48 19.2	
	baz=240,slow=74,SNR=494						
MKAR	Makanchi Array	116.94	311	PKP	PKPdf	00 25 20.4	-1.0
	0.4nm,0.5s,baz=108,slow=3.2,SNR=5.2						
KURBB	Kurchatov Arra	120.19	314	PKP	PKPdf	00 25 26.3	-1.1
	1.2nm,0.7s,baz=108,slow=2.0,SNR=9.0						
BVAR	Borovoye Array	125.46	316	PKP	PKPdf	00 25 37.0	-0.5
	1.2nm,0.6s,baz=112,slow=1.6,SNR=8.2						
H10S3	ASCENSION HYDR	138.96	154	T	T	03 01 35.8	
	baz=15,slow=74,SNR=581						
H10S2	ASCENSION HYDR	138.96	154	T	T	03 01 35.8	
	baz=205,slow=74,SNR=606						
H10N3	ASCENSION HYDR	140.03	154	T	T	03 02 59.0	
	baz=204,slow=75,SNR=400						
H10N1	ASCENSION HYDR	140.04	154	T	T	03 02 57.3	
	baz=204,slow=75,SNR=392						
H10N2	ASCENSION HYDR	140.05	154	T	T	03 02 56.6	
	baz=204,slow=75,SNR=358						
FINES	FINESS Array B	143.85	341	PKP	PKPab	00 26 08.2	-0.3
	2.3nm,0.9s,baz=45,slow=0.8,SNR=4.2						
NOA	NORSAR Array B	147.37	352	PKPbc	PKPbc	00 26 19.4	-0.5
	0.9nm,0.6s,baz=14,slow=4.5,SNR=5.2						
HFS	Hagfors	147.88	349	PKPbc	PKPbc	00 26 20.7	-0.6
	3.8nm,0.8s,baz=62,slow=3.5,SNR=5.9						
AKASG	Malin Array Be	150.23	324	PKPbc	PKPbc	00 26 26.4	-1.1
	3.1nm,0.7s,baz=48,slow=2.6,SNR=9.6						
MMAI	Mount Meron Ar	151.27	287	PKPbc	PKiKP	00 26 31.6	+0.5
	3.9nm,0.8s,baz=188,slow=2.5,SNR=7.5						
BRTR	Keskin Array B	152.00	301	PKPbc	PKPbc	00 26 30.8	-1.4
	1.5nm,0.9s,baz=146,slow=5.6,SNR=6.4						
TORD	Torodi Ar. Bea	164.24	178	PKPab	PKPab	00 27 35.1	+0.5
	1.0nm,0.7s,baz=147,slow=2.2,SNR=6.9						

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*IDC **23** 00:11:18.5±1.9, 3°.75S×129°.49E, h0^{km}, mb3.7/3, mbtmp3.8/4, ML3.4/1, MS3.5/1, Error ellipse: s-maj=178.2km s-min=24.9km az=69.0*

*DJA **23** 00:11:21.5±0.5, 4°S±4°×12°9E±°, h10^{km}, M3.7/11, MLv3.7/11*

ISC 23 00:11:21.3±0.9**, 4°.24S**±0°.06×**128°.56E**±0°.05**, h10^{km}, n14, σ1^{s}09**/17**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	0.66	326	P	Pg	00 11 34.2	+0.2
AAI				S	Sg	00 11 43.1	+0.4
KRAI	Karang Ratu	0.93	350	P	Pg	00 11 39.3	+0.1
KRAI				S	Sg	00 11 51.3	0.0
MSAI	Masohi	0.96	23	P	Pg	00 11 39.1	-0.7
MSAI				S	Sg	00 11 51.9	-0.4
BNDI	Bandanaira	1.37	102	P	Pn	00 11 44.8	-1.7
NLAI	Namlea	1.76	304	P	Pn	00 11 50.0	-1.9
SANI	Sanana	3.36	310	P	Pn	00 12 14.7	+0.8
FAKI	Fak Fak	3.91	71	P	Pn	00 12 22.3	+0.9
SIJI	Sorong	4.30	39	P	Pn	00 12 27.5	+0.6
SWI	Sorong	4.30	39	P	Pn	00 12 27.1	+0.3
WRA	Warramunga Arr	16.59	161	Pn	Pn	00 15 15.7	+1.4
	0.1nm,0.3s,baz=343,slow=10,SNR=5.2						
	1.6nm,0.8s						
ASAR	Alice Springs	19.99	166	P	P	00 15 55.8	+1.6
	2.2nm,0.8s,baz=347,slow=11,SNR=16						
ASAR				PcP	PcP	00 20 09.0	-1.6
	0.3nm,0.6s,baz=7.6,slow=2.8,SNR=5.9						
	2.2nm,0.8s						
NWAO	Narrogin (SRO)	30.44	199	LR	LR	00 32 00.9	
	comp=Z,82nm,18.2s,baz=24,slow=40						
MKAR	Makanchi Array	65.14	327	P	P	00 22 02.1	-0.4
	0.4nm,0.4s,baz=113,slow=8.4,SNR=13						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	69.42	329	P	P	00 22 29.1	-0.5
	0.5nm,0.4s,baz=128,slow=5.6,SNR=4.1						
	0.5nm,0.4s						

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*IDC **23** 00:20:18.3±0.9, 29°.00S×177°.77W, h0^{km}, mb4.2/4, mbtmp4.2/4, MS3.5/6, Error ellipse: s-maj=31.2km s-min=10.6km az=110.0*

ISC 23 00:20:24.2±0.9**, 28°.97S**±0°.10×**177°.9W**±0°.2**, h35^{km}, n34, σ1^{s}22**/20**, mb4.2**/5**, MS3.4**/6**, 4C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.29	190	LR	LR	00 20 29.7	
	comp=Z,318nm,18.0s,baz=340,slow=40						
RAO				Pn	Pn	00 20 29.8	-2.2
	1μm,0.3s,baz=257,slow=22,SNR=22						
RAO				Sn	Sn	00 20 36.8	-0.5
	5μm,0.3s,baz=49,slow=19,SNR=25						
URZ	Urewera	10.17	203	Sn	Sn	00 24 40.1	-0.3
	0.2nm,0.3s,baz=233,slow=20,SNR=1.6						

PPT	Papeete	28.28	73	LR	LR	00 37 14.0	
	comp=Z,37nm,18.4s,baz=250,slow=36						
CTA	Charters Tower	33.72	277	LR	LR	00 38 31.3	
	comp=Z,52nm,19.9s,baz=72,slow=32						
STKA	Stephens Creek	34.94	255	P	P	00 27 14.4	+1.5
	2.4nm,0.7s,baz=95,slow=10,SNR=5.2						
STKA				LR	LR	00 39 19.4	
	comp=Z,71nm,18.6s,baz=27,slow=33						
	2.4nm,0.7s						
PMG	Port Moresby	38.12	294	LR	LR	00 41 19.9	
	comp=Z,57nm,21.0s,baz=154,slow=33						
ASAR	Alice Springs	43.33	265	P	P	00 28 23.1	+0.1
	2.8nm,0.9s,baz=94,slow=7.5,SNR=16						
ASAR				LR	LR	00 45 24.6	
	comp=Z,95nm,18.0s,baz=104,slow=35						
	2.8nm,0.9s						
WRA	Warramunga Arr	44.19	271	P	P	00 28 29.8	-0.1
	4.5nm,0.7s,baz=109,slow=8.1,SNR=17						
	4.5nm,0.7s						
BATI	Baumata	57.60	276	LR	LR	00 54 55.9	
	comp=Z,92nm,18.1s,baz=183,slow=36						
QSPA	South Pole Qui	61.14	180	P	P	00 30 37.1	+2.3
	5.1nm,1.1s,baz=46,slow=3.4,SNR=8.8						
SNAA	Sanae	79.58	178	⇑P	P	00 32 28.0	+0.7
SNAA	Sanae	79.58	178	P	P	00 32 27.9	+0.7
	1.3nm,0.8s,baz=115,slow=20,SNR=5.8						
	1.3nm,0.8s						
VNA3	Neumayer Olymp	79.72	176	⇑P	P	00 32 29.0	+1.0
VNA2	Neumayer--Watz	80.16	177	⇑P	P	00 32 31.7	+1.4
	baz=161,slow=5.1						
VNA1	Neumayer--Stat	80.39	176	⇑P	P	00 32 33.1	+1.6
H03S2	Juan Fernandez	81.15	124	T	T	02 02 11.6	
	baz=240,slow=74,SNR=31						
H03S1	Juan Fernandez	81.17	124	T	T	02 02 07.5	
	baz=240,slow=74,SNR=32						
H03S3	Juan Fernandez	81.17	124	T	T	02 02 09.2	
	baz=240,slow=74,SNR=30						
H03N3	Juan Fernandez	81.34	123	T	T	02 02 19.0	
	baz=237,slow=75,SNR=14						
H03N2	Juan Fernandez	81.34	123	T	T	02 02 16.8	
	baz=237,slow=75,SNR=14						
H03N1	Juan Fernandez	81.36	123	T	T	02 02 13.3	
	baz=237,slow=75,SNR=13						
MKAR	Makanchi Array	116.94	311	PKP	PKPdf	00 39 03.1	-1.9
	0.1nm,0.4s,baz=156,slow=2.7,SNR=2.1						
KURBB	Kurchatov Arra	120.18	314	PKP	PKiKP	00 39 10.5	-0.5
	0.6nm,0.7s,baz=110,slow=1.9,SNR=5.4						
H10S3	ASCENSION HYDR	138.96	154	T	T	03 15 15.6	
	baz=204,slow=74,SNR=71						
H10S2	ASCENSION HYDR	138.96	154	T	T	03 15 15.7	
	baz=16,slow=74,SNR=71						
H10N3	ASCENSION HYDR	140.04	154	T	T	03 16 44.1	
	baz=203,slow=75,SNR=31						
H10N1	ASCENSION HYDR	140.05	154	T	T	03 16 45.0	
	baz=203,slow=75,SNR=28						
H10N2	ASCENSION HYDR	140.06	154	T	T	03 16 42.6	
	baz=203,slow=75,SNR=28						
NOA	NORSAR Array B	147.36	352	PKPbc	PKPdf	00 40 00.8	-0.3
	1.2nm,0.8s,baz=15,slow=4.4,SNR=4.7						
HFS	Hagfors	147.87	349	PKPbc	PKPbc	00 40 04.4	-0.5
	2.2nm,0.8s,baz=46,slow=4.3,SNR=3.8						
AKASG	Malin Array Be	150.22	324	PKPbc	PKPbc	00 40 10.6	-0.5
	1.8nm,0.6s,baz=50,slow=2.9,SNR=7.7						
MMAI	Mount Meron Ar	151.27	287	PKPbc	PKiKP	00 40 14.5	-0.2
	3.2nm,0.8s,baz=94,slow=2.5,SNR=4.6						
BRTR	Keskin Array B	152.00	301	PKPbc	PKPbc	00 40 14.7	-1.1
	1.0nm,0.9s,baz=144,slow=4.3,SNR=4.4						
TORD	Torodi Ar. Bea	164.25	178	PKPab	PKPab	00 41 18.9	+0.5
	0.9nm,0.8s,baz=149,slow=2.7,SNR=5.6						

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*IDC **23** 00:22:53.5±1.3, 5°.18S×146°.08E, h0km, mb3.9/3, mbtmp3.9/5, ML3.1/2, Error ellipse: s-maj=63.6km s-min=26.2km az=111.0*

ISC 23 00:22:57.5±1.3**, 5°.2S**±0°.1×**146°.0E**±0°.2**, h27**km**, n6,** σ**1s.51**/7**, mb4.1**/3**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	4.29	165	Pn	Pn	00 24 02.0	+0.9
	7.8nm,0.3s,baz=345,slow=4.7,SNR=6.8						
PMG				Sn	Sn	00 24 49.4	-0.9
	10.0nm,0.3s,baz=214,slow=18,SNR=6.2						
	21nm,0.3s						
WRA	Warramunga Arr	18.51	217	P	Pn	00 27 11.6	-0.7
	0.3nm,0.3s,baz=36,slow=11,SNR=9.6						
	0.6nm,0.4s						
ASAR	Alice Springs	21.72	211	P	P	00 27 48.6	+1.8
	0.4nm,0.4s,baz=49,slow=7.4,SNR=14						
	0.4nm,0.4s						
QSPA	South Pole Qui	84.72	180	P	P	00 35 28.3	-0.7
	2.3nm,0.7s,baz=301,slow=2.2,SNR=6.3						
	2.3nm,0.7s						
ILAR	Eielson Array	85.17	23	P	P	00 35 31.8	+0.7
	0.9nm,0.7s,baz=252,slow=5.0,SNR=12						
	0.9nm,0.7s						
TORD	Torodi Ar. Bea	143.96	285	PKP	PKPdf	00 42 30.0	-1.6
	0.5nm,0.7s,baz=76,slow=5.3,SNR=2.5						

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*IDC **23** 00:53:29.2±1.2, 28°.98S×177°.87W, h0km, mb4.0/5, mbtmp4.0/5, MS3.4/4, Error ellipse: s-maj=33.7km s-min=14.5km az=81.0*

ISC 23 00:53:34.7±1.2**, 29°.1S**±0°.2×**177°.9W**±0°.2**, h35**km**, n26,** σ**1s.29**/16**, mb4.1**/6**, MS3.5**/3**, 4C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.20	187	Pn	Pn	00 53 40.1	-1.4
	2μm,0.3s,baz=63,slow=3.6,SNR=15						
RAO				Sn	Sn	00 53 44.4	-1.9
	5μm,0.3s,baz=217,slow=20,SNR=17						
DZM	Mont Dzumac	15.74	293	LR	LR	01 01 45.6	
	comp=Z,98nm,19.8s,baz=208,slow=32						
STKA	Stephens Creek	34.90	255	P	P	01 00 24.5	+1.5
	1.5nm,0.7s,baz=90,slow=13,SNR=2.4						
	1.5nm,0.7s						
ASAR	Alice Springs	43.30	265	P	P	01 01 33.0	-0.4
	1.4nm,0.9s,baz=98,slow=7.8,SNR=16						
	1.4nm,0.9s						
WRA	Warramunga Arr	44.16	271	P	P	01 01 39.7	-0.6
	2.9nm,0.8s,baz=108,slow=8.0,SNR=11						
	2.9nm,0.8s						
NWAO	Narrogin (SRO)	54.97	248	LR	LR	01 23 41.1	
	comp=Z,44nm,20.2s,baz=12,slow=33						
GUMO	Guam	55.60	315	LR	LR	01 23 30.6	
	comp=Z,20nm,21.2s,baz=96,slow=32						
QSPA	South Pole Qui	61.06	180	P	P	01 03 46.5	+1.8
	1.8nm,0.8s,baz=11,slow=2.6,SNR=5.7						
	1.8nm,0.8s						
TROLL	Troll, Antarti	79.22	180	⇑P	P	01 05 37.3	+1.4
	comp=Z,108nm,0.8s						
SNAA	Sanae	79.50	178	⇑P	P	01 05 38.4	+1.1
	comp=Z,19nm,0.8s						
SNAA	Sanae	79.50	178	P	P	01 05 38.5	+1.1
	comp=Z,1.0nm,0.8s,baz=139,slow=6.4,SNR=3.2						
SNAA				LR	LR	01 38 33.9	
	comp=Z,60nm,20.3s,baz=311,slow=34						
	comp=Z,1.0nm,0.8s						
VNA3	Neumayer Olymp	79.64	176	⇑P	P	01 05 38.3	+0.2
VNA2	Neumayer--Watz	80.08	177	⇑P	P	01 05 41.1	+0.7
	comp=Z,2.4nm,0.7s,baz=158,slow=4.5						
H03S2	Juan Fernandez	81.13	124	T	T	02 35 17.3	
	baz=240,slow=74,SNR=32						
H03S1	Juan Fernandez	81.14	124	T	T	02 35 16.3	
	baz=240,slow=74,SNR=46						
H03S3	Juan Fernandez	81.15	124	T	T	02 35 19.3	
	baz=240,slow=74,SNR=31						
KURBB	Kurchatov Arra	120.22	314	PKP	PKPdf	01 12 20.2	-1.3
	comp=Z,0.3nm,0.7s,baz=106,slow=2.0,SNR=4.9						
BVAR	Borovoye Array	125.50	316	PKP	PKiKP	01 12 31.1	-0.9
	comp=Z,0.4nm,0.5s,baz=29,slow=3.3,SNR=3.6						
H10S3	ASCENSION HYDR	138.90	154	T	T	03 48 28.1	
	baz=204,slow=74,SNR=84						
H10S2	ASCENSION HYDR	138.90	154	T	T	03 48 28.2	
	baz=16,slow=74,SNR=80						
H10N3	ASCENSION HYDR	139.98	154	T	T	03 49 50.8	
	baz=204,slow=75,SNR=35						
H10N1	ASCENSION HYDR	139.98	154	T	T	03 49 51.5	
	baz=204,slow=75,SNR=42						
H10N2	ASCENSION HYDR	140.00	154	T	T	03 49 49.8	
	baz=204,slow=75,SNR=36						
AKASG	Malin Array Be	150.28	324	PKPbc	PKPbc	01 13 21.0	-0.7
	comp=Z,2.1nm,0.7s,baz=48,slow=2.6,SNR=4.5						
BRTR	Keskin Array B	152.02	301	PKPbc	PKiKP	01 13 25.9	-0.8
	comp=Z,0.8nm,1.0s,baz=116,slow=5.8,SNR=3.0						
TORD	Torodi Ar. Bea	164.17	179	PKPab	PKPab	01 14 29.7	+1.2
	comp=Z,0.4nm,0.7s,baz=168,slow=2.1,SNR=2.6						

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*NOU **23** 01:06:43.3, 10°.56S×165°.60E, h0km, mb5.4/17, Santa Cruz Islands*

*NEIC **23** 01:06:46.8±1.7, 10°.58S±0°.09×165°.6E±0°.1, h103km±6km, mb4.5/36, Error ellipse: s-maj=17.6km s-min=13.2km az=80.0*

*IDC **23** 01:06:48.3±5.1, 10°.55S×165°.59E, h123km±45km, mb3.8/13, mbtmp4.3/14, MS3.3/7, Error ellipse: s-maj=22.9km s-min=21.1km az=128.0*

ISC 23 01:06:45.8±0.5**, 10°.61S**±0°.06×**165°.65E**±0°.07**, h100**km**, n92,** σ**1s.47**/87**, mb4.4**/28**, 1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HURO	Huro Makira	3.68	272	P	Pn	01 07 40.0	-0.7
SANVU	Saraoutou	5.04	163		Pn	01 07 59.4	+0.3
SANVU	Saraoutou	5.04	163	P	Pn	01 07 59.2	+0.1
NGOA	Tingoa Renbel	5.56	260	P	Pn	01 08 04.3	-1.8
SAVO	Savo Central	5.93	284	P	Pn	01 08 12.6	+1.4
TATA	Tatamba Isabel	6.17	290	P	Pn	01 08 15.0	+0.5
TATA	Tatamba Isabel	6.17	290	S	Sn	01 09 26.6	+2.9
DVP	Devils Point	7.49	161	P	Pn	01 08 35.4	+3.0
MARNC	Mare, Loyalty	11.05	168	Pn	Pn	01 09 21.8	+1.0
MARNC	Mare, Loyalty	11.05	168	P	Pn	01 09 23.6	+2.8
DZM	Mont Dzumac	11.42	176	P	Pn	01 09 29.5	+3.6
	42nm,0.3s,baz=329,slow=11,SNR=160						
DZM				S	Sn	01 11 27.0	-4.6
	3.7nm,0.4s,baz=139,slow=19,SNR=1.8						
DZM	Mont Dzumac	11.42	176	*e*P	Pn	01 09 27.1	+1.2
	44nm,0.8s						
DZM				*e*S	Sn	01 11 30.2	-1.4
	46nm,1.1s						
DZM	Mont Dzumac	11.42	176	Pn	Pn	01 09 27.9	+2.0
DZM	Mont Dzumac	11.42	176	P	Pn	01 09 28.6	+2.7
YATNC	Mamie plateau,	11.45	174	P	Pn	01 09 28.4	+2.2
ONTNC	Ouen Toro	11.66	176	Pn	Pn	01 09 32.7	+3.7
ONTNC	Ouen Toro	11.66	176	P	Pn	01 09 33.4	+4.4
OUENC	Ouen Island, N	11.80	175	P	Pn	01 09 34.5	+3.7
PINNC	Pines Island,	12.06	172	Pn	Pn	01 09 35.1	+0.8
MSVF	Nonsavu	13.95	122		Pn	01 10 00.1	+0.8
PMG	Port Moresby	18.25	272	LR	LR	01 17 59.9	
	comp=Z,91nm,19.3s,baz=138,slow=37						
PMG	Port Moresby	18.25	272	P	Pn	01 10 52.0	-0.7
PMG				IAmb	IAmb	01 10 53.8	
	comp=Z,27nm,1.0s						
MANU	Manus Island	20.05	294	P	Pn	01 11 11.8	-2.1
MANU				IAmb	IAmb	01 11 14.1	
	comp=Z,31nm,0.9s						
CTA	Charters Tower	20.92	241	P	P	01 11 21.4	+0.8
	comp=Z,8.6nm,0.7s,baz=65,slow=10,SNR=11						
	comp=Z,8.6nm,0.7s						
CTAO	Charters Tower	20.92	241	P	P	01 11 21.2	+0.7
CTAO				IAmb	IAmb	01 11 22.8	
	comp=Z,10nm,0.8s						
COEN	Coen	22.20	259	P	P	01 11 33.4	-0.9
INKA	Innaminka	28.94	230	P	P	01 12 34.6	-1.2
RTZ	Ruatahuna	29.67	162	P	P	01 12 42.9	+0.6
BKZ	Black Stump Fm	30.04	163	P	P	01 12 46.3	+0.9
STKA	Stephens Creek	30.69	223	P	P	01 12 51.6	+0.4
	comp=Z,2.4nm,0.6s,baz=37,slow=9.7,SNR=5.2						
STKA				LR	LR	01 23 13.7	
	comp=Z,73nm,21.6s,baz=30,slow=32						
	comp=Z,2.4nm,0.6s						
STKA	Stephens Creek	30.69	223	P	P	01 12 50.9	-0.3
STKA				IAmb	IAmb	01 13 19.5	
	comp=Z,14nm,1.1s						
WR8	Warramunga Arr	31.40	249	P	P	01 12 57.0	-0.6
WR8				IAmb	IAmb	01 12 58.0	
	comp=Z,8.0nm,1.1s						
WB0	Warramunga Arr	31.45	249	P	P	01 12 57.7	-0.4
WB0				IAmb	IAmb	01 12 58.5	
	comp=Z,11nm,0.9s						
WRA	Warramunga Arr	31.54	249	P	P	01 12 58.6	-0.3
	comp=Z,6.6nm,0.9s,baz=79,slow=9.2,SNR=27						
	comp=Z,6.6nm,0.9s						
WRA	Warramunga Arr	31.54	249	P	P	01 12 57.1	-1.8
SNZO	South Karori	31.60	167	P	P	01 13 00.4	+1.3
LTZ	Lake Taylor	32.57	171	P	P	01 13 08.2	+0.6
AS31	Alice Springs	32.90	243	P	P	01 13 09.5	-1.2
ASAR	Alice Springs	32.90	243	P	P	01 13 09.9	-0.9
	comp=Z,4.6nm,0.9s,baz=71,slow=9.6,SNR=31						
ASAR				PcP	PcP	01 15 52.6	-0.6
	comp=Z,0.5nm,0.6s,baz=54,slow=2.5,SNR=5.5						
	comp=Z,4.6nm,0.9s						
ASAR	Alice Springs	32.90	243	P	P	01 13 08.9	-1.8
MQZ	McQueen's Vall	33.53	171	P	P	01 13 16.0	+0.1
BBOO	Buckleboo	35.05	226	P	P	01 13 29.7	+0.5
BBOO				IAmb	IAmb	01 13 30.4	
	comp=Z,5.6nm,0.5s						
KNRA	Kununurra	36.23	258	P	P	01 13 39.2	-0.3
FITZ	Fitzroy Crossi	39.40	254	P	P	01 14 05.7	-0.4
FITZ				IAmb	IAmb	01 14 06.6	
	comp=Z,3.0nm,0.8s						
FORT	Forrest	40.21	234	P	P	01 14 12.9	+0.2
FORT				IAmb	IAmb	01 14 14.1	
	comp=Z,8.5nm,0.8s						
BATI	Baumata	41.27	267	LR	LR	01 32 37.7	
	comp=Z,65nm,18.5s,baz=170,slow=38						
PPT	Papeete	43.90	104	LR	LR	01 28 07.6	
	comp=Z,38nm,21.4s,baz=284,slow=29						
PPT2	Papeete2	43.90	104	*e*LR	LR	01 27 00.8	
	comp=Z,120nm,29.0s						
PPT2				*e*LR	LR	01 27 03.3	
	comp=Z,107nm,40.8s						
TBI	Tubuai	44.59	112	*e*LR	LR	01 27 29.2	
	comp=Z,994nm,34.2s						
PSA00	Pilbara Seismi	45.18	250	P	P	01 14 53.1	0.0
MORW	Morawa	49.74	241	P	P	01 15 28.8	+0.5
JHJ	Hachijo jima 2	49.99	331	LR	LR	01 33 40.7	
	comp=Z,38nm,21.5s,baz=281,slow=32						
JGF	Kuroka	53.17	331	P	P	01 15 53.6	-0.1
JGF				IAmb	IAmb	01 16 12.7	
	comp=Z,11nm,1.1s						
MJAR	Matsushiro Arr	53.54	333	P	P	01 15 54.9	-1.5
	comp=Z,4.4nm,0.9s,baz=160,slow=8.0,SNR=5.5						
	comp=Z,4.4nm,0.9s						
UGM	Wanagama	54.41	268	P	P	01 16 01.9	-1.3
JNU	Nakatsue	54.67	324	LR	LR	01 37 06.1	
	comp=Z,25nm,20.3s,baz=177,slow=33						
NJ2	Nanjing	61.64	315	*e*P	P	01 16 53.9	+0.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
XAN	Xi'an	69.76	312	⇓P	P	01 17 45.4	-0.1
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC	Hu-ho-hao-te	71.44	320	*e*P	P	01 17 56.5	+0.9
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,210nm,6.4s						
CMAR	Chiang Mai Arr	71.85	293	P	P	01 17 59.0	+0.5
	comp=Z,2.3nm,0.7s,baz=116,slow=4.5,SNR=13						
CMAR				LR	LR	01 52 01.3	
	comp=Z,9.1nm,18.3s,baz=255,slow=38						
	comp=Z,2.3nm,0.7s						
CMAR	Chiang Mai Arr	71.85	293	P	P	01 17 58.5	+0.1
PZH	PanZhiHua	72.16	302	P	P	01 18 01.8	+1.5
LZH	Lanzhou	74.39	312	*e*P	P	01 18 18.0	+4.7
LZH				pP	PcP	01 18 25.4	-2.1
LZH				pmax	pmax		
	comp=Z,13nm,1.3s						
ACHA	Angle Creek He	75.58	20	P	P	01 18 20.1	+0.6
ACHA				IAmb	IAmb	01 18 29.1	
	comp=Z,8.7nm,1.1s						
P19K	Oil Pt	77.38	20	P	P	01 18 29.6	0.0
SONM	Songino Array	78.26	324	P	P	01 18 34.9	0.0
	comp=Z,0.6nm,0.8s,baz=146,slow=8.0,SNR=2.8						
	comp=Z,0.6nm,0.8s						
SONM	Songino Array	78.26	324	P	P	01 18 34.5	-0.3
L18K	Granite Mounta	78.29	17	P	P	01 18 34.9	+0.4
QSPA	South Pole Qui	79.39	180	P	P	01 18 41.1	+0.4
	comp=Z,1.4nm,0.6s,baz=307,slow=2.1,SNR=10						
	comp=Z,1.4nm,0.6s						
QSPA	South Pole Qui	79.39	180	P	P	01 18 41.0	+0.2
QSPA				IAmb	IAmb	01 18 42.7	
	comp=Z,3.0nm,1.0s						
BMRM	Bremner River	81.36	22	P	P	01 18 52.6	+1.4
BMRM				IAmb	IAmb	01 19 03.7	
	comp=Z,8.8nm,1.2s						
N25K	Chitina, Valde	81.78	22	P	P	01 18 53.0	-0.4
N25K				IAmb	IAmb	01 18 56.3	
	comp=Z,5.8nm,1.1s						
GLB	Gilahina Butte	81.97	22	P	P	01 18 54.1	-0.2
GLB				IAmb	IAmb	01 19 21.8	
	comp=Z,6.6nm,1.2s						
ILAR	Eielson Array	83.14	19	P	P	01 18 59.8	-0.5
	comp=Z,0.6nm,0.8s,baz=234,slow=5.5,SNR=6.6						
	comp=Z,0.6nm,0.8s						
ILAR	Eielson Array	83.14	19	P	P	01 19 00.9	+0.7
SCRK	Sand Creek	83.55	20	P	P	01 19 02.4	-0.2
BCAR	Beaver Creek A	83.73	21	P	P	01 19 03.7	+0.3
DAWY	Dawson	85.19	21	P	P	01 19 11.1	+0.3
P33M	Teslin, Yukon	85.67	26	P	P	01 19 13.4	+0.1
DSP	Deep Springs	85.77	51	P	P	01 19 15.0	+0.9
DSP				IAmb	IAmb	01 19 15.7	
	comp=Z,3.7nm,1.0s						
NVAR	Mina Array Bea	85.82	50	P	P	01 19 15.3	+0.5
	comp=Z,2.0nm,0.9s,baz=236,slow=6.9,SNR=5.0						
	comp=Z,2.0nm,0.9s						
NVAR	Mina Array Bea	85.82	50	P	P	01 19 14.6	-0.1
U15A	North Rim	89.92	53	P	P	01 19 34.2	-0.2
U15A				IAmb	IAmb	01 19 36.1	
	comp=Z,2.5nm,0.8s						
MKAR	Makanchi Array	93.14	317	P	P	01 19 48.1	-0.6
	comp=Z,0.9nm,0.7s,baz=86,slow=6.4,SNR=7.9						
	comp=Z,0.9nm,0.7s						
MKAR	Makanchi Array	93.14	317	P	P	01 19 47.9	-0.8
ZALV	Zalesovo Beam	93.15	324	P	P	01 19 48.0	-0.6
	comp=Z,0.5nm,0.6s,baz=90,slow=4.4,SNR=3.7						
	comp=Z,0.5nm,0.6s						
ZALV	Zalesovo Beam	93.15	324	P	P	01 19 47.2	-1.4
PDAR	Pinedale Array	93.33	47	P	P	01 19 48.5	-1.5
	comp=Z,0.4nm,0.8s,baz=291,slow=1.3,SNR=4.1						
	comp=Z,0.4nm,0.8s						
PDAR	Pinedale Array	93.33	47	P	P	01 19 48.6	-1.4
ARCES	ARCESS Array B	115.89	345	PKP	PKiKP	01 25 14.9	-1.4
	comp=Z,4.5nm,1.0s,baz=63,slow=2.2,SNR=7.3						
ARCES	ARCESS Array B	115.89	345		PKiKP	01 25 14.7	-1.6
BOSA	Boshof	125.36	223	PKPdf	PKPdf	01 25 35.8	-0.1

IDC 23 01:19:15.6±2.4**, 7°.58S**×**155°.03E, h0**km**, mb3.6**/5**, mbtmp3.6**/5**, Error ellipse: s-maj=85.6km s-min=27.6km az=123.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.52	236	P	P	01 24 26.7	-0.9
	1.0nm,1.0s,baz=58,slow=9.7,SNR=4.5						
	1.0nm,1.0s						
ASAR	Alice Springs	25.82	229	P	P	01 24 49.4	+0.5
	0.4nm,0.7s,baz=59,slow=9.1,SNR=6.0						
	0.4nm,0.7s						
SONM	Songino Array	69.85	327	P	P	01 30 29.3	+1.0
	0.3nm,0.4s,baz=129,slow=4.9,SNR=5.1						
	0.3nm,0.4s						
MKAR	Makanchi Array	83.87	319	P	P	01 31 46.9	-0.5
	0.8nm,0.7s,baz=101,slow=6.1,SNR=7.9						
	0.8nm,0.7s						
ILAR	Eielson Array	83.90	21	P	P	01 31 46.8	-0.3
	0.8nm,0.9s,baz=262,slow=5.8,SNR=5.9						
	0.8nm,0.9s						

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*IDC **23** 01:42:19.7±12.0, 7°.11S×129°.39E, h151km±125km, mb3.0/2, mbtmp3.9/6, ML4.2/4, Error ellipse: s-maj=136.0km s-min=31.0km az=47.0*

*NEIC **23** 01:42:21.6±1.6, 7°.05S±0°.08×129°.3E±0°.1, h161km±12km, mb4.1/4, Error ellipse: s-maj=15.7km s-min=9.8km az=114.0*

ISC 23 01:42:19.8±0.8**, 7°.30S**±0°.07×**129°.34E**±0°.08**, h150**km**, n22,** σ**2s.54**/25**, mb3.3**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.06	109	Pn	Pn	01 43 01.8	+6.2
FAKI	Fak Fak	5.23	34	Pn	Pn	01 43 34.5	-1.8
SOEI	Soe	5.58	244	Pn	Pn	01 43 43.0	+2.0
MTN	Manton Dam	5.79	162	Pn	Pn	01 43 47.7	+4.0
BATI	Baumata	6.31	242	P	Pn	01 43 53.5	+2.8
	16nm,0.3s,baz=87,slow=4.1,SNR=3.5						
BATI				S	Sn	01 44 59.5	-2.3
	46nm,0.4s,baz=54,slow=19,SNR=5.9						
	29nm,0.3s						
KNRA	Kununurra	8.35	184	Pn	Pn	01 44 19.9	+2.1
FITZ	Fitzroy Crossi	11.32	198	P	Pn	01 44 58.3	+1.0
	0.6nm,0.3s,baz=24,slow=10,SNR=36						
FITZ				S	Sn	01 46 59.1	-3.4
	3.3nm,0.4s,baz=90,slow=22,SNR=7.0						
	1.5nm,0.2s						
FITZ	Fitzroy Crossi	11.32	198	Pn	Pn	01 44 57.4	+0.1
WB0	Warramunga Arr	13.34	159	Pn	Pn	01 45 24.5	+1.2
WRA	Warramunga Arr	13.48	159	P	Pn	01 45 25.9	+0.8
	1.0nm,0.3s,baz=333,slow=12,SNR=18						
WRA				S	Sn	01 47 49.4	-5.1
	2.2nm,0.5s,baz=344,slow=19,SNR=11						
	1.0nm,0.6s						
WRA	Warramunga Arr	13.48	159	Pn	Pn	01 45 25.5	+0.3
WR8	Warramunga Arr	13.55	159	Pn	Pn	01 45 26.7	+0.7
COEN	Coen	15.12	117		P	01 45 48.6	+1.2
AS31	Alice Springs	16.86	165	P	Pn	01 46 09.4	+2.3
AS31				IAmb	IAmb	01 46 11.3	
	comp=Z,3.2nm,0.5s						
ASAR	Alice Springs	16.86	165	P	Pn	01 46 10.2	+3.2
	comp=Z,1.2nm,0.3s,baz=346,slow=11,SNR=82						
ASAR				S	S	01 49 11.7	-2.9
	comp=Z,0.5nm,0.4s,baz=350,slow=26,SNR=6.2						
	comp=Z,5.5nm,0.4s						
ASAR	Alice Springs	16.86	165	P	Pn	01 46 10.5	+3.5
FORT	Forrest	23.39	183	P	P	01 47 17.7	+2.5
FORT				IAmb	IAmb	01 47 22.1	
	comp=Z,7.7nm,1.0s						
BBOO	Buckleboo	26.15	167	P	P	01 47 42.7	+2.6
MKAR	Makanchi Array	68.11	327	P	P	01 53 01.1	-2.4
	comp=Z,0.3nm,0.6s,baz=128,slow=5.4,SNR=4.1						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	68.11	327	P	P	01 53 02.5	-0.9
KURBB	Kurchatov Arra	72.42	329	P	P	01 53 30.1	+0.6
	comp=Z,0.1nm,0.4s,baz=125,slow=4.4,SNR=1.7						
	comp=Z,0.1nm,0.4s						
ABKAR	Akbulak array	82.33	322	P	P	01 54 23.2	-1.5

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*GCG **23** 02:19:17.0±0.4, 14°.29N×92°.33W, h90km±9km, MD3.9, MW3.0*

*MEX **23** 02:19:19.2±0.4, 14°.06N×92°.37W, h59km±14km, MD4.1*

*CATAC **23** 02:19:19.3±1.1, 14°N±5°×9°2W±°, h28km±8km, M3.5/10, MLv3.5/10, Error ellipse: s-maj=12.4km s-min=8.0km az=27.3, confirmed*

ISC 23 02:19:15.6±1.9**, 13°.97N**±0°.06×**92°.39W**±0°.04**, h25**km±16km**, n30,** σ**2s.01**/41**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.87	51	*e*P	Pn	02 19 33.3	+1.0
RTAL				*e*S	Sn	02 19 43.0	-1.2
RTAL	Retalhuleu	0.87	51	S	Sn	02 19 46.1	+1.9
RTAL	Retalhuleu	0.87	51	P	Pn	02 19 33.3	+1.0
THIG		0.94	7	*e*P	Pn	02 19 33.2	0.0
THIG				*e*S	Sb	02 19 44.6	-0.8
STG2	El Palmar, Qui	1.09	65	*i* P	Pn	02 19 35.4	0.0
STG5	El Palmar, Qui	1.10	67	*i* P	Pn	02 19 35.4	-0.1
STG8	El Palmar, Qui	1.12	65	*i* P	Pn	02 19 36.0	+0.2
CHUJ	Union Juarez	1.15	14	*e*P	Pn	02 19 36.5	+0.2
CHUJ				*e*S	Sn	02 19 50.2	-1.2
PATR	El Naranjo	1.15	8	*e*P	Pn	02 19 36.6	+0.2
PATR				*e*S	Sn	02 19 50.2	-1.2
PAVE	Pavencul	1.23	10	*e*P	Pn	02 19 38.0	+0.5
PAVE				*e*S	Sn	02 19 51.3	-2.1
HUEH	Huehuetenango	1.59	33	*e*P	Pb	02 19 44.9	+0.3
HUEH				*e*S	Sb	02 20 05.0	+0.7
HUEH	Huehuetenango	1.59	33	P	Pb	02 19 44.6	+0.1
FG16	Alotenango, Sa	1.85	80	*i* P	Pn	02 19 43.0	-2.9
PCIG		1.90	335	*e*P	Pn	02 19 47.1	+0.6
PCIG				*e*S	Sn	02 20 01.3	-8.2
CCIG	Comitan	2.31	6	*e*P	Pb	02 19 56.3	-0.5
CCIG				*e*S	Sb	02 20 22.5	-2.4
FAME	Alcaldia de Sa	2.31	93	P	Pn	02 19 52.6	+0.5
FAME	Alcaldia de Sa	2.31	93	S	Sn	02 20 18.3	-1.4
NUBE	Las Nubes	2.54	91	*i* P	Pn	02 19 57.1	+1.7
NUBE	Las Nubes	2.54	91	S	Sn	02 20 24.1	-1.4
NUBE	Las Nubes	2.54	91	P	Pn	02 19 56.2	+0.9
JAYA	Jayaque - finc	2.88	96	*i* S	Sn	02 20 35.0	+1.1
TGIG		2.88	346	*e*P	Pn	02 20 02.3	+2.3
TGIG				*e*S	Sn	02 20 35.3	+1.4
PMON	Piamonte	3.00	95	P	Pn	02 20 02.9	+1.3
PMON	Piamonte	3.00	95	S	Sn	02 20 36.5	-0.4
PETF	Flores	3.81	39	P	Pn	02 20 15.5	+2.8
CMIG	Matias Romero	3.92	323	*e*P	Pn	02 20 16.1	+1.8

CMIG				*e*S	Sn	02 20 59.0	-0.5
HUIG	Huatulco	4.01	297	*e*P	Pn	02 20 16.1	+0.6
HUIG				*e*S	Sn	02 20 56.0	-5.8
NEUV	Arroyo Zacate	4.96	319	*e*P	Pn	02 20 32.6	+4.1
NEUV				*e*S	Sn	02 21 21.5	-3.7
TOIG	Toxpalan	6.08	313	*e*P	Pn	02 20 46.8	+2.7
TOIG				*e*S	Sn	02 21 28.1	-25
TXIG	Tlaxiaco	6.12	303	*e*P	Pn	02 20 48.9	+4.1
TXIG				*e*S	Sn	02 21 39.9	-14

RSNC 23 02:19:20.0±0.0**,3°N**±4°×**7°9W**±°**,h29**^{km}±10^{km}**,M2.6,mb3.9, ML2.4,South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GR1C	Gorgona, Isla	1.14	91	P	Pn	02 19 39.2	-0.8
GR1C				S	Sn	02 19 53.7	-1.0
BBAC	Balboa, Cauca	2.29	116	P	Pn	02 19 55.4	-0.7
BBAC				S	Sn	02 20 21.7	-1.8
JAMC	Jamundi, Valle	2.64	86	P	Pn	02 20 00.4	-0.5
JAMC				S	Sn	02 20 29.8	-2.2
GCUF	Volcan Galeras	2.66	132	P	Pn	02 20 01.8	+0.4
GCUF				S	Sn	02 20 31.8	-1.1
POPC	Popayan, Colom	2.68	100	P	Pn	02 19 59.8	-1.6
POPC				S	Sn	02 20 35.1	+2.1
CRUC	La Cruz	2.77	122	P	Pn	02 20 04.5	+1.7
CRUC				S	Sn	02 20 37.7	+2.3
PAC1	Pacto, Paraso	2.79	169	P	Pn	02 19 59.8	-3.1
PAC1				S	Sn	02 20 29.9	-5.9
CUSE	Cuicocha Este	2.86	161	P	Pn	02 20 03.0	-1.0
CUSE				S	Sn	02 20 34.0	-3.7
OTAV	Otavalo	2.90	163	P	Pn	02 20 02.6	-2.1
OTAV				S	Sn	02 20 36.0	-2.9
YOTC	Yotoco, Valle	3.11	72	P	Pn	02 20 06.6	-0.6
YOTC				S	Sn	02 20 42.0	-1.5
PLMC	San Jos del P	3.55	58	P	Pn	02 20 12.2	-1.0
PLMC				S	Sn	02 20 53.8	-0.5
GARC	Garzon, Huila	3.90	102	P	Pn	02 20 19.8	+1.5
ORTC	Ortega, Tolima	4.15	78	P	Pn	02 20 24.2	+2.7
ORTC				S	Sn	02 21 11.9	+2.8
PRAC	Prado	4.47	81	P	Pn	02 20 28.8	+2.9
PRAC				S	Sn	02 21 20.4	+3.4
MACC	Macarena, Meta	5.53	99	P	Pn	02 20 41.5	+1.1

NORS ***23*** *02:21:17.1, 42°.97N×47°.02E, h1*^{km}*, MPVA3.7*
DRS ***23*** *02:21:19.1, 42°.98N×46°.97E, h9*^{km}
MOS 23 02:21:18.6,42°.98N×47°.03E,h10^{km}**,MPVA3.7,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUJR	Buynaksk	0.16	160	*e*Pg	Pb	02 21 24.0	+0.3
BUJR				*e*Sg	Sg	02 21 27.0	+2.3
KRNR	Karanay	0.18	212	*e*Pg	Pb	02 21 23.9	-0.1
KRNR				*e*Sg	Sg	02 21 27.6	+2.4
DLMR	Dylym	0.31	287	*e*Pg	Pb	02 21 26.0	-0.2
DLMR				*e*Sg	Sb	02 21 32.0	+0.7
UNCR	Uncukul	0.32	214	*e*Pg	Pb	02 21 26.6	+0.2
UNCR				*e*Sg	Sb	02 21 32.2	+0.6
MAK	Makhachkala	0.35	93	*e*Pg	Pb	02 21 26.5	-0.3
MAK				*e*Sg	Sb	02 21 32.5	+0.2
ARKR	Arakani	0.38	184	*e*Pg	Pb	02 21 27.7	+0.4
ARKR				*e*Sg	Sb	02 21 34.4	+1.1
XNZR	Khunzakh	0.50	209	*e*Pg	Pb	02 21 29.6	+0.1
XNZR				*e*Sg	Sb	02 21 37.4	+0.5
DVE	Vedeno	0.67	268	*e*Pg	Pg	02 21 31.9	+0.4
DVE				*e*Sg	Sb	02 21 42.7	+1.1
BTLR	Botlikh	0.67	243	*e*Pg	Pn	02 21 33.6	-0.6
BTLR				*e*Sg	Sn	02 21 44.1	-0.7
SGKR	Sergokala	0.69	138	*e*Pg	Pn	02 21 34.7	+0.3
SGKR				*e*Sg	Sn	02 21 45.5	+0.3
KMKR	Kumukh	0.85	177	*e*Pg	Pn	02 21 37.0	+0.3
KMKR				*e*Sg	Sn	02 21 50.3	+1.0
URKR	Urkarakh	0.93	151	*e*Pg	Pn	02 21 39.0	+1.2
URKR				*e*Sg	Sn	02 21 52.7	+1.6
GROC	Groznyy	0.93	284	*e*Pg	Pn	02 21 37.9	+0.1
GROC				*e*Sg	Sn	02 21 52.9	+1.8
TLTR	Tlyarata	1.01	210	*e*Pg	Pn	02 21 39.5	+0.7
TLTR				*e*Sg	Sn	02 21 53.6	+0.5
DRN	Derbent	1.35	134	*e*Pg	Pg	02 21 46.5	+2.1
DRN				*e*Sg	Sg	02 22 06.2	+4.3
AKT	Akhty	1.58	161	*e*Pg	Pg	02 21 49.8	+0.8
AKT				*e*Sg	Sg	02 22 11.3	+1.7
KMGR	Komgaron	1.59	274	*e*Pg	Pg	02 21 50.1	+1.0
KMGR				*e*Sg	Sg	02 22 14.2	+4.4
KSMR	Kasumkent	1.60	149	*e*Pg	Pg	02 21 50.7	+1.4
KSMR				*e*Sg	Sg	02 22 12.7	+2.7
VLKR	Vladikavkaz	1.73	273	*e*Pg	Pg	02 21 51.9	+0.1
VLKR				*e*Sg	Sg	02 22 17.9	+3.7
TRKR	Terskaya	1.84	295	*e*Pg	Pb	02 21 52.9	+0.6
TRKR				*e*Sg	Sg	02 22 20.7	+3.0
BTKR	Batakoyurt	1.86	283	*e*Pg	Pb	02 21 53.3	+0.6
BTKR				*e*Sg	Sg	02 22 21.8	+3.3
LACR	Lac	2.02	267	*e*Pg	Pb	02 21 54.5	-0.9
LACR				*e*Sg	Sg	02 22 23.8	+0.4
ARNR	Ardon	2.02	277	*e*Pg	Pb	02 21 55.3	-0.2
ARNR				*e*Sg	Sg	02 22 25.9	+2.2
PRTR	Priterechnaya	2.15	292	*e*Pg	Pg	02 21 59.4	-0.4
PRTR				*e*Sg	Sg	02 22 27.7	0.0
KORR	Kora	2.18	274	*e*Pg	Pb	02 21 57.8	-0.2
KORR				*e*Sg	Sb	02 22 26.3	+1.2
STDR	Stavd-Durt	2.21	281	*e*Pg	Pg	02 21 59.9	-1.0
STDR				*e*Sg	Sg	02 22 30.1	+0.5
LSNR	Lesken	2.37	278	*e*Pn	Pb	02 22 01.6	+0.3
LSNR				*e*Sn	Sg	02 22 34.3	-0.3
DIGR	Digorskoe uzhe	2.54	269	*e*Pn	Pn	02 22 00.1	+0.2
DIGR				*e*Sn	Sb	02 22 37.2	+1.6
NCK	Nalchik	2.56	283	*e*Pn	Pn	02 22 01.8	+1.6
NCK				*e*Sn	Sb	02 22 36.3	+0.1
KBTC	Kuba-Taba	2.77	289	*e*Pn	Pn	02 22 04.3	+1.3
KBTC				*e*Sn	Sb	02 22 41.4	-0.9
PYA1	Pyatigorsk	3.06	292	*e*Pn	Pn	02 22 08.2	+1.1
PYA1				*e*Sn	Sn	02 22 46.0	+2.3
KBZ	Khabaz	3.11	285	*e*Pn	Pn	02 22 07.8	+0.2
KBZ				*e*Sn	Sb	02 22 50.0	-1.8
SHA1	Shidzhatmaz	3.28	285	*e*Pn	Pn	02 22 10.9	+0.7
SHA1				*e*Sn	Sn	02 22 51.1	+1.7
KIV0	Kislovodsk Arr	3.31	289	*e*Pn	Pn	02 22 11.1	+0.6
KIV0				*e*Sn	Sn	02 22 50.9	+1.1
KIV	Kislovodsk	3.31	289	*e*Pn	Pn	02 22 10.2	-0.3
KIV				*e*Sn	Sn	02 22 51.1	+1.1
ALER	Alexandrovskoy	3.47	302	*e*Pn	Pn	02 22 14.5	+1.8
ALER				*e*Sn	Sn	02 22 56.1	+2.3

SJA ***23*** *02:21:31.0±0.7, 21°.84S×67°.31W, h218*^{km}*, ML4.1, MW3.8*
IDC ***23*** *02:21:32.0±1.8, 21°.90S×67°.22W, h176*^{km}*±16*^{km}*, mb2.8/2, mbtmp3.7/7, Error ellipse: s-maj=23.5km s-min=15.6km az=58.0*
NEIC ***23*** *02:21:32.3±1.2, 21°.89S±0°.08×67°.48W±0°.10, h226*^{km}*±8*^{km}*, mb4.0/3, Error ellipse: s-maj=13.1km s-min=11.1km az=103.0*
SCB ***23*** *02:21:33.4±1.1, 21°.92S×67°.31W, h178*^{km}*±8*^{km}*, MB5.1, ML4.3/4, Error ellipse: s-maj=3.7km s-min=2.7km az=0.0*
GUC ***23*** *02:21:33.7±0.6, 21°.90S×67°.57W, h221*^{km}*±6*^{km}*, ML4.2*
ISC 23 02:21:32.2±0.7**,21°.92S**±0°.04×**67°.32W**±0°.04**,h203**^{km}±7^{km}**, n111,σ1**^{s}**.20**/142**,4C-2D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AF01	San Pedro de A	1.30	217		Pn	02 22 06.1	+1.3
AF01	San Pedro de A	1.30	217	*e*P	Pn	02 22 06.4	+1.6
AF01	San Pedro de A	1.30	217	*e*P	Pn	02 21 52.6	-12
AF01				*e*S	S	02 22 19.2	-11
YJA	Yavi	1.70	99	*e*P	Pn	02 22 09.0	+0.5
YJA	Yavi	1.70	99	Pg	Pn	02 22 08.5	0.0
YJA	Yavi	1.70	99	*e*P	Pn	02 22 09.2	+0.7
YJA				*e*S	S	02 22 35.5	-0.6
MOCB	Mochara	1.70	67	Pg	Pn	02 22 08.2	-0.4
MOCB				Sg	S	02 22 34.3	-1.9
MOCB				IAML		02 22 35.4	
	589nm,0.6s						
PB09	IPOC Station P	1.79	274	Pn	Pn	02 22 09.6	+0.5
PB09	IPOC Station P	1.79	274	⇑*i*P	Pn	02 22 09.9	+0.9
PB09	IPOC Station P	1.79	274	Pg	Pn	02 22 09.5	+0.5
PB09	IPOC Station P	1.79	274	*e*P	Pn	02 22 09.9	+0.9
PB09				*e*S	S	02 22 39.4	+2.3
HJA	Humahuaca	2.19	126	*e*P	Pn	02 22 14.2	+0.9
HJA				*e*S	S	02 22 47.5	+2.7
PB01	IPOC Station P	2.19	293	Pn	Pn	02 22 13.1	0.0
PB01	IPOC Station P	2.19	293	*e*P	Pn	02 22 13.3	+0.3
PB01				*e*S	S	02 22 43.6	-0.7
PB01				IAML		02 22 45.6	
	comp=E,1µm,0.2s						
PB01	IPOC Station P	2.19	293	Pg	Pn	02 22 13.4	+0.3
PB01				Sg	S	02 22 43.4	-0.9
PB01				IAML		02 22 45.4	
	comp=E,1µm,0.2s						
PB01	IPOC Station P	2.19	293	*e*P	Pn	02 22 13.5	+0.3
PB01				*e*S	S	02 22 44.4	+0.1
PB01				IAML		02 22 45.1	
	comp=Z,698nm,0.2s						
PB06	IPOC Station P	2.23	249	Pn	Pn	02 22 13.8	+0.4
PB06	IPOC Station P	2.23	249	*e*P	Pn	02 22 14.0	+0.5
PB06				*e*S	S	02 22 44.9	-0.1
PB06				IAML		02 22 46.3	
	comp=E,508nm,0.2s						
PB06	IPOC Station P	2.23	249	Pg	Pn	02 22 13.8	+0.4
PB06	IPOC Station P	2.23	249	*e*P	Pn	02 22 14.0	+0.5
PB06				*e*S	S	02 22 46.3	+1.3
PB06				IAML		02 22 47.3	
	comp=Z,283nm,0.1s						
PB03	IPOC Station P	2.26	266	Pn	Pn	02 22 14.1	+0.3
PB03	IPOC Station P	2.26	266	*e*P	Pn	02 22 14.4	+0.6
PB03				*e*S	S	02 22 44.8	-0.8
PB03				IAML		02 22 46.3	
	comp=E,761nm,0.1s						
PB03	IPOC Station P	2.26	266	*e*P	Pn	02 22 14.2	+0.4
PB03				*e*S	S	02 22 45.4	-0.2
PB03				IAML		02 22 46.9	
	comp=Z,778nm,0.2s						
PB07	IPOC Station P	2.39	274	Pn	Pn	02 22 15.5	+0.2
PB07	IPOC Station P	2.39	274	*e*P	Pn	02 22 15.7	+0.5
PB07				*e*S	S	02 22 47.2	-1.0
PB07				IAML		02 22 48.2	
	comp=N,1µm,0.2s						
PB07	IPOC Station P	2.39	274	*e*P	Pn	02 22 15.5	+0.2
PB07				*e*S	S	02 22 47.7	-0.4
PB07				IAML		02 22 49.6	
	comp=Z,676nm,0.3s						
PB08	IPOC Station P	2.46	316	Pn	Pn	02 22 16.7	+0.4
PB08	IPOC Station P	2.46	316	⇑*e*P	Pn	02 22 17.4	+1.1
PB08				IAML		02 22 51.4	
	comp=E,340nm,0.2s						
PB08	IPOC Station P	2.46	316	Pg	Pn	02 22 17.0	+0.7
PB08	IPOC Station P	2.46	316	*e*P	Pn	02 22 17.4	+1.1
PB08				*e*S	S	02 22 51.2	+1.2
AOVT	TarijaAcel	2.46	82	Pg	Pn	02 22 16.4	+0.3
PB02	IPOC Station P	2.47	283	Pn	Pn	02 22 15.9	-0.1
PB02	IPOC Station P	2.47	283	*e*P	Pn	02 22 16.3	+0.3
PB02				*e*S	S	02 22 48.3	-1.3
PB02	IPOC Station P	2.47	283	Pg	Pn	02 22 16.6	+0.5
PB02				Sg	S	02 22 48.9	-0.7
PB02				IAML		02 22 50.6	
	comp=E,1µm,0.2s						
PB02	IPOC Station P	2.47	283	*e*P	Pn	02 22 16.3	+0.3
PB02				*e*S	S	02 22 49.0	-0.5
PB02				IAML		02 22 49.6	
	comp=Z,913nm,0.1s						
SALTA		2.47	159	⇓*e*P	Pn	02 22 18.1	+1.7
SALTA		2.47	159	*e*P	Pn	02 22 13.4	-3.1
SALTA				*e*P		02 22 13.6	
SALTA				*e*P		02 22 18.2	
PB05	IPOC Station P	2.82	250	Pn	Pn	02 22 20.2	+0.1
PB05	IPOC Station P	2.82	250	⇑*e*P	Pn	02 22 20.5	+0.4
PB05				*e*S	S	02 22 55.4	-1.5
PB05				IAML		02 22 59.1	
	comp=E,271nm,0.2s						
PB05	IPOC Station P	2.82	250	*e*P	Pn	02 22 20.6	+0.5
PB05				*e*S	S	02 22 56.2	-0.6
PB05				IAML		02 22 58.1	
	comp=Z,180nm,0.3s						
GO01	Chusmiza	2.84	322	Pn	Pn	02 22 21.0	+0.3
GO01	Chusmiza	2.84	322	*e*P	Pn	02 22 21.3	+0.6
GO01	Chusmiza	2.84	322	Pg	Pn	02 22 21.4	+0.6
GO01	Chusmiza	2.84	322	*e*P	Pn	02 22 20.8	+0.1
GO01				*e*S	S	02 22 59.7	+1.8
GO01				IAML		02 23 02.2	
	comp=Z,209nm,0.1s						
PATCX	Punta Patache	2.85	292	Pn	Pn	02 22 20.5	+0.1
PATCX	Punta Patache	2.85	292	*e*P	Pn	02 22 20.5	+0.1
PATCX				*e*S	S	02 22 56.2	-1.2
PATCX				IAML		02 22 57.3	
	comp=E,788nm,0.3s						
PATCX	Punta Patache	2.85	292	*e*P	Pn	02 22 20.5	+0.1
PATCX				*e*S	S	02 22 57.1	-0.3
PATCX				IAML		02 22 58.3	
	comp=Z,493nm,0.3s						
HMBC	Humberstone	2.90	304	Pn	Pn	02 22 19.9	-1.0
HMBC	Humberstone	2.90	304	⇑*e*P	Pn	02 22 20.6	-0.4
HMBC				IAML		02 22 59.1	
	comp=N,582nm,0.1s						
HMBC	Humberstone	2.90	304	*e*P	Pn	02 22 20.5	-0.4
HMBC				*e*S	S	02 22 57.3	-1.1
HMBC				IAML		02 23 01.4	
	comp=Z,493nm,0.2s						
TA01	Diego Aracena	2.98	296	Pn	Pn	02 22 21.0	-0.9
TA01	Diego Aracena	2.98	296	*e*P	Pn	02 22 21.6	-0.3
TA01				*e*S	S	02 22 57.9	-2.1
TA01				IAML		02 23 00.1	
	comp=N,585nm,0.4s						
TA01	Diego Aracena	2.98	296	*e*P	Pn	02 22 20.8	-1.0
TA01				*e*S	S	02 22 58.5	-1.5
TA01				IAML		02 22 59.9	
	comp=Z,285nm,0.3s						
PB11	IPOC Station P	3.06	314	Pn	Pn	02 22 22.2	-0.7
PB11	IPOC Station P	3.06	314	*e*P	Pn	02 22 22.7	-0.3
PB11	IPOC Station P	3.06	314	Pg	Pn	02 22 22.9	0.0
PB11				Sg	S	02 23 00.5	-1.4
PB11				IAML		02 23 01.3	
	comp=Z,992nm,0.2s						
PB11	IPOC Station P	3.06	314	*e*P	Pn	02 22 22.5	-0.4
PB11				*e*S	S	02 23 00.8	-1.1
PB11				IAML		02 23 01.2	
	comp=Z,400nm,0.2s						
TA02	Huaiquique	3.09	302	*e*P	Pn	02 22 22.8	-0.3
TA02	Huaiquique	3.09	302	*e*P	Pn	02 22 22.7	-0.4
TA02				*e*S	S	02 23 01.8	-0.4
TA02				IAML		02 23 03.3	
	comp=Z,467nm,0.1s						
SLA	San Lorenzo	3.25	149	*e*P	Pn	02 22 13.3	-12
PB10	IPOC Station P	3.38	241	Pn	Pn	02 22 26.3	-0.3
PB10	IPOC Station P	3.38	241	*e*P	Pn	02 22 26.8	+0.3
PB10				*e*S	S	02 23 06.6	-1.9
PB10	IPOC Station P	3.38	241	*e*P	Pn	02 22 27.0	+0.5
PB10				*e*S	S	02 23 05.8	-2.6
PB10				IAML		02 23 08.4	
	comp=Z,165nm,0.3s						
SOEO	Opoqueri	3.38	351	Pg	Pn	02 22 27.7	+0.6
GO02	Mina Guanaco	3.84	212	Pn	Pn	02 22 33.3	+0.9
GO02	Mina Guanaco	3.84	212	*e*P	Pn	02 22 33.4	+0.9
GO02	Mina Guanaco	3.84	212	Pg	Pn	02 22 33.3	+0.9
GO02	Mina Guanaco	3.84	212	*e*P	Pn	02 22 32.8	+0.4
GO02				*e*S	S	02 23 18.4	-0.8
GO02				IAML		02 23 22.8	
	comp=Z,284nm,0.2s						
PB14	IPOC Station P	3.91	226	Pn	Pn	02 22 33.2	-0.1
PB14	IPOC Station P	3.91	226	⇓*e*P	Pn	02 22 33.9	+0.6
PB14	IPOC Station P	3.91	226	Pg	Pn	02 22 33.9	+0.6
PB14	IPOC Station P	3.91	226	*e*P	Pn	02 22 33.6	+0.3
PB14				*e*S	S	02 23 07.0	-14
PB14				IAML		02 23 22.6	
	comp=Z,224nm,0.6s						
SOET	ToroToro	4.04	21	Pg	Pn	02 22 35.6	+0.6
AOEA	Aiquile	4.21	28	Pg	Pn	02 22 37.1	+0.1
AOEA	Aiquile	4.21	28	Pg	Pn	02 22 37.2	+0.2
PB12	IPOC Station P	4.33	319	Pn	Pn	02 22 35.9	-2.5
PB12	IPOC Station P	4.33	319	*e*P	Pn	02 22 36.7	-1.7
PB12	IPOC Station P	4.33	319	*e*P	Pn	02 22 36.9	-1.5
PB12				*e*S	S	02 23 26.6	-3.3
PB12				IAML		02 23 32.4	
	comp=Z,142nm,0.2s						
PB18	Visviri	4.76	334	Pn	Pn	02 22 45.7	+1.5
BBOJ	La Paz, Jacaqu	4.98	350	Pg	Pn	02 22 48.8	+1.7
BBOE	La Paz, Chanca	5.12	353	Pg	Pn	02 22 50.3	+1.5
AC02	Maricunga	5.17	198	Pn	Pn	02 22 49.9	+0.6
AC01	Pan de Azucar	5.17	215	Pn	Pn	02 22 48.2	-0.6
AC01	Pan de Azucar	5.17	215	*e*S	S	02 23 46.2	-2.7
AC01				IAML		02 23 49.8	
	comp=Z,53nm,0.2s						
BBOD	La Paz, Gloria	5.39	347	Pg	Pn	02 22 53.2	+0.9
LPAZ	La Paz	5.65	352	P	Pn	02 22 56.9	+1.2
	comp=Z,2.7nm,0.3s,baz=160,slow=5.2,SNR=37						
LPAZ				S	S	02 23 59.8	-1.5
	comp=Z,3.2nm,0.5s,baz=9.0,slow=18,SNR=5.0						
LPAZ	La Paz	5.65	352	Pn	Pn	02 22 55.8	+0.1
LPAZ	La Paz	5.65	352	Pg	Pn	02 22 56.9	+1.2
BBOB	La Paz, Bander	5.80	352	Pg	Pn	02 22 58.6	+1.1
GO03	Copiapo	6.24	205	Pn	Pn	02 23 01.3	-1.4
AC04	Llanos de Chal	7.12	208	Pn	Pn	02 23 11.2	-2.8
AC05	El Transito	7.39	201	Pn	Pn	02 23 17.1	-0.5
LCO	Las Campanas	7.69	203	Pn	Pn	02 23 19.9	-1.9
SIV	San Ignacio	8.35	46	P	Pn	02 23 27.9	-2.3
	comp=Z,26nm,0.5s,baz=233,slow=8.7,SNR=193						
SIV				S	S	02 24 54.2	-10
	comp=Z,4.1nm,0.4s,baz=127,slow=22,SNR=6.7						
CO03	El Pedregal	9.38	198	Pn	Pn	02 23 41.7	-1.8
CFA	Coronel Fontan	9.68	185	P	Pn	02 23 47.4	0.0
	comp=Z,0.4nm,0.3s,baz=308,slow=11,SNR=17						
CO02	Combarbal	9.81	199	Pn	Pn	02 23 46.7	-2.4
PTLB	Pontes e Lacer	10.08	52	Pn	Pn	02 23 51.4	-1.1
CPUP	Villa Florida	10.13	118	P	Pn	02 23 52.3	-0.8
	comp=Z,0.6nm,0.3s,baz=290,slow=15,SNR=4.8						
CPUP	Villa Florida	10.13	118	Pn	Pn	02 23 55.4	+2.3
VA03	San Esteban	11.18	194	Pn	Pn	02 24 06.8	+0.2
VILB	Vilhena	11.21	38	Pn	Pn	02 24 06.9	-0.2
ITAB	Concordia	14.80	114		P	02 24 52.8	+0.1
TRQA	Tornquist	16.73	165	P	P	02 25 13.5	-0.4
TRQA				IAmb	IAmb	02 25 24.5	
	comp=Z,3.5nm,0.9s						
VAO	Valinhos	18.85	97	P	Pn	02 25 37.8	-2.5
VAO				IAmb	IAmb	02 25 38.7	
	comp=Z,13nm,0.8s						
BDFB	Brasilia	19.31	74	P	Pn	02 25 43.5	-2.3
	comp=Z,1.8nm,0.4s,baz=236,slow=8.7,SNR=7.0						
BDFB	Brasilia	19.31	74	P	P	02 25 41.9	-0.4
BDFB				IAmb	IAmb	02 25 44.0	
	comp=Z,4.7nm,1.0s						
TXAR	Lajitas Array	61.82	324	P	P	02 31 31.6	+1.6
	comp=Z,0.2nm,0.7s,baz=149,slow=6.6,SNR=2.6						
	comp=Z,0.2nm,0.7s						
PDAR	Pinedale Array	75.21	329	P	P	02 32 55.9	+3.1
	comp=Z,0.3nm,0.6s,baz=118,slow=4.5,SNR=3.0						
	comp=Z,0.3nm,0.6s						
TORD	Torodi Ar. Bea	76.11	70	P	P	02 32 59.8	+1.6
	comp=Z,5.4nm,0.4s,baz=266,slow=4.6,SNR=151						
MKAR	Makanchi Array	145.09	37	PKPbc	PKiKP	02 40 48.7	-0.6
	comp=Z,0.7nm,0.7s,baz=323,slow=3.8,SNR=7.8						

CATAC ***23*** *02:27:40.6±0.9, 14°N±3°×9°2W±°, h22*^{km}*±9*^{km}*, M3.5/7, MLv3.5/7, Error ellipse: s-maj=11.1km s-min=6.4km az=69.8, confirmed*
GCG ***23*** *02:27:44.6±0.8, 13°.88N×92°.08W, h0*^{km}*±8*^{km}*, MD4.0*
MEX ***23*** *02:27:45.7±0.6, 13°.94N×92°.41W, h17*^{km}*±45*^{km}*, MD3.8*
ISC 23 02:27:42.2±1.8**,13°.98N**±0°.06×**92°.26W**±0°.04**,h17**^{km}±11^{km}**, n27,σ1**^{s}**.65**/36**,Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.77	45	*e*P	Pn	02 27 59.9	+1.6
RTAL				*e*S	Sn	02 28 10.8	+1.3
RTAL	Retalhuleu	0.77	45	P	Pn	02 27 59.5	+1.2
RTAL				S	Sn	02 28 11.9	+2.4
THIG		0.92	360	*e*P	Pn	02 28 00.6	+0.2
THIG				*e*S	Sb	02 28 11.9	+0.2
STG5	El Palmar, Qui	0.98	65	*i* P	Pn	02 28 02.0	+0.7
HUEH	Huehuetenango	1.52	29	*e*P	Pg	02 28 11.1	-0.4
HUEH				*e*S	Sn	02 28 27.5	-0.8
HUEH	Huehuetenango	1.52	29	S	Sb	02 28 30.2	+1.1
FG16	Alotenango, Sa	1.72	80	*i* P	Pn	02 28 09.8	-1.8
QUIS	Sacapulas	1.72	41	*i* P	Pg	02 28 16.0	+0.7
QUIS				*i* S	Sg	02 28 39.3	+1.5
PCIG		1.95	332	*e*P	Pn	02 28 13.8	-0.7
PCIG				*e*		02 28 27.7	
APG	El Apazote	2.01	60	*i* P	Pb	02 28 19.1	+0.5
FAME	Alcaldia de Sa	2.18	93	P	Pn	02 28 16.9	-0.9
FAME	Alcaldia de Sa	2.18	93	S	Sn	02 28 45.2	+0.7
CCIG	Comitan	2.29	3	*e*P	Pb	02 28 22.5	-0.7
CCIG				*e*S	Sb	02 28 50.9	-0.5
SLOZ	Alcaldia de Sa	2.40	89	P	Pn	02 28 20.1	-0.8
NUBE	Las Nubes	2.41	92	*i* P	Pb	02 28 23.6	-1.6
NUBE				*i* S	Sn	02 28 52.8	+2.5
NUBE	Las Nubes	2.41	92	P	Pn	02 28 21.1	+0.1
NUBE	Las Nubes	2.41	92	S	Sn	02 28 51.5	+1.2
JAYA	Jayaque - finc	2.75	96	P	Pn	02 28 24.9	-0.8
JAYA	Jayaque - finc	2.75	96	S	Sn	02 28 59.6	+0.9
TGIG		2.90	343	*e*P	Pn	02 28 28.7	+1.0
TGIG				*e*S	Sn	02 29 03.3	+1.1
PETF	Flores	3.72	38	*e*P	Pb	02 28 44.3	-3.2
PETF				*e*S	Sn	02 29 18.5	-3.9
CMIG	Matias Romero	3.99	321	*e*P	Pn	02 28 42.2	-0.5
CMIG				*e*		02 29 20.9	
HUIG	Huatulco	4.12	296	*e*P	Pn	02 28 43.8	-0.7
HUIG				*e*		02 29 12.1	
NEUV	Arroyo Zacate	5.04	318	*e*P	Pn	02 28 54.0	-3.0
NEUV				*e*		02 29 39.6	
YOIG	Yosondua	5.84	300	*e*	Pn	02 29 10.9	+2.5
YOIG				*e*		02 30 06.2	
TOIG	Toxpalan	6.17	312	*e*	Pn	02 29 12.1	-0.6
TOIG				*e*		02 30 08.2	
TXIG	Tlaxiaco	6.22	302	*e*	Pn	02 29 16.5	+2.9
TXIG				*e*		02 30 19.3	

IDC 23 02:30:21.1±8.1**,11°.27S**×**162°.42E,h0**^{km}**,mb3.7**/5**, mbtmp3.7**/5**,MS3.2**/3**,Error ellipse: s-maj=229.9km s-min=37.6km az=122.0,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.41	161	LR	LR	02 36 24.6	
	comp=Z,96nm,18.2s,baz=252,slow=32						
PMG	Port Moresby	15.13	276	LR	LR	02 39 48.3	
	comp=Z,55nm,18.6s,baz=121,slow=38						
STKA	Stephens Creek	28.10	220	LR	LR	02 45 57.9	
	comp=Z,97nm,21.4s,baz=216,slow=33						
WRA	Warramunga Arr	28.35	249	P	P	02 36 17.7	+0.6
	0.7nm,0.7s,baz=79,slow=8.6,SNR=2.8						
	0.7nm,0.7s						
ASAR	Alice Springs	29.79	242	P	P	02 36 29.6	-0.3
	0.4nm,0.6s,baz=62,slow=10,SNR=11						
	0.4nm,0.6s						
FITZ	Fitzroy Crossi	36.17	255	P	P	02 37 25.4	-0.2
	1.2nm,1.0s,baz=101,slow=16,SNR=1.9						
	1.2nm,1.0s						
SONM	Songino Array	76.95	325	P	P	02 42 16.0	+0.4
	0.8nm,1.0s,baz=140,slow=7.0,SNR=4.4						
	0.8nm,1.0s						
MKAR	Makanchi Array	91.47	317	P	P	02 43 29.0	-0.5
	0.3nm,0.6s,baz=116,slow=6.6,SNR=3.8						
	0.3nm,0.6s						

NEIC ***23*** *02:51:05.8±1.4, 13°.86N±0°.08×90°.02W±0°.05, h103*^{km}*±7*^{km}*, mb4.0/34, Error ellipse: s-maj=12.7km s-min=4.3km az=208.0*
SNET ***23*** *02:51:05.2±0.9, 13°.78N×90°.07W, h99*^{km}*, ML3.9*
GCG ***23*** *02:51:05.4±1.0, 13°.80N×90°.09W, h96*^{km}*±8*^{km}*, MD4.0, MW3.3*
CATAC ***23*** *02:51:05.8±0.3, 14°N±3°×9°0W±°, h90*^{km}*±2*^{km}*, M4.0/31, MLv4.0/31, Error ellipse: s-maj=7.5km s-min=3.3km az=23.4, confirmed*
IDC ***23*** *02:51:06.8±1.7, 14°.23N×89°.61W, h112*^{km}*±11*^{km}*, mb3.8/3, mbtmp4.0/5, Error ellipse: s-maj=47.1km s-min=19.5km az=42.0*
ISC 23 02:51:04.8±0.7**,13°.78N**±0°.05×**90°.04W**±0°.04**,h113**^{km}±4^{km}**, n140,σ1**^{s}**.37**/153**,mb4.0**/17**,Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	0.07	23	P	Pn	02 51 18.9	-1.5
NUBE	Las Nubes	0.29	64	*i* P	Pn	02 51 19.8	-1.3
NUBE	Las Nubes	0.29	64	S	Sn	02 51 32.4	-0.9
NUBE	Las Nubes	0.29	64	P	Pn	02 51 19.8	-1.3
LOAL	Lomas de Alarc	0.34	49	P	Pn	02 51 20.4	-0.8
LOAL	Lomas de Alarc	0.34	49	S	Sn	02 51 32.7	-0.8
CEVE	Cerro Verde	0.41	83	*i* P	Pn	02 51 21.1	-0.8
CEVE				*e*S	Sn	02 51 33.8	-0.7
CEVE	Cerro Verde	0.41	83	P	Pn	02 51 21.0	-0.8
ESSJ	San Jos, E	0.49	244	*i* P	Pn	02 51 23.7	+1.8

UNIC	Universidad Ca	0.52	67	S	Sn	02 51 34.1	-1.3
UNIC	Universidad Ca	0.52	67	P	Pn	02 51 21.4	-0.9
PCG5	San Vicente Pa	0.54	324	*i* P	Pn	02 51 23.9	+1.4
PCG5				*i* S	Sn	02 51 38.4	+2.6
JAYA	Jayaque - finc	0.59	102	*e*P	Pn	02 51 22.1	-0.7
JAYA				*e*S	Sn	02 51 35.3	-1.1
JAYA	Jayaque - finc	0.59	102	*i* P	Pn	02 51 21.9	-0.9
JAYA	Jayaque - finc	0.59	102	P	Pn	02 51 22.1	-0.7
JAYA	Jayaque - finc	0.59	102	S	Sn	02 51 34.9	-1.4
CEDA	San Andres	0.63	87	*e*P	Pn	02 51 22.4	-0.6
CEDA				*e*S	Sn	02 51 36.1	-0.5
FG16	Alotenango, Sa	0.67	318	*i* P	Pn	02 51 25.9	+2.4
PMON	Piamonte	0.71	95	P	Pn	02 51 23.7	0.0
BOQS	Boqueron	0.74	93	*e*P	Pn	02 51 23.8	-0.4
BOQS				*e*S	Sn	02 51 39.6	+1.0
LALI	Alcalda de L	0.76	112	*i* P	Pn	02 51 23.7	-0.3
LALI	Alcalda de L	0.76	112	P	Pn	02 51 23.8	-0.2
LALI	Alcalda de L	0.76	112	S	Sn	02 51 38.1	-0.3
UEES	Universidad Ev	0.78	94	P	Pn	02 51 24.2	-0.1
PANCS	Alcalda de	0.86	101	P	Pn	02 51 25.0	+0.1
PANCS	Alcalda de	0.86	101	S	Sn	02 51 39.2	-0.9
MTO3	Montecristo	0.91	47		Pn	02 51 24.8	-0.9
MTO3				Sn	Sn	02 51 39.4	-1.9
MTO3	Montecristo	0.91	47	*i* P	Pn	02 51 24.9	-0.8
MTO3	Montecristo	0.91	47	S	Sn	02 51 40.0	-1.3
MTO3	Montecristo	0.91	47	P	Pn	02 51 25.0	-0.6
GCG4	OSOP	0.94	330	*i* P	Pn	02 51 25.4	-0.5
ESSG	Sabana Grande	0.97	308	*i* P	Pn	02 51 24.7	-1.4
ESSG				*i* S	Sn	02 51 40.0	-2.2
ESQI	Esquipulas	1.03	41	Pn	Pn	02 51 26.2	-0.5
ESQI				Sn	Sn	02 51 42.2	-1.1
ESQI	Esquipulas	1.03	41	*e*P	Pn	02 51 26.5	-0.3
ESQI				*e*S	Sn	02 51 42.8	-0.6
ESQI	Esquipulas	1.03	41	P	Pn	02 51 26.5	-0.3
ESQI	Esquipulas	1.03	41	S	Sn	02 51 43.0	-0.3
ZAFR2	Estanzuela, Za	1.04	40	*i* P	Pn	02 51 28.8	+2.1
ZAFR2				*i* S	Sn	02 51 48.3	+5.0
PAVA	Las Pavas	1.08	93	S	Sn	02 51 44.7	+0.7
PAVA	Las Pavas	1.08	93	P	Pn	02 51 27.1	-0.1
LLGN	La Laguna	1.13	70	P	Pn	02 51 27.2	-0.6
LLGN	La Laguna	1.13	70	S	Sn	02 51 44.6	-0.6
TECO	Alcaldia de Te	1.25	101	S	Sn	02 51 47.4	+0.1
TECO	Alcaldia de Te	1.25	101	P	Pn	02 51 28.8	-0.2
SCLA	Alcaldia de Sa	1.28	93	P	Pn	02 51 29.4	0.0
SCLA	Alcaldia de Sa	1.28	93	S	Sn	02 51 48.3	+0.3
APG	El Apazote	1.29	342	P	Pn	02 51 29.3	-0.4
	11nm,0.4s,baz=138,slow=10.0,SNR=172						
APG				S	Sn	02 51 47.5	-0.9
	10nm,0.6s,baz=94,slow=14,SNR=4.7						
APG	El Apazote	1.29	342	*i* P	Pn	02 51 29.2	-0.4
APG				*i* S	Sn	02 51 48.1	-0.3
STG5	El Palmar, Qui	1.41	296	*i* P	Pn	02 51 33.9	+3.1
STG8	El Palmar, Qui	1.44	298	*i* P	Pn	02 51 34.8	+3.5
PQSS	Presa 15 de Se	1.45	96	S	Sn	02 51 49.9	-1.3
PQSS	Presa 15 de Se	1.45	96	P	Pn	02 51 29.1	-2.1
STG2	El Palmar, Qui	1.45	297	*i* S	Sn	02 51 59.1	+7.6
SARH	Santa Rosa de	1.59	51	*i* P	Pn	02 51 33.4	+0.3
SARH				*i* S	Sn	02 51 55.3	+0.9
SARH	Santa Rosa de	1.59	51	P	Pn	02 51 33.4	+0.3
RTAL	Retalhuleu	1.77	295	Pn	Pn	02 51 34.8	-0.2
RTAL	Retalhuleu	1.77	295	P	Pn	02 51 35.2	+0.1
RTAL	Retalhuleu	1.77	295	S	Sn	02 51 58.3	+0.2
QUIS	Sacapulas	1.82	326	*i* P	Pn	02 51 36.2	+0.4
HUEH	Huehuetenango	2.08	318	Pn	Pn	02 51 38.8	-0.5
LCND	La Caada	2.15	102	P	Pn	02 51 40.1	+0.3
CNCH	Conchagua	2.21	103	P	Pn	02 51 41.1	+0.4
SMCA	Catarina	2.24	299	*i* P	Pn	02 51 41.2	+0.1
CSGN	Cosiguina Volc	2.55	108	P	Pn	02 51 45.4	+0.3
POTN	Potosi Cosigui	2.59	107	P	Pn	02 51 46.7	+1.2
TGUH	Tegucigalpa,Un	2.71	84	Pn	Pn	02 51 47.2	0.0
CRIN	San Cristobal	3.10	110	Pn	Pn	02 51 53.9	+1.4
CRIN	San Cristobal	3.10	110	P	Pn	02 51 54.0	+1.6
YUSH	Yuscaran	3.11	86	P	Pn	02 51 52.8	+0.3
PETF	Flores	3.13	3	Pn	Pn	02 51 53.0	+0.3
PKGN	Cerro Pekin	3.18	110	P	Pn	02 51 54.2	+0.8
PKGN				S	Sn	02 52 30.5	-0.3
HERN	Volcan Telica	3.34	110	Pn	Pn	02 51 55.8	+0.3
POLN	Al Sur del Vol	3.34	109	P	Pn	02 51 56.4	+0.9
POLN				S	Sn	02 52 33.7	-0.9
CNGN	Cerro Negro	3.50	111	Pn	Pn	02 51 58.0	+0.5
CNGN	Cerro Negro	3.50	111	P	Pn	02 51 58.4	+0.8
LIMN	Finca el Limon	3.65	101	P	Pn	02 52 00.1	+0.4
MOM2	El Cardon	3.71	111	P	Pn	02 52 02.3	+1.9
COPN	Copaltepe	3.72	115	P	Pn	02 52 01.0	+0.5
RCVN	Varillal2	3.75	92	P	Pn	02 52 01.4	+0.4
RCON	San Juan de Ri	3.79	94	P	Pn	02 52 02.2	+0.6
TISN	Laguna Tiscapa	4.02	113	P	Pn	02 52 04.7	+0.1
UNAN	Cigeo UNAN	4.03	114	P	Pn	02 52 05.8	+1.1
MGAN	Managua	4.04	113	Pn	Pn	02 52 05.7	+0.9
MATN	Matagalpa	4.10	101	P	Pn	02 52 05.2	-0.5
MAS3	Al N del Volca	4.15	114	P	Pn	02 52 07.0	+0.6
NANN	Nandasmo	4.24	115	P	Pn	02 52 09.3	+1.8
BOAB	BOACO BROADBAN	4.46	107	Pn	Pn	02 52 11.1	+0.6
BOAB	BOACO BROADBAN	4.46	107	P	Pn	02 52 11.3	+0.8
SIUN	Universidad Ur	5.12	90	Pn	Pn	02 52 19.9	+0.5
JUD3	Juan Diaz 3	5.68	129	Pn	Pn	02 52 28.6	+1.5
CMIG	Matias Romero	5.71	306	P	Pn	02 52 26.5	-0.9
	4.5nm,0.3s,baz=151,slow=10,SNR=28						
JTS	Las Juntas de	6.07	124	P	Pn	02 52 33.6	+1.4
	27nm,0.4s,baz=306,slow=14,SNR=42						
JTS				S	Sn	02 53 34.1	-6.3
	11nm,0.4s,baz=248,slow=19,SNR=1.3						
JTS	Las Juntas de	6.07	124	Pn	Pn	02 52 33.7	+1.5
SOCE	Pocosol	6.29	122	Pn	Pn	02 52 35.8	+0.6
TEIG	Tepich	6.63	15	P	Pn	02 52 40.3	+0.5
	baz=308,slow=20,SNR=1.5						
TEIG	Tepich	6.63	15	Pn	Pn	02 52 39.7	-0.1
PIRO	Carate, Puerto	8.47	128	Pn	Pn	02 53 08.0	+3.1
BRU2	Volcan	8.75	124	Pn	Pn	02 53 09.7	+1.1
SOR	Soroa	11.18	36	Pn	Pn	02 53 45.1	+3.7
FLOC	Florencia	18.69	129	P	P	02 55 16.2	+1.7
BRDY	Brady	19.27	336	P	P	02 55 20.6	-0.1
BRDY				IAmb	IAmb	02 55 21.7	
	comp=Z,4.7nm,0.7s						
WHTX	Lake Whitney,	19.36	341	P	P	02 55 21.7	+0.1
Z47A	Carrollton	19.42	5	Pn	Pn	02 55 27.4	+2.8
TXAR	Lajitas Array	19.98	323	P	P	02 55 30.5	+2.0
	comp=Z,0.3nm,0.4s,baz=149,slow=10,SNR=9.2						
TXAR	Lajitas Array	19.98	323	P	P	02 55 29.4	+1.0
TX31	Lajitas Ar. Si	19.98	323	P	P	02 55 29.8	+1.3
PLPT	Palo Pinto	20.40	340	P	P	02 55 32.3	-0.6
PLPT				IAmb	IAmb	02 55 34.0	
	comp=Z,9.1nm,1.0s						
MIAR	Mount Ida	20.93	352	P	P	02 55 40.5	+2.1
MIAR				IAmb	IAmb	02 55 42.3	
	comp=Z,2.9nm,0.8s						
APMT	Aspermont	21.52	336	P	P	02 55 42.9	-1.9
APMT				IAmb	IAmb	02 55 44.3	
	comp=Z,4.7nm,0.7s						
SWET	Sewanee	21.67	9	P	P	02 55 46.5	+0.1
SWET				IAmb	IAmb	02 56 02.0	
	comp=Z,4.9nm,1.0s						
VHRN	Van Horn	21.82	323	P	P	02 55 49.3	+1.1
LCAR	Lake Charles	22.22	358	P	P	02 55 52.7	+0.5
WMOK	Wichita Mounta	22.32	341	P	P	02 55 51.2	-2.0
WMOK				IAmb	IAmb	02 55 53.3	
	comp=Z,3.7nm,0.9s						
WVT	Waverly	22.35	5	P	P	02 55 52.8	-0.7
WVT				IAmb	IAmb	02 55 55.5	
	comp=Z,4.3nm,0.8s						
FNO	Franklin	22.39	344	P	P	02 55 52.4	-1.6
FNO				IAmb	IAmb	02 55 53.5	
	comp=Z,4.0nm,0.5s						
TKL	Tuckaleechee C	22.51	13	P	P	02 55 55.1	0.0
TKL				IAmb	IAmb	02 56 06.0	
	comp=Z,13nm,1.1s						
MNTX	Cornudas Mount	22.72	324	P	P	02 55 57.3	0.0
T47A	Sharon Grove	23.27	6	P	P	02 56 01.4	-1.0
T47A				IAmb	IAmb	02 56 04.1	
	comp=Z,16nm,1.0s						
U54A	Nelsons Funny	23.82	17	P	P	02 56 08.2	+0.7
U54A				IAmb	IAmb	02 56 25.1	
	comp=Z,18nm,1.2s						
V58A	Windy Hill, Pi	24.03	22	P	P	02 56 08.4	-0.9
WCI	Wyandotte Cave	24.58	7	P	P	02 56 15.3	+1.0
WCI				IAmb	IAmb	02 56 16.3	
	comp=Z,11nm,0.8s						
PV12	Saucer Basin,	29.57	329	P	P	02 57 00.1	+0.8
PV12				IAmb	IAmb	02 57 25.5	
	comp=Z,2.6nm,0.9s						
ECSD	EROS Data Cent	30.38	351	P	P	02 57 05.1	-1.1
K57A	Scipio Center	31.13	19	P	P	02 57 11.2	-1.5
NVAR	Mina Array Bea	35.05	320	P	P	02 57 49.1	+1.9
	comp=Z,0.7nm,0.7s,baz=141,slow=11,SNR=5.2						
	comp=Z,0.7nm,0.7s						
EPLO	Experimental L	35.92	356	P	P	02 57 52.4	-1.8
MHC	Mount Hamilton	36.63	316	P	P	02 58 00.6	0.0
ULM	Lac du Bonnet	36.68	354	P	P	02 57 57.4	-3.3
	comp=Z,2.4nm,0.6s,baz=174,slow=9.0,SNR=3.2						
	comp=Z,2.4nm,0.6s						
FFC	Flin Flon	41.91	350	P	P	02 58 43.6	-0.4
SCHQ	Schefferville	44.80	19	P	P	02 59 05.2	-2.0
	comp=Z,2.6nm,0.4s,baz=218,slow=12,SNR=7.8						
	comp=Z,2.6nm,0.4s						
SCHQ	Schefferville	44.80	19	P	P	02 59 05.5	-1.7
FCC	Fort Churchill	45.01	357	P	P	02 59 07.3	-1.5
FCC				IAmb	IAmb	02 59 16.2	
	comp=Z,1.3nm,1.1s						
KUQ	Kuujjuuaa	47.16	15	P	P	02 59 23.8	-1.8
KUQ				IAmb	IAmb	02 59 49.5	
	comp=Z,4.0nm,1.0s						
YKAW1	Yellowknife Wh	51.66	346	P	P	02 59 58.7	-1.0
YKAW1				IAmb	IAmb	03 00 00.4	
	comp=Z,0.8nm,0.7s						
YKA	Yellowknife Ar	51.69	346	P	P	02 59 58.2	-1.9
YKAW3	Yellowknife Wh	51.75	346	P	P	02 59 59.1	-1.4
ILON	Igloolik, Nuna	55.80	4	P	P	03 00 27.8	-2.1
F28M	Old Crow	62.70	341	P	P	03 01 16.1	-1.3
F28M				IAmb	IAmb	03 01 29.1	
	comp=Z,1.7nm,1.1s						
H22K	Ishtalitna Cre	65.97	337	P	P	03 01 41.4	+2.6
WRA	Warramunga Arr	137.18	255	PKPdf	PKPdf	03 10 17.0	+1.3
ASAR	Alice Springs	137.38	250	PKPdf	PKPdf	03 10 17.6	+1.6

IDC ***23*** *02:55:42.1±1.5, 36°.38N×27°.23E, h0^{km}, mb3.5/3, mbtmp3.5/5, ML3.5/2, MS3.5/1, Error ellipse: s-maj=56.3km s-min=22.7km az=146.0*

ISK ***23*** *02:55:43.1, 36°.43N×27°.29E, h2^{km}, ML3.3/24*

ATH ***23*** *02:55:43.8, 36°.45N×27°.25E, h17^{km}±1^{km}, ML3.2/6, Manual Solution by K.Orfanogiannaki First location: 2019/12/23 02:57:05, This location: 2019/12/23 06:09:06 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

THE ***23*** *02:55:44.2, 36°N±2°×2°7E±°, h10^{km}±5^{km}, M3.2/8, MLh3.2/8*

AFAD ***23*** *02:55:44.8, 36°.46N×27°.32E, h7^{km}±1^{km}, ML2.8*

ISC 23 02:55:44.0±0.9, **36°.43N**±0°.02×**27°.26E**±0°.02, **h14**^{km}±6^{km}, **n67**, σ**1^s.21**/88, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NISR	Nisiros	0.21	329	P	Pg	02 55 48.4	-0.3
NISR				S	Sg	02 55 51.8	-0.1
NISR	Nisiros	0.21	329	P	Pg	02 55 48.0	-0.7
NISR				S	Sg	02 55 51.8	-0.1
YAZI	Mula-Dat§a-	0.29	32	P	Pg	02 55 49.8	-0.3
YAZI				S	Sg	02 55 53.5	-0.7
YAZI				*i* IAML		02 55 54.0	
	comp=N,1μm,0.5s						
YAZI				*i* IAML		02 55 54.0	
	comp=E,2μm,0.6s						
DAT	Datca	0.39	41	Pg	Pg	02 55 51.5	-0.4
DAT				Sg	Sg	02 55 57.7	+0.5
KLNA	Kalymnos	0.57	336	P	Pg	02 55 54.9	-0.4
KLNA				S	Sg	02 56 03.1	+0.2
BDRM	Kayabasi	0.65	13	P	Pg	02 55 55.9	-0.8
BDRM				S	Sg	02 56 05.4	+0.2
BDRM				*i* IAML		02 56 07.0	
	comp=E,745nm,0.3s						
RGE1	Gennadi, Rhode	0.68	127	P	Pb	02 55 57.7	+0.2
RGE1				S	Sb	02 56 06.7	-0.1
YKAV	Yalikavak-Bodr	0.69	1	Pg	Pb	02 55 57.7	-0.2
YKAV				Sg	Sb	02 56 06.9	-0.4
ARG	Arkhangelos	0.73	107	P	Pg	02 55 57.9	-0.3
ARG				S	Sb	02 56 09.0	+0.6
ARG	Arkhangelos	0.73	107	Pg	Pg	02 55 57.7	-0.5
ARG				Sg	Sb	02 56 08.9	+0.5
ARG	Arkhangelos	0.73	107	P	Pg	02 55 57.7	-0.5
ARG				S	Sb	02 56 08.9	+0.5
ASTA	Astypalaia	0.74	279	P	Pg	02 55 58.5	+0.1
ASTA				S	Sb	02 56 08.5	-0.2
RODB	Rodos	0.77	89	P	Pg	02 55 59.0	-0.1
RDI1	Rhodes Town Ha	0.78	88	P	Pb	02 55 59.5	+0.2
TURN	Turunc	0.86	66	P	Pg	02 56 00.3	-0.4
TURN				S	Sb	02 56 13.5	+1.3
TURN				*i* IAML		02 56 15.0	
	comp=E,600nm,0.3s						
TURN				*i* IAML		02 56 17.0	
	comp=N,849nm,0.4s						
TURN	Turunc	0.86	66	Pg	Pg	02 55 59.9	-0.8
TURN				Sg	Sb	02 56 12.6	+0.5
KARP	Karpathos	0.89	185	P	Pb	02 56 01.8	+0.5
KARP				S	Sb	02 56 14.5	+1.5
KARP	Karpathos	0.89	185	Pg	Pg	02 56 01.1	-0.1
KARP	Karpathos	0.89	185	P	Pg	02 56 01.1	-0.1
KARP				S	Sb	02 56 13.4	+0.4
MLSB	Milas	0.95	25	Pg	Pb	02 56 02.3	-0.1
DDIM	Aydin, Didim	1.02	359	P	Pb	02 56 03.9	+0.4
DDIM				*i* IAML		02 56 28.0	
	comp=E,787nm,0.8s						
DDIM				*i* IAML		02 56 29.0	
	comp=N,541nm,0.9s						
YER	Yerkesik	1.08	49	P	Pg	02 56 04.4	-0.4
YER				S	Sn	02 56 20.6	+1.0
YER	Yerkesik	1.08	49	Pg	Pg	02 56 04.4	-0.4
MULA	Mugla, Merkez-	1.18	46	P	Pn	02 56 06.7	+0.5
MULA				*i* IAML		02 56 28.0	
	comp=E,328nm,0.4s						
MULA				*i* IAML		02 56 33.0	
	comp=N,147nm,0.9s						
DALY	Dalyan (Mula)	1.18	71	Pn	Pg	02 56 05.9	-0.9
GCAM	G?zelcaml?	1.26	359	P	Pg	02 56 08.1	-0.2
GCAM				*i* IAML		02 56 25.0	
	comp=N,210nm,0.9s						
GCAM				*i* IAML		02 56 55.0	
	comp=E,197nm,1.2s						
GCAM	G?zelcaml?	1.26	359	Pn	Pg	02 56 08.3	-0.1
AYDN	Tasoluk	1.32	22	P	Pn	02 56 08.6	+0.5
AYDN				*i* IAML		02 56 32.0	
	comp=N,222nm,0.4s						
AYDN				*i* IAML		02 56 32.0	
	comp=E,221nm,0.4s						
SABU	Mula-Dalaman	1.43	74	P	Pb	02 56 10.5	+0.1
SABU				S	Sg	02 56 30.5	+0.5
SABU				*i* IAML		02 56 34.0	
	comp=E,127nm,0.4s						
SABU				*i* IAML		02 56 40.0	
	comp=N,208nm,0.4s						
THR8	Santorini-Mono	1.44	269	P	Pn	02 56 09.8	+0.1
THERA	Ancient Thera,	1.44	268	P	Pn	02 56 09.4	-0.4
FETY	Fethiye	1.48	82	P	Pn	02 56 01.9	-8.4
FETY	Fethiye	1.48	82	P	Pn	02 56 01.5	-8.8
FETY				S	Sn	02 56 21.7	-7.8
THR6	Thira Island,	1.51	268	P	Pn	02 56 11.6	+1.0
APE	Apeiranthos	1.53	295	Pn	Pb	02 56 12.7	+0.5
ZKR	Zakros	1.57	213	Pn	Pn	02 56 12.7	+1.2
ZKR	Zakros	1.57	213	P	Pn	02 56 11.6	+0.1
ZKR				S	Sn	02 56 31.6	0.0
ESEN	Aydn-Nazilli	1.61	32	P	Pn	02 56 12.6	+0.5
DNZT	Denizli-Tavas-	1.65	59	P	Pg	02 56 15.3	-0.3
DNZT				S	Sg	02 56 37.6	+0.6
DNZT				*i* IAML		02 56 44.0	
	comp=N,142nm,0.8s						
DNZT				*i* IAML		02 56 49.0	
	comp=E,101nm,0.6s						
GMLD	Gumuldur	1.66	351	Pn	Pb	02 56 14.7	+0.3
TAVA	DENIZLI_Tavas	1.68	52	P	Pg	02 56 15.9	-0.3
TAVA				S	Sg	02 56 39.9	+1.9
TAVA				*i* IAML		02 56 48.0	
	comp=N,104nm,0.8s						
TAVA				*i* IAML		02 56 48.0	
	comp=E,94nm,0.5s						
CAME	Cameli-Denizli	1.72	72	Pn	Pn	02 56 14.7	+1.0
NAZL	Nazilli-Aydin	1.73	28	Pn	Pb	02 56 15.4	-0.3
NPS	Neapolis	1.78	229	P	Pn	02 56 14.0	-0.4
NPS	Neapolis	1.78	229	P	Pn	02 56 13.9	-0.5
NPS				S	Sn	02 56 35.4	-1.4
AKAS	Kas	1.90	95	Pn	Pn	02 56 17.2	+1.0
APMY	Acipayam-Deniz	1.93	57	Pn	Pn	02 56 17.9	+1.3
ODEM	Odemis-Izmir	1.95	19	Pn	Pb	02 56 18.5	-0.9
BLCB	Balcova	1.96	355	Pn	Pn	02 56 18.4	+1.6
ELL	Elmali	2.15	81	Pn	Pn	02 56 20.7	+1.1
CHOS	Chios island	2.17	334	P	Pn	02 56 19.3	-0.6
CHOS	Chios island	2.17	334	Pn	Pn	02 56 19.4	-0.5
IDI	Anoyia	2.24	240	P	Pn	02 56 20.6	-0.2
IDI	Anoyia	2.24	240	P	Pn	02 56 20.5	-0.3
GOMA	Golmarmara-Man	2.33	13	Pn	Pn	02 56 23.9	+2.0
KULA	Kula-Manisa	2.36	28	Pn	Pn	02 56 24.3	+1.9
KORT	Korkueli	2.54	76	Pn	Pn	02 56 26.6	+1.6
GORD	Gordes-Manisa	2.58	16	Pn	Pn	02 56 27.2	+1.8
VLY	Voula,Athens	3.11	298	P	Pn	02 56 33.0	+0.3
DION	Dionisos Attik	3.12	303	P	Pn	02 56 33.7	+0.8
LTK	Loutraki	3.78	296	P	Pn	02 56 42.5	+0.6
BRTR	Keskin Array B	6.01	55	Pn	Pn	02 57 15.2	+2.5
	0.4nm,0.3s,baz=243,slow=16,SNR=14						
	0.8nm,0.3s						
MMAI	Mount Meron Ar	7.52	115	Pn	Pn	02 57 32.8	-0.6
	2.7nm,0.3s,baz=303,slow=13,SNR=18						
MMAI				Sn	Sn	02 58 55.5	-2.9
	1.7nm,0.3s,baz=312,slow=27,SNR=4.2						
	2.4nm,0.4s						
TORD	Torodi Ar. Bea	32.62	231	P	P	03 02 15.1	-0.4
	0.8nm,0.6s,baz=32,slow=11,SNR=11						
	0.8nm,0.6s						
BVAR	Borovoye Array	34.23	47	LR	LR	03 20 14.3	
	comp=Z,64nm,18.5s,baz=337,slow=43						
KURBB	Kurchatov Arra	38.99	52	P	P	03 03 10.4	+0.7
	0.2nm,0.3s,baz=284,slow=8.0,SNR=2.4						
	0.2nm,0.3s						
MKAR	Makanchi Array	41.65	58	P	P	03 03 32.5	+0.6
	0.3nm,0.7s,baz=287,slow=5.6,SNR=2.2						
	0.3nm,0.7s						

NNC ***23*** *02:56:55.0±2.2, 43°.20N×78°.21E, h0^{km}, mpv2.7, Error ellipse: s-maj=15.5km s-min=6.3km az=44.0*

SOME ***23*** *02:56:55.7, 43°.20N×78°.20E, h10^{km}*

KRNET ***23*** *02:56:59.2±0.1, 43°.05N×78°.09E, h29^{km}, mb2.2*

ISC 23 02:56:54.7±1.1, **43°.21N**±0°.03×**78°.25E**±0°.03, **h15**^{km}±10^{km}, **n12**, σ**0^s.57**/24, **6C-6D**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURS	Kuram	0.28	348	P	Pg	02 57 01.1	+0.4
	9.8nm,0.1s						
KURS				S	Sg	02 57 04.0	-0.9
	4.7nm,0.1s						
KPKS	Kokpek	0.41	51	P	Pb	02 57 03.8	+0.2
	0.2nm,0.1s						
KPKS				S	Sb	02 57 09.7	0.0
	22nm,0.2s						
KPKS	Kokpek	0.41	51	*e*P	Pb	02 57 03.8	+0.2
	0.2nm,0.1s						
KPKS				*e*S	Sb	02 57 09.7	0.0
	22nm,0.2s						
UZB	Uzynbulak	0.57	96	P	Pb	02 57 06.6	+0.2
	2.9nm,0.1s						
UZB				S	Sb	02 57 14.4	+0.1
	14nm,0.1s						
UZB	Uzynbulak	0.57	96	*e*P	Pb	02 57 06.6	+0.2
	2.9nm,0.1s						
UZB				*e*S	Sb	02 57 14.4	+0.1
	14nm,0.1s						
PRZ	Przheval'sk	0.74	171	⇓*e*P	Pn	02 57 10.6	-0.1
PRZ				⇓*e*S	Sb	02 57 19.4	+0.2
BLB	Baldybastay	0.90	10	P	Pb	02 57 12.2	+0.1
	4.3nm,0.1s						
BLB				S	Sb	02 57 24.0	+0.1
	4.5nm,0.2s						
KDJ	Kajisay	1.34	217	⇑*i*P	Pg	02 57 20.5	0.0
KDJ				⇑*i*S	Sn	02 57 35.5	-1.1
TARG	Taragay, Kyrgy	1.52	193	⇑*i*P	Pg	02 57 24.2	+0.3
TARG				⇑*i*S	Sb	02 57 41.3	-0.6
ULHL	Ulahol	1.77	238	⇑*i*P	Pb	02 57 27.6	+0.7
ULHL				⇑*i*S	Sn	02 57 47.9	+0.7
BOOM	Boomskoye usch	1.85	248	⇓*i*P	Pb	02 57 28.8	+0.6
BOOM				⇓*i*S	Sb	02 57 50.2	-1.0
TKM2	Tokmak 2	1.97	262	⇓*i*P	Pb	02 57 31.2	+0.9
TKM2				⇓*i*S	Sb	02 57 54.0	-0.7

IDC ***23*** *03:12:53.0±8.6, 36°.57N×71°.09E, h190^{km}±58^{km}, mb3.3/5, mbtmp3.7/11, Error ellipse: s-maj=74.8km s-min=22.7km az=8.0*

NNC ***23*** *03:12:55.7±4.3, 36°.83N×70°.74E, h149^{km}±51^{km}, mb2.9, mpv3.5, Error ellipse: s-maj=36.4km s-min=26.3km az=13.0*

ISC 23 03:12:54.1±1.8, **36°.7N**±0°.2×**71°.0E**±0°.1, **h188**^{km}, **n17**, σ**1^s.08**/20, **mb3.5**/5, **3C-5D**, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.42	357	⇓P	Pn	03 14 26.7	+0.1
	1.9nm,0.2s,baz=182,slow=12,SNR=137						
KK31				⇑S	Sn	03 15 37.1	-2.7
	6.6nm,0.3s,baz=188,slow=26,SNR=6.0						
AAK	Ala-Archa	6.52	23	P	Pn	03 14 28.1	0.0
	2.4nm,0.3s,baz=179,slow=3.9,SNR=12						
AAK				S	Sn	03 15 41.9	-0.4
	3.9nm,0.5s,baz=324,slow=20,SNR=15						
AAK	Ala-Archa	6.52	23	⇑P	Pn	03 14 28.2	+0.2
	0.6nm,0.4s						
AAK				⇑S	Sn	03 15 42.4	+0.1
	5.9nm,0.9s						
MK31	Makanchi Array	13.13	36	⇓P	P	03 15 56.8	-0.1
	1.0nm,0.7s,baz=203,slow=11,SNR=7.7						
MKAR	Makanchi Array	13.13	36	P	Pn	03 15 54.4	+0.8
	0.9nm,0.8s,baz=223,slow=8.8,SNR=7.3						
AB31	Akbulak array	14.93	331	⇓P	P	03 16 17.1	+0.4
	1.7nm,0.8s,baz=140,slow=12,SNR=25						
KURBB	Kurchatov Arra	14.94	19	P	P	03 16 17.5	+0.7
	0.3nm,0.4s,baz=198,slow=37,SNR=2.6						
BVA0	Borovoye Array	16.34	359	⇓P	Pn	03 16 34.9	+2.0
	1.5nm,0.7s,baz=152,slow=10.0,SNR=4.8						
BVAR	Borovoye Array	16.34	359	P	Pn	03 16 34.1	+1.2
	0.5nm,0.3s,baz=153,slow=13,SNR=3.1						
AKTO	Aktyubinsk	16.62	330	P	P	03 16 36.1	+0.7
	2.0nm,0.3s,baz=138,slow=7.7,SNR=8.1						
AKTO	Aktyubinsk	16.62	330	⇓P	P	03 16 36.0	+0.6
	2.9nm,1.1s						
ZALV	Zalesovo Beam	19.74	25	P	P	03 17 09.5	+0.3
	1.1nm,0.4s,baz=218,slow=12,SNR=8.1						
HILR	Hailar Array B	37.19	54	P	P	03 19 45.3	-1.6
	1.4nm,0.3s,baz=270,slow=5.8,SNR=8.8						
	1.4nm,0.3s						
FINES	FINESS Array B	37.34	326	P	P	03 19 47.9	-0.1
	0.5nm,0.6s,baz=114,slow=9.4,SNR=5.6						
	0.5nm,0.6s						
ARCES	ARCESS Array B	40.98	338	P	P	03 20 17.8	-0.2
	1.0nm,0.7s,baz=113,slow=8.0,SNR=5.3						
	1.0nm,0.7s						
HFS	Hagfors	42.93	322	P	P	03 20 33.4	-0.4
	1.4nm,0.8s,baz=77,slow=6.4,SNR=4.0						
	1.4nm,0.8s						
NOA	NORSAR Array B	44.24	323	P	P	03 20 43.0	-1.4
	0.5nm,0.7s,baz=96,slow=7.8,SNR=3.8						
	0.5nm,0.7s						

IDC ***23*** *03:17:32.0±0.9, 62°.76S×157°.99W, h0^{km}, mb4.0/6, mbtmp4.0/7, ML3.8/1, MS3.8/19, Error ellipse: s-maj=30.3km s-min=23.6km az=36.0*

NEIC ***23*** *03:17:34.2±1.4, 62°.89S±0°.08×157°.7W±0°.4, h10^{km}±1^{km}, mb4.5/9, Error ellipse: s-maj=28.7km s-min=13.3km az=77.0*

ISC 23 03:17:33.5±0.8, **62°.8S**±0°.1×**157°.9W**±0°.1, **h10**^{km}, **n50**, σ**0^s.89**/27, **mb4.3**/8, **MS3.8**/18, **5C**, **Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBA	Scott Base	18.66	203	P	P	03 21 50.3	-0.7
VNDA	Vanda	19.40	205	P	Pn	03 22 00.6	+0.3
	0.3nm,0.3s,baz=73,slow=17,SNR=18						
VNDA				LR	LR	03 27 28.5	
	comp=Z,242nm,20.4s,baz=66,slow=31						
	1.3nm,0.4s						
VNDA	Vanda	19.40	205	P	Pn	03 21 59.9	-0.5
QSPA	South Pole Qui	27.31	180	P	P	03 23 19.4	+1.3
	6.2nm,1.0s,baz=47,slow=1.6,SNR=10.0						
QSPA				LR	LR	03 31 58.8	
	comp=Z,194nm,21.4s,baz=58,slow=32						
	6.2nm,1.0s						
QSPA	South Pole Qui	27.31	180	P	P	03 23 18.4	+0.3
QSPA				IAmb	IAmb	03 23 21.4	

	comp=Z,13nm,1.1s						
URZ	Urewera	28.90	316	LR	LR	03 32 30.2	
	comp=Z,144nm,19.7s,baz=233,slow=31						
BELA	Belgrano 2	35.42	162	P	P	03 24 29.5	+0.5
BELA				IAmb	IAmb	03 24 32.2	
	comp=Z,7.5nm,1.3s						
PMSA	Palmer Station	37.87	136	LR	LR	03 38 26.4	
	comp=Z,133nm,18.5s,baz=318,slow=33						
TBI	Tubuai	39.85	12	eLR	LR	03 35 50.9	
	comp=Z,1µm,28.8s						
RAR	Rarotonga	41.59	357	LR	LR	03 39 32.4	
	comp=Z,120nm,19.9s,baz=202,slow=32						
VNA3	Neumayer Olymp	44.43	166	⇑P	P	03 25 42.4	-1.4
SNAA	Sanae	44.70	169	⇑P	P	03 25 46.3	+0.3
SNAA	Sanae	44.70	169	P	P	03 25 44.8	-1.1
	comp=Z,2.9nm,1.1s,baz=147,slow=7.2,SNR=5.4						
SNAA				LR	LR	03 44 15.8	
	comp=Z,99nm,18.6s,baz=222,slow=36						
	comp=Z,2.9nm,1.1s						
SNAA	Sanae	44.70	169	P	P	03 25 44.9	-1.1
SNAA				IAmb	IAmb	03 25 49.0	
	comp=Z,8.0nm,1.3s						
TROLL	Troll, Antarti	44.79	171	⇑P	P	03 25 48.7	+1.9
VNA2	Neumayer--Watz	44.98	167	⇑P	P	03 25 47.7	-0.4
	baz=255,slow=12						
VNA1	Neumayer--Stat	45.15	166	⇑P	P	03 25 49.8	+0.3
PPT2	Papeete2	45.54	11	eLR	LR	03 38 26.7	
	comp=Z,205nm,26.0s						
PPT2				eLR	LR	03 38 27.6	
	comp=Z,306nm,26.8s						
PPT	Papeete	45.56	11	LR	LR	03 39 48.5	
	comp=Z,88nm,19.6s,baz=202,slow=29						
MAW	Mawson	46.60	200	LR	LR	03 44 42.5	
	comp=Z,92nm,18.0s,baz=168,slow=35						
RPN	Rapa Nui	47.63	65	LR	LR	03 41 23.1	
	comp=Z,73nm,20.6s,baz=227,slow=30						
PLCA	Paso Flores	53.59	109	LR	LR	03 47 06.5	
	comp=Z,69nm,18.1s,baz=204,slow=33						
TAOE	Nuku Hiva Isla	55.37	21	eLR	LR	03 43 10.7	
	comp=Z,129nm,24.2s						
H03S2	Juan Fernandez	55.56	98	T	T	04 27 27.1	
	baz=211,slow=73,SNR=210						
H03S1	Juan Fernandez	55.56	98	T	T	04 27 29.0	
	baz=211,slow=73,SNR=163						
H03S3	Juan Fernandez	55.58	98	T	T	04 27 28.3	
	baz=211,slow=73,SNR=188						
CTA	Charters Tower	56.93	292	LR	LR	03 47 51.9	
	comp=Z,63nm,19.6s,baz=50,slow=32						
H01W1	Cape Leeuwin H	58.72	254	T	T	04 31 39.6	
	baz=146,slow=76,SNR=12						
H01W2	Cape Leeuwin H	58.72	254	T	T	04 31 47.4	
	baz=146,slow=76,SNR=12						
H01W3	Cape Leeuwin H	58.73	254	T	T	04 31 48.1	
	baz=146,slow=76,SNR=14						
ASAR	Alice Springs	59.28	278	P	P	03 27 33.5	-1.6
	comp=Z,0.7nm,0.9s,baz=152,slow=7.9,SNR=7.5						
ASAR				LR	LR	03 49 37.1	
	comp=Z,98nm,19.3s,baz=115,slow=32						
	comp=Z,0.7nm,0.9s						
TRQA	Tornquist	59.47	114	P	P	03 27 35.4	-0.9
WRA	Warramunga Arr	62.31	280	P	P	03 27 55.4	-0.4
	comp=Z,1.5nm,1.0s,baz=156,slow=6.0,SNR=4.1						
	comp=Z,1.5nm,1.0s						
WB0	Warramunga Arr	62.44	281	P	P	03 27 57.8	+1.1
WB0				IAmb	IAmb	03 27 59.3	
	comp=Z,4.4nm,1.2s						
CPUP	Villa Florida	71.56	112	P	P	03 28 55.0	+0.4
	comp=Z,1.9nm,1.0s,baz=213,slow=9.7,SNR=4.0						
	comp=Z,1.9nm,1.0s						
CPUP	Villa Florida	71.56	112	P	P	03 28 54.4	-0.1
LPAZ	La Paz	75.55	97	P	P	03 29 18.7	-0.2
	comp=Z,1.0nm,0.8s,baz=236,slow=3.6,SNR=4.2						
LPAZ				LR	LR	03 53 50.7	
	comp=Z,39nm,20.5s,baz=88,slow=29						
	comp=Z,1.0nm,0.8s						
LPAZ	La Paz	75.55	97	P	P	03 29 18.7	-0.2
LPAZ				IAmb	IAmb	03 29 28.8	
	comp=Z,7.2nm,1.4s						
BATI	Baumata	75.71	276	LR	LR	04 00 21.9	
	comp=Z,52nm,20.2s,baz=235,slow=34						
SUR	Sutherland	85.14	179	LR	LR	04 03 47.1	
	comp=Z,118nm,20.9s,baz=182,slow=33						
BOSA	Boshof	88.86	183	LR	LR	04 08 25.5	
	comp=Z,44nm,18.0s,baz=200,slow=34						
JTS	Las Juntas de	91.43	70	LR	LR	04 03 54.7	
	comp=Z,37nm,18.1s,baz=100,slow=30						
LBTB	Lobatse	92.44	183	LR	LR	04 07 51.5	
	comp=Z,44nm,21.6s,baz=182,slow=33						
SDV	Santo Domingo	96.58	83	LR	LR	04 09 51.3	
	comp=Z,28nm,20.6s,baz=287,slow=32						
ILAR	Eielson Array	127.53	6	PKP	PKiKP	03 36 38.3	+0.8
	comp=Z,0.9nm,0.7s,baz=224,slow=1.4,SNR=9.3						
ILAR	Eielson Array	127.53	6		PKiKP	03 36 38.1	+0.6
F64A	Sherman	129.25	64	PKPdf	PKPdf	03 36 40.7	-0.1
ZALV	Zalesovo Beam	147.24	284	PKPbc	PKPbc	03 37 15.1	-0.5
	comp=Z,0.4nm,0.5s,baz=151,slow=3.3,SNR=1.7						
ZALV	Zalesovo Beam	147.24	284		PKPdf	03 37 14.4	+1.1
KURBB	Kurchatov Arra	147.84	274	PKPbc	PKPbc	03 37 17.2	-0.2
	comp=Z,0.5nm,0.3s,baz=130,slow=2.3,SNR=5.7						

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*TAP **23** 03:30:13.5, 24°.23N×122°.88E, h40^{km}, ML3.0, D*
*JMA **23** 03:30:13.4±0.1, 24°N±2°×122°.9E±0°.6, h54^{km}±1^{km}, MV2.6/13, NW OFF ISHIGAKIJIMA IS*
ISC 23 03:30:12.0±1.1**, 24°.07N**±0°.03×**122°.87E**±0°.02**, h33**^{km}±5^{km}**, n81, σ1^{s}.17**/128**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.38	11	eP	Pn	03 30 21.6	+0.3
JYNG				eS	Sb	03 30 27.4	+0.6
YOJ	Yonaguni jima	0.41	19	P	Pn	03 30 21.7	+0.1
YOJ	Yonaguni jima	0.41	19	S	Sb	03 30 27.8	+0.3
YOJ	Yonaguni jima	0.41	19	i P	Pn	03 30 21.7	+0.1
YOJ				i S	Sb	03 30 27.7	+0.2
YOJ	Yonaguni jima	0.41	19	eP	Pn	03 30 21.8	+0.1
YOJ				eS	Sb	03 30 27.7	+0.2
EOS4	EOS4	0.51	275	eP	Pn	03 30 25.6	+3.0
EOS3	EOS3	0.55	293	eP	Pn	03 30 25.8	+2.5
EOS2	EOS2	0.68	301	eP	Pn	03 30 26.8	+1.7
IRIF	Iriomote-Funau	0.83	72	eP	Pn	03 30 27.8	+0.4
IRIF				eS	Sb	03 30 38.8	0.0
HATJ	Hateruma jima	0.86	91	eP	Pn	03 30 30.0	+2.2
HATJ				eS	Sn	03 30 42.2	+3.1
JKRS	Kuro-shima	1.05	81	eP	Pb	03 30 31.9	+0.2
JKRS				eS	Sn	03 30 45.3	+1.3
ESAO	Su ao	1.06	298	eP	Pb	03 30 31.3	-0.6
ESAO				eS	Sn	03 30 45.5	+1.4
EWUT	Wuta	1.06	291	P	Pb	03 30 31.9	0.0
EWUT				eS	Sn	03 30 45.3	+1.1
TWC	Suao	1.07	300	P	Pn	03 30 31.2	+0.5
TWC				eS	Sb	03 30 44.1	-1.7
ENA	Nanau	1.09	289	eP	Pb	03 30 32.6	+0.2
ETL	Fush Village	1.14	274	eP	Pb	03 30 33.1	-0.1
TWD	Chiawan	1.16	271	eS	Sn	03 30 48.6	+1.9
NACB	Ninganchiao	1.17	275	P	Pb	03 30 33.7	0.0
NACB	Ninganchiao	1.17	275	P	Pb	03 30 33.6	-0.1
NACB				eS	Sn	03 30 49.0	+2.2
NDS	Dongshan	1.19	298	eP	Pn	03 30 32.7	+0.4
NDS				eS	Sn	03 30 47.6	+0.2
JIJ	Ishigaki jima	1.20	76	eP	Pn	03 30 32.8	+0.4
JIJ				eS	Sn	03 30 47.0	-0.6
SHUL	Shoufeng	1.23	257	eP	Pb	03 30 34.9	+0.2
SHUL				eS	Sb	03 30 52.0	+1.8
ETM	Tongmen	1.26	265	eP	Pb	03 30 34.9	-0.3
ETM				eS	Sb	03 30 51.5	+0.3
TWE	Neicheng	1.27	301	P	Pb	03 30 34.9	-0.5
ETLH	Xiulin Townshi	1.27	276	P	Pb	03 30 35.1	-0.4
ETLH				eS	Sb	03 30 51.6	0.0
TIPB	Shuangxi	1.30	313	i P	Pn	03 30 34.3	+0.4
TIPB				S	Sn	03 30 49.1	-1.2
LATG	Datong	1.31	291	P	Pb	03 30 36.2	+0.1
LATG				eS	Sb	03 30 52.9	+0.3
ENTT	Nioudou	1.31	296	eP	Pb	03 30 36.3	+0.2
LXIB	Xiulin Townshi	1.33	268	P	Pb	03 30 36.1	-0.4
LXIB				eS	Sb	03 30 53.6	+0.3
FUSB	Fushanzhiwuyua	1.35	301	P	Pb	03 30 35.9	-1.0
FUSB				S	Sn	03 30 51.9	+0.3
SXI1	Grass Mountain	1.36	319	P	Pn	03 30 35.0	+0.3
SXI1				eS	Sn	03 30 50.8	-0.9
WFSB	Wu-fen Shan	1.40	315	P	Pn	03 30 35.7	+0.5
WFSB				eS	Sn	03 30 49.9	-2.7
JISG	Ishigakijimahi	1.41	69	eP	Pn	03 30 35.5	+0.2
JISG				eS	Sn	03 30 52.0	-0.8
NWLT	Wulai	1.43	300	eP	Pb	03 30 37.4	-0.7
NWLT				eS	Sn	03 30 53.5	+0.2
HGSD	Ruisui	1.45	247	i P	Pb	03 30 37.6	-0.7
HGSD				eS	Sb	03 30 55.9	-0.5
TNOU	National Taiwa	1.46	317	S	Sn	03 30 51.4	-2.7
WHF	Hehuan Shan	1.47	273	eP	Pb	03 30 38.5	-0.4
YHNB	Yeheng	1.48	294	P	Pb	03 30 38.4	-0.7
YHNB	Yeheng	1.48	294	eP	Pb	03 30 38.6	-0.4
YHNB				eS	Sb	03 30 58.2	+0.6
FUSS	Fushou	1.49	277	eP	Pb	03 30 39.0	-0.4
NSK	Sanguang	1.50	294	eP	Pb	03 30 38.8	-0.6
EHYH	Wanrong	1.51	248	P	Pb	03 30 39.0	-0.4
EHYH				eS	Sb	03 30 58.7	+0.5
EHY	Hungye	1.53	249	P	Pb	03 30 39.0	-0.7
EHY				eS	Sb	03 30 58.7	0.0
OWD	Renai	1.55	266	P	Pb	03 30 39.4	-0.8
OWD				eS	Sb	03 30 58.9	-0.8
TDCB	Techi	1.57	277	eP	Pb	03 30 40.0	-0.5
TDCB				eS	Sb	03 30 59.7	-0.5
YULB	Yu-li	1.59	245	P	Pb	03 30 40.1	-0.8
YULB	Yu-li	1.59	245	eP	Pb	03 30 40.0	-0.8
YULB				eS	Sb	03 31 00.1	-0.5
YM01	YM01	1.59	312	eS	Sn	03 30 56.4	-1.0
WUSB	Renai	1.60	267	eP	Pb	03 30 40.4	-0.7
WUSB				eS	Sb	03 31 00.4	-0.7
TWF1	Yuli	1.61	244	P	Pb	03 30 40.6	-0.5
TWF1				S	Sb	03 31 01.1	-0.1
CHKH	Chenggong	1.61	237	eP	Pb	03 30 39.7	-1.5
CHKH				eS	Sb	03 30 59.4	-1.8
VWDT	VWDT	1.61	259	P	Pb	03 30 40.8	-0.4
VWDT				eS	Sb	03 31 00.4	-0.8
FULB	Fuli	1.69	239	P	Pb	03 30 41.0	-1.4
FULB				eS	Sb	03 31 02.0	-1.3
NFF	Wufeng Townshi	1.69	290	eP	Pb	03 30 42.2	-0.4
NFF				eS	Sb	03 31 02.6	-0.9
JTJ	Tarama	1.76	71	eP	Pn	03 30 40.9	+0.7
JTJ				eS	Sn	03 31 00.5	-1.0
WHP	Taichung City	1.77	277	eP	Pb	03 30 44.0	+0.2
WHP				eS	Sb	03 31 05.0	-0.7
SSLB	Suanglung	1.77	261	P	Pb	03 30 42.8	-1.1
SSLB	Suanglung	1.77	261	eP	Pb	03 30 43.1	-0.9
EHD	Haiduan	1.78	239	eP	Pn	03 30 40.9	+0.4
LIOB	Emei	1.78	289	eP	Pb	03 30 44.0	-0.1
SMLT	Sun Moon Lake	1.81	264	eP	Pb	03 30 43.8	-0.8
TYC	Yuchr	1.85	265	eP	Pb	03 30 44.2	-0.9
ELDTW	Lidau	1.91	243	eP	Pb	03 30 44.1	-2.2
ALS	Alishan	1.97	254	eP	Pb	03 30 46.7	-0.7
CHN5	Tsauling	2.06	257	eP	Pb	03 30 48.2	-0.7
CHN5				eS	Sb	03 31 12.8	-1.3
TWGBT	Beinan	2.06	233	P	Pb	03 30 46.2	-2.6
TWGBT				eS	Sb	03 31 10.7	-3.4
TWG	Pinlang	2.07	233	eP	Pb	03 30 46.2	-2.8
STYH	Taoyuan	2.12	245	i P	Pb	03 30 48.3	-1.5
WDLH	Douliu	2.17	260	P	Pb	03 30 49.7	-0.9
WDLH				eS	Sb	03 31 17.0	0.0
WCKO	Fanlu	2.17	253	eP	Pb	03 30 49.8	-0.9
WCKO				eS	Sb	03 31 16.6	-0.5
TPUB	Ta-pu	2.19	250	P	Pb	03 30 50.2	-0.8
TPUB	Ta-pu	2.19	250	eP	Pb	03 30 50.8	-0.2
TPUB				eS	Sb	03 31 17.0	-0.8
WTP	Ta-pu	2.23	249	eP	Pb	03 30 50.8	-0.8
WTP				eS	Sb	03 31 19.7	+0.9
CHN1	Nanshi	2.32	248	P	Pb	03 30 52.5	-0.7
CHN1				eS	Sb	03 31 21.4	-0.2
JIKM	Ikemajima	2.33	68	eP	Pn	03 30 48.9	+0.9
TWK	Hsinying	2.33	250	eP	Pb	03 30 52.4	-1.0
TWK				eS	Sb	03 31 21.8	+0.1
LYUB	Lan-yu	2.38	210	eS	Sn	03 31 17.3	+0.6
WSL	Shuilin Townsh	2.48	258	eP	Pb	03 30 53.8	-2.1
MASBT	Mashibuluo	2.52	235	eP	Pb	03 30 53.8	-2.7
MASBT				eS	Sb	03 31 25.1	-2.0
SCZT	Fangliau	2.67	231	eP	Pb	03 30 58.5	-0.7
VCHM	Qimei	3.27	255	eP	Pn	03 31 03.9	+2.9

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*TEH **23** 03:38:32.5, 34°.32N×45°.64E, h10^{km}±131^{km}*
*ISN **23** 03:38:33.0±1.2, 34°.34N×45°.67E, h19^{km}±31^{km}, ML2.8*
ISC 23 03:38:32.8±1.1**, 34°.32N**±0°.06×**45°.66E**±0°.06**, h18**^{km}**, n7, σ0^{s}.41**/9**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLG1	Gilan-e-Gharb	0.30	135	Pg	Pg	03 38 38.9	-0.5
IDHR	Dehrash	0.71	58	Pg	Pb	03 38 46.9	0.0
IGHG	Ghaleghazi	0.76	89	Pg	Pg	03 38 48.0	+0.3
KCHF	Cheshme Sefid,	1.15	92	Pg	Pb	03 38 54.7	+0.4
IBDR	Badra	1.23	169	ePg	Pn	03 38 55.0	-0.1
	baz=350						
IBDR				eSg	Sg	03 39 13.0	+0.3
IBDR				AML	AML	03 39 18.6	
	comp=N,157nm,0.3s						
IBDR				AML	AML	03 39 28.2	
	comp=E,114nm,0.4s						
IKRK	Kirkuk	1.52	315	ePn	Pb	03 39 01.0	+0.4
IKRK				eSn	Sg	03 39 22.0	-0.1
IKRK				AML	AML	03 39 25.7	
	comp=N,270nm,0.6s						
IKRK				AML	AML	03 39 26.0	
	comp=E,182nm,0.5s						
SNQR	Sonqor, Kerman	1.71	71	Pg	Pg	03 39 05.4	-0.5

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*TEH **23** 03:51:28.7, 37°.64N×47°.67E, h6^{km}*
*NNC **23** 03:51:38.0±2.6, 38°.23N×48°.37E, h0^{km}, mb3.9, Error ellipse: s-maj=45.4km s-min=19.5km az=100.0*
ISC 23 03:51:28.9±1.0**, 37°.65N**±0°.03×**47°.68E**±0°.03**, h9**^{km}±7^{km}**, n43, σ2^{s}.30**/49**, 1C-2D, Northwestern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISRB	Sarab	0.17	358	Pg	Pg	03 51 32.5	-0.3
ISRB				Sg	Sg	03 51 35.8	+0.3
IHSH	Hashtrud	0.48	224	Pg	Pg	03 51 37.7	-0.6
IHRS	Heris	0.83	323	Pg	Pg	03 51 44.3	-0.7
IHRS				Sg	Sb	03 51 56.7	-0.4
CSN1	Caspian	1.13	94	Pg	Pg	03 51 50.3	-0.3
GRMI	Germi	1.17	8	Pg	Pg	03 51 50.8	-0.6
GAS1	Astara - Iran	1.18	51	Pg	Pg	03 51 50.7	-0.9
ZNJK	Zanjan	1.27	140	Pg	Pg	03 51 51.9	-1.4
ITBZ	Tabriz	1.34	296	Pg	Pn	03 51 53.4	-0.6
ITBZ				Sg	Sn	03 52 12.9	+0.9
IAZR	Azarshahr	1.35	272	Pg	Pn	03 51 53.9	-0.2
ISHB	Shabestar	1.75	292	Pg	Pb	03 52 00.6	-0.7
MAHB	Mahabad	1.80	241	Pg	Pb	03 52 01.9	-0.3
IMRD	Marand	1.88	305	Pn	Pb	03 52 04.1	+0.5
GIDE	GILAN DEYLAMAN	1.93	112	Pn	Pb	03 52 03.7	-0.6
JIR1	Jirandeh	1.94	118	Pn	Pb	03 52 04.3	-0.3
LHJ2	Lahijan - Gila	1.96	104	Pn	Pb	03 52 04.7	-0.1
HGHA	Hamedan- Ghaye	2.36	156	Pn	Pb	03 52 10.3	-1.4
IGZV	Ghazvin	2.40	121	Pn	Pb	03 52 10.6	-1.7
QABG	Abgarm-Qazvin	2.47	141	Pn	Pn	03 52 11.5	+2.0
SNQR	Sonqor, Kerman	2.79	181	Pn	Pb	03 52 17.1	-2.0
MAKU	Maku	2.90	307	Pn	Pn	03 52 18.1	+2.7
HAGD	Aghdareh	3.06	157	Pn	Pn	03 52 18.9	+1.2
MZPU	Pul - Mazandar	3.34	110	Pn	Pn	03 52 24.2	+2.7
VSHL	Vashlovani	3.71	345	P	Pb	03 52 35.9	+1.3
GLG1	Gilan-e-Gharb	3.81	203	Pn	Pn	03 52 30.3	+2.5
IQOM	Qom	3.92	135	Pn	Pn	03 52 31.6	+2.1
IPRN	Peran	3.99	109	Pn	Pn	03 52 33.1	+2.7
DGRG	David-gareji	4.19	336	P	Pb	03 52 43.5	+0.7
DGRG				S	Sg	03 53 40.6	-2.9
IVRN	Varamin	4.21	128	Pn	Pn	03 52 35.4	+2.0
IALA	Alasht	4.40	109	Pn	Pn	03 52 38.8	+2.6
QAMS	Qamsar	4.94	141	Pn	Pn	03 52 45.7	+2.2
ISFB	Sefidab	4.95	130	Pn	Pn	03 52 45.7	+2.2
IGLO	Ghaloghah	5.05	101	Pn	Pn	03 52 47.1	+2.1
CHRG	Chargali	5.13	337	P	Pb	03 52 58.0	-0.9
KRSH	Karshahi	5.16	134	Pn	Pn	03 52 48.4	+2.0
IKLH	Kolahrood	5.37	142	Pn	Pn	03 52 52.0	+2.6
ANAR	Anarak	6.65	130	Pn	Pn	03 53 09.9	+3.0
ISFR	Sfrayin	8.24	91	Pn	Pn	03 53 31.6	+2.7
IBAF	Bafgh	8.88	131	Pn	Pn	03 53 40.4	+2.9
AB31	Akbulak array	14.60	34	Pn	Pn	03 54 54.6	-1.0
	2.2nm,0.7s,baz=214,slow=13,SNR=14						
AB31				⇓Sn	Sn	03 57 29.9	-7.5
	0.4nm,0.5s,baz=223,slow=14,SNR=4.5						
AKTO	Aktyubinsk	14.77	27	⇑Pn	Pn	03 54 56.6	-1.2
	5.8nm,0.8s						
AKTO				⇓Sn	Sn	03 57 36.4	-5.0
	3.1nm,0.8s						
KK31	Karatay Array	18.21	65	P	P	03 55 42.6	+0.6
	1.9nm,0.8s,baz=265,slow=12,SNR=7.3						
BVA0	Borovoye Array	22.02	38	P	P	03 56 25.3	+1.9
	5.0nm,1.1s,baz=236,slow=10.0,SNR=11						
MK31	Makanchi Array	27.03	59	P	P	03 57 16.4	+5.1
	0.6nm,0.6s,baz=254,slow=7.8,SNR=5.6						

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*ATH **23** 03:56:34.9, 39°.25N×20°.60E, h14^{km}±2^{km}, ML3.0/12, Manual Solution by E.Daskalaki First location: 2019/12/23 03:57:37, This location: 2019/12/23 07:48:41 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*
*THE **23** 03:56:35.6, 39°.3N±0°.9×2°1E±°, h5^{km}±2^{km}, M2.8/16, MLh2.8/16*
*IDC **23** 03:56:39.2±9.4, 39°.92N×21°.20E, h0^{km}, mb3.4/3, mbtmp3.4/4, ML2.8/1, Error ellipse: s-maj=177.2km s-min=29.5km az=31.0*
ISC 23 03:56:35.6±0.9**, 39°.25N**±0°.02×**20°.63E**±0°.03**, h15**^{km}±8^{km}**, n42, σ0^{s}.82**/56**, mb3.4**/3**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGT	Igoumenitsa	0.36	321	P	Pg	03 56 42.4	-0.6
IGT				S	Sg	03 56 48.8	+0.8
IGT	Igoumenitsa	0.36	321	P	Pg	03 56 42.2	-0.8
IGT				S	Sg	03 56 47.5	-0.6
TSLK	Tsoukalades, L	0.43	177	P	Pg	03 56 43.9	-0.3
JAN	Janina	0.44	23	P	Pg	03 56 44.3	-0.2
JAN				S	Sb	03 56 51.7	+0.1
JAN	Janina	0.44	23	P	Pg	03 56 44.0	-0.4
JAN				S	Sg	03 56 51.0	+0.6
PRMD	Pramanda	0.46	53	P	Pg	03 56 44.5	-0.3
PRMD				S	Sb	03 56 53.0	+0.9
LKD2	Lefkada island	0.46	177	P	Pg	03 56 44.5	-0.3
LKD2				S	Sb	03 56 53.4	+1.3
LKD2	Lefkada island	0.46	177	P	Pg	03 56 44.2	-0.6
TETR	Tetrakomo, Epi	0.51	79	P	Pg	03 56 45.0	-0.7
TETR				S	Sg	03 56 53.4	+0.8
TETR	Tetrakomo, Epi	0.51	79	P	Pg	03 56 44.9	-0.9
TETR				S	Sg	03 56 53.1	+0.5
NYDR	Nydri-Lefkada	0.54	174	P	Pg	03 56 45.5	-0.7
NYDR				S	Sb	03 56 55.2	+0.8
AMPL	Ampelaki	0.56	126	P	Pg	03 56 46.2	-0.5
AMPL				S	Sb	03 56 55.4	+0.4
DRAG	Dragano-Lefkad	0.57	184	P	Pg	03 56 45.9	-0.9
EVGI	Lefkada island	0.63	178	P	Pg	03 56 47.6	-0.3
EVGI				S	Sb	03 56 57.3	+0.3
EVGI	Lefkada island	0.63	178	P	Pg	03 56 46.8	-1.2
EVGI				S	Sg	03 56 56.2	-0.1
KEK	Kerkira	0.79	306	P	Pg	03 56 50.5	-0.4
KEK	Kerkira	0.79	306	P	Pg	03 56 50.1	-0.8
KPRO	Kipourio	0.90	39	P	Pg	03 56 52.8	-0.3
KPRO	Kipourio	0.90	39	P	Pg	03 56 52.6	-0.5
EVR	Evrytania	0.98	110	P	Pg	03 56 53.9	-0.6
EVR	Evrytania	0.98	110	P	Pg	03 56 53.3	-1.3
EVR				S	Sb	03 57 07.8	+0.7
VLS	Valsamata	1.07	182	P	Pg	03 56 55.5	-0.9
THL	Klokotos Trika	1.12	73	P	Pg	03 56 57.1	-0.1
THL	Klokotos Trika	1.12	73	P	Pg	03 56 55.9	-1.3
MAKR	Makrakomi, Fth	1.20	101	P	Pg	03 56 58.2	-0.4
MAKR	Makrakomi, Fth	1.20	101	P	Pg	03 56 57.3	-1.3
ANX	Ano Chora	1.21	123	P	Pg	03 56 58.0	-0.8
NEST	Nestorio	1.21	16	P	Pb	03 56 59.0	+0.8
NEST	Nestorio	1.21	16	P	Pg	03 56 58.3	-0.6
EFP	Efpalio	1.29	129	P	Pn	03 56 59.7	+0.6
EFP	Efpalio	1.29	129	P	Pn	03 56 59.7	+0.6
AGG	Agios Georgios	1.34	99	P	Pn	03 57 00.1	+0.3
AGG	Agios Georgios	1.34	99	P	Pn	03 56 59.9	0.0
AGG				S	Sg	03 57 17.6	-1.4
RLS	Riolos of Patr	1.36	151	P	Pn	03 57 00.4	+0.3
KZN	Kozani	1.37	40	P	Pn	03 56 59.7	-0.6
KZN	Kozani	1.37	40	P	Pn	03 56 59.5	-0.8
AXAR	Agios Charalam	1.66	106	P	Pn	03 57 05.8	+1.7
KLV	Kalavryta, Ach	1.70	135	P	Pn	03 57 04.8	0.0
GERES	GERESS Array B	10.80	335	Pn	Pn	03 59 10.6	+0.9
	baz=154,slow=14,SNR=3.0						
	0.5nm,0.5s						
FINES	FINESS Array B	22.47	7	P	P	04 01 31.6	-2.4
	0.5nm,0.7s,baz=190,slow=9.6,SNR=4.2						
	0.5nm,0.7s						
MKAR	Makanchi Array	44.68	59	P	P	04 04 47.4	-0.3
	0.2nm,0.4s,baz=284,slow=8.2,SNR=5.2						
	0.2nm,0.4s						
ZALV	Zalesovo Beam	44.92	49	P	P	04 04 49.6	+0.1
	0.4nm,0.3s,baz=292,slow=7.4,SNR=2.0						
	0.4nm,0.3s						

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*WEL **23** 04:04:23.2±0.7, 32°S±5°×18°0E±1°0, h306^{km}±8^{km}, M5.2/12, mB5.6/11, ML4.9/10, MLv5.4/12, Mw(mB)5.1/11, Error ellipse: s-maj=14.5km s-min=5.3km az=111.0, confirmed*
*IDC **23** 04:04:27.3±4.6, 32°.54S×179°.98W, h276^{km}±43^{km}, mb3.6/2, mbtmp4.5/4, Error ellipse: s-maj=46.6km s-min=39.0km az=40.0*
*NOU **23** 04:04:53.8, 34°.80S×179°.51E, h318^{km}, mb4.5/13, South of Kermadec Islands*
ISC 23 04:04:23.8±0.9**, 32°.28S**±0°.06×**179°.8W**±0°.1**, h250**^{km}**, n60, σ2^{s}.42**/63**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.41	29	P	Pn	04 05 21.5	+0.7
GLKZ				S	S	04 06 03.7	-2.3
MXZ	Matakaoa Point	5.50	196	P	Pn	04 05 50.5	+4.9
MXZ	Matakaoa Point	5.50	196	P	Pn	04 05 49.3	+3.7
MXZ				S	S	04 06 51.0	+0.1
WMGZ	Waiomatatini S	5.72	194	P	Pn	04 05 49.8	+1.4
WMGZ				S	S	04 06 53.4	-2.5
KUZ	Kuaotunu	5.79	219	P	Pn	04 05 56.0	+6.7
KUZ	Kuaotunu	5.79	219	P	Pn	04 05 53.5	+4.2
HAZ	Te Kaha	5.82	199	P	Pn	04 05 53.3	+3.7
HAZ				S	S	04 06 58.5	+0.4
PKGZ	Pakihiroa	5.84	197	P	Pn	04 05 52.3	+2.5
PKGZ				S	S	04 06 58.0	-0.7
PUZ	Puketiti	6.00	195	P	Pn	04 05 52.0	+0.2
PUZ				S	S	04 07 00.9	-1.4
RUGZ	Raukumara Rang	6.04	199	P	Pn	04 05 56.0	+3.5
RUGZ				S	S	04 07 01.7	-1.7
WCZ	Waipu Caves	6.08	232	P	Pn	04 05 57.1	+4.3
TWGZ	Tauwhareparae	6.16	197	P	Pn	04 05 56.3	+2.4
OPRZ	Ohinepanea	6.31	207	P	Pn	04 06 00.1	+4.5
MARZ	Manawahe	6.39	206	P	Pn	04 06 01.0	+4.3
CNGZ	Carnagh Statio	6.40	194	P	Pn	04 06 01.4	+4.6
MWZ	Matawai	6.43	199	P	Pn	04 05 57.7	+0.5
TKGZ	Te Karaka	6.44	197	P	Pn	04 05 59.1	+1.8
URZ	Urewera	6.48	202	P	Pn	04 05 59.1	+1.3
	79nm,0.3s,baz=267,slow=3.9,SNR=127						
URZ				S	S	04 07 10.1	-3.1
	72nm,0.4s,baz=51,slow=23,SNR=9.4						
URZ	Urewera	6.48	202	P	Pn	04 05 59.7	+1.8
URZ	Urewera	6.48	202	P	Pn	04 05 59.7	+1.8
TOZ	Tahuroa Road	6.67	214	P	Pn	04 06 06.6	+6.4
RTZ	Ruatahuna	6.85	202	P	Pn	04 06 04.8	+2.2
KNZ	Kokohu	7.04	196	P	Pn	04 06 06.7	+1.9
TLZ	Tolley Road	7.14	211	P	Pn	04 06 10.9	+4.7
BKZ	Black Stump Fm	7.51	203	P	Pn	04 06 12.1	+1.3
BKZ	Black Stump Fm	7.51	203	P	Pn	04 06 10.9	+0.1
HIZ	Hauiti	7.60	214	P	Pn	04 06 17.4	+5.4
HIZ	Hauiti	7.60	214	P	Pn	04 06 17.4	+5.4
NGZ	Ngauruhoe	7.83	207	P	Pn	04 06 17.9	+2.9
VRZ	Vera Road	8.14	211	P	Pn	04 06 22.7	+3.9
PWZ	Pawanui	8.19	198	P	Pn	04 06 20.6	+1.2
PXZ	Pawanui	8.20	198	P	Pn	04 06 19.9	+0.5
TSZ	Takapari Road	8.49	203	P	Pn	04 06 23.5	+0.3
WAZ	Wanganui	8.57	208	P	Pn	04 06 25.9	+1.6
KHEZ	Kahui Hut	8.62	214	P	Pn	04 06 27.8	+2.9
BFZ	Birch Farm	8.97	200	P	Pn	04 06 27.9	-1.4
BFZ	Birch Farm	8.97	200	P	Pn	04 06 28.2	-1.0
MRZ	Mangatainoka R	9.16	203	P	Pn	04 06 29.0	-2.6
SNZO	South Karori	10.03	205	P	Pn	04 06 41.0	-1.6
NNZ	Nelson	10.46	210	P	Pn	04 06 46.2	-1.9
QRZ	Quartz Range	10.53	214	P	Pn	04 06 47.8	-1.0
QRZ	Quartz Range	10.53	214	P	Pn	04 06 47.9	-1.0
THZ	Tophouse	11.12	210	P	Pn	04 06 54.9	-1.4
KHZ	Kahutara	11.42	206	P	Pn	04 06 58.3	-1.7
KHZ	Kahutara	11.42	206	P	Pn	04 06 58.2	-1.8
DSZ	Denniston Nort	11.59	213	P	Pn	04 07 00.2	-2.0

DSZ				S	S	04 09 02.9	-8.6
CTZ	**Chatham Island**	**11.71**	**169**	P	P	04 07 21.6	+15
CTZ				S	**S**	**04 09 19.6**	**+5.5**
GVZ	**Greta Valley S**	**12.09**	**206**	P	**Pn**	**04 07 06.8**	**-1.5**
GVZ				S	S	04 09 12.3	-11
LTZ	**Lake Taylor**	**12.22**	**209**	P	**Pn**	**04 07 08.5**	**-1.6**
LTZ				S	S	04 09 15.0	-11
INZ	**Inchbonnie**	**12.53**	**211**	P	**Pn**	**04 07 11.6**	**-2.1**
INZ				S	S	04 09 21.6	-12
OXZ	**Oxford**	**12.77**	**208**	P	**Pn**	**04 07 14.6**	**-2.2**
OXZ				S	S	04 09 26.7	-12
MQZ	**McQueen's Vall**	**12.86**	**205**	P	**Pn**	**04 07 15.3**	**-2.6**
WVZ	**Waitaha Valley**	**13.12**	**212**	P	**Pn**	**04 07 18.9**	**-2.2**
RPZ	**Rata Peaks**	**13.50**	**210**	P	**Pn**	**04 07 23.6**	**-2.1**
ODZ	**Otahua Downs**	**14.76**	**208**	P	**P**	**04 07 40.2**	**-0.6**
JCZ	**Jackson Bay**	**14.79**	**214**	P	**P**	**04 07 40.4**	**-0.9**
DZM	**Mont Dzumac**	**15.91**	**306**	P	**Pn**	**04 07 56.5**	**+1.5**
	14nm,0.8s,baz=136,slow=21,SNR=8.2						
ASAR	**Alice Springs**	**41.53**	**270**	P	**P**	**04 11 47.1**	**0.0**
	0.9nm,0.3s,baz=106,slow=7.4,SNR=15						
	0.9nm,0.3s						
WRA	**Warramunga Arr**	**42.69**	**275**	P	**P**	**04 11 56.2**	**-0.3**
	2.2nm,0.3s,baz=113,slow=8.1,SNR=24						
	2.2nm,0.3s						
FINES	**FINESS Array B**	**146.34**	**338**	PKPbc	**PKPbc**	**04 23 34.5**	**+0.1**
	0.4nm,0.3s,baz=54,slow=3.5,SNR=6.5						

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*IDC **23** 04:13:58.2±0.9, 29°.01S×177°.89W, h0^{km}, mb4.3/5, mbtmp4.3/5, MS3.4/9, Error ellipse: s-maj=29.3km s-min=9.6km az=85.0*

*NEIC **23** 04:14:00.6±2.1, 28°.81S±0°.04×178°.0W±0°.2, h10^{km}±1^{km}, mb4.5/9, Error ellipse: s-maj=28.6km s-min=5.7km az=85.0*

ISC 23 04:14:03.5±0.9, 28°.94S±0°.09×177°.9W±0°.2, h35^{km}, n46, σ1^{s}.22/34, mb4.5/8, MS3.4/7, 5D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.31**	**185**	Pn	**Pn**	**04 14 09.1**	**-2.6**
	5μm,0.3s,baz=59,slow=3.7,SNR=124						
RAO				Sn	**Sn**	**04 14 15.7**	**-1.5**
	7μm,0.3s,baz=43,slow=23,SNR=19						
RAO	**Raoul Island**	**0.31**	**185**		Pn	04 14 08.8	-2.8
RAO				Sg	**Sn**	**04 14 15.5**	**-1.7**
TOZ	**Tahuroa Road**	**10.36**	**210**	Pn	**Pn**	**04 16 31.2**	**+1.6**
DZM	**Mont Dzumac**	**15.70**	**292**	LR	LR	04 22 03.7	
	comp=Z,252nm,21.5s,slow=31						
DZM	**Mont Dzumac**	**15.70**	**292**	*e*LR	LR	04 21 22.9	
	314nm,23.9s						
RAR	**Rarotonga**	**18.11**	**69**	LR	LR	04 23 25.0	
	comp=Z,49nm,19.9s,baz=268,slow=31						
TBI	**Tubuai**	**26.08**	**84**	*e*LR	LR	04 26 14.6	
	610nm,30.2s						
PPT2	**Papeete2**	**28.28**	**73**	*e*LR	LR	04 27 01.0	
	101nm,26.2s						
PPT2				*e*LR	LR	04 27 02.1	
	98nm,30.8s						
PPT	**Papeete**	**28.29**	**73**	LR	LR	04 31 19.5	
	comp=Z,32nm,18.1s,baz=255,slow=37						
CTA	**Charters Tower**	**33.69**	**277**	LR	LR	04 32 13.7	
	comp=Z,91nm,20.1s,baz=42,slow=32						
CTAO	**Charters Tower**	**33.69**	**277**	P	**P**	**04 20 42.3**	**+0.8**
CTAO				IAmb	IAmb	04 20 43.7	
	comp=Z,5.5nm,0.8s						
STKA	**Stephens Creek**	**34.93**	**255**	P	**P**	**04 20 52.0**	**-0.1**
	comp=Z,4.3nm,0.9s,baz=82,slow=6.9,SNR=7.1						
	comp=Z,4.3nm,0.9s						
STKA	**Stephens Creek**	**34.93**	**255**		**P**	**04 20 52.9**	**+0.8**
PMG	**Port Moresby**	**38.09**	**294**	LR	LR	04 35 14.4	
	comp=Z,34nm,19.7s,baz=164,slow=34						
RKT	**Rikitea**	**38.84**	**92**	*e*LR	LR	04 31 57.3	
	comp=Z,3μm,34.0s						
TAOE	**Nuku Hiva Isla**	**40.66**	**68**	*e*LR	LR	04 32 36.0	
	comp=Z,54nm,25.3s						
AS31	**Alice Springs**	**43.30**	**265**	P	**P**	**04 22 00.9**	**-1.3**
ASAR	**Alice Springs**	**43.30**	**265**	P	**P**	**04 22 02.0**	**-0.2**
	comp=Z,2.6nm,0.8s,baz=103,slow=7.8,SNR=28						
ASAR				LR	LR	04 38 24.5	
	comp=Z,83nm,19.0s,baz=117,slow=34						
	comp=Z,2.6nm,0.8s						
ASAR	**Alice Springs**	**43.30**	**265**	P	**P**	**04 21 59.8**	**-2.5**
WR8	**Warramunga Arr**	**44.01**	**271**	P	**P**	**04 22 07.0**	**-1.0**
WR8				IAmb	IAmb	04 22 13.6	
	comp=Z,10nm,1.1s						
WRA	**Warramunga Arr**	**44.16**	**271**	P	**P**	**04 22 08.8**	**-0.3**
	comp=Z,7.2nm,0.9s,baz=108,slow=7.9,SNR=15						
	comp=Z,7.2nm,0.9s						
WRA	**Warramunga Arr**	**44.16**	**271**	P	**P**	**04 22 07.5**	**-1.6**
WB0	**Warramunga Arr**	**44.18**	**271**	P	**P**	**04 22 07.9**	**-1.4**
WB0				IAmb	IAmb	04 22 09.5	
	comp=Z,7.1nm,0.8s						
SBA	**Scott Base**	**49.49**	**184**	P	**P**	**04 22 52.2**	**+2.2**
GUMO	**Guam**	**55.52**	**314**	LR	LR	04 45 19.4	
	comp=Z,22nm,18.1s,baz=125,slow=34						
RPN	**Rapa Nui**	**59.74**	**106**	LR	LR	04 46 46.8	
	comp=Z,25nm,18.4s,baz=285,slow=33						
QSPA	**South Pole Qui**	**61.16**	**180**	P	**P**	**04 24 15.7**	**+1.4**
	comp=Z,2.8nm,0.8s,baz=96,slow=0.6,SNR=10						
	comp=Z,2.8nm,0.8s						
QSPA	**South Pole Qui**	**61.16**	**180**	P	**P**	**04 24 16.1**	**+1.7**
QSPA				IAmb	IAmb	04 24 23.9	
	comp=Z,4.2nm,0.8s						
TROLL	**Troll, Antarti**	**79.33**	**180**	⇓P	**P**	**04 26 06.1**	**+0.8**
SNAA	**Sanae**	**79.61**	**178**	⇓P	**P**	**04 26 07.2**	**+0.4**
SNAA	**Sanae**	**79.61**	**178**	P	**P**	**04 26 07.1**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=206,slow=4.3,SNR=6.5						
SNAA				LR	LR	05 00 43.4	
	comp=Z,46nm,18.9s,baz=266,slow=35						
	comp=Z,1.7nm,0.8s						
SNAA	**Sanae**	**79.61**	**178**	P	**P**	**04 26 07.0**	**+0.2**
SNAA				IAmb	IAmb	04 26 08.4	
	comp=Z,4.6nm,1.1s						
VNA3	**Neumayer Olymp**	**79.75**	**176**	⇓P	**P**	**04 26 07.9**	**+0.4**
VNA2	**Neumayer--Watz**	**80.19**	**177**	⇓P	**P**	**04 26 10.6**	**+0.8**
	baz=172,slow=4.8						
VNA1	**Neumayer--Stat**	**80.42**	**177**	⇓P	**P**	**04 26 12.4**	**+1.4**
KKAR	**Karatay Array**	**124.34**	**304**	PKPdf	**PKiKP**	**04 32 59.1**	**+0.1**
BVAR	**Borovoye Array**	**125.42**	**316**	PKP	**PKPdf**	**04 32 60.0**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=101,slow=2.9,SNR=4.8						
ABKAR	**Akbulak array**	**132.02**	**312**	PKPdf	**PKiKP**	**04 33 13.7**	**-0.4**
FINES	**FINESS Array B**	**143.81**	**341**	PKhKP	PKPpre	04 33 30.5	
	comp=Z,2.7nm,0.9s,baz=64,slow=4.4,SNR=5.0						
NC303	**NORSAR Array S**	**147.13**	**352**	PKPdf	**PKPbc**	**04 33 40.8**	**-1.4**
NB2	**NORSAR Subarra**	**147.33**	**352**	PKP	**PKPbc**	**04 33 42.5**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=12,slow=2.9						
NOA	**NORSAR Array B**	**147.33**	**352**	PKPbc	**PKPbc**	**04 33 42.0**	**-0.8**
	comp=Z,1.0nm,0.8s,baz=16,slow=4.6,SNR=4.5						
HFS	**Hagfors**	**147.84**	**349**	PKPbc	**PKPbc**	**04 33 43.5**	**-0.7**
	comp=Z,2.7nm,0.8s,baz=84,slow=5.9,SNR=5.1						
AKASG	**Malin Array Be**	**150.19**	**324**	PKPbc	**PKPbc**	**04 33 49.7**	**-0.7**
	comp=Z,5.8nm,1.0s,baz=49,slow=2.6,SNR=7.4						
BRTR	**Keskin Array B**	**151.96**	**301**	PKPbc	**PKPbc**	**04 33 54.6**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=160,slow=3.9,SNR=4.3						
TORD	**Torodi Ar. Bea**	**164.28**	**178**	PKPab	**PKPab**	**04 34 57.9**	**0.0**
	comp=Z,1.0nm,0.7s,baz=147,slow=1.8,SNR=5.9						

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*IDC **23** 04:48:18.2±2.0, 9°.01S×111°.17E, h0^{km}, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=113.9km s-min=20.7km az=51.0*

*DJA **23** 04:48:24.3±0.3, 9°S±3°×11°1E±°, h10^{km}, M4.1/21, mb4.3/4, MLv4.0/21*

ISC 23 04:48:24.1±1.0, 9°.21S±0°.09×111°.23E±0°.07, h35^{km}, n32, σ1^{s}.99/37, mb3.9/7, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCJI	**Pacitan**	**1.01**	**357**	P	**Pn**	**04 48 41.5**	**-0.3**
PCJI				S	**Sn**	**04 48 53.8**	**-0.9**
UGM	**Wanagama**	**1.47**	**331**	P	**Pn**	**04 48 49.4**	**+1.3**
UGM				S	**Sn**	**04 49 07.9**	**+1.8**
SNJI	**Sawahan-Nganju**	**1.51**	**20**	P	**Pn**	**04 48 50.0**	**+1.2**
SNJI				S	**Sn**	**04 49 08.7**	**+1.3**
SJI	**Sawahan**	**1.56**	**20**	P	**Pn**	**04 48 50.0**	**+0.6**
YOGI	**Yogyakarta**	**1.67**	**326**	P	**Pn**	**04 48 52.6**	**+1.8**
YOGI				S	**Sn**	**04 49 12.7**	**+1.7**
NGJI	**Ngawi**	**1.84**	**7**	P	**Pn**	**04 48 56.6**	**+3.4**
SMRI	**Semarang**	**2.29**	**340**	P	**Pn**	**04 49 02.2**	**+2.9**
GMJI	**Gumukmas**	**2.38**	**67**	P	**Pn**	**04 49 01.2**	**+0.7**
TBJI	**Tambak Boyo**	**2.45**	**14**	P	**Pn**	**04 49 03.4**	**+1.8**
BLJI	**Banyuglugur**	**2.75**	**58**	P	**Pn**	**04 49 07.3**	**+1.6**
KPJI	**Karang Pucung**	**2.94**	**309**	P	**Pn**	**04 49 11.8**	**+3.4**
JAGI	**Jajag, Banyuwa**	**2.98**	**76**	P	**Pn**	**04 49 09.3**	**+0.5**
CTJI	**Waduk Cacaban**	**2.98**	**317**	P	**Pn**	**04 49 11.9**	**+3.0**
ABJI	**Asem Bagus**	**3.28**	**65**	P	**Pn**	**04 49 13.4**	**+0.4**
KMMI	**Kalianget**	**3.45**	**52**	P	**Pn**	**04 49 16.5**	**+1.1**
RTBI	**Rangdo, Negare**	**3.74**	**79**	P	**Pn**	**04 49 21.7**	**+2.3**
IGBI	**Denpasar**	**3.88**	**85**	P	**Pn**	**04 49 22.0**	**+0.7**
BBJI	**Bungbulang**	**3.95**	**296**	P	**Pn**	**04 49 24.3**	**+2.0**
KHKI	**Kahang-Kahang**	**4.40**	**79**	P	**Pn**	**04 49 31.7**	**+3.2**
CNJI	**Cibinong**	**4.48**	**295**	P	**Pn**	**04 49 31.7**	**+2.2**
KLNI	**Mataram**	**4.87**	**81**	P	**Pn**	**04 49 36.9**	**+2.0**
TWSI	**Taliwang, Sumb**	**5.60**	**86**	P	**Pn**	**04 49 47.6**	**+2.7**
	0.1nm18nm,0.6s						
PLAI	**Plampang**	**6.47**	**87**	P	**Pn**	**04 50 00.2**	**+3.3**
	30nm,0.9s						
DBNI	**Kabupaten Domp**	**7.03**	**85**	P	**Pn**	**04 50 06.5**	**+1.9**
	0.1nm11nm,0.9s						
LBFI	**Labuhan Bajo,**	**8.59**	**86**	P	**Pn**	**04 50 27.0**	**+1.1**
WRA	**Warramunga Arr**	**24.74**	**118**	P	**P**	**04 53 42.6**	**0.0**
	0.9nm,0.7s,baz=293,slow=9.9,SNR=2.4						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**26.01**	**126**	P	**P**	**04 53 54.7**	**+0.7**
	0.4nm,0.5s,baz=304,slow=9.6,SNR=5.7						
ASAR				PcP	**PcP**	**04 57 22.3**	**+0.5**
	0.3nm,0.6s,baz=319,slow=2.2,SNR=4.6						
	0.4nm,0.5s						
SONM	**Songino Array**	**56.95**	**356**	P	**P**	**04 58 04.3**	**-1.8**
	0.5nm,0.5s,baz=174,slow=8.7,SNR=3.7						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**61.44**	**338**	P	**P**	**04 58 34.8**	**-2.1**
	0.9nm,0.6s,baz=142,slow=6.1,SNR=9.6						
	0.9nm,0.6s						
KURBB	**Kurchatov Arra**	**66.01**	**338**	P	**P**	**04 59 05.3**	**-1.6**
	0.6nm,0.5s,baz=145,slow=5.4,SNR=7.3						
	0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**66.77**	**343**	P	**P**	**04 59 09.4**	**-2.4**
	0.6nm,0.5s,baz=151,slow=9.5,SNR=4.4						
	0.6nm,0.5s						
BVAR	**Borovoye Array**	**71.07**	**335**	P	**P**	**04 59 36.8**	**-1.7**
	1.2nm,0.7s,baz=141,slow=9.6,SNR=5.7						
	1.2nm,0.7s						

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*IDC **23** 04:58:09.7±4.4, 13°.61N×121°.70E, h74^{km}±34^{km}, mb3.4/5, mbtmp3.7/5, Error ellipse: s-maj=146.3km s-min=18.0km az=62.0*

ISC 23 04:58:05.1±1.4, 13°.8N±0°.2×122°.2E±0°.2, h35^{km}, n6, σ1^{s}.32/7, mb3.7/5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**1.26**	**282**	P	**Pn**	**04 58 27.4**	**+1.2**
	1μm,0.6s,baz=208,slow=4.1,SNR=32						
TGY				S	**Sn**	**04 58 40.8**	**-1.2**
	1μm,0.5s,baz=102,slow=22,SNR=6.4						
WRA	**Warramunga Arr**	**35.62**	**160**	P	**P**	**05 04 58.3**	**-1.5**
	0.6nm,0.7s,baz=338,slow=8.6,SNR=1.9						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**38.99**	**163**	P	**P**	**05 05 29.4**	**+1.2**
	0.3nm,0.5s,baz=340,slow=9.4,SNR=3.9						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**46.80**	**323**	P	**P**	**05 06 30.6**	**-0.7**
	0.5nm,0.6s,baz=108,slow=8.2,SNR=4.4						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**49.62**	**332**	P	**P**	**05 06 53.0**	**+0.1**
	0.9nm,0.4s,baz=121,slow=5.8,SNR=4.1						
	0.9nm,0.4s						
KURBB	**Kurchatov Arra**	**50.90**	**325**	P	**P**	**05 07 02.5**	**-0.1**
	1.2nm,0.6s,baz=133,slow=7.4,SNR=13						
	1.2nm,0.6s						

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*NEIC **23** 05:02:29.5±2.1, 3°.6S±0°.1×150°.09E±0°.08, h10^{km}±1^{km}, mb4.3/14, Error ellipse: s-maj=25.1km s-min=10.2km az=203.0*

*IDC **23** 05:02:31.3±1.3, 3°.25S×149°.57E, h0^{km}, mb3.8/4, mbtmp3.9/5, ML3.5/1, MS3.5/15, Error ellipse: s-maj=92.0km s-min=23.3km az=119.0*

ISC 23 05:02:30.0±0.7, 3°.4S±0°.1×149°.95E±0°.09, h19^{km}, n39, σ2^{s}.06/24, mb4.0/10, MS3.5/11, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**2.34**	**110**	Pn	**Pn**	**05 03 05.8**	**-1.8**
MANU	**Manus Island**	**2.91**	**297**	Pn	**Pb**	**05 03 19.2**	**-2.2**
PMG	**Port Moresby**	**6.58**	**205**	LR	LR	05 06 32.6	
	comp=Z,286nm,21.2s,baz=114,slow=37						
JAY	**Jayapura**	**9.28**	**275**	LR	LR	05 07 39.2	
	comp=Z,595nm,20.6s,baz=47,slow=35						
CTA	**Charters Tower**	**16.98**	**192**	P	**P**	**05 06 33.0**	**+4.5**
	0.1nm,0.3s,baz=16,slow=11,SNR=5.0						
CTA				LR	LR	05 12 23.5	
	comp=Z,76nm,20.2s,baz=34,slow=35						
	6.1nm,0.8s						
GUMO	**Guam**	**17.61**	**343**	LR	LR	05 11 35.5	
	comp=Z,214nm,20.5s,baz=155,slow=31						
FAKI	**Fak Fak**	**17.68**	**271**	P	**P**	**05 06 35.0**	**-1.3**
FAKI				IAmb	IAmb	05 06 35.9	
	comp=Z,21nm,1.1s						
MTN	**Manton Dam**	**20.84**	**242**	P	Pn	05 07 10.7	-2.7
MTN				IAmb	IAmb	05 07 11.1	
	comp=Z,9.3nm,1.1s						
WB0	**Warramunga Arr**	**22.26**	**222**	P	**P**	**05 07 24.9**	**-1.3**
WB0				IAmb	IAmb	05 07 32.2	
	comp=Z,23nm,1.3s						
WR0	**Warramunga Arr**	**22.30**	**221**	P	**P**	**05 07 24.9**	**-1.6**
WR0				IAmb	IAmb	05 07 38.9	
	comp=Z,24nm,1.5s						
WR8	**Warramunga Arr**	**22.32**	**221**	P	**P**	**05 07 27.8**	**+1.0**
WR8				IAmb	IAmb	05 07 38.4	
	comp=Z,7.6nm,1.1s						
WRA	**Warramunga Arr**	**22.42**	**222**	P	**P**	**05 07 29.8**	**+1.9**
	comp=Z,3.0nm,0.9s,baz=45,slow=11,SNR=12						
	comp=Z,3.0nm,0.9s						
WRA	**Warramunga Arr**	**22.42**	**222**	P	**P**	**05 07 27.5**	**-0.4**
DZM	**Mont Dzumac**	**24.51**	**141**	LR	LR	05 15 22.5	
	comp=Z,160nm,20.9s,baz=322,slow=31						
DZM	**Mont Dzumac**	**24.51**	**141**	P	**P**	**05 07 46.6**	**-2.0**
AS31	**Alice Springs**	**25.43**	**216**	P	**P**	**05 07 56.8**	**-0.1**
ASAR	**Alice Springs**	**25.43**	**216**	P	**P**	**05 07 59.6**	**+2.8**
	comp=Z,1.2nm,0.7s,baz=56,slow=8.1,SNR=12						
ASAR				LR	LR	05 18 56.5	
	comp=Z,114nm,21.2s,baz=82,slow=39						
	comp=Z,1.2nm,0.7s						
ASAR	**Alice Springs**	**25.43**	**216**	P	**P**	**05 07 57.6**	**+0.7**
PINNC	**Pines Island,**	**25.54**	**140**	P	**P**	**05 07 54.3**	**-3.5**
INKA	**Innaminka**	**25.76**	**199**	P	**P**	**05 07 59.2**	**-0.4**
INKA				IAmb	IAmb	05 08 05.7	
	comp=Z,4.2nm,1.1s						
FITZ	**Fitzroy Crossi**	**27.94**	**237**	P	**P**	**05 08 17.7**	**-1.7**
STKA	**Stephens Creek**	**29.40**	**195**	LR	LR	05 20 58.8	
	comp=Z,119nm,19.0s,baz=26,slow=38						
JCJ	**Chichijima**	**31.23**	**347**	LR	LR	05 19 49.5	
	comp=Z,73nm,19.4s,baz=170,slow=34						
MJAR	**Matsushiro Arr**	**41.22**	**346**	LR	LR	05 24 16.3	
	comp=Z,59nm,19.8s,baz=174,slow=32						
CMAR	**Chiang Mai Arr**	**54.71**	**295**	LR	LR	05 35 40.3	
	comp=Z,21nm,18.2s,baz=55,slow=37						
PEA0B	**Petropavlovsk-**	**56.67**	**6**	P	**P**	**05 12 11.6**	**-0.4**
PETK	**Petropavlovsk-**	**56.67**	**6**	LR	LR	05 31 36.5	
	comp=Z,73nm,21.7s,baz=125,slow=31						
PETK	**Petropavlovsk-**	**56.67**	**6**	P	**P**	**05 12 11.9**	**-0.1**
MA2	**Magadan**	**62.78**	**0**	LR	LR	05 40 28.6	
	comp=Z,42nm,18.9s,baz=88,slow=36						
YAK	**Yakutsk**	**67.07**	**350**	LR	LR	05 47 21.9	
	comp=Z,17nm,19.0s,baz=138,slow=40						
ILAR	**Eielson Array**	**81.95**	**23**	P	**P**	**05 14 51.8**	**+3.5**
	comp=Z,0.6nm,0.8s,baz=247,slow=5.6,SNR=7.1						
	comp=Z,0.6nm,0.8s						
ILAR	**Eielson Array**	**81.95**	**23**	P	**P**	**05 14 50.2**	**+1.9**
J25K	**Salcha River,**	**82.47**	**23**	P	**P**	**05 14 52.5**	**+1.4**
J25K				IAmb	IAmb	05 15 06.1	
	comp=Z,3.6nm,1.0s						
KK31	**Karatay Array**	**84.61**	**314**	P	**P**	**05 15 03.8**	**+1.2**
KK31				IAmb	IAmb	05 15 15.9	
	comp=Z,4.7nm,1.3s						
KKAR	**Karatay Array**	**84.61**	**314**	P	**P**	**05 15 04.0**	**+1.5**
MAW	**Mawson**	**85.77**	**203**	LR	LR	05 50 46.7	
	comp=Z,48nm,20.2s,baz=146,slow=34						
YKA	**Yellowknife Ar**	**95.51**	**28**	P	P	05 15 59.2	+5.7
	comp=Z,0.3nm,1.0s,baz=279,slow=5.7,SNR=4.2						
	comp=Z,0.3nm,1.0s						
RPN	**Rapa Nui**	**97.97**	**118**	LR	LR	05 54 17.4	
	comp=Z,25nm,18.4s,baz=339,slow=32						
TORD	**Torodi Ar. Bea**	**147.17**	**289**	PKPbc	**PKiKP**	**05 22 16.4**	**+0.9**
	comp=Z,1.0nm,0.9s,baz=55,slow=2.7,SNR=4.2						

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*IDC **23** 05:28:40.7±0.9, 22°.22S×175°.86W, h0^{km}, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=40.1km s-min=28.2km az=140.0*

ISC 23 05:28:50.6±0.9, 22°.3S±0°.3×176°.0W±0°.2, h71^{km}, n12, σ1^{s}.30/10, mb3.7/5, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**45.99**	**258**	P	**P**	**05 37 08.1**	**+0.9**
	0.5nm,0.5s,baz=92,slow=7.5,SNR=9.0						
ASAR				PcP	**PcP**	**05 38 43.3**	**+0.4**
	0.2nm,0.5s,baz=109,slow=4.0,SNR=6.0						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**46.26**	**263**	P	**P**	**05 37 08.9**	**-0.3**
	0.5nm,0.5s,baz=96,slow=8.1,SNR=7.5						
	0.5nm,0.5s						
VNDA	**Vanda**	**56.30**	**186**	P	**P**	**05 38 22.9**	**-0.6**
	1.2nm,0.8s,baz=72,slow=9.0,SNR=8.4						
	1.2nm,0.8s						
H03S2	**Juan Fernandez**	**83.41**	**124**	T	T	07 13 25.4	
	baz=247,slow=75,SNR=18						
H03S1	**Juan Fernandez**	**83.42**	**124**	T	T	07 13 25.9	
	baz=247,slow=75,SNR=18						
H03S3	**Juan Fernandez**	**83.42**	**124**	T	T	07 13 25.4	
	baz=247,slow=75,SNR=15						
TXAR	**Lajitas Array**	**86.44**	**56**	P	**P**	**05 41 26.9**	**+1.1**
	0.5nm,0.9s,baz=239,slow=4.5,SNR=4.2						
	0.5nm,0.9s						
ILAR	**Eielson Array**	**89.66**	**12**	P	**P**	**05 41 39.0**	**-1.2**
	0.3nm,0.6s,baz=205,slow=5.8,SNR=5.8						
	0.3nm,0.6s						
ARCES	**ARCESS Array B**	**131.03**	**350**	PKP	**PKPdf**	**05 47 53.1**	**-0.3**
	3.4nm,0.9s,baz=72,slow=2.2,SNR=2.4						
AKASG	**Malin Array Be**	**145.50**	**331**	PKPbc	**PKPdf**	**05 48 19.4**	**-0.9**
	2.1nm,0.5s,baz=44,slow=4.0,SNR=11						
BRTR	**Keskin Array B**	**149.46**	**311**	PKPbc	**PKPdf**	**05 48 29.9**	**+2.4**
	0.7nm,0.6s,baz=135,slow=3.6,SNR=3.1						
MMAI	**Mount Meron Ar**	**150.35**	**298**	PKPbc	**PKPbc**	**05 48 33.3**	**-1.0**
	1.4nm,0.5s,baz=38,slow=2.6,SNR=2.0						

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*IDC **23** 05:38:32.5±1.2, 6°.49N×125°.22E, h0^{km}, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=35.3km s-min=8.9km az=112.0*

*NEIC **23** 05:38:35.0±1.1, 6°.53N±0°.07×125°.26E±0°.08, h10^{km}±1^{km}, mb4.0/9, Error ellipse: s-maj=16.0km s-min=8.9km az=127.0*

ISC 23 05:38:37.3±0.9, 6°.6N±0°.1×125°.5E±0°.3, h35^{km}, n18, σ0^{s}.63/17, mb3.8/8, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.43**	**10**	Pg	**Pn**	**05 38 46.7**	**-0.3**
	327nm,0.3s,baz=168,slow=0.8,SNR=20						
DAV				Lg	Lg	05 38 53.9	
	704nm,0.3s,baz=74,slow=20,SNR=11						
DAV				LR	LR	05 39 20.6	
	comp=Z,698nm,20.3s,baz=322,slow=71						
TOLI2	**Tolitoli**	**7.24**	**221**	Pn	Pn	05 40 15.1	-5.6
MTN	**Manton Dam**	**20.15**	**164**	P	**P**	**05 43 08.9**	**+0.2**
MTN				IAmb	IAmb	05 43 10.2	
	comp=Z,18nm,1.5s						
KNRA	**Kununurra**	**22.41**	**172**	P	**P**	**05 43 33.0**	**0.0**
FITZ	**Fitzroy Crossi**	**24.59**	**180**	P	**P**	**05 43 53.0**	**-1.3**
	comp=Z,1.1nm,0.4s,baz=360,slow=5.9,SNR=13						
	comp=Z,1.1nm,0.4s						
FITZ	**Fitzroy Crossi**	**24.59**	**180**	P	**P**	**05 43 53.4**	**-0.9**
FITZ				IAmb	IAmb	05 44 13.6	
	comp=Z,2.3nm,1.4s						
WB0	**Warramunga Arr**	**27.66**	**162**	P	**P**	**05 44 22.8**	**+0.7**
WB0				IAmb	IAmb	05 44 56.7	
	comp=Z,3.3nm,1.1s						
WRA	**Warramunga Arr**	**27.81**	**162**	P	**P**	**05 44 22.4**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=344,slow=8.3,SNR=2.6						
	comp=Z,0.5nm,0.5s						
WR8	**Warramunga Arr**	**27.88**	**162**	P	**P**	**05 44 24.1**	**+0.1**
WR8				IAmb	IAmb	05 44 37.0	
	comp=Z,4.2nm,1.1s						
AS31	**Alice Springs**	**31.22**	**165**	P	**P**	**05 44 53.4**	**-0.3**
ASAR	**Alice Springs**	**31.22**	**165**	P	**P**	**05 44 53.0**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=348,slow=7.6,SNR=6.4						
	comp=Z,0.3nm,0.4s						
ASAR	**Alice Springs**	**31.22**	**165**	P	**P**	**05 44 53.9**	**+0.2**
INKA	**Innaminka**	**37.22**	**157**	P	**P**	**05 45 46.1**	**+0.6**
INKA				IAmb	IAmb	05 46 11.3	
	comp=Z,2.7nm,1.3s						
STKA	**Stephens Creek**	**41.27**	**159**	P	**P**	**05 46 19.6**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=334,slow=16,SNR=2.0						
	comp=Z,1.5nm,0.7s						
MKAR	**Makanchi Array**	**54.48**	**325**	P	**P**	**05 48 02.2**	**+0.7**
KURBB	**Kurchatov Arra**	**58.65**	**327**	P	**P**	**05 48 30.8**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=128,slow=5.6,SNR=4.2						
	comp=Z,0.3nm,0.3s						
AB31	**Akbulak array**	**69.14**	**320**	P	**P**	**05 49 40.4**	**+0.3**
ABKAR	**Akbulak array**	**69.14**	**320**	P	**P**	**05 49 40.2**	**+0.1**

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*IDC **23** 06:06:24.6±2.5, 7°.23S×120°.42E, h392^{km}±23^{km}, mb3.3/4, mbtmp4.1/7, Error ellipse: s-maj=107.4km s-min=17.6km az=59.0*

*DJA **23** 06:06:26.9±0.3, 8°S±3°×12°0E±°, h379^{km}±4^{km}, M3.9/19, mb4.0/3, MLv3.8/19*

ISC 23 06:06:25.2±0.9, 7°.57S±0°.07×120°.14E±0°.07, h392^{km}±8^{km}, n24, σ1^{s}.15/31, mb3.9/3, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBFI	**Labuhan Bajo,**	**0.94**	**195**	P	**Pn**	**06 07 15.2**	**-0.1**
LBFI				S	**S**	**06 07 54.2**	**-1.4**
EDFI	**Ende, Flores**	**1.93**	**127**	P	**Pn**	**06 07 19.8**	**-0.3**
DBNI	**Kabupaten Domp**	**2.03**	**243**	P	**Pn**	**06 07 21.3**	**+0.6**
DBNI				S	**S**	**06 08 05.3**	**-0.1**
WSI	**Waingapu**	**2.09**	**176**	P	**Pn**	**06 07 21.7**	**+0.7**
WSI				S	**S**	**06 08 05.2**	**-0.8**
WBSI	**Waikabubak, Su**	**2.19**	**200**	P	**Pn**	**06 07 22.2**	**+0.5**
WBSI				S	**S**	**06 08 06.1**	**-1.2**
BKSI	**Bulukumba**	**2.24**	**359**	P	**Pn**	**06 07 23.0**	**+0.9**
KAPI	**Kappang**	**2.57**	**351**	P	**Pn**	**06 07 26.1**	**+1.6**
PLAI	**Plampang**	**2.65**	**242**	P	**Pn**	**06 07 25.7**	**+0.7**
PLAI				S	**S**	**06 08 12.3**	**-1.1**
BASI	**Baing, Sumba**	**2.66**	**171**	P	**Pn**	**06 07 26.6**	**+1.5**
BASI				S	**S**	**06 08 14.4**	**+0.9**
TWSI	**Taliwang, Sumb**	**3.43**	**250**	P	**Pn**	**06 07 32.0**	**+0.5**
SPSI	**Sidrap Palu**	**3.60**	**354**	P	**Pn**	**06 07 34.5**	**+1.3**
KLNI	**Mataram**	**4.10**	**258**	P	**Pn**	**06 07 39.1**	**+1.3**
PMSI	**Majene**	**4.23**	**343**	P	**Pn**	**06 07 40.6**	**+1.5**
BATI	**Baumata**	**4.35**	**127**	P	**Pn**	**06 07 41.3**	**+0.9**
	26nm,0.3s,baz=207,slow=6.1,SNR=6.4						
BATI				S	**S**	**06 08 40.3**	**-0.8**
	26nm,0.3s,baz=291,slow=22,SNR=7.2						
BATI	**Baumata**	**4.35**	**127**	P	**Pn**	**06 07 41.2**	**+0.9**
SOEI	**Soe**	**4.62**	**118**	P	**Pn**	**06 07 43.8**	**+0.7**
IGBI	**Denpasar**	**5.10**	**256**	P	**Pn**	**06 07 49.3**	**+1.4**
	0.3nm56nm,0.9s						
GMJI	**Gumukmas**	**6.67**	**264**	P	**Pn**	**06 08 05.6**	**+0.6**
FITZ	**Fitzroy Crossi**	**11.75**	**153**	P	**P**	**06 09 03.9**	**+1.4**
	0.5nm,0.4s,baz=325,slow=9.0,SNR=6.2						
WRA	**Warramunga Arr**	**18.45**	**133**	P	**P**	**06 10 14.9**	**-0.1**
	3.9nm,0.5s,baz=314,slow=11,SNR=23						
ASAR	**Alice Springs**	**20.75**	**142**	P	**P**	**06 10 37.5**	**+0.3**
	2.8nm,0.5s,baz=317,slow=8.3,SNR=55						
	2.8nm,0.5s						
STKA	**Stephens Creek**	**31.37**	**143**	P	**P**	**06 12 11.8**	**+0.2**
	1.8nm,0.3s,baz=322,slow=8.2,SNR=7.7						
	1.8nm,0.3s						
MKAR	**Makanchi Array**	**63.72**	**332**	P	**P**	**06 16 15.7**	**-0.9**
	0.3nm,0.4s,baz=140,slow=7.7,SNR=4.7						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**68.13**	**338**	P	**P**	**06 16 41.3**	**-2.8**
	0.7nm,0.3s,baz=149,slow=5.2,SNR=4.0						
	0.7nm,0.3s						

IDC 23 06:08:17.3±2.5, 10°.00N×125°.49E, h0^{km}, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=240.4km s-min=22.1km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**31.00**	**164**	P	P	06 14 36.1	-0.6
	0.6nm,0.6s,baz=345,slow=8.8,SNR=1.6						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**34.45**	**166**	P	P	06 15 07.0	0.0
	0.6nm,0.5s,baz=343,slow=7.1,SNR=12						
	0.6nm,0.5s						
STKA	**Stephens Creek**	**44.40**	**160**	P	P	06 16 30.0	+0.2

	2.9nm,0.5s,baz=332,slow=9.9,SNR=10						
	2.9nm,0.5s						
MKAR	Makanchi Array	51.78	323	P	P	06 17 27.3	+0.4
	0.2nm,0.5s,baz=130,slow=7.6,SNR=2.2						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	55.86	326	P	P	06 17 56.1	-0.6
	0.2nm,0.4s,baz=126,slow=6.2,SNR=2.8						
	0.2nm,0.4s						

*SOME **23** 06:12:26.8, 41°.90N×78°.70E, h10^{km}*
*KRNET **23** 06:12:27.7±0.1, 41°.95N×78°.63E, h14^{km}, mb2.6*
ISC 23 06:12:26.8±2.0**, 41°.90N**±0°.08×**78°.61E**±0°.04**, h7**^{km}±12^{km}**, n22, σ1^{s}.90**/44**, 18C-6D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.60	345	⇑iP	Pg	06 12 38.8	+0.3
PRZ				⇑iS	Sb	06 12 47.1	-1.6
KDJ	Kajisay	1.09	283	⇑iP	Pb	06 12 48.5	+0.3
KDJ				⇑iS	Sg	06 13 03.4	+1.5
UZB	Uzynbulak	1.28	14	eP	Pn	06 12 49.7	-1.7
	1.7nm,0.1s						
UZB				eS	Sb	06 13 06.5	-1.7
	5.8nm,0.2s						
SHLS	Shalkode	1.40	26	eP	Pg	06 12 54.5	+0.8
	6.4nm,0.3s						
SHLS				eS	Sg	06 13 14.7	+2.7
	21nm,0.4s						
TNSS	Tian-Shan	1.67	313	eP	Pg	06 12 59.1	+0.1
	1.6nm,0.2s						
TNSS				eS	Sg	06 13 22.5	+1.9
	5.8nm,0.2s						
KOTS	Kotyrbulak	1.73	321	eP	Pg	06 12 59.9	-0.2
	6.1nm,0.2s						
KOTS				eS	Sg	06 13 24.0	+1.5
	18nm,0.3s						
ULHL	Ulahol	1.80	282	⇑iP	Pb	06 13 01.4	+1.2
ULHL				⇑iS	Sg	06 13 25.7	+1.1
IZV	Izvestkoviy	1.86	308	eP	Pg	06 13 02.4	-0.1
	4.4nm,0.2s						
IZV				eS	Sg	06 13 28.2	+1.6
	25nm,0.5s						
KTMS	Ketmen	2.01	39	eP	Pb	06 13 02.5	-1.3
	1.6nm,0.1s						
KTMS				eS	Sb	06 13 28.0	-1.1
	14nm,0.3s						
MTBS	Maitube	2.03	308	eP	Pb	06 13 04.9	+0.8
	3.0nm,0.2s						
MTBS				eS	Sg	06 13 32.4	+0.5
	14nm,0.3s						
BOOM	Boomskoye usch	2.07	287	⇑iP	Pb	06 13 05.8	+0.9
BOOM				⇑iS	Sg	06 13 33.5	+0.2
CHKK	Chushkaly	2.29	329	eP	Pg	06 13 09.5	-1.1
	23nm,0.3s						
CHKK				eS	Sg	06 13 40.6	+0.3
	23nm,0.3s						
TKM2	Tokmak 2	2.45	296	⇓iP	Pb	06 13 11.1	-0.3
TKM2				⇓iS	Sb	06 13 42.5	+0.6
DGS	Degeres	2.49	304	eP	Pg	06 13 13.6	-0.9
	3.3nm,0.5s						
DGS				eS	Sg	06 13 47.2	+0.4
	9.5nm,0.3s						
KRBS	Karabastau	2.81	311	eP	Pg	06 13 19.3	-1.3
	1.3nm,0.2s						
KRBS				eS	Sg	06 13 57.2	+0.2
	3.3nm,0.4s						
KBK	Karagaybulak	2.82	287	⇑iP	Pb	06 13 16.1	-1.6
KBK				⇑iS	Sb	06 13 51.3	-1.2
CHMS	Chumysh	3.06	292	⇑eP	Pb	06 13 19.1	-2.5
CHMS				⇑eS	Sb	06 13 56.8	-2.4
UCH	Uchtor	3.07	277	⇑iP	Pb	06 13 19.8	-2.2
UCH				⇑iS	Sb	06 13 57.9	-2.0
AAK	Ala-Archa	3.14	285	⇓iP	Pb	06 13 20.5	-2.6
AAK				⇓iS	Sb	06 13 59.3	-2.4
ARLS	Aral	3.20	271	⇓eP	Pb	06 13 21.4	-2.8
ARLS				⇓iS	Sb	06 14 00.8	-2.6
USP	Ospenovka	3.33	296	⇑eP	Pb	06 13 22.9	-3.3
USP				⇑iS	Sb	06 14 03.4	-3.6
EKS2	Erkin-Say	3.67	284	⇑eP	Pn	06 13 27.8	+3.7
EKS2				⇑iS	Sn	06 14 11.7	+4.0

*IDC **23** 06:15:57.9±3.5, 30°.90S×177°.68W, h0^{km}, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=82.5km s-min=32.6km az=124.0*
ISC 23 06:16:00.5±3.5**, 30°.9S**±0°.1×**177°.6W**±0°.5**, h27**^{km}**, n9, σ2^{s}.23**/7**, mb3.9**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.62	351	Pn	Pb	06 16 28.9	-0.8
	93nm,0.3s,baz=323,slow=20,SNR=1.6						
RAO				Sn	Sn	06 16 45.8	-1.5
	336nm,0.3s,baz=191,slow=21,SNR=6.7						
URZ	Urewera	8.56	209	Sn	Sn	06 19 35.1	-3.1
	1.6nm,0.3s,baz=82,slow=22,SNR=7.6						
STKA	Stephens Creek	34.69	258	P	P	06 22 50.5	+2.5
	1.7nm,0.5s,baz=129,slow=14,SNR=5.1						
	1.7nm,0.5s						
ASAR	Alice Springs	43.41	267	P	P	06 24 00.9	-0.1
	0.7nm,0.7s,baz=100,slow=7.7,SNR=8.2						
	0.7nm,0.7s						
WRA	Warramunga Arr	44.44	272	P	P	06 24 10.2	+0.9
	1.2nm,0.6s,baz=112,slow=8.0,SNR=7.3						
	1.2nm,0.6s						
H03S2	Juan Fernandez	79.94	123	T	T	07 57 17.7	
	baz=238,slow=74,SNR=7.9						
H03S1	Juan Fernandez	79.96	123	T	T	07 57 19.0	
	baz=238,slow=74,SNR=7.1						
H03S3	Juan Fernandez	79.96	123	T	T	07 57 17.8	
	baz=238,slow=74,SNR=6.9						
FINES	FINESS Array B	145.69	340	PKPbc	PKPab	06 35 36.9	+0.5
	1.1nm,0.5s,baz=55,slow=5.1,SNR=11						

*GCG **23** 06:18:01.7±1.0, 14°.05N×91°.06W, h77^{km}±5^{km}, MD3.9*
*SNET **23** 06:18:01.8±1.4, 14°.14N×91°.03W, h86^{km}, ML3.8*
*CATAC **23** 06:18:02.7±0.4, 14°N±2°×9°1W±°, h35^{km}±5^{km}, M3.9/25, MLv3.9/25, Error ellipse: s-maj=6.2km s-min=2.6km az=35.8, confirmed*
ISC 23 06:18:03.0±1.3**, 13°.98N**±0°.05×**90°.98W**±0°.04**, h16**^{km}±9^{km}**, n72, σ1^{s}.32**/83**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESSG	Sabana Grande	0.42	19	iP	Pn	06 18 14.5	-0.1
ESSG				iS	Sn	06 18 24.7	+2.7
FG16	Alotenango, Sa	0.54	57	iP	Pn	06 18 15.6	-0.6
STG5	El Palmar, Qui	0.55	319	iP	Pn	06 18 18.4	+2.1
STG5				iS	Sn	06 18 31.3	+6.1
STG8	El Palmar, Qui	0.59	322	iP	Pn	06 18 19.5	+2.6
STG2	El Palmar, Qui	0.60	319	iP	Pn	06 18 19.7	+2.8
ESSJ	San Jos, E	0.62	132	iS	Sb	06 18 24.2	+0.3
PCG5	San Vicente Pa	0.63	68	iP	Pg	06 18 15.8	+0.4
GCG4	OSOP	0.74	35	iP	Pn	06 18 18.8	-0.2
RTAL	Retalhuleu	0.88	308	S	Sn	06 18 31.4	-1.8
RTAL	Retalhuleu	0.88	308	P	Pg	06 18 18.3	-1.9
SOKI	Kika Raxquin	0.93	334	iP	Pg	06 18 20.0	-1.2
FAME	Alcaldia de Sa	0.94	98	P	Pb	06 18 21.0	0.0
APG	El Apazote	1.13	26	iP	Pn	06 18 23.0	-1.3
LOAL	Lomas de Alarc	1.16	89	eP	Pn	06 18 24.3	-0.3
LOAL				eS	Sg	06 18 43.0	+2.3
LOAL	Lomas de Alarc	1.16	89	P	Pn	06 18 24.4	-0.2
LOAL	Lomas de Alarc	1.16	89	S	Sn	06 18 40.9	+0.7
NUBE	Las Nubes	1.16	94	eP	Pn	06 18 24.1	-0.6
NUBE				eS	Sn	06 18 41.0	+0.6
NUBE	Las Nubes	1.16	94	iP	Pn	06 18 24.1	-0.6
NUBE				iS	Sg	06 18 41.9	+1.1
NUBE	Las Nubes	1.16	94	P	Pn	06 18 24.2	-0.6
RTR	El Retiro	1.29	94	eP	Pn	06 18 26.2	-0.4
QUIS	Sacapulas	1.31	355	iP	Pn	06 18 25.1	-1.6
SBLS	San Blas	1.32	96	eP	Pn	06 18 26.5	-0.5
SBLS				eS	Sg	06 18 46.6	+0.8
CEVE	Cerro Verde	1.32	96	eP	Pn	06 18 27.1	+0.1
CEVE				eS	Sg	06 18 46.9	+1.1
CEVE	Cerro Verde	1.32	96	P	Pn	06 18 26.9	-0.1
CEVE	Cerro Verde	1.32	96	S	Sn	06 18 44.6	+0.2
SMCA	Catarina	1.38	309	iP	Pn	06 18 24.2	-3.3
UNIC	Universidad Ca	1.39	90	P	Pn	06 18 26.7	-1.0
UNIC	Universidad Ca	1.39	90	S	Sb	06 18 46.5	+0.4
HUEH	Huehuetenango	1.42	339	S	Sb	06 18 45.6	-1.7
HUEH	Huehuetenango	1.42	339	P	Pn	06 18 26.7	-1.6
JAYA	Jayaque - finc	1.52	102	eP	Pn	06 18 28.9	-0.8
JAYA				eS	Sn	06 18 49.5	+0.3
JAYA	Jayaque - finc	1.52	102	iP	Pn	06 18 28.9	-0.8
JAYA	Jayaque - finc	1.52	102	P	Pn	06 18 29.0	-0.6
CEDA	San Andres	1.55	96	S	Sn	06 18 50.1	+0.4
CEDA	San Andres	1.55	96	P	Pn	06 18 29.2	-0.7
MTO3	Montecristo	1.62	75	iP	Pn	06 18 29.4	-1.6
MTO3	Montecristo	1.62	75	P	Pn	06 18 29.5	-1.6
MTO3	Montecristo	1.62	75	S	Sn	06 18 51.8	0.0
PMON	Piamonte	1.64	99	eP	Pn	06 18 30.4	-0.7
PMON				eS	Sb	06 18 54.4	+1.1
PMON	Piamonte	1.64	99	P	Pn	06 18 30.5	-0.7
PMON	Piamonte	1.64	99	S	Sn	06 18 52.2	+0.3
BOQS	Boqueron	1.67	98	eP	Pn	06 18 31.1	-0.6
LALI	Alcalda de L	1.68	107	eP	Pn	06 18 31.2	-0.5
LALI				eS	Sn	06 18 54.1	+1.2
LALI	Alcalda de L	1.68	107	iP	Pn	06 18 31.2	-0.5
LALI				iS	Sn	06 18 53.6	+0.7
LALI	Alcalda de L	1.68	107	P	Pn	06 18 31.2	-0.5
LALI	Alcalda de L	1.68	107	S	Sn	06 18 52.8	-0.1
ZAFR2	Estanzuela, Za	1.68	69	iP	Pn	06 18 30.1	-1.7
ESQI	Esquipulas	1.69	70	P	Pn	06 18 30.6	-1.3
ESQI	Esquipulas	1.69	70	S	Sn	06 18 53.1	-0.1
UEES	Universidad Ev	1.71	99	P	Pn	06 18 32.3	+0.2
UTEC	Universidad Te	1.75	99	S	Sn	06 18 54.8	+0.1
UTEC	Universidad Te	1.75	99	P	Pn	06 18 32.1	-0.6
IGN	Direccin Gen	1.77	98	S	Sn	06 18 56.2	+0.9
IGN	Direccin Gen	1.77	98	P	Pn	06 18 32.8	-0.3
PANCS	Alcalda de	1.78	102	S	Sn	06 18 55.7	+0.1
PANCS	Alcalda de	1.78	102	P	Pn	06 18 32.9	-0.3
LOMA	Loma Larga	1.79	101	S	Sn	06 18 56.6	+0.9
LOMA	Loma Larga	1.79	101	P	Pn	06 18 32.5	-0.8
LFRS	El Faro	1.89	101	eP	Pn	06 18 34.4	-0.4
LLGN	La Laguna	1.98	85	P	Pn	06 18 34.7	-1.2
PAVA	Las Pavas	2.00	97	P	Pn	06 18 35.3	-0.9
PAVA	Las Pavas	2.00	97	S	Sn	06 19 01.6	+0.7
UESV	Universidad de	2.15	99	P	Pn	06 18 37.5	-0.8
UESV	Universidad de	2.15	99	S	Sn	06 19 05.0	+0.4
TECO	Alcaldia de Te	2.18	101	S	Sn	06 19 05.0	-0.3
TECO	Alcaldia de Te	2.18	101	P	Pn	06 18 37.6	-1.0
SCLA	Alcaldia de Sa	2.20	97	P	Pn	06 18 37.9	-1.0
SARH	Santa Rosa de	2.29	70	iP	Pn	06 18 38.9	-1.2
SARH	Santa Rosa de	2.29	70	P	Pn	06 18 39.0	-1.1
PQSS	Presa 15 de Se	2.37	98	P	Pn	06 18 40.6	-0.6
LCND	La Caada	3.07	102	P	Pn	06 18 50.0	-0.9
PETF	Flores	3.11	20	P	Pn	06 18 49.9	-1.5

*IDC **23** 06:24:37.1±0.8, 2°.25N×126°.75E, h0^{km}, mb4.0/10, mbtmp4.0/10, Error ellipse: s-maj=51.6km s-min=14.3km az=70.0*
*DJA **23** 06:24:41.6±0.3, 2°N±3°×12°7E±°, h10^{km}, M4.2/13, mB4.9/1, mb4.7/4, MLv4.0/13, Mw(mB)4.2/1*
*NEIC **23** 06:24:43.8±1.2, 2°.2N±0°.1×126°.7E±0°.1, h35^{km}±2^{km}, mb4.2/18, Error ellipse: s-maj=22.1km s-min=11.9km az=226.0*
ISC 23 06:24:45.2±0.6**, 2°.21N**±0°.06×**126°.80E**±0°.06**, h63**^{km}**, n43, σ1^{s}.28**/45**, mb4.1**/16**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	Galela, Maluku	1.05	110	P	Pn	06 25 02.5	-1.6
GAMI				S	Sn	06 25 17.1	-1.0
TNTI	Ternate	1.53	158		Pn	06 25 09.4	-1.0
TNTI	Ternate	1.53	158	P	Pn	06 25 09.0	-1.4
SGSI	Sangihe	1.94	319	P	Pn	06 25 13.8	-2.1
GTOI	Gorontalo	4.10	248	P	Pn	06 25 45.4	+0.1
SANI	Sanana	4.30	191	P	Pn	06 25 46.3	-1.9
MRSI	Marisa	5.15	251	P	Pn	06 26 00.6	+0.8
	0.2nm1μm74nm,0.8s						
LUWI	Luwuk	5.16	231	Pn	Pn	06 25 57.2	-2.7
LUWI	Luwuk	5.16	231	P	Pn	06 25 58.7	-1.2
	85nm,0.8s						
APSI	Ampana	6.01	239	P	Pn	06 26 11.1	-0.5
TOLI2	Tolitoli	6.11	260		Pn	06 26 11.1	-1.9
SBUM	Sibu	14.57	271		Pn	06 28 05.8	-2.3
MTN	Manton Dam	15.56	164		Pn	06 28 19.7	-1.1
KNRA	Kununurra	17.87	174		Pn	06 28 49.7	0.0
KNRA				IAmb	IAmb	06 29 19.4	
	comp=Z,25nm,1.4s						
FITZ	Fitzroy Crossi	20.21	183	P	P	06 29 14.4	-0.7
	comp=Z,2.1nm,0.5s,baz=19,slow=9.5,SNR=12						
	comp=Z,2.1nm,0.5s						
FITZ	Fitzroy Crossi	20.21	183	P	P	06 29 15.3	+0.3
WB0	Warramunga Arr	23.07	161	P	P	06 29 44.5	-1.2
WB0				IAmb	IAmb	06 29 51.0	
	comp=Z,9.3nm,1.1s						
WRA	Warramunga Arr	23.22	162	P	P	06 29 46.1	-1.0
	comp=Z,4.7nm,0.7s,baz=338,slow=10,SNR=18						
	comp=Z,4.7nm,0.7s						
WRA	Warramunga Arr	23.22	162	P	P	06 29 46.2	-1.0
WR8	Warramunga Arr	23.29	161	P	P	06 29 46.6	-1.0
WR8				IAmb	IAmb	06 30 07.1	
	comp=Z,10nm,1.2s						
PSA00	Pilbara Seismi	24.59	196	P	P	06 29 59.9	+0.3
PSA00				IAmb	IAmb	06 30 24.6	
	comp=Z,4.3nm,1.5s						
PSA00	Pilbara Seismi	24.59	196	P	P	06 29 59.9	+0.3
PSA00				IAmb	IAmb	06 30 13.6	
	comp=Z,4.1nm,0.7s						
AS31	Alice Springs	26.63	165	P	P	06 30 18.2	+0.2
ASAR	Alice Springs	26.63	165	P	P	06 30 17.8	-0.3
	comp=Z,0.5nm,0.3s,baz=350,slow=14,SNR=24						
ASAR				PcP	PcP	06 33 42.0	+1.1
	comp=Z,0.5nm,0.5s,baz=342,slow=2.3,SNR=8.4						
	comp=Z,0.5nm,0.3s						
ASAR	Alice Springs	26.63	165	P	P	06 30 18.6	+0.5
CM31	Chiang Mai Arr	31.72	302	P	P	06 31 03.2	-0.1
CMAR	Chiang Mai Arr	31.72	302	P	P	06 31 02.9	-0.4
	comp=Z,1.2nm,0.3s,baz=116,slow=6.6,SNR=8.4						
	comp=Z,1.2nm,0.3s						
FORT	Forrest	32.82	178	P	P	06 31 13.5	+0.7
FORT				IAmb	IAmb	06 31 22.4	
	comp=Z,5.7nm,0.8s						
STKA	Stephens Creek	36.69	159	P	P	06 31 46.4	+0.2
	comp=Z,1.1nm,0.4s,baz=332,slow=14,SNR=4.2						
	comp=Z,1.1nm,0.4s						
STKA	Stephens Creek	36.69	159	P	P	06 31 47.7	+1.6
USRK	Ussuriysk Ar.	42.07	6	P	P	06 32 30.6	-0.2
	comp=Z,3.1nm,0.8s,baz=168,slow=10.0,SNR=4.0						
	comp=Z,3.1nm,0.8s						
SONM	Songino Array	48.76	342	P	P	06 33 23.7	-0.2
	comp=Z,0.4nm,0.5s,baz=159,slow=9.0,SNR=2.5						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	58.84	326	P	P	06 34 36.5	-0.8
	comp=Z,0.7nm,0.5s,baz=126,slow=7.8,SNR=9.2						
	comp=Z,0.7nm,0.5s						
KURBB	Kurchatov Arra	63.05	328	P	P	06 35 05.2	-0.6
	comp=Z,1.5nm,0.6s,baz=128,slow=6.0,SNR=17						
	comp=Z,1.5nm,0.6s						
KURK	Kurchatov	63.06	328	P	P	06 35 05.6	-0.2
AB31	Akbulak array	73.37	321	P	P	06 36 10.2	-0.2
AB31				IAmb	IAmb	06 36 26.0	
	comp=Z,3.2nm,1.4s						
ABKAR	Akbulak array	73.37	321	P	P	06 36 10.1	-0.3
C18K	Utukok River	81.45	21	P	P	06 36 57.1	+1.8
C18K				IAmb	IAmb	06 37 19.4	
	comp=Z,6.5nm,1.4s						
VNDA	Vanda	81.92	173	P	P	06 36 58.8	+1.4
	comp=Z,0.5nm,0.4s,baz=316,slow=6.2,SNR=7.0						
	comp=Z,0.5nm,0.4s						
VNDA	Vanda	81.92	173	P	P	06 36 58.9	+1.4
VNDA				IAmb	IAmb	06 37 03.0	
	comp=Z,3.1nm,1.3s						
G19K	Purcell Mounta	82.39	23	P	P	06 37 02.2	+2.0
D19K	Kuna River	82.51	21	P	P	06 37 03.1	+2.3
D19K				IAmb	IAmb	06 37 25.3	
	comp=Z,6.9nm,1.4s						
BMAR	Burnt Mountain	87.45	23	P	P	06 37 28.1	+2.5

RSNC 23 06:28:05.9±0.0**, 7°N**±1°×**7°3W**±°**, h148**^{km}±1^{km}**, M3.0, mb3.4, mB5.1, ML2.8, Mw(mB)4.4, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.24	190	P	Pn	06 28 25.9	-0.5
BARC				S	Sn	06 28 41.0	-0.9
BRJC	Barrancabermej	0.62	283	P	Pn	06 28 27.6	-0.1
BRJC				S	Sn	06 28 44.4	+0.2
PAMC	Pamplona, Colo	0.67	41	P	Pn	06 28 28.7	+0.1
PAMC				S	Sn	06 28 45.8	0.0
RUSC	La Rusia	0.93	177	P	Pn	06 28 29.8	-0.7
RUSC				S	Sn	06 28 48.6	-0.7
PTBC	PUERTO BERRIO,	1.34	258	P	Pn	06 28 32.2	-1.5
PTBC				S	Sn	06 28 53.8	-1.1
OCAC	Ocana	1.41	353	P	Pn	06 28 33.9	-0.7
OCAC				S	Sn	06 28 55.9	-0.6
SPBC	San Pablo de B	1.49	218	P	Pn	06 28 34.6	-0.8
SPBC				S	Sn	06 28 56.7	-1.2
CHIC	Chingaza	2.26	195	P	Pn	06 28 43.8	-0.7
CHIC				S	Sn	06 29 13.9	-0.2
ROSC	El Rosal	2.30	211	P	Pn	06 28 45.4	+0.5
ROSC				S	Sn	06 29 16.8	+2.0
UREC	San Jos de Ur	2.54	291	P	Pn	06 28 45.5	-2.0
UREC				S	Sn	06 29 17.2	-2.4
VILC	Villavicencio,	2.76	192	P	Pn	06 28 49.5	-0.8
VILC				S	Sn	06 29 24.9	+0.4
NIZA	Niza - Manizal	2.91	233	P	Pn	06 28 51.2	-1.2
NIZA				S	Sn	06 29 28.7	+0.5
CMAN1	Manizales, Cal	2.95	234	P	Pn	06 28 51.7	-1.1
CMAN1				S	Sn	06 29 27.8	-1.2
CBOC	Ciudad Bolivar	3.01	252	P	Pn	06 28 53.3	-0.2
CBOC				S	Sn	06 29 29.5	-0.8
DBBC	Dabeiba	3.05	274	P	Pn	06 28 53.1	-0.9
DBBC				S	Sn	06 29 28.4	-2.7
ARGC	Ariguani, Magd	3.20	340	P	Pn	06 28 56.3	+0.5
ARGC				S	Sn	06 29 34.8	+0.4
SDV	Santo Domingo	3.22	50	P	Pn	06 28 55.5	-0.6
SDV				S	Sn	06 29 33.2	-1.8
PRAC	Prado	3.55	209	P	Pn	06 28 59.2	-1.1
PRAC				S	Sn	06 29 42.3	-0.2
ORTC	Ortega, Tolima	3.58	216	P	Pn	06 29 00.1	-0.6
ORTC				S	Sn	06 29 43.5	+0.3
SJCC	San Jacinto, C	3.66	327	P	Pn	06 29 00.0	-1.7
SJCC				S	Sn	06 29 41.4	-3.6
PLMC	San Jos del P	3.67	239	P	Pn	06 29 01.5	-0.3
PLMC				S	Sn	06 29 44.4	-0.8
URMC	La Uribe, Meta	3.77	199	P	Pn	06 29 02.8	-0.4
URMC				S	Sn	06 29 46.8	-0.9
YOTC	Yotoco, Valle	4.26	229	P	Pn	06 29 08.3	-1.4
MACC	Macarena, Meta	4.71	189	P	Pn	06 29 12.6	-2.9
MACC				S	Sn	06 30 05.5	-4.2
URIC	Uribia, Colomb	4.97	13	P	Pn	06 29 16.5	-2.4
URIC				S	Sn	06 30 13.3	-2.6
JAMC	Jamundi, Valle	5.03	225	P	Pn	06 29 20.1	+0.2
	7.1nm,1.9s						
JAMC				S	Sn	06 30 15.7	-1.9
	7.1nm,1.9s						
GARC	Garzon, Huila	5.17	207	P	Pn	06 29 19.8	-2.1
GARC				S	Sn	06 30 17.3	-3.8
POPC	Popayan, Colom	5.53	220	P	Pn	06 29 26.0	-0.6
	5.3nm,1.5s						
POPC				S	Sn	06 30 30.0	+0.4
	5.3nm,1.5s						
FLOC	Florencia	5.78	206	P	Pn	06 29 28.7	-1.1
	8.3nm,1.1s						
BBAC	Balboa, Cauca	6.29	221	P	Pn	06 29 36.9	+0.2
BBAC				S	Sn	06 30 46.7	-1.1

*CATAC **23** 06:28:40.4±0.4, 9°N±2°×8°5W±°, h3^{km}±2^{km}, M4.1/16, MLv4.1/16, Error ellipse: s-maj=6.2km s-min=3.0km az=38.2, confirmed*
*UCR **23** 06:28:41.1±0.9, 9°.41N×84°.61W, h17^{km}±3^{km}, MW4.1*
ISC 23 06:28:41.1±0.9**, 9°.40N**±0°.03×**84°.61W**±0°.02**, h18**^{km}**, n135, σ0^{s}.73**/136**, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVQ2	Quepos	0.44	85	eP	Pg	06 28 49.5	-0.5
SVQ2				eS	Sg	06 28 56.6	+0.6
PICV	PH. Pirrs	0.47	61	eP	Pg	06 28 50.3	-0.3
PAQE	Paquera	0.53	322	eP	Pg	06 28 51.5	-0.2
PURI	Puriscal	0.53	33	eP	Pg	06 28 51.4	-0.4
CAO2	Cobano, Puntar	0.57	300	eP	Pg	06 28 52.4	-0.1
ACOS	Acosta	0.59	48	eP	Pg	06 28 52.1	-0.8
ARZA	Esparza	0.59	354	eP	Pg	06 28 52.3	-0.6
ROBF	Roble, Puntare	0.59	347	eP	Pg	06 28 52.5	-0.5
ATEO	Atenas	0.62	21	eP	Pb	06 28 52.7	-0.7
PITB	Pirrs, San	0.63	65	eP	Pb	06 28 53.1	-0.6
PALD	Palmares	0.67	14	eP	Pb	06 28 53.6	-0.8
SANTA	Santa Ana	0.68	38	eP	Pb	06 28 53.4	-1.0
PIEC	Cerro El Cedra	0.68	71	eP	Pb	06 28 54.1	-0.4
RAMO	San Ramon	0.70	11	eP	Pb	06 28 54.1	-0.7
TCS1	Tacares	0.71	25	P	Pb	06 28 54.7	-0.2
TCS1	Tacares	0.71	25	eP	Pb	06 28 54.6	-0.4
PAVB	Pavas, San Jos	0.72	42	eP	Pb	06 28 54.3	-0.9
AMPA	Desamparados	0.73	47	eP	Pb	06 28 54.3	-1.0
GREC	Grecia	0.73	24	eP	Pb	06 28 54.8	-0.7
SARCI	Sarchi	0.73	20	eP	Pb	06 28 55.1	-0.3
CENT	San Jose	0.74	44	eP	Pb	06 28 55.7	+0.1
LUJA	Lujan	0.74	45	eP	Pb	06 28 54.6	-1.0
MEXI	Barrio Mexico	0.74	43	eP	Pb	06 28 54.9	-0.7
HEME	Heredia, Merce	0.75	38	eP	Pb	06 28 56.0	+0.3
POAS	San Pedro de P	0.76	28	eP	Pb	06 28 55.7	-0.2
ECI	Escuela Centro	0.77	45	eP	Pb	06 28 55.2	-0.8
SJS	Escuela Geolog	0.77	45	eP	Pb	06 28 55.2	-0.7
SJS3	Mercedes San J	0.77	45	eP	Pb	06 28 55.3	-0.6
LUPE	Guadalupe	0.77	45	eP	Pb	06 28 49.3	-6.7
HDC	Heredia	0.77	39	eP	Pb	06 28 55.4	-0.7
TRIO	Tres Rios	0.79	50	eP	Pb	06 28 55.3	-1.0
ZARE	Zarcero	0.81	15	eP	Pb	06 28 56.7	-0.1
TAGO	Cartago	0.82	55	eP	Pb	06 28 56.1	-0.8
CORON	Coronado	0.82	46	eP	Pb	06 28 56.5	-0.5
REPA	Paraso	0.84	59	eP	Pb	06 28 56.4	-0.9
VPS8	V Poas	0.86	25	eP	Pb	06 28 57.2	-0.4
BUS1	Rivas	0.86	80	eP	Pb	06 28 56.7	-1.1
VPL1	V. Platanar	0.89	16	eP	Pb	06 28 57.5	-0.6
CVIMO	Finca Echandi	0.90	46	eP	Pb	06 28 57.8	-0.6
VPL2	V. Platanar	0.93	14	eP	Pb	06 28 58.4	-0.4
QUEU	Ciudad Quesada	0.93	10	eP	Pb	06 28 59.0	+0.2
PCAYA	Pacayas	0.94	57	eP	Pb	06 28 58.2	-0.8
JUNT	Juntas	0.94	338	eP	Pb	06 28 57.9	-1.1
JTS	Las Juntas de	0.95	339	P	Pb	06 28 58.5	-0.6
JTS				S	Sb	06 29 11.4	0.0
JTS	Las Juntas de	0.95	339	eP	Pb	06 28 58.1	-1.0
VICA	Volcano Irazu	0.95	52	eP	Pb	06 28 58.5	-0.9
RAFA	San Farael, Vo	0.96	55	eP	Pb	06 28 58.7	-0.7
SOCE	Pocosol	0.98	359	S	Sg	06 29 13.6	+0.5
SOCE	Pocosol	0.98	359	P	Pb	06 28 59.4	-0.2
SOCE	Pocosol	0.98	359	eP	Pb	06 28 59.2	-0.3
VINA	Juan Vinas	0.98	60	eP	Pb	06 28 58.9	-0.7
INDI	Punta indio, G	1.00	298	eP	Pb	06 28 58.7	-1.2
ARTO	Ro Cuarto	1.01	22	eP	Pb	06 28 56.5	-3.7
CMARA	Lajas Hojancha	1.02	308	P	Pb	06 28 59.1	-1.1
CMARA	Lajas Hojancha	1.02	308	S	Sb	06 29 13.8	+0.6
CMARA	Lajas Hojancha	1.02	308	eP	Pb	06 28 59.1	-1.1
CVTQ	Turrialba Volc	1.02	54	eP	Pb	06 28 60.0	-0.5
CASO	Castillo	1.04	353	eP	Pb	06 29 00.1	-0.5
VTR0	Volcan Turrial	1.04	53	eP	Pb	06 29 00.3	-0.5
VTUN	Crater Central	1.04	53	eP	Pb	06 29 00.8	0.0
CVTV	Tajo	1.04	54	eP	Pb	06 29 00.1	-0.6
CVTR	Volcan Turrial	1.04	53	eP	Pb	06 29 00.0	-0.8
TURIB	Turrialba	1.04	61	eP	Pb	06 28 59.7	-0.9
VTCV	VTCV, Calle Va	1.04	56	eP	Pb	06 29 00.1	-0.6
EDPE	Pejibaye, P	1.05	103	eP	Pb	06 28 59.9	-0.8
VERB	Verbena	1.05	59	eP	Pb	06 29 00.2	-0.6
ARE1	Arenal 1	1.06	354	eP	Pb	06 29 00.8	-0.2
VARE2	V. Arenal	1.06	354	eP	Pb	06 29 01.0	-0.1
FORC	Fortuna	1.06	357	eP	Pb	06 29 00.6	-0.4
ABRB	Las Abras (San	1.06	55	eP	Pb	06 29 00.6	-0.5
VACR	Volcan Arenal	1.07	356	eP	Pb	06 29 00.7	-0.4
CHIK	Chiripa	1.08	344	eP	Pb	06 29 00.8	-0.6
SAJE	San Jernim	1.08	93	eP	Pb	06 29 00.5	-0.9
CEDE	Laguna Cedeo	1.09	355	eP	Pb	06 29 01.3	-0.1
ITAL	Pital	1.10	17	eP	Pb	06 29 01.0	-0.6
NICO	Nicoya	1.11	312	eP	Pb	06 29 00.7	-1.0
TABAC	Tabacon	1.11	352	eP	Pb	06 29 01.5	-0.2
REZ	Monterrey de S	1.13	355	eP	Pn	06 29 02.2	+0.1
CNAS	Canas	1.13	335	eP	Pn	06 29 01.5	-0.6
RESJ	San Isidro (Tu	1.14	56	eP	Pn	06 29 01.9	-0.4
PILE	Guapiles	1.15	45	eP	Pn	06 29 02.0	-0.3
INVE	Universidad In	1.16	337	eP	Pn	06 29 01.9	-0.7
JUD3	Juan Diaz 3	1.20	310	eP	Pn	06 29 01.6	-1.3
PLVR	Palo Verde	1.20	322	eP	Pn	06 29 02.2	-0.9
SARA	Sarapiqu	1.20	29	eP	Pn	06 29 02.3	-0.6
RVLA	Villa Bonita	1.23	55	eP	Pn	06 29 03.5	+0.1
LCOCO	El Coco	1.24	57	eP	Pn	06 29 03.4	-0.1
TIMP	Tierras Morena	1.25	341	eP	Pn	06 29 03.2	-0.5
QUEB	Quebradon, Cot	1.25	347	eP	Pn	06 29 03.7	0.0
ELVJ	El Viejo (Barb	1.26	326	eP	Pn	06 29 03.5	-0.4
BURE	Buenos Aires	1.27	100	eP	Pn	06 29 03.8	-0.2

CARI	Cariari	1.29	42	eP	Pn	06 29 04.2	0.0
EGUB	Earth Gu¡pi	1.29	51	eP	Pn	06 29 04.4	+0.2
IRES	Siquirres	1.29	57	eP	Pn	06 29 04.2	0.0
SACU	Santa Cruz	1.29	312	eP	Pb	06 29 05.2	+0.3
BAGA	Bagaces	1.29	330	eP	Pn	06 29 03.9	-0.4
FIMO	Fila Mora	1.30	108	eP	Pn	06 29 04.0	-0.5
COVE	Coope Vega, Sa	1.33	9	P	Pn	06 29 04.7	0.0
COVE	Coope Vega, Sa	1.33	9	S	Sb	06 29 23.5	+1.2
TENO	El Achiote	1.35	344	eP	Pn	06 29 04.6	-0.5
DRK0	Durika	1.35	96	S	Sn	06 29 22.6	-0.2
DRK0	Durika	1.35	96	P	Pn	06 29 04.6	-0.6
DRK0	Durika	1.35	96	eP	Pn	06 29 04.5	-0.6
MOTZ	Rio Naranjo	1.36	340	eP	Pn	06 29 05.4	+0.2
CUI	Cuipilapa	1.37	336	eP	Pn	06 29 05.4	0.0
COLC	Colonia	1.39	335	eP	Pn	06 29 05.8	+0.1
TAAN	Batan	1.42	61	eP	Pn	06 29 06.7	+0.7
HORNC	Hornillas	1.42	337	eP	Pn	06 29 06.1	-0.1
TRT2	Tortugero	1.44	37	P	Pn	06 29 06.4	+0.1
TRT2	Tortugero	1.44	37	S	Sb	06 29 26.4	+1.1
TRT2	Tortugero	1.44	37	eP	Pn	06 29 06.3	+0.1
MESS	Mesas	1.46	337	eP	Pn	06 29 06.7	+0.1
EDP2	Potrero Grande	1.46	105	eP	Pn	06 29 06.6	0.0
VMAR	Armenia, Volca	1.49	340	eP	Pn	06 29 07.6	+0.5
ALIBA	Liberia Airpor	1.51	322	eP	Pn	06 29 07.4	+0.2
GPS2	Hotel Rincn d	1.53	331	eP	Pn	06 29 08.1	+0.5
PTJ1	Puerto Jimnez	1.55	123	P	Pn	06 29 08.3	+0.6
ELI1	Hacienda Flor	1.55	323	P	Pn	06 29 08.7	+0.9
ELI1	Hacienda Flor	1.55	323	eP	Pn	06 29 08.1	+0.2
VRLE	La Escondida,	1.57	332	eP	Pn	06 29 08.6	+0.4
LAPC	Finca la Perla	1.59	329	eP	Pn	06 29 08.2	-0.2
VORI	VORI	1.59	333	eP	Pn	06 29 09.0	+0.5
PIRO	Carate, Puerto	1.60	128	S	Sb	06 29 31.7	+1.8
PIRO	Carate, Puerto	1.60	128	P	Pb	06 29 10.1	+0.1
BUAI	Buenos Aires	1.64	334	eP	Pn	06 29 09.5	+0.5
BRIBI	Bribri	1.78	83	eP	Pb	06 29 12.7	-0.4
ALCO	Alturas Coton,	1.81	104	eP	Pn	06 29 10.7	-0.8
CDITO	Canoas	1.90	115	P	Pn	06 29 14.2	+1.6
BRU2	Volcan	1.98	107	P	Pn	06 29 13.8	-0.1
BRU2	Volcan	1.98	107	S	Sb	06 29 41.3	+0.1
JEFFS	S de V. Baru	2.17	109	eP	Pn	06 29 16.1	-0.4
PBNVO	Pueblo Nuevo,	2.44	102	eP	Pn	06 29 19.7	-0.3
BOAB	BOACO BROADBAN	3.21	341	P	Pn	06 29 32.6	+2.0
MATN	Matagalpa	3.74	340	P	Pn	06 29 38.3	+0.2
RCVN	Varillal2	4.44	340	P	Pn	06 29 49.2	+1.5

GFZ **23** 06:33:35.3,11°.54N×141°.81E,h41^{km},MW5.8,Moment Tensor Solution. s89 Moment tensor: M_{rr}1.84; $M_{\theta\theta}$-3.32; $M_{\phi\phi}$1.48; $M_{r\theta}$2.40; $M_{\theta\phi}$3.67; $M_{\phi r}$0.84; Fault plane solution: NP1:ϕ_s340.00000°,δ55.00000°,λ163.00000°. NP2:ϕ_s80.00000°,δ76.00000°,λ36.00000°. Principal axes: T 4.7900, Plg35.0000°, Azm305.0000°; N 0.9200, Plg52.0000°, Azm98.0000°; P -5.7200, Plg13.0000°, Azm206.0000°;

BJI **23** 06:33:38.6,11°.56N×141°.88E,h55^{km},mB5.8/68,mb5.6/93,Ms5.5/98,Ms7 5.3/96

MOS **23** 06:33:38.1±0.9,11°.53N×141°.61E,h44^{km},mb6.0/71,MS5.5/34,Error ellipse: s-maj=7.9km s-min=4.0km az=111.7

NEIC **23** 06:33:40.1,11°.53N×141°.69E,h39^{km}

NEIC **23** 06:33:40.1,11°.43N×141°.79E,h40^{km},Moment Tensor Solution. Duration: 3^{s}6 Moment tensor: Scale 10^{17}Nm; M_{rr}3.30; $M_{\theta\theta}$-3.25; $M_{\phi\phi}$-0.05; $M_{r\theta}$2.66; $M_{\theta\phi}$4.06; $M_{\phi r}$0.12; Fault plane solution: $M_0$5.86000×10^{17} NP1: ϕ_s337.95000°,δ44.18000°,λ144.11000°. NP2: ϕ_s95.38000°,δ65.88000°,λ51.79000°. Principal axes: T 4.8952, Plg53.0000°, Azm319.0000°; N 1.6018, Plg34.0000°, Azm113.0000°; P -6.4970, Plg13.0000°, Azm212.0000°;

ISC-PP **23** 06:33:40,11°.53N×141°.73E,h31^{km},Mwppsm6.1,Moment Tensor Solution. s47 Moment tensor: Scale 10^{18}Nm; M_{rr}0.76±.13; $M_{\theta\theta}$0.42±.17; $M_{\phi\phi}$-0.17±.17; $M_{r\theta}$-0.26±.15; $M_{\theta\phi}$0.09±.17; $M_{\phi r}$0.18±.11; Fault plane solution: $M_0$1.70000×10^{18} NP1:ϕ_s189.50000°,δ42.20000°,λ131.40000°. NP2:ϕ_s319.60000°,δ59.70000°,λ59.10000°.

IPGP **23** 06:33:40.0,11°.53N×141°.70E,h52^{km},Mw5.8,Fault plane solution: NP1:ϕ_s306.00000°,δ41.00000°,λ110.00000°. NP2:ϕ_s100.00000°,δ52.00000°,λ73.00000°.

NEIC **23** 06:33:40.3±1.6,11°.53N±0°.08×141°.73E±0°.08,h42^{km}±3^{km},mb5.9/609,Ms_20 5.6/504,Mwb5.8/119,Mww5.8/25,Error ellipse: s-maj=12.2km s-min=10.7km az=56.0,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}5.76; $M_{\theta\theta}$-5.44; $M_{\phi\phi}$-0.33; $M_{r\theta}$2.12; $M_{\theta\phi}$3.01; $M_{\phi r}$0.28; Fault plane solution: $M_0$6.71000×10^{17} NP1: ϕ_s103.08000°,δ54.22000°,λ75.10000°. NP2: ϕ_s307.55000°,δ38.37000°,λ109.64000°. Principal axes: T 6.2670, Plg75.0000°, Azm327.0000°; N 0.8175, Plg12.0000°, Azm112.0000°; P -7.0845, Plg8.0000°, Azm204.0000°;

NEIC **23** 06:33:40.1,11°.53N×141°.69E,h40^{km}

IDC **23** 06:33:41.4±1.4,11°.52N×141°.72E,h59^{km}±12^{km},mb5.3/38,mbtmp5.5/40,MS5.2/69,Error ellipse: s-maj=9.6km s-min=7.8km az=84.0

GCMT **23** 06:33:43.3±0.1,11°.36N×141°.73E,h57^{km},MW5.8/149,Moment Tensor Solution. s147,c288; s149,c464; Duration: 2^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}4.41±.07; $M_{\theta\theta}$-5.89±.06; $M_{\phi\phi}$1.49±.07; $M_{r\theta}$1.98±.06; $M_{\theta\phi}$5.75±.05; $M_{\phi r}$0.40±.06; Best double couple: $M_0$7.55600×10^{17} NP1:ϕ_s336.00000°,δ55.00000°,λ150.00000°. NP2:ϕ_s84.00000°,δ66.00000°,λ39.00000°. Principal axes: T 5.9020, Plg44.0000°, Azm304.0000°; N 3.3170, Plg45.0000°, Azm111.0000°; P -9.2090, Plg7.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function

DJA **23** 06:33:46.0±0.5,11°N±2°×14°2E±°,h105^{km}±4^{km},M5.7/128,mB6.1/103,mb5.7/128,Mw5.8/94,Mw(mB)5.8/103,MwMwp5.6/72,Mwp5.7/72

ISC 23 06:33:40.1±0.2,**11°.53N**±0°.02×**141°.79E**±0°.03,**h52**^{km}±1^{km},**h55**^{km}**:pP-P,n1765,**σ1^s**54**/1505,**mb5.9**/534,**MS5.6**/381,**53C-31D,Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.64	55	P	Pn	06 34 37.0	+3.0
	8µm,0.3s,baz=188,slow=8.0,SNR=182						
GUMO				S	Sn	06 35 19.6	+3.9
	11µm,0.7s,baz=354,slow=23,SNR=9.0						
GUMO				LR	LR	06 35 59.5	
	comp=Z,52µm,19.1s,baz=220,slow=37						
DPSS	Saipan	5.37	46		Pn	06 35 00.6	+2.9
I39PW	PALAU INFRASON	8.16	242	P	Pn	06 35 35.7	-0.4
	baz=67,slow=14,SNR=2.1						
I39PW				S	Sn	06 36 59.8	-7.2
	baz=65,slow=12						
SMPI	Sarmi	13.77	193	P	Pn	06 36 53.9	+1.2
	27µm1µm,1.7s						
BAKI	Biak	13.84	204	P	Pn	06 36 55.2	+1.6
JAY	Jayapura	13.99	184	P	Pn	06 36 55.5	-0.2
	150nm,0.3s,baz=300,slow=4.8,SNR=156						
JAY				S	Sn	06 39 25.0	-4.6
	46nm,0.4s,baz=182,slow=20,SNR=10						
JAY				LR	LR	06 41 55.7	
	comp=Z,23µm,18.2s,baz=7.0,slow=35						
JAY	Jayapura	13.99	184	P	Pn	06 36 57.0	+1.3
	17µm10µm448nm,1.9s						
GENI	Genyem	14.12	187	P	Pn	06 36 59.5	+2.1
GENI	Genyem	14.12	187	P	Pn	06 36 59.5	+2.1
SRPI	Serui, Papua	14.40	203	P	Pn	06 37 03.0	+1.8
	16µm12µm277nm,1.1s						
MWPI	Manokwari, Pap	14.57	212	P	Pn	06 37 05.8	+2.4
MANU	Manus Island	14.58	157		Pn	06 37 04.7	+1.2
RKPI	Ransiki, Papua	15.00	211	P	Pn	06 37 10.1	+1.1
	28µm19µm541nm,0.8s						
JCJ	Chichijima	15.49	1	P	Pn	06 37 10.0	-5.3
	158nm,0.4s,baz=269,slow=14,SNR=18						
JCJ	Chichijima	15.49	1	Pn	Pn	06 37 14.1	-1.2
JCJ	Chichijima	15.49	1	P	P	06 37 18.4	-0.4
WAMI	Wamena	15.61	191	P	P	06 37 21.5	+1.3
SWI	Sorong	16.15	221	P	Pn	06 37 24.6	+0.8
	23µm12µm675nm,0.9s						
SIJI	Sorong	16.15	221	P	P	06 37 25.3	-1.0
	20µm9µm481nm,1.4s						
DAV	Davao City (W)	16.59	256	P	P	06 37 33.4	+2.3
	190nm,0.4s,baz=69,slow=12,SNR=14						
DAV				LR	LR	06 42 32.2	
	comp=Z,11µm,21.9s,baz=64,slow=32						
DAV	Davao City (W)	16.59	256	P	P	06 37 33.0	+1.9
DAV				P	P	06 37 33.0	+1.9
DAV				S	S	06 40 41.2	-0.8
DAV				S	S	06 40 41.2	-0.8
DAV	Davao City (W)	16.59	256	P	P	06 37 31.4	+0.3
DAV	Davao City (W)	16.59	256	P	P	06 37 31.2	+0.1
DAV	Davao City (W)	16.59	256	P	P	06 37 32.6	+1.5
	26µm20µm727nm,1.2s						
DAV	Davao City (W)	16.59	256	P	P	06 37 33.0	+1.9
GAMI	Galela, Maluku	16.89	236	P	P	06 37 35.8	+1.3
	11µm702nm,1.2s						
PATS	Pohnpei	16.96	105	P	P	06 37 34.5	-0.7
	comp=Z,821nm,0.7s						
PATS	Pohnpei	16.96	105		Pn	06 37 34.1	+0.1
PATS				IAmb	IAmb	06 37 42.7	
	comp=Z,806nm,0.9s						
PATS	Pohnpei	16.96	105	P	P	06 37 35.4	+0.2
KMPI	Kaimana, Papua	17.09	209	P	P	06 37 36.5	-0.2
	comp=Z,14µmcomp=Z,868nm,1.6s						
FAKI	Fak Fak	17.20	214	P	P	06 37 38.5	+0.6
FAKI	Fak Fak	17.20	214	P	P	06 37 38.2	+0.3
	comp=Z,16µmcomp=Z,747nm,1.0s						
TNTI	Ternate	17.86	234	P	P	06 37 46.7	+1.6
TNTI	Ternate	17.86	234	P	P	06 37 46.9	+1.7
TNTI	Ternate	17.86	234	P	P	06 37 47.2	+2.0
	comp=Z,14µmcomp=Z,10µmcomp=Z,363nm,1.2s						
SGSI	Sangihe	17.89	245	P	P	06 37 47.7	+2.3
RABL	Rabaul	18.72	146	P	Pn	06 37 55.9	+0.4
RABL				IAmb	IAmb	06 38 06.1	
	comp=Z,1µm,1.3s						
MSAI	Masohi	19.54	222	P	P	06 38 03.2	-0.4
JOW	Kunigami	19.84	322	P	Pn	06 38 09.1	+0.4
	comp=Z,639nm,0.7s,baz=140,slow=10,SNR=57						
JOW				LR	LR	06 45 24.2	
	comp=Z,8µm,20.7s,baz=130,slow=36						
JOW	Kunigami	19.84	322		Pn	06 38 08.5	-0.2
JOW				IAmb	IAmb	06 38 14.7	
	comp=Z,659nm,0.7s						
JOW	Kunigami	19.84	322	P	Pn	06 38 09.2	+0.5
BNDI	Bandanaira	19.85	217	P	P	06 38 07.6	+0.7
BNDI	Bandanaira	19.85	217	P	P	06 38 07.5	+0.7
KRAI	Karang Ratu	19.87	223	P	Pn	06 38 08.5	-0.7
MMPI	Merauke	19.91	184	P	Pn	06 38 08.5	-1.1
	comp=Z,15µmcomp=Z,482nm,0.8s						
AAI	Ambon	20.28	223	P	Pn	06 38 13.5	-0.5
	comp=Z,21µmcomp=Z,15µmcomp=Z,1µm,1.2s						
JMJ	Miyako jima 2	20.47	312	P	Pn	06 38 16.1	0.0
TGY	Tagaytay City	20.49	279	P	Pn	06 38 15.9	-0.6
	comp=Z,4µm,0.8s,baz=142,slow=3.3,SNR=105						
TGY				LR	LR	06 45 58.9	
	comp=Z,6µm,20.4s,baz=86,slow=36						
TGY	Tagaytay City	20.49	279	P	Pn	06 38 16.0	-0.5
NLAI	Namlea	20.70	226	P	Pn	06 38 17.6	-1.4
	comp=Z,22µmcomp=Z,9µmcomp=Z,435nm,1.8s						
SANI	Sanana	20.70	230	P	P	06 38 14.9	-1.3
SANI	Sanana	20.70	230	P	P	06 38 15.3	-0.9
PMG	Port Moresby	21.47	165	P	P	06 38 24.6	+0.2
	comp=Z,78nm,0.7s,baz=355,slow=10,SNR=23						
PMG				S	S	06 42 16.6	-3.3
	comp=Z,3.7nm,0.4s,baz=180,slow=12,SNR=0.9						
PMG				LR	LR	06 46 08.2	
	comp=Z,7µm,20.7s,baz=341,slow=35						
	comp=Z,78nm,0.7s						
PMG	Port Moresby	21.47	165		P	06 38 24.8	+0.4
PMG				IAmb	IAmb	06 38 35.3	
	comp=Z,790nm,1.0s						
PMG	Port Moresby	21.47	165	P	P	06 38 24.2	-0.2
PMG	Port Moresby	21.47	165	S	S	06 42 19.3	-0.6
PMG	Port Moresby	21.47	165	P	P	06 38 24.5	+0.1
PMG	Port Moresby	21.47	165	S	S	06 42 18.7	-1.2
PMG	Port Moresby	21.47	165	P	P	06 38 25.7	+1.3
	comp=Z,7µmcomp=Z,8µmcomp=Z,929nm,1.2s						
PMG	Port Moresby	21.47	165	d iP	P	06 38 24.6	+0.2
PMG				MLR	MLR		
	comp=Z,7µm,16.0s						
SZP	Santa	21.49	289	P	P	06 38 26.7	+2.1
GTOI	Gorontalo	21.55	241	P	P	06 38 28.0	+2.7
	comp=Z,12µmcomp=Z,9µmcomp=Z,482nm,2.0s						
JHJ	Hachijo jima 2	21.57	355	LR	LR	06 45 09.9	
	comp=Z,15µm,20.7s,baz=191,slow=32						
YOJ	Yonaguni jima	21.97	308	P	P	06 38 32.0	+2.3
YOJ	Yonaguni jima	21.97	308	P	P	06 38 31.7	+2.0
YOJ	Yonaguni jima	21.97	308	S	S	06 42 28.6	-0.9
YOJ	Yonaguni jima	21.97	308	P	P	06 38 32.0	+2.3
YOJ				pmax	pmax		
	comp=Z,1µm,1.1s						
SAUI	Saumlaki	22.01	209		P	06 38 31.3	+1.2
SAUI				IAmb	IAmb	06 38 34.8	
	comp=Z,893nm,1.1s						
SAUI	Saumlaki	22.01	209	P	P	06 38 31.4	+1.2
SAUI	Saumlaki	22.01	209	P	P	06 38 30.7	+0.5
	comp=Z,17µmcomp=Z,19µmcomp=Z,860nm,1.9s						
JSU	Suzuyama	22.47	334	P	P	06 38 36.3	+1.2
MRSI	Marisa	22.56	242	P	P	06 38 37.1	+1.0
	comp=Z,11µmcomp=Z,12µmcomp=Z,934nm,1.4s						
LUWI	Luwuk	22.65	238		P	06 38 36.7	-0.4
LUWI	Luwuk	22.65	238	P	P	06 38 37.5	+0.4
LUWI	Luwuk	22.65	238	S	S	06 42 39.3	-2.3
LUWI	Luwuk	22.65	238	P	P	06 38 37.3	+0.2
TWGBT	Beinan	22.71	302	P	P	06 38 39.3	+1.6
YULB	Yu-li	22.79	304	P	P	06 38 38.7	+0.1
YULB	Yu-li	22.79	304	P	P	06 38 39.4	+0.8
NACB	Ninganchiao	22.93	306	P	P	06 38 40.2	+0.2
NACB	Ninganchiao	22.93	306	P	P	06 38 41.1	+1.2
JMN	Monobe	23.25	343	P	P	06 38 44.2	+1.1
JMN				IAmb	IAmb	06 38 46.1	
	comp=Z,971nm,1.6s						
JMN	Monobe	23.25	343	P	P	06 38 43.9	+0.8
SSLB	Suanglung	23.26	304	P	P	06 38 43.6	+0.4
SSLB	Suanglung	23.26	304	P	P	06 38 43.7	+0.4
TOLI2	Tolitoli	23.27	245	P	P	06 38 42.6	-0.8
TOLI2	Tolitoli	23.27	245	P	P	06 38 43.2	-0.2
TPUB	Ta-pu	23.30	303	P	P	06 38 43.2	-0.5
TPUB				IAmb	IAmb	06 38 45.9	
	comp=Z,364nm,0.9s						
TPUB	Ta-pu	23.30	303	P	P	06 38 43.9	+0.3
YHNB	Yeheng	23.35	307	P	P	06 38 44.9	+0.7
YHNB				IAmb	IAmb	06 38 47.0	
	comp=Z,318nm,0.7s						
YHNB	Yeheng	23.35	307	P	P	06 38 44.4	+0.2
TATO	Taipei	23.42	308	P	P	06 38 46.6	+1.9
TATO				P	P	06 38 46.6	+1.9
TATO	Taipei	23.42	308	P	P	06 38 45.0	+0.3
TATO	Taipei	23.42	308	P	P	06 38 45.7	+1.0
APSI	Ampana	23.52	240	P	P	06 38 45.7	0.0
	comp=Z,7µmcomp=Z,460nm,1.6s						
JNU	Nakatsue	23.71	337	LR	LR	06 46 37.2	
	comp=Z,6µm,20.9s,baz=94,slow=33						
JNU	Nakatsue	23.71	337	P	P	06 38 48.0	+0.6
JNU				IAmb	IAmb	06 38 51.5	
	comp=Z,398nm,1.1s						
JNU	Nakatsue	23.71	337	P	P	06 38 48.1	+0.7
INU	Inuyama	24.11	350	P	P	06 38 51.2	+0.2
INU	Inuyama	24.11	350	P	P	06 38 52.0	+1.0
JGF	Kuroka	24.30	351	P	P	06 38 53.2	+0.4
JGF	Kuroka	24.30	351	P	P	06 38 53.1	+0.3
MPSI	Mapaga	24.41	244	P	P	06 38 54.1	+0.1
	comp=Z,8µmcomp=Z,5µmcomp=Z,175nm,1.2s						
H11S3	WAKE ISLAND Hy	25.01	71	T	T	07 07 18.9	
	baz=254,slow=78,SNR=11						
H11S1	WAKE ISLAND Hy	25.03	71	T	T	07 07 12.5	
	baz=254,slow=78,SNR=8.1						
H11S2	WAKE ISLAND Hy	25.03	71	T	T	07 07 18.3	
	baz=254,slow=78,SNR=12						
PCI	Palu	25.07	242	P	P	06 39 00.8	+0.9
	comp=Z,8µmcomp=Z,143nm,1.3s						
MJAR	Matsushiro Arr	25.11	353	P	P	06 38 59.5	-0.7
	comp=Z,38nm,0.6s,baz=171,slow=11,SNR=59						
MJAR				PcP	PcP	06 42 34.5	+1.1
	comp=Z,26nm,0.8s,baz=163,slow=3.0,SNR=8.2						
MJAR				ScP	ScP	06 46 09.4	+1.0
	comp=Z,6.1nm,1.1s,baz=198,slow=3.9,SNR=4.8						
	comp=Z,38nm,0.6s						
MJAR	Matsushiro Arr	25.11	353	P	P	06 39 00.1	-0.1
MAJO	Matsushiro	25.12	353	P	P	06 38 59.4	-0.7
MAJO	Matsushiro	25.12	353	P	P	06 38 59.9	-0.3
MAJO	Matsushiro	25.12	353	⇓iP	P	06 38 59.3	-0.9
MAJO				pmax	pmax		
	comp=Z,116nm,0.8s						
MJB9	Matsu-Tunnel	25.12	353	P	P	06 39 00.8	+0.6
TARAI	Tarakan	25.34	253	P	P	06 39 03.1	+0.7
COEN	Coen	25.36	177	P	P	06 39 02.8	+0.3
	comp=Z,176nm,0.9s,comp=Z,0.0nm						
COEN	Coen	25.36	177	P	P	06 39 02.8	+0.3
COEN	Coen	25.36	177	P	P	06 39 02.4	-0.1
KKSI	Kolaka, Sulawe	25.38	233	P	P	06 39 03.7	+0.9
	comp=Z,8µmcomp=Z,5µmcomp=Z,155nm,1.0s						
H11N1	WAKE ISLAND Hy	25.49	68	T	T	07 07 44.0	
	baz=254,slow=75,SNR=7.3						
H11N2	WAKE ISLAND Hy	25.50	68	T	T	07 07 44.0	
	baz=254,slow=75,SNR=7.2						
H11N3	WAKE ISLAND Hy	25.50	68	T	T	07 07 46.3	
	baz=254,slow=75,SNR=5.0						
JTU	Tsushima	25.53	336	P	P	06 39 04.3	+0.4
QZH	Quanzhou	25.70	304	P	P	06 39 04.8	-0.7
QZH				S	S	06 43 28.5	-2.3
QZH				pmax	pmax		
	comp=Z,100nm,1.1s						
QZH				pmax	pmax		
	comp=Z,2µm,6.3s						
QZH				LR	LR		
	comp=Z,5µm,18.2s						
QZH				LR	LR		
	comp=Z,4µm,19.7s						
QZH				LR	LR		
	comp=Z,6µm,19.4s						
KDU	Kakadu	25.77	201	P	P	06 39 07.3	+1.1
	comp=Z,201nm,1.0s,comp=Z,0.0nm						
KKM	Kota Kinabalu	25.84	260	P	P	06 39 08.6	+1.5
KKM	Kota Kinabalu	25.84	260	P	P	06 39 06.6	-0.5
	comp=Z,5µmcomp=Z,175nm,1.0s						
DRS	Darwin Rock St	26.14	205	P	P	06 39 09.7	+0.1
TTSI	Tana Toraja	26.21	238	P	P	06 39 11.0	+0.8
	comp=Z,7µmcomp=Z,4µmcomp=Z,183nm,0.8s						
MTN	Manton Dam	26.42	204	P	P	06 39 12.2	+0.1
	comp=Z,274nm,1.0s,comp=Z,0.0nm						
MTN	Manton Dam	26.42	204	P	P	06 39 11.7	-0.4
JSD	Sado	26.59	354	P	P	06 39 13.8	+0.4
JSD	Sado	26.59	354	P	P	06 39 13.8	+0.4
TATA	Tatamba Isabel	26.69	137	P	P	06 39 16.3	+1.7
SPSI	Sidrap Palu	26.77	236	P	P	06 39 14.8	-0.5
	comp=Z,94nm,0.8s						
MMSI	Mamuju	26.77	240	P	P	06 39 15.0	-0.4
PMSI	Majene	27.21	238	P	P	06 39 19.6	+0.3
	comp=Z,7µmcomp=Z,2µmcomp=Z,111nm,0.9s						
SSE	Sheshan	27.25	319	P	P	06 39 19.6	+0.2
SSE				pmax	pmax		
	comp=Z,99nm,0.8s						
SSE				pmax	pmax		
	comp=Z,1µm,4.9s						
SSE				LR	LR		
	comp=Z,6µm,15.1s						
SSE				LR	LR		
	comp=Z,4µm,14.5s						
SAVO	Savo Central	27.26	138	P	P	06 39 20.2	+0.4
BKSI	Bulukumba	27.29	233	P	P	06 39 19.6	-0.4
SOEI	Soe	27.39	220	P	P	06 39 20.0	-1.1
SOEI				IAmb	IAmb	06 40 05.3	
	comp=Z,357nm,1.0s						
SOEI	Soe	27.39	220	P	P	06 39 22.1	+1.1
SOEI	Soe	27.39	220	P	P	06 39 20.1	-0.9
	comp=Z,9µmcomp=Z,5µmcomp=Z,299nm,1.2s						
KAPI	Kappang	27.40	234	P	P	06 39 22.4	+1.5
KAPI				P	P	06 39 22.4	+1.5
KAPI				S	S	06 44 02.1	+4.4
KAPI				S	S	06 44 02.1	+4.4
KAPI	Kappang	27.40	234	P	P	06 39 20.9	-0.1
KAPI	Kappang	27.40	234	P	P	06 39 20.7	-0.2
KAPI	Kappang	27.40	234	P	P	06 39 20.0	-0.9
KAPI	Kappang	27.40	234	c iP	P	06 39 20.3	-0.6
KAPI				pmax	pmax		
	comp=Z,52nm,0.9s						
KAPI				MLR	MLR		
	comp=Z,3µm,18.0s						
BKB	Balikpapan	27.81	244	P	P	06 39 24.0	-0.6
	comp=Z,7µmcomp=Z,5µmcomp=Z,152nm,1.1s						
MMRI	Maumere	27.91	225	P	P	06 39 25.1	-0.4
MMRI				IAmb	IAmb	06 40 25.6	
	comp=Z,302nm,1.1s						
MMRI	Maumere	27.91	225	P	P	06 39 26.2	+0.6
MMRI	Maumere	27.91	225	P	P	06 39 24.9	-0.7
	comp=Z,6µmcomp=Z,5µmcomp=Z,249nm,1.0s						
TJN	Taejon	27.96	335	P	P	06 39 26.2	+0.5
TJN	Taejon	27.96	335	⇓iP	P	06 39 26.3	+0.5
TJN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BATI	Baumata	28.12	221	LR	LR	06 50 36.9	
	comp=Z,6µm,21.2s,baz=61,slow=36						
BATI	Baumata	28.12	221	P	P	06 39 26.1	-1.3
	comp=Z,8µmcomp=Z,4µmcomp=Z,223nm,0.9s						
EDFI	Ende, Flores	28.37	226	P	P	06 39 28.2	-1.6
	comp=Z,6µmcomp=Z,4µmcomp=Z,118nm,1.8s						
KSRS	Korea Array	28.66	337	P	P	06 39 31.8	-0.2
	comp=Z,11nm,0.7s,baz=160,slow=9.8,SNR=29						
KSRS				PcP	PcP	06 42 42.8	+1.1
	comp=Z,21nm,0.9s,baz=164,slow=1.6,SNR=17						
KSRS				LR	LR	06 49 19.2	
	comp=Z,3µm,21.9s,baz=155,slow=33						
	comp=Z,11nm,0.7s						
KSAR	Wonju Array Be	28.67	337	P	P	06 39 33.0	+0.9
KSAR	Wonju Array Be	28.67	337	P	P	06 39 33.0	+0.9
INCN	Inchon	29.21	335	P	P	06 39 37.9	+1.0
INCN				P	P	06 39 37.9	+1.0
INCN				S	S	06 44 29.1	+3.2
INCN				S	S	06 44 29.1	+3.2
INCN	Inchon	29.21	335	P	P	06 39 37.4	+0.5
INCN	Inchon	29.21	335	P	P	06 39 38.9	+2.0
INCN	Inchon	29.21	335	P	P	06 39 37.4	+0.5
INCN				pmax	pmax		
	comp=Z,70nm,0.8s						
INCN				MLR	MLR		
	comp=Z,8µm,20.0s						
NJ2	Nanjing	29.39	318	⇑P	P	06 39 39.8	+1.3
NJ2				PP	PnPn	06 40 29.8	-4.5
NJ2				PcP	PcP	06 42 45.8	+2.1
NJ2				S	S	06 44 34.1	+5.4
NJ2				pmax	pmax		
	comp=Z,57nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,570nm,4.3s						
NJ2				LR	LR		
	comp=Z,5µm,20.8s						
NJ2				LR	LR		
	comp=Z,3µm,17.5s						
NJ2				LR	LR		
	comp=Z,7µm,20.6s						
GZH	Guangzhou	29.43	297	P	P	06 39 39.4	+0.5
GZH				PP	PnPn	06 40 33.0	-1.9
GZH				S	S	06 44 30.6	+1.1
GZH				pmax	pmax		
	comp=Z,84nm,1.5s						
GZH				LR	LR		
	comp=Z,3µm,17.0s						
GZH				LR	LR		
	comp=Z,3µm,20.0s						
GZH				LR	LR		
	comp=Z,6µm,17.6s						
MTKI	Muara Teweh, K	29.45	247	P	P	06 39 36.9	-2.4
MTSU	Mount Surprise	29.58	175	P	P	06 39 41.6	+1.2
	comp=Z,21nm,0.9s						
MTSU	Mount Surprise	29.58	175	P	P	06 39 41.5	+1.2
KNRA	Kununurra	29.95	206	P	P	06 39 44.5	+1.0
	comp=Z,93nm,1.1s,comp=Z,0.0nm						
KNRA	Kununurra	29.95	206	IAmb	IAmb	06 40 11.3	
	comp=Z,392nm,1.9s						
WSI	Waingapu	30.00	226	P	P	06 39 41.0	-3.0
	comp=Z,7µmcomp=Z,3µmcomp=Z,180nm,0.9s						
BASI	Baing, Sumba	30.18	225	P	P	06 39 42.5	-3.2
	comp=Z,6µmcomp=Z,3µmcomp=Z,267nm,0.9s						
WBSI	Waikabubak, Su	30.62	228	P	P	06 39 48.1	-1.6
	comp=Z,4µmcomp=Z,79nm,0.7s						
BBKI	Banjar Baru	30.66	242	P	P	06 39 48.8	-1.2
SBUM	Sibu	30.67	255	P	P	06 39 50.3	+0.3
SBUM	Sibu	30.67	255	P	P	06 39 50.3	+0.3
SBUM	Sibu	30.67	255	P	P	06 39 50.0	0.0
DBNI	Kabupaten Domp	30.67	231	P	P	06 39 50.7	+0.6
PKKI	Palangkaraya	30.85	245	P	P	06 39 50.6	-1.1
TV1H	Townsville Har	30.99	171	P	P	06 39 54.4	+1.7
QIZ	Qiongzhong	31.66	288	P	P	06 40 00.3	+1.5
QIZ				pP	pP	06 40 10.8	0.0
QIZ				S	S	06 45 03.9	-0.9
QIZ				pmax	pmax		
	comp=Z,53nm,0.9s						
QIZ				pmax	pmax		
	comp=Z,1µm,3.6s						
QIZ				LR	LR		

	comp=Z,1µm,15.7s						
QIZ				LR	LR		
	comp=Z,2µm,22.4s						
QIZ				LR	LR		
	comp=Z,3µm,19.2s						
QIZ	**Qiongzhong**	**31.66**	**288**	P	**P**	**06 40 00.5**	**+1.7**
CNSH	**ChangSha**	**31.67**	**306**	P	**P**	**06 39 59.1**	**+0.3**
CNSH				S	**S**	**06 45 06.8**	**+2.1**
CNSH				pmax	pmax		
	comp=Z,51nm,1.3s						
CNSH				LR	LR		
	comp=Z,2µm,14.5s						
CNSH				LR	LR		
	comp=Z,1µm,14.2s						
CNSH				LR	LR		
	comp=Z,2µm,15.5s						
WHN	**Wuhan**	**31.70**	**311**	P	**P**	**06 40 00.0**	**+1.1**
WHN				PP	**PnPn**	**06 41 02.3**	**-2.2**
WHN				PcP	**PcP**	**06 42 51.8**	**+2.0**
WHN				S	**S**	**06 45 06.8**	**+1.8**
WHN				pmax	pmax		
	comp=Z,310nm,0.8s						
WHN				pmax	pmax		
	comp=Z,2µm,11.0s						
WHN				LR	LR		
	comp=Z,22µm,21.6s						
WHN				LR	LR		
	comp=Z,32µm,24.3s						
WHN				LR	LR		
	comp=Z,22µm,20.8s						
CTA	**Charters Tower**	**31.72**	**172**	P	**P**	**06 40 00.5**	**+1.3**
	comp=Z,30nm,0.9s,comp=Z,0.0nm						
CTA	**Charters Tower**	**31.72**	**172**	P	**P**	**06 39 59.9**	**+0.7**
CTAO	**Charters Tower**	**31.72**	**172**	P	**P**	**06 40 00.1**	**+0.9**
CTAO	**Charters Tower**	**31.72**	**172**	P	**P**	**06 39 59.8**	**+0.6**
CTAO	**Charters Tower**	**31.72**	**172**	P	**P**	**06 40 00.1**	**+0.9**
CTAO				pmax	pmax		
	comp=Z,101nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,8µm,18.0s						
CTAO	**Charters Tower**	**31.72**	**172**	P	**P**	**06 40 00.1**	**+0.9**
TWSI	**Taliwang, Sumb**	**31.92**	**232**	P	**P**	**06 40 00.6**	**-0.4**
QIS	**Mount Isa**	**31.95**	**184**	P	**P**	**06 40 01.8**	**+0.6**
	comp=Z,158nm,0.8s,comp=Z,0.0nm						
QIS	**Mount Isa**	**31.95**	**184**	P	**P**	**06 40 01.7**	**+0.4**
WRAB	**Tennant Creek**	**32.11**	**193**	P	**P**	**06 40 02.7**	**+0.1**
WRAB				IAmb	IAmb	06 40 04.1	
	comp=Z,122nm,0.7s						
WRAB	**Tennant Creek**	**32.11**	**193**	IAMs_20	IAMs_20	06 53 47.9	
	comp=Z,9µm,19.0s						
WRAB	**Tennant Creek**	**32.11**	**193**	P	**P**	**06 40 02.9**	**+0.3**
WRAB	**Tennant Creek**	**32.11**	**193**	*d* *i*P	**P**	**06 40 02.8**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,88nm,0.8s						
WRAB	**Tennant Creek**	**32.11**	**193**	P	**P**	**06 40 02.6**	**+0.1**
WRA	**Warramunga Arr**	**32.12**	**193**	P	**P**	**06 40 02.6**	**-0.1**
	comp=Z,100nm,0.6s,baz=14,slow=9.4,SNR=62						
WRA				S	S	06 45 02.6	-9.0
	comp=Z,1.9nm,1.0s,baz=25,slow=17,SNR=1.2						
	comp=Z,100nm,0.6s						
WRA	**Warramunga Arr**	**32.12**	**193**	P	**P**	**06 40 01.8**	**-0.8**
WRA	**Warramunga Arr**	**32.12**	**193**	*i* P	**P**	**06 40 01.9**	**-0.8**
WRA				pmax	pmax		
	comp=Z,107nm,0.6s						
KLNI	**Mataram**	**32.34**	**233**	P	**P**	**06 40 02.1**	**-2.6**
	comp=Z,83nm,0.8s						
PSTR	**Posyet**	**32.45**	**345**	⇑*i*P	**P**	**06 40 06.7**	**+1.3**
ASAJ	**Asahikawa**	**32.48**	**1**	P	**P**	**06 40 06.5**	**+0.9**
	comp=Z,17nm,0.6s,baz=218,slow=8.2,SNR=13						
ASAJ				LR	LR	06 51 55.8	
	comp=Z,2µm,21.4s,baz=194,slow=34						
	comp=Z,17nm,0.6s						
ASAJ	**Asahikawa**	**32.48**	**1**	P	**P**	**06 40 06.7**	**+1.1**
ASAJ				pmax	pmax		
	comp=Z,71nm,1.2s						
JKA	**Kamikawa-asahi**	**32.48**	**1**	P	**P**	**06 40 06.7**	**+1.1**
YUK	**Yuzh-Kuril'sk**	**32.58**	**5**	P	**P**	**06 40 06.4**	**-0.1**
YUK				*i* S	**S**	**06 45 15.0**	**-3.4**
YUK				pmax	pmax		
	comp=Z,280nm,1.6s						
VLA	**Vladivostok**	**32.63**	**346**	⇑*i*P	**P**	**06 40 09.3**	**+2.4**
VLA				pmax	pmax		
	comp=Z,16nm,0.9s						
DL2	**Dalian**	**32.64**	**330**	⇑*i*P	**P**	**06 40 08.1**	**+1.0**
DL2				pP	**pP**	**06 40 18.8**	**-0.5**
DL2				sP	**sP**	**06 40 25.8**	**+0.8**
DL2				PcP	**PcP**	**06 42 53.5**	**+1.3**
DL2				S	**S**	**06 45 22.3**	**+2.8**
DL2				pmax	pmax		
	comp=Z,310nm,1.0s						
DL2				pmax	pmax		
	comp=Z,2µm,7.2s						
DL2				LR	LR		
	comp=Z,4µm,18.2s						
DL2				LR	LR		
	comp=Z,5µm,18.5s						
DL2				LR	LR		
	comp=Z,8µm,20.2s						
KHKI	**Kahang-Kahang**	**32.69**	**234**	P	**P**	**06 40 06.7**	**-1.0**
	comp=Z,1µmcomp=Z,94nm,1.4s						
GULI	**GuiLin**	**32.70**	**299**	P	**P**	**06 40 10.6**	**+2.8**
GULI				S	**S**	**06 45 19.4**	**-1.4**
GULI				pmax	pmax		
	comp=Z,84nm,1.2s						
GULI				pmax	pmax		
	comp=Z,1µm,10.0s						
GULI				LR	LR		
	comp=Z,1µm,15.7s						
GULI				LR	LR		
	comp=Z,2µm,20.0s						
GULI				LR	LR		
	comp=Z,4µm,19.5s						
TIA	**Tai'an**	**33.16**	**322**	P	**P**	**06 40 12.4**	**+0.7**
TIA				pP	**sP**	**06 40 26.8**	**-3.0**
TIA				PcP	**PcP**	**06 42 55.0**	**+1.2**
TIA				S	**S**	**06 45 27.0**	**-0.7**
TIA				sS	**sS**	**06 45 45.4**	**-1.4**
TIA				ScP	**ScP**	**06 46 35.0**	**+1.1**
TIA				PcS	**PcS**	**06 46 40.4**	**+1.1**
TIA				ScS	**ScS**	**06 50 35.8**	**+1.3**
TIA				pmax	pmax		
	comp=Z,250nm,1.0s						
TIA				pmax	pmax		
	comp=Z,1µm,3.7s						
TIA				LR	LR		
	comp=Z,3µm,17.6s						
TIA				LR	LR		
	comp=Z,2µm,20.1s						
TIA				LR	LR		
	comp=Z,4µm,19.3s						
KMMI	**Kalianget**	**33.26**	**238**	P	**P**	**06 40 14.4**	**+1.6**
	comp=Z,101nm,1.0s						
RTBI	**Rangdo, Negare**	**33.27**	**235**	P	**P**	**06 40 09.8**	**-3.1**
	comp=Z,2µmcomp=Z,112nm,1.4s						
IGBI	**Denpasar**	**33.32**	**234**	P	**P**	**06 40 10.5**	**-2.8**
	comp=Z,5µmcomp=Z,79nm,0.8s						
ABJI	**Asem Bagus**	**33.46**	**236**	P	**P**	**06 40 12.3**	**-2.2**
	comp=Z,2µmcomp=Z,51nm,0.9s						
FITZ	**Fitzroy Crossi**	**33.47**	**209**	P	**P**	**06 40 13.7**	**-0.9**
	comp=Z,18nm,0.7s,baz=26,slow=11,SNR=28						
	comp=Z,18nm,0.7s						
BYJI	**Banyuwangi**	**33.60**	**235**	P	**P**	**06 40 16.7**	**+1.0**
USRK	**Ussuriysk Ar.**	**33.63**	**347**	P	**P**	**06 40 16.8**	**+1.1**
	comp=Z,132nm,0.8s,baz=167,slow=8.1,SNR=139						
	comp=Z,132nm,0.8s						
TEY	**Ternei**	**33.69**	**353**	⇑*e*P	**P**	**06 40 16.6**	**+0.5**
TEY				pmax	pmax		
	comp=Z,20nm,0.9s						
TEY				pmax	pmax		
	comp=N,20nm,0.9s						
TEY				MLR	MLR		
	comp=N,100nm,17.0s						
TEY				MLR	MLR		
	comp=Z,100nm,15.0s						
JAGI	**Jajag, Banyuwa**	**33.91**	**235**	P	**P**	**06 40 17.3**	**-1.2**
JAGI	**Jajag, Banyuwa**	**33.91**	**235**	P	**P**	**06 40 16.7**	**-1.8**
	comp=Z,2µmcomp=Z,68nm,1.1s						
BLJI	**Banyuglugur**	**33.95**	**237**	P	**P**	**06 40 20.0**	**+1.2**
	comp=Z,4µmcomp=Z,2µmcomp=Z,76nm,0.9s						
SNY	**Shenyang**	**34.13**	**335**	⇓P	**P**	**06 40 21.0**	**+1.0**
SNY				S	**S**	**06 45 41.5**	**-1.0**
SNY				pmax	pmax		
	comp=Z,49nm,1.3s						
SNY				pmax	pmax		
	comp=Z,830nm,3.7s						
SNY				LR	LR		
	comp=Z,1µm,14.7s						
SNY				LR	LR		
	comp=Z,2µm,17.1s						
SNY				LR	LR		
	comp=Z,3µm,17.5s						
GMJI	**Gumukmas**	**34.37**	**236**	P	**P**	**06 40 21.7**	**-0.7**
	comp=Z,145nm,0.9s						
MDJ	**Mudanjiang**	**34.60**	**345**	P	**P**	**06 40 24.3**	**+0.2**
MDJ				PP	**PnPn**	**06 41 38.1**	**-2.9**
MDJ				PcP	**PcP**	**06 42 58.8**	**+1.1**
MDJ				S	**S**	**06 45 49.5**	**-0.2**
MDJ				SS	**SnSn**	**06 48 06.8**	**+1.1**
MDJ				ScS	**ScS**	**06 50 42.3**	**+0.6**
MDJ				pmax	pmax		
	comp=Z,34nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,980nm,7.9s						
MDJ				LR	LR		
	comp=Z,3µm,23.2s						
MDJ				LR	LR		
	comp=Z,5µm,22.0s						
MDJ				LR	LR		
	comp=Z,10µm,24.2s						
MDJ	**Mudanjiang**	**34.60**	**345**	P	**P**	**06 40 25.4**	**+1.3**
CN2	**Changchun**	**35.12**	**339**	*e*P	**P**	**06 40 27.9**	**-0.7**
CN2				*e*pP	pP	06 40 39.1	-1.5
CN2				*e*sP	pwP	06 40 49.0	+2.4
CN2				PP	**PP**	**06 41 49.3**	**+0.3**
CN2				*e*S	**S**	**06 45 53.5**	**-4.3**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,100nm,4.0s						
CN2				LR	LR		
	comp=Z,4µm,20.0s						
CN2				LR	LR		
	comp=Z,4µm,20.0s						
CN2				LR	LR		
	comp=Z,3µm,22.6s						
LYN	**LuoYang**	**35.17**	**315**	P	**P**	**06 40 30.1**	**+1.0**
LYN				sP	sP	06 40 45.6	-1.3
LYN				PP	**PnPn**	**06 41 46.5**	**-1.7**
LYN				PcP	**PcP**	**06 43 01.0**	**+1.5**
LYN				S	**S**	**06 45 58.4**	**-0.4**
LYN				pmax	pmax		
	comp=Z,2µm,6.4s						
LYN				LR	LR		
	comp=Z,8µm,19.9s						
LYN				LR	LR		
	comp=Z,5µm,20.6s						
LYN				LR	LR		
	comp=Z,12µm,20.3s						
ENH	**Enshi**	**35.29**	**307**	P	**P**	**06 40 31.4**	**+1.2**
ENH				PcP	**PcP**	**06 43 00.8**	**+0.8**
YSS	**Yuzhno-Sakhali**	**35.32**	**1**	P	**P**	**06 40 31.0**	**+0.8**
YSS	**Yuzhno-Sakhali**	**35.32**	**1**	*e*P	**P**	**06 40 30.4**	**+0.2**
YSS				*e**PP	**pP**	**06 40 43.6**	**+1.4**
YSS				*e*		06 41 49.7	
YSS				*e*S	**S**	**06 45 57.6**	**-3.1**
YSS				*e**SS	**sS**	**06 46 18.7**	**-1.1**
YSS				*e*SS	**SnSn**	**06 48 14.3**	**-8.8**
YSS				*e*SSS	SSS	06 48 43.3	
YSS				pmax	pmax		
	comp=Z,500nm,4.7s						
YSS				pmax	pmax		
	comp=N,300nm,4.0s						
YSS				pmax	pmax		
	comp=E,200nm,4.4s						
YSS				pmax	pmax		
	comp=Z,600nm,5.9s						
YSS				pmax	pmax		
	comp=N,500nm,4.8s						
YSS				pmax	pmax		
	comp=E,200nm,3.7s						
YSS				smax	smax		
	comp=N,800nm,7.3s						
YSS				MLR	MLR		
	comp=Z,3µm,16.0s						
YSS				MLR	MLR		
	comp=N,2µm,15.0s						
HNS	**HongShan**	**35.41**	**321**	⇑P	**P**	**06 40 32.0**	**+0.9**
HNS				PcP	**PcP**	**06 43 01.4**	**+1.3**
HNS				S	**S**	**06 46 04.1**	**+1.8**
HNS				pmax	pmax		
	comp=N,680nm,0.9s						
HNS				LR	LR		
	comp=N,1µm,15.1s						
HNS				LR	LR		
	comp=N,3µm,19.5s						
HNS				LR	LR		
	comp=N,4µm,21.6s						
SJI	**Sawahan**	**35.47**	**239**	P	**P**	**06 40 30.5**	**-1.5**
	comp=N,4µmcomp=N,78nm,1.1s						
UBPT	**Khong Chiam**	**35.49**	**280**	P	**P**	**06 40 32.9**	**+0.8**
SNJI	**Sawahan-Nganju**	**35.50**	**239**	P	**P**	**06 40 31.2**	**-1.1**
	comp=N,3µmcomp=N,105nm,1.7s						
NGJI	**Ngawi**	**35.53**	**240**	P	**P**	**06 40 31.8**	**-0.6**
	comp=N,80nm,0.9s						
AUNRC	**North Rockhamp**	**35.70**	**166**	P	**P**	**06 40 33.8**	**+0.1**
ASAR	**Alice Springs**	**35.81**	**192**	P	**P**	**06 40 34.9**	**+0.2**
	comp=N,43nm,0.6s,baz=16,slow=12,SNR=337						
ASAR				LR	LR	06 55 30.7	
	comp=N,8µm,21.4s,baz=17,slow=37						
ASAR				P3KPbc		07 11 15.9	
	comp=N,1.2nm,0.7s,baz=184,slow=3.4,SNR=13						
	comp=N,43nm,0.6s						
PCJI	**Pacitan**	**36.20**	**239**	P	**P**	**06 40 37.0**	**-1.2**
	comp=N,175nm,1.1s						
GYA	**Guiyang**	**36.23**	**299**	⇑P	**P**	**06 40 40.4**	**+1.9**
GYA				S	**S**	**06 46 10.5**	**-5.0**
GYA				pmax	pmax		
	comp=N,2µm,3.4s						
GYA				LR	LR		
	comp=N,3µm,16.6s						
GYA				LR	LR		
	comp=N,2µm,19.9s						
GYA				LR	LR		
	comp=N,3µm,19.1s						
BNX	**BinXian**	**36.24**	**343**	⇑P	**P**	**06 40 38.8**	**+0.7**
BNX				pP	**sP**	**06 40 55.0**	**-0.8**
BNX				PP	**PP**	**06 42 04.0**	**+2.7**
BNX				S	**S**	**06 46 13.6**	**-1.2**
BNX				sS	**sS**	**06 46 38.3**	**+4.3**
BNX				pmax	pmax		
	comp=N,440nm,1.0s						
BNX				LR	LR		
	comp=N,4µm,22.2s						
BNX				LR	LR		
	comp=N,5µm,21.7s						
BNX				LR	LR		
	comp=N,6µm,23.8s						
BJT	**Baijiatuau**	**36.31**	**326**	P	**P**	**06 40 39.5**	**+0.7**
BJI	**Beijing**	**36.32**	**326**	P	**P**	**06 40 39.8**	**+0.9**
BJI				S	**S**	**06 46 15.1**	**-1.1**
BJI				sS	**sS**	**06 46 36.9**	**+1.5**
BJI				pmax	pmax		
	comp=N,200nm,0.9s						
BJI				pmax	pmax		
	comp=N,960nm,3.7s						
BJI				LR	LR		
	comp=N,2µm,19.4s						
BJI				LR	LR		
	comp=N,780nm,20.8s						
BJI				LR	LR		
	comp=N,2µm,18.1s						
UGM	**Wanagama**	**36.60**	**240**	IAmb	IAmb	06 41 06.2	
	comp=Z,268nm,1.1s						
UGM	**Wanagama**	**36.60**	**240**	P	**P**	**06 40 40.9**	**-0.8**
UGM	**Wanagama**	**36.60**	**240**	P	**P**	**06 40 41.1**	**-0.6**
	comp=Z,283nm,1.3s						
TPI	**Tanjungpandan**	**36.79**	**249**	P	**P**	**06 40 41.6**	**-1.6**
	comp=Z,2µmcomp=Z,174nm,0.8s						
TIY	**Taiyuan**	**37.02**	**320**	P	**P**	**06 40 46.3**	**+1.3**
TIY				PP	**PP**	**06 42 06.9**	**-3.2**
TIY				S	**S**	**06 46 27.3**	**+0.2**
TIY				sS	**ScP**	**06 46 55.4**	**+7.5**
TIY				SS	**SnSn**	**06 48 59.8**	**-4.7**
TIY				pmax	pmax		
	comp=Z,430nm,0.7s						
TIY				pmax	pmax		
	comp=Z,2µm,4.7s						
TIY				LR	LR		
	comp=Z,4µm,15.4s						
TIY				LR	LR		
	comp=Z,2µm,15.4s						
TIY				LR	LR		
	comp=Z,4µm,19.6s						
CTJI	**Waduk Cacaban**	**37.30**	**242**	P	**P**	**06 40 46.9**	**-0.6**
	comp=Z,3µmcomp=Z,192nm,1.6s						
XAN	**Xi'an**	**37.42**	**312**	⇑P	**P**	**06 40 48.6**	**+0.2**
XAN				PP	**PP**	**06 42 15.0**	**+0.5**
XAN				PcP	**PcP**	**06 43 08.3**	**+1.9**
XAN				S	**S**	**06 46 30.5**	**-2.7**
XAN				pmax	pmax		
	comp=Z,190nm,0.8s						
XAN				pmax	pmax		
	comp=Z,940nm,9.8s						
XAN				LR	LR		
	comp=Z,3µm,16.5s						
XAN				LR	LR		
	comp=Z,4µm,21.3s						
XAN				LR	LR		
	comp=Z,6µm,22.0s						
XAN	**Xi'an**	**37.42**	**312**	P	**P**	**06 40 48.7**	**+0.2**
XAN				PcP	**PcP**	**06 43 07.6**	**+1.3**
UGL	**Uglegorsk**	**37.44**	**0**	*e*P	**P**	**06 40 49.2**	**+1.0**
UGL				*e*		06 42 34.0	
UGL				*e*S	**S**	**06 46 28.4**	**-4.5**
UGL				*e*SS	**SnSn**	**06 49 14.4**	**+0.3**
UGL				pmax	pmax		
	comp=Z,100nm,0.9s						
UGL				pmax	pmax		
	comp=Z,1µm,3.9s						
UGL				smax	smax		
	comp=E,1µm,6.0s						
UGL				smax	smax		
	comp=N,2µm,5.3s						
UGL				MLR	MLR		
	comp=E,2µm,18.0s						
UGL				MLR	MLR		
	comp=N,3µm,20.0s						
UGL				MLR	MLR		
	comp=Z,3µm,17.0s						
KPJI	**Karang Pucung**	**37.67**	**242**	P	**P**	**06 40 49.2**	**-1.5**
	comp=Z,3µmcomp=Z,2µmcomp=Z,120nm,1.4s						
EIDS	**Eidsvold**	**37.77**	**166**	P	**P**	**06 40 51.9**	**+0.5**
	comp=Z,29nm,0.7s						
EIDS	**Eidsvold**	**37.77**	**166**	P	**P**	**06 40 51.5**	**+0.1**
QLP	**Quilpie**	**37.95**	**176**	P	**P**	**06 40 52.7**	**-0.1**
	comp=Z,208nm,0.9s						
QLP	**Quilpie**	**37.95**	**176**	P	**P**	**06 40 52.4**	**-0.4**
WRKA	**Warakurna**	**38.65**	**200**	P	**P**	**06 40 59.9**	**+1.1**
	comp=Z,68nm,1.0s,comp=Z,0.0nm						
DSRI	**Dabo**	**38.84**	**255**	P	**P**	**06 40 58.9**	**-1.6**
	comp=Z,45nm,0.9s						
BBJI	**Bungbulang**	**38.84**	**243**	P	**P**	**06 40 59.1**	**-1.5**
BBJI	**Bungbulang**	**38.84**	**243**	P	**P**	**06 40 58.3**	**-2.3**
	comp=Z,90nm,1.0s						
MYKOM	**Kota Tinggi**	**38.85**	**258**	P	**P**	**06 41 00.5**	**-0.1**
MYKOM	**Kota Tinggi**	**38.85**	**258**	P	**P**	**06 41 00.7**	**+0.1**
MYKOM	**Kota Tinggi**	**38.85**	**258**	P	**P**	**06 40 59.5**	**-1.1**
BTDF	**Bukit Timah Da**	**39.04**	**258**	P	**P**	**06 41 01.5**	**-0.8**
MBWA	**Marble Bar**	**39.05**	**214**	P	**P**	**06 41 01.6**	**-0.6**
	comp=Z,46nm,1.6s,comp=Z,0.0nm						
MBWA	**Marble Bar**	**39.05**	**214**	P	**P**	**06 41 05.1**	**+3.0**
MBWA				P	**P**	**06 41 05.1**	**+3.0**
MBWA	**Marble Bar**	**39.05**	**214**	P	**P**	**06 41 01.5**	**-0.6**
MBWA	**Marble Bar**	**39.05**	**214**	P	**P**	**06 41 01.2**	**-0.9**
MBWA	**Marble Bar**	**39.05**	**214**	P	**P**	**06 41 01.4**	**-0.7**
MBWA				pP	**pP**	**06 41 13.6**	**+0.4**
XLT	**XiLinHaoTe**	**39.15**	**330**	*e*P	**P**	**06 41 03.6**	**+0.8**
XLT				pP	pwP	06 41 17.3	-2.8
XLT				S	**S**	**06 46 57.0**	**-2.1**
XLT				SS	**SS**	**06 49 49.0**	**-4.5**
XLT				pmax	pmax		
	comp=Z,270nm,0.9s						
XLT				LR	LR		
	comp=Z,2µm,19.8s						
XLT				LR	LR		
	comp=Z,4µm,22.8s						
DBJI	**Dramaga**	**39.21**	**244**	P	**P**	**06 41 03.7**	**0.0**
	comp=Z,157nm,1.1s						
CNJI	**Cibinong**	**39.23**	**243**	P	**P**	**06 41 02.4**	**-1.3**
	comp=Z,3µmcomp=Z,76nm,1.2s						
TYV	**Tymovskoe**	**39.23**	**1**	*e*P	**P**	**06 41 04.1**	**+0.8**
TYV				*e*S	**S**	**06 47 00.3**	**+0.3**
TYV				pmax	pmax		
	comp=Z,128nm,0.7s						
TYV				pmax	pmax		
	comp=Z,700nm,3.3s						
TYV				smax	smax		
	comp=N,3µm,7.5s						
TYV				smax	smax		
	comp=E,2µm,7.5s						
TYV				smax	smax		
	comp=N,38nm,1.7s						
TYV				smax	smax		
	comp=E,30nm,1.7s						
TYV				MLR	MLR		
	comp=Z,3µm,18.0s						
PSAC2	**Pilbara Seismi**	**39.28**	**213**	P	**P**	**06 41 03.9**	**-0.2**
	comp=Z,147nm,0.8s						
KMI	**Kunming**	**39.30**	**296**	⇑P	**P**	**06 41 06.5**	**+1.9**
KMI				sP	pwP	06 41 27.8	+4.5
KMI				PP	**PnPn**	**06 42 41.8**	**+3.2**
KMI				PcP	**PcP**	**06 43 14.3**	**+1.7**
KMI				S	**S**	**06 46 57.8**	**-4.4**
KMI				sS	sS	06 47 22.5	+0.9
KMI				pmax	pmax		
	comp=Z,120nm,0.9s						
KMI				pmax	pmax		
	comp=Z,1µm,5.8s						
KMI				LR	LR		
	comp=Z,890nm,20.5s						
KMI				LR	LR		
	comp=Z,2µm,18.7s						
KMI				LR	LR		
	comp=Z,2µm,18.8s						
PSAC1	**Pilbara Seismi**	**39.31**	**213**	P	**P**	**06 41 04.1**	**-0.2**
	comp=Z,120nm,0.9s						
PSA00	**Pilbara Seismi**	**39.32**	**213**	P	**P**	**06 41 04.2**	**-0.2**
	comp=Z,120nm,0.9s						
PSA00	**Pilbara Seismi**	**39.32**	**213**	P	**P**	**06 41 03.6**	**-0.8**
PSA00	**Pilbara Seismi**	**39.32**	**213**	P	**P**	**06 41 03.6**	**-0.8**
PSAB3	**Pilbara Seismi**	**39.33**	**213**	P	**P**	**06 41 04.2**	**-0.3**
	comp=Z,134nm,0.9s						
GRNR	**Gornyy**	**39.38**	**355**	⇑*i*P	**P**	**06 41 05.6**	**+1.1**
GRNR				pmax	pmax		
	comp=N,20nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,30nm,0.7s						
HHC	**Hu-ho-hao-te**	**39.48**	**323**	*e*P	**P**	**06 41 06.9**	**+1.2**
HHC				pP	sP	06 41 20.0	-4.0
HHC				PP	**PnPn**	**06 42 40.8**	**+0.4**
HHC				S	**S**	**06 47 06.3**	**+1.9**
HHC				sS	sS	06 47 24.1	+0.4
HHC				SS	**SS**	**06 49 52.8**	**-7.6**
HHC				pmax	pmax		
	comp=Z,110nm,0.9s						
HHC				pmax	pmax		
	comp=Z,1µm,6.6s						
HHC				LR	LR		
	comp=Z,2µm,17.0s						
HHC				LR	LR		
	comp=Z,2µm,17.0s						
HHC				LR	LR		
	comp=Z,4µm,17.0s						
SBJI	**Serang**	**39.57**	**245**	P	**P**	**06 41 06.6**	**0.0**
	comp=Z,227nm,1.2s						
TW1H	**Toowoomba 1 Ha**	**40.07**	**166**	P	**P**	**06 41 11.7**	**+1.0**
CD2	**Chengdu**	**40.09**	**305**	P	**P**	**06 41 11.5**	**+0.7**
CD2				pP	pP	06 41 24.3	+1.1
CD2				PP	**PP**	**06 42 44.3**	**+0.5**
CD2				S	**S**	**06 47 11.8**	**-1.8**
CD2				sS	sS	06 47 32.0	-1.0
CD2				pmax	pmax		
	comp=Z,680nm,0.8s						
CD2				pmax	pmax		
	comp=Z,2µm,4.7s						
CD2				LR	LR		
	comp=Z,4µm,12.8s						
CD2				LR	LR		
	comp=Z,4µm,16.1s						
CD2				LR	LR		
	comp=Z,4µm,19.2s						
KLI	**Kotabumi**	**40.18**	**248**	P	**P**	**06 41 11.5**	**-0.2**
AUWSH	**Wavell State H**	**40.20**	**164**	P	**P**	**06 41 12.5**	**+0.9**
KLSI		**40.23**	**248**	P	**P**	**06 41 11.4**	**-0.7**
	comp=Z,2µmcomp=Z,124nm,1.2s						
BTO	**Baotou**	**40.26**	**322**	⇑*i*P	**P**	**06 41 14.4**	**+2.3**
BTO				PP	**PnPn**	**06 42 51.8**	**+2.2**

BTO				S	S	06 47 19.9	+4.0
BTO				pmax	pmax		
	comp=Z,520nm,0.8s						
BTO				LR	LR		
	comp=Z,2µm,12.6s						
BTO				LR	LR		
	comp=Z,6µm,16.0s						
BTO				LR	LR		
	comp=Z,5µm,14.1s						
HEH	**HeiHe**	40.39	346	*e*P	P	06 41 13.8	+0.9
HEH				PcP	PcP	06 43 16.0	+0.8
HEH				ScP	ScP	06 47 00.8	+0.4
HEH				S	S	06 47 16.3	-1.0
HEH				ScS	ScS	06 51 12.4	-1.8
HEH				pmax	pmax		
	comp=Z,310nm,1.0s						
HEH				LR	LR		
	comp=Z,4µm,20.3s						
HEH				LR	LR		
	comp=Z,3µm,18.4s						
HEH				LR	LR		
	comp=Z,5µm,20.4s						
PZH	**PanZhiHua**	40.49	297	P	P	06 41 15.5	+1.2
PZH				PP	PnPn	06 42 51.3	-1.3
PZH				PcP	PcP	06 43 17.6	+1.3
PZH				S	S	06 47 19.0	-0.9
PZH				sS	sS	06 47 40.6	+1.3
PZH				pmax	pmax		
	comp=Z,170nm,0.9s						
PZH				pmax	pmax		
	comp=Z,1µm,3.8s						
PZH				LR	LR		
	comp=Z,730nm,17.1s						
PZH				LR	LR		
	comp=Z,670nm,18.4s						
PZH				LR	LR		
	comp=Z,980nm,19.0s						
MDSI	**Maura Dua**	40.65	249	P	P	06 41 14.7	-0.9
	comp=Z,1µmcomp=Z,74nm,1.0s						
IPM	**Ipoh**	40.93	264	P	P	06 41 17.9	-0.1
IPM	**Ipoh**	40.93	264	P	P	06 41 18.4	+0.5
IPM	**Ipoh**	40.93	264	P	P	06 41 17.5	-0.4
	comp=Z,2µmcomp=Z,80nm,1.1s						
GC1S	**Gold Coast 1 S**	41.05	164	P	P	06 41 19.9	+1.3
KULM	**Kulim**	41.13	265	P	P	06 41 20.0	+0.5
KULM	**Kulim**	41.13	265	P	P	06 41 20.2	+0.7
	comp=Z,2µmcomp=Z,135nm,1.2s						
AULRC	**Lightning Ridg**	41.15	172	P	P	06 41 18.7	-0.7
DZM	**Mont Dzumac**	41.23	144	LR	LR	06 56 57.4	
	comp=Z,3µm,20.9s,baz=332,slow=34						
DZM	**Mont Dzumac**	41.23	144	*e*P	P	06 41 21.1	+0.8
	comp=Z,283nm,1.1s						
DZM				*e*S	S	06 47 24.3	-6.4
	comp=Z,1µm,27.9s						
DZM				*e*SS	SS	06 50 32.7	-3.0
	comp=Z,7µm,34.5s						
DZM				*e*LR	LR	06 52 32.6	
	comp=Z,7µm,28.4s						
DZM	**Mont Dzumac**	41.23	144	P	P	06 41 22.1	+1.8
DZM	**Mont Dzumac**	41.23	144	P	P	06 41 22.3	+2.0
DZM	**Mont Dzumac**	41.23	144	P	P	06 41 22.0	+1.7
DZM				pP	sP	06 41 33.3	-2.6
DZM				sP	pwP	06 41 38.2	-5.5
YATNC	**Mamie plateau,**	41.48	144	P	P	06 41 24.2	+1.9
KSI	**Kapahiang**	41.80	251	P	P	06 41 24.8	-0.3
	comp=Z,144nm,1.1s						
HIA	**Hailar**	41.83	338	P	P	06 41 25.8	+0.9
CM31	**Chiang Mai Arr**	41.88	285	P	P	06 41 27.1	+1.5
	SNR=83						
CM31				P	P	06 41 27.1	+1.5
	SNR=83						
CM31	**Chiang Mai Arr**	41.88	285	IAmb	IAmb	06 41 29.5	
	comp=Z,284nm,1.1s						
CMAR	**Chiang Mai Arr**	41.88	285	P	P	06 41 27.5	+1.9
	comp=Z,138nm,1.0s,baz=88,slow=6.1,SNR=229						
CMAR				PcP	PcP	06 43 22.3	+1.5
	comp=Z,25nm,0.9s,baz=85,slow=2.6,SNR=4.9						
CMAR				LR	LR	06 58 22.5	
	comp=Z,2µm,20.9s,baz=105,slow=35						
	comp=Z,138nm,1.0s						
CMAR	**Chiang Mai Arr**	41.88	285	*i* P	P	06 41 27.5	+1.9
CMAR				pmax	pmax		
	comp=Z,149nm,1.0s						
CHTO	**Chiang Mai**	41.90	285	P	P	06 41 26.7	+0.8
CHTO				P	P	06 41 26.7	+0.8
CHTO	**Chiang Mai**	41.90	285	P	P	06 41 27.0	+1.2
CHTO	**Chiang Mai**	41.90	285	P	P	06 41 27.0	+1.2
CHTO	**Chiang Mai**	41.90	285	P	P	06 41 24.8	-1.0
	comp=Z,3µmcomp=Z,2µmcomp=Z,78nm,1.5s						
CHTO	**Chiang Mai**	41.90	285	P	P	06 41 27.0	+1.2
CHTO				pmax	pmax		
	comp=Z,50nm,1.0s						
CHTO				MLR	MLR		
	comp=Z,2µm,20.0s						
MASI	**Maura Aman, Be**	41.94	252	P	P	06 41 26.3	+0.1
	comp=Z,3µmcomp=Z,256nm,0.9s						
BKNI	**Bangkinang**	41.96	257	P	P	06 41 25.4	-0.9
LZH	**Lanzhou**	42.05	312	⇑P	P	06 41 28.1	+1.0
LZH				pP	pP	06 41 39.5	0.0
LZH				sP	pwP	06 41 48.9	+4.0
LZH				PP	PP	06 43 08.1	+2.9
LZH				PcP	PcP	06 43 23.4	+2.1
LZH				S	S	06 47 41.0	-1.9
LZH				sS	sS	06 48 07.8	+5.4
LZH				SS	SS	06 50 44.6	-7.1
LZH				pmax	pmax		
	comp=Z,260nm,1.3s						
LZH				pmax	pmax		
	comp=Z,1µm,5.5s						
LZH				LR	LR		
	comp=Z,2µm,13.4s						
LZH				LR	LR		
	comp=Z,5µm,14.4s						
LZH				LR	LR		
	comp=Z,6µm,13.4s						
HILR	**Hailar Array B**	42.07	339	P	P	06 41 27.6	+0.7
	comp=Z,38nm,0.6s,baz=143,slow=11,SNR=33						
HILR				PcP	PcP	06 43 20.9	0.0
	comp=Z,20nm,0.8s,baz=151,slow=3.3,SNR=3.6						
HILR				LR	LR	06 59 10.8	
	comp=Z,3µm,18.8s,baz=110,slow=36						
	comp=Z,38nm,0.6s						
LZDM	**Lanzhou Array**	42.11	312	P	P	06 41 28.8	+1.1
	comp=Z,46nm,0.5s,baz=142,slow=7.5,SNR=56						
LZDM				PcP	PcP	06 43 22.4	+0.8
	comp=Z,30nm,0.7s,baz=116,slow=3.4,SNR=4.3						
LZDM				LR	LR	06 59 21.7	
	comp=Z,5µm,20.1s,baz=100,slow=37						
	comp=Z,46nm,0.5s						
ARMA	**Armidale**	42.76	167	P	P	06 41 33.3	+0.6
	comp=Z,48nm,0.9s						
ARMA	**Armidale**	42.76	167	P	P	06 41 33.4	+0.6
PPI	**Padang Panjang**	42.80	257	P	P	06 41 31.9	-1.3
	comp=Z,3µmcomp=Z,2µmcomp=Z,108nm,1.5s						
PDSI	**Padang**	42.88	256	P	P	06 41 31.3	-2.6
	comp=Z,7µmcomp=Z,66nm,0.7s						
CMSA	**Cobar Meteorol**	42.98	175	P	P	06 41 34.9	+0.6
	comp=Z,75nm,1.0s						
CMSA	**Cobar Meteorol**	42.98	175	P	P	06 41 34.3	0.0
TNCH	**TengChong**	43.03	294	P	P	06 41 36.6	+1.4
TNCH				pP	pP	06 41 45.6	-1.8
TNCH				PP	PP	06 43 18.6	+2.7
TNCH				S	S	06 47 59.3	+1.7
TNCH				pmax	pmax		
	comp=Z,340nm,0.9s						
TNCH				pmax	pmax		
	comp=Z,2µm,3.0s						
TNCH				LR	LR		
	comp=Z,2µm,18.2s						
TNCH				LR	LR		
	comp=Z,2µm,20.2s						
TNCH				LR	LR		
	comp=Z,7µm,20.0s						
STKA	**Stephens Creek**	43.16	180	P	P	06 41 35.6	-0.1
	comp=Z,286nm,1.1s						
STKA	**Stephens Creek**	43.16	180	P	P	06 41 35.5	-0.3
	comp=Z,29nm,0.9s,baz=350,slow=8.4,SNR=46						
STKA				LR	LR	07 01 13.5	
	comp=Z,7µm,18.0s,baz=355,slow=38						
	comp=Z,29nm,0.9s						
STKA	**Stephens Creek**	43.16	180	IAmb	IAmb	06 42 02.4	
	comp=Z,321nm,1.1s						
STKA	**Stephens Creek**	43.16	180	P	P	06 41 35.2	-0.5
STKA	**Stephens Creek**	43.16	180	*c i*P	P	06 41 34.4	-1.3
MNSI	**Mandailing Nat**	43.23	259	P	P	06 41 36.1	-0.5
	comp=Z,55nm,0.9s						
AUPHS	**Peel High Scho**	43.27	169	P	P	06 41 37.4	+0.7
PSI	**Prapat**	43.35	262	P	P	06 41 37.6	-0.2
	comp=Z,161nm,0.9s,baz=85,slow=3.3,SNR=69						
	comp=Z,161nm,0.9s						
PSI	**Prapat**	43.35	262	P	P	06 41 37.4	-0.4
	comp=Z,2µmcomp=Z,158nm,0.9s						
GIRL	**Giralia**	43.38	218	P	P	06 41 39.0	+1.3
	comp=Z,97nm,0.9s						
GIRL	**Giralia**	43.38	218	P	P	06 41 38.3	+0.6
PEA0B	**Petropavlovsk-**	43.40	14	⇓*i*P	P	06 41 38.6	+1.2
PETK	**Petropavlovsk-**	43.40	14	P	P	06 41 38.8	+1.3
	comp=Z,29nm,0.9s,baz=198,slow=5.5,SNR=18						
PETK				PcP	PcP	06 43 25.7	+0.6
	comp=Z,23nm,0.9s,baz=209,slow=6.0,SNR=5.0						
PETK				LR	LR	06 58 02.2	
	comp=Z,3µm,20.0s,baz=202,slow=34						
	comp=Z,29nm,0.9s						
PETK	**Petropavlovsk-**	43.40	14	P	P	06 41 38.4	+0.9
TSI	**Tuntungan**	43.54	263	P	P	06 41 39.3	+0.2
	comp=Z,201nm,0.7s						
PET	**Petropavlovsk**	43.55	15	P	P	06 41 39.8	+1.2
PET	**Petropavlovsk**	43.55	15	P	P	06 41 40.6	+2.0
PET	**Petropavlovsk**	43.55	15	*e*P	P	06 41 40.8	+2.2
PET				*e**PP	pP	06 41 51.3	+0.4
PET				*e**SP	pwP	06 41 58.9	+1.6
PET				*e*		06 43 27.2	
PET				*e*S	S	06 48 03.8	-0.1
PET				*e**SS	sS	06 48 26.7	+3.2
PET				*e*SS	SS	06 51 17.5	-2.6
PET				pmax	pmax		
	comp=Z,63nm,0.8s						
PET				pmax	pmax		
	comp=Z,400nm,16.3s						
PET				pmax	pmax		
	comp=Z,800nm,10.5s						
PET				MLR	MLR		
	comp=Z,2µm,17.0s						
PET				MLR	MLR		
	comp=Z,1µm,16.0s						
PET	**Petropavlovsk**	43.55	15	P	P	06 41 40.0	+1.4
	comp=Z,2µmcomp=Z,87nm,0.9s						
ZEA	**Zeya**	43.67	348	*e*P	P	06 41 40.3	+0.7
ZEA				*e*S	S	06 48 02.2	-3.5
ZEA				pmax	pmax		
	comp=N,30nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,70nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,300nm,4.3s						
ZEA				smax	smax		
	comp=N,500nm,16.2s						
PPSI	**Pulau Pagai**	43.90	254	P	P	06 41 40.5	-1.5
	comp=N,3µmcomp=N,190nm,1.4s						
AUDCS	**Dubbo College**	44.00	172	P	P	06 41 42.3	-0.2
FORT	**Forrest**	44.08	197	P	P	06 41 44.5	+1.3
	comp=Z,109nm,1.0s						
FORT	**Forrest**	44.08	197	P	P	06 41 44.2	+1.1
MEEK	**Meekatharra**	44.12	210	P	P	06 41 44.0	+0.4
	comp=Z,37nm,1.6s,comp=Z,0.0nm						
MEEK	**Meekatharra**	44.12	210	P	P	06 41 43.4	-0.2
KCSI	**Kotacane, Aceh**	44.30	263	P	P	06 41 44.7	-0.6
	comp=Z,2µmcomp=Z,208nm,0.9s						
SISI	**Saibi**	44.31	256	P	P	06 41 43.6	-1.7
	comp=Z,3µmcomp=Z,168nm,0.8s						
BBOO	**Buckleboo**	44.42	187	P	P	06 41 46.5	+0.6
	comp=Z,180nm,0.8s						
BBOO	**Buckleboo**	44.42	187	P	P	06 41 46.2	+0.3
BBOO				IAmb	IAmb	06 41 57.9	
	comp=Z,122nm,0.7s						
BBOO	**Buckleboo**	44.42	187	P	P	06 41 46.2	+0.3
WHYH	**Whyalla**	44.49	185	P	P	06 41 47.3	+0.9
AUJCS	**Jamestown Cent**	44.58	184	P	P	06 41 47.8	+0.6
LHMI	**Lhok Sumawe**	44.76	266	P	P	06 41 50.5	+1.6
LHMI	**Lhok Sumawe**	44.76	266	P	P	06 41 48.3	-0.6
HTT	**Hallett**	44.79	183	P	P	06 41 49.5	+0.7
	comp=Z,39nm,0.9s						
HTT	**Hallett**	44.79	183	P	P	06 41 49.4	+0.5
TPTI		44.94	263	P	P	06 41 49.7	-0.6
	comp=Z,2µmcomp=Z,92nm,0.8s						
GSI	**Gunungsitoli**	45.02	260	P	P	06 41 49.9	-1.2
GSI				IAmb	IAmb	06 41 53.3	
	comp=Z,201nm,0.9s						
GSI	**Gunungsitoli**	45.02	260	P	P	06 41 49.8	-1.2
GSI	**Gunungsitoli**	45.02	260	P	P	06 41 49.7	-1.3
	comp=Z,5µmcomp=Z,275nm,1.0s						
MLSI	**Meulaboh, Aceh**	45.48	265	P	P	06 41 53.7	-0.9
	comp=Z,3µmcomp=Z,114nm,1.0s						
AUCAS	**Cummins Area S**	45.90	187	P	P	06 41 58.7	+1.2
SNSI	**Sinabang, Aceh**	45.96	262	P	P	06 41 58.9	+0.4
	comp=Z,4µmcomp=Z,222nm,0.9s						
YNG	**Young**	46.00	172	P	P	06 41 59.6	+1.2
	comp=Z,36nm,1.0s						
MSVF	**Nonsavu**	46.13	129	P	P	06 42 01.3	+1.6
MSVF				IAmb	IAmb	06 42 03.2	
	comp=Z,160nm,0.7s						
MSVF	**Nonsavu**	46.13	129	IAMs_20	IAMs_20	06 59 25.3	
	comp=Z,7µm,20.0s						
MSVF	**Nonsavu**	46.13	129	P	P	06 42 01.7	+2.0
MSVF	**Nonsavu**	46.13	129	*i* P	P	06 42 01.4	+1.6
MSVF	**Nonsavu**	46.13	129	P	P	06 42 01.7	+2.0
MSVF				pP	sP	06 42 14.7	-1.2
AUMAR	**Marden Senior**	46.26	184	P	P	06 42 01.3	+0.9
GTA	**Gaotai**	46.37	314	P	P	06 42 03.0	+1.5
GTA				sP	pwP	06 42 24.0	+3.8
GTA				PcP	PcP	06 43 38.6	+2.7
GTA				PP	PP	06 43 56.4	+5.4
GTA				S	S	06 48 47.1	+1.7
GTA				sS	sS	06 49 07.4	+2.3
GTA				pmax	pmax		
	comp=Z,460nm,0.9s						
GTA				pmax	pmax		
	comp=Z,800nm,8.8s						
GTA				LR	LR		
	comp=Z,1µm,17.9s						
GTA				LR	LR		
	comp=Z,3µm,19.9s						
GTA				LR	LR		
	comp=Z,4µm,21.1s						
CIT	**Chita**	46.40	336	*e*P	P	06 42 02.4	+1.0
CIT				*e*		06 42 16.0	
CIT				*e*		06 42 23.0	
CIT				*e*		06 43 36.4	
CIT				*e*		06 43 49.2	
CIT				*e*		06 44 35.6	
CIT				pmax	pmax		
	comp=Z,348nm,1.9s						
PASG	**PASIGHAT**	46.40	298	*e*P	P	06 42 00.7	-1.1
PASG				IAmb	IAmb	06 42 04.3	
	comp=Z,109nm,0.5s						
ULN	**Ulaanbaatar**	46.44	328	P	P	06 42 01.6	-0.3
ULN				P	P	06 42 01.6	-0.3
ULN				S	S	06 48 48.2	+1.9
ULN				S	S	06 48 48.2	+1.9
ULN	**Ulaanbaatar**	46.44	328	P	P	06 42 03.1	+1.1
ULN	**Ulaanbaatar**	46.44	328	P	P	06 42 02.4	+0.5
	comp=Z,8µmcomp=Z,382nm,1.2s						
ULN	**Ulaanbaatar**	46.44	328	*c i*P	P	06 42 03.2	+1.3
ULN				pmax	pmax		
	comp=Z,171nm,1.7s						
AUMBR	**Murray Bridge**	46.46	183	P	P	06 42 02.8	+0.8
KMBL	**Kambalda**	46.73	204	P	P	06 42 04.3	+0.1
	comp=Z,42nm,1.3s						
SONM	**Songino Array**	46.76	328	P	P	06 42 05.5	+1.0
	comp=Z,37nm,1.0s,baz=139,slow=7.1,SNR=107						
SONM				PcP	PcP	06 43 38.3	+1.2
	comp=Z,31nm,0.7s,baz=144,slow=3.9,SNR=10						
SONM				ScP	ScP	06 47 26.9	+0.3
	comp=Z,3.6nm,1.0s,baz=159,slow=4.5,SNR=3.7						
SONM				LR	LR	07 03 17.3	
	comp=Z,4µm,20.0s,baz=124,slow=38						
	comp=Z,37nm,1.0s						
SONM	**Songino Array**	46.76	328	P	P	06 42 05.3	+0.8
MOKO	**MOKOCHONG**	46.81	295	*e*P	P	06 42 03.9	-1.3
MOKO				IAmb	IAmb	06 42 10.1	
	comp=Z,37nm,0.6s						
AUDAR	**Daramalan Coll**	47.04	172	P	P	06 42 07.5	+1.0
KOHI	**KOHIMA**	47.08	294	*e*P	P	06 42 07.3	0.0
KOHI				IAmb	IAmb	06 42 11.2	
	comp=Z,63nm,0.5s						
AUMTS	**Mt Stromlo**	47.09	172	P	P	06 42 08.2	+1.3
CAN	**Canberra**	47.09	172	P	P	06 42 08.3	+1.3
	comp=Z,53nm,1.1s						
CAN	**Canberra**	47.09	172	P	P	06 42 07.5	+0.6
CAN				IAMs_20	IAMs_20	07 02 49.6	
	comp=Z,4µm,18.0s						
CAN	**Canberra**	47.09	172	P	P	06 42 08.1	+1.1
CAN	**Canberra**	47.09	172	P	P	06 42 07.5	+0.6
CAN				pmax	pmax		
	comp=Z,56nm,1.1s						
CAN				MLR	MLR		
	comp=Z,4µm,18.0s						
IMP	**Imphal**	47.10	293	*e*P	P	06 42 05.6	-1.8
IMP				IAmb	IAmb	06 42 09.6	
	comp=Z,90nm,0.8s						
CNB	**Canberra Magne**	47.13	172	P	P	06 42 08.2	+0.8
	comp=Z,47nm,0.9s						
CNB	**Canberra Magne**	47.13	172	P	P	06 42 08.1	+0.8
AUMHS	**Melrose High S**	47.14	172	P	P	06 42 08.1	+0.8
MORW	**Morawa**	47.40	211	P	P	06 42 09.8	+0.4
	comp=Z,135nm,1.1s,comp=Z,0.0nm						
MORW	**Morawa**	47.40	211	P	P	06 42 09.5	0.0
MORW				IAmb	IAmb	06 42 27.5	
	comp=Z,151nm,1.1s						
MORW	**Morawa**	47.40	211	P	P	06 42 09.7	+0.3
CMBY	**CAMPBELL BAY**	47.40	269	*e*P	P	06 42 08.4	-1.4
CMBY				IAmb	IAmb	06 42 13.8	
	comp=Z,54nm,0.7s						
DGPR	**DIGLIPUR**	47.70	277	*e*P	P	06 42 10.6	-1.4
DGPR				IAmb	IAmb	06 42 14.8	
	comp=Z,54nm,0.5s						
SAIH	**SAIHA**	47.73	290	*e*P	P	06 42 11.3	-1.0
SAIH				IAmb	IAmb	06 42 15.9	
	comp=Z,106nm,2.0s						
PBA	**Port Blair**	47.99	275	P	P	06 42 14.1	-0.2
PBA	**Port Blair**	47.99	275	*e*P	P	06 42 13.2	-1.1
PBA				IAmb	IAmb	06 42 16.5	
	comp=Z,115nm,0.5s						
ARPS	**Mount Arapiles**	48.04	180	P	P	06 42 15.7	+1.4
	comp=Z,47nm,1.5s						
BLDU	**Ballidu**	48.34	209	P	P	06 42 17.4	+0.7
	comp=Z,77nm,0.7s						
BLDU	**Ballidu**	48.34	209	P	P	06 42 16.7	0.0
MA2	**Magadan**	48.43	6	LR	LR	07 01 03.4	
	comp=Z,1µm,21.1s,baz=194,slow=34						
MA2	**Magadan**	48.43	6	P	P	06 42 17.6	+0.6
MA2				IAmb	IAmb	06 43 45.2	
	comp=Z,102nm,0.8s						
MA2	**Magadan**	48.43	6	P	P	06 42 17.6	+0.6
MA2	**Magadan**	48.43	6	*ce*P	P	06 42 18.3	+1.3
MA2				pmax	pmax		
	comp=Z,77nm,1.0s						
MA2	**Magadan**	48.43	6	P	P	06 42 18.4	+1.4
	comp=Z,81nm,0.8s						
SHEM	**Shemya Is, Ala**	48.60	26	LR	LR	07 00 36.4	
	comp=Z,4µm,21.4s,baz=232,slow=33						
KLBR	**Kellerberrin**	48.67	208	P	P	06 42 19.6	+0.4
	comp=Z,140nm,0.9s						
KLBR	**Kellerberrin**	48.67	208	P	P	06 42 19.1	-0.1
BRAT	**Ballarat**	48.86	178	P	P	06 42 22.1	+1.6
GOMU	**GeErMu**	48.88	308	P	P	06 42 20.8	-0.5
GOMU				S	S	06 49 20.6	-1.0
GOMU				pmax	pmax		
	comp=Z,24nm,0.8s						
GOMU				LR	LR		
	comp=Z,2µm,19.0s						
GOMU				LR	LR		
	comp=Z,3µm,19.0s						
GOMU				LR	LR		
	comp=Z,4µm,19.3s						
AUMTC	**Mt Clear Colle**	48.91	178	P	P	06 42 22.4	+1.5
TOO	**Toolangi**	48.96	176	P	P	06 42 23.1	+1.7
	comp=Z,37nm,1.3s						
BRDH	**Bariadhala**	48.99	290	LR	LR	07 03 44.4	
	comp=Z,1µm,20.4s,baz=138,slow=37						
MGBR	**Mount Gambier**	49.00	181	IAmb	IAmb	06 42 39.5	
	comp=Z,248nm,1.3s						
SHL	**Shillong**	49.05	294	P	P	06 42 23.0	+0.4
	SNR=52						
SHL	**Shillong**	49.05	294	*e*P	P	06 42 20.5	-2.1
GUWA	**GUWAHATI**	49.30	295	*e*P	P	06 42 23.1	-1.2
GUWA				IAmb	IAmb	06 42 25.8	
	comp=Z,87nm,1.5s						
TAWA	**Tawang**	49.34	296	*e*P	P	06 42 23.9	-1.1
TAWA				IAmb	IAmb	06 42 27.7	
	comp=Z,149nm,0.7s						
AGT	**Agartala**	49.45	292	*e*P	P	06 42 24.0	-1.4
MUN	**Mundaring**	49.71	209	P	P	06 42 27.9	+0.8
	comp=Z,76nm,0.8s,comp=Z,0.0nm						
MUN	**Mundaring**	49.71	209	P	P	06 42 28.0	+0.8
ZAK	**Zakamensk**	49.94	329	*e*P	P	06 42 28.7	-0.2
ZAK				*e*		06 42 38.3	
ZAK				pmax	pmax		
	comp=Z,198nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,159nm,1.1s						
NWAO	**Narrogin (SRO)**	50.03	207	P	P	06 42 29.3	-0.3
	comp=Z,48nm,0.9s						
NWAO	**Narrogin (SRO)**	50.03	207	LR	LR	07 04 53.6	
	comp=Z,2µm,18.4s,baz=32,slow=38						
NWAO	**Narrogin (SRO)**	50.03	207	P	P	06 42 29.3	-0.3
NWAO				P	P	06 42 29.3	-0.3
NWAO				S	S	06 49 42.2	+5.3
NWAO				S	S	06 49 42.2	+5.3
NWAO	**Narrogin (SRO)**	50.03	207	P	P	06 42 29.9	+0.3
NWAO	**Narrogin (SRO)**	50.03	207	P	P	06 42 30.1	+0.5
NWAO	**Narrogin (SRO)**	50.03	207	P	P	06 42 29.9	+0.3
NWAO				pmax	pmax		
	comp=Z,55nm,0.9s						
LSA	**Lhasa**	50.30	299	IAmb	IAmb	06 42 35.8	
	comp=Z,125nm,1.0s						
LSA	**Lhasa**	50.30	299	P	P	06 42 29.3	-3.1
LSA				S	S	06 49 29.6	-12
LSA				pmax	pmax		
	comp=Z,45nm,0.8s						
LSA				LR	LR		
	comp=Z,1µm,20.1s						
LSA				LR	LR		
	comp=Z,1µm,18.3s						
LSA				LR	LR		
	comp=Z,2µm,20.5s						
LSA	**Lhasa**	50.30	299	P	P	06 42 33.9	+1.6
LSA	**Lhasa**	50.30	299	P	P	06 42 33.9	+1.6
LSA				PcP	PcP	06 43 52.6	+1.9
IRK	**Irkutsk**	50.61	331	*e*P	P	06 42 34.8	+1.0
IRK				*e*S	S	06 49 46.2	+1.6
IRK				pmax	pmax		
	comp=Z,178nm,3.0s						
DHUB	**DHUBRI**	50.79	294	*e*P	P	06 42 34.6	-1.0
DHUB				IAmb	IAmb	06 42 37.7	
	comp=Z,82nm,1.2s						
BOD	**Bodaibo**	50.82	341	*e*P	P	06 42 35.2	0.0
BOD				pmax	pmax		
	comp=Z,82nm,1.1s						
YAK	**Yakutsk**	51.18	353	LR	LR	07 02 47.5	
	comp=Z,5µm,21.6s,baz=164,slow=34						
YAK	**Yakutsk**	51.18	353	P	P	06 42 38.1	+0.3
YAK	**Yakutsk**	51.18	353	IAMs_20	IAMs_20	07 01 55.5	
	comp=Z,6µm,22.0s						
YAK	**Yakutsk**	51.18	353	*c i*P	P	06 42 37.9	+0.1
YAK				*e**PP	pwP	06 42 57.8	+1.2
YAK				*e*		06 43 52.6	
YAK				*e*		06 44 33.7	
YAK				*e*PPP	PPP	06 45 34.6	
YAK				*e*S	S	06 49 48.5	-3.6
YAK				*e*		06 52 21.0	
YAK				*e*SSS	SSS	06 55 03.3	
YAK				pmax	pmax		
	comp=Z,145nm,0.7s						
YAK				pmax	pmax		
	comp=N,43nm,0.9s						
YAK				pmax	pmax		
	comp=E,31nm,0.8s						
YAK				pmax	pmax		
	comp=Z,102nm,1.8s						
YAK				pmax	pmax		
	comp=E,106nm,2.0s						
YAK				pmax	pmax		
	comp=N,22nm,1.0s						
YAK				smax	smax		
	comp=N,252nm,1.1s						
YAK				smax	smax		
	comp=E,157nm,0.8s						
YAK				MLR	MLR		
	comp=E,791nm,19.0s						
YAK	**Yakutsk**	51.18	353	P	P	06 42 38.1	+0.3
YAK				pP	pP	06 42 51.0	+0.7
MOY	**Mondy**	51.87	329	*e*P	P	06 42 44.1	+0.8
MOY				pmax	pmax		
	comp=Z,162nm,3.2s						
SEY	**Seymchan**	51.88	6	LR	LR	07 03 42.7	

	comp=Z,2µm,20.9s,baz=190,slow=35						
SEY	Seymchan	51.88	6	eP	P	06 42 43.2	+0.1
SEY				e		06 52 27.9	
SEY				eSS	SS	06 53 40.4	+1.4
SEY				pmax	pmax		
	comp=Z,58nm,0.9s						
GTK	Tadong	52.18	296	eP	P	06 42 44.8	-1.3
GTK				IAmb	IAmb	06 42 48.3	
	comp=Z,48nm,1.2s						
ADK	Adak	52.37	31	P	P	06 42 48.4	+1.6
ADK	Adak	52.37	31	IAMs_20	IAMs_20	06 59 48.5	
	comp=Z,6µm,18.0s						
ADK	Adak	52.37	31	P	P	06 42 48.4	+1.6
ADK	Adak	52.37	31	P	P	06 42 48.4	+1.6
ADK				pmax	pmax		
	comp=Z,1µm,1.9s						
SHBG	Sahibganj	52.84	293	eP	P	06 42 49.7	-1.1
KNGR	Kungurtug, Tuv	53.12	326	i P	P	06 42 54.4	+1.8
KNGR				pmax	pmax		
	comp=Z,100nm,1.1s						
BOK	Bokaro	54.34	291	eP	P	06 43 00.6	-1.2
BOK				IAmb	IAmb	06 43 04.5	
	comp=Z,76nm,1.2s						
TAU	Tasmania Unive	54.41	175	IAMs_20	IAMs_20	07 06 04.2	
	comp=Z,5µm,19.0s						
KNTI	KHUNTI	54.86	290	eP	P	06 43 04.5	-1.2
OUZ	Omahuta	55.39	148	P	P	06 43 11.7	+2.6
RAO	Raoul Island	56.17	137	LR	LR	07 05 30.1	
	comp=Z,2µm,18.5s,baz=333,slow=34						
VLK	Valmikinagar	56.33	295	eP	P	06 43 15.0	-1.1
VLK				IAmb	IAmb	06 43 19.0	
	comp=Z,64nm,0.9s						
WCZ	Waipu Caves	56.33	148	P	P	06 43 17.5	+1.7
WMQ	Urumqi	56.42	315	⇑P	P	06 43 17.8	+1.2
WMQ				PcP	PcP	06 44 14.1	+1.0
WMQ				PP	PP	06 45 25.3	+2.7
WMQ				S	S	06 51 04.3	+0.5
WMQ				pmax	pmax		
	comp=Z,43nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,1µm,4.7s						
WMQ				LR	LR		
	comp=Z,2µm,24.5s						
WMQ				LR	LR		
	comp=Z,3µm,22.7s						
WMQ				LR	LR		
	comp=Z,3µm,21.7s						
WMQ	Urumqi	56.42	315	P	P	06 43 17.9	+1.3
WMQ				pP	pP	06 43 30.1	+0.8
WMQ				sP	pwP	06 43 35.0	-0.3
WMQ				PcP	PcP	06 44 14.1	+1.0
RAGD	RAYAGADA	56.55	285	eP	P	06 43 17.0	-0.8
VIS	Vishakhapatnam	56.72	284	eP	P	06 43 17.8	-1.2
VIS				IAmb	IAmb	06 43 22.9	
	comp=Z,105nm,0.6s						
NIKH	Nikolski High	57.03	33	P	P	06 43 21.9	+1.2
	baz=242						
KIP	Kipapa	58.27	72	P	P	06 43 31.7	+1.8
KIP	Kipapa	58.27	72	P	P	06 43 32.2	+2.3
SPIA	Saint Paul Isl	58.41	28	P	P	06 43 31.5	+1.4
	baz=239						
P08K	Saint George I	58.44	29	P	P	06 43 31.7	+1.3
	baz=240						
DGZ	Jazzator, Alta	58.54	322	c iP	P	06 43 32.7	+1.2
DGZ				pmax	pmax		
	comp=Z,124nm,1.2s						
UNV	Unalaska Valle	58.68	33	P	P	06 43 32.5	+0.4
UNV	Unalaska Valle	58.68	33	P	P	06 43 33.5	+1.4
	baz=244						
BILL	Bilibino	58.70	11	P	P	06 43 32.6	+0.5
BILL				IAmb	IAmb	06 43 34.4	
	comp=Z,77nm,0.9s						
BILL	Bilibino	58.70	11	c iP	P	06 43 32.4	+0.3
BILL				pmax	pmax		
	comp=Z,86nm,0.9s						
BILL				MLR	MLR		
	comp=Z,3µm,20.0s						
BILL	Bilibino	58.70	11	P	P	06 43 32.4	+0.3
VRZ	Vera Road	59.02	150	P	P	06 43 36.8	+2.2
QRZ	Quartz Range	59.34	153	IAMs_20	IAMs_20	07 12 57.8	
	comp=Z,4µm,19.0s						
QRZ	Quartz Range	59.34	153	P	P	06 43 38.3	+1.5
VJD	Vijayawada	59.34	282	eP	P	06 43 36.2	-1.2
ZSN	Zaisan	59.41	319	eP	P	06 43 38.0	+0.5
ZSN	Zaisan	59.41	319	eP	P	06 43 37.9	+0.5
KRVZ	Karewarewa	59.42	150	P	P	06 43 39.4	+1.8
NNVZ	North Ngauruho	59.44	150	P	P	06 43 39.9	+2.1
COVZ	Chateau Observ	59.46	150	P	P	06 43 39.6	+1.7
NGZ	Ngauruhoe	59.47	150	P	P	06 43 39.9	+1.9
OTVZ	Oturere	59.49	150	P	P	06 43 39.9	+1.7
HAZ	Te Kaha	59.51	147	P	P	06 43 38.9	+0.9
URZ	Urewera	59.53	148	P	P	06 43 38.6	+0.4
	comp=Z,39nm,0.8s,baz=322,slow=7.8,SNR=9.3						
URZ				LR	LR	07 08 24.2	
	comp=Z,1µm,18.5s,baz=314,slow=35						
	comp=Z,39nm,0.8s						
URZ	Urewera	59.53	148	P	P	06 43 39.3	+1.1
TRVZ	Turoa	59.54	150	P	P	06 43 40.9	+2.4
WNVZ	Wahianoa	59.58	150	P	P	06 43 41.3	+2.5
RUGZ	Raukumara Rang	59.61	148	P	P	06 43 39.4	+0.5
MOVZ	Moawhango	59.72	150	P	P	06 43 40.5	+0.8
RTZ	Ruatahuna	59.73	148	P	P	06 43 40.3	+0.6
PTH	Pithoragarh	59.75	298	eP	P	06 43 39.1	-1.1
PTH				IAmb	IAmb	06 43 42.0	
	comp=Z,97nm,0.9s						
MWZ	Matawai	59.80	148	P	P	06 43 41.0	+0.8
LGTI	Lohaghat	59.84	297	eP	P	06 43 40.1	-0.7
BKZ	Black Stump Fm	59.90	149	P	P	06 43 41.5	+0.6
BKZ	Black Stump Fm	59.90	149	P	P	06 43 40.8	0.0
BKZ	Black Stump Fm	59.90	149	P	P	06 43 41.6	+0.8
PUZ	Puketiti	59.99	147	P	P	06 43 41.9	+0.4
NMHZ	Naumai	60.01	149	P	P	06 43 42.9	+1.3
NNZ	Nelson	60.03	153	P	P	06 43 42.2	+0.6
KWHZ	Kaweka Forest	60.06	149	P	P	06 43 42.6	+0.7
PALK	Pallekele	60.32	272	P	P	06 43 45.3	+1.0
	comp=Z,47nm,0.9s,baz=71,slow=7.7,SNR=18						
PALK				LR	LR	07 08 57.5	
	comp=Z,668nm,21.8s,baz=82,slow=35						
	comp=Z,47nm,0.9s						
PALK	Pallekele	60.32	272	P	P	06 43 45.4	+1.2
PALK				S	S	06 51 58.8	+3.3
PALK	Pallekele	60.32	272	P	P	06 43 43.5	-0.7
	comp=Z,44nm,1.1s						
PALK	Pallekele	60.32	272	i P	P	06 43 45.8	+1.5
	SNR=10						
TSZ	Takapari Road	60.33	150	P	P	06 43 44.4	+0.7
TCW	Tory Channel	60.43	152	P	P	06 43 44.7	+0.3
INZ	Inchbonnie	60.44	155	P	P	06 43 45.3	+1.0
TIXI	Tiksi	60.60	355	LR	LR	07 09 59.3	
	comp=Z,2µm,21.5s,baz=179,slow=36						
TIXI	Tiksi	60.60	355	P	P	06 43 45.1	0.0
TIXI				IAmb	IAmb	06 43 48.1	
	comp=Z,64nm,0.8s						
TIXI	Tiksi	60.60	355	⇑iP	P	06 43 44.8	-0.2
TIXI				pmax	pmax		
	comp=Z,59nm,0.7s						
MRZ	Mangatainoka R	60.61	151	P	P	06 43 45.4	-0.1
NGP	Nagpur	60.64	288	eP	P	06 43 45.1	-1.1
NGP				IAmb	IAmb	06 43 48.7	
	comp=Z,44nm,1.6s						
FALS	False Pass	60.75	33	P	P	06 43 47.4	+1.0
FALS	False Pass	60.75	33	P	P	06 43 47.7	+1.4
	baz=247						
LTZ	Lake Taylor	60.83	155	P	P	06 43 47.6	+0.5
TKRD	Thakurdwara	60.90	297	eP	P	06 43 46.5	-1.4
MK31	Makanchi Array	60.92	317	i P	P	06 43 48.2	+0.5
MK31				pmax	pmax		
	comp=Z,135nm,1.1s						
MKAR	Makanchi Array	60.92	317	P	P	06 43 48.4	+0.6
	comp=Z,75nm,1.0s,baz=98,slow=7.2,SNR=187						
MKAR				LR	LR	07 11 18.9	
	comp=Z,3µm,20.3s,baz=94,slow=37						
MKAR				PKP2bc	P'P'bc	07 13 10.9	-5.7
	comp=Z,3.2nm,0.9s,baz=349,slow=1.2,SNR=9.7						
	comp=Z,75nm,1.0s						
BFZ	Birch Farm	60.95	151	P	P	06 43 47.7	-0.2
BFZ	Birch Farm	60.95	151	P	P	06 43 47.9	+0.1
XMAS	Kiritimati	60.97	94	IAMs_20	IAMs_20	07 02 46.1	
	comp=Z,3µm,22.0s						
KNHH	Kane Nui o Ham	60.99	74	P	P	06 43 50.5	+1.7
KHZ	Kahutara	61.07	154	P	P	06 43 48.0	-0.6
MAKZ	Makanchi	61.13	317	P	P	06 43 49.8	+0.6
MAKZ				IAmb	IAmb	06 43 51.9	
	comp=Z,161nm,1.1s						
MAKZ				IAMs_20	IAMs_20	07 11 05.0	
	comp=Z,3µm,20.0s						
MAKZ	Makanchi	61.13	317	P	P	06 43 49.8	+0.6
MAKZ				pmax	pmax		
	comp=Z,161nm,1.2s						
MAKZ				MLR	MLR		
	comp=Z,3µm,20.0s						
MAKZ	Makanchi	61.13	317	P	P	06 43 50.1	+0.9
MAKZ				pP	pP	06 44 02.4	+0.3
OXZ	Oxford	61.18	155	IAmb	IAmb	06 44 14.2	
	comp=Z,60nm,0.8s						
OXZ	Oxford	61.18	155	P	P	06 43 49.7	+0.4
HYB	Hyderabad	61.28	284	eP	P	06 43 51.0	+0.4
HYB				IVmB_BB		06 43 52.5	
	comp=Z,2µm,1.1s						
HYB				epP	pP	06 44 03.1	0.0
HYB				eScP	ScP	06 48 31.4	+1.1
HYB				eS	S	06 52 08.5	+0.9
GVZ	Greta Valley S	61.30	154	P	P	06 43 50.8	+0.6
GVZ				IAmb	IAmb	06 44 15.7	
	comp=Z,123nm,0.9s						
GVZ	Greta Valley S	61.30	154	P	P	06 43 50.2	0.0
LBZ	Lake Benmore	61.33	157	P	P	06 43 50.6	+0.2
LBZ	Lake Benmore	61.33	157	P	P	06 43 49.5	-0.9
MLZ	Mavora Lakes	61.42	159	IAmb	IAmb	06 44 23.3	
	comp=Z,106nm,1.2s						
MLZ	Mavora Lakes	61.42	159	P	P	06 43 50.9	-0.1
GAMB	Gambell	61.48	22	P	P	06 43 52.4	+1.3
	baz=234						
KLP	Kalpa	61.56	300	eP	P	06 43 51.6	-1.1
ZAA0	Zalesovo Array	61.58	326	IAmb	IAmb	06 43 53.9	
	comp=Z,202nm,1.9s						
ZALV	Zalesovo Beam	61.58	326	P	P	06 43 52.0	0.0
	comp=Z,22nm,0.7s,baz=103,slow=6.0,SNR=87						
ZALV				LR	LR	07 12 07.7	
	comp=Z,3µm,20.7s,baz=106,slow=38						
ZALV				PKP2bc	P'P'bc	07 13 07.3	-7.2
	comp=Z,2.9nm,0.8s,baz=290,slow=4.3,SNR=5.1						
	comp=Z,22nm,0.7s						
ZALV	Zalesovo Beam	61.58	326	P	P	06 43 51.8	-0.2
ZALV	Zalesovo Beam	61.58	326	i P	P	06 43 52.0	0.0
ZALV				pmax	pmax		
	comp=Z,22nm,0.6s						
DDI	Dehra Dun	61.65	298	eP	P	06 43 51.9	-1.1
DDI				IAmb	IAmb	06 43 54.9	
	comp=Z,88nm,0.9s						
MQZ	McQueen's Vall	61.74	155	P	P	06 43 52.7	-0.4
S12K	Black Hills	61.79	32	P	P	06 43 54.4	+1.0
	baz=248,SNR=5.3						
M11K	Mekoryuk	61.84	26	P	P	06 43 55.1	+1.5
	baz=241						
WUS	Wushi	61.90	311	IAmb	IAmb	06 43 57.5	
	comp=Z,113nm,1.3s						
SHLS	Shalkode	62.07	313	eP	P	06 43 53.9	-1.8
	comp=Z,83nm,1.2s						
SHLS	Shalkode	62.07	313	eP	P	06 43 53.9	-1.8
SHLS				pmax	pmax		
	comp=Z,83nm,1.2s						
PDGK	Podgornoye	62.08	313	P	P	06 43 55.4	-0.4
BHPL	Bhopal	62.10	290	eP	P	06 43 55.1	-1.0
BHPL				IAmb	IAmb	06 43 57.6	
	comp=Z,67nm,0.5s						
NDI	New Delhi	62.32	296	eP	P	06 43 56.6	-0.9
NDI				IAmb	IAmb	06 43 58.4	
	comp=Z,120nm,1.1s						
NRDN	NARMADA NAGAR	62.34	290	eP	P	06 43 56.5	-1.2
UZB	Uzynbulak	62.38	313	eP	P	06 43 58.1	+0.2
	comp=Z,68nm,1.1s						
UZB	Uzynbulak	62.38	313	eP	P	06 43 58.0	+0.2
UZB				pmax	pmax		
	comp=Z,68nm,1.1s						
SMLA	Simla	62.46	299	eP	P	06 43 57.3	-1.0
SMLA				IAmb	IAmb	06 44 00.7	
	comp=Z,87nm,1.3s						
SDPT	Sand Point	62.50	33	P	P	06 43 59.1	+1.0
SDPT	Sand Point	62.50	33	P	P	06 43 58.9	+0.8
SDPT	Sand Point	62.50	33	P	P	06 43 58.9	+0.8
	baz=249,SNR=12						
KKR	Kurukshetra	62.70	298	eP	P	06 43 59.8	-0.2
CHNA	Chernabura Isl	62.80	34	P	P	06 44 01.3	+1.2
	baz=250						
SATY	Saty	62.81	313	eP	P	06 44 00.9	+0.3
	comp=Z,93nm,1.3s						
SATY	Saty	62.81	313	eP	P	06 44 00.9	+0.3
SATY				pmax	pmax		
	comp=Z,93nm,1.3s						
KUDL	Kundal	62.94	296	eP	P	06 44 00.7	-0.9
KOD	Kodaikanal	63.06	276	eP	P	06 44 02.8	-0.2
M13K	Dall Lake	63.11	27	P	P	06 44 03.9	+1.8
	baz=244,SNR=9.5						
TDK	Taldyqorghan	63.16	315	eP	P	06 44 03.3	+0.4
	comp=Z,134nm,0.7s						
TDK	Taldyqorghan	63.16	315	eP	P	06 44 03.2	+0.4
TDK				pmax	pmax		
	comp=Z,134nm,0.7s						
K13K	Kusilvak Mount	63.24	25	IAmb	IAmb	06 44 06.2	
	comp=Z,147nm,0.9s						
K13K				IAMs_20	IAMs_20	07 10 35.8	
	comp=Z,4µm,21.0s						
K13K	Kusilvak Mount	63.24	25	P	P	06 44 04.4	+1.5
	baz=242						
DHRM	DHARAMSHALA	63.26	300	eP	P	06 44 02.7	-1.2
DHRM				IAmb	IAmb	06 44 05.7	
	comp=Z,15nm,0.3s						
S14K	Fog Glacier	63.32	32	P	P	06 44 04.6	+0.9
	baz=250,SNR=9.6						
TLWR	Talawar	63.53	300	eP	P	06 44 04.5	-1.0
KDJ	Kajisay	63.55	311	IAmb	IAmb	06 44 08.4	
	comp=Z,159nm,0.9s						
O14K	Tigyukauivet M	63.58	29	IAmb	IAmb	06 44 08.1	
	comp=Z,167nm,1.1s						
O14K	Tigyukauivet M	63.58	29	P	P	06 44 06.5	+1.3
	baz=247						
N14K	Kuskokwak Cree	63.66	28	P	P	06 44 07.1	+1.4
	baz=246,SNR=16						
TRD	Trivandrum	63.80	274	eP	P	06 44 06.4	-1.1
MDOK	Medeo	63.81	312	eP	P	06 44 07.6	+0.3
MDOK	Medeo	63.81	312	eP	P	06 44 07.6	+0.3
L14K	Kuka Creek	63.81	26	IAMs_20	IAMs_20	07 09 13.8	
	comp=Z,3µm,21.0s						
L14K	Kuka Creek	63.81	26	P	P	06 44 08.1	+1.4
	baz=244,SNR=41						
TNA	Tin City	63.83	21	IAmb	IAmb	06 44 09.6	
	comp=Z,80nm,1.0s						
TNA	Tin City	63.83	21	P	P	06 44 08.0	+1.3
	baz=237,SNR=7.3						
TNSS	Tian-Shan	63.86	312	eP	P	06 44 07.9	-0.1
TNSS	Tian-Shan	63.86	312	eP	P	06 44 07.8	-0.1
M14K	Bethel	63.88	27	P	P	06 44 08.5	+1.4
	baz=245,SNR=19						
AAA	Alma-Ata	63.91	313	eP	P	06 44 08.2	+0.3
	comp=Z,140nm,1.0s						
AAA	Alma-Ata	63.91	313	eP	P	06 44 08.1	+0.3
AAA				pmax	pmax		
	comp=Z,141nm,1.0s						
CHKK	Chushkaly	63.96	313	eP	P	06 44 08.5	+0.3
CHKK	Chushkaly	63.96	313	eP	P	06 44 08.4	+0.3
J14K	Nanvaranak Lak	64.08	25	IAmb	IAmb	06 44 11.6	
	comp=Z,76nm,0.9s						
J14K	Nanvaranak Lak	64.08	25	P	P	06 44 09.7	+1.3
	baz=243						
KSH	Kashi	64.12	308	P	P	06 44 12.4	+3.0
KSH				sP	pwP	06 44 32.6	+3.0
KSH				PcP	PcP	06 44 46.3	+2.1
KSH				S	S	06 52 46.8	+4.0
KSH				pmax	pmax		
	comp=Z,85nm,0.8s						
KSH				pmax	pmax		
	comp=Z,1µm,6.3s						
KSH				LR	LR		
	comp=Z,900nm,17.9s						
KSH				LR	LR		
	comp=Z,2µm,20.6s						
KSH				LR	LR		
	comp=Z,3µm,20.6s						
ANM	Nome	64.23	22	IAmb	IAmb	06 44 12.5	
	comp=Z,104nm,0.8s						
ANM	Nome	64.23	22	P	P	06 44 10.8	+1.3
	baz=240,SNR=34						
O15K	Ungalikthiuk R	64.23	29	IAMs_20	IAMs_20	07 07 34.2	
	comp=Z,4µm,20.0s						
O15K	Ungalikthiuk R	64.23	29	P	P	06 44 10.9	+1.4
	baz=248						
KURK	Kurchatov	64.25	321	P	P	06 44 10.2	+0.4
KURK				P	P	06 44 10.2	+0.4
KURK				S	S	06 52 45.6	+2.0
KURK				S	S	06 52 45.6	+2.0
KURK	Kurchatov	64.25	321	P	P	06 44 10.1	+0.4
KURK	Kurchatov	64.25	321	IAMs_20	IAMs_20	07 12 40.4	
	comp=Z,3µm,21.0s						
KURK	Kurchatov	64.25	321	c iP	P	06 44 10.0	+0.2
KURK				pmax	pmax		
	comp=Z,307nm,1.0s						
KURK				MLR	MLR		
	comp=Z,3µm,20.0s						
KURK	Kurchatov	64.25	321	P	P	06 44 10.2	+0.4
ULHL	Ulahol	64.26	311	P	P	06 44 10.9	+0.5
	SNR=14						
KURBB	Kurchatov Arra	64.28	321	P	P	06 44 10.3	+0.3
	comp=Z,144nm,0.8s,baz=104,slow=6.7,SNR=551						
KURBB				S	S	06 52 42.9	-1.1
	comp=Z,0.3nm,0.4s,baz=95,slow=10,SNR=5.3						
KURBB				PKPPKP	P'P'df	07 12 59.8	-2.0
	comp=Z,0.4nm,0.3s,baz=257,slow=3.2,SNR=4.0						
KURBB				LR	LR	07 13 03.6	
	comp=Z,3µm,21.2s,baz=105,slow=37						
	comp=Z,144nm,0.8s						
KURBB	Kurchatov Arra	64.28	321	P	P	06 44 09.9	-0.1
F14K	Arctic Creek	64.35	21	P	P	06 44 11.6	+1.5
	baz=239						
M15K	Kasigluk River	64.42	27	P	P	06 44 12.1	+1.4
	baz=246						
L15K	Ungalak Mounta	64.47	26	P	P	06 44 12.6	+1.5
	baz=245						
N15K	Kwethluk River	64.49	28	IAmb	IAmb	06 44 14.2	
	comp=Z,144nm,0.8s						
N15K	Kwethluk River	64.49	28	P	P	06 44 12.4	+1.2
	baz=247						
BOOM	Boomskoye usch	64.52	312	IAmb	IAmb	06 44 48.1	
	comp=Z,105nm,1.1s						
K15K	Wolf Creek Mou	64.72	26	IAMs_20	IAMs_20	07 09 32.7	
	comp=Z,5µm,21.0s						
K15K	Wolf Creek Mou	64.72	26	P	P	06 44 14.2	+1.5
	baz=245,SNR=36						
R16K	Pilot Point	64.78	31	P	P	06 44 14.9	+1.9
	baz=251						
TKM2	Tokmak 2	64.83	312	P	P	06 44 14.1	0.0
	SNR=53						
G15K	Niukluk	64.94	22	P	P	06 44 15.7	+1.7
	baz=241						
P16K	Nushagak River	65.06	30	P	P	06 44 16.5	+1.6
	baz=250,SNR=13						
F15K	North Star Dit	65.07	22	IAmb	IAmb	06 44 18.1	
	comp=Z,141nm,1.1s						
F15K	North Star Dit	65.07	22	P	P	06 44 16.4	+1.5
	baz=240						
O16K	Kokwok River B	65.21	29	IAmb	IAmb	06 44 18.4	
	comp=Z,105nm,0.8s						
O16K				IAMs_20	IAMs_20	07 08 27.0	
	comp=Z,5µm,22.0s						
O16K	Kokwok River B	65.21	29	P	P	06 44 17.2	+1.3
	baz=249,SNR=19						
N16K	Nishlik Lake	65.21	28	P	P	06 44 17.4	+1.4
	baz=248						
CHIR	Chirikof Islan	65.26	33	P	P	06 44 17.7	+1.4
	baz=253						
KBK	Karagaybulak	65.27	312	P	P	06 44 17.6	+0.7
	SNR=44						
M16K	Timber Creek	65.33	27	IAmb	IAmb	06 44 19.6	
	comp=Z,80nm,0.8s						
M16K	Timber Creek	65.33	27	P	P	06 44 17.9	+1.2
	baz=248,SNR=10						
L16K	Owhat River	65.36	27	IAmb	IAmb	06 44 19.5	
	comp=Z,178nm,1.4s						
L16K				IAMs_20	IAMs_20	07 10 46.2	
	comp=Z,4µm,20.0s						
L16K	Owhat River	65.36	27	P	P	06 44 17.9	+1.1
	baz=247						
R17L	Mt. Peulik Vol	65.42	31	P	P	06 44 17.6	+0.4
	baz=252,SNR=7.3						
PLK4	Peulik 4	65.42	31	IAmb	IAmb	06 44 34.9	
	comp=Z,176nm,1.1s						
CHMS	Chumysh	65.45	312	P	P	06 44 18.3	+0.4
	SNR=44						
KAD	Karad	65.45	284	eP	P	06 44 18.2	-0.1
H16K	Elim	65.46	23	P	P	06 44 18.3	+0.9
	baz=243,SNR=42						
UDPR	Udaipur	65.46	292	eP	P	06 44 17.2	-1.0
FRU1	Bishkek	65.52	312	IAmb	IAmb	06 44 20.7	
	comp=Z,83nm,0.9s						
J16K	Anvik River	65.52	25	IAmb	IAmb	06 44 20.8	
	comp=Z,83nm,0.8s						
J16K	Anvik River	65.52	25	P	P	06 44 19.4	+1.6
	baz=245						
UCH	Uchtor	65.53	311	P	P	06 44 20.1	+1.2
	SNR=134						
AAK	Ala-Archa	65.59	312	P	P	06 44 19.5	+0.5
	SNR=28						
AAK	Ala-Archa	65.59	312	LR	LR	07 15 29.1	
	comp=Z,1µm,19.9s,baz=84,slow=38						
AAK	Ala-Archa	65.59	312	P	P	06 44 19.4	+0.5
AAK				P	P	06 44 19.4	+0.5
AAK	Ala-Archa	65.59	312	P	P	06 44 19.4	+0.5
AAK	Ala-Archa	65.59	312	i P	P	06 44 19.5	+0.5
	SNR=35						
AAK	Ala-Archa	65.59	312	i P	P	06 44 18.9	-0.1
AAK				pmax	pmax		
	comp=Z,46nm,1.0s						
AAK				MLR	MLR		
	comp=Z,2µm,18.0s						
Q16K	King Salmon	65.60	30	P	P	06 44 19.7	+1.3
	baz=251						
POO	Poona	65.67	285	eP	P	06 44 18.5	-1.2
POO				IAmb	IAmb	06 44 21.1	
	comp=Z,124nm,0.4s						
USP	Ospenovka	65.67	312	P	P	06 44 19.6	+0.3
	SNR=46						
I17K	Unalakleet	65.74	24	IAmb	IAmb	06 44 22.6	
	comp=Z,108nm,0.9s						
I17K				IAMs_20	IAMs_20	07 09 49.6	
	comp=Z,5µm,21.0s						
I17K	Unalakleet	65.74	24	P	P	06 44 20.6	+1.4
	baz=245,SNR=38						
O17K	Koliganek Bris	65.75	29	P	P	06 44 20.8	+1.4
	baz=250,SNR=36						
G16K	Koyuk River	65.76	22	P	P	06 44 20.4	+1.1
	baz=243						
Q17K	Contact Creek	65.85	31	P	P	06 44 20.7	+0.5
	baz=252,SNR=6.2						
P17K	Kvichak River	65.87	30	IAmb	IAmb	06 44 23.8	
	comp=Z,209nm,1.2s						
P17K	Kvichak River	65.87	30	P	P	06 44 20.7	+0.6
	baz=251,SNR=11						
NIL	Nilore	65.88	302	P	P	06 44 21.7	+0.9
NIL	Nilore	65.88	302	P	P	06 44 21.7	+0.9
NIL				pmax	pmax		
	comp=Z,522nm,0.8s						
NIL				MLR	MLR		
	comp=Z,2µm,21.0s						
N17K	Nushagak Hills	65.96	28	P	P	06 44 22.0	+1.3
	baz=250,SNR=15						
RAR	Rarotonga	65.97	119	LR	LR	07 08 08.6	
	comp=Z,2µm,21.9s,baz=289,slow=31						
L17K	Donlin	66.04	26	P	P	06 44 22.3	+1.1
	baz=248,SNR=23						
EKS2	Erkin-Say	66.12	312	P	P	06 44 23.1	+0.8
	SNR=33						
C16K	Lisburne Hills	66.14	19	IAmb	IAmb	06 44 24.6	
	comp=Z,88nm,1.0s						
C16K	Lisburne Hills	66.14	19	P	P	06 44 22.8	+1.0
	baz=239,SNR=42						
M17K	Holitna River	66.16	27	IAMs_20	IAMs_20	07 11 10.8	
	comp=Z,4µm,20.0s						
M17K	Holitna River	66.16	27	P	P	06 44 23.6	+1.6
	baz=249,SNR=30						
J17K	VABM Dome	66.19	25	IAmb	IAmb	06 44 25.6	
	comp=Z,154nm,0.8s						
J17K				IAMs_20	IAMs_20	07 12 16.8	
	comp=Z,5µm,20.0s						
J17K	VABM Dome	66.19	25	P	P	06 44 23.8	+1.6
	baz=247,SNR=38						
BTLS	Baital	66.22	314	eP	P	06 44 19.3	-3.4
SII	Sitkinak Islan	66.24	33	P	P	06 44 24.6	+2.0
SII	Sitkinak Islan	66.24	33	P	P	06 44 24.0	+1.4
	baz=254,SNR=8.5						
K17K	Iditarod	66.26	26	IAmb	IAmb	06 44 26.1	
	comp=Z,158nm,0.8s						
K17K				IAMs_20	IAMs_20	07 12 20.5	
	comp=Z,4µm,20.0s						
K17K	Iditarod	66.26	26	P	P	06 44 24.1	+1.5
	baz=248,SNR=44						
Q18K	Katmai Hardscr	66.41	31	P	P	06 44 23.6	-0.2
	baz=253,SNR=13						
G17K	Kiwalik Mounta	66.44	23	P	P	06 44 25.1	+1.3

	baz=244						
H17K	Granite Mounta	66.49	23	IAmb	IAmb	06 44 27.2	
	comp=Z,122nm,0.8s						
H17K				IAMs_20	IAMs_20	07 12 37.4	
	comp=Z,3µm,20.0s						
H17K	Granite Mounta	66.49	23	P	P	06 44 25.6	+1.6
	baz=245						
P18K	Big Mountain,	66.53	30	P	P	06 44 25.3	+0.9
	baz=252						
D17K	Noatak River	66.59	20	P	P	06 44 25.9	+1.3
	baz=241,SNR=73						
N18K	Kilae Creek	66.62	28	IAmb	IAmb	06 44 28.3	
	comp=Z,92nm,1.0s						
N18K	Kilae Creek	66.62	28	P	P	06 44 26.4	+1.4
	baz=251						
F17K	Baldwin Pennin	66.64	22	P	P	06 44 26.4	+1.5
	baz=244						
O18K	Koktuh Hills	66.68	29	IAmb	IAmb	06 44 28.4	
	comp=Z,140nm,0.8s						
O18K				IAMs_20	IAMs_20	07 14 21.8	
	comp=Z,3µm,19.0s						
O18K	Koktuh Hills	66.68	29	P	P	06 44 26.5	+1.1
	baz=252,SNR=19						
E17K	Hotham Inlet	66.72	21	P	P	06 44 27.1	+1.6
	baz=243,SNR=124						
L18K	Granite Mounta	66.78	27	IAmb	IAmb	06 44 29.5	
	comp=Z,134nm,1.2s						
L18K				IAMs_20	IAMs_20	07 11 21.2	
	comp=Z,4µm,21.0s						
L18K	Granite Mounta	66.78	27	P	P	06 44 27.4	+1.4
	baz=250						
RDOG	Red Dog Mine	66.82	20	IAmb	IAmb	06 44 29.2	
	comp=Z,88nm,0.8s						
RDOG	Red Dog Mine	66.82	20	P	P	06 44 27.4	+1.3
	baz=241,SNR=34						
OHAK	Old Harbor	66.89	32	IAmb	IAmb	06 44 42.8	
	comp=Z,169nm,1.3s						
OHAK	Old Harbor	66.89	32	P	P	06 44 28.2	+1.5
OHAK	Old Harbor	66.89	32	P	P	06 44 27.9	+1.2
	baz=255,SNR=6.9						
M18K	Stony River	66.91	28	P	P	06 44 28.4	+1.6
	baz=251						
C17K	DeLong Mountai	66.94	19	P	P	06 44 28.2	+1.3
	baz=241,SNR=31						
NRIK	Noril'sk	67.11	342	P	P	06 44 28.0	+0.1
	comp=Z,49nm,1.0s,baz=118,slow=7.2,SNR=51						
NRIK				S	S	06 53 15.4	-2.6
	comp=Z,1.5nm,0.6s,baz=227,slow=22,SNR=11						
NRIK				LR	LR	07 14 09.1	
	comp=Z,2µm,21.8s,baz=122,slow=36						
	comp=Z,49nm,1.0s						
NRIK	Noril'sk	67.11	342*c*	*i*P	P	06 44 27.9	0.0
NRIK				pmax	pmax		
	comp=Z,113nm,1.5s						
Q19K	Cape Douglas,	67.17	31	P	P	06 44 29.2	+0.7
	baz=254,SNR=9.3						
H18K	Honhosa River	67.17	23	IAmb	IAmb	06 44 31.1	
	comp=Z,93nm,0.7s						
H18K				IAMs_20	IAMs_20	07 10 54.6	
	comp=Z,4µm,21.0s						
H18K	Honhosa River	67.17	23	P	P	06 44 29.5	+1.1
	baz=247						
J18K	Innoko River	67.21	25	IAMs_20	IAMs_20	07 10 58.5	
	comp=Z,5µm,21.0s						
J18K	Innoko River	67.21	25	P	P	06 44 29.5	+0.8
	baz=249,SNR=12						
O19K	Port Alsworth	67.21	29	IAmb	IAmb	06 44 44.5	
	comp=Z,120nm,1.2s						
O19K				IAMs_20	IAMs_20	07 09 39.7	
	comp=Z,4µm,21.0s						
O19K	Port Alsworth	67.21	29	P	P	06 44 29.9	+1.2
	baz=253,SNR=10						
F18K	Selawik	67.28	22	P	P	06 44 30.2	+1.2
	baz=245,SNR=40						
E18K	Tukpahlearik C	67.30	21	IAmb	IAmb	06 44 32.6	
	comp=Z,146nm,0.8s						
E18K	Tukpahlearik C	67.30	21	P	P	06 44 30.7	+1.6
	baz=244,SNR=137						
N19K	Bonanza Creek	67.31	28	IAmb	IAmb	06 44 32.8	
	comp=Z,142nm,0.7s						
N19K				IAMs_20	IAMs_20	07 09 18.6	
	comp=Z,5µm,22.0s						
N19K	Bonanza Creek	67.31	28	P	P	06 44 31.1	+1.6
	baz=252,SNR=35						
MANEM	Manem	67.32	306	IAmb	IAmb	06 44 33.2	
	comp=Z,461nm,0.8s						
G18K	Tagagawik	67.36	23	P	P	06 44 30.6	+1.1
	baz=246,SNR=119						
KDAK	Kodiak Island	67.40	32	LR	LR	07 12 07.0	
	comp=Z,1µm,20.4s,baz=238,slow=34						
KDAK	Kodiak Island	67.40	32	P	P	06 44 31.4	+1.4
KDAK	Kodiak Island	67.40	32	IAMs_20	IAMs_20	07 09 19.1	
	comp=Z,4µm,21.0s						
KDAK	Kodiak Island	67.40	32	P	P	06 44 31.4	+1.4
KDAK				pmax	pmax		
	comp=Z,271nm,1.2s						
KDAK	Kodiak Island	67.40	32	P	P	06 44 31.2	+1.2
	baz=255						
P19K	Oil Pt	67.57	30	P	P	06 44 31.7	+0.6
	baz=254,SNR=11						
L19K	White Mountain	67.58	27	IAmb	IAmb	06 44 34.2	
	comp=Z,101nm,0.9s						
L19K				IAMs_20	IAMs_20	07 11 55.3	
	comp=Z,5µm,21.0s						
L19K	White Mountain	67.58	27	P	P	06 44 32.3	+1.3
	baz=251						
GCSA	Galena City Sc	67.60	24	P	P	06 44 32.1	+1.1
	baz=248,SNR=19						
C18K	Utukok River	67.66	19	IAmb	IAmb	06 44 34.2	
	comp=Z,67nm,0.8s						
C18K	Utukok River	67.66	19	P	P	06 44 32.6	+1.1
	baz=243						
Q20K	Shuyak Island	67.71	31	P	P	06 44 32.6	+0.7
	baz=255,SNR=6.4						
B18K	Kokolik River	67.80	19	P	P	06 44 33.7	+1.5
	baz=242,SNR=58						
BRZS	Berezniki	67.84	319	*e*P	P	06 44 33.4	+0.5
BRZS	Berezniki	67.84	319	*e*P	P	06 44 33.4	+0.5
J19K	Poorman	67.85	25	IAmb	IAmb	06 44 35.8	
	comp=Z,112nm,0.8s						
J19K	Poorman	67.85	25	P	P	06 44 33.9	+1.2
	baz=250						
DZA	Taraz	67.94	312	*e*P	P	06 44 34.0	+0.2
DZA	Taraz	67.94	312	*e*P	P	06 44 33.9	+0.2
O20K	Slope Mountain	67.99	29	P	P	06 44 34.5	+0.8
	baz=254						
RED	Redoubt Volcan	68.01	29	IAmb	IAmb	06 44 36.2	
	comp=Z,108nm,0.9s						
G19K	Purcell Mounta	68.05	23	P	P	06 44 35.1	+1.2
	baz=248						
F19K	Shaleruckik Mo	68.06	22	P	P	06 44 34.8	+0.8
	baz=247						
H19K	Roundabout Mou	68.06	23	IAMs_20	IAMs_20	07 10 50.0	
	comp=Z,3µm,20.0s						
H19K	Roundabout Mou	68.06	23	P	P	06 44 35.2	+1.2
	baz=249						
M20K	Styx River	68.26	28	IAmb	IAmb	06 44 38.9	
	comp=Z,240nm,1.4s						
M20K	Styx River	68.26	28	P	P	06 44 37.1	+1.7
	baz=253						
K20K	Telida	68.29	26	IAmb	IAmb	06 44 39.0	
	comp=Z,104nm,1.0s						
K20K				IAMs_20	IAMs_20	07 11 55.2	
	comp=Z,4µm,22.0s						
K20K	Telida	68.29	26	P	P	06 44 37.3	+1.8
	baz=252,SNR=20						
HOM	Homer	68.35	30	P	P	06 44 37.3	+1.4
	baz=255						
C19K	Lookout Ridge	68.39	19	IAmb	IAmb	06 44 39.6	
	comp=Z,199nm,1.1s						
C19K	Lookout Ridge	68.39	19	P	P	06 44 37.8	+1.8
	baz=244,SNR=116						
A19K	Wainwright	68.42	18	P	P	06 44 38.0	+1.8
	baz=242,SNR=129						
N20K	Mount Spurr	68.49	28	P	P	06 44 38.1	+1.3
	baz=254,SNR=10						
SPCR	Spurr Chakacha	68.49	28	P	P	06 44 38.2	+1.4
	baz=254,SNR=7.9						
E19K	Redstone River	68.50	21	P	P	06 44 38.2	+1.5
	baz=247						
J20K	Nowinta River	68.52	25	IAmb	IAmb	06 44 40.4	
	comp=Z,147nm,0.8s						
J20K				IAMs_20	IAMs_20	07 11 38.2	
	comp=Z,4µm,21.0s						
J20K	Nowinta River	68.52	25	P	P	06 44 38.6	+1.7
	baz=251						
CNPM	China Poot	68.52	30	IAMs_20	IAMs_20	07 10 54.6	
	comp=Z,3µm,21.0s						
KK31	Karatay Array	68.55	312	IAmb	IAmb	06 44 39.8	
	comp=Z,98nm,1.1s						
KK31	Karatay Array	68.55	312	*i*P	P	06 44 37.3	-0.2
KKAR	Karatay Array	68.55	312	P	P	06 44 37.6	+0.1
KKAR	Karatay Array	68.55	312	P	P	06 44 37.6	+0.1
I20K	Naaghedeneel	68.59	24	IAMs_20	IAMs_20	07 13 50.6	
	comp=Z,4µm,21.0s						
I20K	Naaghedeneel	68.59	24	P	P	06 44 39.1	+1.8
	baz=251						
D19K	Kuna River	68.61	20	IAmb	IAmb	06 44 40.5	
	comp=Z,133nm,0.9s						
D19K	Kuna River	68.61	20	P	P	06 44 38.7	+1.3
	baz=246						
H20K	Anotleneega Mo	68.66	24	P	P	06 44 39.3	+1.5
	baz=250,SNR=94						
BRLK	Bradley Lake	68.75	30	IAmb	IAmb	06 44 40.3	
	comp=Z,142nm,0.7s						
BRLK				IAMs_20	IAMs_20	07 12 37.3	
	comp=Z,3µm,22.0s						
BRSE	Bradley Lake S	68.82	30	P	P	06 44 39.5	+0.6
	baz=256,SNR=10						
IUG	Iuzhnay	68.84	311	*e*P	P	06 44 39.0	-0.5
F20K	Avaraart Lake	68.89	22	P	P	06 44 40.7	+1.6
	baz=249						
PPLA	Purkeypile	68.97	27	IAmb	IAmb	06 44 42.6	
	comp=Z,92nm,0.7s						
PPLA				IAMs_20	IAMs_20	07 12 50.2	
	comp=Z,4µm,20.0s						
PPLA	Purkeypile	68.97	27	P	P	06 44 40.9	+1.0
	baz=254,SNR=22						
SKT	Skwentna	69.01	28	P	P	06 44 41.0	+1.0
SKT	Skwentna	69.01	28	IAMs_20	IAMs_20	07 12 51.4	
	comp=Z,4µm,21.0s						
SKT	Skwentna	69.01	28	P	P	06 44 40.2	+0.2
	baz=255,SNR=18						
BRLS	Borolday	69.04	312	*e*P	P	06 44 41.5	+0.8
BRLS	Borolday	69.04	312	*e*P	P	06 44 41.4	+0.8
CHM	Chimkent	69.17	311	*e*P	P	06 44 41.9	+0.5
	comp=Z,82nm,0.9s						
CHM	Chimkent	69.17	311	*e*P	P	06 44 41.9	+0.5
CHM				pmax	pmax		
	comp=Z,82nm,0.9s						
E20K	Nigu River	69.17	21	P	P	06 44 42.4	+1.4
	baz=248						
CHUM	Lake Minchumin	69.20	26	P	P	06 44 42.6	+1.6
	baz=253,SNR=48						
D20K	Etivluk River	69.20	20	P	P	06 44 42.5	+1.4
	baz=247						
BHUJ	Bhuj	69.24	291	*e*P	P	06 44 41.1	-0.9
BHUJ				IAmb	IAmb	06 44 44.9	
	comp=Z,97nm,0.8s						
SUA	Susitna One	69.24	28	IAmb	IAmb	06 44 43.4	
	comp=Z,101nm,0.9s						
SUA	Susitna One	69.24	28	P	P	06 44 41.8	+0.2
	baz=256,SNR=7.1						
SLKM	Skilak Lake	69.25	29	IAmb	IAmb	06 44 44.3	
	comp=Z,185nm,1.0s						
SLKM				IAMs_20	IAMs_20	07 14 37.9	
	comp=Z,3µm,22.0s						
IMAR	Indian Mountai	69.27	23	P	P	06 44 43.0	+1.5
CHGR	Chuyangaron	69.35	307*c*	*i*P	P	06 44 43.1	+0.4
CHGR				pmax	pmax		
	comp=Z,338nm,1.0s						
KBL	Kabul	69.39	303	P	P	06 44 43.2	+0.1
	SNR=62						
KBL				P	P	06 44 43.2	+0.1
	SNR=62						
KBL				S	S	06 53 47.8	+1.1
KBL				S	S	06 53 47.8	+1.1
KBL	Kabul	69.39	303	P	P	06 44 43.2	+0.1
KBL				IAmb	IAmb	06 44 46.4	
	comp=Z,136nm,1.0s						
KBL	Kabul	69.39	303	P	P	06 44 43.2	+0.1
KBL				pmax	pmax		
	comp=Z,136nm,1.0s						
O22K	Cooper Landing	69.49	29	IAMs_20	IAMs_20	07 15 05.1	
	comp=Z,2µm,19.0s						
O22K	Cooper Landing	69.49	29	P	P	06 44 43.4	+0.5
	baz=257,SNR=15						
L22K	Petersville	69.50	27	IAMs_20	IAMs_20	07 13 27.2	
	comp=Z,4µm,21.0s						
H21K	Melozitna Rive	69.53	24	IAmb	IAmb	06 44 46.4	
	comp=Z,121nm,0.9s						
H21K				IAMs_20	IAMs_20	07 11 56.8	
	comp=Z,4µm,21.0s						
H21K	Melozitna Rive	69.53	24	P	P	06 44 44.7	+1.6
	baz=252,SNR=72						
G21K	Allakaket	69.53	23	IAmb	IAmb	06 44 47.0	
	comp=Z,97nm,1.0s						
G21K	Allakaket	69.53	23	P	P	06 44 44.5	+1.3
	baz=251						
SEW	Seward	69.53	30	IAmb	IAmb	06 44 45.6	
	comp=Z,118nm,0.8s						
SEW				IAMs_20	IAMs_20	07 12 39.3	
	comp=Z,5µm,22.0s						
SEW	Seward	69.53	30	P	P	06 44 44.0	+0.8
	baz=257,SNR=14						
B20K	Meade River	69.54	19	P	P	06 44 44.6	+1.5
	baz=246,SNR=163						
M22K	Willow	69.60	28	IAMs_20	IAMs_20	07 10 45.0	
	comp=Z,3µm,22.0s						
M22K	Willow	69.60	28	P	P	06 44 43.5	0.0
	baz=256,SNR=7.6						
RC01	Rabbit Creek A	69.62	29	IAmb	IAmb	06 44 46.5	
	comp=Z,130nm,0.7s						
RC01				IAMs_20	IAMs_20	07 14 30.5	
	comp=Z,3µm,21.0s						
RC01	Rabbit Creek A	69.62	29	P	P	06 44 44.0	+0.2
	baz=257,SNR=11						
BVA0	Borovoye Array	69.69	322	*i*P	P	06 44 44.3	-0.1
BVAR	Borovoye Array	69.69	322	P	P	06 44 44.7	+0.3
	comp=Z,69nm,0.5s,baz=106,slow=7.4,SNR=55						
BVAR				PKP2bc	P'P'bc	07 12 51.0	-0.9
	comp=Z,2.0nm,0.8s,baz=318,slow=2.0,SNR=8.9						
BVAR				LR	LR	07 16 25.5	
	comp=Z,2µm,20.9s,baz=90,slow=37						
	comp=Z,69nm,0.5s						
CUT	Chulitna	69.69	27	IAMs_20	IAMs_20	07 11 33.5	
	comp=Z,4µm,22.0s						
CUT	Chulitna	69.69	27	P	P	06 44 44.3	+0.2
	baz=256,SNR=6.0						
KTH	Kantishna Hill	69.70	26	IAmb	IAmb	06 44 46.7	
	comp=Z,172nm,0.8s						
KTH				IAMs_20	IAMs_20	07 12 50.5	
	comp=Z,4µm,22.0s						
I21K	Tanana	69.71	24	IAmb	IAmb	06 44 48.2	
	comp=Z,184nm,0.9s						
I21K	Tanana	69.71	24	P	P	06 44 45.8	+1.5
	baz=253						
BORK	Borovoye	69.74	322	P	P	06 44 45.1	+0.5
BORK				IAmb	IAmb	06 44 46.9	
	comp=Z,138nm,0.8s						
BORK	Borovoye	69.74	322*c*	*i*P	P	06 44 45.0	+0.4
BORK				pmax	pmax		
	comp=Z,153nm,0.8s						
BORK	Borovoye	69.74	322	P	P	06 44 45.2	+0.5
BORK				sP	pwP	06 45 03.0	-0.5
F21K	Alatna River	69.77	22	P	P	06 44 45.8	+1.2
	baz=251						
BPAW	Bear Paw Mtn.	69.82	26	IAmb	IAmb	06 44 47.8	
	comp=Z,154nm,0.8s						
BPAW				IAMs_20	IAMs_20	07 12 39.6	
	comp=Z,4µm,21.0s						
BPAW	Bear Paw Mtn.	69.82	26	P	P	06 44 45.9	+1.0
	baz=254,SNR=30						
TRF	Thorofare Moun	69.95	26	IAMs_20	IAMs_20	07 13 21.1	
	comp=Z,4µm,22.0s						
TRF	Thorofare Moun	69.95	26	P	P	06 44 46.1	+0.1
	baz=255,SNR=46						
C21K	Knifeblade Rid	69.98	20	P	P	06 44 47.3	+1.4
	baz=249						
E21K	Killik River	70.01	21	P	P	06 44 47.5	+1.4
	baz=250						
PMR	Palmer	70.02	28	IAmb	IAmb	06 44 48.1	
	comp=Z,116nm,0.7s						
PMR	Palmer	70.02	28	P	P	06 44 46.2	0.0
PMR	Palmer	70.02	28	P	P	06 44 46.3	+0.2
	baz=257,SNR=25						
SHAA	Shahritus	70.15	306	IAmb	IAmb	06 44 50.5	
	comp=Z,444nm,0.9s						
GHO	Glory Hole Cre	70.16	28	IAmb	IAmb	06 44 48.9	
	comp=Z,85nm,0.7s						
GHO				IAMs_20	IAMs_20	07 11 23.7	
	comp=Z,4µm,22.0s						
H22K	Ishtalitna Cre	70.16	24	IAMs_20	IAMs_20	07 12 05.6	
	comp=Z,4µm,22.0s						
H22K	Ishtalitna Cre	70.16	24	P	P	06 44 48.6	+1.6
	baz=253,SNR=55						
B21K	Ikpikpuk River	70.21	19	IAmb	IAmb	06 44 49.9	
	comp=Z,124nm,0.8s						
B21K	Ikpikpuk River	70.21	19	P	P	06 44 48.6	+1.4
	baz=249						
A21K	Barrow	70.24	18	P	P	06 44 48.6	+1.3
	baz=246,SNR=113						
PWL	Port Wells	70.24	29	IAMs_20	IAMs_20	07 10 50.9	
	comp=Z,4µm,22.0s						
PWL	Port Wells	70.24	29	P	P	06 44 48.5	+0.9
	baz=258,SNR=30						
KNK	Knik Glacier	70.30	29	IAmb	IAmb	06 44 50.4	
	comp=Z,234nm,1.3s						
KNK				IAMs_20	IAMs_20	07 11 40.4	
	comp=Z,3µm,20.0s						
KNK	Knik Glacier	70.30	29	P	P	06 44 48.8	+0.8
	baz=258,SNR=14						
SML	Sawmill	70.44	28	IAmb	IAmb	06 44 50.9	
	comp=Z,151nm,0.7s						
SML				IAMs_20	IAMs_20	07 13 26.2	
	comp=Z,4µm,21.0s						
SML	Sawmill	70.44	28	P	P	06 44 49.6	+0.8
	baz=258,SNR=23						
P23K	Montague Islan	70.52	30	P	P	06 44 50.3	+1.1
	baz=259						
RND	Reindeer	70.56	27	IAmb	IAmb	06 44 51.6	
	comp=Z,102nm,0.7s						
WAT1	Susitna Watana	70.56	27	P	P	06 44 50.5	+1.0
	baz=257						
D22K	Ayikyak River	70.60	20	P	P	06 44 51.5	+1.9
	baz=251,SNR=213						
A22K	Sinclair Lake	70.61	18	P	P	06 44 51.1	+1.5
	baz=248						
MCK	McKinley	70.61	26	IAmb	IAmb	06 44 52.5	
	comp=Z,160nm,1.0s						
MCK				IAMs_20	IAMs_20	07 13 18.4	
	comp=Z,4µm,21.0s						
MCK	McKinley	70.61	26	P	P	06 44 50.1	+0.3
	baz=256,SNR=36						
E22K	Anaktuvuk Pass	70.67	21	IAmb	IAmb	06 44 53.5	
	comp=Z,148nm,1.0s						
E22K	Anaktuvuk Pass	70.67	21	P	P	06 44 51.8	+1.7
	baz=252,SNR=119						
M23K	Glacier View	70.72	28	P	P	06 44 51.2	+0.8
	baz=258,SNR=12						
NEA2	Nenana	70.75	25	IAMs_20	IAMs_20	07 13 19.3	
	comp=Z,4µm,21.0s						
NEA2	Nenana	70.75	25	P	P	06 44 51.5	+0.8
	baz=256,SNR=16						
I23K	Minto, Yukon-K	70.77	25	IAmb	IAmb	06 44 53.8	
	comp=Z,138nm,0.8s						
I23K				IAMs_20	IAMs_20	07 13 08.7	
	comp=Z,5µm,22.0s						
I23K	Minto, Yukon-K	70.77	25	P	P	06 44 51.9	+1.2
	baz=256,SNR=82						
GLI	Glacier Island	70.83	29	IAmb	IAmb	06 45 07.0	
	comp=Z,374nm,1.7s						
GLI				IAMs_20	IAMs_20	07 15 19.7	
	comp=Z,4µm,21.0s						
GLI	Glacier Island	70.83	29	P	P	06 44 52.1	+0.9
	baz=259						
B22K	Teshekpuk Lake	70.85	19	P	P	06 44 52.4	+1.3
	baz=250,SNR=174						
H23K	Yukon River	70.87	24	IAmb	IAmb	06 44 54.7	
	comp=Z,142nm,0.8s						
H23K				IAMs_20	IAMs_20	07 13 10.9	
	comp=Z,4µm,21.0s						
H23K	Yukon River	70.87	24	P	P	06 44 52.8	+1.5
	baz=255						
WAT6	Susitna Watana	70.88	28	P	P	06 44 52.2	+0.6
	baz=258,SNR=43						
SCM	Sheep Creek Mo	70.91	28	IAMs_20	IAMs_20	07 11 38.6	
	comp=Z,3µm,22.0s						
SCM	Sheep Creek Mo	70.91	28	P	P	06 44 52.8	+1.0
	baz=258,SNR=32						
G23K	Bananza Creek	70.92	23	IAmb	IAmb	06 44 55.1	
	comp=Z,155nm,0.8s						
G23K	Bananza Creek	70.92	23	P	P	06 44 53.4	+1.8
	baz=254,SNR=132						
Q23K	Middleton Isla	70.94	31	P	P	06 44 53.3	+1.5
	baz=260						
COLD	Coldfoot	70.99	22	IAmb	IAmb	06 44 55.6	
	comp=Z,207nm,1.0s						
COLD	Coldfoot	70.99	22	P	P	06 44 53.8	+1.8
	baz=254,SNR=212						
HIN	Hinchinbrook I	71.03	30	IAMs_20	IAMs_20	07 12 35.0	
	comp=Z,4µm,21.0s						
FID	Port Fidalgo	71.11	30	IAmb	IAmb	06 44 55.3	
	comp=Z,158nm,0.9s						
WRH	Wood River Hil	71.14	26	IAmb	IAmb	06 44 55.5	
	comp=Z,186nm,1.0s						
WRH				IAMs_20	IAMs_20	07 13 20.4	
	comp=Z,4µm,21.0s						
DHY	Denali Highway	71.14	27	IAMs_20	IAMs_20	07 14 08.7	
	comp=Z,4µm,21.0s						
DHY	Denali Highway	71.14	27	P	P	06 44 53.9	+0.7
	baz=258,SNR=17						
CCB	Clear Creek Bu	71.30	25	IAmb	IAmb	06 44 56.3	
	comp=Z,92nm,0.9s						
CCB				IAMs_20	IAMs_20	07 13 35.6	
	comp=Z,4µm,21.0s						
D23K	Nanushuk River	71.32	21	P	P	06 44 55.8	+1.8
	baz=253,SNR=149						
EYAK	Cordova Ski Ar	71.43	30	IAmb	IAmb	06 44 57.7	
	comp=Z,144nm,1.2s						
EYAK	Cordova Ski Ar	71.43	30	P	P	06 44 56.0	+1.2
	baz=260,SNR=6.5						
E23K	Chandalar	71.44	22	P	P	06 44 56.6	+1.8
	baz=254						
M24K	Tolsona, Glenn	71.50	28	IAmb	IAmb	06 45 52.0	
	comp=Z,128nm,0.9s						
M24K	Tolsona, Glenn	71.50	28	P	P	06 44 56.7	+1.4
	baz=260,SNR=6.1						
KLU	Klutina	71.51	29	IAmb	IAmb	06 44 58.3	
	comp=Z,149nm,1.0s						
KLU				IAMs_20	IAMs_20	07 14 11.4	
	comp=Z,3µm,22.0s						
KLU	Klutina	71.51	29	P	P	06 44 56.5	+1.1
	baz=260,SNR=15						
DIV	Divide	71.52	29	IAmb	IAmb	06 44 58.4	
	comp=Z,186nm,1.2s						
DIV				IAMs_20	IAMs_20	07 13 05.6	
	comp=Z,5µm,22.0s						
H24K	Noodor Dome	71.54	24	IAmb	IAmb	06 44 58.7	
	comp=Z,132nm,1.0s						
H24K				IAMs_20	IAMs_20	07 13 09.9	
	comp=Z,4µm,22.0s						
H24K	Noodor Dome	71.54	24	P	P	06 44 56.8	+1.4
	baz=257						
POKR	Poker Plat Res	71.56	25	IAMs_20	IAMs_20	07 15 32.5	
	comp=Z,4µm,21.0s						
POKR	Poker Plat Res	71.56	25	P	P	06 44 56.8	+1.3
	baz=257,SNR=17						
C23K	Itkillik River	71.60	20	P	P	06 44 57.2	+1.6
	baz=253,SNR=200						
HDA	Harding Lake	71.61	26	IAmb	IAmb	06 44 57.3	
	comp=Z,148nm,0.8s						
HDA				IAMs_20	IAMs_20	07 13 45.9	
	comp=Z,3µm,21.0s						
HDA	Harding Lake	71.61	26	P	P	06 44 55.5	-0.3
	baz=258,SNR=59						
TOLK	Toolik Lake Re	71.61	21	IAmb	IAmb	06 44 58.9	
	comp=Z,133nm,0.7s						
TOLK	Toolik Lake Re	71.61	21	P	P	06 44 57.5	+1.7
	baz=254,SNR=91						
IL31		71.71	25	IAmb	IAmb	06 44 57.6	
	comp=Z,147nm,0.7s						
ILAR	Eielson Array	71.71	25	P	P	06 44 55.6	-0.8
	comp=Z,117nm,0.7s,baz=257,slow=5.7,SNR=79						
ILAR				S	S	06 54 05.0	-7.2
	comp=Z,1.6nm,1.0s,baz=271,slow=9.5,SNR=6.5						
ILAR				LR	LR	07 14 19.6	
	comp=Z,2µm,20.7s,baz=248,slow=34						
	comp=Z,117nm,0.7s						
ILAR	Eielson Array	71.71	25	P	P	06 44 56.0	-0.4
E24K	Your Creek	71.85	22	IAMs_20	IAMs_20	07 16 32.8	
	comp=Z,2µm,19.0s						
E24K	Your Creek	71.85	22	P	P	06 44 58.7	+1.5
	baz=255						
G24K	Hadweenzic Riv	71.90	23	IAmb	IAmb	06 45 00.9	
	comp=Z,141nm,1.1s						
G24K				IAMs_20	IAMs_20	07 15 34.4	
	comp=Z,3µm,20.0s						
G24K	Hadweenzic Riv	71.90	23	P	P	06 44 59.0	+1.5
	baz=257						
F24K	Squaw Lake	71.93	22	IAmb	IAmb	06 45 01.4	
	comp=Z,107nm,0.9s						
F24K				IAMs_20	IAMs_20	07 15 39.3	
	comp=Z,3µm,22.0s						

F24K	Squaw Lake	71.93	22	P	P	06 44 59.6	+1.8
	baz=256						
PAX	Paxson	71.98	27	IAmb	IAmb	06 45 00.4	
	comp=Z,115nm,0.8s						
PAX				IAMs_20	IAMs_20	07 13 04.7	
	comp=Z,3µm,21.0s						
PAX	Paxson	71.98	27	P	P	06 44 59.1	+1.0
	baz=260,SNR=32						
KAIM	Kayak Island	71.99	31	P	P	06 44 58.9	+0.7
	baz=262						
K24K	Donnelly Dome	71.99	26	P	P	06 44 58.8	+0.6
	baz=259,SNR=51						
D24K	Happy Valley	72.01	21	P	P	06 45 00.1	+2.0
	baz=255						
HARP	HAARP	72.02	28	P	P	06 44 59.4	+1.1
	baz=260,SNR=21						
BMRM	Bremner River	72.05	29	IAmb	IAmb	06 45 02.2	
	comp=Z,200nm,1.2s						
BMRM	Bremner River	72.05	29	P	P	06 44 59.5	+0.9
	baz=261,SNR=17						
N25K	Chitina, Valde	72.15	29	IAmb	IAmb	06 45 02.4	
	comp=Z,220nm,1.6s						
N25K				IAMs_20	IAMs_20	07 16 04.4	
	comp=Z,3µm,21.0s						
N25K	Chitina, Valde	72.15	29	P	P	06 45 00.3	+1.1
	baz=261,SNR=6.3						
C24K	Franklin Bluff	72.20	20	P	P	06 45 00.7	+1.4
	baz=255						
J25K	Salcha River,	72.32	26	IAMs_20	IAMs_20	07 13 55.6	
	comp=Z,3µm,21.0s						
J25K	Salcha River,	72.32	26	P	P	06 44 59.9	-0.2
	baz=259,SNR=31						
RIDG	Independent Ri	72.39	27	P	P	06 45 01.1	+0.5
	baz=260,SNR=12						
BERG	Berg Lake	72.41	30	IAmb	IAmb	06 45 04.5	
	comp=Z,152nm,0.9s						
BERG				IAMs_20	IAMs_20	07 12 55.6	
	comp=Z,3µm,21.0s						
G25K	Bearman Lake	72.44	23	P	P	06 45 02.5	+1.8
	baz=258,SNR=31						
GLB	Gilahina Butte	72.50	29	IAmb	IAmb	06 45 04.8	
	comp=Z,126nm,1.1s						
GLB				IAMs_20	IAMs_20	07 12 28.7	
	comp=Z,3µm,21.0s						
VRDI	Verde Repeater	72.64	29	IAMs_20	IAMs_20	07 12 42.4	
	comp=Z,3µm,22.0s						
CRQM	Cirque	72.73	30	IAmb	IAmb	06 45 06.4	
	comp=Z,158nm,0.9s						
CRQM				IAMs_20	IAMs_20	07 13 32.4	
	comp=Z,4µm,22.0s						
CRQE	Cirque	72.75	30	P	P	06 45 02.9	+0.1
	baz=263,SNR=18						
MENT	Mentasta	72.76	27	IAmb	IAmb	06 45 05.7	
	comp=Z,103nm,0.9s						
MENT	Mentasta	72.76	27	P	P	06 45 03.8	+1.0
F25K	Christian Rive	72.79	23	IAmb	IAmb	06 45 06.6	
	comp=Z,122nm,0.8s						
F25K	Christian Rive	72.79	23	P	P	06 45 04.8	+1.9
	baz=258,SNR=110						
SCRK	Sand Creek	72.80	26	IAMs_20	IAMs_20	07 14 48.4	
	comp=Z,4µm,21.0s						
SCRK	Sand Creek	72.80	26	P	P	06 45 03.7	+0.6
	baz=261,SNR=48						
MCARA	McCarthy VSAT	72.87	29	IAmb	IAmb	06 45 06.4	
	comp=Z,137nm,0.9s						
MCARA				IAMs_20	IAMs_20	07 13 12.4	
	comp=Z,3µm,21.0s						
MCARA	McCarthy VSAT	72.87	29	P	P	06 45 04.6	+1.2
	baz=263,SNR=22						
TGL	Tana Glacier	72.88	30	IAmb	IAmb	06 45 07.2	
	comp=Z,154nm,1.1s						
D25K	Kavik River	72.90	21	IAmb	IAmb	06 45 07.5	
	comp=Z,141nm,1.0s						
D25K	Kavik River	72.90	21	P	P	06 45 04.9	+1.4
	baz=257,SNR=170						
E25K	Arctic Village	72.92	22	P	P	06 45 05.6	+1.9
	baz=258,SNR=60						
L26K	Log Cabin Wild	72.94	27	IAmb	IAmb	06 45 06.4	
	comp=Z,100nm,0.8s						
L26K				IAMs_20	IAMs_20	07 15 06.2	
	comp=Z,3µm,20.0s						
L26K	Log Cabin Wild	72.94	27	P	P	06 45 05.0	+1.1
	baz=262,SNR=65						
M26K	Nabesna, AK	73.01	28	P	P	06 45 05.2	+0.9
	baz=262						
J26L	Joseph Creek	73.07	26	IAmb	IAmb	06 45 07.8	
	comp=Z,86nm,0.8s						
J26L				IAMs_20	IAMs_20	07 16 31.5	
	comp=Z,3µm,20.0s						
J26L	Joseph Creek	73.07	26	P	P	06 45 05.3	+0.7
	baz=261,SNR=62						
BMAR	Burnt Mountain	73.16	23	P	P	06 45 06.9	+1.9
I26K	Coal Creek Min	73.36	25	IAMs_20	IAMs_20	07 16 48.5	
	comp=Z,3µm,20.0s						
I26K	Coal Creek Min	73.36	25	P	P	06 45 06.3	0.0
	baz=261						
YAH	Yahtse	73.37	30	IAmb	IAmb	06 45 10.0	
	comp=Z,244nm,1.4s						
YAH				IAMs_20	IAMs_20	07 16 19.6	
	comp=Z,4µm,21.0s						
F26K	Sheenjek River	73.37	23	IAmb	IAmb	06 45 10.1	
	comp=Z,219nm,1.3s						
F26K				IAMs_20	IAMs_20	07 16 55.3	
	comp=Z,3µm,19.0s						
F26K	Sheenjek River	73.37	23	P	P	06 45 08.3	+2.0
	baz=260,SNR=130						
G26K	Porcupine Rive	73.38	23	P	P	06 45 08.2	+1.9
	baz=260,SNR=58						
GRNC	Granite Creek	73.40	30	IAmb	IAmb	06 45 09.5	
	comp=Z,106nm,0.8s						
GRNC				IAMs_20	IAMs_20	07 13 05.6	
	comp=Z,4µm,22.0s						
M27K	Edge Creek, AK	73.53	28	P	P	06 45 08.8	+1.3
	baz=263						
C26K	Camden Bay	73.53	20	P	P	06 45 09.2	+2.1
	baz=258						
CTG	Chitna Glacier	73.63	30	P	P	06 45 09.7	+1.6
	baz=264,SNR=29						
CTGM	Chitina Glacie	73.63	30	IAmb	IAmb	06 45 11.4	
	comp=Z,140nm,0.8s						
L27K	Beaver Creek,	73.63	27	IAMs_20	IAMs_20	07 13 35.7	
	comp=Z,3µm,22.0s						
L27K	Beaver Creek,	73.63	27	P	P	06 45 09.3	+1.4
	baz=263						
BCAR	Beaver Creek A	73.65	27	P	P	06 45 09.2	+1.1
PPT	Papeete	73.68	112	P	P	06 45 10.4	+1.5
	comp=Z,75nm,0.8s,baz=286,slow=9.4,SNR=9.4						
PPT				LR	LR	07 11 52.8	
	comp=Z,2µm,20.4s,baz=268,slow=31						
	comp=Z,75nm,0.8s						
PPT2	Papeete2	73.69	112	eP	P	06 45 10.3	+1.3
	comp=Z,154nm,1.3s						
PPT2				eS	SKiKP	06 54 32.0	-2.7
	comp=Z,881nm,26.2s						
PPT2				eSS	SS	06 59 18.1	-2.9
	comp=Z,580nm,25.8s						
PPT2				eLQ	LQ	07 04 17.4	
	comp=Z,2µm,30.5s						
PPT2				eLR	LR	07 07 38.6	
	comp=Z,3µm,28.5s						
PPT2				eLR	LR	07 07 45.9	
	comp=Z,4µm,22.5s						
PPTF	Pamatai, Papee	73.70	112	P	P	06 45 11.4	+2.3
PAE	Paea	73.71	112	eP	P	06 45 05.6	-3.4
	comp=Z,36nm,1.1s						
PAE	Paea	73.71	112	eLR	LR	07 07 50.0	
	comp=Z,738nm,23.3s						
LOGN	Logan Glacier	73.78	30	IAmb	IAmb	06 45 13.0	
	comp=Z,107nm,0.8s						
C27K	Jago River	73.88	21	IAmb	IAmb	06 45 12.2	
	comp=Z,136nm,0.7s						
C27K	Jago River	73.88	21	P	P	06 45 10.9	+1.8
	baz=260,SNR=198						
TIAR	Tiarei	73.89	112	eP	P	06 45 07.8	-2.4
	comp=Z,218nm,1.1s						
TIAR	Tiarei	73.89	112	eLR	LR	07 07 55.3	
	comp=Z,5µm,23.9s						
BVCY	Beaver Creek	74.00	28	P	P	06 45 11.7	+1.6
	baz=264,SNR=35						
TVO	Taravao	74.04	112	eP	P	06 45 11.8	+0.7
	comp=Z,102nm,1.4s						
TVO	Taravao	74.04	112	eLR	LR	07 07 59.2	
	comp=Z,1µm,24.9s						
I27K	Kandik River	74.04	25	IAMs_20	IAMs_20	07 15 10.2	
	comp=Z,4µm,21.0s						
I27K	Kandik River	74.04	25	P	P	06 45 11.3	+1.0
	baz=263,SNR=39						
PCA	Pinnacle	74.08	31	IAmb	IAmb	06 45 14.4	
	comp=Z,121nm,0.9s						
PCA				IAMs_20	IAMs_20	07 16 50.7	
	comp=Z,4µm,22.0s						
PINM	Pinnacle	74.08	31	P	P	06 45 12.0	+1.3
	baz=265,SNR=11						
YUK3	Moose Creek	74.13	29	P	P	06 45 12.5	+1.5
	baz=265,SNR=52						
H27K	Steamboat Moun	74.16	24	IAmb	IAmb	06 45 15.2	
	comp=Z,186nm,0.9s						
H27K	Steamboat Moun	74.16	24	P	P	06 45 12.7	+1.8
	baz=262,SNR=132						
O28M	Mount Upton	74.17	30	IAmb	IAmb	06 45 14.9	
	comp=Z,129nm,1.0s						
O28M				IAMs_20	IAMs_20	07 14 13.9	
	comp=Z,3µm,22.0s						
O28M	Mount Upton	74.17	30	P	P	06 45 13.1	+1.7
	baz=265,SNR=27						
G27K	Doyon Strip	74.19	24	IAMs_20	IAMs_20	07 15 05.0	
	comp=Z,2µm,22.0s						
G27K	Doyon Strip	74.19	24	P	P	06 45 12.6	+1.5
	baz=262,SNR=28						
BCPM	Bancas Point	74.38	31	IAMs_20	IAMs_20	07 15 06.6	
	comp=Z,3µm,21.0s						
E27K	Coleen River	74.40	22	IAmb	IAmb	06 45 15.9	
	comp=Z,111nm,0.8s						
E27K	Coleen River	74.40	22	P	P	06 45 14.0	+1.7
	baz=262,SNR=112						
YUK8	Steele Glacier	74.42	29	P	P	06 45 14.7	+1.8
	baz=266,SNR=35						
PMOR	Pomariorio Ree	74.46	109	eP	P	06 45 11.2	-2.3
	comp=Z,98nm,0.9s						
PMOR	Pomariorio Ree	74.46	109	eLR	LR	07 08 07.3	
	comp=Z,3µm,22.7s						
I28M	Miner Creek	74.72	25	IAmb	IAmb	06 45 17.4	
	comp=Z,113nm,0.9s						
I28M	Miner Creek	74.72	25	P	P	06 45 15.6	+1.4
	baz=264,SNR=106						
D27M	Malcolm River	74.78	21	IAmb	IAmb	06 45 18.0	
	comp=Z,119nm,0.7s						
D27M	Malcolm River	74.78	21	P	P	06 45 16.4	+1.9
	baz=262						
VAH	Vaihoa	74.78	109	eP	P	06 45 15.5	+0.2
	comp=Z,5.0nm,1.4s						
DAWY	Dawson	74.82	27	IAmb	IAmb	06 45 18.2	
	comp=Z,154nm,0.9s						
DAWY	Dawson	74.82	27	P	P	06 45 16.3	+1.5
	baz=265,SNR=100						
O29M	Mount Kennedy	74.93	30	IAmb	IAmb	06 45 32.0	
	comp=Z,120nm,1.1s						
O29M				IAMs_20	IAMs_20	07 16 57.1	
	comp=Z,4µm,21.0s						
O29M	Mount Kennedy	74.93	30	P	P	06 45 17.7	+2.0
	baz=267,SNR=27						
YUK4	Talbot Arm	74.96	29	P	P	06 45 18.1	+2.3
	baz=267,SNR=63						
F28M	Old Crow	74.97	23	IAMs_20	IAMs_20	07 17 20.7	
	comp=Z,3µm,21.0s						
F28M	Old Crow	74.97	23	P	P	06 45 17.4	+1.8
	baz=264,SNR=248						
HRA	Herat	75.00	303	IAmb	IAmb	06 45 19.1	
	comp=Z,212nm,0.8s						
YUK6	Outpost Mounta	75.08	30	P	P	06 45 18.5	+1.9
	baz=267,SNR=12						
M29M	Somme Creek	75.12	28	IAmb	IAmb	06 45 20.4	
	comp=Z,168nm,1.0s						
M29M				IAMs_20	IAMs_20	07 14 44.9	
	comp=Z,3µm,21.0s						
M29M	Somme Creek	75.12	28	P	P	06 45 18.6	+1.9
	baz=266,SNR=98						
E28M	Babbage River	75.21	22	IAmb	IAmb	06 45 20.2	
	comp=Z,175nm,0.7s						
E28M	Babbage River	75.21	22	P	P	06 45 18.8	+1.8
	baz=264,SNR=359						
L29M	L29M	75.31	28	IAmb	IAmb	06 45 21.6	
	comp=Z,222nm,1.0s						
L29M	L29M	75.31	28	P	P	06 45 19.8	+2.1
	baz=266,SNR=96						
P29M	Windy Craggy	75.32	31	IAmb	IAmb	06 45 21.6	
	comp=Z,137nm,1.2s						
P29M				IAMs_20	IAMs_20	07 14 27.8	
	comp=Z,2µm,22.0s						
P29M	Windy Craggy	75.32	31	P	P	06 45 19.6	+1.8
	baz=268						
J29N	Klondike Camp	75.36	26	IAmb	IAmb	06 45 22.3	
	comp=Z,112nm,0.9s						
J29N				IAMs_20	IAMs_20	07 19 48.2	
	comp=Z,3µm,20.0s						
J29N	Klondike Camp	75.36	26	P	P	06 45 19.7	+1.7
	baz=266,SNR=44						
I29M	Ogilvie Camp,	75.39	25	IAmb	IAmb	06 45 21.3	
	comp=Z,105nm,1.0s						
I29M				IAMs_20	IAMs_20	07 15 52.8	
	comp=Z,3µm,22.0s						
I29M	Ogilvie Camp,	75.39	25	P	P	06 45 19.2	+1.2
	baz=266,SNR=57						
H29M	Whitestone	75.43	24	IAMs_20	IAMs_20	07 16 14.9	
	comp=Z,3µm,21.0s						
H29M	Whitestone	75.43	24	P	P	06 45 19.7	+1.4
	baz=265,SNR=46						
HYT	Haines Junctio	75.49	30	IAmb	IAmb	06 45 22.6	
	comp=Z,128nm,0.9s						
HYT	Haines Junctio	75.49	30	P	P	06 45 20.8	+1.9
	baz=268,SNR=54						
D28M	Stokes Point	75.57	21	P	P	06 45 20.5	+1.6
	baz=264						
SVE	Sverdlovsk	75.60	326	deP	P	06 45 19.9	+0.6
SVE				eS	S	06 54 53.8	-2.5
SVE				pmax	pmax		
	comp=Z,124nm,1.3s						
SVE				MLR	MLR		
	comp=Z,3µm,20.0s						
G29M	Pine Creek	75.62	24	IAMs_20	IAMs_20	07 18 12.0	
	comp=Z,3µm,20.0s						
G29M	Pine Creek	75.62	24	P	P	06 45 21.2	+1.9
	baz=266						
K29M	Barlow Dome	75.63	27	IAmb	IAmb	06 45 23.3	
	comp=Z,183nm,0.8s						
K29M				IAMs_20	IAMs_20	07 16 46.3	
	comp=Z,3µm,21.0s						
K29M	Barlow Dome	75.63	27	P	P	06 45 21.3	+1.7
	baz=267						
TBI	Tubuai	75.63	118	eP	P	06 45 12.6	-7.5
	comp=Z,1µm,25.2s						
TBI				eS	S	06 54 57.2	-0.5
	comp=Z,3µm,29.8s						
TBI				eSS	SS	06 59 50.5	+0.3
	comp=Z,1µm,24.0s						
TBI				eLQ	LQ	07 05 16.1	
	comp=Z,2µm,23.8s						
TBI				eLR	LR	07 08 35.0	
	comp=Z,13µm,29.5s						
TBI				eLR	LR	07 08 39.3	
	comp=Z,3µm,23.8s						
N30M	Aishikik Lake	75.72	29	IAmb	IAmb	06 45 23.7	
	comp=Z,142nm,1.1s						
N30M	Aishikik Lake	75.72	29	P	P	06 45 21.8	+1.8
	baz=268,SNR=43						
P30M	Million Dollar	75.73	31	P	P	06 45 22.2	+2.1
	baz=268						
E29M	Blow River	75.79	22	P	P	06 45 21.5	+1.3
	baz=265						
M30M	Minto, Yukon	75.90	28	IAmb	IAmb	06 45 24.6	
	comp=Z,116nm,1.1s						
M30M				IAMs_20	IAMs_20	07 16 28.5	
	comp=Z,3µm,21.0s						
M30M	Minto, Yukon	75.90	28	P	P	06 45 22.8	+1.7
	baz=268,SNR=58						
PLBC	Pleasant Camp	76.02	31	P	P	06 45 23.3	+1.6
	baz=269,SNR=32						
AB31	Akbulak array	76.05	318	P	P	06 45 21.4	-0.7
ABKAR	Akbulak array	76.05	318	P	P	06 45 22.2	+0.1
S31K	Pelican	76.06	33	P	P	06 45 23.5	+1.6
	baz=270						
EPYK	Eagle Plains	76.11	24	IAmb	IAmb	06 45 25.2	
	comp=Z,288nm,1.4s						
EPYK				IAMs_20	IAMs_20	07 16 55.7	
	comp=Z,3µm,20.0s						
EPYK	Eagle Plains	76.11	24	P	P	06 45 23.4	+1.3
	baz=267,SNR=56						
O30N	Mendenhall	76.18	30	IAMs_20	IAMs_20	07 17 46.0	
	comp=Z,2µm,21.0s						
O30N	Mendenhall	76.18	30	P	P	06 45 24.1	+1.4
	baz=269,SNR=10						
J30M	Hart River	76.18	26	IAMs_20	IAMs_20	07 20 03.0	
	comp=Z,4µm,21.0s						
J30M	Hart River	76.18	26	P	P	06 45 24.4	+1.6
	baz=268,SNR=33						
I30M	Mount Dempster	76.19	25	P	P	06 45 24.0	+1.2
	baz=268						
G30M	tAoh Zraii Nji	76.34	24	IAMs_20	IAMs_20	07 18 33.4	
	comp=Z,3µm,21.0s						
G30M	tAoh Zraii Nji	76.34	24	P	P	06 45 24.4	+0.9
	baz=267						
MAYO	Mayo, Yukon	76.34	27	P	P	06 45 25.4	+1.9
	baz=268,SNR=76						
N31M	Braeburn, Yuko	76.34	29	IAmb	IAmb	06 45 28.0	
	comp=Z,140nm,1.1s						
N31M	Braeburn, Yuko	76.34	29	P	P	06 45 25.3	+1.7
	baz=269,SNR=29						
F30M	Barrier River	76.53	23	IAMs_20	IAMs_20	07 18 33.9	
	comp=Z,3µm,21.0s						
F30M	Barrier River	76.53	23	P	P	06 45 25.9	+1.5
	baz=268,SNR=123						
SKAG	Skagway	76.55	31	IAmb	IAmb	06 45 41.9	
	comp=Z,386nm,2.0s						
SKAG	Skagway	76.55	31	P	P	06 45 26.6	+1.9
SKAG	Skagway	76.55	31	P	P	06 45 26.6	+1.9
	baz=270						
SIT	Sitka	76.55	34	P	P	06 45 26.4	+1.6
	baz=270						
WHY	Whitehorse	76.77	30	P	P	06 45 27.9	+1.7
	baz=270,SNR=58						
NGCH	Negor - Chabah	76.78	294	P	P	06 45 27.9	+1.2
	SNR=8.9						
BESE	Bessie Mountai	76.79	32	IAMs_20	IAMs_20	07 15 37.4	
	comp=Z,3µm,22.0s						
ARTI	Arti	76.84	325	LR	LR	07 22 36.4	
	comp=Z,5µm,19.6s,baz=85,slow=38						
ARTI	Arti	76.84	325	P	P	06 45 26.2	-0.2
ARTI				IAmb	IAmb	06 45 28.0	
	comp=Z,156nm,1.1s						
ARTI	Arti	76.84	325	c iP	P	06 45 26.1	-0.3
ARTI				*PP	sP	06 45 41.5	-3.4
ARTI						06 48 17.3	
ARTI				PPP	PPP	06 50 04.1	
ARTI				S	S	06 55 11.7	+1.7
ARTI				SS	SS	07 00 03.2	-3.6
ARTI				pmax	pmax		
	comp=Z,129nm,1.1s						
ARTI				MLR	MLR		
	comp=Z,5µm,20.0s						
ARTI	Arti	76.84	325	P	P	06 45 26.2	-0.2
S32K	Killisnoo	76.95	33	P	P	06 45 28.6	+1.6
	baz=271,SNR=6.2						
R32K	Eaglecrest	76.97	33	IAMs_20	IAMs_20	07 15 43.2	
	comp=Z,2µm,20.0s						
R32K	Eaglecrest	76.97	33	P	P	06 45 28.9	+1.8
	baz=271,SNR=7.2						
M31M	Drury Creek, Y	77.01	29	IAmb	IAmb	06 45 31.2	
	comp=Z,102nm,1.1s						
M31M				IAMs_20	IAMs_20	07 15 57.9	
	comp=Z,4µm,22.0s						
M31M	Drury Creek, Y	77.01	29	P	P	06 45 28.7	+1.4
	baz=270,SNR=43						
H31M	Peel River	77.06	25	IAmb	IAmb	06 45 30.7	
	comp=Z,101nm,0.8s						
H31M	Peel River	77.06	25	P	P	06 45 28.7	+1.2
	baz=269,SNR=43						
G31M	Satah River	77.10	24	IAMs_20	IAMs_20	07 16 32.0	
	comp=Z,3µm,22.0s						
G31M	Satah River	77.10	24	P	P	06 45 28.6	+1.0
	baz=269,SNR=240						
AKTO	Aktyubinsk	77.25	319	LR	LR	07 22 53.3	
	comp=Z,1µm,18.5s,baz=71,slow=38						
AKTO	Aktyubinsk	77.25	319	P	P	06 45 28.2	-0.7
F31M	Tsiigehtchic	77.32	23	IAMs_20	IAMs_20	07 19 02.6	
	comp=Z,2µm,21.0s						
F31M	Tsiigehtchic	77.32	23	P	P	06 45 29.4	+0.6
	baz=269,SNR=46						
P32M	Atlin	77.37	31	IAmb	IAmb	06 45 32.9	
	comp=Z,85nm,0.9s						
P32M				IAMs_20	IAMs_20	07 18 32.5	
	comp=Z,3µm,20.0s						
P32M	Atlin	77.37	31	P	P	06 45 30.9	+1.5
	baz=271,SNR=14						
INK	Inuvik	77.41	22	LR	LR	07 19 34.5	
	comp=Z,372nm,20.3s,baz=257,slow=36						
INK	Inuvik	77.41	22	IAmb	IAmb	06 45 31.8	
	comp=Z,131nm,1.1s						
INK	Inuvik	77.41	22	P	P	06 45 30.0	+0.7
	baz=269,SNR=70						
N32M	Quiet Lake	77.65	30	IAmb	IAmb	06 45 35.0	
	comp=Z,170nm,1.0s						
N32M				IAMs_20	IAMs_20	07 15 53.9	
	comp=Z,4µm,21.0s						
N32M	Quiet Lake	77.65	30	P	P	06 45 32.4	+1.5
	baz=271						
U33K	Whale Pass	77.80	35	IAmb	IAmb	06 45 47.9	
	comp=Z,118nm,1.1s						
U33K	Whale Pass	77.80	35	P	P	06 45 33.3	+1.6
	baz=272,SNR=7.2						
P33M	Teslin, Yukon	77.80	31	IAMs_20	IAMs_20	07 18 35.0	
	comp=Z,3µm,21.0s						
P33M	Teslin, Yukon	77.80	31	P	P	06 45 33.2	+1.4
	baz=272,SNR=44						
CRAG	Craig	77.82	35	P	P	06 45 33.7	+1.8
	baz=273						
T33K	Petersburg	77.86	34	P	P	06 45 34.0	+2.0
	baz=272						
Q32M	Nakina River	78.13	32	IAmb	IAmb	06 45 54.8	
	comp=Z,315nm,1.9s						
Q32M	Nakina River	78.13	32	P	P	06 45 35.4	+1.6
	baz=273,SNR=9.6						
WRAK	Wrangell Islan	78.21	34	IAmb	IAmb	06 45 50.1	
	comp=Z,108nm,1.0s						
WRAK	Wrangell Islan	78.21	34	P	P	06 45 35.8	+1.8
	baz=273,SNR=15						
V35K	Ketchikan	78.69	36	IAMs_20	IAMs_20	07 16 17.8	
	comp=Z,2µm,20.0s						
V35K	Ketchikan	78.69	36	P	P	06 45 38.2	+1.6
	baz=274						
JLN	Jalan Bani Buh	78.76	290	P	P	06 45 37.8	+0.1
JLN				P	P	06 45 38.1	+0.3
	SNR=11						
R33M	Jennings River	78.78	31	IAMs_20	IAMs_20	07 19 12.8	
	comp=Z,3µm,20.0s						
R33M	Jennings River	78.78	31	P	P	06 45 39.2	+1.9
	baz=274,SNR=45						
S34M	Telegraph Cree	78.78	33	P	P	06 45 39.2	+2.0
	baz=274,SNR=24						
WBK	Wadi Bani Khal	79.10	291	P	P	06 45 40.2	+0.6
	SNR=13						
HG4B	Hotspring	79.17	39	IAmb	IAmb	06 45 55.1	
	comp=Z,218nm,1.3s						
WSAR	Wadi Sarin	79.32	292	P	P	06 45 41.4	+0.6
	SNR=9.5						
T35M	Bob Quinn	79.33	34	IAMs_20	IAMs_20	07 16 53.6	
	comp=Z,2µm,21.0s						
T35M	Bob Quinn	79.33	34	P	P	06 45 42.1	+1.9
	baz=275,SNR=20						
U35K	Hyder	79.54	35	IAMs_20	IAMs_20	07 16 56.3	
	comp=Z,3µm,22.0s						
U35K	Hyder	79.54	35	P	P	06 45 42.9	+1.5
	baz=275						
RUBB	Prince Rupert	79.55	37	IAmb	IAmb	06 46 01.7	
	comp=Z,164nm,1.5s						
BIDO	Bidbid	79.74	292	P	P	06 45 43.9	+0.8
	SNR=39						
WTLY	Watson Lake, Y	79.82	31	IAmb	IAmb	06 45 46.5	
	comp=Z,193nm,1.0s						
WTLY	Watson Lake, Y	79.82	31	P	P	06 45 44.6	+1.8
	baz=275,SNR=107						
SMDO	Samad	79.87	292	P	P	06 45 44.3	+0.3
	SNR=12						
JMDO	Jabal Madar	79.92	291	P	P	06 45 44.3	+0.1
	SNR=7.1						
JMDO				P	P	06 45 44.3	+0.1
	SNR=7.1						
A36M	Sachs Harbour	80.04	18	P	P	06 45 44.7	+0.9
	baz=276,SNR=282						
TAOE	Nuku Hiva Isla	80.22	101	eP	P	06 45 40.2	-5.7
	comp=Z,301nm,26.7s						
TAOE	Nuku Hiva Isla	80.22	101	eS	S	06 55 42.5	-5.3
	comp=Z,438nm,26.2s						
TAOE				eSS	SS	07 00 53.0	-6.8
	comp=Z,618nm,28.5s						
TAOE				eLQ	LQ	07 07 24.0	
	comp=Z,1µm,26.7s						
TAOE				eLR	LR	07 10 39.7	
	comp=Z,1µm,21.7s						
MHTO	MHTO	80.25	290	P	P	06 45 46.5	+0.6
	SNR=34						
HOQ	Hoqain	80.47	292	P	P	06 45 47.7	+0.6
	SNR=45						
BSY	Bisya	80.69	291	P	P	06 45 48.8	+0.5
	SNR=14						

C36M	**Paulatuk**	**80.77**	**21**	IAmb	IAmb	06 45 49.9	
	comp=Z,331nm,1.4s						
C36M	**Paulatuk**	**80.77**	**21**	P	**P**	**06 45 48.2**	**+0.6**
	baz=278,SNR=124						
DQM	**DQM**	**80.81**	**289**	P	**P**	**06 45 49.9**	**+1.0**
	SNR=8.1						
CASY	**Casey**	**80.94**	**192**	P	**P**	**06 45 48.9**	**+0.4**
CASY	**Casey**	**80.94**	**192**	IAMs_20	IAMs_20	07 19 34.3	
	comp=Z,2µm,19.0s						
BANOM	**Banah**	**81.04**	**295**	P	**P**	**06 45 51.2**	**+1.1**
BANOM				P	**P**	**06 45 51.2**	**+1.1**
BANOM	**Banah**	**81.04**	**295**	i P	**P**	**06 45 50.5**	**+0.4**
	SNR=67						
BBB	**Bella Bella**	**81.06**	**39**	LR	LR	07 16 05.1	
	comp=Z,3µm,21.0s,baz=278,slow=31						
BBB	**Bella Bella**	**81.06**	**39**	IAmb	IAmb	06 46 05.3	
	comp=Z,197nm,1.5s						
SOHO	**SOHO**	**81.09**	**293**	P	**P**	**06 45 50.9**	**+0.6**
SOHO				S	**S**	**06 55 59.4**	**+2.9**
SOHO	**SOHO**	**81.09**	**293**	i P	**P**	**06 45 50.2**	**-0.1**
	SNR=58						
MDH	**Madha**	**81.13**	**294**	P	**P**	**06 45 50.1**	**-0.4**
	SNR=14						
MDH	**Madha**	**81.13**	**294**	i P	**P**	**06 45 50.4**	**-0.2**
	SNR=24						
SHME	**Shamm**	**81.16**	**295**	P	**P**	**06 45 51.8**	**+1.1**
	SNR=14						
SHME				P	**P**	**06 45 51.8**	**+1.1**
	SNR=14						
SHME	**Shamm**	**81.16**	**295**	i P	**P**	**06 45 51.2**	**+0.5**
	SNR=14						
ARQ	**Araqi**	**81.22**	**292**	P	**P**	**06 45 51.8**	**+0.7**
	SNR=34						
ARQ				S	**S**	**06 56 00.5**	**+2.6**
MASF	**Masafi**	**81.24**	**294**	P	**P**	**06 45 52.1**	**+0.9**
	SNR=52						
MASF				P	**P**	**06 45 52.1**	**+0.9**
	SNR=52						
MASF				S	**S**	**06 56 00.5**	**+2.4**
MASF				S	**S**	**06 56 00.5**	**+2.4**
MSFE	**Esma-Masafi**	**81.25**	**294**	i P	**P**	**06 45 51.9**	**+0.7**
	SNR=102						
HOLB	**Holberg**	**81.25**	**40**	IAmb	IAmb	06 46 06.8	
	comp=Z,250nm,1.2s						
LIRD	**Liard River Hi**	**81.25**	**31**	P	**P**	**06 45 52.0**	**+1.5**
	baz=278,SNR=79						
UOSS	**Minazif**	**81.27**	**294**	P	**P**	**06 45 51.8**	**+0.5**
UOSS				P	**P**	**06 45 51.8**	**+0.5**
UOSS	**Minazif**	**81.27**	**294**	P	**P**	**06 45 51.2**	**-0.1**
UOSS				IAmb	IAmb	06 45 52.9	
	comp=Z,123nm,0.8s						
UOSS	**Minazif**	**81.27**	**294**	i P	**P**	**06 45 50.9**	**-0.4**
	SNR=34						
HATD	**Hatta, Dubai**	**81.35**	**294**	P	**P**	**06 45 52.4**	**+0.7**
	SNR=32						
HATD				S	**S**	**06 56 01.6**	**+2.4**
HATD	**Hatta, Dubai**	**81.35**	**294**	i P	**P**	**06 45 51.9**	**+0.2**
	SNR=64						
ASHO	**Ashiyiah**	**81.44**	**293**	P	**P**	**06 45 52.8**	**+0.5**
	SNR=29						
ASHO	**Ashiyiah**	**81.44**	**293**	i P	**P**	**06 45 52.2**	**-0.1**
	SNR=73						
KIRV	**Kirov**	**81.50**	**328**	LR	LR	07 25 27.5	
	comp=Z,4µm,19.5s,baz=75,slow=38						
KIRV	**Kirov**	**81.50**	**328**	ceP	**P**	**06 45 52.6**	**+0.9**
NAZ	**Nazwa, Dubai**	**81.75**	**294**	P	**P**	**06 45 54.1**	**+0.3**
	SNR=13						
NAZ				P	**P**	**06 45 54.1**	**+0.3**
	SNR=13						
NAZ				S	**S**	**06 56 05.8**	**+2.5**
NAZ				S	**S**	**06 56 05.8**	**+2.5**
NAZ	**Nazwa, Dubai**	**81.75**	**294**	i P	**P**	**06 45 53.9**	**0.0**
	SNR=16						
TOAD	**Toad River Com**	**81.77**	**32**	P	**P**	**06 45 54.1**	**+0.8**
	baz=279,SNR=36						
ALNE	**Al Ain**	**81.81**	**293**	P	**P**	**06 45 55.0**	**+0.8**
	SNR=56						
ALNE				P	**P**	**06 45 55.0**	**+0.8**
	SNR=56						
ALNE	**Al Ain**	**81.81**	**293**	i P	**P**	**06 45 54.7**	**+0.5**
	SNR=47						
FAQ	**Al Faqa, Dubai**	**81.85**	**294**	P	**P**	**06 45 55.0**	**+0.7**
	SNR=9.8						
FAQ				P	**P**	**06 45 55.0**	**+0.7**
	SNR=9.8						
FAQ	**Al Faqa, Dubai**	**81.85**	**294**	i P	**P**	**06 45 54.2**	**-0.1**
	SNR=7.0						
WRGLY	**Wrigley**	**81.94**	**27**	IAmb	IAmb	06 45 57.4	
	comp=Z,83nm,0.8s						
WRGLY	**Wrigley**	**81.94**	**27**	P	**P**	**06 45 55.5**	**+1.4**
	baz=280,SNR=46						
ASUD	**Al Ashush, Dub**	**82.10**	**294**	P	**P**	**06 45 56.7**	**+1.1**
	SNR=20						
ASUD				P	**P**	**06 45 56.7**	**+1.1**
	SNR=20						
ASUD	**Al Ashush, Dub**	**82.10**	**294**	i P	**P**	**06 45 56.2**	**+0.5**
	SNR=32						
AJN	**Ajban**	**82.42**	**293**	P	**P**	**06 45 57.9**	**+0.6**
	SNR=14						
AJN				P	**P**	**06 45 57.9**	**+0.6**
	SNR=14						
AJN				S	**S**	**06 56 11.7**	**+1.5**
AJN				S	**S**	**06 56 11.7**	**+1.5**
AJN	**Ajban**	**82.42**	**293**	i P	**P**	**06 45 57.2**	**-0.1**
	SNR=11						
UMZA	**Um Al Zommool**	**82.56**	**292**	P	**P**	**06 45 57.7**	**-0.3**
UMZA				S	**S**	**06 56 13.1**	**+1.5**
SHAO	**Shalim**	**82.91**	**287**	P	**P**	**06 46 00.9**	**+1.0**
SHAO				P	**P**	**06 46 00.9**	**+1.0**
SHAO	**Shalim**	**82.91**	**287**	i P	**P**	**06 46 00.2**	**+0.2**
	SNR=5.2						
BELG	**Belogornoye**	**83.49**	**322**	LR	LR	07 24 55.2	
	comp=Z,2µm,20.7s,baz=71,slow=37						
BELG	**Belogornoye**	**83.49**	**322**	c iP	**P**	**06 46 02.5**	**+0.2**
BELG				pmax	pmax		
	comp=Z,117nm,1.0s						
MZWR	**Madinat Zayed**	**83.55**	**293**	P	**P**	**06 46 03.7**	**+0.5**
DMTO	**DMTO**	**83.59**	**287**	P	**P**	**06 46 04.1**	**+0.6**
DMTO				P	**P**	**06 46 04.1**	**+0.6**
MZR	**Muzera**	**84.04**	**292**	P	**P**	**06 46 06.3**	**+0.5**
	SNR=39						
MZR				P	**P**	**06 46 06.3**	**+0.5**
	SNR=39						
MZR	**Muzera**	**84.04**	**292**	i P	**P**	**06 46 06.1**	**+0.3**
	SNR=35						
CLRS	**Cowichan Lake**	**84.10**	**42**	IAmb	IAmb	06 46 20.8	
	comp=Z,314nm,1.9s						
DOK	**Doka**	**84.20**	**288**	P	**P**	**06 46 06.6**	**0.0**
	SNR=8.2						
DOK				P	**P**	**06 46 06.6**	**0.0**
	SNR=8.2						
JRN	**Qarnain Island**	**84.27**	**294**	P	**P**	**06 46 07.0**	**+0.1**
JRN				P	**P**	**06 46 07.0**	**+0.1**
RBK	**Rabkut**	**84.33**	**287**	P	**P**	**06 46 07.7**	**+0.4**
	SNR=8.4						
RBK				P	**P**	**06 46 07.7**	**+0.4**
	SNR=8.4						
GHWR	**Ruwais**	**84.42**	**293**	P	**P**	**06 46 08.1**	**+0.5**
NLWA	**Neilton Lookou**	**84.54**	**43**	IAMs_20	IAMs_20	07 18 34.1	
	comp=Z,2µm,21.0s						
PGC	**Sidney**	**84.57**	**42**	IAmb	IAmb	06 46 23.9	
	comp=Z,172nm,1.5s						
WHFO	**Wadi Hawf**	**84.66**	**287**	P	**P**	**06 46 10.0**	**+1.0**
	SNR=6.2						
WHFO				P	**P**	**06 46 10.0**	**+1.0**
	SNR=6.2						
HOPEN	**Hopen**	**84.88**	**348**	eP	**P**	**06 46 09.2**	**+0.4**
LLLB	**Lillooet**	**85.17**	**39**	IAmb	IAmb	06 46 27.1	
	comp=Z,192nm,1.6s						
GNW	**Green Mountain**	**85.20**	**43**	IAmb	IAmb	06 46 14.4	
	comp=Z,94nm,0.7s						
ABTO	**Aybut**	**85.21**	**287**	P	**P**	**06 46 11.7**	**-0.1**
	SNR=9.3						
ABTO				P	**P**	**06 46 11.7**	**-0.1**
	SNR=9.3						
MAK	**Makhachkala**	**85.35**	**313**	eP	**P**	**06 46 11.8**	**-0.1**
MAK				e*PP	**pP**	**06 46 25.8**	**+0.9**
MAK				e*SP	**pwP**	**06 46 31.8**	**-1.3**
MAK				e		06 49 30.9	
MAK				ePPP	PPP	06 51 25.6	
MAK				eSS	SS	07 02 20.8	+6.7
MAK				eSSS	SSS	07 05 49.1	
MAK				pmax	pmax		
	comp=Z,336nm,1.0s						
MAK				MLR	MLR		
	comp=Z,3µm,18.0s						
F04D	**Rainier, OR**	**85.37**	**44**	IAmb	IAmb	06 46 27.5	
	comp=Z,145nm,1.2s						
G03D	**McMinnville, O**	**85.38**	**45**	IAmb	IAmb	06 46 32.9	
	comp=Z,104nm,1.0s						
ALE	**Alert**	**85.45**	**3**	P	**P**	**06 46 13.0**	**+1.3**
ALE				pP	**pP**	**06 46 25.5**	**+0.5**
AKT	**Akhty**	**85.47**	**311**	eP	**P**	**06 46 12.5**	**-0.2**
AKT				e*PP	**pP**	**06 46 26.9**	**+1.2**
AKT				e		06 49 31.2	
AKT				eS	**SKSac**	**06 56 33.2**	**-0.8**
AKT				pmax	pmax		
	comp=Z,488nm,0.8s						
AKT				pmax	pmax		
	comp=Z,427nm,0.8s						
AKT				pmax	pmax		
	comp=E,187nm,0.7s						
AKT				pmax	pmax		
	comp=N,101nm,0.7s						
SPB2	**Spitsbergen Ar**	**85.58**	**350**	IAmb	IAmb	06 46 14.8	
	comp=Z,137nm,1.2s						
SPA0	**Spitsbergen Ar**	**85.58**	**350**	eP	**P**	**06 46 13.1**	**+0.7**
SPITS	**Spitsbergen Ar**	**85.58**	**350**	P	**P**	**06 46 12.7**	**+0.3**
	comp=Z,48nm,0.8s,baz=102,slow=6.9,SNR=30						
SPITS				LR	LR	07 24 18.7	
	comp=Z,3µm,21.7s,baz=36,slow=36						
	comp=Z,48nm,0.8s						
SPITS	**Spitsbergen Ar**	**85.58**	**350**	P	**P**	**06 46 13.2**	**+0.8**
SPITS				pmax	pmax		
	comp=Z,188nm,1.4s						
ADZR	**Andozero**	**85.58**	**334**	eP	**P**	**06 46 11.4**	**-1.2**
ADZR				pmax	pmax		
	comp=Z,82nm,1.6s						
ADZR				MLR	MLR		
	comp=Z,1µm,16.0s						
K02D	**Willamette Mer**	**85.59**	**47**	IAmb	IAmb	06 46 28.5	
	comp=Z,90nm,1.3s						
KSXB	**Camp Six Broad**	**85.61**	**48**	IAmb	IAmb	06 46 29.9	
	comp=Z,223nm,1.6s						
KMPM	**Mount Pierce**	**85.71**	**50**	IAmb	IAmb	06 46 29.8	
	comp=Z,142nm,1.3s						
LVZ	**Lovozero**	**85.73**	**339**	IAMs_20	IAMs_20	07 26 28.6	
	comp=Z,2µm,21.0s						
LVZ	**Lovozero**	**85.73**	**339**	⇑P	**P**	**06 46 12.2**	**-1.1**
LVZ	**Lovozero**	**85.73**	**339**	P	**P**	**06 46 12.5**	**-0.8**
	comp=Z,55nm,1.2s						
TRNA	**Turayna**	**85.77**	**294**	P	**P**	**06 46 15.2**	**+0.8**
	SNR=6.1						
L02F	**Cave Junction**	**85.78**	**48**	IAmb	IAmb	06 46 29.6	
	comp=Z,102nm,1.3s						
SHMA	**Al-Shehemyia**	**85.79**	**295**	P	**P**	**06 46 15.3**	**+0.9**
	SNR=5.1						
KBS	**Kingsbay**	**85.79**	**351**	P	**P**	**06 46 14.6**	**+1.1**
KBS				IAmb	IAmb	06 46 16.1	
	comp=Z,78nm,0.8s						
KBS	**Kingsbay**	**85.79**	**351**	eP	**P**	**06 46 14.6**	**+1.1**
KBS	**Kingsbay**	**85.79**	**351**	ceP	**P**	**06 46 15.0**	**+1.6**
KBS				pmax	pmax		
	comp=Z,126nm,1.3s						
KHMM	**Horse Mountain**	**85.91**	**49**	IAmb	IAmb	06 46 30.8	
	comp=Z,185nm,1.4s						
KLMR	**Klimovskoe**	**85.92**	**331**	eP	**P**	**06 46 12.7**	**-1.6**
KLMR				e*PP	**pP**	**06 46 27.8**	**+0.5**
KLMR				e		06 49 32.6	
KLMR				S	**SKSac**	**06 56 32.5**	**-3.2**
KLMR				pmax	pmax		
	comp=Z,98nm,1.1s						
KLMR				MLR	MLR		
	comp=Z,3µm,18.0s						
YKAW3	**Yellowknife Wh**	**86.03**	**27**	IAmb	IAmb	06 46 17.9	
	comp=Z,79nm,0.8s						
LON	**Longmire**	**86.05**	**43**	IAmb	IAmb	06 46 30.1	
	comp=Z,66nm,1.2s						
YKA	**Yellowknife Ar**	**86.06**	**27**	P	**P**	**06 46 15.9**	**+0.9**
	comp=Z,47nm,0.9s,baz=293,slow=6.1,SNR=294						
YKA				PKiKP	**PKiKP**	**06 51 21.9**	**-1.3**
	comp=Z,1.5nm,0.8s,baz=285,slow=2.8,SNR=4.1						
YKA				S	**SKSac**	**06 56 33.1**	**-3.4**
	comp=Z,0.8nm,1.1s,baz=305,slow=7.2,SNR=4.3						
YKA				PKKPbc	**PKKPbc**	**07 04 14.3**	**-2.3**
	comp=Z,0.3nm,0.8s,baz=107,slow=0.8,SNR=3.7						
YKA				LR	LR	07 23 45.4	
	comp=Z,2µm,20.5s,baz=288,slow=35						
	comp=Z,47nm,0.9s						
YKA	**Yellowknife Ar**	**86.06**	**27**	P	**P**	**06 46 16.2**	**+1.2**
YKA	**Yellowknife Ar**	**86.06**	**27**	i P	**P**	**06 46 15.8**	**+0.8**
YKA				pmax	pmax		
	comp=Z,49nm,0.9s						
YKAW1	**Yellowknife Wh**	**86.11**	**27**	IAmb	IAmb	06 46 18.4	
	comp=Z,71nm,0.8s						
SMRA	**Abu-Samra**	**86.12**	**294**	P	**P**	**06 46 16.7**	**+0.6**
	SNR=13						
SAKB	**Bahrain**	**86.14**	**296**	P	**P**	**06 46 17.0**	**+0.8**
BBOR	**Butler Butte**	**86.27**	**47**	IAmb	IAmb	06 46 31.9	
	comp=Z,131nm,1.4s						
APA	**Apatity**	**86.29**	**339**	⇓iP	**P**	**06 46 15.1**	**-1.0**
APA				i		06 49 38.6	
APA				i S	**S**	**06 56 44.1**	**-3.1**
APA				pmax	pmax		
	comp=Z,24nm,1.1s						
APA				MLR	MLR		
	comp=Z,3µm,24.1s						
KHBM	**Hayfork Bally**	**86.33**	**49**	IAmb	IAmb	06 46 32.6	
	comp=Z,107nm,1.4s						
KHBM				IAMs_20	IAMs_20	07 17 52.3	
	comp=Z,2µm,22.0s						
HSPB	**Hornsund (broa**	**86.44**	**349**	eP	**P**	**06 46 17.6**	**+1.0**
M02C	**Callahan**	**86.45**	**49**	IAmb	IAmb	06 46 33.3	
	comp=Z,109nm,1.2s						
M02C				IAMs_20	IAMs_20	07 18 07.3	
	comp=Z,3µm,21.0s						
YBH	**Yreka Blue Hor**	**86.49**	**48**	LR	LR	07 18 41.9	
	comp=Z,127nm,21.8s,baz=278,slow=31						
VADS	**Vadso**	**86.64**	**342**	eP	**P**	**06 46 17.8**	**+0.1**
N02D	**Trinity Center**	**86.65**	**49**	IAMs_20	IAMs_20	07 16 56.6	
	comp=Z,3µm,22.0s						
LTY	**Liberty**	**86.69**	**43**	IAmb	IAmb	06 46 44.6	
	comp=Z,115nm,1.0s						
I05D	**Terrebonne, OR**	**86.90**	**46**	IAmb	IAmb	06 46 34.8	
	comp=Z,150nm,1.2s						
M03C	**McCloud**	**87.02**	**49**	IAmb	IAmb	06 46 23.7	
	comp=Z,116nm,0.9s						
GDXM	**Geysers**	**87.04**	**51**	IAmb	IAmb	06 46 37.0	
	comp=Z,145nm,1.6s						
CCD	**Concordia, Ant**	**87.21**	**185**	P	**P**	**06 46 21.4**	**+0.6**
J05D	**Fort Rock, OR**	**87.21**	**47**	IAmb	IAmb	06 46 36.6	
	comp=Z,154nm,1.2s						
RES	**Resolute Bay**	**87.23**	**13**	LR	LR	07 28 17.8	
	comp=Z,530nm,20.1s,baz=329,slow=38						
MNRC	**McLaughlin Min**	**87.30**	**51**	IAmb	IAmb	06 46 37.3	
	comp=Z,133nm,1.4s						
B08A	**Colville Reser**	**87.31**	**41**	IAmb	IAmb	06 46 37.1	
	comp=Z,110nm,0.9s						
VRH	**Novokhopyorsk**	**87.33**	**322**	eP	**P**	**06 46 19.2**	**-2.2**
VRH				pmax	pmax		
	comp=Z,130nm,0.9s						
EPH	**Ephrata**	**87.38**	**42**	IAmb	IAmb	06 46 24.4	
	comp=Z,98nm,0.7s						
KEV	**Kevo**	**87.53**	**342**	P	**P**	**06 46 22.0**	**0.0**
KEV				IAmb	IAmb	06 46 24.1	
	comp=Z,85nm,1.3s						
KEV				IAMs_20	IAMs_20	07 26 09.1	
	comp=Z,3µm,22.0s						
KEV	**Kevo**	**87.53**	**342**	P	**P**	**06 46 22.0**	**0.0**
KEV				pmax	pmax		
	comp=Z,85nm,1.3s						
KEV				MLR	MLR		
	comp=Z,3µm,22.0s						
HAWA	**Hanford**	**87.66**	**43**	IAMs_20	IAMs_20	07 18 08.7	
	comp=Z,2µm,21.0s						
SUTB	**Sutter Butte**	**87.72**	**51**	IAmb	IAmb	06 46 38.3	
	comp=Z,159nm,1.6s						
ORV	**Oroville**	**87.86**	**50**	IAmb	IAmb	06 46 40.0	
	comp=Z,160nm,1.5s						
ARA0	**ARCESS Array S**	**88.10**	**342**	eP	**P**	**06 46 24.5**	**-0.3**
ARCES	**ARCESS Array B**	**88.10**	**342**	P	**P**	**06 46 24.2**	**-0.5**
	comp=Z,26nm,0.6s,baz=67,slow=6.7,SNR=76						
ARCES				LR	LR	07 29 16.6	
	comp=Z,1µm,20.4s,baz=64,slow=38						
	comp=Z,26nm,0.6s						
ARCES	**ARCESS Array B**	**88.10**	**342**	P	**P**	**06 46 24.7**	**-0.1**
ARCES				IAmb	IAmb	06 46 26.4	
	comp=Z,129nm,1.4s						
G08A	**Pilot Rock**	**88.32**	**44**	IAmb	IAmb	06 46 41.5	
	comp=Z,162nm,1.5s						
RKT	**Rikitea**	**88.36**	**114**	eLR	LR	07 14 30.3	
	comp=Z,6µm,24.2s						
MOS	**Moscow**	**88.39**	**327**	eP	**P**	**06 46 21.7**	**-4.7**
MOS				eS	**S**	**06 57 01.0**	**-6.7**
MOS				pmax	pmax		
	comp=Z,132nm,1.1s						
MOS				pmax	pmax		
	comp=Z,300nm,1.5s						
MOS				MLR	MLR		
	comp=E,3µm,19.0s						
MOS				MLR	MLR		
	comp=Z,4µm,19.0s						
KBZ	**Khabaz**	**88.45**	**314**	P	**P**	**06 46 25.9**	**-1.0**
	comp=Z,32nm,0.9s,baz=122,slow=2.6,SNR=38						
KBZ				LR	LR	07 30 56.7	
	comp=Z,862nm,18.7s,baz=64,slow=39						
	comp=Z,32nm,0.9s						
KBZ	**Khabaz**	**88.45**	**314**	c iP	**P**	**06 46 26.4**	**-0.6**
KBZ				pmax	pmax		
	comp=Z,39nm,0.9s						
KVAR	**Kislovodsk Arr**	**88.54**	**314**	LR	LR	07 27 37.1	
	comp=Z,1µm,21.7s,baz=276,slow=37						
KIV	**Kislovodsk**	**88.55**	**314**	P	**P**	**06 46 26.7**	**-0.9**
KIV				IAmb	IAmb	06 46 35.2	
	comp=Z,69nm,0.9s						
KIV	**Kislovodsk**	**88.55**	**314**	eP	**P**	**06 46 26.4**	**-1.2**
KIV				e		06 56 50.5	
KIV				pmax	pmax		
	comp=Z,56nm,1.0s						
KIV				pmax	pmax		
	comp=Z,164nm,4.4s						
LPSR	**Galich'ya Gora**	**88.61**	**324**	eP	**P**	**06 46 26.1**	**-1.4**
LPSR				pmax	pmax		
	comp=Z,260nm,0.9s						
SHA1	**Shidzhatmaz**	**88.62**	**314**	ceP	**P**	**06 46 28.1**	**0.0**
LNOR	**Lincton Mounta**	**88.63**	**44**	IAmb	IAmb	06 46 43.0	
	comp=Z,117nm,1.5s						
NEUR	**Neytrino**	**88.71**	**314**	i P	**P**	**06 46 28.6**	**+0.1**
VORR	**Voronezh**	**88.72**	**323**	eP	**P**	**06 46 26.9**	**-1.1**
VORR				pmax	pmax		
	comp=Z,139nm,0.6s						
NEW	**Newport**	**88.76**	**41**	LR	LR	07 21 38.9	
	comp=Z,2µm,19.6s,baz=296,slow=32						
NEW	**Newport**	**88.76**	**41**	IAmb	IAmb	06 46 31.5	
	comp=Z,45nm,0.8s						
NEW	**Newport**	**88.76**	**41**	IAMs_20	IAMs_20	07 20 36.5	
	comp=Z,2µm,22.0s						
VORD	**Divnogorie**	**88.87**	**322**	eP	**P**	**06 46 24.8**	**-4.0**
VORD				pmax	pmax		
	comp=Z,60nm,0.8s						
VSR	**Storozhevoye**	**88.87**	**322**	eP	**P**	**06 46 25.2**	**-3.6**
VSR				pmax	pmax		
	comp=Z,80nm,0.9s						
KTK1	**Kautokeino**	**89.06**	**342**	eP	**P**	**06 46 28.8**	**-0.5**
CMB	**Columbia Colle**	**89.06**	**51**	IAmb	IAmb	06 46 45.2	
	comp=Z,130nm,1.5s						
J08A	**Circle Bar Ran**	**89.15**	**46**	IAmb	IAmb	06 46 33.9	
	comp=Z,85nm,0.9s						
OBN	**Obninsk**	**89.16**	**326**	LR	LR	07 30 17.9	
	comp=Z,4µm,19.4s,baz=10.0,slow=38						
OBN	**Obninsk**	**89.16**	**326**	P	**P**	**06 46 29.4**	**-0.6**
OBN	**Obninsk**	**89.16**	**326**	⇓P	**P**	**06 46 29.1**	**-0.9**
OBN	**Obninsk**	**89.16**	**326**	c iP	**P**	**06 46 29.0**	**-1.0**
OBN				e*PP	**pP**	**06 46 42.1**	**-1.0**
OBN				e		06 49 57.7	
OBN				i		06 56 54.6	
OBN				i S	**S**	**06 57 18.8**	**+3.8**
OBN				i		06 58 26.0	
OBN				i		06 58 51.7	
OBN				pmax	pmax		
	comp=Z,127nm,1.3s						
OBN				MLR	MLR		
	comp=Z,4µm,19.0s						
OBN	**Obninsk**	**89.16**	**326**	P	**P**	**06 46 29.0**	**-1.0**
	comp=Z,92nm,1.1s						
PMPB	**Monarch Peak**	**89.17**	**53**	IAmb	IAmb	06 46 46.3	
	comp=Z,114nm,1.2s						
WVOR	**Wild Horse Val**	**89.27**	**47**	IAmb	IAmb	06 46 46.2	
	comp=Z,111nm,1.1s						
WVOR				IAMs_20	IAMs_20	07 19 51.7	
	comp=Z,2µm,21.0s						
F10A	**Beach Ranch, E**	**89.31**	**43**	IAmb	IAmb	06 46 46.1	
	comp=Z,177nm,1.7s						
PAHR	**Pah Rah Range**	**89.41**	**50**	IAmb	IAmb	06 46 47.0	
	comp=Z,121nm,1.3s						
PKD	**Bear Valley Ra**	**89.44**	**54**	IAmb	IAmb	06 47 00.6	
	comp=Z,103nm,1.0s						
BMO	**Blue Mountains**	**89.56**	**44**	IAmb	IAmb	06 46 47.3	
	comp=Z,151nm,1.4s						
EDM	**Edmonton**	**89.57**	**36**	IAmb	IAmb	06 46 35.1	
	comp=Z,100nm,1.2s						
ERBR	**Yeremizino-Bor**	**89.59**	**317**	eP	**P**	**06 46 31.2**	**-1.1**
ERBR				eS	**SKSac**	**06 56 59.1**	**+0.5**
ERBR				pmax	pmax		
	comp=Z,205nm,0.9s						
ERBR				MLR	MLR		
	comp=Z,3µm,21.0s						
JETT	**Jettan, Norway**	**89.62**	**343**	eP	**P**	**06 46 31.8**	**-0.2**
VNDA	**Vanda**	**89.63**	**176**	P	**P**	**06 46 32.2**	**+0.5**
	comp=Z,11nm,0.9s,baz=318,slow=6.4,SNR=37						
VNDA				PKKPbc	**PKKPdf**	**07 04 06.7**	**+2.2**
	comp=Z,1.2nm,1.0s,baz=262,slow=2.0,SNR=4.2						
VNDA				LR	LR	07 26 41.4	
	comp=Z,3µm,18.7s,baz=350,slow=36						
	comp=Z,11nm,0.9s						
VNDA	**Vanda**	**89.63**	**176**	P	**P**	**06 46 32.4**	**+0.7**
VNDA	**Vanda**	**89.63**	**176**	P	**P**	**06 46 32.4**	**+0.7**
VNDA	**Vanda**	**89.63**	**176**	P	**P**	**06 46 32.2**	**+0.5**
LABN	**Labinsk**	**89.73**	**316**	eP	**P**	**06 46 32.0**	**-1.0**
LABN				pmax	pmax		
	comp=Z,41nm,0.7s						
TRO	**Tromso**	**90.01**	**343**	eP	**P**	**06 46 33.1**	**-0.6**
MDPB	**Devils Postpil**	**90.16**	**52**	IAmb	IAmb	06 46 50.8	
	comp=Z,147nm,1.7s						
TULEG	**Thule**	**90.27**	**7**	IAmb	IAmb	06 46 36.8	
	comp=Z,53nm,0.8s						
SBA	**Scott Base**	**90.33**	**175**	P	**P**	**06 46 36.5**	**+1.6**
SBA	**Scott Base**	**90.33**	**175**	IAMs_20	IAMs_20	07 25 09.5	
	comp=Z,2µm,20.0s						
SBA	**Scott Base**	**90.33**	**175**	P	**P**	**06 46 36.5**	**+1.6**
SBA				pmax	pmax		
	comp=Z,39nm,1.3s						
PLID	**Pearl Lake**	**90.39**	**44**	IAMs_20	IAMs_20	07 19 32.0	
	comp=Z,2µm,22.0s						
GURO	**Guroymak-BITLI**	**90.40**	**309**	IAmb	IAmb	06 46 38.1	
	comp=Z,87nm,0.8s						
VSLR	**Vesyoloye**	**90.53**	**315**	i P	**P**	**06 46 35.9**	**-0.9**
VSLR				pmax	pmax		
	comp=Z,106nm,1.1s						
NVAR	**Mina Array Bea**	**90.55**	**51**	P	**P**	**06 46 39.0**	**+1.7**
	comp=Z,49nm,0.8s,baz=261,slow=5.9,SNR=212						
NVAR				LR	LR	07 22 06.3	
	comp=Z,442nm,21.1s,baz=270,slow=32						
	comp=Z,49nm,0.8s						
PUL	**Pulkovo**	**90.58**	**332**	ceP	**P**	**06 46 36.9**	**+0.3**
PUL				pmax	pmax		
	comp=Z,82nm,0.5s						
NV11	**Mina Array Sit**	**90.66**	**51**	IAmb	IAmb	06 46 53.1	
	comp=Z,127nm,1.4s						
SOC	**Sochi**	**90.72**	**315**	eP	**P**	**06 46 35.9**	**-1.7**
SOC				e*PP	**pP**	**06 46 49.6**	**-1.1**
SOC				pmax	pmax		
	comp=Z,29nm,0.9s						
RAYN	**Ar Rayn**	**91.13**	**294**	P	**P**	**06 46 39.9**	**0.0**
RAYN	**Ar Rayn**	**91.13**	**294**	P	**P**	**06 46 39.4**	**-0.6**
RAYN				IAmb	IAmb	06 46 41.2	
	comp=Z,55nm,0.9s						
RAYN	**Ar Rayn**	**91.13**	**294**	i P	**P**	**06 46 39.3**	**-0.6**
	SNR=9.8						
RAYN	**Ar Rayn**	**91.13**	**294**	P	**P**	**06 46 39.4**	**-0.6**
RAYN				pmax	pmax		
	comp=Z,55nm,1.0s						
ISA	**Isabella, Lake**	**91.14**	**53**	IAmb	IAmb	06 46 54.5	
	comp=Z,83nm,1.5s						
KOPT	**Kop Dagi**	**91.16**	**311**	IAmb	IAmb	06 46 49.2	
	comp=Z,60nm,0.8s						
OSI	**Osito Audit: C**	**91.21**	**54**	IAmb	IAmb	06 47 04.3	
	comp=Z,99nm,1.1s						
OSI				IAMs_20	IAMs_20	07 19 40.7	
	comp=Z,2µm,22.0s						
CWC	**Cottonwood Cre**	**91.24**	**53**	IAmb	IAmb	06 46 55.6	
	comp=Z,72nm,1.4s						
GMN	**Gold Mountain**	**91.65**	**52**	IAmb	IAmb	06 46 57.6	
	comp=Z,95nm,1.6s						
MARD	**Mardin**	**91.68**	**308**	IAmb	IAmb	06 46 43.5	
	comp=Z,52nm,1.0s						
FIA1	**FINESS Array S**	**91.73**	**334**	P	**P**	**06 46 40.7**	**-1.2**
FINES	**FINESS Array B**	**91.73**	**334**	P	**P**	**06 46 40.6**	**-1.3**
	comp=Z,50nm,0.7s,baz=64,slow=4.8,SNR=227						

FINES				PKKPbc	PKKPdf	07 04 00.6	+1.8
	comp=Z,3.7nm,0.8s,baz=70,slow=2.2,SNR=7.0						
FINES				LR	LR	07 29 12.7	
	comp=Z,1µm,21.6s,baz=64,slow=36						
	comp=Z,50nm,0.7s						
FINES	FINESS Array B	91.73	334	P	P	06 46 41.0	-0.9
MWC	Mount Wilson	91.84	55	IAMs_20	IAMs_20	07 19 10.5	
	comp=Z,2µm,22.0s						
ANN	Anapa	91.92	316	eP	P	06 46 41.4	-1.7
ANN				e*PP	pP	06 46 55.7	-0.5
ANN				eS	SKSac	06 57 10.1	-1.8
ANN				pmax	pmax		
	comp=Z,100nm,0.8s						
WSHM	Spangler Hills	91.92	53	IAmb	IAmb	06 46 58.8	
	comp=Z,94nm,1.4s						
HLID	Hailey	91.93	45	IAmb	IAmb	06 46 46.9	
	comp=Z,34nm,0.9s						
HLID				IAMs_20	IAMs_20	07 23 22.9	
	comp=Z,2µm,22.0s						
POIN	Pond Inlet	92.06	11	IAmb	IAmb	06 46 46.0	
	comp=Z,48nm,1.0s						
STEI	Steigen	92.11	342	eP	P	06 46 43.0	-0.5
ELK	Elko	92.19	48	LR	LR	07 22 17.4	
	comp=Z,1µm,21.1s,baz=277,slow=32						
ELK	Elko	92.19	48	IAmb	IAmb	06 47 00.0	
	comp=Z,80nm,1.4s						
ELK				IAMs_20	IAMs_20	07 22 18.0	
	comp=Z,2µm,19.0s						
WCT	Wildcat Mounta	92.27	52	IAmb	IAmb	06 47 00.5	
	comp=Z,104nm,1.4s						
BCYI	Bear Canyon	92.39	44	IAmb	IAmb	06 47 01.0	
	comp=Z,110nm,1.5s						
GWY	Greenwater Val	92.41	52	IAmb	IAmb	06 47 01.1	
	comp=Z,110nm,1.4s						
FAUS	Fauske	92.43	342	eP	P	06 46 44.3	-0.7
ELS	Elsinore Mount	92.50	55	IAmb	IAmb	06 47 14.6	
	comp=Z,81nm,1.4s						
TPNV	Topopah Spring	92.52	52	IAmb	IAmb	06 47 01.7	
	comp=Z,84nm,1.3s						
S11A	Rachel	92.71	51	IAmb	IAmb	06 47 15.9	
	comp=Z,45nm,1.0s						
BLKN	Baker Lake	92.81	22	IAmb	IAmb	06 46 49.0	
	comp=Z,63nm,0.9s						
VSU	Vasula	92.82	332	ceP	P	06 46 45.7	-1.3
VSU				pmax	pmax		
	comp=Z,141nm,1.7s						
DPP	Dos Picos Cty	93.06	56	IAmb	IAmb	06 47 12.4	
	comp=Z,82nm,1.2s						
BOZ	Bozeman (W)	93.16	42	IAmb	IAmb	06 47 04.0	
	comp=Z,77nm,1.5s						
DNR	Dunn Ranch,Anz	93.16	55	IAmb	IAmb	06 47 13.2	
	comp=Z,102nm,1.3s						
PFO	Pinyon Flats O	93.28	55	LR	LR	07 25 26.4	
	comp=Z,628nm,19.4s,baz=285,slow=33						
PFO	Pinyon Flats O	93.28	55	P	P	06 46 50.4	+0.5
PFO				IAmb	IAmb	06 47 13.7	
	comp=Z,66nm,1.1s						
PFO	Pinyon Flats O	93.28	55	IAMs_20	IAMs_20	07 20 03.8	
	comp=Z,2µm,22.0s						
PFO	Pinyon Flats O	93.28	55	i P	P	06 46 51.0	+1.1
PFO				pmax	pmax		
	comp=Z,122nm,1.5s						
PMD	Palm Desert	93.34	55	IAmb	IAmb	06 47 05.8	
	comp=Z,100nm,1.4s						
BAR	Barrett	93.37	56	IAmb	IAmb	06 47 13.9	
	comp=Z,71nm,1.3s						
SPR3	Spring Creek 3	93.37	49	IAmb	IAmb	06 47 05.9	
	comp=Z,69nm,1.5s						
RAUS	Rausandaksla	93.41	341	eP	P	06 46 48.6	-0.9
MOR8	Moi Rana	93.45	341	eP	P	06 46 47.5	-2.2
VAGH	Vaagaholmen	93.46	342	eP	P	06 46 48.3	-1.4
MTPC	Mountain Pass	93.47	53	IAmb	IAmb	06 47 14.9	
	comp=Z,78nm,1.4s						
EGMT	Eagleton	93.51	40	IAmb	IAmb	06 47 05.1	
	comp=Z,124nm,1.8s						
HVU	Hansel Valley	93.63	46	IAmb	IAmb	06 47 06.6	
	comp=Z,103nm,1.6s						
YHB	Horse Butte	93.73	43	IAmb	IAmb	06 47 08.2	
	comp=Z,74nm,1.0s						
STOK	Stokkvaagen	93.79	342	eP	P	06 46 50.5	-0.8
DANC	Danby, Needles	93.85	54	IAmb	IAmb	06 47 27.4	
	comp=Z,77nm,1.1s						
LEIR	Leirfjorden	93.90	341	eP	P	06 46 51.1	-0.7
YMR	Madison River	93.92	43	IAmb	IAmb	06 46 56.7	
	comp=Z,60nm,0.9s						
YUH	Yuha Desert	93.98	56	IAmb	IAmb	06 47 16.8	
	comp=Z,71nm,1.2s						
MNK	Minsk	94.03	328	i P	P	06 46 49.6	-3.1
MNK				i *PP	pP	06 47 04.3	-1.5
MNK				i *SP	sP	06 47 11.2	+0.4
MNK				i		06 50 35.9	
MNK				i PPP	PPP	06 52 37.9	
MNK				i S	SKSac	06 57 19.9	-3.3
MNK				i SS	SS	07 04 30.0	+11
MNK				pmax	pmax		
	comp=E,13nm,0.8s						
MNK				pmax	pmax		
	comp=Z,15nm,0.7s						
MNK				pmax	pmax		
	comp=N,20nm,0.9s						
MNK				MLR	MLR		
	comp=E,2µm,20.0s						
MNK				MLR	MLR		
	comp=N,2µm,19.0s						
MNK				MLR	MLR		
	comp=Z,3µm,18.0s						
YNM	Yellowstone No	94.07	43	IAmb	IAmb	06 46 58.1	
	comp=Z,82nm,1.0s						
BC3	Big Chuckawall	94.08	55	IAmb	IAmb	06 47 17.6	
	comp=Z,108nm,1.4s						
BC3				IAMs_20	IAMs_20	07 20 40.7	
	comp=Z,2µm,22.0s						
YFT	Old Faithful	94.08	43	IAmb	IAmb	06 46 59.1	
	comp=Z,66nm,1.0s						
SIM	Simferopol'	94.10	317	eP	P	06 46 51.4	-1.8
SIM				e*PP	pP	06 47 02.0	-4.3
SIM				pmax	pmax		
	comp=Z,57nm,0.8s						
ESJX	Sierra Juarez	94.14	56	IAmb	IAmb	06 47 18.1	
	comp=Z,67nm,1.3s						
IRM	Iron Mountain	94.18	54	IAmb	IAmb	06 47 17.9	
	comp=Z,83nm,1.3s						
IRM				IAMs_20	IAMs_20	07 25 55.3	
	comp=Z,2µm,20.0s						
FXWY	Fox Creek	94.23	44	IAmb	IAmb	06 47 09.5	
	comp=Z,66nm,1.6s						
H17A	Grant Village	94.27	43	IAmb	IAmb	06 47 11.9	
	comp=Z,83nm,1.3s						
LKWY	Lake	94.33	43	IAmb	IAmb	06 47 11.5	
	comp=Z,83nm,1.3s						
NACGM	Naroch	94.43	328	eP	P	06 46 53.9	-0.5
	comp=Z,32nm,0.9s,baz=63						
YNE	Yellowstone No	94.43	43	IAmb	IAmb	06 47 10.6	
	comp=Z,102nm,1.9s						
GAZ	Gaziantep	94.45	309	IAmb	IAmb	06 46 56.1	
	comp=Z,65nm,0.9s						
CCUT	Cedar City	94.54	50	IAmb	IAmb	06 47 11.2	
	comp=Z,55nm,1.6s						
HWUT	Hardware Ranch	94.55	46	IAmb	IAmb	06 47 10.3	
	comp=Z,55nm,1.3s						
CTU	Camp Tracy	94.72	47	IAmb	IAmb	06 47 11.0	
	comp=Z,69nm,1.8s						
GLA	Glamis	94.75	55	IAmb	IAmb	06 47 20.7	
	comp=Z,69nm,1.2s						
BLYC	Blythe	94.79	54	IAmb	IAmb	06 47 32.5	
	comp=Z,39nm,0.9s						
LCMT	Little Creek M	94.80	51	IAmb	IAmb	06 47 12.2	
	comp=Z,58nm,1.6s						
RLMT	Red Lodge	94.88	42	IAmb	IAmb	06 47 12.7	
	comp=Z,96nm,1.4s						
AKASG	Malin Array Be	94.93	324	P	P	06 46 55.5	-1.3
	comp=Z,18nm,0.9s,baz=54,slow=4.5,SNR=38						
AKASG				LR	LR	07 32 16.6	
	comp=Z,3µm,20.9s,baz=60,slow=37						
	comp=Z,18nm,0.9s						
AKASG	Malin Array Be	94.93	324	P	P	06 46 56.4	-0.5
AKASG	Malin Array Be	94.93	324	P	P	06 46 56.4	-0.5
AKASG				pmax	pmax		
	comp=Z,26nm,1.1s						
AKBB	Malin Array Si	94.93	324	ceP	P	06 46 54.3	-2.5
AKBB				pmax	pmax		
	comp=Z,18nm,0.9s						
AKBB	Malin Array Si	94.93	324	P	P	06 46 55.1	-1.7
AK09	Malin Array Si	94.93	324	P	P	06 46 55.1	-1.7
AK01	Malin Array Si	94.94	324	P	P	06 46 54.7	-2.2
AK08	Malin Array Si	94.94	324	P	P	06 46 54.7	-2.2
KIEV	Kiev	94.94	324	⇓P	P	06 46 55.4	-1.5
KIEV	Kiev	94.94	324	i P	P	06 46 55.3	-1.6
	SNR=14						
KIEV	Kiev	94.94	324	⇓P	P	06 46 55.4	-1.5
AK04	Malin Array Si	94.95	324	P	P	06 46 54.3	-2.6
AK10	Malin Array Si	94.95	324	P	P	06 46 54.2	-2.8
AK02	Malin Array Si	94.96	324	P	P	06 46 54.4	-2.6
AK23	Malin Array Si	94.96	324	P	P	06 46 54.9	-2.1
AK11	Malin Array Si	94.97	324	P	P	06 46 55.1	-1.9
AK05	Malin Array Si	94.97	324	P	P	06 46 54.6	-2.5
AK15	Malin Array Si	94.99	324	P	P	06 46 54.9	-2.2
AK06	Malin Array Si	94.99	324	P	P	06 46 55.0	-2.1
AK12	Malin Array Si	94.99	324	P	P	06 46 54.9	-2.2
AK22	Malin Array Si	94.99	324	P	P	06 46 54.9	-2.2
AK21	Malin Array Si	95.00	324	P	P	06 46 55.0	-2.2
AK07	Malin Array Si	95.00	324	P	P	06 46 55.0	-2.2
AK16	Malin Array Si	95.01	324	P	P	06 46 55.0	-2.2
AK18	Malin Array Si	95.01	324	P	P	06 46 55.0	-2.2
AK14	Malin Array Si	95.03	324	P	P	06 46 55.1	-2.2
AK17	Malin Array Si	95.03	324	P	P	06 46 55.1	-2.2
KNB	Kanab	95.12	51	IAmb	IAmb	06 47 22.5	
	comp=Z,92nm,1.6s						
FFC	Flin Flon	95.14	31	P	P	06 46 58.3	+0.6
FFC				IAmb	IAmb	06 47 00.3	
	comp=Z,57nm,1.1s						
FFC	Flin Flon	95.14	31	IAMs_20	IAMs_20	07 26 03.5	
	comp=Z,3µm,22.0s						
FFC	Flin Flon	95.14	31	P	P	06 46 58.3	+0.6
FFC				pmax	pmax		
	comp=Z,57nm,1.1s						
JMIC	Jan Mayen	95.25	351	LR	LR	07 27 59.5	
	comp=Z,518nm,21.9s,baz=54,slow=34						
NSS	Namsos	95.30	341	eP	P	06 46 56.8	-1.5
PKCU	Pink Cliffs	95.37	50	IAmb	IAmb	06 47 28.4	
	comp=Z,66nm,1.4s						
PDAR	Pinedale Array	95.54	45	P	P	06 47 00.0	-0.2
	comp=Z,2.8nm,0.7s,baz=251,slow=2.0,SNR=21						
PDAR				PP	PP	06 50 48.0	-3.4
	comp=Z,1.5nm,0.8s,baz=270,slow=3.7,SNR=4.0						
PDAR				LR	LR	07 24 34.6	
	comp=Z,474nm,21.5s,baz=299,slow=32						
	comp=Z,2.8nm,0.7s						
PDAR	Pinedale Array	95.54	45	P	P	06 47 00.3	+0.2
PABE	Paberze	95.56	330	IAmb	IAmb	06 47 00.6	
	comp=Z,74nm,1.4s						
113A	Mohawk Valley,	95.69	55	IAmb	IAmb	06 47 16.7	
	comp=Z,58nm,1.5s						
MI28	Mi28,Pidlybu	95.72	325	P	P	06 46 57.9	-2.6
Q16A	Castle Valley	95.73	49	IAmb	IAmb	06 47 16.2	
	comp=Z,83nm,1.7s						
P17A	Butcher Ranch,	95.86	48	IAmb	IAmb	06 47 16.4	
	comp=Z,78nm,1.8s						
Y14A	Wickenburg	95.94	54	IAmb	IAmb	06 47 26.0	
	comp=Z,39nm,1.2s						
SUMG	Summit	96.08	0	IAmb	IAmb	06 47 04.2	
	comp=Z,42nm,1.1s						
SRU	San Rafael Swe	96.14	48	IAmb	IAmb	06 47 17.4	
	comp=Z,58nm,1.8s						
ASF	Jabal al Asfar	96.22	304	LR	LR	07 35 26.5	
	comp=Z,366nm,20.6s,baz=45,slow=38						
LAO	LASA Array	96.24	40	IAmb	IAmb	06 47 06.1	
	comp=Z,62nm,0.9s						
BR131	Keskin Array S	96.26	313	i P	P	06 47 03.1	-0.3
BRTR	Keskin Array B	96.26	313	P	P	06 47 03.3	-0.1
	comp=Z,10nm,0.8s,baz=101,slow=3.6,SNR=29						
BRTR				LR	LR	07 33 38.0	
	comp=Z,506nm,21.9s,baz=50,slow=37						
	comp=Z,10nm,0.8s						
BRTR	Keskin Array B	96.26	313	P	P	06 47 02.1	-1.3
KIRS	Kirsehir-Merke	96.26	312	⇓P	P	06 47 00.0	-3.3
BR106	Keskin Array S	96.27	313	P	P	06 47 02.5	-0.9
	comp=Z,106nmcomp=Z,14nm,0.9s						
BR105	Keskin Array S	96.28	312	P	P	06 47 02.8	-0.7
	comp=Z,134nmcomp=Z,17nm,0.9s						
ATD	Arta Tunnel	96.31	283	LR	LR	07 28 11.1	
	comp=Z,8.0nm,21.0s,baz=73,slow=34						
RDMU	Red Mountain	96.32	47	IAmb	IAmb	06 47 18.4	
	comp=Z,78nm,1.7s						
MAW	Mawson	96.38	202	P	P	06 47 03.9	+1.0
	comp=Z,6.8nm,1.0s						
MAW	Mawson	96.38	202	P	P	06 47 03.0	0.0
	comp=Z,24nm,0.9s,baz=54,slow=5.2,SNR=23						
MAW				LR	LR	07 28 53.8	
	comp=Z,905nm,18.5s,baz=80,slow=34						
	comp=Z,24nm,0.9s						
MAW	Mawson	96.38	202	P	P	06 47 03.0	0.0
RNPP9	Sopachiv	96.50	325	P	P	06 47 03.6	-0.4
SORM	Soroca	96.53	322	⇑P	P	06 47 02.6	-1.6
SORM	Soroca	96.53	322	⇑P	P	06 47 02.6	-1.6
RNPP8	Varash	96.56	325	P	P	06 47 03.4	-0.8
RNPP5	Staryi Chortor	96.59	325	P	P	06 47 03.3	-1.1
SUW	Suwalki	96.70	329	eP	P	06 47 03.2	-1.6
SUW	Suwalki	96.70	329	IAMs_20	IAMs_20	07 32 25.7	
	comp=Z,3µm,22.0s						
214A	Organ Pipe Nat	96.70	56	IAmb	IAmb	06 47 29.6	
	comp=Z,34nm,1.1s						
WUAZ	Wupatki	96.71	52	IAmb	IAmb	06 47 21.0	
	comp=Z,57nm,1.6s						
FCC	Fort Churchill	96.73	26	IAmb	IAmb	06 47 07.5	
	comp=Z,36nm,1.0s						
DGMT	Dagmar	96.74	38	IAmb	IAmb	06 47 07.4	
	comp=Z,34nm,0.9s						
MMAI	Mount Meron Ar	97.16	306	P	P	06 47 07.0	-0.5
	comp=Z,22nm,0.8s,baz=60,slow=4.9,SNR=16						
MMAI				LR	LR	07 35 39.4	
	comp=Z,785nm,21.1s,baz=38,slow=38						
	comp=Z,22nm,0.8s						
O20A	White River Ci	97.42	47	IAMs_20	IAMs_20	07 25 29.5	
	comp=Z,2µm,21.0s						
KMPD	K-Podol'skiy	97.48	323	P	PcP	06 47 06.1	-2.4
KMPD				P	P	06 47 05.7	-2.7
PV23	Carpenter Ridg	97.48	48	IAmb	IAmb	06 47 11.8	
	comp=Z,39nm,0.9s						
HFS	Hagfors	97.51	337	P	P	06 47 06.8	-1.5
	comp=Z,5.7nm,0.7s,baz=113,slow=2.3,SNR=17						
HFS				LR	LR	07 34 36.8	
	comp=Z,2µm,20.7s,baz=49,slow=38						
	comp=Z,5.7nm,0.7s						
GHAJ	Ghor Haditha	97.57	304	IAmb	IAmb	06 47 10.1	
	comp=Z,27nm,0.8s						
PV04	Paradox Valley	97.58	48	IAmb	IAmb	06 47 27.4	
	comp=Z,55nm,1.5s						
PV17	East Wray Mesa	97.58	49	IAmb	IAmb	06 47 32.5	
	comp=Z,69nm,1.7s						
PV16	Nyswonger Mesa	97.60	49	IAmb	IAmb	06 47 32.8	
	comp=Z,70nm,1.8s						
PV18	Skein Mesa, Pa	97.63	49	IAmb	IAmb	06 47 24.0	
	comp=Z,35nm,1.2s						
K22A	Casper	97.66	44	IAmb	IAmb	06 47 25.4	
	comp=Z,83nm,1.9s						
PV12	Saucer Basin,	97.68	48	IAmb	IAmb	06 47 24.5	
	comp=Z,47nm,1.1s						
NB2	NORSAR Subarra	97.86	338	P	P	06 47 08.5	-1.5
	comp=Z,40nm,1.4s,baz=48,slow=5.1						
NB2	NORSAR Subarra	97.86	338	P	P	06 47 08.5	-1.5
	baz=48,slow=5.1						
NOA	NORSAR Array B	97.86	338	P	P	06 47 08.4	-1.5
	comp=Z,9.0nm,0.9s,baz=59,slow=4.4,SNR=21						
NOA				PP	PP	06 51 01.1	-7.1
	comp=Z,1.0nm,0.8s,baz=46,slow=8.4,SNR=3.9						
NOA				PKKPbc	PKKPbc	07 03 44.5	-2.0
	comp=Z,1.2nm,0.8s,baz=227,slow=2.9,SNR=3.9						
NOA				LR	LR	07 32 20.3	
	comp=Z,1µm,21.8s,baz=40,slow=36						
	comp=Z,9.0nm,0.9s						
TPGR	Topolog	97.87	319	⇑P	P	06 47 08.9	-1.5
CFR	Carcaliu	97.92	319	⇓P	P	06 47 09.1	-1.4
CFR	Carcaliu	97.92	319	⇓P	P	06 47 09.1	-1.4
ABPO	Ambohimpanom	97.93	252	P	P	06 47 11.0	-0.3
ABPO	Ambohimpanom	97.93	252	P	P	06 47 11.0	-0.3
ABPO				pmax	pmax		
	comp=Z,18nm,1.1s						
DOMB	Dombas	97.95	340	eP	P	06 47 09.3	-1.0
CSS	Mathiatis	98.14	308	IAmb	IAmb	06 47 12.2	
	comp=Z,35nm,0.9s						
PRAR	RASCA	98.16	322	⇑P	P	06 47 10.7	-0.8
TESR	Tescani	98.28	321	⇑P	P	06 47 11.4	-0.8
VRI	Vrincioaia	98.51	320	⇓P	P	06 47 12.4	-0.8
VRI	Vrincioaia	98.51	320	⇓P	P	06 47 12.4	-0.8
AKN	Aaknes	98.55	340	eP	P	06 47 12.7	-0.3
PLOR	Plostina	98.57	320	⇓P	P	06 47 12.6	-0.9
PLOR	Plostina	98.57	320	⇓P	P	06 47 12.6	-0.9
EIL	Elat	98.58	303	LR	LR	07 33 50.1	
	comp=Z,358nm,21.4s,baz=40,slow=37						
BURAR	Bucovina Array	98.65	322	P	P	06 47 13.2	-0.7
BURAR	Bucovina Array	98.65	322	⇓P	P	06 47 13.2	-0.7
BURAR	Bucovina Array	98.65	322	⇓P	P	06 47 13.2	-0.7
RSSD	Black Hills	98.71	42	P	Pdif	06 47 14.7	+0.2
RSSD	Black Hills	98.71	42	P	Pdif	06 47 14.7	+0.3
RSSD				pmax	pmax		
	comp=Z,27nm,1.9s						
NEHR	Nehoiu	98.98	320	⇓P	P	06 47 14.8	-0.5
OZUR		99.00	321	⇓P	Pdif	06 47 14.9	-0.6
MLR	Muntele Rosu	99.17	320	PKKPbc	PKKPbc	07 03 41.8	-0.6
	comp=Z,1.5nm,0.8s,baz=207,slow=4.5,SNR=3.1						
MLR				LR	LR	07 37 04.9	
	comp=Z,1µm,18.9s,baz=53,slow=38						
MLR	Muntele Rosu	99.17	320	IAMs_20	IAMs_20	07 36 44.9	
	comp=Z,2µm,20.0s						
MLR	Muntele Rosu	99.17	320	⇓P	Pdif	06 47 15.6	-0.7
MLR	Muntele Rosu	99.17	320	⇓P	Pdif	06 47 15.6	-0.7
ISP	Isparta	99.22	312	ceP	Pdif	06 47 16.5	-0.2
ISP				pmax	pmax		
	comp=Z,36nm,1.7s						
DOPR	Dopca	99.30	321	⇑P	Pdif	06 47 16.6	-0.2
ISCO	Idaho Springs	99.42	46	IAMs_20	IAMs_20	07 30 00.2	
	comp=Z,2µm,22.0s						
E28A	Huff	99.71	38	IAMs_20	IAMs_20	07 28 43.1	
	comp=Z,2µm,22.0s						
ARR	Arges	100.05	320	⇓P	Pdif	06 47 19.6	-0.5
STHS	Stebnicka Huta	100.07	325	i P	Pdif	06 47 19.7	-0.4
STHS	Stebnicka Huta	100.07	325	ePDIFF	Pdif	06 47 19.7	-0.4
HUMR	Humele	100.22	320	⇑P	Pdif	06 47 19.6	-1.2
MARR	Marisel-Cluj	100.36	322	⇑P	Pdif	06 47 20.7	-0.9
ULM	Lac du Bonnet	100.62	33	P	Pdif	06 47 21.8	-0.7
	comp=Z,13nm,0.9s,baz=313,slow=3.5,SNR=12						
T25A	Trinidad	101.35	48	IAMs_20	IAMs_20	07 27 32.5	
	comp=Z,2µm,22.0s						
QSPA	South Pole Qui	101.38	180	P	Pdif	06 47 26.2	+0.6
	comp=Z,10nm,0.9s,baz=2.4,slow=2.1,SNR=26						
QSPA				PKKPbc	PKKPbc	07 03 34.6	-3.1
	comp=Z,7.2nm,1.0s,baz=174,slow=0.8,SNR=8.7						
QSPA	South Pole Qui	101.38	180	IAMs_20	IAMs_20	07 34 24.4	
	comp=Z,2µm,19.0s						
SIRR	Siria	101.44	322	⇑P	Pdif	06 47 25.6	-0.6
OKC	Ostrava-Krasne	101.55	327	AMS	AMS	07 37 10.0	
	comp=Z,3µm,20.4s						
PSZ	Piszkesteto	101.62	324	⇓P	Pdif	06 47 26.7	-0.4
PSZ	Piszkesteto	101.62	324	⇓P	Pdif	06 47 26.7	-0.4
AGMN	Agassiz Nation	101.68	35	IAMs_20	IAMs_20	07 33 03.8	
	comp=Z,2µm,21.0s						
STEB	Steborice	101.70	327	ePDIFF	Pdif	06 47 26.7	-0.6
KSCO	Kaye Shedlock'	101.85	46	IAMs_20	IAMs_20	07 27 02.5	
	comp=Z,2µm,22.0s						
MORC	Moravsky Berou	101.91	327	⇑P	Pdif	06 47 28.0	-0.3
MORC	Moravsky Berou	101.91	327	ePDIFF	Pdif	06 47 27.7	-0.6
MORC	Moravsky Berou	101.91	327	⇑P	Pdif	06 47 28.0	-0.3
KSP	Ksiaz	101.96	328	eP	Pdif	06 47 28.3	-0.1
MAUC	Maruska	101.99	326	ePDIFF	Pdif	06 47 28.9	+0.3
MDVR	Moldovita	102.14	321	⇑P	Pdif	06 47 28.6	-0.9
KRLC	Kraliky	102.15	327	eP	Pdif	06 47 29.4	0.0
KRLC				MLR	MLR		
	comp=Z,3µm,19.5s						
KRLC	Kraliky	102.15	327	ePDIFF	Pdif	06 47 29.4	0.0
KRLC				AMS	AMS	07 38 30.0	
	comp=Z,3µm,19.5s						
OSTC	Ostas	102.17	328	AMS	AMS	07 39 10.0	
	comp=Z,2µm,17.6s						
DPC	Dobruska-Polom	102.23	328	eP	Pdif	06 47 29.5	-0.2
DPC				MLR	MLR		
	comp=Z,2µm,17.5s						
DPC	Dobruska-Polom	102.23	328	ePDIFF	Pdif	06 47 29.5	-0.2
DPC				AMS	AMS	07 37 40.0	
	comp=Z,2µm,17.5s						
CHVC	Chvalec	102.23	328	eP	Pdif	06 47 29.4	-0.3
CHVC				MLR	MLR		
	comp=Z,2µm,20.6s						
CHVC	Chvalec	102.23	328	ePDIFF	Pdif	06 47 29.4	-0.3
CHVC				AMS	AMS	07 38 20.0	
	comp=Z,2µm,20.6s						
UPC	Upice	102.30	328	eP	Pdif	06 47 30.5	+0.5
UPC				MLR	MLR		
	comp=Z,2µm,18.2s						
UPC	Upice	102.30	328	ePDIFF	Pdif	06 47 30.5	+0.5
UPC				AMS	AMS	07 38 10.0	
	comp=Z,2µm,18.2s						
JAVC	Velka Javorina	102.35	326	ePDIFF	Pdif	06 47 31.1	+0.8
VRAC	Vranov	102.69	327	ePDIFF	Pdif	06 47 31.3	-0.4
KRUC	Moravsky	102.93	327	ePDIFF	Pdif	06 47 32.4	-0.4
PVCC	Panska Ves	103.03	329	AMS	AMS	07 36 30.0	
	comp=Z,3µm,20.0s						
MORH	Mrgy, Hungar	103.25	323	⇑P	Pdif	06 47 33.8	-0.4
RICC	Richard	103.26	329	AMS	AMS	07 36 00.0	
	comp=Z,4µm,25.2s						
CLL	Collm	103.34	330	IAMs_20	IAMs_20	07 37 36.7	
	comp=Z,2µm,21.0s						
CLL	Collm	103.34	330	i P	Pdif	06 47 34.5	-0.1
CLL				e		06 51 56.0	
CLL				eS	Sdif	06 59 21.0	+2.8
CLL				pmax	pmax		
	comp=Z,11nm,1.0s						
CLL				MLR	MLR		
	comp=Z,2µm,23.7s						
PRU	Pruhonice	103.37	328	AMS	AMS	07 36 20.0	
	comp=Z,2µm,20.6s						
PRA	Prague	103.38	328	AMS	AMS	07 36 20.0	
	comp=Z,3µm,22.1s						
HSKC	Hora Svate Kat	103.56	329	AMS	AMS	07 38 30.0	
	comp=Z,2µm,17.5s						
ECSD	EROS Data Cent	103.62	39	IAMs_20	IAMs_20	07 32 27.7	
	comp=Z,2µm,22.0s						
BGNE	Belgrade	103.80	42	IAMs_20	IAMs_20	07 32 42.7	
	comp=Z,1µm,22.0s						
MSTX	Muleshoe	103.86	51	IAMs_20	IAMs_20	07 27 53.3	
	comp=Z,1µm,22.0s						
CONA	Conrad Observa	103.88	326	ePdiff	Pdif	06 47 38.2	+1.0
	comp=Z,14nm,1.2s						
ZVC	Zvikov	103.88	328	ePDIFF	Pdif	06 47 37.2	+0.2
ZVC				AMS	AMS	07 39 10.0	
	comp=Z,2µm,18.0s						
CKRC	Cesky Krumlov	104.19	327	eP	Pdif	06 47 38.3	-0.1
CKRC				MLR	MLR		
	comp=Z,2µm,16.8s						
CKRC	Cesky Krumlov	104.19	327	ePDIFF	Pdif	06 47 38.3	-0.1
CKRC				AMS	AMS	07 40 10.0	
	comp=Z,2µm,16.8s						
AMTX	Amarillo	104.30	49	IAMs_20	IAMs_20	07 29 16.7	
	comp=Z,1µm,22.0s						
EYMN	Ely	104.30	34	IAMs_20	IAMs_20	07 32 27.0	
	comp=Z,2µm,21.0s						
KHC	Kasperske Hory	104.39	328	eP	Pdif	06 47 39.7	+0.4
KHC				MLR	MLR		
	comp=Z,2µm,19.3s						
KHC	Kasperske Hory	104.39	328	ePDIFF	Pdif	06 47 39.7	+0.4
KHC				AMS	AMS	07 39 30.0	
	comp=Z,2µm,19.3s						
ARSA	Arzberg	104.45	325	ePdiff	Pdif	06 47 40.0	+0.4
	comp=Z,0.2nm,0.3s						
GERES	GERESS Array B	104.50	328	Pdiff	Pdif	06 47 39.1	-0.8
	comp=Z,4.8nm,1.0s,baz=45,slow=4.0,SNR=6.5						
GERES				PKKPbc	PKKPbc	07 03 24.6	-2.4
	comp=Z,1.6nm,0.9s,baz=333,slow=1.1,SNR=3.7						
MOA	Molln	104.79	326	ePdiff	Pdif	06 47 41.3	+0.2
	comp=Z,12nm,1.3s						
PDG	Podgorica	104.88	320	IAMs_20	IAMs_20	07 38 48.8	
	comp=Z,2µm,20.0s						
TXAR	Lajitas Array	105.00	55	Pdiff	Pdif	06 47 42.6	+0.1
	comp=Z,0.7nm,1.0s,baz=267,slow=2.3,SNR=4.7						
TXAR				PKiKP	PKiKP	06 51 58.1	+0.8
	comp=Z,0.8nm,0.8s,baz=283,slow=1.4,SNR=4.4						
TXAR				PKKPbc	PKKPbc	07 03 25.8	+0.9
	comp=Z,1.0nm,0.9s,baz=100,slow=3.4,SNR=6.5						
TXAR				PKKPab	PKKPab	07 03 42.1	-1.5
	comp=Z,0.8nm,0.8s,baz=126,slow=6.6,SNR=5.0						
SYO	Syowa Base	105.06	201	⇓ePdiff	Pdif	06 47 43.0	+1.4
BIOA	Bad Ischl, Aus	105.23	327	ePdiff	Pdif	06 47 41.4	-1.7
	comp=Z,4.4nm,1.0s						
OBKA	Obir	105.43	325	ePdiff	Pdif	06 47 42.8	-1.3
	comp=Z,2.6nm,0.7s						
I37A	Lemond, Waseca	105.44	38	IAMs_20	IAMs_20	07 36 03.7	
	comp=Z,2µm,20.0s						
KBA	Koelnbreinsper	105.75	326	ePdiff	Pdif	06 47 43.2	-2.5
	comp=Z,0.7nm,0.3s						
MYKA	Terra Mystica	105.86	326	ePdiff	Pdif	06 47 45.6	-0.4
	comp=Z,4.4nm,0.9s						
LESA	Schwarzleotal	105.91	327	ePdiff	Pdif	06 47 46.0	-0.2
	comp=Z,7.5nm,0.9s						
KSU1	Kansas State U	105.96	44	IAMs_20	IAMs_20	07 33 58.3	
	comp=Z,2µm,21.0s						
ABTA	Abfaltersbach	106.41	326	ePdiff	Pdif	06 47 47.5	-1.0
	comp=Z,8.9nm,0.9s						
WATA	Walderalm	106.55	327	ePdiff	Pdif	06 47 50.5	+1.4
	comp=Z,4.4nm,1.0s						

WTTA	**Wattenberg**	**106.56**	**327**	*e*Pdiff	**Pdif**	**06 47 49.5**	**+0.3**
	comp=Z,7.7nm,1.1s						
SCIA	**State Center**	**106.71**	**40**	IAMs_20	IAMs_20	07 32 56.7	
	comp=Z,1µm,21.0s						
OK029	**Liberty Lake**	**106.97**	**47**	IAMs_20	IAMs_20	07 31 05.6	
	comp=Z,2µm,22.0s						
OK048	**Pawnee Station**	**107.04**	**46**	IAMs_20	IAMs_20	07 34 59.3	
	comp=Z,2µm,20.0s						
OK051	**E0350 and S346**	**107.07**	**46**	IAMs_20	IAMs_20	07 35 33.1	
	comp=Z,1µm,20.0s						
N38A	**Joes South For**	**107.30**	**41**	IAMs_20	IAMs_20	07 37 47.5	
	comp=Z,1µm,22.0s						
OK052	**Battle Ridge R**	**107.34**	**46**	IAMs_20	IAMs_20	07 35 20.3	
	comp=Z,1µm,20.0s						
F42A	**Maple Grove Fa**	**107.46**	**34**	IAMs_20	IAMs_20	07 34 12.8	
	comp=Z,2µm,21.0s						
L40A	**Anamosa**	**107.86**	**39**	IAMs_20	IAMs_20	07 37 31.9	
	comp=Z,2µm,21.0s						
TUL3	**Leonard**	**108.10**	**46**	IAMs_20	IAMs_20	07 31 41.3	
	comp=Z,1µm,21.0s						
Z35A	**Perchaven, San**	**108.27**	**49**	IAMs_20	IAMs_20	07 32 00.3	
	comp=Z,2µm,22.0s						
U38A	**Gravette**	**108.82**	**45**	IAMs_20	IAMs_20	07 33 59.2	
	comp=Z,2µm,22.0s						
N41A	**Harden Midland**	**108.85**	**40**	IAMs_20	IAMs_20	07 34 57.4	
	comp=Z,1µm,22.0s						
E46A	**Sault Ste Mari**	**109.11**	**32**	IAMs_20	IAMs_20	07 34 19.3	
	comp=Z,2µm,22.0s						
R40A	**Maddies Statio**	**109.28**	**42**	IAMs_20	IAMs_20	07 33 15.1	
	comp=Z,2µm,22.0s						
SCHQ	**Schefferville**	**109.62**	**17**	PKiKP	**PKiKP**	**06 52 06.4**	**+1.3**
	comp=Z,3.4nm,0.9s,baz=252,slow=3.2,SNR=4.1						
SCHQ				PKKPbc	**PKKPbc**	**07 03 08.8**	**-2.5**
	comp=Z,3.1nm,0.8s,baz=256,slow=5.7,SNR=3.7						
735A	**Kenedy**	**109.87**	**54**	IAMs_20	IAMs_20	07 33 41.1	
	comp=Z,1µm,20.0s						
HDIL	**Hopedale**	**109.91**	**39**	IAMs_20	IAMs_20	07 38 55.3	
	comp=Z,2µm,21.0s						
GLMI	**Grayling**	**109.97**	**33**	IAMs_20	IAMs_20	07 37 22.1	
	comp=Z,2µm,21.0s						
Z38A	**Mt. Pleasant**	**109.98**	**48**	IAMs_20	IAMs_20	07 32 36.3	
	comp=Z,2µm,22.0s						
CCM	**Cathedral Cave**	**110.09**	**42**	IAMs_20	IAMs_20	07 31 38.4	
	comp=Z,1µm,20.0s						
MIAR	**Mount Ida**	**110.35**	**46**	IAMs_20	IAMs_20	07 36 56.0	
	comp=Z,2µm,22.0s						
T42A	**Van Buren**	**110.75**	**43**	IAMs_20	IAMs_20	07 36 28.1	
	comp=Z,1µm,22.0s						
HKT	**Hockley**	**110.91**	**52**	IAMs_20	IAMs_20	07 38 43.2	
	comp=Z,1µm,21.0s						
NATX	**Nacogdoches**	**110.94**	**49**	IAMs_20	IAMs_20	07 35 53.1	
	comp=Z,1µm,20.0s						
SFIN	**Lafayette**	**111.36**	**38**	IAMs_20	IAMs_20	07 36 04.6	
	comp=Z,2µm,22.0s						
I49A	**Point Hope**	**111.52**	**33**	IAMs_20	IAMs_20	07 38 38.0	
	comp=Z,2µm,21.0s						
S44A	**Carbondale**	**111.59**	**42**	IAMs_20	IAMs_20	07 37 20.1	
	comp=Z,1µm,22.0s						
P46A	**Rosedale**	**111.76**	**39**	IAMs_20	IAMs_20	07 35 58.1	
	comp=Z,2µm,22.0s						
T45A	**Paducah**	**112.38**	**42**	IAMs_20	IAMs_20	07 37 34.0	
	comp=Z,2µm,22.0s						
K50A	**Casco**	**112.41**	**34**	IAMs_20	IAMs_20	07 42 53.7	
	comp=Z,1µm,21.0s						
P48A	**Milroy**	**112.94**	**38**	IAMs_20	IAMs_20	07 37 34.3	
	comp=Z,2µm,19.0s						
WCI	**Wyandotte Cave**	**113.16**	**40**	IAMs_20	IAMs_20	07 38 06.5	
	comp=Z,2µm,22.0s						
OXF	**Oxford**	**113.28**	**44**	IAMs_20	IAMs_20	07 38 14.3	
	comp=Z,1µm,22.0s						
NVL	**N'lazarevskaya**	**113.32**	**196**	*i* PKIKP	**PKiKP**	**06 52 13.0**	**+1.5**
NVL				*e*		06 53 03.4	
NVL				*e*PPP	PPP	06 55 27.5	
NVL				*e*SS	SS	07 08 46.3	+2.5
NVL				*e*SSS	SSS	07 12 59.4	
NVL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NVL				MLR	MLR		
	comp=Z,1µm,18.0s						
T47A	**Sharon Grove**	**113.39**	**41**	IAMs_20	IAMs_20	07 35 35.8	
	comp=Z,1µm,21.0s						
WVT	**Waverly**	**113.42**	**42**	IAMs_20	IAMs_20	07 41 51.8	
	comp=Z,1µm,20.0s						
Y45A	**Yeager Farm, C**	**113.55**	**45**	IAMs_20	IAMs_20	07 32 45.8	
	comp=Z,2µm,22.0s						
R49A	**Shelbyville**	**113.82**	**39**	IAMs_20	IAMs_20	07 37 19.8	
	comp=Z,2µm,21.0s						
PLAL	**Pickwick Lake**	**113.92**	**43**	IAMs_20	IAMs_20	07 38 33.1	
	comp=Z,1µm,22.0s						
M52A	**Chesterland**	**113.94**	**34**	IAMs_20	IAMs_20	07 43 50.1	
	comp=Z,2µm,22.0s						
ERPA	**Erie**	**114.28**	**33**	IAMs_20	IAMs_20	07 39 38.1	
	comp=Z,2µm,22.0s						
V48A	**Smith Brothers**	**114.32**	**42**	IAMs_20	IAMs_20	07 42 07.3	
	comp=Z,2µm,22.0s						
R50A	**Paris**	**114.35**	**39**	IAMs_20	IAMs_20	07 37 56.6	
	comp=Z,2µm,21.0s						
U49A	**Red Boiling Sp**	**114.53**	**41**	IAMs_20	IAMs_20	07 37 48.8	
	comp=Z,1µm,22.0s						
146A	**Union**	**114.56**	**46**	IAMs_20	IAMs_20	07 39 27.3	
	comp=Z,2µm,22.0s						
J55A	**Hilton**	**114.58**	**31**	IAMs_20	IAMs_20	07 43 37.9	
	comp=Z,1µm,20.0s						
TROLL	**Troll, Antarti**	**114.80**	**193**	⇓P	PKPdf	06 52 14.8	+0.3
TROLL	**Troll, Antarti**	**114.80**	**193**	P	**PKKPbc**	**07 02 51.2**	**-3.4**
T50A	**Nancy**	**114.82**	**40**	IAMs_20	IAMs_20	07 40 57.3	
	comp=Z,2µm,20.0s						
X48A	**Hartselle**	**114.92**	**43**	IAMs_20	IAMs_20	07 42 11.5	
	comp=Z,1µm,22.0s						
Z47A	**Carrollton**	**114.94**	**45**	IAMs_20	IAMs_20	07 33 52.2	
	comp=Z,2µm,22.0s						
LONY	**Lake Ozonia**	**115.13**	**28**	IAMs_20	IAMs_20	07 40 42.9	
	comp=Z,1µm,22.0s						
S51A	**Beattyville**	**115.20**	**39**	IAMs_20	IAMs_20	07 38 24.3	
	comp=Z,1µm,20.0s						
LSZ	**Lusaka**	**115.51**	**258**		**PKPdf**	**06 52 16.9**	**-0.5**
LSZ	**Lusaka**	**115.51**	**258**	PKIKP	**PKPdf**	**06 52 16.9**	**-0.5**
L56A	**Greenwood**	**115.53**	**32**	IAMs_20	IAMs_20	07 42 27.1	
	comp=Z,2µm,21.0s						
K57A	**Scipio Center**	**115.63**	**30**	IAMs_20	IAMs_20	07 44 20.4	
	comp=Z,1µm,19.0s						
Y49A	**Blount Mountai**	**115.69**	**44**	IAMs_20	IAMs_20	07 35 22.0	
	comp=Z,2µm,22.0s						
LRAL	**Lakeview Retre**	**115.77**	**45**	IAMs_20	IAMs_20	07 39 37.1	
	comp=Z,2µm,22.0s						
TZTN	**Tazewell**	**115.92**	**40**	IAMs_20	IAMs_20	07 41 57.5	
	comp=Z,1µm,20.0s						
J59A	**Piesco**	**116.05**	**29**	IAMs_20	IAMs_20	07 37 58.3	
	comp=Z,2µm,21.0s						
VT1	**Waterbury**	**116.18**	**27**	IAMs_20	IAMs_20	07 41 32.8	
	comp=Z,2µm,21.0s						
SNAA	**Sanae**	**116.18**	**192**	⇓P	**PKiKP**	**06 52 16.9**	**-0.2**
SNAA	**Sanae**	**116.18**	**192**	P	**PKKPbc**	**07 02 45.7**	**-4.1**
SNAA	**Sanae**	**116.18**	**192**	PKP	**PKiKP**	**06 52 16.6**	**-0.5**
	comp=Z,4.6nm,1.1s,baz=121,slow=2.2,SNR=7.8						
SNAA				PKKPbc	**PKKPbc**	**07 02 45.2**	**-4.5**
	comp=Z,6.0nm,0.9s,baz=317,slow=4.0,SNR=14						
SNAA	**Sanae**	**116.18**	**192**		**PKiKP**	**06 52 17.0**	**-0.2**
SNAA	**Sanae**	**116.18**	**192**	PKIKP	**PKiKP**	**06 52 17.0**	**-0.1**
SNAA				MLR	MLR		
	comp=Z,2µm,20.0s						
TKL	**Tuckaleechee C**	**116.34**	**40**		**PKiKP**	**06 52 19.5**	**+1.1**
TKL	**Tuckaleechee C**	**116.34**	**40**	PKIKP	**PKiKP**	**06 52 19.5**	**+1.1**
SSPA	**Standing Stone**	**116.44**	**33**		**PKiKP**	**06 52 18.9**	**+0.4**
SSPA	**Standing Stone**	**116.44**	**33**	IAMs_20	IAMs_20	07 45 35.4	
	comp=Z,1µm,21.0s						
W52A	**Murphy**	**116.59**	**41**	IAMs_20	IAMs_20	07 43 23.3	
	comp=Z,1µm,21.0s						
LBNH	**Lisbon**	**116.61**	**26**	IAMs_20	IAMs_20	07 38 58.0	
	comp=Z,2µm,21.0s						
HNH	**Hanover**	**116.88**	**27**	IAMs_20	IAMs_20	07 42 07.1	
	comp=Z,2µm,21.0s						
250A	**Grady**	**116.88**	**45**	IAMs_20	IAMs_20	07 35 48.7	
	comp=Z,2µm,21.0s						
PKME	**Peaks-Kenny Pk**	**116.89**	**24**	IAMs_20	IAMs_20	07 43 06.0	
	comp=Z,2µm,21.0s						
N58A	**Sunbury**	**116.91**	**32**	IAMs_20	IAMs_20	07 42 59.7	
	comp=Z,2µm,21.0s						
V53A	**Saluda**	**116.94**	**40**	IAMs_20	IAMs_20	07 42 42.4	
	comp=Z,1µm,22.0s						
TRY	**Troy**	**117.00**	**29**	IAMs_20	IAMs_20	07 42 01.6	
	comp=Z,1µm,20.0s						
U54A	**Nelsons Funny**	**117.00**	**39**	IAMs_20	IAMs_20	07 36 28.0	
	comp=Z,1µm,22.0s						
J61A	**Chester**	**117.04**	**28**	IAMs_20	IAMs_20	07 42 22.4	
	comp=Z,2µm,21.0s						
I62A	**Tamworth**	**117.16**	**26**	IAMs_20	IAMs_20	07 45 52.5	
	comp=Z,2µm,20.0s						
Y52A	**Lilburn**	**117.26**	**42**	IAMs_20	IAMs_20	07 40 32.2	
	comp=Z,2µm,22.0s						
152A	**Waverly Hall**	**117.54**	**44**	IAMs_20	IAMs_20	07 43 30.9	
	comp=Z,2µm,20.0s						
VNA2	**Neumayer--Watz**	**117.66**	**191**	⇑P	**PKiKP**	**06 52 20.0**	**+0.1**
	baz=102,slow=1.4						
VNA2	**Neumayer--Watz**	**117.66**	**191**	P	**PKKPbc**	**07 02 42.0**	**-2.3**
	baz=329,slow=35						
L61B	**Northampton**	**117.68**	**28**	IAMs_20	IAMs_20	07 42 42.5	
	comp=Z,1µm,21.0s						
K62A	**Royalston**	**117.72**	**28**	IAMs_20	IAMs_20	07 42 43.4	
	comp=Z,2µm,21.0s						
VNA3	**Neumayer Olymp**	**117.80**	**190**	⇑P	**PKPdf**	**06 52 19.8**	**-0.3**
VNA3	**Neumayer Olymp**	**117.80**	**190**	⇓P	**PKKPbc**	**07 02 41.0**	**-2.9**
V55A	**Taylorsville**	**117.81**	**39**	IAMs_20	IAMs_20	07 42 12.4	
	comp=Z,1µm,20.0s						
GOGA	**Godfrey**	**117.92**	**42**	IAMs_20	IAMs_20	07 41 01.9	
	comp=Z,2µm,22.0s						
VNA1	**Neumayer--Stat**	**118.05**	**191**	P	**PKiKP**	**06 52 20.9**	**+0.3**
VNA1	**Neumayer--Stat**	**118.05**	**191**	P	**PKKPbc**	**07 02 41.3**	**-1.6**
HRV	**Adam Dziewonsk**	**118.15**	**27**	IAMs_20	IAMs_20	07 42 42.8	
	comp=Z,2µm,21.0s						
KMSC	**Kings Mountain**	**118.20**	**39**	IAMs_20	IAMs_20	07 49 15.8	
	comp=Z,1µm,20.0s						
WSPT	**Westport, CT**	**118.36**	**30**	IAMs_20	IAMs_20	07 40 53.7	
	comp=Z,2µm,20.0s						
BOSA	**Boshof**	**118.65**	**244**	PKP	**PKiKP**	**06 52 23.9**	**+0.7**
	comp=Z,8.1nm,0.8s,baz=112,slow=3.8,SNR=9.5						
P61A	**Hammonton**	**118.77**	**32**	IAMs_20	IAMs_20	07 39 51.7	
	comp=Z,2µm,22.0s						
M63A	**Gales Ferry**	**118.79**	**29**	IAMs_20	IAMs_20	07 42 55.0	
	comp=Z,2µm,22.0s						
L64A	**Middleborough**	**118.93**	**27**	IAMs_20	IAMs_20	07 43 29.4	
	comp=Z,2µm,21.0s						
X58A	**Rowland**	**119.82**	**39**	IAMs_20	IAMs_20	07 40 59.6	
	comp=Z,2µm,21.0s						
ESDC	**Sonseca Array**	**119.93**	**330**	PKP	**PKiKP**	**06 52 25.7**	**+0.3**
	comp=Z,2.4nm,0.8s,baz=49,slow=2.3,SNR=13						
ESDC				PP	**PP**	**06 53 44.1**	**-4.7**
	comp=Z,4.5nm,1.0s,baz=38,slow=7.0,SNR=6.6						
ESDC				PKKPbc	**PKKPbc**	**07 02 35.3**	**-0.2**
	comp=Z,3.1nm,0.8s,baz=237,slow=3.4,SNR=13						
PGAV	**Gavieira, Arco**	**120.07**	**335**	*e*PKP	**PKiKP**	**06 52 26.6**	**+1.0**
MVO	**Moncorvo**	**120.19**	**333**	*e*PKP	**PKiKP**	**06 52 27.5**	**+1.7**
POLO	**Lamas de Olo**	**120.36**	**334**	*e*PKP	**PKiKP**	**06 52 27.2**	**+1.0**
PVRL	**Vila Real**	**120.40**	**334**	*e*PKP	**PKiKP**	**06 52 28.0**	**+1.8**
PVIS	**Viseu**	**120.94**	**333**	*e*PKP	**PKiKP**	**06 52 28.8**	**+1.5**
MTE	**Manteigas**	**121.04**	**333**	*e*PKP	**PKiKP**	**06 52 29.4**	**+1.9**
PCBR	**Castelo Branco**	**121.46**	**333**	*e*PKP	**PKiKP**	**06 52 29.3**	**+1.0**
PCAS	**Casmilo, Conde**	**121.74**	**333**	*e*PKP	**PKiKP**	**06 52 29.8**	**+0.9**
PMRV	**Marv??o**	**121.75**	**332**	*e*PKP	**PKiKP**	**06 52 29.8**	**+0.9**
PSARD	**Sardoal**	**121.96**	**333**	*e*PKP	**PKiKP**	**06 52 30.5**	**+1.2**
PSBE	**So Bento**	**122.32**	**333**	*e*PKP	**PKiKP**	**06 52 31.4**	**+1.4**
PMTG	**Montargil**	**122.42**	**333**	*e*PKP	**PKiKP**	**06 52 30.9**	**+0.7**
PARRA	**Arraiolos**	**122.55**	**332**	*e*PKP	**PKiKP**	**06 52 31.3**	**+0.9**
PBAR	**Barrancos**	**122.60**	**331**	*e*PKP	**PKiKP**	**06 52 31.4**	**+0.9**
EVO	**Evora**	**122.76**	**332**	*e*PKP	**PKiKP**	**06 52 31.0**	**+0.1**
MOE	**Montemor**	**122.93**	**332**	*e*PKP	**PKiKP**	**06 52 32.7**	**+1.4**
PBEJ	**Beja**	**123.10**	**332**	*e*PKP	**PKiKP**	**06 52 32.8**	**+1.2**
MESJ	**Messejana**	**123.42**	**332**	*e*PKPdf	**PKiKP**	**06 52 32.5**	**+0.3**
MESJ				IAMs_20	IAMs_20	07 48 58.3	
	comp=Z,2µm,26.3s						
MESJ	**Messejana**	**123.42**	**332**	*e*PKP	**PKiKP**	**06 52 33.6**	**+1.4**
MESJ	**Messejana**	**123.42**	**332**	*e*PKIKP	**PKiKP**	**06 52 32.5**	**+0.3**
PCVE	**Castro Verde**	**123.50**	**331**	*e*PKP	**PKiKP**	**06 52 33.7**	**+1.3**
PVAQ	**Vaqueiros**	**123.53**	**331**	*e*PKP	**PKiKP**	**06 52 33.1**	**+0.6**
PBDV	**Barranco-do-Ve**	**123.76**	**331**	*e*PKP	**PKiKP**	**06 52 34.4**	**+1.4**
MD01	**Midelt array s**	**125.52**	**325**		**PKiKP**	**06 52 37.4**	**+0.7**
MD31	**MD31**	**125.52**	**325**		**PKiKP**	**06 52 37.8**	**+1.1**
BOAB	**BOACO BROADBAN**	**127.22**	**65**	IAMs_20	IAMs_20	07 44 48.7	
	comp=Z,1µm,22.0s						
BBSR	**BB Station**	**129.54**	**29**	IAMs_20	IAMs_20	07 45 19.0	
	comp=Z,1µm,22.0s						
GTBY	**Guantanamo Bay**	**132.08**	**50**	IAMs_20	IAMs_20	07 49 13.5	
	comp=Z,1µm,20.0s						
TORD	**Torodi Ar. Bea**	**133.43**	**301**	PKhKP	PKPpre	06 52 37.0	
	comp=Z,1.7nm,0.8s,baz=32,slow=5.8,SNR=4.0						
TORD				PKP	**PKPdf**	**06 52 50.4**	**-1.2**
	comp=Z,5.4nm,0.6s,baz=35,slow=3.6,SNR=14						
TORD				PP	PP	06 55 06.7	-13
	comp=Z,6.1nm,0.9s,baz=42,slow=8.7,SNR=4.5						
TORD				SKPab	**SKPbc**	**06 56 16.3**	**+0.4**
	comp=Z,13nm,1.2s,baz=28,slow=4.0,SNR=5.8						
SDDR	**Presa de Saban**	**135.48**	**47**	IAMs_20	IAMs_20	07 48 35.2	
	comp=Z,1µm,22.0s						
LL01	**San Ignacio de**	**137.22**	**142**	IAMs_20	IAMs_20	07 45 34.7	
	comp=Z,946nm,18.0s						
OTAV	**Otavalo**	**138.36**	**76**	IAMs_20	IAMs_20	07 43 17.1	
	comp=Z,1µm,21.0s						
OTAV	**Otavalo**	**138.36**	**76**	*e*P	PKPpre	06 52 57.5	
LR03	**Panguipulli**	**138.82**	**139**		**PKiKP**	**06 53 02.8**	**-0.4**
PLCA	**Paso Flores**	**139.32**	**141**	PKhKP	PKPpre	06 52 55.1	
	comp=Z,2.2nm,0.8s,baz=228,slow=7.9,SNR=3.1						
PLCA				PKP	**PKPdf**	**06 53 01.2**	**-0.7**
	comp=Z,9.5nm,0.8s,baz=225,slow=3.3,SNR=9.6						
PLCA	**Paso Flores**	**139.32**	**141**		**PKiKP**	**06 53 04.3**	**+0.1**
PLCA	**Paso Flores**	**139.32**	**141**	PKIKP	**PKiKP**	**06 53 04.3**	**+0.1**
PLCA	**Paso Flores**	**139.32**	**141**	*e*P	**PKPdf**	**06 53 00.1**	**-1.8**
SJG	**San Juan**	**139.66**	**43**	IAMs_20	IAMs_20	07 54 20.3	
	comp=Z,1µm,20.0s						
SJG	**San Juan**	**139.66**	**43**	*e*P	PKPpre	06 52 55.6	
ATAH	**Atahualpa**	**140.14**	**87**	PKhKP	PKPpre	06 53 00.2	
	comp=Z,9.3nm,0.8s,baz=270,slow=4.0,SNR=6.2						
ATAH				PKP	**PKPdf**	**06 53 05.7**	**+1.1**
	comp=Z,22nm,0.8s,baz=279,slow=3.3,SNR=12						
ROSC	**El Rosal**	**140.57**	**68**	PKhKP	PKPpre	06 53 02.8	
	comp=Z,13nm,0.5s,baz=138,slow=13,SNR=7.3						
ROSC	**El Rosal**	**140.57**	**68**		**PKPdf**	**06 53 04.8**	**-0.6**
ROSC	**El Rosal**	**140.57**	**68**	PKIKP	**PKPdf**	**06 53 04.8**	**-0.6**
SDV	**Santo Domingo**	**141.91**	**59**	*e*P	**PKPdf**	**06 53 04.7**	**-2.8**
NNA	**Nana**	**142.20**	**95**	PKP	**PKPdf**	**06 53 08.6**	**+0.8**
	comp=Z,20nm,0.8s,baz=306,slow=5.6,SNR=11						
NNA	**Nana**	**142.20**	**95**		**PKPdf**	**06 53 09.1**	**+1.3**
NNA	**Nana**	**142.20**	**95**	PKIKP	**PKPdf**	**06 53 09.1**	**+1.3**
DBIC	**Dimbokro**	**142.21**	**297**	PKhKP	PKPpre	06 53 03.4	
	comp=Z,37nm,1.0s,baz=90,slow=3.3,SNR=32						
SKI	**Saint Kitts**	**142.46**	**41**	*e*P	**PKiKP**	**06 53 11.7**	**+0.5**
DHSZ	**Broadband at M**	**143.87**	**41**	*e*P	PKPab	06 53 06.3	-1.4
ATGZ	**Broadband at L**	**144.02**	**41**	*e*P	PKPbc	06 53 09.6	+0.7
MMLZ	**Guadeloupe Bro**	**144.10**	**41**	*e*P	PKPbc	06 53 09.1	0.0
TBG	**Guadaloupe-3**	**144.25**	**41**	*e*P	PKPbc	06 53 10.2	+0.6
TDBA	**Terre de Bas,**	**144.26**	**41**		**PKPdf**	**06 53 10.8**	**-0.5**
DSDZ	**La Diserade, G**	**144.28**	**40**	*e*P	PKPbc	06 53 10.1	+0.5
GDSD	**La Dsirade Is**	**144.28**	**40**		PKPbc	06 53 10.4	+0.8
DWS	**Wesley**	**144.68**	**41**	*e*P	**PKPdf**	**06 53 12.5**	**+0.4**
DSLB	**Salisbury**	**144.71**	**41**	*e*P	**PKPdf**	**06 53 12.0**	**-0.1**
DLPL	**La Plaine**	**144.90**	**41**	*e*P	**PKPdf**	**06 53 12.7**	**+0.2**
SVN	**Savane Anatole**	**145.31**	**42**	*e*P	**PKPdf**	**06 53 14.2**	**+1.0**
BIM	**Bigot**	**145.61**	**42**	*e*P	**PKPdf**	**06 53 13.5**	**-0.2**
CFA	**Coronel Fontan**	**145.85**	**130**	PKPbc	**PKPbc**	**06 53 14.5**	**+0.2**
	comp=Z,54nm,1.0s,baz=250,slow=3.8,SNR=112						
PCRV	**Puerto La Cruz**	**146.02**	**52**	*e*P	**PKPdf**	**06 53 14.1**	**-0.4**
SLCP	**Castries, St.**	**146.04**	**42**	*e*P	**PKPbc**	**06 53 15.5**	**+0.3**
SLBI	**Saint Lucia, B**	**146.04**	**42**	*e*P	**PKPbc**	**06 53 14.8**	**-0.4**
TRQA	**Tornquist**	**146.09**	**145**		**PKPab**	**06 53 15.5**	**0.0**
TRQA	**Tornquist**	**146.09**	**145**	PKP2	**PKPab**	**06 53 15.5**	**0.0**
SLB	**Belfond**	**146.13**	**43**	*e*P	**PKPbc**	**06 53 15.2**	**-0.4**
SLAC	**Saint Lucia, A**	**146.18**	**42**	*e*P	**PKPab**	**06 53 16.6**	**+0.2**
AC01	**Pan de Azucar**	**146.20**	**120**		**PKPab**	**06 53 16.4**	**+0.1**
MCLT	**Moule a Chique**	**146.29**	**43**	*e*P	**PKPdf**	**06 53 14.5**	**-0.3**
SVB	**Belmont**	**146.39**	**44**	*e*P	**PKPdf**	**06 53 14.5**	**-0.5**
GRGR	**Grenville**	**146.92**	**45**	IAMs_20	IAMs_20	08 00 31.1	
	comp=Z,1µm,22.0s						
AC02	**Maricunga**	**147.19**	**122**	IAMs_20	IAMs_20	07 46 12.8	
	comp=Z,1µm,21.0s						
DMDM	**Guralp CMG5TDE**	**147.98**	**47**	*e*P	**PKPdf**	**06 53 19.0**	**+1.3**
TRN	**Trinidad (W)**	**148.12**	**47**	*e*P	**PKPdf**	**06 53 19.0**	**+1.1**
TRN	**Trinidad (W)**	**148.12**	**47**	*e*P	**PKPbc**	**06 53 20.6**	**-0.5**
PB12	**IPOC Station P**	**148.24**	**107**	IAMs_20	IAMs_20	07 47 37.4	
	comp=Z,810nm,22.0s						
AP01	**Chacalluta**	**148.26**	**106**	IAMs_20	IAMs_20	07 47 38.0	
	comp=Z,808nm,21.0s						
TPP	**Pointe-a-Pierr**	**148.31**	**48**	*e*P	**PKPbc**	**06 53 22.2**	**+0.6**
PB16	**IPOC Station P**	**149.05**	**106**	IAMs_20	IAMs_20	07 48 15.1	
	comp=Z,828nm,21.0s						
PB18	**Visviri**	**149.17**	**105**	IAMs_20	IAMs_20	07 48 40.3	
	comp=Z,1µm,21.0s						
LPAZ	**La Paz**	**150.59**	**103**	PKP	**PKPdf**	**06 53 24.0**	**+1.5**
	comp=Z,13nm,1.0s,baz=325,slow=1.0,SNR=29						
LPAZ				PKPbc	**PKiKP**	**06 53 29.7**	**+1.0**
	comp=Z,117nm,0.8s,baz=7.9,slow=2.8,SNR=134						
LPAZ	**La Paz**	**150.59**	**103**	*e*P	**PKPdf**	**06 53 21.5**	**-1.1**
TEFE	**Tefe**	**152.65**	**75**	*e*P	**PKPdf**	**06 53 24.7**	**-0.4**
PSAL	**Palomas, Salto**	**153.53**	**140**	*e*P	**PKPdf**	**06 53 26.0**	**+0.2**
BOAV	**Boa Vista**	**153.86**	**59**	*e*P	**PKPdf**	**06 53 26.0**	**-0.8**
MACA	**Manacapuru-AM**	**156.24**	**71**	*e*P	**PKPdf**	**06 53 29.6**	**-0.5**
CPUP	**Villa Florida**	**156.73**	**132**	PKP	**PKPdf**	**06 53 30.6**	**+0.3**
	comp=Z,5.1nm,0.9s,baz=182,slow=3.7,SNR=9.6						
CPUP				PKPab	**PKPab**	**06 54 00.8**	**+1.0**
	comp=Z,14nm,1.0s,baz=225,slow=6.8,SNR=11						
SIV	**San Ignacio**	**157.37**	**104**	PKP	**PKPdf**	**06 53 32.0**	**+0.6**
	comp=Z,5.4nm,0.9s,baz=204,slow=1.5,SNR=24						
SIV				PKPab	**PKPab**	**06 54 04.2**	**+1.3**
	comp=Z,14nm,0.8s,baz=230,slow=5.4,SNR=12						
MDP	**Montagnes des**	**158.12**	**42**	PKPab	**PKPab**	**06 54 06.4**	**+0.4**
	comp=Z,27nm,0.9s,baz=322,slow=5.1,SNR=4.2						
VILB	**Vilhena**	**158.47**	**96**	*e*P	**PKPdf**	**06 53 32.5**	**-0.3**
CNLB	**Canela**	**158.74**	**148**	*e*P	**PKPdf**	**06 53 32.8**	**0.0**
MURT	**Porto Murtinho**	**158.88**	**121**	*e*P	**PKPdf**	**06 53 33.0**	**-0.1**
PTLB	**Pontes e Lacer**	**159.29**	**103**		**PKPdf**	**06 53 34.7**	**+1.0**
PTLB	**Pontes e Lacer**	**159.29**	**103**	*e*P	**PKPdf**	**06 53 33.5**	**-0.2**
AMBA	**Amambai (Brazi**	**160.40**	**128**	*e*P	**PKPdf**	**06 53 34.7**	**-0.1**
AQDB	**Aquidauana**	**161.00**	**120**	*e*P	**PKPdf**	**06 53 35.4**	**-0.1**
ITTB	**Itaituba**	**161.26**	**69**	*e*P	**PKPdf**	**06 53 35.8**	**-0.2**
PDRB	**Porto dos Gac**	**161.86**	**92**	*e*P	**PKPdf**	**06 53 36.3**	**-0.3**
SALV	**Santo Antonio**	**162.47**	**106**	*e*P	**PKPdf**	**06 53 37.0**	**-0.1**
NPGB	**Novo Progresso**	**162.51**	**77**	*e*P	**PKPdf**	**06 53 37.0**	**-0.3**
CLDB	**Colider**	**162.74**	**90**	*e*P	**PKPdf**	**06 53 37.2**	**-0.3**
PP1B	**Ponte de Pedra**	**162.78**	**112**	*e*P	**PKPdf**	**06 53 37.3**	**-0.1**
ITRB	**Iturama**	**165.76**	**126**	*e*P	**PKPdf**	**06 53 40.0**	**-0.1**
ARAG	**Araguaiana, MT**	**166.15**	**109**	*e*P	**PKPdf**	**06 53 40.3**	**-0.1**
BB19B	**Bebedouro**	**166.30**	**135**	*e*P	**PKPdf**	**06 53 40.4**	**-0.1**
TMAB	**Tom-Au,PA,Br**	**166.63**	**48**	*e*P	**PKPdf**	**06 53 40.7**	**-0.2**
SNDB	**Serra Nova Dou**	**167.19**	**93**	*e*P	**PKPdf**	**06 53 40.4**	**-0.8**
PRPB	**Parauapebas**	**167.37**	**66**	*e*P	**PKPdf**	**06 53 41.3**	**-0.1**
IPMB	**Ipameri, GO**	**168.40**	**125**	*e*P	**PKPdf**	**06 53 41.8**	**-0.3**
BDFB	**Brasilia**	**169.63**	**114**	PKP	**PKPdf**	**06 53 43.4**	**+0.4**
	comp=Z,16nm,0.9s,baz=174,slow=1.1,SNR=24						
SMTB	**Santa Maria do**	**170.40**	**75**	*e*P	**PKPdf**	**06 53 40.9**	**-2.5**
DIAM	**Diamantina, MG**	**171.45**	**143**	*e*P	**PKPdf**	**06 53 43.5**	**-0.4**
BSFB	**Barra de Sao F**	**172.31**	**161**	*e*P	**PKPdf**	**06 53 44.2**	**0.0**
SJMB	**Sao Joao De Ma**	**172.31**	**158**	*e*P	**PKPdf**	**06 53 43.9**	**-0.3**
JANB	**Januaria**	**173.10**	**121**	*e*P	**PKPdf**	**06 53 44.6**	**0.0**
NBPA	**Parau_RN**	**174.16**	**349**	*e*P	**PKPdf**	**06 53 44.9**	**-0.1**
NBTA	**Tacaratu-PE**	**177.61**	**356**	*e*P	**PKPdf**	**06 53 45.8**	**0.0**

OSPL ***23*** *06:57:25.0±2.1, 18°.73N×69°.86W, h129^{km}±15^{km}, ML2.3, Presumed earthquake*

SDD ***23*** *06:57:27.6±2.1, 18°.69N×70°.11W, h124^{km}±15^{km}, MD2.8, ML2.9, MW2.8, Presumed earthquake*

ISC 23 06:57:28.1±2.3**, 18°.66N**±0°.07×**70°.10W**±0°.05**, h106^{km}**±16^{km}**, n13, σ0^s.95**/24**, 12C-2D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDD	**Santo Domingo**	**0.27**	**138**	*i* P	**Pn**	**06 57 41.2**	**-2.0**
SDD				*e*S	**Sn**	**06 57 54.9**	**+0.3**
DR08	**Loma La Naviza**	**0.32**	**14**	⇑*e*Pg	**Pn**	**06 57 44.4**	**+0.9**
DR08				⇑*e*Sg	**Sn**	**06 57 54.6**	**-0.5**
DR08				IAML		06 57 55.3	
	comp=N,3µm,0.3s						
ABDR	**Alto Bandera**	**0.52**	**288**	⇓*e*Pg	**Pn**	**06 57 46.0**	**+0.9**
ABDR				⇓*e*Sg	**Sn**	**06 57 58.5**	**+0.7**
ABDR				IAML		06 58 18.1	
	comp=N,1.4nm,0.3s						
HATOM	**Hato Mayor del**	**0.70**	**79**	⇑*e*Pg	**Pn**	**06 57 45.5**	**-0.6**
HATOM				⇑*e*Sg	**Sn**	**06 58 00.3**	**+0.7**
HATOM				IAML		06 58 03.4	
	comp=N,225nm,0.3s						
NADR	**Nagua**	**0.73**	**18**	⇑*e*Pg	**Pn**	**06 57 47.1**	**+0.7**
NADR				⇑*e*Sg	**Sn**	**06 58 00.5**	**+0.5**
NADR				IAML		06 58 02.9	
	comp=N,1µm,0.3s						
SC01	**Santiago de lo**	**0.97**	**323**	⇑*e*Pg	**Pn**	**06 57 47.1**	**-1.6**
SC01				⇑*e*Sg	**Sn**	**06 58 04.1**	**0.0**
SC01				IAML		06 58 05.1	
	comp=N,1µm,0.3s						
SC01	**Santiago de lo**	**0.97**	**323**	*i* P	**Pn**	**06 57 47.9**	**-0.8**
SC01				*e*S	**Sn**	**06 58 04.2**	**0.0**
SC01				IAML		06 58 07.2	
	comp=Z,35nm,1.1s						
MIDR	**Miches**	**1.05**	**72**	⇑*e*Pg	**Pn**	**06 57 49.3**	**-0.2**
MIDR				⇑*e*Sg	**Sn**	**06 58 06.1**	**+0.5**
MIDR				IAML		06 58 31.3	
	comp=N,46nm,2.5s						
PODR	**Polo**	**1.22**	**247**	⇑*e*Pg	**Pn**	**06 57 50.3**	**-1.3**
PODR				⇑*e*Sg	**Sn**	**06 58 09.9**	**+0.5**
PODR				IAML		06 58 15.1	
	comp=N,397nm,0.3s						
PODR	**Polo**	**1.22**	**247**	*i* P	**Pn**	**06 57 51.4**	**-0.2**
PODR				*e*S	**Sn**	**06 58 09.4**	**+0.1**
LONE3	**El Aguacate, B**	**1.29**	**268**	*i* P	**Pn**	**06 57 51.1**	**-1.1**
LONE3				IAML		06 58 09.9	
	comp=Z,25nm,2.1s						
LODU1	**El Espartillar**	**1.34**	**257**	*i* P	**Pn**	**06 57 52.4**	**-0.3**
LOBH	**Bahia de las A**	**1.66**	**242**	*i* P	**Pn**	**06 57 57.2**	**+0.6**
LOBH				*e*S	**Sn**	**06 58 20.0**	**+1.7**
LOBH				IAML		06 58 30.6	
	comp=Z,52nm,1.1s						

VIE ***23*** *06:58:26.2±0.3, 50°.24N×19°.03E, h0^{km}, mb2.7/8, ml3.0/8, ms4.0/3, Error ellipse: s-maj=3.5km s-min=1.9km az=160.0 3 km ESE of Katowice Suspected Mining induced.*

IPEC ***23*** *06:58:26.6±0.1, 50°.20N×19°.03E, h1^{km}, ML3.0/6, Error ellipse: s-maj=1.8km s-min=0.8km az=1.0*

MCSM ***23*** *06:58:26.7±0.6, 50°N±6°×1°9E±°, h14^{km}±5^{km}, MLv3.2*

IDC ***23*** *06:58:27.5±1.0, 50°.10N×19°.08E, h0^{km}, mbtmp3.3/6, ML2.7/6, Error ellipse: s-maj=15.9km s-min=7.5km az=137.0*

DNK ***23*** *06:58:27.8±2.2, 50°.05N×18°.30E, h15^{km}, ML2.4, Presumed earthquake*

BGR ***23*** *06:58:27.5±0.3, 50°.21N×19°.01E, h1^{km}, ML3.2/11, Error ellipse: s-maj=7.8km s-min=3.3km az=0.0*

PRU ***23*** *06:58:27.1, 50°.20N×19°.00E, h0^{km}*

UPP ***23*** *06:58:33.5±3.1, 50°.56N×18°.76E, h0^{km}, ML2.0, Presumed earthquake*

ISC 23 06:58:24.7±0.6**, 50°.30N**±0°.03×**19°.08E**±0°.02**, h0^{km}, n92, σ1^s.65**/145**, 1C-12D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.47**	**99**	*e*Pg	**Pb**	**06 58 36.0**	**+0.1**
OJC				*i* Sg	**Sb**	**06 58 43.0**	**-0.4**
OJC	**Ojcow**	**0.47**	**99**	*e*Pg	**Pb**	**06 58 36.2**	**+0.3**
OJC				*e*Sg	**Sb**	**06 58 43.2**	**-0.2**
OJC	**Ojcow**	**0.47**	**99**	P	**Pb**	**06 58 36.0**	**+0.1**
OKC	**Ostrava-Krasne**	**0.76**	**233**	*e*PG	**Pb**	**06 58 40.4**	**-0.3**
OKC	**Ostrava-Krasne**	**0.76**	**233**	*e*Pg	**Pg**	**06 58 40.2**	**+1.1**
OKC				*e*Sg	**Sg**	**06 58 50.2**	**+1.3**
STEB	**Steborice**	**0.91**	**247**	*e*PG	**Pb**	**06 58 43.2**	**-0.2**
STEB				*e*SG	**Sg**	**06 58 55.0**	**+1.0**
ANAC	**Anensky vrch**	**1.11**	**259**	*e*Pg	**Pb**	**06 58 47.1**	**+0.2**
	baz=83						
ANAC				*e*Sg	**Sg**	**06 59 00.1**	**-0.3**
	352nm,0.4s,baz=83						
MORC	**Moravsky Berou**	**1.12**	**243**	⇓P	**Pb**	**06 58 47.3**	**+0.4**
MORC				⇓S	**Sb**	**06 59 02.6**	**+0.6**
MORC	**Moravsky Berou**	**1.12**	**243**	*e*Pg	**Pg**	**06 58 46.6**	**+0.5**
	baz=66						
MORC				*e*Sg	**Sg**	**06 58 59.5**	**-1.1**
	120nm,0.3s,baz=66						
MORC	**Moravsky Berou**	**1.12**	**243**	*e*Pg	**Pg**	**06 58 46.5**	**+0.5**
MORC				*e*Sg	**Sg**	**06 59 00.7**	**+0.2**
LANS	**Liptovska Anna**	**1.18**	**167**	*e*PG	**Pg**	**06 58 47.7**	**+0.5**
LANS				*e*SG	**Sg**	**06 59 02.3**	**-0.2**
LANS				*e*LG	Lg	06 59 03.0	
NIE	**Niedzica**	**1.19**	**138**	*e*Pg	**Pb**	**06 58 48.0**	**-0.1**
NIE				*e*Sg	**Sn**	**06 59 05.9**	**+0.5**
NIE	**Niedzica**	**1.19**	**138**	P	**Pg**	**06 58 47.6**	**+0.2**
LOSC	**Losov**	**1.29**	**239**	*e*Pg	**Pg**	**06 58 49.7**	**+0.3**
	baz=61						
LOSC				*e*Sg	**Sg**	**06 59 04.8**	**-1.4**
	183nm,0.4s,baz=61						
KRLC	**Kraliky**	**1.49**	**262**	*e*PG	**Pg**	**06 58 53.3**	**0.0**
KRLC				*e*SG	**Sg**	**06 59 12.3**	**-0.3**
STHS	**Stebnicka Huta**	**1.66**	**121**	*e*PG	**Pn**	**06 58 55.1**	**0.0**
STHS				*e*SG	**Sg**	**06 59 19.9**	**+2.0**
STHS				*e*LG	Lg	06 59 28.0	
JAVC	**Velka Javorina**	**1.71**	**213**	*e*PN	**Pn**	**06 58 56.2**	**+0.5**
JAVC	**Velka Javorina**	**1.71**	**213**	*e*Pn	**Pn**	**06 58 56.1**	**+0.4**
	baz=33						

DPC	**Dobruska-Polom**	1.77	273	*e*PG	Pb	06 58 57.9	-0.1
DPC				*e*SG	Sb	06 59 21.3	+0.6
	comp=Z,129nm,0.3s						
DPC	**Dobruska-Polom**	1.77	273	*e*Pn	Pb	06 58 57.7	-0.2
DPC				*e*Sg	Sg	06 59 21.4	0.0
DPC	**Dobruska-Polom**	1.77	273	P	Pb	06 58 57.8	-0.2
OSTC	**Ostas**	1.85	279	*e*PG	Pb	06 58 59.3	0.0
OSTC				*e*SG	Sg	06 59 25.7	+1.7
KSP	**Ksiaz**	1.86	288	*e*Pn	Pn	06 58 58.7	+1.0
KSP				*e*Pg	Pg	06 59 02.1	+1.9
KSP				*e*Sn	Sg	06 59 24.5	+0.2
KSP				*e*Sg	Sb	06 59 27.0	+3.8
KSP	**Ksiaz**	1.86	288	*e*Pn	Pb	06 58 58.8	-0.6
KSP				*e*Sg	Sg	06 59 26.7	+2.4
KSP	**Ksiaz**	1.86	288	P	Pn	06 58 58.7	+1.0
VRAC	**Vranov**	1.89	239	Pn	Pn	06 58 58.8	+0.6
	15nm,0.3s,baz=59,slow=14,SNR=82						
VRAC				Lg	Lg	06 59 22.8	
	11nm,0.3s,baz=150,slow=20,SNR=16						
VRAC	**Vranov**	1.89	239	⇓P	Pb	06 58 60.0	-0.1
VRAC				⇓S	Sn	06 59 22.3	-0.4
VRAC	**Vranov**	1.89	239	*e*Pn	Pn	06 58 59.0	+0.8
	baz=60						
VRAC				*e*Sg	Sn	06 59 23.1	+0.4
	60nm,0.6s,baz=60						
CHVC	**Chvalec**	1.95	280	*e*PG	Pb	06 59 00.6	-0.5
KECS	**Kecovo**	2.04	153	*e*PN	Pn	06 59 00.3	+0.1
KECS				*e*SN	Sn	06 59 24.3	-2.1
KECS				*e*LG	Lg	06 59 32.2	
KRUC	**Moravsky**	2.13	236	*e*PN	Pn	06 59 02.3	+0.7
KRUC				*e*SG	Sb	06 59 31.1	-0.2
KRUC	**Moravsky**	2.13	236	*e*Pn	Pn	06 59 02.2	+0.7
	baz=56						
KRUC				*e*Sg	Sb	06 59 31.0	-0.2
	55nm,0.9s,baz=56						
MODS	**Modra-Piesok**	2.26	212	*e*PN	Pn	06 59 03.8	+0.5
PSZ	**Piszkesteto**	2.44	167	⇓P	Pn	06 59 06.6	+0.8
PRU	**Pruhonice**	2.93	266	*e*PG	Pb	06 59 18.1	+0.3
PRU				*e*SG	Sg	06 59 58.0	-0.9
	comp=Z,24nm,0.6s						
BERU	**Beregovo**	3.12	130	P	Pn	06 59 14.6	-0.5
CONA	**Conrad Observa**	3.17	223	*i* Pn	Pn	06 59 16.1	+0.2
	1.4nm,0.3s						
CONA				*e*Sn	Sn	06 59 55.6	+1.0
	11nm,0.4s						
RONA	**Rosalia, Austr**	3.18	216	*i* Pn	Pn	06 59 16.4	+0.4
	2.5nm,0.4s						
RONA				*i* Sn	Sn	06 59 54.3	-0.3
	0.4nm,0.2s						
MPLH	**Magyarpolny**	3.29	199	P	Pn	06 59 17.0	-0.5
BRG	**Berggiesshubel**	3.32	282	*e*Pg	Pg	06 59 28.5	+0.2
BRG				*e*Sg	Sg	07 00 12.0	+0.6
CKRC	**Cesky Krumlov**	3.44	246	*e*PN	Pn	06 59 20.8	+1.3
CKRC				*e*PG	Pb	06 59 26.8	+0.4
FBE	**Freiberg**	3.70	282	*e*Sg	Sg	07 00 23.1	-0.3
KHC	**Kasperske Hory**	3.75	254	*e*PN	Pn	06 59 24.7	+0.8
KHC				*e*SG	Sg	07 00 22.6	-2.6
	comp=Z,20nm,0.3s						
KHC	**Kasperske Hory**	3.75	254	P	Pn	06 59 24.1	+0.2
GEC2	**GERESS Array S**	3.79	249	*e*Pn	Pn	06 59 26.1	+1.8
GEC2				*e*Sg	Sg	07 00 23.2	-3.1
GERES	**GERESS Array B**	3.79	249	Pn	Pn	06 59 26.5	+2.1
	0.1nm,0.3s,baz=65,slow=15,SNR=10						
GERES				Pg	Pg	06 59 35.3	-1.9
	0.2nm,0.3s,baz=68,slow=15,SNR=12						
GERES				Lg	Lg	07 00 20.7	
	0.5nm,0.3s,baz=69,slow=26,SNR=6.8						
	1.0nm,0.3s						
ARSA	**Arzberg**	3.85	219	*i* Pn	Pn	06 59 26.3	+1.1
	0.5nm,0.2s						
ARSA				*e*Sn	Sn	07 00 12.2	+1.1
	4.1nm,0.5s						
CLL	**Collm**	3.98	287	*e*Pn	Pn	06 59 28.2	+1.2
CLL				*e*Sg	Sg	07 00 32.9	+0.4
CLL	**Collm**	3.98	287	*i* Pg	Pg	06 59 43.0	+2.0
CLL				*e*Sg	Sg	07 00 36.0	+3.5
	comp=Z,22nm,0.6s						
MOA	**Molln**	4.00	234	*i* Pn	Pn	06 59 27.7	+0.5
	comp=Z,0.2nm,0.1s						
MOA				*i* Sn	Sn	07 00 14.1	-0.8
	comp=Z,3.1nm,0.6s						
MORH	**Mrgy, Hungar**	4.10	184	⇓P	Pn	06 59 29.7	+1.2
WET	**Wettzell**	4.18	256	*e*Pn	Pn	06 59 30.1	+0.3
WET				*e*Sg	Sg	07 00 35.8	-3.2
TANN	**Tannenbergstha**	4.24	274	*e*Pn	Pn	06 59 32.5	+2.0
TANN				*e*Sg	Sg	07 00 39.5	-1.2
DRGR		4.26	144	⇓P	Pn	06 59 32.5	+1.6
BIOA	**Bad Ischl, Aus**	4.43	236	*e*Pn	Pn	06 59 34.0	+0.9
	comp=Z,5.0nm,0.3s						
BIOA				*e*Sn	Sn	07 00 25.0	-0.4
	comp=Z,8.2nm,0.4s						
MARR	**Marisel-Cluj**	4.51	142	⇓P	Pn	06 59 35.6	+1.3
MOX	**Moxa**	4.78	277	*e*Pn	Pn	06 59 39.4	+1.5
MOX				*e*Sg	Sg	07 00 58.7	+0.6
TIM	**Timisoara**	4.79	162	⇓P	Pn	06 59 39.9	+1.9
BURAR	**Bucovina Array**	4.86	121	⇓P	Pn	06 59 40.7	+1.6
BZS	**Buzias**	4.99	159	⇓P	Pn	06 59 41.4	+0.6
GRF	**Grafenberg Arr**	5.10	266	*e*Sg	Sg	07 01 09.9	+1.4
LESA	**Schwarzleotal**	5.11	238	*i* Pn	Pn	06 59 44.1	+1.5
	comp=Z,0.4nm,0.2s						
LESA				*e*Sn	Sn	07 00 42.6	+0.3
	comp=Z,0.1nm,0.1s						
BSD	**Bornholm Skovb**	5.45	334	*e*	Pn	06 59 46.4	-0.6
	baz=158,slow=11						
BSD				*i* P	Pb	06 59 49.3	-11
BSD				*i* S	Sn	07 00 45.2	-5.1
BSD				IAML		07 00 51.9	
	comp=Z,1.9nm,0.3s						
GZR	**Gura Zlata**	5.50	152	⇓P	Pn	06 59 49.5	+1.5
ABTA	**Abfaltersbach**	5.62	233	*i* Sn	Sn	07 00 54.7	-0.2
	comp=Z,0.2nm,0.2s						
WTTA	**Wattenberg**	5.78	241	*i* Sn	Sn	07 00 58.5	-0.4
	comp=Z,0.3nm,0.1s						
RETA	**Reutte**	6.16	246	*e*Sn	Sn	07 01 06.8	-1.3
	comp=Z,1.8nm,0.5s						
ARR	**Arges**	6.19	141	⇑P	Pb	07 00 15.2	+1.8
AK19	**Malin Array Si**	6.35	82	P	Pn	06 59 59.1	-0.4
AK21	**Malin Array Si**	6.37	82	P	Pn	06 59 59.0	-0.8
AK17	**Malin Array Si**	6.38	83	P	Pn	06 59 59.6	-0.3
FETA	**Feichten**	6.43	243	*e*Sg	Sg	07 01 51.1	+0.1
	comp=Z,1.6nm,0.9s						
AK11	**Malin Array Si**	6.45	83	P	Pn	07 00 00.9	0.0
AK05	**Malin Array Si**	6.48	83	P	Pn	07 00 01.0	-0.2
AKASG	**Malin Array Be**	6.49	83	Pn	Pn	07 00 02.0	+0.6
	comp=Z,0.9nm,0.3s,baz=268,slow=12,SNR=2.7						
AKASG				Lg	Lg	07 01 51.9	
	comp=Z,1.6nm,0.3s,baz=283,slow=26,SNR=4.5						
	comp=Z,0.2nm,0.3s						
AKBB	**Malin Array Si**	6.49	83	P	Pn	07 00 01.9	+0.5
DEL	**Delary**	6.92	335	P	Pn	07 00 09.6	+2.3
DEL				S	Sn	07 01 22.2	-4.4
DEL	**Delary**	6.92	335	*i* P	Pn	07 00 08.1	+0.9
DEL				P	Pn	07 00 09.6	+2.3
DEL				S	Sn	07 01 22.2	-4.4
DEL				*i* S	Sn	07 01 22.3	-4.4
DEL				IAML		07 01 27.3	
	comp=Z,1.5nm,0.3s						
VXJU	**Vaexsjoe**	7.08	341	P	Pn	07 00 12.2	+2.8
VXJU				S	Sn	07 01 28.1	-2.3
VXJU	**Vaexsjoe**	7.08	341	P	Pn	07 00 12.2	+2.8
VXJU				S	Sn	07 01 28.1	-2.3
OSKU	**Oskarshamn**	7.13	347	P	Pn	07 00 12.6	+2.4
OSKU				S	Sn	07 01 29.3	-2.5
OSKU	**Oskarshamn**	7.13	347	P	Pn	07 00 12.6	+2.4
OSKU				S	Sn	07 01 29.3	-2.5
GOTU	**Gotland**	7.41	358	S	Sn	07 01 37.1	-1.5
GOTU	**Gotland**	7.41	358	S	Sn	07 01 37.1	-1.5
VSTU	**Vaestervik**	7.53	350	P	Pn	07 00 17.7	+2.1
VSTU	**Vaestervik**	7.53	350	P	Pn	07 00 17.7	+2.1
GNOU	**Gnosjoe**	7.68	338	S	Sn	07 01 41.6	-3.6
GNOU	**Gnosjoe**	7.68	338	S	Sn	07 01 41.6	-3.6
HFS	**Hagfors**	10.32	345	Pn	Pn	07 00 55.0	+1.2
	comp=Z,0.1nm,0.3s,baz=155,slow=11,SNR=1.8						
HFS				Sn	Sn	07 02 45.8	-4.3
	comp=Z,0.3nm,0.3s,baz=163,slow=25,SNR=5.1						
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	11.63	341	Pn	Pn	07 01 12.0	+0.1
	baz=156,slow=11,SNR=2.0						
	comp=Z,0.2nm,0.5s						
FINES	**FINESS Array B**	11.83	17	Pn	Pn	07 01 14.1	-0.4
	comp=Z,0.3nm,0.3s,baz=202,slow=10,SNR=13						
FINES				Sn	Sn	07 03 21.7	-5.4
	comp=Z,0.6nm,0.3s,baz=200,slow=21,SNR=9.5						
	comp=Z,1.2nm,0.5s						
ARCES	**ARCESS Array B**	19.54	7	Pn	P	07 02 54.0	+0.5
	comp=Z,0.1nm,0.3s,baz=192,slow=13,SNR=8.2						
	comp=Z,3.7nm,1.0s						

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*IDC **23** 07:00:48.5±4.6, 36°.29N×70°.94E, h171^{km}±39^{km}, mb3.3/9, mbtmp3.8/14, Error ellipse: s-maj=35.1km s-min=19.3km az=34.0*

*NNC **23** 07:00:56.0±3.2, 36°.88N×70°.83E, h163^{km}±53^{km}, mb3.0, mpv3.9, Error ellipse: s-maj=31.5km s-min=15.7km az=29.0*

ISC 23 07:00:51.4±1.1, **36°.56N**±0°.10×**70°.9E**±0°.1, **h188**^{km}, **n31**, σ**1^{s}45**/34, **mb3.5**/7, **3C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UCH	**Uchtor**	6.32	25	P	Pn	07 02 23.8	+0.8
	SNR=21						
EKS2	**Erkin-Say**	6.49	19	P	Pn	07 02 25.8	+0.9
	SNR=14						
BRLS	**Borolday**	6.51	353	Pg	Pn	07 02 22.3	-2.8
	2.1nm,0.1s						
BRLS				Lg	Lg	07 03 29.5	
	19nm,0.4s						
KK31	**Karatay Array**	6.54	358	⇑P	Pn	07 02 26.1	+0.7
	1.6nm,0.2s,baz=188,slow=13,SNR=23						
KK31				⇑S	Sn	07 03 36.3	-3.7
	6.4nm,0.3s,baz=177,slow=16,SNR=16						
AAK	**Ala-Archa**	6.68	24	P	Pn	07 02 28.4	+1.1
	SNR=16						
AAK	**Ala-Archa**	6.68	24	P	Pn	07 02 28.3	+0.9
	8.9nm,0.3s,baz=202,slow=11,SNR=61						
AAK				S	Sn	07 03 41.4	-1.9
	5.7nm,0.5s,baz=323,slow=23,SNR=7.9						
AAK	**Ala-Archa**	6.68	24	⇓P	Pn	07 02 28.2	+0.8
	1.0nm,0.3s						
AAK				⇓S	Sn	07 03 41.5	-1.8
	2.3nm,0.5s						
KBK	**Karagaybulak**	6.85	26	P	Pn	07 02 30.8	+1.2
	SNR=12						
CHMS	**Chumysh**	7.08	24	P	Pn	07 02 33.5	+1.0
	SNR=7.5						
USP	**Ospenovka**	7.25	21	P	Pn	07 02 35.5	+0.8
	SNR=13						
TKM2	**Tokmak 2**	7.31	28	P	Pn	07 02 36.6	+0.8
	SNR=32						
DGS	**Degeres**	7.66	28	P	Pn	07 02 40.8	+0.7
	5.4nm,0.7s						
MTBS	**Maitube**	7.82	31	P	Pn	07 02 43.4	+1.1
	15nm,0.4s						
KOTS	**Kotyrbulak**	8.20	34	P	Pn	07 02 48.7	+1.4
	10nm,0.8s						
SATY	**Saty**	8.69	39	P	Pn	07 02 55.9	+2.2
	3.7nm,0.8s						
MKAR	**Makanchi Array**	13.29	36	P	Pn	07 03 52.7	-0.1
	0.9nm,0.5s,baz=218,slow=9.2,SNR=6.2						
AB31	**Akbulak array**	14.99	331	⇑P	P	07 04 17.3	+2.6
	0.2nm,0.3s,baz=0.0,slow=0.1,SNR=9.6						
KURBB	**Kurchatov Arra**	15.10	19	P	Pn	07 04 14.3	-0.7
	0.5nm,0.5s,baz=206,slow=11,SNR=4.2						
BVAR	**Borovoye Array**	16.47	359	P	P	07 04 31.6	+0.6
	0.6nm,0.5s,baz=165,slow=9.8,SNR=3.0						
AKTO	**Aktyubinsk**	16.68	330	P	Pn	07 04 34.9	+0.6
	1.1nm,0.3s,baz=135,slow=7.2,SNR=5.9						
AKTO	**Aktyubinsk**	16.68	330	⇓P	Pn	07 04 35.2	+1.0
	2.2nm,1.1s						
ZALV	**Zalesovo Beam**	19.90	25	P	P	07 05 08.8	+0.6
	1.3nm,0.3s,baz=227,slow=11,SNR=5.6						
	1.3nm,0.3s						
FINES	**FINESS Array B**	37.38	326	P	P	07 07 46.5	+0.9
	1.4nm,0.9s,baz=107,slow=12,SNR=3.6						
	1.4nm,0.9s						
ARCES	**ARCESS Array B**	41.06	338	P	P	07 08 17.2	+1.2
	2.5nm,0.9s,baz=117,slow=8.3,SNR=8.3						
	2.5nm,0.9s						
HFS	**Hagfors**	42.97	322	P	P	07 08 31.9	+0.4
	3.0nm,0.9s,baz=94,slow=14,SNR=5.1						
	3.0nm,0.9s						
NB2	**NORSAR Subarra**	44.28	323	P	P	07 08 42.4	+0.4
	comp=Z,0.5nm,0.6s,baz=96,slow=7.9						
NOA	**NORSAR Array B**	44.28	323	P	P	07 08 42.9	+0.8
	comp=Z,0.7nm,0.8s,baz=96,slow=7.7,SNR=4.3						
	comp=Z,0.7nm,0.8s						
TORD	**Torodi Ar. Bea**	65.63	269	P	P	07 11 14.2	-1.4
	comp=Z,0.5nm,0.7s,baz=41,slow=7.0,SNR=2.2						
	comp=Z,0.5nm,0.7s						
YKA	**Yellowknife Ar**	81.19	3	P	P	07 12 46.1	+0.5
	comp=Z,0.2nm,0.5s,baz=352,slow=5.4,SNR=14						
	comp=Z,0.2nm,0.5s						
WRA	**Warramunga Arr**	82.10	122	P	P	07 12 49.2	-1.8
	comp=Z,0.5nm,0.5s,baz=316,slow=5.2,SNR=3.5						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	84.36	125	P	P	07 13 00.8	-1.7
	comp=Z,0.5nm,0.5s,baz=330,slow=5.2,SNR=6.8						
	comp=Z,0.5nm,0.5s						

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*IDC **23** 07:03:43.3±2.0, 2°.46N×127°.17E, h0^{km}, mb3.6/4, mbtmp3.7/4, Error ellipse: s-maj=119.3km s-min=24.3km az=69.0*

*DJA **23** 07:03:48.8±0.3, 2°N±4°×12°7E±°, h10^{km}, M3.9/7, mb4.4/1, MLv3.6/7*

ISC 23 07:03:51.1±1.1, **2°.34N**±0°.09×**126°.85E**±0°.07, **h53**^{km}, **n9**, σ**0^{s}86**/10, **mb3.6**/3, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	1.06	118	P	Pn	07 04 09.4	-0.3
GAMI				S	Sn	07 04 24.4	+0.9
TNTI	**Ternate**	1.64	162	P	Pn	07 04 18.1	+0.6
SGSI	**Sangihe**	1.88	316	P	Pn	07 04 21.2	+0.4
GTOI	**Gorontalo**	4.19	246	P	Pn	07 04 52.3	-0.2
MRSI	**Marisa**	5.24	249	P	Pn	07 05 07.1	+0.2
FITZ	**Fitzroy Crossi**	20.34	183	P	P	07 08 23.1	0.0
	0.7nm,0.4s,baz=34,slow=11,SNR=1.9						
	0.7nm,0.4s						
WRA	**Warramunga Arr**	23.33	162	P	P	07 08 52.9	-1.9
	1.0nm,0.4s,baz=342,slow=11,SNR=12						
	1.0nm,0.4s						
ASAR	**Alice Springs**	26.74	166	P	P	07 09 26.0	+0.1
	0.5nm,0.5s,baz=352,slow=16,SNR=7.1						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	58.76	326	P	P	07 13 43.7	-0.1
	0.6nm,0.5s,baz=121,slow=7.6,SNR=6.1						
	0.6nm,0.5s						

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*IDC **23** 07:11:40.3±0.8, 54°.86N×161°.33W, h0^{km}, mb4.2/26, mbtmp4.2/28, ML4.1/2, MS3.7/1, Error ellipse: s-maj=23.0km s-min=12.6km az=174.0*

*NEIC **23** 07:11:45.5±1.6, 54°.63N±0°.05×161°.10W±0°.05, h35^{km}±2^{km}, mb4.1/41, ML4.3/37, ML4.0(AEIC), Error ellipse: s-maj=8.7km s-min=4.5km az=181.0*

*AEIC **23** 07:11:45.9±2.0, 54°.68N±0°.05×161°.13W±0°.05, h35^{km}±6^{km}, Error ellipse: s-maj=8.1km s-min=3.9km az=181.0*

ISC 23 07:11:46.6±0.9, **54°.75N**±0°.05×**161°.10W**±0°.03, **h46**^{km}±7^{km}, **n208**, σ**1^{s}36**/209, **mb4.3**/50, **2D, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DOL	**Dolgoi Island**	0.59	313		Pn	07 11 58.2	-0.6
DOL					Sn	07 12 07.4	-0.2
SDPT	**Sand Point**	0.70	31		Pn	07 12 00.7	+0.5
SDPT					Sn	07 12 10.3	+0.4
HAG	**Hague Volcano**	0.73	321		Pn	07 12 00.8	+0.1
PS4A	**Pavlof South-4**	0.74	324		Pn	07 12 00.7	0.0
PS4A					Sn	07 12 11.9	+0.9
PS1A	**Pavlof South-1**	0.77	331		Pn	07 12 01.3	+0.2
PS1A					Sn	07 12 12.7	+1.1
DT1	**Dutton Round H**	0.77	298		Pn	07 12 00.4	-0.7
DT1					Sn	07 12 11.0	-0.6
DTNA	**Dutton South F**	0.78	302		Pn	07 12 00.8	-0.4
DTNA					Sn	07 12 11.8	0.0
PN7A	**Pavlof North-7**	0.86	323		Pn	07 12 02.6	+0.3
CNBA	**Chernabura Isl**	0.88	85		Pn	07 12 01.6	-0.9
CNBA	**Chernabura Isl**	0.88	85		Sn	07 12 12.4	-1.8
S12K	**Black Hills**	1.10	330		Pn	07 12 06.3	+0.7
S12K				Sn	Sn	07 12 20.9	+1.2
FALS	**False Pass**	1.35	276	Pn	Pn	07 12 08.4	-0.4
FALS	**False Pass**	1.35	276		Sn	07 12 25.5	0.0
ISNN	**Isanotski Nort**	1.55	274		Pn	07 12 12.2	+0.4
ISNN					Sn	07 12 33.6	+2.9
VNSW	**Veniaminof 7**	1.59	33		Pn	07 12 13.6	+1.3
VNWF	**Veniaminof 8**	1.66	31		Pn	07 12 14.9	+1.7
SSBA	**Shishaldin**	1.75	272		Pn	07 12 14.8	+0.3
SSBA					Sn	07 12 39.6	+3.9
VNFG	**Fog Glacier, M**	1.77	29		Pn	07 12 16.8	+2.0
VNFG					Sn	07 12 41.9	+5.7
VNFG	**Fog Glacier, M**	1.77	29		Pn	07 12 17.0	+2.1
VNFG	**Fog Glacier, M**	1.77	29	IAML		07 12 53.8	
	comp=E,4µm,0.7s						
VNFG				IAML		07 12 55.0	
	comp=N,5µm,0.8s						
VNSG	**Veniaminof 6**	1.79	39		Pn	07 12 16.4	+1.3
AZAC	**Aniakchak**	2.69	36		Pn	07 12 28.9	+1.5
AKSA	**Akutan Strait**	2.75	259		Pn	07 12 28.8	+0.6
AKSA					Sn	07 13 00.0	-0.2
AKSA					Lg	07 13 02.4	
ANNE	**Aniakchak Nort**	2.77	37		Pn	07 12 29.9	+1.5
AKUT	**Akutan**	2.80	259		Pn	07 12 27.7	-1.0
AKUT					Sn	07 13 03.1	+1.9
AKUT					Lg	07 13 04.1	
AKUT	**Akutan**	2.80	259	IAML		07 13 08.3	
	comp=N,615nm,0.9s						
AKUT				IAML		07 13 15.4	
	comp=E,603nm,1.0s						
AHB	**Akutan Harbor**	2.83	259		Pn	07 12 29.5	+0.3
AHB					Sn	07 13 04.7	+2.6
ZRO	**Akutan Zero**	2.93	259		Pn	07 12 30.8	+0.2
ZRO					Sn	07 13 06.9	+2.5
AKMO	**Akutan Morgan**	2.94	259		Pn	07 12 31.1	+0.3
AKMO					Sn	07 13 07.0	+2.2
UNV	**Unalaska Valle**	3.29	256	Pn	Pn	07 12 35.7	+0.2
UNV				IAML		07 13 35.6	
	comp=N,350nm,0.6s						
CHIR	**Chirikof Islan**	3.31	69	Pn	Pn	07 12 36.7	+0.9
CHIR				IAML		07 13 32.0	
	comp=E,584nm,1.0s						
CHIR				IAML		07 13 36.5	
	comp=N,690nm,1.0s						
MNAT	**Makushin Natee**	3.38	257		Pn	07 12 37.0	+0.2
MSW	**Makushin Switc**	3.43	258		Pn	07 12 37.7	+0.2
R16K	**Pilot Point**	3.44	33	Pn	Pn	07 12 39.4	+1.8
R16K				IAML		07 13 30.7	
	comp=N,555nm,1.5s						
PLBL	**Peulik Blue Cr**	3.80	37		Pn	07 12 44.4	+1.9
PLK4	**Peulik 4**	3.92	41	Pn	Pn	07 12 46.7	+2.4
PLK4				IAML		07 13 37.7	
	comp=E,460nm,0.7s						
PLK4				IAML		07 13 51.3	
	comp=N,457nm,0.6s						
PLK1	**Peulik 1**	3.95	37		Pn	07 12 46.6	+2.0
PLK3	**Peulik 3**	3.99	41		Pn	07 12 47.5	+2.3
PLK2	**Peulik 2**	4.03	39		Pn	07 12 47.9	+2.2
SII	**Sitkinak Islan**	4.32	62	Pn	Pn	07 12 50.4	+0.8
SII				IAML		07 14 08.1	
	comp=E,536nm,0.8s						
O15K	**Ungalikthiuk R**	4.49	8	Pn	Pn	07 12 52.6	+0.6
O15K				IAML		07 14 19.4	
	comp=E,184nm,0.9s						
KJL	**Kejulik**	4.52	41		Pn	07 12 53.9	+1.5
O14K	**Tigyukauivet M**	4.52	359		Pn	07 12 53.3	+1.0
CNTC	**Contact Creek**	4.56	37		Pn	07 12 54.5	+1.5
CAHL	**Cahill**	4.62	42		Pn	07 12 55.4	+1.6
P16K	**Nushagak River**	4.62	20	Pn	Pn	07 12 54.9	+1.2
P16K				IAML		07 14 33.8	
	comp=N,313nm,1.0s						
P16K				IAML		07 14 40.5	
	comp=E,331nm,1.2s						
ANCK	**Angle Creek**	4.65	40		Pn	07 12 56.2	+1.9
ACHA	**Angle Creek He**	4.72	40	Pn	Pn	07 12 57.1	+1.9
OHAK	**Old Harbor**	5.04	57	Pn	Pn	07 12 59.4	0.0
OHAK				IAML		07 14 31.3	
	comp=N,198nm,0.6s						
OHAK				IAML		07 14 32.1	
	comp=E,230nm,0.9s						
KAWH	**Katmai**	5.04	41		Pn	07 13 00.9	+1.3
O16K	**Kokwok River B**	5.12	17		Pn	07 13 01.4	+0.8
O16K				IAML		07 14 51.0	
	comp=N,82nm,0.8s						
P17K	**Kvichak River**	5.13	28	Pn	Pn	07 13 03.1	+2.3
N14K	**Kuskokwak Cree**	5.20	357	Pn	Pn	07 13 02.8	+1.2
N14K				IAML		07 14 47.2	
	comp=E,174nm,0.7s						
N14K				IAML		07 15 04.1	
	comp=N,158nm,1.4s						
KAHG	**Katmai Hook Gl**	5.21	41		Pn	07 13 03.6	+1.6
N15K	**Kwethluk River**	5.46	5	Pn	Pn	07 13 06.5	+1.2
O17K	**Koliganek Bris**	5.49	22		Pn	07 13 06.3	+0.7
KDAK	**Kodiak Island**	5.63	54	Pn	Pn	07 13 07.3	-0.3
	comp=N,3.9nm,0.3s,baz=82,slow=0.4,SNR=171						
KDAK				Sn	Sn	07 14 09.5	-1.4
	comp=N,4.7nm,0.3s,baz=269,slow=14,SNR=1.2						
KDAK				Lg	Lg	07 14 33.2	
	comp=N,9.4nm,0.3s,baz=76,slow=22,SNR=11						
	comp=N,15nm,0.4s						
KDAK	**Kodiak Island**	5.63	54	Pn	Pn	07 13 07.9	+0.2
P18K	**Big Mountain,**	5.65	32	Pn	Pn	07 13 08.7	+0.8
M13K	**Dall Lake**	5.81	349		Pn	07 13 11.3	+1.3
Q19K	**Cape Douglas,**	5.85	41	Pn	Pn	07 13 12.4	+1.7
N16K	**Nishlik Lake**	5.88	11		Pn	07 13 12.2	+1.3
M15K	**Kasigluk River**	5.97	2		Pn	07 13 12.6	+0.4
O18K	**Koktuh Hills**	6.03	30	Pn	Pn	07 13 15.5	+2.3
M14K	**Bethel**	6.04	356		Pn	07 13 13.9	+0.7
N17K	**Nushagak Hills**	6.16	18		Pn	07 13 15.4	+0.6
M11K	**Mekoryuk**	6.28	336		Pn	07 13 17.0	+0.6
M16K	**Timber Creek**	6.39	9		Pn	07 13 19.0	+1.0
N18K	**Kilae Creek**	6.57	23		Pn	07 13 21.0	+0.5
O19K	**Port Alsworth**	6.57	31	Pn	Pn	07 13 23.1	+2.6
L14K	**Kuka Creek**	6.67	353		Pn	07 13 22.4	+0.6
ILSW	**Iliamna Southw**	6.78	36	Pn	Pn	07 13 26.3	+2.7
M17K	**Holitna River**	6.95	15		Pn	07 13 26.3	+0.6
L15K	**Ungalak Mounta**	6.95	358		Pn	07 13 25.8	+0.1
N19K	**Bonanza Creek**	7.03	27		Pn	07 13 28.9	+2.0
L16K	**Owhat River**	7.03	6		Pn	07 13 27.5	+0.7
M18K	**Stony River**	7.31	20		Pn	07 13 31.2	+0.6
K13K	**Kusilvak Mount**	7.44	347		Pn	07 13 33.0	+0.6
RDT	**Redoubt**	7.47	35		Pn	07 13 35.1	+2.2
L17K	**Donlin**	7.55	10		Pn	07 13 34.2	+0.3
K15K	**Wolf Creek Mou**	7.57	358		Pn	07 13 34.8	+0.6
L18K	**Granite Mounta**	7.84	15		Pn	07 13 38.3	+0.4
CKL	**Chakachamna La**	7.96	32		Pn	07 13 42.7	+3.1
SPNN	**North Nagishla**	7.99	30		Pn	07 13 42.9	+2.9
SPU	**Mount Spurr**	8.04	33		Pn	07 13 43.1	+2.5
K17K	**Iditarod**	8.12	9		Pn	07 13 42.1	+0.4
J14K	**Nanvaranak Lak**	8.12	352	Pn	Pn	07 13 42.3	+0.6
SEW	**Seward**	8.26	45		Pn	07 13 43.9	+0.3
STLK	**Strandline Lak**	8.35	32		Pn	07 13 48.0	+3.1
J16K	**Anvik River**	8.56	2		Pn	07 13 47.9	+0.1
SUA	**Susitna One**	8.67	35	Pn	Pn	07 13 51.1	+1.7
J17K	**VABM Dome**	8.74	6		Pn	07 13 49.7	-0.4
SKT	**Skwentna**	8.81	31	Pn	Pn	07 13 53.7	+2.5
J18K	**Innoko River**	9.03	13		Pn	07 13 54.7	+0.6
PWL	**Port Wells**	9.15	43		Pn	07 13 56.1	+0.3
ANM	**Nome**	10.08	349	Pn	Pn	07 14 09.3	+0.8
SCM	**Sheep Creek Mo**	10.13	40	Pn	Pn	07 14 08.8	-0.4
KLU	**Klutina**	10.47	44	Pn	Pn	07 14 14.0	0.0
DHY	**Denali Highway**	10.93	35	Pn	Pn	07 14 19.5	-0.7
F15K	**North Star Dit**	11.13	352	Pn	Pn	07 14 24.1	+1.2
GLB	**Gilahina Butte**	11.32	47	Pn	Pn	07 14 25.0	-0.5
K24K	**Donnelly Dome**	11.95	34	Pn	Pn	07 14 34.2	+0.1
HDA	**Harding Lake**	12.02	31	Pn	Pn	07 14 32.8	-2.1
ILAR	**Eielson Array**	12.30	30	Pn	Pn	07 14 35.6	-3.2
	comp=N,0.5nm,0.3s,baz=222,slow=13,SNR=19						
ILAR				Sn	Sn	07 16 47.5	-6.8
	comp=N,0.2nm,0.3s,baz=208,slow=23,SNR=2.5						
C16K	**Lisburne Hills**	13.72	353		Pn	07 15 00.2	+2.1
DAWY	**Dawson**	14.39	41	Pn	Pn	07 15 07.1	-0.1
I28M	**Miner Creek**	14.95	36	IAmb	IAmb	07 15 35.9	
	comp=Z,5.2nm,0.7s						
K29M	**Barlow Dome**	15.01	43	IAmb	IAmb	07 15 37.4	
	comp=Z,10nm,0.7s						
J29N	**Klondike Camp**	15.02	41	IAmb	IAmb	07 15 34.3	
	comp=Z,17nm,0.8s						
D24K	**Happy Valley**	15.51	17	IAmb	IAmb	07 15 27.6	
	comp=Z,12nm,1.2s						
M31M	**Drury Creek, Y**	15.74	51	P	Pn	07 15 26.9	+2.1
M31M				IAmb	IAmb	07 15 53.6	
	comp=Z,10nm,0.9s						
C23K	**Itkillik River**	15.86	13	IAmb	IAmb	07 15 53.5	
	comp=Z,20nm,1.2s						
B22K	**Teshekpuk Lake**	16.02	9	IAmb	IAmb	07 15 57.4	
	comp=Z,18nm,1.4s						
I30M	**Mount Dempster**	16.09	39	IAmb	IAmb	07 15 49.4	
	comp=Z,20nm,0.8s						
G29M	**Pine Creek**	16.44	33	IAmb	IAmb	07 15 52.7	
	comp=Z,11nm,0.9s						
EPYK	**Eagle Plains**	16.56	36	IAmb	IAmb	07 15 54.7	

	comp=Z,25nm,1.2s						
H31M	Peel River	17.11	39		Pn	07 15 41.5	-0.6
H31M				IAmb	IAmb	07 16 18.2	
	comp=Z,22nm,1.1s						
D27M	Malcolm River	17.19	25	P	Pn	07 15 43.4	+0.3
F30M	Barrier River	17.56	33	IAmb	IAmb	07 15 53.4	
	comp=Z,6.6nm,0.6s						
G31M	Satah River	17.68	36	P	Pn	07 15 47.9	-1.1
INK	Inuvik	18.66	33	P	P	07 15 58.9	-1.3
	comp=Z,0.7nm,0.3s,baz=238,slow=11,SNR=6.2						
	comp=Z,2.4nm,0.5s						
INK	Inuvik	18.66	33	P	P	07 15 58.3	-1.9
A36M	Sachs Harbour	22.99	28		P	07 16 45.1	-1.7
A36M				IAmb	IAmb	07 16 50.7	
	comp=Z,7.3nm,0.8s						
PEA0B	Petropavlovsk-	24.07	283	P	P	07 16 56.8	-0.4
PETK	Petropavlovsk-	24.07	283	P	P	07 16 56.2	-1.1
	comp=Z,5.3nm,0.4s,baz=79,slow=13,SNR=53						
	comp=Z,5.3nm,0.4s						
PETK	Petropavlovsk-	24.07	283	P	P	07 16 56.5	-0.8
YKAW3	Yellowknife Wh	24.91	53	P	P	07 17 05.0	+0.2
YKA	Yellowknife Ar	24.91	53	P	P	07 17 05.8	+0.9
	comp=Z,0.4nm,0.5s,baz=274,slow=9.7,SNR=19						
	comp=Z,0.4nm,0.5s						
YKA	Yellowknife Ar	24.91	53	P	P	07 17 05.1	+0.3
YKAW1	Yellowknife Wh	24.97	53	P	P	07 17 06.7	+1.3
RES	Resolute Bay	32.04	27	P	P	07 18 08.2	+0.1
RES				IAmb	IAmb	07 18 42.8	
	comp=Z,3.0nm,1.3s						
BLKN	Baker Lake	32.89	47	P	P	07 18 16.5	+0.9
BLKN				IAmb	IAmb	07 18 26.8	
	comp=Z,3.2nm,1.0s						
NVAR	Mina Array Bea	33.02	102	P	P	07 18 19.5	+2.0
	comp=Z,0.2nm,0.4s,baz=318,slow=11,SNR=2.3						
	comp=Z,0.2nm,0.4s						
FCC	Fort Churchill	35.57	56	P	P	07 18 39.8	+0.9
FCC				IAmb	IAmb	07 19 13.8	
	comp=Z,6.5nm,1.4s						
ULM	Lac du Bonnet	38.68	69	P	P	07 19 05.6	+0.2
	comp=Z,2.2nm,0.3s,baz=320,slow=8.5,SNR=3.3						
	comp=Z,2.2nm,0.3s						
EPLO	Experimental L	40.15	68	P	P	07 19 16.5	-1.2
EYMN	Ely	42.35	69	P	P	07 19 37.3	+1.5
H11N2	WAKE ISLAND Hy	42.56	228	T	T	08 04 33.5	
	baz=27,slow=76,SNR=5.7						
H11N3	WAKE ISLAND Hy	42.57	228	T	T	08 04 34.1	
	baz=27,slow=76,SNR=8.2						
H11N1	WAKE ISLAND Hy	42.58	228	T	T	08 04 34.5	
	baz=27,slow=76,SNR=5.8						
H11S1	WAKE ISLAND Hy	43.73	227	T	T	08 05 55.8	
	baz=26,slow=76,SNR=7.1						
H11S2	WAKE ISLAND Hy	43.74	227	T	T	08 06 02.9	
	baz=26,slow=76,SNR=6.3						
H11S3	WAKE ISLAND Hy	43.75	227	T	T	08 06 06.7	
	baz=26,slow=76,SNR=5.9						
MJAR	Matsushiro Arr	44.64	272	P	P	07 19 53.7	-0.6
	comp=Z,3.1nm,0.7s,baz=39,slow=5.5,SNR=5.6						
	comp=Z,3.1nm,0.7s						
BNX	BinXian	44.73	289	⇓P	P	07 19 53.8	-1.1
BNX				pmax	pmax		
	comp=Z,5.0nm,0.9s						
JGF	Kuroka	45.79	272	P	P	07 20 03.5	0.0
JHJ	Hachijo jima 2	46.15	267	LR	LR	07 36 25.3	
	comp=Z,85nm,20.5s,baz=212,slow=32						
HILR	Hailar Array B	46.42	298	P	P	07 20 07.0	-1.3
	comp=Z,1.5nm,0.5s,baz=51,slow=7.5,SNR=3.1						
	comp=Z,1.5nm,0.5s						
SPITS	Spitsbergen Ar	47.32	1	P	P	07 20 14.1	-0.8
	comp=Z,7.5nm,0.9s,baz=38,slow=4.2,SNR=12						
	comp=Z,7.5nm,0.9s						
TXAR	Lajitas Array	47.96	98	P	P	07 20 22.2	+1.6
	comp=Z,0.2nm,0.5s,baz=306,slow=7.8,SNR=4.5						
TXAR				PcP	PcP	07 21 48.8	+0.6
	comp=Z,0.4nm,0.5s,baz=270,slow=0.7,SNR=9.8						
	comp=Z,0.2nm,0.5s						
KSRS	Korea Array	49.93	281	P	P	07 20 35.0	-0.3
	comp=Z,2.5nm,0.6s,baz=43,slow=8.5,SNR=5.7						
	comp=Z,2.5nm,0.6s						
SCHQ	Schefferville	50.23	49	P	P	07 20 38.0	+0.4
	comp=Z,2.6nm,0.5s,baz=333,slow=2.5,SNR=6.5						
	comp=Z,2.6nm,0.5s						
H06N1	SOCORRO T-PHAS	52.13	113	T	T	08 16 33.7	
	SNR=5.3						
SONM	Songino Array	54.20	304	P	P	07 21 06.8	-0.4
	comp=Z,1.6nm,0.8s,baz=29,slow=9.3,SNR=7.8						
SONM				PcP	PcP	07 22 10.4	-0.7
	comp=Z,0.9nm,0.6s,baz=46,slow=4.3,SNR=4.1						
	comp=Z,1.6nm,0.8s						
SONM	Songino Array	54.20	304	P	P	07 21 07.3	+0.2
SONM				IAmb	IAmb	07 21 08.1	
	comp=Z,2.1nm,1.0s						
ARCES	ARCESS Array B	55.93	357	P	P	07 21 17.6	-1.7
	comp=Z,0.9nm,0.4s,baz=11,slow=7.4,SNR=11						
	comp=Z,0.9nm,0.4s						
HHC	Hu-ho-hao-te	56.54	295	eP	P	07 21 25.6	+1.5
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
HNS	HongShan	57.35	290	⇓P	P	07 21 29.8	+0.1
HNS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ZAA0	Zalesovo Array	58.84	321	P	P	07 21 39.0	-0.9
ZAA0				IAmb	IAmb	07 21 55.6	
	comp=Z,1.8nm,0.9s						
ZALV	Zalesovo Beam	58.84	321	P	P	07 21 39.1	-0.8
	comp=Z,0.7nm,0.3s,baz=39,slow=6.5,SNR=4.9						
ZALV				PcP	PcP	07 22 29.1	+0.2
	comp=Z,0.7nm,0.4s,baz=29,slow=3.4,SNR=5.4						
	comp=Z,0.7nm,0.3s						
ZALV	Zalesovo Beam	58.84	321	P	P	07 21 38.8	-1.1
KURK	Kurchatov	63.70	322	P	P	07 22 12.7	-0.1
KURK				IAmb	IAmb	07 22 15.9	
	comp=Z,1.9nm,1.0s						
KURBB	Kurchatov Arra	63.81	322	P	P	07 22 12.9	-0.6
	comp=Z,0.2nm,0.3s,baz=19,slow=5.9,SNR=4.1						
KURBB				PcP	PcP	07 22 48.1	-0.9
	comp=Z,0.7nm,0.7s,baz=29,slow=3.8,SNR=3.5						
	comp=Z,0.2nm,0.3s						
FIA1	FINESS Array S	64.01	356	P	P	07 22 13.8	-0.8
FINES	FINESS Array B	64.01	356	P	P	07 22 13.7	-1.0
	comp=Z,2.6nm,0.5s,baz=11,slow=7.5,SNR=37						
	comp=Z,2.6nm,0.5s						
FINES	FINESS Array B	64.01	356	P	P	07 22 14.0	-0.7
NB2	NORSAR Subarra	64.39	4	P	P	07 22 16.8	-0.5
	comp=Z,2.9nm,1.0s,baz=357,slow=6.5						
NOA	NORSAR Array B	64.39	4	P	P	07 22 16.8	-0.5
	comp=Z,2.5nm,0.8s,baz=356,slow=6.5,SNR=13						
	comp=Z,2.5nm,0.8s						
BVAR	Borovoye Array	64.45	328	P	P	07 22 17.8	0.0
	comp=Z,0.9nm,0.4s,baz=36,slow=7.2,SNR=7.7						
BVAR				PcP	PcP	07 22 51.4	-0.3
	comp=Z,0.8nm,0.4s,baz=42,slow=4.4,SNR=4.0						
	comp=Z,0.9nm,0.4s						
BORK	Borovoye	64.45	328	P	P	07 22 17.7	0.0
BORK				IAmb	IAmb	07 22 18.1	
	comp=Z,1.5nm,0.8s						
ARTI	Arti	64.64	337	P	P	07 22 18.2	-0.6
NC602	NORSAR Array S	64.71	4	P	P	07 22 19.0	-0.3
HFS	Hagfors	65.39	3	P	P	07 22 23.2	-0.5
	comp=Z,4.4nm,0.4s,baz=29,slow=3.4,SNR=71						
	comp=Z,4.4nm,0.4s						
MKAR	Makanchi Array	65.57	318	P	P	07 22 23.9	-1.2
	comp=Z,1.4nm,0.5s,baz=43,slow=5.2,SNR=23						
	comp=Z,1.4nm,0.5s						
MKAR	Makanchi Array	65.57	318	P	P	07 22 24.1	-1.0
MAKZ	Makanchi	65.68	318	P	P	07 22 25.1	-0.8
WMQ	Urumqi	65.77	312	eP	P	07 22 29.8	+3.3
WMQ				LR	LR		
	comp=Z,160nm,19.3s						
EKA	Eskdalemuir Ar	68.80	13	P	P	07 22 45.6	+0.3
	comp=Z,3.1nm,0.6s,baz=339,slow=4.8,SNR=10.0						
	comp=Z,3.1nm,0.6s						
ABKAR	Akbulak array	70.79	333	P	P	07 22 57.7	0.0
PZH	PanZhiHua	72.73	291	P	P	07 23 11.1	+1.2
KK31	Karatay Array	73.08	323	P	P	07 23 11.1	-0.5
KK31				IAmb	IAmb	07 23 11.7	
	comp=Z,2.7nm,0.8s						
KKAR	Karatay Array	73.08	323	P	P	07 23 10.9	-0.6
KSH	Kashi	74.18	318	P	P	07 23 21.8	+3.6
KSH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CLL	Collm	74.20	4	i P	P	07 23 17.3	-0.6
CLL				epP	pP	07 23 31.0	-0.3
AKASG	Malin Array Be	74.56	353	P	P	07 23 19.2	-0.9
	comp=Z,6.2nm,0.4s,baz=11,slow=5.9,SNR=38						
	comp=Z,6.2nm,0.4s						
STHS	Stebnicka Huta	76.19	358	eP	P	07 23 29.4	-0.1
GERES	GERESS Array B	76.69	4	P	P	07 23 32.2	-0.2
	comp=Z,1.3nm,0.6s,baz=360,slow=6.7,SNR=3.0						
	comp=Z,1.3nm,0.6s						
CONA	Conrad Observa	77.66	2	eP	P	07 23 36.9	-1.0
	comp=Z,2.4nm,0.6s						
MOA	Molln	77.70	3	eP	P	07 23 36.1	-1.9
	comp=Z,0.4nm,0.5s						
LESA	Schwarzleotal	78.06	4	eP	P	07 23 37.7	-2.4
	comp=Z,1.3nm,0.7s						
WATA	Walderalm	78.10	5	eP	P	07 23 40.3	-0.1
	comp=Z,2.7nm,1.1s						
WTTA	Wattenberg	78.17	5	eP	P	07 23 38.5	-2.3
	comp=Z,3.0nm,0.8s						
SQTA	Sankt Quirin	78.20	5	eP	P	07 23 38.5	-2.4
	comp=Z,3.6nm,0.7s						
ARSA	Arzberg	78.33	2	eP	P	07 23 39.7	-1.8
	comp=Z,2.4nm,0.9s						
FETA	Feichten	78.37	6	eP	P	07 23 40.3	-1.6
	comp=Z,3.3nm,0.8s						
ABTA	Abfaltersbach	78.73	4	eP	P	07 23 43.2	-0.7
	comp=Z,2.4nm,0.9s						
SOKA	Soboth	78.89	3	eP	P	07 23 43.7	-1.0
	comp=Z,2.7nm,0.9s						
MYKA	Terra Mystica	78.90	4	eP	P	07 23 43.3	-1.4
	comp=Z,1.6nm,0.8s						
OBKA	Obir	79.05	3	eP	P	07 23 45.3	-0.3
	comp=Z,11nm,0.8s						
KBZ	Khabaz	79.79	343	P	P	07 23 50.0	+0.5
	comp=Z,4.3nm,0.9s,baz=325,slow=3.9,SNR=7.6						
	comp=Z,4.3nm,0.9s						
CM31	Chiang Mai Arr	80.72	289	P	P	07 23 54.9	0.0
CMAR	Chiang Mai Arr	80.72	289	P	P	07 23 54.8	-0.1
	comp=Z,2.5nm,0.4s,baz=16,slow=5.8,SNR=13						
	comp=Z,2.5nm,0.4s						
CMAR	Chiang Mai Arr	80.72	289	P	P	07 23 54.9	0.0
ESDC	Sonseca Array	83.92	18	P	P	07 24 11.8	+0.4
	comp=Z,2.6nm,0.8s,baz=344,slow=4.6,SNR=11						
	comp=Z,2.6nm,0.8s						
BRTR	Keskin Array B	85.05	349	P	P	07 24 17.4	+0.1
	comp=Z,2.9nm,0.8s,baz=30,slow=1.9,SNR=13						
	comp=Z,2.9nm,0.8s						
BRTR	Keskin Array B	85.05	349	P	P	07 24 17.6	+0.4
QSPA	South Pole Qui	144.53	180	PKP	PKPab	07 31 14.3	-0.6
	comp=Z,3.0nm,0.8s,baz=102,slow=1.0,SNR=20						
BOSA	Boshof	153.48	347	PKPbc	PKPbc	07 31 37.7	-2.0
	comp=Z,5.3nm,1.2s,baz=13,slow=1.8,SNR=3.3						

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*ASRS **23** 07:22:55.0±1.3, 49°.61N×81°.60E, h0^{km}, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*NNC **23** 07:22:57.2±1.5, 49°.73N×81°.73E, h0^{km}, mb2.8, mpv2.4, Error ellipse: s-maj=20.7km s-min=3.2km az=54.0, Suspected Mining explosion.*

*IDC **23** 07:22:59.2±1.3, 49°.74N×81°.65E, h0^{km}, mbtmp2.4/2, ML2.0/2, Error ellipse: s-maj=17.7km s-min=8.3km az=58.0*

ISC 23 07:22:58.6±1.3**, 49°.54N**±0°.08×**81°.7E**±0°.1**, h0^{km}, n8, σ0^{s}.50**/8**, 7C-1D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	2.33	302	⇑Pg	Pn	07 23 37.4	-0.7
	1.7nm,0.8s						
KURK				⇑Lg	Lg	07 24 07.7	
	5.4nm,0.6s						
KURBB	Kurchatov Arra	2.34	299	Pg	Pn	07 23 38.8	+0.6
	0.1nm,0.3s,baz=112,slow=19,SNR=15						
KURBB				Lg	Lg	07 24 07.9	
	0.5nm,0.3s,baz=108,slow=31,SNR=16						
KURBB	Kurchatov Arra	2.34	299	⇑Pg	Pn	07 23 38.5	+0.3
	4.5nm,0.8s						
KURBB				⇑Lg	Lg	07 24 08.6	
	11nm,0.3s						
MAKZ	Makanchi	2.74	177	⇑Pg	Pg	07 23 50.9	-0.1
	1.0nm,0.6s						
MAKZ				⇓Lg	Lg	07 24 31.4	
	3.1nm,0.6s						
MK31	Makanchi Array	2.77	172	⇑Pg	Pg	07 23 51.1	-0.5
	0.5nm,0.5s,baz=341,slow=9.8,SNR=19						
MK31				⇑Lg	Lg	07 24 30.8	
	1.3nm,0.4s,baz=351,slow=28,SNR=10.0						
MKAR	Makanchi Array	2.77	172	Pn	Pb	07 23 49.1	+0.2
	0.4nm,0.3s,baz=346,slow=12,SNR=6.6						
MKAR				Pg	Pg	07 23 51.8	+0.2
	0.5nm,0.3s,baz=352,slow=14,SNR=14						
MKAR				Lg	Lg	07 24 31.2	
	0.8nm,0.3s,baz=5.7,slow=31,SNR=14						
	0.8nm,0.3s						
ZALV	Zalesovo Beam	4.81	22	Pn	Pn	07 24 12.3	0.0
	0.2nm,0.3s,baz=208,slow=15,SNR=2.1						
ZALV				Lg	Lg	07 25 26.5	
	0.3nm,0.3s,baz=206,slow=26,SNR=5.1						
	0.4nm,0.3s						
I46RU	ZALESOVO INFRA	4.81	22	I	I	07 52 50.0	
	baz=202,slow=328,SNR=2.0						

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*IDC **23** 07:34:34.0±5.3, 34°.66N×79°.59E, h0^{km}, mb3.7/2, mbtmp3.5/6, ML3.3/3, Error ellipse: s-maj=114.0km s-min=37.4km az=111.0*

ISC 23 07:34:37.5±2.8**, 34°.7N**±0°.2×**80°.0E**±0°.3**, h35^{km}, n6,** σ**1^{s}.20**/7**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	9.07	333	Pn	Pn	07 36 46.5	+0.6
	0.3nm,0.3s,baz=202,slow=19,SNR=6.0						
AAK				Lg	Lg	07 39 11.7	
	0.1nm,0.3s,baz=226,slow=6.7,SNR=5.0						
	0.5nm,0.3s						
MKAR	Makanchi Array	12.24	7	Pn	Pn	07 37 30.5	+1.2
	0.3nm,0.3s,baz=189,slow=14,SNR=12						
MKAR				Sn	Sn	07 39 43.6	-0.9
	baz=184,slow=20,SNR=2.0						
	0.9nm,0.5s						
KURBB	Kurchatov Arra	15.99	357	Pn	Pn	07 38 17.9	-1.7
	0.2nm,0.3s,baz=184,slow=10,SNR=6.1						
BVAR	Borovoye Array	19.60	342	P	Pn	07 39 04.1	0.0
	baz=152,slow=9.6,SNR=3.5						
	0.5nm,0.4s						
FINES	FINESS Array B	43.15	325	P	P	07 42 33.9	-0.4
	1.6nm,0.9s,baz=100,slow=8.0,SNR=3.8						
	1.6nm,0.9s						
TORD	Torodi Ar. Bea	73.12	274	P	P	07 46 04.5	-0.2
	0.3nm,0.5s,baz=49,slow=7.0,SNR=2.4						
	0.3nm,0.5s						

IDC 23 07:38:36.1±1.1**, 15°.71S**×**172°.76W, h0^{km}, mb3.7**/6**, mbtmp3.7**/6**, Error ellipse: s-maj=70.4km s-min=27.0km az=145.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S2	WAKE ISLAND Hy	39.55	328	T	T	08 29 01.4	
	baz=145,slow=76,SNR=2.2						
H11S3	WAKE ISLAND Hy	39.56	328	T	T	08 29 01.6	
	baz=145,slow=76,SNR=5.5						
H11S1	WAKE ISLAND Hy	39.56	328	T	T	08 29 02.0	
	baz=145,slow=76,SNR=3.5						
WRA	Warramunga Arr	50.37	257	P	P	07 47 35.3	-0.1
	0.4nm,1.0s,baz=94,slow=9.0,SNR=1.6						
	0.4nm,1.0s						
ASAR	Alice Springs	50.60	252	P	P	07 47 38.0	+0.8
	0.2nm,0.5s,baz=99,slow=7.4,SNR=1.9						
	0.2nm,0.5s						
TXAR	Lajitas Array	80.28	56	P	P	07 50 50.1	+0.8
	1.3nm,1.1s,baz=212,slow=4.4,SNR=6.0						
	1.3nm,1.1s						
PDAR	Pinedale Array	82.09	42	P	P	07 50 59.1	+0.2
	0.4nm,0.6s,baz=223,slow=3.6,SNR=5.7						
	0.4nm,0.6s						
ILAR	Eielson Array	82.63	11	P	P	07 50 59.6	-1.3
	0.4nm,0.9s,baz=208,slow=5.1,SNR=2.1						
	0.4nm,0.9s						
H03S2	Juan Fernandez	84.52	123	T	T	09 25 05.9	
	baz=240,slow=74						
H03S1	Juan Fernandez	84.53	123	T	T	09 25 07.3	
	baz=240,slow=74						
H03S3	Juan Fernandez	84.54	123	T	T	09 25 06.7	
	baz=240,slow=74						
H03N2	Juan Fernandez	84.62	123	T	T	09 25 18.1	
	baz=259,slow=73,SNR=12						
H03N3	Juan Fernandez	84.62	123	T	T	09 25 19.3	
	baz=259,slow=73,SNR=11						
H03N1	Juan Fernandez	84.63	123	T	T	09 25 21.5	
	baz=259,slow=73,SNR=10						
MAW	Mawson	87.69	198	P	P	07 51 25.5	-0.9
	3.0nm,0.8s,baz=121,slow=5.1,SNR=4.5						
	3.0nm,0.8s						

IDC 23 07:40:36.8±4.9**, 2°.22S**×**139°.71E, h0^{km}, mb3.4**/2**, mbtmp3.4**/3**, ML3.4**/1**, Error ellipse: s-maj=190.1km s-min=31.5km az=87.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.38	196	P	Pn	07 44 53.2	-0.1
	0.1nm,0.3s,baz=16,slow=12,SNR=4.6						
	0.5nm,0.5s						
ASAR	Alice Springs	22.04	194	P	P	07 45 33.2	-0.2
	0.8nm,0.7s,baz=24,slow=11,SNR=7.7						
	0.8nm,0.7s						
MKAR	Makanchi Array	70.02	322	P	P	07 51 50.6	+0.1
	0.2nm,0.4s,baz=100,slow=7.7,SNR=3.2						
	0.2nm,0.4s						

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*IDC **23** 07:41:47.0±0.7, 6°.78N×72°.97W, h158^{km}±10^{km}, mb3.2/6, mbtmp3.7/8, Error ellipse: s-maj=31.1km s-min=7.5km az=131.0*

*RSNC **23** 07:41:47.8±0.0, 7°N±1°×7°3W±°, h148^{km}±1^{km}, M3.8, mB5.0, mb4.3, ML3.5, Mw(mB)4.2*

ISC 23 07:41:47.0±0.7**, 6°.83N**±0°.03×**73°.09W**±0°.05**, h153^{km}**±5^{km}**, n59,** σ**1^{s}.38**/96**, mb3.4**/6**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.26	201	P	Pn	07 42 07.9	-0.2
BARC				S	Sn	07 42 23.0	-1.2
PAMC	Pamplona, Colo	0.64	38	P	Pn	07 42 10.7	+0.7
PAMC				S	Sn	07 42 27.9	+0.3
BRJC	Barrancabermej	0.67	282	P	Pn	07 42 09.6	0.0
BRJC				S	Sn	07 42 26.7	-0.1
RUSC	La Rusia	0.94	180	P	Pn	07 42 11.8	-0.3
RUSC				S	Sn	07 42 30.2	-1.1
PTBC	PUERTO BERRIO,	1.39	258	P	Pn	07 42 14.5	-1.2
PTBC				S	Sn	07 42 35.6	-2.0
OCAC	Ocana	1.42	351	P	Pn	07 42 16.1	0.0
OCAC				S	Sn	07 42 38.2	-0.3
SPBC	San Pablo de B	1.53	220	P	Pn	07 42 16.8	-0.4
SPBC				S	Sn	07 42 38.8	-1.5
CHIC	Chingaza	2.28	196	P	Pn	07 42 26.0	0.0
CHIC				S	Sn	07 42 55.8	-0.3
ROSC	El Rosal	2.33	212	P	Pn	07 42 28.1	+1.6
	111nm,0.3s,baz=166,slow=22,SNR=55						
ROSC				S	Sn	07 42 58.2	+1.2
	694nm,0.5s,baz=44,slow=22,SNR=11						
ROSC	El Rosal	2.33	212	P	Pn	07 42 26.5	-0.1
ROSC				S	Sn	07 42 57.6	+0.5
MEDEC	Medelln, Ant	2.54	258	P	Pn	07 42 29.3	+0.3
MEDEC				S	Sn	07 43 01.6	+0.2
UREC	San Jos de Ur	2.59	291	P	Pn	07 42 27.9	-1.5
UREC				S	Sn	07 43 02.4	+0.3
VILC	Villavicencio,	2.77	193	P	Pn	07 42 31.7	0.0
VILC				S	Sn	07 43 06.6	+0.2
NIZA	Niza - Manizal	2.95	233	P	Pn	07 42 35.6	+1.4
NIZA				S	Sn	07 43 10.9	+0.3
CBOC	Ciudad Bolivar	3.06	252	P	Pn	07 42 35.6	+0.2
CBOC				S	Sn	07 43 12.6	-0.2
DBBC	Dabeiba	3.10	274	P	Pn	07 42 35.7	-0.1
DBBC				S	Sn	07 43 13.3	-0.4
SDV	Santo Domingo	3.17	50	P	Pn	07 42 37.7	+0.8
	33nm,0.3s,baz=210,slow=3.2,SNR=69						
SDV				S	Sn	07 43 14.7	-0.8
	220nm,0.6s,baz=258,slow=20,SNR=35						
SDV	Santo Domingo	3.17	50	P	Pn	07 42 37.4	+0.5
SDV				S	Sn	07 43 14.8	-0.7
ARGC	Ariguani, Magd	3.22	339	P	Pn	07 42 38.4	+1.2
ARGC				S	Sn	07 43 17.9	+1.7
PRAC	Prado	3.58	210	P	Pn	07 42 41.9	0.0
PRAC				S	Sn	07 43 23.3	-1.3
ORTC	Ortega, Tolima	3.61	217	P	Pn	07 42 42.0	-0.4
ORTC				S	Sn	07 43 25.5	+0.1
SJCC	San Jacinto, C	3.68	326	P	Pn	07 42 42.0	-1.2
SJCC				S	Sn	07 43 24.1	-2.8
PLMC	San Jos del P	3.71	239	P	Pn	07 42 43.7	+0.1
PLMC				S	Sn	07 43 26.7	-0.9
URMC	La Uribe, Meta	3.79	200	P	Pn	07 42 45.0	+0.3
URMC				S	Sn	07 43 29.4	-0.1
LCBC	Los crdobas,	3.82	302	P	Pn	07 42 44.2	-0.8
LCBC				S	Sn	07 43 29.6	-0.5
YOTC	Yotoco, Valle	4.30	229	P	Pn	07 42 50.5	-0.9
YOTC				S	Sn	07 43 41.6	0.0
SOLC	Bahia Solano	4.33	262	P	Pn	07 42 53.2	+1.5
CAPC	Capurgana	4.59	293	P	Pn	07 42 53.4	-1.6
CAPC				S	Sn	07 43 44.6	-3.5
PIZC	Pizarro, Choco	4.64	247	P	Pn	07 42 56.4	+0.7
PIZC				S	Sn	07 43 48.6	-0.6
PTAC	Punta Ardita,	4.70	274	P	Pn	07 42 55.5	-0.9
PTAC				S	Sn	07 43 52.4	+1.8
MACC	Macarena, Meta	4.72	189	P	Pn	07 42 54.8	-2.0
MACC				S	Sn	07 43 46.7	-4.5
URIC	Uribia, Colomb	4.96	13	P	Pn	07 42 58.1	-1.8
JAMC	Jamundi, Valle	5.07	225	P	Pn	07 43 00.9	-0.7
	22nm,0.5s						
JAMC				S	Sn	07 43 57.8	-1.9
	22nm,0.5s						
GARC	Garzon, Huila	5.20	208	P	Pn	07 43 01.9	-1.5
	4μm37nm,0.4s						
GARC				S	Sn	07 44 00.1	-2.9
	4μm37nm,0.4s						
POPC	Popayan, Colom	5.56	220	P	Pn	07 43 07.9	-0.3
	17nm,0.4s						
POPC				S	Sn	07 44 10.7	-0.9
	17nm,0.4s						
FLOC	Florencia	5.81	206	P	Pn	07 43 10.7	-0.5
	13nm,1.0s						
FLOC				S	Sn	07 44 15.9	-1.3
	13nm,1.0s						
BBAC	Balboa, Cauca	6.33	221	P	Pn	07 43 18.7	+0.4
BBAC				S	Sn	07 44 28.8	-1.0
GR1C	Gorgona, Isla	6.33	233	P	Pn	07 43 17.6	-0.5
GR1C				S	Sn	07 44 28.7	-0.8
CRUC	La Cruz	6.50	217	P	Pn	07 43 23.4	+2.7
GCUF	Volcan Galeras	7.00	217	P	Pn	07 43 29.1	+1.5
	21nm,0.4s						
GCUF				S	Sn	07 44 46.9	+0.5
	21nm,0.4s						
BCIP	Isla Barro Col	7.07	290	P	Pn	07 43 25.9	-2.1
BCIP				S	Sn	07 44 45.0	-2.4
OTAV	Otavalo	8.46	219	P	Pn	07 43 47.3	+0.4
SGC2	Sao Gabriel da	9.24	138	P	Pn	07 43 53.7	-3.2
SGC2				S	Sn	07 45 37.3	-2.2
MTDJ	Mount Denham	12.12	339	eP	Pn	07 44 38.0	+3.1
GTBY	Guantanamo Bay	13.16	352	eP	P	07 44 53.2	+0.6
MASC	Masc	13.31	355	eP	P	07 44 59.5	+5.3
RCC	Rio Carpintero	13.32	349	eP	P	07 44 53.8	-0.6
LMGC	Las Mercedes	13.69	344	eP	P	07 44 58.9	+0.4
PINC	Pinares de May	13.82	349	eP	P	07 45 03.4	+3.5
CCCC	Cccc	14.98	343	eP	Pn	07 45 00.4	-11
MGV	Manicaragua	16.58	337	eP	Pn	07 45 39.1	+8.4
TXAR	Lajitas Array	36.48	312	P	P	07 48 38.5	+0.9
	0.4nm,0.5s,baz=126,slow=8.9,SNR=7.1						
TXAR				PcP	PcP	07 50 59.1	+0.8
	0.2nm,0.6s,baz=101,slow=3.2,SNR=2.6						
	0.4nm,0.5s						
PDAR	Pinedale Array	48.09	324	P	P	07 50 12.0	+0.6
	0.4nm,0.5s,baz=126,slow=9.6,SNR=4.3						
	0.4nm,0.5s						
SCHQ	Schefferville	48.13	5	P	P	07 50 11.8	+0.6
	3.4nm,0.9s,baz=219,slow=8.9,SNR=2.0						
	3.4nm,0.9s						
NVAR	Mina Array Bea	51.50	315	P	P	07 50 36.0	-1.3
	0.2nm,0.4s,baz=117,slow=7.0,SNR=2.1						
	0.2nm,0.4s						
YKA	Yellowknife Ar	63.26	340	P	P	07 51 59.0	+0.1
	0.7nm,0.6s,baz=138,slow=5.7,SNR=27						
	0.7nm,0.6s						
ILAR	Eielson Array	76.97	335	P	P	07 53 22.3	-0.1
	0.2nm,0.6s,baz=88,slow=6.7,SNR=1.6						
	0.2nm,0.6s						
ASAR	Alice Springs	149.14	234	PKPbc	PKPbc	08 01 16.9	-1.2
	1.2nm,0.5s,baz=114,slow=3.5,SNR=4.2						
WRA	Warramunga Arr	150.37	241	PKPbc	PKPbc	08 01 20.2	-1.0
	1.3nm,0.5s,baz=109,slow=2.8,SNR=19						

IDC 23 07:43:18.5±2.3**, 29°.10S**×**177°.97W, h0^{km}, mb3.9**/4**,**

mbtmp3.9/4, Error ellipse: s-maj=60.6km s-min=10.9km az=59.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.16**	**165**	Pn	Pg	07 43 28.1	+6.5
	862nm,0.3s,baz=354,slow=0.8,SNR=15						
RAO				Sn	Sg	07 43 34.5	+11
	2µm,0.3s,baz=36,slow=24,SNR=13						
ASAR	**Alice Springs**	**43.22**	**266**	P	P	07 51 20.8	-0.8
	0.5nm,0.6s,baz=102,slow=7.0,SNR=7.9						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**44.09**	**271**	P	P	07 51 27.5	-1.2
	0.9nm,0.5s,baz=110,slow=8.0,SNR=5.1						
	0.9nm,0.5s						
QSPA	**South Pole Qui**	**61.01**	**180**	P	P	07 53 34.9	+1.4
	1.2nm,0.8s,baz=42,slow=3.5,SNR=3.8						
	1.2nm,0.8s						
MAW	**Mawson**	**73.53**	**200**	P	P	07 54 54.5	+1.8
	1.2nm,0.4s,baz=180,slow=6.0,SNR=9.3						
	1.2nm,0.4s						

UPP ***23*** *08:15:18.5±0.0, 67°.85N×20°.14E, h0km, ML2.2, Confirmed Induced event*

IDC ***23*** *08:15:20.6±1.1, 67°.87N×20°.57E, h0km, mbtmp2.7/4, ML1.9/4, Error ellipse: s-maj=18.7km s-min=6.6km az=121.0*

ISC 23 08:15:18.9±0.9**, 67°.84N**±0°.04×**20°.17E**±0°.04**, h0km, n17, σ0s.95**/20**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.13**	**30**	P	**Pg**	**08 15 21.1**	**-0.3**
KUA				S	**Sg**	**08 15 23.3**	**+0.3**
RATU	**Laukkuluspa**	**0.22**	**265**	P	**Pg**	**08 15 22.6**	**-0.5**
KOVU	**Salmi**	**0.38**	**360**	P	**Pg**	**08 15 25.9**	**-0.3**
NIKU	**Nikkaluokta**	**0.43**	**274**	P	**Pg**	**08 15 26.6**	**-0.5**
LANU	**Lannavaara**	**0.72**	**73**	P	**Pg**	**08 15 32.3**	**-0.4**
DUNU	**Dundret**	**0.74**	**168**	P	**Pg**	**08 15 32.7**	**-0.4**
SALU	**Saltoluokta**	**0.79**	**235**	P	**Pg**	**08 15 33.5**	**-0.5**
MASU	**Masugnsbyn**	**0.80**	**118**	P	**Pg**	**08 15 34.0**	**-0.2**
KIF	**Kilpisjarvi**	**1.19**	**11**	*e*P	**Pb**	**08 15 42.0**	**-0.3**
PAJU	**Pajala**	**1.40**	**125**	P	**Pn**	**08 15 43.9**	**-1.8**
HEF	**Hetta**	**1.43**	**65**	*e*P	**Pn**	**08 15 45.4**	**-0.6**
ERTU	**Ertsjaerv**	**1.52**	**148**	P	**Pn**	**08 15 46.6**	**-0.6**
HARU	**Harads**	**1.72**	**169**	P	**Pn**	**08 15 49.8**	**-0.2**
ARCES	**ARCESS Array B**	**2.59**	**46**	Pn	**Pn**	**08 16 03.6**	**+1.6**
	0.4nm,0.3s,baz=226,slow=15,SNR=27						
ARCES				Lg	Lg	08 16 36.5	
	1.1nm,0.3s,baz=228,slow=25,SNR=16						
	0.9nm,0.3s						
FINES	**FINESS Array B**	**6.91**	**156**	Pn	**Pn**	**08 17 03.3**	**+2.1**
	0.1nm,0.3s,baz=344,slow=14,SNR=1.4						
FINES				Sn	**Sn**	**08 18 20.8**	**+0.5**
	0.1nm,0.3s,baz=346,slow=20,SNR=1.5						
FINES				Lg	Lg	08 18 56.0	
	0.2nm,0.3s,baz=342,slow=25,SNR=3.9						
	1.0nm,0.8s						
NOA	**NORSAR Array B**	**7.84**	**214**	Pn	**Pn**	**08 17 15.6**	**+1.5**
	baz=9.3,slow=11,SNR=2.2						
NOA				Lg	Lg	08 19 29.1	
	baz=227,slow=24,SNR=1.8						
	0.3nm,0.8s						
HFS	**Hagfors**	**8.24**	**203**	Pn	**Pn**	**08 17 19.3**	**-0.2**
	0.1nm,0.3s,baz=17,slow=15,SNR=1.3						
HFS				Sn	**Sn**	**08 18 53.0**	**-0.2**
	0.1nm,0.3s,baz=32,slow=21,SNR=1.5						
HFS				Lg	Lg	08 19 38.9	
	0.1nm,0.3s,baz=42,slow=25,SNR=1.7						
	0.3nm,0.3s						

NOU ***23*** *08:24:04.3, 20°.84S×178°.71W, h601km, mb4.7/45, Fiji Islands Region*

IDC ***23*** *08:24:05.6±0.6, 20°.79S×178°.92W, h612km±6km, mb3.9/20, mbtmp4.9/21, Error ellipse: s-maj=10.8km s-min=8.7km az=147.0*

NEIC ***23*** *08:24:05.1±2.3, 20°.8S±0°.1×178°.8W±0°.1, h602km±6km, mb4.7/274, Error ellipse: s-maj=17.0km s-min=14.3km az=123.0*

ISC 23 08:24:04.4±0.5**, 20°.83S**±0°.05×**178°.72W**±0°.05**, h606km**±5km**, h608km:pP-P, n688, σ1s.01**/616**, mb4.7**/172**, 36C-34D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.34**	**315**		**P**	**08 25 34.0**	**+1.0**
MSVF	**Nonsavu**	**4.34**	**315**	P	**P**	**08 25 33.6**	**+0.7**
GLKZ	**Green Lake**	**8.42**	**175**	P	**P**	**08 26 07.1**	**-0.7**
NIUE	**Niue**	**8.45**	**80**		**P**	**08 26 08.2**	**-0.1**
NIUE	**Niue**	**8.45**	**80**	P	**P**	**08 26 08.1**	**-0.1**
NIUE				S	S	08 27 60.0	+10
AFI	**Afiamalu**	**9.55**	**45**	P	**P**	**08 26 17.8**	**-1.3**
AFI	**Afiamalu**	**9.55**	**45**	P	**P**	**08 26 17.9**	**-1.2**
	44nm,0.5s						
AFI	**Afiamalu**	**9.55**	**45**	P	**P**	**08 26 17.3**	**-1.8**
AFI				S	**S**	**08 28 02.5**	**-7.1**
INH	**Isangel**	**11.35**	**274**	P	**P**	**08 26 37.2**	**+0.4**
	362nm,0.8s						
MARNC	**Mare, Loyalty**	**12.38**	**265**		**P**	**08 26 46.4**	**-0.6**
MARNC	**Mare, Loyalty**	**12.38**	**265**	P	**P**	**08 26 46.2**	**-0.8**
	1.6nm,0.9s						
FUNA	**Funafuti**	**12.40**	**350**	P	**P**	**08 26 46.6**	**-0.6**
PINNC	**Pines Island,**	**12.98**	**260**		**P**	**08 26 53.3**	**+0.4**
PINNC	**Pines Island,**	**12.98**	**260**	P	**P**	**08 26 53.5**	**+0.5**
	158nm,1.3s						
YATNC	**Mamie plateau,**	**13.46**	**262**	P	**P**	**08 26 58.3**	**+0.5**
	32nm,0.9s						
DZM	**Mont Dzumac**	**13.87**	**262**	P	**P**	**08 27 01.2**	**-0.8**
	38nm,0.7s,baz=90,slow=20,SNR=31						
DZM	**Mont Dzumac**	**13.87**	**262**	*e*P	**P**	**08 27 00.5**	**-1.5**
	100nm,1.1s						
DZM				*e*S	S	08 29 18.2	-9.1
	651nm,24.4s						
DZM	**Mont Dzumac**	**13.87**	**262**	P	**P**	**08 27 01.2**	**-0.8**
	65nm,0.8s						
SANVU	**Saraoutou**	**14.41**	**290**		**P**	**08 27 07.0**	**0.0**
SANVU	**Saraoutou**	**14.41**	**290**	P	**P**	**08 27 07.3**	**+0.2**
	128nm,0.6s						
OUZ	**Omahuta**	**15.85**	**204**	P	**P**	**08 27 22.3**	**+2.4**
KOUNC	**Koumac, New Ca**	**15.91**	**268**	P	**P**	**08 27 21.8**	**+1.1**
	127nm,0.8s						
WCZ	**Waipu Caves**	**16.23**	**201**	P	**P**	**08 27 26.0**	**+2.6**
KUZ	**Kuaotunu**	**16.58**	**196**	P	**P**	**08 27 28.2**	**+1.6**
MKAZ	**Moumakai**	**17.07**	**197**	P	**P**	**08 27 32.7**	**+1.7**
HAZ	**Te Kaha**	**17.14**	**189**	P	**P**	**08 27 31.0**	**-0.7**
PUZ	**Puketiti**	**17.38**	**188**	P	**P**	**08 27 34.9**	**+1.0**
TOZ	**Tahuroa Road**	**17.57**	**195**	P	**P**	**08 27 35.5**	**-0.1**
TOZ				IAmb	IAmb	08 27 38.1	
	comp=Z,22nm,1.0s						
TOZ	**Tahuroa Road**	**17.57**	**195**	P	**P**	**08 27 36.7**	**+1.1**
URZ	**Urewera**	**17.74**	**191**	P	**P**	**08 27 35.9**	**-1.3**
	comp=Z,7.9nm,0.3s,baz=282,slow=2.3,SNR=23						
URZ				S	**S**	**08 30 23.4**	**-6.5**
	comp=Z,4.9nm,0.6s,baz=6.9,slow=22,SNR=7.9						
URZ	**Urewera**	**17.74**	**191**	P	**P**	**08 27 36.1**	**-1.0**
	comp=Z,32nm,1.4s						
URZ	**Urewera**	**17.74**	**191**	P	**P**	**08 27 35.9**	**-1.3**
MWZ	**Matawai**	**17.74**	**190**	P	**P**	**08 27 36.6**	**-0.7**
BFZ	**Birch Farm**	**20.25**	**191**	P	**P**	**08 27 59.2**	**-0.7**
SNZO	**South Karori**	**21.16**	**194**	P	**P**	**08 28 07.8**	**-0.3**
TCW	**Tory Channel**	**21.17**	**195**	P	**P**	**08 28 08.3**	**+0.2**
TCW	**Tory Channel**	**21.17**	**195**	P	**P**	**08 28 07.9**	**-0.3**
QRZ	**Quartz Range**	**21.28**	**199**	P	**P**	**08 28 09.8**	**+0.7**
	comp=Z,148nm,2.0s						
QRZ	**Quartz Range**	**21.28**	**199**	P	**P**	**08 28 09.5**	**+0.4**
TKNZ	**Takaka Hill**	**21.34**	**198**	P	**P**	**08 28 09.1**	**-0.7**
TKNZ	**Takaka Hill**	**21.34**	**198**	P	**P**	**08 28 08.9**	**-0.9**
NNZ	**Nelson**	**21.40**	**197**	P	**P**	**08 28 09.1**	**-1.1**
TUWZ	**Tuamarina**	**21.45**	**195**	P	**P**	**08 28 10.4**	**-0.3**
MRNZ	**Matariki Terra**	**21.74**	**198**	P	**P**	**08 28 12.5**	**-0.8**
THZ	**Tophouse**	**22.04**	**197**	P	**P**	**08 28 14.9**	**-1.1**
DSZ	**Denniston Nort**	**22.34**	**199**	P	**P**	**08 28 18.8**	**+0.2**
KHZ	**Kahutara**	**22.48**	**195**	P	**P**	**08 28 18.3**	**-1.5**
GVZ	**Greta Valley S**	**23.13**	**196**	P	**P**	**08 28 24.1**	**-1.5**
LTZ	**Lake Taylor**	**23.16**	**197**	P	**P**	**08 28 24.1**	**-1.8**
INZ	**Inchbonnie**	**23.34**	**199**	P	**P**	**08 28 26.6**	**-0.8**
MQZ	**McQueen's Vall**	**23.92**	**196**	P	**P**	**08 28 31.6**	**-0.9**
TATA	**Tatamba Isabel**	**24.15**	**298**	P	**P**	**08 28 34.1**	**-0.9**
	comp=Z,134nm,0.7s						
FOZ	**Fox Glacier**	**24.58**	**200**	P	**P**	**08 28 38.6**	**+0.3**
TBI	**Tubuai**	**27.20**	**101**	*e*sS	sS	08 35 58.1	+1.3
	comp=Z,1µm,39.2s						
WHZ	**Wether Hill Ro**	**27.29**	**201**	P	**P**	**08 29 03.5**	**+1.4**
TW1H	**Toowoomba 1 Ha**	**27.52**	**250**	P	**P**	**08 29 05.6**	**+1.1**
PPT2	**Papeete2**	**27.69**	**88**	*e*sS	sS	08 35 54.6	-11
	comp=Z,278nm,29.0s						
PPT2				*e*sS	**SS**	**08 36 02.8**	**-10**
	comp=Z,188nm,24.5s						
PPT	**Papeete**	**27.69**	**88**	P	**P**	**08 29 07.6**	**+1.6**
	comp=Z,56nm,1.1s,baz=49,slow=8.6,SNR=7.3						
	comp=Z,56nm,1.1s						
EIDS	**Eidsvold**	**28.11**	**255**		**P**	**08 29 09.4**	**-0.3**
EIDS				IAmb	IAmb	08 29 10.4	
	comp=Z,11nm,0.8s						
EIDS	**Eidsvold**	**28.11**	**255**	P	**P**	**08 29 09.7**	**+0.1**
	comp=Z,16nm,0.7s						
ARMA	**Armidale**	**28.32**	**244**	P	**P**	**08 29 12.3**	**+0.9**
ARMA				IAmb	IAmb	08 29 13.3	
	comp=Z,29nm,1.1s						
AULRC	**Lightning Ridg**	**31.26**	**247**	P	**P**	**08 29 37.0**	**+0.4**
CTAO	**Charters Tower**	**32.79**	**265**		**P**	**08 29 49.9**	**+0.2**
CTAO				IAmb	IAmb	08 29 51.0	
	comp=Z,22nm,0.9s						
CTAO	**Charters Tower**	**32.79**	**265**	P	**P**	**08 29 49.5**	**-0.2**
	comp=Z,12nm,0.8s						
CMSA	**Cobar Meteorol**	**33.54**	**244**	P	**P**	**08 29 55.7**	**-0.1**
	comp=Z,22nm,1.0s						
QLP	**Quilpie**	**34.32**	**253**	P	**P**	**08 30 01.9**	**-0.5**
	comp=Z,55nm,0.7s						
PMG	**Port Moresby**	**34.77**	**284**		**P**	**08 30 06.3**	**+0.1**
PMG	**Port Moresby**	**34.77**	**284**	P	**P**	**08 30 06.2**	**0.0**
	comp=Z,77nm,0.8s						
PMG	**Port Moresby**	**34.77**	**284**	P	**P**	**08 30 05.8**	**-0.4**
MTSU	**Mount Surprise**	**34.91**	**268**	P	**P**	**08 30 07.2**	**-0.2**
	comp=Z,15nm,0.7s						
BRAT	**Ballarat**	**36.34**	**234**	P	**P**	**08 30 19.9**	**+1.1**
	comp=Z,13nm,0.9s						
STKA	**Stephens Creek**	**37.04**	**244**	P	**P**	**08 30 24.9**	**+0.2**
	comp=Z,8.9nm,0.7s,baz=96,slow=10.0,SNR=18						
STKA				PcP	**PcP**	**08 32 28.9**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=101,slow=5.7,SNR=4.4						
	comp=Z,8.9nm,0.7s						
STKA	**Stephens Creek**	**37.04**	**244**		**P**	**08 30 24.9**	**+0.2**
STKA	**Stephens Creek**	**37.04**	**244**	P	**P**	**08 30 24.9**	**+0.2**
	comp=Z,3.4nm,1.1s						
INKA	**Innaminka**	**37.46**	**251**	P	**P**	**08 30 28.9**	**+0.7**
QIS	**Mount Isa**	**38.91**	**263**	P	**P**	**08 30 39.2**	**-0.8**
	comp=Z,5.6nm,0.7s						
AUMBR	**Murray Bridge**	**39.44**	**240**	P	**P**	**08 30 43.7**	**-0.2**
	comp=Z,40nm,0.9s						
HTT	**Hallett**	**39.48**	**242**	P	**P**	**08 30 44.4**	**0.0**
	comp=Z,24nm,1.2s						
AUJCS	**Jamestown Cent**	**39.71**	**243**	P	**P**	**08 30 46.8**	**+0.6**
	comp=Z,24nm,0.9s						
WHYH	**Whyalla**	**40.55**	**243**	P	**P**	**08 30 53.5**	**+0.7**
	comp=Z,32nm,0.8s						
BBOO	**Buckleboo**	**41.80**	**244**	IAmb	IAmb	08 31 04.0	
	comp=Z,22nm,0.6s						
BBOO	**Buckleboo**	**41.80**	**244**	P	**P**	**08 31 02.6**	**-0.1**
	comp=Z,33nm,0.9s						
JAY	**Jayapura**	**43.52**	**289**	P	**P**	**08 31 15.4**	**-0.9**
	comp=Z,42nm,0.9s						
WR8	**Warramunga Arr**	**43.74**	**263**	IAmb	IAmb	08 31 19.3	
	comp=Z,22nm,1.1s						
ASAR	**Alice Springs**	**43.79**	**257**	P	**P**	**08 31 17.9**	**-0.4**
	comp=Z,53nm,0.9s,baz=97,slow=7.5,SNR=390						
ASAR				PcP	**PcP**	**08 32 51.5**	**+0.3**
	comp=Z,5.3nm,0.5s,baz=102,slow=3.9,SNR=12						
ASAR				ScP	**ScP**	**08 35 46.5**	**+0.6**
	comp=Z,2.1nm,0.7s,baz=106,slow=4.7,SNR=6.7						
ASAR				S	**S**	**08 37 03.8**	**-2.7**
	comp=Z,5.5nm,0.8s,baz=93,slow=16,SNR=25						
ASAR				PKiKP	**PKiKP**	**08 39 48.9**	**-1.6**
	comp=Z,0.1nm,0.6s,baz=87,slow=1.6,SNR=4.2						
ASAR				ScS	**ScS**	**08 40 10.7**	**+0.2**
	comp=Z,0.7nm,0.9s,baz=75,slow=7.2,SNR=4.8						
	comp=Z,53nm,0.9s						
ASAR	**Alice Springs**	**43.79**	**257**	P	**P**	**08 31 18.0**	**-0.4**
WB0	**Warramunga Arr**	**43.87**	**263**	IAmb	IAmb	08 31 18.8	
	comp=Z,24nm,0.6s						
WRAB	**Tennant Creek**	**43.88**	**263**	P	**P**	**08 31 18.1**	**-0.9**
WRAB				IAmb	IAmb	08 31 19.7	
	comp=Z,18nm,0.8s						
WRAB	**Tennant Creek**	**43.88**	**263**	P	**P**	**08 31 17.9**	**-1.2**
	comp=Z,15nm,0.9s						
WRA	**Warramunga Arr**	**43.89**	**263**	P	**P**	**08 31 18.2**	**-1.0**
	comp=Z,7.7nm,0.3s,baz=97,slow=6.9,SNR=167						
WRA				PcP	**PcP**	**08 32 50.3**	**-1.3**
	comp=Z,2.1nm,0.9s,baz=98,slow=5.1,SNR=4.8						
WRA				ScP	**ScP**	**08 35 46.8**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=98,slow=3.9,SNR=6.0						
WRA				S	**S**	**08 37 04.7**	**-3.3**
	comp=Z,3.2nm,0.9s,baz=99,slow=14,SNR=7.6						
	comp=Z,7.7nm,0.3s						
WRA	**Warramunga Arr**	**43.89**	**263**		**P**	**08 31 17.5**	**-1.7**
MTN	**Manton Dam**	**48.50**	**271**		**P**	**08 31 52.5**	**-1.4**
FORT	**Forrest**	**48.55**	**247**	IAmb	IAmb	08 31 54.9	
	comp=Z,12nm,0.7s						
KNRA	**Kununurra**	**49.97**	**267**		**P**	**08 32 04.2**	**-0.5**
KNRA				IAmb	IAmb	08 32 06.6	
	comp=Z,22nm,0.7s						
FITZ	**Fitzroy Crossi**	**52.32**	**263**	S	**S**	**08 39 01.7**	**-1.4**
	comp=Z,4.3nm,0.8s,baz=161,slow=10.0,SNR=6.6						
FITZ	**Fitzroy Crossi**	**52.32**	**263**		**P**	**08 32 21.4**	**-0.2**
FITZ	**Fitzroy Crossi**	**52.32**	**263**	P	**P**	**08 32 21.6**	**0.0**
	comp=Z,37nm,2.0s						
SIJI	**Sorong**	**52.68**	**286**	P	**P**	**08 32 23.7**	**-0.5**
SWI	**Sorong**	**52.69**	**286**	P	**P**	**08 32 23.9**	**-0.4**
KRAI	**Karang Ratu**	**54.28**	**281**	P	**P**	**08 32 35.1**	**-0.4**
	comp=Z,15nm,0.5s						
SOEI	**Soe**	**55.84**	**272**		**P**	**08 32 47.0**	**+0.6**
SOEI	**Soe**	**55.84**	**272**	P	**P**	**08 32 47.9**	**+1.4**
	comp=Z,101nm,0.8s						
SOEI	**Soe**	**55.84**	**272**	P	**P**	**08 32 46.9**	**+0.4**
PSA00	**Pilbara Seismi**	**56.94**	**257**		**P**	**08 32 53.3**	**-0.5**
PSA00	**Pilbara Seismi**	**56.94**	**257**		**P**	**08 32 52.9**	**-0.9**
PSA00				IAmb	IAmb	08 32 55.1	
	comp=Z,9.0nm,0.9s						
PSA00	**Pilbara Seismi**	**56.94**	**257**	P	**P**	**08 32 53.3**	**-0.5**
	comp=Z,31nm,0.8s						
SANI	**Sanana**	**56.99**	**282**	P	**P**	**08 32 54.0**	**-0.2**
	comp=Z,21nm,0.9s						
SANI	**Sanana**	**56.99**	**282**	P	**P**	**08 32 52.5**	**-1.7**
	comp=Z,21nm,0.7s						
MBWA	**Marble Bar**	**57.13**	**258**		**P**	**08 32 54.3**	**-0.7**
MBWA	**Marble Bar**	**57.13**	**258**	P	**P**	**08 32 54.4**	**-0.7**
	comp=Z,16nm,0.7s						
KLBR	**Kellerberrin**	**57.31**	**245**	P	**P**	**08 32 56.2**	**+0.1**
	comp=Z,47nm,0.7s						
VNDA	**Vanda**	**57.52**	**185**	P	**P**	**08 32 59.0**	**+2.3**
	comp=Z,2.9nm,0.7s,baz=1.1,slow=6.5,SNR=22						
	comp=Z,2.9nm,0.7s						
VNDA	**Vanda**	**57.52**	**185**		**P**	**08 32 59.0**	**+2.3**
EDFI	**Ende, Flores**	**58.57**	**272**	P	**P**	**08 33 03.2**	**-1.8**
	comp=Z,33nm,0.8s						
DBNI	**Kabupaten Domp**	**61.81**	**271**	P	**P**	**08 33 25.3**	**-0.9**
	comp=Z,39nm,0.6s						
CASY	**Casey**	**63.38**	**205**	P	**P**	**08 33 36.6**	**+1.2**
CASY				IAmb	IAmb	08 33 55.0	
	comp=Z,32nm,1.2s						
QSPA	**South Pole Qui**	**69.24**	**180**	P	**P**	**08 34 12.8**	**+1.2**
	comp=Z,14nm,0.6s,baz=274,slow=0.6,SNR=110						
	comp=Z,14nm,0.6s						
QSPA	**South Pole Qui**	**69.24**	**180**	P	**P**	**08 34 12.8**	**+1.2**
QSPA				IAmb	IAmb	08 34 13.7	
	comp=Z,15nm,0.7s						
MJAR	**Matsushiro Arr**	**70.08**	**324**	P	**P**	**08 34 16.9**	**-0.1**
	comp=Z,4.4nm,0.7s,baz=157,slow=6.0,SNR=14						
	comp=Z,4.4nm,0.7s						
MJAR	**Matsushiro Arr**	**70.08**	**324**		**P**	**08 34 16.6**	**-0.3**
JSD	**Sado**	**71.15**	**325**	P	**P**	**08 34 23.2**	**0.0**
JSD				IAmb	IAmb	08 34 25.5	
	comp=Z,44nm,1.5s						
JNU	**Nakatsue**	**72.06**	**317**	P	**P**	**08 34 29.1**	**+0.5**
JNU				IAmb	IAmb	08 34 30.5	
	comp=Z,46nm,1.5s						
ADK	**Adak**	**72.42**	**1**	P	**P**	**08 34 30.6**	**+0.4**
TPUB	**Ta-pu**	**73.59**	**303**		**P**	**08 34 36.6**	**-1.0**
UNV	**Unalaska Valle**	**75.11**	**7**	P	**P**	**08 34 45.2**	**-0.1**
	baz=192						
PEA0B	**Petropavlovsk-**	**76.42**	**346**	P	**P**	**08 34 52.7**	**+0.2**
PETK	**Petropavlovsk-**	**76.42**	**346**	P	**P**	**08 34 52.2**	**-0.3**
	comp=Z,9.8nm,0.6s,baz=114,slow=5.6,SNR=27						
	comp=Z,9.8nm,0.6s						
PETK	**Petropavlovsk-**	**76.42**	**346**	P	**P**	**08 34 53.0**	**+0.4**
KSRS	**Korea Array**	**76.69**	**319**	P	**P**	**08 34 54.6**	**+0.2**
	comp=Z,1.9nm,0.6s,baz=130,slow=6.5,SNR=4.7						
	comp=Z,1.9nm,0.6s						
SDPT	**Sand Point**	**77.45**	**11**	P	**P**	**08 34 58.0**	**-0.1**
	baz=197						
P08K	**Saint George I**	**77.52**	**5**	P	**P**	**08 34 59.1**	**+0.7**
	baz=189						
S12K	**Black Hills**	**77.54**	**10**	P	**P**	**08 34 59.0**	**+0.5**
	baz=196						
SPIA	**Saint Paul Isl**	**78.03**	**5**	P	**P**	**08 35 02.7**	**+1.6**
	baz=188						
S14K	**Fog Glacier**	**78.51**	**11**	P	**P**	**08 35 04.4**	**+0.6**
	baz=198						
CHIR	**Chirikof Islan**	**78.83**	**13**	P	**P**	**08 35 06.4**	**+1.0**
	baz=202						
USRK	**Ussuriysk Ar.**	**78.86**	**326**	P	**P**	**08 35 07.4**	**+1.5**
	comp=Z,7.1nm,0.7s,baz=127,slow=3.4,SNR=11						
	comp=Z,7.1nm,0.7s						
BELA	**Belgrano 2**	**79.31**	**173**		**P**	**08 35 08.0**	**+0.2**
MNRC	**McLaughlin Min**	**79.38**	**41**	IAmb	IAmb	08 35 12.2	
	comp=Z,37nm,0.9s						
NJ2	**Nanjing**	**79.58**	**310**	*e*P	**P**	**08 35 12.0**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SII	**Sitkinak Islan**	**79.82**	**14**	P	**P**	**08 35 10.9**	**+0.2**
	baz=203						
O02D	**Mt. Diablo Mer**	**79.96**	**40**	IAmb	IAmb	08 35 15.4	
	comp=Z,26nm,0.8s						
R16K	**Pilot Point**	**80.08**	**11**	P	**P**	**08 35 12.3**	**+0.5**
	baz=200						
YUH	**Yuha Desert**	**80.16**	**50**	P	**P**	**08 35 14.4**	**+1.5**
R17L	**Mt. Peulik Vol**	**80.37**	**12**	P	**P**	**08 35 14.0**	**+0.5**
	baz=201						
MDJ	**Mudanjiang**	**80.41**	**325**	P	**P**	**08 35 15.0**	**+1.0**
MDJ				pmax	pmax		
	comp=Z,14nm,1.2s						
MDJ	**Mudanjiang**	**80.41**	**325**	P	**P**	**08 35 15.4**	**+1.4**
	comp=Z,12nm,1.2s						
OHAK	**Old Harbor**	**80.63**	**14**	P	**P**	**08 35 15.3**	**+0.5**
	baz=204						
O03E	**Paynes Creek**	**80.63**	**41**	IAmb	IAmb	08 35 18.7	
	comp=Z,48nm,1.1s						
YBH	**Yreka Blue Hor**	**80.97**	**39**	IAmb	IAmb	08 35 20.2	
	comp=Z,24nm,0.8s						
MAW	**Mawson**	**81.02**	**200**	P	**P**	**08 35 17.6**	**+0.8**
	comp=Z,4.4nm,0.5s,baz=96,slow=3.0,SNR=14						
	comp=Z,4.4nm,0.5s						
Q17K	**Contact Creek**	**81.05**	**12**	P	**P**	**08 35 16.9**	**-0.2**
	baz=202						
O14K	**Tigyukauivet M**	**81.08**	**9**	P	**P**	**08 35 16.6**	**-0.4**
	baz=196						
O15K	**Ungalikthiuk R**	**81.22**	**10**	P	**P**	**08 35 17.5**	**-0.2**
	baz=198						
PNTR	**Pine Nut**	**81.28**	**43**		**P**	**08 35 20.7**	**+1.8**
Q16K	**King Salmon**	**81.29**	**11**	P	**P**	**08 35 18.0**	**-0.1**
	baz=201						
KDAK	**Kodiak Island**	**81.30**	**14**	P	**P**	**08 35 18.4**	**+0.2**
	baz=205						
DSP	**Deep Springs**	**81.34**	**45**		**P**	**08 35 20.8**	**+1.9**
PIX	**Pinacate**	**81.37**	**52**		**P**	**08 35 21.2**	**+2.0**
PIX				IAmb	IAmb	08 35 22.0	
	comp=Z,17nm,0.9s						
P16K	**Nushagak River**	**81.39**	**11**	P	**P**	**08 35 19.1**	**+0.5**
	baz=200						
LHV	**Little Huntoon**	**81.50**	**44**	IAmb	IAmb	08 35 22.8	
	comp=Z,16nm,0.9s						
IRM	**Iron Mountain**	**81.51**	**49**	IAmb	IAmb	08 35 23.1	
	comp=Z,26nm,1.4s						
GRAC	**Grapevine Rang**	**81.53**	**45**	IAmb	IAmb	08 35 22.5	
	comp=Z,16nm,0.8s						
M11K	**Mekoryuk**	**81.56**	**6**	P	**P**	**08 35 19.9**	**+0.4**
	baz=192						
Q18K	**Katmai Hardscr**	**81.58**	**12**	P	**P**	**08 35 20.0**	**+0.2**
	baz=202,SNR=8.0						
DANC	**Danby, Needles**	**81.60**	**48**	IAmb	IAmb	08 35 23.4	
	comp=Z,24nm,1.0s						
N14K	**Kuskokwak Cree**	**81.66**	**9**	P	**P**	**08 35 20.4**	**+0.4**
	baz=196						
SHOC	**Shoshone, Teco**	**81.66**	**47**	IAmb	IAmb	08 35 23.1	
	comp=Z,15nm,0.9s						
NVAR	**Mina Array Bea**	**81.73**	**44**	P	**P**	**08 35 23.1**	**+1.9**
	comp=Z,7.5nm,0.6s,baz=223,slow=8.2,SNR=60						
NVAR				pP	**pwP**	**08 37 32.8**	**+1.5**
	comp=Z,0.1nm,0.2s,baz=267,slow=5.1,SNR=1.3						
	comp=Z,7.5nm,0.6s						
NVAR	**Mina Array Bea**	**81.73**	**44**		**P**	**08 35 22.4**	**+1.2**
BLYC	**Blythe**	**81.73**	**49**	IAmb	IAmb	08 35 24.1	
	comp=Z,14nm,0.8s						
PAHR	**Pah Rah Range**	**81.77**	**42**	IAmb	IAmb	08 35 23.9	
	comp=Z,21nm,0.9s						
P17K	**Kvichak River**	**81.82**	**11**	P	**P**	**08 35 21.0**	**+0.3**
	baz=201						
NV11	**Mina Array Sit**	**81.82**	**44**	IAmb	IAmb	08 35 24.1	
	comp=Z,28nm,1.2s						
O16K	**Kokwok River B**	**81.90**	**10**	P	**P**	**08 35 21.6**	**+0.4**
	baz=199						
M13K	**Dall Lake**	**81.92**	**8**	P	**P**	**08 35 21.9**	**+0.7**
	baz=194						
Q20K	**Shuyak Island**	**82.09**	**14**	P	**P**	**08 35 22.7**	**+0.5**
	baz=205						
Q19K	**Cape Douglas,**	**82.12**	**13**	P	**P**	**08 35 22.2**	**-0.2**
	baz=204						
N15K	**Kwethluk River**	**82.13**	**9**	P	**P**	**08 35 23.1**	**+0.7**
	baz=198						
CN2	**Changchun**	**82.16**	**323**	*e*P	**P**	**08 35 23.8**	**+0.9**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
NEE2	**Needles Airpor**	**82.20**	**48**	IAmb	IAmb	08 35 26.9	
	comp=Z,28nm,1.3s						
P18K	**Big Mountain,**	**82.23**	**12**	P	**P**	**08 35 23.2**	**+0.3**
	baz=202						
O17K	**Koliganek Bris**	**82.24**	**11**	P	**P**	**08 35 22.7**	**-0.3**
	baz=200						
TPNV	**Topopah Spring**	**82.25**	**46**	IAmb	IAmb	08 35 26.4	
	comp=Z,18nm,0.8s						
BNX	**BinXian**	**82.31**	**325**	⇑P	**P**	**08 35 24.1**	**+0.5**
BNX				pmax	pmax		
	comp=Z,15nm,0.8s						
M14K	**Bethel**	**82.42**	**8**	P	**P**	**08 35 24.3**	**+0.5**
	baz=196						
IPM	**Ipoh**	**82.51**	**278**	P	**P**	**08 35 25.8**	**+0.4**
IPM				IAmb	IAmb	08 35 26.9	
	comp=Z,12nm,0.7s						
IPM	**Ipoh**	**82.51**	**278**	P	**P**	**08 35 26.4**	**+1.0**
	comp=Z,20nm,0.9s						
IPM	**Ipoh**	**82.51**	**278**	P	**P**	**08 35 25.1**	**-0.3**
	comp=Z,20nm,0.9s						
M15K	**Kasigluk River**	**82.54**	**9**	P	**P**	**08 35 24.8**	**+0.4**
	baz=197						
N16K	**Nishlik Lake**	**82.62**	**10**	P	**P**	**08 35 26.0**	**+1.1**
	baz=199						
K05A	**Summer Lake**	**82.64**	**39**		**P**	**08 35 27.8**	**+2.1**
O18K	**Koktuh Hills**	**82.66**	**12**	P	**P**	**08 35 25.3**	**+0.2**
	baz=202,SNR=6.8						
P19K	**Oil Pt**	**82.87**	**13**	P	**P**	**08 35 26.0**	**-0.1**
	baz=204						
L14K	**Kuka Creek**	**82.90**	**8**	P	**P**	**08 35 26.3**	**+0.2**
	baz=195						
WIFE	**Three Sisters-**	**82.92**	**37**	IAmb	IAmb	08 35 29.8	
	comp=Z,23nm,0.8s						
N17K	**Nushagak Hills**	**82.94**	**11**	P	**P**	**08 35 27.4**	**+1.0**
	baz=200						
S11A	**Rachel**	**82.97**	**45**	IAmb	IAmb	08 35 29.7	
	comp=Z,14nm,0.7s						
TIA	**Tai'an**	**83.01**	**313**	P	**P**	**08 35 28.1**	**+0.7**
TIA				pmax	pmax		
	comp=Z,12nm,1.6s						
M16K	**Timber Creek**	**83.11**	**10**	P	**P**	**08 35 28.5**	**+1.2**
	baz=199						
O19K	**Port Alsworth**	**83.15**	**12**	P	**P**	**08 35 27.9**	**+0.4**
	baz=203,SNR=13						
K13K	**Kusilvak Mount**	**83.24**	**7**	P	**P**	**08 35 28.7**	**+0.8**
	baz=193						
N18K	**Kilae Creek**	**83.31**	**11**	P	**P**	**08 35 28.8**	**+0.5**
	baz=201						
I05D	**Terrebonne, OR**	**83.36**	**37**	IAmb	IAmb	08 35 31.8	
	comp=Z,24nm,0.8s						
L15K	**Ungalak Mounta**	**83.38**	**8**	P	**P**	**08 35 29.8**	**+1.3**
	baz=196						
BRSE	**Bradley Lake S**	**83.48**	**14**	P	**P**	**08 35 30.2**	**+1.0**
	baz=206						
N19K	**Bonanza Creek**	**83.69**	**12**	P	**P**	**08 35 30.4**	**+0.1**
	baz=203						
L16K	**Owhat River**	**83.69**	**9**	P	**P**	**08 35 31.5**	**+1.3**
	baz=198						
TUC	**Tucson**	**83.71**	**52**		**P**	**08 35 33.6**	**+2.5**
TUC				IAmb	IAmb	08 35 34.5	
	comp=Z,13nm,0.8s						
M17K	**Holitna River**	**83.72**	**10**	P	**P**	**08 35 31.7**	**+1.4**
	baz=200						
WVOR	**Wild Horse Val**	**83.82**	**40**	IAmb	IAmb	08 35 34.2	
	comp=Z,16nm,1.0s						

NLWA	Neilton Lookou	83.89	34	IAmb	IAmb	08 35 34.4	
	comp=Z,15nm,0.8s						
K15K	Wolf Creek Mou	83.97	8	P	P	08 35 33.0	+1.6
	baz=196						
M18K	Stony River	84.08	11	P	P	08 35 33.2	+1.2
	baz=202						
SEW	Seward	84.10	14	P	P	08 35 33.3	+1.2
	baz=207						
L17K	Donlin	84.27	9	P	P	08 35 34.3	+1.3
	baz=199						
G06A	Carlson Farm,	84.30	37	IAmb	IAmb	08 35 36.1	
	comp=Z,29nm,1.3s						
319A	Douglas	84.38	54	IAmb	IAmb	08 35 37.9	
	comp=Z,27nm,0.9s						
J08A	Circle Bar Ran	84.45	40	IAmb	IAmb	08 35 37.1	
	comp=Z,31nm,1.2s						
N20K	Mount Spurr	84.49	13	P	P	08 35 34.3	+0.1
	baz=205						
SPCR	Spurr Chakacha	84.49	13	P	P	08 35 34.0	-0.2
	baz=205						
B04A	Port Angeles	84.50	34	IAmb	IAmb	08 35 36.8	
	comp=Z,12nm,0.8s						
GAMB	Gambell	84.51	3	P	P	08 35 34.9	+0.9
	baz=187						
GNW	Green Mountain	84.54	34	IAmb	IAmb	08 35 37.2	
	comp=Z,13nm,0.8s						
L18K	Granite Mounta	84.61	10	P	P	08 35 35.3	+0.7
	baz=201						
K17K	Iditarod	84.82	9	P	P	08 35 36.8	+1.2
	baz=199						
L19K	White Mountain	84.89	11	IAmb	IAmb	08 35 37.8	
	comp=Z,28nm,1.2s						
L19K	White Mountain	84.89	11	P	P	08 35 36.6	+0.6
	baz=202						
RC01	Rabbit Creek A	84.92	14	P	P	08 35 36.6	+0.4
	baz=207						
M20K	Styx River	84.93	12	P	P	08 35 36.9	+0.5
	baz=204						
PWL	Port Wells	85.03	14	P	P	08 35 37.4	+0.7
	baz=208						
SUA	Susitna One	85.03	13	P	P	08 35 37.4	+0.6
	baz=206						
J16K	Anvik River	85.04	8	P	P	08 35 36.7	0.0
	baz=197						
PKCU	Pink Cliffs	85.19	47	IAmb	IAmb	08 35 41.9	
	comp=Z,17nm,0.9s						
HEH	HeiHe	85.24	329	*e*P	P	08 35 38.1	+0.2
HNS	HongShan	85.28	313	⇑P	P	08 35 39.6	+1.2
G08A	Pilot Rock	85.29	38	IAmb	IAmb	08 35 41.1	
	comp=Z,19nm,0.9s						
CRAG	Craig	85.29	24	P	P	08 35 38.7	+0.6
	baz=222						
MXC	Moxie City	85.30	36	IAmb	IAmb	08 35 41.0	
	comp=Z,12nm,0.8s						
SKT	Skwentna	85.34	13	P	P	08 35 39.0	+0.8
	baz=205						
GLI	Glacier Island	85.34	15	P	P	08 35 38.3	+0.1
	baz=210						
J17K	VABM Dome	85.36	9	P	P	08 35 39.0	+0.8
	baz=198						
EYAK	Cordova Ski Ar	85.39	16	P	P	08 35 39.2	+0.8
	baz=211						
M22K	Willow	85.43	13	P	P	08 35 38.8	+0.3
	baz=207						
LYN	LuoYang	85.45	309	P	P	08 35 40.9	+1.6
LYN				pmax	pmax		
	comp=Z,21nm,0.6s						
KNK	Knik Glacier	85.49	14	P	P	08 35 39.4	+0.5
	baz=208						
PMR	Palmer	85.50	14	P	P	08 35 39.2	+0.3
	baz=208						
LTY	Liberty	85.51	35	IAmb	IAmb	08 35 41.5	
	comp=Z,15nm,1.2s						
E07A	Sunnyside	85.53	36	IAmb	IAmb	08 35 42.2	
	comp=Z,26nm,1.0s						
I17K	Unalakleet	85.61	8	P	P	08 35 39.8	+0.4
	baz=197						
HAWA	Hanford	85.61	37	IAmb	IAmb	08 35 42.6	
	comp=Z,22nm,0.8s						
SIT	Sitka	85.68	22	P	P	08 35 40.6	+0.8
	baz=220						
ANM	Nome	85.75	6	P	P	08 35 40.4	+0.4
	baz=192						
V35K	Ketchikan	85.77	25	P	P	08 35 41.4	+1.1
	baz=223						
U33K	Whale Pass	85.77	24	P	P	08 35 40.6	+0.3
	baz=222						
J18K	Innoko River	85.78	10	P	P	08 35 40.9	+0.6
	baz=201						
WAH2	Wahluke Slope	85.81	36	IAmb	IAmb	08 35 42.8	
	comp=Z,9.4nm,0.6s						
SML	Sawmill	85.87	14	P	P	08 35 41.1	+0.4
	baz=208						
CUT	Chulitna	85.98	13	P	P	08 35 41.5	+0.3
	baz=206,SNR=5.6						
L22K	Petersville	85.99	13		P	08 35 41.0	-0.3
L22K				IAmb	IAmb	08 35 41.7	
	comp=Z,22nm,1.0s						
M23K	Glacier View	85.99	14	P	P	08 35 42.0	+0.7
	baz=209						
BMO	Blue Mountains	85.99	39	IAmb	IAmb	08 35 44.0	
	comp=Z,10nm,0.8s						
BMRM	Bremner River	86.04	16	P	P	08 35 41.9	+0.4
	baz=212						
PPLA	Purkeypile	86.04	12	P	P	08 35 40.4	-1.3
	baz=205						
121A	Cookes Peak, D	86.05	53	IAmb	IAmb	08 35 45.8	
	comp=Z,18nm,1.4s						
MFID	Camas Ranch	86.07	41	IAmb	IAmb	08 35 44.8	
	comp=Z,14nm,0.9s						
K20K	Telida	86.12	11	P	P	08 35 42.0	+0.2
	baz=203						
SCM	Sheep Creek Mo	86.12	14	P	P	08 35 42.8	+0.8
	baz=209,SNR=5.2						
H16K	Elim	86.14	7	P	P	08 35 42.6	+0.7
	baz=195						
EPH	Ephrata	86.15	36	IAmb	IAmb	08 35 44.7	
	comp=Z,16nm,0.8s						
KLU	Klutina	86.16	15	P	P	08 35 42.0	-0.1
	baz=210						
ELIB	Princess Elisa	86.24	187	*d*P	P	08 35 42.7	0.0
	comp=Z,18nm,0.7s						
CRQE	Cirque	86.25	17	P	P	08 35 42.8	+0.2
	baz=213						
S32K	Killisnoo	86.26	22	P	P	08 35 42.6	0.0
	baz=221						
WRAK	Wrangell Islan	86.29	24	P	P	08 35 43.7	+1.0
	baz=223						
G15K	Niukluk	86.30	6	P	P	08 35 43.4	+0.8
	baz=194						
D08A	Wollman Farm,	86.35	36	IAmb	IAmb	08 35 45.9	
	comp=Z,24nm,1.0s						
PNL	Peninsula	86.41	19	P	P	08 35 44.4	+1.1
	baz=216						
J19K	Poorman	86.45	10	P	P	08 35 44.7	+1.3
	baz=202						
E09A	Wood Farm, Sta	86.46	37	IAmb	IAmb	08 35 46.1	
	comp=Z,25nm,1.1s						
TNA	Tin City	86.52	4	P	P	08 35 44.7	+1.1
	baz=190						
F14K	Arctic Creek	86.56	5	P	P	08 35 44.9	+1.0
	baz=192						
N25K	Chitina, Valde	86.58	16	IAmb	IAmb	08 35 45.2	
	comp=Z,24nm,0.9s						
N25K	Chitina, Valde	86.58	16	P	P	08 35 44.7	+0.5
	baz=212,SNR=5.4						
M24K	Tolsona, Glenn	86.63	15	P	P	08 35 44.6	+0.2
	baz=210						
EPT	El Paso	86.67	54	IAmb	IAmb	08 35 48.9	
	comp=Z,15nm,1.0s						
WAT6	Susitna Watana	86.68	14	P	P	08 35 45.2	+0.5
	baz=209,SNR=7.5						
H17K	Granite Mounta	86.72	8	P	P	08 35 44.9	+0.3
	baz=198						
WAT1	Susitna Watana	86.72	13	P	P	08 35 45.0	+0.3
	baz=208						
MCARA	McCarthy VSAT	86.80	16	P	P	08 35 46.0	+1.0
	baz=213						
J20K	Nowinta River	86.86	11	P	P	08 35 46.0	+0.7
	baz=203						
G16K	Koyuk River	86.86	7	P	P	08 35 46.3	+1.0
	baz=195						
KTH	Kantishna Hill	86.88	12	IAmb	IAmb	08 35 45.6	
	comp=Z,13nm,0.8s						
P29M	Windy Craggy	86.89	19	P	P	08 35 46.1	+0.5
	baz=218						
PLID	Pearl Lake	86.89	39	IAmb	IAmb	08 35 48.5	
	comp=Z,21nm,1.2s						
R32K	Eaglecrest	86.89	22	P	P	08 35 46.3	+0.8
	baz=221						
CTG	Chitna Glacier	86.91	17	P	P	08 35 46.2	+0.4
	baz=215						
TRF	Thorofare Moun	86.92	12	P	P	08 35 45.8	0.0
	baz=206,SNR=9.3						
CHUM	Lake Minchumin	86.92	11	P	P	08 35 46.2	+0.7
	baz=205						
LLLB	Lillooet	86.93	32	IAmb	IAmb	08 35 48.3	
	comp=Z,20nm,1.1s						
F15K	North Star Dit	86.94	6	P	P	08 35 46.2	+0.5
	baz=193						
GCSA	Galena City Sc	86.96	9	P	P	08 35 46.4	+0.7
	baz=200						
HLID	Hailey	87.02	41	IAmb	IAmb	08 35 49.6	
	comp=Z,13nm,0.9s						
O28M	Mount Upton	87.07	18	P	P	08 35 47.4	+0.7
	baz=216						
HVU	Hansel Valley	87.10	43	IAmb	IAmb	08 35 50.5	
	comp=Z,19nm,1.3s						
HARP	HAARP	87.12	15	P	P	08 35 47.2	+0.6
	baz=211						
H18K	Honhosa River	87.13	8	P	P	08 35 47.2	+0.6
	baz=199						
C09A	Chrisman Ranch	87.14	36	IAmb	IAmb	08 35 49.2	
	comp=Z,18nm,0.8s						
G17K	Kiwalik Mounta	87.17	7	P	P	08 35 47.5	+0.8
	baz=197						
O29M	Mount Kennedy	87.17	19	P	P	08 35 47.4	+0.4
	baz=217						
PLBC	Pleasant Camp	87.19	20	P	P	08 35 47.7	+0.8
	baz=219						
DHY	Denali Highway	87.20	14	P	P	08 35 47.4	+0.2
	baz=209						
SRU	San Rafael Swe	87.24	46	IAmb	IAmb	08 35 50.3	
	comp=Z,12nm,0.8s						
Y22A	Socorro	87.30	52	IAmb	IAmb	08 35 51.0	
	comp=Z,13nm,1.1s						
BPAW	Bear Paw Mtn.	87.36	12	P	P	08 35 48.1	+0.4
	baz=206						
I20K	Naaghedeneel	87.38	10	P	P	08 35 48.4	+0.8
	baz=203						
VHRN	Van Horn	87.39	56	IAmb	IAmb	08 35 51.8	
	comp=Z,16nm,1.1s						
TROLL	Troll, Antarti	87.40	180	⇑P	P	08 35 48.4	+0.3
MCK	McKinley	87.44	13	P	P	08 35 48.3	+0.2
	baz=208,SNR=10						
MNTX	Cornudas Mount	87.49	55	IAmb	IAmb	08 35 51.9	
	comp=Z,9.2nm,0.8s						
T35M	Bob Quinn	87.50	24	P	P	08 35 49.6	+1.1
	baz=224						
P30M	Million Dollar	87.52	19	P	P	08 35 50.5	+2.0
	baz=219						
SKAG	Skagway	87.53	21	P	P	08 35 50.3	+1.8
	baz=220						
PAX	Paxson	87.54	15	P	P	08 35 49.9	+1.2
	baz=211						
YUK8	Steele Glacier	87.61	18	P	P	08 35 50.4	+1.2
	baz=216,SNR=7.7						
TCUT	Toone Canyon	87.65	44	IAmb	IAmb	08 35 52.5	
	comp=Z,15nm,0.9s						
M26K	Nabesna, AK	87.66	16	P	P	08 35 50.5	+1.3
	baz=213						
P18A	Preston Nutter	87.68	46	IAmb	IAmb	08 35 52.6	
	comp=Z,14nm,1.2s						
SNAA	Sanae	87.69	179	⇑P	P	08 35 49.3	-0.1
SNAA	Sanae	87.69	179	P	P	08 35 49.2	-0.2
	comp=Z,1.9nm,0.5s,baz=200,slow=11,SNR=13						
	comp=Z,1.9nm,0.5s						
SNAA	Sanae	87.69	179		P	08 35 49.6	+0.2
PV05	Paradox Valley	87.71	48	IAmb	IAmb	08 35 52.9	
	comp=Z,9.2nm,1.0s						
YUK6	Outpost Mounta	87.74	18	P	P	08 35 50.8	+1.0
	baz=217						
H19K	Roundabout Mou	87.75	9	IAmb	IAmb	08 35 50.9	
	comp=Z,13nm,0.8s						
H19K	Roundabout Mou	87.75	9	P	P	08 35 50.5	+1.1
	baz=201,SNR=6.5						
BSUT	Blindstream Ca	87.78	45	IAmb	IAmb	08 35 53.9	
	comp=Z,29nm,1.4s						
G18K	Tagagawik	87.79	8	P	P	08 35 50.3	+0.6
	baz=199						
TX31	Lajitas Ar. Si	87.80	58	IAmb	IAmb	08 35 53.9	
	comp=Z,17nm,0.9s						
TXAR	Lajitas Array	87.80	58	P	P	08 35 53.0	+2.3
	comp=Z,10nm,0.8s,baz=218,slow=6.0,SNR=113						
TXAR				pP	pwP	08 38 03.1	0.0
	comp=Z,0.8nm,0.8s,baz=215,slow=4.1,SNR=5.2						
TXAR				PKKPbc	PKKPbc	08 53 34.0	-0.1
	comp=Z,0.3nm,0.6s,baz=122,slow=1.4,SNR=5.4						
	comp=Z,10nm,0.8s						
TXAR	Lajitas Array	87.80	58		P	08 35 52.8	+2.1
XAN	Xi'an	87.80	308	⇑P	P	08 35 51.8	+1.3
XAN				pmax	pmax		
	comp=Z,21nm,1.2s						
YUK3	Moose Creek	87.81	17	P	P	08 35 50.9	+0.8
	baz=215,SNR=14						
S34M	Telegraph Cree	87.83	23	IAmb	IAmb	08 35 52.7	
	comp=Z,20nm,0.9s						
S34M	Telegraph Cree	87.83	23	P	P	08 35 51.7	+1.7
	baz=224,SNR=6.7						
VNA3	Neumayer Olymp	87.85	176	⇓P	P	08 35 50.0	-0.1
PV10	Paradox Valley	87.89	48	IAmb	IAmb	08 35 53.0	
	comp=Z,15nm,1.0s						
PV19	Morning Glory	87.90	48	IAmb	IAmb	08 35 54.6	
	comp=Z,13nm,1.0s						
HYT	Haines Junctio	87.90	19	P	P	08 35 51.7	+1.3
	baz=218						
M27K	Edge Creek, AK	87.91	16	P	P	08 35 51.8	+1.4
	baz=214,SNR=5.8						
PV18	Skein Mesa, Pa	87.92	48	IAmb	IAmb	08 35 53.3	
	comp=Z,13nm,1.1s						
PV20	West Nyswonger	87.93	48	IAmb	IAmb	08 35 53.3	
	comp=Z,12nm,1.0s						
MENT	Mentasta	87.93	15	IAmb	IAmb	08 35 52.0	
	comp=Z,13nm,1.0s						
PV23	Carpenter Ridg	87.95	47	IAmb	IAmb	08 35 53.6	
	comp=Z,14nm,0.9s						
H20K	Anotleneega Mo	87.96	10	P	P	08 35 51.1	+0.7
	baz=202						
PV11	David Mesa, Pa	87.97	48	IAmb	IAmb	08 35 55.0	
	comp=Z,17nm,1.4s						
YUK4	Talbot Arm	87.98	18	P	P	08 35 52.6	+1.7
	baz=217						
F17K	Baldwin Pennin	88.00	7	P	P	08 35 51.6	+1.0
	baz=196						
PV12	Saucer Basin,	88.03	48	IAmb	IAmb	08 35 54.6	
	comp=Z,13nm,1.0s						
L26K	Log Cabin Wild	88.10	15	IAmb	IAmb	08 35 52.7	
	comp=Z,23nm,1.4s						
L26K	Log Cabin Wild	88.10	15	P	P	08 35 51.9	+0.7
	baz=213						
TASM	ASL Pad, Albuq	88.13	52	IAmb	IAmb	08 35 54.6	
	comp=Z,8.8nm,1.1s						
TASM	ASL Pad, Albuq	88.13	52	IAmb	IAmb	08 35 54.6	
	comp=Z,8.3nm,1.0s						
TASM	ASL Pad, Albuq	88.13	52	IAmb	IAmb	08 35 54.6	
	comp=Z,8.8nm,1.1s						
TASM	ASL Pad, Albuq	88.13	52	IAmb	IAmb	08 35 54.6	
	comp=Z,8.3nm,1.0s						
ANMO	Albuquerque	88.14	52		P	08 35 51.8	-0.4
ANMO				IAmb	IAmb	08 35 55.2	
	comp=Z,11nm,1.1s						
PV22	Blue Mesa, Par	88.14	47	IAmb	IAmb	08 35 54.5	
	comp=Z,9.3nm,1.1s						
I21K	Tanana	88.16	11	P	P	08 35 51.9	+0.6
	baz=205						
P32M	Atlin	88.16	21	P	P	08 35 51.9	+0.4
	baz=221						
NEA2	Nenana	88.18	12	IAmb	IAmb	08 35 52.9	
	comp=Z,20nm,1.3s						
NEA2	Nenana	88.18	12	P	P	08 35 52.3	+0.9
	baz=208						
K24K	Donnelly Dome	88.19	14	P	P	08 35 52.5	+0.9
	baz=211,SNR=7.2						
Q32M	Nakina River	88.19	22	P	P	08 35 52.8	+0.9
	baz=223						
BVCY	Beaver Creek	88.23	17	P	P	08 35 52.9	+1.1
	baz=215,SNR=7.3						
G19K	Purcell Mounta	88.24	9	IAmb	IAmb	08 35 53.1	
	comp=Z,16nm,0.9s						
G19K	Purcell Mounta	88.24	9	P	P	08 35 52.5	+0.8
	baz=200,SNR=9.1						
VNA2	Neumayer--Watz	88.29	177	⇑P	P	08 35 52.5	+0.4
	baz=173,slow=5.3						
O30N	Mendenhall	88.30	19	P	P	08 35 53.1	+0.9
	baz=219						
F18K	Selawik	88.34	7	P	P	08 35 52.4	+0.3
	baz=198						
RIDG	Independent Ri	88.35	14	P	P	08 35 53.2	+0.9
	baz=211						
DOT	Dot Lake	88.45	15	IAmb	IAmb	08 35 54.1	
	comp=Z,13nm,0.8s						
H21K	Melozitna Rive	88.45	10	P	P	08 35 53.4	+0.7
	baz=204						
HDA	Harding Lake	88.46	13	P	P	08 35 53.2	+0.4
	baz=210,SNR=12						
L27K	Beaver Creek,	88.51	16	IAmb	IAmb	08 35 54.7	
	comp=Z,7.8nm,0.9s						
L27K	Beaver Creek,	88.51	16	P	P	08 35 53.6	+0.5
	baz=214						
PECS	Pecos	88.51	56	IAmb	IAmb	08 35 56.4	
	comp=Z,11nm,1.3s						
VNA1	Neumayer--Stat	88.52	177	⇑P	P	08 35 53.7	+0.6
N30M	Aishikik Lake	88.53	19	P	P	08 35 53.4	+0.2
	baz=218						
E17K	Hotham Inlet	88.56	7	P	P	08 35 53.5	+0.4
	baz=196,SNR=7.7						
RDMU	Red Mountain	88.59	45	IAmb	IAmb	08 35 56.4	
	comp=Z,11nm,0.8s						
WHY	Whitehorse	88.59	20	P	P	08 35 54.1	+0.5
	baz=220						
I23K	Minto, Yukon-K	88.62	12	P	P	08 35 53.7	+0.3
	baz=207						
HILR	Hailar Array B	88.74	325	P	P	08 35 55.1	+0.6
	comp=Z,3.1nm,0.5s,baz=130,slow=5.3,SNR=10.0						
	comp=Z,3.1nm,0.5s						
SCRK	Sand Creek	88.75	15	IAmb	IAmb	08 35 56.9	
	comp=Z,8.8nm,0.8s						
SCRK	Sand Creek	88.75	15	P	P	08 35 54.5	+0.2
	baz=212,SNR=5.4						
ILAR	Eielson Array	88.79	13	P	P	08 35 54.2	-0.1
	comp=Z,6.1nm,0.5s,baz=220,slow=5.4,SNR=53						
ILAR				pP	pP	08 38 06.0	+1.4
	comp=Z,1.8nm,1.0s,baz=221,slow=6.4,SNR=6.3						
ILAR				PKiKP	PKiKP	08 40 48.8	-0.6
	comp=Z,0.3nm,0.5s,baz=274,slow=1.9,SNR=5.5						
	comp=Z,6.1nm,0.5s						
ILAR	Eielson Array	88.79	13		P	08 35 54.0	-0.3
F19K	Shaleruckik Mo	88.80	8	IAmb	IAmb	08 35 55.5	
	comp=Z,9.9nm,0.8s						
F19K	Shaleruckik Mo	88.80	8	P	P	08 35 54.7	+0.4
	baz=200						
M29M	Somme Creek	88.91	17	P	P	08 35 55.7	+0.6
	baz=217,SNR=8.4						
H22K	Ishtalitna Cre	88.92	11	P	P	08 35 55.7	+0.8
	baz=205						
P33M	Teslin, Yukon	88.93	21	P	P	08 35 55.6	+0.5
	baz=222						
N31M	Braeburn, Yuko	88.94	19	P	P	08 35 55.8	+0.7
	baz=220						
R33M	Jennings River	88.97	22	P	P	08 35 56.0	+0.6
	baz=224						
POKR	Poker Plat Res	88.98	13	P	P	08 35 54.4	-0.8
	baz=209						
J25K	Salcha River,	88.98	14	P	P	08 35 55.5	+0.2
	baz=211						
E18K	Tukpahlearik C	89.02	7	IAmb	IAmb	08 35 56.7	
	comp=Z,14nm,0.9s						
E18K	Tukpahlearik C	89.02	7	P	P	08 35 56.1	+0.9
	baz=197,SNR=7.2						
D17K	Noatak River	89.03	6	P	P	08 35 56.4	+1.1
	baz=195,SNR=6.8						
DLMT	Dillon	89.07	40	IAmb	IAmb	08 35 58.8	
	comp=Z,7.4nm,0.8s						
HHC	Hu-ho-hao-te	89.11	315	*e*P	P	08 35 57.8	+1.3
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,92nm,5.6s						
G21K	Allakaket	89.13	10	P	P	08 35 56.1	+0.2
	baz=204						
H23K	Yukon River	89.19	12	P	P	08 35 56.7	+0.5
	baz=207						
SAND	Sanderson	89.28	58	IAmb	IAmb	08 36 00.1	
	comp=Z,7.1nm,0.8s						
F20K	Avaraart Lake	89.29	9	IAmb	IAmb	08 35 57.9	
	comp=Z,13nm,0.9s						
F20K	Avaraart Lake	89.29	9	P	P	08 35 57.3	+0.8
	baz=201,SNR=9.2						
J26L	Joseph Creek	89.29	14	P	P	08 35 57.8	+1.1
	baz=213						
MNHN	Monahans	89.36	56	IAmb	IAmb	08 35 59.9	
	comp=Z,11nm,1.2s						
RDOG	Red Dog Mine	89.39	6	P	P	08 35 57.8	+0.8
	baz=195						
C16K	Lisburne Hills	89.39	5	IAmb	IAmb	08 35 58.3	
	comp=Z,10nm,1.1s						
C16K	Lisburne Hills	89.39	5	P	P	08 35 57.5	+0.5
	baz=192						
LOHW	Long Hollow	89.41	42	IAmb	IAmb	08 36 00.3	
	comp=Z,7.3nm,0.7s						
E19K	Redstone River	89.46	8	P	P	08 35 57.9	+0.6
	baz=200,SNR=15						
M30M	Minto, Yukon	89.49	18	P	P	08 35 58.8	+1.1
	baz=219,SNR=9.2						
PLCA	Paso Flores	89.53	134	P	P	08 36 00.3	+1.8
	comp=Z,4.1nm,0.8s,baz=213,slow=5.1,SNR=8.6						
	comp=Z,4.1nm,0.8s						
L29M	L29M	89.53	17	P	P	08 35 59.3	+1.4
	baz=218						
N32M	Quiet Lake	89.54	20	P	P	08 35 58.7	+0.8
	baz=222						
CM31	Chiang Mai Arr	89.59	290	P	P	08 35 59.6	+0.5
CMAR	Chiang Mai Arr	89.59	290	P	P	08 36 00.2	+1.1
	comp=Z,4.3nm,0.8s,baz=118,slow=3.2,SNR=24						
	comp=Z,4.3nm,0.8s						
CMAR	Chiang Mai Arr	89.59	290	P	P	08 35 59.7	+0.6
BW06	Boulder Array	89.66	43	IAmb	IAmb	08 36 01.0	
	comp=Z,11nm,0.8s						
PD31	Pinedale Array	89.66	43	IAmb	IAmb	08 36 01.0	
	comp=Z,10nm,0.8s						
PDAR	Pinedale Array	89.66	43	P	P	08 36 00.0	+0.8
	comp=Z,7.6nm,0.7s,baz=212,slow=3.6,SNR=79						
PDAR				pP	pwP	08 38 12.1	0.0
	comp=Z,0.2nm,0.4s,baz=276,slow=7.8,SNR=1.5						
	comp=Z,7.6nm,0.7s						
PDAR	Pinedale Array	89.66	43		P	08 35 59.3	+0.1
YHL	Hebgen Lake	89.67	41	IAmb	IAmb	08 36 02.4	
	comp=Z,7.4nm,0.9s						
CHTO	Chiang Mai	89.73	290	P	P	08 36 00.7	+1.0
CHTO				IAmb	IAmb	08 36 01.5	
	comp=Z,12nm,1.1s						
CHTO	Chiang Mai	89.73	290	P	P	08 36 00.8	+1.1
	comp=Z,8.4nm,0.9s						
CHTO	Chiang Mai	89.73	290	P	P	08 35 59.6	-0.1
C17K	DeLong Mountai	89.77	6	P	P	08 35 59.7	+0.9
	baz=194						
BOZ	Bozeman (W)	89.78	40	IAmb	IAmb	08 36 02.1	
	comp=Z,6.4nm,0.9s						
F21K	Alatna River	89.78	10	P	P	08 35 59.0	+0.1
	baz=204						
H17A	Grant Village	89.82	42	IAmb	IAmb	08 36 03.5	
	comp=Z,10nm,1.1s						
G23K	Bananza Creek	89.89	11	P	P	08 36 00.1	+0.7
	baz=207						
M31M	Drury Creek, Y	89.92	19	P	P	08 36 00.1	+0.5
	baz=221						
DAWY	Dawson	89.96	16	P	P	08 36 00.3	+0.5
	baz=216,SNR=9.2						
I26K	Coal Creek Min	90.07	14	P	P	08 36 00.7	+0.5
	baz=213						
HAYD	Hayden	90.12	46	IAmb	IAmb	08 36 03.7	
	comp=Z,8.2nm,0.9s						
C18K	Utukok River	90.13	6	IAmb	IAmb	08 36 01.1	
	comp=Z,8.3nm,1.1s						
C18K	Utukok River	90.13	6	P	P	08 36 01.3	+0.8
	baz=196						
WTLY	Watson Lake, Y	90.25	23	P	P	08 36 02.6	+1.4
	baz=226						
K29M	Barlow Dome	90.28	17	P	P	08 36 01.7	+0.3
	baz=218						
COLD	Coldfoot	90.33	11	IAmb	IAmb	08 36 03.2	
	comp=Z,13nm,1.0s						
COLD	Coldfoot	90.33	11	P	P	08 36 02.5	+1.2
	baz=206,SNR=8.4						
D19K	Kuna River	90.33	7	P	P	08 36 02.4	+1.0
	baz=199						
E20K	Nigu River	90.35	8	P	P	08 36 01.6	0.0
	baz=201						
G24K	Hadweenzic Riv	90.36	12	P	P	08 36 01.8	+0.3
	baz=209						
OZNA	Ozona	90.46	57	IAmb	IAmb	08 36 05.1	
	comp=Z,6.7nm,0.7s						
YNE	Yellowstone No	90.47	41	IAmb	IAmb	08 36 05.6	
	comp=Z,6.4nm,0.9s						

MAYO	Mayo, Yukon	90.55	18	P	P	08 36 03.1	+0.6
	baz=220						
J29N	Klondike Camp	90.58	16	IAmb	IAmb	08 36 04.3	
	comp=Z,7.9nm,0.7s						
J29N	Klondike Camp	90.58	16	P	P	08 36 03.2	+0.5
	baz=217,SNR=6.6						
T25A	Trinidad	90.59	50	IAmb	IAmb	08 36 05.5	
	comp=Z,6.8nm,1.0s						
I27K	Kandik River	90.67	15	P	P	08 36 03.8	+0.7
	baz=214						
G25K	Bearman Lake	90.69	12	P	P	08 36 03.3	+0.4
	baz=210						
D20K	Etivluk River	90.73	8	P	P	08 36 03.7	+0.5
	baz=201						
TOAD	Toad River Com	90.73	25	P	P	08 36 03.6	+0.1
	baz=229,SNR=11						
C19K	Lookout Ridge	90.74	7	P	P	08 36 03.9	+0.6
	baz=198						
B18K	Kokolik River	90.76	6	P	P	08 36 04.0	+0.7
	baz=196						
LIRD	Liard River Hi	90.77	24	P	P	08 36 04.0	+0.5
	baz=228						
833A	Chaparral WMA,	90.81	60	IAmb	IAmb	08 36 06.8	
	comp=Z,9.5nm,0.8s						
E21K	Killik River	90.83	9	P	P	08 36 04.4	+0.7
	baz=203						
E22K	Anaktuvuk Pass	90.88	10	P	P	08 36 04.2	+0.2
	baz=205,SNR=8.4						
I28M	Miner Creek	90.95	15	P	P	08 36 04.9	+0.5
	baz=216						
F24K	Squaw Lake	91.00	11	P	P	08 36 05.4	+0.9
	baz=209						
POST	Post	91.04	55	IAmb	IAmb	08 36 07.1	
	comp=Z,8.6nm,0.8s						
E23K	Chandalar	91.17	11	P	P	08 36 06.0	+0.6
	baz=207						
J30M	Hart River	91.18	17	P	P	08 36 06.4	+0.8
	baz=219						
H27K	Steamboat Moun	91.21	14	P	P	08 36 06.7	+1.2
	baz=214						
I29M	Ogilvie Camp,	91.28	16	IAmb	IAmb	08 36 08.2	
	comp=Z,16nm,1.4s						
I29M	Ogilvie Camp,	91.28	16	P	P	08 36 06.7	+0.9
	baz=217						
G26K	Porcupine Rive	91.32	13	IAmb	IAmb	08 36 08.6	
	comp=Z,8.1nm,0.9s						
G26K	Porcupine Rive	91.32	13	P	P	08 36 06.7	+0.8
	baz=212,SNR=6.2						
C21K	Knifeblade Rid	91.38	8	P	P	08 36 07.4	+1.2
	baz=202,SNR=5.4						
E24K	Your Creek	91.38	11	P	P	08 36 07.8	+1.5
	baz=208						
D22K	Ayikyak River	91.43	9	P	P	08 36 07.9	+1.4
	baz=204						
F25K	Christian Rive	91.49	12	P	P	08 36 08.0	+1.2
	baz=211						
A19K	Wainwright	91.65	6	P	P	08 36 08.7	+1.4
	baz=196						
G27K	Doyon Strip	91.66	14	P	P	08 36 08.7	+1.1
	baz=214						
I30M	Mount Dempster	91.68	16	P	P	08 36 08.3	+0.6
	baz=219						
TOLK	Toolik Lake Re	91.70	10	P	P	08 36 08.7	+1.0
	baz=207,SNR=5.5						
D23K	Nanushuk River	91.81	10	P	P	08 36 09.1	+1.0
	baz=206						
B21K	Ikpikpuk River	91.84	8	P	P	08 36 09.1	+0.9
	baz=202						
F26K	Sheenjek River	91.88	13	P	P	08 36 09.5	+1.0
	baz=212						
B20K	Meade River	91.88	7	IAmb	IAmb	08 36 09.3	
	comp=Z,8.4nm,0.8s						
B20K	Meade River	91.88	7	P	P	08 36 08.8	+0.4
	baz=200						
H29M	Whitestone	91.95	15	P	P	08 36 09.4	+0.5
	baz=217						
E25K	Arctic Village	91.96	12	P	P	08 36 09.3	+0.4
	baz=211						
D24K	Happy Valley	92.28	10	P	P	08 36 11.0	+0.7
	baz=208						
EPYK	Eagle Plains	92.48	16	P	P	08 36 11.4	0.0
	baz=219						
G29M	Pine Creek	92.59	15	P	P	08 36 13.0	+1.2
	baz=218						
C23K	Itkillik River	92.61	9	P	P	08 36 12.3	+0.6
	baz=206						
B22K	Teshekpuk Lake	92.66	8	P	P	08 36 12.6	+0.6
	baz=204						
H31M	Peel River	92.67	17	P	P	08 36 13.0	+0.8
	baz=221						
F28M	Old Crow	92.72	14	P	P	08 36 13.0	+0.6
	baz=216						
EDM	Edmonton	92.75	33	IAmb	IAmb	08 36 14.9	
	comp=Z,5.2nm,0.8s						
C24K	Franklin Bluff	92.81	10	P	P	08 36 13.2	+0.6
	baz=208						
E27K	Coleen River	92.82	13	P	P	08 36 13.4	+0.6
	baz=214						
D25K	Kavik River	92.85	11	P	P	08 36 13.4	+0.4
	baz=210						
A22K	Sinclair Lake	93.08	8	P	P	08 36 14.7	+0.8
	baz=202						
G30M	tAoh Zraii Nji	93.09	15	P	P	08 36 14.6	+0.5
	baz=219						
A21K	Barrow	93.18	7	P	P	08 36 15.8	+1.5
	baz=201						
G31M	Satah River	93.54	16	P	P	08 36 16.6	+0.5
	baz=221,SNR=7.9						
LAO	LASA Array	93.60	41	IAmb	IAmb	08 36 19.7	
	comp=Z,6.6nm,0.9s						
C27K	Jago River	93.60	12	IAmb	IAmb	08 36 18.3	
	comp=Z,13nm,1.4s						
C27K	Jago River	93.60	12	P	P	08 36 16.8	+0.4
	baz=212						
E28M	Babbage River	93.60	13	IAmb	IAmb	08 36 17.9	
	comp=Z,9.0nm,1.1s						
E28M	Babbage River	93.60	13	P	P	08 36 16.7	+0.4
	baz=216						
C26K	Camden Bay	93.63	11	P	P	08 36 17.4	+1.0
	baz=211						
F30M	Barrier River	93.68	15	P	P	08 36 17.4	+0.7
	baz=220						
E29M	Blow River	93.79	14	P	P	08 36 17.0	-0.2
	baz=218						
D27M	Malcolm River	93.82	13	P	P	08 36 17.6	+0.1
	baz=215						
RSSD	Black Hills	93.86	44		P	08 36 18.1	-0.3
RSSD				IAmb	IAmb	08 36 19.9	
	comp=Z,6.6nm,1.0s						
F31M	Tsiigehtchic	94.06	16	P	P	08 36 18.4	-0.1
	baz=222,SNR=7.0						
D28M	Stokes Point	94.36	13	P	P	08 36 19.8	+0.1
	baz=217						
INK	Inuvik	94.77	15	P	P	08 36 21.8	+0.2
	baz=222						
YKA	Yellowknife Ar	97.09	25	P	Pdif	08 36 32.0	-0.2
	comp=Z,0.8nm,0.8s,baz=252,slow=5.1,SNR=19						
YKA				pP	pwP	08 38 45.2	-1.2
	comp=Z,0.4nm,1.1s,baz=236,slow=4.0,SNR=3.3						
YKA				PKiKP	PKiKP	08 41 03.2	-0.5
	comp=Z,0.1nm,0.5s,baz=253,slow=1.5,SNR=3.7						
YKA				PKKPbc	PKKPbc	08 53 08.1	-3.2
	comp=Z,0.1nm,0.4s,baz=52,slow=2.5,SNR=3.9						
	comp=Z,0.8nm,0.8s						
C36M	Paulatuk	97.96	17	P	Pdif	08 36 35.5	-0.4
	baz=230						
A36M	Sachs Harbour	99.37	15	P	Pdif	08 36 42.2	+0.1
	baz=230						
ZALV	Zalesovo Beam	110.33	321	PKiKP	PKiKP	08 41 27.4	-0.9
	comp=Z,2.4nm,0.6s,baz=129,slow=0.1,SNR=12						
MKAR	Makanchi Array	110.94	313	PKiKP	PKiKP	08 41 28.9	-0.8
	comp=Z,1.9nm,0.6s,baz=79,slow=1.2,SNR=18						
MKAR				PKKPbc	PKKPbc	08 52 29.9	0.0
	comp=Z,0.8nm,0.7s,baz=298,slow=3.1,SNR=6.9						
KURBB	Kurchatov Arra	113.83	317	PKiKP	PKiKP	08 41 34.2	-0.9
	comp=Z,2.0nm,0.5s,baz=100,slow=1.8,SNR=14						
BVAR	Borovoye Array	118.90	320	PKP	PKPdf	08 41 44.2	-0.6
	comp=Z,8.4nm,0.4s,baz=104,slow=1.0,SNR=42						
KKAR	Karatay Array	118.93	309		PKPdf	08 41 44.7	-0.5
BORK	Borovoye	118.94	320		PKPdf	08 41 44.5	-0.3
SPITS	Spitsbergen Ar	122.15	356	PKP	PKPdf	08 41 49.7	-0.8
	comp=Z,5.4nm,0.6s,baz=94,slow=3.7,SNR=14						
ARTI	Arti	125.20	325		PKPdf	08 41 56.9	+0.1
BOSA	Boshof	125.66	206	PKP	PKPdf	08 41 58.0	-0.8
	comp=Z,1.9nm,0.8s,baz=182,slow=12,SNR=3.7						
ABKAR	Akbulak array	125.86	316		PKPdf	08 41 58.0	-0.3
ARCES	ARCESS Array B	129.12	349	PKP	PKPdf	08 42 03.7	-0.2
	comp=Z,5.9nm,0.5s,baz=17,slow=1.2,SNR=38						
FINES	FINESS Array B	135.90	343	PKhKP	PKPpre	08 42 06.0	
	comp=Z,0.9nm,0.5s,baz=34,slow=2.7,SNR=6.1						
FINES				PKP	PKPdf	08 42 15.1	-1.7
	comp=Z,3.0nm,0.5s,baz=52,slow=2.5,SNR=7.3						
FINES				SKPbc	SKPbc	08 44 53.8	+1.3
	comp=Z,4.1nm,0.8s,baz=58,slow=4.7,SNR=11						
NB2	NORSAR Subarra	139.23	353	PKP	PKPpre	08 42 15.0	
	comp=Z,1.2nm,0.6s,baz=16,slow=3.2						
NB2				pPKP	SKPbc	08 45 03.5	+1.5
	comp=Z,0.6nm,0.6s,baz=347,slow=2.5						
NOA	NORSAR Array B	139.23	353	PKhKP	PKPpre	08 42 14.5	
	comp=Z,1.8nm,0.6s,baz=15,slow=4.6,SNR=14						
NOA				PKP	PKPdf	08 42 23.1	+0.1
	comp=Z,0.6nm,0.5s,baz=46,slow=2.3,SNR=4.2						
NOA				SKPbc	SKPbc	08 45 02.5	+0.5
	comp=Z,1.1nm,0.8s,baz=14,slow=4.4,SNR=4.8						
HFS	Hagfors	139.76	350	PKhKP	PKPpre	08 42 16.5	
	comp=Z,4.3nm,0.3s,baz=62,slow=3.5,SNR=74						
LODK	Lodwar	142.60	247		PKPdf	08 42 28.9	-1.6
SUW	Suwalki	142.91	339	ePKP	PKPdf	08 42 27.7	-2.0
AKASG	Malin Array Be	142.97	330	PKP	PKPdf	08 42 27.6	-2.4
	comp=Z,25nm,0.4s,baz=44,slow=4.2,SNR=130						
KIEV	Kiev	142.99	330	⇑P	PKPdf	08 42 27.1	-2.8
MCD	Coleburn Disti	143.15	4	eP	PKPab	08 42 27.8	-0.3
KPL	Plockton	143.19	6	eP	PKPab	08 42 28.0	-0.3
DRUM	Mains of Drumt	143.86	4	eP	PKPbc	08 42 30.2	-0.5
MBAR	Mbarara	144.17	237		PKPab	08 42 33.7	+0.1
INVG	Invergeldie, C	144.24	5	eP	PKPbc	08 42 31.7	-0.2
LAWE	Loch Awe, Argy	144.27	6	eP	PKPbc	08 42 31.6	-0.4
SORM	Soroca	145.13	328	⇓P	PKPbc	08 42 34.4	-0.5
EKA	Eskdalemuir Ar	145.39	4	PKPbc	PKPbc	08 42 34.8	-0.6
	comp=Z,10.0nm,0.7s,baz=350,slow=3.1,SNR=19						
ESK	Eskdalemuir	145.40	5	eP	PKPbc	08 42 35.2	-0.2
BEL	Belsk	145.53	339	ePKP	PKPab	08 42 36.8	-0.7
EDMD	Edmundbyers	145.97	3	eP	PKPbc	08 42 36.9	-0.2
BSEG	Bad Segeberg	146.24	350	ePKPbc	PKPbc	08 42 38.4	+0.6
	baz=18,slow=2.4						
ILTH	Belurgan, Co L	146.35	8	eP	PKPbc	08 42 38.2	+0.1
GDLE	Glaisdale, N Y	146.43	2	eP	PKPbc	08 42 38.5	+0.3
WIM	Isle of Man	146.43	6	eP	PKPbc	08 42 38.7	+0.4
IGLA	Glengowla, Co	146.46	12	eP	PKPbc	08 42 38.6	+0.2
BR131	Keskin Array S	146.56	311		PKPbc	08 42 39.2	-0.1
BRTR	Keskin Array B	146.56	311	PKPbc	PKPbc	08 42 39.4	0.0
	comp=Z,7.7nm,0.5s,baz=139,slow=4.7,SNR=36						
BRTR	Keskin Array B	146.56	311		PKPbc	08 42 39.2	-0.1
TLCR		146.78	323	⇓P	PKPbc	08 42 38.6	-0.9
GIRR	Girov	146.85	328	⇑P	PKPbc	08 42 40.0	+0.3
HPK	Haverah Park	146.86	3	eP	PKPbc	08 42 39.5	0.0
RUE	Ruedersdorf	146.96	346	ePKPbc	PKPbc	08 42 40.2	+0.4
	baz=18,slow=2.4						
BURAR	Bucovina Array	147.01	330	⇓P	PKPbc	08 42 41.1	+0.8
TESR	Tescani	147.08	327	⇑P	PKPbc	08 42 40.1	-0.2
ANTO	Ankara	147.09	312		PKPbc	08 42 41.2	+0.5
ANTO	Ankara	147.09	312	⇑P	PKPbc	08 42 40.6	0.0
CFR	Carcaliu	147.16	324	⇓P	PKPbc	08 42 40.3	-0.2
COSR	Cosmesti PH	147.17	326	⇑P	PKiKP	08 42 41.8	-0.4
TPGR	Topolog	147.20	323	⇓P	PKPbc	08 42 39.8	-0.9
OJC	Ojcow	147.22	338	ePKP	PKPbc	08 42 40.8	+0.3
PANC	Panciu	147.25	326	⇓P	PKPbc	08 42 41.2	+0.5
WLF1	Llynfaes	147.31	6	eP	PKPbc	08 42 39.7	-0.9
ONER	Baraj Valea Uz	147.33	327	⇓P	PKiKP	08 42 41.8	-0.7
STHS	Stebnicka Huta	147.35	336	ePKP	PKPbc	08 42 40.7	-0.2
STHS				e		08 42 45.5	
MMAI	Mount Meron Ar	147.39	299	PKPbc	PKiKP	08 42 42.6	-0.6
	comp=Z,13nm,0.5s,baz=76,slow=4.4,SNR=27						
MMAI				SKP		08 45 04.5	
	comp=Z,9.3nm,0.9s,baz=238,slow=2.7,SNR=4.6						
TIRR	Tirgusor	147.45	323	⇑P	PKPbc	08 42 41.4	+0.1
VRI	Vrincioaia	147.47	326	⇓P	PKPbc	08 42 41.2	-0.2
PLOR	Plostina	147.52	326	⇑P	PKPbc	08 42 41.2	-0.3
TLBR	Topalu	147.61	323	⇓P	PKPbc	08 42 41.6	0.0
FLTG	Flechtingen	147.62	349	ePKPbc	PKPbc	08 42 41.8	+0.3
	baz=18,slow=2.4						
FLTG				ePKPab	PKPab	08 42 46.1	+0.2
	baz=18,slow=2.4						
NIE	Niedzica	147.70	337	ePKP	PKiKP	08 42 42.7	-0.6
MANR	Mangalia	147.74	322	⇓P	PKPbc	08 42 42.1	+0.1
COVR	Voineasa-Covas	147.76	326	⇑P	PKPbc	08 42 40.3	-1.9
KSP	Ksiaz	147.81	342	ePKP	PKPbc	08 42 42.7	+0.7
FOEL	Foel Wylfa	147.81	5	eP	PKPbc	08 42 42.3	+0.3
BOSR	Bodos	147.88	327	⇑P	PKPbc	08 42 43.1	+0.7
ASSE	Asse, Remlinge	147.92	349	ePKPbc	PKPbc	08 42 42.5	+0.3
	baz=18,slow=2.4						
ASSE				ePKPab	PKPab	08 42 47.4	+0.4
	baz=18,slow=2.4						
NEHR	Nehoiu	147.99	326	⇑P	PKPbc	08 42 42.8	+0.1
ISR	Istrita	148.06	325	⇑P	PKPbc	08 42 43.1	+0.2
OSTC	Ostas	148.08	342	⇑ePKP	PKiKP	08 42 43.9	-0.1
DOPR	Dopca	148.09	327	⇑P	PKiKP	08 42 43.7	-0.5
OKC	Ostrava-Krasne	148.11	339	⇑ePKP	PKPbc	08 42 42.8	0.0
MLR	Muntele Rosu	148.13	326		PKPbc	08 42 42.9	-0.3
MLR	Muntele Rosu	148.13	326	⇑P	PKPbc	08 42 43.2	0.0
STEB	Steborice	148.15	340	⇑ePKP	PKiKP	08 42 43.6	-0.5
STEB				⇑ePKP	PKPab	08 42 48.0	-0.2
UPC	Upice	148.19	342	⇑ePKP	PKiKP	08 42 43.9	-0.3
CLL	Collm	148.23	346	ePKPbc	PKiKP	08 42 43.7	-0.5
	baz=18,slow=2.4						
CLL	Collm	148.23	346	ePKPdf	PKPdf	08 42 39.0	+0.2
	comp=Z,5.0nm,1.1s						
CLL				⇓iPKPbc	PKPbc	08 42 43.4	+0.4
	comp=Z,31nm,0.7s						
CLL				i PKPab	PKPab	08 42 48.6	+0.2
	comp=Z,17nm,0.7s						
CLL				i pPKPab	pPKPab	08 45 05.9	+4.1
	comp=Z,9.0nm,0.9s						
LANS	Liptovska Anna	148.23	337	ePKP	PKiKP	08 42 44.6	+0.2
LANS				e		08 42 50.1	
DPC	Dobruska-Polom	148.24	342	⇑ePKP	PKiKP	08 42 44.1	-0.2
DPC				⇑ePKP	PKPab	08 42 49.1	+0.5
CLZ	Clausthal	148.25	349	ePKPbc	PKPbc	08 42 43.3	+0.1
	baz=18,slow=2.4						
CLZ				ePKPab	PKPab	08 42 49.5	+0.9
	baz=18,slow=2.4						
KRLC	Kraliky	148.34	341	⇑ePKP	PKiKP	08 42 44.3	-0.3
MORC	Moravsky Berou	148.36	340	⇓P	PKPbc	08 42 44.0	+0.5
MORC	Moravsky Berou	148.36	340	ePKP	PKPbc	08 42 43.7	+0.2
BRG	Berggiesshubel	148.41	345	ePKPbc	PKPbc	08 42 43.9	+0.4
	baz=18,slow=2.4						
CJR	Cluj-Napoca	148.43	330	⇓P	PKPbc	08 42 44.1	+0.3
NEUB	Neuenburg	148.59	347	ePKPbc	PKPbc	08 42 44.4	+0.5
	baz=18,slow=2.4						
GTTG	Gottingen	148.60	350	ePKPbc	PKPbc	08 42 44.2	+0.3
	baz=18,slow=2.4						
GTTG				ePKPab	PKPab	08 42 50.1	+0.2
	baz=18,slow=2.4						
MAUC	Maruska	148.62	339	⇑ePKP	PKiKP	08 42 45.2	0.0
MARR	Marisel-Cluj	148.68	330	⇓P	PKPbc	08 42 43.9	-0.6
HSKC	Hora Svate Kat	148.78	345	⇑ePKP	PKiKP	08 42 45.1	-0.3
DRGR		148.78	331	⇓P	PKPbc	08 42 44.3	-0.3
ARR	Arges	148.89	327	⇓P	PKiKP	08 42 45.8	-0.1
PRU	Pruhonice	149.06	343	⇑ePKP	PKiKP	08 42 45.8	-0.2
VRAC	Vranov	149.07	340	ePKP	PKPbc	08 42 45.5	+0.3
PSZ	Piszkesteto	149.09	335		PKPbc	08 42 45.6	+0.2
PSZ	Piszkesteto	149.09	335	⇓P	PKPbc	08 42 45.6	+0.2
BUG	Bochum--Univer	149.09	353	ePKPbc	PKiKP	08 42 45.7	-0.3
	baz=18,slow=2.4						
BUG				ePKPab	PKPab	08 42 52.7	+0.7
	baz=18,slow=2.4						
JAVC	Velka Javorina	149.11	339	ePKP	PKiKP	08 42 46.8	+0.6
MOX	Moxa	149.15	347	ePKPbc	PKPbc	08 42 45.7	+0.4
	baz=18,slow=2.4						
KASTN	Kahler Asten	149.18	351	ePKPbc	PKPbc	08 42 45.9	+0.4
	baz=18,slow=2.4						
TANN	Tannenbergstha	149.19	346	ePKPbc	PKiKP	08 42 46.3	-0.1
	baz=18,slow=2.4						
HUMR	Humele	149.29	326	⇓P	PKPbc	08 42 45.6	-0.2
KRUC	Moravsky	149.35	340	ePKP	PKPbc	08 42 46.0	+0.1
TREC	Trest	149.42	342	⇑ePKP	PKiKP	08 42 46.7	-0.1
SIRR	Siria	149.65	331	⇓P	PKiKP	08 42 47.1	-0.3
ZVC	Zvikov	149.66	343	⇑ePKP	PKiKP	08 42 47.1	-0.1
MODS	Modra-Piesok	149.66	339	ePKP	PKiKP	08 42 47.7	+0.4
MODS				e		08 42 55.9	
MANZ	Manzenberg	149.67	346	ePKPbc	PKiKP	08 42 47.2	-0.1
	baz=18,slow=2.4						
ROTZ	Rotzenmuhle	149.85	346	ePKPbc	PKiKP	08 42 47.5	-0.2
	baz=18,slow=2.4						
UCC	Uccle	150.00	356	dPKP	PKiKP	08 42 47.7	-0.1
MEM	Membach	150.05	354	dPKP	PKiKP	08 42 48.0	0.0
BTNL	Ternell	150.06	354	dPKP	PKiKP	08 42 48.1	0.0
KHC	Kasperske Hory	150.10	344	⇑ePKP	PKiKP	08 42 48.3	+0.1
KHC				ex	x	08 42 57.0	
BSTI	Sart Tilman	150.12	355	dPKP	PKiKP	08 42 48.3	+0.1
TNS	Taunus Mts	150.13	351	ePKPbc	PKiKP	08 42 48.5	+0.2
	baz=18,slow=2.4						
TNS				ePKPab	PKPab	08 42 57.1	+0.7
	baz=18,slow=2.4						
GRF	Grafenberg Arr	150.14	347	ePKPbc	PKiKP	08 42 48.3	0.0
	baz=18,slow=2.4						
GRF				ePKPab	PKPab	08 42 57.3	+0.8
	baz=18,slow=2.4						
CKRC	Cesky Krumlov	150.19	343	⇑ePKP	PKiKP	08 42 48.6	+0.2
WET	Wettzell	150.27	345	ePKPbc	PKPbc	08 42 48.1	+0.1
	baz=18,slow=2.4						
WET				ePKPab	PKPab	08 42 58.1	+1.0
	baz=18,slow=2.4						
BCLA	Clavier	150.30	355	dPKP	PKPbc	08 42 48.2	+0.2
BCLA				dPKPab	PKPab	08 42 57.2	+0.1
GEC2	GERESS Array S	150.33	343	ePKPbc	PKiKP	08 42 48.6	-0.1
	baz=18,slow=2.4						
GERES	GERESS Array B	150.33	343	PKPbc	PKiKP	08 42 48.7	-0.1
	comp=Z,9.0nm,0.8s,baz=23,slow=4.4,SNR=18						
HERR	Herculane	150.34	329	⇓P	PKPbc	08 42 48.1	-0.2
BGES	Gesves	150.36	355	dPKPab	PKPab	08 42 57.0	-0.3
BMRD	Maredsous	150.46	355	dPKP	PKiKP	08 42 48.9	+0.1
CONA	Conrad Observa	150.52	340	i PKP	PKPbc	08 42 48.9	+0.2
	comp=Z,21nm,0.7s,SNR=9.7						
RCHB	Rochefort	150.57	355	dPKP	PKiKP	08 42 49.0	-0.1
RONA	Rosalia, Austr	150.57	339	i PKP	PKiKP	08 42 49.2	0.0
	comp=Z,30nm,0.6s,SNR=8.4						
DOU	Dourbes	150.68	356	dPKP	PKiKP	08 42 49.3	0.0
MDVR	Moldovita	150.75	329	⇓P	PKPbc	08 42 49.4	+0.1
MORH	Mrgy, Hungar	150.97	335	⇑P	PKPbc	08 42 49.7	0.0
WLF	Walferdange	150.97	353	ePKPbc	PKiKP	08 42 50.7	+0.7
	baz=18,slow=2.4						
WLF	Walferdange	150.97	353	dPKP	PKiKP	08 42 50.4	+0.4
MOA	Molln	151.08	342	ePKP	PKiKP	08 42 50.2	-0.1
	comp=Z,5.8nm,0.5s						
BIOA	Bad Ischl, Aus	151.40	342	ePKP	PKPbc	08 42 50.7	0.0
	comp=Z,4.6nm,0.5s						
STU	Stuttgart	151.41	349	ePKPbc	PKiKP	08 42 51.2	+0.3
	baz=18,slow=2.4						
FUR	Furstenfeldbru	151.57	346	ePKPbc	PKPbc	08 42 50.8	-0.2
	baz=18,slow=2.4						
FUR				ePKPab	PKPab	08 43 03.2	+0.6
	baz=18,slow=2.4						
SOKA	Soboth	151.89	340	i PKP	PKPbc	08 42 51.4	-0.4
	comp=Z,46nm,1.8s,SNR=7.3						
SOKA	Soboth	151.89	340	eP	PKPbc	08 42 51.4	-0.4
	comp=Z,46nm,1.8s,SNR=7.3						
LESA	Schwarzleotal	151.91	343	i PKP	PKPbc	08 42 51.8	-0.1
	comp=Z,2.0nm,0.4s,SNR=10						
LESA				i PKP	PKPab	08 43 04.8	+0.7
	comp=Z,3.8nm,0.4s						
LESA	Schwarzleotal	151.91	343	eP	PKPbc	08 42 51.8	-0.1
	comp=Z,2.0nm,0.4s,SNR=10						
BFO	Black Forest	151.99	350	ePKPbc	PKiKP	08 42 52.1	0.0
	baz=18,slow=2.4						
BFO				ePKPab	PKPab	08 43 04.1	-0.2
	baz=18,slow=2.4						
OBKA	Obir	152.19	340	i PKP	PKPab	08 43 05.5	+0.2
	comp=Z,1.9nm,0.4s						
WATA	Walderalm	152.27	345	i PKP	PKPbc	08 42 52.7	-0.1
	comp=Z,3.5nm,0.5s,SNR=5.5						
WATA				i PKP	PKPab	08 43 06.2	+0.5
	comp=Z,4.5nm,0.6s						
UBR	Ueberruh	152.28	347	ePKPbc	PKPbc	08 42 52.4	-0.3
	baz=18,slow=2.4						
RETA	Reutte	152.32	346	ePKP	PKiKP	08 42 52.9	0.0
	comp=Z,4.3nm,0.7s						
RETA				i PKP	PKPab	08 43 06.2	+0.3
	comp=Z,5.8nm,0.5s						
WTTA	Wattenberg	152.32	345	i PKP	PKPbc	08 42 52.8	-0.1
	comp=Z,13nm,0.5s,SNR=9.4						
WTTA				i PKP	PKPab	08 43 06.6	+0.6
	comp=Z,8.1nm,0.5s						
MYKA	Terra Mystica	152.36	341	i PKP	PKPbc	08 42 52.2	-0.7
	comp=Z,6.6nm,0.5s,SNR=4.9						
MYKA				i PKP	PKPab	08 43 06.3	+0.3
	comp=Z,2.0nm,0.4s						
SQTA	Sankt Quirin	152.47	345	i PKP	PKPbc	08 42 53.1	-0.1
	comp=Z,46nm,1.4s,SNR=5.3						
SQTA				i PKP	PKPab	08 43 06.9	+0.4
	comp=Z,1.5nm,0.3s						
SQTA	Sankt Quirin	152.47	345	eP	PKPbc	08 42 53.1	-0.1
	comp=Z,46nm,1.4s,SNR=5.3						
ABTA	Abfaltersbach	152.58	343	i PKP	PKPbc	08 42 53.0	-0.4
	comp=Z,2.5nm,0.4s,SNR=8.5						
ABTA				i PKP	PKPab	08 43 07.3	+0.4
	comp=Z,4.2nm,0.6s						
LJU	Ljubljana	152.61	340	i PKPbc	PKPbc	08 42 53.4	0.0
CRNS	Crni Vrh	152.66	340	i PKPbc	PKPbc	08 42 53.1	-0.4
DAVA	Damuels	152.70	347	ePKP	PKPbc	08 42 53.6	-0.1
	comp=Z,13nm,1.3s						
DAVA				i PKP	PKPab	08 43 07.4	-0.1
	comp=Z,1.2nm,0.2s						
FETA	Feichten	152.77	346	i PKP	PKPbc	08 42 53.9	0.0
	comp=Z,5.9nm,0.6s,SNR=4.5						
FETA	Feichten	152.77	346	eP	PKPbc	08 42 53.9	0.0
	comp=Z,5.9nm,0.6s,SNR=4.5						
FUORN	Ofenpass-Fuorn	153.25	346		PKiKP	08 42 55.6	+0.5
ESDC	Sonseca Array	160.69	12	PKPab	PKPab	08 43 42.1	-0.1
	comp=Z,4.4nm,1.0s,baz=338,slow=3.7,SNR=9.7						
ESDC	Sonseca Array	160.69	12		PKPab	08 43 42.9	+0.7
DBIC	Dimbokro	164.72	156	PKP	PKPdf	08 43 00.1	-0.6
	comp=Z,4.1nm,0.7s,baz=295,slow=1.1,SNR=6.2						
DBIC				PKPab	PKPab	08 44 01.3	+0.8
	comp=Z,3.7nm,0.8s,baz=189,slow=5.5,SNR=4.6						
MD31	MD31	166.86	23		PKPab	08 44 10.8	+1.1
TORD	Torodi Ar. Bea	172.35	183	PKP	PKPdf	08 43 04.7	-0.8
	comp=Z,2.7nm,0.8s,baz=323,slow=2.2,SNR=16						
TORD				PKPab	PKPab	08 44 34.2	+0.1
	comp=Z,0.7nm,0.6s,baz=161,slow=3.5,SNR=4.5						

IDC ***23*** *08:49:40.8±0.9, 1°.37N×125°.96E, h0km, mb4.0/7, mbtmp4.0/8, ML4.0/1, Error ellipse: s-maj=100.6km s-min=15.3km az=70.0*

DJA ***23*** *08:49:45.2±0.3, 2°N±3°×12°6E±°, h10km, M4.2/13, mB4.9/1, mb4.3/6, MLv4.1/13, Mw(mB)4.2/1*

NEIC ***23*** *08:49:46.2±2.1, 1°.5N±0°.1×126°.43E±0°.08, h35km±2km, mb4.2/15, Error ellipse: s-maj=21.1km s-min=12.4km az=201.0*

ISC 23 08:49:47.4±0.6, **1°.53N**±0°.06×**126°.41E**±0°.07, **h47km, n41,** σ**1s.23**/44, **mb4.2**/14, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.21	128		Pn	08 50 07.0	-0.9
TNTI	Ternate	1.21	128	P	Pn	08 50 07.7	-0.2
TNTI				S	Sn	08 50 23.4	+0.2
GAMI	Galela, Maluku	1.41	77	P	Pn	08 50 10.8	+0.2
SGSI	Sangihe	2.32	338	P	Pn	08 50 22.6	-0.5
GTOI	Gorontalo	3.52	255	P	Pn	08 50 40.6	+1.1
SANI	Sanana	3.58	187	P	Pn	08 50 40.5	+0.1
LUWI	Luwuk	4.45	235	Pn	Pn	08 50 52.2	-0.1
LUWI	Luwuk	4.45	235	P	Pn	08 50 52.9	+0.6
NLAI	Namlea	4.78	172	P	Pn	08 50 58.3	+1.4
APSI	Ampana	5.34	243	P	Pn	08 51 05.7	+1.1
SIJI	Sorong	5.41	116	P	Pn	08 51 07.2	+1.7
FAKI	Fak Fak	7.32	127	P	Pn	08 51 34.4	+2.7
	0.1nm14nm,0.8s						
TTSI	Tana Toraja	8.00	235	P	Pn	08 51 41.9	+0.8
	0.1nm11nm,0.7s						
SPSI	Sidrap Palu	8.59	231	P	Pn	08 51 50.8	+1.6
KNRA	Kununurra	17.25	172	P	Pn	08 53 44.1	-0.9
KNRA				IAmb	IAmb	08 53 49.8	
	comp=Z,16nm,1.1s						
FITZ	Fitzroy Crossi	19.52	182	P	P	08 54 08.4	-2.5
	comp=Z,0.4nm,0.3s,baz=10,slow=12,SNR=9.2						
	comp=Z,1.1nm,0.4s						
FITZ	Fitzroy Crossi	19.52	182	P	P	08 54 09.0	-1.9
WB0	Warramunga Arr	22.56	160		P	08 54 42.6	-1.2
WRA	Warramunga Arr	22.71	160	P	P	08 54 44.0	-1.3
	comp=Z,1.6nm,0.3s,baz=330,slow=11,SNR=55						
WRA				S	S	08 58 49.0	-1.6
	comp=Z,0.6nm,0.9s,baz=328,slow=18,SNR=2.9						
	comp=Z,1.6nm,0.3s						
WRA	Warramunga Arr	22.71	160	P	P	08 54 43.1	-2.2
WR8	Warramunga Arr	22.77	160		P	08 54 45.1	-0.9
WR8				IAmb	IAmb	08 54 48.0	
	comp=Z,5.8nm,0.4s						
AS31	Alice Springs	26.08	164		P	08 55 16.6	-0.1
ASAR	Alice Springs	26.08	164	P	P	08 55 16.8	0.0
	comp=Z,1.2nm,0.4s,baz=344,slow=8.1,SNR=48						
ASAR				PcP	PcP	08 58 44.0	+0.2
	comp=Z,0.4nm,0.5s,baz=352,slow=2.4,SNR=5.3						
	comp=Z,1.2nm,0.4s						
ASAR	Alice Springs	26.08	164	P	P	08 55 17.0	+0.2

STKA	Stephens Creek	36.21	158	P	P	08 56 45.0	-0.7
	comp=Z,1.3nm,0.5s,baz=348,slow=10,SNR=4.8						
	comp=Z,1.3nm,0.5s						
SONM	Songino Array	49.28	342	P	P	08 58 33.0	+1.3
	comp=Z,0.4nm,0.5s,baz=165,slow=7.4,SNR=1.8						
	comp=Z,0.4nm,0.5s						
MK31	Makanchi Array	59.19	326	P	P	08 59 43.2	-0.5
MK31				IAmb	IAmb	08 59 46.0	
	comp=Z,0.9nm,0.8s						
MKAR	Makanchi Array	59.19	326	P	P	08 59 42.6	-1.0
	comp=Z,1.0nm,0.5s,baz=122,slow=7.7,SNR=17						
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	59.19	326	P	P	08 59 42.8	-0.9
KURBB	Kurchatov Arra	63.42	328	P	P	09 00 11.1	-1.0
	comp=Z,1.4nm,0.6s,baz=130,slow=6.3,SNR=13						
	comp=Z,1.4nm,0.6s						
KURK	Kurchatov	63.43	328	P	P	09 00 11.7	-0.5
KK31	Karatay Array	64.63	318	P	P	09 00 19.2	-1.1
KK31				IAmb	IAmb	09 00 40.0	
	comp=Z,3.1nm,1.4s						
KKAR	Karatay Array	64.63	318	P	P	09 00 19.3	-1.0
NRIK	Noril'sk	72.48	346	P	P	09 01 08.9	+0.2
	comp=Z,1.8nm,0.5s,baz=135,slow=6.8,SNR=5.5						
	comp=Z,1.8nm,0.5s						
NRIK	Noril'sk	72.48	346	P	P	09 01 09.1	+0.4
NRIK				IAmb	IAmb	09 01 09.2	
	comp=Z,2.3nm,0.8s						
AB31	Akbulak array	73.65	321	P	P	09 01 15.5	-0.5
AB31				IAmb	IAmb	09 01 56.5	
	comp=Z,3.3nm,1.5s						
ABKAR	Akbulak array	73.65	321	P	P	09 01 15.2	-0.8
VNDA	Vanda	81.30	173	P	P	09 01 59.0	+0.8
VNDA				IAmb	IAmb	09 02 14.6	
	comp=Z,3.2nm,1.2s						
D19K	Kuna River	83.28	21	P	P	09 02 10.6	+1.8
D19K				IAmb	IAmb	09 02 10.8	
	comp=Z,5.9nm,1.4s						
D20K	Etivluk River	83.86	21	P	P	09 02 13.8	+2.0
D20K				IAmb	IAmb	09 02 44.4	
	comp=Z,5.3nm,1.4s						
B22K	Teshekpuk Lake	85.26	20	P	P	09 02 20.8	+2.1

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*NEIC **23** 09:12:27.6±1.4, 19°.30N±0°.04×67°.17W±0°.04, h10^{km}±1^{km}, ML2.7/22, Md3.4/9(RSPR), Error ellipse: s-maj=7.0km s-min=6.6km az=330.0*

*SDD **23** 09:12:29.7±1.7, 19°.29N×67°.22W, h19^{km}±134^{km}, MD3.3, ML3.2, MW3.2, Presumed earthquake*

*RSPR **23** 09:12:30.2, 19°.35N×67°.25W, h25^{km}±25^{km}, MD3.4/9*

*OSPL **23** 09:12:32.2±0.7, 19°.12N×67°.41W, h41^{km}±24^{km}, ML2.4, Presumed earthquake*

ISC 23 09:12:27.5±1.5, **19°.25N**±0°.07×**67°.21W**±0°.03, **h11**^{km}±10^{km}, **n49**, σ**0^{s}.62**/63, **18C-7D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	0.79	173		Pn	09 12 44.6	+0.1
AGPR				IAML		09 12 56.3	
	371nm,0.3s						
AGPR				IAML		09 13 02.2	
	273nm,0.6s						
AGPR	Aguadilla, PR	0.79	173	⇓eP	Pn	09 12 44.2	-0.4
AGPR	Aguadilla, PR	0.79	173	eS	Sn	09 12 55.6	-0.7
AGPR	Aguadilla, PR	0.79	173	⇑ePg	Pn	09 12 44.5	-0.1
AGPR				⇑eSg	Sb	09 12 54.8	+0.9
AGPR				IAML		09 12 56.7	
	comp=N,296nm,0.4s						
AGPR	Aguadilla, PR	0.79	173	i P	Pn	09 12 44.6	+0.1
AGPR				eS	Sb	09 12 54.5	+0.6
AGPR				IAML		09 12 56.3	
	comp=Z,151nm,0.4s						
IDE	Isla Desecheo	0.90	196		Pn	09 12 45.7	-0.3
IDE					Sn	09 12 58.9	-0.2
IDE	Isla Desecheo	0.90	196	⇑eP	Pn	09 12 45.7	-0.3
IDE	Isla Desecheo	0.90	196	eS	Sn	09 12 58.9	-0.2
AOPR	Arecibo Observ	1.00	154		Pn	09 12 47.6	0.0
AOPR					Sn	09 13 01.6	0.0
AOPR	Arecibo Observ	1.00	154	IAML		09 13 15.3	
	comp=N,249nm,0.4s						
AOPR	Arecibo Observ	1.00	154	⇑eP	Pn	09 12 47.6	0.0
AOPR	Arecibo Observ	1.00	154	eS	Sn	09 13 01.6	0.0
AOPR	Arecibo Observ	1.00	154	⇑ePg	Pn	09 12 48.3	+0.8
AOPR				⇑eSg	Sn	09 13 02.3	+0.6
AOPR				IAML		09 13 09.5	
	comp=N,2µm,0.3s						
EMPR	Esperanza - Ma	1.01	140	Pn	Pn	09 12 49.2	+1.6
EMPR				IAML		09 13 05.1	
	comp=N,198nm,0.5s						
EMPR				IAML		09 13 23.9	
	comp=N,215nm,0.7s						
PRSN	Puerto Rico Se	1.03	176	Pn	Pn	09 12 48.0	+0.1
PRSN	Puerto Rico Se	1.03	176	⇓eP	Pn	09 12 48.0	+0.1
LSP	Las Mesas	1.08	174		Pn	09 12 48.7	+0.1
LSP					Sn	09 13 03.8	+0.2
LSP	Las Mesas	1.08	174	⇓eP	Pn	09 12 48.7	+0.1
LSP	Las Mesas	1.08	174	eS	Sn	09 13 03.8	+0.2
UUPR	Utuado, UPR, P	1.10	155	Pn	Pn	09 12 49.5	+0.6
ECPR	Experimental S	1.23	139	Pn	Pg	09 12 51.4	+0.3
ECPR				IAML		09 13 10.3	
	comp=N,288nm,0.2s						
ECPR	Experimental S	1.23	139	⇑eP	Pg	09 12 51.5	+0.3
ECPR	Experimental S	1.23	139	eS	Sg	09 13 07.2	+0.1
CRPR	Cabo Rojo, PR	1.24	175	Pn	Pb	09 12 51.1	+0.2
CRPR				IAML		09 13 15.6	
	comp=N,96nm,1.0s						
CRPR				IAML		09 13 18.1	
	comp=N,123nm,0.6s						
CRPR	Cabo Rojo, PR	1.24	175		Sn	09 13 07.7	+0.1
CRPR	Cabo Rojo, PR	1.24	175	⇓eP	Pb	09 12 51.2	+0.2
CRPR	Cabo Rojo, PR	1.24	175	eS	Sn	09 13 07.7	+0.1
CRPR	Cabo Rojo, PR	1.24	175	⇑ePg	Pg	09 12 51.4	0.0
CRPR				⇑eSg	Sn	09 13 07.7	+0.1
CRPR				IAML		09 13 20.1	
	comp=N,660nm,0.4s						
CRPR	Cabo Rojo, PR	1.24	175	⇓iP	Pb	09 12 51.2	+0.3
CRPR				eS	Sb	09 13 04.4	-2.7
CRPR				IAML		09 13 11.3	
	comp=Z,67nm,0.5s						
MLPR	Magueyes Islan	1.28	173	⇓eP	Pb	09 12 51.9	+0.2
MLPR	Magueyes Islan	1.28	173	eS	Sn	09 13 08.9	+0.2
GBPR	Guanica, Bosqu	1.31	166		Pg	09 12 52.6	0.0
GBPR	Guanica, Bosqu	1.31	166	⇑eP	Pg	09 12 52.6	0.0
CELP	Cerrillos	1.31	153	Pn	Pg	09 12 52.7	0.0
CELP				IAML		09 13 11.8	
	comp=Z,139nm,0.4s						
CELP				IAML		09 13 15.3	
	comp=Z,128nm,0.5s						
OBIP	Obispado Ponce	1.33	154		Pb	09 12 52.8	+0.3
OBIP					Sn	09 13 10.2	+0.4
OBIP	Obispado Ponce	1.33	154	⇑eP	Pb	09 12 52.8	+0.3
OBIP	Obispado Ponce	1.33	154	eS	Sn	09 13 10.2	+0.4
GCPR	Guaynabo City	1.42	131		Pb	09 12 53.8	-0.2
GCPR					Sn	09 13 11.5	-0.6
GCPR	Guaynabo City	1.42	131	⇑eP	Pb	09 12 53.8	-0.2
GCPR	Guaynabo City	1.42	131	eS	Sn	09 13 11.5	-0.6
SJG	San Juan	1.52	138	Pn	Pn	09 12 54.7	+0.1
SJG				IAML		09 13 19.9	
	comp=Z,66nm,0.3s						
SJG				IAML		09 13 25.8	
	comp=Z,67nm,0.5s						
SJG	San Juan	1.52	138	i P	Pg	09 12 56.4	-0.2
SJG				eS	Sn	09 13 14.7	+0.3
SJG				IAML		09 13 17.2	
	comp=Z,22nm,1.1s						
HIDR	Higuey Centro	1.57	246	⇑ePg	Pb	09 12 57.1	+0.6
HIDR				⇑eSg	Sg	09 13 17.7	-0.3
HIDR				IAML		09 13 28.0	
	comp=N,510nm,0.3s						
HUMP	Col San Antoni	1.70	130		Pb	09 12 58.0	-0.7
HUMP					Sn	09 13 18.3	-0.6
HUMP	Col San Antoni	1.70	130	⇓eP	Pb	09 12 58.0	-0.7
HUMP	Col San Antoni	1.70	130	eS	Sn	09 13 18.3	-0.6
MIDR	Miches	1.76	262	⇑ePg	Pb	09 13 00.3	+0.5
MIDR				⇑eSg	Sb	09 13 22.8	+0.9
MIDR				IAML		09 13 27.0	
	comp=N,35nm,0.6s						
DR12	Loma Pena Alta	2.10	258	Pn	Pb	09 13 04.2	-1.4
HATOM	Hato Mayor del	2.10	258	⇑ePg	Pb	09 13 04.5	-1.2
HATOM				⇑eSg	Sb	09 13 32.7	+0.9
HATOM				IAML		09 13 43.5	
	comp=N,255nm,0.3s						

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*ISK **23** 09:29:27.1, 36°.43N×41°.14E, h18^{km}, ML3.0/10*

*AFAD **23** 09:29:35.1, 37°.90N×40°.83E, h7^{km}±5^{km}, ML2.7*

ISC 23 09:29:21.8±2.2, **36°.35N**±0°.09×**41°.05E**±0°.05, **h12**^{km}±13^{km}, **n15**, σ**1^{s}.09**/20, **Iraq**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARD	Mardin	0.98	347	P	Pn	09 29 42.9	+1.3
MARD				S	Sn	09 29 56.0	+0.5
MARD				i IAML		09 29 56.0	
	comp=E,413nm,0.5s						
MARD				i IAML		09 29 58.0	
	comp=N,464nm,0.7s						
MIDY	Mardin/Midyat-	1.09	15	P	Pg	09 29 42.9	+0.1
MIDY				S	Sg	09 29 57.6	+0.6
BTMN	Batman	1.55	7	P	Pg	09 29 51.9	+0.4
DYBB	Diyarbakir	1.75	336	Pn	Pg	09 29 56.9	+1.4
DYBB				Sn	Sg	09 30 18.9	+0.6
SRTM	Siirt_Merkez	1.78	23	P	Pn	09 29 51.9	-0.6
SVAN	Silvan-Diyarba	1.80	4	Pn	Pg	09 29 56.7	+0.4
SVAN				Sn	Sg	09 30 18.9	-0.8
URFA	Urfa	2.09	302	Pn	Pg	09 30 00.9	-1.0
CUKT	Cukurca	2.24	66	Pn	Pb	09 30 02.9	+0.6
CUKT				Sn	Sb	09 30 29.3	-0.7
GURO	Guroymak-BITLI	2.33	19	Pn	Pb	09 30 04.5	+0.7
SVRC	Sivrice-ELAZID	2.45	326	Pn	Pg	09 30 07.2	-1.6
AKDM	Akdamar-Van	2.50	37	Pn	Pb	09 30 07.0	+0.2
BNGB	Bingl	2.65	354	Pn	Pb	09 30 09.6	+0.3
YEDI	Yedisu-Bingol	3.11	353	Pn	Pb	09 30 16.1	-1.0
GAZ	Gaziantep	3.19	286	Pn	Pb	09 30 18.8	+0.4
AGRB	Hanur-Agry	3.57	25	Pn	Pb	09 30 22.3	-2.6

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*CATAC **23** 09:43:09.3±0.3, 10°N±2°×8°5W±°, h45^{km}±5^{km}, M3.6/13, MLv3.6/13, Error ellipse: s-maj=6.4km s-min=3.2km az=39.2, confirmed*

*UCR **23** 09:43:09.3±0.8, 9°.91N×84°.54W, h57^{km}±2^{km}, MW3.6*

ISC 23 09:43:09.7±1.3, **9°.89N**±0°.04×**84°.54W**±0°.03, **h57**^{km}±6^{km}, **n117**, σ**0^{s}.45**/118, **Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARZA	Esparza	0.17	310	eP	Pn	09 43 18.3	-0.3
ARZA				eS	Sn	09 43 25.7	+0.7
ATEO	Atenas	0.18	59	eP	Pn	09 43 18.3	-0.4
ATEO				eS	Sn	09 43 25.3	+0.1
PALD	Palmares	0.20	31	eP	Pn	09 43 18.5	-0.4
RAMO	San Ramon	0.21	19	eP	Pn	09 43 18.7	-0.3
ROBF	Roble, Puntare	0.22	296	eP	Pn	09 43 18.6	-0.2
NARAN	Naranjo de Ala	0.27	37	eP	Pn	09 43 19.3	0.0
SARCI	Sarchi	0.28	43	eP	Pn	09 43 19.4	0.0
TCS1	Tacares	0.28	56	P	Pn	09 43 19.3	-0.1
TCS1	Tacares	0.28	56	eP	Pn	09 43 19.3	-0.1
ENAS	Puntarenas	0.31	288	eP	Pn	09 43 19.5	0.0
SANTA	Santa Ana	0.35	82	eP	Pn	09 43 19.5	-0.5
ACOS	Acosta	0.38	103	eP	Pn	09 43 19.6	-0.7
PAQE	Paquera	0.40	261	eP	Pn	09 43 20.1	-0.2
VPL1	V. Platanar	0.41	25	eP	Pn	09 43 20.3	-0.4
HEME	Heredia, Merce	0.41	74	eP	Pn	09 43 21.5	+0.9
PAVB	Pavas, San Jos	0.42	82	eP	Pn	09 43 20.4	-0.3
PICV	PH. Pirrs	0.42	127	eP	Pn	09 43 20.1	-0.5
HDC	Heredia	0.43	75	eP	Pn	09 43 20.7	-0.2
QUEU	Ciudad Quesada	0.45	13	eP	Pn	09 43 21.1	+0.2
VPL2	V. Platanar	0.45	20	eP	Pn	09 43 20.9	-0.1
CENT	San Jose	0.46	84	eP	Pn	09 43 21.8	+0.8
LUJA	Lujan	0.46	85	eP	Pn	09 43 20.9	-0.3
AMPA	Desamparados	0.47	89	eP	Pn	09 43 20.6	-0.6
LUPE	Guadalupe	0.48	82	eP	Pn	09 43 15.2	-6.1
SJS	Escuela Geolog	0.48	84	eP	Pn	09 43 21.1	-0.2
ECI	Escuela Centro	0.48	84	eP	Pn	09 43 21.1	-0.2
SJS3	Mercedes San J	0.48	84	eP	Pn	09 43 21.3	0.0
SOCE	Pocosol	0.50	351	P	Pn	09 43 21.8	+0.3
SOCE	Pocosol	0.50	351	S	Sn	09 43 31.0	+1.0
SOCE	Pocosol	0.50	351	eP	Pn	09 43 21.4	0.0
CORON	Coronado	0.54	81	eP	Pn	09 43 22.0	+0.1
TRIO	Tres Rios	0.54	88	eP	Pn	09 43 21.8	-0.2
ARTO	Ro Cuarto	0.56	35	eP	Pn	09 43 21.6	-0.5
RAZU	San Marcos de	0.56	114	eP	Pn	09 43 21.3	-0.9
JUNT	Juntas	0.57	314	eP	Pn	09 43 21.8	-0.4
JTS	Las Juntas de	0.57	315	P	Pn	09 43 22.0	-0.3
JTS				S	Sn	09 43 31.6	+0.2
JTS	Las Juntas de	0.57	315	eP	Pn	09 43 21.9	-0.3
CASO	Castillo	0.58	341	eP	Pn	09 43 22.6	+0.2
SVQ2	Quepos	0.58	141	eP	Pn	09 43 21.8	-0.5
FORC	Fortuna	0.59	347	eP	Pn	09 43 22.6	+0.2
ARE1	Arenal 1	0.60	343	eP	Pn	09 43 22.9	+0.3
VARE2	V. Arenal	0.60	343	eP	Pn	09 43 22.9	+0.3
VACR	Volcan Arenal	0.60	347	eP	Pn	09 43 22.7	+0.1
CVIMO	Finca Echandi	0.60	77	eP	Pn	09 43 22.6	-0.2
TAGO	Cartago	0.61	92	eP	Pn	09 43 22.6	-0.2
CEDE	Laguna Cedeo	0.62	345	eP	Pn	09 43 23.0	+0.1
ITAL	Pital	0.62	25	eP	Pn	09 43 22.5	-0.3
PIEC	Cerro El Cedra	0.63	114	eP	Pn	09 43 22.4	-0.7
TABAC	Tabacon	0.65	340	eP	Pn	09 43 23.4	+0.2
REZ	Monterrey de S	0.66	346	eP	Pn	09 43 23.4	+0.1
REPA	Paraso	0.66	95	eP	Pn	09 43 23.2	-0.2
VICA	Volcano Irazu	0.69	82	eP	Pn	09 43 23.7	-0.4
PCAYA	Pacayas	0.72	87	eP	Pn	09 43 24.0	-0.1
TILA	Tilaran	0.72	324	eP	Pn	09 43 23.9	-0.1
RAFA	San Farael, Vo	0.72	84	eP	Pn	09 43 24.0	-0.3
CNAS	Canas	0.77	315	eP	Pn	09 43 24.7	+0.1
CVTR	Volcan Turrial	0.78	80	eP	Pn	09 43 25.0	-0.2
VINA	Juan Vinas	0.78	89	eP	Pn	09 43 24.7	-0.2
INVE	Universidad In	0.78	319	eP	Pn	09 43 24.9	+0.1
CVTV	Tajo	0.79	81	eP	Pn	09 43 25.2	+0.1
VTCV	VTCV, Calle Va	0.81	83	eP	Pn	09 43 25.3	0.0
PILE	Guapiles	0.81	66	eP	Pn	09 43 25.0	-0.1
QUEB	Quebradon, Cot	0.81	334	eP	Pn	09 43 25.1	-0.2
ABRB	Las Abras (San	0.82	81	eP	Pn	09 43 25.7	+0.2
VERB	Verbena	0.83	86	eP	Pn	09 43 25.5	-0.1
TIMP	Tierras Morena	0.84	326	eP	Pn	09 43 25.4	-0.2
TURIB	Turrialba	0.84	88	eP	Pn	09 43 25.2	-0.4
BUS1	Rivas	0.85	113	eP	Pn	09 43 25.0	-1.1
CMARA	Lajas Hojancha	0.88	279	S	Sn	09 43 37.9	-0.3
CMARA	Lajas Hojancha	0.88	279	P	Pn	09 43 25.7	-0.4
CMARA	Lajas Hojancha	0.88	279	eP	Pn	09 43 25.6	-0.6
RESJ	San Isidro (Tu	0.89	81	eP	Pn	09 43 26.5	+0.2
TENO	El Achiote	0.92	332	eP	Pn	09 43 26.5	-0.2
CARI	Cariari	0.92	59	eP	Pn	09 43 26.8	+0.2
NICO	Nicoya	0.93	286	eP	Pn	09 43 26.4	-0.3
BAGA	Bagaces	0.96	312	eP	Pn	09 43 27.1	+0.1
ELVJ	El Viejo (Barb	0.96	306	eP	Pn	09 43 27.9	+0.8
RVLA	Villa Bonita	0.96	77	eP	Pn	09 43 27.3	+0.2
CUI	Cuipilapa	0.98	321	eP	Pn	09 43 27.4	0.0
LCOCO	El Coco	0.99	78	eP	Pn	09 43 27.5	0.0
EGUB	Earth Gu¡pi	0.99	71	eP	Pn	09 43 27.6	+0.2
ZEDO	Perez Zeledon	0.99	122	eP	Pn	09 43 28.4	+0.8
COLC	Colonia	1.01	320	eP	Pn	09 43 27.7	-0.1
JUD3	Juan Diaz 3	1.02	286	eP	Pn	09 43 27.6	-0.3
HORNC	Hornillas	1.04	323	eP	Pn	09 43 27.9	-0.2
TRT2	Tortugero	1.04	50	S	Sn	09 43 42.0	+0.3
TRT2	Tortugero	1.04	50	P	Pn	09 43 26.9	-1.2
IRES	Siquirres	1.04	78	eP	Pn	09 43 28.4	+0.3
MESS	Mesas	1.07	323	eP	Pn	09 43 28.6	0.0
VMAR	Armenia, Volca	1.08	329	eP	Pn	09 43 28.5	-0.2
CLARA	Aguas Claras	1.09	325	eP	Pn	09 43 28.9	0.0
SACU	Santa Cruz	1.10	290	eP	Pn	09 43 28.7	-0.2
UPAL	Upala	1.11	335	P	Pn	09 43 28.7	-0.3
UPAL	Upala	1.11	335	S	Sn	09 43 43.8	+0.4
UPAL	Upala	1.11	335	eP	Pn	09 43 28.6	-0.5
DELF	Filadelfia	1.15	299	eP	Pn	09 43 29.7	+0.2
SAJE	San Jernim	1.15	118	eP	Pn	09 43 29.3	-0.5
GPS2	Hotel Rincn d	1.18	317	eP	Pn	09 43 29.2	-0.9
GPS3	Bodega del ICE	1.19	317	eP	Pn	09 43 30.8	+0.6
EDPE	Pejibaye, P	1.20	127	eP	Pn	09 43 30.3	+0.1
ALIBA	Liberia Airpor	1.22	305	eP	Pn	09 43 31.1	+0.7
LAPC	Finca la Perla	1.24	315	eP	Pn	09 43 30.5	-0.4
ELI1	Hacienda Flor	1.25	307	eP	Pn	09 43 31.3	+0.4
DRK0	Durika	1.42	116	S	Sn	09 43 51.1	0.0
DRK0	Durika	1.42	116	P	Pn	09 43 32.8	-0.6
DRK0	Durika	1.42	116	eP	Pn	09 43 32.7	-0.6
LCRUZ	La Cruz	1.60	318	eP	Pn	09 43 35.6	-0.1
PIRO	Carate, Puerto	1.89	141	S	Sn	09 44 02.5	+0.1
PIRO	Carate, Puerto	1.89	141	P	Pn	09 43 41.2	+1.6
ALCO	Alturas Coton,	1.92	119	eP	Pn	09 43 40.0	-0.3
BRU2	Volcan	2.12	121	P	Pn	09 43 43.3	+0.4
BRU2	Volcan	2.12	121	S	Sn	09 44 08.2	0.0
BOAB	BOACO BROADBAN	2.78	337	S	Sn	09 44 23.1	-1.0
BOAB	BOACO BROADBAN	2.78	337	P	Pn	09 43 51.1	-0.6
MATN	Matagalpa	3.32	336	P	Pn	09 43 58.1	-1.2
SIUN	Universidad Ur	3.81	357	P	Pn	09 44 13.0	+7.0
RCON	San Juan de Ri	3.91	336	P	Pn	09 44 08.0	+0.6

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*NEIC **23** 09:51:47.7±1.6, 56°.28N±0°.04×152°.09W±0°.08, h10^{km}±2^{km}, ML3.2/62, ML3.1(AEIC), Error ellipse: s-maj=8.1km s-min=5.9km az=117.0*

*AEIC **23** 09:51:51.2±1.5, 56°.24N±0°.08×152°.0W±0°.1, h18^{km}±6^{km}, Error ellipse: s-maj=13.4km s-min=5.8km az=148.0*

*IDC **23** 09:51:56.4±4.2, 56°.83N×151°.96W, h48^{km}±27^{km}, mb3.7/5, mbtmp3.8/7, ML3.1/2, Error ellipse: s-maj=41.2km s-min=26.3km az=8.0*

ISC 23 09:51:51.7±1.2, **56°.40N**±0°.08×**152°.00W**±0°.05, **h35**^{km}, **n97**, σ**1^{s}.55**/91, **mb4.1**/5, **Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHAK	Old Harbor	1.09	320		Pn	09 52 09.2	-1.2
OHAK				IAML		09 52 40.2	
	comp=E,728nm,0.8s						
OHAK				IAML		09 52 43.0	
	comp=N,525nm,0.9s						
OHAK	Old Harbor	1.09	320		Sn	09 52 26.6	+2.4
SII	Sitkinak Islan	1.22	279		Pn	09 52 08.7	-3.6
SII					Sn	09 52 31.6	+4.0
SII	Sitkinak Islan	1.22	279	IAML		09 52 46.9	
	comp=E,989nm,0.7s						
KDAK	Kodiak Island	1.43	347	P	Pn	09 52 13.7	-1.3
	comp=E,17nm,0.4s,baz=313,slow=1.1,SNR=104						
KDAK				S	Sn	09 52 27.8	-4.8
	comp=E,75nm,0.4s,baz=189,slow=8.1,SNR=8.5						
KDAK	Kodiak Island	1.43	347		Pn	09 52 13.7	-1.3
KDAK	Kodiak Island	1.43	347		Sn	09 52 35.4	+2.9
R18K	Karluk	1.78	312		Pn	09 52 19.0	-1.0
R18K	Karluk	1.78	312	IAML		09 52 33.6	
	comp=E,439nm,0.5s						
R18K				IAML		09 52 59.9	
	comp=N,477nm,0.5s						
CHIR	Chirikof Islan	2.11	256		Pn	09 52 20.8	-3.6
CHIR						09 52 21.1	
CHIR					Sn	09 52 44.0	-5.4
CHIR	Chirikof Islan	2.11	256	IAML		09 52 44.4	
	comp=N,242nm,1.2s						
CHIR				IAML		09 52 45.3	
	comp=E,209nm,0.6s						
SYI	Shuyak Island	2.23	355		Pn	09 52 25.7	-0.4
SYI						09 52 26.2	
SYI					Sn	09 52 51.1	-1.3
SYI	Shuyak Island	2.23	355	IAML		09 53 30.7	
	comp=E,92nm,1.1s						
CAHL	Cahill	2.44	314		Pn	09 52 28.0	-1.1
MGLS	Mageik Landsli	2.45	317		Pn	09 52 28.3	-0.8
KAWH	Katmai	2.50	324		Pn	09 52 29.6	-0.3
KAHG	Katmai Hook Gl	2.51	328		Pn	09 52 30.4	+0.3
KAKN	Katmai Knife C	2.53	320		Pn	09 52 29.9	-0.4
ACHA	Angle Creek He	2.56	317		Pn	09 52 30.0	-0.8
ACHA						09 52 30.6	
KARR	Katmai Rainbow	2.56	326		Pn	09 52 30.8	+0.1
KARR						09 52 31.1	
KABU	Katmai Buttres	2.59	318		Pn	09 52 31.0	-0.1
KABU					Pn	09 52 31.1	-0.1
ANCK	Angle Creek	2.62	315		Pn	09 52 31.2	-0.4
ANCK						09 52 31.4	
PLK4	Peulik 4	2.69	299	Pn	Pn	09 52 29.3	-3.2
Q19K	Cape Douglas,	2.69	342		Pn	09 52 33.4	+0.9
KAHC	Katmai Hardscr	2.78	326		Pn	09 52 33.7	-0.1
CNTC	Contact Creek	2.82	313		Pn	09 52 33.6	-0.7
CNPM	China Poot	3.17	7		Pn	09 52 38.6	-0.4
CNPM				IAML		09 53 17.0	
	comp=E,38nm,1.0s						
CNPM	China Poot	3.17	7		Sn	09 53 14.4	-1.1
CNPM	China Poot	3.17	7	IAML		09 53 12.2	
	comp=N,33nm,1.2s						
HOM	Homer	3.28	3	Pn	Pn	09 52 41.3	+0.8
P19K	Oil Pt	3.33	349		Pn	09 52 42.4	+1.1
P19K				IAML		09 53 06.8	
	comp=E,93nm,0.9s						
P19K				IAML		09 54 04.3	
	comp=N,90nm,1.0s						
BRSE	Bradley Lake S	3.42	11		Pn	09 52 41.4	-1.1
BRSE					Sn	09 53 19.7	-2.1
BRLK	Bradley Lake	3.43	9	Pn	Pn	09 52 41.9	-0.8
BRLK				IAML		09 54 09.3	
	comp=E,62nm,1.2s						
BRLK				IAML		09 54 52.8	
	comp=N,46nm,1.5s						
ILS	Iliamna Low So	3.62	351		Pn	09 52 45.4	+0.2
ILS					Sn	09 53 25.8	-0.9
ILSW	Iliamna Southw	3.65	351		Pn	09 52 45.8	+0.1
ILSW				IAML		09 54 08.5	
	comp=E,34nm,1.2s						
ILSW				IAML		09 54 11.1	
	comp=N,27nm,1.5s						
IVE	Iliamna Volcan	3.67	352		Pn	09 52 45.7	-0.3
P17K	Kvichak River	3.68	322		Pn	09 52 45.9	-0.1
O18K	Koktuh Hills	3.86	335		Pn	09 52 48.5	-0.1
O18K				IAML		09 54 14.5	
	comp=N,29nm,1.1s						
O18K				IAML		09 54 28.8	
	comp=E,28nm,1.4s						
SEW	Seward	3.96	19		Pn	09 52 48.1	-1.6
SEW	Seward	3.96	19	IAML		09 54 29.7	
	comp=E,22nm,1.4s						
O19K	Port Alsworth	4.00	343		Pn	09 52 50.8	+0.4
O19K				IAML		09 53 39.5	
	comp=N,54nm,0.5s						
O19K				IAML		09 53 39.5	
	comp=E,57nm,0.5s						
RED	Redoubt Volcan	4.05	355		Pn	09 52 50.8	-0.4
RED					Sn	09 53 36.0	-1.6
RED	Redoubt Volcan	4.05	355	IAML		09 53 38.3	
	comp=N,23nm,1.4s						
RED				IAML		09 54 19.2	
	comp=E,27nm,1.5s						
RDWB	Redoubt West	4.13	354		Pn	09 52 51.6	-0.7
SLKM	Skilak Lake	4.23	12	IAML		09 53 47.9	
	comp=E,45nm,1.4s						
SLKM				IAML		09 54 54.3	
	comp=N,26nm,1.4s						
SLKM	Skilak Lake	4.23	12		Pn	09 52 52.7	-0.9
SLKM						09 52 53.1	
SLKM					Sn	09 53 38.9	-2.8
O17K	Koliganek Bris	4.33	324		Pn	09 52 54.6	-0.4
O16K	Kokwok River B	4.56	317		Pn	09 52 57.4	-0.7
O16K	Kokwok River B	4.56	317	IAML		09 53 32.9	
	comp=N,13nm,1.4s						
O16K				IAML		09 54 56.8	
	comp=E,13nm,1.5s						
N19K	Bonanza Creek	4.62	345		Pn	09 52 59.0	0.0
N18K	Kilae Creek	4.75	336		Pn	09 53 00.4	-0.4
SPU	Mount Spurr	4.80	360	Pn	Pn	09 53 02.0	+0.6
RC01	Rabbit Creek A	4.85	13	Pn	Pn	09 53 01.6	-0.6
RC01				IAML		09 53 58.0	
	comp=E,19nm,1.3s						
RC01				IAML		09 54 51.5	
	comp=N,18nm,1.3s						
HIN	Hinchinbrook I	4.94	34	Pn	Pn	09 53 03.0	-0.4
N17K	Nushagak Hills	4.96	329		Pn	09 53 03.1	-0.4
O15K	Ungalikthiuk R	5.03	307		Pn	09 53 03.5	-1.0
O15K	Ungalikthiuk R	5.03	307	IAML		09 53 48.2	
	comp=N,13nm,1.3s						
O15K				IAML		09 55 16.9	
	comp=E,18nm,1.4s						
STLK	Strandline Lak	5.12	1	Pn	Pn	09 53 05.5	-0.4
STLK				IAML		09 54 06.4	
	comp=E,10.0nm,1.4s						
STLK				IAML		09 54 07.8	
	comp=N,10nm,0.8s						
SUA	Susitna One	5.12	7	Pn	Pn	09 53 05.6	-0.4
FID	Port Fidalgo	5.23	31	Pn	Pn	09 53 06.2	-1.2
KNK	Knik Glacier	5.36	19	Pn	Pn	09 53 07.5	-1.6
N16K	Nishlik Lake	5.42	322		Pn	09 53 09.5	-0.4
PMR	Palmer	5.42	15	Pn	Pn	09 53 09.3	-0.6
M18K	Stony River	5.48	340		Pn	09 53 10.3	-0.4
M20K	Styx River	5.53	354	Pn	Pn	09 53 11.4	-0.2
SKT	Skwentna	5.61	2	Pn	Pn	09 53 11.7	-0.8
GHO	Glory Hole Cre	5.62	15	Pn	Pn	09 53 12.6	-0.1
N15K	Kwethluk River	5.70	315		Pn	09 53 13.4	-0.3
SML	Sawmill	5.75	18	Pn	Pn	09 53 13.8	-0.6
M17K	Holitna River	5.75	333		Pn	09 53 14.9	+0.4
M16K	Timber Creek	5.89	325		Pn	09 53 16.3	0.0
SCM	Sheep Creek Mo	5.96	22		Pn	09 53 17.5	+0.1
L19K	White Mountain	5.98	347		Pn	09 53 17.6	-0.1

BMRM	**Bremner River**	5.99	37	Pn	Pn	09 53 18.2	+0.4
M24K	**Tolsona, Glenn**	6.46	25	Pn	Pn	09 53 24.5	+0.3
PPLA	**Purkeypile**	6.52	359	Pn	Pn	09 53 24.9	-0.3
VRDI	**Verde Repeater**	6.57	39	Pn	Pn	09 53 26.2	+0.3
GLB	**Gilahina Butte**	6.60	37	Pn	Pn	09 53 26.3	+0.1
K17K	**Iditarod**	7.10	336	Pn	Pn	09 53 33.0	+0.1
RND	**Reindeer**	7.21	11	Pn	Pn	09 53 35.0	+0.6
LOGN	**Logan Glacier**	7.25	48	Pn	Pn	09 53 35.7	+0.5
J17K	**VABM Dome**	7.87	336	Pn	Pn	09 53 43.5	+0.1
ILAR	**Eielson Array**	8.77	15	P	Pn	09 53 56.1	+0.4
	comp=N,0.6nm,0.3s,baz=201,slow=14,SNR=43						
ILAR				S	Sn	09 55 26.9	-6.3
	comp=N,0.5nm,0.5s,baz=193,slow=31,SNR=5.3						
	comp=N,2.9nm,0.6s						
YKA	**Yellowknife Ar**	19.74	57	P	Pn	09 56 19.8	+0.1
	baz=273,slow=11,SNR=5.4						
	comp=N,0.5nm,0.9s						
H11N2	**WAKE ISLAND Hy**	47.65	237	T	T	10 51 33.2	
	baz=29						
H11N3	**WAKE ISLAND Hy**	47.66	237	T	T	10 51 37.4	
	baz=29						
H11N1	**WAKE ISLAND Hy**	47.67	237	T	T	10 51 36.0	
	baz=29						
H11S1	**WAKE ISLAND Hy**	48.80	236	T	T	10 53 00.5	
	baz=29						
H11S2	**WAKE ISLAND Hy**	48.82	236	T	T	10 53 00.9	
	baz=29						
H11S3	**WAKE ISLAND Hy**	48.82	236	T	T	10 53 07.1	
	baz=29						
SONM	**Songino Array**	57.40	308	P	P	10 01 37.8	+1.4
	comp=N,1.4nm,0.7s,baz=50,slow=7.5,SNR=5.6						
	comp=N,1.4nm,0.7s						
ZALV	**Zalesovo Beam**	60.62	325	P	P	10 02 00.1	+1.6
	comp=N,0.8nm,0.2s,baz=28,slow=6.5,SNR=5.8						
	comp=N,0.8nm,0.2s						
ZALV	**Zalesovo Beam**	60.62	325	P	P	10 01 59.7	+1.3
KURK	**Kurchatov**	65.33	327	P	P	10 02 30.6	+0.9
KURBB	**Kurchatov Arra**	65.44	327	P	P	10 02 30.6	+0.1
	comp=N,0.4nm,0.6s,baz=32,slow=5.5,SNR=2.4						
	comp=N,0.4nm,0.6s						
BVAR	**Borovoye Array**	65.52	333	P	P	10 02 31.7	+0.7
	comp=N,1.3nm,0.7s,baz=23,slow=7.8,SNR=5.9						
	comp=N,1.3nm,0.7s						
MKAR	**Makanchi Array**	67.61	323	P	P	10 02 45.2	+0.8
	comp=N,1.0nm,0.9s,baz=38,slow=6.3,SNR=3.7						
	comp=N,1.0nm,0.9s						

*IDC **23** 09:56:15.6±6.0, 20°.58S×176°.03W, h281^{km}±51^{km}, mb3.2/4, mbtmp3.9/6, Error ellipse: s-maj=37.1km s-min=18.5km az=96.0*

ISC 23 09:56:16.5±1.5**, 20°.5S**±0°.1×**176°.1W**±0°.2**, h300^{km}, n8, σ1^{s}.76**/10**, mb3.2**/4**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	16.32	261	P	Pn	09 59 50.5	0.0
	4.3nm,0.8s,baz=81,slow=19						
URZ	**Urewera**	18.65	197	P	P	10 00 13.1	+0.1
	3.5nm,0.8s,baz=24,slow=15,SNR=1.1						
URZ				S	S	10 03 29.3	0.0
	3.2nm,0.8s,baz=29,slow=19,SNR=1.3						
CTA	**Charters Tower**	35.24	264	P	P	10 02 45.1	+1.7
	2.4nm,0.4s,baz=85,slow=9.1,SNR=6.5						
	2.4nm,0.4s						
ASAR	**Alice Springs**	46.23	256	P	P	10 04 13.5	+0.9
	0.5nm,0.5s,baz=91,slow=7.9,SNR=15						
ASAR				PcP	sP	10 05 44.9	-2.8
	0.4nm,0.5s,baz=108,slow=3.8,SNR=9.3						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	46.34	262	P	P	10 04 14.0	+0.5
	0.4nm,0.4s,baz=93,slow=6.3,SNR=32						
WRA				PcP	sP	10 05 45.7	-3.1
	0.4nm,0.7s,baz=93,slow=3.7,SNR=2.7						
	0.4nm,0.4s						
ILAR	**Eielson Array**	87.93	12	P	P	10 08 31.8	-0.2
	0.3nm,0.8s,baz=206,slow=4.4,SNR=5.1						
	0.3nm,0.8s						
AKASG	**Malin Array Be**	143.84	333	PKhKP	PKPpre	10 15 14.4	
	0.4nm,0.4s,baz=44,slow=3.8,SNR=4.3						
BRTR	**Keskin Array B**	148.12	314	PKPbc	PKiKP	10 15 29.4	+0.5
	1.1nm,0.6s,baz=90,slow=4.3,SNR=5.0						

*SOME **23** 10:05:02.5, 41°.63N×78°.72E*
*KRNET **23** 10:05:02.3±0.1, 41°.53N×78°.70E, h17^{km}, mb3.0*
*NNC **23** 10:05:03.3±1.1, 41°.58N×78°.67E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=7.8km s-min=4.4km az=163.0*

ISC 23 10:05:04.3±1.6**, 41°.61N**±0°.07×**78°.69E**±0°.05**, h0^{km}, n39, σ0^{s}.96**/58**, 26C-11D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	0.90	346	⇑*i*P	Pg	10 05 21.3	-0.3
PRZ				⇑*i*S	Sb	10 05 35.4	-0.2
KDJ	**Kajisay**	1.24	295	⇑*i*P	Pg	10 05 26.5	-1.6
KDJ				⇑*i*S	Sg	10 05 44.1	-0.1
SATY	**Saty**	1.47	352	P	Pn	10 05 31.3	-0.9
	38nm,0.3s						
SATY				S	Sn	10 05 52.4	+0.3
	58nm,0.1s						
UZB	**Uzynbulak**	1.56	9	P	Pn	10 05 32.3	-1.1
	11nm,0.1s						
UZB				S	Sg	10 05 54.1	-0.3
	39nm,0.5s						
SHLS	**Shalkode**	1.65	20	P	Pg	10 05 36.2	+0.2
	26nm,0.1s						
SHLS				S	Sg	10 06 00.7	+3.2
	185nm,0.7s						
PDGK	**Podgornoye**	1.82	19	⇓Pn	Pn	10 05 36.4	-0.7
	13nm,0.5s						
PDGK				⇑Sn	Sg	10 06 02.3	-0.5
	122nm,0.9s						
KPKS	**Kokpek**	1.86	360	P	Pn	10 05 38.0	+0.5
	0.2nm,0.1s						
KPKS				S	Sg	10 06 03.8	-0.2
	43nm,0.3s						
KURS	**Kuram**	1.92	349	Pg	Pb	10 05 39.5	-0.8
	41nm,0.6s						
KURS				Lg	Lg	10 06 06.0	
	11nm,0.6s						
TNSS	**Tian-Shan**	1.93	319	Pg	Pn	10 05 39.3	+0.5
	6.3nm,0.3s						
TNSS				Lg	Lg	10 06 05.6	
	22nm,0.3s						
ULHL	**Ulahol**	1.93	290	⇑*e*P	Pn	10 05 38.8	+0.1
ULHL				⇑*i*S	Sb	10 06 05.5	+0.2
MDOK	**Medeo**	1.97	323	Pg	Pn	10 05 39.9	+0.8
	22nm,0.3s						
MDOK				Lg	Lg	10 06 06.9	
	36nm,0.3s						
KOTS	**Kotyrbulak**	2.00	325	Pg	Pb	10 05 40.8	-0.9
	28nm,0.2s						
KOTS				Lg	Lg	10 06 08.6	
	100nm,0.5s						
KTMS	**Ketmen**	2.21	33	Pg	Pn	10 05 42.8	+0.3
	3.7nm,0.1s						
KTMS				Lg	Lg	10 06 11.7	
	18nm,0.4s						
BOOM	**Boomskoye usch**	2.23	294	⇑*i*P	Pn	10 05 43.1	+0.4
BOOM				⇑*i*S	Sb	10 06 12.7	-1.1
MTBS	**Maitube**	2.26	313	Pg	Pn	10 05 44.4	+1.4
	35nm,0.2s						
MTBS				Lg	Lg	10 06 14.4	
	47nm,0.3s						
BLB	**Baldybastay**	2.50	357	Pg	Pb	10 05 49.9	-0.2
	11nm,0.1s						
BLB				Lg	Lg	10 06 23.9	
	32nm,0.5s						
CHKK	**Chushkaly**	2.57	331	Pg	Pn	10 05 48.9	+1.7
	4.4nm,0.4s						
CHKK				Lg	Lg	10 06 22.5	
	27nm,0.5s						
KTBS	**Karatobe**	2.57	326	Pg	Pb	10 05 49.6	-1.8
	12nm,0.5s						
KTBS				Lg	Lg	10 06 23.4	
	0.4nm,0.3s						
TKM2	**Tokmak 2**	2.64	301	⇑*e*P	Pn	10 05 49.0	+0.6
TKM2				⇑*i*S	Sn	10 06 22.8	+1.5
ARXS	**Arharly**	2.68	347	Pg	Pn	10 05 50.5	+1.7
	7.3nm,0.5s						
ARXS				Lg	Lg	10 06 25.0	
	13nm,0.4s						
DGS	**Degeres**	2.71	308	Pg	Pb	10 05 53.0	-0.7
	12nm,0.5s						
DGS				Lg	Lg	10 06 29.2	
	54nm,0.5s						
KNOS	**Konyrlen**	2.77	7	Pg	Pb	10 05 54.3	-0.6
	5.6nm,0.4s						
KNOS				Lg	Lg	10 06 31.5	
	19nm,0.3s						
KUU	**Kurty**	2.87	324	Pg	Pb	10 05 56.4	0.0
	3.4nm,0.1s						
KUU				Lg	Lg	10 06 35.0	
	20nm,0.2s						
KBK	**Karagaybulak**	2.97	292	⇑*i*P	Pn	10 05 53.2	+0.3
KBK				⇑*i*S	Sn	10 06 30.4	+1.0
KRBS	**Karabastau**	3.05	314	Pg	Pb	10 05 57.9	-1.6
	3.4nm,0.3s						
KRBS				Lg	Lg	10 06 37.6	
	18nm,0.4s						
UCH	**Uchtor**	3.18	283	⇑*e*P	Pn	10 05 56.0	0.0
UCH				⇑*i*S	Sn	10 06 35.3	+0.5
CHMS	**Chumysh**	3.23	297	⇓*i*P	Pn	10 05 56.8	+0.4
CHMS				⇓*i*S	Sn	10 06 36.6	+1.0
FRU1	**Bishkek**	3.25	293	⇑*i*P	Pn	10 05 57.2	+0.7
FRU1				⇑*i*S	Sn	10 06 37.4	+1.5
ARLS	**Aral**	3.28	276	⇑*i*P	Pn	10 05 57.2	+0.1
ARLS				⇑*i*S	Sn	10 06 37.2	+0.4
AAK	**Ala-Archa**	3.29	290	⇓*i*P	Pn	10 05 57.4	+0.2
AAK				⇓*i*S	Sn	10 06 37.8	+0.8
AAK	**Ala-Archa**	3.29	290	⇑Pg	Pb	10 06 04.8	+1.2
	2.3nm,0.9s						
AAK				⇑Lg	Lg	10 06 49.5	
	6.9nm,0.7s						
USP	**Ospenovka**	3.52	300	⇑*i*P	Pn	10 06 00.7	+0.5
USP				⇑*i*S	Sn	10 06 43.4	+0.8
SGDS	**Sogindy**	3.52	303	Pg	Pb	10 06 07.1	-0.4
	2.5nm,0.2s						
SGDS				Lg	Lg	10 06 53.3	
	16nm,0.3s						
EKS2	**Erkin-Say**	3.80	288	⇓*i*P	Pn	10 06 04.6	+0.4
EKS2				⇓*i*S	Sn	10 06 50.0	+0.3
MRKS	**Merke**	4.21	287	Pg	Pb	10 06 20.9	+1.5
	2.1nm,0.6s						
MRKS				Lg	Lg	10 07 16.9	
	9.3nm,0.3s						
SFK	**Sufi-Kurgan**	4.24	250	⇑*i*P	Pn	10 06 10.2	-0.2
SFK				⇑*i*S	Sn	10 06 59.6	-1.2
MNAS	**Manas**	4.69	283	⇓*i*P	Pn	10 06 16.8	+0.4
MNAS				⇓*i*S	Sn	10 07 11.2	-0.4
MK31	**Makanchi Array**	5.80	25	⇓Sn	Sn	10 07 38.1	-0.6
	0.6nm,0.5s,baz=205,slow=24,SNR=3.9						
MK31				⇑Lg	Lg	10 08 07.5	
	1.5nm,0.6s						
KK31	**Karatay Array**	6.24	287	⇓Lg	Lg	10 08 22.2	
	0.8nm,0.4s,baz=92,slow=28,SNR=4.4						

*KRNET **23** 10:12:48.7±0.1, 41°.89N×76°.77E, h18^{km}, mb2.8*
*NNC **23** 10:12:49.8±0.6, 41°.94N×76°.74E, h0^{km}, mb3.6, mpv3.5, Error ellipse: s-maj=4.0km s-min=2.7km az=174.0*
*SOME **23** 10:12:49.2, 41°.90N×76°.72E, h15^{km}*
*KNET **23** 10:12:51.0±0.3, 41°.96N×76°.63E, h15^{km}±1^{km}, ml2.2, Error ellipse: s-maj=2.9km s-min=2.0km az=53.0*

ISC 23 10:12:48.6±1.3**, 41°.92N**±0°.03×**76°.79E**±0°.02**, h2^{km}**±10^{km}**, n68, σ1^{s}.24**/119**, 46C-14D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	0.36	54	⇑*i*P	Pb	10 12 56.5	-1.4
KDJ				⇑*i*S	Sb	10 13 02.2	-1.8
ULHL	**Ulahol**	0.52	309	⇑P	Pg	10 12 59.1	+0.4
	30nm,0.2s,SNR=13						
ULHL				⇑S	Sg	10 13 06.1	+0.6
	116nm,0.1s						
ULHL	**Ulahol**	0.52	309	⇑*i*P	Pg	10 12 59.0	+0.3
ULHL				⇑*i*S	Sg	10 13 06.1	+0.6
BOOM	**Boomskoye usch**	0.85	312	⇓*i*P	Pg	10 13 05.0	0.0
BOOM				⇓*i*S	Sg	10 13 16.6	+0.6
IZV	**Izvestkoviy**	1.12	353	P	Pg	10 13 10.3	+0.1
	44nm,0.2s						
IZV				S	Sg	10 13 25.4	+0.6
	235nm,0.4s						
IZV	**Izvestkoviy**	1.12	353	*e*P	Pg	10 13 10.3	+0.1
	44nm,0.2s						
IZV				*e*S	Sg	10 13 25.4	+0.6
	235nm,0.4s						
TNSS	**Tian-Shan**	1.12	6	P	Pb	10 13 10.7	-0.4
	16nm,0.2s						
TNSS				S	Sb	10 13 26.1	-0.2
	9.4nm,0.2s						
TNSS	**Tian-Shan**	1.12	6	*e*P	Pb	10 13 10.7	-0.4
	16nm,0.2s						
TNSS				*e*S	Sb	10 13 26.1	-0.2
	9.4nm,0.2s						
MTBS	**Maitube**	1.24	348	P	Pb	10 13 12.5	-0.3
	28nm,0.2s						
MTBS				S	Sb	10 13 29.1	-0.2
	81nm,0.2s						
MTBS	**Maitube**	1.24	348	*e*P	Pb	10 13 12.5	-0.3
	28nm,0.2s						
MTBS				*e*S	Sb	10 13 29.1	-0.2
	81nm,0.2s						
MDOK	**Medeo**	1.26	9	Pg	Pn	10 13 13.1	-0.3
	78nm,0.1s						
MDOK				Lg	Lg	10 13 30.1	
	31nm,0.2s						
KNDC	**Almaty**	1.30	6	⇑P	Pb	10 13 14.0	+0.1
	85nm,0.5s						
KNDC				⇓S	Sn	10 13 32.4	+0.4
	64nm,0.4s						
PRZ	**Przheval'sk**	1.32	64	⇑*i*P	Pb	10 13 13.8	-0.5
PRZ				⇑*i*S	Sn	10 13 32.1	-0.5
TKM2	**Tokmak 2**	1.34	319	⇓P	Pn	10 13 14.0	-0.5
	5.9nm,0.1s,SNR=6.6						
TKM2				⇑S	Sg	10 13 32.0	+0.4
	70nm,0.1s						
TKM2	**Tokmak 2**	1.34	319	⇑*i*P	Pn	10 13 13.6	-0.9
TKM2				⇑*i*S	Sg	10 13 31.6	0.0
KOTS	**Kotyrbulak**	1.34	10	P	Pb	10 13 14.8	+0.3
	177nm,0.2s						
KOTS	**Kotyrbulak**	1.34	10	*e*P	Pb	10 13 14.8	+0.3
	177nm,0.2s						
KOTS				*e*S	Sn	10 13 33.1	+0.2
	91nm,0.2s						
DGS	**Degeres**	1.52	331	P	Pg	10 13 17.8	0.0
	6.2nm,0.1s						
DGS				S	Sg	10 13 38.2	+0.6
	60nm,0.3s						
DGS	**Degeres**	1.52	331	*e*P	Pg	10 13 17.8	0.0
	6.2nm,0.1s						
DGS				*e*S	Sg	10 13 38.2	+0.6
	60nm,0.3s						
KBK	**Karagaybulak**	1.55	299	⇓P	Pb	10 13 17.9	-0.3
	8.4nm,0.1s,SNR=6.3						
KBK				⇓S	Sg	10 13 38.6	+0.1
	28nm,0.1s						
KBK	**Karagaybulak**	1.55	299	⇑*i*P	Pn	10 13 17.1	-0.3
KBK				⇑*i*S	Sn	10 13 37.8	-0.5
SATY	**Saty**	1.65	46	P	Pg	10 13 20.0	-0.3
	30nm,0.1s						
SATY				S	Sg	10 13 41.9	+0.2
	190nm,0.1s						
UCH	**Uchtor**	1.72	281	⇓P	Pb	10 13 20.7	-0.5
	6.5nm,0.3s,SNR=6.5						
UCH				⇑S	Sb	10 13 43.3	-0.2
	20nm,0.3s						
UCH	**Uchtor**	1.72	281	⇑*i*P	Pn	10 13 20.1	+0.1
UCH				⇑*i*S	Sb	10 13 43.0	-0.5
KTBS	**Karatobe**	1.79	358	P	Pg	10 13 22.6	-0.5
	30nm,0.3s						
KTBS				S	Sg	10 13 46.3	0.0
	0.3nm,0.3s						
FRU1	**Bishkek**	1.83	300	⇓*i*P	Pb	10 13 22.2	-0.7
FRU1				⇓*i*S	Sb	10 13 46.6	+0.3
ARLS	**Aral**	1.84	269	⇑*i*P	Pb	10 13 21.7	-1.4
ARLS				⇑*e*S	Sb	10 13 45.8	-0.9
AAK	**Ala-Archa**	1.85	294	⇑P	Pb	10 13 22.6	-0.6
	8.0nm,0.3s,SNR=7.2						
AAK				⇑S	Sb	10 13 47.0	+0.1
	26nm,0.3s						
AAK	**Ala-Archa**	1.85	294	⇑*i*P	Pb	10 13 22.1	-1.1
AAK				⇑*i*S	Sb	10 13 46.6	-0.3
AAK	**Ala-Archa**	1.85	294	⇑Pn	Pb	10 13 22.6	-0.6
	1.8nm,0.4s						
AAK				⇑Sn	Sb	10 13 46.9	+0.1
	5.4nm,0.6s						
CHMS	**Chumysh**	1.85	306	⇓P	Pb	10 13 23.0	-0.3
	6.2nm,0.3s						
CHMS				⇑S	Sb	10 13 47.7	+0.7
	15nm,0.2s						
CHMS	**Chumysh**	1.85	306	⇓*i*P	Pb	10 13 22.2	-1.1
CHMS				⇓*e*S	Sb	10 13 46.7	-0.2
KURS	**Kuram**	1.87	32	P	Pg	10 13 24.0	-0.5
	8.5nm,0.4s						
KURS				S	Sg	10 13 48.8	+0.1
	11nm,0.2s						
CHKK	**Chushkaly**	1.94	4	P	Pg	10 13 25.1	-0.8
	6.7nm,0.1s						
CHKK				S	Sg	10 13 50.6	-0.3
	66nm,0.3s						
CHKK	**Chushkaly**	1.94	4	*e*P	Pg	10 13 25.1	-0.8
	6.7nm,0.1s						
CHKK				*e*S	Sg	10 13 50.6	-0.3
	66nm,0.3s						
KRBS	**Karabastau**	1.96	336	Pg	Pb	10 13 25.4	+0.4
	12nm,0.1s						
KRBS				Lg	Lg	10 13 51.2	
	14nm,0.2s						
KRBS	**Karabastau**	1.96	336	*e*P	Pb	10 13 25.4	+0.4
	12nm,0.1s						
KRBS				*e*S	Sg	10 13 51.2	-0.3
	14nm,0.2s						
KUU	**Kurty**	2.00	351	Pg	Pg	10 13 26.4	-0.6
	5.3nm,0.0s						
KUU				Lg	Lg	10 13 52.9	
	33nm,0.2s						
KUU	**Kurty**	2.00	351	*e*P	Pg	10 13 26.4	-0.6
	5.3nm,0.0s						
KUU				*e*S	Sg	10 13 52.9	0.0
	33nm,0.2s						
UZB	**Uzynbulak**	2.06	53	Pg	Pg	10 13 26.9	-1.1
	14nm,0.3s						
UZB				Lg	Lg	10 13 53.9	
	43nm,0.3s						
UZB	**Uzynbulak**	2.06	53	*e*P	Pg	10 13 26.9	-1.1
	14nm,0.3s						
UZB				*e*S	Sg	10 13 53.9	-0.9
	43nm,0.3s						
KPKS	**Kokpek**	2.08	41	Pg	Pg	10 13 27.6	-1.0
	0.2nm,0.1s						
KPKS				Lg	Lg	10 13 55.0	
	66nm,0.4s						
KPKS	**Kokpek**	2.08	41	*e*P	Pg	10 13 27.6	-1.0
	0.2nm,0.1s						
KPKS				*e*S	Sg	10 13 55.0	-0.6
	66nm,0.4s						
USP	**Ospenovka**	2.16	309	⇓P	Pb	10 13 28.0	-0.5
	5.0nm,0.2s,SNR=6.2						
USP				⇑S	Sb	10 13 56.6	+0.8
	16nm,0.2s						
USP	**Ospenovka**	2.16	309	⇑*i*P	Pn	10 13 26.5	+0.8
USP				⇑*i*S	Sn	10 13 54.1	+1.0
SGDS	**Sogindy**	2.21	315	Pg	Pb	10 13 29.7	+0.3
	2.4nm,0.1s						
SGDS				Lg	Lg	10 13 58.6	
	23nm,0.3s						
SHLS	**Shalkode**	2.33	57	Pg	Pg	10 13 37.2	+3.9
	6.4nm,0.3s						
SHLS				Lg	Lg	10 14 11.5	
	71nm,0.3s						
SHLS	**Shalkode**	2.33	57	*e*P	Pg	10 13 37.2	+3.9
	6.4nm,0.3s						
SHLS				*e*S	Sg	10 14 11.5	+8.0
	71nm,0.3s						
EKS2	**Erkin-Say**	2.36	289	⇑*i*P	Pn	10 13 29.0	+0.6
EKS2				⇑*i*S	Sn	10 13 58.6	+0.6
PDGK	**Podgornoye**	2.44	54	⇓Pn	Pb	10 13 31.7	-1.6
	6.7nm,0.4s						
PDGK				⇑Sn	Sg	10 14 05.3	-1.8
	25nm,0.4s						
SALK	**Salom-Alik**	2.46	246	⇑*e*P	Pn	10 13 30.6	+0.7
SALK				⇑*e*S	Sn	10 14 00.5	-0.1
BLB	**Baldybastay**	2.50	29	Pg	Pg	10 13 35.4	-1.2
	17nm,0.1s						
BLB				Lg	Lg	10 14 08.4	
	81nm,0.3s						
MRKS	**Merke**	2.77	289	Pg	Pb	10 13 38.9	0.0
	10nm,0.6s						
MRKS				Lg	Lg	10 14 14.3	
	18nm,0.4s						
MRKS	**Merke**	2.77	289	*e*P	Pb	10 13 38.9	0.0
	10nm,0.6s						
MRKS				*e*S	Sb	10 14 14.3	+1.0
	18nm,0.4s						
ARSB	**Arslanbob**	2.92	260	⇑*e*P	Pn	10 13 36.6	+0.5
ARSB				⇑*e*S	Sn	10 14 11.5	-0.3
KNOS	**Konyrlen**	3.00	35	Pg	Pg	10 13 44.2	-1.9
	2.4nm,0.2s						
KNOS				Lg	Lg	10 14 23.5	
	10.0nm,0.2s						
KTMS	**Ketmen**	3.04	59	Pg	Pb	10 13 44.3	+0.8
	1.0nm,0.2s						
KTMS				Lg	Lg	10 14 23.7	
	9.4nm,0.2s						
KTMS	**Ketmen**	3.04	59	*e*P	Pb	10 13 44.3	+0.8
	1.0nm,0.2s						
KTMS				*e*S	Sg	10 14 23.7	-2.6
	9.4nm,0.2s						
SFK	**Sufi-Kurgan**	3.13	234	⇑*i*P	Pn	10 13 39.5	+0.3
SFK				⇑*i*S	Sn	10 14 16.7	-0.6
MNAS	**Manas**	3.23	282	⇑*i*P	Pn	10 13 41.1	+0.6
MNAS				⇑*i*S	Sn	10 14 19.7	0.0
ARK	**Arkit**	3.61	270	⇑*i*P	Pn	10 13 46.2	+0.6
ARK				⇑*i*S	Sn	10 14 28.4	-0.4
BTLS	**Baital**	3.71	328	Pg	Pb	10 13 55.0	+0.3
	8.8nm,0.3s						
BTLS				Lg	Lg	10 14 42.1	
	10nm,0.4s						
BTLS	**Baital**	3.71	328	*e*P	Pb	10 13 55.0	+0.3
	8.8nm,0.3s						
BTLS				*e*S	Sb	10 14 42.1	+1.9
	10nm,0.4s						
KAPS	**Kapalarasan**	3.85	28	Pg	Pb	10 13 58.9	+1.6
	1.3nm,0.1s						
KAPS				Lg	Lg	10 14 48.6	
	10nm,0.2s						
KK31	**Karatay Array**	4.79	286	⇑Pg	Pg	10 14 16.8	-3.6
	1.1nm,0.7s,baz=95,slow=17,SNR=4.5						
KK31				⇑Lg	Lg	10 15 19.6	
	0.8nm,0.3s,baz=107,slow=28,SNR=6.4						
BRLS	**Borolday**	5.26	285	Pg	Pg	10 14 27.9	-1.6
	0.4nm,0.1s						
BRLS				Lg	Lg	10 15 38.3	
	1.0nm,0.2s						
BRLS	**Borolday**	5.26	285	*e*P	Pg	10 14 27.9	-1.6
	0.4nm,0.1s						
BRLS				*e*S	Sg	10 15 38.3	+0.7
	1.0nm,0.2s						
MK31	**Makanchi Array**	6.27	37	⇑Pg	Pg	10 14 46.7	-2.0
	1.0nm,0.8s						
MK31				⇑Lg	Lg	10 16 09.9	
	0.4nm,0.5s,baz=217,slow=28,SNR=4.0						

*NEIC **23** 10:19:52.9±0.9, 10°.7S±0°.1×166°.0E±0°.2, h143^{km}±9^{km}, mb4.5/10, Error ellipse: s-maj=26.2km s-min=14.1km az=80.0*
*IDC **23** 10:19:56.8±5.2, 10°.66S×165°.85E, h182^{km}±48^{km}, mb3.4/7, mbtmp3.9/8, Error ellipse: s-maj=31.5km s-min=24.3km az=162.0*

ISC 23 10:19:52.9±1.0**, 10°.77S**±0°.09×**166°.0E**±0°.2**, h150^{km}, n26, σ1^{s}.28**/23**, mb4.0**/11**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	4.80	166		Pn	10 21 04.8	+1.2
SANVU				Sn	Sn	10 21 57.6	-1.3
DZM	**Mont Dzumac**	11.25	178	P	P	10 22 34.3	-3.3
	4.4nm,0.4s,baz=247,slow=15						
DZM				S	Sn	10 24 34.0	+0.1
	6.6nm,0.7s,baz=308,slow=21,SNR=6.1						
DZM	**Mont Dzumac**	11.25	178		Pn	10 22 31.7	+2.3
DZM				Sn	Sn	10 24 32.1	-1.7
CTA	**Charters Tower**	21.13	242	P	P	10 24 26.9	+0.8
	5.3nm,0.8s,baz=65,slow=12,SNR=4.0						
	5.3nm,0.8s						
CTAO	**Charters Tower**	21.13	242	P	P	10 24 25.9	-0.1
CTAO				IAmb	IAmb	10 24 53.9	
	comp=Z,22nm,1.5s						
H11S2	**WAKE ISLAND Hy**	29.08	1	T	T	10 56 26.4	
	baz=181,slow=76,SNR=4.6						
H11S3	**WAKE ISLAND Hy**	29.09	1	T	T	10 56 31.9	
	baz=181,slow=76,SNR=4.1						
H11S1	**WAKE ISLAND Hy**	29.10	1	T	T	10 56 27.8	
	baz=181,slow=76,SNR=4.8						

RTZ	Ruatahuna	29.42	162	P	P	10 25 43.7	+1.3
BKZ	Black Stump Fm	29.79	163	P	P	10 25 46.9	+1.3
BKZ				IAmb	IAmb	10 26 13.7	
	comp=Z,31nm,1.4s						
H11N1	WAKE ISLAND Hy	30.30	2	T	T	10 57 58.1	
	baz=182,slow=76,SNR=6.7						
H11N3	WAKE ISLAND Hy	30.31	2	T	T	10 57 58.4	
	baz=182,slow=76,SNR=5.6						
H11N2	WAKE ISLAND Hy	30.32	2	T	T	10 57 59.4	
	baz=182,slow=76,SNR=5.0						
MRZ	Mangatainoka R	30.96	166	P	P	10 25 57.1	+1.3
BFZ	Birch Farm	31.14	165	P	P	10 25 58.4	+1.0
BFZ				IAmb	IAmb	10 26 03.2	
	comp=Z,38nm,1.2s						
MSWZ	Moikau Station	31.60	167	P	P	10 26 02.4	+1.0
WR8	Warramunga Arr	31.65	249	P	P	10 26 02.4	+0.3
WR8				IAmb	IAmb	10 26 03.4	
	comp=Z,3.3nm,1.1s						
WB0	Warramunga Arr	31.71	250	P	P	10 26 03.0	+0.4
WRA	Warramunga Arr	31.79	250	P	P	10 26 03.6	+0.2
	comp=Z,0.9nm,0.7s,baz=84,slow=9.2,SNR=5.3						
	comp=Z,0.9nm,0.7s						
ASAR	Alice Springs	33.12	243	P	P	10 26 15.0	0.0
	comp=Z,0.5nm,0.8s,baz=61,slow=10,SNR=7.4						
ASAR				PcP	PcP	10 28 55.0	+0.1
	comp=Z,0.4nm,0.7s,baz=68,slow=3.0,SNR=5.5						
	comp=Z,0.5nm,0.8s						
KNRA	Kununurra	36.52	258	P	P	10 26 43.9	-0.3
KNRA				IAmb	IAmb	10 26 56.1	
	comp=Z,29nm,1.4s						
FITZ	Fitzroy Crossi	39.67	255	P	P	10 27 10.8	+0.3
	comp=Z,1.9nm,0.6s,baz=76,slow=7.2,SNR=9.8						
	comp=Z,1.9nm,0.6s						
QSPA	South Pole Qui	79.23	180	P	P	10 31 42.1	+0.8
	comp=Z,1.3nm,0.7s,baz=29,slow=0.8,SNR=6.1						
	comp=Z,1.3nm,0.7s						
QSPA	South Pole Qui	79.23	180	IAmb	IAmb	10 31 49.6	
	comp=Z,5.8nm,1.4s						
ILAR	Eielson Array	83.18	18	P	P	10 32 01.8	0.0
	comp=Z,0.8nm,0.7s,baz=237,slow=5.3,SNR=17						
	comp=Z,0.8nm,0.7s						
MKAR	Makanchi Array	93.48	317	P	P	10 32 50.0	-1.5
	comp=Z,0.5nm,0.8s,baz=99,slow=4.7,SNR=2.7						
	comp=Z,0.5nm,0.8s						

*IDC **23** 10:30:22.6±1.8, 8°.84S×123°.62E, h0^{km}, mb3.4/1, mbtmp3.3/4, ML3.3/3, Error ellipse: s-maj=134.7km s-min=27.2km az=63.0*
*DJA **23** 10:30:33.6±0.4, 9°S±3°×12°3E±°, h115^{km}±5^{km}, M3.5/13, mB4.7/1, mb3.7/4, MLv3.4/13, Mw(mB)4.0/1*
ISC 23 10:30:34.0±1.0, **9°.39S**±0°.09×**123°.33E**±0°.09, **h100**^{km}, **n14,** σ**2**^{s}.**19**/17, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	0.87	158	P	Pn	10 30 55.4	+2.3
BATI				S	Sn	10 31 11.9	+4.4
SOEI	Soe	0.99	111	P	Pn	10 30 56.0	+1.6
SOEI				S	Sn	10 31 11.9	+2.1
MMRI	Maumere	1.32	305	P	Pn	10 30 58.5	+0.5
EDFI	Ende, Flores	1.74	291	P	Pn	10 31 03.8	+0.4
BASI	Baing, Sumba	2.83	253	P	Pn	10 31 19.8	+2.3
LBFI	Labuhan Bajo,	3.52	285	P	Pn	10 31 28.1	+1.4
WBSI	Waikabubak, Su	3.89	266	P	Pn	10 31 32.5	+0.7
DBNI	Kabupaten Domp	5.04	280	P	Pn	10 31 48.3	+1.1
	0.0nm4.6nm,0.6s						
PLAI	Plampang	5.51	275	P	Pn	10 31 54.9	+1.2
	23nm,1.0s						
TWSI	Taliwang, Sumb	6.40	275	P	Pn	10 32 06.5	+0.7
	872nm14nm,1.6s						
FITZ	Fitzroy Crossi	8.94	166	Pn	Pn	10 32 40.0	-0.3
	0.2nm,0.3s,baz=357,slow=11,SNR=7.8						
FITZ				Sn	Sn	10 34 14.8	-4.5
	2.6nm,0.3s,baz=284,slow=7.0,SNR=20						
	0.5nm,0.3s						
WRA	Warramunga Arr	14.94	136	Pn	Pn	10 33 58.2	-1.8
	0.2nm,0.3s,baz=310,slow=10,SNR=6.2						
WRA				Sn	Sn	10 36 33.4	-12
	0.3nm,0.3s,baz=316,slow=9.4,SNR=8.7						
	0.4nm,1.0s						
ASAR	Alice Springs	17.43	146	P	P	10 34 30.7	0.0
	0.1nm,0.3s,baz=325,slow=12,SNR=9.3						
ASAR				S	Sn	10 37 35.1	-10
	0.3nm,0.5s,baz=317,slow=23,SNR=7.3						
	0.3nm,0.5s						
MKAR	Makanchi Array	66.82	331	P	P	10 41 14.2	-0.9
	0.2nm,0.4s,baz=143,slow=7.0,SNR=5.0						
	0.2nm,0.4s						

*IDC **23** 10:43:00.2±1.0, 19°.26N×67°.19W, h0^{km}, mb3.5/6, mbtmp3.5/7, ML2.8/1, MS2.9/1, Error ellipse: s-maj=29.3km s-min=16.9km az=49.0*
*SDD **23** 10:43:02.2±1.7, 19°.26N×67°.24W, h20^{km}±159^{km}, MD3.8, ML3.7, MW4.1, Presumed earthquake*
*OSPL **23** 10:43:02.2±0.7, 19°.24N×67°.42W, h15^{km}±4^{km}, ML3.5, Presumed earthquake*
*NEIC **23** 10:43:03.2±1.4, 19°.11N±0°.03×67°.18W±0°.03, h14^{km}±6^{km}, ML3.7/24, Md4.0/13(RSPR), Error ellipse: s-maj=4.8km s-min=4.0km az=108.0*
*RSPR **23** 10:43:04.2, 19°.23N×67°.22W, h40^{km}±10^{km}, MD4.0/13*
ISC 23 10:43:02.9±0.7, **19°.17N**±0°.05×**67°.21W**±0°.03, **h20**^{km}±5^{km}, **n73,** σ**1**^{s}.**06**/89, **mb3.6**/5, **15C-12D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	0.70	172		Pb	10 43 17.0	+0.4
AGPR				IAML		10 43 28.9	
	4µm,0.8s						
AGPR				IAML		10 43 30.6	
	4µm,0.6s						
AGPR	Aguadilla, PR	0.70	172	⇓eP	Pb	10 43 16.8	+0.2
AGPR	Aguadilla, PR	0.70	172	eS	Sn	10 43 27.5	-0.5
AGPR	Aguadilla, PR	0.70	172	⇑ePg	Pb	10 43 17.0	+0.4
AGPR				⇑eSg	Sb	10 43 26.6	+0.8
AGPR				IAML		10 43 32.7	
	comp=N,4µm,0.6s						
AGPR	Aguadilla, PR	0.70	172	i P	Pb	10 43 16.9	+0.4
AGPR				eS	Sn	10 43 27.6	-0.5
AGPR				IAML		10 43 28.7	
	comp=Z,2µm,0.8s						
IDE	Isla Desecheo	0.82	198		Pb	10 43 18.8	+0.3
IDE					Sn	10 43 31.0	+0.2
IDE	Isla Desecheo	0.82	198	⇑eP	Pb	10 43 18.8	+0.3
IDE	Isla Desecheo	0.82	198	eS	Sn	10 43 31.0	+0.2
AOPR	Arecibo Observ	0.93	152		Pb	10 43 19.9	-0.5
AOPR					Sn	10 43 33.9	+0.4
AOPR	Arecibo Observ	0.93	152	IAML		10 43 43.4	
	comp=N,3µm,0.4s						
AOPR				IAML		10 43 44.8	
	comp=E,5µm,0.4s						
AOPR	Arecibo Observ	0.93	152	⇓eP	Pb	10 43 19.9	-0.5
AOPR	Arecibo Observ	0.93	152	eS	Sn	10 43 33.9	+0.4
AOPR	Arecibo Observ	0.93	152	⇑ePg	Pb	10 43 20.1	-0.2
AOPR				⇑eSg	Sn	10 43 33.5	0.0
AOPR				IAML		10 43 34.7	
	comp=N,2µm,0.3s						
EMPR	Esperanza - Ma	0.94	137		Pn	10 43 21.3	+0.3
EMPR					Sb	10 43 32.8	+0.1
EMPR	Esperanza - Ma	0.94	137	IAML		10 43 44.8	
	comp=N,2µm,0.6s						
EMPR				IAML		10 43 45.3	
	comp=N,2µm,0.7s						
EMPR	Esperanza - Ma	0.94	137	⇓eP	Pn	10 43 21.3	+0.3
EMPR	Esperanza - Ma	0.94	137	eS	Sb	10 43 32.8	+0.1
PRSN	Puerto Rico Se	0.95	176		Pb	10 43 20.5	-0.2
PRSN					Sn	10 43 33.9	-0.1
PRSN	Puerto Rico Se	0.95	176	⇓eP	Pb	10 43 20.5	-0.2
PRSN	Puerto Rico Se	0.95	176	eS	Sn	10 43 33.9	-0.1
LSP	Las Mesas	1.00	173		Pb	10 43 21.4	-0.2
LSP					Sn	10 43 35.0	-0.3
LSP	Las Mesas	1.00	173	⇑eP	Pb	10 43 21.4	-0.2
LSP	Las Mesas	1.00	173	eS	Sn	10 43 35.0	-0.3
CRPR	Cabo Rojo, PR	1.16	175		Pn	10 43 23.9	-0.1
CRPR					Sb	10 43 38.1	-0.8
CRPR	Cabo Rojo, PR	1.16	175	IAML		10 43 43.3	
	comp=N,2µm,0.7s						
CRPR				IAML		10 43 47.0	
	comp=N,1µm,0.7s						
CRPR	Cabo Rojo, PR	1.16	175	⇑eP	Pn	10 43 23.9	-0.1
CRPR	Cabo Rojo, PR	1.16	175	eS	Sb	10 43 38.1	-0.8
CRPR	Cabo Rojo, PR	1.16	175	⇑ePg	Pn	10 43 23.9	-0.1
CRPR				⇑eSg	Sn	10 43 39.5	+0.2
CRPR				IAML		10 43 42.2	
	comp=N,2µm,0.5s						
CRPR	Cabo Rojo, PR	1.16	175	i P	Pn	10 43 24.0	-0.1
CRPR				eS	Sn	10 43 39.3	+0.1
CRPR				IAML		10 43 42.3	
	comp=Z,2µm,0.3s						
ECPR	Experimental S	1.17	136	⇓eP	Pn	10 43 23.5	-0.6
ECPR	Experimental S	1.17	136	eS	Sb	10 43 38.0	-1.1
MLPR	Magueyes Islan	1.21	172	⇓eP	Pn	10 43 24.4	-0.2
MLPR	Magueyes Islan	1.21	172	eS	Sb	10 43 40.3	+0.1
GBPR	Guanica, Bosqu	1.23	165		Pn	10 43 24.5	-0.4
GBPR	Guanica, Bosqu	1.23	165	⇓eP	Pn	10 43 24.5	-0.4
OBIP	Obispado Ponce	1.26	153		Pn	10 43 25.0	-0.4
OBIP					Sn	10 43 41.0	-0.7
OBIP	Obispado Ponce	1.26	153	IAML		10 43 47.3	
	comp=E,1µm,0.7s						
OBIP				IAML		10 43 48.4	
	comp=N,1µm,0.9s						
OBIP	Obispado Ponce	1.26	153	⇓eP	Pn	10 43 25.0	-0.4
OBIP	Obispado Ponce	1.26	153	eS	Sn	10 43 41.0	-0.7
GCPR	Guaynabo City	1.37	129		Pn	10 43 26.2	-0.7
GCPR					Sn	10 43 44.1	-0.3
GCPR	Guaynabo City	1.37	129	⇑eP	Pn	10 43 26.2	-0.7
GCPR	Guaynabo City	1.37	129	eS	Sn	10 43 44.1	-0.3
SJG	San Juan	1.46	136	Pn	Pn	10 43 28.5	+0.4
	comp=N,76nm,0.3s,baz=303,slow=11,SNR=34						
SJG				Sn	Sb	10 43 49.3	+1.8
	comp=N,62nm,0.3s,baz=106,slow=22,SNR=5.3						
SJG				LR	LR	10 44 19.3	
	comp=N,413nm,20.1s,baz=307,slow=53						
SJG	San Juan	1.46	136		Pn	10 43 27.9	-0.2
SJG	San Juan	1.46	136	IAML		10 43 53.2	
	comp=N,660nm,0.6s						
SJG				IAML		10 43 54.4	
	comp=N,591nm,0.7s						
SJG	San Juan	1.46	136	⇓eP	Pn	10 43 27.9	-0.2
SJG	San Juan	1.46	136	eS	Sn	10 43 45.0	-1.6
SJG	San Juan	1.46	136	i P	Pn	10 43 28.6	+0.4
SJG				eS	Sb	10 43 49.0	+1.6
SJG				IAML		10 44 05.9	
	comp=Z,422nm,1.4s						
HIDR	Higuey Centro	1.54	248	⇑ePg	Pn	10 43 29.3	+0.1
HIDR				⇑eSg	Sn	10 43 49.2	+0.6
HIDR				IAML		10 44 01.9	
	comp=N,1µm,0.2s						
HUMP	Col San Antoni	1.65	128		Pn	10 43 30.6	-0.1
HUMP					Sn	10 43 50.8	-0.5
HUMP	Col San Antoni	1.65	128	⇓eP	Pn	10 43 30.6	-0.1
HUMP	Col San Antoni	1.65	128	eS	Sn	10 43 50.8	-0.5
MIDR	Miches	1.75	264	⇑ePg	Pn	10 43 31.9	-0.1
MIDR				⇓eSg	Sn	10 43 53.0	-0.7
MIDR				IAML		10 44 08.4	
	comp=N,502nm,0.4s						
SMDR	Samana, DR	1.87	274	⇓eP	Pn	10 43 32.6	-1.2
DR12	Loma Pena Alta	2.09	260		Pn	10 43 37.1	+0.3
HATOM	Hato Mayor del	2.09	260	⇑ePg	Pn	10 43 37.2	+0.4
HATOM				⇑eSg	Sb	10 44 05.6	-0.1
HATOM				IAML		10 44 15.4	
	comp=N,439nm,0.8s						
SDD	Santo Domingo	2.66	255		Pn	10 43 45.8	+1.3
SDD				IAML		10 44 32.2	
	comp=E,392nm,0.8s						
SDD				IAML		10 44 38.9	
	comp=N,286nm,0.7s						
SC01	Santiago de lo	3.33	275		Pn	10 43 56.3	+2.4
SDDR	Presa de Saban	3.86	268		Pn	10 44 02.7	+1.5
SDDR	Presa de Saban	3.86	268	i P	Pn	10 44 01.9	+0.7
SDDR				eS	Sb	10 44 56.6	-0.1
MASC	Masc	6.69	280	i P	Pn	10 44 40.6	+0.6
MASC				IAmb	IAmb	10 45 03.4	
	comp=Z,59nm,1.6s						
QMBU	Quimbuelo	7.23	279	i P	Pn	10 44 43.3	-4.3
GTBY	Guantanamo Bay	7.49	277	eP	Pn	10 44 50.3	-0.7
GTBY				IAmb	IAmb	10 45 12.6	
	comp=Z,60nm,1.2s						
RCC	Rio Carpintero	8.04	277	i P	Pn	10 44 57.5	-1.1
RCC				IAmb	IAmb	10 45 20.3	
	comp=Z,12nm,1.2s						
PINC	Pinares de May	8.18	281	i P	Pn	10 44 56.1	-4.4
PINC				IAmb	IAmb	10 45 04.1	
	comp=Z,12nm,1.4s						
SDV	Santo Domingo	10.75	198	Pn	Pn	10 45 38.2	+2.2
	comp=Z,0.8nm,0.3s,baz=355,slow=14,SNR=4.1						
SDV				Sn	Sn	10 47 32.0	-3.8
	comp=Z,0.4nm,0.3s,baz=32,slow=20,SNR=1.9						
SDV				LR	LR	10 50 29.1	
	comp=Z,58nm,19.0s,baz=308,slow=41						
	comp=Z,1.0nm,0.3s						
RUSC	La Rusia	14.38	204		Pn	10 46 26.2	+0.3
TXAR	Lajitas Array	34.62	294	P	P	10 49 50.7	-0.3
	comp=Z,0.5nm,0.8s,baz=106,slow=11,SNR=7.8						
	comp=Z,0.5nm,0.8s						
SIV	San Ignacio	35.46	170	P	P	10 49 59.5	+1.3
	comp=Z,3.3nm,0.7s,baz=6.9,slow=8.6,SNR=4.3						
	comp=Z,3.3nm,0.7s						
NVAR	Mina Array Bea	48.06	305	P	P	10 51 40.8	-0.6
	comp=Z,0.2nm,0.3s,baz=68,slow=5.7,SNR=1.9						
	comp=Z,0.2nm,0.3s						
YKA	Yellowknife Ar	54.11	335	P	P	10 52 27.1	+1.0
	comp=Z,0.1nm,0.5s,baz=123,slow=6.3,SNR=1.6						
	comp=Z,0.1nm,0.5s						
ESDC	Sonseca Array	57.59	55	P	P	10 52 52.3	+0.7
	comp=Z,0.5nm,0.8s,baz=278,slow=8.1,SNR=4.2						
	comp=Z,0.5nm,0.8s						
TORD	Torodi Ar. Bea	66.10	84	P	P	10 53 48.4	-0.8
	comp=Z,0.7nm,0.9s,baz=292,slow=5.9,SNR=2.0						
	comp=Z,0.7nm,0.9s						

*IDC **23** 10:43:04.2±0.6, 17°.64S×173°.81W, h0^{km}, mb4.1/10, mbtmp4.1/11, ML3.4/1, MS4.0/47, Error ellipse: s-maj=29.8km s-min=16.7km az=141.0*
*NEIC **23** 10:43:05.6±1.4, 17°.92S±0°.08×173°.51W±0°.05, h10^{km}±1^{km}, mb4.6/17, Error ellipse: s-maj=15.0km s-min=6.7km az=334.0*
*GCMT **23** 10:43:12.6±0.4, 17°.83S±0°.03×173°.17W±0°.03, h45^{km}±1^{km}, MW4.9/59, Moment Tensor Solution. s27,c34; s59,c74; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.44±.21; M$_{\theta\theta}$0.56±.16; M$_{\phi\phi}$-2.99±.13; M$_{r\theta}$0.55±.12; M$_{\theta\phi}$-0.60±.09; M$_{\phi r}$1.35±.10; Best double couple: M$_0$3.13200×10^{16} NP1:φ$_s$180.00000°,δ32.00000°,λ76.00000°. NP2: φ$_s$17.00000°,δ59.00000°,λ99.00000°. Principal axes: T 2.8280, Plg74.0000°, Azm311.0000°; N 0.6120, Plg8.0000°, Azm192.0000°; P -3.4350, Plg14.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 23 10:43:09.3±0.5, **17°.78S**±0°.08×**173°.03W**±0°.07, **h26**^{km}, **n121,** σ**2**^{s}.**20**/66, **mb4.6**/17, **MS4.1**/45, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	3.22	114		Pn	10 43 59.4	+1.2
NIUE	Niue	3.22	114	P	Pn	10 43 58.8	+0.6
NIUE				S	Sn	10 44 36.1	+0.4
AFI	Afiamalu	4.03	18		Pn	10 44 09.8	+0.3
MSVF	Nonsavu	8.50	269	Pn	Pn	10 45 01.8	-9.1
RAR	Rarotonga	12.96	107	Pn	Pn	10 46 12.8	+0.9
	6.5nm,0.3s,baz=156,slow=4.8,SNR=8.7						
RAR				Sn	Sn	10 48 30.0	-5.3
	0.9nm,0.3s,baz=179,slow=9.7,SNR=1.2						
RAR				LR	LR	10 50 23.5	
	comp=Z,495nm,19.8s,baz=276,slow=32						
DZM	Mont Dzumac	19.76	254	P	P	10 47 29.5	-8.0
	0.1nm,0.3s,baz=66,slow=16,SNR=2.6						
DZM				LR	LR	10 53 52.6	
	comp=Z,963nm,21.3s,baz=88,slow=34						
	9.9nm,1.1s						
DZM	Mont Dzumac	19.76	254	eP	Pn	10 47 39.8	+0.7
	142nm,30.9s						
DZM				eS	Sn	10 51 26.0	+5.4
	975nm,24.6s						
DZM				eLR	LR	10 52 35.5	
	2µm,24.9s						
MXZ	Matakaoa Point	21.13	199	P	P	10 47 52.6	+0.5
WCZ	Waipu Caves	21.27	209	P	P	10 47 52.4	-1.3
WMGZ	Waiomatatini S	21.33	199	P	P	10 47 56.4	+2.1
KUZ	Kuaotunu	21.34	205	P	P	10 47 52.1	-2.3
HAZ	Te Kaha	21.47	200	P	P	10 47 54.7	-1.1
PKGZ	Pakihiroa	21.48	200	P	P	10 47 55.2	-0.7
PUZ	Puketiti	21.61	199	P	P	10 47 55.8	-1.6
WIAZ	Waiheke Island	21.63	207	P	P	10 47 56.5	-1.0
RUGZ	Raukumara Rang	21.70	200	P	P	10 47 58.5	+0.2
TWGZ	Tauwhareparae	21.79	199	P	P	10 48 00.8	+1.4
ETAZ	East Tamaki Re	21.85	207	P	P	10 47 58.3	-1.6
MKAZ	Moumakai	21.88	206	P	P	10 47 58.4	-1.8
MWZ	Matawai	22.08	200	P	P	10 48 01.1	-1.3
URZ	Urewera	22.15	201	P	P	10 47 60.0	-3.1
	8.9nm,0.4s,baz=12,slow=15,SNR=20						
URZ				S	S	10 51 51.7	-14
	13nm,1.1s,baz=32,slow=19,SNR=2.0						
URZ				LR	LR	10 53 59.8	
	comp=Z,185nm,20.4s,baz=10,slow=30						
	8.9nm,0.4s						
URZ	Urewera	22.15	201	P	P	10 48 00.1	-3.0
TOZ	Tahuroa Road	22.28	205	P	P	10 47 59.4	-5.1
TOZ	Tahuroa Road	22.28	205	P	P	10 48 02.7	-1.8
PPT2	Papeete2	22.35	93	eP	P	10 47 57.9	-7.6
	116nm,33.5s						
PPT2				eS	S	10 51 58.0	-12
	182nm,26.8s						
PPT2				eS	Sn	10 52 01.5	-21
	442nm,28.0s						
PPT2				eLR	LR	10 53 19.1	
	912nm,27.0s						
PPT2				eLR	LR	10 53 27.0	
	1µm,25.2s						
PPT	Papeete	22.35	93	LR	LR	10 54 31.5	
	comp=Z,384nm,20.6s,baz=252,slow=30						
SNGZ	Shannon Statio	22.55	200	P	P	10 48 07.0	-0.5
TBI	Tubuai	22.74	108	eP	P	10 47 56.0	-14
	426nm,34.0s						
TBI				eS	S	10 52 14.7	-2.2
	620nm,25.5s						
TBI				eLR	LR	10 53 42.6	
	6µm,28.0s						
TBI				eLR	LR	10 53 45.8	
	1µm,21.8s						
MTHZ	Maungataniwha	22.78	201	P	P	10 48 10.5	+0.6
TLZ	Tolley Road	22.78	204	P	P	10 48 09.8	-0.2
BKZ	Black Stump Fm	23.18	201	P	P	10 48 10.8	-3.2
HIZ	Hauiti	23.21	205	P	P	10 48 13.0	-1.3
KWHZ	Kaweka Forest	23.43	201	P	P	10 48 14.9	-1.7
OTVZ	Oturere	23.47	202	P	P	10 48 13.7	-3.3
SNVZ	South Ngauruho	23.50	203	P	P	10 48 15.5	-1.8
KAHZ	Kahuranaki	23.62	200	P	P	10 48 17.7	-0.6
TSZ	Takapari Road	24.16	201	P	P	10 48 23.0	-0.4
BFZ	Birch Farm	24.62	200	P	P	10 48 23.1	-4.5
BFZ	Birch Farm	24.62	200	P	P	10 48 25.3	-2.3
MRZ	Mangatainoka R	24.83	201	P	P	10 48 26.2	-3.2
QRZ	Quartz Range	26.12	205	P	P	10 48 37.4	-3.8
QRZ	Quartz Range	26.12	205	P	P	10 48 39.9	-1.3
KHZ	Kahutara	27.09	202	P	P	10 48 52.3	+2.4
DSZ	Denniston Nort	27.19	205	P	P	10 48 53.6	+2.8
LTZ	Lake Taylor	27.88	204	P	P	10 48 56.1	-1.0
INZ	Inchbonnie	28.15	205	P	P	10 48 54.0	-5.4
INZ	Inchbonnie	28.15	205	P	P	10 49 01.7	+2.3
OXZ	Oxford	28.43	203	P	P	10 49 01.1	-0.8
WVZ	Waitaha Valley	28.73	205	P	P	10 49 02.1	-2.4
TAOE	Nuku Hiva Isla	33.16	79	eS	S	10 54 54.2	-8.1
	76nm,25.7s						
TAOE				eLR	LR	10 58 19.9	
	565nm,25.4s						
RKT	Rikitea	35.98	105	eLR	LR	10 59 41.3	
	3µm,31.2s						
CTA	Charters Tower	38.51	260	LR	LR	11 04 03.9	
	comp=Z,433nm,21.6s,baz=68,slow=33						
CTAO	Charters Tower	38.51	260	P	P	10 50 23.5	-6.3
CTAO				IAmb	IAmb	10 50 58.4	
	comp=Z,13nm,1.2s						
PMG	Port Moresby	39.51	277	LR	LR	11 04 59.4	
	comp=Z,191nm,21.0s,baz=145,slow=34						
COEN	Coen	42.23	269	P	P	10 50 52.8	-7.8
COEN				IAmb	IAmb	10 50 57.9	
	comp=Z,12nm,1.2s						
STKA	Stephens Creek	43.20	242	P	P	10 51 02.3	-6.0
	comp=Z,1.2nm,0.6s,baz=93,slow=6.6,SNR=4.9						
STKA				LR	LR	11 07 32.5	
	comp=Z,163nm,18.5s,baz=49,slow=34						
	comp=Z,1.2nm,0.6s						
STKA	Stephens Creek	43.20	242	IAmb	IAmb	10 51 43.8	
	comp=Z,19nm,1.2s						
JAY	Jayapura	47.83	283	LR	LR	11 10 13.3	
	comp=Z,181nm,21.3s,baz=44,slow=35						
WR8	Warramunga Arr	49.53	259		P	10 51 52.1	-6.2
WB0	Warramunga Arr	49.65	259		P	10 51 53.6	-5.5
WB0				IAmb	IAmb	10 52 05.2	
	comp=Z,3.8nm,0.6s						
WRAB	Tennant Creek	49.67	259	P	P	10 51 52.7	-6.6
WRAB				IAmb	IAmb	10 52 02.6	
	comp=Z,9.8nm,1.4s						
WRA	Warramunga Arr	49.68	259	P	P	10 51 52.2	-7.2
	comp=Z,2.0nm,0.5s,baz=98,slow=7.1,SNR=34						
	comp=Z,2.0nm,0.5s						
WRA	Warramunga Arr	49.68	259	P	P	10 51 52.8	-6.6
AS31	Alice Springs	49.75	254		P	10 51 54.0	-5.9
AS31				IAmb	IAmb	10 52 06.2	
	comp=Z,5.3nm,0.8s						
ASAR	Alice Springs	49.75	254	P	P	10 51 53.0	-6.9
	comp=Z,9.4nm,0.6s,baz=92,slow=8.2,SNR=124						
ASAR				PcP	PcP	10 53 17.9	-2.9
	comp=Z,0.8nm,0.5s,baz=91,slow=4.1,SNR=0.7						
ASAR				S	S	10 58 51.7	-16
	comp=Z,0.4nm,0.8s,baz=95,slow=14,SNR=4.5						
	comp=Z,9.4nm,0.6s						
ASAR	Alice Springs	49.75	254		P	10 51 53.2	-6.7
GUMO	Guam	51.93	304	LR	LR	11 10 49.7	
	comp=Z,86nm,21.2s,baz=130,slow=32						
MTN	Manton Dam	53.92	267	P	P	10 52 25.1	-6.0
MTN				IAmb	IAmb	10 52 40.8	
	comp=Z,9.7nm,1.1s						
KNRA	Kununurra	55.59	263	P	P	10 52 37.4	-5.8
KNRA				IAmb	IAmb	10 53 04.8	
	comp=Z,14nm,1.2s						
FITZ	Fitzroy Crossi	58.09	259	P	P	10 52 55.8	-5.1
	comp=Z,1.7nm,0.4s,baz=92,slow=5.6,SNR=12						
FITZ				LR	LR	11 16 02.3	
	comp=Z,263nm,21.7s,baz=104,slow=34						
	comp=Z,1.7nm,0.4s						
RPN	Rapa Nui	59.08	111	LR	LR	11 12 04.8	
	comp=Z,177nm,18.9s,baz=242,slow=29						
VNDA	Vanda	61.06	186	LR	LR	11 14 23.8	
	comp=Z,48nm,21.1s,baz=0.0,slow=31						
BATI	Baumata	61.65	268	LR	LR	11 21 00.3	
	comp=Z,121nm,18.1s,baz=137,slow=37						
JCJ	Chichijima	62.26	315	LR	LR	11 16 00.7	
	comp=Z,224nm,20.4s,baz=2.0,slow=32						
NWAO	Narrogin (SRO)	63.78	242	LR	LR	11 19 03.9	
	comp=Z,101nm,18.8s,baz=98,slow=34						
DAV	Davao City (W)	65.43	287	LR	LR	11 20 01.3	
	comp=Z,65nm,19.3s,baz=136,slow=34						
JHJ	Hachijo jima 2	67.76	318	LR	LR	11 24 17.7	
	comp=Z,52nm,18.4s,baz=92,slow=37						
MJAR	Matsushiro Arr	70.98	320	LR	LR	11 19 59.8	
	comp=Z,95nm,19.8s,baz=138,slow=32						
SHEM	Shemya Is, Ala	71.09	352	LR	LR	11 17 47.5	
	comp=Z,188nm,21.9s,baz=356,slow=29						
JOW	Kunigami	72.17	307	LR	LR	11 20 05.8	
	comp=Z,147nm,21.1s,baz=60,slow=31						
QSPA	South Pole Qui	72.28	180	P	P	10 54 32.3	-0.1
	comp=Z,4.7nm,1.0s,baz=44,slow=3.1,SNR=6.9						
	comp=Z,4.7nm,1.0s						
QSPA	South Pole Qui	72.28	180		P	10 54 30.3	-2.0
QSPA				IAmb	IAmb	10 54 43.8	
	comp=Z,6.9nm,0.8s						
JNU	Nakatsue	73.68	313	LR	LR	11 20 27.7	
	comp=Z,76nm,20.6s,baz=116,slow=31						
ASAJ	Asahikawa	73.74	328	LR	LR	11 22 02.0	
	comp=Z,102nm,20.8s,baz=166,slow=32						
LPIG	La Paz	73.99	58	LR	LR	11 18 20.7	
	comp=Z,125nm,20.3s,baz=240,slow=28						
PFO	Pinyon Flats O	74.29	46	LR	LR	11 19 60.0	
	comp=Z,99nm,19.9s,baz=231,slow=30						
PETK	Petropavlovsk-	74.99	342	LR	LR	11 19 09.3	
	comp=Z,67nm,21.8s,baz=103,slow=29						
YBH	Yreka Blue Hor	75.28	37	LR	LR	11 20 56.8	
	comp=Z,14nm,19.6s,baz=252,slow=30						
NVAR	Mina Array Bea	75.86	41	P	P	10 54 54.5	+0.7
	comp=Z,0.4nm,0.5s,baz=228,slow=8.9,SNR=5.2						
NVAR				LR	LR	11 20 36.8	
	comp=Z,125nm,20.3s,baz=248,slow=30						
	comp=Z,0.4nm,0.5s						
KDAK	Kodiak Island	77.17	11	LR	LR	11 23 03.0	
	comp=Z,214nm,19.7s,baz=225,slow=31						
KSRS	Korea Array	78.10	316	LR	LR	11 25 58.9	
	comp=Z,38nm,19.5s,baz=110,slow=33						
BBB	Bella Bella	79.85	26	LR	LR	11 24 52.6	
	comp=Z,79nm,19.0s,baz=235,slow=31						
TXAR	Lajitas Array	81.65	56	P	P	10 55 28.2	+2.6
	comp=Z,0.2nm,0.6s,baz=245,slow=5.9,SNR=5.1						

TXAR				LR	LR	11 24 00.8	
	comp=Z,70nm,21.1s,baz=290,slow=30						
	comp=Z,0.2nm,0.6s						
PMSA	Palmer Station	81.87	156	LR	LR	11 30 46.9	
	comp=Z,97nm,18.1s,baz=304,slow=35						
ANMO	Albuquerque	82.06	50	LR	LR	11 24 45.4	
	comp=Z,98nm,19.2s,baz=258,slow=30						
NEW	Newport	82.47	34	LR	LR	11 25 00.2	
	comp=Z,87nm,18.9s,baz=231,slow=30						
MA2	Magadan	82.53	342	LR	LR	11 24 12.6	
	comp=Z,45nm,21.6s,baz=120,slow=30						
PDAR	Pinedale Array	83.80	42	P	P	10 55 38.3	+1.6
	comp=Z,0.5nm,0.5s,baz=208,slow=3.3,SNR=4.2						
PDAR				LR	LR	11 25 27.2	
	comp=Z,63nm,20.0s,baz=277,slow=30						
	comp=Z,0.5nm,0.5s						
CMIG	Matias Romero	84.35	70	LR	LR	11 24 40.9	
	comp=Z,116nm,20.0s,baz=234,slow=29						
ILAR	Eielson Array	84.70	11	P	P	10 55 39.2	-1.2
	comp=Z,0.4nm,0.5s,baz=237,slow=5.9,SNR=17						
	comp=Z,0.4nm,0.5s						
SEY	Seymchan	84.89	345	LR	LR	11 30 02.5	
	comp=Z,64nm,20.1s,baz=132,slow=33						
MAW	Mawson	85.66	199	LR	LR	11 30 48.8	
	comp=Z,116nm,21.3s,baz=123,slow=34						
PSI	Prapat	88.98	273	LR	LR	11 35 16.3	
	comp=Z,96nm,18.7s,baz=155,slow=36						
HILR	Hailar Array B	89.43	323	LR	LR	11 31 34.2	
	comp=Z,78nm,20.7s,baz=50,slow=33						
JTS	Las Juntas de	91.29	80	LR	LR	11 27 18.0	
	comp=Z,85nm,20.8s,baz=256,slow=29						
ATAH	Atahualpa	92.24	98	LR	LR	11 28 43.6	
	comp=Z,101nm,21.9s,baz=255,slow=30						
CMAR	Chiang Mai Arr	93.69	288	LR	LR	11 33 40.6	
	comp=Z,44nm,21.7s,baz=135,slow=33						
ULM	Lac du Bonnet	95.55	39	LR	LR	11 31 30.2	
	comp=Z,141nm,20.7s,baz=252,slow=30						
SONM	Songino Array	96.84	318	LR	LR	11 35 14.0	
	comp=Z,73nm,19.2s,baz=50,slow=32						
TIXI	Tiksi	97.38	344	LR	LR	11 36 49.0	
	comp=Z,54nm,19.8s,baz=22,slow=33						
MKAR	Makanchi Array	112.73	314	PKiKP	PKiKP	11 01 41.1	-2.5
	comp=Z,0.4nm,0.5s,baz=202,slow=1.4,SNR=6.7						
BVAR	Borovoye Array	119.96	321	PKP	PKPdf	11 01 55.5	-1.8
	comp=Z,0.9nm,0.4s,baz=80,slow=1.6,SNR=4.3						
ARCES	ARCESS Array B	127.00	352	PKP	PKPdf	11 02 08.8	-1.6
	comp=Z,6.6nm,1.1s,baz=22,slow=0.9,SNR=5.5						
FINES	FINESS Array B	134.33	347	PKP	PKPdf	11 02 23.9	-0.5
	comp=Z,0.5nm,0.5s,baz=43,slow=6.5,SNR=5.1						
BRTR	Keskin Array B	148.19	319	PKPbc	PKPdf	11 02 49.2	-0.9
	comp=Z,1.1nm,0.7s,baz=99,slow=1.5,SNR=5.0						
GERES	GERESS Array B	148.53	351	PKPbc	PKPdf	11 02 53.2	+2.9
	comp=Z,1.1nm,0.9s,baz=34,slow=5.6,SNR=3.9						
CONA	Conrad Observa	149.06	348	ePKiKP	PKPbc	11 02 55.6	+0.3
	comp=Z,1.2nm,1.1s						
RONA	Rosalia, Austr	149.19	348	i PKiKP	PKPbc	11 02 56.0	+0.4
	comp=Z,3.7nm,0.7s						
ARSA	Arzberg	149.78	348	ePKiKP	PKPbc	11 02 56.7	-0.2
	comp=Z,2.7nm,0.7s						
MMAI	Mount Meron Ar	150.29	306	PKPbc	PKPdf	11 02 55.3	+1.7
	comp=Z,1.1nm,0.3s,baz=104,slow=4.6,SNR=1.7						
TORD	Torodi Ar. Bea	173.14	131	PKP	PKPdf	11 03 15.1	-2.1
	comp=Z,0.8nm,0.9s,baz=318,slow=1.8,SNR=3.7						
TORD				PKPab	PKPab	11 04 46.3	+1.7
	comp=Z,0.4nm,0.7s,baz=258,slow=2.4,SNR=1.9						

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*NEIC **23** 10:48:41.9±1.3, 19°.16N±0°.04×67°.14W±0°.03, h10^{km}±2^{km}, ML3.5/16, Md3.4/12(RSPR), Error ellipse: s-maj=6.4km s-min=4.7km az=18.0*

*SDD **23** 10:48:41.3±1.9, 19°.28N×67°.18W, h18^{km}±82^{km}, MD3.8, ML3.6, MW3.9, Presumed earthquake*

*OSPL **23** 10:48:42.6±1.2, 19°.26N×67°.14W, h18^{km}±7^{km}, ML3.4, Presumed earthquake*

*RSPR **23** 10:48:42.7, 19°.25N×67°.25W, h9^{km}±7^{km}, MD3.4/12*

ISC 23 10:48:37.9±1.4**, 19°.33N**±0°.05×**67°.21W**±0°.03**, h12**^{km}±9^{km}**, n61, σ1^{s}.09**/79**, 19C-7D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.86	174		Pn	10 48 56.2	+0.3
AGPR	Aguadilla, PR	0.86	174	⇓eP	Pn	10 48 56.3	+0.4
AGPR	Aguadilla, PR	0.86	174	eS	Sb	10 49 07.1	+0.8
AGPR	Aguadilla, PR	0.86	174	⇑ePg	Pn	10 48 56.4	+0.4
AGPR				⇑eSg	Sb	10 49 06.5	+0.3
AGPR				IAML		10 49 10.8	
	comp=N,2μm,0.3s						
AGPR	Aguadilla, PR	0.86	174	i P	Pn	10 48 56.1	+0.3
AGPR				eS	Sb	10 49 07.2	+1.0
AGPR				IAML		10 49 08.7	
	comp=Z,1μm,0.2s						
IDE	Isla Desecheo	0.97	195		Pn	10 48 58.2	+0.8
IDE					Sb	10 49 10.0	+0.6
IDE	Isla Desecheo	0.97	195	⇑eP	Pn	10 48 58.2	+0.8
IDE	Isla Desecheo	0.97	195	eS	Sb	10 49 10.0	+0.6
EMPR	Esperanza - Ma	1.06	143		Pn	10 49 00.9	+2.2
EMPR					Sn	10 49 13.1	-0.3
EMPR	Esperanza - Ma	1.06	143	⇑eP	Pn	10 49 00.9	+2.2
EMPR	Esperanza - Ma	1.06	143	eS	Sn	10 49 13.1	-0.3
AOPR	Arecibo Observ	1.06	156		Pn	10 48 59.3	+0.6
AOPR					Sg	10 49 10.6	-1.7
AOPR	Arecibo Observ	1.06	156	⇓eP	Pn	10 48 59.3	+0.6
AOPR	Arecibo Observ	1.06	156	eS	Sg	10 49 10.6	-1.7
AOPR	Arecibo Observ	1.06	156	⇓ePg	Pn	10 48 59.3	+0.6
AOPR				⇑eSg	Sb	10 49 12.4	+0.1
AOPR				IAML		10 49 25.9	
	comp=N,2μm,0.3s						
PRSN	Puerto Rico Se	1.10	177		Pn	10 48 59.9	+0.7
PRSN					Sg	10 49 13.8	+0.3
PRSN	Puerto Rico Se	1.10	177	⇓eP	Pn	10 48 59.9	+0.7
PRSN	Puerto Rico Se	1.10	177	eS	Sg	10 49 13.8	+0.3
LSP	Las Mesas	1.15	174		Pg	10 49 00.8	+0.8
LSP	Las Mesas	1.15	174	⇑eP	Pg	10 49 00.8	+0.8
ECPR	Experimental S	1.28	141	⇑eP	Pg	10 49 03.0	+0.4
ECPR	Experimental S	1.28	141	eS	Sn	10 49 18.9	0.0
CRPR	Cabo Rojo, PR	1.32	176		Pg	10 49 03.2	0.0
CRPR					Sb	10 49 19.2	-0.3
CRPR	Cabo Rojo, PR	1.32	176	IAML		10 49 21.3	
	comp=E,1μm,0.9s						
CRPR				IAML		10 49 29.2	
	comp=N,1μm,0.7s						
CRPR	Cabo Rojo, PR	1.32	176	⇓eP	Pg	10 49 03.2	0.0
CRPR	Cabo Rojo, PR	1.32	176	eS	Sb	10 49 19.2	-0.3
CRPR	Cabo Rojo, PR	1.32	176	⇑ePg	Pg	10 49 03.3	0.0
CRPR				⇑eSg	Sb	10 49 19.4	0.0
CRPR				IAML		10 49 29.0	
	comp=N,1μm,0.8s						
CRPR	Cabo Rojo, PR	1.32	176	i P	Pg	10 49 03.2	-0.1
CRPR				eS	Sb	10 49 19.1	-0.3
CRPR				IAML		10 49 22.5	
	comp=Z,978nm,0.3s						
MLPR	Magueyes Islan	1.36	173	⇓eP	Pg	10 49 03.8	-0.3
MLPR	Magueyes Islan	1.36	173	eS	Sb	10 49 20.3	-0.4
GBPR	Guanica, Bosqu	1.38	167		Pg	10 49 04.2	-0.2
GBPR					Sn	10 49 20.9	-0.3
GBPR	Guanica, Bosqu	1.38	167	⇑eP	Pg	10 49 04.2	-0.2
GBPR	Guanica, Bosqu	1.38	167	eS	Sn	10 49 20.9	-0.3
OBIP	Obispado Ponce	1.40	156		Pg	10 49 04.5	-0.3
OBIP					Sb	10 49 22.0	+0.2
OBIP	Obispado Ponce	1.40	156	IAML		10 49 26.7	
	comp=E,906nm,0.6s						
OBIP				IAML		10 49 27.0	
	comp=N,1μm,0.6s						
OBIP	Obispado Ponce	1.40	156	⇓eP	Pg	10 49 04.5	-0.3
OBIP	Obispado Ponce	1.40	156	eS	Sb	10 49 22.0	+0.2
GCPR	Guaynabo City	1.47	133		Pg	10 49 06.0	-0.2
GCPR					Sg	10 49 24.5	-0.7
GCPR	Guaynabo City	1.47	133	⇑eP	Pg	10 49 06.0	-0.2
GCPR	Guaynabo City	1.47	133	eS	Sg	10 49 24.5	-0.7
SJG	San Juan	1.57	140		Pg	10 49 07.7	-0.3
SJG	San Juan	1.57	140	IAML		10 49 36.9	
	comp=N,644nm,0.7s						
SJG	San Juan	1.57	140	⇑eP	Pg	10 49 07.7	-0.3
SJG	San Juan	1.57	140	eS	Sn	10 49 26.2	+0.3
SJG	San Juan	1.57	140	i P	Pg	10 49 07.6	-0.5
SJG				eS	Sn	10 49 24.1	-1.8
SJG				IAML		10 49 41.0	
	comp=Z,487nm,0.4s						
HIDR	Higuey Centro	1.60	243	⇑ePg	Pg	10 49 08.6	-0.1
HIDR				⇑eSg	Sg	10 49 29.1	-0.5
HIDR				IAML		10 49 39.5	
	comp=N,728nm,0.7s						
HUMP	Col San Antoni	1.75	132		Pb	10 49 09.9	0.0
HUMP					Sn	10 49 30.8	+0.6
HUMP	Col San Antoni	1.75	132	IAML		10 49 39.5	
	comp=E,544nm,0.4s						
HUMP	Col San Antoni	1.75	132	⇑eP	Pb	10 49 09.9	0.0
HUMP	Col San Antoni	1.75	132	eS	Sn	10 49 30.8	+0.6
MIDR	Miches	1.77	259	⇑ePg	Pg	10 49 13.0	+1.1
MIDR				⇑eSg	Sg	10 49 36.4	+1.5
MIDR				IAML		10 49 43.2	
	comp=N,246nm,0.4s						
DR12	Loma Pena Alta	2.12	256		Pb	10 49 16.6	+0.2
HATOM	Hato Mayor del	2.12	256	⇑ePg	Pb	10 49 16.6	+0.2
HATOM				⇑eSg	Sg	10 49 45.7	-0.5
HATOM				IAML		10 49 55.7	
	comp=N,283nm,0.7s						
SDD	Santo Domingo	2.70	252		Pb	10 49 26.3	+0.1
SDD				IAML		10 50 22.0	
	comp=N,175nm,1.3s						
SDD				IAML		10 50 23.7	
	comp=E,171nm,1.4s						
SDDR	Presa de Saban	3.87	266		Pn	10 49 41.7	+4.4
SDDR	Presa de Saban	3.87	266	i P	Pg	10 49 49.6	-2.5
MASC	Masc	6.67	278	i P	Pn	10 50 16.5	+0.7
MASC				IAmb	IAmb	10 50 44.4	
	comp=Z,44nm,1.3s						
MASC				i S	Sn	10 51 31.2	-0.5
QMBU	Quimbuelo	7.21	278	i P	Pn	10 50 23.0	-0.3
QMBU				IAmb	IAmb	10 50 50.7	
	comp=Z,31nm,1.0s						
QMBU				i S	Sn	10 51 43.6	-1.6
GTBY	Guantanamo Bay	7.47	276	i P	Pn	10 50 37.2	+10
GTBY				i S	Sn	10 51 49.6	-2.0
RCC	Rio Carpintero	8.03	276	i P	Pn	10 50 36.5	+2.1
RCC				IAmb	IAmb	10 51 02.3	
	comp=Z,21nm,1.6s						
RCC				i S	Sn	10 52 01.9	-3.3
PINC	Pinares de May	8.16	280	i P	Pn	10 50 37.2	+1.0
PINC				IAmb	IAmb	10 50 53.4	
	comp=Z,12nm,1.5s						
PINC				i S	Sn	10 52 06.0	-2.4

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*IDC **23** 10:49:31.7±1.1, 6°.59N×125°.06E, h0^{km}, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=25.2km s-min=10.9km az=133.0*

ISC 23 10:49:33.4±1.2**, 6°.6N**±0°.1×**125°.2E**±0°.2**, h10**^{km}**, n6, σ1^{s}.10**/6**, mb3.6**/5**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.62	43	Pg	Pg	10 49 45.0	-0.4
	2μm,0.3s,baz=258,slow=3.0,SNR=27						
DAV				Lg	Lg	10 49 55.3	
	526nm,0.3s,baz=24,slow=21,SNR=5.6						
DAV				LR	LR	10 50 14.7	
	comp=Z,906nm,21.4s,baz=337,slow=61						
WRA	Warramunga Arr	27.90	161	P	P	10 55 23.4	-0.4
	0.4nm,0.5s,baz=340,slow=8.9,SNR=2.3						
	0.4nm,0.5s						
ASAR	Alice Springs	31.29	164	P	P	10 55 53.6	-0.2
	0.4nm,0.5s,baz=341,slow=6.9,SNR=7.2						
	0.4nm,0.5s						
MKAR	Makanchi Array	54.30	325	P	P	10 58 59.9	-0.1
	0.3nm,0.6s,baz=113,slow=8.0,SNR=2.8						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	58.48	327	P	P	10 59 28.6	-1.0
	0.2nm,0.3s,baz=123,slow=6.8,SNR=4.2						
	0.2nm,0.3s						
ILAR	Eielson Array	83.19	26	P	P	11 02 01.1	+1.5
	0.9nm,1.0s,baz=247,slow=5.9,SNR=5.0						
	0.9nm,1.0s						

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*SDD **23** 11:02:46.7±1.9, 19°.32N×67°.15W, h19^{km}±21^{km}, MD3.4, ML3.4, MW3.3, Presumed earthquake*

*NEIC **23** 11:02:46.5±0.7, 19°.18N±0°.04×67°.23W±0°.02, h10^{km}±2^{km}, ML2.9/11, Md3.5/9(RSPR), Error ellipse: s-maj=7.7km s-min=3.3km az=19.0*

*RSPR **23** 11:02:48.2, 19°.28N×67°.27W, h49^{km}±8^{km}, MD3.5/9*

ISC 23 11:02:46.8±1.7**, 19°.14N**±0°.07×**67°.21W**±0°.03**, h9**^{km}±10^{km}**, n47, σ0^{s}.54**/55**, 20C-4D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.68	172	Pn	Pn	11 03 02.0	-0.7
AGPR				IAML		11 03 15.4	
	603nm,0.3s						
AGPR				IAML		11 03 17.6	
	500nm,0.4s						
AGPR	Aguadilla, PR	0.68	172	⇑eP	Pn	11 03 01.8	-0.8
AGPR	Aguadilla, PR	0.68	172	eS	Sn	11 03 13.0	-0.4
AGPR	Aguadilla, PR	0.68	172	⇑iP	Pn	11 03 01.8	-0.8
AGPR				⇑eSg	Sn	11 03 12.9	-0.4
AGPR				IAML		11 03 17.6	
	comp=N,586nm,0.4s						
IDE	Isla Desecheo	0.79	198		Pn	11 03 03.9	-0.4
IDE					Sn	11 03 16.3	+0.1
IDE	Isla Desecheo	0.79	198	⇑eP	Pn	11 03 03.9	-0.4
IDE	Isla Desecheo	0.79	198	eS	Sn	11 03 16.3	+0.1
AOPR	Arecibo Observ	0.90	151		Sn	11 03 19.0	+0.1
AOPR	Arecibo Observ	0.90	151	Pn	Pb	11 03 05.2	+0.5
AOPR	Arecibo Observ	0.90	151	⇑eP	Pb	11 03 05.1	+0.5
AOPR	Arecibo Observ	0.90	151	eS	Sn	11 03 19.0	+0.1
AOPR	Arecibo Observ	0.90	151	⇑ePg	Pb	11 03 05.2	+0.5
AOPR				⇑eSg	Sn	11 03 19.8	+0.8
AOPR				IAML		11 03 30.4	
	comp=N,4μm,0.3s						
PRSN	Puerto Rico Se	0.92	176	⇑eP	Pn	11 03 05.7	-0.3
PRSN	Puerto Rico Se	0.92	176	eS	Sn	11 03 19.1	-0.3
EMPR	Esperanza - Ma	0.93	136		Pn	11 03 05.8	-0.2
EMPR					Sn	11 03 20.4	+1.0
EMPR	Esperanza - Ma	0.93	136	IAML		11 03 29.2	
	comp=N,313nm,0.8s						
EMPR				IAML		11 03 30.2	
	comp=N,334nm,0.6s						
EMPR	Esperanza - Ma	0.93	136	⇑eP	Pn	11 03 05.8	-0.2
EMPR	Esperanza - Ma	0.93	136	eS	Sn	11 03 20.4	+1.0
LSP	Las Mesas	0.97	173		Pn	11 03 06.5	-0.2
LSP					Sn	11 03 21.5	+0.9
LSP	Las Mesas	0.97	173	⇑iP	Pn	11 03 06.5	-0.2
LSP	Las Mesas	0.97	173	eS	Sn	11 03 21.5	+0.9
CRPR	Cabo Rojo, PR	1.14	175		Pg	11 03 08.8	+0.2
CRPR					Sn	11 03 24.7	+0.1
CRPR	Cabo Rojo, PR	1.14	175	IAML		11 03 28.2	
	comp=N,193nm,0.3s						
CRPR	Cabo Rojo, PR	1.14	175	⇓eP	Pg	11 03 08.8	+0.2
CRPR	Cabo Rojo, PR	1.14	175	eS	Sn	11 03 24.7	+0.1
CRPR	Cabo Rojo, PR	1.14	175	⇑ePg	Pg	11 03 09.0	+0.4
CRPR				⇑eSg	Sn	11 03 24.9	+0.3
CRPR				IAML		11 03 27.6	
	comp=N,2μm,0.3s						
ECPR	Experimental S	1.15	135	⇑eP	Pb	11 03 08.7	-0.1
MLPR	Magueyes Islan	1.18	172	⇓iP	Pn	11 03 09.5	0.0
MLPR	Magueyes Islan	1.18	172	eS	Sn	11 03 25.7	0.0
GBPR	Guanica, Bosqu	1.20	165		Pg	11 03 10.1	+0.1
GBPR	Guanica, Bosqu	1.20	165	⇓eP	Pg	11 03 10.1	+0.1
OBIP	Obispado Ponce	1.24	152		Sg	11 03 26.6	+0.1
OBIP	Obispado Ponce	1.24	152		Pb	11 03 10.4	+0.1
OBIP	Obispado Ponce	1.24	152	⇓eP	Pb	11 03 10.3	+0.1
OBIP	Obispado Ponce	1.24	152	eS	Sg	11 03 26.6	+0.1
GCPR	Guaynabo City	1.35	128		Sb	11 03 29.2	-0.6
GCPR	Guaynabo City	1.35	128	Pn	Pn	11 03 11.6	-0.3
GCPR	Guaynabo City	1.35	128	⇑eP	Pn	11 03 10.3	-1.6
GCPR	Guaynabo City	1.35	128	eS	Sb	11 03 29.2	-0.6
HIDR	Higuey Centro	1.53	249	⇑ePg	Pn	11 03 14.5	+0.1
HIDR				⇑eSg	Sg	11 03 36.4	+0.4
HIDR				IAML		11 03 47.3	
	comp=N,693nm,0.3s						
HUMP	Col San Antoni	1.63	127		Sn	11 03 37.0	+0.1
HUMP	Col San Antoni	1.63	127		Pn	11 03 15.8	+0.1
HUMP				IAML		11 03 42.4	
	comp=N,114nm,0.4s						
HUMP				IAML		11 03 48.5	
	comp=N,96nm,0.3s						
HUMP	Col San Antoni	1.63	127	⇑eP	Pn	11 03 15.6	-0.1
HUMP	Col San Antoni	1.63	127	eS	Sn	11 03 37.0	+0.1
MIDR	Miches	1.75	265	⇑ePg	Pn	11 03 18.1	+0.8
MIDR				⇑eSg	Sb	11 03 41.8	+0.7
MIDR				IAML		11 03 54.4	
	comp=N,48nm,1.6s						
DR12	Loma Pena Alta	2.08	261	Pn	Pn	11 03 21.8	-0.3
HATOM	Hato Mayor del	2.08	261	⇑ePg	Pb	11 03 24.0	-0.9
HATOM				⇑eSg	Sg	11 03 52.9	-1.0
HATOM				IAML		11 04 01.2	
	comp=N,241nm,0.3s						

SJA 23 11:09:38.4±0.7**, 27°.59S**×**67°.47W, h146**^{km}±3^{km}**, ML3.5, MW3.3, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TINO	Tinogasta	0.48	190	eP	Pn	11 10 00.3	+0.9
TINO				eS	Sn	11 10 15.3	-0.1
AANI	Anillaco	1.30	159	eP	Pn	11 10 06.6	+0.7
AANI				IAML		11 10 27.1	
	comp=Z,385nm,0.5s						
VCA	Vinchina	1.31	209	eP	Pn	11 10 07.4	+1.5
VCA				eS	Sn	11 10 27.9	+0.9
VCA				IAML		11 10 29.8	
	comp=Z,404nm,0.2s						
AC02	Maricunga	1.66	297	eP	Pn	11 10 07.1	-2.9
AC02				eS	Sn	11 10 39.0	+5.1
CYA	Choya	1.70	120	eP	Pn	11 10 10.8	+0.8
CYA				eS	Sn	11 10 28.5	-5.6
CYA				eS		11 10 34.1	
ACLC	CERRO LA CRUZ	1.88	166	eP	Pn	11 10 13.0	+0.9
ACLC				eS	Sn	11 10 38.3	+0.2
FSA	Cafayete	1.99	42	eP	Pn	11 10 15.2	+1.9
FSA				eS	Sn	11 10 36.0	-4.2
AHML	Horco Molle	2.07	68	eP	Pn	11 10 00.4	-14
AHML				eS	Sn	11 10 28.5	-13
AGUA	GUANDACOL	2.09	205	eP	Pn	11 10 15.5	+1.0
AGUA				eS	Sn	11 10 45.2	+2.9
AGUA				IAML		11 10 46.0	
	comp=Z,160nm,0.2s						
GO03	Copiapo	2.45	269	eP	Pn	11 10 19.5	+0.7
GO03				eS	Sn	11 10 49.9	0.0
GO03				IAML		11 10 50.6	
	comp=Z,222nm,0.3s						
ACDV	Cuesta del Vie	2.95	209	eP	Pn	11 10 26.5	+1.4
AVFE	Valle Fertil	3.06	180	eP	Pn	11 10 27.2	+0.8
AVFE				eS	Sn	11 11 03.7	+0.1
GO02	Mina Guanaco	3.08	321	eS	Sn	11 11 09.6	+5.2
AROD	Rodeo	3.11	214	eP	Pn	11 10 28.7	+1.4
AROD				eS	Sn	11 11 06.7	+1.6
ACCO	Cerro Coronel	3.30	205	eP	Pn	11 10 30.7	+1.0
ACCO				eS	Sn	11 11 10.3	+0.9
SLA	San Lorenzo	3.36	32	eP	Pn	11 10 27.5	-2.9
ACHE	Chepes	3.63	169	eP	Pn	11 10 35.0	+1.2
ACHE				eS	Sn	11 11 17.0	+0.2
RTLL	Cerro Villicun	3.83	193	eP	Pn	11 10 37.1	+0.8
RTLL				eS	Sn	11 11 21.0	-0.3
RTLL				IAML		11 11 23.4	
	comp=Z,42nm,0.4s						
AZAP	Zapla	3.99	33	eP	Pn	11 10 40.3	+1.6
RTLS	Leoncito	4.48	200	eP	Pn	11 10 45.8	+0.6
RTLS				IAML		11 11 39.4	
	comp=Z,48nm,1.1s						
AUSP	Uspallata	4.91	199	eP	Pn	11 10 51.6	+0.8
ARCO	CERRO ARCO	5.38	193	eP	Pn	11 10 39.0	-18
ARCO				eP		11 10 44.7	
ARCO				eS	Sn	11 11 57.6	-0.7
ARCO				IAML		11 12 00.4	
	comp=Z,15nm,0.7s						
AAGR	Agrelo	5.60	192	eP	Pn	11 11 00.0	+0.2
AAGR				eS	Sn	11 12 02.0	-1.4
AAGR				IAML		11 12 13.5	
	comp=Z,19nm,2.3s						
VA03	San Esteban	5.80	207	eP	Pn	11 11 02.7	+0.2
VA03				eS	Sn	11 12 09.0	+0.8
VA03				IAML		11 12 18.2	
	comp=Z,23nm,1.9s						
ROC1	El Roble	6.18	209	eP	Pn	11 11 06.1	-1.6
ROC1				eS	Sn	11 12 15.0	-2.5
PEL	Peldehue	6.19	206	eP	Pn	11 11 08.0	+0.4
PEL				IAML		11 13 03.8	
	comp=Z,28nm,1.8s						

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*TAP **23** 11:15:31.9, 24°.32N×122°.53E, h49^{km}, ML3.4, C*

*JMA **23** 11:15:32.4±0.1, 24°N±3°×122°.6E±0°.8, h51^{km}±1^{km}, MV2.4/9, NW OFF ISHIGAKIJIMA IS*

ISC 23 11:15:32.2±1.2**, 24°.28N**±0°.03×**122°.55E**±0°.02**, h49**^{km}±6^{km}**, n129, σ1^{s}.16**/225**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS3	EOS3	0.22	272	eP	Pn	11 15 40.4	+0.1
EOS3				eS	Sn	11 15 46.8	+0.7
EOS4	EOS4	0.27	234	eP	Pn	11 15 40.8	+0.3
EOS4				eS	Sn	11 15 47.6	+1.2
EOS2	EOS2	0.33	295	eP	Pn	11 15 41.4	+0.1
EOS2				eS	Sn	11 15 48.8	+1.0
JYNG	Yonagunijimaku	0.40	64	eP	Pn	11 15 42.0	-0.2
JYNG				eS	Sn	11 15 49.0	-0.3
YOJ	Yonaguni jima	0.46	66	P	Pn	11 15 42.6	-0.2
YOJ	Yonaguni jima	0.46	66	S	Sn	11 15 50.5	0.0
YOJ	Yonaguni jima	0.46	66	P	Pn	11 15 42.6	-0.2
YOJ				S	Sn	11 15 50.5	0.0
YOJ	Yonaguni jima	0.46	66	eP	Pn	11 15 42.7	-0.2
YOJ				eS	Sn	11 15 50.4	-0.1
ESAO	Su ao	0.71	295	eP	Pn	11 15 45.7	-0.3
ESAO				eS	Sn	11 15 55.2	-0.9
TWC	Suao	0.72	297	P	Pn	11 15 45.6	-0.6
TWC				eS	Sn	11 15 55.3	-1.0
EWUT	Wuta	0.73	283	eP	Pn	11 15 45.6	-0.7
EWUT				eS	Sn	11 15 56.6	+0.1
EAHA	Aohua	0.74	274	P	Pn	11 15 46.3	-0.2
EAHA				eS	Sn	11 15 58.0	+1.1
EGS		0.80	315	eP	Pn	11 15 45.5	-1.8
EGS				eS	Sn	11 15 55.7	-2.5
NDS	Dongshan	0.84	295	P	Pn	11 15 47.8	0.0
ETL	Fush Village	0.86	262	eP	Pn	11 15 47.3	-0.8
ETL				eS	Sn	11 15 59.1	-0.6
ILA	Ilan	0.88	304	eP	Pn	11 15 48.1	-0.2
ILA				S	Sn	11 15 59.9	-0.2
NACB	Ninganchiao	0.88	263	P	Pn	11 15 47.1	-1.3
NACB	Ninganchiao	0.88	263	P	Pn	11 15 47.6	-0.8
NACB				eS	Sn	11 15 59.1	-1.1
TWB1	Santiao Chiao	0.89	325	i P	Pn	11 15 47.7	-0.7
TWB1				eS	Sn	11 15 58.5	-1.8
TWD	Chiawan	0.90	257	P	Pn	11 15 47.6	-1.0
TWD				eS	Sn	11 15 59.6	-0.9
TWE	Neicheng	0.92	299	P	Pn	11 15 49.1	+0.2
TWE				S	Sn	11 16 00.3	-0.8
TIPB	Shuangxi	0.96	316	i P	Pn	11 15 48.9	-0.5
TIPB				S	Sn	11 16 00.7	-1.3
TEYL	Yanliau Villag	0.96	245	P	Pn	11 15 49.1	-0.4
TEYL				S	Sn	11 16 01.7	-0.4
ENTT	Nioudou	0.97	292	P	Pn	11 15 49.8	+0.3
ENTT				eS	Sn	11 16 02.6	+0.3
LATG	Datong	0.97	285	P	Pn	11 15 49.6	0.0
LATG				eS	Sn	11 16 03.4	+0.9
ETLH	Xiulin Townshi	0.98	266	i P	Pn	11 15 49.0	-0.7
ETLH				eS	Sn	11 16 01.8	-0.9
FUSB	Fushanzhiwuyua	1.00	299	i P	Pn	11 15 50.0	-0.1
FUSB				eS	Sn	11 16 03.0	-0.1
ETM	Tongmen	1.02	252	eP	Pn	11 15 49.2	-1.0
ETM				S	Sn	11 16 01.9	-1.6
SXI1	Grass Mountain	1.02	323	i P	Pn	11 15 49.6	-0.7
SXI1				S	Sn	11 16 02.1	-1.5
SHUL	Shoufeng	1.03	242	eP	Pn	11 15 49.9	-0.4
SHUL				S	Sn	11 16 02.9	-0.8
NWF	Wu-fen Shan	1.06	318	eP	Pn	11 15 50.2	-0.6
NWF				eS	Sn	11 16 03.2	-1.3
WFSB	Wu-fen Shan	1.06	318	eP	Pn	11 15 50.5	-0.2
WFSB				eS	Sn	11 16 03.1	-1.2
LXIB	Xiulin Townshi	1.07	256	eP	Pn	11 15 50.3	-0.7
LXIB				S	Sn	11 16 04.0	-1.0
IRIF	Iriomote-Funau	1.07	87	eP	Pn	11 15 51.1	+0.1
IRIF				eS	Sn	11 16 05.2	+0.4
NNSB	Datong	1.08	278	P	Pn	11 15 50.8	-0.3
NNSB				eS	Sn	11 16 05.0	0.0
NWLT	Wulai	1.08	298	P	Pn	11 15 51.5	+0.5
NWLT				S	Sn	11 16 06.2	+1.2
TEGC	Jichi Village	1.09	239	eP	Pn	11 15 52.3	+1.2
TEGC				eS	Sn	11 16 02.8	-2.2
NNS	Nan Shan	1.09	279	eP	Pn	11 15 51.0	-0.2
NNS				eS	Sn	11 16 04.8	-0.5
TNOU	National Taiwa	1.12	321	eP	Pn	11 15 51.0	-0.6
TNOU				eS	Sn	11 16 04.4	-1.5
ESL	Shilin	1.12	246	eP	Pn	11 15 50.7	-0.9
ESL				eS	Sn	11 16 04.8	-1.2
TWA	Mucha	1.13	309	eP	Pn	11 15 51.6	-0.1
TWA				eS	Sn	11 16 05.4	-0.7
YHNB	Yeheng	1.14	290	P	Pn	11 15 51.8	-0.1

YHNB	Yeheng	1.14	290	S	Sn	11 16 07.7	+1.1
YHNB	Yeheng	1.14	290	P	Pn	11 15 52.2	+0.2
YHNB				S	Sn	11 16 07.1	+0.5
NHDH	Xindian Distri	1.16	306	P	Pn	11 15 52.4	+0.3
NHDH				eS	Sn	11 16 07.2	+0.4
NSK	Sanguang	1.16	290	P	Pn	11 15 52.5	+0.3
NSK				eS	Sn	11 16 07.5	+0.5
WHF	Hehuan Shan	1.19	264	eP	Pn	11 15 52.2	-0.7
WHF				eS	Sn	11 16 07.1	-1.0
TATO	Taipei	1.19	306	P	Pn	11 15 53.3	+0.8
TATO	Taipei	1.19	306	S	Sn	11 16 07.9	+0.2
EGFH	Guangfu	1.20	240	eS	Sn	11 16 06.5	-1.2
FUSS	Fushou	1.20	269	eP	Pn	11 15 52.8	0.0
TAP	Taipei	1.22	309	eS	Sn	11 16 07.5	-0.7
TWT	Tachien	1.26	269	eP	Pn	11 15 54.2	+0.6
ZUZH	Zhuzihu	1.27	314	P	Pn	11 15 53.3	-0.4
ZUZH				eS	Sn	11 16 08.1	-1.6
TDCB	Techi	1.27	269	eP	Pn	11 15 54.2	+0.4
TDCB				eS	Sn	11 16 09.1	-0.7
HGSD	Ruisui	1.30	233	eP	Pn	11 15 53.2	-0.8
HGSD				eS	Sn	11 16 09.1	-1.1
OWD	Renai	1.30	256	P	Pn	11 15 53.7	-0.4
OWD				eS	Sn	11 16 09.3	-1.2
ANP	Anpu	1.30	314	eP	Pn	11 15 54.3	+0.2
TWY	Chenhua	1.32	319	eS	Sn	11 16 10.0	-0.7
TWS1	Kuangyinshan	1.32	309	P	Pn	11 15 54.2	0.0
TWS1				eS	Sn	11 16 10.6	-0.2
JKRS	Kuro-shima	1.33	91	eP	Pn	11 15 55.2	+0.9
JKRS				eS	Sn	11 16 11.9	+0.9
NTST	Danshui	1.34	311	eS	Sn	11 16 10.7	-0.5
WUSB	Renai	1.34	258	P	Pn	11 15 54.5	-0.2
WUSB				eS	Sn	11 16 10.6	-0.9
KSHI	Guanxi Townshi	1.35	292	eP	Pn	11 15 55.9	+1.2
KSHI				eS	Sn	11 16 13.3	+1.8
EHYH	Wanrong	1.35	235	eP	Pn	11 15 54.8	+0.1
EHYH				eS	Sn	11 16 11.1	-0.5
NFF	Wufeng Townshi	1.35	285	P	Pn	11 15 55.6	+0.7
NFF				eS	Sn	11 16 12.1	+0.4
EHY	Hungye	1.36	236	eP	Pn	11 15 54.2	-0.7
EHY				eS	Sn	11 16 11.2	-0.7
ECBN	Changbin	1.39	227	eP	Pn	11 15 55.3	0.0
ECBN				eS	Sn	11 16 11.0	-1.5
VWDT	VWDT	1.39	248	eP	Pn	11 15 55.2	-0.1
VWDT				eS	Sn	11 16 11.7	-0.8
PCYT	Pengchaiyu	1.41	342	eP	Pn	11 15 55.3	-0.3
PCYT				eS	Sn	11 16 12.9	-0.2
NCUH	Zhongli	1.42	299	eP	Pn	11 15 57.6	+1.9
NCUH				S	Sn	11 16 14.2	+0.9
LIOB	Emei	1.45	285	P	Pn	11 15 56.9	+0.8
LIOB				eS	Sn	11 16 14.2	+0.2
YULB	Yu-li	1.45	233	P	Pn	11 15 55.4	-0.7
YULB	Yu-li	1.45	233	eP	Pn	11 15 55.5	-0.7
YULB				eS	Sn	11 16 12.5	-1.5
JIJ	Ishigaki jima	1.45	86	P	Pn	11 15 56.5	+0.4
JIJ				eS	Sn	11 16 14.1	+0.1
NSTT	Nanjuang	1.46	284	eP	Pn	11 15 57.1	+0.9
NSTT				eS	Sn	11 16 15.4	+1.3
WHP	Taichung City	1.47	270	P	Pn	11 15 57.6	+1.3
WHP				S	Sn	11 16 14.8	+0.3
TWF1	Yuli	1.48	232	P	Pn	11 15 55.9	-0.5
TWF1				eS	Sn	11 16 13.7	-0.9
CHKH	Chenggong	1.52	225	eS	Sn	11 16 13.0	-2.5
WCS	Beigang Elemen	1.52	262	eP	Pn	11 15 57.3	+0.4
SSLB	Suanglung	1.54	252	P	Pn	11 15 58.5	+1.1
SSLB	Suanglung	1.54	252	eP	Pn	11 15 57.2	-0.2
SMLT	Sun Moon Lake	1.56	256	eP	Pn	11 15 57.9	+0.2
SMLT				eS	Sn	11 16 16.6	-0.3
FULB	Fuli	1.58	227	eP	Pn	11 15 56.9	-0.9
FULB				eS	Sn	11 16 16.2	-0.9
TYC	Yuchr	1.59	257	eP	Pn	11 15 58.2	+0.2
CHKT	Chengkung	1.60	223	eP	Pn	11 15 57.0	-1.1
CHKT				eS	Sn	11 16 14.8	-2.8
TWQ1	Liyutan	1.63	273	eP	Pn	11 15 59.8	+1.3
TWQ1				eS	Sn	11 16 19.3	+1.0
NMLH	Miaoli	1.63	279	eP	Pn	11 15 59.9	+1.4
NMLH				eS	Sn	11 16 19.4	+1.1
JISG	Ishigakijimahi	1.63	79	eP	Pn	11 15 58.5	0.0
JISG				eS	Sn	11 16 18.2	-0.1
NSY	Sanyi	1.64	275	eP	Pn	11 15 59.9	+1.2
WHYT	Xinyi Township	1.66	250	eP	Pn	11 15 59.8	+0.9
WHYT				eS	Sn	11 16 20.8	+1.6
YUS	Yu-Shan	1.66	242	eS	Sn	11 16 18.8	-1.0
EHD	Haiduan	1.67	228	eP	Pn	11 15 58.5	-0.6
EHD				eS	Sn	11 16 18.8	-0.6
ECS	Chishang	1.70	226	P	Pn	11 15 59.7	+0.2
ECS				eS	Sn	11 16 19.5	-0.5
TCU	Taichung	1.72	266	eS	Sn	11 16 22.1	+1.6
WJS	Zhushan	1.73	255	eP	Pn	11 16 01.5	+1.6
WJS				eS	Sn	11 16 23.1	+2.3
WNT	Mingjian	1.75	257	eP	Pn	11 16 01.9	+1.7
WNT				eS	Sn	11 16 22.9	+1.4
ALS	Alishan	1.77	245	eP	Pn	11 16 01.4	+0.7
ALS				eS	Sn	11 16 22.0	-0.3
ELDTW	Lidau	1.78	233	eP	Pn	11 15 59.9	-0.7
ELDTW				eS	Sn	11 16 18.9	-3.2
WCHH	Zhanghua	1.83	264	eS	Sn	11 16 24.2	+0.8
WCH1	Changhua City	1.84	264	eS	Sn	11 16 25.5	+1.9
CHN5	Tsauling	1.85	249	eP	Pn	11 16 02.9	+1.3
CHN5				eS	Sn	11 16 25.0	+1.2
WGK	Gukeng	1.92	252	P	Pn	11 16 02.0	-0.4
WGK				eS	Sn	11 16 29.2	+3.8
WDLH	Douliu	1.94	253	eP	Pn	11 16 03.8	+1.1
WDLH				eS	Sn	11 16 27.8	+2.0
STYH	Taoyuan	1.97	236	eP	Pn	11 16 03.9	+0.7
WCKO	Fanlu	1.97	245	P	Pn	11 16 04.6	+1.4
WCKO				S	Sn	11 16 28.3	+1.6
TWGBT	Beinan	1.99	223	eP	Pn	11 16 03.0	-0.5
TWGBT				eS	Sn	11 16 24.1	-3.0
TWG	Pinlang	1.99	223	eS	Sn	11 16 25.1	-2.1
JTJ	Tarama	1.99	79	eP	Pn	11 16 04.2	+0.8
TPUB	Ta-pu	2.01	241	P	Pn	11 16 05.1	+1.3
TPUB	Ta-pu	2.01	241	P	Pn	11 16 05.3	+1.5
TPUB				eS	Sn	11 16 28.9	+1.0
WTP	Ta-pu	2.05	240	eP	Pn	11 16 05.7	+1.3
WTP				eS	Sn	11 16 30.2	+1.4
TWK	Hsinying	2.14	242	eP	Pn	11 16 07.2	+1.6
TWK				eS	Sn	11 16 32.5	+1.4
CHN1	Nanshi	2.15	240	eP	Pn	11 16 07.5	+1.8
CHN1				eS	Sn	11 16 33.0	+1.7
SNST	Tainan City	2.16	241	eP	Pn	11 16 07.8	+2.0
SGST	Jiashian	2.16	237	eP	Pn	11 16 06.9	+1.0
SGST				eS	Sn	11 16 33.1	+1.6
WSL	Shuilin Townsh	2.26	251	eP	Pn	11 16 08.0	+0.9
WSL				eS	Sn	11 16 35.0	+1.3
SSD	Sandimen	2.33	230	eP	Pn	11 16 08.6	+0.4
SSD				eS	Sn	11 16 37.4	+1.8
MASBT	Mashibuluo	2.42	227	eP	Pn	11 16 10.1	+0.7
MASBT				eS	Sn	11 16 37.9	+0.1
LYUB	Lan-yu	2.44	202	eP	Pn	11 16 07.9	-1.7
LYUB				eS	Sn	11 16 34.4	-3.7
EAST	Anshuo	2.45	220	eP	Pn	11 16 10.1	+0.2
EAST				eS	Sn	11 16 36.8	-1.9
TSCK	Chigu Township	2.53	244	eP	Pn	11 16 11.4	+0.6
TSCK				eS	Sn	11 16 41.6	+1.2
SCZT	Fangliau	2.60	224	eP	Pn	11 16 14.1	+2.3
SCZT				eS	Sn	11 16 45.6	+3.4
SLIU	Shizi	2.61	219	eP	Pn	11 16 14.7	+2.7
PHUB	P'eng-hu	2.83	255	P	Pn	11 16 14.6	-0.4
PHUB				S	Sn	11 16 47.0	-0.9
PNG	Penghu	2.83	256	eP	Pn	11 16 14.9	-0.1
PNG				eS	Sn	11 16 46.8	-1.2
MATB	Ma-tsu	3.01	309	S	Sn	11 16 50.8	-1.5
VCHM	Qimei	3.06	250	eP	Pn	11 16 18.3	+0.3
VCHM				eS	Sn	11 16 54.4	+1.0
PTMZ	Houxiangcun	3.21	284	eP	Pn	11 16 19.7	-0.5
PTMZ				eS	Sn	11 16 54.5	-2.8

JMA 23 11:20:00.0±0.5**,27°N**±3°×**12°6E**±°**,h213**km**,MV3.5**/24**,NW OFF OKINAWAJIMA IS,Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JKE	Kume jima 2	1.22	127	P	Pn	11 20 33.2	+0.5
JAGN	Aguni-jima	1.46	109	eP	Pn	11 20 35.0	+0.5
JAGN				eS	S	11 21 00.5	-0.5
JIH	Iheya	2.02	91	eP	Pn	11 20 40.1	+0.5
JIH				eS	S	11 21 08.7	-1.5
JJT3	Tamagusuku3	2.08	116	eS	S	11 21 11.8	+0.4
JNTH	Nagotoyohara	2.15	105	eP	Pn	11 20 41.9	+1.0
JNTH				eS	S	11 21 10.7	-1.8
JOW	Kunigami	2.31	95	eP	Pn	11 20 43.0	+0.3
JOW				eS	S	11 21 13.4	-2.2
JOGS	Gusukube	2.32	187	eP	Pn	11 20 43.0	+0.1
JMJ2	Miyako jima3	2.35	188	eP	Pn	11 20 43.8	+0.6
JYRO	Yoronjima	2.45	91	eP	Pn	11 20 44.4	+0.2
JYRO				eS	S	11 21 15.8	-2.4
JOKE	Okinoerabujima	2.57	83	eP	Pn	11 20 45.3	-0.2
JOKE				eS	S	11 21 17.9	-2.7
JTJ	Tarama	2.59	201	eP	Pn	11 20 45.8	+0.1
JTJ				eS	S	11 21 19.8	-1.3
JISG	Ishigakijimahi	2.78	207	eP	Pn	11 20 47.7	-0.2
JISG				eS	S	11 21 23.0	-1.9
JTK	Tokunoshima	2.97	76	eP	Pn	11 20 49.3	-0.6
JTK				eS	S	11 21 25.8	-2.9
JIJ	Ishigaki jima	3.05	208	eP	Pn	11 20 50.2	-0.7
JIJ				eS	S	11 21 27.1	-3.3
JKRS	Kuro-shima	3.21	209	eP	Pn	11 20 52.3	-0.6
JKRS				eS	S	11 21 31.6	-2.3
JAMN	Amaminishikomi	3.29	69	eP	Pn	11 20 52.8	-0.8
JAMN				eS	S	11 21 32.1	-3.3
HATJ	Hateruma jima	3.46	210	eP	Pn	11 20 55.2	-0.5
HATJ				eS	S	11 21 38.2	-1.0
JAM	Amami Oshima	3.70	68	eS	S	11 21 41.7	-2.6
JMZ	Minamidaito 2	5.10	103	eP	Pn	11 21 16.4	+0.4
JMZ				eS	S	11 22 12.2	-3.6
JTN	Tanegashima 3	5.84	51	eP	Pn	11 21 25.6	+0.2

SJA ***23*** *11:23:25.6±0.5, 28°.60S×71°.75W, h12km, ML4.5, MW4.2*
NEIC ***23*** *11:23:29.7±1.8, 28°.63S±0°.04×71°.60W±0°.09, h18km±4km, mb4.5/6, ML4.4(GUC), Error ellipse: s-maj=11.5km s-min=5.0km az=98.0*
GUC ***23*** *11:23:31.5±0.9, 28°.67S×71°.44W, h34km±7km, ML4.4*
IDC ***23*** *11:23:32.0±4.4, 28°.73S×71°.41W, h36km±34km, mb4.0/10, mbtmp4.0/14, ML3.8/4, MS3.6/3, Error ellipse: s-maj=27.4km s-min=17.0km az=92.0*
ISC 23 11:23:26.5±1.3**,28°.60S**±0°.02×**71°.49W**±0°.05**,h1**km±8km**, n100,**σ**1s.82**/106**,mb4.5**/10**,5C-1D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AC04	Llanos de Chal	0.54	43		Pn	11 23 42.9	+1.5
AC04	Llanos de Chal	0.54	43	⇑iP	Pn	11 23 42.8	+1.5
AC04				eS	Sn	11 23 50.6	-0.4
AC04	Llanos de Chal	0.54	43	eP	Pg	11 23 30.5	-6.3
AC04				eS	Sg	11 23 37.3	-6.5
AC04				IAML		11 23 51.4	
	comp=Z,15µm,0.7s						
LCO	Las Campanas	0.80	121		Pn	11 23 45.9	+0.7
LCO	Las Campanas	0.80	121	eP	Pn	11 23 45.0	-0.3
LCO				eS	Sb	11 23 55.7	+0.8
LCO	Las Campanas	0.80	121	eP	Pn	11 23 44.9	-0.3
LCO				IAML		11 24 01.2	
	comp=Z,20µm,0.7s						
AC05	El Transito	1.09	103		Pn	11 23 50.5	+1.4
AC05	El Transito	1.09	103	eP	Pn	11 23 50.4	+1.4
AC05				eS	Sn	11 24 04.3	-0.6
AC05				IAML		11 24 05.4	
	comp=N,11µm,0.5s						
AC05	El Transito	1.09	103	eP	Pg	11 23 45.0	-2.5
AC05				eP	Pn	11 23 49.7	+0.6
AC05				IAML		11 24 05.0	
	comp=Z,5µm,0.5s						
CO05	La Serena	1.33	171		Pg	11 23 53.1	+1.0
CO05	La Serena	1.33	171	eP	Pg	11 23 53.0	+1.0
CO05				eS	Sg	11 24 09.8	+0.5
CO05				IAML		11 24 11.7	
	comp=N,20µm,0.3s						
GO03	Copiapo	1.50	48		Pg	11 23 57.3	+2.1
GO03	Copiapo	1.50	48	eP	Pg	11 23 57.2	+2.0
GO03				IAML		11 24 21.6	
	comp=N,4µm,0.6s						
GO03	Copiapo	1.50	48	eP	Pg	11 23 57.1	+1.9
GO03				eS	Sg	11 24 18.2	+3.6
GO03				IAML		11 24 21.9	
	comp=Z,2µm,0.6s						
AC06	Mina Casimiro	1.59	39		Pg	11 23 58.7	+1.6
AC06	Mina Casimiro	1.59	39	eP	Pg	11 23 59.0	+1.9
GO04	Tololo Observa	1.68	159		Pg	11 23 58.6	0.0
GO04	Tololo Observa	1.68	159	⇑eP	Pb	11 23 58.3	0.0
GO04				IAML		11 24 23.3	
	comp=E,34µm,0.5s						
GO04	Tololo Observa	1.68	159	eP	Pb	11 23 57.8	-0.6
CO01	Juntas del Tor	1.83	139		Pg	11 24 01.9	+0.3
CO01	Juntas del Tor	1.83	139	eP	Pg	11 24 01.6	0.0
CO01				IAML		11 24 27.1	
	comp=N,5µm,0.5s						
CO01	Juntas del Tor	1.83	139	eP	Pb	11 24 01.1	+0.1
CO01				IAML		11 24 30.6	
	comp=Z,3µm,0.7s						
CO06	Fray Jorge	2.07	184		Pn	11 24 02.7	+0.2
CO06	Fray Jorge	2.07	184	IAML		11 24 38.9	
	comp=E,3µm,0.4s						
CO03	El Pedregal	2.33	163		Pb	11 24 07.5	-2.0
CO03	El Pedregal	2.33	163	eP	Pb	11 24 07.3	-2.2
CO03				IAML		11 24 44.8	
	comp=E,6µm,0.4s						
CO03	El Pedregal	2.33	163	eP	Pb	11 24 07.5	-2.0
CO03				eS	Sg	11 24 41.3	-0.3
CO03				IAML		11 24 44.1	
	comp=Z,3µm,0.8s						
AROD	Rodeo	2.35	132	eP	Pb	11 24 10.6	+0.7
AC01	Pan de Azucar	2.57	18		Pn	11 24 10.5	+1.2
AC01	Pan de Azucar	2.57	18	⇓eP	Pn	11 24 10.4	+1.2
AC01				IAML		11 25 06.6	
	comp=E,844nm,0.5s						
AC01	Pan de Azucar	2.57	18	eP	Pn	11 24 10.4	+1.1
AC01				eS	Sb	11 24 45.8	+0.2
ACDV	Cuesta del Vie	2.59	128	eP	Pb	11 24 14.2	+0.3
ACDV				IAML		11 24 59.2	
	comp=Z,1µm,1.4s						
CO02	Combarbal	2.63	171		Pn	11 24 11.3	+1.1
CO02	Combarbal	2.63	171	eP	Pn	11 24 10.9	+0.7
CO02				eS	Sg	11 24 51.8	+0.8
CO02				IAML		11 24 53.9	
	comp=Z,7µm,0.4s						
AC02	Maricunga	2.73	50		Pb	11 24 16.1	-0.3
AC02	Maricunga	2.73	50	eP	Pb	11 24 15.8	-0.6
AC02				IAML		11 25 02.8	
	comp=N,1µm,0.4s						
AC02	Maricunga	2.73	50	eP	Pb	11 24 14.9	-1.6
AC02				IAML		11 24 59.4	
	comp=Z,886nm,1.0s						
AGUA	GUANDACOL	2.77	109	eP	Pb	11 24 17.7	+0.9
AGUA				IAML		11 25 10.8	
	comp=Z,1µm,1.3s						
VCA	Vinchina	2.89	93	eP	Pb	11 24 19.7	+0.8
VCA	Vinchina	2.89	93	eP	Pn	11 24 14.7	+0.9
VCA				eS	Sg	11 24 58.7	-0.6
VCA				IAML		11 25 14.7	
	comp=Z,1µm,0.9s						
ACCO	Cerro Coronel	2.89	134	eP	Pb	11 24 18.5	-0.6
CO04	Los Peladeros	3.46	173	eP	Pn	11 24 22.8	+1.0
CO04				IAML		11 25 20.2	
	comp=N,2µm,0.3s						
TINO	Tinogasta	3.50	82	eP	Pb	11 24 26.4	-2.8
RTLS	Leoncito	3.71	150	eP	Pb	11 24 29.9	-3.1
RTLL	Cerro Villicun	3.77	137	eP	Pb	11 24 29.6	-4.4
RTLL				IAML		11 25 36.6	
	comp=Z,916nm,0.5s						
GO02	Mina Guanaco	3.82	27		Pn	11 24 28.5	+1.7
GO02	Mina Guanaco	3.82	27	eP	Pn	11 24 28.7	+1.9
GO02	Mina Guanaco	3.82	27	eP	Pn	11 24 29.3	+2.5
GO02				IAML		11 25 54.1	
	comp=Z,619nm,0.6s						
VA06	Catapilco	3.95	178		Pn	11 24 28.7	+0.4
ACLC	CERRO LA CRUZ	4.06	103	eP	Pn	11 24 33.8	+3.9
ACLC				IAML		11 25 47.9	
	comp=Z,266nm,1.2s						
AVFE	Valle Fertil	4.06	121	eP	Pn	11 24 33.8	+3.9
AVFE				IAML		11 25 45.3	
	comp=Z,612nm,0.7s						
PB14	IPOC Station P	4.08	14		Pn	11 24 30.6	+0.2
PB14	IPOC Station P	4.08	14	eP	Pn	11 24 30.6	+0.2
PB14				IAML		11 26 06.3	
	comp=Z,214nm,0.6s						
CFA	Coronel Fontan	4.11	138	Pn	Pn	11 24 33.2	+2.7
	comp=Z,30nm,0.3s,baz=313,slow=15,SNR=171						
CFA				Sn	Sn	11 25 19.9	+0.6
	comp=Z,46nm,0.3s,baz=53,slow=20,SNR=7.0						
CFA	Coronel Fontan	4.11	138	eP	Pn	11 24 33.5	+3.0
CFA				IAML		11 25 50.5	
	comp=Z,401nm,0.7s						
VA03	San Esteban	4.23	169		Pn	11 24 33.9	+1.7
VA03	San Esteban	4.23	169	eP	Pn	11 24 33.9	+1.7
VA03				eS	Sn	11 25 25.7	+3.5
VA03				IAML		11 25 46.4	
	comp=Z,1µm,0.4s						
PEL	Peldehue	4.58	172		Pn	11 24 38.0	+1.0
ARCO	CERRO ARCO	4.76	153	eP	Pn	11 24 44.3	+4.6
ARCO				IAML		11 26 04.5	
	comp=Z,664nm,0.8s						
MT05	Renca	4.82	173	eP	Pn	11 24 42.3	+2.0
MT05				eS	Sb	11 25 52.1	+1.8
MT05				IAML		11 26 00.6	
	comp=Z,744nm,1.0s						
MT04	Ro Olivares	4.93	167	eP	Pn	11 24 45.1	+3.2
MT04				eS	Sn	11 25 43.9	+4.2
MT04				IAML		11 26 05.5	
	comp=Z,259nm,0.4s						
MT08	Bocatoma Ro	4.99	166	eP	Pn	11 24 46.8	+4.0
MT08				IAML		11 26 08.3	
	comp=Z,216nm,0.5s						
CYA	Choya	5.00	90	eP	Pn	11 24 45.7	+2.8
CYA				IAML		11 26 16.6	
	comp=Z,118nm,1.1s						
MT01	Popeta	5.25	178	IAML		11 26 20.8	
	comp=Z,392nm,0.5s						
PB06	IPOC Station P	6.12	17		Pn	11 25 00.2	+2.0
PB02	IPOC Station P	7.39	12		Pn	11 25 14.8	-0.9
PLCA	Paso Flores	12.13	177	Pn	Pn	11 26 20.1	-0.4
	comp=Z,0.1nm,0.3s,baz=24,slow=8.6,SNR=3.1						
PLCA				LR	LR	11 30 56.0	
	comp=Z,244nm,21.2s,baz=324,slow=37						
	comp=Z,3.3nm,1.0s						
TRQA	Tornquist	12.32	142		Pn	11 26 23.6	+0.4
LPAZ	La Paz	12.64	15	Pn	Pn	11 26 31.1	+3.0
	comp=Z,0.2nm,0.3s,baz=182,slow=6.8,SNR=7.5						
	comp=Z,1.0nm,0.4s						
LPAZ	La Paz	12.64	15		Pn	11 26 29.0	+0.8
CPUP	Villa Florida	12.77	83	Pn	Pn	11 26 30.7	+1.4
	comp=Z,0.2nm,0.3s,baz=250,slow=14,SNR=5.4						
	comp=Z,1.0nm,0.6s						
CPUP	Villa Florida	12.77	83	Pn	Pn	11 26 30.5	+1.2
SIV	San Ignacio	15.81	40	Pn	P	11 27 12.5	-2.0
	baz=221,slow=7.3,SNR=3.6						
	comp=Z,0.5nm,0.4s						
ITAB	Concordia	17.16	90	Pn	P	11 27 29.3	-0.1
BDFB	Brasilia	25.22	64	P	P	11 28 55.6	+1.4
	comp=Z,0.8nm,0.4s,baz=238,slow=9.7,SNR=3.1						
	comp=Z,0.8nm,0.4s						
BDFB	Brasilia	25.22	64	IAmb	IAmb	11 29 13.3	
	comp=Z,4.6nm,0.9s						
RPN	Rapa Nui	33.40	263	LR	LR	11 39 52.2	
	comp=Z,52nm,19.9s,baz=64,slow=29						
VNA3	Neumayer Olymp	54.20	159	⇑P	P	11 32 48.7	-4.5
	comp=Z,2.2nm,0.6s						
VNA2	Neumayer--Watz	54.83	159	P	P	11 32 57.7	-0.1
	comp=Z,3.7nm,0.6s,baz=284,slow=7.6						
SNAA	Sanae	56.42	159	⇑P	P	11 33 08.7	-0.7
	comp=Z,92nm,0.7s						
SNAA	Sanae	56.42	159	P	P	11 33 08.6	-0.7
	comp=Z,3.6nm,0.6s,baz=274,slow=7.8,SNR=13						
	comp=Z,3.6nm,0.6s						
SNAA	Sanae	56.42	159	P	P	11 33 08.7	-0.7
SNAA				IAmb	IAmb	11 33 09.9	
	comp=Z,3.7nm,0.7s						
TROLL	Troll, Antarti	58.13	159	⇑P	P	11 33 21.0	-0.6
	comp=Z,97nm,0.6s						
QSPA	South Pole Qui	61.62	180	P	P	11 33 45.7	+0.1
	comp=Z,2.9nm,0.7s,baz=159,slow=1.8,SNR=14						
	comp=Z,2.9nm,0.7s						
QSPA	South Pole Qui	61.62	180	P	P	11 33 45.8	+0.2
QSPA				IAmb	IAmb	11 33 46.6	
	comp=Z,3.3nm,0.7s						
TXAR	Lajitas Array	65.31	329	P	P	11 34 11.6	+1.2
	comp=Z,0.3nm,0.7s,baz=144,slow=8.7,SNR=4.2						
	comp=Z,0.3nm,0.7s						
DBIC	Dimbokro	73.05	72	P	P	11 34 58.7	0.0
	comp=Z,2.4nm,0.7s,baz=54,slow=6.3,SNR=3.8						
	comp=Z,2.4nm,0.7s						
DBIC	Dimbokro	73.05	72	IAmb	IAmb	11 35 09.7	
	comp=Z,6.2nm,0.9s						
MAW	Mawson	78.21	164	P	P	11 35 26.4	-0.9
	comp=Z,3.6nm,0.5s,baz=205,slow=7.4,SNR=7.5						
MAW				LR	LR	12 10 38.9	
	comp=Z,61nm,18.2s,baz=172,slow=36						
	comp=Z,3.6nm,0.5s						
PDAR	Pinedale Array	79.19	332	P	P	11 35 33.9	+0.6
	comp=Z,0.3nm,0.5s,baz=149,slow=2.5,SNR=3.2						
	comp=Z,0.3nm,0.5s						
TORD	Torodi Ar. Bea	81.94	70	P	P	11 35 48.0	-0.4
	comp=Z,2.5nm,0.6s,baz=262,slow=2.9,SNR=15						
	comp=Z,2.5nm,0.6s						
BOSA	Boshof	82.18	118	P	P	11 35 48.5	-1.2
	comp=Z,1.0nm,0.3s,baz=313,slow=21,SNR=4.9						
	comp=Z,1.0nm,0.3s						
YKA	Yellowknife Ar	97.11	341	P	Pdif	11 36 60.0	0.0
	comp=Z,0.3nm,0.7s,baz=151,slow=3.7,SNR=6.1						
	comp=Z,0.3nm,0.7s						
ASAR	Alice Springs	122.56	208	PKP	PKiKP	11 42 23.6	-1.2
	comp=Z,1.0nm,0.5s,baz=131,slow=1.5,SNR=41						
WRA	Warramunga Arr	125.67	210	PKP	PKiKP	11 42 30.2	-0.7
	comp=Z,2.8nm,0.6s,baz=158,slow=1.7,SNR=34						
KURK	Kurchatov	148.46	37		PKiKP	11 43 14.9	-1.2
KURBB	Kurchatov Arra	148.46	37	PKPbc	PKiKP	11 43 14.9	-1.3
	comp=Z,2.2nm,0.6s,baz=300,slow=3.3,SNR=18						
ZAA0	Zalesovo Array	149.33	28	PKPbc	PKiKP	11 43 16.9	-1.0
ZALV	Zalesovo Beam	149.33	28	PKPbc	PKiKP	11 43 16.8	-1.1
	comp=Z,6.2nm,0.6s,baz=296,slow=3.3,SNR=31						
MKAR	Makanchi Array	152.62	41	PKPbc	PKiKP	11 43 24.4	-0.5
	comp=Z,1.5nm,0.7s,baz=330,slow=2.0,SNR=18						

SOME ***23*** *11:30:12.5, 42°.23N×82°.60E, h20km*
NNC ***23*** *11:30:15.1±1.3, 42°.09N×82°.29E, h16km±5km, mb3.6, mpv3.2, Error ellipse: s-maj=10.7km s-min=6.6km az=168.0*
ISC 23 11:30:04.6±2.8**,42°.0N**±0°.1×**82°.68E**±0°.07**,h13**km**,n24, σ2s.24**/33**,4C-5D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KTMS	Ketmen	2.23	311	P	Pg	11 30 47.6	+0.2
	5.0nm,0.3s						
KTMS				S	Sb	11 31 12.7	+0.2
	38nm,0.7s						
KTMS	Ketmen	2.23	311	eP	Pg	11 30 47.6	+0.2
	5.0nm,0.3s						
KTMS				eS	Sb	11 31 12.7	+0.2
	38nm,0.7s						
SHLS	Shalkode	2.63	297	Pg	Pg	11 30 54.1	-1.0
	26nm,0.3s						
SHLS				Lg	Lg	11 31 24.4	
	64nm,0.7s						
SHLS	Shalkode	2.63	297	eP	Pg	11 30 54.1	-1.0
	26nm,0.3s						
SHLS				eS	Sb	11 31 24.4	+0.3
	64nm,0.7s						
UZB	Uzynbulak	2.93	294	Pg	Pg	11 31 03.7	+3.0
	2.2nm,0.1s						
UZB				Lg	Lg	11 31 40.8	
	28nm,0.8s						
UZB	Uzynbulak	2.93	294	eP	Pg	11 31 03.7	+3.0
	2.2nm,0.1s						
UZB				eS	Sg	11 31 40.8	+2.2
	28nm,0.8s						
KPKS	Kokpek	3.28	298	Pg	Pg	11 31 09.3	+1.9
	0.3nm,0.1s						
KPKS				Lg	Lg	11 31 49.9	
	13nm,0.7s						
KPKS	Kokpek	3.28	298	eP	Pg	11 31 09.3	+1.9
	0.3nm,0.1s						
KPKS				eS	Sg	11 31 49.9	0.0
	13nm,0.7s						
SATY	Saty	3.33	290	Pg	Pg	11 31 10.0	+1.7
	1.8nm,0.2s						
SATY				Lg	Lg	11 31 52.0	
	37nm,0.6s						
KNOS	Konyrlen	3.47	314	Pg	Pg	11 31 13.0	+1.9
	2.0nm,0.5s						
KNOS				Lg	Lg	11 31 56.2	
	24nm,0.7s						
KURS	Kuram	3.63	295	Pg	Pg	11 31 16.5	+2.3
	1.7nm,0.6s						
KURS				Lg	Lg	11 32 02.2	
	4.8nm,0.8s						

BLB	**Baldybastay**	**3.71**	**305**	Pg	**Pg**	**11 31 17.8**	**+2.1**
	5.6nm,0.1s						
BLB				Lg	Lg	11 32 04.7	
	18nm,0.9s						
ARXS	**Arharly**	**4.18**	**303**	Pg	**Pg**	**11 31 27.2**	**+2.7**
	1.1nm,0.2s						
ARXS				Lg	Lg	11 32 20.8	
	13nm,0.7s						
ARXS	**Arharly**	**4.18**	**303**	*e*P	**Pg**	**11 31 27.2**	**+2.7**
	1.1nm,0.2s						
ARXS				*e*S	**Sg**	**11 32 20.8**	**+2.2**
	13nm,0.7s						
TNSS	**Tian-Shan**	**4.36**	**285**	Pg	**Pg**	**11 31 29.0**	**+1.0**
	0.2nm,0.0s						
TNSS				Lg	Lg	11 32 23.6	
	3.8nm,0.8s						
TNSS	**Tian-Shan**	**4.36**	**285**	*e*P	**Pg**	**11 31 29.0**	**+1.0**
	0.2nm,0.0s						
TNSS				*e*S	**Sg**	**11 32 23.6**	**-0.9**
	3.8nm,0.8s						
MK31	**Makanchi Array**	**4.79**	**357**	⇑Pn	**Pb**	**11 31 25.9**	**-2.4**
	0.7nm,0.6s,baz=74,slow=19,SNR=3.4						
MK31				⇑Pg	**Pg**	**11 31 39.1**	**+2.9**
	1.5nm,0.6s,baz=176,slow=17,SNR=8.5						
MK31				Sn	**Sb**	**11 32 20.8**	**-5.0**
	3.2nm,0.8s,baz=181,slow=16,SNR=4.2						
MK31				Lg	Lg	11 32 43.8	
	11nm,0.6s,baz=175,slow=30,SNR=5.9						
MAKZ	**Makanchi**	**4.82**	**354**	⇑Pn	**Pb**	**11 31 27.7**	**-1.1**
	2.0nm,0.8s						
MAKZ				⇓Sn	**Sb**	**11 32 22.1**	**-4.7**
	6.6nm,0.9s						
MAKZ				⇓Lg	Lg	11 32 44.3	
	17nm,1.0s						
DGS	**Degeres**	**5.24**	**286**	Pg	**Pg**	**11 31 45.4**	**+0.5**
	1.3nm,0.5s						
DGS				Lg	Lg	11 32 51.9	
	18nm,0.7s						
ZSN	**Zaisan**	**5.65**	**15**	Pg	**Pg**	**11 31 55.2**	**+2.4**
	2.7nm,0.2s						
ZSN				Lg	Lg	11 33 08.4	
	18nm,0.7s						
ZSN	**Zaisan**	**5.65**	**15**	*e*P	**Pg**	**11 31 55.2**	**+2.4**
	2.7nm,0.2s						
ZSN				*e*S	**Sg**	**11 33 08.4**	**+2.4**
	18nm,0.7s						
AAK	**Ala-Archa**	**6.10**	**279**	⇓Pg	**Pg**	**11 32 02.1**	**+0.8**
	4.7nm,1.3s						
AAK				⇓Lg	Lg	11 33 21.4	
	4.4nm,0.9s						
KURBB	**Kurchatov Arra**	**9.07**	**343**	⇓Lg	Lg	11 34 57.2	
	11nm,0.8s						
KURK	**Kurchatov**	**9.14**	**344**	⇑Lg	Lg	11 34 59.4	
	5.1nm,1.3s						

NOU 23 11:42:03.7, 15°.37S×167°.26E, h86^{km}, MLv4.5/14, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.09**	**216**	P	Pn	11 42 17.0	+1.1
SANVU	**Saraoutou**	**0.09**	**216**	S	Sn	11 42 26.4	+1.4
MARNC	**Mare, Loyalty**	**6.12**	**173**	P	Pn	11 43 31.4	-0.2
	0.4nm,1.6s						
YATNC	**Mamie plateau,**	**6.66**	**183**	P	Pn	11 43 38.3	-0.7
	24nm,1.0s						
DZM	**Mont Dzumac**	**6.71**	**186**	P	Pn	11 43 40.0	+0.3
	15nm,2.1s						
OUENC	**Ouen Island, N**	**7.02**	**183**	P	Pn	11 43 44.9	+1.0
	21nm,2.3s						
PINNC	**Pines Island,**	**7.21**	**179**	P	Pn	11 43 46.7	+0.3
	48nm,1.4s						

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*IDC **23** 11:51:10.0±1.3, 30°.25S×177°.95W, h0^{km}, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=34.8km s-min=17.9km az=104.0*

ISC 23 11:51:16.5±1.5**, 30°.2S**±0°.1×**177°.9W**±0°.3**, h50^{km}, n7, σ1^{s}.01**/7**, mb4.0**/4**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.92**	**0**	Pn	**Pn**	**11 51 33.1**	**0.0**
	231nm,0.3s,baz=78,slow=14,SNR=8.3						
RAO				Sn	**Sn**	**11 51 46.0**	**+0.7**
	770nm,0.3s,baz=17,slow=23,SNR=12						
STKA	**Stephens Creek**	**34.59**	**257**	P	**P**	**11 58 01.5**	**+0.8**
	3.7nm,0.9s,baz=111,slow=7.6,SNR=6.2						
	3.7nm,0.9s						
ASAR	**Alice Springs**	**43.19**	**267**	P	**P**	**11 59 12.4**	**-0.3**
	0.5nm,0.7s,baz=103,slow=7.7,SNR=13						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**44.16**	**272**	P	**P**	**11 59 19.7**	**-0.8**
	1.0nm,0.3s,baz=110,slow=8.1,SNR=32						
	1.0nm,0.3s						
QSPA	**South Pole Qui**	**59.94**	**180**	P	**P**	**12 01 17.9**	**+0.6**
	1.0nm,0.7s,baz=46,slow=1.4,SNR=7.1						
	1.0nm,0.7s						
FINES	**FINESS Array B**	**144.95**	**340**	PKPbc	PKPbc	12 10 46.0	-0.7
	3.2nm,0.8s,baz=62,slow=3.8,SNR=12						
HFS	**Hagfors**	**149.03**	**349**	PKPbc	**PKPbc**	**12 10 57.0**	**-1.4**
	2.7nm,1.0s,baz=15,slow=6.0,SNR=2.6						

IDC 23 12:17:21.6±1.4**, 0°.09N**×**125°.60E, h0^{km}, mb3.6**/4**, mbtmp3.6**/4**, MS3.5**/1**, Error ellipse: s-maj=179.6km s-min=19.6km az=64.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.67**	**157**	P	P	12 22 13.4	-0.5
	0.6nm,0.4s,baz=335,slow=11,SNR=13						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**24.95**	**162**	P	P	12 22 47.8	+0.9
	0.7nm,0.5s,baz=344,slow=10,SNR=32						
	0.7nm,0.5s						
STKA	**Stephens Creek**	**35.21**	**156**	P	P	12 24 16.7	-0.9
	0.8nm,0.6s,baz=334,slow=4.9,SNR=2.9						
	0.8nm,0.6s						
HILR	**Hailar Array B**	**49.54**	**355**	LR	LR	12 48 27.5	
	comp=Z,49nm,19.8s,baz=340,slow=38						
MKAR	**Makanchi Array**	**59.93**	**327**	P	P	12 27 29.4	-0.2
	0.3nm,0.4s,baz=120,slow=7.9,SNR=8.9						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**64.22**	**329**	P	P	12 27 58.4	+0.1
	3.4nm,0.2s,baz=129,slow=5.9,SNR=4.9						

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*IDC **23** 12:21:15.1±2.9, 62°.88N×151°.36W, h82^{km}±20^{km}, mb3.0/2, mbtmp3.4/5, Error ellipse: s-maj=54.3km s-min=10.9km az=116.0*

*AEIC **23** 12:21:16.9±0.8, 62°.91N±0°.03×151°.26W±0°.09, h116^{km}±3^{km}, ML3.1, ML3.3/212(NEIC), Error ellipse: s-maj=5.9km s-min=5.0km az=82.0*

*NEIC **23** 12:21:17.1±0.7, 62°.92N±0°.03×151°.30W±0°.09, h112^{km}±6^{km}, Error ellipse: s-maj=5.9km s-min=4.6km az=77.0*

ISC 23 12:21:17.2±0.9**, 62°.92N**±0°.03×**151°.28W**±0°.04**, h115^{km}**±6^{km}**, n185, σ0^{s}.76**/164**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPLA	**Purkeypile**	**0.42**	**267**		**Sn**	**12 21 46.7**	**-0.4**
PPLA	**Purkeypile**	**0.42**	**267**		**Pn**	**12 21 34.1**	**-0.1**
PPLA				IAML		12 21 47.4	
	comp=N,1µm,0.7s						
L22K	**Petersville**	**0.46**	**149**		**Sn**	**12 21 46.6**	**-0.8**
L22K	**Petersville**	**0.46**	**149**		**Pn**	**12 21 34.2**	**-0.2**
KTH	**Kantishna Hill**	**0.65**	**14**		**Sn**	**12 21 49.1**	**-0.6**
KTH	**Kantishna Hill**	**0.65**	**14**		**Pn**	**12 21 35.7**	**-0.1**
TRF	**Thorofare Moun**	**0.69**	**40**		**Sn**	**12 21 50.4**	**-0.1**
TRF	**Thorofare Moun**	**0.69**	**40**		**Pn**	**12 21 36.1**	**-0.1**
CUT	**Chulitna**	**0.70**	**138**		**Sn**	**12 21 50.0**	**-0.1**
CUT	**Chulitna**	**0.70**	**138**		**Pn**	**12 21 35.8**	**-0.2**
SKT	**Skwentna**	**0.95**	**187**		**Sn**	**12 21 53.8**	**-0.5**
SKT	**Skwentna**	**0.95**	**187**		**Pn**	**12 21 38.0**	**-0.4**
CHUM	**Lake Minchumin**	**1.07**	**335**		**Pn**	**12 21 39.3**	**-0.2**
CHUM					**Sn**	**12 21 55.5**	**-0.8**
WAT7	**Susitna Watana**	**1.12**	**94**		**Pn**	**12 21 39.7**	**-0.4**
WAT7					**Sn**	**12 21 56.7**	**-0.8**
BPAW	**Bear Paw Mtn.**	**1.19**	**6**		**Pn**	**12 21 40.3**	**-0.4**
BPAW				IAML		12 21 58.1	
	comp=E,405nm,0.7s						
BPAW				IAML		12 21 58.2	
	comp=N,286nm,0.9s						
RND	**Reindeer**	**1.20**	**65**		**Sn**	**12 21 58.3**	**-0.7**
RND	**Reindeer**	**1.20**	**65**		**Pn**	**12 21 40.7**	**-0.3**
RND				IAML		12 21 59.5	
	comp=E,460nm,0.3s						
WAT1	**Susitna Watana**	**1.25**	**93**		**Pn**	**12 21 41.0**	**-0.5**
WAT1					**Sn**	**12 21 59.0**	**-0.9**
M22K	**Willow**	**1.29**	**155**		**Sn**	**12 22 01.4**	**+0.9**
M22K	**Willow**	**1.29**	**155**		**Pn**	**12 21 41.5**	**-0.4**
MCK	**McKinley**	**1.33**	**51**		**Sn**	**12 22 00.9**	**-0.6**
MCK	**McKinley**	**1.33**	**51**		**Pn**	**12 21 42.3**	**-0.1**
MCK				IAML		12 22 01.4	
	comp=N,209nm,0.7s						
MCK				IAML		12 22 01.5	
	comp=E,209nm,0.4s						
K20K	**Telida**	**1.34**	**290**		**Pn**	**12 21 42.0**	**-0.4**
M20K	**Styx River**	**1.35**	**220**		**Pn**	**12 21 42.0**	**-0.7**
M20K					**Sn**	**12 22 01.1**	**-0.9**
STLK	**Strandline Lak**	**1.45**	**190**	Pn	**Pn**	**12 21 43.6**	**-0.2**
STLK				IAML		12 22 04.1	
	comp=E,370nm,0.3s						
STLK				IAML		12 22 04.8	
	comp=N,311nm,0.4s						
SUA	**Susitna One**	**1.49**	**170**		**Pn**	**12 21 44.4**	**+0.1**
SUA				IAML		12 22 05.7	
	comp=E,454nm,0.7s						
SUA				IAML		12 22 07.3	
	comp=N,278nm,0.6s						
GHO	**Glory Hole Cre**	**1.59**	**135**		**Sn**	**12 22 07.9**	**+0.9**
GHO	**Glory Hole Cre**	**1.59**	**135**		**Pn**	**12 21 45.5**	**0.0**
GHO				IAML		12 22 09.2	
	comp=E,464nm,0.6s						
GHO				IAML		12 22 12.1	
	comp=N,407nm,0.5s						
PMR	**Palmer**	**1.67**	**142**		**Pn**	**12 21 45.8**	**-0.5**
PMR				IAML		12 22 10.4	
	comp=N,206nm,0.7s						
PMR				IAML		12 22 13.2	
	comp=E,226nm,0.4s						
PMR	**Palmer**	**1.67**	**142**	P	**Pn**	**12 21 45.6**	**-0.7**
SPCG	**Spurr Capps Gl**	**1.67**	**192**		**Pn**	**12 21 46.2**	**-0.3**
SPCG					**Sn**	**12 22 08.5**	**-0.2**
SPNN	**North Nagishla**	**1.70**	**204**		**Pn**	**12 21 46.7**	**-0.1**
SPBG	**Spurr Blockage**	**1.75**	**198**		**Pn**	**12 21 47.4**	**+0.1**
SML	**Sawmill**	**1.77**	**128**		**Pn**	**12 21 47.2**	**-0.4**
SML				IAML		12 22 12.8	
	comp=E,271nm,0.7s						
SML				IAML		12 22 13.0	
	comp=N,227nm,0.7s						
SPCR	**Spurr Chakacha**	**1.78**	**195**		**Pn**	**12 21 47.5**	**-0.3**
SPCR	**Spurr Chakacha**	**1.78**	**195**		**Pn**	**12 21 47.5**	**-0.3**
SPU	**Mount Spurr**	**1.79**	**192**		**Pn**	**12 21 47.4**	**-0.4**
DHY	**Denali Highway**	**1.79**	**83**		**Pn**	**12 21 47.3**	**-0.6**
DHY				IAML		12 22 11.2	
	comp=E,333nm,0.4s						
J20K	**Nowinta River**	**1.80**	**316**		**Pn**	**12 21 47.5**	**-0.3**
CKL	**Chakachamna La**	**1.80**	**196**		**Pn**	**12 21 47.7**	**-0.4**
L19K	**White Mountain**	**1.81**	**247**		**Pn**	**12 21 47.5**	**-0.6**
NEA2	**Nenana**	**1.94**	**29**		**Pn**	**12 21 49.0**	**-0.6**
NEA2				IAML		12 22 13.8	
	comp=E,199nm,0.9s						
NEA2				IAML		12 22 14.4	
	comp=N,181nm,0.8s						
RC01	**Rabbit Creek A**	**1.98**	**158**		**Pn**	**12 21 49.7**	**-0.4**
RC01				IAML		12 22 15.6	
	comp=E,254nm,0.5s						
KNK	**Knik Glacier**	**2.01**	**138**	IAML		12 22 21.7	
	comp=N,304nm,0.5s						
WRH	**Wood River Hil**	**2.11**	**41**		**Pn**	**12 21 51.5**	**-0.2**
SCM	**Sheep Creek Mo**	**2.14**	**119**		**Pn**	**12 21 51.7**	**-0.6**
SCM				IAML		12 22 20.1	
	comp=E,248nm,0.8s						
CAPN	**Captain Cook N**	**2.16**	**178**		**Pn**	**12 21 54.3**	**+1.9**
J19K	**Poorman**	**2.23**	**301**		**Pn**	**12 21 52.9**	**-0.3**
J19K				IAML		12 22 20.0	
	comp=N,117nm,0.7s						
J19K				IAML		12 22 21.0	
	comp=E,141nm,0.6s						
I21K	**Tanana**	**2.29**	**353**	IAML		12 22 21.9	
	comp=E,96nm,0.7s						
CCB	**Clear Creek Bu**	**2.32**	**40**		**Pn**	**12 21 53.9**	**-0.5**
CCB				IAML		12 22 21.7	
	comp=E,114nm,0.6s						
I20K	**Naaghedeneel**	**2.35**	**324**		**Pn**	**12 21 55.0**	**+0.2**
I23K	**Minto, Yukon-K**	**2.39**	**20**		**Pn**	**12 21 55.2**	**0.0**
HDA	**Harding Lake**	**2.44**	**50**		**Pn**	**12 21 55.5**	**-0.4**
HDA				IAML		12 22 26.1	
	comp=E,143nm,0.8s						
HDA				IAML		12 22 26.4	
	comp=N,142nm,0.8s						
SLKM	**Skilak Lake**	**2.48**	**168**		**Pn**	**12 21 56.3**	**-0.2**
SLKM				IAML		12 22 27.1	
	comp=E,174nm,0.7s						
SLKM				IAML		12 22 27.2	
	comp=N,169nm,0.3s						
COLA	**College**	**2.48**	**36**		**Pn**	**12 21 56.1**	**-0.3**
PWL	**Port Wells**	**2.50**	**145**		**Pn**	**12 21 56.0**	**-0.7**
J18K	**Innoko River**	**2.52**	**285**		**Pn**	**12 21 56.8**	**-0.3**
J18K	**Innoko River**	**2.52**	**285**	IAML		12 22 28.2	
	comp=N,79nm,1.0s						
J18K				IAML		12 22 28.3	
	comp=E,179nm,1.1s						
O22K	**Cooper Landing**	**2.56**	**162**	Pn	**Pn**	**12 21 57.4**	**-0.1**
M18K	**Stony River**	**2.57**	**238**		**Pn**	**12 21 56.9**	**-0.7**
L18K	**Granite Mounta**	**2.60**	**257**		**Pn**	**12 21 57.7**	**-0.3**
L18K				IAML		12 22 49.8	
	comp=N,58nm,0.8s						
N19K	**Bonanza Creek**	**2.60**	**217**		**Pn**	**12 21 58.2**	**0.0**
RED	**Redoubt Volcan**	**2.61**	**196**	Pn	**Pn**	**12 21 58.6**	**+0.3**
K24K	**Donnelly Dome**	**2.63**	**68**		**Pn**	**12 21 58.5**	**0.0**
K24K				IAML		12 22 37.2	
	comp=N,117nm,0.6s						
K24K				IAML		12 22 39.7	
	comp=E,158nm,0.5s						
PAX	**Paxson**	**2.66**	**86**	IAML		12 22 35.3	
	comp=N,89nm,0.6s						
PAX				IAML		12 22 42.6	
	comp=E,77nm,0.7s						
ILAR	**Eielson Array**	**2.69**	**44**	P	**Pn**	**12 21 58.8**	**-0.4**
	comp=E,23nm,0.4s,baz=226,slow=13,SNR=466						
ILAR				S	**Sn**	**12 22 29.2**	**-2.3**
	comp=E,16nm,0.8s,baz=232,slow=18,SNR=5.4						
POKR	**Poker Plat Res**	**2.78**	**36**		**Pn**	**12 22 00.0**	**-0.3**
POKR				IAML		12 22 55.1	
	comp=E,44nm,0.9s						
KLU	**Klutina**	**2.89**	**117**		**Pn**	**12 22 00.9**	**-1.1**
KLU				IAML		12 22 45.7	
	comp=E,111nm,0.8s						
KLU				IAML		12 22 48.5	
	comp=N,124nm,0.9s						
SEW	**Seward**	**2.96**	**162**		**Pn**	**12 22 02.0**	**-0.7**
RIDG	**Independent Ri**	**3.02**	**71**	Pn	**Pn**	**12 22 04.1**	**+0.5**
RIDG				IAML		12 22 47.9	
	comp=E,77nm,0.7s						
RIDG				IAML		12 22 49.4	
	comp=N,78nm,0.7s						
H20K	**Anotleneega Mo**	**3.02**	**330**		**Pn**	**12 22 03.2**	**-0.3**
ILSW	**Iliamna Southw**	**3.08**	**198**	Pn	**Pn**	**12 22 05.5**	**+1.0**
J25K	**Salcha River,**	**3.13**	**55**	IAML		12 22 45.1	
	comp=N,52nm,0.7s						
J25K				IAML		12 22 45.5	
	comp=E,85nm,0.6s						
N18K	**Kilae Creek**	**3.14**	**226**		**Pn**	**12 22 04.7**	**-0.4**
FID	**Port Fidalgo**	**3.15**	**132**		**Pn**	**12 22 04.7**	**-0.6**
DIV	**Divide**	**3.16**	**122**		**Pn**	**12 22 04.3**	**-1.2**
DIV				IAML		12 22 41.8	
	comp=E,60nm,0.6s						
DIV				IAML		12 22 54.0	
	comp=N,101nm,1.1s						
BRLK	**Bradley Lake**	**3.18**	**176**	Pn	**Pn**	**12 22 06.0**	**+0.3**
BRLK				IAML		12 22 42.5	
	comp=N,84nm,0.4s						
BRLK				IAML		12 22 44.4	
	comp=E,102nm,0.3s						
BRSE	**Bradley Lake S**	**3.20**	**175**		**Pn**	**12 22 05.4**	**-0.6**
K17K	**Iditarod**	**3.23**	**269**		**Pn**	**12 22 06.0**	**-0.3**
K17K	**Iditarod**	**3.23**	**269**	IAML		12 22 44.9	
	comp=E,40nm,0.6s						
K17K				IAML		12 23 03.0	
	comp=N,46nm,1.0s						
IMAR	**Indian Mountai**	**3.25**	**342**		**Pn**	**12 22 06.4**	**-0.2**
M17K	**Holitna River**	**3.27**	**245**		**Pn**	**12 22 05.8**	**-1.0**
M17K	**Holitna River**	**3.27**	**245**	IAML		12 23 06.2	
	comp=N,46nm,1.1s						
M17K				IAML		12 23 15.1	
	comp=E,55nm,0.8s						
DOT	**Dot Lake**	**3.34**	**74**	IAML		12 22 51.1	
	comp=N,64nm,0.6s						
DOT				IAML		12 22 51.4	
	comp=E,49nm,0.7s						
L17K	**Donlin**	**3.35**	**259**		**Pn**	**12 22 07.3**	**-0.5**
WACK	**Wrangell Chich**	**3.37**	**103**		**Pn**	**12 22 07.9**	**-0.5**
N25K	**Chitina, Valde**	**3.39**	**110**	IAML		12 22 49.7	
	comp=E,55nm,0.5s						
N25K				IAML		12 22 50.8	
	comp=N,78nm,0.5s						
HIN	**Hinchinbrook I**	**3.41**	**136**		**Pn**	**12 22 07.6**	**-1.1**
CNPM	**China Poot**	**3.41**	**180**		**Pn**	**12 22 09.0**	**+0.2**
CNPM				IAML		12 22 52.0	
	comp=E,100nm,0.6s						
SCRK	**Sand Creek**	**3.44**	**69**		**Pn**	**12 22 08.5**	**-0.8**
SCRK	**Sand Creek**	**3.44**	**69**	IAML		12 22 56.0	
	comp=N,28nm,0.7s						
SCRK				IAML		12 23 09.4	
	comp=E,28nm,1.4s						
H19K	**Roundabout Mou**	**3.45**	**321**		**Pn**	**12 22 09.0**	**-0.2**
H19K				IAML		12 23 05.3	
	comp=N,40nm,0.8s						
H19K				IAML		12 23 08.8	
	comp=E,36nm,0.8s						
WASW	**Wrangell South**	**3.45**	**104**		**Pn**	**12 22 09.1**	**-0.4**
MENT	**Mentasta**	**3.46**	**86**		**Pn**	**12 22 09.5**	**+0.2**
MENT				IAML		12 22 57.7	
	comp=N,81nm,1.0s						
MENT				IAML		12 23 09.2	
	comp=E,94nm,1.1s						
MENT	**Mentasta**	**3.46**	**86**	P	**Pn**	**12 22 09.3**	**-0.1**
P23K	**Montague Islan**	**3.48**	**146**		**Pn**	**12 22 07.9**	**-1.7**
EYAK	**Cordova Ski Ar**	**3.55**	**130**	P	**Pn**	**12 22 11.7**	**+1.2**
J17K	**VABM Dome**	**3.57**	**281**		**Pn**	**12 22 10.4**	**-0.4**
J17K				IAML		12 22 51.2	
	comp=N,32nm,0.9s						
J17K				IAML		12 22 52.0	
	comp=E,35nm,0.9s						
L26K	**Log Cabin Wild**	**3.62**	**85**		**Pn**	**12 22 11.7**	**+0.1**
L26K	**Log Cabin Wild**	**3.62**	**85**	IAML		12 23 01.0	
	comp=N,54nm,0.5s						
L26K				IAML		12 23 08.1	
	comp=E,74nm,0.4s						
N17K	**Nushagak Hills**	**3.70**	**232**		**Pn**	**12 22 12.3**	**-0.2**
BMRM	**Bremner River**	**3.71**	**119**		**Pn**	**12 22 11.6**	**-1.2**
BMRM				IAML		12 23 11.0	
	comp=N,79nm,1.0s						
AUJK	**Augustine Jueg**	**3.73**	**197**		**Pn**	**12 22 14.4**	**+1.4**
G21K	**Allakaket**	**3.73**	**346**		**Pn**	**12 22 12.7**	**-0.2**
J26L	**Joseph Creek**	**3.78**	**62**	IAML		12 23 02.1	
	comp=N,60nm,0.7s						
GLB	**Gilahina Butte**	**3.80**	**110**	IAML		12 22 57.6	
	comp=N,68nm,0.6s						
GLB				IAML		12 22 58.6	
	comp=E,59nm,0.6s						
H18K	**Honhosa River**	**3.83**	**309**		**Pn**	**12 22 14.1**	**-0.2**
H18K	**Honhosa River**	**3.83**	**309**	IAML		12 22 58.4	
	comp=E,24nm,0.7s						
H18K				IAML		12 23 00.1	
	comp=N,26nm,1.3s						
G23K	**Bananza Creek**	**3.84**	**7**		**Pn**	**12 22 14.2**	**-0.3**
M26K	**Nabesna, AK**	**3.86**	**94**		**Pn**	**12 22 14.2**	**-0.5**
M26K	**Nabesna, AK**	**3.86**	**94**	IAML		12 23 20.7	
	comp=N,34nm,1.0s						
M26K				IAML		12 23 22.9	
	comp=E,29nm,0.7s						
L16K	**Owhat River**	**4.01**	**256**		**Pn**	**12 22 16.5**	**-0.2**
VRDI	**Verde Repeater**	**4.06**	**111**	IAML		12 23 06.0	
	comp=N,35nm,1.3s						
VRDI				IAML		12 23 10.1	
	comp=E,34nm,1.4s						
G19K	**Purcell Mounta**	**4.09**	**325**		**Pn**	**12 22 17.3**	**-0.5**
G19K				IAML		12 23 05.5	
	comp=E,22nm,1.2s						
M16K	**Timber Creek**	**4.09**	**246**		**Pn**	**12 22 17.1**	**-0.8**
M16K	**Timber Creek**	**4.09**	**246**	IAML		12 23 49.8	
	comp=N,18nm,1.4s						
MCARA	**McCarthy VSAT**	**4.17**	**108**		**Pn**	**12 22 18.4**	**-0.4**
O17K	**Koliganek Bris**	**4.22**	**224**		**Pn**	**12 22 19.4**	**-0.1**
K27K	**Chicken**	**4.28**	**71**		**Pn**	**12 22 19.9**	**-0.3**
I26K	**Coal Creek Min**	**4.29**	**53**	IAML		12 23 14.9	
	comp=N,35nm,0.7s						
I26K				IAML		12 23 16.0	
	comp=E,36nm,0.9s						
H17K	**Granite Mounta**	**4.31**	**302**	IAML		12 23 12.2	
	comp=N,19nm,1.4s						
H17K				IAML		12 23 12.2	
	comp=E,50nm,0.7s						
L27K	**Beaver Creek,**	**4.32**	**84**		**Pn**	**12 22 19.9**	**-0.9**
N16K	**Nishlik Lake**	**4.33**	**239**		**Pn**	**12 22 20.5**	**-0.5**
BCAR	**Beaver Creek A**	**4.33**	**84**		**Pn**	**12 22 20.4**	**-0.7**
I17K	**Unalakleet**	**4.34**	**287**		**Pn**	**12 22 21.5**	**+0.4**
I17K				IAML		12 23 13.0	
	comp=N,30nm,0.6s						
COLD	**Coldfoot**	**4.35**	**6**		**Pn**	**12 22 21.1**	**-0.1**
SYI	**Shuyak Island**	**4.36**	**188**		**Pn**	**12 22 20.7**	**-0.7**
G18K	**Tagagawik**	**4.37**	**316**		**Pn**	**12 22 21.3**	**-0.2**
G18K	**Tagagawik**	**4.37**	**316**	IAML		12 23 11.9	
	comp=N,17nm,1.5s						
G18K				IAML		12 23 13.4	
	comp=E,18nm,1.5s						
M27K	**Edge Creek, AK**	**4.38**	**93**		**Pn**	**12 22 22.0**	**+0.2**
M27K	**Edge Creek, AK**	**4.38**	**93**	IAML		12 23 36.5	
	comp=N,20nm,0.9s						
G25K	**Bearman Lake**	**4.45**	**28**		**Pn**	**12 22 21.9**	**-0.6**
PTPK	**Patty Peak**	**4.50**	**109**		**Pn**	**12 22 22.8**	**-0.6**
F20K	**Avaraart Lake**	**4.55**	**337**		**Pn**	**12 22 24.0**	**+0.1**
TGL	**Tana Glacier**	**4.56**	**115**		**Pn**	**12 22 23.4**	**-0.8**
TGL				IAML		12 23 25.1	
	comp=N,43nm,1.0s						
KAHC	**Katmai Hardscr**	**4.66**	**205**		**Pn**	**12 22 25.6**	**0.0**
KIAG	**Kiagna River**	**4.67**	**111**		**Pn**	**12 22 24.1**	**-1.6**
KAHG	**Katmai Hook Gl**	**4.72**	**201**		**Pn**	**12 22 26.5**	**+0.2**
KARR	**Katmai Rainbow**	**4.75**	**202**		**Pn**	**12 22 27.1**	**+0.4**
F24K	**Squaw Lake**	**4.83**	**16**		**Pn**	**12 22 27.7**	**0.0**
BVCY	**Beaver Creek**	**4.83**	**91**		**Pn**	**12 22 27.6**	**-0.2**
KAWH	**Katmai**	**4.87**	**202**		**Pn**	**12 22 28.6**	**+0.2**
BARN	**Barnard Glacie**	**4.91**	**108**		**Pn**	**12 22 28.3**	**-0.6**
BARN	**Barnard Glacie**	**4.91**	**108**	IAML		12 23 25.1	
	comp=N,30nm,0.7s						
BARN				IAML		12 23 27.2	
	comp=E,24nm,1.2s						
L15K	**Ungalak Mounta**	**4.92**	**260**		**Pn**	**12 22 28.4**	**-0.5**
YUK2	**White River**	**5.00**	**99**		**Pn**	**12 22 30.0**	**0.0**
I27K	**Kandik River**	**5.00**	**53**	IAML		12 23 31.7	
	comp=N,14nm,1.2s						
I27K				IAML		12 23 46.7	
	comp=E,15nm,1.1s						
KAKN	**Katmai Knife C**	**5.00**	**204**		**Pn**	**12 22 29.8**	**-0.3**
GRNC	**Granite Creek**	**5.02**	**112**		**Pn**	**12 22 29.1**	**-1.3**
GRNC	**Granite Creek**	**5.02**	**112**	IAML		12 23 46.1	
	comp=E,17nm,1.4s						
GRNC				IAML		12 23 54.7	
	comp=N,24nm,1.5s						
N15K	**Kwethluk River**	**5.04**	**241**		**Pn**	**12 22 29.9**	**-0.6**
N15K	**Kwethluk River**	**5.04**	**241**	IAML		12 23 36.0	
	comp=N,13nm,1.4s						
N15K				IAML		12 25 15.3	
	comp=E,31nm,1.5s						
KABU	**Katmai Buttres**	**5.07**	**205**		**Pn**	**12 22 31.7**	**+0.8**
CTGM	**Chitina Glacie**	**5.09**	**108**		**Pn**	**12 22 30.8**	**-0.6**
CTGM	**Chitina Glacie**	**5.09**	**108**	IAML		12 23 29.6	
	comp=N,20nm,0.6s						
CTGM				IAML		12 23 33.1	
	comp=E,17nm,1.5s						
G26K	**Porcupine Rive**	**5.15**	**35**	IAML		12 24 09.2	
	comp=E,15nm,1.1s						
G26K				IAML		12 24 11.7	
	comp=N,17nm,1.2s						
ANCK	**Angle Creek**	**5.17**	**206**		**Pn**	**12 22 33.3**	**+0.9**
CNTC	**Contact Creek**	**5.19**	**208**		**Pn**	**12 22 33.9**	**+1.2**
E19K	**Redstone River**	**5.20**	**334**	IAML		12 23 50.1	
	comp=E,8.5nm,1.1s						
E19K				IAML		12 23 54.2	
	comp=N,9.2nm,0.9s						
KDAK	**Kodiak Island**	**5.20**	**188**	P	**Pn**	**12 22 30.2**	**-2.5**
	comp=N,4.2nm,0.3s,baz=39,slow=4.7,SNR=150						
KDAK				S	**Sn**	**12 23 27.6**	**-3.8**
	comp=N,20nm,0.5s,baz=115,slow=23,SNR=27						
F25K	**Christian Rive**	**5.25**	**24**		**Pn**	**12 22 33.0**	**-0.4**
LOGN	**Logan Glacier**	**5.30**	**109**	Pn	**Pn**	**12 22 33.7**	**-0.4**
LOGN				IAML		12 23 40.2	
	comp=E,18nm,1.4s						
LOGN				IAML		12 24 46.3	
	comp=N,15nm,1.5s						

H27K	Steamboat Moun	5.35	47		Pn	12 22 35.0	+0.2
H27K				IAML		12 23 51.5	
	comp=E,6.8nm,1.3s						
H27K				IAML		12 24 24.9	
	comp=N,8.0nm,0.9s						
F17K	Baldwin Pennin	5.54	314		Pn	12 22 37.8	+0.6
L14K	Kuka Creek	5.58	259		Pn	12 22 38.2	+0.5
J14K	Nanvaranak Lak	5.63	274		Pn	12 22 38.4	0.0
F26K	Sheenjek River	5.64	29		Pn	12 22 38.8	+0.1
O28M	Mount Upton	5.68	107		Pn	12 22 38.9	-0.5
E20K	Nigu River	5.73	341		Pn	12 22 40.6	+0.8
OHAK	Old Harbor	5.81	191		Pn	12 22 38.5	-2.3
OHAK	Old Harbor	5.81	191	P	Pn	12 22 38.6	-2.3
PCA	Pinnacle	5.99	113		Pn	12 22 42.8	-0.6
L29M	L29M	5.99	82		Pn	12 22 43.1	-0.3
E17K	Hotham Inlet	6.11	318		Pn	12 22 45.0	0.0
K29M	Barlow Dome	6.25	75		Pn	12 22 46.4	-0.6
D19K	Kuna River	6.26	336		Pn	12 22 47.2	+0.2
K13K	Kusilvak Mount	6.29	267		Pn	12 22 47.2	-0.1
N30M	Aishikik Lake	6.80	96		Pn	12 22 53.9	-0.5
J30M	Hart River	6.83	69		Pn	12 22 54.5	-0.3
B21K	Ikpikpuk River	6.86	350		Pn	12 22 55.0	0.0
P30M	Million Dollar	7.40	106		Pn	12 23 01.8	-0.6
JIS	Juneau Island	9.51	112	P	Pn	12 23 29.8	-1.1
YKA	Yellowknife Ar	16.68	75	P	P	12 25 04.0	-0.1
	comp=N,0.6nm,1.0s,baz=286,slow=12,SNR=7.5						
PDAR	Pinedale Array	31.45	110	P	P	12 27 29.0	+1.3
	comp=N,0.5nm,0.9s,baz=338,slow=5.5,SNR=3.7						
	comp=N,0.5nm,0.9s						
TXAR	Lajitas Array	45.35	115	P	P	12 29 24.7	+0.9
	comp=N,0.2nm,0.5s,baz=328,slow=6.2,SNR=3.5						
	comp=N,0.2nm,0.5s						

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*IDC **23** 12:32:45.0±1.4, 7°.28S×120°.07E, h575^{km}±18^{km}, mb3.3/13, mbtmp4.3/16, Error ellipse: s-maj=29.8km s-min=10.3km az=65.0*

*NEIC **23** 12:32:45.1±1.4, 7°.32S±0°.10×120°.0E±0°.1, h570^{km}±9^{km}, mb4.3/19, Error ellipse: s-maj=19.6km s-min=13.3km az=69.0*

*DJA **23** 12:32:45.3±0.1, 7°S±2°×12°0E±°, h565^{km}±2^{km}, M4.1/30, mb3.9/30, mB5.0/6, MLv4.1/27, Mw(mB)4.3/6*

ISC 23 12:32:44.8±0.5**, 7°.37S**±0°.06×**120°.04E**±0°.07**, h570**^{km}±6^{km}**, n103, σ0^{s}99**/112**, mb4.0**/21**, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBFI	Labuhan Bajo,	1.11	188	P	P	12 33 53.2	-0.1
LBFI				S	S	12 34 45.9	-3.1
BKSI	Bulukumba	2.04	2	P	P	12 33 58.0	+1.5
DBNI	Kabupaten Domp	2.05	237	P	P	12 33 57.5	+1.0
DBNI				S	S	12 34 54.3	-0.6
EDFI	Ende, Flores	2.13	130	P	P	12 33 56.2	-0.8
WSI	Waingapu	2.30	174	P	P	12 33 58.4	+0.7
WSI				S	S	12 34 55.9	-1.0
WBSI	Waikabubak, Su	2.35	196	P	P	12 33 58.4	+0.4
WBSI				S	S	12 34 56.0	-1.5
KAPI	Kappang	2.36	353	P	P	12 33 58.3	+0.3
KAPI	Kappang	2.36	353	P	P	12 34 00.1	+2.1
KAPI	Kappang	2.36	353	P	P	12 34 00.2	+2.2
KAPI				S	S	12 34 59.6	+2.1
MMRI	Maumere	2.51	120	P	P	12 33 57.9	-0.9
MMRI	Maumere	2.51	120	P	P	12 33 58.9	+0.2
MMRI	Maumere	2.51	120	P	P	12 33 58.4	-0.3
PLAI	Plampang	2.67	237	P	P	12 34 00.5	+0.9
PLAI	Plampang	2.67	237	P	P	12 34 00.8	+1.2
PLAI				S	S	12 34 59.5	-0.9
BASI	Baing, Sumba	2.88	169	P	P	12 34 02.4	+1.7
BASI				S	S	12 35 02.9	+0.3
SPSI	Sidrap Palu	3.39	355	P	P	12 34 05.8	+1.8
TWSI	Taliwang, Sumb	3.41	246	P	P	12 34 05.2	+1.2
TWSI				S	S	12 35 07.1	-1.4
PMSI	Majene	4.00	344	P	P	12 34 10.2	+2.0
KLNI	Mataram	4.05	255	P	P	12 34 09.2	+0.8
TTSI	Tana Toraja	4.30	357	P	P	12 34 12.2	+1.8
KHKI	Kahang-Kahang	4.50	257	P	P	12 34 10.9	-0.9
KHKI				S	S	12 35 20.9	-1.9
BATI	Baumata	4.55	128	P	P	12 34 12.8	+0.5
	52nm,0.3s,baz=93,slow=3.0,SNR=14						
BATI				S	S	12 35 22.2	-1.4
	25nm,0.3s,baz=9.5,slow=22,SNR=9.1						
BATI	Baumata	4.55	128	P	P	12 34 12.4	+0.1
BATI				S	S	12 35 22.6	-1.0
MMSI	Mamuju	4.78	346	P	P	12 34 16.3	+2.1
SOEI	Soe	4.80	120	P	P	12 34 14.3	-0.1
SOEI	Soe	4.80	120	P	P	12 34 14.7	+0.3
SOEI	Soe	4.80	120	P	P	12 34 14.6	+0.2
DNP	Denpasar	4.96	254	P	P	12 34 16.3	+0.8
IGBI	Denpasar	5.06	253	P	P	12 34 16.9	+0.6
RTBI	Rangdo, Negare	5.17	258	P	P	12 34 18.3	+1.0
	0.3nm59nm,0.9s						
JAGI	Jajag, Banyuwa	5.94	259	P	P	12 34 23.4	-0.5
JAGI	Jajag, Banyuwa	5.94	259	P	P	12 34 23.9	0.0
JAGI	Jajag, Banyuwa	5.94	259	P	P	12 34 23.5	-0.4
KMMI	Kalianget	6.04	273	P	P	12 34 26.0	+1.3
	0.1nm14nm,1.2s						
BLJI	Banyuglugur	6.40	266	P	P	12 34 28.2	+0.2
GMJI	Gumukmas	6.60	262	P	P	12 34 29.6	-0.2
	0.1nm17nm,1.2s						
LUWI	Luwuk	6.85	24	P	P	12 34 32.3	+0.1
MPSI	Mapaga	7.66	359	P	P	12 34 41.0	+1.1
	0.1nm26nm,0.9s						
MRSI	Marisa	8.02	14	P	P	12 34 43.3	-0.1
	17nm,0.7s						
SNJI	Sawahan-Nganju	8.22	267	P	P	12 34 46.7	+1.2
	24nm,1.8s						
TOLI2	Tolitoli	8.46	5	P	P	12 34 47.1	-0.6
TOLI2	Tolitoli	8.46	5	P	P	12 34 47.8	+0.1
GTOI	Gorontalo	8.48	21	P	P	12 34 48.7	+0.8
	14nm,1.0s						
PCJI	Pacitan	8.82	264	P	P	12 34 51.0	-0.3
	21nm,0.6s						
UGM	Wanagama	9.45	266	P	P	12 34 56.6	-1.0
UGM	Wanagama	9.45	266	P	P	12 34 58.6	+1.0
UGM	Wanagama	9.45	266	P	P	12 34 57.9	+0.3
	61nm,2.3s						
KPJI	Karang Pucung	11.02	269	P	P	12 35 14.5	+1.0
	16nm,0.6s						
FITZ	Fitzroy Crossi	11.98	153	P	P	12 35 23.3	+0.1
	1.5nm,0.4s,baz=334,slow=9.3,SNR=14						
MTN	Manton Dam	12.20	117		P	12 35 25.2	-0.3
BBJI	Bungbulang	12.29	269	P	P	12 35 27.4	+0.8
BBJI	Bungbulang	12.29	269	P	P	12 35 26.2	-0.4
	10nm,1.0s						
CNJI	Cibinong	12.81	269	P	P	12 35 31.2	-0.6
	28nm,1.3s						
MBWA	Marble Bar	13.71	181	P	P	12 35 41.5	+0.5
KKM	Kota Kinabalu	13.86	344	P	P	12 35 42.7	0.0
KKM	Kota Kinabalu	13.86	344	P	P	12 35 43.6	+0.9
PSA00	Pilbara Seismi	14.12	181	P	P	12 35 45.5	+0.3
EGSI	Enggano, Bengk	17.77	275	P	P	12 36 21.2	+1.4
	2µm24nm,1.2s						
WB0	Warramunga Arr	18.59	133		P	12 36 27.5	+0.3
WB0				IAmb	IAmb	12 36 29.4	
	comp=Z,8.2nm,0.6s						
WRA	Warramunga Arr	18.66	133	P	P	12 36 28.0	+0.1
	comp=Z,3.6nm,0.5s,baz=309,slow=9.7,SNR=77						
WRA	Warramunga Arr	18.66	133		P	12 36 26.9	-1.0
WRAB	Tennant Creek	18.67	133	P	P	12 36 27.2	-0.7
WRAB				IAmb	IAmb	12 36 30.7	
	comp=Z,10nm,0.7s						
WRAB	Tennant Creek	18.67	133	P	P	12 36 28.3	+0.4
WR8	Warramunga Arr	18.79	133		P	12 36 29.3	+0.3
WR8				IAmb	IAmb	12 36 30.5	
	comp=Z,10nm,0.7s						
MEEK	Meekatharra	19.21	184	P	P	12 36 33.6	+0.8
AS31	Alice Springs	20.97	142		P	12 36 48.8	+0.1
ASAR	Alice Springs	20.97	142	P	P	12 36 49.0	+0.2
	comp=Z,6.9nm,0.3s,baz=319,slow=8.3,SNR=313						
ASAR				ScP	ScP	12 43 13.3	-1.4
	comp=Z,0.5nm,0.6s,baz=332,slow=2.1,SNR=14						
	comp=Z,6.9nm,0.3s						
ASAR	Alice Springs	20.97	142		P	12 36 49.2	+0.4
JAY	Jayapura	21.14	78	P	P	12 36 50.1	-0.3
	comp=Z,22nm,1.0s						
QIS	Mount Isa	23.03	127	P	P	12 37 07.4	+0.2
BLDU	Ballidu	23.34	187	P	P	12 37 10.3	+0.6
FORT	Forrest	24.47	163	P	P	12 37 20.1	+0.3
FORT				IAmb	IAmb	12 37 35.7	
	comp=Z,12nm,1.1s						
NWAO	Narrogin (SRO)	25.56	185	P	P	12 37 28.8	-0.6
INKA	Innaminka	28.19	138	P	P	12 37 53.3	+0.7
INKA				IAmb	IAmb	12 37 54.2	
	comp=Z,1.9nm,0.6s						
CTAO	Charters Tower	28.37	119	P	P	12 37 54.8	+0.6
CTAO				IAmb	IAmb	12 37 56.4	
	comp=Z,17nm,1.4s						
BBOO	Buckleboo	29.36	152	P	P	12 38 03.0	+0.4
BBOO				IAmb	IAmb	12 38 03.6	
	comp=Z,7.5nm,0.5s						
BBOO	Buckleboo	29.36	152	P	P	12 38 02.9	+0.3
HTT	Hallett	31.27	149	P	P	12 38 19.9	+0.8
STKA	Stephens Creek	31.59	143	P	P	12 38 22.5	+0.7
	comp=Z,6.9nm,0.3s,baz=322,slow=8.4,SNR=37						
	comp=Z,6.9nm,0.3s						
STKA	Stephens Creek	31.59	143	P	P	12 38 22.5	+0.7
STKA	Stephens Creek	31.59	143	P	P	12 38 22.3	+0.5
CMAR	Chiang Mai Arr	33.05	321	P	P	12 38 34.2	0.0
	comp=Z,0.7nm,0.5s,baz=146,slow=6.2,SNR=5.7						
	comp=Z,0.7nm,0.5s						
CMSA	Cobar Meteorol	33.92	139	P	P	12 38 42.5	+1.0
TOO	Toolangi	37.91	146	P	P	12 39 16.0	+1.7
TOO				IAmb	IAmb	12 39 37.8	
	comp=Z,8.4nm,1.5s						
CAN	Canberra	38.46	140	P	P	12 39 18.5	-0.4
KSRS	Korea Array	45.19	9	P	P	12 40 11.8	+0.2
	comp=Z,1.0nm,0.5s,baz=181,slow=10,SNR=2.6						
	comp=Z,1.0nm,0.5s						
USRK	Ussuriysk Ar.	52.45	11	P	P	12 41 03.4	-1.7
	comp=Z,2.7nm,0.6s,baz=170,slow=5.8,SNR=2.8						
	comp=Z,2.7nm,0.6s						
SONM	Songino Array	56.27	349	P	P	12 41 31.8	-0.2
	comp=Z,1.8nm,0.6s,baz=167,slow=8.5,SNR=12						
	comp=Z,1.8nm,0.6s						
SONM	Songino Array	56.27	349	IAmb	IAmb	12 41 32.4	
	comp=Z,1.6nm,0.8s						
MKAR	Makanchi Array	63.50	332	P	P	12 42 19.6	-0.1
	comp=Z,4.3nm,0.5s,baz=143,slow=7.5,SNR=87						
	comp=Z,4.3nm,0.5s						
MAKZ	Makanchi	63.66	332	P	P	12 42 20.9	+0.1
MAKZ				IAmb	IAmb	12 42 21.1	
	comp=Z,2.3nm,0.5s						
ZAA0	Zalesovo Array	67.91	338	IAmb	IAmb	12 42 46.0	
	comp=Z,4.7nm,0.4s						
ZALV	Zalesovo Beam	67.91	338	P	P	12 42 45.6	-1.3
	comp=Z,3.7nm,0.3s,baz=144,slow=5.3,SNR=26						
	comp=Z,3.7nm,0.3s						
ZALV	Zalesovo Beam	67.91	338		P	12 42 45.7	-1.2
KURBB	Kurchatov Arra	67.98	333	P	P	12 42 46.3	-1.3
	comp=Z,1.2nm,0.4s,baz=149,slow=5.3,SNR=14						
	comp=Z,1.2nm,0.4s						
KURK	Kurchatov	68.01	333		P	12 42 47.3	-0.3
KURK				IAmb	IAmb	12 42 48.2	
	comp=Z,5.5nm,1.0s						
PETK	Petropavlovsk-	68.18	23	P	P	12 42 48.4	-0.3
	comp=Z,1.7nm,0.8s,baz=287,slow=2.0,SNR=4.2						
	comp=Z,1.7nm,0.8s						
MAW	Mawson	71.11	200	P	P	12 43 07.1	+1.2
	comp=Z,2.2nm,0.7s,baz=69,slow=8.6,SNR=2.1						
	comp=Z,2.2nm,0.7s						
BVAR	Borovoye Array	73.36	331	P	P	12 43 18.2	-0.9
	comp=Z,0.4nm,0.4s,baz=131,slow=4.5,SNR=4.8						
	comp=Z,0.4nm,0.4s						
VNDA	Vanda	73.43	171	P	P	12 43 19.4	+0.3
	comp=Z,0.4nm,0.4s,baz=312,slow=6.6,SNR=2.8						
	comp=Z,0.4nm,0.4s						
VNDA	Vanda	73.43	171	IAmb	IAmb	12 43 28.1	
	comp=Z,1.9nm,1.1s						
AB31	Akbulak array	76.84	324	P	P	12 43 37.6	-1.0
ABKAR	Akbulak array	76.84	324	P	P	12 43 37.8	-0.8

IDC 23 12:36:46.7±8.8**, 4°.01S**×**103°.48W, h0**^{km}**, mb3.5**/4**, mbtmp3.5**/4**, MS3.2**/2**, Error ellipse: s-maj=255.9km s-min=177.2km az=94.0, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	22.62	22	LR	LR	12 48 32.6	
	comp=Z,57nm,20.1s,baz=136,slow=31						
RPN	Rapa Nui	23.66	193	LR	LR	12 48 47.8	
	comp=Z,54nm,19.9s,baz=0.0,slow=30						
H03N2	Juan Fernandez	37.17	145	T	T	13 23 51.5	
	baz=317,slow=77,SNR=7.7						
H03N1	Juan Fernandez	37.18	145	T	T	13 23 58.3	
	baz=317,slow=77,SNR=8.0						
H03N3	Juan Fernandez	37.18	145	T	T	13 23 56.7	
	baz=317,slow=77,SNR=8.8						
NVAR	Mina Array Bea	44.41	343	P	P	12 44 59.0	-0.5
	0.6nm,0.9s,baz=179,slow=7.4,SNR=2.0						
	0.6nm,0.9s						
PDAR	Pinedale Array	46.88	354	P	P	12 45 19.6	+0.4
	1.1nm,0.8s,baz=158,slow=7.3,SNR=9.2						
	1.1nm,0.8s						
YKA	Yellowknife Ar	66.86	354	P	P	12 47 39.8	-0.5
	0.3nm,0.8s,baz=170,slow=6.2,SNR=5.8						
	0.3nm,0.8s						
ILAR	Eielson Array	75.65	342	P	P	12 48 33.9	+0.3
	0.6nm,0.9s,baz=120,slow=6.2,SNR=4.4						
	0.6nm,0.9s						

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*HEL **23** 12:36:51.1±0.3, 60°.97N×29°.05E, h0^{km}, ML1.8, Suspected explosion*

*IDC **23** 12:36:53.3±2.2, 60°.92N×28°.87E, h0^{km}, mbtmp3.3/2, ML2.2/2, Error ellipse: s-maj=17.4km s-min=12.3km az=159.0*

ISC 23 12:36:50.1±1.1**, 61°.04N**±0°.04×**29°.00E**±0°.05**, h0**^{km}**, n23,** σ**1^{s}45**/34**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUF	Ruokolahti	0.39	356	PG	Pb	12 36 59.9	-0.1
RUF				SG	Sb	12 37 05.4	-1.1
RUF				MSG		12 37 06.2	
	comp=Z,11nm,0.2s						
VJF	Virojoki	0.87	236	PB	Pb	12 37 07.2	-0.9
VJF				MSG		12 37 17.6	
	comp=Z,11nm,0.2s						
VJF				SB	Sb	12 37 19.2	-1.0
FIA0	FINESS Array S	1.47	287	PG	Pb	12 37 18.0	-0.4
FIA0				MSG		12 37 36.7	
	comp=Z,9.9nm,0.2s						
FINES	FINESS Array B	1.47	287	Pg	Pg	12 37 18.6	+0.3
	comp=Z,0.4nm,0.3s,baz=112,slow=16,SNR=24						
FINES				Lg	Lg	12 37 38.8	
	comp=Z,3.6nm,0.3s,baz=111,slow=29,SNR=49						
PVF	Pernaja	1.62	254	PG	Pg	12 37 20.5	-0.6
PVF				MSG		12 37 39.8	
	comp=Z,7.6nm,0.2s						
PVF				SN	Sg	12 37 44.4	+2.4
SUF	Sumiainen	2.16	323	PG	Pg	12 37 31.6	0.0
	baz=138						
SUF				MSG		12 37 57.2	
	comp=Z,3.4nm,0.2s						
SUF				SG	Sg	12 38 00.3	+0.8
JOF	Joensuu	2.18	29	*e*P	Pg	12 37 31.1	-0.8
JOF	Joensuu	2.18	29	PG	Pg	12 37 31.1	-0.8
	baz=207						
JOF				SG	Sg	12 37 59.1	-1.0
NUR	Nurmijarvi	2.20	258	PG	Pb	12 37 30.3	-0.5
NUR				MSG		12 37 56.7	
	comp=Z,3.3nm,0.2s						
NUR				SG	Sb	12 37 58.4	-0.1
HEL1	Helsinki	2.21	249	PG	Pb	12 37 30.9	+0.1
HEL1				MSG		12 37 56.4	
	comp=Z,5.0nm,0.2s						
KEF	Keuruu	2.28	302	*e*P	Pg	12 37 33.5	-0.3
KEF	Keuruu	2.28	302	PG	Pb	12 37 32.6	+0.5
KEF				MSG		12 38 00.3	
	comp=Z,2.5nm,0.2s						
KEF				SG	Sg	12 38 02.8	-0.4
MEF	Metsahovi	2.41	252	*e*P	Pb	12 37 33.3	-1.1
MEF	Metsahovi	2.41	252	PB	Pb	12 37 33.0	-1.4
MEF				MSG		12 38 02.6	
	comp=Z,3.5nm,0.2s						
MEF				SG	Sb	12 38 04.0	-0.6
NIF	Nilsia	2.43	347	PG	Pb	12 37 35.2	+0.6
NIF				MSG		12 38 05.0	
	comp=Z,3.1nm,0.2s						
NIF				SG	Sg	12 38 07.0	-1.1
RMF	Romuvaara	3.22	7	PB	Pb	12 37 47.7	-0.5
RAF	Rauma	3.52	273	*e*P	Pb	12 37 49.6	-3.7
RAF	Rauma	3.52	273	PB	Pb	12 37 51.7	-1.5
VAF	Ylistaro	3.60	307	*e*P	Pb	12 37 51.7	-2.9
VAF	Ylistaro	3.60	307	PB	Pb	12 37 51.8	-2.7
	baz=117						
VAF				SB	Sb	12 38 39.1	+0.4
I43RU	DUBNA INFRASON	6.07	132	I	I	13 14 30.0	
	baz=323,slow=310,SNR=2.0						
HFS	Hagfors	7.59	270	Pn	Pn	12 38 43.1	+1.2
	comp=Z,0.1nm,0.3s,baz=95,slow=16,SNR=1.9						
HFS				Sn	Sn	12 40 07.0	-1.6
	comp=Z,0.1nm,0.3s,baz=80,slow=26,SNR=2.6						
	comp=Z,0.9nm,0.7s						
ARCES	ARCESS Array B	8.66	352	Pn	Pn	12 38 59.6	+3.1
	comp=Z,0.1nm,0.3s,baz=175,slow=12,SNR=1.7						
ARCES				Sn	Sn	12 40 33.5	-1.2
	baz=168,slow=22,SNR=1.0						
	comp=Z,2.6nm,1.0s						

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*IDC **23** 12:39:54.5±0.6, 6°.16S×142°.87E, h0^{km}, mb4.4/15, mbtmp4.5/20, ML3.3/3, MS3.8/27, Error ellipse: s-maj=24.1km s-min=13.5km az=82.0*

*BJI **23** 12:39:55.3, 6°.12S×143°.15E, h19^{km}, mB5.4/8, mb4.6/47*

*NEIC **23** 12:39:56.8±2.7, 6°.30S±0°.02×142°.71E±0°.07, h10^{km}±1^{km}, mb5.0/60, Error ellipse: s-maj=11.4km s-min=3.7km az=79.0*

*GCMT **23** 12:39:58.8±0.3, 6°.29S±0°.03×142°.57E±0°.03, h12^{km}, MW4.9/81, Moment Tensor Solution. s16,c19; s81,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.91±.08; $M_{\theta\theta}$-1.00±.08; $M_{\phi\phi}$-0.91±.08; $M_{r\theta}$1.38±.30; $M_{\theta\phi}$0.88±.06; $M_{\phi r}$-1.69±.30; Best double couple: $M_0$2.87600×10^{16} NP1:ϕ_s309.00000°, δ21.00000°, λ80.00000°. NP2: ϕ_s139.00000°, δ70.00000°, λ94.00000°. Principal axes: T 2.9200, Plg65.0000°, Azm55.0000°; N -0.0870, Plg3.0000°, Azm318.0000°; P -2.8330, Plg25.0000°, Azm226.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **23** 12:40:00.2±0.4, 6°S±3°×14°3E±°, h43^{km}±5^{km}, M4.9/31, mb4.8/31, mB5.3/12, MLv5.5/7, Mw(mB)4.7/12*

ISC 23 12:39:56.6±0.4**, 6°.31S**±0°.05×**142°.70E**±0°.06**, h10**^{km}**, n151,** σ**1^{s}42**/112**, mb4.9**/51**, MS3.7**/23**, 2C-3D, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPI	Merauke	3.14	227	P	Pn	12 40 48.5	+2.3
JAY	Jayapura	4.26	332	Pn	Pn	12 41 02.0	+0.5
	14nm,0.3s,baz=179,slow=7.5,SNR=34						
JAY				Sn	Sn	12 41 54.1	+2.7
	9.3nm,0.3s,baz=347,slow=20,SNR=5.0						
	40nm,0.4s						
JAY	Jayapura	4.26	332	P	Pn	12 41 01.6	0.0
GENI	Genyem	4.47	326	P	Pn	12 41 03.6	-0.8
PMG	Port Moresby	5.39	125	Pn	Pn	12 41 17.2	+0.1
	10.0nm,0.3s,baz=324,slow=4.2,SNR=47						
PMG				Sn	Sn	12 42 18.3	-0.9
	53nm,0.3s,baz=252,slow=22,SNR=21						
	93nm,0.6s						
PMG	Port Moresby	5.39	125		Pn	12 41 17.5	+0.4
PMG	Port Moresby	5.39	125	P	Pn	12 41 17.3	+0.2
	2.2nm2µm169nm,0.9s						
SMPI	Sarmi	5.85	317	P	Pn	12 41 24.6	+1.2
	1.1nm3µm188nm,2.0s						
MANU	Manus Island	6.29	48		Pn	12 41 29.9	+0.3
COEN	Coen	7.62	177	Pn	Pn	12 41 49.6	+1.8
SRPI	Serui, Papua	7.80	304	P	Pn	12 41 50.9	+0.6
	0.5nm64nm,0.5s						
RABL	Rabaul	9.66	78	Pn	Pn	12 42 16.7	+0.9
MWPI	Manokwari, Pap	10.15	301	P	Pn	12 42 22.9	+0.3
	95nm,1.0s						
FAKI	Fak Fak	10.94	287		Pn	12 42 32.4	-1.1
FAKI	Fak Fak	10.94	287	P	Pn	12 42 32.8	-0.6
	31nm,0.8s						
SAUI	Saumlaki	11.43	261		Pn	12 42 40.0	-0.1
SAUI	Saumlaki	11.43	261	P	Pn	12 42 41.5	+1.4
SIJI	Sorong	12.62	295	P	Pn	12 42 54.8	-1.6
	27nm,1.6s						
SWI	Sorong	12.63	295	P	Pn	12 42 56.3	-0.1
	46nm,0.8s						
MTN	Manton Dam	13.12	239		Pn	12 43 00.3	-2.9
CTA	Charters Tower	14.13	166	Pn	Pn	12 43 19.2	+2.2
	0.1nm,0.3s,baz=353,slow=14,SNR=4.1						
CTA				LR	LR	12 48 17.3	
	comp=Z,337nm,19.1s,baz=351,slow=35						
	7.2nm,1.1s						
CTAO	Charters Tower	14.13	166		Pn	12 43 17.4	+0.4
KRAI	Karang Ratu	14.56	281	P	Pn	12 43 22.0	-0.9
AAI	Ambon	14.68	280	P	Pn	12 43 23.9	-0.6
	28nm,0.6s						
WB0	Warramunga Arr	15.63	210		Pn	12 43 35.6	-1.6
WR0	Warramunga Arr	15.72	210	Pn	Pn	12 43 37.6	-0.7
WR8	Warramunga Arr	15.73	210		Pn	12 43 36.6	-2.0
WRAB	Tennant Creek	15.79	210		Pn	12 43 37.9	-1.3
WB2	Warramunga Arr	15.80	210	Pn	Pn	12 43 40.2	+0.9
I07AU	WARRAMUNGA INF	15.80	210	I	I	14 18 50.0	
	baz=28,slow=310,SNR=1.7						
WRA	Warramunga Arr	15.80	210	Pn	Pn	12 43 37.5	-1.9
	1.4nm,0.3s,baz=37,slow=13,SNR=33						
WRA				Sn	Sn	12 46 29.6	-5.1
	1.4nm,0.3s,baz=37,slow=23,SNR=6.2						
WRA	Warramunga Arr	15.80	210	Pn	Pn	12 43 37.8	-1.6
NLAI	Namlea	15.84	280	P	Pn	12 43 39.1	-0.8
	17nm,0.6s						
KNRA	Kununurra	16.54	235		Pn	12 43 46.8	-2.0
SANI	Sanana	17.19	284	P	Pn	12 43 57.8	+0.7
	34nm,1.1s						
SOEI	Soe	18.57	258		P	12 44 12.9	-1.1
SOEI				IAmb	IAmb	12 44 22.0	
	comp=Z,152nm,1.3s						
SOEI	Soe	18.57	258	P	P	12 44 14.6	+0.6
	comp=Z,1µmcomp=Z,103nm,1.0s						
AS31	Alice Springs	19.22	205		P	12 44 22.6	+1.5
ASAR	Alice Springs	19.22	205	P	P	12 44 23.3	+2.2
	comp=Z,49nm,0.8s,baz=32,slow=10,SNR=168						
ASAR				S	Sn	12 47 56.5	-1.1
	comp=Z,11nm,0.8s,baz=16,slow=28,SNR=5.6						
ASAR				LR	LR	12 52 37.6	
	comp=Z,1µm,20.3s,baz=29,slow=39						
ASAR	Alice Springs	19.22	205	P	P	12 44 22.2	+1.1
BATI	Baumata	19.23	257	P	P	12 44 23.6	+2.4
	comp=Z,6.6nm,0.3s,baz=121,slow=22,SNR=3.8						
BATI				LR	LR	12 53 34.2	
	comp=Z,584nm,18.6s,baz=91,slow=42						
BATI	Baumata	19.23	257	P	P	12 44 20.3	-0.9
	comp=Z,45nm,1.1s						
GUMO	Guam	19.88	6	LR	LR	12 51 18.2	
	comp=Z,93nm,18.4s,baz=196,slow=35						
FITZ	Fitzroy Crossi	20.36	233	P	P	12 44 34.6	+1.2
	comp=Z,25nm,0.7s,baz=48,slow=12,SNR=54						
FITZ				LR	LR	12 53 28.4	
	comp=Z,768nm,20.4s,baz=54,slow=40						
	comp=Z,25nm,0.7s						
FITZ	Fitzroy Crossi	20.36	233	P	P	12 44 33.9	+0.4
MMRI	Maumere	20.42	262	P	P	12 44 32.6	-1.6
MMRI	Maumere	20.42	262	P	P	12 44 30.7	-3.5
	comp=Z,61nm,0.8s						
LUWI	Luwuk	20.55	284	P	P	12 44 34.9	-0.7
LUWI				IAmb	IAmb	12 44 50.8	
	comp=Z,41nm,0.9s						
LUWI	Luwuk	20.55	284	P	P	12 44 34.9	-0.7
	comp=Z,110nm,1.5s						
EIDS	Eidsvold	20.59	158	P	P	12 44 35.4	-0.5
EIDS				IAmb	IAmb	12 44 43.0	
	comp=Z,51nm,1.1s						
GTOI	Gorontalo	20.83	289	P	P	12 44 39.4	+0.8
	comp=Z,699nmcomp=Z,51nm,0.7s						
EDFI	Ende, Flores	20.97	262	P	P	12 44 39.4	-0.8
	comp=Z,620nmcomp=Z,38nm,1.3s						
KKSI	Kolaka, Sulawe	21.06	275	P	P	12 44 40.9	-0.3
INKA	Innaminka	21.40	185		P	12 44 44.8	+0.2
INKA				IAmb	IAmb	12 44 54.4	
	comp=Z,38nm,1.0s						
KAPI	Kappang	22.87	272	P	P	12 45 00.8	+0.3
KAPI				IAmb	IAmb	12 45 20.6	
	comp=Z,55nm,1.4s						
TOLI2	Tolitoli	23.09	288	P	P	12 45 03.5	+0.8
TOLI2				IAmb	IAmb	12 45 23.2	
	comp=Z,34nm,0.9s						
STKA	Stephens Creek	25.46	182	P	P	12 45 25.2	+0.3
	comp=Z,12nm,0.9s,baz=348,slow=8.7,SNR=10						
STKA				LR	LR	12 56 51.9	
	comp=Z,408nm,18.7s,baz=355,slow=40						
	comp=Z,12nm,0.9s						
STKA	Stephens Creek	25.46	182	P	P	12 45 25.1	+0.3
MBWA	Marble Bar	26.69	234	P	P	12 45 35.4	-0.8
MBWA				IAmb	IAmb	12 45 57.7	
	comp=Z,43nm,1.4s						
PSA00	Pilbara Seismi	26.81	233	P	P	12 45 36.8	-0.4

DZM	**Mont Dzumac**	**27.78**	**127**	LR	LR	12 57 23.5	
	comp=Z,111nm,18.6s,baz=344,slow=38						
DZM	**Mont Dzumac**	**27.78**	**127**	*e*LR	LR	12 52 42.3	
	comp=Z,490nm,25.4s						
JCJ	**Chichijima**	**33.21**	**359**	LR	LR	12 58 01.9	
	comp=Z,104nm,20.6s,baz=82,slow=33						
NWAO	**Narrogin (SRO)**	**35.53**	**218**	LR	LR	13 02 22.3	
	comp=Z,450nm,21.2s,baz=134,slow=38						
JHJ	**Hachijo jima 2**	**39.30**	**356**	LR	LR	13 04 10.1	
	comp=Z,78nm,18.2s,baz=130,slow=37						
MJAR	**Matsushiro Arr**	**42.83**	**355**	LR	LR	13 03 21.7	
	comp=Z,14nm,19.6s,baz=160,slow=33						
IPM	**Ipoh**	**42.96**	**283**	P	**P**	**12 47 57.2**	**+0.8**
NJ2	**Nanjing**	**44.40**	**331**	*e*P	**P**	**12 48 07.8**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PSI	**Prapat**	**44.63**	**280**	LR	LR	13 12 44.7	
	comp=Z,82nm,18.5s,baz=110,slow=44						
KSRS	**Korea Array**	**45.67**	**344**	P	**P**	**12 48 16.1**	**-1.4**
	comp=Z,2.2nm,0.8s,baz=159,slow=9.0,SNR=5.5						
KSRS				LR	LR	13 06 03.8	
	comp=Z,14nm,20.2s,baz=155,slow=34						
	comp=Z,2.2nm,0.8s						
LYN	**LuoYang**	**49.66**	**327**	P	**P**	**12 48 48.3**	**-0.4**
LYN				pP	pP	12 48 51.5	-0.6
LYN				pmax	pmax		
	comp=Z,25nm,0.7s						
CMAR	**Chiang Mai Arr**	**49.67**	**301**	P	**P**	**12 48 49.6**	**+0.5**
	comp=Z,2.0nm,0.7s,baz=120,slow=5.7,SNR=15						
	comp=Z,2.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**49.67**	**301**		**P**	**12 48 48.9**	**-0.1**
CHTO	**Chiang Mai**	**49.82**	**301**	P	**P**	**12 48 50.1**	**-0.1**
CHTO				IAmb	IAmb	12 48 55.5	
	comp=Z,16nm,1.8s						
KMI	**Kunming**	**49.86**	**310**	P	**P**	**12 48 51.9**	**+1.2**
KMI				pmax	pmax		
	comp=Z,16nm,1.2s						
HNS	**HongShan**	**50.72**	**331**	⇓P	**P**	**12 48 56.0**	**-0.7**
HNS				pmax	pmax		
	comp=Z,9.0nm,1.2s						
USRK	**Ussuriysk Ar.**	**51.19**	**350**	P	**P**	**12 48 58.8**	**-1.3**
	comp=Z,4.4nm,0.8s,baz=191,slow=11,SNR=4.7						
	comp=Z,4.4nm,0.8s						
XAN	**Xi'an**	**51.29**	**324**	⇑P	**P**	**12 49 00.0**	**-1.1**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.6s						
PZH	**PanZhiHua**	**51.37**	**311**	P	**P**	**12 49 02.4**	**+0.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BJI	**Beijing**	**52.20**	**334**	P	**P**	**12 49 08.9**	**+1.2**
BJI				pmax	pmax		
	comp=Z,5.0nm,1.7s						
CD2	**Chengdu**	**52.50**	**317**	*e*P	**P**	**12 49 11.0**	**+0.8**
BNX	**BinXian**	**53.59**	**347**	⇓P	**P**	**12 49 16.4**	**-1.4**
BNX				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**54.94**	**331**	*e*P	**P**	**12 49 30.5**	**+2.5**
HHC				pmax	pmax		
	comp=Z,17nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,4.4s						
BTO	**Baotou**	**55.51**	**330**	*e*P	**P**	**12 49 36.4**	**+4.3**
BTO				pmax	pmax		
	comp=Z,14nm,0.8s						
BTO				pmax	pmax		
	comp=Z,260nm,5.1s						
LZH	**Lanzhou**	**55.73**	**322**	*e*P	**P**	**12 49 33.3**	**-0.6**
LZH				pP	pP	12 49 38.0	+0.7
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
HEH	**HeiHe**	**57.87**	**348**	*e*P	**P**	**12 49 46.8**	**-1.7**
HEH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA	**Gaotai**	**60.31**	**323**	*e*P	**P**	**12 50 07.0**	**+1.1**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.8s						
PETK	**Petropavlovsk-**	**60.54**	**10**	P	**P**	**12 50 06.7**	**-0.3**
	comp=Z,2.4nm,0.8s,baz=151,slow=6.4,SNR=4.3						
PETK				LR	LR	13 17 05.7	
	comp=Z,44nm,19.3s,baz=105,slow=37						
	comp=Z,2.4nm,0.8s						
ULN	**Ulaanbaatar**	**62.40**	**334**	P	**P**	**12 50 19.5**	**-0.4**
SONM	**Songino Array**	**62.67**	**333**	P	**P**	**12 50 20.9**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=165,slow=8.3,SNR=7.3						
	comp=Z,1.2nm,0.8s						
SONM	**Songino Array**	**62.67**	**333**	P	**P**	**12 50 21.0**	**-0.7**
SONM				IAmb	IAmb	12 50 22.6	
	comp=Z,15nm,1.9s						
PALK	**Pallekele**	**63.30**	**281**	LR	LR	13 20 49.2	
	comp=Z,50nm,20.1s,baz=108,slow=39						
SHEM	**Shemya Is, Ala**	**64.57**	**21**	LR	LR	13 13 23.9	
	comp=Z,94nm,21.1s,baz=292,slow=31						
PPT	**Papeete**	**66.91**	**106**	LR	LR	13 18 48.0	
	comp=Z,42nm,18.7s,baz=238,slow=35						
PPT2	**Papeete2**	**66.91**	**106**	*e*LR	LR	13 10 58.7	
	comp=Z,67nm,26.2s						
HYB	**Hyderabad**	**67.58**	**292**	*e*P	**P**	**12 50 53.8**	**-0.2**
YAK	**Yakutsk**	**68.88**	**353**	LR	LR	13 20 23.2	
	comp=Z,41nm,20.5s,baz=90,slow=35						
VNDA	**Vanda**	**71.90**	**176**	P	**P**	**12 51 20.5**	**+1.0**
	comp=Z,1.1nm,1.0s,baz=18,slow=9.3,SNR=4.3						
VNDA				LR	LR	13 23 05.4	
	comp=Z,72nm,18.3s,baz=348,slow=36						
	comp=Z,1.1nm,1.0s						
VNDA	**Vanda**	**71.90**	**176**	IAmb	IAmb	12 51 24.8	
	comp=Z,16nm,1.8s						
MKAR	**Makanchi Array**	**75.05**	**322**	P	**P**	**12 51 38.4**	**-0.3**
	comp=Z,3.7nm,0.8s,baz=108,slow=7.2,SNR=26						
	comp=Z,3.7nm,0.8s						
MKAR	**Makanchi Array**	**75.05**	**322**		**P**	**12 51 37.8**	**-0.8**
MAKZ	**Makanchi**	**75.25**	**322**	P	**P**	**12 51 39.0**	**-0.8**
MAKZ				IAmb	IAmb	12 51 43.8	
	comp=Z,14nm,1.2s						
TAOE	**Nuku Hiva Isla**	**76.40**	**98**	*e*LR	LR	13 15 14.0	
	comp=Z,39nm,22.1s						
KSH	**Kashi**	**76.43**	**313**	P	**P**	**12 51 48.5**	**+1.7**
KSH				pP	pP	12 51 51.1	+0.7
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NIL	**Nilore**	**76.65**	**307**	P	**P**	**12 51 48.0**	**0.0**
NIL				IAmb	IAmb	12 51 52.5	
	comp=Z,12nm,0.9s						
ZALV	**Zalesovo Beam**	**77.03**	**329**	P	**P**	**12 51 48.5**	**-1.3**
	comp=Z,2.0nm,0.7s,baz=101,slow=6.2,SNR=9.8						
	comp=Z,2.0nm,0.7s						
ZALV	**Zalesovo Beam**	**77.03**	**329**	P	P	12 51 47.1	-2.6
TIXI	**Tiksi**	**78.33**	**356**	LR	LR	13 25 52.3	
	comp=Z,30nm,20.8s,baz=284,slow=35						
KURK	**Kurchatov**	**78.93**	**324**		**P**	**12 51 59.0**	**-1.3**
KURBB	**Kurchatov Arra**	**78.94**	**324**	P	**P**	**12 51 59.7**	**-0.7**
	comp=Z,1.6nm,0.2s,baz=115,slow=5.0,SNR=12						
	comp=Z,1.6nm,0.2s						
MAW	**Mawson**	**80.33**	**202**	LR	LR	13 26 30.4	
	comp=Z,72nm,18.3s,baz=72,slow=35						
GAR	**Garm**	**80.44**	**311**	P	**P**	**12 52 08.0**	**-1.1**
CHGR	**Chuyangaron**	**81.22**	**311**		**P**	**12 52 12.6**	**-0.6**
CHGR				IAmb	IAmb	12 52 13.3	
	comp=Z,16nm,1.0s						
KKAR	**Karatay Array**	**81.46**	**315**		**P**	**12 52 13.4**	**-0.9**
KDAK	**Kodiak Island**	**82.22**	**29**	LR	LR	13 20 45.2	
	comp=Z,122nm,21.1s,baz=222,slow=30						
QSPA	**South Pole Qui**	**83.66**	**180**	P	**P**	**12 52 25.4**	**0.0**
	comp=Z,4.2nm,0.8s,baz=303,slow=1.1,SNR=19						
QSPA				LR	LR	13 30 08.1	
	comp=Z,151nm,18.6s,baz=12,slow=36						
	comp=Z,4.2nm,0.8s						
QSPA	**South Pole Qui**	**83.66**	**180**		**P**	**12 52 24.5**	**-1.0**
QSPA				IAmb	IAmb	12 52 33.2	
	comp=Z,17nm,1.2s						
NRIK	**Noril'sk**	**84.28**	**343**	P	**P**	**12 52 26.9**	**-1.4**
	comp=Z,7.2nm,1.0s,baz=127,slow=5.3,SNR=9.3						
	comp=Z,7.2nm,1.0s						
NRIK	**Noril'sk**	**84.28**	**343**	IAmb	IAmb	12 52 28.4	
	comp=Z,13nm,1.1s						
BVAR	**Borovoye Array**	**84.52**	**325**	P	**P**	**12 52 29.2**	**-0.7**
	comp=Z,16nm,0.8s,baz=110,slow=6.8,SNR=37						
	comp=Z,16nm,0.8s						
BORK	**Borovoye**	**84.57**	**325**		**P**	**12 52 29.4**	**-0.7**
E19K	**Redstone River**	**84.80**	**20**	IAmb	IAmb	12 52 31.5	
	comp=Z,11nm,1.2s						
C19K	**Lookout Ridge**	**84.91**	**18**	IAmb	IAmb	12 52 36.9	
	comp=Z,12nm,1.1s						
D19K	**Kuna River**	**85.05**	**19**	IAmb	IAmb	12 53 09.8	
	comp=Z,24nm,1.5s						
PMR	**Palmer**	**85.36**	**26**		**P**	**12 52 32.3**	**-1.5**
D20K	**Etivluk River**	**85.63**	**19**	IAmb	IAmb	12 52 40.1	
	comp=Z,13nm,1.3s						
B20K	**Meade River**	**86.11**	**17**	IAmb	IAmb	12 53 50.2	
	comp=Z,12nm,1.4s						
B21K	**Ikpikpuk River**	**86.70**	**18**	IAmb	IAmb	12 52 57.4	
	comp=Z,13nm,1.2s						
E22K	**Anaktuvuk Pass**	**86.94**	**20**	IAmb	IAmb	12 54 29.5	
	comp=Z,24nm,1.6s						
G23K	**Bananza Creek**	**86.99**	**22**	IAmb	IAmb	12 52 56.1	
	comp=Z,5.3nm,0.9s						
CCB	**Clear Creek Bu**	**87.05**	**24**		**P**	**12 52 40.2**	**-1.9**
ILAR	**Eielson Array**	**87.47**	**24**	P	P	12 52 41.5	-2.7
	comp=Z,3.0nm,0.8s,baz=258,slow=4.8,SNR=27						
ILAR				LR	LR	13 29 22.0	
	comp=Z,78nm,19.0s,baz=240,slow=34						
	comp=Z,3.0nm,0.8s						
ILAR	**Eielson Array**	**87.47**	**24**	P	P	12 52 41.6	-2.6
F24K	**Squaw Lake**	**88.07**	**21**	IAmb	IAmb	12 52 51.2	
	comp=Z,12nm,1.1s						
SYO	**Syowa Base**	**88.82**	**201**	⇑*i*pP	**P**	**12 52 54.0**	**+3.4**
SYO	**Syowa Base**	**88.82**	**201**	⇓*e*sP	sP	12 52 56.2	+0.7
D25K	**Kavik River**	**89.23**	**20**	IAmb	IAmb	12 52 53.0	
	comp=Z,25nm,1.6s						
G26K	**Porcupine Rive**	**89.38**	**22**	IAmb	IAmb	12 52 54.2	
	comp=Z,18nm,1.2s						
F26K	**Sheenjek River**	**89.48**	**21**	IAmb	IAmb	12 53 00.1	
	comp=Z,12nm,1.2s						
I27K	**Kandik River**	**89.84**	**24**	IAmb	IAmb	12 53 01.2	
	comp=Z,12nm,1.0s						
H27K	**Steamboat Moun**	**90.04**	**23**	IAmb	IAmb	12 52 56.7	
	comp=Z,11nm,1.0s						
DAWY	**Dawson**	**90.37**	**25**	P	**P**	**12 52 57.8**	**-0.1**
DAWY				IAmb	IAmb	12 52 59.2	
	comp=Z,17nm,1.4s						
INK	**Inuvik**	**93.51**	**22**	LR	LR	13 36 39.9	
	comp=Z,51nm,18.5s,baz=290,slow=36						
BBB	**Bella Bella**	**94.43**	**38**	LR	LR	13 29 09.0	
	comp=Z,41nm,19.7s,baz=246,slow=31						
YBH	**Yreka Blue Hor**	**97.58**	**49**	LR	LR	13 29 56.5	
	comp=Z,6.8nm,21.4s,baz=284,slow=31						
YKA	**Yellowknife Ar**	**101.42**	**28**	P	**Pdif**	**12 53 47.9**	**-0.2**
	comp=Z,0.4nm,1.1s,baz=279,slow=5.3,SNR=2.9						
TORD	**Torodi Ar. Bea**	**141.00**	**283**	PKhKP	PKPpre	12 59 22.9	
	comp=Z,0.7nm,0.7s,baz=55,slow=3.5,SNR=4.1						
LPAZ	**La Paz**	**142.12**	**127**	PKP	**PKPdf**	**12 59 27.9**	**-3.1**
	comp=Z,1.3nm,0.6s,baz=29,slow=5.5,SNR=5.6						
LPAZ	**La Paz**	**142.12**	**127**		**PKPdf**	**12 59 30.2**	**-0.8**
DBIC	**Dimbokro**	**147.76**	**272**	PKPbc	**PKPdf**	**12 59 42.5**	**+2.5**
	comp=Z,7.0nm,0.8s,baz=136,slow=4.1,SNR=10						
DBIC	**Dimbokro**	**147.76**	**272**		**PKPdf**	**12 59 43.0**	**+3.0**

IDC 23 12:59:44.7±3.3**,45°.90N**×**36°.94E,h0^{km},mb2.6**/1**,mbtmp3.2**/4**,ML2.9**/3**,MS2.4**/1**,Error ellipse: s-maj=106.0km s-min=12.6km az=38.0,Crimea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBZ	**Khabaz**	**4.76**	**115**	Pn	Pn	13 00 57.8	+0.1
	1.1nm,0.3s,baz=286,slow=15,SNR=13						
KBZ				Sn	Sn	13 01 53.1	-0.4
	0.8nm,0.3s,baz=292,slow=22,SNR=2.1						
KBZ				Lg	Lg	13 02 15.4	
	0.8nm,0.3s,baz=261,slow=14,SNR=4.7						
KBZ				LR	LR	13 02 56.0	
	comp=Z,51nm,21.8s,baz=258,slow=40						
	2.2nm,0.2s						
FINES	**FINESS Array B**	**16.81**	**342**	Pn	Pn	13 03 33.4	-7.7
	0.1nm,0.3s,baz=153,slow=19,SNR=4.2						
	0.4nm,0.3s						
HFS	**Hagfors**	**19.81**	**324**	P	P	13 04 16.0	-0.4
	0.1nm,0.3s,baz=134,slow=11,SNR=5.7						
	0.4nm,0.3s						
NOA	**NORSAR Array B**	**21.33**	**324**	P	P	13 04 33.3	+0.3
	0.1nm,0.3s,baz=122,slow=10,SNR=1.7						
	0.1nm,0.3s						

NOU ***23*** *13:05:16.6, 44°.34S×168°.19E, h3^{km}, MLv3.6/5, South Island, New Zealand*

WEL ***23*** *13:05:17.0±0.5, 44°S±3°×16°8E±°, h5^{km}, M3.1/8, ML2.9/7, MLv3.1/8, Error ellipse: s-maj=5.5km s-min=2.8km az=122.4, confirmed*

ISC 23 13:05:17.2±1.1**,44°.40S**±0°.03×**168°.27E**±0°.04**,h8**^{km}±13^{km}**, n23,**σ**0^{s}.52**/29**,South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSZ	**Milford Sound**	**0.37**	**222**	P	**Pg**	**13 05 24.8**	**+0.4**
MSZ				S	**Sg**	**13 05 30.0**	**+0.7**
NSBS	**Neils Beach**	**0.49**	**35**	P	**Pg**	**13 05 27.0**	**+0.2**
NSBS				S	**Sg**	**13 05 33.3**	**+0.1**
JCZ	**Jackson Bay**	**0.50**	**49**	P	**Pg**	**13 05 26.5**	**-0.4**
JCZ	**Jackson Bay**	**0.50**	**49**	P	**Pg**	**13 05 26.6**	**-0.2**
JCZ				S	**Sg**	**13 05 33.1**	**-0.3**
WKZ	**Wanaka**	**0.69**	**129**	P	**Pg**	**13 05 30.3**	**-0.1**
QTPS	**Queenstown Pol**	**0.69**	**156**	P	**Pg**	**13 05 30.1**	**-0.5**
QTPS				S	**Sg**	**13 05 39.4**	**-0.2**
WNPS	**Wanaka Nationa**	**0.69**	**115**	P	**Pg**	**13 05 30.7**	**+0.2**
WNPS				S	**Sg**	**13 05 39.0**	**-0.6**
MECS	**Makarora Emerg**	**0.71**	**77**	P	**Pg**	**13 05 30.9**	**-0.1**
HDWS	**Haast DOC Work**	**0.76**	**48**	P	**Pg**	**13 05 31.6**	**-0.3**
MLZ	**Mavora Lakes**	**0.97**	**186**	P	**Pg**	**13 05 35.3**	**-0.6**
MLZ				S	**Sg**	**13 05 48.2**	**-0.4**
TAFS	**Te Anau Fire S**	**1.09**	**201**	P	**Pg**	**13 05 37.9**	**-0.3**
EAZ	**Earnscleugh**	**1.11**	**139**	P	**Pg**	**13 05 37.9**	**-0.7**
TWAS	**Twizel Area Sc**	**1.32**	**84**	P	**Pb**	**13 05 42.9**	**+0.6**
DCZ	**Deep Cove**	**1.33**	**216**	P	**Pn**	**13 05 41.1**	**-1.0**
LBZ	**Lake Benmore**	**1.38**	**90**	P	**Pn**	**13 05 43.0**	**+0.3**
FOZ	**Fox Glacier**	**1.42**	**53**	P	**Pn**	**13 05 42.8**	**-0.5**
MCNS	**Mount Cook Ann**	**1.48**	**64**	P	**Pn**	**13 05 43.6**	**-0.6**
WHZ	**Wether Hill Ro**	**1.51**	**189**	P	**Pn**	**13 05 44.4**	**-0.2**
ODZ	**Otahua Downs**	**1.81**	**112**	P	**Pn**	**13 05 49.4**	**+0.6**
ODZ	**Otahua Downs**	**1.81**	**112**	P	**Pn**	**13 05 49.0**	**+0.2**
RPZ	**Rata Peaks**	**2.12**	**72**	P	**Pn**	**13 05 53.6**	**+0.5**
SYZ	**Scrubby Hill**	**2.22**	**164**	P	**Pn**	**13 05 55.4**	**+1.0**
QRZ	**Quartz Range**	**4.76**	**43**	P	**Pn**	**13 06 28.9**	**-0.4**

IDC ***23*** *13:12:06.5±2.0, 0°.96S×127°.20E, h0^{km}, mb3.3/4, mbtmp3.4/4, Error ellipse: s-maj=208.5km s-min=23.5km az=67.0*

DJA ***23*** *13:12:09.5±0.3, 1°S±2°×12°8E±°, h10^{km}, M4.0/11, mb4.6/1, MLv3.6/11*

ISC 23 13:12:08.4±1.0**,0°.68S**±0°.05×**127°.83E**±0°.08**,h10**^{km}**,n12,** σ**1^{s}.44**/14**,mb3.6**/3**,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.51**	**342**	P	**Pn**	**13 12 36.4**	**+0.8**
TNTI				S	**Sb**	**13 12 57.2**	**+1.3**
SANI	**Sanana**	**2.29**	**234**	P	**Pn**	**13 12 46.0**	**-0.3**
NLAI	**Namlea**	**2.65**	**196**	P	**Pn**	**13 12 52.3**	**+1.1**
NLAI				S	**Sn**	**13 13 24.5**	**+1.1**
KRAI	**Karang Ratu**	**2.68**	**168**	P	**Pn**	**13 12 53.2**	**+1.5**
AAI	**Ambon**	**3.01**	**173**	P	**Pn**	**13 12 57.8**	**+1.6**
SIJI	**Sorong**	**3.44**	**93**	P	**Pn**	**13 13 03.7**	**+1.6**
FAKI	**Fak Fak**	**4.94**	**117**	P	**Pn**	**13 13 21.8**	**-1.0**
APSI	**Ampana**	**6.19**	**268**	P	**Pn**	**13 13 41.6**	**+1.7**
WRA	**Warramunga Arr**	**20.18**	**162**	P	**P**	**13 16 41.6**	**-1.7**
	0.8nm,0.8s,baz=342,slow=12,SNR=10						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**23.60**	**166**	P	**P**	**13 17 18.6**	**-1.1**
	0.5nm,0.6s,baz=349,slow=12,SNR=26						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**61.80**	**326**	P	**P**	**13 22 26.7**	**-0.9**
	0.3nm,0.7s,baz=124,slow=7.2,SNR=2.9						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**66.03**	**328**	P	**P**	**13 22 54.0**	**-1.3**
	0.4nm,0.7s,baz=126,slow=6.2,SNR=2.2						
	0.4nm,0.7s						

NEIC ***23*** *13:13:12.5±1.1, 53°.22N±0°.05×167°.21W±0°.05, h9^{km}±7^{km}, mb3.8/10, ML3.9/10, ML3.5(AEIC), Error ellipse: s-maj=8.0km s-min=1.3km az=151.0*

AEIC ***23*** *13:13:13.7±1.4, 53°.34N±0°.05×167°.31W±0°.06, h12^{km}±5^{km}, Error ellipse: s-maj=8.6km s-min=2.5km az=143.0*

IDC ***23*** *13:13:19.0±8.2, 53°.09N×165°.67W, h0^{km}, mb3.4/3, mbtmp3.4/5, ML3.0/2, MS3.7/4, Error ellipse: s-maj=148.2km s-min=40.6km az=91.0*

ISC 23 13:13:11.5±1.8**,53°.25N**±0°.07×**167°.25W**±0°.04**,h1**^{km}±12^{km}**, n62,**σ**0^{s}.80**/59**,mb3.5**/4**,MS3.8**/4**,Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKFG	**Magazine Ridge**	**0.43**	**292**		**Pb**	**13 13 22.4**	**+0.5**
OKFG					**Sb**	**13 13 28.6**	**-0.1**
OKTU	**Okmok Mt. Tuli**	**0.49**	**286**		**Pb**	**13 13 23.6**	**+0.7**
MAPS	**Pakushin South**	**0.59**	**18**		**Pb**	**13 13 24.3**	**-0.2**
MGOD	**Makushin Gods**	**0.59**	**22**		**Pb**	**13 13 24.3**	**-0.3**
OKSP	**Okmok Steeple**	**0.63**	**270**		**Pb**	**13 13 25.6**	**+0.4**
MREP	**Makushin Rep't**	**0.63**	**28**		**Pb**	**13 13 25.4**	**0.0**
MNAT	**Makushin Natee**	**0.72**	**28**		**Pb**	**13 13 26.6**	**-0.1**
MSW	**Makushin Switc**	**0.72**	**23**		**Pb**	**13 13 26.4**	**-0.4**
MSW					**Sg**	**13 13 35.4**	**+0.9**
UNV	**Unalaska Valle**	**0.74**	**37**		**Pb**	**13 13 27.1**	**-0.1**
UNV				IAML		13 13 37.7	
	comp=E,3µm,0.4s						
UNV	**Unalaska Valle**	**0.74**	**37**		**Sb**	**13 13 36.6**	**-1.1**
NIKH	**Nikolski High**	**1.01**	**254**		**Pn**	**13 13 31.8**	**-0.9**
NIKH					**Sb**	**13 13 44.8**	**-0.7**
NIKH	**Nikolski High**	**1.01**	**254**	IAML		13 13 45.3	
	comp=E,3µm,0.6s						
AKRB	**Akutan Reef Bi**	**1.12**	**38**		**Pn**	**13 13 34.6**	**+0.2**
AKRB					**Sn**	**13 13 49.0**	**-1.4**
ZRO	**Akutan Zero**	**1.13**	**41**		**Sb**	**13 13 48.9**	**-0.1**
AKBBA	**Akutan Broad B**	**1.15**	**42**		**Pn**	**13 13 34.5**	**-0.2**
AKBBA					**Sb**	**13 13 49.5**	**-0.1**
LVA	**Lava Point**	**1.16**	**38**		**Pn**	**13 13 34.8**	**0.0**
LVA					**Sb**	**13 13 50.4**	**+0.5**
LVA					**Sn**	**13 13 50.0**	**-1.4**
AKV	**Akutan Volcano**	**1.16**	**41**		**Sb**	**13 13 50.0**	**0.0**
AKGG	**Akutan Green G**	**1.21**	**38**		**Pn**	**13 13 35.5**	**0.0**
AKGG					**Sn**	**13 13 51.2**	**-1.2**
AHB	**Akutan Harbor**	**1.21**	**44**		**Pn**	**13 13 34.9**	**-0.6**
AKUT	**Akutan**	**1.25**	**44**		**Pb**	**13 13 35.5**	**-0.2**
AKUT				IAML		13 13 52.8	
	comp=E,3µm,0.4s						
AKUT				IAML		13 13 52.9	
	comp=N,3µm,0.2s						
AKUT	**Akutan**	**1.25**	**44**		**Sb**	**13 13 51.7**	**-0.6**
AKSA	**Akutan Strait**	**1.28**	**46**		**Pg**	**13 13 35.8**	**-0.2**
AKSA					**Sb**	**13 13 52.6**	**-0.6**
AKSA					**Sn**	**13 13 53.2**	**-1.0**
CLES	**Cleveland East**	**1.66**	**256**		**Pb**	**13 13 41.8**	**-0.9**
CLES	**Cleveland East**	**1.66**	**256**	IAML		13 14 05.2	
	comp=E,2µm,0.6s						
CLES				IAML		13 14 12.6	
	comp=N,1µm,0.9s						
DT1	**Dutton Round H**	**3.46**	**56**		**Pn**	**13 14 07.0**	**+0.5**
DT1					Pb	13 14 07.7	-5.8
DT1					**Sn**	**13 14 50.5**	**+2.6**
DOL	**Dolgoi Island**	**3.69**	**57**		**Pn**	**13 14 10.5**	**+0.9**
DOL					Pb	13 14 11.0	-6.4
DOL					**Sn**	**13 14 56.4**	**+2.7**
M11K	**Mekoryuk**	**7.17**	**4**	Pn	**Pn**	**13 14 58.4**	**+1.0**
OHAK	**Old Harbor**	**8.91**	**58**	Pn	**Pn**	**13 15 21.1**	**0.0**
L16K	**Owhat River**	**9.45**	**23**	Pn	**Pn**	**13 15 28.9**	**+0.4**
KDAK	**Kodiak Island**	**9.47**	**56**	Pn	**Pn**	**13 15 28.7**	**-0.1**
	comp=N,0.2nm,0.3s,baz=239,slow=2.5,SNR=7.0						
	comp=N,9.3nm,1.1s						
L19K	**White Mountain**	**11.11**	**31**	Pn	**Pn**	**13 15 52.2**	**+0.8**
ANM	**Nome**	**11.39**	**4**	Pn	**Pn**	**13 15 55.6**	**+0.6**
H18K	**Honhosa River**	**12.75**	**17**	Pn	**Pn**	**13 16 14.2**	**+0.5**
HIN	**Hinchinbrook I**	**13.38**	**49**	Pn	**Pn**	**13 16 22.1**	**-0.2**
KLU	**Klutina**	**14.10**	**46**	Pn	**Pn**	**13 16 32.1**	**-0.1**
ILAR	**Eielson Array**	**15.50**	**34**	Pn	**P**	**13 16 54.1**	**-1.4**
	comp=N,0.1nm,0.3s,baz=210,slow=12,SNR=2.1						
	comp=N,0.4nm,0.9s						
YAH	**Yahtse**	**15.60**	**53**	Pn	**Pn**	**13 16 51.7**	**-0.8**
GRNC	**Granite Creek**	**15.70**	**51**	Pn	**Pn**	**13 16 53.4**	**-0.4**
M26K	**Nabesna, AK**	**15.74**	**45**	Pn	**Pn**	**13 16 54.3**	**+0.2**
M26K				IAmb	IAmb	13 17 36.6	
	comp=Z,16nm,1.4s						
M27K	**Edge Creek, AK**	**16.20**	**46**	Pn	**Pn**	**13 16 59.2**	**-0.9**
M27K				IAmb	IAmb	13 17 16.1	
	comp=Z,16nm,1.4s						
D20K	**Etivluk River**	**16.30**	**14**	P	**P**	**13 17 05.0**	**+0.5**
D20K				IAmb	IAmb	13 17 45.7	
	comp=Z,8.0nm,1.5s						
B22K	**Teshekpuk Lake**	**18.26**	**15**		**P**	**13 17 25.8**	**-0.2**
C23K	**Itkillik River**	**18.31**	**18**		**P**	**13 17 26.5**	**0.0**
C24K	**Franklin Bluff**	**18.59**	**20**	P	**Pn**	**13 17 29.9**	**+0.1**
C24K				IAmb	IAmb	13 18 14.0	
	comp=Z,5.1nm,1.2s						
G29M	**Pine Creek**	**19.72**	**35**	P	**P**	**13 17 41.8**	**-0.2**
G29M				IAmb	IAmb	13 18 19.9	
	comp=Z,6.6nm,1.3s						
YKAW3	**Yellowknife Wh**	**28.68**	**50**	P	**P**	**13 19 09.4**	**-0.1**
YKAW3				IAmb	IAmb	13 19 49.6	
	comp=Z,3.2nm,1.5s						
YKA	**Yellowknife Ar**	**28.69**	**50**	P	**P**	**13 19 09.8**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=282,slow=9.0,SNR=5.9						
	comp=Z,0.2nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**38.96**	**221**	T	T	14 01 53.0	
	baz=24,slow=76,SNR=102						
H11N3	**WAKE ISLAND Hy**	**38.96**	**221**	T	T	14 02 07.5	
	baz=24,slow=76,SNR=83						
H11N1	**WAKE ISLAND Hy**	**38.98**	**221**	T	T	14 01 55.5	
	baz=24,slow=76,SNR=73						
PDAR	**Pinedale Array**	**38.99**	**82**	P	**P**	**13 20 39.4**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=328,slow=5.3,SNR=3.5						
	comp=Z,0.5nm,0.8s						
H11S1	**WAKE ISLAND Hy**	**40.14**	**220**	T	T	14 03 28.3	
	baz=24,slow=76,SNR=43						
H11S2	**WAKE ISLAND Hy**	**40.16**	**220**	T	T	14 03 24.2	
	baz=24,slow=76,SNR=51						
H11S3	**WAKE ISLAND Hy**	**40.16**	**220**	T	T	14 03 24.4	
	baz=24,slow=76,SNR=44						
ULM	**Lac du Bonnet**	**42.60**	**64**	LR	LR	13 39 31.8	
	comp=Z,48nm,18.4s,baz=311,slow=38						
FRB	**Frobisher Bay**	**47.51**	**37**	LR	LR	13 42 57.8	
	comp=Z,128nm,20.2s,baz=312,slow=38						
TXAR	**Lajitas Array**	**51.46**	**91**	P	**P**	**13 22 19.1**	**+0.8**
	comp=Z,0.4nm,0.4s,baz=307,slow=6.0,SNR=14						
	comp=Z,0.4nm,0.4s						
SADO	**Sadowa**	**54.89**	**60**	LR	LR	13 44 47.9	
	comp=Z,92nm,21.9s,baz=0.5,slow=35						
TKL	**Tuckaleechee C**	**58.70**	**71**	LR	LR	13 47 25.1	
	comp=Z,80nm,20.9s,baz=320,slow=35						
H03N2	**Juan Fernandez**	**115.07**	**113**	T	T	15 36 53.5	
	baz=322,slow=77,SNR=30						
H03N1	**Juan Fernandez**	**115.08**	**113**	T	T	15 36 55.0	
	baz=322,slow=77,SNR=30						
H03N3	**Juan Fernandez**	**115.08**	**113**	T	T	15 36 54.2	
	baz=322,slow=77,SNR=38						

SOME ***23*** *13:35:01.4, 42°.13N×83°.58E, h5^{km}*

NNC ***23*** *13:35:13.6±2.3, 42°.46N×83°.34E, h0^{km}, mb3.3, mpv2.9, Error ellipse: s-maj=21.7km s-min=12.3km az=133.0*

ISC 23 13:34:28.8±5.6**,40°.5N**±0°.3×**84°.6E**±0°.1**,h10**^{km}**,n9,** σ**2^{s}.02**/14**,3C-2D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**4.32**	**314**	*e*P	**Pg**	**13 35 51.3**	**-0.3**
	12nm,0.3s						
KTMS				*e*S	**Sn**	**13 36 27.4**	**+2.2**
	64nm,0.3s						
SHLS	**Shalkode**	**4.67**	**306**	*e*P	**Pg**	**13 35 55.6**	**-2.6**
	15nm,0.2s						
SHLS				*e*S	**Sn**	**13 36 35.3**	**+1.6**
	70nm,0.2s						
PDGK	**Podgornoye**	**4.74**	**308**	⇑Pn	**Pg**	**13 36 02.4**	**+2.8**
	3.6nm,0.5s						
PDGK				⇓Lg	Lg	13 36 46.7	
	50nm,0.8s						
UZB	**Uzynbulak**	**4.93**	**304**	*e*P	**Pg**	**13 36 05.4**	**+2.1**
	3.5nm,0.2s						
UZB				*e*S	**Sb**	**13 36 52.1**	**-2.7**
	19nm,0.6s						
KPKS	**Kokpek**	**5.31**	**306**	*e*P	**Pg**	**13 36 12.0**	**+1.5**
	0.4nm,0.2s						
KPKS				*e*S	**Sb**	**13 37 03.5**	**-2.0**
	37nm,0.6s						
MK31	**Makanchi Array**	**6.51**	**346**	Pn	**Pb**	**13 36 20.8**	**-1.3**
	0.7nm,0.6s,baz=188,slow=11,SNR=13						
MK31				Pg	**Pg**	**13 36 33.5**	**+0.1**
	0.8nm,0.3s,baz=178,slow=14,SNR=14						
MK31				Lg	Lg	13 37 33.6	
	11nm,0.5s,baz=154,slow=29,SNR=12						
MAKZ	**Makanchi**	**6.58**	**344**	⇑Pg	**Pg**	**13 36 35.9**	**+1.1**
	1.2nm,0.5s						
MAKZ				⇑Lg	Lg	13 37 36.8	
	7.0nm,0.5s						
ZSN	**Zaisan**	**6.95**	**2**	*e*P	**Pg**	**13 36 41.4**	**-0.4**
	4.1nm,0.2s						
ZSN				*e*S	**Sb**	**13 37 54.0**	**+1.4**
	15nm,0.6s						

KURK	**Kurchatov**	**11.04**	**340**	⇓Lg	Lg	13 39 56.6	
	1.7nm,0.8s						

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*JMA **23** 13:51:22.2±0.3,44°N±2°×14°8E±°,h0^{km},MV3.8/24,SE OFF ETOROFU*
*SKHL **23** 13:51:23.8±0.2,44°.60N×148°.30E,h42^{km}±7^{km},mb4.4/3*
ISC 23 13:51:15.8±3.0,44°.28N±0°.08×148°.3E±0°.1,h7^{km}±14^{km},n15,σ1^{s}.39/24,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.01**	**341**	*e*P	**Pn**	**13 51 37.0**	**+0.6**
KUR				AMB	AMB	13 51 38.9	
	120nm,0.3s						
KUR				*i* S	**Sb**	**13 51 47.9**	**-1.2**
KUR				A	A	13 51 53.2	
	220nm,0.2s						
KUR				A	A	13 51 53.2	
	520nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.79**	**263**	*e*P	**Pg**	**13 51 52.4**	**+2.2**
YUK				AMB	AMB	13 51 54.7	
	110nm,0.2s						
YUK				*i* S	**Sg**	**13 52 13.0**	**-0.4**
YUK				A	A	13 52 18.6	
	180nm,0.2s						
YUK				A	A	13 52 18.6	
	100nm,0.2s						
NEM2	**Nemuro 2**	**2.08**	**245**	P	**Pg**	**13 51 56.2**	**+0.5**
NEM2				S	**Sb**	**13 52 20.5**	**+0.6**
NMR	**Nemuro--Hokkai**	**2.09**	**245**	*e*P	**Pg**	**13 51 56.2**	**+0.3**
NMR				*i* S	**Sb**	**13 52 21.1**	**+1.0**
GLVR	**Golovnino**	**2.10**	**256**	*e*P	**Pg**	**13 51 57.0**	**+1.0**
GLVR				AMB	AMB	13 51 59.0	
	60nm,0.3s						
GLVR				*i* S	**Sg**	**13 52 23.0**	**-0.2**
GLVR				A	A	13 52 27.9	
	310nm,0.3s						
GLVR				A	A	13 52 27.9	
	200nm,0.3s						
JRA	**Rausu**	**2.33**	**263**	P	**Pg**	**13 52 00.9**	**+0.4**
JRA				S	**Sg**	**13 52 29.6**	**-1.2**
JNSB	**Nemuroshibetsu**	**2.45**	**259**	P	**Pg**	**13 52 02.7**	**-0.1**
JKHN	**Kushirohamanak**	**2.59**	**244**	*e*P	**Pb**	**13 52 03.8**	**+1.2**
JKHN				S	**Sb**	**13 52 33.8**	**-0.7**
JNK	**Nakash**	**2.70**	**256**	P	**Pb**	**13 52 05.6**	**+1.2**
JNK				S	**Sb**	**13 52 37.7**	**+0.1**
JAK	**Akkeshi**	**2.93**	**245**	P	**Pb**	**13 52 08.6**	**+0.2**
JAK				S	**Sb**	**13 52 42.4**	**-2.0**
JAR	**Ashorobuto**	**3.44**	**255**	P	**Pb**	**13 52 16.4**	**-0.7**
JOB	**Onbets**	**3.54**	**249**	P	**Pb**	**13 52 17.8**	**-1.0**
JCH	**Churui**	**3.98**	**247**	P	**Pb**	**13 52 24.0**	**-2.2**
JNBK	**Urakawa-nobuka**	**4.53**	**246**	P	**Pb**	**13 52 32.1**	**-3.6**
JANG	**Nango**	**6.38**	**235**	*e*S	**Sn**	**13 54 04.3**	**+1.0**

IDC 23 13:55:01.1±2.1,**0°.96N×125°.17E,h0^{km},mb3.1**/3,**mbtmp3.2**/3,**Error ellipse: s-maj=194.4km s-min=27.9km az=64.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.63**	**157**	P	P	14 00 03.1	-0.9
	0.3nm,0.3s,baz=335,slow=11,SNR=13						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**25.91**	**161**	P	P	14 00 35.9	+0.7
	0.2nm,0.6s,baz=345,slow=12,SNR=6.3						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**58.97**	**327**	P	P	14 05 02.5	-0.1
	0.1nm,0.3s,baz=121,slow=8.2,SNR=2.1						
	0.1nm,0.3s						

IDC 23 14:20:54.4±1.5,**9°.37N×125°.10E,h0^{km},mb3.7**/5,**mbtmp3.7**/5,**Error ellipse: s-maj=188.1km s-min=21.6km az=68.0,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**30.52**	**163**	P	P	14 27 09.9	+0.3
	0.4nm,0.8s,baz=331,slow=9.9,SNR=6.9						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**33.95**	**165**	P	P	14 27 39.6	-0.1
	0.1nm,0.3s,baz=350,slow=7.3,SNR=12						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**52.05**	**324**	P	P	14 30 07.4	+1.4
	0.2nm,0.3s,baz=118,slow=7.0,SNR=7.8						
	0.2nm,0.3s						
ARCES	**ARCESS Array B**	**84.63**	**340**	P	P	14 33 28.4	-1.3
	4.4nm,0.9s,baz=83,slow=7.0,SNR=7.6						
	4.4nm,0.9s						
FINES	**FINESS Array B**	**86.13**	**332**	P	P	14 33 36.8	-0.4
	0.8nm,0.7s,baz=73,slow=6.4,SNR=4.6						
	0.8nm,0.7s						

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*SJA **23** 15:05:38.9±1.0,20°.85S×69°.18W,h120^{km},ML3.6,MW3.5*
*GUC **23** 15:05:42.3±0.8,20°.88S×69°.20W,h106^{km}±4^{km},ML3.6*
ISC 23 15:05:40.0±1.8,**20°.86S**±0°.04×**69°.21W**±0°.08,**h119**^{km}±12^{km},**n29,σ0^{s}.54**/45,**6C-4D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	**0.32**	**235**	⇑*i*P	**Pn**	**15 05 56.9**	**-0.2**
PB01				*e*S	**Sn**	**15 06 08.8**	**-1.2**
PB01	**IPOC Station P**	**0.32**	**235**	*i* P	**Pn**	**15 05 56.3**	**-0.8**
PB01				IAML		15 06 09.8	
	comp=Z,4μm,0.2s						
PB02	**IPOC Station P**	**0.79**	**234**	⇑*i*P	**Pn**	**15 06 00.8**	**+0.7**
PB02				*e*S	**Sn**	**15 06 15.0**	**-0.4**
PB02				IAML		15 06 16.7	
	comp=E,3μm,0.2s						
PB02	**IPOC Station P**	**0.79**	**234**	*i* P	**Pn**	**15 06 00.2**	**+0.1**
PB02				*e*S	**Sn**	**15 06 15.7**	**+0.3**
PB02				IAML		15 06 16.9	
	comp=Z,3μm,0.3s						
HMBC	**Humberstone**	**0.86**	**312**	⇓*i*P	**Pn**	**15 06 01.1**	**+0.3**
HMBC				*e*S	**Sn**	**15 06 16.3**	**-0.3**
HMBC				IAML		15 06 16.9	
	comp=N,3μm,0.2s						
HMBC	**Humberstone**	**0.86**	**312**	*i* P	**Pn**	**15 06 00.4**	**-0.4**
HMBC				IAML		15 06 16.8	
	comp=Z,1μm,0.3s						
PATCX	**Punta Patache**	**0.88**	**272**	*e*P	**Pn**	**15 06 01.8**	**+0.8**
PATCX				*e*S	**Sn**	**15 06 16.7**	**-0.1**
PATCX				IAML		15 06 18.1	
	comp=N,2μm,0.2s						
PATCX	**Punta Patache**	**0.88**	**272**	*i* P	**Pn**	**15 06 01.3**	**+0.3**
PATCX				IAML		15 06 19.9	
	comp=Z,860nm,0.4s						
PB09	**IPOC Station P**	**0.93**	**182**	⇑*i*P	**Pn**	**15 06 02.3**	**+0.7**
PB09				*e*S	**Sn**	**15 06 17.8**	**-0.1**
PB09	**IPOC Station P**	**0.93**	**182**	*i* P	**Pn**	**15 06 01.6**	**+0.1**
PB09				IAML		15 06 20.5	
	comp=Z,489nm,0.2s						
TA01	**Diego Aracena**	**0.95**	**288**	⇓*i*P	**Pn**	**15 06 02.1**	**+0.5**
TA01				*e*S	**Sn**	**15 06 17.4**	**-0.4**
TA01				IAML		15 06 19.8	
	comp=E,887nm,0.3s						
TA01	**Diego Aracena**	**0.95**	**288**	*i* P	**Pn**	**15 06 01.2**	**-0.3**
TA01				*e*S	**Sn**	**15 06 18.5**	**+0.7**
TA01				IAML		15 06 18.9	
	comp=Z,408nm,0.3s						
TA02	**Huaiquique**	**1.04**	**304**	*e*P	**Pn**	**15 06 03.2**	**+0.7**
TA02				*e*S	**Sn**	**15 06 19.4**	**0.0**
TA02				IAML		15 06 20.3	
	comp=N,4μm,0.1s						
TA02	**Huaiquique**	**1.04**	**304**	*i* P	**Pn**	**15 06 02.5**	**+0.1**
TA02				IAML		15 06 22.6	
	comp=Z,1μm,0.1s						
PB07	**IPOC Station P**	**1.07**	**216**	⇑*i*P	**Pn**	**15 06 03.6**	**+0.7**
PB07				*e*S	**Sn**	**15 06 19.6**	**-0.6**
PB07	**IPOC Station P**	**1.07**	**216**	*i* P	**Pn**	**15 06 03.0**	**+0.1**
PB07				IAML		15 06 22.2	
	comp=Z,410nm,0.5s						
PB11	**IPOC Station P**	**1.17**	**339**	⇓*i*P	**Pn**	**15 06 04.4**	**+0.5**
PB11				*e*S	**Sn**	**15 06 21.8**	**-0.2**
PB11				IAML		15 06 22.9	
	comp=N,2μm,0.2s						
PB11	**IPOC Station P**	**1.17**	**339**	*i* P	**Pn**	**15 06 03.8**	**-0.2**
PB11				IAML		15 06 23.8	
	comp=Z,1μm,0.2s						
GO01	**Chusmiza**	**1.18**	**1**	⇓*i*P	**Pn**	**15 06 05.2**	**+0.7**
GO01				*e*S	**Sn**	**15 06 23.2**	**+0.4**
GO01				IAML		15 06 24.6	
	comp=N,4μm,0.2s						
GO01	**Chusmiza**	**1.18**	**1**	*i* P	**Pn**	**15 06 04.5**	**0.0**
GO01				*e*S	**Sn**	**15 06 23.1**	**+0.2**
GO01				IAML		15 06 24.2	
	comp=Z,1μm,0.5s						
PB03	**IPOC Station P**	**1.29**	**203**	⇑*i*P	**Pn**	**15 06 06.1**	**+0.9**
PB03				*e*S	**Sn**	**15 06 24.0**	**-0.3**
PB03				IAML		15 06 28.7	
	comp=N,555nm,0.1s						
PB03	**IPOC Station P**	**1.29**	**203**	*i* P	**Pn**	**15 06 05.4**	**+0.2**
PB03				*e*S	**Sn**	**15 06 25.0**	**+0.7**
PB03				IAML		15 06 25.9	
	comp=Z,454nm,0.2s						
PB06	**IPOC Station P**	**1.87**	**190**	⇑*i*P	**Pn**	**15 06 12.8**	**+0.8**
PB06				*e*S	**Sn**	**15 06 36.3**	**-0.2**
PB06				IAML		15 06 41.5	
	comp=E,383nm,0.2s						
PB06	**IPOC Station P**	**1.87**	**190**	*i* P	**Pn**	**15 06 12.4**	**+0.5**
PB06				IAML		15 06 40.6	
	comp=Z,265nm,0.4s						
PB05	**IPOC Station P**	**2.19**	**205**	*e*P	**Pn**	**15 06 16.6**	**+0.7**
PB05				IAML		15 06 46.6	
	comp=E,172nm,0.3s						
PB05	**IPOC Station P**	**2.19**	**205**	*i* P	**Pn**	**15 06 16.2**	**+0.2**
PB05				IAML		15 06 45.9	
	comp=Z,122nm,0.3s						
PB12	**IPOC Station P**	**2.47**	**335**	*i* P	**Pn**	**15 06 19.0**	**-0.5**
PB12				IAML		15 06 51.3	
	comp=Z,116nm,0.2s						
PB10	**IPOC Station P**	**2.92**	**205**	*i* P	**Pn**	**15 06 24.8**	**-0.5**
PB10				IAML		15 07 01.2	
	comp=Z,45nm,0.3s						
PB14	**IPOC Station P**	**3.91**	**196**	*i* P	**Pn**	**15 06 37.7**	**-0.9**
PB14				IAML		15 07 25.2	
	comp=Z,66nm,0.2s						

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*IDC **23** 15:13:08.0±1.2,9°.56S×157°.51E,h0^{km},mb4.0/9,mbtmp4.0/10,ML3.4/1,MS3.4/2,Error ellipse: s-maj=35.9km s-min=22.6km az=111.0*
*NEIC **23** 15:13:09.6±0.7,9°.51S±0°.06×157°.6E±0°.1,h10^{km}±1^{km},mb4.3/16,Error ellipse: s-maj=24.7km s-min=9.8km az=80.0*
ISC 23 15:13:11.4±0.9,**9°.6S**±0°.1×**157°.6E**±0°.1,**h24^{km},n31,σ0^{s}.71**/31,**mb4.1**/15,**Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**7.59**	**314**	Pn	**Pn**	**15 15 00.1**	**-0.4**
COEN	**Coen**	**14.77**	**251**	Pn	**Pn**	**15 16 40.0**	**+1.0**
CTA	**Charters Tower**	**15.14**	**225**	Pn	**Pn**	**15 16 42.6**	**-1.3**
	0.1nm,0.3s,baz=39,slow=16,SNR=1.8						
CTA				LR	LR	15 21 52.8	
	comp=Z,136nm,19.3s,baz=54,slow=35						
	2.6nm,0.8s						
CTAO	**Charters Tower**	**15.14**	**225**	Pn	**Pn**	**15 16 44.2**	**+0.3**
ARMA	**Armidale**	**21.48**	**194**	P	**P**	**15 17 59.0**	**+0.5**
ARMA				IAmb	IAmb	15 18 01.4	
	comp=Z,18nm,1.3s						
INKA	**Innaminka**	**24.06**	**219**		**P**	**15 18 24.6**	**-0.3**
INKA				IAmb	IAmb	15 18 26.2	
	comp=Z,5.1nm,0.7s						
WR8	**Warramunga Arr**	**24.57**	**243**		**P**	**15 18 29.5**	**-0.2**
WR8				IAmb	IAmb	15 18 31.4	
	comp=Z,12nm,1.1s						
WB0	**Warramunga Arr**	**24.60**	**243**		**P**	**15 18 29.9**	**-0.1**
WB0				IAmb	IAmb	15 18 39.2	
	comp=Z,8.0nm,0.9s						
WRAB	**Tennant Creek**	**24.69**	**243**	P	**P**	**15 18 30.7**	**-0.2**
WRAB				IAmb	IAmb	15 18 34.4	
	comp=Z,7.6nm,0.9s						
WRA	**Warramunga Arr**	**24.71**	**243**	P	**P**	**15 18 30.7**	**-0.3**
	comp=Z,6.5nm,0.9s,baz=72,slow=10.0,SNR=26						
	comp=Z,6.5nm,0.9s						
WRA	**Warramunga Arr**	**24.71**	**243**		**P**	**15 18 30.6**	**-0.3**
AS31	**Alice Springs**	**26.62**	**235**		**P**	**15 18 47.6**	**-0.7**
ASAR	**Alice Springs**	**26.62**	**235**	P	**P**	**15 18 47.0**	**-1.3**
	comp=Z,2.2nm,0.5s,baz=66,slow=10,SNR=24						
ASAR				LR	LR	15 29 00.5	
	comp=Z,72nm,18.4s,baz=88,slow=36						
	comp=Z,2.2nm,0.5s						
ASAR	**Alice Springs**	**26.62**	**235**	P	**P**	**15 18 47.3**	**-1.0**
STKA	**Stephens Creek**	**26.70**	**211**	P	**P**	**15 18 50.0**	**+1.0**
	comp=Z,3.1nm,0.6s,baz=46,slow=14,SNR=10.0						
	comp=Z,3.1nm,0.6s						
STKA	**Stephens Creek**	**26.70**	**211**	P	**P**	**15 18 49.4**	**+0.5**
KNRA	**Kununurra**	**28.76**	**255**	P	**P**	**15 19 07.4**	**-0.1**
BBOO	**Buckleboo**	**30.50**	**218**	P	**P**	**15 19 22.6**	**-0.2**
FITZ	**Fitzroy Crossi**	**32.12**	**251**	P	**P**	**15 19 35.5**	**-1.7**
	comp=Z,1.4nm,0.6s,baz=66,slow=7.4,SNR=8.1						
	comp=Z,1.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**32.12**	**251**	P	**P**	**15 19 36.8**	**-0.4**
RTZ	**Ruatahuna**	**33.75**	**152**	P	**P**	**15 19 51.1**	**-0.2**
FORT	**Forrest**	**34.65**	**228**	P	**P**	**15 19 59.3**	**+0.1**
FORT				IAmb	IAmb	15 20 07.4	
	comp=Z,8.2nm,1.1s						
TUWZ	**Tuamarina**	**34.87**	**158**	P	**P**	**15 20 00.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**64.21**	**296**	P	**P**	**15 23 45.9**	**+1.0**
	comp=Z,0.7nm,0.9s,baz=118,slow=5.2,SNR=7.1						
	comp=Z,0.7nm,0.9s						
CMAR	**Chiang Mai Arr**	**64.21**	**296**	P	**P**	**15 23 45.0**	**+0.2**
SONM	**Songino Array**	**72.88**	**327**	P	**P**	**15 24 39.3**	**+0.7**
	comp=Z,1.0nm,0.9s,baz=116,slow=3.4,SNR=3.6						
	comp=Z,1.0nm,0.9s						
SONM	**Songino Array**	**72.88**	**327**	P	**P**	**15 24 38.4**	**-0.2**
SONM				IAmb	IAmb	15 24 41.0	
	comp=Z,1.9nm,1.1s						
QSPA	**South Pole Qui**	**80.43**	**180**	P	**P**	**15 25 21.5**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=307,slow=2.8,SNR=13						
	comp=Z,0.9nm,0.8s						
QSPA	**South Pole Qui**	**80.43**	**180**	P	**P**	**15 25 21.5**	**+0.5**
QSPA				IAmb	IAmb	15 25 53.0	
	comp=Z,3.1nm,1.2s						
ILAR	**Eielson Array**	**84.83**	**21**	P	**P**	**15 25 43.6**	**-0.1**
	comp=Z,0.5nm,1.0s,baz=230,slow=5.1,SNR=4.1						
	comp=Z,0.5nm,1.0s						
MKAR	**Makanchi Array**	**87.02**	**318**	P	**P**	**15 25 54.4**	**-0.6**
	comp=Z,0.6nm,0.9s,baz=98,slow=5.0,SNR=4.0						
	comp=Z,0.6nm,0.9s						

IDC 23 15:33:15.5±2.0,**6°.66N×126°.72E,h0^{km},mb3.4**/4,**mbtmp3.4**/4,**Error ellipse: s-maj=56.0km s-min=18.3km az=47.0,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.20**	**290**	Pn	Pn	15 33 40.6	+1.0
	103nm,0.3s,baz=277,slow=6.8,SNR=3.0						
DAV				Sn	Sn	15 33 56.5	-0.1
	112nm,0.3s,baz=76,slow=23,SNR=3.9						
FITZ	**Fitzroy Crossi**	**24.62**	**182**	P	P	15 38 37.7	-0.1
	1.1nm,0.5s,baz=358,slow=9.9,SNR=9.5						
	1.1nm,0.5s						
WRA	**Warramunga Arr**	**27.48**	**164**	P	P	15 39 02.5	-1.2
	0.3nm,0.7s,baz=342,slow=10.0,SNR=4.6						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**30.94**	**167**	P	P	15 39 35.5	+1.0
	0.2nm,0.5s,baz=344,slow=7.5,SNR=8.2						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**55.17**	**324**	P	P	15 42 49.5	-0.5
	0.3nm,0.7s,baz=116,slow=5.8,SNR=2.6						
	0.3nm,0.7s						

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*IDC **23** 15:35:07.9±6.3,10°.59N×83°.77W,h0^{km},mb3.2/3,mbtmp3.2/3,Error ellipse: s-maj=131.5km s-min=15.4km az=150.0*
*CATAC **23** 15:35:17.0±0.3,10°N±2°×8°4W±°,h68^{km}±3^{km},M3.8/14,MLv3.8/14,Error ellipse: s-maj=5.6km s-min=2.3km az=45.9,confirmed*
*UCR **23** 15:35:16.2±0.8,10°.17N×84°.21W,h83^{km}±2^{km},MW4.2*
ISC 23 15:35:16.7±0.9,**10°.14N**±0°.04×**84°.20W**±0°.04,**h83**^{km}±5^{km},**n130,σ0^{s}.45**/134,**mb3.2**/3,**Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VPS8	**V Poas**	**0.06**	**312**	*e*P	**Pn**	**15 35 28.5**	**-0.4**
GREC	**Grecia**	**0.13**	**238**	*e*P	**Pn**	**15 35 28.4**	**-0.3**
GREC				*e*S	**Sn**	**15 35 37.8**	**+0.2**
TCS1	**Tacares**	**0.14**	**225**	P	**Pn**	**15 35 28.5**	**-0.3**
TCS1	**Tacares**	**0.14**	**225**	*e*P	**Pn**	**15 35 28.4**	**-0.3**
TCS1				*e*S	**Sn**	**15 35 38.1**	**+0.5**
SARCI	**Sarchi**	**0.15**	**250**	*e*P	**Pn**	**15 35 28.6**	**-0.2**
SARCI				*e*S	**Sn**	**15 35 38.3**	**+0.6**
HEME	**Heredia, Merce**	**0.16**	**157**	*e*P	**Pn**	**15 35 29.6**	**+0.7**
HDC	**Heredia**	**0.16**	**149**	*e*P	**Pn**	**15 35 28.5**	**-0.4**
VPL1	**V. Platanar**	**0.20**	**305**	*e*P	**Pn**	**15 35 29.0**	**-0.1**
SANTA	**Santa Ana**	**0.21**	**176**	*e*P	**Pn**	**15 35 28.5**	**-0.5**
PAVB	**Pavas, San Jos**	**0.21**	**158**	*e*P	**Pn**	**15 35 28.6**	**-0.5**
MEXI	**Barrio Mexico**	**0.23**	**151**	*e*P	**Pn**	**15 35 28.7**	**-0.4**
CENT	**San Jose**	**0.24**	**150**	*e*P	**Pn**	**15 35 29.9**	**+0.7**
ATEO	**Atenas**	**0.24**	**228**	*e*P	**Pn**	**15 35 28.5**	**-0.6**
VPL2	**V. Platanar**	**0.24**	**312**	*e*P	**Pn**	**15 35 29.1**	**-0.1**
PALD	**Palmares**	**0.25**	**249**	*e*P	**Pn**	**15 35 28.5**	**-0.7**
SJS	**Escuela Geolog**	**0.25**	**144**	*e*P	**Pn**	**15 35 28.8**	**-0.4**
LUJA	**Lujan**	**0.25**	**149**	*e*P	**Pn**	**15 35 28.9**	**-0.4**
ECI	**Escuela Centro**	**0.25**	**144**	*e*P	**Pn**	**15 35 28.9**	**-0.4**
SJS3	**Mercedes San J**	**0.25**	**144**	*e*P	**Pn**	**15 35 28.9**	**-0.3**
CORON	**Coronado**	**0.26**	**131**	*e*P	**Pn**	**15 35 29.1**	**-0.2**
RAMO	**San Ramon**	**0.27**	**258**	*e*P	**Pn**	**15 35 28.7**	**-0.6**
CVIMO	**Finca Echandi**	**0.28**	**115**	*e*P	**Pn**	**15 35 29.2**	**-0.2**
AMPA	**Desamparados**	**0.28**	**151**	*e*P	**Pn**	**15 35 28.9**	**-0.5**
TRIO	**Tres Rios**	**0.31**	**139**	*e*P	**Pn**	**15 35 29.1**	**-0.5**
ITAL	**Pital**	**0.32**	**347**	*e*P	**Pn**	**15 35 29.1**	**-0.3**
ACOS	**Acosta**	**0.34**	**174**	*e*P	**Pn**	**15 35 29.2**	**-0.6**
VICA	**Volcano Irazu**	**0.38**	**114**	*e*P	**Pn**	**15 35 30.0**	**-0.3**
TAGO	**Cartago**	**0.39**	**135**	*e*P	**Pn**	**15 35 29.8**	**-0.2**
PILE	**Guapiles**	**0.41**	**80**	*e*P	**Pn**	**15 35 30.1**	**0.0**
RAFA	**San Farael, Vo**	**0.42**	**115**	*e*P	**Pn**	**15 35 30.5**	**-0.1**
LCR2	**La Lucha 2**	**0.44**	**154**	S	**Sn**	**15 35 40.9**	**+0.2**
PCAYA	**Pacayas**	**0.44**	**120**	*e*P	**Pn**	**15 35 30.3**	**-0.2**
CVTQ	**Turrialba Volc**	**0.45**	**108**	*e*P	**Pn**	**15 35 30.8**	**+0.1**
VTR0	**Volcan Turrial**	**0.45**	**106**	*e*P	**Pn**	**15 35 30.6**	**-0.2**
CVTR	**Volcan Turrial**	**0.45**	**105**	*e*P	**Pn**	**15 35 30.6**	**-0.3**
REPA	**Paraso**	**0.45**	**134**	*e*P	**Pn**	**15 35 30.4**	**-0.2**
CVTV	**Tajo**	**0.46**	**107**	*e*P	**Pn**	**15 35 30.8**	**0.0**
SOCE	**Pocosol**	**0.48**	**300**	P	**Pn**	**15 35 30.3**	**-0.3**
SOCE	**Pocosol**	**0.48**	**300**	S	**Sn**	**15 35 41.6**	**+0.7**
SOCE	**Pocosol**	**0.48**	**300**	*e*P	**Pn**	**15 35 30.5**	**-0.1**
ARZA	**Esparza**	**0.48**	**252**	*e*P	**Pn**	**15 35 30.2**	**-0.4**
VTCV	**VTCV, Calle Va**	**0.49**	**109**	*e*P	**Pn**	**15 35 30.8**	**-0.1**
ABRB	**Las Abras (San**	**0.49**	**106**	*e*P	**Pn**	**15 35 31.1**	**+0.2**
CARI	**Cariari**	**0.51**	**64**	*e*P	**Pn**	**15 35 31.0**	**+0.2**
PITB	**Pirrs, San**	**0.51**	**160**	*e*P	**Pn**	**15 35 30.4**	**-0.6**
RAZU	**San Marcos de**	**0.51**	**160**	*e*P	**Pn**	**15 35 30.3**	**-0.7**
VINA	**Juan Vinas**	**0.51**	**119**	*e*P	**Pn**	**15 35 30.8**	**-0.2**
PICV	**PH. Pirrs**	**0.51**	**179**	*e*P	**Pn**	**15 35 30.1**	**-0.8**
VERB	**Verbena**	**0.53**	**111**	*e*P	**Pn**	**15 35 31.4**	**+0.2**
TURIB	**Turrialba**	**0.56**	**115**	*e*P	**Pn**	**15 35 31.2**	**-0.1**
RESJ	**San Isidro (Tu**	**0.56**	**101**	*e*P	**Pn**	**15 35 31.6**	**+0.3**
FORC	**Fortuna**	**0.56**	**305**	*e*P	**Pn**	**15 35 31.3**	**0.0**
PIEC	**Cerro El Cedra**	**0.57**	**155**	*e*P	**Pn**	**15 35 30.9**	**-0.7**
VACR	**Volcan Arenal**	**0.57**	**305**	*e*P	**Pn**	**15 35 31.3**	**-0.1**
ARE1	**Arenal 1**	**0.60**	**302**	*e*P	**Pn**	**15 35 31.6**	**0.0**
CASO	**Castillo**	**0.60**	**299**	*e*P	**Pn**	**15 35 31.7**	**0.0**
VARE2	**V. Arenal**	**0.60**	**302**	*e*P	**Pn**	**15 35 31.7**	**0.0**
CEDE	**Laguna Cedeo**	**0.60**	**305**	*e*P	**Pn**	**15 35 31.8**	**0.0**
RVLA	**Villa Bonita**	**0.60**	**93**	*e*P	**Pn**	**15 35 31.9**	**+0.3**
EGUB	**Earth Gu¡pi**	**0.60**	**83**	*e*P	**Pn**	**15 35 31.9**	**+0.2**
COVE	**Coope Vega, Sa**	**0.61**	**341**	P	**Pn**	**15 35 31.3**	**-0.4**
COVE	**Coope Vega, Sa**	**0.61**	**341**	S	**Sn**	**15 35 43.2**	**+0.4**
TRT2	**Tortugero**	**0.62**	**48**	P	**Pn**	**15 35 31.5**	**-0.2**
TRT2	**Tortugero**	**0.62**	**48**	S	**Sn**	**15 35 43.3**	**+0.3**
TRT2	**Tortugero**	**0.62**	**48**	*e*P	**Pn**	**15 35 31.7**	**0.0**
REZ	**Monterrey de S**	**0.62**	**308**	*e*P	**Pn**	**15 35 31.8**	**-0.1**
LCOCO	**El Coco**	**0.64**	**95**	*e*P	**Pn**	**15 35 32.1**	**+0.2**
TABAC	**Tabacon**	**0.66**	**303**	*e*P	**Pn**	**15 35 32.4**	**+0.1**
BUS1	**Rivas**	**0.73**	**143**	*e*P	**Pn**	**15 35 32.6**	**-0.8**
JTS	**Las Juntas de**	**0.76**	**281**	Pg	**Pn**	**15 35 32.9**	**-0.3**
	177nm,0.3s,baz=31,slow=5.4,SNR=602						
JTS				Lg	Lg	15 35 45.1	
	303nm,0.3s,baz=161,slow=22,SNR=21						
JTS	**Las Juntas de**	**0.76**	**281**	P	**Pn**	**15 35 32.8**	**-0.3**
JTS				S	**Sn**	**15 35 45.5**	**0.0**
JTS	**Las Juntas de**	**0.76**	**281**	*e*P	**Pn**	**15 35 32.8**	**-0.3**
CHIK	**Chiripa**	**0.76**	**293**	*e*P	**Pn**	**15 35 33.5**	**+0.1**
JUNT	**Juntas**	**0.76**	**281**	*e*P	**Pn**	**15 35 32.9**	**-0.3**
PAQE	**Paquera**	**0.79**	**246**	*e*P	**Pn**	**15 35 33.8**	**+0.3**
TILA	**Tilaran**	**0.82**	**293**	*e*P	**Pn**	**15 35 33.9**	**-0.1**
QUEB	**Quebradon, Cot**	**0.83**	**305**	*e*P	**Pn**	**15 35 33.6**	**-0.5**
INVE	**Universidad In**	**0.91**	**291**	*e*P	**Pn**	**15 35 35.0**	**0.0**
TIMP	**Tierras Morena**	**0.92**	**299**	*e*P	**Pn**	**15 35 34.8**	**-0.3**
CNAS	**Canas**	**0.92**	**288**	*e*P	**Pn**	**15 35 35.1**	**+0.1**
TENO	**El Achiote**	**0.95**	**306**	*e*P	**Pn**	**15 35 35.5**	**+0.1**
MOTZ	**Rio Naranjo**	**1.01**	**302**	*e*P	**Pn**	**15 35 36.4**	**+0.2**
SAJE	**San Jernim**	**1.04**	**139**	*e*P	**Pn**	**15 35 35.9**	**-0.7**
CUI	**Cuipilapa**	**1.08**	**299**	*e*P	**Pn**	**15 35 36.9**	**-0.1**
UPAL	**Upala**	**1.10**	**313**	P	**Pn**	**15 35 36.9**	**-0.2**
UPAL	**Upala**	**1.10**	**313**	S	**Sn**	**15 35 51.8**	**-0.5**
UPAL	**Upala**	**1.10**	**313**	*e*P	**Pn**	**15 35 36.8**	**-0.2**
BAGA	**Bagaces**	**1.11**	**290**	*e*P	**Pn**	**15 35 37.2**	**-0.1**
COLC	**Colonia**	**1.12**	**298**	*e*P	**Pn**	**15 35 37.3**	**-0.1**
HORNC	**Hornillas**	**1.12**	**301**	*e*P	**Pn**	**15 35 37.3**	**-0.1**
VMAR	**Armenia, Volca**	**1.12**	**307**	*e*P	**Pn**	**15 35 37.3**	**-0.1**
MESS	**Mesas**	**1.15**	**301**	*e*P	**Pn**	**15 35 37.6**	**-0.1**
ELVJ	**El Viejo (Barb**	**1.15**	**286**	*e*P	**Pn**	**15 35 39.1**	**+1.5**
PLVR	**Palo Verde**	**1.15**	**280**	*e*P	**Pn**	**15 35 38.0**	**0.0**
CLARA	**Aguas Claras**	**1.15**	**304**	*e*P	**Pn**	**15 35 37.6**	**-0.2**
EDPE	**Pejibaye, P**	**1.16**	**148**	*e*P	**Pn**	**15 35 37.8**	**-0.1**
OCHAL	**Ojochal**	**1.17**	**152**	P	**Pn**	**15 35 38.0**	**0.0**
OCHAL	**Ojochal**	**1.17**	**152**	S	**Sn**	**15 35 54.6**	**+0.5**
CMARA	**Lajas Hojancha**	**1.21**	**264**	P	**Pn**	**15 35 38.3**	**-0.2**
CMARA	**Lajas Hojancha**	**1.21**	**264**	S	**Sn**	**15 35 55.5**	**+0.5**
CMARA	**Lajas Hojancha**	**1.21**	**264**	*e*P	**Pn**	**15 35 38.4**	**-0.2**
NICO	**Nicoya**	**1.23**	**270**	*e*P	**Pn**	**15 35 38.9**	**+0.2**
DRK0	**Durika**	**1.28**	**133**	P	**Pn**	**15 35 38.6**	**-0.9**
DRK0	**Durika**	**1.28**	**133**	S	**Sn**	**15 35 56.4**	**-0.4**
DRK0	**Durika**	**1.28**	**133**	*e*P	**Pn**	**15 35 38.7**	**-0.9**
GPS2	**Hotel Rincn d**	**1.29**	**298**	*e*P	**Pn**	**15 35 39.3**	**-0.2**
VRLE	**La Escondida,**	**1.31**	**299**	*e*P	**Pn**	**15 35 39.8**	**-0.1**
JUD3	**Juan Diaz 3**	**1.32**	**271**	*e*P	**Pn**	**15 35 40.0**	**+0.1**
BUAI	**Buenos Aires**	**1.33**	**303**	*e*P	**Pn**	**15 35 39.5**	**-0.5**
LAPC	**Finca la Perla**	**1.36**	**297**	*e*P	**Pn**	**15 35 40.1**	**-0.3**
ALIBA	**Liberia Airpor**	**1.40**	**289**	*e*P	**Pn**	**15 35 40.9**	**0.0**
ELI1	**Hacienda Flor**	**1.42**	**291**	P	**Pn**	**15 35 40.9**	**-0.2**
ELI1	**Hacienda Flor**	**1.42**	**291**	S	**Sn**	**15 35 59.4**	**-0.2**
LCRUZ	**La Cruz**	**1.69**	**304**	*e*P	**Pn**	**15 35 44.7**	**+0.1**
ALCO	**Alturas Coton,**	**1.79**	**131**	*e*P	**Pn**	**15 35 45.7**	**-0.5**
PTJ1	**Puerto Jimnez**	**1.82**	**151**	S	**Sn**	**15 36 09.7**	**+0.7**
PIRO	**Carate, Puerto**	**1.93**	**154**	P	**Pn**	**15 35 48.9**	**+1.2**
PIRO	**Carate, Puerto**	**1.93**	**154**	S	**Sn**	**15 36 11.5**	**+0.2**
BRU2	**Volcan**	**2.00**	**132**	P	**Pn**	**15 35 48.9**	**0.0**
BRU2	**Volcan**	**2.00**	**132**	S	**Sn**	**15 36 13.7**	**+0.3**
BRU2	**Volcan**	**2.00**	**132**	*e*P	**Pn**	**15 35 48.8**	**0.0**
CDITO	**Canoas**	**2.04**	**140**	P	**Pn**	**15 35 48.5**	**-0.6**
CDITO	**Canoas**	**2.04**	**140**	S	**Sn**	**15 36 14.5**	**+0.6**
CLLRA	**Cordillera,**	**2.09**	**131**	*e*P	**Pn**	**15 35 50.1**	**0.0**
JEFFS	**S de V. Baru**	**2.20**	**132**	*e*P	**Pn**	**15 35 51.3**	**-0.2**
BOAB	**BOACO BROADBAN**	**2.71**	**328**	P	**Pn**	**15 35 57.9**	**-0.2**
BOAB	**BOACO BROADBAN**	**2.71**	**328**	S	**Sn**	**15 36 29.7**	**-0.3**
TXAR	**Lajitas Array**	**26.38**	**319**	P	**P**	**15 40 47.7**	**+2.1**
	0.1nm,0.4s,baz=133,slow=9.7,SNR=2.0						
	0.1nm,0.4s						
YKA	**Yellowknife Ar**	**56.69**	**344**	P	**P**	**15 44 50.5**	**-0.8**
	0.1nm,0.3s,baz=123,slow=9.7,SNR=4.2						
	0.1nm,0.3s						
ILAR	**Eielson Array**	**69.41**	**336**	P	**P**	**15 46 14.8**	**-0.8**
	0.2nm,0.6s,baz=106,slow=4.8,SNR=5.9						
	0.2nm,0.6s						

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*NEIC **23** 15:36:16.4±1.1,0°.07N±0°.08×123°.02E±0°.04,h160^{km}±6^{km},mb4.2/32,Error ellipse: s-maj=11.1km s-min=4.8km az=191.0*
*IDC **23** 15:36:17.2±5.5,0°.18N×123°.37E,h173^{km}±55^{km},mb3.3/10,mbtmp3.8/11,MS3.1/1,Error ellipse: s-maj=37.9km s-min=12.9km az=66.0*
*DJA **23** 15:36:17.7±0.3,0°S±3°×12°3E±°,h148^{km}±4^{km},M4.2/18,mb4.2/13,mB4.8/4,MLv4.2/18,Mw(mB)4.1/4*
ISC 23 15:36:16.3±0.5,**0°.02N**±0°.05×**123°.01E**±0°.06,**h162^{km},n76,σ0^{s}.93**/78,**mb4.0**/24,**Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTOI	**Gorontalo**	**0.61**	**0**	P	**Pn**	**15 36 41.5**	**+1.9**
GTOI				S	**Sn**	**15 37 00.2**	**+2.7**
LUWI	**Luwuk**	**1.08**	**193**		**Pn**	**15 36 43.1**	**+0.2**
LUWI	**Luwuk**	**1.08**	**193**	P	**Pn**	**15 36 42.8**	**-0.1**
LUWI				S	**Sn**	**15 37 02.1**	**-1.3**
MRSI	**Marisa**	**1.16**	**293**	P	**Pn**	**15 36 43.9**	**+0.3**
MRSI				S	**Sn**	**15 37 03.7**	**-0.8**
APSI	**Ampana**	**1.65**	**236**	P	**Pn**	**15 36 48.7**	**+0.4**
TOLI2	**Tolitoli**	**2.48**	**296**		**Pn**	**15 36 57.3**	**-0.4**

MPSI	Mapaga	3.13	276	P	Pn	15 37 06.6	+0.9
PCI	Palu	3.30	254	P	Pn	15 37 08.7	+0.7
SANI	Sanana	3.62	125	P	Pn	15 37 10.5	-1.5
KDI	Kendari	3.97	186	P	Pn	15 37 16.9	+0.4
KKSI	Kolaka, Sulawe	4.38	198	P	Pn	15 37 21.4	-0.4
TTSI	Tana Toraja	4.41	226	P	Pn	15 37 22.5	+0.3
TNTI	Ternate	4.42	80		Pn	15 37 22.0	-0.4
TNTI	Ternate	4.42	80	P	Pn	15 37 22.6	+0.3
SGSI	Sangihe	4.43	35	P	Pn	15 37 24.1	+1.7
SPSI	Sidrap Palu	5.11	219	P	Pn	15 37 32.4	+1.0
	0.1nm465nm18nm,0.5s						
NLAI	Namlea	5.21	128	P	Pn	15 37 33.6	+0.8
	2µm47nm,0.5s						
KAPI	Kappang	5.97	213		Pn	15 37 43.1	+0.4
KAPI	Kappang	5.97	213	P	Pn	15 37 44.2	+1.5
	0.0nm14nm,1.0s						
BKSI	Bulukumba	6.04	208	P	Pn	15 37 45.0	+1.3
	0.1nm23nm,1.1s						
KRAI	Karang Ratu	6.32	122	P	Pn	15 37 49.5	+2.1
	0.2nm734nm22nm,0.6s						
BNDI	Bandanaira	8.23	123	P	Pn	15 38 14.0	+1.2
SIJI	Sorong	8.30	96	P	Pn	15 38 15.4	+1.6
EDFI	Ende, Flores	8.81	189	P	Pn	15 38 21.2	+0.6
	12nm,0.6s						
LBFI	Labuhan Bajo,	9.00	200	P	Pn	15 38 24.2	+1.2
	22nm,0.8s						
FAKI	Fak Fak	9.69	108	Pn	Pn	15 38 32.3	+0.2
FAKI	Fak Fak	9.69	108	P	Pn	15 38 32.3	+0.2
	19nm,1.1s						
JAGI	Jajag, Banyuwa	12.21	226	Pn	Pn	15 39 05.8	+0.7
PCJI	Pacitan	14.34	235	P	Pn	15 39 33.8	+1.7
MTN	Manton Dam	15.11	148		Pn	15 39 42.3	+0.7
KNRA	Kununurra	16.60	160	P	P	15 40 00.2	+0.8
KNRA				IAmb	IAmb	15 40 23.9	
	comp=Z,6.6nm,1.1s						
FITZ	Fitzroy Crossi	18.19	172	P	P	15 40 17.5	+0.6
	comp=Z,6.4nm,0.6s,baz=358,slow=7.3,SNR=24						
FITZ	Fitzroy Crossi	18.19	172	P	P	15 40 17.0	+0.1
MBWA	Marble Bar	21.29	188	P	P	15 40 49.3	-1.0
MBWA				IAmb	IAmb	15 41 12.0	
	comp=Z,11nm,1.1s						
WB0	Warramunga Arr	22.61	151	P	P	15 41 02.6	-0.9
WB0				IAmb	IAmb	15 41 04.4	
	comp=Z,9.5nm,1.4s						
WRAB	Tennant Creek	22.73	151	P	P	15 41 03.8	-0.9
WRAB				IAmb	IAmb	15 41 06.1	
	comp=Z,7.3nm,1.4s						
WRA	Warramunga Arr	22.73	151	P	P	15 41 03.9	-0.8
	comp=Z,1.4nm,0.7s,baz=326,slow=10,SNR=20						
	comp=Z,1.4nm,0.7s						
WRA	Warramunga Arr	22.73	151	P	P	15 41 03.9	-0.8
WR8	Warramunga Arr	22.82	151	P	P	15 41 04.8	-0.6
WR8				IAmb	IAmb	15 41 06.5	
	comp=Z,3.9nm,0.8s						
COEN	Coen	24.32	126	P	P	15 41 19.3	+0.1
COEN				IAmb	IAmb	15 41 20.6	
	comp=Z,12nm,1.3s						
AS31	Alice Springs	25.81	157	P	P	15 41 32.5	-0.1
ASAR	Alice Springs	25.81	157	P	P	15 41 32.9	+0.2
	comp=Z,0.5nm,0.8s,baz=343,slow=13,SNR=9.8						
ASAR				PcP	PcP	15 44 57.9	-0.2
	comp=Z,0.4nm,0.7s,baz=348,slow=1.9,SNR=6.4						
	comp=Z,0.5nm,0.8s						
ASAR	Alice Springs	25.81	157	P	P	15 41 32.7	0.0
JOW	Kunigami	27.14	10	LR	LR	15 52 11.9	
	comp=Z,40nm,21.7s,baz=328,slow=36						
MORW	Morawa	29.68	192	P	P	15 42 06.2	-0.8
MORW				IAmb	IAmb	15 42 49.2	
	comp=Z,12nm,1.1s						
CMAR	Chiang Mai Arr	29.91	309	P	P	15 42 11.8	+2.6
	comp=Z,0.7nm,0.7s,baz=139,slow=7.3,SNR=8.6						
CMAR				PcP	PcP	15 45 07.7	-0.4
	comp=Z,0.5nm,0.7s,baz=143,slow=0.3,SNR=5.3						
	comp=Z,0.7nm,0.7s						
FORT	Forrest	31.00	172	P	P	15 42 18.3	-0.3
FORT				IAmb	IAmb	15 42 49.4	
	comp=Z,8.7nm,1.1s						
PBA	Port Blair	32.20	292	P	P	15 42 29.1	-0.2
INKA	Innaminka	32.43	150	P	P	15 42 31.2	+0.1
BBOO	Buckleboo	34.90	161	P	P	15 42 52.1	-0.3
STKA	Stephens Creek	36.27	153	P	P	15 43 04.3	+0.2
	comp=Z,2.2nm,0.6s,baz=313,slow=11,SNR=5.6						
	comp=Z,2.2nm,0.6s						
STKA	Stephens Creek	36.27	153	P	P	15 43 04.0	-0.1
MJAR	Matsushiro Arr	38.98	20	P	P	15 43 25.0	-1.8
	comp=Z,0.9nm,0.5s,baz=189,slow=8.6,SNR=2.1						
	comp=Z,0.9nm,0.5s						
MJAR	Matsushiro Arr	38.98	20	IAmb	IAmb	15 43 26.6	
	comp=Z,5.9nm,1.4s						
ARMA	Armidale	40.70	141	P	P	15 43 40.8	-0.5
ARMA				IAmb	IAmb	15 43 53.2	
	comp=Z,19nm,1.3s						
CAN	Canberra	42.70	148	P	P	15 43 58.4	+1.0
HILR	Hailar Array B	49.43	357	P	P	15 44 48.6	-1.1
	comp=Z,1.1nm,0.5s,baz=181,slow=14,SNR=2.7						
	comp=Z,1.1nm,0.5s						
SONM	Songino Array	49.77	345	P	P	15 44 51.6	-0.9
	comp=Z,0.5nm,0.6s,baz=160,slow=4.6,SNR=1.7						
	comp=Z,0.5nm,0.6s						
HMDM	Hanimaadhoo	50.16	279	P	P	15 44 54.9	-0.9
MKAR	Makanchi Array	58.60	328	P	P	15 45 56.0	-0.2
	comp=Z,0.3nm,0.4s,baz=124,slow=8.4,SNR=8.9						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	58.60	328	P	P	15 45 55.8	-0.4
ZALV	Zalesovo Beam	62.30	336	P	P	15 46 19.5	-1.6
	comp=Z,0.3nm,0.3s,baz=144,slow=10.0,SNR=2.0						
	comp=Z,0.3nm,0.3s						
BKZ	Black Stump Fm	62.46	135	P	P	15 46 22.7	+0.2
RTZ	Ruatahuna	62.58	134	P	P	15 46 23.4	0.0
KURBB	Kurchatov Arra	62.95	330	P	P	15 46 25.0	-0.5
	comp=Z,0.3nm,0.5s,baz=140,slow=6.0,SNR=2.2						
	comp=Z,0.3nm,0.5s						
KURK	Kurchatov	62.97	330	P	P	15 46 25.0	-0.6
KURK	Kurchatov	62.97	330	IAmb	IAmb	15 46 25.2	
	comp=Z,2.0nm,1.1s						
VNDA	Vanda	80.26	172	P	P	15 48 08.5	0.0
VNDA				IAmb	IAmb	15 48 32.2	
	comp=Z,4.3nm,1.4s						
H17K	Granite Mounta	84.52	25	P	P	15 48 31.3	+0.5
C18K	Utukok River	84.83	21	P	P	15 48 32.6	+0.3
C18K				IAmb	IAmb	15 48 36.6	
	comp=Z,3.5nm,1.3s						
C19K	Lookout Ridge	85.49	21	P	P	15 48 35.7	0.0
D19K	Kuna River	85.90	21	P	P	15 48 37.8	+0.2
D19K				IAmb	IAmb	15 48 48.8	
	comp=Z,6.6nm,1.3s						
B21K	Ikpikpuk River	87.32	20	P	P	15 48 44.9	+0.5
B21K				IAmb	IAmb	15 49 19.8	
	comp=Z,2.3nm,1.2s						
I21K	Tanana	87.88	25	P	P	15 48 46.9	-0.2
QSPA	South Pole Qui	89.95	180	P	P	15 48 56.9	-0.2
QSPA				IAmb	IAmb	15 49 10.1	
	comp=Z,4.7nm,1.4s						
I28M	Miner Creek	92.92	25	P	P	15 49 11.0	+0.2

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*MEX **23** 15:47:55.3±0.8, 13°.69N×93°.22W, h1^{km}±33^{km}, MD5.8*

*GFZ **23** 15:47:56.6, 13°.74N×92°.90W, h10^{km}, MW5.7, Moment Tensor Solution. s68 Moment tensor: M$_{rr}$-4.07; M$_{\theta\theta}$3.02; M$_{\phi\phi}$1.05; M$_{r\theta}$1.94; M$_{\theta\phi}$-1.30; M$_{\phi r}$-1.01; Fault plane solution: NP1:ϕ_s116.00000°, δ30.00000°, λ-90.00000°. NP2:ϕ_s297.00000°, δ60.00000°, λ-89.00000°. Principal axes: T 4.2400, Plg15.0000°, Azm27.0000°; N 0.4000, Plg0.0000°, Azm117.0000°; P -4.6400, Plg75.0000°, Azm208.0000°;*

*NEIC **23** 15:47:56.7, 13°.80N×92°.81W, h10^{km}*

*IPGP **23** 15:47:56.0, 13°.81N×92°.79W, h9^{km}, Mw5.8, Fault plane solution: NP1:ϕ_s93.00000°, δ27.00000°, λ-119.00000°. NP2:ϕ_s305.00000°, δ66.00000°, λ-76.00000°.*

*NEIC **23** 15:47:56.7, 13°.80N×92°.81W, h16^{km}*

*NEIC **23** 15:47:56.7, 14°.00N×92°.91W, h16^{km}, Moment Tensor Solution. Duration: 4^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-5.53; M$_{\theta\theta}$4.76; M$_{\phi\phi}$0.77; M$_{r\theta}$0.49; M$_{\theta\phi}$-1.75; M$_{\phi r}$-1.68; Fault plane solution: M$_0$5.75000×10^{17} NP1:ϕ_s98.25000°, δ40.93000°, λ-109.68000°. NP2:ϕ_s303.59000°, δ51.91000°, λ-73.72000°. Principal axes: T 5.5248, Plg6.0000°, Azm22.0000°; N 0.4264, Plg13.0000°, Azm113.0000°; P -5.9512, Plg76.0000°, Azm269.0000°;*

*NEIC **23** 15:47:56.1±1.8, 13°.76N±0°.06×92°.86W±0°.06, h10^{km}±1^{km}, mb5.8/919, Ms_20 5.3/520, Mwb5.7/59, Mww5.8/73 Error ellipse: s-maj=11.6km s-min=9.2km az=219.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.96; M$_{\theta\theta}$2.29; M$_{\phi\phi}$-0.33; M$_{r\theta}$2.47; M$_{\theta\phi}$-0.99; M$_{\phi r}$-1.65; Fault plane solution: M$_0$3.79000×10^{17} NP1:ϕ_s89.45000°, δ21.26000°, λ-120.73000°. NP2:ϕ_s301.98000°, δ71.84000°, λ-78.75000°. Principal axes: T 4.0236, Plg26.0000°, Azm23.0000°; N -0.5116, Plg11.0000°, Azm118.0000°; P -3.5119, Plg62.0000°, Azm229.0000°;*

*CATAC **23** 15:47:57.0±1.1, 14°N±4°×9°3W±°, h2^{km}±7^{km}, M5.8/25, MLv5.8/25 Error ellipse: s-maj=8.4km s-min=5.2km az=31.6, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-3.53; M$_{\theta\theta}$3.03; M$_{\phi\phi}$0.50; M$_{r\theta}$0.77; M$_{\theta\phi}$-2.32; M$_{\phi r}$-2.05; Fault plane solution: M$_0$4.59233×10^{17} NP1: ϕ_s99.69268°, δ37.21037°, λ-124.15483°. NP2: ϕ_s320.11939°, δ59.97094°, λ-66.91098°. Principal axes: T 4.7706, Plg12.0808°, Azm33.6454°; N -0.3803, Plg19.8477°, Azm128.0763°; P -4.3904, Plg66.4940°, Azm274.1670°; confirmed*

*MOS **23** 15:47:58.8±1.1, 13°.66N×93°.00W, h43^{km}, mb5.8/42, MS5.4/21 Error ellipse: s-maj=8.5km s-min=5.8km az=91.7*

*SNET **23** 15:47:58.9±1.0, 13°.83N×92°.82W, h28^{km}, ML5.7*

*GCG **23** 15:47:58.3±2.0, 13°.71N×92°.76W, h14^{km}±12^{km}, MD5.6, ML5.7*

*GCMT **23** 15:47:58.1±0.1, 13°.75N×93°.21W, h12^{km}, MW5.7/156, Moment Tensor Solution. s135,c256; s156,c470; Duration: 1^{s}8 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-4.51±.03; M$_{\theta\theta}$3.88±.03; M$_{\phi\phi}$0.63±.03; M$_{r\theta}$1.91±.09; M$_{\theta\phi}$-1.96±.03; M$_{\phi r}$0.32±.10; Best double couple: M$_0$5.04900×10^{17} NP1:ϕ_s128.00000°, δ37.00000°, λ-69.00000°. NP2:ϕ_s282.00000°, δ56.00000°, λ-105.00000°. Principal axes: T 5.0720, Plg10.0000°, Azm23.0000°; N -0.0430, Plg12.0000°, Azm291.0000°; P -5.0260, Plg74.0000°, Azm150.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*IDC **23** 15:47:58.2±2.9, 13°.68N×92°.89W, h30^{km}±19^{km}, mb5.2/26, mbtmp5.3/31, ML4.9/5, MS5.2/57 Error ellipse: s-maj=16.8km s-min=10.4km az=57.0*

*BGR **23** 15:48:06.5, 14°.15N×91°.31W, h33^{km}, mb5.4, Ms5.5*

*UCR **23** 15:48:33.5±0.7, 13°.69N×89°.76W, h321^{km}±553^{km}, MW4.7*

ISC 23 15:47:55.2±0.5, **13°.69N**±0°.03×**93°.04W**±0°.03, **h14**^{km}±2^{km}, **h14**^{km}**:pP-P, n1822,** σ**1^{s}95**/1358, **mb5.8**/507, **MS5.4**/352, **47C-40D, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.43	32	*e*P	Pn	15 48 20.2	-0.6
THIG				*e*S	Sb	15 48 39.4	-0.3
SMCA	Catarina	1.49	39	*i* P	Pn	15 48 21.2	-0.5
RTAL	Retalhuleu	1.54	57		Pn	15 48 22.2	-0.2
RTAL	Retalhuleu	1.54	57⇑	*i*P	Pn	15 48 22.2	-0.2
RTAL				*e*S	Sg	15 48 43.7	-1.4
RTAL	Retalhuleu	1.54	57	P	Pn	15 48 21.9	-0.5
RTAL	Retalhuleu	1.54	57	S	Sn	15 48 41.1	-1.2
PATR	El Naranjo	1.62	29⇑	*e*P	Pn	15 48 22.4	-1.2
PATR				*e*S	Sb	15 48 44.7	-0.9
CHUJ	Union Juarez	1.66	33⇑	*e*P	Pn	15 48 23.4	-0.8
CHUJ				*e*S	Sn	15 48 44.9	-0.7
PAVE	Pavencul	1.71	29⇑	*e*P	Pn	15 48 24.2	-0.8
PAVE				*e*S	Sb	15 48 47.6	-0.6
STG2	El Palmar, Qui	1.78	65	*i* P	Pn	15 48 24.2	-1.5
STG2				*e*S	Sn	15 48 45.5	-2.7
STG8	El Palmar, Qui	1.80	65	*i* P	Pn	15 48 24.8	-1.4
QUEO	Labor Ovalle	1.89	51	*i* P	Pn	15 48 27.5	+0.1
QUEO				*e*S	Sn	15 48 51.4	+0.3
QUEO				IAML		15 48 59.9	
	comp=N,115µm,0.7s						
SOKI	Kika Raxquin	1.94	54	*i* P	Pn	15 48 27.9	-0.3
SOKI				IAML		15 49 02.8	
	comp=N,42µm,0.9s						
PCIG		2.01	355⇑	*i*P	Pn	15 48 27.7	-1.1
PCIG				*e*S	Sn	15 48 51.5	-2.4
HUEH	Huehuetenango	2.20	42		Pn	15 48 32.0	+0.4
HUEH	Huehuetenango	2.20	42⇑	*i*P	Pn	15 48 32.6	+1.0
HUEH				*e*S	Sb	15 49 00.9	-1.3
HUEH	Huehuetenango	2.20	42	*i* P	Pn	15 48 32.5	+0.9
HUEH				IAML		15 49 02.6	
	comp=N,68µm,0.6s						
HUEH	Huehuetenango	2.20	42	P	Pn	15 48 32.6	+1.0
ESSG	Sabana Grande	2.25	72	*i* P	Pn	15 48 31.1	-1.1
ESSG				*e*S	Sn	15 48 55.4	-4.4
ESSJ	San Jos, E	2.47	93	*i* P	Pn	15 48 30.7	-4.4
QUIS	Sacapulas	2.47	50	*i* P	Pn	15 48 36.6	+1.4
QUIS				*e*S	Sn	15 49 06.6	+1.4
QUIS				IAML		15 49 10.9	
	comp=N,55µm,0.6s						
FG16	Alotenango, Sa	2.52	76	*e*P	Pn	15 48 31.4	-4.6
FG16				*i* S	Sn	15 48 58.9	-7.8
FG16				IAML		15 49 08.9	
	comp=N,178µm,0.3s						
GCG4	OSOP	2.59	69	*e*P	Pn	15 48 37.4	+0.5
GCG4				IAML		15 49 23.6	
	comp=N,31µm,0.8s						
PCG5	San Vicente Pa	2.64	78	*i* P	Pn	15 48 33.6	-4.0
PCG5				*e*S	Sn	15 49 02.8	-6.6
CCIG	Comitan	2.72	19⇑	*e*P	Pn	15 48 40.6	+1.8
CCIG				*e*S	Sb	15 49 16.1	-1.1
APG	El Apazote	2.82	62	Pn	Pn	15 48 41.0	+0.9
	comp=N,38nm,0.3s,baz=193,slow=12,SNR=957						
APG				Sn	Sn	15 49 13.5	-0.5
	comp=N,72nm,0.3s,baz=102,slow=13,SNR=10						
	comp=N,512nm,0.8s						
APG	El Apazote	2.82	62⇑	*i*P	Pn	15 48 41.0	+0.9
APG				*e*S	Sb	15 49 17.7	-2.3
FAME	Alcaldia de Sa	2.94	87	P	Pn	15 48 41.1	-0.5
TGBT	Tuxtla Gutierr	3.07	359	*e*P	Pn	15 48 44.5	+1.1
TGBT				*e*S	Sn	15 49 20.1	+0.2
TGIG		3.07	358⇑	*e*P	Pn	15 48 44.7	+1.2
TGIG				*e*S	Sn	15 49 19.9	-0.2
AVCB	Coban	3.10	55	IAML		15 49 38.6	
	comp=N,60µm,0.5s						
NUBE	Las Nubes	3.17	86	*e*P	Pn	15 48 44.0	-0.9
NUBE	Las Nubes	3.17	86	P	Pn	15 48 44.0	-0.9
NUBE	Las Nubes	3.17	86	S	Sn	15 49 20.2	-2.5
LOAL	Lomas de Alarc	3.18	84	P	Pn	15 48 45.1	+0.2
LOAL	Lomas de Alarc	3.18	84	S	Sn	15 49 20.9	-1.8
JUAM	Asuncion Mita	3.30	78	*e*P	Pn	15 48 46.4	-0.1
JUAM				*e*S	Sn	15 49 21.6	-4.0
JUAM				IAML		15 49 28.8	
	comp=N,16µm,0.8s						
CEVE	Cerro Verde	3.32	87	*e*P	Pn	15 48 47.5	+0.5
CEVE				*e*S	Sn	15 49 24.9	-1.6
CEVE	Cerro Verde	3.32	87	P	Pn	15 48 47.1	+0.1
CEVE	Cerro Verde	3.32	87	S	Sn	15 49 26.6	+0.1
UNIC	Universidad Ca	3.40	85	P	Pn	15 48 47.6	-0.4
UNIC	Universidad Ca	3.40	85	S	Sn	15 49 27.3	-1.0
JAYA	Jayaque - finc	3.49	90	*e*P	Pn	15 48 48.4	-0.9
JAYA	Jayaque - finc	3.49	90	*e*P	Pn	15 48 48.8	-0.5
JAYA	Jayaque - finc	3.49	90	P	Pn	15 48 49.2	-0.1
JAYA	Jayaque - finc	3.49	90	S	Sn	15 49 28.7	-1.8
CEDA	San Andres	3.54	88	P	Pn	15 48 50.5	+0.6
CEDA	San Andres	3.54	88	S	Sn	15 49 31.2	-0.4
LALI	Alcalda de L	3.62	93	*e*P	Pn	15 48 50.9	-0.1
LALI				*e*S	Sn	15 49 29.9	-3.5
LALI	Alcalda de L	3.62	93	S	Sn	15 49 32.9	-0.5
PMON	Piamonte	3.62	89	P	Pn	15 48 51.3	+0.2
PMON	Piamonte	3.62	89	S	Sn	15 49 32.5	-1.1
HUIG	Huatulco	3.62	305	*e*P	Pn	15 48 49.3	-1.7
HUIG				*e*S	Sn	15 49 26.0	-7.6
MTO3	Montecristo	3.64	78		Pn	15 48 51.0	-0.4
MTO3	Montecristo	3.64	78	*i* P	Pn	15 48 51.1	-0.3
MTO3	Montecristo	3.64	78	P	Pn	15 48 50.3	-1.1
MTO3	Montecristo	3.64	78	S	Sn	15 49 32.9	-1.3
ESQI	Esquipulas	3.69	76		Pn	15 48 51.9	-0.1
ESQI	Esquipulas	3.69	76	*e*P	Pn	15 48 52.1	+0.1
ESQI	Esquipulas	3.69	76	P	Pn	15 48 53.1	+1.1
UEES	Universidad Ev	3.69	89	P	Pn	15 48 52.4	+0.4
UEES	Universidad Ev	3.69	89	S	Sn	15 49 34.6	-0.8
UTEC	Universidad Te	3.73	89	P	Pn	15 48 53.7	+1.2
PANCS	Alcalda de	3.75	91	P	Pn	15 48 54.3	+1.5
IGN	Direccin Gen	3.76	89	P	Pn	15 48 53.7	+0.8
LOMA	Loma Larga	3.76	90	P	Pn	15 48 53.2	+0.2
LOMA	Loma Larga	3.76	90	S	Sn	15 49 35.5	-1.6
UDBS	Universidad Do	3.77	89	P	Pn	15 48 53.0	-0.1
UDBS	Universidad Do	3.77	89	S	Sn	15 49 35.8	-1.6
CMIG	Matias Romero	3.82	332	Pn	Pn	15 48 54.0	+0.2
	comp=N,108nm,0.3s,baz=167,slow=14,SNR=310						
CMIG				Sn	Sn	15 49 36.2	-2.4
	comp=N,198nm,0.3s,baz=118,slow=10,SNR=9.4						
CMIG				LR	LR	15 50 13.5	
	comp=N,20µm,21.3s,baz=136,slow=35						
	comp=N,672nm,0.5s						
CMIG	Matias Romero	3.82	332⇓	*e*P	Pn	15 48 51.7	-2.1
CMIG				*e*S	Sn	15 49 33.5	-5.1
PANG	Puerto Angel	3.86	301	*e*P	Pn	15 48 53.1	-1.2
PANG				*e*S	Sn	15 49 31.5	-8.0
PAVA	Las Pavas	3.98	89	P	Pn	15 48 56.6	+0.5
PAVA	Las Pavas	3.98	89	S	Sn	15 49 41.9	-0.8
UESV	Universidad de	4.13	90	P	Pn	15 48 58.3	+0.3
TECO	Alcaldia de Te	4.14	92	P	Pn	15 48 59.0	+0.8
TECO	Alcaldia de Te	4.14	92	S	Sn	15 49 45.3	-1.2
SCLA	Alcaldia de Sa	4.19	89	P	Pn	15 48 59.4	+0.6
SCLA	Alcaldia de Sa	4.19	89	S	Sn	15 49 47.6	0.0
VHSA	Villahermosa	4.27	1	*e*P	Pn	15 49 01.9	+2.0
VHSA				*e*S	Sn	15 49 51.7	+2.1
SARH	Santa Rosa de	4.29	75	*e*P	Pn	15 49 00.4	+0.2
SARH	Santa Rosa de	4.29	75	P	Pn	15 49 00.9	+0.7
SARH	Santa Rosa de	4.29	75	S	Sn	15 49 50.4	+0.3
PQSS	Presa 15 de Se	4.35	90	S	Sn	15 49 49.3	-2.3
PQSS	Presa 15 de Se	4.35	90	P	Pn	15 48 59.4	-1.6
PETF	Flores	4.43	43		Pn	15 49 02.2	0.0
PETF	Flores	4.43	43	*e*P	Pn	15 49 03.0	+0.9
PETF				*e*S	Sn	15 49 54.3	+0.7
PETF	Flores	4.43	43	*i* P	Pn	15 49 03.1	+0.9
PETF				IAML		15 49 11.2	
	comp=N,7µm,0.8s						
PETF	Flores	4.43	43	P	Pn	15 49 03.2	+1.1
TUIG	Tuzandepetl	4.52	343	*e*P	Pn	15 49 01.4	-2.0
TUIG				*e*S	Sn	15 49 50.8	-5.0
PEIG	Puerto Escondi	4.59	301	*e*P	Pn	15 49 03.2	-1.2
PEIG				*e*S	Sn	15 49 49.0	-8.5
IZABA	Izabal, Puerto	4.76	64	*e*P	Pn	15 49 06.0	-0.6
NEUV	Arroyo Zacate	4.81	327	*e*P	Pn	15 49 05.5	-1.8
NEUV				*e*S	Sn	15 49 59.3	-3.5
OXBJ	Oaxaca	4.89	314	*e*P	Pb	15 49 17.4	-3.5
OXBJ				*e*S	Sn	15 50 06.8	+1.6
VHO	Vista Hermosa	4.90	314	*e*P	Pn	15 49 10.1	+1.3
VHO				*e*S	Sn	15 50 01.1	-4.4
LCND	La Caada	5.02	94	P	Pn	15 49 10.9	+0.6
CNCH	Conchagua	5.08	94	*e*P	Pn	15 49 10.4	-0.7
PMUV	Sontecomapan	5.23	338	*e*P	Pn	15 49 10.1	-3.1
PMUV				*e*S	Sn	15 50 07.0	-6.4
YOIG	Yosondua	5.37	306⇓	*e*P	Pn	15 49 15.9	+0.6
YOIG				*e*S	Sn	15 50 12.0	-5.2
SCIG	Sabancuy	5.54	18⇑	*e*P	Pn	15 49 17.5	+0.1
SCIG				*e*S	Sn	15 50 20.1	-0.9
SCIG	Sabancuy	5.54	18	*i* P	Pn	15 49 17.6	+0.3
PNIG	Pinotepa	5.61	299⇓	*e*P	Pn	15 49 17.8	-0.5
PNIG				*e*S	Sn	15 50 13.2	-9.4
TGUH	Tegucigalpa,Un	5.61	86		Pn	15 49 17.0	-1.4
TGUH	Tegucigalpa,Un	5.61	86	P	Pn	15 49 17.2	-1.2
	comp=N,26µmcomp=N,10µmcomp=N,1µm,0.9s						
TGUH				S	Sn	15 50 28.0	+5.2
	comp=N,26µmcomp=N,10µmcomp=N,1µm,0.9s						
TXIG	Tlaxiaco	5.78	308	*e*P	Pn	15 49 21.4	+0.5
TXIG				*e*S	Sn	15 50 23.0	-4.1
TOIG	Toxpalan	5.85	319	*e*P	Pn	15 49 23.2	+1.5
TOIG				*e*S	Sn	15 50 24.8	-3.9
CRIN	San Cristobal	5.91	99		Pn	15 49 22.5	-0.1
CRIN	San Cristobal	5.91	99	P	Pn	15 49 23.3	+0.7
	comp=N,77µmcomp=N,24µmcomp=N,1µm,0.6s						
CRIN				S	Sn	15 50 24.4	-5.8
	comp=N,77µmcomp=N,24µmcomp=N,1µm,0.6s						
HERN	Volcan Telica	6.14	99		Pn	15 49 25.0	-0.7
HLIG	Huajuapan de L	6.17	313	*e*P	Pn	15 49 27.8	+1.7
HLIG				*e*S	Sn	15 50 32.0	-4.7
TPIG	Tehuac#an	6.28	319	*e*P	Pn	15 49 29.0	+1.3
TPIG				*e*S	Sn	15 50 39.6	+0.3
CNGN	Cerro Negro	6.29	100		Pn	15 49 27.1	-0.6
CNGN	Cerro Negro	6.29	100	P	Pn	15 49 28.0	+0.3
	comp=N,88µmcomp=N,5µm,0.6s						
CNGN				S	Sn	15 50 32.9	-6.5
	comp=N,88µmcomp=N,5µm,0.6s						
MGIG	Malinaltepec	6.45	304	*e*P	Pn	15 49 31.5	+1.5
MGIG				*e*S	Sn	15 50 37.1	-6.4
FTIG	Fresnillo de T	6.46	311	*e*P	Pn	15 49 32.7	+2.6
FTIG				*e*S	Sn	15 50 38.4	-5.2
TLIG	Tlapa	6.57	307	*e*P	Pn	15 49 33.4	+1.7
TLIG				*e*S	Sn	15 50 39.6	-7.0
CRIG	Cruz Grande	6.62	298	*e*P	Pn	15 49 32.0	-0.2
CRIG				*e*S	Sn	15 50 37.6	-10
JAUV	Jalcomulco	6.70	328	*e*P	Pn	15 49 31.8	-1.6
JAUV				*e*S	Sn	15 50 42.7	-6.9
MGAN	Managua	6.79	102		Pn	15 49 35.0	+0.4
MGAN	Managua	6.79	102	P	Pn	15 49 34.7	+0.1
	comp=N,10µmcomp=N,694nm,0.8s						
LVIG	Laguna Verde	6.82	332	*e*P	Pn	15 49 33.4	-1.5
LVIG				*e*S	Sn	15 50 46.8	-5.6
DAIG	Los Arroyos	7.19	298	*e*P	Pn	15 49 40.9	+0.9
DAIG				*e*S	Sn	15 50 52.3	-9.3
BOAB	BOACO BROADBAN	7.29	99		Pn	15 49 40.5	-0.9
PPCL	Tochimilco	7.46	315	*e*P	Pn	15 49 47.6	+3.5
PPCL				*e*S	Sn	15 51 08.0	-0.7
PPPT	Popocatepetl	7.51	315	*e*P	Pn	15 49 47.2	+2.3
PPPT				*e*S	Sn	15 51 03.5	-6.7
PPSX	Xalitzintla	7.51	316	*e*P	Pn	15 49 49.4	+4.7
PPSX				*e*S	Sn	15 51 13.3	+3.4
PBXN	Popocatepetl	7.56	315	*e*P	Pn	15 49 48.9	+3.4
PBXN				*e*S	Sn	15 51 11.3	0.0
PPM	Popocatepetl	7.58	316	*e*P	Pn	15 49 49.9	+4.1
PPM				*e*S	Sn	15 51 11.0	-0.8
MEIG	Mezcala	7.61	304	*e*P	Pn	15 49 47.8	+1.9
MEIG				*e*S	Sn	15 51 03.2	-8.8
CAIG	El Cayaco	7.73	297	*e*P	Pn	15 49 48.9	+1.4
CAIG				*e*S	Sn	15 51 04.3	-11
YAIG	Yautepec	7.75	312	*e*P	Pn	15 49 51.4	+3.5
YAIG				*e*S	Sn	15 51 08.7	-6.7
PLIG	Platanillo	7.78	308	*e*P	Pn	15 49 50.2	+2.0
PLIG				*e*S	Sn	15 51 08.3	-7.9
CXUV	Coxquihui	7.78	327	*e*P	Pn	15 49 47.2	-1.0
CXUV				*e*S	Sn	15 51 12.4	-3.8
MPVM	San Francisco	7.93	315	*e*P	Pn	15 49 53.4	+3.0
MPVM				*e*S	Sn	15 51 20.5	+0.3
TEIG	Tepich	7.94	34	Pn	Pn	15 49 50.2	-0.1
	baz=310,slow=24						
TEIG	Tepich	7.94	34		Pn	15 49 49.4	-0.9
TEIG	Tepich	7.94	34	P	Pn	15 49 50.0	-0.3
	comp=N,95µmcomp=N,106µmcomp=N,5µm,0.6s						
THVM	De Xico	7.98	315	*e*P	Pn	15 49 51.4	+0.3
THVM				*e*S	Sn	15 51 24.4	+3.0
SIUN	Universidad Ur	8.03	89		Pn	15 49 51.2	-0.4
TLVM	San Miguel Top	8.04	314	*e*P	Pn	15 49 55.4	+3.4
TLVM				*e*S	Sn	15 51 20.1	-2.8
XCVM	Xochimilco	8.04	314	*e*P	Pn	15 49 56.1	+4.1
XCVM				*e*S	Sn	15 51 19.1	-3.8
MAVM	Malinalco, Edo	8.12	311	*e*P	Pn	15 49 56.6	+3.7
MAVM				*e*S	Sn	15 51 18.0	-6.7
JUD3	Juan Diaz 3	8.13	115		Pn	15 49 54.9	+1.9
UNM	Universidad Na	8.13	314		Pn	15 49 58.2	+5.0
UNM	Universidad Na	8.13	314	P	Pn	15 49 58.2	+5.0
UNM	Universidad Na	8.13	314	*e*P	Pn	15 49 53.5	+0.3
UNM				*e*S	Sn	15 51 19.5	-5.7
PBVM	Pinon	8.14	315	*e*P	Pn	15 49 50.1	-3.0
PBVM				*e*S	Sn	15 51 26.6	+1.5
BJVM	Benito Juarez	8.16	315	*e*P	Pn	15 50 00.7	+7.1
BJVM				*e*S	Sn	15 51 32.4	+6.6
VTVM	Tizayuca	8.17	319	*e*P	Pn	15 49 56.0	+2.2
VTVM				*e*S	Sn	15 51 30.7	+4.5
AOVM	Tlapan	8.19	313	*e*P	Pn	15 49 56.9	+2.7
AOVM				*e*S	Sn	15 51 24.7	-2.2
INVM	La Marquesa	8.25	313	*e*P	Pn	15 49 59.2	+4.2
INVM				*e*S	Sn	15 51 22.0	-6.2
ARIG	Puente Sto Nin	8.38	304	*e*P	Pn	15 49 59.0	+2.5
ARIG				*e*S	Sn	15 51 23.0	-8.0
TOVM	TOLUCA	8.46	312	*e*P	Pn	15 50 01.9	+4.1
TOVM				*e*S	Sn	15 51 26.4	-6.8
JTS	Las Juntas de	8.60	112	Pn	Pn	15 50 00.5	+1.1
	comp=N,10nm,0.3s,baz=307,slow=12,SNR=24						
JTS				Sn	Sn	15 51 33.7	-2.6
	comp=N,0.3nm,0.3s,baz=127,slow=22,SNR=0.9						
JTS				LR	LR	15 52 29.1	
	comp=N,2µm,19.5s,baz=292,slow=32						
	comp=N,31nm,0.4s						
JTS	Las Juntas de	8.60	112*c*	*i*P	Pn	15 50 01.5	+2.1
JTS	Las Juntas de	8.60	112	P	Pn	15 50 01.9	+2.5
	comp=N,11µmcomp=N,4µmcomp=N,244nm,0.9s						
DEIG	Demacu	8.73	320	*e*P	Pn	15 50 04.0	+2.7
DEIG				*e*S	Sn	15 51 39.9	+0.1

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SOCE  Pocosol           8.87 111          Pn        15 50 02.9 -0.2
ZIIG  Zihuatanejo       9.00 297 eP       Pn        15 50 06.6 +1.6
ZIIG                             eS       Sn        15 51 48.1 +1.9
ACIG  Acambay           9.06 315 eP       Pn        15 50 09.0 +3.2
CTUV  Llano Grande      9.25 328 eP       Pn        15 50 10.1 +1.7
CTUV                             eS       Sn        15 51 46.0 -6.4
HDC   Heredia           9.47 112 eP       Pn        15 50 11.8 +0.4
PIEC  Cerro El Cedra    9.77 113 eP       Pn        15 50 19.6 +4.0
CVTQ  Turrialba Volc    9.78 111 eP       Pn        15 50 18.7 +2.7
CVTR  Volcan Turrial    9.78 111 eP       Pn        15 50 18.7 +2.7
VTR0  Volcan Turrial    9.78 111 eP       Pn        15 50 19.8 +3.7
CVTV  Tajo              9.80 111 eP       Pn        15 50 18.7 +2.5
MOIG  Morelia           9.82 308 eP       Pn        15 50 20.6 +4.2
MOIG                             eS       Sn        15 52 10.2 +3.5
ABRB  Las Abras (San    9.83 111 eP       Pn        15 50 19.7 +3.2
JRQG  Juriquilla Cam    9.94 316          Pn        15 50 22.3 +4.3
JRQG  Juriquilla Cam    9.94 316 eP       Pn        15 50 16.6 -1.3
JRQG                             eS       Sn        15 52 12.9 +3.4
BUS1  Rivas             9.98 113 eP       Pn        15 50 21.5 +2.7
SAJE  San Jernim       10.29 114 eP       Pn        15 50 25.0 +2.4
EDPE  Pejibaye, P      10.31 115 eP       Pn        15 50 27.3 +4.3
DRK0  Durika           10.55 114 eP       Pn        15 50 28.4 +2.0
PIRO  Carate, Puerto   10.87 118          Pn        15 50 32.0 +1.5
PIRO  Carate, Puerto   10.87 118 eP       Pn        15 50 34.7 +4.1
EDAD  Golfito          10.90 116 eP       Pn        15 50 33.8 +2.8
MMIG  Aquila           10.92 296 eP       Pn        15 50 32.8 +1.6
MMIG                             eS       Sn        15 52 42.7  +10
ALCO  Alturas Coton,   11.06 114 eP       Pn        15 50 34.9 +1.6
BRU2  Volcan           11.25 115          Pn        15 50 36.6 +0.7
BRU2  Volcan           11.25 115 eP       Pn        15 50 39.5 +3.6
JEFFS S de V. Baru     11.45 115 eP       Pn        15 50 41.4 +2.8
EZ5V                   11.65 301 eP       Pn        15 50 46.1 +4.7
MNGA  Volcan de Coli   11.66 301 eP       Pn        15 50 44.7 +3.1
INCO  Volcan de Coli   11.67 301 eP       Pn        15 50 43.9 +2.0
SOMAC Volcano de Col   11.69 301 eP       Pn        15 50 44.7 +2.5
CDAR  Ciudad de Arme   11.76 298 eP       Pn        15 50 45.7 +3.1
CEGR  Campo Tres       11.82 300 eP       Pn        15 50 45.7 +1.9
LNIG  Linares          12.69 332 eP       Pn        15 50 57.5 +2.1
LNIG                             eS       Sn        15 53 08.1 -8.5
ZAIG  Zacatecas        12.78 316 eP       Pn        15 51 00.4 +3.5
CJM   Chamela          12.88 298 eP       Pn        15 50 58.3 +0.3
SOR   Soroa            13.14  45 eP       Pn        15 50 56.2 -5.3
ANIG  Ahuacatlan       13.18 305 eP       Pn        15 51 06.2 +3.9
ANIG                             eS       Sn        15 53 34.0 +5.3
MNIG  Monterrey        13.68 331 eP       Pn        15 51 06.5 -2.5
MNIG                             eS       Sn        15 53 33.4 -7.6
HBVL  Hebbronville     14.31 339          Pn        15 51 19.4 +1.8
PAYG  Puerto Ayora     14.53 169          Pn        15 51 22.4 +1.8
MGV   Manicaragua      14.98  54 eP       Pn        15 51 23.9 -2.7
MTDJ  Mount Denham     15.57  71  Pn      Pn        15 51 32.9 -1.7
MTDJ                              IAmb    IAmb      15 51 40.1
      comp=Z,313nm,0.8s
MTDJ  Mount Denham     15.57  71 i P      P         15 51 38.5 -0.4
MTDJ  Mount Denham     15.57  71 eP       P         15 51 38.9  0.0
CAIB  Caibarien        15.58  54          Pn        15 51 32.8 -1.8
CAIB                              IAmb    IAmb      15 51 39.5
      comp=Z,217nm,0.9s
CAIB  Caibarien        15.58  54 eP       Pn        15 51 33.6 -1.0
833A  Chaparral WMA,   15.72 339          Pn        15 51 37.3 +0.9
833A                              IAmb    IAmb      15 51 45.5
      comp=Z,1µm,1.1s
MAIG  Mazatlaan        15.82 309 eP       P         15 51 40.1 -1.4
EF02  Christine        15.86 342  IAmb    IAmb      15 51 46.1
      comp=Z,281nm,0.6s
EF04  Eagle Ford 04    16.06 345  IAmb    IAmb      15 51 47.9
      comp=Z,749nm,1.6s
MCIG  Muzquiz          16.17 332 eP       Pn        15 51 43.0 +0.8
MCIG                             eS       Sn        15 54 44.8 +3.4
STH   Stony Hill       16.21  72 i P      P         15 51 45.8  0.0
PDIG  Papasquiaro      16.22 316 eP       Pn        15 51 42.3 -0.7
CCCC  Cccc             16.36  61 eP       P         15 51 48.9 +1.3
HKT   Hockley          16.39 351          Pn        15 51 45.1 +0.2
HKT                               IAmb    IAmb      15 51 52.1
      comp=Z,643nm,1.6s
HKT   Hockley          16.39 351c iP      Pn        15 51 43.9 -1.0
HKT                               pmax    pmax
      comp=Z,442nm,1.6s
MLDN  Muldoon          16.45 348  Pn      Pn        15 51 46.7 +1.0
MLDN                              IAmb    IAmb      15 51 53.7
      comp=Z,1µm,1.1s
061Z  Ochoppi          16.63  41  Pn      Pn        15 51 45.8 -2.3
061Z                              IAmb    IAmb      15 51 53.0
      comp=Z,713nm,0.8s
061Z  Ochoppi          16.63  41 eP       Pn        15 51 45.1 -3.0
HNDO  Hondo            16.79 341  IAmb    IAmb      15 51 56.3
      comp=Z,1µm,1.5s
441A  DeRidder         16.98 360  IAmb    IAmb      15 51 58.3
      comp=Z,741nm,1.0s
CHIV  Chivirico        17.09  66  IAmb    IAmb      15 51 58.7
      comp=Z,126nm,0.9s
HNVL  Huntsville, TX   17.14 353  IAmb    IAmb      15 52 00.4
      comp=Z,530nm,1.1s
APAC  Apartado, Choc   17.15 108  P       P         15 51 58.5 +2.2
      comp=Z,11µmcomp=Z,7µmcomp=Z,497nm,1.5s
YAR   Yar              17.27  65 eP       P         15 51 58.0 +0.4
HPIG                   17.70 320  P       P         15 52 04.2 +1.6
RCC   Rio Carpintero   17.74  67 eP       Pn        15 52 01.5 -0.5
060A  Indiantown       17.80  40 eP       Pn        15 52 01.1 -1.6
PINC  Pinares de May   17.81  65 eP       Pn        15 52 02.8  0.0
DBBC  Dabeiba          17.82 110  P       P         15 52 04.9 +1.0
JCT   Junction City    17.84 341  IAmb    IAmb      15 52 09.1
      comp=Z,996nm,1.2s
SJCC  San Jacinto, C   17.88 100  P       Pn        15 52 01.6 -2.2
      comp=Z,8µmcomp=Z,468nm,1.5s
H06E1 SOCORRO T-PHAS17.90 289     T       T         16 11 01.0
      SNR=20
DWPF  Disney Wildern   17.96  35          Pn        15 52 03.8 -0.9
DWPF                              IAmb    IAmb      15 52 07.0
      comp=Z,328nm,0.8s
DWPF  Disney Wildern   17.96  35 eP       Pn        15 52 04.2 -0.6
BCIG  La Boquilla      17.99 322 eP       P         15 52 06.3 +0.7
451A  Vernon           18.14  21  IAmb    IAmb      15 52 09.4
      comp=Z,839nm,1.2s
UREC  San Jos de Ur    18.18 107  P       P         15 52 07.6 -0.1
      comp=Z,8µmcomp=Z,5µmcomp=Z,153nm,1.5s
GTBY  Guantanamo Bay   18.24  68 eP       P         15 52 08.1 -0.2
GTBY  Guantanamo Bay   18.24  68  P       Pn        15 52 05.2 -3.0
      comp=Z,16µmcomp=Z,7µmcomp=Z,275nm,1.2s
BRAL  Brewton          18.25  17  IAmb    IAmb      15 52 12.0
      comp=Z,983nm,0.8s
656A  Willston         18.39  30  IAmb    IAmb      15 52 13.1
      comp=Z,457nm,0.9s
TX31  Lajitas Ar. Si   18.43 329  IAmb    IAmb      15 52 18.5
      comp=Z,1µm,1.9s
TXAR  Lajitas Array    18.43 329  P       Pn        15 52 13.6 +3.1
      comp=Z,2.2nm,0.3s,baz=151,slow=11,SNR=174
TXAR                              LR      LR        16 00 23.6
      comp=Z,4µm,19.4s,baz=131,slow=40
TXAR                              P3KPbc            16 26 47.0
      comp=Z,0.9nm,0.9s,baz=270,slow=2.5,SNR=5.3
      comp=Z,24nm,0.7s
TXAR  Lajitas Array    18.43 329  P       Pn        15 52 12.6 +2.1
TXAR  Lajitas Array    18.43 329  P       Pn        15 52 12.6 +2.1
CBOC  Ciudad Bolivar   18.48 113  P       Pn        15 52 12.6 +1.3
      comp=Z,7µmcomp=Z,5µmcomp=Z,163nm,1.2s
QMBU  Quimbuelo        18.59  67 eP       P         15 52 11.2 -1.0
VBMS  Vicksburg        18.59   7  IAmb    IAmb      15 52 15.5
      comp=Z,346nm,0.8s
WHTX  Lake Whitney,    18.66 348  IAmb    IAmb      15 52 18.2
      comp=Z,295nm,0.9s
PLMC  San Jos del P    18.68 116  P       Pn        15 52 13.9 +0.2
      comp=Z,5µmcomp=Z,4µmcomp=Z,141nm,1.7s
OZNA  Ozona            18.70 338  IAmb    IAmb      15 52 19.6
      comp=Z,940nm,1.4s
HELC  Santa Helena     18.77 112  P       Pn        15 52 18.2 +3.1
      comp=Z,10µmcomp=Z,5µmcomp=Z,197nm,1.7s
ARGC  Ariguani, Magd   18.78 100  P       Pn        15 52 14.6 -0.2
      comp=Z,9µmcomp=Z,8µmcomp=Z,223nm,1.6s
SLBS  Sierra La Lagu   18.83 304  P       Pn        15 52 18.2 +2.8
143A  Socs Landing,    18.99   4  IAmb    IAmb      15 52 21.2
      comp=Z,452nm,1.1s
YOTC  Yotoco, Valle    19.09 119  P       Pn        15 52 18.2 -0.5
      comp=Z,5µmcomp=Z,2µmcomp=Z,57nm,0.7s
MASC  Masc             19.10  68 eP       P         15 52 17.7 -0.1
352A  Blakely          19.21  21  IAmb    IAmb      15 52 26.3
      comp=Z,390nm,0.9s
JAMC  Jamundi, Valle   19.22 121  P       Pn        15 52 20.9 +0.5
      comp=Z,6µmcomp=Z,3µmcomp=Z,90nm,0.9s
250A  Grady            19.23  18  IAmb    IAmb      15 52 21.7
      comp=Z,933nm,1.4s
LPIG  La Paz           19.33 305  P       Pn        15 52 24.2 +2.9
      comp=Z,5.1nm,0.3s,baz=206,slow=1.9,SNR=15
LPIG                              LR      LR        15 58 34.7
      comp=Z,4µm,19.8s,baz=117,slow=33
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      comp=Z,21nm,0.3s
PPLP  Puerto Lpez      19.41 140  P       P         15 52 19.6 -1.7
      comp=Z,9µmcomp=Z,4µmcomp=Z,96nm,1.1s
BBAC  Balboa, Cauca    19.45 125  P       Pn        15 52 23.6 +0.6
      comp=Z,7µmcomp=Z,4µmcomp=Z,142nm,1.0s
Z38A  Mt. Pleasant     19.57 355  IAmb    IAmb      15 52 31.7
      comp=Z,455nm,1.1s
POPC  Popayan, Colom   19.60 123  P       Pn        15 52 26.9 +2.0
      comp=Z,7µmcomp=Z,3µmcomp=Z,146nm,1.7s
PTBC  PUERTO BERRIO, 19.61 109    P       Pn        15 52 24.9 +0.1
      comp=Z,4µmcomp=Z,257nm,1.0s
NORC  Norcasia         19.63 113  P       Pn        15 52 25.6 +0.5
      comp=Z,8µmcomp=Z,4µmcomp=Z,139nm,1.1s
FW06  Azle             19.64 349  IAmb    IAmb      15 52 32.5
      comp=Z,346nm,0.8s
PLPT  Palo Pinto       19.64 347  IAmb    IAmb      15 52 28.4
      comp=Z,468nm,0.8s
OTAV  Otavalo          19.68 132          Pn        15 52 27.0 +0.9
OTAV  Otavalo          19.68 132  P       Pn        15 52 27.0 +0.9
OTAV                              pmax    pmax
      comp=Z,39nm,1.1s
OTAV  Otavalo          19.68 132 eP       P         15 52 24.6 -0.1
OTAV  Otavalo          19.68 132  P       Pn        15 52 26.6 +0.5
      comp=Z,7µmcomp=Z,2µmcomp=Z,48nm,1.0s
MNHN  Monahans         19.71 335  IAmb    IAmb      15 52 30.4
      comp=Z,264nm,0.9s
ABTX  Abilene, Hawle   19.79 343  IAmb    IAmb      15 52 29.9
      comp=Z,674nm,0.8s
GCUF  Volcan Galeras   19.86 127  P       Pn        15 52 29.9 +1.6
      comp=Z,7µmcomp=Z,206nm,2.4s
WLAR  White Oak Lake   19.91 360  IAmb    IAmb      15 52 34.2
      comp=Z,271nm,0.8s
Z35A  Perchaven, San   19.93 350  IAmb    IAmb      15 52 35.1
      comp=Z,832nm,1.0s
Z47A  Carrollton       19.94  12  P       P         15 52 26.6 -0.3
Z47A                              IAmb    IAmb      15 52 29.9
      comp=Z,670nm,0.9s
LRAL  Lakeview Retre   20.03  15  P       P         15 52 27.7 -0.2
LRAL                              IAmb    IAmb      15 52 30.1
      comp=Z,326nm,0.8s
ORTC  Ortega, Tolima   20.07 117  P       Pn        15 52 31.9 +1.6
      comp=Z,6µmcomp=Z,4µmcomp=Z,257nm,1.6s
OCAC  Ocana            20.09 104  P       Pn        15 52 30.6 -0.1
      comp=Z,5µmcomp=Z,7µmcomp=Z,428nm,1.0s
CCAR  Cane Creek       20.17   3  IAmb    IAmb      15 52 34.6
      comp=Z,265nm,0.9s
BONI  La Bonita        20.22 129  P       Pn        15 52 34.3 +2.1
      comp=Z,6µmcomp=Z,3µmcomp=Z,143nm,1.5s
VHRN  Van Horn         20.27 329  IAmb    IAmb      15 52 38.6
      comp=Z,546nm,1.5s
SPBC  San Pablo de B   20.32 111  P       Pn        15 52 37.3 +4.1
      comp=Z,5µmcomp=Z,5µmcomp=Z,245nm,1.5s
SLOR  San Lorenzo -    20.32 134          Pn        15 52 34.3 +0.6
152A  Waverly Hall     20.37  21  IAmb    IAmb      15 52 33.4
      comp=Z,579nm,0.9s
ROSC  El Rosal         20.44 114  P       Pn        15 52 37.9 +2.8
      comp=Z,229nm,1.0s,baz=316,slow=8.4,SNR=47
PRAC  Prado            20.48 117  P       Pn        15 52 35.9 +0.8
      comp=Z,7µmcomp=Z,3µmcomp=Z,159nm,1.1s
LOOK  Love County      20.56 350  IAmb    IAmb      15 52 41.6
      comp=Z,731nm,1.2s
WTFS  Witchita Falls   20.59 347  IAmb    IAmb      15 52 40.6
      comp=Z,463nm,0.9s
URIC  Uribia, Colomb   20.62  93  P       P         15 52 33.5 -1.0
      comp=Z,3µmcomp=Z,76nm,1.6s
BARC  Barichara        20.77 108  P       Pn        15 52 40.6 +1.9
      comp=Z,4µmcomp=Z,526nm,1.2s
GARC  Garzon, Huila    20.77 122  P       Pn        15 52 39.0 +0.3
      comp=Z,5µmcomp=Z,2µmcomp=Z,71nm,1.4s
MIAR  Mount Ida        20.77 359  IAmb    IAmb      15 52 43.4
      comp=Z,820nm,1.4s
PAMC  Pamplona, Colo   20.96 105  P       Pn        15 52 40.8 -0.4
      comp=Z,3µmcomp=Z,361nm,1.0s
Y49A  Blount Mountai   20.96  16  IAmb    IAmb      15 52 39.7
      comp=Z,1µm,1.7s
FLOC  Florencia        20.99 123  P       Pn        15 52 41.6 +0.6
      comp=Z,5µmcomp=Z,5µmcomp=Z,346nm,1.4s
OXF   Oxford           20.99   8  IAmb    IAmb      15 52 44.1
      comp=Z,252nm,0.9s
CHIC  Chingaza         21.06 113  P       P         15 52 46.4 +6.8
RUSC  La Rusia         21.12 110  P       P         15 52 44.4 +4.1
      comp=Z,7µmcomp=Z,6µmcomp=Z,676nm,1.3s
URMC  La Uribe, Meta   21.15 118  P       P         15 52 41.5 +1.3
      comp=Z,2µmcomp=Z,139nm,1.0s
X34A  Smith Ranch, M   21.27 349  IAmb    IAmb      15 52 49.0
      comp=Z,460nm,0.8s
257A  Skidaway Islan   21.27  29  IAmb    IAmb      15 52 46.6
      comp=Z,368nm,0.7s
VILC  Villavicencio,   21.33 115  P       P         15 52 44.9 +2.7
      comp=Z,2µmcomp=Z,310nm,0.8s
X48A  Hartselle        21.37  14  IAmb    IAmb      15 52 43.5
      comp=Z,226nm,0.8s
GOGA  Godfrey          21.48  22  IAmb    IAmb      15 52 44.9
      comp=Z,433nm,0.9s
SDDR  Presa de Saban   21.52  73  P       P         15 52 43.0 -1.1
SDDR                              IAMs_20 IAMs_20   16 02 12.2
      comp=Z,11µm,18.0s
SDDR  Presa de Saban   21.52  73  P       P         15 52 43.5 -0.6
      comp=Z,9µmcomp=Z,3µmcomp=Z,175nm,0.9s
WMOK  Wichita Mounta   21.59 347  IAmb    IAmb      15 52 50.5
      comp=Z,149nm,0.7s
Y52A  Lilburn          21.68  21  IAMs_20 IAMs_20   16 02 05.5
      comp=Z,12µm,20.0s
FPAL  Fort Paine       21.82  17  IAmb    IAmb      15 52 48.4
      comp=Z,245nm,0.8s
FNO   Franklin         21.84 350  IAmb    IAmb      15 52 52.2
      comp=Z,447nm,0.7s
HBAR  Harrisburg       21.88   5  IAmb    IAmb      15 52 52.5
      comp=Z,300nm,0.7s
X51A  Calhoun          22.07  18  IAmb    IAmb      15 52 53.1
      comp=Z,212nm,0.8s
SC01  Santiago de lo   22.12  72  P       P         15 52 49.7 -0.9
FCAR  Ozark Folk Cen   22.12   2  IAmb    IAmb      15 52 54.3
      comp=Z,240nm,0.8s
MACC  Macarena, Meta   22.17 119  P       P         15 52 51.5 +0.4
      comp=Z,6µmcomp=Z,3µmcomp=Z,299nm,1.2s
GRTK  Grand Turk       22.26  66  P       P         15 52 51.2 -0.9
      comp=Z,8µmcomp=Z,869nm,1.0s
TUL3  Leonard          22.27 354  IAmb    IAmb      15 52 56.3
      comp=Z,1µm,1.6s
DEOK  Depew            22.28 353  IAmb    IAmb      15 52 55.9
      comp=Z,510nm,0.9s
GNAR  Gosnell          22.35   6  IAmb    IAmb      15 52 55.1
      comp=Z,530nm,1.4s
SWET  Sewanee          22.38  15  IAmb    IAmb      15 52 53.9
      comp=Z,383nm,0.7s
HALT  Halls            22.38   8  IAmb    IAmb      15 53 12.7
      comp=Z,245nm,1.0s
RGRS  Roger Stewart    22.44  29  IAmb    IAmb      15 52 55.5
      comp=Z,806nm,1.1s
RLO   Rose Lookout     22.45 356  IAmb    IAmb      15 52 57.6
      comp=Z,798nm,1.4s
SDV   Santo Domingo    22.48 100  LR      LR        16 02 18.1
      comp=Z,3µm,21.8s,baz=285,slow=38
SDV   Santo Domingo    22.48 100  P       P         15 52 54.0 -0.6
SDV                               IAmb    IAmb      15 53 00.1
      comp=Z,446nm,0.9s
SDV   Santo Domingo    22.48 100 eP       P         15 52 54.4 -0.2
SDV   Santo Domingo    22.48 100  P       P         15 52 52.9 -1.7
      comp=Z,5µmcomp=Z,8µmcomp=Z,585nm,1.2s
PEBM  Pemiscott Bayo   22.51   7  IAmb    IAmb      15 52 59.1
      comp=Z,1µm,1.8s
HHAR  Hobbs            22.51 358  IAmb    IAmb      15 52 57.4
      comp=Z,230nm,0.9s
W50A  Signal Mountai   22.53  17  IAmb    IAmb      15 53 12.2
      comp=Z,123nm,0.7s
NZIG  Nacozari, Sono   22.54 320 eP       P         15 52 56.8 +1.7
LNXT  Lenox            22.55   8  IAmb    IAmb      15 52 59.0
      comp=Z,394nm,0.7s
CSU   Charleston Sou   22.56  29  IAmb    IAmb      15 52 56.7
      comp=Z,421nm,0.9s
NHSC  New Hope         22.61  29  IAmb    IAmb      15 52 58.1
      comp=Z,543nm,0.9s
NHSC                              IAMs_20 IAMs_20   16 02 24.9
      comp=Z,19µm,19.0s
V48A  Smith Brothers   22.66  13  IAmb    IAmb      15 52 59.0
      comp=Z,305nm,1.1s
HODGE Hodges           22.67  24  IAmb    IAmb      15 52 58.2
      comp=Z,581nm,1.1s
U38A  Gravette         22.69 357  IAmb    IAmb      15 53 00.3
      comp=Z,313nm,0.8s
GLAT  Glass            22.74   8  IAmb    IAmb      15 52 58.4
      comp=Z,407nm,0.9s
WVT   Waverly          22.83  11  P       P         15 52 56.1 -1.8
WVT   Waverly          22.83  11  P       P         15 52 56.2 -1.8
WVT                               pmax    pmax
      comp=Z,80nm,0.7s
W52A  Murphy           22.85  20  IAmb    IAmb      15 53 00.2
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      comp=Z,278nm,0.7s
UTMT  University of    22.87   9  IAmb    IAmb      15 52 59.5
      comp=Z,340nm,1.0s
CPCT  Cooper Cave      22.99  18  IAmb    IAmb      15 53 00.2
      comp=Z,199nm,0.8s
HICK  Hickman          23.01   8  IAmb    IAmb      15 53 01.0
      comp=Z,340nm,1.0s
PH02  Texas Public H   23.06 341  IAmb    IAmb      15 53 04.3
      comp=Z,1µm,1.1s
319A  Douglas          23.08 322  IAmb    IAmb      15 53 24.2
      comp=Z,210nm,1.2s
BG3   Lake Jocassee    23.09  22  IAmb    IAmb      15 53 02.5
      comp=Z,431nm,0.8s
121A  Cookes Peak, D   23.10 327  IAmb    IAmb      15 53 20.4
      comp=Z,157nm,0.9s
CLTN  Cedars of Leba   23.11  14  IAmb    IAmb      15 53 02.8
      comp=Z,187nm,0.8s
PBMO  Poplar Bluff     23.11   5  IAmb    IAmb      15 53 02.4
      comp=Z,285nm,0.8s
MGMO  Mountain Grove   23.38   2  IAmb    IAmb      15 53 08.1
      comp=Z,232nm,0.9s
TKL   Tuckaleechee C   23.41  19  P       P         15 53 03.0 -0.9
      comp=Z,356nm,0.7s,baz=194,slow=11,SNR=206
TKL                               LR      LR        16 04 00.9
      comp=Z,12µm,18.2s,baz=210,slow=41
      comp=Z,356nm,0.7s
TKL   Tuckaleechee C   23.41  19  P       P         15 53 03.0 -0.9
Y58A  Scranton         23.51  29  IAmb    IAmb      15 53 05.7
      comp=Z,311nm,0.8s
U49A  Red Boiling Sp   23.64  15  IAmb    IAmb      15 53 06.5
      comp=Z,243nm,0.8s
CGM3  Cape Girardeau   23.71   7  IAmb    IAmb      15 53 08.5
      comp=Z,125nm,0.7s
Y22A  Socorro          23.80 330  IAmb    IAmb      15 53 21.2
      comp=Z,322nm,1.1s
X58A  Rowland          24.20  28  IAmb    IAmb      15 53 12.2
      comp=Z,433nm,1.1s
Y60A  Bolivia          24.29  31  IAMs_20 IAMs_20   16 03 16.0
      comp=Z,17µm,20.0s
CCM   Cathedral Cave   24.32   3  P       P         15 53 10.5 -2.0
CCM                               IAmb    IAmb      15 53 14.2
      comp=Z,177nm,0.8s
CCM   Cathedral Cave   24.32   3  P       P         15 53 10.5 -2.0
CCM                               pmax    pmax
      comp=Z,177nm,0.9s
BAHB  Baha de los      24.35 312 eP       P         15 53 12.1 -0.8
ANMO  Albuquerque      24.39 333  LR      LR        16 04 16.7
      comp=Z,4µm,18.1s,baz=145,slow=40
ANMO  Albuquerque      24.39 333  P       P         15 53 14.9 +1.4
ANMO  Albuquerque      24.39 333ceP       P         15 53 13.3 -0.2
ANMO                              pmax    pmax
      comp=Z,41nm,0.8s
ANMO                              MLR     MLR
      comp=Z,4µm,17.0s
TASM  ASL Pad, Albuq   24.39 332  IAmb    IAmb      15 53 22.4
      comp=Z,74nm,1.1s
TASM  ASL Pad, Albuq   24.39 332  IAmb    IAmb      15 53 22.4
      comp=Z,74nm,1.1s
R40A  Maddies Statio   24.51   1  IAmb    IAmb      15 53 18.2
      comp=Z,132nm,0.8s
TUC   Tucson           24.64 322  P       P         15 53 17.2 +1.6
TUC   Tucson           24.64 322  IAMs_20 IAMs_20   16 03 32.9
      comp=Z,13µm,18.0s
TUC   Tucson           24.64 322  P       P         15 53 17.2 +1.6
TUC                               pmax    pmax
      comp=Z,87nm,1.2s
TUC                               MLR     MLR
      comp=Z,13µm,18.0s
TUC   Tucson           24.64 322 eP       P         15 53 16.5 +0.9
SLM   Saint Louis      24.97   5  IAmb    IAmb      15 53 21.3
      comp=Z,277nm,0.8s
W59A  Clinton          25.12  29  IAmb    IAmb      15 53 20.1
      comp=Z,92nm,0.8s
WCI   Wyandotte Cave   25.17  13  P       P         15 53 18.4 -1.7
WCI   Wyandotte Cave   25.17  13  P       P         15 53 18.5 -1.7
WCI                               pmax    pmax
      comp=Z,821nm,0.8s
WCI                               MLR     MLR
      comp=Z,6µm,22.0s
ATAH  Atahualpa        25.28 144  LR      LR        16 00 28.9
      comp=Z,3µm,21.5s,baz=303,slow=30
S51A  Beattyville      25.30  18  IAmb    IAmb      15 53 23.1
      comp=Z,257nm,0.8s
Q44A  Meyer Farm, Va   25.37   7  IAmb    IAmb      15 53 24.4
      comp=Z,232nm,0.8s
R49A  Shelbyville      25.48  14  IAmb    IAmb      15 53 24.1
      comp=Z,237nm,0.8s
R50A  Paris            25.69  16  IAmb    IAmb      15 53 26.8
      comp=Z,294nm,0.9s
P40A  Paris            25.76   2  IAmb    IAmb      15 53 26.4
      comp=Z,198nm,0.8s
OBIP  Obispado Ponce   25.78  77  P       P         15 53 24.3 -1.6
BLA   Blacksburg       26.00  23  IAmb    IAmb      15 53 31.3
      comp=Z,211nm,0.8s
P43A  Skaggs, Pawnee   26.04   6  IAmb    IAmb      15 53 30.6
      comp=Z,127nm,0.7s
W18A  Petrified Fore   26.12 328  IAmb    IAmb      15 53 50.6
      comp=Z,183nm,1.7s
S54A  Dingess, Beckl   26.18  21  IAmb    IAmb      15 53 30.1
      comp=Z,175nm,0.8s
SJG   San Juan         26.22  77  LR      LR        16 03 41.2
      comp=Z,6µm,21.9s,baz=260,slow=36
SJG   San Juan         26.22  77  P       P         15 53 27.4 -2.6
SJG   San Juan         26.22  77  P       P         15 53 27.4 -2.6
SJG                               pmax    pmax
      comp=Z,57nm,0.9s
SJG                               MLR     MLR
      comp=Z,6µm,20.0s
T57A  Hurt             26.28  26  IAmb    IAmb      15 53 31.3
      comp=Z,284nm,0.9s
P46A  Rosedale         26.34  10  IAMs_20 IAMs_20   16 05 43.8
      comp=Z,8µm,22.0s
SDCO  Great Sand Dun   26.41 337  IAmb    IAmb      15 53 39.0
      comp=Z,285nm,1.3s
V61A  Roper            26.52  31  IAmb    IAmb      15 53 36.8
      comp=Z,221nm,0.8s
P48A  Milroy           26.54  13  IAmb    IAmb      15 53 33.1
      comp=Z,249nm,0.8s
Q51A  Peebles          26.65  17  IAMs_20 IAMs_20   16 05 16.9
      comp=Z,7µm,20.0s
Q52A  Bidwell          26.92  19  IAmb    IAmb      15 53 39.6
      comp=Z,288nm,0.9s
Q52A                              IAMs_20 IAMs_20   16 05 49.7
      comp=Z,13µm,19.0s
HDIL  Hopedale         26.97   6  IAmb    IAmb      15 53 39.9
      comp=Z,232nm,1.1s
T59A  Double "B" Far   27.00  28  IAmb    IAmb      15 53 37.5
      comp=Z,338nm,0.9s
SFIN  Lafayette        27.10  10  IAmb    IAmb      15 53 39.0
      comp=Z,176nm,0.7s
SFIN                              IAMs_20 IAMs_20   16 06 07.9
      comp=Z,7µm,22.0s
P51A  Williamsport     27.16  17  IAmb    IAmb      15 53 39.7
      comp=Z,220nm,0.8s
O48B  Farmland         27.36  13  IAmb    IAmb      15 53 41.8
      comp=Z,242nm,0.8s
Q54A  Coxs Mills       27.41  21  IAmb    IAmb      15 53 41.4
      comp=Z,203nm,0.9s
O49A  Covington        27.48  15  IAmb    IAmb      15 53 42.3
      comp=Z,241nm,0.9s
O49A                              IAMs_20 IAMs_20   16 06 32.1
      comp=Z,6µm,19.0s
P52A  Corning          27.57  18  IAmb    IAmb      15 53 42.4
      comp=Z,115nm,0.8s
P53A  Whipple          27.68  20  IAmb    IAmb      15 53 43.8
      comp=Z,178nm,0.9s
R58B  Mineral          27.68  26  IAmb    IAmb      15 53 43.6
      comp=Z,242nm,0.9s
N47A  Urbana           27.84  12  IAmb    IAmb      15 53 45.1
      comp=Z,179nm,0.8s
ACSO  Alum Creek Sta   27.88  17  IAmb    IAmb      15 53 46.2
      comp=Z,118nm,0.8s
ACSO                              IAMs_20 IAMs_20   16 06 24.8
      comp=Z,8µm,19.0s
BLYC  Blythe           27.92 319  P       P         15 53 47.4 +2.2
M44A  Midewin, Midew   27.94   8  IAmb    IAmb      15 53 46.9
      comp=Z,190nm,1.3s
Q56A  Snyder Ridge,    28.06  23  IAmb    IAmb      15 53 47.6
      comp=Z,106nm,0.9s
CBN   Corbin Frederi   28.10  27  IAMs_20 IAMs_20   16 05 41.6
      comp=Z,12µm,19.0s
O52A  Adamsville       28.11  18  IAmb    IAmb      15 53 47.4
      comp=Z,223nm,0.9s
PV13  Radium Mtn., P   28.12 333  IAmb    IAmb      15 53 56.7
      comp=Z,161nm,1.1s
SCIA  State Center     28.12 360  IAmb    IAmb      15 53 50.0
      comp=Z,122nm,0.8s
PV15  Paradox Valley   28.12 334  IAmb    IAmb      15 53 56.2
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	comp=Z,144nm,1.1s						
PV05	**Paradox Valley**	**28.18**	**332**	IAmb	IAmb	15 53 57.0	
	comp=Z,144nm,1.1s						
PV03	**Paradox Valley**	**28.21**	**333**	IAmb	IAmb	15 53 57.4	
	comp=Z,209nm,1.2s						
PV11	**David Mesa, Pa**	**28.26**	**333**	IAmb	IAmb	15 53 57.9	
	comp=Z,295nm,1.2s						
PV07	**Paradox Valley**	**28.27**	**334**	IAmb	IAmb	15 53 57.4	
	comp=Z,230nm,1.1s						
PV17	**East Wray Mesa**	**28.28**	**333**	IAmb	IAmb	15 53 57.9	
	comp=Z,155nm,1.1s						
PV16	**Nyswonger Mesa**	**28.29**	**333**	IAmb	IAmb	15 53 58.1	
	comp=Z,219nm,1.2s						
PV19	**Morning Glory**	**28.31**	**333**	IAmb	IAmb	15 53 58.2	
	comp=Z,223nm,1.1s						
L40A	**Anamosa**	**28.32**	**3**	IAmb	IAmb	15 53 50.3	
	comp=Z,98nm,0.8s						
PV20	**West Nyswonger**	**28.33**	**333**	IAmb	IAmb	15 53 58.3	
	comp=Z,337nm,1.2s						
PV04	**Paradox Valley**	**28.35**	**333**	IAmb	IAmb	15 53 57.9	
	comp=Z,342nm,1.3s						
MCWV	**Mont Chateau**	**28.36**	**22**	IAmb	IAmb	15 53 49.5	
	comp=Z,490nm,1.9s						
L42A	**Oliver, Polo**	**28.36**	**5**	IAmb	IAmb	15 53 51.2	
	comp=Z,153nm,0.9s						
HQIL	**Hanson Quary C**	**28.37**	**8**	IAmb	IAmb	15 53 51.7	
	comp=Z,214nm,1.1s						
PV14	**Lion Creek, Pa**	**28.38**	**333**	IAmb	IAmb	15 53 58.8	
	comp=Z,174nm,1.2s						
PV10	**Paradox Valley**	**28.39**	**333**	IAmb	IAmb	15 53 57.7	
	comp=Z,245nm,1.1s						
PV22	**Blue Mesa, Par**	**28.41**	**333**	IAmb	IAmb	15 53 58.4	
	comp=Z,226nm,1.2s						
O53A	**New Philadelph**	**28.42**	**19**	IAmb	IAmb	15 53 50.1	
	comp=Z,116nm,0.9s						
BC3	**Big Chuckawall**	**28.46**	**318**	P	**P**	**15 53 52.3**	**+2.3**
PV21	**Cone Mtn., Par**	**28.52**	**333**	IAmb	IAmb	15 53 59.3	
	comp=Z,112nm,1.1s						
IRM	**Iron Mountain**	**28.58**	**319**	IAMs_20	IAMs_20	16 05 14.3	
	comp=Z,6µm,20.0s						
O54A	**Avella**	**28.64**	**21**	IAmb	IAmb	15 53 51.8	
	comp=Z,168nm,0.7s						
NEE2	**Needles Airpor**	**28.65**	**321**	IAMs_20	IAMs_20	16 06 21.0	
	comp=Z,11µm,19.0s						
N51A	**Ashland**	**28.69**	**17**	IAmb	IAmb	15 54 32.2	
	comp=Z,75nm,0.8s						
N51A				IAMs_20	IAMs_20	16 06 38.7	
	comp=Z,10µm,20.0s						
L44A	**Lake County Fo**	**28.73**	**8**	IAmb	IAmb	15 53 54.2	
	comp=Z,330nm,1.5s						
L46A	**Eue Claire**	**28.82**	**10**	IAmb	IAmb	15 53 53.8	
	comp=Z,158nm,1.1s						
L46A				IAMs_20	IAMs_20	16 07 21.0	
	comp=Z,8µm,22.0s						
SABA	**Saba**	**28.94**	**78**	IAMs_20	IAMs_20	16 06 19.0	
	comp=Z,7µm,18.0s						
M50A	**Fremont**	**28.95**	**16**	IAMs_20	IAMs_20	16 07 10.0	
	comp=Z,7µm,19.0s						
DANC	**Danby, Needles**	**29.04**	**320**	IAMs_20	IAMs_20	16 06 39.4	
	comp=Z,9µm,19.0s						
N53A	**Lisbon**	**29.05**	**19**	IAmb	IAmb	15 53 55.6	
	comp=Z,155nm,0.7s						
PFO	**Pinyon Flats O**	**29.09**	**317**	LR	LR	16 05 22.5	
	comp=Z,2µm,18.7s,baz=136,slow=36						
PFO	**Pinyon Flats O**	**29.09**	**317**	IAMs_20	IAMs_20	16 06 35.1	
	comp=Z,5µm,18.0s						
PFO	**Pinyon Flats O**	**29.09**	**317**	P	**P**	**15 53 57.0**	**+1.3**
PFO				pmax	pmax		
	comp=Z,55nm,1.4s						
PFO				MLR	MLR		
	comp=Z,7µm,15.0s						
SEUS	**St. Eustatius**	**29.18**	**79**	IAMs_20	IAMs_20	16 04 59.4	
	comp=Z,7µm,20.0s						
JFWS	**Jewell Farm**	**29.22**	**4**	IAmb	IAmb	15 54 01.0	
	comp=Z,63nm,0.6s						
SDMD	**Soldier's Deli**	**29.33**	**26**	IAmb	IAmb	15 53 58.7	
	comp=Z,125nm,0.8s						
PAMR	**Moraine State**	**29.41**	**20**	IAmb	IAmb	15 53 58.9	
	comp=Z,180nm,0.8s						
K30B	**Basset**	**29.44**	**350**	IAmb	IAmb	15 54 41.0	
	comp=Z,199nm,1.0s						
HAYD	**Hayden**	**29.49**	**338**	IAmb	IAmb	15 54 06.9	
	comp=Z,101nm,1.1s						
O20A	**White River Ci**	**29.54**	**336**	IAmb	IAmb	15 54 07.4	
	comp=Z,215nm,1.4s						
M52A	**Chesterland**	**29.56**	**18**	IAmb	IAmb	15 54 00.4	
	comp=Z,129nm,0.7s						
M52A				IAMs_20	IAMs_20	16 07 03.7	
	comp=Z,12µm,20.0s						
AAM	**Ann Arbor**	**29.65**	**14**	IAmb	IAmb	15 54 01.5	
	comp=Z,134nm,1.0s						
SSPA	**Standing Stone**	**29.94**	**23**	P	**P**	**15 54 01.4**	**-1.6**
SSPA				IAmb	IAmb	15 54 04.3	
	comp=Z,262nm,1.4s						
MVL	**Millersville**	**30.03**	**26**	IAmb	IAmb	15 54 04.7	
	comp=Z,210nm,0.9s						
PAGS	**Pennsylvania G**	**30.07**	**25**	IAmb	IAmb	15 54 04.6	
	comp=Z,204nm,1.0s						
PAOC	**Oil Creek Stat**	**30.07**	**20**	IAmb	IAmb	15 54 04.5	
	comp=Z,86nm,0.9s						
ECSD	**EROS Data Cent**	**30.10**	**355**	IAmb	IAmb	15 54 06.7	
	comp=Z,445nm,1.7s						
NNA	**Nana**	**30.14**	**147**	LR	LR	16 04 15.6	
	comp=Z,2µm,18.1s,baz=330,slow=32						
NNA	**Nana**	**30.14**	**147**	P	**P**	**15 54 06.3**	**+1.3**
NNA				IAmb	IAmb	15 54 07.8	
	comp=Z,110nm,1.4s						
NNA	**Nana**	**30.14**	**147**	*ce*P	**P**	**15 54 07.3**	**+2.2**
NNA				pmax	pmax		
	comp=Z,119nm,1.3s						
J47A	**Sunmer**	**30.29**	**12**	IAMs_20	IAMs_20	16 08 21.5	
	comp=Z,5µm,18.0s						
GDHS	**Morne Mazeau,**	**30.30**	**81**	IAMs_20	IAMs_20	16 05 30.3	
	comp=Z,6µm,18.0s						
ANWB	**Willy Bob**	**30.33**	**78**	IAMs_20	IAMs_20	16 05 26.7	
	comp=Z,5µm,21.0s						
K50A	**Casco**	**30.35**	**15**	IAmb	IAmb	15 54 07.4	
	comp=Z,93nm,0.9s						
K50A				IAMs_20	IAMs_20	16 08 28.0	
	comp=Z,8µm,18.0s						
SHOC	**Shoshone, Teco**	**30.41**	**321**	IAMs_20	IAMs_20	16 07 33.0	
	comp=Z,9µm,18.0s						
RDMU	**Red Mountain**	**30.45**	**335**	IAmb	IAmb	15 54 15.1	
	comp=Z,113nm,1.3s						
CBE	**Ff, Capester**	**30.45**	**82**	IAMs_20	IAMs_20	16 05 25.2	
	comp=Z,6µm,20.0s						
ERPA	**Erie**	**30.50**	**19**	IAmb	IAmb	15 54 08.2	
	comp=Z,87nm,0.8s						
ABD	**La Joyeuse, An**	**30.57**	**81**	IAMs_20	IAMs_20	16 05 30.4	
	comp=Z,5µm,21.0s						
N58A	**Sunbury**	**30.58**	**25**	IAmb	IAmb	15 54 09.1	
	comp=Z,148nm,1.1s						
MAGL	**Barre de l'ile**	**30.77**	**82**	IAMs_20	IAMs_20	16 05 32.6	
	comp=Z,6µm,20.0s						
I45A	**Fountain**	**30.80**	**10**	IAMs_20	IAMs_20	16 08 41.5	
	comp=Z,8µm,21.0s						
CCCA	**Chr Cany lake**	**30.86**	**319**	IAmb	IAmb	15 54 19.9	
	comp=Z,119nm,1.6s						
GDSD	**La Dsirade Is**	**30.98**	**81**	IAMs_20	IAMs_20	16 05 20.1	
	comp=Z,5µm,22.0s						
TPNV	**Topopah Spring**	**31.09**	**322**	IAMs_20	IAMs_20	16 07 31.8	
	comp=Z,9µm,19.0s						
FURC	**Furnace Creek,**	**31.14**	**321**	IAmb	IAmb	15 54 23.4	
	comp=Z,119nm,1.8s						
FURC				IAMs_20	IAMs_20	16 08 07.3	
	comp=Z,8µm,18.0s						
MPOM	**Morne Pois Mar**	**31.21**	**85**	IAMs_20	IAMs_20	16 07 44.4	
	comp=Z,4µm,19.0s						
S11A	**Rachel**	**31.27**	**324**	IAmb	IAmb	15 54 33.6	
	comp=Z,81nm,1.2s						
L56A	**Greenwood**	**31.36**	**22**	IAmb	IAmb	15 54 15.9	
	comp=Z,93nm,0.9s						
I49A	**Point Hope**	**31.39**	**14**	IAmb	IAmb	15 54 16.2	
	comp=Z,165nm,1.0s						
I49A				IAMs_20	IAMs_20	16 08 45.8	
	comp=Z,6µm,19.0s						
KSPA	**Keystone Colle**	**31.57**	**25**	IAmb	IAmb	15 54 18.4	
	comp=Z,106nm,0.9s						
DUG	**Dugway, Tooele**	**31.60**	**330**	IAMs_20	IAMs_20	16 08 31.1	
	comp=Z,5µm,18.0s						
TCUT	**Toone Canyon**	**31.68**	**333**	IAmb	IAmb	15 54 27.6	
	comp=Z,338nm,1.6s						
CPNY	**Central Park**	**31.74**	**28**	IAmb	IAmb	15 54 19.1	
	comp=Z,89nm,0.9s						
MMNY	**Mt. Morris Dam**	**31.76**	**21**	IAmb	IAmb	15 54 19.3	
	comp=Z,156nm,1.0s						
RSSD	**Black Hills**	**31.76**	**345**	P	**P**	**15 54 20.6**	**+1.3**
RSSD				IAmb	IAmb	15 54 23.3	
	comp=Z,63nm,0.7s						
RSSD	**Black Hills**	**31.76**	**345**	P	**P**	**15 54 20.6**	**+1.3**
RSSD				pmax	pmax		
	comp=Z,63nm,0.7s						
RSSD				MLR	MLR		
	comp=Z,500nm,19.0s						
GLMI	**Grayling**	**31.85**	**11**	IAMs_20	IAMs_20	16 09 12.1	
	comp=Z,5µm,20.0s						
BBSR	**BB Station**	**31.88**	**50**	P	**P**	**15 54 18.2**	**-1.9**
BBSR				IAmb	IAmb	15 54 20.1	
	comp=Z,154nm,0.8s						
CWC	**Cottonwood Cre**	**31.88**	**320**	IAMs_20	IAMs_20	16 08 57.0	
	comp=Z,6µm,18.0s						
PAL	**Palisades**	**31.93**	**28**	IAmb	IAmb	15 54 21.4	
	comp=Z,188nm,0.9s						
MEDO	**Medina**	**31.95**	**20**	IAmb	IAmb	15 54 20.9	
	comp=Z,133nm,0.9s						
N62A	**Caumsett State**	**32.08**	**29**	IAmb	IAmb	15 54 22.0	
	comp=Z,167nm,1.0s						
HWUT	**Hardware Ranch**	**32.15**	**333**	IAmb	IAmb	15 54 31.3	
	comp=Z,81nm,1.0s						
VES	**Vestal, Richgr**	**32.16**	**318**	IAmb	IAmb	15 54 32.3	
	comp=Z,306nm,1.6s						
J55A	**Hilton**	**32.26**	**21**	IAmb	IAmb	15 54 23.5	
	comp=Z,95nm,1.1s						
PDAR	**Pinedale Array**	**32.30**	**337**	P	**P**	**15 54 24.0**	**-0.1**
	comp=Z,10nm,0.8s,baz=133,slow=9.3,SNR=58						
PDAR				PcP	**PcP**	**15 57 11.8**	**-0.3**
	comp=Z,3.5nm,0.7s,baz=160,slow=1.1,SNR=6.7						
	comp=Z,10nm,0.8s						
PDAR	**Pinedale Array**	**32.30**	**337**	P	**P**	**15 54 25.3**	**+1.3**
WSPT	**Westport, CT**	**32.33**	**28**	IAmb	IAmb	15 54 24.2	
	comp=Z,163nm,1.1s						
TIN	**Tinemaha, Big**	**32.36**	**320**	IAmb	IAmb	15 54 33.4	
	comp=Z,239nm,1.7s						
TIN				IAMs_20	IAMs_20	16 08 27.6	
	comp=Z,4µm,19.0s						
HVU	**Hansel Valley**	**32.83**	**332**	IAmb	IAmb	15 54 36.0	
	comp=Z,71nm,1.1s						
E38A	**The Farm, Brul**	**32.84**	**2**	IAmb	IAmb	15 54 32.3	
	comp=Z,42nm,0.6s						
TEFE	**Tefe**	**32.95**	**119**	*e*P	**P**	**15 54 30.6**	**+0.7**
J57A	**Williamstown**	**33.05**	**23**	IAmb	IAmb	15 54 30.9	
	comp=Z,278nm,1.4s						
PECO	**Prince Edward**	**33.13**	**21**	IAmb	IAmb	15 54 31.0	
	comp=Z,114nm,0.9s						
SADO	**Sadowa**	**33.16**	**18**	P	**P**	**15 54 30.5**	**-0.8**
	comp=Z,72nm,0.9s,baz=228,slow=8.0,SNR=22						
SADO				LR	LR	16 09 43.6	
	comp=Z,13µm,18.7s,baz=215,slow=39						
	comp=Z,72nm,0.9s						
SADO	**Sadowa**	**33.16**	**18**	IAmb	IAmb	15 54 31.2	
	comp=Z,92nm,1.0s						
PKD	**Bear Valley Ra**	**33.18**	**317**	IAmb	IAmb	15 54 48.3	
	comp=Z,86nm,1.2s						
ELK	**Elko**	**33.22**	**328**	LR	LR	16 09 47.2	
	comp=Z,3µm,18.3s,baz=144,slow=39						
ELK	**Elko**	**33.22**	**328**	IAMs_20	IAMs_20	16 09 28.2	
	comp=Z,4µm,18.0s						
NVAR	**Mina Array Bea**	**33.29**	**322**	P	**P**	**15 54 35.9**	**+3.1**
	comp=Z,28nm,0.9s,baz=136,slow=8.4,SNR=65						
NVAR				PcP	**PcP**	**15 57 15.1**	**+0.1**
	comp=Z,6.7nm,0.8s,baz=130,slow=2.7,SNR=5.0						
NVAR				LR	LR	16 09 10.1	
	comp=Z,6µm,18.2s,baz=132,slow=38						
	comp=Z,28nm,0.9s						
NVAR	**Mina Array Bea**	**33.29**	**322**	P	**P**	**15 54 35.0**	**+2.2**
NVAR					**PcP**	**15 57 16.9**	**+1.9**
SNOW	**Snow King Moun**	**33.35**	**336**	IAMs_20	IAMs_20	16 10 13.8	
	comp=Z,4µm,18.0s						
E46A	**Sault Ste Mari**	**33.40**	**11**	IAMs_20	IAMs_20	16 10 09.0	
	comp=Z,5µm,18.0s						
DELO	**Deloro Mine**	**33.43**	**20**	IAmb	IAmb	15 54 33.8	
	comp=Z,178nm,0.8s						
TRY	**Troy**	**33.43**	**26**	IAMs_20	IAMs_20	16 08 57.6	
	comp=Z,10µm,20.0s						
PMPB	**Monarch Peak**	**33.51**	**317**	IAmb	IAmb	15 54 43.7	
	comp=Z,432nm,2.0s						
MOOW	**Moose Ponds**	**33.59**	**337**	IAmb	IAmb	15 54 42.3	
	comp=Z,120nm,1.1s						
J59A	**Piesco**	**33.68**	**25**	IAmb	IAmb	15 54 36.8	
	comp=Z,245nm,1.4s						
BUKO	**Buck Lake**	**33.70**	**17**	IAmb	IAmb	15 54 36.5	
	comp=Z,102nm,0.9s						
M65A	**Busby, Falmout**	**33.92**	**31**	P	**P**	**15 54 38.0**	**0.0**
	baz=221						
BOAV	**Boa Vista**	**34.04**	**106**	P	**P**	**15 54 39.1**	**-0.2**
BOAV				IAmb	IAmb	15 54 42.6	
	comp=Z,65nm,1.0s						
BOAV	**Boa Vista**	**34.04**	**106**	*e*P	**P**	**15 54 40.4**	**+1.1**
BOAV	**Boa Vista**	**34.04**	**106**	P	**P**	**15 54 40.7**	**+1.4**
	comp=Z,2µmcomp=Z,68nm,1.1s						
YPP	**Pitchstone Pla**	**34.05**	**337**	IAmb	IAmb	15 55 00.4	
	comp=Z,98nm,1.4s						
H17A	**Grant Village**	**34.07**	**337**	IAmb	IAmb	15 54 49.0	
	comp=Z,120nm,1.1s						
LKWY	**Lake**	**34.15**	**338**	IAmb	IAmb	15 54 48.2	
	comp=Z,206nm,1.4s						
LKWY				IAMs_20	IAMs_20	16 10 14.9	
	comp=Z,5µm,22.0s						
HRV	**Adam Dziewonsk**	**34.20**	**29**	P	**P**	**15 54 39.3**	**-1.1**
HRV				IAmb	IAmb	15 54 40.7	
	comp=Z,109nm,1.1s						
HRV	**Adam Dziewonsk**	**34.20**	**29**	P	**P**	**15 54 39.8**	**-0.5**
NCB	**Newcomb**	**34.21**	**24**	IAmb	IAmb	15 54 40.5	
	comp=Z,302nm,1.6s						
WES	**Weston**	**34.22**	**29**	IAmb	IAmb	15 54 41.7	
	comp=Z,150nm,1.3s						
YMP	**Mirror Lake Pl**	**34.22**	**338**	IAmb	IAmb	15 55 07.2	
	comp=Z,207nm,1.2s						
YFT	**Old Faithful**	**34.22**	**337**	IAmb	IAmb	15 54 49.2	
	comp=Z,230nm,1.3s						
RLMT	**Red Lodge**	**34.23**	**339**	IAmb	IAmb	15 54 47.4	
	comp=Z,422nm,1.9s						
SAO	**San Andreas Ge**	**34.25**	**317**	IAMs_20	IAMs_20	16 10 46.9	
	comp=Z,4µm,20.0s						
BCX	**Boston College**	**34.25**	**29**	IAmb	IAmb	15 54 42.0	
	comp=Z,225nm,1.5s						
YNR	**Norris Junctio**	**34.39**	**338**	IAmb	IAmb	15 54 49.6	
	comp=Z,63nm,0.9s						
YNE	**Yellowstone No**	**34.39**	**338**	IAmb	IAmb	15 54 50.9	
	comp=Z,211nm,1.1s						
J61A	**Chester**	**34.41**	**27**	IAmb	IAmb	15 54 43.5	
	comp=Z,72nm,1.0s						
AGMN	**Agassiz Nation**	**34.59**	**357**	IAmb	IAmb	15 54 44.9	
	comp=Z,98nm,0.9s						
AGMN				IAMs_20	IAMs_20	16 11 18.0	
	comp=Z,4µm,22.0s						
LONY	**Lake Ozonia**	**34.61**	**23**	IAmb	IAmb	15 54 44.1	
	comp=Z,204nm,1.1s						
WBO	**Williamsburg**	**34.67**	**22**	IAmb	IAmb	15 54 44.5	
	comp=Z,134nm,1.1s						
YHL	**Hebgen Lake**	**34.69**	**337**	IAmb	IAmb	15 54 53.6	
	comp=Z,261nm,1.4s						
HLID	**Hailey**	**34.98**	**332**	IAmb	IAmb	15 54 55.1	
	comp=Z,138nm,1.8s						
HLID				IAMs_20	IAMs_20	16 11 48.3	
	comp=Z,4µm,18.0s						
I62A	**Tamworth**	**35.37**	**28**	IAmb	IAmb	15 54 51.5	
	comp=Z,84nm,0.9s						
LBNH	**Lisbon**	**35.39**	**27**	IAmb	IAmb	15 54 51.9	
	comp=Z,135nm,1.4s						
BOZ	**Bozeman (W)**	**35.49**	**337**	IAmb	IAmb	15 55 00.2	
	comp=Z,74nm,1.0s						
MFID	**Camas Ranch**	**35.51**	**331**	IAMs_20	IAMs_20	16 10 27.7	
	comp=Z,4µm,19.0s						
MNTQ	**Montreal, Queb**	**35.72**	**24**	IAmb	IAmb	15 54 53.7	
	comp=Z,197nm,1.1s						
FARB	**Farallon Islan**	**35.80**	**317**	IAMs_20	IAMs_20	16 11 40.9	
	comp=Z,4µm,18.0s						
I63A	**Otisfield**	**35.84**	**28**	IAmb	IAmb	15 54 55.7	
	comp=Z,134nm,1.1s						
EPLO	**Experimental L**	**35.89**	**359**	IAmb	IAmb	15 54 55.7	
	comp=Z,99nm,0.8s						
DGMT	**Dagmar**	**35.89**	**347**	IAmb	IAmb	15 54 58.4	
	comp=Z,183nm,0.8s						
MCCM	**Marconi Confer**	**35.97**	**318**	IAMs_20	IAMs_20	16 09 04.8	
	comp=Z,4µm,18.0s						
TRQ	**Mont Tremblant**	**35.98**	**22**	IAmb	IAmb	15 54 56.9	
	comp=Z,197nm,1.3s						
H62A	**Milan**	**35.99**	**27**	IAmb	IAmb	15 54 56.1	
	comp=Z,166nm,1.8s						
WVOR	**Wild Horse Val**	**36.20**	**327**	IAmb	IAmb	15 55 06.7	
	comp=Z,143nm,1.6s						
WVOR				IAMs_20	IAMs_20	16 11 14.3	
	comp=Z,4µm,19.0s						
MACA	**Manacapuru-AM**	**36.20**	**115**	P	**P**	**15 54 57.9**	**0.0**
MACA	**Manacapuru-AM**	**36.20**	**115**	*e*P	**P**	**15 54 58.5**	**+0.6**
ULM	**Lac du Bonnet**	**36.53**	**357**	P	**P**	**15 54 59.4**	**-1.0**
	comp=Z,62nm,0.8s,baz=170,slow=9.6,SNR=60						
ULM				PcP	**PcP**	**15 57 24.4**	**+0.6**
	comp=Z,22nm,0.9s,baz=206,slow=3.1,SNR=4.7						
ULM				LR	LR	16 12 58.8	
	comp=Z,4µm,20.1s,baz=166,slow=41						
	comp=Z,62nm,0.8s						
ULM	**Lac du Bonnet**	**36.53**	**357**	IAmb	IAmb	15 55 01.0	
	comp=Z,108nm,1.0s						
O03E	**Paynes Creek**	**36.57**	**322**	IAMs_20	IAMs_20	16 11 35.8	
	comp=Z,5µm,18.0s						
HOPS	**Hopland Field**	**36.58**	**319**	IAMs_20	IAMs_20	16 09 41.3	
	comp=Z,4µm,20.0s						
HATC	**Hat Creek Radi**	**36.69**	**323**	IAMs_20	IAMs_20	16 11 43.9	
	comp=Z,7µm,18.0s						
G62A	**West of Eustis**	**36.77**	**27**	IAmb	IAmb	15 55 03.8	
	comp=Z,98nm,0.9s						
EGMT	**Eagleton**	**36.95**	**341**	IAmb	IAmb	15 55 09.6	
	comp=Z,314nm,1.3s						
O02D	**Mt. Diablo Mer**	**37.09**	**321**	IAMs_20	IAMs_20	16 10 10.8	
	comp=Z,3µm,18.0s						
BMO	**Blue Mountains**	**37.30**	**331**	IAMs_20	IAMs_20	16 12 04.8	
	comp=Z,4µm,19.0s						
KCPM	**Cahto Peak**	**37.30**	**320**	IAMs_20	IAMs_20	16 09 56.4	
	comp=Z,4µm,18.0s						
PKME	**Peaks-Kenny Pk**	**37.37**	**28**	IAmb	IAmb	15 55 08.0	
	comp=Z,362nm,2.0s						
MSO	**Missoula**	**37.40**	**336**	IAmb	IAmb	15 55 15.7	
	comp=Z,167nm,1.3s						
KHBM	**Hayfork Bally**	**37.65**	**321**	IAMs_20	IAMs_20	16 10 20.4	
	comp=Z,3µm,19.0s						
KMRM	**Mail Ridge**	**37.69**	**320**	IAmb	IAmb	15 55 18.9	
	comp=Z,193nm,1.8s						
KMRM				IAMs_20	IAMs_20	16 10 42.4	
	comp=Z,5µm,20.0s						
EMMW	**East Machias**	**37.81**	**30**	IAmb	IAmb	15 55 12.6	
	comp=Z,211nm,1.6s						
M02C	**Callahan**	**37.87**	**322**	IAMs_20	IAMs_20	16 11 22.2	
	comp=Z,4µm,19.0s						
YBH	**Yreka Blue Hor**	**38.00**	**323**	LR	LR	16 12 55.3	
	comp=Z,305nm,18.2s,baz=121,slow=39						
KMPM	**Mount Pierce**	**38.06**	**320**	IAMs_20	IAMs_20	16 10 11.4	
	comp=Z,4µm,19.0s						
KHMM	**Horse Mountain**	**38.09**	**321**	IAMs_20	IAMs_20	16 12 33.1	
	comp=Z,3µm,19.0s						
F10A	**Beach Ranch, E**	**38.11**	**332**	IAmb	IAmb	15 55 21.4	
	comp=Z,104nm,0.9s						
G65A	**Princeton**	**38.12**	**30**	IAmb	IAmb	15 55 15.2	
	comp=Z,94nm,0.9s						
JCC	**Jacoby Creek,**	**38.24**	**321**	IAmb	IAmb	15 55 23.4	
	comp=Z,157nm,1.5s						
JCC				IAMs_20	IAMs_20	16 10 41.1	
	comp=Z,3µm,20.0s						
F64A	**Sherman**	**38.25**	**28**	IAmb	IAmb	15 55 15.2	
	comp=Z,308nm,2.0s						
GGN	**Saint George**	**38.41**	**30**	IAmb	IAmb	15 55 17.1	
	comp=Z,370nm,2.0s						
KRPM	**Rodgers**	**38.43**	**321**	IAmb	IAmb	15 55 26.1	
	comp=Z,412nm,1.6s						
LPAZ	**La Paz**	**38.64**	**140**	P	**P**	**15 55 19.2**	**0.0**
	comp=Z,33nm,1.0s,baz=330,slow=6.0,SNR=66						
LPAZ				PcP	**PcP**	**15 57 30.9**	**-0.6**
	comp=Z,10nm,1.0s,baz=346,slow=6.0,SNR=4.4						
LPAZ				LR	LR	16 09 36.2	
	comp=Z,2µm,21.5s,baz=317,slow=34						
	comp=Z,33nm,1.0s						
LPAZ	**La Paz**	**38.64**	**140**	P	**P**	**15 55 19.1**	**-0.1**
LPAZ	**La Paz**	**38.64**	**140**	P	**P**	**15 55 19.1**	**-0.1**
LPAZ						15 57 31.0	
LPAZ				pmax	pmax		
	comp=Z,29nm,0.9s						
LPAZ	**La Paz**	**38.64**	**140**	*e*P	**P**	**15 55 18.6**	**-0.7**
LPAZ	**La Paz**	**38.64**	**140**	P	**P**	**15 55 18.3**	**-0.9**
KSXB	**Camp Six Broad**	**38.75**	**322**	IAMs_20	IAMs_20	16 10 58.4	
	comp=Z,4µm,20.0s						
PB18	**Visviri**	**38.81**	**143**	IAmb	IAmb	15 55 24.4	
	comp=Z,420nm,1.8s						
D62A	**Allapoint, All**	**38.87**	**26**	IAmb	IAmb	15 55 20.6	
	comp=Z,142nm,1.1s						
KEBM	**Edson Butte**	**39.65**	**323**	IAmb	IAmb	15 55 39.1	
	comp=Z,131nm,1.0s						
KEBM				IAMs_20	IAMs_20	16 14 00.2	
	comp=Z,6µm,19.0s						
HOOD	**Mount Hood Mea**	**39.77**	**328**	IAmb	IAmb	15 55 38.6	
	comp=Z,151nm,0.9s						
NEW	**Newport**	**39.84**	**335**	LR	LR	16 13 56.9	
	comp=Z,3µm,18.7s,baz=137,slow=39						
NEW	**Newport**	**39.84**	**335**	IAMs_20	IAMs_20	16 14 42.7	
	comp=Z,5µm,18.0s						
COR	**Corvallis**	**40.15**	**326**	IAMs_20	IAMs_20	16 13 26.1	
	comp=Z,4µm,18.0s						
EPH	**Ephrata**	**40.22**	**332**	IAmb	IAmb	15 55 39.0	
	comp=Z,81nm,1.2s						
PB11	**IPOC Station P**	**40.43**	**145**	IAmb	IAmb	15 55 35.8	
	comp=Z,108nm,1.0s						
TA01	**Diego Aracena**	**40.79**	**146**	P	**P**	**15 55 37.1**	**+0.8**
TA01				IAmb	IAmb	15 55 38.9	
	comp=Z,112nm,1.0s						
PATCX	**Punta Patache**	**41.01**	**146**	IAmb	IAmb	15 55 40.9	
	comp=Z,132nm,1.1s						
ITTB	**Itaituba**	**41.14**	**113**	*e*P	**P**	**15 55 38.8**	**-0.6**
ICQ	**Pointe Anglais**	**41.52**	**25**	P	**P**	**15 55 40.5**	**-1.5**
ICQ				IAmb	IAmb	15 55 41.8	
	comp=Z,109nm,1.0s						
FFC	**Flin Flon**	**41.54**	**352**	P	**P**	**15 55 42.6**	**+0.4**
FFC				IAmb	IAmb	15 55 45.8	
	comp=Z,284nm,1.6s						
FFC	**Flin Flon**	**41.54**	**352**	P	**P**	**15 55 42.6**	**+0.4**
FFC				pmax	pmax		
	comp=Z,284nm,1.7s						
FFC				MLR	MLR		
	comp=Z,2µm,19.0s						
PB02	**IPOC Station P**	**41.55**	**146**	IAmb	IAmb	15 55 45.3	
	comp=Z,100nm,0.9s						
VILB	**Vilhena**	**41.95**	**128**	IAmb	IAmb	15 55 48.0	
	comp=Z,272nm,1.6s						
VILB	**Vilhena**	**41.95**	**128**	*e*P	**P**	**15 55 46.1**	**0.0**
NLWA	**Neilton Lookou**	**42.30**	**329**	IAMs_20	IAMs_20	16 16 24.7	
	comp=Z,5µm,18.0s						
EDM	**Edmonton**	**42.61**	**342**	IAmb	IAmb	15 55 54.9	
	comp=Z,226nm,0.8s						
PB05	**IPOC Station P**	**42.65**	**148**	IAmb	IAmb	15 55 54.3	
	comp=Z,136nm,1.2s						
A04D	**Lummi Island**	**42.65**	**331**	IAmb	IAmb	15 55 58.8	
	comp=Z,155nm,1.0s						
NPGB	**Novo Progresso**	**42.70**	**117**	*e*P	**P**	**15 55 51.2**	**-1.1**
PB06	**IPOC Station P**	**42.86**	**147**	IAmb	IAmb	15 55 55.9	
	comp=Z,115nm,1.1s						
SIV	**San Ignacio**	**43.22**	**132**	LR	LR	16 13 07.6	
	comp=Z,2µm,19.3s,baz=320,slow=35						
RPN	**Rapa Nui**	**43.55**	**201**	LR	LR	16 09 38.9	
	comp=Z,4µm,18.2s,baz=34,slow=30						
RPN	**Rapa Nui**	**43.55**	**201**	P	**P**	**15 56 00.3**	**+1.5**
RPN				IAmb	IAmb	15 56 01.3	
	comp=Z,229nm,1.1s						
RPN	**Rapa Nui**	**43.55**	**201**	IAMs_20	IAMs_20	16 08 37.9	
	comp=Z,5µm,20.0s						
RPN	**Rapa Nui**	**43.55**	**201**	P	**P**	**15 56 00.3**	**+1.5**
RPN				pmax	pmax		
	comp=Z,229nm,1.1s						
VA02	**Isla de Pascua**	**43.61**	**201**	P	**P**	**15 56 00.7**	**+1.4**
VA02				IAmb	IAmb	15 56 01.9	
	comp=Z,336nm,1.3s						
VA02				IAMs_20	IAMs_20	16 08 52.7	
	comp=Z,5µm,22.0s						
LLLB	**Lillooet**	**43.64**	**334**	IAmb	IAmb	15 56 07.9	
	comp=Z,100nm,1.0s						
AF01	**San Pedro de A**	**43.80**	**146**	IAmb	IAmb	15 56 04.6	
	comp=Z,245nm,1.1s						
PDRB	**Porto dos Gac**	**43.91**	**123**	*e*P	**P**	**15 55 59.8**	**-2.2**
PB14	**IPOC Station P**	**44.02**	**150**	IAmb	IAmb	15 56 05.3	
	comp=Z,101nm,1.2s						
OZB	**Mount Ozzard**	**44.16**	**329**	IAmb	IAmb	15 56 12.9	
	comp=Z,88nm,0.9s						
CLDB	**Colider**	**44.27**	**122**	*e*P	**P**	**15 56 03.7**	**-1.1**
PTLB	**Pontes e Lacer**	**44.30**	**130**	IAmb	IAmb	15 56 06.1	
	comp=Z,77nm,1.0s						
PTLB	**Pontes e Lacer**	**44.30**	**130**	*e*P	**P**	**15 56 04.1**	**-0.8**
CBB	**Campbell River**	**44.82**	**331**	P	**P**	**15 56 10.3**	**+1.6**
CBB				IAmb	IAmb	15 56 18.0	
	comp=Z,115nm,1.3s						
GO02	**Mina Guanaco**	**44.88**	**149**	IAmb	IAmb	15 56 12.5	
	comp=Z,134nm,1.1s						
AC01	**Pan de Azucar**	**45.22**	**151**	IAmb	IAmb	15 56 14.2	
	comp=Z,80nm,1.2s						
SCHQ	**Schefferville**	**45.87**	**21**	P	**P**	**15 56 16.2**	**-0.8**
	comp=Z,119nm,0.9s,baz=213,slow=6.3,SNR=66						

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SCHQ                                PcP       PcP       15 57 55.2 +1.1
      comp=Z,30nm,0.8s,baz=217,slow=4.0,SNR=7.0
SCHQ                                LR        LR        16 16 37.6
      comp=Z,8µm,18.8s,baz=206,slow=38
      comp=Z,119nm,0.9s
DRLN  Deer Lake         45.90   32  P         P         15 56 15.7 -1.6
DRLN                                IAmb      IAmb      15 56 17.0
      comp=Z,200nm,1.7s
AC06  Mina Casimiro     46.36 152   IAmb      IAmb      15 56 23.6
      comp=Z,134nm,1.4s
AC02  Maricunga         46.50 150   IAmb      IAmb      15 56 25.9
      comp=Z,151nm,1.1s
AC02  Maricunga         46.50 150  eP         P         15 56 24.8 +1.9
AZAP  Zapla             46.55 144  eP         P         15 56 23.3 +0.3
SLA   San Lorenzo       46.68 145  eP         P         15 56 25.1 +1.1
SALV  Santo Antonio     47.19 127  eP         P         15 56 27.5 -0.5
TMAB  Tom-Au,PA,Br      47.33 106  eP         P         15 56 29.7 +0.6
FSA   Cafayete          47.52 146  eP         P         15 56 31.1 +0.6
BBB   Bella Bella       47.54 331   LR        LR        16 19 30.9
      comp=Z,2µm,18.4s,baz=138,slow=40
LCO   Las Campanas      47.62 153   P         P         15 56 32.0 +0.6
LCO                                 IAmb      IAmb      15 56 33.6
      comp=Z,124nm,1.1s
LCO   Las Campanas      47.62 153   P         P         15 56 32.0 +0.6
LCO                                 pmax      pmax
      comp=Z,124nm,1.2s
AC05  El Transito       47.66 153   IAmb      IAmb      15 56 33.9
      comp=Z,106nm,1.1s
KUQ   Kuujjuuaa         48.06   17  P         P         15 56 32.9 -1.2
KUQ                                 IAmb      IAmb      15 56 34.3
      comp=Z,101nm,0.9s
TINO  Tinogasta         48.28 149  eP         P         15 56 37.1 +0.8
VCA   Vinchina          48.53 151  eP         P         15 56 40.1 +1.9
SNDB  Serra Nova Dou    48.61 120  eP         P         15 56 38.7 -0.2
CO06  Fray Jorge        48.67 155   IAMs_20   IAMs_20   16 13 30.6
      comp=Z,2µm,20.0s
PP1B  Ponte de Pedra    48.83 128  eP         P         15 56 40.5 -0.1
VA04  Juan Fernndez     48.98 164   IAMs_20   IAMs_20   16 12 57.6
      comp=Z,3µm,18.0s
AROD  Rodeo             49.16 153  eP         P         15 56 45.3 +2.0
CO03  El Pedregal       49.21 154   IAmb      IAmb      15 56 45.5
      comp=Z,146nm,1.1s
ACDV  Cuesta del Vie    49.32 152  eP         P         15 56 46.2 +1.9
CO02  Combarbal         49.40 155   IAmb      IAmb      15 56 47.0
      comp=Z,160nm,1.1s
CYA   Choya             49.48 148  eP         P         15 56 46.2 +0.7
CYA                                eP         P         15 56 46.2 +0.7
ACCO  Cerro Coronel     49.70 153  eP         P         15 56 48.6 +1.2
ACLC  CERRO LA CRUZ     49.71 150  eP         P         15 56 47.4  0.0
MOBC  Moresby Island    49.98 330   IAmb      IAmb      15 56 57.8
      comp=Z,71nm,1.0s
ARAG  Araguaiana, MT    50.15 124  eP         P         15 56 49.0 -1.6
SMTB  Santa Maria do    50.37 114  eP         P         15 56 52.4  0.0
VA06  Catapilco         50.47 156   IAmb      IAmb      15 56 54.4
      comp=Z,108nm,1.2s
VA06                                IAMs_20   IAMs_20   16 14 34.2
      comp=Z,3µm,18.0s
AVFE  Valle Fertil      50.49 151  eP         P         15 56 53.1  0.0
RTLL  Cerro Villicun    50.59 153  eP         P         15 56 55.2 +1.4
BLKN  Baker Lake        50.61 358   IAmb      IAmb      15 56 56.1
      comp=Z,356nm,1.8s
VA01  Torpederas        50.74 157   IAMs_20   IAMs_20   16 14 15.6
      comp=Z,3µm,18.0s
U35K  Hyder             50.85 334   IAMs_20   IAMs_20   16 22 31.9
      comp=Z,3µm,19.0s
U35K  Hyder             50.85 334   P         P         15 56 57.4 +2.0
      baz=131
CFA   Coronel Fontan    50.93 153   LR        LR        16 13 27.3
      comp=Z,518nm,21.9s,baz=359,slow=30
VA03  San Esteban       50.95 155   IAmb      IAmb      15 56 58.7
      comp=Z,175nm,1.2s
AUSP  Uspallata         50.96 154  eP         P         15 56 58.5 +1.6
TOAD  Toad River Com    51.07 339   P         P         15 56 59.4 +2.3
      baz=138,SNR=36
C2SB  Chapadao do Su    51.08 128  eP         P         15 56 56.9 -0.7
YKA   Yellowknife Ar    51.10 347   P         P         15 56 58.3 +1.1
      comp=Z,143nm,1.0s,baz=154,slow=6.8,SNR=419
YKA                                 PcP       PcP       15 58 13.8 +1.0
      comp=Z,4.3nm,0.8s,baz=161,slow=3.0,SNR=3.6
YKA                                 PP        PP        15 58 58.8 +4.9
      comp=Z,18nm,1.0s,baz=152,slow=9.3,SNR=5.3
YKA                                 LR        LR        16 23 19.6
      comp=Z,2µm,18.3s,baz=150,slow=42
      comp=Z,143nm,1.0s
YKA   Yellowknife Ar    51.10 347   P         P         15 56 58.2 +1.0
V35K  Ketchikan         51.16 333   P         P         15 56 59.8 +2.1
      baz=129,SNR=7.3
PEL   Peldehue          51.23 156   IAMs_20   IAMs_20   16 14 59.3
      comp=Z,2µm,18.0s
VA05  Santo Domingo     51.32 157   IAMs_20   IAMs_20   16 14 32.8
      comp=Z,3µm,18.0s
MT05  Renca             51.42 156   IAmb      IAmb      15 57 02.1
      comp=Z,189nm,1.2s
MT05                                IAMs_20   IAMs_20   16 14 40.5
      comp=Z,2µm,18.0s
ASAL  Salagasta         51.51 154  eP         P         15 57 01.9 +1.1
MT16  CCHEN             51.54 156   IAmb      IAmb      15 57 15.4
      comp=Z,91nm,1.1s
MT16                                IAMs_20   IAMs_20   16 14 51.5
      comp=Z,2µm,18.0s
MT03  Universidad Ad    51.60 156   P         P         15 57 02.1 +0.6
MT03                                IAmb      IAmb      15 57 03.7
      comp=Z,158nm,1.2s
MT03                                IAMs_20   IAMs_20   16 14 53.2
      comp=Z,2µm,18.0s
MT01  Popeta            51.64 157   IAmb      IAmb      15 57 56.5
      comp=Z,43nm,0.5s
MT01                                IAMs_20   IAMs_20   16 14 51.8
      comp=Z,3µm,18.0s
T35M  Bob Quinn         51.64 335   IAmb      IAmb      15 57 09.8
      comp=Z,80nm,0.9s
T35M                                IAMs_20   IAMs_20   16 22 39.8
      comp=Z,3µm,20.0s
T35M  Bob Quinn         51.64 335   P         P         15 57 02.1 +0.7
      baz=131,SNR=22
MT09  Talagante         51.66 157   IAmb      IAmb      15 57 04.0
      comp=Z,295nm,1.8s
MT09                                IAMs_20   IAMs_20   16 14 52.9
      comp=Z,3µm,18.0s
MT08  Bocatoma Ro       51.76 155   IAmb      IAmb      15 57 05.9
      comp=Z,150nm,1.1s
MT08                                IAMs_20   IAMs_20   16 15 59.1
      comp=Z,2µm,18.0s
LIRD  Liard River Hi    51.78 339   P         P         15 57 04.1 +1.7
      baz=137,SNR=15
TAOE  Nuku Hiva Isla    51.85 247  eP         P         15 56 58.0 -5.6
      comp=Z,384nm,25.3s
TAOE  Nuku Hiva Isla    51.85 247  ePP        PP        15 59 02.8 +1.2
      comp=Z,133nm,23.0s
TAOE                               eS         S         16 04 21.0 -5.2
      comp=Z,2µm,24.7s
TAOE                               eSS        SS        16 07 57.0 -6.2
      comp=Z,529nm,25.4s
TAOE                               eLQ        LQ        16 09 45.7
      comp=Z,2µm,26.9s
TAOE                               eLR        LR        16 11 38.2
      comp=Z,4µm,25.4s
MT13  San Alfonso       51.91 156   IAmb      IAmb      15 57 06.5
      comp=Z,292nm,1.6s
MT13                                IAMs_20   IAMs_20   16 15 21.4
      comp=Z,2µm,18.0s
CRAG  Craig             51.92 332   P         P         15 57 09.9 +6.5
CRAG  Craig             51.92 332   P         P         15 57 05.3 +1.8
      baz=127
AAGR  Agrelo            51.94 154  i P        P         15 57 05.2 +1.2
ACAN  Cantantal         51.97 152  eP         P         15 57 04.3 +0.1
BO04  La Punta          52.00 156   IAmb      IAmb      15 57 06.3
      comp=Z,128nm,1.3s
BO04                                IAMs_20   IAMs_20   16 15 03.7
      comp=Z,3µm,18.0s
LMEL  Las Melosas       52.04 156   IAmb      IAmb      15 57 07.3
      comp=Z,118nm,1.1s
LMEL                                IAMs_20   IAMs_20   16 15 24.6
      comp=Z,2µm,18.0s
AMBA  Amambai (Brazi    52.08 134  eP         P         15 57 04.2 -0.9
WRAK  Wrangell Islan    52.16 334   P         P         15 57 07.3 +2.0
      baz=129
BO01  Tunca             52.17 157   IAmb      IAmb      15 57 07.6
      comp=Z,122nm,1.2s
BO01                                IAMs_20   IAMs_20   16 15 06.9
      comp=Z,3µm,18.0s
U33K  Whale Pass        52.32 333   P         P         15 57 08.2 +1.8
      baz=128
TCA   Tanti             52.44 149  eP         P         15 57 07.6 -0.1
S34M  Telegraph Cree    52.62 336   IAMs_20   IAMs_20   16 23 19.5
      comp=Z,3µm,18.0s
S34M  Telegraph Cree    52.62 336   P         P         15 57 10.3 +1.7
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      baz=131,SNR=25
BO02  Sierra Bellavi    52.64 157   IAMs_20   IAMs_20   16 15 31.8
      comp=Z,3µm,18.0s
T33K  Petersburg        52.67 334   P         P         15 57 11.0 +2.0
      baz=128,SNR=6.7
MRA   San Martin        52.78 151  eP         P         15 57 09.4 -0.8
CPUP  Villa Florida     52.80 139   P         P         15 57 09.7 -0.7
      comp=Z,32nm,0.9s,baz=326,slow=9.1,SNR=56
      comp=Z,32nm,0.9s
CPUP  Villa Florida     52.80 139   IAmb      IAmb      15 57 10.8
      comp=Z,92nm,1.3s
FRB   Frobisher Bay     52.84   13  LR        LR        16 21 34.2
      comp=Z,7µm,18.5s,baz=192,slow=38
BDFB  Brasilia          53.21 122   P         P         15 57 13.1 -0.6
      comp=Z,28nm,0.8s,baz=286,slow=9.3,SNR=20
      comp=Z,28nm,0.8s
BDFB  Brasilia          53.21 122   IAmb      IAmb      15 57 24.5
      comp=Z,53nm,0.8s
WTLY  Watson Lake, Y    53.24 339   P         P         15 57 15.2 +2.0
      baz=135,SNR=66
ML02  Panimavida        53.27 158   IAMs_20   IAMs_20   16 15 39.0
      comp=Z,3µm,18.0s
ITRB  Iturama           53.53 127  eP         P         15 57 15.4 -0.4
R33M  Jennings River    53.54 337   P         P         15 57 17.2 +1.6
      baz=132
BI05  Punta Hualpn      53.54 160   IAMs_20   IAMs_20   16 15 15.0
      comp=Z,3µm,19.0s
Q32M  Nakina River      53.76 336   IAMs_20   IAMs_20   16 22 52.5
      comp=Z,3µm,20.0s
Q32M  Nakina River      53.76 336   P         P         15 57 18.7 +1.4
      baz=130
S32K  Killisnoo         53.78 334   IAMs_20   IAMs_20   16 22 13.4
      comp=Z,3µm,19.0s
S32K  Killisnoo         53.78 334   P         P         15 57 18.5 +1.4
      baz=127
SIT   Sitka             53.86 333   P         P         15 57 18.9 +1.2
      baz=126
WRGLY Wrigley           53.90 344   P         P         15 57 20.0 +2.1
      baz=142,SNR=46
BI02  San Fabin de      54.12 158   IAmb      IAmb      15 57 22.1
      comp=Z,126nm,1.3s
BI02                                IAMs_20   IAMs_20   16 16 04.7
      comp=Z,3µm,19.0s
JIS   Juneau Island     54.19 335   P         P         15 57 28.0 +7.9
R32K  Eaglecrest        54.24 334   IAMs_20   IAMs_20   16 24 35.6
      comp=Z,2µm,19.0s
R32K  Eaglecrest        54.24 334   P         P         15 57 22.1 +1.6
      baz=127
NBPS  Pedro II - PI     54.25 106  eP         P         15 57 22.0 +0.6
IPMB  Ipameri, GO       54.27 124  eP         P         15 57 20.1 -1.3
SDBA  SAO DESIDERIO     54.30 116  eP         P         15 57 21.0 -0.7
BESE  Bessie Mountai    54.57 335   IAmb      IAmb      15 57 31.7
      comp=Z,150nm,1.4s
P32M  Atlin             54.73 336   IAmb      IAmb      15 57 32.4
      comp=Z,108nm,1.1s
P32M                                IAMs_20   IAMs_20   16 23 32.3
      comp=Z,2µm,20.0s
P32M  Atlin             54.73 336   P         P         15 57 26.2 +2.1
      baz=129,SNR=9.8
P33M  Teslin, Yukon     54.78 337   IAmb      IAmb      15 57 32.6
      comp=Z,88nm,0.9s
P33M                                IAMs_20   IAMs_20   16 24 40.5
      comp=Z,2µm,19.0s
P33M  Teslin, Yukon     54.78 337   P         P         15 57 26.4 +1.9
      baz=130,SNR=32
S31K  Pelican           54.78 333   IAMs_20   IAMs_20   16 22 31.0
      comp=Z,3µm,20.0s
S31K  Pelican           54.78 333   P         P         15 57 24.9 +0.5
      baz=125
R31K  City Hall, Gus    54.84 334   P         P         15 57 26.8 +2.0
      baz=126
RKT   Rikitea           54.98 229  eS         S         16 05 13.1 +4.9
      comp=Z,10µm,27.0s
RKT                                eLQ        LQ        16 11 10.5
RKT                                eLR        LR        16 13 29.6
      comp=Z,19µm,27.0s
NBMO  Morrinhos-CE      55.21 104  eP         P         15 57 29.5 +1.2
SKAG  Skagway           55.30 335   P         P         15 57 35.3 +7.2
SKAG  Skagway           55.30 335   P         P         15 57 29.8 +1.7
      baz=127,SNR=6.1
N32M  Quiet Lake        55.49 338   IAMs_20   IAMs_20   16 25 02.2
      comp=Z,2µm,18.0s
N32M  Quiet Lake        55.49 338   P         P         15 57 31.3 +1.7
      baz=130
BB19B Bebedouro         55.71 128  eP         P         15 57 28.9 -2.9
PLBC  Pleasant Camp     55.72 335   P         P         15 57 33.3 +2.1
      baz=126
WHY   Whitehorse        55.86 337   P         P         15 57 34.1 +1.7
      baz=128,SNR=14
JANB  Januaria          56.03 119  eP         P         15 57 33.8 -0.4
PSAL  Palomas, Salto    56.03 143  eP         P         15 57 33.1 -0.7
ILON  Igloolik, Nuna    56.10    5  IAmb      IAmb      15 57 36.4
      comp=Z,78nm,1.0s
LR04  Corral            56.33 162   IAMs_20   IAMs_20   16 19 59.5
      comp=Z,2µm,18.0s
P30M  Million Dollar    56.35 335   P         P         15 57 36.8 +1.0
      baz=126
P29M  Windy Craggy      56.39 335   IAMs_20   IAMs_20   16 23 25.1
      comp=Z,3µm,21.0s
P29M  Windy Craggy      56.39 335   P         P         15 57 37.9 +1.8
      baz=125
O30N  Mendenhall        56.40 336   IAMs_20   IAMs_20   16 24 24.3
      comp=Z,2µm,21.0s
O30N  Mendenhall        56.40 336   P         P         15 57 38.0 +1.9
      baz=127,SNR=21
LR03  Panguipulli       56.44 161   IAMs_20   IAMs_20   16 16 54.8
      comp=Z,2µm,20.0s
M31M  Drury Creek, Y    56.65 338   IAmb      IAmb      15 57 45.6
      comp=Z,216nm,1.4s
M31M                                IAMs_20   IAMs_20   16 25 40.8
      comp=Z,2µm,18.0s
M31M  Drury Creek, Y    56.65 338   P         P         15 57 39.8 +1.9
      baz=130,SNR=28
N31M  Braeburn, Yuko    56.71 337   P         P         15 57 39.7 +1.3
      baz=128,SNR=29
ITAB  Concordia         56.84 136  eP         P         15 57 39.1 -0.6
HYT   Haines Junctio    56.99 336   P         P         15 57 41.8 +1.4
      baz=126,SNR=13
O29M  Mount Kennedy     57.12 335   IAmb      IAmb      15 57 49.8
      comp=Z,74nm,1.1s
O29M                                IAMs_20   IAMs_20   16 24 11.6
      comp=Z,3µm,21.0s
O29M  Mount Kennedy     57.12 335   P         P         15 57 43.3 +1.9
      baz=124,SNR=10
N30M  Aishikik Lake     57.20 337   IAMs_20   IAMs_20   16 24 58.5
      comp=Z,2µm,19.0s
N30M  Aishikik Lake     57.20 337   P         P         15 57 43.6 +1.8
      baz=126
RCLB  Rio Claro- Sao    57.24 128  eP         P         15 57 41.6 -1.1
IVI   Ivigtut           57.37   24  IAmb      IAmb      15 57 43.0
      comp=Z,68nm,1.0s
YUK6  Outpost Mounta    57.40 336   P         P         15 57 44.1 +0.7
      baz=125,SNR=9.2
PINM  Pinnacle          57.70 334   P         P         15 57 46.2 +0.8
      baz=122,SNR=6.5
LL05  Los Muermos       57.72 163   IAMs_20   IAMs_20   16 16 18.4
      comp=Z,2µm,18.0s
YUK4  Talbot Arm        57.74 336   P         P         15 57 47.5 +1.7
      baz=125,SNR=8.0
M30M  Minto, Yukon      57.76 338   IAmb      IAmb      15 57 54.0
      comp=Z,176nm,1.2s
M30M  Minto, Yukon      57.76 338   P         P         15 57 47.4 +1.7
      baz=127,SNR=49
VAO   Valinhos          58.00 129  eP         P         15 57 47.4 -0.6
PLCA  Paso Flores       58.02 160   P         P         15 57 47.8  0.0
      comp=Z,44nm,1.1s,baz=335,slow=7.4,SNR=24
PLCA                                LR        LR        16 18 08.0
      comp=Z,2µm,18.5s,baz=356,slow=31
      comp=Z,44nm,1.1s
PLCA  Paso Flores       58.02 160   P         P         15 57 47.8  0.0
PLCA                                IAmb      IAmb      15 57 49.7
      comp=Z,107nm,1.2s
PLCA  Paso Flores       58.02 160   P         P         15 57 47.8  0.0
PLCA                                pmax      pmax
      comp=Z,107nm,1.3s
PLCA  Paso Flores       58.02 160  eP         P         15 57 47.4 -0.4
O28M  Mount Upton       58.05 335   IAMs_20   IAMs_20   16 24 36.1
      comp=Z,2µm,18.0s
O28M  Mount Upton       58.05 335   P         P         15 57 49.7 +1.6
      baz=123
MAYO  Mayo, Yukon       58.07 339   P         P         15 57 49.9 +2.0
      baz=129,SNR=35
DIAM  Diamantina, MG    58.13 122  eP         P         15 57 49.0 -0.1
YUK8  Steele Glacier    58.15 336   P         P         15 57 50.3 +1.5
      baz=123,SNR=12
M29M  Somme Creek       58.30 337   IAMs_20   IAMs_20   16 25 52.9
      comp=Z,3µm,18.0s
M29M  Somme Creek       58.30 337   P         P         15 57 51.5 +1.9
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      baz=125
LOGN  Logan Glacier     58.41 335   IAmb      IAmb      15 57 59.4
      comp=Z,176nm,1.4s
LOGN                                IAMs_20   IAMs_20   16 24 22.8
      comp=Z,2µm,21.0s
NRS   Narsarsuaq        58.45   25  IAmb      IAmb      15 57 50.4
      comp=Z,59nm,0.9s
YAH   Yahtse            58.48 334   IAMs_20   IAMs_20   16 25 24.7
      comp=Z,3µm,21.0s
PET01 Itanhaem-SP       58.49 130  eP         P         15 57 50.7 -0.6
L29M  L29M              58.57 338   IAMs_20   IAMs_20   16 25 49.6
      comp=Z,2µm,19.0s
L29M  L29M              58.57 338   P         P         15 57 53.4 +2.0
      baz=126
BSCB  Bom Sucesso       58.61 125  eP         P         15 57 51.7 -0.7
CTGM  Chitina Glacie    58.62 335   IAmb      IAmb      15 58 02.9
      comp=Z,83nm,1.0s
CTGM                                IAMs_20   IAMs_20   16 24 30.4
      comp=Z,2µm,19.0s
CTG   Chitna Glacier    58.62 335   P         P         15 57 54.2 +2.2
      baz=122
GRNC  Granite Creek     58.67 334   IAMs_20   IAMs_20   16 24 16.8
      comp=Z,2µm,20.0s
YUK3  Moose Creek       58.70 336   P         P         15 57 54.3 +1.8
      baz=123,SNR=13
NBPA  Parau_RN          58.77 105  eP         P         15 57 54.1 +0.6
K29M  Barlow Dome       58.79 339   IAMs_20   IAMs_20   16 26 57.3
      comp=Z,2µm,19.0s
K29M  Barlow Dome       58.79 339   P         P         15 57 54.9 +1.9
      baz=127,SNR=41
BARN  Barnard Glacie    58.81 335   IAmb      IAmb      15 58 02.9
      comp=Z,67nm,1.2s
BARN                                IAMs_20   IAMs_20   16 24 34.3
      comp=Z,2µm,20.0s
J30M  Hart River        58.84 340   IAMs_20   IAMs_20   16 26 40.3
      comp=Z,2µm,20.0s
J30M  Hart River        58.84 340   P         P         15 57 55.2 +1.9
      baz=129
LL01  San Ignacio de    58.93 162   IAMs_20   IAMs_20   16 20 39.8
      comp=Z,2µm,18.0s
C36M  Paulatuk          58.98 348   IAmb      IAmb      15 57 59.0
      comp=Z,94nm,1.4s
C36M                                IAMs_20   IAMs_20   16 27 52.1
      comp=Z,2µm,19.0s
C36M  Paulatuk          58.98 348   P         P         15 57 56.0 +1.9
      baz=144,SNR=36
H31M  Peel River        58.99 341   IAmb      IAmb      15 58 00.9
      comp=Z,115nm,1.1s
H31M                                IAMs_20   IAMs_20   16 27 22.2
      comp=Z,2µm,18.0s
H31M  Peel River        58.99 341   P         P         15 57 56.3 +2.1
      baz=131,SNR=37
CNLB  Canela            59.04 137  eP         P         15 57 54.7 -0.5
LL07  Hotel Espejo d    59.04 163   IAMs_20   IAMs_20   16 18 09.8
      comp=Z,3µm,20.0s
NBTA  Tacaratu-PE       59.08 109  eP         P         15 57 55.5 -0.2
PARB  Paraibuna         59.21 128  eP         P         15 57 55.9 -0.5
BVCY  Beaver Creek      59.21 336   P         P         15 57 57.3 +1.4
      baz=123,SNR=22
CRQE  Cirque            59.25 334   P         P         15 57 58.3 +2.0
      baz=120,SNR=6.3
I30M  Mount Dempster    59.26 340   P         P         15 57 58.2 +2.0
      baz=129,SNR=90
CRQM  Cirque            59.27 334   IAmb      IAmb      15 58 04.5
      comp=Z,109nm,1.0s
J29N  Klondike Camp     59.41 339   IAmb      IAmb      15 58 04.8
      comp=Z,78nm,1.0s
J29N                                IAMs_20   IAMs_20   16 26 46.5
      comp=Z,3µm,19.0s
J29N  Klondike Camp     59.41 339   P         P         15 57 59.3 +2.2
      baz=127,SNR=18
KAIM  Kayak Island      59.43 333   P         P         15 57 59.5 +2.2
      baz=118
MCARA McCarthy VSAT     59.54 335   IAmb      IAmb      15 58 07.8
      comp=Z,133nm,1.0s
MCARA McCarthy VSAT     59.54 335   P         P         15 57 59.9 +1.8
      baz=120,SNR=8.3
SLP01 Ubatuba-SP        59.56 128  eP         P         15 57 58.6 -0.3
M27K  Edge Creek, AK    59.58 336   IAmb      IAmb      15 58 07.4
      comp=Z,64nm,0.9s
M27K                                IAMs_20   IAMs_20   16 25 53.5
      comp=Z,3µm,20.0s
M27K  Edge Creek, AK    59.58 336   P         P         15 58 00.7 +2.2
      baz=122
DAWY  Dawson            59.59 338   IAmb      IAmb      15 58 04.3
      comp=Z,33nm,0.8s
DAWY  Dawson            59.59 338   P         P         15 58 01.0 +2.5
      baz=125,SNR=26
VRDI  Verde Repeater    59.64 334   IAmb      IAmb      15 58 07.0
      comp=Z,62nm,0.9s
POIN  Pond Inlet        59.66    5  IAmb      IAmb      15 58 03.6
      comp=Z,142nm,1.9s
G31M  Satah River       59.72 342   P         P         15 58 01.4 +2.2
      baz=132,SNR=81
LL02  Futaleuf          59.84 162   P         P         15 58 00.3  0.0
LL02                                IAmb      IAmb      15 58 02.3
      comp=Z,100nm,1.1s
F31M  Tsiigehtchic      59.92 343   IAMs_20   IAMs_20   16 27 10.5
      comp=Z,3µm,20.0s
F31M  Tsiigehtchic      59.92 343   P         P         15 58 03.0 +2.5
      baz=133,SNR=41
BCAR  Beaver Creek A    59.92 337   P         P         15 58 02.2 +1.5
RCBR  Riachuelo         59.93 105   P         P         15 58 01.1 -0.4
RCBR                                IAmb      IAmb      15 58 06.5
      comp=Z,76nm,0.9s
RCBR  Riachuelo         59.93 105   IAMs_20   IAMs_20   16 27 03.8
      comp=Z,2µm,19.0s
RCBR  Riachuelo         59.93 105   P         P         15 58 01.2 -0.4
RCBR                                pmax      pmax
      comp=Z,76nm,1.0s
RCBR                                MLR       MLR
      comp=Z,2µm,19.0s
RCBR  Riachuelo         59.93 105  eP         P         15 58 00.9 -0.7
L27K  Beaver Creek,     59.94 337   IAMs_20   IAMs_20   16 27 43.8
      comp=Z,2µm,18.0s
L27K  Beaver Creek,     59.94 337   P         P         15 58 03.0 +2.2
      baz=122
I29M  Ogilvie Camp,     59.98 340   IAMs_20   IAMs_20   16 27 45.7
      comp=Z,2µm,20.0s
I29M  Ogilvie Camp,     59.98 340   P         P         15 58 03.2 +2.1
      baz=127,SNR=49
BMRM  Bremner River     60.00 334   P         P         15 58 03.5 +2.1
      baz=118,SNR=7.4
M26K  Nabesna, AK       60.05 336   IAmb      IAmb      15 58 09.8
      comp=Z,109nm,1.3s
M26K                                IAMs_20   IAMs_20   16 25 44.9
      comp=Z,2µm,20.0s
M26K  Nabesna, AK       60.05 336   P         P         15 58 03.4 +1.7
      baz=121,SNR=20
Q23K  Middleton Isla    60.07 332   P         P         15 58 03.6 +1.9
      baz=116
EPYK  Eagle Plains      60.10 341   IAmb      IAmb      15 58 08.5
      comp=Z,181nm,1.3s
EPYK  Eagle Plains      60.10 341   P         P         15 58 03.6 +1.7
      baz=129,SNR=36
SFJD  Kangerlussuaq     60.12   18  LR        LR        16 25 24.0
      comp=Z,7µm,18.2s,baz=220,slow=37
SFJD  Kangerlussuaq     60.12   18  P         P         15 58 00.6 -1.3
SFJD                                IAmb      IAmb      15 58 02.3
      comp=Z,41nm,1.0s
SFJD  Kangerlussuaq     60.12   18  P         P         15 58 00.6 -1.3
SFJD                                pmax      pmax
      comp=Z,41nm,1.0s
SFJD                                MLR       MLR
      comp=Z,9µm,18.0s
NBIT  Itapeh - BA       60.18 116  eP         P         15 58 02.9 -0.2
CMC01 Camacan, BA       60.29 117  eP         P         15 58 04.5 +0.6
EYAK  Cordova Ski Ar    60.30 333   IAmb      IAmb      15 58 13.2
      comp=Z,81nm,0.9s
EYAK  Cordova Ski Ar    60.30 333   P         P         15 58 08.7 +5.4
EYAK  Cordova Ski Ar    60.30 333   P         P         15 58 05.2 +1.9
      baz=117
N25K  Chitina, Valde    60.31 334   P         P         15 58 05.2 +1.7
      baz=119,SNR=33
VAS01 Vassouras-RJ      60.34 126  eP         P         15 58 03.9 -0.3
G30M  tAoh Zraii Nji    60.34 342   IAMs_20   IAMs_20   16 29 08.6
      comp=Z,2µm,21.0s
G30M  tAoh Zraii Nji    60.34 342   P         P         15 58 04.1 +0.6
      baz=130
SJMB  Sao Joao De Ma    60.39 121  eP         P         15 58 04.7 +0.1
INK   Inuvik            60.45 344   LR        LR        16 29 22.3
      comp=Z,3µm,18.0s,baz=153,slow=41
INK   Inuvik            60.45 344   P         P         15 58 06.0 +1.8
      baz=133,SNR=124
L26K  Log Cabin Wild    60.51 336   IAmb      IAmb      15 58 12.8
      comp=Z,72nm,1.0s
L26K                                IAMs_20   IAMs_20   16 26 21.0
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             comp=Z,3µm,19.0s
L26K  Log Cabin Wild   60.51 336  P         P          15 58 06.4 +1.7
             baz=121,SNR=28
H29M  Whitestone       60.53 341  IAMs_20   IAMs_20    16 28 39.9
             comp=Z,2µm,19.0s
H29M  Whitestone       60.53 341  P         P          15 58 06.0 +1.2
             baz=127
DIV   Divide           60.58 334  IAmb      IAmb       15 58 13.5
             comp=Z,96nm,1.0s
GUA01 Guaratinga, BA   60.58 118  eP        P          15 58 06.1 +0.2
I28M  Miner Creek      60.59 339  IAmb      IAmb       15 58 28.4
             comp=Z,55nm,1.2s
I28M                              IAMs_20   IAMs_20    16 27 25.6
             comp=Z,3µm,18.0s
I28M  Miner Creek      60.59 339  P         P          15 58 07.3 +2.0
             baz=125,SNR=17
MENT  Mentasta         60.61 336  IAmb      IAmb       15 58 13.5
             comp=Z,198nm,1.6s
MENT  Mentasta         60.61 336  P         P          15 58 09.0 +3.6
F30M  Barrier River    60.62 343  P         P          15 58 07.4 +2.1
             baz=131
NBPV  Pedro Velho      60.70 105  eP        P          15 58 07.3 +0.5
AY01  Puyuhuapi        60.74 163  P         P          15 58 06.6 +0.2
AY01                              IAmb      IAmb       15 58 07.9
             comp=Z,93nm,1.1s
AY01                              IAMs_20   IAMs_20    16 18 06.8
             comp=Z,3µm,19.0s
P23K  Montague Islan   60.80 332  P         P          15 58 08.1 +1.4
             baz=115
KLU   Klutina          60.81 334  IAMs_20   IAMs_20    16 26 59.4
             comp=Z,3µm,19.0s
KLU   Klutina          60.81 334  P         P          15 58 08.5 +1.6
             baz=117,SNR=22
G29M  Pine Creek       60.84 341  IAMs_20   IAMs_20    16 29 01.1
             comp=Z,2µm,18.0s
G29M  Pine Creek       60.84 341  P         P          15 58 08.5 +1.6
             baz=128
HARP  HAARP            60.92 335  P         P          15 58 09.0 +1.4
             baz=118,SNR=15
RES   Resolute Bay     61.00 359  LR        LR         16 28 10.0
             comp=Z,3µm,18.9s,baz=180,slow=40
RES   Resolute Bay     61.00 359  IAmb      IAmb       15 58 10.2
             comp=Z,81nm,0.8s
GLI   Glacier Island   61.04 333  P         P          15 58 09.8 +1.4
             baz=116
DUB01 Friburgo-RJ      61.08 125  eP        P          15 58 09.2  0.0
DOT   Dot Lake         61.10 337  IAMs_20   IAMs_20    16 26 33.7
             comp=Z,3µm,19.0s
VAH   Vaihoa           61.17 244  eP        P          15 58 10.1 +0.2
             comp=Z,7.6nm,1.1s
VAH   Vaihoa           61.17 244  eLR       LR         16 16 13.4
             comp=Z,64µm,32.0s
M24K  Tolsona, Glenn   61.20 335  P         P          15 58 10.7 +1.2
             baz=117,SNR=19
SCRK  Sand Creek       61.24 337  IAmb      IAmb       15 58 17.8
             comp=Z,109nm,1.2s
SCRK                              IAMs_20   IAMs_20    16 27 01.3
             comp=Z,2µm,20.0s
SCRK  Sand Creek       61.24 337  P         P          15 58 12.2 +2.4
             baz=120,SNR=35
I27K  Kandik River     61.25 339  IAmb      IAmb       15 58 17.4
             comp=Z,126nm,1.0s
I27K                              IAMs_20   IAMs_20    16 28 07.2
             comp=Z,3µm,19.0s
I27K  Kandik River     61.25 339  P         P          15 58 11.1 +1.3
             baz=124
PMOR  Pomariorio Ree   61.30 244  eP        P          15 58 11.4 +0.6
             comp=Z,188nm,1.4s
PMOR  Pomariorio Ree   61.30 244  eLR       LR         16 16 17.5
             comp=Z,3µm,23.1s
PAX   Paxson           61.32 336  IAmb      IAmb       15 58 17.5
             comp=Z,92nm,0.8s
PAX                               IAMs_20   IAMs_20    16 26 57.6
             comp=Z,2µm,18.0s
PAX   Paxson           61.32 336  P         P          15 58 12.0 +1.7
             baz=118,SNR=46
RIB01 Linhares ES      61.34 121  eP        P          15 58 10.6 -0.4
J26L  Joseph Creek     61.35 338  IAMs_20   IAMs_20    16 26 58.1
             comp=Z,2µm,18.0s
J26L  Joseph Creek     61.35 338  P         P          15 58 12.2 +1.7
             baz=121,SNR=120
A36M  Sachs Harbour    61.36 349  IAmb      IAmb       15 58 16.0
             comp=Z,112nm,1.0s
A36M                              IAMs_20   IAMs_20    16 28 58.7
             comp=Z,3µm,19.0s
A36M  Sachs Harbour    61.36 349  P         P          15 58 11.5 +1.2
             baz=144,SNR=105
RIDG  Independent Ri   61.45 337  IAMs_20   IAMs_20    16 26 43.9
             comp=Z,3µm,18.0s
RIDG  Independent Ri   61.45 337  P         P          15 58 12.9 +1.7
             baz=119
CAM01 Campos-RJ        61.52 124  eP        P          15 58 11.0 -1.2
SCM   Sheep Creek Mo   61.56 334  P         P          15 58 13.4 +1.4
             baz=116,SNR=8.5
H27K  Steamboat Moun   61.57 340  IAMs_20   IAMs_20    16 28 06.6
             comp=Z,2µm,20.0s
H27K  Steamboat Moun   61.57 340  P         P          15 58 13.2 +1.2
             baz=124
PWL   Port Wells       61.58 333  IAmb      IAmb       15 58 23.7
             comp=Z,43nm,1.0s
PWL   Port Wells       61.58 333  P         P          15 58 13.2 +1.1
             baz=114
I26K  Coal Creek Min   61.63 339  IAMs_20   IAMs_20    16 28 02.1
             comp=Z,2µm,19.0s
I26K  Coal Creek Min   61.63 339  P         P          15 58 13.9 +1.7
             baz=122
ALF01 Guarapari-ES     61.68 123  eP        P          15 58 13.5 +0.2
M23K  Glacier View     61.72 334  P         P          15 58 14.5 +1.6
             baz=116,SNR=11
E29M  Blow River       61.73 343  IAMs_20   IAMs_20    16 28 59.3
             comp=Z,3µm,18.0s
E29M  Blow River       61.73 343  P         P          15 58 14.7 +1.8
             baz=129
SEW   Seward           61.78 332  IAmb      IAmb       15 58 21.8
             comp=Z,53nm,0.8s
SEW   Seward           61.78 332  P         P          15 58 15.2 +1.9
             baz=113
F28M  Old Crow         61.84 342  P         P          15 58 15.6 +1.9
             baz=126,SNR=168
K24K  Donnelly Dome    61.84 336  IAMs_20   IAMs_20    16 25 40.3
             comp=Z,2µm,19.0s
K24K  Donnelly Dome    61.84 336  P         P          15 58 15.9 +2.1
             baz=118,SNR=39
KNK   Knik Glacier     61.87 333  IAMs_20   IAMs_20    16 27 36.5
             comp=Z,2µm,18.0s
KNK   Knik Glacier     61.87 333  P         P          15 58 15.9 +1.9
             baz=115,SNR=6.3
G27K  Doyon Strip      61.94 340  IAmb      IAmb       15 58 21.3
             comp=Z,54nm,0.9s
G27K                              IAMs_20   IAMs_20    16 29 54.3
             comp=Z,2µm,18.0s
G27K  Doyon Strip      61.94 340  P         P          15 58 16.7 +2.3
             baz=124,SNR=39
COYC  Coyhaique        61.95 163  P         P          15 58 14.9 +0.2
SML   Sawmill          61.98 334  IAMs_20   IAMs_20    16 28 01.4
             comp=Z,2µm,18.0s
SML   Sawmill          61.98 334  P         P          15 58 17.0 +2.2
             baz=115,SNR=18
O22K  Cooper Landing   62.05 332  IAMs_20   IAMs_20    16 26 46.5
             comp=Z,2µm,18.0s
O22K  Cooper Landing   62.05 332  P         P          15 58 17.2 +2.0
             baz=113
KIP   Kipapa           62.07 287  IAMs_20   IAMs_20    16 15 37.6
             comp=Z,3µm,20.0s
WAT6  Susitna Watana   62.07 335  P         P          15 58 17.2 +1.7
             baz=116,SNR=56
J25K  Salcha River,    62.08 337  IAMs_20   IAMs_20    16 28 28.5
             comp=Z,3µm,18.0s
J25K  Salcha River,    62.08 337  P         P          15 58 17.3 +1.9
             baz=119,SNR=55
DHY   Denali Highway   62.14 335  IAmb      IAmb       15 58 33.6
             comp=Z,84nm,1.5s
DHY   Denali Highway   62.14 335  P         P          15 58 17.5 +1.6
             baz=116
PMR   Palmer           62.24 333  P         P          15 58 18.9 +2.5
PMR   Palmer           62.24 333  P         P          15 58 18.4 +2.0
             baz=114,SNR=8.4
BRSE  Bradley Lake S   62.24 331  P         P          15 58 17.9 +1.4
             baz=112,SNR=7.8
SLKM  Skilak Lake      62.29 332  IAmb      IAmb       15 58 24.6
             comp=Z,82nm,0.7s
SLKM                              IAMs_20   IAMs_20    16 27 08.9
             comp=Z,2µm,18.0s
RC01  Rabbit Creek A   62.30 333  P         P          15 58 19.1 +2.3
             baz=113,SNR=9.5
E28M  Babbage River    62.34 343  IAMs_20   IAMs_20    16 29 26.5
             comp=Z,3µm,18.0s
E28M  Babbage River    62.34 343  P         P          15 58 18.8 +1.8
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             baz=127
CNPM  China Poot       62.40 331  IAMs_20   IAMs_20    16 25 46.8
             comp=Z,1µm,19.0s
KDAK  Kodiak Island    62.45 329  P         P          15 58 19.8 +1.9
KDAK                              IAmb      IAmb       15 58 26.4
             comp=Z,54nm,0.8s
KDAK  Kodiak Island    62.45 329 i P        P          15 58 18.8 +0.9
KDAK                              pmax      pmax
             comp=Z,195nm,1.9s
KDAK                              MLR       MLR
             comp=Z,2µm,19.0s
KDAK  Kodiak Island    62.45 329  P         P          15 58 19.6 +1.7
             baz=109
WAT1  Susitna Watana   62.51 335  P         P          15 58 19.9 +1.6
             baz=115
D28M  Stokes Point     62.56 343  P         P          15 58 20.0 +1.6
             baz=128
HDA   Harding Lake     62.58 337  IAmb      IAmb       15 58 26.1
             comp=Z,112nm,1.1s
HDA                               IAMs_20   IAMs_20    16 26 37.8
             comp=Z,2µm,20.0s
HDA   Harding Lake     62.58 337  P         P          15 58 19.9 +1.2
             baz=118,SNR=45
OHAK  Old Harbor       62.64 328  IAmb      IAmb       15 59 25.9
             comp=Z,173nm,1.7s
OHAK  Old Harbor       62.64 328  P         P          15 58 23.2 +4.1
OHAK  Old Harbor       62.64 328  P         P          15 58 21.0 +1.9
             baz=108
Q20K  Shuyak Island    62.64 330  P         P          15 58 20.2 +1.1
             baz=110
HOM   Homer            62.64 331  P         P          15 58 20.9 +1.8
             baz=111
E27K  Coleen River     62.71 342  P         P          15 58 21.3 +1.8
             baz=125,SNR=126
G26K  Porcupine Rive   62.72 340  IAmb      IAmb       15 58 27.4
             comp=Z,123nm,1.1s
G26K                              IAMs_20   IAMs_20    16 28 14.0
             comp=Z,2µm,19.0s
G26K  Porcupine Rive   62.72 340  P         P          15 58 21.8 +2.2
             baz=122,SNR=59
ILAR  Eielson Array    62.73 337  P         P          15 58 20.6 +0.9
             comp=Z,46nm,1.0s,baz=139,slow=3.9,SNR=56
ILAR                              PP        PP         16 00 38.4 +0.9
             comp=Z,8.6nm,0.9s,baz=119,slow=6.7,SNR=4.4
             comp=Z,46nm,1.0s
ILAR  Eielson Array    62.73 337  P         P          15 58 20.5 +0.8
M22K  Willow           62.74 333  P         P          15 58 21.6 +1.9
             baz=113,SNR=9.5
CAPN  Captain Cook N   62.82 332  P         P          15 58 22.4 +2.2
             baz=112
RND   Reindeer         62.89 335  IAMs_20   IAMs_20    16 29 29.1
             comp=Z,2µm,18.0s
SUA   Susitna One      62.90 333  IAMs_20   IAMs_20    16 28 34.7
             comp=Z,2µm,18.0s
SUA   Susitna One      62.90 333  P         P          15 58 21.8 +0.8
             baz=112,SNR=24
SII   Sitkinak Islan   62.90 327  P         P          15 58 22.8 +1.9
             baz=107
CCB   Clear Creek Bu   63.02 337  IAmb      IAmb       15 58 29.3
             comp=Z,143nm,1.6s
CCB                               IAMs_20   IAMs_20    16 27 00.4
             comp=Z,2µm,20.0s
WRH   Wood River Hil   63.05 337  IAmb      IAmb       15 58 28.6
             comp=Z,64nm,1.2s
CUT   Chulitna         63.06 334  IAMs_20   IAMs_20    16 28 32.8
             comp=Z,2µm,19.0s
CUT   Chulitna         63.06 334  P         P          15 58 23.3 +1.5
             baz=113,SNR=28
MCK   McKinley         63.06 336  IAmb      IAmb       15 58 29.7
             comp=Z,138nm,1.2s
MCK                               IAMs_20   IAMs_20    16 28 32.6
             comp=Z,2µm,18.0s
MCK   McKinley         63.06 336  P         P          15 58 23.1 +1.2
             baz=115,SNR=27
POKR  Poker Plat Res   63.10 337  IAMs_20   IAMs_20    16 29 17.3
             comp=Z,2µm,18.0s
POKR  Poker Plat Res   63.10 337  P         P          15 58 23.2 +1.1
             baz=117,SNR=23
D27M  Malcolm River    63.14 343  IAMs_20   IAMs_20    16 29 01.5
             comp=Z,2µm,18.0s
D27M  Malcolm River    63.14 343  P         P          15 58 23.5 +1.1
             baz=126
F26K  Sheenjek River   63.24 341  IAmb      IAmb       15 58 30.7
             comp=Z,159nm,1.4s
F26K                              IAMs_20   IAMs_20    16 28 45.6
             comp=Z,2µm,19.0s
F26K  Sheenjek River   63.24 341  P         P          15 58 23.2 +0.2
             baz=122
BMAR  Burnt Mountain   63.24 340  P         P          15 58 24.1 +1.1
O20K  Slope Mountain   63.25 331  P         P          15 58 24.0 +0.8
             baz=110,SNR=5.5
L22K  Petersville      63.32 334  IAmb      IAmb       15 58 32.5
             comp=Z,84nm,1.1s
L22K                              IAMs_20   IAMs_20    16 28 41.7
             comp=Z,1µm,20.0s
R18K  Karluk           63.34 328  P         P          15 58 24.8 +1.0
             baz=107
Q19K  Cape Douglas,    63.36 330  P         P          15 58 24.8 +0.8
             baz=108
AY03  Cochrane         63.37 165  P         P          15 58 25.3 +1.3
AY03                              IAmb      IAmb       15 58 26.5
             comp=Z,79nm,1.1s
AY03                              IAMs_20   IAMs_20    16 18 33.5
             comp=Z,3µm,21.0s
SPU   Mount Spurr      63.38 332  IAmb      IAmb       15 58 31.8
             comp=Z,64nm,0.8s
P19K  Oil Pt           63.39 330  P         P          15 58 25.6 +1.5
             baz=109,SNR=9.4
G25K  Bearman Lake     63.41 339  P         P          15 58 26.1 +2.0
             baz=120,SNR=17
SKT   Skwentna         63.44 333  P         P          15 58 26.1 +1.7
             baz=112,SNR=28
N20K  Mount Spurr      63.45 332  P         P          15 58 26.3 +1.7
             baz=111,SNR=7.9
SPCR  Spurr Chakacha   63.45 332  P         P          15 58 26.7 +2.1
             baz=111,SNR=7.8
ILSW  Iliamna Southw   63.46 331  IAmb      IAmb       15 58 32.5
             comp=Z,100nm,0.9s
CHIR  Chirikof Islan   63.47 326  P         P          15 58 26.4 +1.7
             baz=105
NEA2  Nenana           63.49 336  IAmb      IAmb       15 58 31.8
             comp=Z,117nm,1.3s
NEA2                              IAMs_20   IAMs_20    16 28 27.7
             comp=Z,2µm,19.0s
NEA2  Nenana           63.49 336  P         P          15 58 26.7 +2.0
             baz=116,SNR=26
TRF   Thorofare Moun   63.49 335  P         P          15 58 26.7 +1.8
             baz=114,SNR=42
H24K  Noodor Dome      63.60 338  IAMs_20   IAMs_20    16 29 45.4
             comp=Z,2µm,18.0s
H24K  Noodor Dome      63.60 338  P         P          15 58 27.4 +1.9
             baz=117,SNR=65
TIAR  Tiarei           63.65 242  eP        P          15 58 27.5 +1.0
             comp=Z,367nm,1.4s
TIAR                              eS        S          16 06 53.2 -7.5
             comp=Z,3µm,26.7s
TIAR  Tiarei           63.65 242  eLR       LR         16 17 17.0
             comp=Z,3µm,23.1s
TVO   Taravao          63.66 242  eS        S          16 06 56.3 -4.7
             comp=Z,790nm,27.8s
TVO   Taravao          63.66 242  eLR       LR         16 17 18.3
             comp=Z,525nm,22.3s
F25K  Christian Rive   63.68 340  IAmb      IAmb       15 58 33.9
             comp=Z,100nm,1.0s
F25K                              IAMs_20   IAMs_20    16 29 46.2
             comp=Z,3µm,18.0s
F25K  Christian Rive   63.68 340  P         P          15 58 28.1 +2.1
             baz=120,SNR=50
ANGG  Ammassalik, Gr   63.70  22  IAmb      IAmb       15 58 26.0
             comp=Z,36nm,0.7s
KTH   Kantishna Hill   63.79 335  IAmb      IAmb       15 58 34.3
             comp=Z,92nm,1.0s
KTH                               IAMs_20   IAMs_20    16 25 40.0
             comp=Z,2µm,19.0s
I23K  Minto, Yukon-K   63.84 337  IAMs_20   IAMs_20    16 31 21.0
             comp=Z,2µm,18.0s
I23K  Minto, Yukon-K   63.84 337  P         P          15 58 29.2 +2.2
             baz=116,SNR=74
PPT   Papeete          63.85 242  LR        LR         16 19 25.5
             comp=Z,2µm,18.0s,baz=69,slow=30
G24K  Hadweenzic Riv   63.86 339  IAMs_20   IAMs_20    16 28 51.2
             comp=Z,2µm,18.0s
G24K  Hadweenzic Riv   63.86 339  P         P          15 58 29.2 +2.0
             baz=118,SNR=48
PPT2  Papeete2         63.86 242  eP        P          15 58 23.5 -4.5
             comp=Z,388nm,25.5s
PPT2  Papeete2         63.86 242  ePP       PP         16 00 50.0 +1.4
             comp=Z,187nm,26.8s
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PPT2                              eS        S          16 07 06.0 +2.5
             comp=Z,1µm,27.0s
PPT2                              eSS       SS         16 11 08.9 -3.2
             comp=Z,534nm,26.2s
PPT2                              eLQ       LQ         16 14 44.7
             comp=Z,4µm,31.5s
PPT2                              eLR       LR         16 17 14.9
             comp=Z,3µm,24.2s
PPT2                              eLR       LR         16 17 21.8
             comp=Z,2µm,24.5s
PAE   Paea             63.90 242  eP        P          15 58 28.8 +0.7
             comp=Z,54nm,1.4s
PAE                               eS        S          16 06 55.9 -7.8
             comp=Z,184nm,23.0s
PAE   Paea             63.90 242  eLR       LR         16 17 24.3
             comp=Z,335nm,21.2s
E25K  Arctic Village   63.92 341  IAMs_20   IAMs_20    16 28 44.6
             comp=Z,2µm,19.0s
E25K  Arctic Village   63.92 341  P         P          15 58 29.3 +1.8
             baz=121,SNR=66
Q18K  Katmai Hardscr   63.95 329  P         P          15 58 29.6 +1.7
             baz=107,SNR=22
ACHA  Angle Creek He   63.98 329  IAmb      IAmb       15 58 37.4
             comp=Z,70nm,1.3s
BPAW  Bear Paw Mtn.    64.04 336  IAMs_20   IAMs_20    16 28 36.4
             comp=Z,2µm,19.0s
BPAW  Bear Paw Mtn.    64.04 336  P         P          15 58 30.3 +2.0
             baz=113
PPLA  Purkeypile       64.07 334  IAmb      IAmb       15 58 36.5
             comp=Z,145nm,1.2s
PPLA  Purkeypile       64.07 334  P         P          15 58 30.2 +1.5
             baz=112,SNR=17
O19K  Port Alsworth    64.09 331  IAMs_20   IAMs_20    16 31 02.5
             comp=Z,3µm,19.0s
O19K  Port Alsworth    64.09 331  P         P          15 58 30.7 +2.0
             baz=108,SNR=8.3
M20K  Styx River       64.11 333  IAMs_20   IAMs_20    16 29 22.4
             comp=Z,2µm,18.0s
M20K  Styx River       64.11 333  P         P          15 58 29.8 +0.8
             baz=110
TULEG Thule            64.13   6  P         P          15 58 28.8  0.0
TULEG                             IAmb      IAmb       15 58 31.6
             comp=Z,76nm,1.1s
C27K  Jago River       64.15 342  IAMs_20   IAMs_20    16 31 16.5
             comp=Z,3µm,19.0s
C27K  Jago River       64.15 342  P         P          15 58 30.5 +1.4
             baz=123,SNR=109
Q17K  Contact Creek    64.28 329  P         P          15 58 31.6 +1.5
             baz=106
P18K  Big Mountain,    64.28 330  IAmb      IAmb       15 58 37.7
             comp=Z,62nm,0.8s
P18K                              IAMs_20   IAMs_20    16 31 47.6
             comp=Z,3µm,19.0s
P18K  Big Mountain,    64.28 330  P         P          15 58 30.7 +0.6
             baz=107,SNR=8.3
R17L  Mt. Peulik Vol   64.34 328  P         P          15 58 32.3 +1.8
             baz=105,SNR=5.1
N19K  Bonanza Creek    64.36 331  P         P          15 58 32.0 +1.3
             baz=109,SNR=21
F24K  Squaw Lake       64.39 340  IAmb      IAmb       15 58 38.6
             comp=Z,112nm,1.4s
F24K  Squaw Lake       64.39 340  P         P          15 58 32.5 +1.9
             baz=118,SNR=28
O18K  Koktuh Hills     64.41 330  P         P          15 58 33.2 +2.4
             baz=107,SNR=24
CHUM  Lake Minchumin   64.49 335  P         P          15 58 33.0 +1.7
             baz=112,SNR=17
C26K  Camden Bay       64.66 343  P         P          15 58 33.8 +1.5
             baz=122
G23K  Bananza Creek    64.77 338  IAmb      IAmb       15 58 40.8
             comp=Z,126nm,1.4s
G23K                              IAMs_20   IAMs_20    16 31 56.3
             comp=Z,2µm,21.0s
G23K  Bananza Creek    64.77 338  P         P          15 58 34.2 +1.1
             baz=116
Q16K  King Salmon      64.78 329  P         P          15 58 34.8 +1.5
             baz=106
D25K  Kavik River      64.79 342  IAMs_20   IAMs_20    16 31 46.3
             comp=Z,2µm,18.0s
D25K  Kavik River      64.79 342  P         P          15 58 35.0 +1.7
             baz=120,SNR=104
P17K  Kvichak River    64.81 329  P         P          15 58 34.6 +1.2
P17K  Kvichak River    64.81 329  P         P          15 58 34.7 +1.3
             baz=106,SNR=11
E24K  Your Creek       64.85 340  IAMs_20   IAMs_20    16 30 30.2
             comp=Z,3µm,19.0s
E24K  Your Creek       64.85 340  P         P          15 58 35.1 +1.4
             baz=118
I21K  Tanana           64.86 336  IAmb      IAmb       15 58 41.1
             comp=Z,83nm,1.0s
I21K                              IAMs_20   IAMs_20    16 31 44.1
             comp=Z,2µm,20.0s
I21K  Tanana           64.86 336  P         P          15 58 34.9 +1.2
             baz=113
H22K  Ishtalitna Cre   64.92 337  IAmb      IAmb       15 58 41.1
             comp=Z,137nm,1.3s
H22K                              IAMs_20   IAMs_20    16 31 39.4
             comp=Z,3µm,19.0s
H22K  Ishtalitna Cre   64.92 337  P         P          15 58 35.2 +1.1
             baz=114,SNR=54
L19K  White Mountain   64.98 333  IAmb      IAmb       15 58 41.8
             comp=Z,47nm,1.0s
L19K  White Mountain   64.98 333  P         P          15 58 35.7 +1.2
             baz=109,SNR=6.6
N18K  Kilae Creek      64.98 331  IAmb      IAmb       15 58 42.2
             comp=Z,77nm,0.9s
N18K  Kilae Creek      64.98 331  P         P          15 58 36.1 +1.5
             baz=107
K20K  Telida           65.03 334  P         P          15 58 35.8 +0.9
             baz=110,SNR=43
COLD  Coldfoot         65.06 339  IAmb      IAmb       15 58 43.3
             comp=Z,129nm,1.3s
COLD                              IAMs_20   IAMs_20    16 29 13.9
             comp=Z,3µm,20.0s
COLD  Coldfoot         65.06 339  P         P          15 58 36.5 +1.6
             baz=116,SNR=50
M18K  Stony River      65.19 332  P         P          15 58 37.7 +1.8
             baz=108
E23K  Chandalar        65.22 340  IAMs_20   IAMs_20    16 30 10.2
             comp=Z,2µm,20.0s
E23K  Chandalar        65.22 340  P         P          15 58 37.9 +1.8
             baz=116
O17K  Koliganek Bris   65.30 330  P         P          15 58 38.6 +2.1
             baz=106
J20K  Nowinta River    65.35 335  IAmb      IAmb       15 58 44.3
             comp=Z,181nm,1.5s
J20K                              IAMs_20   IAMs_20    16 31 38.2
             comp=Z,2µm,21.0s
J20K  Nowinta River    65.35 335  P         P          15 58 39.2 +2.3
             baz=110,SNR=38
H21K  Melozitna Rive   65.37 337  IAmb      IAmb       15 58 43.9
             comp=Z,125nm,1.4s
H21K                              IAMs_20   IAMs_20    16 31 33.3
             comp=Z,2µm,18.0s
H21K  Melozitna Rive   65.37 337  P         P          15 58 38.8 +1.8
             baz=112
CHNA  Chernabura Isl   65.45 324  P         P          15 58 39.8 +2.1
             baz=101
D24K  Happy Valley     65.47 341  IAMs_20   IAMs_20    16 30 16.0
             comp=Z,2µm,20.0s
D24K  Happy Valley     65.47 341  P         P          15 58 39.7 +2.1
             baz=118
TOLK  Toolik Lake Re   65.47 340  P         P          15 58 39.6 +2.0
             baz=117,SNR=46
P16K  Nushagak River   65.54 329  P         P          15 58 40.3 +2.1
             baz=104
N17K  Nushagak Hills   65.55 331  IAmb      IAmb       15 58 46.3
             comp=Z,90nm,1.0s
N17K  Nushagak Hills   65.55 331  P         P          15 58 40.2 +2.0
             baz=106
C24K  Franklin Bluff   65.70 342  P         P          15 58 41.2 +2.2
             baz=118
I20K  Naaghedeneel     65.70 336  IAMs_20   IAMs_20    16 30 21.7
             comp=Z,2µm,21.0s
I20K  Naaghedeneel     65.70 336  P         P          15 58 40.5 +1.4
             baz=110,SNR=32
S14K  Fog Glacier      65.72 326  P         P          15 58 41.5 +1.9
             baz=102
O16K  Kokwok River B   65.74 330  IAmb      IAmb       15 58 47.3
             comp=Z,100nm,1.3s
O16K  Kokwok River B   65.74 330  P         P          15 58 41.5 +2.1
             baz=105
L18K  Granite Mounta   65.81 333  IAmb      IAmb       15 58 47.9
             comp=Z,139nm,1.3s
L18K  Granite Mounta   65.81 333  P         P          15 58 41.2 +1.4
             baz=107,SNR=16
IMAR  Indian Mountai   65.85 337  P         P          15 58 41.8 +1.7
F22K  John River       65.87 339  P         P          15 58 41.8 +1.6
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        baz=114
J19K   Poorman           65.90 335   IAMs_20  IAMs_20  16 29 44.8
        comp=Z,2µm,19.0s
J19K   Poorman           65.90 335   P        P        15 58 41.2 +0.8
        baz=109,SNR=44
M17K   Holitna River     65.91 332   IAmb     IAmb     15 58 48.2
        comp=Z,59nm,0.8s
M17K   Holitna River     65.91 332   P        P        15 58 41.2 +0.6
        baz=106
G21K   Allakaket         65.96 338   IAMs_20  IAMs_20  16 32 21.9
        comp=Z,3µm,19.0s
G21K   Allakaket         65.96 338   P        P        15 58 42.4 +1.6
        baz=112
D23K   Nanushuk River    65.98 340   P        P        15 58 41.9 +1.0
        baz=116
E22K   Anaktuvuk Pass    66.00 339   IAMs_20  IAMs_20  16 30 08.7
        comp=Z,2µm,20.0s
E22K   Anaktuvuk Pass    66.00 339   P        P        15 58 42.5 +1.4
        baz=114,SNR=85
SDPT   Sand Point        66.05 325   P        P        15 58 43.4 +1.9
        baz=101
H20K   Anotleneega Mo    66.11 336   P        P        15 58 43.3 +1.5
        baz=110
J18K   Innoko River      66.19 334   IAmb     IAmb     15 58 49.9
        comp=Z,38nm,0.8s
J18K                                 IAMs_20  IAMs_20  16 30 39.6
        comp=Z,3µm,19.0s
J18K   Innoko River      66.19 334   P        P        15 58 44.3 +2.0
        baz=108
F21K   Alatna River      66.22 338   IAMs_20  IAMs_20  16 32 42.7
        comp=Z,3µm,18.0s
F21K   Alatna River      66.22 338   P        P        15 58 44.4 +1.9
        baz=112,SNR=129
N16K   Nishlik Lake      66.29 330   P        P        15 58 44.9 +1.9
        baz=104
TBI    Tubuai            66.34 237  eP        P        15 58 42.9 -1.0
        comp=Z,1µm,29.0s
TBI    Tubuai            66.34 237  ePP       PP       16 01 15.3 +5.1
        comp=Z,576nm,27.2s
TBI                                 eS        S        16 07 34.8 +1.3
        comp=Z,4µm,26.2s
TBI                                 eSS       SS       16 11 41.8 -8.6
        comp=Z,3µm,34.8s
TBI                                 eLQ       LQ       16 15 45.5
        comp=Z,4µm,26.5s
TBI                                 eLR       LR       16 18 37.8
        comp=Z,15µm,26.0s
TBI                                 eLR       LR       16 18 40.0
        comp=Z,2µm,22.5s
C23K   Itkillik River    66.34 341   P        P        15 58 44.9 +1.7
        baz=116
O15K   Ungalikthiuk R    66.50 329   IAmb     IAmb     15 58 52.1
        comp=Z,154nm,1.3s
O15K   Ungalikthiuk R    66.50 329   P        P        15 58 46.4 +2.0
        baz=103
L17K   Donlin            66.50 332   P        P        15 58 45.8 +1.5
        baz=106
M16K   Timber Creek      66.52 331   IAmb     IAmb     15 58 52.5
        comp=Z,53nm,0.8s
M16K   Timber Creek      66.52 331   P        P        15 58 46.3 +1.9
        baz=104
D22K   Ayikyak River     66.60 340   P        P        15 58 46.2 +1.3
        baz=114,SNR=68
GCSA   Galena City Sc    66.66 335   P        P        15 58 47.0 +1.8
        baz=108,SNR=5.7
K17K   Iditarod          66.67 333   IAmb     IAmb     15 58 52.4
        comp=Z,66nm,0.8s
K17K                                 IAMs_20  IAMs_20  16 31 46.3
        comp=Z,3µm,20.0s
K17K   Iditarod          66.67 333   P        P        15 58 47.0 +1.6
        baz=106
H19K   Roundabout Mou    66.74 336   IAMs_20  IAMs_20  16 30 37.4
        comp=Z,3µm,21.0s
H19K   Roundabout Mou    66.74 336   P        P        15 58 47.4 +1.6
        baz=109,SNR=50
SUMG   Summit            66.80  15   P        P        15 58 46.2 -0.4
SUMG                                 IAmb     IAmb     15 58 51.0
        comp=Z,70nm,0.9s
SUMG   Summit            66.80  15   P        P        15 58 46.2 -0.4
SUMG                                 pmax     pmax
        comp=Z,70nm,0.9s
SUMG                                 MLR      MLR
        comp=Z,9µm,18.0s
N15K   Kwethluk River    66.85 330   P        P        15 58 48.7 +2.1
        baz=103
E21K   Killik River      66.86 339   IAMs_20  IAMs_20  16 33 00.3
        comp=Z,3µm,20.0s
E21K   Killik River      66.86 339   P        P        15 58 47.5 +1.0
        baz=112
L16K   Owhat River       66.93 332   IAmb     IAmb     15 58 55.1
        comp=Z,72nm,0.9s
L16K   Owhat River       66.93 332   P        P        15 58 48.6 +1.5
        baz=104,SNR=15
F20K   Avaraart Lake     66.97 338   IAMs_20  IAMs_20  16 33 14.4
        comp=Z,3µm,18.0s
F20K   Avaraart Lake     66.97 338   P        P        15 58 47.8 +0.6
        baz=110
S12K   Black Hills       67.00 325   P        P        15 58 48.3 +0.6
        baz=99
G19K   Purcell Mounta    67.18 337   IAMs_20  IAMs_20  16 33 21.4
        comp=Z,2µm,19.0s
G19K   Purcell Mounta    67.18 337   P        P        15 58 49.2 +0.6
        baz=108,SNR=72
J17K   VABM Dome         67.19 333   IAmb     IAmb     15 58 55.9
        comp=Z,30nm,0.7s
J17K   VABM Dome         67.19 333   P        P        15 58 50.2 +1.5
        baz=105
O14K   Tigyukauivet M    67.23 329   P        P        15 58 50.2 +1.1
        baz=102
M15K   Kasigluk River    67.26 330   P        P        15 58 50.4 +1.2
        baz=103
H18K   Honhosa River     67.39 335   IAmb     IAmb     15 58 58.0
        comp=Z,137nm,1.4s
H18K                                 IAMs_20  IAMs_20  16 32 24.9
        comp=Z,2µm,20.0s
H18K   Honhosa River     67.39 335   P        P        15 58 51.5 +1.6
        baz=107
C21K   Knifeblade Rid    67.40 340   P        P        15 58 51.2 +1.2
        baz=112,SNR=28
B22K   Teshekpuk Lake    67.43 341   P        P        15 58 51.4 +1.3
        baz=114
B21K   Ikpikpuk River    67.53 341   P        P        15 58 51.8 +1.2
        baz=112
E20K   Nigu River        67.56 339   P        P        15 58 53.2 +2.2
        baz=110,SNR=56
N14K   Kuskokwak Cree    67.58 330   P        P        15 58 52.9 +1.7
        baz=102
FALS   False Pass        67.63 324   P        P        15 58 53.0 +1.4
        baz=98
E19K   Redstone River    67.66 338   IAmb     IAmb     15 58 59.0
        comp=Z,193nm,1.7s
E19K                                 IAMs_20  IAMs_20  16 33 28.4
        comp=Z,3µm,18.0s
E19K   Redstone River    67.66 338   P        P        15 58 52.9 +1.3
        baz=109,SNR=26
F19K   Shaleruckik Mo    67.66 337   IAMs_20  IAMs_20  16 32 30.0
        comp=Z,2µm,18.0s
F19K   Shaleruckik Mo    67.66 337   P        P        15 58 53.0 +1.4
        baz=108
G18K   Tagagawik         67.72 336   IAmb     IAmb     15 59 00.9
        comp=Z,165nm,1.4s
G18K                                 IAMs_20  IAMs_20  16 31 16.6
        comp=Z,3µm,20.0s
G18K   Tagagawik         67.72 336   P        P        15 58 53.7 +1.7
        baz=107,SNR=31
J16K   Anvik River       67.83 333   IAMs_20  IAMs_20  16 30 35.0
        comp=Z,3µm,19.0s
J16K   Anvik River       67.83 333   P        P        15 58 54.8 +2.1
        baz=104,SNR=33
L15K   Ungalak Mounta    67.86 331   P        P        15 58 54.1 +1.2
        baz=102
D20K   Etivluk River     67.86 339   IAMs_20  IAMs_20  16 32 21.9
        comp=Z,3µm,21.0s
D20K   Etivluk River     67.86 339   P        P        15 58 54.3 +1.4
        baz=110,SNR=97
M14K   Bethel            67.88 330   P        P        15 58 54.7 +1.6
        baz=102,SNR=26
H17K   Granite Mounta    67.96 335   IAmb     IAmb     15 59 02.8
        comp=Z,120nm,1.2s
H17K                                 IAMs_20  IAMs_20  16 31 13.1
        comp=Z,3µm,20.0s
H17K   Granite Mounta    67.96 335   P        P        15 58 55.1 +1.6
        baz=105
K15K   Wolf Creek Mou    68.01 332   P        P        15 58 55.0 +1.1
        baz=103
I17K   Unalakleet        68.02 334   IAmb     IAmb     15 59 02.2
        comp=Z,62nm,0.8s
I17K   Unalakleet        68.02 334   P        P        15 58 55.4 +1.5
        baz=104,SNR=11
A22K   Sinclair Lake     68.17 342   P        P        15 58 56.0 +1.3
        baz=112
F18K   Selawik           68.31 337   P        P        15 58 57.3 +1.6
        baz=106,SNR=10
D19K   Kuna River        68.31 339   P        P        15 58 56.7 +0.9
        baz=108
L14K   Kuka Creek        68.35 331   IAmb     IAmb     15 59 04.1
        comp=Z,73nm,0.9s
L14K                                 IAMs_20  IAMs_20  16 29 40.1
        comp=Z,3µm,20.0s
L14K   Kuka Creek        68.35 331   P        P        15 58 57.8 +1.8
        baz=101,SNR=6.5
G17K   Kiwalik Mounta    68.40 336   P        P        15 58 57.7 +1.4
        baz=105
B20K   Meade River       68.49 341   P        P        15 58 58.3 +1.6
        baz=110
M13K   Dall Lake         68.49 330   P        P        15 58 58.1 +1.2
        baz=100
A21K   Barrow            68.78 342   P        P        15 58 59.8 +1.3
        baz=111,SNR=19
H16K   Elim              68.85 334   P        P        15 59 00.5 +1.4
        baz=103,SNR=35
F17K   Baldwin Pennin    68.88 336   IAmb     IAmb     15 59 07.3
        comp=Z,180nm,1.8s
F17K                                 IAMs_20  IAMs_20  16 30 41.3
        comp=Z,1µm,22.0s
F17K   Baldwin Pennin    68.88 336   P        P        15 59 01.0 +1.7
        baz=104,SNR=11
E18K   Tukpahlearik C    68.89 338   IAmb     IAmb     15 59 07.5
        comp=Z,73nm,1.2s
E18K                                 IAMs_20  IAMs_20  16 33 21.4
        comp=Z,2µm,19.0s
E18K   Tukpahlearik C    68.89 338   P        P        15 59 01.2 +1.9
        baz=106,SNR=19
C19K   Lookout Ridge     69.01 339   P        P        15 59 01.5 +1.5
        baz=107
J14K   Nanvaranak Lak    69.03 332   P        P        15 59 01.4 +1.2
        baz=101
G16K   Koyuk River       69.07 335   IAmb     IAmb     15 59 08.9
        comp=Z,180nm,1.6s
G16K   Koyuk River       69.07 335   P        P        15 59 01.9 +1.5
        baz=103
E17K   Hotham Inlet      69.26 337   P        P        15 59 03.1 +1.5
        baz=104,SNR=114
UNV    Unalaska Valle    69.31 323   P        P        15 59 04.9 +2.8
UNV    Unalaska Valle    69.31 323   P        P        15 59 04.0 +1.8
        baz=95
K13K   Kusilvak Mount    69.38 331   IAmb     IAmb     15 59 10.7
        comp=Z,92nm,1.2s
K13K                                 IAMs_20  IAMs_20  16 30 24.3
        comp=Z,2µm,20.0s
K13K   Kusilvak Mount    69.38 331   P        P        15 59 04.3 +1.9
        baz=100
C18K   Utukok River      69.44 339   IAmb     IAmb     15 59 10.8
        comp=Z,83nm,1.1s
C18K   Utukok River      69.44 339   P        P        15 59 04.4 +1.7
        baz=105
G15K   Niukluk           69.68 335   P        P        15 59 05.7 +1.5
        baz=101,SNR=7.1
A19K   Wainwright        69.82 340   P        P        15 59 06.5 +1.5
        baz=106
B18K   Kokolik River     69.84 339   P        P        15 59 06.7 +1.5
        baz=105
D17K   Noatak River      69.88 338   P        P        15 59 06.9 +1.4
        baz=103,SNR=35
M11K   Mekoryuk          69.89 330   P        P        15 59 06.9 +1.3
        baz=98
RDOG   Red Dog Mine      69.90 338   IAmb     IAmb     15 59 13.8
        comp=Z,158nm,1.4s
RDOG   Red Dog Mine      69.90 338   P        P        15 59 06.7 +1.2
        baz=104,SNR=12
BORG   Borgarnes         69.93  26   LR       LR       16 29 24.0
        comp=Z,1µm,18.6s,baz=264,slow=36
F15K   North Star Dit    70.07 335   IAMs_20  IAMs_20  16 31 06.1
        comp=Z,3µm,20.0s
F15K   North Star Dit    70.07 335   P        P        15 59 08.4 +1.8
        baz=101
C17K   DeLong Mountai    70.10 338   P        P        15 59 07.5 +0.7
        baz=103,SNR=16
ANM    Nome              70.16 334   IAmb     IAmb     15 59 15.1
        comp=Z,47nm,0.8s
ANM                                  IAMs_20  IAMs_20  16 30 10.4
        comp=Z,2µm,20.0s
ANM    Nome              70.16 334   P        P        15 59 08.5 +1.3
        baz=100,SNR=8.6
NIKH   Nikolski High     70.65 322   P        P        15 59 12.0 +1.6
        baz=93
F14K   Arctic Creek      70.71 335   P        P        15 59 11.3 +0.8
        baz=99,SNR=6.2
C16K   Lisburne Hills    70.84 338   IAmb     IAmb     15 59 19.3
        comp=Z,74nm,1.0s
C16K                                 IAMs_20  IAMs_20  16 30 55.1
        comp=Z,3µm,21.0s
C16K   Lisburne Hills    70.84 338   P        P        15 59 12.8 +1.5
        baz=101
SCO    Scoresbysund      70.89  20   P        P        15 59 11.4 -0.1
SCO    Scoresbysund      70.89  20   P        P        15 59 11.4 -0.1
SCO                                  pmax     pmax
        comp=Z,18nm,0.9s
SCO                                  MLR      MLR
        comp=Z,8µm,18.0s
P08K   Saint George I    71.26 325   P        P        15 59 15.8 +1.8
        baz=93
USHA   Ushuaia           71.37 165   LR       LR       16 25 18.2
        comp=Z,2µm,19.8s,baz=333,slow=31
TNA    Tin City          71.38 335   IAmb     IAmb     15 59 23.9
        comp=Z,104nm,1.1s
TNA                                  IAMs_20  IAMs_20  16 30 22.7
        comp=Z,2µm,19.0s
TNA    Tin City          71.38 335   P        P        15 59 16.0 +1.5
        baz=98
MG01   Puerto William    71.66 165   IAMs_20  IAMs_20  16 25 26.9
        comp=Z,3µm,19.0s
SPIA   Saint Paul Isl    71.68 326   P        P        15 59 17.9 +1.4
        baz=93
EFI    East Falkland     71.82 158   IAMs_20  IAMs_20  16 28 34.0
        comp=Z,2µm,18.0s
GAMB   Gambell           72.81 333   IAMs_20  IAMs_20  16 28 30.8
        comp=Z,3µm,22.0s
GAMB   Gambell           72.81 333   P        P        15 59 24.5 +1.3
        baz=94
MBO    M'Bour            73.46  79   IAMs_20  IAMs_20  16 27 29.7
        comp=Z,3µm,21.0s
RAR    Rarotonga         74.12 243   LR       LR       16 24 36.3
        comp=Z,1µm,18.3s,baz=50,slow=30
VAL    Valentia          74.92  39   P        P        15 59 35.9 +0.1
IGLA   Glengowla, Co     75.37  38   P        P        15 59 38.4 +0.1
JMIC   Jan Mayen         75.38  20   LR       LR       16 33 53.6
        comp=Z,4µm,19.4s,baz=260,slow=37
IDGL   Inch Island, C    76.35  36   P        P        15 59 43.9  0.0
IWEX   Carrickbyrne,     77.02  39   P        P        15 59 47.9 +0.1
PSBE   So Bento          77.03  52  eP        P        15 59 48.4 +0.2
ILTH   Belurgan, Co L    77.12  37   P        P        15 59 48.3  0.0
ILTH   Belurgan, Co L    77.12  37  eP        P        15 59 47.9 -0.4
ILTH                                 IAmb     IAmb     15 59 49.0
        comp=Z,16nm,0.8s
PGAV   Gavieira, Arco    77.13  50  eP        P        15 59 48.5 -0.3
PGAV                                i IAmb    IAmb     15 59 49.4
        comp=Z,115nm,1.6s
PGAV                                eLR       LR       16 25 45.8
PGAV                                i IAMs_20 IAMs_20  16 28 02.6
        comp=Z,2µm,22.0s
DSB    Dublin            77.18  38   P        P        15 59 48.6  0.0
PCAS   Casmilo, Conde    77.19  52  eP        P        15 59 49.2 +0.2
PCAS                                i IAmb    IAmb     15 59 50.3
        comp=Z,152nm,1.5s
KPL    Plockton          77.20  34  eP        P        15 59 48.6  0.0
KPL                                  IAmb     IAmb     15 59 50.1
        comp=Z,63nm,0.8s
PFVI   Vila Bisbo        77.31  55   IAmb     IAmb     15 59 51.3
        comp=Z,118nm,1.1s
PFVI   Vila Bisbo        77.31  55  eP        P        15 59 50.2 +0.5
PCAB   Cabril            77.34  50  eP        P        15 59 49.3 -0.5
MORF   Marmelete         77.42  54  eP        P        15 59 50.5 +0.1
MORF                                 IAmb     IAmb     15 59 51.6
        comp=Z,55nm,1.0s
MORF   Marmelete         77.42  54  eP        P        15 59 51.0 +0.5
MORF   Marmelete         77.42  54  eP        P        15 59 50.5 +0.1
LAWE   Loch Awe, Argy    77.44  35  eP        P        15 59 50.0  0.0
LAWE                                 IAmb     IAmb     15 59 51.5
        comp=Z,21nm,0.8s
MOE    Montemor          77.50  53  eP        P        15 59 51.2 +0.4
MOE                                 i IAmb    IAmb     15 59 52.6
        comp=Z,87nm,1.8s
PSARD  Sardoal           77.50  52  eP        P        15 59 50.9 +0.1
PMTG   Montargil         77.53  53  eP        P        15 59 50.8 -0.1
PMTG                                i IAmb    IAmb     15 59 51.4
        comp=Z,71nm,1.1s
POLO   Lamas de Olo      77.56  50  eP        P        15 59 51.0 -0.1
POLO                                i IAmb    IAmb     15 59 52.8
        comp=Z,41nm,1.5s
PVIS   Viseu             77.56  51  eP        P        15 59 50.9 -0.2
PVRL   Vila Real         77.63  50  eP        P        15 59 51.8 +0.3
MESJ   Messejana         77.69  54  eP        P        15 59 52.0 +0.1
MESJ                                 IAmb     IAmb     15 59 53.3
        comp=Z,29nm,1.0s
MESJ   Messejana         77.69  54  eP        P        15 59 51.9 +0.1
MESJ   Messejana         77.69  54  eP        P        15 59 52.0 +0.1
PARRA  Arraiolos         77.70  53  eP        P        15 59 51.9  0.0
PARRA                               i IAmb    IAmb     15 59 53.7
        comp=Z,66nm,1.8s
EVO    Evora             77.76  53  eP        P        15 59 51.4 -0.9
EVO                                 i IAmb    IAmb     15 59 54.1
        comp=Z,85nm,1.8s
PCVE   Castro Verde      77.86  54  eP        P        15 59 53.3 +0.5
MTE    Manteigas         77.87  51   IAmb     IAmb     15 59 53.7
        comp=Z,47nm,0.9s
MTE    Manteigas         77.87  51  eP        P        15 59 52.5 -0.3
MTE                                 i IAmb    IAmb     15 59 53.8
        comp=Z,62nm,1.1s
MTE                                 eLR       LR       16 25 14.8
MTE                                 i IAMs_20 IAMs_20  16 33 34.5
        comp=Z,2µm,20.0s
PBEJ   Beja              77.94  54  eP        P        15 59 53.7 +0.5
PBEJ                                i IAmb    IAmb     15 59 55.2
        comp=Z,46nm,1.5s
GAL1   Galloway          77.98  36  eP        P        15 59 52.7 -0.4
GAL1                                 IAmb     IAmb     15 59 54.1
        comp=Z,29nm,0.7s
PCBR   Castelo Branco    78.00  52  eP        P        15 59 53.6 +0.1
PCBR                                i IAmb    IAmb     15 59 55.1
        comp=Z,85nm,1.6s
BIGH   Upper Bighouse    78.00  32  eP        P        15 59 53.9 +0.8
BIGH                                 IAmb     IAmb     15 59 55.0
        comp=Z,18nm,0.8s
PBDV   Barranco-do-Ve    78.00  54  eP        P        15 59 54.0 +0.4
PESTR  Estremoz          78.04  53  eP        P        15 59 53.7 -0.1
PESTR                               i IAmb    IAmb     15 59 54.8
        comp=Z,66nm,1.3s
PMRV   Marv??o           78.12  52  eP        P        15 59 54.2  0.0
PMRV                                i IAmb    IAmb     15 59 55.9
        comp=Z,46nm,1.6s
PMRV                                eLR       LR       16 25 16.0
PMRV                                i IAMs_20 IAMs_20  16 30 08.8
        comp=Z,2µm,22.0s
PVAQ   Vaqueiros         78.15  54   IAmb     IAmb     15 59 56.0
        comp=Z,46nm,1.0s
PVAQ   Vaqueiros         78.15  54  eP        P        15 59 54.9 +0.5
PVAQ                                eLR       LR       16 24 48.2
PVAQ                                i IAMs_20 IAMs_20  16 31 37.9
        comp=Z,2µm,20.0s
MVO    Moncorvo          78.16  50  eP        P        15 59 54.6 +0.2
MVO                                 eLR       LR       16 25 12.4
MVO                                 i IAMs_20 IAMs_20  16 36 38.0
        comp=Z,2µm,18.0s
INVG   Invergeldie, C    78.17  35  eP        P        15 59 54.0 -0.1
INVG                                 IAmb     IAmb     15 59 55.6
        comp=Z,54nm,0.8s
NEWG   New Galloway      78.22  36  eP        P        15 59 54.4  0.0
NEWG                                 IAmb     IAmb     15 59 55.7
        comp=Z,39nm,0.8s
PBRG   Braganca          78.28  50  eP        P        15 59 54.9 -0.2
PBRG                                i IAmb    IAmb     15 59 57.6
        comp=Z,67nm,1.7s
MCD    Coleburn Disti    78.46  33  eP        P        15 59 55.9 +0.2
MCD                                  IAmb     IAmb     15 59 57.1
        comp=Z,42nm,0.7s
PBAR   Barrancos         78.57  53  eP        P        15 59 56.8 +0.1
PBAR                                i IAmb    IAmb     15 59 58.0
        comp=Z,66nm,1.4s
EDI    Edinburgh         78.71  35  eP        P        15 59 56.4 -0.7
EDI                                  IAmb     IAmb     15 59 58.7
        comp=Z,40nm,0.8s
ESK    Eskdalemuir       78.78  36   P        P        15 59 57.5  0.0
ESK                                  IAmb     IAmb     15 59 58.7
        comp=Z,97nm,0.8s
ESK    Eskdalemuir       78.78  36  eP        P        15 59 57.4  0.0
ESK                                  IAmb     IAmb     15 59 59.0
        comp=Z,64nm,0.7s
ESK    Eskdalemuir       78.78  36   P        P        15 59 57.5  0.0
ESK                                  pmax     pmax
        comp=Z,97nm,0.9s
EKB    Eskdalemuir       78.79  36   IAmb     IAmb     15 59 58.8
        comp=Z,97nm,0.8s
EKA    Eskdalemuir Ar    78.81  36   P        P        15 59 57.3 -0.3
        comp=Z,64nm,0.8s,baz=279,slow=5.9,SNR=81
EKA                                  LR       LR       16 35 15.0
        comp=Z,2µm,18.5s,baz=284,slow=36
        comp=Z,64nm,0.8s
DRUM   Mains of Drumt    78.96  34  eP        P        15 59 57.6 -0.8
DRUM                                 IAmb     IAmb     16 00 00.1
        comp=Z,62nm,0.8s
AVE    Averroes          79.01  58   IAmb     IAmb     16 00 00.9
        comp=Z,98nm,0.9s
HLM1   Long Mynd         79.37  38  eP        P        16 00 00.5 -0.3
HLM1                                 IAmb     IAmb     16 00 01.7
        comp=Z,22nm,0.7s
MCH1   Michaelchurch     79.37  39  eP        P        16 00 00.4 -0.4
KBS    Kingsbay          79.51  11   P        P        16 00 02.5 +1.4
KBS                                  IAmb     IAmb     16 00 05.6
        comp=Z,168nm,1.3s
KBS    Kingsbay          79.51  11  eP        P        16 00 04.1 +3.0
KBS    Kingsbay          79.51  11c iP        P        16 00 04.0 +2.9
MONM   Monmouth          79.52  39  eP        P        16 00 01.4 -0.2
MONM                                 IAmb     IAmb     16 00 03.7
        comp=Z,18nm,0.8s
EDMD   Edmundbyers       79.56  36  eP        P        16 00 02.0 +0.2
EDMD                                 IAmb     IAmb     16 00 03.2
        comp=Z,38nm,0.8s
HPK    Haverah Park      79.89  37  eP        P        16 00 03.8 +0.2
HPK                                  IAmb     IAmb     16 00 05.0
        comp=Z,23nm,0.7s
STRD   Stroud            79.92  39  eP        P        16 00 03.5 -0.2
STRD                                 IAmb     IAmb     16 00 04.9
        comp=Z,42nm,0.8s
LBWR   Ladybower, Pea    79.92  37  eP        P        16 00 04.3 +0.6
LBWR                                 IAmb     IAmb     16 00 05.8
        comp=Z,34nm,0.9s
PAB    San Pablo         80.43  52   P        P        16 00 06.7 -0.2
PAB    San Pablo         80.43  52   P        P        16 00 06.7 -0.2
PAB                                  pmax     pmax
        comp=Z,60nm,1.1s
SPA0   Spitsbergen Ar    80.59  11  eP        P        16 00 08.6 +1.6
SPITS  Spitsbergen Ar    80.59  11   P        P        16 00 07.4 +0.4
        comp=Z,26nm,0.9s,baz=258,slow=1.5,SNR=11
SPITS                                LR       LR       16 39 17.2
        comp=Z,7µm,18.8s,baz=266,slow=38
        comp=Z,26nm,0.9s
SPITS  Spitsbergen Ar    80.59  11   P        P        16 00 07.8 +0.8
SPITS                                pmax     pmax
        comp=Z,173nm,1.4s
SPB2   Spitsbergen Ar    80.59  11   IAmb     IAmb     16 00 10.5
        comp=Z,188nm,1.6s
ESDC   Sonseca Array     80.70  51   P        P        16 00 07.8 -0.5
        comp=Z,37nm,1.0s,baz=290,slow=5.8,SNR=99
ESDC                                 PKKPbc   PKKPbc   16 18 49.8 +1.2
        comp=Z,0.4nm,0.6s,baz=49,slow=1.7,SNR=4.8
ESDC                                 LR       LR       16 30 52.3
        comp=Z,2µm,20.6s,baz=283,slow=32
        comp=Z,37nm,1.0s
ESDC   Sonseca Array     80.70  51   P        P        16 00 08.0 -0.4
ESBB   Sonseca Array     80.70  51   IAmb     IAmb     16 00 09.9
        comp=Z,64nm,1.1s
HSPB   Hornsund (broa    80.85  13  eP        P        16 00 12.1 +3.7
HSPB                                eL        L        16 37 10.8
        comp=Z,6µm,20.5s
HSPB   Hornsund (broa    80.85  13  eP        P        16 00 11.5 +3.1
PMSA   Palmer Station    81.26 168   LR       LR       16 28 15.3
        comp=Z,1µm,19.8s,baz=306,slow=30
MD01   Midelt array s    81.28  58   P        P        16 00 11.1 -0.6
BILL   Bilibino          81.37 338   P        P        16 00 12.2 +1.0
BILL                                 IAmb     IAmb     16 00 20.5
        comp=Z,216nm,1.6s
BILL   Bilibino          81.37 338ceP         P        16 00 12.8 +1.5
BILL                                 pmax     pmax
        comp=Z,103nm,1.7s
MDT    Midelt            81.42  58   LR       LR       16 35 07.1
        comp=Z,665nm,18.1s,baz=294,slow=35
SUE    Sulen             81.88  29  eP        P        16 00 12.6 -1.5
FOO    Floro             81.88  29  eP        P        16 00 14.6 +0.6
BER    Bergen            82.31  30  eP        P        16 00 18.9 +2.6
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KMY   Karmoy           82.55  31 eP       P        16 00 18.0 +0.4
AKN   Aaknes           82.64  28 eP       P        16 00 19.2 +1.2
HOPE  Hope Point       82.89 150  P       P        16 00 19.8 +0.5
HOPE                              IAmb    IAmb     16 00 21.4
      comp=Z,110nm,1.1s
HOPE  Hope Point       82.89 150  P       P        16 00 19.8 +0.5
HOPE                              pmax    pmax
      comp=Z,110nm,1.1s
HOPEN Hopen            83.03  12 eP       P        16 00 22.7 +2.9
ODD1  Odda             83.06  30 eP       P        16 00 19.3  -1.1
BLS5  Blasjo           83.10  31 eP       P        16 00 21.3 +0.8
CART  Cartagena        83.37  53  IAMs_20 IAMs_20  16 32 58.9
      comp=Z,2µm,20.0s
LOF   Lofoten          83.45  21 eP       P        16 00 24.3 +2.2
OBBL  Beni Bahdel      83.58  56  P       P        16 00 24.0 +0.4
DOMB  Dombas           83.61  28 eP       P        16 00 24.6 +1.5
SKAR  Skarslia         83.65  29 eP       P        16 00 24.9 +1.5
VAGH  Vaagaholmen      83.84  23 eP       P        16 00 25.9 +1.8
STOK  Stokkvaagen      83.88  23 eP       P        16 00 26.0 +1.7
CEST  Esterri de Car   83.98  48  IAmb    IAmb     16 00 27.1
      comp=Z,35nm,1.0s
LEIR  Leirfjorden      83.99  23 eP       P        16 00 26.8 +1.9
NSS   Namsos           84.08  25 eP       P        16 00 26.5 +1.2
STEI  Steigen          84.12  21 eP       P        16 00 27.2 +1.7
UCC   Uccle            84.13  39  IAmb    IAmb     16 00 27.5
      comp=Z,49nm,1.1s
RAUS  Rausandaksla     84.23  23 eP       P        16 00 28.2 +2.1
FAUS  Fauske           84.34  22 eP       P        16 00 28.7 +2.0
DOU   Dourbes          84.45  40 dP       P        16 00 28.2 +0.6
      comp=Z,22nm,1.1s
DOU                              dPP      PP       16 03 37.8  -4.7
MOR8  Moi Rana         84.48  23 eP       P        16 00 29.4 +2.0
BMRD  Maredsous        84.50  40 dP       P        16 00 28.6 +0.8
ODJA  Bouhanifia       84.53  55  P       P        16 00 29.6 +1.2
KONO  Kongsberg        84.57  30  IAMs_20 IAMs_20  16 34 11.7
      comp=Z,2µm,21.0s
KONO  Kongsberg        84.57  30 eP       P        16 00 29.3 +1.3
KONO  Kongsberg        84.57  30ceP       P        16 00 27.7  -0.3
KONO                              pmax    pmax
      comp=Z,161nm,2.5s
NC204 NORSAR Array S   84.61  28  IAmb    IAmb     16 00 34.0
      comp=Z,37nm,1.1s
TRO   Tromso           84.67  19 eP       P        16 00 30.5 +2.3
BGES  Gesves           84.68  40 dP       P        16 00 29.2 +0.4
      comp=Z,36nm,1.0s
CORI  Orista           84.70  48  IAmb    IAmb     16 00 32.3
      comp=Z,88nm,1.2s
NBO00 NORSAR Array S   84.70  28  IAmb    IAmb     16 00 34.7
      comp=Z,141nm,1.4s
BCLA  Clavier          84.81  39 dP       P        16 00 29.6 +0.2
      comp=Z,26nm,0.9s
RCHB  Rochefort        84.83  40 dP       P        16 00 30.0 +0.5
      comp=Z,24nm,1.0s
NB2   NORSAR Subarra   84.90  28  P       P        16 00 30.9 +1.3
      comp=Z,369nm,2.5s,baz=289,slow=5.1
NB2   NORSAR Subarra   84.90  28  P       P        16 00 30.9 +1.3
      baz=289,slow=5.1
NOA   NORSAR Array B   84.90  28  P       P        16 00 30.9 +1.3
      comp=Z,17nm,0.9s,baz=290,slow=5.1,SNR=80
NOA                               LR      LR       16 38 46.8
      comp=Z,1µm,19.8s,baz=285,slow=36
      comp=Z,17nm,0.9s
NOA   NORSAR Array B   84.90  28  P       P        16 00 31.0 +1.3
BSTI  Sart Tilman      84.92  39 dP       P        16 00 31.0 +1.0
      comp=Z,7.1nm,0.9s
NB201 NORSAR Array S   84.93  28  IAmb    IAmb     16 00 35.9
      comp=Z,114nm,1.3s
BEBN  Eben Emael       84.94  39 dP       P        16 00 31.2 +1.2
OSL   Oslo             85.02  29 eP       P        16 00 32.5 +2.3
ESMB  Sidi M’hamed B   85.06  55  P       P        16 00 31.6 +0.6
NC405 NORSAR Array S   85.10  28  IAmb    IAmb     16 00 34.2
      comp=Z,124nm,1.5s
NC602 NORSAR Array S   85.15  29  IAmb    IAmb     16 00 34.6
      comp=Z,126nm,1.3s
NC602 NORSAR Array S   85.15  29 eP       P        16 00 32.5 +1.6
JETT  Jettan, Norway   85.17  19 eP       P        16 00 33.0 +2.2
MEM   Membach          85.19  39 dP       P        16 00 32.4 +1.1
BHOU  Houvegnez        85.26  39 dP       P        16 00 32.4 +0.7
      comp=Z,19nm,1.3s
BTNL  Ternell          85.27  39 dP       P        16 00 33.0 +1.2
EANR  'Ain N'Sour      85.38  54  P       P        16 00 33.4 +0.7
WLF   Walferdange      85.53  40  IAmb    IAmb     16 00 36.8
      comp=Z,77nm,1.2s
WLF   Walferdange      85.53  40 eP       P        16 00 34.2 +1.1
      comp=Z,24nm,0.9s,baz=289,slow=4.8
SSB   Saint Sauveur    85.64  45  IAmb    IAmb     16 00 35.0
      comp=Z,103nm,1.8s
BUG   Bochum--Univer   85.72  38 eP       P        16 00 35.7 +1.8
      comp=Z,26nm,0.9s,baz=289,slow=4.8
IBBN  Ibbenburen       85.77  37 eP       P        16 00 35.6 +1.5
      comp=Z,24nm,0.9s,baz=289,slow=4.8
EARB  Arib             86.01  54  P       P        16 00 36.0 +0.3
EHRZ  Djelida          86.11  54  P       P        16 00 36.6 +0.3
EBGR  Bougara          86.13  54  P       P        16 00 37.6 +1.2
KTK1  Kautokeino       86.31  19 eP       P        16 00 38.7 +2.1
HFS   Hagfors          86.36  29  P       P        16 00 37.2 +0.3
      comp=Z,16nm,0.7s,baz=209,slow=2.7,SNR=33
HFS                               LR      LR       16 39 19.1
      comp=Z,2µm,19.6s,baz=282,slow=36
      comp=Z,16nm,0.7s
KASTN Kahler Asten     86.48  38 eP       P        16 00 39.2 +1.5
      comp=Z,40nm,1.2s,baz=289,slow=4.8
ECH   Echery           86.58  41  IAmb    IAmb     16 00 40.6
      comp=Z,108nm,1.3s
EZEK  Zmalet El Emir   86.59  55  P       P        16 00 40.6 +1.9
AFDJ  Sidi Ladjel      86.68  55  P       P        16 00 40.4 +1.3
DBIC  Dimbokro         86.69  84  P       P        16 00 40.0 +0.6
      comp=Z,39nm,0.9s,baz=307,slow=3.6,SNR=35
DBIC                              LR      LR       16 36 31.0
      comp=Z,976nm,20.5s,baz=310,slow=34
      comp=Z,39nm,0.9s
DBIC  Dimbokro         86.69  84  P       P        16 00 38.6  -0.8
DBIC                              IAmb    IAmb     16 00 42.4
      comp=Z,85nm,1.1s
DBIC  Dimbokro         86.69  84  P       P        16 00 38.6  -0.8
DBIC                              pmax    pmax
      comp=Z,85nm,1.2s
BSEG  Bad Segeberg     86.74  35 eP       P        16 00 40.3 +1.4
      comp=Z,41nm,0.9s,baz=289,slow=4.8
ARA0  ARCESS Array S   86.75  18 eP       P        16 00 40.2 +1.6
ARCES ARCESS Array B   86.75  18  P       P        16 00 40.0 +1.3
      comp=Z,16nm,0.7s,baz=289,slow=4.5,SNR=33
ARCES                             LR      LR       16 40 31.9
      comp=Z,3µm,18.3s,baz=296,slow=36
      comp=Z,16nm,0.7s
ARCES ARCESS Array B   86.75  18  P       P        16 00 39.0 +0.3
ARCES                             IAmb    IAmb     16 00 42.4
      comp=Z,138nm,1.6s
ARCES ARCESS Array B   86.75  18  P       P        16 00 39.0 +0.3
ARCES                             pmax    pmax
      comp=Z,138nm,1.6s
TNS   Taunus Mts       86.80  39 eP       P        16 00 40.7 +1.4
      comp=Z,62nm,1.0s,baz=289,slow=4.8
ABRIN Birine           87.06  54  P       P        16 00 40.2  -0.7
KEV   Kevo             87.07  18  P       P        16 00 40.8 +0.6
KEV                               IAmb    IAmb     16 01 37.5
      comp=Z,62nm,1.3s
KEV   Kevo             87.07  18  P       P        16 00 40.8 +0.6
KEV                               pmax    pmax
      comp=Z,62nm,1.3s
KEV                               MLR     MLR
      comp=Z,3µm,20.0s
BNI   Bardonecchia     87.16  44  IAmb    IAmb     16 00 44.2
      comp=Z,128nm,1.4s
ADJB  Djebel Djouab    87.17  54  P       P        16 00 41.8 +0.3
BFO   Black Forest     87.29  41  P       P        16 00 41.4  -0.4
BFO                               IAmb    IAmb     16 00 43.6
      comp=Z,59nm,1.1s
BFO   Black Forest     87.29  41  P       P        16 00 41.4  -0.4
BFO                               pmax    pmax
      comp=Z,59nm,1.1s
BFO                               MLR     MLR
      comp=Z,2µm,18.0s
BFO   Black Forest     87.29  41 eP       P        16 00 42.5 +0.7
      comp=Z,28nm,1.0s,baz=289,slow=4.8
GTTG  Gottingen        87.30  38 eP       P        16 00 43.2 +1.5
      comp=Z,71nm,0.9s,baz=289,slow=4.8
CLZ   Clausthal        87.45  37 eP       P        16 00 43.6 +1.1
      comp=Z,31nm,0.8s,baz=289,slow=4.8
ASSE  Asse, Remlinge   87.53  37 eP       P        16 00 43.9 +1.3
      comp=Z,89nm,1.2s,baz=289,slow=4.8
AKET  Djebel Ketaf     87.54  54  P       P        16 00 45.1 +1.7
VADS  Vadso            87.55  17 eP       P        16 00 43.9 +1.4
UBBA  Unterbreizbach   87.55  38 eP       P        16 00 44.4 +1.6
      comp=Z,12nm,0.9s,baz=289,slow=4.8
ATKB  Taksebt          87.57  53  P       P        16 00 44.3 +1.0
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STU   Stuttgart        87.70  40  IAMs_20 IAMs_20  16 40 07.9
      comp=Z,2µm,21.0s
STU   Stuttgart        87.70  40 eP       P        16 00 44.9 +1.2
      comp=Z,71nm,0.8s,baz=289,slow=4.8
FLTG  Flechtingen      87.79  37 eP       P        16 00 45.3 +1.3
      comp=Z,25nm,0.8s,baz=289,slow=4.8
ABSD  Ouled Sidi Bra   87.95  54  P       P        16 00 46.5 +1.3
CTCHA Tamokra          88.04  53  P       P        16 00 46.7 +1.1
RGN   Rugen            88.19  34  IAMs_20 IAMs_20  16 39 26.4
      comp=Z,2µm,20.0s
CAZD  Ain Tagrout      88.50  53  P       P        16 00 49.1 +1.2
TUE   Stuetta          88.52  42  P       P        16 00 48.7 +0.8
      comp=Z,378nm,1.2s
MOX   Moxa             88.58  38 eP       P        16 00 49.2 +1.3
      comp=Z,14nm,0.9s,baz=289,slow=4.8
MOX                              eL       L        16 42 11.6
      comp=Z,1µm,18.8s
DAVA  Damuels          88.61  42 i PcP    PcP      16 00 49.8  -0.1
      comp=Z,124nm,1.2s,SNR=17
DAVA                             ePP      PP       16 04 14.8  -1.5
      comp=Z,9.2nm,1.1s
SEY   Seymchan         88.62 335  PKKPbc  PKKPbc   16 18 28.9  -1.9
      comp=Z,1.8nm,0.8s,baz=288,slow=6.4,SNR=5.5
SEY   Seymchan         88.62 335 eP       P        16 00 48.4 +0.7
SEY                              e                 16 04 16.7
SEY                              eS       SKSac    16 11 09.6  -6.9
SEY                               pmax    pmax
      comp=Z,26nm,1.2s
SEY                               smax    smax
      comp=N,362nm,19.6s
SEY                               smax    smax
      comp=E,976nm,14.3s
UBR   Ueberruh         88.63  41 eP       P        16 00 48.9 +0.7
      comp=E,36nm,1.0s,baz=289,slow=4.8
GRF   Grafenberg Arr   88.66  39 eP       P        16 00 49.4 +1.2
      comp=E,50nm,1.1s,baz=289,slow=4.8
GRF                              eL       L        16 41 44.5
      comp=E,2µm,19.7s
DAVOX Davos/Dischmat   88.77  42  LR      LR       16 37 56.9
      comp=E,1µm,18.6s,baz=262,slow=34
FUORN Ofenpass-Fuorn   89.07  42  P       P        16 00 49.8  -0.8
FUORN                             IAmb    IAmb     16 00 53.5
      comp=Z,77nm,1.1s
MANZ  Manzenberg       89.10  39 eP       P        16 00 51.6 +1.2
      comp=Z,3.2nm,0.9s,baz=289,slow=4.8
RETA  Reutte           89.11  41 i PcP    PcP      16 00 51.6  -0.3
      comp=Z,50nm,0.9s,SNR=17
RETA                             ePP      PP       16 04 20.6 +0.4
      comp=Z,9.6nm,0.9s
TANN  Tannenbergstha   89.17  38 eP       P        16 00 52.0 +1.3
      comp=Z,18nm,1.0s,baz=289,slow=4.8
CLL   Collm            89.17  37  IAMs_20 IAMs_20  16 47 50.6
      comp=Z,1µm,19.0s
CLL   Collm            89.17  37⇓iP       P        16 00 52.4 +1.8
CLL                              e                 16 11 22.0
CLL                              eS       S        16 11 40.0 +0.7
CLL                               pmax    pmax
      comp=Z,176nm,2.2s
CLL                               MLR     MLR
      comp=Z,1µm,18.6s
CLL   Collm            89.17  37 eP       P        16 00 52.0 +1.4
      comp=Z,6.7nm,0.9s,baz=289,slow=4.8
CLL   Collm            89.17  37  P       P        16 00 51.2 +0.6
      comp=Z,24nm,1.8s
CJSR  Ain Djasser      89.21  53  P       P        16 00 53.3 +2.1
ROTZ  Rotzenmuhle      89.24  39 eP       P        16 00 52.5 +1.5
      comp=Z,2.0nm,1.0s,baz=289,slow=4.8
FETA  Feichten         89.24  42 i PcP    PcP      16 00 52.8 +0.1
      comp=Z,38nm,0.9s,SNR=12
FETA                             i PP     PP       16 04 22.8 +1.4
      comp=Z,18nm,1.7s
COAT  Oued Athmania    89.36  53  P       P        16 00 54.1 +2.2
SQTA  Sankt Quirin     89.48  41 i PcP    PcP      16 00 53.8 +0.1
      comp=Z,29nm,1.3s,SNR=7.2
SQTA                             ePP      PP       16 04 23.4 +0.1
      comp=Z,9.7nm,1.1s
CTEI  Djebel Teioual   89.51  53  P       P        16 00 54.9 +2.2
CASM  Ain Smara        89.52  53  P       P        16 00 53.7 +1.1
HSKC  Hora Svate Kat   89.68  38 eP       P        16 00 54.6 +1.6
HSKC                              AMS     AMS      16 42 30.0
      comp=Z,2µm,22.3s
WATA  Walderalm        89.68  41 i PcP    PcP      16 00 54.9 +0.4
      comp=Z,23nm,1.4s,SNR=8.3
WATA                             ePP      PP       16 04 21.8  -3.1
      comp=Z,7.5nm,1.4s
CSGS  Sigus            89.72  53  P       P        16 00 56.3 +2.7
WTTA  Wattenberg       89.74  41 i PcP    PcP      16 00 55.0 +0.1
      comp=Z,22nm,1.3s,SNR=7.1
WTTA                             ePP      PP       16 04 23.8  -1.6
      comp=Z,11nm,1.5s
CTGD  Timgad           89.76  54  P       P        16 00 55.5 +1.7
PET   Petropavlovsk    89.83 325 i P      P        16 00 54.7 +1.1
PET                               pmax    pmax
      comp=Z,33nm,1.3s
WET   Wettzell         89.87  39 eP       P        16 00 55.4 +1.5
      comp=Z,12nm,0.9s,baz=289,slow=4.8
BRG   Berggiesshubel   89.88  37 eP       P        16 00 55.5 +1.6
      comp=Z,14nm,0.9s,baz=289,slow=4.8
RICC  Richard          90.09  38 eP       P        16 00 56.7 +1.8
CTI   Castel Tesino    90.17  42  IAmb    IAmb     16 00 57.7
      comp=Z,116nm,1.6s
APA   Apatity          90.25  18⇓iP       P        16 00 55.4 +0.1
APA                              i                 16 04 28.8
APA                              i S      S        16 11 48.5  -0.3
APA                              i PS     PnS      16 12 52.2  -4.2
APA                               pmax    pmax
      comp=Z,12nm,1.1s
APA                               MLR     MLR
      comp=Z,3µm,26.4s
KHC   Kasperske Hory   90.30  39ceP       P        16 00 56.1 +0.1
KHC                               pmax    pmax
      comp=Z,35nm,1.3s
KHC   Kasperske Hory   90.30  39 eP       P        16 00 57.1 +1.1
KHC                               AMS     AMS      16 39 40.0
      comp=Z,3µm,23.8s
KHC   Kasperske Hory   90.30  39  P       P        16 00 56.8 +0.8
      comp=Z,35nm,1.2s
PEA0B Petropavlovsk-   90.33 325ceP       P        16 00 55.2  -0.8
PETK  Petropavlovsk-   90.33 325  P       P        16 00 57.0 +1.0
      comp=Z,9.0nm,0.9s,baz=83,slow=12,SNR=7.0
      comp=Z,9.0nm,0.9s
TIXI  Tiksi            90.35 348  LR      LR       16 49 02.7
      comp=Z,1µm,18.3s,baz=27,slow=40
TIXI  Tiksi            90.35 348  P       P        16 00 55.7   0.0
TIXI                              IAmb    IAmb     16 01 00.5
      comp=Z,38nm,0.8s
TIXI  Tiksi            90.35 348 i P      P        16 00 55.2  -0.5
TIXI                              pmax    pmax
      comp=Z,37nm,0.8s
LESA  Schwarzleotal    90.35  41 i PcP    PcP      16 00 57.7 +0.3
      comp=Z,24nm,1.6s,SNR=7.2
LESA                             i PP     PP       16 04 30.0  -0.1
      comp=Z,18nm,1.4s
PVCC  Panska Ves       90.38  37 eP       P        16 00 58.2 +2.0
PVCC  Panska Ves       90.38  37 eP       P        16 00 58.2 +2.0
CBBAR Babar            90.38  54  P       P        16 00 58.5 +1.7
LVZ   Lovozero         90.41  17ceP       P        16 00 57.1 +1.0
LVZ                               pmax    pmax
      comp=Z,44nm,1.1s
PRA   Prague           90.47  38  AMS     AMS      16 43 00.0
      comp=Z,2µm,19.2s
GEC2  GERESS Array S   90.48  39  IAmb    IAmb     16 00 59.6
      comp=Z,36nm,1.1s
GEC2  GERESS Array S   90.48  39 eP       P        16 00 58.2 +1.3
      comp=Z,19nm,1.0s,baz=289,slow=4.8
GERES GERESS Array B   90.48  39  P       P        16 00 57.7 +0.8
      comp=Z,12nm,0.9s,baz=322,slow=4.1,SNR=40
GERES                             PP      PP       16 04 28.9  -2.2
      comp=Z,2.2nm,1.0s,baz=293,slow=6.8,SNR=3.6
GERES                             PKKPbc  PKKPbc   16 18 24.8  -1.1
      comp=Z,1.0nm,0.8s,baz=4.8,slow=1.6,SNR=3.8
GERES                             LR      LR       16 40 19.0
      comp=Z,2µm,19.7s,baz=284,slow=35
      comp=Z,12nm,0.9s
ABTA  Abfaltersbach    90.48  41 i PcP    PcP      16 00 58.4 +0.3
      comp=Z,52nm,1.2s,SNR=12
ABTA                             ePP      PP       16 04 26.4  -4.8
      comp=Z,11nm,1.3s
CRHA  Rehia            90.56  53  P       P        16 00 58.9 +1.4
ZVC   Zvikov           90.56  39  AMS     AMS      16 42 50.0
      comp=Z,2µm,24.7s
PRU   Pruhonice        90.57  38 eP       P        16 00 58.6 +1.5
PRU                               MLR     MLR
      comp=Z,2µm,19.3s
PRU   Pruhonice        90.57  38 eP       P        16 00 58.6 +1.5
PRU                               AMS     AMS      16 43 00.0
      comp=Z,2µm,19.3s
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CIMO  Cimolais         90.59  42  IAmb    IAmb     16 01 02.8
      comp=Z,42nm,1.0s
OSSC  Osservatorio P   90.75  45  IAmb    IAmb     16 01 00.2
      comp=Z,32nm,0.9s
STAL  STALIGIAL        90.78  42  IAmb    IAmb     16 01 00.5
      comp=Z,48nm,1.1s
GKP   Gorka Klasztor   90.82  34 eP       P        16 01 00.5 +2.3
GKP                              eL       L        16 40 42.1
      comp=Z,3µm,20.5s
BIOA  Bad Ischl, Aus   90.86  40 i PcP    PcP      16 00 60.0 +0.3
      comp=Z,20nm,1.0s,SNR=9.1
BIOA                             i PP     PP       16 04 32.9  -1.2
      comp=Z,11nm,1.5s
CKRC  Cesky Krumlov    90.86  39 eP       P        16 01 00.0 +1.4
CKRC                              MLR     MLR
      comp=Z,2µm,21.9s
CKRC  Cesky Krumlov    90.86  39 eP       P        16 01 00.0 +1.4
CKRC                              AMS     AMS      16 39 50.0
      comp=Z,2µm,21.9s
KBA   Koelnbreinsper   90.90  41 epP      pP       16 01 00.9  -0.8
      comp=Z,37nm,1.0s
KBA                              i PP     PP       16 04 37.0 +2.4
      comp=Z,26nm,0.9s
MA2   Magadan          90.92 333 i P      P        16 00 58.7 +0.2
MA2                               pmax    pmax
      comp=Z,241nm,2.5s
MOA   Molln            91.20  40 i PcP    PcP      16 01 01.5 +0.4
      comp=Z,19nm,0.9s,SNR=7.6
MOA                              ePP      PP       16 04 34.2  -2.6
      comp=Z,11nm,1.4s
FINES FINESS Array B   91.20  25  P       P        16 00 60.0 +0.2
      comp=Z,35nm,1.0s,baz=323,slow=2.9,SNR=57
FINES                             PP      PP       16 04 35.4  -0.8
      comp=Z,4.7nm,1.0s,baz=324,slow=9.4,SNR=4.8
FINES                             PKKPbc  PKKPdf   16 18 21.8 +1.6
      comp=Z,1.8nm,0.8s,baz=29,slow=4.4,SNR=5.5
FINES                             LR      LR       16 43 44.3
      comp=Z,2µm,18.5s,baz=304,slow=37
      comp=Z,35nm,1.0s
FINES FINESS Array B   91.20  25  P       P        16 01 00.1 +0.3
FINES FINESS Array B   91.20  25  P       P        16 01 00.0 +0.2
CHVC  Chvalec          91.23  37 eP       P        16 01 01.4 +1.1
CHVC  Chvalec          91.23  37 eP       P        16 01 01.4 +1.1
UPC   Upice            91.24  37 eP       P        16 01 02.0 +1.7
UPC                               MLR     MLR
      comp=Z,2µm,19.6s
UPC   Upice            91.24  37 eP       P        16 01 02.0 +1.7
UPC                               AMS     AMS      16 38 40.0
      comp=Z,2µm,19.6s
MYKA  Terra Mystica    91.25  41 i PcP    PcP      16 01 02.1 +0.6
      comp=Z,24nm,1.0s,SNR=9.4
MYKA                             ePP      PP       16 04 38.4 +1.1
      comp=Z,5.2nm,1.1s
KSP   Ksiaz            91.27  37 eP       P        16 01 02.3 +1.9
KSP                              eL       L        16 43 58.4
      comp=Z,2µm,19.6s
KSP   Ksiaz            91.27  37  P       P        16 01 01.7 +1.3
      comp=Z,32nm,1.0s
OSTC  Ostas            91.34  37 eP       P        16 01 01.9 +1.2
OSTC                              MLR     MLR
      comp=Z,2µm,20.8s
OSTC  Ostas            91.34  37 eP       P        16 01 01.9 +1.2
OSTC                              AMS     AMS      16 43 50.0
      comp=Z,2µm,20.8s
TOA0  Torodi Ar. Sit   91.43  76  P       P        16 01 01.0  -0.9
TORD  Torodi Ar. Bea   91.43  76  P       P        16 01 02.0 +0.1
      comp=Z,6.5nm,0.8s,baz=301,slow=4.4,SNR=27
TORD                              PKKPbc  PKKPbc   16 18 23.5 +1.1
      comp=Z,1.1nm,0.8s,baz=72,slow=2.9,SNR=4.8
TORD                              LR      LR       16 39 53.5
      comp=Z,631nm,21.1s,baz=282,slow=34
      comp=Z,6.5nm,0.8s
CADS  Cadrg            91.46  42 i P      P        16 01 02.8 +1.3
DPC   Dobruska-Polom   91.48  37 eP       P        16 01 02.7 +1.3
DPC                               MLR     MLR
      comp=Z,2µm,19.7s
DPC   Dobruska-Polom   91.48  37 eP       P        16 01 02.7 +1.3
DPC                               AMS     AMS      16 38 40.0
      comp=Z,2µm,19.7s
DPC   Dobruska-Polom   91.48  37  P       P        16 01 02.4 +1.0
      comp=Z,44nm,1.0s
TRI   Trieste          91.67  42  IAmb    IAmb     16 01 05.0
      comp=Z,96nm,1.4s
MURB  Monte Urbino     91.71  45  IAmb    IAmb     16 01 04.0
      comp=Z,50nm,0.9s
OBKA  Obir             91.88  41 i PcP    PcP      16 01 04.9 +0.6
      comp=Z,25nm,0.9s,SNR=5.4
OBKA                             ePP      PP       16 04 32.7   -10
      comp=Z,10nm,1.2s
KEST  Kesra            91.88  53  P       P        16 01 04.8 +1.2
      comp=Z,73nm,1.0s,baz=310,slow=2.0,SNR=19
KEST                              LR      LR       16 36 01.3
      comp=Z,433nm,20.7s,baz=275,slow=31
      comp=Z,73nm,1.0s
KEST  Kesra            91.88  53  P       P        16 01 02.7  -1.0
CESX  Cesi             91.98  45  IAmb    IAmb     16 01 05.8
      comp=Z,64nm,0.9s
KRUC  Moravsky         92.04  38 eP       P        16 01 05.3 +1.3
LJU   Ljubljana        92.04  42 eP       P        16 01 05.0 +0.9
VRAC  Vranov           92.06  38  LR      LR       16 44 01.3
      comp=Z,2µm,18.1s,baz=308,slow=37
VRAC  Vranov           92.06  38 ⇓P       P        16 01 05.5 +1.4
VRAC  Vranov           92.06  38 eP       P        16 01 05.6 +1.5
VRAC  Vranov           92.06  38 ⇓P       P        16 01 05.5 +1.4
CEY   Cerknica         92.09  42 i P      P        16 01 06.0 +1.7
SOKA  Soboth           92.12  41 i PcP    PcP      16 01 05.6 +0.3
      comp=Z,3.9nm,0.6s,SNR=8.3
SOKA                             ePP      PP       16 04 39.0  -5.2
      comp=Z,6.2nm,1.0s
CONA  Conrad Observa   92.16  40 i PcP    PcP      16 01 05.9 +0.4
      comp=Z,45nm,1.9s,SNR=9.2
CONA                             ePP      PP       16 04 42.7  -1.7
      comp=Z,5.1nm,1.0s
FDMO  Fiordimonte      92.18  45  IAmb    IAmb     16 01 06.7
      comp=Z,70nm,1.0s
RAO   Raoul Island     92.21 241  LR      LR       16 32 15.3
      comp=Z,602nm,21.4s,baz=112,slow=29
ARSA  Arzberg          92.21  40 i PcP    PcP      16 01 06.0 +0.4
      comp=Z,18nm,1.3s,SNR=6.7
ARSA                             ePP      PP       16 04 46.6 +1.8
      comp=Z,5.5nm,0.7s
NRCA  Norcia           92.27  45  IAmb    IAmb     16 01 08.3
      comp=Z,35nm,1.2s
GUMA  Gualdo di Mace   92.34  45  IAmb    IAmb     16 01 08.2
      comp=Z,72nm,1.1s
MORC  Moravsky Berou   92.43  37  IAmb    IAmb     16 01 09.1
      comp=Z,51nm,1.3s
MORC  Moravsky Berou   92.43  37 ⇓P       P        16 01 07.6 +1.8
MORC  Moravsky Berou   92.43  37 eP       P        16 01 07.7 +1.8
MORC  Moravsky Berou   92.43  37 ⇓P       P        16 01 07.6 +1.8
TAM   Tamanrasset      92.46  66  IAmb    IAmb     16 01 11.1
      comp=Z,34nm,1.0s
TAM                               IAMs_20 IAMs_20  16 42 24.4
      comp=Z,1µm,19.0s
STEB  Steborice        92.50  37 eP       P        16 01 07.5 +1.4
RONA  Rosalia, Austr   92.52  40 i pP     pP       16 01 08.2  -0.8
      comp=Z,26nm,1.0s,SNR=7.2
RONA                             ePP      PP       16 04 42.7  -4.5
      comp=Z,7.7nm,1.2s
AQU   L'Aquila         92.64  45  P       P        16 01 07.9 +0.9
      comp=Z,44nm,1.2s
OKC   Ostrava-Krasne   92.77  37 eP       P        16 01 09.2 +1.9
OKC   Ostrava-Krasne   92.77  37 eP       P        16 01 09.2 +1.9
MAUC  Maruska          92.77  38 eP       P        16 01 09.6 +2.2
MODS  Modra-Piesok     92.85  39 eP       P        16 01 10.2 +2.4
MODS                              pmax    pmax
      comp=Z,157nm,1.4s
MODS  Modra-Piesok     92.85  39 eP       P        16 01 10.2 +2.4
SMOL  Smolenice        92.89  39 eP       P        16 01 10.5 +2.6
SMOL                              pmax    pmax
      comp=Z,30nm,1.4s
JAVC  Velka Javorina   92.89  38 eP       P        16 01 10.5 +2.5
MSVF  Nonsavu          93.07 253 i P      P        16 01 10.0 +0.6
MSVF                              pmax    pmax
      comp=Z,73nm,1.8s
VSU   Vasula           93.08  27ceP       P        16 01 08.1  -0.4
VSU                               pmax    pmax
      comp=Z,74nm,2.4s
PABE  Paberze          93.31  31  IAMs_20 IAMs_20  16 43 25.7
      comp=Z,2µm,21.0s
BEL   Belsk            93.40  35 eP       P        16 01 12.8 +2.7
BEL                              eL       L        16 42 26.5
      comp=Z,3µm,20.6s
MPLH  Magyarpolny      93.51  40  P       P        16 01 11.4 +0.6
      comp=Z,64nm,1.7s
OJC   Ojcow            93.56  36 eP       P        16 01 13.3 +2.3
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OJC				eL	L	16 45 19.1	
	comp=Z,2µm,19.6s						
OJC	Ojcow	93.56	36	P	P	16 01 11.7	+0.7
	comp=Z,38nm,1.5s						
SUW	Suwalki	93.65	32	eP	P	16 01 12.7	+1.4
SUW				eL	L	16 32 41.3	
	comp=Z,2µm,44.1s						
SUW	Suwalki	93.65	32	IAMs_20	IAMs_20	16 43 33.7	
	comp=Z,2µm,21.0s						
LANS	Liptovska Anna	93.84	37	eP	P	16 01 15.2	+2.9
LANS				pmax	pmax		
	comp=Z,24nm,1.5s						
LANS	Liptovska Anna	93.84	37	eP	P	16 01 15.2	+2.9
NIE	Niedzica	94.21	37	eP	P	16 01 16.9	+2.8
NIE				eL	L	16 45 39.3	
	comp=Z,1µm,19.3s						
NIE	Niedzica	94.21	37	P	P	16 01 15.5	+1.5
	comp=Z,14nm,2.2s						
BLY	Banja Luka	94.27	42	⇑P	P	16 01 15.5	+1.2
MORH	Mrgy, Hungar	94.60	40	⇓P	P	16 01 17.4	+1.6
MORH	Mrgy, Hungar	94.60	40	P	P	16 01 16.0	+0.2
	comp=Z,22nm,1.7s						
PSZ	Piszkesteto	94.63	38	IAmb	IAmb	16 01 19.8	
	comp=Z,108nm,1.5s						
PSZ				IAMs_20	IAMs_20	16 45 04.2	
	comp=Z,855nm,18.0s						
PSZ	Piszkesteto	94.63	38	⇑P	P	16 01 18.7	+2.6
PSZ	Piszkesteto	94.63	38	⇑P	P	16 01 18.7	+2.6
KECS	Kecovo	94.74	38	eP	P	16 01 19.1	+2.7
KECS				pmax	pmax		
	comp=Z,23nm,1.0s						
KECS	Kecovo	94.74	38	eP	P	16 01 19.1	+2.7
STHS	Stebnicka Huta	94.76	37	eP	P	16 01 18.4	+1.9
STHS				pmax	pmax		
	comp=Z,17nm,1.5s						
STHS	Stebnicka Huta	94.76	37	eP	P	16 01 18.4	+1.9
VAE	Valguarnera	95.13	50	LR	LR	16 39 06.4	
	comp=Z,3µm,21.5s,baz=331,slow=32						
KWP	Kalwaria Pacla	95.50	36	eP	P	16 01 20.8	+0.8
KWP				eL	L	16 45 18.4	
	comp=Z,1µm,21.1s						
KWP	Kalwaria Pacla	95.50	36	P	P	16 01 20.6	+0.7
	comp=Z,58nm,2.1s						
MATE	Matera	95.58	46	⇑P	P	16 01 20.4	0.0
MNK	Minsk	95.76	30	i P	P	16 01 20.7	-0.2
MNK				i		16 05 09.5	
MNK				i PPP	PPP	16 07 15.0	
MNK				i S	SKSac	16 11 56.7	-0.2
MNK				i SSS	SSS	16 22 50.3	
MNK				pmax	pmax		
	comp=E,10.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,8.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,51nm,0.9s						
MNK				MLR	MLR		
	comp=E,397nm,16.0s						
MNK				MLR	MLR		
	comp=Z,1µm,17.0s						
MNK				MLR	MLR		
	comp=N,685nm,17.0s						
MUKU	Mukachevo	96.05	37	P	P	16 01 23.1	+0.7
BERU	Beregovo	96.13	37	P	P	16 01 23.8	+1.0
BRIU	Brid	96.30	37	P	P	16 01 24.0	+0.5
RNPP9	Sopachiv	96.38	33	P	P	16 01 24.4	+0.6
RNPP8	Varash	96.40	34	P	P	16 01 24.5	+0.6
MORS	Morshin	96.42	36	P	P	16 01 23.0	-1.1
SIRR	Siria	96.45	39	⇑P	P	16 01 26.1	+1.7
RNPP5	Staryi Chortor	96.47	34	P	P	16 01 25.1	+0.8
MEZ	Mezhgor'ye	96.50	37	P	P	16 01 25.6	+1.1
PDG	Podgorica	96.60	44	IAMs_20	IAMs_20	16 50 08.5	
	comp=Z,1µm,18.0s						
KLMR	Klimovskoe	96.71	21	eP	P	16 01 24.7	-0.4
KLMR				S	SKSac	16 12 01.1	-0.5
KLMR				pmax	pmax		
	comp=Z,72nm,1.2s						
KLMR				MLR	MLR		
	comp=Z,3µm,20.0s						
BZS	Buzias	96.72	40	⇓P	P	16 01 26.6	+1.1
BZS	Buzias	96.72	40	⇓P	P	16 01 26.6	+1.1
DRGR		96.85	39	⇑P	P	16 01 27.1	+0.9
DRGR		96.85	39	⇑P	P	16 01 27.1	+0.9
STNU	Starunia	96.98	36	P	P	16 01 27.8	+1.2
BELA	Belgrano 2	97.02	170	IAmb	IAmb	16 01 27.2	
	comp=Z,17nm,1.1s						
RAKU	Rahkiv	97.12	37	P	P	16 01 26.8	-0.5
MARR	Marisel-Cluj	97.15	39	⇓P	Pdif	16 01 28.8	+1.1
MDVR	Moldovita	97.17	41	⇓P	Pdif	16 01 29.0	+1.3
NRIK	Noril'sk	97.19	360	P	Pdif	16 01 28.9	+1.7
	comp=Z,3.9nm,0.7s,baz=25,slow=3.9,SNR=9.2						
NRIK				PP	PP	16 05 23.9	+1.3
	comp=Z,0.6nm,0.3s,baz=14,slow=4.5,SNR=6.5						
NRIK				LR	LR	16 50 30.7	
	comp=Z,3µm,18.6s,baz=16,slow=39						
	comp=Z,3.9nm,0.7s						
NRIK	Noril'sk	97.19	360	IAmb	IAmb	16 01 31.2	
	comp=Z,39nm,1.8s						
NRIK	Noril'sk	97.19	360	i P	Pdif	16 01 28.8	+1.6
NRIK				pmax	pmax		
	comp=Z,21nm,1.6s						
DEV	Deva	97.40	39	⇑P	Pdif	16 01 30.2	+1.5
DEV	Deva	97.40	39	⇑P	Pdif	16 01 30.2	+1.6
CJR	Cluj-Napoca	97.42	38	⇓P	Pdif	16 01 30.6	+1.8
CJR	Cluj-Napoca	97.42	38	⇓P	Pdif	16 01 30.6	+1.8
YAK	Yakutsk	97.43	341	LR	LR	16 51 03.5	
	comp=Z,1µm,18.8s,baz=46,slow=39						
YAK	Yakutsk	97.43	341	eP	P	16 01 28.4	+0.1
YAK				e*PP	pwP	16 01 38.1	-0.8
YAK				e		16 05 25.5	
YAK				eS	SKSac	16 12 03.3	-1.9
YAK				eSS	SS	16 19 31.1	+1.4
YAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.9s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,302nm,4.9s						
YAK				pmax	pmax		
	comp=N,283nm,4.3s						
YAK				pmax	pmax		
	comp=E,169nm,4.3s						
YAK				smax	smax		
	comp=N,165nm,4.7s						
YAK				smax	smax		
	comp=E,146nm,3.3s						
KSV	Kosov	97.50	36	P	Pdif	16 01 30.5	+1.4
GZR	Gura Zlata	97.55	40	⇓P	Pdif	16 01 30.8	+1.4
GZR	Gura Zlata	97.55	40	⇓P	Pdif	16 01 30.8	+1.4
MI28	Mi28,Pidlybu	97.59	33	P	Pdif	16 01 29.4	0.0
BUR08	Bucovina Ar. S	97.92	37	IAmb	IAmb	16 01 52.8	
	comp=Z,36nm,1.9s						
BURAR	Bucovina Array	97.94	37	⇑P	Pdif	16 01 32.5	+1.3
BURAR	Bucovina Array	97.94	37	⇑P	Pdif	16 01 32.5	+1.3
MI29	MI29, Kamyanyy	97.96	34	P	P	16 01 30.9	-0.1
MI30	MI30,Zelenitsa	97.96	33	P	Pdif	16 01 31.0	0.0
	comp=Z,51nm,1.9s						
KMPD	K-Podol'skiy	98.17	36	P	Pdif	16 01 32.1	+0.1
KMPD				P	P	16 01 31.7	-0.3
MDB	Medias	98.17	39	⇑P	Pdif	16 01 35.0	+2.9
MDB	Medias	98.17	39	⇑P	Pdif	16 01 35.0	+2.9
URZ	Urewera	98.22	233	LR	LR	16 35 45.3	
	comp=Z,843nm,21.5s,baz=74,slow=29						
TNR	Turnu Rosu	98.35	39	⇑P	Pdif	16 01 34.2	+1.3
TNR	Turnu Rosu	98.35	39	⇑P	Pdif	16 01 34.2	+1.3
AK21	Malin Array Si	98.40	33	P	P	16 01 32.4	-0.5
AK20	Malin Array Si	98.40	33	P	Pdif	16 01 33.0	0.0
AK19	Malin Array Si	98.41	33	P	P	16 01 31.9	-1.1
AK22	Malin Array Si	98.42	33	P	P	16 01 32.3	-0.8
AK03	Malin Array Si	98.52	33	P	P	16 01 32.2	-1.3
KIEV	Kiev	98.53	33	IAMs_20	IAMs_20	16 46 48.1	
	comp=Z,2µm,21.0s						
KIEV	Kiev	98.53	33	⇓P	P	16 01 33.5	0.0
KIEV	Kiev	98.53	33	⇓P	P	16 01 33.5	0.0
AKASG	Malin Array Be	98.54	33	P	P	16 01 33.0	-0.6
	comp=Z,3.1nm,0.8s,baz=290,slow=3.5,SNR=10						
AKASG				PP	PP	16 05 32.7	-0.9
	comp=Z,2.9nm,0.9s,baz=301,slow=6.6,SNR=5.0						
AKASG				LR	LR	16 47 18.4	
	comp=Z,1µm,19.6s,baz=307,slow=36						
	comp=Z,3.1nm,0.8s						
AKASG	Malin Array Be	98.54	33	IAmb	IAmb	16 01 35.0	
	comp=Z,18nm,1.6s						
AKASG	Malin Array Be	98.54	33	i P	Pdif	16 01 34.2	+0.6
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKBB	Malin Array Si	98.54	33	IAmb	IAmb	16 05 32.0	
	comp=Z,16nm,1.2s						
AKBB	Malin Array Si	98.54	33c	eP	P	16 01 32.6	-1.0
AKBB				pmax	pmax		
	comp=Z,16nm,1.5s						
AKBB	Malin Array Si	98.54	33	P	P	16 01 33.0	-0.6
AK02	Malin Array Si	98.55	33	P	P	16 01 33.4	-0.2
AK05	Malin Array Si	98.57	33	P	P	16 01 33.1	-0.6
AK06	Malin Array Si	98.59	33	P	P	16 01 33.2	-0.6
AK08	Malin Array Si	98.59	33	P	P	16 01 33.1	-0.7
AK10	Malin Array Si	98.61	33	P	P	16 01 33.2	-0.7
AK07	Malin Array Si	98.61	33	P	P	16 01 33.6	-0.3
AK09	Malin Array Si	98.62	33	P	P	16 01 33.6	-0.3
ARR	Arges	98.71	39	⇑P	Pdif	16 01 36.2	+1.6
DOPR	Dopca	98.87	38	⇑P	Pdif	16 01 36.2	+0.9
GIRR	Girov	99.03	37	⇓P	Pdif	16 01 37.3	+1.4
OZUR		99.05	38	⇓P	Pdif	16 01 37.7	+1.7
TURR	Turia	99.20	38	⇑P	Pdif	16 01 38.4	+1.6
HUMR	Humele	99.34	40	⇑P	Pdif	16 01 38.4	+1.1
OBN	Obninsk	99.41	27	LR	LR	16 48 56.0	
	comp=Z,2µm,18.1s,baz=257,slow=37						
OBN	Obninsk	99.41	27	P	Pdif	16 01 37.6	+0.2
OBN	Obninsk	99.41	27c	iP	Pdif	16 01 37.8	+0.4
OBN				e*SP	pwP	16 01 47.0	-0.9
OBN				i		16 05 38.3	
OBN				i		16 12 16.1	
OBN				i PS	PS	16 14 37.7	+0.4
OBN				pmax	pmax		
	comp=Z,91nm,1.6s						
OBN				MLR	MLR		
	comp=Z,2µm,17.0s						
COVR	Voineasa-Covas	99.42	38	⇑P	Pdif	16 01 39.6	+1.9
MLR	Muntele Rosu	99.45	39	LR	LR	16 49 31.7	
	comp=Z,814nm,18.1s,baz=311,slow=37						
MLR	Muntele Rosu	99.45	39	IAmb	IAmb	16 01 40.7	
	comp=Z,25nm,1.0s						
MLR				IAMs_20	IAMs_20	16 44 03.6	
	comp=Z,1µm,20.0s						
MLR	Muntele Rosu	99.45	39	⇓P	Pdif	16 01 37.6	-0.4
MLR	Muntele Rosu	99.45	39	⇓P	Pdif	16 01 37.6	-0.4
MOS	Moscow	99.45	26	eP	Pdif	16 01 37.2	-0.3
MOS				e		16 12 17.1	
MOS				pmax	pmax		
	comp=Z,74nm,1.3s						
MOS				MLR	MLR		
	comp=Z,1µm,18.0s						
SORM	Soroca	99.47	35	⇓P	Pdif	16 01 37.9	+0.1
SORM	Soroca	99.47	35	⇓P	Pdif	16 01 37.9	+0.1
CFR	Carcaliu	100.93	38	⇑P	Pdif	16 01 44.1	-0.3
CFR	Carcaliu	100.93	38	⇑P	Pdif	16 01 44.1	-0.3
TIRR	Tirgusor	101.48	39	IAMs_20	IAMs_20	16 47 54.4	
	comp=Z,1µm,21.0s						
YSS	Yuzhno-Sakhali	101.72	325	eP	Pdif	16 01 47.3	-0.5
YSS				e		16 05 58.1	
YSS				ePPP	PPP	16 08 18.9	
YSS				e		16 12 24.4	
YSS				eS	Sdif	16 13 23.1	-5.8
YSS				ePS	PS	16 15 03.4	+1.0
YSS				eSS	SS	16 20 30.4	0.0
EDA	Edea	101.88	83	IAMs_20	IAMs_20	16 53 21.3	
	comp=Z,649nm,19.0s						
LPSR	Galich'ya Gora	102.13	28	eP	Pdif	16 01 51.2	+1.7
LPSR				pmax	pmax		
	comp=Z,37nm,1.0s						
VORR	Voronezh	102.88	28	eP	Pdif	16 01 55.6	+2.7
VORR				pmax	pmax		
	comp=Z,43nm,0.4s						
SNAA	Sanae	102.95	161	P	Pdif	16 01 52.1	-0.7
	comp=Z,2.0nm,0.9s,baz=277,slow=6.7,SNR=6.1						
SNAA	Sanae	102.95	161	IAMs_20	IAMs_20	16 45 15.1	
	comp=Z,742nm,18.0s						
QSPA	South Pole Qui	103.64	180	Pdiff	Pdif	16 01 57.2	+1.3
	comp=Z,2.8nm,0.9s,baz=150,slow=3.9,SNR=6.2						
VRH	Novokhopyorsk	104.35	27	eP	Pdif	16 01 59.1	-0.3
VRH				pmax	pmax		
	comp=Z,37nm,1.9s						
DZM	Mont Dzumac	104.62	250	eSS	SS	16 21 09.3	-3.9
	comp=Z,1µm,26.8s						
DZM	Mont Dzumac	104.62	250	eLQ	LQ	16 31 57.1	
	comp=Z,1µm,39.5s						
DZM				eLR	LR	16 36 24.8	
	comp=Z,2µm,24.5s						
ANTO	Ankara	106.72	41	IAMs_20	IAMs_20	16 55 45.3	
	comp=Z,1µm,19.0s						
HEH	HeiHe	107.13	334	Pdif	Pdif	16 02 14.4	+2.6
HEH				PP	PP	16 06 41.6	+3.9
HEH				AMB	AMB		
	comp=Z,450nm,7.2s						
HEH				LR	LR		
	comp=Z,460nm,21.0s						
HEH				LR	LR		
	comp=Z,600nm,24.1s						
HEH				LR	LR		
	comp=Z,950nm,23.0s						
BRTR	Keskin Array B	107.34	40	PKKPbc	PKKPbc	16 17 38.0	-0.6
	comp=Z,2.0nm,0.8s,baz=122,slow=4.5,SNR=6.5						
KIV	Kislovodsk	109.87	32	IAMs_20	IAMs_20	16 52 49.0	
	comp=Z,773nm,20.0s						
HILR	Hailar Array B	110.71	338	PP	PP	16 06 59.8	-4.0
	comp=Z,0.6nm,0.4s,baz=64,slow=6.8,SNR=4.6						
BORK	Borovoye	112.01	11	i PKIKP	PKiKP	16 06 29.8	-0.4
BVAR	Borovoye Array	112.05	11	Pdiff	Pdif	16 02 36.4	+2.7
	comp=Z,1.7nm,0.9s,baz=343,slow=3.1,SNR=5.5						
ZALV	Zalesovo Beam	112.61	1	PKiKP	PKiKP	16 06 30.9	-0.4
	comp=Z,1.3nm,0.6s,baz=356,slow=1.6,SNR=5.3						
ZALV				PP	PP	16 07 17.8	+0.8
	comp=Z,3.7nm,0.8s,baz=353,slow=7.6,SNR=12						
ZALV				PKKPbc	PKKPab	16 17 27.6	-3.0
	comp=Z,0.9nm,0.5s,baz=157,slow=4.2,SNR=6.2						
CN2	Changchun	112.87	331	ePKP	PKiKP	16 06 32.3	+0.2
CN2				LR	LR		
	comp=Z,800nm,17.0s						
CN2				LR	LR		
	comp=Z,700nm,17.0s						
CN2				LR	LR		
	comp=Z,900nm,18.1s						
WIN	Windhoek	113.52	109	IAMs_20	IAMs_20	16 51 58.7	
	comp=Z,728nm,18.0s						
TSUM	Tsumeb	113.60	105	IAMs_20	IAMs_20	16 50 11.7	
	comp=Z,787nm,20.0s						
KURK	Kurchatov	115.46	6	P	PKPdf	16 06 37.5	+0.7
KURK	Kurchatov	115.46	6	i PKIKP	PKiKP	16 06 35.3	-1.5
KURBB	Kurchatov Arra	115.54	6	PKP	PKiKP	16 06 37.0	0.0
	comp=Z,2.6nm,0.9s,baz=344,slow=2.1,SNR=16						
KURBB				PP	PP	16 07 37.5	-0.2
	comp=Z,1.9nm,0.9s,baz=349,slow=6.5,SNR=5.9						
KURBB				PKKPbc	PKKPbc	16 17 09.0	-2.8
	comp=Z,2.8nm,0.9s,baz=186,slow=3.1,SNR=22						
ULN	Ulaanbaatar	116.16	345	P	PKPdf	16 06 39.9	+1.4
ULN	Ulaanbaatar	116.16	345	i PKIKP	PKiKP	16 06 38.4	-0.1
KSRS	Korea Array	116.22	324	PKP	PKiKP	16 06 38.6	0.0
	comp=Z,2.7nm,0.8s,baz=7.6,slow=1.7,SNR=7.9						
SONM	Songino Array	116.35	346	PKP	PKiKP	16 06 38.7	-0.1
	comp=Z,2.5nm,1.0s,baz=18,slow=1.3,SNR=6.6						
SONM				PP	PP	16 07 42.6	-1.1
	comp=Z,2.5nm,1.0s,baz=350,slow=6.0,SNR=4.1						
SONM				PKKPbc	PKKPbc	16 17 07.4	-1.7
	comp=Z,2.2nm,0.8s,baz=191,slow=2.6,SNR=9.7						
DGZ	Jazzator, Alta	116.89	360	i PKIKP	PKPdf	16 06 39.3	-0.6
SYO	Syowa Base	117.16	163	⇓ePdiff	Pdif	16 02 54.4	-1.5
SYO	Syowa Base	117.16	163	⇓ePKPdf	PKiKP	16 06 41.3	+1.8
SYO	Syowa Base	117.16	163	⇓epPKPdf	pPKPdf	16 06 44.2	+2.0
DL2	Dalian	118.47	330	PKP	PKPdf	16 06 42.4	-0.6
DL2				PP	PP	16 08 02.4	+3.7
DL2				AMB	AMB		
	comp=Z,160nm,9.6s						
DL2				LR	LR		
	comp=Z,760nm,20.4s						
DL2				LR	LR		
	comp=Z,1µm,18.0s						
DL2				LR	LR		
	comp=Z,1µm,18.4s						
MK31	Makanchi Array	119.65	4	i PKIKP	PKPdf	16 06 44.4	-0.7
MKAR	Makanchi Array	119.65	4	PKP	PKPdf	16 06 44.0	-1.1
	comp=Z,1.2nm,0.7s,baz=1.1,slow=2.0,SNR=9.8						
MKAR				PP	PP	16 08 06.3	-0.1
	comp=Z,3.9nm,0.8s,baz=18,slow=5.1,SNR=7.5						
MKAR				PKKPbc	PKKPbc	16 16 55.1	-2.0
	comp=Z,1.9nm,0.9s,baz=143,slow=4.2,SNR=8.4						
MKAR	Makanchi Array	119.65	4	PKIKP	PKPdf	16 06 44.0	-1.1
BOSA	Boshof	121.14	115	PKP	PKPdf	16 06 48.0	-0.5
	comp=Z,11nm,0.9s,baz=283,slow=3.3,SNR=10						
BOSA				PP	PP	16 08 19.1	+0.5
	comp=Z,6.5nm,0.8s,baz=294,slow=5.6,SNR=4.1						
BOSA	Boshof	121.14	115	PKIKP	PKPdf	16 06 48.0	-0.5
HHC	Hu-ho-hao-te	121.14	338	ePKP	PKPdf	16 06 45.1	-3.1
HHC				PP	PP	16 08 19.3	+2.3
HHC				SKS	SKSac	16 13 52.9	+6.1
HHC				SKKS	SKKSac	16 15 09.8	-7.9
HHC				LR	LR		
	comp=Z,950nm,17.0s						
HHC				LR	LR		
	comp=Z,2µm,18.7s						
HHC				LR	LR		
	comp=Z,1µm,16.2s						
BTO	Baotou	121.90	339	ePKP	PKPdf	16 06 49.5	-0.2
BTO				PP	PP	16 08 23.4	+1.3
BTO				SS	SS	16 25 00.1	+1.4
BTO				AMB	AMB		
	comp=Z,360nm,4.3s						
BTO				LR	LR		
	comp=Z,620nm,11.4s						
BTO				LR	LR		
	comp=Z,1µm,20.4s						
BTO				LR	LR		
	comp=Z,1µm,20.5s						
WMQ	Urumqi	122.77	359	ePKP	PKiKP	16 06 51.9	+0.5
WMQ				PP	PP	16 08 30.0	+2.3
WMQ				AMB	AMB		
	comp=Z,560nm,7.7s						
WMQ				LR	LR		
	comp=Z,2µm,19.7s						
WMQ				LR	LR		
	comp=Z,1µm,21.3s						
WMQ				LR	LR		
	comp=Z,2µm,19.7s						
TIA	Tai'an	122.78	331	PKP	PKiKP	16 06 52.5	+0.9
TIA				PP	PP	16 08 34.0	+5.8
TIA				LR	LR		
	comp=Z,2µm,13.7s						
TIA				LR	LR		
	comp=Z,3µm,15.7s						
TIA				LR	LR		
	comp=Z,5µm,14.7s						
AAK	Ala-Archa	122.79	11	P	PKiKP	16 06 52.3	+0.7
AAK	Ala-Archa	122.79	11	i PKIKP	PKiKP	16 06 52.3	+0.7
MBAR	Mbarara	122.87	82	P	PKiKP	16 06 52.5	-0.1
MBAR	Mbarara	122.87	82	IAMs_20	IAMs_20	16 57 02.6	
	comp=Z,1µm,21.0s						
HNS	HongShan	122.88	334	⇑PKP	PKiKP	16 06 52.1	+0.4
HNS				PP	PP	16 08 35.1	+6.4
HNS				AMB	AMB		
	comp=Z,460nm,9.8s						
HNS				LR	LR		
	comp=Z,520nm,19.6s						
HNS				LR	LR		
	comp=Z,930nm,18.1s						
HNS				LR	LR		
	comp=Z,1µm,17.6s						
CTA	Charters Tower	123.15	255	PKP	PKPdf	16 06 52.4	0.0
	comp=Z,4.2nm,1.0s,baz=6.3,slow=4.8,SNR=5.3						
CTAO	Charters Tower	123.15	255	IAMs_20	IAMs_20	16 49 53.6	
	comp=Z,1µm,20.0s						
LSZ	Lusaka	123.22	99	P	PKPdf	16 06 52.2	-0.6
LSZ	Lusaka	123.22	99	IAMs_20	IAMs_20	17 03 26.6	
	comp=Z,872nm,18.0s						
MAW	Mawson	123.86	169	PKP	PKPdf	16 06 51.4	-0.9
	comp=Z,8.0nm,0.8s,baz=256,slow=4.7,SNR=9.4						
WUS	Wushi	124.92	7	IAMs_20	IAMs_20	17 02 51.6	
	comp=Z,995nm,21.0s						
RAYN	Ar Rayn	125.12	48	P	PKiKP	16 06 56.7	+0.1
RAYN	Ar Rayn	125.12	48	IAMs_20	IAMs_20	17 12 52.9	
	comp=Z,606nm,18.0s						
NJ2	Nanjing	125.21	327	ePKP	PKiKP	16 06 56.9	+0.4
GTA	Gaotai	125.83	348	PKP	PKPdf	16 06 57.6	+0.3
GTA				SS	SS	16 25 52.3	+4.2
GTA				AMB	AMB		
	comp=Z,390nm,10.8s						
GTA				LR	LR		
	comp=Z,2µm,19.1s						
GTA				LR	LR		
	comp=Z,2µm,19.5s						
GTA				LR	LR		
	comp=Z,1µm,21.9s						
LODK	Lodwar	126.06	75	P	PKPdf	16 06 57.5	-0.9
LODK	Lodwar	126.06	75	IAMs_20	IAMs_20	16 57 54.5	
	comp=Z,824nm,22.0s						
KSH	Kashi	126.09	11	PKP	PKiKP	16 07 00.4	+2.2
KSH				PP	PP	16 08 53.1	+3.0
KSH				LR	LR		
	comp=Z,1µm,18.9s						
KSH				LR	LR		
	comp=Z,1µm,17.9s						
KSH				LR	LR		
	comp=Z,2µm,21.6s						
LYN	LuoYang	126.25	334	PKP	PKPdf	16 06 55.8	-2.3
LYN				PP	PP	16 08 52.8	+1.4
LYN				SKKS		16 15 48.6	
LYN				SS	SS	16 25 59.3	+5.6
LYN				AMB	AMB		
	comp=Z,880nm,9.3s						
LYN				LR	LR		
	comp=Z,450nm,18.2s						
LYN				LR	LR		
	comp=Z,480nm,21.0s						
LYN				LR	LR		
	comp=Z,960nm,24.0s						
STKA	Stephens Creek	127.03	240	PKP	PKPdf	16 06 59.7	+0.1
	comp=Z,20nm,0.8s,baz=56,slow=1.8,SNR=35						
FURI	Furi	127.08	68	IAMs_20	IAMs_20	17 05 54.9	
	comp=Z,724nm,18.0s						
LZH	Lanzhou	127.99	343	ePKP	PKPdf	16 07 00.0	-1.6
LZH				PP	PP	16 09 12.4	+10
LZH				SKKS		16 15 56.3	
LZH				AMB	AMB		
	comp=Z,300nm,4.8s						
LZH				LR	LR		
	comp=Z,3µm,20.3s						
LZH				LR	LR		
	comp=Z,2µm,21.3s						
LZH				LR	LR		
	comp=Z,4µm,20.6s						
XAN	Xi'an	128.14	337	⇑PKP	PKPdf	16 07 02.0	+0.2
XAN				PP	PP	16 09 07.9	+4.1
XAN				SS	SS	16 26 21.0	+3.8
XAN				AMB	AMB		
	comp=Z,430nm,7.9s						
XAN				LR	LR		
	comp=Z,2µm,20.6s						
XAN				LR	LR		
	comp=Z,700nm,19.2s						
XAN				LR	LR		
	comp=Z,2µm,20.6s						
TRNA	Turayna	128.28	43	P	PKPdf	16 07 01.6	-0.5
ATD	Arta Tunnel	129.58	62	IAMs_20	IAMs_20	17 01 28.6	
	comp=Z,748nm,20.0s						
GOMU	GeErMu	129.83	352	PKP	PKPdf	16 07 05.6	+0.2
GOMU				SS	SS	16 26 40.0	+1.8
GOMU				AMB	AMB		
	comp=Z,530nm,9.5s						
GOMU				LR	LR		
	comp=Z,2µm,14.9s						
GOMU				LR	LR		
	comp=Z,580nm,14.4s						
GOMU				LR	LR		
	comp=Z,2µm,14.5s						
KIBK	Kibwezi	130.37	81	IAMs_20	IAMs_20	17 08 59.3	
	comp=Z,592nm,20.0s						
SHME	Shamm	130.40	37	P	PKiKP	16 07 07.0	0.0
BANOM	Banah	130.59	37	P	PKPdf	16 07 06.3	-0.3
MASF	Masafi	130.92	38	P	PKiKP	16 07 08.0	-0.2
	SNR=8.8						
MZR	Muzera	130.97	42	P	PKPdf	16 07 07.7	+0.3
UOSS	Minazif	131.27	38	P	PKiKP	16 07 08.8	0.0
UOSS	Minazif	131.27	38	IAMs_20	IAMs_20	17 10 58.0	
	comp=Z,569nm,21.0s						
HATD	Hatta, Dubai	131.31	38	P	PKPdf	16 07 07.6	-0.4
	SNR=5.0						
ASHO	Ashiyiah	131.38	39	P	PKPdf	16 07 07.9	-0.2
ALNE	Al Ain	131.65	39	P	PKPdf	16 07 07.8	-0.8
SOHO	SOHO	132.07	39	P	PKPdf	16 07 09.5	+0.1
CD2	Chengdu	132.81	340	PKP	PKPdf	16 07 10.1	-0.6
CD2				PP	PP	16 09 35.3	+1.2
CD2				AMB	AMB		
	comp=Z,770nm,8.4s						
CD2				LR	LR		
	comp=Z,2µm,19.6s						
CD2				LR	LR		
	comp=Z,1µm,17.6s						

CD2				LR	LR		
	comp=Z,3µm,19.1s						
DHRM	**DHARAMSHALA**	**133.20**	**12**	*e*P	**PKiKP**	**16 07 12.4**	**-0.4**
DHRM				IAmb	IAmb	16 07 25.9	
	comp=Z,162nm,2.3s						
BSY	**Bisya**	**133.51**	**39**	P	**PKiKP**	**16 07 13.4**	**-0.1**
SMDO	**Samad**	**133.79**	**38**	P	**PKPdf**	**16 07 11.6**	**-1.2**
WSAR	**Wadi Sarin**	**134.00**	**37**	P	**PKPdf**	**16 07 11.7**	**-1.4**
FAKI	**Fak Fak**	**134.02**	**279**	IAMs_20	IAMs_20	17 01 32.1	
	comp=Z,925nm,19.0s						
WRAB	**Tennant Creek**	**134.33**	**255**	IAMs_20	IAMs_20	16 57 05.6	
	comp=Z,967nm,20.0s						
WRA	**Warramunga Arr**	**134.34**	**255**	PKP	**PKPdf**	**16 07 13.9**	**+0.1**
	comp=Z,7.2nm,0.7s,baz=90,slow=2.5,SNR=6.8						
WRA				PP	**PP**	**16 09 44.0**	**-1.8**
	comp=Z,2.5nm,1.2s,baz=81,slow=7.2,SNR=5.5						
JMDO	**Jabal Madar**	**134.34**	**39**	P	**PKPdf**	**16 07 12.4**	**-1.4**
SIJI	**Sorong**	**134.35**	**282**	PKP	**PKPdf**	**16 07 13.9**	**-0.1**
SWI	**Sorong**	**134.36**	**282**	PKP	**PKPdf**	**16 07 13.3**	**-0.6**
SMLA	**Simla**	**134.46**	**12**	*e*P	**PKiKP**	**16 07 14.6**	**-0.4**
SMLA				IAmb	IAmb	16 07 20.6	
	comp=Z,190nm,2.5s						
ASAR	**Alice Springs**	**134.61**	**250**	PKP	**PKPdf**	**16 07 14.2**	**-0.1**
	comp=Z,4.7nm,0.7s,baz=92,slow=1.8,SNR=17						
ASAR				SKPbc	**SKPbc**	**16 10 42.1**	**-1.9**
	comp=Z,1.2nm,1.0s,baz=90,slow=3.4,SNR=4.5						
WHFO	**Wadi Hawf**	**134.63**	**47**	P	**PKPdf**	**16 07 13.4**	**-1.0**
WBK	**Wadi Bani Khal**	**134.68**	**38**	P	**PKPdf**	**16 07 13.0**	**-1.4**
CGRH	**CHANDIGARH**	**134.76**	**12**	*e*P	**PKiKP**	**16 07 16.0**	**+0.2**
CGRH				IAmb	IAmb	16 07 19.0	
	comp=Z,621nm,0.3s						
SRGN	**SRI GANGA NAGA**	**134.85**	**16**	*e*P	**PKiKP**	**16 07 15.3**	**-0.6**
MHTO	**MHTO**	**135.29**	**40**	P	**PKPdf**	**16 07 15.3**	**-0.2**
BKNR	**BIKANER**	**136.47**	**18**	*e*P	**PKPdf**	**16 07 18.5**	**+0.9**
LSA	**Lhasa**	**136.68**	**355**	IAMs_20	IAMs_20	17 14 19.9	
	comp=Z,864nm,21.0s						
TKRD	**Thakurdwara**	**136.70**	**10**	*e*P	**PKPdf**	**16 07 18.3**	**+0.3**
NDI	**New Delhi**	**136.84**	**13**	*e*P	**PKPdf**	**16 07 18.7**	**+0.4**
KUDL	**Kundal**	**137.20**	**14**	*e*P	**PKPdf**	**16 07 19.6**	**+0.7**
TNTI	**Ternate**	**137.47**	**287**	IAMs_20	IAMs_20	16 58 24.6	
	comp=Z,400nm,20.0s						
PZH	**PanZhiHua**	**137.54**	**340**	PKP	**PKPdf**	**16 07 20.4**	**+0.6**
PZH				PP	**PP**	**16 10 08.6**	**+4.5**
PZH				PKS	**PKSdf**	**16 10 54.8**	**-1.4**
PZH				SKKS		16 16 57.6	
PZH				SS	**SS**	**16 28 11.8**	**+0.4**
PZH				AMB	AMB		
	comp=Z,430nm,5.8s						
PZH				LR	LR		
	comp=Z,750nm,21.4s						
PZH				LR	LR		
	comp=Z,340nm,18.8s						
PZH				LR	LR		
	comp=Z,990nm,19.2s						
PASG	**PASIGHAT**	**137.72**	**349**	*e*P	**PKPdf**	**16 07 20.8**	**+0.9**
KRAI	**Karang Ratu**	**137.82**	**280**	PKP	**PKPdf**	**16 07 20.2**	**-0.2**
KRAI				PKP	**PKiKP**	**16 07 21.8**	**-0.6**
AJM	**Ajmer**	**138.32**	**17**	*e*P	**PKPdf**	**16 07 22.1**	**+1.0**
KMI	**Kunming**	**138.47**	**338**	PKP	**PKPdf**	**16 07 21.5**	**-0.1**
KMI				PP	**PP**	**16 10 11.8**	**+1.8**
KMI				SKP	**SKPbc**	**16 10 50.5**	**-5.5**
KMI				AMB	AMB		
	comp=Z,380nm,6.6s						
KMI				LR	LR		
	comp=Z,2µm,19.7s						
KMI				LR	LR		
	comp=Z,1µm,20.0s						
KMI				LR	LR		
	comp=Z,2µm,14.4s						
ZIRO	**ZIRO**	**138.49**	**351**	*e*P	**PKPdf**	**16 07 22.1**	**+0.6**
BRCI	**Bahraich**	**138.66**	**7**	*e*P	**PKPdf**	**16 07 22.4**	**+0.8**
TAWA	**Tawang**	**138.69**	**353**	*e*P	**PKPdf**	**16 07 22.1**	**-0.1**
VLK	**Valmikinagar**	**139.01**	**4**	*e*P	**PKPdf**	**16 07 22.8**	**+0.4**
GTK	**Tadong**	**139.21**	**358**	*e*P	**PKPdf**	**16 07 23.4**	**+0.5**
MOKO	**MOKOCHONG**	**139.56**	**350**	*e*P	**PKPdf**	**16 07 24.2**	**+0.7**
SANI	**Sanana**	**139.73**	**283**	PKP	**PKPdf**	**16 07 24.1**	**+0.2**
SANI				PKP	**PKiKP**	**16 07 25.4**	**-0.9**
TNCH	**TengChong**	**139.90**	**344**	PKP	**PKiKP**	**16 07 26.1**	**-0.5**
TNCH				PP	**PP**	**16 10 22.5**	**+3.8**
TNCH				SS	SS	16 28 42.3	+3.1
TNCH				AMB	AMB		
	comp=Z,460nm,5.8s						
TNCH				LR	LR		
	comp=Z,610nm,16.0s						
TNCH				LR	LR		
	comp=Z,1µm,15.6s						
TNCH				LR	LR		
	comp=Z,2µm,16.0s						
GUWA	**GUWAHATI**	**140.09**	**353**	*e*P	**PKPdf**	**16 07 25.1**	**+0.8**
COBR	**COOCHBEHAR**	**140.19**	**356**	*e*P	**PKPdf**	**16 07 25.1**	**+0.7**
KOHI	**KOHIMA**	**140.22**	**350**	*e*P	**PKPdf**	**16 07 25.3**	**+0.6**
JHNI	**Jhansi**	**140.25**	**12**	*e*P	**PKPdf**	**16 07 25.1**	**+0.5**
DHUB	**DHUBRI**	**140.42**	**356**	*e*P	**PKPdf**	**16 07 24.0**	**-0.8**
QIZ	**Qiongzhong**	**140.44**	**325**	IAMs_20	IAMs_20	17 22 34.9	
	comp=Z,980nm,21.0s						
QIZ	**Qiongzhong**	**140.44**	**325**	PKP	**PKPdf**	**16 07 24.8**	**-0.3**
QIZ				PP	**PP**	**16 10 23.6**	**+1.2**
QIZ				SS	SS	16 28 48.6	+2.4
QIZ				LR	LR		
	comp=Z,630nm,19.4s						
QIZ				LR	LR		
	comp=Z,350nm,20.0s						
QIZ				LR	LR		
	comp=Z,1µm,17.1s						
GUNA	**GUNA**	**140.75**	**14**	*e*P	**PKPdf**	**16 07 26.4**	**+0.9**
ALBI	**Allahabad**	**140.92**	**7**	*e*P	**PKPdf**	**16 07 26.2**	**+0.5**
VOI	**Vohitsoka**	**140.98**	**108**	P	**PKPdf**	**16 07 26.5**	**+0.4**
VAR	**Varanasi**	**141.06**	**6**	*e*P	**PKPdf**	**16 07 26.8**	**+0.8**
IMP	**Imphal**	**141.11**	**350**	*e*P	**PKPdf**	**16 07 27.2**	**+1.0**
GAYA	**Gaya**	**141.71**	**3**	*e*P	**PKPdf**	**16 07 27.1**	**-0.1**
BHPL	**Bhopal**	**142.13**	**14**	*e*P	**PKPdf**	**16 07 28.6**	**+0.6**
LUWI	**Luwuk**	**142.41**	**286**	IAMs_20	IAMs_20	16 58 19.4	
	comp=Z,444nm,21.0s						
AGT	**Agartala**	**142.43**	**354**	*e*P	**PKPdf**	**16 07 28.7**	**+0.2**
NRDN	**NARMADA NAGAR**	**142.57**	**15**	*e*P	**PKPdf**	**16 07 29.4**	**+0.6**
BOK	**Bokaro**	**142.73**	**2**	*e*P	**PKPdf**	**16 07 29.8**	**+0.7**
SOEI	**Soe**	**143.29**	**272**	PKP	**PKiKP**	**16 07 32.9**	**-0.8**
APSI	**Ampana**	**143.40**	**287**	PKP	**PKPdf**	**16 07 30.0**	**-0.5**
SAIH	**SAIHA**	**143.57**	**351**	*e*P	**PKPdf**	**16 07 30.8**	**0.0**
BATI	**Baumata**	**143.95**	**271**	PKP	**PKPdf**	**16 07 30.8**	**-0.6**
BATI				PKP	**pPKPdf**	**16 07 32.5**	**-1.6**
CAL	**Calcutta**	**143.97**	**358**	*e*P	**PKPdf**	**16 07 31.6**	**+0.3**
BLSP	**Bilaspur**	**144.13**	**8**	*e*P	**PKPdf**	**16 07 32.1**	**+0.6**
AKL	**Akola**	**144.45**	**16**	*e*P	**PKPdf**	**16 07 32.3**	**+0.1**
KKSI	**Kolaka, Sulawe**	**144.50**	**282**	PKP	**PKPdf**	**16 07 32.0**	**-0.4**
KKSI				PKP	**pPKPdf**	**16 07 33.6**	**-1.5**
JHSG	**JHARSUGUGA**	**144.63**	**5**	*e*P	**PKPdf**	**16 07 32.4**	**0.0**
KKM	**Kota Kinabalu**	**144.96**	**302**	IAMs_20	IAMs_20	16 53 56.7	
	comp=Z,590nm,22.0s						
MMRI	**Maumere**	**145.06**	**274**		**PKPbc**	**16 07 31.5**	**-1.3**
PCI	**Palu**	**145.08**	**289**	PKP	**PKPbc**	**16 07 33.0**	**+0.2**
PCI				PKP	**PKPdf**	**16 07 33.7**	**+0.3**
POO	**Poona**	**145.47**	**22**	*e*P	**PKPab**	**16 07 35.0**	**+0.9**
CHTO	**Chiang Mai**	**145.61**	**340**	P	**PKPdf**	**16 07 34.3**	**+0.1**
CM31	**Chiang Mai Arr**	**145.94**	**339**	P	**PKPab**	**16 07 36.1**	**+0.3**
	SNR=74						
CMAR	**Chiang Mai Arr**	**145.94**	**339**	PKPbc	**PKPab**	**16 07 35.8**	**-0.1**
	comp=Z,43nm,1.0s,baz=344,slow=4.2,SNR=164						
BWNR	**Bhubaneshwar**	**146.21**	**2**	*e*P	**PKPdf**	**16 07 35.5**	**+0.3**
BKSI	**Bulukumba**	**146.29**	**281**	PKP	**PKPbc**	**16 07 36.2**	**-0.4**
BKSI				PKP	**PKPab**	**16 07 36.9**	**-0.5**
NWAO	**Narrogin (SRO)**	**146.43**	**230**	P	**PKPbc**	**16 07 36.7**	**+0.2**
KAPI	**Kappang**	**146.56**	**282**	P	**PKPbc**	**16 07 37.3**	**-0.1**
KAPI	**Kappang**	**146.56**	**282**	PKP	**PKPbc**	**16 07 36.9**	**-0.5**
KAPI				PKP	**PKPab**	**16 07 38.4**	**0.0**
MMSI	**Mamuju**	**146.60**	**286**	PKP	**PKPdf**	**16 07 36.4**	**+0.4**
MMSI				PKP	**PKPbc**	**16 07 37.3**	**-0.2**
KAD	**Karad**	**146.72**	**23**	*e*P	**PKPdf**	**16 07 36.5**	**+0.4**
PMSI	**Majene**	**146.87**	**285**	PKP	**PKPbc**	**16 07 38.6**	**+0.3**
BASI	**Baing, Sumba**	**146.95**	**272**	PKP	**PKPdf**	**16 07 37.4**	**+0.9**
RAGD	**RAYAGADA**	**147.09**	**6**	*e*P	**PKPdf**	**16 07 36.8**	**+0.1**
WSI	**Waingapu**	**147.13**	**273**	PKP	**PKPdf**	**16 07 37.2**	**+0.4**
WSI				PKP	**pPKPdf**	**16 07 39.8**	**+0.3**
LBFI	**Labuhan Bajo,**	**147.30**	**276**	PKP	**PKPdf**	**16 07 36.1**	**-1.0**
LBFI				PKP	**PKPbc**	**16 07 39.1**	**-0.4**
MSEY	**Mahe Island**	**147.69**	**77**	P	**PKPdf**	**16 07 36.7**	**-1.2**
MBWA	**Marble Bar**	**147.91**	**252**	P	**PKPdf**	**16 07 39.3**	**+1.4**
BKB	**Balikpapan**	**147.91**	**290**	PKP	**PKPbc**	**16 07 40.4**	**-0.8**
HYB	**Hyderabad**	**148.00**	**15**	*e*PKPbc	**PKPbc**	**16 07 40.9**	**-0.4**
HYB				*e*PKPab	**PKiKP**	**16 07 43.5**	**+0.3**
HYB				*e*PP	**PP**	**16 11 09.0**	**+1.9**
HYB				*e*SKSdf	**SKSdf**	**16 14 46.5**	**-0.4**
WBSI	**Waikabubak, Su**	**148.00**	**274**	PKP	**PKPdf**	**16 07 38.9**	**+0.5**
WBSI				PKP	**pPKPdf**	**16 07 39.9**	**-1.2**
VIS	**Vishakhapatnam**	**148.59**	**7**	*e*P	**PKPdf**	**16 07 39.4**	**+0.3**
DBNI	**Kabupaten Domp**	**148.83**	**276**	PKP	**PKPdf**	**16 07 39.4**	**-0.3**
DBNI				PKP	**pPKPdf**	**16 07 40.9**	**-1.5**
VJD	**Vijayawada**	**149.35**	**12**	*e*P	**PKPdf**	**16 07 40.8**	**+0.4**
PLAI	**Plampang**	**149.41**	**276**	PKP	**PKPdf**	**16 07 40.5**	**-0.1**
MTKI	**Muara Teweh, K**	**149.59**	**292**	PKP	**PKPdf**	**16 07 42.1**	**+1.2**
KLNI	**Mataram**	**150.95**	**277**	PKP	**PKPbc**	**16 07 46.2**	**-2.5**
MNGI	**Mangalore**	**151.00**	**25**	*e*P	**PKPdf**	**16 07 43.3**	**+0.4**
KHKI	**Kahang-Kahang**	**151.41**	**278**	PKP	**PKPdf**	**16 07 44.9**	**+1.2**
ABJI	**Asem Bagus**	**152.59**	**280**	PKP	**PKPdf**	**16 07 48.0**	**+2.5**
KMMI	**Kalianget**	**152.65**	**281**	PKP	**PKPdf**	**16 07 47.7**	**+2.1**
DGPR	**DIGLIPUR**	**152.66**	**347**	*e*P	**PKPdf**	**16 07 45.7**	**+0.2**
SALM	**Salem**	**153.35**	**20**	*e*P	**PKPdf**	**16 07 45.9**	**-0.6**
PBA	**Port Blair**	**154.18**	**347**	P	**PKPdf**	**16 07 47.1**	**-0.6**
SNJI	**Sawahan-Nganju**	**154.95**	**281**	PKP	**PKPdf**	**16 07 50.1**	**+1.0**
KULM	**Kulim**	**156.76**	**323**	IAMs_20	IAMs_20	17 31 33.8	
	comp=Z,694nm,21.0s						
PSI	**Prapat**	**159.77**	**323**	PKP	**PKPdf**	**16 07 54.6**	**-0.5**
PSI				PKP	**pPKPdf**	**16 07 56.1**	**-1.7**
KLSI		**160.33**	**295**	PKP	**PKPdf**	**16 07 55.6**	**0.0**
KLSI				PKP	**pPKPdf**	**16 07 55.7**	**-2.6**
PPI	**Padang Panjang**	**161.30**	**314**	PKP	**PKPdf**	**16 07 57.0**	**+0.4**
PPI				PKP	**pPKPdf**	**16 07 57.3**	**-2.0**
PDSI	**Padang**	**161.57**	**312**	PKP	**PKPdf**	**16 07 56.9**	**0.0**
PDSI				PKP	**PKPdf**	**16 07 56.9**	**0.0**
KRJI	**Kerinci**	**161.61**	**308**	PKP	**PKPdf**	**16 07 57.1**	**0.0**
KRJI				PKP	**pPKPdf**	**16 07 57.9**	**-1.9**
GSI	**Gunungsitoli**	**161.76**	**324**	PKP	**PKPdf**	**16 07 57.1**	**0.0**
GSI				PKP	**pPKPdf**	**16 07 58.7**	**-1.1**

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*NEIC **23** 15:54:04.2±1.9, 14°.4S±0°.1×165°.59E±0°.09, h10^{km}±2^{km}, mb4.3/8, Error ellipse: s-maj=20.6km s-min=13.9km az=17.0*

*IDC **23** 15:54:12.9±12.0, 15°.18S×164°.40E, h0^{km}, mb4.0/3, mbtmp3.9/4, ML3.3/1, MS3.6/1, Error ellipse: s-maj=213.9km s-min=34.2km az=47.0*

ISC 23 15:54:06.2±1.5**, 14°.3S**±0°.1×**165°.54E**±0°.10**, h35^{km}, n16, σ0^{s}.96**/17**, mb4.0**/7**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**1.96**	**125**	Pn	**Pn**	**15 54 37.5**	**+0.6**
SANVU				Sn	**Sn**	**15 54 59.7**	**-0.5**
DZM	**Mont Dzumac**	**7.75**	**174**	Pn	**Pn**	**15 55 58.3**	**+1.7**
	0.6nm,0.3s,baz=121,slow=13,SNR=6.8						
DZM				Sn	**Sn**	**15 57 22.4**	**-0.8**
	0.5nm,0.3s,baz=293,slow=23,SNR=1.2						
	1.6nm,0.3s						
PINNC	**Pines Island,**	**8.43**	**168**	Pn	**Pn**	**15 56 06.7**	**+0.8**
JAY	**Jayapura**	**27.19**	**293**	LR	LR	16 10 35.9	
	comp=Z,104nm,18.0s,baz=54,slow=37						
STKA	**Stephens Creek**	**28.00**	**227**	P	**P**	**15 59 53.0**	**-0.9**
	1.2nm,0.3s,baz=54,slow=9.3,SNR=10.0						
	1.2nm,0.3s						
STKA	**Stephens Creek**	**28.00**	**227**	P	**P**	**15 59 52.6**	**-1.4**
WR8	**Warramunga Arr**	**30.15**	**255**	P	**P**	**16 00 13.8**	**+0.6**
WR8				IAmb	IAmb	16 00 33.6	
	comp=Z,5.8nm,1.5s						
WB0	**Warramunga Arr**	**30.23**	**255**	P	**P**	**16 00 14.6**	**+0.7**
WB0				IAmb	IAmb	16 00 46.5	
	comp=Z,9.5nm,1.5s						
WRA	**Warramunga Arr**	**30.30**	**255**	P	**P**	**16 00 15.1**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=82,slow=7.2,SNR=7.8						
	comp=Z,0.3nm,0.4s						
WRA	**Warramunga Arr**	**30.30**	**255**	P	**P**	**16 00 14.0**	**-0.5**
AS31	**Alice Springs**	**31.26**	**248**	P	**P**	**16 00 23.0**	**0.0**
ASAR	**Alice Springs**	**31.26**	**248**	P	**P**	**16 00 23.0**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=76,slow=9.6,SNR=58						
	comp=Z,0.7nm,0.4s						
ASAR	**Alice Springs**	**31.26**	**248**	P	**P**	**16 00 22.5**	**-0.4**
BBOO	**Buckleboo**	**32.52**	**230**	P	**P**	**16 00 32.5**	**-1.4**
BBOO				IAmb	IAmb	16 00 55.5	
	comp=Z,16nm,1.4s						
KNRA	**Kununurra**	**35.52**	**263**	P	**P**	**16 01 01.3**	**+1.2**
FITZ	**Fitzroy Crossi**	**38.44**	**259**	P	**P**	**16 01 25.8**	**+0.9**
FITZ				IAmb	IAmb	16 01 42.1	
	comp=Z,2.5nm,1.5s						

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*IDC **23** 15:54:21.6±4.0, 0°.31S×97°.83E, h0^{km}, mb3.4/6, mbtmp3.4/6, Error ellipse: s-maj=171.7km s-min=23.7km az=56.0*

*DJA **23** 15:54:26.6±0.3, 0°N±3°×9°8E±°, h11^{km}±4^{km}, M3.6/10, MLv3.6/10*

ISC 23 15:54:27.4±0.9**, 0°.08N**±0°.08×**98°.22E**±0°.08**, h30^{km}, n21, σ1^{s}.07**/17**, mb3.4**/6**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBSI	**Pulau Batu**	**0.14**	**156**	P	**Pb**	**15 54 31.8**	**-1.3**
PBSI				S	**Sb**	**15 54 36.3**	**-0.6**
GSI	**Gunungsitoli**	**1.38**	**332**	P	**Pn**	**15 54 50.5**	**-0.2**
MNSI	**Mandailing Nat**	**1.53**	**62**	P	**Pn**	**15 54 52.1**	**-0.7**
MNSI				S	**Sn**	**15 55 11.2**	**-0.5**
SISI	**Saibi**	**1.64**	**148**	P	**Pb**	**15 54 55.9**	**-1.2**
PPI	**Padang Panjang**	**2.24**	**104**	P	**Pn**	**15 55 04.3**	**+1.8**
PDSI	**Padang**	**2.44**	**114**	P	**Pn**	**15 55 05.2**	**-0.1**
PSI	**Prapat**	**2.80**	**15**	P	**Pn**	**15 55 09.2**	**-1.1**
TPTI		**3.33**	**342**	P	**Pn**	**15 55 17.2**	**-0.3**
KCSI	**Kotacane, Aceh**	**3.45**	**352**	P	**Pn**	**15 55 19.1**	**-0.1**
H08S2	**Diego Garcia H**	**26.78**	**253**	T	T	16 27 28.8	
	baz=74,slow=76,SNR=11						
H08S3	**Diego Garcia H**	**26.78**	**253**	T	T	16 27 31.7	
	baz=74,slow=76,SNR=101						
H08S1	**Diego Carcia H**	**26.79**	**253**	T	T	16 27 33.3	
	baz=74,slow=76,SNR=8.6						
WRA	**Warramunga Arr**	**40.58**	**122**	P	**P**	**16 02 03.5**	**-1.2**
	0.3nm,0.8s,baz=297,slow=7.7,SNR=1.4						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**41.91**	**127**	P	**P**	**16 02 15.6**	**0.0**
	0.2nm,0.8s,baz=297,slow=8.6,SNR=2.5						
	0.2nm,0.8s						
SONM	**Songino Array**	**48.10**	**7**	P	**P**	**16 03 06.7**	**+2.2**
	0.3nm,0.4s,baz=198,slow=10,SNR=2.5						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**48.58**	**345**	P	**P**	**16 03 08.7**	**+0.6**
	0.4nm,0.5s,baz=158,slow=8.4,SNR=10						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**53.08**	**344**	P	**P**	**16 03 42.5**	**+0.6**
	0.1nm,0.4s,baz=163,slow=7.0,SNR=3.0						
	0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**54.83**	**350**	P	**P**	**16 03 55.3**	**+0.7**
	0.4nm,0.4s,baz=175,slow=7.1,SNR=2.3						
	0.4nm,0.4s						
H04N2	**CROZET ISLANDS**	**61.43**	**215**	T	T	17 11 03.7	
	baz=56						
H04N1	**CROZET ISLANDS**	**61.45**	**215**	T	T	17 11 05.8	
	baz=56						
H04N3	**CROZET ISLANDS**	**61.45**	**215**	T	T	17 11 03.3	
	baz=56						

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*SSNC **23** 16:10:58.4±3.7, 19°.32N×70°.78W, h12^{km}±29^{km}, MD3.2, ML2.6, MW3.1*

*SDD **23** 16:10:58.6±2.8, 19°.45N×70°.91W, h31^{km}±12^{km}, MD3.4, ML3.7, MW3.6, Presumed earthquake*

*OSPL **23** 16:11:00.1±1.9, 19°.43N×70°.98W, h1^{km}±18^{km}, ML2.8, Presumed earthquake*

ISC 23 16:10:57.3±1.0**, 19°.40N**±0°.02×**70°.86W**±0°.02**, h14^{km}**±8^{km}**, n30, σ1^{s}.47**/55**, 25C-4D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SC01	**Santiago de lo**	**0.12**	**77**	⇑*e*Pg	**Pb**	**16 11 03.4**	**+1.9**
SC01				⇑*e*Sg	**Sb**	**16 11 08.3**	**+4.1**
SC01				IAML		16 11 12.3	
	comp=N,83µm,0.3s						
SC01	**Santiago de lo**	**0.12**	**77**	*i* P	**Pb**	**16 11 03.5**	**+1.9**
SC01				*e*S	**Sb**	**16 11 08.3**	**+4.1**
SC01				IAML		16 11 10.7	
	comp=Z,3µm,0.3s						
SODR	**Sosua Marina B**	**0.44**	**37**	⇑*e*Pg	**Pb**	**16 11 07.0**	**+0.1**
SODR				IAML		16 11 20.3	
	comp=N,4µm,0.5s						
LUDR	**Luperon**	**0.50**	**349**	⇑*e*Pg	**Pg**	**16 11 07.3**	**0.0**
LUDR				⇑*e*Sg	**Sb**	**16 11 16.1**	**+1.0**
LOPP1	**Punta Rusia, P**	**0.56**	**324**	*i* P	**Pg**	**16 11 08.2**	**-0.1**
LOPP1				*e*S	**Sg**	**16 11 15.7**	**0.0**
LOPP1				IAML		16 11 19.6	
	comp=Z,1µm,0.8s						
REDR	**Restauracion**	**0.56**	**246**	*e*Pg	**Pn**	**16 11 12.0**	**+1.2**
REDR				⇑*e*Sg	**Sn**	**16 11 22.2**	**+2.4**
REDR				IAML		16 11 23.2	
	comp=N,6µm,0.2s						
SDDR	**Presa de Saban**	**0.58**	**225**	*e*P	**Pb**	**16 11 09.2**	**-0.1**
SDDR				*e*S	**Sg**	**16 11 16.4**	**-0.1**
SDDR				IAML		16 11 18.8	
	comp=N,419nm,0.4s						
SDDR				IAML		16 11 21.4	
	comp=N,298nm,0.4s						
SDDR	**Presa de Saban**	**0.58**	**225**	⇓*e*Pg	**Pb**	**16 11 09.1**	**-0.1**
SDDR				⇑*e*Sg	**Sb**	**16 11 17.9**	**+0.5**
SDDR				IAML		16 11 18.6	
	comp=N,414nm,0.6s						
SDDR	**Presa de Saban**	**0.58**	**225**	*i* P	**Pb**	**16 11 09.2**	**-0.1**
SDDR				*e*S	**Sg**	**16 11 16.5**	**-0.1**
SDDR				IAML		16 11 18.3	
	comp=Z,218nm,0.5s						
ABDR	**Alto Bandera**	**0.62**	**160**	⇑*e*Pg	**Pn**	**16 11 10.8**	**-1.3**
ABDR				⇑*e*Sg	**Sb**	**16 11 19.8**	**+0.9**
ABDR				IAML		16 11 49.8	
	comp=N,1.2nm,0.3s						
DR08	**Loma La Naviza**	**0.90**	**119**	⇑*e*Pg	**Pg**	**16 11 14.3**	**-0.5**
DR08				⇑*e*Sg	**Sn**	**16 11 27.7**	**-0.8**
DR08				IAML		16 11 38.7	
	comp=N,11µm,0.2s						
MCDR	**Montecristi**	**0.90**	**303**	⇑*e*Pg	**Pb**	**16 11 14.1**	**-0.6**
MCDR				IAML		16 11 32.9	
	comp=N,5µm,0.4s						
CADR	**Cabrera**	**0.90**	**73**	⇑*e*Pg	**Pb**	**16 11 13.3**	**-1.4**
CADR				⇑*e*Sg	**Sn**	**16 11 28.0**	**-0.4**
CADR				IAML		16 11 34.4	
	comp=N,6µm,0.3s						
NADR	**Nagua**	**0.94**	**93**	⇑*e*Pg	**Pb**	**16 11 15.1**	**-0.4**
NADR				⇑*e*Sg	**Sn**	**16 11 29.5**	**+0.1**
NADR				IAML		16 11 35.4	
	comp=N,18µm,0.3s						
LONE3	**El Aguacate, B**	**0.97**	**216**	*i* P	**Pn**	**16 11 16.2**	**-0.4**
LONE3				*e*S	**Sn**	**16 11 30.1**	**-0.2**
LONE3				IAML		16 11 31.4	
	comp=Z,252nm,0.4s						
NEDR	**Neiba UASD**	**1.05**	**210**	*e*Sg	**Sn**	**16 11 33.2**	**+1.1**
NEDR				IAML		16 11 35.3	
	comp=N,1µm,0.3s						
LODU1	**El Espartillar**	**1.19**	**209**	*i* P	**Pg**	**16 11 20.8**	**+0.5**
LODU1				*e*S	**Sg**	**16 11 37.7**	**+1.7**
PODR	**Polo**	**1.29**	**198**	⇓*e*Pg	**Pg**	**16 11 22.3**	**0.0**
PODR				IAML		16 11 45.8	
	comp=N,5µm,0.3s						
PODR	**Polo**	**1.29**	**198**	*i* P	**Pg**	**16 11 22.5**	**+0.2**
PODR				*e*S	**Sg**	**16 11 40.5**	**+1.4**
SDD	**Santo Domingo**	**1.29**	**136**	⇑*e*Sg	**Sg**	**16 11 38.5**	**-0.6**
SDD				IAML		16 11 45.5	
	comp=N,954nm,0.3s						
HATOM	**Hato Mayor del**	**1.52**	**113**	⇑*e*Pg	**Pn**	**16 11 24.2**	**+0.1**
HATOM				⇑*e*Sg	**Sb**	**16 11 43.9**	**-0.6**
HATOM				IAML		16 11 49.3	
	comp=N,4µm,0.2s						
SMDR	**Samana, DR**	**1.58**	**94**	⇓*e*Pg	**Pn**	**16 11 25.1**	**+0.2**
SMDR				⇑*e*Sg	**Sg**	**16 11 47.6**	**-0.6**
SMDR				IAML		16 11 53.6	
	comp=N,330nm,0.5s						
MIDR	**Miches**	**1.76**	**103**	⇑*e*Pg	**Pb**	**16 11 28.1**	**-1.2**
MIDR				⇑*e*Sg	**Sg**	**16 11 52.4**	**-1.5**
MIDR				IAML		16 11 54.6	
	comp=N,94nm,0.2s						
GRTK	**Grand Turk**	**2.12**	**353**	*e*P	**Pn**	**16 11 33.6**	**+1.3**
GRTK				*e*S	**Sn**	**16 11 56.8**	**-1.6**
GRTK	**Grand Turk**	**2.12**	**353**	⇑*e*Pg	**Pn**	**16 11 31.1**	**-1.1**
GRTK				⇓*e*Sg	**Sn**	**16 11 57.4**	**-1.0**
GRTK				IAML		16 12 04.0	
	comp=N,6µm,0.3s						
HIDR	**Higuey Centro**	**2.18**	**111**	*e*Pg	**Pb**	**16 11 35.0**	**-1.5**
HIDR				⇑*e*Sg	**Sb**	**16 12 04.4**	**+1.0**
HIDR				IAML		16 12 05.6	
	comp=N,3µm,0.3s						
PCDR	**Punta Cana, DR**	**2.50**	**110**	⇑*e*Pg	**Pb**	**16 11 39.7**	**-2.4**
PCDR				IAML		16 12 21.2	
	comp=N,197nm,2.7s						
MASC	**Masc**	**3.27**	**284**	*e*P	**Pn**	**16 11 49.9**	**+1.8**
MASC				*e*S	**Sn**	**16 12 28.9**	**+2.0**
MASC				*e*Sg	**Sb**	**16 12 34.0**	**-0.8**
QMBU	**Quimbuelo**	**3.81**	**283**	*e*P	**Pn**	**16 11 54.3**	**-1.3**
QMBU				*e*S	**Sn**	**16 12 37.4**	**-2.8**
RCC	**Rio Carpintero**	**4.60**	**278**	*e*P	**Pn**	**16 12 06.7**	**+0.3**
RCC				*e*S	**Sn**	**16 12 56.3**	**-3.4**

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*IDC **23** 16:12:24.7±3.8, 23°.48S×179°.56E, h508^{km}±36^{km}, mb3.3/4, mbtmp4.2/4, Error ellipse: s-maj=109.7km s-min=28.3km az=160.0*

*NEIC **23** 16:12:28.4±2.0, 23°.2S±0°.2×179°.8E±0°.1, h575^{km}±11^{km}, mb4.3/19, Error ellipse: s-maj=23.9km s-min=13.1km az=165.0*

ISC 23 16:12:24.5±1.7**, 23°.7S**±0°.3×**179°.9W**±0°.2**, h550^{km}, n30, σ1^{s}.46**/28**, mb4.2**/15**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**11.36**	**279**	P	**P**	**16 14 57.2**	**+0.8**
PINNC	**Pines Island,**	**11.68**	**273**	P	**P**	**16 15 01.5**	**+1.8**
AFI	**Afiamalu**	**12.44**	**40**	P	**P**	**16 15 08.2**	**+0.5**
DZM	**Mont Dzumac**	**12.68**	**275**	P	**P**	**16 15 09.4**	**-0.8**
	11nm,0.7s,baz=82,slow=18,SNR=8.9						
DZM	**Mont Dzumac**	**12.68**	**275**	P	**P**	**16 15 12.0**	**+1.8**
ARMA	**Armidale**	**26.15**	**249**	P	**P**	**16 17 15.3**	**-0.2**
ARMA				IAmb	IAmb	16 17 23.0	
	comp=Z,13nm,1.2s						
EIDS	**Eidsvold**	**26.41**	**260**	P	**P**	**16 17 17.5**	**-0.3**
EIDS				IAmb	IAmb	16 17 26.1	
	comp=Z,7.4nm,1.2s						
CTAO	**Charters Tower**	**31.55**	**270**	P	**P**	**16 18 03.4**	**+0.9**
STKA	**Stephens Creek**	**34.86**	**248**	P	**P**	**16 18 29.2**	**-1.0**
	comp=Z,1.8nm,0.5s,baz=97,slow=5.9,SNR=7.6						
	comp=Z,1.8nm,0.5s						
STKA	**Stephens Creek**	**34.86**	**248**	P	**P**	**16 18 29.2**	**-1.0**
INKA	**Innaminka**	**35.56**	**255**	P	**P**	**16 18 36.2**	**+0.2**
BBOO	**Buckleboo**	**39.58**	**247**	P	**P**	**16 19 07.0**	**-1.8**
BBOO				IAmb	IAmb	16 19 41.3	
	comp=Z,20nm,1.4s						
AS31	**Alice Springs**	**42.14**	**260**	P	**P**	**16 19 28.9**	**-0.4**
ASAR	**Alice Springs**	**42.14**	**260**	P	**P**	**16 19 28.9**	**-0.4**
	comp=Z,1.6nm,0.5s,baz=99,slow=7.8,SNR=102						
ASAR				ScP	**ScP**	**16 24 14.8**	**+5.5**
	comp=Z,0.2nm,0.6s,baz=104,slow=4.0,SNR=4.2						
	comp=Z,1.6nm,0.5s						
ASAR	**Alice Springs**	**42.14**	**260**	P	**P**	**16 19 28.3**	**-1.0**
WR8	**Warramunga Arr**	**42.34**	**266**	P	**P**	**16 19 30.5**	**-0.4**
WR8				IAmb	IAmb	16 19 31.2	
	comp=Z,4.3nm,0.9s						
WB0	**Warramunga Arr**	**42.49**	**266**	P	**P**	**16 19 31.6**	**-0.4**
WB0				IAmb	IAmb	16 19 32.3	
	comp=Z,5.9nm,0.6s						
WRAB	**Tennant Creek**	**42.49**	**266**	P	**P**	**16 19 31.6**	**-0.4**
WRAB				IAmb	IAmb	16 19 32.0	
	comp=Z,5.4nm,0.4s						
WRA	**Warramunga Arr**	**42.49**	**266**	P	**P**	**16 19 31.8**	**-0.3**
	comp=Z,3.6nm,0.3s,baz=99,slow=8.1,SNR=143						
	comp=Z,3.6nm,0.3s						
FORT	**Forrest**	**46.44**	**249**	P	**P**	**16 20 00.6**	**-1.7**
FORT				IAmb	IAmb	16 20 12.4	
	comp=Z,9.3nm,1.1s						
MTN	**Manton Dam**	**47.52**	**274**	P	**P**	**16 20 10.7**	**+0.1**
KNRA	**Kununurra**	**48.76**	**270**	P	**P**	**16 20 20.5**	**+0.6**
KNRA				IAmb	IAmb	16 20 21.2	
	comp=Z,15nm,1.1s						
FITZ	**Fitzroy Crossi**	**50.92**	**265**	P	**P**	**16 20 36.2**	**+0.6**
SBA	**Scott Base**	**54.55**	**183**	P	P	16 21 06.3	+5.7
SBA				IAmb	IAmb	16 21 42.0	
	comp=Z,27nm,1.4s						
PSA00	**Pilbara Seismi**	**55.27**	**259**	P	**P**	**16 21 06.0**	**-0.5**
PSA00				IAmb	IAmb	16 21 14.8	
	comp=Z,19nm,1.5s						
MBWA	**Marble Bar**	**55.48**	**260**	P	**P**	**16 21 07.4**	**-0.6**
MBWA				IAmb	IAmb	16 21 25.0	
	comp=Z,9.4nm,1.1s						
JCJ	**Chichijima**	**62.40**	**322**	P	**P**	**16 21 52.5**	**-1.7**
VA02	**Isla de Pascua**	**62.97**	**109**	P	P	16 22 02.7	+4.8
KSAR	**Wonju Array Be**	**78.18**	**320**	P	**P**	**16 23 26.5**	**-0.8**
TXAR	**Lajitas Array**	**90.28**	**58**	P	P	16 24 32.5	+5.3
	comp=Z,0.5nm,0.8s,baz=205,slow=6.6,SNR=5.4						
	comp=Z,0.5nm,0.8s						

*IDC **23** 16:17:16.4±6.9, 62°.23S×155°.27E, h0^{km}, mb3.6/2, mbtmp3.7/3, ML3.7/1, MS3.8/1, Error ellipse: s-maj=441.1km s-min=41.4km az=75.0*

*NEIC **23** 16:17:17.8±0.7, 62°.2S±0°.1×155°.5E±0°.4, h10^{km}±2^{km}, mb4.3/7, Error ellipse: s-maj=37.9km s-min=8.5km az=57.0*

ISC 23 16:17:17.2±1.1, **62°.2S**±0°.1×**155°.6E**±0°.2, **h10**^{km}**, n19, σ**$0^{s}.$**37**/10, **mb4.0**/6, **Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**15.56**	**175**	Pn	**Pn**	**16 20 55.8**	**-0.5**
	0.3nm,0.3s,baz=341,slow=12,SNR=23						
VNDA				LR	LR	16 26 15.1	
	comp=Z,334nm,20.9s,baz=340,slow=35						
	2.4nm,0.6s						
VNDA	**Vanda**	**15.56**	**175**		**Pn**	**16 20 56.8**	**+0.5**
LBZ	**Lake Benmore**	**19.73**	**32**	P	**Pn**	**16 21 48.0**	**-0.3**
LBZ				IAmb	IAmb	16 22 23.1	
	comp=Z,52nm,1.4s						
RTZ	**Ruatahuna**	**26.96**	**39**	P	**P**	**16 22 58.9**	**+0.2**
H01W1	**Cape Leeuwin H**	**37.64**	**297**	T	T	17 04 11.0	
	baz=149,slow=76,SNR=44						
H01W2	**Cape Leeuwin H**	**37.64**	**297**	T	T	17 04 15.7	
	baz=149,slow=76,SNR=34						
H01W3	**Cape Leeuwin H**	**37.66**	**297**	T	T	17 04 12.9	
	baz=149,slow=76,SNR=38						
ASAR	**Alice Springs**	**41.22**	**329**	P	**P**	**16 25 02.4**	**+0.4**
	comp=Z,0.9nm,0.9s,baz=177,slow=8.0,SNR=8.1						
	comp=Z,0.9nm,0.9s						
WRA	**Warramunga Arr**	**44.70**	**331**	P	**P**	**16 25 30.5**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=162,slow=7.9,SNR=3.4						
	comp=Z,0.5nm,0.7s						
WRAB	**Tennant Creek**	**44.71**	**331**	P	**P**	**16 25 30.3**	**0.0**
WRAB				IAmb	IAmb	16 25 38.0	
	comp=Z,2.8nm,1.1s						
WB0	**Warramunga Arr**	**44.86**	**331**	P	**P**	**16 25 31.7**	**+0.2**
WB0				IAmb	IAmb	16 25 49.0	
	comp=Z,4.7nm,1.4s						
FITZ	**Fitzroy Crossi**	**48.76**	**321**	P	**P**	**16 26 01.6**	**-0.4**
FITZ				IAmb	IAmb	16 26 12.3	
	comp=Z,1.3nm,1.2s						
PMG	**Port Moresby**	**53.02**	**350**	P	**P**	**16 26 34.1**	**0.0**
PMG				IAmb	IAmb	16 27 08.9	
	comp=Z,13nm,1.1s						
H03S2	**Juan Fernandez**	**74.76**	**135**	T	T	17 52 02.5	
	baz=201,slow=74,SNR=57						
H03S1	**Juan Fernandez**	**74.76**	**135**	T	T	17 52 03.8	
	baz=201,slow=74,SNR=57						
H03S3	**Juan Fernandez**	**74.77**	**135**	T	T	17 52 03.3	
	baz=201,slow=74,SNR=43						
H08S2	**Diego Garcia H**	**80.08**	**272**	T	T	17 57 29.1	
	baz=152,slow=76,SNR=10						
H08S1	**Diego Carcia H**	**80.09**	**272**	T	T	17 57 34.7	
	baz=152,slow=76,SNR=7.8						
H08S3	**Diego Garcia H**	**80.10**	**272**	T	T	17 57 23.0	
	baz=152,slow=76,SNR=17						

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*BJI **23** 16:19:03.3, 55°.70N×162°.39E, h13^{km}, mB5.3/32, mb4.7/65, Ms5.3/65, Ms7 5.1/62*

*IDC **23** 16:19:04.8±0.4, 55°.73N×162°.17E, h0^{km}, mb4.8/35, mbtmp4.8/39, ML4.8/4, MS4.6/19, Error ellipse: s-maj=10.8km s-min=8.8km az=174.0*

*KRSC **23** 16:19:04.8±1.2, 55°.56N×162°.67E, h21^{km}±21^{km}, Ml5.7, Felt [III-IV] at kordon Kronoki; [II-III] at Ust-Kamchatsk.*

*MOS **23** 16:19:05.8±1.2, 55°.73N×162°.41E, h22^{km}, mb5.5/69, MS4.7/14, Error ellipse: s-maj=5.5km s-min=3.5km az=79.5*

*NEIC **23** 16:19:06.1±1.2, 55°.74N±0°.07×162°.2E±0°.1, h8^{km}±3^{km}, mb5.4/570, Mww5.2/29, Error ellipse: s-maj=10.7km s-min=8.7km az=141.0*

*NEIC **23** 16:19:06.8, 55°.74N×162°.21E, h12^{km}*

*NEIC **23** 16:19:06.8, 55°.44N×162°.56E, h12^{km}, Moment Tensor Solution. Duration: 2^{s}3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$7.00; M$_{θθ}$-2.47; M$_{ϕϕ}$-4.53; M$_{rθ}$-1.01; M$_{θϕ}$-0.27; M$_{ϕr}$3.42; Fault plane solution: M$_0$7.12000×10^{16} NP1: ϕ$_s$187.74000°, δ30.04000°, λ100.86000°. NP2: ϕ$_s$355.24000°, δ60.55000°, λ83.78000°. Principal axes: T 8.0447, Plg74.0000°, Azm249.0000°; N -2.5733, Plg5.0000°, Azm358.0000°; P -5.4714, Plg15.0000°, Azm90.0000°;*

*GCMT **23** 16:19:09.1±0.2, 55°.62N±0°.02×162°.56E±0°.03, h12^{km}, MW5.1/111, Moment Tensor Solution. s43,c60; s111,c175; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.89±.14; M$_{θθ}$-2.38±.14; M$_{ϕϕ}$-2.51±.12; M$_{rθ}$0.90±.42; M$_{θϕ}$3.13±.11; M$_{ϕr}$-0.29±.45; Best double couple: M$_0$5.32100×10^{16} NP1:ϕ$_s$322.00000°, δ41.00000°, λ99.00000°. NP2:ϕ$_s$130.00000°, δ50.00000°, λ82.00000°. Principal axes: T 5.0010, Plg83.0000°, Azm354.0000°; N 0.6420, Plg6.0000°, Azm135.0000°; P -5.6420, Plg5.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **23** 16:19:19.9, 56°.87N×161°.12E, h33^{km}, mb5.1*

ISC 23 16:19:07.3±0.5, **55°.72N**±0°.03×**162°.39E**±0°.03, **h18**^{km}±2^{km}, **h18**^{km}**:pP-P, n1249, σ**$1^{s}.$**17**/1075, **mb5.4**/455, **MS4.9**/46, **65C-40D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.55**	**26**	PN	**Pg**	**16 19 17.4**	**-0.9**
KBTR	**Krutoberegovo**	**0.55**	**26**	*e*P	**Pg**	**16 19 17.4**	**-0.9**
KBG	**Krutoberegovo**	**0.57**	**18**	PN	**Pg**	**16 19 17.8**	**-0.8**
KBG				S	**Sn**	**16 19 28.7**	**-0.8**
KBG	**Krutoberegovo**	**0.57**	**18**	*e*P	**Pg**	**16 19 17.9**	**-0.8**
KBG				*e*S	**Sn**	**16 19 28.7**	**-0.8**
ZLN	**Zelenaya**	**0.94**	**289**	PN	**Pg**	**16 19 25.5**	**-0.2**
ZLN	**Zelenaya**	**0.94**	**289**	*e*P	**Pg**	**16 19 25.5**	**-0.2**
BZGR	**Bezymyannyi-Gr**	**0.98**	**284**	PN	**Pb**	**16 19 26.1**	**+0.2**
BZGR				S	**Sn**	**16 19 42.3**	**+2.5**
BZGR	**Bezymyannyi-Gr**	**0.98**	**284**	*e*P	**Pb**	**16 19 26.1**	**+0.2**
BZGR				*e*S	**Sn**	**16 19 42.4**	**+2.5**
CIRR	**Tsirk**	**1.01**	**294**	PN	**Pn**	**16 19 26.6**	**-0.1**
CIRR	**Tsirk**	**1.01**	**294**	*e*P	**Pn**	**16 19 26.6**	**-0.1**
SMKR	**Semkarok**	**1.01**	**330**	PN	**Pb**	**16 19 25.8**	**-0.6**
SMKR	**Semkarok**	**1.01**	**330**	*e*P	**Pb**	**16 19 25.8**	**-0.6**
BZWR	**Bezymyannyi-We**	**1.10**	**284**	PN	**Pn**	**16 19 28.1**	**+0.1**
BZWR	**Bezymyannyi-We**	**1.10**	**284**	*e*P	**Pn**	**16 19 28.1**	**+0.1**
KLY	**Klyuchi**	**1.15**	**302**	PN	**Pn**	**16 19 27.1**	**-1.3**
KLY	**Klyuchi**	**1.15**	**302**	*e*P	**Pn**	**16 19 27.1**	**-1.3**
KIRR	**Kirishev**	**1.18**	**283**	PN	**Pb**	**16 19 29.6**	**+0.3**
KIRR	**Kirishev**	**1.18**	**283**	*e*P	**Pb**	**16 19 29.6**	**+0.3**
KMNR	**Kamenistaya**	**1.22**	**273**	PN	**Pb**	**16 19 30.3**	**+0.4**
KMNR	**Kamenistaya**	**1.22**	**273**	*e*P	**Pb**	**16 19 30.4**	**+0.4**
MKZ	**Mys Kozlova**	**1.22**	**198**	PN	**Pn**	**16 19 26.9**	**-2.6**
MKZ	**Mys Kozlova**	**1.22**	**198**	*e*P	**Pn**	**16 19 26.9**	**-2.6**
TUMD	**Tumrok D**	**1.25**	**247**	PN	**Pn**	**16 19 29.7**	**-0.1**
TUMD				S	**Sg**	**16 19 47.6**	**0.0**
TUMD	**Tumrok D**	**1.25**	**247**	*e*P	**Pn**	**16 19 29.8**	**-0.1**
TUMD				*e*S	**Sg**	**16 19 47.6**	**0.0**
KZV	**Kizimen**	**1.34**	**244**	PN	**Pn**	**16 19 31.0**	**-0.3**
KZV	**Kizimen**	**1.34**	**244**	*e*P	**Pn**	**16 19 31.0**	**-0.3**
KOZ	**Kozyrevsk**	**1.46**	**285**	PN	**Pb**	**16 19 34.1**	**+0.2**
KOZ	**Kozyrevsk**	**1.46**	**285**	*e*P	**Pb**	**16 19 34.2**	**+0.2**
SRDR	**Sredinnyy**	**1.62**	**293**	PN	**Pb**	**16 19 36.2**	**-0.5**
SRDR	**Sredinnyy**	**1.62**	**293**	*e*P	**Pb**	**16 19 36.2**	**-0.5**
ESO	**Esso**	**2.09**	**277**	PN	**Pn**	**16 19 42.6**	**+1.1**
ESO	**Esso**	**2.09**	**277**	*e*P	**Pn**	**16 19 42.6**	**+1.1**
BKI	**Bering**	**2.10**	**103**	PN	**Pn**	**16 19 40.0**	**-1.6**
BKI	**Bering**	**2.10**	**103**	*e*P	**Pn**	**16 19 40.0**	**-1.6**
KII	**Karymskiy**	**2.39**	**227**	PN	**Pn**	**16 19 46.0**	**+0.3**
KII	**Karymskiy**	**2.39**	**227**	*e*P	**Pn**	**16 19 46.0**	**+0.3**
SPN	**Mys Shipunski**	**2.96**	**209**	PN	**Pn**	**16 19 51.1**	**-2.4**
SPN	**Mys Shipunski**	**2.96**	**209**	*e*P	**Pn**	**16 19 51.1**	**-2.4**
SPN				*e*S	**Sn**	**16 20 24.6**	**-3.9**
NLC	**Nalytchevo**	**3.11**	**216**	PN	**Pn**	**16 19 54.6**	**-0.8**
NLC				S	**Sn**	**16 20 31.5**	**-0.5**
NLC	**Nalytchevo**	**3.11**	**216**	*e*P	**Pn**	**16 19 54.6**	**-0.8**
NLC				*e*S	**Sn**	**16 20 31.5**	**-0.5**
SDLR	**Sedlovina**	**3.19**	**221**	PN	**Pn**	**16 19 56.4**	**-0.2**
SDLR	**Sedlovina**	**3.19**	**221**	*e*P	**Pn**	**16 19 56.4**	**-0.2**
KRX	**Arik**	**3.21**	**224**	PN	**Pn**	**16 19 57.2**	**+0.2**
KRX	**Arik**	**3.21**	**224**	*e*P	**Pn**	**16 19 57.3**	**+0.2**
KRER	**Koryakskii**	**3.22**	**223**	PN	**Pn**	**16 19 57.6**	**+0.5**
KRER	**Koryakskii**	**3.22**	**223**	*e*P	**Pn**	**16 19 57.7**	**+0.5**
SMAR	**Somma**	**3.23**	**222**	PN	**Pn**	**16 19 57.2**	**0.0**
SMAR	**Somma**	**3.23**	**222**	*e*P	**Pn**	**16 19 57.3**	**0.0**
AVH	**Avacha**	**3.25**	**222**	PN	**Pn**	**16 19 57.8**	**+0.3**
AVH	**Avacha**	**3.25**	**222**	*e*P	**Pn**	**16 19 57.8**	**+0.3**
UGLR	**Uglovaya**	**3.26**	**221**	PN	**Pn**	**16 19 57.7**	**+0.1**
UGLR	**Uglovaya**	**3.26**	**221**	*e*P	**Pn**	**16 19 57.7**	**+0.1**
KOK	**Koryaka**	**3.27**	**224**	PN	**Pn**	**16 19 57.9**	**+0.2**
KOK	**Koryaka**	**3.27**	**224**	*e*P	**Pn**	**16 19 58.0**	**+0.2**
GNL	**Ganaly**	**3.28**	**234**	PN	**Pn**	**16 19 59.0**	**+1.1**
GNL	**Ganaly**	**3.28**	**234**	*e*P	**Pn**	**16 19 59.1**	**+1.1**
DALK	**Dalny**	**3.43**	**220**	PN	**Pn**	**16 19 59.5**	**-0.3**
DALK				S	**Sn**	**16 20 39.4**	**-0.5**
DALK	**Dalny**	**3.43**	**220**	*e*P	**Pn**	**16 19 59.5**	**-0.3**
DALK				*e*S	**Sn**	**16 20 39.4**	**-0.5**
INSR	**Institute**	**3.46**	**221**	PN	**Pn**	**16 20 00.5**	**+0.3**
INSR				S	**Sn**	**16 20 41.3**	**+0.7**
INSR	**Institute**	**3.46**	**221**	*e*P	**Pn**	**16 20 00.5**	**+0.3**
INSR				*e*S	**Sn**	**16 20 41.4**	**+0.7**
PET	**Petropavlovsk**	**3.47**	**221**		**Pn**	**16 19 59.9**	**-0.5**
PET	**Petropavlovsk**	**3.47**	**221**	*e*PN	**Pn**	**16 20 00.2**	**-0.2**
PET				*e*S	**Sn**	**16 20 41.5**	**+0.5**
PET				pmax	pmax		
	comp=Z,2µm,0.7s						
PET				smax	smax		
	comp=N,8µm,0.7s						
PET				smax	smax		
	comp=E,8µm,0.7s						
PET				MLR	MLR		
	comp=Z,11µm,9.0s						
PET				MLR	MLR		
	comp=Z,14µm,9.0s						
PET	**Petropavlovsk**	**3.47**	**221**	*e*P	**Pn**	**16 20 00.7**	**+0.3**
PET				*e*S	**Sn**	**16 20 42.2**	**+1.2**
OSSR	**Ossora**	**3.56**	**6**	PN	**Pn**	**16 20 03.4**	**+1.8**
OSSR	**Ossora**	**3.56**	**6**	*e*P	**Pn**	**16 20 03.5**	**+1.8**
PALN	**Palana**	**3.63**	**340**	PN	**Pb**	**16 20 08.0**	**-2.8**
PALN	**Palana**	**3.63**	**340**	*e*P	**Pb**	**16 20 08.1**	**-2.8**
PEA0B	**Petropavlovsk-**	**3.79**	**228**		**Pn**	**16 20 04.9**	**+0.2**
PEA0B	**Petropavlovsk-**	**3.79**	**228**	PN	**Pn**	**16 20 07.9**	**+3.1**
PETK	**Petropavlovsk-**	**3.79**	**228**	Pn	**Pn**	**16 20 03.4**	**-1.3**
	comp=Z,6.4nm,0.3s,baz=68,slow=17,SNR=33						
PETK				Sn	**Sn**	**16 20 52.9**	**+4.0**
	comp=Z,26nm,0.3s,baz=76,slow=22,SNR=5.5						
PETK	**Petropavlovsk-**	**3.79**	**228**		**Pn**	**16 20 04.8**	**0.0**
PETK	**Petropavlovsk-**	**3.79**	**228**	PN	**Pn**	**16 20 04.8**	**0.0**
PETK						16 20 52.9	
KRMR	**Karymshinskiy**	**3.82**	**223**	PN	**Pn**	**16 20 05.5**	**+0.3**
KRMR				S	**Sn**	**16 20 53.4**	**+3.8**
KRMR	**Karymshinskiy**	**3.82**	**223**	*e*P	**Pn**	**16 20 05.6**	**+0.3**
KRMR				*e*S	**Sn**	**16 20 53.5**	**+3.8**
RUS	**Russkaya**	**4.00**	**216**	PN	**Pn**	**16 20 07.9**	**+0.2**
RUS	**Russkaya**	**4.00**	**216**	*e*P	**Pn**	**16 20 08.0**	**+0.2**
GRL	**Gorelyy**	**4.06**	**220**	PN	**Pn**	**16 20 09.7**	**+1.1**
GRL	**Gorelyy**	**4.06**	**220**	*e*P	**Pn**	**16 20 09.8**	**+1.1**
MTVR	**Mutnovka**	**4.08**	**219**	PN	**Pn**	**16 20 09.1**	**+0.2**
MTVR	**Mutnovka**	**4.08**	**219**	*e*P	**Pn**	**16 20 09.1**	**+0.2**
APC	**Apacha**	**4.15**	**230**	PN	**Pn**	**16 20 12.3**	**+2.6**
APC	**Apacha**	**4.15**	**230**	*e*P	**Pn**	**16 20 12.4**	**+2.6**
ASAK	**Asacha**	**4.26**	**220**	PN	**Pn**	**16 20 12.1**	**+0.8**
ASAK	**Asacha**	**4.26**	**220**	*e*P	**Pn**	**16 20 12.1**	**+0.8**
KDTR	**Khodutka, Kamc**	**4.68**	**215**	PN	**Pn**	**16 20 17.2**	**+0.3**
KDTR	**Khodutka, Kamc**	**4.68**	**215**	*e*P	**Pn**	**16 20 17.2**	**+0.3**
KDTR				*e*S	**Sn**	**16 21 10.8**	**+0.1**
TILK	**Tilichiki**	**5.14**	**21**	PN	**Pn**	**16 20 27.4**	**+4.1**
TILK	**Tilichiki**	**5.14**	**21**	*e*P	**Pn**	**16 20 27.5**	**+4.1**
PAU	**Pauzhetka**	**5.40**	**220**	PN	**Pn**	**16 20 29.9**	**+3.1**
PAU	**Pauzhetka**	**5.40**	**220**	*e*P	**Pn**	**16 20 30.0**	**+3.1**
SKR	**Severo-Kuril’s**	**6.29**	**219**	*e*PN	**Pn**	**16 20 41.3**	**+2.2**
SKR				*e*S	**Sn**	**16 21 54.5**	**+4.0**
SKR				pmax	pmax		
	comp=Z,2µm,4.5s						
SKR				pmax	pmax		
	comp=Z,260nm,0.5s						
SKR				smax	smax		
	comp=N,503nm,0.8s						
SKR				smax	smax		
	comp=E,1µm,0.8s						
SKR				MLR	MLR		
	comp=Z,10µm,13.0s						
SKR	**Severo-Kuril’s**	**6.29**	**219**	*e*P	**Pn**	**16 20 40.6**	**+1.5**
KMSK	**Kamenskaya**	**7.05**	**15**	PN	**Pn**	**16 20 52.3**	**+2.8**
KMSK	**Kamenskaya**	**7.05**	**15**	*e*P	**Pn**	**16 20 52.3**	**+2.8**
MA2	**Magadan**	**7.34**	**307**	Pn	**Pn**	**16 20 53.9**	**+0.5**
	comp=Z,2.2nm,0.3s,baz=133,slow=12,SNR=12						
MA2				LR	LR	16 23 28.1	
	comp=Z,420nm,19.8s,baz=118,slow=36						
	comp=Z,8.6nm,1.1s						
MA2	**Magadan**	**7.34**	**307**	*i* PN	**Pn**	**16 20 54.2**	**+0.7**
SHEM	**Shemya Is, Ala**	**7.49**	**109**	Pn	**Pn**	**16 20 57.4**	**+1.9**
	comp=Z,9.2nm,0.3s,baz=283,slow=5.2,SNR=4.6						
SHEM				LR	LR	16 23 08.5	
	comp=Z,939nm,21.5s,baz=294,slow=32						
	comp=Z,85nm,0.6s						
SMY	**Shemya**	**7.49**	**109**	Pn	**Pn**	**16 20 56.3**	**+0.8**
SMY	**Shemya**	**7.49**	**109**	PN	**Pn**	**16 20 56.3**	**+0.8**
SEY	**Seymchan**	**8.85**	**329**	Pn	**Pn**	**16 21 13.3**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=136,slow=6.5,SNR=3.6						
SEY				LR	LR	16 24 47.6	
	comp=Z,1µm,19.5s,baz=138,slow=39						
SEY	**Seymchan**	**8.85**	**329**	*e*PN	**Pn**	**16 21 16.1**	**+1.9**
SEY				pmax	pmax		
	comp=Z,30nm,1.2s						
OKH	**Okha**	**11.48**	**267**	*de*PN	**Pn**	**16 21 46.2**	**-4.0**
OKH				pmax	pmax		
	comp=Z,400nm,8.8s						
OKH				MLR	MLR		
	comp=N,4µm,14.0s						
OKH				MLR	MLR		
	comp=E,4µm,14.0s						
OKH				MLR	MLR		
	comp=Z,3µm,12.0s						
BILL	**Bilibino**	**12.50**	**7**		**Pn**	**16 22 04.8**	**+0.8**
BILL	**Bilibino**	**12.50**	**7**	*ce*PN	**Pn**	**16 22 06.1**	**+2.1**
BILL				pmax	pmax		
	comp=Z,46nm,1.1s						
TYV	**Tymovskoe**	**12.75**	**256**	*e*PN	Pn	16 22 12.8	+5.2
TYV				*e*S	**Sn**	**16 24 34.8**	**+5.9**
TYV				pmax	pmax		
	comp=Z,83nm,1.3s						
TYV				pmax	pmax		
	comp=Z,1µm,4.9s						
TYV				smax	smax		
	comp=N,10.0nm,1.4s						
TYV				smax	smax		
	comp=E,9.0nm,1.4s						
TYV				smax	smax		
	comp=N,1µm,8.1s						
NKL	**Nikolayevsk**	**12.89**	**268**	*e*PN	**Pn**	**16 22 08.3**	**-1.1**
NKL				pmax	pmax		
	comp=E,76nm,1.0s						
NKL				pmax	pmax		
	comp=N,254nm,1.2s						
NKL				pmax	pmax		
	comp=Z,461nm,1.2s						
NKL				MLR	MLR		
	comp=E,8µm,14.0s						
NKL				MLR	MLR		
	comp=N,8µm,16.0s						
NKL				MLR	MLR		
	comp=Z,15µm,15.0s						
KUR	**Kuril'sk**	**13.95**	**227**	P	**Pn**	**16 22 27.6**	**+3.6**
KUR				S	**Sn**	**16 24 59.5**	**+1.2**
KUR				MLR	MLR		
	comp=Z,3µm,14.0s						
KUR				MLR	MLR		
	comp=N,3µm,15.0s						
KUR				MLR	MLR		
	comp=E,2µm,10.0s						
UGL	**Uglegorsk**	**14.04**	**250**	*e*P	**P**	**16 22 29.9**	**-3.0**
UGL				*e*S	**Sn**	**16 25 03.1**	**+2.6**
UGL				pmax	pmax		
	comp=Z,100nm,1.2s						
UGL				pmax	pmax		
	comp=Z,1µm,2.9s						
UGL				MLR	MLR		
	comp=E,6µm,17.0s						
UGL				MLR	MLR		
	comp=N,3µm,14.0s						
UGL				MLR	MLR		
	comp=Z,7µm,14.0s						
ATKA	**Atka Island**	**14.20**	**95**	Pn	**Pn**	**16 22 28.6**	**+1.3**
YSS	**Yuzhno-Sakhali**	**15.04**	**243**	Pn	**Pn**	**16 22 37.8**	**-1.0**
YSS	**Yuzhno-Sakhali**	**15.04**	**243**	*e*P	**P**	**16 22 44.6**	**+0.6**
YSS				*e*S	**Sn**	**16 25 27.5**	**+2.8**
YSS				pmax	pmax		
	comp=Z,1µm,6.9s						
YSS				pmax	pmax		
	comp=N,700nm,6.7s						
YSS				pmax	pmax		
	comp=E,800nm,4.3s						
YSS				pmax	pmax		
	comp=Z,40nm,0.7s						
YSS				pmax	pmax		
	comp=N,20nm,1.0s						
YSS				MLR	MLR		
	comp=N,3µm,13.0s						
YSS				MLR	MLR		
	comp=E,7µm,13.0s						
YSS				MLR	MLR		
	comp=Z,10µm,13.0s						
SPIA	**Saint Paul Isl**	**15.16**	**73**	P	**Pn**	**16 22 41.3**	**+1.1**
	baz=276						
GAMB	**Gambell**	**15.25**	**48**	P	**Pn**	**16 22 42.0**	**+0.6**
	baz=250						
P08K	**Saint George I**	**15.62**	**75**	P	**Pn**	**16 22 46.9**	**+0.7**
	baz=279						
YUK	**Yuzh-Kuril'sk**	**15.77**	**229**	*e*P	**Pn**	**16 22 47.9**	**-0.4**
YUK				S	**Sn**	**16 25 38.7**	**-3.7**
YUK				pmax	pmax		
	comp=Z,244nm,1.4s						
YUK				pmax	pmax		
	comp=Z,142nm,0.5s						
YUK				pmax	pmax		
	comp=N,57nm,0.4s						
YUK				pmax	pmax		
	comp=E,32nm,0.5s						
YUK				MLR	MLR		
	comp=Z,4µm,19.0s						
YUK				MLR	MLR		
	comp=E,3µm,16.0s						
YUK				MLR	MLR		
	comp=N,3µm,13.0s						
GRNR	**Gornyy**	**16.27**	**263**	⇓*i*P	**P**	**16 22 57.8**	**+0.2**
GRNR				pmax	pmax		
	comp=E,9.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,2µm,15.0s						
GRNR				MLR	MLR		
	comp=N,2µm,16.0s						
GRNR				MLR	MLR		
	comp=Z,3µm,16.0s						
NIKH	**Nikolski High**	**16.93**	**87**	P	**P**	**16 23 04.2**	**-0.7**
	baz=291						
M11K	**Mekoryuk**	**17.16**	**61**	P	**Pn**	**16 23 06.4**	**+0.5**
	baz=268						
JKA	**Kamikawa-asahi**	**17.16**	**236**		**Pn**	**16 23 05.3**	**-0.7**
ASAJ	**Asahikawa**	**17.17**	**236**	P	**Pn**	**16 23 05.4**	**-0.7**
	comp=Z,3.1nm,0.3s,baz=341,slow=3.1,SNR=20						
ASAJ				LR	LR	16 29 38.3	
	comp=Z,6µm,18.6s,baz=49,slow=37						
	comp=Z,17nm,0.9s						
ASAJ	**Asahikawa**	**17.17**	**236**	P	**Pn**	**16 23 05.3**	**-0.7**
ASAJ				pmax	pmax		
	comp=Z,183nm,1.2s						
TNA	**Tin City**	**17.39**	**44**		**P**	**16 23 10.9**	**+0.9**
TNA	**Tin City**	**17.39**	**44**	P	**Pn**	**16 23 08.8**	**+0.1**
	baz=250						
YAK	**Yakutsk**	**17.90**	**304**	P	**Pn**	**16 23 14.0**	**-1.0**
	comp=Z,3.5nm,0.3s,baz=95,slow=13,SNR=26						
	comp=Z,16nm,0.6s						
YAK	**Yakutsk**	**17.90**	**304**		**Pn**	**16 23 14.9**	**-0.1**
YAK	**Yakutsk**	**17.90**	**304**	*c i*P	**P**	**16 23 15.5**	**-0.1**
YAK				*e*S	**Sn**	**16 26 35.0**	**+1.1**
YAK				pmax	pmax		
	comp=Z,25nm,1.8s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.9s						
YAK				pmax	pmax		
	comp=E,24nm,0.9s						
YAK				pmax	pmax		
	comp=Z,308nm,2.1s						
YAK				pmax	pmax		
	comp=N,128nm,2.5s						
YAK				pmax	pmax		
	comp=E,210nm,1.3s						
YAK				smax	smax		
	comp=N,213nm,4.3s						
YAK				smax	smax		
	comp=E,137nm,3.0s						
YAK				MLR	MLR		
	comp=Z,1µm,20.0s						
YAK				MLR	MLR		
	comp=N,1µm,12.0s						
YAK				MLR	MLR		
	comp=E,405nm,14.0s						
UNV	**Unalaska Valle**	**17.96**	**83**		**P**	**16 23 17.2**	**+0.9**
UNV	**Unalaska Valle**	**17.96**	**83**	P	**P**	**16 23 16.6**	**+0.3**
	baz=289						
F14K	**Arctic Creek**	**17.99**	**45**	P	**P**	**16 23 16.5**	**-0.1**
	baz=252						
K13K	**Kusilvak Mount**	**18.01**	**56**	P	**Pn**	**16 23 16.5**	**+0.1**
	baz=265						
ANM	**Nome**	**18.13**	**48**		**P**	**16 23 19.6**	**+1.5**
ANM	**Nome**	**18.13**	**48**	P	**P**	**16 23 19.6**	**+1.5**
ANM				pmax	pmax		
	comp=Z,113nm,1.3s						
ANM	**Nome**	**18.13**	**48**	P	**Pn**	**16 23 17.9**	**0.0**
	baz=256,SNR=9.7						
ERM	**Erimo**	**18.57**	**230**		**P**	**16 23 22.1**	**-0.9**
ERM	**Erimo**	**18.57**	**230**	P	**P**	**16 23 22.1**	**-0.9**
ERM				pmax	pmax		
	comp=Z,106nm,1.3s						
M13K	**Dall Lake**	**18.58**	**61**	P	**P**	**16 23 22.9**	**-0.1**
	baz=271						
J14K	**Nanvaranak Lak**	**18.60**	**54**	P	**P**	**16 23 23.3**	**0.0**
J14K	**Nanvaranak Lak**	**18.60**	**54**	P	**P**	**16 23 22.9**	**-0.4**
	baz=264						
F15K	**North Star Dit**	**18.73**	**45**	P	**Pn**	**16 23 25.8**	**+0.7**
F15K	**North Star Dit**	**18.73**	**45**	P	**P**	**16 23 24.5**	**-0.1**
	baz=254,SNR=28						
G15K	**Niukluk**	**18.79**	**47**	P	**P**	**16 23 24.8**	**-0.5**
	baz=257,SNR=14						
L14K	**Kuka Creek**	**18.91**	**58**	P	**Pn**	**16 23 27.1**	**-0.2**
	baz=269						
M14K	**Bethel**	**19.26**	**60**	P	**Pn**	**16 23 31.5**	**0.0**
M14K				IAmb	IAmb	16 23 44.6	
	comp=Z,603nm,2.0s						
M14K	**Bethel**	**19.26**	**60**	P	**P**	**16 23 30.7**	**+0.2**
	baz=271						
C16K	**Lisburne Hills**	**19.38**	**37**		**Pn**	**16 23 33.8**	**+1.0**
C16K				IAmb	IAmb	16 23 39.7	
	comp=Z,304nm,1.1s						
C16K	**Lisburne Hills**	**19.38**	**37**	P	**P**	**16 23 31.8**	**+0.1**
	baz=246,SNR=96						
FALS	**False Pass**	**19.38**	**78**	P	**P**	**16 23 32.2**	**+0.3**
	baz=287						
N14K	**Kuskokwak Cree**	**19.43**	**63**	P	**P**	**16 23 32.8**	**+0.5**
	baz=274,SNR=6.5						
H16K	**Elim**	**19.47**	**48**	P	**P**	**16 23 32.8**	**0.0**
	baz=260,SNR=14						
L15K	**Ungalak Mounta**	**19.49**	**57**	P	**P**	**16 23 33.3**	**+0.3**
	baz=269						
K15K	**Wolf Creek Mou**	**19.50**	**56**	P	**P**	**16 23 33.5**	**+0.3**
	baz=267						
G16K	**Koyuk River**	**19.57**	**46**	P	**P**	**16 23 33.9**	**0.0**
	baz=257,SNR=8.7						
O14K	**Tigyukauivet M**	**19.69**	**65**	P	**P**	**16 23 35.6**	**+0.4**
	baz=276						
M15K	**Kasigluk River**	**19.89**	**60**	P	**P**	**16 23 36.4**	**-0.9**
	baz=272,SNR=6.6						
S12K	**Black Hills**	**19.90**	**75**	P	**P**	**16 23 38.2**	**+0.7**
	baz=285						
D17K	**Noatak River**	**19.95**	**39**	P	**P**	**16 23 38.6**	**+0.6**
	baz=250,SNR=43						
J16K	**Anvik River**	**20.00**	**53**	P	**P**	**16 23 38.5**	**0.0**
	baz=265,SNR=5.6						
I17K	**Unalakleet**	**20.02**	**51**	P	Pn	16 23 40.0	-0.5
I17K	**Unalakleet**	**20.02**	**51**	P	**P**	**16 23 39.1**	**+0.3**
	baz=263,SNR=38						
RDOG	**Red Dog Mine**	**20.13**	**38**	P	Pn	16 23 41.8	-0.1
RDOG				IAmb	IAmb	16 23 48.1	
	comp=Z,268nm,1.2s						
RDOG	**Red Dog Mine**	**20.13**	**38**	P	**P**	**16 23 40.2**	**+0.2**
	baz=250,SNR=105						
C17K	**DeLong Mountai**	**20.19**	**37**	P	**P**	**16 23 41.4**	**+0.7**
	baz=248,SNR=82						
N15K	**Kwethluk River**	**20.21**	**62**	P	**P**	**16 23 41.5**	**+0.6**
	baz=274						
E17K	**Hotham Inlet**	**20.21**	**42**	P	**P**	**16 23 41.7**	**+0.8**
	baz=254,SNR=84						
F17K	**Baldwin Pennin**	**20.26**	**43**	P	**P**	**16 23 42.1**	**+0.8**

	baz=256,SNR=34						
ZEA	Zeya	20.26	279	eP	P	16 23 41.9	+0.4
ZEA				eS	S	16 27 14.0	-14
ZEA				pmax	pmax		
	comp=Z,400nm,3.2s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.2s						
ZEA				smax	smax		
	comp=N,500nm,7.0s						
ZEA				smax	smax		
	comp=E,200nm,7.0s						
ZEA				MLR	MLR		
	comp=E,500nm,15.0s						
ZEA				MLR	MLR		
	comp=N,500nm,12.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,14.0s						
G17K	Kiwalik Mounta	20.29	46	P	P	16 23 41.7	0.0
	baz=259						
O15K	Ungalikthiuk R	20.43	65	IAmb	IAmb	16 23 55.4	
	comp=Z,287nm,1.6s						
O15K	Ungalikthiuk R	20.43	65	P	P	16 23 43.7	+0.3
	baz=277						
L16K	Owhat River	20.45	57	P	P	16 23 44.4	+0.9
L16K	Owhat River	20.45	57	P	P	16 23 44.0	+0.5
	baz=270,SNR=5.4						
H17K	Granite Mounta	20.50	48	P	P	16 23 44.2	+0.2
	baz=261,SNR=31						
J17K	VABM Dome	20.69	53	P	P	16 23 46.7	+0.6
	baz=266,SNR=10						
M16K	Timber Creek	20.72	59	P	P	16 23 46.4	0.0
	baz=273,SNR=8.7						
E18K	Tukpahlearik C	20.77	41	P	P	16 23 47.1	+0.2
	baz=254,SNR=28						
N16K	Nishlik Lake	20.84	61	P	P	16 23 48.4	+0.7
	baz=274,SNR=8.2						
SDPT	Sand Point	20.86	76	P	P	16 23 48.8	+0.9
	baz=287						
F18K	Selawik	20.92	43	P	P	16 23 48.7	+0.2
	baz=257,SNR=73						
C18K	Utukok River	20.94	37	P	P	16 23 49.0	+0.2
	baz=250						
B18K	Kokolik River	20.99	35	P	P	16 23 49.7	+0.4
	baz=248,SNR=167						
L17K	Donlin	21.01	56	P	P	16 23 50.3	+0.7
	baz=270						
K17K	Iditarod	21.01	54	P	P	16 23 50.3	+0.7
	baz=269,SNR=32						
S14K	Fog Glacier	21.11	73	P	P	16 23 51.3	+0.5
	baz=285						
G18K	Tagagawik	21.18	46	P	P	16 23 51.7	+0.4
	baz=260,SNR=52						
H18K	Honhosa River	21.18	48	P	P	16 23 52.0	+0.6
	baz=262,SNR=32						
O16K	Kokwok River B	21.27	63	P	P	16 23 52.9	+0.6
	baz=277						
TIXI	Tiksi	21.34	331	P	P	16 23 53.7	+0.8
	comp=Z,144nm,1.0s,baz=127,slow=11,SNR=89						
	comp=Z,144nm,1.0s						
TIXI	Tiksi	21.34	331	P	P	16 23 53.9	+1.0
TIXI				IAmb	IAmb	16 23 58.6	
	comp=Z,303nm,1.1s						
TIXI	Tiksi	21.34	331	ceP	P	16 23 54.8	+1.9
TIXI				pmax	pmax		
	comp=Z,466nm,1.7s						
P16K	Nushagak River	21.39	65	P	P	16 23 54.4	+0.8
	baz=279						
M17K	Holitna River	21.44	58	IAmb	IAmb	16 24 05.6	
	comp=Z,195nm,1.4s						
M17K	Holitna River	21.44	58	P	P	16 23 54.5	+0.4
	baz=273,SNR=6.8						
CHNA	Chernabura Isl	21.50	76	P	P	16 23 55.9	+1.0
	baz=288						
A19K	Wainwright	21.56	34	P	P	16 23 56.0	+0.7
	baz=247						
HEH	HeiHe	21.59	270	eP	P	16 23 54.1	-1.8
HEH				pP	pP	16 23 57.3	-3.5
HEH				PP	PnPn	16 24 15.8	-0.6
HEH				S	S	16 27 52.1	-2.1
HEH				SS	SnSn	16 28 19.9	+2.0
HEH				pmax	pmax		
	comp=Z,42nm,1.1s						
HEH				pmax	pmax		
	comp=Z,720nm,4.5s						
HEH				LR	LR		
	comp=Z,2µm,12.8s						
HEH				LR	LR		
	comp=Z,3µm,15.9s						
HEH				LR	LR		
	comp=Z,4µm,13.1s						
N17K	Nushagak Hills	21.62	60	P	P	16 23 56.5	+0.5
	baz=275						
C19K	Lookout Ridge	21.64	37	IAmb	IAmb	16 24 04.1	
	comp=Z,208nm,1.1s						
C19K	Lookout Ridge	21.64	37	P	P	16 23 56.8	+0.5
	baz=251,SNR=92						
F19K	Shaleruckik Mo	21.70	43	P	P	16 23 57.1	+0.3
	baz=259,SNR=169						
O17K	Koliganek Bris	21.75	63	P	P	16 23 57.8	+0.4
	baz=277,SNR=5.2						
J18K	Innoko River	21.76	52	P	P	16 23 58.0	+0.4
	baz=268,SNR=24						
L18K	Granite Mounta	21.76	56	P	P	16 23 57.9	+0.3
	baz=272,SNR=6.0						
GCSA	Galena City Sc	21.76	49	P	P	16 23 57.9	+0.3
	baz=265,SNR=16						
G19K	Purcell Mounta	21.85	45	P	P	16 23 59.1	+0.6
	baz=261,SNR=102						
R16K	Pilot Point	21.87	69	P	P	16 23 59.2	+0.5
	baz=282						
D19K	Kuna River	21.97	39	P	P	16 24 00.3	+0.5
	baz=254,SNR=146						
H19K	Roundabout Mou	22.03	47	P	P	16 24 00.3	-0.1
	baz=264						
E19K	Redstone River	22.04	42	P	P	16 24 01.3	+0.7
	baz=258						
Q16K	King Salmon	22.13	65	P	P	16 24 02.3	+0.7
	baz=280						
P17K	Kvichak River	22.16	64	IAmb	IAmb	16 24 09.4	
	comp=Z,386nm,1.7s						
P17K	Kvichak River	22.16	64	P	P	16 24 02.2	+0.4
	baz=279						
M18K	Stony River	22.20	58	P	P	16 24 02.8	+0.5
	baz=274						
N18K	Kilae Creek	22.24	60	P	P	16 24 03.2	+0.4
	baz=276						
J19K	Poorman	22.26	51	P	P	16 24 03.4	+0.5
	baz=268,SNR=17						
R17L	Mt. Peulik Vol	22.50	68	P	P	16 24 06.2	+0.7
	baz=283						
PLK4	Peulik 4	22.50	68	IAmb	IAmb	16 24 18.1	
	comp=Z,266nm,1.4s						
USRK	Ussuriysk Ar.	22.50	252	P	P	16 24 03.5	-2.2
	comp=Z,2.6nm,0.6s,baz=78,slow=9.9,SNR=4.5						
	comp=Z,2.6nm,0.6s						
F20K	Avaraart Lake	22.53	43	P	P	16 24 05.8	0.0
	baz=261						
D20K	Etivluk River	22.55	39	IAmb	IAmb	16 24 12.5	
	comp=Z,198nm,1.0s						
D20K	Etivluk River	22.55	39	P	P	16 24 06.8	+0.7
	baz=256,SNR=156						
E20K	Nigu River	22.60	40	P	P	16 24 07.0	+0.4
	baz=257,SNR=95						
Q17K	Contact Creek	22.61	66	P	P	16 24 07.4	+0.5
	baz=282						
L19K	White Mountain	22.62	56	P	P	16 24 06.5	-0.4
	baz=273						
H20K	Anotleneega Mo	22.67	47	P	P	16 24 07.3	0.0
	baz=265,SNR=42						
O18K	Koktuh Hills	22.68	62	P	P	16 24 08.1	+0.6
O18K				IAmb	IAmb	16 24 22.1	
	comp=Z,175nm,1.4s						
O18K	Koktuh Hills	22.68	62	P	P	16 24 07.0	-0.4
	baz=278,SNR=9.1						
B20K	Meade River	22.74	35	P	P	16 24 07.7	-0.3
	baz=252						
P18K	Big Mountain,	22.74	63	P	P	16 24 08.6	+0.5
	baz=280						
I20K	Naaghedeneel	22.79	49	P	P	16 24 08.7	+0.1
	baz=267						
ACHA	Angle Creek He	22.91	66	P	P	16 24 11.2	+1.3
J20K	Nowinta River	22.91	51	IAmb	IAmb	16 24 13.6	
	comp=Z,160nm,1.2s						
J20K	Nowinta River	22.91	51	P	P	16 24 09.9	0.0
	baz=269,SNR=34						
N19K	Bonanza Creek	22.91	59	P	P	16 24 09.9	-0.1
	baz=277						
K20K	Telida	22.95	53	IAmb	IAmb	16 24 14.0	
	comp=Z,141nm,1.3s						
K20K	Telida	22.95	53	P	P	16 24 10.2	0.0
	baz=271,SNR=28						
Q18K	Katmai Hardscr	22.99	65	P	P	16 24 11.5	+0.8
	baz=281						
O19K	Port Alsworth	23.07	61	P	P	16 24 12.5	+1.0
	baz=278						
IMAR	Indian Mountai	23.18	46	P	P	16 24 12.7	+0.1
C21K	Knifeblade Rid	23.30	38	P	P	16 24 14.7	+0.9
	baz=257						
G21K	Allakaket	23.33	45	P	P	16 24 15.2	+1.1
	baz=264,SNR=131						
A21K	Barrow	23.34	32	P	P	16 24 15.1	+0.9
	baz=250,SNR=57						
CHIR	Chirikof Islan	23.36	72	P	P	16 24 15.0	+0.6
	baz=288						
F21K	Alatna River	23.43	43	P	P	16 24 15.6	+0.5
	baz=263,SNR=51						
E21K	Killik River	23.44	40	P	P	16 24 15.7	+0.5
	baz=259						
M20K	Styx River	23.45	57	P	P	16 24 15.3	-0.1
	baz=275						
B21K	Ikpikpuk River	23.48	37	P	P	16 24 16.5	+1.0
	baz=256						
R18K	Karluk	23.51	68	P	P	16 24 16.8	+0.9
	baz=284						
MDJ	Mudanjiang	23.54	256	P	P	16 24 14.5	-1.8
MDJ				S	S	16 28 33.4	+4.2
MDJ				pmax	pmax		
	comp=Z,11nm,1.3s						
MDJ				LR	LR		
	comp=Z,2µm,19.2s						
MDJ				LR	LR		
	comp=Z,3µm,14.4s						
MDJ				LR	LR		
	comp=Z,6µm,16.5s						
H21K	Melozitna Rive	23.55	47	P	P	16 24 16.4	+0.2
	baz=267						
Q19K	Cape Douglas,	23.63	64	P	P	16 24 17.6	+0.5
	baz=282						
ILSW	Iliamna Southw	23.69	61	P	P	16 24 18.8	+1.0
P19K	Oil Pt	23.70	62	P	P	16 24 17.6	-0.2
	baz=280						
CHUM	Lake Minchumin	23.72	51	P	P	16 24 18.1	+0.2
	baz=271,SNR=25						
A22K	Sinclair Lake	23.74	33	P	P	16 24 18.5	+0.5
	baz=252						
RED	Redoubt Volcan	23.80	60	IAmb	IAmb	16 24 35.9	
	comp=Z,155nm,1.4s						
PPLA	Purkeypile	23.82	54	P	P	16 24 19.1	+0.1
	baz=274,SNR=20						
I21K	Tanana	23.87	48	P	P	16 24 19.6	+0.3
	baz=269,SNR=30						
SII	Sitkinak Islan	23.92	70	P	P	16 24 20.2	+0.3
	baz=287						
O20K	Slope Mountain	23.93	61	P	P	16 24 20.3	+0.3
	baz=280						
F22K	John River	23.96	42	P	P	16 24 20.5	+0.2
	baz=263						
N20K	Mount Spurr	23.97	58	P	P	16 24 21.1	+0.7
	baz=278,SNR=8.4						
SPCR	Spurr Chakacha	23.97	58	P	P	16 24 21.1	+0.7
	baz=278,SNR=7.4						
D22K	Ayikyak River	23.99	39	P	P	16 24 20.7	+0.3
	baz=260,SNR=115						
BNX	BinXian	24.05	260	⇑P	P	16 24 19.0	-2.1
BNX				S	S	16 28 37.6	+0.3
BNX				pmax	pmax		
	comp=Z,27nm,1.8s						
BNX				pmax	pmax		
	comp=Z,330nm,4.7s						
BNX				LR	LR		
	comp=Z,3µm,13.5s						
BNX				LR	LR		
	comp=Z,2µm,12.2s						
BNX				LR	LR		
	comp=Z,3µm,13.1s						
B22K	Teshekpuk Lake	24.05	35	P	P	16 24 21.9	+0.9
	baz=256,SNR=162						
H22K	Ishtalitna Cre	24.15	46	P	P	16 24 22.2	+0.2
	baz=268,SNR=54						
E22K	Anaktuvuk Pass	24.18	41	P	P	16 24 22.7	+0.4
	baz=262,SNR=172						
SKT	Skwentna	24.20	56	P	P	16 24 22.9	+0.4
	baz=276,SNR=6.6						
OHAK	Old Harbor	24.21	68	P	P	16 24 23.3	+0.7
	baz=286						
BPAW	Bear Paw Mtn.	24.30	51	P	P	16 24 23.9	+0.6
	baz=272						
Q20K	Shuyak Island	24.33	64	P	P	16 24 24.1	+0.5
	baz=283						
KDAK	Kodiak Island	24.43	66	P	P	16 24 23.8	-0.8
	comp=Z,10nm,0.6s,baz=311,slow=0.6,SNR=12						
KDAK				LR	LR	16 33 11.8	
	comp=Z,2µm,21.3s,baz=271,slow=34						
	comp=Z,10nm,0.6s						
KDAK	Kodiak Island	24.43	66	IAmb	IAmb	16 24 54.2	
	comp=Z,134nm,1.5s						
KDAK	Kodiak Island	24.43	66	P	P	16 24 23.8	-0.8
KDAK				pmax	pmax		
	comp=Z,135nm,1.5s						
KDAK	Kodiak Island	24.43	66	P	P	16 24 24.5	-0.1
	baz=285						
HOM	Homer	24.49	62	P	P	16 24 25.5	+0.4
	baz=281						
CAPN	Captain Cook N	24.54	59	P	P	16 24 26.0	+0.5
	baz=279						
SUA	Susitna One	24.63	57	IAmb	IAmb	16 24 33.9	
	comp=Z,70nm,0.8s						
SUA	Susitna One	24.63	57	P	P	16 24 26.7	+0.2
	baz=278,SNR=18						
TRF	Thorofare Moun	24.64	52	P	P	16 24 26.9	+0.2
	baz=274,SNR=39						
COLD	Coldfoot	24.70	43	P	P	16 24 27.3	+0.4
	baz=266,SNR=118						
D23K	Nanushuk River	24.72	39	IAmb	IAmb	16 24 35.3	
	comp=Z,151nm,1.1s						
D23K	Nanushuk River	24.72	39	P	P	16 24 28.0	+0.9
	baz=262,SNR=39						
G23K	Bananza Creek	24.73	45	IAmb	IAmb	16 24 34.8	
	comp=Z,100nm,1.0s						
G23K	Bananza Creek	24.73	45	P	P	16 24 28.2	+0.9
	baz=267,SNR=53						
CUT	Chulitna	24.74	55	IAmb	IAmb	16 24 34.9	
	comp=Z,91nm,0.8s						
CUT	Chulitna	24.74	55	P	P	16 24 27.8	+0.5
	baz=276,SNR=8.5						
C23K	Itkillik River	24.88	37	P	P	16 24 28.8	+0.3
	baz=260,SNR=183						
M22K	Willow	24.89	56	IAmb	IAmb	16 24 32.4	
	comp=Z,67nm,1.0s						
M22K	Willow	24.89	56	P	P	16 24 29.2	+0.5
	baz=278						
BRSE	Bradley Lake S	24.92	61	P	P	16 24 29.3	+0.3
	baz=282						
I23K	Minto, Yukon-K	24.98	48	P	P	16 24 30.2	+0.8
	baz=271,SNR=53						
E23K	Chandalar	24.99	41	P	P	16 24 30.2	+0.5
	baz=265						
TOLK	Toolik Lake Re	25.07	40	P	P	16 24 31.1	+0.8
	baz=264,SNR=194						
NEA2	Nenana	25.12	50	IAmb	IAmb	16 24 37.2	
	comp=Z,68nm,1.0s						
NEA2	Nenana	25.12	50	P	P	16 24 31.2	+0.5
	baz=273,SNR=25						
RC01	Rabbit Creek A	25.17	58	P	P	16 24 31.9	+0.7
	baz=280						
MCK	McKinley	25.23	52	IAmb	IAmb	16 24 40.7	
	comp=Z,163nm,1.4s						
MCK	McKinley	25.23	52	P	P	16 24 32.1	+0.4
	baz=275,SNR=29						
MAJO	Matsushiro	25.24	231	P	P	16 24 31.8	-0.3
MAJO				IAmb	IAmb	16 24 34.2	
	comp=Z,152nm,1.1s						
MAJO	Matsushiro	25.24	231	i P	P	16 24 32.1	0.0
MAJO				pmax	pmax		
	comp=Z,210nm,1.7s						
MJAR	Matsushiro Arr	25.24	231	P	P	16 24 32.5	+0.4
	comp=Z,62nm,0.9s,baz=24,slow=8.2,SNR=64						
MJAR				PcP	PcP	16 28 04.3	-0.8
	comp=Z,6.0nm,1.1s,baz=117,slow=2.2,SNR=4.6						
MJAR				LR	LR	16 35 25.4	
	comp=Z,3µm,19.4s,baz=30,slow=39						
	comp=Z,62nm,0.9s						
O22K	Cooper Landing	25.28	59	P	P	16 24 32.3	+0.1
	baz=281						
RND	Reindeer	25.29	52	IAmb	IAmb	16 24 34.5	
	comp=Z,123nm,1.2s						
PMR	Palmer	25.38	57	P	P	16 24 33.6	+0.5
	baz=279						
D24K	Happy Valley	25.40	39	P	P	16 24 33.4	+0.2
	baz=263						
E24K	Your Creek	25.42	41	P	P	16 24 33.6	+0.1
	baz=266						
WAT1	Susitna Watana	25.48	54	P	P	16 24 34.2	0.0
	baz=277						
SEW	Seward	25.49	60	IAmb	IAmb	16 24 44.6	
	comp=Z,65nm,1.0s						
SEW	Seward	25.49	60	P	P	16 24 34.6	+0.5
	baz=282						
C24K	Franklin Bluff	25.52	38	P	P	16 24 34.1	-0.2
	baz=262						
H24K	Noodor Dome	25.58	47	P	P	16 24 35.1	+0.1
	baz=271,SNR=27						
F24K	Squaw Lake	25.61	43	P	P	16 24 35.1	-0.1
	baz=268,SNR=45						
SML	Sawmill	25.72	56	P	P	16 24 36.7	+0.4
	baz=279,SNR=13						
KNK	Knik Glacier	25.73	57	IAmb	IAmb	16 24 38.6	
	comp=Z,123nm,1.1s						
KNK	Knik Glacier	25.73	57	P	P	16 24 36.5	+0.2
	baz=280,SNR=16						
G24K	Hadweenzic Riv	25.75	45	P	P	16 24 36.7	+0.3
	baz=270,SNR=131						
POKR	Poker Plat Res	25.79	48	IAmb	IAmb	16 24 41.1	
	comp=Z,79nm,1.2s						
POKR	Poker Plat Res	25.79	48	P	P	16 24 36.7	-0.1
	baz=273,SNR=13						
PWL	Port Wells	25.88	58	IAmb	IAmb	16 24 50.3	
	comp=Z,108nm,1.0s						
PWL	Port Wells	25.88	58	P	P	16 24 38.1	+0.3
	baz=281,SNR=9.1						
WAT6	Susitna Watana	25.89	54	P	P	16 24 37.8	-0.1
	baz=278,SNR=14						
DHY	Denali Highway	25.99	53	P	P	16 24 39.0	+0.2
	baz=277,SNR=19						
M23K	Glacier View	26.01	56	P	P	16 24 39.1	+0.2
	baz=280,SNR=14						
IL31		26.04	49	IAmb	IAmb	16 24 42.4	
	comp=Z,74nm,1.1s						
ILAR	Eielson Array	26.04	49	P	P	16 24 39.7	+0.6
	comp=Z,53nm,1.0s,baz=264,slow=7.5,SNR=157						
ILAR				PcP	PcP	16 28 05.8	-0.6
	comp=Z,2.4nm,0.9s,baz=301,slow=3.5,SNR=5.7						
ILAR				LR	LR	16 34 34.1	
	comp=Z,2µm,19.6s,baz=226,slow=36						
	comp=Z,53nm,1.0s						
ILAR	Eielson Array	26.04	49	P	P	16 24 39.0	-0.1
HDA	Harding Lake	26.04	50	P	P	16 24 39.2	0.0
	baz=275,SNR=19						
BOD	Bodaibo	26.16	295	eP	P	16 24 38.9	-1.3
BOD				pmax	pmax		
	comp=Z,99nm,1.6s						
SCM	Sheep Creek Mo	26.19	56	P	P	16 24 40.6	0.0
	baz=280,SNR=10						
HILR	Hailar Array B	26.26	274	P	P	16 24 40.7	-0.6
	comp=Z,2.1nm,0.5s,baz=63,slow=10,SNR=11						
HILR				LR	LR	16 36 36.3	
	comp=Z,2µm,18.1s,baz=65,slow=40						
	comp=Z,2.1nm,0.5s						
D25K	Kavik River	26.29	39	P	P	16 24 41.3	0.0
	baz=265						
G25K	Bearman Lake	26.29	45	P	P	16 24 41.2	-0.2
	baz=271,SNR=28						
CN2	Changchun	26.34	259	eP	P	16 24 41.8	-0.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,100nm,4.0s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
CN2				LR	LR		
	comp=Z,2µm,17.0s						
JGF	Kuroka	26.41	231	P	P	16 24 42.2	-0.5
JGF				IAmb	IAmb	16 24 47.8	
	comp=Z,108nm,1.2s						
F25K	Christian Rive	26.47	43	P	P	16 24 43.5	+0.4
	baz=270,SNR=112						
GLI	Glacier Island	26.47	58	P	P	16 24 42.9	-0.1
	baz=282						
E25K	Arctic Village	26.51	41	P	P	16 24 43.4	0.0
	baz=268,SNR=69						
P23K	Montague Islan	26.51	60	P	P	16 24 43.9	+0.4
	baz=283						
K24K	Donnelly Dome	26.61	51	IAmb	IAmb	16 25 10.9	
	comp=Z,84nm,1.0s						
K24K	Donnelly Dome	26.61	51	P	P	16 24 44.2	-0.2
	baz=277,SNR=8.9						
M24K	Tolsona, Glenn	26.68	55	P	P	16 24 45.1	+0.1
	baz=280,SNR=9.0						
J25K	Salcha River,	26.71	49	IAmb	IAmb	16 24 46.0	
	comp=Z,91nm,1.4s						
J25K	Salcha River,	26.71	49	P	P	16 24 44.7	-0.5
	baz=276,SNR=25						
INU	Inuyama	26.77	231	P	P	16 24 44.7	-1.2
C26K	Camden Bay	26.85	37	P	P	16 24 46.4	+0.1
	baz=266,SNR=140						
PAX	Paxson	26.86	53	P	P	16 24 46.2	-0.5
	baz=279,SNR=13						
BMAR	Burnt Mountain	26.88	43	P	P	16 24 48.0	+1.3
KLU	Klutina	26.91	56	P	P	16 24 46.9	-0.2
	baz=281,SNR=11						
RIDG	Independent Ri	27.03	51	IAmb	IAmb	16 24 49.8	
	comp=Z,101nm,1.1s						
RIDG	Independent Ri	27.03	51	P	P	16 24 48.4	+0.3
	baz=278,SNR=6.3						
F26K	Sheenjek River	27.05	42	P	P	16 24 48.2	0.0
	baz=271,SNR=65						
DIV	Divide	27.05	57	IAmb	IAmb	16 24 50.8	
	comp=Z,79nm,1.2s						
HARP	HAARP	27.10	54	P	P	16 24 48.7	0.0
	baz=280						
Q23K	Middleton Isla	27.17	61	P	P	16 24 49.8	+0.5
	baz=285						
G26K	Porcupine Rive	27.20	44	P	P	16 24 50.3	+0.8
	baz=272,SNR=97						
C27K	Jago River	27.25	38	P	P	16 24 50.0	+0.1
	baz=267,SNR=81						
SCRK	Sand Creek	27.38	51	IAmb	IAmb	16 24 52.9	
	comp=Z,127nm,1.1s						
SCRK	Sand Creek	27.38	51	P	P	16 24 50.9	-0.5
	baz=278,SNR=57						
J26L	Joseph Creek	27.49	49	P	P	16 24 52.3	0.0
	baz=277						
N25K	Chitina, Valde	27.51	56	IAmb	IAmb	16 24 54.7	
	comp=Z,74nm,1.3s						
N25K	Chitina, Valde	27.51	56	P	P	16 24 52.3	-0.2
	baz=282,SNR=9.6						
JHJ	Hachijo jima 2	27.53	224	LR	LR	16 37 51.4	
	comp=Z,546nm,18.3s,baz=72,slow=41						
I26K	Coal Creek Min	27.57	48	P	P	16 24 52.9	-0.1
	baz=276						
BMRM	Bremner River	27.64	57	IAmb	IAmb	16 24 55.7	
	comp=Z,98nm,1.1s						
BMRM	Bremner River	27.64	57	P	P	16 24 53.8	+0.2
	baz=283,SNR=12						
L26K	Log Cabin Wild	27.81	52	P	P	16 24 55.5	+0.4
	baz=280,SNR=5.7						
GLB	Gilahina Butte	27.91	56	IAmb	IAmb	16 24 59.0	
	comp=Z,115nm,1.4s						
KAIM	Kayak Island	27.99	59	P	P	16 24 56.8	+0.2
	baz=285						
E27K	Coleen River	28.00	41	P	P	16 24 56.9	+0.2
	baz=272,SNR=36						
G27K	Doyon Strip	28.05	44	P	P	16 24 57.2	+0.1
	baz=275,SNR=35						
M26K	Nabesna, AK	28.09	54	IAmb	IAmb	16 25 05.1	
	comp=Z,145nm,1.4s						
M26K	Nabesna, AK	28.09	54	P	P	16 24 58.0	+0.4
	baz=282,SNR=20						
VRDI	Verde Repeater	28.13	56	IAmb	IAmb	16 25 00.2	
	comp=Z,97nm,1.5s						
H27K	Steamboat Moun	28.15	45	P	P	16 24 58.5	+0.4
	baz=276,SNR=72						
I27K	Kandik River	28.18	47	P	P	16 24 58.1	-0.3
	baz=277						
D27M	Malcolm River	28.21	39	P	P	16 24 57.8	-0.8
	baz=271						
MCARA	McCarthy VSAT	28.30	56	IAmb	IAmb	16 25 07.3	
	comp=Z,98nm,1.3s						
MCARA	McCarthy VSAT	28.30	56	P	P	16 24 59.2	-0.2
	baz=284,SNR=7.1						
CRQM	Cirque	28.39	57	IAmb	IAmb	16 25 03.5	
	comp=Z,73nm,0.9s						

CRQE	**Cirque**	**28.41**	**57**	P	**P**	**16 25 00.4**	**-0.2**
	baz=285,SNR=7.3						
L27K	**Beaver Creek,**	**28.48**	**52**	IAmb	IAmb	16 25 08.3	
	comp=Z,99nm,1.1s						
L27K	**Beaver Creek,**	**28.48**	**52**	P	**P**	**16 25 01.1**	**0.0**
	baz=281,SNR=46						
BCAR	**Beaver Creek A**	**28.50**	**52**	P	**P**	**16 25 01.6**	**+0.3**
TGL	**Tana Glacier**	**28.54**	**57**	IAmb	IAmb	16 25 07.8	
	comp=Z,88nm,1.4s						
CIT	**Chita**	**28.55**	**283**	*e*P	**P**	**16 25 01.8**	**0.0**
CIT				*e*		16 25 10.0	
CIT				*e*		16 25 54.4	
M27K	**Edge Creek, AK**	**28.61**	**54**	IAmb	IAmb	16 25 06.9	
	comp=Z,68nm,1.0s						
M27K	**Edge Creek, AK**	**28.61**	**54**	P	**P**	**16 25 02.4**	**+0.1**
	baz=283,SNR=29						
SNY	**Shenyang**	**28.68**	**257**	⇓P	**P**	**16 25 03.4**	**+0.5**
SNY				pmax	pmax		
	comp=Z,12nm,1.4s						
SNY				pmax	pmax		
	comp=Z,120nm,6.3s						
SNY				LR	LR		
	comp=Z,1µm,15.2s						
SNY				LR	LR		
	comp=Z,3µm,15.2s						
SNY				LR	LR		
	comp=Z,5µm,15.8s						
F28M	**Old Crow**	**28.68**	**42**	P	**P**	**16 25 03.0**	**+0.3**
	baz=275,SNR=72						
E28M	**Babbage River**	**28.74**	**40**	IAmb	IAmb	16 25 11.3	
	comp=Z,149nm,1.4s						
E28M	**Babbage River**	**28.74**	**40**	P	**P**	**16 25 03.6**	**+0.3**
	baz=273,SNR=62						
I28M	**Miner Creek**	**28.90**	**47**	IAmb	IAmb	16 25 12.5	
	comp=Z,128nm,1.6s						
I28M	**Miner Creek**	**28.90**	**47**	P	**P**	**16 25 05.0**	**+0.2**
	baz=278,SNR=25						
D28M	**Stokes Point**	**29.00**	**39**	P	**P**	**16 25 05.5**	**0.0**
	baz=272						
BARN	**Barnard Glacie**	**29.01**	**56**	IAmb	IAmb	16 25 15.0	
	comp=Z,101nm,1.5s						
GRNC	**Granite Creek**	**29.05**	**57**	IAmb	IAmb	16 25 08.8	
	comp=Z,71nm,1.3s						
BVCY	**Beaver Creek**	**29.06**	**53**	P	**P**	**16 25 06.5**	**+0.4**
	baz=283,SNR=19						
CTG	**Chitna Glacier**	**29.19**	**56**	P	**P**	**16 25 07.4**	**-0.1**
	baz=285,SNR=6.5						
CTGM	**Chitina Glacie**	**29.19**	**56**	IAmb	IAmb	16 25 10.1	
	comp=Z,78nm,1.2s						
DAWY	**Dawson**	**29.36**	**50**	IAmb	IAmb	16 25 14.7	
	comp=Z,72nm,1.5s						
DAWY	**Dawson**	**29.36**	**50**	P	**P**	**16 25 09.4**	**+0.5**
	baz=281,SNR=16						
E29M	**Blow River**	**29.36**	**41**	P	**P**	**16 25 08.6**	**-0.2**
	baz=275						
YUK3	**Moose Creek**	**29.39**	**54**	P	**P**	**16 25 09.7**	**+0.3**
	baz=285,SNR=7.0						
H29M	**Whitestone**	**29.42**	**45**	P	**P**	**16 25 09.5**	**+0.2**
	baz=278,SNR=26						
G29M	**Pine Creek**	**29.47**	**44**	P	**P**	**16 25 09.9**	**+0.1**
	baz=277						
KSRS	**Korea Array**	**29.48**	**246**	P	**P**	**16 25 08.2**	**-1.8**
	comp=Z,2.8nm,0.7s,baz=40,slow=9.0,SNR=8.1						
KSRS				PcP	**PcP**	**16 28 15.8**	**+0.7**
	comp=Z,6.6nm,1.0s,baz=20,slow=2.1,SNR=12						
KSRS				LR	LR	16 37 18.8	
	comp=Z,2µm,18.2s,baz=35,slow=37						
	comp=Z,2.8nm,0.7s						
I29M	**Ogilvie Camp,**	**29.58**	**47**	IAmb	IAmb	16 25 17.7	
	comp=Z,100nm,1.2s						
I29M	**Ogilvie Camp,**	**29.58**	**47**	P	**P**	**16 25 10.9**	**+0.1**
	baz=280,SNR=43						
O28M	**Mount Upton**	**29.78**	**56**	IAmb	IAmb	16 25 15.3	
	comp=Z,64nm,1.1s						
O28M	**Mount Upton**	**29.78**	**56**	P	**P**	**16 25 12.4**	**-0.5**
	baz=286,SNR=9.0						
J29N	**Klondike Camp**	**29.79**	**49**	P	**P**	**16 25 12.7**	**0.0**
	baz=282						
YUK8	**Steele Glacier**	**29.84**	**55**	P	**P**	**16 25 12.5**	**-0.9**
	baz=286						
PINM	**Pinnacle**	**29.95**	**58**	P	**P**	**16 25 13.9**	**-0.2**
	baz=288						
EPYK	**Eagle Plains**	**30.06**	**45**	P	**P**	**16 25 15.5**	**+0.4**
	baz=279,SNR=26						
L29M	**L29M**	**30.12**	**51**	IAmb	IAmb	16 25 23.2	
	comp=Z,90nm,0.9s						
L29M	**L29M**	**30.12**	**51**	P	**P**	**16 25 16.1**	**+0.5**
	baz=284,SNR=45						
M29M	**Somme Creek**	**30.13**	**53**	P	**P**	**16 25 15.2**	**-0.6**
	baz=285						
G30M	**tAoh Zraii Nji**	**30.16**	**43**	P	**P**	**16 25 15.9**	**0.0**
	baz=279						
K29M	**Barlow Dome**	**30.21**	**50**	P	**P**	**16 25 16.7**	**+0.1**
	baz=283,SNR=10						
F30M	**Barrier River**	**30.24**	**42**	P	**P**	**16 25 16.9**	**+0.3**
	baz=278,SNR=54						
BCPM	**Bancas Point**	**30.29**	**58**	IAmb	IAmb	16 25 19.3	
	comp=Z,82nm,0.9s						
YUK4	**Talbot Arm**	**30.34**	**55**	P	**P**	**16 25 18.2**	**+0.5**
	baz=286,SNR=7.1						
I30M	**Mount Dempster**	**30.41**	**47**	IAmb	IAmb	16 25 25.0	
	comp=Z,90nm,1.1s						
I30M	**Mount Dempster**	**30.41**	**47**	P	**P**	**16 25 18.8**	**+0.6**
	baz=282,SNR=52						
J30M	**Hart River**	**30.56**	**48**	P	**P**	**16 25 19.8**	**+0.2**
	baz=283						
YUK6	**Outpost Mounta**	**30.59**	**56**	P	**P**	**16 25 19.8**	**-0.2**
	baz=287						
O29M	**Mount Kennedy**	**30.68**	**57**	P	**P**	**16 25 20.5**	**-0.2**
	baz=288						
M30M	**Minto, Yukon**	**30.85**	**52**	P	**P**	**16 25 22.7**	**+0.7**
	baz=286,SNR=11						
G31M	**Satah River**	**30.93**	**43**	IAmb	IAmb	16 25 30.3	
	comp=Z,92nm,1.2s						
G31M	**Satah River**	**30.93**	**43**	P	**P**	**16 25 23.2**	**+0.6**
	baz=280,SNR=20						
MAYO	**Mayo, Yukon**	**30.98**	**50**	IAmb	IAmb	16 25 30.4	
	comp=Z,90nm,1.4s						
INK	**Inuvik**	**30.98**	**41**	LR	LR	16 38 41.2	
	comp=Z,2µm,18.4s,baz=354,slow=38						
INK	**Inuvik**	**30.98**	**41**	P	**P**	**16 25 23.7**	**+0.7**
	baz=279,SNR=41						
HYT	**Haines Junctio**	**31.03**	**55**	IAmb	IAmb	16 25 27.2	
	comp=Z,67nm,1.1s						
HYT	**Haines Junctio**	**31.03**	**55**	P	**P**	**16 25 23.7**	**-0.1**
	baz=288,SNR=20						
N30M	**Aishikik Lake**	**31.03**	**54**	P	**P**	**16 25 23.5**	**-0.1**
	baz=287,SNR=5.2						
F31M	**Tsiigehtchic**	**31.04**	**42**	P	**P**	**16 25 23.7**	**+0.1**
	baz=280,SNR=51						
H31M	**Peel River**	**31.12**	**45**	IAmb	IAmb	16 25 31.2	
	comp=Z,77nm,1.3s						
H31M	**Peel River**	**31.12**	**45**	P	**P**	**16 25 24.2**	**-0.1**
	baz=282,SNR=20						
P29M	**Windy Craggy**	**31.30**	**58**	P	**P**	**16 25 25.2**	**-0.8**
	baz=290						
JNU	**Nakatsue**	**31.43**	**237**	LR	LR	16 39 00.8	
	comp=Z,904nm,19.3s,baz=40,slow=38						
P30M	**Million Dollar**	**31.51**	**57**	P	**P**	**16 25 27.1**	**-0.8**
	baz=290						
XLT	**XiLinHaoTe**	**31.54**	**268**	*e*P	**P**	**16 25 29.6**	**+1.2**
XLT				sP	sP	16 25 36.4	+0.8
XLT				PcP	**PcP**	**16 28 21.5**	**+0.9**
XLT				pmax	pmax		
	comp=Z,7.0nm,1.6s						
XLT				pmax	pmax		
	comp=Z,120nm,6.0s						
XLT				LR	LR		
	comp=Z,2µm,15.8s						
XLT				LR	LR		
	comp=Z,2µm,16.1s						
N31M	**Braeburn, Yuko**	**31.62**	**54**	P	**P**	**16 25 29.4**	**+0.6**
	baz=288						
O30N	**Mendenhall**	**31.70**	**55**	P	**P**	**16 25 30.2**	**+0.6**
	baz=289,SNR=8.4						
DL2	**Dalian**	**31.77**	**255**	P	**P**	**16 25 31.8**	**+1.5**
DL2				S	**S**	**16 30 39.5**	**+0.1**
DL2				pmax	pmax		
	comp=Z,42nm,1.4s						
DL2				pmax	pmax		
	comp=Z,190nm,5.0s						
DL2				LR	LR		
	comp=Z,2µm,13.7s						
DL2				LR	LR		
	comp=Z,3µm,13.1s						
DL2				LR	LR		
	comp=Z,4µm,13.9s						
PLBC	**Pleasant Camp**	**32.02**	**58**	P	**P**	**16 25 31.6**	**-0.7**
	baz=291						
M31M	**Drury Creek, Y**	**32.03**	**52**	IAmb	IAmb	16 25 40.2	
	comp=Z,46nm,0.9s						
M31M	**Drury Creek, Y**	**32.03**	**52**	P	**P**	**16 25 32.4**	**0.0**
	baz=288,SNR=26						
WHY	**Whitehorse**	**32.30**	**55**	P	**P**	**16 25 34.3**	**-0.5**
	baz=290,SNR=15						
SKAG	**Skagway**	**32.51**	**57**	IAmb	IAmb	16 25 40.1	
	comp=Z,50nm,1.2s						
SKAG	**Skagway**	**32.51**	**57**	P	**P**	**16 25 36.9**	**+0.3**
	baz=291,SNR=5.5						
S31K	**Pelican**	**32.64**	**60**	P	**P**	**16 25 37.4**	**-0.3**
	baz=293						
R31K	**City Hall, Gus**	**32.70**	**59**	P	**P**	**16 25 38.3**	**0.0**
	baz=293						
N32M	**Quiet Lake**	**32.96**	**54**	P	**P**	**16 25 40.1**	**-0.5**
	baz=290						
A36M	**Sachs Harbour**	**33.19**	**33**	P	**P**	**16 25 43.6**	**+1.3**
A36M				IAmb	IAmb	16 25 50.8	
	comp=Z,91nm,1.3s						
A36M	**Sachs Harbour**	**33.19**	**33**	P	**P**	**16 25 42.3**	**-0.1**
	baz=280,SNR=36						
P32M	**Atlin**	**33.23**	**56**	P	**P**	**16 25 43.0**	**+0.1**
	baz=292						
R32K	**Eaglecrest**	**33.35**	**59**	P	**P**	**16 25 44.8**	**+0.8**
	baz=294						
P33M	**Teslin, Yukon**	**33.42**	**55**	P	**P**	**16 25 45.3**	**+0.7**
	baz=292,SNR=6.6						
SIT	**Sitka**	**33.45**	**61**	P	**P**	**16 25 45.2**	**+0.4**
	baz=295						
IRK	**Irkutsk**	**33.49**	**289**	*e*P	**P**	**16 25 44.5**	**-0.8**
IRK				pmax	pmax		
	comp=Z,69nm,2.7s						
S32K	**Killisnoo**	**33.65**	**60**	P	**P**	**16 25 47.0**	**+0.4**
	baz=295						
BJI	**Beijing**	**34.01**	**262**	P	**P**	**16 25 46.8**	**-3.0**
BJI				PcP	**PcP**	**16 28 28.1**	**+0.7**
C36M	**Paulatuk**	**34.13**	**37**	P	**P**	**16 25 51.1**	**+0.5**
C36M	**Paulatuk**	**34.13**	**37**	P	**P**	**16 25 50.6**	**0.0**
	baz=285,SNR=74						
Q32M	**Nakina River**	**34.16**	**57**	IAmb	IAmb	16 25 55.2	
	comp=Z,58nm,1.2s						
Q32M	**Nakina River**	**34.16**	**57**	P	**P**	**16 25 51.1**	**-0.1**
	baz=294,SNR=6.0						
ULN	**Ulaanbaatar**	**34.28**	**280**	P	**P**	**16 25 52.0**	**-0.4**
ULN	**Ulaanbaatar**	**34.28**	**280**	P	**P**	**16 25 50.3**	**-2.1**
ULN	**Ulaanbaatar**	**34.28**	**280**	P	**P**	**16 25 51.3**	**-1.1**
ULN	**Ulaanbaatar**	**34.28**	**280**	*ce*P	**P**	**16 25 52.2**	**-0.2**
ULN				pmax	pmax		
	comp=Z,12nm,1.7s						
NRIK	**Noril'sk**	**34.58**	**323**	P	**P**	**16 25 54.4**	**-0.1**
	comp=Z,19nm,1.2s,baz=85,slow=7.2,SNR=18						
NRIK				PcP	**PcP**	**16 28 28.3**	**-0.2**
	comp=Z,2.2nm,0.5s,baz=71,slow=4.7,SNR=6.2						
	comp=Z,19nm,1.2s						
NRIK	**Noril'sk**	**34.58**	**323**	P	**P**	**16 25 53.8**	**-0.7**
NRIK	**Noril'sk**	**34.58**	**323**	*i* P	**P**	**16 25 53.3**	**-1.2**
NRIK				pmax	pmax		
	comp=Z,38nm,1.5s						
R33M	**Jennings River**	**34.59**	**56**	IAmb	IAmb	16 25 58.7	
	comp=Z,57nm,1.2s						
R33M	**Jennings River**	**34.59**	**56**	P	**P**	**16 25 55.1**	**+0.2**
	baz=294,SNR=13						
SONM	**Songino Array**	**34.67**	**281**	P	**P**	**16 25 55.0**	**-0.6**
	comp=Z,1.8nm,0.5s,baz=65,slow=8.2,SNR=10						
SONM				PcP	**PcP**	**16 28 28.6**	**-0.7**
	comp=Z,3.9nm,0.7s,baz=99,slow=1.8,SNR=8.4						
SONM				ScP	**ScP**	**16 32 15.8**	**+2.3**
	comp=Z,3.7nm,1.1s,baz=11,slow=1.5,SNR=8.0						
	comp=Z,1.8nm,0.5s						
SONM	**Songino Array**	**34.67**	**281**	P	**P**	**16 25 54.2**	**-1.4**
SONM	**Songino Array**	**34.67**	**281**	P	**P**	**16 25 54.2**	**-1.4**
SONM						16 28 28.6	
SONM				pmax	pmax		
	comp=Z,14nm,1.5s						
U33K	**Whale Pass**	**34.96**	**62**	P	**P**	**16 25 57.5**	**-0.4**
	baz=297						
ZAK	**Zakamensk**	**34.98**	**287**	*e*P	**P**	**16 25 56.7**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,15nm,2.0s						
S34M	**Telegraph Cree**	**35.14**	**58**	IAmb	IAmb	16 26 07.9	
	comp=Z,57nm,1.3s						
S34M	**Telegraph Cree**	**35.14**	**58**	P	**P**	**16 25 59.4**	**-0.1**
	baz=296,SNR=7.8						
WRAK	**Wrangell Islan**	**35.21**	**61**	P	**P**	**16 25 59.7**	**-0.3**
	baz=297						
CRAG	**Craig**	**35.26**	**63**	P	**P**	**16 26 00.1**	**-0.4**
	baz=298						
WTLY	**Watson Lake, Y**	**35.31**	**54**	P	**P**	**16 26 01.4**	**+0.4**
	baz=294,SNR=7.6						
MOY	**Mondy**	**35.53**	**290**	*e*P	**P**	**16 26 02.6**	**-0.5**
MOY				pmax	pmax		
	comp=Z,48nm,3.0s						
T35M	**Bob Quinn**	**35.98**	**59**	IAmb	IAmb	16 26 12.1	
	comp=Z,84nm,1.2s						
T35M	**Bob Quinn**	**35.98**	**59**	P	**P**	**16 26 07.1**	**+0.4**
	baz=297,SNR=10						
HHC	**Hu-ho-hao-te**	**36.06**	**267**	*e*P	**P**	**16 26 06.0**	**-1.7**
HHC				S	**S**	**16 31 39.8**	**-6.1**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,6.0s						
HHC				LR	LR		
	comp=Z,980nm,14.5s						
HHC				LR	LR		
	comp=Z,1µm,13.6s						
HHC				LR	LR		
	comp=Z,1µm,15.8s						
V35K	**Ketchikan**	**36.08**	**62**	P	**P**	**16 26 07.6**	**0.0**
	baz=299						
H11N2	**WAKE ISLAND Hy**	**36.09**	**173**	T	T	17 04 17.7	
	baz=356,slow=76,SNR=7775						
H11N3	**WAKE ISLAND Hy**	**36.10**	**173**	T	T	17 04 18.7	
	baz=356,slow=76,SNR=6656						
H11N1	**WAKE ISLAND Hy**	**36.10**	**173**	T	T	17 04 17.7	
	baz=356,slow=76,SNR=6185						
WRGLY	**Wrigley**	**36.38**	**47**	IAmb	IAmb	16 26 18.3	
	comp=Z,78nm,1.3s						
WRGLY	**Wrigley**	**36.38**	**47**	P	**P**	**16 26 10.5**	**+0.5**
	baz=294,SNR=12						
HNS	**HongShan**	**36.67**	**260**	⇑P	**P**	**16 26 11.6**	**-1.2**
HNS				PcP	**PcP**	**16 28 35.8**	**+0.6**
HNS				pmax	pmax		
	comp=Z,9.0nm,1.5s						
HNS				LR	LR		
	comp=Z,2µm,12.6s						
HNS				LR	LR		
	comp=Z,3µm,14.5s						
HNS				LR	LR		
	comp=Z,4µm,13.4s						
LIRD	**Liard River Hi**	**36.84**	**54**	P	**P**	**16 26 14.5**	**+0.5**
	baz=297,SNR=12						
BTO	**Baotou**	**37.10**	**268**	*e*P	**P**	**16 26 15.1**	**-1.4**
BTO				pP	**pP**	**16 26 20.1**	**-1.8**
BTO				PP	**PnPn**	**16 27 45.0**	**+3.7**
BTO				S	**S**	**16 31 59.8**	**-1.9**
BTO				pmax	pmax		
	comp=Z,19nm,0.8s						
BTO				pmax	pmax		
	comp=Z,370nm,4.5s						
BTO				LR	LR		
	comp=Z,3µm,13.8s						
BTO				LR	LR		
	comp=Z,4µm,16.7s						
BTO				LR	LR		
	comp=Z,4µm,20.8s						
TOAD	**Toad River Com**	**37.50**	**54**	P	**P**	**16 26 20.5**	**+0.9**
	baz=298,SNR=51						
SSE	**Sheshan**	**37.91**	**247**	P	**P**	**16 26 21.9**	**-1.4**
SSE				S	**S**	**16 32 11.4**	**-2.6**
SSE				pmax	pmax		
	comp=Z,12nm,0.9s						
SSE				pmax	pmax		
	comp=Z,120nm,4.6s						
SSE				LR	LR		
	comp=Z,730nm,18.4s						
SSE				LR	LR		
	comp=Z,380nm,16.1s						
JOW	**Kunigami**	**37.93**	**235**	LR	LR	16 41 50.2	
	comp=Z,1µm,22.0s,baz=81,slow=36						
KNGR	**Kungurtug, Tuv**	**37.95**	**290**	*i* P	**P**	**16 26 24.6**	**+0.9**
KNGR				pmax	pmax		
	comp=Z,22nm,1.5s						
NJ2	**Nanjing**	**38.39**	**250**	*e*P	**P**	**16 26 26.4**	**-1.0**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
NJ2				LR	LR		
	comp=Z,2µm,14.9s						
NJ2				LR	LR		
	comp=Z,1µm,13.7s						
NJ2				LR	LR		
	comp=Z,2µm,13.3s						
BBB	**Bella Bella**	**39.49**	**65**	P	**P**	**16 26 37.1**	**+0.8**
	comp=Z,22nm,1.1s,baz=275,slow=8.4,SNR=4.1						
	comp=Z,22nm,1.1s						
BBB	**Bella Bella**	**39.49**	**65**	IAmb	IAmb	16 26 45.4	
	comp=Z,155nm,1.8s						
LYN	**LuoYang**	**39.99**	**259**	*e*P	**P**	**16 26 40.1**	**-0.6**
LYN				pmax	pmax		
	comp=Z,260nm,5.3s						
LYN				LR	LR		
	comp=Z,2µm,18.6s						
LYN				LR	LR		
	comp=Z,2µm,17.5s						
LYN				LR	LR		
	comp=Z,2µm,20.3s						
YKA	**Yellowknife Ar**	**40.34**	**45**	P	**P**	**16 26 44.6**	**+1.3**
	comp=Z,5.8nm,0.6s,baz=301,slow=8.7,SNR=74						
YKA				PP	**PnPn**	**16 28 19.6**	**0.0**
	comp=Z,6.1nm,1.0s,baz=305,slow=11,SNR=4.2						
YKA				PcP	**PcP**	**16 28 47.3**	**+1.1**
	comp=Z,3.9nm,1.1s,baz=302,slow=4.0,SNR=4.8						
YKA				ScP	**ScP**	**16 32 38.3**	**+4.0**
	comp=Z,0.3nm,0.9s,baz=297,slow=4.6,SNR=3.6						
	comp=Z,5.8nm,0.6s						
YKA	**Yellowknife Ar**	**40.34**	**45**	P	**P**	**16 26 43.5**	**+0.2**
RES	**Resolute Bay**	**40.38**	**24**	LR	LR	16 45 20.4	
	comp=Z,609nm,19.0s,baz=349,slow=39						
RES	**Resolute Bay**	**40.38**	**24**	P	**P**	**16 26 43.9**	**+0.4**
RES	**Resolute Bay**	**40.38**	**24**	P	**P**	**16 26 43.9**	**+0.4**
RES				pmax	pmax		
	comp=Z,38nm,1.4s						
CBB	**Campbell River**	**42.15**	**66**	P	**P**	**16 26 59.7**	**+1.4**
XAN	**Xi'an**	**42.35**	**262**	⇓P	**P**	**16 27 00.8**	**+0.6**
XAN				pP	pP	16 27 05.0	-0.5
XAN				PcP	**PcP**	**16 28 53.8**	**+0.4**
XAN				ScP	**ScP**	**16 32 45.8**	**+3.0**
XAN				PcS	**PcS**	**16 32 48.1**	**+2.8**
XAN				ScS	**ScS**	**16 37 00.9**	**-0.1**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.5s						
XAN				LR	LR		
	comp=Z,2µm,14.4s						
XAN				LR	LR		
	comp=Z,3µm,14.4s						
XAN				LR	LR		
	comp=Z,3µm,14.4s						
ZALV	**Zalesovo Beam**	**42.52**	**301**	P	**P**	**16 26 59.0**	**-2.3**
	comp=Z,1.5nm,0.5s,baz=59,slow=5.7,SNR=10.0						
ZALV				PP	**PP**	**16 28 43.5**	**+3.9**
	comp=Z,4.0nm,1.0s,baz=32,slow=8.7,SNR=3.9						
ZALV				ScP	**ScP**	**16 32 44.4**	**+1.2**
	comp=Z,0.8nm,0.7s,baz=90,slow=5.9,SNR=3.7						
	comp=Z,1.5nm,0.5s						
ZALV	**Zalesovo Beam**	**42.52**	**301**	P	**P**	**16 27 00.0**	**-1.3**
ZALV	**Zalesovo Beam**	**42.52**	**301**	*i* P	**P**	**16 27 00.9**	**-0.4**
NOR	**Nord**	**42.92**	**360**	*i* P	**P**	**16 27 05.4**	**+1.1**
NOR				IAmb	IAmb	16 27 06.1	
	comp=Z,14nm,1.2s						
LLLB	**Lillooet**	**43.59**	**64**	IAmb	IAmb	16 27 20.0	
	comp=Z,70nm,1.2s						
GTA	**Gaotai**	**43.68**	**275**	P	**P**	**16 27 11.5**	**+0.5**
GTA				sP	sP	16 27 23.0	+4.7
GTA				PcP	**PP**	**16 28 53.9**	**+1.4**
GTA				PcS	**PcS**	**16 32 50.9**	**+0.1**
GTA				ScS	ScS	16 37 08.5	-0.8
GTA				pmax	pmax		
	comp=Z,27nm,1.2s						
GTA				LR	LR		
	comp=Z,2µm,20.7s						
GTA				LR	LR		
	comp=Z,2µm,21.5s						
GTA				LR	LR		
	comp=Z,1µm,19.9s						
LZH	**Lanzhou**	**43.73**	**269**	*e*P	**P**	**16 27 14.8**	**+3.4**
LZH				sP	sP	16 27 21.3	+2.5
LZH				PcP	**PcP**	**16 28 59.3**	**+1.2**
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				LR	LR		
	comp=Z,3µm,14.1s						
LZH				LR	LR		
	comp=Z,2µm,14.1s						
LZH				LR	LR		
	comp=Z,4µm,14.4s						
DGZ	**Jazzator, Alta**	**43.75**	**295***c*	*i*P	**P**	**16 27 11.0**	**-0.5**
DGZ				pmax	pmax		
	comp=Z,53nm,1.1s						
LZDM	**Lanzhou Array**	**43.90**	**269**	PcP	**PcP**	**16 28 57.4**	**-1.5**
	comp=Z,1.5nm,0.3s,baz=35,slow=5.4,SNR=3.9						
PGC	**Sidney**	**43.98**	**67**	IAmb	IAmb	16 27 20.9	
	comp=Z,71nm,1.6s						
GUMO	**Guam**	**44.17**	**205**	LR	LR	16 45 00.2	
	comp=Z,359nm,19.9s,baz=40,slow=35						
A04D	**Lummi Island**	**44.33**	**66**	IAmb	IAmb	16 27 24.4	
	comp=Z,63nm,1.1s						
NLWA	**Neilton Lookou**	**44.55**	**68**	IAmb	IAmb	16 27 26.0	
	comp=Z,49nm,1.1s						
SPITS	**Spitsbergen Ar**	**44.77**	**351**	P	**P**	**16 27 18.1**	**-1.0**
	comp=Z,198nm,1.1s,baz=73,slow=7.3,SNR=51						
SPITS	**Spitsbergen Ar**	**44.77**	**351**	P	**P**	**16 27 19.7**	**+0.6**
SPITS				pmax	pmax		
	comp=Z,294nm,1.3s						
WISH	**Wishkah**	**44.78**	**69**	IAmb	IAmb	16 27 23.4	
	comp=Z,107nm,1.4s						
KIP	**Kipapa**	**45.11**	**123**	*i* P	**P**	**16 27 22.9**	**+0.5**
KIP				pmax	pmax		
	comp=Z,112nm,1.1s						
NEEM	**North Greenlan**	**45.48**	**10**	*i* P	**P**	**16 27 26.0**	**+0.9**
NEEM				IAmb	IAmb	16 27 28.5	
	comp=Z,80nm,1.3s						
HSPB	**Hornsund (broa**	**45.91**	**350**	*e*P	**P**	**16 27 30.7**	**+2.6**
B08A	**Colville Reser**	**46.29**	**65**	IAmb	IAmb	16 27 38.9	
	comp=Z,43nm,1.0s						
LTY	**Liberty**	**46.31**	**67**	IAmb	IAmb	16 27 39.9	
	comp=Z,105nm,1.8s						
ZSN	**Zaisan**	**46.49**	**294**	*e*P	**P**	**16 27 32.0**	**-1.2**
	comp=Z,26nm,1.3s						
ZSN	**Zaisan**	**46.49**	**294**	*e*P	**P**	**16 27 31.9**	**-1.2**
ZSN				pmax	pmax		
	comp=Z,26nm,1.3s						
EPH	**Ephrata**	**46.80**	**66**	IAmb	IAmb	16 27 43.3	
	comp=Z,105nm,1.7s						
ILON	**Igloolik, Nuna**	**46.86**	**26**	IAmb	IAmb	16 27 45.6	
	comp=Z,63nm,1.4s						
MXC	**Moxie City**	**46.95**	**67**	IAmb	IAmb	16 27 45.0	
	comp=Z,88nm,1.8s						
E07A	**Sunnyside**	**47.19**	**67**	IAmb	IAmb	16 27 46.1	
	comp=Z,35nm,1.1s						
C09A	**Chrisman Ranch**	**47.19**	**65**	IAmb	IAmb	16 27 45.7	
	comp=Z,50nm,1.3s						
H04A	**Detroit Lake**	**47.20**	**70**	IAmb	IAmb	16 27 47.0	
	comp=Z,90nm,1.6s						
WAH2	**Wahluke Slope**	**47.21**	**66**	IAmb	IAmb	16 27 42.0	
	comp=Z,85nm,1.6s						
G05A	**Wamic**	**47.29**	**69**	IAmb	IAmb	16 27 54.6	
	comp=Z,61nm,1.3s						
KULLO	**Kullorsuaq**	**47.33**	**13**	*i* P	**P**	**16 27 39.8**	**+0.5**
KULLO				IAmb	IAmb	16 27 41.7	
	comp=Z,31nm,0.8s						
D08A	**Wollman Farm,**	**47.35**	**66**	IAmb	IAmb	16 27 46.9	
	comp=Z,34nm,1.4s						
WMQ	**Urumqi**	**47.39**	**288**	⇓P	**P**	**16 27 41.3**	**+1.0**
WMQ				ScS	ScS	16 37 33.4	+0.4
WMQ				pmax	pmax		
	comp=Z,67nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,340nm,4.5s						
WMQ				LR	LR		
	comp=Z,5µm,18.5s						
WMQ				LR	LR		
	comp=Z,3µm,19.1s						
WMQ				LR	LR		
	comp=Z,870nm,20.5s						
HAWA	**Hanford**	**47.47**	**67**	IAmb	IAmb	16 27 48.9	
	comp=Z,42nm,1.4s						
KURK	**Kurchatov**	**47.51**	**301**	P	**P**	**16 27 40.7**	**-0.2**
KURK	**Kurchatov**	**47.51**	**301**		**PcP**	**16 29 10.3**	**-0.5**
KURK	**Kurchatov**	**47.51**	**301**	P	**P**	**16 27 40.0**	**-0.9**
KURK				IAmb	IAmb	16 27 41.8	
	comp=Z,49nm,0.9s						
KURK	**Kurchatov**	**47.51**	**301**	*ce*P	**P**	**16 27 40.1**	**-0.9**
KURK				pmax	pmax		

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       comp=Z,125nm,1.7s
CD2    Chengdu           47.58 264    P      P      16 27 39.6 -2.2
CD2                                   S      S      16 34 33.9 -2.2
CD2                                   pmax   pmax
       comp=Z,10.0nm,0.4s
CD2                                   LR     LR
       comp=Z,2µm,15.5s
CD2                                   LR     LR
       comp=Z,2µm,14.7s
CD2                                   LR     LR
       comp=Z,3µm,14.1s
F07A   Phinny Hill Vi    47.59  68    IAmb   IAmb   16 27 49.3
       comp=Z,32nm,0.8s
KURBB  Kurchatov Arra    47.61 301    P      P      16 27 40.9 -0.9
       comp=Z,36nm,1.1s,baz=55,slow=7.6,SNR=122
KURBB                                 PcP    PcP    16 29 10.3 -0.8
       comp=Z,5.6nm,1.0s,baz=46,slow=3.5,SNR=5.4
       comp=Z,36nm,1.1s
KURBB  Kurchatov Arra    47.61 301    P      P      16 27 40.3 -1.5
DAG    Danmarks Havn     47.78   0  i P      P      16 27 43.0 +0.3
DAG                                   IAmb   IAmb   16 27 44.4
       comp=Z,62nm,1.3s
I05D   Terrebonne, OR    47.88  70    IAmb   IAmb   16 27 55.6
       comp=Z,36nm,1.3s
E09A   Wood Farm, Sta    48.11  66    IAmb   IAmb   16 27 52.8
       comp=Z,36nm,1.0s
BBOR   Butler Butte      48.15  72    IAmb   IAmb   16 27 55.0
       comp=Z,82nm,1.8s
KSXB   Camp Six Broad    48.22  74    IAmb   IAmb   16 28 01.0
       comp=Z,59nm,1.5s
MK31   Makanchi Array    48.25 295  i P      P      16 27 44.4 -2.4
MK31                                  pmax   pmax
       comp=Z,32nm,0.9s
MKAR   Makanchi Array    48.25 295    P      P      16 27 45.6 -1.2
       comp=Z,19nm,1.0s,baz=52,slow=7.9,SNR=71
       comp=Z,19nm,1.0s
MKAR   Makanchi Array    48.25 295    P      P      16 27 44.6 -2.2
GULI   GuiLin            48.28 253    P      P      16 27 46.3 -0.9
GULI                                  S      S      16 34 36.1  -10
GULI                                  pmax   pmax
       comp=Z,9.0nm,1.2s
GULI                                  pmax   pmax
       comp=Z,130nm,4.9s
GULI                                  LR     LR
       comp=Z,1µm,18.4s
GULI                                  LR     LR
       comp=Z,1µm,16.3s
GULI                                  LR     LR
       comp=Z,2µm,18.4s
MAKZ   Makanchi          48.40 295    P      P      16 27 45.9 -2.1
MAKZ                                  IAmb   IAmb   16 27 48.4
       comp=Z,61nm,1.2s
MAKZ   Makanchi          48.40 295    P      P      16 27 45.9 -2.1
MAKZ                                  pmax   pmax
       comp=Z,61nm,1.2s
LNOR   Lincton Mounta    48.46  67    IAmb   IAmb   16 27 56.8
       comp=Z,81nm,1.8s
PINE   Pine Mountain     48.47  70    IAmb   IAmb   16 27 57.4
       comp=Z,49nm,1.3s
G08A   Pilot Rock        48.50  68    IAmb   IAmb   16 27 56.8
       comp=Z,68nm,2.0s
J05D   Fort Rock, OR     48.65  71    IAmb   IAmb   16 27 58.2
       comp=Z,34nm,1.1s
GOMU   GeErMu            48.75 276    P      P      16 27 48.3 -2.9
GOMU                                  sP     pP     16 27 55.5 -1.0
GOMU                                  S      S      16 34 48.3 -4.9
GOMU                                  pmax   pmax
       comp=Z,2.0nm,0.5s
GOMU                                  LR     LR
       comp=Z,2µm,15.0s
GOMU                                  LR     LR
       comp=Z,580nm,14.1s
GOMU                                  LR     LR
       comp=Z,2µm,14.7s
YBH    Yreka Blue Hor    48.92  73    P      P      16 27 52.7 +0.6
       comp=Z,0.9nm,1.2s,baz=192,slow=6.9,SNR=3.0
KHMM   Horse Mountain    48.96  75    IAmb   IAmb   16 28 01.6
       comp=Z,109nm,1.8s
N02D   Trinity Center    49.45  74    IAmb   IAmb   16 28 06.2
       comp=Z,59nm,1.6s
M03C   McCloud           49.56  74    IAmb   IAmb   16 28 10.9
       comp=Z,51nm,1.3s
BVA0   Borovoye Array    49.83 308    P      P      16 27 56.5 -2.3
BVAR   Borovoye Array    49.83 308    P      P      16 27 58.0 -0.8
       comp=Z,7.4nm,0.5s,baz=61,slow=7.6,SNR=45
       comp=Z,7.4nm,0.5s
BORK   Borovoye          49.84 308    P      P      16 27 57.3 -1.6
BORK   Borovoye          49.84 308ceP      P      16 27 58.1 -0.8
BORK                                  pmax   pmax
       comp=Z,30nm,1.7s
MSO    Missoula          50.04  63    IAmb   IAmb   16 28 08.7
       comp=Z,53nm,1.4s
HATC   Hat Creek Radi    50.23  73    IAmb   IAmb   16 28 10.1
       comp=Z,107nm,1.8s
DBG    Daneborg          50.25   1  i P      P      16 28 01.6  0.0
DBG                                   IAmb   IAmb   16 28 03.0
       comp=Z,31nm,1.2s
FFC    Flin Flon         50.26  49    P      P      16 28 02.3 +0.3
FFC    Flin Flon         50.26  49    P      P      16 28 02.3 +0.3
FFC                                   pmax   pmax
       comp=Z,51nm,1.6s
MNRC   McLaughlin Min    51.06  76    IAmb   IAmb   16 28 20.8
       comp=Z,106nm,1.6s
SUMG   Summit            51.18   8    P      P      16 28 09.2  0.0
SUMG                                  IAmb   IAmb   16 28 17.3
       comp=Z,59nm,1.1s
SUMG   Summit            51.18   8    P      P      16 28 09.2  0.0
SUMG                                  pmax   pmax
       comp=Z,59nm,1.1s
SUMG   Summit            51.18   8  i P      P      16 28 09.5 +0.3
SUMG                                  IAmb   IAmb   16 28 11.5
       comp=Z,62nm,1.2s
NIAQ   Niaqornat         51.20  14  i P      P      16 28 10.6 +1.7
NIAQ                                  IAmb   IAmb   16 28 11.4
       comp=Z,89nm,1.2s
ARCES  ARCESS Array B    51.21 342    P      P      16 28 08.0 -1.0
       comp=Z,23nm,1.0s,baz=22,slow=7.3,SNR=14
       comp=Z,23nm,1.0s
ARCES  ARCESS Array B    51.21 342    P      P      16 28 08.9 -0.1
ARCES  ARCESS Array B    51.21 342    P      P      16 28 08.9 -0.1
ARCES                                 pmax   pmax
       comp=Z,39nm,1.2s
SVE    Sverdlovsk        51.29 316   eP      P      16 28 10.3 +0.5
SVE                                   pmax   pmax
       comp=Z,33nm,1.7s
SVE                                   MLR    MLR
       comp=Z,2µm,20.0s
APA    Apatity           51.34 338⇓eP      P      16 28 09.1 -0.8
APA                                  e             16 29 20.7
APA                                  e             16 30 01.2
APA                                   pmax   pmax
       comp=Z,20nm,1.0s
APA                                   MLR    MLR
       comp=Z,1µm,16.8s
TDK    Taldyqorghan      51.46 296   eP      P      16 28 10.3 -0.9
       comp=Z,43nm,1.3s
TDK    Taldyqorghan      51.46 296   eP      P      16 28 10.3 -0.9
TDK                                   pmax   pmax
       comp=Z,43nm,1.3s
DLMT   Dillon            51.73  63    IAmb   IAmb   16 28 21.7
       comp=Z,111nm,1.6s
JETT   Jettan, Norway    52.03 344   eP      P      16 28 16.4 +1.3
BOZ    Bozeman (W)       52.05  63    IAmb   IAmb   16 28 24.3
       comp=Z,93nm,1.9s
KTK1   Kautokeino        52.06 343   eP      P      16 28 15.9 +0.6
PDGK   Podgornoye        52.07 293    P      P      16 28 13.6 -2.3
MPK    Martis Peak       52.08  74    IAmb   IAmb   16 28 26.6
       comp=Z,88nm,1.5s
PZH    PanZhiHua         52.08 262    P      P      16 28 14.1 -2.1
PZH                                   PcP    PcP    16 29 27.6 -0.5
PZH                                   PcS    PcS    16 33 24.8 -1.8
PZH                                   S      S      16 35 40.3 +1.0
PZH                                   ScS    ScS    16 38 03.4 -2.0
PZH                                   pmax   pmax
       comp=Z,10.0nm,1.5s
PZH                                   LR     LR
       comp=Z,1µm,16.1s
PZH                                   LR     LR
       comp=Z,760nm,13.9s
PZH                                   LR     LR
       comp=Z,1µm,14.7s
PAHR   Pah Rah Range     52.14  73    IAmb   IAmb   16 28 25.1
       comp=Z,88nm,2.0s
SHLS   Shalkode          52.20 293⇑iP      P      16 28 14.0 -3.0
       comp=Z,31nm,0.8s
SHLS   Shalkode          52.20 293c iP     P      16 28 13.9 -3.0
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SHLS                                  pmax   pmax
       comp=Z,31nm,0.8s
UZB    Uzynbulak         52.44 293   eP      P      16 28 17.3 -1.4
       comp=Z,25nm,1.3s
UZB    Uzynbulak         52.44 293   eP      P      16 28 17.2 -1.4
UZB                                   pmax   pmax
       comp=Z,25nm,1.3s
PNTR   Pine Nut          52.47  74    IAmb   IAmb   16 28 29.0
       comp=Z,71nm,1.6s
ARTI   Arti              52.48 317    P      P      16 28 17.9 -0.7
ARTI   Arti              52.48 317d iP     P      16 28 19.0 +0.4
ARTI                                                16 29 27.6
ARTI                                                16 30 14.1
ARTI                                  S      S      16 35 43.3 -0.5
ARTI                                  SS     SS     16 39 20.2 -0.9
ARTI                                  pmax   pmax
       comp=Z,24nm,1.4s
ARTI                                  MLR    MLR
       comp=Z,2µm,19.0s
KMI    Kunming           52.60 260    P      P      16 28 23.3 +3.1
KMI                                   PcP    PcP    16 29 30.5 +0.3
KMI                                   pmax   pmax
       comp=Z,8.0nm,1.2s
KMI                                   LR     LR
       comp=Z,2µm,19.7s
KMI                                   LR     LR
       comp=Z,1µm,20.0s
KMI                                   LR     LR
       comp=Z,2µm,14.8s
SATY   Saty              52.82 294⇑iP      P      16 28 20.2 -1.3
       comp=Z,24nm,1.4s
SATY   Saty              52.82 294c iP     P      16 28 20.2 -1.3
SATY                                  pmax   pmax
       comp=Z,24nm,1.4s
CHKK   Chushkaly         52.98 295   eP      P      16 28 20.8 -1.8
CHKK   Chushkaly         52.98 295   eP      P      16 28 20.8 -1.8
YNR    Norris Junctio    53.15  63    IAmb   IAmb   16 28 33.3
       comp=Z,57nm,1.5s
ADZR   Andozero          53.17 333   eP      P      16 28 22.4 -1.2
ADZR                                  pmax   pmax
       comp=Z,124nm,1.2s
YNE    Yellowstone No    53.28  62    IAmb   IAmb   16 28 33.5
       comp=Z,109nm,2.0s
YPP    Pitchstone Pla    53.40  63    IAmb   IAmb   16 28 35.6
       comp=Z,57nm,1.5s
H17A   Grant Village     53.43  63    IAmb   IAmb   16 28 37.0
       comp=Z,110nm,1.8s
JMIC   Jan Mayen         53.43 356    LR     LR     16 50 32.9
       comp=Z,264nm,18.7s,baz=338,slow=35
MDOK   Medeo             53.45 295   eP      P      16 28 24.8 -1.3
MDOK   Medeo             53.45 295   eP      P      16 28 24.8 -1.3
AAA    Alma-Ata          53.48 295   eP      P      16 28 25.1 -1.3
       comp=Z,31nm,0.7s
AAA    Alma-Ata          53.48 295   eP      P      16 28 25.0 -1.3
AAA                                   pmax   pmax
       comp=Z,31nm,0.7s
RLMT   Red Lodge         53.57  62    IAmb   IAmb   16 28 35.2
       comp=Z,35nm,1.1s
TNSS   Tian-Shan         53.59 295   eP      P      16 28 25.9 -1.7
TNSS   Tian-Shan         53.59 295   eP      P      16 28 25.8 -1.7
ELK    Elko              53.62  69    IAmb   IAmb   16 28 36.5
       comp=Z,62nm,1.9s
NVAR   Mina Array Bea    53.64  73    P      P      16 28 29.6 +1.9
       comp=Z,5.5nm,0.8s,baz=300,slow=7.0,SNR=19
       comp=Z,5.5nm,0.8s
NVAR   Mina Array Bea    53.64  73    P      P      16 28 29.1 +1.4
QIZ    Qiongzhong        53.65 249    P      P      16 28 27.0 -0.7
QIZ                                   S      S      16 36 01.0 +0.5
QIZ                                   LR     LR
       comp=Z,800nm,15.7s
QIZ                                   LR     LR
       comp=Z,600nm,15.7s
QIZ                                   LR     LR
       comp=Z,1µm,15.3s
LAO    LASA Array        53.94  58    IAmb   IAmb   16 28 38.3
       comp=Z,77nm,1.4s
LOHW   Long Hollow       53.97  64    IAmb   IAmb   16 28 40.6
       comp=Z,49nm,1.5s
SCO    Scoresbysund      54.06   2    P      P      16 28 30.7 +0.6
SCO    Scoresbysund      54.06   2    P      P      16 28 30.7 +0.6
SCO                                   pmax   pmax
       comp=Z,25nm,1.3s
SCO    Scoresbysund      54.06   2  i P      P      16 28 31.3 +1.3
SCO                                   IAmb   IAmb   16 28 32.9
       comp=Z,18nm,1.2s
KIRV   Kirov             54.08 323ceP      P      16 28 31.4 +1.1
HVU    Hansel Valley     54.17  67    IAmb   IAmb   16 28 40.4
       comp=Z,56nm,1.9s
TKM2   Tokmak 2          54.36 296    P      P      16 28 32.5 -0.4
       SNR=14
SGDS   Sogindy           54.47 297   eP      P      16 28 32.4 -1.1
BOOM   Boomskoye usch    54.49 295    IAmb   IAmb   16 28 35.5
       comp=Z,78nm,1.2s
FRB    Frobisher Bay     54.56  25    LR     LR     16 55 43.6
       comp=Z,663nm,18.6s,baz=284,slow=40
USP    Ospenovka         54.67 297    P      P      16 28 34.8 -0.2
       SNR=28
TIN    Tinemaha, Big     54.68  75    IAmb   IAmb   16 28 49.6
       comp=Z,51nm,1.0s
CHMS   Chumysh           54.74 296    P      P      16 28 34.9 -0.5
       SNR=18
FAUS   Fauske            54.79 345   eP      P      16 28 35.3 -0.1
KBK    Karagaybulak      54.88 296    P      P      16 28 36.5 -0.2
       SNR=19
TNCH   TengChong         55.04 264    P      P      16 28 40.0 +2.0
TNCH                                  pmax   pmax
       comp=Z,280nm,4.0s
BW06   Boulder Array     55.11  64    IAmb   IAmb   16 28 47.0
       comp=Z,110nm,1.8s
PD31   Pinedale Array    55.11  64    IAmb   IAmb   16 28 47.0
       comp=Z,110nm,1.8s
PDAR   Pinedale Array    55.11  64    P      P      16 28 39.8 +1.4
       comp=Z,3.4nm,0.7s,baz=336,slow=3.3,SNR=26
       comp=Z,3.4nm,0.7s
AAK    Ala-Archa         55.13 296    P      P      16 28 37.8 -0.6
       SNR=29
AAK    Ala-Archa         55.13 296    P      P      16 28 38.1 -0.2
AAK    Ala-Archa         55.13 296    P      P      16 28 37.3 -1.1
AAK                                   IAmb   IAmb   16 28 39.7
       comp=Z,69nm,1.2s
AAK    Ala-Archa         55.13 296ceP      P      16 28 38.2 -0.2
AAK                                   pmax   pmax
       comp=Z,103nm,1.7s
SFJD   Kangerlussuaq     55.14  15    LR     LR     16 53 27.8
       comp=Z,592nm,20.4s,baz=296,slow=37
SFJD   Kangerlussuaq     55.14  15  i P      P      16 28 39.4 +1.6
SFJD                                  IAmb   IAmb   16 28 40.1
       comp=Z,9.7nm,0.8s
CWC    Cottonwood Cre    55.21  75    IAmb   IAmb   16 28 53.4
       comp=Z,69nm,1.6s
KLMR   Klimovskoe        55.35 330   eP      P      16 28 37.0 -2.5
KLMR                                 e*PP    sP     16 28 50.4 +3.5
KLMR                                 e              16 30 41.4
KLMR                                  pmax   pmax
       comp=Z,121nm,1.3s
SPR3   Spring Creek 3    55.36  70    IAmb   IAmb   16 28 51.0
       comp=Z,50nm,1.0s
UCH    Uchtor            55.41 296    P      P      16 28 40.6 -0.3
       SNR=10
EKS2   Erkin-Say         55.47 296    P      P      16 28 40.7 -0.1
       SNR=24
CTU    Camp Tracy        55.49  67    IAmb   IAmb   16 28 49.9
       comp=Z,90nm,1.8s
LSA    Lhasa             55.62 273    P      P      16 28 32.3  -10
VAGH   Vaagaholmen       55.69 346   eP      P      16 28 42.7 +0.9
RAUS   Rausandaksla      55.86 345   eP      P      16 28 43.7 +0.6
CLC    China Lake        55.94  75    IAmb   IAmb   16 28 53.9
       comp=Z,48nm,1.4s
MPU    Maple Canyon      56.04  67    IAmb   IAmb   16 28 49.6
       comp=Z,38nm,1.2s
ULM    Lac du Bonnet     56.06  49    P      P      16 28 46.0 +1.3
       comp=Z,11nm,0.9s,baz=317,slow=8.6,SNR=6.9
       comp=Z,11nm,0.9s
ULM    Lac du Bonnet     56.06  49    IAmb   IAmb   16 28 58.2
       comp=Z,45nm,1.2s
BSUT   Blindstream Ca    56.12  66    IAmb   IAmb   16 28 58.7
       comp=Z,73nm,1.4s
WSHM   Spangler Hills    56.15  75    IAmb   IAmb   16 28 55.4
       comp=Z,43nm,1.3s
DZA    Taraz             56.53 298   eP      P      16 28 47.4 -1.0
DZA    Taraz             56.53 298   eP      P      16 28 47.3 -1.0
DAV    Davao City (W)    56.60 225    LR     LR     16 54 42.0
       comp=Z,435nm,18.3s,baz=57,slow=38
DAV    Davao City (W)    56.60 225    P      P      16 28 47.9 -1.1
KSH    Kashi             56.64 292    P      P      16 28 52.5 +3.3
KSH                                   pmax   pmax
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       comp=Z,33nm,1.6s
KSH                                   LR     LR
       comp=Z,2µm,17.2s
KSH                                   LR     LR
       comp=Z,2µm,17.9s
KSH                                   LR     LR
       comp=Z,1µm,21.0s
K22A   Casper            56.72  62    IAmb   IAmb   16 29 03.5
       comp=Z,81nm,1.6s
KK31   Karatay Array     56.79 299  i P      P      16 28 48.6 -1.5
KKAR   Karatay Array     56.79 299    P      P      16 28 49.3 -0.8
KKAR   Karatay Array     56.79 299    P      P      16 28 49.3 -0.8
ARSB   Arslanbob         56.86 296    IAmb   IAmb   16 28 53.4
       comp=Z,69nm,1.5s
MWC    Mount Wilson      56.86  77    IAmb   IAmb   16 29 05.0
       comp=Z,86nm,1.4s
RSSD   Black Hills       56.87  59    P      P      16 28 51.4 +0.5
RSSD                                  IAmb   IAmb   16 29 04.6
       comp=Z,56nm,1.4s
RSSD   Black Hills       56.87  59    P      P      16 28 51.4 +0.5
RSSD                                  pmax   pmax
       comp=Z,56nm,1.5s
P17A   Butcher Ranch,    56.91  67    IAmb   IAmb   16 29 01.3
       comp=Z,108nm,1.7s
AKTO   Aktyubinsk        57.04 312    P      P      16 28 50.1 -1.7
Q16A   Castle Valley     57.09  68    IAmb   IAmb   16 29 02.6
       comp=Z,34nm,1.2s
AB31   Akbulak array     57.12 310   eP      P      16 28 50.0 -2.3
ABKAR  Akbulak array     57.12 310    P      P      16 28 51.7 -0.6
BRLS   Borolday          57.17 299⇑iP      P      16 28 53.5 +0.7
BRLS   Borolday          57.17 299c iP     P      16 28 53.5 +0.7
MTPU   Mount Pierson     57.21  69    IAmb   IAmb   16 29 03.4
       comp=Z,57nm,1.7s
SRU    San Rafael Swe    57.29  67    IAmb   IAmb   16 29 03.8
       comp=Z,54nm,1.1s
EPLO   Experimental L    57.41  48    IAmb   IAmb   16 29 07.6
       comp=Z,40nm,1.1s
KNB    Kanab             57.63  71    IAmb   IAmb   16 29 12.1
       comp=Z,111nm,1.8s
CHM    Chimkent          57.82 299   eP      P      16 28 56.3 -1.1
       comp=Z,29nm,1.1s
CHM    Chimkent          57.82 299   eP      P      16 28 56.2 -1.1
CHM                                   pmax   pmax
       comp=Z,29nm,1.1s
HAYD   Hayden            57.93  64    IAmb   IAmb   16 29 13.0
       comp=Z,66nm,1.5s
DANC   Danby, Needles    58.02  74    IAmb   IAmb   16 29 10.4
       comp=Z,62nm,1.5s
HMU    Henry Mountain    58.05  69    IAmb   IAmb   16 29 09.1
       comp=Z,62nm,1.0s
FINES  FINESS Array B    58.24 337    P      P      16 29 00.2 +0.3
       comp=Z,28nm,0.5s,baz=33,slow=8.4,SNR=323
       comp=Z,28nm,0.5s
PV21   Cone Mtn., Par    58.51  67    IAmb   IAmb   16 29 16.7
       comp=Z,68nm,1.5s
IRM    Iron Mountain     58.51  75    IAmb   IAmb   16 29 17.4
       comp=Z,57nm,1.4s
PV14   Lion Creek, Pa    58.62  67    IAmb   IAmb   16 29 17.5
       comp=Z,60nm,1.3s
PV04   Paradox Valley    58.67  67    IAmb   IAmb   16 29 20.7
       comp=Z,49nm,1.2s
PUL    Pulkovo           58.71 334ceP      P      16 29 05.0 +1.7
PUL                                   pmax   pmax
       comp=Z,100nm,0.4s
PV16   Nyswonger Mesa    58.72  67    IAmb   IAmb   16 29 18.3
       comp=Z,68nm,1.3s
PV03   Paradox Valley    58.80  67    IAmb   IAmb   16 29 18.7
       comp=Z,73nm,1.4s
PV05   Paradox Valley    58.80  67    IAmb   IAmb   16 29 14.3
       comp=Z,59nm,1.2s
DRK    Karamyk           58.83 295    IAmb   IAmb   16 29 08.7
       comp=Z,47nm,1.3s
PV13   Radium Mtn., P    58.89  67    IAmb   IAmb   16 29 21.6
       comp=Z,58nm,1.2s
PV02   Paradox Valley    58.90  67    IAmb   IAmb   16 29 15.1
       comp=Z,64nm,1.3s
BLYC   Blythe            59.16  74    IAmb   IAmb   16 29 21.2
       comp=Z,33nm,1.2s
GLA    Glamis            59.52  75    IAmb   IAmb   16 29 24.2
       comp=Z,38nm,1.1s
WUAZ   Wupatki           59.52  71    IAmb   IAmb   16 29 20.4
       comp=Z,35nm,1.2s
BELG   Belogornoye       59.59 320  i P      P      16 29 08.3 -1.1
BELG                                  pmax   pmax
       comp=Z,18nm,1.1s
ESJX   Sierra Juarez     59.70  77    IAmb   IAmb   16 29 25.5
       comp=Z,31nm,1.2s
CHTO   Chiang Mai        59.74 259    P      P      16 29 10.4 -0.6
CHTO   Chiang Mai        59.74 259    P      P      16 29 09.9 -1.0
CHTO   Chiang Mai        59.74 259    P      P      16 29 10.0 -1.0
CHTO   Chiang Mai        59.74 259    P      P      16 29 09.9 -1.0
CHTO                                  pmax   pmax
       comp=Z,21nm,1.1s
CM31   Chiang Mai Arr    60.03 259    P      P      16 29 13.2 +0.2
       SNR=5.7
CMAR   Chiang Mai Arr    60.03 259    P      P      16 29 12.8 -0.2
       comp=Z,5.0nm,0.9s,baz=22,slow=7.7,SNR=33
       comp=Z,5.0nm,0.9s
CMAR   Chiang Mai Arr    60.03 259    P      P      16 29 12.2 -0.8
MOS    Moscow            60.17 328   eP      P      16 29 12.2 -1.2
MOS                                   pmax   pmax
       comp=Z,103nm,1.3s
RABL   Rabaul            60.29 192    P      P      16 29 15.1 +0.4
MANEM  Manem             60.35 294    IAmb   IAmb   16 29 19.4
       comp=Z,50nm,1.2s
ECSD   EROS Data Cent    60.68  55    IAmb   IAmb   16 29 30.2
       comp=Z,39nm,1.1s
W18A   Petrified Fore    60.70  70    IAmb   IAmb   16 29 32.2
       comp=Z,52nm,1.3s
E38A   The Farm, Brul    60.70  49    IAmb   IAmb   16 29 27.3
       comp=Z,39nm,0.9s
VSU    Vasula            60.75 335ceP      P      16 29 17.2 -0.1
VSU                                   pmax   pmax
       comp=Z,252nm,1.7s
CHGR   Chuyangaron       60.80 296    P      P      16 29 16.9 -1.1
CHGR   Chuyangaron       60.80 296    P      P      16 29 17.0 -1.1
CHGR                                  pmax   pmax
       comp=Z,113nm,1.4s
SDCO   Great Sand Dun    60.92  65    IAmb   IAmb   16 29 33.6
       comp=Z,52nm,1.5s
OBN    Obninsk           61.02 328    P      P      16 29 19.1 -0.1
OBN    Obninsk           61.02 328  ⇓P      P      16 29 19.5 +0.3
OBN    Obninsk           61.02 328c iP     P      16 29 19.3 +0.1
OBN                                  i *PP   sP     16 29 25.9 -0.8
OBN                                  i              16 30 02.2
OBN                                   S      S      16 37 36.0 -0.5
OBN                                  e              16 38 01.8
OBN                                  e              16 39 12.6
OBN                                   pmax   pmax
       comp=Z,139nm,1.7s
OBN                                   MLR    MLR
       comp=Z,714nm,17.0s
OBN    Obninsk           61.02 328    P      P      16 29 18.7 -0.5
       comp=Z,1µmcomp=Z,69nm,1.6s
X18A   Snowflake         61.03  71    IAmb   IAmb   16 29 34.6
       comp=Z,44nm,1.2s
NC204  NORSAR Array S    61.23 345    IAmb   IAmb   16 29 23.1
       comp=Z,62nm,1.4s
NB2    NORSAR Subarra    61.38 344    P      P      16 29 21.6 -0.1
       comp=Z,53nm,1.4s,baz=18,slow=6.9
NB2    NORSAR Subarra    61.38 344    P      P      16 29 21.6 -0.1
       baz=18,slow=6.9
NOA    NORSAR Array B    61.38 344    P      P      16 29 21.7  0.0
       comp=Z,3.6nm,0.6s,baz=19,slow=6.9,SNR=34
       comp=Z,3.6nm,0.6s
214A   Organ Pipe Nat    61.45  75    IAmb   IAmb   16 29 37.5
       comp=Z,38nm,1.2s
NBO00  NORSAR Array S    61.46 345    IAmb   IAmb   16 29 24.5
       comp=Z,34nm,1.4s
NAO01  NORSAR Array S    61.62 345    P      P      16 29 23.2  0.0
NAO01                                 IAmb   IAmb   16 29 25.5
       comp=Z,44nm,1.4s
NC602  NORSAR Array S    61.62 344    IAmb   IAmb   16 29 24.5
       comp=Z,65nm,1.9s
NC602  NORSAR Array S    61.62 344   eP      P      16 29 23.8 +0.5
SWI    Sorong            61.84 216    P      P      16 29 25.6 +0.4
       comp=Z,57nm,1.4s
SIJI   Sorong            61.84 216    P      P      16 29 25.8 +0.6
       comp=Z,45nm,1.3s
HFS    Hagfors           61.85 343    P      P      16 29 23.2 -1.6
       comp=Z,6.4nm,0.5s,baz=40,slow=4.8,SNR=52
       comp=Z,6.4nm,0.5s
T25A   Trinidad          61.94  65    IAmb   IAmb   16 29 40.9
       comp=Z,53nm,1.4s
SKAR   Skarslia          62.15 346   eP      P      16 29 27.8 +0.9
SHAA   Shahritus         62.16 296    IAmb   IAmb   16 29 28.7
       comp=Z,226nm,1.8s
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TUC	Tucson	62.28	73	P	P	16 29 29.3	+1.1
TUC	Tucson	62.28	73	P	P	16 29 29.3	+1.1
TUC				pmax	pmax		
	comp=Z,21nm,1.3s						
LPSR	Galich'ya Gora	62.42	325	*e*P	P	16 29 28.2	-0.5
LPSR				pmax	pmax		
	comp=Z,96nm,1.3s						
NIL	Nilore	62.50	290	P	P	16 29 28.5	-1.0
NIL	Nilore	62.50	290	P	P	16 29 28.6	-1.0
NIL				IAmb	IAmb	16 29 31.3	
	comp=Z,28nm,0.9s						
NIL	Nilore	62.50	290	P	P	16 29 28.6	-1.0
NIL				pmax	pmax		
	comp=Z,28nm,1.0s						
TASM	ASL Pad, Albuq	62.56	68	IAmb	IAmb	16 29 41.4	
	comp=Z,11nm,0.9s						
TASM	ASL Pad, Albuq	62.56	68	IAmb	IAmb	16 29 44.3	
	comp=Z,25nm,1.4s						
ANMO	Albuquerque	62.56	68	P	P	16 29 31.1	+0.9
ANMO	Albuquerque	62.56	68	*i* P	P	16 29 31.3	+1.1
ANMO				pmax	pmax		
	comp=Z,23nm,1.4s						
ABQ	Albuquerque	62.56	68	IAmb	IAmb	16 29 44.3	
	comp=Z,30nm,1.5s						
VRH	Novokhopyorsk	62.66	322	*e*P	P	16 29 29.1	-1.2
VRH				pmax	pmax		
	comp=Z,28nm,0.6s						
SCHQ	Schefferville	62.70	30	P	P	16 29 30.3	-0.3
	comp=Z,5.1nm,0.7s,baz=2.2,slow=7.2,SNR=8.8						
	comp=Z,5.1nm,0.7s						
Y22A	Socorro	63.07	69	IAmb	IAmb	16 29 58.7	
	comp=Z,43nm,1.2s						
VORR	Voronezh	63.11	324	*e*P	P	16 29 33.5	+0.2
VORR				pmax	pmax		
	comp=Z,63nm,0.4s						
I40A	Norwalk	63.25	51	IAmb	IAmb	16 29 47.1	
	comp=Z,27nm,1.1s						
FAKI	Fak Fak	63.45	214	P	P	16 29 36.3	+0.4
	comp=Z,45nm,1.1s						
VSR	Storozhevoye	63.51	324	*e*P	P	16 29 32.9	-3.1
VSR				pmax	pmax		
	comp=Z,30nm,1.0s						
VORD	Divnogorie	63.69	324	*e*P	P	16 29 33.8	-3.3
VORD				pmax	pmax		
	comp=Z,20nm,1.0s						
121A	Cookes Peak, D	63.72	70	IAmb	IAmb	16 29 57.7	
	comp=Z,46nm,1.4s						
NACGM	Naroch	63.93	333	⇑*i*P	P	16 29 37.8	-0.9
	comp=Z,74nm,1.0s,baz=26						
TOLI2	Tolitoli	63.97	228	P	P	16 29 39.1	-0.2
TOLI2				IAmb	IAmb	16 29 45.4	
	comp=Z,16nm,0.8s						
MNK	Minsk	64.00	332	*i* P	P	16 29 40.0	+0.8
	comp=E,66nm,1.3s						
MNK				*i* P	P	16 29 40.0	+0.8
	comp=N,15nm,0.9s						
MNK				*i* P	P	16 29 40.0	+0.8
	comp=Z,81nm,1.0s,baz=27						
MNK				*i* pP	sP	16 29 49.6	+3.0
MNK				*i* sP	pP	16 29 54.7	+10
MNK				*i* PP	PP	16 31 59.1	-0.2
MNK				*i* PPP	PPP	16 33 30.6	
MNK				*i* S	S	16 38 14.1	0.0
MNK				*i* SS	SS	16 42 23.2	+1.5
MNK				*i* LR	LR	16 57 58.7	
MNK				*i* LRM	MLR	17 01 14.8	
	comp=E,465nm,17.8s						
MNK				*i* LRM	MLR	17 01 23.4	
	comp=Z,530nm,16.3s						
MNK				*i* LRM	MLR	17 01 26.2	
	comp=N,382nm,14.2s						
MNK	Minsk	64.00	332	*i* P	P	16 29 39.9	+0.8
MNK				*i* *PP	sP	16 29 49.6	+3.0
MNK				*i*		16 31 59.1	
MNK				*i* PPP	PPP	16 33 30.6	
MNK				*i* S	S	16 38 14.0	0.0
MNK				*i* SS	SS	16 42 23.2	+1.5
MNK				pmax	pmax		
	comp=N,15nm,0.9s						
MNK				pmax	pmax		
	comp=E,66nm,1.3s						
MNK				pmax	pmax		
	comp=Z,81nm,1.0s						
MNK				MLR	MLR		
	comp=E,465nm,18.0s						
MNK				MLR	MLR		
	comp=Z,530nm,16.0s						
MNK				MLR	MLR		
	comp=N,382nm,14.0s						
KBL	Kabul	64.02	294	P	P	16 29 37.6	-2.2
	SNR=7.4						
KBL	Kabul	64.02	294	P	P	16 29 37.1	-2.7
KBL	Kabul	64.02	294	P	P	16 29 37.2	-2.7
KBL				pmax	pmax		
	comp=Z,16nm,1.2s						
MRSI	Marisa	64.06	226	P	P	16 29 40.1	+0.1
	comp=Z,25nm,1.0s						
SANI	Sanana	64.79	221	P	P	16 29 44.3	-0.5
	comp=Z,668nmcomp=Z,35nm,1.0s						
MPSI	Mapaga	65.03	228	P	P	16 29 46.0	-0.4
	comp=Z,666nmcomp=Z,21nm,0.7s						
VLDQ	Val d'Or	65.07	40	IAmb	IAmb	16 29 54.5	
	comp=Z,44nm,1.1s						
AMTX	Amarillo	65.08	64	IAmb	IAmb	16 30 00.3	
	comp=Z,25nm,1.1s						
KRAI	Karang Ratu	65.10	218	P	P	16 29 48.7	+1.9
	comp=Z,1µmcomp=Z,30nm,1.4s						
MSTX	Muleshoe	65.23	66	IAmb	IAmb	16 29 54.5	
	comp=Z,40nm,1.3s						
AAI	Ambon	65.52	218	P	P	16 29 50.2	+0.7
	comp=Z,51nm,1.4s						
SUW	Suwalki	65.62	335	*e*P	P	16 29 49.8	+0.1
SMWD	Samnorwood	65.64	63	IAmb	IAmb	16 30 05.1	
	comp=Z,41nm,1.0s						
MNTX	Cornudas Mount	65.65	69	IAmb	IAmb	16 30 05.4	
	comp=Z,50nm,1.1s						
PCI	Palu	66.18	228	P	P	16 29 53.1	-0.7
	comp=Z,43nm,0.8s						
DKNS	Dickens	66.42	65	IAmb	IAmb	16 30 09.4	
	comp=Z,32nm,1.1s						
VHRN	Van Horn	66.57	70	IAmb	IAmb	16 30 11.3	
	comp=Z,32nm,1.3s						
POST	Post	66.60	65	IAmb	IAmb	16 30 10.6	
	comp=Z,36nm,0.9s						
SBUM	Sibu	66.60	237	P	P	16 29 56.6	+0.2
SBUM	Sibu	66.60	237	P	P	16 29 57.5	+1.0
	comp=Z,686nmcomp=Z,21nm,1.4s						
WMOK	Wichita Mounta	66.66	62	IAmb	IAmb	16 30 11.0	
	comp=Z,37nm,0.9s						
PECS	Pecos	66.70	68	IAmb	IAmb	16 29 60.0	
	comp=Z,29nm,1.4s						
ODSA	Odessa	66.80	67	IAmb	IAmb	16 30 12.0	
	comp=Z,29nm,1.1s						
SN07	Snyder 07	66.89	65	IAmb	IAmb	16 30 12.3	
	comp=Z,33nm,1.4s						
DEOK	Depew	66.92	60	IAmb	IAmb	16 30 11.9	
	comp=Z,25nm,1.1s						
AK23	Malin Array Si	67.01	330	P	P	16 29 58.3	-0.4
AK03	Malin Array Si	67.02	330	P	P	16 29 58.2	-0.5
AK21	Malin Array Si	67.02	330	P	P	16 29 58.1	-0.6
AK22	Malin Array Si	67.03	330	P	P	16 29 58.2	-0.6
AK04	Malin Array Si	67.04	330	P	P	16 29 58.3	-0.5
AKASG	Malin Array Be	67.04	330	P	P	16 29 58.6	-0.2
	comp=Z,6.5nm,0.4s,baz=30,slow=6.2,SNR=79						
	comp=Z,6.5nm,0.4s						
AKASG	Malin Array Be	67.04	330	P	P	16 29 58.9	+0.1
AKASG	Malin Array Be	67.04	330	*i* P	P	16 29 58.5	-0.3
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.4s						
AKBB	Malin Array Si	67.04	330	*i* P	P	16 29 57.7	-1.1
AKBB				pmax	pmax		
	comp=Z,103nm,1.4s						
AKBB	Malin Array Si	67.04	330	P	P	16 29 58.3	-0.5
KIEV	Kiev	67.05	330	P	P	16 29 58.0	-0.9
KIEV	Kiev	67.05	330	⇓P	P	16 29 57.5	-1.4
KIEV	Kiev	67.05	330	P	P	16 29 58.0	-0.9
KIEV				pmax	pmax		
	comp=Z,95nm,1.3s						
KIEV	Kiev	67.05	330	P	P	16 29 57.8	-1.1
	comp=Z,4µmcomp=Z,262nm,1.6s						
AK01	Malin Array Si	67.05	330	P	P	16 29 58.3	-0.6
AK20	Malin Array Si	67.06	330	P	P	16 29 58.3	-0.7
AK18	Malin Array Si	67.06	330	P	P	16 29 58.3	-0.7
AK15	Malin Array Si	67.07	330	P	P	16 29 58.5	-0.5
AK11	Malin Array Si	67.08	330	P	P	16 29 58.5	-0.6
AK19	Malin Array Si	67.08	330	P	P	16 29 58.5	-0.6
AK02	Malin Array Si	67.08	330	P	P	16 29 58.4	-0.7
AK08	Malin Array Si	67.09	330	P	P	16 29 58.6	-0.6
AK09	Malin Array Si	67.10	330	P	P	16 29 58.4	-0.8
AK16	Malin Array Si	67.10	330	P	P	16 29 58.7	-0.5
AK17	Malin Array Si	67.10	330	P	P	16 29 58.7	-0.5
APMT	Aspermont	67.10	64	IAmb	IAmb	16 30 13.4	
	comp=Z,36nm,1.1s						
AK12	Malin Array Si	67.11	330	P	P	16 29 58.8	-0.5
AK05	Malin Array Si	67.12	330	P	P	16 29 58.7	-0.6
AK10	Malin Array Si	67.12	330	P	P	16 29 58.8	-0.6
AK14	Malin Array Si	67.14	330	P	P	16 29 58.9	-0.5
AK06	Malin Array Si	67.15	330	P	P	16 29 58.8	-0.7
P43A	Skaggs, Pawnee	67.16	53	IAmb	IAmb	16 30 13.7	
	comp=Z,29nm,1.0s						
AK13	Malin Array Si	67.17	330	P	P	16 29 59.1	-0.5
AK07	Malin Array Si	67.18	330	P	P	16 29 59.2	-0.5
TUL3	Leonard	67.21	60	IAmb	IAmb	16 30 13.8	
	comp=Z,36nm,1.1s						
X34A	Smith Ranch, M	67.25	62	IAmb	IAmb	16 30 03.1	
	comp=Z,69nm,1.6s						
MI28	Mi28,Pidlybu	67.27	331	P	P	16 29 59.6	-0.7
RNPP9	Sopachiv	67.31	332	P	P	16 30 00.6	0.0
LDAQ	Lac Daran	67.36	36	P	P	16 30 01.2	+0.1
LDAQ				IAmb	IAmb	16 30 02.5	
	comp=Z,43nm,1.3s						
RNPP8	Varash	67.39	332	P	P	16 30 01.1	0.0
U38A	Gravette	67.47	58	IAmb	IAmb	16 30 15.1	
	comp=Z,29nm,1.2s						
RNPP5	Staryi Chortor	67.48	332	P	P	16 30 01.2	-0.4
WTFS	Witchita Falls	67.59	63	IAmb	IAmb	16 30 16.5	
	comp=Z,28nm,1.1s						
CCM	Cathedral Cave	67.65	55	P	P	16 30 03.1	+0.2
CCM	Cathedral Cave	67.65	55	P	P	16 30 03.1	+0.2
CCM				pmax	pmax		
	comp=Z,71nm,1.5s						
SGCY	Sterling City	67.70	66	IAmb	IAmb	16 30 17.5	
	comp=Z,35nm,1.0s						
R9F13	Warsaw-Wawer	67.76	335	*e*P	P	16 30 04.9	+1.5
HHAR	Hobbs	67.81	58	IAmb	IAmb	16 30 17.7	
	comp=Z,35nm,1.1s						
MGMO	Mountain Grove	67.90	56	IAmb	IAmb	16 30 17.6	
	comp=Z,28nm,1.1s						
ABTX	Abilene, Hawle	67.90	64	IAmb	IAmb	16 30 18.7	
	comp=Z,34nm,1.0s						
LMQ	La Malbaie	68.02	36	P	P	16 30 05.2	0.0
LMQ				IAmb	IAmb	16 30 06.6	
	comp=Z,32nm,1.1s						
TTSI	Tana Toraja	68.12	227	P	P	16 30 05.3	-0.8
	comp=Z,17nm,1.1s						
MMSI	Mamuju	68.18	228	P	P	16 30 06.0	-0.5
	comp=Z,707nmcomp=Z,51nm,0.9s						
BEL	Belsk	68.20	335	*e*P	P	16 30 07.4	+1.2
TX31	Lajitas Ar. Si	68.41	70	IAmb	IAmb	16 30 22.8	
	comp=Z,38nm,1.1s						
TXAR	Lajitas Array	68.42	70	P	P	16 30 09.7	+1.7
	comp=Z,13nm,0.9s,baz=305,slow=4.4,SNR=54						
TXAR				PKPPKP	P'P'df	16 58 21.5	-6.5
	comp=Z,2.2nm,1.2s,baz=119,slow=4.6,SNR=5.4						
	comp=Z,13nm,0.9s						
TXAR	Lajitas Array	68.42	70	P	P	16 30 08.5	+0.5
TXAR	Lajitas Array	68.42	70	P	P	16 30 08.5	+0.5
KIV	Kislovodsk	68.42	318	*e*P	P	16 30 06.5	-1.3
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KIV	Kislovodsk	68.42	318	P	P	16 30 07.4	-0.4
	comp=Z,13nm,1.0s						
PLPT	Palo Pinto	68.42	63	IAmb	IAmb	16 30 21.6	
	comp=Z,35nm,1.3s						
N49A	Columbus Grove	68.44	48	IAmb	IAmb	16 30 09.2	
	comp=Z,44nm,1.4s						
OZNA	Ozona	68.49	67	IAmb	IAmb	16 30 15.1	
	comp=Z,66nm,1.9s						
AKT	Akhty	68.49	313	*e*P	P	16 30 07.7	-0.6
AKT				*e*		16 30 32.0	
AKT				*e*S	S	16 39 10.9	+1.6
AKT				pmax	pmax		
	comp=Z,63nm,1.4s						
KBZ	Khabaz	68.53	317	P	P	16 30 09.2	+0.8
	comp=Z,19nm,1.0s,baz=23,slow=4.1,SNR=19						
	comp=Z,19nm,1.0s						
KBZ	Khabaz	68.53	317	*i* P	P	16 30 08.3	-0.1
KBZ				pmax	pmax		
	comp=Z,40nm,1.1s						
SHA1	Shidzhatmaz	68.62	317	*i* P	P	16 30 08.6	-0.6
EKA	Eskdalemuir Ar	68.68	351	P	P	16 30 09.3	+0.2
	comp=Z,2.6nm,0.5s,baz=17,slow=4.7,SNR=16						
	comp=Z,2.6nm,0.5s						
SAND	Sanderson	68.74	68	IAmb	IAmb	16 30 12.5	
	comp=Z,46nm,1.5s						
D62A	Allapoint, All	68.85	35	P	P	16 30 10.4	+0.2
D62A				IAmb	IAmb	16 30 12.6	
	comp=Z,44nm,1.4s						
SPSI	Sidrap Palu	68.97	226	P	P	16 30 11.2	-0.2
	comp=Z,26nm,1.3s						
FCAR	Ozark Folk Cen	68.99	57	IAmb	IAmb	16 30 25.1	
	comp=Z,31nm,1.0s						
NEUR	Neytrino	69.00	317	*i* P	P	16 30 11.1	-0.5
NEUR				pmax	pmax		
	comp=Z,12nm,1.3s						
P48A	Milroy	69.11	50	IAmb	IAmb	16 30 13.0	
	comp=Z,62nm,1.4s						
HORU	Horodok	69.17	331	P	P	16 30 11.5	-0.7
LVV	L'vov	69.25	333	P	P	16 30 12.5	-0.3
BRDY	Brady	69.30	65	IAmb	IAmb	16 30 21.5	
	comp=Z,35nm,1.6s						
MIAR	Mount Ida	69.38	59	IAmb	IAmb	16 30 20.6	
	comp=Z,61nm,1.5s						
SLBS	Sierra La Lagu	69.48	78	P	P	16 30 15.1	+0.4
SLBS				IAmb	IAmb	16 30 17.9	
	comp=Z,55nm,1.6s						
ACSO	Alum Creek Sta	69.52	48	IAmb	IAmb	16 30 20.6	
	comp=Z,44nm,1.3s						
JCT	Junction City	69.53	66	IAmb	IAmb	16 30 21.2	
	comp=Z,28nm,0.9s						
SORM	Soroca	69.60	329	⇑P	P	16 30 14.8	-0.1
SORM	Soroca	69.60	329	⇑P	P	16 30 14.8	-0.1
FLTG	Flechtingen	69.71	342	*e*P	P	16 30 16.4	+0.9
	comp=Z,84nm,1.8s,baz=17,slow=6.1						
KMPD	K-Podol'skiy	69.75	330	P	P	16 30 15.3	-0.5
KMPD				P	P	16 30 15.0	-0.8
KWP	Kalwaria Pacla	69.77	333	*e*P	P	16 30 17.4	+1.4
KWP	Kalwaria Pacla	69.77	333	P	P	16 30 16.6	+0.6
	comp=Z,2µmcomp=Z,195nm,1.3s						
KAPI	Kappang	69.93	226	*i* P	P	16 30 14.2	-3.1
KAPI				pmax	pmax		
	comp=Z,43nm,1.7s						
OJC	Ojcow	69.93	335	*e*P	P	16 30 18.1	+1.2
OJC	Ojcow	69.93	335	P	P	16 30 17.4	+0.4
	comp=Z,82nm,1.4s						
KULM	Kulim	69.98	249	P	P	16 30 17.1	-0.6
KULM	Kulim	69.98	249	P	P	16 30 17.5	-0.2
	comp=Z,910nmcomp=Z,53nm,2.0s						
G62A	West of Eustis	69.99	37	IAmb	IAmb	16 30 19.4	
	comp=Z,36nm,1.3s						
O52A	Adamsville	70.09	47	IAmb	IAmb	16 30 28.3	
	comp=Z,44nm,1.2s						
KSP	Ksiaz	70.14	338	*e*P	P	16 30 19.4	+1.2
KSP	Ksiaz	70.14	338	P	P	16 30 18.6	+0.4
	comp=Z,51nm,1.4s						
STNU	Starunia	70.15	332	P	P	16 30 18.4	+0.1
CLZ	Clausthal	70.33	342	*e*P	P	16 30 20.1	+0.7
	comp=Z,16nm,1.1s,baz=17,slow=6.1						
STHS	Stebnicka Huta	70.33	334	*e*P	P	16 30 19.7	+0.3
STHS				pmax	pmax		
	comp=Z,46nm,1.3s						
STHS	Stebnicka Huta	70.33	334	*e*P	P	16 30 19.7	+0.3
H62A	Milan	70.34	38	IAmb	IAmb	16 30 21.5	
	comp=Z,66nm,1.4s						
KSV	Kosov	70.36	331	P	P	16 30 19.6	0.0
CLL	Collm	70.36	340	*i* P	P	16 30 19.7	+0.2
CLL				pmax	pmax		
	comp=Z,85nm,1.5s						
CLL	Collm	70.36	340	*e*P	P	16 30 20.2	+0.7
	comp=Z,52nm,1.3s,baz=17,slow=6.1						
CLL	Collm	70.36	340	P	P	16 30 19.4	-0.1
	comp=Z,41nm,1.5s						
CLL	Collm	70.36	340	*i* P	P	16 30 19.7	+0.2
	comp=Z,85nm,1.5s						
OSTC	Ostas	70.42	338	*e*P	P	16 30 21.0	+1.0
OSTC	Ostas	70.42	338	*e*P	P	16 30 21.0	+1.0
CHVC	Chvalec	70.43	338	*e*P	P	16 30 21.1	+1.1
CHVC	Chvalec	70.43	338	*e*P	P	16 30 21.1	+1.1
IPM	Ipoh	70.47	248	P	P	16 30 20.0	-0.7
IPM	Ipoh	70.47	248	P	P	16 30 20.2	-0.5
	comp=Z,640nmcomp=Z,53nm,1.4s						
UPC	Upice	70.51	338	*e*P	P	16 30 22.0	+1.5
UPC	Upice	70.51	338	*e*P	P	16 30 22.0	+1.5
MILM	Milestii Mici	70.56	328	⇑P	P	16 30 19.0	-1.8
MILM	Milestii Mici	70.56	328	⇑P	P	16 30 19.0	-1.8
NIE	Niedzica	70.56	335	*e*P	P	16 30 22.4	+1.5
NIE	Niedzica	70.56	335	P	P	16 30 21.5	+0.6
	comp=Z,13nm,1.8s						
R50A	Paris	70.57	50	IAmb	IAmb	16 30 37.3	
	comp=Z,37nm,1.5s						
MEZ	Mezhgor'ye	70.59	332	P	P	16 30 21.0	0.0
BRG	Berggiesshubel	70.59	339	*e*P	P	16 30 21.7	+0.8
	comp=Z,22nm,1.2s,baz=17,slow=6.1						
DPC	Dobruska-Polom	70.59	338	*e*P	P	16 30 22.4	+1.3
DPC				*e*		16 30 30.2	
DPC	Dobruska-Polom	70.59	338	*e*P	P	16 30 22.4	+1.3
DPC				*e*x	x	16 30 30.2	
DPC	Dobruska-Polom	70.59	338	P	P	16 30 21.3	+0.2
	comp=Z,56nm,1.3s						
BBKI	Banjar Baru	70.62	231	P	P	16 30 22.2	+0.6
STEB	Steborice	70.67	337	*e*P	P	16 30 22.6	+1.2
KRLC	Kraliky	70.75	337	*e*P	P	16 30 23.1	+1.1
KRLC	Kraliky	70.75	337	*e*P	P	16 30 23.1	+1.1
PVCC	Panska Ves	70.79	339	*e*P	P	16 30 31.0	+8.8
WVT	Waverly	70.79	54	P	P	16 30 23.2	+0.8
WVT				IAmb	IAmb	16 30 29.1	
	comp=Z,62nm,1.4s						
WVT	Waverly	70.79	54	P	P	16 30 23.2	+0.8
WVT				pmax	pmax		
	comp=Z,62nm,1.4s						
MUKU	Mukachevo	70.86	333	P	P	16 30 22.5	-0.1
RAKU	Rahkiv	70.86	332	P	P	16 30 21.5	-1.2
MORC	Moravsky Berou	70.87	337	⇑P	P	16 30 23.3	+0.6
MORC	Moravsky Berou	70.87	337	*e*P	P	16 30 23.5	+0.8
MORC	Moravsky Berou	70.87	337	⇑P	P	16 30 23.3	+0.6
BRIU	Brid	70.88	333	P	P	16 30 22.9	+0.2
PRAR	RASCA	70.90	330	⇓P	P	16 30 23.5	+0.6
BUR08	Bucovina Ar. S	70.93	331	IAmb	IAmb	16 30 24.8	
	comp=Z,41nm,1.1s						
HSKC	Hora Svate Kat	70.94	340	*e*P	P	16 30 23.6	+0.4
HSKC				*e*x	x	16 30 31.5	
M57A	Sunshine Farm,	70.95	43	IAmb	IAmb	16 30 32.6	
	comp=Z,24nm,0.9s						
BURAR	Bucovina Array	70.95	331	P	P	16 30 23.6	+0.2
BURAR				IAmb	IAmb	16 30 34.8	
	comp=Z,22nm,0.8s						
BURAR	Bucovina Array	70.95	331	⇑P	P	16 30 23.7	+0.3
BURAR	Bucovina Array	70.95	331	⇑P	P	16 30 23.7	+0.3
LANS	Liptovska Anna	71.01	335	*e*P	P	16 30 25.4	+1.8
LANS				pmax	pmax		
	comp=Z,45nm,1.2s						
LANS	Liptovska Anna	71.01	335	*e*P	P	16 30 25.4	+1.8
KORU	Korolevo	71.02	332	P	P	16 30 23.7	+0.1
L59A	Walton	71.02	41	IAmb	IAmb	16 30 24.5	
	comp=Z,47nm,1.4s						
BERU	Beregovo	71.07	333	P	P	16 30 24.5	+0.6
TRSU	Trosnyk	71.12	333	P	P	16 30 24.8	+0.6
MAUC	Maruska	71.19	336	*e*P	P	16 30 26.2	+1.5
GIRR	Girov	71.20	330	⇓P	P	16 30 24.9	+0.2
MOX	Moxa	71.25	341	*e*P	P	16 30 25.6	+0.6
	comp=Z,17nm,1.3s,baz=17,slow=6.1						
COEN	Coen	71.27	200	P	P	16 30 25.2	-0.1
COEN				IAmb	IAmb	16 30 32.5	
	comp=Z,33nm,1.1s						
KASTN	Kahler Asten	71.28	343	*e*P	P	16 30 25.9	+0.7
	comp=Z,10nm,1.2s,baz=17,slow=6.1						
MYKOM	Kota Tinggi	71.29	244	IAmb	IAmb	16 30 27.5	
	comp=Z,24nm,1.0s						
MYKOM	Kota Tinggi	71.29	244	P	P	16 30 26.1	+0.5
	comp=Z,27nm,1.4s						
PRU	Pruhonice	71.31	339	*e*P	P	16 30 26.2	+0.9
PRU				*e*		16 30 34.7	
PRU	Pruhonice	71.31	339	*e*P	P	16 30 26.2	+0.9
PRU				*e*x	x	16 30 34.7	
TANN	Tannenbergstha	71.32	340	*e*P	P	16 30 26.4	+1.0
	comp=Z,16nm,1.2s,baz=17,slow=6.1						
BIZ	Bicaz	71.32	330	⇑P	P	16 30 27.8	+2.3
UBBA	Unterbreizbach	71.38	342	*e*P	P	16 30 26.4	+0.8
	comp=Z,49nm,1.6s,baz=17,slow=6.1						
KECS	Kecovo	71.39	334	*e*P	P	16 30 26.9	+1.1
KECS				pmax	pmax		
	comp=Z,29nm,1.2s						
KECS	Kecovo	71.39	334	*e*P	P	16 30 26.9	+1.1
T50A	Nancy	71.40	51	IAmb	IAmb	16 30 34.0	
	comp=Z,32nm,1.2s						
VRAC	Vranov	71.52	337	⇓P	P	16 30 27.0	+0.4
VRAC	Vranov	71.52	337	*e*P	P	16 30 27.3	+0.7
VRAC	Vranov	71.52	337	⇓P	P	16 30 27.0	+0.4
TESR	Tescani	71.56	329	⇑P	P	16 30 27.1	+0.2
PLAL	Pickwick Lake	71.63	55	IAmb	IAmb	16 30 29.2	
	comp=Z,65nm,1.4s						
JAVC	Velka Javorina	71.70	336	*e*P	P	16 30 29.7	+1.9
VLDR	Vladesti	71.74	328	⇑P	P	16 30 28.4	+0.4
TREC	Trest	71.77	338	*e*P	P	16 30 29.2	+1.0
TREC				*e*		16 30 36.4	
TREC	Trest	71.77	338	*e*P	P	16 30 29.2	+1.0
TREC				*e*x	x	16 30 36.4	
ONER	Baraj Valea Uz	71.79	330	⇓P	P	16 30 29.3	+0.9
KRUC	Moravsky	71.79	337	*e*P	P	16 30 29.2	+0.9
MANZ	Manzenberg	71.79	340	*e*P	P	16 30 28.9	+0.6
	comp=Z,5.9nm,1.3s,baz=17,slow=6.1						
ZVC	Zvikov	71.90	339	*e*P	P	16 30 29.8	+0.9
HKT	Hockley	71.98	63	P	P	16 30 30.4	+0.8
HKT				IAmb	IAmb	16 30 36.6	
	comp=Z,84nm,1.9s						
HKT	Hockley	71.98	63	*i* P	P	16 30 30.2	+0.6
HKT				pmax	pmax		
	comp=Z,39nm,1.9s						
ROTZ	Rotzenmuhle	71.98	340	*e*P	P	16 30 30.6	+1.2
	comp=Z,9.4nm,1.4s,baz=17,slow=6.1						
PANC	Panciu	71.99	329	⇑P	P	16 30 30.7	+1.2
LHMI	Lhok Sumawe	72.01	252	P	P	16 30 30.7	+0.7
PSZ	Piszkesteto	72.06	335	IAmb	IAmb	16 30 32.4	
	comp=Z,57nm,1.3s						
PSZ	Piszkesteto	72.06	335	⇑P	P	16 30 31.1	+1.2
PSZ	Piszkesteto	72.06	335	⇑P	P	16 30 31.1	+1.2
SMOL	Smolenice	72.08	336	*e*P	P	16 30 31.6	+1.6
SMOL				pmax	pmax		
	comp=Z,27nm,1.3s						
TLCR		72.12	327	⇑P	P	16 30 29.6	-0.6
TLCR		72.12	327	⇑P	P	16 30 29.6	-0.6
ODBI	Odobesti	72.12	329	⇑P	P	16 30 31.0	+0.8
VRI	Vrincioaia	72.12	329	⇑P	P	16 30 30.7	+0.4
VRI	Vrincioaia	72.12	329	⇑P	P	16 30 30.7	+0.4
TURR	Turia	72.16	330	⇑P	P	16 30 31.8	+1.3
PLOR	Plostina	72.16	329	⇓P	P	16 30 31.0	+0.4
PLOR	Plostina	72.16	329	⇓P	P	16 30 31.0	+0.4
OZUR		72.18	330	⇓P	P	16 30 31.5	+0.8
CJR	Cluj-Napoca	72.22	332	⇓P	P	16 30 31.4	+0.5
CJR	Cluj-Napoca	72.22	332	⇓P	P	16 30 31.4	+0.5
MEM	Membach	72.24	344	*d*P	P	16 30 30.1	-0.8
	comp=Z,21nm,1.0s						
BTNL	Ternell	72.24	344	*d*P	P	16 30 31.4	+0.5
	comp=Z,14nm,0.9s						
GRA1	Grafenberg Arr	72.24	341	IAmb	IAmb	16 30 40.6	
	comp=Z,38nm,1.1s						
GRF	Grafenberg Arr	72.24	341	*e*P	P	16 30 32.1	+1.1
	comp=Z,20nm,1.1s,baz=17,slow=6.1						
MODS	Modra-Piesok	72.25	336	*e*P	P	16 30 32.5	+1.5
MODS				pmax	pmax		
	comp=Z,91nm,1.3s						
MODS	Modra-Piesok	72.25	336	*e*P	P	16 30 32.5	+1.5
MMRI	Maumere	72.26	222	P	P	16 30 32.5	+1.1
	comp=Z,43nm,1.1s						
COVR	Voineasa-Covas	72.29	329	⇑P	P	16 30 32.3	+1.0
UCC	Uccle	72.29	346	*d*P	P	16 30 31.4	+0.2
KHC	Kasperske Hory	72.32	339	IAmb	IAmb	16 30 34.0	
	comp=Z,56nm,1.3s						
KHC	Kasperske Hory	72.32	339	*e*P	P	16 30 32.6	+1.1
KHC				*e*		16 30 40.5	
KHC	Kasperske Hory	72.32	339	*e*P	P	16 30 32.6	+1.1
KHC				*e*x	x	16 30 40.5	
KHC	Kasperske Hory	72.32	339	P	P	16 30 31.9	+0.4
	comp=Z,35nm,1.3s						
CFR	Carcaliu	72.33	328	⇑P	P	16 30 31.1	-0.4
CFR	Carcaliu	72.33	328	⇑P	P	16 30 31.1	-0.4
HYB	Hyderabad	72.35	275	*e*P	P	16 30 31.9	-0.2
MARR	Marisel-Cluj	72.39	332	⇓P	P	16 30 32.8	+0.8
DRGR		72.39	332	⇓P	P	16 30 32.4	+0.4
DRGR		72.39	332	⇓P	P	16 30 32.4	+0.4
SWET	Sewanee	72.41	53	IAmb	IAmb	16 30 38.1	
	comp=Z,83nm,1.6s						
DOPR	Dopca	72.41	330	⇑P	P	16 30 32.8	+0.8
BISRR	Bisoca	72.42	329	⇑P	P	16 30 33.3	+1.2

WET	Wettzell	72.45	340	*e*P	P	16 30 33.2	+0.9
	comp=Z,34nm,1.2s,baz=17,slow=6.1						
CKRC	Cesky Krumlov	72.47	339	*e*P	P	16 30 33.2	+0.9
CKRC	Cesky Krumlov	72.47	339	*e*P	P	16 30 33.2	+0.9
GRER		72.49	329	⇑P	P	16 30 33.8	+1.3
MDB	Medias	72.53	331	⇓P	P	16 30 33.9	+1.1
MDB	Medias	72.53	331	⇓P	P	16 30 33.9	+1.1
TPGR	Topolog	72.54	328	⇑P	P	16 30 33.0	+0.2
X48A	Hartselle	72.54	54	IAmb	IAmb	16 30 34.5	
	comp=Z,53nm,1.5s						
SOEI	Soe	72.54	220	P	P	16 30 35.4	+2.2
	comp=Z,47nm,2.1s						
GEC2	GERESS Array S	72.57	339	IAmb	IAmb	16 30 35.0	
	comp=Z,40nm,1.2s						
GEC2	GERESS Array S	72.57	339	*e*P	P	16 30 33.6	+0.5
	comp=Z,24nm,1.1s,baz=17,slow=6.1						
GERES	GERESS Array B	72.57	339	P	P	16 30 34.0	+1.0
	comp=Z,14nm,1.1s,baz=35,slow=4.9,SNR=26						
	comp=Z,14nm,1.1s						
EDFI	Ende, Flores	72.57	223	P	P	16 30 31.7	-1.7
	comp=Z,19nm,0.8s						
TSI	Tuntungan	72.59	250	P	P	16 30 32.8	-0.7
KOPT	Kop Dagi	72.64	317	IAmb	IAmb	16 30 36.1	
	comp=Z,62nm,1.5s						
NEHR	Nehoiu	72.65	329	⇓P	P	16 30 34.5	+1.0
MLR	Muntele Rosu	72.69	329	⇑P	P	16 30 35.0	+1.1
MLR	Muntele Rosu	72.69	329	⇑P	P	16 30 35.0	+1.1
ISR	Istrita	72.86	329	⇑P	P	16 30 34.9	+0.1
ISR	Istrita	72.86	329	⇑P	P	16 30 34.9	+0.1
HBVL	Hebbronville	72.86	67	IAmb	IAmb	16 30 38.6	
	comp=Z,49nm,1.3s						
DSRI	Dabo	72.87	242	P	P	16 30 35.5	+0.4
	comp=Z,2μmcomp=Z,47nm,1.8s						
TIRR	Tirgusor	72.90	327	⇑P	P	16 30 34.9	0.0
TIRR	Tirgusor	72.90	327	⇑P	P	16 30 34.9	0.0
DOU	Dourbes	72.94	345	*d*P	P	16 30 34.0	-1.1
CONA	Conrad Observa	72.98	337	*i* pP	P	16 30 36.9	+1.4
	comp=Z,29nm,1.3s,SNR=14						
PSI	Prapat	72.99	249	P	P	16 30 35.2	-0.8
	comp=Z,602nmcomp=Z,28nm,1.3s						
AMRR	Amara	73.08	328	⇓P	P	16 30 37.4	+1.4
AMRR	Amara	73.08	328	⇓P	P	16 30 37.4	+1.4
RONA	Rosalia, Austr	73.10	337	*i* pP	P	16 30 38.3	+2.1
	comp=Z,24nm,1.1s,SNR=7.1						
Z47A	Carrollton	73.10	56	IAmb	IAmb	16 30 48.7	
	comp=Z,42nm,0.8s						
SIRR	Siria	73.15	333	⇓P	P	16 30 37.6	+1.1
MTN	Manton Dam	73.16	212	P	P	16 30 36.8	+0.1
ARR	Arges	73.17	330	⇓P	P	16 30 38.2	+1.6
BATI	Baumata	73.18	220	LR	LR	17 04 45.1	
	comp=Z,424nm,19.8s,baz=113,slow=38						
BATI	Baumata	73.18	220	P	P	16 30 39.3	+2.4
	comp=Z,23nm,0.7s						
MTUR	Matau	73.18	330	⇑P	P	16 30 38.2	+1.4
MTUR	Matau	73.18	330	⇑P	P	16 30 38.2	+1.4
GURO	Guroymak-BITLI	73.30	315	IAmb	IAmb	16 30 40.3	
	comp=Z,54nm,1.6s						
MPLH	Magyarpolny	73.32	336	P	P	16 30 38.4	+1.0
	comp=Z,4μmcomp=Z,193nm,1.4s						
LOT	Lotru	73.34	331	⇑P	P	16 30 36.6	-1.1
ICOR	Ion Corvin	73.39	328	⇓P	P	16 30 39.0	+1.1
MOA	Molln	73.40	338	*i* pP	P	16 30 38.7	+0.9
	comp=Z,17nm,1.3s,SNR=6.2						
TPTI		73.53	251	P	P	16 30 37.5	-1.5
	comp=Z,15nm,0.6s						
GZR	Gura Zlata	73.66	332	⇑P	P	16 30 40.1	+0.6
GZR	Gura Zlata	73.66	332	⇑P	P	16 30 40.1	+0.6
DBNI	Kabupaten Domp	73.68	226	P	P	16 30 39.3	-0.5
	comp=Z,18nm,0.8s						
BIOA	Bad Ischl, Aus	73.68	339	*i* pP	P	16 30 41.5	+1.9
	comp=Z,13nm,1.3s,SNR=5.8						
ARSA	Arzberg	73.70	337	*i* pP	P	16 30 41.4	+1.7
	comp=Z,32nm,1.5s,SNR=8.1						
LRAL	Lakeview Retre	73.74	55	IAmb	IAmb	16 30 50.0	
	comp=Z,72nm,1.7s						
BZS	Buzias	73.76	332	⇑P	P	16 30 40.5	+0.5
BZS	Buzias	73.76	332	⇑P	P	16 30 40.5	+0.5
MORH	Mrgy, Hungar	73.95	335	⇓P	P	16 30 39.9	-1.2
MORH	Mrgy, Hungar	73.95	335	P	P	16 30 40.4	-0.7
	comp=Z,23nm,1.5s						
BFO	Black Forest	74.07	342	P	P	16 30 42.0	+0.2
BFO	Black Forest	74.07	342	P	P	16 30 42.0	+0.2
BFO				pmax	pmax		
	comp=Z,18nm,1.2s						
BFO	Black Forest	74.07	342	*e*P	P	16 30 42.7	+0.9
	comp=Z,3.6nm,0.9s,baz=17,slow=6.1						
LESA	Schwarzleotal	74.13	339	*i* pP	P	16 30 43.6	+1.3
	comp=Z,24nm,1.4s,SNR=7.3						
KMMI	Kalianget	74.20	231	P	P	16 30 43.2	+0.3
	comp=Z,1μmcomp=Z,73nm,1.8s						
HERR	Herculane	74.23	332	⇓P	P	16 30 42.8	0.0
WBSI	Waikabubak, Su	74.28	224	P	P	16 30 41.4	-2.0
	comp=Z,39nm,1.4s						
KBA	Koelnbreinsper	74.33	339	*i* pP	P	16 30 44.6	+1.1
	comp=Z,44nm,0.8s						
SOKA	Soboth	74.35	337	*i* pP	P	16 30 44.7	+1.1
	comp=Z,43nm,1.6s,SNR=12						
PERS	Pernice	74.37	337	*e*P	P	16 30 44.6	+1.0
ECH	Echery	74.38	343	IAmb	IAmb	16 30 46.1	
	comp=Z,61nm,1.7s						
UBR	Ueberruh	74.38	341	*e*P	P	16 30 44.8	+1.1
	comp=Z,44nm,1.4s,baz=17,slow=6.1						
WATA	Walderalm	74.43	340	*i* pP	P	16 30 45.5	+1.4
	comp=Z,40nm,1.3s,SNR=10.0						
RETA	Reutte	74.44	340	*i* pP	P	16 30 45.6	+1.6
	comp=Z,24nm,1.4s						
WTTA	Wattenberg	74.49	340	*i* pP	P	16 30 45.9	+1.5
	comp=Z,50nm,1.4s,SNR=14						
MDVR	Moldovita	74.51	332	⇑P	P	16 30 43.6	-0.9
OBKA	Obir	74.61	338	*i* pP	P	16 30 46.6	+1.5
	comp=Z,61nm,1.1s,SNR=13						
SQTA	Sankt Quirin	74.61	340	*i* pP	P	16 30 46.4	+1.2
	comp=Z,47nm,1.3s,SNR=12						
KHKI	Kahang-Kahang	74.68	228	P	P	16 30 44.9	-0.7
	comp=Z,26nm,1.3s						
MYKA	Terra Mystica	74.69	338	*i* pP	P	16 30 46.7	+1.2
	comp=Z,31nm,1.4s,SNR=8.9						
SNSI	Sinabang, Aceh	74.70	251	P	P	16 30 45.3	-0.6
DAVA	Damuels	74.80	341	*i* pP	P	16 30 47.2	+1.0
	comp=Z,24nm,1.5s,SNR=5.4						
ABTA	Abfaltersbach	74.81	339	*i* pP	P	16 30 47.4	+1.2
	comp=Z,48nm,1.2s,SNR=11						
MARD	Mardin	74.86	315	IAmb	IAmb	16 30 48.5	
	comp=Z,87nm,1.5s						
FETA	Feichten	74.90	340	*i* pP	P	16 30 48.1	+1.3
	comp=Z,37nm,1.2s,SNR=12						
GSI	Gunungsitoli	74.97	250	P	P	16 30 46.2	-1.2
GSI	Gunungsitoli	74.97	250	P	P	16 30 46.5	-0.9
	comp=Z,74nm,1.4s						
PDSI	Padang	75.33	246	P	P	16 30 48.4	-1.1
FUORN	Ofenpass-Fuorn	75.37	341	IAmb	IAmb	16 31 03.3	
	comp=Z,72nm,1.6s						
BNN	Bunyan	75.41	320	IAmb	IAmb	16 30 51.2	
	comp=Z,37nm,1.2s						
BOJS	Bojanci	75.41	337	*i* P	P	16 30 50.1	+0.5
BR106	Keskin Array S	75.42	322	P	P	16 30 49.6	-0.3
	comp=Z,143nmcomp=Z,12nm,0.8s						
BR131	Keskin Array S	75.42	322	P	P	16 30 50.6	+0.7
	SNR=8.5						
BR131	Keskin Array S	75.42	322	IAmb	IAmb	16 30 51.3	
	comp=Z,52nm,1.5s						
BRTR	Keskin Array B	75.42	322	P	P	16 30 50.4	+0.4
	comp=Z,15nm,1.2s,baz=52,slow=2.0,SNR=26						
	comp=Z,15nm,1.2s						
BRTR	Keskin Array B	75.42	322	P	P	16 30 49.6	-0.4
BRTR	Keskin Array B	75.42	322	*i* P	P	16 30 50.4	+0.4
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BR105	Keskin Array S	75.44	322	P	P	16 30 49.8	-0.2
	comp=Z,187nmcomp=Z,15nm,0.8s						
BR104	Keskin Array S	75.44	322	P	P	16 30 49.4	-0.6
	comp=Z,153nmcomp=Z,13nm,0.8s						
ANTO	Ankara	75.59	322	P	P	16 30 51.2	+0.3
ANTO	Ankara	75.59	322	P	P	16 30 50.4	-0.4
ANTO				IAmb	IAmb	16 30 53.2	
	comp=Z,78nm,1.4s						
ANTO	Ankara	75.59	322	⇓P	P	16 30 52.2	+1.4
ANTO	Ankara	75.59	322	⇓P	P	16 30 52.2	+1.4
ANTO	Ankara	75.59	322	P	P	16 30 50.5	-0.4
	comp=Z,23nm,1.4s						
CTI	Castel Tesino	75.65	339	IAmb	IAmb	16 30 52.5	
	comp=Z,40nm,1.3s						
TUE	Stuetta	75.69	341	IAmb	IAmb	16 30 54.5	
	comp=Z,79nm,1.8s						
TUE	Stuetta	75.69	341	P	P	16 30 51.2	-0.2
	comp=Z,76nm,0.8s						
PBSI	Pulau Batu	75.74	248	P	P	16 30 51.4	-0.4
	comp=Z,76nm,1.8s						
SJI	Sawahan	75.79	232	P	P	16 30 51.4	-0.7
	comp=Z,27nm,1.3s						
SNJI	Sawahan-Nganju	75.83	232	P	P	16 30 52.3	-0.2
	comp=Z,28nm,1.6s						
KIRS	Kirsehir-Merke	75.85	321	⇑P	P	16 30 52.3	0.0
CTJI	Waduk Cacaban	76.32	235	P	P	16 30 54.6	-0.5
	comp=Z,23nm,1.3s						
MASI	Maura Aman, Be	76.33	243	P	P	16 30 54.3	-0.9
GAZ	Gaziantep	76.37	318	IAmb	IAmb	16 30 57.2	
	comp=Z,48nm,1.2s						
BORA	Eskisehir	76.38	324	IAmb	IAmb	16 30 56.6	
	comp=Z,53nm,1.5s						
SISI	Saibi	76.39	247	P	P	16 30 55.1	-0.4
MDSI	Maura Dua	76.52	241	P	P	16 30 53.9	-2.3
KNRA	Kununurra	76.56	213	IAmb	IAmb	16 30 57.9	
	comp=Z,41nm,1.1s						
CTAO	Charters Tower	76.74	196	P	P	16 30 57.4	+0.1
CTAO				IAmb	IAmb	16 30 58.8	
	comp=Z,26nm,1.1s						
CTAO	Charters Tower	76.74	196	P	P	16 30 57.4	+0.1
CTAO				pmax	pmax		
	comp=Z,27nm,1.1s						
RDO	Rodhopi	76.78	328	IAmb	IAmb	16 30 59.2	
	comp=Z,63nm,1.2s						
PDG	Podgorica	77.35	333	⇑P	P	16 31 00.6	0.0
BANOM	Banah	77.45	298	P	P	16 31 00.1	-1.4
VAY	Valandovo	77.49	330	*i* P	P	16 31 02.3	+0.9
MDH	Madha	77.97	297	P	P	16 31 04.1	-0.3
MASF	Masafi	77.98	297	P	P	16 31 02.9	-1.5
GUMA	Gualdo di Mace	78.16	337	IAmb	IAmb	16 31 18.6	
	comp=Z,47nm,1.0s						
OHR	Ohrid	78.17	331	*i* P	P	16 31 05.4	+0.1
MANT	Manisa	78.26	325	IAmb	IAmb	16 31 07.0	
	comp=Z,39nm,1.2s						
UOSS	Minazif	78.31	297	P	P	16 31 04.5	-1.8
UOSS	Minazif	78.31	297	P	P	16 31 05.1	-1.2
HATD	Hatta, Dubai	78.45	297	P	P	16 31 06.3	-0.7
	SNR=5.7						
NAZ	Nazwa, Dubai	78.55	298	P	P	16 31 06.5	-1.0
ASHO	Ashiyiah	78.60	297	P	P	16 31 06.1	-1.8
CAMP	Campotosto	78.64	337	IAmb	IAmb	16 31 10.4	
	comp=Z,58nm,1.1s						
CESX	Cesi	78.75	338	IAmb	IAmb	16 31 09.5	
	comp=Z,71nm,1.6s						
SOHO	SOHO	78.82	296	P	P	16 31 07.9	-1.2
AQU	L'Aquila	78.82	337	P	P	16 31 09.6	+0.7
	comp=Z,42nm,0.9s						
WBK	Wadi Bani Khal	78.83	294	P	P	16 31 07.3	-1.9
HOQ	Hoqain	78.88	295	P	P	16 31 08.2	-1.2
SMDO	Samad	78.93	295	P	P	16 31 09.2	-0.6
JLN	Jalan Bani Buh	78.98	293	P	P	16 31 09.8	-0.1
WR8	Warramunga Arr	79.00	207	IAmb	IAmb	16 31 11.3	
	comp=Z,56nm,1.6s						
ASUD	Al Ashush, Dub	79.02	298	P	P	16 31 11.0	+0.9
WRAB	Tennant Creek	79.02	207	P	P	16 31 10.0	0.0
WRAB				IAmb	IAmb	16 31 22.6	
	comp=Z,41nm,1.2s						
WRAB	Tennant Creek	79.02	207	P	P	16 31 10.0	0.0
WRAB				pmax	pmax		
	comp=Z,41nm,1.3s						
WRA	Warramunga Arr	79.03	207	P	P	16 31 10.2	+0.2
	comp=Z,13nm,1.0s,baz=19,slow=5.3,SNR=32						
	comp=Z,13nm,1.0s						
WRA	Warramunga Arr	79.03	207	*i* P	P	16 31 10.1	+0.1
WRA				pmax	pmax		
	comp=Z,13nm,1.0s						
INTR	Introdacqua	79.03	337	IAmb	IAmb	16 31 18.7	
	comp=Z,52nm,1.1s						
ALNE	Al Ain	79.28	297	P	P	16 31 13.5	+1.9
	SNR=5.7						
JMDO	Jabal Madar	79.47	294	P	P	16 31 11.2	-1.4
ARQ	Araqi	79.48	296	P	P	16 31 12.7	-0.1
BSY	Bisya	79.63	295	P	P	16 31 12.8	-0.7
CSS	Mathiatis	79.78	320	P	P	16 31 14.3	+0.1
	comp=Z,60nm,2.6s						
MHTO	MHTO	80.69	293	P	P	16 31 18.6	-0.6
UMZA	Um Al Zommool	80.69	297	P	P	16 31 17.9	-1.4
MMAI	Mount Meron Ar	80.73	317	P	P	16 31 19.9	+0.5
	comp=Z,9.5nm,0.8s,baz=332,slow=3.3,SNR=9.3						
	comp=Z,9.5nm,0.8s						
TIP	Timpagrande	81.04	334	⇑P	P	16 31 17.3	-3.6
TIP	Timpagrande	81.04	334	P	P	16 31 20.4	-0.6
	comp=Z,42nm,1.4s						
MZR	Muzera	81.30	298	P	P	16 31 21.4	-1.1
GHAJ	Ghor Haditha	82.19	316	IAmb	IAmb	16 31 28.1	
	comp=Z,44nm,1.4s						
ASAR	Alice Springs	82.71	206	P	P	16 31 30.4	+0.7
	comp=Z,15nm,0.9s,baz=14,slow=5.8,SNR=156						
ASAR				PKPPKP	P'P'df	16 58 03.9	+10
	comp=Z,1.2nm,1.1s,baz=215,slow=1.5,SNR=4.4						
	comp=Z,15nm,0.9s						
ASAR	Alice Springs	82.71	206	P	P	16 31 29.7	+0.1
ASAR	Alice Springs	82.71	206	P	P	16 31 29.7	+0.1
POLO	Lamas de Olo	82.92	353	*e*P	P	16 31 32.8	+1.9
MVO	Moncorvo	83.07	352	*e*P	P	16 31 33.1	+1.5
MVO				*i* IAmb	IAmb	16 31 41.5	
	comp=Z,64nm,1.7s						
PVIS	Viseu	83.58	353	*e*P	P	16 31 33.5	-0.7
ESBB	Sonseca Array	84.27	349	IAmb	IAmb	16 31 40.2	
	comp=Z,53nm,1.4s						
ESDC	Sonseca Array	84.27	349	P	P	16 31 39.1	+1.4
	comp=Z,16nm,1.1s,baz=359,slow=4.8,SNR=35						
	comp=Z,16nm,1.1s						
ESDC	Sonseca Array	84.27	349	P	P	16 31 38.2	+0.4
ESDC				IAmb	IAmb	16 31 40.1	
	comp=Z,59nm,1.4s						
PCAS	Casmilo, Conde	84.29	353	*e*P	P	16 31 38.8	+1.1
PCBR	Castelo Branco	84.42	352	*e*P	P	16 31 38.6	+0.2
PCBR				*i* IAmb	IAmb	16 31 44.7	
	comp=Z,68nm,1.9s						
PAB	San Pablo	84.44	350	P	P	16 31 39.3	+0.7
PAB				IAmb	IAmb	16 31 40.9	
	comp=Z,43nm,1.4s						
PAB	San Pablo	84.44	350	P	P	16 31 39.3	+0.7
PAB				pmax	pmax		
	comp=Z,43nm,1.4s						
DOK	Doka	84.64	295	P	P	16 31 37.2	-2.6
MBWA	Marble Bar	84.69	219	P	P	16 31 39.7	-0.1
MBWA	Marble Bar	84.69	219	P	P	16 31 39.4	-0.4
MBWA				IAmb	IAmb	16 31 40.7	
	comp=Z,40nm,1.2s						
RAYN	Ar Rayn	84.70	305	P	P	16 31 40.2	0.0
RAYN	Ar Rayn	84.70	305	P	P	16 31 39.1	-1.1
RAYN	Ar Rayn	84.70	305	P	P	16 31 39.1	-1.1
RAYN				pmax	pmax		
	comp=Z,88nm,1.5s						
PSA00	Pilbara Seismi	85.03	219	P	P	16 31 41.0	-0.5
PSA00				IAmb	IAmb	16 31 42.4	
	comp=Z,42nm,1.4s						
PSA00	Pilbara Seismi	85.03	219	IAmb	IAmb	16 31 42.4	
	comp=Z,65nm,1.4s						
PMTG	Montargil	85.25	353	*e*P	P	16 31 43.5	+0.9
PMTG				*i* IAmb	IAmb	16 31 58.2	
	comp=Z,69nm,1.9s						
PESTR	Estremoz	85.40	352	*e*P	P	16 31 44.1	+0.7
PESTR				*i* IAmb	IAmb	16 31 46.7	
	comp=Z,61nm,1.8s						
WHFO	Wadi Hawf	85.41	295	P	P	16 31 41.4	-2.4
PARRA	Arraiolos	85.48	353	*e*P	P	16 31 44.9	+1.1
PARRA				*i* IAmb	IAmb	16 31 48.2	
	comp=Z,63nm,1.8s						
EVO	Evora	85.76	352	*e*P	P	16 31 46.5	+1.3
EVO				*i* IAmb	IAmb	16 32 02.8	
	comp=Z,65nm,1.8s						
PBAR	Barrancos	86.04	352	*e*P	P	16 31 47.9	+1.4
PBAR				*i* IAmb	IAmb	16 31 51.0	
	comp=Z,79nm,1.7s						
ABTO	Aybut	86.12	295	P	P	16 31 45.9	-1.4
STKA	Stephens Creek	89.04	198	P	P	16 32 01.9	+1.2
	comp=Z,3.6nm,0.9s,baz=351,slow=9.4,SNR=7.9						
	comp=Z,3.6nm,0.9s						
TORD	Torodi Ar. Bea	109.51	340	PP	PP	16 38 04.2	-2.0
	comp=Z,2.1nm,0.9s,baz=19,slow=9.4,SNR=8.0						
NPGB	Novo Progresso	123.00	46	*e*P	PKPdf	16 38 01.6	-0.9
LPAZ	La Paz	125.12	65	PKP	PKiKP	16 38 07.9	+0.3
	comp=Z,0.9nm,0.5s,baz=355,slow=6.3,SNR=4.4						
CLDB	Colider	126.26	49	*e*P	PKiKP	16 38 09.2	-0.1
SMTB	Santa Maria do	127.63	39	*e*P	PKiKP	16 38 12.1	+0.1
PB01	IPOC Station P	128.36	70		PKiKP	16 38 13.1	-0.2
PTLB	Pontes e Lacer	128.81	55		PKiKP	16 38 14.1	-0.2
PTLB	Pontes e Lacer	128.81	55	*e*P	PKiKP	16 38 14.1	-0.2
SNDB	Serra Nova Dou	129.10	44	*e*P	PKiKP	16 38 15.0	+0.1
SALV	Santo Antonio	130.77	52	*e*P	PKiKP	16 38 17.9	-0.3
NBTA	Tacaratu-PE	130.80	27	*e*P	PKPdf	16 38 16.5	-1.0
SDBA	SAO DESIDERIO	131.86	37	*e*P	PKiKP	16 38 20.4	-0.2
ARAG	Araguaiana, MT	132.26	47	*e*P	PKiKP	16 38 21.5	+0.3
PP1B	Ponte de Pedra	132.63	52	*e*P	PKiKP	16 38 21.9	0.0
VNDA	Vanda	132.97	180	PKP	PKPdf	16 38 20.1	+0.5
	comp=Z,4.2nm,1.1s,baz=346,slow=3.6,SNR=9.0						
VNDA	Vanda	132.97	180		PKiKP	16 38 20.6	-0.1
BDFB	Brasilia	133.72	42	PKP	PKPdf	16 38 22.6	-0.4
	comp=Z,2.0nm,0.6s,baz=18,slow=22,SNR=4.3						
JANB	Januaria	134.53	38	*e*P	PKPdf	16 38 23.7	-0.7
NBIT	Itapeh - BA	135.97	31	*e*P	PKPdf	16 38 26.6	-0.4
CPUP	Villa Florida	138.97	61	PKP	PKPdf	16 38 32.6	+0.3
	comp=Z,4.4nm,1.1s,baz=0.0,slow=20,SNR=4.4						
BSFB	Barra de Sao F	139.20	35	*e*P	PKPdf	16 38 32.6	-0.4
BOSA	Boshof	139.24	294	PKP	PKPdf	16 38 33.8	+0.8
	comp=Z,3.3nm,0.9s,baz=66,slow=2.9,SNR=9.2						
BSCB	Bom Sucesso	139.83	41	*e*P	PKiKP	16 38 35.6	-1.0
PLCA	Paso Flores	142.66	89	PKP	PKPdf	16 38 38.0	-0.7
	comp=Z,12nm,1.1s,baz=270,slow=4.5,SNR=7.3						
PLCA	Paso Flores	142.66	89		PKPdf	16 38 39.7	+1.0
PLCA	Paso Flores	142.66	89	PKIKP	PKPdf	16 38 38.0	-0.7
PLCA	Paso Flores	142.66	89	*e*P	PKPdf	16 38 38.8	+0.1
MAW	Mawson	142.88	219	PKP	PKPdf	16 38 35.7	-2.3
	comp=Z,5.1nm,1.0s,baz=120,slow=1.7,SNR=4.3						
CPSB	Cacapava Do Su	144.25	60	*e*P	PKPdf	16 38 41.9	+0.2
COYC	Coyhaique	144.87	97		PKPdf	16 38 42.0	-0.2
QSPA	South Pole Qui	145.47	180	PKPbc	PKPdf	16 38 42.3	-0.4
	comp=Z,71nm,1.1s,baz=355,slow=1.1,SNR=114						
SYO	Syowa Base	151.59	220	⇓*i*pPKPdf	pPKPdf	16 38 57.0	-1.2
SYO	Syowa Base	151.59	220	⇓*i*pPKPbc	pPKPbc	16 39 04.2	-0.3
NVL	N'lazarevskaya	160.25	209	*e*PKIKP	PKPdf	16 39 05.7	+1.8
NVL				*e*		16 43 25.4	
NVL				*e*SS	SS	17 03 40.2	+3.7
NVL				*e*SSS	SSS	17 09 50.3	
NVL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SNAA	Sanae	162.79	196	PKPab	PKPab	16 39 54.4	-1.4
	comp=Z,4.9nm,1.1s,baz=165,slow=2.7,SNR=5.7						

MOS ***23*** *16:26:01.9±1.1, 55°.65N×162°.57E, h14*^{km}*, mb4.6/14, Error ellipse: s-maj=7.5km s-min=4.2km az=73.1*

KRSC ***23*** *16:26:02.0±1.3, 55°.59N×162°.69E, h22*^{km}*±30*^{km}*, Ml4.7*

IDC ***23*** *16:26:01.8±0.6, 55°.73N×162°.14E, h0*^{km}*, mb4.1/25, mbtmp4.2/27, ML3.8/3, Error ellipse: s-maj=16.3km s-min=12.4km az=136.0*

NEIC ***23*** *16:26:03.6±1.3, 55°.73N±0°.06×162°.1E±0°.1, h10*^{km}*±1*^{km}*, mb4.6/57, Error ellipse: s-maj=14.0km s-min=6.3km az=306.0*

ISC 23 16:26:06.2±0.3, **55°.68N**±0°.03×**162°.46E**±0°.03, **h31**^{km}, **n448**, σ**1**^{s}**.06**/451, **mb4.5**/58, **2D**, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.57	21	PN	Pb	16 26 14.6	-3.1
KBTR	Krutoberegovo	0.57	21	*e*P	Pb	16 26 14.7	-3.1
KBG	Krutoberegovo	0.59	13	PN	Pb	16 26 15.1	-3.1
KBG	Krutoberegovo	0.59	13	*e*P	Pb	16 26 15.2	-3.1
ZLN	Zelenaya	0.99	291	PN	Pn	16 26 22.9	-1.2
ZLN	Zelenaya	0.99	291	*e*P	Pn	16 26 23.0	-1.2
CIRR	Tsirk	1.06	295	PN	Pn	16 26 23.8	-1.2
CIRR	Tsirk	1.06	295	*e*P	Pn	16 26 23.9	-1.2
SMKR	Semkarok	1.06	329	PN	Pn	16 26 23.7	-1.3
SMKR	Semkarok	1.06	329	*e*P	Pn	16 26 23.8	-1.3
BZWR	Bezymyannyi-We	1.15	285	PN	Pn	16 26 25.2	-1.0
BZWR	Bezymyannyi-We	1.15	285	*e*P	Pn	16 26 25.3	-1.0
KLY	Klyuchi	1.20	303	PN	Pn	16 26 24.2	-2.6
KLY	Klyuchi	1.20	303	*e*P	Pn	16 26 24.2	-2.6
KIRR	Kirishev	1.23	284	PN	Pn	16 26 26.4	-0.9
KIRR				S	Sb	16 26 46.7	+2.3
KIRR	Kirishev	1.23	284	*e*P	Pn	16 26 26.4	-0.9
KIRR				*e*S	Sb	16 26 46.8	+2.3
KMNR	Kamenistaya	1.26	274	PN	Pn	16 26 27.5	-0.2
KMNR	Kamenistaya	1.26	274	*e*P	Pn	16 26 27.5	-0.2
TUMD	Tumrok D	1.27	249	PN	Pn	16 26 26.5	-1.2
TUMD				S	Sn	16 26 44.3	+0.6
TUMD	Tumrok D	1.27	249	*e*P	Pn	16 26 26.6	-1.2
TUMD				*e*S	Sn	16 26 44.3	+0.6
KZV	Kizimen	1.36	246	PN	Pn	16 26 28.2	-1.0
KZV	Kizimen	1.36	246	*e*P	Pn	16 26 28.2	-1.0
TUMR	Tumrok	1.38	254	PN	Pn	16 26 29.3	0.0
TUMR	Tumrok	1.38	254	*e*P	Pn	16 26 29.4	0.0
KOZ	Kozyrevsk	1.51	286	PN	Pn	16 26 31.5	+0.4
KOZ				S	Sb	16 26 53.9	+1.6
KOZ	Kozyrevsk	1.51	286	*e*P	Pn	16 26 31.5	+0.4
KOZ				*e*S	Sb	16 26 53.9	+1.6
BKI	Bering	2.06	102	PN	Pn	16 26 37.3	-1.2
BKI	Bering	2.06	102	*e*P	Pn	16 26 37.4	-1.2
ESO	Esso	2.14	278	PN	Pn	16 26 39.5	-0.2
ESO	Esso	2.14	278	*e*P	Pn	16 26 39.5	-0.2
KII	Karymskiy	2.40	228	PN	Pn	16 26 42.5	-0.8
KII	Karymskiy	2.40	228	*e*P	Pn	16 26 42.6	-0.8
SPN	Mys Shipunski	2.95	210	PN	Pn	16 26 48.7	-2.2
SPN	Mys Shipunski	2.95	210	*e*P	Pn	16 26 48.7	-2.2
SPN				*e*S	Sn	16 27 22.3	-2.9
NLC	Nalytchevo	3.10	217	PN	Pn	16 26 52.5	-0.4
NLC				S	Sn	16 27 28.4	-0.5
NLC	Nalytchevo	3.10	217	*e*P	Pn	16 26 52.5	-0.4
NLC				*e*S	Sn	16 27 28.5	-0.5
SDLR	Sedlovina	3.18	222	PN	Pn	16 26 53.5	-0.7
SDLR	Sedlovina	3.18	222	*e*P	Pn	16 26 53.6	-0.7
KRX	Arik	3.21	225	PN	Pn	16 26 55.2	+0.6
KRX	Arik	3.21	225	*e*P	Pn	16 26 55.2	+0.6
KRER	Koryakskii	3.22	224	PN	Pn	16 26 55.5	+0.8
KRER	Koryakskii	3.22	224	*e*P	Pn	16 26 55.6	+0.8
SMAR	Somma	3.23	223	PN	Pn	16 26 53.9	-1.0
SMAR	Somma	3.23	223	*e*P	Pn	16 26 53.9	-1.0
AVH	Avacha	3.25	223	PN	Pn	16 26 54.2	-0.9
AVH	Avacha	3.25	223	*e*P	Pn	16 26 54.2	-0.9
UGLR	Uglovaya	3.26	222	PN	Pn	16 26 54.5	-0.7
UGLR	Uglovaya	3.26	222	*e*P	Pn	16 26 54.6	-0.7
KOK	Koryaka	3.27	225	PN	Pn	16 26 56.4	+1.1
KOK	Koryaka	3.27	225	*e*P	Pn	16 26 56.5	+1.1
GNL	Ganaly	3.29	235	PN	Pn	16 26 56.6	+0.9
GNL	Ganaly	3.29	235	*e*P	Pn	16 26 56.6	+0.9
DALK	Dalny	3.43	221	PN	Pn	16 26 56.3	-1.1
DALK				S	Sn	16 27 38.0	+1.1
DALK	Dalny	3.43	221	*e*P	Pn	16 26 56.4	-1.1
DALK				*e*S	Sn	16 27 38.1	+1.1
INSR	Institute	3.46	222	PN	Pb	16 27 05.4	-1.2
INSR	Institute	3.46	222	*e*P	Pb	16 27 05.4	-1.2
PET	Petropavlovsk	3.47	222	Pn	Pn	16 26 57.0	-1.0
PET	Petropavlovsk	3.47	222	*e*PN	Pn	16 26 57.7	-0.3
PET				*e*S	Sn	16 27 39.0	+1.0
PET				pmax	pmax		
	comp=Z,186nm,0.6s						
PET				smax	smax		
	comp=E,601nm,0.8s						
PET				smax	smax		
	comp=N,679nm,0.7s						
PET	Petropavlovsk	3.47	222	*e*P	Pn	16 26 57.0	-1.0
OSSR	Ossora	3.60	5	PN	Pn	16 27 00.2	+0.5
OSSR	Ossora	3.60	5	*e*P	Pn	16 27 00.2	+0.5
PEA0B	Petropavlovsk-	3.79	229		Pn	16 27 00.0	-2.4
PEA0B	Petropavlovsk-	3.79	229	PN	Pn	16 27 00.0	-2.4
PETK	Petropavlovsk-	3.79	229	Pn	Pn	16 27 00.8	-1.6
	comp=N,4.3nm,0.3s,baz=60,slow=16,SNR=14						
PETK				Sn	Sb	16 27 52.7	-5.1
	comp=N,5.0nm,0.3s,baz=0.8,slow=10,SNR=4.1						
PETK	Petropavlovsk-	3.79	229		Pn	16 26 59.2	-3.3
PETK	Petropavlovsk-	3.79	229	PN	Pn	16 26 59.2	-3.3
PETK						16 27 52.7	
KRMR	Karymshinskiy	3.82	223	PN	Pn	16 27 01.2	-1.6
KRMR				S	Sn	16 27 50.4	+3.8
KRMR	Karymshinskiy	3.82	223	*e*P	Pn	16 27 01.3	-1.6
KRMR				*e*S	Sn	16 27 50.5	+3.8
GRL	Gorelyy	4.06	221	PN	Pn	16 27 07.3	+1.1
GRL	Gorelyy	4.06	221	*e*P	Pn	16 27 07.3	+1.1
MTVR	Mutnovka	4.07	220	PN	Pn	16 27 06.4	0.0
MTVR	Mutnovka	4.07	220	*e*P	Pn	16 27 06.4	0.0
APC	Apacha	4.15	231	PN	Pn	16 27 12.4	+5.0
APC	Apacha	4.15	231	*e*P	Pn	16 27 12.5	+5.0
ASAK	Asacha	4.26	221	PN	Pn	16 27 08.7	-0.2
ASAK	Asacha	4.26	221	*e*P	Pn	16 27 08.8	-0.2
KDTR	Khodutka, Kamc	4.67	216	PN	Pn	16 27 14.7	+0.2
KDTR	Khodutka, Kamc	4.67	216	*e*P	Pn	16 27 14.7	+0.2
TILK	Tilichiki	5.17	21	PN	Pn	16 27 23.1	+1.9
TILK	Tilichiki	5.17	21	*e*P	Pn	16 27 23.1	+1.9
PAU	Pauzhetka	5.40	221	PN	Pn	16 27 26.7	+2.3

PAU	Pauzhetka	5.40	221	*e*P	Pn	16 27 26.7	+2.3
SKR	Severo-Kuril's	6.29	220	*e*PN	Pn	16 27 43.8	+7.1
SKR				*e*S	Sn	16 28 53.1	+5.7
SKR				pmax	pmax		
	comp=Z,50nm,0.8s						
SKR				smax	smax		
	comp=N,166nm,1.0s						
SKR				smax	smax		
	comp=E,50nm,1.0s						
SKR				MLR	MLR		
	comp=Z,2µm,15.0s						
OKH	Okha	11.52	267	*de*PN	Pn	16 28 45.0	-3.3
OKH				MLR	MLR		
	comp=N,1µm,11.0s						
OKH				MLR	MLR		
	comp=E,2µm,11.0s						
OKH				MLR	MLR		
	comp=Z,800nm,11.0s						
BILL	Bilibino	12.53	7	*i* PN	Pn	16 29 03.1	+1.0
SPIA	Saint Paul Isl	15.13	73	P	Pn	16 29 38.7	+1.3
	baz=276						
GAMB	Gambell	15.24	47	P	Pn	16 29 39.3	+0.4
	baz=251						
P08K	Saint George I	15.59	75	P	Pn	16 29 45.0	+1.7
	baz=279						
NIKH	Nikolski High	16.89	87	P	Pn	16 30 02.0	+2.0
	baz=291						
M11K	Mekoryuk	17.14	61	P	Pn	16 30 04.0	+0.9
	baz=269						
ASAJ	Asahikawa	17.18	236	P	Pn	16 30 02.6	-1.0
	comp=Z,0.9nm,0.3s,baz=107,slow=6.9,SNR=8.2						
	comp=Z,5.0nm,0.8s						
TNA	Tin City	17.39	43	P	Pn	16 30 06.3	+0.2
	baz=250						
UNV	Unalaska Valle	17.93	83	P	P	16 30 14.5	+1.3
	baz=289						
YAK	Yakutsk	17.96	304	P	Pn	16 30 11.8	-1.3
	comp=Z,0.5nm,0.3s,baz=117,slow=3.2,SNR=4.4						
	comp=Z,7.4nm,0.6s						
YAK	Yakutsk	17.96	304	*i* P	P	16 30 13.6	+0.1
YAK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
F14K	Arctic Creek	17.99	44	P	Pn	16 30 13.0	-0.6
	baz=252						
K13K	Kusilvak Mount	17.99	56	P	Pn	16 30 14.1	+0.5
	baz=265						
ANM	Nome	18.13	48	P	Pn	16 30 14.9	-0.4
	baz=256						
M13K	Dall Lake	18.56	61	P	P	16 30 20.8	+0.7
	baz=271						
J14K	Nanvaranak Lak	18.59	54	P	P	16 30 20.8	+0.4
	baz=264						
F15K	North Star Dit	18.73	44	P	P	16 30 21.7	-0.3
	baz=254						
G15K	Niukluk	18.79	47	P	P	16 30 22.7	+0.1
	baz=257						
L14K	Kuka Creek	18.90	58	P	P	16 30 24.3	+0.5
	baz=269						
M14K	Bethel	19.24	60	P	Pn	16 30 30.4	+1.7
M14K				IAmb	IAmb	16 30 52.1	
	comp=Z,51nm,1.4s						
M14K	Bethel	19.24	60	P	P	16 30 28.4	+0.8
	baz=271						
FALS	False Pass	19.35	78	P	Pn	16 30 30.5	+0.5
	baz=287						
C16K	Lisburne Hills	19.38	37	P	Pn	16 30 31.1	+0.8
C16K	Lisburne Hills	19.38	37	P	P	16 30 28.2	-0.9
	baz=246,SNR=9.6						
N14K	Kuskokwak Cree	19.41	63	P	P	16 30 29.8	+0.4
	baz=274						
H16K	Elim	19.46	48	P	P	16 30 30.0	0.0
	baz=260						
L15K	Ungalak Mounta	19.48	57	P	P	16 30 30.9	+0.7
	baz=269						
K15K	Wolf Creek Mou	19.49	55	P	P	16 30 30.6	+0.4
	baz=267						
G16K	Koyuk River	19.57	46	P	P	16 30 31.2	0.0
	baz=258						
M15K	Kasigluk River	19.87	60	P	P	16 30 34.7	+0.3
	baz=272						
D17K	Noatak River	19.95	39	P	P	16 30 35.5	+0.2
	baz=250						
J16K	Anvik River	19.99	53	P	P	16 30 36.2	+0.5
	baz=265						
I17K	Unalakleet	20.01	51	P	P	16 30 36.6	+0.7
	baz=264						
RDOG	Red Dog Mine	20.14	38	P	Pn	16 30 39.2	-0.1
RDOG	Red Dog Mine	20.14	38	P	P	16 30 38.1	+0.7
	baz=250						
N15K	Kwethluk River	20.19	62	P	P	16 30 39.6	+1.7
	baz=274						
C17K	DeLong Mountai	20.20	37	P	P	16 30 38.3	+0.3
	baz=248						
E17K	Hotham Inlet	20.21	41	P	P	16 30 39.0	+0.9
	baz=254,SNR=7.7						
F17K	Baldwin Pennin	20.26	43	P	P	16 30 39.5	+0.9
	baz=256						
G17K	Kiwalik Mounta	20.29	46	P	P	16 30 39.3	+0.3
	baz=259						
O15K	Ungalikthiuk R	20.41	65	P	P	16 30 41.4	+1.0
	baz=277						
L16K	Owhat River	20.44	57	P	P	16 30 41.6	+1.0
	baz=271						
H17K	Granite Mounta	20.50	48	P	P	16 30 41.7	+0.5
	baz=262						
J17K	VABM Dome	20.68	52	P	P	16 30 44.0	+0.8
	baz=266						
M16K	Timber Creek	20.70	59	P	P	16 30 45.6	+2.1
M16K				IAmb	IAmb	16 30 57.0	
	comp=Z,44nm,1.5s						
M16K	Timber Creek	20.70	59	P	P	16 30 44.9	+1.4
	baz=273						
E18K	Tukpahlearik C	20.77	41	P	P	16 30 44.5	+0.4
	baz=254						
N16K	Nishlik Lake	20.83	61	P	P	16 30 45.6	+0.7
	baz=274						
SDPT	Sand Point	20.83	75	P	P	16 30 46.2	+1.3
	baz=287						
F18K	Selawik	20.92	43	P	P	16 30 46.0	+0.3
	baz=258						
C18K	Utukok River	20.94	37		P	16 30 47.0	+0.9
C18K				IAmb	IAmb	16 30 52.6	
	comp=Z,19nm,0.9s						
C18K	Utukok River	20.94	37	P	P	16 30 45.9	-0.2
	baz=250						
L17K	Donlin	21.00	56	P	P	16 30 47.0	+0.3
	baz=271						
B18K	Kokolik River	21.00	35	P	P	16 30 45.9	-0.7
	baz=248,SNR=9.3						
K17K	Iditarod	21.00	54	P	P	16 30 47.0	+0.3
	baz=269						
S14K	Fog Glacier	21.09	73	P	P	16 30 48.7	+0.9
	baz=285						
G18K	Tagagawik	21.18	46	P	P	16 30 48.3	-0.3
	baz=260						
H18K	Honhosa River	21.18	48	P	P	16 30 48.7	+0.1
	baz=263						
O16K	Kokwok River B	21.25	63	P	P	16 30 50.5	+1.2
	baz=277						
P16K	Nushagak River	21.37	65	P	P	16 30 51.5	+0.8
	baz=279						
TIXI	Tiksi	21.39	331	P	P	16 30 50.8	+0.1
	comp=Z,18nm,0.9s,baz=119,slow=8.2,SNR=32						
	comp=Z,18nm,0.9s						
TIXI	Tiksi	21.39	331		P	16 30 51.1	+0.3
TIXI				IAmb	IAmb	16 30 55.1	
	comp=Z,22nm,0.8s						
TIXI	Tiksi	21.39	331	*i* P	P	16 30 51.3	+0.5
TIXI				pmax	pmax		
	comp=Z,17nm,0.8s						
M17K	Holitna River	21.42	58	P	P	16 30 51.5	+0.3
	baz=273						
CHNA	Chernabura Isl	21.47	76	P	P	16 30 53.7	+2.0
	baz=288						
A19K	Wainwright	21.57	33	P	P	16 30 52.7	0.0
	baz=247						
N17K	Nushagak Hills	21.60	60	P	P	16 30 54.6	+1.4
	baz=276						
C19K	Lookout Ridge	21.64	37	P	P	16 30 54.6	+1.0
C19K	Lookout Ridge	21.64	37	P	P	16 30 53.4	-0.2
	baz=251,SNR=7.1						
F19K	Shaleruckik Mo	21.70	43	P	P	16 30 55.8	+1.6
F19K				IAmb	IAmb	16 30 58.3	
	comp=Z,21nm,0.9s						
F19K	Shaleruckik Mo	21.70	43	P	P	16 30 53.7	-0.4
	baz=259,SNR=16						
O17K	Koliganek Bris	21.73	62	P	P	16 30 55.5	+1.0
	baz=278						
J18K	Innoko River	21.75	52	P	P	16 30 55.1	+0.4
	baz=269						
L18K	Granite Mounta	21.75	56	P	P	16 30 55.7	+1.0
	baz=272						
GCSA	Galena City Sc	21.76	49	P	P	16 30 54.9	+0.1
	baz=265						
G19K	Purcell Mounta	21.85	45	P	P	16 30 56.4	+0.6
	baz=262						
R16K	Pilot Point	21.85	68	P	P	16 30 57.6	+1.8
	baz=283						
D19K	Kuna River	21.97	39		P	16 30 58.8	+1.7
D19K				IAmb	IAmb	16 31 02.6	
	comp=Z,26nm,1.1s						
D19K	Kuna River	21.97	39	P	P	16 30 57.1	0.0
	baz=255,SNR=12						
H19K	Roundabout Mou	22.02	47	P	P	16 30 58.4	+0.8
	baz=264						
E19K	Redstone River	22.04	42	P	P	16 30 57.8	0.0
	baz=258						
P17K	Kvichak River	22.14	64	P	P	16 31 00.1	+1.2
	baz=279						
M18K	Stony River	22.19	58	P	P	16 31 00.7	+1.3
	baz=274						
N18K	Kilae Creek	22.23	60	P	P	16 31 00.7	+0.8
	baz=276						
J19K	Poorman	22.25	51	P	P	16 31 00.6	+0.4
	baz=268						
R17L	Mt. Peulik Vol	22.47	68	P	P	16 31 03.8	+1.2
	baz=283						
F20K	Avaraart Lake	22.53	43	P	P	16 31 03.4	+0.4
	baz=261						
D20K	Etivluk River	22.56	39		P	16 31 04.4	+1.0
D20K				IAmb	IAmb	16 31 06.9	
	comp=Z,20nm,1.0s						
D20K	Etivluk River	22.56	39	P	P	16 31 03.9	+0.5
	baz=256						
Q17K	Contact Creek	22.59	66	P	P	16 31 04.4	+0.6
	baz=282						
E20K	Nigu River	22.60	40	P	P	16 31 04.0	+0.2
	baz=257						
L19K	White Mountain	22.61	56	P	P	16 31 04.5	+0.5
	baz=273						
O18K	Koktuh Hills	22.66	62	P	P	16 31 05.2	+0.6
	baz=279						
H20K	Anotleneega Mo	22.67	47	P	P	16 31 04.8	+0.2
	baz=265						
P18K	Big Mountain,	22.72	63	P	P	16 31 05.5	+0.3
	baz=280						
B20K	Meade River	22.74	35	P	P	16 31 05.5	+0.2
	baz=252						
I20K	Naaghedeneel	22.79	49	P	P	16 31 05.3	-0.4
	baz=267						
N19K	Bonanza Creek	22.90	59	P	P	16 31 07.3	+0.3
	baz=277						
J20K	Nowinta River	22.91	51	P	P	16 31 07.8	+0.8
J20K	Nowinta River	22.91	51	P	P	16 31 06.9	-0.2
	baz=269						
K20K	Telida	22.94	53	P	P	16 31 07.2	-0.2
	baz=271						
Q18K	Katmai Hardscr	22.97	65	P	P	16 31 07.5	-0.4
	baz=282						
O19K	Port Alsworth	23.06	61	P	P	16 31 08.7	+0.2
	baz=278						
IMAR	Indian Mountai	23.18	46	P	P	16 31 10.7	+0.9
C21K	Knifeblade Rid	23.31	38	P	P	16 31 10.4	-0.7
	baz=257						
G21K	Allakaket	23.33	45	P	P	16 31 12.5	+1.2
G21K	Allakaket	23.33	45	P	P	16 31 11.3	0.0
	baz=264,SNR=9.9						
CHIR	Chirikof Islan	23.34	72	P	P	16 31 11.5	+0.1
	baz=288						
A21K	Barrow	23.36	32	P	P	16 31 10.9	-0.6
	baz=250						
F21K	Alatna River	23.43	43	IAmb	IAmb	16 31 15.6	
	comp=Z,16nm,1.1s						
F21K	Alatna River	23.43	43	P	P	16 31 11.8	-0.4
	baz=263						
M20K	Styx River	23.44	56	P	P	16 31 12.7	+0.2
	baz=275						
E21K	Killik River	23.44	40	P	P	16 31 11.9	-0.6
	baz=259						
B21K	Ikpikpuk River	23.48	37	P	P	16 31 13.1	+0.4
	baz=256						
H21K	Melozitna Rive	23.54	47	P	P	16 31 13.2	-0.2
	baz=267						
Q19K	Cape Douglas,	23.61	64	P	P	16 31 14.2	+0.1
	baz=282						
P19K	Oil Pt	23.68	62	P	P	16 31 14.9	+0.1
	baz=280						
CHUM	Lake Minchumin	23.71	51	P	P	16 31 15.1	+0.1
	baz=272						
A22K	Sinclair Lake	23.75	33	P	P	16 31 15.1	-0.2
	baz=252						
PPLA	Purkeypile	23.81	54	P	P	16 31 15.6	-0.5
	baz=274						
I21K	Tanana	23.86	48	P	P	16 31 15.9	-0.5
	baz=269						
SII	Sitkinak Islan	23.89	70	P	P	16 31 16.6	-0.1
	baz=287						
O20K	Slope Mountain	23.91	61	P	P	16 31 16.9	-0.1
	baz=280						
SPCR	Spurr Chakacha	23.95	58	P	P	16 31 16.9	-0.5
	baz=278						
N20K	Mount Spurr	23.95	58	P	P	16 31 16.7	-0.7
	baz=278						
F22K	John River	23.96	42	P	P	16 31 17.1	-0.3
	baz=263						
D22K	Ayikyak River	23.99	39	P	P	16 31 16.5	-1.1
	baz=260						
B22K	Teshekpuk Lake	24.06	35	P	P	16 31 17.2	-1.0
	baz=256,SNR=9.7						
H22K	Ishtalitna Cre	24.14	46	IAmb	IAmb	16 31 24.7	
	comp=Z,27nm,1.4s						
H22K	Ishtalitna Cre	24.14	46	P	P	16 31 18.0	-1.0
	baz=268						
E22K	Anaktuvuk Pass	24.18	41		P	16 31 20.4	+1.0
E22K	Anaktuvuk Pass	24.18	41	P	P	16 31 18.7	-0.7
	baz=262,SNR=11						
OHAK	Old Harbor	24.19	68	P	P	16 31 19.6	+0.2
	baz=286						
SKT	Skwentna	24.19	56	P	P	16 31 21.1	+1.6
SKT	Skwentna	24.19	56	P	P	16 31 18.9	-0.6
	baz=276						
BPAW	Bear Paw Mtn.	24.29	51	P	P	16 31 20.2	-0.2
	baz=272						
Q20K	Shuyak Island	24.31	64	P	P	16 31 20.4	-0.2
	baz=283						
KDAK	Kodiak Island	24.41	66	P	P	16 31 21.2	-0.3
	baz=285						
HOM	Homer	24.48	62	P	P	16 31 21.5	-0.6
	baz=281						
CAPN	Captain Cook N	24.52	59	P	P	16 31 22.1	-0.3
	baz=279						
SUA	Susitna One	24.62	57	P	P	16 31 23.3	-0.2
	baz=278						
TRF	Thorofare Moun	24.63	52		P	16 31 24.6	+0.9
TRF				IAmb	IAmb	16 31 29.7	
	comp=Z,18nm,1.0s						
TRF	Thorofare Moun	24.63	52	P	P	16 31 23.0	-0.7
	baz=274						
COLD	Coldfoot	24.70	43		P	16 31 24.8	+0.8
COLD				IAmb	IAmb	16 31 27.4	
	comp=Z,17nm,1.0s						
COLD	Coldfoot	24.70	43	P	P	16 31 23.5	-0.5
	baz=266,SNR=9.6						
D23K	Nanushuk River	24.72	39	P	P	16 31 25.2	+1.0
D23K	Nanushuk River	24.72	39	P	P	16 31 24.2	-0.1
	baz=262						
CUT	Chulitna	24.73	55	P	P	16 31 24.2	-0.1
	baz=276						
G23K	Bananza Creek	24.73	44	IAmb	IAmb	16 31 27.1	
	comp=Z,19nm,1.2s						
G23K	Bananza Creek	24.73	44	P	P	16 31 24.2	-0.2
	baz=267,SNR=7.2						
M22K	Willow	24.88	56	P	P	16 31 25.2	-0.4
	baz=278						
C23K	Itkillik River	24.89	37	P	P	16 31 25.6	-0.1
	baz=260,SNR=10						
BRSE	Bradley Lake S	24.91	61	P	P	16 31 25.8	-0.2
	baz=282						
I23K	Minto, Yukon-K	24.97	48	P	P	16 31 27.8	+1.3
I23K				IAmb	IAmb	16 31 29.9	
	comp=Z,17nm,1.2s						
I23K	Minto, Yukon-K	24.97	48	P	P	16 31 26.1	-0.4
	baz=271						
E23K	Chandalar	24.99	41	P	P	16 31 26.3	-0.6
	baz=265						
TOLK	Toolik Lake Re	25.07	40	P	P	16 31 27.3	-0.2
	baz=264,SNR=16						
NEA2	Nenana	25.11	50	P	P	16 31 28.5	+0.7
NEA2	Nenana	25.11	50	P	P	16 31 28.0	+0.2
	baz=273						
RC01	Rabbit Creek A	25.16	58	P	P	16 31 28.7	+0.5
	baz=280						
MCK	McKinley	25.22	52	P	P	16 31 29.0	+0.2
	baz=275						
MJB9	Matsu-Tunnel	25.25	231	P	P	16 31 29.4	+0.1
MAJO	Matsushiro	25.25	231		P	16 31 29.7	+0.4
MAJO	Matsushiro	25.25	231	*i* P	P	16 31 28.5	-0.8
MAJO				pmax	pmax		
	comp=Z,16nm,0.8s						
MJAR	Matsushiro Arr	25.25	231	P	P	16 31 29.2	-0.1
	comp=Z,13nm,0.8s,baz=31,slow=7.6,SNR=14						
	comp=Z,13nm,0.8s						
MJAR	Matsushiro Arr	25.25	231	P	P	16 31 29.9	+0.6
MJAR	Matsushiro Arr	25.25	231	P	P	16 31 29.9	+0.6
MJAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
O22K	Cooper Landing	25.27	59	P	P	16 31 30.2	+1.0
	baz=281						
PMR	Palmer	25.37	57	P	P	16 31 31.1	+1.0
	baz=279						
D24K	Happy Valley	25.41	39	P	P	16 31 30.7	+0.3
	baz=263						
E24K	Your Creek	25.42	41	P	P	16 31 30.8	+0.2
	baz=266						
SEW	Seward	25.47	60	P	P	16 31 31.9	+0.8
	baz=282						
WAT1	Susitna Watana	25.47	54	P	P	16 31 31.5	+0.3
	baz=277						
C24K	Franklin Bluff	25.53	38	P	P	16 31 32.0	+0.5
	baz=262						
WRH	Wood River Hil	25.54	50	P	P	16 31 32.6	+0.9
H24K	Noodor Dome	25.58	47	P	P	16 31 32.2	+0.1
	baz=271						
F24K	Squaw Lake	25.61	43	P	P	16 31 32.3	0.0
	baz=268						
CCB	Clear Creek Bu	25.65	49		P	16 31 33.2	+0.5
CCB				IAmb	IAmb	16 31 34.5	
	comp=Z,22nm,1.4s						
SML	Sawmill	25.71	56	P	P	16 31 33.7	+0.4
	baz=279						
KNK	Knik Glacier	25.71	57	P	P	16 31 33.6	+0.3
	baz=280						
G24K	Hadweenzic Riv	25.74	45	P	P	16 31 33.7	+0.2
	baz=270						
POKR	Poker Plat Res	25.79	48	P	P	16 31 33.8	-0.2
	baz=273						
PWL	Port Wells	25.87	58	P	P	16 31 35.5	+0.8
	baz=281						
WAT6	Susitna Watana	25.88	54	P	P	16 31 34.5	-0.4
	baz=278						
DHY	Denali Highway	25.98	53	P	P	16 31 36.3	+0.5
	baz=277						
M23K	Glacier View	26.00	56	P	P	16 31 36.5	+0.6
	baz=280						
HDA	Harding Lake	26.04	50	P	P	16 31 36.5	+0.3
	baz=275						
IL31		26.04	49		P	16 31 36.6	+0.5
ILAR	Eielson Array	26.04	49	P	P	16 31 36.7	+0.5
	comp=Z,6.4nm,0.9s,baz=275,slow=11,SNR=20						
	comp=Z,6.4nm,0.9s						
SCM	Sheep Creek Mo	26.18	56	P	P	16 31 38.6	+1.0
	baz=280						
G25K	Bearman Lake	26.29	44	P	P	16 31 39.2	+0.8
	baz=271						
D25K	Kavik River	26.29	39	P	P	16 31 38.8	+0.3
	baz=265						
GLI	Glacier Island	26.46	58	P	P	16 31 40.8	+0.8
	baz=282						
F25K	Christian Rive	26.47	43	P	P	16 31 40.3	+0.1
	baz=270						
P23K	Montague Islan	26.50	60	P	P	16 31 41.5	+1.1
	baz=283						
E25K	Arctic Village	26.51	41	IAmb	IAmb	16 31 43.6	
	comp=Z,27nm,1.4s						
E25K	Arctic Village	26.51	41	P	P	16 31 41.0	+0.5
	baz=269,SNR=6.4						
K24K	Donnelly Dome	26.61	51	P	P	16 31 41.7	+0.3
	baz=277						
M24K	Tolsona, Glenn	26.67	55	P	P	16 31 42.4	+0.4
	baz=280						
J25K	Salcha River,	26.70	49	P	P	16 31 42.6	+0.3
	baz=276						
C26K	Camden Bay	26.86	37	P	P	16 31 43.4	-0.1
	baz=266						
PAX	Paxson	26.86	53	P	P	16 31 44.2	+0.5
	baz=279						
BMAR	Burnt Mountain	26.88	43	P	P	16 31 45.0	+1.1
KLU	Klutina	26.90	56	P	P	16 31 44.5	+0.4
	baz=282						
F26K	Sheenjek River	27.05	42	P	P	16 31 45.9	+0.6
	baz=271						
HARP	HAARP	27.09	54	P	P	16 31 46.2	+0.5
	baz=280						
Q23K	Middleton Isla	27.15	61	P	P	16 31 47.2	+0.9
	baz=285						
EYAK	Cordova Ski Ar	27.18	58	P	P	16 31 46.9	+0.5
	baz=283						
G26K	Porcupine Rive	27.20	44	P	P	16 31 46.8	+0.2
	baz=273						
C27K	Jago River	27.25	38	P	P	16 31 46.9	-0.2
	baz=267						
SCRK	Sand Creek	27.37	51	IAmb	IAmb	16 31 49.5	
	comp=Z,14nm,1.2s						
SCRK	Sand Creek	27.37	51	P	P	16 31 48.1	-0.3
	baz=278,SNR=7.2						
J26L	Joseph Creek	27.49	49	P	P	16 31 49.5	+0.2
	baz=278						
N25K	Chitina, Valde	27.50	56	P	P	16 31 49.9	+0.5
	baz=282						
BMRM	Bremner River	27.63	57	P	P	16 31 51.2	+0.5
	baz=283						
L26K	Log Cabin Wild	27.80	52	P	P	16 31 52.4	+0.3
	baz=280						
KAIM	Kayak Island	27.97	59	P	P	16 31 54.4	+0.8
	baz=285						
E27K	Coleen River	28.00	41	P	P	16 31 53.9	+0.1
	baz=272						
G27K	Doyon Strip	28.05	44	P	P	16 31 54.6	+0.3
	baz=275						
M26K	Nabesna, AK	28.08	54	P	P	16 31 54.8	+0.2
	baz=282						
H27K	Steamboat Moun	28.15	45	P	P	16 31 54.6	-0.6
	baz=276						
I27K	Kandik River	28.18	47	P	P	16 31 55.5	0.0
	baz=277						
D27M	Malcolm River	28.21	39	P	P	16 31 55.1	-0.7
	baz=271						
MCARA	McCarthy VSAT	28.28	56	P	P	16 31 56.2	-0.1
	baz=284						
CRQE	Cirque	28.40	57	P	P	16 31 57.7	+0.1
	baz=285						
L27K	Beaver Creek,	28.48	52	P	P	16 31 58.3	+0.2
	baz=282						
M27K	Edge Creek, AK	28.60	54	P	P	16 31 59.7	+0.4
	baz=283						
F28M	Old Crow	28.68	42		P	16 32 01.5	+1.6
F28M				IAmb	IAmb	16 32 03.6	
	comp=Z,11nm,1.2s						
F28M	Old Crow	28.68	42	P	P	16 32 00.1	+0.2
	baz=275						
E28M	Babbage River	28.75	40	IAmb	IAmb	16 32 03.3	
	comp=Z,15nm,1.4s						
E28M	Babbage River	28.75	40	P	P	16 32 01.0	+0.5
	baz=273						
I28M	Miner Creek	28.89	47	P	P	16 32 01.7	-0.2
	baz=279						
D28M	Stokes Point	29.00	39	P	P	16 32 02.3	-0.4
	baz=273						
BVCY	Beaver Creek	29.05	53	P	P	16 32 03.5	+0.3
	baz=283						
CTG	Chitna Glacier	29.18	56	P	P	16 32 04.9	+0.4
	baz=286						
DAWY	Dawson	29.35	50	P	P	16 32 05.6	-0.3
	baz=282						
E29M	Blow River	29.36	41	P	P	16 32 05.7	-0.1
	baz=275						
YUK3	Moose Creek	29.38	54	P	P	16 32 06.5	+0.1
	baz=285						
H29M	Whitestone	29.42	45	P	P	16 32 06.1	-0.4
	baz=278						
G29M	Pine Creek	29.47	44	P	P	16 32 06.8	-0.1
	baz=278						
KSRS	Korea Array	29.50	246	P	P	16 32 06.5	-0.9
	comp=Z,1.1nm,0.7s,baz=39,slow=8.3,SNR=2.1						

	comp=Z,1.1nm,0.7s						
I29M	Ogilvie Camp,	29.58	47	P	P	16 32 08.4	+0.6
	baz=280						
O28M	Mount Upton	29.77	56	P	P	16 32 09.9	0.0
	baz=287						
J29N	Klondike Camp	29.78	49	P	P	16 32 09.5	-0.2
	baz=282						
YUK8	Steele Glacier	29.83	55	P	P	16 32 10.1	-0.3
	baz=286						
PINM	Pinnacle	29.94	58	P	P	16 32 11.6	+0.5
	baz=288						
EPYK	Eagle Plains	30.06	45	P	P	16 32 12.5	+0.3
	baz=280						
L29M	L29M	30.11	51	P	P	16 32 13.0	+0.4
	baz=284,SNR=5.1						
M29M	Somme Creek	30.12	53	P	P	16 32 12.7	-0.1
	baz=285						
K29M	Barlow Dome	30.21	50	P	P	16 32 13.7	+0.2
	baz=283						
F30M	Barrier River	30.24	42	P	P	16 32 13.6	0.0
	baz=278						
YUK4	Talbot Arm	30.33	55	P	P	16 32 14.9	+0.2
	baz=286						
I30M	Mount Dempster	30.40	47	P	P	16 32 15.1	-0.2
	baz=282						
J30M	Hart River	30.56	48	P	P	16 32 16.3	-0.4
	baz=283						
YUK6	Outpost Mounta	30.58	55	P	P	16 32 17.3	+0.3
	baz=287						
O29M	Mount Kennedy	30.67	57	P	P	16 32 18.2	+0.5
	baz=288						
M30M	Minto, Yukon	30.84	52	P	P	16 32 18.9	-0.2
	baz=286						
G31M	Satah River	30.93	43	P	P	16 32 19.5	-0.2
	baz=281						
MAYO	Mayo, Yukon	30.97	50	P	P	16 32 20.3	+0.2
	baz=285						
INK	Inuvik	30.98	40	P	P	16 32 20.8	+0.6
INK				IAmb	IAmb	16 32 29.8	
	comp=Z,17nm,1.4s						
INK	Inuvik	30.98	40	P	P	16 32 20.8	+0.6
INK				pmax	pmax		
	comp=Z,17nm,1.4s						
INK	Inuvik	30.98	40	P	P	16 32 20.3	+0.2
	baz=279						
HYT	Haines Junctio	31.02	55	P	P	16 32 20.6	-0.1
	baz=288						
N30M	Aishikik Lake	31.02	54	P	P	16 32 20.5	-0.1
	baz=287						
F31M	Tsiigehtchic	31.04	42	P	P	16 32 19.7	-0.9
	baz=280						
H31M	Peel River	31.11	45	P	P	16 32 21.0	-0.5
	baz=282						
P29M	Windy Craggy	31.29	58	P	P	16 32 23.5	+0.5
	baz=290						
P30M	Million Dollar	31.50	57	P	P	16 32 25.5	+0.6
	baz=290						
N31M	Braeburn, Yuko	31.61	54	P	P	16 32 25.9	+0.1
	baz=288						
O30N	Mendenhall	31.69	55	P	P	16 32 26.8	+0.2
	baz=289						
PLBC	Pleasant Camp	32.00	58	P	P	16 32 29.4	+0.1
	baz=291						
M31M	Drury Creek, Y	32.02	52	IAmb	IAmb	16 32 32.2	
	comp=Z,6.8nm,0.9s						
M31M	Drury Creek, Y	32.02	52	P	P	16 32 29.5	+0.2
	baz=288						
WHY	Whitehorse	32.29	55	P	P	16 32 32.1	+0.2
	baz=290						
SKAG	Skagway	32.50	57	P	P	16 32 33.6	0.0
	baz=292						
S31K	Pelican	32.62	60	P	P	16 32 35.5	+0.8
	baz=293						
N32M	Quiet Lake	32.95	54	P	P	16 32 37.4	-0.2
	baz=290						
A36M	Sachs Harbour	33.20	33	P	P	16 32 38.9	-0.6
	baz=280						
P32M	Atlin	33.22	56	P	P	16 32 39.8	-0.1
	baz=292						
R32K	Eaglecrest	33.34	59	P	P	16 32 40.9	0.0
	baz=294						
P33M	Teslin, Yukon	33.41	55	P	P	16 32 41.5	-0.1
	baz=292						
SIT	Sitka	33.44	61	P	P	16 32 41.4	-0.3
	baz=295						
S32K	Killisnoo	33.63	60	P	P	16 32 43.9	+0.4
	baz=295						
C36M	Paulatuk	34.14	37	P	P	16 32 47.7	-0.1
	baz=285						
Q32M	Nakina River	34.14	57	P	P	16 32 48.1	-0.1
	baz=294						
R33M	Jennings River	34.58	56	P	P	16 32 51.1	-0.8
	baz=294						
U33K	Whale Pass	34.95	62	P	P	16 32 55.7	+0.9
	baz=297						
S34M	Telegraph Cree	35.12	58	P	P	16 32 56.3	-0.1
	baz=296						
WRAK	Wrangell Islan	35.19	61	P	P	16 32 57.1	+0.1
	baz=297						
CRAG	Craig	35.24	63	P	P	16 32 57.4	0.0
	baz=298						
WTLY	Watson Lake, Y	35.30	54	P	P	16 32 57.4	-0.5
	baz=294						
T35M	Bob Quinn	35.97	59	P	P	16 33 02.9	-0.8
	baz=298						
H11N2	WAKE ISLAND Hy	36.05	173	T	T	17 11 13.5	
	baz=356,slow=76,SNR=123						
H11N3	WAKE ISLAND Hy	36.06	173	T	T	17 11 13.7	
	baz=356,slow=76,SNR=45						
H11N1	WAKE ISLAND Hy	36.06	173	T	T	17 11 16.6	
	baz=356,slow=76,SNR=69						
V35K	Ketchikan	36.07	62	P	P	16 33 03.8	-0.6
	baz=299						
HHC	Hu-ho-hao-te	36.10	268	*e*P	P	16 33 04.1	-1.0
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,190nm,5.0s						
TOAD	Toad River Com	37.48	54	P	P	16 33 18.3	+1.7
	baz=298						
NJ2	Nanjing	38.42	250	*e*P	P	16 33 24.3	-0.3
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
YKA	Yellowknife Ar	40.34	45	P	P	16 33 41.5	+1.2
	comp=Z,2.0nm,0.8s,baz=267,slow=7.6,SNR=9.6						
	comp=Z,2.0nm,0.8s						
GTA	Gaotai	43.72	275	*e*P	P	16 34 09.5	+1.1
GTA				sP	sP	16 34 22.8	+1.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
DGZ	Jazzator, Alta	43.80	295	*i* P	P	16 34 07.5	-1.4
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SPITS	Spitsbergen Ar	44.81	351	P	P	16 34 16.6	+0.1
	comp=Z,5.2nm,0.7s,baz=71,slow=6.3,SNR=8.4						
	comp=Z,5.2nm,0.7s						
BLKN	Baker Lake	46.18	36	P	P	16 34 27.4	0.0
BLKN				IAmb	IAmb	16 34 37.1	
	comp=Z,6.7nm,1.0s						
WMQ	Urumqi	47.44	289	*e*P	P	16 34 36.0	-1.7
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				LR	LR		
	comp=Z,1µm,24.1s						
KURK	Kurchatov	47.56	301	P	P	16 34 35.5	-2.9
KURK				IAmb	IAmb	16 34 38.5	
	comp=Z,6.2nm,1.1s						
KURK	Kurchatov	47.56	301	*i* P	P	16 34 36.6	-1.8
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURBB	Kurchatov Arra	47.67	301	P	P	16 34 38.0	-1.3
	comp=Z,2.7nm,0.8s,baz=57,slow=7.9,SNR=9.5						
	comp=Z,2.7nm,0.8s						
MK31	Makanchi Array	48.30	295	*i* P	P	16 34 42.8	-1.4
MKAR	Makanchi Array	48.30	295	P	P	16 34 42.0	-2.2
	comp=Z,1.1nm,0.6s,baz=63,slow=6.8,SNR=8.9						
	comp=Z,1.1nm,0.6s						
MKAR	Makanchi Array	48.30	295	P	P	16 34 42.5	-1.7
MKAR	Makanchi Array	48.30	295	*i* P	P	16 34 43.2	-1.0
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MAKZ	Makanchi	48.45	295	P	P	16 34 43.7	-1.7
MAKZ				IAmb	IAmb	16 34 45.1	
	comp=Z,6.2nm,1.3s						
MAKZ	Makanchi	48.45	295	P	P	16 34 43.7	-1.7
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BVAR	Borovoye Array	49.88	308	P	P	16 34 54.6	-1.5
	comp=Z,0.9nm,0.5s,baz=64,slow=9.6,SNR=4.8						
	comp=Z,0.9nm,0.5s						
PZH	PanZhiHua	52.12	262	P	P	16 35 14.0	+0.5
ARTI	Arti	52.53	317	*d i*P	P	16 35 17.1	+1.1
ARTI						16 36 23.2	
ARTI						16 37 18.6	
ARTI				S	S	16 42 42.3	+2.0
ARTI				SS	SS	16 46 18.4	+0.5
ARTI				pmax	pmax		
	comp=Z,6.0nm,1.4s						
NVAR	Mina Array Bea	53.62	73	P	P	16 35 26.8	+2.2
	comp=Z,0.9nm,0.7s,baz=262,slow=4.1,SNR=3.8						
	comp=Z,0.9nm,0.7s						
PDAR	Pinedale Array	55.09	64	P	P	16 35 36.4	+1.2
	comp=Z,0.6nm,0.7s,baz=354,slow=3.4,SNR=5.4						
	comp=Z,0.6nm,0.7s						
AAK	Ala-Archa	55.18	296	P	P	16 35 35.1	-0.7
AAK				IAmb	IAmb	16 35 36.4	
	comp=Z,6.4nm,1.1s						
AAK	Ala-Archa	55.18	296	P	P	16 35 35.1	-0.7
AAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KLMR	Klimovskoe	55.40	330	*e*P	P	16 35 34.7	-2.2
KLMR				pmax	pmax		
	comp=Z,11nm,1.0s						
KK31	Karatay Array	56.84	299	IAmb	IAmb	16 35 47.6	
	comp=Z,7.1nm,1.1s						
KKAR	Karatay Array	56.84	299	P	P	16 35 45.8	-1.6
KKAR	Karatay Array	56.84	299	P	P	16 35 45.8	-1.6
FIA1	FINESS Array S	58.28	337	P	P	16 35 57.0	-0.2
FINES	FINESS Array B	58.28	337	P	P	16 35 56.1	-1.2
	comp=Z,8.0nm,0.6s,baz=32,slow=8.1,SNR=44						
	comp=Z,8.0nm,0.6s						
FINES	FINESS Array B	58.28	337	*i* P	P	16 35 57.2	-0.1
FINES				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CMAR	Chiang Mai Arr	60.06	259	P	P	16 36 09.4	-0.8
	comp=Z,0.9nm,0.9s,baz=19,slow=7.1,SNR=4.9						
CMAR				PcP	PcP	16 36 55.5	-0.3
	comp=Z,2.4nm,0.8s,baz=14,slow=3.5,SNR=12						
	comp=Z,0.9nm,0.9s						
CMAR	Chiang Mai Arr	60.06	259	P	P	16 36 09.4	-0.8
CMAR						16 36 56.2	
NB2	NORSAR Subarra	61.43	345	P	P	16 36 18.5	-0.5
	comp=Z,2.7nm,0.8s,baz=20,slow=6.9						
NOA	NORSAR Array B	61.43	345	P	P	16 36 18.0	-1.0
	comp=Z,1.9nm,0.9s,baz=19,slow=6.8,SNR=8.0						
	comp=Z,1.9nm,0.9s						
HFS	Hagfors	61.90	343	P	P	16 36 21.8	-0.2
	comp=Z,1.5nm,0.6s,baz=48,slow=2.2,SNR=6.9						
	comp=Z,1.5nm,0.6s						
PABE	Paberze	64.12	335	P	P	16 36 36.8	-0.1
AKASG	Malin Array Be	67.09	330	P	P	16 36 55.8	-0.4
	comp=Z,1.7nm,0.5s,baz=31,slow=6.0,SNR=7.8						
	comp=Z,1.7nm,0.5s						
TXAR	Lajitas Array	68.39	70	P	P	16 37 06.2	+1.4
	comp=Z,0.7nm,0.7s,baz=301,slow=5.2,SNR=10.0						
	comp=Z,0.7nm,0.7s						
TXAR	Lajitas Array	68.39	70	P	P	16 37 05.9	+1.1
KBZ	Khabaz	68.59	317	P	P	16 37 05.3	-0.3
	comp=Z,2.4nm,0.8s,baz=9.6,slow=5.1,SNR=4.4						
	comp=Z,2.4nm,0.8s						
EKA	Eskdalemuir Ar	68.73	351	P	P	16 37 05.8	-0.6
	comp=Z,0.9nm,0.6s,baz=9.7,slow=5.2,SNR=2.3						
	comp=Z,0.9nm,0.6s						
OJC	Ojcow	69.98	336	P	P	16 37 14.4	+0.2
OJC	Ojcow	69.98	336	P	P	16 37 14.4	+0.2
STHS	Stebnicka Huta	70.38	334	*e*P	P	16 37 16.9	+0.2
STHS	Stebnicka Huta	70.38	334	*e*P	P	16 37 16.9	+0.2
MORC	Moravsky Berou	70.92	337	IAmb	IAmb	16 37 21.6	
	comp=Z,5.9nm,0.9s						
BUR08	Bucovina Ar. S	70.98	331	P	P	16 37 20.6	+0.1
BUR08				IAmb	IAmb	16 37 21.5	
	comp=Z,4.0nm,0.8s						
BURAR	Bucovina Array	71.01	331	P	P	16 37 20.7	0.0
BURAR				IAmb	IAmb	16 37 21.8	
	comp=Z,3.9nm,0.8s						
LANS	Liptovska Anna	71.06	335	*e*P	P	16 37 22.7	+1.9
LANS	Liptovska Anna	71.06	335	*e*P	P	16 37 22.7	+1.9
ZST	Bratislava	72.50	336	*e*P	P	16 37 29.3	-0.2
ZST	Bratislava	72.50	336	*e*P	P	16 37 29.3	-0.2
GERES	GERESS Array B	72.62	339	P	P	16 37 30.3	0.0
	comp=Z,0.6nm,0.7s,baz=337,slow=2.2,SNR=2.5						
	comp=Z,0.6nm,0.7s						
PSI	Prapat	73.02	249	P	P	16 37 32.9	-0.2
	comp=Z,5.1nm,0.5s,baz=68,slow=12,SNR=3.8						
	comp=Z,5.1nm,0.5s						
RPSI	Rantau Prapat	73.11	249	P	P	16 37 32.9	-0.6
BRTR	Keskin Array B	75.48	322	P	P	16 37 46.2	-0.9
	comp=Z,1.6nm,0.7s,baz=49,slow=2.9,SNR=7.2						
	comp=Z,1.6nm,0.7s						
BRTR	Keskin Array B	75.48	322	*i* P	P	16 37 47.2	0.0
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRA	Warramunga Arr	79.02	207	P	P	16 38 06.9	0.0
	comp=Z,1.1nm,0.7s,baz=19,slow=5.4,SNR=8.1						
	comp=Z,1.1nm,0.7s						
ASAR	Alice Springs	82.69	206	P	P	16 38 26.4	0.0
	comp=Z,2.1nm,0.7s,baz=14,slow=5.4,SNR=26						
	comp=Z,2.1nm,0.7s						
ASAR	Alice Springs	82.69	206	P	P	16 38 27.1	+0.6
ASAR	Alice Springs	82.69	206	P	P	16 38 27.1	+0.6
ESDC	Sonseca Array	84.31	350	P	P	16 38 34.9	0.0
	comp=Z,0.8nm,0.8s,baz=359,slow=3.7,SNR=3.6						
	comp=Z,0.8nm,0.8s						
RAYN	Ar Rayn	84.76	305	P	P	16 38 36.1	-1.3
RAYN				IAmb	IAmb	16 38 38.4	
	comp=Z,7.2nm,1.4s						
RAYN	Ar Rayn	84.76	305	P	P	16 38 36.1	-1.3
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.4s						
QSPA	South Pole Qui	145.43	180	PKPbc	PKPdf	16 45 39.6	+0.2
	comp=Z,10nm,0.9s,baz=162,slow=1.5,SNR=10.0						
QSPA	South Pole Qui	145.43	180	PKPdf	PKPdf	16 45 39.4	0.0

KRSC ***23*** *16:28:42.3±0.9, 55°.56N×162°.77E, h24^{km}±19^{km}, Ml4.0*

IDC ***23*** *16:28:43.2±2.3, 55°.66N×162°.50E, h0^{km}, mb3.8/4, mbtmp3.7/5, ML2.4/1, Error ellipse: s-maj=51.0km s-min=32.5km az=141.0*

MOS ***23*** *16:28:44.3±0.7, 55°.65N×162°.71E, h28^{km}, mb3.6/1, Error ellipse: s-maj=9.7km s-min=5.9km az=67.2*

NEIC ***23*** *16:28:45.0±1.3, 55°.8N±0°.1×162°.0E±0°.3, h10^{km}±1^{km}, mb4.3/21, Error ellipse: s-maj=28.6km s-min=17.3km az=131.0*

ISC 23 16:28:44.2±1.4, **55°.63N**±0°.04×**162°.55E**±0°.04, **h9**^{km}±9^{km}, **n91**, σ**1^{s}.24**/117, **mb4.1**/13, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.60	15	PN	Pg	16 28 55.6	-0.2
KBTR	Krutoberegovo	0.60	15	*e*P	Pg	16 28 55.7	-0.2
KBG	Krutoberegovo	0.63	8	PN	Pb	16 28 56.2	-1.2
KBG				S	Sg	16 29 04.8	+0.1
KBG	Krutoberegovo	0.63	8	*e*P	Pb	16 28 56.2	-1.2
KBG				*e*S	Sg	16 29 04.8	+0.1
ZLN	Zelenaya	1.06	292	PN	Pb	16 29 04.3	-0.4
ZLN				S	Sb	16 29 19.4	+0.7
ZLN	Zelenaya	1.06	292	*e*P	Pb	16 29 04.4	-0.4
ZLN				*e*S	Sb	16 29 19.4	+0.7
BZGR	Bezymyannyi-Gr	1.09	287	PN	Pb	16 29 04.4	-0.9
BZGR				S	Sb	16 29 20.8	+1.1
BZGR	Bezymyannyi-Gr	1.09	287	*e*P	Pb	16 29 04.4	-0.9
BZGR				*e*S	Sb	16 29 20.8	+1.1
SMKR	Semkarok	1.13	328	PN	Pn	16 29 05.0	-1.3
SMKR	Semkarok	1.13	328	*e*P	Pn	16 29 05.0	-1.3
BZWR	Bezymyannyi-We	1.21	287	PN	Pn	16 29 06.5	-0.9
BZWR				S	Sb	16 29 23.3	+0.3
BZWR	Bezymyannyi-We	1.21	287	*e*P	Pn	16 29 06.5	-0.9
BZWR				*e*S	Sb	16 29 23.4	+0.3
KLY	Klyuchi	1.27	303	PN	Pn	16 29 05.4	-2.6
KLY	Klyuchi	1.27	303	*e*P	Pn	16 29 05.4	-2.6
KIRR	Kirishev	1.29	285	PN	Pn	16 29 07.9	-0.6
KIRR				S	Sb	16 29 26.7	+1.4
KIRR	Kirishev	1.29	285	*e*P	Pn	16 29 08.0	-0.6
KIRR				*e*S	Sb	16 29 26.8	+1.4
TUMD	Tumrok D	1.30	252	PN	Pn	16 29 07.7	-0.8
TUMD				S	Sn	16 29 25.3	-0.7
TUMD	Tumrok D	1.30	252	*e*P	Pn	16 29 07.8	-0.8
TUMD				*e*S	Sn	16 29 25.4	-0.7
KMNR	Kamenistaya	1.31	276	PN	Pn	16 29 09.1	+0.3
KMNR				S	Sb	16 29 27.6	+1.5
KMNR	Kamenistaya	1.31	276	*e*P	Pn	16 29 09.1	+0.3
KMNR				*e*S	Sb	16 29 27.6	+1.5
KZV	Kizimen	1.39	249	PN	Pn	16 29 09.3	-0.6
KZV				S	Sn	16 29 27.7	-0.7
KZV	Kizimen	1.39	249	*e*P	Pn	16 29 09.3	-0.6
KZV				*e*S	Sn	16 29 27.7	-0.7
KOZ	Kozyrevsk	1.57	287	PN	Pn	16 29 12.6	+0.4
KOZ				S	Sb	16 29 34.8	+1.5
KOZ	Kozyrevsk	1.57	287	*e*P	Pn	16 29 12.7	+0.4
KOZ				*e*S	Sb	16 29 34.8	+1.5
SRDR	Sredinnyy	1.73	295	PN	Pn	16 29 14.9	+0.4
SRDR				S	Sn	16 29 37.6	+0.8
SRDR	Sredinnyy	1.73	295	*e*P	Pn	16 29 15.0	+0.4
SRDR				*e*S	Sn	16 29 37.7	+0.8
ESO	Esso	2.19	279	PN	Pn	16 29 21.4	+0.6
ESO	Esso	2.19	279	*e*P	Pn	16 29 21.4	+0.6
KII	Karymskiy	2.40	230	PN	Pn	16 29 24.0	+0.3
KII	Karymskiy	2.40	230	*e*P	Pn	16 29 24.0	+0.3
SPN	Mys Shipunski	2.94	211	PN	Pn	16 29 29.3	-1.7
SPN	Mys Shipunski	2.94	211	*e*P	Pn	16 29 29.3	-1.7
SPN				*e*S	Sn	16 30 02.9	-3.5
NLC	Nalytchevo	3.10	219	*e*S	Sn	16 30 09.9	-0.3
SDLR	Sedlovina	3.18	224	PN	Pn	16 29 34.9	+0.4
SDLR	Sedlovina	3.18	224	*e*P	Pn	16 29 34.9	+0.4
KRX	Arik	3.22	227	PN	Pn	16 29 36.4	+1.4
KRX	Arik	3.22	227	*e*P	Pn	16 29 36.5	+1.4
SMAR	Somma	3.23	224	PN	Pn	16 29 35.2	0.0
SMAR	Somma	3.23	224	*e*P	Pn	16 29 35.3	0.0
AVH	Avacha	3.25	225	PN	Pn	16 29 37.2	+1.8
AVH	Avacha	3.25	225	*e*P	Pn	16 29 37.3	+1.8
UGLR	Uglovaya	3.26	223	PN	Pn	16 29 35.9	+0.4
UGLR	Uglovaya	3.26	223	*e*P	Pn	16 29 36.0	+0.4
KOK	Koryaka	3.27	226	PN	Pn	16 29 37.1	+1.4
KOK	Koryaka	3.27	226	*e*P	Pn	16 29 37.2	+1.4
GNL	Ganaly	3.31	236	PN	Pn	16 29 37.5	+1.4
GNL	Ganaly	3.31	236	*e*P	Pn	16 29 37.6	+1.4
DALK	Dalny	3.42	222	PN	Pn	16 29 37.3	-0.3
DALK				S	Sn	16 30 18.4	+0.1
DALK	Dalny	3.42	222	*e*P	Pn	16 29 37.4	-0.3
DALK				*e*S	Sn	16 30 18.4	+0.1
PET	Petropavlovsk	3.47	223	Pn	Pn	16 29 37.5	-0.8
PET	Petropavlovsk	3.47	223	PN	Pn	16 29 38.3	+0.1
PET				S	Sn	16 30 19.8	+0.4
PET	Petropavlovsk	3.47	223	*e*P	Pn	16 29 38.4	+0.1
PET				*e*S	Sn	16 30 19.9	+0.4
PEA0B	Petropavlovsk-	3.80	230	Pn	Pn	16 29 42.6	-0.3
PEA0B	Petropavlovsk-	3.80	230	PN	Pn	16 29 42.6	-0.3
PETK	Petropavlovsk-	3.80	230	Pn	Pn	16 29 43.4	+0.5
	1.4nm,0.3s,baz=90,slow=20,SNR=6.7						
PETK				Sn	Sb	16 30 35.2	-2.3
	2.1nm,0.3s,baz=84,slow=19,SNR=4.2						
	2.6nm,0.7s						
PETK	Petropavlovsk-	3.80	230		Pn	16 29 41.7	-1.2
PETK	Petropavlovsk-	3.80	230	PN	Pn	16 29 41.7	-1.2
KRMR	Karymshinskiy	3.82	225	PN	Pn	16 29 44.4	+1.3
KRMR				S	Sn	16 30 28.8	+0.7
KRMR	Karymshinskiy	3.82	225	*e*P	Pn	16 29 44.4	+1.3
KRMR				*e*S	Sn	16 30 28.8	+0.7
GRL	Gorelyy	4.06	222	PN	Pn	16 29 48.0	+1.5
GRL	Gorelyy	4.06	222	*e*P	Pn	16 29 48.1	+1.5
MTVR	Mutnovka	4.07	221	PN	Pn	16 29 47.8	+1.1
MTVR	Mutnovka	4.07	221	*e*P	Pn	16 29 47.9	+1.1
LVA	Lava Point	18.05	82		P	16 32 57.9	+2.4
M14K	Bethel	19.22	60	P	Pn	16 33 10.3	+1.2
M14K				IAmb	IAmb	16 33 48.7	
	comp=Z,40nm,1.4s						
H17K	Granite Mounta	20.49	48	P	Pn	16 33 24.8	+0.6
H17K				IAmb	IAmb	16 33 34.0	
	comp=Z,21nm,1.5s						
C18K	Utukok River	20.95	37	P	Pn	16 33 29.1	-0.5
TIXI	Tiksi	21.45	331	P	P	16 33 33.2	+0.9
	comp=Z,3.9nm,0.3s,baz=122,slow=7.9,SNR=3.8						
	comp=Z,3.9nm,0.3s						
C19K	Lookout Ridge	21.65	37	P	P	16 33 36.4	+1.8
H19K	Roundabout Mou	22.02	47	P	P	16 33 41.5	+3.0
H19K				IAmb	IAmb	16 33 42.3	
	comp=Z,11nm,1.5s						
B20K	Meade River	22.75	35	P	P	16 33 47.4	+1.1
B21K	Ikpikpuk River	23.49	37	P	P	16 33 55.2	+1.4
B21K				IAmb	IAmb	16 34 01.5	
	comp=Z,12nm,1.0s						
D22K	Ayikyak River	24.00	39	P	P	16 33 59.7	+1.0
C23K	Itkillik River	24.90	37	P	P	16 34 08.4	+1.5
C23K				IAmb	IAmb	16 34 10.2	
	comp=Z,13nm,1.4s						
E24K	Your Creek	25.42	41	P	P	16 34 13.2	+1.4
E24K				IAmb	IAmb	16 34 19.7	
	comp=Z,5.3nm,1.1s						
G24K	Hadweenzic Riv	25.74	45	P	P	16 34 16.3	+1.7
G24K				IAmb	IAmb	16 34 21.9	
	comp=Z,18nm,1.4s						
ILAR	Eielson Array	26.03	49	P	P	16 34 17.9	+0.7
	comp=Z,1.1nm,0.9s,baz=259,slow=7.3,SNR=4.3						
	comp=Z,1.1nm,0.9s						
D25K	Kavik River	26.30	39	P	P	16 34 20.7	+1.0
D25K				IAmb	IAmb	16 34 23.3	
	comp=Z,2.6nm,0.8s						
BMAR	Burnt Mountain	26.88	43	P	P	16 34 26.6	+1.7
C27K	Jago River	27.26	38	P	P	16 34 29.6	+1.4
D27M	Malcolm River	28.22	39	P	P	16 34 38.1	+1.1
D27M				IAmb	IAmb	16 34 38.3	
	comp=Z,3.8nm,1.2s						
I28M	Miner Creek	28.89	47	P	P	16 34 44.8	+1.8
I28M				IAmb	IAmb	16 34 55.9	
	comp=Z,4.6nm,1.4s						
KURK	Kurchatov	47.63	301	P	P	16 37 16.0	-4.2
KURK				IAmb	IAmb	16 37 56.0	
	comp=Z,4.3nm,1.3s						
FIA1	FINESS Array S	58.35	337	P	P	16 38 37.4	-1.7
FINES	FINESS Array B	58.35	337	P	P	16 38 38.0	-1.0
	comp=Z,1.3nm,0.7s,baz=29,slow=8.7,SNR=6.1						
	comp=Z,1.3nm,0.7s						
FINES	FINESS Array B	58.35	337	P	P	16 38 37.6	-1.4
FINES	FINESS Array B	58.35	337	P	P	16 38 38.0	-1.0
NOA	NORSAR Array B	61.49	345	P	P	16 39 01.1	+0.4
	comp=Z,0.1nm,0.4s,baz=15,slow=6.9,SNR=3.4						
	comp=Z,0.1nm,0.4s						
NC602	NORSAR Array S	61.73	344	P	P	16 39 02.6	+0.4
FAKI	Fak Fak	63.43	214	P	P	16 39 13.6	-0.5
M63A	Gales Ferry	72.81	40	P	P	16 40 13.3	+0.6

PRU 23 16:32:05.7, 50°.38N×18°.83E, h0^{km}, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STEB	Steborice	0.81	237	*e*SG	Sg	16 32 32.1	+0.3
MORC	Moravsky Berou	1.03	234	*e*PG	Pg	16 32 24.9	-0.4
MORC				*e*SG	Sg	16 32 39.0	+0.4
MAUC	Maruska	1.21	213	*e*SG	Sg	16 32 44.2	-0.2
DPC	Dobruska-Polom	1.61	270	*e*SG	Sn	16 32 56.8	0.0

IDC ***23*** *16:37:37.1±1.0, 22°.67N×118°.68E, h0^{km}, mb3.8/9, mbtmp3.8/9, Error ellipse: s-maj=97.3km s-min=15.7km az=65.0*

NEIC ***23*** *16:37:39.7±1.4, 22°.65N±0°.07×118°.52E±0°.07, h14^{km}±5^{km}, mb4.4/6, Error ellipse: s-maj=10.4km s-min=9.0km az=171.0*

ISC 23 16:37:39.6±0.7, **22°.61N**±0°.09×**118°.50E**±0°.06, **h17**^{km}, **n26**, σ**0^{s}.55**/26, **mb3.8**/11, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPUB	Ta-pu	2.08	70		Pn	16 38 12.8	-0.9
TWG	Pinlang	2.38	84		Pn	16 38 17.7	-0.2
SSLB	Suanglung	2.54	62		Pn	16 38 20.1	0.0
YULB	Yu-li	2.69	73		Pn	16 38 22.1	0.0
NACB	Ninganchiao	3.24	61		Pn	16 38 30.2	+0.6
YHNB	Yeheng	3.34	52		Pn	16 38 30.8	-0.3
TATO	Taipei	3.61	49	Pn	Pn	16 38 34.6	-0.1
HKPS	Hong Kong Po S	4.05	266	Pn	Pn	16 38 40.4	-0.4
JNU	Nakatsue	15.13	44	Pn	Pn	16 41 12.4	-0.2
JNU				IAmb	IAmb	16 41 17.2	
	comp=Z,29nm,1.3s						
KSAR	Wonju Array Be	16.85	27	Pn	Pn	16 41 33.9	-0.8
INU	Inuyama	20.54	48	P	P	16 42 17.4	+0.2
INU				IAmb	IAmb	16 42 25.0	
	comp=Z,31nm,1.5s						
SONM	Songino Array	26.98	342	P	P	16 43 21.1	+0.7
	comp=Z,0.9nm,0.8s,baz=156,slow=9.7,SNR=4.4						
	comp=Z,0.9nm,0.8s						
MKAR	Makanchi Array	37.82	319	P	P	16 44 56.2	+1.1
	comp=Z,0.7nm,0.7s,baz=115,slow=9.2,SNR=8.1						

	comp=Z,0.7nm,0.7s						
MKAR	Makanchi Array	37.82	319	P	P	16 44 56.0	+0.8
ZAA0	Zalesovo Array	40.29	330	P	P	16 45 15.5	-0.2
ZAA0				IAmb	IAmb	16 45 18.2	
	comp=Z,1.9nm,0.9s						
ZALV	Zalesovo Beam	40.29	330	P	P	16 45 15.7	0.0
	comp=Z,0.5nm,0.5s,baz=116,slow=9.8,SNR=2.5						
	comp=Z,0.5nm,0.5s						
ZALV	Zalesovo Beam	40.29	330	P	P	16 45 15.5	-0.2
KURBB	Kurchatov Arra	41.78	322	P	P	16 45 28.1	+0.1
	comp=Z,0.8nm,0.9s,baz=128,slow=7.6,SNR=5.5						
	comp=Z,0.8nm,0.9s						
PMG	Port Moresby	42.43	135	P	P	16 45 33.5	-0.2
PMG				IAmb	IAmb	16 45 39.6	
	comp=Z,10nm,0.9s						
PET	Petropavlovsk	43.01	35	P	P	16 45 37.7	-0.2
WRA	Warramunga Arr	45.03	159	P	P	16 45 55.6	+1.1
	comp=Z,1.5nm,0.7s,baz=341,slow=8.5,SNR=8.6						
	comp=Z,1.5nm,0.7s						
BVAR	Borovoye Array	47.37	322	P	P	16 46 13.2	+0.5
	comp=Z,0.4nm,0.6s,baz=134,slow=8.4,SNR=2.5						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	48.37	161	P	P	16 46 20.4	-0.4
	comp=Z,1.7nm,0.8s,baz=338,slow=6.4,SNR=30						
	comp=Z,1.7nm,0.8s						
ASAR	Alice Springs	48.37	161	P	P	16 46 21.4	+0.7
NRIK	Noril'sk	50.31	346	P	P	16 46 34.8	-0.2
	comp=Z,2.5nm,0.7s,baz=140,slow=4.9,SNR=7.6						
	comp=Z,2.5nm,0.7s						
STKA	Stephens Creek	58.51	157	P	P	16 47 34.5	-0.5
	comp=Z,1.9nm,1.0s,baz=336,slow=11,SNR=2.9						
	comp=Z,1.9nm,1.0s						

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*IDC **23** 16:38:29.6±0.8, 56°.30S×142°.45W, h0^{km}, mb4.5/6, mbtmp4.5/6, MS4.1/5, Error ellipse: s-maj=31.2km s-min=21.5km az=15.0*

*NEIC **23** 16:38:31.8±1.2, 56°.68S±0°.10×142°.4W±0°.2, h10^{km}±1^{km}, mb4.7/18, Error ellipse: s-maj=21.8km s-min=9.3km az=135.0*

ISC 23 16:38:31.4±0.6, **56°.5S**±0°.2×**142°.3W**±0°.1, **h10**^{km}, **n59**, σ**1**^{s}.**14**/37, **mb4.7**/13, **MS4.0**/5, **5C**, **Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBI	Tubuai	33.50	348	*e*LR	LR	16 53 51.3	
	1μm,25.5s						
QSPA	South Pole Qui	33.68	180	P	P	16 45 14.0	+1.8
	4.6nm,0.8s,baz=106,slow=1.6,SNR=21						
QSPA				LR	LR	16 56 15.1	
	comp=Z,285nm,19.8s,baz=103,slow=32						
	4.6nm,0.8s						
QSPA	South Pole Qui	33.68	180	P	P	16 45 09.4	-2.8
QSPA				IAmb	IAmb	16 45 40.1	
	comp=Z,14nm,0.9s						
PMSA	Palmer Station	36.87	136	LR	LR	16 57 22.8	
	comp=Z,277nm,18.3s,baz=299,slow=31						
RAR	Rarotonga	37.52	333	LR	LR	16 57 38.0	
	comp=Z,104nm,18.0s,baz=72,slow=31						
BELA	Belgrano 2	38.97	161	P	P	16 45 57.7	+0.7
BELA				IAmb	IAmb	16 46 01.0	
	comp=Z,14nm,0.9s						
PPT2	Papeete2	39.21	349	*e*LR	LR	16 56 22.0	
	comp=Z,367nm,26.2s						
PPT2				*e*LR	LR	16 56 24.7	
	comp=Z,415nm,24.8s						
PPT	Papeete	39.23	349	LR	LR	16 58 53.8	
	comp=Z,212nm,18.6s,baz=219,slow=31						
TAOE	Nuku Hiva Isla	47.54	3	*e*LR	LR	17 00 10.1	
	comp=Z,207nm,24.3s						
AFI	Afiamalu	48.09	320	P	P	16 47 12.8	+1.6
H03S2	Juan Fernandez	48.10	90	T	T	17 38 50.5	
	baz=220,slow=74,SNR=53						
H03S1	Juan Fernandez	48.10	90	T	T	17 38 55.1	
	baz=220,slow=74,SNR=89						
H03S3	Juan Fernandez	48.12	90	T	T	17 38 51.0	
	baz=220,slow=74,SNR=44						
VNA3	Neumayer Olymp	48.27	161	⇑P	P	16 47 11.6	-0.4
H03N3	Juan Fernandez	48.38	89	T	T	17 39 08.6	
	baz=223,slow=72,SNR=101						
H03N2	Juan Fernandez	48.39	89	T	T	17 39 10.3	
	baz=223,slow=72,SNR=117						
H03N1	Juan Fernandez	48.40	89	T	T	17 39 10.4	
	baz=223,slow=72,SNR=77						
VNA2	Neumayer--Watz	48.94	162	⇑P	P	16 47 17.6	+0.5
	baz=210,slow=7.3						
SNAA	Sanae	49.02	164	⇑P	P	16 47 19.1	+1.3
SNAA	Sanae	49.02	164	P	P	16 47 18.0	+0.2
	comp=Z,6.1nm,0.6s,baz=237,slow=7.3,SNR=19						
	comp=Z,6.1nm,0.6s						
SNAA	Sanae	49.02	164	P	P	16 47 16.4	-1.4
VNA1	Neumayer--Stat	49.02	162	⇑P	P	16 47 19.7	+2.0
TROLL	Troll, Antarti	49.48	166	⇑P	P	16 47 23.8	+2.5
DZM	Mont Dzumac	50.72	291	*e*LR	LR	17 02 04.2	
	comp=Z,455nm,21.9s						
TRQA	Tornquist	54.26	107	P	P	16 47 56.9	-0.4
EIDS	Eidsvold	56.36	274	P	P	16 48 13.0	+0.4
EIDS				IAmb	IAmb	16 48 13.3	
	comp=Z,6.4nm,0.9s						
STKA	Stephens Creek	56.57	262	P	P	16 48 14.8	+0.7
	comp=Z,4.2nm,0.9s,baz=134,slow=7.9,SNR=7.2						
	comp=Z,4.2nm,0.9s						
STKA	Stephens Creek	56.57	262	P	P	16 48 14.4	+0.4
INKA	Innaminka	60.23	264		P	16 48 39.7	+0.1
PB16	IPOC Station P	65.43	86	P	P	16 49 15.5	+0.5
CPUP	Villa Florida	65.77	101	P	P	16 49 15.6	-0.8
CPUP				IAmb	IAmb	16 49 16.0	
	comp=Z,3.7nm,0.9s						
AS31	Alice Springs	67.21	261		P	16 49 25.1	-0.6
ASAR	Alice Springs	67.21	261	P	P	16 49 25.1	-0.7
	comp=Z,7.8nm,0.8s,baz=143,slow=6.0,SNR=108						
	comp=Z,7.8nm,0.8s						
ASAR	Alice Springs	67.21	261		P	16 49 24.8	-0.9
LPAZ	La Paz	67.86	86	P	P	16 49 30.8	+0.2
	comp=Z,2.0nm,0.6s,baz=187,slow=3.3,SNR=8.0						
	comp=Z,2.0nm,0.6s						
LPAZ	La Paz	67.86	86	P	P	16 49 31.0	+0.5
LPAZ				IAmb	IAmb	16 49 31.9	
	comp=Z,12nm,1.4s						
H01W1	Cape Leeuwin H	68.46	239	T	T	18 05 00.2	
	baz=144,slow=75,SNR=303						
H01W2	Cape Leeuwin H	68.46	239	T	T	18 05 00.6	
	baz=144,slow=75,SNR=484						
H01W3	Cape Leeuwin H	68.47	239	T	T	18 05 01.5	
	baz=144,slow=75,SNR=266						
WR8	Warramunga Arr	69.86	264		P	16 49 41.5	-0.7
WR8				IAmb	IAmb	16 49 42.8	
	comp=Z,8.7nm,1.0s						
WRA	Warramunga Arr	69.96	264	P	P	16 49 42.4	-0.5
	comp=Z,6.2nm,0.9s,baz=144,slow=5.9,SNR=25						
	comp=Z,6.2nm,0.9s						
WRAB	Tennant Creek	69.96	264	P	P	16 49 42.1	-0.8
WRAB				IAmb	IAmb	16 49 42.9	
	comp=Z,5.0nm,0.7s						
WB0	Warramunga Arr	70.07	264		P	16 49 43.1	-0.5
FITZ	Fitzroy Crossi	76.22	258	P	P	16 50 20.0	+0.1
PSA00	Pilbara Seismi	76.48	252	P	P	16 50 21.1	-0.2
PSA00				IAmb	IAmb	16 53 07.2	
	comp=Z,7.6nm,1.4s						
KNRA	Kununurra	76.49	262	P	P	16 50 21.8	+0.3
KNRA				IAmb	IAmb	16 51 13.6	
	comp=Z,11nm,1.2s						
ELK	Elko	99.53	21	LR	LR	17 29 28.6	
	comp=Z,214nm,18.4s,baz=334,slow=31						
H10S3	ASCENSION HYDR	101.91	127	T	T	18 46 49.8	
	baz=13,slow=74,SNR=19						
H10S2	ASCENSION HYDR	101.91	127	T	T	18 46 47.7	
	baz=207,slow=74,SNR=20						
H10N3	ASCENSION HYDR	102.97	127	T	T	18 48 04.8	
	baz=206,slow=75,SNR=24						
H10N1	ASCENSION HYDR	102.97	127	T	T	18 48 00.9	
	baz=206,slow=75,SNR=22						
H10N2	ASCENSION HYDR	102.99	127	T	T	18 48 06.3	
	baz=206,slow=75,SNR=19						
ILAR	Eielson Array	120.97	358	PKP	PKPdf	16 57 22.1	-0.3
	comp=Z,1.6nm,0.9s,baz=211,slow=1.7,SNR=8.7						
ESDC	Sonseca Array	148.11	104	PKPbc	PKPbc	16 58 16.7	+0.1
	comp=Z,4.6nm,0.8s,baz=239,slow=2.6,SNR=12						
ESDC	Sonseca Array	148.11	104		PKPab	16 58 19.8	+0.2
MKAR	Makanchi Array	151.14	270	PKPbc	PKPbc	16 58 23.2	-0.6
	comp=Z,4.7nm,0.8s,baz=108,slow=3.6,SNR=18						
MKAR	Makanchi Array	151.14	270		PKPbc	16 58 22.8	-1.0
ZALV	Zalesovo Beam	153.39	285	PKPab	PKPab	16 58 39.5	-1.4
	comp=Z,2.6nm,0.8s,baz=117,slow=4.0,SNR=6.5						
BVAR	Borovoye Array	160.91	273	PKPab	PKPab	16 59 11.0	-2.4
	comp=Z,3.0nm,0.9s,baz=108,slow=4.8,SNR=8.3						

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*NEIC **23** 16:44:10.5, 50°.33N×130°.10W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.27; $M_{\theta\theta}$-4.87; $M_{\phi\phi}$4.75; $M_{r\theta}$1.54; $M_{\theta\phi}$0.19; $M_{\phi r}$1.62; Fault plane solution: $M_0$5.30000×10^{16} NP1:ϕ_s316.00000°, δ65.00000°, λ178.00000°. NP2:ϕ_s47.00000°, δ88.00000°, λ25.00000°. Principal axes: T 5.2684, Plg19.0000°, Azm274.0000°; N 0.0806, Plg65.0000°, Azm51.0000°; P -5.3490, Plg16.0000°, Azm178.0000°;*

*BJI **23** 16:44:11.0, 50°.50N×129°.70W, h10^{km}, mB5.5/11, mb4.7/49, Ms5.4/11, Ms7 5.1/11*

*IDC **23** 16:44:11.7±0.5, 50°.37N×129°.85W, h0^{km}, mb4.4/23, mbtmp4.4/32, ML4.1/8, MS4.6/65, Error ellipse: s-maj=14.1km s-min=8.4km az=43.0*

*NEIC **23** 16:44:12.7, 50°.47N×129°.91W, h12^{km}, Moment Tensor Solution. Duration: 2^s.1 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.88; $M_{\theta\theta}$-7.19; $M_{\phi\phi}$8.07; $M_{r\theta}$0.80; $M_{\theta\phi}$0.35; $M_{\phi r}$1.57; Fault plane solution: $M_0$7.87000×10^{16} NP1: ϕ_s315.97000°, δ78.11000°, λ178.00000°. NP2: ϕ_s46.38000°, δ88.05000°, λ11.90000°. Principal axes: T 8.3492, Plg10.0000°, Azm272.0000°; N -1.0614, Plg78.0000°, Azm56.0000°; P -7.2878, Plg7.0000°, Azm181.0000°;*

*NEIC **23** 16:44:12.7, 50°.57N×129°.75W, h12^{km}*

*NEIC **23** 16:44:13.8±1.2, 50°.57N±0°.04×129°.7W±0°.1, h10^{km}±1^{km}, mb5.1/397, Mww5.2/62, Mwr5.1(OTT), Error ellipse: s-maj=12.9km s-min=2.8km az=236.0*

*MOS **23** 16:44:14.1±1.0, 50°.45N×129°.71W, h26^{km}, mb5.2/47, MS4.8/4, Error ellipse: s-maj=10.4km s-min=5.1km az=110.0*

*GCMT **23** 16:44:14.8±0.1, 50°.34N±0°.01×130°.04W±0°.01, h12^{km}, MW5.2/138, Moment Tensor Solution. s54,c67; s138,c244; Duration: 1^s.0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.06±.01; $M_{\theta\theta}$-0.79±.01; $M_{\phi\phi}$0.85±.01; $M_{r\theta}$0.01±.04; $M_{\theta\phi}$0.05±.01; $M_{\phi r}$-0.22±.04; Best double couple: $M_0$0.84700×10^{17} NP1:ϕ_s228.00000°, δ80.00000°, λ8.00000°. NP2:ϕ_s136.00000°, δ82.00000°, λ170.00000°. Principal axes: T 0.9020, Plg13.0000°, Azm92.0000°; N -0.1100, Plg77.0000°, Azm280.0000°; P -0.7910, Plg2.0000°, Azm182.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 16:44:14.1±0.3, **50°.57N**±0°.04×**129°.74W**±0°.05, **h10**^{km}, **n715**, σ**1**^{s}.**58**/527, **mb5.0**/182, **MS4.6**/66, **6C-4D**, **Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBB	Bella Bella	1.91	32	Pn	Pn	16 44 46.2	-0.5
	150nm,0.3s,baz=221,slow=6.9,SNR=1043						
BBB				Sn	Sg	16 45 19.5	+4.0
	432nm,0.3s,baz=287,slow=22,SNR=6.6						
BBB				LR	LR	16 45 40.7	
	comp=Z,5μm,21.3s,baz=216,slow=42						
	692nm,0.5s						
BBB	Bella Bella	1.91	32		Pn	16 44 46.2	-0.5
BBB					Sn	16 45 10.3	-0.6
HG4B	Hotspring	1.95	333		Pn	16 44 43.0	-4.3
CBB	Campbell River	2.85	99		Pn	16 44 57.7	-2.0
MOBC	Moresby Island	2.93	333		Pn	16 44 57.4	-3.3
DIB	Dawson Inlet,	3.14	328		Pn	16 44 59.9	-3.7
OZB	Mount Ozzard	3.19	119		Pn	16 45 00.3	-4.0
RUBB	Prince Rupert	3.78	355		Pn	16 45 11.1	-1.3
CLRS	Cowichan Lake	4.04	114		Pn	16 45 13.6	-2.3
C03A	Quillayute Air	4.28	126		Pn	16 45 17.9	-1.4
PGC	Sidney	4.52	113		Pn	16 45 20.7	-1.8
B04A	Port Angeles	4.79	119		Pn	16 45 24.3	-2.0
V35K	Ketchikan	4.90	347		Pn	16 45 25.7	-2.0
V35K	Ketchikan	4.90	347	P	Pn	16 45 26.2	-1.6
	baz=166,SNR=8.8						
A04D	Lummi Island	4.93	109		Pn	16 45 26.4	-1.7
NLWA	Neilton Lookou	5.00	127		Pn	16 45 27.7	-1.6
WISH	Wishkah	5.24	129		Pn	16 45 31.1	-1.4
CRAG	Craig	5.32	339		Pn	16 45 31.6	-1.8
CRAG	Craig	5.32	339	P	Pn	16 45 31.9	-1.5
	baz=156						
U35K	Hyder	5.36	358		Pn	16 45 33.3	-0.8
U35K	Hyder	5.36	358	P	Pn	16 45 33.1	-1.0
	baz=178,SNR=8.1						
GNW	Green Mountain	5.45	121		Pn	16 45 34.1	-1.2
RADR	Rader Ridge	5.73	134		Pn	16 45 38.0	-1.2
U33K	Whale Pass	5.91	341		Pn	16 45 40.2	-1.4
U33K	Whale Pass	5.91	341	P	Pn	16 45 39.7	-2.0
	baz=158						
WRAK	Wrangell Islan	6.07	346		Pn	16 45 42.3	-1.5
WRAK	Wrangell Islan	6.07	346	P	Pn	16 45 42.4	-1.3
	baz=164						
T35M	Bob Quinn	6.43	357	P	Pn	16 45 47.9	-1.0
	baz=177,SNR=21						
LON	Longmire	6.49	123		Pn	16 45 48.7	-1.1
LON	Longmire	6.49	123	P	Pn	16 45 48.7	-1.1
T33K	Petersburg	6.54	344	P	Pn	16 45 48.5	-1.8
	baz=162						
LTY	Liberty	6.83	116		Pn	16 45 53.7	-0.7
B08A	Colville Reser	7.13	104		Pn	16 45 57.3	-1.2
G04A	Mulino	7.25	135		Pn	16 45 59.5	-0.6
SIT	Sitka	7.29	335	P	Pn	16 45 58.8	-1.8
	baz=151						
COR	Corvallis	7.40	142		Pn	16 46 01.1	-1.0
COR	Corvallis	7.40	142	P	Pn	16 46 01.1	-1.0
S34M	Telegraph Cree	7.41	354	P	Pn	16 46 00.3	-1.8
	baz=173						
MXC	Moxie City	7.43	119		Pn	16 46 01.4	-1.1
S32K	Killisnoo	7.48	339	P	Pn	16 46 01.0	-2.1
	baz=156						
HOOD	Mount Hood Mea	7.55	131		Pn	16 46 04.3	-0.1
E07A	Sunnyside	7.69	118		Pn	16 46 05.3	-0.8
R32K	Eaglecrest	8.21	342	P	Pn	16 46 11.6	-1.6
	baz=158						
S31K	Pelican	8.32	335	P	Pn	16 46 13.0	-1.7
	baz=150						
I05D	Terrebonne, OR	8.44	134		Pn	16 46 16.6	+0.2
Q32M	Nakina River	8.54	351	P	Pn	16 46 16.8	-1.1
	baz=169						
NEW	Newport	8.54	101	Pn	Pn	16 46 17.5	-0.4
	22nm,0.4s,baz=295,slow=11,SNR=43						
NEW				LR	LR	16 49 37.1	
	comp=Z,9μm,19.2s,baz=282,slow=38						
TOAD	Toad River Com	8.70	16	P	Pn	16 46 19.3	-0.6
	baz=199,SNR=18						
R33M	Jennings River	8.87	356	P	Pn	16 46 21.1	-1.3
	baz=175,SNR=17						
LIRD	Liard River Hi	9.10	12	P	Pn	16 46 24.8	-0.7
	baz=195,SNR=9.7						
P32M	Atlin	9.32	347	P	Pn	16 46 26.8	-1.7
	baz=164						
SKAG	Skagway	9.47	342	P	Pn	16 46 28.6	-1.8
	baz=158						
WTLY	Watson Lake, Y	9.58	3	P	Pn	16 46 31.1	-1.0
	baz=184,SNR=5.7						
PLBC	Pleasant Camp	9.68	339	P	Pn	16 46 31.6	-1.8
	baz=154						
P33M	Teslin, Yukon	9.82	351	P	Pn	16 46 34.1	-1.3
	baz=168						
YBH	Yreka Blue Hor	10.09	148	Pn	Pn	16 46 37.8	-1.3
	baz=350,slow=13,SNR=27						
YBH				LR	LR	16 49 53.6	
	comp=Z,143nm,20.6s,baz=312,slow=34						
BMO	Blue Mountains	10.14	120		Pn	16 46 39.2	-0.5
BMO	Blue Mountains	10.14	120	P	Pn	16 46 39.2	-0.5
P29M	Windy Craggy	10.16	336	P	Pn	16 46 38.5	-1.5
	baz=150						
P30M	Million Dollar	10.41	340	P	Pn	16 46 41.9	-1.5
	baz=154						
EDM	Edmonton	10.47	69		Pn	16 46 43.7	-0.6
EDM	Edmonton	10.47	69	P	Pn	16 46 43.7	-0.6
JTMT	Jette	10.51	100		Pn	16 46 44.1	-0.8
WHY	Whitehorse	10.52	346	P	Pn	16 46 43.1	-1.8
	baz=162						
PLID	Pearl Lake	10.73	115		Pn	16 46 46.3	-1.8
N32M	Quiet Lake	10.77	351	P	Pn	16 46 46.4	-1.9
	baz=168						
O30N	Mendenhall	10.83	343	P	Pn	16 46 47.0	-2.1
	baz=158						
O29M	Mount Kennedy	10.96	336	P	Pn	16 46 48.2	-2.7
	baz=149						
HYT	Haines Junctio	11.16	340	P	Pn	16 46 51.1	-2.7
	baz=154						
PINM	Pinnacle	11.25	332	P	Pn	16 46 52.6	-2.3
	baz=143						
N31M	Braeburn, Yuko	11.45	345	P	Pn	16 46 55.3	-2.2
	baz=160						
YUK6	Outpost Mounta	11.46	338	P	Pn	16 46 55.8	-2.2
	baz=151						
N30M	Aishikik Lake	11.65	342	P	Pn	16 46 58.4	-2.0
	baz=156						
O28M	Mount Upton	11.79	334	P	Pn	16 46 59.5	-2.9
	baz=146						
YUK4	Talbot Arm	11.88	339	P	Pn	16 47 02.1	-1.6
	baz=152						
M31M	Drury Creek, Y	11.94	349	P	Pn	16 47 02.0	-2.3
	baz=166,SNR=5.1						
YUK8	Steele Glacier	12.10	336	P	Pn	16 47 04.5	-2.2
	baz=148						
CTG	Chitna Glacier	12.27	333	P	Pn	16 47 06.0	-2.9
	baz=143						
HOPS	Hopland Field	12.50	155		Pn	16 47 11.7	-0.3
KAIM	Kayak Island	12.54	324	P	Pn	16 47 09.7	-2.7
	baz=132						
HLID	Hailey	12.57	118		Pn	16 47 11.9	-1.2
M30M	Minto, Yukon	12.64	345	P	Pn	16 47 11.9	-1.9
	baz=159						
SUTB	Sutter Butte	12.65	151		Pn	16 47 13.8	-0.2
CRQE	Cirque	12.66	329	P	Pn	16 47 11.9	-2.2
	baz=138,SNR=7.5						
YUK3	Moose Creek	12.70	336	P	Pn	16 47 13.4	-1.4
	baz=147						
M29M	Somme Creek	12.82	341	P	Pn	16 47 14.9	-1.5
	baz=154,SNR=6.4						
Q23K	Middleton Isla	12.99	319	P	Pn	16 47 16.4	-2.2
	baz=126						
MCARA	McCarthy VSAT	13.11	331	P	Pn	16 47 17.6	-2.6
	baz=140						
WRGLY	Wrigley	13.14	13	P	Pn	16 47 18.4	-2.1
	baz=198,SNR=17						
BMRM	Bremner River	13.32	327	P	Pn	16 47 21.2	-2.0
	baz=135						
BVCY	Beaver Creek	13.34	337	P	Pn	16 47 21.1	-2.2
	baz=148						
L29M	L29M	13.37	343	P	Pn	16 47 21.9	-1.9
	baz=156						
EYAK	Cordova Ski Ar	13.45	324	P	Pn	16 47 22.1	-2.7
	baz=131						
M27K	Edge Creek, AK	13.55	335	P	Pn	16 47 24.0	-2.4
	baz=145						
P23K	Montague Islan	13.76	320	P	Pn	16 47 26.2	-2.8
	baz=126						
N25K	Chitina, Valde	13.78	329	P	Pn	16 47 26.8	-2.6
	baz=137						
M26K	Nabesna, AK	13.90	334	P	Pn	16 47 28.2	-2.8
	baz=142						
K29M	Barlow Dome	13.94	346	P	Pn	16 47 29.6	-2.1
	baz=159,SNR=7.3						
ELK	Elko	14.09	129	Pn	Pn	16 47 33.8	-0.1
	0.1nm,0.3s,baz=322,slow=13,SNR=10						
ELK				LR	LR	16 52 40.4	
	comp=Z,1μm,21.4s,baz=324,slow=36						
	2.9nm,0.9s						
BCAR	Beaver Creek A	14.12	337		Pn	16 47 33.4	-0.6
L27K	Beaver Creek,	14.13	337	P	Pn	16 47 31.5	-2.6
	baz=147						
KLU	Klutina	14.15	327	P	Pn	16 47 31.3	-3.1
	baz=133,SNR=6.4						
GLI	Glacier Island	14.17	323	P	Pn	16 47 32.2	-2.5
	baz=129						
J30M	Hart River	14.47	349	P	Pn	16 47 36.5	-2.4
	baz=163						
DAWY	Dawson	14.47	343	P	Pn	16 47 36.3	-2.6
	baz=155						
L26K	Log Cabin Wild	14.50	335	P	Pn	16 47 37.0	-2.2
	baz=143						
YKA	Yellowknife Ar	14.52	29	Pn	Pn	16 47 38.9	-0.6
	0.5nm,0.3s,baz=226,slow=13,SNR=38						
YKA				Sn	Sn	16 50 18.6	-1.8
	0.4nm,0.3s,baz=223,slow=23,SNR=4.3						
	7.0nm,0.9s						
HARP	HAARP	14.54	330	P	Pn	16 47 37.1	-2.7
	baz=138						
YKAW1	Yellowknife Wh	14.55	29		Pn	16 47 38.9	-1.0
YKAW3	Yellowknife Wh	14.57	29		Pn	16 47 39.6	-0.6
NVAR	Mina Array Bea	14.60	142	Pn	Pn	16 47 39.5	-1.4
	9.4nm,1.1s,baz=318,slow=12,SNR=13						
NVAR	Mina Array Bea	14.60	142		Pn	16 47 40.4	-0.5
J29N	Klondike Camp	14.62	345	P	Pn	16 47 39.1	-1.8
	baz=158						
PWL	Port Wells	14.64	322	P	Pn	16 47 38.3	-2.8
	baz=126						
M24K	Tolsona, Glenn	14.66	328	P	Pn	16 47 38.7	-2.7
	baz=134						
SEW	Seward	14.67	318	P	Pn	16 47 38.5	-3.0
	baz=122						
SCM	Sheep Creek Mo	14.88	326	P	Pn	16 47 41.8	-2.5
	baz=131						
O22K	Cooper Landing	14.99	319	P	Pn	16 47 43.0	-2.8
	baz=123						
M23K	Glacier View	14.99	325	P	Pn	16 47 43.4	-2.4
	baz=130						
KNK	Knik Glacier	15.02	323	P	Pn	16 47 43.9	-2.3
	baz=128						
BRSE	Bradley Lake S	15.05	316	P	Pn	16 47 44.2	-2.5
	baz=118						
PAX	Paxson	15.07	332	P	Pn	16 47 44.8	-2.1
	baz=138						
I30M	Mount Dempster	15.10	349	P	Pn	16 47 45.6	-1.8
	baz=164						
BGU	Big Grassy Mou	15.10	123	IAmb	IAmb	16 47 53.9	
	comp=Z,110nm,1.8s						
KDAK	Kodiak Island	15.15	307	Pn	Pn	16 47 48.0	0.0
	comp=Z,0.2nm,0.3s,baz=91,slow=5.6,SNR=4.3						
KDAK				LR	LR	16 51 55.6	
	comp=Z,2μm,20.8s,baz=115,slow=30						
	comp=Z,26nm,1.0s						
KDAK	Kodiak Island	15.15	307	IAmb	IAmb	16 47 52.1	
	comp=Z,108nm,1.4s						
KDAK	Kodiak Island	15.15	307	*i* P	Pn	16 47 47.6	-0.3
KDAK	Kodiak Island	15.15	307	P	Pn	16 47 45.3	-2.7
	baz=109						
SLKM	Skilak Lake	15.21	319	Pn	Pn	16 47 48.6	-0.2
SLKM				IAmb	IAmb	16 47 55.4	
	comp=Z,79nm,1.4s						
SML	Sawmill	15.22	325	P	Pn	16 47 46.6	-2.3
	baz=129						
BBGB	Big Mountain B	15.32	153	IAmb	IAmb	16 47 57.3	
	comp=Z,82nm,1.1s						
RC01	Rabbit Creek A	15.33	321	P	Pn	16 47 48.0	-2.4
	baz=124						
Q20K	Shuyak Island	15.34	310	P	Pn	16 47 47.5	-3.0
	baz=112						
OHAK	Old Harbor	15.35	305	P	Pn	16 47 47.4	-3.1
	baz=106						
PMR	Palmer	15.39	323	P	Pn	16 47 48.3	-2.7
	baz=127						
HOM	Homer	15.42	315	P	Pn	16 47 49.1	-2.4
	baz=116						
SCRK	Sand Creek	15.43	336	IAmb	IAmb	16 47 57.5	
	comp=Z,151nm,1.8s						
SCRK	Sand Creek	15.43	336	P	Pn	16 47 50.2	-1.6
	baz=144,SNR=35						
H31M	Peel River	15.46	353	P	Pn	16 47 51.0	-1.1
	baz=169,SNR=10						
RIDG	Independent Ri	15.48	334	P	Pn	16 47 50.8	-1.5
	baz=142,SNR=10						
I29M	Ogilvie Camp,	15.49	346	P	Pn	16 47 51.8	-0.6
	baz=159,SNR=24						
WAT6	Susitna Watana	15.52	328	P	Pn	16 47 51.9	-1.1
	baz=133,SNR=7.0						
SII	Sitkinak Islan	15.66	302	P	Pn	16 47 52.3	-2.5
	baz=102						
CAPN	Captain Cook N	15.74	319	P	Pn	16 47 53.7	-1.9
	baz=121						
DHY	Denali Highway	15.74	329	P	Pn	16 47 54.5	-1.4
	baz=135,SNR=16						
DUG	Dugway, Tooele	15.74	125	P	Pn	16 47 59.3	+3.3
DUG				IAmb	IAmb	16 48 01.8	
	comp=Z,124nm,1.3s						
DUG	Dugway, Tooele	15.74	125	P	Pn	16 47 59.3	+3.3
DUG				pmax	pmax		
	comp=Z,124nm,1.3s						
J26L	Joseph Creek	15.76	338	P	Pn	16 47 54.9	-1.1
	baz=146,SNR=40						
HULI	Fort Hunter Li	15.79	154	IAmb	IAmb	16 48 02.1	
	comp=Z,205nm,1.2s						
K24K	Donnelly Dome	15.79	333	P	Pn	16 47 55.6	-0.7
	baz=140,SNR=13						
TIN	Tinemaha, Big	15.83	144	IAmb	IAmb	16 48 03.1	
	comp=Z,132nm,1.3s						
I28M	Miner Creek	15.83	344	P	Pn	16 47 56.0	-1.0

	baz=156						
BW06	Boulder Array	15.86	112	IAmb	IAmb	16 48 00.9	
	comp=Z,159nm,1.3s						
M22K	Willow	15.86	323	P	Pn	16 47 55.2	-2.1
	baz=126,SNR=6.2						
PD31	Pinedale Array	15.86	112	IAmb	IAmb	16 48 00.9	
	comp=Z,175nm,1.4s						
PDAR	Pinedale Array	15.86	112	Pn	Pn	16 47 59.1	+1.5
	comp=Z,0.6nm,0.3s,baz=312,slow=9.4,SNR=176						
PDAR				LR	LR	16 54 04.1	
	comp=Z,1μm,21.1s,baz=306,slow=37						
PDAR	Pinedale Array	15.86	112	Pn	Pn	16 47 56.8	-0.9
SUA	Susitna One	15.95	321	P	Pn	16 48 01.7	+3.3
SUA	Susitna One	15.95	321	P	Pn	16 47 55.9	-2.5
	baz=124						
WAT1	Susitna Watana	15.96	327	P	Pn	16 47 57.5	-1.1
	baz=132						
LAO	LASA Array	16.00	95	IAmb	IAmb	16 48 06.1	
	comp=Z,129nm,1.3s						
R18K	Karluk	16.05	305	P	Pn	16 47 57.6	-2.0
	baz=105						
O20K	Slope Mountain	16.05	315	P	Pn	16 47 58.2	-1.5
	baz=116						
Q19K	Cape Douglas,	16.07	311	P	Pn	16 47 58.3	-1.6
	baz=111						
P19K	Oil Pt	16.15	313	P	Pn	16 47 59.1	-1.9
	baz=114						
EPYK	Eagle Plains	16.24	350	IAmb	IAmb	16 48 09.0	
	comp=Z,295nm,1.8s						
EPYK	Eagle Plains	16.24	350	P	Pn	16 48 01.3	-0.8
	baz=164,SNR=25						
I27K	Kandik River	16.28	342	P	Pn	16 48 01.9	-0.8
	baz=152,SNR=16						
H29M	Whitestone	16.31	347	IAmb	IAmb	16 48 09.6	
	comp=Z,289nm,2.0s						
H29M	Whitestone	16.31	347	P	Pn	16 48 02.9	-0.1
	baz=160,SNR=22						
J25K	Salcha River,	16.31	336	P	Pn	16 48 02.8	-0.3
	baz=142,SNR=22						
CUT	Chulitna	16.31	324	IAmb	IAmb	16 48 06.6	
	comp=Z,324nm,2.0s						
CUT	Chulitna	16.31	324	P	Pn	16 48 01.7	-1.2
	baz=127						
CHIR	Chirikof Islan	16.33	299	P	Pn	16 48 00.6	-2.7
	baz=98						
SPU	Mount Spurr	16.33	319		Pn	16 48 03.2	-0.1
S11A	Rachel	16.33	137	IAmb	IAmb	16 48 10.3	
	comp=Z,167nm,1.5s						
I26K	Coal Creek Min	16.34	340	P	Pn	16 48 02.7	-0.7
	baz=148						
N20K	Mount Spurr	16.40	319	P	Pn	16 48 02.8	-1.4
	baz=120,SNR=10						
SPCR	Spurr Chakacha	16.40	319	P	Pn	16 48 02.5	-1.8
	baz=120,SNR=8.6						
SKT	Skwentna	16.54	322	P	Pn	16 48 04.2	-1.8
	baz=124						
G31M	Satah River	16.56	354	P	Pn	16 48 05.8	-0.4
	baz=170,SNR=35						
L22K	Petersville	16.57	324	IAmb	IAmb	16 48 13.2	
	comp=Z,191nm,2.0s						
HDA	Harding Lake	16.58	333	P	Pn	16 48 05.3	-1.2
	baz=139,SNR=16						
BSUT	Blindstream Ca	16.61	120		Pn	16 48 06.5	-0.8
VES	Vestal, Richgr	16.62	148	IAmb	IAmb	16 48 12.4	
	comp=Z,161nm,1.6s						
Q18K	Katmai Hardscr	16.64	309	P	Pn	16 48 05.8	-1.6
	baz=108						
MCK	McKinley	16.70	329	P	Pn	16 48 06.6	-1.4
	baz=133,SNR=10						
G30M	tAoh Zraii Nji	16.78	351	P	Pn	16 48 07.8	-1.2
	baz=166						
H27K	Steamboat Moun	16.82	343	IAmb	IAmb	16 48 17.2	
	comp=Z,176nm,1.9s						
H27K	Steamboat Moun	16.82	343	P	Pn	16 48 08.1	-1.4
	baz=153,SNR=18						
ILAR	Eielson Array	16.84	334	Pn	Pn	16 48 12.0	+2.3
	comp=Z,0.2nm,0.3s,baz=142,slow=12,SNR=54						
ILAR				PcP	PcP	16 52 56.8	0.0
	comp=Z,0.9nm,0.7s,baz=194,slow=1.9,SNR=5.8						
ILAR				LR	LR	16 54 04.1	
	comp=Z,2μm,19.4s,baz=132,slow=35						
	comp=Z,17nm,1.0s						
ILAR	Eielson Array	16.84	334	Pn	Pn	16 48 09.8	+0.1
ILAR	Eielson Array	16.84	334	P	Pn	16 48 09.8	+0.1
O19K	Port Alsworth	16.87	314	P	Pn	16 48 07.9	-2.2
	baz=114						
FURC	Furnace Creek,	16.87	142	IAmb	IAmb	16 48 15.4	
	comp=Z,366nm,1.9s						
G29M	Pine Creek	16.92	349	IAmb	IAmb	16 48 17.5	
	comp=Z,154nm,1.2s						
G29M	Pine Creek	16.92	349	P	Pn	16 48 10.2	-0.5
	baz=162						
Q17K	Contact Creek	16.97	307	P	Pn	16 48 08.8	-2.7
	baz=106						
TRF	Thorofare Moun	16.97	327	IAmb	IAmb	16 48 18.8	
	comp=Z,299nm,1.6s						
TRF	Thorofare Moun	16.97	327	P	Pn	16 48 09.8	-1.8
	baz=130,SNR=19						
ISA	Isabella, Lake	16.98	147	IAmb	IAmb	16 48 16.4	
	comp=Z,171nm,1.6s						
P18K	Big Mountain,	16.99	311	P	Pn	16 48 09.3	-2.4
	baz=110						
CCB	Clear Creek Bu	17.01	333	IAmb	IAmb	16 48 19.7	
	comp=Z,196nm,1.8s						
F31M	Tsiigehtchic	17.04	355	IAmb	IAmb	16 48 19.6	
	comp=Z,364nm,1.6s						
F31M	Tsiigehtchic	17.04	355	P	Pn	16 48 10.7	-1.5
	baz=171,SNR=58						
PLK4	Peulik 4	17.06	305	IAmb	IAmb	16 48 19.3	
	comp=Z,145nm,1.2s						
R17L	Mt. Peulik Vol	17.06	305	P	Pn	16 48 10.2	-2.3
	baz=103						
M20K	Styx River	17.13	320	P	Pn	16 48 11.1	-2.4
	baz=121						
O18K	Koktuh Hills	17.15	313	P	Pn	16 48 11.6	-2.0
	baz=112						
CLC	China Lake	17.16	145	IAmb	IAmb	16 48 18.8	
	comp=Z,173nm,1.8s						
N19K	Bonanza Creek	17.20	316	P	Pn	16 48 12.3	-2.0
	baz=116						
KTH	Kantishna Hill	17.25	327	IAmb	IAmb	16 48 18.4	
	comp=Z,310nm,1.8s						
POKR	Poker Plat Res	17.26	334	P	Pn	16 48 13.2	-1.8
	baz=139,SNR=7.9						
FFC	Flin Flon	17.30	65	P	Pn	16 48 15.1	-0.4
FFC				IAmb	IAmb	16 48 23.6	
	comp=Z,83nm,0.9s						
FFC	Flin Flon	17.30	65	P	Pn	16 48 15.1	-0.4
FFC				pmax	pmax		
	comp=Z,83nm,0.9s						
PPLA	Purkeypile	17.32	324	IAmb	IAmb	16 48 22.4	
	comp=Z,394nm,2.0s						
PPLA	Purkeypile	17.32	324	P	Pn	16 48 14.4	-1.4
	baz=125,SNR=16						
NEA2	Nenana	17.35	331	IAmb	IAmb	16 48 24.8	
	comp=Z,146nm,1.4s						
NEA2	Nenana	17.35	331	P	Pn	16 48 15.0	-1.1
	baz=135,SNR=28						
F30M	Barrier River	17.36	352	P	Pn	16 48 15.4	-0.8
	baz=167,SNR=17						
G27K	Doyon Strip	17.37	344	IAmb	IAmb	16 48 22.3	
	comp=Z,271nm,1.8s						
G27K	Doyon Strip	17.37	344	P	Pn	16 48 15.7	-0.6
	baz=154,SNR=43						
Q16K	King Salmon	17.47	308	P	Pn	16 48 15.5	-2.1
	baz=106						
CCCA	Chr Cany lake	17.51	144	IAmb	IAmb	16 48 22.6	
	comp=Z,214nm,2.0s						
P17K	Kvichak River	17.52	310	P	Pn	16 48 16.0	-2.1
	baz=108						
SZCU	Shurtz Canyon	17.59	131	IAmb	IAmb	16 48 22.3	
	comp=Z,249nm,1.8s						
BPAW	Bear Paw Mtn.	17.63	328	P	Pn	16 48 18.3	-1.3
	baz=130						
R16K	Pilot Point	17.68	304	P	Pn	16 48 18.0	-2.2
	baz=101						
K22A	Casper	17.75	108	IAmb	IAmb	16 48 24.8	
	comp=Z,127nm,1.1s						
N18K	Kilae Creek	17.77	315	P	Pn	16 48 20.0	-1.5
	baz=113,SNR=9.7						
F28M	Old Crow	17.83	347	IAmb	IAmb	16 48 26.2	
	comp=Z,205nm,1.8s						
F28M	Old Crow	17.83	347	P	Pn	16 48 21.1	-0.8
	baz=158,SNR=29						
I23K	Minto, Yukon-K	17.83	332	IAmb	IAmb	16 48 30.5	
	comp=Z,198nm,1.8s						
I23K	Minto, Yukon-K	17.83	332	P	Pn	16 48 21.0	-1.0
	baz=136,SNR=24						
G26K	Porcupine Rive	17.89	342	IAmb	IAmb	16 48 27.8	
	comp=Z,289nm,1.6s						
G26K	Porcupine Rive	17.89	342	P	Pn	16 48 21.8	-0.9
	baz=150,SNR=57						
INK	Inuvik	17.89	355	P	Pn	16 48 23.4	+0.7
	comp=Z,0.1nm,0.3s,baz=162,slow=13,SNR=22						
INK				LR	LR	16 55 20.2	
	comp=Z,3μm,20.4s,baz=180,slow=37						
	comp=Z,14nm,1.0s						
INK	Inuvik	17.89	355	IAmb	IAmb	16 48 27.7	
	comp=Z,179nm,1.9s						
INK	Inuvik	17.89	355	P	Pn	16 48 22.4	-0.3
	baz=172,SNR=21						
H24K	Noodor Dome	17.93	335	IAmb	IAmb	16 48 30.2	
	comp=Z,151nm,1.2s						
H24K	Noodor Dome	17.93	335	P	Pn	16 48 22.2	-1.1
	baz=140						
CHUM	Lake Minchumin	17.95	327	P	Pn	16 48 22.1	-1.4
	baz=127,SNR=26						
L19K	White Mountain	17.98	320	IAmb	IAmb	16 48 33.1	
	comp=Z,202nm,1.6s						
L19K	White Mountain	17.98	320	P	Pn	16 48 21.9	-2.1
	baz=119						
O17K	Koliganek Bris	18.02	311	P	Pn	16 48 22.2	-2.1
	baz=109						
M18K	Stony River	18.08	317	P	Pn	16 48 23.8	-1.4
	baz=115						
G25K	Bearman Lake	18.23	339	P	Pn	16 48 26.1	-0.8
	baz=145,SNR=38						
P16K	Nushagak River	18.24	309	P	Pn	16 48 25.4	-1.6
	baz=105						
K20K	Telida	18.28	324	P	Pn	16 48 26.3	-1.3
	baz=123,SNR=27						
O20A	White River Ci	18.29	116	IAmb	IAmb	16 48 32.2	
	comp=Z,272nm,1.8s						
N17K	Nushagak Hills	18.31	313	P	Pn	16 48 26.4	-1.6
	baz=111						
E29M	Blow River	18.32	350	P	Pn	16 48 26.9	-1.1
	baz=163						
O16K	Kokwok River B	18.44	310	P	P	16 48 28.1	-1.4
	baz=107						
BMAR	Burnt Mountain	18.46	342	P	P	16 48 31.1	+1.3
HMU	Henry Mountain	18.50	126	IAmb	IAmb	16 48 32.6	
	comp=Z,142nm,1.3s						
G24K	Hadweenzic Riv	18.50	338	IAmb	IAmb	16 48 37.2	
	comp=Z,125nm,1.4s						
G24K	Hadweenzic Riv	18.50	338	P	P	16 48 28.5	-1.6
	baz=142,SNR=30						
CHNA	Chernabura Isl	18.51	295	P	P	16 48 29.0	-1.3
	baz=91						
RSSD	Black Hills	18.52	100	P	P	16 48 30.1	-0.6
RSSD				IAmb	IAmb	16 48 36.6	
	comp=Z,199nm,1.8s						
RSSD	Black Hills	18.52	100	P	P	16 48 30.1	-0.6
RSSD				pmax	pmax		
	comp=Z,199nm,1.8s						
S14K	Fog Glacier	18.57	299	P	P	16 48 28.6	-2.5
	baz=95						
F26K	Sheenjek River	18.61	343	P	P	16 48 31.0	-0.3
	baz=150,SNR=73						
E27K	Coleen River	18.61	346	IAmb	IAmb	16 48 37.7	
	comp=Z,183nm,2.0s						
E27K	Coleen River	18.61	346	P	P	16 48 30.7	-0.6
	baz=156,SNR=24						
I21K	Tanana	18.66	330	IAmb	IAmb	16 48 38.7	
	comp=Z,227nm,1.4s						
I21K	Tanana	18.66	330	P	P	16 48 30.5	-1.3
	baz=131,SNR=22						
E28M	Babbage River	18.71	349	P	P	16 48 32.0	-0.4
	baz=160,SNR=35						
M17K	Holitna River	18.75	316	P	P	16 48 31.2	-1.7
	baz=113,SNR=6.2						
L18K	Granite Mounta	18.77	319	P	P	16 48 31.6	-1.5
	baz=116,SNR=12						
J20K	Nowinta River	18.77	326	IAmb	IAmb	16 48 41.7	
	comp=Z,251nm,1.4s						
J20K	Nowinta River	18.77	326	P	P	16 48 31.4	-1.7
	baz=125						
F25K	Christian Rive	18.82	341	P	P	16 48 33.0	-0.7
	baz=147,SNR=94						
H22K	Ishtalitna Cre	18.95	332	P	P	16 48 34.0	-1.2
	baz=134,SNR=14						
SDPT	Sand Point	19.03	296	P	P	16 48 34.5	-1.5
	baz=92						
N16K	Nishlik Lake	19.03	313	P	P	16 48 35.3	-0.8
	baz=108						
PV23	Carpenter Ridg	19.03	122	IAmb	IAmb	16 48 42.0	
	comp=Z,85nm,1.0s						
C36M	Paulatuk	19.04	6	IAmb	IAmb	16 48 42.5	
	comp=Z,205nm,1.6s						
C36M	Paulatuk	19.04	6	P	P	16 48 35.8	-0.1
	baz=191,SNR=27						
PV14	Lion Creek, Pa	19.09	122	IAmb	IAmb	16 48 41.4	
	comp=Z,163nm,1.6s						
PV04	Paradox Valley	19.13	122	IAmb	IAmb	16 48 42.3	
	comp=Z,223nm,1.7s						
G23K	Bananza Creek	19.16	335	P	P	16 48 36.9	-0.5
	baz=138,SNR=29						
ELS	Elsinore Mount	19.17	147	IAmb	IAmb	16 48 41.8	
	comp=Z,143nm,1.6s						
PV17	East Wray Mesa	19.19	122	IAmb	IAmb	16 48 42.7	
	comp=Z,357nm,2.0s						
PV16	Nyswonger Mesa	19.19	122	IAmb	IAmb	16 48 41.8	
	comp=Z,131nm,1.4s						
O15K	Ungalikthiuk R	19.19	308	P	P	16 48 36.7	-1.0
	baz=103						
J19K	Poorman	19.21	324	P	P	16 48 37.0	-0.9
	baz=122						
H21K	Melozitna Rive	19.23	330	P	P	16 48 37.6	-0.6
	baz=131,SNR=19						
F24K	Squaw Lake	19.25	339	IAmb	IAmb	16 48 44.1	
	comp=Z,149nm,1.3s						
F24K	Squaw Lake	19.25	339	P	P	16 48 37.4	-1.0
	baz=143						
I20K	Naaghedeneel	19.25	327	P	P	16 48 37.7	-0.6
	baz=126						
E25K	Arctic Village	19.25	342	P	P	16 48 37.9	-0.4
	baz=148,SNR=59						
PV03	Paradox Valley	19.27	122	IAmb	IAmb	16 48 42.5	
	comp=Z,200nm,1.7s						
M16K	Timber Creek	19.30	314	P	P	16 48 38.6	-0.4
	baz=110,SNR=7.9						
D28M	Stokes Point	19.31	350	P	P	16 48 38.9	0.0
	baz=162,SNR=22						
PV13	Radium Mtn., P	19.35	122	IAmb	IAmb	16 48 44.4	
	comp=Z,282nm,1.7s						
J18K	Innoko River	19.36	322	P	P	16 48 38.3	-1.2
	baz=119						
L17K	Donlin	19.42	317	P	P	16 48 39.0	-1.2
	baz=114						
D27M	Malcolm River	19.50	348	P	P	16 48 40.4	-0.6
	baz=158						
PFO	Pinyon Flats O	19.55	145	P	P	16 48 39.9	-2.1
	comp=Z,0.3nm,0.3s,baz=329,slow=13,SNR=6.7						
PFO				LR	LR	16 56 19.2	
	comp=Z,1μm,18.8s,baz=322,slow=38						
	comp=Z,3.6nm,0.8s						
PFO	Pinyon Flats O	19.55	145	P	P	16 48 41.6	-0.4
PFO	Pinyon Flats O	19.55	145	P	P	16 48 41.6	-0.4
PFO				pmax	pmax		
	comp=Z,111nm,2.0s						
N15K	Kwethluk River	19.57	311	P	P	16 48 40.5	-1.5
	baz=106						
COLD	Coldfoot	19.59	336	IAmb	IAmb	16 48 48.6	
	comp=Z,211nm,1.4s						
COLD	Coldfoot	19.59	336	P	P	16 48 41.1	-0.9
	baz=138,SNR=52						
K17K	Iditarod	19.66	319	P	P	16 48 41.1	-1.8
	baz=115						
IMAR	Indian Mountai	19.74	330	P	P	16 48 44.3	+0.6
L16K	Owhat River	19.77	316	P	P	16 48 42.5	-1.5
	baz=111						
H20K	Anotleneega Mo	19.80	328	P	P	16 48 42.6	-1.8
	baz=127,SNR=20						
E24K	Your Creek	19.83	339	P	P	16 48 43.4	-1.3
	baz=143						
BC3	Big Chuckawall	19.89	143	IAmb	IAmb	16 48 50.0	
	comp=Z,115nm,1.7s						
O14K	Tigyukauivet M	19.93	308	P	P	16 48 44.7	-1.1
O14K	Tigyukauivet M	19.93	308	P	P	16 48 43.9	-1.9
	baz=102						
S12K	Black Hills	19.94	297	P	P	16 48 45.0	-1.0
	baz=91						
M15K	Kasigluk River	20.00	312	P	P	16 48 45.2	-1.4
	baz=106						
G21K	Allakaket	20.01	332	P	P	16 48 45.7	-1.0
	baz=131,SNR=32						
ISCO	Idaho Springs	20.04	113	P	P	16 48 47.0	-0.5
ISCO				IAmb	IAmb	16 48 52.4	
	comp=Z,139nm,1.8s						
ISCO	Idaho Springs	20.04	113	P	P	16 48 47.0	-0.5
ISCO				pmax	pmax		
	comp=Z,139nm,1.8s						
GCSA	Galena City Sc	20.07	325	P	P	16 48 46.4	-0.9
	baz=122,SNR=5.1						
WUAZ	Wupatki	20.08	132	P	P	16 48 46.9	-0.9
WUAZ				IAmb	IAmb	16 48 49.4	
	comp=Z,132nm,1.9s						
E23K	Chandalar	20.08	338	P	P	16 48 46.6	-0.9
	baz=141						
BLYC	Blythe	20.17	141	P	P	16 48 48.2	-0.4
BLYC				IAmb	IAmb	16 48 51.5	
	comp=Z,130nm,1.9s						
C27K	Jago River	20.25	346	IAmb	IAmb	16 48 56.9	
	comp=Z,174nm,1.8s						
C27K	Jago River	20.25	346	P	P	16 48 49.1	-0.1
	baz=154,SNR=19						
J17K	VABM Dome	20.27	320	P	P	16 48 49.8	+0.4
J17K				IAmb	IAmb	16 49 02.7	
	comp=Z,96nm,1.2s						
J17K	VABM Dome	20.27	320	P	P	16 48 48.1	-1.3
	baz=116,SNR=15						
N14K	Kuskokwak Cree	20.28	310	P	P	16 48 47.8	-1.8
	baz=103						
BAR	Barrett	20.31	147	P	P	16 48 49.6	-0.6
F22K	John River	20.32	335	P	P	16 48 49.4	-0.7
	baz=136						
H19K	Roundabout Mou	20.35	327	P	P	16 48 48.8	-1.5
	baz=124						
D25K	Kavik River	20.43	343	P	P	16 48 50.1	-1.2
	baz=148						
F21K	Alatna River	20.48	333	IAmb	IAmb	16 48 57.6	
	comp=Z,127nm,1.7s						
F21K	Alatna River	20.48	333	P	P	16 48 50.4	-1.4
	baz=133,SNR=6.3						
TOLK	Toolik Lake Re	20.53	339	P	P	16 48 51.8	-0.6
	baz=142,SNR=43						
M14K	Bethel	20.62	312	P	P	16 48 53.0	-0.3
M14K				IAmb	IAmb	16 49 05.5	
	comp=Z,117nm,1.1s						
M14K	Bethel	20.62	312	P	P	16 48 51.6	-1.6
	baz=105						
Y14A	Wickenburg	20.65	137	IAmb	IAmb	16 49 01.8	
	comp=Z,94nm,1.6s						
CBX	Cerro Bola	20.65	147	IAmb	IAmb	16 49 05.7	
	comp=Z,156nm,1.3s						
GLA	Glamis	20.66	142	IAmb	IAmb	16 48 55.9	
	comp=Z,82nm,1.4s						
L15K	Ungalak Mounta	20.66	315	P	P	16 48 52.2	-1.6
	baz=108						
E22K	Anaktuvuk Pass	20.68	337	P	P	16 48 53.6	-0.4
	baz=137,SNR=48						
C26K	Camden Bay	20.70	345	P	P	16 48 53.6	-0.4
	baz=152						
FALS	False Pass	20.72	295	P	P	16 48 52.2	-2.2
	baz=88						
D24K	Happy Valley	20.78	341	P	P	16 48 54.4	-0.6
	baz=144						
H18K	Honhosa River	20.83	325	P	P	16 48 54.7	-0.8
	baz=121,SNR=35						
J16K	Anvik River	20.85	319	P	P	16 48 55.7	0.0
J16K				IAmb	IAmb	16 49 02.5	
	comp=Z,86nm,1.1s						
J16K	Anvik River	20.85	319	P	P	16 48 54.4	-1.4
	baz=113,SNR=19						
Q24A	Divide	20.86	114	IAmb	IAmb	16 49 01.5	
	comp=Z,112nm,1.8s						
K15K	Wolf Creek Mou	20.88	316	P	P	16 48 55.1	-1.1
	baz=110						
G19K	Purcell Mounta	20.92	328	IAmb	IAmb	16 49 07.0	
	comp=Z,133nm,1.2s						
G19K	Purcell Mounta	20.92	328	P	P	16 48 55.3	-1.2
	baz=125,SNR=26						
F20K	Avaraart Lake	21.03	331	P	P	16 48 56.9	-0.8
	baz=129						
D23K	Nanushuk River	21.04	339	P	P	16 48 56.9	-0.8
	baz=141,SNR=41						
L14K	Kuka Creek	21.12	313	P	P	16 48 56.9	-1.8
	baz=106						
I17K	Unalakleet	21.13	321	P	P	16 48 58.1	-0.7
I17K				IAmb	IAmb	16 49 11.6	
	comp=Z,117nm,1.2s						
I17K	Unalakleet	21.13	321	P	P	16 48 57.1	-1.6
	baz=114						
ESJX	Sierra Juarez	21.18	146	IAmb	IAmb	16 49 01.1	
	comp=Z,72nm,1.1s						
W18A	Petrified Fore	21.19	129	IAmb	IAmb	16 49 01.4	
	comp=Z,103nm,1.2s						
M13K	Dall Lake	21.20	311	P	P	16 48 57.9	-1.7
	baz=103						
C24K	Franklin Bluff	21.22	342	P	P	16 48 59.0	-0.7
	baz=145						
H17K	Granite Mounta	21.29	324	P	P	16 48 59.3	-1.2
	baz=118,SNR=44						
G18K	Tagagawik	21.32	327	P	P	16 48 60.0	-0.8
	baz=122,SNR=16						
D22K	Ayikyak River	21.45	337	IAmb	IAmb	16 49 10.0	
	comp=Z,63nm,1.1s						
D22K	Ayikyak River	21.45	337	P	P	16 49 01.8	-0.4
	baz=137,SNR=29						
E21K	Killik River	21.46	336	P	P	16 49 02.4	+0.1
	baz=134						
OGNE	Ogallala	21.48	106	P	P	16 49 02.6	-0.3
ULM	Lac du Bonnet	21.48	78	P	P	16 49 02.0	-0.6
	comp=Z,80nm,0.9s,baz=286,slow=9.8,SNR=39						
ULM				LR	LR	16 57 38.3	
	comp=Z,4μm,19.3s,baz=286,slow=37						
	comp=Z,80nm,0.9s						
ULM	Lac du Bonnet	21.48	78	P	P	16 49 02.3	-0.4
ULM	Lac du Bonnet	21.48	78	P	P	16 49 02.3	-0.4
ULM				pmax	pmax		
	comp=Z,308nm,1.5s						
SDCO	Great Sand Dun	21.48	117	IAmb	IAmb	16 49 09.6	
	comp=Z,77nm,1.4s						
F19K	Shaleruckik Mo	21.55	330	P	P	16 49 02.6	-0.6
	baz=125,SNR=29						
X18A	Snowflake	21.56	130	IAmb	IAmb	16 49 05.5	
	comp=Z,104nm,1.2s						
A36M	Sachs Harbour	21.59	4	P	P	16 49 03.8	+0.2
A36M				IAmb	IAmb	16 49 11.0	
	comp=Z,61nm,0.9s						
A36M	Sachs Harbour	21.59	4	P	P	16 49 04.2	+0.6
	baz=188,SNR=42						
C23K	Itkillik River	21.70	340	P	P	16 49 04.9	0.0
	baz=142,SNR=38						
E19K	Redstone River	21.75	331	IAmb	IAmb	16 49 22.0	
	comp=Z,74nm,0.9s						
E19K	Redstone River	21.75	331	P	P	16 49 05.2	-0.2
	baz=127,SNR=40						
VTX	Valle De La Tr	21.80	146	IAmb	IAmb	16 49 13.9	
	comp=Z,200nm,1.9s						
G17K	Kiwalik Mounta	21.84	325	P	P	16 49 05.2	-1.2
	baz=118,SNR=11						
J14K	Nanvaranak Lak	21.92	317	P	P	16 49 06.1	-1.2
	baz=108,SNR=7.5						
E20K	Nigu River	21.94	334	P	P	16 49 07.1	-0.4
	baz=130,SNR=36						
FCC	Fort Churchill	21.96	54	P	P	16 49 08.1	+0.5
FCC				IAmb	IAmb	16 49 09.9	
	comp=Z,114nm,1.0s						
FCC	Fort Churchill	21.96	54	P	P	16 49 08.1	+0.5
FCC				pmax	pmax		
	comp=Z,114nm,1.0s						
F18K	Selawik	22.04	328	P	P	16 49 07.3	-1.1
	baz=122,SNR=42						
H16K	Elim	22.06	322	P	P	16 49 07.2	-1.5
	baz=114,SNR=17						
C21K	Knifeblade Rid	22.18	336	P	P	16 49 08.6	-1.4
	baz=134,SNR=70						
K13K	Kusilvak Mount	22.18	314	P	P	16 49 08.3	-1.8
	baz=105						
D20K	Etivluk River	22.36	334	P	P	16 49 10.3	-1.7
	baz=131						
G16K	Koyuk River	22.42	324	P	P	16 49 10.7	-1.9
	baz=116,SNR=5.8						
BLKN	Baker Lake	22.42	39	P	P	16 49 12.8	+0.2
BLKN				IAmb	IAmb	16 49 17.9	
	comp=Z,125nm,1.2s						
B21K	Ikpikpuk River	22.46	337	P	P	16 49 10.8	-2.2
	baz=135						
F17K	Baldwin Pennin	22.51	327	IAmb	IAmb	16 49 21.5	
	comp=Z,90nm,1.1s						
F17K	Baldwin Pennin	22.51	327	P	P	16 49 12.2	-1.3
	baz=120,SNR=33						
T25A	Trinidad	22.53	117	IAmb	IAmb	16 49 28.7	
	comp=Z,138nm,1.5s						

M11K	**Mekoryuk**	**22.59**	**310**	P	**P**	**16 49 11.9**	**-2.5**
	baz=99						
UNV	**Unalaska Valle**	**22.60**	**293**	P	**P**	**16 49 11.4**	**-3.2**
	baz=83						
D19K	**Kuna River**	**22.65**	**333**	P	**P**	**16 49 13.6**	**-1.4**
	baz=128,SNR=20						
B22K	**Teshekpuk Lake**	**22.71**	**339**	P	**P**	**16 49 14.5**	**-1.1**
	baz=138,SNR=84						
E18K	**Tukpahlearik C**	**22.79**	**329**	IAmb	IAmb	16 49 24.7	
	comp=Z,93nm,1.5s						
E18K	**Tukpahlearik C**	**22.79**	**329**	P	**P**	**16 49 15.2**	**-1.3**
	baz=122,SNR=6.6						
G15K	**Niukluk**	**22.91**	**322**	P	**P**	**16 49 15.6**	**-2.1**
	baz=113						
EPLO	**Experimental L**	**22.97**	**78**	P	**P**	**16 49 17.4**	**-1.1**
TUC	**Tucson**	**23.01**	**135**	P	**P**	**16 49 17.9**	**-1.2**
TUC				IAmb	IAmb	16 49 21.1	
	comp=Z,48nm,1.1s						
TUC	**Tucson**	**23.01**	**135**	P	**P**	**16 49 17.9**	**-1.2**
TUC				pmax	pmax		
	comp=Z,48nm,1.2s						
TASM	**ASL Pad, Albuq**	**23.01**	**124**	IAmb	IAmb	16 49 20.5	
	comp=Z,119nm,1.8s						
TASM	**ASL Pad, Albuq**	**23.01**	**124**	IAmb	IAmb	16 49 20.6	
	comp=Z,111nm,1.8s						
TASM	**ASL Pad, Albuq**	**23.01**	**124**	IAmb	IAmb	16 49 20.5	
	comp=Z,115nm,1.8s						
TASM	**ASL Pad, Albuq**	**23.01**	**124**	IAmb	IAmb	16 49 20.6	
	comp=Z,115nm,1.8s						
ANMO	**Albuquerque**	**23.01**	**124**	P	**P**	**16 49 18.4**	**-0.8**
	comp=Z,9.9nm,1.0s,baz=311,slow=10,SNR=29						
ANMO				LR	LR	16 58 01.7	
	comp=Z,1µm,18.9s,baz=316,slow=36						
	comp=Z,9.9nm,1.0s						
ANMO	**Albuquerque**	**23.01**	**124**	P	**P**	**16 49 18.3**	**-1.0**
ANMO				IAmb	IAmb	16 49 20.5	
	comp=Z,114nm,1.8s						
ANMO	**Albuquerque**	**23.01**	**124*c***	*i*P	**P**	**16 49 17.9**	**-1.4**
ANMO				pmax	pmax		
	comp=Z,61nm,1.8s						
ABQ	**Albuquerque**	**23.01**	**124**	IAmb	IAmb	16 49 20.6	
	comp=Z,111nm,1.8s						
E17K	**Hotham Inlet**	**23.02**	**328**	P	**P**	**16 49 17.6**	**-1.3**
	baz=120,SNR=8.4						
ANM	**Nome**	**23.28**	**320**	P	**P**	**16 49 19.2**	**-2.3**
	baz=110						
B20K	**Meade River**	**23.37**	**336**	P	**P**	**16 49 21.3**	**-1.1**
	baz=132						
F15K	**North Star Dit**	**23.42**	**323**	IAmb	IAmb	16 49 29.1	
	comp=Z,84nm,1.3s						
F15K	**North Star Dit**	**23.42**	**323**	P	**P**	**16 49 20.6**	**-2.4**
	baz=113						
C19K	**Lookout Ridge**	**23.45**	**333**	IAmb	IAmb	16 49 35.9	
	comp=Z,99nm,1.6s						
C19K	**Lookout Ridge**	**23.45**	**333**	P	**P**	**16 49 21.5**	**-1.8**
	baz=127,SNR=11						
Y22A	**Socorro**	**23.52**	**126**	IAmb	IAmb	16 49 27.2	
	comp=Z,107nm,1.4s						
A22K	**Sinclair Lake**	**23.55**	**340**	P	**P**	**16 49 22.7**	**-1.4**
	baz=137						
C18K	**Utukok River**	**23.65**	**332**	P	**P**	**16 49 24.0**	**-1.3**
	baz=124,SNR=30						
D17K	**Noatak River**	**23.75**	**329**	P	**P**	**16 49 24.8**	**-1.4**
	baz=120						
RDOG	**Red Dog Mine**	**23.87**	**329**	P	**P**	**16 49 26.8**	**-0.6**
RDOG	**Red Dog Mine**	**23.87**	**329**	P	**P**	**16 49 26.2**	**-1.2**
	baz=120						
F14K	**Arctic Creek**	**23.98**	**322**	P	**P**	**16 49 26.3**	**-2.1**
	baz=111						
P08K	**Saint George I**	**24.12**	**300**	P	**P**	**16 49 27.2**	**-2.6**
	baz=88						
NIKH	**Nikolski High**	**24.12**	**291**	P	**P**	**16 49 27.4**	**-2.5**
	baz=80						
A21K	**Barrow**	**24.15**	**339**	P	**P**	**16 49 27.6**	**-2.3**
	baz=135,SNR=22						
C17K	**DeLong Mountai**	**24.18**	**330**	P	**P**	**16 49 27.4**	**-2.8**
	baz=121						
121A	**Cookes Peak, D**	**24.23**	**130**	IAmb	IAmb	16 49 34.0	
	comp=Z,102nm,1.6s						
B18K	**Kokolik River**	**24.24**	**333**	P	**P**	**16 49 28.4**	**-2.3**
	baz=124,SNR=33						
319A	**Douglas**	**24.48**	**134**	IAmb	IAmb	16 49 50.3	
	comp=Z,50nm,1.3s						
SPIA	**Saint Paul Isl**	**24.48**	**301**	P	**P**	**16 49 30.7**	**-2.4**
	baz=88						
A19K	**Wainwright**	**24.53**	**335**	P	**P**	**16 49 31.2**	**-2.2**
	baz=127,SNR=24						
TNA	**Tin City**	**24.63**	**322**	P	**P**	**16 49 32.3**	**-2.1**
	baz=109						
C16K	**Lisburne Hills**	**24.78**	**329**	IAmb	IAmb	16 49 43.0	
	comp=Z,44nm,1.2s						
C16K	**Lisburne Hills**	**24.78**	**329**	P	**P**	**16 49 33.8**	**-1.9**
	baz=118						
R32A	**Long Quarter,**	**25.05**	**107**	IAmb	IAmb	16 49 52.5	
	comp=Z,91nm,1.3s						
SPMN	**Marine on St.**	**25.15**	**88**	IAmb	IAmb	16 49 42.3	
	comp=Z,42nm,0.8s						
E38A	**The Farm, Brul**	**25.37**	**84**	IAmb	IAmb	16 49 44.5	
	comp=Z,64nm,1.2s						
EPT	**El Paso**	**25.48**	**129**	IAmb	IAmb	16 49 45.1	
	comp=Z,64nm,1.3s						
GAMB	**Gambell**	**25.74**	**317**	P	**P**	**16 49 42.6**	**-1.8**
	baz=101						
NOKA	**Waynoka**	**26.07**	**110**	IAmb	IAmb	16 49 49.1	
	comp=Z,80nm,1.3s						
MNTX	**Cornudas Mount**	**26.11**	**127**	IAmb	IAmb	16 49 49.2	
	comp=Z,40nm,1.2s						
CROK	**Carrier**	**26.73**	**109**	IAmb	IAmb	16 49 54.9	
	comp=Z,89nm,1.4s						
G40A	**Rib Lake**	**26.79**	**86**	IAmb	IAmb	16 49 55.5	
	comp=Z,41nm,1.1s						
DKNS	**Dickens**	**27.00**	**118**	IAmb	IAmb	16 49 56.9	
	comp=Z,47nm,1.3s						
POST	**Post**	**27.12**	**119**	IAmb	IAmb	16 49 58.8	
	comp=Z,54nm,1.6s						
I40A	**Norwalk**	**27.14**	**89**	IAmb	IAmb	16 49 59.1	
	comp=Z,47nm,0.8s						
OK048	**Pawnee Station**	**27.41**	**108**	IAmb	IAmb	16 50 01.1	
	comp=Z,54nm,1.1s						
WMOK	**Wichita Mounta**	**27.46**	**113**	IAmb	IAmb	16 50 01.5	
	comp=Z,49nm,1.1s						
P38A	**Dawn**	**27.54**	**99**	IAmb	IAmb	16 50 02.1	
	comp=Z,44nm,0.8s						
APMT	**Aspermont**	**27.70**	**117**	IAmb	IAmb	16 50 02.8	
	comp=Z,77nm,1.4s						
QUOK	**Quay**	**27.72**	**109**	IAmb	IAmb	16 50 03.7	
	comp=Z,60nm,1.1s						
FNO	**Franklin**	**27.92**	**111**	IAmb	IAmb	16 50 05.6	
	comp=Z,33nm,1.2s						
RES	**Resolute Bay**	**28.15**	**19**	LR	LR	17 01 16.9	
	comp=Z,2µm,20.1s,baz=218,slow=36						
P40A	**Paris**	**28.53**	**98**	IAmb	IAmb	16 50 10.8	
	comp=Z,76nm,1.5s						
N41A	**Harden Midland**	**28.62**	**95**	IAmb	IAmb	16 50 11.6	
	comp=Z,50nm,1.0s						
RLO	**Rose Lookout**	**28.75**	**107**	IAmb	IAmb	16 50 23.9	
	comp=Z,64nm,1.3s						
TX31	**Lajitas Ar. Si**	**28.88**	**127**	IAmb	IAmb	16 50 14.2	
	comp=Z,30nm,1.2s						
TXAR	**Lajitas Array**	**28.88**	**127**	P	**P**	**16 50 12.2**	**-0.9**
	comp=Z,9.1nm,1.0s,baz=326,slow=6.5,SNR=48						
TXAR				LR	LR	17 02 31.4	
	comp=Z,835nm,18.6s,baz=317,slow=38						
	comp=Z,9.1nm,1.0s						
TXAR	**Lajitas Array**	**28.88**	**127**	P	**P**	**16 50 11.7**	**-1.3**
TXAR	**Lajitas Array**	**28.88**	**127**	P	**P**	**16 50 11.7**	**-1.3**
OZNA	**Ozona**	**28.96**	**122**	IAmb	IAmb	16 50 14.1	
	comp=Z,80nm,1.9s						
U38A	**Gravette**	**28.96**	**106**	IAmb	IAmb	16 50 25.6	
	comp=Z,36nm,1.2s						
PLPT	**Palo Pinto**	**29.11**	**116**	IAmb	IAmb	16 50 15.3	
	comp=Z,41nm,1.4s						
R40A	**Maddies Statio**	**29.12**	**100**	IAmb	IAmb	16 50 58.5	
	comp=Z,54nm,1.4s						
K43A	**Burlington**	**29.18**	**89**	IAmb	IAmb	16 50 16.5	
	comp=Z,55nm,1.1s						
SAND	**Sanderson**	**29.18**	**124**	IAmb	IAmb	16 50 21.4	
	comp=Z,30nm,1.3s						
CCM	**Cathedral Cave**	**29.90**	**100**	P	**P**	**16 50 21.3**	**-0.6**
CCM				IAmb	IAmb	16 50 29.5	
	comp=Z,52nm,1.5s						
CCM	**Cathedral Cave**	**29.90**	**100**	P	**P**	**16 50 21.3**	**-0.6**
CCM				pmax	pmax		
	comp=Z,52nm,1.5s						
JCT	**Junction City**	**30.02**	**121**	IAmb	IAmb	16 50 23.3	
	comp=Z,31nm,1.1s						
P43A	**Skaggs, Pawnee**	**30.06**	**96**	IAmb	IAmb	16 50 24.4	
	comp=Z,34nm,0.8s						
WHTX	**Lake Whitney,**	**30.20**	**116**	IAmb	IAmb	16 50 25.2	
	comp=Z,35nm,1.2s						
DRIO	**Del Rio**	**30.40**	**123**	IAmb	IAmb	16 50 26.4	
	comp=Z,29nm,1.4s						
FVM	**French Village**	**30.46**	**99**	IAmb	IAmb	16 51 02.4	
	comp=Z,26nm,1.1s						
T42A	**Van Buren**	**30.63**	**101**	IAmb	IAmb	16 51 22.6	
	comp=Z,67nm,1.8s						
FCAR	**Ozark Folk Cen**	**30.71**	**104**	IAmb	IAmb	16 50 29.7	
	comp=Z,30nm,0.9s						
SLBS	**Sierra La Lagu**	**30.93**	**143**	P	**P**	**16 50 30.1**	**-1.1**
SLBS				IAmb	IAmb	16 50 31.5	
	comp=Z,29nm,1.4s						
LCAR	**Lake Charles**	**31.20**	**103**	IAmb	IAmb	16 50 33.4	
	comp=Z,35nm,1.3s						
X40A	**Basin Creek Fa**	**31.20**	**107**	IAmb	IAmb	16 51 28.8	
	comp=Z,48nm,1.6s						
CGM3	**Cape Girardeau**	**31.36**	**99**	IAmb	IAmb	16 50 34.7	
	comp=Z,26nm,1.1s						
S44A	**Carbondale**	**31.38**	**98**	IAmb	IAmb	16 50 35.4	
	comp=Z,33nm,1.1s						
SIUC	**Southern Illin**	**31.39**	**98**	IAmb	IAmb	16 50 35.5	
	comp=Z,32nm,1.1s						
P46A	**Rosedale**	**31.55**	**94**	IAmb	IAmb	16 50 37.4	
	comp=Z,29nm,1.0s						
833A	**Chaparral WMA,**	**31.92**	**123**	IAmb	IAmb	16 50 40.6	
	comp=Z,35nm,1.1s						
HKT	**Hockley**	**32.65**	**116**	P	**P**	**16 50 45.6**	**-0.5**
HKT	**Hockley**	**32.65**	**116**	P	**P**	**16 50 45.6**	**-0.5**
HKT				pmax	pmax		
	comp=Z,79nm,1.6s						
N49A	**Columbus Grove**	**32.76**	**89**	IAmb	IAmb	16 50 47.6	
	comp=Z,21nm,0.9s						
O49A	**Covington**	**33.06**	**90**	IAmb	IAmb	16 50 50.0	
	comp=Z,30nm,0.8s						
T47A	**Sharon Grove**	**33.16**	**98**	IAmb	IAmb	16 50 50.9	
	comp=Z,22nm,1.1s						
WVT	**Waverly**	**33.24**	**99**	P	**P**	**16 50 50.8**	**-0.4**
WVT				IAmb	IAmb	16 50 52.4	
	comp=Z,26nm,1.2s						
WVT	**Waverly**	**33.24**	**99**	P	**P**	**16 50 50.8**	**-0.4**
WVT				pmax	pmax		
	comp=Z,26nm,1.2s						
VLDQ	**Val d'Or**	**33.58**	**73**	IAmb	IAmb	16 50 53.9	
	comp=Z,25nm,1.0s						
SHEM	**Shemya Is, Ala**	**34.17**	**296**	LR	LR	17 02 23.2	
	comp=Z,1µm,19.2s,baz=91,slow=32						
FRB	**Frobisher Bay**	**34.25**	**44**	LR	LR	17 05 24.6	
	comp=Z,913nm,20.8s,baz=278,slow=37						
S51A	**Beattyville**	**35.00**	**94**	IAmb	IAmb	16 51 07.2	
	comp=Z,19nm,0.8s						
BILL	**Bilibino**	**35.02**	**324**	P	**P**	**16 51 06.2**	**-0.2**
BILL				IAmb	IAmb	16 51 13.1	
	comp=Z,56nm,1.4s						
BILL	**Bilibino**	**35.02**	**324**	*i* P	**P**	**16 51 06.8**	**+0.4**
BILL				pmax	pmax		
	comp=Z,47nm,1.4s						
FPAL	**Fort Paine**	**35.65**	**100**	IAmb	IAmb	16 51 12.5	
	comp=Z,34nm,1.3s						
Q54A	**Coxs Mills**	**35.97**	**90**	IAmb	IAmb	16 51 15.7	
	comp=Z,29nm,0.9s						
TKL	**Tuckaleechee C**	**36.10**	**96**	LR	LR	17 06 34.2	
	comp=Z,3µm,19.1s,baz=316,slow=37						
V53A	**Saluda**	**36.70**	**96**	IAmb	IAmb	16 51 22.2	
	comp=Z,49nm,1.0s						
M57A	**Sunshine Farm,**	**37.02**	**84**	IAmb	IAmb	16 52 03.9	
	comp=Z,55nm,1.6s						
BG3	**Lake Jocassee**	**37.05**	**97**	IAmb	IAmb	16 51 25.0	
	comp=Z,49nm,1.2s						
Y52A	**Lilburn**	**37.06**	**99**	IAmb	IAmb	16 51 25.0	
	comp=Z,32nm,1.0s						
SCHQ	**Schefferville**	**37.22**	**58**	LR	LR	17 06 27.4	
	comp=Z,2µm,18.3s,baz=291,slow=36						
BLA	**Blacksburg**	**37.28**	**92**	IAmb	IAmb	16 51 28.2	
	comp=Z,55nm,1.3s						
152A	**Waverly Hall**	**37.44**	**101**	IAmb	IAmb	16 51 27.7	
	comp=Z,34nm,0.9s						
P57A	**Homestead Farm**	**37.48**	**87**	IAmb	IAmb	16 51 28.5	
	comp=Z,23nm,1.1s						
S57A	**Dark Hollow, R**	**37.88**	**90**	IAmb	IAmb	16 51 32.5	
	comp=Z,43nm,1.3s						
R58B	**Mineral**	**38.45**	**89**	IAmb	IAmb	16 51 37.2	
	comp=Z,35nm,1.2s						
V58A	**Windy Hill, Pi**	**38.97**	**92**	IAmb	IAmb	16 51 41.1	
	comp=Z,35nm,0.9s						
T59A	**Double "B" Far**	**39.25**	**90**	IAmb	IAmb	16 51 43.6	
	comp=Z,36nm,1.2s						
SFJD	**Kangerlussuaq**	**40.92**	**36**	LR	LR	17 09 31.8	
	comp=Z,730nm,19.2s,baz=288,slow=37						
SEY	**Seymchan**	**41.74**	**318**	LR	LR	17 09 35.8	
	comp=Z,638nm,19.9s,baz=76,slow=36						
SEY	**Seymchan**	**41.74**	**318**	*e*P	**P**	**16 52 03.2**	**+0.3**
SEY				pmax	pmax		
	comp=Z,31nm,1.1s						
PET	**Petropavlovsk**	**42.66**	**302**	P	**P**	**16 52 09.8**	**-0.7**
PET				IAmb	IAmb	16 52 17.5	
	comp=Z,49nm,1.2s						
PET	**Petropavlovsk**	**42.66**	**302**	*e*P	**P**	**16 52 09.8**	**-0.7**
PEA0B	**Petropavlovsk-**	**43.13**	**303**	P	**P**	**16 52 13.8**	**-0.6**
PEA0B	**Petropavlovsk-**	**43.13**	**303**	P	**P**	**16 52 13.8**	**-0.6**
PEA0B				pmax	pmax		
	comp=Z,79nm,1.3s						
PETK	**Petropavlovsk-**	**43.13**	**303**	P	**P**	**16 52 14.2**	**-0.2**
	comp=Z,14nm,0.9s,baz=72,slow=9.3,SNR=8.9						
PETK				LR	LR	17 09 36.9	
	comp=Z,342nm,19.8s,baz=65,slow=35						
	comp=Z,14nm,0.9s						
PETK	**Petropavlovsk-**	**43.13**	**303**	P	**P**	**16 52 13.7**	**-0.6**
CMIG	**Matias Romero**	**43.49**	**127**	LR	LR	17 11 12.0	
	comp=Z,379nm,18.6s,baz=328,slow=37						
MA2	**Magadan**	**43.76**	**314**	LR	LR	17 09 27.5	
	comp=Z,547nm,20.2s,baz=76,slow=35						
TIXI	**Tiksi**	**46.31**	**335**	LR	LR	17 13 24.4	
	comp=Z,758nm,19.7s,baz=39,slow=38						
TIXI	**Tiksi**	**46.31**	**335**	P	**P**	**16 52 39.3**	**-0.2**
TIXI				IAmb	IAmb	16 52 45.7	
	comp=Z,35nm,1.4s						
TIXI	**Tiksi**	**46.31**	**335**	*i* P	**P**	**16 52 39.0**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,32nm,1.4s						
SPITS	**Spitsbergen Ar**	**49.87**	**9**	LR	LR	17 15 22.6	
	comp=Z,1µm,18.6s,baz=328,slow=37						
YAK	**Yakutsk**	**51.38**	**324**	LR	LR	17 15 37.2	
	comp=Z,519nm,18.2s,baz=67,slow=37						
YAK	**Yakutsk**	**51.38**	**324**	P	**P**	**16 53 18.6**	**+0.2**
YAK				IAmb	IAmb	16 53 25.9	
	comp=Z,24nm,0.9s						
YAK	**Yakutsk**	**51.38**	**324**	*e*P	**P**	**16 53 19.5**	**+1.0**
YAK				*e**PP	**pwP**	**16 53 30.8**	**+7.1**
YAK				*e*		16 54 34.2	
YAK				*e*		16 55 16.7	
YAK				*e*PPP	PPP	16 56 15.4	
YAK				*e*S	**S**	**17 00 39.6**	**+2.1**
YAK				*e**SS	sS	17 00 59.6	+18
YAK				*e*		17 03 09.6	
YAK				*e*SS	**SS**	**17 04 16.9**	**+4.4**
YAK				*e*SSS	SSS	17 05 51.4	
YAK				pmax	pmax		
	comp=Z,20nm,0.9s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,18nm,1.4s						
YAK				pmax	pmax		
	comp=Z,480nm,9.5s						
YAK				pmax	pmax		
	comp=N,477nm,8.3s						
YAK				pmax	pmax		
	comp=E,358nm,10.0s						
YAK				smax	smax		
	comp=N,371nm,5.9s						
YAK				smax	smax		
	comp=E,60nm,2.4s						
CHIV	**Chivirico**	**51.69**	**106**	P	**P**	**16 53 20.6**	**-0.7**
CHIV				IAmb	IAmb	16 53 22.3	
	comp=Z,65nm,1.1s						
JMIC	**Jan Mayen**	**51.73**	**21**	LR	LR	17 15 51.4	
	comp=Z,636nm,19.7s,baz=340,slow=37						
TYV	**Tymovskoe**	**52.21**	**307**	*e*P	**P**	**16 53 24.1**	**-0.7**
TYV				pmax	pmax		
	comp=Z,12nm,1.1s						
TYV				pmax	pmax		
	comp=Z,400nm,5.3s						
BORG	**Borgarnes**	**52.45**	**31**	LR	LR	17 16 01.4	
	comp=Z,481nm,21.7s,baz=310,slow=36						
JTS	**Las Juntas de**	**54.40**	**122**	LR	LR	17 20 47.5	
	comp=Z,430nm,19.0s,baz=318,slow=40						
JTS	**Las Juntas de**	**54.40**	**122**	*i* P	**P**	**16 53 40.9**	**-0.4**
JTS				pmax	pmax		
	comp=Z,22nm,1.5s						
YSS	**Yuzhno-Sakhali**	**54.54**	**303**	*e*P	**P**	**16 53 41.4**	**-0.6**
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
GRNR	**Gornyy**	**55.39**	**310⇑**	*i*P	**P**	**16 53 47.4**	**-0.7**
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,220nm,14.0s						
ASAJ	**Asahikawa**	**56.42**	**300**	LR	LR	17 19 21.5	
	comp=E,240nm,18.4s,baz=22,slow=37						
NRIK	**Noril'sk**	**57.31**	**345**	P	**P**	**16 54 03.6**	**+2.1**
	comp=E,9.5nm,1.1s,baz=20,slow=7.7,SNR=5.9						
NRIK				LR	LR	17 21 06.2	
	comp=E,504nm,19.0s,baz=46,slow=38						
	comp=E,9.5nm,1.1s						
NRIK	**Noril'sk**	**57.31**	**345**	P	**P**	**16 54 01.1**	**-0.4**
NRIK				IAmb	IAmb	16 54 08.1	
	comp=Z,28nm,1.4s						
NRIK	**Noril'sk**	**57.31**	**345**	*i* P	**P**	**16 54 00.4**	**-1.1**
NRIK				pmax	pmax		
	comp=Z,28nm,1.5s						
ZEA	**Zeya**	**57.70**	**317**	*e*P	**P**	**16 54 04.9**	**+0.4**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
H11N2	**WAKE ISLAND Hy**	**58.14**	**262**	T	T	17 56 56.8	
	baz=42,slow=76,SNR=6428						
H11N3	**WAKE ISLAND Hy**	**58.14**	**262**	T	T	17 56 56.9	
	baz=42,slow=76,SNR=4867						
H11N1	**WAKE ISLAND Hy**	**58.16**	**262**	T	T	17 56 58.1	
	baz=42,slow=76,SNR=5064						
H11S1	**WAKE ISLAND Hy**	**59.17**	**262**	T	T	17 58 07.1	
	baz=47,slow=75,SNR=293						
H11S2	**WAKE ISLAND Hy**	**59.18**	**262**	T	T	17 58 08.1	
	baz=47,slow=75,SNR=259						
H11S3	**WAKE ISLAND Hy**	**59.19**	**262**	T	T	17 58 11.3	
	baz=47,slow=75,SNR=180						
SJG	**San Juan**	**59.48**	**99**	LR	LR	17 21 11.3	
	comp=Z,430nm,19.7s,baz=338,slow=37						
TAOE	**Nuku Hiva Isla**	**59.87**	**192**	*e*LR	LR	17 11 54.6	
	comp=Z,998nm,25.7s						
HEH	**HeiHe**	**60.03**	**314**	*e*P	**P**	**16 54 19.4**	**-1.3**
HEH				pmax	pmax		
	comp=Z,34nm,1.1s						
APA	**Apatity**	**61.50**	**7⇓**	*e*P	**P**	**16 54 32.0**	**+1.5**
APA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
APA				MLR	MLR		
	comp=Z,1µm,19.7s						
USRK	**Ussuriysk Ar.**	**62.02**	**306**	P	**P**	**16 54 33.0**	**-1.3**
	comp=Z,7.4nm,0.9s,baz=58,slow=4.4,SNR=11						
	comp=Z,7.4nm,0.9s						
BNX	**BinXian**	**63.23**	**310**	⇓P	**P**	**16 54 40.3**	**-2.0**
BNX				pmax	pmax		
	comp=Z,10.0nm,1.6s						
HILR	**Hailar Array B**	**63.96**	**317**	P	**P**	**16 54 46.6**	**-0.5**
	comp=Z,9.4nm,1.0s,baz=63,slow=6.8,SNR=7.2						
	comp=Z,9.4nm,1.0s						
MJAR	**Matsushiro Arr**	**64.01**	**296**	P	**P**	**16 54 46.4**	**-1.3**
	comp=Z,3.5nm,0.9s,baz=34,slow=5.6,SNR=5.9						
MJAR				LR	LR	17 18 25.0	
	comp=Z,226nm,21.5s,baz=25,slow=32						
	comp=Z,3.5nm,0.9s						
MAJO	**Matsushiro**	**64.01**	**296**	*i* P	**P**	**16 54 46.9**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,49nm,2.9s						
NB2	**NORSAR Subarra**	**64.41**	**20**	P	**P**	**16 54 50.5**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=332,slow=6.9						
NOA	**NORSAR Array B**	**64.41**	**20**	P	**P**	**16 54 50.4**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=334,slow=6.5,SNR=6.5						
NOA				LR	LR	17 22 39.2	
	comp=Z,475nm,19.8s,baz=325,slow=36						
	comp=Z,1.4nm,0.8s						
ROSC	**El Rosal**	**64.83**	**115**	P	**P**	**16 54 53.1**	**-0.6**
ROSC	**El Rosal**	**64.83**	**115**	P	**P**	**16 54 53.1**	**-0.6**
ROSC				pmax	pmax		
	comp=Z,37nm,1.1s						
EKA	**Eskdalemuir Ar**	**65.48**	**30**	P	**P**	**16 54 58.0**	**+1.1**
	comp=Z,2.6nm,0.8s,baz=309,slow=5.3,SNR=4.5						
EKA				LR	LR	17 21 55.9	
	comp=Z,440nm,18.1s,baz=342,slow=34						
	comp=Z,2.6nm,0.8s						
JHJ	**Hachijo jima 2**	**65.52**	**293**	LR	LR	17 18 56.6	
	comp=Z,137nm,21.4s,baz=27,slow=32						
CN2	**Changchun**	**65.59**	**310**	*e*P	**P**	**16 54 57.6**	**-0.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
HFS	**Hagfors**	**65.76**	**19**	P	**P**	**16 54 59.9**	**+1.2**
	comp=Z,2.6nm,0.8s,baz=318,slow=2.0,SNR=4.8						
HFS				LR	LR	17 24 20.6	
	comp=Z,808nm,19.1s,baz=354,slow=36						
	comp=Z,2.6nm,0.8s						
FINES	**FINESS Array B**	**66.67**	**12**	P	**P**	**16 55 04.5**	**0.0**
	comp=Z,2.8nm,0.8s,baz=23,slow=15,SNR=8.4						
FINES				LR	LR	17 25 28.5	
	comp=Z,716nm,18.7s,baz=353,slow=37						
	comp=Z,2.8nm,0.8s						
IRK	**Irkutsk**	**67.85**	**328**	*e*P	**P**	**16 55 12.7**	**+0.5**
IRK				pmax	pmax		
	comp=Z,61nm,2.2s						
JCJ	**Chichijima**	**68.41**	**287**	LR	LR	17 18 54.0	
	comp=Z,210nm,21.3s,baz=58,slow=30						
TLY	**Talaya**	**68.53**	**328**	*i* P	**P**	**16 55 15.1**	**-1.4**
TLY				pmax	pmax		
	comp=Z,26nm,1.8s						
KLMR	**Klimovskoe**	**68.59**	**6**	*e*P	**P**	**16 55 14.6**	**-2.0**
KLMR				*e*		16 55 39.7	
KLMR				pmax	pmax		
	comp=Z,43nm,1.4s						
MOY	**Mondy**	**69.44**	**329**	*e*P	**P**	**16 55 23.1**	**+0.9**
MOY				pmax	pmax		
	comp=Z,51nm,2.5s						
XLT	**XiLinHaoTe**	**69.92**	**315**	*e*P	**P**	**16 55 25.6**	**+0.4**
XLT				pP	pP	16 55 29.1	+1.3
XLT				pmax	pmax		
	comp=Z,8.0nm,1.0s						
XLT				pmax	pmax		
	comp=Z,310nm,5.3s						
PPT	**Papeete**	**70.05**	**200**	LR	LR	17 20 17.3	
	comp=Z,197nm,19.5s,baz=12,slow=31						
PPT2	**Papeete2**	**70.08**	**200**	*e*S	**S**	**17 04 41.3**	**+4.2**
	comp=Z,536nm,27.2s						
PPT2				*e*SS	**SS**	**17 09 12.5**	**+5.2**
	comp=Z,229nm,26.8s						
PPT2				*e*LQ	LQ	17 13 07.7	
	comp=Z,735nm,28.5s						
PPT2				*e*LR	LR	17 16 30.4	
	comp=Z,518nm,26.8s						
PPT2				*e*LR	LR	17 16 37.1	
	comp=Z,418nm,29.2s						
ULN	**Ulaanbaatar**	**70.47**	**323**	*i* P	**P**	**16 55 28.0**	**-0.7**
ULN				pmax	pmax		
	comp=Z,11nm,1.4s						
JNU	**Nakatsue**	**70.63**	**299**	LR	LR	17 22 40.1	
	comp=Z,407nm,21.8s,baz=17,slow=33						
SONM	**Songino Array**	**70.75**	**324**	P	**P**	**16 55 30.9**	**+0.6**
	comp=Z,2.6nm,1.0s,baz=30,slow=2.2,SNR=13						
SONM				LR	LR	17 27 49.6	
	comp=Z,644nm,18.7s,baz=30,slow=37						
	comp=Z,2.6nm,1.0s						
SONM	**Songino Array**	**70.75**	**324**	P	**P**	**16 55 29.8**	**-0.5**
SONM				IAmb	IAmb	16 55 36.0	
	comp=Z,24nm,1.5s						
SONM	**Songino Array**	**70.75**	**324**	P	**P**	**16 55 29.8**	**-0.5**
SONM				pmax	pmax		
	comp=Z,24nm,1.5s						
DL2	**Dalian**	**71.17**	**309**	*e*P	P	16 55 22.8	-10
DL2				S	S	17 04 35.3	-14
DL2				pmax	pmax		
	comp=Z,23nm,0.9s						
DL2				pmax	pmax		
	comp=Z,470nm,5.7s						
DL2				LR	LR		
	comp=N,1µm,14.7s						
DL2				LR	LR		
	comp=E,730nm,14.8s						
DL2				LR	LR		
	comp=Z,750nm,16.2s						
KIRV	**Kirov**	**71.20**	**0**	LR	LR	17 29 31.1	
	comp=Z,348nm,21.0s,baz=358,slow=38						
KIRV	**Kirov**	**71.20**	**0**	*i* P	**P**	**16 55 33.6**	**+0.9**
KNGR	**Kungurtug, Tuv**	**71.47**	**330**	*i* P	**P**	**16 55 34.9**	**+0.3**
KNGR				pmax	pmax		
	comp=Z,11nm,1.1s						
ZAA0	**Zalesovo Array**	**71.89**	**339**	IAmb	IAmb	16 55 42.5	

	comp=Z,51nm,1.9s						
ZALV	Zalesovo Beam	71.89	339	P	P	16 55 37.4	+0.5
	comp=Z,1.4nm,0.7s,baz=25,slow=5.3,SNR=9.6						
ZALV				LR	LR	17 29 28.2	
	comp=Z,352nm,18.1s,baz=16,slow=38						
	comp=Z,1.4nm,0.7s						
ZALV	Zalesovo Beam	71.89	339	P	P	16 55 36.1	-0.8
ZALV	Zalesovo Beam	71.89	339	iP	P	16 55 39.0	+2.1
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ATAH	Atahualpa	72.53	126	LR	LR	17 28 32.0	
	comp=Z,450nm,19.1s,baz=349,slow=37						
SVE	Sverdlovsk	72.63	354	eP	P	16 55 43.1	+1.8
SVE				pmax	pmax		
	comp=Z,26nm,1.3s						
ARTI	Arti	73.20	355	LR	LR	17 29 17.4	
	comp=Z,272nm,21.6s,baz=12,slow=37						
ARTI	Arti	73.20	355	P	P	16 55 45.1	+0.4
ARTI				IAmb	IAmb	16 55 51.8	
	comp=Z,12nm,1.1s						
ARTI	Arti	73.20	355d	iP	P	16 55 45.4	+0.7
ARTI						16 58 25.4	
ARTI				S	SKiKP	17 05 16.4	+0.3
ARTI				SS	SS	17 09 52.4	+0.1
ARTI				pmax	pmax		
	comp=Z,12nm,1.5s						
RKT	Rikitea	73.51	185	eLR	LR	17 18 15.2	
	comp=Z,4μm,30.8s						
MOS	Moscow	73.54	7	eP	P	16 55 46.5	-0.2
MOS				MLR	MLR		
	comp=Z,700nm,20.0s						
CLL	Collm	73.68	23	eP	P	16 55 49.0	+1.4
CLL				L	L	17 28 00.0	
	comp=Z,500nm,19.7s						
OBN	Obninsk	74.07	8	LR	LR	17 30 49.8	
	comp=Z,427nm,19.0s,baz=331,slow=38						
OBN	Obninsk	74.07	8	⇓eP	P	16 55 48.4	-1.4
OBN				e*SP	pP	16 55 54.1	+1.7
OBN				i		16 56 06.1	
OBN				SSS	SSS	17 13 19.0	
OBN				pmax	pmax		
	comp=Z,49nm,1.8s						
OBN				MLR	MLR		
	comp=Z,449nm,18.0s						
HHC	Hu-ho-hao-te	74.36	316	eP	P	16 55 50.4	-1.5
HHC				pmax	pmax		
	comp=Z,14nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,6.3s						
BOAV	Boa Vista	75.04	105	P	P	16 55 55.1	-0.9
BOAV				IAmb	IAmb	16 55 56.1	
	comp=Z,16nm,1.0s						
DGZ	Jazzator, Alta	75.17	336	iP	P	16 55 55.8	-0.8
DGZ				pmax	pmax		
	comp=Z,29nm,1.4s						
BTO	Baotou	75.23	317	eP	P	16 55 54.9	-2.1
BTO				pP	pP	16 56 00.3	+0.7
BTO				S	S	17 05 33.3	-2.6
BTO				pmax	pmax		
	comp=Z,8.0nm,0.5s						
BTO				pmax	pmax		
	comp=Z,850nm,5.8s						
BTO				LR	LR		
	comp=Z,1μm,14.5s						
BTO				LR	LR		
	comp=Z,1μm,12.9s						
BTO				LR	LR		
	comp=Z,800nm,18.0s						
BORK	Borovoye	75.38	348	iP	P	16 55 57.3	-0.2
BORK				pmax	pmax		
	comp=Z,14nm,1.6s						
BVAR	Borovoye Array	75.39	348	P	P	16 55 59.1	+1.6
	comp=Z,0.9nm,0.7s,baz=343,slow=4.6,SNR=7.0						
BVAR				LR	LR	17 33 13.3	
	comp=Z,163nm,19.4s,baz=9.2,slow=39						
	comp=Z,0.9nm,0.7s						
TIA	Tai'an	75.50	310	P	P	16 55 58.3	-0.1
TIA				pmax	pmax		
	comp=Z,19nm,1.3s						
TBI	Tubuai	75.63	199	eS	S	17 05 43.8	+3.8
	comp=Z,2μm,34.0s						
TBI				eSS	SS	17 10 35.4	+3.4
	comp=Z,2μm,39.2s						
TBI				eLQ	LQ	17 16 00.8	
	comp=Z,2μm,31.5s						
TBI				eLR	LR	17 19 09.9	
	comp=Z,2μm,27.8s						
TBI				eLR	LR	17 19 13.1	
	comp=Z,1μm,25.8s						
HNS	HongShan	75.71	312	⇑P	P	16 56 00.3	+0.7
HNS				pmax	pmax		
	comp=Z,14nm,1.1s						
KHC	Kasperske Hory	75.82	24	iP	P	16 55 58.9	-1.2
KHC				pmax	pmax		
	comp=Z,37nm,4.6s						
GERES	GERESS Array B	76.12	24	P	P	16 56 03.6	+1.7
	comp=Z,0.7nm,0.8s,baz=327,slow=4.7,SNR=2.4						
	comp=Z,0.7nm,0.8s						
MORC	Moravsky Berou	76.19	21	eP	P	16 56 01.3	-0.9
KURK	Kurchatov	76.24	342	P	P	16 56 01.8	-0.6
KURK	Kurchatov	76.24	342	iP	P	16 56 01.7	-0.7
KURK				pmax	pmax		
	comp=Z,15nm,1.6s						
KURBB	Kurchatov Arra	76.35	342	P	P	16 56 02.8	-0.2
	comp=Z,2.5nm,1.1s,baz=13,slow=5.4,SNR=9.9						
KURBB				PP	PP	16 58 56.9	+3.2
	comp=Z,0.3nm,0.7s,baz=26,slow=7.7,SNR=4.2						
KURBB				LR	LR	17 33 08.8	
	comp=Z,355nm,19.8s,baz=181,slow=38						
	comp=Z,2.5nm,1.1s						
VRAC	Vranov	76.41	22	eP	P	16 56 03.3	-0.1
DAVA	Damuels	76.50	27	eP	P	16 56 03.5	-0.6
	comp=Z,12nm,1.4s						
RETA	Reutte	76.57	26	epP	P	16 56 04.2	-0.2
	comp=Z,6.4nm,1.4s						
KRUC	Moravsky	76.59	22	eP	P	16 56 04.1	-0.3
GUMO	Guam	76.72	275	LR	LR	17 22 08.3	
	comp=Z,506nm,21.4s,baz=38,slow=30						
LPSR	Galich'ya Gora	76.76	7	eP	P	16 56 07.1	+1.8
LPSR				pmax	pmax		
	comp=Z,20nm,1.1s						
WATA	Walderalm	76.93	26	eP	P	16 56 02.6	-4.0
	comp=Z,11nm,1.5s						
SQTA	Sankt Quirin	76.94	26	epP	P	16 56 08.8	+2.3
	comp=Z,18nm,1.7s						
DAVOX	Davos/Dischmat	76.95	27	LR	LR	17 33 05.4	
	comp=Z,530nm,18.5s,baz=263,slow=38						
FETA	Feichten	76.98	27	epP	P	16 56 08.7	+1.8
	comp=Z,15nm,1.5s						
WTTA	Wattenberg	77.02	26	ipP	P	16 56 08.2	+1.1
	comp=Z,8.7nm,1.2s						
LESA	Schwarzleotal	77.15	25	eP	P	16 56 05.2	-2.6
	comp=Z,8.1nm,1.7s						
BIOA	Bad Ischl, Aus	77.17	24	epP	P	16 56 07.9	+0.2
	comp=Z,5.4nm,1.3s						
MOA	Molln	77.18	24	eP	P	16 56 07.0	-0.9
	comp=Z,7.1nm,1.4s						
BELG	Belogornoye	77.39	2	LR	LR	17 35 03.7	
	comp=Z,219nm,19.0s,baz=352,slow=39						
BELG	Belogornoye	77.39	2	iP	P	16 56 10.1	+1.3
BELG				pmax	pmax		
	comp=Z,6.0nm,1.3s						
CONA	Conrad Observa	77.52	23	epP	P	16 56 10.3	+0.5
	comp=Z,4.3nm,1.3s						
AKASG	Malin Array Be	77.53	14	P	P	16 56 08.8	-0.8
	comp=Z,0.4nm,0.3s,baz=346,slow=5.2,SNR=11						
AKASG				LR	LR	17 31 08.2	
	comp=Z,699nm,20.3s,baz=359,slow=36						
	comp=Z,0.4nm,0.3s						
AKASG	Malin Array Be	77.53	14	IAmb	IAmb	16 56 12.4	
	comp=Z,6.2nm,1.2s						
AKASG	Malin Array Be	77.53	14	P	P	16 56 08.9	-0.8
AKASG				pmax	pmax		
	comp=Z,6.0nm,1.3s						
AKBB	Malin Array Si	77.53	14	iP	P	16 56 09.1	-0.5
AKBB				pmax	pmax		
	comp=Z,17nm,1.3s						
KBA	Koelnbreinsper	77.65	25	iP	P	16 56 09.5	-1.1
	comp=Z,37nm,1.2s						
VORR	Voronezh	77.70	7	eP	P	16 56 10.2	-0.4
VORR				pmax	pmax		
	comp=Z,69nm,0.4s						
ABTA	Abfaltersbach	77.73	26	eP	P	16 56 08.5	-2.5
	comp=Z,6.5nm,1.5s						
RONA	Rosalia, Austr	77.83	23	eP	P	16 56 08.3	-3.2
	comp=Z,2.4nm,0.6s						
ZSN	Zaisan	77.91	337	eP	P	16 56 11.9	-0.1
ZSN	Zaisan	77.91	337	eP	P	16 56 11.8	-0.1
NJ2	Nanjing	77.93	306	eP	P	16 56 11.0	-1.2
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ARSA	Arzberg	78.06	23	iP	P	16 56 11.9	-0.8
	comp=Z,6.8nm,1.4s						
MYKA	Terra Mystica	78.14	25	eP	P	16 56 12.4	-0.9
	comp=Z,7.1nm,1.2s						
VSR	Storozhevoye	78.15	7	eP	P	16 56 15.5	+2.4
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ESDC	Sonseca Array	78.34	40	P	P	16 56 14.2	-0.3
	comp=Z,3.7nm,1.1s,baz=322,slow=5.7,SNR=11						
	comp=Z,3.7nm,1.1s						
VRH	Novokhopyorsk	78.35	5	eP	P	16 56 09.9	-4.3
VRH				pmax	pmax		
	comp=Z,5.0nm,0.3s						
VORD	Divnogorie	78.41	7	eP	P	16 56 15.7	+1.2
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SOKA	Soboth	78.47	24	ipP	P	16 56 15.8	+0.7
	comp=Z,9.5nm,1.1s						
OBKA	Obir	78.50	24	epP	P	16 56 18.0	+2.7
	comp=Z,9.9nm,1.2s						
LYN	LuoYang	79.08	312	P	P	16 56 19.1	+0.6
LYN				pP	pP	16 56 23.0	+1.8
LYN				sP	PcP	16 56 27.4	+0.4
LYN				pmax	pmax		
	comp=Z,30nm,1.1s						
LYN				pmax	pmax		
	comp=Z,360nm,6.5s						
MK31	Makanchi Array	79.15	338	iP	P	16 56 16.3	-2.5
MKAR	Makanchi Array	79.15	338	P	P	16 56 18.4	-0.3
	comp=Z,1.7nm,0.8s,baz=42,slow=4.0,SNR=14						
MKAR				LR	LR	17 33 51.5	
	comp=Z,567nm,19.5s,baz=349,slow=38						
	comp=Z,1.7nm,0.8s						
MKAR	Makanchi Array	79.15	338	P	P	16 56 18.6	-0.2
MKAR	Makanchi Array	79.15	338	iP	P	16 56 18.3	-0.5
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKTO	Aktyubinsk	79.16	355	LR	LR	17 33 27.9	
	comp=Z,206nm,20.9s,baz=4.0,slow=37						
MAKZ	Makanchi	79.21	338	P	P	16 56 18.5	-0.6
MAKZ				IAmb	IAmb	16 56 25.3	
	comp=Z,28nm,1.3s						
MAKZ	Makanchi	79.21	338	P	P	16 56 18.5	-0.6
MAKZ				pmax	pmax		
	comp=Z,28nm,1.3s						
AB31	Akbulak array	80.21	354	IAmb	IAmb	16 56 32.4	
	comp=Z,34nm,1.7s						
ABKAR	Akbulak array	80.21	354	P	P	16 56 24.1	-0.3
GTA	Gaotai	80.41	323	eP	P	16 56 25.9	0.0
GTA				sP	pwP	16 56 33.4	+2.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.7s						
WMQ	Urumqi	80.50	334	eP	P	16 56 29.5	+3.3
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				LR	LR		
	comp=Z,220nm,19.5s						
XAN	Xi'an	81.16	314	⇑P	P	16 56 29.4	-0.4
XAN				pP	pP	16 56 33.5	+1.0
XAN				sP	pwP	16 56 36.9	+1.7
XAN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
XAN				LR	LR		
	comp=Z,750nm,16.5s						
XAN				LR	LR		
	comp=Z,600nm,15.8s						
XAN				LR	LR		
	comp=Z,300nm,16.5s						
LZH	Lanzhou	81.66	319	eP	P	16 56 30.5	-2.1
LZH				sP	pP	16 56 36.8	+1.5
LZH				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MLR	Muntele Rosu	82.03	17	LR	LR	17 34 07.2	
	comp=Z,767nm,18.7s,baz=355,slow=36						
BTLS	Baital	82.56	343	eP	P	16 56 36.7	-0.3
BTLS	Baital	82.56	343	eP	P	16 56 36.7	-0.3
CHKK	Chushkaly	83.12	341	eP	P	16 56 39.5	-0.5
CHKK	Chushkaly	83.12	341	eP	P	16 56 39.4	-0.5
SHLS	Shalkode	83.24	339	eP	P	16 56 39.9	-0.9
	comp=Z,8.8nm,1.1s						
SHLS	Shalkode	83.24	339	eP	P	16 56 39.8	-0.9
SHLS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
UZB	Uzynbulak	83.35	339	eP	P	16 56 40.7	-0.7
UZB	Uzynbulak	83.35	339	eP	P	16 56 40.6	-0.7
SATY	Saty	83.58	340	eP	P	16 56 42.0	-0.5
	comp=Z,20nm,1.6s						
SATY	Saty	83.58	340	eP	P	16 56 41.9	-0.5
SATY				pmax	pmax		
	comp=Z,20nm,1.6s						
MDOK	Medeo	83.77	341	eP	P	16 56 42.9	-0.6
MDOK	Medeo	83.77	341	eP	P	16 56 42.9	-0.6
MD01	Midelt array s	83.78	44	P	P	16 56 42.5	-1.1
TNSS	Tian-Shan	83.91	341	eP	P	16 56 44.0	-0.5
TNSS	Tian-Shan	83.91	341	eP	P	16 56 44.0	-0.5
GOF	Gofitskoye	84.55	5c	eP	P	16 56 42.3	-4.9
AAK	Ala-Archa	84.79	342	iP	P	16 56 48.3	-0.4
AAK				pmax	pmax		
	comp=Z,14nm,1.7s						
KKAR	Karatay Array	85.05	345	P	P	16 56 49.7	-0.1
KKAR	Karatay Array	85.05	345	P	P	16 56 49.7	-0.1
DZA	Taraz	85.12	345	eP	P	16 56 50.2	+0.1
DZA	Taraz	85.12	345	eP	P	16 56 50.2	+0.1
BRLS	Borolday	85.23	346	eP	P	16 56 51.4	+0.6
BRLS	Borolday	85.23	346	eP	P	16 56 51.3	+0.6
LPAZ	La Paz	85.61	122	P	P	16 56 50.8	-2.7
	comp=Z,2.4nm,0.6s,baz=352,slow=7.2,SNR=8.8						
LPAZ				LR	LR	17 38 58.0	
	comp=Z,196nm,18.6s,baz=338,slow=38						
	comp=Z,2.4nm,0.6s						
LPAZ	La Paz	85.61	122	P	P	16 56 51.8	-1.7
LPAZ				IAmb	IAmb	16 56 52.4	
	comp=Z,10nm,1.3s						
KIV	Kislovodsk	85.63	5	eP	P	16 56 53.3	+0.6
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,278nm,20.0s						
KVAR	Kislovodsk Arr	85.63	5	LR	LR	17 38 51.5	
	comp=Z,287nm,18.8s,baz=264,slow=38						
SHA1	Shidzhatmaz	85.84	6	iP	P	16 56 54.0	0.0
KBZ	Khabaz	85.86	5	P	P	16 56 53.5	-0.2
	comp=Z,2.2nm,0.8s,baz=1.5,slow=4.7,SNR=5.3						
KBZ				LR	LR	17 38 56.1	
	comp=Z,331nm,19.0s,baz=1.5,slow=38						
	comp=Z,2.2nm,0.8s						
KBZ	Khabaz	85.86	5	iP	P	16 56 53.7	0.0
KBZ				pmax	pmax		
	comp=Z,11nm,1.1s						
CHM	Chimkent	85.96	346	eP	P	16 56 53.9	-0.5
CHM	Chimkent	85.96	346	eP	P	16 56 53.8	-0.5
CD2	Chengdu	86.12	316	eP	P	16 56 53.3	-2.0
KSH	Kashi	87.49	340	P	P	16 57 07.0	+5.0
KSH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BRTR	Keskin Array B	88.91	13	LR	LR	17 41 06.5	
	comp=Z,193nm,18.0s,baz=9.5,slow=38						
SIV	San Ignacio	89.30	116	LR	LR	17 39 41.2	
	comp=Z,212nm,21.9s,baz=349,slow=37						
PTLB	Pontes e Lacer	89.98	115	P	P	16 57 12.3	-1.4
PTLB				IAmb	IAmb	16 57 13.4	
	comp=Z,12nm,1.1s						
PZH	PanZhiHua	90.80	315	P	P	16 57 18.0	+0.2
PZH				pmax	pmax		
	comp=Z,10.0nm,1.7s						
DZM	Mont Dzumac	91.53	236	eLR	LR	17 26 15.8	
	comp=Z,379nm,22.4s						
IDI	Anoyia	91.63	21	LR	LR	17 42 26.4	
	comp=Z,235nm,18.8s,baz=334,slow=38						
JAY	Jayapura	91.64	268	LR	LR	17 30 16.7	
	comp=Z,605nm,21.3s,baz=9.0,slow=30						
PMG	Port Moresby	92.84	259	LR	LR	17 31 17.7	
	comp=Z,275nm,21.9s,baz=353,slow=30						
MMAI	Mount Meron Ar	95.75	13	LR	LR	17 44 00.3	
	comp=Z,202nm,20.5s,baz=35,slow=37						
ASF	Jabal al Asfar	96.78	11	LR	LR	17 45 09.3	
	comp=Z,86nm,20.4s,baz=21,slow=38						
EIL	Elat	98.97	13	LR	LR	17 45 32.8	
	comp=Z,164nm,21.8s,baz=41,slow=37						
CMAR	Chiang Mai Arr	99.05	314	P	Pdif	16 57 55.8	+0.3
	comp=Z,0.8nm,0.9s,baz=9.8,slow=4.3,SNR=6.2						
	comp=Z,0.8nm,0.9s						
SNAA	Sanae	148.41	151	PKPbc	PKPdf	17 03 58.6	+2.8
	comp=Z,1.5nm,0.2s,baz=266,slow=1.8,SNR=5.5						
BOSA	Boshof	151.06	50	PKPbc	PKPdf	17 04 06.2	+4.8
	comp=Z,4.3nm,0.9s,baz=350,slow=6.6,SNR=3.8						
SYO	Syowa Base	160.79	168	⇑epPKPdf	PKPdf	17 04 15.6	+2.8

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*IDC **23** 17:16:34.4±5.0, 7°.95S×128°.51E, h209^{km}±51^{km}, mb3.2/2, mbtmp3.5/6, Error ellipse: s-maj=53.6km s-min=19.3km az=52.0*

ISC 23 17:16:33.2±1.4**, 7°.95S**±0°.10×**128°.7E**±0°.1**, h200**^{km}**, n6,** σ**1^s.75**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.42	245	P	Pn	17 17 52.7	-0.3
	17nm,0.4s,baz=95,slow=19,SNR=14						
BATI				S	Sn	17 18 55.5	-0.5
	12nm,0.3s,baz=65,slow=22,SNR=7.7						
FITZ	Fitzroy Crossi	10.51	196	P	Pn	17 18 59.4	+0.4
	1.3nm,0.7s,baz=25,slow=12,SNR=10.0						
FITZ				S	S	17 20 56.2	-0.6
	1.6nm,0.4s,baz=99,slow=20,SNR=6.9						
WRA	Warramunga Arr	13.14	156	P	Pn	17 19 33.4	+1.0
	0.2nm,0.6s,baz=330,slow=15,SNR=14						
WRA				S	S	17 21 55.4	-3.6
	1.7nm,0.4s,baz=331,slow=22,SNR=12						
ASAR	Alice Springs	16.42	163	P	Pn	17 20 14.2	+1.5
	0.2nm,0.6s,baz=346,slow=9.9,SNR=4.7						
ASAR				S	S	17 23 15.8	+2.1
	0.3nm,0.6s,baz=324,slow=16,SNR=6.0						
MKAR	Makanchi Array	68.29	328	P	P	17 27 12.7	+0.1
	0.4nm,0.5s,baz=115,slow=6.3,SNR=9.8						
	0.4nm,0.5s						
KURBB	Kurchatov Arra	72.62	329	P	P	17 27 38.2	-0.4
	0.4nm,0.5s,baz=130,slow=5.0,SNR=7.0						
	0.4nm,0.5s						

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*IDC **23** 17:30:45.4±0.6, 55°.80N×162°.17E, h0^{km}, mb3.9/21, mbtmp3.9/22, ML2.7/1, MS3.7/7, Error ellipse: s-maj=17.4km s-min=12.9km az=140.0*

*KRSC **23** 17:30:45.1±1.1, 55°.55N×162°.68E, h20^{km}±23^{km}, Ml4.7*

*NEIC **23** 17:30:47.4±1.6, 55°.80N±0°.09×162°.1E±0°.2, h10^{km}±1^{km}, mb4.6/76, Error ellipse: s-maj=22.8km s-min=4.0km az=131.0*

*MOS **23** 17:30:48.0±1.0, 55°.67N×162°.53E, h34^{km}, mb4.4/12, Error ellipse: s-maj=7.5km s-min=4.2km az=71.3*

ISC 23 17:30:49.2±0.8**, 55°.68N**±0°.03×**162°.47E**±0°.03**, h30**^{km}±5^{km}**, n474,** σ**1^s.18**/459**, mb4.5**/65**, MS3.7**/6**, 8C, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.57	20	PN	Pb	17 30 57.8	-2.8
KBTR	Krutoberegovo	0.57	20	eP	Pb	17 30 57.9	-2.8
KBG	Krutoberegovo	0.59	13	PN	Pb	17 30 58.4	-2.7
KBG	Krutoberegovo	0.59	13	eP	Pb	17 30 58.4	-2.7
ZLN	Zelenaya	1.00	291	PN	Pn	17 31 06.3	-0.9
ZLN	Zelenaya	1.00	291	eP	Pn	17 31 06.3	-0.9
BZGR	Bezymyannyi-Gr	1.03	286	PN	Pn	17 31 06.5	-1.2
BZGR				S	Sb	17 31 22.3	+0.5
BZGR	Bezymyannyi-Gr	1.03	286	eP	Pn	17 31 06.6	-1.2
BZGR				eS	Sb	17 31 22.3	+0.5
CIRR	Tsirk	1.06	295	PN	Pn	17 31 07.5	-0.6
CIRR	Tsirk	1.06	295	eP	Pn	17 31 07.5	-0.6
SMKR	Semkarok	1.07	329	PN	Pn	17 31 06.9	-1.2
SMKR	Semkarok	1.07	329	eP	Pn	17 31 06.9	-1.2
BZWR	Bezymyannyi-We	1.15	285	PN	Pn	17 31 08.6	-0.7
BZWR	Bezymyannyi-We	1.15	285	eP	Pn	17 31 08.6	-0.7
MKZ	Mys Kozlova	1.20	201	PN	Pn	17 31 07.1	-2.7
MKZ	Mys Kozlova	1.20	201	eP	Pn	17 31 07.2	-2.7
KLY	Klyuchi	1.20	303	PN	Pn	17 31 07.4	-2.5
KLY	Klyuchi	1.20	303	eP	Pn	17 31 07.5	-2.5
KIRR	Kirishev	1.23	284	PN	Pn	17 31 09.8	-0.7
KIRR	Kirishev	1.23	284	eP	Pn	17 31 09.8	-0.7
KMNR	Kamenistaya	1.26	275	PN	Pn	17 31 11.1	+0.3
KMNR	Kamenistaya	1.26	275	eP	Pn	17 31 11.2	+0.3
TUMD	Tumrok D	1.27	249	PN	Pn	17 31 10.0	-0.9
TUMD				S	Sb	17 31 27.8	-0.6
TUMD	Tumrok D	1.27	249	eP	Pn	17 31 10.0	-0.9
TUMD				eS	Sb	17 31 27.9	-0.6
KZV	Kizimen	1.36	246	PN	Pn	17 31 11.3	-0.9
KZV	Kizimen	1.36	246	eP	Pn	17 31 11.4	-0.9
TUMR	Tumrok	1.38	254	PN	Pn	17 31 12.8	+0.4
TUMR	Tumrok	1.38	254	eP	Pn	17 31 12.9	+0.4
KOZ	Kozyrevsk	1.51	286	PN	Pn	17 31 14.7	+0.5
KOZ				S	Sb	17 31 37.3	+2.0
KOZ	Kozyrevsk	1.51	286	eP	Pn	17 31 14.8	+0.5
KOZ				eS	Sb	17 31 37.3	+2.0
SRDR	Sredinnyy	1.67	294	PN	Pn	17 31 16.7	+0.2
SRDR				S	Sb	17 31 40.2	+0.3
SRDR	Sredinnyy	1.67	294	eP	Pn	17 31 16.7	+0.2
SRDR				eS	Sb	17 31 40.3	+0.3
BKI	Bering	2.05	102	PN	Pn	17 31 20.5	-1.1
BKI	Bering	2.05	102	eP	Pn	17 31 20.5	-1.1
ESO	Esso	2.14	278	PN	Pn	17 31 23.8	+1.0
ESO	Esso	2.14	278	eP	Pn	17 31 23.8	+1.0
KII	Karymskiy	2.40	228	PN	Pn	17 31 26.0	-0.4
KII	Karymskiy	2.40	228	eP	Pn	17 31 26.0	-0.4
SPN	Mys Shipunski	2.95	210	PN	Pn	17 31 31.0	-2.9
SPN	Mys Shipunski	2.95	210	eP	Pn	17 31 31.1	-2.9
SPN				eS	Sn	17 32 05.1	-3.3
NLC	Nalytchevo	3.10	217	PN	Pn	17 31 34.9	-1.1
NLC				S	Sn	17 32 11.7	-0.3
NLC	Nalytchevo	3.10	217	eP	Pn	17 31 34.9	-1.1
NLC				eS	Sn	17 32 11.8	-0.3
SDLR	Sedlovina	3.19	222	PN	Pn	17 31 36.6	-0.7
SDLR	Sedlovina	3.19	222	eP	Pn	17 31 36.7	-0.7
KRX	Arik	3.22	225	PN	Pn	17 31 37.6	-0.1
KRX	Arik	3.22	225	eP	Pn	17 31 37.7	-0.1
KRER	Koryakskii	3.22	224	PN	Pn	17 31 37.4	-0.4
KRER	Koryakskii	3.22	224	eP	Pn	17 31 37.5	-0.4
SMAR	Somma	3.23	223	PN	Pn	17 31 37.5	-0.5
SMAR	Somma	3.23	223	eP	Pn	17 31 37.5	-0.5
AVH	Avacha	3.25	224	PN	Pn	17 31 37.9	-0.2
AVH	Avacha	3.25	224	eP	Pn	17 31 37.9	-0.2
UGLR	Uglovaya	3.26	222	PN	Pn	17 31 37.8	-0.5
UGLR	Uglovaya	3.26	222	eP	Pn	17 31 37.9	-0.5
KOK	Koryaka	3.27	225	PN	Pn	17 31 38.2	-0.3
KOK	Koryaka	3.27	225	eP	Pn	17 31 38.2	-0.3
GNL	Ganaly	3.29	235	PN	Pn	17 31 39.9	+1.1
GNL	Ganaly	3.29	235	eP	Pn	17 31 39.9	+1.1
DALK	Dalny	3.43	221	PN	Pn	17 31 38.9	-1.6
DALK				S	Sn	17 32 19.9	-0.1
DALK	Dalny	3.43	221	eP	Pn	17 31 38.9	-1.6
DALK				eS	Sn	17 32 19.9	-0.1
INSR	Institute	3.46	222	PN	Pn	17 31 43.6	+2.8
INSR	Institute	3.46	222	eP	Pn	17 31 43.7	+2.8
PET	Petropavlovsk	3.47	222		Pn	17 31 40.1	-1.0
PET	Petropavlovsk	3.47	222	ePN	Pn	17 31 40.5	-0.6
PET				eS	Sn	17 32 22.0	+0.9
PET				pmax	pmax		
	comp=Z,127nm,0.4s						
PET				smax	smax		
	comp=N,670nm,0.5s						
PET				smax	smax		
	comp=E,462nm,0.5s						
PET				MLR	MLR		
	comp=Z,700nm,8.0s						
PET	Petropavlovsk	3.47	222	eP	Pn	17 31 40.4	-0.6
OSSR	Ossora	3.60	5	PN	Pn	17 31 44.2	+1.4
OSSR	Ossora	3.60	5	eP	Pn	17 31 44.2	+1.4
PALN	Palana	3.68	339	PN	Pb	17 31 50.2	-3.2
PALN	Palana	3.68	339	eP	Pb	17 31 50.2	-3.2
PEA0B	Petropavlovsk-	3.79	229	Pn	Pn	17 31 45.7	+0.2
PEA0B	Petropavlovsk-	3.79	229	PN	Pn	17 31 46.2	+0.7
PETK	Petropavlovsk-	3.79	229	Pn	Pn	17 31 44.7	-0.9
	comp=Z,3.0nm,0.3s,baz=65,slow=19,SNR=44						
PETK				Sn	Sn	17 32 29.1	-0.1
	comp=Z,8.8nm,0.3s,baz=88,slow=21,SNR=4.4						
PETK				Lg	Lg	17 32 38.6	
	comp=Z,13nm,0.3s,baz=31,slow=21,SNR=6.7						
PETK				LR	LR	17 33 30.9	
	comp=Z,1μm,18.4s,baz=53,slow=44						
	comp=Z,5.9nm,0.5s						
PETK	Petropavlovsk-	3.79	229		Pn	17 31 44.5	-1.1
KRMR	Karymshinskiy	3.82	224	PN	Pn	17 31 45.7	-0.1
KRMR	Karymshinskiy	3.82	224	eP	Pn	17 31 45.8	-0.1
GRL	Gorelyy	4.06	221	PN	Pn	17 31 50.0	+0.7
GRL	Gorelyy	4.06	221	eP	Pn	17 31 50.0	+0.7

MTVR	Mutnovka	4.08	220	PN	Pn	17 31 49.7	+0.2
MTVR	Mutnovka	4.08	220	eP	Pn	17 31 49.7	+0.2
APC	Apacha	4.16	231	PN	Pn	17 31 51.5	+1.1
APC	Apacha	4.16	231	eP	Pn	17 31 51.6	+1.1
ASAK	Asacha	4.26	221	PN	Pn	17 31 52.3	+0.3
ASAK	Asacha	4.26	221	eP	Pn	17 31 52.3	+0.3
MIPR	Malaya Ipel'ka	4.79	227	PN	Pn	17 32 03.8	+4.6
MIPR	Malaya Ipel'ka	4.79	227	eP	Pn	17 32 03.8	+4.6
TILK	Tilichiki	5.17	21	PN	Pn	17 32 06.6	+2.3
TILK	Tilichiki	5.17	21	eP	Pn	17 32 06.6	+2.3
PAU	Pauzhetka	5.40	221	PN	Pn	17 32 10.6	+3.1
PAU	Pauzhetka	5.40	221	eP	Pn	17 32 10.6	+3.1
SKR	Severo-Kuril's	6.29	220	cePN	Pn	17 32 21.8	+2.0
SKR	Severo-Kuril's	6.29	220	eP	Pn	17 32 21.2	+1.4
BILL	Bilibino	12.53	7	cePN	Pn	17 33 50.3	+5.1
BILL				pmax	pmax		
	comp=Z,19nm,1.7s						
TYV	Tymovskoe	12.78	256	ePN	P	17 33 57.4	-1.9
TYV				pmax	pmax		
	comp=Z,6.0nm,1.3s						
TYV				pmax	pmax		
	comp=Z,400nm,4.2s						
SPIA	Saint Paul Isl	15.13	73	P	Pn	17 34 22.5	+2.0
	baz=277						
GAMB	Gambell	15.24	47	P	Pn	17 34 22.3	+0.4
	baz=251						
P08K	Saint George I	15.58	75	P	Pn	17 34 27.8	+1.4
	baz=279						
NIKH	Nikolski High	16.89	87	P	P	17 34 46.0	+1.1
	baz=291						
M11K	Mekoryuk	17.14	61	P	P	17 34 47.8	+0.2
	baz=269						
JKA	Kamikawa-asahi	17.18	236	P	P	17 34 48.7	+0.6
JKA	Kamikawa-asahi	17.18	236	IAmb	IAmb	17 35 32.4	
	comp=Z,62nm,1.5s						
ASAJ	Asahikawa	17.18	236	P	P	17 34 48.7	+0.6
	comp=Z,8.2nm,0.8s,baz=44,slow=12,SNR=6.8						
ASAJ				LR	LR	17 41 28.7	
	comp=Z,273nm,18.4s,baz=11,slow=38						
ASAJ	Asahikawa	17.18	236	P	P	17 34 48.7	+0.6
ASAJ				pmax	pmax		
	comp=Z,62nm,1.5s						
TNA	Tin City	17.39	43	P	Pn	17 34 49.7	+0.4
	baz=250						
UNV	Unalaska Valle	17.93	83	P	P	17 34 57.2	+0.9
	baz=289						
YAK	Yakutsk	17.96	304	eP	P	17 34 57.6	+1.0
YAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.8s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.2s						
F14K	Arctic Creek	17.99	44	P	Pn	17 34 56.5	-0.1
	baz=253						
K13K	Kusilvak Mount	17.99	56	P	P	17 34 58.1	+1.1
	baz=265						
ANM	Nome	18.12	48	P	Pn	17 34 58.3	0.0
	baz=256						
M13K	Dall Lake	18.56	61	P	Pn	17 35 03.7	+0.1
	baz=271						
J14K	Nanvaranak Lak	18.59	54	P	Pn	17 35 03.8	-0.1
	baz=264						
F15K	North Star Dit	18.73	44	P	Pn	17 35 05.4	-0.3
	baz=254						
G15K	Niukluk	18.79	47	P	Pn	17 35 06.3	0.0
	baz=257						
L14K	Kuka Creek	18.89	58	P	Pn	17 35 07.3	-0.3
	baz=269						
M14K	Bethel	19.24	60	P	P	17 35 10.6	-0.1
	baz=271						
FALS	False Pass	19.35	78	P	Pn	17 35 13.0	0.0
	baz=287						
C16K	Lisburne Hills	19.38	37		Pn	17 35 14.0	+0.6
C16K	Lisburne Hills	19.38	37	P	P	17 35 12.3	+0.2
	baz=246						
N14K	Kuskokwak Cree	19.41	63	P	Pn	17 35 13.7	-0.1
	baz=274						
H16K	Elim	19.46	48	P	P	17 35 13.4	+0.3
	baz=260						
L15K	Ungalak Mounta	19.48	57	P	Pn	17 35 14.2	-0.5
	baz=269						
K15K	Wolf Creek Mou	19.48	55	P	Pn	17 35 14.2	-0.5
	baz=267						
G16K	Koyuk River	19.57	46	P	P	17 35 13.3	-0.9
	baz=258						
O14K	Tigyukauivet M	19.67	65	P	P	17 35 15.5	+0.2
	baz=276						
S12K	Black Hills	19.87	75	P	Pn	17 35 19.1	-0.2
	baz=285						
M15K	Kasigluk River	19.87	60	P	Pn	17 35 18.9	-0.4
	baz=272						
D17K	Noatak River	19.95	39	P	P	17 35 18.0	-0.4
	baz=251						
J16K	Anvik River	19.99	53	P	P	17 35 19.6	+0.7
	baz=265						
I17K	Unalakleet	20.01	51	P	P	17 35 19.8	+0.8
	baz=264						
RDOG	Red Dog Mine	20.14	38	P	P	17 35 19.6	-0.8
	baz=250						
N15K	Kwethluk River	20.19	62	P	Pn	17 35 23.4	+0.3
N15K	Kwethluk River	20.19	62	P	P	17 35 21.9	+0.8
	baz=274						
C17K	DeLong Mountai	20.20	37	P	P	17 35 20.3	-0.8
	baz=248						
E17K	Hotham Inlet	20.21	41	P	P	17 35 21.1	-0.1
	baz=254,SNR=6.9						
F17K	Baldwin Pennin	20.26	43		Pn	17 35 24.7	+0.9
F17K				IAmb	IAmb	17 35 30.9	
	comp=Z,28nm,1.4s						
F17K	Baldwin Pennin	20.26	43	P	P	17 35 21.8	+0.1
	baz=256						
G17K	Kiwalik Mounta	20.29	46	P	P	17 35 21.6	-0.4
	baz=259						
ZEA	Zeya	20.31	279	eP	Pn	17 35 31.6	+7.1
O15K	Ungalikthiuk R	20.41	65	P	P	17 35 23.9	+0.4
	baz=277						
L16K	Owhat River	20.44	57	P	Pn	17 35 26.2	+0.2
L16K	Owhat River	20.44	57	P	P	17 35 23.5	-0.2
	baz=271						
H17K	Granite Mounta	20.49	48	P	Pn	17 35 26.2	-0.4
H17K	Granite Mounta	20.49	48	P	P	17 35 23.4	-0.9
	baz=262						
J17K	VABM Dome	20.68	52	P	Pn	17 35 27.8	-1.0
J17K	VABM Dome	20.68	52	P	P	17 35 27.1	+0.8
	baz=267						
M16K	Timber Creek	20.70	59	P	P	17 35 27.4	+0.8
	baz=273						
E18K	Tukpahlearik C	20.77	41	P	Pn	17 35 29.2	-0.5
E18K	Tukpahlearik C	20.77	41	P	P	17 35 27.6	+0.4
	baz=254						
N16K	Nishlik Lake	20.82	61	P	P	17 35 28.6	+0.7
	baz=275						
SDPT	Sand Point	20.83	75	P	P	17 35 28.7	+0.8
	baz=287						
F18K	Selawik	20.92	43	P	P	17 35 29.1	+0.2
	baz=258						
C18K	Utukok River	20.94	37		P	17 35 30.1	+1.0
C18K	Utukok River	20.94	37	P	P	17 35 28.9	-0.3
	baz=251						
L17K	Donlin	21.00	56	P	P	17 35 29.6	-0.2
	baz=271						
B18K	Kokolik River	21.00	35	P	P	17 35 28.9	-0.8
	baz=248						
K17K	Iditarod	21.00	54		P	17 35 31.3	+1.5
K17K	Iditarod	21.00	54	P	P	17 35 29.5	-0.3
	baz=269						
S14K	Fog Glacier	21.09	73	P	P	17 35 31.0	+0.2
	baz=285						
G18K	Tagagawik	21.17	46		P	17 35 35.6	+3.9
G18K	Tagagawik	21.17	46	P	P	17 35 30.9	-0.7
	baz=260						
H18K	Honhosa River	21.18	48	P	P	17 35 30.6	-1.1
	baz=263						
O16K	Kokwok River B	21.25	63	P	P	17 35 32.6	+0.2
	baz=277						
P16K	Nushagak River	21.37	65	P	P	17 35 34.3	+0.5
	baz=279						
TIXI	Tiksi	21.39	331	P	P	17 35 34.6	+0.7
	comp=Z,9.4nm,0.8s,baz=121,slow=8.6,SNR=57						
TIXI	Tiksi	21.39	331		P	17 35 32.8	-1.1
TIXI	Tiksi	21.39	331	ceP	P	17 35 34.9	+1.0
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
M17K	Holitna River	21.42	58	P	P	17 35 34.0	-0.3
	baz=273						
CHNA	Chernabura Isl	21.47	76	P	P	17 35 35.5	+0.7
	baz=288						
A19K	Wainwright	21.56	33	P	P	17 35 34.0	-1.8
	baz=247,SNR=8.1						
N17K	Nushagak Hills	21.60	60	P	P	17 35 36.1	-0.1
	baz=276						
HEH	HeiHe	21.64	270	eP	P	17 35 36.4	-0.3
HEH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
C19K	Lookout Ridge	21.64	37	P	P	17 35 38.7	+2.0
C19K				IAmb	IAmb	17 35 44.5	
	comp=Z,32nm,1.3s						
C19K	Lookout Ridge	21.64	37	P	P	17 35 35.6	-1.1
	baz=251						
F19K	Shaleruckik Mo	21.70	43	P	P	17 35 39.2	+1.9
F19K				IAmb	IAmb	17 35 46.5	
	comp=Z,17nm,0.8s						
F19K	Shaleruckik Mo	21.70	43	P	P	17 35 36.0	-1.2
	baz=259						
O17K	Koliganek Bris	21.73	62	P	P	17 35 38.1	+0.5
	baz=278						
J18K	Innoko River	21.75	52	P	P	17 35 37.5	-0.3
	baz=269						
L18K	Granite Mounta	21.75	56	P	P	17 35 37.3	-0.5
	baz=272						
GCSA	Galena City Sc	21.76	49	P	P	17 35 37.1	-0.7
	baz=265						
G19K	Purcell Mounta	21.85	45		P	17 35 41.7	+2.8
G19K				IAmb	IAmb	17 35 48.0	
	comp=Z,29nm,1.2s						
G19K	Purcell Mounta	21.85	45	P	P	17 35 37.1	-1.8
	baz=262,SNR=13						
R16K	Pilot Point	21.85	68	P	P	17 35 39.5	+0.6
	baz=283						
D19K	Kuna River	21.97	39		P	17 35 41.7	+1.5
D19K				IAmb	IAmb	17 35 49.0	
	comp=Z,32nm,1.1s						
D19K	Kuna River	21.97	39	P	P	17 35 39.1	-1.1
	baz=255						
H19K	Roundabout Mou	22.02	47	P	P	17 35 39.6	-1.1
	baz=264						
E19K	Redstone River	22.04	42	P	P	17 35 43.4	+2.5
E19K				IAmb	IAmb	17 35 51.6	
	comp=Z,33nm,1.2s						
E19K	Redstone River	22.04	42	P	P	17 35 39.3	-1.6
	baz=258,SNR=9.0						
P17K	Kvichak River	22.14	64	P	P	17 35 42.2	+0.3
	baz=279						
M18K	Stony River	22.19	58	P	P	17 35 42.1	-0.5
	baz=274						
N18K	Kilae Creek	22.22	60	P	P	17 35 43.3	+0.4
	baz=276						
J19K	Poorman	22.25	51	P	P	17 35 42.5	-0.7
	baz=268						
R17L	Mt. Peulik Vol	22.47	68	P	P	17 35 46.0	+0.4
	baz=283						
F20K	Avaraart Lake	22.53	43	P	P	17 35 44.9	-1.3
	baz=261						
D20K	Etivluk River	22.56	39	P	P	17 35 45.1	-1.4
	baz=256						
Q17K	Contact Creek	22.59	66	P	P	17 35 47.5	+0.6
	baz=282						
E20K	Nigu River	22.60	40	P	P	17 35 45.4	-1.6
	baz=257,SNR=8.5						
L19K	White Mountain	22.61	56	P	P	17 35 48.0	+0.9
	baz=273						
O18K	Koktuh Hills	22.66	62	P	P	17 35 48.0	+0.4
	baz=279						
H20K	Anotleneega Mo	22.67	47	P	P	17 35 47.7	+0.1
	baz=265						
P18K	Big Mountain,	22.72	63	P	P	17 35 48.0	-0.3
	baz=280						
B20K	Meade River	22.74	35	P	P	17 35 47.6	-0.7
	baz=252						
I20K	Naaghedeneel	22.79	49	P	P	17 35 47.8	-1.0
	baz=268						
N19K	Bonanza Creek	22.90	59	P	P	17 35 49.5	-0.7
	baz=277						
J20K	Nowinta River	22.91	51	P	P	17 35 49.7	-0.4
	baz=269						
K20K	Telida	22.93	53	P	P	17 35 50.2	-0.3
	baz=271						
Q18K	Katmai Hardscr	22.96	65	P	P	17 35 50.6	-0.3
	baz=282						
O19K	Port Alsworth	23.05	61	P	P	17 35 51.8	+0.2
	baz=278						
IMAR	Indian Mountai	23.18	46	P	P	17 35 54.2	+1.3
C21K	Knifeblade Rid	23.31	38	P	P	17 35 53.4	-0.8
	baz=257,SNR=12						
G21K	Allakaket	23.33	45	P	P	17 35 53.6	-0.8
	baz=264						
CHIR	Chirikof Islan	23.33	72	P	P	17 35 54.8	+0.3
	baz=288						
A21K	Barrow	23.36	32	P	P	17 35 53.2	-1.4
	baz=250						
F21K	Alatna River	23.42	43		P	17 35 56.2	+0.8
F21K				IAmb	IAmb	17 36 02.6	
	comp=Z,22nm,1.2s						
F21K	Alatna River	23.42	43	P	P	17 35 55.3	-0.1
	baz=263,SNR=8.1						
M20K	Styx River	23.44	56	P	P	17 35 55.5	-0.1
	baz=276						
E21K	Killik River	23.44	40	P	P	17 35 53.9	-1.6
	baz=260						
B21K	Ikpikpuk River	23.48	37	P	P	17 35 55.0	-0.8
	baz=256						
H21K	Melozitna Rive	23.54	47	P	P	17 35 57.9	+1.4
H21K				IAmb	IAmb	17 36 06.2	
	comp=Z,20nm,1.4s						
H21K	Melozitna Rive	23.54	47	P	P	17 35 56.2	-0.3
	baz=267						
Q19K	Cape Douglas,	23.61	64	P	P	17 35 57.4	+0.3
	baz=282						
P19K	Oil Pt	23.68	62	P	P	17 35 58.0	+0.1
	baz=280						
CHUM	Lake Minchumin	23.71	51	P	P	17 35 57.5	-0.5
	baz=272						
A22K	Sinclair Lake	23.75	33	P	P	17 35 57.3	-1.1
	baz=253						
PPLA	Purkeypile	23.80	54	P	P	17 35 59.1	-0.1
	baz=274						
I21K	Tanana	23.86	48	P	P	17 35 59.5	0.0
	baz=269						
SII	Sitkinak Islan	23.89	70	P	P	17 36 00.3	+0.4
	baz=287						
O20K	Slope Mountain	23.91	61	P	P	17 36 00.2	+0.1
	baz=280						
N20K	Mount Spurr	23.95	58	P	P	17 35 59.1	-1.4
	baz=278						
SPCR	Spurr Chakacha	23.95	58	P	P	17 35 59.9	-0.6
	baz=278						
F22K	John River	23.96	42	P	P	17 35 59.8	-0.7
	baz=264						
D22K	Ayikyak River	23.99	39		P	17 36 02.6	+1.9
D22K	Ayikyak River	23.99	39	P	P	17 35 59.5	-1.2
	baz=260,SNR=13						
B22K	Teshekpuk Lake	24.06	35	P	P	17 36 00.1	-1.2
	baz=256						
H22K	Ishtalitna Cre	24.14	46	IAmb	IAmb	17 36 23.2	
	comp=Z,23nm,1.4s						
H22K	Ishtalitna Cre	24.14	46	P	P	17 36 00.6	-1.5
	baz=268						
E22K	Anaktuvuk Pass	24.18	41		P	17 36 03.9	+1.3
E22K	Anaktuvuk Pass	24.18	41	P	P	17 36 01.0	-1.5
	baz=262,SNR=18						
OHAK	Old Harbor	24.18	68	P	P	17 36 03.1	+0.5
	baz=286						
SKT	Skwentna	24.18	56	P	P	17 36 02.0	-0.6
	baz=276						
BPAW	Bear Paw Mtn.	24.29	51	P	P	17 36 04.3	+0.7
	baz=272						
Q20K	Shuyak Island	24.31	64	P	P	17 36 04.3	+0.6
	baz=283						
KDAK	Kodiak Island	24.41	66	LR	LR	17 44 53.6	
	comp=Z,205nm,18.9s,baz=279,slow=35						
KDAK	Kodiak Island	24.41	66	P	P	17 36 04.7	+0.1
	baz=285						
HOM	Homer	24.47	62	P	P	17 36 05.3	+0.2
	baz=282						
CAPN	Captain Cook N	24.52	59	P	P	17 36 06.0	+0.4
	baz=279						
SUA	Susitna One	24.62	57	P	P	17 36 07.0	+0.4
	baz=278						
TRF	Thorofare Moun	24.63	52		P	17 36 08.4	+1.6
TRF				IAmb	IAmb	17 36 10.4	
	comp=Z,12nm,0.9s						
TRF	Thorofare Moun	24.63	52	P	P	17 36 06.6	-0.2
	baz=274						
COLD	Coldfoot	24.70	43		P	17 36 08.6	+1.5
COLD				IAmb	IAmb	17 36 10.8	
	comp=Z,17nm,1.0s						
COLD	Coldfoot	24.70	43	P	P	17 36 07.0	-0.1
	baz=266,SNR=17						
D23K	Nanushuk River	24.72	39	IAmb	IAmb	17 36 12.1	
	comp=Z,12nm,1.1s						
D23K	Nanushuk River	24.72	39	P	P	17 36 06.8	-0.5
	baz=262						
CUT	Chulitna	24.73	55	P	P	17 36 07.8	+0.4
	baz=276						
G23K	Bananza Creek	24.73	44	IAmb	IAmb	17 36 19.7	
	comp=Z,17nm,1.2s						
G23K	Bananza Creek	24.73	44	P	P	17 36 07.4	-0.1
	baz=267						
M22K	Willow	24.88	56	P	P	17 36 09.2	+0.4
	baz=278						
C23K	Itkillik River	24.89	37	P	P	17 36 08.5	-0.4
	baz=260						
BRSE	Bradley Lake S	24.91	61	P	P	17 36 09.3	+0.2
	baz=282						
I23K	Minto, Yukon-K	24.97	48	P	P	17 36 11.5	+1.9
I23K	Minto, Yukon-K	24.97	48	P	P	17 36 09.7	+0.1
	baz=271						
E23K	Chandalar	24.99	41	P	P	17 36 09.9	-0.1
	baz=265						
TOLK	Toolik Lake Re	25.07	40	P	P	17 36 12.5	+1.9
TOLK	Toolik Lake Re	25.07	40	P	P	17 36 09.8	-0.8
	baz=264,SNR=19						
NEA2	Nenana	25.11	50	P	P	17 36 12.3	+1.4
NEA2				IAmb	IAmb	17 36 14.9	
	comp=Z,9.2nm,1.0s						
NEA2	Nenana	25.11	50	P	P	17 36 10.9	0.0
	baz=273						
RC01	Rabbit Creek A	25.15	58	P	P	17 36 12.1	+0.7
	baz=280						
MCK	McKinley	25.22	52	P	P	17 36 12.3	+0.4
	baz=275						
MJB9	Matsu-Tunnel	25.25	231	P	P	17 36 13.3	+0.8
MJAR	Matsushiro Arr	25.25	231	P	P	17 36 12.9	+0.5
	comp=Z,7.9nm,0.8s,baz=26,slow=8.8,SNR=18						
MJAR				LR	LR	17 47 05.4	
	comp=Z,154nm,18.5s,baz=31,slow=39						
	comp=Z,7.9nm,0.8s						
MJAR	Matsushiro Arr	25.25	231	IAmb	IAmb	17 36 20.2	
	comp=Z,2.4nm,0.8s						
MJAR	Matsushiro Arr	25.25	231	P	P	17 36 12.9	+0.5
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MAJO	Matsushiro	25.25	231		P	17 36 10.7	-1.8
MAJO	Matsushiro	25.25	231	i P	P	17 36 11.8	-0.6
MAJO				pmax	pmax		
	comp=Z,15nm,0.8s						
O22K	Cooper Landing	25.26	59	P	P	17 36 13.4	+1.1
	baz=281						
PMR	Palmer	25.36	57	P	P	17 36 14.2	+1.1
	baz=279						
D24K	Happy Valley	25.41	39	P	P	17 36 16.3	+2.8
D24K	Happy Valley	25.41	39	P	P	17 36 13.5	-0.1
	baz=263,SNR=14						
E24K	Your Creek	25.42	41	P	P	17 36 13.4	-0.4
	baz=266						
SEW	Seward	25.47	60	P	P	17 36 15.3	+1.1
	baz=282						
WAT1	Susitna Watana	25.47	54	P	P	17 36 15.1	+0.8
	baz=277						
C24K	Franklin Bluff	25.53	38	P	P	17 36 14.4	-0.2
	baz=262						
WRH	Wood River Hil	25.54	50	P	P	17 36 16.4	+1.7
WRH				IAmb	IAmb	17 36 17.0	
	comp=Z,15nm,1.0s						
H24K	Noodor Dome	25.58	47	P	P	17 36 15.3	+0.1
	baz=271						
F24K	Squaw Lake	25.61	43	P	P	17 36 15.7	+0.3
	baz=268						
CCB	Clear Creek Bu	25.65	49		P	17 36 16.6	+0.8
CCB				IAmb	IAmb	17 36 17.9	
	comp=Z,21nm,1.3s						
SML	Sawmill	25.71	56	P	P	17 36 17.3	+0.9
	baz=279						
KNK	Knik Glacier	25.71	57	P	P	17 36 17.0	+0.6
	baz=280						
G24K	Hadweenzic Riv	25.74	45	P	P	17 36 17.1	+0.4
	baz=270,SNR=13						
POKR	Poker Plat Res	25.78	48	P	P	17 36 17.3	+0.3
	baz=273						
PWL	Port Wells	25.87	58	P	P	17 36 18.7	+0.9
	baz=281						
WAT6	Susitna Watana	25.87	54	P	P	17 36 18.8	+0.8
	baz=278						
DHY	Denali Highway	25.98	53	P	P	17 36 19.8	+0.8
	baz=277						
M23K	Glacier View	26.00	56	P	P	17 36 20.0	+1.0
	baz=280						
HDA	Harding Lake	26.04	50	P	P	17 36 20.6	+1.3
	baz=275						
IL31		26.04	49		P	17 36 20.1	+0.8
IL31				IAmb	IAmb	17 36 22.5	
	comp=Z,14nm,1.1s						
ILAR	Eielson Array	26.04	49	P	P	17 36 20.1	+0.8
	comp=Z,5.7nm,1.0s,baz=267,slow=7.7,SNR=32						
	comp=Z,5.7nm,1.0s						
SCM	Sheep Creek Mo	26.18	56	P	P	17 36 21.6	+0.9
	baz=280						
G25K	Bearman Lake	26.29	44	P	P	17 36 22.2	+0.7
	baz=271						
D25K	Kavik River	26.29	39	P	P	17 36 22.1	+0.5
	baz=265						
GLI	Glacier Island	26.46	58	P	P	17 36 24.6	+1.4
	baz=282						
F25K	Christian Rive	26.47	43	IAmb	IAmb	17 36 30.7	
	comp=Z,14nm,1.1s						
F25K	Christian Rive	26.47	43	P	P	17 36 23.7	+0.5
	baz=270,SNR=11						
P23K	Montague Islan	26.50	60	P	P	17 36 24.6	+1.1
	baz=284						
E25K	Arctic Village	26.51	41	IAmb	IAmb	17 36 31.2	
	comp=Z,15nm,1.1s						
E25K	Arctic Village	26.51	41	P	P	17 36 24.5	+0.9
	baz=269,SNR=9.7						
K24K	Donnelly Dome	26.61	51	P	P	17 36 25.2	+0.7
	baz=277						
M24K	Tolsona, Glenn	26.67	55	P	P	17 36 25.4	+0.3
	baz=280						
J25K	Salcha River,	26.70	49	P	P	17 36 26.0	+0.7
	baz=276						
PAX	Paxson	26.85	53	P	P	17 36 27.1	+0.3
	baz=279						
C26K	Camden Bay	26.85	37	P	P	17 36 25.8	-0.7
	baz=266						
BMAR	Burnt Mountain	26.88	43		P	17 36 28.2	+1.3
KLU	Klutina	26.90	56	P	P	17 36 28.2	+1.0
	baz=282						
RIDG	Independent Ri	27.02	51	P	P	17 36 29.4	+1.1
	baz=278						
F26K	Sheenjek River	27.05	42	IAmb	IAmb	17 36 40.0	
	comp=Z,14nm,1.4s						
F26K	Sheenjek River	27.05	42	P	P	17 36 28.4	0.0
	baz=271						
HARP	HAARP	27.09	54	P	P	17 36 29.5	+0.7
	baz=280						
Q23K	Middleton Isla	27.15	61	P	P	17 36 30.1	+0.7
	baz=285						
EYAK	Cordova Ski Ar	27.18	58	P	P	17 36 30.5	+0.9
	baz=284						
G26K	Porcupine Rive	27.20	44	P	P	17 36 29.8	0.0
	baz=273						
C27K	Jago River	27.25	38	IAmb	IAmb	17 36 36.5	
	comp=Z,13nm,1.1s						
C27K	Jago River	27.25	38	P	P	17 36 29.4	-0.8
	baz=268,SNR=5.6						
SCRK	Sand Creek	27.37	51		P	17 36 31.0	-0.4
SCRK				IAmb	IAmb	17 36 33.0	
	comp=Z,9.5nm,1.0s						
SCRK	Sand Creek	27.37	51	P	P	17 36 32.3	+0.8
	baz=278,SNR=5.5						
J26L	Joseph Creek	27.49	49	P	P	17 36 32.8	+0.4
	baz=278						
N25K	Chitina, Valde	27.50	56	P	P	17 36 33.3	+0.7
	baz=282						
I26K	Coal Creek Min	27.57	48	P	P	17 36 33.3	+0.2
	baz=276						
BMRM	Bremner River	27.63	57	P	P	17 36 34.4	+0.7
	baz=283						
L26K	Log Cabin Wild	27.80	52	P	P	17 36 35.7	+0.5
	baz=280						
KAIM	Kayak Island	27.97	59	P	P	17 36 37.4	+0.7
	baz=286						
E27K	Coleen River	28.00	41	P	P	17 36 37.2	+0.2

	baz=272						
G27K	**Doyon Strip**	**28.05**	**44**	IAmb	IAmb	17 36 45.5	
	comp=Z,15nm,1.5s						
G27K	**Doyon Strip**	**28.05**	**44**	P	**P**	**17 36 37.1**	**-0.3**
	baz=275						
M26K	**Nabesna, AK**	**28.08**	**54**	P	**P**	**17 36 37.9**	**+0.2**
	baz=282						
H27K	**Steamboat Moun**	**28.15**	**45**	P	**P**	**17 36 38.1**	**-0.2**
	baz=276,SNR=7.3						
I27K	**Kandik River**	**28.18**	**47**	P	**P**	**17 36 38.0**	**-0.5**
	baz=277						
D27M	**Malcolm River**	**28.21**	**39**	P	**P**	**17 36 37.0**	**-1.8**
	baz=271						
MCARA	**McCarthy VSAT**	**28.28**	**56**	P	**P**	**17 36 38.6**	**-0.9**
	baz=284						
CRQE	**Cirque**	**28.40**	**57**	P	**P**	**17 36 40.7**	**0.0**
	baz=285						
L27K	**Beaver Creek,**	**28.48**	**52**	IAmb	IAmb	17 36 44.4	
	comp=Z,10nm,1.1s						
L27K	**Beaver Creek,**	**28.48**	**52**	P	**P**	**17 36 41.0**	**-0.2**
	baz=282						
M27K	**Edge Creek, AK**	**28.59**	**54**	IAmb	IAmb	17 36 45.9	
	comp=Z,12nm,1.1s						
M27K	**Edge Creek, AK**	**28.59**	**54**	P	**P**	**17 36 42.9**	**+0.5**
	baz=283						
F28M	**Old Crow**	**28.68**	**42**	IAmb	IAmb	17 36 46.5	
	comp=Z,8.7nm,1.1s						
F28M	**Old Crow**	**28.68**	**42**	P	**P**	**17 36 43.1**	**+0.1**
	baz=275						
E28M	**Babbage River**	**28.75**	**40**	P	**P**	**17 36 44.2**	**+0.7**
	baz=273						
I28M	**Miner Creek**	**28.89**	**47**	P	**P**	**17 36 45.7**	**+0.8**
	baz=279						
D28M	**Stokes Point**	**29.00**	**39**	P	**P**	**17 36 45.6**	**-0.2**
	baz=273						
BVCY	**Beaver Creek**	**29.05**	**53**	P	**P**	**17 36 47.1**	**+0.8**
	baz=283						
CTG	**Chitna Glacier**	**29.18**	**56**	P	**P**	**17 36 48.2**	**+0.7**
	baz=286						
DAWY	**Dawson**	**29.35**	**50**	P	**P**	**17 36 48.9**	**-0.1**
	baz=282						
E29M	**Blow River**	**29.36**	**41**	IAmb	IAmb	17 36 57.3	
	comp=Z,14nm,1.4s						
E29M	**Blow River**	**29.36**	**41**	P	**P**	**17 36 47.7**	**-1.3**
	baz=275						
YUK3	**Moose Creek**	**29.38**	**54**	P	**P**	**17 36 49.7**	**+0.2**
	baz=285						
H29M	**Whitestone**	**29.42**	**45**	P	**P**	**17 36 49.3**	**-0.2**
	baz=279						
G29M	**Pine Creek**	**29.47**	**44**	P	**P**	**17 36 50.6**	**+0.7**
	baz=278						
KSRS	**Korea Array**	**29.50**	**246**	LR	LR	17 47 41.5	
	comp=Z,63nm,20.6s,baz=205,slow=34						
I29M	**Ogilvie Camp,**	**29.58**	**47**	P	**P**	**17 36 51.4**	**+0.4**
	baz=280						
O28M	**Mount Upton**	**29.77**	**56**	P	**P**	**17 36 52.9**	**-0.1**
	baz=287						
J29N	**Klondike Camp**	**29.78**	**49**	P	**P**	**17 36 53.4**	**+0.5**
	baz=282						
YUK8	**Steele Glacier**	**29.83**	**55**	P	**P**	**17 36 53.8**	**+0.3**
	baz=286						
PINM	**Pinnacle**	**29.93**	**58**	P	**P**	**17 36 54.1**	**-0.2**
	baz=288						
EPYK	**Eagle Plains**	**30.06**	**45**	P	**P**	**17 36 55.6**	**+0.3**
	baz=280						
L29M	**L29M**	**30.11**	**51**	IAmb	IAmb	17 36 59.3	
	comp=Z,11nm,1.0s						
L29M	**L29M**	**30.11**	**51**	P	**P**	**17 36 56.6**	**+0.9**
	baz=284						
M29M	**Somme Creek**	**30.12**	**53**	P	**P**	**17 36 56.5**	**+0.6**
	baz=285						
G30M	**tAoh Zraii Nji**	**30.16**	**43**	P	**P**	**17 36 55.2**	**-0.9**
	baz=279						
K29M	**Barlow Dome**	**30.21**	**50**	P	**P**	**17 36 57.5**	**+0.8**
	baz=283						
F30M	**Barrier River**	**30.24**	**42**	IAmb	IAmb	17 37 04.2	
	comp=Z,11nm,1.1s						
F30M	**Barrier River**	**30.24**	**42**	P	**P**	**17 36 57.3**	**+0.6**
	baz=278						
YUK4	**Talbot Arm**	**30.33**	**55**	P	**P**	**17 36 58.6**	**+0.7**
	baz=287						
I30M	**Mount Dempster**	**30.40**	**47**	P	**P**	**17 36 58.4**	**0.0**
	baz=282						
J30M	**Hart River**	**30.55**	**48**	P	**P**	**17 37 00.3**	**+0.6**
	baz=283						
YUK6	**Outpost Mounta**	**30.58**	**55**	P	**P**	**17 37 01.0**	**+0.9**
	baz=288						
O29M	**Mount Kennedy**	**30.67**	**57**	P	**P**	**17 37 01.7**	**+0.9**
	baz=288						
M30M	**Minto, Yukon**	**30.84**	**52**	P	**P**	**17 37 03.3**	**+1.1**
	baz=286						
G31M	**Satah River**	**30.93**	**43**	P	**P**	**17 37 03.8**	**+1.0**
	baz=281						
INK	**Inuvik**	**30.98**	**40**	IAmb	IAmb	17 37 12.7	
	comp=Z,13nm,1.2s						
INK	**Inuvik**	**30.98**	**40**	P	**P**	**17 37 03.6**	**+0.3**
	baz=279						
HYT	**Haines Junctio**	**31.01**	**55**	P	**P**	**17 37 02.9**	**-0.9**
	baz=288						
N30M	**Aishikik Lake**	**31.02**	**54**	P	**P**	**17 37 02.5**	**-1.3**
	baz=288						
F31M	**Tsiigehtchic**	**31.04**	**42**	IAmb	IAmb	17 37 11.1	
	comp=Z,4.7nm,0.7s						
F31M	**Tsiigehtchic**	**31.04**	**42**	P	**P**	**17 37 02.8**	**-1.0**
	baz=280						
H31M	**Peel River**	**31.11**	**45**	P	**P**	**17 37 04.2**	**-0.3**
	baz=282						
P29M	**Windy Craggy**	**31.29**	**58**	P	**P**	**17 37 06.3**	**+0.2**
	baz=290						
JNU	**Nakatsue**	**31.45**	**237**	LR	LR	17 49 52.9	
	comp=Z,188nm,18.6s,baz=296,slow=37						
P30M	**Million Dollar**	**31.49**	**57**	P	**P**	**17 37 07.7**	**-0.3**
	baz=290						
N31M	**Braeburn, Yuko**	**31.61**	**54**	P	**P**	**17 37 09.1**	**+0.2**
	baz=288						
O30N	**Mendenhall**	**31.69**	**55**	P	**P**	**17 37 09.3**	**-0.3**
	baz=289						
PLBC	**Pleasant Camp**	**32.00**	**58**	P	**P**	**17 37 13.8**	**+1.4**
	baz=291						
M31M	**Drury Creek, Y**	**32.02**	**52**	P	**P**	**17 37 12.8**	**+0.3**
	baz=288						
WHY	**Whitehorse**	**32.29**	**55**	P	**P**	**17 37 15.7**	**+0.7**
	baz=290						
SKAG	**Skagway**	**32.49**	**57**	P	**P**	**17 37 17.0**	**+0.4**
	baz=292						
S31K	**Pelican**	**32.62**	**60**	P	**P**	**17 37 18.6**	**+0.9**
	baz=293						
N32M	**Quiet Lake**	**32.95**	**54**	P	**P**	**17 37 20.8**	**+0.1**
	baz=290						
A36M	**Sachs Harbour**	**33.19**	**33**	P	**P**	**17 37 21.9**	**-0.7**
	baz=280						
P32M	**Atlin**	**33.21**	**56**	P	**P**	**17 37 24.1**	**+1.1**
	baz=292						
R32K	**Eaglecrest**	**33.34**	**59**	P	**P**	**17 37 25.7**	**+1.7**
	baz=294						
P33M	**Teslin, Yukon**	**33.40**	**55**	P	**P**	**17 37 24.5**	**-0.2**
	baz=292						
SIT	**Sitka**	**33.43**	**61**	P	**P**	**17 37 26.4**	**+1.6**
	baz=295						
S32K	**Killisnoo**	**33.63**	**60**	P	**P**	**17 37 27.8**	**+1.2**
	baz=295						
C36M	**Paulatuk**	**34.14**	**37**		**P**	**17 37 32.5**	**+1.6**
C36M				IAmb	IAmb	17 37 37.0	
	comp=Z,8.3nm,0.9s						
C36M	**Paulatuk**	**34.14**	**37**	P	**P**	**17 37 29.7**	**-1.2**
	baz=285						
Q32M	**Nakina River**	**34.14**	**57**	P	**P**	**17 37 31.1**	**-0.2**
	baz=294						
R33M	**Jennings River**	**34.58**	**56**	P	**P**	**17 37 34.4**	**-0.6**
	baz=294						
SONM	**Songino Array**	**34.72**	**281**	P	**P**	**17 37 36.6**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=47,slow=7.4,SNR=2.2						
SONM				PcP	**PcP**	**17 40 09.2**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=46,slow=4.2,SNR=3.0						
	comp=Z,0.2nm,0.5s						
U33K	**Whale Pass**	**34.94**	**62**	P	**P**	**17 37 38.2**	**+0.3**
	baz=297						
S34M	**Telegraph Cree**	**35.12**	**58**	P	**P**	**17 37 39.7**	**+0.2**
	baz=296						
WRAK	**Wrangell Islan**	**35.19**	**61**	P	**P**	**17 37 40.4**	**+0.4**
	baz=297						
CRAG	**Craig**	**35.24**	**63**	P	**P**	**17 37 40.7**	**+0.2**
	baz=298						
T35M	**Bob Quinn**	**35.97**	**59**	P	**P**	**17 37 47.0**	**+0.3**
	baz=298						
H11N2	**WAKE ISLAND Hy**	**36.04**	**173**	T	T	18 15 56.5	
	baz=356,slow=76,SNR=561						
H11N3	**WAKE ISLAND Hy**	**36.06**	**173**	T	T	18 16 03.8	
	baz=356,slow=76,SNR=83						
H11N1	**WAKE ISLAND Hy**	**36.06**	**173**	T	T	18 16 04.4	
	baz=356,slow=76,SNR=100						
V35K	**Ketchikan**	**36.06**	**62**	P	**P**	**17 37 47.8**	**+0.3**
	baz=299						
HHC	**Hu-ho-hao-te**	**36.10**	**268**	*e*P	**P**	**17 37 46.5**	**-1.8**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,150nm,6.5s						
TOAD	**Toad River Com**	**37.48**	**54**	P	**P**	**17 38 00.4**	**+0.7**
	baz=298,SNR=6.4						
JOW	**Kunigami**	**37.94**	**235**	LR	LR	17 56 00.4	
	comp=Z,108nm,18.1s,baz=192,slow=40						
NJ2	**Nanjing**	**38.42**	**250**	*e*P	**P**	**17 38 05.8**	**-2.0**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LYN	**LuoYang**	**40.02**	**259**	*e*P	**P**	**17 38 25.3**	**+4.1**
LYN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
YKAW3	**Yellowknife Wh**	**40.30**	**45**		**P**	**17 38 24.2**	**+1.1**
YKA	**Yellowknife Ar**	**40.34**	**45**	P	**P**	**17 38 24.5**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=300,slow=9.0,SNR=14						
	comp=Z,0.5nm,0.5s						
YKA	**Yellowknife Ar**	**40.34**	**45**	*i* P	**P**	**17 38 25.6**	**+2.2**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YKAW1	**Yellowknife Wh**	**40.39**	**45**	P	**P**	**17 38 25.9**	**+2.0**
SPITS	**Spitsbergen Ar**	**44.81**	**351**	P	**P**	**17 38 59.7**	**+0.1**
	comp=Z,5.7nm,0.8s,baz=64,slow=9.6,SNR=7.7						
	comp=Z,5.7nm,0.8s						
KURK	**Kurchatov**	**47.57**	**301**		**P**	**17 39 19.3**	**-2.3**
KURK				IAmb	IAmb	17 39 26.3	
	comp=Z,4.3nm,1.1s						
KURK	**Kurchatov**	**47.57**	**301**	*ce*P	**P**	**17 39 20.5**	**-1.1**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.6s						
KURBB	**Kurchatov Arra**	**47.67**	**301**	P	**P**	**17 39 21.9**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=57,slow=8.0,SNR=12						
	comp=Z,0.8nm,0.4s						
MK31	**Makanchi Array**	**48.30**	**295**	*ce*P	**P**	**17 39 27.0**	**-0.4**
MKAR	**Makanchi Array**	**48.30**	**295**	P	**P**	**17 39 26.0**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=47,slow=6.7,SNR=12						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**48.30**	**295**	*i* P	**P**	**17 39 29.8**	**+2.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MAKZ	**Makanchi**	**48.45**	**295**	P	**P**	**17 39 26.8**	**-1.8**
MAKZ				IAmb	IAmb	17 39 28.6	
	comp=Z,4.5nm,1.3s						
MAKZ	**Makanchi**	**48.45**	**295**	P	**P**	**17 39 26.8**	**-1.8**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BVAR	**Borovoye Array**	**49.88**	**308**	P	**P**	**17 39 38.3**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=58,slow=7.0,SNR=6.1						
	comp=Z,0.7nm,0.5s						
ARCES	**ARCESS Array B**	**51.26**	**342**	P	**P**	**17 39 47.9**	**-1.6**
	comp=Z,7.0nm,1.1s,baz=18,slow=4.3,SNR=5.9						
	comp=Z,7.0nm,1.1s						
PZH	**PanZhiHua**	**52.12**	**262**	P	**P**	**17 39 56.4**	**-0.2**
NVAR	**Mina Array Bea**	**53.61**	**73**	P	**P**	**17 40 10.5**	**+2.9**
	comp=Z,0.2nm,0.3s,baz=324,slow=9.1,SNR=1.7						
	comp=Z,0.2nm,0.3s						
KIRV	**Kirov**	**54.14**	**324**	*ce*P	**P**	**17 40 11.6**	**+0.8**
PDAR	**Pinedale Array**	**55.09**	**64**	P	**P**	**17 40 20.3**	**+1.9**
	comp=Z,0.7nm,0.9s,baz=46,slow=4.3,SNR=3.9						
	comp=Z,0.7nm,0.9s						
AAK	**Ala-Archa**	**55.18**	**296**	*i* P	**P**	**17 40 18.6**	**-0.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SPR3	**Spring Creek 3**	**55.34**	**70**	P	**P**	**17 40 22.7**	**+2.4**
SPR3				IAmb	IAmb	17 40 31.4	
	comp=Z,6.7nm,1.3s						
KKAR	**Karatay Array**	**56.84**	**299**		**P**	**17 40 28.9**	**-1.7**
KKAR	**Karatay Array**	**56.84**	**299**	P	**P**	**17 40 28.9**	**-1.7**
FINES	**FINESS Array B**	**58.29**	**337**	P	**P**	**17 40 40.1**	**-0.3**
	comp=Z,4.5nm,0.6s,baz=32,slow=8.8,SNR=46						
	comp=Z,4.5nm,0.6s						
FINES	**FINESS Array B**	**58.29**	**337**	P	**P**	**17 40 40.6**	**+0.2**
FINES	**FINESS Array B**	**58.29**	**337**	*i* P	**P**	**17 40 40.7**	**+0.2**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**60.06**	**259**	P	**P**	**17 40 54.0**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=22,slow=6.8,SNR=7.0						
	comp=Z,0.8nm,0.6s						
CMAR	**Chiang Mai Arr**	**60.06**	**259**	P	**P**	**17 40 53.0**	**-0.3**
CMAR	**Chiang Mai Arr**	**60.06**	**259**	P	**P**	**17 40 54.0**	**+0.7**
OBN	**Obninsk**	**61.07**	**328**	⇑*e*P	**P**	**17 41 01.7**	**+2.0**
OBN				*PP	**sP**	**17 41 13.0**	**+0.8**
OBN				*SP	pP	17 41 20.0	+11
OBN						17 41 42.0	
OBN						17 43 14.0	
OBN				S	**S**	**17 49 11.0**	**-5.2**
OBN				*SS	sS	17 49 45.0	+14
OBN				*e*SS	**SS**	**17 53 12.0**	**-3.1**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,162nm,20.0s						
NB2	**NORSAR Subarra**	**61.43**	**345**	P	**P**	**17 41 01.9**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=19,slow=6.9						
NOA	**NORSAR Array B**	**61.43**	**345**	P	**P**	**17 41 01.1**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=18,slow=6.8,SNR=4.9						
	comp=Z,0.3nm,0.5s						
HFS	**Hagfors**	**61.90**	**343**	P	**P**	**17 41 04.2**	**-1.0**
	comp=Z,0.8nm,0.6s,baz=27,slow=1.7,SNR=7.4						
	comp=Z,0.8nm,0.6s						
PABE	**Paberze**	**64.13**	**335**	P	**P**	**17 41 19.5**	**-0.5**
AKASG	**Malin Array Be**	**67.09**	**330**	P	**P**	**17 41 38.6**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=30,slow=6.3,SNR=5.7						
	comp=Z,1.2nm,0.5s						
AKASG	**Malin Array Be**	**67.09**	**330**	P	**P**	**17 41 37.8**	**-1.5**
AKASG				IAmb	IAmb	17 41 57.5	
	comp=Z,3.9nm,1.2s						
AKASG	**Malin Array Be**	**67.09**	**330**	P	**P**	**17 41 37.8**	**-1.5**
AKASG				pmax	pmax		
	comp=Z,4.0nm,1.3s						
AKBB	**Malin Array Si**	**67.09**	**330**	*ce*P	**P**	**17 41 38.8**	**-0.5**
AKBB				pmax	pmax		
	comp=Z,2.0nm,0.4s						
TXAR	**Lajitas Array**	**68.39**	**70**	P	**P**	**17 41 49.4**	**+1.5**
	comp=Z,0.4nm,0.5s,baz=297,slow=3.9,SNR=9.8						
	comp=Z,0.4nm,0.5s						
TXAR	**Lajitas Array**	**68.39**	**70**	P	**P**	**17 41 49.2**	**+1.3**
TXAR	**Lajitas Array**	**68.39**	**70**	P	**P**	**17 41 49.2**	**+1.3**
EKA	**Eskdalemuir Ar**	**68.73**	**351**	P	**P**	**17 41 49.7**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=353,slow=3.4,SNR=3.7						
	comp=Z,0.9nm,0.6s						
CLL	**Collm**	**70.41**	**340**	*i* sP	P	17 42 05.1	+5.2
BUR08	**Bucovina Ar. S**	**70.99**	**331**		**P**	**17 42 03.5**	**-0.1**
BUR08				IAmb	IAmb	17 42 26.6	
	comp=Z,6.2nm,1.3s						
BURAR	**Bucovina Array**	**71.01**	**331**	P	**P**	**17 42 04.0**	**+0.2**
LANS	**Liptovska Anna**	**71.06**	**335**	*e*P	**P**	**17 42 06.0**	**+2.0**
LANS	**Liptovska Anna**	**71.06**	**335**	*e*P	**P**	**17 42 06.0**	**+2.0**
BRTR	**Keskin Array B**	**75.48**	**322**	P	**P**	**17 42 30.6**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=55,slow=6.6,SNR=4.2						
	comp=Z,0.8nm,0.8s						
BRTR	**Keskin Array B**	**75.48**	**322**	P	**P**	**17 42 30.1**	**-0.3**
WRA	**Warramunga Arr**	**79.02**	**207**	P	**P**	**17 42 50.3**	**+0.3**
	comp=Z,1.6nm,1.0s,baz=26,slow=6.1,SNR=6.6						
	comp=Z,1.6nm,1.0s						
ASAR	**Alice Springs**	**82.69**	**206**	P	**P**	**17 43 10.7**	**+1.1**
	comp=Z,2.0nm,1.0s,baz=17,slow=5.2,SNR=21						
	comp=Z,2.0nm,1.0s						
ASAR	**Alice Springs**	**82.69**	**206**	P	**P**	**17 43 10.6**	**+1.0**
QSPA	**South Pole Qui**	**145.43**	**180**	PKPbc	**PKPbc**	**17 50 22.7**	**+0.1**
	comp=Z,4.4nm,1.1s,baz=32,slow=0.5,SNR=12						
QSPA	**South Pole Qui**	**145.43**	**180**		**PKPdf**	**17 50 22.3**	**-0.2**
TRQA	**Tornquist**	**145.60**	**78**	PKPdf	**PKPbc**	**17 50 24.2**	**+0.1**
TRQA	**Tornquist**	**145.60**	**78**	PKP2	**PKPbc**	**17 50 24.2**	**+0.1**

KRSC 23 17:42:38.3±0.8, 55°.56N×162°.72E, h23km±22km, Ml3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.65**	**5**	*e*P	Pb	17 42 51.1	+0.1
KBG	**Krutoberegovo**	**0.70**	**359**	*e*P	Pb	17 42 51.6	-0.2
KBG				*e*S	Sn	17 43 01.9	-0.9
ZLN	**Zelenaya**	**1.18**	**294**	*e*P	Pb	17 43 00.8	+0.8
BZGR	**Bezymyannyi-Gr**	**1.21**	**289**	*e*P	Pb	17 43 00.2	-0.3
BZGR				*e*S	Sb	17 43 16.7	+1.0
SMKR	**Semkarok**	**1.24**	**326**	*e*P	Pn	17 43 00.3	-0.1
BZWR	**Bezymyannyi-We**	**1.32**	**289**	*e*P	Pn	17 43 01.9	+0.4
BZWR				*e*S	Sb	17 43 19.6	+0.5
TUMD	**Tumrok D**	**1.37**	**256**	*e*S	Sb	17 43 21.0	+0.6
KLY	**Klyuchi**	**1.39**	**304**	*e*P	Pn	17 43 01.0	-1.3
KLY				*e*S	Sn	17 43 18.8	-1.0
KIRR	**Kirishev**	**1.40**	**287**	*e*P	Pb	17 43 03.4	-0.4
KIRR				*e*S	Sb	17 43 22.9	+1.5
KMNR	**Kamenistaya**	**1.42**	**279**	*e*P	Pb	17 43 04.4	+0.2
KMNR				*e*S	Sb	17 43 23.0	+1.2
KZV	**Kizimen**	**1.46**	**253**	*e*P	Pb	17 43 04.9	+0.1
KZV				*e*S	Sb	17 43 23.7	+0.8
KOZ	**Kozyrevsk**	**1.68**	**288**	*e*P	Pb	17 43 08.1	-0.5
KOZ				*e*S	Sb	17 43 30.1	+0.7
SRDR	**Sredinnyy**	**1.85**	**295**	*e*P	Pb	17 43 10.5	-1.0
BKI	**Bering**	**1.89**	**100**	*e*P	Pb	17 43 14.3	+2.3
ESO	**Esso**	**2.30**	**281**	*e*P	Pn	17 43 16.9	+2.0
SPN	**Mys Shipunski**	**2.93**	**214**	*e*P	Pn	17 43 24.8	+1.4
SPN				*e*S	Sn	17 43 58.9	+1.0
NLC	**Nalytchevo**	**3.10**	**221**	*e*S	Sn	17 44 05.6	+3.5
SDLR	**Sedlovina**	**3.20**	**226**	*e*P	Pn	17 43 30.4	+3.1
KRER	**Koryakskii**	**3.24**	**227**	*e*P	Pn	17 43 30.9	+3.1
KRX	**Arik**	**3.24**	**229**	*e*P	Pb	17 43 31.9	-3.3
SMAR	**Somma**	**3.25**	**226**	*e*P	Pn	17 43 30.9	+2.9
AVH	**Avacha**	**3.27**	**227**	*e*P	Pn	17 43 31.6	+3.5
UGLR	**Uglovaya**	**3.28**	**226**	*e*P	Pn	17 43 31.6	+3.3
KOK	**Koryaka**	**3.29**	**228**	*e*P	Pn	17 43 31.8	+3.2
GNL	**Ganaly**	**3.35**	**238**	*e*P	Pn	17 43 33.1	+3.8
DALK	**Dalny**	**3.44**	**224**	*e*P	Pn	17 43 33.2	+2.8
DALK				*e*S	Sn	17 44 13.5	+3.1
PET	**Petropavlovsk**	**3.48**	**225**	*e*P	Pn	17 43 34.2	+3.2
PET				*e*S	Sn	17 44 15.3	+3.9
GRL	**Gorelyy**	**4.07**	**224**	*e*P	Pn	17 43 43.4	+4.1
MTVR	**Mutnovka**	**4.08**	**223**	*e*P	Pn	17 43 43.2	+3.9
ASAK	**Asacha**	**4.27**	**224**	*e*P	Pn	17 43 45.9	+4.0

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*WEL **23** 17:48:58.1±0.7, 24°S±9°×17°6W±1°9, h278km±10km, mB4.8/4, MLv5.7/2, Mw(mB)4.0/4, Error ellipse: s-maj=27.1km s-min=4.1km az=115.8, confirmed*

*NEIC **23** 17:48:59.2±1.5, 24°.03S±0°.09×176°.7W±0°.1, h62km±2km, mb4.3/13, Error ellipse: s-maj=18.9km s-min=10.6km az=121.0*

*IDC **23** 17:49:00.4±4.3, 24°.08S×176°.86W, h70km±38km, mb3.7/11, mbtmp4.1/12, ML4.9/2, Error ellipse: s-maj=24.3km s-min=23.3km az=62.0*

ISC 23 17:49:00.1±0.5, 24°.05S±0°.06×176°.45W±0°.08, h82km, n54, σ2s.19/49, mb4.0/15, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**5.35**	**194**	P	**Pn**	**17 50 15.9**	**-1.5**
	95nm,0.3s,baz=95,slow=20,SNR=1.8						
RAO				S	**Sn**	**17 51 16.0**	**-1.7**
	578nm,0.4s,baz=95,slow=24,SNR=7.3						
GLKZ	**Green Lake**	**5.36**	**194**	P	**Pn**	**17 50 17.9**	**+0.4**
GLKZ				S	**Sn**	**17 51 16.0**	**-1.9**
NIUE	**Niue**	**7.83**	**52**	Pn	**Pn**	**17 50 53.2**	**+1.9**
NIUE	**Niue**	**7.83**	**52**	P	**Pn**	**17 50 53.6**	**+2.2**
NIUE				S	**Sn**	**17 52 12.8**	**-5.6**
AFI	**Afiamalu**	**11.01**	**24**		**Pn**	**17 51 34.2**	**-0.6**
AFI	**Afiamalu**	**11.01**	**24**	P	**Pn**	**17 51 34.8**	**0.0**
AFI				S	**Sn**	**17 53 30.1**	**-6.0**
HAZ	**Te Kaha**	**14.53**	**199**	P	Pn	17 52 11.5	-10
HAZ				S	Sn	17 54 44.8	-17
PKGZ	**Pakihiroa**	**14.55**	**197**	P	Pn	17 52 11.1	-11
PKGZ				S	Sn	17 54 43.8	-18
PUZ	**Puketiti**	**14.69**	**197**	P	Pn	17 52 12.3	-11
PUZ				S	Sn	17 54 47.6	-18
RUGZ	**Raukumara Rang**	**14.75**	**199**	P	Pn	17 52 14.2	-10
RUGZ				S	Sn	17 54 51.9	-15
URZ	**Urewera**	**15.19**	**200**	P	**Pn**	**17 52 29.5**	**-0.5**
	2.4nm,0.3s,baz=0.0,slow=8.1,SNR=9.6						
URZ				S	Sn	17 55 00.5	-17
	5.4nm,0.4s,baz=327,slow=24,SNR=8.6						
	12nm,0.5s						
URZ	**Urewera**	**15.19**	**200**	S	Sn	17 55 01.4	-16
TOZ	**Tahuroa Road**	**15.28**	**205**	Pn	**Pn**	**17 52 29.1**	**-2.0**
TOZ				IAmb	IAmb	17 52 45.0	
	comp=Z,32nm,1.4s						
RIGZ	**Rimuhau**	**15.42**	**197**	S	Sn	17 55 04.4	-19
RAR	**Rarotonga**	**15.66**	**83**	P	**Pn**	**17 52 35.1**	**-0.9**
	comp=Z,25nm,0.8s,baz=194,slow=4.2,SNR=1.7						
RAR				S	Sn	17 55 18.7	-10
	comp=Z,16nm,0.6s,baz=18,slow=20,SNR=1.2						
RAR	**Rarotonga**	**15.66**	**83**		**Pn**	**17 52 36.9**	**+0.9**
DZM	**Mont Dzumac**	**15.87**	**274**	P	**P**	**17 52 44.9**	**+4.0**
	comp=Z,12nm,0.9s,baz=72,slow=18,SNR=8.2						
BKZ	**Black Stump Fm**	**16.22**	**200**	S	Sn	17 55 24.6	-18
OTVZ	**Oturere**	**16.49**	**202**	P	Pn	17 52 38.7	-7.7
SNVZ	**South Ngauruho**	**16.52**	**202**	P	**Pn**	**17 52 40.7**	**-6.1**
STKA	**Stephens Creek**	**37.68**	**248**	P	**P**	**17 56 06.9**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=89,slow=12,SNR=3.6						
	comp=Z,1.1nm,0.5s						
STKA	**Stephens Creek**	**37.68**	**248**	P	**P**	**17 56 06.9**	**-0.7**
INKA	**Innaminka**	**38.54**	**255**	P	**P**	**17 56 15.3**	**+0.4**
INKA				IAmb	IAmb	17 56 16.5	
	comp=Z,3.1nm,1.1s						
COEN	**Coen**	**39.35**	**277**	P	**P**	**17 56 21.2**	**-0.6**
BBOO	**Buckleboo**	**42.37**	**247**	P	**P**	**17 56 45.3**	**-1.2**
BBOO				IAmb	IAmb	17 57 17.7	
	comp=Z,14nm,1.4s						
AS31	**Alice Springs**	**45.21**	**260**		**P**	**17 57 08.5**	**-0.9**
ASAR	**Alice Springs**	**45.21**	**260**	P	**P**	**17 57 08.0**	**-1.4**
	comp=Z,1.5nm,0.4s,baz=95,slow=7.3,SNR=61						
	comp=Z,1.5nm,0.4s						
WR8	**Warramunga Arr**	**45.48**	**265**	P	**P**	**17 57 09.7**	**-1.8**
WRAB	**Tennant Creek**	**45.62**	**265**	P	**P**	**17 57 10.4**	**-2.3**
WRAB				IAmb	IAmb	17 57 13.2	
	comp=Z,4.9nm,1.3s						
WB0	**Warramunga Arr**	**45.62**	**265**	P	**P**	**17 57 10.6**	**-2.1**
WB0				IAmb	IAmb	17 57 12.0	
	comp=Z,2.5nm,0.6s						
WRA	**Warramunga Arr**	**45.63**	**265**	P	**P**	**17 57 10.5**	**-2.2**
	comp=Z,1.4nm,0.6s,baz=96,slow=8.4,SNR=34						
	comp=Z,1.4nm,0.6s						
WRA	**Warramunga Arr**	**45.63**	**265**	P	**P**	**17 57 10.6**	**-2.1**
VNDA	**Vanda**	**54.53**	**186**	P	**P**	**17 58 20.2**	**+1.1**
	comp=Z,0.6nm,0.9s,baz=44,slow=4.3,SNR=2.0						
	comp=Z,0.6nm,0.9s						
VNDA	**Vanda**	**54.53**	**186**	P	**P**	**17 58 21.1**	**+1.9**
VNDA				IAmb	IAmb	17 58 48.9	
	comp=Z,4.9nm,1.5s						
QSPA	**South Pole Qui**	**66.04**	**180**	P	**P**	**17 59 39.2**	**+1.2**
	comp=Z,2.2nm,0.8s,baz=44,slow=1.3,SNR=12						
	comp=Z,2.2nm,0.8s						
QSPA	**South Pole Qui**	**66.04**	**180**	P	**P**	**17 59 39.4**	**+1.4**
QSPA				IAmb	IAmb	18 00 14.9	
	comp=Z,8.8nm,1.5s						
MJAR	**Matsushiro Arr**	**73.90**	**323**	P	**P**	**18 00 25.9**	**-0.4**
	comp=Z,2.2nm,1.0s,baz=114,slow=11,SNR=4.0						
	comp=Z,2.2nm,1.0s						
PETK	**Petropavlovsk-**	**80.05**	**345**	P	**P**	**18 01 02.7**	**+2.3**
	comp=Z,6.7nm,0.8s,baz=178,slow=6.2,SNR=5.8						
	comp=Z,6.7nm,0.8s						
PETK	**Petropavlovsk-**	**80.05**	**345**	P	**P**	**18 01 00.9**	**+0.5**
NVAR	**Mina Array Bea**	**82.64**	**42**	P	**P**	**18 01 18.7**	**+4.0**
	comp=Z,0.5nm,0.6s,baz=252,slow=5.4,SNR=3.8						
	comp=Z,0.5nm,0.6s						
NVAR	**Mina Array Bea**	**82.64**	**42**	P	**P**	**18 01 16.4**	**+1.6**
PDAR	**Pinedale Array**	**90.57**	**43**	P	**P**	**18 01 56.0**	**+2.6**
	comp=Z,0.4nm,0.7s,baz=216,slow=4.8,SNR=4.1						
	comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	**90.57**	**43**	P	**P**	**18 01 54.5**	**+1.0**
ILAR	**Eielson Array**	**91.45**	**12**	P	**P**	**18 01 57.8**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=201,slow=4.8,SNR=2.5						
	comp=Z,0.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**92.63**	**289**	P	**P**	**18 02 03.1**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=116,slow=3.1,SNR=4.4						
	comp=Z,0.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**92.63**	**289**	P	**P**	**18 02 02.1**	**-1.1**
ARCES	**ARCESS Array B**	**132.65**	**350**	PKP	**PKPdf**	**18 08 04.8**	**+0.2**
	comp=Z,5.1nm,1.0s,baz=29,slow=5.5,SNR=4.9						
FINES	**FINESS Array B**	**139.56**	**344**	PKP	**PKPdf**	**18 08 19.3**	**+1.7**
	comp=Z,1.8nm,0.9s,baz=28,slow=5.8,SNR=2.3						
HFS	**Hagfors**	**143.25**	**352**	PKhKP	PKPpre	18 08 22.2	
	comp=Z,0.8nm,0.6s,baz=56,slow=0.5,SNR=4.5						
AKASG	**Malin Array Be**	**146.79**	**330**	PKPbc	**PKPbc**	**18 08 33.0**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=43,slow=4.0,SNR=9.5						
AKASG	**Malin Array Be**	**146.79**	**330**		**PKPbc**	**18 08 32.8**	**+0.2**
BRTR	**Keskin Array B**	**150.22**	**309**	PKPbc	**PKPbc**	**18 08 42.7**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=68,slow=3.9,SNR=8.2						
BRTR	**Keskin Array B**	**150.22**	**309**		**PKPbc**	**18 08 42.3**	**+0.2**
MMAI	**Mount Meron Ar**	**150.71**	**295**	PKPbc	**PKiKP**	**18 08 44.8**	**+0.9**
	comp=Z,4.0nm,0.7s,baz=76,slow=3.5,SNR=5.1						

*IDC **23** 18:00:35.9±0.9,67°.18N×21°.00E,h0^{km},mbtmp2.8/4,ML1.9/4,Error ellipse: s-maj=15.2km s-min=7.0km az=116.0*

*UPP **23** 18:00:35.5±0.1,67°.05N×20°.94E,h0^{km},ML2.0,Suspected explosion*

ISC 23 18:00:35.5±0.9,**67°.06N**±0°.04×**20°.85E**±0°.04,**h0**^{km},**n15,** σ**1^{s}.21**/18,**Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASU	Masugnsbyn	0.60	48	P	Pg	18 00 46.5	-0.4
ERTU	Ertsjaerv	0.73	133	P	Pg	18 00 48.8	-0.7
PAJU	Pajala	0.89	91	P	Pg	18 00 51.5	-1.0
HARU	Harads	0.90	177	P	Pg	18 00 52.2	-0.5
RATU	Laukkuluspa	0.91	328	P	Pg	18 00 52.8	-0.1
KUA	Kurravaara	0.92	348	P	Pg	18 00 53.2	+0.1
SALU	Saltoluokta	0.97	291	P	Pb	18 00 54.6	-0.6
SALU	Saltoluokta	0.97	291	*e*P	Pb	18 00 54.7	-0.4
NIKU	Nikkaluokta	1.07	320	P	Pg	18 00 56.0	-0.1
LANU	Lannavaara	1.09	23	P	Pg	18 00 55.5	-0.8
HEF	Hetta	1.73	37	*e*P	Pn	18 01 06.9	+0.1
ARCES	ARCESS Array B	3.03	33	Pn	Pn	18 01 24.8	+0.1
	0.2nm,0.3s,baz=217,slow=14,SNR=32						
ARCES				Lg	Lg	18 02 04.9	
	0.7nm,0.3s,baz=214,slow=23,SNR=9.0						
	0.8nm,0.2s						
FINES	FINESS Array B	6.08	156	Pn	Pn	18 02 07.4	+1.0
	0.1nm,0.3s,baz=347,slow=12,SNR=6.6						
FINES				Sn	Sn	18 03 19.4	+2.9
	0.3nm,0.3s,baz=345,slow=21,SNR=7.9						
FINES				Lg	Lg	18 03 50.4	
	0.3nm,0.3s,baz=339,slow=15,SNR=5.9						
	2.2nm,1.1s						
NOA	NORSAR Array B	7.37	219	Pn	Pn	18 02 26.1	+1.9
	baz=25,slow=13,SNR=4.1						
NOA				Sn	Sn	18 03 45.9	-2.4
	baz=44,slow=24,SNR=1.7						
NOA				Lg	Lg	18 04 31.0	
	baz=44,slow=25,SNR=1.7						
	0.3nm,0.8s						
HFS	Hagfors	7.64	208	Pn	Pn	18 02 28.0	+0.1
	0.1nm,0.3s,baz=28,slow=16,SNR=6.3						
HFS				Sn	Sn	18 03 54.4	-0.7
	0.1nm,0.3s,baz=25,slow=24,SNR=1.5						
HFS				Lg	Lg	18 04 33.8	
	0.1nm,0.3s,baz=28,slow=34,SNR=1.5						
	0.8nm,0.8s						

IDC 23 18:18:41.3±2.6,**7°.37S**×**128°.09E,h0**^{km},**mb3.3**/1, **mbtmp3.1**/3,**ML3.2**/2,**MS3.5**/1,**Error ellipse: s-maj=288.9km s-min=33.7km az=65.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.89	155	Pn	Pn	18 21 58.1	-1.5
	0.1nm,0.3s,baz=332,slow=14,SNR=8.0						
WRA				Sn	Sn	18 24 20.1	-15
	0.2nm,0.3s,baz=130,slow=13,SNR=6.8						
	0.4nm,0.7s						
ASAR	Alice Springs	17.14	162	Pn	P	18 22 43.6	-0.5
	0.1nm,0.3s,baz=338,slow=8.7,SNR=15						
ASAR				Sn	Sn	18 25 41.9	-12
	0.1nm,0.3s,baz=348,slow=25,SNR=5.2						
	0.2nm,0.8s						
TGY	Tagaytay City	22.48	342	LR	LR	18 35 16.1	
	comp=Z,114nm,18.4s,baz=120,slow=44						
MKAR	Makanchi Array	67.51	328	P	P	18 29 39.3	0.0
	0.1nm,0.4s,baz=120,slow=5.7,SNR=2.1						
	0.1nm,0.4s						

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*VIE **23** 18:31:29.9±0.3,50°.33N×18°.73E,h0^{km},mb2.7/3,ml2.4/5, Error ellipse: s-maj=3.4km s-min=1.9km az=1.0 20 km WNW of Katowice Suspected Mining induced.*

*IPEC **23** 18:31:30.8±0.1,50°.21N×18°.78E,h1^{km},ML2.3/6,Error ellipse: s-maj=1.7km s-min=0.6km az=173.0*

*PRU **23** 18:31:31.4,50°.21N×18°.74E,h0^{km}*

ISC 23 18:31:29.7±0.9,**50°.26N**±0°.04×**18°.82E**±0°.02,**h0**^{km},**n28,** σ**0^{s}.84**/46,**Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.61	225	*e*PG	Pg	18 31 41.9	+0.6
OKC				*e*SG	Sg	18 31 49.2	+0.1
	comp=Z,45nm,0.6s						
OJC	Ojcow	0.63	94	*e*Pg	Pb	18 31 43.2	-0.4
OJC				*e*Sg	Sb	18 31 52.3	-0.7
STEB	Steborice	0.75	244	*e*PG	Pg	18 31 44.6	+0.6
STEB				*e*SG	Sg	18 31 54.2	+0.5
	comp=Z,108nm,0.3s						
ANAC	Anensky vrch	0.94	259	*e*Pg	Pg	18 31 48.4	+0.7
	baz=81						
ANAC				*e*Sg	Sg	18 31 59.6	-0.3
	105nm,0.4s,baz=81						
MORC	Moravsky Berou	0.95	240	*e*Pg	Pg	18 31 48.2	+0.3
	baz=61						
MORC				*e*Sg	Sg	18 31 59.3	-1.0
	51nm,0.3s,baz=61						
LOSC	Losov	1.13	236	*e*Pg	Pg	18 31 51.4	0.0
	baz=57						
LOSC				*e*Sg	Sg	18 32 04.6	-1.4
	60nm,0.4s,baz=57						
LANS	Liptovska Anna	1.19	159	*e*PG	Pb	18 31 53.2	0.0
LANS				*e*SG	Sb	18 32 09.0	-0.1
LANS				*e*LG	Lg	18 32 11.5	
NIE	Niedzica	1.28	131	*e*Pg	Pn	18 31 55.1	+0.2
NIE				*e*Sg	Sn	18 32 12.8	+0.1
KRLC	Kraliky	1.32	263	*e*SG	Sg	18 32 11.0	-1.1
	comp=Z,29nm,0.3s						
DPC	Dobruska-Polom	1.60	274	*e*PG	Pn	18 31 59.4	+0.1
DPC				*e*SG	Sn	18 32 20.8	+0.2
	comp=Z,22nm,0.2s						
OSTC	Ostas	1.69	281	*e*PG	Pb	18 32 01.7	+0.1
OSTC				*e*SG	Sb	18 32 23.7	+0.3
KSP	Ksiaz	1.71	291	*e*Pg	Pg	18 32 02.7	+0.3
KSP				*e*Sg	Sg	18 32 25.4	+0.8
VRAC	Vranov	1.73	237	*e*Pn	Pn	18 32 01.2	+0.2
	baz=57						
VRAC				*e*Sg	Sn	18 32 23.4	-0.3
	15nm,0.3s,baz=57						
STHS	Stebnicka Huta	1.79	117	*e*PG	Pb	18 32 03.5	+0.2
STHS				*e*SG	Sg	18 32 28.4	+1.4
STHS				*e*LG	Lg	18 32 41.4	
UPC	Upice	1.81	279	*e*PG	Pb	18 32 03.7	0.0
KRUC	Moravsky	1.98	233	*e*Pn	Pn	18 32 04.7	+0.3
	baz=53						
KRUC				*e*Sg	Sb	18 32 31.1	-0.7
	11nm,0.3s,baz=53						
KECS	Kecovo	2.09	148	*e*SN	Sn	18 32 30.9	-1.8
PVCC	Panska Ves	2.73	277	*e*SG	Sg	18 32 56.8	-0.5
	comp=Z,15nm,0.2s						
PRU	Pruhonice	2.76	266	*e*SG	Sb	18 32 55.0	+0.7
CONA	Conrad Observa	3.04	221	*i* Pn	Pn	18 32 18.8	-0.3
	0.5nm,0.3s						
CONA				*i* Sn	Sn	18 32 54.5	-1.6
	1.7nm,0.3s						
CKRC	Cesky Krumlov	3.27	245	*e*SG	Sb	18 33 11.1	+2.2
KHC	Kasperske Hory	3.58	254	*e*PN	Pn	18 32 25.5	-1.0
KHC				*e*PG	Pb	18 32 34.1	+0.2
KHC				*e*SG	Sg	18 33 23.6	-1.1
	comp=Z,12nm,0.4s						
ARSA	Arzberg	3.72	217	*e*Sn	Sn	18 33 14.2	+1.4
	0.6nm,0.3s						
CLL	Collm	3.83	288	*e*Sg	Sg	18 33 31.0	-1.7
MOA	Molln	3.84	233	*i* Pn	Pn	18 32 30.2	+0.1
	0.2nm,0.1s						
MOA				*e*Sn	Sn	18 33 15.0	-1.0
	0.4nm,0.1s						
BIOA	Bad Ischl, Aus	4.27	235	*i* Sn	Sn	18 33 26.4	-0.1
	5.4nm,0.7s						
LESA	Schwarzleotal	4.95	237	*i* Sn	Sn	18 33 43.8	+0.5
	1.1nm,0.4s						
WTTA	Wattenberg	5.62	240	*i* Sn	Sn	18 34 00.1	+0.3
	2.5nm,0.6s						

IDC 23 18:34:10.4±1.4,**13°.66N**×**122°.40E,h0**^{km},**mb3.5**/4, **mbtmp3.5**/4,**Error ellipse: s-maj=38.5km s-min=14.2km az=35.0,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	Tagaytay City	1.49	287	Pg	Pn	18 34 37.9	-0.6
	178nm,0.3s,baz=122,slow=3.1,SNR=7.5						
TGY				Lg	Lg	18 34 57.5	
	244nm,0.3s,baz=170,slow=21,SNR=6.7						
WRA	Warramunga Arr	35.40	160	P	P	18 41 06.8	-1.4
	0.3nm,0.5s,baz=339,slow=8.4,SNR=5.1						
	0.3nm,0.5s						
ASAR	Alice Springs	38.77	163	P	P	18 41 37.7	+0.8
	0.5nm,0.6s,baz=341,slow=7.0,SNR=15						
	0.5nm,0.6s						
MKAR	Makanchi Array	47.05	323	P	P	18 42 43.3	-0.6
	0.5nm,0.9s,baz=132,slow=8.3,SNR=4.2						
	0.5nm,0.9s						
KURBB	Kurchatov Arra	51.15	325	P	P	18 43 15.3	+0.2
	1.1nm,1.0s,baz=119,slow=8.8,SNR=4.7						
	1.1nm,1.0s						

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*IDC **23** 19:13:23.9±0.5,50°.43N×129°.86W,h0^{km},mb4.7/27, mbtmp4.7/34,ML4.5/6,MS5.3/63,Error ellipse: s-maj=12.2km s-min=8.2km az=36.0*

*NEIC **23** 19:13:24.1,50°.41N×10°.04W,h4^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.02; M$_{\theta\theta}$-3.57; M$_{\phi\phi}$2.51; M$_{r\theta}$-0.88; M$_{\theta\phi}$-0.21; M$_{\phi r}$-1.62; Fault plane solution: M$_0$3.60000×10^{17} NP1:ϕ_s131.00000°, δ60.00000°,λ172.00000°. NP2:ϕ_s225.00000°,δ83.00000°, λ30.00000°. Principal axes: T 3.6696, Plg26.0000°, Azm92.0000°; N -0.1989, Plg59.0000°, Azm237.0000°; P -3.4706, Plg15.0000°, Azm354.0000°;*

*NEIC **23** 19:13:25,50°.57N×129°.82W,h10^{km}*

*IPGP **23** 19:13:25.0,50°.57N×129°.82W,h20^{km},Mw5.7,Fault plane solution: NP1:ϕ_s226.00000°,δ88.00000°,λ22.00000°. NP2:ϕ_s136.00000°,δ68.00000°,λ178.00000°.*

*NEIC **23** 19:13:25,50°.47N×129°.98W,h12^{km},Moment Tensor Solution. Duration: 3^{s}.6 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.34; M$_{\theta\theta}$-4.14; M$_{\phi\phi}$3.80; M$_{r\theta}$-0.49; M$_{\theta\phi}$0.14; M$_{\phi r}$1.43; Fault plane solution: M$_0$4.26000×10^{17} NP1:ϕ_s47.60000°, δ71.08000°,λ9.47000°. NP2:ϕ_s314.50000°,δ81.05000°, λ160.83000°. Principal axes: T 4.3155, Plg20.0000°, Azm270.0000°; N -0.1161, Plg69.0000°, Azm110.0000°; P -4.1994, Plg7.0000°, Azm2.0000°;*

*NEIC **23** 19:13:25,50°.57N×129°.82W,h12^{km}*

*NEIC **23** 19:13:25.1±1.9,50°.54N±0°.03×129°.83W±0°.07,h10^{km}±1^{km}, mb5.4/511,Mwb5.5/50,Mww5.7/92,Mwr5.6(OTT),Error ellipse: s-maj=8.4km s-min=3.8km az=123.0,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.85; M$_{\theta\theta}$-2.76; M$_{\phi\phi}$1.91; M$_{r\theta}$-0.63; M$_{\theta\phi}$-0.40; M$_{\phi r}$-0.58; Fault plane solution: M$_0$2.62000×10^{17} NP1: ϕ_s129.12000°,δ66.24000°,λ170.50000°. NP2: ϕ_s222.98000°,δ81.31000°,λ24.05000°. Principal axes: T 2.1649, Plg23.0000°, Azm88.0000°; N 0.7542, Plg65.0000°, Azm242.0000°; P -2.9191, Plg10.0000°, Azm354.0000°;*

*ISC-PP **23** 19:13:25,50°.54N×129°.83W,h11^{km},Mwppsm6.1, Moment Tensor Solution. s50 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.07±.10; M$_{\theta\theta}$-0.49±.17; M$_{\phi\phi}$0.60±.14; M$_{r\theta}$0.20±.18; M$_{\theta\phi}$-0.24±.13; M$_{\phi r}$-0.32±.13; Fault plane solution: M$_0$1.53000×10^{18} NP1:ϕ_s120.20000°,δ87.30000°, λ156.00000°. NP2:ϕ_s211.40000°,δ66.00000°,λ3.00000°.*

*MOS **23** 19:13:26.2±1.3,50°.49N×129°.59W,h22^{km},mb5.4/61, MS5.5/19 Error ellipse: s-maj=10.1km s-min=4.9km az=107.7*

*GFZ **23** 19:13:27.8,50°.48N×129°.72W,h12^{km},MW5.6,Moment Tensor Solution. s43 Moment tensor: M$_{rr}$-0.12; M$_{\theta\theta}$-2.95; M$_{\phi\phi}$3.07; M$_{r\theta}$1.40; M$_{\theta\phi}$0.33; M$_{\phi r}$-0.67; Fault plane solution: NP1:ϕ_s319.00000°,δ82.00000°, λ-155.00000°. NP2:ϕ_s226.00000°,δ66.00000°, λ-8.00000°. Principal axes: T 3.2100, Plg11.0000°, Azm90.0000°; N 0.3600, Plg64.0000°, Azm336.0000°; P -3.5700, Plg23.0000°, Azm185.0000°;*

*GCMT **23** 19:13:28.1±0.1,50°.36N±0°.01×130°.01W±0°.01,h12^{km}, MW5.7/158,Moment Tensor Solution. s122,c226; s158,c330; Duration: 1^{s}.7 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.38±.04; M$_{\theta\theta}$-4.41±.04; M$_{\phi\phi}$4.03±.04; M$_{r\theta}$-0.16±.10; M$_{\theta\phi}$-0.15±.03; M$_{\phi r}$-0.21±.10; Best double couple: M$_0$4.23100×10^{17} NP1:ϕ_s134.00000°,δ86.00000°, λ179.00000°. NP2:ϕ_s224.00000°,δ89.00000°,λ4.00000°. Principal axes: T 4.0440, Plg3.0000°, Azm89.0000°; N 0.3740, Plg86.0000°, Azm238.0000°; P -4.4180, Plg2.0000°, Azm359.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 19:13:24.8±0.2,**50°.34N**±0°.04×**129°.81W**±0°.04,**h10**^{km}, **n977,**σ**1^{s}.96**/758,**mb5.3**/304,**MS5.5**/114,**25C-12D, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	Holberg	1.11	74		Pb	19 13 44.4	-1.8
BBB	Bella Bella	2.13	29	Pn	Pn	19 13 59.0	-1.5
	187nm,0.3s,baz=224,slow=6.8,SNR=998						
BBB				Sn	Sn	19 14 23.6	-3.4
	695nm,0.3s,baz=195,slow=16,SNR=7.5						
BBB				LR	LR	19 14 55.0	
	comp=Z,47μm,21.6s,baz=222,slow=44						
	470nm,0.3s						
BBB	Bella Bella	2.13	29		Pn	19 13 58.5	-1.9
HG4B	Hotspring	2.14	337		Pn	19 13 55.9	-4.8
CBB	Campbell River	2.87	94		Pn	19 14 10.1	-0.5
MOBC	Moresby Island	3.12	335		Pn	19 14 09.4	-4.6
OZB	Mount Ozzard	3.13	115		Pn	19 14 12.4	-1.8
DIB	Dawson Inlet,	3.31	331		Pn	19 14 11.1	-5.6
CLRS	Cowichan Lake	4.00	110		Pn	19 14 26.0	-0.1
RUBB	Prince Rupert	4.00	356		Pn	19 14 22.2	-3.9
C03A	Quillayute Air	4.19	123		Pn	19 14 31.1	+2.4
PGC	Sidney	4.48	110		Pn	19 14 33.1	+0.5
B04A	Port Angeles	4.72	116		Pn	19 14 35.6	-0.5
A04D	Lummi Island	4.90	107		Pn	19 14 40.3	+1.8
NLWA	Neilton Lookou	4.91	125		Pn	19 14 40.3	+1.7
LLLB	Lillooet	5.07	84		Pn	19 14 41.1	+0.3
V35K	Ketchikan	5.12	348		Pn	19 14 38.1	-3.3
V35K	Ketchikan	5.12	348	P	Pn	19 14 38.3	-3.1
	baz=167,SNR=18						
WISH	Wishkah	5.13	127		Pn	19 14 43.7	+2.1
GNW	Green Mountain	5.37	118		Pn	19 14 46.6	+1.6
CRAG	Craig	5.52	340		Pn	19 14 43.4	-3.6
CRAG	Craig	5.52	340	P	Pn	19 14 43.3	-3.6
	baz=157,SNR=6.5						
U35K	Hyder	5.59	359		Pn	19 14 44.6	-3.3
U35K	Hyder	5.59	359	P	Pn	19 14 44.3	-3.6
	baz=179						
U33K	Whale Pass	6.12	342		Pn	19 14 52.4	-2.7
U33K	Whale Pass	6.12	342	P	Pn	19 14 51.9	-3.2
	baz=159						
F04D	Rainier, OR	6.23	131		Pn	19 14 58.4	+1.7
WRAK	Wrangell Islan	6.28	347	P	Pn	19 14 54.5	-2.9
	baz=165						
T35M	Bob Quinn	6.66	358	P	Pn	19 15 00.1	-2.5
	baz=178,SNR=30						
T33K	Petersburg	6.75	345	P	Pn	19 14 60.0	-3.9
	baz=162						
COR	Corvallis	7.25	140		Pn	19 15 13.6	+2.9
COR	Corvallis	7.25	140	P	Pn	19 15 13.6	+2.9
SIT	Sitka	7.48	336	P	Pn	19 15 10.5	-3.3
	baz=151						
S34M	Telegraph Cree	7.63	355	P	Pn	19 15 12.9	-3.0
	baz=174,SNR=15						
S32K	Killisnoo	7.68	340	P	Pn	19 15 13.6	-2.9
	baz=156						
WIFE	Three Sisters-	8.31	136	Pn	Pn	19 15 27.3	+1.8
R32K	Eaglecrest	8.41	343	P	Pn	19 15 23.0	-3.7
	baz=159						
S31K	Pelican	8.51	336	P	Pn	19 15 23.7	-4.3
	baz=151						
NEW	Newport	8.55	99	Pn	Pn	19 15 29.9	+1.3
	6.3nm,0.3s,baz=296,slow=11,SNR=32						
NEW				Lg	Lg	19 17 52.9	
	baz=311,slow=10						
NEW				LR	LR	19 18 49.5	
	comp=Z,55μm,18.8s,baz=282,slow=38						
	27nm,0.4s						
Q32M	Nakina River	8.76	352	P	Pn	19 15 27.5	-4.1
	baz=170						
R31K	City Hall, Gus	8.80	339	P	Pn	19 15 28.5	-3.3
	baz=154						
TOAD	Toad River Com	8.93	15	P	Pn	19 15 30.8	-3.0
	baz=200,SNR=26						
R33M	Jennings River	9.10	356	P	Pn	19 15 32.7	-3.5
	baz=175,SNR=33						
LIRD	Liard River Hi	9.34	12	P	Pn	19 15 36.4	-2.9
	baz=195						
P32M	Atlin	9.54	348	P	Pn	19 15 39.8	-2.3
	baz=165						
SKAG	Skagway	9.67	343	P	Pn	19 15 42.0	-1.9
	baz=158						
K05A	Summer Lake	9.78	138		Pn	19 15 49.6	+4.1
WTLY	Watson Lake, Y	9.81	3	P	Pn	19 15 44.0	-1.9
	baz=184,SNR=10						
PLBC	Pleasant Camp	9.88	340	P	Pn	19 15 44.2	-2.6
	baz=154						
YBH	Yreka Blue Hor	9.92	148	Pn	Pn	19 15 52.5	+5.1
	baz=352,slow=15,SNR=45						
YBH				LR	LR	19 19 06.7	
	comp=Z,2μm,21.2s,baz=312,slow=34						
YBH	Yreka Blue Hor	9.92	148		Pn	19 15 52.1	+4.7
YBH	Yreka Blue Hor	9.92	148	P	Pn	19 15 52.1	+4.7
KRPM	Rodgers	10.03	154		Pn	19 15 50.4	+1.5
P33M	Teslin, Yukon	10.04	351	P	Pn	19 15 46.5	-2.5
	baz=169,SNR=13						
BMO	Blue Mountains	10.07	118		Pn	19 15 50.1	+0.7
BMO	Blue Mountains	10.07	118	P	Pn	19 15 50.1	+0.7
M02C	Callahan	10.17	149		Pn	19 15 55.2	+4.3
KOTAN	Kotaneelee Air	10.35	16	P	Pn	19 15 50.3	-2.8
	baz=201,SNR=29						
P29M	Windy Craggy	10.36	337	P	Pn	19 15 50.5	-2.8
	baz=150						
EDM	Edmonton	10.60	68		Pn	19 15 58.4	+1.8
EDM	Edmonton	10.60	68	P	Pn	19 15 58.4	+1.8
P30M	Million Dollar	10.61	340	P	Pn	19 15 53.8	-3.0
	baz=154						
WHY	Whitehorse	10.73	346		Pn	19 15 57.0	-1.6
WHY	Whitehorse	10.73	346	P	Pn	19 15 55.7	-2.8
	baz=162,SNR=21						
N32M	Quiet Lake	10.99	352	P	Pn	19 15 57.0	-5.0
	baz=169						
O30N	Mendenhall	11.04	344	P	Pn	19 15 58.3	-4.3
	baz=158,SNR=7.5						
O29M	Mount Kennedy	11.15	337	P	Pn	19 15 60.0	-4.3
	baz=149,SNR=6.9						
HYT	Haines Junctio	11.37	341	P	Pn	19 16 03.0	-4.2
	baz=154,SNR=10						
PINM	Pinnacle	11.44	333	P	Pn	19 16 04.0	-4.0
	baz=144						
N31M	Braeburn, Yuko	11.66	346	P	Pn	19 16 06.9	-4.1
	baz=161						
YUK6	Outpost Mounta	11.66	339	P	Pn	19 16 08.5	-2.8
	baz=152,SNR=8.5						
N30M	Aishikik Lake	11.86	343	P	Pn	19 16 10.1	-3.7
	baz=157,SNR=11						
O28M	Mount Upton	11.97	335	P	Pn	19 16 12.3	-3.4
	baz=146						
YUK4	Talbot Arm	12.08	339	P	Pn	19 16 14.8	-2.3
	baz=152,SNR=6.2						
M31M	Drury Creek, Y	12.16	350	P	Pn	19 16 15.0	-2.9
	baz=166,SNR=10						
YUK8	Steele Glacier	12.30	337	P	Pn	19 16 17.2	-2.8
	baz=148,SNR=15						
CTG	Chitna Glacier	12.46	333	P	Pn	19 16 19.7	-2.4
	baz=143						
KAIM	Kayak Island	12.70	325	P	Pn	19 16 22.4	-2.9
	baz=132						
TGL	Tana Glacier	12.75	330		Pn	19 16 23.0	-3.0
CRQE	Cirque	12.83	329	P	Pn	19 16 24.5	-2.7
	baz=138						
M30M	Minto, Yukon	12.85	345	P	Pn	19 16 26.0	-1.3
	baz=159						
YUK3	Moose Creek	12.89	337	P	Pn	19 16 25.8	-2.3
	baz=148,SNR=9.1						
M29M	Somme Creek	13.03	342	P	Pn	19 16 28.5	-1.4
	baz=154,SNR=19						
Q23K	Middleton Isla	13.14	320	P	Pn	19 16 29.9	-1.3
	baz=126						
MCARA	McCarthy VSAT	13.29	331	P	Pn	19 16 33.0	-0.3
	baz=140						
WRGLY	Wrigley	13.37	13	P	Pn	19 16 33.8	-0.6
	baz=198						
BMRM	Bremner River	13.49	328	P	Pn	19 16 35.8	-0.4
	baz=135,SNR=9.0						
BVCY	Beaver Creek	13.54	338	P	Pn	19 16 35.4	-1.3
	baz=148						
L29M	L29M	13.57	344	P	Pn	19 16 37.0	-0.2
	baz=157,SNR=14						
EYAK	Cordova Ski Ar	13.61	325	P	Pn	19 16 36.7	-1.0
	baz=131						
MAYO	Mayo, Yukon	13.69	348	P	Pn	19 16 39.3	+0.5
	baz=163						
M27K	Edge Creek, AK	13.75	336	P	Pn	19 16 39.5	-0.1
	baz=145,SNR=12						
P23K	Montague Islan	13.90	321	P	Pn	19 16 42.6	+0.9
	baz=126						
N25K	Chitina, Valde	13.96	330	P	Pn	19 16 41.7	-0.8
	baz=137,SNR=9.9						
ELK	Elko	13.99	128	Pn	Pn	19 16 46.7	+3.6
	7.8nm,1.0s,baz=322,slow=14,SNR=14						
M26K	Nabesna, AK	14.09	334	P	Pn	19 16 43.2	-1.1
	baz=143,SNR=12						
K29M	Barlow Dome	14.16	346	P	Pn	19 16 44.9	-0.3
	baz=159,SNR=8.9						
BCAR	Beaver Creek A	14.32	338		Pn	19 16 43.6	-3.7
KLU	Klutina	14.32	327	P	Pn	19 16 46.3	-1.1
	baz=134,SNR=12						
L27K	Beaver Creek,	14.32	337	P	Pn	19 16 47.1	-0.4
	baz=147,SNR=14						
GLI	Glacier Island	14.33	324	P	Pn	19 16 46.5	-1.1
	baz=129						
NVAR	Mina Array Bea	14.45	141	Pn	P	19 16 53.6	-2.8
	25nm,1.1s,baz=322,slow=12,SNR=26						
NVAR				LR	LR	19 22 23.1	
	comp=Z,17μm,19.8s,baz=324,slow=37						
NVAR	Mina Array Bea	14.45	141	Pn	Pn	19 16 51.9	+2.4
DAWY	Dawson	14.68	343	P	Pn	19 16 51.0	-1.3
	baz=155,SNR=17						
L26K	Log Cabin Wild	14.69	335	P	Pn	19 16 51.6	-0.7
	baz=144,SNR=18						
J30M	Hart River	14.69	349	P	Pn	19 16 52.8	+0.3
	baz=163,SNR=7.6						
HARP	HAARP	14.72	331	P	Pn	19 16 52.1	-0.8
	baz=138						
YKA	Yellowknife Ar	14.75	29	Pn	Pn	19 16 51.6	-1.6
	0.6nm,0.3s,baz=223,slow=12,SNR=66						
YKA				Sn	Sn	19 19 24.2	-12
	0.5nm,0.3s,baz=233,slow=16,SNR=1.3						
YKA				Lg	Lg	19 20 59.5	
	0.9nm,0.3s,baz=333,slow=24,SNR=5.0						
YKA	Yellowknife Ar	14.75	29		Pn	19 16 50.7	-2.5
YKAW1	Yellowknife Wh	14.78	29		Pn	19 16 50.9	-2.7
PWL	Port Wells	14.79	322	P	Pn	19 16 52.4	-1.5
	baz=127						
YKAW3	Yellowknife Wh	14.80	28		Pn	19 16 51.2	-2.7
SEW	Seward	14.81	319	P	Pn	19 16 52.7	-1.4
	baz=122						
M24K	Tolsona, Glenn	14.84	329	P	Pn	19 16 53.0	-1.5
	baz=135						
J29N	Klondike Camp	14.84	346	P	Pn	19 16 54.5	0.0
	baz=158,SNR=6.1						
SAO	San Andreas Ge	14.85	153	IAmb	IAmb	19 17 04.8	
	comp=Z,155nm,1.6s						
SCM	Sheep Creek Mo	15.04	327	P	Pn	19 16 54.8	-2.4
	baz=132,SNR=9.0						
O22K	Cooper Landing	15.13	320		Pn	19 16 56.3	-2.0
O22K	Cooper Landing	15.13	320	P	Pn	19 16 55.7	-2.6
	baz=123						
M23K	Glacier View	15.16	326	P	Pn	19 16 57.3	-1.4
	baz=131,SNR=11						
KNK	Knik Glacier	15.18	324	IAmb	IAmb	19 17 02.8	
	comp=Z,190nm,1.8s						
KNK	Knik Glacier	15.18	324	P	Pn	19 16 57.0	-2.0
	baz=128,SNR=5.7						
BRSE	Bradley Lake S	15.19	316	P	Pn	19 16 56.1	-3.0
	baz=119						
PAX	Paxson	15.25	332	P	Pn	19 16 58.6	-1.4
	baz=139,SNR=12						
KDAK	Kodiak Island	15.25	308	Pn	Pn	19 17 00.3	+0.3
	comp=Z,0.4nm,0.3s,baz=122,slow=9.9,SNR=5.5						
KDAK				LR	LR	19 21 04.3	
	comp=Z,4μm,18.3s,baz=338,slow=30						
KDAK	Kodiak Island	15.25	308		Pn	19 16 57.4	-2.6
KDAK	Kodiak Island	15.25	308	P	Pn	19 16 57.4	-2.6
KDAK				pmax	pmax		
	comp=Z,105nm,1.4s						
KDAK	Kodiak Island	15.25	308	P	Pn	19 16 57.8	-2.2
	baz=109						
I30M	Mount Dempster	15.32	349	P	Pn	19 17 00.7	-0.2
	baz=164,SNR=11						

SLKM	Skilak Lake	15.35	319	IAmb	IAmb	19 17 05.2	
	comp=Z,205nm,1.6s						
HWUT	Hardware Ranch	15.37	118	IAmb	IAmb	19 17 08.0	
	comp=Z,374nm,1.6s						
SML	Sawmill	15.38	325	IAmb	IAmb	19 17 05.2	
	comp=Z,207nm,1.7s						
SML	Sawmill	15.38	325	P	Pn	19 17 00.4	-1.4
	baz=130						
OHAK	Old Harbor	15.44	306	IAmb	IAmb	19 17 06.5	
	comp=Z,169nm,1.6s						
OHAK	Old Harbor	15.44	306	P	Pn	19 17 00.3	-2.1
	baz=106						
Q20K	Shuyak Island	15.46	311	P	Pn	19 16 59.8	-2.9
	baz=112						
RC01	Rabbit Creek A	15.48	322	P	Pn	19 17 03.6	+0.7
	baz=125,SNR=7.1						
PMR	Palmer	15.55	324	P	Pn	19 17 03.5	-0.3
	baz=127						
PMPB	Monarch Peak	15.55	152	IAmb	IAmb	19 17 14.4	
	comp=Z,393nm,1.5s						
HOM	Homer	15.55	315	P	Pn	19 17 04.2	+0.4
	baz=117						
GHO	Glory Hole Cre	15.58	325	P	P	19 17 07.4	-1.3
GHO	Glory Hole Cre	15.58	325	IAmb	IAmb	19 17 08.8	
	comp=Z,122nm,1.4s						
SCRK	Sand Creek	15.63	336	P	Pn	19 17 05.6	+0.6
	baz=144,SNR=141						
DUG	Dugway, Tooele	15.65	124	IAmb	IAmb	19 17 14.9	
	comp=Z,201nm,1.3s						
RIDG	Independent Ri	15.66	335	P	Pn	19 17 05.2	-0.2
	baz=142,SNR=20						
TIN	Tinemaha, Big	15.67	144	IAmb	IAmb	19 17 15.3	
	comp=Z,285nm,1.8s						
H31M	Peel River	15.69	353	P	Pn	19 17 05.3	-0.4
	baz=169,SNR=16						
WAT6	Susitna Watana	15.69	328	P	Pn	19 17 05.1	-0.8
	baz=133,SNR=36						
I29M	Ogilvie Camp,	15.70	347	P	Pn	19 17 05.4	-0.5
	baz=159,SNR=38						
SII	Sitkinak Islan	15.75	303	P	Pn	19 17 06.9	+0.5
	baz=102						
BW06	Boulder Array	15.82	111	IAmb	IAmb	19 17 13.9	
	comp=Z,342nm,1.4s						
PD31	Pinedale Array	15.82	111	IAmb	IAmb	19 17 13.9	
	comp=Z,313nm,1.3s						
PDAR	Pinedale Array	15.82	111	Pn	P	19 17 11.7	0.0
	comp=Z,0.7nm,0.3s,baz=312,slow=9.3,SNR=310						
PDAR				LR	LR	19 23 17.0	
	comp=Z,7µm,21.3s,baz=306,slow=37						
PDAR	Pinedale Array	15.82	111	P	P	19 17 10.8	-0.8
PKD	Bear Valley Ra	15.88	151	IAmb	IAmb	19 17 17.9	
	comp=Z,250nm,1.3s						
CAPN	Captain Cook N	15.88	319	P	Pn	19 17 08.2	+0.1
	baz=121						
DHY	Denali Highway	15.92	330	P	Pn	19 17 07.7	-1.1
DHY	Denali Highway	15.92	330	IAmb	IAmb	19 17 13.7	
	comp=Z,64nm,1.4s						
DHY	Denali Highway	15.92	330	P	Pn	19 17 08.3	-0.4
	baz=135,SNR=44						
J26L	Joseph Creek	15.95	338	P	Pn	19 17 09.2	0.0
	baz=146,SNR=182						
K24K	Donnelly Dome	15.97	334	P	Pn	19 17 10.1	+0.7
	baz=140,SNR=29						
M22K	Willow	16.02	323	P	Pn	19 17 10.0	+0.1
	baz=126,SNR=16						
I28M	Miner Creek	16.04	345	P	Pn	19 17 11.4	+1.1
	baz=156,SNR=34						
SUA	Susitna One	16.10	322	P	Pn	19 17 11.9	+0.9
	baz=124,SNR=7.0						
WAT1	Susitna Watana	16.14	328	P	Pn	19 17 12.1	+0.6
	baz=132						
R18K	Karluk	16.14	306	P	Pn	19 17 12.1	+0.6
	baz=106						
Q19K	Cape Douglas,	16.18	311	P	P	19 17 14.0	-1.2
	baz=111						
O20K	Slope Mountain	16.18	316	P	Pn	19 17 12.7	+0.6
	baz=116						
S11A	Rachel	16.19	136	IAmb	IAmb	19 17 21.6	
	comp=Z,413nm,1.6s						
P19K	Oil Pt	16.27	314	P	Pn	19 17 14.2	+1.0
	baz=114						
CHIR	Chirikof Islan	16.40	299	P	Pn	19 17 14.7	-0.1
	baz=98						
VES	Vestal, Richgr	16.45	148	IAmb	IAmb	19 17 23.8	
	comp=Z,419nm,1.8s						
EPYK	Eagle Plains	16.46	350	IAmb	IAmb	19 17 20.8	
	comp=Z,347nm,1.8s						
EPYK	Eagle Plains	16.46	350	P	Pn	19 17 16.3	+0.6
	baz=164,SNR=16						
CUT	Chulitna	16.47	325	P	Pn	19 17 14.4	-1.3
	baz=128						
I27K	Kandik River	16.49	343	P	Pn	19 17 17.1	+1.1
	baz=152,SNR=26						
J25K	Salcha River,	16.50	336	P	Pn	19 17 16.5	+0.4
	baz=142,SNR=77						
H29M	Whitestone	16.52	348	P	Pn	19 17 16.9	+0.6
	baz=160,SNR=32						
I26K	Coal Creek Min	16.54	340	P	Pn	19 17 16.4	-0.2
	baz=149,SNR=157						
N20K	Mount Spurr	16.55	320	P	Pn	19 17 16.7	0.0
	baz=121,SNR=54						
SPCR	Spurr Chakacha	16.55	320	P	Pn	19 17 17.1	+0.3
	baz=121,SNR=24						
RND	Reindeer	16.63	329	IAmb	IAmb	19 17 23.2	
	comp=Z,328nm,1.7s						
SKT	Skwentna	16.70	323	P	Pn	19 17 17.6	-1.0
	baz=124						
FURC	Furnace Creek,	16.72	141	IAmb	IAmb	19 17 28.4	
	comp=Z,566nm,1.8s						
Q18K	Katmai Hardscr	16.75	309	P	Pn	19 17 19.7	+0.3
	baz=108						
DGMT	Dagmar	16.75	87	IAmb	IAmb	19 17 25.6	
	comp=Z,340nm,1.1s						
HDA	Harding Lake	16.77	334	P	Pn	19 17 19.9	+0.4
	baz=139,SNR=34						
G31M	Satah River	16.79	354	P	Pn	19 17 20.1	+0.4
	baz=170,SNR=60						
MCK	McKinley	16.88	330	P	Pn	19 17 20.6	-0.3
	baz=133,SNR=14						
O19K	Port Alsworth	17.00	315	P	Pn	19 17 22.4	+0.1
	baz=114,SNR=12						
G30M	tAoh Zraii Nji	17.00	351	P	Pn	19 17 21.2	-1.2
	baz=166						
ILAR	Eielson Array	17.03	335	Pn	Pn	19 17 23.3	+0.5
	comp=Z,0.7nm,0.3s,baz=144,slow=11,SNR=102						
ILAR				LR	LR	19 23 16.8	
	comp=Z,20µm,20.5s,baz=130,slow=35						
	comp=Z,67nm,1.0s						
ILAR	Eielson Array	17.03	335	P	Pn	19 17 21.2	-1.6
ILAR	Eielson Array	17.03	335	P	Pn	19 17 21.2	-1.6
H27K	Steamboat Moun	17.03	344	P	Pn	19 17 23.0	+0.2
	baz=154,SNR=40						
Q17K	Contact Creek	17.07	308	P	P	19 17 24.4	-0.8
	baz=106,SNR=8.0						
P18K	Big Mountain,	17.11	312	P	Pn	19 17 22.6	-1.3
	baz=110						
G29M	Pine Creek	17.14	349	IAmb	IAmb	19 17 28.6	
	comp=Z,279nm,1.5s						
G29M	Pine Creek	17.14	349	P	Pn	19 17 24.0	-0.1
	baz=162,SNR=50						
TRF	Thorofare Moun	17.14	328	IAmb	IAmb	19 17 29.9	
	comp=Z,391nm,1.6s						
TRF	Thorofare Moun	17.14	328	P	P	19 17 25.8	-0.2
	baz=130,SNR=19						
WRH	Wood River Hil	17.15	333	IAmb	IAmb	19 17 29.1	
	comp=Z,367nm,1.6s						
R17L	Mt. Peulik Vol	17.15	305	P	Pn	19 17 23.8	-0.5
	baz=103						
F31M	Tsiigehtchic	17.27	355	IAmb	IAmb	19 17 32.1	
	comp=Z,630nm,1.6s						
F31M	Tsiigehtchic	17.27	355	P	Pn	19 17 26.1	+0.4
	baz=172,SNR=106						
O18K	Koktuh Hills	17.27	313	P	Pn	19 17 26.2	+0.4
	baz=112,SNR=15						
N19K	Bonanza Creek	17.34	317	P	Pn	19 17 26.7	0.0
	baz=116,SNR=8.8						
COLA	College	17.38	334	P	Pn	19 17 26.4	-0.6
	baz=138						
KTH	Kantishna Hill	17.42	327	IAmb	IAmb	19 17 30.4	
	comp=Z,343nm,1.5s						
FFC	Flin Flon	17.43	65	P	Pn	19 17 25.3	-2.6
FFC				IAmb	IAmb	19 17 32.5	
	comp=Z,599nm,1.8s						
FFC	Flin Flon	17.43	65	P	Pn	19 17 25.3	-2.6
FFC				pmax	pmax		
	comp=Z,599nm,1.8s						
POKR	Poker Plat Res	17.45	335	P	Pn	19 17 27.7	-0.2
	baz=140,SNR=18						
Q16A	Castle Valley	17.45	124	IAmb	IAmb	19 17 39.7	
	comp=Z,332nm,1.8s						
PPLA	Purkeypile	17.48	324	IAmb	IAmb	19 17 34.5	
	comp=Z,519nm,2.0s						
PPLA	Purkeypile	17.48	324	P	Pn	19 17 28.1	-0.4
	baz=125,SNR=20						
NEA2	Nenana	17.53	332	P	P	19 17 29.7	-0.4
	baz=135,SNR=33						
G27K	Doyon Strip	17.58	344	P	P	19 17 31.1	+0.4
	baz=154,SNR=110						
Q16K	King Salmon	17.58	309	P	Pn	19 17 28.6	-1.0
	baz=106						
F30M	Barrier River	17.58	352	P	P	19 17 30.6	-0.1
	baz=167,SNR=41						
P17K	Kvichak River	17.63	310		Pn	19 17 26.7	-3.5
P17K	Kvichak River	17.63	310	P	Pn	19 17 30.7	+0.5
	baz=108						
K22A	Casper	17.73	107	IAmb	IAmb	19 17 37.8	
	comp=Z,324nm,1.2s						
BPAW	Bear Paw Mtn.	17.80	329	P	Pn	19 17 32.4	+0.1
	baz=130,SNR=10						
N18K	Kilae Creek	17.91	315	P	P	19 17 34.1	-0.2
	baz=113,SNR=15						
I23K	Minto, Yukon-K	18.01	333	P	P	19 17 36.4	+1.0
	baz=136,SNR=26						
F28M	Old Crow	18.04	348	P	P	19 17 36.2	+0.4
	baz=159,SNR=53						
G26K	Porcupine Rive	18.09	342	P	P	19 17 37.5	+1.2
	baz=150,SNR=106						
CHUM	Lake Minchumin	18.11	327	P	P	19 17 36.6	+0.1
	baz=128,SNR=22						
H24K	Noodor Dome	18.12	336	P	P	19 17 36.7	+0.1
	baz=140,SNR=69						
INK	Inuvik	18.12	356	P	Pn	19 17 35.7	-0.5
	comp=Z,0.2nm,0.3s,baz=168,slow=11,SNR=44						
INK				Lg	Lg	19 22 53.0	
	baz=121,slow=5.9,SNR=1.5						
INK				LR	LR	19 24 33.1	
	comp=Z,22µm,20.5s,baz=170,slow=37						
	comp=Z,43nm,1.1s						
INK	Inuvik	18.12	356	P	Pn	19 17 36.0	-0.2
	baz=172,SNR=41						
L19K	White Mountain	18.13	320	P	Pn	19 17 36.2	-0.3
	baz=119,SNR=45						
O17K	Koliganek Bris	18.13	312	P	Pn	19 17 36.6	+0.1
	baz=109						
M18K	Stony River	18.22	318	P	Pn	19 17 36.6	-0.9
	baz=116,SNR=23						
O20A	White River Ci	18.23	116	IAmb	IAmb	19 17 50.2	
	comp=Z,313nm,1.4s						
P16K	Nushagak River	18.34	309	IAmb	IAmb	19 17 44.1	
	comp=Z,405nm,1.3s						
P16K	Nushagak River	18.34	309	P	P	19 17 39.2	+0.1
	baz=106						
HMU	Henry Mountain	18.40	125	IAmb	IAmb	19 17 49.7	
	comp=Z,205nm,1.1s						
G25K	Bearman Lake	18.43	339	P	Pn	19 17 41.2	+1.2
	baz=145,SNR=70						
N17K	Nushagak Hills	18.44	314	P	Pn	19 17 40.2	+0.1
	baz=111,SNR=6.3						
K20K	Telida	18.44	324	IAmb	IAmb	19 17 48.4	
	comp=Z,339nm,1.3s						
K20K	Telida	18.44	324	P	Pn	19 17 40.3	+0.1
	baz=123,SNR=23						
RSSD	Black Hills	18.52	100	P	P	19 17 40.4	-1.0
RSSD	Black Hills	18.52	100	P	P	19 17 40.4	-1.0
RSSD				pmax	pmax		
	comp=Z,208nm,1.6s						
E29M	Blow River	18.54	351	P	Pn	19 17 41.8	+0.4
	baz=164						
O16K	Kokwok River B	18.56	311	P	Pn	19 17 41.7	+0.1
	baz=107						
CHNA	Chernabura Isl	18.57	296	P	P	19 17 40.8	-0.7
	baz=91						
S14K	Fog Glacier	18.64	300	P	Pn	19 17 42.9	+0.1
	baz=96						
BMAR	Burnt Mountain	18.67	342	P	P	19 17 42.7	+0.1
G24K	Hadweenzic Riv	18.70	338	P	Pn	19 17 44.6	+1.3
	baz=142,SNR=60						
F26K	Sheenjek River	18.81	343	P	Pn	19 17 46.3	+1.5
	baz=150,SNR=120						
E27K	Coleen River	18.82	346	P	Pn	19 17 45.4	+0.6
	baz=156,SNR=72						
I21K	Tanana	18.84	330	P	Pn	19 17 44.9	-0.1
	baz=131,SNR=50						
M17K	Holitna River	18.89	316	P	Pn	19 17 46.4	+0.8
	baz=113,SNR=18						
L18K	Granite Mounta	18.91	319	P	Pn	19 17 46.0	+0.1
	baz=116,SNR=33						
E28M	Babbage River	18.93	349	P	Pn	19 17 46.5	+0.4
	baz=160,SNR=62						
J20K	Nowinta River	18.94	326	P	Pn	19 17 46.9	+0.7
	baz=125,SNR=17						
PV23	Carpenter Ridg	18.95	121	IAmb	IAmb	19 17 53.4	
	comp=Z,327nm,1.3s						
PV10	Paradox Valley	18.99	121	IAmb	IAmb	19 17 55.0	
	comp=Z,407nm,1.3s						
ELS	Elsinore Mount	19.00	147	IAmb	IAmb	19 17 58.4	
	comp=Z,302nm,1.6s						
PV14	Lion Creek, Pa	19.00	121	IAmb	IAmb	19 17 54.4	
	comp=Z,170nm,1.2s						
F25K	Christian Rive	19.02	341	P	Pn	19 17 48.6	+1.3
	baz=147,SNR=152						
PV04	Paradox Valley	19.05	121	IAmb	IAmb	19 17 54.5	
	comp=Z,213nm,1.4s						
PV20	West Nyswonger	19.06	121	IAmb	IAmb	19 17 54.3	
	comp=Z,354nm,1.3s						
PV19	Morning Glory	19.07	121	IAmb	IAmb	19 17 54.5	
	comp=Z,363nm,1.3s						
SDPT	Sand Point	19.09	297	P	Pn	19 17 49.2	+1.1
	baz=92						
PV17	East Wray Mesa	19.11	121	IAmb	IAmb	19 17 53.5	
	comp=Z,383nm,1.7s						
NEE2	Needles Airpor	19.11	139	IAmb	IAmb	19 17 59.3	
	comp=Z,350nm,1.9s						
PV16	Nyswonger Mesa	19.11	121	IAmb	IAmb	19 17 54.9	
	comp=Z,221nm,1.3s						
H22K	Ishtalitna Cre	19.14	333	IAmb	IAmb	19 17 54.9	
	comp=Z,514nm,1.6s						
H22K	Ishtalitna Cre	19.14	333	P	Pn	19 17 50.2	+1.5
	baz=134,SNR=56						
PV11	David Mesa, Pa	19.14	121	IAmb	IAmb	19 17 55.3	
	comp=Z,391nm,1.4s						
N16K	Nishlik Lake	19.16	313	P	Pn	19 17 50.5	+1.6
	baz=109,SNR=7.8						
PV18	Skein Mesa, Pa	19.16	121	IAmb	IAmb	19 17 55.4	
	comp=Z,464nm,1.4s						
PV12	Saucer Basin,	19.16	121	IAmb	IAmb	19 17 55.6	
	comp=Z,363nm,1.4s						
PV05	Paradox Valley	19.18	122	IAmb	IAmb	19 17 55.8	
	comp=Z,189nm,1.3s						
PV03	Paradox Valley	19.18	121	IAmb	IAmb	19 17 55.7	
	comp=Z,226nm,1.4s						
PV13	Radium Mtn., P	19.27	121	IAmb	IAmb	19 17 58.9	
	comp=Z,242nm,1.2s						
C36M	Paulatuk	19.27	6	IAmb	IAmb	19 17 52.7	
	comp=Z,344nm,1.4s						
C36M	Paulatuk	19.27	6	P	Pn	19 17 50.5	+0.4
	baz=191,SNR=45						
PV02	Paradox Valley	19.28	121	IAmb	IAmb	19 18 00.9	
	comp=Z,472nm,1.4s						
O15K	Ungalikthiuk R	19.30	309	IAmb	IAmb	19 17 56.2	
	comp=Z,708nm,1.9s						
O15K	Ungalikthiuk R	19.30	309	P	Pn	19 17 51.5	+0.9
	baz=104,SNR=7.0						
G23K	Bananza Creek	19.35	336	P	Pn	19 17 52.6	+1.4
	baz=138,SNR=105						
DNR	Dunn Ranch,Anz	19.36	145	IAmb	IAmb	19 18 00.1	
	comp=Z,242nm,1.7s						
J19K	Poorman	19.37	325	P	Pn	19 17 51.7	+0.2
	baz=122,SNR=31						
PFO	Pinyon Flats O	19.39	145	P	Pn	19 17 52.8	+0.8
	comp=Z,0.2nm,0.3s,baz=351,slow=10.0,SNR=9.4						
PFO				LR	LR	19 25 22.4	
	comp=Z,8µm,18.9s,baz=322,slow=37						
	comp=Z,13nm,1.1s						
PFO	Pinyon Flats O	19.39	145	P	Pn	19 17 52.7	+0.7
PFO	Pinyon Flats O	19.39	145	*i* P	Pn	19 17 51.6	-0.4
PFO				pmax	pmax		
	comp=Z,150nm,2.1s						
H21K	Melozitna Rive	19.41	331	P	Pn	19 17 52.2	+0.3
	baz=131,SNR=30						
I20K	Naaghedeneel	19.42	327	P	P	19 17 50.6	-0.2
	baz=126						
PV01	Paradox Valley	19.42	121	IAmb	IAmb	19 17 57.6	
	comp=Z,193nm,1.3s						
M16K	Timber Creek	19.43	315	P	Pn	19 17 52.3	+0.2
	baz=110,SNR=17						
F24K	Squaw Lake	19.45	339	P	Pn	19 17 53.5	+1.1
	baz=143,SNR=97						
E25K	Arctic Village	19.46	342	P	Pn	19 17 53.5	+1.0
	baz=148,SNR=73						
J18K	Innoko River	19.51	323	P	Pn	19 17 52.9	-0.3
	baz=119,SNR=44						
D28M	Stokes Point	19.53	351	P	Pn	19 17 54.2	+0.9
	baz=163,SNR=68						
L17K	Donlin	19.55	318	P	Pn	19 17 53.4	-0.3
	baz=114,SNR=9.1						
N15K	Kwethluk River	19.69	312	P	Pn	19 17 55.8	+0.5
	baz=106						
D27M	Malcolm River	19.71	348	P	Pn	19 17 55.1	-0.5
	baz=158						
BC3	Big Chuckawall	19.73	142	IAmb	IAmb	19 18 03.3	
	comp=Z,187nm,1.5s						
COLD	Coldfoot	19.78	336	P	Pn	19 17 56.5	+0.2
	baz=139,SNR=32						
K17K	Iditarod	19.80	320	P	Pn	19 17 56.4	-0.2
	baz=115,SNR=25						
CPE	Camp Elliot	19.80	147	IAmb	IAmb	19 18 09.7	
	comp=Z,165nm,1.4s						
L16K	Owhat River	19.91	316	P	Pn	19 17 58.0	+0.2
	baz=111,SNR=36						
IMAR	Indian Mountai	19.92	331	P	P	19 17 55.8	-0.5
WUAZ	Wupatki	19.96	131	IAmb	IAmb	19 18 06.7	
	comp=Z,197nm,1.4s						
H20K	Anotleneega Mo	19.98	329	P	Pn	19 17 58.4	-0.2
	baz=127,SNR=49						
ISCO	Idaho Springs	19.99	113	IAmb	IAmb	19 18 04.5	
	comp=Z,291nm,1.9s						
S12K	Black Hills	20.01	298	P	Pn	19 18 00.6	+1.5
	baz=92						
BLYC	Blythe	20.02	140	IAmb	IAmb	19 18 09.7	
	comp=Z,203nm,1.6s						
E24K	Your Creek	20.03	339	P	P	19 17 58.0	+0.4
	baz=143						
O14K	Tigyukauivet M	20.03	309	P	Pn	19 17 59.9	+0.6
	baz=102						
M15K	Kasigluk River	20.12	313	P	Pn	19 18 01.1	+0.7
	baz=107,SNR=31						
G21K	Allakaket	20.20	332	P	Pn	19 18 00.9	-0.3
	baz=132,SNR=69						
GCSA	Galena City Sc	20.24	326	P	Pn	19 18 01.1	-0.6
	baz=122,SNR=25						
E23K	Chandalar	20.28	338	P	Pn	19 18 02.8	+0.5
	baz=141,SNR=210						
N14K	Kuskokwak Cree	20.40	310	P	Pn	19 18 04.5	+0.9
	baz=103						
J17K	VABM Dome	20.42	321	P	Pn	19 18 03.3	-0.5
	baz=116,SNR=38						
YUH	Yuha Desert	20.45	145	IAmb	IAmb	19 18 11.2	
	comp=Z,212nm,1.4s						
C27K	Jago River	20.46	346	P	P	19 18 02.9	+0.7
	baz=154						
CBX	Cerro Bola	20.48	147	IAmb	IAmb	19 18 16.3	
	comp=Z,332nm,1.2s						
F22K	John River	20.51	335	P	P	19 18 03.6	+0.8
	baz=136						
GLA	Glamis	20.51	142	IAmb	IAmb	19 18 12.4	
	comp=Z,293nm,1.6s						
H19K	Roundabout Mou	20.52	328	P	P	19 18 03.5	+0.7
	baz=125						
D25K	Kavik River	20.64	343	P	P	19 18 04.3	+0.1
	baz=149						
F21K	Alatna River	20.67	334	P	Pn	19 18 05.8	-1.0
	baz=133,SNR=47						
TOLK	Toolik Lake Re	20.73	340	P	P	19 18 06.0	+0.9
TOLK	Toolik Lake Re	20.73	340	P	P	19 18 06.2	+1.0
	baz=142,SNR=123						
M14K	Bethel	20.74	312	P	P	19 18 04.1	-1.1
M14K	Bethel	20.74	312	P	Pn	19 18 07.5	-0.1
	baz=105,SNR=18						
FALS	False Pass	20.78	296	P	P	19 18 06.3	+0.6
	baz=88						
L15K	Ungalak Mounta	20.80	315	P	P	19 18 06.5	+0.7
	baz=108,SNR=36						
X16A	Lo Mia Camp, P	20.82	133	IAmb	IAmb	19 18 19.9	
	comp=Z,128nm,1.1s						
E22K	Anaktuvuk Pass	20.87	337	P	Pn	19 18 08.6	-0.6
	baz=138,SNR=86						
CCX	Cicese	20.89	147	IAmb	IAmb	19 18 27.1	
	comp=Z,139nm,1.0s						
C26K	Camden Bay	20.91	345	P	Pn	19 18 08.7	-0.8
	baz=152						
D24K	Happy Valley	20.98	341	P	Pn	19 18 09.5	-0.9
	baz=144						
H18K	Honhosa River	20.99	326	P	Pn	19 18 09.8	-0.7
	baz=121,SNR=58						
J16K	Anvik River	20.99	320	P	P	19 18 08.7	+0.7
	baz=113,SNR=72						
ESJX	Sierra Juarez	21.02	145	IAmb	IAmb	19 18 18.4	
	comp=Z,219nm,1.3s						
K15K	Wolf Creek Mou	21.02	317	P	P	19 18 10.5	+2.3
	baz=110,SNR=25						
W18A	Petrified Fore	21.09	129	IAmb	IAmb	19 18 29.5	
	comp=Z,417nm,1.5s						
G19K	Purcell Mounta	21.09	329	P	P	19 18 09.0	0.0
	baz=125,SNR=47						
F20K	Avaraart Lake	21.21	332	P	P	19 18 11.2	+0.9
	baz=129						
D23K	Nanushuk River	21.23	339	P	P	19 18 13.1	+2.5
	baz=141,SNR=116						
L14K	Kuka Creek	21.24	314	P	P	19 18 12.4	+1.8
	baz=106,SNR=14						
I17K	Unalakleet	21.28	321	P	P	19 18 12.9	+1.9
	baz=115,SNR=20						
M13K	Dall Lake	21.32	311	P	P	19 18 13.5	+2.0
	baz=103,SNR=5.9						
C24K	Franklin Bluff	21.42	342	P	P	19 18 14.3	+1.8
	baz=145						
SDCO	Great Sand Dun	21.42	117	IAmb	IAmb	19 18 21.7	
	comp=Z,231nm,1.4s						
H17K	Granite Mounta	21.45	324	P	P	19 18 14.2	+1.3
	baz=118,SNR=64						
G18K	Tagagawik	21.49	327	P	P	19 18 12.4	-0.9
	baz=122,SNR=58						
ULM	Lac du Bonnet	21.58	77	P	P	19 18 14.8	+0.4
	comp=Z,118nm,1.1s,baz=285,slow=10,SNR=66						
ULM				Lg	Lg	19 24 45.9	
	comp=Z,0.3nm,0.3s,baz=222,slow=5.9,SNR=11						
	comp=Z,118nm,1.1s						
ULM	Lac du Bonnet	21.58	77	P	P	19 18 14.1	-0.3
ULM	Lac du Bonnet	21.58	77	*i* P	P	19 18 13.6	-0.7
D22K	Ayikyak River	21.64	338	P	P	19 18 15.1	+0.2
	baz=137,SNR=62						
E21K	Killik River	21.65	336	P	P	19 18 15.5	+0.5
	baz=134						
F19K	Shaleruckik Mo	21.72	330	P	P	19 18 16.5	+0.8
	baz=126,SNR=64						
A36M	Sachs Harbour	21.82	4	P	P	19 18 16.4	-0.3
A36M				IAmb	IAmb	19 18 24.4	
	comp=Z,103nm,0.9s						
A36M	Sachs Harbour	21.82	4	P	P	19 18 18.1	+1.3
	baz=188,SNR=101						
C23K	Itkillik River	21.91	341	P	P	19 18 19.4	+1.7
	baz=142,SNR=83						
E19K	Redstone River	21.93	332	P	P	19 18 19.5	+1.6
	baz=128,SNR=187						
G17K	Kiwalik Mounta	22.00	325	P	P	19 18 19.7	+1.0
	baz=118,SNR=57						
J14K	Nanvaranak Lak	22.06	317	P	P	19 18 17.1	-2.3
J14K	Nanvaranak Lak	22.06	317	P	P	19 18 19.6	+0.2
	baz=108,SNR=12						
E20K	Nigu River	22.13	334	P	P	19 18 21.4	+1.2
	baz=131,SNR=63						
FCC	Fort Churchill	22.13	54	P	P	19 18 19.5	-0.7
FCC				IAmb	IAmb	19 18 22.8	
	comp=Z,230nm,1.2s						
FCC	Fort Churchill	22.13	54	P	P	19 18 19.5	-0.7
FCC				pmax	pmax		
	comp=Z,230nm,1.2s						
F18K	Selawik	22.21	328	P	P	19 18 22.6	+1.7
	baz=122,SNR=61						
H16K	Elim	22.21	322	P	P	19 18 20.7	-0.3
	baz=114,SNR=32						
214A	Organ Pipe Nat	22.29	139	IAmb	IAmb	19 18 39.6	
	comp=Z,308nm,1.9s						
K13K	Kusilvak Mount	22.31	315	P	P	19 18 22.1	0.0
	baz=105,SNR=6.5						
C21K	Knifeblade Rid	22.37	337	P	P	19 18 24.1	+1.4
	baz=134,SNR=110						
PIX	Pinacate	22.37	141	IAmb	IAmb	19 18 29.3	
	comp=Z,113nm,1.2s						
T25A	Trinidad	22.47	116	IAmb	IAmb	19 18 39.2	
	comp=Z,168nm,1.3s						
D20K	Etivluk River	22.55	335	P	P	19 18 25.5	+0.9
	baz=131,SNR=79						

G16K	**Koyuk River**	**22.58**	**324**	P	**P**	**19 18 25.2**	**+0.3**
	baz=116,SNR=11						
BLKN	**Baker Lake**	**22.63**	**39**	P	**P**	**19 18 24.1**	**-1.4**
UNV	**Unalaska Valle**	**22.65**	**293**	P	**P**	**19 18 26.6**	**+0.9**
	baz=83						
B21K	**Ikpikpuk River**	**22.66**	**338**	P	**P**	**19 18 25.3**	**-0.4**
	baz=136						
F17K	**Baldwin Pennin**	**22.67**	**327**	P	**P**	**19 18 27.5**	**+1.6**
	baz=120,SNR=49						
M11K	**Mekoryuk**	**22.70**	**310**	P	**P**	**19 18 26.9**	**+0.7**
	baz=100						
D19K	**Kuna River**	**22.83**	**333**	P	**P**	**19 18 28.1**	**+0.5**
	baz=128,SNR=53						
TUC	**Tucson**	**22.88**	**135**	P	**P**	**19 18 30.0**	**+1.5**
TUC				IAmb	IAmb	19 18 34.2	
	comp=Z,180nm,1.4s						
TUC	**Tucson**	**22.88**	**135**	P	**P**	**19 18 30.0**	**+1.5**
TUC				pmax	pmax		
	comp=Z,180nm,1.5s						
B22K	**Teshekpuk Lake**	**22.91**	**340**	P	**P**	**19 18 29.6**	**+1.2**
	baz=139,SNR=292						
TASM	**ASL Pad, Albuq**	**22.92**	**123**	IAmb	IAmb	19 18 33.7	
	comp=Z,213nm,1.8s						
TASM	**ASL Pad, Albuq**	**22.92**	**123**	IAmb	IAmb	19 18 33.7	
	comp=Z,220nm,1.8s						
TASM	**ASL Pad, Albuq**	**22.92**	**123**	IAmb	IAmb	19 18 33.6	
	comp=Z,220nm,1.8s						
TASM	**ASL Pad, Albuq**	**22.92**	**123**	IAmb	IAmb	19 18 33.7	
	comp=Z,231nm,1.8s						
ANMO	**Albuquerque**	**22.92**	**123**	LR	LR	19 27 14.9	
	comp=Z,6μm,19.0s,baz=310,slow=36						
ANMO	**Albuquerque**	**22.92**	**123**	P	**P**	**19 18 30.9**	**+1.9**
ANMO				IAmb	IAmb	19 18 33.7	
	comp=Z,213nm,1.8s						
ANMO	**Albuquerque**	**22.92**	**123**	*i* P	**P**	**19 18 30.6**	**+1.6**
ANMO				pmax	pmax		
	comp=Z,116nm,1.8s						
ABQ	**Albuquerque**	**22.92**	**123**	IAmb	IAmb	19 18 33.7	
	comp=Z,220nm,1.8s						
E18K	**Tukpahlearik C**	**22.97**	**330**	P	**P**	**19 18 30.4**	**+1.4**
	baz=123,SNR=46						
G15K	**Niukluk**	**23.06**	**322**	P	**P**	**19 18 29.6**	**-0.3**
	baz=113,SNR=26						
EPLO	**Experimental L**	**23.07**	**78**	P	**P**	**19 18 29.9**	**-0.3**
E17K	**Hotham Inlet**	**23.19**	**328**	P	**P**	**19 18 31.7**	**+0.4**
	baz=120,SNR=18						
Y22A	**Socorro**	**23.43**	**126**	IAmb	IAmb	19 18 52.3	
	comp=Z,256nm,1.6s						
ANM	**Nome**	**23.43**	**321**	P	**P**	**19 18 33.6**	**-0.1**
ANM				IAmb	IAmb	19 18 55.0	
	comp=Z,119nm,1.4s						
ANM	**Nome**	**23.43**	**321**	P	**P**	**19 18 33.6**	**-0.1**
ANM				pmax	pmax		
	comp=Z,119nm,1.4s						
ANM	**Nome**	**23.43**	**321**	P	**P**	**19 18 34.5**	**+0.8**
	baz=110,SNR=6.1						
B20K	**Meade River**	**23.56**	**337**	P	**P**	**19 18 35.1**	**+0.2**
	baz=132						
F15K	**North Star Dit**	**23.58**	**324**	P	**P**	**19 18 36.1**	**+0.9**
	baz=114,SNR=35						
C19K	**Lookout Ridge**	**23.63**	**334**	P	**P**	**19 18 36.6**	**+0.8**
	baz=127,SNR=18						
A22K	**Sinclair Lake**	**23.75**	**340**	P	**P**	**19 18 37.7**	**+0.9**
	baz=137						
C18K	**Utukok River**	**23.84**	**332**	P	**P**	**19 18 38.4**	**+0.6**
	baz=124,SNR=47						
D17K	**Noatak River**	**23.93**	**329**	P	**P**	**19 18 39.1**	**+0.6**
	baz=120,SNR=19						
RDOG	**Red Dog Mine**	**24.05**	**330**	P	**P**	**19 18 38.7**	**-1.0**
RDOG	**Red Dog Mine**	**24.05**	**330**	P	**P**	**19 18 41.5**	**+1.8**
	baz=121,SNR=20						
121A	**Cookes Peak, D**	**24.12**	**129**	IAmb	IAmb	19 18 51.4	
	comp=Z,217nm,1.4s						
F14K	**Arctic Creek**	**24.13**	**323**	P	**P**	**19 18 43.1**	**+2.7**
	baz=111,SNR=22						
NIKH	**Nikolski High**	**24.16**	**291**	P	**P**	**19 18 42.4**	**+1.5**
	baz=80						
P08K	**Saint George I**	**24.20**	**300**	P	**P**	**19 18 42.9**	**+1.7**
	baz=88						
A21K	**Barrow**	**24.35**	**339**	P	**P**	**19 18 43.3**	**+0.9**
	baz=135,SNR=33						
319A	**Douglas**	**24.35**	**133**	IAmb	IAmb	19 18 55.0	
	comp=Z,189nm,1.5s						
C17K	**DeLong Mountai**	**24.35**	**331**	P	**P**	**19 18 43.4**	**+0.8**
	baz=121,SNR=23						
B18K	**Kokolik River**	**24.42**	**333**	P	**P**	**19 18 44.6**	**+1.5**
	baz=125,SNR=127						
SPIA	**Saint Paul Isl**	**24.57**	**302**	P	**P**	**19 18 47.2**	**+2.7**
	baz=88						
A19K	**Wainwright**	**24.71**	**335**	P	**P**	**19 18 47.7**	**+2.0**
	baz=127,SNR=58						
TNA	**Tin City**	**24.79**	**322**	P	**P**	**19 18 48.7**	**+2.3**
	baz=109						
C16K	**Lisburne Hills**	**24.95**	**329**	P	**P**	**19 18 50.0**	**+2.1**
	baz=118,SNR=33						
R32A	**Long Quarter,**	**25.03**	**106**	IAmb	IAmb	19 19 05.6	
	comp=Z,123nm,1.1s						
PH02	**Texas Public H**	**25.11**	**116**	IAmb	IAmb	19 19 10.4	
	comp=Z,331nm,2.0s						
I37A	**Lemond, Waseca**	**25.36**	**90**	P	**P**	**19 18 52.8**	**+1.0**
EPT	**El Paso**	**25.38**	**128**	IAmb	IAmb	19 19 06.7	
	comp=Z,136nm,1.3s						
E38A	**The Farm, Brul**	**25.45**	**84**	IAmb	IAmb	19 19 10.1	
	comp=Z,131nm,1.3s						
MSTX	**Muleshoe**	**25.67**	**119**	IAmb	IAmb	19 18 58.9	
	comp=Z,150nm,1.5s						
GAMB	**Gambell**	**25.88**	**317**	P	**P**	**19 18 58.3**	**+1.9**
	baz=101						
KSU1	**Kansas State U**	**25.92**	**103**	IAmb	IAmb	19 19 08.0	
	comp=Z,106nm,0.9s						
MNTX	**Cornudas Mount**	**26.01**	**126**	IAmb	IAmb	19 19 02.2	
	comp=Z,98nm,1.4s						
KAN08	**Anthony NE Sta**	**26.24**	**108**	IAmb	IAmb	19 19 26.6	
	comp=Z,96nm,1.3s						
SMWD	**Samnorwood**	**26.30**	**114**	IAmb	IAmb	19 19 04.5	
	comp=Z,104nm,1.5s						
SCIA	**State Center**	**26.50**	**94**	IAmb	IAmb	19 19 11.9	
	comp=Z,157nm,1.4s						
G40A	**Rib Lake**	**26.85**	**85**	IAmb	IAmb	19 19 08.6	
	comp=Z,106nm,1.3s						
DKNS	**Dickens**	**26.93**	**117**	IAmb	IAmb	19 19 10.0	
	comp=Z,142nm,1.6s						
VHRN	**Van Horn**	**26.94**	**127**	IAmb	IAmb	19 19 36.7	
	comp=Z,87nm,1.4s						
BLOK	**Blackwell**	**27.00**	**108**	IAmb	IAmb	19 19 23.9	
	comp=Z,201nm,1.6s						
OK048	**Pawnee Station**	**27.39**	**108**	IAmb	IAmb	19 19 14.1	
	comp=Z,162nm,1.4s						
WMOK	**Wichita Mounta**	**27.42**	**113**	IAmb	IAmb	19 19 14.5	
	comp=Z,115nm,1.2s						
APMT	**Aspermont**	**27.64**	**117**	IAmb	IAmb	19 19 15.9	
	comp=Z,157nm,1.4s						
QUOK	**Quay**	**27.69**	**108**	IAmb	IAmb	19 19 16.8	
	comp=Z,169nm,1.4s						
L40A	**Anamosa**	**27.70**	**92**	IAmb	IAmb	19 19 21.8	
	comp=Z,129nm,1.1s						
FNO	**Franklin**	**27.88**	**110**	IAmb	IAmb	19 19 18.6	
	comp=Z,74nm,1.3s						
JFWS	**Jewell Farm**	**27.90**	**90**	IAmb	IAmb	19 19 24.2	
	comp=Z,129nm,1.1s						
X34A	**Smith Ranch, M**	**28.07**	**112**	IAmb	IAmb	19 19 20.8	
	comp=Z,172nm,1.5s						
SGCY	**Sterling City**	**28.12**	**120**	IAmb	IAmb	19 19 20.4	
	comp=Z,128nm,1.8s						
W35A	**Tecumseh**	**28.27**	**110**	IAmb	IAmb	19 19 21.9	
	comp=Z,153nm,1.5s						
WTFS	**Witchita Falls**	**28.28**	**114**	IAmb	IAmb	19 19 21.8	
	comp=Z,117nm,1.4s						
RES	**Resolute Bay**	**28.39**	**19**	LR	LR	19 30 29.9	
	comp=Z,12μm,20.8s,baz=230,slow=36						
ABTX	**Abilene, Hawle**	**28.43**	**117**	IAmb	IAmb	19 19 23.1	
	comp=Z,186nm,1.6s						
P40A	**Paris**	**28.54**	**98**	IAmb	IAmb	19 19 23.9	
	comp=Z,124nm,1.4s						
N41A	**Harden Midland**	**28.65**	**94**	IAmb	IAmb	19 19 24.6	
	comp=Z,124nm,1.2s						
RLO	**Rose Lookout**	**28.73**	**106**	IAmb	IAmb	19 19 36.8	
	comp=Z,80nm,1.2s						
TX31	**Lajitas Ar. Si**	**28.78**	**127**	IAmb	IAmb	19 19 27.3	
	comp=Z,68nm,1.3s						
TXAR	**Lajitas Array**	**28.78**	**127**	P	**P**	**19 19 25.4**	**+2.5**
	comp=Z,21nm,1.1s,baz=326,slow=6.0,SNR=74						
TXAR				LR	LR	19 31 32.6	
	comp=Z,4μm,21.2s,baz=314,slow=38						
	comp=Z,21nm,1.1s						
TXAR	**Lajitas Array**	**28.78**	**127**	P	**P**	**19 19 23.9**	**+1.1**
TXAR	**Lajitas Array**	**28.78**	**127**	P	**P**	**19 19 23.9**	**+1.1**
OZNA	**Ozona**	**28.88**	**121**	IAmb	IAmb	19 19 27.2	
	comp=Z,156nm,1.9s						
U38A	**Gravette**	**28.95**	**105**	IAmb	IAmb	19 19 38.6	
	comp=Z,72nm,1.3s						
PLPT	**Palo Pinto**	**29.05**	**115**	IAmb	IAmb	19 19 28.3	
	comp=Z,82nm,1.4s						
R40A	**Maddies Statio**	**29.12**	**100**	IAmb	IAmb	19 20 12.1	
	comp=Z,60nm,1.1s						
K43A	**Burlington**	**29.23**	**89**	IAmb	IAmb	19 20 21.1	
	comp=Z,145nm,1.5s						
FW06	**Azle**	**29.38**	**114**	IAmb	IAmb	19 19 31.6	
	comp=Z,94nm,1.4s						
ILON	**Igloolik, Nuna**	**29.56**	**32**	P	**P**	**19 19 28.6**	**-0.6**
ILON				IAmb	IAmb	19 20 04.4	
	comp=Z,98nm,1.9s						
HDIL	**Hopedale**	**29.73**	**93**	IAmb	IAmb	19 19 43.5	
	comp=Z,133nm,1.4s						
L44A	**Lake County Fo**	**29.76**	**90**	IAmb	IAmb	19 19 34.4	
	comp=Z,140nm,1.4s						
MGMO	**Mountain Grove**	**29.82**	**102**	IAmb	IAmb	19 19 35.2	
	comp=Z,169nm,1.9s						
CCM	**Cathedral Cave**	**29.91**	**99**	P	**P**	**19 19 32.6**	**0.0**
CCM				IAmb	IAmb	19 19 35.5	
	comp=Z,100nm,1.5s						
CCM	**Cathedral Cave**	**29.91**	**99**	P	**P**	**19 19 32.6**	**0.0**
CCM				pmax	pmax		
	comp=Z,100nm,1.5s						
JCT	**Junction City**	**29.95**	**120**	IAmb	IAmb	19 19 36.3	
	comp=Z,86nm,1.4s						
HQIL	**Hanson Quary C**	**29.99**	**90**	IAmb	IAmb	19 19 36.6	
	comp=Z,107nm,1.3s						
P43A	**Skaggs, Pawnee**	**30.09**	**95**	IAmb	IAmb	19 19 37.5	
	comp=Z,105nm,1.3s						
E46A	**Sault Ste Mari**	**30.13**	**80**	IAmb	IAmb	19 19 37.6	
	comp=Z,78nm,1.2s						
WHTX	**Lake Whitney,**	**30.15**	**115**	IAmb	IAmb	19 19 38.3	
	comp=Z,88nm,1.3s						
LPIG	**La Paz**	**30.26**	**143**	LR	LR	19 32 15.2	
	comp=Z,6μm,18.6s,baz=332,slow=37						
DRIO	**Del Rio**	**30.32**	**123**	IAmb	IAmb	19 19 39.5	
	comp=Z,51nm,1.4s						
FVM	**French Village**	**30.47**	**99**	IAmb	IAmb	19 20 16.4	
	comp=Z,49nm,1.2s						
FCAR	**Ozark Folk Cen**	**30.70**	**104**	IAmb	IAmb	19 19 42.8	
	comp=Z,64nm,1.2s						
SLBS	**Sierra La Lagu**	**30.78**	**142**	P	**P**	**19 19 42.4**	**+1.9**
SLBS				IAmb	IAmb	19 19 52.8	
	comp=Z,36nm,1.1s						
Q44A	**Meyer Farm, Va**	**30.83**	**96**	IAmb	IAmb	19 20 31.8	
	comp=Z,73nm,1.2s						
HNDO	**Hondo**	**30.96**	**121**	IAmb	IAmb	19 19 45.2	
	comp=Z,62nm,1.7s						
X40A	**Basin Creek Fa**	**31.18**	**106**	IAmb	IAmb	19 20 42.5	
	comp=Z,52nm,1.4s						
LCAR	**Lake Charles**	**31.19**	**102**	IAmb	IAmb	19 19 46.5	
	comp=Z,31nm,0.9s						
PBMO	**Poplar Bluff**	**31.20**	**100**	IAmb	IAmb	19 20 43.4	
	comp=Z,44nm,1.2s						
CGM3	**Cape Girardeau**	**31.37**	**99**	IAmb	IAmb	19 19 47.1	
	comp=Z,55nm,1.3s						
S44A	**Carbondale**	**31.39**	**98**	IAmb	IAmb	19 19 48.5	
	comp=Z,87nm,1.4s						
SIUC	**Southern Illin**	**31.40**	**98**	IAmb	IAmb	19 19 48.5	
	comp=Z,95nm,1.4s						
OLIL	**Olney**	**31.51**	**95**	IAmb	IAmb	19 19 49.9	
	comp=Z,103nm,1.1s						
P46A	**Rosedale**	**31.58**	**93**	IAmb	IAmb	19 19 50.5	
	comp=Z,60nm,1.1s						
POIN	**Pond Inlet**	**31.68**	**27**	IAmb	IAmb	19 20 39.5	
	comp=Z,95nm,1.7s						
833A	**Chaparral WMA,**	**31.84**	**122**	IAmb	IAmb	19 19 53.7	
	comp=Z,108nm,1.4s						
N47A	**Urbana**	**31.86**	**90**	IAmb	IAmb	19 19 52.5	
	comp=Z,97nm,1.2s						
BLO	**Bloomington**	**32.27**	**93**	IAmb	IAmb	19 21 01.3	
	comp=Z,80nm,1.3s						
HKT	**Hockley**	**32.59**	**116**	P	**P**	**19 19 58.1**	**+1.9**
HKT	**Hockley**	**32.59**	**116**	P	**P**	**19 19 57.7**	**+1.5**
HKT				pmax	pmax		
	comp=Z,116nm,1.5s						
N49A	**Columbus Grove**	**32.81**	**89**	IAmb	IAmb	19 20 00.7	
	comp=Z,78nm,1.3s						
K50A	**Casco**	**32.85**	**85**	IAmb	IAmb	19 20 35.8	
	comp=Z,42nm,0.8s						
T47A	**Sharon Grove**	**33.18**	**97**	IAmb	IAmb	19 20 04.0	
	comp=Z,51nm,1.3s						
WVT	**Waverly**	**33.25**	**99**	P	**P**	**19 20 02.0**	**+0.1**
WVT				IAmb	IAmb	19 20 04.8	
	comp=Z,41nm,1.1s						
WVT	**Waverly**	**33.25**	**99**	P	**P**	**19 20 02.1**	**+0.1**
WVT				pmax	pmax		
	comp=Z,41nm,1.1s						
VLDQ	**Val d'Or**	**33.69**	**73**	IAmb	IAmb	19 20 07.0	
	comp=Z,95nm,1.5s						
PLAL	**Pickwick Lake**	**33.82**	**101**	IAmb	IAmb	19 20 09.6	
	comp=Z,57nm,1.1s						
ACSO	**Alum Creek Sta**	**33.95**	**89**	IAmb	IAmb	19 20 10.7	
	comp=Z,80nm,1.2s						
N51A	**Ashland**	**33.97**	**87**	IAmb	IAmb	19 20 40.8	
	comp=Z,83nm,1.4s						
SADO	**Sadowa**	**34.09**	**79**	LR	LR	19 35 00.3	
	comp=Z,4μm,20.8s,baz=326,slow=38						
SADO	**Sadowa**	**34.09**	**79**	IAmb	IAmb	19 20 11.8	
	comp=Z,102nm,1.4s						
SHEM	**Shemya Is, Ala**	**34.23**	**296**	LR	LR	19 31 58.5	
	comp=Z,3μm,18.9s,baz=84,slow=33						
Q51A	**Peebles**	**34.39**	**91**	IAmb	IAmb	19 20 14.6	
	comp=Z,109nm,1.2s						
FRB	**Frobisher Bay**	**34.45**	**44**	LR	LR	19 35 06.3	
	comp=Z,5μm,18.6s,baz=277,slow=38						
O52A	**Adamsville**	**34.74**	**88**	IAmb	IAmb	19 20 17.4	
	comp=Z,79nm,1.5s						
X48A	**Hartselle**	**34.81**	**101**	IAmb	IAmb	19 20 18.1	
	comp=Z,71nm,1.4s						
P52A	**Corning**	**34.82**	**89**	IAmb	IAmb	19 20 17.7	
	comp=Z,83nm,1.4s						
N53A	**Lisbon**	**35.01**	**87**	IAmb	IAmb	19 20 18.9	
	comp=Z,92nm,1.5s						
SWET	**Sewanee**	**35.02**	**99**	IAmb	IAmb	19 20 19.8	
	comp=Z,50nm,1.4s						
S51A	**Beattyville**	**35.03**	**93**	IAmb	IAmb	19 20 20.3	
	comp=Z,59nm,1.3s						
O53A	**New Philadelph**	**35.07**	**88**	IAmb	IAmb	19 20 29.4	
	comp=Z,42nm,1.1s						
Q52A	**Bidwell**	**35.11**	**90**	IAmb	IAmb	19 20 20.3	
	comp=Z,92nm,1.4s						
DELO	**Deloro Mine**	**35.17**	**79**	IAmb	IAmb	19 20 21.4	
	comp=Z,82nm,1.3s						
BILL	**Bilibino**	**35.19**	**324**	P	**P**	**19 20 17.8**	**-0.7**
BILL	**Bilibino**	**35.19**	**324**	*ce*P	**P**	**19 20 20.0**	**+1.5**
BILL				pmax	pmax		
	comp=Z,180nm,2.5s						
P53A	**Whipple**	**35.38**	**89**	IAmb	IAmb	19 20 22.9	
	comp=Z,78nm,1.4s						
Y49A	**Blount Mountai**	**35.59**	**101**	IAmb	IAmb	19 20 25.1	
	comp=Z,104nm,1.6s						
FPAL	**Fort Paine**	**35.66**	**99**	IAmb	IAmb	19 20 25.7	
	comp=Z,40nm,1.1s						
TZTN	**Tazewell**	**35.72**	**95**	IAmb	IAmb	19 20 26.5	
	comp=Z,57nm,1.2s						
LRAL	**Lakeview Retre**	**35.77**	**102**	IAmb	IAmb	19 20 25.8	
	comp=Z,88nm,1.6s						
PECO	**Prince Edward**	**35.85**	**79**	IAmb	IAmb	19 20 27.4	
	comp=Z,123nm,1.6s						
X51A	**Calhoun**	**36.12**	**98**	IAmb	IAmb	19 20 29.8	
	comp=Z,104nm,1.1s						
TKL	**Tuckaleechee C**	**36.12**	**96**	LR	LR	19 35 37.0	
	comp=Z,16μm,18.7s,baz=310,slow=37						
TKL	**Tuckaleechee C**	**36.12**	**96**	IAmb	IAmb	19 20 30.1	
	comp=Z,85nm,1.6s						
W52A	**Murphy**	**36.37**	**97**	IAmb	IAmb	19 20 31.7	
	comp=Z,50nm,1.1s						
L56A	**Greenwood**	**36.40**	**82**	IAmb	IAmb	19 21 14.7	
	comp=Z,67nm,1.4s						
S54A	**Dingess, Beckl**	**36.40**	**91**	IAmb	IAmb	19 20 31.3	
	comp=Z,93nm,1.4s						
WBO	**Williamsburg**	**36.41**	**77**	IAmb	IAmb	19 20 32.1	
	comp=Z,72nm,1.5s						
V53A	**Saluda**	**36.72**	**95**	IAmb	IAmb	19 20 35.3	
	comp=Z,170nm,1.4s						
J57A	**Williamstown**	**36.73**	**80**	IAmb	IAmb	19 20 44.3	
	comp=Z,104nm,1.5s						
LONY	**Lake Ozonia**	**37.02**	**77**	IAmb	IAmb	19 20 46.8	
	comp=Z,92nm,1.6s						
BG3	**Lake Jocassee**	**37.07**	**96**	IAmb	IAmb	19 20 38.0	
	comp=Z,65nm,1.2s						
Y52A	**Lilburn**	**37.07**	**99**	IAmb	IAmb	19 20 38.1	
	comp=Z,75nm,1.2s						
MNTQ	**Montreal, Queb**	**37.20**	**75**	IAmb	IAmb	19 20 48.2	
	comp=Z,52nm,1.2s						
BINY	**Binghamton**	**37.36**	**81**	IAmb	IAmb	19 21 15.1	
	comp=Z,75nm,1.5s						
SCHQ	**Schefferville**	**37.38**	**58**	P	**P**	**19 20 38.5**	**+1.1**
	comp=Z,10nm,1.0s,baz=302,slow=9.5,SNR=5.1						
SCHQ				LR	LR	19 36 24.9	
	comp=Z,16μm,18.4s,baz=290,slow=37						
	comp=Z,10nm,1.0s						
152A	**Waverly Hall**	**37.44**	**101**	IAmb	IAmb	19 20 40.8	
	comp=Z,127nm,1.3s						
LDAQ	**Lac Daran**	**37.53**	**70**	IAmb	IAmb	19 20 52.1	
	comp=Z,104nm,1.5s						
P57A	**Homestead Farm**	**37.54**	**86**	IAmb	IAmb	19 21 16.8	
	comp=Z,92nm,1.5s						
V55A	**Taylorsville**	**37.63**	**94**	IAmb	IAmb	19 21 04.1	
	comp=Z,74nm,1.4s						
J59A	**Piesco**	**37.65**	**79**	IAmb	IAmb	19 20 52.2	
	comp=Z,126nm,1.6s						
GOGA	**Godfrey**	**37.74**	**99**	IAmb	IAmb	19 20 43.4	
	comp=Z,102nm,1.3s						
S57A	**Dark Hollow, R**	**37.93**	**89**	IAmb	IAmb	19 20 45.6	
	comp=Z,139nm,1.4s						
KMSC	**Kings Mountain**	**38.00**	**95**	IAmb	IAmb	19 20 44.8	
	comp=Z,105nm,1.6s						
T57A	**Hurt**	**38.19**	**91**	IAmb	IAmb	19 20 55.7	
	comp=Z,44nm,0.9s						
R58B	**Mineral**	**38.50**	**88**	IAmb	IAmb	19 20 50.4	
	comp=Z,99nm,1.4s						
TRY	**Troy**	**38.55**	**79**	IAmb	IAmb	19 21 16.3	
	comp=Z,134nm,1.8s						
D62A	**Allapoint, All**	**39.25**	**70**	IAmb	IAmb	19 21 06.4	
	comp=Z,88nm,1.7s						
T59A	**Double "B" Far**	**39.30**	**89**	IAmb	IAmb	19 20 56.8	
	comp=Z,88nm,1.3s						
M65A	**Busby, Falmout**	**41.07**	**79**	P	P	19 21 13.6	+5.3
	baz=304						
SFJD	**Kangerlussuaq**	**41.13**	**36**	LR	LR	19 37 30.6	
	comp=Z,7μm,19.1s,baz=290,slow=35						
SFJD	**Kangerlussuaq**	**41.13**	**36**	P	**P**	**19 21 05.9**	**-2.6**
SFJD				IAmb	IAmb	19 21 15.9	
	comp=Z,63nm,1.3s						
SFJD	**Kangerlussuaq**	**41.13**	**36**	P	**P**	**19 21 05.9**	**-2.6**
SFJD				pmax	pmax		
	comp=Z,63nm,1.3s						
SEY	**Seymchan**	**41.88**	**318**	LR	LR	19 38 05.8	
	comp=Z,4μm,20.5s,baz=80,slow=36						
SEY	**Seymchan**	**41.88**	**318**	*e*P	**P**	**19 21 14.5**	**-0.2**
SEY				*e*S	**S**	**19 27 30.2**	**-2.1**
SEY				pmax	pmax		
	comp=Z,70nm,1.4s						
SEY				smax	smax		
	comp=E,1μm,12.9s						
SEY				smax	smax		
	comp=N,276nm,14.3s						
SEY				MLR	MLR		
	comp=Z,4μm,21.0s						
PET	**Petropavlovsk**	**42.74**	**302**	P	**P**	**19 21 21.6**	**-0.3**
PET				IAmb	IAmb	19 21 28.2	
	comp=Z,188nm,1.4s						
PET	**Petropavlovsk**	**42.74**	**302**	*e*P	**P**	**19 21 23.5**	**+1.7**
PET				*e*		19 23 05.5	
PET				*e*S	**S**	**19 27 43.2**	**-2.0**
PET				pmax	pmax		
	comp=Z,102nm,1.3s						
PET				pmax	pmax		
	comp=Z,800nm,7.4s						
PET				pmax	pmax		
	comp=Z,400nm,6.6s						
PET				MLR	MLR		
	comp=Z,1μm,15.0s						
PET				MLR	MLR		
	comp=Z,1μm,13.0s						
PET	**Petropavlovsk**	**42.74**	**302**	P	**P**	**19 21 23.3**	**+1.5**
	comp=Z,92nm,2.1s						
PEA0B	**Petropavlovsk-**	**43.22**	**303**	*i* P	**P**	**19 21 26.9**	**+1.2**
PETK	**Petropavlovsk-**	**43.22**	**303**	P	**P**	**19 21 26.3**	**+0.6**
	comp=Z,37nm,1.1s,baz=82,slow=14,SNR=11						
PETK				LR	LR	19 37 21.7	
	comp=Z,2μm,21.0s,baz=71,slow=33						
	comp=Z,37nm,1.1s						
PETK	**Petropavlovsk-**	**43.22**	**303**	P	**P**	**19 21 24.5**	**-1.2**
PETK	**Petropavlovsk-**	**43.22**	**303**	P	**P**	**19 21 24.5**	**-1.2**
SUMG	**Summit**	**43.33**	**26**	P	**P**	**19 21 24.1**	**-2.7**
SUMG	**Summit**	**43.33**	**26**	P	**P**	**19 21 24.1**	**-2.7**
SUMG				pmax	pmax		
	comp=Z,28nm,1.0s						
CMIG	**Matias Romero**	**43.39**	**127**	LR	LR	19 41 28.0	
	comp=Z,2μm,18.2s,baz=322,slow=39						
MA2	**Magadan**	**43.89**	**314**	LR	LR	19 39 09.3	
	comp=Z,2μm,19.0s,baz=74,slow=35						
MA2	**Magadan**	**43.89**	**314**	*ce*P	**P**	**19 21 34.8**	**+3.8**
MA2				pmax	pmax		
	comp=Z,171nm,1.7s						
MA2	**Magadan**	**43.89**	**314**	P	**P**	**19 21 33.3**	**+2.3**
	comp=Z,91nm,1.6s						
TEIG	**Tepich**	**44.41**	**117**	P	**P**	**19 21 33.8**	**-1.8**
TEIG				IAmb	IAmb	19 21 38.9	
	comp=Z,52nm,1.1s						
SKR	**Severo-Kuril's**	**45.23**	**301**	*e*P	P	19 21 36.6	-5.3
SKR				*e*		19 23 17.2	
SKR				*e*S	**S**	**19 28 23.5**	**+1.9**
SKR				pmax	pmax		
	comp=Z,700nm,6.0s						
SKR				MLR	MLR		
	comp=Z,1μm,14.0s						
PETF	**Flores**	**46.19**	**122**	P	**P**	**19 21 49.6**	**-0.1**
PETF				IAmb	IAmb	19 21 53.1	
	comp=Z,92nm,1.3s						
TIXI	**Tiksi**	**46.50**	**335**	LR	LR	19 42 04.3	
	comp=Z,4μm,22.0s,baz=73,slow=37						
TIXI	**Tiksi**	**46.50**	**335**	P	**P**	**19 21 51.3**	**-0.3**
TIXI	**Tiksi**	**46.50**	**335**	*ce*P	**P**	**19 21 52.5**	**+0.9**
TIXI				pmax	pmax		
	comp=Z,121nm,2.5s						
CAIB	**Caibarien**	**47.91**	**106**	P	**P**	**19 22 04.0**	**+0.9**
CAIB				IAmb	IAmb	19 22 06.0	
	comp=Z,301nm,1.9s						
MTO3	**Montecristo**	**48.53**	**123**	P	**P**	**19 22 08.9**	**+0.6**
MTO3				IAmb	IAmb	19 22 35.8	
	comp=Z,116nm,1.9s						
SPITS	**Spitsbergen Ar**	**50.10**	**9**	LR	LR	19 44 36.0	
	comp=Z,9μm,18.4s,baz=331,slow=37						
HERN	**Volcan Telica**	**51.38**	**122**	IAmb	IAmb	19 23 06.1	
	comp=Z,502nm,0.9s						
YAK	**Yakutsk**	**51.54**	**324**	LR	LR	19 44 48.6	
	comp=Z,3μm,18.7s,baz=58,slow=37						
YAK	**Yakutsk**	**51.54**	**324**	P	**P**	**19 22 30.2**	**-0.1**
YAK	**Yakutsk**	**51.54**	**324**	*e*P	**P**	**19 22 31.1**	**+0.8**
YAK				*e**PP	**pwP**	**19 22 38.4**	**+2.9**
YAK				*e*		19 23 45.7	
YAK				*e*		19 24 28.0	
YAK				*e*PPP	PPP	19 25 26.6	
YAK				*e*S	**S**	**19 29 50.6**	**+0.2**
YAK				*e**SS	sS	19 30 08.2	+14
YAK				*e*		19 32 22.3	
YAK				*e*SS	**SS**	**19 33 27.2**	**+1.6**
YAK				*e*SSS	SSS	19 35 01.1	
YAK				pmax	pmax		
	comp=Z,35nm,1.0s						
YAK				pmax	pmax		
	comp=N,12nm,0.9s						
YAK				pmax	pmax		
	comp=E,16nm,1.0s						
YAK				pmax	pmax		
	comp=Z,495nm,4.7s						
YAK				pmax	pmax		
	comp=N,164nm,2.7s						
YAK				pmax	pmax		
	comp=E,242nm,3.4s						
YAK				smax	smax		
	comp=N,732nm,5.8s						
YAK				smax	smax		
	comp=E,232nm,2.9s						
YAK				MLR	MLR		
	comp=Z,3μm,22.0s						
YAK				MLR	MLR		
	comp=E,2μm,15.0s						
YAK				MLR	MLR		
	comp=N,1μm,22.0s						
SIUN	**Universidad Ur**	**51.61**	**119**	P	**P**	**19 22 32.1**	**+0.7**
SIUN				IAmb	IAmb	19 22 35.2	
	comp=Z,30nm,1.3s						
CHIV	**Chivirico**	**51.68**	**106**	IAmb	IAmb	19 22 35.4	
	comp=Z,164nm,1.3s						
JMIC	**Jan Mayen**	**51.96**	**21**	LR	LR	19 45 04.7	
	comp=Z,5μm,18.2s,baz=327,slow=37						
BOAB	**BOACO BROADBA**	**52.15**	**121**	P	**P**	**19 22 36.2**	**+0.8**

TYV	**Tymovskoe**	**52.31**	**307**	*e*P	**P**	**19 22 37.8**	**+1.6**
TYV				*e*S	**S**	**19 30 03.4**	**+2.1**
TYV				pmax	pmax		
	comp=Z,42nm,1.2s						
TYV				pmax	pmax		
	comp=Z,400nm,4.4s						
TYV				smax	smax		
	comp=N,700nm,7.2s						
TYV				smax	smax		
	comp=E,1µm,7.2s						
BORG	**Borgarnes**	**52.67**	**31**	LR	LR	19 45 13.9	
	comp=E,4µm,21.8s,baz=310,slow=36						
UGL	**Uglegorsk**	**53.69**	**305**	*e*P	**P**	**19 22 48.3**	**+1.9**
UGL				*e*S	**S**	**19 30 21.0**	**+1.0**
UGL				pmax	pmax		
	comp=Z,100nm,1.5s						
UGL				smax	smax		
	comp=E,700nm,4.1s						
UGL				smax	smax		
	comp=N,1µm,9.8s						
UGL				MLR	MLR		
	comp=E,2µm,15.0s						
UGL				MLR	MLR		
	comp=N,2µm,13.0s						
UGL				MLR	MLR		
	comp=Z,2µm,16.0s						
JTS	**Las Juntas de**	**54.32**	**121**	LR	LR	19 50 22.1	
	comp=Z,2µm,19.6s,baz=318,slow=41						
YSS	**Yuzhno-Sakhali**	**54.62**	**303**	P	**P**	**19 22 52.3**	**-0.9**
YSS				IAmb	IAmb	19 22 59.0	
	comp=Z,78nm,1.2s						
YSS	**Yuzhno-Sakhali**	**54.62**	**303**	*e*P	**P**	**19 22 55.0**	**+1.8**
YSS				*e*		19 25 04.0	
YSS				*e*S	**S**	**19 30 33.1**	**+0.4**
YSS				pmax	pmax		
	comp=Z,40nm,1.3s						
YSS				pmax	pmax		
	comp=N,20nm,1.1s						
YSS				pmax	pmax		
	comp=E,30nm,1.2s						
YSS				pmax	pmax		
	comp=Z,600nm,7.6s						
YSS				pmax	pmax		
	comp=E,300nm,6.1s						
YSS				smax	smax		
	comp=N,500nm,5.9s						
YSS				MLR	MLR		
	comp=Z,900nm,17.0s						
YSS				MLR	MLR		
	comp=N,1µm,14.0s						
YSS				MLR	MLR		
	comp=E,700nm,15.0s						
GRNR	**Gornyy**	**55.51**	**310**	⇑*i*P	**P**	**19 23 00.1**	**+0.5**
GRNR				pmax	pmax		
	comp=Z,20nm,1.0s						
SDDR	**Presa de Saban**	**55.61**	**102**	IAmb	IAmb	19 23 03.6	
	comp=Z,32nm,0.9s						
ASAJ	**Asahikawa**	**56.50**	**300**	LR	LR	19 43 08.3	
	comp=Z,865nm,21.9s,baz=58,slow=32						
NRIK	**Noril'sk**	**57.52**	**345**	P	**P**	**19 23 13.7**	**0.0**
	comp=Z,8.4nm,0.9s,baz=37,slow=5.5,SNR=7.3						
NRIK				LR	LR	19 50 18.7	
	comp=Z,2µm,19.0s,baz=42,slow=39						
	comp=Z,8.4nm,0.9s						
NRIK	**Noril'sk**	**57.52**	**345**	P	**P**	**19 23 12.6**	**-1.1**
NRIK	**Noril'sk**	**57.52**	**345**	P	**P**	**19 23 12.6**	**-1.1**
NRIK				pmax	pmax		
	comp=Z,134nm,1.9s						
ZEA	**Zeya**	**57.84**	**317**	*e*P	**P**	**19 23 16.0**	**-0.1**
ZEA				*e*S	**S**	**19 31 16.6**	**+1.4**
ZEA				pmax	pmax		
	comp=Z,200nm,2.4s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.6s						
ZEA				smax	smax		
	comp=N,500nm,11.2s						
H11N2	**WAKE ISLAND Hy**	**58.07**	**263**	T	T	20 26 02.5	
	baz=42,slow=75,SNR=6907						
H11N3	**WAKE ISLAND Hy**	**58.07**	**263**	T	T	20 26 03.7	
	baz=42,slow=75,SNR=5847						
H11N1	**WAKE ISLAND Hy**	**58.08**	**263**	T	T	20 26 03.7	
	baz=42,slow=75,SNR=4611						
ARCES	**ARCESS Array B**	**59.08**	**10**	LR	LR	19 50 19.9	
	comp=N,3µm,19.0s,baz=337,slow=38						
H11S1	**WAKE ISLAND Hy**	**59.09**	**262**	T	T	20 27 18.4	
	baz=46,slow=75,SNR=454						
H11S2	**WAKE ISLAND Hy**	**59.10**	**262**	T	T	20 27 25.3	
	baz=46,slow=75,SNR=308						
H11S3	**WAKE ISLAND Hy**	**59.11**	**262**	T	T	20 27 20.9	
	baz=46,slow=75,SNR=273						
GCPR	**Guaynabo City**	**59.39**	**98**	IAmb	IAmb	19 23 29.6	
	comp=Z,59nm,1.4s						
SJG	**San Juan**	**59.49**	**98**	LR	LR	19 50 24.8	
	comp=Z,1µm,20.4s,baz=328,slow=37						
TAOE	**Nuku Hiva Isla**	**59.63**	**192**	*e*S	**S**	**19 31 38.0**	**-1.4**
	comp=Z,648nm,24.9s						
TAOE				*e*SS	**SS**	**19 35 31.5**	**-3.8**
	comp=Z,612nm,27.4s						
TAOE				*e*LQ	LQ	19 38 30.6	
	comp=Z,3µm,30.6s						
TAOE				*e*LR	LR	19 41 06.8	
	comp=Z,8µm,28.5s						
HUMP	**Col San Antoni**	**59.66**	**98**	IAmb	IAmb	19 24 03.5	
	comp=Z,46nm,1.1s						
HEH	**HeiHe**	**60.15**	**314**	*e*P	**P**	**19 23 30.5**	**-1.7**
HEH				S	**S**	**19 31 45.6**	**+0.3**
HEH				pmax	pmax		
	comp=Z,110nm,1.3s						
HEH				pmax	pmax		
	comp=Z,660nm,4.5s						
HEH				LR	LR		
	comp=Z,2µm,14.7s						
HEH				LR	LR		
	comp=Z,2µm,14.2s						
HEH				LR	LR		
	comp=Z,3µm,19.7s						
BOD	**Bodaibo**	**60.19**	**326**	*e*P	**P**	**19 23 31.5**	**-0.8**
BOD				pmax	pmax		
	comp=Z,102nm,1.8s						
APAC	**Apartado, Choc**	**61.00**	**115**	P	**P**	**19 23 37.1**	**-1.3**
	comp=Z,53nm,1.2s						
LVZ	**Lovozero**	**61.51**	**7**	*i* P	**P**	**19 23 42.7**	**+1.4**
LVZ				pmax	pmax		
	comp=Z,72nm,1.4s						
UREC	**San Jos de Ur**	**61.73**	**114**	P	**P**	**19 23 40.5**	**-2.9**
	comp=Z,589nmcomp=Z,27nm,1.6s						
APA	**Apatity**	**61.74**	**7**	⇓*e*P	**P**	**19 23 38.3**	**-4.4**
APA				*e*		19 24 28.2	
APA				pmax	pmax		
	comp=Z,12nm,1.2s						
APA				MLR	MLR		
	comp=Z,4µm,20.3s						
DBBC	**Dabeiba**	**61.93**	**115**	P	**P**	**19 23 41.4**	**-3.4**
USRK	**Ussuriysk Ar.**	**62.12**	**306**	P	**P**	**19 23 45.7**	**0.0**
	comp=Z,16nm,1.0s,baz=46,slow=6.9,SNR=18						
	comp=Z,16nm,1.0s						
OCAC	**Ocana**	**62.65**	**112**	P	**P**	**19 23 48.7**	**-1.0**
	comp=Z,1µmcomp=Z,38nm,1.1s						
VLA	**Vladivostok**	**62.93**	**306**	*i* P	**P**	**19 23 53.2**	**+2.1**
VLA				pmax	pmax		
	comp=Z,109nm,1.8s						
CBOC	**Ciudad Bolivar**	**62.97**	**116**	P	**P**	**19 23 54.0**	**+2.1**
	comp=Z,938nmcomp=Z,36nm,1.6s						
HELC	**Santa Helena**	**62.99**	**115**	P	**P**	**19 23 49.2**	**-3.0**
	comp=Z,647nmcomp=Z,18nm,1.1s						
PTBC	**PUERTO BERRIO,**	**63.33**	**114**	P	**P**	**19 23 50.1**	**-4.0**
	comp=Z,1µmcomp=Z,53nm,1.6s						
BNX	**BinXian**	**63.34**	**310**	⇓P	**P**	**19 23 52.6**	**-1.2**
BNX				S	**S**	**19 32 27.8**	**+2.0**
BNX				pmax	pmax		
	comp=Z,26nm,1.6s						
BNX				pmax	pmax		
	comp=Z,360nm,4.4s						
BNX				LR	LR		
	comp=Z,1µm,14.4s						
BNX				LR	LR		
	comp=Z,1µm,14.3s						
BNX				LR	LR		
	comp=Z,1µm,14.7s						
PLMC	**San Jos del P**	**63.59**	**117**	P	**P**	**19 23 52.5**	**-3.4**
	comp=Z,681nmcomp=Z,34nm,1.2s						
PAMC	**Pamplona, Colo**	**63.73**	**112**	P	**P**	**19 23 54.5**	**-2.8**
	comp=Z,160nmcomp=Z,12nm,1.1s						
SDV	**Santo Domingo**	**63.75**	**109**	LR	LR	19 53 20.1	
	comp=Z,1µm,21.6s,baz=325,slow=38						
SDV	**Santo Domingo**	**63.75**	**109**	P	**P**	**19 23 56.9**	**-0.2**
SDV				IAmb	IAmb	19 23 59.9	
	comp=Z,48nm,1.4s						
SDV	**Santo Domingo**	**63.75**	**109**	*e*P	**P**	**19 23 57.3**	**+0.2**
SDV	**Santo Domingo**	**63.75**	**109**	P	**P**	**19 23 53.0**	**-4.1**
	comp=Z,766nmcomp=Z,28nm,1.6s						
PSTR	**Posyet**	**63.82**	**306**	*i* P	**P**	**19 24 00.4**	**+3.4**
NORC	**Norcasia**	**63.88**	**115**	P	**P**	**19 23 54.5**	**-3.2**
	comp=Z,862nmcomp=Z,66nm,1.2s						
BARC	**Barichara**	**64.04**	**113**	P	**P**	**19 24 02.4**	**+3.4**
	comp=Z,51nm,1.0s						
MJAR	**Matsushiro Arr**	**64.07**	**296**	P	**P**	**19 23 59.1**	**+0.3**
	comp=Z,6.5nm,1.0s,baz=27,slow=5.8,SNR=9.1						
MJAR				LR	LR	19 47 28.3	
	comp=Z,1µm,21.9s,baz=44,slow=32						
	comp=Z,6.5nm,1.0s						
MJAR	**Matsushiro Arr**	**64.07**	**296**	P	**P**	**19 23 59.3**	**+0.5**
MJAR				IAmb	IAmb	19 24 03.3	
	comp=Z,28nm,1.5s						
MJAR	**Matsushiro Arr**	**64.07**	**296**	P	**P**	**19 23 59.3**	**+0.5**
MJAR				pmax	pmax		
	comp=Z,28nm,1.5s						
MAJO	**Matsushiro**	**64.07**	**296**	*i* P	**P**	**19 24 00.7**	**+1.9**
MAJO				pmax	pmax		
	comp=Z,33nm,1.3s						
HILR	**Hailar Array B**	**64.09**	**317**	P	**P**	**19 23 59.2**	**+0.4**
	comp=Z,13nm,1.0s,baz=77,slow=6.4,SNR=10						
	comp=Z,13nm,1.0s						
YOTC	**Yotoco, Valle**	**64.31**	**117**	P	**P**	**19 23 59.8**	**-0.9**
	comp=Z,791nmcomp=Z,37nm,1.3s						
NC204	**NORSAR Array S**	**64.34**	**20**	P	**P**	**19 23 59.2**	**-1.0**
NC204				IAmb	IAmb	19 24 29.5	
	comp=Z,30nm,1.4s						
NC303	**NORSAR Array S**	**64.51**	**20**	P	**P**	**19 24 00.7**	**-0.6**
NC303				IAmb	IAmb	19 24 37.9	
	comp=Z,28nm,1.1s						
NB2	**NORSAR Subarra**	**64.65**	**20**	P	**P**	**19 24 03.4**	**+1.2**
	comp=Z,60nm,1.7s,baz=335,slow=6.5						
NB2	**NORSAR Subarra**	**64.65**	**20**	P	**P**	**19 24 03.4**	**+1.2**
	baz=335,slow=6.5						
NOA	**NORSAR Array B**	**64.65**	**20**	P	**P**	**19 24 02.5**	**+0.3**
	comp=Z,7.1nm,1.1s,baz=334,slow=6.5,SNR=11						
NOA				LR	LR	19 52 02.7	
	comp=Z,3µm,20.5s,baz=330,slow=36						
	comp=Z,7.1nm,1.1s						
RUSC	**La Rusia**	**64.66**	**113**	P	**P**	**19 24 01.2**	**-2.2**
	comp=Z,1µmcomp=Z,66nm,1.5s						
NAO01	**NORSAR Array S**	**64.75**	**20**	IAmb	IAmb	19 24 28.9	
	comp=Z,35nm,1.1s						
ROSC	**El Rosal**	**64.78**	**115**	P	**P**	**19 24 04.7**	**+0.6**
	comp=Z,14nm,0.3s,baz=339,slow=10,SNR=16						
ROSC				LR	LR	19 57 23.4	
	comp=Z,1µm,18.1s,baz=358,slow=41						
	comp=Z,14nm,0.3s						
ROSC	**El Rosal**	**64.78**	**115**	P	**P**	**19 24 02.9**	**-1.1**
CIT	**Chita**	**64.78**	**322**	*e*P	**P**	**19 24 03.8**	**+0.6**
CIT				*e*		19 24 31.8	
CIT				*e*		19 26 34.6	
CIT				*e*		19 27 57.4	
CIT				pmax	pmax		
	comp=Z,169nm,2.1s						
ORTC	**Ortega, Tolima**	**65.00**	**116**	P	**P**	**19 24 07.2**	**+2.1**
	comp=Z,1µmcomp=Z,48nm,1.4s						
CHIC	**Chingaza**	**65.29**	**114**	P	**P**	**19 24 07.0**	**-0.4**
	comp=Z,994nmcomp=Z,35nm,1.5s						
POPC	**Popayan, Colom**	**65.30**	**118**	P	**P**	**19 24 09.8**	**+2.5**
	comp=Z,438nmcomp=Z,20nm,1.0s						
BBAC	**Balboa, Cauca**	**65.41**	**119**	P	**P**	**19 24 11.4**	**+3.5**
	comp=Z,1µmcomp=Z,35nm,1.7s						
JHJ	**Hachijo jima 2**	**65.56**	**293**	LR	LR	19 46 35.5	
	comp=Z,580nm,21.9s,baz=9.0,slow=30						
ADZR	**Andozero**	**65.69**	**6**	*e*P	**P**	**19 24 12.8**	**+4.0**
ADZR				S	**S**	**19 33 00.1**	**+5.9**
ADZR				pmax	pmax		
	comp=Z,37nm,1.6s						
ADZR				MLR	MLR		
	comp=Z,4µm,17.0s						
EKA	**Eskdalemuir Ar**	**65.70**	**30**	P	**P**	**19 24 08.0**	**-1.1**
	comp=Z,1.2nm,0.6s,baz=305,slow=4.9,SNR=3.5						
EKA				LR	LR	19 52 27.7	
	comp=Z,3µm,19.4s,baz=325,slow=36						
	comp=Z,1.2nm,0.6s						
EKA	**Eskdalemuir Ar**	**65.70**	**30**	P	**P**	**19 24 08.0**	**-1.1**
CN2	**Changchun**	**65.70**	**310**	*e*P	**P**	**19 24 08.5**	**-0.8**
CN2				*e*S	**S**	**19 32 54.0**	**-1.1**
CN2				SS	**SS**	**19 37 07.1**	**-1.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CN2				pmax	pmax		
	comp=Z,500nm,5.5s						
CN2				LR	LR		
	comp=Z,1µm,18.0s						
CN2				LR	LR		
	comp=Z,2µm,18.0s						
CN2				LR	LR		
	comp=Z,2µm,21.1s						
HFS	**Hagfors**	**66.00**	**19**	P	**P**	**19 24 11.2**	**+0.3**
	comp=Z,6.5nm,1.0s,baz=350,slow=7.5,SNR=9.9						
HFS				LR	LR	19 53 23.9	
	comp=Z,6µm,19.6s,baz=338,slow=36						
	comp=Z,6.5nm,1.0s						
URMC	**La Uribe, Meta**	**66.03**	**116**	P	**P**	**19 24 11.4**	**-0.4**
	comp=Z,1µmcomp=Z,52nm,1.3s						
OTAV	**Otavalo**	**66.22**	**121**	P	**P**	**19 24 14.5**	**+1.1**
OTAV	**Otavalo**	**66.22**	**121**	P	**P**	**19 24 14.5**	**+1.1**
OTAV				pmax	pmax		
	comp=Z,90nm,1.4s						
OTAV	**Otavalo**	**66.22**	**121**	*e*P	**P**	**19 24 13.0**	**-0.5**
OTAV	**Otavalo**	**66.22**	**121**	P	**P**	**19 24 16.5**	**+3.1**
	comp=Z,1µmcomp=Z,51nm,1.9s						
GARC	**Garzon, Huila**	**66.26**	**118**	P	**P**	**19 24 16.0**	**+2.5**
	comp=Z,879nmcomp=Z,42nm,1.4s						
FLOC	**Florencia**	**66.66**	**118**	P	**P**	**19 24 18.7**	**+2.9**
	comp=Z,1µmcomp=Z,104nm,1.4s						
FIA1	**FINESS Array S**	**66.91**	**12**	P	**P**	**19 24 14.4**	**-2.2**
FINES	**FINESS Array B**	**66.91**	**12**	P	**P**	**19 24 17.3**	**+0.7**
	comp=Z,9.0nm,1.0s,baz=2.9,slow=7.6,SNR=14						
FINES				LR	LR	19 54 41.7	
	comp=Z,4µm,18.9s,baz=330,slow=37						
	comp=Z,9.0nm,1.0s						
FINES	**FINESS Array B**	**66.91**	**12**	P	**P**	**19 24 15.3**	**-1.3**
FINES	**FINESS Array B**	**66.91**	**12**	*i* P	**P**	**19 24 18.2**	**+1.6**
FINES				pmax	pmax		
	comp=Z,13nm,1.1s						
IRK	**Irkutsk**	**68.02**	**328**	*e*P	**P**	**19 24 21.2**	**-2.7**
IRK				pmax	pmax		
	comp=Z,204nm,0.2s						
SNY	**Shenyang**	**68.09**	**309**	⇑P	**P**	**19 24 25.8**	**+1.4**
SNY				S	**S**	**19 33 16.4**	**-7.5**
SNY				pmax	pmax		
	comp=Z,27nm,1.3s						
SNY				pmax	pmax		
	comp=Z,240nm,5.5s						
SNY				LR	LR		
	comp=Z,900nm,14.7s						
SNY				LR	LR		
	comp=Z,1µm,15.6s						
SNY				LR	LR		
	comp=Z,1µm,24.2s						
PTLC	**Puerto Leguiza**	**68.30**	**118**	P	**P**	**19 24 30.6**	**+4.5**
	comp=Z,2µmcomp=Z,51nm,1.2s						
JCJ	**Chichijima**	**68.43**	**287**	LR	LR	19 47 45.3	
	comp=Z,1µm,21.9s,baz=70,slow=30						
TLY	**Talaya**	**68.70**	**328**	P	**P**	**19 24 27.1**	**-1.1**
TLY	**Talaya**	**68.70**	**328**	*ce*P	**P**	**19 24 31.1**	**+2.9**
TLY				pmax	pmax		
	comp=Z,80nm,1.7s						
KLMR	**Klimovskoe**	**68.83**	**6**	*e*P	**P**	**19 24 28.8**	**+0.1**
KLMR				S	**S**	**19 33 30.9**	**-1.2**
KLMR				pmax	pmax		
	comp=Z,69nm,1.3s						
KLMR				MLR	MLR		
	comp=Z,2µm,18.0s						
KSRS	**Korea Array**	**69.11**	**304**	P	**P**	**19 24 31.2**	**+0.3**
	comp=Z,4.3nm,1.0s,baz=64,slow=5.5,SNR=8.1						
KSRS				LR	LR	19 52 04.0	
	comp=Z,513nm,21.9s,baz=65,slow=34						
	comp=Z,4.3nm,1.0s						
KSAR	**Wonju Array Be**	**69.14**	**304**	P	**P**	**19 24 29.9**	**-1.2**
KSAR	**Wonju Array Be**	**69.14**	**304**	P	**P**	**19 24 29.9**	**-1.2**
MCRA	**Macar, Loja**	**69.28**	**125**	P	**P**	**19 24 33.9**	**+1.7**
MOY	**Mondy**	**69.61**	**329**	*e*P	**P**	**19 24 35.4**	**+1.5**
MOY				pmax	pmax		
	comp=Z,120nm,2.2s						
PPT2	**Papeete2**	**69.84**	**200**	*e*P	**P**	**19 24 37.1**	**+1.6**
	comp=Z,75nm,28.2s						
PPT2				*e*S	**S**	**19 33 42.7**	**-2.3**
	comp=Z,448nm,27.8s						
PPT2				*e*SS	**SS**	**19 38 07.2**	**-7.1**
	comp=Z,657nm,29.2s						
PPT2				*e*LQ	LQ	19 42 22.3	
	comp=Z,3µm,26.5s						
PPT2				*e*LR	LR	19 45 41.8	
	comp=Z,4µm,26.0s						
PPT2				*e*LR	LR	19 45 50.5	
	comp=Z,2µm,23.8s						
VSU	**Vasula**	**69.87**	**13**	*ce*P	**P**	**19 24 36.6**	**+1.4**
VSU				pmax	pmax		
	comp=Z,36nm,1.7s						
ZAK	**Zakamensk**	**69.92**	**327**	*e*P	**P**	**19 24 35.9**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,34nm,2.0s						
XLT	**XiLinHaoTe**	**70.05**	**315**	*e*P	**P**	**19 24 38.6**	**+1.9**
XLT				S	**S**	**19 33 50.8**	**+3.6**
XLT				pmax	pmax		
	comp=Z,18nm,1.7s						
XLT				LR	LR		
	comp=Z,2µm,16.1s						
XLT				LR	LR		
	comp=Z,670nm,21.0s						
ULN	**Ulaanbaatar**	**70.63**	**323**	P	**P**	**19 24 39.4**	**-0.9**
ULN				IAmb	IAmb	19 24 46.6	
	comp=Z,33nm,1.4s						
ULN	**Ulaanbaatar**	**70.63**	**323**	P	**P**	**19 24 41.6**	**+1.3**
	comp=Z,2µmcomp=Z,72nm,2.0s						
ULN	**Ulaanbaatar**	**70.63**	**323**	P	**P**	**19 24 39.9**	**-0.4**
ULN				pmax	pmax		
	comp=Z,29nm,1.5s						
JNU	**Nakatsue**	**70.70**	**299**	LR	LR	19 51 54.1	
	comp=Z,1µm,21.8s,baz=62,slow=33						
SONM	**Songino Array**	**70.90**	**324**	P	**P**	**19 24 42.6**	**+0.7**
	comp=Z,4.5nm,0.9s,baz=50,slow=4.8,SNR=23						
SONM				LR	LR	19 57 03.0	
	comp=Z,3µm,20.0s,baz=28,slow=37						
	comp=Z,4.5nm,0.9s						
SONM	**Songino Array**	**70.90**	**324**	P	**P**	**19 24 41.0**	**-1.0**
DL2	**Dalian**	**71.27**	**309**	P	P	19 24 36.4	-7.7
DL2				S	S	19 33 51.0	-10
DL2				SKS	**S**	**19 33 58.3**	**-3.1**
DL2				pmax	pmax		
	comp=Z,61nm,1.6s						
DL2				pmax	pmax		
	comp=Z,400nm,4.8s						
DL2				LR	LR		
	comp=N,2µm,17.5s						
DL2				LR	LR		
	comp=E,1µm,16.7s						
DL2				LR	LR		
	comp=Z,2µm,26.5s						
KIRV	**Kirov**	**71.44**	**0**	*ce*P	**P**	**19 24 45.7**	**+1.0**
ZAA0	**Zalesovo Array**	**72.09**	**339**	P	**P**	**19 24 48.0**	**-0.8**
ZALV	**Zalesovo Beam**	**72.09**	**339**	P	**P**	**19 24 48.5**	**-0.3**
	comp=Z,2.4nm,0.8s,baz=32,slow=5.2,SNR=14						
ZALV				LR	LR	19 58 41.0	
	comp=Z,3µm,19.9s,baz=20,slow=38						
	comp=Z,2.4nm,0.8s						
ZALV	**Zalesovo Beam**	**72.09**	**339**	P	**P**	**19 24 47.3**	**-1.5**
ZALV	**Zalesovo Beam**	**72.09**	**339**	*i* P	**P**	**19 24 49.2**	**+0.4**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ATAH	**Atahualpa**	**72.43**	**126**	LR	LR	19 57 45.6	
	comp=Z,1µm,20.1s,baz=343,slow=37						
BSTI	**Sart Tilman**	**72.50**	**28**	*d*P	**P**	**19 24 49.9**	**-1.4**
BMRD	**Maredsous**	**72.50**	**29**	*d*P	**P**	**19 24 53.1**	**+1.8**
BGES	**Gesves**	**72.53**	**28**	*d*P	**P**	**19 24 53.4**	**+1.9**
	comp=Z,13nm,1.3s						
MEM	**Membach**	**72.61**	**28**	*d*P	**P**	**19 24 55.5**	**+3.5**
BTNL	**Ternell**	**72.67**	**28**	*d*P	**P**	**19 24 55.2**	**+2.9**
	comp=Z,14nm,1.2s						
RCHB	**Rochefort**	**72.77**	**28**	*d*P	**P**	**19 24 54.9**	**+1.9**
	comp=Z,15nm,1.3s						
SVE	**Sverdlovsk**	**72.85**	**354**	*e*P	**P**	**19 24 54.0**	**+0.7**
SVE				*e*S	**S**	**19 34 22.2**	**+3.2**
SVE				pmax	pmax		
	comp=Z,47nm,1.6s						
BJI	**Beijing**	**73.04**	**313**	P	**P**	**19 24 54.9**	**+0.2**
BJI				S	**SKiKP**	**19 34 25.8**	**-1.2**
BJI				SS	**SS**	**19 39 08.8**	**+7.4**
BJI				LR	LR		
	comp=Z,640nm,21.7s						
BJI				LR	LR		
	comp=Z,440nm,19.5s						
BJI				LR	LR		
	comp=Z,640nm,22.3s						
RKT	**Rikitea**	**73.27**	**185**	*e*S	**S**	**19 34 25.4**	**+1.1**
	comp=Z,2µm,29.0s						
RKT	**Rikitea**	**73.27**	**185**	*e*LR	LR	19 47 25.0	
	comp=Z,23µm,27.8s						
ARTI	**Arti**	**73.42**	**355**	LR	LR	19 58 52.4	
	comp=Z,2µm,21.3s,baz=11,slow=37						
ARTI	**Arti**	**73.42**	**355**	P	**P**	**19 24 55.0**	**-1.7**
ARTI				IAmb	IAmb	19 25 31.7	
	comp=Z,25nm,1.1s						
ARTI	**Arti**	**73.42**	**355**	*d i*P	**P**	**19 24 57.7**	**+1.0**
ARTI						19 27 42.1	
ARTI				S	**SKiKP**	**19 34 27.1**	**0.0**
ARTI				SS	**SS**	**19 39 05.9**	**-0.5**
ARTI				pmax	pmax		
	comp=Z,22nm,1.2s						
WLF	**Walferdange**	**73.49**	**28**	*d*P	**P**	**19 24 58.8**	**+1.6**
SUW	**Suwalki**	**73.57**	**16**	*e*P	**P**	**19 24 58.6**	**+1.0**
MOS	**Moscow**	**73.78**	**7**	*e*P	**P**	**19 24 59.6**	**+0.9**
MOS				*e*S	**S**	**19 34 31.9**	**+2.4**
MOS				pmax	pmax		
	comp=Z,34nm,0.7s						
MOS				MLR	MLR		
	comp=N,4µm,18.0s						
MOS				MLR	MLR		
	comp=Z,4µm,18.0s						
MNK	**Minsk**	**73.87**	**13**	*i* P	**P**	**19 25 00.7**	**+1.4**
MNK				*i*		19 27 46.1	
MNK				*i* PPP	PPP	19 29 26.7	
MNK				*i* S	**S**	**19 34 33.1**	**+2.5**
MNK				*i* SS	**SS**	**19 39 18.1**	**+4.9**
MNK				pmax	pmax		
	comp=Z,27nm,1.0s						
MNK				pmax	pmax		
	comp=N,15nm,1.3s						
MNK				pmax	pmax		
	comp=E,13nm,1.2s						
MNK				MLR	MLR		
	comp=N,2µm,17.0s						
MNK				MLR	MLR		
	comp=Z,6µm,19.0s						
MNK				MLR	MLR		
	comp=E,4µm,19.0s						
CLL	**Collm**	**73.91**	**23**	*i* P	**P**	**19 25 04.2**	**+4.6**
CLL				pmax	pmax		
	comp=Z,42nm,1.8s						
CLL				MLR	MLR		
	comp=Z,4µm,18.1s						
CLL	**Collm**	**73.91**	**23**	P	**P**	**19 25 01.5**	**+1.9**
	comp=Z,10nm,1.2s						
OBN	**Obninsk**	**74.30**	**8**	LR	LR	19 59 53.0	
	comp=Z,4µm,18.5s,baz=302,slow=38						
OBN	**Obninsk**	**74.30**	**8**	P	**P**	**19 25 00.5**	**-1.3**
OBN	**Obninsk**	**74.30**	**8**	*d i*P	**P**	**19 25 03.4**	**+1.6**
OBN				*i* *SP	**pwP**	**19 25 09.3**	**+2.1**
OBN				*i*		19 25 17.7	
OBN				*i* S	**S**	**19 34 39.4**	**+4.0**
OBN				*i*		19 35 16.1	
OBN				*i* SS	**SS**	**19 39 19.6**	**-0.1**
OBN				SSS	SSS	19 42 36.0	
OBN				pmax	pmax		
	comp=Z,71nm,1.7s						
OBN				MLR	MLR		
	comp=Z,4µm,18.0s						
OBN	**Obninsk**	**74.30**	**8**	P	**P**	**19 25 01.7**	**-0.1**
	comp=Z,37nm,1.3s						
HHC	**Hu-ho-hao-te**	**74.50**	**316**	*e*P	**P**	**19 25 03.8**	**+0.4**
HHC				S	**S**	**19 34 35.3**	**-3.0**
HHC				SS	**SS**	**19 39 22.3**	**-1.5**
HHC				pmax	pmax		
	comp=Z,31nm,1.1s						
HHC				pmax	pmax		
	comp=Z,270nm,5.0s						
HHC				LR	LR		
	comp=Z,2µm,19.6s						
HHC				LR	LR		
	comp=Z,1µm,18.7s						
HHC				LR	LR		
	comp=Z,2µm,17.9s						
HSKC	**Hora Svate Kat**	**74.66**	**23**	AMS	AMS	19 59 00.0	
	comp=Z,5µm,18.2s						
PGAV	**Gavieira, Arco**	**74.84**	**41**	*e*LR	LR	19 49 57.8	

PGAV				i IAMs_20	IAMs_20	20 05 11.7	
	comp=Z,3µm,18.0s						
PVCC	Panska Ves	75.02	23	AMS	AMS	20 01 40.0	
	comp=Z,3µm,17.4s						
BOAV	Boa Vista	75.03	105	P	P	19 25 06.1	-0.6
BOAV				IAmb	IAmb	19 25 09.2	
	comp=Z,42nm,1.3s						
BOAV	Boa Vista	75.03	105	eP	P	19 25 06.8	+0.2
ECH	Echery	75.08	28	IAmb	IAmb	19 25 14.0	
	comp=Z,88nm,1.8s						
KSP	Ksiaz	75.14	21	eP	P	19 25 09.6	+2.8
KSP	Ksiaz	75.14	21	P	P	19 25 08.0	+1.2
	comp=Z,16nm,1.4s						
CHVC	Chvalec	75.32	22	AMS	AMS	19 59 30.0	
	comp=Z,3µm,19.2s						
BTO	Baotou	75.37	317	eP	P	19 25 09.3	+0.9
BTO				S	S	19 34 48.9	+0.8
BTO				pmax	pmax		
	comp=Z,32nm,1.0s						
BTO				pmax	pmax		
	comp=Z,500nm,4.0s						
BTO				LR	LR		
	comp=Z,3µm,16.3s						
BTO				LR	LR		
	comp=Z,4µm,15.5s						
BTO				LR	LR		
	comp=Z,3µm,14.5s						
UPC	Upice	75.39	22	AMS	AMS	19 59 20.0	
	comp=Z,4µm,20.8s						
OSTC	Ostas	75.39	22	AMS	AMS	19 59 40.0	
	comp=Z,3µm,18.8s						
TBI	Tubuai	75.40	199	eS	S	19 34 45.8	-2.3
	comp=Z,3µm,36.0s						
TBI				eSS	SS	19 39 35.9	-3.2
	comp=Z,3µm,35.2s						
TBI				eLQ	LQ	19 45 15.0	
	comp=Z,8µm,28.0s						
TBI				eLR	LR	19 48 24.7	
	comp=Z,16µm,29.5s						
TBI				eLR	LR	19 48 28.0	
	comp=Z,3µm,28.0s						
PRA	Prague	75.41	23	AMS	AMS	20 00 30.0	
	comp=Z,5µm,14.6s						
PRU	Pruhonice	75.51	23	AMS	AMS	20 00 50.0	
	comp=Z,5µm,17.0s						
BORK	Borovoye	75.60	348	P	P	19 25 07.0	-2.3
BORK				IAmb	IAmb	19 25 22.5	
	comp=Z,27nm,1.2s						
BORK	Borovoye	75.60	348	ceP	P	19 25 10.8	+1.4
BORK				pmax	pmax		
	comp=Z,28nm,1.7s						
DPC	Dobruska-Polom	75.60	22	eP	P	19 25 13.2	+3.7
DPC	Dobruska-Polom	75.60	22	eP	P	19 25 13.2	+3.7
DPC				eS	S	19 34 56.2	+6.0
DPC				AMS	AMS	19 59 40.0	
	comp=Z,3µm,16.1s						
DPC	Dobruska-Polom	75.60	22	P	P	19 25 11.0	+1.5
	comp=Z,13nm,1.4s						
BVAR	Borovoye Array	75.61	348	P	P	19 25 09.8	+0.3
	comp=Z,3.3nm,1.1s,baz=335,slow=5.4,SNR=8.4						
BVAR				LR	LR	20 01 45.8	
	comp=Z,2µm,21.1s,baz=10,slow=38						
	comp=Z,3.3nm,1.1s						
TIA	Tai'an	75.61	310	P	P	19 25 10.8	+1.0
TIA				pP	sP	19 25 14.1	+0.8
TIA				S	S	19 34 55.4	+4.7
TIA				pmax	pmax		
	comp=Z,45nm,1.4s						
TIA				LR	LR		
	comp=Z,940nm,19.6s						
TIA				LR	LR		
	comp=Z,980nm,22.0s						
TIA				LR	LR		
	comp=Z,2µm,23.7s						
HNS	HongShan	75.83	312	⇑P	P	19 25 11.9	+0.9
HNS				S	S	19 34 57.6	+4.6
HNS				pmax	pmax		
	comp=Z,35nm,1.4s						
HNS				LR	LR		
	comp=Z,1µm,19.8s						
HNS				LR	LR		
	comp=Z,2µm,20.0s						
HNS				LR	LR		
	comp=Z,3µm,16.3s						
ZVC	Zvikov	75.93	23	AMS	AMS	20 01 10.0	
	comp=Z,4µm,15.2s						
KRLC	Kraliky	75.97	21	AMS	AMS	20 00 40.0	
	comp=Z,5µm,16.9s						
MVO	Moncorvo	76.03	41	eLR	LR	19 50 39.8	
MVO				i IAMs_20	IAMs_20	20 04 10.2	
	comp=Z,2µm,18.0s						
KHC	Kasperske Hory	76.05	24	ceP	P	19 25 10.9	-1.2
KHC				pmax	pmax		
	comp=Z,26nm,1.7s						
KHC	Kasperske Hory	76.05	24	eP	P	19 25 16.2	+4.1
KHC				eS	S	19 34 54.3	-0.9
KHC				AMS	AMS	20 01 20.0	
	comp=Z,4µm,15.9s						
KHC	Kasperske Hory	76.05	24	P	P	19 25 13.2	+1.1
	comp=Z,10nm,1.6s						
PCAS	Casmilo, Conde	76.32	42	eP	P	19 25 15.7	+1.9
STEB	Steborice	76.33	21	eP	P	19 25 24.0	+10
GERES	GERESS Array B	76.35	24	P	P	19 25 13.7	-0.2
	comp=Z,0.5nm,0.7s,baz=347,slow=4.1,SNR=7.2						
GERES				LR	LR	20 00 50.9	
	comp=Z,3µm,18.2s,baz=340,slow=37						
	comp=Z,0.5nm,0.7s						
MORC	Moravsky Berou	76.42	21	eP	P	19 25 15.7	+1.5
KURK	Kurchatov	76.44	342	P	P	19 25 17.3	+3.1
KURK				IAmb	IAmb	19 25 22.3	
	comp=Z,49nm,1.6s						
KURK	Kurchatov	76.44	342	ceP	P	19 25 13.0	-1.2
KURK				pmax	pmax		
	comp=Z,50nm,2.5s						
MTE	Manteigas	76.45	42	eLR	LR	19 50 30.9	
MTE				i IAMs_20	IAMs_20	20 04 16.6	
	comp=Z,2µm,20.0s						
OKC	Ostrava-Krasne	76.51	21	AMS	AMS	20 01 00.0	
	comp=Z,4µm,17.8s						
OJC	Ojcow	76.51	20	eP	P	19 25 12.6	-2.0
OJC	Ojcow	76.51	20	P	P	19 25 16.3	+1.7
	comp=Z,16nm,1.2s						
CKRC	Cesky Krumlov	76.53	23	AMS	AMS	20 02 10.0	
	comp=Z,3µm,15.4s						
RNPP9	Sopachiv	76.54	15	P	P	19 25 15.1	+0.3
KURBB	Kurchatov Arra	76.55	342	P	P	19 25 14.5	-0.4
	comp=Z,8.9nm,1.2s,baz=14,slow=5.4,SNR=25						
KURBB				LR	LR	20 02 21.8	
	comp=Z,2µm,19.4s,baz=15,slow=38						
	comp=Z,8.9nm,1.2s						
RNPP8	Varash	76.61	15	P	P	19 25 16.3	+1.2
VRAC	Vranov	76.64	22	LR	LR	20 00 31.7	
	comp=Z,3µm,18.4s,baz=328,slow=37						
VRAC	Vranov	76.64	22	eP	P	19 25 17.2	+1.8
RNPP5	Staryi Chortor	76.72	15	P	P	19 25 17.3	+1.5
DAVA	Damuels	76.72	27	i pP	pP	19 25 19.0	+0.3
	comp=Z,46nm,1.7s						
RETA	Reutte	76.79	26	ePcP	PcP	19 25 23.9	-3.8
	comp=Z,8.5nm,1.3s						
KRUC	Moravsky	76.82	22	eP	P	19 25 17.7	+1.3
LPSR	Galich'ya Gora	76.99	7	eP	P	19 25 17.5	+0.2
LPSR				pmax	pmax		
	comp=Z,20nm,1.1s						
LPSR				MLR	MLR		
	comp=Z,4µm,17.0s						
WATA	Walderalm	77.16	26	i pP	pP	19 25 23.0	+1.9
	comp=Z,28nm,1.5s						
SQTA	Sankt Quirin	77.16	26	epP	pP	19 25 20.4	-0.7
	comp=Z,29nm,1.6s						
DAVOX	Davos/Dischmat	77.18	27	LR	LR	19 59 56.3	
	comp=Z,4µm,19.7s,baz=310,slow=36						
FETA	Feichten	77.21	26	i pP	pP	19 25 23.7	+2.3
	comp=Z,19nm,1.5s						
WTTA	Wattenberg	77.24	26	epP	pP	19 25 21.9	+0.2
	comp=Z,30nm,1.5s						
MI28	Mi28,Pidlybu	77.30	14	P	P	19 25 19.3	+0.3
TUE	Stuetta	77.30	28	P	P	19 25 20.7	+1.3
	comp=Z,6µmcomp=Z,85nm,2.2s						
JAVC	Velka Javorina	77.31	21	eP	P	19 25 22.7	+3.4
PMRV	Marv??o	77.32	42	eLR	LR	19 51 23.2	
PMRV				i IAMs_20	IAMs_20	20 07 08.0	
	comp=Z,2µm,18.0s						
NIE	Niedzica	77.37	19	eP	P	19 25 23.0	+3.4
LESA	Schwarzleotal	77.38	25	epP	pP	19 25 21.6	-0.7
	comp=Z,15nm,1.7s						
BIOA	Bad Ischl, Aus	77.39	24	ePcP	PcP	19 25 25.7	-4.5
	comp=Z,8.9nm,1.1s						
MOA	Molln	77.41	24	ePcP	PcP	19 25 25.8	-4.4
	comp=Z,10nm,1.6s						
LANS	Liptovska Anna	77.45	20	eP	P	19 25 24.4	+4.4
LANS	Liptovska Anna	77.45	20	eP	P	19 25 24.4	+4.4
PARRA	Arraiolos	77.55	43	eP	P	19 25 21.8	+1.1
PARRA				i IAmb	IAmb	19 25 26.6	
	comp=Z,57nm,1.9s						
SSE	Sheshan	77.55	304	P	P	19 25 21.6	+0.8
SSE				S	S	19 35 08.3	-3.7
SSE				pmax	pmax		
	comp=Z,29nm,1.2s						
SSE				LR	LR		
	comp=Z,260nm,26.1s						
SSE				LR	LR		
	comp=Z,250nm,19.9s						
SSE				LR	LR		
	comp=Z,380nm,25.4s						
STHS	Stebnicka Huta	77.57	19	eP	P	19 25 21.8	+1.1
STHS	Stebnicka Huta	77.57	19	eP	P	19 25 21.8	+1.1
BELG	Belogornoye	77.62	2	LR	LR	20 04 35.9	
	comp=Z,2µm,19.5s,baz=358,slow=40						
BELG	Belogornoye	77.62	2	i P	P	19 25 20.5	-0.3
BELG				pmax	pmax		
	comp=Z,11nm,1.1s						
AK21	Malin Array Si	77.66	14	P	P	19 25 21.8	+0.7
MODS	Modra-Piesok	77.67	22	eP	P	19 25 26.2	+5.0
MODS	Modra-Piesok	77.67	22	eP	P	19 25 26.2	+5.0
AK22	Malin Array Si	77.68	14	P	P	19 25 21.6	+0.4
AK23	Malin Array Si	77.69	14	P	P	19 25 22.1	+0.9
AK20	Malin Array Si	77.69	14	P	P	19 25 20.9	-0.3
AK19	Malin Array Si	77.71	14	P	P	19 25 21.7	+0.4
AK18	Malin Array Si	77.72	14	P	P	19 25 21.7	+0.3
AK04	Malin Array Si	77.73	13	P	P	19 25 21.8	+0.3
CONA	Conrad Observa	77.75	23	i P	P	19 25 21.7	0.0
	comp=Z,14nm,1.8s						
AK17	Malin Array Si	77.75	14	P	P	19 25 22.2	+0.6
AKASG	Malin Array Be	77.76	13	P	P	19 25 22.1	+0.5
	comp=Z,9.9nm,1.1s,baz=346,slow=5.1,SNR=23						
AKASG				LR	LR	20 00 21.5	
	comp=Z,5µm,20.3s,baz=343,slow=36						
	comp=Z,9.9nm,1.1s						
AKASG	Malin Array Be	77.76	13	P	P	19 25 20.7	-0.9
AKASG				IAmb	IAmb	19 25 27.8	
	comp=Z,45nm,1.9s						
AKASG	Malin Array Be	77.76	13	i P	P	19 25 23.2	+1.6
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AKBB	Malin Array Si	77.76	13	IAmb	IAmb	19 25 42.8	
	comp=Z,30nm,1.1s						
AKBB	Malin Array Si	77.76	13	ceP	P	19 25 20.5	-1.1
AKBB				pmax	pmax		
	comp=Z,45nm,1.7s						
AKBB	Malin Array Si	77.76	13	P	P	19 25 22.3	+0.7
KIEV	Kiev	77.77	13	P	P	19 25 20.2	-1.4
KIEV				IAmb	IAmb	19 25 42.8	
	comp=Z,30nm,1.2s						
KIEV	Kiev	77.77	13	P	P	19 25 20.2	-1.4
KIEV				pmax	pmax		
	comp=Z,30nm,1.2s						
KIEV	Kiev	77.77	13	P	P	19 25 22.1	+0.5
	comp=Z,85nm,1.2s						
AK01	Malin Array Si	77.77	13	P	P	19 25 22.4	+0.7
AK16	Malin Array Si	77.78	14	P	P	19 25 21.5	-0.2
AK11	Malin Array Si	77.78	14	P	P	19 25 21.4	-0.3
EVO	Evora	77.79	43	eP	P	19 25 23.6	+1.6
EVO				i IAmb	IAmb	19 25 58.8	
	comp=Z,64nm,1.9s						
AK02	Malin Array Si	77.80	13	P	P	19 25 22.0	+0.2
AK12	Malin Array Si	77.81	14	P	P	19 25 22.1	+0.2
AK14	Malin Array Si	77.81	14	P	P	19 25 21.7	-0.2
AK13	Malin Array Si	77.82	14	P	P	19 25 22.2	+0.2
AK08	Malin Array Si	77.83	13	P	P	19 25 21.6	-0.4
AK05	Malin Array Si	77.84	13	P	P	19 25 21.7	-0.3
AK09	Malin Array Si	77.86	13	P	P	19 25 22.2	+0.1
AK10	Malin Array Si	77.87	13	P	P	19 25 22.6	+0.4
AK06	Malin Array Si	77.87	14	P	P	19 25 22.3	+0.1
KBA	Koelnbreinsper	77.88	25	ePcP	PcP	19 25 29.7	-2.8
	comp=Z,21nm,0.8s						
MDP	Montagnes des	77.90	97	LR	LR	19 58 36.9	
	comp=Z,1µm,21.8s,baz=335,slow=35						
AK07	Malin Array Si	77.91	14	P	P	19 25 22.6	+0.2
VORR	Voronezh	77.94	7	eP	P	19 25 22.1	-0.5
VORR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VORR				MLR	MLR		
	comp=Z,340nm,7.0s						
ABTA	Abfaltersbach	77.96	25	epP	pP	19 25 25.8	+0.3
	comp=Z,7.9nm,1.6s						
NJ2	Nanjing	78.03	306	eP	P	19 25 24.6	+1.2
NJ2				pP	pwP	19 25 28.1	-0.7
NJ2				S	S	19 35 19.8	+2.7
NJ2				pmax	pmax		
	comp=Z,28nm,1.5s						
NJ2				LR	LR		
	comp=Z,1µm,16.7s						
NJ2				LR	LR		
	comp=Z,1µm,22.2s						
NJ2				LR	LR		
	comp=Z,700nm,20.6s						
RONA	Rosalia, Austr	78.07	23	epP	pP	19 25 26.0	-0.1
	comp=Z,9.3nm,1.4s						
PMOZ	Porto Moniz, M	78.07	53	eLR	LR	19 51 53.8	
PMOZ				i IAMs_20	IAMs_20	19 55 37.6	
	comp=Z,2µm,18.0s						
ZSN	Zaisan	78.10	337	eP	P	19 25 25.6	+1.9
	comp=Z,66nm,2.0s						
ZSN				eS	S	19 35 20.6	+3.0
ZSN	Zaisan	78.10	337	eP	P	19 25 25.5	+1.9
ZSN				eS	S	19 35 20.5	+3.0
ZSN				pmax	pmax		
	comp=Z,66nm,2.0s						
ARSA	Arzberg	78.29	23	epP	pP	19 25 27.7	+0.4
	comp=Z,13nm,1.7s						
LUBAR	Lubar, Ukraine	78.29	15	P	P	19 25 24.8	+0.2
MYKA	Terra Mystica	78.37	25	epP	pP	19 25 28.1	+0.3
	comp=Z,11nm,2.1s						
VSR	Storozhevoye	78.39	7	eP	P	19 25 23.7	-1.4
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
VSR				MLR	MLR		
	comp=Z,3µm,16.0s						
MORF	Marmelete	78.53	44	eP	P	19 25 28.5	+2.3
MORF				i IAmb	IAmb	19 25 39.1	
	comp=Z,122nm,1.8s						
PCVE	Castro Verde	78.53	44	eP	P	19 25 27.8	+1.7
PCVE				i IAmb	IAmb	19 25 31.6	
	comp=Z,60nm,1.8s						
ESDC	Sonseca Array	78.55	40	P	P	19 25 27.1	+0.8
	comp=Z,6.7nm,1.1s,baz=321,slow=5.6,SNR=18						
	comp=Z,6.7nm,1.1s						
ESDC	Sonseca Array	78.55	40	P	P	19 25 27.7	+1.4
ESDC				IAmb	IAmb	19 25 33.5	
	comp=Z,43nm,1.7s						
VRH	Novokhopyorsk	78.58	5	eP	P	19 25 24.0	-2.1
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VRH				MLR	MLR		
	comp=Z,3µm,17.0s						
VORD	Divnogorie	78.65	7	eP	P	19 25 25.1	-1.4
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VORD				MLR	MLR		
	comp=Z,1µm,12.0s						
SOKA	Soboth	78.70	24	i pP	pP	19 25 28.8	-0.8
	comp=Z,23nm,1.5s						
OBKA	Obir	78.73	24	epP	pP	19 25 29.5	-0.2
	comp=Z,12nm,1.2s						
HORU	Horodok	78.75	16	P	P	19 25 28.2	+1.0
MUKU	Mukachevo	78.79	18	P	P	19 25 28.9	+1.6
PVAQ	Vaqueiros	78.86	43	eP	P	19 25 29.1	+1.2
PVAQ				i IAmb	IAmb	19 25 34.4	
	comp=Z,70nm,1.8s						
PVAQ				eLR	LR	19 52 27.3	
PVAQ				i IAMs_20	IAMs_20	19 56 49.4	
	comp=Z,3µm,20.0s						
MPLH	Magyarpolny	78.86	22	P	P	19 25 29.6	+1.8
	comp=Z,34nm,1.6s						
MEZ	Mezhgor'ye	78.89	18	P	P	19 25 29.5	+1.5
STNU	Starunia	78.89	17	P	P	19 25 29.8	+1.9
BRIU	Brid	78.96	18	P	P	19 25 29.5	+1.2
BERU	Beregovo	78.99	18	P	P	19 25 30.3	+1.9
LYN	LuoYang	79.20	312	P	P	19 25 31.8	+1.9
LYN				pP	pwP	19 25 35.1	-0.1
LYN				sP	PcP	19 25 39.0	+0.8
LYN				S	S	19 35 34.3	+4.7
LYN				pmax	pmax		
	comp=Z,82nm,1.2s						
LYN				pmax	pmax		
	comp=Z,560nm,4.7s						
LYN				LR	LR		
	comp=Z,2µm,20.3s						
LYN				LR	LR		
	comp=Z,1µm,20.3s						
LYN				LR	LR		
	comp=Z,2µm,19.6s						
MK31	Makanchi Array	79.35	338	ceP	P	19 25 31.3	+0.8
MKAR	Makanchi Array	79.35	338	P	P	19 25 30.5	0.0
	comp=Z,1.9nm,0.8s,baz=32,slow=4.8,SNR=16						
MKAR				LR	LR	20 02 54.7	
	comp=Z,4µm,21.3s,baz=12,slow=38						
	comp=Z,1.9nm,0.8s						
MKAR	Makanchi Array	79.35	338	P	P	19 25 28.5	-2.0
MKAR	Makanchi Array	79.35	338	i P	P	19 25 30.8	+0.3
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NSLU	Nyzhne Selyshc	79.38	17	P	P	19 25 31.5	+0.9
KSV	Kosov	79.38	17	P	P	19 25 32.6	+2.0
AKTO	Aktyubinsk	79.38	355	LR	LR	20 02 40.6	
	comp=Z,2µm,21.1s,baz=20,slow=37						
KMPD	K-Podol'skiy	79.39	16	P	P	19 25 31.5	+0.9
MAKZ	Makanchi	79.41	338	P	P	19 25 30.4	-0.4
MAKZ	Makanchi	79.41	338	P	P	19 25 30.4	-0.4
MAKZ				pmax	pmax		
	comp=Z,115nm,1.7s						
MORH	Mrgy, Hungar	80.02	22	P	P	19 25 35.7	+1.6
	comp=Z,14nm,1.4s						
ABKAR	Akbulak array	80.43	354	P	P	19 25 36.0	-0.2
GTA	Gaotai	80.57	323	P	P	19 25 37.0	-0.4
GTA				pP	sP	19 25 41.8	+0.9
GTA				S	S	19 35 45.0	+0.8
GTA				pmax	pmax		
	comp=Z,12nm,1.5s						
GTA				LR	LR		
	comp=Z,3µm,23.9s						
WMQ	Urumqi	80.69	333	eP	P	19 25 41.3	+3.4
WMQ				S	S	19 35 47.5	+2.3
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,160nm,3.7s						
WMQ				LR	LR		
	comp=Z,2µm,17.1s						
WMQ				LR	LR		
	comp=Z,2µm,20.7s						
WMQ				LR	LR		
	comp=Z,2µm,23.3s						
XAN	Xi'an	81.28	314	⇑P	P	19 25 41.3	+0.1
XAN				pP	sP	19 25 45.6	+0.8
XAN				sP	PcP	19 25 48.9	+1.5
XAN				S	S	19 35 51.8	+0.1
XAN				pmax	pmax		
	comp=Z,39nm,1.5s						
XAN				LR	LR		
	comp=Z,1µm,20.6s						
XAN				LR	LR		
	comp=Z,3µm,17.9s						
XAN				LR	LR		
	comp=Z,3µm,17.6s						
WHN	Wuhan	81.53	308	P	P	19 25 43.8	+1.3
WHN				S	SKSac	19 36 00.1	-2.0
WHN				pmax	pmax		
	comp=Z,340nm,2.0s						
WHN				LR	LR		
	comp=Z,1µm,12.4s						
WHN				LR	LR		
	comp=Z,1µm,12.7s						
WHN				LR	LR		
	comp=Z,4µm,30.5s						
LZH	Lanzhou	81.80	319	eP	P	19 25 44.8	+0.8
LZH				sP	PcP	19 25 52.0	+2.2
LZH				S	S	19 35 57.8	+0.6
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,210nm,4.5s						
LZH				LR	LR		
	comp=Z,3µm,16.8s						
LZH				LR	LR		
	comp=Z,3µm,17.5s						
LZH				LR	LR		
	comp=Z,4µm,17.9s						
TDK	Taldyqorghan	81.93	340	eP	P	19 25 46.2	+1.9
	comp=Z,41nm,1.5s						
TDK				eS	SKSac	19 36 00.7	-3.8
TDK	Taldyqorghan	81.93	340	eP	P	19 25 46.2	+1.9
TDK				eS	SKSac	19 36 00.6	-3.8
TDK				pmax	pmax		
	comp=Z,41nm,1.5s						
LZDM	Lanzhou Array	81.98	319	LR	LR	20 02 35.3	
	comp=Z,2µm,19.1s,baz=20,slow=36						
MLR	Muntele Rosu	82.26	17	LR	LR	20 03 19.7	
	comp=Z,4µm,19.1s,baz=350,slow=36						
ITTB	Itaituba	83.27	105	eP	P	19 25 51.6	0.0
SHLS	Shalkode	83.44	339	eP	P	19 25 53.6	+1.2
	comp=Z,20nm,1.2s						
SHLS	Shalkode	83.44	339	eP	P	19 25 53.6	+1.2
SHLS				pmax	pmax		
	comp=Z,20nm,1.2s						
UZB	Uzynbulak	83.55	339	eP	P	19 25 54.4	+1.4
	comp=Z,34nm,1.7s						
UZB				eS	SKSac	19 36 16.3	+0.6
UZB	Uzynbulak	83.55	339	eP	P	19 25 54.4	+1.4
UZB				eS	SKSac	19 36 16.2	+0.6
UZB				pmax	pmax		
	comp=Z,34nm,1.7s						
SATY	Saty	83.78	340	eP	P	19 25 55.8	+1.7
	comp=Z,32nm,1.4s						
SATY				eS	SKSac	19 36 17.8	+0.8
SATY	Saty	83.78	340	eP	P	19 25 55.8	+1.7
SATY				eS	SKSac	19 36 17.8	+0.8
SATY				pmax	pmax		
	comp=Z,32nm,1.4s						
MDOK	Medeo	83.97	341	eP	P	19 25 57.1	+1.9
MDOK				eS	S	19 36 19.3	+0.2
MDOK	Medeo	83.97	341	eP	P	19 25 57.1	+1.9
MDOK				eS	S	19 36 19.3	+0.2
MD01	Midelt array s	83.98	44	P	P	19 25 54.6	-0.7
MD31	MD31	83.98	44	P	P	19 25 57.4	+2.1
MD31				IAmb	IAmb	19 26 20.3	
	comp=Z,34nm,1.6s						
SIM	Simferopol'	84.07	11	eP	P	19 25 57.5	+2.1
SIM				eS	SKSac	19 36 13.0	-5.6
SIM				ePS	PnS	19 37 32.0	+20
SIM				eSS	SS	19 41 42.0	-4.5
SIM				pmax	pmax		
	comp=Z,19nm,1.0s						
SIM				pmax	pmax		
	comp=Z,100nm,6.8s						
SIM				MLR	MLR		
	comp=Z,4µm,19.0s						
TNSS	Tian-Shan	84.11	341	eP	P	19 25 57.5	+1.3
TNSS	Tian-Shan	84.11	341	eP	P	19 25 57.5	+1.3
CNSH	ChangSha	84.17	308	P	P	19 25 58.0	+1.8
CNSH				S	S	19 36 22.3	+1.2
CNSH				SS	SS	19 41 53.3	+4.3
CNSH				pmax	pmax		
	comp=Z,24nm,2.3s						
CNSH				LR	LR		
	comp=Z,1µm,10.9s						
CNSH				LR	LR		
	comp=Z,1µm,18.2s						
CNSH				LR	LR		
	comp=Z,960nm,19.3s						
GOF	Gofitskoye	84.78	5	ceP	P	19 26 01.8	+2.8
AAK	Ala-Archa	85.00	342	LR	LR	20 07 25.3	
	comp=Z,2µm,20.1s,baz=29,slow=38						
AAK	Ala-Archa	85.00	342	ceP	P	19 26 01.3	+0.9
AAK				pmax	pmax		
	comp=Z,23nm,1.7s						
KKAR	Karatay Array	85.26	345	P	P	19 26 01.0	-0.5
KKAR	Karatay Array	85.26	345	P	P	19 26 01.0	-0.5
GOMU	GeErMu	85.27	325	P	P	19 25 59.9	-2.2
GOMU				S	S	19 36 31.1	-1.5
GOMU				LR	LR		
	comp=Z,1µm,17.8s						
GOMU				LR	LR		
	comp=Z,2µm,17.7s						
GOMU				LR	LR		
	comp=Z,2µm,17.3s						
DZA	Taraz	85.33	345	eP	P	19 26 03.6	+1.7

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DZA   Taraz              85.33 345 eP      P        19 26 03.6 +1.7
BRLS  Borolday           85.44 346 eP      P        19 26 05.5 +3.0
BRLS  Borolday           85.44 346 eP      P        19 26 05.4 +3.0
LPAZ  La Paz             85.53 122  P      P        19 26 04.2 +0.4
      comp=Z,9.4nm,1.1s,baz=325,slow=4.6,SNR=19
      comp=Z,9.4nm,1.1s
LPAZ  La Paz             85.53 122  IAmb   IAmb     19 26 12.9
      comp=Z,25nm,1.3s
LPAZ  La Paz             85.53 122 eP      P        19 26 03.1  -0.7
NPGB  Novo Progresso     85.59 106 eP      P        19 26 02.8  -0.6
KIV   Kislovodsk         85.86   5 eP      P        19 26 04.4  -0.2
KIV                                e                19 36 29.3
KIV                                eSS     SS       19 42 17.1 +4.1
KIV                                 pmax   pmax
      comp=Z,11nm,1.1s
KIV                                 MLR    MLR
      comp=Z,2µm,20.0s
KIV   Kislovodsk         85.86   5  P      P        19 26 06.2 +1.6
      comp=Z,15nm,1.2s
KVAR  Kislovodsk Arr     85.86   5  LR     LR       20 07 54.9
      comp=Z,2µm,19.3s,baz=257,slow=38
SOC   Sochi              86.02   8 eP      P        19 26 07.3 +2.1
SOC                                e                19 29 25.1
SOC                                eS      S        19 36 33.7  -5.2
SOC                                eSS     SS       19 42 19.6 +4.6
SOC                                 pmax   pmax
      comp=Z,23nm,0.9s
SOC                                 MLR    MLR
      comp=Z,3µm,18.0s
SHA1  Shidzhatmaz        86.08   5ceP      P        19 26 06.2 +0.4
KBZ   Khabaz             86.10   5  P      P        19 26 06.6 +1.0
      comp=Z,7.4nm,1.0s,baz=344,slow=7.4,SNR=7.8
KBZ                                 LR     LR       20 08 08.8
      comp=Z,3µm,18.8s,baz=348,slow=38
      comp=Z,7.4nm,1.0s
KBZ   Khabaz             86.10   5ceP      P        19 26 07.5 +1.9
KBZ                                 pmax   pmax
      comp=Z,26nm,2.0s
CHM   Chimkent           86.17 346 eP      P        19 26 07.7 +1.7
CHM   Chimkent           86.17 346 eP      P        19 26 07.7 +1.7
CD2   Chengdu            86.25 316 eP      P        19 26 05.5  -1.2
CD2                                 S      S        19 36 39.4  -2.4
CD2                                 pmax   pmax
      comp=Z,320nm,5.0s
CD2                                 LR     LR
      comp=Z,2µm,17.0s
CD2                                 LR     LR
      comp=Z,3µm,19.6s
CD2                                 LR     LR
      comp=Z,2µm,17.7s
PB12  IPOC Station P     86.27 125  P      P        19 26 07.1 +0.3
PB12                                IAmb   IAmb     19 26 13.6
      comp=Z,59nm,1.4s
KEST  Kesra              87.02  32  P      P        19 26 11.9 +1.5
      comp=Z,12nm,1.0s,baz=322,slow=12,SNR=4.4
      comp=Z,12nm,1.0s
MAK   Makhachkala        87.05   2 eP      P        19 26 03.0  -7.3
MAK                                ePPP    PPP      19 31 26.7
MAK                                eSS     SS       19 42 30.4 +0.2
MAK                                eSSS    SSS      19 46 04.8
MAK                                 pmax   pmax
      comp=Z,421nm,1.3s
VILB  Vilhena            87.33 114 eP      P        19 26 11.4  -0.5
PB11  IPOC Station P     87.57 125  P      P        19 26 13.0  -0.2
PB11                                IAmb   IAmb     19 26 18.9
      comp=Z,36nm,1.2s
KSH   Kashi              87.69 340  P      P        19 26 18.8 +5.1
KSH                                 S      S        19 36 49.0  -6.7
KSH                                 pmax   pmax
      comp=Z,10.0nm,1.6s
KSH                                 pmax   pmax
      comp=Z,320nm,4.6s
KSH                                 LR     LR
      comp=Z,2µm,17.2s
KSH                                 LR     LR
      comp=Z,2µm,19.6s
KSH                                 LR     LR
      comp=Z,2µm,18.6s
GO01  Chusmiza           87.74 125  IAmb   IAmb     19 26 32.5
      comp=Z,39nm,1.8s
GULI  GuiLin             87.84 308  P      P        19 26 17.0 +2.6
GULI                                S      S        19 36 56.5  -0.7
GULI                                pmax   pmax
      comp=Z,23nm,1.7s
GULI                                pmax   pmax
      comp=Z,280nm,6.0s
GULI                                LR     LR
      comp=Z,660nm,21.9s
GULI                                LR     LR
      comp=Z,640nm,20.6s
GULI                                LR     LR
      comp=Z,920nm,18.6s
CLDB  Colider            88.31 109 eP      P        19 26 17.6 +1.0
PDRB  Porto dos Gac      88.33 110 eP      P        19 26 15.2  -1.6
PRPB  Parauapebas        88.36 102 eP      P        19 26 17.7 +0.8
AKT   Akhty              88.54   2 eP      P        19 26 18.1 +0.5
AKT                                 MLR    MLR
      comp=Z,3µm,17.0s
GYA   Guiyang            88.69 312 ⇑P      P        19 26 19.3 +0.8
GYA                                 pmax   pmax
      comp=Z,26nm,1.2s
BR106 Keskin Array S     89.13  13  P      P        19 26 22.4 +2.0
      comp=Z,60nmcomp=Z,3.2nm,1.4s
BRTR  Keskin Array B     89.14  13  P      P        19 26 21.0 +0.5
      comp=Z,1.5nm,1.0s,baz=15,slow=6.0,SNR=5.2
      comp=Z,1.5nm,1.0s
BRTR  Keskin Array B     89.14  13  P      P        19 26 25.4 +4.9
BRTR  Keskin Array B     89.14  13  P      P        19 26 25.4 +4.9
BR104 Keskin Array S     89.16  13  P      P        19 26 22.0 +1.4
      comp=Z,3.8nm,1.3s
PTLB  Pontes e Lacer     89.93 114  IAmb   IAmb     19 26 26.4
      comp=Z,46nm,1.5s
PTLB  Pontes e Lacer     89.93 114 eP      P        19 26 24.3 +0.2
PZH   PanZhiHua          90.93 315  P      P        19 26 29.5 +0.4
PZH                                 SKS    SKSac    19 37 02.0 +0.8
PZH                                 S      S        19 37 21.8  -4.5
PZH                                 pmax   pmax
      comp=Z,20nm,1.4s
PZH                                 pmax   pmax
      comp=Z,200nm,4.0s
PZH                                 LR     LR
      comp=Z,790nm,23.2s
PZH                                 LR     LR
      comp=Z,750nm,23.5s
PZH                                 LR     LR
      comp=Z,410nm,24.0s
DZM   Mont Dzumac        91.37 236 eS      S        19 37 22.5  -7.4
      comp=Z,169nm,20.9s
DZM                                eSS     SS       19 43 31.0  -4.9
      comp=Z,770nm,28.8s
DZM                                eLQ     LQ       19 50 59.2
      comp=Z,1µm,32.1s
DZM                                eLR     LR       19 55 39.1
      comp=Z,1µm,21.8s
KMI   Kunming            91.67 314  P      P        19 26 34.0 +1.4
KMI                                 SKS    SKSac    19 37 03.4  -2.2
KMI                                 S      ScS      19 37 36.9 +0.9
KMI                                 pmax   pmax
      comp=Z,15nm,1.9s
KMI                                 LR     LR
      comp=Z,1µm,15.0s
KMI                                 LR     LR
      comp=Z,2µm,14.7s
KMI                                 LR     LR
      comp=Z,1µm,22.9s
SMTB  Santa Maria do     91.82 102 eP      P        19 26 34.0 +0.9
GO02  Mina Guanaco       92.08 128  IAmb   IAmb     19 26 40.7
      comp=Z,45nm,1.6s
LSA   Lhasa              92.44 325  P      P        19 26 32.3  -4.1
QIZ   Qiongzhong         93.29 305  P      P        19 26 38.8  -1.1
QIZ                                 S      S        19 37 44.3  -3.1
QIZ                                 SS     SS       19 44 00.6  -1.5
QIZ                                 LR     LR
      comp=Z,340nm,18.4s
QIZ                                 LR     LR
      comp=Z,760nm,20.6s
QIZ                                 LR     LR
      comp=Z,1µm,18.8s
TNCH  TengChong          93.64 317  P      P        19 26 44.0 +2.3
TNCH                                SKS    SKSac    19 37 16.3  -0.2
TNCH                                S      S        19 37 48.0  -2.7
TNCH                                SS     SS       19 44 07.3 +0.4
TNCH                                pmax   pmax
      comp=Z,23nm,1.6s
TNCH                                pmax   pmax
      comp=Z,240nm,4.1s
TNCH                                LR     LR
      comp=Z,890nm,17.5s
TNCH                                LR     LR
      comp=Z,910nm,16.1s
TNCH                                LR     LR
      comp=Z,3µm,20.2s
CHTO  Chiang Mai         98.86 314  P      Pdif     19 27 06.7 +1.5
CMAR  Chiang Mai Arr     99.17 314  P      Pdif     19 27 07.8 +1.2
      comp=Z,1.0nm,0.3s,baz=12,slow=5.2,SNR=11
      comp=Z,1.0nm,0.3s
CMAR  Chiang Mai Arr     99.17 314  P      Pdif     19 27 09.0 +2.4
CMAR  Chiang Mai Arr     99.17 314  P      Pdif     19 27 09.0 +2.4
QSPA  South Pole Qui    140.14 180  PKP    PKPdf    19 32 51.5  -0.8
      comp=Z,3.2nm,1.1s,baz=62,slow=1.6,SNR=4.3
QSPA  South Pole Qui    140.14 180         PKPdf    19 32 53.2 +1.0
LSZ   Lusaka            140.75  35  PKP    PKPdf    19 32 54.4  -0.6
      comp=Z,2.5nm,0.9s,baz=4.7,slow=1.9,SNR=4.0
LSZ   Lusaka            140.75  35         PKiKP    19 32 59.1 +1.5
LSZ   Lusaka            140.75  35  PKIKP  PKiKP    19 32 59.1 +1.5
KGCAE Kacgae            144.93  49 i P     PKPdf    19 33 02.7 +0.5
LKGWB Lokgwabe          145.50  51 i P     PKiKP    19 33 05.7  -1.4
KHWEE KHWEE             145.65  44 i P     PKPab    19 33 04.6 +0.6
BROLN Tlhalogang        145.70  40 i P     PKPab    19 33 05.0 +0.8
VNA3  Neumayer Olymp    146.15 150 ⇑P      PKPab    19 33 05.2 +0.8
VNA1  Neumayer--Stat    146.67 149 ⇑P      PKPdf    19 33 03.7 +0.2
LPHEP Lephephe          147.07  44 i P     PKiKP    19 33 10.1  -0.3
SNAA  Sanae             148.23 151 ⇑P      PKiKP    19 33 10.9  -0.4
SNAA  Sanae             148.23 151  PKPbc  PKPbc    19 33 09.3  -0.2
      comp=Z,7.8nm,1.0s,baz=249,slow=2.7,SNR=14
SNAA  Sanae             148.23 151         PKPbc    19 33 09.1  -0.5
LBTB  Lobatse           148.37  46  PKPbc  PKPbc    19 33 10.4  -0.9
      comp=Z,11nm,0.9s,baz=307,slow=4.4,SNR=7.5
TROLL Troll, Antarti    149.75 153 ⇑P      PKPdf    19 33 09.4 +0.7
BOSA  Boshof            151.24  50  PKPbc  PKiKP    19 33 18.9   0.0
      comp=Z,12nm,0.9s,baz=344,slow=3.3,SNR=9.7
BOSA  Boshof            151.24  50         PKiKP    19 33 19.7 +0.8
SYO   Syowa Base        160.58 169⇓ePKPdf  PKPdf    19 33 23.4 +0.2
SYO   Syowa Base        160.58 169⇑epPKPdf pPKPdf   19 33 27.0 +1.1
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*NNC **23** 19:41:15.2±6.8, 37°.04N×71°.23E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=61.0km s-min=50.5km az=135.0*

*IDC **23** 19:41:19.9±66.0, 34°.65N×73°.39E, h395^{km}±224^{km}, mb3.0/3, mbtmp3.6/4, Error ellipse: s-maj=1012.0km s-min=65.0km az=164.0*

ISC 23 19:41:12.6±2.3**, 36°.6N**±0°.2×**71°.4E**±0°.2**, h100^{km}, n8, σ1^{s}07**/10**, 2C-2D, Afghanistan-Tajikistan border region**

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Code  Station Name        Δ°   AZ°     Phase ID          Time      Res
                                      Op        ISC     h  m  s    ISC
AAK   Ala-Archa          6.52  21 ⇑P        Pn       19 42 47.3 +1.4
      2.8nm,0.9s
AAK                               ⇓S        Sn       19 43 58.7  -0.2
      8.7nm,0.9s
KK31  Karatay Array      6.55 355 ⇓P        Pn       19 42 47.6 +1.3
      2.3nm,0.3s,baz=180,slow=13,SNR=67
KK31                              ⇑S        Sn       19 43 58.3  -1.1
      2.4nm,0.3s,baz=186,slow=23,SNR=11
MKAR  Makanchi Array    13.06  35  P        P        19 44 20.1  -0.6
      0.1nm,0.4s,baz=206,slow=9.8,SNR=6.6
AB31  Akbulak array     15.15 330  P        Pn       19 44 41.5 +0.5
      0.9nm,0.8s,baz=274,slow=37,SNR=7.4
ZALV  Zalesovo Beam     19.73  24  P        P        19 45 32.6  -1.4
      1.8nm,0.3s,baz=207,slow=10,SNR=15
      1.8nm,0.3s
HFS   Hagfors           43.17 322  P        P        19 49 02.9  -0.2
      1.9nm,1.0s,baz=87,slow=9.2,SNR=7.0
      1.9nm,1.0s
NB2   NORSAR Subarra    44.48 323  P        P        19 49 13.1  -0.5
      comp=Z,0.2nm,0.5s,baz=95,slow=7.9
NOA   NORSAR Array B    44.48 323  P        P        19 49 13.1  -0.5
      comp=Z,0.2nm,0.5s,baz=95,slow=7.9,SNR=1.9
      comp=Z,0.2nm,0.5s
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IDC 23 19:49:30.4±3.4**, 30°.17S**×**137°.10E, h0^{km}, mbtmp3.1**/4**, ML2.8**/4**, Error ellipse: s-maj=66.7km s-min=15.9km az=42.0, South Australia**

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Code  Station Name        Δ°   AZ°     Phase ID          Time      Res
                                      Op        ISC     h  m  s    ISC
STKA  Stephens Creek     4.22 115  Pn       Pn       19 50 36.7 +0.7
      0.4nm,0.3s,baz=297,slow=13,SNR=12
STKA                               Pg       Pb       19 50 47.5 +2.1
      0.4nm,0.3s,baz=295,slow=16,SNR=7.2
STKA                               Sn       Sn       19 51 24.5  -1.5
      1.1nm,0.3s,baz=320,slow=10,SNR=5.9
STKA                               Lg       Lg       19 51 43.9
      1.4nm,0.3s,baz=12,slow=20,SNR=7.1
      1.2nm,0.4s
ASAR  Alice Springs      7.08 335  Pn       Pn       19 51 16.6 +1.3
      0.1nm,0.3s,baz=154,slow=12,SNR=8.9
ASAR                               Sn       Sn       19 52 35.8  -0.7
      0.1nm,0.3s,baz=161,slow=22,SNR=6.1
      0.4nm,0.7s
WRA   Warramunga Arr    10.48 346  Pn       Pn       19 52 02.6 +0.6
      0.1nm,0.3s,baz=164,slow=13,SNR=7.3
WRA                                Sn       Sn       19 54 00.1  -0.2
      0.1nm,0.3s,baz=166,slow=24,SNR=2.8
      0.3nm,0.5s
FITZ  Fitzroy Crossi    15.92 316  Pn       Pn       19 53 14.3  -1.6
      baz=148,slow=15,SNR=1.8
      1.2nm,0.8s
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*NEIC **23** 19:49:41.2, 50°.49N×130°.09W, h9^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.40; $M_{\theta\theta}$-1.01; $M_{\phi\phi}$0.78; $M_{r\theta}$-0.71; $M_{\theta\phi}$0.70; $M_{\phi r}$-0.40; Fault plane solution: $M_0$1.40000×10^{18} NP1:ϕ_s155.00000°, δ54.00000°, λ-174.00000°. NP2:ϕ_s61.00000°, δ86.00000°, λ-37.00000°. Principal axes: T 1.4702, Plg21.0000°, Azm114.0000°; N -0.1307, Plg53.0000°, Azm235.0000°; P -1.3395, Plg28.0000°, Azm12.0000°;*

*IDC **23** 19:49:42.5±0.4, 50°.57N×129°.89W, h0^{km}, mb4.6/29, mbtmp4.6/38, ML3.9/8, MS5.8/88 Error ellipse: s-maj=11.0km s-min=7.7km az=39.0*

*NEIC **23** 19:49:42.9, 50°.59N×129°.95W, h10^{km}*

*NEIC **23** 19:49:43, 50°.62N×129°.91W, h12^{km}*

*NEIC **23** 19:49:43.1±2.1, 50°.61N±0°.06×129°.94W±0°.05, h10^{km}±1^{km}, mb5.4/578, Ms_20 5.9/496, Mwb5.9/62, Mww6.0/106, Mwr6.0(OTT), Error ellipse: s-maj=10.3km s-min=4.5km az=201.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.05; $M_{\theta\theta}$-7.63; $M_{\phi\phi}$7.58; $M_{r\theta}$0.94; $M_{\theta\phi}$2.92; $M_{\phi r}$-2.94; Fault plane solution: $M_0$8.71000×10^{17} NP1:ϕ_s236.50000°, δ70.41000°, λ5.02000°. NP2: ϕ_s144.81000°, δ85.27000°, λ160.34000°. Principal axes: T 8.9614, Plg17.0000°, Azm99.0000°; N -0.5275, Plg70.0000°, Azm312.0000°; P -8.4339, Plg10.0000°, Azm192.0000°;*

*NEIC **23** 19:49:43, 50°.62N×129°.91W, h12^{km}, Moment Tensor Solution. Duration: 5^{s}3 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.11; $M_{\theta\theta}$-1.15; $M_{\phi\phi}$1.25; $M_{r\theta}$0.17; $M_{\theta\phi}$0.40; $M_{\phi r}$0.24; Fault plane solution: $M_0$1.30000×10^{18} NP1: ϕ_s323.80000°, δ77.82000°, λ177.66000°. NP2: ϕ_s54.29000°, δ87.71000°, λ12.19000°. Principal axes: T 1.3661, Plg10.0000°, Azm280.0000°; N -0.1401, Plg78.0000°, Azm65.0000°; P -1.2260, Plg7.0000°, Azm188.0000°;*

*GFZ **23** 19:49:46.0, 50°.56N×129°.79W, h13^{km}, MW6.0, Moment Tensor Solution. s73 Moment tensor: M_{rr}-0.07; $M_{\theta\theta}$-0.97; $M_{\phi\phi}$1.03; $M_{r\theta}$-0.10; $M_{\theta\phi}$0.36; $M_{\phi r}$-0.63; Fault plane solution: NP1:ϕ_s143.00000°, δ74.00000°, λ162.00000°. NP2:ϕ_s238.00000°, δ73.00000°, λ17.00000°. Principal axes: T 1.3800, Plg24.0000°, Azm100.0000°; N -0.3500, Plg66.0000°, Azm283.0000°; P -1.0300, Plg1.0000°, Azm190.0000°;*

*MOS **23** 19:49:45.1±1.3, 50°.51N×129°.82W, h28^{km}, mb5.6/68, MS6.0/47 Error ellipse: s-maj=8.9km s-min=4.5km az=104.8*

*GCMT **23** 19:49:47.1±0.1, 50°.48N×130°.18W, h12^{km}, MW6.0/166, Moment Tensor Solution. s148,c312; s166,c571; Duration: 2^{s}5 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.01±.01; $M_{\theta\theta}$-1.22±.01; $M_{\phi\phi}$1.23±.01; $M_{r\theta}$-0.08±.02; $M_{\theta\phi}$0.38±.01; $M_{\phi r}$-0.18±.02; Best double couple: $M_0$1.29900×10^{18} NP1:ϕ_s143.00000°, δ82.00000°, λ176.00000°. NP2:ϕ_s234.00000°, δ86.00000°, λ8.00000°. Principal axes: T 1.3160, Plg8.0000°, Azm99.0000°; N -0.0350, Plg81.0000°, Azm262.0000°; P -1.2810, Plg2.0000°, Azm9.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*BGR **23** 19:49:51.9, 49°.70N×124°.97W, h10^{km}, mb5.1*

ISC 23 19:49:44.1±0.5**, 50°.40N**±0°.03×**129°.89W**±0°.03**, h14^{km}**±2^{km}**, h14^{km}:pP-P, n1379, σ2^{s}46**/1117**, mb5.4**/354**, MS6.0**/381**, 94C-49D, Vancouver Island region**

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Code  Station Name        Δ°   AZ°     Phase ID          Time      Res
                                      Op        ISC     h  m  s    ISC
HOLB  Holberg            1.15  77           Pg       19 50 03.0  -3.2
HG4B  Hotspring          2.06 337           Pn       19 50 12.8  -5.6
BBB   Bella Bella        2.10  31  Pn       Pn       19 50 16.1  -2.7
      84nm,0.3s,baz=239,slow=5.3,SNR=361
BBB                                Sn       Sn       19 50 39.5  -5.3
      504nm,0.3s,baz=250,slow=19,SNR=8.1
BBB                                LR       LR       19 51 02.2
      comp=Z,55µm,21.5s,baz=224,slow=40
BBB   Bella Bella        2.10  31           Pn       19 50 15.5  -3.4
BBB   Bella Bella        2.10  31 ⇑P        Pn       19 50 15.8  -3.1
CBB   Campbell River     2.93  96           Pn       19 50 28.7  -1.5
MOBC  Moresby Island     3.04 336           Pn       19 50 26.4  -5.3
OZB   Mount Ozzard       3.20 115           Pn       19 50 32.7  -1.3
OZB   Mount Ozzard       3.20 115 ⇑P        Pn       19 50 31.9  -2.0
DIB   Dawson Inlet,      3.23 331           Pn       19 50 29.6  -4.8
RUBB  Prince Rupert      3.94 357           Pn       19 50 39.6  -4.4
CLRS  Cowichan Lake      4.07 111           Pn       19 50 45.3  -0.5
C03A  Quillayute Air     4.27 123           Pn       19 50 49.1 +0.5
PGC   Sidney             4.55 110           Pn       19 50 52.1  -0.3
B04A  Port Angeles       4.80 117  Pn       Pn       19 50 56.2 +0.3
A04D  Lummi Island       4.97 107           Pn       19 50 57.5  -0.7
NLWA  Neilton Lookou     4.98 125           Pn       19 50 59.1 +0.6
NLWA  Neilton Lookou     4.98 125 ⇑P        Pn       19 50 59.3 +0.8
V35K  Ketchikan          5.04 349           Pn       19 50 54.5  -4.7
V35K  Ketchikan          5.04 349  P        Pn       19 50 56.3  -3.0
      baz=167,SNR=27
LLLB  Lillooet           5.12  85           Pn       19 50 58.5  -1.8
WISH  Wishkah            5.21 127           Pn       19 51 02.8 +1.2
CRAG  Craig              5.44 340           Pn       19 50 59.7  -5.0
CRAG  Craig              5.44 340  P        Pn       19 51 01.6  -3.1
CRAG  Craig              5.44 340 ⇓P        Pn       19 51 01.0  -3.7
CRAG  Craig              5.44 340  P        Pn       19 50 59.9  -4.8
      baz=157,SNR=12
GNW   Green Mountain     5.45 119           Pn       19 51 05.4 +0.6
U35K  Hyder              5.52 359           Pn       19 51 02.5  -3.4
U35K  Hyder              5.52 359  P        Pn       19 51 02.4  -3.4
      baz=179,SNR=11
RADR  Rader Ridge        5.68 132           Pn       19 51 07.9  -0.2
U33K  Whale Pass         6.04 343           Pn       19 51 07.8  -5.2
U33K  Whale Pass         6.04 343  P        Pn       19 51 09.9  -3.0
      baz=160,SNR=13
D05A  Enumclaw           6.13 119           Pn       19 51 14.2   0.0
F03A  Seaside            6.16 134           Pn       19 51 14.9 +0.3
WRAK  Wrangell Islan     6.20 347           Pn       19 51 09.6  -5.6
WRAK  Wrangell Islan     6.20 347 ⇓P        Pn       19 51 12.6  -2.6
WRAK  Wrangell Islan     6.20 347  P        Pn       19 51 12.4  -2.7
      baz=165
F04D  Rainier, OR        6.31 131           Pn       19 51 16.2  -0.4
T35M  Bob Quinn          6.60 358           Pn       19 51 16.5  -4.1
T35M  Bob Quinn          6.60 358  P        Pn       19 51 19.9  -0.6
      baz=178,SNR=34
T33K  Petersburg         6.68 345  P        Pn       19 51 17.7  -3.9
      baz=163
COR   Corvallis          7.33 140           Pn       19 51 33.2 +2.5
COR   Corvallis          7.33 140  P        Pn       19 51 33.2 +2.5
COR   Corvallis          7.33 140 ⇑P        Pn       19 51 33.3 +2.7
SIT   Sitka              7.40 336  P        Pn       19 51 33.3 +1.7
SIT   Sitka              7.40 336  P        Pn       19 51 27.1  -4.4
      baz=151
S34M  Telegraph Cree     7.56 355  P        Pn       19 51 33.1  -0.7
      baz=174,SNR=20
S32K  Killisnoo          7.60 341  P        Pn       19 51 30.4  -3.9
      baz=156
HAWA  Hanford            7.97 116 ⇑P        Pn       19 51 41.3 +1.8
JIS   Juneau Island      8.31 343  P        Pn       19 51 44.4 +0.3
R32K  Eaglecrest         8.34 343  P        Pn       19 51 41.6  -2.8
      baz=159
S31K  Pelican            8.43 336  P        Pn       19 51 44.0  -1.8
      baz=151
NEW   Newport            8.61  99  Pn       Pn       19 51 48.1  -0.1
      3.7nm,0.3s,baz=292,slow=11,SNR=27
NEW                                Lg       Lg       19 54 14.5
      0.3nm,0.3s,baz=219,slow=18,SNR=3.6
NEW                                LR       LR       19 55 11.7
      comp=Z,165µm,18.7s,baz=284,slow=38
      18nm,0.5s
NEW   Newport            8.61  99 ⇑P        Pn       19 51 48.7 +0.4
Q32M  Nakina River       8.69 352  P        Pn       19 51 48.8  -0.6
      baz=170,SNR=20
R31K  City Hall, Gus     8.72 339  P        Pn       19 51 47.5  -2.1
      baz=154
TOAD  Toad River Com     8.88  16  P        Pn       19 51 50.9  -1.1
      baz=200,SNR=55
R33M  Jennings River     9.03 356  P        Pn       19 51 53.8  -0.3
      baz=176,SNR=72
LIRD  Liard River Hi     9.29  12  P        Pn       19 51 57.8 +0.4
      baz=196,SNR=18
P32M  Atlin              9.46 348  P        Pn       19 51 57.0  -2.9
      baz=165,SNR=12
SKAG  Skagway            9.60 343  P        Pn       19 52 03.1 +1.4
SKAG  Skagway            9.60 343 ⇑P        Pn       19 52 03.2 +1.5
SKAG  Skagway            9.60 343  P        Pn       19 52 00.4  -1.3
      baz=158
WTLY  Watson Lake, Y     9.75   3           Pn       19 52 03.0  -0.8
WTLY  Watson Lake, Y     9.75   3  P        Pn       19 52 03.0  -0.8
      baz=184,SNR=30
PLBC  Pleasant Camp      9.80 340  P        Pn       19 52 01.7  -2.8
      baz=155
K05A  Summer Lake        9.86 138           Pn       19 52 08.3 +2.8
P33M  Teslin, Yukon      9.97 352  P        Pn       19 52 04.8  -2.1
      baz=169,SNR=22
YBH   Yreka Blue Hor    10.00 147  Pn       Pn       19 52 12.2 +4.8
      4.7nm,1.0s,baz=349,slow=15,SNR=51
YBH                                LR       LR       19 55 43.1
      comp=Z,3µm,19.6s,baz=313,slow=36
KRPM  Rodgers           10.11 154  Pn       Pn       19 52 11.3 +2.5
BMO   Blue Mountains    10.14 118  Pn       Pn       19 52 10.2 +0.9
BMO   Blue Mountains    10.14 118  P        Pn       19 52 10.2 +0.9
BMO   Blue Mountains    10.14 118 ⇑P        Pn       19 52 11.1 +1.8
P29M  Windy Craggy      10.28 337  P        Pn       19 52 09.1  -1.9
      baz=150
KOTAN Kotaneelee Air    10.30  17  P        Pn       19 52 10.8  -0.4
      baz=202,SNR=41
JCC   Jacoby Creek,     10.42 155           Pn       19 52 15.4 +2.4
J08A  Circle Bar Ran    10.51 128           Pn       19 52 15.3 +0.8
P30M  Million Dollar    10.54 340  P        Pn       19 52 11.4  -3.1
      baz=154
EDM   Edmonton          10.62  68           Pn       19 52 15.5  -0.3
EDM   Edmonton          10.62  68  P        Pn       19 52 15.5  -0.3
WHY   Whitehorse        10.66 347           Pn       19 52 11.5  -4.8
WHY   Whitehorse        10.66 347  P        Pn       19 52 14.5  -1.8
      baz=162,SNR=19
PLID  Pearl Lake        10.75 114           Pn       19 52 18.0 +0.2
N32M  Quiet Lake        10.92 352  P        Pn       19 52 16.3  -3.5
      baz=169
O30N  Mendenhall        10.96 344  P        Pn       19 52 17.2  -3.2
      baz=158,SNR=10
O29M  Mount Kennedy     11.07 337  P        Pn       19 52 17.9  -4.1
      baz=149,SNR=14
MSO   Missoula          11.15 103           Pn       19 52 23.1 +0.1
HYT   Haines Junctio    11.29 341           Pn       19 52 21.8  -3.1
HYT   Haines Junctio    11.29 341  P        Pn       19 52 20.2  -4.8
      baz=154
PINM  Pinnacle          11.36 333  P        Pn       19 52 23.9  -1.9
      baz=144
N31M  Braeburn, Yuko    11.58 346           Pn       19 52 25.9  -3.0
N31M  Braeburn, Yuko    11.58 346  P        Pn       19 52 25.3  -3.6
      baz=161,SNR=10
YUK6  Outpost Mounta    11.58 339  P        Pn       19 52 25.4  -3.7
      baz=152,SNR=18
N30M  Aishikik Lake     11.79 343  P        Pn       19 52 29.3  -2.3
      baz=157,SNR=5.8
O28M  Mount Upton       11.89 335  P        Pn       19 52 30.9  -2.4
      baz=146,SNR=13
YUK4  Talbot Arm        12.00 339  P        Pn       19 52 32.8  -2.0
      baz=152,SNR=14
M31M  Drury Creek, Y    12.09 350  P        Pn       19 52 34.0  -1.8
      baz=166,SNR=16
YUK8  Steele Glacier    12.22 337  P        Pn       19 52 35.6  -2.2
      baz=148
CTG   Chitna Glacier    12.38 333  P        Pn       19 52 35.7  -4.1
      baz=143,SNR=16
HLID  Hailey            12.58 117 ⇑P        Pn       19 52 45.0 +2.4
KAIM  Kayak Island      12.62 325  P        Pn       19 52 40.5  -2.5
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	baz=132						
CRQE	Cirque	12.75	329	P	Pn	19 52 42.0	-2.9
	baz=138,SNR=15						
M30M	Minto, Yukon	12.78	345	P	Pn	19 52 44.0	-1.2
	baz=160,SNR=7.8						
YUK3	Moose Creek	12.81	337	P	Pn	19 52 42.2	-3.7
	baz=148,SNR=18						
M29M	Somme Creek	12.95	342	P	Pn	19 52 45.5	-2.1
	baz=155,SNR=41						
Q23K	Middleton Isla	13.05	320	P	Pn	19 52 46.8	-2.1
	baz=126						
BOZ	Bozeman (W)	13.13	104	⇓P	Pn	19 52 52.1	+1.9
MCARA	McCarthy VSAT	13.21	331	P	Pn	19 52 47.7	-3.4
	baz=140						
WRGLY	Wrigley	13.32	13		Pn	19 52 50.8	-1.8
WRGLY	Wrigley	13.32	13	P	Pn	19 52 47.8	-4.8
	baz=198,SNR=50						
EGMT	Eagleton	13.37	92	⇑P	Pn	19 52 54.5	+1.0
BMRM	Bremner River	13.41	328	P	Pn	19 52 50.6	-3.3
	baz=135,SNR=9.7						
BVCY	Beaver Creek	13.46	338	P	Pn	19 52 50.6	-3.8
	baz=148						
L29M	L29M	13.50	344	P	Pn	19 52 52.9	-2.1
	baz=157,SNR=14						
EYAK	Cordova Ski Ar	13.53	325	P	Pn	19 52 57.1	+1.7
EYAK	Cordova Ski Ar	13.53	325	P	Pn	19 52 50.3	-5.1
	baz=131						
MAYO	Mayo, Yukon	13.62	349	P	Pn	19 52 53.3	-3.3
	baz=163						
M27K	Edge Creek, AK	13.67	336	P	Pn	19 52 55.3	-2.1
	baz=146,SNR=17						
P23K	Montague Islan	13.82	321	P	Pn	19 52 54.7	-4.7
	baz=126						
N25K	Chitina, Valde	13.88	330	P	Pn	19 52 55.5	-4.7
	baz=137,SNR=14						
M26K	Nabesna, AK	14.01	334	P	Pn	19 52 57.8	-4.1
	baz=143,SNR=7.1						
ELK	Elko	14.07	128	Pn	Pn	19 53 06.9	+3.8
	0.1nm,0.3s,baz=316,slow=10,SNR=14						
ELK				Lg	Lg	19 57 09.4	
	baz=233,slow=20,SNR=1.2						
ELK				LR	LR	19 58 26.9	
	comp=Z,23µm,18.4s,baz=326,slow=37						
	18nm,1.2s						
ELK	Elko	14.07	128	⇓P	Pn	19 53 06.5	+3.4
K29M	Barlow Dome	14.08	346	P	Pn	19 53 00.2	-2.8
	baz=159						
KLU	Klutina	14.24	327	P	Pn	19 53 03.8	-1.3
	baz=134,SNR=22						
BCAR	Beaver Creek A	14.24	338	P	Pn	19 53 04.7	-0.4
L27K	Beaver Creek,	14.24	337	P	Pn	19 53 03.4	-1.8
	baz=147,SNR=32						
GLI	Glacier Island	14.25	324	P	Pn	19 53 02.2	-3.0
	baz=129						
LKWY	Lake	14.40	106	⇑P	P	19 53 11.1	-3.5
NVAR	Mina Array Bea	14.53	141	Pn	Pn	19 53 13.6	+4.1
	0.2nm,0.3s,baz=319,slow=11,SNR=36						
NVAR				LR	LR	19 58 26.8	
	comp=Z,16µm,19.6s,baz=328,slow=36						
	25nm,1.1s						
NVAR	Mina Array Bea	14.53	141		Pn	19 53 11.5	+2.0
DAWY	Dawson	14.61	343	P	Pn	19 53 08.0	-2.2
	baz=155,SNR=17						
L26K	Log Cabin Wild	14.61	335	P	Pn	19 53 07.5	-2.7
	baz=144,SNR=20						
J30M	Hart River	14.61	349	P	Pn	19 53 08.6	-1.8
	baz=163						
MENT	Mentasta	14.64	334	P	Pn	19 53 12.5	+1.9
HARP	HAARP	14.64	331	P	Pn	19 53 07.1	-3.5
	baz=138						
PWL	Port Wells	14.71	322	P	Pn	19 53 08.2	-3.4
	baz=127						
YKA	Yellowknife Ar	14.72	29	Pn	Pn	19 53 07.3	-4.3
	0.6nm,0.3s,baz=225,slow=12,SNR=78						
YKA				Sn	Sn	19 55 43.7	-11
	0.9nm,0.3s,baz=144,slow=20,SNR=6.6						
YKA				Lg	Lg	19 57 16.1	
	baz=220,slow=32						
	19nm,1.0s						
YKA	Yellowknife Ar	14.72	29		Pn	19 53 08.8	-2.8
SEW	Seward	14.73	319	P	Pn	19 53 08.9	-2.9
	baz=122						
YKAW1	Yellowknife Wh	14.75	29		Pn	19 53 08.8	-3.2
M24K	Tolsona, Glenn	14.75	329	P	Pn	19 53 08.4	-3.8
	baz=135						
J29N	Klondike Camp	14.76	346	P	Pn	19 53 11.0	-1.3
	baz=158,SNR=6.5						
YKAW3	Yellowknife Wh	14.77	29		Pn	19 53 09.1	-3.2
RLMT	Red Lodge	14.82	103	⇑P	Pn	19 53 15.1	+1.7
SCM	Sheep Creek Mo	14.96	327	P	Pn	19 53 13.0	-2.0
	baz=132,SNR=17						
O22K	Cooper Landing	15.05	320	P	Pn	19 53 12.3	-3.8
	baz=123						
M23K	Glacier View	15.07	326	P	Pn	19 53 12.5	-4.0
	baz=131,SNR=12						
KNK	Knik Glacier	15.10	324	P	Pn	19 53 13.2	-3.6
	baz=128,SNR=14						
BRSE	Bradley Lake S	15.10	316	P	Pn	19 53 12.2	-4.7
	baz=118						
PAX	Paxson	15.17	332	P	Pn	19 53 14.2	-3.5
	baz=139,SNR=11						
KDAK	Kodiak Island	15.17	308	Pn	Pn	19 53 16.7	-1.0
	0.6nm,0.3s,baz=118,slow=6.1,SNR=14						
KDAK				Sn	Sn	19 55 57.8	-7.6
	baz=32,slow=20,SNR=1.0						
KDAK				LR	LR	19 57 36.6	
	comp=Z,49µm,20.7s,baz=122,slow=32						
	44nm,0.8s						
KDAK	Kodiak Island	15.17	308		Pn	19 53 11.7	-6.0
KDAK	Kodiak Island	15.17	308	⇑P	Pn	19 53 17.1	-0.6
KDAK	Kodiak Island	15.17	308	P	Pn	19 53 15.8	-2.0
	baz=109						
CNPM	China Poot	15.22	315		Pn	19 53 12.4	-6.0
I30M	Mount Dempster	15.24	350	P	Pn	19 53 18.4	-0.4
	baz=164,SNR=23						
SML	Sawmill	15.30	325	P	Pn	19 53 16.8	-2.7
	baz=130,SNR=10.0						
OHAK	Old Harbor	15.36	305	P	Pn	19 53 23.0	+2.8
OHAK	Old Harbor	15.36	305	P	Pn	19 53 17.5	-2.8
	baz=106						
Q20K	Shuyak Island	15.38	311	P	Pn	19 53 17.2	-3.2
	baz=112						
RC01	Rabbit Creek A	15.40	322	P	Pn	19 53 17.8	-2.9
	baz=125						
HWUT	Hardware Ranch	15.44	118	IAmb	IAmb	19 53 28.0	
	comp=Z,185nm,1.2s						
HWUT	Hardware Ranch	15.44	118	⇑P	P	19 53 24.5	-1.6
PMR	Palmer	15.46	324	P	P	19 53 24.1	-1.9
PMR	Palmer	15.46	324	P	Pn	19 53 19.2	-2.3
	baz=127,SNR=12						
HOM	Homer	15.47	315	P	Pn	19 53 20.7	-0.9
	baz=117						
SCRK	Sand Creek	15.55	336	P	Pn	19 53 21.6	-1.1
	baz=144,SNR=119						
RIDG	Independent Ri	15.58	335	P	Pn	19 53 21.8	-1.4
	baz=142,SNR=15						
WAT6	Susitna Watana	15.61	328	P	Pn	19 53 21.7	-2.0
	baz=133,SNR=62						
H31M	Peel River	15.62	353	P	Pn	19 53 22.4	-1.2
	baz=169,SNR=21						
PMPB	Monarch Peak	15.63	152	IAmb	IAmb	19 53 33.7	
	comp=Z,540nm,1.3s						
I29M	Ogilvie Camp,	15.63	347	P	Pn	19 53 22.6	-1.1
	baz=160,SNR=44						
SII	Sitkinak Islan	15.67	303	P	Pn	19 53 22.8	-1.5
	baz=102						
SII				S	Sn	19 56 22.5	+5.0
	baz=102						
HULI	Fort Hunter Li	15.68	153	IAmb	IAmb	19 53 34.4	
	comp=Z,262nm,1.1s						
DUG	Dugway, Tooele	15.73	124	⇑P	Pn	19 53 27.1	+1.9
CAPN	Captain Cook N	15.80	319	P	Pn	19 53 23.7	-2.2
	baz=121						
CAPN				S	Sn	19 56 24.8	+4.3
	baz=121						
DHY	Denali Highway	15.84	330	P	Pn	19 53 24.3	-2.3
	baz=135,SNR=36						
DHY				S	Sn	19 56 25.1	+3.4
	baz=135						
J26L	Joseph Creek	15.88	338	IAmb	IAmb	19 53 31.7	
	comp=Z,184nm,1.0s						
J26L	Joseph Creek	15.88	338	P	Pn	19 53 25.9	-1.1
	baz=146,SNR=165						
J26L				S	S	19 56 30.8	-6.1
	baz=146						
J26L				S	S	19 56 30.8	-6.1
	baz=146						
K24K	Donnelly Dome	15.89	334	P	Pn	19 53 26.5	-0.7
	baz=140,SNR=41						
BW06	Boulder Array	15.89	111	IAmb	IAmb	19 53 34.2	
	comp=Z,309nm,1.2s						
BW06	Boulder Array	15.89	111	⇑P	P	19 53 30.8	-0.3
PD31	Pinedale Array	15.89	111	IAmb	IAmb	19 53 34.2	
	comp=Z,280nm,1.1s						
PDAR	Pinedale Array	15.89	111	Pn	P	19 53 29.8	-1.4
	comp=Z,1.4nm,0.3s,baz=314,slow=8.0,SNR=338						
PDAR	Pinedale Array	15.89	111		P	19 53 29.5	-1.7
M22K	Willow	15.94	323	P	Pn	19 53 24.2	-3.5
	baz=126,SNR=15						
M22K				S	Sn	19 56 28.6	+4.7
	baz=126						
I28M	Miner Creek	15.97	345	P	Pn	19 53 24.6	-3.6
	baz=156,SNR=93						
I28M				S	Sn	19 56 26.6	+1.8
	baz=156						
SUA	Susitna One	16.01	322	P	Pn	19 53 26.4	-2.4
	baz=124,SNR=29						
SUA				S	Sn	19 56 28.1	+2.1
	baz=124						
WAT1	Susitna Watana	16.05	328	P	Pn	19 53 25.6	-3.6
	baz=132						
WAT1				S	Sn	19 56 28.4	+1.6
	baz=132						
LAO	LASA Array	16.09	94	⇓P	Pn	19 53 31.0	+1.2
Q19K	Cape Douglas,	16.10	311	P	Pn	19 53 27.2	-2.6
	baz=111,SNR=5.7						
Q19K				S	Sn	19 56 31.0	+3.0
	baz=111						
Q19K				S	Sn	19 56 31.0	+3.0
	baz=111						
O20K	Slope Mountain	16.10	316	P	Pn	19 53 27.4	-2.5
	baz=116						
O20K				S	Sn	19 56 29.3	+1.3
	baz=116						
O20K				S	Sn	19 56 29.3	+1.3
	baz=116						
P19K	Oil Pt	16.19	314	P	Pn	19 53 27.7	-3.3
	baz=114,SNR=18						
P19K				S	Sn	19 56 35.3	+5.1
	baz=114						
P19K				S	Sn	19 56 35.3	+5.1
	baz=114						
ILSW	Iliamna Southw	16.29	315		Pn	19 53 29.4	-2.9
CHIR	Chirikof Islan	16.32	299	P	Pn	19 53 29.4	-3.2
	baz=98						
CHIR				S	Sn	19 56 36.9	+3.6
	baz=98						
CUT	Chulitna	16.39	325	P	Pn	19 53 30.5	-2.9
	baz=128						
CUT				S	Sn	19 56 40.7	+5.9
	baz=128						
EPYK	Eagle Plains	16.39	350	P	Pn	19 53 31.2	-2.3
	baz=164,SNR=30						
EPYK				S	Sn	19 56 35.2	+0.2
	baz=164						
EPYK				S	S	19 56 38.9	-8.4
	baz=164						
I27K	Kandik River	16.41	343	P	Pn	19 53 31.8	-2.0
	baz=152,SNR=46						
I27K				S	S	19 56 41.3	-6.4
	baz=152						
I27K				S	S	19 56 41.3	-6.4
	baz=152						
J25K	Salcha River,	16.42	336	P	Pn	19 53 32.0	-1.9
	baz=143,SNR=92						
J25K				S	S	19 56 41.5	-6.4
	baz=143						
J25K				S	S	19 56 41.5	-6.4
	baz=143						
H29M	Whitestone	16.45	348	P	Pn	19 53 32.5	-1.7
	baz=160,SNR=45						
H29M				S	S	19 56 43.9	-4.5
	baz=160						
I26K	Coal Creek Min	16.46	340	P	Pn	19 53 33.7	-0.7
	baz=149,SNR=88						
I26K				S	S	19 56 47.4	-1.3
	baz=149						
I26K				S	S	19 56 47.4	-1.3
	baz=149						
N20K	Mount Spurr	16.46	320	P	Pn	19 53 32.2	-2.3
	baz=120,SNR=27						
N20K				S	Sn	19 56 40.3	+3.4
	baz=120						
N20K				S	Sn	19 56 40.3	+3.4
	baz=120						
SPCR	Spurr Chakacha	16.46	320	P	Pn	19 53 32.8	-1.7
	baz=120,SNR=22						
SPCR				S	Sn	19 56 41.3	+4.4
	baz=120						
BSUT	Blindstream Ca	16.61	119		Pn	19 53 37.1	+0.3
SKT	Skwentna	16.61	322	P	Pn	19 53 33.2	-3.2
	baz=124,SNR=19						
SKT				S	Sn	19 56 41.0	+0.6
	baz=124						
WCT	Wildcat Mounta	16.62	140	IAmb	IAmb	19 53 46.7	
	comp=Z,378nm,1.4s						
Q18K	Katmai Hardscr	16.67	309	P	Pn	19 53 34.5	-2.7
	baz=108						
Q18K				S	Sn	19 56 46.3	+4.4
	baz=108						
Q18K				S	Sn	19 56 46.3	+4.4
	baz=108						
HDA	Harding Lake	16.69	334	P	Pn	19 53 35.4	-1.8
	baz=139,SNR=51						
HDA				S	Sn	19 56 44.4	+2.3
	baz=139						
ACHA	Angle Creek He	16.69	308	P	Pn	19 53 36.4	-1.0
G31M	Satah River	16.72	354	P	Pn	19 53 36.2	-1.3
	baz=170,SNR=65						
G31M				S	S	19 56 51.0	-2.8
	baz=170						
MCK	McKinley	16.80	330	P	Pn	19 53 37.2	-1.5
	baz=133,SNR=61						
MCK				S	Sn	19 56 48.5	+3.7
	baz=133						
DGMT	Dagmar	16.80	87	IAmb	IAmb	19 53 45.8	
	comp=Z,255nm,0.8s						
DGMT	Dagmar	16.80	87	⇑P	Pn	19 53 38.2	-0.6
FURC	Furnace Creek,	16.80	141	IAmb	IAmb	19 53 46.6	
	comp=Z,456nm,1.8s						
ISA	Isabella, Lake	16.90	146	IAmb	IAmb	19 53 48.5	
	comp=Z,254nm,1.4s						
O19K	Port Alsworth	16.91	315	P	Pn	19 53 37.4	-2.7
	baz=114,SNR=18						
O19K				S	Sn	19 56 53.0	+5.3
	baz=114						
O19K				S	Sn	19 56 53.0	+5.3
	baz=114						
G30M	tAoh Zraii Nji	16.93	351	P	Pn	19 53 38.7	-1.7
	baz=166						
ILAR	Eielson Array	16.95	335	Pn	Pn	19 53 39.4	-1.2
	comp=Z,0.6nm,0.3s,baz=150,slow=8.6,SNR=56						
ILAR				LR	LR	19 59 31.6	
	comp=Z,23µm,19.3s,baz=131,slow=35						
	comp=Z,16nm,0.9s						
ILAR	Eielson Array	16.95	335		Pn	19 53 37.4	-3.1
ILAR	Eielson Array	16.95	335	P	Pn	19 53 37.4	-3.1
H27K	Steamboat Moun	16.96	344	P	Pn	19 53 38.1	-2.6
	baz=154,SNR=57						
H27K				S	Sn	19 56 50.9	+2.2
	baz=154						
Q17K	Contact Creek	16.99	308	P	Pn	19 53 38.6	-2.6
	baz=106,SNR=12						
Q17K				S	Sn	19 56 54.7	+4.9
	baz=106						
Q17K				S	Sn	19 56 54.7	+4.9
	baz=106						
P18K	Big Mountain,	17.03	312	P	Pn	19 53 40.5	-1.1
	baz=110						
P18K				S	Sn	19 56 53.9	+3.4
	baz=110						
P18K				S	Sn	19 56 53.9	+3.4
	baz=110						
TRF	Thorofare Moun	17.06	328	IAmb	IAmb	19 53 46.0	
	comp=Z,431nm,1.4s						
TRF	Thorofare Moun	17.06	328	P	Pn	19 53 40.8	-1.3
	baz=130,SNR=61						
TRF				S	Sn	19 56 55.0	+3.7
	baz=130						
G29M	Pine Creek	17.06	349	IAmb	IAmb	19 53 48.1	
	comp=Z,362nm,1.4s						
G29M	Pine Creek	17.06	349	P	Pn	19 53 40.0	-2.0
	baz=162,SNR=59						
R17L	Mt. Peulik Vol	17.07	305	P	Pn	19 53 41.2	-0.9
	baz=103						
O18K	Koktuh Hills	17.19	313	P	Pn	19 53 42.1	-1.5
	baz=112,SNR=26						
O18K				S	Sn	19 56 56.4	+2.1
	baz=112						
O18K				S	Sn	19 56 56.4	+2.1
	baz=112						
M20K	Styx River	17.20	321	P	Pn	19 53 42.8	-1.0
	baz=121						
F31M	Tsiigehtchic	17.20	355	IAmb	IAmb	19 53 48.0	
	comp=Z,434nm,1.4s						
F31M	Tsiigehtchic	17.20	355	P	Pn	19 53 43.2	-0.5
	baz=172,SNR=100						
F31M				S	Sn	19 56 57.6	+3.2
	baz=172						
N19K	Bonanza Creek	17.25	317	P	Pn	19 53 42.8	-1.6
	baz=116,SNR=12						
N19K				S	Sn	19 56 57.7	+1.7
	baz=116						
N19K				S	Sn	19 56 57.7	+1.7
	baz=116						
COLA	College	17.30	334	P	Pn	19 53 42.9	-1.9
	baz=138						
COLA				S	Sn	19 56 57.9	+1.1
	baz=138						
KTH	Kantishna Hill	17.34	327	IAmb	IAmb	19 53 50.4	
	comp=Z,259nm,1.1s						
POKR	Poker Plat Res	17.36	335	P	Pn	19 53 44.2	-1.5
	baz=140,SNR=40						
POKR				S	Sn	19 57 01.9	+3.4
	baz=140						
POKR				S	Sn	19 57 01.9	+3.4
	baz=140						
PPLA	Purkeypile	17.39	324	P	Pn	19 53 44.4	-1.8
	baz=125,SNR=30						
PPLA				S	Sn	19 57 02.5	+3.0
	baz=125						
NEA2	Nenana	17.45	332	P	Pn	19 53 45.0	-1.8
	baz=135,SNR=58						
NEA2				S	Sn	19 57 02.5	+1.9
	baz=135						
FFC	Flin Flon	17.45	65		Pn	19 53 45.0	-1.9
FFC	Flin Flon	17.45	65	P	Pn	19 53 45.0	-1.9
FFC				pmax	pmax		
	comp=Z,260nm,1.6s						
Q16K	King Salmon	17.50	309	P	Pn	19 53 45.8	-1.6
	baz=106						
Q16K				S	Sn	19 57 06.3	+4.5
	baz=106						
G27K	Doyon Strip	17.50	344	P	Pn	19 53 46.4	-1.0
	baz=154,SNR=79						
G27K				S	Sn	19 57 03.5	+1.7
	baz=154						
G27K				S	Sn	19 57 03.5	+1.7
	baz=154						
F30M	Barrier River	17.51	352	P	Pn	19 53 46.5	-1.1
	baz=167,SNR=34						
F30M				S	Sn	19 57 02.0	0.0
	baz=167						
P17K	Kvichak River	17.55	310		Pn	19 53 48.6	+0.6
P17K				IAmb	IAmb	19 53 53.2	
	comp=Z,505nm,1.9s						
P17K	Kvichak River	17.55	310	P	Pn	19 53 45.8	-2.2
	baz=108,SNR=6.6						
P17K				S	Sn	19 57 06.8	+3.9
	baz=108						
P17K				S	Sn	19 57 06.8	+3.9
	baz=108						
SZCU	Shurtz Canyon	17.55	130	IAmb	IAmb	19 53 57.7	
	comp=Z,425nm,1.5s						
R16K	Pilot Point	17.70	305	P	Pn	19 53 49.6	-0.3
	baz=102						
BPAW	Bear Paw Mtn.	17.72	329	P	Pn	19 53 47.8	-2.4
	baz=130,SNR=22						
BPAW				S	Sn	19 57 09.1	+1.9
	baz=130						
K22A	Casper	17.80	107	IAmb	IAmb	19 53 58.9	
	comp=Z,275nm,1.0s						
N18K	Kilae Creek	17.82	315	P	Pn	19 53 50.3	-1.2
	baz=113,SNR=15						
N18K				S	Sn	19 57 12.2	+2.5
	baz=113						
N18K				S	Sn	19 57 12.2	+2.5
	baz=113						
I23K	Minto, Yukon-K	17.93	333	IAmb	IAmb	19 53 58.4	
	comp=Z,408nm,1.7s						
I23K	Minto, Yukon-K	17.93	333	P	Pn	19 53 50.7	-2.1
	baz=136,SNR=43						
I23K				S	S	19 57 18.6	0.0
	baz=136						
I23K				S	S	19 57 18.6	0.0
	baz=136						
F28M	Old Crow	17.97	348	P	Pn	19 53 52.1	-1.0
	baz=159,SNR=80						
F28M				S	S	19 57 17.2	-2.0
	baz=159						
G26K	Porcupine Rive	18.02	342	P	Pn	19 53 53.1	-0.6
	baz=150,SNR=166						
G26K				S	S	19 57 20.0	-0.2
	baz=150						
CHUM	Lake Minchumin	18.03	327	P	Pn	19 53 52.9	-1.1
	baz=128,SNR=42						
CHUM				S	S	19 57 18.8	-1.8
	baz=128						
H24K	Noodor Dome	18.04	336	IAmb	IAmb	19 54 00.8	
	comp=Z,344nm,1.1s						
H24K	Noodor Dome	18.04	336	P	Pn	19 53 53.4	-0.7
	baz=140,SNR=142						
H24K				S	S	19 57 20.9	+0.1
	baz=140						
H24K				S	S	19 57 20.9	+0.1
	baz=140						
INK	Inuvik	18.05	356	P	Pn	19 53 53.0	-1.1
	comp=Z,0.2nm,0.3s,baz=168,slow=12,SNR=39						
INK				LR	LR	20 01 23.1	
	comp=Z,76µm,18.4s,baz=176,slow=39						
	comp=Z,46nm,1.1s						
INK	Inuvik	18.05	356	IAmb	IAmb	19 53 59.1	
	comp=Z,364nm,1.6s						
INK	Inuvik	18.05	356	P	Pn	19 53 52.8	-1.3
	baz=172,SNR=63						
INK				S	S	19 57 19.8	-1.0
	baz=172						
L19K	White Mountain	18.05	320	IAmb	IAmb	19 54 00.4	
	comp=Z,405nm,1.2s						
L19K	White Mountain	18.05	320	P	Pn	19 53 53.5	-0.7
	baz=119,SNR=73						
L19K				S	S	19 57 21.3	+0.2
	baz=119						
L19K				S	S	19 57 21.3	+0.2
	baz=119						
O17K	Koliganek Bris	18.05	312	P	Pn	19 53 53.1	-1.1
	baz=109						
O17K				S	Sn	19 57 17.8	+2.6
	baz=109						
PKCU	Pink Cliffs	18.05	129	IAmb	IAmb	19 54 03.2	
	comp=Z,283nm,1.3s						
M18K	Stony River	18.14	318	P	Pn	19 53 54.3	-0.9
	baz=116,SNR=28						
M18K				S	S	19 57 20.8	-1.9
	baz=116						
MTPC	Mountain Pass	18.18	140	IAmb	IAmb	19 54 06.2	
	comp=Z,420nm,1.6s						
P16K	Nushagak River	18.26	309	IAmb	IAmb	19 54 03.0	
	comp=Z,492nm,1.2s						
P16K	Nushagak River	18.26	309	P	Pn	19 53 53.7	-3.1
	baz=105						
P16K				S	S	19 57 25.2	-0.1
	baz=105						
P16K				S	S	19 57 25.2	-0.1
	baz=105						
O20A	White River Ci	18.31	116	IAmb	IAmb	19 54 07.7	
	comp=Z,555nm,1.5s						
MWC	Mount Wilson	18.34	147	IAmb	IAmb	19 54 04.3	
	comp=Z,219nm,1.2s						
G25K	Bearman Lake	18.35	339	P	Pn	19 53 56.6	-1.2
	baz=145,SNR=35						
N17K	Nushagak Hills	18.36	314	P	Pn	19 53 56.1	-1.8
N17K	Nushagak Hills	18.36	314	P	Pn	19 53 57.9	-0.1
	baz=111						
N17K				S	S	19 57 26.2	-1.0
	baz=111						
K20K	Telida	18.36	324	P	Pn	19 53 55.1	-2.9
	baz=123,SNR=58						
K20K				S	Sn	19 57 23.9	+1.3
	baz=123						
K20K				S	Sn	19 57 23.9	+1.3
	baz=123						
E29M	Blow River	18.47	351	P	P	19 53 59.1	0.0
	baz=164						

O16K	Kokwok River B	18.48	311		P	P	19 53 58.4	-0.9
	baz=107,SNR=13							
O16K					S	S	19 57 28.8	-0.8
	baz=107							
HMU	Henry Mountain	18.48	125		IAmb	IAmb	19 54 08.5	
	comp=Z,367nm,1.2s							
CHNA	Chernabura Isl	18.49	295		P	P	19 53 56.0	-3.5
	baz=91							
CHNA					S	Sn	19 57 27.4	+1.5
	baz=91							
S14K	Fog Glacier	18.57	300		P	P	19 53 59.8	-0.7
	baz=95							
S14K					S	S	19 57 31.3	-0.4
	baz=95							
S14K					S	S	19 57 31.3	-0.4
	baz=95							
RSSD	Black Hills	18.58	100			Pn	19 54 01.0	-0.1
RSSD	Black Hills	18.58	100		P	Pn	19 54 01.0	-0.1
RSSD					pmax	pmax		
	comp=Z,85nm,1.1s							
BMAR	Burnt Mountain	18.59	342		P	P	19 53 59.2	-1.4
G24K	Hadweenzic Riv	18.62	338		IAmb	IAmb	19 54 07.1	
	comp=Z,262nm,1.2s							
G24K	Hadweenzic Riv	18.62	338		P	P	19 54 00.5	-0.3
	baz=142,SNR=100							
G24K					S	S	19 57 32.7	+0.3
	baz=142							
G24K					S	S	19 57 32.7	+0.3
	baz=142							
F26K	Sheenjek River	18.74	343		IAmb	IAmb	19 54 07.8	
	comp=Z,456nm,1.2s							
F26K	Sheenjek River	18.74	343		P	P	19 54 01.8	-0.4
	baz=150,SNR=285							
F26K					S	S	19 57 37.1	+2.3
	baz=150							
E27K	Coleen River	18.75	346		IAmb	IAmb	19 54 08.3	
	comp=Z,224nm,1.2s							
E27K	Coleen River	18.75	346		P	P	19 54 01.8	-0.4
	baz=156,SNR=92							
E27K					S	S	19 57 37.2	+2.2
	baz=156							
E27K					S	S	19 57 37.2	+2.2
	baz=156							
I21K	Tanana	18.75	330		IAmb	IAmb	19 54 06.8	
	comp=Z,458nm,1.1s							
I21K	Tanana	18.75	330		P	P	19 54 02.1	-0.2
	baz=131,SNR=120							
I21K					S	S	19 57 35.9	+0.7
	baz=131							
I21K					S	S	19 57 35.9	+0.7
	baz=131							
M17K	Holitna River	18.80	316		IAmb	IAmb	19 54 12.0	
	comp=Z,404nm,1.4s							
M17K	Holitna River	18.80	316		P	P	19 54 00.7	-2.2
	baz=113,SNR=25							
M17K					S	S	19 57 37.2	+1.0
	baz=113							
L18K	Granite Mounta	18.83	319		IAmb	IAmb	19 54 07.7	
	comp=Z,322nm,1.4s							
L18K	Granite Mounta	18.83	319		P	Pn	19 54 04.0	+0.3
	baz=116,SNR=17							
L18K					S	S	19 57 35.8	-0.9
	baz=116							
L18K					S	S	19 57 35.8	-0.9
	baz=116							
J20K	Nowinta River	18.86	326		IAmb	IAmb	19 54 13.5	
	comp=Z,654nm,1.4s							
J20K	Nowinta River	18.86	326		P	P	19 54 03.2	-0.2
	baz=125,SNR=179							
J20K					S	S	19 57 38.1	+0.9
	baz=125							
J20K					S	S	19 57 38.1	+0.9
	baz=125							
E28M	Babbage River	18.86	349		P	P	19 54 02.7	-0.7
	baz=161,SNR=151							
E28M					S	S	19 57 43.2	+6.0
	baz=161							
U15A	North Rim	18.87	131		IAmb	IAmb	19 54 13.5	
	comp=Z,396nm,1.6s							
F25K	Christian Rive	18.94	341		P	Pn	19 54 05.5	+0.4
	baz=148,SNR=254							
F25K					S	S	19 57 40.5	+1.4
	baz=148							
DANC	Danby, Needles	18.98	141		IAmb	IAmb	19 54 17.4	
	comp=Z,483nm,1.9s							
SDPT	Sand Point	19.02	297		P	Pn	19 54 11.9	+5.9
SDPT	Sand Point	19.02	297		P	P	19 54 03.3	-2.0
	baz=92							
SDPT					S	Sn	19 57 38.5	-0.1
	baz=92							
PV23	Carpenter Ridg	19.03	121		IAmb	IAmb	19 54 15.7	
	comp=Z,638nm,1.5s							
H22K	Ishtalitna Cre	19.06	333		P	Pn	19 54 07.2	+0.7
	baz=134,SNR=64							
H22K					S	S	19 57 43.9	+2.6
	baz=134							
H22K					S	S	19 57 43.9	+2.6
	baz=134							
PV10	Paradox Valley	19.07	121		IAmb	IAmb	19 54 14.0	
	comp=Z,511nm,1.2s							
N16K	Nishlik Lake	19.07	313		P	P	19 54 06.5	+0.6
	baz=108,SNR=23							
N16K					S	S	19 57 45.0	+3.3
	baz=108							
PV14	Lion Creek, Pa	19.08	121		IAmb	IAmb	19 54 16.0	
	comp=Z,511nm,1.5s							
PV04	Paradox Valley	19.13	121		IAmb	IAmb	19 54 14.1	
	comp=Z,215nm,1.2s							
PV17	East Wray Mesa	19.18	121		IAmb	IAmb	19 54 17.2	
	comp=Z,444nm,1.3s							
PV16	Nyswonger Mesa	19.18	121		IAmb	IAmb	19 54 17.2	
	comp=Z,644nm,1.7s							
C36M	Paulatuk	19.21	6		P	P	19 54 04.9	-2.3
C36M					IAmb	IAmb	19 54 10.3	
	comp=Z,503nm,1.5s							
C36M	Paulatuk	19.21	6		P	P	19 54 06.6	-0.7
	baz=192,SNR=66							
C36M					S	S	19 57 46.5	+2.3
	baz=192							
O15K	Ungalikthiuk R	19.22	309		IAmb	IAmb	19 54 17.5	
	comp=Z,443nm,1.3s							
O15K	Ungalikthiuk R	19.22	309		P	P	19 54 06.0	-1.4
	baz=104,SNR=6.5							
O15K					S	S	19 57 47.2	+2.6
	baz=104							
PV18	Skein Mesa, Pa	19.23	121		IAmb	IAmb	19 54 16.8	
	comp=Z,523nm,1.3s							
PV03	Paradox Valley	19.26	121		IAmb	IAmb	19 54 17.1	
	comp=Z,248nm,1.2s							
G23K	Bananza Creek	19.27	335		IAmb	IAmb	19 54 16.2	
	comp=Z,275nm,1.1s							
G23K	Bananza Creek	19.27	335		P	P	19 54 08.2	+0.2
	baz=138,SNR=75							
G23K					S	S	19 57 49.9	+4.3
	baz=138							
G23K					S	S	19 57 49.9	+4.3
	baz=138							
J19K	Poorman	19.29	325		P	P	19 54 08.6	+0.4
	baz=122,SNR=115							
J19K					S	S	19 57 47.6	+1.7
	baz=122							
J19K					S	S	19 57 47.6	+1.7
	baz=122							
H21K	Melozitna Rive	19.33	331		IAmb	IAmb	19 54 13.8	
	comp=Z,163nm,1.1s							
H21K	Melozitna Rive	19.33	331		P	Pn	19 54 09.2	-0.5
	baz=131,SNR=73							
H21K					S	S	19 57 50.1	+3.3
	baz=131							
H21K					S	S	19 57 50.1	+3.3
	baz=131							
I20K	Naaghedeneel	19.34	327		P	P	19 54 08.4	-0.3
	baz=126							
M16K	Timber Creek	19.35	314		IAmb	IAmb	19 54 19.6	
	comp=Z,534nm,1.6s							
M16K	Timber Creek	19.35	314		P	Pn	19 54 10.2	+0.2
	baz=110,SNR=20							
M16K					S	S	19 57 49.0	+1.8
	baz=110							
M16K					S	S	19 57 49.0	+1.8
	baz=110							
F24K	Squaw Lake	19.37	339		P	Pn	19 54 11.0	+0.8
	baz=143,SNR=110							
F24K					S	S	19 57 49.9	+2.3
	baz=143							
E25K	Arctic Village	19.38	342		P	Pn	19 54 10.5	+0.2
	baz=148,SNR=237							
E25K					S	S	19 57 51.1	+3.3
	baz=148							
E25K					S	S	19 57 51.1	+3.3
	baz=148							
J18K	Innoko River	19.43	322		IAmb	IAmb	19 54 16.4	
	comp=Z,265nm,1.1s							
J18K	Innoko River	19.43	322		P	P	19 54 10.5	+0.7
	baz=119,SNR=54							
J18K					S	Sn	19 57 47.1	-1.3
	baz=119							
DNR	Dunn Ranch,Anz	19.45	145		IAmb	IAmb	19 54 25.3	
	comp=Z,262nm,1.4s							
D28M	Stokes Point	19.46	351		P	Pn	19 54 10.2	-1.0
	baz=163,SNR=90							
D28M					S	S	19 57 51.9	+2.7
	baz=163							
PMD	Palm Desert	19.47	144		IAmb	IAmb	19 54 26.1	
	comp=Z,319nm,1.9s							
PFO	Pinyon Flats O	19.47	144		P	Pn	19 54 13.1	+1.4
	comp=Z,0.2nm,0.3s,baz=330,slow=9.9,SNR=14							
PFO					LR	LR	20 01 55.2	
	comp=Z,23µm,18.9s,baz=322,slow=37							
	comp=Z,32nm,1.1s							
PFO	Pinyon Flats O	19.47	144		P	Pn	19 54 12.8	+1.0
PFO	Pinyon Flats O	19.47	144	i	P	Pn	19 54 12.4	+0.7
PFO					pmax	pmax		
	comp=Z,184nm,1.3s							
L17K	Donlin	19.47	318		P	P	19 54 09.8	-0.4
	baz=114,SNR=19							
L17K					S	Sn	19 57 49.2	-0.2
	baz=114							
L17K					S	Sn	19 57 49.2	-0.2
	baz=114							
PV01	Paradox Valley	19.50	121		IAmb	IAmb	19 54 16.8	
	comp=Z,185nm,1.1s							
N15K	Kwethluk River	19.61	311		P	Pn	19 54 12.9	-0.1
	baz=106,SNR=7.1							
N15K					S	Sn	19 57 57.2	+4.5
	baz=106							
N15K					S	Sn	19 57 57.2	+4.5
	baz=106							
D27M	Malcolm River	19.64	348		P	Pn	19 54 13.1	-0.4
	baz=158							
COLD	Coldfoot	19.70	336		IAmb	IAmb	19 54 19.0	
	comp=Z,365nm,1.2s							
COLD	Coldfoot	19.70	336		P	Pn	19 54 13.9	-0.3
	baz=139,SNR=190							
COLD					S	Sn	19 57 58.4	+3.4
	baz=139							
K17K	Iditarod	19.72	319		P	P	19 54 12.5	-0.4
	baz=115,SNR=75							
K17K					S	Sn	19 57 57.7	+2.3
	baz=115							
BC3	Big Chuckawall	19.82	142			Pn	19 54 16.1	+0.2
L16K	Owhat River	19.82	316		P	P	19 54 11.3	-2.7
L16K					IAmb	IAmb	19 54 25.2	
	comp=Z,370nm,1.4s							
L16K	Owhat River	19.82	316		P	P	19 54 14.9	+0.9
	baz=111,SNR=13							
L16K					S	Sn	19 57 58.9	+1.1
	baz=111							
L16K					S	Sn	19 57 58.9	+1.1
	baz=111							
IMAR	Indian Mountai	19.84	331		P	P	19 54 13.1	-1.1
H20K	Anotleneega Mo	19.89	329		P	P	19 54 13.6	-1.2
	baz=127,SNR=64							
H20K					S	Sn	19 58 01.6	+2.0
	baz=127							
H20K					S	Sn	19 58 01.6	+2.0
	baz=127							
S12K	Black Hills	19.93	298		P	P	19 54 15.8	+0.5
	baz=91							
O14K	Tigyukauivet M	19.95	308		P	P	19 54 15.9	+0.4
	baz=102							
O14K					S	Sn	19 58 03.0	+2.0
	baz=102							
O14K					S	Sn	19 58 03.0	+2.0
	baz=102							
E24K	Your Creek	19.95	339		P	Pn	19 54 17.2	0.0
	baz=143							
WUAZ	Wupatki	20.04	131			P	19 54 17.8	+1.0
WUAZ					IAmb	IAmb	19 54 25.9	
	comp=Z,424nm,1.6s							
WUAZ	Wupatki	20.04	131	⇑	P	Pn	19 54 19.5	+0.9
M15K	Kasigluk River	20.04	313		P	P	19 54 16.7	+0.3
	baz=107,SNR=23							
M15K					S	Sn	19 58 05.7	+2.5
	baz=107							
ISCO	Idaho Springs	20.06	113			P	19 54 17.7	+0.6
ISCO					IAmb	IAmb	19 54 28.0	
	comp=Z,459nm,1.9s							
ISCO					IAMs_20	IAMs_20	20 02 17.4	
	comp=Z,52µm,18.0s							
ISCO	Idaho Springs	20.06	113		P	P	19 54 17.7	+0.6
ISCO					pmax	pmax		
	comp=Z,459nm,1.9s							
ISCO					MLR	MLR		
	comp=Z,52µm,18.0s							
ISCO	Idaho Springs	20.06	113	⇑	P	Pn	19 54 19.4	+0.5
BLYC	Blythe	20.11	140			Pn	19 54 19.3	+0.1
BLYC					IAmb	IAmb	19 54 28.3	
	comp=Z,277nm,1.4s							
G21K	Allakaket	20.11	332		P	P	19 54 17.5	+0.3
	baz=132,SNR=59							
G21K					S	Sn	19 58 07.1	+2.2
	baz=132							
GCSA	Galena City Sc	20.16	326		P	P	19 54 17.4	-0.2
	baz=122,SNR=19							
GCSA					S	Sn	19 58 05.5	-0.4
	baz=122							
E23K	Chandalar	20.20	338		P	P	19 54 18.6	+0.4
	baz=141,SNR=287							
E23K					S	Sn	19 58 10.4	+3.4
	baz=141							
BAR	Barrett	20.23	146		IAmb	IAmb	19 54 28.1	
	comp=Z,311nm,1.6s							
N14K	Kuskokwak Cree	20.32	310		P	P	19 54 16.8	-2.6
N14K					IAMs_20	IAMs_20	20 00 31.4	
	comp=Z,39µm,21.0s							
N14K	Kuskokwak Cree	20.32	310		P	P	19 54 19.8	+0.4
	baz=103,SNR=15							
N14K					S	Sn	19 58 10.3	+0.6
	baz=103							
J17K	VABM Dome	20.34	321		IAmb	IAmb	19 54 34.0	
	comp=Z,243nm,1.1s							
J17K	VABM Dome	20.34	321		P	P	19 54 19.4	-0.1
	baz=116,SNR=37							
J17K					S	Sn	19 58 10.9	+0.7
	baz=116							
J17K					S	Sn	19 58 10.9	+0.7
	baz=116							
C27K	Jago River	20.38	346		IAMs_20	IAMs_20	20 01 59.8	
	comp=Z,49µm,22.0s							
C27K	Jago River	20.38	346		P	Pn	19 54 21.5	-0.7
	baz=154							
F22K	John River	20.43	335		P	Pn	19 54 22.1	-0.7
	baz=136							
H19K	Roundabout Mou	20.44	328		P	P	19 54 21.2	+0.5
	baz=125							
YUH	Yuha Desert	20.53	145		IAmb	IAmb	19 54 30.3	
	comp=Z,250nm,1.4s							
D25K	Kavik River	20.56	343		IAMs_20	IAMs_20	20 02 24.6	
	comp=Z,68µm,19.0s							
D25K	Kavik River	20.56	343		P	Pn	19 54 23.4	-0.9
	baz=149							
F21K	Alatna River	20.59	334		IAmb	IAmb	19 54 35.4	
	comp=Z,333nm,1.2s							
F21K	Alatna River	20.59	334		P	P	19 54 22.6	+0.2
	baz=133,SNR=45							
F21K					S	Sn	19 58 16.8	+0.6
	baz=133							
F21K					S	Sn	19 58 16.8	+0.6
	baz=133							
Y14A	Wickenburg	20.59	137		IAmb	IAmb	19 54 36.2	
	comp=Z,462nm,2.0s							
GLA	Glamis	20.59	142		IAmb	IAmb	19 54 34.6	
	comp=Z,309nm,1.4s							
TOLK	Toolik Lake Re	20.65	340		IAMs_20	IAMs_20	20 02 24.6	
	comp=Z,54µm,20.0s							
TOLK	Toolik Lake Re	20.65	340		P	P	19 54 23.2	+0.2
	baz=142,SNR=114							
TOLK					S	Sn	19 58 19.6	+1.8
	baz=142							
TOLK					S	Sn	19 58 19.6	+1.8
	baz=142							
M14K	Bethel	20.66	312		P	P	19 54 21.2	-1.9
M14K					IAmb	IAmb	19 54 35.1	
	comp=Z,393nm,1.2s							
M14K	Bethel	20.66	312		P	P	19 54 24.6	+1.6
	baz=105,SNR=14							
M14K					S	Sn	19 58 20.8	+2.8
	baz=105							
M14K					S	Sn	19 58 20.8	+2.8
	baz=105							
FALS	False Pass	20.71	295			P	19 54 19.9	-3.7
FALS					IAMs_20	IAMs_20	20 00 05.5	
	comp=Z,44µm,21.0s							
FALS	False Pass	20.71	295		P	Pn	19 54 29.3	+3.3
FALS	False Pass	20.71	295		P	P	19 54 24.4	+0.8
	baz=88							
FALS					S	S	19 58 17.4	+3.1
	baz=88							
L15K	Ungalak Mounta	20.71	315		P	P	19 54 23.0	-0.6
	baz=108,SNR=46							
L15K					S	Sn	19 58 18.8	-0.5
	baz=108							
E22K	Anaktuvuk Pass	20.80	337		P	P	19 54 23.4	-1.2
E22K					IAMs_20	IAMs_20	20 01 57.4	
	comp=Z,39µm,18.0s							
E22K	Anaktuvuk Pass	20.80	337		P	P	19 54 25.4	+0.8
	baz=138,SNR=306							
E22K					S	Sn	19 58 20.9	-0.4
	baz=138							
E22K					S	Sn	19 58 20.9	-0.4
	baz=138							
C26K	Camden Bay	20.83	345		P	P	19 54 25.7	+0.8
	baz=152,SNR=162							
C26K					S	Sn	19 58 22.5	+0.4
	baz=152							
C26K					S	Sn	19 58 22.5	+0.4
	baz=152							
X16A	Lo Mia Camp, P	20.90	133		IAmb	IAmb	19 54 37.8	
	comp=Z,177nm,1.1s							
D24K	Happy Valley	20.90	341		IAMs_20	IAMs_20	20 02 15.5	
	comp=Z,35µm,19.0s							
D24K	Happy Valley	20.90	341		P	P	19 54 26.3	+0.6
	baz=144							
H18K	Honhosa River	20.91	326		P	P	19 54 26.2	+0.3
	baz=121,SNR=67							
H18K					S	Sn	19 58 22.0	-2.0
	baz=121							
J16K	Anvik River	20.91	320		P	P	19 54 25.4	-0.4
	baz=113							
J16K					S	Sn	19 58 22.4	-1.6
	baz=113							
K15K	Wolf Creek Mou	20.94	317		P	P	19 54 24.8	-1.3
	baz=110,SNR=30							
K15K					S	Sn	19 58 25.5	+0.9
	baz=110							
K15K					S	Sn	19 58 25.5	+0.9
	baz=110							
CCX	Cicese	20.97	147		IAmb	IAmb	19 54 36.1	
	comp=Z,280nm,1.2s							
G19K	Purcell Mounta	21.01	329		IAmb	IAmb	19 54 36.8	
	comp=Z,382nm,1.4s							
G19K					IAMs_20	IAMs_20	20 01 59.7	
	comp=Z,30µm,18.0s							
G19K	Purcell Mounta	21.01	329		P	P	19 54 26.5	-0.4
	baz=125,SNR=50							
G19K					S	Sn	19 58 25.2	-1.2
	baz=125							
G19K					S	Sn	19 58 25.2	-1.2
	baz=125							
ESJX	Sierra Juarez	21.10	145		IAmb	IAmb	19 54 33.3	
	comp=Z,160nm,1.1s							
F20K	Avaraart Lake	21.13	332		IAMs_20	IAMs_20	20 02 33.8	
	comp=Z,35µm,20.0s							
F20K	Avaraart Lake	21.13	332		P	P	19 54 28.0	-0.1
	baz=129							
D23K	Nanushuk River	21.16	339		IAMs_20	IAMs_20	20 02 21.5	
	comp=Z,38µm,20.0s							
D23K	Nanushuk River	21.16	339		P	P	19 54 28.1	-0.4
	baz=141,SNR=123							
D23K					S	Sn	19 58 29.1	-0.8
	baz=141							
L14K	Kuka Creek	21.16	314		P	P	19 54 30.3	+1.8
	baz=106							
L14K					S	Sn	19 58 29.5	-0.4
	baz=106							
L14K					S	Sn	19 58 29.5	-0.4
	baz=106							
I17K	Unalakleet	21.20	321		P	P	19 54 29.4	+0.5
	baz=115,SNR=31							
I17K					S	Sn	19 58 29.5	-1.4
	baz=115							
M13K	Dall Lake	21.24	311		P	P	19 54 25.6	-3.7
M13K					IAMs_20	IAMs_20	20 01 10.7	
	comp=Z,35µm,21.0s							
M13K	Dall Lake	21.24	311		P	P	19 54 30.0	+0.7
	baz=103							
M13K					S	Sn	19 58 29.2	-2.7
	baz=103							
C24K	Franklin Bluff	21.34	342		IAMs_20	IAMs_20	20 03 09.4	
	comp=Z,59µm,18.0s							
C24K	Franklin Bluff	21.34	342		P	P	19 54 31.5	+1.1
	baz=145,SNR=213							
C24K					S	Sn	19 58 32.0	-2.3
	baz=145							
H17K	Granite Mounta	21.37	324		P	P	19 54 31.2	+0.5
	baz=118,SNR=110							
H17K					S	Sn	19 58 31.6	-3.4
	baz=118							
H17K					S	Sn	19 58 31.6	-3.4
	baz=118							
G18K	Tagagawik	21.41	327		IAmb	IAmb	19 54 42.0	
	comp=Z,475nm,1.6s							
G18K	Tagagawik	21.41	327		P	P	19 54 31.4	+0.3
	baz=122,SNR=53							
G18K					S	Sn	19 58 33.8	-2.1
	baz=122							
SDCO	Great Sand Dun	21.50	117		IAmb	IAmb	19 54 46.2	
	comp=Z,239nm,1.4s							
SDCO					IAMs_20	IAMs_20	20 03 15.8	
	comp=Z,50µm,19.0s							
SDCO	Great Sand Dun	21.50	117	⇑	P	P	19 54 33.4	+0.8
OGNE	Ogallala	21.53	105			P	19 54 34.9	+2.2
OGNE					IAMs_20	IAMs_20	20 03 05.6	
	comp=Z,31µm,19.0s							
OGNE	Ogallala	21.53	105	⇑	P	P	19 54 34.8	+2.0
D22K	Ayikyak River	21.56	338			P	19 54 30.6	-2.3
D22K					IAmb	IAmb	19 54 39.0	
	comp=Z,172nm,1.1s							
D22K					IAMs_20	IAMs_20	20 02 31.0	
	comp=Z,57µm,20.0s							
D22K	Ayikyak River	21.56	338		P	P	19 54 34.6	+1.8
	baz=137,SNR=71							
D22K					S	Sn	19 58 35.7	-4.0
	baz=137							
D22K					S	Sn	19 58 35.7	-4.0
	baz=137							
E21K	Killik River	21.57	336		IAMs_20	IAMs_20	20 02 32.4	
	comp=Z,35µm,20.0s							
E21K	Killik River	21.57	336		P	P	19 54 32.1	-0.8
	baz=135							
ULM	Lac du Bonnet	21.61	77		P	P	19 54 33.1	-0.3
	comp=Z,152nm,1.1s,baz=284,slow=9.4,SNR=48							
ULM					LR	LR	20 03 56.4	
	comp=Z,9µm,18.0s,baz=280,slow=40							
	comp=Z,152nm,1.1s							
ULM	Lac du Bonnet	21.61	77			P	19 54 33.1	-0.3
ULM					IAmb	IAmb	19 54 39.2	
	comp=Z,367nm,1.3s							
ULM	Lac du Bonnet	21.61	77	i	P	P	19 54 33.7	+0.2
F19K	Shaleruckik Mo	21.64	330		IAmb	IAmb	19 54 50.1	
	comp=Z,235nm,1.1s							
F19K	Shaleruckik Mo	21.64	330		P	P	19 54 33.2	-0.4
	baz=126,SNR=96							
F19K					S	S	19 58 36.3	+3.7
	baz=126							
SUSD	Miller	21.66	94		IAMs_20	IAMs_20	20 02 56.0	
	comp=Z,54µm,22.0s							
VTX	Valle De La Tr	21.71	146		IAmb	IAmb	19 54 44.1	
	comp=Z,349nm,1.7s							
A36M	Sachs Harbour	21.76	4		P	P	19 54 34.0	-0.9
A36M					IAmb	IAmb	19 54 42.5	
	comp=Z,257nm,1.2s							
A36M	Sachs Harbour	21.76	4		P	P	19 54 35.2	+0.3
	baz=188,SNR=95							
A36M					S	Sn	19 58 39.8	-4.4
	baz=188							
C23K	Itkillik River	21.83	341		IAMs_20	IAMs_20	20 03 02.8	
	comp=Z,43µm,20.0s							
C23K	Itkillik River	21.83	341		P	P	19 54 37.1	+1.4
	baz=142,SNR=86							
C23K					S	Sn	19 58 41.0	-5.0
	baz=142							
C23K					S	Sn	19 58 41.0	-5.0

	baz=142						
E19K	Redstone River	21.85	332	IAMs_20	IAMs_20	20 03 05.6	
	comp=Z,28µm,18.0s						
E19K	Redstone River	21.85	332	P	P	19 54 36.4	+0.6
	baz=128,SNR=99						
E19K				S	Sn	19 58 41.5	-4.9
	baz=128						
E19K				S	Sn	19 58 41.5	-4.9
	baz=128						
G17K	Kiwalik Mounta	21.92	325	P	P	19 54 35.7	-0.8
	baz=118,SNR=41						
G17K				S	Sn	19 58 43.3	-4.8
	baz=118						
G17K				S	Sn	19 58 43.3	-4.8
	baz=118						
J14K	Nanvaranak Lak	21.97	317	P	P	19 54 34.9	-2.4
J14K				IAmb	IAmb	19 54 47.9	
	comp=Z,264nm,1.2s						
J14K	Nanvaranak Lak	21.97	317	P	P	19 54 37.7	+0.5
	baz=108,SNR=13						
J14K				S	S	19 58 44.4	+5.3
	baz=108						
E20K	Nigu River	22.05	334	P	P	19 54 38.3	+0.2
	baz=131,SNR=78						
E20K				S	S	19 58 45.2	+4.6
	baz=131						
K30B	Basset	22.10	99	IAMs_20	IAMs_20	20 03 20.1	
	comp=Z,70µm,21.0s						
AKUT	Akutan	22.12	294	P	P	19 54 45.5	+6.7
F18K	Selawik	22.13	328	P	P	19 54 37.6	-1.2
	baz=122,SNR=123						
F18K				S	S	19 58 45.2	+3.3
	baz=122						
F18K				S	S	19 58 45.2	+3.3
	baz=122						
H16K	Elim	22.13	322	P	P	19 54 38.4	-0.5
	baz=114,SNR=53						
H16K				S	S	19 58 46.2	+4.2
	baz=114						
H16K				S	S	19 58 46.2	+4.2
	baz=114						
FCC	Fort Churchill	22.13	54	P	P	19 54 39.3	+0.4
FCC				IAmb	IAmb	19 54 51.2	
	comp=Z,148nm,0.9s						
FCC	Fort Churchill	22.13	54	P	P	19 54 39.3	+0.4
FCC				pmax	pmax		
	comp=Z,148nm,0.9s						
AGMN	Agassiz Nation	22.16	82		P	19 54 38.4	-1.0
AGMN				IAmb	IAmb	19 54 45.8	
	comp=Z,251nm,0.9s						
AGMN				IAMs_20	IAMs_20	20 03 21.0	
	comp=Z,77µm,20.0s						
AGMN	Agassiz Nation	22.16	82	⇑P	P	19 54 39.6	+0.2
K13K	Kusilvak Mount	22.23	315	P	P	19 54 40.9	+0.9
K13K				IAmb	IAmb	19 54 50.9	
	comp=Z,193nm,1.4s						
K13K	Kusilvak Mount	22.23	315	P	P	19 54 39.6	-0.4
	baz=105						
K13K				S	S	19 58 47.5	+3.5
	baz=105						
K13K				S	S	19 58 47.5	+3.5
	baz=105						
C21K	Knifeblade Rid	22.29	337	P	P	19 54 39.6	-1.0
	baz=135,SNR=113						
C21K				S	Sn	19 58 50.9	-6.1
	baz=135						
C21K				S	Sn	19 58 50.9	-6.1
	baz=135						
KSCO	Kaye Shedlock'	22.34	110	IAMs_20	IAMs_20	20 03 26.6	
	comp=Z,29µm,21.0s						
214A	Organ Pipe Nat	22.37	139	IAmb	IAmb	19 54 48.3	
	comp=Z,156nm,1.2s						
SFX	San Felipe	22.37	144	IAmb	IAmb	19 54 47.0	
	comp=Z,151nm,1.2s						
PIX	Pinacate	22.45	141	IAmb	IAmb	19 54 47.7	
	comp=Z,121nm,1.2s						
D20K	Etivluk River	22.47	335	IAmb	IAmb	19 54 50.6	
	comp=Z,207nm,1.1s						
D20K				IAMs_20	IAMs_20	20 03 52.0	
	comp=Z,59µm,18.0s						
D20K	Etivluk River	22.47	335	P	P	19 54 41.5	-1.0
	baz=131,SNR=94						
D20K				S	S	19 58 53.4	+5.0
	baz=131						
D20K				S	S	19 58 53.4	+5.0
	baz=131						
G16K	Koyuk River	22.50	324	IAmb	IAmb	19 54 52.7	
	comp=Z,90nm,1.0s						
G16K	Koyuk River	22.50	324	P	P	19 54 42.0	-0.9
	baz=116,SNR=26						
G16K				S	S	19 58 54.2	+5.3
	baz=116						
T25A	Trinidad	22.54	116	IAMs_20	IAMs_20	20 03 51.4	
	comp=Z,37µm,19.0s						
UNV	Unalaska Valle	22.58	293	IAMs_20	IAMs_20	20 01 06.4	
	comp=Z,29µm,20.0s						
UNV	Unalaska Valle	22.58	293	P	P	19 54 50.7	+7.0
UNV	Unalaska Valle	22.58	293	S	S	19 58 55.2	+4.6
	baz=83						
B21K	Ikpikpuk River	22.58	338	IAMs_20	IAMs_20	20 03 36.9	
	comp=Z,29µm,21.0s						
B21K	Ikpikpuk River	22.58	338	P	P	19 54 43.4	-0.2
	baz=136						
F17K	Baldwin Pennin	22.59	327	P	P	19 54 42.6	-1.2
	baz=120,SNR=61						
BLKN	Baker Lake	22.61	39	P	P	19 54 43.4	-0.6
BLKN				IAmb	IAmb	19 55 04.2	
	comp=Z,221nm,1.1s						
M11K	Mekoryuk	22.62	310	IAMs_20	IAMs_20	20 02 13.9	
	comp=Z,38µm,18.0s						
M11K	Mekoryuk	22.62	310	P	P	19 54 44.2	0.0
	baz=100						
M11K				S	S	19 58 55.1	+3.9
	baz=100						
M11K				S	S	19 58 55.1	+3.9
	baz=100						
D19K	Kuna River	22.75	333	IAMs_20	IAMs_20	20 03 40.5	
	comp=Z,30µm,18.0s						
D19K	Kuna River	22.75	333	P	P	19 54 42.4	-3.1
	baz=128,SNR=74						
D19K				S	S	19 58 57.7	+4.1
	baz=128						
F33A	5 Mile Ranch,	22.77	88	IAMs_20	IAMs_20	20 03 40.7	
	comp=Z,56µm,20.0s						
B22K	Teshekpuk Lake	22.83	340	IAMs_20	IAMs_20	20 03 36.3	
	comp=Z,50µm,19.0s						
B22K	Teshekpuk Lake	22.83	340	P	P	19 54 45.3	-1.0
	baz=139,SNR=361						
B22K				S	S	19 58 59.7	+4.9
	baz=139						
B22K				S	S	19 58 59.7	+4.9
	baz=139						
E18K	Tukpahlearik C	22.89	330	IAmb	IAmb	19 55 05.3	
	comp=Z,349nm,1.4s						
E18K				IAMs_20	IAMs_20	20 03 29.7	
	comp=Z,24µm,19.0s						
E18K	Tukpahlearik C	22.89	330	P	P	19 54 46.3	-0.6
	baz=123,SNR=35						
E18K				S	S	19 59 02.5	+6.7
	baz=123						
E18K				S	S	19 59 02.5	+6.7
	baz=123						
TUC	Tucson	22.96	135	P	P	19 54 49.5	+1.5
TUC	Tucson	22.96	135	P	P	19 54 49.5	+1.5
TUC				pmax	pmax		
	comp=Z,401nm,1.6s						
TUC				MLR	MLR		
	comp=Z,11µm,20.0s						
TUC	Tucson	22.96	135	⇑P	P	19 54 50.2	+2.2
G15K	Niukluk	22.98	322	P	P	19 54 45.8	-2.0
	baz=113,SNR=16						
G15K				S	S	19 59 03.0	+5.5
	baz=113						
TASM	ASL Pad, Albuq	23.00	123	IAmb	IAmb	19 54 58.9	
	comp=Z,77nm,1.3s						
TASM	ASL Pad, Albuq	23.00	123	IAmb	IAmb	19 54 58.9	
	comp=Z,78nm,1.3s						
ANMO	Albuquerque	23.00	123	LR	LR	20 03 46.8	
	comp=Z,18µm,19.2s,baz=313,slow=37						
ANMO	Albuquerque	23.00	123	P	P	19 54 49.6	+1.0
ANMO	Albuquerque	23.00	123	IAMs_20	IAMs_20	20 03 27.4	
	comp=Z,20µm,20.0s						
ANMO	Albuquerque	23.00	123	IAMs_20	IAMs_20	20 03 27.4	
	comp=Z,20µm,20.0s						
ANMO	Albuquerque	23.00	123	*ce*P	P	19 54 50.4	+1.8
ANMO				pmax	pmax		
	comp=Z,62nm,1.3s						
ANMO	Albuquerque	23.00	123	⇑P	P	19 54 50.3	+1.8
EPLO	Experimental L	23.10	78	P	P	19 54 48.4	-0.9
EPLO				IAmb	IAmb	19 54 57.0	
	comp=Z,159nm,0.9s						
E17K	Hotham Inlet	23.11	328	P	P	19 54 49.5	+0.3
	baz=120,SNR=33						
E17K				S	S	19 59 04.0	+4.3
	baz=120						
ANM	Nome	23.35	321	P	P	19 54 49.6	-2.0
ANM				IAmb	IAmb	19 55 08.8	
	comp=Z,98nm,1.0s						
ANM	Nome	23.35	321	P	P	19 54 49.6	-2.0
ANM				pmax	pmax		
	comp=Z,98nm,1.0s						
ANM				MLR	MLR		
	comp=Z,21µm,20.0s						
ANM	Nome	23.35	321	P	P	19 54 52.2	+0.5
	baz=110,SNR=11						
ANM				S	S	19 59 09.4	+5.7
	baz=110						
B20K	Meade River	23.48	337	IAMs_20	IAMs_20	20 03 54.8	
	comp=Z,28µm,19.0s						
B20K	Meade River	23.48	337	P	P	19 54 52.9	0.0
	baz=132						
ECSD	EROS Data Cent	23.48	94	IAMs_20	IAMs_20	20 04 02.2	
	comp=Z,61µm,22.0s						
ECSD	EROS Data Cent	23.48	94	⇑P	P	19 54 54.0	+0.7
F15K	North Star Dit	23.50	324	IAmb	IAmb	19 55 00.9	
	comp=Z,276nm,1.2s						
F15K	North Star Dit	23.50	324	P	P	19 54 53.9	+0.8
	baz=114,SNR=33						
F15K				S	S	19 59 12.1	+6.0
	baz=114						
F15K				S	S	19 59 12.1	+6.0
	baz=114						
C19K	Lookout Ridge	23.55	334	IAmb	IAmb	19 55 13.9	
	comp=Z,355nm,1.6s						
C19K				IAMs_20	IAMs_20	20 04 20.0	
	comp=Z,45µm,18.0s						
C19K	Lookout Ridge	23.55	334	P	P	19 54 53.8	+0.1
	baz=127,SNR=38						
C19K				S	S	19 59 12.3	+5.2
	baz=127						
C19K				S	S	19 59 12.3	+5.2
	baz=127						
A22K	Sinclair Lake	23.67	340	P	P	19 54 56.0	+1.3
	baz=137						
C18K	Utukok River	23.75	332	IAMs_20	IAMs_20	20 04 33.5	
	comp=Z,40µm,19.0s						
C18K	Utukok River	23.75	332	P	P	19 54 55.5	-0.1
	baz=124,SNR=65						
C18K				S	S	19 59 15.3	+5.0
	baz=124						
C18K				S	S	19 59 15.3	+5.0
	baz=124						
D17K	Noatak River	23.84	329	P	P	19 54 56.2	-0.2
	baz=120,SNR=22						
D17K				S	S	19 59 16.8	+5.3
	baz=120						
D17K				S	S	19 59 16.8	+5.3
	baz=120						
RDOG	Red Dog Mine	23.97	330	IAmb	IAmb	19 55 06.5	
	comp=Z,384nm,1.8s						
RDOG	Red Dog Mine	23.97	330	P	P	19 54 58.0	+0.3
	baz=121,SNR=8.4						
RDOG				S	S	19 59 20.7	+7.2
	baz=121						
F14K	Arctic Creek	24.05	323	P	P	19 54 58.5	+0.1
	baz=111						
F14K				S	S	19 59 23.5	+8.5
	baz=111						
NIKH	Nikolski High	24.09	291	P	P	19 54 58.4	-0.5
	baz=80						
NIKH				S	S	19 59 18.3	+2.6
	baz=80						
P08K	Saint George I	24.12	300	IAMs_20	IAMs_20	20 02 29.5	
	comp=Z,27µm,21.0s						
P08K	Saint George I	24.12	300	P	P	19 55 01.2	+2.1
	baz=88						
CBKS	Cedar Bluff	24.22	107	IAMs_20	IAMs_20	20 04 51.0	
	comp=Z,30µm,18.0s						
CBKS	Cedar Bluff	24.22	107	⇑P	P	19 55 02.0	+1.7
A21K	Barrow	24.27	339	P	P	19 55 01.3	+0.9
	baz=135,SNR=62						
A21K				S	S	19 59 22.5	+4.2
	baz=135						
A21K				S	S	19 59 22.5	+4.2
	baz=135						
C17K	DeLong Mountai	24.27	330	P	P	19 54 59.8	-0.7
	baz=121						
C17K				S	S	19 59 22.3	+3.8
	baz=121						
B18K	Kokolik River	24.34	333	P	P	19 55 01.5	+0.4
	baz=125,SNR=109						
B18K				S	S	19 59 23.2	+3.7
	baz=125						
B18K				S	S	19 59 23.2	+3.7
	baz=125						
SPIA	Saint Paul Isl	24.49	302	IAMs_20	IAMs_20	20 03 04.1	
	comp=Z,27µm,21.0s						
SPIA	Saint Paul Isl	24.49	302	P	P	19 55 02.0	-0.5
	baz=88						
L34A	Svendsen Farm,	24.52	97	IAMs_20	IAMs_20	20 04 52.9	
	comp=Z,57µm,19.0s						
A19K	Wainwright	24.64	335	P	P	19 55 04.3	+0.6
	baz=127,SNR=62						
A19K				S	S	19 59 30.2	+6.0
	baz=127						
A19K				S	S	19 59 30.2	+6.0
	baz=127						
TNA	Tin City	24.70	322	IAmb	IAmb	19 55 17.9	
	comp=Z,175nm,1.4s						
TNA	Tin City	24.70	322	⇑P	P	19 55 05.9	+1.5
TNA	Tin City	24.70	322	P	P	19 55 04.5	+0.1
	baz=109						
TNA				S	S	19 59 32.5	+7.1
	baz=109						
C16K	Lisburne Hills	24.87	329	P	P	19 55 06.7	+0.9
	baz=118,SNR=47						
C16K				S	S	19 59 35.1	+7.1
	baz=118						
C16K				S	S	19 59 35.1	+7.1
	baz=118						
EYMN	Ely	25.04	81	IAMs_20	IAMs_20	20 04 57.9	
	comp=Z,60µm,22.0s						
EYMN	Ely	25.04	81	⇑P	P	19 55 08.5	+0.9
R32A	Long Quarter,	25.09	106	IAmb	IAmb	19 55 41.2	
	comp=Z,206nm,1.3s						
R32A				IAMs_20	IAMs_20	20 05 18.1	
	comp=Z,23µm,20.0s						
PH02	Texas Public H	25.18	116	IAmb	IAmb	19 55 16.1	
	comp=Z,194nm,1.7s						
SPMN	Marine on St.	25.25	87	IAMs_20	IAMs_20	20 05 08.4	
	comp=Z,52µm,22.0s						
I37A	Lemond, Waseca	25.41	90	IAmb	IAmb	19 55 18.5	
	comp=Z,105nm,1.1s						
I37A				IAMs_20	IAMs_20	20 05 09.8	
	comp=Z,46µm,22.0s						
E38A	The Farm, Brul	25.49	84	IAmb	IAmb	19 55 32.7	
	comp=Z,236nm,1.5s						
AMTX	Amarillo	25.70	116	IAMs_20	IAMs_20	20 05 43.0	
	comp=Z,47µm,21.0s						
AMTX	Amarillo	25.70	116	⇑P	P	19 55 15.5	+1.7
HSIG		25.71	139	⇑P	P	19 55 15.9	+2.1
MSTX	Muleshoe	25.74	119	IAmb	IAmb	19 55 21.2	
	comp=Z,172nm,1.4s						
MSTX				IAMs_20	IAMs_20	20 05 53.5	
	comp=Z,34µm,19.0s						
GAMB	Gambell	25.80	317	P	P	19 55 14.5	+0.2
	baz=101						
GAMB				S	S	19 59 52.4	+10
	baz=101						
KSU1	Kansas State U	25.98	103	IAMs_20	IAMs_20	20 05 45.2	
	comp=Z,43µm,21.0s						
KSU1	Kansas State U	25.98	103	⇑P	P	19 55 18.3	+2.1
MNTX	Cornudas Mount	26.09	126	IAmb	IAmb	19 55 25.6	
	comp=Z,167nm,1.4s						
MNTX	Cornudas Mount	26.09	126	⇑P	P	19 55 19.1	+1.9
TBO	Thunder Bay	26.11	78	IAmb	IAmb	19 55 23.6	
	comp=Z,89nm,1.0s						
SMWD	Samnorwood	26.37	114	IAmb	IAmb	19 55 27.9	
	comp=Z,171nm,1.9s						
SCIA	State Center	26.56	94	IAmb	IAmb	19 55 32.9	
	comp=Z,95nm,1.0s						
SCIA				IAMs_20	IAMs_20	20 05 57.7	
	comp=Z,52µm,19.0s						
CROK	Carrier	26.77	109	IAmb	IAmb	19 55 31.3	
	comp=Z,164nm,1.2s						
G40A	Rib Lake	26.90	85	IAmb	IAmb	19 55 29.1	
	comp=Z,48nm,0.9s						
G40A				IAMs_20	IAMs_20	20 06 07.7	
	comp=Z,56µm,21.0s						
DKNS	Dickens	27.01	117	IAmb	IAmb	19 55 33.4	
	comp=Z,130nm,1.4s						
VHRN	Van Horn	27.02	127	IAmb	IAmb	19 55 33.5	
	comp=Z,102nm,1.1s						
BLOK	Blackwell	27.07	108	IAmb	IAmb	19 56 08.6	
	comp=Z,120nm,1.3s						
POST	Post	27.12	119	IAmb	IAmb	19 55 35.4	
	comp=Z,67nm,1.4s						
N38A	Joes South For	27.14	96	IAMs_20	IAMs_20	20 06 17.3	
	comp=Z,50µm,20.0s						
I40A	Norwalk	27.25	88	IAmb	IAmb	19 56 08.0	
	comp=Z,175nm,1.4s						
I40A				IAMs_20	IAMs_20	20 06 20.2	
	comp=Z,60µm,22.0s						
T35A	Sooner Cattle	27.40	107	IAmb	IAmb	19 55 53.1	
	comp=Z,129nm,1.0s						
ATKA	Atka Island	27.44	291	IAMs_20	IAMs_20	20 03 27.1	
	comp=Z,21µm,22.0s						
OK051	E0350 and S346	27.46	108	IAmb	IAmb	19 55 50.2	
	comp=Z,184nm,1.4s						
WMOK	Wichita Mounta	27.49	113	IAmb	IAmb	19 55 33.4	
	comp=Z,68nm,1.0s						
WMOK	Wichita Mounta	27.49	113	IAMs_20	IAMs_20	20 06 56.1	
	comp=Z,42µm,19.0s						
WMOK	Wichita Mounta	27.49	113	⇑P	P	19 55 31.7	+1.9
OK029	Liberty Lake	27.56	110	IAMs_20	IAMs_20	20 06 15.6	
	comp=Z,21µm,20.0s						
P38A	Dawn	27.61	99	IAmb	IAmb	19 55 35.9	
	comp=Z,87nm,0.8s						
OK052	Battle Ridge R	27.82	108	IAMs_20	IAMs_20	20 06 57.4	
	comp=Z,18µm,18.0s						
JFWS	Jewell Farm	27.95	90	IAmb	IAmb	19 55 45.2	
	comp=Z,89nm,1.1s						
JFWS	Jewell Farm	27.95	90	IAMs_20	IAMs_20	20 06 51.0	
	comp=Z,49µm,19.0s						
JFWS	Jewell Farm	27.95	90	⇓P	P	19 55 36.0	+2.1
FNO	Franklin	27.95	110	IAmb	IAmb	19 55 37.5	
	comp=Z,46nm,1.1s						
F42A	Maple Grove Fa	28.00	83	IAmb	IAmb	19 55 41.1	
	comp=Z,77nm,0.9s						
I42A	Draeger Farm,	28.34	87	IAmb	IAmb	19 56 17.5	
	comp=Z,101nm,1.3s						
W35A	Tecumseh	28.34	110	IAmb	IAmb	19 55 45.2	
	comp=Z,167nm,1.6s						
RES	Resolute Bay	28.34	19	LR	LR	20 06 47.8	
	comp=Z,35µm,21.1s,baz=232,slow=36						
WTFS	Witchita Falls	28.36	114	IAmb	IAmb	19 55 45.2	
	comp=Z,182nm,1.6s						
TUL3	Leonard	28.49	107	IAmb	IAmb	19 55 42.1	
	comp=Z,78nm,1.0s						
TUL3				IAMs_20	IAMs_20	20 07 50.1	
	comp=Z,18µm,19.0s						
ABTX	Abilene, Hawle	28.50	117	IAMs_20	IAMs_20	20 07 32.3	
	comp=Z,52µm,19.0s						
P40A	Paris	28.60	98	IAmb	IAmb	19 55 52.8	
	comp=Z,92nm,1.2s						
N41A	Harden Midland	28.70	95	IAmb	IAmb	19 55 45.3	
	comp=Z,71nm,0.9s						
L42A	Oliver, Polo	28.78	91	IAmb	IAmb	19 55 47.7	
	comp=Z,103nm,1.0s						
L42A				IAMs_20	IAMs_20	20 07 16.1	
	comp=Z,44µm,21.0s						
RLO	Rose Lookout	28.80	106	IAmb	IAmb	19 55 59.3	
	comp=Z,111nm,1.3s						
H43A	Windswept, Lux	28.80	85	IAMs_20	IAMs_20	20 07 17.0	
	comp=Z,51µm,20.0s						
TX31	Lajitas Ar. Si	28.86	127	IAmb	IAmb	19 55 50.7	
	comp=Z,180nm,1.5s						
TXAR	Lajitas Array	28.86	127	P	P	19 55 44.2	+2.0
	comp=Z,33nm,1.0s,baz=325,slow=6.4,SNR=103						
TXAR				LR	LR	20 07 37.3	
	comp=Z,11µm,18.6s,baz=315,slow=37						
	comp=Z,33nm,1.0s						
TXAR	Lajitas Array	28.86	127		P	19 55 43.0	+0.8
S39A	Bolivar	28.89	102	IAMs_20	IAMs_20	20 07 23.7	
	comp=Z,40µm,22.0s						
OZNA	Ozona	28.95	121	IAmb	IAmb	19 56 44.9	
	comp=Z,111nm,1.6s						
LOOK	Love County	28.95	112	IAmb	IAmb	19 56 04.3	
	comp=Z,152nm,1.3s						
ADK	Adak	29.01	291	IAMs_20	IAMs_20	20 04 14.5	
	comp=Z,22µm,22.0s						
U38A	Gravette	29.01	105	IAmb	IAmb	19 56 34.6	
	comp=Z,46nm,1.1s						
U38A				IAMs_20	IAMs_20	20 07 40.6	
	comp=Z,34µm,21.0s						
PLPT	Palo Pinto	29.13	115	IAmb	IAmb	19 56 18.7	
	comp=Z,49nm,1.2s						
R40A	Maddies Statio	29.19	100	IAmb	IAmb	19 56 03.5	
	comp=Z,108nm,1.5s						
K43A	Burlington	29.28	89	IAmb	IAmb	19 56 47.5	
	comp=Z,90nm,1.2s						
K43A				IAMs_20	IAMs_20	20 07 31.1	
	comp=Z,52µm,22.0s						
Z35A	Perchaven, San	29.38	113	IAMs_20	IAMs_20	20 08 06.1	
	comp=Z,28µm,20.0s						
FW06	Azle	29.45	114	IAmb	IAmb	19 55 54.9	
	comp=Z,206nm,1.8s						
ILON	Igloolik, Nuna	29.53	32		P	19 55 46.0	-1.6
L44A	Lake County Fo	29.81	90	IAmb	IAmb	19 56 09.3	
	comp=Z,91nm,1.2s						
HPIG		29.86	133	IAmb	IAmb	19 56 00.1	
	comp=Z,122nm,2.0s						
MGMO	Mountain Grove	29.88	102	IAmb	IAmb	19 56 41.9	
	comp=Z,42nm,0.9s						
CCM	Cathedral Cave	29.97	99		P	19 55 51.8	-0.1
CCM				IAmb	IAmb	19 56 45.6	
	comp=Z,65nm,1.1s						
CCM	Cathedral Cave	29.97	99	P	P	19 55 51.8	-0.1
CCM				pmax	pmax		
	comp=Z,65nm,1.2s						
CCM				MLR	MLR		
	comp=Z,59µm,20.0s						
CCM	Cathedral Cave	29.97	99	⇓P	P	19 55 53.2	+1.4
JCT	Junction City	30.02	120	IAmb	IAmb	19 55 57.2	
	comp=Z,49nm,0.8s						
JCT				IAMs_20	IAMs_20	20 08 37.8	
	comp=Z,26µm,18.0s						
JCT	Junction City	30.02	120	⇑P	P	19 55 53.9	+1.5
HQIL	Hanson Quary C	30.04	90	IAMs_20	IAMs_20	20 08 06.5	
	comp=Z,43µm,19.0s						
M44A	Midewin, Midew	30.14	91	IAMs_20	IAMs_20	20 08 08.0	
	comp=Z,45µm,19.0s						
P43A	Skaggs, Pawnee	30.14	95	IAmb	IAmb	19 55 58.1	
	comp=Z,57nm,0.9s						
E46A	Sault Ste Mari	30.17	80	IAmb	IAmb	19 56 15.2	
	comp=Z,94nm,1.3s						
WHTX	Lake Whitney,	30.22	115	IAmb	IAmb	19 56 01.6	
	comp=Z,185nm,1.7s						
WHTX				IAMs_20	IAMs_20	20 08 44.7	
	comp=Z,37µm,19.0s						
LPIG	La Paz	30.34	143	LR	LR	20 08 38.4	
	comp=Z,8µm,18.9s,baz=333,slow=37						
DRIO	Del Rio	30.39	123	IAmb	IAmb	19 56 02.0	
	comp=Z,77nm,1.1s						
FVM	French Village	30.53	99	IAmb	IAmb	19 56 18.3	
	comp=Z,46nm,0.9s						
MIAR	Mount Ida	30.75	107	⇑P	P	19 56 00.5	+1.7
FCAR	Ozark Folk Cen	30.77	104	IAmb	IAmb	19 56 03.5	
	comp=Z,55nm,0.8s						
SLBS	Sierra La Lagu	30.86	142		P	19 55 59.8	-0.1
SLBS				IAmb	IAmb	19 56 07.6	
	comp=Z,60nm,1.4s						
SLBS	Sierra La Lagu	30.86	142	⇓P	P	19 56 03.1	+3.2
Q44A	Meyer Farm, Va	30.89	96	IAmb	IAmb	19 56 31.1	
	comp=Z,62nm,1.1s						
L46A	Eue Claire	30.93	89	IAMs_20	IAMs_20	20 08 32.8	
	comp=Z,48µm,22.0s						
HNDO	Hondo	31.04	121	IAmb	IAmb	19 57 04.5	
	comp=Z,103nm,2.0s						
WHAR	Wooly Hollow	31.05	105	IAmb	IAmb	19 56 57.0	
	comp=Z,99nm,1.5s						
X40A	Basin Creek Fa	31.24	106	IAmb	IAmb	19 57 09.4	
	comp=Z,51nm,1.4s						
LCAR	Lake Charles	31.26	102	IAmb	IAmb	19 57 01.4	
	comp=Z,76nm,1.3s						
SFIN	Lafayette	31.28	92	IAMs_20	IAMs_20	20 08 44.4	
	comp=Z,41µm,21.0s						
UALR	University of	31.36	105	IAmb	IAmb	19 57 06.2	
	comp=Z,71nm,1.3s						
CGM3	Cape Girardeau	31.43	99	IAmb	IAmb	19 56 08.5	
	comp=Z,32nm,0.9s						
S44A	Carbondale	31.45	98	IAmb	IAmb	19 56 09.1	
	comp=Z,45nm,0.9s						
SIUC	Southern Illin	31.46	98	IAmb	IAmb	19 56 09.2	

	comp=Z,51nm,0.9s						
POIN	**Pond Inlet**	**31.65**	**27**		**P**	**19 56 05.9**	**-0.3**
POIN				IAmb	IAmb	19 56 37.6	
	comp=Z,43nm,1.0s						
N47A	**Urbana**	**31.91**	**90**	IAmb	IAmb	19 56 13.1	
	comp=Z,54nm,1.0s						
N47A				IAMs_20	IAMs_20	20 09 12.9	
	comp=Z,45µm,20.0s						
NATX	**Nacogdoches**	**32.03**	**112**	IAMs_20	IAMs_20	20 09 59.2	
	comp=Z,20µm,20.0s						
HNVL	**Huntsville, TX**	**32.28**	**114**	IAmb	IAmb	19 56 22.7	
	comp=Z,62nm,1.2s						
USIN	**University of**	**32.30**	**96**	IAmb	IAmb	19 56 16.6	
	comp=Z,67nm,0.8s						
BLO	**Bloomington**	**32.33**	**93**	IAmb	IAmb	19 56 17.2	
	comp=Z,41nm,0.8s						
735A	**Kenedy**	**32.38**	**120**	IAMs_20	IAMs_20	20 10 26.3	
	comp=Z,20µm,20.0s						
O48B	**Farmland**	**32.59**	**91**	IAMs_20	IAMs_20	20 09 33.6	
	comp=Z,38µm,21.0s						
HKT	**Hockley**	**32.66**	**116**		**P**	**19 56 15.0**	**-0.5**
HKT	**Hockley**	**32.66**	**116**	*i* P	**P**	**19 56 17.3**	**+1.7**
HKT				pmax	pmax		
	comp=Z,110nm,1.4s						
HKT	**Hockley**	**32.66**	**116**	⇑P	**P**	**19 56 18.0**	**+2.5**
N49A	**Columbus Grove**	**32.85**	**89**	IAmb	IAmb	19 56 35.6	
	comp=Z,33nm,1.0s						
N49A				IAMs_20	IAMs_20	20 09 42.3	
	comp=Z,47µm,22.0s						
P48A	**Milroy**	**32.86**	**92**	IAMs_20	IAMs_20	20 09 42.9	
	comp=Z,40µm,22.0s						
K50A	**Casco**	**32.89**	**85**	IAmb	IAmb	19 56 27.4	
	comp=Z,100nm,1.2s						
WCI	**Wyandotte Cave**	**33.02**	**95**		**P**	**19 56 16.8**	**-1.9**
WCI				IAmb	IAmb	19 56 24.7	
	comp=Z,48nm,1.2s						
WCI	**Wyandotte Cave**	**33.02**	**95**	IAMs_20	IAMs_20	20 09 50.2	
	comp=Z,40µm,21.0s						
WCI	**Wyandotte Cave**	**33.02**	**95**	P	**P**	**19 56 16.8**	**-1.9**
WCI				pmax	pmax		
	comp=Z,48nm,1.2s						
WCI				MLR	MLR		
	comp=Z,40µm,21.0s						
WVT	**Waverly**	**33.31**	**99**		**P**	**19 56 20.9**	**-0.3**
WVT				IAmb	IAmb	19 56 42.8	
	comp=Z,78nm,1.4s						
WVT	**Waverly**	**33.31**	**99**	P	**P**	**19 56 20.9**	**-0.3**
WVT				pmax	pmax		
	comp=Z,78nm,1.4s						
WVT				MLR	MLR		
	comp=Z,60µm,18.0s						
WVT	**Waverly**	**33.31**	**99**	⇓P	**P**	**19 56 22.7**	**+1.5**
143A	**Socs Landing,**	**33.33**	**107**	IAmb	IAmb	19 56 49.9	
	comp=Z,74nm,1.0s						
143A				IAMs_20	IAMs_20	20 10 33.1	
	comp=Z,15µm,20.0s						
OXF	**Oxford**	**33.35**	**103**	⇑P	**P**	**19 56 23.2**	**+1.6**
441A	**DeRidder**	**33.63**	**112**	IAMs_20	IAMs_20	20 10 58.5	
	comp=Z,21µm,18.0s						
BUKO	**Buck Lake**	**33.66**	**79**	IAmb	IAmb	19 56 46.6	
	comp=Z,147nm,1.6s						
Y45A	**Yeager Farm, C**	**33.69**	**104**	IAMs_20	IAMs_20	20 10 23.7	
	comp=Z,29µm,22.0s						
R49A	**Shelbyville**	**33.70**	**94**	IAmb	IAmb	19 56 42.4	
	comp=Z,125nm,1.8s						
R49A				IAMs_20	IAMs_20	20 10 58.1	
	comp=Z,15µm,18.0s						
PLAL	**Pickwick Lake**	**33.88**	**101**	IAmb	IAmb	19 56 30.4	
	comp=Z,47nm,1.0s						
ACSO	**Alum Creek Sta**	**34.00**	**89**	IAmb	IAmb	19 56 40.8	
	comp=Z,39nm,0.9s						
SADO	**Sadowa**	**34.13**	**79**	LR	LR	20 10 55.7	
	comp=Z,39µm,21.6s,baz=326,slow=37						
SHEM	**Shemya Is, Ala**	**34.15**	**296**	LR	LR	20 07 54.2	
	comp=Z,14µm,20.8s,baz=84,slow=32						
V48A	**Smith Brothers**	**34.19**	**99**	IAmb	IAmb	19 57 28.9	
	comp=Z,56nm,1.5s						
R50A	**Paris**	**34.24**	**93**	IAmb	IAmb	19 57 03.4	
	comp=Z,73nm,1.0s						
P51A	**Williamsport**	**34.36**	**90**	IAmb	IAmb	19 56 36.0	
	comp=Z,59nm,0.9s						
FRB	**Frobisher Bay**	**34.44**	**44**	LR	LR	20 11 09.2	
	comp=Z,21µm,19.7s,baz=278,slow=38						
Q51A	**Peebles**	**34.44**	**91**	IAmb	IAmb	19 57 04.1	
	comp=Z,85nm,1.1s						
Q51A				IAMs_20	IAMs_20	20 10 41.5	
	comp=Z,34µm,20.0s						
O52A	**Adamsville**	**34.79**	**88**	IAmb	IAmb	19 56 38.0	
	comp=Z,46nm,1.3s						
146A	**Union**	**34.82**	**105**	IAmb	IAmb	19 56 41.1	
	comp=Z,100nm,1.1s						
146A				IAMs_20	IAMs_20	20 11 21.2	
	comp=Z,25µm,19.0s						
ZAIG	**Zacatecas**	**34.87**	**132**	⇑P	**P**	**19 56 37.9**	**+2.7**
X48A	**Hartselle**	**34.87**	**101**	IAMs_20	IAMs_20	20 11 22.1	
	comp=Z,41µm,21.0s						
TULEG	**Thule**	**34.96**	**21**		**P**	**19 56 33.6**	**-1.5**
TULEG				IAmb	IAmb	19 57 43.6	
	comp=Z,71nm,1.4s						
Z47A	**Carrollton**	**35.05**	**103**	IAMs_20	IAMs_20	20 11 15.2	
	comp=Z,38µm,20.0s						
N53A	**Lisbon**	**35.06**	**87**	IAmb	IAmb	19 56 54.7	
	comp=Z,39nm,1.0s						
S51A	**Beattyville**	**35.09**	**93**	IAmb	IAmb	19 57 10.0	
	comp=Z,42nm,0.9s						
S51A				IAMs_20	IAMs_20	20 11 03.9	
	comp=Z,36µm,21.0s						
BILL	**Bilibino**	**35.10**	**324**		**P**	**19 56 34.6**	**-1.8**
BILL				IAmb	IAmb	19 56 43.1	
	comp=Z,109nm,1.2s						
BILL	**Bilibino**	**35.10**	**324**	*ce*P	**P**	**19 56 37.4**	**+1.0**
BILL				pmax	pmax		
	comp=Z,109nm,1.7s						
O53A	**New Philadelph**	**35.12**	**88**	IAmb	IAmb	19 56 57.9	
	comp=Z,70nm,1.4s						
Q52A	**Bidwell**	**35.16**	**90**	IAmb	IAmb	19 57 09.8	
	comp=Z,55nm,1.2s						
Q52A				IAMs_20	IAMs_20	20 11 04.6	
	comp=Z,39µm,21.0s						
PAOC	**Oil Creek Stat**	**35.41**	**85**	IAmb	IAmb	19 56 49.6	
	comp=Z,146nm,2.0s						
P53A	**Whipple**	**35.43**	**89**	IAMs_20	IAMs_20	20 11 12.5	
	comp=Z,40µm,22.0s						
W50A	**Signal Mountai**	**35.49**	**98**	IAmb	IAmb	19 57 27.4	
	comp=Z,108nm,1.8s						
KUQ	**Kuujjuuaa**	**35.57**	**53**	IAmb	IAmb	19 57 10.1	
	comp=Z,164nm,1.9s						
Y49A	**Blount Mountai**	**35.65**	**101**	IAmb	IAmb	19 56 47.4	
	comp=Z,83nm,1.3s						
FPAL	**Fort Paine**	**35.72**	**99**	IAmb	IAmb	19 57 03.6	
	comp=Z,43nm,1.1s						
TZTN	**Tazewell**	**35.77**	**95**	IAmb	IAmb	19 56 48.9	
	comp=Z,80nm,1.3s						
TZTN				IAMs_20	IAMs_20	20 11 44.3	
	comp=Z,37µm,20.0s						
TZTN	**Tazewell**	**35.77**	**95**	⇓P	**P**	**19 56 44.2**	**+1.7**
LRAL	**Lakeview Retre**	**35.83**	**102**	IAmb	IAmb	19 57 16.0	
	comp=Z,54nm,1.2s						
LRAL	**Lakeview Retre**	**35.83**	**102**	⇓P	**P**	**19 56 44.5**	**+1.4**
GAC	**Glen Almond**	**35.99**	**76**	⇑P	**P**	**19 56 45.5**	**+1.3**
TKL	**Tuckaleechee C**	**36.17**	**96**	LR	LR	20 12 08.9	
	comp=Z,47µm,18.4s,baz=308,slow=37						
TKL	**Tuckaleechee C**	**36.17**	**96**	IAmb	IAmb	19 57 05.3	
	comp=Z,56nm,1.3s						
TKL	**Tuckaleechee C**	**36.17**	**96**	⇓P	**P**	**19 56 47.2**	**+1.2**
X51A	**Calhoun**	**36.18**	**98**	IAmb	IAmb	19 56 48.5	
	comp=Z,102nm,1.1s						
TRQ	**Mont Tremblant**	**36.32**	**75**	IAmb	IAmb	19 57 02.7	
	comp=Z,51nm,1.1s						
W52A	**Murphy**	**36.43**	**97**	IAmb	IAmb	19 56 57.0	
	comp=Z,56nm,1.2s						
L56A	**Greenwood**	**36.44**	**82**	IAmb	IAmb	19 57 36.9	
	comp=Z,56nm,1.3s						
S54A	**Dingess, Beckl**	**36.45**	**91**	IAmb	IAmb	19 56 58.0	
	comp=Z,190nm,1.8s						
S54A				IAMs_20	IAMs_20	20 11 54.8	
	comp=Z,37µm,20.0s						
V53A	**Saluda**	**36.78**	**95**	IAmb	IAmb	19 56 57.6	
	comp=Z,63nm,0.8s						
R55A	**Marlinton**	**36.93**	**90**	IAmb	IAmb	19 57 02.6	
	comp=Z,98nm,1.2s						
R55A				IAMs_20	IAMs_20	20 12 10.3	
	comp=Z,35µm,21.0s						
250A	**Grady**	**37.00**	**103**	IAMs_20	IAMs_20	20 12 25.7	
	comp=Z,34µm,21.0s						
LONY	**Lake Ozonia**	**37.06**	**77**	IAMs_20	IAMs_20	20 12 18.1	
	comp=Z,28µm,19.0s						
BRAL	**Brewton**	**37.06**	**105**	IAMs_20	IAMs_20	20 12 41.7	
	comp=Z,25µm,20.0s						
BG3	**Lake Jocassee**	**37.13**	**96**	IAmb	IAmb	19 56 56.7	
	comp=Z,54nm,1.0s						
Y52A	**Lilburn**	**37.13**	**99**	IAmb	IAmb	19 56 58.7	
	comp=Z,48nm,0.9s						
BLA	**Blacksburg**	**37.37**	**91**	⇑P	**P**	**19 57 00.4**	**+4.2**
SCHQ	**Schefferville**	**37.39**	**58**	P	**P**	**19 56 56.1**	**-0.1**
	comp=Z,18nm,1.1s,baz=304,slow=6.8,SNR=8.2						
SCHQ				LR	LR	20 11 59.3	
	comp=Z,25µm,18.8s,baz=291,slow=36						
	comp=Z,18nm,1.1s						
BINY	**Binghamton**	**37.40**	**81**	IAmb	IAmb	19 57 29.4	
	comp=Z,150nm,1.9s						
152A	**Waverly Hall**	**37.50**	**101**	IAmb	IAmb	19 57 01.4	
	comp=Z,72nm,0.9s						
P57A	**Homestead Farm**	**37.59**	**86**	IAmb	IAmb	19 57 34.9	
	comp=Z,52nm,1.2s						
JRQG	**Juriquilla Cam**	**37.65**	**131**	IAmb	IAmb	19 57 07.4	
	comp=Z,62nm,1.3s						
N58A	**Sunbury**	**37.67**	**84**	IAMs_20	IAMs_20	20 11 35.0	
	comp=Z,21µm,22.0s						
J59A	**Piesco**	**37.68**	**79**	IAMs_20	IAMs_20	20 12 08.8	
	comp=Z,23µm,21.0s						
V55A	**Taylorsville**	**37.69**	**94**	IAmb	IAmb	19 57 08.2	
	comp=Z,113nm,1.7s						
GOGA	**Godfrey**	**37.80**	**99**	IAmb	IAmb	19 57 04.1	
	comp=Z,59nm,1.1s						
GOGA	**Godfrey**	**37.80**	**99**	⇓P	**P**	**19 57 01.3**	**+1.5**
PAULI	**Pauline**	**37.95**	**95**	IAmb	IAmb	19 57 32.7	
	comp=Z,91nm,1.5s						
S57A	**Dark Hollow, R**	**37.98**	**89**	IAmb	IAmb	19 57 08.0	
	comp=Z,142nm,1.8s						
PAGS	**Pennsylvania G**	**38.00**	**85**	IAmb	IAmb	19 57 36.9	
	comp=Z,145nm,1.7s						
HODGE	**Hodges**	**38.04**	**97**	IAmb	IAmb	19 58 12.8	
	comp=Z,149nm,1.8s						
KMSC	**Kings Mountain**	**38.05**	**95**	IAmb	IAmb	19 57 08.6	
	comp=Z,155nm,1.9s						
451A	**Vernon**	**38.25**	**104**	IAMs_20	IAMs_20	20 13 36.1	
	comp=Z,32µm,20.0s						
VT1	**Waterbury**	**38.34**	**76**	IAMs_20	IAMs_20	20 11 19.1	
	comp=Z,21µm,20.0s						
R58B	**Mineral**	**38.55**	**88**	IAmb	IAmb	19 57 16.3	
	comp=Z,94nm,1.4s						
LBNH	**Lisbon**	**38.90**	**76**	IAMs_20	IAMs_20	20 12 22.7	
	comp=Z,20µm,21.0s						
HNH	**Hanover**	**38.95**	**77**	IAMs_20	IAMs_20	20 13 27.1	
	comp=Z,26µm,18.0s						
NEEM	**North Greenlan**	**39.02**	**20**	⇑P	**P**	**19 57 11.1**	**+1.1**
V58A	**Windy Hill, Pi**	**39.06**	**92**	IAMs_20	IAMs_20	20 13 27.1	
	comp=Z,30µm,21.0s						
E62A	**Clayton Lake**	**39.21**	**71**	IAMs_20	IAMs_20	20 12 39.4	
	comp=Z,18µm,19.0s						
D62A	**Allapoint, All**	**39.28**	**71**	IAMs_20	IAMs_20	20 12 03.0	
	comp=Z,20µm,21.0s						
UNM	**Universidad Na**	**39.43**	**131**	IAMs_20	IAMs_20	20 15 30.4	
	comp=Z,15µm,19.0s						
I62A	**Tamworth**	**39.45**	**76**	IAMs_20	IAMs_20	20 12 03.3	
	comp=Z,21µm,19.0s						
P61A	**Hammonton**	**39.54**	**84**	IAMs_20	IAMs_20	20 12 43.5	
	comp=Z,16µm,19.0s						
I63A	**Otisfield**	**39.83**	**75**	IAMs_20	IAMs_20	20 12 24.3	
	comp=Z,21µm,21.0s						
PKME	**Peaks-Kenny Pk**	**40.01**	**73**	IAMs_20	IAMs_20	20 11 24.8	
	comp=Z,11µm,21.0s						
WVL	**Waterville**	**40.14**	**74**	IAMs_20	IAMs_20	20 14 34.2	
	comp=Z,26µm,20.0s						
WES	**Weston**	**40.24**	**78**	IAMs_20	IAMs_20	20 14 07.4	
	comp=Z,29µm,19.0s						
F64A	**Sherman**	**40.29**	**72**	IAMs_20	IAMs_20	20 13 23.0	
	comp=Z,18µm,19.0s						
BCX	**Boston College**	**40.36**	**78**	IAMs_20	IAMs_20	20 14 11.6	
	comp=Z,28µm,18.0s						
L64A	**Middleborough**	**40.78**	**78**	IAMs_20	IAMs_20	20 13 40.8	
	comp=Z,19µm,21.0s						
M65A	**Busby, Falmout**	**41.11**	**79**	IAMs_20	IAMs_20	20 15 06.5	
	comp=Z,24µm,18.0s						
SFJD	**Kangerlussuaq**	**41.11**	**36**	LR	LR	20 14 45.6	
	comp=Z,24µm,18.4s,baz=291,slow=37						
SFJD	**Kangerlussuaq**	**41.11**	**36**		P	19 57 31.8	+4.8
SFJD				IAmb	IAmb	19 57 56.8	
	comp=Z,99nm,1.4s						
SFJD	**Kangerlussuaq**	**41.11**	**36**	IAMs_20	IAMs_20	20 14 51.1	
	comp=Z,26µm,18.0s						
SFJD	**Kangerlussuaq**	**41.11**	**36**	P	P	19 57 31.8	+4.8
SFJD				pmax	pmax		
	comp=Z,99nm,1.5s						
SFJD				MLR	MLR		
	comp=Z,26µm,18.0s						
TLIG	**Tlapa**	**41.24**	**131**	⇓P	**P**	**19 57 31.1**	**+2.4**
SEY	**Seymchan**	**41.80**	**318**	LR	LR	20 15 24.9	
	comp=Z,16µm,18.7s,baz=77,slow=37						
SEY	**Seymchan**	**41.80**	**318**	*e*P	**P**	**19 57 32.2**	**-0.5**
SEY				*e*		19 59 06.6	
SEY				*e*S	**S**	**20 03 50.1**	**+0.8**
SEY				*e*SS	**SS**	**20 06 53.8**	**-1.0**
SEY				pmax	pmax		
	comp=Z,112nm,1.5s						
SEY				smax	smax		
	comp=E,14µm,17.5s						
SEY				smax	smax		
	comp=N,3µm,16.3s						
SEY				MLR	MLR		
	comp=Z,17µm,19.0s						
PET	**Petropavlovsk**	**42.66**	**302**	P	P	19 57 35.3	-4.6
PET				IAmb	IAmb	19 58 04.6	
	comp=Z,159nm,1.4s						
PET				IAMs_20	IAMs_20	20 12 28.5	
	comp=Z,11µm,21.0s						
PET	**Petropavlovsk**	**42.66**	**302**	P	**P**	**19 57 43.2**	**+3.3**
PET	**Petropavlovsk**	**42.66**	**302**	*e*P	**P**	**19 57 39.7**	**-0.2**
PET				*e*		19 59 19.6	
PET				*e*S	**S**	**20 03 58.8**	**-3.5**
PET				*e*SS	**SS**	**20 07 06.6**	**-5.7**
PET				pmax	pmax		
	comp=Z,2µm,7.5s						
PET				pmax	pmax		
	comp=Z,2µm,11.7s						
PET				MLR	MLR		
	comp=Z,5µm,13.0s						
PET				MLR	MLR		
	comp=Z,4µm,13.0s						
PET	**Petropavlovsk**	**42.66**	**302**	P	**P**	**19 57 42.1**	**+2.2**
	comp=Z,76nm,1.8s						
DWPF	**Disney Wildern**	**42.69**	**103**	IAMs_20	IAMs_20	20 17 24.7	
	comp=Z,10µm,19.0s						
PEA0B	**Petropavlovsk-**	**43.14**	**303**	IAmb	IAmb	19 57 50.4	
	comp=Z,155nm,1.4s						
PEA0B	**Petropavlovsk-**	**43.14**	**303**	*i* P	**P**	**19 57 43.6**	**-0.2**
PETK	**Petropavlovsk-**	**43.14**	**303**	P	**P**	**19 57 43.4**	**-0.4**
	comp=Z,17nm,0.9s,baz=79,slow=11,SNR=12						
PETK				LR	LR	20 13 38.0	
	comp=Z,9µm,20.7s,baz=64,slow=33						
	comp=Z,17nm,0.9s						
PETK	**Petropavlovsk-**	**43.14**	**303**	P	**P**	**19 57 42.3**	**-1.5**
SUMG	**Summit**	**43.29**	**26**		**P**	**19 57 42.5**	**-2.7**
SUMG				IAmb	IAmb	19 58 29.5	
	comp=Z,105nm,1.5s						
SUMG				IAMs_20	IAMs_20	20 16 00.5	
	comp=Z,16µm,19.0s						
SUMG	**Summit**	**43.29**	**26**	P	**P**	**19 57 42.5**	**-2.7**
SUMG				pmax	pmax		
	comp=Z,105nm,1.5s						
SUMG				MLR	MLR		
	comp=Z,16µm,19.0s						
SUMG	**Summit**	**43.29**	**26**	⇑P	**P**	**19 57 47.6**	**+2.4**
CMIG	**Matias Romero**	**43.47**	**127**	LR	LR	20 17 51.2	
	comp=Z,4µm,18.5s,baz=324,slow=39						
MA2	**Magadan**	**43.80**	**314**	LR	LR	20 15 08.2	
	comp=Z,10µm,20.1s,baz=74,slow=35						
MA2	**Magadan**	**43.80**	**314**		**P**	**19 57 53.1**	**+4.1**
MA2				IAmb	IAmb	19 57 55.8	
	comp=Z,154nm,1.4s						
MA2				IAMs_20	IAMs_20	20 16 44.4	
	comp=Z,11µm,18.0s						
MA2	**Magadan**	**43.80**	**314**	P	**P**	**19 57 53.6**	**+4.6**
MA2	**Magadan**	**43.80**	**314**	*i* P	**P**	**19 57 49.7**	**+0.7**
MA2				pmax	pmax		
	comp=Z,124nm,1.4s						
MA2				MLR	MLR		
	comp=Z,11µm,16.0s						
IVI	**Ivigtut**	**44.19**	**43**	IAMs_20	IAMs_20	20 16 32.2	
	comp=Z,14µm,20.0s						
TEIG	**Tepich**	**44.49**	**117**		**P**	**19 57 54.3**	**-0.6**
TEIG				IAmb	IAmb	19 57 58.9	
	comp=Z,96nm,1.3s						
TEIG	**Tepich**	**44.49**	**117**	⇓P	**P**	**19 57 57.1**	**+2.2**
061Z	**Ochoppi**	**44.62**	**105**	IAMs_20	IAMs_20	20 17 27.0	
	comp=Z,28µm,21.0s						
SKR	**Severo-Kuril’s**	**45.16**	**300**	*e*P	**P**	**19 57 59.9**	**0.0**
SKR				*e*		19 59 48.7	
SKR				*e*S	**S**	**20 04 37.1**	**-1.6**
SKR				pmax	pmax		
	comp=Z,1µm,5.4s						
SKR				smax	smax		
	comp=N,2µm,13.3s						
SKR				smax	smax		
	comp=E,8µm,11.4s						
SKR				MLR	MLR		
	comp=Z,2µm,17.0s						
NRS	**Narsarsuaq**	**45.42**	**43**	IAMs_20	IAMs_20	20 15 41.4	
	comp=Z,15µm,18.0s						
DAG	**Danmarks Havn**	**46.02**	**17**	⇑P	**P**	**19 58 06.9**	**+0.5**
JOHN	**Johnston Islan**	**46.20**	**238**	IAMs_20	IAMs_20	20 11 21.0	
	comp=Z,9µm,20.0s						
PETF	**Flores**	**46.26**	**122**	P	**P**	**19 58 08.9**	**-0.1**
PETF				IAmb	IAmb	19 58 15.5	
	comp=Z,85nm,1.3s						
TIXI	**Tiksi**	**46.42**	**335**	LR	LR	20 18 53.0	
	comp=Z,11µm,21.1s,baz=72,slow=38						
TIXI	**Tiksi**	**46.42**	**335**		**P**	**19 58 07.0**	**-2.7**
TIXI				IAMs_20	IAMs_20	20 18 42.1	
	comp=Z,10µm,20.0s						
TIXI	**Tiksi**	**46.42**	**335**	*ce*P	**P**	**19 58 09.7**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,46nm,1.7s						
TIXI				MLR	MLR		
	comp=Z,10µm,19.0s						
ANGG	**Ammassalik, Gr**	**46.48**	**35**	IAMs_20	IAMs_20	20 17 04.8	
	comp=Z,18µm,20.0s						
TGUH	**Tegucigalpa,Un**	**50.02**	**121**		**P**	**19 58 38.6**	**+0.4**
TGUH				IAmb	IAmb	19 58 59.3	
	comp=Z,76nm,1.0s						
TGUH				IAMs_20	IAMs_20	20 21 36.3	
	comp=Z,7µm,18.0s						
SPITS	**Spitsbergen Ar**	**50.05**	**9**	P	**P**	**19 58 37.8**	**+0.2**
	comp=Z,25nm,1.0s,baz=331,slow=12,SNR=4.6						
SPITS				LR	LR	20 20 52.7	
	comp=Z,29µm,18.5s,baz=330,slow=38						
	comp=Z,25nm,1.0s						
SPITS	**Spitsbergen Ar**	**50.05**	**9**	P	**P**	**19 58 37.5**	**-0.1**
SPITS				pmax	pmax		
	comp=Z,144nm,1.3s						
BBSR	**BB Station**	**50.46**	**85**	IAMs_20	IAMs_20	20 20 11.9	
	comp=Z,18µm,19.0s						
HERN	**Volcan Telica**	**51.46**	**122**	IAmb	IAmb	19 59 32.7	
	comp=Z,153nm,0.5s						
YAK	**Yakutsk**	**51.46**	**324**	LR	LR	20 22 11.7	
	comp=Z,9µm,18.4s,baz=60,slow=38						
YAK	**Yakutsk**	**51.46**	**324**	P	**P**	**19 58 46.4**	**-2.0**
YAK	**Yakutsk**	**51.46**	**324**	IAMs_20	IAMs_20	20 21 54.7	
	comp=Z,9µm,19.0s						
YAK	**Yakutsk**	**51.46**	**324**	*e*P	**P**	**19 58 48.3**	**-0.1**
YAK				e*PP	**pwP**	**19 58 59.5**	**+4.5**
YAK				*e*		20 00 03.1	
YAK				*e*PPP	PPP	20 01 44.0	
YAK				*e*S	**S**	**20 06 07.9**	**+0.4**
YAK				*e*		20 08 39.0	
YAK				*e*SS	**SS**	**20 09 45.3**	**+2.7**
YAK				*e*SSS	SSS	20 11 18.4	
YAK				pmax	pmax		
	comp=Z,34nm,0.9s						
YAK				pmax	pmax		
	comp=N,32nm,1.7s						
YAK				pmax	pmax		
	comp=E,31nm,1.6s						
YAK				pmax	pmax		
	comp=Z,651nm,3.8s						
YAK				pmax	pmax		
	comp=N,585nm,5.4s						
YAK				pmax	pmax		
	comp=E,529nm,5.1s						
YAK				smax	smax		
	comp=N,1µm,6.4s						
YAK				smax	smax		
	comp=E,966nm,6.4s						
YAK				MLR	MLR		
	comp=Z,8µm,22.0s						
YAK				MLR	MLR		
	comp=N,11µm,21.0s						
YAK				MLR	MLR		
	comp=E,4µm,17.0s						
SIUN	**Universidad Ur**	**51.69**	**119**	P	**P**	**19 58 50.4**	**-0.3**
SIUN				IAmb	IAmb	19 58 57.7	
	comp=Z,27nm,1.1s						
CHIV	**Chivirico**	**51.74**	**106**	IAmb	IAmb	19 59 14.7	
	comp=Z,97nm,1.1s						
NKL	**Nikolayevsk**	**51.88**	**310**	*e*P	**P**	**19 58 50.0**	**-1.7**
NKL				*e*S	**S**	**20 06 12.7**	**-0.8**
NKL				pmax	pmax		
	comp=E,28nm,1.2s						
NKL				pmax	pmax		
	comp=N,112nm,1.4s						
NKL				pmax	pmax		
	comp=Z,318nm,1.3s						
NKL				smax	smax		
	comp=E,583nm,8.6s						
NKL				smax	smax		
	comp=N,667nm,8.4s						
NKL				MLR	MLR		
	comp=E,15µm,16.0s						
NKL				MLR	MLR		
	comp=N,19µm,15.0s						
NKL				MLR	MLR		
	comp=Z,22µm,15.0s						
JMIC	**Jan Mayen**	**51.92**	**21**	LR	LR	20 21 21.9	
	comp=Z,17µm,18.6s,baz=324,slow=37						
BOAB	**BOACO BROADBA**	**52.23**	**120**	P	**P**	**19 58 53.6**	**-1.0**
BOAB				IAMs_20	IAMs_20	20 24 43.1	
	comp=Z,10µm,20.0s						
BOAB	**BOACO BROADBA**	**52.23**	**120**	⇑P	**P**	**19 58 56.7**	**+2.0**
TYV	**Tymovskoe**	**52.23**	**307**	*e*P	**P**	**19 58 56.3**	**+2.0**
TYV				*e*S	**S**	**20 06 20.5**	**+2.1**
TYV				pmax	pmax		
	comp=Z,43nm,1.3s						
TYV				pmax	pmax		
	comp=Z,500nm,3.2s						
TYV				smax	smax		
	comp=N,2µm,9.2s						
TYV				smax	smax		
	comp=E,5µm,9.2s						
BORG	**Borgarnes**	**52.65**	**31**	LR	LR	20 21 31.7	
	comp=E,12µm,20.8s,baz=309,slow=36						
BORG	**Borgarnes**	**52.65**	**31**	IAMs_20	IAMs_20	20 21 18.2	
	comp=Z,15µm,20.0s						
KUR	**Kuril'sk**	**52.79**	**298**	*e*P	**P**	**19 58 57.2**	**-1.3**
KUR				*e*S	**S**	**20 06 24.6**	**-1.5**
KUR				MLR	MLR		
	comp=Z,3µm,15.0s						
KUR				MLR	MLR		
	comp=E,3µm,16.0s						
XMAS	**Kiritimati**	**53.54**	**215**	IAMs_20	IAMs_20	20 24 09.0	
	comp=Z,8µm,19.0s						
UGL	**Uglegorsk**	**53.61**	**305**	*e*P	**P**	**19 59 04.6**	**+0.1**
UGL				*e*		20 01 12.2	
UGL				*e*S	**S**	**20 06 38.7**	**+1.6**
UGL				pmax	pmax		
	comp=Z,1µm,6.7s						
UGL				smax	smax		
	comp=E,6µm,14.0s						
UGL				smax	smax		
	comp=N,3µm,8.0s						
UGL				MLR	MLR		
	comp=N,4µm,16.0s						
UGL				MLR	MLR		
	comp=E,6µm,16.0s						
UGL				MLR	MLR		
	comp=Z,4µm,17.0s						
GRTK	**Grand Turk**	**53.90**	**100**	IAMs_20	IAMs_20	20 22 43.4	
	comp=Z,15µm,19.0s						
JUD3	**Juan Diaz 3**	**54.18**	**122**	P	**P**	**19 59 07.2**	**-1.9**
JTS	**Las Juntas de**	**54.40**	**121**	LR	LR	20 26 45.6	
	comp=Z,4µm,19.2s,baz=320,slow=41						
YSS	**Yuzhno-Sakhali**	**54.55**	**303**		P	19 59 16.3	+5.0
YSS				IAmb	IAmb	19 59 29.7	
	comp=Z,40nm,0.9s						
YSS	**Yuzhno-Sakhali**	**54.55**	**303**	P	P	19 59 16.3	+5.0
YSS	**Yuzhno-Sakhali**	**54.55**	**303**	*e*P	**P**	**19 59 12.9**	**+1.5**
YSS				*e*S	**S**	**20 06 49.8**	**-0.1**
YSS				pmax	pmax		
	comp=N,20nm,1.1s						
YSS				pmax	pmax		

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      comp=Z,40nm,1.1s
YSS                                  pmax      pmax
      comp=Z,400nm,4.4s
YSS                                  smax      smax
      comp=N,600nm,8.3s
YSS                                  MLR       MLR
      comp=Z,4µm,16.0s
YSS                                  MLR       MLR
      comp=N,4µm,14.0s
YSS                                  MLR       MLR
      comp=E,4µm,15.0s
GRNR  Gornyy           55.42 310⇑i P         P         19 59 16.9  -0.8
GRNR                                 pmax      pmax
      comp=Z,7.0nm,1.2s
GRNR                                 MLR       MLR
      comp=E,4µm,19.0s
SDDR  Presa de Saban   55.67 102     P         P         19 59 18.0  -1.9
SDDR                                 IAmb      IAmb      19 59 24.2
      comp=Z,41nm,1.1s
SDDR                                 IAMs_20   IAMs_20   20 23 22.6
      comp=Z,10µm,20.0s
ASAJ  Asahikawa        56.42 300     LR        LR        20 20 16.7
      comp=Z,5µm,21.6s,baz=56,slow=33
NRIK  Noril'sk         57.45 345     P         P         19 59 30.6  -1.2
      comp=Z,16nm,0.8s,baz=34,slow=6.1,SNR=25
NRIK                                 LR        LR        20 25 28.8
      comp=Z,4µm,19.9s,baz=41,slow=38
      comp=Z,16nm,0.8s
NRIK  Noril'sk         57.45 345     P         P         19 59 30.1  -1.7
NRIK  Noril'sk         57.45 345   i P         P         19 59 30.3  -1.5
NRIK                                 pmax      pmax
      comp=Z,6µm,15.9s
ERM   Erimo            57.47 298     IAMs_20   IAMs_20   20 21 07.8
      comp=Z,7µm,21.0s
ZEA   Zeya             57.76 317   eP          P         19 59 36.2  +2.0
ZEA                                eS          S         20 07 38.5  +6.1
ZEA                                  pmax      pmax
      comp=Z,30nm,1.4s
ZEA                                  pmax      pmax
      comp=Z,600nm,6.4s
ZEA                                  pmax      pmax
      comp=Z,800nm,12.3s
ZEA                                  smax      smax
      comp=N,1µm,10.4s
ZEA                                  MLR       MLR
      comp=E,2µm,15.0s
ZEA                                  MLR       MLR
      comp=N,1µm,12.0s
ZEA                                  MLR       MLR
      comp=Z,4µm,14.0s
H11N2 WAKE ISLAND Hy   58.02 262     T         T         21 02 06.5
      baz=42,slow=76,SNR=8636
H11N3 WAKE ISLAND Hy   58.02 262     T         T         21 02 19.8
      baz=42,slow=76,SNR=8141
H11N1 WAKE ISLAND Hy   58.04 262     T         T         21 02 22.0
      baz=42,slow=76,SNR=6795
KEV   Kevo             58.97   9     IAMs_20   IAMs_20   20 27 45.3
      comp=Z,16µm,19.0s
ARCES ARCESS Array B   59.02  10     P         P         19 59 41.4  -1.4
      comp=Z,3.4nm,0.8s,baz=350,slow=6.4,SNR=5.2
ARCES                                LR        LR        20 25 19.4
      comp=Z,12µm,22.0s,baz=332,slow=36
      comp=Z,3.4nm,0.8s
ARCES ARCESS Array B   59.02  10     P         P         19 59 41.4  -1.4
ARCES                                pmax      pmax
      comp=Z,142nm,1.9s
H11S1 WAKE ISLAND Hy   59.05 262     T         T         21 03 37.6
      baz=40,slow=76,SNR=701
H11S2 WAKE ISLAND Hy   59.06 262     T         T         21 03 38.9
      baz=40,slow=76,SNR=603
H11S3 WAKE ISLAND Hy   59.07 262     T         T         21 03 34.8
      baz=40,slow=76,SNR=692
GCPR  Guaynabo City    59.45  98     IAmb      IAmb      20 00 06.8
      comp=Z,41nm,1.1s
SJG   San Juan         59.55  98     LR        LR        20 26 46.6
      comp=Z,4µm,20.0s,baz=329,slow=37
SJG   San Juan         59.55  98     IAMs_20   IAMs_20   20 28 43.1
      comp=Z,6µm,18.0s
TAOE  Nuku Hiva Isla   59.68 192   eP          P         19 59 38.3   -10
      comp=Z,430nm,27.2s
TAOE                               eS          S         20 07 58.1  -0.2
      comp=Z,2µm,27.2s
TAOE                               eSS         SS        20 11 51.5  -2.9
      comp=Z,2µm,28.3s
TAOE                               eLQ         LQ        20 14 49.9
      comp=Z,3µm,30.4s
TAOE                               eLR         LR        20 17 27.2
      comp=Z,22µm,28.7s
HEH   HeiHe            60.07 314   eP          P         19 59 48.8  -1.5
HEH                                  S         S         20 07 55.9  -6.6
HEH                                  pmax      pmax
      comp=Z,100nm,1.1s
HEH                                  pmax      pmax
      comp=Z,970nm,4.5s
HEH                                  LR        LR
      comp=Z,8µm,15.9s
HEH                                  LR        LR
      comp=Z,10µm,14.5s
HEH                                  LR        LR
      comp=Z,11µm,18.8s
BOD   Bodaibo          60.10 326   eP          P         19 59 48.8  -1.6
BOD                                  pmax      pmax
      comp=Z,122nm,1.5s
APAC  Apartado, Choc   61.07 115     P         P         19 59 56.7  -0.9
      comp=Z,2µmcomp=Z,60nm,1.0s
LVZ   Lovozero         61.45   7     IAMs_20   IAMs_20   20 29 50.9
      comp=Z,8µm,18.0s
LVZ   Lovozero         61.45   7   i P         P         20 00 00.3  +0.8
LVZ                                  pmax      pmax
      comp=Z,68nm,1.2s
LVZ   Lovozero         61.45   7     P         P         19 59 59.3  -0.2
      comp=Z,57nm,2.3s
APA   Apatity          61.68   7⇓eP            P         19 59 57.7  -3.3
APA                                  pmax      pmax
      comp=Z,16nm,1.1s
APA                                  MLR       MLR
      comp=Z,11µm,19.7s
SABA  Saba             61.76  96     IAMs_20   IAMs_20   20 26 20.4
      comp=Z,15µm,21.0s
UREC  San Jos de Ur    61.80 114     P         P         19 59 59.2  -3.3
      comp=Z,32nm,0.9s
DBBC  Dabeiba          62.00 115     P         P         20 00 01.1  -2.8
SEUS  St. Eustatius    62.02  96     IAMs_20   IAMs_20   20 26 16.3
      comp=Z,16µm,22.0s
USRK  Ussuriysk Ar.    62.04 306     P         P         20 00 04.9  +1.1
      comp=Z,13nm,0.9s,baz=46,slow=4.4,SNR=19
      comp=Z,13nm,0.9s
ANWB  Willy Bob        62.66  95     IAMs_20   IAMs_20   20 27 59.9
      comp=Z,8µm,20.0s
OCAC  Ocana            62.72 112     P         P         20 00 02.1  -6.8
      comp=Z,2µmcomp=Z,42nm,1.1s
VLA   Vladivostok      62.85 305   i P         P         20 00 09.6  +0.4
VLA                                  pmax      pmax
      comp=Z,128nm,1.8s
MDJ   Mudanjiang       62.97 308     IAMs_20   IAMs_20   20 24 55.2
      comp=Z,11µm,21.0s
MDJ   Mudanjiang       62.97 308     P         P         20 00 10.8  +0.8
MDJ                                  pP        sP        20 00 14.0  -1.3
MDJ                                  S         S         20 08 41.3  +1.8
MDJ                                  SS        SS        20 12 49.3  +5.2
MDJ                                  pmax      pmax
      comp=Z,17nm,1.9s
MDJ                                  LR        LR
      comp=Z,6µm,22.4s
MDJ                                  LR        LR
      comp=Z,8µm,19.9s
MDJ                                  LR        LR
      comp=Z,15µm,19.9s
CBOC  Ciudad Bolivar   63.05 116     P         P         20 00 10.8  -0.2
      comp=Z,964nmcomp=Z,32nm,1.4s
HELC  Santa Helena     63.06 115     P         P         20 00 08.9  -2.5
      comp=Z,39nm,1.3s
BNX   BinXian          63.26 310   ⇓P          P         20 00 11.9   0.0
BNX                                  S         S         20 08 46.5  +3.5
BNX                                  pmax      pmax
      comp=Z,14nm,1.8s
BNX                                  pmax      pmax
      comp=Z,1µm,12.1s
BNX                                  LR        LR
      comp=Z,3µm,18.3s
BNX                                  LR        LR
      comp=Z,5µm,19.7s
BNX                                  LR        LR
      comp=Z,5µm,16.8s
PTBC  PUERTO BERRIO,   63.41 114     P         P         20 00 12.8  -0.4
      comp=Z,66nm,1.2s
BRJC  Barrancabermej   63.48 113     P         P         20 00 11.3  -2.4
      comp=Z,51nm,1.1s
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PLMC  San Jos del P    63.67 117     P         P         20 00 14.2  -0.8
      comp=Z,875nmcomp=Z,52nm,1.2s
GDHS  Morne Mazeau,    63.70  96     IAMs_20   IAMs_20   20 27 05.5
      comp=Z,15µm,21.0s
ABD   La Joyeuse, An   63.73  96     IAMs_20   IAMs_20   20 27 14.4
      comp=Z,10µm,21.0s
PAMC  Pamplona, Colo   63.80 112     P         P         20 00 16.2  -0.2
      comp=Z,234nmcomp=Z,26nm,0.9s
SDV   Santo Domingo    63.82 109     LR        LR        20 30 57.4
      comp=Z,4µm,19.2s,baz=327,slow=39
SDV   Santo Domingo    63.82 109     P         P         20 00 16.3  +0.1
SDV                                  IAmb      IAmb      20 00 22.1
      comp=Z,37nm,1.3s
SDV   Santo Domingo    63.82 109   eP          P         20 00 17.7  +1.5
SDV   Santo Domingo    63.82 109     P         P         20 00 15.2  -1.0
      comp=Z,1µmcomp=Z,21nm,1.4s
NORC  Norcasia         63.95 115     P         P         20 00 16.7  -0.2
      comp=Z,1µmcomp=Z,88nm,1.2s
MAJO  Matsushiro       63.99 296     IAMs_20   IAMs_20   20 22 45.7
      comp=Z,7µm,22.0s
MAJO  Matsushiro       63.99 296     P         P         20 00 21.1  +4.2
MAJO  Matsushiro       63.99 296   i P         P         20 00 15.2  -1.7
MAJO                                 pmax      pmax
      comp=Z,40nm,1.5s
MJAR  Matsushiro Arr   63.99 296     P         P         20 00 17.0  +0.1
      comp=Z,4.5nm,0.8s,baz=46,slow=6.4,SNR=6.4
MJAR                                 LR        LR        20 23 43.6
      comp=Z,6µm,22.0s,baz=38,slow=32
      comp=Z,4.5nm,0.8s
MJAR  Matsushiro Arr   63.99 296     P         P         20 00 14.1  -2.8
MJAR                                 IAmb      IAmb      20 00 56.9
      comp=Z,60nm,1.9s
MJAR  Matsushiro Arr   63.99 296     P         P         20 00 14.1  -2.8
MJAR                                 pmax      pmax
      comp=Z,60nm,2.0s
HILR  Hailar Array B   64.01 317     P         P         20 00 16.6  -0.3
      comp=Z,8.5nm,0.8s,baz=79,slow=7.5,SNR=15
HILR                                 LR        LR        20 29 04.7
      comp=Z,10µm,18.5s,baz=65,slow=37
      comp=Z,8.5nm,0.8s
BARC  Barichara        64.11 113     P         P         20 00 16.7  -1.5
      comp=Z,803nmcomp=Z,65nm,1.1s
GDSD  La Dsirade Is    64.12  96     IAMs_20   IAMs_20   20 28 16.7
      comp=Z,8µm,22.0s
HIA   Hailar           64.23 317     IAMs_20   IAMs_20   20 28 29.8
      comp=Z,12µm,19.0s
MAGL  Barre de l'ile   64.25  96     IAMs_20   IAMs_20   20 27 42.3
      comp=Z,13µm,21.0s
SPBC  San Pablo de B   64.34 114     P         P         20 00 17.7  -1.8
      comp=Z,949nmcomp=Z,44nm,1.2s
YOTC  Yotoco, Valle    64.38 117     P         P         20 00 18.1  -1.7
      comp=Z,943nmcomp=Z,42nm,1.1s
NC303 NORSAR Array S   64.47  20     IAmb      IAmb      20 00 40.9
      comp=Z,38nm,1.1s
NB2   NORSAR Subarra   64.60  20     P         P         20 00 21.0  +0.4
      comp=Z,1.7nm,0.8s,baz=335,slow=6.9
NOA   NORSAR Array B   64.60  20     P         P         20 00 20.2  -0.4
      comp=Z,4.5nm,0.9s,baz=334,slow=6.6,SNR=14
NOA                                  LR        LR        20 28 30.3
      comp=Z,11µm,20.6s,baz=330,slow=36
      comp=Z,4.5nm,0.9s
NC405 NORSAR Array S   64.65  19     IAmb      IAmb      20 00 54.3
      comp=Z,49nm,1.5s
CIT   Chita            64.70 322   eP          P         20 00 21.6  +0.3
CIT                                e                     20 01 00.4
CIT                                e                     20 02 46.2
CIT                                e                     20 09 13.4
CIT                                  pmax      pmax
      comp=Z,158nm,3.8s
RUSC  La Rusia         64.73 113     P         P         20 00 23.5  +1.0
      comp=Z,979nmcomp=Z,95nm,1.3s
JAMC  Jamundi, Valle   64.82 118     P         P         20 00 21.5  -1.3
      comp=Z,1µmcomp=Z,32nm,1.1s
ROSC  El Rosal         64.85 115     P         P         20 00 25.2  +2.0
      comp=Z,64nm,1.1s,baz=333,slow=4.5,SNR=15
ROSC                                 LR        LR        20 32 45.5
      comp=Z,1µm,18.1s,baz=346,slow=40
      comp=Z,64nm,1.1s
ROSC  El Rosal         64.85 115     P         P         20 00 21.5  -1.7
ROSC  El Rosal         64.85 115     P         P         20 00 21.5  -1.7
ROSC                                 pmax      pmax
      comp=Z,135nm,1.4s
ORTC  Ortega, Tolima   65.07 116     P         P         20 00 22.5  -1.7
      comp=Z,1µmcomp=Z,68nm,1.2s
CHIC  Chingaza         65.36 114     P         P         20 00 25.9  -0.6
      comp=Z,1µmcomp=Z,41nm,2.1s
POPC  Popayan, Colom   65.38 118     P         P         20 00 25.9  -0.5
      comp=Z,575nmcomp=Z,24nm,1.0s
PRAC  Prado            65.44 116     P         P         20 00 27.4  +0.8
      comp=Z,1µmcomp=Z,71nm,1.3s
BBAC  Balboa, Cauca    65.48 119     P         P         20 00 25.9  -1.2
      comp=Z,1µmcomp=Z,33nm,1.2s
KONO  Kongsberg        65.49  21     IAMs_20   IAMs_20   20 33 17.3
      comp=Z,9µm,18.0s
KONO  Kongsberg        65.49  21   i P         P         20 00 27.2  +1.0
KONO                                 pmax      pmax
      comp=Z,37nm,1.5s
JHJ   Hachijo jima 2   65.49 293     LR        LR        20 24 10.5
      comp=Z,1µm,20.1s,baz=48,slow=32
ADZR  Andozero         65.63   6   eP          P         20 00 25.3  -1.8
ADZR                                 S         S         20 09 15.4  +3.7
ADZR                                 pmax      pmax
      comp=Z,72nm,2.1s
ADZR                                 MLR       MLR
      comp=Z,10µm,17.0s
ESK   Eskdalemuir      65.67  30     IAMs_20   IAMs_20   20 28 13.9
      comp=Z,10µm,20.0s
EKA   Eskdalemuir Ar   65.67  30     P         P         20 00 28.0  +0.5
      comp=Z,1.6nm,0.6s,baz=316,slow=5.8,SNR=5.5
EKA                                  LR        LR        20 28 55.0
      comp=Z,10µm,18.3s,baz=328,slow=36
      comp=Z,1.6nm,0.6s
EKA   Eskdalemuir Ar   65.67  30     P         P         20 00 28.0  +0.5
HFS   Hagfors          65.95  19     P         P         20 00 29.2   0.0
      comp=Z,6.5nm,0.9s,baz=343,slow=3.1,SNR=12
HFS                                  LR        LR        20 29 41.2
      comp=Z,19µm,19.6s,baz=340,slow=36
      comp=Z,6.5nm,0.9s
GCUF  Volcan Galeras   66.08 120     P         P         20 00 27.9  -3.4
      comp=Z,1µmcomp=Z,53nm,1.2s
PAC1  Pacto, Paraso    66.08 122     P         P         20 00 26.4  -4.5
      comp=Z,57nm,1.3s
URMC  La Uribe, Meta   66.11 116     P         P         20 00 30.8  -0.1
      comp=Z,1µmcomp=Z,90nm,1.2s
CUSE  Cuicocha Este    66.27 121     P         P         20 00 32.3  -0.1
      comp=Z,5µmcomp=Z,106nm,1.3s
OTAV  Otavalo          66.29 121     P         P         20 00 33.9  +1.3
OTAV  Otavalo          66.29 121     P         P         20 00 33.9  +1.3
OTAV                                 pmax      pmax
      comp=Z,69nm,1.2s
OTAV                                 MLR       MLR
      comp=Z,2µm,20.0s
OTAV  Otavalo          66.29 121   eP          P         20 00 32.1  -0.4
OTAV  Otavalo          66.29 121     P         P         20 00 32.7  +0.1
      comp=Z,2µmcomp=Z,55nm,1.3s
BONI  La Bonita        66.62 120     P         P         20 00 30.3  -4.1
      comp=Z,2µmcomp=Z,51nm,2.1s
FLOC  Florencia        66.74 118     P         P         20 00 34.2  -0.7
      comp=Z,2µmcomp=Z,96nm,1.1s
FIA1  FINESS Array S   66.85  12     P         P         20 00 31.1  -3.8
FINES FINESS Array B   66.86  12     P         P         20 00 34.0  -0.9
      comp=Z,7.2nm,0.8s,baz=358,slow=5.7,SNR=13
FINES                                LR        LR        20 30 58.5
      comp=Z,12µm,18.4s,baz=344,slow=37
      comp=Z,7.2nm,0.8s
FINES FINESS Array B   66.86  12     P         P         20 00 31.9  -3.0
GRGR  Grenville        66.89  99     IAMs_20   IAMs_20   20 31 12.5
      comp=Z,5µm,20.0s
IRK   Irkutsk          67.94 327   eP          P         20 00 41.8  -0.2
IRK                                  pmax      pmax
      comp=Z,183nm,2.3s
SNY   Shenyang         68.01 309   ⇓P          P         20 00 44.3  +1.7
SNY                                  S         S         20 09 45.5  +4.4
SNY                                  pmax      pmax
      comp=Z,20nm,1.3s
SNY                                  pmax      pmax
      comp=Z,950nm,11.4s
SNY                                  LR        LR
      comp=Z,4µm,19.0s
SNY                                  LR        LR
      comp=Z,7µm,18.5s
SNY                                  LR        LR
      comp=Z,9µm,20.4s
JCJ   Chichijima       68.36 287     LR        LR        20 23 38.5
      comp=Z,5µm,21.2s,baz=56,slow=30
TLY   Talaya           68.62 327     P         P         20 00 44.8  -1.6
TLY                                  IAmb      IAmb      20 00 52.6
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      comp=Z,50nm,1.1s
TLY   Talaya           68.62 327   i P         P         20 00 48.5  +2.2
TLY                                  pmax      pmax
      comp=Z,76nm,1.3s
KLMR  Klimovskoe       68.77   6   eP          P         20 00 46.6  -0.4
KLMR                               e                     20 01 11.7
KLMR                                 S         S         20 09 48.8  -0.8
KLMR                                 pmax      pmax
      comp=Z,125nm,1.5s
KLMR                                 MLR       MLR
      comp=Z,7µm,19.0s
KSRS  Korea Array      69.03 304     P         P         20 00 49.1   0.0
      comp=Z,2.4nm,0.8s,baz=50,slow=5.5,SNR=8.0
KSRS                                 LR        LR        20 27 29.0
      comp=Z,2µm,21.7s,baz=55,slow=33
      comp=Z,2.4nm,0.8s
KSAR  Wonju Array Be   69.06 304     P         P         20 00 48.3  -1.0
KSAR  Wonju Array Be   69.06 304     P         P         20 00 48.3  -1.0
MCRA  Macar, Loja      69.36 125     P         P         20 00 51.7  +0.3
      comp=Z,1µmcomp=Z,64nm,2.0s
MOY   Mondy            69.53 329   eP          P         20 00 52.8  +0.7
MOY                                  pmax      pmax
      comp=Z,166nm,2.0s
VSU   Vasula           69.82  13ceP            P         20 00 55.1  +1.5
VSU                                  pmax      pmax
      comp=Z,27nm,1.0s
ZAK   Zakamensk        69.83 327   eP          P         20 00 54.0   0.0
ZAK                                  pmax      pmax
      comp=Z,36nm,2.0s
PPT   Papeete          69.86 200     LR        LR        20 24 26.9
      comp=Z,4µm,21.0s,baz=14,slow=30
PPTF  Pamatai, Papee   69.88 200     IAMs_20   IAMs_20   20 24 23.6
      comp=Z,4µm,20.0s
PPT2  Papeete2         69.89 200   ePP         PP        20 03 27.6  -1.8
      comp=Z,223nm,24.0s
PPT2                               eS          S         20 10 03.2  -0.5
      comp=Z,1µm,27.0s
PPT2                               eSS         SS        20 14 28.1  -5.2
      comp=Z,2µm,29.8s
PPT2                               eLQ         LQ        20 18 56.3
      comp=Z,6µm,26.5s
PPT2                               eLR         LR        20 22 01.7
      comp=Z,13µm,26.8s
PPT2                               eLR         LR        20 22 10.7
      comp=Z,10µm,29.0s
CMLA  Cha da Macela    69.95  55     IAMs_20   IAMs_20   20 27 15.9
      comp=Z,10µm,20.0s
XLT   XiLinHaoTe       69.97 315   eP          P         20 00 56.6  +1.7
XLT                                  pP        pwP       20 01 00.0  -1.6
XLT                                  S         S         20 10 09.1  +4.6
XLT                                  pmax      pmax
      comp=Z,15nm,1.1s
XLT                                  LR        LR
      comp=Z,8µm,17.4s
XLT                                  LR        LR
      comp=Z,3µm,20.7s
ULN   Ulaanbaatar      70.55 323     IAMs_20   IAMs_20   20 32 48.4
      comp=Z,8µm,18.0s
ULN   Ulaanbaatar      70.55 323ceP            P         20 00 59.0  +0.6
ULN                                  pmax      pmax
      comp=Z,29nm,1.7s
JNU   Nakatsue         70.62 299     LR        LR        20 28 10.0
      comp=Z,6µm,21.9s,baz=48,slow=33
SONM  Songino Array    70.82 324     P         P         20 00 59.8  -0.3
      comp=Z,6.6nm,1.1s,baz=25,slow=3.4,SNR=27
SONM                                 LR        LR        20 33 16.8
      comp=Z,8µm,18.3s,baz=32,slow=37
      comp=Z,6.6nm,1.1s
SONM  Songino Array    70.82 324     P         P         20 00 58.8  -1.3
SONM                                 IAmb      IAmb      20 01 06.3
      comp=Z,85nm,1.6s
SONM  Songino Array    70.82 324     P         P         20 00 58.8  -1.3
SONM                                 pmax      pmax
      comp=Z,85nm,1.6s
RGN   Rugen            70.98  22     IAMs_20   IAMs_20   20 32 36.5
      comp=Z,8µm,20.0s
DL2   Dalian           71.19 309     P         P         20 01 04.0  +1.7
DL2                                  S         S         20 10 22.9  +4.2
DL2                                  pmax      pmax
      comp=Z,47nm,1.3s
DL2                                  pmax      pmax
      comp=Z,1µm,4.5s
DL2                                  LR        LR
      comp=Z,5µm,18.6s
DL2                                  LR        LR
      comp=Z,8µm,16.1s
DL2                                  LR        LR
      comp=Z,10µm,17.8s
KIRV  Kirov            71.37   0     LR        LR        20 35 11.1
      comp=Z,7µm,20.6s,baz=357,slow=38
KIRV  Kirov            71.37   0ceP            P         20 01 03.7  +0.7
ZAA0  Zalesovo Array   72.01 339     P         P         20 01 05.0  -2.0
ZALV  Zalesovo Beam    72.01 339     P         P         20 01 06.5  -0.5
      comp=Z,2.4nm,0.7s,baz=19,slow=5.1,SNR=14
ZALV                                 LR        LR        20 37 42.1
      comp=Z,6µm,18.4s,baz=20,slow=40
      comp=Z,2.4nm,0.7s
ZALV  Zalesovo Beam    72.01 339     P         P         20 01 04.5  -2.4
ZALV  Zalesovo Beam    72.01 339   i P         P         20 01 06.8  -0.2
ZALV                                 pmax      pmax
      comp=Z,2.0nm,0.7s
JSU   Suzuyama         72.06 298     P         P         20 01 13.0  +5.3
PABE  Paberze          72.23  15     IAmb      IAmb      20 01 18.6
      comp=Z,50nm,1.0s
BMRD  Maredsous        72.47  29   dP          P         20 01 12.4  +2.6
BGES  Gesves           72.50  28   dP          P         20 01 13.0  +3.1
      comp=Z,15nm,1.2s
ATAH  Atahualpa        72.51 125     LR        LR        20 34 08.8
      comp=Z,3µm,20.9s,baz=347,slow=37
MEM   Membach          72.58  28   dP          P         20 01 12.2  +1.7
DOU   Dourbes          72.60  29   dP          P         20 01 10.9  +0.3
BTNL  Ternell          72.63  28   dP          P         20 01 13.7  +3.0
RCHB  Rochefort        72.74  28   dP          P         20 01 12.4  +1.0
      comp=Z,15nm,1.1s
SVE   Sverdlovsk       72.78 354   eP          P         20 01 12.1  +0.6
SVE                                eS          S         20 10 38.6  +2.2
SVE                                  pmax      pmax
      comp=Z,66nm,1.8s
BHOU  Houvegnez        72.80  28   dP          P         20 01 14.7  +2.9
BJI   Beijing          72.96 313     P         P         20 01 13.5  +0.7
BJI                                  S         S         20 10 41.0  +2.1
BJI                                  LR        LR
      comp=Z,2µm,16.3s
BJI                                  LR        LR
      comp=Z,1µm,15.1s
BJI                                  LR        LR
      comp=Z,3µm,15.8s
BJT   Baijiatuau       72.98 313     IAMs_20   IAMs_20   20 34 11.6
      comp=Z,5µm,20.0s
RKT   Rikitea          73.33 185   eS          S         20 10 42.9  -0.3
      comp=Z,39µm,30.8s
RKT                                eSS         SS        20 15 29.9  +4.0
      comp=Z,3µm,27.0s
RKT                                eLQ         LQ        20 20 40.5
      comp=Z,11µm,27.5s
RKT                                eLR         LR        20 23 46.2
      comp=Z,55µm,27.8s
ARTI  Arti             73.36 355     P         P         20 01 12.8  -2.2
ARTI                                 IAMs_20   IAMs_20   20 39 22.4
      comp=Z,5µm,18.0s
ARTI  Arti             73.36 355d iP           P         20 01 15.1  +0.2
ARTI                                                     20 01 32.7
ARTI                                                     20 03 54.5
ARTI                                 PPP       PPP       20 05 43.0
ARTI                                 S         S         20 10 44.3  +1.3
ARTI                                                     20 11 25.6
ARTI                                 SS        SS        20 15 25.9  +2.3
ARTI                                 pmax      pmax
      comp=Z,39nm,1.5s
ARTI                                 MLR       MLR
      comp=Z,6µm,22.0s
WLF   Walferdange      73.45  28   dP          P         20 01 17.2  +1.6
SUW   Suwalki          73.53  16     IAMs_20   IAMs_20   20 34 53.4
      comp=Z,11µm,20.0s
MOS   Moscow           73.72   7   eP          P         20 01 16.7  -0.3
MOS                                e                     20 01 41.0
MOS                                eS          S         20 10 48.9  +1.9
MOS                                  pmax      pmax
      comp=Z,146nm,2.0s
MOS                                  pmax      pmax
      comp=Z,600nm,2.8s
MOS                                  smax      smax
      comp=N,2µm,6.6s
MOS                                  smax      smax
      comp=E,2µm,6.8s
MOS                                  MLR       MLR
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         comp=N,10µm,18.0s
MOS                                  MLR       MLR
         comp=Z,10µm,18.0s
MNK      Minsk             73.82  13 i P       P         20 01 18.7 +1.0
MNK                                  i                   20 04 04.0
MNK                                  i PPP     PPP       20 05 48.9
MNK                                  i S       S         20 10 49.6 +1.4
MNK                                  i SS      SS        20 15 30.2  -0.5
MNK                                  i SSS     SSS       20 18 46.9
MNK                                    pmax    pmax
         comp=E,20nm,1.2s
MNK                                    pmax    pmax
         comp=N,13nm,1.2s
MNK                                    pmax    pmax
         comp=Z,32nm,1.0s
MNK                                    MLR     MLR
         comp=N,7µm,18.0s
MNK                                    MLR     MLR
         comp=Z,16µm,19.0s
MNK                                    MLR     MLR
         comp=E,9µm,18.0s
CLL      Collm             73.87  23   IAMs_20 IAMs_20   20 33 28.1
         comp=Z,9µm,20.0s
CLL      Collm             73.87  23 i P       P         20 01 28.0  +10
CLL                                  e                   20 11 21.0
CLL                                    pmax    pmax
         comp=Z,38nm,1.6s
CLL                                    MLR     MLR
         comp=Z,9µm,20.3s
CLL      Collm             73.87  23   P       P         20 01 18.8 +0.8
         comp=Z,16nm,1.4s
OBN      Obninsk           74.25   8   LR      LR        20 36 58.1
         comp=Z,9µm,18.6s,baz=298,slow=38
OBN      Obninsk           74.25   8   P       P         20 01 17.7  -2.4
OBN                                    IAMs_20 IAMs_20   20 36 37.2
         comp=Z,9µm,20.0s
OBN      Obninsk           74.25   8 ⇑P        P         20 01 22.1 +2.0
OBN      Obninsk           74.25   8d iP       P         20 01 20.8 +0.7
OBN                                  i *SP     pwP       20 01 29.1 +2.2
OBN                                  i                   20 01 31.8
OBN                                  i S       S         20 10 57.0 +4.0
OBN                                  i PS      PnS       20 11 30.9 +4.6
OBN                                  eSS       SS        20 15 37.7 +0.6
OBN                                    SSS     SSS       20 18 46.0
OBN                                    pmax    pmax
         comp=Z,87nm,1.7s
OBN                                    MLR     MLR
         comp=Z,7µm,17.0s
OBN      Obninsk           74.25   8   P       P         20 01 20.5 +0.4
         comp=Z,68nm,1.1s
HHC      Hu-ho-hao-te      74.41 316 eP        P         20 01 20.5  -1.1
HHC                                    S       SKiKP     20 10 51.3 +3.9
HHC                                    ScS     SKSac     20 11 29.5 +0.4
HHC                                    SS      SS        20 15 37.3  -3.5
HHC                                    pmax    pmax
         comp=Z,9.0nm,1.2s
HHC                                    pmax    pmax
         comp=Z,300nm,6.2s
HHC                                    LR      LR
         comp=Z,4µm,18.7s
HHC                                    LR      LR
         comp=Z,5µm,16.2s
HHC                                    LR      LR
         comp=Z,6µm,16.2s
HSKC     Hora Svate Kat    74.62  23   AMS     AMS       20 35 20.0
         comp=Z,13µm,16.8s
PGAV     Gavieira, Arco    74.83  41 eLQ       LQ        20 22 52.5
PGAV                                 eLR       LR        20 24 47.5
PGAV                                 i IAMs_20 IAMs_20   20 33 30.3
         comp=Z,7µm,18.0s
RICC     Richard           74.84  23   AMS     AMS       20 38 40.0
         comp=Z,10µm,16.6s
GRA1     Grafenberg Arr    74.88  25   IAMs_20 IAMs_20   20 34 60.0
         comp=Z,9µm,18.0s
GRF      Grafenberg Arr    74.88  25 eP        P         20 01 26.5 +2.5
         comp=Z,26nm,1.3s,baz=342,slow=5.3
GRFO     Grafenberg        74.88  25   IAMs_20 IAMs_20   20 34 59.7
         comp=Z,9µm,18.0s
PVCC     Panska Ves        74.98  23 eP        P         20 01 26.3 +1.8
PVCC                                   MLR     MLR
         comp=Z,9µm,16.5s
PVCC     Panska Ves        74.98  23 eP        P         20 01 26.3 +1.8
PVCC                                   AMS     AMS       20 38 10.0
         comp=Z,9µm,16.5s
ECH      Echery            75.05  28   IAMs_20 IAMs_20   20 36 16.7
         comp=Z,10µm,19.0s
BOAV     Boa Vista         75.10 105   P       P         20 01 24.6  -1.1
BOAV                                   IAmb    IAmb      20 01 31.4
         comp=Z,92nm,1.6s
BOAV     Boa Vista         75.10 105 eP        P         20 01 26.4 +0.7
BOAV     Boa Vista         75.10 105   P       P         20 01 20.9  -4.8
KSP      Ksiaz             75.10  21   P       P         20 01 25.6 +0.4
         comp=Z,26nm,1.6s
PTCN     Pitcairn Islan    75.14 180   IAMs_20 IAMs_20   20 25 56.4
         comp=Z,8µm,21.0s
STU      Stuttgart         75.15  27   IAMs_20 IAMs_20   20 37 29.2
         comp=Z,9µm,19.0s
CHVC     Chvalec           75.28  22   AMS     AMS       20 35 50.0
         comp=Z,7µm,16.8s
BTO      Baotou            75.29 317 eP        P         20 01 24.5  -2.1
BTO                                    S       S         20 11 00.6  -4.8
BTO                                    pmax    pmax
         comp=Z,9.0nm,0.6s
BTO                                    pmax    pmax
         comp=Z,1µm,5.0s
BTO                                    LR      LR
         comp=Z,6µm,12.6s
BTO                                    LR      LR
         comp=Z,10µm,14.5s
BTO                                    LR      LR
         comp=Z,11µm,17.2s
BFO      Black Forest      75.30  27   P       P         20 01 24.8  -1.6
BFO                                    IAmb    IAmb      20 01 60.0
         comp=Z,60nm,1.5s
BFO      Black Forest      75.30  27   P       P         20 01 24.8  -1.6
BFO                                    pmax    pmax
         comp=Z,60nm,1.5s
BFO                                    MLR     MLR
         comp=Z,12µm,19.0s
UPC      Upice             75.34  22 eP        P         20 01 30.9 +4.3
UPC                                    MLR     MLR
         comp=Z,8µm,17.7s
UPC      Upice             75.34  22 epP       P         20 01 30.9 +4.3
UPC                                    AMS     AMS       20 35 50.0
         comp=Z,8µm,17.7s
OSTC     Ostas             75.35  22 eP        P         20 01 27.6 +0.9
OSTC                                   MLR     MLR
         comp=Z,8µm,15.1s
OSTC     Ostas             75.35  22 eP        P         20 01 27.6 +0.9
OSTC                                   AMS     AMS       20 36 30.0
         comp=Z,8µm,15.1s
PRA      Prague            75.37  23   AMS     AMS       20 38 50.0
         comp=Z,12µm,16.3s
TBI      Tubuai            75.44 199 eS        S         20 11 04.9  -1.9
         comp=Z,8µm,35.2s
TBI                                  eSS       SS        20 15 53.4  -4.7
         comp=Z,8µm,38.5s
TBI                                  eLQ       LQ        20 21 25.8
         comp=Z,18µm,28.2s
TBI                                  eLR       LR        20 24 45.4
         comp=Z,34µm,26.5s
TBI                                  eLR       LR        20 24 48.4
         comp=Z,7µm,24.2s
PRU      Pruhonice         75.47  23 eS        S         20 11 11.1 +4.3
PRU                                    AMS     AMS       20 38 50.0
         comp=Z,12µm,16.2s
POLO     Lamas de Olo      75.52  41 eP        P         20 01 26.7  -1.2
POLO                                 ePcP      pwP       20 01 36.0 +1.3
POLO                                 i IAmb    IAmb      20 01 43.0
         comp=Z,45nm,1.9s
BORK     Borovoye          75.52 348   P       P         20 01 25.9  -1.7
BORK                                   IAmb    IAmb      20 01 44.1
         comp=Z,85nm,1.6s
BORK     Borovoye          75.52 348   IAMs_20 IAMs_20   20 39 10.8
         comp=Z,6µm,21.0s
BORK     Borovoye          75.52 348ceP        P         20 01 28.4 +0.8
BORK                                   pmax    pmax
         comp=Z,29nm,1.7s
BORK                                   MLR     MLR
         comp=Z,6µm,22.0s
TIA      Tai'an            75.53 310   P       P         20 01 29.6 +1.7
TIA                                    pP      sP        20 01 32.5  -0.8
TIA                                    S       S         20 11 03.5  -4.5
TIA                                    pmax    pmax
         comp=Z,33nm,1.3s
TIA                                    LR      LR
         comp=Z,3µm,19.2s
TIA                                    LR      LR
         comp=Z,6µm,17.3s
TIA                                    LR      LR
         comp=Z,9µm,23.7s
BVAR     Borovoye Array    75.53 348   P       P         20 01 28.2 +0.5
         comp=Z,2.8nm,0.9s,baz=0.0,slow=4.7,SNR=12
BVAR                                   LR      LR        20 39 13.3
         comp=Z,4µm,20.0s,baz=15,slow=39
         comp=Z,2.8nm,0.9s
DPC      Dobruska-Polom    75.56  22 eP        P         20 01 29.2 +1.3
DPC                                  eS        S         20 11 13.4 +5.4
DPC                                    MLR     MLR
         comp=Z,7µm,15.8s
DPC      Dobruska-Polom    75.56  22 eP        P         20 01 29.2 +1.3
DPC                                  eS        S         20 11 13.4 +5.4
DPC                                    AMS     AMS       20 36 40.0
         comp=Z,7µm,15.8s
DPC      Dobruska-Polom    75.56  22   P       P         20 01 29.0 +1.1
         comp=Z,25nm,1.6s
HNS      HongShan          75.75 312 ⇑P        P         20 01 29.6 +0.5
HNS                                    S       S         20 11 14.3 +4.0
HNS                                    pmax    pmax
         comp=Z,50nm,1.6s
HNS                                    LR      LR
         comp=Z,4µm,23.3s
HNS                                    LR      LR
         comp=Z,7µm,19.8s
HNS                                    LR      LR
         comp=Z,9µm,19.8s
ZVC      Zvikov            75.89  23 eS        S         20 11 18.0 +6.5
ZVC                                    AMS     AMS       20 35 50.0
         comp=Z,11µm,18.5s
KRLC     Kraliky           75.93  21   AMS     AMS       20 36 50.0
         comp=Z,13µm,15.3s
MVO      Moncorvo          76.01  41 eLQ       LQ        20 21 30.1
MVO                                  eLR       LR        20 23 45.8
MVO                                  i IAMs_20 IAMs_20   20 34 18.1
         comp=Z,5µm,18.0s
KHC      Kasperske Hory    76.02  24   IAmb    IAmb      20 01 55.5
         comp=Z,70nm,1.9s
KHC                                    IAMs_20 IAMs_20   20 36 18.9
         comp=Z,7µm,19.0s
KHC      Kasperske Hory    76.02  24 eP        P         20 01 32.6 +2.1
KHC                                  e                   20 01 45.2
KHC                                    MLR     MLR
         comp=Z,9µm,15.1s
KHC      Kasperske Hory    76.02  24 eP        P         20 01 32.6 +2.1
KHC                                  ex        x         20 01 45.2
KHC                                  eS        S         20 11 20.3 +7.3
KHC                                    AMS     AMS       20 37 40.0
         comp=Z,9µm,15.1s
KHC      Kasperske Hory    76.02  24   P       P         20 01 31.3 +0.8
         comp=Z,16nm,1.9s
RAR      Rarotonga         76.04 209   LR      LR        20 26 49.1
         comp=Z,4µm,21.4s,baz=6.5,slow=29
STEB     Steborice         76.29  21 eP        P         20 01 35.0 +3.0
PCAS     Casmilo, Conde    76.31  42 ePcP      PcP       20 01 40.4  -3.8
GERES    GERESS Array B    76.31  24   P       P         20 01 32.6 +0.3
         comp=Z,1.7nm,0.8s,baz=330,slow=5.1,SNR=12
GERES                                  LR      LR        20 37 08.5
         comp=Z,8µm,19.6s,baz=338,slow=37
         comp=Z,1.7nm,0.8s
TREC     Trest             76.34  23   AMS     AMS       20 37 20.0
         comp=Z,14µm,16.2s
KURK     Kurchatov         76.37 342   P       P         20 01 30.8  -1.6
KURK                                   IAmb    IAmb      20 01 48.4
         comp=Z,63nm,1.4s
KURK     Kurchatov         76.37 342   IAMs_20 IAMs_20   20 37 54.3
         comp=Z,6µm,19.0s
KURK     Kurchatov         76.37 342ceP        P         20 01 32.9 +0.5
KURK                                   pmax    pmax
         comp=Z,33nm,1.7s
KURK                                   MLR     MLR
         comp=Z,6µm,18.0s
MORC     Moravsky Berou    76.38  21   IAmb    IAmb      20 01 47.5
         comp=Z,39nm,1.7s
MORC     Moravsky Berou    76.38  21 eP        P         20 01 33.1 +0.5
MTE      Manteigas         76.43  42   IAMs_20 IAMs_20   20 39 59.7
         comp=Z,6µm,20.0s
MTE      Manteigas         76.43  42 eLQ       LQ        20 21 24.4
MTE                                  eLR       LR        20 25 09.6
MTE                                  i IAMs_20 IAMs_20   20 42 31.9
         comp=Z,6µm,18.0s
OKC      Ostrava-Krasne    76.46  21   AMS     AMS       20 37 10.0
         comp=Z,10µm,16.9s
OJC      Ojcow             76.47  19   P       P         20 01 34.0 +1.0
         comp=Z,18nm,1.0s
KURBB    Kurchatov Arra    76.47 342   P       P         20 01 32.5  -0.6
         comp=Z,4.2nm,0.8s,baz=18,slow=5.5,SNR=18
KURBB                                  PP      PP        20 04 28.4 +4.3
         comp=Z,1.1nm,0.8s,baz=13,slow=7.7,SNR=4.3
KURBB                                  LR      LR        20 38 37.7
         comp=Z,5µm,19.4s,baz=18,slow=38
         comp=Z,4.2nm,0.8s
CKRC     Cesky Krumlov     76.49  23 eS        S         20 11 25.9 +7.7
CKRC                                   AMS     AMS       20 36 40.0
         comp=Z,8µm,17.0s
RNPP9    Sopachiv          76.49  15   P       P         20 01 33.5 +0.4
RNPP8    Varash            76.56  15   P       P         20 01 33.8 +0.3
VRAC     Vranov            76.60  22   LR      LR        20 36 58.1
         comp=Z,11µm,18.2s,baz=326,slow=37
VRAC     Vranov            76.60  22 ⇑P        P         20 01 33.5  -0.3
VRAC     Vranov            76.60  22 eP        P         20 01 35.2 +1.4
VRAC     Vranov            76.60  22 ⇑P        P         20 01 33.5  -0.3
GUMO     Guam              76.64 275   LR      LR        20 28 12.1
         comp=Z,7µm,21.6s,baz=35,slow=30
GUMO     Guam              76.64 275   IAMs_20 IAMs_20   20 27 39.1
         comp=Z,7µm,22.0s
RNPP5    Staryi Chortor    76.67  15   P       P         20 01 34.2 +0.1
DAVA     Damuels           76.69  27 i pP      P         20 01 37.2 +2.6
         comp=Z,18nm,1.6s
SENIN    Lac Senin/Sane    76.75  29   IAMs_20 IAMs_20   20 33 12.7
         comp=Z,9µm,20.0s
RETA     Reutte            76.76  26 epP       pP        20 01 38.6  -0.1
         comp=Z,13nm,2.1s
KRUC     Moravsky          76.78  22 eP        P         20 01 35.5 +0.7
PSARD    Sardoal           76.83  42 ePcP      PcP       20 01 43.3  -3.2
PSARD                                i IAmb    IAmb      20 01 48.1
         comp=Z,68nm,2.0s
MAUC     Maruska           76.83  21 eP        P         20 01 38.7 +3.5
JOW      Kunigami          76.84 296   LR      LR        20 36 35.2
         comp=Z,1µm,19.4s,baz=57,slow=37
PMAFR    Mafra             76.87  44 eP        P         20 01 34.7  -0.9
PCBR     Castelo Branco    76.92  42 ePcP      PcP       20 01 43.4  -3.5
LPSR     Galich'ya Gora    76.94   7 eP        P         20 01 35.1  -0.5
LPSR                                   pmax    pmax
         comp=Z,20nm,0.9s
LPSR                                   MLR     MLR
         comp=Z,10µm,17.0s
WATA     Walderalm         77.12  26 i pP      P         20 01 39.3 +2.3
         comp=Z,19nm,1.5s
SQTA     Sankt Quirin      77.13  26 epP       P         20 01 39.3 +2.3
         comp=Z,19nm,1.8s
DAVOX    Davos/Dischmat    77.15  27   LR      LR        20 36 23.5
         comp=Z,11µm,20.2s,baz=321,slow=36
FETA     Feichten          77.17  26 i P       P         20 01 36.1  -1.2
         comp=Z,32nm,2.3s
WTTA     Wattenberg        77.21  26 epP       P         20 01 39.4 +1.9
         comp=Z,16nm,1.3s
PMTG     Montargil         77.24  43 ePcP      PcP       20 01 47.3  -0.9
PMTG                                 i IAmb    IAmb      20 02 09.8
         comp=Z,48nm,1.5s
MI28     Mi28,Pidlybu      77.25  14   P       P         20 01 37.8 +0.4
TUE      Stuetta           77.27  28   IAmb    IAmb      20 02 01.1
         comp=Z,46nm,1.4s
JAVC     Velka Javorina    77.27  21 eP        P         20 01 39.5 +1.8
PMRV     Marv??o           77.30  42 ePcP      P         20 01 44.7 +6.7
PMRV                                 eLQ       LQ        20 21 41.4
PMRV                                 eLR       LR        20 27 03.4
PMRV                                 i IAMs_20 IAMs_20   20 41 01.6
         comp=Z,5µm,20.0s
NIE      Niedzica          77.33  19   P       P         20 01 38.6 +0.6
         comp=Z,8.4nm,1.8s
LESA     Schwarzleotal     77.35  25 i pP      P         20 01 40.6 +2.5
         comp=Z,10nm,1.4s
BIOA     Bad Ischl, Aus    77.36  24 i pP      pP        20 01 41.5  -0.6
         comp=Z,15nm,1.6s
MOA      Molln             77.38  24 epP       P         20 01 40.2 +2.0
         comp=Z,7.3nm,1.2s
FUORN    Ofenpass-Fuorn    77.40  27   IAmb    IAmb      20 02 00.7
         comp=Z,66nm,1.6s
FUORN                                  IAMs_20 IAMs_20   20 36 20.9
         comp=Z,9µm,19.0s
NNA      Nana              77.42 127   P       P         20 01 38.6  -0.2
NNA                                    IAmb    IAmb      20 01 45.1
         comp=Z,67nm,1.2s
NNA      Nana              77.42 127ceP        P         20 01 41.7 +2.9
NNA                                    pmax    pmax
         comp=Z,146nm,1.7s
SSE      Sheshan           77.47 304   P       P         20 01 39.1 +0.1
SSE                                    S       S         20 11 28.3  -1.0
SSE                                    pmax    pmax
         comp=Z,18nm,0.8s
SSE                                    pmax    pmax
         comp=Z,450nm,10.2s
SSE                                    LR      LR
         comp=Z,1µm,26.1s
SSE                                    LR      LR
         comp=Z,670nm,24.7s
STHS     Stebnicka Huta    77.53  19 eP        P         20 01 42.8 +3.7
STHS     Stebnicka Huta    77.53  19 eP        P         20 01 42.8 +3.7
PARRA    Arraiolos         77.53  43 ePcP      PcP       20 01 46.7  -2.8
PARRA                                i IAmb    IAmb      20 02 25.9
         comp=Z,66nm,1.7s
BELG     Belogornoye       77.56   2   LR      LR        20 40 23.9
         comp=Z,3µm,19.3s,baz=0.9,slow=39
BELG     Belogornoye       77.56   2 i P       P         20 01 37.9  -1.2
BELG                                   pmax    pmax
         comp=Z,20nm,1.5s
BELG                                   MLR     MLR
         comp=Z,2µm,23.0s
AK21     Malin Array Si    77.61  14   P       P         20 01 38.9  -0.5
MODS     Modra-Piesok      77.63  22 eP        P         20 01 45.8 +6.1
MODS     Modra-Piesok      77.63  22 eP        P         20 01 45.8 +6.1
AK20     Malin Array Si    77.64  14   P       P         20 01 39.7 +0.1
MOE      Montemor          77.64  43 ePcP      PcP       20 01 48.4  -1.6
MOE                                  i IAmb    IAmb      20 01 53.0
         comp=Z,74nm,1.7s
AK19     Malin Array Si    77.66  14   P       P         20 01 39.8 +0.1
AK18     Malin Array Si    77.67  14   P       P         20 01 39.7   0.0
AK04     Malin Array Si    77.68  13   P       P         20 01 39.8   0.0
PESTR    Estremoz          77.69  42 ePcP      PcP       20 01 47.5  -2.7
PESTR                                i IAmb    IAmb      20 02 26.8
         comp=Z,59nm,1.9s
AK03     Malin Array Si    77.69  13   P       P         20 01 39.5  -0.3
LVV      L'vov             77.69  17   P       P         20 01 40.8 +0.9
AK15     Malin Array Si    77.70  13   P       P         20 01 40.2 +0.3
AK17     Malin Array Si    77.70  14   P       P         20 01 39.4  -0.5
CONA     Conrad Observa    77.71  23 eP        P         20 01 39.9  -0.3
         comp=Z,20nm,2.0s
AKASG    Malin Array Be    77.71  13   P       P         20 01 39.5  -0.5
         comp=Z,8.7nm,0.9s,baz=348,slow=5.3,SNR=22
AKASG                                  LR      LR        20 36 38.5
         comp=Z,13µm,19.8s,baz=352,slow=36
         comp=Z,8.7nm,0.9s
AKASG    Malin Array Be    77.71  13 i P       P         20 01 40.0   0.0
AKASG                                  pmax    pmax
         comp=Z,9.0nm,0.9s
AKBB     Malin Array Si    77.71  13   IAmb    IAmb      20 01 50.6
         comp=Z,52nm,1.1s
AKBB     Malin Array Si    77.71  13ceP        P         20 01 40.7 +0.7
AKBB                                   pmax    pmax
         comp=Z,54nm,1.2s
AKBB     Malin Array Si    77.71  13   P       P         20 01 39.2  -0.8
KIEV     Kiev              77.72  13   P       P         20 01 38.5  -1.4
KIEV                                   IAmb    IAmb      20 01 50.6
         comp=Z,47nm,1.1s
KIEV     Kiev              77.72  13 ⇓P        P         20 01 39.5  -0.5
KIEV     Kiev              77.72  13   P       P         20 01 38.6  -1.4
KIEV                                   pmax    pmax
         comp=Z,47nm,1.2s
KIEV                                   MLR     MLR
         comp=Z,14µm,20.0s
KIEV     Kiev              77.72  13   P       P         20 01 39.2  -0.8
         comp=Z,165nm,1.2s
AK01     Malin Array Si    77.72  13   P       P         20 01 39.3  -0.7
AK16     Malin Array Si    77.72  13   P       P         20 01 39.5  -0.6
AK11     Malin Array Si    77.72  13   P       P         20 01 39.2  -0.9
AK02     Malin Array Si    77.75  13   P       P         20 01 39.8  -0.4
AK12     Malin Array Si    77.76  13   P       P         20 01 39.8  -0.4
AK14     Malin Array Si    77.76  14   P       P         20 01 39.6  -0.7
AK13     Malin Array Si    77.77  14   P       P         20 01 39.2  -1.1
AK08     Malin Array Si    77.78  13   P       P         20 01 40.2  -0.2
AK05     Malin Array Si    77.79  13   P       P         20 01 40.2  -0.2
AK09     Malin Array Si    77.80  13   P       P         20 01 40.3  -0.2
AK10     Malin Array Si    77.81  13   P       P         20 01 40.1  -0.5
AK06     Malin Array Si    77.82  13   P       P         20 01 40.3  -0.3
KBA      Koelnbreinsper    77.84  25 eP        P         20 01 39.8  -1.2
         comp=Z,33nm,1.5s
VORR     Voronezh          77.88   7 eP        P         20 01 40.3  -0.6
VORR                                   pmax    pmax
         comp=Z,40nm,1.0s
VORR                                   MLR     MLR
         comp=Z,5µm,14.0s
ABTA     Abfaltersbach     77.92  25 eP        P         20 01 40.3  -1.1
         comp=Z,15nm,1.2s
NJ2      Nanjing           77.95 306 eP        P         20 01 39.6  -2.0
NJ2                                    pP      pP        20 01 44.9  -0.7
NJ2                                    S       S         20 11 36.4 +2.0
NJ2                                    pmax    pmax
         comp=Z,6.0nm,0.5s
NJ2                                    pmax    pmax
         comp=Z,450nm,4.0s
NJ2                                    LR      LR
         comp=Z,3µm,21.4s
NJ2                                    LR      LR
         comp=Z,5µm,23.1s
NJ2                                    LR      LR
         comp=Z,3µm,23.3s
MDP      Montagnes des     77.96  97   LR      LR        20 35 59.4
         comp=Z,5µm,21.8s,baz=328,slow=36
ZSN      Zaisan            78.02 337⇑iP        P         20 01 42.4 +0.6
         comp=Z,87nm,2.0s
ZSN                                  eS        S         20 11 36.5 +1.6
ZSN      Zaisan            78.02 337c iP       P         20 01 42.4 +0.6
ZSN                                  eS        S         20 11 36.5 +1.6
ZSN                                    pmax    pmax
         comp=Z,87nm,2.0s
RONA     Rosalia, Austr    78.03  23 i P       P         20 01 41.2  -0.7
         comp=Z,13nm,1.5s
PMOZ     Porto Moniz, M    78.07  53 eLR       LR        20 28 48.1
PMOZ                                 i IAMs_20 IAMs_20   20 31 53.3
         comp=Z,5µm,18.0s
LUBAR    Lubar, Ukraine    78.24  15   P       P         20 01 43.0   0.0
ARSA     Arzberg           78.25  23 epP       P         20 01 45.5 +2.4
         comp=Z,15nm,1.5s
MESJ     Messejana         78.26  43 ePcP      PcP       20 01 51.2  -1.5
MESJ                                 i IAmb    IAmb      20 02 31.1
         comp=Z,50nm,2.2s
PBEJ     Beja              78.26  43 ePcP      PcP       20 01 51.1  -1.6
PBEJ                                 i IAmb    IAmb      20 01 58.3
         comp=Z,46nm,2.1s
MORS     Morshin           78.33  17   P       P         20 01 45.0 +1.6
VSR      Storozhevoye      78.33   7 eP        P         20 01 43.0  -0.4
VSR                                    pmax    pmax
         comp=Z,30nm,1.1s
VSR                                    MLR     MLR
         comp=Z,10µm,16.0s
MYKA     Terra Mystica     78.34  25 i pP      pP        20 01 46.9  -0.7
         comp=Z,9.7nm,1.5s
PAB      San Pablo         78.48  40   IAMs_20 IAMs_20   20 41 10.8
         comp=Z,6µm,20.0s
PBAR     Barrancos         78.50  43 ePcP      PcP       20 01 52.1  -1.6
MORF     Marmelete         78.52  44 ePcP      PcP       20 01 52.8  -1.1
PCVE     Castro Verde      78.52  43 ePcP      PcP       20 01 52.8  -1.0
VRH      Novokhopyorsk     78.52   5 eP        P         20 01 42.4  -2.1
VRH                                    pmax    pmax
         comp=Z,20nm,1.0s
VRH                                    MLR     MLR
         comp=Z,6µm,16.0s
ESDC     Sonseca Array     78.53  40   P       P         20 01 45.3 +0.4
         comp=Z,2.3nm,1.0s,baz=322,slow=5.3,SNR=9.9
ESDC                                   LR      LR        20 35 22.5
         comp=Z,5µm,18.2s,baz=324,slow=35
         comp=Z,2.3nm,1.0s
VORD     Divnogorie        78.59   7 eP        P         20 01 44.0  -0.8
VORD                                   pmax    pmax
         comp=Z,30nm,1.1s
VORD                                   MLR     MLR
         comp=Z,4µm,15.0s
SOKA     Soboth            78.66  24 i pP      P         20 01 47.0 +1.5
         comp=Z,22nm,1.6s
PSZ      Piszkesteto       78.66  20   IAmb    IAmb      20 02 16.6
         comp=Z,61nm,1.5s
PSZ      Piszkesteto       78.66  20 ⇑P        P         20 01 47.9 +2.5
PSZ      Piszkesteto       78.66  20 ⇑P        P         20 01 47.9 +2.5
OBKA     Obir              78.69  24 i pP      P         20 01 47.7 +2.1
         comp=Z,15nm,1.0s
HORU     Horodok           78.71  16   P       P         20 01 47.0 +1.5
MUKU     Mukachevo         78.74  18   P       P         20 01 47.1 +1.4
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MPLH	**Magyarpolny**	**78.82**	**22**	P	**P**	**20 01 47.5**	**+1.3**
	comp=Z,30nm,1.2s						
PVAQ	**Vaqueiros**	**78.85**	**43**	*e*PcP	**PcP**	**20 01 54.6**	**-0.7**
PVAQ				*i* IAmb	IAmb	20 02 00.9	
	comp=Z,82nm,1.8s						
PVAQ				*e*LQ	LQ	20 22 15.3	
PVAQ				*e*LR	LR	20 27 03.4	
PVAQ				*i* IAMs_20	IAMs_20	20 33 03.8	
	comp=Z,6µm,20.0s						
BRIU	**Brid**	**78.92**	**18**	P	**P**	**20 01 48.4**	**+1.7**
BERU	**Beregovo**	**78.94**	**18**	P	**P**	**20 01 48.6**	**+1.8**
KORU	**Korolevo**	**79.11**	**18**	P	**P**	**20 01 49.2**	**+1.4**
LYN	**LuoYang**	**79.12**	**312**	P	**P**	**20 01 48.3**	**+0.2**
LYN				pP	sP	20 01 52.8	-0.7
LYN				sP	pwP	20 01 54.9	0.0
LYN				S	**S**	**20 11 52.4**	**+5.4**
LYN				pmax	pmax		
	comp=Z,46nm,0.9s						
LYN				pmax	pmax		
	comp=Z,970nm,6.9s						
LYN				LR	LR		
	comp=Z,5µm,22.3s						
LYN				LR	LR		
	comp=Z,5µm,20.3s						
LYN				LR	LR		
	comp=Z,10µm,17.9s						
TRSU	**Trosnyk**	**79.14**	**18**	P	**P**	**20 01 49.3**	**+1.4**
MK31	**Makanchi Array**	**79.27**	**338**	*ce*P	**P**	**20 01 49.6**	**+0.9**
MKAR	**Makanchi Array**	**79.27**	**338**	P	**P**	**20 01 47.8**	**-1.0**
	comp=Z,1.8nm,0.7s,baz=30,slow=4.9,SNR=16						
MKAR				LR	LR	20 39 19.5	
	comp=Z,9µm,20.2s,baz=12,slow=38						
	comp=Z,1.8nm,0.7s						
MKAR	**Makanchi Array**	**79.27**	**338**	P	**P**	**20 01 46.8**	**-2.0**
MKAR	**Makanchi Array**	**79.27**	**338**	*i* P	**P**	**20 01 48.4**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
RPN	**Rapa Nui**	**79.31**	**161**	LR	LR	20 29 48.1	
	comp=Z,609nm,18.6s,baz=10.0,slow=30						
KSV	**Kosov**	**79.33**	**17**	P	**P**	**20 01 50.2**	**+1.2**
MAKZ	**Makanchi**	**79.33**	**338**	P	**P**	**20 01 47.4**	**-1.7**
MAKZ				IAMs_20	IAMs_20	20 39 10.8	
	comp=Z,8µm,20.0s						
MAKZ	**Makanchi**	**79.33**	**338**	P	**P**	**20 01 47.4**	**-1.7**
MAKZ				pmax	pmax		
	comp=Z,194nm,1.7s						
MAKZ				MLR	MLR		
	comp=Z,8µm,20.0s						
KMPD	**K-Podol'skiy**	**79.34**	**16**	P	**P**	**20 01 48.1**	**-0.9**
KMPD				P	**pP**	**20 01 49.4**	**-3.6**
MORH	**Mrgy, Hungar**	**79.98**	**22**	⇓P	**P**	**20 01 53.2**	**+0.7**
MORH	**Mrgy, Hungar**	**79.98**	**22**	P	**P**	**20 01 53.1**	**+0.6**
	comp=Z,1µmcomp=Z,22nm,1.8s						
BUR08	**Bucovina Ar. S**	**80.00**	**17**	IAmb	IAmb	20 02 16.4	
	comp=Z,55nm,1.8s						
BURAR	**Bucovina Array**	**80.03**	**17**	P	**P**	**20 01 51.3**	**-1.6**
BURAR	**Bucovina Array**	**80.03**	**17**	⇑P	**P**	**20 01 56.7**	**+3.7**
BURAR	**Bucovina Array**	**80.03**	**17**	⇑P	**P**	**20 01 56.7**	**+3.7**
SORM	**Soroca**	**80.07**	**15**	⇑P	**P**	**20 01 53.1**	**+0.1**
SORM	**Soroca**	**80.07**	**15**	⇑P	**P**	**20 01 53.1**	**+0.1**
SFS	**San Fernando**	**80.29**	**43**	IAMs_20	IAMs_20	20 31 45.2	
	comp=Z,6µm,21.0s						
DRGR		**80.33**	**19**	⇓P	**P**	**20 01 54.1**	**-0.4**
DRGR		**80.33**	**19**	⇓P	**P**	**20 01 54.1**	**-0.4**
AB31	**Akbulak array**	**80.36**	**353**	IAmb	IAmb	20 02 08.3	
	comp=Z,131nm,1.9s						
ABKAR	**Akbulak array**	**80.36**	**353**	P	**P**	**20 01 53.1**	**-1.4**
ARCR	**ARCALIA**	**80.38**	**18**	⇑P	**P**	**20 01 55.3**	**+0.7**
GTA	**Gaotai**	**80.49**	**323**	P	**P**	**20 01 55.1**	**-0.5**
GTA				pP	sP	20 01 59.5	-1.5
GTA				pmax	pmax		
	comp=Z,12nm,1.4s						
GTA				LR	LR		
	comp=Z,4µm,21.9s						
GTA				LR	LR		
	comp=Z,7µm,23.1s						
GTA				LR	LR		
	comp=Z,8µm,23.5s						
MARR	**Marisel-Cluj**	**80.53**	**18**	⇑P	**P**	**20 01 57.4**	**+1.8**
SIRR	**Siria**	**80.61**	**20**	⇑P	P	20 02 02.0	+6.1
WMQ	**Urumqi**	**80.61**	**333**	*e*P	**P**	**20 01 57.3**	**+1.2**
WMQ				pP	pwP	20 02 01.6	-1.3
WMQ				S	**S**	**20 12 02.3**	**-0.3**
WMQ				pmax	pmax		
	comp=Z,47nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,870nm,5.1s						
WMQ				LR	LR		
	comp=Z,4µm,22.9s						
WMQ				LR	LR		
	comp=Z,5µm,22.9s						
WMQ				LR	LR		
	comp=Z,6µm,22.9s						
GIRR	**Girov**	**80.90**	**16**	⇓P	**P**	**20 02 00.8**	**+3.3**
XAN	**Xi'an**	**81.20**	**314**	⇑P	**P**	**20 01 58.8**	**-0.6**
XAN				pP	sP	20 02 03.1	-1.7
XAN				sP	PcP	20 02 06.3	+0.7
XAN				S	**S**	**20 12 09.8**	**+0.8**
XAN				pmax	pmax		
	comp=Z,15nm,1.2s						
XAN				LR	LR		
	comp=Z,6µm,15.8s						
XAN				LR	LR		
	comp=Z,7µm,18.6s						
XAN				LR	LR		
	comp=Z,5µm,19.9s						
BZS	**Buzias**	**81.22**	**20**	⇑P	**P**	**20 01 59.7**	**+0.5**
BZS	**Buzias**	**81.22**	**20**	⇑P	**P**	**20 01 59.7**	**+0.5**
TESR	**Tescani**	**81.36**	**16**	⇑P	P	20 02 05.6	+5.7
WHN	**Wuhan**	**81.45**	**308**	P	**P**	**20 02 03.3**	**+2.6**
WHN				S	**SKSac**	**20 12 14.9**	**-4.8**
WHN				pmax	pmax		
	comp=Z,42nm,0.9s						
WHN				LR	LR		
	comp=Z,8µm,15.9s						
WHN				LR	LR		
	comp=Z,9µm,17.7s						
WHN				LR	LR		
	comp=Z,10µm,18.7s						
MAHO	**Mahon**	**81.49**	**34**	IAMs_20	IAMs_20	20 35 54.9	
	comp=Z,7µm,21.0s						
CART	**Cartagena**	**81.51**	**39**	IAMs_20	IAMs_20	20 37 06.0	
	comp=Z,6µm,18.0s						
GZR	**Gura Zlata**	**81.68**	**19**	⇓P	**P**	**20 02 02.0**	**+0.3**
GZR	**Gura Zlata**	**81.68**	**19**	⇓P	**P**	**20 02 02.0**	**+0.3**
TURR	**Turia**	**81.68**	**17**	⇓P	**P**	**20 02 02.5**	**+0.8**
LZH	**Lanzhou**	**81.72**	**319**	*e*P	**P**	**20 02 00.9**	**-1.3**
LZH				pP	pwP	20 02 07.9	-1.1
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
LZH				LR	LR		
	comp=Z,8µm,18.2s						
LZH				LR	LR		
	comp=Z,9µm,17.2s						
LZH				LR	LR		
	comp=Z,12µm,17.9s						
TDK	**Taldyqorghan**	**81.85**	**340**	⇑*i*P	**P**	**20 02 03.2**	**+0.6**
	comp=Z,99nm,2.1s						
TDK				LR	LR	20 40 50.7	
	comp=Z,4µm,18.7s						
TDK	**Taldyqorghan**	**81.85**	**340**	*c i*P	**P**	**20 02 03.2**	**+0.6**
TDK				pmax	pmax		
	comp=Z,99nm,2.1s						
LZDM	**Lanzhou Array**	**81.89**	**319**	P	**P**	**20 02 03.1**	**-0.3**
	comp=Z,2.5nm,0.3s,baz=2.5,slow=6.8,SNR=3.9						
LZDM				LR	LR	20 38 50.7	
	comp=Z,6µm,19.7s,baz=40,slow=36						
	comp=Z,2.5nm,0.3s						
COVR	**Voineasa-Covas**	**81.92**	**17**	⇓P	**P**	**20 02 06.2**	**+3.3**
GHRR		**81.93**	**16**	⇑P	**P**	**20 02 06.5**	**+3.5**
PLOR	**Plostina**	**81.99**	**16**	⇓P	P	20 02 09.6	+6.3
PLOR	**Plostina**	**81.99**	**16**	⇓P	P	20 02 09.6	+6.2
VRI	**Vrincioaia**	**81.99**	**16**	⇓P	**P**	**20 02 05.4**	**+2.1**
VRI	**Vrincioaia**	**81.99**	**16**	⇓P	**P**	**20 02 05.4**	**+2.1**
ARR	**Arges**	**82.08**	**18**	⇑P	**P**	**20 02 07.3**	**+3.5**
TATO	**Taipei**	**82.11**	**300**	IAMs_20	IAMs_20	20 34 37.9	
	comp=Z,4µm,20.0s						
MLR	**Muntele Rosu**	**82.21**	**17**	LR	LR	20 39 37.9	
	comp=Z,16µm,19.8s,baz=353,slow=36						
AVE	**Averroes**	**82.41**	**45**	IAMs_20	IAMs_20	20 36 59.6	
	comp=Z,6µm,19.0s						
YHNB	**Yeheng**	**82.42**	**300**	IAMs_20	IAMs_20	20 34 58.1	
	comp=Z,4µm,21.0s						
NACB	**Ninganchiao**	**82.69**	**299**	IAMs_20	IAMs_20	20 35 09.2	
	comp=Z,3µm,22.0s						
CFR	**Carcaliu**	**82.91**	**15**	⇓P	**P**	**20 02 09.7**	**+1.7**
CFR	**Carcaliu**	**82.91**	**15**	⇓P	**P**	**20 02 09.7**	**+1.7**
CHKK	**Chushkaly**	**83.25**	**341**	*e*P	**P**	**20 02 10.6**	**+0.7**
CHKK	**Chushkaly**	**83.25**	**341**	*e*P	**P**	**20 02 10.6**	**+0.7**
ITTB	**Itaituba**	**83.33**	**105**	*e*P	**P**	**20 02 09.7**	**-1.0**
SSLB	**Suanglung**	**83.35**	**299**	IAMs_20	IAMs_20	20 35 38.8	
	comp=Z,4µm,21.0s						
SHLS	**Shalkode**	**83.36**	**339**	⇑*i*P	**P**	**20 02 10.7**	**0.0**
	comp=Z,62nm,2.2s						
SHLS				*e*S	**SKSac**	**20 12 31.1**	**-1.4**
SHLS	**Shalkode**	**83.36**	**339**	*c i*P	**P**	**20 02 10.6**	**0.0**
SHLS				*e*S	**SKSac**	**20 12 31.1**	**-1.4**
SHLS				pmax	pmax		
	comp=Z,62nm,2.2s						
YULB	**Yu-li**	**83.47**	**299**	IAMs_20	IAMs_20	20 35 14.0	
	comp=Z,3µm,21.0s						
UZB	**Uzynbulak**	**83.47**	**339**	⇑*i*P	**P**	**20 02 11.7**	**+0.4**
	comp=Z,36nm,1.8s						
UZB				*e*S	**SKSac**	**20 12 32.6**	**-0.7**
UZB	**Uzynbulak**	**83.47**	**339**	*c i*P	**P**	**20 02 11.6**	**+0.4**
UZB				*e*S	**SKSac**	**20 12 32.6**	**-0.7**
UZB				pmax	pmax		
	comp=Z,36nm,1.8s						
SATY	**Saty**	**83.70**	**340**	⇑*i*P	**P**	**20 02 12.7**	**+0.3**
	comp=Z,53nm,1.6s						
SATY				*e*S	**SKSac**	**20 12 34.5**	**-0.3**
SATY	**Saty**	**83.70**	**340**	*c i*P	**P**	**20 02 12.7**	**+0.3**
SATY				*e*S	**SKSac**	**20 12 34.4**	**-0.3**
SATY				pmax	pmax		
	comp=Z,53nm,1.6s						
AAA	**Alma-Ata**	**83.88**	**341**	*e*P	**P**	**20 02 13.6**	**+0.4**
	comp=Z,32nm,0.9s						
AAA				LR	LR	20 41 29.1	
AAA	**Alma-Ata**	**83.88**	**341**	*e*P	**P**	**20 02 13.6**	**+0.4**
AAA				pmax	pmax		
	comp=Z,32nm,0.9s						
MDOK	**Medeo**	**83.89**	**341**	*e*P	**P**	**20 02 14.0**	**+0.6**
MDOK				*e*S	**SKSac**	**20 12 36.0**	**-0.1**
MDOK				LR	LR	20 41 34.3	
MDOK	**Medeo**	**83.89**	**341**	*e*P	**P**	**20 02 14.0**	**+0.6**
MDOK				*e*S	**SKSac**	**20 12 35.9**	**-0.1**
ERBR	**Yeremizino-Bor**	**83.90**	**7**	*e*P	**P**	**20 02 13.7**	**+0.5**
ERBR				*e*S	**SKSac**	**20 12 35.2**	**-0.4**
ERBR				pmax	pmax		
	comp=Z,34nm,1.0s						
ERBR				MLR	MLR		
	comp=Z,5µm,16.0s						
MD01	**Midelt array s**	**83.97**	**44**	P	P	20 02 08.9	-5.0
MD31	**MD31**	**83.97**	**44**	P	**P**	**20 02 09.8**	**-4.0**
MD31				IAmb	IAmb	20 02 32.0	
	comp=Z,35nm,1.6s						
SIM	**Simferopol'**	**84.02**	**11**	*e*P	**P**	**20 02 15.6**	**+1.8**
SIM				*e*PS	**PnS**	**20 13 31.0**	**+1.3**
SIM				pmax	pmax		
	comp=Z,29nm,1.4s						
SIM				pmax	pmax		
	comp=Z,240nm,6.1s						
SIM				MLR	MLR		
	comp=Z,7µm,16.5s						
TNSS	**Tian-Shan**	**84.04**	**341**	*e*P	**P**	**20 02 14.7**	**+0.2**
TNSS	**Tian-Shan**	**84.04**	**341**	*e*P	**P**	**20 02 14.6**	**+0.2**
TWG	**Pinlang**	**84.05**	**299**	IAMs_20	IAMs_20	20 44 29.3	
	comp=Z,3µm,18.0s						
ENH	**Enshi**	**84.06**	**312**	IAMs_20	IAMs_20	20 40 42.1	
	comp=Z,6µm,20.0s						
CNSH	**ChangSha**	**84.09**	**308**	P	**P**	**20 02 15.3**	**+0.9**
CNSH				pmax	pmax		
	comp=Z,15nm,1.4s						
CNSH				LR	LR		
	comp=Z,2µm,22.0s						
CNSH				LR	LR		
	comp=Z,3µm,29.5s						
CNSH				LR	LR		
	comp=Z,5µm,28.6s						
ANN	**Anapa**	**84.54**	**9**	*e*P	**P**	**20 02 15.0**	**-1.4**
ANN				*e*S	**SKSac**	**20 12 38.5**	**-1.2**
ANN				pmax	pmax		
	comp=Z,36nm,0.8s						
ANN				MLR	MLR		
	comp=N,11µm,18.0s						
GOF	**Gofitskoye**	**84.72**	**5**	*ce*P	**P**	**20 02 16.1**	**-1.3**
AAK	**Ala-Archa**	**84.92**	**342**	LR	LR	20 45 53.8	
	comp=N,4µm,18.5s,baz=24,slow=40						
AAK	**Ala-Archa**	**84.92**	**342**	P	**P**	**20 02 16.5**	**-2.1**
AAK				IAmb	IAmb	20 02 35.3	
	comp=Z,62nm,1.5s						
AAK	**Ala-Archa**	**84.92**	**342**	IAMs_20	IAMs_20	20 44 29.6	
	comp=Z,4µm,20.0s						
AAK	**Ala-Archa**	**84.92**	**342**	*ce*P	**P**	**20 02 17.9**	**-0.7**
AAK				pmax	pmax		
	comp=Z,2µm,18.8s						
LABN	**Labinsk**	**84.99**	**7**	*e*P	**P**	**20 02 18.9**	**+0.2**
LABN				pmax	pmax		
	comp=Z,19nm,1.3s						
CUC	**Castrocucco**	**85.08**	**26**	IAMs_20	IAMs_20	20 40 21.1	
	comp=Z,8µm,21.0s						
GOMU	**GeErMu**	**85.19**	**325**	P	**P**	**20 02 18.3**	**-2.0**
GOMU				pP	pP	20 02 22.5	-1.8
GOMU				sP	sP	20 02 25.3	-0.4
GOMU				S	**SKSac**	**20 12 40.4**	**-4.6**
GOMU				LR	LR		
	comp=Z,4µm,17.2s						
GOMU				LR	LR		
	comp=Z,6µm,17.9s						
GOMU				LR	LR		
	comp=Z,8µm,17.7s						
KK31	**Karatay Array**	**85.19**	**345**	IAmb	IAmb	20 02 36.3	
	comp=Z,61nm,1.8s						
KKAR	**Karatay Array**	**85.19**	**345**	P	P	20 02 14.4	-5.4
KKAR	**Karatay Array**	**85.19**	**345**	P	P	20 02 14.4	-5.4
DZA	**Taraz**	**85.26**	**345**	*e*P	**P**	**20 02 20.8**	**+0.7**
DZA	**Taraz**	**85.26**	**345**	*e*P	**P**	**20 02 20.8**	**+0.7**
WUS	**Wushi**	**85.28**	**338**	IAMs_20	IAMs_20	20 42 13.3	
	comp=Z,3µm,22.0s						
BRLS	**Borolday**	**85.37**	**346**	⇑*i*P	**P**	**20 02 22.6**	**+1.9**
BRLS	**Borolday**	**85.37**	**346**	*c i*P	**P**	**20 02 22.5**	**+1.9**
SANVU	**Saraoutou**	**85.55**	**239**	IAMs_20	IAMs_20	20 30 44.5	
	comp=Z,4µm,22.0s						
LPAZ	**La Paz**	**85.61**	**122**	P	**P**	**20 02 22.8**	**0.0**
	comp=Z,5.4nm,0.9s,baz=343,slow=4.4,SNR=17						
LPAZ				LR	LR	20 45 49.8	
	comp=Z,2µm,18.2s,baz=331,slow=39						
	comp=Z,5.4nm,0.9s						
LPAZ	**La Paz**	**85.61**	**122**	P	**P**	**20 02 18.7**	**-4.1**
LPAZ				IAmb	IAmb	20 02 39.0	
	comp=Z,42nm,1.4s						
LPAZ	**La Paz**	**85.61**	**122**	P	**P**	**20 02 18.7**	**-4.1**
LPAZ				pmax	pmax		
	comp=Z,42nm,1.4s						
LPAZ	**La Paz**	**85.61**	**122**	*e*P	**P**	**20 02 19.7**	**-3.1**
NPGB	**Novo Progresso**	**85.66**	**106**	*e*P	**P**	**20 02 21.2**	**-1.2**
KIV	**Kislovodsk**	**85.80**	**5**		**P**	**20 02 27.5**	**+4.6**
KIV				IAMs_20	IAMs_20	20 44 13.8	
	comp=Z,7µm,18.0s						
KIV	**Kislovodsk**	**85.80**	**5**	⇓P	**P**	**20 02 24.1**	**+1.2**
KIV	**Kislovodsk**	**85.80**	**5**	*e*P	**P**	**20 02 22.5**	**-0.4**
KIV				*e*		20 12 47.4	
KIV				*e*SS	SS	20 18 32.9	+2.5
KIV				pmax	pmax		
	comp=Z,30nm,1.1s						
KIV				pmax	pmax		
	comp=Z,78nm,4.0s						
KIV				MLR	MLR		
	comp=Z,4µm,20.0s						
KVAR	**Kislovodsk Arr**	**85.80**	**5**	LR	LR	20 44 20.8	
	comp=Z,6µm,19.1s,baz=260,slow=38						
PB18	**Visviri**	**85.95**	**124**	P	**P**	**20 02 21.9**	**-2.5**
SOC	**Sochi**	**85.96**	**8**	*e*P	**P**	**20 02 23.6**	**+0.1**
SOC				*e**PP	**pwP**	**20 02 30.6**	**+0.2**
SOC				*e*		20 05 51.3	
SOC				*e*PPP	PPP	20 07 39.4	
SOC				*e*S	**SKSac**	**20 12 50.0**	**+1.2**
SOC				*e*SS	**SS**	**20 18 35.5**	**+3.0**
SOC				pmax	pmax		
	comp=Z,16nm,1.0s						
SOC				MLR	MLR		
	comp=Z,7µm,18.0s						
SHA1	**Shidzhatmaz**	**86.02**	**5**	*ce*P	**P**	**20 02 25.6**	**+1.4**
KBZ	**Khabaz**	**86.04**	**5**	P	**P**	**20 02 23.6**	**-0.3**
	comp=Z,3.6nm,1.0s,baz=6.0,slow=6.5,SNR=7.5						
KBZ				LR	LR	20 44 34.3	
	comp=Z,6µm,18.2s,baz=351,slow=38						
	comp=Z,3.6nm,1.0s						
KBZ	**Khabaz**	**86.04**	**5**	*ce*P	**P**	**20 02 25.6**	**+1.7**
KBZ				pmax	pmax		
	comp=Z,46nm,2.3s						
KBZ				MLR	MLR		
	comp=Z,8µm,22.0s						
CHM	**Chimkent**	**86.10**	**346**	*e*P	**P**	**20 02 24.9**	**+0.6**
CHM				LR	LR	20 43 00.1	
	comp=Z,3µm,17.4s						
CHM	**Chimkent**	**86.10**	**346**	*e*P	**P**	**20 02 24.9**	**+0.6**
CD2	**Chengdu**	**86.17**	**316**	*e*P	**P**	**20 02 24.3**	**-0.6**
CD2				S	**S**	**20 12 56.5**	**-2.7**
CD2				LR	LR		
	comp=Z,7µm,16.7s						
CD2				LR	LR		
	comp=Z,8µm,19.0s						
CD2				LR	LR		
	comp=Z,6µm,18.4s						
NCK	**Nalchik**	**86.31**	**5**	*i* P	**P**	**20 02 25.4**	**+0.1**
NCK				pmax	pmax		
	comp=Z,60nm,2.0s						
PB12	**IPOC Station P**	**86.35**	**125**	P	P	20 02 21.4	-4.4
PB12				IAmb	IAmb	20 02 31.8	
	comp=Z,72nm,1.5s						
NEUR	**Neytrino**	**86.49**	**5**	*i* P	**P**	**20 02 27.1**	**+0.7**
NEUR				pmax	pmax		
	comp=Z,50nm,1.8s						
MAK	**Makhachkala**	**86.99**	**2**	*d i*P	**P**	**20 02 24.7**	**-3.9**
MAK				*e*		20 05 59.9	
MAK				*e*PPP	PPP	20 07 48.3	
MAK				*e*		20 12 54.5	
MAK				*e*SSS	SSS	20 22 16.8	
MAK				pmax	pmax		
	comp=Z,266nm,1.0s						
KEST	**Kesra**	**87.00**	**32**	LR	LR	20 42 25.9	
	comp=Z,6µm,18.8s,baz=338,slow=36						
VAE	**Valguarnera**	**87.01**	**28**	LR	LR	20 42 39.9	
	comp=Z,9µm,18.4s,baz=339,slow=37						
VILB	**Vilhena**	**87.40**	**114**	*e*P	**P**	**20 02 32.1**	**+1.2**
KSH	**Kashi**	**87.62**	**340**	P	**P**	**20 02 34.3**	**+2.4**
KSH				pmax	pmax		
	comp=Z,11nm,1.6s						
KSH				LR	LR		
	comp=Z,4µm,18.6s						
KSH				LR	LR		
	comp=Z,5µm,19.2s						
KSH				LR	LR		
	comp=Z,4µm,19.2s						
PB11	**IPOC Station P**	**87.65**	**125**	IAmb	IAmb	20 02 47.8	
	comp=Z,20nm,0.9s						
GULI	**GuiLin**	**87.76**	**308**	P	P	20 02 38.3	+5.7
GULI				S	**S**	**20 13 16.0**	**+1.4**
GULI				pmax	pmax		
	comp=Z,29nm,1.5s						
GULI				pmax	pmax		
	comp=Z,330nm,7.6s						
GULI				LR	LR		
	comp=Z,2µm,19.2s						
GULI				LR	LR		
	comp=Z,2µm,20.7s						
GULI				LR	LR		
	comp=Z,3µm,23.2s						
HKPS	**Hong Kong Po S**	**88.28**	**304**	IAMs_20	IAMs_20	20 43 30.8	
	comp=Z,4µm,20.0s						
CLDB	**Colider**	**88.38**	**109**	*e*P	**P**	**20 02 36.9**	**+1.2**
PDRB	**Porto dos Gac**	**88.40**	**110**	*e*P	**P**	**20 02 36.6**	**+1.0**
AKT	**Akhty**	**88.47**	**2**	*e*P	**P**	**20 02 34.4**	**-1.5**
AKT				*e*S	**SKSac**	**20 13 03.5**	**-1.0**
AKT				pmax	pmax		
	comp=Z,72nm,2.3s						
AKT				MLR	MLR		
	comp=Z,8µm,18.0s						
WDD	**Wied Dalam**	**88.56**	**28**	IAMs_20	IAMs_20	20 44 57.5	
	comp=Z,6µm,19.0s						
GYA	**Guiyang**	**88.60**	**312**	⇓P	**P**	**20 02 35.8**	**-1.0**
GYA				pmax	pmax		
	comp=Z,9.0nm,1.4s						
SACV	**Santiago Islan**	**88.63**	**68**	IAMs_20	IAMs_20	20 38 49.6	
	comp=Z,5µm,20.0s						
ANTO	**Ankara**	**88.83**	**13**	IAMs_20	IAMs_20	20 47 28.3	
	comp=Z,6µm,19.0s						
ANTO	**Ankara**	**88.83**	**13**	P	**P**	**20 02 39.0**	**+1.4**
	comp=Z,14nm,1.8s						
BR106	**Keskin Array S**	**89.08**	**13**	P	**P**	**20 02 40.3**	**+1.5**
	comp=Z,5.6nm,1.1s						
BR131	**Keskin Array S**	**89.09**	**13**	IAmb	IAmb	20 03 33.6	
	comp=Z,33nm,1.6s						
BRTR	**Keskin Array B**	**89.09**	**13**	P	**P**	**20 02 39.0**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=349,slow=1.3,SNR=10						
BRTR				LR	LR	20 45 20.2	
	comp=Z,5µm,20.2s,baz=336,slow=38						
	comp=Z,0.5nm,0.7s						
BRTR	**Keskin Array B**	**89.09**	**13**		pwP	20 02 45.8	0.0
BRTR	**Keskin Array B**	**89.09**	**13**	P	**P**	**20 02 39.0**	**+0.1**
BRTR				*PP	**pwP**	**20 02 45.8**	**0.0**
BR105	**Keskin Array S**	**89.09**	**13**	P	**P**	**20 02 40.4**	**+1.5**
	comp=Z,8.8nm,1.2s						
BR104	**Keskin Array S**	**89.11**	**13**	P	**P**	**20 02 40.3**	**+1.3**
	comp=Z,7.1nm,1.2s						
KARS	**Kars**	**89.14**	**5**	IAmb	IAmb	20 02 57.8	
	comp=Z,52nm,1.3s						
SIV	**San Ignacio**	**89.31**	**116**	LR	LR	20 47 49.5	
	comp=Z,3µm,18.2s,baz=358,slow=39						
CHGR	**Chuyangaron**	**89.75**	**345**	*i* P	**P**	**20 02 42.1**	**+0.2**
CHGR				pmax	pmax		
	comp=Z,271nm,1.4s						
RAO	**Raoul Island**	**89.98**	**221**	LR	LR	20 35 20.4	
	comp=Z,1µm,21.3s,baz=348,slow=30						
PTLB	**Pontes e Lacer**	**90.00**	**114**	IAmb	IAmb	20 02 59.0	
	comp=Z,29nm,1.1s						
PTLB	**Pontes e Lacer**	**90.00**	**114**	*e*P	**P**	**20 02 43.8**	**+0.7**
MANEM	**Manem**	**90.39**	**343**	IAmb	IAmb	20 03 02.7	
	comp=Z,261nm,1.6s						
ISP	**Isparta**	**90.47**	**15**	IAMs_20	IAMs_20	20 44 20.3	
	comp=Z,8µm,21.0s						
PZH	**PanZhiHua**	**90.85**	**315**	P	**P**	**20 02 47.3**	**0.0**
PZH				S	**S**	**20 13 42.1**	**-1.7**
PZH				pmax	pmax		
	comp=Z,30nm,1.2s						
PZH				pmax	pmax		
	comp=Z,250nm,4.7s						
PZH				LR	LR		
	comp=Z,3µm,14.5s						
PZH				LR	LR		
	comp=Z,3µm,14.9s						
PZH				LR	LR		
	comp=Z,5µm,17.7s						
SHAA	**Shahritus**	**90.98**	**346**	IAmb	IAmb	20 03 05.4	
	comp=Z,249nm,1.4s						
TGY	**Tagaytay City**	**91.02**	**294**	LR	LR	20 43 55.9	
	comp=Z,2µm,18.2s,baz=81,slow=36						
GURO	**Guroymak-BITLI**	**91.14**	**6**	IAmb	IAmb	20 03 16.2	
	comp=Z,31nm,1.5s						
DZM	**Mont Dzumac**	**91.36**	**236**	LR	LR	20 36 05.2	
	comp=Z,3µm,21.2s,baz=32,slow=30						
DZM	**Mont Dzumac**	**91.36**	**236**	*e*S	**S**	**20 13 43.0**	**-5.0**
	comp=Z,1µm,28.8s						
DZM				*e*SS	**SS**	**20 19 49.5**	**-4.6**
	comp=Z,2µm,26.6s						
DZM				*e*LQ	LQ	20 27 35.1	
	comp=Z,6µm,29.1s						
DZM				*e*LR	LR	20 31 56.1	
	comp=Z,4µm,21.9s						
JAY	**Jayapura**	**91.54**	**268**	LR	LR	20 35 36.0	
	comp=Z,11µm,21.7s,baz=35,slow=30						
KMI	**Kunming**	**91.58**	**314**	⇓P	**P**	**20 02 54.8**	**+3.9**
KMI				SS	SS	20 19 50.3	-5.6
KMI				pmax	pmax		
	comp=Z,20nm,2.0s						
KMI				pmax	pmax		
	comp=Z,310nm,4.6s						
KMI				LR	LR		
	comp=Z,3µm,16.2s						
KMI				LR	LR		
	comp=Z,5µm,14.2s						
KMI				LR	LR		
	comp=Z,5µm,21.1s						
IDI	**Anoyia**	**91.82**	**20**	LR	LR	20 46 52.6	
	comp=Z,4µm,19.9s,baz=327,slow=37						
SNDB	**Serra Nova Dou**	**91.98**	**106**	*e*P	**P**	**20 02 53.3**	**+0.9**
KARP	**Karpathos**	**92.05**	**19**	P	**P**	**20 02 53.6**	**+1.0**
	comp=Z,169nm,1.6s						
LSA	**Lhasa**	**92.36**	**325**	IAMs_20	IAMs_20	20 45 53.8	
	comp=Z,5µm,22.0s						
LSA	**Lhasa**	**92.36**	**325**	P	P	20 02 47.3	-7.4
LSA	**Lhasa**	**92.36**	**325**	S	S	20 13 49.3	-8.7
LSA				LR	LR		
	comp=N,3µm,19.4s						
LSA				LR	LR		
	comp=E,2µm,18.3s						

LSA				LR	LR		
	comp=Z,4µm,20.5s						
NBPS	**Pedro II - PI**	**92.36**	**94**	*e*P	**P**	**20 02 53.2**	**-1.1**
PMG	**Port Moresby**	**92.71**	**259**	LR	LR	20 36 58.2	
	comp=Z,4µm,21.4s,baz=58,slow=31						
PMG	**Port Moresby**	**92.71**	**259**	IAMs_20	IAMs_20	20 36 36.2	
	comp=Z,4µm,22.0s						
MBO	**M'Bour**	**92.97**	**63**	IAMs_20	IAMs_20	20 39 47.9	
	comp=Z,7µm,22.0s						
QIZ	**Qiongzhong**	**93.22**	**305**	IAMs_20	IAMs_20	20 46 24.4	
	comp=Z,4µm,21.0s						
QIZ	**Qiongzhong**	**93.22**	**305**	P	**P**	**20 02 55.8**	**-2.4**
QIZ				S	**S**	**20 14 02.1**	**-2.8**
QIZ				SS	**SS**	**20 20 18.8**	**-0.4**
QIZ				LR	LR		
	comp=Z,2µm,19.6s						
QIZ				LR	LR		
	comp=Z,2µm,17.3s						
QIZ				LR	LR		
	comp=Z,3µm,20.8s						
TNCH	**TengChong**	**93.56**	**317**	P	**P**	**20 03 00.0**	**+0.1**
TNCH				sP	sP	20 03 04.9	-0.5
TNCH				pmax	pmax		
	comp=Z,32nm,1.2s						
TNCH				pmax	pmax		
	comp=Z,220nm,3.0s						
CSS	**Mathiatis**	**93.72**	**14**	IAMs_20	IAMs_20	20 46 59.9	
	comp=Z,6µm,22.0s						
CSS	**Mathiatis**	**93.72**	**14**	P	**P**	**20 03 02.2**	**+1.9**
DAV	**Davao City (W)**	**93.75**	**286**	LR	LR	20 37 11.5	
	comp=Z,6µm,22.0s,baz=56,slow=30						
DAV	**Davao City (W)**	**93.75**	**286**	IAMs_20	IAMs_20	20 36 27.2	
	comp=Z,6µm,22.0s						
KBL	**Kabul**	**93.78**	**344**		**P**	**20 03 05.0**	**+4.2**
KBL				IAmb	IAmb	20 03 09.8	
	comp=Z,16nm,1.0s						
KBL	**Kabul**	**93.78**	**344**	P	**P**	**20 03 05.0**	**+4.2**
KBL				pmax	pmax		
	comp=Z,17nm,1.0s						
NIL	**Nilore**	**93.84**	**341**		**P**	**20 03 04.3**	**+3.4**
NIL	**Nilore**	**93.84**	**341**	IAMs_20	IAMs_20	20 48 39.8	
	comp=Z,5µm,20.0s						
NIL	**Nilore**	**93.84**	**341**	P	**P**	**20 03 04.3**	**+3.4**
NIL				pmax	pmax		
	comp=Z,215nm,2.0s						
NIL				MLR	MLR		
	comp=Z,5µm,20.0s						
MMAI	**Mount Meron Ar**	**95.93**	**12**	LR	LR	20 49 29.7	
	comp=Z,4µm,21.1s,baz=345,slow=38						
BDFB	**Brasilia**	**96.82**	**106**	LR	LR	20 52 17.4	
	comp=Z,4µm,18.2s,baz=328,slow=39						
ASF	**Jabal al Asfar**	**96.96**	**11**	LR	LR	20 49 26.4	
	comp=Z,4µm,21.8s,baz=350,slow=37						
RCBR	**Riachuelo**	**97.00**	**91**	IAMs_20	IAMs_20	20 43 57.5	
	comp=Z,7µm,20.0s						
TAM	**Tamanrasset**	**97.16**	**41**	IAMs_20	IAMs_20	20 52 16.6	
	comp=Z,5µm,18.0s						
FAKI	**Fak Fak**	**97.25**	**274**	IAMs_20	IAMs_20	20 41 36.7	
	comp=Z,6µm,20.0s						
TNTI	**Ternate**	**97.52**	**280**	IAMs_20	IAMs_20	20 38 22.9	
	comp=Z,5µm,22.0s						
GHAJ	**Ghor Haditha**	**97.64**	**13**	IAMs_20	IAMs_20	20 50 25.5	
	comp=Z,4µm,21.0s						
CHTO	**Chiang Mai**	**98.78**	**314**	IAMs_20	IAMs_20	20 50 24.9	
	comp=Z,3µm,20.0s						
CHTO	**Chiang Mai**	**98.78**	**314**	P	Pdif	20 03 27.2	+3.7
CMAR	**Chiang Mai Arr**	**99.09**	**314**	P	**Pdif**	**20 03 24.9**	**0.0**
	comp=Z,1.1nm,0.8s,baz=37,slow=4.1,SNR=13						
CMAR				LR	LR	20 49 12.1	
	comp=Z,2µm,18.9s,baz=15,slow=36						
	comp=Z,1.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**99.09**	**314**	P	**Pdif**	**20 03 18.3**	**-6.6**
EIL	**Elat**	**99.16**	**13**	LR	LR	20 51 23.9	
	comp=Z,2µm,21.5s,baz=349,slow=37						
CPUP	**Villa Florida**	**99.61**	**120**	LR	LR	20 52 49.9	
	comp=Z,1µm,21.7s,baz=346,slow=38						
URZ	**Urewera**	**99.83**	**220**	LR	LR	20 43 11.6	
	comp=Z,2µm,19.2s,baz=33,slow=32						
CTAO	**Charters Tower**	**101.42**	**252**	IAMs_20	IAMs_20	20 41 31.8	
	comp=Z,6µm,21.0s						
SAUI	**Saumlaki**	**101.72**	**272**	IAMs_20	IAMs_20	20 45 31.3	
	comp=Z,3µm,20.0s						
LUWI	**Luwuk**	**101.80**	**283**	IAMs_20	IAMs_20	20 43 09.1	
	comp=Z,3µm,22.0s						
SPB	**Sao Paulo**	**103.22**	**111**	IAMs_20	IAMs_20	20 53 24.9	
	comp=Z,4µm,21.0s						
UOSS	**Minazif**	**104.79**	**354**	IAMs_20	IAMs_20	20 59 01.6	
	comp=Z,2µm,20.0s						
BKB	**Balikpapan**	**105.60**	**287**	IAMs_20	IAMs_20	20 45 13.7	
	comp=Z,2µm,21.0s						
RAYN	**Ar Rayn**	**106.29**	**4**	IAMs_20	IAMs_20	20 56 26.4	
	comp=Z,3µm,21.0s						
TRQA	**Tornquist**	**106.36**	**130**	IAMs_20	IAMs_20	21 01 21.3	
	comp=Z,3µm,22.0s						
SOEI	**Soe**	**107.55**	**276**	IAMs_20	IAMs_20	20 44 55.3	
	comp=Z,4µm,22.0s						
MMRI	**Maumere**	**107.99**	**278**	IAMs_20	IAMs_20	20 45 15.5	
	comp=Z,3µm,22.0s						
KULM	**Kulim**	**109.55**	**305**	IAMs_20	IAMs_20	21 02 05.3	
	comp=Z,2µm,20.0s						
IPM	**Ipoh**	**110.04**	**305**	IAMs_20	IAMs_20	20 55 07.3	
	comp=Z,3µm,22.0s						
CAN	**Canberra**	**111.19**	**240**	IAMs_20	IAMs_20	21 01 36.5	
	comp=Z,2µm,19.0s						
LHMI	**Lhok Sumawe**	**111.49**	**309**	IAMs_20	IAMs_20	21 04 50.4	
	comp=Z,2µm,18.0s						
ASCN	**Ascension**	**112.24**	**75**	IAMs_20	IAMs_20	20 49 56.5	
	comp=Z,6µm,22.0s						
JAGI	**Jajag, Banyuwa**	**112.92**	**285**	IAMs_20	IAMs_20	20 47 20.5	
	comp=Z,2µm,22.0s						
BKNI	**Bangkinang**	**113.52**	**302**	IAMs_20	IAMs_20	21 02 34.8	
	comp=Z,3µm,19.0s						
GSI	**Gunungsitoli**	**114.53**	**306**	IAMs_20	IAMs_20	20 57 18.1	
	comp=Z,3µm,20.0s						
EDA	**Edea**	**116.05**	**46**	IAMs_20	IAMs_20	20 55 34.0	
	comp=Z,5µm,18.0s						
PALK	**Pallekele**	**116.73**	**326**	IAMs_20	IAMs_20	21 09 22.4	
	comp=Z,3µm,20.0s						
MBWA	**Marble Bar**	**118.93**	**271**	IAMs_20	IAMs_20	20 54 29.4	
	comp=Z,4µm,20.0s						
FURI	**Furi**	**120.11**	**13**	IAMs_20	IAMs_20	21 08 06.1	
	comp=Z,3µm,19.0s						
LODK	**Lodwar**	**124.90**	**18**		**pPKPdf**	**20 08 52.9**	**+4.8**
LODK				IAMs_20	IAMs_20	21 09 06.4	
	comp=Z,3µm,18.0s						
MBAR	**Mbarara**	**127.71**	**25**	IAMs_20	IAMs_20	21 06 38.5	
	comp=Z,3µm,19.0s						
NWAO	**Narrogin (SRO)**	**128.68**	**263**	IAMs_20	IAMs_20	21 03 29.4	
	comp=Z,3µm,19.0s						
HOPE	**Hope Point**	**130.15**	**130**	IAMs_20	IAMs_20	21 08 13.5	
	comp=Z,4µm,22.0s						
KIBK	**Kibwezi**	**131.03**	**16**		**pPKPdf**	**20 09 05.6**	**+5.8**
KIBK				IAMs_20	IAMs_20	21 11 14.1	
	comp=Z,2µm,18.0s						
DGAR	**Diego Garcia**	**133.27**	**329**	IAMs_20	IAMs_20	21 10 18.5	
	comp=Z,3µm,20.0s						
SBA	**Scott Base**	**133.65**	**195**	IAMs_20	IAMs_20	20 59 00.4	
	comp=Z,3µm,18.0s						
VNDA	**Vanda**	**134.30**	**196**	PKP	**PKPdf**	**20 09 00.4**	**+0.7**
	comp=Z,1.2nm,0.9s,baz=80,slow=6.1,SNR=4.6						
TSUM	**Tsumeb**	**139.56**	**52**		**PKiKP**	**20 09 17.0**	**+3.2**
TSUM	**Tsumeb**	**139.56**	**52**	IAMs_20	IAMs_20	21 14 48.0	
	comp=Z,3µm,19.0s						
QSPA	**South Pole Qui**	**140.21**	**180**	PKhKP	PKPpre	20 09 06.0	
	comp=Z,3.1nm,0.9s,baz=179,slow=1.8,SNR=8.5						
LSZ	**Lusaka**	**140.73**	**35**		**PKiKP**	**20 09 17.7**	**+1.5**
LSZ	**Lusaka**	**140.73**	**35**	PKIKP	**PKiKP**	**20 09 17.7**	**+1.5**
LSZ				MLR	MLR		
	comp=Z,4µm,20.0s						
WIN	**Windhoek**	**142.12**	**55**	IAMs_20	IAMs_20	21 13 43.0	
	comp=Z,3µm,20.0s						
KOOLE	**Kule**	**144.06**	**52**		PKPab	20 09 09.7	-7.1
KGCAE	**Kacgae**	**144.93**	**49**	*i* P	**PKPdf**	**20 09 21.1**	**+0.3**
LKGWB	**Lokgwabe**	**145.50**	**51**		**PKiKP**	**20 09 24.8**	**-1.0**
LKGWB	**Lokgwabe**	**145.50**	**51**	*i* P	**PKPab**	**20 09 22.4**	**+0.3**
BROLN	**Tlhalogang**	**145.69**	**40**	*i* P	**PKPab**	**20 09 23.4**	**+0.6**
CASY	**Casey**	**146.15**	**219**	IAMs_20	IAMs_20	21 13 19.4	
	comp=Z,2µm,19.0s						
VNA3	**Neumayer Olymp**	**146.23**	**150**	⇓P	**PKPdf**	**20 09 22.7**	**+1.2**
VNA1	**Neumayer--Stat**	**146.76**	**149**	⇑P	**PKPbc**	**20 09 24.1**	**+0.1**
MREMI	**Moremi**	**147.04**	**41**	*i* P	**PKPdf**	**20 09 23.2**	**-1.2**
LPHEP	**Lephephe**	**147.06**	**44**	*i* P	**PKPdf**	**20 09 24.9**	**+0.5**
SKOMA	**Sekoma**	**147.16**	**48**	*i* P	**PKPdf**	**20 09 24.7**	**+0.2**
SNAA	**Sanae**	**148.31**	**151**	⇑P	**PKPdf**	**20 09 26.1**	**+1.1**
SNAA	**Sanae**	**148.31**	**151**	PKPbc	**PKPbc**	**20 09 27.7**	**-0.7**
	comp=Z,7.7nm,1.0s,baz=276,slow=2.5,SNR=12						
SNAA	**Sanae**	**148.31**	**151**		**PKPdf**	**20 09 21.4**	**-3.5**
SNAA				IAMs_20	IAMs_20	21 21 11.8	
	comp=Z,3µm,20.0s						
LBTB	**Lobatse**	**148.37**	**46**		**PKPdf**	**20 09 19.7**	**-6.9**
LBTB	**Lobatse**	**148.37**	**46**	PKHKP	PKPpre	20 09 19.7	
ABPO	**Ambohimpanom**	**148.60**	**5**		pPKPab	20 09 39.9	+1.6
ABPO	**Ambohimpanom**	**148.60**	**5**	IAMs_20	IAMs_20	21 20 51.7	
	comp=Z,4µm,22.0s						
MAKGR	**Makgori**	**148.67**	**48**	*i* P	**PKPdf**	**20 09 28.5**	**+1.5**
TROLL	**Troll, Antarti**	**149.83**	**153**	⇑P	**PKPdf**	**20 09 28.1**	**+0.6**
BOSA	**Boshof**	**151.24**	**50**	PKP	**PKPdf**	**20 09 30.4**	**-0.6**
	comp=Z,4.3nm,0.9s,baz=334,slow=1.5,SNR=4.1						
BOSA				PKPbc	**PKiKP**	**20 09 38.9**	**+1.4**
	comp=Z,16nm,1.0s,baz=289,slow=1.1,SNR=9.8						
VOI	**Vohitsoka**	**151.44**	**6**		**PKPdf**	**20 09 31.7**	**+0.2**
NVL	**N'lazarevskaya**	**153.06**	**153**	*e*PKIKP	**PKPdf**	**20 09 35.6**	**+3.4**
NVL				*e*		20 13 29.3	
NVL				*e*PPP	PPP	20 16 56.7	
NVL				*e*SSS	SSS	20 38 54.4	
NVL				pmax	pmax		
	comp=Z,17nm,0.7s						
SYO	**Syowa Base**	**160.65**	**169**	⇓*e*sPKPdf	sPKPdf	20 09 47.4	-0.1

IDC ***23*** *20:00:24.2±1.5, 50.°43N×130.°17W, h0^{km}, mb3.6/3, mbtmp3.7/8, ML3.6/4, Error ellipse: s-maj=23.7km s-min=16.5km az=60.0*

ISC 23 20:00:26.3±1.2**, 50.°73N**±0.°10×**130.°07W**±0.°09**, h10^{km}, n12, σ1.^{s}35**/11**, mb3.6**/3**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBB	**Bella Bella**	**1.91**	**39**	Pn	**Pn**	**20 00 59.5**	**+0.7**
	9.6nm,0.3s,baz=220,slow=5.9,SNR=8.0						
BBB				Sn	**Sn**	**20 01 23.0**	**+0.2**
	48nm,0.3s,baz=321,slow=19,SNR=7.0						
	108nm,0.7s						
H02S2	**DAWSON INLET T**	**2.89**	**330**	Pn	**Pn**	**20 01 11.1**	**-1.3**
NEW	**Newport**	**8.78**	**101**	Pn	**Pn**	**20 02 32.6**	**-0.6**
	0.2nm,0.3s,baz=270,slow=20,SNR=2.1						
	2.6nm,0.8s						
YKA	**Yellowknife Ar**	**14.49**	**30**	Pn	**Pn**	**20 03 51.8**	**+0.7**
	0.1nm,0.3s,baz=224,slow=12,SNR=6.2						
YKA				Sn	**Sn**	**20 06 29.2**	**-2.4**
	0.1nm,0.3s,baz=227,slow=23,SNR=1.4						
	2.1nm,0.9s						
PDAR	**Pinedale Array**	**16.12**	**112**	Pn	**Pn**	**20 04 13.0**	**-0.1**
	0.1nm,0.3s,baz=308,slow=12,SNR=15						
	6.9nm,1.0s						
ILAR	**Eielson Array**	**16.61**	**334**	Pn	**P**	**20 04 23.5**	**+2.1**
	1.1nm,0.8s,baz=148,slow=11,SNR=8.3						
TXAR	**Lajitas Array**	**29.15**	**127**	P	**P**	**20 06 26.7**	**-0.8**
	1.1nm,0.9s,baz=323,slow=7.7,SNR=6.5						
	1.1nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**57.96**	**262**	T	T	21 12 56.9	
	baz=42,slow=76,SNR=21						
H11N3	**WAKE ISLAND Hy**	**57.96**	**262**	T	T	21 12 56.8	
	baz=42,slow=76,SNR=33						
H11N1	**WAKE ISLAND Hy**	**57.97**	**262**	T	T	21 12 48.5	
	baz=42,slow=76,SNR=19						
KURBB	**Kurchatov Arra**	**76.13**	**342**	P	**P**	**20 12 14.8**	**+0.9**
	0.2nm,0.7s,baz=13,slow=6.8,SNR=2.1						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**78.93**	**338**	P	**P**	**20 12 29.9**	**+0.3**
	0.7nm,1.0s,baz=19,slow=4.5,SNR=3.6						
	0.7nm,1.0s						

OSPL ***23*** *20:15:26.4±0.4, 19.°75N×69.°94W, h0^{km}±4^{km}, ML2.4, Presumed earthquake*

SDD ***23*** *20:15:27.2±2.3, 19.°72N×70.°08W, h12^{km}±14^{km}, MD3.0, ML3.0, MW2.8, Presumed earthquake*

ISC 23 20:15:27.4±1.1**, 19.°69N**±0.°05×**70.°05W**±0.°03**, h14^{km}**±6^{km}**, n16, σ1.^{s}25**/29**, 23C-1D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CADR	**Cabrera**	**0.10**	**105**	⇑*e*Pg	**Pg**	**20 15 30.2**	**-0.4**
CADR				⇑*e*Sg	**Sg**	**20 15 33.7**	**+1.0**
CADR				IAML		20 15 36.7	
	comp=N,9µm,0.2s						
NADR	**Nagua**	**0.38**	**152**	⇑*e*Pg	**Pg**	**20 15 34.5**	**-0.6**
NADR				⇑*e*Sg	**Sg**	**20 15 39.9**	**-0.4**
NADR				IAML		20 15 46.1	
	comp=N,505nm,0.2s						
SFDR	**San Fco. de Ma**	**0.45**	**205**	⇑*e*Pg	**Pg**	**20 15 35.4**	**-0.9**
SFDR				⇑*e*Sg	**Sg**	**20 15 42.9**	**+0.6**
SFDR				IAML		20 15 46.3	
	comp=N,4µm,0.2s						
SC01	**Santiago de lo**	**0.70**	**248**	*e*S	**Sg**	**20 15 51.6**	**+1.4**
DR08	**Loma La Naviza**	**0.73**	**178**	⇑*e*Pg	**Pg**	**20 15 40.4**	**-1.2**
DR08				⇑*e*Sg	**Sg**	**20 15 50.7**	**-0.5**
DR08				IAML		20 15 52.4	
	comp=N,14µm,0.2s						
LUDR	**Luperon**	**0.88**	**283**	⇑*e*Pg	**Pg**	**20 15 43.0**	**-1.5**
LUDR				⇓*e*Sg	**Sg**	**20 15 54.3**	**-1.6**
SMDR	**Samana, DR**	**0.90**	**116**	⇑*e*Sg	**Sn**	**20 15 58.6**	**+0.1**
SMDR				IAML		20 16 02.2	
	comp=N,2µm,0.3s						
ABDR	**Alto Bandera**	**1.03**	**212**	⇑*e*Pg	**Pg**	**20 15 46.5**	**-0.9**
ABDR				⇑*e*Sg	**Sg**	**20 15 59.9**	**-1.1**
ABDR				IAML		20 16 29.5	
	comp=N,1.3nm,0.3s						
HATOM	**Hato Mayor del**	**1.10**	**145**	⇑*e*Pg	**Pg**	**20 15 46.1**	**-2.5**
HATOM				⇑*e*Sg	**Sg**	**20 16 02.1**	**-0.8**
HATOM				IAML		20 16 03.5	
	comp=N,343nm,0.2s						
LOPP1	**Punta Rusia, P**	**1.10**	**279**	*i* P	**Pg**	**20 15 47.7**	**-1.0**
LOPP1				*e*S	**Sb**	**20 16 03.8**	**+1.4**
LOPP1				IAML		20 16 09.0	
	comp=Z,121nm,2.1s						
MIDR	**Miches**	**1.18**	**127**	⇑*e*Pg	**Pg**	**20 15 49.0**	**-1.1**
MIDR				⇑*e*Sg	**Sb**	**20 16 05.3**	**+0.7**
MIDR				IAML		20 16 05.8	
	comp=N,38nm,0.4s						
SDDR	**Presa de Saban**	**1.37**	**239**	⇑*e*Pg	**Pn**	**20 15 51.8**	**-0.4**
SDDR				⇑*e*Sg	**Sb**	**20 16 08.6**	**-1.7**
SDDR				IAML		20 16 13.3	
	comp=N,1µm,0.3s						
HIDR	**Higuey Centro**	**1.67**	**131**	⇑*e*Pg	**Pn**	**20 15 56.7**	**+0.5**
HIDR				⇑*e*Sg	**Sg**	**20 16 21.4**	**+0.3**
HIDR				IAML		20 16 22.6	
	comp=N,536nm,0.3s						
LONE3	**El Aguacate, B**	**1.72**	**231**	*i* P	**Pn**	**20 15 57.4**	**+0.3**
LONE3				*e*S	**Sn**	**20 16 20.3**	**+1.4**
LONE3				IAML		20 16 25.4	
	comp=Z,24nm,2.4s						
PODR	**Polo**	**1.92**	**218**	⇑*e*Pg	**Pn**	**20 16 01.0**	**+1.2**
PODR				⇑*e*Sg	**Sb**	**20 16 28.7**	**+2.5**
PODR				IAML		20 16 29.2	
	comp=N,84nm,0.6s						
PCDR	**Punta Cana, DR**	**1.96**	**126**	⇑*e*Sg	**Sg**	**20 16 30.2**	**-0.4**
PCDR				IAML		20 16 38.7	
	comp=N,130nm,1.5s						

IDC ***23*** *20:56:21.1±2.7, 27.°68N×140.°09E, h496^{km}±37^{km}, mb3.3/7, mbtmp4.1/9, Error ellipse: s-maj=36.3km s-min=12.6km az=76.0*

JMA ***23*** *20:56:21.1±0.2, 28°N±1°×14°1E±°, h505^{km}, MV3.8/31, W OFF OGASAWARA*

ISC 23 20:56:21.0±0.9**, 27.°74N**±0.°08×**140.°2E**±0.°1**, h500^{km}, n22, σ1.^{s}51**/26**, mb3.7**/7**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.90**	**109**	P	**P**	**20 57 25.5**	**-0.1**
CBIJ				*e*S	**S**	**20 58 16.2**	**-1.9**
JCJ	**Chichijima**	**1.90**	**109**	P	P	20 57 14.1	-12
	102nm,0.3s,baz=283,slow=23,SNR=22						
JCJ				S	S	20 58 03.4	-15
	250nm,0.5s,baz=98,slow=22,SNR=14						
BSO1	**Boso 1**	**6.93**	**6**	*e*P	**P**	**20 58 07.5**	**+1.8**
BSO1				*e*S	**S**	**20 59 31.2**	**-0.5**
BSO3	**Boso 3**	**7.05**	**2**	*e*S	**S**	**20 59 33.1**	**-1.2**
BSO4	**Boso 4**	**7.23**	**1**	*e*P	**P**	**20 58 12.2**	**+2.9**
BSO4				*e*S	**S**	**20 59 36.4**	**-1.7**
JIE	**Ise**	**7.27**	**337**	*e*P	**P**	**20 58 11.5**	**+1.7**
JOD2	**Odawara 2**	**7.56**	**353**	*e*P	**P**	**20 58 13.7**	**+1.0**
JRY	**Ryogami san**	**8.32**	**353**	*e*P	**P**	**20 58 20.9**	**+0.3**
JAG	**Ashikaga**	**8.68**	**356**	P	**P**	**20 58 23.9**	**-0.4**
JAG				*e*S	**S**	**21 00 01.8**	**-3.9**
JHO	**Hitachi**	**8.85**	**2**	P	**P**	**20 58 27.1**	**+1.0**
MJAR	**Matsushiro Arr**	**8.93**	**350**	P	**P**	**20 58 26.6**	**-0.4**
	1.2nm,0.4s,baz=172,slow=11,SNR=6.4						
JFK	**Kawauchi**	**9.62**	**3**	*e*P	**P**	**20 58 35.6**	**+1.4**
JFK				*e*S	**S**	**21 00 22.4**	**-1.4**
JAMN	**Amaminishikomi**	**9.73**	**276**	*e*P	**P**	**20 58 36.0**	**+0.5**
JMK	**Ichinoseki**	**11.22**	**4**	*e*P	**P**	**20 58 53.1**	**+2.1**
KSRS	**Korea Array**	**14.14**	**316**	P	**P**	**20 59 23.8**	**+1.7**
	1.1nm,0.7s,baz=146,slow=8.7,SNR=4.3						
CMAR	**Chiang Mai Arr**	**38.88**	**265**	P	**P**	**21 03 02.5**	**-0.6**
	0.3nm,0.3s,baz=82,slow=7.6,SNR=5.7						
	0.3nm,0.3s						
TIXI	**Tiksi**	**44.40**	**355**	P	**P**	**21 03 46.5**	**+0.6**
	8.9nm,0.5s,baz=166,slow=7.3,SNR=5.0						
	8.9nm,0.5s						
WRA	**Warramunga Arr**	**47.73**	**187**	P	**P**	**21 04 11.8**	**-0.3**
	2.9nm,0.4s,baz=6.7,slow=7.6,SNR=56						
	2.9nm,0.4s						
MKAR	**Makanchi Array**	**48.68**	**309**	P	**P**	**21 04 18.9**	**0.0**
	0.4nm,0.4s,baz=98,slow=7.4,SNR=7.2						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**51.31**	**314**	P	**P**	**21 04 38.2**	**+0.1**
	2.1nm,0.6s,baz=91,slow=8.1,SNR=32						
	2.1nm,0.6s						
ASAR	**Alice Springs**	**51.46**	**187**	P	**P**	**21 04 39.4**	**-0.2**
	1.1nm,0.4s,baz=1.9,slow=5.9,SNR=58						
	1.1nm,0.4s						
BVAR	**Borovoye Array**	**56.36**	**317**	P	**P**	**21 05 14.2**	**+0.4**
	1.8nm,0.4s,baz=89,slow=6.7,SNR=15						
	1.8nm,0.4s						

NEIC ***23*** *20:56:21.4, 50.°29N×130.°02W, h7^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.19; M$_{θθ}$-1.70; M$_{φφ}$1.48; M$_{rθ}$-0.52; M$_{θφ}$-0.37; M$_{φr}$-0.63; Fault plane solution: M$_0$1.80000×10^{18} NP1:φ$_s$129.00000°, δ63.00000°, λ-179.00000°. NP2:φ$_s$38.00000°, δ89.00000°, λ-27.00000°. Principal axes: T 1.8386, Plg18.0000°, Azm86.0000°; N -0.0243, Plg63.0000°, Azm216.0000°; P -1.8143, Plg19.0000°, Azm350.0000°;*

IDC ***23*** *20:56:21.9±0.4, 50.°37N×129.°91W, h0^{km}, mb4.9/36, mbtmp4.9/46, ML4.0/9, MS5.8/88 Error ellipse: s-maj=12.5km s-min=7.4km az=38.0*

BJI ***23*** *20:56:21.4, 50.°50N×129.°64W, h10^{km}, mB5.8/35, mb5.2/81, Ms6.1/89, Ms7 5.8/85*

ISC-PP ***23*** *20:56:23, 50.°52N×129.°76W, h10^{km}*

NEIC ***23*** *20:56:23.9, 50.°51N×129.°76W, h12^{km}*

BGR ***23*** *20:56:23.6, 50.°15N×132.°27W, h10^{km}, mb5.3*

NEIC ***23*** *20:56:23.9, 50.°51N×129.°76W, h12^{km}, Moment Tensor Solution. Duration: 5.^{s}3 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.05; M$_{θθ}$-1.28; M$_{φφ}$1.33; M$_{rθ}$-0.28; M$_{θφ}$0.08; M$_{φr}$-0.04; Fault plane solution: M$_0$1.34000×10^{18} NP1: φ$_s$137.38000°, δ79.96000°, λ-172.97000°. NP2: φ$_s$46.15000°, δ83.08000°, λ-10.11000°. Principal axes: T 1.3322, Plg2.0000°, Azm92.0000°; N 0.0089, Plg78.0000°, Azm192.0000°; P -1.3411, Plg12.0000°, Azm2.0000°;*

NEIC ***23*** *20:56:23.6, 50.°53N×129.°73W, h10^{km}*

NEIC ***23*** *20:56:23.6±2.1, 50.°52N±0.°06×129.°76W±0.°07, h10^{km}±1^{km}, mb5.6/628, Ms_20 6.0/490, Mwb6.0/89, Mww6.0/66, Mwr6.1(OTT), Error ellipse: s-maj=9.6km s-min=7.8km az=198.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.32; M$_{θθ}$-1.31; M$_{φφ}$0.99; M$_{rθ}$-0.20; M$_{θφ}$0.06; M$_{φr}$-0.19; Fault plane solution: M$_0$1.21000×10^{18} NP1:φ$_s$135.97000°, δ74.28000°, λ173.98000°. NP2: φ$_s$227.61000°, δ84.21000°, λ15.80000°. Principal axes: T 1.0440, Plg15.0000°, Azm93.0000°; N 0.2880, Plg73.0000°, Azm247.0000°; P -1.3319, Plg7.0000°, Azm1.0000°;*

MOS ***23*** *20:56:24.2±1.3, 50.°33N×129.°84W, h26^{km}, mb5.6/67, MS6.0/32 Error ellipse: s-maj=9.7km s-min=4.4km az=104.1*

GFZ ***23*** *20:56:25.1, 50.°35N×129.°79W, h15^{km}, MW6.0, Moment Tensor Solution. s51 Moment tensor: M$_{rr}$-0.39; M$_{θθ}$-0.78; M$_{φφ}$1.17; M$_{rθ}$-0.20; M$_{θφ}$0.12; M$_{φr}$-0.24; Fault plane solution: NP1:φ$_s$140.00000°, δ67.00000°, λ-169.00000°. NP2:φ$_s$46.00000°, δ81.00000°, λ-22.00000°. Principal axes: T 1.2200, Plg9.0000°, Azm94.0000°; N -0.3600, Plg65.0000°, Azm204.0000°; P -0.8600, Plg23.0000°, Azm1.0000°;*

GCMT ***23*** *20:56:26.6±0.1, 50.°29N×129.°91W, h12^{km}, MW6.0/164, Moment Tensor Solution. s144,c302; s164,c587; Duration: 2.^{s}6 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.07±.01; M$_{θθ}$-1.39±.01; M$_{φφ}$1.46±.01; M$_{rθ}$-0.12±.02; M$_{θφ}$0.06±.01; M$_{φr}$-0.11±.02; Best double couple: M$_0$1.43500×10^{18} NP1:φ$_s$136.00000°, δ84.00000°, λ-179.00000°. NP2:φ$_s$46.00000°, δ89.00000°, λ-6.00000°. Principal axes: T 1.4690, Plg4.0000°, Azm91.0000°; N -0.0720, Plg83.0000°, Azm221.0000°; P -1.4010, Plg5.0000°, Azm1.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 23 20:56:23.8±0.5**, 50.°26N**±0.°03×**129.°69W**±0.°03**, h13^{km}**±2^{km}**, h13^{km}:pP-P, n1370, σ2.^{s}58**/1090**, mb5.5**/364**, MS6.0**/363**, 129C-45D, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.07**	**69**		**Pb**	**20 56 42.7**	**-1.4**
BBB	**Bella Bella**	**2.16**	**27**	Pn	**Pn**	**20 56 57.4**	**-2.2**
	307nm,0.3s,baz=229,slow=12,SNR=678						
BBB				Sn	**Sn**	**20 57 21.7**	**-4.5**
	1µm,0.3s,baz=293,slow=13,SNR=21						
BBB				Lg	Lg	20 57 36.6	
	755nm,0.3s,baz=259,slow=20,SNR=4.5						
BBB				LR	LR	20 57 54.4	
	comp=Z,149µm,19.9s,baz=219,slow=43						
	1µm,0.4s						
BBB	**Bella Bella**	**2.16**	**27**		**Pn**	**20 56 56.0**	**-3.5**
BBB	**Bella Bella**	**2.16**	**27**	⇓P	**Pn**	**20 56 57.1**	**-2.4**
HG4B	**Hotspring**	**2.24**	**336**		Pn	20 56 54.0	-6.6
CBB	**Campbell River**	**2.79**	**93**		**Pn**	**20 57 08.2**	**0.0**
OZB	**Mount Ozzard**	**3.03**	**114**		**Pn**	**20 57 10.2**	**-1.2**
OZB	**Mount Ozzard**	**3.03**	**114**	⇑P	**Pn**	**20 57 10.4**	**-1.1**
MOBC	**Moresby Island**	**3.21**	**335**		Pn	20 57 07.7	-6.3
DIB	**Dawson Inlet,**	**3.41**	**331**		Pn	20 57 10.6	-6.1
H02S2	**DAWSON INLET T**	**3.41**	**331**	Pn	Pn	20 57 11.5	-5.2
CLRS	**Cowichan Lake**	**3.90**	**110**		**Pn**	**20 57 23.4**	**0.0**
RUBB	**Prince Rupert**	**4.08**	**355**		**Pn**	**20 57 21.2**	**-4.6**
C03A	**Quillayute Air**	**4.09**	**123**		**Pn**	**20 57 27.6**	**+1.7**
PGC	**Sidney**	**4.38**	**109**		**Pn**	**20 57 30.1**	**+0.1**
B04A	**Port Angeles**	**4.62**	**116**		**Pn**	**20 57 33.5**	**+0.1**
NLWA	**Neilton Lookou**	**4.80**	**125**		**Pn**	**20 57 37.0**	**+1.2**
A04D	**Lummi Island**	**4.81**	**106**		**Pn**	**20 57 36.7**	**+0.8**
LLLB	**Lillooet**	**5.00**	**83**		**Pn**	**20 57 38.8**	**+0.2**
WISH	**Wishkah**	**5.03**	**127**		**Pn**	**20 57 40.8**	**+1.9**
V35K	**Ketchikan**	**5.21**	**348**		**Pn**	**20 57 36.5**	**-4.8**
V35K	**Ketchikan**	**5.21**	**348**	P	**Pn**	**20 57 37.7**	**-3.6**
	baz=166,SNR=15						
GNW	**Green Mountain**	**5.27**	**118**		**Pn**	**20 57 43.3**	**+1.0**
RADR	**Rader Ridge**	**5.50**	**132**		**Pn**	**20 57 48.3**	**+2.9**
CRAG	**Craig**	**5.61**	**340**		**Pn**	**20 57 42.5**	**-4.4**
CRAG	**Craig**	**5.61**	**340**	P	**Pn**	**20 57 43.7**	**-3.2**
CRAG	**Craig**	**5.61**	**340**	⇓P	**Pn**	**20 57 43.0**	**-3.9**
CRAG	**Craig**	**5.61**	**340**	P	**Pn**	**20 57 43.4**	**-3.5**
	baz=156,SNR=5.6						
U35K	**Hyder**	**5.67**	**358**	P	**Pn**	**20 57 44.3**	**-3.3**
	baz=178,SNR=8.2						
U33K	**Whale Pass**	**6.21**	**342**	P	**Pn**	**20 57 52.1**	**-3.0**
	baz=159,SNR=7.8						
WRAK	**Wrangell Islan**	**6.37**	**347**	⇑P	**Pn**	**20 57 54.7**	**-2.6**
WRAK	**Wrangell Islan**	**6.37**	**347**	P	**Pn**	**20 57 54.2**	**-3.0**
	baz=164,SNR=7.4						
T35M	**Bob Quinn**	**6.74**	**357**	P	**Pn**	**20 57 59.3**	**-3.1**
	baz=177,SNR=53						
T33K	**Petersburg**	**6.84**	**345**	P	**Pn**	**20 57 59.7**	**-4.1**
	baz=162						
COR	**Corvallis**	**7.14**	**140**		**Pn**	**20 58 11.2**	**+3.3**
COR	**Corvallis**	**7.14**	**140**	P	**Pn**	**20 58 11.2**	**+3.3**
COR	**Corvallis**	**7.14**	**140**	⇓P	**Pn**	**20 58 11.3**	**+3.3**
SIT	**Sitka**	**7.58**	**336**	P	**Pn**	**20 58 09.2**	**-4.7**
	baz=151						
SIT				S	**Sn**	**20 59 44.1**	**+4.5**
	baz=151						
S34M	**Telegraph Cree**	**7.71**	**354**	P	**Pn**	**20 58 12.8**	**-2.9**
	baz=173,SNR=12						
S34M				S	Sb	20 59 57.4	-12
	baz=173						
S32K	**Killisnoo**	**7.77**	**340**	P	**Pn**	**20 58 13.1**	**-3.4**
	baz=156						
HAWA	**Hanford**	**7.80**	**116**	⇑P	**Pn**	**20 58 18.8**	**+1.8**

```
I56US  NEWPORT INFRAS  8.46  99  Lg    Lg    21 01 04.2
       baz=298,slow=36
NEW    Newport         8.46  99  Pn    Pn    20 58 28.4 +2.3
       146nm,0.7s,baz=295,slow=11,SNR=91
NEW                              Lg    Lg    21 00 47.8
       baz=225,slow=8.6
NEW                              LR    LR    21 01 46.4
       comp=Z,257µm,18.8s,baz=281,slow=38
NEW    Newport         8.46  99 ⇑P     Pn    20 58 27.1 +1.0
JIS    Juneau Island   8.48 343  P     Pn    20 58 24.6 -1.6
R32K   Eaglecrest      8.51 343  P     Pn    20 58 21.8 -4.8
       baz=158
S31K   Pelican         8.61 336  P     Pn    20 58 23.3 -4.7
       baz=150
S31K                             S     Sn    21 00 08.4 +3.5
       baz=150
S31K                             S     Sn    21 00 08.4 +3.5
       baz=150
Q32M   Nakina River    8.84 351  P     Pn    20 58 25.9 -5.5
       baz=169
TOAD   Toad River Com  8.98  15  P     Pn    20 58 30.5 -2.7
       baz=199,SNR=52
R33M   Jennings River  9.18 356  P     Pn    20 58 32.3 -3.7
       baz=175
LIRD   Liard River Hi  9.39  11  P     Pn    20 58 35.9 -2.8
       baz=195,SNR=35
P32M   Atlin           9.63 348  P     Pn    20 58 39.0 -2.9
       baz=164,SNR=7.6
SKAG   Skagway         9.77 343  P     Pn    20 58 40.2 -3.7
       baz=158
YBH    Yreka Blue Hor  9.81 148  Pn    Pn    20 58 47.6 +2.9
       0.2nm,0.3s,baz=348,slow=12,SNR=190
YBH                              Sn    Sn    21 00 46.5  +12
       baz=159,slow=13
YBH                              LR    LR    21 02 04.1
       comp=Z,4µm,21.1s,baz=312,slow=34
       12nm,0.9s
WTLY   Watson Lake, Y  9.88   3        Pn    20 58 43.4 -2.2
WTLY   Watson Lake, Y  9.88   3  P     Pn    20 58 42.9 -2.6
       baz=184,SNR=11
BMO    Blue Mountains  9.96 118 ⇑P     Pn    20 58 48.6 +1.9
PLBC   Pleasant Camp   9.98 340  P     Pn    20 58 43.6 -3.1
       baz=154
P33M   Teslin, Yukon  10.13 351  P     Pn    20 58 45.2 -3.7
       baz=168,SNR=15
KOTAN  Kotaneelee Air 10.39  16  P     Pn    20 58 50.0 -2.5
       baz=201,SNR=23
P29M   Windy Craggy   10.46 337  P     Pn    20 58 49.9 -3.4
       baz=150
P30M   Million Dollar 10.71 340  P     Pn    20 58 53.5 -3.2
       baz=154
WHY    Whitehorse     10.82 346  P     Pn    20 58 54.9 -3.6
       baz=162,SNR=21
WVOR   Wild Horse Val 10.93 132 ⇑P     Pn    20 59 03.9 +3.9
MSO    Missoula       10.99 102 ⇑P     Pn    20 59 01.3 +0.5
N32M   Quiet Lake     11.08 351  P     Pn    20 58 57.8 -4.0
       baz=168
O30N   Mendenhall     11.13 344  P     Pn    20 58 59.3 -3.2
       baz=158,SNR=6.1
O29M   Mount Kennedy  11.25 337  P     Pn    20 59 01.3 -3.0
       baz=149
HYT    Haines Junctio 11.46 340  P     Pn    20 59 04.2 -3.0
       baz=154
PINM   Pinnacle       11.54 333  P     Pn    20 59 05.3 -2.8
       baz=144
N31M   Braeburn, Yuko 11.75 346  P     Pn    20 59 08.1 -2.9
       baz=160
YUK6   Outpost Mounta 11.76 339  P     Pn    20 59 08.6 -2.7
       baz=151
N30M   Aishikik Lake  11.95 343  P     Pn    20 59 10.2 -3.6
       baz=156
O28M   Mount Upton    12.07 335  P     Pn    20 59 12.5 -3.1
       baz=146
MESA   MESA           12.13 330  P     Pn    20 59 14.0 -2.3
       baz=139
YUK4   Talbot Arm     12.18 339  P     Pn    20 59 14.2 -2.8
       baz=152
M31M   Drury Creek, Y 12.24 350  P     Pn    20 59 14.9 -2.8
       baz=166,SNR=12
YUK8   Steele Glacier 12.39 337  P     Pn    20 59 16.6 -3.5
       baz=148,SNR=7.3
HLID   Hailey         12.40 117 ⇑P     Pn    20 59 23.1 +3.0
MNRC   McLaughlin Min 12.49 153        Pn    20 59 26.1 +4.8
BGLC   Bering Glacier 12.53 327  P     Pn    20 59 18.6 -3.1
       baz=135
CTG    Chitna Glacier 12.56 333  P     Pn    20 59 18.8 -3.3
       baz=143
KAIM   Kayak Island   12.80 325  P     Pn    20 59 22.6 -2.8
       baz=132
CRQE   Cirque         12.93 329  P     Pn    20 59 24.4 -2.8
       baz=138
M30M   Minto, Yukon   12.94 345  P     Pn    20 59 23.5 -3.7
       baz=159
BOZ    Bozeman (W)    12.97 104 ⇑P     Pn    20 59 28.6 +0.7
YUK3   Moose Creek    12.99 337  P     Pn    20 59 24.5 -3.6
       baz=147,SNR=7.5
MCCM   Marconi Confer 13.06 156 ⇓P     Pn    20 59 33.6 +4.7
M29M   Somme Creek    13.12 342  P     Pn    20 59 25.4 -4.4
       baz=154
EGMT   Eagleton       13.24  92 ⇑P     Pn    20 59 32.2 +0.8
Q23K   Middleton Isla 13.24 320  P     Pn    20 59 29.5 -1.8
       baz=126
MCARA  McCarthy VSAT  13.39 331  P     Pn    20 59 30.1 -3.3
       baz=140,SNR=9.6
WRGLY  Wrigley        13.43  12        Pn    20 59 32.4 -1.4
WRGLY  Wrigley        13.43  12  P     Pn    20 59 30.9 -2.9
       baz=198,SNR=61
BMRM   Bremner River  13.60 328  P     Pn    20 59 32.7 -3.6
       baz=135,SNR=7.0
BVCY   Beaver Creek   13.63 338  P     Pn    20 59 33.2 -3.5
       baz=148
L29M   L29M           13.67 344  P     Pn    20 59 34.8 -2.3
       baz=156
EYAK   Cordova Ski Ar 13.72 325  P     Pn    20 59 41.1 +3.3
EYAK   Cordova Ski Ar 13.72 325  P     Pn    20 59 35.4 -2.4
       baz=131
MAYO   Mayo, Yukon    13.78 348  P     Pn    20 59 35.5 -3.2
       baz=163
M27K   Edge Creek, AK 13.85 336  P     Pn    20 59 36.6 -3.1
       baz=145,SNR=7.8
ELK    Elko           13.88 128  Pn    P     20 59 45.0 -3.7
       0.2nm,0.3s,baz=312,slow=10,SNR=28
ELK                              LR    LR    21 05 00.4
       comp=Z,29µm,20.1s,baz=325,slow=37
       19nm,0.9s
ELK    Elko           13.88 128 ⇑P     Pn    20 59 43.8 +3.4
P23K   Montague Islan 14.01 321  P     Pn    20 59 39.3 -2.5
       baz=126
N25K   Chitina, Valde 14.06 330  P     Pn    20 59 40.0 -2.5
       baz=137
M26K   Nabesna, AK    14.19 334  P     Pn    20 59 41.6 -2.6
       baz=143
LKWY   Lake           14.24 106 ⇑P     Pn    20 59 47.8 +2.5
K29M   Barlow Dome    14.25 346  P     Pn    20 59 43.2 -2.0
       baz=159,SNR=12
NVAR   Mina Array Bea 14.34 141  Pn    P     20 59 51.6 -2.2
       0.3nm,0.3s,baz=320,slow=11,SNR=82
NVAR                             LR    LR    21 05 09.7
       comp=Z,41µm,20.1s,baz=325,slow=36
       62nm,1.0s
NVAR   Mina Array Bea 14.34 141        Pn    20 59 49.6 +2.9
BCAR   Beaver Creek A 14.41 337        Pn    20 59 43.6 -3.8
L27K   Beaver Creek,  14.42 337  P     Pn    20 59 43.6 -3.8
       baz=147
KLU    Klutina        14.42 327  P     Pn    20 59 44.3 -3.2
       baz=133,SNR=18
KLU                              S     S     21 02 39.3 -7.8
       baz=133
GLI    Glacier Island 14.43 324  P     Pn    20 59 43.4 -4.2
       baz=129
GLI                              S     S     21 02 37.8 -9.5
       baz=129
RLMT   Red Lodge      14.67 103 ⇑P     Pn    20 59 52.0 +0.8
SAO    San Andreas Ge 14.75 153 ⇓P     P     20 59 55.8 -2.3
DAWY   Dawson         14.77 343  P     Pn    20 59 48.9 -3.4
       baz=155,SNR=10
DAWY                             S     S     21 02 52.6 -1.6
       baz=155
J30M   Hart River     14.77 349  P     Pn    20 59 49.4 -3.0
       baz=163
YKA    Yellowknife Ar 14.78  28  Pn    Pn    20 59 48.8 -3.5
       0.9nm,0.3s,baz=230,slow=12,SNR=57
YKA                              Sn    Sn    21 02 28.1 -7.5
       1.0nm,0.3s,baz=223,slow=23,SNR=3.6
YKA                              Lg    Lg    21 04 03.0
       baz=224,slow=24
YKA                              LR    LR    21 05 01.6
       comp=Z,23µm,21.5s,baz=218,slow=35
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       6.9nm,0.7s
YKA    Yellowknife Ar 14.78  28        Pn    20 59 48.1 -4.2
YKA    Yellowknife Ar 14.78  28  P     Pn    20 59 48.1 -4.2
L26K   Log Cabin Wild 14.78 335  P     Pn    20 59 49.2 -3.2
       baz=143,SNR=14
L26K                             S     S     21 02 50.7 -3.7
       baz=143
L26K                             S     S     21 02 50.7 -3.7
       baz=143
YKAW1  Yellowknife Wh 14.81  28        Pn    20 59 49.1 -3.6
MENT   Mentasta       14.81 334  P     Pn    20 59 53.7 +0.9
HARP   HAARP          14.82 331  P     Pn    20 59 50.2 -2.7
       baz=138
YKAW3  Yellowknife Wh 14.83  28        Pn    20 59 48.9 -4.1
PWL    Port Wells     14.90 323  P     Pn    20 59 51.5 -2.4
       baz=126
PWL                              S     S     21 02 50.0 -6.7
       baz=126
SEW    Seward         14.92 319  P     Pn    20 59 50.1 -4.1
       baz=122
SEW                              S     S     21 02 49.7 -7.4
       baz=122
J29N   Klondike Camp  14.93 346  P     Pn    20 59 50.6 -3.8
       baz=158
J29N                             S     S     21 02 52.6 -4.8
       baz=158
M24K   Tolsona, Glenn 14.94 329  P     Pn    20 59 51.6 -2.9
       baz=135,SNR=5.9
BBGB   Big Mountain B 15.04 152  IAmb  IAmb  21 00 07.1
       comp=Z,322nm,1.1s
SCM    Sheep Creek Mo 15.14 327  P     Pn    20 59 53.3 -4.0
       baz=131,SNR=9.7
SCM                              S     Sn    21 02 53.0 +8.2
       baz=131
O22K   Cooper Landing 15.24 320  P     Pn    20 59 54.5 -3.9
       baz=123
O22K                             S     S     21 02 56.8 -6.8
       baz=123
M23K   Glacier View   15.26 326  P     Pn    20 59 55.5 -3.3
       baz=130
M23K                             S     S     21 02 58.4 -5.7
       baz=130
M23K                             S     S     21 02 58.4 -5.7
       baz=130
HWUT   Hardware Ranch 15.27 118 ⇑P     P     21 00 02.5 -1.5
KNK    Knik Glacier   15.29 324  P     Pn    20 59 56.3 -2.8
       baz=128,SNR=20
KNK                              S     S     21 02 59.1 -5.5
       baz=128
BRSE   Bradley Lake S 15.29 316  P     Pn    20 59 57.1 -2.1
       baz=118
BRSE                             S     S     21 03 00.5 -4.3
       baz=118
PAX    Paxson         15.35 332  P     Pn    20 59 56.6 -3.3
       baz=138,SNR=20
KDAK   Kodiak Island  15.36 308  Pn    Pn    20 59 57.6 -2.5
       comp=Z,0.3nm,0.3s,baz=111,slow=7.0,SNR=5.1
KDAK                             Sn    Sn    21 02 51.3 +1.5
       comp=Z,0.1nm,0.3s,baz=22,slow=13,SNR=1.7
KDAK                             LR    LR    21 04 31.7
       comp=Z,14µm,20.2s,baz=112,slow=32
       comp=Z,28nm,1.1s
KDAK   Kodiak Island  15.36 308        Pn    20 59 57.2 -2.9
KDAK   Kodiak Island  15.36 308 iP     Pn    20 59 57.0 -3.0
KDAK   Kodiak Island  15.36 308 ⇓P     Pn    20 59 59.0 -1.0
KDAK   Kodiak Island  15.36 308  P     Pn    20 59 59.9 -0.1
       baz=109
I30M   Mount Dempster 15.40 349  P     Pn    20 59 58.5 -2.2
       baz=164,SNR=14
SML    Sawmill        15.49 325        Pn    21 00 00.1 -1.7
SML    Sawmill        15.49 325  P     Pn    20 59 58.9 -2.9
       baz=129,SNR=13
SML                              S     S     21 03 05.7 -3.2
       baz=129
HULI   Fort Hunter Li 15.50 154  IAmb  IAmb  21 00 13.4
       comp=Z,431nm,0.9s
DUG    Dugway, Tooele 15.54 124  IAmb  IAmb  21 00 11.5
       comp=Z,376nm,1.3s
DUG    Dugway, Tooele 15.54 124 ⇑P     Pn    21 00 04.7 +2.0
OHAK   Old Harbor     15.54 306  P     P     21 00 09.3 +2.5
OHAK   Old Harbor     15.54 306  P     Pn    21 00 02.7 +0.2
       baz=106,SNR=5.9
OHAK                             S     S     21 03 05.6 -4.3
       baz=106
Q20K   Shuyak Island  15.56 311  P     Pn    21 00 02.0 -0.7
       baz=112
Q20K                             S     Sn    21 03 02.1 +7.3
       baz=112
Q20K                             S     Sn    21 03 02.1 +7.3
       baz=112
TIN    Tinemaha, Big  15.57 144  IAmb  IAmb  21 00 13.5
       comp=Z,280nm,1.0s
RC01   Rabbit Creek A 15.59 322  P     Pn    20 59 59.1 -4.0
       baz=124,SNR=7.8
RC01                             S     S     21 03 05.6 -5.1
       baz=124
PMR    Palmer         15.65 324  P     Pn    21 00 05.5 +1.7
PMR    Palmer         15.65 324  P     Pn    21 00 01.5 -2.3
       baz=127,SNR=14
PMR                              S     S     21 03 06.4 -5.6
       baz=127
HOM    Homer          15.65 315  P     Pn    21 00 03.1 -0.8
       baz=117
SCRK   Sand Creek     15.72 336  P     Pn    21 00 01.8 -3.1
       baz=144,SNR=85
SCRK                             S     S     21 03 13.1 -0.6
       baz=144
BW06   Boulder Array  15.73 111  IAmb  IAmb  21 00 13.1
       comp=Z,407nm,1.1s
BW06   Boulder Array  15.73 111 ⇑P     P     21 00 08.7 -0.5
PD31   Pinedale Array 15.73 111  IAmb  IAmb  21 00 13.1
       comp=Z,372nm,1.1s
PDAR   Pinedale Array 15.73 111  Pn    P     21 00 08.9 -0.3
       comp=Z,2.4nm,0.3s,baz=316,slow=10,SNR=430
PDAR                             LR    LR    21 06 13.4
       comp=Z,29µm,21.8s,baz=304,slow=37
PDAR   Pinedale Array 15.73 111        Pn    21 00 06.9 +1.7
RIDG   Independent Ri 15.76 335  P     Pn    21 00 02.8 -2.5
       baz=142,SNR=32
H31M   Peel River     15.77 353  P     Pn    21 00 03.2 -2.2
       baz=169
PKD    Bear Valley Ra 15.78 152  IAmb  IAmb  21 00 15.2
       comp=Z,500nm,1.4s
I29M   Ogilvie Camp,  15.79 347  P     Pn    21 00 02.6 -3.1
       baz=159,SNR=52
I29M                             S     S     21 03 15.7 +0.7
       baz=159
WAT6   Susitna Watana 15.79 328  P     Pn    21 00 02.5 -3.4
       baz=133,SNR=55
SII    Sitkinak Islan 15.85 303  P     Pn    21 00 05.3 -1.2
       baz=102
LAO    LASA Array     15.95  94  IAmb  IAmb  21 00 15.8
       comp=Z,358nm,1.1s
LAO    LASA Array     15.95  94 ⇑P     Pn    21 00 08.7 +0.9
CAPN   Captain Cook N 15.99 319  P     Pn    21 00 07.2 -1.0
       baz=121
DHY    Denali Highway 16.02 330  P     Pn    21 00 06.4 -2.3
       baz=135,SNR=28
J26L   Joseph Creek   16.05 338  P     Pn    21 00 07.1 -1.9
       baz=146,SNR=103
K24K   Donnelly Dome  16.07 334  P     Pn    21 00 07.4 -1.9
       baz=140,SNR=70
S11A   Rachel         16.09 136  IAmb  IAmb  21 00 20.9
       comp=Z,1µm,1.6s
M22K   Willow         16.12 323  P     Pn    21 00 06.6 -3.3
       baz=126,SNR=25
I28M   Miner Creek    16.13 344  P     Pn    21 00 08.3 -1.9
       baz=156,SNR=48
SUA    Susitna One    16.20 322  P     Pn    21 00 07.7 -3.3
       baz=124,SNR=32
WAT1   Susitna Watana 16.24 328  P     Pn    21 00 07.9 -3.5
       baz=132
Q19K   Cape Douglas,  16.29 311  P     Pn    21 00 11.1 -1.0
       baz=111
Q19K                             S     Sn    21 03 18.5 +6.1
       baz=111
Q19K                             S     Sn    21 03 18.5 +6.1
       baz=111
O20K   Slope Mountain 16.29 316  P     Pn    21 00 10.0 -2.1
       baz=116
VES    Vestal, Richgr 16.34 148  IAmb  IAmb  21 00 20.4
       comp=Z,476nm,1.5s
P19K   Oil Pt         16.38 314  P     Pn    21 00 13.5 +0.2
       baz=114,SNR=5.5
P19K                             S     S     21 03 21.3 -5.7
       baz=114
P19K                             S     S     21 03 21.3 -5.7
       baz=114
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BSUT   Blindstream Ca 16.43 119        P     21 00 16.1 -1.0
WCT    Wildcat Mounta 16.43 140  IAmb  IAmb  21 00 24.7
       comp=Z,547nm,1.5s
CHIR   Chirikof Islan 16.50 300  P     Pn    21 00 12.2 -2.6
       baz=98
EPYK   Eagle Plains   16.55 350  IAmb  IAmb  21 00 19.4
       comp=Z,823nm,1.9s
EPYK   Eagle Plains   16.55 350  P     Pn    21 00 12.9 -2.4
       baz=164,SNR=29
CUT    Chulitna       16.57 325  P     Pn    21 00 13.2 -2.4
       baz=127,SNR=10
I27K   Kandik River   16.58 342  P     Pn    21 00 13.4 -2.4
       baz=152,SNR=22
J25K   Salcha River,  16.60 336  P     Pn    21 00 14.2 -1.8
       baz=142,SNR=77
H29M   Whitestone     16.61 348  P     Pn    21 00 13.5 -2.6
       baz=160
FURC   Furnace Creek, 16.61 141  IAmb  IAmb  21 00 26.9
       comp=Z,1µm,2.0s
I26K   Coal Creek Min 16.64 340  P     Pn    21 00 14.8 -1.7
       baz=148
N20K   Mount Spurr    16.65 320  P     Pn    21 00 14.4 -2.4
       baz=120
N20K                             S     S     21 03 27.1 -5.6
       baz=120
N20K                             S     S     21 03 27.1 -5.6
       baz=120
SPCR   Spurr Chakacha 16.65 320  P     Pn    21 00 15.3 -1.5
       baz=120,SNR=28
SPCR                             S     S     21 03 27.5 -5.2
       baz=120
DGMT   Dagmar         16.68  86        Pn    21 00 17.4 +0.3
DGMT   Dagmar         16.68  86 ⇑P     Pn    21 00 17.3 +0.1
ISA    Isabella, Lake 16.71 147  IAmb  IAmb  21 00 26.7
       comp=Z,656nm,1.7s
SKT    Skwentna       16.80 323  P     Pn    21 00 16.2 -2.4
       baz=124,SNR=27
Q18K   Katmai Hardscr 16.86 310  P     P     21 00 20.6 -0.8
       baz=108,SNR=12
Q18K                             S     Sn    21 03 30.9 +4.6
       baz=108
Q18K                             S     Sn    21 03 30.9 +4.6
       baz=108
G31M   Satah River    16.87 354  P     Pn    21 00 17.4 -1.9
       baz=170,SNR=87
HDA    Harding Lake   16.87 334  P     Pn    21 00 17.4 -2.0
       baz=139,SNR=66
ACHA   Angle Creek He 16.88 308        Pn    21 00 17.4 -2.2
CLC    China Lake     16.90 144  IAmb  IAmb  21 00 31.1
       comp=Z,643nm,1.8s
MCK    McKinley       16.98 330  P     Pn    21 00 19.9 -0.9
       baz=133,SNR=47
G30M   tAoh Zraii Nji 17.09 351  P     Pn    21 00 21.1 -1.1
       baz=166
O19K   Port Alsworth  17.10 315        Pn    21 00 20.4 -1.9
O19K   Port Alsworth  17.10 315  P     Pn    21 00 19.6 -2.7
       baz=114,SNR=10
O19K                             S     Sn    21 03 36.0 +4.0
       baz=114
O19K                             S     Sn    21 03 36.0 +4.0
       baz=114
H27K   Steamboat Moun 17.12 344  P     Pn    21 00 20.4 -2.2
       baz=153
ILAR   Eielson Array  17.13 335  Pn    Pn    21 00 21.3 -1.3
       comp=Z,0.7nm,0.3s,baz=143,slow=10,SNR=82
ILAR                             PcP   PcP   21 05 07.4 +1.0
       comp=Z,3.0nm,0.6s,baz=169,slow=0.9,SNR=12
ILAR                             LR    LR    21 06 18.6
       comp=Z,40µm,20.5s,baz=131,slow=35
       comp=Z,46nm,0.9s
ILAR   Eielson Array  17.13 335        Pn    21 00 20.7 -1.9
ILAR   Eielson Array  17.13 335  P     Pn    21 00 20.7 -1.9
Q17K   Contact Creek  17.18 308  P     Pn    21 00 20.8 -2.6
       baz=106,SNR=15
Q17K                             S     S     21 03 39.3 -4.2
       baz=106
Q17K                             S     S     21 03 39.3 -4.2
       baz=106
P18K   Big Mountain,  17.22 312  P     Pn    21 00 23.9 +0.1
       baz=110,SNR=5.2
P18K                             S     Sn    21 03 37.7 +2.8
       baz=110
P18K                             S     Sn    21 03 37.7 +2.8
       baz=110
G29M   Pine Creek     17.22 349  P     Pn    21 00 21.2 -2.6
       baz=162
TRF    Thorofare Moun 17.24 328  P     Pn    21 00 23.4 -0.9
       baz=130,SNR=26
TRF                              S     Sn    21 03 37.6 +1.9
       baz=130
R17L   Mt. Peulik Vol 17.26 306  P     Pn    21 00 22.1 -2.2
       baz=103
CCUT   Cedar City     17.27 131  IAmb  IAmb  21 00 36.4
       comp=Z,501nm,1.6s
F31M   Tsiigehtchic   17.35 355  IAmb  IAmb  21 00 30.0
       comp=Z,579nm,1.4s
F31M   Tsiigehtchic   17.35 355  P     Pn    21 00 24.1 -1.3
       baz=171,SNR=112
SZCU   Shurtz Canyon  17.37 130  IAmb  IAmb  21 00 38.0
       comp=Z,329nm,1.1s
O18K   Koktuh Hills   17.38 313  P     P     21 00 26.4 -0.7
       baz=112,SNR=23
O18K                             S     Sn    21 03 39.6 +0.8
       baz=112
O18K                             S     Sn    21 03 39.6 +0.8
       baz=112
M20K   Styx River     17.39 321  P     Pn    21 00 24.9 -1.0
       baz=121
M20K                             S     S     21 03 44.0 -3.6
       baz=121
M20K                             S     S     21 03 44.0 -3.6
       baz=121
FFC    Flin Flon      17.40  64        Pn    21 00 23.6 -2.5
FFC                              IAmb  IAmb  21 00 31.4
       comp=Z,634nm,1.4s
FFC    Flin Flon      17.40  64  P     Pn    21 00 23.6 -2.5
FFC                              pmax  pmax
       comp=Z,634nm,1.4s
FFC    Flin Flon      17.40  64 ⇑P     Pn    21 00 24.4 -1.7
N19K   Bonanza Creek  17.44 317  P     Pn    21 00 26.3 -0.3
       baz=116,SNR=19
N19K                             S     S     21 03 45.1 -3.7
       baz=116
N19K                             S     S     21 03 45.1 -3.7
       baz=116
COLA   College        17.48 334  P     Pn    21 00 25.4 -1.5
COLA   College        17.48 334  P     P     21 00 28.3 +0.2
COLA   College        17.48 334 iP     Pn    21 00 24.8 -2.1
COLA                             pmax  pmax
       comp=Z,282nm,1.4s
COLA   College        17.48 334 ⇓P     Pn    21 00 25.5 -1.5
COLA   College        17.48 334  P     Pn    21 00 24.6 -2.3
       baz=138
COLA                             S     S     21 03 50.2 +1.0
       baz=138
TPO    Tropico Hills  17.51 147  IAmb  IAmb  21 00 35.7
       comp=Z,615nm,1.9s
POKR   Poker Plat Res 17.54 335  P     Pn    21 00 26.3 -1.5
       baz=139,SNR=14
POKR                             S     S     21 03 52.1 +1.4
       baz=139
POKR                             S     S     21 03 52.1 +1.4
       baz=139
PPLA   Purkeypile     17.58 325  P     Pn    21 00 27.0 -1.4
       baz=125,SNR=20
PPLA                             S     S     21 04 00.1 +8.4
       baz=125
NEA2   Nenana         17.63 332  P     Pn    21 00 27.4 -1.5
       baz=135,SNR=37
NEA2                             S     S     21 03 58.8 +6.4
       baz=135
K22A   Casper         17.64 107  IAmb  IAmb  21 00 36.4
       comp=Z,622nm,1.1s
GSC    Goldstone, Bar 17.65 143  IAmb  IAmb  21 00 39.3
       comp=Z,580nm,1.9s
F30M   Barrier River  17.66 352  P     Pn    21 00 27.3 -2.0
       baz=167,SNR=32
G27K   Doyon Strip    17.67 344  P     Pn    21 00 27.6 -1.8
       baz=154
G27K                             S     S     21 04 05.1  +12
       baz=154
G27K                             S     S     21 04 05.1  +12
       baz=154
Q16K   King Salmon    17.68 309  P     P     21 00 30.5 +0.1
       baz=106
Q16K                             S     Sn    21 03 49.6 +3.4
       baz=106
P17K   Kvichak River  17.73 310  P     P     21 00 30.6 -0.4
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	baz=108,SNR=6.6						
P17K				S	S	21 03 51.5	-3.0
	baz=108						
P17K				S	S	21 03 51.5	-3.0
	baz=108						
PKCU	Pink Cliffs	17.87	129	IAmb	IAmb	21 00 44.1	
	comp=Z,533nm,1.4s						
BPAW	Bear Paw Mtn.	17.90	329	P	Pn	21 00 31.1	-1.2
	baz=130,SNR=24						
BPAW				S	Sn	21 03 54.1	+2.6
	baz=130						
KNB	Kanab	17.95	131	IAmb	IAmb	21 00 44.8	
	comp=Z,328nm,1.2s						
N18K	Kilae Creek	18.01	315	P	Pn	21 00 32.5	-1.2
	baz=113						
N18K				S	S	21 03 57.2	-3.0
	baz=113						
N18K				S	S	21 03 57.2	-3.0
	baz=113						
I23K	Minto, Yukon-K	18.11	333	P	Pn	21 00 33.8	-1.0
	baz=136,SNR=17						
I23K				S	S	21 04 00.9	-1.3
	baz=136						
I23K				S	S	21 04 00.9	-1.3
	baz=136						
F28M	Old Crow	18.13	347	P	Pn	21 00 33.7	-1.4
	baz=158,SNR=60						
F28M				S	S	21 04 01.2	-1.3
	baz=158						
O20A	White River Ci	18.13	116	IAmb	IAmb	21 00 47.1	
	comp=Z,456nm,1.2s						
MWC	Mount Wilson	18.16	148	IAmb	IAmb	21 00 48.8	
	comp=Z,307nm,1.2s						
G26K	Porcupine Rive	18.19	342	P	Pn	21 00 34.1	-1.7
	baz=150						
INK	Inuvik	18.20	355	P	Pn	21 00 34.4	-1.4
	comp=Z,0.3nm,0.3s,baz=164,slow=12,SNR=51						
INK				LR	LR	21 07 45.6	
	comp=Z,64µm,21.7s,baz=172,slow=38						
	comp=Z,25nm,0.9s						
INK	Inuvik	18.20	355	P	Pn	21 00 34.5	-1.3
	baz=172,SNR=45						
INK				S	S	21 04 02.0	-1.8
	baz=172						
H24K	Noodor Dome	18.22	336	IAmb	IAmb	21 00 41.5	
	comp=Z,386nm,1.3s						
H24K	Noodor Dome	18.22	336	P	Pn	21 00 34.9	-1.3
	baz=140						
H24K				S	S	21 04 02.8	-1.6
	baz=140						
H24K				S	S	21 04 02.8	-1.6
	baz=140						
CHUM	Lake Minchumin	18.22	327	P	Pn	21 00 35.5	-0.6
	baz=128,SNR=114						
CHUM				S	S	21 04 04.1	-0.1
	baz=128						
L19K	White Mountain	18.24	320	P	Pn	21 00 35.2	-1.2
	baz=119,SNR=44						
L19K				S	Sn	21 04 00.4	+0.8
	baz=119						
L19K				S	Sn	21 04 00.4	+0.8
	baz=119						
O17K	Koliganek Bris	18.24	312	P	Pn	21 00 34.9	-1.4
	baz=109						
O17K				S	Sn	21 04 00.6	+1.0
	baz=109						
HMU	Henry Mountain	18.29	125	IAmb	IAmb	21 00 44.9	
	comp=Z,781nm,1.3s						
M18K	Stony River	18.32	318	P	Pn	21 00 35.8	-1.6
	baz=116						
RSSD	Black Hills	18.43	100		P	21 00 39.1	0.0
RSSD				IAmb	IAmb	21 00 47.0	
	comp=Z,1µm,1.9s						
RSSD	Black Hills	18.43	100	P	P	21 00 39.1	0.0
RSSD				pmax	pmax		
	comp=Z,1µm,2.0s						
P16K	Nushagak River	18.45	309	P	Pn	21 00 39.3	+0.4
	baz=105,SNR=7.0						
P16K				S	S	21 04 07.4	-1.6
	baz=105						
P16K				S	S	21 04 07.4	-1.6
	baz=105						
G25K	Bearman Lake	18.52	339	P	P	21 00 39.0	-0.6
	baz=145						
N17K	Nushagak Hills	18.54	314	P	P	21 00 38.7	-1.2
	baz=111,SNR=17						
N17K				S	Sn	21 04 07.9	+0.9
	baz=111						
K20K	Telida	18.55	324	P	P	21 00 38.4	-1.5
	baz=123						
K20K				S	Sn	21 04 07.7	+0.6
	baz=123						
K20K				S	Sn	21 04 07.7	+0.6
	baz=123						
E29M	Blow River	18.62	350	P	P	21 00 38.9	-1.8
	baz=163						
O16K	Kokwok River B	18.66	311	P	P	21 00 40.5	-0.7
	baz=107						
O16K				S	S	21 04 15.1	+1.8
	baz=107						
CHNA	Chernabura Isl	18.67	296	P	Pn	21 00 43.3	+1.7
	baz=91						
CHNA				S	S	21 04 15.8	+2.3
	baz=91						
S14K	Fog Glacier	18.75	300	P	Pn	21 00 43.1	+0.4
	baz=96						
BMAR	Burnt Mountain	18.76	342	P	P	21 00 41.5	-0.8
G24K	Hadweenzic Riv	18.79	338	P	P	21 00 42.6	0.0
	baz=142						
G24K				S	S	21 04 23.8	+7.9
	baz=142						
G24K				S	S	21 04 23.8	+7.9
	baz=142						
DANC	Danby, Needles	18.80	141	IAmb	IAmb	21 00 58.3	
	comp=Z,522nm,1.3s						
PV23	Carpenter Ridg	18.85	121	IAmb	IAmb	21 00 52.2	
	comp=Z,418nm,0.9s						
ELS	Elsinore Mount	18.90	147	IAmb	IAmb	21 00 59.0	
	comp=Z,305nm,1.1s						
PV14	Lion Creek, Pa	18.90	121	IAmb	IAmb	21 00 52.8	
	comp=Z,273nm,1.1s						
F26K	Sheenjek River	18.91	343	IAmb	IAmb	21 00 46.9	
	comp=Z,817nm,1.8s						
F26K	Sheenjek River	18.91	343	P	P	21 00 43.7	-0.2
	baz=150						
F26K				S	S	21 04 20.1	+1.8
	baz=150						
E27K	Coleen River	18.91	346	P	P	21 00 43.4	-0.5
	baz=156						
E27K				S	S	21 04 26.5	+8.1
	baz=156						
E27K				S	S	21 04 26.5	+8.1
	baz=156						
PV22	Blue Mesa, Par	18.92	120	IAmb	IAmb	21 00 57.7	
	comp=Z,262nm,0.9s						
I21K	Tanana	18.94	330	IAmb	IAmb	21 00 49.9	
	comp=Z,526nm,1.2s						
I21K	Tanana	18.94	330	P	P	21 00 43.6	-0.6
	baz=131,SNR=147						
I21K				S	S	21 04 21.1	+2.3
	baz=131						
I21K				S	S	21 04 21.1	+2.3
	baz=131						
PV04	Paradox Valley	18.95	121	IAmb	IAmb	21 00 52.6	
	comp=Z,554nm,1.4s						
PV20	West Nyswonger	18.95	121	IAmb	IAmb	21 00 49.5	
	comp=Z,363nm,1.0s						
PV19	Morning Glory	18.97	121	IAmb	IAmb	21 00 49.7	
	comp=Z,387nm,1.1s						
M17K	Holitna River	18.99	316	P	P	21 00 44.8	0.0
	baz=113,SNR=27						
M17K				S	S	21 04 20.7	+0.8
	baz=113						
PV17	East Wray Mesa	19.00	121	IAmb	IAmb	21 00 53.8	
	comp=Z,443nm,1.2s						
PV16	Nyswonger Mesa	19.00	121	IAmb	IAmb	21 00 57.5	
	comp=Z,675nm,1.6s						
L18K	Granite Mounta	19.02	319	P	Pn	21 00 45.5	-0.3
	baz=116,SNR=52						
L18K				S	S	21 04 22.3	+1.8
	baz=116						
L18K				S	S	21 04 22.3	+1.8
	baz=116						
E28M	Babbage River	19.02	349	P	P	21 00 44.1	-0.9
	baz=160						
E28M				S	S	21 04 23.5	+3.1
	baz=160						
PV11	David Mesa, Pa	19.04	121	IAmb	IAmb	21 01 00.8	
	comp=Z,374nm,1.1s						
J20K	Nowinta River	19.04	326	IAmb	IAmb	21 00 52.8	
	comp=Z,599nm,1.6s						
J20K	Nowinta River	19.04	326	P	P	21 00 44.1	-1.2
	baz=125						
J20K				S	S	21 04 21.9	+1.0
	baz=125						
J20K				S	S	21 04 21.9	+1.0
	baz=125						
PV18	Skein Mesa, Pa	19.05	121	IAmb	IAmb	21 00 58.0	
	comp=Z,559nm,1.0s						
PV12	Saucer Basin,	19.06	121	IAmb	IAmb	21 01 01.1	
	comp=Z,397nm,1.0s						
PV05	Paradox Valley	19.07	122	IAmb	IAmb	21 00 56.2	
	comp=Z,371nm,1.1s						
PV03	Paradox Valley	19.08	121	IAmb	IAmb	21 00 58.2	
	comp=Z,351nm,1.2s						
F25K	Christian Rive	19.12	341	P	P	21 00 46.1	-0.1
	baz=147						
F25K				S	S	21 04 30.5	+7.9
	baz=147						
PV13	Radium Mtn., P	19.16	121	IAmb	IAmb	21 00 59.2	
	comp=Z,617nm,1.2s						
SDPT	Sand Point	19.20	297	P	Pn	21 00 51.2	+3.2
SDPT	Sand Point	19.20	297	P	Pn	21 00 49.8	+1.8
	baz=92						
SDPT				S	Sn	21 04 23.2	+0.5
	baz=92						
PV15	Paradox Valley	19.22	120	IAmb	IAmb	21 01 02.0	
	comp=Z,242nm,1.1s						
H22K	Ishtalitna Cre	19.24	333	P	Pn	21 00 48.2	-0.3
	baz=134,SNR=54						
H22K				S	S	21 04 28.4	+3.5
	baz=134						
H22K				S	S	21 04 28.4	+3.5
	baz=134						
DNR	Dunn Ranch,Anz	19.26	145	IAmb	IAmb	21 00 59.3	
	comp=Z,287nm,1.2s						
N16K	Nishlik Lake	19.26	313	P	Pn	21 00 48.9	+0.1
	baz=108						
N16K				S	S	21 04 28.8	+3.4
	baz=108						
PFO	Pinyon Flats O	19.28	145	P	Pn	21 00 51.5	+2.1
	comp=Z,0.4nm,0.3s,baz=323,slow=6.9,SNR=19						
PFO				LR	LR	21 08 28.7	
	comp=Z,35µm,18.9s,baz=322,slow=37						
	comp=Z,23nm,0.8s						
PFO	Pinyon Flats O	19.28	145		Pn	21 00 51.0	+1.6
PFO	Pinyon Flats O	19.28	145	*i* P	Pn	21 00 49.0	-0.4
PFO				pmax	pmax		
	comp=Z,367nm,1.7s						
C36M	Paulatuk	19.34	6	IAmb	IAmb	21 00 53.6	
	comp=Z,503nm,1.4s						
C36M	Paulatuk	19.34	6	P	P	21 00 47.4	-1.0
	baz=191,SNR=154						
O15K	Ungalikthiuk R	19.40	309	P	P	21 00 47.5	-1.8
	baz=104						
O15K				S	S	21 04 30.6	+2.4
	baz=104						
G23K	Bananza Creek	19.45	335	IAmb	IAmb	21 00 59.6	
	comp=Z,698nm,1.6s						
G23K	Bananza Creek	19.45	335	P	P	21 00 49.2	-0.6
	baz=138						
G23K				S	S	21 04 31.4	+2.2
	baz=138						
G23K				S	S	21 04 31.4	+2.2
	baz=138						
J19K	Poorman	19.48	325	IAmb	IAmb	21 00 58.2	
	comp=Z,726nm,1.7s						
J19K	Poorman	19.48	325	P	P	21 00 49.8	-0.2
	baz=122,SNR=67						
J19K				S	S	21 04 30.9	+1.2
	baz=122						
J19K				S	S	21 04 30.9	+1.2
	baz=122						
H21K	Melozitna Rive	19.51	331	P	P	21 00 50.4	-0.1
	baz=131,SNR=79						
H21K				S	S	21 04 35.5	+5.1
	baz=131						
H21K				S	S	21 04 35.5	+5.1
	baz=131						
I20K	Naaghedeneel	19.52	328	P	P	21 00 50.3	-0.3
	baz=126						
I20K				S	S	21 04 33.6	+3.1
	baz=126						
M16K	Timber Creek	19.53	315	P	Pn	21 00 51.9	-0.2
	baz=110						
M16K				S	S	21 04 33.9	+3.1
	baz=110						
M16K				S	S	21 04 33.9	+3.1
	baz=110						
F24K	Squaw Lake	19.55	339	P	Pn	21 00 51.7	-0.5
	baz=143,SNR=102						
F24K				S	S	21 04 36.8	+5.8
	baz=143						
E25K	Arctic Village	19.55	342	IAmb	IAmb	21 00 59.6	
	comp=Z,966nm,1.9s						
E25K	Arctic Village	19.55	342	P	P	21 00 50.1	-0.8
	baz=148,SNR=94						
E25K				S	Sn	21 04 37.4	+6.2
	baz=148						
E25K				S	Sn	21 04 37.4	+6.2
	baz=148						
BORC	Borrego Spring	19.61	145	IAmb	IAmb	21 01 07.6	
	comp=Z,378nm,1.5s						
D28M	Stokes Point	19.62	350	P	Pn	21 00 52.7	-0.2
	baz=162						
J18K	Innoko River	19.62	323	IAmb	IAmb	21 01 00.2	
	comp=Z,405nm,1.4s						
J18K	Innoko River	19.62	323	P	P	21 00 50.9	-0.7
	baz=119						
J18K				S	Sn	21 04 34.7	+1.9
	baz=119						
BC3	Big Chuckawall	19.63	142	IAmb	IAmb	21 01 09.3	
	comp=Z,830nm,1.8s						
DPP	Dos Picos Cty	19.66	147	IAmb	IAmb	21 01 10.1	
	comp=Z,514nm,1.5s						
L17K	Donlin	19.66	318	P	P	21 00 52.6	+0.4
	baz=114,SNR=16						
L17K				S	Sn	21 04 36.5	+2.6
	baz=114						
L17K				S	Sn	21 04 36.5	+2.6
	baz=114						
CPE	Camp Elliot	19.70	147	IAmb	IAmb	21 01 10.6	
	comp=Z,643nm,1.6s						
N15K	Kwethluk River	19.80	312	P	P	21 00 54.1	+0.5
	baz=106						
N15K				S	Sn	21 04 39.1	+1.9
	baz=106						
N15K				S	Sn	21 04 39.1	+1.9
	baz=106						
D27M	Malcolm River	19.80	348	P	Pn	21 00 54.5	-0.8
	baz=158						
D27M				S	Sn	21 04 41.1	+3.8
	baz=158						
WUAZ	Wupatki	19.85	131		Pn	21 00 56.8	+0.6
WUAZ				IAmb	IAmb	21 01 08.3	
	comp=Z,370nm,1.2s						
WUAZ	Wupatki	19.85	131	⇑P	Pn	21 00 58.0	+1.8
COLD	Coldfoot	19.88	336	IAmb	IAmb	21 00 59.2	
	comp=Z,399nm,1.5s						
COLD	Coldfoot	19.88	336	P	Pn	21 00 55.4	-0.7
	baz=138,SNR=87						
COLD				S	Sn	21 04 42.7	+3.5
	baz=138						
ISCO	Idaho Springs	19.89	113		Pn	21 00 56.5	-0.3
ISCO				IAmb	IAmb	21 01 06.5	
	comp=Z,202nm,1.1s						
ISCO				IAMs_20	IAMs_20	21 08 51.4	
	comp=Z,80µm,19.0s						
ISCO	Idaho Springs	19.89	113	P	Pn	21 00 56.5	-0.3
ISCO				pmax	pmax		
	comp=Z,202nm,1.1s						
ISCO				MLR	MLR		
	comp=Z,80µm,19.0s						
ISCO	Idaho Springs	19.89	113	⇑P	Pn	21 00 57.9	+1.1
K17K	Iditarod	19.91	320	IAmb	IAmb	21 01 01.2	
	comp=Z,437nm,1.4s						
K17K	Iditarod	19.91	320	P	P	21 00 54.4	-0.5
	baz=115						
K17K				S	Sn	21 04 43.2	+3.4
	baz=115						
BLYC	Blythe	19.92	140		Pn	21 00 57.8	+1.0
BLYC				IAmb	IAmb	21 01 08.2	
	comp=Z,651nm,1.6s						
L16K	Owhat River	20.01	316	P	P	21 00 54.7	-1.2
	baz=111						
L16K				S	Sn	21 04 42.3	0.0
	baz=111						
L16K				S	Sn	21 04 42.3	0.0
	baz=111						
IMAR	Indian Mountai	20.02	331	P	P	21 00 55.0	-1.0
BAR	Barrett	20.04	146		Pn	21 00 59.1	+0.8
H20K	Anotleneega Mo	20.08	329	P	P	21 00 56.1	-0.5
	baz=127,SNR=34						
H20K				S	Sn	21 04 43.2	-0.7
	baz=127						
H20K				S	Sn	21 04 43.2	-0.7
	baz=127						
E24K	Your Creek	20.13	339	P	Pn	21 00 58.4	-0.7
	baz=143						
E24K				S	Sn	21 04 51.0	+5.8
	baz=143						
E24K				S	Sn	21 04 51.0	+5.8
	baz=143						
O14K	Tigyukauivet M	20.14	309	P	Pn	21 00 58.5	-0.7
	baz=102						
O14K				S	Sn	21 04 45.8	+0.3
	baz=102						
O14K				S	Sn	21 04 45.8	+0.3
	baz=102						
M15K	Kasigluk River	20.23	313	P	P	21 00 58.8	+0.5
	baz=107						
M15K				S	Sn	21 04 48.0	+0.4
	baz=107						
G21K	Allakaket	20.30	332	P	P	21 00 59.2	+0.2
	baz=131,SNR=87						
G21K				S	Sn	21 04 49.9	+0.7
	baz=131						
GCSA	Galena City Sc	20.34	326	P	P	21 00 59.3	-0.2
	baz=122,SNR=23						
GCSA				S	S	21 04 47.8	+1.0
	baz=122						
YUH	Yuha Desert	20.34	145	IAmb	IAmb	21 01 09.6	
	comp=Z,271nm,1.1s						
E23K	Chandalar	20.38	338	IAMs_20	IAMs_20	21 08 33.5	
	comp=Z,57µm,19.0s						
E23K	Chandalar	20.38	338	P	P	21 01 00.4	+0.5
	baz=141						
E23K				S	Sn	21 04 56.5	+5.3
	baz=141						
Y14A	Wickenburg	20.40	137	IAmb	IAmb	21 01 17.0	
	comp=Z,390nm,1.4s						
GLA	Glamis	20.41	142	IAmb	IAmb	21 01 10.2	
	comp=Z,223nm,1.1s						
GLA				IAMs_20	IAMs_20	21 08 57.7	
	comp=Z,40µm,18.0s						
N14K	Kuskokwak Cree	20.50	310	P	P	21 01 00.1	-1.1
N14K				IAmb	IAmb	21 01 06.6	
	comp=Z,633nm,1.4s						
N14K	Kuskokwak Cree	20.50	310	P	Pn	21 01 02.3	-1.2
	baz=103,SNR=22						
N14K				S	Sn	21 04 56.4	+2.2
	baz=103						
J17K	VABM Dome	20.52	321	IAmb	IAmb	21 01 06.7	
	comp=Z,349nm,1.1s						
J17K	VABM Dome	20.52	321	P	P	21 01 01.2	-0.3
	baz=116,SNR=63						
J17K				S	S	21 04 51.7	+1.2
	baz=116						
J17K				S	S	21 04 51.7	+1.2
	baz=116						
C27K	Jago River	20.55	346	IAMs_20	IAMs_20	21 08 53.8	
	comp=Z,56µm,18.0s						
C27K	Jago River	20.55	346	P	P	21 01 02.6	+0.9
	baz=154						
C27K				S	Sn	21 05 00.4	+5.2
	baz=154						
C27K				S	Sn	21 05 00.4	+5.2
	baz=154						
F22K	John River	20.61	335	P	P	21 01 03.3	+0.9
	baz=136						
F22K				S	Sn	21 05 00.4	+3.7
	baz=136						
H19K	Roundabout Mou	20.63	328	P	P	21 01 03.3	+0.7
	baz=125						
H19K				S	Sn	21 04 56.1	-0.9
	baz=125						
Q24A	Divide	20.70	114	P	Pn	21 01 05.6	-0.8
Q24A				IAMs_20	IAMs_20	21 09 40.0	
	comp=Z,40µm,18.0s						
X16A	Lo Mia Camp, P	20.71	133	IAmb	IAmb	21 01 17.6	
	comp=Z,244nm,1.0s						
D25K	Kavik River	20.73	343	IAMs_20	IAMs_20	21 08 48.9	
	comp=Z,51µm,20.0s						
D25K	Kavik River	20.73	343	P	P	21 01 03.9	+0.1
	baz=148						
D25K				S	Sn	21 05 01.7	+2.0
	baz=148						
D25K				S	Sn	21 05 01.7	+2.0
	baz=148						
F21K	Alatna River	20.77	334	P	P	21 01 04.1	-0.1
	baz=133						
F21K				S	Sn	21 05 00.8	+0.3
	baz=133						
F21K				S	Sn	21 05 00.8	+0.3
	baz=133						
CCX	Cicese	20.78	147	IAmb	IAmb	21 01 17.3	
	comp=Z,345nm,1.1s						
TOLK	Toolik Lake Re	20.82	339	IAMs_20	IAMs_20	21 08 50.6	
	comp=Z,58µm,19.0s						
TOLK	Toolik Lake Re	20.82	339	P	P	21 01 05.2	+0.5
	baz=142,SNR=189						
TOLK				S	Sn	21 05 02.4	+0.5
	baz=142						
TOLK				S	Sn	21 05 02.4	+0.5
	baz=142						
M14K	Bethel	20.85	313	P	P	21 01 04.2	-0.7
M14K				IAmb	IAmb	21 01 13.2	
	comp=Z,622nm,1.4s						
M14K	Bethel	20.85	313	P	Pn	21 01 07.0	-0.4
	baz=105,SNR=20						
M14K				S	Sn	21 05 04.4	+2.0
	baz=105						
M14K				S	Sn	21 05 04.4	+2.0
	baz=105						
FALS	False Pass	20.88	296	P	Pn	21 01 08.4	+0.5
	baz=88						
FALS				S	Sn	21 05 02.3	-1.0
	baz=88						
L15K	Ungalak Mounta	20.90	315	P	P	21 01 06.0	+0.4
	baz=108						
L15K				S	Sn	21 05 03.9	+0.2
	baz=108						
ESJX	Sierra Juarez	20.91	146	IAmb	IAmb	21 01 18.9	
	comp=Z,302nm,1.1s						
E22K	Anaktuvuk Pass	20.97	337	P	P	21 01 05.6	-0.8
E22K				IAmb	IAmb	21 01 15.8	
	comp=Z,337nm,1.2s						
E22K				IAMs_20	IAMs_20	21 08 42.6	
	comp=Z,52µm,19.0s						
E22K	Anaktuvuk Pass	20.97	337	P	P	21 01 06.3	0.0
	baz=137,SNR=184						
E22K				S	Sn	21 05 06.2	+0.7
	baz=137						
E22K				S	Sn	21 05 06.2	+0.7
	baz=137						
C26K	Camden Bay	21.00	345	P	P	21 01 06.9	+0.3
	baz=152						
C26K				S	Sn	21 05 04.7	-1.2
	baz=152						
C26K				S	Sn	21 05 04.7	-1.2
	baz=152						
D24K	Happy Valley	21.07	341	IAMs_20	IAMs_20	21 09 20.9	
	comp=Z,52µm,18.0s						
D24K	Happy Valley	21.07	341	P	P	21 01 08.0	+0.6
	baz=144						
D24K				S	Sn	21 05 08.9	+1.1
	baz=144						
D24K				S	Sn	21 05 08.9	+1.1
	baz=144						
H18K	Honhosa River	21.09	326	P	P	21 01 07.6	-0.1
	baz=121,SNR=66						
H18K				S	Sn	21 05 07.1	-1.3
	baz=121						
J16K	Anvik River	21.10	320	P	P	21 01 07.7	0.0
	baz=113,SNR=106						
J16K				S	Sn	21 05 07.9	-0.6
	baz=113						
K15K	Wolf Creek Mou	21.12	317	IAmb	IAmb	21 01 16.1	
	comp=Z,383nm,1.4s						
K15K	Wolf Creek Mou	21.12	317	P	P	21 01 08.4	+0.4
	baz=110,SNR=32						
K15K				S	Sn	21 05 09.2	+0.1
	baz=110						
K15K				S	Sn	21 05 09.2	+0.1

	baz=110						
G19K	**Purcell Mounta**	**21.20**	**329**	P	**P**	**21 01 08.0**	**-0.7**
	baz=125						
G19K				S	Sn	21 05 09.2	-1.6
	baz=125						
G19K				S	Sn	21 05 09.2	-1.6
	baz=125						
F20K	**Avaraart Lake**	**21.31**	**332**	P	**P**	**21 01 09.6**	**-0.4**
	baz=129						
F20K				S	Sn	21 05 11.9	-1.6
	baz=129						
F20K				S	Sn	21 05 11.9	-1.6
	baz=129						
SDCO	**Great Sand Dun**	**21.32**	**117**	IAmb	IAmb	21 01 19.5	
	comp=Z,237nm,1.0s						
SDCO				IAMs_20	IAMs_20	21 09 49.6	
	comp=Z,68µm,20.0s						
SDCO	**Great Sand Dun**	**21.32**	**117**	⇑P	**P**	**21 01 13.5**	**+2.9**
D23K	**Nanushuk River**	**21.33**	**339**	IAmb	IAmb	21 01 17.0	
	comp=Z,438nm,1.3s						
D23K				IAMs_20	IAMs_20	21 09 06.9	
	comp=Z,58µm,18.0s						
D23K	**Nanushuk River**	**21.33**	**339**	P	**P**	**21 01 10.4**	**+0.3**
	baz=141,SNR=124						
D23K				S	Sn	21 05 12.1	-1.9
	baz=141						
L14K	**Kuka Creek**	**21.35**	**314**	P	**P**	**21 01 10.8**	**+0.5**
	baz=106						
L14K				S	Sn	21 05 12.3	-2.2
	baz=106						
L14K				S	Sn	21 05 12.3	-2.2
	baz=106						
OGNE	**Ogallala**	**21.37**	**105**		**P**	**21 01 12.5**	**+1.6**
OGNE				IAMs_20	IAMs_20	21 09 55.6	
	comp=Z,45µm,18.0s						
OGNE	**Ogallala**	**21.37**	**105**	⇑P	**P**	**21 01 13.6**	**+2.7**
I17K	**Unalakleet**	**21.39**	**321**	P	**P**	**21 01 09.7**	**-1.0**
I17K				IAmb	IAmb	21 01 21.9	
	comp=Z,559nm,1.4s						
I17K	**Unalakleet**	**21.39**	**321**	P	**P**	**21 01 10.9**	**+0.1**
	baz=115,SNR=68						
I17K				S	Sn	21 05 13.2	-2.1
	baz=115						
M13K	**Dall Lake**	**21.43**	**311**	IAmb	IAmb	21 01 16.5	
	comp=Z,434nm,1.2s						
M13K	**Dall Lake**	**21.43**	**311**	P	**P**	**21 01 11.4**	**+0.2**
	baz=103						
M13K				S	Sn	21 05 14.6	-1.7
	baz=103						
C24K	**Franklin Bluff**	**21.52**	**342**	IAMs_20	IAMs_20	21 09 36.5	
	comp=Z,46µm,18.0s						
C24K	**Franklin Bluff**	**21.52**	**342**	P	**P**	**21 01 12.3**	**+0.2**
	baz=145						
ULM	**Lac du Bonnet**	**21.52**	**77**	P	**P**	**21 01 12.4**	**0.0**
	comp=Z,192nm,0.8s,baz=284,slow=10,SNR=62						
ULM				LR	LR	21 09 48.9	
	comp=Z,108µm,18.0s,baz=280,slow=37						
	comp=Z,192nm,0.8s						
ULM	**Lac du Bonnet**	**21.52**	**77**		**P**	**21 01 12.3**	**0.0**
ULM	**Lac du Bonnet**	**21.52**	**77**	*i* P	**P**	**21 01 11.7**	**-0.6**
SUSD	**Miller**	**21.52**	**94**	IAMs_20	IAMs_20	21 09 40.2	
	comp=Z,106µm,18.0s						
H17K	**Granite Mounta**	**21.56**	**324**	P	**P**	**21 01 12.8**	**+0.2**
	baz=118						
H17K				S	**S**	**21 05 14.2**	**+3.2**
	baz=118						
H17K				S	**S**	**21 05 14.2**	**+3.2**
	baz=118						
G18K	**Tagagawik**	**21.59**	**327**	P	**P**	**21 01 12.7**	**-0.3**
	baz=122						
G18K				S	**S**	**21 05 14.5**	**+2.9**
	baz=122						
D22K	**Ayikyak River**	**21.74**	**338**	IAMs_20	IAMs_20	21 09 17.6	
	comp=Z,48µm,19.0s						
D22K	**Ayikyak River**	**21.74**	**338**	P	**P**	**21 01 13.3**	**-1.2**
	baz=137						
E21K	**Killik River**	**21.75**	**336**	IAMs_20	IAMs_20	21 09 07.0	
	comp=Z,41µm,20.0s						
E21K	**Killik River**	**21.75**	**336**	P	**P**	**21 01 14.2**	**-0.5**
	baz=134						
F19K	**Shaleruckik Mo**	**21.82**	**330**	IAmb	IAmb	21 01 21.2	
	comp=Z,286nm,1.1s						
F19K	**Shaleruckik Mo**	**21.82**	**330**	P	**P**	**21 01 14.3**	**-1.1**
	baz=125						
F19K				S	**S**	**21 05 18.8**	**+2.7**
	baz=125						
A36M	**Sachs Harbour**	**21.89**	**4**	IAmb	IAmb	21 01 23.2	
	comp=Z,228nm,0.9s						
A36M				IAMs_20	IAMs_20	21 09 59.3	
	comp=Z,95µm,18.0s						
A36M	**Sachs Harbour**	**21.89**	**4**	P	**P**	**21 01 16.3**	**+0.2**
	baz=188,SNR=112						
A36M				S	**S**	**21 05 20.4**	**+3.0**
	baz=188						
K30B	**Basset**	**21.95**	**99**	IAMs_20	IAMs_20	21 09 54.1	
	comp=Z,100µm,20.0s						
C23K	**Itkillik River**	**22.00**	**341**	IAmb	IAmb	21 01 23.9	
	comp=Z,340nm,1.0s						
C23K				IAMs_20	IAMs_20	21 10 01.5	
	comp=Z,47µm,18.0s						
C23K	**Itkillik River**	**22.00**	**341**	P	**P**	**21 01 16.5**	**-0.8**
	baz=142						
C23K				S	**S**	**21 05 23.9**	**+4.4**
	baz=142						
C23K				S	**S**	**21 05 23.9**	**+4.4**
	baz=142						
E19K	**Redstone River**	**22.03**	**332**	P	**P**	**21 01 18.1**	**+0.4**
	baz=127						
E19K				S	**S**	**21 05 23.4**	**+3.3**
	baz=127						
E19K				S	**S**	**21 05 23.4**	**+3.3**
	baz=127						
AGMN	**Agassiz Nation**	**22.05**	**82**	⇑P	**P**	**21 01 18.3**	**+0.2**
G17K	**Kiwalik Mounta**	**22.10**	**325**	P	**P**	**21 01 17.8**	**-0.7**
	baz=118						
G17K				S	**S**	**21 05 24.8**	**+3.3**
	baz=118						
G17K				S	**S**	**21 05 24.8**	**+3.3**
	baz=118						
FCC	**Fort Churchill**	**22.11**	**54**	P	**P**	**21 01 18.8**	**+0.2**
FCC				IAmb	IAmb	21 01 28.3	
	comp=Z,284nm,0.9s						
FCC	**Fort Churchill**	**22.11**	**54**	P	**P**	**21 01 18.8**	**+0.2**
FCC				pmax	pmax		
	comp=Z,284nm,0.9s						
J14K	**Nanvaranak Lak**	**22.16**	**317**	P	**P**	**21 01 19.8**	**+0.8**
	baz=108						
J14K				S	**S**	**21 05 25.7**	**+3.0**
	baz=108						
KSCO	**Kaye Shedlock’**	**22.18**	**110**	IAMs_20	IAMs_20	21 10 10.5	
	comp=Z,42µm,21.0s						
214A	**Organ Pipe Nat**	**22.19**	**139**	IAmb	IAmb	21 01 38.9	
	comp=Z,206nm,1.1s						
SFX	**San Felipe**	**22.19**	**144**	IAmb	IAmb	21 01 36.1	
	comp=Z,202nm,1.0s						
E20K	**Nigu River**	**22.23**	**334**	P	**P**	**21 01 19.8**	**-0.1**
	baz=131						
E20K				S	**S**	**21 05 29.2**	**+5.2**
	baz=131						
PIX	**Pinacate**	**22.26**	**141**	IAmb	IAmb	21 01 45.7	
	comp=Z,182nm,1.1s						
F18K	**Selawik**	**22.31**	**328**	P	**P**	**21 01 20.4**	**-0.2**
	baz=122,SNR=129						
F18K				S	**S**	**21 05 27.9**	**+2.5**
	baz=122						
F18K				S	**S**	**21 05 27.9**	**+2.5**
	baz=122						
H16K	**Elim**	**22.32**	**322**	P	**P**	**21 01 20.3**	**-0.4**
	baz=114,SNR=120						
H16K				S	**S**	**21 05 29.1**	**+3.6**
	baz=114						
H16K				S	**S**	**21 05 29.1**	**+3.6**
	baz=114						
T25A	**Trinidad**	**22.37**	**116**	IAmb	IAmb	21 01 33.5	
	comp=Z,289nm,1.1s						
T25A				IAMs_20	IAMs_20	21 10 01.2	
	comp=Z,34µm,22.0s						
K13K	**Kusilvak Mount**	**22.41**	**315**	P	**P**	**21 01 20.2**	**-1.6**
	baz=105						
K13K				S	**S**	**21 05 32.8**	**+5.3**
	baz=105						
K13K				S	**S**	**21 05 32.8**	**+5.3**
	baz=105						
C21K	**Knifeblade Rid**	**22.47**	**337**	P	**P**	**21 01 21.9**	**-0.5**
	baz=134						
C21K				S	**S**	**21 05 34.3**	**+6.0**
	baz=134						
C21K				S	**S**	**21 05 34.3**	**+6.0**
	baz=134						
BLKN	**Baker Lake**	**22.64**	**39**	P	**P**	**21 01 23.7**	**-0.5**
BLKN				IAmb	IAmb	21 01 28.1	
	comp=Z,188nm,1.1s						
F33A	**5 Mile Ranch,**	**22.64**	**88**	IAMs_20	IAMs_20	21 10 15.1	
	comp=Z,90µm,20.0s						
D20K	**Etivluk River**	**22.65**	**335**	IAMs_20	IAMs_20	21 09 44.8	
	comp=Z,35µm,19.0s						
D20K	**Etivluk River**	**22.65**	**335**	P	**P**	**21 01 23.1**	**-1.3**
	baz=131						
D20K				S	**S**	**21 05 36.8**	**+5.1**
	baz=131						
D20K				S	**S**	**21 05 36.8**	**+5.1**
	baz=131						
G16K	**Koyuk River**	**22.68**	**324**	P	**P**	**21 01 22.0**	**-2.6**
	baz=116						
G16K				S	Sn	21 05 39.5	-6.9
	baz=116						
UNV	**Unalaska Valle**	**22.75**	**293**	P	**P**	**21 01 31.5**	**+6.1**
UNV	**Unalaska Valle**	**22.75**	**293**	P	**P**	**21 01 27.9**	**+2.5**
	baz=83						
UNV				S	**S**	**21 05 39.7**	**+6.1**
	baz=83						
B21K	**Ikpikpuk River**	**22.75**	**338**	IAMs_20	IAMs_20	21 10 02.4	
	comp=Z,40µm,20.0s						
B21K	**Ikpikpuk River**	**22.75**	**338**	P	**P**	**21 01 24.6**	**-0.8**
	baz=135						
TUC	**Tucson**	**22.77**	**135**	P	**P**	**21 01 28.0**	**+2.0**
TUC				IAmb	IAmb	21 01 46.8	
	comp=Z,359nm,1.4s						
TUC	**Tucson**	**22.77**	**135**	P	**P**	**21 01 28.0**	**+2.0**
TUC				pmax	pmax		
	comp=Z,359nm,1.5s						
TUC				MLR	MLR		
	comp=Z,15µm,18.0s						
TUC	**Tucson**	**22.77**	**135**	⇑P	**P**	**21 01 28.7**	**+2.7**
F17K	**Baldwin Pennin**	**22.78**	**327**	P	**P**	**21 01 25.4**	**-0.2**
	baz=120,SNR=75						
F17K				S	**S**	**21 05 38.8**	**+4.9**
	baz=120						
M11K	**Mekoryuk**	**22.81**	**310**	P	**P**	**21 01 26.3**	**+0.3**
	baz=99						
M11K				S	**S**	**21 05 38.6**	**+4.0**
	baz=99						
M11K				S	**S**	**21 05 38.6**	**+4.0**
	baz=99						
TASM	**ASL Pad, Albuq**	**22.82**	**123**	IAmb	IAmb	21 01 43.7	
	comp=Z,260nm,1.4s						
TASM	**ASL Pad, Albuq**	**22.82**	**123**	IAmb	IAmb	21 01 43.7	
	comp=Z,261nm,1.4s						
TASM	**ASL Pad, Albuq**	**22.82**	**123**	IAmb	IAmb	21 01 43.7	
	comp=Z,271nm,1.4s						
TASM	**ASL Pad, Albuq**	**22.82**	**123**	IAmb	IAmb	21 01 43.7	
	comp=Z,253nm,1.4s						
ANMO	**Albuquerque**	**22.82**	**123**	P	**P**	**21 01 28.9**	**+2.3**
	comp=Z,20nm,0.9s,baz=312,slow=11,SNR=54						
ANMO				LR	LR	21 10 11.4	
	comp=Z,22µm,21.2s,baz=312,slow=36						
	comp=Z,20nm,0.9s						
ANMO	**Albuquerque**	**22.82**	**123**	P	**P**	**21 01 28.2**	**+1.7**
ANMO				IAmb	IAmb	21 01 43.7	
	comp=Z,242nm,1.4s						
ANMO	**Albuquerque**	**22.82**	**123**	P	**P**	**21 01 28.2**	**+1.7**
ANMO				pmax	pmax		
	comp=Z,242nm,1.4s						
ANMO				MLR	MLR		
	comp=Z,26µm,21.0s						
ANMO	**Albuquerque**	**22.82**	**123**	⇑P	**P**	**21 01 28.8**	**+2.3**
ABQ	**Albuquerque**	**22.82**	**123**	IAmb	IAmb	21 01 43.8	
	comp=Z,239nm,1.3s						
D19K	**Kuna River**	**22.93**	**333**	IAmb	IAmb	21 01 34.3	
	comp=Z,411nm,1.4s						
D19K	**Kuna River**	**22.93**	**333**	P	**P**	**21 01 26.5**	**-0.8**
	baz=128,SNR=44						
B22K	**Teshekpuk Lake**	**23.00**	**340**	IAMs_20	IAMs_20	21 10 22.1	
	comp=Z,56µm,19.0s						
B22K	**Teshekpuk Lake**	**23.00**	**340**	P	**P**	**21 01 27.2**	**-0.8**
	baz=138						
B22K				S	**S**	**21 05 43.2**	**+5.4**
	baz=138						
B22K				S	**S**	**21 05 43.2**	**+5.4**
	baz=138						
EPLO	**Experimental L**	**23.01**	**77**	P	**P**	**21 01 27.0**	**-1.2**
E18K	**Tukpahlearik C**	**23.07**	**330**	IAmb	IAmb	21 01 35.6	
	comp=Z,217nm,1.3s						
E18K	**Tukpahlearik C**	**23.07**	**330**	P	**P**	**21 01 28.1**	**-0.6**
	baz=122,SNR=54						
E18K				S	**S**	**21 05 44.2**	**+5.2**
	baz=122						
E18K				S	**S**	**21 05 44.2**	**+5.2**
	baz=122						
G15K	**Niukluk**	**23.16**	**322**	P	**P**	**21 01 29.7**	**0.0**
	baz=113,SNR=39						
G15K				S	**S**	**21 05 48.0**	**+7.4**
	baz=113						
E17K	**Hotham Inlet**	**23.30**	**328**	P	**P**	**21 01 30.2**	**-0.7**
	baz=120,SNR=56						
E17K				S	**S**	**21 05 49.0**	**+6.2**
	baz=120						
ECSD	**EROS Data Cent**	**23.35**	**93**	IAMs_20	IAMs_20	21 10 36.5	
	comp=Z,82µm,22.0s						
ECSD	**EROS Data Cent**	**23.35**	**93**	⇑P	**P**	**21 01 31.6**	**-0.2**
ANM	**Nome**	**23.54**	**321**	P	**P**	**21 01 31.2**	**-2.1**
	baz=110,SNR=9.9						
ANM				S	**S**	**21 05 52.1**	**+5.4**
	baz=110						
B20K	**Meade River**	**23.66**	**337**	IAMs_20	IAMs_20	21 10 41.4	
	comp=Z,36µm,20.0s						
B20K	**Meade River**	**23.66**	**337**	P	**P**	**21 01 34.1**	**-0.4**
	baz=132						
F15K	**North Star Dit**	**23.68**	**324**	P	**P**	**21 01 34.1**	**-0.7**
	baz=113						
C19K	**Lookout Ridge**	**23.73**	**334**	IAmb	IAmb	21 01 40.5	
	comp=Z,167nm,1.2s						
C19K				IAMs_20	IAMs_20	21 10 09.4	
	comp=Z,28µm,20.0s						
C19K	**Lookout Ridge**	**23.73**	**334**	P	**P**	**21 01 35.0**	**-0.3**
	baz=127,SNR=45						
C19K				S	**S**	**21 05 52.5**	**+2.6**
	baz=127						
C19K				S	**S**	**21 05 52.5**	**+2.6**
	baz=127						
A22K	**Sinclair Lake**	**23.85**	**340**	P	**P**	**21 01 36.4**	**+0.1**
	baz=137						
C18K	**Utukok River**	**23.94**	**332**	P	**P**	**21 01 36.6**	**-0.7**
	baz=124,SNR=155						
C18K				S	**S**	**21 05 57.0**	**+3.9**
	baz=124						
C18K				S	**S**	**21 05 57.0**	**+3.9**
	baz=124						
121A	**Cookes Peak, D**	**24.02**	**129**	IAmb	IAmb	21 01 49.0	
	comp=Z,251nm,1.1s						
D17K	**Noatak River**	**24.03**	**329**	P	**P**	**21 01 37.6**	**-0.5**
	baz=120,SNR=21						
D17K				S	**S**	**21 05 58.2**	**+3.7**
	baz=120						
D17K				S	**S**	**21 05 58.2**	**+3.7**
	baz=120						
CBKS	**Cedar Bluff**	**24.06**	**107**	IAMs_20	IAMs_20	21 11 25.5	
	comp=Z,40µm,18.0s						
CBKS	**Cedar Bluff**	**24.06**	**107**	⇑P	**P**	**21 01 40.6**	**+1.9**
RDOG	**Red Dog Mine**	**24.15**	**330**	IAmb	IAmb	21 01 45.5	
	comp=Z,472nm,1.9s						
RDOG	**Red Dog Mine**	**24.15**	**330**	P	**P**	**21 01 39.5**	**+0.3**
	baz=120,SNR=29						
RDOG				S	**S**	**21 05 57.2**	**+0.6**
	baz=120						
F14K	**Arctic Creek**	**24.24**	**323**	P	**P**	**21 01 39.7**	**-0.3**
	baz=111,SNR=18						
F14K				S	**S**	**21 06 00.1**	**+2.2**
	baz=111						
319A	**Douglas**	**24.25**	**133**	IAmb	IAmb	21 02 03.5	
	comp=Z,225nm,1.1s						
NIKH	**Nikolski High**	**24.26**	**292**	P	**P**	**21 01 42.7**	**+2.3**
	baz=80						
P08K	**Saint George I**	**24.30**	**301**	P	**P**	**21 01 42.3**	**+1.6**
	baz=88						
A21K	**Barrow**	**24.45**	**339**	P	**P**	**21 01 42.5**	**+0.7**
	baz=135,SNR=88						
A21K				S	**S**	**21 06 04.3**	**+3.2**
	baz=135						
A21K				S	**S**	**21 06 04.3**	**+3.2**
	baz=135						
C17K	**DeLong Mountai**	**24.45**	**331**	P	**P**	**21 01 41.8**	**-0.3**
	baz=121,SNR=29						
C17K				S	**S**	**21 06 05.6**	**+4.2**
	baz=121						
B18K	**Kokolik River**	**24.52**	**333**	P	**P**	**21 01 42.9**	**+0.3**
	baz=124						
B18K				S	**S**	**21 06 06.9**	**+4.4**
	baz=124						
B18K				S	**S**	**21 06 06.9**	**+4.4**
	baz=124						
A19K	**Wainwright**	**24.81**	**335**	P	**P**	**21 01 45.3**	**+0.1**
	baz=127						
TNA	**Tin City**	**24.89**	**322**	P	**P**	**21 01 45.3**	**-0.6**
TNA				IAmb	IAmb	21 01 53.9	
	comp=Z,232nm,1.5s						
TNA	**Tin City**	**24.89**	**322**	⇓P	**P**	**21 01 46.2**	**+0.3**
TNA	**Tin City**	**24.89**	**322**	P	**P**	**21 01 46.1**	**+0.2**
	baz=109,SNR=9.9						
TNA				S	**S**	**21 06 16.9**	**+8.5**
	baz=109						
R32A	**Long Quarter,**	**24.93**	**106**	IAMs_20	IAMs_20	21 12 00.6	
	comp=Z,33µm,18.0s						
EYMN	**Ely**	**24.93**	**80**	IAMs_20	IAMs_20	21 11 34.3	
	comp=Z,93µm,22.0s						
EYMN	**Ely**	**24.93**	**80**	⇑P	**P**	**21 01 47.8**	**+1.2**
PH02	**Texas Public H**	**25.01**	**116**	IAmb	IAmb	21 01 57.6	
	comp=Z,156nm,1.1s						
C16K	**Lisburne Hills**	**25.05**	**329**	P	**P**	**21 01 47.6**	**+0.2**
	baz=118,SNR=42						
C16K				S	**S**	**21 06 15.7**	**+4.7**
	baz=118						
C16K				S	**S**	**21 06 15.7**	**+4.7**
	baz=118						
SPMN	**Marine on St.**	**25.13**	**87**	IAMs_20	IAMs_20	21 11 43.5	
	comp=Z,84µm,21.0s						
EPT	**El Paso**	**25.27**	**128**	IAmb	IAmb	21 01 57.6	
	comp=Z,160nm,1.1s						
EPT				IAMs_20	IAMs_20	21 12 19.2	
	comp=Z,34µm,18.0s						
AMTX	**Amarillo**	**25.52**	**116**	⇑P	**P**	**21 01 54.4**	**+2.4**
HSIG		**25.52**	**139**	⇑P	**P**	**21 01 54.8**	**+2.8**
MSTX	**Muleshoe**	**25.57**	**119**	IAMs_20	IAMs_20	21 12 27.2	
	comp=Z,47µm,20.0s						
KSU1	**Kansas State U**	**25.82**	**103**	⇑P	**P**	**21 01 56.9**	**+2.3**
MNTX	**Cornudas Mount**	**25.90**	**127**	IAmb	IAmb	21 02 06.3	
	comp=Z,246nm,1.4s						
MNTX	**Cornudas Mount**	**25.90**	**127**	⇑P	**P**	**21 01 57.9**	**+2.5**
NOKA	**Waynoka**	**25.94**	**110**	IAmb	IAmb	21 02 04.9	
	comp=Z,135nm,0.9s						
GAMB	**Gambell**	**25.99**	**317**	S	**S**	**21 06 34.0**	**+8.3**
	baz=101						
KAN08	**Anthony NE Sta**	**26.14**	**108**	IAmb	IAmb	21 02 24.1	
	comp=Z,147nm,1.1s						
OK038	**West end E0370**	**26.16**	**110**	IAMs_20	IAMs_20	21 12 34.9	
	comp=Z,27µm,21.0s						
SMWD	**Samnorwood**	**26.20**	**114**	IAmb	IAmb	21 02 07.2	
	comp=Z,109nm,1.1s						
SCIA	**State Center**	**26.42**	**94**	IAMs_20	IAMs_20	21 12 32.9	
	comp=Z,80µm,20.0s						
SRIG	**Santa Rosalia**	**26.51**	**143**	⇑P	**P**	**21 02 04.0**	**+3.0**
G40A	**Rib Lake**	**26.78**	**85**	IAmb	IAmb	21 02 12.3	
	comp=Z,117nm,0.9s						
DKNS	**Dickens**	**26.83**	**117**	IAmb	IAmb	21 02 12.0	
	comp=Z,145nm,1.2s						
VHRN	**Van Horn**	**26.83**	**127**	IAmb	IAmb	21 02 31.4	
	comp=Z,143nm,1.1s						
BLOK	**Blackwell**	**26.90**	**108**	IAmb	IAmb	21 02 21.7	
	comp=Z,162nm,1.2s						
POST	**Post**	**26.95**	**119**	IAmb	IAmb	21 02 14.0	
	comp=Z,82nm,0.9s						
PECS	**Pecos**	**26.95**	**125**	IAmb	IAmb	21 02 44.2	
	comp=Z,127nm,1.4s						
OK048	**Pawnee Station**	**27.29**	**108**	IAmb	IAmb	21 02 16.2	
	comp=Z,171nm,1.1s						
OK051	**E0350 and S346**	**27.30**	**108**	IAmb	IAmb	21 02 46.4	
	comp=Z,191nm,1.2s						
OK051				IAMs_20	IAMs_20	21 13 42.8	
	comp=Z,33µm,18.0s						
WMOK	**Wichita Mounta**	**27.32**	**113**	IAmb	IAmb	21 02 17.1	
	comp=Z,160nm,0.9s						
WMOK	**Wichita Mounta**	**27.32**	**113**	IAMs_20	IAMs_20	21 13 37.8	
	comp=Z,66µm,18.0s						
WMOK	**Wichita Mounta**	**27.32**	**113**	⇑P	**P**	**21 02 10.4**	**+2.2**
OK029	**Liberty Lake**	**27.39**	**110**	IAMs_20	IAMs_20	21 13 22.4	
	comp=Z,26µm,20.0s						
APMT	**Aspermont**	**27.54**	**117**	IAmb	IAmb	21 02 17.9	
	comp=Z,150nm,1.1s						
MNHN	**Monahans**	**27.56**	**123**	IAmb	IAmb	21 02 28.2	
	comp=Z,194nm,1.9s						
OK052	**Battle Ridge R**	**27.66**	**108**	IAMs_20	IAMs_20	21 14 18.3	
	comp=Z,38µm,18.0s						
FNO	**Franklin**	**27.79**	**110**	IAmb	IAmb	21 02 20.7	
	comp=Z,142nm,1.1s						
JFWS	**Jewell Farm**	**27.82**	**90**	⇑P	**P**	**21 02 14.3**	**+1.7**
SGCY	**Sterling City**	**28.02**	**120**	IAmb	IAmb	21 02 24.2	
	comp=Z,183nm,1.8s						
W35A	**Tecumseh**	**28.17**	**110**	IAmb	IAmb	21 02 24.8	
	comp=Z,236nm,1.5s						
WTFS	**Witchita Falls**	**28.18**	**114**	IAmb	IAmb	21 02 23.9	
	comp=Z,155nm,1.2s						
I42A	**Draeger Farm,**	**28.22**	**87**	IAmb	IAmb	21 02 29.7	
	comp=Z,140nm,1.2s						
TUL3	**Leonard**	**28.33**	**107**	IAMs_20	IAMs_20	21 12 45.0	
	comp=Z,19µm,19.0s						
RES	**Resolute Bay**	**28.43**	**19**	LR	LR	21 13 29.6	
	comp=Z,32µm,19.9s,baz=230,slow=36						
RES	**Resolute Bay**	**28.43**	**19**	P	**P**	**21 02 16.2**	**-1.5**
RES				IAmb	IAmb	21 03 08.8	
	comp=Z,74nm,1.2s						
RES	**Resolute Bay**	**28.43**	**19**	P	**P**	**21 02 16.3**	**-1.5**
RES				pmax	pmax		
	comp=Z,74nm,1.2s						
RES	**Resolute Bay**	**28.43**	**19**	⇑P	**P**	**21 02 18.0**	**+0.3**
P40A	**Paris**	**28.46**	**98**	IAmb	IAmb	21 03 04.4	
	comp=Z,173nm,1.1s						
N41A	**Harden Midland**	**28.57**	**94**	IAmb	IAmb	21 02 26.9	
	comp=Z,152nm,1.0s						
RLO	**Rose Lookout**	**28.63**	**106**	IAmb	IAmb	21 02 38.1	
	comp=Z,160nm,1.1s						
L42A	**Oliver, Polo**	**28.65**	**91**	IAMs_20	IAMs_20	21 14 07.4	
	comp=Z,71µm,19.0s						
TXAR	**Lajitas Array**	**28.68**	**127**	P	**P**	**21 02 21.4**	**+0.9**
	comp=Z,28nm,0.9s,baz=325,slow=7.0,SNR=43						
TXAR				PcP	**PcP**	**21 05 34.1**	**+3.2**
	comp=Z,1.2nm,0.6s,baz=327,slow=4.4,SNR=1.8						
TXAR				LR	LR	21 14 39.5	
	comp=Z,22µm,18.4s,baz=314,slow=38						
	comp=Z,28nm,0.9s						
TXAR	**Lajitas Array**	**28.68**	**127**	P	**P**	**21 02 20.9**	**+0.5**
TXAR	**Lajitas Array**	**28.68**	**127**	P	**P**	**21 02 21.0**	**+0.5**
TXAR						21 05 34.1	
H43A	**Windswept, Lux**	**28.68**	**85**	IAmb	IAmb	21 02 27.9	
	comp=Z,124nm,1.1s						
OZNA	**Ozona**	**28.77**	**121**	IAmb	IAmb	21 02 29.3	
	comp=Z,103nm,1.3s						
U38A	**Gravette**	**28.85**	**105**	IAMs_20	IAMs_20	21 14 00.5	
	comp=Z,21µm,20.0s						
PLPT	**Palo Pinto**	**28.95**	**115**	IAmb	IAmb	21 03 22.8	
	comp=Z,82nm,1.2s						
R40A	**Maddies Statio**	**29.04**	**100**	IAmb	IAmb	21 03 08.9	
	comp=Z,123nm,1.0s						
K43A	**Burlington**	**29.16**	**89**	IAmb	IAmb	21 03 23.2	
	comp=Z,173nm,1.2s						
Z35A	**Perchaven, San**	**29.21**	**113**	IAMs_20	IAMs_20	21 14 48.9	
	comp=Z,40µm,18.0s						
HHAR	**Hobbs**	**29.23**	**105**	IAmb	IAmb	21 02 40.7	
	comp=Z,112nm,1.3s						
FW06	**Azle**	**29.28**	**114**	IAmb	IAmb	21 02 33.5	
	comp=Z,121nm,1.1s						
ILON	**Igloolik, Nuna**	**29.58**	**32**	P	**P**	**21 02 27.2**	**-0.7**
HDIL	**Hopedale**	**29.65**	**93**	IAmb	IAmb	21 02 42.0	
	comp=Z,106nm,0.8s						
HDIL	**Hopedale**	**29.65**	**93**	⇑P	**P**	**21 02 30.4**	**+1.5**
HPIG		**29.68**	**133**	IAmb	IAmb	21 02 48.3	
	comp=Z,137nm,1.9s						
BRDY	**Brady**	**29.68**	**118**	IAmb	IAmb	21 02 38.9	
	comp=Z,102nm,1.6s						
L44A	**Lake County Fo**	**29.69**	**90**	IAmb	IAmb	21 02 46.4	
	comp=Z,120nm,1.0s						
MGMO	**Mountain Grove**	**29.73**	**102**	IAmb	IAmb	21 03 23.8	
	comp=Z,81nm,0.9s						
CCM	**Cathedral Cave**	**29.82**	**99**	P	**P**	**21 02 31.3**	**+0.8**
CCM				IAmb	IAmb	21 03 31.9	
	comp=Z,84nm,1.1s						
CCM	**Cathedral Cave**	**29.82**	**99**	P	**P**	**21 02 31.3**	**+0.8**
CCM				pmax	pmax		
	comp=Z,84nm,1.1s						
CCM				MLR	MLR		
	comp=Z,96µm,20.0s						
CCM	**Cathedral Cave**	**29.82**	**99**	⇑P	**P**	**21 02 31.2**	**+0.8**
JCT	**Junction City**	**29.84**	**120**	IAMs_20	IAMs_20	21 15 12.5	
	comp=Z,31µm,18.0s						

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HQIL  Hanson Quary C  29.92  90   IAmb      IAmb      21 02 38.8
       comp=Z,116nm,1.1s
P43A  Skaggs, Pawnee  30.01  95   IAmb      IAmb      21 02 39.6
       comp=Z,125nm,0.9s
WHTX  Lake Whitney,   30.05 115   IAmb      IAmb      21 02 40.3
       comp=Z,153nm,1.1s
WHTX                              IAMs_20   IAMs_20   21 15 19.4
       comp=Z,52µm,21.0s
E46A  Sault Ste Mari  30.07  80   P         P         21 02 32.9 +0.3
E46A                              IAmb      IAmb      21 02 40.0
       comp=Z,172nm,1.3s
E46A                              IAMs_20   IAMs_20   21 14 18.5
       comp=Z,54µm,22.0s
SLM   Saint Louis     30.12  97   IAmb      IAmb      21 03 14.4
       comp=Z,89nm,1.0s
LPIG  La Paz          30.16 143   LR        LR        21 15 12.4
       comp=Z,18µm,18.5s,baz=332,slow=37
GLMI  Grayling        30.54  83   IAMs_20   IAMs_20   21 14 18.2
       comp=Z,38µm,22.0s
T42A  Van Buren       30.54 101   IAmb      IAmb      21 03 35.6
       comp=Z,84nm,1.3s
T42A                              IAMs_20   IAMs_20   21 14 36.7
       comp=Z,33µm,21.0s
MIAR  Mount Ida       30.59 107   IAmb      IAmb      21 02 45.9
       comp=Z,145nm,1.1s
MIAR                              IAMs_20   IAMs_20   21 14 40.8
       comp=Z,15µm,18.0s
MIAR  Mount Ida       30.59 107  ⇑P         P         21 02 39.6 +2.4
Z38A  Mt. Pleasant    30.61 110   IAMs_20   IAMs_20   21 14 10.7
       comp=Z,24µm,20.0s
FCAR  Ozark Folk Cen  30.61 104   IAmb      IAmb      21 02 44.9
       comp=Z,88nm,0.8s
SLBS  Sierra La Lagu  30.67 143   P         P         21 02 39.7 +1.6
SLBS                              IAmb      IAmb      21 02 55.1
       comp=Z,71nm,1.2s
SLBS  Sierra La Lagu  30.67 143   IAMs_20   IAMs_20   21 15 17.6
       comp=Z,19µm,19.0s
SLBS  Sierra La Lagu  30.67 143  ⇑P         P         21 02 40.8 +2.6
Q44A  Meyer Farm, Va  30.75  96   IAmb      IAmb      21 03 34.1
       comp=Z,139nm,1.2s
435B  Jarrell         30.86 117   IAmb      IAmb      21 02 48.0
       comp=Z,143nm,1.2s
X40A  Basin Creek Fa  31.08 106   IAmb      IAmb      21 03 40.9
       comp=Z,108nm,1.1s
LCAR  Lake Charles    31.10 102   IAmb      IAmb      21 02 48.6
       comp=Z,67nm,0.9s
PBMO  Poplar Bluff    31.11 100   IAmb      IAmb      21 02 48.3
       comp=Z,63nm,1.1s
UALR  University of   31.20 105   IAmb      IAmb      21 03 09.4
       comp=Z,86nm,1.1s
CGM3  Cape Girardeau  31.29  99   IAmb      IAmb      21 02 50.0
       comp=Z,68nm,0.9s
S44A  Carbondale      31.30  98   IAmb      IAmb      21 02 50.6
       comp=Z,96nm,0.9s
SIUC  Southern Illin  31.32  98   IAmb      IAmb      21 02 50.7
       comp=Z,93nm,0.9s
P46A  Rosedale        31.50  93   IAmb      IAmb      21 02 52.7
       comp=Z,64nm,0.8s
NATX  Nacogdoches     31.86 112   IAmb      IAmb      21 02 57.4
       comp=Z,155nm,1.4s
NATX                              IAMs_20   IAMs_20   21 16 42.0
       comp=Z,32µm,19.0s
BLO   Bloomington     32.19  93   IAmb      IAmb      21 02 58.7
       comp=Z,97nm,0.8s
735A  Kenedy          32.20 120   IAMs_20   IAMs_20   21 17 00.8
       comp=Z,28µm,18.0s
AAM   Ann Arbor       32.35  86   IAmb      IAmb      21 03 00.9
       comp=Z,63nm,0.8s
O48B  Farmland        32.46  91   IAMs_20   IAMs_20   21 16 09.3
       comp=Z,55µm,21.0s
HKT   Hockley         32.49 116   P         P         21 02 56.2 +2.3
HKT   Hockley         32.49 116 i P         P         21 02 54.2 +0.3
HKT                               pmax      pmax
       comp=Z,166nm,1.4s
HKT   Hockley         32.49 116  ⇑P         P         21 02 56.8 +2.8
N49A  Columbus Grove  32.73  89   IAmb      IAmb      21 03 02.9
       comp=Z,103nm,1.0s
K50A  Casco           32.78  85   IAmb      IAmb      21 03 04.5
       comp=Z,109nm,1.0s
WCI   Wyandotte Cave  32.88  95   P         P         21 02 57.5 +0.2
WCI                               IAmb      IAmb      21 03 56.0
       comp=Z,43nm,0.9s
WCI   Wyandotte Cave  32.88  95   IAMs_20   IAMs_20   21 16 23.7
       comp=Z,62µm,22.0s
WCI   Wyandotte Cave  32.88  95   P         P         21 02 57.5 +0.2
WCI                               pmax      pmax
       comp=Z,43nm,0.9s
WCI                               MLR       MLR
       comp=Z,62µm,22.0s
WCI   Wyandotte Cave  32.88  95  ⇑P         P         21 02 58.4 +1.1
T47A  Sharon Grove    33.09  97   IAmb      IAmb      21 03 27.7
       comp=Z,73nm,1.1s
WVT   Waverly         33.16  99   P         P         21 03 00.3 +0.5
WVT                               IAmb      IAmb      21 03 14.2
       comp=Z,70nm,1.1s
WVT   Waverly         33.16  99   IAMs_20   IAMs_20   21 16 33.8
       comp=Z,58µm,22.0s
WVT   Waverly         33.16  99   P         P         21 03 00.3 +0.5
WVT                               pmax      pmax
       comp=Z,70nm,1.1s
WVT                               MLR       MLR
       comp=Z,58µm,22.0s
WVT   Waverly         33.16  99  ⇑P         P         21 03 00.9 +1.1
143A  Socs Landing,   33.17 107   IAMs_20   IAMs_20   21 17 09.1
       comp=Z,28µm,21.0s
OXF   Oxford          33.20 103  ⇑P         P         21 03 01.8 +1.7
M50A  Fremont         33.21  87   IAmb      IAmb      21 03 08.3
       comp=Z,90nm,1.2s
441A  DeRidder        33.46 112   IAMs_20   IAMs_20   21 17 33.3
       comp=Z,26µm,19.0s
R49A  Shelbyville     33.56  94   IAmb      IAmb      21 04 17.6
       comp=Z,82nm,1.3s
VLDQ  Val d'Or        33.63  73   IAmb      IAmb      21 03 09.3
       comp=Z,84nm,1.1s
PLAL  Pickwick Lake   33.73 101   IAmb      IAmb      21 03 11.8
       comp=Z,87nm,0.9s
ACSO  Alum Creek Sta  33.87  89  ⇑P         P         21 03 07.0 +1.0
N51A  Ashland         33.89  87   IAmb      IAmb      21 03 12.9
       comp=Z,98nm,0.9s
SADO  Sadowa          34.03  79   LR        LR        21 17 31.9
       comp=Z,79µm,21.0s,baz=326,slow=37
SADO  Sadowa          34.03  79   IAmb      IAmb      21 03 14.2
       comp=Z,115nm,1.0s
V48A  Smith Brothers  34.04  99   IAmb      IAmb      21 03 36.1
       comp=Z,224nm,1.9s
VBMS  Vicksburg       34.04 107   IAMs_20   IAMs_20   21 18 49.2
       comp=Z,25µm,22.0s
M52A  Chesterland     34.22  86   IAmb      IAmb      21 03 15.4
       comp=Z,100nm,1.1s
SHEM  Shemya Is, Ala  34.33 296   LR        LR        21 14 40.0
       comp=Z,9µm,19.9s,baz=84,slow=32
FRB   Frobisher Bay   34.45  44   LR        LR        21 17 56.6
       comp=Z,8µm,18.4s,baz=277,slow=38
146A  Union           34.66 105   IAMs_20   IAMs_20   21 17 57.3
       comp=Z,37µm,21.0s
O52A  Adamsville      34.67  88   IAmb      IAmb      21 03 20.4
       comp=Z,72nm,1.1s
ZAIG  Zacatecas       34.68 132  ⇑P         P         21 03 16.6 +3.1
X48A  Hartselle       34.72 101   IAmb      IAmb      21 03 20.2
       comp=Z,51nm,1.0s
X48A                              IAMs_20   IAMs_20   21 17 08.3
       comp=Z,26µm,22.0s
P52A  Corning         34.75  89   IAmb      IAmb      21 03 20.1
       comp=Z,98nm,0.9s
ERPA  Erie            34.79  84   IAMs_20   IAMs_20   21 18 38.0
       comp=Z,29µm,18.0s
Z47A  Carrollton      34.90 103   IAmb      IAmb      21 04 34.1
       comp=Z,95nm,1.3s
Z47A                              IAMs_20   IAMs_20   21 17 27.3
       comp=Z,28µm,22.0s
SWET  Sewanee         34.94  99   IAmb      IAmb      21 03 22.1
       comp=Z,161nm,1.9s
N53A  Lisbon          34.94  87   IAmb      IAmb      21 03 22.1
       comp=Z,87nm,0.9s
O53A  New Philadelph  35.00  88   IAmb      IAmb      21 03 24.9
       comp=Z,84nm,1.0s
Q52A  Bidwell         35.04  90   IAmb      IAmb      21 03 22.6
       comp=Z,100nm,1.0s
TULEG Thule           35.04  21   IAmb      IAmb      21 04 08.6
       comp=Z,129nm,1.9s
TULEG                             IAMs_20   IAMs_20   21 17 39.3
       comp=Z,31µm,19.0s
DELO  Deloro Mine     35.11  79   IAmb      IAmb      21 03 24.4
       comp=Z,88nm,1.0s
MEDO  Medina          35.24  81   IAmb      IAmb      21 03 25.1
       comp=Z,169nm,1.4s
346A  Big Creek Wild  35.26 107   IAMs_20   IAMs_20   21 20 03.5
       comp=Z,23µm,19.0s
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BILL  Bilibino        35.29 324   P         P         21 03 16.2 -1.8
BILL                              IAmb      IAmb      21 03 24.1
       comp=Z,164nm,1.4s
BILL  Bilibino        35.29 324 ceP         P         21 03 18.0 +0.1
BILL                              pmax      pmax
       comp=Z,89nm,1.3s
PAOC  Oil Creek Stat  35.30  85   IAmb      IAmb      21 03 27.3
       comp=Z,50nm,0.9s
P53A  Whipple         35.30  89   IAmb      IAmb      21 03 25.2
       comp=Z,112nm,1.1s
PAMR  Moraine State   35.34  86   IAmb      IAmb      21 03 34.7
       comp=Z,90nm,1.2s
W50A  Signal Mountai  35.34  98   IAmb      IAmb      21 03 25.7
       comp=Z,41nm,0.8s
Y49A  Blount Mountai  35.50 101   IAmb      IAmb      21 03 27.3
       comp=Z,125nm,1.4s
KUQ   Kuujjuuaa       35.55  53   IAmb      IAmb      21 03 56.6
       comp=Z,141nm,1.7s
FPAL  Fort Paine      35.57  99   IAmb      IAmb      21 03 27.9
       comp=Z,86nm,1.1s
J55A  Hilton          35.59  81   IAMs_20   IAMs_20   21 17 38.8
       comp=Z,49µm,22.0s
TZTN  Tazewell        35.63  95   IAmb      IAmb      21 03 39.1
       comp=Z,101nm,1.2s
TZTN  Tazewell        35.63  95  ⇑P         P         21 03 22.5 +1.3
LRAL  Lakeview Retre  35.68 102   IAmb      IAmb      21 03 52.3
       comp=Z,75nm,1.1s
LRAL  Lakeview Retre  35.68 102  ⇑P         P         21 03 22.6 +1.0
PECO  Prince Edward   35.78  79   IAmb      IAmb      21 03 29.8
       comp=Z,130nm,1.3s
MMNY  Mt. Morris Dam  35.80  82   IAmb      IAmb      21 03 29.7
       comp=Z,200nm,1.7s
GAC   Glen Almond     35.90  76  ⇑P         P         21 03 24.2 +0.9
TKL   Tuckaleechee C  36.03  96   LR        LR        21 18 43.4
       comp=Z,86µm,18.6s,baz=308,slow=37
TKL   Tuckaleechee C  36.03  96   IAmb      IAmb      21 03 46.3
       comp=Z,92nm,1.3s
TKL   Tuckaleechee C  36.03  96  ⇓P         P         21 03 25.8 +1.1
W52A  Murphy          36.29  97   IAmb      IAmb      21 03 33.9
       comp=Z,98nm,1.0s
S54A  Dingess, Beckl  36.32  91   IAmb      IAmb      21 03 33.6
       comp=Z,75nm,0.8s
L56A  Greenwood       36.33  82   IAmb      IAmb      21 03 29.8
       comp=Z,82nm,1.3s
J57A  Williamstown    36.67  80   IAmb      IAmb      21 03 37.6
       comp=Z,64nm,0.9s
K57A  Scipio Center   36.69  81   IAmb      IAmb      21 04 03.5
       comp=Z,159nm,1.6s
K57A                              IAMs_20   IAMs_20   21 16 12.7
       comp=Z,19µm,19.0s
U54A  Nelsons Funny   36.76  93   IAmb      IAmb      21 03 38.2
       comp=Z,57nm,0.8s
BRAL  Brewton         36.91 105   IAMs_20   IAMs_20   21 19 17.7
       comp=Z,36µm,22.0s
SSPA  Standing Stone  36.92  85   P         P         21 03 31.9 -0.2
SSPA  Standing Stone  36.92  85   IAMs_20   IAMs_20   21 17 13.3
       comp=Z,32µm,22.0s
SSPA  Standing Stone  36.92  85  ⇑P         P         21 03 32.2  0.0
Q56A  Snyder Ridge,   36.97  88   IAmb      IAmb      21 03 39.8
       comp=Z,104nm,1.3s
Y52A  Lilburn         36.98  99   IAmb      IAmb      21 03 40.2
       comp=Z,90nm,1.0s
BG3   Lake Jocassee   36.99  96   IAmb      IAmb      21 03 40.2
       comp=Z,115nm,0.9s
M57A  Sunshine Farm,  37.02  83   IAMs_20   IAMs_20   21 16 10.9
       comp=Z,19µm,20.0s
BLA   Blacksburg      37.24  91  ⇑P         P         21 03 36.4 +1.4
BINY  Binghamton      37.30  81   IAmb      IAmb      21 04 00.8
       comp=Z,90nm,1.2s
BINY                              IAMs_20   IAMs_20   21 18 14.9
       comp=Z,44µm,22.0s
BINY  Binghamton      37.30  81  ⇑P         P         21 03 36.1 +0.7
152A  Waverly Hall    37.35 101   IAmb      IAmb      21 03 42.9
       comp=Z,132nm,1.0s
SCHQ  Schefferville   37.35  58   P         P         21 03 36.2 +0.5
       comp=Z,13nm,1.0s,baz=284,slow=5.8,SNR=7.0
SCHQ                              LR        LR        21 19 23.3
       comp=Z,67µm,19.3s,baz=290,slow=37
       comp=Z,13nm,1.0s
P57A  Homestead Farm  37.47  86   IAmb      IAmb      21 03 43.9
       comp=Z,169nm,1.3s
LDAQ  Lac Daran       37.48  70   IAmb      IAmb      21 04 13.2
       comp=Z,162nm,1.4s
V55A  Taylorsville    37.55  94   IAmb      IAmb      21 03 45.1
       comp=Z,65nm,0.9s
N58A  Sunbury         37.55  84   IAmb      IAmb      21 03 44.0
       comp=Z,74nm,1.0s
N58A                              IAMs_20   IAMs_20   21 16 43.0
       comp=Z,14µm,20.0s
J59A  Piesco          37.59  79   IAMs_20   IAMs_20   21 18 44.1
       comp=Z,39µm,20.0s
GOGA  Godfrey         37.66  99   IAmb      IAmb      21 03 45.6
       comp=Z,91nm,0.9s
GOGA  Godfrey         37.66  99  ⇑P         P         21 03 39.5 +1.0
U56A  King            37.78  92   IAmb      IAmb      21 03 55.4
       comp=Z,96nm,1.3s
U56A                              IAMs_20   IAMs_20   21 19 43.3
       comp=Z,35µm,19.0s
PAULI Pauline         37.81  95   IAmb      IAmb      21 03 46.9
       comp=Z,82nm,1.2s
S57A  Dark Hollow, R  37.86  89   IAmb      IAmb      21 03 57.1
       comp=Z,132nm,1.2s
PAGS  Pennsylvania G  37.88  84   IAmb      IAmb      21 03 46.7
       comp=Z,120nm,1.1s
L59A  Walton          37.90  81   IAmb      IAmb      21 03 56.7
       comp=Z,118nm,1.4s
KMSC  Kings Mountain  37.91  95   IAmb      IAmb      21 03 43.3
       comp=Z,229nm,1.9s
352A  Blakely         38.02 102   IAMs_20   IAMs_20   21 19 11.5
       comp=Z,24µm,22.0s
T57A  Hurt            38.12  91   IAmb      IAmb      21 04 14.0
       comp=Z,146nm,1.9s
VT1   Waterbury       38.25  76   IAMs_20   IAMs_20   21 18 36.6
       comp=Z,28µm,22.0s
R58B  Mineral         38.43  88   IAmb      IAmb      21 03 52.7
       comp=Z,116nm,1.1s
TRY   Troy            38.49  79   IAmb      IAmb      21 04 11.8
       comp=Z,132nm,1.6s
LBNH  Lisbon          38.81  76   IAmb      IAmb      21 03 57.1
       comp=Z,233nm,1.9s
LBNH                              IAMs_20   IAMs_20   21 19 02.2
       comp=Z,29µm,19.0s
TIGA  Tifton          38.88 101   IAMs_20   IAMs_20   21 19 35.7
       comp=Z,18µm,22.0s
BRNJ  Basking Ridge   39.01  82   IAmb      IAmb      21 04 22.9
       comp=Z,146nm,1.6s
NEEM  North Greenlan  39.10  20  ⇓P         P         21 03 51.8 +1.2
H62A  Milan           39.12  75   IAMs_20   IAMs_20   21 18 31.3
       comp=Z,29µm,22.0s
E62A  Clayton Lake    39.13  71   IAMs_20   IAMs_20   21 18 14.1
       comp=Z,23µm,19.0s
G62A  West of Eustis  39.19  74   IAMs_20   IAMs_20   21 16 53.9
       comp=Z,15µm,18.0s
D62A  Allapoint, All  39.20  70   IAMs_20   IAMs_20   21 18 40.9
       comp=Z,29µm,19.0s
T59A  Double "B" Far  39.22  89   IAmb      IAmb      21 03 59.0
       comp=Z,78nm,0.9s
UNM   Universidad Na  39.25 131   IAMs_20   IAMs_20   21 22 14.7
       comp=Z,27µm,20.0s
L61B  Northampton     39.26  79   IAMs_20   IAMs_20   21 19 38.4
       comp=Z,44µm,21.0s
I62A  Tamworth        39.36  76   IAMs_20   IAMs_20   21 19 46.8
       comp=Z,37µm,20.0s
P61A  Hammonton       39.42  84   IAMs_20   IAMs_20   21 18 23.6
       comp=Z,20µm,20.0s
X58A  Rowland         39.56  94   IAmb      IAmb      21 04 01.9
       comp=Z,85nm,0.8s
X58A                              IAMs_20   IAMs_20   21 19 44.5
       comp=Z,30µm,21.0s
I63A  Otisfield       39.74  75   IAMs_20   IAMs_20   21 22 17.8
       comp=Z,14µm,18.0s
W59A  Clinton         39.75  92   IAmb      IAmb      21 04 03.6
       comp=Z,109nm,0.8s
PKME  Peaks-Kenny Pk  39.93  73   IAMs_20   IAMs_20   21 17 48.4
       comp=Z,21µm,19.0s
WVL   Waterville      40.05  74   IAMs_20   IAMs_20   21 20 12.8
       comp=Z,33µm,21.0s
WES   Weston          40.14  78   P         P         21 03 59.0 -0.2
WES   Weston          40.14  78   P         P         21 03 59.0 -0.2
WES                               pmax      pmax
       comp=Z,26nm,1.0s
WES                               MLR       MLR
       comp=Z,68µm,18.0s
F64A  Sherman         40.21  72   P         P         21 03 59.0 -0.8
F64A                              IAMs_20   IAMs_20   21 20 01.7
       comp=Z,23µm,18.0s
M63A  Gales Ferry     40.21  80   IAMs_20   IAMs_20   21 20 17.9
       comp=Z,36µm,22.0s
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BCX   Boston College  40.27  78   IAMs_20   IAMs_20   21 20 05.0
       comp=Z,26µm,21.0s
ILULI Ilulissat       40.39  33   IAMs_20   IAMs_20   21 19 32.6
       comp=Z,17µm,19.0s
656A  Willston        40.96 103   IAmb      IAmb      21 04 13.6
       comp=Z,134nm,1.0s
656A                              IAMs_20   IAMs_20   21 20 12.9
       comp=Z,12µm,20.0s
M65A  Busby, Falmout  41.01  79   P         P         21 04 05.2 -1.2
       baz=304
G65A  Princeton       41.02  72   IAMs_20   IAMs_20   21 20 02.2
       comp=Z,25µm,20.0s
SFJD  Kangerlussuaq   41.15  36   LR        LR        21 20 30.4
       comp=Z,19µm,18.9s,baz=290,slow=35
SFJD  Kangerlussuaq   41.15  36   IAMs_20   IAMs_20   21 21 24.1
       comp=Z,21µm,18.0s
EMMW  East Machias    41.34  73   IAMs_20   IAMs_20   21 19 44.6
       comp=Z,20µm,21.0s
SEY   Seymchan        41.98 318   P         P         21 04 13.2 -0.9
       comp=Z,39nm,0.8s,baz=87,slow=7.7,SNR=22
SEY                               LR        LR        21 21 07.5
       comp=Z,9µm,21.0s,baz=78,slow=36
       comp=Z,39nm,0.8s
SEY   Seymchan        41.98 318  eP         P         21 04 12.6 -1.5
SEY                              eS         S         21 10 28.5 -3.6
SEY                              eSS        SS        21 13 33.3 -5.2
SEY                               pmax      pmax
       comp=Z,97nm,1.3s
SEY                               smax      smax
       comp=E,4µm,17.5s
SEY                               smax      smax
       comp=N,1µm,17.9s
SEY                               MLR       MLR
       comp=Z,9µm,21.0s
LMN   Caledonia Moun  42.37  70   P         P         21 04 15.9 -1.6
LMN                               IAmb      IAmb      21 04 53.6
       comp=Z,90nm,1.2s
DWPF  Disney Wildern  42.53 103   IAMs_20   IAMs_20   21 24 51.5
       comp=Z,14µm,19.0s
PET   Petropavlovsk   42.85 303   P         P         21 04 19.6 -1.7
PET                               IAmb      IAmb      21 04 23.7
       comp=Z,186nm,1.3s
PET   Petropavlovsk   42.85 303   P         P         21 04 21.3 +0.1
PET   Petropavlovsk   42.85 303  eP         P         21 04 20.8 -0.4
PET                              eS         S         21 10 41.0 -4.0
PET                               pmax      pmax
       comp=Z,123nm,1.2s
PET                               MLR       MLR
       comp=Z,3µm,17.0s
PET                               MLR       MLR
       comp=Z,3µm,14.0s
CMIG  Matias Romero   43.28 127   LR        LR        21 24 25.2
       comp=Z,6µm,18.3s,baz=324,slow=39
PEA0B Petropavlovsk-  43.32 303   IAmb      IAmb      21 04 26.9
       comp=Z,250nm,1.5s
PEA0B Petropavlovsk-  43.32 303 ceP         P         21 04 25.9 +0.8
PETK  Petropavlovsk-  43.32 303   P         P         21 04 24.5 -0.6
       comp=Z,66nm,1.1s,baz=70,slow=18,SNR=22
PETK                              LR        LR        21 21 21.3
       comp=Z,5µm,19.4s,baz=72,slow=35
       comp=Z,66nm,1.1s
PETK  Petropavlovsk-  43.32 303   P         P         21 04 24.0 -1.2
PETK  Petropavlovsk-  43.32 303   P         P         21 04 24.0 -1.2
SUMG  Summit          43.36  26   P         P         21 04 24.3 -1.4
SUMG                              IAMs_20   IAMs_20   21 22 32.6
       comp=Z,15µm,18.0s
SUMG  Summit          43.36  26   P         P         21 04 24.3 -1.4
SUMG                              pmax      pmax
       comp=Z,72nm,1.1s
SUMG                              MLR       MLR
       comp=Z,15µm,18.0s
SUMG  Summit          43.36  26  ⇑P         P         21 04 26.4 +0.7
060A  Indiantown      43.96 103   IAMs_20   IAMs_20   21 22 57.4
       comp=Z,19µm,21.0s
MA2   Magadan         43.99 314   P         P         21 04 29.2 -1.2
       comp=Z,49nm,1.1s,baz=97,slow=5.4,SNR=5.6
MA2                               LR        LR        21 22 10.9
       comp=Z,4µm,18.4s,baz=73,slow=35
       comp=Z,49nm,1.1s
MA2   Magadan         43.99 314   P         P         21 04 29.2 -1.2
MA2                               IAmb      IAmb      21 04 33.7
       comp=Z,96nm,1.2s
MA2   Magadan         43.99 314   P         P         21 04 31.5 +1.0
MA2   Magadan         43.99 314 ceP         P         21 04 31.4 +1.0
MA2                               pmax      pmax
       comp=Z,100nm,1.3s
IVI   Ivigtut         44.21  43   IAMs_20   IAMs_20   21 20 05.7
       comp=Z,14µm,20.0s
TEIG  Tepich          44.31 117   P         P         21 04 33.2 -0.2
TEIG                              IAmb      IAmb      21 04 41.2
       comp=Z,87nm,1.0s
TEIG  Tepich          44.31 117  ⇓P         P         21 04 35.6 +2.2
TEIG  Tepich          44.31 117   P         P         21 04 35.0 +1.6
       comp=Z,235nm,1.2s
SKR   Severo-Kuril's  45.34 301  eP         P         21 04 35.1 -6.1
SKR                              eS         S         21 11 27.6 +6.3
SKR                               pmax      pmax
       comp=Z,1µm,5.9s
SKR                               smax      smax
       comp=E,5µm,13.8s
SKR                               smax      smax
       comp=N,2µm,11.2s
SKR                               MLR       MLR
       comp=Z,3µm,18.0s
NRS   Narsarsuaq      45.43  43   IAMs_20   IAMs_20   21 21 53.0
       comp=Z,14µm,18.0s
DAG   Danmarks Havn   46.12  17  ⇑P         P         21 04 46.9 -0.2
JOHN  Johnston Islan  46.24 238   IAMs_20   IAMs_20   21 17 34.9
       comp=Z,11µm,20.0s
ANGG  Ammassalik, Gr  46.52  35   P         P         21 04 48.0 -2.3
ANGG                              IAmb      IAmb      21 05 08.2
       comp=Z,116nm,1.4s
ANGG                              IAMs_20   IAMs_20   21 22 16.9
       comp=Z,18µm,18.0s
TIXI  Tiksi           46.60 335   P         P         21 04 50.1 -0.8
       comp=Z,20nm,1.1s,baz=81,slow=9.6,SNR=16
TIXI                              LR        LR        21 25 39.4
       comp=Z,10µm,21.2s,baz=74,slow=38
       comp=Z,20nm,1.1s
TIXI  Tiksi           46.60 335   P         P         21 04 49.1 -1.9
TIXI                              IAmb      IAmb      21 04 55.8
       comp=Z,46nm,1.1s
TIXI                              IAMs_20   IAMs_20   21 25 27.8
       comp=Z,9µm,21.0s
TIXI  Tiksi           46.60 335 ceP         P         21 04 50.0 -0.9
TIXI                              pmax      pmax
       comp=Z,81nm,2.5s
CAIB  Caibarien       47.82 106   IAmb      IAmb      21 05 04.6
       comp=Z,92nm,1.1s
MTO3  Montecristo     48.43 123   IAmb      IAmb      21 05 27.8
       comp=Z,53nm,1.0s
SCO   Scoresbysund    48.96  25   IAMs_20   IAMs_20   21 26 06.6
       comp=Z,18µm,19.0s
KBS   Kingsbay        49.07   9   IAMs_20   IAMs_20   21 26 31.8
       comp=Z,16µm,18.0s
TGUH  Tegucigalpa,Un  49.84 121   P         P         21 05 18.2 +1.5
TGUH                              IAMs_20   IAMs_20   21 28 09.5
       comp=Z,11µm,18.0s
SPITS Spitsbergen Ar  50.16   9   LR        LR        21 27 36.5
       comp=Z,21µm,18.4s,baz=326,slow=37
SPITS Spitsbergen Ar  50.16   9   P         P         21 05 16.9 -1.5
SPITS                             pmax      pmax
       comp=Z,94nm,1.3s
CNGN  Cerro Negro     51.44 122   P         P         21 05 29.1 +0.4
SIUN  Universidad Ur  51.51 119   IAmb      IAmb      21 05 37.5
       comp=Z,47nm,1.1s
CHIV  Chivirico       51.58 106   IAmb      IAmb      21 05 37.6
       comp=Z,179nm,1.1s
YAK   Yakutsk         51.65 324   P         P         21 05 29.1 -0.5
       comp=Z,43nm,0.7s,baz=56,slow=8.7,SNR=14
YAK                               LR        LR        21 27 50.5
       comp=Z,7µm,18.6s,baz=58,slow=37
       comp=Z,43nm,0.7s
YAK   Yakutsk         51.65 324   P         P         21 05 28.1 -1.6
YAK                               IAmb      IAmb      21 05 34.9
       comp=Z,98nm,0.8s
YAK   Yakutsk         51.65 324   IAMs_20   IAMs_20   21 31 27.0
       comp=Z,8µm,18.0s
YAK   Yakutsk         51.65 324  eP         P         21 05 29.2 -0.5
YAK                              e*PP       pwP       21 05 40.2 +4.4
YAK                              e                    21 06 43.3
YAK                              e                    21 07 26.6
YAK                              ePPP       PPP       21 08 25.9
YAK                              eS         S         21 12 50.1  0.0
YAK                              e*SS       sS        21 13 08.4 +13
YAK                              e                    21 15 18.5
YAK                               pmax      pmax
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	comp=Z,60nm,1.1s						
YAK				pmax	pmax		
	comp=N,32nm,1.0s						
YAK				pmax	pmax		
	comp=E,39nm,1.4s						
YAK				pmax	pmax		
	comp=Z,495nm,3.9s						
YAK				pmax	pmax		
	comp=N,35nm,1.1s						
YAK				pmax	pmax		
	comp=E,206nm,3.0s						
YAK				smax	smax		
	comp=N,1µm,6.9s						
YAK				smax	smax		
	comp=E,476nm,5.4s						
YAK				MLR	MLR		
	comp=Z,6µm,22.0s						
YAK				MLR	MLR		
	comp=N,3µm,15.0s						
YAK				MLR	MLR		
	comp=E,4µm,28.0s						
JMIC	**Jan Mayen**	**52.00**	**21**	LR	LR	21 28 04.4	
	comp=E,13µm,18.3s,baz=324,slow=37						
BOAB	**BOACO BROADBAN**	**52.05**	**121**	P	**P**	**21 05 34.6**	**+1.4**
BOAB				IAMs_20	IAMs_20	21 31 24.7	
	comp=Z,19µm,20.0s						
BOAB	**BOACO BROADBAN**	**52.05**	**121**	⇑P	**P**	**21 05 34.8**	**+1.6**
MTDJ	**Mount Denham**	**52.22**	**108**	P	**P**	**21 05 36.3**	**+1.7**
MTDJ				IAMs_20	IAMs_20	21 28 52.8	
	comp=Z,7µm,20.0s						
TYV	**Tymovskoe**	**52.42**	**307**	*e*P	**P**	**21 05 34.3**	**-1.3**
TYV				*e*S	**S**	**21 12 57.8**	**-3.2**
TYV				pmax	pmax		
	comp=Z,500nm,3.7s						
TYV				pmax	pmax		
	comp=Z,32nm,1.0s						
TYV				smax	smax		
	comp=N,2µm,10.8s						
TYV				smax	smax		
	comp=E,3µm,10.8s						
GTBY	**Guantanamo Bay**	**52.43**	**105**	P	**P**	**21 05 37.0**	**+1.0**
	comp=E,3µmcomp=E,78nm,1.4s						
BORG	**Borgarnes**	**52.70**	**31**	LR	LR	21 28 21.8	
	comp=E,10µm,18.9s,baz=310,slow=36						
BORG	**Borgarnes**	**52.70**	**31**	IAMs_20	IAMs_20	21 27 59.9	
	comp=Z,13µm,20.0s						
KUR	**Kuril'sk**	**52.97**	**299**	P	**P**	**21 05 36.7**	**-3.0**
KUR				*e*		21 06 45.7	
KUR				*e*		21 07 38.1	
KUR				*e*S	**S**	**21 13 10.0**	**+1.5**
KUR				*e*SSS	SSS	21 18 31.1	
KUR				pmax	pmax		
	comp=Z,2µm,16.5s						
KUR				MLR	MLR		
	comp=Z,3µm,18.0s						
KUR				MLR	MLR		
	comp=N,2µm,14.0s						
KUR				MLR	MLR		
	comp=E,2µm,14.0s						
GRTK	**Grand Turk**	**53.75**	**100**	IAMs_20	IAMs_20	21 29 18.2	
	comp=Z,22µm,19.0s						
UGL	**Uglegorsk**	**53.79**	**305**	*e*P	**P**	**21 05 46.3**	**+0.6**
UGL				*e*		21 07 40.8	
UGL				*e*S	**S**	**21 13 16.2**	**-3.5**
UGL				pmax	pmax		
	comp=Z,100nm,1.4s						
UGL				smax	smax		
	comp=E,5µm,14.0s						
UGL				smax	smax		
	comp=N,2µm,13.0s						
JTS	**Las Juntas de**	**54.22**	**121**	LR	LR	21 33 18.8	
	comp=N,6µm,19.3s,baz=320,slow=41						
JTS	**Las Juntas de**	**54.22**	**121**	IAMs_20	IAMs_20	21 33 07.2	
	comp=Z,6µm,19.0s						
JTS	**Las Juntas de**	**54.22**	**121**	P	**P**	**21 05 48.7**	**-0.5**
	comp=Z,18nm,0.9s						
YSS	**Yuzhno-Sakhali**	**54.73**	**303**	P	**P**	**21 05 50.6**	**-2.0**
YSS				IAmb	IAmb	21 05 54.4	
	comp=Z,70nm,1.2s						
YSS	**Yuzhno-Sakhali**	**54.73**	**303**	P	**P**	**21 05 51.9**	**-0.7**
YSS	**Yuzhno-Sakhali**	**54.73**	**303**	*e*P	**P**	**21 05 51.6**	**-1.0**
YSS				*e*S	**S**	**21 13 28.2**	**-4.2**
YSS				pmax	pmax		
	comp=Z,40nm,0.9s						
YSS				pmax	pmax		
	comp=N,40nm,1.2s						
YSS				pmax	pmax		
	comp=E,30nm,1.2s						
YSS				pmax	pmax		
	comp=Z,500nm,5.7s						
YSS				pmax	pmax		
	comp=N,300nm,6.1s						
YSS				pmax	pmax		
	comp=E,400nm,6.5s						
YSS				smax	smax		
	comp=E,2µm,11.0s						
YSS				MLR	MLR		
	comp=N,1µm,16.0s						
YSS				MLR	MLR		
	comp=Z,2µm,16.0s						
YSS				MLR	MLR		
	comp=E,1µm,13.0s						
HDC	**Heredia**	**54.91**	**121**	IAMs_20	IAMs_20	21 31 00.7	
	comp=Z,9µm,21.0s						
SDDR	**Presa de Saban**	**55.52**	**102**	P	**P**	**21 05 58.0**	**-0.6**
SDDR				IAMs_20	IAMs_20	21 29 59.3	
	comp=Z,14µm,20.0s						
SDDR	**Presa de Saban**	**55.52**	**102**	P	**P**	**21 05 58.2**	**-0.5**
	comp=Z,109nm,1.1s						
GRNR	**Gornyy**	**55.61**	**310**	⇓*i*P	**P**	**21 05 57.7**	**-1.2**
GRNR				pmax	pmax		
	comp=Z,30nm,1.3s						
JKA	**Kamikawa-asahi**	**56.60**	**300**	P	**P**	**21 06 05.4**	**-0.7**
JKA	**Kamikawa-asahi**	**56.60**	**300**	IAmb	IAmb	21 06 18.4	
	comp=Z,78nm,1.3s						
ASAJ	**Asahikawa**	**56.60**	**300**	P	**P**	**21 06 05.4**	**-0.7**
	comp=Z,26nm,1.1s,baz=26,slow=19,SNR=3.5						
	comp=Z,26nm,1.1s						
ASAJ	**Asahikawa**	**56.60**	**300**	P	**P**	**21 06 05.4**	**-0.7**
ASAJ				pmax	pmax		
	comp=Z,78nm,1.3s						
BRU2	**Volcan**	**56.70**	**120**	IAmb	IAmb	21 06 32.0	
	comp=Z,122nm,1.3s						
NRIK	**Noril'sk**	**57.61**	**345**	P	**P**	**21 06 12.2**	**-0.7**
	comp=Z,24nm,1.0s,baz=20,slow=7.0,SNR=17						
NRIK				LR	LR	21 33 20.5	
	comp=Z,5µm,19.1s,baz=43,slow=39						
	comp=Z,24nm,1.0s						
NRIK	**Noril'sk**	**57.61**	**345**	P	**P**	**21 06 11.1**	**-1.8**
NRIK	**Noril'sk**	**57.61**	**345**	P	**P**	**21 06 11.1**	**-1.8**
NRIK				pmax	pmax		
	comp=Z,29nm,1.0s						
ZEA	**Zeya**	**57.94**	**317**	*e*P	**P**	**21 06 14.0**	**-1.4**
ZEA				*e*S	**S**	**21 14 14.5**	**-0.4**
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
ZEA				smax	smax		
	comp=E,400nm,15.7s						
ZEA				smax	smax		
	comp=N,1µm,13.1s						
ZEA				MLR	MLR		
	comp=E,1µm,20.0s						
ZEA				MLR	MLR		
	comp=N,1µm,15.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,19.0s						
BCIP	**Isla Barro Col**	**58.00**	**117**	IAMs_20	IAMs_20	21 35 36.0	
	comp=Z,6µm,20.0s						
BCIP	**Isla Barro Col**	**58.00**	**117**	P	**P**	**21 06 15.4**	**-0.9**
	comp=Z,62nm,1.2s						
H11N2	**WAKE ISLAND Hy**	**58.13**	**263**	T	T	22 09 03.5	
	baz=42,slow=76						
H11N3	**WAKE ISLAND Hy**	**58.13**	**263**	T	T	22 09 04.2	
	baz=42,slow=76						
H11N1	**WAKE ISLAND Hy**	**58.15**	**263**	T	T	22 09 04.8	
	baz=42,slow=76,SNR=6129						
KEV	**Kevo**	**59.09**	**9**	IAMs_20	IAMs_20	21 34 11.3	
	comp=Z,14µm,18.0s						
ARCES	**ARCESS Array B**	**59.14**	**10**	LR	LR	21 32 03.1	
	comp=Z,8µm,21.6s,baz=336,slow=36						
H11S1	**WAKE ISLAND Hy**	**59.16**	**262**	T	T	22 10 18.4	
	baz=46,slow=75						
H11S2	**WAKE ISLAND Hy**	**59.17**	**262**	T	T	22 10 25.0	
	baz=46,slow=75						
H11S3	**WAKE ISLAND Hy**	**59.17**	**262**	T	T	22 10 27.7	
	baz=46,slow=75						
GCPR	**Guaynabo City**	**59.30**	**98**	IAmb	IAmb	21 06 31.9	
	comp=Z,64nm,1.0s						
SJG	**San Juan**	**59.41**	**98**	LR	LR	21 33 21.8	
	comp=Z,7µm,20.3s,baz=321,slow=37						
SJG	**San Juan**	**59.41**	**98**	IAMs_20	IAMs_20	21 35 17.9	
	comp=Z,10µm,20.0s						
TAOE	**Nuku Hiva Isla**	**59.57**	**192**	*e*S	**S**	**21 14 36.1**	**-0.8**
	comp=Z,2µm,27.2s						
TAOE				*e*SS	**SS**	**21 18 30.3**	**-2.4**
	comp=Z,2µm,27.0s						
TAOE				*e*LQ	LQ	21 21 28.8	
	comp=Z,8µm,30.8s						
TAOE				*e*LR	LR	21 24 04.5	
	comp=Z,23µm,26.3s						
SJCC	**San Jacinto, C**	**60.13**	**112**	P	**P**	**21 06 31.2**	**+0.1**
	comp=Z,31nm,1.5s						
HEH	**HeiHe**	**60.26**	**314**	*e*P	**P**	**21 06 28.8**	**-2.7**
HEH				PP	**PP**	**21 08 48.0**	**+4.1**
HEH				S	**S**	**21 14 41.8**	**-3.1**
HEH				pmax	pmax		
	comp=Z,82nm,0.9s						
HEH				pmax	pmax		
	comp=Z,1µm,5.1s						
HEH				LR	LR		
	comp=Z,5µm,15.8s						
HEH				LR	LR		
	comp=Z,5µm,14.2s						
HEH				LR	LR		
	comp=Z,8µm,19.7s						
BOD	**Bodaibo**	**60.29**	**326**	*e*P	**P**	**21 06 29.1**	**-2.5**
BOD				pmax	pmax		
	comp=Z,79nm,1.8s						
URIC	**Uribia, Colomb**	**60.63**	**108**	P	**P**	**21 06 33.6**	**-0.9**
	comp=Z,2µmcomp=Z,47nm,2.0s						
PAYG	**Puerto Ayora**	**60.86**	**133**	P	**P**	**21 06 37.8**	**+1.7**
PAYG	**Puerto Ayora**	**60.86**	**133**	P	**P**	**21 06 35.5**	**-0.5**
	comp=Z,1µmcomp=Z,66nm,1.2s						
APAC	**Apartado, Choc**	**60.90**	**115**	P	**P**	**21 06 37.4**	**+1.1**
	comp=Z,2µmcomp=Z,146nm,1.2s						
LVZ	**Lovozero**	**61.58**	**7**	P	**P**	**21 06 39.5**	**-0.7**
LVZ				IAMs_20	IAMs_20	21 35 02.0	
	comp=Z,11µm,19.0s						
LVZ	**Lovozero**	**61.58**	**7**	*i* P	**P**	**21 06 38.4**	**-1.8**
LVZ				pmax	pmax		
	comp=Z,96nm,1.6s						
SABA	**Saba**	**61.62**	**96**	IAMs_20	IAMs_20	21 32 43.2	
	comp=Z,19µm,22.0s						
UREC	**San Jos de Ur**	**61.63**	**114**	P	**P**	**21 06 41.5**	**+0.2**
	comp=Z,60nm,1.3s						
DBBC	**Dabeiba**	**61.83**	**115**	P	**P**	**21 06 45.6**	**+2.9**
SEUS	**St. Eustatius**	**61.88**	**96**	IAMs_20	IAMs_20	21 32 50.1	
	comp=Z,22µm,21.0s						
USRK	**Ussuriysk Ar.**	**62.23**	**306**	P	**P**	**21 06 43.9**	**-1.1**
	comp=Z,17nm,0.8s,baz=43,slow=7.2,SNR=17						
	comp=Z,17nm,0.8s						
ANWB	**Willy Bob**	**62.52**	**95**	IAMs_20	IAMs_20	21 34 24.7	
	comp=Z,15µm,20.0s						
CBOC	**Ciudad Bolivar**	**62.87**	**116**	P	**P**	**21 06 50.3**	**+0.5**
	comp=Z,2µmcomp=Z,31nm,1.1s						
HELC	**Santa Helena**	**62.89**	**115**	P	**P**	**21 06 51.3**	**+1.2**
	comp=Z,2µmcomp=Z,60nm,1.9s						
MDJ	**Mudanjiang**	**63.16**	**308**	IAMs_20	IAMs_20	21 31 41.5	
	comp=Z,6µm,21.0s						
MDJ	**Mudanjiang**	**63.16**	**308**	P	**P**	**21 06 50.8**	**-0.3**
MDJ				pP	pP	21 06 54.8	+0.2
MDJ				S	**S**	**21 15 21.8**	**0.0**
MDJ				SS	**SS**	**21 19 29.8**	**+2.8**
MDJ				pmax	pmax		
	comp=Z,12nm,1.6s						
MDJ				LR	LR		
	comp=Z,5µm,22.7s						
MDJ				LR	LR		
	comp=Z,4µm,21.3s						
MDJ				LR	LR		
	comp=Z,8µm,22.0s						
MDJ	**Mudanjiang**	**63.16**	**308**	P	**P**	**21 06 53.0**	**+1.9**
PTBC	**PUERTO BERRIO,**	**63.23**	**114**	P	**P**	**21 06 52.0**	**0.0**
	comp=Z,2µmcomp=Z,112nm,1.1s						
BRJC	**Barrancabermej**	**63.30**	**113**	P	**P**	**21 06 53.7**	**+1.2**
	comp=Z,2µmcomp=Z,108nm,1.2s						
BNX	**BinXian**	**63.45**	**310**	⇓P	**P**	**21 06 50.9**	**-2.1**
BNX				S	**S**	**21 15 23.4**	**-2.0**
BNX				pmax	pmax		
	comp=Z,11nm,1.2s						
BNX				pmax	pmax		
	comp=Z,850nm,14.2s						
BNX				LR	LR		
	comp=Z,2µm,19.3s						
BNX				LR	LR		
	comp=Z,3µm,25.3s						
BNX				LR	LR		
	comp=Z,2µm,23.5s						
PLMC	**San Jos del P**	**63.49**	**117**	P	**P**	**21 06 54.6**	**+0.8**
	comp=Z,2µmcomp=Z,59nm,1.0s						
ABD	**La Joyeuse, An**	**63.59**	**96**	IAMs_20	IAMs_20	21 34 00.3	
	comp=Z,20µm,21.0s						
PAMC	**Pamplona, Colo**	**63.63**	**112**	P	**P**	**21 06 56.1**	**+0.9**
	comp=Z,393nmcomp=Z,51nm,1.0s						
SDV	**Santo Domingo**	**63.66**	**109**	LR	LR	21 37 40.3	
	comp=Z,5µm,19.1s,baz=326,slow=39						
SDV	**Santo Domingo**	**63.66**	**109**	P	**P**	**21 06 55.3**	**+0.3**
SDV				IAmb	IAmb	21 07 02.2	
	comp=Z,52nm,1.2s						
SDV				IAMs_20	IAMs_20	21 35 32.9	
	comp=Z,7µm,22.0s						
SDV	**Santo Domingo**	**63.66**	**109**	P	**P**	**21 06 55.4**	**+0.4**
	comp=Z,2µmcomp=Z,48nm,2.0s						
NORC	**Norcasia**	**63.78**	**115**	P	**P**	**21 06 57.0**	**+1.4**
	comp=Z,2µmcomp=Z,128nm,1.1s						
BARC	**Barichara**	**63.94**	**113**	P	**P**	**21 06 58.5**	**+1.6**
	comp=Z,1µmcomp=Z,99nm,1.0s						
GDSD	**La Dsirade Is**	**63.98**	**96**	IAMs_20	IAMs_20	21 34 40.6	
	comp=Z,16µm,20.0s						
GR1C	**Gorgona, Isla**	**63.98**	**120**	P	**P**	**21 06 57.0**	**+0.1**
MJAR	**Matsushiro Arr**	**64.17**	**297**	P	**P**	**21 06 56.4**	**-1.6**
	comp=Z,12nm,1.2s,baz=33,slow=5.5,SNR=12						
MJAR				LR	LR	21 30 40.5	
	comp=Z,3µm,21.2s,baz=42,slow=32						
	comp=Z,12nm,1.2s						
MJAR	**Matsushiro Arr**	**64.17**	**297**	P	**P**	**21 06 56.5**	**-1.5**
MJAR	**Matsushiro Arr**	**64.17**	**297**	P	**P**	**21 06 56.5**	**-1.5**
MJAR				pmax	pmax		
	comp=Z,35nm,1.7s						
MJB9	**Matsu-Tunnel**	**64.17**	**297**	IAmb	IAmb	21 07 02.6	
	comp=Z,34nm,1.1s						
MAJO	**Matsushiro**	**64.17**	**297**	P	**P**	**21 06 56.1**	**-1.9**
MAJO				IAmb	IAmb	21 07 01.7	
	comp=Z,36nm,1.1s						
MAJO	**Matsushiro**	**64.17**	**297**	IAMs_20	IAMs_20	21 29 43.4	
	comp=Z,6µm,22.0s						
MAJO	**Matsushiro**	**64.17**	**297**	P	**P**	**21 06 57.8**	**-0.2**
MAJO	**Matsushiro**	**64.17**	**297**	P	**P**	**21 06 56.4**	**-1.6**
MAJO				pmax	pmax		
	comp=Z,40nm,1.2s						
SPBC	**San Pablo de B**	**64.17**	**114**	P	**P**	**21 06 57.5**	**-0.8**
	comp=Z,2µmcomp=Z,61nm,1.1s						
HILR	**Hailar Array B**	**64.20**	**317**	P	**P**	**21 06 56.7**	**-1.3**
	comp=Z,14nm,0.8s,baz=72,slow=6.6,SNR=14						
	comp=Z,14nm,0.8s						
YOTC	**Yotoco, Valle**	**64.21**	**117**	P	**P**	**21 06 59.4**	**+0.9**
	comp=Z,2µmcomp=Z,71nm,1.1s						
NC204	**NORSAR Array S**	**64.38**	**20**	IAmb	IAmb	21 07 05.5	
	comp=Z,92nm,1.8s						
HIA	**Hailar**	**64.42**	**317**	IAMs_20	IAMs_20	21 35 14.9	
	comp=Z,9µm,22.0s						
HIA	**Hailar**	**64.42**	**317**	P	**P**	**21 06 59.0**	**-0.4**
IDGL	**Inch Island, C**	**64.48**	**33**	P	**P**	**21 07 02.4**	**+2.7**
RUSC	**La Rusia**	**64.56**	**113**	P	**P**	**21 07 00.4**	**-0.9**
	comp=Z,2µmcomp=Z,86nm,1.6s						
JAMC	**Jamundi, Valle**	**64.65**	**118**	P	**P**	**21 07 02.0**	**+0.5**
	comp=Z,2µmcomp=Z,61nm,1.6s						
ROSC	**El Rosal**	**64.68**	**115**	P	**P**	**21 07 03.6**	**+1.6**
	comp=Z,74nm,0.9s,baz=342,slow=13,SNR=23						
ROSC				LR	LR	21 40 02.3	
	comp=Z,4µm,18.0s,baz=345,slow=40						
	comp=Z,74nm,0.9s						
ROSC	**El Rosal**	**64.68**	**115**	P	**P**	**21 07 03.5**	**+1.6**
NB2	**NORSAR Subarra**	**64.69**	**20**	P	**P**	**21 07 01.0**	**0.0**
	comp=Z,375nm,3.3s,baz=335,slow=6.9						
NB2	**NORSAR Subarra**	**64.69**	**20**	P	**P**	**21 07 01.0**	**0.0**
	baz=335,slow=6.9						
NOA	**NORSAR Array B**	**64.69**	**20**	P	**P**	**21 07 00.9**	**0.0**
	comp=Z,4.8nm,0.9s,baz=335,slow=6.5,SNR=21						
NOA				LR	LR	21 34 52.6	
	comp=Z,8µm,20.2s,baz=330,slow=36						
	comp=Z,4.8nm,0.9s						
NAO01	**NORSAR Array S**	**64.79**	**20**	IAmb	IAmb	21 07 28.5	
	comp=Z,48nm,1.2s						
CIT	**Chita**	**64.89**	**322**	*e*P	**P**	**21 07 01.8**	**-0.7**
CIT				*e*		21 07 12.6	
CIT				*e*		21 07 34.8	
CIT				pmax	pmax		
	comp=Z,98nm,2.2s						
ORTC	**Ortega, Tolima**	**64.90**	**116**	P	**P**	**21 07 02.5**	**-0.5**
	comp=Z,2µmcomp=Z,116nm,1.1s						
CHIC	**Chingaza**	**65.19**	**115**	P	**P**	**21 07 05.6**	**+0.3**
	comp=Z,2µmcomp=Z,66nm,2.2s						
POPC	**Popayan, Colom**	**65.20**	**118**	P	**P**	**21 07 05.9**	**+0.7**
	comp=Z,1µmcomp=Z,45nm,1.0s						
PRAC	**Prado**	**65.26**	**116**	P	**P**	**21 07 05.6**	**+0.3**
	comp=Z,2µmcomp=Z,95nm,1.9s						
BBAC	**Balboa, Cauca**	**65.30**	**119**	P	**P**	**21 07 06.8**	**+1.0**
	comp=Z,2µmcomp=Z,51nm,1.1s						
KONO	**Kongsberg**	**65.57**	**21**	IAMs_20	IAMs_20	21 36 39.4	
	comp=Z,5µm,18.0s						
ESK	**Eskdalemuir**	**65.73**	**30**	IAMs_20	IAMs_20	21 35 16.3	
	comp=Z,10µm,19.0s						
EKA	**Eskdalemuir Ar**	**65.73**	**30**	P	**P**	**21 07 06.8**	**-0.9**
	comp=Z,5.6nm,0.7s,baz=311,slow=5.3,SNR=10						
EKA				LR	LR	21 35 27.1	
	comp=Z,10µm,18.6s,baz=324,slow=36						
	comp=Z,5.6nm,0.7s						
ILTH	**Belurgan, Co L**	**65.73**	**33**	P	**P**	**21 07 08.2**	**+0.4**
ADZR	**Andozero**	**65.76**	**6**	*e*P	**P**	**21 07 09.4**	**+1.6**
ADZR				S	**S**	**21 15 53.9**	**+0.6**
ADZR				pmax	pmax		
	comp=Z,59nm,1.7s						
ADZR				MLR	MLR		
	comp=Z,8µm,17.0s						
CN2	**Changchun**	**65.81**	**310**	*e*P	**P**	**21 07 06.0**	**-2.5**
CN2				*e*S	**S**	**21 16 00.1**	**+5.5**
CN2				SS	**SS**	**21 20 06.1**	**-2.2**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,2µm,25.0s						
CN2				LR	LR		
	comp=Z,5µm,25.0s						
CN2				LR	LR		
	comp=Z,3µm,25.6s						
GCUF	**Volcan Galeras**	**65.90**	**120**	P	**P**	**21 07 10.6**	**+0.6**
URMC	**La Uribe, Meta**	**65.93**	**116**	P	**P**	**21 07 10.6**	**+0.9**
	comp=Z,2µmcomp=Z,136nm,1.1s						
HFS	**Hagfors**	**66.04**	**19**	P	**P**	**21 07 09.4**	**-0.3**
	comp=Z,6.2nm,0.7s,baz=353,slow=7.4,SNR=13						
HFS				LR	LR	21 36 24.1	
	comp=Z,16µm,19.7s,baz=337,slow=36						
	comp=Z,6.2nm,0.7s						
CUSE	**Cuicocha Este**	**66.08**	**121**	P	**P**	**21 07 14.6**	**+3.5**
	comp=Z,4µmcomp=Z,149nm,1.1s						
OTAV	**Otavalo**	**66.11**	**121**	P	**P**	**21 07 13.6**	**+2.3**
OTAV	**Otavalo**	**66.11**	**121**	P	**P**	**21 07 13.6**	**+2.3**
OTAV				pmax	pmax		
	comp=Z,90nm,1.1s						
OTAV				MLR	MLR		
	comp=Z,3µm,20.0s						
OTAV	**Otavalo**	**66.11**	**121**	P	**P**	**21 07 14.2**	**+2.9**
	comp=Z,3µmcomp=Z,87nm,1.1s						
GARC	**Garzon, Huila**	**66.16**	**118**	P	**P**	**21 07 13.2**	**+1.8**
	comp=Z,2µmcomp=Z,84nm,1.1s						
DSB	**Dublin**	**66.35**	**33**	P	**P**	**21 07 14.2**	**+2.4**
DSB	**Dublin**	**66.35**	**33**	IAMs_20	IAMs_20	21 33 18.2	
	comp=Z,13µm,19.0s						
PPLP	**Puerto Lpez**	**66.36**	**125**	P	**P**	**21 07 13.8**	**+1.4**
	comp=Z,2µmcomp=Z,99nm,1.2s						
FLOC	**Florencia**	**66.56**	**118**	P	**P**	**21 07 15.0**	**+1.3**
	comp=Z,2µmcomp=Z,181nm,1.3s						
GRGR	**Grenville**	**66.74**	**99**	IAMs_20	IAMs_20	21 36 50.3	
	comp=Z,9µm,20.0s						
FIA1	**FINESS Array S**	**66.96**	**12**	IAmb	IAmb	21 07 38.2	
	comp=Z,68nm,1.1s						
FINES	**FINESS Array B**	**66.96**	**12**	P	**P**	**21 07 15.4**	**-0.1**
	comp=Z,9.5nm,0.8s,baz=1.4,slow=5.6,SNR=25						
FINES				LR	LR	21 37 33.0	
	comp=Z,15µm,18.1s,baz=344,slow=37						
	comp=Z,9.5nm,0.8s						
FINES	**FINESS Array B**	**66.96**	**12**	P	**P**	**21 07 15.0**	**-0.6**
FINES	**FINESS Array B**	**66.96**	**12**	*i* P	**P**	**21 07 15.3**	**-0.2**
FINES				pmax	pmax		
	comp=Z,10.0nm,0.8s						
IRK	**Irkutsk**	**68.12**	**328**	*e*P	**P**	**21 07 21.5**	**-1.6**
IRK				pmax	pmax		
	comp=Z,111nm,2.8s						
SNY	**Shenyang**	**68.19**	**310**	⇓P	**P**	**21 07 22.5**	**-1.2**
SNY				S	**S**	**21 16 26.1**	**+2.7**
SNY				pmax	pmax		
	comp=Z,21nm,1.2s						
SNY				pmax	pmax		
	comp=Z,650nm,11.7s						
SNY				LR	LR		
	comp=Z,2µm,22.3s						
SNY				LR	LR		
	comp=Z,4µm,21.3s						
SNY				LR	LR		
	comp=Z,5µm,20.8s						
PTLC	**Puerto Leguiza**	**68.20**	**118**	P	**P**	**21 07 28.0**	**+4.0**
	comp=Z,4µmcomp=Z,123nm,1.1s						
JCJ	**Chichijima**	**68.52**	**287**	LR	LR	21 30 35.7	
	comp=Z,3µm,21.3s,baz=63,slow=30						
TLY	**Talaya**	**68.81**	**328**	P	**P**	**21 07 25.7**	**-1.7**
TLY				IAmb	IAmb	21 07 33.1	
	comp=Z,30nm,1.0s						
TLY	**Talaya**	**68.81**	**328**	*ce*P	**P**	**21 07 27.6**	**+0.2**
TLY				pmax	pmax		
	comp=Z,72nm,1.7s						
KLMR	**Klimovskoe**	**68.89**	**6**	*e*P	**P**	**21 07 25.6**	**-2.1**
KLMR				S	**S**	**21 16 28.9**	**-2.2**
KLMR				pmax	pmax		
	comp=Z,145nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,7µm,19.0s						
MCRA	**Macar, Loja**	**69.17**	**126**	P	**P**	**21 07 31.7**	**+1.6**
	comp=Z,2µmcomp=Z,108nm,1.1s						
KSRS	**Korea Array**	**69.22**	**304**	P	**P**	**21 07 29.4**	**-0.7**
	comp=Z,8.0nm,0.9s,baz=50,slow=5.7,SNR=11						
	comp=Z,8.0nm,0.9s						
KSAR	**Wonju Array Be**	**69.25**	**304**	P	**P**	**21 07 28.2**	**-2.1**
KSAR	**Wonju Array Be**	**69.25**	**304**	P	**P**	**21 07 28.2**	**-2.1**
MOY	**Mondy**	**69.71**	**329**	*e*P	**P**	**21 07 32.6**	**-0.5**
MOY				pmax	pmax		
	comp=Z,80nm,2.2s						
PPT	**Papeete**	**69.78**	**200**	LR	LR	21 31 22.4	
	comp=Z,4µm,18.2s,baz=16,slow=30						
PPTF	**Pamatai, Papee**	**69.80**	**200**	IAMs_20	IAMs_20	21 33 21.7	
	comp=Z,5µm,18.0s						
PPT2	**Papeete2**	**69.80**	**200**	*e*S	**S**	**21 16 40.9**	**-1.9**
	comp=Z,2µm,31.0s						
PPT2				*e*SS	**SS**	**21 21 07.6**	**-4.4**
	comp=Z,2µm,29.8s						
PPT2				*e*LQ	LQ	21 25 13.3	
	comp=Z,13µm,28.0s						
PPT2				*e*LR	LR	21 28 39.3	
	comp=Z,16µm,29.0s						
PPT2				*e*LR	LR	21 28 48.3	
	comp=Z,6µm,23.8s						
VSU	**Vasula**	**69.93**	**13**	*ce*P	**P**	**21 07 33.8**	**-0.3**
VSU				pmax	pmax		
	comp=Z,49nm,1.3s						
ZAK	**Zakamensk**	**70.02**	**327**	*e*P	**P**	**21 07 32.9**	**-2.1**
ZAK				pmax	pmax		
	comp=Z,31nm,1.7s						
XLT	**XiLinHaoTe**	**70.15**	**316**	*e*P	**P**	**21 07 35.0**	**-0.9**
XLT				S	**S**	**21 16 50.1**	**+3.4**
XLT				pmax	pmax		
	comp=Z,17nm,1.3s						
XLT				LR	LR		
	comp=Z,5µm,17.6s						
XLT				LR	LR		
	comp=Z,2µm,21.2s						
ULN	**Ulaanbaatar**	**70.73**	**323**	IAMs_20	IAMs_20	21 39 00.7	
	comp=Z,8µm,20.0s						
ULN	**Ulaanbaatar**	**70.73**	**323**	P	**P**	**21 07 37.9**	**-1.6**
ULN	**Ulaanbaatar**	**70.73**	**323**	*ce*P	**P**	**21 07 38.9**	**-0.6**
ULN				pmax	pmax		
	comp=Z,33nm,1.7s						
JNU	**Nakatsue**	**70.80**	**299**	LR	LR	21 34 55.6	
	comp=Z,4µm,21.8s,baz=50,slow=33						
SONM	**Songino Array**	**71.01**	**324**	P	**P**	**21 07 40.3**	**-0.8**
	comp=Z,11nm,1.1s,baz=51,slow=3.7,SNR=24						
SONM				LR	LR	21 40 04.4	
	comp=Z,7µm,21.1s,baz=30,slow=37						
	comp=Z,11nm,1.1s						
SONM	**Songino Array**	**71.01**	**324**	P	**P**	**21 07 39.6**	**-1.5**

SONM				IAmb	IAmb	21 07 46.9	
	comp=Z,50nm,1.4s						
SONM	Songino Array	71.01	324	P	P	21 07 39.6	-1.5
SONM				pmax	pmax		
	comp=Z,51nm,1.4s						
RGN	Rugen	71.06	22	IAMs_20	IAMs_20	21 39 27.5	
	comp=Z,5µm,18.0s						
DL2	Dalian	71.38	309	P	P	21 07 44.3	+1.0
DL2				S	S	21 16 56.6	-4.3
DL2				pmax	pmax		
	comp=Z,34nm,1.0s						
DL2				pmax	pmax		
	comp=Z,730nm,6.8s						
DL2				LR	LR		
	comp=Z,5µm,18.9s						
DL2				LR	LR		
	comp=Z,3µm,20.4s						
DL2				LR	LR		
	comp=Z,6µm,25.5s						
KIRV	Kirov	71.51	0	LR	LR	21 41 54.7	
	comp=Z,7µm,20.7s,baz=357,slow=38						
KIRV	Kirov	71.51	0	ceP	P	21 07 43.5	-0.2
UCC	Uccle	71.97	29	dP	P	21 07 48.9	+2.2
ZAA0	Zalesovo Array	72.18	339	IAmb	IAmb	21 08 05.5	
	comp=Z,106nm,1.6s						
ZALV	Zalesovo Beam	72.18	339	P	P	21 07 47.3	-0.6
	comp=Z,14nm,1.0s,baz=21,slow=4.9,SNR=22						
ZALV				LR	LR	21 41 42.6	
	comp=Z,7µm,20.0s,baz=20,slow=38						
	comp=Z,14nm,1.0s						
ZALV	Zalesovo Beam	72.18	339	P	P	21 07 45.6	-2.3
ZALV	Zalesovo Beam	72.18	339	i P	P	21 07 49.2	+1.3
ZALV				pmax	pmax		
	comp=Z,13nm,1.0s						
JSU	Suzuyama	72.24	298	P	P	21 07 47.6	-1.1
ATAH	Atahualpa	72.33	126	LR	LR	21 40 42.3	
	comp=Z,5µm,20.9s,baz=347,slow=37						
PABE	Paberze	72.33	15	IAMs_20	IAMs_20	21 41 03.8	
	comp=Z,8µm,19.0s						
BEBN	Eben Emael	72.37	28	dP	P	21 07 47.7	-1.4
BSTI	Sart Tilman	72.53	28	dP	P	21 07 53.0	+3.0
BMRD	Maredsous	72.53	29	dP	P	21 07 51.1	+1.1
	comp=Z,20nm,1.2s						
BGES	Gesves	72.56	28	dP	P	21 07 50.8	+0.6
	comp=Z,18nm,1.2s						
MEM	Membach	72.64	28	dP	P	21 07 51.7	+1.0
	comp=Z,26nm,1.2s						
DOU	Dourbes	72.66	29	dP	P	21 07 51.2	+0.4
	comp=Z,14nm,1.5s						
BTNL	Ternell	72.69	28	dP	P	21 07 52.4	+1.3
RCHB	Rochefort	72.80	28	dP	P	21 07 52.8	+1.1
	comp=Z,23nm,1.1s						
BHOU	Houvegnez	72.86	28	dP	P	21 07 53.1	+1.1
SVE	Sverdlovsk	72.93	354	eP	P	21 07 51.9	-0.4
SVE				eS	SKiKP	21 17 23.6	-1.0
SVE				pmax	pmax		
	comp=Z,57nm,1.1s						
BJI	Beijing	73.14	313	P	P	21 07 52.8	-1.0
BJI				S	SKiKP	21 17 23.9	-1.4
BJI				LR	LR		
	comp=Z,2µm,17.9s						
BJI				LR	LR		
	comp=Z,1µm,14.5s						
BJI				LR	LR		
	comp=Z,2µm,16.6s						
RKT	Rikitea	73.21	185	eS	S	21 17 20.0	-1.8
	comp=Z,4µm,26.8s						
RKT				eSS	SS	21 22 01.7	-2.3
	comp=Z,6µm,32.5s						
RKT				eLQ	LQ	21 27 04.1	
	comp=Z,17µm,30.8s						
RKT				eLR	LR	21 30 22.4	
	comp=Z,70µm,27.8s						
PATS	Pohnpei	73.28	260	IAMs_20	IAMs_20	21 42 01.9	
	comp=Z,8µm,18.0s						
ARTI	Arti	73.50	355	LR	LR	21 41 42.5	
	comp=Z,5µm,21.4s,baz=11,slow=37						
ARTI	Arti	73.50	355	P	P	21 07 53.1	-2.6
ARTI				IAmb	IAmb	21 08 00.6	
	comp=Z,35nm,0.9s						
ARTI				IAMs_20	IAMs_20	21 41 30.2	
	comp=Z,6µm,21.0s						
ARTI	Arti	73.50	355	d iP	P	21 07 55.1	-0.6
ARTI				PPP	PPP	21 12 25.4	
ARTI				S	SKiKP	21 17 26.2	+0.8
ARTI				SS	SS	21 22 07.8	+1.9
ARTI				pmax	pmax		
	comp=Z,31nm,1.1s						
WLF	Walferdange	73.52	28	IAMs_20	IAMs_20	21 39 17.2	
	comp=Z,11µm,19.0s						
WLF	Walferdange	73.52	28	dP	P	21 07 57.7	+1.8
SUW	Suwalki	73.62	16	eP	P	21 07 55.5	-0.9
SUW	Suwalki	73.62	16	IAMs_20	IAMs_20	21 41 37.9	
	comp=Z,7µm,21.0s						
CLF	Chambon-Foret	73.72	31	IAMs_20	IAMs_20	21 39 51.7	
	comp=Z,11µm,19.0s						
MOS	Moscow	73.84	7	eP	P	21 07 55.6	-2.1
MOS				eS	S	21 17 27.8	-0.6
MOS				pmax	pmax		
	comp=Z,108nm,1.8s						
MOS				pmax	pmax		
	comp=Z,400nm,2.6s						
MOS				MLR	MLR		
	comp=N,8µm,18.0s						
MOS				MLR	MLR		
	comp=Z,10µm,18.0s						
MNK	Minsk	73.92	13	i P	P	21 07 58.1	-0.1
MNK				i		21 10 40.2	
MNK				i PPP	PPP	21 12 27.6	
MNK				i S	S	21 17 29.6	+0.2
MNK				i SS	SS	21 22 14.0	+1.6
MNK				pmax	pmax		
	comp=N,16nm,1.2s						
MNK				pmax	pmax		
	comp=Z,46nm,1.0s						
MNK				pmax	pmax		
	comp=E,35nm,1.1s						
MNK				MLR	MLR		
	comp=N,6µm,19.0s						
MNK				MLR	MLR		
	comp=Z,17µm,20.0s						
MNK				MLR	MLR		
	comp=E,11µm,18.0s						
CLL	Collm	73.94	23	IAMs_20	IAMs_20	21 42 05.0	
	comp=Z,11µm,18.0s						
CLL	Collm	73.94	23	i P	P	21 07 58.8	+0.4
CLL				eS	S	21 17 36.0	+6.2
CLL				pmax	pmax		
	comp=Z,42nm,1.4s						
CLL				MLR	MLR		
	comp=Z,11µm,18.2s						
OBN	Obninsk	74.36	8	LR	LR	21 42 54.1	
	comp=Z,10µm,18.7s,baz=300,slow=38						
OBN	Obninsk	74.36	8	P	P	21 07 59.4	-1.3
OBN				IAmb	IAmb	21 08 06.1	
	comp=Z,63nm,0.8s						
OBN				IAMs_20	IAMs_20	21 42 41.9	
	comp=Z,11µm,20.0s						
OBN	Obninsk	74.36	8	⇑P	P	21 08 00.1	-0.6
OBN	Obninsk	74.36	8	d iP	P	21 08 00.1	-0.6
OBN				e*SP	pwP	21 08 06.8	-0.1
OBN				i		21 08 10.1	
OBN				i		21 08 17.8	
OBN				i S	S	21 17 36.7	+2.4
OBN				e		21 17 55.5	
OBN				i PS	PnS	21 18 17.4	+10
OBN				i SS	SS	21 22 17.1	-1.9
OBN				SSS	SSS	21 25 29.0	
OBN				pmax	pmax		
	comp=Z,132nm,1.7s						
OBN				MLR	MLR		
	comp=Z,11µm,18.0s						
HHC	Hu-ho-hao-te	74.60	316	eP	P	21 08 00.9	-1.6
HHC				S	S	21 17 33.6	-4.2
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,890nm,6.9s						
HHC				LR	LR		
	comp=Z,4µm,18.1s						
HHC				LR	LR		
	comp=Z,2µm,17.9s						
HHC				LR	LR		
	comp=Z,5µm,16.2s						
HSKC	Hora Svate Kat	74.70	23	eP	P	21 08 04.9	+2.1
HSKC				eS	S	21 17 41.7	+3.4
HSKC				AMS	AMS	21 41 50.0	
	comp=Z,13µm,17.7s						
PGAV	Gavieira, Arco	74.85	41	eS	S	21 17 44.0	+3.5
PGAV				eLQ	LQ	21 29 15.9	
PGAV				eLR	LR	21 32 47.5	
PGAV				i IAMs_20	IAMs_20	21 48 44.5	
	comp=Z,6µm,18.0s						
RICC	Richard	74.92	23	eS	S	21 17 51.3	+11
RICC				AMS	AMS	21 43 20.0	
	comp=Z,8µm,15.3s						
BOAV	Boa Vista	74.94	105	P	P	21 08 04.7	0.0
BOAV				IAmb	IAmb	21 08 11.5	
	comp=Z,43nm,1.0s						
BOAV	Boa Vista	74.94	105	P	P	21 08 05.1	+0.4
	comp=Z,1µmcomp=Z,46nm,1.9s						
GRA1	Grafenberg Arr	74.95	25	IAMs_20	IAMs_20	21 41 33.4	
	comp=Z,10µm,19.0s						
GRF	Grafenberg Arr	74.95	25	eP	P	21 08 07.6	+3.3
	comp=Z,40nm,1.5s,baz=340,slow=5.3						
PTCN	Pitcairn Islan	75.00	180	IAMs_20	IAMs_20	21 32 43.5	
	comp=Z,9µm,21.0s						
PVCC	Panska Ves	75.06	23	AMS	AMS	21 44 40.0	
	comp=Z,9µm,16.0s						
ECH	Echery	75.11	28	IAmb	IAmb	21 08 23.6	
	comp=Z,63nm,1.5s						
ECH				IAMs_20	IAMs_20	21 40 14.9	
	comp=Z,10µm,21.0s						
KSP	Ksiaz	75.18	22	eP	P	21 08 06.4	+0.8
STU	Stuttgart	75.22	27	IAMs_20	IAMs_20	21 43 52.5	
	comp=Z,9µm,18.0s						
BEL	Belsk	75.23	18	eP	P	21 08 06.8	+1.0
TBI	Tubuai	75.35	199	eP	P	21 08 06.3	-0.4
	comp=Z,1µm,22.0s						
TBI	Tubuai	75.35	199	ePP	PP	21 10 53.5	-2.4
	comp=Z,2µm,26.2s						
TBI				eS	S	21 17 44.0	-1.8
	comp=Z,8µm,43.2s						
TBI				eSS	SS	21 22 31.0	-5.7
	comp=Z,7µm,34.0s						
TBI				eLQ	LQ	21 27 59.6	
	comp=Z,27µm,28.5s						
TBI				eLR	LR	21 31 22.3	
	comp=Z,50µm,30.2s						
TBI				eLR	LR	21 31 25.7	
	comp=Z,9µm,29.0s						
BFO	Black Forest	75.36	27	P	P	21 08 05.2	-1.5
BFO				IAmb	IAmb	21 08 10.8	
	comp=Z,59nm,1.4s						
BFO				IAMs_20	IAMs_20	21 40 00.4	
	comp=Z,10µm,21.0s						
BFO	Black Forest	75.36	27	P	P	21 08 05.2	-1.5
BFO				pmax	pmax		
	comp=Z,59nm,1.4s						
BFO				MLR	MLR		
	comp=Z,10µm,21.0s						
CHVC	Chvalec	75.36	22	eP	P	21 08 09.9	+3.2
CHVC				MLR	MLR		
	comp=Z,9µm,18.0s						
CHVC	Chvalec	75.36	22	eP	P	21 08 09.9	+3.2
CHVC				AMS	AMS	21 42 20.0	
	comp=Z,9µm,18.0s						
UPC	Upice	75.42	22	AMS	AMS	21 42 10.0	
	comp=Z,10µm,17.8s						
OSTC	Ostas	75.43	22	eP	P	21 08 08.9	+1.9
OSTC				eS	S	21 17 53.1	+6.6
OSTC				MLR	MLR		
	comp=Z,7µm,18.1s						
OSTC	Ostas	75.43	22	eP	P	21 08 08.9	+1.9
OSTC				eS	S	21 17 53.1	+6.6
OSTC				AMS	AMS	21 42 30.0	
	comp=Z,7µm,18.1s						
PRA	Prague	75.44	23	AMS	AMS	21 43 30.0	
	comp=Z,12µm,16.1s						
BTO	Baotou	75.48	317	eP	P	21 08 05.4	-2.2
BTO				PP	PP	21 11 00.6	+4.5
BTO				S	S	21 17 41.8	-5.7
BTO				pmax	pmax		
	comp=Z,23nm,1.3s						
BTO				pmax	pmax		
	comp=Z,960nm,6.0s						
BTO				LR	LR		
	comp=Z,4µm,13.8s						
BTO				LR	LR		
	comp=Z,9µm,16.0s						
BTO				LR	LR		
	comp=Z,5µm,18.0s						
POLO	Lamas de Olo	75.54	41	eP	P	21 08 10.1	+2.2
PRU	Pruhonice	75.55	23	eP	P	21 08 10.8	+3.1
PRU				eS	S	21 17 54.1	+6.4
PRU				MLR	MLR		
	comp=Z,11µm,15.5s						
PRU	Pruhonice	75.55	23	eP	P	21 08 10.8	+3.1
PRU				eS	S	21 17 54.1	+6.4
PRU				AMS	AMS	21 43 40.0	
	comp=Z,11µm,15.5s						
DPC	Dobruska-Polom	75.64	22	eP	P	21 08 08.3	0.0
DPC				MLR	MLR		
	comp=Z,10µm,17.0s						
DPC	Dobruska-Polom	75.64	22	eP	P	21 08 08.3	0.0
DPC				AMS	AMS	21 42 40.0	
	comp=Z,10µm,17.0s						
PVRL	Vila Real	75.65	41	eP	P	21 08 09.4	+0.9
PVRL				i IAmb	IAmb	21 08 38.4	
	comp=Z,77nm,1.6s						
BORK	Borovoye	75.69	348	P	P	21 08 07.2	-1.2
BORK	Borovoye	75.69	348	IAMs_20	IAMs_20	21 47 25.9	
	comp=Z,5µm,19.0s						
BORK	Borovoye	75.69	348	ceP	P	21 08 08.1	-0.3
BORK				pmax	pmax		
	comp=Z,57nm,2.5s						
BVAR	Borovoye Array	75.70	348	P	P	21 08 07.6	-0.9
	comp=Z,15nm,1.1s,baz=1.9,slow=4.5,SNR=15						
BVAR				LR	LR	21 44 57.6	
	comp=Z,3µm,21.2s,baz=14,slow=39						
	comp=Z,15nm,1.1s						
TIA	Tai'an	75.72	310	P	P	21 08 07.8	-1.1
TIA				PP	PP	21 10 55.8	-2.3
TIA				S	S	21 17 53.3	+3.2
TIA				pmax	pmax		
	comp=Z,41nm,1.3s						
TIA				LR	LR		
	comp=Z,2µm,20.6s						
TIA				LR	LR		
	comp=Z,3µm,23.0s						
TIA				LR	LR		
	comp=Z,6µm,24.0s						
HNS	HongShan	75.94	312	⇓P	P	21 08 09.4	-0.7
HNS				S	S	21 17 55.1	+2.7
HNS				pmax	pmax		
	comp=Z,44nm,1.2s						
HNS				LR	LR		
	comp=Z,3µm,21.2s						
HNS				LR	LR		
	comp=Z,5µm,19.8s						
HNS				LR	LR		
	comp=Z,5µm,21.4s						
ZVC	Zvikov	75.97	23	eP	P	21 08 11.6	+1.5
ZVC				eS	S	21 17 58.0	+5.6
ZVC				AMS	AMS	21 44 00.0	
	comp=Z,10µm,16.5s						
RAR	Rarotonga	75.98	209	LR	LR	21 33 47.2	
	comp=Z,4µm,20.9s,baz=9.5,slow=30						
KRLC	Kraliky	76.01	22	AMS	AMS	21 43 30.0	
	comp=Z,11µm,15.7s						
MVO	Moncorvo	76.03	41	eS	S	21 17 56.0	+2.4
MVO				eLQ	LQ	21 28 06.0	
MVO				eLR	LR	21 33 28.4	
MVO				i IAMs_20	IAMs_20	21 39 16.2	
	comp=Z,5µm,18.0s						
PVIS	Viseu	76.04	42	eP	P	21 08 12.5	+1.8
KHC	Kasperske Hory	76.09	24	IAmb	IAmb	21 08 29.5	
	comp=Z,50nm,1.4s						
KHC				IAMs_20	IAMs_20	21 40 20.4	
	comp=Z,8µm,21.0s						
KHC	Kasperske Hory	76.09	24	eP	P	21 08 13.4	+2.5
KHC				e		21 08 25.8	
KHC				eS	S	21 17 58.8	+4.9
KHC				MLR	MLR		
	comp=Z,10µm,15.7s						
KHC	Kasperske Hory	76.09	24	eP	P	21 08 13.4	+2.5
KHC				ex	x	21 08 25.8	
KHC				eS	S	21 17 58.8	+4.9
KHC				AMS	AMS	21 44 20.0	
	comp=Z,10µm,15.7s						
PCAS	Casmilo, Conde	76.33	43	eP	P	21 08 12.4	+0.1
STEB	Steborice	76.37	21	eP	P	21 08 14.1	+1.7
STEB				ex	x	21 08 25.3	
GERES	GERESS Array B	76.39	24	P	P	21 08 13.2	+0.6
	comp=Z,1.1nm,0.6s,baz=354,slow=5.9,SNR=8.8						
GERES				LR	LR	21 43 42.2	
	comp=Z,7µm,18.5s,baz=339,slow=37						
	comp=Z,1.1nm,0.6s						
MTE	Manteigas	76.45	42	IAMs_20	IAMs_20	21 46 55.9	
	comp=Z,7µm,20.0s						
MTE	Manteigas	76.45	42	eS	S	21 18 05.6	+7.4
MTE				eLQ	LQ	21 28 03.5	
MTE				eLR	LR	21 33 47.3	
MTE				i IAMs_20	IAMs_20	21 47 11.7	
	comp=Z,5µm,20.0s						
MORC	Moravsky Berou	76.47	21	⇑P	P	21 08 16.5	+3.5
MORC	Moravsky Berou	76.47	21	eP	P	21 08 12.8	-0.2
MORC	Moravsky Berou	76.47	21	⇑P	P	21 08 16.5	+3.5
KURK	Kurchatov	76.54	342	P	P	21 08 10.7	-2.6
KURK	Kurchatov	76.54	342	IAMs_20	IAMs_20	21 44 48.7	
	comp=Z,6µm,19.0s						
KURK	Kurchatov	76.54	342	ceP	P	21 08 12.4	-0.9
KURK				pmax	pmax		
	comp=Z,39nm,1.7s						
OKC	Ostrava-Krasne	76.55	21	eS	S	21 18 02.7	+4.0
OJC	Ojcow	76.55	20	eP	P	21 08 11.1	-2.3
CKRC	Cesky Krumlov	76.56	24	AMS	AMS	21 45 40.0	
	comp=Z,7µm,15.9s						
KURBB	Kurchatov Arra	76.64	342	P	P	21 08 12.6	-1.4
	comp=Z,16nm,1.1s,baz=19,slow=5.0,SNR=26						
KURBB				LR	LR	21 45 23.5	
	comp=Z,5µm,19.5s,baz=21,slow=38						
	comp=Z,16nm,1.1s						
VRAC	Vranov	76.68	22	LR	LR	21 43 31.8	
	comp=Z,9µm,18.3s,baz=328,slow=37						
VRAC	Vranov	76.68	22	⇓P	P	21 08 13.1	-1.1
VRAC	Vranov	76.68	22	eP	P	21 08 14.4	+0.2
VRAC	Vranov	76.68	22	⇓P	P	21 08 13.1	-1.1
DAVA	Damuels	76.75	27	i pP	pP	21 08 18.1	-0.3
	comp=Z,28nm,1.3s,SNR=7.7						
GUMO	Guam	76.78	275	IAMs_20	IAMs_20	21 34 35.3	
	comp=Z,5µm,21.0s						
SENIN	Lac Senin/Sane	76.81	29	IAMs_20	IAMs_20	21 40 36.9	
	comp=Z,11µm,18.0s						
RETA	Reutte	76.83	26	i pP	P	21 08 16.7	+1.6
	comp=Z,14nm,1.8s						
PSARD	Sardoal	76.84	43	eP	P	21 08 17.8	+2.5
KRUC	Moravsky	76.86	22	eP	P	21 08 14.9	-0.3
SSB	Saint Sauveur	76.88	31	IAMs_20	IAMs_20	21 40 23.0	
	comp=Z,10µm,21.0s						
MAUC	Maruska	76.92	21	eP	P	21 08 16.6	+1.1
PCBR	Castelo Branco	76.94	42	eP	P	21 08 18.3	+2.5
JOW	Kunigami	77.01	296	LR	LR	21 43 39.9	
	comp=Z,873nm,19.2s,baz=58,slow=37						
LPSR	Galich'ya Gora	77.06	7	eP	P	21 08 15.4	-0.8
LPSR				pmax	pmax		
	comp=Z,60nm,0.9s						
LPSR				MLR	MLR		
	comp=Z,9µm,17.0s						
WATA	Walderalm	77.19	26	epP	pP	21 08 21.4	+0.5
	comp=Z,20nm,1.2s						
SQTA	Sankt Quirin	77.19	26	i pP	pP	21 08 21.0	+0.2
	comp=Z,20nm,1.3s,SNR=7.4						
DAVOX	Davos/Dischmat	77.21	27	LR	LR	21 42 56.7	
	comp=Z,10µm,19.8s,baz=320,slow=36						
NNA	Nana	77.23	127	LR	LR	21 42 41.8	
	comp=Z,3µm,18.8s,baz=337,slow=36						
NNA	Nana	77.23	127	P	P	21 08 18.2	+0.5
NNA				IAmb	IAmb	21 08 25.2	
	comp=Z,80nm,1.1s						
NNA	Nana	77.23	127	ceP	P	21 08 19.4	+1.7
NNA				pmax	pmax		
	comp=Z,131nm,1.3s						
FETA	Feichten	77.24	27	i pP	pP	21 08 20.8	-0.3
	comp=Z,18nm,1.2s						
WTTA	Wattenberg	77.28	26	i pP	pP	21 08 21.3	-0.1
	comp=Z,25nm,1.4s,SNR=8.6						
PMRV	Marv??o	77.32	42	eP	P	21 08 18.7	+0.7
PMRV				i IAmb	IAmb	21 08 52.4	
	comp=Z,52nm,1.8s						
PMRV				eS	S	21 18 10.3	+2.7
PMRV				eLQ	LQ	21 28 32.0	
PMRV				eLR	LR	21 34 12.8	
PMRV				i IAMs_20	IAMs_20	21 40 15.1	
	comp=Z,7µm,20.0s						
TUE	Stuetta	77.33	28	IAMs_20	IAMs_20	21 41 55.6	
	comp=Z,14µm,20.0s						
JAVC	Velka Javorina	77.35	21	eP	P	21 08 19.1	+1.1
LESA	Schwarzleotal	77.42	25	epP	P	21 08 18.7	+0.3
	comp=Z,16nm,1.5s,SNR=6.3						
NIE	Niedzica	77.42	20	eP	P	21 08 17.3	-1.1
BIOA	Bad Ischl, Aus	77.43	24	i pP	pP	21 08 21.2	-0.9
	comp=Z,14nm,1.4s						
MOA	Molln	77.45	24	i pP	P	21 08 19.6	+1.1
	comp=Z,9.8nm,1.7s						
FUORN	Ofenpass-Fuorn	77.47	27	IAMs_20	IAMs_20	21 45 25.2	
	comp=Z,12µm,18.0s						
LANS	Liptovska Anna	77.49	20	eP	P	21 08 21.1	+2.3
LANS	Liptovska Anna	77.49	20	eP	P	21 08 21.1	+2.3
PARRA	Arraiolos	77.55	43	eP	P	21 08 20.6	+1.4
PARRA				i IAmb	IAmb	21 09 00.6	
	comp=Z,49nm,1.5s						
STHS	Stebnicka Huta	77.62	19	eP	P	21 08 22.6	+3.1
STHS	Stebnicka Huta	77.62	19	eP	P	21 08 22.6	+3.1
MOE	Montemor	77.65	43	eP	P	21 08 21.9	+2.1
MOE				i IAmb	IAmb	21 08 39.1	
	comp=Z,51nm,1.9s						
SSE	Sheshan	77.66	304	P	P	21 08 19.3	-0.6
SSE				S	S	21 18 15.3	+3.9
SSE				pmax	pmax		
	comp=Z,28nm,1.0s						
SSE				pmax	pmax		
	comp=Z,280nm,4.7s						
SSE				LR	LR		
	comp=Z,800nm,27.5s						
SSE				LR	LR		
	comp=Z,480nm,20.6s						
BELG	Belogornoye	77.69	2	LR	LR	21 47 27.2	
	comp=Z,4µm,19.6s,baz=357,slow=40						
PESTR	Estremoz	77.70	43	eP	P	21 08 19.7	-0.4
PESTR				i IAmb	IAmb	21 08 48.8	
	comp=Z,47nm,1.6s						
KWP	Kalwaria Pacla	77.71	18	eP	P	21 08 19.6	-0.3
MODS	Modra-Piesok	77.72	22	eP	P	21 08 21.5	+1.5
MODS	Modra-Piesok	77.72	22	eP	P	21 08 21.5	+1.5
CONA	Conrad Observa	77.78	23	epP	pP	21 08 24.0	0.0
	comp=Z,22nm,1.7s						
EVO	Evora	77.79	43	eP	P	21 08 22.0	+1.4
EVO				i IAmb	IAmb	21 09 22.6	
	comp=Z,62nm,1.6s						
AKASG	Malin Array Be	77.82	14	P	P	21 08 19.9	-0.6
	comp=Z,9.9nm,1.0s,baz=347,slow=5.2,SNR=19						
AKASG				LR	LR	21 43 22.0	
	comp=Z,15µm,20.5s,baz=352,slow=36						
	comp=Z,9.9nm,1.0s						
AKASG	Malin Array Be	77.82	14	P	P	21 08 19.6	-0.9
AKBB	Malin Array Si	77.82	14	IAmb	IAmb	21 08 26.0	
	comp=Z,68nm,1.2s						
AKBB	Malin Array Si	77.82	14	ceP	P	21 08 19.1	-1.4
AKBB				pmax	pmax		
	comp=Z,71nm,1.4s						
MDP	Montagnes des	77.82	97	LR	LR	21 42 45.3	
	comp=Z,5µm,21.9s,baz=324,slow=36						
KIEV	Kiev	77.82	14	P	P	21 08 19.0	-1.5
KIEV				IAmb	IAmb	21 08 26.0	
	comp=Z,67nm,1.3s						
KIEV	Kiev	77.82	14	IAMs_20	IAMs_20	21 43 11.4	
	comp=Z,15µm,21.0s						
KIEV	Kiev	77.82	14	⇑P	P	21 08 20.1	-0.4
KIEV	Kiev	77.82	14	⇑P	P	21 08 20.1	-0.4
KBA	Koelnbreinsper	77.92	25	epP	pP	21 08 24.5	-0.4
	comp=Z,55nm,1.6s						
ABTA	Abfaltersbach	77.99	26	i pP	pP	21 08 24.9	-0.4
	comp=Z,14nm,1.8s						
VORR	Voronezh	78.00	7	eP	P	21 08 19.9	-1.6
VORR				pmax	pmax		
	comp=Z,90nm,1.2s						
VORR				MLR	MLR		
	comp=Z,6µm,15.0s						
PMOZ	Porto Moniz, M	78.06	53	eS	SKSac	21 18 29.1	-7.1
PMOZ				eLR	LR	21 35 42.5	
PMOZ				i IAMs_20	IAMs_20	21 41 31.3	
	comp=Z,6µm,18.0s						
RONA	Rosalia, Austr	78.11	23	epP	pP	21 08 25.1	-0.7
	comp=Z,1.7nm,0.8s						
NJ2	Nanjing	78.13	306	⇑P	P	21 08 22.8	+0.3
NJ2				pP	pP	21 08 25.9	-0.2
NJ2				sP	sP	21 08 27.6	+0.2

NJ2				S	**S**	**21 18 18.3**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,23nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,480nm,4.5s						
NJ2				LR	LR		
	comp=Z,2µm,21.8s						
NJ2				LR	LR		
	comp=Z,4µm,21.8s						
NJ2				LR	LR		
	comp=Z,4µm,23.5s						
ZSN	**Zaisan**	**78.20**	**337**	⇑*i*P	**P**	**21 08 23.1**	**+0.3**
ZSN				*e*S	**S**	**21 18 17.9**	**+1.0**
ZSN	**Zaisan**	**78.20**	**337**	*c i*P	**P**	**21 08 23.0**	**+0.3**
ZSN				*e*S	**S**	**21 18 17.8**	**+1.0**
PBEJ	**Beja**	**78.28**	**43**	*e*P	**P**	**21 08 25.4**	**+2.2**
PBEJ				*i* IAmb	IAmb	21 08 54.1	
	comp=Z,37nm,2.1s						
BRZS	**Berezniki**	**78.31**	**345**	*e*P	**P**	**21 08 23.7**	**+0.4**
BRZS				*e*S	**S**	**21 18 19.0**	**+1.0**
BRZS	**Berezniki**	**78.31**	**345**	*e*P	**P**	**21 08 23.7**	**+0.4**
BRZS				*e*S	**S**	**21 18 19.0**	**+1.0**
ARSA	**Arzberg**	**78.33**	**23**	*e*pP	**P**	**21 08 24.9**	**+1.4**
	comp=Z,22nm,1.7s,SNR=9.4						
MYKA	**Terra Mystica**	**78.41**	**25**	*e*PcP	**PcP**	**21 08 30.7**	**-2.5**
	comp=Z,18nm,1.3s						
VSR	**Storozhevoye**	**78.45**	**7**	*e*P	**P**	**21 08 23.1**	**-0.9**
VSR				pmax	pmax		
	comp=Z,70nm,1.5s						
VSR				MLR	MLR		
	comp=Z,9µm,17.0s						
PAB	**San Pablo**	**78.51**	**40**	IAMs_20	IAMs_20	21 40 18.1	
	comp=Z,5µm,18.0s						
PBAR	**Barrancos**	**78.52**	**43**	*e*P	**P**	**21 08 25.9**	**+1.3**
MORF	**Marmelete**	**78.53**	**44**	*e*P	**P**	**21 08 25.1**	**+0.3**
ESDC	**Sonseca Array**	**78.56**	**40**	P	**P**	**21 08 25.0**	**+0.1**
	comp=Z,4.7nm,1.0s,baz=316,slow=5.4,SNR=14						
ESDC				LR	LR	21 41 45.3	
	comp=Z,6µm,18.1s,baz=322,slow=35						
	comp=Z,4.7nm,1.0s						
ESDC	**Sonseca Array**	**78.56**	**40**	P	**P**	**21 08 25.5**	**+0.7**
VRH	**Novokhopyorsk**	**78.65**	**5**	*e*P	**P**	**21 08 22.6**	**-2.4**
VRH				pmax	pmax		
	comp=Z,30nm,0.9s						
VRH				MLR	MLR		
	comp=Z,8µm,19.0s						
VORD	**Divnogorie**	**78.71**	**7**	*e*P	**P**	**21 08 24.1**	**-1.3**
VORD				pmax	pmax		
	comp=Z,40nm,0.9s						
VORD				MLR	MLR		
	comp=Z,4µm,15.0s						
SOKA	**Soboth**	**78.73**	**24**	*e*pP	**P**	**21 08 26.2**	**+0.4**
	comp=Z,40nm,0.9s						
PSZ	**Piszkesteto**	**78.75**	**20**	IAmb	IAmb	21 08 44.6	
	comp=Z,92nm,1.5s						
PSZ				IAMs_20	IAMs_20	21 46 07.4	
	comp=Z,9µm,18.0s						
PSZ	**Piszkesteto**	**78.75**	**20**	⇑P	**P**	**21 08 27.2**	**+1.4**
PSZ	**Piszkesteto**	**78.75**	**20**	⇑P	**P**	**21 08 27.2**	**+1.4**
OBKA	**Obir**	**78.76**	**24**	*e*pP	pP	21 08 28.6	-0.9
	comp=Z,33nm,1.6s						
PVAQ	**Vaqueiros**	**78.86**	**44**	*e*P	**P**	**21 08 26.0**	**-0.5**
PVAQ				*i* IAmb	IAmb	21 09 20.9	
	comp=Z,70nm,1.8s						
PVAQ				*e*S	**S**	**21 18 25.2**	**+1.0**
PVAQ				*e*LQ	LQ	21 28 38.4	
PVAQ				*e*LR	LR	21 35 29.7	
PVAQ				*i* IAMs_20	IAMs_20	21 39 42.0	
	comp=Z,9µm,18.0s						
RPN	**Rapa Nui**	**79.14**	**162**	LR	LR	21 36 22.3	
	comp=Z,1µm,18.0s,baz=354,slow=30						
MACA	**Manacapuru-AM**	**79.19**	**108**	IAmb	IAmb	21 08 34.5	
	comp=Z,69nm,1.2s						
LYN	**LuoYang**	**79.31**	**312**	P	**P**	**21 08 28.4**	**-0.6**
LYN				pP	sP	21 08 33.3	-0.5
LYN				sP	pwP	21 08 35.8	+0.5
LYN				S	**S**	**21 18 34.8**	**+5.8**
LYN				pmax	pmax		
	comp=Z,88nm,1.0s						
LYN				pmax	pmax		
	comp=Z,980nm,5.0s						
LYN				LR	LR		
	comp=Z,4µm,21.0s						
LYN				LR	LR		
	comp=Z,3µm,19.9s						
LYN				LR	LR		
	comp=Z,6µm,19.2s						
MK31	**Makanchi Array**	**79.44**	**338**	*ce*P	**P**	**21 08 29.2**	**-0.4**
MKAR	**Makanchi Array**	**79.44**	**338**	P	**P**	**21 08 28.2**	**-1.4**
	comp=Z,5.1nm,1.0s,baz=32,slow=4.8,SNR=23						
MKAR				LR	LR	21 46 06.6	
	comp=Z,9µm,21.1s,baz=12,slow=38						
	comp=Z,5.1nm,1.0s						
MKAR	**Makanchi Array**	**79.44**	**338**	P	**P**	**21 08 28.0**	**-1.6**
AKTO	**Aktyubinsk**	**79.46**	**355**	LR	LR	21 45 30.9	
	comp=Z,5µm,21.6s,baz=7.5,slow=37						
MAKZ	**Makanchi**	**79.50**	**338**	P	**P**	**21 08 27.6**	**-2.3**
MAKZ				IAmb	IAmb	21 09 05.1	
	comp=Z,68nm,1.3s						
MAKZ				IAMs_20	IAMs_20	21 45 58.4	
	comp=Z,9µm,21.0s						
MAKZ	**Makanchi**	**79.50**	**338**	⇓P	**P**	**21 08 28.9**	**-1.0**
MORH	**Mrgy, Hungar**	**80.06**	**22**	⇓P	**P**	**21 08 36.1**	**+3.3**
BURAR	**Bucovina Array**	**80.13**	**17**	⇑P	**P**	**21 08 31.6**	**-1.8**
BURAR	**Bucovina Array**	**80.13**	**17**	⇑P	**P**	**21 08 31.6**	**-1.8**
SORM	**Soroca**	**80.17**	**15**	⇑P	**P**	**21 08 33.1**	**-0.3**
SORM	**Soroca**	**80.17**	**15**	⇑P	**P**	**21 08 33.1**	**-0.3**
SFS	**San Fernando**	**80.31**	**43**	IAMs_20	IAMs_20	21 41 03.2	
	comp=Z,10µm,18.0s						
DRGR		**80.42**	**19**	⇑P	**P**	**21 08 34.4**	**-0.5**
DRGR		**80.42**	**19**	⇑P	**P**	**21 08 34.4**	**-0.5**
ARCR	**ARCALIA**	**80.47**	**18**	⇓P	**P**	**21 08 35.8**	**+0.7**
ABKAR	**Akbulak array**	**80.52**	**354**	P	**P**	**21 08 33.4**	**-1.9**
PRAR	**RASCA**	**80.56**	**16**	⇑P	**P**	**21 08 39.7**	**+4.2**
MARR	**Marisel-Cluj**	**80.62**	**19**	⇓P	**P**	**21 08 32.8**	**-3.2**
GTA	**Gaotai**	**80.67**	**323**	P	**P**	**21 08 34.8**	**-1.7**
GTA				pP	pP	21 08 39.8	-0.3
GTA				S	**SKSac**	**21 18 47.8**	**-6.8**
GTA				LR	LR		
	comp=Z,3µm,21.5s						
GTA				LR	LR		
	comp=Z,5µm,22.7s						
GTA				LR	LR		
	comp=Z,7µm,22.3s						
SIRR	**Siria**	**80.70**	**20**	⇓P	**P**	**21 08 39.8**	**+3.5**
WMQ	**Urumqi**	**80.79**	**334**	P	**P**	**21 08 37.0**	**0.0**
WMQ				sP	PcP	21 08 50.1	+6.5
WMQ				S	**S**	**21 18 43.0**	**-1.5**
WMQ				pmax	pmax		
	comp=Z,14nm,1.3s						
WMQ				LR	LR		
	comp=Z,5µm,20.5s						
WMQ				LR	LR		
	comp=Z,5µm,21.9s						
WMQ				LR	LR		
	comp=Z,5µm,24.7s						
BZS	**Buzias**	**81.31**	**20**	⇑P	**P**	**21 08 39.4**	**-0.2**
BZS	**Buzias**	**81.31**	**20**	⇑P	**P**	**21 08 39.4**	**-0.2**
DEV	**Deva**	**81.33**	**19**	⇑P	P	21 08 48.9	+9.2
MDB	**Medias**	**81.38**	**18**	⇑P	P	21 08 45.5	+5.5
MDB	**Medias**	**81.38**	**18**	⇑P	P	21 08 45.5	+5.5
XAN	**Xi'an**	**81.39**	**314**	⇑P	**P**	**21 08 38.3**	**-2.0**
XAN				pP	pP	21 08 43.0	-0.8
XAN				sP	sP	21 08 45.5	+0.4
XAN				S	**S**	**21 18 48.8**	**-2.2**
XAN				pmax	pmax		
	comp=Z,18nm,1.3s						
XAN				LR	LR		
	comp=Z,3µm,19.2s						
XAN				LR	LR		
	comp=Z,6µm,20.6s						
XAN				LR	LR		
	comp=Z,6µm,15.8s						
MILM	**Milestii Mici**	**81.43**	**15**	⇑P	P	21 08 47.0	+6.8
MILM	**Milestii Mici**	**81.43**	**15**	⇑P	P	21 08 47.0	+6.8
TESR	**Tescani**	**81.45**	**16**	⇑P	**P**	**21 08 39.6**	**-0.7**
MAHO	**Mahon**	**81.53**	**34**	IAMs_20	IAMs_20	21 41 20.6	
	comp=Z,5µm,20.0s						
CART	**Cartagena**	**81.54**	**39**	IAMs_20	IAMs_20	21 51 50.4	
	comp=Z,5µm,18.0s						
WHN	**Wuhan**	**81.64**	**308**	P	**P**	**21 08 40.1**	**-1.5**
WHN				S	**S**	**21 18 53.8**	**+0.3**
WHN				LR	LR		
	comp=Z,6µm,18.7s						
WHN				LR	LR		
	comp=Z,4µm,15.5s						
WHN				LR	LR		
	comp=Z,8µm,19.8s						
DOPR	**Dopca**	**81.74**	**17**	⇑P	**P**	**21 08 42.8**	**+0.8**
GZR	**Gura Zlata**	**81.77**	**19**	⇑P	**P**	**21 08 46.7**	**+4.6**
GZR	**Gura Zlata**	**81.77**	**19**	⇑P	**P**	**21 08 46.7**	**+4.6**
TURR	**Turia**	**81.78**	**17**	⇑P	**P**	**21 08 42.7**	**+0.6**
MSVF	**Nonsavu**	**81.82**	**230**	P	**P**	**21 08 44.2**	**+1.6**
LZH	**Lanzhou**	**81.91**	**319**	*e*P	**P**	**21 08 42.0**	**-1.1**
LZH				pP	pP	21 08 46.9	+0.2
LZH				sP	PcP	21 08 49.0	+0.2
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				LR	LR		
	comp=Z,6µm,18.2s						
LZH				LR	LR		
	comp=Z,4µm,18.2s						
LZH				LR	LR		
	comp=Z,10µm,17.5s						
LOT	**Lotru**	**81.92**	**19**	⇑P	**P**	**21 08 46.3**	**+3.3**
PURM	**Purcari**	**81.98**	**14**	⇓P	P	21 08 48.6	+5.6
COVR	**Voineasa-Covas**	**82.01**	**17**	⇑P	**P**	**21 08 43.5**	**+0.2**
TDK	**Taldyqorghan**	**82.02**	**340**	⇑*i*P	**P**	**21 08 43.6**	**+0.2**
	comp=Z,76nm,2.0s						
TDK				LR	LR	21 47 14.7	
	comp=Z,2µm,16.6s						
TDK	**Taldyqorghan**	**82.02**	**340**	*c i*P	**P**	**21 08 43.6**	**+0.2**
TDK				pmax	pmax		
	comp=Z,76nm,2.0s						
GHRR		**82.02**	**16**	⇑P	**P**	**21 08 40.3**	**-3.0**
LZDM	**Lanzhou Array**	**82.08**	**319**	P	**P**	**21 08 43.1**	**-1.1**
	comp=Z,3.8nm,0.5s,baz=48,slow=2.2,SNR=5.7						
	comp=Z,3.8nm,0.5s						
PLOR	**Plostina**	**82.09**	**16**	⇑P	**P**	**21 08 44.1**	**+0.3**
PLOR	**Plostina**	**82.09**	**16**	⇑P	**P**	**21 08 44.1**	**+0.3**
VRI	**Vrincioaia**	**82.09**	**16**	⇑P	**P**	**21 08 43.1**	**-0.6**
VRI	**Vrincioaia**	**82.09**	**16**	⇑P	**P**	**21 08 43.1**	**-0.6**
PANC	**Panciu**	**82.16**	**16**	⇓P	P	21 08 49.4	+5.4
HERR	**Herculane**	**82.18**	**20**	⇑P	**P**	**21 08 47.6**	**+3.5**
MLR	**Muntele Rosu**	**82.31**	**17**	LR	LR	21 46 09.8	
	comp=Z,10µm,19.2s,baz=348,slow=36						
MLR	**Muntele Rosu**	**82.31**	**17**	IAMs_20	IAMs_20	21 44 43.5	
	comp=Z,11µm,22.0s						
AVE	**Averroes**	**82.42**	**46**	IAMs_20	IAMs_20	21 43 40.4	
	comp=Z,7µm,18.0s						
YHNB	**Yeheng**	**82.60**	**300**	IAMs_20	IAMs_20	21 41 11.7	
	comp=Z,3µm,22.0s						
NACB	**Ninganchiao**	**82.86**	**299**	P	**P**	**21 08 48.4**	**+0.3**
CFR	**Carcaliu**	**83.01**	**16**	⇑P	**P**	**21 08 51.0**	**+2.5**
CFR	**Carcaliu**	**83.01**	**16**	⇑P	**P**	**21 08 51.0**	**+2.5**
HUMR	**Humele**	**83.05**	**18**	⇑P	**P**	**21 08 49.6**	**+0.9**
TLCR		**83.11**	**15**	⇓P	P	21 08 39.8	-9.3
TLCR		**83.11**	**15**	⇓P	P	21 08 39.8	-9.2
BOVS	**Bovan**	**83.21**	**20**	⇓P	**P**	**21 08 49.1**	**-0.4**
CHKK	**Chushkaly**	**83.42**	**341**	*e*P	**P**	**21 08 50.9**	**+0.2**
CHKK	**Chushkaly**	**83.42**	**341**	*e*P	**P**	**21 08 50.8**	**+0.2**
SSLB	**Suanglung**	**83.53**	**300**	P	**P**	**21 08 52.3**	**+0.7**
SHLS	**Shalkode**	**83.54**	**339**	⇑*i*P	**P**	**21 08 51.0**	**-0.5**
	comp=Z,61nm,1.9s						
SHLS	**Shalkode**	**83.54**	**339**	*c i*P	**P**	**21 08 51.0**	**-0.5**
SHLS				pmax	pmax		
	comp=Z,61nm,1.9s						
UZB	**Uzynbulak**	**83.65**	**339**	*e*P	**P**	**21 08 52.1**	**0.0**
UZB	**Uzynbulak**	**83.65**	**339**	*e*P	**P**	**21 08 52.0**	**0.0**
TIRR	**Tirgusor**	**83.75**	**16**	IAMs_20	IAMs_20	21 46 24.6	
	comp=Z,7µm,22.0s						
PDG	**Podgorica**	**83.77**	**23**	IAMs_20	IAMs_20	21 49 32.7	
	comp=Z,9µm,18.0s						
PDG	**Podgorica**	**83.77**	**23**	⇓P	**P**	**21 08 52.4**	**-0.1**
SATY	**Saty**	**83.87**	**340**	⇑*i*P	**P**	**21 08 53.2**	**0.0**
	comp=Z,56nm,1.7s						
SATY	**Saty**	**83.87**	**340**	*c i*P	**P**	**21 08 53.2**	**0.0**
SATY				pmax	pmax		
	comp=Z,56nm,1.7s						
MD01	**Midelt array s**	**83.98**	**44**	P	**P**	**21 08 52.2**	**-1.7**
ERBR	**Yeremizino-Bor**	**84.02**	**7**	*e*P	**P**	**21 08 54.7**	**+1.0**
ERBR				*e*S	**S**	**21 19 16.3**	**-1.1**
ERBR				pmax	pmax		
	comp=Z,56nm,1.2s						
AAA	**Alma-Ata**	**84.05**	**341**	*e*P	**P**	**21 08 54.1**	**+0.1**
	comp=Z,40nm,1.4s						
AAA				LR	LR	21 48 04.5	
AAA	**Alma-Ata**	**84.05**	**341**	*e*P	**P**	**21 08 54.1**	**+0.1**
AAA				pmax	pmax		
	comp=Z,40nm,1.4s						
MDOK	**Medeo**	**84.07**	**341**	*e*P	**P**	**21 08 54.2**	**0.0**
MDOK				*e*S	**S**	**21 19 16.2**	**-2.1**
MDOK				LR	LR	21 48 02.6	
MDOK	**Medeo**	**84.07**	**341**	*e*P	**P**	**21 08 54.2**	**0.0**
MDOK				*e*S	**S**	**21 19 16.2**	**-2.1**
SIM	**Simferopol'**	**84.13**	**11**	*e*P	**P**	**21 08 58.4**	**+4.1**
SIM				*e*S	**S**	**21 19 22.0**	**+3.5**
SIM				*e*PS	**PnS**	**21 20 08.0**	**-2.9**
SIM				pmax	pmax		
	comp=Z,50nm,1.4s						
SIM				pmax	pmax		
	comp=Z,140nm,5.1s						
SIM				MLR	MLR		
	comp=Z,6µm,16.0s						
TNSS	**Tian-Shan**	**84.21**	**341**	*e*P	**P**	**21 08 55.1**	**-0.2**
TNSS	**Tian-Shan**	**84.21**	**341**	*e*P	**P**	**21 08 55.0**	**-0.2**
ENH	**Enshi**	**84.25**	**312**	IAMs_20	IAMs_20	21 47 39.5	
	comp=Z,4µm,22.0s						
CNSH	**ChangSha**	**84.27**	**308**	P	**P**	**21 08 51.4**	**-3.9**
CNSH				S	**S**	**21 19 18.8**	**-1.6**
CNSH				pmax	pmax		
	comp=Z,23nm,1.1s						
CNSH				LR	LR		
	comp=Z,1µm,20.9s						
CNSH				LR	LR		
	comp=Z,2µm,30.4s						
CNSH				LR	LR		
	comp=Z,3µm,32.7s						
ANN	**Anapa**	**84.66**	**9**	*e*P	**P**	**21 08 54.5**	**-2.4**
ANN				*e*S	**SKSac**	**21 19 16.8**	**-3.7**
ANN				pmax	pmax		
	comp=Z,44nm,1.0s						
GOF	**Gofitskoye**	**84.85**	**5**	*ce*P	**P**	**21 08 57.6**	**-0.3**
AAK	**Ala-Archa**	**85.09**	**342**	LR	LR	21 50 17.5	
	comp=Z,4µm,21.0s,baz=16,slow=38						
AAK	**Ala-Archa**	**85.09**	**342**	P	**P**	**21 08 56.9**	**-2.5**
AAK				IAmb	IAmb	21 09 19.2	
	comp=Z,33nm,1.4s						
AAK	**Ala-Archa**	**85.09**	**342**	IAMs_20	IAMs_20	21 51 24.1	
	comp=Z,4µm,20.0s						
AAK	**Ala-Archa**	**85.09**	**342**	*i* P	**P**	**21 08 58.5**	**-0.9**
AAK				pmax	pmax		
	comp=Z,27nm,1.7s						
LABN	**Labinsk**	**85.11**	**7**	*e*P	**P**	**21 09 00.2**	**+1.0**
LABN				*e*S	**S**	**21 19 24.9**	**-3.3**
LABN				pmax	pmax		
	comp=Z,27nm,0.8s						
CUC	**Castrocucco**	**85.15**	**26**	IAMs_20	IAMs_20	21 47 03.4	
	comp=Z,10µm,21.0s						
KKAR	**Karatay Array**	**85.35**	**345**	P	**P**	**21 08 56.7**	**-3.8**
KKAR	**Karatay Array**	**85.35**	**345**	P	**P**	**21 08 56.7**	**-3.8**
GOMU	**GeErMu**	**85.37**	**325**	P	**P**	**21 08 59.0**	**-2.2**
GOMU				pP	PcP	21 09 02.8	-1.4
GOMU				sP	sP	21 09 06.1	+0.1
GOMU				S	**SKSac**	**21 19 26.6**	**+0.4**
GOMU				LR	LR		
	comp=Z,3µm,19.0s						
GOMU				LR	LR		
	comp=Z,4µm,19.4s						
GOMU				LR	LR		
	comp=Z,4µm,18.9s						
DZA	**Taraz**	**85.42**	**345**	*e*P	**P**	**21 09 01.0**	**+0.1**
DZA	**Taraz**	**85.42**	**345**	*e*P	**P**	**21 09 01.0**	**+0.1**
LPAZ	**La Paz**	**85.42**	**122**	P	**P**	**21 09 01.8**	**0.0**
	comp=Z,17nm,1.0s,baz=344,slow=5.6,SNR=17						
LPAZ				LR	LR	21 50 19.0	
	comp=Z,3µm,21.0s,baz=332,slow=38						
	comp=Z,17nm,1.0s						
LPAZ	**La Paz**	**85.42**	**122**	IAmb	IAmb	21 09 27.1	
	comp=Z,45nm,1.2s						
LPAZ	**La Paz**	**85.42**	**122**	*e*P	**P**	**21 09 01.5**	**-0.3**
LPAZ	**La Paz**	**85.42**	**122**	P	**P**	**21 09 02.0**	**+0.2**
WUS	**Wushi**	**85.45**	**339**	IAMs_20	IAMs_20	21 49 33.7	
	comp=Z,5µm,22.0s						
BRLS	**Borolday**	**85.53**	**346**	⇑*i*P	**P**	**21 09 02.8**	**+1.3**
BRLS	**Borolday**	**85.53**	**346**	*c i*P	**P**	**21 09 02.7**	**+1.3**
SANVU	**Saraoutou**	**85.58**	**240**	IAMs_20	IAMs_20	21 37 16.9	
	comp=Z,4µm,21.0s						
PB18	**Visviri**	**85.77**	**124**	IAMs_20	IAMs_20	21 54 51.6	
	comp=Z,3µm,19.0s						
KIV	**Kislovodsk**	**85.93**	**6**	IAMs_20	IAMs_20	21 50 28.7	
	comp=Z,6µm,20.0s						
KIV	**Kislovodsk**	**85.93**	**6**	⇓P	**P**	**21 09 03.2**	**-0.3**
KIV	**Kislovodsk**	**85.93**	**6**	*e*P	**P**	**21 09 02.6**	**-0.8**
KIV				*e*		21 19 27.5	
KIV				*e*SS	SS	21 25 13.9	+1.7
KIV				pmax	pmax		
	comp=Z,33nm,1.1s						
KIV				pmax	pmax		
	comp=Z,42nm,3.8s						
KIV				MLR	MLR		
	comp=Z,4µm,20.0s						
KVAR	**Kislovodsk Arr**	**85.93**	**6**	LR	LR	21 50 56.0	
	comp=Z,6µm,19.1s,baz=260,slow=38						
SOC	**Sochi**	**86.08**	**8**	*e*P	**P**	**21 09 02.9**	**-1.1**
SOC				*e*		21 12 22.6	
SOC				*e*S	**SKSac**	**21 19 28.9**	**-0.7**
SOC				*e*SS	**SS**	**21 25 22.5**	**+8.3**
SOC				pmax	pmax		
	comp=Z,20nm,0.8s						
SOC				MLR	MLR		
	comp=Z,8µm,18.0s						
SHA1	**Shidzhatmaz**	**86.14**	**6**	*i* P	**P**	**21 09 03.3**	**-1.4**
KBZ	**Khabaz**	**86.17**	**5**	P	**P**	**21 09 04.8**	**+0.4**
	comp=Z,7.9nm,0.9s,baz=344,slow=4.7,SNR=9.8						
KBZ				LR	LR	21 51 00.5	
	comp=Z,7µm,18.9s,baz=352,slow=38						
	comp=Z,7.9nm,0.9s						
KBZ	**Khabaz**	**86.17**	**5**	*ce*P	**P**	**21 09 05.8**	**+1.4**
KBZ				pmax	pmax		
	comp=Z,29nm,1.2s						
PB12	**IPOC Station P**	**86.17**	**125**	IAmb	IAmb	21 09 09.1	
	comp=Z,53nm,1.1s						
TIP	**Timpagrande**	**86.17**	**26**	IAMs_20	IAMs_20	21 50 05.3	
	comp=Z,8µm,19.0s						
CHM	**Chimkent**	**86.26**	**346**	*e*P	**P**	**21 09 05.0**	**0.0**
CHM				LR	LR	21 49 16.4	
	comp=Z,2µm,20.8s						
CHM	**Chimkent**	**86.26**	**346**	*e*P	**P**	**21 09 05.0**	**0.0**
CD2	**Chengdu**	**86.36**	**316**	P	**P**	**21 09 03.3**	**-2.4**
CD2				S	**S**	**21 19 36.9**	**-4.2**
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
CD2				LR	LR		
	comp=Z,4µm,19.6s						
CD2				LR	LR		
	comp=Z,8µm,21.6s						
CD2				LR	LR		
	comp=Z,5µm,24.5s						
PB16	**IPOC Station P**	**86.37**	**124**	IAMs_20	IAMs_20	21 51 01.0	
	comp=Z,4µm,21.0s						
NCK	**Nalchik**	**86.44**	**5**	*i* P	**P**	**21 09 06.7**	**+0.8**
NCK				pmax	pmax		
	comp=Z,57nm,1.6s						
NEUR	**Neytrino**	**86.62**	**6**	*i* P	**P**	**21 09 05.4**	**-1.6**
NEUR				pmax	pmax		
	comp=Z,41nm,1.6s						
KEST	**Kesra**	**87.04**	**32**	P	**P**	**21 09 10.3**	**+1.2**
	comp=Z,14nm,0.9s,baz=316,slow=3.7,SNR=6.3						
KEST				LR	LR	21 47 58.7	
	comp=Z,5µm,19.6s,baz=335,slow=36						
	comp=Z,14nm,0.9s						
KEST	**Kesra**	**87.04**	**32**	IAmb	IAmb	21 09 19.8	
	comp=Z,51nm,1.2s						
VAE	**Valguarnera**	**87.07**	**28**	LR	LR	21 49 04.6	
	comp=Z,5µm,19.1s,baz=348,slow=36						
MAK	**Makhachkala**	**87.12**	**2**	*e*P	**P**	**21 09 05.6**	**-3.6**
MAK				*e*		21 19 29.4	
MAK				*e*SS	SS	21 25 23.7	-5.8
MAK				*e*SSS	SSS	21 28 57.5	
MAK				pmax	pmax		
	comp=Z,431nm,1.2s						
PB11	**IPOC Station P**	**87.47**	**125**	IAmb	IAmb	21 09 29.7	
	comp=Z,40nm,0.9s						
GO01	**Chusmiza**	**87.64**	**125**	IAmb	IAmb	21 09 46.0	
	comp=Z,89nm,2.0s						
KSH	**Kashi**	**87.79**	**340**	P	**P**	**21 09 14.3**	**+1.7**
KSH				pmax	pmax		
	comp=Z,8.0nm,1.7s						
KSH				LR	LR		
	comp=Z,4µm,18.6s						
KSH				LR	LR		
	comp=Z,4µm,18.5s						
KSH				LR	LR		
	comp=Z,5µm,20.3s						
GULI	**GuiLin**	**87.95**	**308**	P	**P**	**21 09 13.4**	**0.0**
GULI				S	**S**	**21 19 54.4**	**-2.0**
GULI				pmax	pmax		
	comp=Z,19nm,1.1s						
GULI				pmax	pmax		
	comp=Z,780nm,11.9s						
GULI				LR	LR		
	comp=Z,1µm,19.8s						
GULI				LR	LR		
	comp=Z,2µm,23.3s						
GULI				LR	LR		
	comp=Z,2µm,22.1s						
PB08	**IPOC Station P**	**88.05**	**125**	IAmb	IAmb	21 09 41.3	
	comp=Z,24nm,1.1s						
SACV	**Santiago Islan**	**88.57**	**68**	IAMs_20	IAMs_20	21 43 33.1	
	comp=Z,6µm,21.0s						
AKT	**Akhty**	**88.61**	**2**	*e*P	**P**	**21 09 16.1**	**-0.4**
AKT						21 12 45.9	
AKT				*e*PPP	PPP	21 14 37.9	
AKT				*e*S	**SKSac**	**21 19 44.5**	**-0.9**
AKT				pmax	pmax		
	comp=Z,75nm,2.2s						
AKT				MLR	MLR		
	comp=Z,9µm,18.0s						
WDD	**Wied Dalam**	**88.63**	**28**	IAMs_20	IAMs_20	21 51 30.7	
	comp=Z,6µm,18.0s						
GYA	**Guiyang**	**88.79**	**312**	⇑P	**P**	**21 09 16.8**	**-0.8**
GYA				S	**S**	**21 20 02.9**	**-1.8**
GYA				pmax	pmax		
	comp=Z,23nm,1.1s						
ANTO	**Ankara**	**88.93**	**13**	IAMs_20	IAMs_20	21 54 09.6	
	comp=Z,6µm,18.0s						
SIV	**San Ignacio**	**89.14**	**116**	P	**P**	**21 09 19.0**	**-0.1**
	comp=Z,4.9nm,0.7s,baz=309,slow=5.5,SNR=6.4						
SIV				LR	LR	21 54 24.1	
	comp=Z,5µm,18.2s,baz=352,slow=39						
	comp=Z,4.9nm,0.7s						
BR131	**Keskin Array S**	**89.20**	**13**	IAmb	IAmb	21 09 50.8	
	comp=Z,38nm,1.6s						
BRTR	**Keskin Array B**	**89.20**	**13**	P	**P**	**21 09 19.1**	**-0.2**
	comp=Z,6.0nm,1.2s,baz=354,slow=2.5,SNR=11						
BRTR				LR	LR	21 51 43.4	
	comp=Z,4µm,20.6s,baz=343,slow=37						
	comp=Z,6.0nm,1.2s						
KIRS	**Kirsehir-Merke**	**89.82**	**13**	⇑P	**P**	**21 09 20.8**	**-1.4**
PTLB	**Pontes e Lacer**	**89.83**	**115**	IAmb	IAmb	21 09 43.3	
	comp=Z,41nm,1.1s						
RAO	**Raoul Island**	**89.95**	**221**	LR	LR	21 45 49.3	
	comp=Z,806nm,18.9s,baz=339,slow=33						
BNN	**Bunyan**	**90.35**	**11**	IAmb	IAmb	21 09 58.3	
	comp=Z,38nm,1.4s						
MANEM	**Manem**	**90.56**	**343**	IAmb	IAmb	21 09 45.1	
	comp=Z,140nm,1.5s						
ISP	**Isparta**	**90.57**	**16**	IAMs_20	IAMs_20	21 53 25.4	
	comp=Z,6µm,20.0s						
PZH	**PanZhiHua**	**91.04**	**316**	P	**P**	**21 09 26.9**	**-1.2**
PZH				S	**S**	**21 20 25.3**	**-0.2**
PZH				pmax	pmax		
	comp=Z,20nm,1.0s						
PZH				LR	LR		
	comp=Z,2µm,20.4s						
PZH				LR	LR		
	comp=Z,2µm,23.5s						
PZH				LR	LR		
	comp=Z,3µm,20.2s						
SHAA	**Shahritus**	**91.15**	**346**	IAmb	IAmb	21 10 04.1	
	comp=Z,137nm,1.3s						
TGY	**Tagaytay City**	**91.20**	**294**	LR	LR	21 50 32.8	
	comp=Z,1µm,18.2s,baz=67,slow=36						
GURO	**Guroymak-BITLI**	**91.26**	**6**	IAmb	IAmb	21 09 55.8	
	comp=Z,44nm,1.8s						
DZM	**Mont Dzumac**	**91.39**	**236**	*e*SS	SS	21 26 41.1	+6.5
	comp=Z,2µm,29.4s						
DZM				*e*LQ	LQ	21 34 15.9	
	comp=Z,7µm,31.8s						
DZM				*e*LR	LR	21 38 28.2	
	comp=Z,4µm,21.9s						
OUENC	**Ouen Island, N**	**91.46**	**236**	P	**P**	**21 09 32.9**	**+3.2**
JAY	**Jayapura**	**91.66**	**268**	LR	LR	21 42 31.2	
	comp=Z,10µm,21.4s,baz=39,slow=30						
KMI	**Kunming**	**91.77**	**314**	P	**P**	**21 09 34.8**	**+3.2**
KMI				S	**S**	**21 20 34.8**	**+2.4**

KMI				pmax	pmax		
	comp=Z,16nm,0.9s						
KMI				LR	LR		
	comp=Z,2µm,21.9s						
KMI				LR	LR		
	comp=Z,4µm,21.2s						
KMI				LR	LR		
	comp=Z,4µm,22.0s						
IDI	Anoyia	91.90	21	LR	LR	21 53 16.6	
	comp=Z,4µm,19.6s,baz=332,slow=37						
GO02	Mina Guanaco	91.97	128	IAmb	IAmb	21 09 39.0	
	comp=Z,24nm,1.1s						
KARP	Karpathos	92.14	19	IAMs_20	IAMs_20	21 49 31.9	
	comp=Z,9µm,18.0s						
MARD	Mardin	92.39	8	IAmb	IAmb	21 09 40.8	
	comp=Z,42nm,1.3s						
LSA	Lhasa	92.55	325	IAMs_20	IAMs_20	21 57 12.8	
	comp=Z,4µm,19.0s						
LSA	Lhasa	92.55	325	P	P	21 09 21.0	-14
PMG	Port Moresby	92.81	259	LR	LR	21 45 22.4	
	comp=Z,4µm,20.3s,baz=62,slow=32						
PMG	Port Moresby	92.81	259	IAMs_20	IAMs_20	21 43 07.6	
	comp=Z,5µm,22.0s						
MBO	M'Bour	92.92	63	IAMs_20	IAMs_20	21 46 25.6	
	comp=Z,8µm,21.0s						
BBTS	Babate	92.95	63	LR	LR	21 47 40.1	
	comp=Z,9µm,21.4s,baz=276,slow=33						
QIZ	Qiongzhong	93.40	305	IAMs_20	IAMs_20	21 53 20.0	
	comp=Z,3µm,20.0s						
QIZ	Qiongzhong	93.40	305	P	P	21 09 36.3	-2.6
QIZ				S	S	21 20 42.0	-4.6
QIZ				SS	SS	21 27 06.3	+4.4
QIZ				LR	LR		
	comp=Z,1µm,19.2s						
QIZ				LR	LR		
	comp=Z,2µm,20.4s						
QIZ				LR	LR		
	comp=Z,2µm,20.2s						
TNCH	TengChong	93.75	317	P	P	21 09 40.5	-0.2
TNCH				pmax	pmax		
	comp=Z,23nm,1.3s						
CSS	Mathiatis	93.82	14	IAMs_20	IAMs_20	21 53 31.1	
	comp=Z,6µm,22.0s						
DAV	Davao City (W)	93.91	286	LR	LR	21 43 57.3	
	comp=Z,5µm,21.9s,baz=52,slow=30						
DAV	Davao City (W)	93.91	286	IAMs_20	IAMs_20	21 43 23.3	
	comp=Z,6µm,22.0s						
NIL	Nilore	94.02	341	IAMs_20	IAMs_20	21 55 25.2	
	comp=Z,6µm,21.0s						
AC05	El Transito	94.67	131	IAmb	IAmb	21 09 51.5	
	comp=Z,23nm,1.0s						
DHRM	DHARAMSHALA	94.68	338	IAmb	IAmb	21 10 05.7	
	comp=Z,149nm,2.2s						
KOHI	KOHIMA	94.98	321	IAmb	IAmb	21 09 56.3	
	comp=Z,36nm,1.8s						
GUWA	GUWAHATI	95.51	323	IAmb	IAmb	21 10 06.0	
	comp=Z,72nm,2.0s						
SMLA	Simla	95.54	337	IAmb	IAmb	21 10 01.7	
	comp=Z,64nm,1.6s						
CO06	Fray Jorge	95.55	133	IAMs_20	IAMs_20	21 48 14.6	
	comp=Z,3µm,19.0s						
MMAI	Mount Meron Ar	96.04	13	LR	LR	21 56 03.3	
	comp=Z,4µm,21.6s,baz=346,slow=37						
CO03	El Pedregal	96.14	132	IAMs_20	IAMs_20	21 51 12.0	
	comp=Z,2µm,18.0s						
CO02	Combarbal	96.29	133	IAMs_20	IAMs_20	21 48 37.2	
	comp=Z,3µm,20.0s						
BDFB	Brasilia	96.66	106	LR	LR	21 56 46.5	
	comp=Z,3µm,21.1s,baz=328,slow=37						
ASF	Jabal al Asfar	97.07	11	LR	LR	21 56 10.3	
	comp=Z,3µm,21.8s,baz=346,slow=37						
TAM	Tamanrasset	97.18	41	IAMs_20	IAMs_20	21 52 14.8	
	comp=Z,5µm,20.0s						
FAKI	Fak Fak	97.39	274	IAMs_20	IAMs_20	21 49 38.8	
	comp=Z,4µm,20.0s						
TNTI	Ternate	97.67	280	IAMs_20	IAMs_20	21 44 57.1	
	comp=Z,4µm,22.0s						
GHAJ	Ghor Haditha	97.75	13	IAMs_20	IAMs_20	21 56 58.9	
	comp=Z,4µm,21.0s						
VA03	San Esteban	97.80	133	IAMs_20	IAMs_20	21 49 24.6	
	comp=Z,2µm,19.0s						
VA05	Santo Domingo	98.05	134	IAMs_20	IAMs_20	21 52 45.3	
	comp=Z,2µm,21.0s						
MT05	Renca	98.23	134	IAMs_20	IAMs_20	21 49 00.1	
	comp=Z,2µm,21.0s						
MT16	CCHEN	98.36	133	IAMs_20	IAMs_20	21 49 41.5	
	comp=Z,2µm,20.0s						
MT09	Talagante	98.44	134	IAMs_20	IAMs_20	21 53 04.5	
	comp=Z,2µm,19.0s						
MT13	San Alfonso	98.73	133	IAMs_20	IAMs_20	21 49 52.4	
	comp=Z,3µm,20.0s						
CHTO	Chiang Mai	98.97	314	IAMs_20	IAMs_20	21 58 45.0	
	comp=Z,3µm,18.0s						
CHTO	Chiang Mai	98.97	314	P	P	21 10 03.3	-1.0
CHTO	Chiang Mai	98.97	314	P	Pdif	21 10 04.8	+0.5
EIL	Elat	99.26	14	LR	LR	21 58 27.9	
	comp=Z,2µm,19.3s,baz=347,slow=38						
CMAR	Chiang Mai Arr	99.28	314	P	Pdif	21 10 04.0	-1.6
	comp=Z,1.6nm,0.9s,baz=20,slow=5.1,SNR=11						
CMAR				LR	LR	21 55 49.2	
	comp=Z,2µm,19.8s,baz=55,slow=36						
	comp=Z,1.6nm,0.9s						
CMAR	Chiang Mai Arr	99.28	314	P	Pdif	21 10 03.5	-2.1
CMAR	Chiang Mai Arr	99.28	314	*i* P	Pdif	21 10 05.3	-0.3
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CPUP	Villa Florida	99.43	120	P	Pdif	21 10 05.7	-0.3
	comp=Z,1.3nm,0.7s,baz=311,slow=9.3,SNR=3.0						
CPUP				LR	LR	22 02 29.6	
	comp=Z,2µm,18.6s,baz=344,slow=40						
	comp=Z,1.3nm,0.7s						
CPUP	Villa Florida	99.43	120	IAmb	IAmb	21 13 00.3	
	comp=Z,22nm,1.6s						
URZ	Urewera	99.80	220	LR	LR	21 48 23.0	
	comp=Z,2µm,20.0s,baz=29,slow=31						
BI05	Punta Hualpn	99.92	137	IAMs_20	IAMs_20	21 49 17.2	
	comp=Z,2µm,21.0s						
TOZ	Tahuroa Road	100.02	221	IAMs_20	IAMs_20	21 49 14.7	
	comp=Z,2µm,19.0s						
CTA	Charters Tower	101.50	253	P	Pdif	21 10 13.3	-2.0
	comp=Z,4.9nm,1.2s,baz=27,slow=18,SNR=3.1						
CTAO	Charters Tower	101.50	253	IAMs_20	IAMs_20	21 48 16.2	
	comp=Z,5µm,21.0s						
SAUI	Saumlaki	101.85	272	IAMs_20	IAMs_20	21 52 17.4	
	comp=Z,3µm,20.0s						
LR04	Corral	102.45	139	IAMs_20	IAMs_20	21 51 45.0	
	comp=Z,3µm,21.0s						
LR03	Panguipulli	102.70	138	IAMs_20	IAMs_20	21 52 16.6	
	comp=Z,3µm,22.0s						
SPB	Sao Paulo	103.06	111	IAMs_20	IAMs_20	21 59 28.7	
	comp=Z,5µm,20.0s						
LL03	Petrohue	103.92	139	IAMs_20	IAMs_20	21 48 35.2	
	comp=Z,2µm,21.0s						
UOSS	Minazif	104.94	354	IAMs_20	IAMs_20	22 01 21.0	
	comp=Z,3µm,22.0s						
BKB	Balikpapan	105.77	288	IAMs_20	IAMs_20	21 52 54.1	
	comp=Z,2µm,20.0s						
TRQA	Tornquist	106.18	130	IAMs_20	IAMs_20	21 54 31.3	
	comp=Z,3µm,20.0s						
RAYN	Ar Rayn	106.42	5	IAMs_20	IAMs_20	22 05 01.2	
	comp=Z,3µm,22.0s						
SOEI	Soe	107.69	276	IAMs_20	IAMs_20	21 51 29.5	
	comp=Z,5µm,22.0s						
HYB	Hyderabad	108.16	332	*e*PKiKP	PKiKP	21 14 51.3	-0.4
HYB				*e*sPKiKP	sPKiKP	21 14 55.9	-0.8
HYB				*e*SKSac	SKSac	21 21 23.8	-1.2
HYB				IVMs_BB	IVMs_BB	22 02 51.5	
	comp=Z,872nm,19.8s						
WRAB	Tennant Creek	108.82	261	IAMs_20	IAMs_20	21 52 55.6	
	comp=Z,6µm,21.0s						
KULM	Kulim	109.73	305	IAMs_20	IAMs_20	22 08 49.6	
	comp=Z,2µm,20.0s						
CAN	Canberra	111.23	240	IAMs_20	IAMs_20	21 53 47.4	
	comp=Z,2µm,20.0s						
ASCN	Ascension	112.16	75	IAMs_20	IAMs_20	21 58 39.1	
	comp=Z,7µm,20.0s						
BKNI	Bangkinang	113.70	302	IAMs_20	IAMs_20	22 09 20.1	
	comp=Z,3µm,20.0s						
EDA	Edea	116.06	46	IAMs_20	IAMs_20	22 04 34.1	
	comp=Z,4µm,19.0s						
PALK	Pallekele	116.92	326	IAMs_20	IAMs_20	22 16 06.2	
	comp=Z,3µm,20.0s						
ATD	Arta Tunnel	118.12	8	IAMs_20	IAMs_20	22 08 10.5	
	comp=Z,2µm,20.0s						
MBWA	Marble Bar	119.06	271	IAMs_20	IAMs_20	22 01 44.5	
	comp=Z,4µm,20.0s						
FURI	Furi	120.22	13	IAMs_20	IAMs_20	22 14 46.5	
	comp=Z,3µm,18.0s						
SHEL	Horse Pasture	123.66	73	IAMs_20	IAMs_20	22 05 30.6	
	comp=Z,5µm,19.0s						
MBAR	Mbarara	127.78	25	IAMs_20	IAMs_20	22 17 18.0	
	comp=Z,3µm,19.0s						
NWAO	Narrogin (SRO)	128.79	263	IAMs_20	IAMs_20	22 05 02.6	
	comp=Z,4µm,22.0s						
SBA	Scott Base	133.55	195	IAMs_20	IAMs_20	22 06 22.5	
	comp=Z,3µm,18.0s						
VNDA	Vanda	134.21	196	PKhKP	PKPpre	21 15 32.6	
	comp=Z,0.3nm,0.3s,baz=263,slow=10.0,SNR=7.1						
TSUM	Tsumeb	139.55	52	IAMs_20	IAMs_20	22 09 32.8	
	comp=Z,4µm,22.0s						
QSPA	South Pole Qui	140.07	180	PKhKP	PKPpre	21 15 45.7	
	comp=Z,4.1nm,1.1s,baz=66,slow=0.6,SNR=5.0						
QSPA	South Pole Qui	140.07	180		PKPdf	21 15 49.1	-1.5
LSZ	Lusaka	140.77	35	PKP	PKPdf	21 15 54.1	+0.5
	comp=Z,1.7nm,0.6s,baz=23,slow=3.6,SNR=5.4						
LSZ	Lusaka	140.77	35	IAMs_20	IAMs_20	22 17 35.5	
	comp=Z,5µm,21.0s						
LSZ	Lusaka	140.77	35	PKIKP	PKPdf	21 15 54.1	+0.5
LSZ				MLR	MLR		
	comp=Z,5µm,21.0s						
WIN	Windhoek	142.09	55	IAMs_20	IAMs_20	22 13 45.6	
	comp=Z,4µm,20.0s						
VNA3	Neumayer Olymp	146.05	150	⇑P	PKPbc	21 16 01.5	-0.4
	comp=Z,26nm,0.8s						
CASY	Casey	146.12	219	IAMs_20	IAMs_20	22 14 16.1	
	comp=Z,2µm,20.0s						
VNA1	Neumayer--Stat	146.57	149	⇑P	PKPbc	21 16 03.5	0.0
VNA2	Neumayer--Watz	146.82	149	⇑P	PKPbc	21 16 04.0	-0.2
	baz=269,slow=1.1						
SNAA	Sanae	148.13	151	⇑P	PKPbc	21 16 07.5	-0.4
SNAA	Sanae	148.13	151	PKPbc	PKPbc	21 16 07.6	-0.2
	comp=Z,10nm,1.1s,baz=254,slow=2.3,SNR=3.2						
SNAA	Sanae	148.13	151		PKPbc	21 16 07.1	-0.8
SNAA				IAMs_20	IAMs_20	22 26 26.3	
	comp=Z,4µm,19.0s						
ABPO	Ambohimpanom	148.73	6	IAMs_20	IAMs_20	22 27 41.6	
	comp=Z,3µm,22.0s						
TROLL	Troll, Antarti	149.65	153	⇑P	PKPbc	21 16 11.3	-0.4
BOSA	Boshof	151.23	51	PKPbc	PKPbc	21 16 17.1	+0.2
	comp=Z,6.1nm,0.8s,baz=342,slow=2.5,SNR=11						
BOSA	Boshof	151.23	51		PKPbc	21 16 16.4	-0.4
BOSA	Boshof	151.23	51	PKIKP	PKPbc	21 16 16.5	-0.4
ELIB	Princess Elisa	155.09	160	*d*PKPdf	PKPdf	21 16 18.3	+3.1
ELIB				*d*PKP	PKPab	21 16 40.4	+0.5
SYO	Syowa Base	160.49	168	⇓*e*PKPdf	PKPdf	21 16 21.0	-0.7
SYO	Syowa Base	160.49	168	⇑*e*pPKPdf	pPKPdf	21 16 26.4	+1.0

IDC ***23*** *21:00:47.6±1.0, 5°.58S×153°.45E, h0^{km}, mb4.0/12, mbtmp4.0/13, ML2.4/1, MS5.3/1, Error ellipse: s-maj=37.8km s-min=17.2km az=108.0*

NEIC ***23*** *21:00:49.5±1.9, 5°.54S±0°.04×153°.4E±0°.1, h10^{km}±1^{km}, mb4.2/18, Error ellipse: s-maj=19.2km s-min=6.7km az=83.0*

ISC 23 21:00:54.0±0.7**, 5°.50S**±0°.09×**153°.3E**±0°.1**, h43^{km}, n46,** σ**1^s.07**/46**, mb4.0**/21**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.71	320	Pn	Pn	21 01 20.0	-1.4
PMG	Port Moresby	7.20	237	Pn	Pn	21 02 36.6	-0.2
	3.8nm,0.3s,baz=47,slow=12,SNR=8.1						
PMG				Sn	Sn	21 03 55.7	-1.6
	3.6nm,0.3s,baz=292,slow=23,SNR=9.6						
	15nm,0.5s						
PATS	Pohnpei	13.25	22	Pn	Pn	21 03 57.1	-2.5
MTN	Manton Dam	23.03	250	P	P	21 05 57.0	+1.4
MTN				IAmb	IAmb	21 06 15.9	
	comp=Z,4.3nm,0.8s						
WB0	Warramunga Arr	23.21	231	P	P	21 05 56.2	-1.2
WB0				IAmb	IAmb	21 06 03.2	
	comp=Z,5.4nm,1.0s						
WR8	Warramunga Arr	23.24	230	P	P	21 05 56.8	-0.8
WR8				IAmb	IAmb	21 06 26.5	
	comp=Z,5.9nm,1.1s						
WRAB	Tennant Creek	23.34	230	P	P	21 05 58.1	-0.6
WRAB				IAmb	IAmb	21 06 09.4	
	comp=Z,4.1nm,0.9s						
WRA	Warramunga Arr	23.35	230	P	P	21 05 57.9	-0.9
	comp=Z,1.4nm,0.7s,baz=55,slow=10,SNR=7.0						
	comp=Z,1.4nm,0.7s						
WRA	Warramunga Arr	23.35	230	P	P	21 05 57.7	-1.1
INKA	Innaminka	25.12	207	P	P	21 06 12.9	-2.0
INKA				IAmb	IAmb	21 06 30.1	
	comp=Z,2.3nm,0.8s						
AS31	Alice Springs	25.96	224	P	P	21 06 21.4	-1.4
ASAR	Alice Springs	25.97	224	P	P	21 06 22.4	-0.4
	comp=Z,0.7nm,0.6s,baz=59,slow=9.3,SNR=12						
	comp=Z,0.7nm,0.6s						
ASAR	Alice Springs	25.97	224	P	P	21 06 22.7	-0.1
KNRA	Kununurra	26.10	245	P	P	21 06 24.5	+0.5
KNRA				IAmb	IAmb	21 07 02.2	
	comp=Z,4.1nm,0.7s						
STKA	Stephens Creek	28.43	201	P	P	21 06 43.6	-1.1
	comp=Z,1.6nm,0.8s,baz=32,slow=6.8,SNR=3.9						
	comp=Z,1.6nm,0.8s						
STKA	Stephens Creek	28.43	201	P	P	21 06 44.1	-0.6
FITZ	Fitzroy Crossi	29.75	243	P	P	21 06 55.8	-0.8
ASAJ	Asahikawa	50.32	350	LR	LR	21 26 31.6	
	comp=Z,3µm,21.3s,baz=62,slow=31						
PEA0B	Petropavlovsk-	58.51	3	P	P	21 10 46.7	+0.9
PETK	Petropavlovsk-	58.51	3	P	P	21 10 46.6	+0.8
	comp=Z,2.1nm,0.5s,baz=164,slow=6.1,SNR=11						
	comp=Z,2.1nm,0.5s						
PETK	Petropavlovsk-	58.51	3	P	P	21 10 46.1	+0.4
CMAR	Chiang Mai Arr	58.61	295	P	P	21 10 50.0	+2.9
	comp=Z,0.7nm,0.4s,baz=116,slow=5.3,SNR=6.4						
	comp=Z,0.7nm,0.4s						
CMAR	Chiang Mai Arr	58.61	295	P	P	21 10 48.2	+1.1
SONM	Songino Array	67.17	328	P	P	21 11 44.6	+0.9
	comp=Z,0.7nm,0.6s,baz=137,slow=5.0,SNR=6.6						
	comp=Z,0.7nm,0.6s						
SONM	Songino Array	67.17	328	P	P	21 11 43.5	-0.1
SONM				IAmb	IAmb	21 11 46.8	
	comp=Z,4.6nm,1.4s						
J18K	Innoko River	78.33	21	P	P	21 12 48.2	-1.2
TIXI	Tiksi	78.65	352	P	P	21 12 52.0	+1.0
	comp=Z,0.6nm,0.4s,baz=182,slow=2.6,SNR=6.1						
SUA	Susitna One	79.40	24	P	P	21 12 55.3	-0.2
KTH	Kantishna Hill	80.48	22	P	P	21 13 00.6	-0.6
C19K	Lookout Ridge	81.14	15	P	P	21 13 05.3	+0.7
C19K				IAmb	IAmb	21 13 29.4	
	comp=Z,1.6nm,0.9s						
MKAR	Makanchi Array	81.17	319	P	P	21 13 06.2	+0.9
	comp=Z,0.7nm,0.8s,baz=96,slow=8.0,SNR=9.2						
	comp=Z,0.7nm,0.8s						
MKAR	Makanchi Array	81.17	319	P	P	21 13 05.8	+0.6
MAKZ	Makanchi	81.38	319	P	P	21 13 07.1	+0.8
MAKZ				IAmb	IAmb	21 13 29.7	
	comp=Z,3.1nm,1.1s						
ZALV	Zalesovo Beam	82.00	326	P	P	21 13 09.3	-0.1
	comp=Z,1.6nm,0.6s,baz=107,slow=5.3,SNR=5.8						
	comp=Z,1.6nm,0.6s						
ILAR	Eielson Array	82.63	22	P	P	21 13 11.8	-0.7
	comp=Z,0.3nm,0.6s,baz=256,slow=5.7,SNR=2.8						
	comp=Z,0.3nm,0.6s						
B21K	Ikpikpuk River	82.82	16	P	P	21 13 14.3	+1.0
J25K	Salcha River,	83.12	22	P	P	21 13 15.8	+0.7
QSPA	South Pole Qui	84.46	180	P	P	21 13 23.1	+1.0
	comp=Z,1.0nm,0.6s,baz=26,slow=1.8,SNR=7.7						
	comp=Z,1.0nm,0.6s						
QSPA	South Pole Qui	84.46	180	P	P	21 13 21.8	-0.2
QSPA				IAmb	IAmb	21 13 42.1	
	comp=Z,3.4nm,1.1s						
KURK	Kurchatov	84.61	322	P	P	21 13 22.6	-0.3
KURBB	Kurchatov Arra	84.64	322	P	P	21 13 23.0	0.0
	comp=Z,1.0nm,0.7s,baz=105,slow=4.1,SNR=4.4						
	comp=Z,1.0nm,0.7s						
BVAR	Borovoye Array	90.09	323	P	P	21 13 49.3	0.0
	comp=Z,1.9nm,0.7s,baz=104,slow=6.3,SNR=7.4						
	comp=Z,1.9nm,0.7s						
AKBB	Malin Array Si	115.34	324	PKiKP	PKPdf	21 19 32.1	+1.1
KIEV	Kiev	115.35	324	PKiKP	PKPdf	21 19 32.1	+1.1
TORD	Torodi Ar. Bea	150.97	287	PKPbc	PKiKP	21 20 43.7	-0.1
	comp=Z,1.6nm,0.6s,baz=54,slow=2.6,SNR=11						
TORD	Torodi Ar. Bea	150.97	287		PKPbc	21 20 43.4	+0.2

IDC ***23*** *21:15:08.2±1.9, 34°.23N×89°.75E, h0^{km}, mb3.7/4, mbtmp3.4/8, ML3.1/4, Error ellipse: s-maj=51.4km s-min=30.1km az=60.0*

ISC 23 21:15:09.8±1.3**, 34°.3N**±0°.2×**89°.8E**±0°.2**, h10^{km}, n9,** σ**1^s.53**/9**, mb4.0**/3**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	13.69	338	Pn	Pn	21 18 22.7	-1.2
	baz=142,slow=14,SNR=1.7						
	0.1nm,0.6s						
CMAR	Chiang Mai Arr	17.79	150	P	Pn	21 19 17.6	0.0
	0.1nm,0.3s,baz=342,slow=11,SNR=5.2						
	0.5nm,0.6s						
KURBB	Kurchatov Arra	18.25	337	P	Pn	21 19 24.9	+1.9
	baz=143,slow=12,SNR=3.5						
	0.4nm,0.7s						
SONM	Songino Array	18.39	38	P	Pn	21 19 25.0	+0.1
	0.1nm,0.3s,baz=226,slow=13,SNR=5.1						
	0.4nm,0.6s						
ZALV	Zalesovo Beam	19.94	351	P	P	21 19 42.2	+0.5
	5.0nm,0.8s,baz=171,slow=11,SNR=18						
	5.0nm,0.8s						
BVAR	Borovoye Array	23.24	329	P	P	21 20 18.9	+1.8
	0.5nm,0.5s,baz=131,slow=10,SNR=4.5						
	0.5nm,0.5s						
HFS	Hagfors	54.16	323	P	P	21 24 35.2	+0.3
	0.9nm,0.6s,baz=86,slow=8.8,SNR=5.8						
	0.9nm,0.6s						
NB2	NORSAR Subarra	55.24	325	P	P	21 24 41.1	-1.7
	comp=Z,2.1nm,0.8s,baz=81,slow=7.4						
NOA	NORSAR Array B	55.24	325	P	P	21 24 41.2	-1.5
	comp=Z,1.0nm,0.9s,baz=80,slow=7.1,SNR=4.8						
	comp=Z,1.0nm,0.9s						

IDC ***23*** *21:19:35.1±0.5, 7°.31S×130°.03E, h0^{km}, mb4.5/15, mbtmp4.5/17, ML5.0/2, Error ellipse: s-maj=30.5km s-min=13.0km az=77.0*

NEIC ***23*** *21:19:42.2±1.8, 7°.36S±0°.06×129°.92E±0°.06, h47^{km}±6^{km}, mb4.6/45, Error ellipse: s-maj=9.9km s-min=6.8km az=142.0*

DJA ***23*** *21:19:43.9±0.2, 8°S±2°×13°0E±°, h110^{km}±8^{km}, M4.7/23, mb4.8/23, mB5.2/12, MLv4.9/19, Mw(mB)4.6/12, MwMwp5.2/1, Mwp5.4/1*

ISC 23 21:19:41.3±0.3**, 7°.51S**±0°.04×**130°.08E**±0°.05**, h50^{km}, n172,** σ**2^s.09**/166**, mb4.6**/43**, 4D, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.30	111		Pn	21 20 07.4	+4.3
SAUI	Saumlaki	1.30	111	P	Pn	21 20 07.6	+4.5
SAUI	Saumlaki	1.30	111	P	Pn	21 20 07.6	+4.5
BNDI	Bandanaira	2.97	357	P	Pn	21 20 28.9	+2.9
BNDI	Bandanaira	2.97	357	P	Pn	21 20 29.0	+2.9
AAI	Ambon	4.24	334	P	Pn	21 20 45.9	+2.5
MSAI	Masohi	4.29	344	P	Pn	21 20 47.5	+3.4
KRAI	Karang Ratu	4.49	338	P	Pn	21 20 50.7	+3.8
DRS	Darwin Rock St	4.96	171	P	Pn	21 20 55.7	+2.4
FAKI	Fak Fak	5.05	25	Pn	Pn	21 20 54.0	-0.6
FAKI	Fak Fak	5.05	25	P	Pn	21 20 54.1	-0.4
FAKI	Fak Fak	5.05	25	P	Pn	21 20 54.3	-0.2
NLAI	Namlea	5.17	325	P	Pn	21 21 00.7	+4.4
KMPI	Kaimana, Papua	5.26	44	P	Pn	21 20 57.6	+0.2
MTN	Manton Dam	5.40	169		Pn	21 21 01.8	+2.4
SOEI	Soe	6.16	248	Pn	Pn	21 21 14.1	+4.1
SOEI	Soe	6.16	248	P	Pn	21 21 15.1	+5.2
SOEI	Soe	6.16	248	P	Pn	21 21 14.8	+4.9
	1.0nm2µm111nm,0.6s						
SIJI	Sorong	6.70	10	P	Pn	21 21 17.5	+0.2
SWI	Sorong	6.71	10	P	Pn	21 21 18.5	+1.2
	0.7nm2µm82nm,0.5s						
SANI	Sanana	6.78	323	P	Pn	21 21 24.0	+5.7
SANI	Sanana	6.78	323	P	Pn	21 21 23.6	+5.3
	0.4nm66nm,0.6s						
BATI	Baumata	6.88	247	Pn	Pn	21 21 24.9	+5.2
	11nm,0.3s,baz=154,slow=3.7,SNR=17						
BATI				Sn	Sn	21 22 35.0	-1.8
	12nm,0.3s,baz=124,slow=13,SNR=3.6						
BATI	Baumata	6.88	247	P	Pn	21 21 25.4	+5.7
	0.6nm59nm,0.5s						
RKPI	Ransiki, Papua	7.23	35	P	Pn	21 21 25.1	+0.7
MWPI	Manokwari, Pap	7.64	31	P	Pn	21 21 31.1	+1.0
	197nm,0.8s						
MMRI	Maumere	7.84	261	Pn	Pn	21 21 36.1	+3.3
KNRA	Kununurra	8.22	189	Pn	Pn	21 21 39.8	+1.7
EDFI	Ende, Flores	8.39	261	P	Pn	21 21 46.4	+5.9
BSSI	Bau Bau, Buton	9.62	278	P	Pn	21 22 04.0	+6.8
	61nm,1.1s						
BASI	Baing, Sumba	9.77	253	P	Pn	21 22 03.5	+4.3
	2µm106nm,0.5s						
BKSI	Bulukumba	10.13	282	P	Pn	21 22 10.0	+5.8
LBFI	Labuhan Bajo,	10.13	264	P	Pn	21 22 09.8	+5.5
	43nm,0.6s						
WBSI	Waikabubak, Su	10.78	258	P	Pn	21 22 16.8	+3.7
	48nm,0.7s						
SPSI	Sidrap Palu	10.84	288	P	Pn	21 22 20.4	+6.4
	47nm,0.7s						
MRSI	Marisa	11.35	314	P	Pn	21 22 26.7	+5.8
	6µm753nm56nm,1.0s						
FITZ	Fitzroy Crossi	11.38	202	Pn	Pn	21 22 20.8	-0.5
	16nm,0.3s,baz=32,slow=10,SNR=118						
FITZ				Sn	Sn	21 24 21.4	-5.6
	14nm,0.3s,baz=115,slow=9.9,SNR=9.4						
	31nm,0.3s						
FITZ	Fitzroy Crossi	11.38	202	Pn	Pn	21 22 21.2	-0.1
JAY	Jayapura	11.69	65	P	Pn	21 22 26.0	+0.4
	19nm,0.9s						
DBNI	Kabupaten Domp	11.69	264	P	Pn	21 22 29.5	+3.9
	19nm,0.6s						
PLAI	Plampang	12.25	263	P	Pn	21 22 35.0	+1.8
WB0	Warramunga Arr	12.88	161	Pn	Pn	21 22 39.6	-2.2
WRAB	Tennant Creek	13.03	162	Pn	Pn	21 22 42.1	-1.7
WRAB	Tennant Creek	13.03	162	P	Pn	21 22 41.6	-2.2
WRA	Warramunga Arr	13.03	162	Pn	Pn	21 22 42.0	-1.9
	3.4nm,0.3s,baz=346,slow=13,SNR=97						
WRA				Sn	Sn	21 25 00.6	-6.8
	6.1nm,0.3s,baz=346,slow=21,SNR=19						
WB1	Warramunga Ar.	13.05	162	P	Pn	21 22 41.8	-2.3
WR8	Warramunga Arr	13.10	161	Pn	Pn	21 22 42.3	-2.5
TWSI	Taliwang, Sumb	13.12	264	P	Pn	21 22 47.7	+2.6
COEN	Coen	14.37	118	Pn	Pn	21 23 00.8	-1.2
COEN	Coen	14.37	118	P	Pn	21 23 01.1	-1.0
JAGI	Jajag, Banyuwa	15.80	265	Pn	Pn	21 23 20.4	-0.3
JAGI	Jajag, Banyuwa	15.80	265	P	P	21 23 22.4	-1.3
QIS	Mount Isa	15.92	146	P	Pn	21 23 20.7	-1.4
AS31	Alice Springs	16.48	168	Pn	Pn	21 23 27.6	-1.7
ASAR	Alice Springs	16.48	168	Pn	Pn	21 23 28.7	-0.5
	2.0nm,0.3s,baz=349,slow=10,SNR=76						
ASAR				Sn	Sn	21 26 24.4	-7.0
	2.0nm,0.3s,baz=347,slow=24,SNR=7.8						
	3.2nm,0.4s						
ASAR	Alice Springs	16.48	168	Pn	Pn	21 23 28.6	-0.7
MBWA	Marble Bar	16.86	215	Pn	Pn	21 23 33.3	-0.6
MBWA	Marble Bar	16.86	215	P	Pn	21 23 33.5	-0.4
PMG	Port Moresby	17.00	98	P	P	21 23 39.7	+2.7
	12nm,0.5s,baz=284,slow=1.9,SNR=5.4						
PSA00	Pilbara Seismi	17.12	214	Pn	Pn	21 23 37.5	+0.3
PSA00	Pilbara Seismi	17.12	214	P	P	21 23 37.9	-0.4
MTSU	Mount Surprise	17.43	129	P	Pn	21 23 41.3	+0.2
KKM	Kota Kinabalu	19.30	314	P	P	21 24 02.3	-0.1
KKM				IAmb	IAmb	21 24 14.7	
	comp=Z,45nm,1.1s						
KKM	Kota Kinabalu	19.30	314	P	Pn	21 24 04.6	+0.7
CTA	Charters Tower	20.05	130	P	Pn	21 24 14.7	+2.0
	comp=Z,3.3nm,0.7s,baz=307,slow=14,SNR=3.8						
SBUM	Sibu	20.38	298	P	Pn	21 24 15.4	-1.1
SBUM	Sibu	20.38	298	P	Pn	21 24 17.6	+1.1
MEEK	Meekatharra	21.92	208	P	P	21 24 33.8	+3.2
INKA	Innaminka	22.52	155	P	P	21 24 39.7	+2.7
FORT	Forrest	23.23	184	P	P	21 24 46.4	+2.2
FORT				IAmb	IAmb	21 25 12.0	
	comp=Z,12nm,0.7s						
MORW	Morawa	25.20	210	P	P	21 25 05.6	+3.2
MORW				IAmb	IAmb	21 25 19.3	
	comp=Z,16nm,1.1s						
BBOO	Buckleboo	25.78	168	P	P	21 25 09.8	+2.2
BBOO				IAmb	IAmb	21 25 12.4	
	comp=Z,9.8nm,0.7s						
STKA	Stephens Creek	26.52	158	P	P	21 25 17.2	+2.9
	comp=Z,1.7nm,0.4s,baz=340,slow=8.9,SNR=7.6						
	comp=Z,1.7nm,0.4s						
STKA	Stephens Creek	26.52	158	P	P	21 25 16.1	+1.8
NWAO	Narrogin (SRO)	27.96	203	P	P	21 25 29.4	+2.2
NWAO				IAmb	IAmb	21 26 06.2	
	comp=Z,22nm,1.2s						
KULM	Kulim	32.00	293	P	P	21 26 03.6	+0.4
CAN	Canberra	32.67	151	P	P	21 26 14.0	+5.0
TOO	Toolangi	33.03	157	P	P	21 26 15.2	+3.2
GSI	Gunungsitoli	33.58	284	P	P	21 26 14.8	-2.2

GSI				IAmb	IAmb	21 26 17.7	
	comp=Z,15nm,1.1s						
CM31	Chiang Mai Arr	40.12	310	P	P	21 27 12.2	-0.3
CM31				IAmb	IAmb	21 27 13.1	
	comp=Z,7.4nm,0.9s						
CMAR	Chiang Mai Arr	40.12	310	P	P	21 27 12.2	-0.3
	comp=Z,3.8nm,0.6s,baz=139,slow=7.6,SNR=31						
CMAR				PcP	PcP	21 29 17.9	+1.5
	comp=Z,0.8nm,0.6s,baz=137,slow=3.0,SNR=4.2						
	comp=Z,3.8nm,0.6s						
CMAR	Chiang Mai Arr	40.12	310	P	P	21 27 10.3	-2.2
CHTO	Chiang Mai	40.33	311	P	P	21 27 13.0	-1.3
CHTO				IAmb	IAmb	21 27 14.7	
	comp=Z,8.9nm,0.8s						
NJ2	Nanjing	40.77	345	*e*P	P	21 27 19.3	+1.6
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PZH	PanZhiHua	43.58	322	P	P	21 27 41.5	+0.7
MJAR	Matsushiro Arr	44.48	9	P	P	21 27 45.8	-2.0
	comp=Z,2.7nm,0.6s,baz=184,slow=9.2,SNR=7.5						
	comp=Z,2.7nm,0.6s						
MJB9	Matsu-Tunnel	44.48	9	P	P	21 27 47.7	-0.1
MJB9				IAmb	IAmb	21 28 08.1	
	comp=Z,22nm,1.5s						
JYT	Yasato	44.53	12	P	P	21 27 47.4	-0.7
XAN	Xi'an	45.93	335	⇓P	P	21 27 57.8	-1.6
XAN				pmax	pmax		
	comp=Z,13nm,0.7s						
HNS	HongShan	46.93	343	⇓P	P	21 28 06.3	-0.8
HNS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SHL	Shillong	49.60	313	P	P	21 28 26.5	-1.6
LZDM	Lanzhou Array	49.85	332	P	P	21 28 29.8	-0.3
	comp=Z,2.8nm,0.4s,baz=159,slow=13,SNR=6.4						
	comp=Z,2.8nm,0.4s						
HHC	Hu-ho-hao-te	51.05	342	*e*P	P	21 28 42.1	+3.4
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,270nm,5.7s						
USRK	Ussuriysk Ar.	51.50	2	P	P	21 28 41.3	-0.5
	comp=Z,3.1nm,0.6s,baz=175,slow=6.0,SNR=6.5						
	comp=Z,3.1nm,0.6s						
LSA	Lhasa	52.62	317	P	P	21 28 50.2	-0.9
LSA				IAmb	IAmb	21 28 52.2	
	comp=Z,3.2nm,0.6s						
BNX	BinXian	53.06	358	⇓P	P	21 28 53.0	-0.4
BNX				pmax	pmax		
	comp=Z,7.0nm,2.1s						
GTA	Gaotai	54.45	331	P	P	21 29 04.5	+0.6
GTA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HEH	HeiHe	57.57	358	*e*P	P	21 29 22.9	-2.9
HEH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ULN	Ulaanbaatar	58.77	342	P	P	21 29 33.0	-1.4
ULN				IAmb	IAmb	21 29 35.3	
	comp=Z,5.9nm,0.8s						
SONM	Songino Array	58.95	342	P	P	21 29 35.6	0.0
	comp=Z,1.3nm,0.4s,baz=162,slow=6.9,SNR=18						
	comp=Z,1.3nm,0.4s						
SONM	Songino Array	58.95	342	P	P	21 29 35.5	-0.2
SONM				IAmb	IAmb	21 29 36.5	
	comp=Z,4.7nm,1.3s						
WMQ	Urumqi	63.86	327	*e*P	P	21 30 09.5	+0.6
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
PEA0B	Petropavlovsk-	64.78	18	P	P	21 30 15.3	+0.7
PETK	Petropavlovsk-	64.78	18	P	P	21 30 15.2	+0.6
	comp=Z,8.7nm,0.7s,baz=184,slow=4.7,SNR=19						
	comp=Z,8.7nm,0.7s						
PETK	Petropavlovsk-	64.78	18	P	P	21 30 14.7	+0.1
NIL	Nilore	67.61	311	P	P	21 30 33.4	+0.2
NIL				IAmb	IAmb	21 30 36.5	
	comp=Z,5.2nm,0.7s						
KSH	Kashi	68.44	318	P	P	21 30 38.9	+0.5
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MKAR	Makanchi Array	68.69	327	P	P	21 30 39.6	-0.1
	comp=Z,8.8nm,0.5s,baz=118,slow=7.8,SNR=213						
	comp=Z,8.8nm,0.5s						
MKAR	Makanchi Array	68.69	327	P	P	21 30 39.3	-0.4
MAKZ	Makanchi	68.87	327	P	P	21 30 39.7	-1.1
YAK	Yakutsk	69.33	360	P	P	21 30 42.4	-0.9
MANEM	Manem	70.47	314	P	P	21 30 51.0	-0.2
MANEM				IAmb	IAmb	21 30 54.8	
	comp=Z,5.2nm,0.7s						
KBL	Kabul	71.15	310	P	P	21 30 55.0	-0.3
KBL				IAmb	IAmb	21 30 58.3	
	comp=Z,4.2nm,0.6s						
VNDA	Vanda	71.94	173	P	P	21 31 01.4	+2.4
	comp=Z,0.6nm,0.5s,baz=334,slow=6.0,SNR=6.4						
	comp=Z,0.6nm,0.5s						
VNDA	Vanda	71.94	173	P	P	21 31 01.1	+2.2
ZAA0	Zalesovo Array	72.07	334	P	P	21 30 59.0	-1.1
ZAA0				IAmb	IAmb	21 30 59.7	
	comp=Z,9.7nm,1.4s						
ZALV	Zalesovo Beam	72.07	334	P	P	21 30 58.8	-1.3
	comp=Z,1.9nm,0.4s,baz=127,slow=5.7,SNR=13						
	comp=Z,1.9nm,0.4s						
ZALV	Zalesovo Beam	72.07	334	P	P	21 30 58.4	-1.7
GAR	Garm	72.08	315	P	P	21 31 00.1	-0.6
CHGR	Chuyangaron	72.75	314	P	P	21 31 03.1	-1.5
KURBB	Kurchatov Arra	72.98	329	P	P	21 31 05.1	-0.5
	comp=Z,5.2nm,0.7s,baz=128,slow=4.8,SNR=69						
	comp=Z,5.2nm,0.7s						
KURK	Kurchatov	72.99	329	P	P	21 31 04.6	-1.0
KURK				IAmb	IAmb	21 31 07.8	
	comp=Z,9.5nm,0.8s						
KK31	Karatay Array	73.77	319	P	P	21 31 09.7	-0.8
KKAR	Karatay Array	73.77	319	P	P	21 31 09.4	-1.1
HRA	Herat	76.33	308	P	P	21 31 24.9	-0.8
BVAR	Borovoye Array	78.53	328	P	P	21 31 36.6	-0.7
	comp=Z,1.7nm,0.6s,baz=126,slow=7.5,SNR=13						
	comp=Z,1.7nm,0.6s						
BORK	Borovoye	78.58	328	P	P	21 31 36.9	-0.6
BORK				IAmb	IAmb	21 31 37.8	
	comp=Z,5.2nm,0.9s						
TIXI	Tiksi	79.00	360	P	P	21 31 38.4	-1.0
TIXI				IAmb	IAmb	21 31 40.8	
	comp=Z,13nm,1.5s						
QSPA	South Pole Qui	82.47	180	P	P	21 32 00.3	+1.9
	comp=Z,2.8nm,0.6s,baz=314,slow=5.9,SNR=18						
	comp=Z,2.8nm,0.6s						
QSPA	South Pole Qui	82.47	180	P	P	21 31 60.0	+1.6
QSPA				IAmb	IAmb	21 32 00.9	
	comp=Z,3.8nm,0.8s						
AB31	Akbulak array	82.95	322	P	P	21 31 59.8	-1.2
AB31				IAmb	IAmb	21 32 03.3	
	comp=Z,5.5nm,1.1s						
ABKAR	Akbulak array	82.95	322	P	P	21 31 59.8	-1.2
RAYN	Ar Rayn	88.02	294	P	P	21 32 26.8	0.0
RAYN				IAmb	IAmb	21 32 28.1	
	comp=Z,2.6nm,0.6s						
ELIB	Princess Elisa	88.03	197	*d*P	P	21 32 25.9	-0.1
ILAR	Eielson Array	93.77	25	P	P	21 32 51.3	-1.3
	comp=Z,0.8nm,1.0s,baz=259,slow=4.2,SNR=5.5						
	comp=Z,0.8nm,1.0s						
ILAR	Eielson Array	93.77	25	P	P	21 32 51.1	-1.5
SNAA	Sanae	95.19	193	P	P	21 33 00.2	+1.0
	comp=Z,0.9nm,0.3s,baz=126,slow=4.5,SNR=5.8						
	comp=Z,0.9nm,0.3s						
SNAA	Sanae	95.19	193	P	P	21 33 00.7	+1.5
SNAA				IAmb	IAmb	21 33 02.1	
	comp=Z,2.6nm,0.9s						
FINES	FINESS Array B	103.25	331	PKiKP	PKiKP	21 37 55.3	+0.9
	comp=Z,0.6nm,0.7s,baz=49,slow=3.5,SNR=5.3						
FINES	FINESS Array B	103.25	331		PKiKP	21 37 54.2	-0.2
YKA	Yellowknife Ar	108.17	26	PKiKP	PKiKP	21 38 03.7	+0.2
	comp=Z,0.3nm,0.6s,baz=296,slow=2.3,SNR=6.0						
RONA	Rosalia, Austr	111.46	318	*e*PKiKP	PKiKP	21 38 11.3	+1.1
	comp=Z,4.1nm,0.5s						
RONA				*e*PKKP	PKKPbc	21 49 00.4	-6.2
	comp=Z,2.3nm,0.7s						
CONA	Conrad Observa	111.69	319	*e*PKiKP	PKiKP	21 38 09.0	-1.7
	comp=Z,5.7nm,1.5s						
CONA				*e*PKKP	PKKPab	21 49 14.2	+0.6
	comp=Z,2.3nm,0.7s						
ARSA	Arzberg	112.07	318	*e*PKiKP	PKiKP	21 38 11.2	-0.2
	comp=Z,1.2nm,0.6s						
ARSA				*e*PKKP	PKKPbc	21 48 56.2	-8.4
	comp=Z,6.1nm,1.7s						
SOKA	Soboth	112.53	318	*e*PKiKP	PKiKP	21 38 12.0	-0.3
	comp=Z,4.6nm,1.0s						
SOKA				*e*PKKP	PKKPbc	21 48 59.8	-3.3
	comp=Z,2.6nm,0.8s						
GERES	GERESS Array B	112.86	320	PKiKP	PKiKP	21 38 13.3	+0.4
	comp=Z,1.2nm,0.6s,baz=70,slow=2.0,SNR=6.9						
OBKA	Obir	112.89	317	*e*pPKiKP	pPKiKP	21 38 28.4	+0.4
	comp=Z,3.8nm,0.9s						
OBKA				*e*PKKP	PKKPbc	21 48 54.8	-7.2
	comp=Z,5.9nm,1.0s						
BIOA	Bad Ischl, Aus	113.20	319	*e*PKiKP	PKiKP	21 38 10.2	-3.3
	comp=Z,3.2nm,1.0s						
BIOA				*e*PKKP	PKKPbc	21 49 03.4	+2.5
	comp=Z,7.4nm,1.4s						
MYKA	Terra Mystica	113.47	318	*e*PKKP	PKKPbc	21 48 59.2	-0.7
	comp=Z,2.6nm,0.6s						
LESA	Schwarzleotal	113.90	319	*e*PKiKP	PKiKP	21 38 15.2	+0.2
	comp=Z,0.1nm,0.3s						
LESA				*e*PKKP	PKKPbc	21 48 48.4	-10
	comp=Z,4.5nm,1.2s						
ABTA	Abfaltersbach	114.19	318	*e*PKiKP	PKPdf	21 38 15.5	0.0
	comp=Z,1.1nm,0.6s						
ABTA				*e*PKKP	PKKPbc	21 48 55.0	-2.5
	comp=Z,13nm,1.9s						
WTTA	Wattenberg	114.62	319	*i* PKiKP	PKPdf	21 38 16.7	+0.2
	comp=Z,2.0nm,0.3s						
WATA	Walderalm	114.64	319	*i* PKP	PKiKP	21 38 15.9	-0.6
	comp=Z,1.3nm,0.4s						
SQTA	Sankt Quirin	114.92	319	*e*PKKP	PKKPdf	21 49 17.8	-0.9
	comp=Z,7.3nm,1.1s						
RETA	Reutte	115.13	319	*i* PKiKP	PKiKP	21 38 17.2	-0.1
	comp=Z,0.7nm,0.4s						
RETA				*e*PKKP	PKKPab	21 48 57.4	-1.0
	comp=Z,8.6nm,1.6s						
FETA	Feichten	115.29	319	*i* PKiKP	PKPdf	21 38 17.9	+0.2
	comp=Z,0.8nm,0.4s						
DAVA	Damuels	115.76	319	*i* PKiKP	PKPdf	21 38 18.8	+0.2
	comp=Z,3.1nm,0.4s						
PDAR	Pinedale Array	117.19	46	PKP	PKPdf	21 38 21.5	-0.1
	comp=Z,0.5nm,0.5s,baz=295,slow=5.6,SNR=6.1						
FCC	Fort Churchill	118.78	24	PKPdf	PKPdf	21 38 23.1	-0.7
KEST	Kesra	119.19	307	PKPdf	PKiKP	21 38 26.5	+1.0
EKA	Eskdalemuir Ar	119.65	331	PKP	PKiKP	21 38 25.8	+0.1
	comp=Z,0.3nm,0.3s,baz=34,slow=3.5,SNR=4.1						
EPLO	Experimental L	124.31	33	PKPdf	PKPdf	21 38 34.9	+0.1
TXAR	Lajitas Array	125.12	59	PKP	PKiKP	21 38 37.9	+0.5
	comp=Z,0.1nm,0.4s,baz=247,slow=1.1,SNR=3.6						
TXAR	Lajitas Array	125.12	59		PKiKP	21 38 37.6	+0.2
TORD	Torodi Ar. Bea	128.98	281	PKP	PKPdf	21 38 44.9	+0.3
	comp=Z,2.0nm,0.7s,baz=94,slow=3.3,SNR=11						
MD01	Midelt array s	131.19	308	PKPdf	PKiKP	21 38 50.5	+1.0
J59A	Piesco	138.20	27	PKPdf	PKPdf	21 39 02.2	+0.9
ITAB	Concordia	145.40	177	PKPdf	PKPab	21 39 16.0	+1.4
CPUP	Villa Florida	145.60	168	PKPbc	PKPab	21 39 17.0	+1.6
	comp=Z,2.1nm,0.6s,baz=167,slow=1.2,SNR=8.5						
CPUP	Villa Florida	145.60	168		PKPab	21 39 16.9	+1.6
LPAZ	La Paz	150.27	143	PKPbc	PKiKP	21 39 31.0	+1.4
	comp=Z,3.0nm,0.4s,baz=180,slow=4.0,SNR=13						
LPAZ	La Paz	150.27	143		PKiKP	21 39 30.4	+0.8

KRSC ***23*** *21:37:37.1±0.9, 55°.57N×162°.66E, h21^{km}±14^{km}, Ml5.0, Felt [III-IV] at kordon Kronoki; [II-III] at Ust-Kamchatsk.*

MOS ***23*** *21:37:39.6±1.0, 55°.68N×162°.47E, h28^{km}, mb4.8/30, Error ellipse: s-maj=6.5km s-min=3.7km az=75.3*

NEIC ***23*** *21:37:41.9±1.4, 55°.8N±0°.1×162°.2E±0°.2, h29^{km}±4^{km}, mb4.7/177, Error ellipse: s-maj=16.7km s-min=11.1km az=147.0*

IDC ***23*** *21:37:45.4±2.8, 55°.81N×162°.26E, h58^{km}±25^{km}, mb4.0/31, mbtmp4.3/34, ML3.9/2, MS4.6/2, Error ellipse: s-maj=12.8km s-min=10.3km az=135.0*

ISC 23 21:37:39.0±0.8**, 55°.66N**±0°.03×**162°.50E**±0°.03**, h14**^{km}±4^{km}**, n640,** σ**2^{s}.27**/518**, mb4.7**/136**, 1C-3D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.58	18	PN	Pg	21 37 49.1	-1.2
KBTR	Krutoberegovo	0.58	18	*e*P	Pg	21 37 49.1	-1.2
KBG	Krutoberegovo	0.61	11	PN	Pg	21 37 49.8	-1.0
KBG				S	Sg	21 37 59.5	+0.6
KBG	Krutoberegovo	0.61	11	*e*P	Pg	21 37 49.8	-1.0
KBG				*e*S	Sg	21 37 59.5	+0.6
ZLN	Zelenaya	1.02	291	PN	Pb	21 37 58.3	-0.1
ZLN	Zelenaya	1.02	291	*e*P	Pb	21 37 58.4	-0.1
BZGR	Bezymyannyi-Gr	1.06	286	PN	Pb	21 37 58.7	-0.4
BZGR				S	Sn	21 38 14.4	+0.4
BZGR	Bezymyannyi-Gr	1.06	286	*e*P	Pb	21 37 58.7	-0.4
BZGR				*e*S	Sn	21 38 14.4	+0.4
CIRR	Tsirk	1.09	296	PN	Pb	21 37 59.2	-0.4
CIRR	Tsirk	1.09	296	*e*P	Pb	21 37 59.3	-0.4
SMKR	Semkarok	1.09	328	PN	Pb	21 37 58.6	-1.0
SMKR	Semkarok	1.09	328	*e*P	Pb	21 37 58.6	-1.0
BZWR	Bezymyannyi-We	1.17	286	PN	Pn	21 38 00.6	-0.5
BZWR	Bezymyannyi-We	1.17	286	*e*P	Pn	21 38 00.7	-0.5
MKZ	Mys Kozlova	1.19	202	PN	Pn	21 37 59.4	-1.8
MKZ	Mys Kozlova	1.19	202	*e*P	Pn	21 37 59.4	-1.8
KLY	Klyuchi	1.23	303	PN	Pn	21 37 59.6	-2.1
KLY				S	Sb	21 38 16.3	-1.3
KLY	Klyuchi	1.23	303	*e*P	Pn	21 37 59.6	-2.1
KLY				*e*S	Sb	21 38 16.3	-1.3
KIRR	Kirishev	1.25	284	PN	Pn	21 38 01.8	-0.4
KIRR	Kirishev	1.25	284	*e*P	Pn	21 38 01.9	-0.4
TUMD	Tumrok D	1.28	250	PN	Pn	21 38 01.9	-0.6
TUMD	Tumrok D	1.28	250	*e*P	Pn	21 38 01.9	-0.6
KMNR	Kamenistaya	1.28	275	PN	Pn	21 38 02.6	+0.1
KMNR	Kamenistaya	1.28	275	*e*P	Pn	21 38 02.7	+0.1
KZV	Kizimen	1.37	247	PN	Pn	21 38 03.5	-0.3
KZV	Kizimen	1.37	247	*e*P	Pn	21 38 03.6	-0.3
TUMR	Tumrok	1.39	255	PN	Pb	21 38 04.6	-0.2
TUMR	Tumrok	1.39	255	*e*P	Pb	21 38 04.6	-0.2
KOZ	Kozyrevsk	1.53	286	PN	Pb	21 38 06.8	-0.3
KOZ				S	Sg	21 38 28.9	+0.6
KOZ	Kozyrevsk	1.53	286	*e*P	Pb	21 38 06.9	-0.3
KOZ				*e*S	Sg	21 38 28.9	+0.6
SRDR	Sredinnyy	1.70	294	PN	Pn	21 38 09.0	+0.8
SRDR	Sredinnyy	1.70	294	*e*P	Pn	21 38 09.0	+0.8
BKI	Bering	2.03	102	PN	Pn	21 38 12.5	-0.2
BKI	Bering	2.03	102	*e*P	Pn	21 38 12.6	-0.2
ESO	Esso	2.16	279	PN	Pn	21 38 14.9	+0.4
ESO	Esso	2.16	279	*e*P	Pn	21 38 15.0	+0.4
KII	Karymskiy	2.40	229	PN	Pn	21 38 18.0	+0.2
KII	Karymskiy	2.40	229	*e*P	Pn	21 38 18.1	+0.2
SPN	Mys Shipunski	2.95	210	PN	Pn	21 38 23.6	-1.7
SPN	Mys Shipunski	2.95	210	*e*P	Pn	21 38 23.7	-1.7
SPN				*e*S	Sn	21 38 57.9	-2.6
SDLR	Sedlovina	3.19	223	PN	Pn	21 38 28.9	+0.2
SDLR	Sedlovina	3.19	223	*e*P	Pn	21 38 28.9	+0.2
KRX	Arik	3.22	226	PN	Pn	21 38 29.8	+0.6
KRX	Arik	3.22	226	*e*P	Pn	21 38 29.8	+0.6
KRER	Koryakskii	3.22	224	PN	Pn	21 38 29.9	+0.7
KRER	Koryakskii	3.22	224	*e*P	Pn	21 38 29.9	+0.7
SMAR	Somma	3.23	223	PN	Pn	21 38 29.5	+0.1
SMAR	Somma	3.23	223	*e*P	Pn	21 38 29.6	+0.1
AVH	Avacha	3.25	224	PN	Pn	21 38 30.2	+0.6
AVH	Avacha	3.25	224	*e*P	Pn	21 38 30.3	+0.6
UGLR	Uglovaya	3.26	223	PN	Pn	21 38 30.0	+0.3
UGLR	Uglovaya	3.26	223	*e*P	Pn	21 38 30.1	+0.3
KOK	Koryaka	3.27	225	PN	Pn	21 38 30.4	+0.5
KOK	Koryaka	3.27	225	*e*P	Pn	21 38 30.4	+0.5
GNL	Ganaly	3.30	235	PN	Pn	21 38 31.2	+1.0
GNL	Ganaly	3.30	235	*e*P	Pn	21 38 31.3	+1.0
DALK	Dalny	3.43	221	PN	Pn	21 38 31.7	-0.2
DALK	Dalny	3.43	221	*e*P	Pn	21 38 31.7	-0.2
INSR	Institute	3.46	223	PN	Pn	21 38 33.4	+1.1
INSR	Institute	3.46	223	*e*P	Pn	21 38 33.5	+1.1
PET	Petropavlovsk	3.47	222	Pn	Pn	21 38 32.9	+0.4
PET	Petropavlovsk	3.47	222	PN	Pn	21 38 33.2	+0.7
PET	Petropavlovsk	3.47	222	*e*P	Pn	21 38 33.3	+0.7
PALN	Palana	3.70	339	PN	Pb	21 38 40.5	-3.5
PALN	Palana	3.70	339	*e*P	Pb	21 38 40.5	-3.5
PEA0B	Petropavlovsk-	3.80	230	Pn	Pn	21 38 38.3	+1.3
PEA0B	Petropavlovsk-	3.80	230	*i* PN	Pn	21 38 36.5	-0.5
PETK	Petropavlovsk-	3.80	230	P	Pn	21 38 41.1	+4.1
	6.1nm,0.3s,baz=66,slow=18,SNR=100						
PETK				S	Sb	21 39 28.2	-3.3
	155nm,1.0s,baz=28,slow=25,SNR=4.3						
PETK				LR	LR	21 40 26.0	
	comp=Z,3µm,19.1s,baz=45,slow=42						
	68nm,0.6s						
PETK	Petropavlovsk-	3.80	230	Pn	Pn	21 38 37.1	+0.1
PETK	Petropavlovsk-	3.80	230	PN	Pn	21 38 37.1	+0.1
KRMR	Karymshinskiy	3.82	224	PN	Pn	21 38 38.1	+0.8
KRMR	Karymshinskiy	3.82	224	*e*P	Pn	21 38 38.2	+0.8
RUS	Russkaya	4.00	218	PN	Pn	21 38 40.1	+0.4
RUS	Russkaya	4.00	218	*e*P	Pn	21 38 40.1	+0.4
GRL	Gorelyy	4.06	222	PN	Pn	21 38 42.4	+1.7
GRL	Gorelyy	4.06	222	*e*P	Pn	21 38 42.4	+1.7
MTVR	Mutnovka	4.07	220	PN	Pn	21 38 41.6	+0.7
MTVR	Mutnovka	4.07	220	*e*P	Pn	21 38 41.7	+0.7
APC	Apacha	4.16	231	PN	Pn	21 38 43.8	+1.9
APC	Apacha	4.16	231	*e*P	Pn	21 38 43.9	+1.9
ASAK	Asacha	4.26	221	PN	Pn	21 38 44.4	+1.0
ASAK	Asacha	4.26	221	*e*P	Pn	21 38 44.4	+1.0
KDTR	Khodutka, Kamc	4.67	216	PN	Pn	21 38 49.3	+0.4
KDTR	Khodutka, Kamc	4.67	216	*e*P	Pn	21 38 49.4	+0.4
TILK	Tilichiki	5.17	20	PN	Pn	21 38 58.4	+2.5
TILK	Tilichiki	5.17	20	*e*P	Pn	21 38 58.5	+2.5
PAU	Pauzhetka	5.40	221	PN	Pn	21 39 02.3	+3.4
PAU	Pauzhetka	5.40	221	*e*P	Pn	21 39 02.4	+3.4
SKR	Severo-Kuril's	6.29	220	*e*PN	Pn	21 39 16.1	+4.9
SKR				pmax	pmax		
	comp=Z,241nm,1.1s						
SKR				pmax	pmax		
	comp=Z,1µm,5.1s						
SKR				MLR	MLR		
	comp=Z,2µm,18.0s						
KMSK	Kamenskaya	7.09	14	PN	Pn	21 39 26.9	+4.8
KMSK	Kamenskaya	7.09	14	*e*P	Pn	21 39 26.9	+4.8
MA2	Magadan	7.42	307	*i* PN	Pn	21 39 27.3	+0.6
SEY	Seymchan	8.93	329	*i* PN	Pn	21 39 49.4	+2.0
BILL	Bilibino	12.55	7	PN	Pn	21 40 40.2	+3.4
TYV	Tymovskoe	12.80	256	*e*PN	Pn	21 40 45.4	+5.1
TYV				pmax	pmax		
	comp=Z,19nm,1.3s						
SPIA	Saint Paul Isl	15.12	73	P	Pn	21 41 11.5	-0.4
	baz=276						
GAMB	Gambell	15.24	47	P	Pn	21 41 12.2	-1.3
	baz=251						
P08K	Saint George I	15.57	75	P	Pn	21 41 16.8	-1.0
	baz=279						
GRNR	Gornyy	16.32	263	⇓*i*P	P	21 41 30.7	+0.3
GRNR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,240nm,16.0s						
NIKH	Nikolski High	16.88	87	P	Pn	21 41 33.9	-0.6
	baz=291						
M11K	Mekoryuk	17.14	61	P	Pn	21 41 36.5	-1.2
	baz=268						
JKA	Kamikawa-asahi	17.18	236		P	21 41 39.8	-0.2
ASAJ	Asahikawa	17.18	236	P	P	21 41 42.3	+2.3
	comp=E,1.9nm,0.3s,baz=58,slow=11,SNR=8.9						
	comp=E,27nm,0.7s						
ASAJ	Asahikawa	17.18	236	P	P	21 41 39.8	-0.2
ASAJ				pmax	pmax		
	comp=Z,32nm,0.9s						
TNA	Tin City	17.39	43		P	21 41 42.8	+0.7
TNA	Tin City	17.39	43	P	Pn	21 41 38.6	-2.2
	baz=250						
UNV	Unalaska Valle	17.91	83	P	Pn	21 41 46.8	-0.6
	baz=289						
YAK	Yakutsk	17.98	304	P	P	21 41 49.5	+0.8
	comp=Z,12nm,0.5s,baz=68,slow=1.0,SNR=4.0						
YAK	Yakutsk	17.98	304	*e*P	P	21 41 50.1	+1.4
YAK				*e*S	S	21 45 13.4	-1.0
YAK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
YAK				pmax	pmax		
	comp=N,1.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,42nm,1.5s						
YAK				pmax	pmax		
	comp=N,146nm,2.8s						
YAK				pmax	pmax		
	comp=E,93nm,1.9s						
YAK				smax	smax		
	comp=N,158nm,3.2s						
YAK				smax	smax		
	comp=E,85nm,2.7s						
YAK				MLR	MLR		
	comp=Z,1µm,13.0s						
YAK				MLR	MLR		
	comp=N,330nm,13.0s						
YAK				MLR	MLR		
	comp=E,653nm,13.0s						
K13K	Kusilvak Mount	17.99	56		P	21 41 50.4	+1.7
K13K	Kusilvak Mount	17.99	56	P	Pn	21 41 46.3	-2.0
	baz=265						
F14K	Arctic Creek	17.99	44	P	Pn	21 41 45.8	-2.5
	baz=252						
ANM	Nome	18.12	48		P	21 41 52.9	+2.6
ANM	Nome	18.12	48	P	P	21 41 52.9	+2.6
ANM				pmax	pmax		
	comp=Z,31nm,1.5s						
ANM	Nome	18.12	48	P	Pn	21 41 47.7	-2.2
	baz=256						
M13K	Dall Lake	18.55	61	P	P	21 41 53.8	-1.1
	baz=271						
J14K	Nanvaranak Lak	18.59	54	P	Pn	21 41 56.9	+1.3
J14K	Nanvaranak Lak	18.59	54	P	P	21 41 53.7	-1.6
	baz=264						
F15K	North Star Dit	18.73	44	P	P	21 41 55.4	-1.5
	baz=254						
G15K	Niukluk	18.78	47	P	P	21 41 56.5	-1.0
	baz=257						
L14K	Kuka Creek	18.89	58	P	Pn	21 41 59.4	+0.2
L14K				IAmb	IAmb	21 42 23.6	
	comp=Z,46nm,1.4s						
L14K	Kuka Creek	18.89	58	P	P	21 41 57.7	-0.9
	baz=269						
M14K	Bethel	19.23	60	P	Pn	21 42 04.5	+1.1
M14K	Bethel	19.23	60	P	P	21 42 01.7	-0.7
	baz=271						
FALS	False Pass	19.33	78	P	P	21 42 03.5	0.0
	baz=287						
C16K	Lisburne Hills	19.38	37	P	Pn	21 42 05.0	-0.2
C16K				IAmb	IAmb	21 42 09.2	
	comp=Z,32nm,0.8s						
C16K	Lisburne Hills	19.38	37	P	P	21 42 02.6	-1.4
	baz=246						
N14K	Kuskokwak Cree	19.40	63	P	P	21 42 03.4	-0.8
	baz=274						
H16K	Elim	19.46	48	P	P	21 42 03.3	-1.6
	baz=260						
L15K	Ungalak Mounta	19.47	57	P	P	21 42 04.2	-0.9
	baz=269						
K15K	Wolf Creek Mou	19.48	55	P	Pn	21 42 07.0	+0.7
K15K	Wolf Creek Mou	19.48	55	P	P	21 42 04.4	-0.7
	baz=267						
G16K	Koyuk River	19.57	46	P	P	21 42 04.7	-1.4
	baz=258						
O14K	Tigyukauivet M	19.66	65	P	P	21 42 06.1	-1.0
	baz=276						
S12K	Black Hills	19.85	75	P	P	21 42 09.0	-0.3
	baz=285						
M15K	Kasigluk River	19.86	60	P	P	21 42 08.4	-0.9
	baz=272						
D17K	Noatak River	19.95	39	P	P	21 42 08.3	-1.9
	baz=250,SNR=9.1						
J16K	Anvik River	19.98	53	P	P	21 42 09.5	-1.1
	baz=265						
I17K	Unalakleet	20.01	51	P	Pn	21 42 12.4	-0.2
I17K	Unalakleet	20.01	51	P	P	21 42 10.1	-0.8
	baz=264,SNR=6.2						
RDOG	Red Dog Mine	20.14	38	P	P	21 42 12.4	+0.1
RDOG	Red Dog Mine	20.14	38	P	P	21 42 11.2	-1.1
	baz=250,SNR=15						
N15K	Kwethluk River	20.18	62	P	Pn	21 42 15.0	+0.3
N15K				IAmb	IAmb	21 42 36.5	
	comp=Z,35nm,1.1s						
N15K	Kwethluk River	20.18	62	P	P	21 42 11.7	-1.1
	baz=274						
C17K	DeLong Mountai	20.20	37	P	P	21 42 11.4	-1.6
	baz=248						
E17K	Hotham Inlet	20.21	41	P	P	21 42 11.8	-1.3
	baz=254,SNR=16						
F17K	Baldwin Pennin	20.26	43	P	Pn	21 42 15.6	+0.1
F17K				IAmb	IAmb	21 42 22.2	
	comp=Z,40nm,1.1s						
F17K	Baldwin Pennin	20.26	43	P	P	21 42 12.3	-1.3
	baz=256,SNR=12						
G17K	Kiwalik Mounta	20.29	46	P	P	21 42 12.6	-1.3
	baz=259						
ZEA	Zeya	20.33	279	*e*P	Pn	21 42 19.7	+3.2
ZEA				pmax	pmax		
	comp=E,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.6s						
O15K	Ungalikthiuk R	20.41	65	P	P	21 42 14.0	-1.2

	baz=277						
L16K	**Owhat River**	**20.43**	**57**	P	**P**	**21 42 14.0**	**-1.5**
	baz=271						
H17K	**Granite Mounta**	**20.49**	**48**	P	Pn	21 42 17.6	-0.8
H17K	**Granite Mounta**	**20.49**	**48**	P	**P**	**21 42 14.7**	**-1.4**
	baz=262,SNR=9.5						
J17K	**VABM Dome**	**20.68**	**52**	P	**P**	**21 42 17.0**	**-1.1**
	baz=266						
M16K	**Timber Creek**	**20.69**	**59**	P	**P**	**21 42 17.4**	**-0.9**
	baz=273						
E18K	**Tukpahlearik C**	**20.77**	**41**	P	Pn	21 42 20.9	-0.6
E18K				IAmb	IAmb	21 42 27.6	
	comp=Z,24nm,0.7s						
E18K	**Tukpahlearik C**	**20.77**	**41**	P	**P**	**21 42 17.6**	**-1.6**
	baz=254						
N16K	**Nishlik Lake**	**20.82**	**61**	P	**P**	**21 42 18.1**	**-1.7**
	baz=274						
F18K	**Selawik**	**20.92**	**43**	P	**P**	**21 42 19.5**	**-1.2**
	baz=258						
C18K	**Utukok River**	**20.94**	**37**	P	**P**	**21 42 22.0**	**+1.0**
C18K				IAmb	IAmb	21 42 27.9	
	comp=Z,33nm,0.9s						
C18K	**Utukok River**	**20.94**	**37**	P	**P**	**21 42 19.5**	**-1.5**
	baz=250						
L17K	**Donlin**	**20.99**	**56**	P	**P**	**21 42 20.8**	**-0.8**
	baz=270						
K17K	**Iditarod**	**21.00**	**54**	P	Pn	21 42 23.6	-0.6
K17K				IAmb	IAmb	21 42 29.0	
	comp=Z,22nm,0.8s						
K17K	**Iditarod**	**21.00**	**54**	P	**P**	**21 42 20.4**	**-1.2**
	baz=269						
B18K	**Kokolik River**	**21.00**	**35**	P	**P**	**21 42 20.2**	**-1.4**
	baz=248						
S14K	**Fog Glacier**	**21.07**	**73**	P	**P**	**21 42 22.1**	**-0.4**
	baz=285						
G18K	**Tagagawik**	**21.17**	**46**	P	**P**	**21 42 25.7**	**+2.2**
G18K				IAmb	IAmb	21 42 29.1	
	comp=Z,15nm,0.7s						
G18K	**Tagagawik**	**21.17**	**46**	P	**P**	**21 42 22.0**	**-1.5**
	baz=260,SNR=7.0						
H18K	**Honhosa River**	**21.17**	**48**	P	**P**	**21 42 25.4**	**+1.9**
H18K	**Honhosa River**	**21.17**	**48**	P	**P**	**21 42 22.3**	**-1.2**
	baz=263						
O16K	**Kokwok River B**	**21.24**	**63**	P	**P**	**21 42 22.2**	**-2.0**
	baz=277						
P16K	**Nushagak River**	**21.36**	**65**	P	**P**	**21 42 23.8**	**-1.7**
	baz=279						
M17K	**Holitna River**	**21.41**	**58**	P	**P**	**21 42 28.2**	**+2.1**
M17K				IAmb	IAmb	21 42 31.5	
	comp=Z,36nm,1.1s						
M17K	**Holitna River**	**21.41**	**58**	P	**P**	**21 42 24.3**	**-1.9**
	baz=273						
TIXI	**Tiksi**	**21.41**	**331**	P	**P**	**21 42 27.1**	**+1.1**
	comp=Z,18nm,0.7s,baz=126,slow=8.9,SNR=82						
	comp=Z,18nm,0.7s						
TIXI	**Tiksi**	**21.41**	**331**	P	**P**	**21 42 25.9**	**-0.1**
TIXI				IAmb	IAmb	21 42 34.7	
	comp=Z,32nm,0.9s						
TIXI	**Tiksi**	**21.41**	**331**	*i* P	**P**	**21 42 26.8**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,39nm,0.9s						
CHNA	**Chernabura Isl**	**21.46**	**76**	P	**P**	**21 42 26.6**	**+0.1**
	baz=288						
A19K	**Wainwright**	**21.57**	**33**	P	**P**	**21 42 25.7**	**-1.9**
	baz=247						
N17K	**Nushagak Hills**	**21.59**	**60**	P	**P**	**21 42 27.0**	**-1.1**
	baz=276						
C19K	**Lookout Ridge**	**21.65**	**37**	P	**P**	**21 42 29.8**	**+1.2**
C19K	**Lookout Ridge**	**21.65**	**37**	P	**P**	**21 42 26.2**	**-2.4**
	baz=251						
HEH	**HeiHe**	**21.65**	**270**	*e*P	**P**	**21 42 25.0**	**-3.7**
HEH				pmax	pmax		
	comp=Z,11nm,0.9s						
F19K	**Shaleruckik Mo**	**21.70**	**43**	P	**P**	**21 42 30.1**	**+1.0**
F19K	**Shaleruckik Mo**	**21.70**	**43**	P	**P**	**21 42 27.6**	**-1.5**
	baz=259						
O17K	**Koliganek Bris**	**21.72**	**62**	P	**P**	**21 42 28.4**	**-0.9**
	baz=278						
J18K	**Innoko River**	**21.74**	**52**	P	**P**	**21 42 31.3**	**+1.7**
J18K	**Innoko River**	**21.74**	**52**	P	**P**	**21 42 29.0**	**-0.6**
	baz=268						
L18K	**Granite Mounta**	**21.74**	**56**	P	**P**	**21 42 31.2**	**+1.6**
L18K	**Granite Mounta**	**21.74**	**56**	P	**P**	**21 42 28.4**	**-1.2**
	baz=272						
GCSA	**Galena City Sc**	**21.75**	**49**	P	**P**	**21 42 28.9**	**-0.8**
	baz=265						
G19K	**Purcell Mounta**	**21.85**	**45**	P	**P**	**21 42 32.6**	**+1.9**
G19K				IAmb	IAmb	21 42 39.7	
	comp=Z,51nm,1.3s						
G19K	**Purcell Mounta**	**21.85**	**45**	P	**P**	**21 42 29.6**	**-1.1**
	baz=262,SNR=16						
D19K	**Kuna River**	**21.97**	**39**	P	**P**	**21 42 33.4**	**+1.3**
D19K	**Kuna River**	**21.97**	**39**	P	**P**	**21 42 31.5**	**-0.6**
	baz=255						
H19K	**Roundabout Mou**	**22.02**	**47**	P	**P**	**21 42 32.9**	**+0.3**
	baz=264						
E19K	**Redstone River**	**22.04**	**42**	P	**P**	**21 42 34.2**	**+1.5**
E19K				IAmb	IAmb	21 42 41.9	
	comp=Z,24nm,1.0s						
E19K	**Redstone River**	**22.04**	**42**	P	**P**	**21 42 32.9**	**+0.1**
	baz=258,SNR=18						
P17K	**Kvichak River**	**22.13**	**64**	P	**P**	**21 42 33.0**	**-0.8**
	baz=279						
M18K	**Stony River**	**22.18**	**58**	P	**P**	**21 42 33.8**	**-0.6**
	baz=274						
N18K	**Kilae Creek**	**22.22**	**60**	P	**P**	**21 42 36.5**	**+1.8**
N18K	**Kilae Creek**	**22.22**	**60**	P	**P**	**21 42 33.5**	**-1.2**
	baz=276						
J19K	**Poorman**	**22.25**	**51**	P	**P**	**21 42 35.7**	**+0.7**
J19K	**Poorman**	**22.25**	**51**	P	**P**	**21 42 34.6**	**-0.5**
	baz=268						
R17L	**Mt. Peulik Vol**	**22.46**	**68**	P	**P**	**21 42 36.3**	**-1.1**
	baz=283						
F20K	**Avaraart Lake**	**22.53**	**43**	P	**P**	**21 42 36.7**	**-1.3**
	baz=261						
D20K	**Etivluk River**	**22.56**	**39**	P	**P**	**21 42 38.9**	**+0.5**
D20K	**Etivluk River**	**22.56**	**39**	P	**P**	**21 42 37.3**	**-1.1**
	baz=256,SNR=34						
Q17K	**Contact Creek**	**22.58**	**66**	P	**P**	**21 42 36.8**	**-1.9**
	baz=282						
E20K	**Nigu River**	**22.60**	**40**	P	**P**	**21 42 37.6**	**-1.2**
	baz=257						
L19K	**White Mountain**	**22.60**	**56**	P	**P**	**21 42 37.5**	**-1.4**
	baz=273						
O18K	**Koktuh Hills**	**22.65**	**62**	P	**P**	**21 42 37.4**	**-2.0**
	baz=279						
H20K	**Anotleneega Mo**	**22.67**	**47**	P	**P**	**21 42 36.4**	**-3.1**
	baz=265						
P18K	**Big Mountain,**	**22.71**	**63**	P	**P**	**21 42 37.6**	**-2.4**
	baz=280						
B20K	**Meade River**	**22.75**	**35**	P	**P**	**21 42 37.4**	**-2.9**
	baz=252						
I20K	**Naaghedeneel**	**22.78**	**49**	P	**P**	**21 42 37.6**	**-3.0**
	baz=267						
N19K	**Bonanza Creek**	**22.89**	**59**	P	**P**	**21 42 38.9**	**-3.1**
	baz=277						
J20K	**Nowinta River**	**22.90**	**51**	P	**P**	**21 42 39.1**	**-2.9**
	baz=269,SNR=6.1						
K20K	**Telida**	**22.93**	**53**	P	**P**	**21 42 39.3**	**-3.0**
	baz=271						
Q18K	**Katmai Hardscr**	**22.95**	**65**	P	**P**	**21 42 40.4**	**-2.3**
	baz=282						
O19K	**Port Alsworth**	**23.05**	**61**	P	**P**	**21 42 40.6**	**-2.8**
	baz=278						
IMAR	**Indian Mountai**	**23.18**	**46**	P	**P**	**21 42 45.1**	**+0.3**
C21K	**Knifeblade Rid**	**23.31**	**38**	P	**P**	**21 42 42.5**	**-3.6**
	baz=257						
CHIR	**Chirikof Islan**	**23.32**	**72**	P	**P**	**21 42 44.6**	**-1.7**
	baz=288						
G21K	**Allakaket**	**23.33**	**45**	P	**P**	**21 42 47.3**	**+1.0**
G21K	**Allakaket**	**23.33**	**45**	P	**P**	**21 42 42.5**	**-3.8**
	baz=264						
A21K	**Barrow**	**23.36**	**32**	P	**P**	**21 42 42.6**	**-4.0**
	baz=250,SNR=6.7						
F21K	**Alatna River**	**23.43**	**43**	IAmb	IAmb	21 42 54.5	
	comp=Z,24nm,1.1s						
F21K	**Alatna River**	**23.43**	**43**	P	**P**	**21 42 44.2**	**-3.0**
	baz=263,SNR=7.7						
M20K	**Styx River**	**23.43**	**56**	P	**P**	**21 42 45.5**	**-2.0**
	baz=275						
E21K	**Killik River**	**23.45**	**40**	P	**P**	**21 42 44.7**	**-2.8**
	baz=259						
B21K	**Ikpikpuk River**	**23.48**	**37**	P	**P**	**21 42 45.4**	**-2.4**
	baz=256						
H21K	**Melozitna Rive**	**23.54**	**47**	P	**P**	**21 42 49.3**	**+0.8**
H21K				IAmb	IAmb	21 42 58.9	
	comp=Z,41nm,1.5s						
H21K	**Melozitna Rive**	**23.54**	**47**	P	**P**	**21 42 46.3**	**-2.1**
	baz=267,SNR=13						
Q19K	**Cape Douglas,**	**23.60**	**64**	P	**P**	**21 42 45.9**	**-3.1**
	baz=282						
P19K	**Oil Pt**	**23.67**	**62**	P	**P**	**21 42 46.8**	**-3.0**
	baz=280						
CHUM	**Lake Minchumin**	**23.71**	**51**	P	**P**	**21 42 47.3**	**-2.7**
	baz=272						
A22K	**Sinclair Lake**	**23.76**	**33**	P	**P**	**21 42 46.1**	**-4.3**
	baz=252						
PPLA	**Purkeypile**	**23.80**	**54**	P	**P**	**21 42 52.7**	**+1.6**
PPLA				IAmb	IAmb	21 43 00.8	
	comp=Z,33nm,1.2s						
PPLA	**Purkeypile**	**23.80**	**54**	P	**P**	**21 42 48.3**	**-2.8**
	baz=274						
I21K	**Tanana**	**23.86**	**48**	P	**P**	**21 42 52.7**	**+1.2**
I21K				IAmb	IAmb	21 43 03.9	
	comp=Z,24nm,1.2s						
I21K	**Tanana**	**23.86**	**48**	P	**P**	**21 42 48.4**	**-3.1**
	baz=269,SNR=7.0						
SII	**Sitkinak Islan**	**23.88**	**70**	P	**P**	**21 42 48.3**	**-3.4**
	baz=287						
O20K	**Slope Mountain**	**23.90**	**61**	P	**P**	**21 42 49.1**	**-3.0**
	baz=280						
SPCR	**Spurr Chakacha**	**23.95**	**58**	P	**P**	**21 42 48.8**	**-3.6**
	baz=278						
N20K	**Mount Spurr**	**23.95**	**58**	P	**P**	**21 42 49.2**	**-3.2**
	baz=278						
F22K	**John River**	**23.96**	**42**	P	**P**	**21 42 49.3**	**-3.2**
	baz=263						
D22K	**Ayikyak River**	**23.99**	**39**	P	**P**	**21 42 48.8**	**-4.0**
	baz=260,SNR=16						
B22K	**Teshekpuk Lake**	**24.07**	**35**	P	**P**	**21 42 50.0**	**-3.3**
	baz=256						
BNX	**BinXian**	**24.10**	**260**	⇓P	**P**	**21 42 53.9**	**0.0**
BNX				pmax	pmax		
	comp=Z,7.0nm,1.4s						
H22K	**Ishtalitna Cre**	**24.14**	**46**	IAmb	IAmb	21 42 58.0	
	comp=Z,28nm,1.0s						
H22K	**Ishtalitna Cre**	**24.14**	**46**	P	**P**	**21 42 51.4**	**-2.7**
	baz=268,SNR=20						
OHAK	**Old Harbor**	**24.17**	**68**	P	**P**	**21 42 51.9**	**-2.6**
	baz=286						
SKT	**Skwentna**	**24.18**	**56**	P	**P**	**21 42 55.7**	**+1.2**
SKT	**Skwentna**	**24.18**	**56**	P	**P**	**21 42 51.5**	**-3.0**
	baz=276						
E22K	**Anaktuvuk Pass**	**24.18**	**41**	P	**P**	**21 42 55.0**	**+0.4**
E22K	**Anaktuvuk Pass**	**24.18**	**41**	P	**P**	**21 42 51.3**	**-3.3**
	baz=262,SNR=33						
BPAW	**Bear Paw Mtn.**	**24.29**	**51**	P	**P**	**21 42 50.3**	**-5.3**
	baz=272						
Q20K	**Shuyak Island**	**24.30**	**64**	P	**P**	**21 42 51.1**	**-4.6**
	baz=283						
KDAK	**Kodiak Island**	**24.40**	**66**	P	**P**	**21 42 57.3**	**+0.8**
KDAK				IAmb	IAmb	21 43 19.9	
	comp=Z,22nm,1.2s						
KDAK	**Kodiak Island**	**24.40**	**66**	P	**P**	**21 42 57.3**	**+0.8**
KDAK				pmax	pmax		
	comp=Z,22nm,1.3s						
KDAK	**Kodiak Island**	**24.40**	**66**	P	**P**	**21 42 51.9**	**-4.6**
	baz=285						
HOM	**Homer**	**24.46**	**62**	P	**P**	**21 42 52.3**	**-4.8**
	baz=281						
CAPN	**Captain Cook N**	**24.52**	**59**	P	**P**	**21 42 53.8**	**-3.8**
	baz=279						
SUA	**Susitna One**	**24.61**	**57**	P	**P**	**21 42 59.3**	**+0.7**
SUA				IAmb	IAmb	21 43 02.5	
	comp=Z,15nm,0.8s						
SUA	**Susitna One**	**24.61**	**57**	P	**P**	**21 42 54.3**	**-4.3**
	baz=278						
TRF	**Thorofare Moun**	**24.63**	**52**	P	**P**	**21 42 59.4**	**+0.6**
TRF				IAmb	IAmb	21 43 02.8	
	comp=Z,19nm,0.8s						
TRF	**Thorofare Moun**	**24.63**	**52**	P	**P**	**21 42 54.3**	**-4.5**
	baz=274,SNR=7.9						
CNPM	**China Poot**	**24.69**	**62**	P	**P**	**21 42 59.7**	**+0.5**
CNPM				IAmb	IAmb	21 43 02.6	
	comp=Z,34nm,1.3s						
COLD	**Coldfoot**	**24.70**	**43**	P	**P**	**21 42 59.8**	**+0.7**
COLD	**Coldfoot**	**24.70**	**43**	P	**P**	**21 42 54.5**	**-4.7**
	baz=266,SNR=41						
D23K	**Nanushuk River**	**24.72**	**39**	IAmb	IAmb	21 43 04.3	
	comp=Z,16nm,0.8s						
D23K	**Nanushuk River**	**24.72**	**39**	P	**P**	**21 42 54.6**	**-4.8**
	baz=262						
CUT	**Chulitna**	**24.72**	**55**	P	**P**	**21 42 54.9**	**-4.6**
	baz=276						
G23K	**Bananza Creek**	**24.73**	**44**	IAmb	IAmb	21 43 03.0	
	comp=Z,17nm,0.9s						
G23K	**Bananza Creek**	**24.73**	**44**	P	**P**	**21 42 54.3**	**-5.2**
	baz=267						
C23K	**Itkillik River**	**24.89**	**37**	P	**P**	**21 42 55.6**	**-5.3**
	baz=260						
BRSE	**Bradley Lake S**	**24.90**	**61**	P	**P**	**21 42 56.4**	**-4.7**
	baz=282						
I23K	**Minto, Yukon-K**	**24.97**	**48**	P	**P**	**21 43 02.9**	**+1.3**
I23K				IAmb	IAmb	21 43 04.5	
	comp=Z,25nm,1.2s						
I23K	**Minto, Yukon-K**	**24.97**	**48**	P	**P**	**21 42 57.4**	**-4.2**
	baz=271,SNR=6.7						
E23K	**Chandalar**	**24.99**	**41**	P	**P**	**21 42 57.2**	**-4.8**
	baz=265						
TOLK	**Toolik Lake Re**	**25.07**	**40**	P	**P**	**21 43 03.6**	**+1.0**
TOLK	**Toolik Lake Re**	**25.07**	**40**	P	**P**	**21 42 57.4**	**-5.2**
	baz=264,SNR=41						
NEA2	**Nenana**	**25.11**	**50**	P	**P**	**21 43 03.1**	**+0.2**
NEA2	**Nenana**	**25.11**	**50**	P	**P**	**21 42 57.1**	**-5.8**
	baz=273,SNR=6.4						
RC01	**Rabbit Creek A**	**25.15**	**58**	P	**P**	**21 42 58.2**	**-5.1**
	baz=280						
MCK	**McKinley**	**25.21**	**52**	P	**P**	**21 43 04.5**	**+0.6**
MCK				IAmb	IAmb	21 43 13.0	
	comp=Z,13nm,0.9s						
MCK	**McKinley**	**25.21**	**52**	P	**P**	**21 43 04.5**	**+0.6**
MCK				pmax	pmax		
	comp=Z,13nm,0.9s						
MCK	**McKinley**	**25.21**	**52**	P	**P**	**21 42 58.5**	**-5.4**
	baz=275						
MJB9	**Matsu-Tunnel**	**25.25**	**231**	P	**P**	**21 43 05.7**	**+1.2**
MAJO	**Matsushiro**	**25.25**	**231**	P	**P**	**21 43 04.3**	**-0.2**
MAJO	**Matsushiro**	**25.25**	**231**	*i* P	**P**	**21 43 04.1**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,25nm,0.8s						
MJAR	**Matsushiro Arr**	**25.25**	**231**	P	**P**	**21 43 05.0**	**+0.5**
	comp=Z,12nm,0.8s,baz=26,slow=7.6,SNR=16						
	comp=Z,12nm,0.8s						
MJAR	**Matsushiro Arr**	**25.25**	**231**	P	**P**	**21 43 04.5**	**+0.1**
MJAR	**Matsushiro Arr**	**25.25**	**231**	P	**P**	**21 43 04.6**	**+0.1**
MJAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
RND	**Reindeer**	**25.27**	**52**	P	**P**	**21 43 04.6**	**+0.1**
RND				IAmb	IAmb	21 43 08.9	
	comp=Z,31nm,1.4s						
RND	**Reindeer**	**25.27**	**52**	P	**P**	**21 43 04.6**	**+0.1**
RND				pmax	pmax		
	comp=Z,31nm,1.4s						
PMR	**Palmer**	**25.36**	**57**	P	**P**	**21 43 00.2**	**-5.0**
	baz=279						
D24K	**Happy Valley**	**25.41**	**39**	P	**P**	**21 43 06.4**	**+0.8**
D24K	**Happy Valley**	**25.41**	**39**	P	**P**	**21 43 00.0**	**-5.6**
	baz=263						
E24K	**Your Creek**	**25.42**	**41**	P	**P**	**21 43 00.6**	**-5.1**
	baz=266						
SEW	**Seward**	**25.46**	**60**	P	**P**	**21 43 01.5**	**-4.6**
	baz=282						
WAT1	**Susitna Watana**	**25.47**	**54**	P	**P**	**21 43 01.4**	**-4.8**
	baz=277						
C24K	**Franklin Bluff**	**25.53**	**37**	P	**P**	**21 43 01.5**	**-5.1**
	baz=262						
WRH	**Wood River Hil**	**25.54**	**50**	IAmb	IAmb	21 43 09.6	
	comp=Z,24nm,0.9s						
H24K	**Noodor Dome**	**25.58**	**47**	P	**P**	**21 43 01.9**	**-5.3**
	baz=271						
F24K	**Squaw Lake**	**25.61**	**43**	IAmb	IAmb	21 43 19.5	
	comp=Z,28nm,1.4s						
F24K	**Squaw Lake**	**25.61**	**43**	P	**P**	**21 43 02.5**	**-4.9**
	baz=268						
COLA	**College**	**25.62**	**49**	*i* P	**P**	**21 43 08.7**	**+1.2**
COLA				pmax	pmax		
	comp=Z,32nm,1.9s						
COLA	**College**	**25.62**	**49**	P	**P**	**21 43 02.5**	**-4.9**
	baz=273						
CCB	**Clear Creek Bu**	**25.65**	**49**	P	**P**	**21 43 07.8**	**+0.1**
CCB				IAmb	IAmb	21 43 10.4	
	comp=Z,16nm,1.1s						
SML	**Sawmill**	**25.70**	**56**	IAmb	IAmb	21 43 12.8	
	comp=Z,32nm,1.2s						
SML	**Sawmill**	**25.70**	**56**	P	**P**	**21 43 02.8**	**-5.6**
	baz=279						
KNK	**Knik Glacier**	**25.71**	**57**	P	**P**	**21 43 03.0**	**-5.4**
	baz=280						
G24K	**Hadweenzic Riv**	**25.74**	**45**	P	**P**	**21 43 03.9**	**-4.7**
	baz=270,SNR=28						
POKR	**Poker Plat Res**	**25.78**	**48**	IAmb	IAmb	21 43 12.6	
	comp=Z,9.7nm,0.7s						
POKR	**Poker Plat Res**	**25.78**	**48**	P	**P**	**21 43 03.4**	**-5.7**
	baz=273						
PWL	**Port Wells**	**25.86**	**58**	P	**P**	**21 43 09.9**	**+0.2**
PWL	**Port Wells**	**25.86**	**58**	P	P	21 43 01.9	-7.9
	baz=281						
WAT6	**Susitna Watana**	**25.87**	**54**	P	P	21 43 01.9	-8.2
	baz=278						
DHY	**Denali Highway**	**25.97**	**53**	IAmb	IAmb	21 43 15.0	
	comp=Z,11nm,0.7s						
DHY	**Denali Highway**	**25.97**	**53**	P	P	21 43 02.8	-8.2
	baz=277						
M23K	**Glacier View**	**25.99**	**56**	P	**P**	**21 43 03.9**	**-7.0**
	baz=280						
HDA	**Harding Lake**	**26.03**	**50**	IAmb	IAmb	21 43 13.4	
	comp=Z,14nm,0.7s						
HDA	**Harding Lake**	**26.03**	**50**	P	P	21 43 04.1	-7.2
	baz=275,SNR=13						
IL31		**26.03**	**49**	IAmb	IAmb	21 43 14.9	
	comp=Z,15nm,0.8s						
ILAR	**Eielson Array**	**26.03**	**49**	P	**P**	**21 43 11.8**	**+0.4**
	comp=Z,10nm,0.8s,baz=273,slow=11,SNR=86						
	comp=Z,10nm,0.8s						
ILAR	**Eielson Array**	**26.03**	**49**	P	**P**	**21 43 11.9**	**+0.6**
SCM	**Sheep Creek Mo**	**26.17**	**56**	P	**P**	**21 43 05.8**	**-6.9**
	baz=280						
G25K	**Bearman Lake**	**26.29**	**44**	P	**P**	**21 43 06.5**	**-7.1**
	baz=271						
D25K	**Kavik River**	**26.29**	**39**	P	**P**	**21 43 06.6**	**-7.1**
	baz=265						
GLI	**Glacier Island**	**26.45**	**58**	P	**P**	**21 43 09.0**	**-6.2**
	baz=282						
F25K	**Christian Rive**	**26.47**	**43**	IAmb	IAmb	21 43 20.6	
	comp=Z,18nm,0.9s						
F25K	**Christian Rive**	**26.47**	**43**	P	P	21 43 08.1	-7.2
	baz=270,SNR=14						
P23K	**Montague Islan**	**26.49**	**60**	P	**P**	**21 43 09.5**	**-6.0**
	baz=283						
E25K	**Arctic Village**	**26.51**	**41**	IAmb	IAmb	21 43 23.0	
	comp=Z,28nm,1.1s						
E25K	**Arctic Village**	**26.51**	**41**	P	P	21 43 07.9	-7.8
	baz=269,SNR=16						
K24K	**Donnelly Dome**	**26.60**	**51**	IAmb	IAmb	21 43 24.0	
	comp=Z,30nm,1.4s						
K24K	**Donnelly Dome**	**26.60**	**51**	P	**P**	**21 43 10.2**	**-6.3**
	baz=277						
M24K	**Tolsona, Glenn**	**26.66**	**55**	P	**P**	**21 43 10.5**	**-6.6**
	baz=280						
J25K	**Salcha River,**	**26.70**	**49**	P	**P**	**21 43 10.6**	**-6.8**
	baz=276						
PAX	**Paxson**	**26.85**	**53**	P	**P**	**21 43 12.6**	**-6.2**
	baz=279						
C26K	**Camden Bay**	**26.86**	**37**	P	**P**	**21 43 12.2**	**-6.5**
	baz=266,SNR=23						
KLU	**Klutina**	**26.89**	**56**	P	**P**	**21 43 12.8**	**-6.3**
	baz=282						
RIDG	**Independent Ri**	**27.02**	**51**	P	**P**	**21 43 14.3**	**-6.0**
	baz=278						
F26K	**Sheenjek River**	**27.05**	**42**	IAmb	IAmb	21 43 27.8	
	comp=Z,13nm,0.8s						
F26K	**Sheenjek River**	**27.05**	**42**	P	**P**	**21 43 14.0**	**-6.4**
	baz=271						
Q23K	**Middleton Isla**	**27.14**	**61**	P	**P**	**21 43 14.8**	**-6.5**
	baz=285						
EYAK	**Cordova Ski Ar**	**27.17**	**58**	P	**P**	**21 43 14.6**	**-7.0**
	baz=283						
G26K	**Porcupine Rive**	**27.20**	**44**	IAmb	IAmb	21 43 29.2	
	comp=Z,20nm,0.8s						
G26K	**Porcupine Rive**	**27.20**	**44**	P	**P**	**21 43 15.5**	**-6.3**
	baz=272,SNR=13						
C27K	**Jago River**	**27.25**	**38**	P	**P**	**21 43 23.1**	**+0.9**
C27K				IAmb	IAmb	21 43 29.5	
	comp=Z,19nm,0.9s						
C27K	**Jago River**	**27.25**	**38**	P	P	21 43 14.1	-8.2
	baz=267						
SCRK	**Sand Creek**	**27.37**	**50**	IAmb	IAmb	21 43 26.2	
	comp=Z,16nm,0.8s						
SCRK	**Sand Creek**	**27.37**	**50**	P	P	21 43 15.5	-7.9
	baz=278,SNR=13						
J26L	**Joseph Creek**	**27.48**	**49**	P	P	21 43 14.7	-10
	baz=277						
N25K	**Chitina, Valde**	**27.49**	**56**	P	P	21 43 15.6	-9.0
	baz=282						
I26K	**Coal Creek Min**	**27.57**	**48**	P	P	21 43 17.0	-8.1
	baz=276						
BMRM	**Bremner River**	**27.62**	**57**	P	P	21 43 16.8	-8.9
	baz=283						
L26K	**Log Cabin Wild**	**27.80**	**52**	P	**P**	**21 43 20.5**	**-6.7**
	baz=280						
KAIM	**Kayak Island**	**27.96**	**59**	P	P	21 43 19.6	-9.1
	baz=285						
E27K	**Coleen River**	**28.00**	**41**	IAmb	IAmb	21 43 33.9	
	comp=Z,20nm,1.4s						
E27K	**Coleen River**	**28.00**	**41**	P	P	21 43 22.2	-6.8
	baz=272,SNR=7.3						
G27K	**Doyon Strip**	**28.05**	**44**	P	P	21 43 21.9	-7.5
	baz=275,SNR=7.7						
M26K	**Nabesna, AK**	**28.07**	**54**	IAmb	IAmb	21 43 39.2	
	comp=Z,20nm,1.2s						
M26K	**Nabesna, AK**	**28.07**	**54**	P	P	21 43 23.0	-6.7
	baz=282						
VRDI	**Verde Repeater**	**28.11**	**56**	P	**P**	**21 43 31.2**	**+1.0**
H27K	**Steamboat Moun**	**28.15**	**45**	P	P	21 43 20.8	-10
	baz=276,SNR=12						
I27K	**Kandik River**	**28.18**	**47**	P	P	21 43 20.1	-10
	baz=277						
D27M	**Malcolm River**	**28.21**	**39**	P	P	21 43 19.9	-11
	baz=271						
MCARA	**McCarthy VSAT**	**28.28**	**56**	P	P	21 43 22.9	-8.6
	baz=284						
CRQE	**Cirque**	**28.39**	**57**	P	P	21 43 25.5	-7.2
	baz=285						
L27K	**Beaver Creek,**	**28.47**	**52**	IAmb	IAmb	21 43 37.7	
	comp=Z,13nm,0.8s						
L27K	**Beaver Creek,**	**28.47**	**52**	P	P	21 43 26.0	-7.2
	baz=281						
BCAR	**Beaver Creek A**	**28.49**	**52**	P	**P**	**21 43 34.9**	**+1.5**
M27K	**Edge Creek, AK**	**28.59**	**54**	IAmb	IAmb	21 43 38.0	
	comp=Z,13nm,0.7s						
M27K	**Edge Creek, AK**	**28.59**	**54**	P	P	21 43 26.8	-7.6
	baz=283,SNR=6.9						
F28M	**Old Crow**	**28.68**	**42**	P	P	21 43 27.2	-7.8
	baz=275,SNR=7.8						
E28M	**Babbage River**	**28.75**	**40**	P	P	21 43 27.7	-7.9
	baz=273						
I28M	**Miner Creek**	**28.89**	**47**	IAmb	IAmb	21 43 46.3	
	comp=Z,25nm,1.4s						
I28M	**Miner Creek**	**28.89**	**47**	P	P	21 43 27.7	-9.3
	baz=279						
D28M	**Stokes Point**	**29.00**	**39**	P	P	21 43 29.9	-7.9
	baz=273						
BVCY	**Beaver Creek**	**29.04**	**53**	P	P	21 43 32.0	-6.3
	baz=283,SNR=5.1						
MESA	**MESA**	**29.09**	**58**	P	P	21 43 31.1	-7.9
	baz=286						
CTG	**Chitna Glacier**	**29.17**	**56**	P	P	21 43 32.0	-7.6
	baz=286						
DAWY	**Dawson**	**29.35**	**50**	P	P	21 43 32.8	-8.3
	baz=281						
E29M	**Blow River**	**29.36**	**41**	P	P	21 43 32.0	-9.1
	baz=275						
YUK3	**Moose Creek**	**29.38**	**54**	P	P	21 43 32.5	-8.9
	baz=285						
H29M	**Whitestone**	**29.42**	**45**	IAmb	IAmb	21 43 49.1	
	comp=Z,12nm,0.7s						
H29M	**Whitestone**	**29.42**	**45**	P	P	21 43 32.3	-9.3
	baz=278						
G29M	**Pine Creek**	**29.47**	**44**	P	P	21 43 32.7	-9.3
	baz=278						
I29M	**Ogilvie Camp,**	**29.58**	**47**	IAmb	IAmb	21 43 45.8	
	comp=Z,13nm,1.1s						
I29M	**Ogilvie Camp,**	**29.58**	**47**	P	P	21 43 35.8	-7.2
	baz=280						
O28M	**Mount Upton**	**29.76**	**56**	P	P	21 43 36.4	-8.6
	baz=287						
J29N	**Klondike Camp**	**29.78**	**49**	P	P	21 43 36.0	-8.8
	baz=282						
YUK8	**Steele Glacier**	**29.82**	**55**	P	P	21 43 37.7	-7.8
	baz=286						
PINM	**Pinnacle**	**29.93**	**58**	P	P	21 43 39.0	-7.2
	baz=288						

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EPYK  Eagle Plains      30.06  45    IAmb   IAmb   21 43 57.6
      comp=Z,16nm,1.1s
EPYK  Eagle Plains      30.06  45    P      P      21 43 39.4  -7.8
      baz=280
L29M  L29M              30.11  51    P      P      21 43 39.3  -8.5
      baz=284
M29M  Somme Creek       30.12  53    P      P      21 43 49.4  +1.4
M29M                                 IAmb   IAmb   21 43 50.6
      comp=Z,8.4nm,0.6s
M29M  Somme Creek       30.12  53    P      P      21 43 38.6  -9.3
      baz=285
G30M  tAoh Zraii Nji    30.16  43    P      P      21 43 38.4   -10
      baz=279
K29M  Barlow Dome       30.20  50    P      P      21 43 39.3  -9.4
      baz=283
F30M  Barrier River     30.24  42    P      P      21 43 39.8  -9.0
      baz=278
YUK4  Talbot Arm        30.33  55    P      P      21 43 40.1   -10
      baz=286
I30M  Mount Dempster    30.40  47    IAmb   IAmb   21 43 57.3
      comp=Z,11nm,0.8s
I30M  Mount Dempster    30.40  47    P      P      21 43 40.3   -10
      baz=282
J30M  Hart River        30.55  48    P      P      21 43 41.7   -10
      baz=283
YUK6  Outpost Mounta    30.57  55    P      P      21 43 43.2  -8.9
      baz=287
O29M  Mount Kennedy     30.66  57    P      P      21 43 43.8  -9.0
      baz=288
M30M  Minto, Yukon      30.83  52    P      P      21 43 44.4   -10
      baz=286
G31M  Satah River       30.93  43    IAmb   IAmb   21 44 03.7
      comp=Z,20nm,1.4s
G31M  Satah River       30.93  43    P      P      21 43 47.5  -7.3
      baz=281
INK   Inuvik            30.98  40    P      P      21 43 45.6   -10
      baz=279,SNR=13
HYT   Haines Junctio    31.01  55    P      P      21 43 47.0  -8.8
      baz=288
N30M  Aishikik Lake     31.01  54    P      P      21 43 47.9  -7.9
      baz=287
F31M  Tsiigehtchic      31.04  42    P      P      21 43 49.1  -6.8
      baz=280,SNR=11
H31M  Peel River        31.11  45    P      P      21 43 47.3  -9.2
      baz=282
P29M  Windy Craggy      31.28  58    P      P      21 43 49.5  -8.6
      baz=290
P30M  Million Dollar    31.49  57    P      P      21 43 50.8  -9.2
      baz=290
N31M  Braeburn, Yuko    31.60  54    P      P      21 43 52.5  -8.4
      baz=288
O30N  Mendenhall        31.68  55    P      P      21 43 53.0  -8.7
      baz=289
PLBC  Pleasant Camp     32.00  58    P      P      21 43 56.1  -8.3
      baz=291
M31M  Drury Creek, Y    32.01  52    IAmb   IAmb   21 44 09.1
      comp=Z,12nm,0.9s
M31M  Drury Creek, Y    32.01  52    P      P      21 43 55.7  -8.8
      baz=288
WHY   Whitehorse        32.28  55    P      P      21 44 08.6  +1.6
WHY   Whitehorse        32.28  55    P      P      21 43 59.5  -7.5
      baz=290
SKAG  Skagway           32.49  57    P      P      21 44 01.4  -7.2
      baz=292
S31K  Pelican           32.61  60    P      P      21 44 02.9  -6.8
      baz=293
N32M  Quiet Lake        32.94  54    P      P      21 44 03.5  -9.2
      baz=290
A36M  Sachs Harbour     33.20  33    P      P      21 44 16.2  +1.5
A36M                                 IAmb   IAmb   21 44 21.7
      comp=Z,6.3nm,0.8s
A36M  Sachs Harbour     33.20  33    P      P      21 44 03.4   -11
      baz=280
P32M  Atlin             33.21  56    P      P      21 44 06.6  -8.5
      baz=292
R32K  Eaglecrest        33.33  59    P      P      21 44 07.7  -8.3
      baz=294
P33M  Teslin, Yukon     33.40  55    P      P      21 44 05.6   -11
      baz=292
SIT   Sitka             33.43  61    P      P      21 44 06.1   -11
      baz=295
S32K  Killisnoo         33.63  60    P      P      21 44 08.7   -10
      baz=295
Q32M  Nakina River      34.14  57    P      P      21 44 14.6  -8.7
      baz=294
C36M  Paulatuk          34.14  37    P      P      21 44 13.9  -9.0
      baz=285,SNR=16
TLY   Talaya            34.18 288  i P      P      21 44 22.4  -1.2
TLY                                  pmax   pmax
      comp=Z,9.0nm,0.8s
R33M  Jennings River    34.58  56    P      P      21 44 28.5  +1.5
R33M                                 IAmb   IAmb   21 44 31.8
      comp=Z,6.9nm,0.8s
R33M  Jennings River    34.58  56    P      P      21 44 18.9  -8.1
      baz=294
NRIK  Noril'sk          34.66 323  i P      P      21 44 29.9  +2.5
NRIK                                 pmax   pmax
      comp=Z,7.0nm,1.4s
SONM  Songino Array     34.74 281    P      P      21 44 27.9  -0.6
      comp=Z,0.4nm,0.5s,baz=62,slow=8.0,SNR=5.9
SONM                                 PcP    PcP    21 47 00.3  -1.5
      comp=Z,1.1nm,0.9s,baz=38,slow=2.6,SNR=3.6
      comp=Z,0.4nm,0.5s
SONM  Songino Array     34.74 281    P      P      21 44 26.3  -2.2
SONM  Songino Array     34.74 281    P      P      21 44 26.3  -2.2
SONM                                 pmax   pmax
      comp=Z,2.0nm,1.2s
U33K  Whale Pass        34.94  62    P      P      21 44 21.7  -8.3
      baz=297
S34M  Telegraph Cree    35.12  58    P      P      21 44 22.3  -9.2
      baz=296
WRAK  Wrangell Islan    35.18  61    P      P      21 44 23.8  -8.3
      baz=297
CRAG  Craig             35.23  63    P      P      21 44 25.0  -7.4
      baz=298
WTLY  Watson Lake, Y    35.29  54    P      P      21 44 25.2  -7.8
      baz=294
T35M  Bob Quinn         35.96  59    P      P      21 44 31.1  -7.7
      baz=298
H11N2 WAKE ISLAND Hy    36.02 173    T      T      22 22 50.0
      baz=356,slow=76,SNR=146
H11N3 WAKE ISLAND Hy    36.04 173    T      T      22 22 52.8
      baz=356,slow=76,SNR=113
H11N1 WAKE ISLAND Hy    36.04 173    T      T      22 22 50.4
      baz=356,slow=76,SNR=153
V35K  Ketchikan         36.06  62    P      P      21 44 29.6   -10
      baz=299
HHC   Hu-ho-hao-te      36.12 268  eP       P      21 44 40.8  +0.3
HHC                                  pmax   pmax
      comp=Z,7.0nm,0.7s
HHC                                  pmax   pmax
      comp=Z,570nm,6.9s
WRGLY Wrigley           36.38  47    P      P      21 44 32.0   -10
      baz=294
U35K  Hyder             36.57  61    P      P      21 44 36.1  -7.8
      baz=299
LIRD  Liard River Hi    36.83  54    P      P      21 44 35.6   -11
      baz=297
KOTAN Kotaneelee Air    37.43  52    P      P      21 44 39.7   -12
      baz=297
TOAD  Toad River Com    37.48  54    P      P      21 44 40.8   -11
      baz=298
NJ2   Nanjing           38.43 251  eP       P      21 44 59.3  -0.7
NJ2                                  pmax   pmax
      comp=Z,7.0nm,0.5s
YKAW3 Yellowknife Wh    40.30  45    P      P      21 45 16.2  +1.0
YKA   Yellowknife Ar    40.34  45    P      P      21 45 16.7  +1.2
      comp=Z,1.6nm,0.5s,baz=301,slow=8.7,SNR=41
      comp=Z,1.6nm,0.5s
YKA   Yellowknife Ar    40.34  45    P      P      21 45 15.4  -0.1
YKA   Yellowknife Ar    40.34  45    P      P      21 45 15.4  -0.1
YKAW1 Yellowknife Wh    40.39  45    P      P      21 45 16.8  +0.8
ZALV  Zalesovo Beam     42.60 301    P      P      21 45 34.4  +0.2
      comp=Z,0.3nm,0.4s,baz=60,slow=6.8,SNR=2.2
ZALV                                 PcP    PcP    21 47 25.0  -1.1
      comp=Z,0.7nm,0.6s,baz=53,slow=5.8,SNR=2.5
      comp=Z,0.3nm,0.4s
ZALV  Zalesovo Beam     42.60 301    P      P      21 45 33.6  -0.7
NOR   Nord              42.98 360  i P      P      21 45 35.8  -1.1
GTA   Gaotai            43.74 275  eP       P      21 45 45.4  +1.6
GTA                                  sP     sP     21 45 53.8  +4.9
GTA                                  pmax   pmax
      comp=Z,5.0nm,1.3s
DGZ   Jazzator, Alta    43.83 295    P      P      21 45 43.4  -1.0
DGZ                                  pmax   pmax
      comp=Z,4.0nm,0.6s
SPITS Spitsbergen Ar    44.83 351    P      P      21 45 52.3  +0.4
      comp=Z,11nm,0.7s,baz=69,slow=7.2,SNR=22
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      comp=Z,11nm,0.7s
SPITS Spitsbergen Ar    44.83 351    P      P      21 45 52.1  +0.2
SPITS                                pmax   pmax
      comp=Z,68nm,1.5s
NEEM  North Greenlan    45.52  10  i P      P      21 45 57.3  -0.4
NEEM                                 IAmb   IAmb   21 46 02.8
      comp=Z,4.8nm,0.9s
BLKN  Baker Lake        46.18  36    P      P      21 46 02.9  +0.3
BLKN                                 IAmb   IAmb   21 46 09.2
      comp=Z,11nm,1.0s
WMQ   Urumqi            47.47 289  eP       P      21 46 16.3  +3.2
WMQ                                  pP     sP     21 46 19.0  +0.4
WMQ                                  pmax   pmax
      comp=Z,14nm,1.3s
KURK  Kurchatov         47.59 301    P      P      21 46 12.3  -1.5
KURK                                 IAmb   IAmb   21 46 17.9
      comp=Z,8.3nm,1.0s
KURK  Kurchatov         47.59 301  i P      P      21 46 12.8  -1.1
KURK                                 pmax   pmax
      comp=Z,8.0nm,0.9s
KURBB Kurchatov Arra    47.69 301    P      P      21 46 13.1  -1.6
      comp=Z,2.8nm,0.7s,baz=56,slow=7.7,SNR=22
      comp=Z,2.8nm,0.7s
DAG   Danmarks Havn     47.83   0  i P      P      21 46 13.3  -2.1
DAG                                  IAmb   IAmb   21 46 15.6
      comp=Z,3.3nm,0.8s
MK31  Makanchi Array    48.33 295  i P      P      21 46 19.1  -0.6
MKAR  Makanchi Array    48.33 295    P      P      21 46 17.9  -1.8
      comp=Z,1.5nm,0.7s,baz=55,slow=6.8,SNR=18
      comp=Z,1.5nm,0.7s
MKAR  Makanchi Array    48.33 295    P      P      21 46 18.3  -1.4
MKAR  Makanchi Array    48.33 295  i P      P      21 46 18.8  -0.9
MKAR                                 pmax   pmax
      comp=Z,2.0nm,0.7s
MAKZ  Makanchi          48.48 295    P      P      21 46 19.1  -1.8
MAKZ                                 IAmb   IAmb   21 46 24.6
      comp=Z,9.6nm,1.4s
MAKZ  Makanchi          48.48 295    P      P      21 46 19.1  -1.8
MAKZ                                 pmax   pmax
      comp=Z,10.0nm,1.4s
BVAR  Borovoye Array    49.91 308    P      P      21 46 30.8  -0.9
      comp=Z,2.3nm,0.5s,baz=55,slow=7.9,SNR=14
BVAR                                 PcP    PcP    21 47 51.2  -0.6
      comp=Z,0.7nm,0.5s,baz=50,slow=4.0,SNR=1.9
      comp=Z,2.3nm,0.5s
BORK  Borovoye          49.92 308    P      P      21 46 31.2  -0.6
BORK  Borovoye          49.92 308  i P      P      21 46 31.8   0.0
BORK                                 pmax   pmax
      comp=Z,13nm,2.3s
DBG   Daneborg          50.30   1  i P      P      21 46 32.3  -2.0
DBG                                  IAmb   IAmb   21 46 34.9
      comp=Z,2.4nm,0.5s
FCC   Fort Churchill    50.60  41    P      P      21 46 37.2  +0.4
FCC   Fort Churchill    50.60  41    P      P      21 46 37.2  +0.4
FCC                                  pmax   pmax
      comp=Z,5.0nm,1.1s
SUMG  Summit            51.23   8  i P      P      21 46 42.0  +0.1
SUMG                                 IAmb   IAmb   21 46 43.4
      comp=Z,3.1nm,0.7s
ARCES ARCESS Array B    51.28 342    P      P      21 46 41.5  -0.3
      comp=Z,2.2nm,0.8s,baz=24,slow=12,SNR=9.2
      comp=Z,2.2nm,0.8s
ARCES ARCESS Array B    51.28 342    P      P      21 46 42.5  +0.7
ARCES ARCESS Array B    51.28 342    P      P      21 46 42.5  +0.7
ARCES                                pmax   pmax
      comp=Z,22nm,1.4s
PZH   PanZhiHua         52.14 262    P      P      21 46 48.3  -0.6
ARTI  Arti              52.56 317    P      P      21 46 50.3  -1.2
ARTI                                 IAmb   IAmb   21 46 57.5
      comp=Z,4.4nm,0.6s
ARTI  Arti              52.56 317d iP       P      21 46 53.4  +1.9
ARTI                                 S      S      21 54 19.0  +1.4
ARTI                                 SS     SS     21 57 55.0   0.0
ARTI                                 pmax   pmax
      comp=Z,15nm,2.4s
RLMT  Red Lodge         53.54  62    IAmb   IAmb   21 47 03.4
      comp=Z,5.7nm,0.9s
NVAR  Mina Array Bea    53.60  73    P      P      21 47 01.8  +2.1
      comp=Z,1.7nm,0.8s,baz=307,slow=7.2,SNR=7.5
      comp=Z,1.7nm,0.8s
NVAR  Mina Array Bea    53.60  73    P      P      21 46 59.2  -0.5
GMN   Gold Mountain     54.99  74    IAmb   IAmb   21 47 33.0
      comp=Z,5.5nm,0.9s
PDAR  Pinedale Array    55.08  64    P      P      21 47 11.6  +1.1
      comp=Z,1.3nm,0.6s,baz=321,slow=1.9,SNR=15
      comp=Z,1.3nm,0.6s
PDAR  Pinedale Array    55.08  64    P      P      21 47 11.3  +0.9
AAK   Ala-Archa         55.21 296  i P      P      21 47 10.1  -1.2
AAK                                  pmax   pmax
      comp=Z,10.0nm,1.1s
SPR3  Spring Creek 3    55.33  70    IAmb   IAmb   21 47 22.7
      comp=Z,5.2nm,0.9s
KLMR  Klimovskoe        55.43 330  eP       P      21 47 11.4  -0.9
KLMR                                 pmax   pmax
      comp=Z,17nm,1.2s
ULM   Lac du Bonnet     56.05  49    P      P      21 47 17.3  +0.3
      comp=Z,2.2nm,0.4s,baz=348,slow=7.9,SNR=4.1
      comp=Z,2.2nm,0.4s
ULM   Lac du Bonnet     56.05  49    IAmb   IAmb   21 47 23.2
      comp=Z,5.6nm,1.0s
BSUT  Blindstream Ca    56.08  66    P      P      21 47 19.4  +1.6
BSUT                                 IAmb   IAmb   21 47 32.2
      comp=Z,17nm,1.5s
TMUT  Trail Mountain    56.76  68    IAmb   IAmb   21 47 27.2
      comp=Z,6.0nm,1.0s
KK31  Karatay Array     56.87 299    IAmb   IAmb   21 47 27.1
      comp=Z,7.0nm,1.0s
KKAR  Karatay Array     56.87 299    P      P      21 47 21.7  -1.2
KKAR  Karatay Array     56.87 299    P      P      21 47 21.7  -1.2
AB31  Akbulak array     57.20 310    P      P      21 47 24.2  -0.9
ABKAR Akbulak array     57.20 310    P      P      21 47 23.7  -1.5
SRU   San Rafael Swe    57.26  67    IAmb   IAmb   21 47 40.0
      comp=Z,7.0nm,0.9s
O20A  White River Ci    57.68  65    P      P      21 47 31.4  +2.4
O20A                                 IAmb   IAmb   21 47 42.2
      comp=Z,8.2nm,0.8s
HMU   Henry Mountain    58.01  69    IAmb   IAmb   21 47 42.6
      comp=Z,7.5nm,1.0s
FIA1  FINESS Array S    58.31 337    P      P      21 47 32.5  -0.2
FINES FINESS Array B    58.31 337    P      P      21 47 32.3  -0.5
      comp=Z,10nm,0.6s,baz=32,slow=8.8,SNR=131
      comp=Z,10nm,0.6s
FINES FINESS Array B    58.31 337    P      P      21 47 32.5  -0.2
PV13  Radium Mtn., P    58.85  67    P      P      21 47 39.5  +2.3
PV13                                 IAmb   IAmb   21 47 51.0
      comp=Z,9.0nm,1.1s
EYMN  Ely               59.68  48    P      P      21 47 42.9  +0.4
GAR   Garm              60.03 296    P      P      21 47 42.4  -2.8
CMAR  Chiang Mai Arr    60.08 259    P      P      21 47 46.8  +1.2
      comp=Z,0.9nm,0.5s,baz=21,slow=6.4,SNR=9.8
CMAR                                 PcP    PcP    21 48 31.6  +0.2
      comp=Z,1.5nm,0.6s,baz=12,slow=3.6,SNR=9.0
      comp=Z,0.9nm,0.5s
CMAR  Chiang Mai Arr    60.08 259    P      P      21 47 45.1  -0.5
CHGR  Chuyangaron       60.88 297    P      P      21 47 49.4  -1.6
CHGR  Chuyangaron       60.88 297    P      P      21 47 49.4  -1.6
CHGR                                 pmax   pmax
      comp=Z,12nm,1.1s
OBN   Obninsk           61.10 328    LR     LR     22 18 57.2
      comp=Z,1µm,18.1s,baz=193,slow=41
OBN   Obninsk           61.10 328⇑iP        P      21 47 53.7  +1.7
OBN                                  *SP    sP     21 47 59.0  +1.4
OBN                                  S      S      21 56 15.0  +4.8
OBN                                  pmax   pmax
      comp=Z,5.0nm,0.7s
OBN                                  MLR    MLR
      comp=Z,979nm,17.0s
NC303 NORSAR Array S    61.25 345    P      P      21 47 51.9  -1.2
NB2   NORSAR Subarra    61.45 345    P      P      21 47 53.5  -0.9
      comp=Z,2.4nm,0.8s,baz=19,slow=6.9
NOA   NORSAR Array B    61.45 345    P      P      21 47 53.9  -0.6
      comp=Z,1.0nm,0.5s,baz=19,slow=6.9,SNR=14
      comp=Z,1.0nm,0.5s
HFS   Hagfors           61.92 343    P      P      21 47 56.8  -0.7
      comp=Z,3.1nm,0.7s,baz=17,slow=5.3,SNR=22
      comp=Z,3.1nm,0.7s
SCHQ  Schefferville     62.72  30    P      P      21 48 02.9  -0.1
      comp=Z,2.7nm,0.7s,baz=326,slow=11,SNR=2.2
      comp=Z,2.7nm,0.7s
SCHQ  Schefferville     62.72  30    P      P      21 48 04.5  +1.5
NACGM Naroch            64.00 333  eP       P      21 48 10.6  -0.9
PABE  Paberze           64.15 335    P      P      21 48 12.2  -0.2
MNTX  Cornudas Mount    65.61  69    P      P      21 48 24.4  +2.1
MNTX                                 IAmb   IAmb   21 48 40.6
      comp=Z,9.9nm,1.3s
P40A  Paris             66.08  55    P      P      21 48 26.1  +0.9
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P40A                                 IAmb   IAmb   21 48 33.3
      comp=Z,7.6nm,1.0s
WMOK  Wichita Mounta    66.63  62    IAmb   IAmb   21 48 47.0
      comp=Z,5.4nm,0.9s
R40A  Maddies Statio    66.97  56    P      P      21 48 30.9   0.0
R40A                                 IAmb   IAmb   21 48 39.5
      comp=Z,5.5nm,0.7s
AK03  Malin Array Si    67.09 330    P      P      21 48 29.2  -2.3
AK21  Malin Array Si    67.10 330    P      P      21 48 29.6  -1.9
AK22  Malin Array Si    67.11 330    P      P      21 48 29.7  -1.9
AK04  Malin Array Si    67.11 330    P      P      21 48 29.1  -2.5
AKASG Malin Array Be    67.12 330    P      P      21 48 30.8  -0.8
      comp=Z,1.9nm,0.3s,baz=29,slow=6.7,SNR=11
      comp=Z,1.9nm,0.3s
AKASG Malin Array Be    67.12 330    P      P      21 48 30.8  -0.8
AKASG Malin Array Be    67.12 330    P      P      21 48 30.8  -0.8
AKASG                                pmax   pmax
      comp=Z,3.0nm,1.0s
AKBB  Malin Array Si    67.12 330    P      P      21 48 30.6  -1.1
AKBB                                 IAmb   IAmb   21 48 36.5
      comp=Z,5.4nm,0.7s
AKBB  Malin Array Si    67.12 330  i P      P      21 48 30.8  -0.8
AKBB                                 pmax   pmax
      comp=Z,5.0nm,0.7s
AKBB  Malin Array Si    67.12 330    P      P      21 48 29.7  -1.9
KIEV  Kiev              67.13 330    P      P      21 48 30.2  -1.5
KIEV                                 IAmb   IAmb   21 48 36.5
      comp=Z,4.8nm,0.7s
KIEV  Kiev              67.13 330    P      P      21 48 30.2  -1.5
KIEV                                 pmax   pmax
      comp=Z,5.0nm,0.7s
KIEV  Kiev              67.13 330    P      P      21 48 30.1  -1.6
      comp=Z,32nm,1.0s
AK01  Malin Array Si    67.13 330    P      P      21 48 30.2  -1.5
AK20  Malin Array Si    67.14 330    P      P      21 48 30.3  -1.5
AK18  Malin Array Si    67.14 330    P      P      21 48 29.9  -1.9
AK11  Malin Array Si    67.15 330    P      P      21 48 30.3  -1.6
AK19  Malin Array Si    67.16 330    P      P      21 48 29.7  -2.2
AK02  Malin Array Si    67.16 330    P      P      21 48 30.1  -1.8
AK08  Malin Array Si    67.17 330    P      P      21 48 30.1  -1.9
AK09  Malin Array Si    67.18 330    P      P      21 48 30.2  -1.8
AK16  Malin Array Si    67.18 330    P      P      21 48 30.2  -1.8
AK17  Malin Array Si    67.18 330    P      P      21 48 30.2  -1.8
AK12  Malin Array Si    67.19 330    P      P      21 48 30.6  -1.5
AK05  Malin Array Si    67.20 330    P      P      21 48 30.2  -1.9
AK10  Malin Array Si    67.20 330    P      P      21 48 30.8  -1.4
AK14  Malin Array Si    67.21 330    P      P      21 48 30.8  -1.4
AK06  Malin Array Si    67.23 330    P      P      21 48 30.9  -1.4
AK13  Malin Array Si    67.24 330    P      P      21 48 31.2  -1.2
LDAQ  Lac Daran         67.36  36    P      P      21 48 33.0  -0.3
LMQ   La Malbaie        68.03  36    P      P      21 48 37.6  +0.1
LUBAR Lubar, Ukraine    68.23 330    P      P      21 48 37.2  -1.5
TX31  Lajitas Ar. Si    68.38  70    IAmb   IAmb   21 48 53.6
      comp=Z,5.4nm,0.9s
TXAR  Lajitas Array     68.38  70    P      P      21 48 41.5  +1.5
      comp=Z,1.1nm,0.4s,baz=294,slow=4.9,SNR=19
      comp=Z,1.1nm,0.4s
TXAR  Lajitas Array     68.38  70    P      P      21 48 41.1  +1.0
KIV   Kislovodsk        68.50 318  eP       P      21 48 41.4  +0.8
KIV                                  pmax   pmax
      comp=Z,6.0nm,1.0s
T42A  Van Buren         68.53  56    P      P      21 48 41.1  +0.3
T42A                                 IAmb   IAmb   21 48 57.9
      comp=Z,6.4nm,1.1s
AKT   Akhty             68.58 313  eP       P      21 48 39.3  -1.8
AKT                                e                   21 49 04.3
AKT                                  pmax   pmax
      comp=Z,16nm,1.0s
KBZ   Khabaz            68.62 317    P      P      21 48 41.4  +0.3
      comp=Z,2.5nm,0.8s,baz=53,slow=5.1,SNR=4.9
      comp=Z,2.5nm,0.8s
KBZ   Khabaz            68.62 317  i P      P      21 48 41.8  +0.6
KBZ                                  pmax   pmax
      comp=Z,4.0nm,0.9s
EKA   Eskdalemuir Ar    68.75 351    P      P      21 48 41.6  -0.2
      comp=Z,2.7nm,0.8s,baz=17,slow=4.7,SNR=8.0
      comp=Z,2.7nm,0.8s
D62A  Allapoint, All    68.86  35    P      P      21 48 42.2  -0.5
E62A  Clayton Lake      69.11  36    P      P      21 48 44.8  +0.5
KMPD  K-Podol'skiy      69.82 331    P      P      21 48 47.5  -1.1
KMPD                                 P      P      21 48 46.7  -1.9
KWP   Kalwaria Pacla    69.84 333    P      P      21 48 47.9  -0.8
      comp=Z,20nm,1.0s
OJC   Ojcow             70.01 336    P      P      21 48 49.1  -0.6
      comp=Z,6.0nm,1.0s
KULM  Kulim             70.02 249    P      P      21 48 49.9  -0.3
STHS  Stebnicka Huta    70.41 334  eP       P      21 48 52.1  -0.1
STHS  Stebnicka Huta    70.41 334  eP       P      21 48 52.1  -0.1
CLL   Collm             70.43 340  epP      pP     21 49 01.0  +4.6
WVT   Waverly           70.78  54    P      P      21 48 55.3  +0.7
WVT   Waverly           70.78  54    P      P      21 48 55.3  +0.7
WVT                                  pmax   pmax
      comp=Z,19nm,1.4s
MORC  Moravsky Berou    70.94 337    P      P      21 48 56.2  +0.7
MORC                                 IAmb   IAmb   21 49 07.9
      comp=Z,3.8nm,0.8s
MORC  Moravsky Berou    70.94 337  eP       P      21 48 55.8  +0.3
MORC  Moravsky Berou    70.94 337    P      P      21 48 56.2  +0.7
MORC                                 pmax   pmax
      comp=Z,4.0nm,0.8s
LANS  Liptovska Anna    71.08 335  eP       P      21 48 57.8  +1.4
LANS  Liptovska Anna    71.08 335  eP       P      21 48 57.8  +1.4
VRAC  Vranov            71.59 337  eP       P      21 48 59.5  +0.1
KRUC  Moravsky          71.87 337  eP       P      21 49 00.4  -0.6
GERES GERESS Array B    72.64 339    P      P      21 49 05.9  +0.2
      comp=Z,0.5nm,0.5s,baz=46,slow=7.6,SNR=5.3
      comp=Z,0.5nm,0.5s
MLR   Muntele Rosu      72.77 330    P      P      21 49 07.2  +0.5
MLR                                  IAmb   IAmb   21 49 12.7
      comp=Z,10nm,0.9s
MLR   Muntele Rosu      72.77 330    P      P      21 49 07.2  +0.5
MLR                                  pmax   pmax
      comp=Z,10.0nm,0.9s
MTN   Manton Dam        73.15 212    P      P      21 49 09.9  +1.0
MTN                                  IAmb   IAmb   21 49 15.5
      comp=Z,9.0nm,0.9s
Y49A  Blount Mountai    73.31  54    P      P      21 49 09.8   0.0
FUORN Ofenpass-Fuorn    75.44 341    P      P      21 49 22.8  +0.4
FUORN                                IAmb   IAmb   21 49 49.1
      comp=Z,9.5nm,1.4s
BRTR  Keskin Array B    75.51 322    P      P      21 49 22.2  -0.5
      comp=Z,1.8nm,0.6s,baz=59,slow=3.2,SNR=12
      comp=Z,1.8nm,0.6s
BRTR  Keskin Array B    75.51 322    P      P      21 49 22.4  -0.4
BR105 Keskin Array S    75.52 322    P      P      21 49 21.4  -1.4
      comp=Z,3.9nm,0.7s
BR104 Keskin Array S    75.52 322    P      P      21 49 21.9  -0.9
TUE   Stuetta           75.76 341    P      P      21 49 24.6  +0.5
TUE                                  IAmb   IAmb   21 49 59.1
      comp=Z,7.0nm,1.1s
KNRA  Kununurra         76.54 213    P      P      21 49 29.3  +0.8
KNRA                                 IAmb   IAmb   21 49 33.4
      comp=Z,12nm,1.1s
CTA   Charters Tower    76.70 196    P      P      21 49 30.7  +1.4
      comp=Z,5.2nm,0.7s,baz=357,slow=12,SNR=4.8
      comp=Z,5.2nm,0.7s
NRCA  Norcia            78.50 338    P      P      21 49 40.0  +0.6
WB0   Warramunga Arr    78.83 207    IAmb   IAmb   21 49 53.1
      comp=Z,12nm,1.3s
WRAB  Tennant Creek     79.00 207    P      P      21 49 43.6  +1.4
WRAB                                 IAmb   IAmb   21 49 53.5
      comp=Z,9.6nm,1.1s
WRAB  Tennant Creek     79.00 207    P      P      21 49 43.6  +1.4
WRAB                                 pmax   pmax
      comp=Z,10.0nm,1.1s
WRA   Warramunga Arr    79.01 207    P      P      21 49 44.1  +1.9
      comp=Z,2.1nm,0.7s,baz=19,slow=5.7,SNR=9.0
      comp=Z,2.1nm,0.7s
WRA   Warramunga Arr    79.01 207    P      P      21 49 43.0  +0.8
WRA   Warramunga Arr    79.01 207    P      P      21 49 43.0  +0.8
WRA                                  pmax   pmax
      comp=Z,1.0nm,1.3s
FITZ  Fitzroy Crossi    79.81 215    P      P      21 49 47.4  +0.8
      comp=Z,5.3nm,1.0s,baz=26,slow=6.6,SNR=10
      comp=Z,5.3nm,1.0s
FITZ  Fitzroy Crossi    79.81 215    P      P      21 49 46.8  +0.2
MMAI  Mount Meron Ar    80.81 317    P      P      21 49 51.6  -0.6
      comp=Z,1.7nm,0.5s,baz=3.3,slow=5.1,SNR=2.4
      comp=Z,1.7nm,0.5s
ASAR  Alice Springs     82.68 206    P      P      21 50 02.9  +1.0
      comp=Z,1.9nm,0.6s,baz=15,slow=4.9,SNR=14
      comp=Z,1.9nm,0.6s
ASAR  Alice Springs     82.68 206           P      21 50 02.4  +0.6
ESDC  Sonseca Array     84.33 350    P      P      21 50 10.8  +0.4
      comp=Z,1.3nm,1.0s,baz=1.3,slow=3.5,SNR=4.1
```

	comp=Z,1.3nm,1.0s						
ESDC	**Sonseca Array**	**84.33**	**350**	P	**P**	**21 50 10.2**	**-0.2**
RAYN	**Ar Rayn**	**84.79**	**305**	P	**P**	**21 50 11.2**	**-1.7**
RAYN				IAmb	IAmb	21 50 17.1	
	comp=Z,6.3nm,1.1s						
RAYN	**Ar Rayn**	**84.79**	**305**	P	**P**	**21 50 11.2**	**-1.7**
RAYN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
QSPA	**South Pole Qui**	**145.41**	**180**	PKPbc	**PKPdf**	**21 57 14.5**	**-0.4**
	comp=Z,10nm,0.6s,baz=314,slow=0.8,SNR=109						
TRQA	**Tornquist**	**145.59**	**78**	PKPdf	**PKPab**	**21 57 17.3**	**+0.7**
TRQA	**Tornquist**	**145.59**	**78**	PKP2	**PKPab**	**21 57 17.3**	**+0.7**
NVL	**N'lazarevskaya**	**160.24**	**209**	*e*PKIKP	**PKPdf**	**21 57 37.2**	**+1.0**
NVL				*e*		22 01 59.3	
NVL				*e*PPP	PPP	22 05 41.9	
NVL				pmax	pmax		
	comp=Z,11nm,1.2s						

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*NNC **23** 21:37:45.0±1.7, 45°.33N×84°.83E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=13.0km s-min=6.7km az=107.0*

*SOME **23** 21:37:46.5, 45°.38N×84°.62E, h10^{km}*

ISC 23 21:37:47.0±1.6,**45°.35N**±0°.06×**84°.46E**±0°.09,**h10**^{km}**,n21,** σ**1**^{s}**.82**/27,**6C-1D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**2.09**	**314**	Pn	**Pb**	**21 38 24.2**	**-0.7**
	0.3nm,0.1s,baz=126,slow=16,SNR=306						
MK31				⇑Sn	**Sg**	**21 38 53.9**	**-0.2**
	6.8nm,0.3s,baz=125,slow=29,SNR=23						
ZSN	**Zaisan**	**2.12**	**7**	Pg	**Pn**	**21 38 23.1**	**+0.7**
	3.5nm,0.2s						
ZSN				Lg	Lg	21 38 49.5	
	26nm,0.2s						
ZSN	**Zaisan**	**2.12**	**7**	*e*P	**Pn**	**21 38 23.1**	**+0.7**
	3.5nm,0.2s						
ZSN				*e*S	**Sn**	**21 38 49.5**	**+0.7**
	26nm,0.2s						
MAKZ	**Makanchi**	**2.26**	**311**	⇑Pn	**Pb**	**21 38 27.3**	**-0.6**
	1.1nm,0.2s						
MAKZ				⇑Sn	**Sg**	**21 38 59.6**	**+0.1**
	9.0nm,0.5s						
KAPS	**Kapalarasan**	**3.60**	**271**	Pg	**Pg**	**21 38 56.6**	**+0.7**
	0.5nm,0.1s						
KAPS				Lg	Lg	21 39 47.3	
	6.4nm,0.2s						
KNOS	**Konyrlen**	**3.89**	**257**	Pg	**Pg**	**21 39 00.9**	**-0.5**
	1.1nm,0.1s						
KNOS				Lg	Lg	21 39 54.5	
	4.0nm,0.2s						
PDGK	**Podgornoye**	**4.10**	**242**	⇓Pg	**Pg**	**21 39 06.8**	**+1.2**
	5.2nm,1.1s						
PDGK				⇑Lg	Lg	21 40 03.5	
	5.4nm,0.6s						
SHLS	**Shalkode**	**4.21**	**240**	Pg	**Pb**	**21 39 01.4**	**+0.2**
	1.8nm,0.3s						
SHLS				Lg	Lg	21 39 55.3	
	5.7nm,0.4s						
SHLS	**Shalkode**	**4.21**	**240**	*e*P	**Pb**	**21 39 01.4**	**+0.2**
	1.8nm,0.3s						
SHLS				*e*S	**Sb**	**21 39 55.3**	**+3.2**
	5.7nm,0.4s						
BLB	**Baldybastay**	**4.45**	**256**	Pg	**Pg**	**21 39 10.9**	**-1.2**
	4.0nm,0.1s						
BLB				Lg	Lg	21 40 11.3	
	5.3nm,0.3s						
UZB	**Uzynbulak**	**4.49**	**242**	Pg	**Pg**	**21 39 10.2**	**-2.7**
	3.5nm,0.3s						
UZB				Lg	Lg	21 40 10.5	
	3.4nm,0.5s						
UZB	**Uzynbulak**	**4.49**	**242**	*e*P	**Pg**	**21 39 10.2**	**-2.7**
	3.5nm,0.3s						
UZB				*e*S	**Sg**	**21 40 10.5**	**-0.6**
	3.4nm,0.5s						
KPKS	**Kokpek**	**4.55**	**248**	Pg	**Pg**	**21 39 12.5**	**-1.7**
	0.2nm,0.1s						
KPKS				Lg	Lg	21 40 14.2	
	9.9nm,0.6s						
KPKS	**Kokpek**	**4.55**	**248**	*e*P	**Pg**	**21 39 12.4**	**-1.7**
	0.2nm,0.1s						
KPKS				*e*S	**Sg**	**21 40 14.2**	**+1.2**
	9.9nm,0.6s						
ARXS	**Arharly**	**4.86**	**259**	Pg	**Pg**	**21 39 17.6**	**-2.4**
	0.7nm,0.4s						
ARXS				Lg	Lg	21 40 23.3	
	5.4nm,0.5s						
ARXS	**Arharly**	**4.86**	**259**	*e*P	**Pg**	**21 39 17.6**	**-2.4**
	0.7nm,0.4s						
ARXS				*e*S	**Sg**	**21 40 23.3**	**+0.4**
	5.4nm,0.5s						
SATY	**Saty**	**4.92**	**244**	Pg	**Pg**	**21 39 17.5**	**-3.7**
	2.5nm,0.3s						
SATY				Lg	Lg	21 40 23.4	
	12nm,0.3s						
CHKK	**Chushkaly**	**5.54**	**257**	Pg	**Pg**	**21 39 30.3**	**-2.8**
	0.4nm,0.1s						
CHKK				Lg	Lg	21 40 45.1	
	3.0nm,0.3s						
CHKK	**Chushkaly**	**5.54**	**257**	*e*P	**Pg**	**21 39 30.3**	**-2.8**
	0.4nm,0.1s						
CHKK				*e*S	**Sg**	**21 40 45.1**	**+0.2**
	3.0nm,0.3s						
KURBB	**Kurchatov Arra**	**6.60**	**325**	⇑Lg	Lg	21 41 18.7	
	12nm,0.7s						
KURK	**Kurchatov**	**6.64**	**326**	⇑Lg	Lg	21 41 18.7	
	1.5nm,0.6s						

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*DJA **23** 21:42:45.8±0.7, 1°N±3°×12°7E±°, h23^{km}±6^{km}, M4.0/13, mB5.7/1, mb4.2/6, MLv3.9/13, Mw(mB)5.2/1, MwMwp5.5/1, Mwp5.7/1*

*IDC **23** 21:42:59.5±15.0, 0°.68N×126°.45E, h184^{km}±163^{km}, mb3.1/5, mbtmp3.6/6, ML3.5/1, Error ellipse: s-maj=95.3km s-min=31.0km az=64.0*

ISC 23 21:42:48.0±0.9,**1°.0N**±0°.1×**126°.90E**±0°.08,**h72**^{km}**,n19,** σ**1**^{s}**.16**/20,**mb3.6**/5,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.52**	**116**	P	**Pn**	**21 42 59.2**	**-2.0**
TNTI				S	**Sn**	**21 43 08.8**	**-2.1**
SANI	**Sanana**	**3.16**	**197**	P	**Pn**	**21 43 34.2**	**-1.3**
GTOI	**Gorontalo**	**3.91**	**265**	P	**Pn**	**21 43 45.7**	**+0.1**
NLAI	**Namlea**	**4.21**	**177**	P	**Pn**	**21 43 50.1**	**+0.2**
LUWI	**Luwuk**	**4.60**	**244**	P	**Pn**	**21 43 55.0**	**-0.1**
SWI	**Sorong**	**4.73**	**113**	P	**Pn**	**21 43 57.5**	**+0.6**
SIJI	**Sorong**	**4.74**	**113**	P	**Pn**	**21 43 57.4**	**+0.3**
MRSI	**Marisa**	**4.99**	**264**	P	**Pn**	**21 43 59.1**	**-1.3**
APSI	**Ampana**	**5.58**	**250**	P	**Pn**	**21 44 08.1**	**-0.5**
FAKI	**Fak Fak**	**6.61**	**126**	P	**Pn**	**21 44 23.5**	**+0.8**
	0.1nm13nm,1.3s						
SPSI	**Sidrap Palu**	**8.67**	**235**	P	**Pn**	**21 44 49.7**	**-1.0**
	4µm14nm,0.7s						
BKSI	**Bulukumba**	**9.23**	**227**	P	**Pn**	**21 44 58.8**	**+0.3**
	16nm,0.7s						
EDFI	**Ende, Flores**	**10.99**	**208**	P	**Pn**	**21 45 24.2**	**+1.6**
FITZ	**Fitzroy Crossi**	**19.02**	**184**	P	**P**	**21 47 04.3**	**0.0**
	0.1nm,0.3s,baz=10.0,slow=12,SNR=2.4						
	1.9nm,0.9s						
WRA	**Warramunga Arr**	**22.05**	**161**	P	**P**	**21 47 37.5**	**+0.5**
	1.7nm,0.5s,baz=339,slow=10,SNR=28						
	1.7nm,0.5s						
ASAR	**Alice Springs**	**25.45**	**165**	P	**P**	**21 48 09.3**	**-0.1**
	0.8nm,0.4s,baz=344,slow=9.7,SNR=36						
	0.8nm,0.4s						
SONM	**Songino Array**	**49.93**	**342**	P	**P**	**21 51 36.7**	**+2.1**
	0.2nm,0.4s,baz=147,slow=6.3,SNR=1.4						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.89**	**326**	P	**P**	**21 52 45.9**	**-0.6**
	0.2nm,0.4s,baz=124,slow=8.3,SNR=6.6						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**64.12**	**328**	P	**P**	**21 53 13.9**	**-0.8**
	0.2nm,0.5s,baz=131,slow=5.8,SNR=5.5						
	0.2nm,0.5s						

IDC 23 22:12:30.3±4.2,**28°.16S**×**177°.21W,h0**^{km}**,mb4.1**/3, **mbtmp4.1**/3,**Error ellipse: s-maj=81.3km s-min=27.2km az=97.0,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.25**	**210**	Pn	Pg	22 12 54.1	-0.1
	116nm,0.3s,baz=24,slow=20,SNR=1.8						
RAO				Sn	Sn	22 13 13.9	+1.3
	237nm,0.3s,baz=92,slow=23,SNR=4.9						
ASAR	**Alice Springs**	**43.97**	**264**	P	P	22 20 39.6	+0.1
	0.6nm,0.7s,baz=99,slow=7.6,SNR=8.7						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**44.76**	**269**	P	P	22 20 46.8	+0.9
	1.3nm,0.9s,baz=110,slow=8.0,SNR=4.7						
	1.3nm,0.9s						
JAY	**Jayapura**	**47.54**	**295**	P	P	22 21 06.7	-1.2
	9.4nm,0.6s,baz=126,slow=8.7,SNR=5.2						
	9.4nm,0.6s						
FINES	**FINESS Array B**	**143.27**	**341**	PKP	PKPdf	22 32 05.8	0.0
	2.2nm,0.7s,baz=33,slow=5.6,SNR=7.6						

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*NEIC **23** 22:20:02.4, 50°.34N×130°.05W, h6^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.60; $M_{\theta\theta}$-5.42; $M_{\phi\phi}$4.50; $M_{r\theta}$-0.37; $M_{\theta\phi}$0.98; $M_{\phi r}$-1.28; Fault plane solution: $M_0$5.30000×10^{15} NP1:ϕ_s140.00000°, δ78.00000°, λ173.00000°. NP2:ϕ_s231.00000°, δ83.00000°, λ12.00000°. Principal axes: T 5.4137, Plg13.0000°, Azm96.0000°; N -0.3921, Plg76.0000°, Azm263.0000°; P -5.0216, Plg3.0000°, Azm5.0000°;*

*ANF **23** 22:20:04.1±0.7, 50°.34N×129°.96W, h0^{km}, Mb4.4/19 Error ellipse: s-maj=8.4km s-min=4.2km az=143.0*

*IDC **23** 22:20:05.2±1.3, 50°.57N×129°.46W, h0^{km}, mb3.7/4, mbtmp3.9/11, ML3.8/6, Error ellipse: s-maj=17.5km s-min=7.8km az=89.0*

*NEIC **23** 22:20:06.8±1.4, 50°.6N±0°.1×129°.52W±0°.04, h10^{km}±2^{km}, mb4.1/96, Mwr4.4(OTT), Error ellipse: s-maj=17.0km s-min=3.9km az=184.0*

ISC 23 22:20:05.1±0.6,**50°.51N**±0°.07×**129°.69W**±0°.05,**h10**^{km}**, n391,** σ**1**^{s}**.17**/356,**mb4.2**/12,**Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.00**	**82**		**Pg**	**22 20 24.1**	**-0.2**
HOLB				Sg	**Sg**	**22 20 35.4**	**-2.0**
BBB	**Bella Bella**	**1.95**	**30**	Pg	**Pn**	**22 20 38.0**	**-0.1**
	57nm,0.3s,baz=232,slow=9.0,SNR=198						
BBB				Lg	Lg	22 21 02.0	
	142nm,0.3s,baz=308,slow=21,SNR=9.4						
BBB	**Bella Bella**	**1.95**	**30**	Pn	**Pn**	**22 20 37.5**	**-0.6**
HG4B	**Hotspring**	**2.02**	**333**	Pn	Pn	22 20 35.2	-4.0
CBB	**Campbell River**	**2.82**	**98**	Pn	**Pn**	**22 20 49.0**	**-1.1**
MOBC	**Moresby Island**	**2.99**	**333**	Pn	**Pn**	**22 20 49.0**	**-3.6**
OZB	**Mount Ozzard**	**3.13**	**118**	Pn	**Pn**	**22 20 51.2**	**-3.3**
DIB	**Dawson Inlet,**	**3.20**	**328**	Pn	**Pn**	**22 20 52.0**	**-3.4**
RUBB	**Prince Rupert**	**3.84**	**355**	Pn	**Pn**	**22 21 01.6**	**-2.6**
CLRS	**Cowichan Lake**	**3.99**	**113**	Pn	**Pn**	**22 21 05.2**	**-1.0**
PGC	**Sidney**	**4.47**	**112**	Pn	**Pn**	**22 21 11.1**	**-1.7**
B04A	**Port Angeles**	**4.73**	**119**	Pn	**Pn**	**22 21 15.7**	**-0.8**
A04D	**Lummi Island**	**4.88**	**109**	Pn	**Pn**	**22 21 17.9**	**-0.6**
NLWA	**Neilton Lookou**	**4.94**	**127**	Pn	**Pn**	**22 21 18.5**	**-0.9**
V35K	**Ketchikan**	**4.97**	**347**	P	**Pn**	**22 21 21.4**	**+1.8**
	baz=164						
LLLB	**Lillooet**	**4.98**	**86**	Pn	**Pn**	**22 21 20.1**	**+0.2**
WISH	**Wishkah**	**5.18**	**129**	Pn	**Pn**	**22 21 21.7**	**-0.9**
CRAG	**Craig**	**5.38**	**339**	Pn	**Pn**	**22 21 23.1**	**-2.3**
CRAG	**Craig**	**5.38**	**339**	P	**Pn**	**22 21 27.0**	**+1.6**
	baz=154						
GNW	**Green Mountain**	**5.39**	**120**	Pn	**Pn**	**22 21 23.1**	**-2.4**
RADR	**Rader Ridge**	**5.66**	**134**	Pn	**Pn**	**22 21 27.5**	**-1.8**
U33K	**Whale Pass**	**5.98**	**341**	P	**Pn**	**22 21 34.8**	**+1.3**
	baz=157						
D05A	**Enumclaw**	**6.07**	**120**	Pn	**Pn**	**22 21 35.2**	**+0.3**
WRAK	**Wrangell Islan**	**6.13**	**346**	P	**Pn**	**22 21 37.3**	**+1.7**
	baz=163						
LON	**Longmire**	**6.44**	**123**	Pn	**Pn**	**22 21 39.4**	**-0.6**
T35M	**Bob Quinn**	**6.49**	**357**	Pn	**Pn**	**22 21 39.6**	**-1.1**
T35M	**Bob Quinn**	**6.49**	**357**	P	**Pn**	**22 21 42.7**	**+2.1**
	baz=176						
LTY	**Liberty**	**6.78**	**115**	Pn	**Pn**	**22 21 45.9**	**+1.3**
B08A	**Colville Reser**	**7.09**	**104**	Pn	**Pn**	**22 21 49.0**	**+0.2**
SIT	**Sitka**	**7.36**	**335**	P	**Pn**	**22 21 53.0**	**+0.6**
	baz=150						
EPH	**Ephrata**	**7.36**	**112**	Pn	**Pn**	**22 21 52.6**	**0.0**
MXC	**Moxie City**	**7.37**	**119**	Pn	**Pn**	**22 21 52.9**	**+0.2**
S34M	**Telegraph Cree**	**7.47**	**354**	Pn	**Pn**	**22 21 54.3**	**+0.3**
S34M	**Telegraph Cree**	**7.47**	**354**	P	**Pn**	**22 21 55.6**	**+1.7**
	baz=172						
S32K	**Killisnoo**	**7.54**	**339**	P	**Pn**	**22 21 55.7**	**+0.8**
	baz=154						
E07A	**Sunnyside**	**7.63**	**117**	Pn	**Pn**	**22 21 56.4**	**+0.1**
WAH2	**Wahluke Slope**	**7.69**	**115**	Pn	**Pn**	**22 21 57.2**	**+0.2**
H04A	**Detroit Lake**	**7.72**	**136**	Pn	**Pn**	**22 21 57.5**	**-0.1**
D08A	**Wollman Farm,**	**7.91**	**112**	Pn	**Pn**	**22 21 59.3**	**-0.8**
C09A	**Chrisman Ranch**	**7.96**	**106**	Pn	**Pn**	**22 22 01.1**	**+0.3**
R32K	**Eaglecrest**	**8.27**	**342**	P	**Pn**	**22 22 05.9**	**+0.8**
	baz=157						
I04A	**Tendick Farm,**	**8.35**	**141**	Pn	**Pn**	**22 22 05.1**	**-1.0**
S31K	**Pelican**	**8.39**	**335**	P	**Pn**	**22 22 07.2**	**+0.7**
	baz=149						
NEW	**Newport**	**8.50**	**100**	Pn	**Pn**	**22 22 08.7**	**+0.4**
	2.1nm,0.3s,baz=283,slow=10,SNR=9.9						
	5.5nm,0.3s						
Q32M	**Nakina River**	**8.60**	**351**	P	**Pn**	**22 22 09.9**	**+0.2**
	baz=168						
E09A	**Wood Farm, Sta**	**8.64**	**113**	Pn	**Pn**	**22 22 10.8**	**+0.6**
TOAD	**Toad River Com**	**8.75**	**15**	P	**Pn**	**22 22 13.4**	**+1.8**
	baz=198						
G08A	**Pilot Rock**	**8.90**	**122**	Pn	**Pn**	**22 22 13.1**	**-0.6**
LNOR	**Lincton Mounta**	**8.92**	**117**	Pn	**Pn**	**22 22 13.2**	**-0.7**
R33M	**Jennings River**	**8.94**	**356**	P	**Pn**	**22 22 15.3**	**+1.1**
	baz=174						
LIRD	**Liard River Hi**	**9.15**	**12**	P	**Pn**	**22 22 19.6**	**+2.5**
	baz=194						
J05D	**Fort Rock, OR**	**9.25**	**138**	Pn	**Pn**	**22 22 19.0**	**+0.3**
P32M	**Atlin**	**9.39**	**347**	P	**Pn**	**22 22 21.2**	**+0.9**
	baz=163						
PLBC	**Pleasant Camp**	**9.75**	**339**	P	**Pn**	**22 22 26.1**	**+0.9**
	baz=153						
P33M	**Teslin, Yukon**	**9.88**	**351**	P	**Pn**	**22 22 28.4**	**+1.2**
	baz=168						
YBH	**Yreka Blue Hor**	**10.02**	**148**	Pn	**Pn**	**22 22 31.8**	**+2.7**
	baz=353,slow=13,SNR=6.7						
YBH	**Yreka Blue Hor**	**10.02**	**148**	Pn	**Pn**	**22 22 32.0**	**+2.9**
BMO	**Blue Mountains**	**10.08**	**119**	Pn	**Pn**	**22 22 28.5**	**-1.5**
KOTAN	**Kotaneelee Air**	**10.16**	**16**	P	**Pn**	**22 22 32.9**	**+2.0**
	baz=200						
P29M	**Windy Craggy**	**10.23**	**336**	P	**Pn**	**22 22 32.4**	**+0.6**
	baz=149						
JTMT	**Jette**	**10.47**	**99**	Pn	**Pn**	**22 22 36.1**	**+0.8**
P30M	**Million Dollar**	**10.48**	**340**	P	**Pn**	**22 22 36.4**	**+1.1**
	baz=153						
WHY	**Whitehorse**	**10.59**	**346**	P	**Pn**	**22 22 37.9**	**+1.1**
	baz=161						
PLID	**Pearl Lake**	**10.68**	**115**	Pn	**Pn**	**22 22 38.6**	**+0.3**
N32M	**Quiet Lake**	**10.84**	**351**	P	**Pn**	**22 22 41.8**	**+1.7**
	baz=168						
O30N	**Mendenhall**	**10.89**	**343**	P	**Pn**	**22 22 42.3**	**+1.4**
	baz=157						
O29M	**Mount Kennedy**	**11.03**	**336**	P	**Pn**	**22 22 43.9**	**+1.1**
	baz=148						
PINM	**Pinnacle**	**11.32**	**332**	P	**Pn**	**22 22 47.5**	**+0.8**
	baz=143						
N31M	**Braeburn, Yuko**	**11.51**	**345**	P	**Pn**	**22 22 50.0**	**+0.6**
	baz=160						
YUK6	**Outpost Mounta**	**11.53**	**338**	P	**Pn**	**22 22 50.6**	**+0.8**
	baz=150						
OVMT	**Ovando**	**11.54**	**101**	Pn	**Pn**	**22 22 49.6**	**-0.2**
N30M	**Aishikik Lake**	**11.72**	**342**	P	**Pn**	**22 22 52.8**	**+0.6**
	baz=156						
O28M	**Mount Upton**	**11.85**	**334**	P	**Pn**	**22 22 54.0**	**-0.3**
	baz=145						
MESA	**MESA**	**11.92**	**329**	P	**Pn**	**22 22 54.6**	**-0.5**
	baz=138						
YUK4	**Talbot Arm**	**11.95**	**339**	P	**Pn**	**22 22 57.4**	**+1.9**
	baz=151						
M31M	**Drury Creek, Y**	**12.00**	**349**	P	**Pn**	**22 22 57.5**	**+1.4**
	baz=165						
YUK8	**Steele Glacier**	**12.17**	**336**	P	**Pn**	**22 22 59.1**	**+0.5**
	baz=147						
CTG	**Chitna Glacier**	**12.34**	**333**	P	**Pn**	**22 23 00.7**	**0.0**
	baz=142						
ORV	**Oroville**	**12.38**	**149**		**Pn**	**22 23 02.6**	**+1.3**
HLID	**Hailey**	**12.51**	**118**	Pn	**Pn**	**22 23 04.6**	**+1.4**
DLMT	**Dillon**	**12.56**	**108**	Pn	**Pn**	**22 23 03.8**	**-0.1**
KAIM	**Kayak Island**	**12.61**	**324**	P	**Pn**	**22 23 03.3**	**-1.0**
	baz=131						
BCYI	**Bear Canyon**	**12.64**	**113**	Pn	**Pn**	**22 23 04.6**	**-0.5**
M30M	**Minto, Yukon**	**12.70**	**345**	P	**Pn**	**22 23 07.3**	**+1.6**
	baz=158						
CRQE	**Cirque**	**12.72**	**329**	P	**Pn**	**22 23 06.2**	**+0.2**
	baz=137						
YUK3	**Moose Creek**	**12.77**	**336**	P	**Pn**	**22 23 06.8**	**+0.2**
	baz=147						
M29M	**Somme Creek**	**12.89**	**341**	P	**Pn**	**22 23 09.4**	**+1.1**
	baz=154						
PAHR	**Pah Rah Range**	**13.01**	**142**	Pn	**Pn**	**22 23 11.3**	**+1.3**
BOZ	**Bozeman (W)**	**13.04**	**105**	Pn	**Pn**	**22 23 10.7**	**+0.3**
MCARA	**McCarthy VSAT**	**13.18**	**331**	P	**Pn**	**22 23 13.3**	**+1.2**
	baz=139						
WRGLY	**Wrigley**	**13.19**	**12**	P	**Pn**	**22 23 14.6**	**+2.4**
	baz=197						
BMRM	**Bremner River**	**13.39**	**327**	P	**Pn**	**22 23 14.8**	**-0.2**
	baz=134						
BVCY	**Beaver Creek**	**13.41**	**337**	P	**Pn**	**22 23 15.4**	**+0.2**
	baz=147						
L29M	**L29M**	**13.43**	**343**	P	**Pn**	**22 23 16.2**	**+0.6**
	baz=156						
EYAK	**Cordova Ski Ar**	**13.52**	**324**	P	**Pn**	**22 23 16.4**	**-0.3**
	baz=130						
M27K	**Edge Creek, AK**	**13.62**	**335**	P	**Pn**	**22 23 18.9**	**+0.7**
	baz=144						
YHL	**Hebgen Lake**	**13.68**	**107**	Pn	**Pn**	**22 23 19.2**	**0.0**
YHB	**Horse Butte**	**13.72**	**108**	Pn	**Pn**	**22 23 20.2**	**+0.4**
P23K	**Montague Islan**	**13.82**	**320**	P	**Pn**	**22 23 20.2**	**-0.6**
	baz=125						
N25K	**Chitina, Valde**	**13.85**	**329**	P	**Pn**	**22 23 21.9**	**+0.6**
	baz=136						
YMR	**Madison River**	**13.91**	**108**	Pn	**Pn**	**22 23 22.2**	**-0.1**
YHH	**Holmes Hill**	**13.91**	**107**	Pn	**Pn**	**22 23 22.2**	**-0.3**
M26K	**Nabesna, AK**	**13.96**	**334**	P	**Pn**	**22 23 23.7**	**+0.9**
	baz=142						
K29M	**Barlow Dome**	**14.01**	**346**	P	**Pn**	**22 23 24.7**	**+1.2**
	baz=158						
ELK	**Elko**	**14.03**	**129**	Pn	**Pn**	**22 23 27.8**	**+3.7**
	0.1nm,0.3s,baz=322,slow=13,SNR=5.2						
	0.4nm,0.5s						
YNR	**Norris Junctio**	**14.06**	**107**	Pn	**Pn**	**22 23 24.9**	**+0.6**
BCAR	**Beaver Creek A**	**14.19**	**337**		**Pn**	**22 23 28.1**	**+2.2**
L27K	**Beaver Creek,**	**14.20**	**337**	P	**Pn**	**22 23 27.1**	**+1.1**
	baz=146						
KLU	**Klutina**	**14.21**	**327**	P	**Pn**	**22 23 26.5**	**+0.2**
	baz=133						
YPP	**Pitchstone Pla**	**14.22**	**109**	Pn	**Pn**	**22 23 26.7**	**+0.1**
GLI	**Glacier Island**	**14.24**	**323**	P	**Pn**	**22 23 26.7**	**+0.2**
	baz=128						
LKWY	**Lake**	**14.30**	**107**	Pn	**Pn**	**22 23 28.0**	**+0.2**
YNE	**Yellowstone No**	**14.32**	**105**	Pn	**Pn**	**22 23 27.0**	**-1.0**
FXWY	**Fox Creek**	**14.43**	**111**	Pn	**Pn**	**22 23 26.3**	**-3.3**
J30M	**Hart River**	**14.53**	**349**	P	**Pn**	**22 23 32.2**	**+1.5**
	baz=162						
NVAR	**Mina Array Bea**	**14.54**	**142**	Pn	**Pn**	**22 23 33.4**	**+2.4**
	1.3nm,0.9s,baz=327,slow=11,SNR=4.2						
NVAR	**Mina Array Bea**	**14.54**	**142**	Pn	**Pn**	**22 23 32.6**	**+1.7**
DAWY	**Dawson**	**14.54**	**343**	P	**Pn**	**22 23 31.9**	**+1.2**
	baz=154						
L26K	**Log Cabin Wild**	**14.56**	**335**	P	**Pn**	**22 23 32.0**	**+1.0**
	baz=143						
YKA	**Yellowknife Ar**	**14.56**	**29**	Pn	**Pn**	**22 23 28.5**	**-2.4**
	0.2nm,0.3s,baz=229,slow=12,SNR=10						
YKA				Sn	Sn	22 26 01.1	-11
	0.1nm,0.3s,baz=224,slow=23,SNR=4.3						
	0.8nm,0.7s						
YKA	**Yellowknife Ar**	**14.56**	**29**	Pn	**Pn**	**22 23 30.8**	**-0.2**
HARP	**HAARP**	**14.61**	**331**	P	**Pn**	**22 23 32.4**	**+0.8**
	baz=137						
M24K	**Tolsona, Glenn**	**14.73**	**328**	P	**Pn**	**22 23 33.7**	**+0.4**
	baz=134						
SEW	**Seward**	**14.74**	**318**	P	**Pn**	**22 23 33.4**	**+0.1**
	baz=121						
SCM	**Sheep Creek Mo**	**14.94**	**326**	P	**Pn**	**22 23 36.2**	**0.0**
	baz=131						
KNK	**Knik Glacier**	**15.09**	**324**	P	**Pn**	**22 23 38.0**	**-0.1**
	baz=127						
BRSE	**Bradley Lake S**	**15.12**	**316**	P	**Pn**	**22 23 36.9**	**-1.6**
	baz=118						
PAX	**Paxson**	**15.13**	**332**	P	**Pn**	**22 23 39.3**	**+0.6**
	baz=138						
I30M	**Mount Dempster**	**15.16**	**349**	P	**Pn**	**22 23 40.9**	**+1.7**
	baz=163						
KDAK	**Kodiak Island**	**15.21**	**307**	P	**Pn**	**22 23 38.0**	**-1.7**
	baz=108						
SML	**Sawmill**	**15.29**	**325**	P	**Pn**	**22 23 40.5**	**-0.3**
	baz=129						
HWUT	**Hardware Ranch**	**15.38**	**118**	IAmb	IAmb	22 23 48.0	
	comp=Z,12nm,1.4s						
RC01	**Rabbit Creek A**	**15.39**	**321**	P	**Pn**	**22 23 42.6**	**+0.5**
	baz=124						
Q20K	**Shuyak Island**	**15.40**	**310**	P	**Pn**	**22 23 42.2**	**0.0**
	baz=111						
OHAK	**Old Harbor**	**15.40**	**305**	P	**Pn**	**22 23 41.9**	**-0.4**
	baz=105						
PMR	**Palmer**	**15.45**	**323**	P	**Pn**	**22 23 43.5**	**+0.7**
	baz=127						
HOM	**Homer**	**15.48**	**315**	P	**Pn**	**22 23 43.2**	**-0.1**
	baz=116						
SCRK	**Sand Creek**	**15.50**	**336**	P	**Pn**	**22 23 44.7**	**+1.1**
	baz=143,SNR=10						
H31M	**Peel River**	**15.53**	**353**	P	**Pn**	**22 23 45.9**	**+2.1**
	baz=168						
RIDG	**Independent Ri**	**15.54**	**334**	P	**Pn**	**22 23 45.3**	**+1.2**
	baz=141						
I29M	**Ogilvie Camp,**	**15.55**	**346**	P	**Pn**	**22 23 46.0**	**+1.8**
	baz=159						
WAT6	**Susitna Watana**	**15.59**	**328**	P	**Pn**	**22 23 45.5**	**+0.7**
	baz=132,SNR=5.7						
PMPB	**Monarch Peak**	**15.66**	**152**	P	**P**	**22 23 52.2**	**+2.2**
DUG	**Dugway, Tooele**	**15.68**	**125**	IAmb	IAmb	22 23 52.8	
	comp=Z,12nm,1.2s						
SII	**Sitkinak Islan**	**15.72**	**302**	P	**Pn**	**22 23 45.8**	**-0.6**
	baz=102						
CAPN	**Captain Cook N**	**15.80**	**319**	P	**Pn**	**22 23 48.2**	**+0.8**
	baz=120						
DHY	**Denali Highway**	**15.81**	**329**	P	**Pn**	**22 23 49.3**	**+1.6**
	baz=134						
BW06	**Boulder Array**	**15.81**	**112**	IAmb	IAmb	22 23 51.9	
	comp=Z,12nm,1.1s						
PDAR	**Pinedale Array**	**15.81**	**112**	Pn	**Pn**	**22 23 48.6**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=312,slow=12,SNR=30						
PDAR				Sn	**Sn**	**22 26 41.3**	**-2.0**
	baz=319,slow=28,SNR=1.7						
	comp=Z,6.7nm,1.0s						
J26L	**Joseph Creek**	**15.82**	**338**	P	**Pn**	**22 23 49.6**	**+1.8**
	baz=145						
K24K	**Donnelly Dome**	**15.86**	**333**	P	**Pn**	**22 23 50.4**	**+2.3**
	baz=139,SNR=5.3						
I28M	**Miner Creek**	**15.90**	**344**	P	**P**	**22 23 53.2**	**+0.8**
I28M				IAmb	IAmb	22 24 01.5	
	comp=Z,17nm,1.4s						
M22K	**Willow**	**15.93**	**323**	P	**Pn**	**22 23 50.3**	**+1.3**
	baz=125						
SUA	**Susitna One**	**16.01**	**321**	P	**Pn**	**22 23 50.8**	**+0.6**
	baz=123						
WAT1	**Susitna Watana**	**16.03**	**327**	P	**Pn**	**22 23 51.9**	**+1.5**
	baz=131						
O20K	**Slope Mountain**	**16.11**	**315**	P	**Pn**	**22 23 51.5**	**-0.1**
	baz=116						
Q19K	**Cape Douglas,**	**16.13**	**311**	P	**Pn**	**22 23 51.9**	**+0.3**
	baz=110						
P19K	**Oil Pt**	**16.21**	**313**	P	**Pn**	**22 23 52.6**	**-0.1**
	baz=114						
EPYK	**Eagle Plains**	**16.31**	**350**	P	**Pn**	**22 23 56.0**	**+2.0**
	baz=163						
I27K	**Kandik River**	**16.35**	**342**	P	**Pn**	**22 23 55.7**	**+1.3**
	baz=152						
H29M	**Whitestone**	**16.37**	**347**	P	**Pn**	**22 23 55.8**	**+1.1**
	baz=160						
J25K	**Salcha River,**	**16.37**	**336**	IAmb	IAmb	22 24 00.9	
	comp=Z,17nm,1.1s						
J25K	**Salcha River,**	**16.37**	**336**	P	**Pn**	**22 23 55.4**	**+0.6**
	baz=142,SNR=7.0						
CHIR	**Chirikof Islan**	**16.38**	**299**	P	**Pn**	**22 23 53.6**	**-1.2**
	baz=98						
I26K	**Coal Creek Min**	**16.41**	**340**	IAmb	IAmb	22 24 02.4	
	comp=Z,28nm,1.2s						
I26K	**Coal Creek Min**	**16.41**	**340**	P	**Pn**	**22 23 56.1**	**+0.9**
	baz=148						
N20K	**Mount Spurr**	**16.47**	**319**	P	**Pn**	**22 23 55.5**	**-0.5**
	baz=120						
SPCR	**Spurr Chakacha**	**16.47**	**319**	P	**Pn**	**22 23 55.2**	**-0.8**
	baz=120						
RND	**Reindeer**	**16.52**	**329**	IAmb	IAmb	22 24 02.6	
	comp=Z,17nm,1.2s						
SKT	**Skwentna**	**16.61**	**322**	P	**Pn**	**22 23 57.7**	**-0.1**
	baz=123						
G31M	**Satah River**	**16.63**	**354**	IAmb	IAmb	22 24 03.8	
	comp=Z,31nm,1.2s						
G31M	**Satah River**	**16.63**	**354**	P	**Pn**	**22 23 59.2**	**+1.3**
	baz=169,SNR=7.8						
HDA	**Harding Lake**	**16.65**	**333**	P	**Pn**	**22 23 58.6**	**+0.3**

	baz=138						
Q18K	Katmai Hardscr	16.70	309	P	Pn	22 23 57.5	-1.5
	baz=108						
MCK	McKinley	16.77	329	P	Pn	22 23 59.7	-0.1
	baz=133						
G30M	tAoh Zraii Nji	16.85	351	P	Pn	22 24 02.4	+1.6
	baz=165						
H27K	Steamboat Moun	16.89	343	P	Pn	22 24 02.9	+1.6
	baz=153						
ILAR	Eielson Array	16.91	334	Pn	P	22 24 04.2	+0.7
	comp=Z,0.1nm,0.3s,baz=138,slow=9.8,SNR=44						
	comp=Z,5.7nm,0.9s						
ILAR	Eielson Array	16.91	334	P	P	22 24 06.4	+2.9
O19K	Port Alsworth	16.93	314	P	Pn	22 24 02.1	+0.3
	baz=114						
G29M	Pine Creek	16.98	349	IAmb	IAmb	22 24 10.5	
	comp=Z,16nm,1.2s						
G29M	Pine Creek	16.98	349	P	Pn	22 24 04.2	+1.7
	baz=161						
Q17K	Contact Creek	17.03	307	P	Pn	22 24 01.7	-1.5
	baz=105						
TRF	Thorofare Moun	17.04	327	P	Pn	22 24 03.6	+0.3
	baz=130						
P18K	Big Mountain,	17.05	311	P	Pn	22 24 03.2	-0.2
	baz=110						
F31M	Tsiigehtchic	17.11	355	IAmb	IAmb	22 24 06.6	
	comp=Z,18nm,1.1s						
F31M	Tsiigehtchic	17.11	355	P	Pn	22 24 05.2	+1.3
	baz=171,SNR=7.0						
R17L	Mt. Peulik Vol	17.12	305	P	Pn	22 24 03.2	-1.0
	baz=103						
M20K	Styx River	17.20	320	P	Pn	22 24 04.9	-0.3
	baz=120						
O18K	Koktuh Hills	17.21	313	P	Pn	22 24 04.5	-0.8
	baz=111						
N19K	Bonanza Creek	17.26	316	P	Pn	22 24 05.4	-0.7
	baz=115						
FFC	Flin Flon	17.29	65	P	Pn	22 24 07.0	+0.6
FFC				IAmb	IAmb	22 24 14.7	
	comp=Z,12nm,0.8s						
POKR	Poker Plat Res	17.32	334	P	Pn	22 24 07.2	+0.5
	baz=139						
PPLA	Purkeypile	17.38	324	P	Pn	22 24 07.5	-0.1
	baz=125						
NEA2	Nenana	17.41	331	P	Pn	22 24 08.3	+0.5
	baz=134						
F30M	Barrier River	17.42	352	P	Pn	22 24 08.5	+0.6
	baz=166						
G27K	Doyon Strip	17.43	344	IAmb	IAmb	22 24 12.9	
	comp=Z,18nm,1.4s						
G27K	Doyon Strip	17.43	344	P	Pn	22 24 07.9	-0.2
	baz=153						
P17K	Kvichak River	17.58	310	P	Pn	22 24 07.7	-2.2
	baz=107						
BPAW	Bear Paw Mtn.	17.69	328	P	Pn	22 24 11.1	-0.3
	baz=130						
N18K	Kilae Creek	17.84	315	P	Pn	22 24 12.5	-0.7
	baz=113						
F28M	Old Crow	17.89	347	P	Pn	22 24 14.7	+0.9
	baz=158						
I23K	Minto, Yukon-K	17.90	332	P	Pn	22 24 14.9	+1.1
	baz=135						
INK	Inuvik	17.95	355	P	Pn	22 24 15.1	+0.7
	comp=Z,0.1nm,0.3s,baz=165,slow=12,SNR=10						
	comp=Z,4.5nm,1.0s						
INK	Inuvik	17.95	355	P	Pn	22 24 15.3	+0.8
	baz=172						
G26K	Porcupine Rive	17.96	342	IAmb	IAmb	22 24 18.6	
	comp=Z,18nm,1.3s						
G26K	Porcupine Rive	17.96	342	P	Pn	22 24 15.6	+1.1
	baz=149						
H24K	Noodor Dome	17.99	335	IAmb	IAmb	22 24 22.4	
	comp=Z,18nm,1.4s						
H24K	Noodor Dome	17.99	335	P	Pn	22 24 14.8	-0.3
	baz=139						
CHUM	Lake Minchumin	18.01	327	P	Pn	22 24 15.0	-0.2
	baz=127						
L19K	White Mountain	18.05	320		P	22 24 18.3	+2.1
L19K				IAmb	IAmb	22 24 19.9	
	comp=Z,18nm,1.2s						
L19K	White Mountain	18.05	320	P	Pn	22 24 15.3	-0.5
	baz=118						
O17K	Koliganek Bris	18.08	311	P	Pn	22 24 15.2	-0.8
	baz=108						
M18K	Stony River	18.14	317	P	Pn	22 24 16.8	0.0
	baz=115						
G25K	Bearman Lake	18.29	339	P	P	22 24 19.7	+1.0
	baz=144						
P16K	Nushagak River	18.30	309	P	Pn	22 24 17.4	-1.3
	baz=105						
K20K	Telida	18.35	324		Pn	22 24 19.4	0.0
K20K				IAmb	IAmb	22 24 28.9	
	comp=Z,13nm,1.1s						
K20K	Telida	18.35	324	P	Pn	22 24 19.2	-0.1
	baz=123						
N17K	Nushagak Hills	18.38	314	P	P	22 24 19.3	-0.4
	baz=110						
E29M	Blow River	18.38	350		Pn	22 24 19.9	+0.2
E29M				IAmb	IAmb	22 24 24.8	
	comp=Z,24nm,1.4s						
E29M	Blow River	18.38	350	P	P	22 24 20.8	+1.1
	baz=163						
HMU	Henry Mountain	18.44	126	P	P	22 24 21.9	+1.1
HMU				IAmb	IAmb	22 24 23.6	
	comp=Z,11nm,1.0s						
O16K	Kokwok River B	18.50	310	P	P	22 24 20.7	-0.4
	baz=106						
BMAR	Burnt Mountain	18.53	342	P	Pn	22 24 22.8	+1.3
CHNA	Chernabura Isl	18.56	295	P	P	22 24 20.4	-1.4
	baz=91						
G24K	Hadweenzic Riv	18.57	338	P	P	22 24 22.1	+0.3
G24K	Hadweenzic Riv	18.57	338	P	Pn	22 24 23.0	+1.0
	baz=142						
S14K	Fog Glacier	18.62	300	P	P	22 24 21.1	-1.5
	baz=95						
F26K	Sheenjek River	18.67	343	P	P	22 24 23.8	+0.8
F26K				IAmb	IAmb	22 24 27.0	
	comp=Z,25nm,1.5s						
F26K	Sheenjek River	18.67	343	P	P	22 24 23.8	+0.8
	baz=150						
E27K	Coleen River	18.68	346	P	P	22 24 23.5	+0.5
E27K	Coleen River	18.68	346	P	Pn	22 24 24.2	+0.9
	baz=155						
I21K	Tanana	18.73	330	P	Pn	22 24 24.8	+0.9
I21K				IAmb	IAmb	22 24 27.9	
	comp=Z,20nm,1.1s						
I21K	Tanana	18.73	330	P	Pn	22 24 24.6	+0.7
	baz=131,SNR=6.3						
E28M	Babbage River	18.78	349	P	P	22 24 23.0	-1.1
E28M	Babbage River	18.78	349	P	Pn	22 24 25.5	+0.9
	baz=160						
M17K	Holitna River	18.81	316	P	P	22 24 24.0	-0.5
	baz=112						
L18K	Granite Mounta	18.83	319	P	P	22 24 25.0	+0.3
	baz=116						
J20K	Nowinta River	18.84	326	P	Pn	22 24 27.0	+1.7
J20K				IAmb	IAmb	22 24 33.6	
	comp=Z,20nm,1.3s						
J20K	Nowinta River	18.84	326	P	Pn	22 24 25.9	+0.6
	baz=125						
F25K	Christian Rive	18.88	341	P	Pn	22 24 26.8	+0.9
F25K	Christian Rive	18.88	341	P	P	22 24 25.7	+0.4
	baz=147						
PV23	Carpenter Ridg	18.98	122	IAmb	IAmb	22 24 33.5	
	comp=Z,9.3nm,0.8s						
PV10	Paradox Valley	19.02	122	IAmb	IAmb	22 24 30.3	
	comp=Z,11nm,0.9s						
H22K	Ishtalitna Cre	19.02	332	P	Pn	22 24 28.1	+0.6
H22K				IAmb	IAmb	22 24 40.3	
	comp=Z,11nm,1.2s						
H22K	Ishtalitna Cre	19.02	332	P	Pn	22 24 28.4	+0.9
	baz=133						
PV20	West Nyswonger	19.08	122	IAmb	IAmb	22 24 29.7	
	comp=Z,12nm,1.0s						
SDPT	Sand Point	19.09	297	P	P	22 24 26.2	-1.3
	baz=92						
C36M	Paulatuk	19.09	6	P	P	22 24 28.2	+0.7
C36M				IAmb	IAmb	22 24 30.1	
	comp=Z,13nm,1.1s						
C36M	Paulatuk	19.09	6	P	Pn	22 24 30.5	+2.2
	baz=191,SNR=5.3						
N16K	Nishlik Lake	19.09	313	P	P	22 24 28.0	+0.3
	baz=108						
PV19	Morning Glory	19.09	122	IAmb	IAmb	22 24 29.9	
	comp=Z,10nm,0.9s						
PV17	East Wray Mesa	19.13	122	IAmb	IAmb	22 24 30.7	
	comp=Z,9.2nm,1.0s						
PV16	Nyswonger Mesa	19.13	122	P	P	22 24 28.7	+0.3
PV11	David Mesa, Pa	19.16	122	IAmb	IAmb	22 24 34.5	
	comp=Z,7.5nm,0.7s						
PV18	Skein Mesa, Pa	19.18	122	IAmb	IAmb	22 24 31.3	
	comp=Z,18nm,1.2s						
PV12	Saucer Basin,	19.19	121	IAmb	IAmb	22 24 52.6	
	comp=Z,16nm,1.4s						
PV05	Paradox Valley	19.20	122	P	Pn	22 24 30.4	+0.3
G23K	Bananza Creek	19.23	335	IAmb	IAmb	22 24 33.0	
	comp=Z,16nm,1.2s						
G23K	Bananza Creek	19.23	335	P	P	22 24 30.3	+1.2
	baz=137						
J19K	Poorman	19.28	324	P	P	22 24 30.5	+0.9
	baz=122						
H21K	Melozitna Rive	19.30	331	P	P	22 24 30.5	+0.7
	baz=130						
PV02	Paradox Valley	19.30	122	IAmb	IAmb	22 24 33.9	
	comp=Z,15nm,1.3s						
I20K	Naaghedeneel	19.32	327	P	P	22 24 31.0	+1.0
	baz=126						
E25K	Arctic Village	19.32	342	P	Pn	22 24 32.2	+1.2
	baz=148						
F24K	Squaw Lake	19.32	339	P	Pn	22 24 31.8	+0.7
F24K				IAmb	IAmb	22 24 36.4	
	comp=Z,20nm,1.3s						
F24K	Squaw Lake	19.32	339	P	Pn	22 24 32.1	+1.0
	baz=142						
M16K	Timber Creek	19.36	314	P	P	22 24 30.7	+0.1
	baz=109						
D28M	Stokes Point	19.38	350	P	Pn	22 24 32.9	+1.3
	baz=162						
J18K	Innoko River	19.42	322	P	Pn	22 24 33.4	+1.0
J18K				IAmb	IAmb	22 24 48.0	
	comp=Z,16nm,1.3s						
J18K	Innoko River	19.42	322	P	P	22 24 31.7	+0.5
	baz=119						
PV01	Paradox Valley	19.45	121	P	Pn	22 24 33.0	-0.1
PV01				IAmb	IAmb	22 24 42.8	
	comp=Z,12nm,1.3s						
L17K	Donlin	19.48	318	P	P	22 24 32.4	+0.6
	baz=113						
D27M	Malcolm River	19.56	348	P	P	22 24 33.4	+0.6
	baz=158,SNR=5.6						
N15K	Kwethluk River	19.63	311	P	P	22 24 33.4	-0.1
	baz=106						
COLD	Coldfoot	19.66	336	P	P	22 24 35.3	+1.5
	baz=138,SNR=7.1						
K17K	Iditarod	19.72	319	P	P	22 24 34.2	-0.2
	baz=115						
MDND	Maddock	19.79	86	P	Pn	22 24 36.9	0.0
IMAR	Indian Mountai	19.81	331	P	P	22 24 36.0	+0.6
L16K	Owhat River	19.84	316	P	P	22 24 36.6	+0.9
	baz=110						
H20K	Anotleneega Mo	19.87	329	P	P	22 24 37.3	+1.2
	baz=126						
E24K	Your Creek	19.90	339	P	Pn	22 24 38.2	+0.1
	baz=142						
O14K	Tigyukauivet M	19.99	308	P	P	22 24 37.7	+0.3
	baz=102						
S12K	Black Hills	20.00	298	P	P	22 24 36.6	-0.9
	baz=91						
M15K	Kasigluk River	20.07	312	P	P	22 24 39.4	+1.2
	baz=106						
G21K	Allakaket	20.08	332	IAmb	IAmb	22 24 45.4	
	comp=Z,14nm,1.1s						
G21K	Allakaket	20.08	332	P	P	22 24 39.9	+1.5
	baz=131						
GCSA	Galena City Sc	20.14	325	P	P	22 24 40.8	+1.8
	baz=122						
E23K	Chandalar	20.15	338	P	Pn	22 24 41.3	+0.3
	baz=140						
C27K	Jago River	20.31	346	P	Pn	22 24 43.0	+0.2
	baz=153						
J17K	VABM Dome	20.33	321	P	P	22 24 42.5	+1.4
	baz=115						
N14K	Kuskokwak Cree	20.34	310	P	P	22 24 41.7	+0.5
	baz=103						
F22K	John River	20.39	335	P	Pn	22 24 44.2	+0.5
	baz=135						
H19K	Roundabout Mou	20.42	327	P	P	22 24 43.7	+1.7
	baz=124						
D25K	Kavik River	20.50	343	P	P	22 24 44.6	+1.7
	baz=148						
F21K	Alatna River	20.55	333	P	P	22 24 45.1	+1.6
	baz=132						
TOLK	Toolik Lake Re	20.60	339	P	P	22 24 45.6	+1.7
TOLK	Toolik Lake Re	20.60	339	P	P	22 24 45.3	+1.3
	baz=142,SNR=8.1						
M14K	Bethel	20.68	312	P	P	22 24 45.5	+0.7
	baz=105						
L15K	Ungalak Mounta	20.73	315	P	P	22 24 45.2	-0.1
	baz=108						
E22K	Anaktuvuk Pass	20.75	337	P	P	22 24 47.4	+1.8
E22K	Anaktuvuk Pass	20.75	337	P	P	22 24 47.0	+1.4
	baz=137,SNR=9.4						
C26K	Camden Bay	20.76	345	P	P	22 24 47.3	+1.6
	baz=151,SNR=11						
FALS	False Pass	20.78	295	P	P	22 24 45.8	-0.2
	baz=88						
D24K	Happy Valley	20.84	341	P	P	22 24 48.5	+1.9
	baz=144,SNR=5.3						
H18K	Honhosa River	20.89	325	P	P	22 24 48.0	+0.8
	baz=120						
J16K	Anvik River	20.91	319	P	P	22 24 48.0	+0.6
	baz=113						
K15K	Wolf Creek Mou	20.95	316	P	P	22 24 48.0	+0.2
	baz=109						
G19K	Purcell Mounta	20.99	328	P	P	22 24 48.5	+0.4
G19K				IAmb	IAmb	22 24 57.3	
	comp=Z,8.3nm,1.1s						
G19K	Purcell Mounta	20.99	328	P	P	22 24 49.0	+0.9
	baz=124						
F20K	Avaraart Lake	21.10	331	P	P	22 24 51.7	+2.4
	baz=128						
D23K	Nanushuk River	21.10	339	P	P	22 24 51.6	+2.2
D23K	Nanushuk River	21.10	339	P	P	22 24 50.7	+1.3
	baz=140						
W18A	Petrified Fore	21.13	129	P	P	22 24 51.3	+1.1
W18A				IAmb	IAmb	22 24 52.3	
	comp=Z,9.0nm,0.9s						
L14K	Kuka Creek	21.18	313	P	P	22 24 51.2	+0.9
	baz=105						
I17K	Unalakleet	21.20	321	P	P	22 24 50.9	+0.5
	baz=114						
M13K	Dall Lake	21.27	311	P	P	22 24 51.4	+0.2
	baz=102						
C24K	Franklin Bluff	21.28	342	P	P	22 24 52.5	+1.3
C24K	Franklin Bluff	21.28	342	P	P	22 24 53.1	+1.8
	baz=145						
H17K	Granite Mounta	21.36	324		P	22 24 52.9	+0.8
H17K	Granite Mounta	21.36	324	P	P	22 24 52.8	+0.6
	baz=118						
G18K	Tagagawik	21.39	327	P	P	22 24 53.1	+0.7
	baz=122						
SDCO	Great Sand Dun	21.43	117	P	P	22 24 53.4	0.0
ULM	Lac du Bonnet	21.46	78	P	P	22 24 53.1	-0.3
	comp=Z,9.4nm,0.7s,baz=288,slow=10,SNR=11						
	comp=Z,9.4nm,0.7s						
X18A	Snowflake	21.50	130	IAmb	IAmb	22 25 00.5	
	comp=Z,17nm,1.3s						
D22K	Ayikyak River	21.51	337	P	P	22 24 54.8	+1.0
	baz=137						
E21K	Killik River	21.53	336	P	P	22 24 53.8	-0.2
	baz=134						
F19K	Shaleruckik Mo	21.61	330	P	P	22 24 55.8	+0.9
	baz=125						
A36M	Sachs Harbour	21.65	4	P	P	22 24 57.5	+2.3
	baz=187						
C23K	Itkillik River	21.77	340	P	P	22 24 57.0	+0.5
	baz=142						
E19K	Redstone River	21.81	331	P	P	22 24 57.8	+0.8
	baz=127						
G17K	Kiwalik Mounta	21.90	325	P	P	22 24 58.3	+0.3
	baz=118						
J14K	Nanvaranak Lak	21.98	317	P	P	22 24 58.6	-0.2
	baz=108						
E20K	Nigu River	22.01	334	P	P	22 24 59.9	+0.7
	baz=130						
F18K	Selawik	22.10	328	P	P	22 25 00.8	+0.7
	baz=122						
H16K	Elim	22.12	322	P	P	22 25 00.6	+0.2
	baz=114						
C21K	Knifeblade Rid	22.24	336	P	P	22 25 02.2	+0.6
	baz=134						
K13K	Kusilvak Mount	22.24	314	P	P	22 25 01.6	0.0
	baz=104						
KSCO	Kaye Shedlock’	22.26	111	P	P	22 25 03.0	+0.8
D20K	Etivluk River	22.43	334	P	P	22 25 03.7	0.0
D20K				IAmb	IAmb	22 25 31.6	
	comp=Z,11nm,1.3s						
D20K	Etivluk River	22.43	334	P	P	22 25 03.9	+0.3
	baz=130						
G16K	Koyuk River	22.49	324	P	P	22 25 03.3	-0.9
	baz=115						
B21K	Ikpikpuk River	22.53	337	IAmb	IAmb	22 25 08.6	
	comp=Z,12nm,1.2s						
B21K	Ikpikpuk River	22.53	337	P	P	22 25 04.7	+0.1
	baz=135						
F17K	Baldwin Pennin	22.57	327	P	P	22 25 03.9	-1.3
	baz=119						
M11K	Mekoryuk	22.65	310	P	P	22 25 04.4	-1.6
	baz=99						
UNV	Unalaska Valle	22.65	293	P	P	22 25 04.0	-2.1
	baz=83						
D19K	Kuna River	22.71	333	P	P	22 25 07.9	+1.2
D19K				IAmb	IAmb	22 25 15.3	
	comp=Z,6.8nm,1.0s						
D19K	Kuna River	22.71	333	P	P	22 25 06.5	-0.2
	baz=128						
B22K	Teshekpuk Lake	22.77	339	P	P	22 25 07.2	-0.1
	baz=138						
E18K	Tukpahlearik C	22.86	329	P	P	22 25 08.1	0.0
	baz=122						
TUC	Tucson	22.94	135	P	P	22 25 10.1	+0.7
ANMO	Albuquerque	22.95	124	P	P	22 25 08.3	-1.3
	comp=Z,1.4nm,0.9s,baz=322,slow=8.4,SNR=3.2						
	comp=Z,1.4nm,0.9s						
ANMO	Albuquerque	22.95	124	P	P	22 25 11.2	+1.6
G15K	Niukluk	22.97	322	P	P	22 25 09.2	-0.1
	baz=112						
E17K	Hotham Inlet	23.09	328	P	P	22 25 10.5	-0.1
	baz=120						
ANM	Nome	23.35	321	P	P	22 25 12.2	-1.0
	baz=110						
B20K	Meade River	23.43	336	P	P	22 25 14.6	+0.6
	baz=132						
F15K	North Star Dit	23.49	324	P	P	22 25 14.2	-0.3
	baz=113						
C19K	Lookout Ridge	23.51	333	P	P	22 25 15.1	+0.2
	baz=127						
A22K	Sinclair Lake	23.62	340	P	P	22 25 16.5	+0.8
	baz=137						
C18K	Utukok River	23.72	332	P	P	22 25 16.4	-0.5
	baz=124						
D17K	Noatak River	23.82	329	P	P	22 25 17.7	-0.1
	baz=119						
RDOG	Red Dog Mine	23.94	330	P	P	22 25 18.9	-0.1
	baz=120						
F14K	Arctic Creek	24.05	322	P	P	22 25 19.3	-0.7
	baz=110						
NIKH	Nikolski High	24.17	291	P	P	22 25 19.1	-2.1
	baz=80						
P08K	Saint George I	24.18	300	P	P	22 25 19.0	-2.2
	baz=87						
A21K	Barrow	24.22	339	P	P	22 25 21.6	+0.1
	baz=135						
C17K	DeLong Mountai	24.24	330	P	P	22 25 21.0	-0.8
	baz=121						
B18K	Kokolik River	24.31	333	P	P	22 25 22.2	-0.1
	baz=124						
SPIA	Saint Paul Isl	24.54	302	P	P	22 25 22.4	-2.1
	baz=88						
A19K	Wainwright	24.59	335	P	P	22 25 24.8	-0.1
	baz=127						
TNA	Tin City	24.70	322	P	P	22 25 24.7	-1.2
	baz=109						
C16K	Lisburne Hills	24.84	329	P	P	22 25 26.3	-0.8
	baz=117						
GAMB	Gambell	25.81	317	P	P	22 25 34.1	-1.8
	baz=101						
WMOK	Wichita Mounta	27.41	113	IAmb	IAmb	22 26 04.0	
	comp=Z,8.0nm,1.4s						
TX31	Lajitas Ar. Si	28.82	127	IAmb	IAmb	22 26 05.1	
	comp=Z,5.0nm,1.3s						
TXAR	Lajitas Array	28.82	127	P	P	22 26 03.8	+0.3
	comp=Z,1.0nm,0.8s,baz=322,slow=6.8,SNR=10.0						
	comp=Z,1.0nm,0.8s						
TXAR	Lajitas Array	28.82	127	P	P	22 26 03.2	-0.2
Q54A	Coxs Mills	35.94	89	P	P	22 27 06.0	+0.4
V53A	Saluda	36.66	96	P	P	22 27 12.3	+0.5
I63A	Otisfield	39.68	76	P	P	22 27 36.5	-0.6
H11N2	WAKE ISLAND Hy	58.16	263	T	T	23 32 46.2	
	baz=42,slow=76,SNR=183						
H11N3	WAKE ISLAND Hy	58.17	263	T	T	23 32 42.5	
	baz=42,slow=76,SNR=215						
H11N1	WAKE ISLAND Hy	58.18	263	T	T	23 32 44.4	
	baz=42,slow=76,SNR=172						
H11S1	WAKE ISLAND Hy	59.19	262	T	T	23 34 00.6	
	baz=40,slow=74						
H11S2	WAKE ISLAND Hy	59.20	262	T	T	23 33 59.7	
	baz=40,slow=74						
H11S3	WAKE ISLAND Hy	59.21	262	T	T	23 33 59.9	
	baz=40,slow=74						
MKAR	Makanchi Array	79.22	338	P	P	22 32 11.7	+1.6
	comp=Z,0.3nm,0.7s,baz=49,slow=5.5,SNR=3.6						
	comp=Z,0.3nm,0.7s						
MKAR	Makanchi Array	79.22	338	P	P	22 32 11.5	+1.5
MAKZ	Makanchi	79.28	338	P	P	22 32 11.3	+0.9
MAKZ				IAmb	IAmb	22 32 23.9	
	comp=Z,1.7nm,0.9s						

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*UUSS **23** 22:34:08.2±1.1, 41.°52N±0.°03×110.°03W±0.°04, h60^{km}±1^{km}, ML3.2/16, ML3.0/107(NEIC), Error ellipse: s-maj=6.1km s-min=5.0km az=32.0*

*NEIC **23** 22:34:08.2±1.3, 41.°54N±0.°04×110.°08W±0.°05, h46^{km}±5^{km}, Error ellipse: s-maj=5.6km s-min=4.7km az=209.0*

*IDC **23** 22:34:10.2±0.8, 42.°35N×110.°93W, h0^{km}, mbtmp3.1/3, ML2.9/2, Error ellipse: s-maj=43.1km s-min=5.2km az=155.0*

ISC 23 22:34:05.8±0.8**, 41.°53N**±0.°02×**110.°03W**±0.°03**, h10**^{km}**, n108,** σ0^{s}**96**/111**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
L17A	Cokeville	0.84	312		Pn	22 34 24.3	+0.3
LHUT	Little Humpy P	0.97	229		Pn	22 34 26.5	+0.6
BMUT	Black Mountain	0.99	296		Pn	22 34 26.5	+0.4
RDMU	Red Mountain	1.02	160		Pb	22 34 26.2	+0.5
RDMU					Sg	22 34 39.5	+0.6
RSUT	Red Spur Mount	1.04	276		Pn	22 34 27.5	+0.7
MCU	Monte Cristo P	1.11	267		Pn	22 34 28.2	+0.5
TCUT	Toone Canyon	1.12	249		Pn	22 34 28.3	+0.5
TCUT	Toone Canyon	1.12	249	Pn	Pn	22 34 28.0	+0.2
TCUT				Sn	Sg	22 34 40.8	-1.1
TCUT				IAML		22 34 43.8	
	comp=N,8μm,0.4s						
TCUT				IAML		22 34 44.4	
	comp=E,5μm,0.4s						
BSUT	Blindstream Ca	1.14	209		Pg	22 34 28.1	+0.4
BSUT				IAML		22 34 43.9	
	comp=E,228nm,0.8s						
BSUT				IAML		22 34 46.3	
	comp=N,186nm,0.5s						
HWUT	Hardware Ranch	1.15	274	Pn	Pn	22 34 28.5	+0.3
HWUT				Sn	Sg	22 34 42.6	-0.4
HWUT				IAML		22 34 44.6	
	comp=N,562nm,0.5s						
HTU	Hoyt Peak	1.24	227		Pn	22 34 29.8	+0.3
N16A	Rees Ranch, Co	1.24	239		Pb	22 34 29.9	+0.4
BW06	Boulder Array	1.28	16		Pb	22 34 30.4	+0.2
BW06				IAML		22 34 47.7	
	comp=N,153nm,0.3s						
BW06				IAML		22 34 47.8	
	comp=N,267nm,0.4s						
PD31	Pinedale Array	1.28	16	Pn	Pn	22 34 30.3	+0.3
PDAR	Pinedale Array	1.28	16	Pg	Pg	22 34 30.6	+0.2
	comp=N,24nm,0.3s,baz=219,slow=11,SNR=599						
PDAR				Lg	Lg	22 34 45.8	
	comp=N,49nm,0.3s,baz=197,slow=24,SNR=15						
PDAR	Pinedale Array	1.28	16	Pn	Pn	22 34 30.0	0.0
HDU	Hyde Park	1.33	282		Pb	22 34 31.1	+0.2
KLJ	Keetly	1.38	229		Pn	22 34 31.7	+0.4
RCJ	Ross Creek	1.38	231		Pn	22 34 31.5	+0.2
LDJ	Lady	1.41	228		Pg	22 34 33.1	+0.2
BEI	Bear River Ran	1.43	295		Pb	22 34 33.0	+0.3
WVUT	Wellsville	1.45	274		Pb	22 34 33.0	0.0
FPU	Francis Peak	1.45	250		Pn	22 34 32.8	+0.4
DAU	Daniels Canyon	1.45	220		Pb	22 34 33.3	+0.2
WBC	Weber Canyon	1.46	255		Pn	22 34 32.9	+0.5
BCUT	Brigham City	1.46	270		Pb	22 34 33.7	+0.5
RBU	Red Butte Cany	1.54	241		Pn	22 34 33.8	+0.3
CTU	Camp Tracy	1.55	238	Pn	Pn	22 34 34.0	+0.4
CTU				IAML		22 34 54.5	

	comp=E,436nm,0.6s						
CTU				IAML		22 34 57.0	
	comp=N,218nm,0.8s						
DCU	Deer Creek Res	1.59	226		Pn	22 34 35.2	+1.0
MHD	Mile High Driv	1.60	237		Pb	22 34 35.6	+0.1
GMU	Granite Mounta	1.62	234		Pn	22 34 34.8	+0.2
MLI	Malad Range	1.64	288		Pn	22 34 35.3	+0.3
LTU	Little Mountai	1.66	273		Pn	22 34 35.3	+0.1
NAIU	Northern Antel	1.73	253		Pn	22 34 35.9	-0.2
GRRI	Grays Lake	1.74	324		Pn	22 34 36.0	-0.4
ARGU	Argyle Ridge	1.75	193		Pb	22 34 37.9	-0.4
SAIU	Southern Antel	1.76	248		Pn	22 34 36.2	-0.2
EPU	East Promontor	1.79	266		Pn	22 34 36.8	-0.2
NOQ	North Oquirrh	1.81	242		Pn	22 34 37.1	-0.1
EMUT	Emma Park	1.82	199		Pn	22 34 38.6	+1.2
SPUT	South Promonto	1.83	264	Pn	Pn	22 34 37.2	-0.3
SPUT				IAML		22 35 04.4	
	comp=N,265nm,0.4s						
SPUT				IAML		22 35 10.6	
	comp=E,129nm,0.3s						
DCM	Dugout Coal Mi	1.89	193		Pn	22 34 38.9	+0.6
ROA	Roan Cliffs	1.89	188		Pn	22 34 39.4	+1.0
CWU	Camp Williams	1.91	236		Pn	22 34 38.9	+0.3
P18A	Preston Nutter	1.91	185	Pn	Pn	22 34 39.6	+0.9
P18A				IAML		22 35 03.7	
	comp=N,216nm,0.4s						
P18A				IAML		22 35 14.3	
	comp=E,198nm,0.5s						
BCE	Book Cliffs Ea	1.94	189		Pn	22 34 40.0	+0.9
MPU	Maple Canyon	1.94	219	Pn	Pn	22 34 39.0	-0.1
O20A	White River Ci	1.95	135	Pn	Pb	22 34 40.9	-0.7
NPI	North Pocatell	1.96	289		Pn	22 34 39.4	+0.1
SNUT	Stansbury Nort	1.98	252		Pn	22 34 39.4	-0.1
SNOW	Snow King Moun	2.00	345	Pn	Pn	22 34 40.3	+0.4
SNOW				IAML		22 35 07.7	
	comp=E,120nm,0.6s						
SNOW				IAML		22 35 09.3	
	comp=E,158nm,0.6s						
HVU	Hansel Valley	2.07	278	Pn	Pn	22 34 40.3	-0.5
HVU				IAML		22 35 28.2	
	comp=E,128nm,0.5s						
HVU				IAML		22 35 29.3	
	comp=N,110nm,0.6s						
ELU	Electric Lake	2.09	206		Pn	22 34 42.5	+1.3
LOHW	Long Hollow	2.12	349	Pn	Pn	22 34 41.4	-0.1
LOHW				IAML		22 35 09.6	
	comp=N,103nm,0.6s						
LOHW				IAML		22 35 22.8	
	comp=N,65nm,0.8s						
P17A	Butcher Ranch,	2.13	195	Pn	Pn	22 34 42.0	+0.4
P17A				IAML		22 35 10.9	
	comp=N,105nm,0.7s						
P17A				IAML		22 35 13.2	
	comp=E,102nm,0.7s						
FXWY	Fox Creek	2.23	341	Pn	Pn	22 34 42.8	-0.2
FXWY				IAML		22 35 10.8	
	comp=E,44nm,0.8s						
MOOW	Moose Ponds	2.27	347	Pn	Pn	22 34 43.4	-0.3
HAYD	Hayden	2.33	115	Pn	Pn	22 34 45.7	+1.3
HAYD				IAML		22 35 34.5	
	comp=E,174nm,0.8s						
BGU	Big Grassy Mou	2.34	256	Pn	Pn	22 34 43.7	-0.8
BGU				IAML		22 35 26.6	
	comp=N,40nm,1.0s						
TMUT	Trail Mountain	2.41	202	Pn	Pn	22 34 46.0	+0.4
TMUT				IAML		22 35 22.1	
	comp=N,127nm,0.7s						
TMUT				IAML		22 35 26.0	
	comp=E,151nm,0.7s						
SRU	San Rafael Swe	2.45	189	Pn	Pn	22 34 46.2	+0.2
SRU				IAML		22 35 22.1	
	comp=N,202nm,0.4s						
DUG	Dugway, Tooele	2.50	239	Pn	Pn	22 34 46.3	-0.4
DUG				IAML		22 35 30.2	
	comp=N,42nm,0.7s						
SNO	Snow College	2.50	208		Pb	22 34 51.7	+0.8
FLU	Fool Peak	2.70	218		Pn	22 34 49.4	-0.1
Q16A	Castle Valley	2.75	199	Pn	Pn	22 34 50.5	+0.3
Q16A				IAML		22 35 28.7	
	comp=E,54nm,0.5s						
Q16A				IAML		22 35 33.1	
	comp=N,50nm,0.5s						
MCID	Moose Creek	2.79	343		Pn	22 34 51.7	+1.0
YPP	Pitchstone Pla	2.79	349	Pn	Pn	22 34 51.3	+0.4
YPP				IAML		22 35 27.9	
	comp=E,31nm,0.6s						
YPP				IAML		22 35 27.9	
	comp=N,26nm,0.6s						
K22A	Casper	2.84	66	Pn	Pn	22 34 52.7	+1.3
H17A	Grant Village	2.89	352	Pn	Pn	22 34 54.2	+2.1
YPLA	Lake Butte	2.98	357		Pn	22 34 53.3	-0.2
LKWY	Lake	3.04	355	Pn	Pn	22 34 56.4	+2.1
LKWY				IAML		22 35 29.6	
	comp=N,30nm,0.6s						
LKWY				IAML		22 35 33.0	
	comp=N,38nm,0.5s						
PV21	Cone Mtn., Par	3.08	164	Pn	Pn	22 34 55.1	+0.4
YHH	Holmes Hill	3.31	350	Pn	Pn	22 34 58.8	+0.8
YHB	Horse Butte	3.33	346	Pn	Pn	22 34 58.8	+0.7
PV12	Saucer Basin,	3.35	163	Pn	Pn	22 34 58.3	-0.1
YHL	Hebgen Lake	3.42	346	Pn	Pn	22 34 59.9	+0.4
QLMT	Earthquake Lak	3.45	343	Pn	Pn	22 35 00.8	+1.0
TCRU	Three Creeks R	3.46	213	Pn	Pn	22 34 58.2	-1.7
TCRU				IAML		22 35 58.3	
	comp=N,20nm,1.2s						
TCRU				IAML		22 36 12.7	
	comp=E,20nm,1.1s						
YNE	Yellowstone No	3.47	0	Pn	Pn	22 35 00.3	+0.2
YNE				IAML		22 35 34.6	
	comp=N,15nm,0.6s						
YNE				IAML		22 36 02.2	
	comp=E,18nm,0.4s						
PV01	Paradox Valley	3.58	161	Pn	Pn	22 35 01.5	-0.1
RLMT	Red Lodge	3.63	9	Pn	Pn	22 35 03.1	+0.8
RLMT				IAML		22 36 11.4	
	comp=E,15nm,1.4s						
RLMT				IAML		22 36 13.9	
	comp=E,19nm,0.3s						
HMU	Henry Mountain	3.63	189	Pn	Pn	22 35 02.0	-0.3
ISCO	Idaho Springs	3.78	116	Pn	Pn	22 35 05.2	+0.7
ISCO				IAML		22 35 35.7	
	comp=E,12nm,1.2s						
ISCO				IAML		22 36 14.8	
	comp=E,16nm,0.6s						
HLID	Hailey	3.82	304	Pn	Pn	22 35 05.7	+0.8
MTPU	Mount Pierson	3.86	206	Pn	Pn	22 35 05.1	-0.5
MTPU				IAML		22 36 32.1	
	comp=E,12nm,3.3s						
MTPU				IAML		22 37 06.7	
	comp=N,11nm,4.7s						
MCMT	McKenzie Canyo	3.88	329	Pn	Pn	22 35 06.9	+1.1
ELK	Elko	4.01	260	Pn	Pn	22 35 09.0	+1.5
	comp=N,0.6nm,0.3s,baz=68,slow=11,SNR=7.4						
ELK				Lg	Lg	22 36 05.0	
	comp=N,0.9nm,0.3s,baz=178,slow=20,SNR=4.1						
	comp=N,1.1nm,0.3s						
ELK	Elko	4.01	260	Pn	Pn	22 35 08.4	+0.8
SPR3	Spring Creek 3	4.15	234	Pn	Pn	22 35 11.7	+2.2
SPR3				IAML		22 35 57.4	
	comp=N,11nm,0.5s						
SPR3				IAML		22 35 58.1	
	comp=E,11nm,0.6s						
PSUT	Pine Spring	4.19	226	Pn	Pn	22 35 10.4	+0.4
BOZ	Bozeman (W)	4.22	345	Pn	Pn	22 35 11.7	+1.3
LRM	Limekiln Ridge	4.63	339	Pn	Pn	22 35 18.7	+2.6
MFID	Camas Ranch	4.68	296	Pn	Pn	22 35 18.1	+1.4
MFID				IAML		22 36 38.8	
	comp=E,9.9nm,4.8s						
MFID				IAML		22 36 53.0	
	comp=E,8.6nm,3.0s						
CCUT	Cedar City	4.74	214	Pn	Pn	22 35 18.7	+1.2
CCUT				IAML		22 36 07.4	
	comp=N,6.1nm,4.9s						
RSSD	Black Hills	5.11	58	Pn	Pn	22 35 22.4	-0.2
SDCO	Great Sand Dun	5.15	136	Pn	Pn	22 35 23.7	+0.4
HRY	Holter Researc	5.33	347	Pn	Pn	22 35 27.6	+2.0
U15A	North Rim	5.39	200	Pn	Pn	22 35 26.6	0.0
U15A				IAML		22 37 05.2	
	comp=N,12nm,0.6s						
U15A				IAML		22 37 14.4	
	comp=E,13nm,0.8s						
PLID	Pearl Lake	5.62	311	Pn	Pn	22 35 31.1	+1.5
LYMT	Lyon Mountain	5.67	344	Pn	Pn	22 35 32.6	+2.3
LAO	LASA Array	5.84	27	Pn	Pn	22 35 32.3	-0.1
WUAZ	Wupatki	6.10	190	Pn	Pn	22 35 36.0	-0.2
BMO	Blue Mountains	6.26	304	Pn	Pn	22 35 40.1	+1.7
WVOR	Wild Horse Val	6.47	281	Pn	Pn	22 35 43.9	+2.6
EGMT	Eagleton	6.49	2	Pn	Pn	22 35 42.0	+0.5
NVAR	Mina Array Bea	7.07	247	Pn	Pn	22 35 52.5	+3.0
	comp=E,0.4nm,0.3s,baz=59,slow=14,SNR=6.1						
NVAR				Lg	Lg	22 37 46.5	
	comp=E,0.1nm,0.3s,baz=293,slow=18,SNR=1.9						
	comp=E,0.5nm,0.4s						
CBKS	Cedar Bluff	8.34	106	Pn	Pn	22 36 06.4	-0.3
YKA	Yellowknife Ar	21.17	354	Pn	P	22 38 47.8	-3.1
	comp=E,0.7nm,0.8s,baz=175,slow=9.9,SNR=8.6						

JMA ***23*** *22:46:03.7±0.3, 44˚N±2˚×14˚8E±˚, h0km, MV4.0/20, SE OFF ETOROFU*

SKHL ***23*** *22:46:04.9±0.7, 44°.40N×148°.30E, h29km±3km, mb4.6/3*

ISC 23 22:46:02.3±4.1**, 44°.4N**±0°.1×**148°.5E**±0°.2**, h27**km±28km**, n13,** σ1s**26**/23**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.97	333	*e*P	Pn	22 46 20.4	+0.4
KUR				AMB	AMB	22 46 20.9	
	180nm,0.4s						
KUR				*e*S	Sb	22 46 32.0	-0.8
KUR				A	A	22 46 32.5	
	370nm,0.2s						
KUR				A	A	22 46 32.5	
	630nm,0.2s						
YUK	Yuzh-Kuril'sk	1.92	261	*e*P	Pn	22 46 34.1	+0.9
YUK				AMB	AMB	22 46 36.5	
	270nm,0.3s						
YUK				*i* S	Sn	22 46 55.5	-0.9
YUK				A	A	22 46 58.5	
	80nm,0.2s						
YUK				A	A	22 46 58.5	
	330nm,0.2s						
GLVR	Golovnino	2.24	254	*e*P	Pn	22 46 38.2	+0.7
GLVR				AMB	AMB	22 46 39.0	
	90nm,0.2s						
GLVR				*i* S	Sn	22 47 03.1	-1.1
GLVR				A	A	22 47 07.6	
	360nm,0.3s						
GLVR				A	A	22 47 07.6	
	230nm,0.3s						
NMR	Nemuro--Hokkai	2.24	244	*e*P	Pn	22 46 37.3	-0.2
NMR				*i* S	Sn	22 47 01.5	-2.7
JRA	Rausu	2.47	261	P	Pn	22 46 42.0	+1.3
JRA				*e*S	Sn	22 47 10.3	+0.5
JNSB	Nemuroshibetsu	2.58	258	P	Pn	22 46 43.7	+1.4
JKHN	Kushirohamanak	2.74	243	P	Pn	22 46 44.7	+0.3
JKHN				*e*S	Sn	22 47 15.0	-1.6
JNK	Nakash	2.84	255	P	Pn	22 46 46.8	+1.0
JNK				*e*S	Sn	22 47 18.6	-0.4
JAK	Akkeshi	3.08	245	P	Pn	22 46 49.5	+0.4
JAR	Ashorobuto	3.58	254	P	Pn	22 46 58.0	+2.0
JAR				*e*S	Sn	22 47 37.7	+0.3
JOB	Onbets	3.69	248	*e*P	Pn	22 46 58.7	+1.2
JOB				*e*S	Sn	22 47 39.2	-0.8
JCH	Churui	4.13	247	*e*P	Pn	22 47 04.9	+1.4
JCH				*e*S	Sn	22 47 50.0	-0.8
JNBK	Urakawa-nobuka	4.68	245	P	Pn	22 47 12.5	+1.4

NEIC ***23*** *22:50:17.9±1.7, 50°.50N±0°.08×129°.2W±0°.1, h10km±1km, mb4.1/54, Error ellipse: s-maj=17.5km s-min=8.9km az=230.0*

IDC ***23*** *22:50:17.6±0.7, 50°.63N×128°.92W, h0km, mb4.0/9, mbtmp3.9/15, ML3.6/6, MS4.2/1, Error ellipse: s-maj=12.9km s-min=6.8km az=86.0*

ISC 23 22:50:20.4±0.6**, 50°.54N**±0°.07×**129°.03W**±0°.07**, h25**km**, n130,** σ1s**31**/108**, mb4.1**/15**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	0.58	79	Pg	Pb	22 50 31.8	-0.2
BBB	Bella Bella	1.75	19	Pn	Pn	22 50 44.5	-4.5
	7.2nm,0.3s,baz=233,slow=6.2,SNR=56						
BBB				Pg	Pb	22 50 48.5	-3.2
	58nm,0.3s,baz=221,slow=11,SNR=30						
BBB				Lg	Lg	22 51 07.8	
	42nm,0.3s,baz=301,slow=18,SNR=8.5						
HG4B	Hotspring	2.23	323	Pn	Pn	22 50 53.0	-2.6
CBB	Campbell River	2.40	101	Pn	Pn	22 50 57.5	-0.6
MOBC	Moresby Island	3.19	326	Pn	Pn	22 51 04.4	-4.6
DIB	Dawson Inlet,	3.42	323	Pn	Pn	22 51 07.7	-4.4
CLRS	Cowichan Lake	3.61	116	Pn	Pn	22 51 14.3	-0.4
RUBB	Prince Rupert	3.87	349	Pn	Pn	22 51 15.6	-2.7
PGC	Sidney	4.09	115	Pn	Pn	22 51 20.6	-0.6
A04D	Lummi Island	4.49	111	Pn	Pn	22 51 26.0	-0.7
LLLB	Lillooet	4.55	86	Pn	Pn	22 51 27.1	-0.6
NLWA	Neilton Lookou	4.63	131	Pn	Pn	22 51 27.0	-1.8
RADR	Rader Ridge	5.39	138	Pn	Pn	22 51 38.1	-1.1
LON	Longmire	6.10	126	Pn	Pn	22 51 48.0	-0.9
LTY	Liberty	6.41	118	Pn	Pn	22 51 52.2	-1.0
T35M	Bob Quinn	6.50	354	Pn	Pn	22 51 54.6	+0.3
B08A	Colville Reser	6.68	105	Pn	Pn	22 51 56.5	-0.5
HOOD	Mount Hood Mea	7.19	134	Pn	Pn	22 52 04.5	+0.5
WAH2	Wahluke Slope	7.32	117	Pn	Pn	22 52 05.4	-0.2
H04A	Detroit Lake	7.46	139	Pn	Pn	22 52 07.0	-0.6
S34M	Telegraph Cree	7.50	351	Pn	Pn	22 52 06.9	-1.1
D08A	Wollman Farm,	7.53	114	Pn	Pn	22 52 07.2	-1.2
BUCK	Buck Mountain	7.55	145	Pn	Pn	22 52 08.9	+0.1
C09A	Chrisman Ranch	7.56	107	Pn	Pn	22 52 07.4	-1.5
NEW	Newport	8.09	102	Pn	Pn	22 52 16.5	+0.2
	0.7nm,0.3s,baz=299,slow=13,SNR=8.4						
NEW				Lg	Lg	22 54 36.6	
	0.1nm,0.3s,baz=328,slow=2.4,SNR=4.1						
	4.3nm,0.7s						
J04A	Umpqua Nationa	8.70	144	Pn	Pn	22 52 24.2	-0.5
BBOR	Butler Butte	8.80	148	Pn	Pn	22 52 26.0	-0.2
R33M	Jennings River	8.95	354	Pn	Pn	22 52 28.8	+0.8
J05D	Fort Rock, OR	9.00	141	Pn	Pn	22 52 29.5	+0.7
F10A	Beach Ranch, E	9.10	116	Pn	Pn	22 52 29.5	-0.6
K05A	Summer Lake	9.60	141	Pn	Pn	22 52 34.1	-3.0
YBH	Yreka Blue Hor	9.83	151	Pn	Pn	22 52 41.2	+1.0
	baz=352,slow=9.7,SNR=14						
P33M	Teslin, Yukon	9.93	349	Pn	Pn	22 52 42.2	+0.7
PLID	Pearl Lake	10.31	117	Pn	Pn	22 52 44.2	-2.7
N02D	Trinity Center	10.53	153	Pn	Pn	22 52 49.4	-0.3
MSO	Missoula	10.64	105	Pn	Pn	22 52 51.1	-0.1
KHBM	Hayfork Bally	10.68	155	Pn	Pn	22 52 51.3	-0.5
KMRM	Mail Ridge	10.97	158	Pn	Pn	22 52 55.1	-0.6
O02D	Mt. Diablo Mer	11.24	155	Pn	Pn	22 52 58.1	-1.4
O03E	Paynes Creek	11.42	151	Pn	Pn	22 53 00.5	-1.4
LYMT	Lyon Mountain	11.61	101	Pn	Pn	22 53 04.4	-0.2
HLID	Hailey	12.15	119	Pn	Pn	22 53 13.7	+1.7
DLMT	Dillon	12.16	109	Pn	Pn	22 53 12.1	0.0
ORV	Oroville	12.19	151	Pn	Pn	22 53 11.2	-1.2
BEKR	Beckworth	12.28	147	Pn	Pn	22 53 13.2	-0.5
YHL	Hebgen Lake	13.28	108	Pn	Pn	22 53 28.6	+1.0
YHH	Holmes Hill	13.52	108	Pn	Pn	22 53 31.3	+0.6
ELK	Elko	13.72	130	Pn	Pn	22 53 35.3	+1.8
	0.1nm,0.3s,baz=316,slow=8.1,SNR=4.8						
	0.2nm,0.3s						
H17A	Grant Village	13.89	109	Pn	Pn	22 53 38.0	+2.2
RYN	Ryan	14.04	144	Pn	Pn	22 53 37.7	-0.1
HVU	Hansel Valley	14.24	122		P	22 53 45.7	-1.9
NVAR	Mina Array Bea	14.30	144	Pn	Pn	22 53 44.8	+3.5
	0.1nm,0.3s,baz=319,slow=12,SNR=8.3						
	2.5nm,0.9s						
RLMT	Red Lodge	14.32	105	Pn	Pn	22 53 42.5	+0.9
YKA	Yellowknife Ar	14.34	28	Pn	Pn	22 53 41.0	-0.5
	0.1nm,0.3s,baz=222,slow=12,SNR=10						
YKA	Yellowknife Ar	14.34	28		Pn	22 53 40.6	-0.9
NV11	Mina Array Sit	14.35	143	Pn	Pn	22 53 41.0	-1.0
YKAW3	Yellowknife Wh	14.39	28	Pn	Pn	22 53 42.6	+0.4
DUG	Dugway, Tooele	15.35	126	P	P	22 53 59.1	-0.8
DUG				IAmb	IAmb	22 54 15.3	
	comp=Z,13nm,1.4s						
PD31	Pinedale Array	15.43	113	Pn	Pn	22 53 55.7	-0.8
PDAR	Pinedale Array	15.43	113	Pn	Pn	22 53 59.2	+2.7
	comp=Z,0.1nm,0.3s,baz=279,slow=9.9,SNR=4.9						
	comp=Z,1.9nm,1.0s						
PDAR	Pinedale Array	15.43	113	Pn	Pn	22 53 56.1	-0.5
SCRK	Sand Creek	15.65	335	Pn	Pn	22 53 59.3	+0.1
SCRK				IAmb	IAmb	22 54 12.1	
	comp=Z,24nm,1.2s						
PSUT	Pine Spring	16.11	132	Pn	Pn	22 54 04.3	-1.0
DGMT	Dagmar	16.24	88	Pn	Pn	22 54 05.8	-0.9
DGMT				IAmb	IAmb	22 54 13.7	
	comp=Z,16nm,0.8s						
SUA	Susitna One	16.26	321	P	Pn	22 54 08.4	+1.5
EPYK	Eagle Plains	16.36	349	IAmb	IAmb	22 54 52.3	
	comp=Z,25nm,1.4s						
H29M	Whitestone	16.44	347	IAmb	IAmb	22 54 20.9	
	comp=Z,10nm,1.0s						
G31M	Satah River	16.65	353	IAmb	IAmb	22 54 23.4	
	comp=Z,11nm,0.8s						
FFC	Flin Flon	16.90	65		Pn	22 54 14.8	-0.1
ILAR	Eielson Array	17.07	333	P	Pn	22 54 16.9	-0.1
	comp=Z,0.2nm,0.3s,baz=147,slow=11,SNR=14						
	comp=Z,3.6nm,1.1s						
ILAR	Eielson Array	17.07	333		Pn	22 54 15.8	-1.2
CCB	Clear Creek Bu	17.25	332	P	Pn	22 54 20.4	+1.1
CCB				IAmb	IAmb	22 54 55.3	
	comp=Z,6.9nm,0.4s						
MTPU	Mount Pierson	17.31	130	P	Pn	22 54 22.0	+1.4
G27K	Doyon Strip	17.53	343	P	P	22 54 25.7	+2.0
NEA2	Nenana	17.60	331	Pn	Pn	22 54 22.3	-1.3
LCMT	Little Creek M	17.63	134		Pn	22 54 23.9	-0.5
INK	Inuvik	17.96	355	P	Pn	22 54 28.5	+0.4
	baz=176,slow=12,SNR=6.0						
	comp=Z,1.5nm,0.8s						
HMU	Henry Mountain	18.11	127		Pn	22 54 29.1	-1.2
PV23	Carpenter Ridg	18.63	123	IAmb	IAmb	22 54 55.9	
	comp=Z,14nm,0.9s						
PV10	Paradox Valley	18.67	123	IAmb	IAmb	22 55 08.9	
	comp=Z,20nm,1.1s						
PV04	Paradox Valley	18.73	123	IAmb	IAmb	22 55 03.0	
	comp=Z,8.1nm,0.9s						
PV20	West Nyswonger	18.74	123	IAmb	IAmb	22 55 10.8	
	comp=Z,25nm,1.3s						
PV19	Morning Glory	18.75	123	IAmb	IAmb	22 54 54.2	
	comp=Z,11nm,1.0s						
PV16	Nyswonger Mesa	18.79	123	P	P	22 54 36.9	-1.1
PV18	Skein Mesa, Pa	18.84	123	IAmb	IAmb	22 55 05.2	
	comp=Z,16nm,1.1s						
PV12	Saucer Basin,	18.84	123	IAmb	IAmb	22 54 50.2	
	comp=Z,17nm,1.1s						
PV13	Radium Mtn., P	18.95	123	IAmb	IAmb	22 54 58.0	
	comp=Z,11nm,1.1s						
F25K	Christian Rive	19.00	340	IAmb	IAmb	22 54 49.3	
	comp=Z,20nm,1.2s						
C36M	Paulatuk	19.02	5	P	Pn	22 54 42.2	+1.3
C36M				IAmb	IAmb	22 54 50.1	
	comp=Z,13nm,1.4s						
L18K	Granite Mounta	19.09	318	P	Pn	22 54 42.6	+0.8
L18K				IAmb	IAmb	22 54 43.4	
	comp=Z,12nm,0.8s						
PV01	Paradox Valley	19.10	123	IAmb	IAmb	22 54 45.8	
	comp=Z,7.7nm,0.9s						
X16A	Lo Mia Camp, P	20.59	135	P	P	22 54 57.6	-0.1
X16A				IAmb	IAmb	22 55 16.7	
	comp=Z,9.0nm,1.1s						
F21K	Alatna River	20.72	333	P	P	22 54 56.8	-1.8
F21K				IAmb	IAmb	22 55 06.2	
	comp=Z,14nm,0.9s						
TOLK	Toolik Lake Re	20.72	339	P	P	22 54 58.3	-0.3
ULM	Lac du Bonnet	21.04	78	P	P	22 55 03.5	+1.3
	comp=Z,12nm,0.7s,baz=274,slow=9.9,SNR=11						
ULM				LR	LR	23 03 35.9	
	comp=Z,685nm,20.6s,baz=304,slow=38						
	comp=Z,12nm,0.7s						
ULM	Lac du Bonnet	21.04	78	P	P	22 55 02.6	+0.4
SDCO	Great Sand Dun	21.07	118	P	P	22 55 01.8	-1.1
X18A	Snowflake	21.20	132	P	P	22 55 03.2	-0.9
H17K	Granite Mounta	21.59	324	P	P	22 55 06.8	-1.2
AGMN	Agassiz Nation	21.59	83	IAmb	IAmb	22 55 14.1	
	comp=Z,8.1nm,0.8s						
G18K	Tagagawik	21.60	327	P	P	22 55 06.8	-1.2
G18K				IAmb	IAmb	22 55 18.4	
	comp=Z,15nm,1.2s						
FCC	Fort Churchill	21.61	54	P	P	22 55 07.7	-0.5
E19K	Redstone River	22.00	331	P	P	22 55 11.2	-1.1
F33A	5 Mile Ranch,	22.21	89	P	P	22 55 15.8	+1.1
F33A				IAmb	IAmb	22 55 18.1	
	comp=Z,8.2nm,1.0s						
ECSD	EROS Data Cent	22.94	95	P	P	22 55 23.2	+0.6
WMOK	Wichita Mounta	27.03	114	P	P	22 56 00.4	-0.1
WMOK				IAmb	IAmb	22 56 02.5	
	comp=Z,6.6nm,1.1s						
TXAR	Lajitas Array	28.50	128	P	P	22 56 13.6	-0.2
	comp=Z,0.7nm,0.9s,baz=321,slow=5.2,SNR=3.5						
	comp=Z,0.7nm,0.9s						
TXAR	Lajitas Array	28.50	128	P	P	22 56 13.1	-0.6
N49A	Columbus Grove	32.30	90	P	P	22 56 47.3	+0.3
O49A	Covington	32.60	91	P	P	22 56 50.1	+0.4
TULEG	Thule	34.64	21	P	P	22 57 06.6	-0.4
TULEG				IAmb	IAmb	22 57 17.1	
	comp=Z,2.2nm,0.7s						
SEY	Seymchan	42.07	318	P	P	22 58 11.0	+1.4
	comp=Z,6.2nm,0.4s,baz=179,slow=5.3,SNR=24						
	comp=Z,6.2nm,0.4s						
PETK	Petropavlovsk-	43.53	303	P	P	22 58 21.0	-0.6
	comp=Z,3.3nm,0.7s,baz=76,slow=14,SNR=4.6						
	comp=Z,3.3nm,0.7s						
PETK	Petropavlovsk-	43.53	303	P	P	22 58 19.7	-1.9
H11N2	WAKE ISLAND Hy	58.59	263	T	T	00 03 03.4	
	baz=41,slow=75,SNR=87						
H11N3	WAKE ISLAND Hy	58.59	263	T	T	00 03 03.5	
	baz=41,slow=75,SNR=67						
H11N1	WAKE ISLAND Hy	58.61	263	T	T	00 03 04.7	
	baz=41,slow=75,SNR=68						
H11S1	WAKE ISLAND Hy	59.62	262	T	T	00 04 19.7	
	baz=40,slow=77						
H11S2	WAKE ISLAND Hy	59.63	262	T	T	00 04 16.1	
	baz=40,slow=77						
H11S3	WAKE ISLAND Hy	59.63	262	T	T	00 04 21.9	
	baz=40,slow=77						
NB2	NORSAR Subarra	64.29	20	P	P	23 00 57.4	+4.3
	comp=Z,4.5nm,1.4s,baz=330,slow=6.5						
NOA	NORSAR Array B	64.29	20	P	P	23 00 54.6	+1.5
	comp=Z,0.7nm,0.9s,baz=333,slow=6.4,SNR=4.8						
	comp=Z,0.7nm,0.9s						
FINES	FINESS Array B	66.61	13	P	P	23 01 09.6	+1.6
	comp=Z,0.9nm,0.7s,baz=25,slow=5.0,SNR=5.1						
	comp=Z,0.9nm,0.7s						
FINES	FINESS Array B	66.61	13	P	P	23 01 10.3	+2.3
SONM	Songino Array	71.04	324	P	P	23 01 36.6	+0.6
	comp=Z,0.7nm,0.8s,baz=46,slow=4.3,SNR=4.8						
	comp=Z,0.7nm,0.8s						
SONM	Songino Array	71.04	324	P	P	23 01 36.4	+0.4
SONM				IAmb	IAmb	23 01 40.2	
	comp=Z,1.2nm,1.1s						
KURK	Kurchatov	76.41	342	P	P	23 02 08.1	+0.8
KURK				IAmb	IAmb	23 02 43.4	
	comp=Z,1.9nm,1.1s						
KURBB	Kurchatov Arra	76.52	342	P	P	23 02 09.6	+1.8
	comp=Z,0.4nm,0.2s,baz=23,slow=4.9,SNR=1.9						
	comp=Z,0.4nm,0.2s						
MKAR	Makanchi Array	79.35	339	P	P	23 02 25.1	+1.4
	comp=Z,0.9nm,0.9s,baz=44,slow=7.1,SNR=5.2						
	comp=Z,0.9nm,0.9s						
MKAR	Makanchi Array	79.35	339	P	P	23 02 23.7	0.0

IDC ***23*** *22:56:09.7±1.7, 50°.53N×129°.68W, h0km, mb3.8/2, mbtmp3.5/7, ML3.6/4, Error ellipse: s-maj=21.4km s-min=9.3km az=94.0*

ISC 23 22:56:10.9±1.3**, 50°.50N**±0°.09×**129°.5W**±0°.1**, h10**km**, n15,** σ1s**36**/10**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBB	Bella Bella	1.91	27	Pg	Pb	22 56 45.3	-0.5
	31nm,0.3s,baz=212,slow=6.4,SNR=308						
BBB				Lg	Lg	22 57 09.8	
	41nm,0.3s,baz=288,slow=19,SNR=59						
NEW	Newport	8.39	101	Pn	Pn	22 58 13.8	+1.2
	0.5nm,0.3s,baz=283,slow=13,SNR=2.8						
NEW				Lg	Lg	23 00 39.3	
	0.1nm,0.3s,baz=343,slow=20,SNR=3.1						
	1.9nm,0.5s						
YBH	Yreka Blue Hor	9.95	149	Pn	Pn	22 58 35.3	+1.3
	baz=349,slow=8.8						
NVAR	Mina Array Bea	14.46	142	Pn	P	22 59 40.5	-2.0
	0.6nm,0.3s,baz=62,slow=17,SNR=9.4						
	0.6nm,0.6s						
PDAR	Pinedale Array	15.71	112	Pn	P	22 59 55.4	-1.0
	baz=304,slow=11,SNR=8.2						
PDAR				Sn	Sn	23 02 45.1	-1.4
	0.2nm,0.3s,baz=350,slow=41,SNR=2.1						
	2.0nm,1.0s						
ILAR	Eielson Array	16.97	334	Pn	Pn	23 00 08.0	-0.1
	0.1nm,0.7s,baz=145,slow=10.0,SNR=5.1						
INK	Inuvik	17.98	355	P	P	23 00 20.9	-0.1
	baz=152,slow=8.4,SNR=1.7						
	0.4nm,0.5s						

ULM	**Lac du Bonnet**	21.36	78	P	P	23 00 59.5	+1.4
	9.6nm,0.9s,baz=288,slow=9.6,SNR=6.7						
	9.6nm,0.9s						
TXAR	**Lajitas Array**	28.73	128	P	P	23 02 09.1	+0.7
	0.5nm,1.0s,baz=350,slow=5.9,SNR=3.5						
	0.5nm,1.0s						
H11N2	**WAKE ISLAND Hy**	58.27	263	T	T	00 08 59.3	
	baz=42,slow=75,SNR=32						
H11N3	**WAKE ISLAND Hy**	58.27	263	T	T	00 08 59.0	
	baz=42,slow=75,SNR=34						
H11N1	**WAKE ISLAND Hy**	58.29	263	T	T	00 09 00.6	
	baz=42,slow=75,SNR=27						
H11S1	**WAKE ISLAND Hy**	59.30	262	T	T	00 10 15.5	
	baz=40						
H11S2	**WAKE ISLAND Hy**	59.31	262	T	T	00 10 14.9	
	baz=40						
H11S3	**WAKE ISLAND Hy**	59.32	262	T	T	00 10 17.2	
	baz=40						

*ROM **23** 23:09:28.8±0.3, 44°.668N±0°.009×11°.83E±0°.02, h9^{km}, ML2.4/30, Error ellipse: s-maj=1.4km s-min=1.0km az=107.0*

*VIE **23** 23:09:30.9±0.5, 44°.63N×11°.96E, h15^{km}, mb2.5/7, ml2.4/14, Error ellipse: s-maj=4.4km s-min=2.4km az=15.0 51 km ENE of Bologna*

ISC 23 23:09:30.8±0.9**, 44°.61N**±0°.03×**11°.87E**±0°.04**, h14**^{km}±5^{km}**, n41, σ0^{s}.70**/61**, 1D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMPO	**Campotto Po**	0.05	241	⇓ePg	Pg	23 09 32.9	-0.5
CMPO	**Campotto Po**	0.05	241	P	Pg	23 09 32.9	-0.5
CMPO				S	Sg	23 09 36.2	+0.9
IMOL	**Imola, Italy**	0.27	201	P	Pb	23 09 37.7	+0.4
FIU	**Minerbio Fiu**	0.27	277	P	Pg	23 09 36.3	-0.2
FIU				S	Sb	23 09 42.1	+0.1
FIU				AML	AML		
	comp=N,1640µm,0.2s						
FIU				AML	AML		
	comp=E,1700µm,0.6s						
MTRZ	**Monterenzio**	0.37	232	P	Pn	23 09 41.7	-0.1
ADRI	**Adria, Italy**	0.44	13	ePg	Pg	23 09 39.8	+0.2
ADRI				eS	Sg	23 09 46.3	+0.7
VISG	**Visignano**	0.52	217	P	Pn	23 09 42.7	-1.2
VISG				AML	AML		
	comp=N,96µm,1.2s						
VISG				AML	AML		
	comp=E,86µm,1.0s						
VISG				AML	AML		
	comp=N,96µm,0.8s						
BRIS	**BRISIGHELLA**	0.53	210	P	Pg	23 09 40.1	-1.0
GAZZ	**Gazzo Veronese**	0.75	313	ePg	Pb	23 09 45.0	-0.6
GAZZ				eS	Sb	23 09 55.7	0.0
TEOL	**Teolo**	0.77	349	ePg	Pb	23 09 45.3	-0.6
TEOL	**Teolo**	0.77	349	P	Pb	23 09 45.1	-0.8
TEOL				S	Sb	23 09 55.3	-0.9
TEOL				AML	AML		
	comp=E,546µm,0.3s						
TEOL				AML	AML		
	comp=N,336µm,1.6s						
TEOL				AML	AML		
	comp=N,336µm,0.4s						
RUFI	**Rufina**	0.81	199	P	Pn	23 09 48.9	+1.1
RUFI				AML	AML		
	comp=N,107µm,0.9s						
RUFI				AML	AML		
	comp=E,71µm,0.8s						
ASQU	**Asqua**	0.81	184	P	Pn	23 09 48.0	+0.1
ASQU				AML	AML		
	comp=N,91µm,1.4s						
ASQU				AML	AML		
	comp=E,89µm,0.7s						
ASQU				AML	AML		
	comp=N,91µm,0.6s						
ZOVE	**Zovencedo**	0.89	342	P	Pb	23 09 47.3	-0.8
ZOVE				S	Sb	23 09 58.8	-1.0
TREG	**Tregnago**	1.04	331	P	Pb	23 09 50.3	-0.3
MARN	**Marana (Italy)**	1.13	336	ePg	Pn	23 09 51.9	-0.3
ROVR	**Rover Verones**	1.18	332	P	Pn	23 09 52.0	-1.1
ROVR				AML	AML		
	comp=N,211µm,0.2s						
ROVR				AML	AML		
	comp=E,71µm,0.9s						
ROVR				AML	AML		
	comp=N,211µm,1.8s						
ASOL	**Asolo**	1.19	1	P	Pb	23 09 53.2	0.0
MTLO	**Montello**	1.22	7	ePg	Pb	23 09 53.5	-0.1
MTLO				eS	Sg	23 10 10.9	+0.8
MBAL	**Monte Baldo -**	1.30	327	P	Pn	23 09 54.7	-0.1
MBAL				AML	AML		
	comp=E,113µm,0.9s						
MBAL				AML	AML		
	comp=N,116µm,0.3s						
MBAL				AML	AML		
	comp=E,113µm,1.1s						
DOSS	**Dosso del Somm**	1.36	339	P	Pn	23 09 55.6	+0.1
DOSS				S	Sn	23 10 12.9	-0.6
DOSS				AML	AML		
	comp=E,177µm,0.4s						
DOSS				AML	AML		
	comp=N,268µm,1.6s						
DOSS				AML	AML		
	comp=E,208µm,0.6s						
DOSS				AML	AML		
	comp=N,164µm,0.6s						
DOSS				AML	AML		
	comp=N,164µm,1.4s						
DOSS				AML	AML		
	comp=N,268µm,0.4s						
VARA	**Varagna**	1.40	331	P	Pn	23 09 55.0	-1.0
VARA				AML	AML		
	comp=E,188µm,0.9s						
VARA				AML	AML		
	comp=E,251µm,0.8s						
VARA				AML	AML		
	comp=N,178µm,0.8s						
VARA				AML	AML		
	comp=N,178µm,1.2s						
VARA				AML	AML		
	comp=E,188µm,1.1s						
VARA				AML	AML		
	comp=N,238µm,0.4s						
MAGA	**Magasa**	1.46	323	P	Pn	23 09 57.2	+0.3
MAGA				S	Sb	23 10 16.4	+0.1
MAGA				AML	AML		
	comp=E,305µm,0.6s						
MAGA				AML	AML		
	comp=N,331µm,1.1s						
MAGA				AML	AML		
	comp=N,331µm,0.9s						
MAGA				AML	AML		
	comp=E,305µm,1.4s						
LUSI	**Trento, Gardas**	1.50	334	P	Pn	23 09 57.9	+0.5
LUSI				AML	AML		
	comp=E,96µm,1.4s						
LUSI				AML	AML		
	comp=N,138µm,0.3s						
LUSI				AML	AML		
	comp=E,96µm,0.6s						
RONC	**Roncone**	1.63	328	P	Pb	23 10 00.2	-0.6
RONC				AML	AML		
	comp=N,166µm,1.0s						
RONC				AML	AML		
	comp=N,166µm,1.0s						
RONC				AML	AML		
	comp=E,137µm,1.3s						
ZIAN	**Ziano**	1.68	353	P	Pn	23 10 00.6	+0.7
ZIAN				AML	AML		
	comp=N,93µm,1.1s						
ZIAN				AML	AML		
	comp=E,90µm,1.0s						
MABI	**Malga Bissina**	1.74	327	P	Pb	23 10 02.6	0.0
OZOL	**Ozolo**	1.89	342	P	Pb	23 10 04.6	-0.5
ABTA	**Abfaltersbach**	2.19	12	i Pn	Pn	23 10 07.3	+0.5
	comp=E,2.3nm,0.4s						
ABTA				eSn	Sn	23 10 34.3	+0.5
	comp=E,5.8nm,0.8s						
MYKA	**Terra Mystica**	2.37	31	i Pn	Pn	23 10 09.3	-0.1
	comp=E,1.2nm,0.2s						
MYKA				eSn	Sn	23 10 38.6	+0.3
	comp=E,0.6nm,0.2s						
FETA	**Feichten**	2.54	342	ePn	Pn	23 10 12.5	+0.7
	comp=E,1.3nm,0.3s						
FETA				eSn	Sn	23 10 44.0	+1.3
	comp=E,6.1nm,0.8s						
SQTA	**Sankt Quirin**	2.65	350	ePn	Pn	23 10 12.6	-0.7
	comp=E,3.6nm,0.3s						
SQTA				eSn	Sn	23 10 44.7	-0.6
	comp=E,4.2nm,0.3s						
WTTA	**Wattenberg**	2.66	357	ePn	Pn	23 10 12.3	-1.1
	comp=E,1.1nm,0.2s						
WTTA				eSn	Sn	23 10 46.2	+0.6
	comp=E,3.9nm,0.4s						
OBKA	**Obir**	2.67	44	ePn	Pn	23 10 13.0	-0.5
	comp=E,0.5nm,0.3s						
OBKA				eSn	Sn	23 10 45.1	-0.6
	comp=E,1.5nm,0.3s						
KBA	**Koelnbreinsper**	2.68	22	ePn	Pn	23 10 12.8	-0.8
	comp=E,11nm,0.6s						
WATA	**Walderalm**	2.74	356	i Pn	Pn	23 10 15.3	+0.8
	comp=E,0.6nm,0.2s						
WATA				eSn	Sn	23 10 48.6	+1.2
	comp=E,1.9nm,0.2s						
LESA	**Schwarzleotal**	2.87	11	ePn	Pn	23 10 15.5	-0.7
	comp=E,0.5nm,0.2s						
LESA				i Sn	Sn	23 10 51.2	+0.6
	comp=E,3.4nm,0.5s						
RETA	**Reutte**	2.98	345	ePn	Pn	23 10 18.1	+0.4
	comp=E,0.7nm,0.3s						
RETA				eSn	Sn	23 10 54.4	+1.1
	comp=E,0.6nm,0.2s						
DAVA	**Damuels**	3.02	333	ePn	Pn	23 10 18.5	+0.2
	comp=E,0.1nm,0.1s						
DAVA				eSn	Sn	23 10 55.8	+1.5
	comp=E,1.0nm,0.3s						
BIOA	**Bad Ischl, Aus**	3.32	21	ePn	Pn	23 10 22.4	+0.1
	comp=E,0.6nm,0.2s						
MOA	**Molln**	3.64	26	ePn	Pn	23 10 27.2	+0.4
	comp=E,0.8nm,0.4s						
MOA				i Sn	Sn	23 11 10.0	+0.4
	comp=E,1.5nm,0.4s						

*MEX **23** 23:09:44.6±1.2, 14°.12N×92°.20W, h41^{km}±24^{km}, MD4.6*

*CATAC **23** 23:09:44.8±0.4, 14°N±2°×9°2W±°, h30^{km}±3^{km}, M5.3/33, mb5.7/4, mB5.8/4, MLv5.1/33, Mw(mB)5.4/4, Error ellipse: s-maj=5.6km s-min=4.0km az=66.5, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.29; $M_{\theta\theta}$-0.29; $M_{\phi\phi}$0.58; $M_{r\theta}$0.43; $M_{\theta\phi}$-0.30; $M_{\phi r}$-0.73; Fault plane solution: $M_0$1.02818×10^{16} NP1:ϕ_s324.93552°, δ76.94168°, λ-106.45523°. NP2:ϕ_s197.52082°, δ20.89411°, λ-39.31090°. Principal axes: T 1.1513, Plg30.0558°, Azm68.3160°; N -0.3245, Plg16.0181°, Azm328.7535°; P -0.8268, Plg55.1222°, Azm214.4311°; confirmed*

*GCG **23** 23:09:45.1±2.1, 14°.24N×91°.99W, h33^{km}±9^{km}, MD4.4, ML5.2*

*SNET **23** 23:09:45.7±1.8, 14°.22N×91°.77W, h14^{km}±999^{km}, ML5.0*

*IDC **23** 23:09:45.7±2.2, 14°.26N×92°.07W, h71^{km}±16^{km}, mb4.0/7, mbtmp4.3/10, MS3.8/2, Error ellipse: s-maj=24.7km s-min=9.5km az=19.0*

*NEIC **23** 23:09:46.0±2.2, 14°.36N±0°.06×92°.04W±0°.05, h58^{km}±3^{km}, mb4.5/147, Md4.6/89(MEX), Error ellipse: s-maj=9.6km s-min=6.0km az=216.0*

ISC 23 23:09:44.3±0.8**, 14°.26N**±0°.05×**92°.10W**±0°.03**, h59**^{km}±7^{km}**, n364, σ2^{s}.03**/433**, mb4.5**/60**, 2C-2D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	0.47	56		Pn	23 09 55.8	-0.1
RTAL	**Retalhuleu**	0.47	56	eP	Pn	23 09 55.5	-0.3
RTAL				eS	Sn	23 10 03.8	-0.4
RTAL	**Retalhuleu**	0.47	56	⇓P	Pn	23 09 55.5	-0.3
RTAL				S	Sn	23 10 04.6	+0.4
SMCA	**Catarina**	0.59	2	i P	Pn	23 09 56.9	-0.4
THIG		0.66	346		Pn	23 09 58.2	+0.1
THIG					Sn	23 10 08.0	-0.1
THIG		0.66	346	eP	Pn	23 09 58.2	+0.1
THIG				eS	Sn	23 10 08.0	-0.1
STG2	**El Palmar, Qui**	0.72	76	i P	Pn	23 09 57.4	-1.5
STG5	**El Palmar, Qui**	0.74	79	i P	Pn	23 09 57.1	-2.0
STG8	**El Palmar, Qui**	0.75	75	i P	Pn	23 09 57.7	-1.6
CHUJ	**Union Juarez**	0.83	359	eP	Pn	23 09 59.6	-0.7
CHUJ				eS	Sn	23 10 11.9	-0.2
QUEO	**Labor Ovalle**	0.83	43	i P	Pn	23 10 00.3	-0.1
PATR	**El Naranjo**	0.86	351		Pn	23 09 59.7	-1.0
PATR					Sn	23 10 13.0	+0.2
PATR	**El Naranjo**	0.86	351	eP	Pn	23 09 59.7	-1.0
PATR				eS	Sn	23 10 13.0	+0.2
SOKI	**Kika Raxquin**	0.87	50	i P	Pn	23 10 00.7	-0.4
PAVE	**Pavencul**	0.93	355		Pn	23 10 01.2	-0.4
PAVE					Sn	23 10 14.0	-0.3
PAVE	**Pavencul**	0.93	355	eP	Pn	23 10 01.2	-0.4
PAVE				eS	Sn	23 10 14.0	-0.3
HUEH	**Huehuetenango**	1.20	29		Pn	23 10 06.2	+1.1
HUEH					Sn	23 10 21.0	+0.4
HUEH	**Huehuetenango**	1.20	29	eP	Pn	23 10 05.8	+0.7
HUEH				eS	Sn	23 10 23.0	+2.4
HUEH	**Huehuetenango**	1.20	29	eP	Pn	23 10 06.1	+1.0
HUEH				eS	Sn	23 10 22.9	+2.3
HUEH	**Huehuetenango**	1.20	29	i P	Pn	23 10 06.4	+1.3
HUEH	**Huehuetenango**	1.20	29	P	Pn	23 10 06.4	+1.3
ESSG	**Sabana Grande**	1.23	84	i P	Pn	23 10 04.2	-1.2
ESSG				i S	Sn	23 10 18.6	-2.6
QUIS	**Sacapulas**	1.41	43	i P	Pn	23 10 09.2	+1.3
FG16	**Alotenango, Sa**	1.54	89	i P	Pn	23 10 04.6	-5.1
GCG4	**OSOP**	1.55	78	i P	Pn	23 10 10.4	+0.6
GCG4				i S	Sn	23 10 29.2	+0.2
PCG5	**San Vicente Pa**	1.67	91	i P	Pn	23 10 07.4	-4.0
PCG5				i P		23 10 07.5	
ESSJ	**San Jos, E**	1.70	114	i P	Pn	23 10 05.6	-6.1
ESSJ				i S	Sn	23 10 21.3	-11
APG	**El Apazote**	1.75	65	P	Pn	23 10 13.1	+0.6
	91nm,0.4s,baz=235,slow=19,SNR=447						
APG				S	Sn	23 10 35.5	+1.7
	316nm,0.5s,baz=201,slow=19,SNR=51						
APG				LR	LR	23 11 01.0	
	comp=Z,69nm,19.9s,baz=270,slow=44						
APG	**El Apazote**	1.75	65	i P	Pn	23 10 12.9	+0.4
PCIG		1.80	323		Pn	23 10 13.4	+0.4
PCIG					Sn	23 10 35.2	+0.4
PCIG		1.80	323	eP	Pn	23 10 13.4	+0.4
PCIG				eS	Sn	23 10 35.2	+0.4
CCIG	**Comitan**	2.01	359		Pn	23 10 18.2	+2.2
CCIG					Sn	23 10 44.1	+3.9
CCIG	**Comitan**	2.01	359	eP	Pn	23 10 18.2	+2.2
CCIG				eS	Sn	23 10 44.1	+3.9
FAME	**Alcaldia de Sa**	2.06	101	P	Pn	23 10 16.1	-0.5
LOAL	**Lomas de Alarc**	2.26	96	S	Sn	23 10 46.0	-0.2
LOAL	**Lomas de Alarc**	2.26	96	P	Pn	23 10 19.8	+0.5
NUBE	**Las Nubes**	2.28	99	i P	Pn	23 10 18.8	-0.8
NUBE	**Las Nubes**	2.28	99	S	Sn	23 10 45.5	-1.2
NUBE	**Las Nubes**	2.28	99	⇑P	Pn	23 10 19.0	-0.7
CEVE	**Cerro Verde**	2.44	100	eP	Pn	23 10 22.0	+0.1
CEVE				IAML		23 11 00.6	
	comp=Z,11µm,0.4s						
CEVE	**Cerro Verde**	2.44	100	S	Sn	23 10 50.2	-0.6
CEVE	**Cerro Verde**	2.44	100	P	Pn	23 10 22.1	+0.1
UNIC	**Universidad Ca**	2.49	96	P	Pn	23 10 22.2	-0.2
UNIC	**Universidad Ca**	2.49	96	S	Sn	23 10 51.0	-0.7
JAYA	**Jayaque - finc**	2.64	103	i P	Pn	23 10 24.3	-0.3
JAYA				i S	Sn	23 10 52.6	-3.0
JAYA	**Jayaque - finc**	2.64	103	⇑P	Pn	23 10 24.3	-0.3
JAYA	**Jayaque - finc**	2.64	103	S	Sn	23 10 54.8	-0.7
MTO3	**Montecristo**	2.66	87	Pn	Pn	23 10 24.9	0.0
MTO3	**Montecristo**	2.66	87	i P	Pn	23 10 24.9	0.0
MTO3	**Montecristo**	2.66	87	P	Pn	23 10 24.8	-0.1
CEDA	**San Andres**	2.66	100	eP	Pn	23 10 24.7	-0.1
CEDA				IAML		23 11 11.2	
	comp=Z,6µm,0.5s						
CEDA	**San Andres**	2.66	100	P	Pn	23 10 25.1	+0.3
CEDA	**San Andres**	2.66	100	S	Sn	23 10 55.7	-0.2
TGBT	**Tuxtla Gutierr**	2.68	339		Pn	23 10 24.0	-1.0
TGBT					Sn	23 10 58.2	+1.9
TGBT	**Tuxtla Gutierr**	2.68	339	eP	Pn	23 10 24.0	-1.0
TGBT				eS	Sn	23 10 58.2	+1.9
ZAFR2	**Estanzuela, Za**	2.68	83	i P	Pn	23 10 22.1	-2.9
ESQI	**Esquipulas**	2.69	83	Pn	Pn	23 10 25.0	-0.2
ESQI	**Esquipulas**	2.69	83	P	Pn	23 10 25.6	+0.4
ESQI	**Esquipulas**	2.69	83	S	Sn	23 10 57.8	+1.1
TGIG		2.69	339		Pn	23 10 26.5	+1.2
TGIG		2.69	339	eP	Pn	23 10 26.5	+1.2
PMON	**Piamonte**	2.75	101	S	Sn	23 10 58.1	-0.2
PMON	**Piamonte**	2.75	101	⇓P	Pn	23 10 26.4	+0.3
BOQS	**Boqueron**	2.78	100	eP	Pn	23 10 24.9	-1.7
LALI	**Alcalda de L**	2.80	106	i P	Pn	23 10 26.4	-0.3
LALI	**Alcalda de L**	2.80	106	P	Pn	23 10 26.4	-0.3
LALI	**Alcalda de L**	2.80	106	S	Sn	23 10 58.6	-0.7
UEES	**Universidad Ev**	2.83	101	P	Pn	23 10 27.3	+0.2
UEES	**Universidad Ev**	2.83	101	S	Sn	23 10 59.9	-0.1
UTEC	**Universidad Te**	2.87	101	P	Pn	23 10 27.8	+0.2
UTEC	**Universidad Te**	2.87	101	S	Sn	23 11 00.4	-0.6
IGN	**Direccin Gen**	2.89	100	P	Pn	23 10 29.1	+1.1
IGN	**Direccin Gen**	2.89	100	S	Sn	23 11 00.8	-0.9
PANCS	**Alcalda de**	2.91	102	P	Pn	23 10 28.6	+0.4
PANCS	**Alcalda de**	2.91	102	S	Sn	23 11 01.3	-0.6
LOMA	**Loma Larga**	2.91	102	P	Pn	23 10 28.4	+0.2
LOMA	**Loma Larga**	2.91	102	S	Sn	23 11 01.7	-0.3
UDBS	**Universidad Do**	2.91	100	P	Pn	23 10 28.7	+0.5
UDBS	**Universidad Do**	2.91	100	S	Sn	23 11 02.2	+0.2
LLGN	**La Laguna**	3.06	91	P	Pn	23 10 30.7	+0.4
PAVA	**Las Pavas**	3.12	100	P	Pn	23 10 31.1	0.0
PAVA	**Las Pavas**	3.12	100	S	Sn	23 11 06.9	-0.3
SARH	**Santa Rosa de**	3.27	81	i P	Pn	23 10 35.5	+2.3
UESV	**Universidad de**	3.27	101	P	Pn	23 10 33.8	+0.7
UESV	**Universidad de**	3.27	101	S	Sn	23 11 10.0	-0.9
TECO	**Alcaldia de Te**	3.30	102	P	Pn	23 10 33.7	+0.2
TECO	**Alcaldia de Te**	3.30	102	S	Sn	23 11 11.3	-0.3
SCLA	**Alcaldia de Sa**	3.32	99	P	Pn	23 10 34.0	+0.2
PETF	**Flores**	3.41	39	Pn	Pn	23 10 35.5	+0.6
PETF	**Flores**	3.41	39		Sn	23 11 17.2	+3.1
PETF	**Flores**	3.41	39	eP	Pn	23 10 36.1	+1.2
PETF				eS	Sn	23 11 17.2	+3.1
PETF	**Flores**	3.41	39	i P	Pn	23 10 37.3	+2.3
PETF	**Flores**	3.41	39	P	Pn	23 10 37.1	+2.2
CMIG	**Matias Romero**	3.89	317	P	Pn	23 10 43.2	+1.6
	comp=Z,55nm,0.3s,baz=154,slow=13,SNR=42						
CMIG				S	Sn	23 11 28.7	+2.7
	comp=Z,200nm,0.3s,baz=88,slow=18,SNR=5.5						
CMIG	**Matias Romero**	3.89	317		Pn	23 10 42.7	+1.1
CMIG					Sn	23 11 24.4	-1.7
CMIG	**Matias Romero**	3.89	317	eP	Pn	23 10 42.7	+1.1
CMIG				eS	Sn	23 11 24.4	-1.7
HUIG	**Huatulco**	4.16	292		Pn	23 10 44.8	-0.4
HUIG					Sn	23 11 26.0	-6.6
HUIG	**Huatulco**	4.16	292	eP	Pn	23 10 44.8	-0.4
HUIG				eS	Sn	23 11 26.0	-6.6
LCND	**La Caada**	4.20	103	P	Pn	23 10 46.5	+0.8
CNCH	**Conchagua**	4.26	103	P	Pn	23 10 47.2	+0.5
CNCH	**Conchagua**	4.26	103	S	Sn	23 11 36.8	+1.6
TUIG	**Tuzandepetl**	4.37	330		Pn	23 10 47.1	-1.1
TUIG					Sn	23 11 35.3	-2.4
TUIG	**Tuzandepetl**	4.37	330	eP	Pn	23 10 47.1	-1.1
TUIG				eS	Sn	23 11 35.3	-2.4
CSGN	**Cosiguina Volc**	4.59	106	P	Pn	23 10 52.1	+0.8
CSGN				S	Sn	23 11 43.2	-0.3
POTN	**Potosi Cosigui**	4.63	105	P	Pn	23 10 53.4	+1.6
POTN				S	Sn	23 11 44.3	-0.1
TGUH	**Tegucigalpa,Un**	4.68	92	Pn	Pn	23 10 53.0	+0.5
TGUH	**Tegucigalpa,Un**	4.68	92	P	Pn	23 10 52.9	+0.3
SCIG	**Sabancuy**	4.76	10		Pn	23 10 54.0	+0.5
SCIG					Sn	23 11 45.6	-1.8
SCIG	**Sabancuy**	4.76	10	eP	Pn	23 10 54.0	+0.5
SCIG				eS	Sn	23 11 45.6	-1.8
SCIG	**Sabancuy**	4.76	10	i P	Pn	23 10 54.0	+0.5
SCIG	**Sabancuy**	4.76	10	P	Pn	23 10 54.2	+0.7
NEUV	**Arroyo Zacate**	4.95	314		Pn	23 10 56.8	+0.7
NEUV					Sn	23 11 49.5	-2.5
NEUV	**Arroyo Zacate**	4.95	314	eP	Pn	23 10 56.8	+0.7
NEUV				eS	Sn	23 11 49.5	-2.5
YUSH	**Yuscaran**	5.11	93	P	Pn	23 10 59.0	+0.6
CRIN	**San Cristobal**	5.15	107	Pn	Pn	23 10 60.0	+1.0
CRIN	**San Cristobal**	5.15	107	P	Pn	23 11 00.2	+1.3
CRIN	**San Cristobal**	5.15	107	S	Sn	23 11 56.5	-0.6
PMUV	**Sontecomapan**	5.16	326		Pn	23 10 57.2	-1.8
PMUV					Sn	23 11 54.2	-3.0
PMUV	**Sontecomapan**	5.16	326	eP	Pn	23 10 57.2	-1.8
PMUV				eS	Sn	23 11 54.2	-3.0
PEIG	**Puerto Escondi**	5.17	290		Pn	23 10 59.3	+0.1
PEIG					Sn	23 11 51.3	-6.3
PEIG	**Puerto Escondi**	5.17	290	eP	Pn	23 10 59.3	+0.1
PEIG				eS	Sn	23 11 51.3	-6.3
PKGN	**Cerro Pekin**	5.23	107	P	Pn	23 11 00.6	+0.7
PKGN				S	Sn	23 11 58.6	-0.2
OXIG	**Oaxaca**	5.27	303		Pn	23 11 03.9	+3.2
OXIG					Sn	23 11 59.7	-0.5
VHO	**Vista Hermosa**	5.27	303	eP	Pn	23 11 03.9	+3.2
VHO				eS	Sn	23 11 59.7	-0.5
HERN	**Volcan Telica**	5.38	107	Pn	Pn	23 11 03.1	+1.0
POLN	**Al Sur del Vol**	5.38	107	P	Pn	23 11 01.7	-0.4
CNGN	**Cerro Negro**	5.54	108	Pn	Pn	23 11 03.6	-0.6
CNGN	**Cerro Negro**	5.54	108	S	Sn	23 12 06.2	-0.4
CNGN	**Cerro Negro**	5.54	108	P	Pn	23 11 04.7	+0.5
YOIG	**Yosondua**	5.85	297		Pn	23 11 11.8	+3.1
YOIG					Sn	23 12 14.7	+0.1
YOIG	**Yosondua**	5.85	297	eP	Pn	23 11 11.8	+3.1
YOIG				eS	Sn	23 12 14.7	+0.1
MGAN	**Managua**	6.07	110	Pn	Pn	23 11 12.3	+0.8
TOIG	**Toxpalan**	6.11	309		Pn	23 11 14.6	+2.5
TOIG					Sn	23 12 19.6	-1.1
TOIG	**Toxpalan**	6.11	309	eP	Pn	23 11 14.6	+2.5
TOIG				eS	Sn	23 12 19.6	-1.1
TXIG	**Tlaxiaco**	6.22	299		Pn	23 11 16.3	+2.6
TXIG					Sn	23 12 20.2	-3.4
TXIG	**Tlaxiaco**	6.22	299	eP	Pn	23 11 16.3	+2.6
TXIG				eS	Sn	23 12 20.2	-3.4
BOAB	**BOACO BROADBAN**	6.51	105	Pn	Pn	23 11 18.0	+0.4
TPIG	**Tehuac#an**	6.53	310		Pn	23 11 21.6	+3.7
TPIG					Sn	23 12 34.9	+3.7
TPIG	**Tehuac#an**	6.53	310	eP	Pn	23 11 21.6	+3.7
TPIG				eS	Sn	23 12 34.9	+3.7
JAUV	**Jalcomulco**	6.79	319		Pn	23 11 20.6	-0.7
JAUV					Sn	23 12 33.3	-4.0
JAUV	**Jalcomulco**	6.79	319	eP	Pn	23 11 20.6	-0.7
JAUV				eS	Sn	23 12 33.3	-4.0
LVIG	**Laguna Verde**	6.83	323		Pn	23 11 19.8	-2.0
LVIG					Sn	23 12 31.1	-7.0
LVIG	**Laguna Verde**	6.83	323	eP	Pn	23 11 19.8	-2.0
LVIG				eS	Sn	23 12 31.1	-7.0
FTIG	**Fresnillo de T**	6.84	303		Pn	23 11 25.1	+3.0
FTIG					Sn	23 12 36.8	-2.0
FTIG	**Fresnillo de T**	6.84	303	eP	Pn	23 11 25.1	+3.0
FTIG				eS	Sn	23 12 36.8	-2.0
MGIG	**Malinaltepec**	6.95	296		Pn	23 11 25.7	+1.9
MGIG					Sn	23 12 39.7	-1.9
MGIG	**Malinaltepec**	6.95	296	eP	Pn	23 11 25.7	+1.9
MGIG				eS	Sn	23 12 39.7	-1.9
TEIG	**Tepich**	6.97	31	P	Pn	23 11 24.0	+0.3
	baz=309,slow=24,SNR=41						
TEIG	**Tepich**	6.97	31	Pn	Pn	23 11 22.9	-0.9
MYIG	**Merida**	7.03	18		Pn	23 11 24.4	-0.2
MYIG					Sn	23 12 40.0	-3.2
MYIG	**Merida**	7.03	18	eP	Pn	23 11 24.4	-0.2
MYIG				eS	Sn	23 12 40.0	-3.2
TLIG	**Tlapa**	7.04	299		Pn	23 11 26.7	+1.9
TLIG					Sn	23 12 38.9	-4.7
TLIG	**Tlapa**	7.04	299	eP	Pn	23 11 26.7	+1.9
TLIG				eS	Sn	23 12 38.9	-4.7
SIUN	**Universidad Ur**	7.13	93	Pn	Pn	23 11 25.6	-0.4
CRIG	**Cruz Grande**	7.21	291		Pn	23 11 28.6	+1.4
CRIG					Sn	23 12 40.2	-7.5
CRIG	**Cruz Grande**	7.21	291	eP	Pn	23 11 28.6	+1.4
CRIG				eS	Sn	23 12 40.2	-7.5
JUD3	**Juan Diaz 3**	7.59	122	Pn	Pn	23 11 33.3	+0.9
PPCL	**Tochimilco**	7.78	307	eP	Pn	23 11 37.6	+2.5
PPCL				eS	Sn	23 13 05.8	+3.9
DAIG	**Los Arroyos**	7.78	292		Pn	23 11 36.7	+1.8
DAIG					Sn	23 12 50.9	-11
DAIG	**Los Arroyos**	7.78	292	eP	Pn	23 11 36.7	+1.8
DAIG				eS	Sn	23 12 50.9	-11
PPSX	**Xalitzintla**	7.80	309	eP	Pn	23 11 40.4	+5.0
PPSX				eS	Sn	23 13 08.0	+5.5
PPPT	**Popocatepetl**	7.81	308	eP	Pn	23 11 39.5	+3.7
PPPT				eS	Sn	23 13 02.9	-0.3
PBPN	**Popocatepetl**	7.86	308	eP	Pn	23 11 40.4	+3.9
PBPN				eS	Sn	23 13 03.8	-0.5
PBXN	**Popocatepetl**	7.86	308	eP	Pn	23 11 41.0	+4.5
PBXN				eS	Sn	23 13 09.1	+4.8
PPM	**Popocatepetl**	7.87	308	eP	Pn	23 11 41.6	+5.0
PPM				eS	Sn	23 13 03.7	-0.9
PPIG	**Popocatepetl**	7.88	308		Pn	23 11 41.6	+5.0
PPIG					Sn	23 13 03.7	-0.9
CXUV	**Coxquihui**	7.88	319		Pn	23 11 34.8	-1.5
CXUV					Sn	23 12 55.8	-8.3

CXUV	Coxquihui	7.88	319	eP	Pn	23 11 34.8	-1.5
CXUV				eS	Sn	23 12 55.8	-8.3
JTS	Las Juntas de	8.02	119	P	Pn	23 11 39.7	+1.5
	comp=Z,9.2nm,0.3s,baz=287,slow=7.2,SNR=9.0						
JTS				S	Sn	23 13 06.4	-1.2
	comp=Z,13nm,0.3s,baz=206,slow=20,SNR=1.4						
JTS	Las Juntas de	8.02	119	Pn	Pn	23 11 40.3	+2.1
MEIG	Mezcala	8.10	298		Pn	23 11 42.5	+3.2
MEIG					Sn	23 13 06.7	-2.8
MEIG	Mezcala	8.10	298	eP	Pn	23 11 42.5	+3.2
MEIG				eS	Sn	23 13 06.7	-2.8
YAIG	Yautepec	8.10	305		Pn	23 11 42.9	+3.5
YAIG					Sn	23 13 03.2	-6.4
YAIG	Yautepec	8.10	305	eP	Pn	23 11 42.9	+3.5
YAIG				eS	Sn	23 13 03.2	-6.4
PLIG	Platanillo	8.21	301		Pn	23 11 43.5	+2.7
PLIG					Sn	23 13 11.0	-1.3
PLIG	Platanillo	8.21	301	eP	Pn	23 11 43.5	+2.7
PLIG				eS	Sn	23 13 11.0	-1.3
SOCE	Pocosol	8.26	117	Pn	Pn	23 11 43.8	+2.2
CAIG	El Cayaco	8.34	290		Pn	23 11 44.7	+2.0
CAIG					Sn	23 13 11.5	-4.0
CAIG	El Cayaco	8.34	290	eP	Pn	23 11 44.7	+2.0
CAIG				eS	Sn	23 13 11.5	-4.0
ARIG	Puente Sto Nin	8.87	298		Pn	23 11 53.4	+3.5
ARIG					Sn	23 13 25.6	-2.9
ARIG	Puente Sto Nin	8.87	298	eP	Pn	23 11 53.4	+3.5
ARIG				eS	Sn	23 13 25.6	-2.9
HDC	Heredia	8.88	118	Pn	Pn	23 11 54.5	+4.4
RAFA	San Farael, Vo	9.16	117	Pn	Pn	23 11 59.2	+5.1
CTUV	Llano Grande	9.32	321		Pn	23 11 57.8	+1.8
CTUV					Sn	23 13 39.3	-0.1
CTUV	Llano Grande	9.32	321	eP	Pn	23 11 57.8	+1.8
CTUV				eS	Sn	23 13 39.3	-0.1
PIRO	Carate, Puerto	10.37	123	Pn	Pn	23 12 13.4	+3.0
BRU2	Volcan	10.70	120	Pn	Pn	23 12 15.6	+0.6
HKT	Hockley	15.99	348	Pn	Pn	23 13 26.0	+0.6
HNVL	Huntsville, TX	16.71	350	P	P	23 13 35.7	-0.2
DRIO	Del Rio	17.02	334		P	23 13 40.0	+0.5
435B	Jarrell	17.20	344		P	23 13 43.9	+2.5
HPIG		17.88	317		Pn	23 13 51.0	+1.8
143A	Socs Landing,	18.37	2	P	P	23 13 54.2	-0.1
143A				IAmb	IAmb	23 14 20.9	
	comp=Z,57nm,1.4s						
TXAR	Lajitas Array	18.43	326	P	Pn	23 13 56.0	+0.3
	comp=Z,5.5nm,0.9s,baz=152,slow=11,SNR=45						
TXAR				PcP	PcP	23 18 24.9	+1.1
	comp=Z,0.1nm,0.4s,baz=124,slow=2.7,SNR=4.0						
TXAR	Lajitas Array	18.43	326	P	Pn	23 13 57.4	+1.7
TX31	Lajitas Ar. Si	18.43	326	P	Pn	23 13 56.6	+0.9
OZNA	Ozona	18.55	335	P	Pn	23 13 58.9	+1.8
H06E1	SOCORRO T-PHAS	18.60	287	T	T	23 33 26.9	
JAMC	Jamundi, Valle	18.77	124	P	Pn	23 14 00.8	+0.8
	comp=Z,13nm,0.9s						
BBAC	Balboa, Cauca	19.06	128	P	Pn	23 14 04.4	+0.9
	comp=Z,9.5nm,1.0s						
Z38A	Mt. Pleasant	19.10	353	P	P	23 14 02.7	+0.4
Z38A				IAmb	IAmb	23 14 33.4	
	comp=Z,14nm,0.7s						
POPC	Popayan, Colom	19.17	126	P	P	23 14 03.8	+0.3
	comp=Z,24nm,1.0s						
Z47A	Carrollton	19.21	10	P	P	23 14 02.8	-0.6
Z47A				IAmb	IAmb	23 14 05.6	
	comp=Z,27nm,0.7s						
LRAL	Lakeview Retre	19.26	13	P	P	23 14 03.2	-0.8
LRAL				IAmb	IAmb	23 14 09.5	
	comp=Z,19nm,1.0s						
FW06	Azle	19.28	346	P	P	23 14 03.3	-1.0
FW06				IAmb	IAmb	23 14 10.3	
	comp=Z,23nm,1.2s						
PLPT	Palo Pinto	19.32	344	P	Pn	23 14 05.6	-0.7
WLAR	White Oak Lake	19.36	357	P	P	23 14 04.7	-0.4
WLAR				IAmb	IAmb	23 14 34.3	
	comp=Z,27nm,1.0s						
ORTC	Ortega, Tolima	19.54	120	P	Pn	23 14 08.7	-0.4
	comp=Z,38nm,0.9s						
CCAR	Cane Creek	19.57	1	P	P	23 14 07.8	+0.4
CCAR				IAmb	IAmb	23 14 34.2	
	comp=Z,31nm,0.9s						
MNHN	Monahans	19.61	332	P	Pn	23 14 09.8	-0.1
MNHN				IAmb	IAmb	23 14 12.0	
	comp=Z,12nm,0.7s						
PECS	Pecos	20.16	330	P	Pn	23 14 16.1	-0.2
PECS				IAmb	IAmb	23 14 17.4	
	comp=Z,19nm,1.2s						
ODSA	Odessa	20.18	334	P	P	23 14 14.8	+0.6
ODSA				IAmb	IAmb	23 14 17.8	
	comp=Z,13nm,0.7s						
VHRN	Van Horn	20.27	326	P	Pn	23 14 16.9	-0.8
VHRN				IAmb	IAmb	23 14 19.3	
	comp=Z,14nm,0.9s						
APMT	Aspermont	20.33	340	P	P	23 14 16.7	+1.0
APMT				IAmb	IAmb	23 14 18.6	
	comp=Z,13nm,0.7s						
SN07	Snyder 07	20.38	338	P	P	23 14 16.7	+0.4
CHIC	Chingaza	20.47	116	P	P	23 14 17.7	-0.1
	comp=Z,34nm,1.2s						
FLOC	Florencia	20.56	126	P	P	23 14 19.2	+0.8
POST	Post	20.59	337	P	P	23 14 18.9	+0.4
POST				IAmb	IAmb	23 14 20.9	
	comp=Z,12nm,0.7s						
X48A	Hartselle	20.62	12	P	P	23 14 17.7	-1.0
X48A				IAmb	IAmb	23 14 26.0	
	comp=Z,22nm,0.9s						
URMC	La Uribe, Meta	20.63	120	P	P	23 14 19.1	0.0
	comp=Z,20nm,0.8s						
CLNB	Carlsbad	20.91	331	P	P	23 14 22.6	+0.5
DKNS	Dickens	20.92	339	P	P	23 14 22.6	+0.5
HTMS	Hat Mesa	20.97	332	P	P	23 14 23.7	+1.0
MNTX	Cornudas Mount	21.20	327	P	P	23 14 24.9	-0.1
MNTX				IAmb	IAmb	23 14 27.5	
	comp=Z,11nm,0.8s						
W35A	Tecumseh	21.24	349	P	P	23 14 25.4	-0.1
W35A				IAmb	IAmb	23 14 51.4	
	comp=Z,32nm,1.2s						
WMOK	Wichita Mounta	21.26	345	P	P	23 14 24.3	-1.5
SDV	Santo Domingo	21.69	102	P	P	23 14 29.4	-1.2
SDV				IAmb	IAmb	23 14 46.9	
	comp=Z,13nm,1.1s						
SDV	Santo Domingo	21.69	102	eP	P	23 14 29.8	-0.9
SDV				eS	S	23 18 23.6	-4.3
V48A	Smith Brothers	21.91	12	P	P	23 14 31.8	-0.8
V48A				IAmb	IAmb	23 14 33.2	
	comp=Z,14nm,1.0s						
SMWD	Samnorwood	22.02	342	P	P	23 14 33.5	-0.4
SMWD				IAmb	IAmb	23 15 05.5	
	comp=Z,23nm,1.0s						
AMTX	Amarillo	22.28	339	P	P	23 14 36.4	-0.4
AMTX				IAmb	IAmb	23 14 41.7	
	comp=Z,10nm,0.6s						
TKL	Tuckaleechee C	22.58	18	LR	LR	23 23 56.9	
	comp=Z,374nm,21.0s,baz=205,slow=38						
T45A	Paducah	22.88	7	P	P	23 14 42.3	-0.6
T47A	Sharon Grove	23.07	10	P	P	23 14 43.4	-1.4
T47A				IAmb	IAmb	23 14 44.4	
	comp=Z,27nm,1.0s						
319A	Douglas	23.20	320	P	P	23 14 48.2	+1.8
319A				IAmb	IAmb	23 14 50.1	
	comp=Z,44nm,1.4s						
S39A	Bolivar	23.36	358	P	P	23 15 04.9	+17
S39A				IAmb	IAmb	23 15 12.4	
	comp=Z,16nm,1.1s						
S44A	Carbondale	23.48	6	P	P	23 14 47.3	-1.4
SIUC	Southern Illin	23.50	6	P	P	23 14 47.6	-1.3
T50A	Nancy	23.57	15	P	P	23 14 48.2	-1.5
T50A				IAmb	IAmb	23 15 16.5	
	comp=Z,8.8nm,0.9s						
V55A	Taylorsville	23.62	23	P	P	23 14 48.5	-1.6
CRNM	Carthage	23.67	328	P	P	23 14 52.1	+1.3
Y22A	Socorro	23.78	328	P	P	23 14 52.7	+0.9
Y22A				IAmb	IAmb	23 14 56.0	
	comp=Z,19nm,1.1s						
DUN6	Lazy B Ranch	23.91	322	P	P	23 14 55.0	+2.1
SBM	South Baldy	23.92	328	P	P	23 14 56.4	+3.1
LENM	Lemitar	23.96	328	P	P	23 14 55.0	+1.5
RTBA	Rita Blanca	24.05	339		P	23 14 54.8	+0.6
RTBA				IAmb	IAmb	23 14 56.7	
	comp=Z,12nm,0.8s						
ABQ	Albuquerque	24.33	330		P	23 14 58.3	+1.5
ANMO	Albuquerque	24.33	330	P	P	23 14 57.3	+0.5
TASM	ASL Pad, Albuq	24.33	330	P	P	23 14 58.1	+1.3
TASM	ASL Pad, Albuq	24.33	330	P	P	23 14 58.1	+1.3
TASM				IAmb	IAmb	23 14 59.5	
	comp=Z,5.8nm,0.7s						
TASM	ASL Pad, Albuq	24.33	330	P	P	23 14 58.4	+1.5
TASM				IAmb	IAmb	23 14 59.5	
	comp=Z,5.9nm,0.7s						
TASM	ASL Pad, Albuq	24.33	330	P	P	23 14 58.3	+1.5
TASM				IAmb	IAmb	23 14 59.5	
	comp=Z,5.8nm,0.7s						
WCI	Wyandotte Cave	24.42	11	P	P	23 14 56.0	-1.4
WCI				IAmb	IAmb	23 14 57.7	
	comp=Z,22nm,0.9s						
OLIL	Olney	24.63	8	P	P	23 14 58.2	-1.1
Q44A	Meyer Farm, Va	24.70	6	P	P	23 14 59.2	-0.6
TUC	Tucson	24.78	320	P	P	23 15 02.1	+1.3
X16A	Lo Mia Camp, P	26.62	322		P	23 15 19.2	+1.7
PV15	Paradox Valley	28.03	332	P	P	23 15 31.9	+1.7
PV15				IAmb	IAmb	23 15 40.2	
	comp=Z,9.7nm,1.3s						
PV02	Paradox Valley	28.04	331	P	P	23 15 31.6	+1.3
PV02				IAmb	IAmb	23 16 05.2	
	comp=Z,19nm,1.5s						
PV13	Radium Mtn., P	28.04	331	P	P	23 15 31.8	+1.5
PV13				IAmb	IAmb	23 15 34.0	
	comp=Z,20nm,1.4s						
PV05	Paradox Valley	28.11	331	P	P	23 15 32.6	+1.7
PV05				IAmb	IAmb	23 15 34.3	
	comp=Z,21nm,1.3s						
PV03	Paradox Valley	28.13	331	P	P	23 15 32.3	+1.2
PV03				IAmb	IAmb	23 15 34.8	
	comp=Z,16nm,1.4s						
PV18	Skein Mesa, Pa	28.15	331		P	23 15 32.2	+0.9
PV18				IAmb	IAmb	23 15 34.8	
	comp=Z,22nm,1.3s						
PV12	Saucer Basin,	28.16	331	P	P	23 15 32.2	+0.9
PV12				IAmb	IAmb	23 15 35.9	
	comp=Z,14nm,1.0s						
PV11	David Mesa, Pa	28.18	331	P	P	23 15 32.0	+0.5
PV17	East Wray Mesa	28.20	331	P	P	23 15 32.5	+0.8
PV16	Nyswonger Mesa	28.21	331	P	P	23 15 33.2	+1.5
PV19	Morning Glory	28.24	331	P	P	23 15 33.0	+0.9
PV19				IAmb	IAmb	23 15 34.8	
	comp=Z,12nm,1.0s						
PV20	West Nyswonger	28.26	331	P	P	23 15 33.8	+1.6
PV20				IAmb	IAmb	23 15 35.0	
	comp=Z,7.2nm,0.9s						
PV04	Paradox Valley	28.27	331	P	P	23 15 33.5	+1.2
PV10	Paradox Valley	28.32	331	P	P	23 15 33.2	+0.4
PV10				IAmb	IAmb	23 15 35.6	
	comp=Z,17nm,1.4s						
PV22	Blue Mesa, Par	28.33	332	P	P	23 15 34.5	+1.6
PV23	Carpenter Ridg	28.37	331	P	P	23 15 34.8	+1.6
PV23				IAmb	IAmb	23 15 38.2	
	comp=Z,7.9nm,0.9s						
U15A	North Rim	28.52	324	P	P	23 15 35.5	+0.8
U15A				IAmb	IAmb	23 15 38.4	
	comp=Z,10nm,1.5s						
W13A	Hualapai Mount	28.56	320	P	P	23 15 36.8	+1.9
BC3	Big Chuckawall	28.66	316	P	P	23 15 37.6	+1.8
BC3				IAmb	IAmb	23 15 39.3	
	comp=Z,8.3nm,0.9s						
HMU	Henry Mountain	28.81	328		P	23 15 38.8	+1.7
HMU				IAmb	IAmb	23 15 40.4	
	comp=Z,10nm,0.9s						
KNB	Kanab	29.24	325	P	P	23 15 43.2	+2.3
KNB				IAmb	IAmb	23 15 44.5	
	comp=Z,7.4nm,1.1s						
PFO	Pinyon Flats O	29.31	315	P	P	23 15 42.0	+0.4
	comp=Z,1.0nm,0.3s,baz=176,slow=19,SNR=5.3						
	comp=Z,1.0nm,0.3s						
V12A	Nelson	29.56	320	P	P	23 15 45.7	+2.0
V12A				IAmb	IAmb	23 15 47.3	
	comp=Z,8.2nm,0.9s						
MTPU	Mount Pierson	29.64	327		P	23 15 45.8	+1.2
SHPR	Sheep Range	30.26	321	P	P	23 15 52.2	+2.2
MPU	Maple Canyon	30.85	330	P	P	23 15 56.1	+1.0
MPU				IAmb	IAmb	23 15 57.9	
	comp=Z,4.9nm,0.8s						
PSUT	Pine Spring	30.89	326	P	P	23 15 56.9	+1.3
PSUT				IAmb	IAmb	23 15 59.2	
	comp=Z,5.6nm,1.0s						
SPR3	Spring Creek 3	31.49	326		P	23 16 02.4	+1.5
SPR3				IAmb	IAmb	23 16 04.0	
	comp=Z,12nm,1.3s						
TCUT	Toone Canyon	31.60	332	P	P	23 16 02.7	+0.8
TCUT				IAmb	IAmb	23 16 46.8	
	comp=Z,7.0nm,0.7s						
HWUT	Hardware Ranch	32.06	332	P	P	23 16 06.5	+0.8
HWUT				IAmb	IAmb	23 16 08.9	
	comp=Z,6.9nm,1.2s						
PDAR	Pinedale Array	32.15	335	P	P	23 16 06.8	+0.3
	comp=Z,1.0nm,1.0s,baz=146,slow=7.7,SNR=3.5						
	comp=Z,1.0nm,1.0s						
J57A	Williamstown	32.17	22	P	P	23 16 05.7	-0.7
NV11	Mina Array Sit	33.32	321		P	23 16 18.8	+2.0
NV11				IAmb	IAmb	23 16 20.9	
	comp=Z,8.9nm,0.9s						
NVAR	Mina Array Bea	33.41	321	P	P	23 16 19.3	+1.7
	comp=Z,5.3nm,0.7s,baz=125,slow=6.6,SNR=33						
NVAR				LR	LR	23 31 55.1	
	comp=Z,91nm,18.6s,baz=116,slow=40						
	comp=Z,5.3nm,0.7s						
NVAR	Mina Array Bea	33.41	321	P	P	23 16 20.2	+2.6
RYN	Ryan	33.67	321		P	23 16 21.8	+1.9
RYN				IAmb	IAmb	23 16 23.7	
	comp=Z,5.4nm,1.1s						
PNTR	Pine Nut	34.61	321	P	P	23 16 30.6	+2.5
PNTR				IAmb	IAmb	23 16 32.0	
	comp=Z,10nm,1.2s						
HLID	Hailey	34.90	331		P	23 16 31.1	+0.7
HLID				IAmb	IAmb	23 16 33.7	
	comp=Z,6.7nm,1.1s						
MCMT	McKenzie Canyo	35.20	334		P	23 16 33.0	-0.1
MFID	Camas Ranch	35.47	330		P	23 16 35.5	+0.3
MFID				IAmb	IAmb	23 16 54.8	
	comp=Z,3.3nm,0.8s						
MACA	Manacapuru-AM	35.63	117	eP	P	23 16 48.0	+11
LYMT	Lyon Mountain	36.72	337	P	P	23 16 46.8	+0.7
J08A	Circle Bar Ran	36.77	327	P	P	23 16 47.4	+1.0
PLID	Pearl Lake	36.80	331	P	P	23 16 47.2	+0.4
PLID				IAmb	IAmb	23 16 48.7	
	comp=Z,5.5nm,0.8s						
BMO	Blue Mountains	37.25	330		P	23 16 50.4	0.0
F10A	Beach Ranch, E	38.04	331	P	P	23 16 57.7	+0.6
J04A	Umpqua Nationa	38.68	324	P	P	23 17 03.8	+1.2
HOOD	Mount Hood Mea	39.78	327	P	P	23 17 14.0	+2.3
ITTB	Itaituba	40.53	115	eP	P	23 17 27.8	+10
NPGB	Novo Progresso	42.15	118	eP	P	23 17 42.8	+11
EDM	Edmonton	42.36	341	P	P	23 17 32.0	-0.6
EDM				IAmb	IAmb	23 17 41.2	
	comp=Z,11nm,1.1s						
PRPB	Parauapebas	46.60	113	eP	P	23 18 15.4	+8.4
SMTB	Santa Maria do	49.77	115	eP	P	23 18 41.5	+10
YKA	Yellowknife Ar	50.75	347	P	P	23 18 37.5	-0.6
	comp=Z,1.4nm,0.7s,baz=155,slow=7.3,SNR=4.6						
	comp=Z,1.4nm,0.7s						
JANB	Januaria	55.52	120	eP	P	23 19 25.6	+12
M29M	Somme Creek	58.14	337	P	P	23 19 32.6	+0.8
NBIT	Itapeh - BA	59.62	117	eP	P	23 19 53.8	+11
BCAR	Beaver Creek A	59.76	336	P	P	23 19 43.6	+0.5
I29M	Ogilvie Camp,	59.77	339	P	P	23 19 42.8	-0.2
I29M				IAmb	IAmb	23 19 44.1	
	comp=Z,4.3nm,0.9s						
L27K	Beaver Creek,	59.78	336	P	P	23 19 43.4	+0.3
GLB	Gilahina Butte	59.78	334	P	P	23 19 43.8	+0.6
INK	Inuvik	60.16	344	P	P	23 19 44.9	-0.7
	comp=Z,2.7nm,0.6s,baz=149,slow=7.5,SNR=10						
	comp=Z,2.7nm,0.6s						
INK	Inuvik	60.16	344	P	P	23 19 44.8	-0.7
INK				IAmb	IAmb	23 19 47.1	
	comp=Z,6.0nm,1.0s						
N25K	Chitina, Valde	60.19	334	P	P	23 19 47.5	+1.5
H29M	Whitestone	60.30	340	P	P	23 19 47.2	+0.6
H29M				IAmb	IAmb	23 19 48.0	
	comp=Z,5.3nm,1.0s						
F30M	Barrier River	60.35	342	P	P	23 19 47.0	+0.1
I28M	Miner Creek	60.38	339	P	P	23 19 48.3	+1.1
I28M				IAmb	IAmb	23 19 53.0	
	comp=Z,5.6nm,1.2s						
K27K	Chicken	60.38	337	P	P	23 19 47.6	+0.5
K27K				IAmb	IAmb	23 19 49.0	
	comp=Z,3.1nm,0.8s						
HIN	Hinchinbrook I	60.48	332	P	P	23 19 48.7	+0.8
I27K	Kandik River	61.05	339	P	P	23 19 52.8	+1.1
SCRK	Sand Creek	61.08	337	P	P	23 19 52.9	+0.8
SCRK				IAmb	IAmb	23 19 54.4	
	comp=Z,5.3nm,1.0s						
M24K	Tolsona, Glenn	61.08	334	P	P	23 19 52.4	+0.3
J26L	Joseph Creek	61.18	337	P	P	23 19 53.4	+0.7
H27K	Steamboat Moun	61.36	339	P	P	23 19 54.5	+0.7
H27K				IAmb	IAmb	23 19 55.3	
	comp=Z,7.3nm,1.1s						
F28M	Old Crow	61.59	341	P	P	23 19 56.1	+0.7
BRLK	Bradley Lake	62.27	331	P	P	23 20 00.7	+0.7
KDAK	Kodiak Island	62.45	328	P	P	23 20 01.1	-0.1
	comp=Z,4.6nm,0.7s,baz=90,slow=2.0,SNR=5.1						
	comp=Z,4.6nm,0.7s						
E27K	Coleen River	62.46	341	P	P	23 20 01.1	-0.1
IL31		62.56	337	P	P	23 20 01.2	-0.6
ILAR	Eielson Array	62.56	337	P	P	23 20 01.1	-0.7
	comp=Z,6.3nm,1.0s,baz=130,slow=4.6,SNR=19						
	comp=Z,6.3nm,1.0s						
ILAR	Eielson Array	62.56	337		P	23 20 01.7	-0.2
SUA	Susitna One	62.81	333	P	P	23 20 04.0	+0.3
SUA				IAmb	IAmb	23 20 13.2	
	comp=Z,7.3nm,1.1s						
BMAR	Burnt Mountain	63.02	340	P	P	23 20 05.3	+0.4
SKT	Skwentna	63.35	333	P	P	23 20 07.5	+0.3
C27K	Jago River	63.89	342	P	P	23 20 10.4	-0.2
C27K				IAmb	IAmb	23 20 12.8	
	comp=Z,6.2nm,1.0s						
D25K	Kavik River	64.54	341	P	P	23 20 15.0	+0.1
G23K	Bananza Creek	64.58	338	P	P	23 20 15.5	+0.3
G23K				IAmb	IAmb	23 20 16.8	
	comp=Z,8.4nm,1.2s						
F21K	Alatna River	66.03	338		P	23 20 25.3	+0.7
C23K	Itkillik River	66.10	341	P	P	23 20 25.5	+0.7
C23K				IAmb	IAmb	23 20 26.5	
	comp=Z,6.6nm,0.8s						
F20K	Avaraart Lake	66.79	338	P	P	23 20 29.9	+0.6
H18K	Honhosa River	67.25	335	P	P	23 20 33.4	+1.1
H18K				IAmb	IAmb	23 20 33.7	
	comp=Z,6.7nm,1.1s						
D20K	Etivluk River	67.65	339		P	23 20 34.8	-0.1
B20K	Meade River	68.26	340	P	P	23 20 39.2	+0.6
EKA	Eskdalemuir Ar	77.81	36	P	P	23 21 32.1	-3.1
	comp=Z,1.4nm,0.7s,baz=278,slow=5.5,SNR=5.2						
BILL	Bilibino	81.18	338	P	P	23 21 54.1	+0.8
KURK	Kurchatov	114.79	6		PKPdf	23 28 18.8	+0.5
KURBB	Kurchatov Arra	114.88	7	PKiKP	PKPdf	23 28 18.8	+0.3
	comp=Z,0.5nm,0.6s,baz=350,slow=1.9,SNR=2.5						
MKAR	Makanchi Array	119.02	4	PKP	PKPdf	23 28 26.2	-0.4
	comp=Z,0.3nm,0.6s,baz=2.0,slow=2.8,SNR=2.9						
HHC	Hu-ho-hao-te	120.94	339	eP	PKPdf	23 28 26.4	-4.2
CHGR	Chuyangaron	124.51	18	PKPdf	PKiKP	23 28 38.1	+0.2
GAR	Garm	124.53	17	PKPdf	PKiKP	23 28 37.9	0.0
SHAA	Shahritus	125.20	19	PKPdf	PKPdf	23 28 38.6	-0.3
NJ2	Nanjing	125.23	328	eP	PKiKP	23 28 40.9	+1.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ASAR	Alice Springs	135.66	251	PKP	PKPdf	23 28 59.7	+0.8
	comp=Z,0.4nm,0.9s,baz=68,slow=3.2,SNR=3.2						
PZH	PanZhiHua	137.31	342	PKP	PKPdf	23 29 01.9	-0.2
CMAR	Chiang Mai Arr	145.72	341	PKPbc	PKPdf	23 29 16.9	-0.2
	comp=Z,8.8nm,0.9s,baz=15,slow=3.2,SNR=57						
CMAR	Chiang Mai Arr	145.72	341		PKPdf	23 29 17.2	0.0

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*IDC **23** 23:14:12.8±2.5, 8°.47S×116°.06E, h0^{km}, mb3.1/3, mbtmp3.3/4, ML3.3/1, Error ellipse: s-maj=153.6km s-min=25.5km az=50.0*

*DJA **23** 23:14:15.1±0.2, 8°S±3°×11°6E±°, h10^{km}, M4.0/19, mb4.3/2, MLv3.8/19*

ISC 23 23:14:15.4±1.1,**8°.35S**±0°.07×**116°.26E**±0°.03,**h18**^{km}±5^{km}, **n26,**σ**1ˢ.06**/32,**Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLNI	Mataram	0.18	245	P	Pg	23 14 19.8	-0.2
KLNI				S	Sg	23 14 23.0	-0.2
KHKI	Kahang-Kahang	0.64	268	P	Pb	23 14 28.3	+0.2
KHKI				S	Sn	23 14 38.1	-1.2
TWSI	Taliwang, Sumb	0.73	122	P	Pg	23 14 29.5	-0.3
TWSI				S	Sg	23 14 39.9	+0.4
SRBI	Singaraja	1.07	284	P	Pb	23 14 34.5	-0.8
DNP	Denpasar	1.09	252	P	Pn	23 14 36.1	+0.4
DNP				S	Sn	23 14 53.1	+2.8
IGBI	Denpasar	1.20	247	P	Pb	23 14 37.4	-0.1
IGBI				S	Sn	23 14 54.5	+1.5
RTBI	Rangdo, Negare	1.31	265	P	Pn	23 14 38.7	-0.1
PLAI	Plampang	1.58	108	P	Pb	23 14 43.9	-0.1
DBNI	Kabupaten Domp	2.04	94	P	Pn	23 14 49.7	+0.8
ABJI	Asem Bagus	2.08	285	P	Pb	23 14 51.3	-1.3
JAGI	Jajag, Banyuwa	2.09	266	P	Pn	23 14 49.1	-0.4
GMJI	Gumukmas	2.79	271	P	Pn	23 14 59.1	0.0
WBSI	Waikabubak, Su	3.35	113	P	Pn	23 15 07.7	+0.7
LBFI	Labuhan Bajo,	3.60	92	P	Pn	23 15 10.6	+0.3
WSI	Waingapu	4.20	109	P	Pn	23 15 18.9	+0.3
SJI	Sawahan	4.49	277	P	Pn	23 15 24.1	+1.5
SNJI	Sawahan-Nganju	4.49	277	P	Pn	23 15 23.6	+0.9
BSSI	Bau Bau, Buton	4.74	63	P	Pn	23 15 25.9	-0.1
KAPI	Kappang	4.80	47	P	Pn	23 15 26.9	+0.1
BKSI	Bulukumba	4.87	52	P	Pn	23 15 27.6	-0.3
PCJI	Pacitan	5.03	271	P	Pn	23 15 30.2	+0.2
	35nm,1.4s						
PMSI	Majene	5.49	29	P	Pn	23 15 37.1	+0.7
FITZ	Fitzroy Crossi	13.31	138	Pn	Pn	23 17 22.9	-0.7
	0.1nm,0.3s,baz=321,slow=13,SNR=2.1						
FITZ				Sn	Sn	23 19 48.2	-3.0
	0.2nm,0.3s,baz=204,slow=18,SNR=2.0						
	1.1nm,0.6s						
WRA	Warramunga Arr	20.96	125	P	P	23 18 58.0	+0.3
	0.4nm,0.5s,baz=299,slow=12,SNR=8.1						
WRA				S	Sn	23 23 02.7	+5.9
	0.4nm,0.4s,baz=314,slow=18,SNR=1.2						
	0.4nm,0.5s						
ASAR	Alice Springs	22.75	134	P	P	23 19 18.4	+1.4
	0.5nm,0.6s,baz=308,slow=9.1,SNR=7.1						
	0.5nm,0.6s						
MKAR	Makanchi Array	62.67	334	P	P	23 24 39.5	+0.5
	0.1nm,0.4s,baz=150,slow=8.4,SNR=4.5						
	0.1nm,0.4s						

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*IDC **23** 23:14:46.2±1.7, 50°.51N×129°.00W, h0^{km}, mb3.7/2, mbtmp3.6/8, ML2.8/3, MS3.6/3, Error ellipse: s-maj=22.7km s-min=8.6km az=83.0*

ISC 23 23:14:49.4±1.1,**50°.69N**±0°.09×**129°.0W**±0°.1,**h25**^{km}**,n17,** σ**1ˢ.11**/10,**Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBB	Bella Bella	1.59	19	Pg	Pb	23 15 18.0	0.0
	22nm,0.3s,baz=215,slow=14,SNR=156						
BBB				LR	LR	23 15 30.0	
	comp=Z,265nm,20.9s,baz=84,slow=25						
BBB				Lg	Lg	23 15 41.6	
	45nm,0.3s,baz=128,slow=19,SNR=9.6						
NEW	Newport	8.08	103	Pn	Pn	23 16 45.0	-0.1
	1.2nm,0.3s,baz=290,slow=12,SNR=6.9						
NEW				Lg	Lg	23 18 59.4	
	0.1nm,0.3s,baz=353,slow=18,SNR=1.3						
NEW				LR	LR	23 19 52.1	
	comp=Z,373nm,21.2s,baz=298,slow=38						
YBH	Yreka Blue Hor	9.95	152	Pn	Pn	23 17 09.1	-1.6
	baz=347,slow=2.7,SNR=4.8						
ELK	Elko	13.79	131	LR	LR	23 23 15.7	
	comp=Z,174nm,18.9s,baz=16,slow=37						
YKA	Yellowknife Ar	14.18	28	Pn	Pn	23 18 07.9	-0.4
	baz=221,slow=12,SNR=2.1						
	0.1nm,0.6s						
NVAR	Mina Array Bea	14.40	144	Pn	Pn	23 18 13.4	+1.7
	0.7nm,0.8s,baz=342,slow=38,SNR=1.8						
PDAR	Pinedale Array	15.45	113	Pn	Pn	23 18 25.8	0.0
	0.4nm,0.4s,baz=304,slow=16,SNR=4.5						
KDAK	Kodiak Island	15.48	306	Pn	Pn	23 18 25.5	-0.3
	0.1nm,0.3s,baz=112,slow=19,SNR=5.9						
	15nm,1.1s						
ILAR	Eielson Array	16.95	333	P	P	23 18 46.9	+0.5
	baz=146,slow=10,SNR=12						
ILAR				LR	LR	23 24 46.6	
	comp=Z,234nm,19.0s,baz=264,slow=35						
	1.3nm,0.9s						
ULM	Lac du Bonnet	20.97	78	P	P	23 19 31.9	+1.5
	8.7nm,0.9s,baz=288,slow=12,SNR=4.7						
	8.7nm,0.9s						
TXAR	Lajitas Array	28.56	129	P	P	23 20 42.7	-0.6
	0.2nm,0.7s,baz=335,slow=8.5,SNR=4.0						
	0.2nm,0.7s						
H11N2	WAKE ISLAND Hy	58.65	263	T	T	00 27 44.5	
	baz=42,slow=75,SNR=61						
H11N3	WAKE ISLAND Hy	58.66	263	T	T	00 27 39.9	

	baz=42,slow=75,SNR=62						
H11N1	**WAKE ISLAND Hy**	58.67	263	T	T	00 27 42.7	
	baz=42,slow=75,SNR=44						
H11S1	**WAKE ISLAND Hy**	59.68	262	T	T	00 28 57.7	
	baz=46,slow=75,SNR=13						
H11S2	**WAKE ISLAND Hy**	59.69	262	T	T	00 28 52.4	
	baz=46,slow=75,SNR=12						
H11S3	**WAKE ISLAND Hy**	59.70	262	T	T	00 28 55.3	
	baz=46,slow=75,SNR=9.0						

IDC 23 23:16:49.2±3.5**, 23°.39N×144°.32E, h0^{km}, mb3.8**/5**, mbtmp3.9**/6**, ML4.2**/1**, Error ellipse: s-maj=148.8km s-min=53.8km az=67.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	4.17	333	Pn	Pn	23 17 55.3	+1.2
	13nm,0.3s,baz=94,slow=23,SNR=5.2						
JCJ				Sn	Sn	23 18 42.3	-1.3
	57nm,0.3s,baz=337,slow=13,SNR=13						
	31nm,0.3s						
KSRS	**Korea Array**	19.87	319	P	Pn	23 21 29.5	+6.1
	3.2nm,0.5s,baz=148,slow=9.1,SNR=11						
SONM	**Songino Array**	38.74	319	P	P	23 24 15.9	+0.6
	0.4nm,0.4s,baz=120,slow=6.7,SNR=4.5						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	54.35	312	P	P	23 26 17.1	-0.5
	0.4nm,0.5s,baz=89,slow=8.5,SNR=12						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	57.03	316	P	P	23 26 36.4	-0.3
	0.4nm,0.4s,baz=92,slow=7.9,SNR=6.9						
	0.4nm,0.4s						
BVAR	**Borovoye Array**	62.09	319	P	P	23 27 11.9	+0.3
	0.8nm,0.4s,baz=94,slow=7.0,SNR=9.6						
	0.8nm,0.4s						
FINES	**FINESS Array B**	82.11	335	P	P	23 29 11.1	-0.4
	1.2nm,0.9s,baz=68,slow=5.9,SNR=3.6						
	1.2nm,0.9s						

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*CATAC **23** 23:25:42.3±0.4, 15°N±3°×9°1W±°, h2^{km}±2^{km}, M3.6/13, MLv3.6/13, Error ellipse: s-maj=6.8km s-min=3.1km az=23.3, confirmed*

*GCG **23** 23:25:43.1±1.0, 15°.29N×90°.68W, h13^{km}±10^{km}, MD4.3, ML3.2, MW3.0*

ISC 23 23:25:42.6±1.0**, 15°.29N**±0°.04×**90°.66W**±0°.03**, h8^{km}, n33, σ1^{s}32**/34**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AVCB	**Coban**	0.31	55	*e*P	**Pg**	23 25 47.3	-1.4
APG	**El Apazote**	0.34	146	*e*P	**Pg**	23 25 48.9	-0.5
QUIS	**Sacapulas**	0.41	270	*e*P	**Pg**	23 25 49.7	-1.0
QUIS				*e*S	**Sg**	23 25 55.5	-0.6
QUIS				IAML		23 25 57.1	
	comp=E,16μm,0.2s						
HUEH	**Huehuetenango**	0.81	272	P	**Pg**	23 25 57.7	-0.5
HUEH	**Huehuetenango**	0.81	272	S	**Sg**	23 26 08.5	-0.2
SOKI	**Kika Raxquin**	0.85	237	*i* P	**Pg**	23 25 58.7	-0.4
ESSG	**Sabana Grande**	0.92	190	*e*P	**Pg**	23 26 00.3	+0.1
ESSG				IAML		23 26 15.1	
	comp=N,359nm,0.2s						
QUEO	**Labor Ovalle**	0.92	243	*i* P	**Pb**	23 26 00.9	-0.1
FG16	**Alotenango, Sa**	1.02	172	*e*P	**Pg**	23 25 59.2	-3.1
FG16				*i* S	**Sg**	23 26 11.0	-4.6
FG16				IAML		23 26 14.4	
	comp=N,4μm,0.2s						
STG8	**El Palmar, Qui**	1.07	219	*e*P	**Pg**	23 26 01.8	-1.3
STG8				IAML		23 26 20.9	
	comp=E,398nm,0.2s						
STG2	**El Palmar, Qui**	1.09	219	*e*P	**Pg**	23 26 02.7	-0.8
STG5	**El Palmar, Qui**	1.10	217	*i* P	**Pg**	23 26 02.6	-1.2
RTAL	**Retalhuleu**	1.25	233	P	**Pb**	23 26 06.8	+0.3
RTAL	**Retalhuleu**	1.25	233	S	**Sg**	23 26 23.3	+0.4
ZAFR2	**Estanzuela, Za**	1.45	119	*i* P	Pn	23 26 02.7	-6.5
ESQI	**Esquipulas**	1.47	119	P	**Pn**	23 26 09.3	-0.2
ESQI	**Esquipulas**	1.47	119	S	**Sb**	23 26 30.3	+1.2
MTO3	**Montecristo**	1.54	125	*i* P	**Pn**	23 26 10.5	0.0
MTO3	**Montecristo**	1.54	125	P	**Pn**	23 26 10.6	0.0
MTO3	**Montecristo**	1.54	125	S	**Sb**	23 26 32.3	+1.0
LOAL	**Lomas de Alarc**	1.54	146	P	**Pn**	23 26 11.0	+0.6
LOAL	**Lomas de Alarc**	1.54	146	S	**Sg**	23 26 33.6	+1.3
FAME	**Alcaldia de Sa**	1.57	156	P	**Pn**	23 26 11.6	+0.8
FAME	**Alcaldia de Sa**	1.57	156	S	**Sg**	23 26 34.4	+1.3
NUBE	**Las Nubes**	1.62	148	*e*P	**Pn**	23 26 11.9	+0.3
NUBE	**Las Nubes**	1.62	148	P	**Pn**	23 26 12.3	+0.7
NUBE	**Las Nubes**	1.62	148	S	**Sg**	23 26 35.7	+0.8
UNIC	**Universidad Ca**	1.69	140	P	**Pn**	23 26 13.6	+1.1
CEVE	**Cerro Verde**	1.77	145	P	**Pn**	23 26 14.9	+1.2
SARH	**Santa Rosa de**	1.91	105	*e*P	**Pn**	23 26 15.3	-0.2
SARH	**Santa Rosa de**	1.91	105	P	**Pn**	23 26 16.3	+0.8
SARH	**Santa Rosa de**	1.91	105	S	**Sb**	23 26 42.6	+0.8
PAVA	**Las Pavas**	2.29	133	P	**Pn**	23 26 22.5	+1.6

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*IDC **23** 23:35:55.7±3.7, 31°.21S×179°.95E, h393^{km}±33^{km}, mb3.5/4, mbtmp4.4/5, Error ellipse: s-maj=31.2km s-min=20.0km az=45.0*

*WEL **23** 23:36:02.0±0.8, 32°S±11°×17°9W±2°8, h299^{km}±13^{km}, M4.6/16, mB5.1/15, ML4.7/14, MLv5.2/16, Mw(mB)4.4/15, Error ellipse: s-maj=38.6km s-min=4.7km az=110.0, confirmed*

ISC 23 23:35:55.0±0.7**, 31°.45S**±0°.07×**179°.6W**±0°.1**, h400^{km}, n51, σ2^{s}38**/71**, mb3.8**/4**, 3C-1D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	2.63	35	P	**Pn**	23 36 54.6	-0.8
GLKZ				S	**S**	23 37 39.2	-4.9
MXZ	**Matakaoa Point**	6.33	195	P	**Pn**	23 37 33.0	+1.9
WMGZ	**Waiomatatini S**	6.56	194	P	**P**	23 37 36.0	+1.8
WMGZ				S	**S**	23 38 52.4	-1.7
HAZ	**Te Kaha**	6.64	198	P	**P**	23 37 36.5	+1.4
HAZ				S	**S**	23 38 53.4	-2.4
PKGZ	**Pakihiroa**	6.67	196	P	**P**	23 37 36.4	+0.9
PKGZ				S	**S**	23 38 52.9	-3.6
PUZ	**Puketiti**	6.83	194	P	**P**	23 37 38.2	+1.0
PUZ				S	**S**	23 38 56.3	-3.5
RUGZ	**Raukumara Rang**	6.87	198	P	**Pn**	23 37 37.8	+0.6
RUGZ				S	**S**	23 38 56.3	-4.4
TWGZ	**Tauwhareparae**	6.99	196	P	**P**	23 37 41.1	+2.0
TWGZ				S	**S**	23 39 00.8	-2.2
OPRZ	**Ohinepanea**	7.11	205	P	**P**	23 37 44.0	+3.7
MARZ	**Manawahe**	7.20	204	P	**P**	23 37 43.8	+2.5
CNGZ	**Carnagh Statio**	7.24	194	P	**P**	23 37 43.1	+1.4
CNGZ				S	S	23 38 59.2	-8.8
MWZ	**Matawai**	7.25	198	P	**Pn**	23 37 42.5	+1.1
MWZ				S	**S**	23 39 06.4	-2.1
TKGZ	**Te Karaka**	7.28	196	P	**Pn**	23 37 42.6	+1.0
TKGZ				S	**S**	23 39 04.2	-4.5
EDRZ	**Edgecumbe**	7.28	203	P	**P**	23 37 44.8	+2.5
URZ	**Urewera**	7.30	201	P	**P**	23 37 43.7	+1.3
	61nm,0.3s,baz=271,slow=2.4,SNR=115						
URZ				S	**S**	23 39 05.1	-4.2
	86nm,0.5s,baz=115,slow=20,SNR=14						
URZ	**Urewera**	7.30	201	P	**Pn**	23 37 42.2	+0.3
URZ				S	**S**	23 39 06.7	-2.6
RAGZ	**Rawiri**	7.44	198	P	**P**	23 37 45.9	+1.9
RAGZ				S	**S**	23 39 10.3	-2.0
TOZ	**Tahuroa Road**	7.44	211	P	**P**	23 37 47.6	+3.6
TARZ	**Mount Tarawera**	7.48	204	P	**P**	23 37 47.4	+2.9
RIGZ	**Rimuhau**	7.55	196	P	**Pn**	23 37 45.3	+0.6
RIGZ				S	**S**	23 39 11.5	-3.0
MUGZ	**Murupara**	7.61	202	P	**P**	23 37 47.6	+1.8
MUGZ				S	**S**	23 39 11.2	-4.6
RTZ	**Ruatahuna**	7.67	200	P	**Pn**	23 37 47.2	+1.0
RTZ				S	**S**	23 39 14.4	-2.8
KNZ	**Kokohu**	7.87	196	P	**P**	23 37 50.0	+1.3
KNZ				S	**S**	23 39 17.4	-3.8
TLZ	**Tolley Road**	7.93	209	P	**P**	23 37 52.9	+3.4
BKZ	**Black Stump Fm**	8.32	201	P	**Pn**	23 37 54.1	+0.5
BKZ				S	**S**	23 39 26.1	-4.8
HIZ	**Hauiti**	8.37	211	P	**P**	23 37 58.2	+3.9
NGZ	**Ngauruhoe**	8.64	205	P	**P**	23 37 58.2	+0.8
VRZ	**Vera Road**	8.92	209	P	**P**	23 38 03.2	+2.7
PXZ	**Pawanui**	9.03	197	P	**Pn**	23 38 02.2	+0.7
TSZ	**Takapari Road**	9.31	201	P	**P**	23 38 04.3	-0.5
STKA	**Stephens Creek**	32.89	259	P	**P**	23 41 53.4	-0.3
	1.7nm,0.3s,baz=96,slow=9.9,SNR=8.4						
	1.7nm,0.3s						
ASAR	**Alice Springs**	41.67	269	P	**P**	23 43 04.4	-2.2
	0.9nm,0.5s,baz=105,slow=7.4,SNR=13						
ASAR				PcP	**PcP**	23 44 54.3	-0.4
	0.5nm,0.6s,baz=109,slow=3.6,SNR=5.8						
	0.9nm,0.5s						
WRA	**Warramunga Arr**	42.76	274	P	**P**	23 43 13.0	-2.3
	1.8nm,0.4s,baz=111,slow=8.3,SNR=37						
WRA				PcP	**PcP**	23 44 58.1	-0.3
	0.5nm,0.7s,baz=118,slow=3.4,SNR=2.6						
	1.8nm,0.4s						
TROLL	**Troll, Antarti**	76.82	181	P	**P**	23 47 06.4	+2.8
SNAA	**Sanae**	77.14	179	⇑P	**P**	23 47 08.0	+2.7
SNAA	**Sanae**	77.14	179	P	**P**	23 47 07.9	+2.6
	1.0nm,0.3s,baz=181,slow=20,SNR=31						
	1.0nm,0.3s						
VNA3	**Neumayer Olymp**	77.35	177	⇓P	**P**	23 47 09.0	+2.7
VNA2	**Neumayer--Watz**	77.77	177	⇑P	**P**	23 47 11.8	+3.1
	baz=172,slow=5.5						
VNA1	**Neumayer--Stat**	78.00	177	⇑P	**P**	23 47 12.2	+2.3
MKAR	**Makanchi Array**	117.37	310	PKP	**PKPdf**	23 53 53.4	0.0
	0.2nm,0.6s,baz=213,slow=2.8,SNR=4.5						
KURBB	**Kurchatov Arra**	120.79	313	PKP	**PKiKP**	23 54 00.2	+0.3
	0.6nm,0.4s,baz=116,slow=1.7,SNR=5.5						
BVAR	**Borovoye Array**	126.17	315	PKP	**PKPdf**	23 54 10.6	+0.5
	0.8nm,0.4s,baz=133,slow=2.7,SNR=6.6						
KBZ	**Khabaz**	144.51	302	PKP	**PKPab**	23 54 44.1	-0.1
	1.9nm,0.5s,baz=212,slow=1.6,SNR=8.6						
FINES	**FINESS Array B**	145.62	338	PKPbc	**PKPbc**	23 54 46.8	0.0
	5.2nm,0.5s,baz=44,slow=4.1,SNR=138						
NB2	**NORSAR Subarra**	149.55	350	PKP	**PKPbc**	23 54 57.6	+0.4
	comp=Z,0.5nm,0.6s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	149.55	350	PKPbc	**PKPbc**	23 54 57.5	+0.4
	comp=Z,0.7nm,0.6s,baz=17,slow=4.2,SNR=6.2						
HFS	**Hagfors**	149.97	347	PKPbc	**PKPbc**	23 54 58.3	+0.2
	comp=Z,1.0nm,0.5s,baz=73,slow=2.0,SNR=16						
HFS				PKPab	**PKPab**	23 55 04.9	-0.6
	comp=Z,0.9nm,0.6s,baz=84,slow=4.6,SNR=7.7						
MMAI	**Mount Meron Ar**	150.40	282	PKPbc	**PKiKP**	23 55 01.4	+0.7
	comp=Z,4.8nm,0.3s,baz=90,slow=6.7,SNR=43						
AKASG	**Malin Array Be**	151.25	320	PKPbc	**PKPbc**	23 55 01.8	+0.4
	comp=Z,0.7nm,0.5s,baz=65,slow=2.1,SNR=4.7						
BRTR	**Keskin Array B**	151.84	296	PKPbc	**PKPbc**	23 55 03.2	-0.1
	comp=Z,2.0nm,0.5s,baz=141,slow=3.8,SNR=23						
TORD	**Torodi Ar. Bea**	161.75	184	PKPab	**PKPab**	23 55 58.9	+1.8
	comp=Z,0.6nm,0.4s,baz=142,slow=2.6,SNR=8.0						

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*IDC **23** 23:38:25.7±0.7, 50°.39N×130°.05W, h0^{km}, mb4.1/16, mbtmp4.0/24, ML3.8/9, MS4.3/72, Error ellipse: s-maj=14.4km s-min=9.2km az=48.0*

*NEIC **23** 23:38:25.1, 50°.39N×130°.20W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.65; $M_{\theta\theta}$-2.55; $M_{\phi\phi}$2.39; $M_{r\theta}$0.61; $M_{\theta\phi}$0.75; $M_{\phi r}$-0.63; Fault plane solution: $M_0$2.80000×10^{16} NP1:ϕ_s233.00000°, δ71.00000°, λ-6.00000°. NP2:ϕ_s325.00000°, δ84.00000°, λ-161.00000°. Principal axes: T 2.8649, Plg10.0000°, Azm97.0000°; N -0.2499, Plg70.0000°, Azm340.0000°; P -2.6150, Plg18.0000°, Azm190.0000°;*

*GCMT **23** 23:38:28.0±0.2, 50°.40N±0°.01×130°.22W±0°.02, h12^{km}, MW5.0/122, Moment Tensor Solution. s29,c32; s122,c189; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.37±.12; $M_{\theta\theta}$-3.69±.11; $M_{\phi\phi}$4.06±.10; $M_{r\theta}$0.61±.35; $M_{\theta\phi}$1.42±.10; $M_{\phi r}$-0.62±.30; Best double couple: $M_0$4.22200×10^{16} NP1:ϕ_s235.00000°, δ78.00000°, λ-3.00000°. NP2:ϕ_s325.00000°, δ87.00000°, λ-168.00000°. Principal axes: T 4.3660, Plg6.0000°, Azm100.0000°; N -0.2860, Plg77.0000°, Azm341.0000°; P -4.0790, Plg11.0000°, Azm191.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **23** 23:38:29.0±1.5, 50°.70N±0°.05×129°.77W±0°.07, h10^{km}±1^{km}, mb4.7/415, Mwr4.9(OTT) Error ellipse: s-maj=10.0km s-min=6.8km az=210.0*

ISC 23 23:38:29.0±0.4**, 50°.70N**±0°.04×**129°.69W**±0°.04**, h10^{km}, n874, σ0^{s}88**/809**, mb4.8**/95**, MS4.3**/68**, 1C-1D, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	0.99	93		**Pg**	23 38 47.7	-0.3
BBB	**Bella Bella**	1.78	33	Pn	**Pb**	23 39 00.8	-0.8
	35nm,0.3s,baz=207,slow=6.5,SNR=570						
BBB				Sn	**Sg**	23 39 25.1	-1.1
	136nm,0.3s,baz=222,slow=9.8,SNR=6.8						
BBB				LR	LR	23 39 55.3	
	comp=Z,4μm,21.0s,baz=222,slow=41						
	200nm,0.6s						
BBB	**Bella Bella**	1.78	33	Pn	**Pn**	23 38 59.5	-0.3
BBB					**Sb**	23 39 23.3	-0.7
HG4B	**Hotspring**	1.85	330	Pn	**Pn**	23 38 57.0	-3.7
MOBC	**Moresby Island**	2.83	331	Pn	**Pn**	23 39 12.3	-1.8
CBB	**Campbell River**	2.85	102	Pn	**Pn**	23 39 13.6	-0.9
DIB	**Dawson Inlet,**	3.04	326	Pn	**Pn**	23 39 13.5	-3.5
OZB	**Mount Ozzard**	3.23	121	Pn	**Pn**	23 39 17.2	-2.4
RUBB	**Prince Rupert**	3.65	355	Pn	**Pn**	23 39 24.8	-0.6
CLRS	**Cowichan Lake**	4.06	115	Pn	**Pn**	23 39 30.3	-0.8
PGC	**Sidney**	4.54	115	Pn	**Pn**	23 39 37.2	-0.5
V35K	**Ketchikan**	4.78	347	Pn	**Pn**	23 39 39.5	-1.5
V35K	**Ketchikan**	4.78	347	P	**Pn**	23 39 39.6	-1.3
	baz=166						
A04D	**Lummi Island**	4.94	111	Pn	**Pn**	23 39 42.9	-0.4
LLLB	**Lillooet**	4.97	88	Pn	**Pn**	23 39 43.3	-0.3
NLWA	**Neilton Lookou**	5.06	129	Pn	**Pn**	23 39 44.4	-0.5
CRAG	**Craig**	5.20	338	Pn	**Pn**	23 39 44.8	-2.0
CRAG	**Craig**	5.20	338	P	**Pn**	23 39 45.5	-1.3
	baz=156						
U35K	**Hyder**	5.23	358	P	**Pn**	23 39 45.3	-1.7
	baz=178						
WISH	**Wishkah**	5.30	130	Pn	**Pn**	23 39 47.9	-0.2
GNW	**Green Mountain**	5.49	122	Pn	**Pn**	23 39 50.0	-0.7
U33K	**Whale Pass**	5.80	341	P	**Pn**	23 39 53.4	-1.5
	baz=158						
WRAK	**Wrangell Islan**	5.94	346	P	**Pn**	23 39 55.2	-1.7
	baz=164						
D05A	**Enumclaw**	6.17	122	Pn	**Pn**	23 40 00.4	+0.3
T35M	**Bob Quinn**	6.30	357	Pn	**Pn**	23 40 02.3	+0.4
T35M	**Bob Quinn**	6.30	357	P	**Pn**	23 40 00.8	-1.0
	baz=177						
LON	**Longmire**	6.54	124	Pn	**Pn**	23 40 05.2	-0.1
LTY	**Liberty**	6.86	117	Pn	**Pn**	23 40 10.2	+0.5
G03D	**McMinnville, O**	6.98	139		**Pn**	23 40 12.2	+1.0
B08A	**Colville Reser**	7.13	105	Pn	**Pn**	23 40 13.8	+0.5
SIT	**Sitka**	7.18	335	Pn	**Pn**	23 40 13.0	-0.9
SIT	**Sitka**	7.18	335	P	**Pn**	23 40 11.6	-2.4
	baz=150						
S34M	**Telegraph Cree**	7.27	354	Pn	**Pn**	23 40 15.5	+0.3
S34M	**Telegraph Cree**	7.27	354	P	**Pn**	23 40 14.5	-0.7
	baz=173						
G04A	**Mulino**	7.32	136	Pn	**Pn**	23 40 16.4	+0.5
S32K	**Killisnoo**	7.36	339	Pn	**Pn**	23 40 16.3	0.0
S32K	**Killisnoo**	7.36	339	P	**Pn**	23 40 15.8	-0.5
	baz=155						
EPH	**Ephrata**	7.43	113	Pn	**Pn**	23 40 16.8	-0.6
MXC	**Moxie City**	7.46	120	Pn	**Pn**	23 40 18.1	+0.3
HOOD	**Mount Hood Mea**	7.61	132		**Pn**	23 40 20.4	+0.3
E07A	**Sunnyside**	7.72	119		**Pn**	23 40 21.5	+0.1
H04D	**Lebanon**	7.76	140		**Pn**	23 40 22.7	+0.8
WAH2	**Wahluke Slope**	7.77	117		**Pn**	23 40 22.4	+0.4
G05A	**Wamic**	7.83	131		**Pn**	23 40 23.9	+1.0
H04A	**Detroit Lake**	7.86	137	Pn	**Pn**	23 40 24.1	+0.8
BUCK	**Buck Mountain**	7.93	143	Pn	**Pn**	23 40 25.1	+0.7
D08A	**Wollman Farm,**	7.98	113	Pn	**Pn**	23 40 24.2	-0.7
HAWA	**Hanford**	8.00	119		**Pn**	23 40 25.5	+0.4
C09A	**Chrisman Ranch**	8.01	107		**Pn**	23 40 25.3	0.0
R32K	**Eaglecrest**	8.09	342	Pn	**Pn**	23 40 25.6	-0.8
R32K	**Eaglecrest**	8.09	342	P	**Pn**	23 40 24.5	-1.9
	baz=158						
G06A	**Carlson Farm,**	8.17	129	Pn	**Pn**	23 40 27.5	-0.1
S31K	**Pelican**	8.21	335	P	**Pn**	23 40 26.9	-1.1
	baz=150						
Q32M	**Nakina River**	8.41	351	P	**Pn**	23 40 28.8	-2.2
	baz=169						
R31K	**City Hall, Gus**	8.49	338	P	**Pn**	23 40 31.5	-0.2
	baz=153						
I04A	**Tendick Farm,**	8.50	142		**Pn**	23 40 33.4	+1.3
I05D	**Terrebonne, OR**	8.51	135	Pn	**Pn**	23 40 33.2	+1.0
WIFE	**Three Sisters-**	8.52	138		**Pn**	23 40 33.4	+0.8
NEW	**Newport**	8.54	102	Pn	**Pn**	23 40 33.2	+0.6
	1.1nm,0.3s,baz=276,slow=8.4,SNR=6.8						
NEW				Lg	Lg	23 43 00.7	
	0.1nm,0.3s,baz=86,slow=19,SNR=3.9						
NEW				LR	LR	23 43 53.8	
	comp=Z,5μm,18.9s,baz=283,slow=38						
	9.4nm,0.7s						
NEW	**Newport**	8.54	102	Pn	**Pn**	23 40 33.0	+0.4
TOAD	**Toad River Com**	8.56	16	P	**Pn**	23 40 31.7	-1.1
	baz=200,SNR=8.2						
E09A	**Wood Farm, Sta**	8.72	114		**Pn**	23 40 35.2	+0.2
R33M	**Jennings River**	8.74	356	Pn	**Pn**	23 40 37.8	+2.4
R33M	**Jennings River**	8.74	356	P	**Pn**	23 40 34.7	-0.7
	baz=175						
LIRD	**Liard River Hi**	8.96	12	P	**Pn**	23 40 37.7	-0.6
	baz=195						
G08A	**Pilot Rock**	9.00	123		**Pn**	23 40 38.9	-0.1
LNOR	**Lincton Mounta**	9.01	118		**Pn**	23 40 39.0	0.0
K02D	**Willamette Mer**	9.01	150		**Pn**	23 40 39.5	+0.4
J04A	**Umpqua Nationa**	9.08	142		**Pn**	23 40 40.3	+0.1
PINE	**Pine Mountain**	9.11	136	Pn	**Pn**	23 40 41.7	+1.1
BBOR	**Butler Butte**	9.17	146		**Pn**	23 40 41.5	0.0
P32M	**Atlin**	9.20	347	P	**Pn**	23 40 40.8	-0.8
	baz=164						
SKAG	**Skagway**	9.35	342	P	**Pn**	23 40 43.0	-0.6
	baz=158						
J05D	**Fort Rock, OR**	9.40	139		**Pn**	23 40 45.7	+1.2
WTLY	**Watson Lake, Y**	9.45	3	Pn	**Pn**	23 40 47.2	+2.2
WTLY	**Watson Lake, Y**	9.45	3	P	**Pn**	23 40 44.8	-0.2
	baz=184						
F10A	**Beach Ranch, E**	9.55	115		**Pn**	23 40 46.4	-0.1
L02F	**Cave Junction**	9.56	152		**Pn**	23 40 45.9	-0.7
PLBC	**Pleasant Camp**	9.57	339	P	**Pn**	23 40 46.3	-0.3
	baz=154						
P33M	**Teslin, Yukon**	9.69	351	Pn	**Pn**	23 40 47.9	-0.6
P33M	**Teslin, Yukon**	9.69	351	P	**Pn**	23 40 47.8	-0.6
	baz=168						
KSXB	**Camp Six Broad**	9.74	153		**Pn**	23 40 49.1	-0.1
KOTAN	**Kotaneelee Air**	9.97	16	P	**Pn**	23 40 51.3	-0.9
	baz=201						
K05A	**Summer Lake**	10.00	140		**Pn**	23 40 52.0	-0.7
P29M	**Windy Craggy**	10.05	336	P	**Pn**	23 40 52.4	-0.9
	baz=150						
BMO	**Blue Mountains**	10.18	120		**Pn**	23 40 54.3	-0.8
YBH	**Yreka Blue Hor**	10.19	149	Pn	**Pn**	23 40 54.2	-1.0
	baz=352,slow=14						
YBH	**Yreka Blue Hor**	10.19	149		**Pn**	23 40 55.3	+0.1
P30M	**Million Dollar**	10.30	339	P	**Pn**	23 40 56.0	-0.6
	baz=153						
EDM	**Edmonton**	10.39	70	Pn	**Pn**	23 40 58.5	+0.6
WHY	**Whitehorse**	10.40	346	Pn	**Pn**	23 40 58.6	+0.6
WHY	**Whitehorse**	10.40	346	P	**Pn**	23 40 57.4	-0.7
	baz=162						
M02C	**Callahan**	10.45	150		**Pn**	23 40 59.5	+0.7
JTMT	**Jette**	10.50	100		**Pn**	23 41 00.4	+0.8
J08A	**Circle Bar Ran**	10.60	130		**Pn**	23 41 01.0	+0.1
N32M	**Quiet Lake**	10.64	351		**Pn**	23 41 01.3	-0.1
N32M	**Quiet Lake**	10.64	351	P	**Pn**	23 41 00.6	-0.8
	baz=168						
KHMM	**Horse Mountain**	10.67	155		**Pn**	23 41 02.5	+0.6
O30N	**Mendenhall**	10.71	343	P	**Pn**	23 41 01.6	-0.7
	baz=158						
PLID	**Pearl Lake**	10.76	116	Pn	**Pn**	23 41 03.4	+0.1
M03C	**McCloud**	10.79	148		**Pn**	23 41 04.2	+0.7
O29M	**Mount Kennedy**	10.85	336	P	**Pn**	23 41 04.0	-0.3
	baz=149						
N02D	**Trinity Center**	10.87	151		**Pn**	23 41 04.8	+0.1
KMPM	**Mount Pierce**	11.00	157	Pn	**Pn**	23 41 07.2	+0.9
KHBM	**Hayfork Bally**	11.01	153		**Pn**	23 41 06.6	0.0
HYT	**Haines Junctio**	11.05	340	P	**Pn**	23 41 06.7	-0.3
	baz=153						
MSO	**Missoula**	11.09	104	Pn	**Pn**	23 41 07.6	0.0
PINM	**Pinnacle**	11.15	332	P	**Pn**	23 41 06.9	-1.5
	baz=143						
WVOR	**Wild Horse Val**	11.22	133		**Pn**	23 41 09.2	-0.2
KMRM	**Mail Ridge**	11.29	156	Pn	**Pn**	23 41 11.0	+0.8
N31M	**Braeburn, Yuko**	11.32	345	P	**Pn**	23 41 09.1	-1.6
	baz=160						
YUK6	**Outpost Mounta**	11.35	338	P	**Pn**	23 41 09.5	-1.7
	baz=151						
HATC	**Hat Creek Radi**	11.43	147	Pn	**Pn**	23 41 13.2	+0.9
N30M	**Aishikik Lake**	11.54	342	P	**Pn**	23 41 11.7	-1.9
	baz=156						
BPMT	**Black Pine Rid**	11.57	105		**Pn**	23 41 15.1	+0.7
OVMT	**Ovando**	11.57	102		**Pn**	23 41 14.8	+0.6
O02D	**Mt. Diablo Mer**	11.58	153		**Pn**	23 41 15.3	+1.0
O28M	**Mount Upton**	11.68	334	P	**Pn**	23 41 14.2	-1.6
	baz=145						
MESA	**MESA**	11.75	329	P	**Pn**	23 41 15.3	-1.4
	baz=139						
YUK4	**Talbot Arm**	11.77	338	P	**Pn**	23 41 16.3	-0.6
	baz=152						
O03E	**Paynes Creek**	11.78	149	Pn	**Pn**	23 41 17.4	+0.4
M31M	**Drury Creek, Y**	11.81	349	Pn	**Pn**	23 41 18.3	+1.0
M31M	**Drury Creek, Y**	11.81	349	P	**Pn**	23 41 16.1	-1.3
	baz=165						
KCPM	**Cahto Peak**	11.82	156	Pn	**Pn**	23 41 18.5	+0.8
MFID	**Camas Ranch**	11.92	122		**Pn**	23 41 19.1	0.0
LOGN	**Logan Glacier**	11.96	332	Pn	**Pn**	23 41 19.3	-0.2
YUK8	**Steele Glacier**	11.99	336	P	**Pn**	23 41 19.7	-0.3
	baz=148						
LYMT	**Lyon Mountain**	12.05	101		**Pn**	23 41 20.6	-0.3
DCMP	**DeCamp, Califo**	12.09	156		**Pn**	23 41 20.6	-0.6
GRNC	**Granite Creek**	12.11	331	Pn	**Pn**	23 41 21.3	-0.3
BGLC	**Bering Glacier**	12.17	326	P	**Pn**	23 41 21.1	-1.1
	baz=135						
CTG	**Chitna Glacier**	12.17	332	P	**Pn**	23 41 21.7	-0.7
	baz=143						
BARN	**Barnard Glacie**	12.34	332	Pn	**Pn**	23 41 24.8	+0.1
HRY	**Holter Researc**	12.45	102		**Pn**	23 41 26.9	+0.7
KAIM	**Kayak Island**	12.45	324	P	**Pn**	23 41 25.7	-0.3
	baz=132						
LRM	**Limekiln Ridge**	12.47	106		**Pn**	23 41 26.7	0.0
M30M	**Minto, Yukon**	12.52	345	P	**Pn**	23 41 26.5	-0.4
	baz=159						
ORV	**Oroville**	12.55	150		**Pn**	23 41 27.3	-0.1
CRQE	**Cirque**	12.56	328	P	**Pn**	23 41 27.2	-0.4
	baz=137						
CRQM	**Cirque**	12.58	328		**Pn**	23 41 29.1	+1.2
YUK3	**Moose Creek**	12.59	336	P	**Pn**	23 41 27.6	-0.5
	baz=147						
HLID	**Hailey**	12.60	119	Pn	**Pn**	23 41 29.3	+1.0
HOPS	**Hopland Field**	12.61	156	Pn	**Pn**	23 41 28.1	-0.1
DLMT	**Dillon**	12.62	108		**Pn**	23 41 28.6	0.0
BEKR	**Beckworth**	12.66	145	Pn	**Pn**	23 41 29.3	+0.1
M29M	**Somme Creek**	12.71	341	Pn	**Pn**	23 41 30.9	+1.3
M29M	**Somme Creek**	12.71	341	P	**Pn**	23 41 29.3	-0.3
	baz=154						
BCYI	**Bear Canyon**	12.72	114		**Pn**	23 41 29.9	-0.1
MCMT	**McKenzie Canyo**	12.75	111		**Pn**	23 41 30.2	-0.2
SUTB	**Sutter Butte**	12.75	151		**Pn**	23 41 29.6	-0.6
GDXM	**Geysers**	12.85	155		**Pn**	23 41 31.7	0.0
MNRC	**McLaughlin Min**	12.88	154		**Pn**	23 41 32.1	0.0
Q23K	**Middleton Isla**	12.91	319	P	**Pn**	23 41 31.6	-0.7
	baz=125						
WRGLY	**Wrigley**	13.00	13	Pn	**Pn**	23 41 34.4	+1.0
MCARA	**McCarthy VSAT**	13.01	330	P	**Pn**	23 41 32.8	-0.9
	baz=140						
BOZ	**Bozeman (W)**	13.08	106		**Pn**	23 41 34.8	-0.1
PAHR	**Pah Rah Range**	13.16	143		**Pn**	23 41 36.3	+0.3
BVCY	**Beaver Creek**	13.23	337	P	**Pn**	23 41 35.9	-0.8
	baz=148						
BMRM	**Bremner River**	13.23	327	Pn	**Pn**	23 41 37.2	+0.5
BMRM	**Bremner River**	13.23	327	P	**Pn**	23 41 36.1	-0.6
	baz=134						
L29M	**L29M**	13.25	343		**Pn**	23 41 37.3	+0.4
L29M	**L29M**	13.25	343	P	**Pn**	23 41 36.6	-0.4
	baz=156						
EGMT	**Eagleton**	13.26	94	Pn	**Pn**	23 41 37.7	+0.4
EYAK	**Cordova Ski Ar**	13.36	324	P	**Pn**	23 41 38.3	-0.1
	baz=130						
CVS	**Carmenet Viney**	13.38	155		**Pn**	23 41 38.3	-0.5
M27K	**Edge Creek, AK**	13.45	335		**Pn**	23 41 40.3	+0.6
M27K	**Edge Creek, AK**	13.45	335	P	**Pn**	23 41 38.7	-1.0
	baz=145						
QLMT	**Earthquake Lak**	13.60	109		**Pn**	23 41 41.8	-0.1
PNTR	**Pine Nut**	13.62	145		**Pn**	23 41 42.9	+0.6
P23K	**Montague Islan**	13.68	320	P	**Pn**	23 41 41.8	-0.9
	baz=125						
N25K	**Chitina, Valde**	13.68	329	P	**Pn**	23 41 42.0	-0.9
	baz=136						
YHL	**Hebgen Lake**	13.74	108		**Pn**	23 41 44.1	+0.2
YHB	**Horse Butte**	13.78	108		**Pn**	23 41 45.2	+0.7
M26K	**Nabesna, AK**	13.79	333	P	**Pn**	23 41 43.9	-0.5
	baz=142						
K29M	**Barlow Dome**	13.82	345		**Pn**	23 41 45.0	+0.2
K29M	**Barlow Dome**	13.82	345	P	**Pn**	23 41 44.6	-0.2
	baz=159						
YMR	**Madison River**	13.96	108		**Pn**	23 41 47.7	+0.7

YHH	Holmes Hill	13.97	108		Pn	23 41 47.1	-0.1
BCAR	Beaver Creek A	14.01	337	Pn	Pn	23 41 48.3	+1.0
L27K	Beaver Creek,	14.02	337		Pn	23 41 48.5	+1.0
L27K	Beaver Creek,	14.02	337	P	Pn	23 41 46.9	-0.5
	baz=147						
KLU	Klutina	14.05	326		Pn	23 41 48.6	+0.6
KLU	Klutina	14.05	326	P	Pn	23 41 47.5	-0.5
	baz=133						
GLI	Glacier Island	14.08	323	P	Pn	23 41 47.7	-0.6
	baz=129						
ELK	Elko	14.15	129	Pn	Pn	23 41 49.1	-0.4
	0.2nm,0.3s,baz=308,slow=19,SNR=8.2						
ELK				LR	LR	23 47 09.0	
	comp=Z,1µm,20.5s,baz=330,slow=37						
	0.7nm,0.5s						
ELK	Elko	14.15	129		Pn	23 41 49.4	-0.2
CMB	Columbia Colle	14.29	149	Pn	Pn	23 41 51.9	+0.6
H17A	Grant Village	14.35	109	P	Pn	23 41 54.4	+2.2
J30M	Hart River	14.35	348		Pn	23 41 52.4	+0.4
J30M	Hart River	14.35	348	P	Pn	23 41 51.7	-0.3
	baz=163						
DAWY	Dawson	14.36	343		Pn	23 41 53.1	+1.0
DAWY	Dawson	14.36	343	P	Pn	23 41 51.3	-0.8
	baz=154						
YNE	Yellowstone No	14.37	106		Pn	23 41 53.0	+0.4
L26K	Log Cabin Wild	14.39	334	Pn	Pn	23 41 53.9	+1.4
L26K	Log Cabin Wild	14.39	334	P	Pn	23 41 52.1	-0.4
	baz=143						
YKA	Yellowknife Ar	14.39	29	Pn	Pn	23 41 53.5	+1.0
	0.3nm,0.3s,baz=223,slow=12,SNR=28						
YKA				Sn	Sn	23 44 30.1	-1.8
	0.2nm,0.3s,baz=57,slow=33,SNR=4.3						
YKA				Lg	Lg	23 46 07.6	
	0.1nm,0.3s,baz=207,slow=30,SNR=1.5						
	2.0nm,0.7s						
YKA	Yellowknife Ar	14.39	29	Pn	Pn	23 41 52.7	+0.2
YMP	Mirror Lake Pl	14.42	107		Pn	23 41 54.4	+1.1
YKAW1	Yellowknife Wh	14.42	29	Pn	Pn	23 41 52.9	0.0
MENT	Mentasta	14.42	334	Pn	Pn	23 41 53.7	+0.7
RYN	Ryan	14.43	143		Pn	23 41 52.9	-0.5
YKAW3	Yellowknife Wh	14.44	29		Pn	23 41 53.0	-0.2
HARP	HAARP	14.44	330	P	Pn	23 41 52.8	-0.5
	baz=137						
FXWY	Fox Creek	14.50	112		Pn	23 41 55.3	+0.9
J29N	Klondike Camp	14.50	345		Pn	23 41 55.2	+1.1
J29N	Klondike Camp	14.50	345	P	Pn	23 41 53.5	-0.6
	baz=158						
MHC	Mount Hamilton	14.54	154		Pn	23 41 55.2	+0.4
PWL	Port Wells	14.55	321	P	Pn	23 41 53.7	-1.1
	baz=126						
M24K	Tolsona, Glenn	14.57	328	P	Pn	23 41 53.4	-1.5
	baz=134						
SEW	Seward	14.59	318	P	Pn	23 41 54.4	-0.9
	baz=122						
MOOW	Moose Ponds	14.61	111	Pn	Pn	23 41 56.7	+1.0
NVAR	Mina Array Bea	14.69	142	Pn	Pn	23 41 55.1	-1.7
	0.1nm,0.3s,baz=318,slow=11,SNR=14						
NVAR				LR	LR	23 47 09.8	
	comp=Z,646nm,19.4s,baz=331,slow=36						
	1.0nm,0.8s						
NVAR	Mina Array Bea	14.69	142	Pn	Pn	23 41 56.4	-0.5
HVU	Hansel Valley	14.69	121		Pn	23 41 56.5	-0.3
NV11	Mina Array Sit	14.74	142		Pn	23 41 57.2	-0.4
SNOW	Snow King Moun	14.77	112	Pn	Pn	23 41 59.5	+1.5
RLMT	Red Lodge	14.77	104		Pn	23 41 58.1	+0.2
LOHW	Long Hollow	14.77	111		Pn	23 41 58.4	+0.4
SCM	Sheep Creek Mo	14.78	326		Pn	23 41 57.4	-0.5
SCM	Sheep Creek Mo	14.78	326	P	Pn	23 41 57.4	-0.5
	baz=131						
K27K	Chicken	14.89	338	Pn	Pn	23 41 59.7	+0.3
KNK	Knik Glacier	14.93	323		P	23 42 04.7	-0.8
KNK	Knik Glacier	14.93	323	P	Pn	23 41 58.9	-1.0
	baz=128						
PAX	Paxson	14.96	331		Pn	23 42 01.4	+1.0
PAX	Paxson	14.96	331	P	Pn	23 41 59.2	-1.2
	baz=138						
I30M	Mount Dempster	14.97	349		Pn	23 42 01.6	+1.1
I30M	Mount Dempster	14.97	349	P	Pn	23 41 59.6	-0.9
	baz=164						
BRSE	Bradley Lake S	14.98	315	P	Pn	23 41 59.3	-1.2
	baz=118						
DOT	Dot Lake	15.08	335		Pn	23 42 01.8	-0.1
KDAK	Kodiak Island	15.09	307	LR	LR	23 46 20.1	
	comp=Z,1µm,21.7s,baz=122,slow=31						
KDAK	Kodiak Island	15.09	307	P	Pn	23 42 00.7	-1.4
	baz=108						
MDPB	Devils Postpil	15.10	146		Pn	23 42 01.9	-0.6
SML	Sawmill	15.13	324		Pn	23 42 02.8	+0.2
SML	Sawmill	15.13	324	P	Pn	23 42 02.3	-0.2
	baz=129						
SAO	San Andreas Ge	15.14	154	Pn	Pn	23 42 01.7	-1.0
BGU	Big Grassy Mou	15.15	124		Pn	23 42 02.9	-0.1
RC01	Rabbit Creek A	15.25	321	P	Pn	23 42 03.6	-0.4
	baz=124						
Q20K	Shuyak Island	15.28	310	P	Pn	23 42 04.2	-0.3
	baz=111						
OHAK	Old Harbor	15.30	304	P	Pn	23 42 04.4	-0.3
	baz=105						
PMR	Palmer	15.30	323		Pn	23 42 05.8	+1.1
PMR				IAmb	IAmb	23 42 11.2	
	comp=Z,53nm,1.8s						
PMR	Palmer	15.30	323	P	Pn	23 42 04.3	-0.4
	baz=127						
SCRK	Sand Creek	15.32	336		Pn	23 42 05.3	+0.1
SCRK	Sand Creek	15.32	336	P	Pn	23 42 05.3	+0.1
	baz=144,SNR=14						
GHO	Glory Hole Cre	15.33	324		Pn	23 42 05.5	+0.3
GHO				IAmb	IAmb	23 42 08.0	
	comp=Z,75nm,2.0s						
H31M	Peel River	15.34	353		Pn	23 42 05.5	+0.2
H31M	Peel River	15.34	353	P	Pn	23 42 04.3	-0.9
	baz=169						
HOM	Homer	15.35	314	P	Pn	23 42 05.5	+0.1
	baz=116						
I29M	Ogilvie Camp,	15.37	346		Pn	23 42 05.9	+0.3
I29M	Ogilvie Camp,	15.37	346	P	Pn	23 42 05.8	+0.2
	baz=159						
RIDG	Independent Ri	15.37	334		Pn	23 42 05.2	-0.5
RIDG	Independent Ri	15.37	334	P	Pn	23 42 05.4	-0.3
	baz=141						
WAT6	Susitna Watana	15.43	327	P	Pn	23 42 06.1	-0.5
	baz=132						
BBGB	Big Mountain B	15.43	153		Pn	23 42 06.5	-0.2
BBGB				IAmb	IAmb	23 42 13.2	
	comp=Z,45nm,1.0s						
HWUT	Hardware Ranch	15.47	119	P	Pn	23 42 08.4	+1.1
SII	Sitkinak Islan	15.62	302	P	Pn	23 42 08.5	-0.5
	baz=102						
DHY	Denali Highway	15.64	329		Pn	23 42 09.3	-0.1
DHY	Denali Highway	15.64	329	P	Pn	23 42 08.7	-0.7
	baz=134						
J26L	Joseph Creek	15.65	337		Pn	23 42 09.5	+0.1
J26L	Joseph Creek	15.65	337	P	Pn	23 42 08.2	-1.2
	baz=146,SNR=18						
CAPN	Captain Cook N	15.66	318	P	Pn	23 42 08.7	-0.8
	baz=120						
K24K	Donnelly Dome	15.68	333		Pn	23 42 11.2	+1.4
K24K	Donnelly Dome	15.68	333	P	Pn	23 42 09.7	-0.1
	baz=139						
I28M	Miner Creek	15.71	344		Pn	23 42 10.6	+0.4
I28M	Miner Creek	15.71	344	P	Pn	23 42 10.0	-0.2
	baz=155						
M22K	Willow	15.78	322		Pn	23 42 10.9	-0.1
M22K				IAmb	IAmb	23 42 17.3	
	comp=Z,60nm,1.4s						
M22K	Willow	15.78	322	P	Pn	23 42 10.8	-0.2
	baz=125						
DUG	Dugway, Tooele	15.79	125		Pn	23 42 11.6	+0.2
PMPB	Monarch Peak	15.83	153		Pn	23 42 10.9	-1.0
PMPB				IAmb	IAmb	23 42 17.5	
	comp=Z,79nm,1.2s						
SUA	Susitna One	15.86	321		Pn	23 42 11.9	-0.2
SUA				IAmb	IAmb	23 42 17.7	
	comp=Z,91nm,1.8s						
SUA	Susitna One	15.86	321	P	Pn	23 42 12.0	-0.2
	baz=123						
WAT1	Susitna Watana	15.87	327	P	Pn	23 42 12.0	-0.2
	baz=131						
BW06	Boulder Array	15.88	112		Pn	23 42 12.8	+0.1
BW06				IAmb	IAmb	23 42 16.8	
	comp=Z,68nm,1.2s						
PD31	Pinedale Array	15.88	112		Pn	23 42 13.5	+0.8
PD31				IAmb	IAmb	23 42 16.8	
	comp=Z,68nm,1.2s						
PDAR	Pinedale Array	15.88	112	Pn	Pn	23 42 13.3	+0.6
	comp=Z,0.4nm,0.3s,baz=311,slow=11,SNR=111						
PDAR				LR	LR	23 48 21.2	
	comp=Z,666nm,21.8s,baz=300,slow=37						
PDAR	Pinedale Array	15.88	112	P	Pn	23 42 14.5	+1.7
TCUT	Toone Canyon	15.89	120		Pn	23 42 12.9	+0.1
HULI	Fort Hunter Li	15.89	154		Pn	23 42 12.2	-0.4
TIN	Tinemaha, Big	15.92	145		Pn	23 42 13.9	+0.8
TIN				IAmb	IAmb	23 42 19.1	
	comp=Z,51nm,1.1s						
SPR3	Spring Creek 3	15.95	131		Pn	23 42 12.9	-0.7
O20K	Slope Mountain	15.98	315	P	Pn	23 42 13.1	-0.5
	baz=116						
LAO	LASA Array	15.98	95	Pn	Pn	23 42 14.6	+0.8
LAO				IAmb	IAmb	23 42 17.5	
	comp=Z,66nm,1.3s						
CTU	Camp Tracy	16.00	122	Pn	Pn	23 42 14.3	+0.2
Q19K	Cape Douglas,	16.00	310	P	Pn	23 42 13.1	-0.8
	baz=111						
GMN	Gold Mountain	16.07	142	Pn	Pn	23 42 15.0	-0.2
P19K	Oil Pt	16.08	313	Pn	Pn	23 42 14.5	-0.4
P19K				IAmb	IAmb	23 42 20.6	
	comp=Z,61nm,1.4s						
P19K	Oil Pt	16.08	313	P	Pn	23 42 14.9	0.0
	baz=114						
EPYK	Eagle Plains	16.12	350		Pn	23 42 14.3	-1.1
EPYK				IAmb	IAmb	23 42 21.9	
	comp=Z,116nm,1.8s						
EPYK	Eagle Plains	16.12	350	P	Pn	23 42 15.1	-0.3
	baz=164						
PKD	Bear Valley Ra	16.16	152		Pn	23 42 15.2	-0.9
I27K	Kandik River	16.16	342		Pn	23 42 15.6	-0.3
I27K	Kandik River	16.16	342	P	Pn	23 42 15.3	-0.7
	baz=152						
ILSW	Iliamna Southw	16.17	314		Pn	23 42 15.8	-0.4
H29M	Whitestone	16.18	347		Pn	23 42 16.9	+0.7
H29M	Whitestone	16.18	347	P	Pn	23 42 15.9	-0.3
	baz=160						
RED	Redoubt Volcan	16.20	316		Pn	23 42 15.8	-0.6
J25K	Salcha River,	16.20	335		Pn	23 42 16.0	-0.4
J25K	Salcha River,	16.20	335	P	Pn	23 42 16.0	-0.4
	baz=142						
CUT	Chulitna	16.22	324		Pn	23 42 15.2	-1.4
CUT				IAmb	IAmb	23 42 23.8	
	comp=Z,74nm,1.3s						
CUT	Chulitna	16.22	324	P	Pn	23 42 16.1	-0.5
	baz=127						
I26K	Coal Creek Min	16.23	340		Pn	23 42 16.2	-0.5
I26K	Coal Creek Min	16.23	340	P	Pn	23 42 16.4	-0.4
	baz=148						
SPU	Mount Spurr	16.25	319		Pn	23 42 16.4	-0.7
CHIR	Chirikof Islan	16.29	298	P	Pn	23 42 16.4	-1.1
	baz=98						
STLK	Strandline Lak	16.32	320		Pn	23 42 16.6	-1.4
N20K	Mount Spurr	16.32	319	P	Pn	23 42 17.7	-0.4
	baz=120						
SPCR	Spurr Chakacha	16.32	319	P	Pn	23 42 17.8	-0.3
	baz=120						
RND	Reindeer	16.36	328		Pn	23 42 18.2	-0.3
S11A	Rachel	16.41	137		Pn	23 42 19.1	-0.2
S11A				IAmb	IAmb	23 42 26.3	
	comp=Z,82nm,1.4s						
G31M	Satah River	16.43	354		Pn	23 42 19.2	-0.1
G31M				IAmb	IAmb	23 42 26.1	
	comp=Z,145nm,1.8s						
G31M	Satah River	16.43	354	P	Pn	23 42 18.4	-0.9
	baz=170						
SKT	Skwentna	16.46	322		Pn	23 42 19.7	0.0
SKT	Skwentna	16.46	322	P	Pn	23 42 19.8	+0.1
	baz=124						
L22K	Petersville	16.48	324		Pn	23 42 20.2	+0.2
L22K				IAmb	IAmb	23 42 25.8	
	comp=Z,79nm,1.7s						
HDA	Harding Lake	16.48	333	P	Pn	23 42 20.9	+0.9
HDA	Harding Lake	16.48	333	P	Pn	23 42 19.6	-0.4
	baz=138						
CWC	Cottonwood Cre	16.52	145		Pn	23 42 21.3	+0.4
PSUT	Pine Spring	16.54	131		Pn	23 42 21.2	+0.1
MPU	Maple Canyon	16.54	123	Pn	Pn	23 42 21.2	+0.1
Q18K	Katmai Hardscr	16.58	308	P	Pn	23 42 20.9	-0.5
	baz=108						
MCK	McKinley	16.61	329		Pn	23 42 22.1	+0.5
MCK	McKinley	16.61	329	P	Pn	23 42 21.4	-0.2
	baz=133						
BSUT	Blindstream Ca	16.64	120		Pn	23 42 22.7	+0.1
DGMT	Dagmar	16.66	88		Pn	23 42 22.1	-0.2
G30M	tAoh Zraii Nji	16.66	351		Pn	23 42 22.0	-0.2
G30M	tAoh Zraii Nji	16.66	351	P	Pn	23 42 22.2	-0.1
	baz=166						
H27K	Steamboat Moun	16.70	343		Pn	23 42 21.8	-1.1
H27K	Steamboat Moun	16.70	343	P	Pn	23 42 22.6	-0.3
	baz=153						
VES	Vestal, Richgr	16.71	149		Pn	23 42 22.9	-0.2
ILAR	Eielson Array	16.73	334	Pn	P	23 42 25.6	+0.1
	comp=Z,0.1nm,0.3s,baz=147,slow=11,SNR=35						
ILAR				PcP	PcP	23 47 17.3	+5.9
	comp=Z,1.9nm,1.0s,baz=222,slow=1.1,SNR=6.9						
ILAR				LR	LR	23 48 35.8	
	comp=Z,366nm,21.0s,baz=158,slow=36						
	comp=Z,6.4nm,1.0s						
ILAR	Eielson Array	16.73	334		Pn	23 42 24.1	+0.9
WCT	Wildcat Mounta	16.77	141		Pn	23 42 23.8	-0.1
WCT				IAmb	IAmb	23 42 28.1	
	comp=Z,103nm,1.6s						
G29M	Pine Creek	16.79	349		Pn	23 42 22.1	-1.8
G29M	Pine Creek	16.79	349	P	Pn	23 42 23.4	-0.5
	baz=162						
O19K	Port Alsworth	16.80	314	Pn	Pn	23 42 21.4	-2.5
WRH	Wood River Hil	16.86	332		Pn	23 42 24.6	-0.2
WRH				IAmb	IAmb	23 42 33.0	
	comp=Z,113nm,1.9s						
TRF	Thorofare Moun	16.88	327		Pn	23 42 23.6	-1.6
TRF				IAmb	IAmb	23 42 32.4	
	comp=Z,138nm,1.6s						
TRF	Thorofare Moun	16.88	327	P	Pn	23 42 24.5	-0.6
	baz=130						
CCB	Clear Creek Bu	16.91	333		Pn	23 42 24.5	-0.8
CCB				IAmb	IAmb	23 42 33.4	
	comp=Z,89nm,1.7s						
F31M	Tsiigehtchic	16.91	355	Pn	Pn	23 42 25.5	+0.1
F31M				IAmb	IAmb	23 42 33.6	
	comp=Z,97nm,1.6s						
F31M	Tsiigehtchic	16.91	355	P	Pn	23 42 25.4	0.0
	baz=171,SNR=13						
Q17K	Contact Creek	16.92	307	P	Pn	23 42 25.3	-0.4
	baz=105						
P18K	Big Mountain,	16.93	311	P	Pn	23 42 25.8	0.0
	baz=110						
FURC	Furnace Creek,	16.96	142		Pn	23 42 26.1	-0.1
FURC				IAmb	IAmb	23 42 29.5	
	comp=Z,147nm,1.9s						
R17L	Mt. Peulik Vol	17.01	304	P	Pn	23 42 26.4	-0.3
	baz=103						
M20K	Styx River	17.05	320		Pn	23 42 26.0	-1.3
M20K	Styx River	17.05	320	P	Pn	23 42 26.4	-0.9
	baz=120						
ISA	Isabella, Lake	17.08	147	P	Pn	23 42 28.1	+0.3
ISA				IAmb	IAmb	23 42 36.8	
	comp=Z,105nm,1.5s						
O18K	Koktuh Hills	17.08	312	Pn	Pn	23 42 27.3	-0.3
O18K	Koktuh Hills	17.08	312	P	Pn	23 42 26.5	-1.1
	baz=111						
COLA	College	17.09	333		Pn	23 42 27.6	0.0
COLA	College	17.09	333	P	Pn	23 42 26.8	-0.8
	baz=138						
N19K	Bonanza Creek	17.13	316		Pn	23 42 28.1	-0.1
N19K	Bonanza Creek	17.13	316	P	Pn	23 42 26.9	-1.4
	baz=115						
POKR	Poker Plat Res	17.15	334	P	Pn	23 42 28.8	+0.4
POKR	Poker Plat Res	17.15	334	P	Pn	23 42 27.9	-0.5
	baz=139						
KTH	Kantishna Hill	17.16	327	P	Pn	23 42 29.1	+0.4
KTH				IAmb	IAmb	23 42 34.9	
	comp=Z,76nm,1.3s						
TCRU	Three Creeks R	17.17	128		Pn	23 42 28.3	-0.8
TCRU				IAmb	IAmb	23 42 35.9	
	comp=Z,67nm,1.5s						
FFC	Flin Flon	17.21	66	Pn	Pn	23 42 29.1	-0.1
PPLA	Purkeypile	17.23	324		Pn	23 42 28.6	-0.9
PPLA				IAmb	IAmb	23 42 35.9	
	comp=Z,111nm,1.6s						
PPLA	Purkeypile	17.23	324	P	Pn	23 42 28.5	-1.1
	baz=125						
F30M	Barrier River	17.23	352		Pn	23 42 29.1	-0.3
F30M	Barrier River	17.23	352	P	Pn	23 42 28.7	-0.7
	baz=167						
NEA2	Nenana	17.25	331	P	Pn	23 42 29.6	0.0
NEA2				IAmb	IAmb	23 42 37.1	
	comp=Z,130nm,1.7s						
NEA2	Nenana	17.25	331	P	Pn	23 42 29.1	-0.6
	baz=135,SNR=16						
G27K	Doyon Strip	17.25	344		Pn	23 42 29.0	-0.6
G27K				IAmb	IAmb	23 42 35.1	
	comp=Z,79nm,1.6s						
G27K	Doyon Strip	17.25	344	P	Pn	23 42 29.7	0.0
	baz=154,SNR=21						
CLC	China Lake	17.25	145		Pn	23 42 29.2	-0.8
CLC				IAmb	IAmb	23 42 39.4	
	comp=Z,134nm,1.9s						
RDMU	Red Mountain	17.28	118		Pn	23 42 29.8	-0.7
TMUT	Trail Mountain	17.29	124	Pn	Pn	23 42 30.5	-0.2
P17A	Butcher Ranch,	17.41	123		Pn	23 42 31.6	-0.4
P17K	Kvichak River	17.45	309	P	Pn	23 42 31.8	-0.5
	baz=108						
WSHM	Spangler Hills	17.48	145		Pn	23 42 32.3	-0.5
LRMC	Laurel Mtn Rad	17.52	146		Pn	23 42 32.8	-0.6
BPAW	Bear Paw Mtn.	17.53	328		Pn	23 42 33.0	-0.2
BPAW				IAmb	IAmb	23 42 41.1	
	comp=Z,65nm,1.5s						
BPAW	Bear Paw Mtn.	17.53	328	P	Pn	23 42 32.9	-0.2
	baz=130						
CCUT	Cedar City	17.56	132		Pn	23 42 33.0	-0.9
P18A	Preston Nutter	17.56	122		Pn	23 42 33.2	-0.9
P18A				IAmb	IAmb	23 42 38.4	
	comp=Z,74nm,1.7s						
Q16A	Castle Valley	17.59	125		Pn	23 42 33.9	-0.4
CCCA	Chr Cany lake	17.60	145		Pn	23 42 33.9	-0.4
CCCA				IAmb	IAmb	23 42 41.8	
	comp=Z,75nm,1.6s						
SHPR	Sheep Range	17.62	138		Pn	23 42 33.8	-0.8
R16K	Pilot Point	17.64	304	P	Pn	23 42 33.6	-0.8
	baz=101						
SZCU	Shurtz Canyon	17.65	132	Pn	Pn	23 42 34.1	-0.9
SZCU				IAmb	IAmb	23 42 42.6	
	comp=Z,87nm,1.6s						
SHOC	Shoshone, Teco	17.68	142		Pn	23 42 35.4	+0.1
F28M	Old Crow	17.70	347		Pn	23 42 35.0	-0.3
F28M	Old Crow	17.70	347	P	Pn	23 42 34.8	-0.5
	baz=158,SNR=15						
N18K	Kilae Creek	17.70	314	P	Pn	23 42 34.5	-0.8
N18K				IAmb	IAmb	23 42 37.6	
	comp=Z,122nm,1.7s						
N18K	Kilae Creek	17.70	314	P	Pn	23 42 34.2	-1.2
	baz=113						
I23K	Minto, Yukon-K	17.73	332	P	Pn	23 42 35.8	+0.2
I23K				IAmb	IAmb	23 42 44.1	
	comp=Z,87nm,1.7s						
I23K	Minto, Yukon-K	17.73	332	P	Pn	23 42 35.5	-0.1
	baz=135,SNR=8.9						
MTPU	Mount Pierson	17.74	129		Pn	23 42 35.2	-1.1
MTPU				IAmb	IAmb	23 42 45.5	
	comp=Z,96nm,1.9s						
INK	Inuvik	17.76	355	P	P	23 42 37.9	+1.1
	comp=Z,0.1nm,0.3s,baz=175,slow=9.5,SNR=13						
INK				Lg	Lg	23 47 58.4	
	baz=272,slow=29,SNR=0.7						
INK				LR	LR	23 49 42.9	
	comp=Z,1µm,21.6s,baz=173,slow=38						
	comp=Z,11nm,1.1s						
INK	Inuvik	17.76	355		Pn	23 42 35.5	-0.4
INK	Inuvik	17.76	355	P	Pn	23 42 36.1	+0.1
	baz=172,SNR=15						
K22A	Casper	17.76	108		Pn	23 42 36.2	-0.2
K22A				IAmb	IAmb	23 42 45.8	
	comp=Z,48nm,1.1s						
G26K	Porcupine Rive	17.77	342		P	23 42 36.9	0.0
G26K				IAmb	IAmb	23 42 40.6	
	comp=Z,155nm,1.8s						
G26K	Porcupine Rive	17.77	342	P	Pn	23 42 35.8	-0.3
	baz=150,SNR=26						
SRU	San Rafael Swe	17.79	123		Pn	23 42 36.2	-0.5
H24K	Noodor Dome	17.82	335	P	Pn	23 42 36.0	-0.7
H24K				IAmb	IAmb	23 42 45.6	
	comp=Z,117nm,1.5s						
H24K	Noodor Dome	17.82	335	P	Pn	23 42 36.1	-0.7
	baz=140						
CHUM	Lake Minchumin	17.85	326	P	Pn	23 42 36.1	-1.0
	baz=127						
L19K	White Mountain	17.90	320		Pn	23 42 37.2	-0.6
L19K				IAmb	IAmb	23 42 46.9	
	comp=Z,70nm,1.3s						
L19K	White Mountain	17.90	320	P	Pn	23 42 36.8	-1.0
	baz=118						
O17K	Koliganek Bris	17.95	311	P	Pn	23 42 37.4	-0.9
	baz=108						
GSC	Goldstone, Bar	18.00	144	P	Pn	23 42 39.4	+0.1
M18K	Stony River	18.00	317	P	Pn	23 42 38.1	-0.9
	baz=115						
LCMT	Little Creek M	18.05	133	P	Pn	23 42 39.1	-0.8
G25K	Bearman Lake	18.11	339	P	Pn	23 42 39.7	-0.6
	baz=145,SNR=14						
PKCU	Pink Cliffs	18.15	130		Pn	23 42 39.4	-1.9
P16K	Nushagak River	18.18	308		Pn	23 42 40.0	-1.1
P16K	Nushagak River	18.18	308	P	Pn	23 42 41.2	+0.1
	baz=105						
E29M	Blow River	18.19	350	P	Pn	23 42 40.6	-0.6
E29M	Blow River	18.19	350	P	Pn	23 42 41.3	+0.1
	baz=163						
K20K	Telida	18.19	323	P	Pn	23 42 39.9	-1.5
K20K				IAmb	IAmb	23 42 49.0	
	comp=Z,51nm,1.2s						
K20K	Telida	18.19	323	P	Pn	23 42 41.5	+0.2
	baz=123						
KNB	Kanab	18.24	132		Pn	23 42 41.1	-1.2
N17K	Nushagak Hills	18.24	313	P	Pn	23 42 40.0	-2.0
N17K				IAmb	IAmb	23 42 51.2	
	comp=Z,61nm,1.4s						
N17K	Nushagak Hills	18.24	313	P	Pn	23 42 41.9	-0.1
	baz=110						
O20A	White River Ci	18.32	117		Pn	23 42 42.8	-0.5
O20A				IAmb	IAmb	23 42 49.9	
	comp=Z,92nm,1.6s						
MTPC	Mountain Pass	18.33	141		Pn	23 42 42.4	-1.0
BMAR	Burnt Mountain	18.34	342		P	23 42 43.8	+0.5
O16K	Kokwok River B	18.38	310	P	Pn	23 42 42.3	-1.4
O16K				IAmb	IAmb	23 42 48.1	
	comp=Z,104nm,1.6s						
O16K	Kokwok River B	18.38	310	P	Pn	23 42 43.2	-0.4
	baz=106						
G24K	Hadweenzic Riv	18.39	337		Pn	23 42 41.2	-2.5
G24K	Hadweenzic Riv	18.39	337	P	Pn	23 42 43.4	-0.3
	baz=142						
V12A	Nelson	18.41	139	P	P	23 42 43.7	-0.6
CNBA	Chernabura Isl	18.48	294	P	P	23 42 45.0	+0.2
CNBA				IAmb	IAmb	23 42 47.2	
	comp=Z,49nm,1.0s						
CHNA	Chernabura Isl	18.48	295	P	Pn	23 42 45.3	+0.4
	baz=91						
E27K	Coleen River	18.49	346		P	23 42 43.0	-1.8
E27K	Coleen River	18.49	346	P	Pn	23 42 45.3	+0.3
	baz=156						
F26K	Sheenjek River	18.49	343	P	P	23 42 45.0	+0.2
F26K	Sheenjek River	18.49	343	P	P	23 42 44.8	0.0
	baz=150						
RSSD	Black Hills	18.51	101	P	Pn	23 42 46.1	+0.5
RSSD				IAmb	IAmb	23 42 53.6	
	comp=Z,72nm,1.8s						
MWC	Mount Wilson	18.53	148	P	P	23 42 44.4	-1.3
MWC				IAmb	IAmb	23 42 53.3	
	comp=Z,53nm,1.2s						
S14K	Fog Glacier	18.53	299	P	P	23 42 45.3	-0.2
	baz=95						
HMU	Henry Mountain	18.55	126		P	23 42 45.6	-0.3
HMU				IAmb	IAmb	23 42 56.2	
	comp=Z,87nm,1.3s						
I21K	Tanana	18.56	330	P	P	23 42 43.4	-2.2
I21K				IAmb	IAmb	23 42 53.2	
	comp=Z,97nm,1.2s						
I21K	Tanana	18.56	330	P	P	23 42 45.6	0.0
	baz=131,SNR=25						
E28M	Babbage River	18.59	349		P	23 42 46.1	+0.2
E28M	Babbage River	18.59	349	P	P	23 42 45.8	-0.1
	baz=160						
HAYD	Hayden	18.63	114	P	P	23 42 46.9	0.0
M17K	Holitna River	18.68	316	P	P	23 42 46.8	-0.1
M17K	Holitna River	18.68	316	P	P	23 42 47.2	+0.3
	baz=112						
J20K	Nowinta River	18.68	326		P	23 42 45.2	-1.7
J20K				IAmb	IAmb	23 42 55.2	
	comp=Z,135nm,1.4s						
J20K	Nowinta River	18.68	326	P	P	23 42 47.0	+0.1
	baz=125,SNR=22						

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L18K  Granite Mounta  18.69 318        P     23 42 44.9 -2.1
L18K                             IAmb  IAmb  23 42 56.5
      comp=Z,54nm,1.3s
L18K  Granite Mounta  18.69 318  P     P     23 42 47.2 +0.2
      baz=116
F25K  Christian Rive  18.70 341  IAmb  IAmb  23 42 51.9
      comp=Z,75nm,1.4s
F25K  Christian Rive  18.70 341  P     P     23 42 47.3 +0.1
      baz=147
H22K  Ishtalitna Cre  18.85 332        Pn    23 42 49.6 +0.2
H22K  Ishtalitna Cre  18.85 332  P     P     23 42 48.9 +0.1
      baz=133
C36M  Paulatuk        18.90   6        P     23 42 49.2 -0.1
C36M                             IAmb  IAmb  23 42 56.8
      comp=Z,131nm,1.9s
C36M  Paulatuk        18.90   6  P     P     23 42 49.4 +0.2
      baz=191,SNR=18
N16K  Nishlik Lake    18.97 312  P     P     23 42 49.9 -0.2
      baz=108
U15A  North Rim       18.97 132        P     23 42 50.8 +0.2
U15A                             IAmb  IAmb  23 42 59.9
      comp=Z,73nm,1.7s
SDPT  Sand Point      19.00 296  P     P     23 42 49.8 -0.7
      baz=91
PV21  Cone Mtn., Par  19.02 122  P     Pn    23 42 51.6 -0.1
G23K  Bananza Creek   19.05 335  P     P     23 42 50.8 -0.3
G23K                             IAmb  IAmb  23 43 01.3
      comp=Z,51nm,1.1s
G23K  Bananza Creek   19.05 335  P     P     23 42 51.2 +0.1
      baz=138
PV23  Carpenter Ridg  19.08 122  P     P     23 42 51.6 -0.2
PV23                             IAmb  IAmb  23 42 56.0
      comp=Z,67nm,1.1s
PV10  Paradox Valley  19.12 122  P     P     23 42 52.0 -0.2
J19K  Poorman         19.12 324  P     P     23 42 50.4 -1.4
J19K                             IAmb  IAmb  23 43 02.2
      comp=Z,61nm,1.2s
J19K  Poorman         19.12 324  P     P     23 42 51.9 +0.2
      baz=122
PV14  Lion Creek, Pa  19.13 122  P     P     23 42 52.3  0.0
PV14                             IAmb  IAmb  23 42 56.5
      comp=Z,54nm,1.2s
H21K  Melozitna Rive  19.13 330  P     P     23 42 51.7 -0.2
H21K                             IAmb  IAmb  23 42 58.7
      comp=Z,121nm,1.9s
H21K  Melozitna Rive  19.13 330  P     P     23 42 51.7 -0.2
      baz=130
O15K  Ungalikthiuk R  19.13 308  P     P     23 42 50.5 -1.4
O15K  Ungalikthiuk R  19.13 308  P     P     23 42 51.7 -0.2
      baz=103
E25K  Arctic Village  19.13 342        Pn    23 42 53.0 +0.2
E25K  Arctic Village  19.13 342  P     P     23 42 51.9  0.0
      baz=148
DANC  Danby, Needles  19.14 142  P     Pn    23 42 54.6 +1.5
DANC                             IAmb  IAmb  23 43 03.7
      comp=Z,52nm,1.3s
F24K  Squaw Lake      19.14 339  P     Pn    23 42 52.6 -0.2
F24K                             IAmb  IAmb  23 43 02.2
      comp=Z,86nm,1.5s
F24K  Squaw Lake      19.14 339  P     P     23 42 51.7 -0.3
      baz=143
PV22  Blue Mesa, Par  19.14 121        P     23 42 52.4  0.0
I20K  Naaghedeneel    19.16 327  P     P     23 42 51.5 -0.6
I20K                             IAmb  IAmb  23 43 01.0
      comp=Z,78nm,1.3s
I20K  Naaghedeneel    19.16 327  P     P     23 42 52.2 +0.1
      baz=126
PV04  Paradox Valley  19.18 122  P     P     23 42 52.6 -0.2
PV04                             IAmb  IAmb  23 43 03.0
      comp=Z,111nm,1.7s
PV20  West Nyswonger  19.18 122  P     P     23 42 52.7 -0.1
PV20                             IAmb  IAmb  23 42 57.0
      comp=Z,89nm,1.2s
D28M  Stokes Point    19.18 350  P     P     23 42 52.4 +0.1
      baz=162,SNR=12
PV19  Morning Glory   19.20 122  P     P     23 42 52.6 -0.4
PV16  Nyswonger Mesa  19.23 122  P     P     23 42 53.3 -0.1
PV16                             IAmb  IAmb  23 42 57.6
      comp=Z,51nm,1.2s
PV17  East Wray Mesa  19.23 122  P     P     23 42 53.1 -0.3
PV17                             IAmb  IAmb  23 43 02.5
      comp=Z,95nm,1.6s
M16K  Timber Creek    19.23 314  P     P     23 42 51.4 -1.6
M16K  Timber Creek    19.23 314  P     P     23 42 52.2 -0.8
      baz=109
PV11  David Mesa, Pa  19.26 122  P     P     23 42 53.5 -0.2
ELS   Elsinore Mount  19.27 148  P     P     23 42 52.7 -0.9
ELS                              IAmb  IAmb  23 43 02.2
      comp=Z,94nm,1.6s
J18K  Innoko River    19.27 322  P     P     23 42 52.9 -0.5
J18K                             IAmb  IAmb  23 43 03.5
      comp=Z,47nm,1.2s
J18K  Innoko River    19.27 322  P     P     23 42 53.7 +0.2
      baz=119
PV18  Skein Mesa, Pa  19.28 122        P     23 42 53.4 -0.6
PV07  Paradox Valley  19.28 121  P     P     23 42 54.0  0.0
PV07                             IAmb  IAmb  23 43 05.6
      comp=Z,74nm,1.9s
PV12  Saucer Basin,   19.29 122  P     P     23 42 53.6 -0.4
PV12                             IAmb  IAmb  23 43 04.1
      comp=Z,102nm,1.3s
PV05  Paradox Valley  19.30 123  P     P     23 42 53.5 -0.7
PV05                             IAmb  IAmb  23 42 58.5
      comp=Z,48nm,1.3s
PV03  Paradox Valley  19.31 122  P     P     23 42 54.1 -0.1
PV03                             IAmb  IAmb  23 42 58.4
      comp=Z,78nm,1.5s
NEE2  Needles Airpor  19.33 140  P     P     23 42 54.8 +0.5
L17K  Donlin          19.34 317  P     P     23 42 54.3 +0.1
      baz=113
W13A  Hualapai Mount  19.36 138  P     P     23 42 55.0 +0.3
D27M  Malcolm River   19.37 348        P     23 42 54.5 -0.1
D27M  Malcolm River   19.37 348  P     P     23 42 54.3 -0.3
      baz=158
PV13  Radium Mtn., P  19.39 122  P     P     23 42 55.3 +0.1
PV13                             IAmb  IAmb  23 42 59.4
      comp=Z,83nm,1.4s
PV02  Paradox Valley  19.40 122  P     P     23 42 55.9 +0.6
PV02                             IAmb  IAmb  23 43 01.9
      comp=Z,84nm,1.4s
PV15  Paradox Valley  19.44 121  P     P     23 42 54.6 -1.2
COLD  Coldfoot        19.48 336        Pn    23 42 56.9  0.0
COLD                             IAmb  IAmb  23 43 05.4
      comp=Z,65nm,1.2s
COLD  Coldfoot        19.48 336  P     P     23 42 56.1 +0.4
      baz=138,SNR=36
N15K  Kwethluk River  19.51 311  P     P     23 42 56.3 +0.2
      baz=106
E28A  Huff            19.54  91  P     Pn    23 42 57.4 -0.3
PV01  Paradox Valley  19.55 122  P     P     23 42 56.9  0.0
PV01                             IAmb  IAmb  23 43 00.3
      comp=Z,35nm,1.1s
K17K  Iditarod        19.58 319  P     P     23 42 56.9 +0.1
K17K                             IAmb  IAmb  23 43 06.9
      comp=Z,83nm,1.3s
K17K  Iditarod        19.58 319  P     P     23 42 57.0 +0.2
      baz=115
DNR   Dunn Ranch,Anz  19.62 146  P     P     23 42 56.6 -1.0
DNR                              IAmb  IAmb  23 43 08.2
      comp=Z,75nm,1.4s
PMD   Palm Desert     19.64 145  P     P     23 42 57.2 -0.4
PMD                              IAmb  IAmb  23 43 06.8
      comp=Z,98nm,1.9s
PFO   Pinyon Flats O  19.64 145  P     P     23 42 54.4 -3.4
      comp=Z,0.1nm,0.3s,baz=312,slow=8.6,SNR=6.9
      comp=Z,3.0nm,1.0s
PFO   Pinyon Flats O  19.64 145  P     P     23 42 58.5 +0.7
IRM   Iron Mountain   19.65 142        P     23 42 57.3 -0.6
IRM                              IAmb  IAmb  23 43 04.5
      comp=Z,59nm,1.6s
L16K  Owhat River     19.70 315  P     P     23 42 57.6 -0.5
L16K                             IAmb  IAmb  23 43 08.2
      comp=Z,56nm,1.5s
L16K  Owhat River     19.70 315  P     P     23 42 58.4 +0.4
      baz=110
H20K  Anotleneega Mo  19.70 328  P     P     23 42 58.6 +0.5
      baz=127
E24K  Your Creek      19.72 339  P     P     23 42 58.6 +0.3
E24K  Your Creek      19.72 339  P     P     23 42 58.8 +0.5
      baz=143
MDND  Maddock         19.77  87        Pn    23 42 59.8 -0.7
O14K  Tigyukauivet M  19.87 308  P     P     23 43 00.3 +0.4
O14K  Tigyukauivet M  19.87 308  P     P     23 43 00.1 +0.1
      baz=102
S12K  Black Hills     19.91 297  P     P     23 43 00.3 -0.2
      baz=91
G21K  Allakaket       19.91 332        P     23 43 00.3 -0.1
G21K  Allakaket       19.91 332  P     P     23 42 60.0 -0.4
      baz=131
M15K  Kasigluk River  19.94 312  P     P     23 43 00.6 -0.1
      baz=106
BORC  Borrego Spring  19.96 146  P     P     23 43 00.9 -0.2
BORC                             IAmb  IAmb  23 43 10.6
      comp=Z,49nm,1.7s
E23K  Chandalar       19.97 338  P     P     23 43 02.1 +1.0
E23K  Chandalar       19.97 338  P     P     23 43 01.1  0.0
      baz=141
BC3   Big Chuckawall  19.98 143        P     23 43 01.6 +0.2
BC3                              IAmb  IAmb  23 43 16.0
      comp=Z,69nm,1.6s
GCSA  Galena City Sc  19.98 325  P     P     23 43 01.2 +0.1
      baz=122
DPP   Dos Picos Cty   20.02 147  P     P     23 43 02.3 +0.4
DPP                              IAmb  IAmb  23 43 05.0
      comp=Z,43nm,1.4s
ISCO  Idaho Springs   20.06 114        P     23 43 01.3 -1.2
ISCO                             IAmb  IAmb  23 43 12.3
      comp=Z,81nm,1.9s
CPE   Camp Elliot     20.07 148  P     P     23 43 02.4  0.0
CPE                              IAmb  IAmb  23 43 11.0
      comp=Z,106nm,1.8s
C27K  Jago River      20.12 346        P     23 43 02.9 +0.2
C27K                             IAmb  IAmb  23 43 09.4
      comp=Z,79nm,1.8s
C27K  Jago River      20.12 346  P     P     23 43 02.9 +0.2
      baz=154
WUAZ  Wupatki         20.14 132        P     23 43 03.8 +0.5
WUAZ                             IAmb  IAmb  23 43 14.6
      comp=Z,31nm,1.1s
J17K  VABM Dome       20.19 320  P     P     23 43 01.8 -1.6
J17K                             IAmb  IAmb  23 43 14.0
      comp=Z,70nm,1.4s
J17K  VABM Dome       20.19 320  P     P     23 43 03.4  0.0
      baz=115
F22K  John River      20.21 335  P     P     23 43 03.7  0.0
      baz=135
N14K  Kuskokwak Cree  20.22 309  P     P     23 43 04.3 +0.5
N14K  Kuskokwak Cree  20.22 309  P     P     23 43 03.8  0.0
      baz=103
BLYC  Blythe          20.25 141        P     23 43 05.1 +0.8
H19K  Roundabout Mou  20.26 327  P     P     23 43 04.3 +0.2
H19K                             IAmb  IAmb  23 43 15.7
      comp=Z,25nm,0.9s
H19K  Roundabout Mou  20.26 327  P     P     23 43 03.6 -0.5
      baz=124
D25K  Kavik River     20.31 343  P     P     23 43 05.1 +0.3
D25K                             IAmb  IAmb  23 43 16.3
      comp=Z,36nm,1.2s
D25K  Kavik River     20.31 343  P     P     23 43 05.0 +0.3
      baz=148
F21K  Alatna River    20.38 333  P     Pn    23 43 06.8 -0.7
F21K                             IAmb  IAmb  23 43 16.4
      comp=Z,61nm,1.2s
F21K  Alatna River    20.38 333  P     P     23 43 05.7 +0.2
      baz=133
BAR   Barrett         20.41 147  P     P     23 43 06.6 +0.6
BAR                              IAmb  IAmb  23 43 17.3
      comp=Z,88nm,1.9s
TOLK  Toolik Lake Re  20.42 339  P     P     23 43 06.8 +0.8
TOLK  Toolik Lake Re  20.42 339  P     P     23 43 05.9  0.0
      baz=142,SNR=24
M14K  Bethel          20.55 312  P     P     23 43 07.0 -0.3
M14K                             IAmb  IAmb  23 43 18.6
      comp=Z,66nm,1.1s
M14K  Bethel          20.55 312  P     P     23 43 07.5 +0.1
      baz=105
E22K  Anaktuvuk Pass  20.57 336        P     23 43 07.3 -0.3
E22K  Anaktuvuk Pass  20.57 336  P     P     23 43 07.6  0.0
      baz=137,SNR=34
C26K  Camden Bay      20.57 345  P     P     23 43 07.8 +0.2
      baz=152
L15K  Ungalak Mounta  20.59 314  P     P     23 43 07.9 +0.1
      baz=108
D24K  Happy Valley    20.66 341  P     P     23 43 09.0 +0.5
D24K  Happy Valley    20.66 341  P     P     23 43 08.7 +0.2
      baz=144
FALS  False Pass      20.70 295  P     P     23 43 08.7 -0.2
      baz=88
YUH   Yuha Desert     20.70 145  P     P     23 43 08.7 -0.5
YUH                              IAmb  IAmb  23 43 20.5
      comp=Z,66nm,1.6s
Y14A  Wickenburg      20.72 138        P     23 43 08.9 -0.6
H18K  Honhosa River   20.73 325        P     23 43 10.2 +0.8
H18K                             IAmb  IAmb  23 43 20.5
      comp=Z,26nm,0.9s
H18K  Honhosa River   20.73 325  P     P     23 43 09.3  0.0
      baz=121
CBX   Cerro Bola      20.74 147  P     P     23 43 09.7 -0.1
CBX                              IAmb  IAmb  23 43 27.2
      comp=Z,61nm,1.1s
GLA   Glamis          20.75 143  P     P     23 43 09.5 -0.3
GLA                              IAmb  IAmb  23 43 13.6
      comp=Z,86nm,1.6s
J16K  Anvik River     20.77 319  P     P     23 43 09.4 -0.3
J16K                             IAmb  IAmb  23 43 17.7
      comp=Z,47nm,1.1s
J16K  Anvik River     20.77 319  P     P     23 43 10.0 +0.3
      baz=113
K15K  Wolf Creek Mou  20.81 316  P     P     23 43 10.3 +0.2
K15K  Wolf Creek Mou  20.81 316  P     P     23 43 10.2 +0.1
      baz=109
G19K  Purcell Mounta  20.82 328  P     P     23 43 09.6 -0.7
G19K  Purcell Mounta  20.82 328  P     P     23 43 09.7 -0.6
      baz=125
Q24A  Divide          20.88 115  P     P     23 43 08.1 -3.4
Q24A                             IAmb  IAmb  23 43 19.5
      comp=Z,47nm,1.8s
D23K  Nanushuk River  20.92 339  P     P     23 43 11.3 -0.1
D23K  Nanushuk River  20.92 339  P     P     23 43 10.9 -0.4
      baz=140
F20K  Avaraart Lake   20.93 331  P     P     23 43 11.0 -0.4
F20K  Avaraart Lake   20.93 331  P     P     23 43 11.9 +0.5
      baz=129,SNR=28
X16A  Lo Mia Camp, P  21.01 134        P     23 43 12.8  0.0
X16A                             IAmb  IAmb  23 43 23.9
      comp=Z,27nm,1.0s
I17K  Unalakleet      21.05 321  P     P     23 43 12.1 -0.6
I17K  Unalakleet      21.05 321  P     P     23 43 12.5 -0.2
      baz=114
L14K  Kuka Creek      21.05 313  P     P     23 43 11.5 -1.2
L14K                             IAmb  IAmb  23 43 19.8
      comp=Z,76nm,1.4s
L14K  Kuka Creek      21.05 313  P     P     23 43 12.9 +0.2
      baz=105
C24K  Franklin Bluff  21.10 342  P     P     23 43 14.1 +0.9
C24K  Franklin Bluff  21.10 342  P     P     23 43 12.9 -0.3
      baz=145
M13K  Dall Lake       21.14 310  P     P     23 43 13.7  0.0
      baz=102
CCX   Cicese          21.15 148  P     P     23 43 13.8 -0.2
CCX                              IAmb  IAmb  23 43 20.7
      comp=Z,52nm,0.9s
H17K  Granite Mounta  21.20 324        P     23 43 13.2 -1.1
H17K                             IAmb  IAmb  23 43 26.8
      comp=Z,41nm,1.1s
H17K  Granite Mounta  21.20 324  P     P     23 43 13.9 -0.5
      baz=118
G18K  Tagagawik       21.22 327  P     P     23 43 14.5 -0.1
G18K                             IAmb  IAmb  23 43 22.8
      comp=Z,45nm,1.4s
G18K  Tagagawik       21.22 327  P     P     23 43 13.8 -0.8
      baz=122
W18A  Petrified Fore  21.25 129  P     P     23 43 15.4  0.0
W18A                             IAmb  IAmb  23 43 20.3
      comp=Z,49nm,1.1s
ESJX  Sierra Juarez   21.27 146  P     P     23 43 15.3 -0.3
ESJX                             IAmb  IAmb  23 43 22.3
      comp=Z,53nm,1.3s
D22K  Ayikyak River   21.34 337        P     23 43 14.9 -0.9
D22K  Ayikyak River   21.34 337  P     P     23 43 15.3 -0.6
      baz=137
E21K  Killik River    21.35 335  P     P     23 43 16.5 +0.5
E21K                             IAmb  IAmb  23 43 24.9
      comp=Z,31nm,1.4s
E21K  Killik River    21.35 335  P     P     23 43 15.3 -0.7
      baz=134
113A  Mohawk Valley,  21.42 141  P     P     23 43 16.1 -0.8
113A                             IAmb  IAmb  23 43 25.1
      comp=Z,40nm,1.6s
ULM   Lac du Bonnet   21.42  78  P     P     23 43 17.5 +0.7
      comp=Z,10.0nm,0.7s,baz=288,slow=11,SNR=11
ULM                              Lg    Lg    23 49 55.3
      comp=Z,0.2nm,0.3s,baz=194,slow=8.5,SNR=3.9
ULM                              LR    LR    23 52 55.4
      comp=Z,437nm,21.9s,baz=270,slow=40
      comp=Z,10.0nm,0.7s
ULM   Lac du Bonnet   21.42  78  P     P     23 43 17.0 +0.2
ULM                              IAmb  IAmb  23 43 26.3
      comp=Z,39nm,1.2s
F19K  Shaleruckik Mo  21.45 329  P     P     23 43 16.7 -0.2
F19K                             IAmb  IAmb  23 43 31.9
      comp=Z,28nm,1.2s
F19K  Shaleruckik Mo  21.45 329  P     P     23 43 16.4 -0.5
      baz=125,SNR=11
A36M  Sachs Harbour   21.45   4  P     P     23 43 18.3 +1.3
A36M                             IAmb  IAmb  23 43 29.3
      comp=Z,60nm,1.2s
A36M  Sachs Harbour   21.45   4  P     P     23 43 17.0  0.0
      baz=188,SNR=28
OGNE  Ogallala        21.49 106        P     23 43 17.9 +0.2
SDCO  Great Sand Dun  21.52 118  P     P     23 43 18.8 +0.5
C23K  Itkillik River  21.59 340  P     P     23 43 18.9 +0.5
C23K  Itkillik River  21.59 340  P     P     23 43 18.4  0.0
      baz=142
E19K  Redstone River  21.64 331  P     P     23 43 19.7 +0.6
E19K  Redstone River  21.64 331  P     P     23 43 19.0 -0.1
      baz=127,SNR=11
G17K  Kiwalik Mounta  21.74 325  P     P     23 43 19.7 -0.5
      baz=118
E20K  Nigu River      21.84 333  P     P     23 43 21.1 -0.2
      baz=130
J14K  Nanvaranak Lak  21.84 316  P     P     23 43 21.7 +0.5
J14K                             IAmb  IAmb  23 43 37.2
      comp=Z,45nm,1.3s
J14K  Nanvaranak Lak  21.84 316  P     P     23 43 20.1 -1.1
      baz=108
FCC   Fort Churchill  21.85  55  P     P     23 43 21.3  0.0
VTX   Valle De La Tr  21.89 147  P     P     23 43 21.7 -0.3
VTX                              IAmb  IAmb  23 43 30.1
      comp=Z,71nm,1.7s
F18K  Selawik         21.94 328  P     P     23 43 21.7 -0.5
      baz=122
H16K  Elim            21.97 322  P     P     23 43 22.3 -0.3
      baz=114
AGMN  Agassiz Nation  21.99  83        P     23 43 23.5 +0.5
AGMN                             IAmb  IAmb  23 43 29.6
      comp=Z,42nm,1.1s
K30B  Basset          22.02 100  P     P     23 43 24.3 +0.9
C21K  Knifeblade Rid  22.07 336  P     P     23 43 22.8 -0.8
      baz=134,SNR=15
K13K  Kusilvak Mount  22.11 314  P     P     23 43 23.6 -0.5
      baz=104
D20K  Etivluk River   22.25 334        P     23 43 25.9 +0.2
D20K                             IAmb  IAmb  23 43 29.9
      comp=Z,88nm,1.9s
D20K  Etivluk River   22.25 334  P     P     23 43 25.9 +0.2
      baz=131,SNR=8.0
BLKN  Baker Lake      22.30  40  P     P     23 43 25.9 -0.2
BLKN                             IAmb  IAmb  23 43 30.1
      comp=Z,24nm,1.0s
KSCO  Kaye Shedlock'  22.33 111  P     P     23 43 27.6 +0.8
G16K  Koyuk River     22.33 324  P     P     23 43 26.2 -0.3
G16K  Koyuk River     22.33 324  P     P     23 43 26.1 -0.4
      baz=116
B21K  Ikpikpuk River  22.35 337  P     P     23 43 26.8 +0.1
B21K  Ikpikpuk River  22.35 337  P     P     23 43 26.6  0.0
      baz=135
F17K  Baldwin Pennin  22.41 327  P     P     23 43 27.5 +0.2
F17K  Baldwin Pennin  22.41 327  P     P     23 43 26.8 -0.5
      baz=119
214A  Organ Pipe Nat  22.52 140        P     23 43 28.2 -0.6
214A                             IAmb  IAmb  23 43 31.3
      comp=Z,28nm,1.2s
M11K  Mekoryuk        22.53 310  P     P     23 43 28.5 -0.1
      baz=99
D19K  Kuna River      22.54 333  P     P     23 43 28.5 -0.3
D19K  Kuna River      22.54 333  P     P     23 43 28.3 -0.4
      baz=128
T25A  Trinidad        22.56 117        P     23 43 29.9 +0.5
UNV   Unalaska Valle  22.58 292  P     P     23 43 28.9 -0.3
      baz=83
B22K  Teshekpuk Lake  22.59 339  P     P     23 43 29.8 +0.6
B22K  Teshekpuk Lake  22.59 339  P     P     23 43 28.8 -0.4
      baz=138
F33A  5 Mile Ranch,   22.63  89  P     P     23 43 29.9 +0.1
E18K  Tukpahlearik C  22.69 329  P     P     23 43 30.4  0.0
E18K                             IAmb  IAmb  23 43 46.9
      comp=Z,66nm,1.6s
E18K  Tukpahlearik C  22.69 329  P     P     23 43 30.0 -0.3
      baz=122
G15K  Niukluk         22.82 322  P     P     23 43 31.1 -0.5
      baz=112
EPLO  Experimental L  22.91  79  P     P     23 43 32.0 -0.8
EPLO                             IAmb  IAmb  23 43 37.2
      comp=Z,38nm,1.0s
E17K  Hotham Inlet    22.93 328  P     P     23 43 32.4 -0.4
      baz=120
TASM  ASL Pad, Albuq  23.06 124  P     P     23 43 34.2 -0.4
TASM                             IAmb  IAmb  23 43 36.1
      comp=Z,30nm,1.5s
TASM  ASL Pad, Albuq  23.06 124  P     P     23 43 34.2 -0.4
TASM                             IAmb  IAmb  23 43 36.1
      comp=Z,30nm,1.5s
TASM  ASL Pad, Albuq  23.06 124  P     P     23 43 33.9 -0.7
TASM                             IAmb  IAmb  23 43 36.1
      comp=Z,29nm,1.4s
TASM  ASL Pad, Albuq  23.06 124  P     P     23 43 33.5 -1.1
TASM                             IAmb  IAmb  23 43 36.1
      comp=Z,30nm,1.4s
ANMO  Albuquerque     23.06 124  LR    LR    23 52 18.5
      comp=Z,532nm,21.9s,baz=312,slow=36
ANMO  Albuquerque     23.06 124  P     P     23 43 33.3 -1.3
ANMO                             IAmb  IAmb  23 43 36.1
      comp=Z,28nm,1.4s
ANMO  Albuquerque     23.06 124  P     P     23 43 33.8 -0.8
ANMO                             IAmb  IAmb  23 43 36.1
      comp=Z,25nm,1.4s
ANMO  Albuquerque     23.06 124  P     P     23 43 34.2 -0.4
ANMO                             IAmb  IAmb  23 43 36.2
      comp=Z,28nm,1.4s
ABQ   Albuquerque     23.06 124        P     23 43 34.4 -0.3
ABQ                              IAmb  IAmb  23 43 36.2
      comp=Z,29nm,1.4s
TUC   Tucson          23.08 136  P     P     23 43 34.5 -0.2
TUC                              IAmb  IAmb  23 43 44.1
      comp=Z,40nm,1.4s
ANM   Nome            23.20 320  P     P     23 43 35.2 -0.4
      baz=110
B20K  Meade River     23.26 336        P     23 43 36.1  0.0
B20K  Meade River     23.26 336  P     P     23 43 35.5 -0.6
      baz=132
F15K  North Star Dit  23.33 323  P     P     23 43 36.6 -0.3
F15K                             IAmb  IAmb  23 43 51.7
      comp=Z,27nm,1.2s
F15K  North Star Dit  23.33 323  P     P     23 43 36.4 -0.5
      baz=113
C19K  Lookout Ridge   23.34 333  P     P     23 43 36.8 -0.3
C19K                             IAmb  IAmb  23 43 45.5
      comp=Z,51nm,1.6s
C19K  Lookout Ridge   23.34 333  P     P     23 43 36.3 -0.8
      baz=127
ECSD  EROS Data Cent  23.38  94        P     23 43 37.9 +0.4
LENM  Lemitar         23.39 126  P     P     23 43 38.0  0.0
A22K  Sinclair Lake   23.44 339  P     P     23 43 38.1 +0.2
      baz=137
SBM   South Baldy     23.44 127  P     P     23 43 38.5 -0.2
C18K  Utukok River    23.55 331  P     P     23 43 39.0 -0.2
C18K                             IAmb  IAmb  23 43 46.5
      comp=Z,30nm,1.2s
C18K  Utukok River    23.55 331  P     P     23 43 38.8 -0.3
      baz=124
Y22A  Socorro         23.58 127  P     P     23 43 39.4 -0.4
BGNE  Belgrade        23.62 101  P     P     23 43 41.1 +1.1
DUN6  Lazy B Ranch    23.65 132  P     P     23 43 40.8 +0.3
D17K  Noatak River    23.66 328  P     P     23 43 39.8 -0.3
      baz=119
CRNM  Carthage        23.68 126  P     P     23 43 40.4 -0.5
RDOG  Red Dog Mine    23.77 329  P     P     23 43 40.9 -0.4
RDOG                             IAmb  IAmb  23 43 48.3
      comp=Z,39nm,1.7s
RDOG  Red Dog Mine    23.77 329  P     P     23 43 40.7 -0.5
      baz=120
F14K  Arctic Creek    23.89 322  P     P     23 43 41.7 -0.7
      baz=110
RTBA  Rita Blanca     24.00 116  P     P     23 43 43.6 -0.3
A21K  Barrow          24.04 339  P     P     23 43 43.0 -0.6
      baz=135,SNR=8.2
C17K  DeLong Mountai  24.08 330  P     P     23 43 43.2 -0.9
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	baz=121						
P08K	**Saint George I**	**24.08**	**300**	P	**P**	**23 43 43.5**	**-0.8**
	baz=87						
NIKH	**Nikolski High**	**24.11**	**291**	P	**P**	**23 43 43.2**	**-1.3**
	baz=80						
B18K	**Kokolik River**	**24.14**	**333**	P	**P**	**23 43 43.7**	**-1.0**
	baz=124						
CBKS	**Cedar Bluff**	**24.19**	**108**	P	**P**	**23 43 46.1**	**+0.7**
121A	**Cookes Peak, D**	**24.29**	**130**		**P**	**23 43 46.2**	**-0.4**
121A				IAmb	IAmb	23 43 49.7	
	comp=Z,43nm,1.4s						
A19K	**Wainwright**	**24.42**	**335**	P	**P**	**23 43 46.4**	**-0.8**
	baz=127						
L34A	**Svendsen Farm,**	**24.43**	**98**	P	**P**	**23 43 49.6**	**+2.0**
SPIA	**Saint Paul Isl**	**24.44**	**301**	P	**P**	**23 43 46.4**	**-1.2**
	baz=88						
319A	**Douglas**	**24.55**	**134**		**P**	**23 43 48.5**	**-0.3**
TNA	**Tin City**	**24.55**	**322**	P	**P**	**23 43 47.3**	**-1.1**
	baz=109						
C16K	**Lisburne Hills**	**24.68**	**329**	P	**P**	**23 43 49.6**	**0.0**
C16K				IAmb	IAmb	23 43 56.3	
	comp=Z,31nm,1.3s						
C16K	**Lisburne Hills**	**24.68**	**329**	P	**P**	**23 43 48.3**	**-1.3**
	baz=118						
EYMN	**Ely**	**24.86**	**81**		**P**	**23 43 52.6**	**+1.2**
R32A	**Long Quarter,**	**25.06**	**107**	P	**P**	**23 43 54.3**	**+1.0**
SPMN	**Marine on St.**	**25.11**	**88**		**P**	**23 43 54.8**	**+1.1**
PH02	**Texas Public H**	**25.20**	**117**	P	**P**	**23 43 54.8**	**+0.1**
PH02				IAmb	IAmb	23 43 57.5	
	comp=Z,44nm,1.6s						
N35A	**Tabor**	**25.50**	**99**	P	**P**	**23 43 58.0**	**+0.8**
EPT	**El Paso**	**25.54**	**129**	P	**P**	**23 43 57.4**	**-0.4**
EPT				IAmb	IAmb	23 44 06.2	
	comp=Z,20nm,0.9s						
GAMB	**Gambell**	**25.67**	**317**	P	**P**	**23 43 57.7**	**-0.9**
	baz=101						
AMTX	**Amarillo**	**25.72**	**117**	P	**P**	**23 43 60.0**	**+0.6**
MSTX	**Muleshoe**	**25.78**	**120**	P	**P**	**23 43 59.6**	**-0.4**
MSTX				IAmb	IAmb	23 44 01.3	
	comp=Z,26nm,1.6s						
KSU1	**Kansas State U**	**25.92**	**104**		**P**	**23 44 02.2**	**+1.1**
TBO	**Thunder Bay**	**25.92**	**79**		**P**	**23 44 01.8**	**+0.8**
NOKA	**Waynoka**	**26.09**	**111**	P	**P**	**23 44 02.9**	**+0.2**
NOKA				IAmb	IAmb	23 44 23.2	
	comp=Z,28nm,1.3s						
MNTX	**Cornudas Mount**	**26.16**	**127**		**P**	**23 44 02.6**	**-0.7**
MNTX				IAmb	IAmb	23 44 07.0	
	comp=Z,38nm,1.4s						
ELIS	**Ellis County**	**26.19**	**112**	P	**P**	**23 44 04.0**	**+0.4**
GDL2	**Guadalupe Moun**	**26.29**	**125**		**P**	**23 44 03.6**	**-1.0**
OK038	**West end E0370**	**26.31**	**111**	P	**P**	**23 44 04.1**	**-0.6**
SMWD	**Samnorwood**	**26.38**	**115**	P	**P**	**23 44 05.3**	**0.0**
SMWD				IAmb	IAmb	23 44 41.5	
	comp=Z,33nm,1.8s						
SCIA	**State Center**	**26.46**	**95**	P	**P**	**23 44 07.6**	**+1.6**
CLNB	**Carlsbad**	**26.49**	**124**	P	**P**	**23 44 05.9**	**-0.5**
CROK	**Carrier**	**26.74**	**110**	P	**P**	**23 44 08.5**	**-0.1**
DKNS	**Dickens**	**27.03**	**118**	P	**P**	**23 44 10.8**	**-0.5**
DKNS				IAmb	IAmb	23 44 14.9	
	comp=Z,20nm,1.4s						
N38A	**Joes South For**	**27.05**	**97**	P	**P**	**23 44 11.5**	**+0.2**
VHRN	**Van Horn**	**27.10**	**128**		**P**	**23 44 11.9**	**-0.1**
VHRN				IAmb	IAmb	23 44 22.5	
	comp=Z,19nm,1.3s						
I40A	**Norwalk**	**27.11**	**89**	P	**P**	**23 44 11.7**	**-0.1**
I40A				IAmb	IAmb	23 44 14.3	
	comp=Z,22nm,0.9s						
POST	**Post**	**27.16**	**120**	P	**P**	**23 44 11.9**	**-0.5**
PECS	**Pecos**	**27.20**	**125**	P	**P**	**23 44 13.1**	**+0.3**
ODSA	**Odessa**	**27.31**	**122**	P	**P**	**23 44 13.2**	**-0.6**
ODSA				IAmb	IAmb	23 44 24.8	
	comp=Z,21nm,1.2s						
T35A	**Sooner Cattle**	**27.36**	**107**	P	**P**	**23 44 14.3**	**+0.1**
T35A				IAmb	IAmb	23 44 15.9	
	comp=Z,24nm,0.9s						
OK048	**Pawnee Station**	**27.43**	**109**	P	**P**	**23 44 14.2**	**-0.6**
OK048				IAmb	IAmb	23 44 18.7	
	comp=Z,20nm,1.0s						
SN07	**Snyder 07**	**27.48**	**119**	P	**P**	**23 44 14.9**	**-0.4**
SN07				IAmb	IAmb	23 44 16.3	
	comp=Z,25nm,1.1s						
WMOK	**Wichita Mounta**	**27.49**	**114**		**P**	**23 44 15.1**	**-0.2**
WMOK				IAmb	IAmb	23 44 17.0	
	comp=Z,12nm,0.8s						
P38A	**Dawn**	**27.53**	**100**		**P**	**23 44 16.1**	**+0.5**
P38A				IAmb	IAmb	23 44 17.4	
	comp=Z,19nm,0.9s						
OK029	**Liberty Lake**	**27.54**	**110**	P	**P**	**23 44 16.0**	**+0.3**
OK029				IAmb	IAmb	23 44 19.8	
	comp=Z,22nm,1.0s						
L40A	**Anamosa**	**27.64**	**93**	P	**P**	**23 44 18.3**	**+1.8**
L40A				IAmb	IAmb	23 44 27.7	
	comp=Z,26nm,1.1s						
QUOK	**Quay**	**27.73**	**109**	P	**P**	**23 44 17.6**	**+0.2**
QUOK				IAmb	IAmb	23 44 21.5	
	comp=Z,29nm,1.2s						
APMT	**Aspermont**	**27.74**	**117**	P	**P**	**23 44 17.8**	**+0.2**
APMT				IAmb	IAmb	23 44 20.5	
	comp=Z,34nm,1.5s						
OK052	**Battle Ridge R**	**27.79**	**109**	P	**P**	**23 44 18.2**	**+0.2**
MNHN	**Monahans**	**27.80**	**124**	P	**P**	**23 44 17.2**	**-1.0**
OKCSW	**OKLAHOMA CITY**	**27.81**	**111**	P	**P**	**23 44 16.9**	**-1.3**
JFWS	**Jewell Farm**	**27.82**	**91**	P	**P**	**23 44 19.8**	**+1.6**
JFWS				IAmb	IAmb	23 44 22.0	
	comp=Z,23nm,1.1s						
FNO	**Franklin**	**27.94**	**111**	P	**P**	**23 44 18.9**	**-0.4**
FNO				IAmb	IAmb	23 44 21.1	
	comp=Z,13nm,1.2s						
RES	**Resolute Bay**	**28.02**	**19**	P	**P**	**23 44 21.4**	**+1.8**
	comp=Z,1.6nm,1.0s,baz=222,slow=11,SNR=4.4						
RES				LR	LR	23 55 30.6	
	comp=Z,1µm,20.4s,baz=193,slow=36						
	comp=Z,1.6nm,1.0s						
RES	**Resolute Bay**	**28.02**	**19**	P	**P**	**23 44 20.9**	**+1.4**
RES				IAmb	IAmb	23 44 49.5	
	comp=Z,12nm,1.2s						
DEOK	**Depew**	**28.08**	**109**	P	**P**	**23 44 19.5**	**-1.0**
X34A	**Smith Ranch, M**	**28.14**	**113**	P	**P**	**23 44 20.6**	**-0.4**
X34A				IAmb	IAmb	23 44 33.1	
	comp=Z,31nm,1.5s						
SGCY	**Sterling City**	**28.24**	**121**	P	**P**	**23 44 22.1**	**0.0**
SGCY				IAmb	IAmb	23 44 22.8	
	comp=Z,38nm,1.9s						
W35A	**Tecumseh**	**28.32**	**111**	P	**P**	**23 44 22.7**	**0.0**
W35A				IAmb	IAmb	23 44 28.6	
	comp=Z,34nm,1.5s						
TUL3	**Leonard**	**28.46**	**108**	P	**P**	**23 44 24.4**	**+0.4**
TUL3				IAmb	IAmb	23 44 25.7	
	comp=Z,18nm,1.0s						
ABTX	**Abilene, Hawle**	**28.52**	**118**	P	**P**	**23 44 24.1**	**-0.5**
N41A	**Harden Midland**	**28.60**	**95**	P	**P**	**23 44 26.2**	**+1.1**
N41A				IAmb	IAmb	23 44 27.4	
	comp=Z,24nm,1.1s						
L42A	**Oliver, Polo**	**28.66**	**92**	P	**P**	**23 44 26.3**	**+0.6**
RLO	**Rose Lookout**	**28.75**	**107**	P	**P**	**23 44 26.6**	**0.0**
RLO				IAmb	IAmb	23 44 32.2	
	comp=Z,19nm,1.2s						
TX31	**Lajitas Ar. Si**	**28.94**	**128**		**P**	**23 44 27.5**	**-0.9**
TX31				IAmb	IAmb	23 44 29.8	
	comp=Z,10nm,1.1s						
TXAR	**Lajitas Array**	**28.94**	**128**	P	**P**	**23 44 28.0**	**-0.4**
	comp=Z,6.2nm,1.0s,baz=323,slow=6.3,SNR=34						
TXAR				LR	LR	23 56 40.2	
	comp=Z,418nm,18.4s,baz=324,slow=38						
	comp=Z,6.2nm,1.0s						
TXAR	**Lajitas Array**	**28.94**	**128**	P	**P**	**23 44 28.1**	**-0.4**
LOOK	**Love County**	**28.95**	**113**	P	**P**	**23 44 29.0**	**+0.7**
U38A	**Gravette**	**28.96**	**106**		**P**	**23 44 29.3**	**+0.9**
OZNA	**Ozona**	**29.00**	**122**	P	**P**	**23 44 28.8**	**-0.1**
OZNA				IAmb	IAmb	23 45 33.0	
	comp=Z,28nm,1.8s						
SAND	**Sanderson**	**29.23**	**125**		**P**	**23 44 30.7**	**-0.2**
SAND				IAmb	IAmb	23 44 33.6	
	comp=Z,43nm,1.9s						
HHAR	**Hobbs**	**29.34**	**106**	P	**P**	**23 44 32.5**	**+0.7**
HHAR				IAmb	IAmb	23 44 50.6	
	comp=Z,30nm,1.9s						
Z35A	**Perchaven, San**	**29.38**	**114**	P	**P**	**23 44 32.1**	**0.0**
Z35A				IAmb	IAmb	23 44 33.3	
	comp=Z,19nm,0.9s						
HQIL	**Hanson Quary C**	**29.92**	**91**	P	**P**	**23 44 37.4**	**+0.6**
JCT	**Junction City**	**30.06**	**121**	P	**P**	**23 44 37.9**	**-0.4**
JCT				IAmb	IAmb	23 44 38.7	
	comp=Z,9.5nm,0.8s						
WHTX	**Lake Whitney,**	**30.23**	**116**	P	**P**	**23 44 39.5**	**-0.2**
DRIO	**Del Rio**	**30.45**	**123**		**P**	**23 44 40.7**	**-0.9**
DRIO				IAmb	IAmb	23 44 43.5	
	comp=Z,9.2nm,1.0s						
FVM	**French Village**	**30.45**	**99**	P	**P**	**23 44 41.0**	**-0.6**
LPIG	**La Paz**	**30.50**	**143**	LR	LR	23 57 21.5	
	comp=Z,365nm,18.8s,baz=334,slow=37						
FCAR	**Ozark Folk Cen**	**30.71**	**104**	P	**P**	**23 44 43.5**	**-0.4**
FCAR				IAmb	IAmb	23 44 45.1	
	comp=Z,9.8nm,0.8s						
MIAR	**Mount Ida**	**30.72**	**108**	P	**P**	**23 44 44.8**	**+0.9**
MIAR				IAmb	IAmb	23 45 04.2	
	comp=Z,27nm,1.4s						
Z38A	**Mt. Pleasant**	**30.76**	**111**	P	**P**	**23 44 44.6**	**+0.3**
LCAR	**Lake Charles**	**31.19**	**103**	IAmb	IAmb	23 44 51.0	
	comp=Z,19nm,1.3s						
POIN	**Pond Inlet**	**31.32**	**27**	P	**P**	**23 44 49.7**	**+0.9**
833A	**Chaparral WMA,**	**31.97**	**123**	IAmb	IAmb	23 44 57.7	
	comp=Z,18nm,1.1s						
HKT	**Hockley**	**32.68**	**116**	P	**P**	**23 45 01.4**	**+0.2**
HKT				IAmb	IAmb	23 45 02.7	
	comp=Z,21nm,1.5s						
P48A	**Milroy**	**32.74**	**93**	P	**P**	**23 45 03.2**	**+1.4**
OXF	**Oxford**	**33.29**	**103**		**P**	**23 45 05.0**	**-1.5**
143A	**Socs Landing,**	**33.30**	**108**	P	**P**	**23 45 06.9**	**+0.3**
HBVL	**Hebbronville**	**33.36**	**123**	P	**P**	**23 45 07.8**	**+0.7**
HBVL				IAmb	IAmb	23 45 09.8	
	comp=Z,12nm,1.1s						
SADO	**Sadowa**	**33.95**	**80**	LR	LR	23 59 38.6	
	comp=Z,1µm,21.7s,baz=324,slow=37						
R50A	**Paris**	**34.13**	**94**	P	**P**	**23 45 14.0**	**+0.2**
FRB	**Frobisher Bay**	**34.13**	**44**	LR	LR	23 59 57.9	
	comp=Z,471nm,21.0s,baz=274,slow=37						
SHEM	**Shemya Is, Ala**	**34.14**	**296**	LR	LR	23 57 28.5	
	comp=Z,416nm,18.6s,baz=124,slow=34						
VBMS	**Vicksburg**	**34.17**	**108**	P	**P**	**23 45 15.1**	**+0.9**
P51A	**Williamsport**	**34.23**	**91**	P	**P**	**23 45 14.0**	**-0.7**
Q51A	**Peebles**	**34.31**	**92**	P	**P**	**23 45 15.0**	**-0.4**
BILL	**Bilibino**	**34.94**	**324**	P	**P**	**23 45 19.1**	**-1.4**
TKL	**Tuckaleechee C**	**36.08**	**97**	LR	LR	00 00 50.9	
	comp=Z,2µm,18.5s,baz=302,slow=37						
V53A	**Saluda**	**36.68**	**96**	P	**P**	**23 45 35.5**	**-0.3**
SCHQ	**Schefferville**	**37.12**	**59**	LR	LR	00 00 41.8	
	comp=Z,733nm,18.2s,baz=290,slow=36						
JSC	**Jenkinsville**	**38.54**	**96**	P	**P**	**23 45 51.6**	**+0.1**
SFJD	**Kangerlussuaq**	**40.79**	**36**	LR	LR	00 03 54.5	
	comp=Z,568nm,19.0s,baz=295,slow=37						
SEY	**Seymchan**	**41.66**	**318**	LR	LR	00 04 08.8	
	comp=Z,504nm,18.0s,baz=88,slow=37						
PETK	**Petropavlovsk-**	**43.09**	**303**	P	**P**	**23 46 27.0**	**-1.8**
	comp=Z,3.1nm,0.7s,baz=160,slow=9.0,SNR=3.8						
PETK				LR	LR	00 02 09.8	
	comp=Z,224nm,18.9s,baz=57,slow=33						
	comp=Z,3.1nm,0.7s						
CMIG	**Matias Romero**	**43.55**	**128**	LR	LR	00 05 29.1	
	comp=Z,197nm,18.6s,baz=325,slow=37						
TIXI	**Tiksi**	**46.21**	**335**	LR	LR	00 09 53.0	
	comp=Z,268nm,18.8s,baz=98,slow=41						
TIXI	**Tiksi**	**46.21**	**335**	P	**P**	**23 46 53.7**	**+0.3**
TIXI				IAmb	IAmb	23 47 02.7	
	comp=Z,17nm,1.5s						
SPITS	**Spitsbergen Ar**	**49.73**	**9**	LR	LR	00 09 34.8	
	comp=Z,536nm,18.7s,baz=340,slow=37						
JMIC	**Jan Mayen**	**51.59**	**21**	LR	LR	00 10 05.0	
	comp=Z,394nm,19.1s,baz=306,slow=36						
BORG	**Borgarnes**	**52.32**	**31**	LR	LR	00 10 40.8	
	comp=Z,338nm,18.9s,baz=310,slow=37						
ASAJ	**Asahikawa**	**56.38**	**300**	LR	LR	00 08 37.9	
	comp=Z,107nm,21.7s,baz=125,slow=32						
NRIK	**Noril'sk**	**57.19**	**345**	P	**P**	**23 48 14.8**	**-0.7**
	comp=Z,2.3nm,0.9s,baz=42,slow=4.9,SNR=7.7						
	comp=Z,2.3nm,0.9s						
NRIK	**Noril'sk**	**57.19**	**345**	P	**P**	**23 48 15.6**	**+0.1**
NRIK				IAmb	IAmb	23 48 21.9	
	comp=Z,10nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**58.19**	**262**	T	T	00 50 46.7	
	baz=42,slow=75						
H11N3	**WAKE ISLAND Hy**	**58.20**	**262**	T	T	00 50 46.5	
	baz=42,slow=75						
H11N1	**WAKE ISLAND Hy**	**58.21**	**262**	T	T	00 50 50.0	
	baz=42,slow=75						
ARCES	**ARCESS Array B**	**58.70**	**10**	LR	LR	00 14 12.8	
	comp=Z,274nm,21.6s,baz=341,slow=36						
H11S1	**WAKE ISLAND Hy**	**59.22**	**262**	T	T	00 52 08.4	
	baz=46,slow=75						
H11S2	**WAKE ISLAND Hy**	**59.23**	**262**	T	T	00 52 07.6	
	baz=46,slow=75						
H11S3	**WAKE ISLAND Hy**	**59.24**	**262**	T	T	00 52 12.0	
	baz=46,slow=75						
SJG	**San Juan**	**59.47**	**99**	LR	LR	00 15 17.5	
	comp=Z,165nm,19.9s,baz=319,slow=37						
HEH	**HeiHe**	**59.96**	**314**	*e*P	**P**	**23 48 32.3**	**-2.7**
HEH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TAOE	**Nuku Hiva Isla**	**60.00**	**192**	*e*LR	LR	00 06 09.6	
	comp=Z,418nm,25.6s						
SDV	**Santo Domingo**	**63.80**	**109**	LR	LR	00 19 48.9	
	comp=Z,112nm,19.1s,baz=276,slow=39						
HILR	**Hailar Array B**	**63.88**	**317**	P	**P**	**23 48 59.9**	**-1.6**
	comp=Z,4.8nm,1.0s,baz=96,slow=6.0,SNR=4.6						
HILR				LR	LR	00 17 46.1	
	comp=Z,210nm,18.7s,baz=125,slow=37						
	comp=Z,4.8nm,1.0s						
MJAR	**Matsushiro Arr**	**63.98**	**296**	LR	LR	00 12 25.5	
	comp=Z,127nm,21.5s,baz=28,slow=32						
NB2	**NORSAR Subarra**	**64.28**	**20**	P	**P**	**23 49 04.6**	**+0.7**
	comp=Z,7.7nm,1.7s,baz=330,slow=6.9						
NOA	**NORSAR Array B**	**64.28**	**20**	P	**P**	**23 49 05.2**	**+1.3**
	comp=Z,1.3nm,1.0s,baz=336,slow=6.6,SNR=3.9						
NOA				LR	LR	00 18 30.9	
	comp=Z,236nm,18.5s,baz=10.0,slow=37						
	comp=Z,1.3nm,1.0s						
ROSC	**El Rosal**	**64.86**	**115**	LR	LR	00 22 36.0	
	comp=Z,123nm,18.3s,baz=4.6,slow=41						
EKA	**Eskdalemuir Ar**	**65.35**	**30**	LR	LR	00 17 27.6	
	comp=Z,334nm,18.3s,baz=342,slow=36						
HFS	**Hagfors**	**65.62**	**19**	LR	LR	00 18 34.1	
	comp=Z,394nm,19.3s,baz=356,slow=36						
OTAV	**Otavalo**	**66.34**	**122**	P	**P**	**23 49 16.9**	**-1.4**
FINES	**FINESS Array B**	**66.53**	**12**	P	**P**	**23 49 19.2**	**+0.8**
	comp=Z,1.9nm,0.9s,baz=9.4,slow=7.4,SNR=4.2						
FINES				LR	LR	00 19 41.8	
	comp=Z,245nm,18.4s,baz=350,slow=37						
	comp=Z,1.9nm,0.9s						
JCJ	**Chichijima**	**68.40**	**287**	LR	LR	00 12 30.6	
	comp=Z,109nm,21.8s,baz=36,slow=30						
KSRS	**Korea Array**	**68.98**	**304**	LR	LR	00 17 12.8	
	comp=Z,61nm,20.9s,baz=55,slow=34						
PPT	**Papeete**	**70.19**	**200**	LR	LR	00 12 16.4	
	comp=Z,144nm,19.1s,baz=338,slow=29						
PPT2	**Papeete2**	**70.21**	**200**	*e*S	**S**	**23 58 52.4**	**-1.1**
	comp=Z,249nm,24.8s						
PPT2	**Papeete2**	**70.21**	**200**	*e*LR	LR	00 10 53.1	
	comp=Z,213nm,25.0s						
PPT2				*e*LR	LR	00 10 53.2	
	comp=Z,330nm,26.2s						
JNU	**Nakatsue**	**70.59**	**299**	LR	LR	00 16 41.8	
	comp=Z,123nm,21.8s,baz=124,slow=33						
SONM	**Songino Array**	**70.66**	**324**	P	**P**	**23 49 43.8**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=46,slow=4.3,SNR=5.7						
SONM				LR	LR	00 21 04.4	
	comp=Z,312nm,19.1s,baz=52,slow=36						
	comp=Z,0.5nm,0.7s						
SONM	**Songino Array**	**70.66**	**324**	IAmb	IAmb	23 49 49.7	
	comp=Z,8.8nm,1.4s						
KIRV	**Kirov**	**71.07**	**0**	LR	LR	00 25 50.7	
	comp=Z,127nm,18.6s,baz=354,slow=40						
ZAA0	**Zalesovo Array**	**71.77**	**339**		**P**	**23 49 51.5**	**+0.4**
ZALV	**Zalesovo Beam**	**71.77**	**339**	P	**P**	**23 49 51.6**	**+0.6**
	comp=Z,1.5nm,0.6s,baz=52,slow=7.5,SNR=8.5						
ZALV				LR	LR	00 26 34.4	
	comp=Z,163nm,18.5s,baz=346,slow=40						
	comp=Z,1.5nm,0.6s						
PABE	**Paberze**	**71.91**	**15**	P	**P**	**23 49 53.0**	**+1.2**
ATAH	**Atahualpa**	**72.58**	**126**	LR	LR	00 21 19.4	
	comp=Z,181nm,21.2s,baz=332,slow=36						
ARTI	**Arti**	**73.07**	**355**	LR	LR	00 23 28.6	
	comp=Z,89nm,21.7s,baz=16,slow=37						
CLL	**Collm**	**73.54**	**23**	*e*P	**P**	**23 50 02.0**	**+0.4**
CLL				AMS	AMS	00 27 00.0	
	comp=Z,300nm,18.6s						
RKT	**Rikitea**	**73.64**	**185**	*e*LR	LR	00 12 36.4	
	comp=Z,4µm,30.5s						
OBN	**Obninsk**	**73.93**	**8**	LR	LR	00 25 41.4	
	comp=Z,188nm,18.1s,baz=20,slow=38						
HHC	**Hu-ho-hao-te**	**74.29**	**316**	*e*P	**P**	**23 50 10.4**	**+4.1**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,190nm,7.0s						
BVAR	**Borovoye Array**	**75.27**	**348**	P	**P**	**23 50 11.2**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=5.7,slow=5.8,SNR=6.4						
BVAR				LR	LR	00 24 42.2	
	comp=Z,140nm,20.7s,baz=19,slow=37						
	comp=Z,0.3nm,0.6s						
HNS	**HongShan**	**75.65**	**312**	⇓P	**P**	**23 50 17.9**	**+3.8**
HNS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HNS				LR	LR		
	comp=E,260nm,18.1s						
HNS				LR	LR		
	comp=Z,230nm,17.2s						
TBI	**Tubuai**	**75.77**	**199**	*e*S	**S**	**23 59 53.4**	**-3.0**
	comp=Z,539nm,29.5s						
TBI	**Tubuai**	**75.77**	**199**	*e*LR	LR	00 13 25.9	
	comp=Z,2µm,44.0s						
TBI				*e*LR	LR	00 13 29.2	
	comp=Z,1µm,29.2s						
GERES	**GERESS Array B**	**75.98**	**24**	P	**P**	**23 50 17.3**	**+1.3**
	comp=Z,0.5nm,0.9s,baz=325,slow=11,SNR=3.5						
GERES				LR	LR	00 25 51.2	
	comp=Z,159nm,19.2s,baz=356,slow=37						
	comp=Z,0.5nm,0.9s						
KURK	**Kurchatov**	**76.12**	**342**	P	**P**	**23 50 16.6**	**+0.1**
KURK	**Kurchatov**	**76.12**	**342**	IAmb	IAmb	23 50 22.3	
	comp=Z,2.8nm,0.9s						
KURBB	**Kurchatov Arra**	**76.23**	**342**	P	**P**	**23 50 16.6**	**-0.5**
	comp=Z,1.8nm,0.2s,baz=20,slow=5.8,SNR=5.2						
KURBB				LR	LR	00 30 24.0	
	comp=Z,122nm,18.1s,baz=165,slow=41						
	comp=Z,1.8nm,0.2s						
VRAC	**Vranov**	**76.27**	**22**	LR	LR	00 25 42.0	
	comp=Z,240nm,18.4s,baz=340,slow=37						
GUMO	**Guam**	**76.75**	**275**	LR	LR	00 16 43.0	
	comp=Z,169nm,20.3s,baz=82,slow=30						
DAVOX	**Davos/Dischmat**	**76.82**	**27**	LR	LR	00 26 45.3	
	comp=Z,268nm,18.5s,baz=322,slow=38						
BELG	**Belogornoye**	**77.25**	**2**	LR	LR	00 28 47.2	
	comp=Z,138nm,19.9s,baz=49,slow=39						
AKASG	**Malin Array Be**	**77.39**	**14**	P	**P**	**23 50 23.6**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=350,slow=4.9,SNR=6.0						
AKASG				LR	LR	00 25 21.7	
	comp=Z,300nm,19.7s,baz=352,slow=36						
	comp=Z,0.6nm,0.5s						
AKASG	**Malin Array Be**	**77.39**	**14**	IAmb	IAmb	23 51 00.5	
	comp=Z,6.7nm,1.4s						
MDP	**Montagnes des**	**77.87**	**97**	LR	LR	00 24 41.6	
	comp=Z,158nm,21.9s,baz=312,slow=36						
NJ2	**Nanjing**	**77.88**	**306**	*e*P	**P**	**23 50 30.3**	**+3.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MKAR	**Makanchi Array**	**79.04**	**338**	P	**P**	**23 50 32.0**	**-1.0**
	comp=Z,0.8nm,0.9s,baz=35,slow=4.9,SNR=14						
MKAR				LR	LR	00 29 25.3	
	comp=Z,172nm,18.1s,baz=6.5,slow=39						
	comp=Z,0.8nm,0.9s						
MKAR	**Makanchi Array**	**79.04**	**338**	P	**P**	**23 50 32.5**	**-0.5**
MAKZ	**Makanchi**	**79.10**	**338**	P	**P**	**23 50 33.4**	**+0.1**
GTA	**Gaotai**	**80.32**	**323**	*e*P	**P**	**23 50 44.3**	**+4.1**
GTA				pP	PcP	23 50 47.3	-0.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WMQ	**Urumqi**	**80.40**	**334**	*e*P	P	23 50 45.5	+5.0
WMQ				pmax	pmax		
	comp=Z,14nm,1.3s						
WMQ				LR	LR		
	comp=Z,130nm,24.3s						
XAN	**Xi'an**	**81.08**	**314**	⇑P	**P**	**23 50 42.5**	**-1.8**
XAN				pP	pP	23 50 47.3	+0.4
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
XAN				LR	LR		
	comp=N,240nm,14.4s						
XAN				LR	LR		
	comp=E,350nm,17.9s						
XAN				LR	LR		
	comp=Z,180nm,17.2s						
LZH	**Lanzhou**	**81.58**	**319**	*e*P	**P**	**23 50 50.8**	**+3.8**
LZH				pP	PcP	23 50 57.0	+4.1
LZH				pmax	pmax		
	comp=Z,14nm,1.2s						
MLR	**Muntele Rosu**	**81.89**	**17**	LR	LR	00 28 19.9	
	comp=Z,401nm,18.5s,baz=24,slow=36						
AAK	**Ala-Archa**	**84.67**	**342**	LR	LR	00 34 37.4	
	comp=Z,95nm,18.1s,baz=26,slow=40						
LPAZ	**La Paz**	**85.66**	**122**	P	**P**	**23 51 07.0**	**-1.5**
	comp=Z,1.7nm,0.7s,baz=204,slow=3.6,SNR=5.5						
LPAZ				LR	LR	00 33 49.8	
	comp=Z,65nm,19.0s,baz=334,slow=39						
	comp=Z,1.7nm,0.7s						
LPAZ	**La Paz**	**85.66**	**122**	P	**P**	**23 51 06.0**	**-2.5**
LPAZ				IAmb	IAmb	23 51 10.0	
	comp=Z,8.0nm,1.4s						
KBZ	**Khabaz**	**85.73**	**5**	LR	LR	00 33 08.3	
	comp=Z,132nm,19.1s,baz=355,slow=38						
KEST	**Kesra**	**86.67**	**32**	LR	LR	00 31 08.0	
	comp=Z,206nm,18.9s,baz=1.2,slow=36						
VAE	**Valguarnera**	**86.68**	**28**	LR	LR	00 31 12.9	
	comp=Z,184nm,18.8s,baz=309,slow=36						
KSH	**Kashi**	**87.38**	**340**	P	P	23 51 23.8	+7.5
KSH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BRTR	**Keskin Array B**	**88.77**	**13**	LR	LR	00 34 12.4	
	comp=Z,122nm,18.6s,baz=339,slow=38						
GAR	**Garm**	**88.96**	**345**	P	**P**	**23 51 24.7**	**+0.8**
SIV	**San Ignacio**	**89.33**	**116**	LR	LR	00 38 12.1	
	comp=Z,114nm,18.0s,baz=284,slow=40						
CHGR	**Chuyangaron**	**89.49**	**345**		**P**	**23 51 25.8**	**-0.5**
SHAA	**Shahritus**	**90.72**	**346**	P	**P**	**23 51 32.0**	**0.0**
SHAA				IAmb	IAmb	23 51 39.9	
	comp=Z,32nm,1.3s						
PZH	**PanZhiHua**	**90.73**	**316**	P	**P**	**23 51 35.3**	**+3.0**
PMG	**Port Moresby**	**92.90**	**259**	LR	LR	00 27 19.9	
	comp=Z,102nm,20.2s,baz=26,slow=32						
DAV	**Davao City (W)**	**93.79**	**286**	LR	LR	00 25 54.5	
	comp=Z,145nm,21.9s,baz=358,slow=30						
MMAI	**Mount Meron Ar**	**95.61**	**13**	LR	LR	00 38 02.5	
	comp=Z,77nm,20.6s,baz=324,slow=37						
ASF	**Jabal al Asfar**	**96.64**	**11**	LR	LR	00 38 09.1	
	comp=Z,88nm,21.8s,baz=8.3,slow=37						
BDFB	**Brasilia**	**96.78**	**106**	LR	LR	00 38 42.9	
	comp=Z,88nm,20.9s,baz=326,slow=37						
EIL	**Elat**	**98.83**	**13**	LR	LR	00 39 54.2	
	comp=Z,92nm,18.5s,baz=350,slow=37						
CPUP	**Villa Florida**	**99.64**	**120**	LR	LR	00 44 21.2	
	comp=Z,47nm,18.5s,baz=344,slow=40						

MEX ***24*** *00:13:38.9±0.4, 13.°68N×93.°32W, h10km, MD4.1*

GCG ***24*** *00:13:39.2±0.5, 14.°38N×93.°42W, h38km±999km, MD4.7, ML3.6*

IDC ***24*** *00:13:41.7±2.2, 14.°08N×92.°90W, h0km, mb3.7/3, mbtmp3.6/6, ML3.5/3, Error ellipse: s-maj=40.8km s-min=20.6km az=15.0*

ISC 24 00:13:40.0±2.7**, 13.°96N**±0.°08×**93.°11W**±0.°04**, h6**km±15km**,** **n25,** σ**2.°74**/40**, mb3.8**/3**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PATR	**El Naranjo**	**1.43**	**36**	*e*P	**Pb**	**00 14 06.5**	**-0.8**
PATR				*e*S	**Sg**	**00 14 27.7**	**+1.6**
RTAL	**Retalhuleu**	**1.49**	**68**	*i* P	**Pn**	**00 14 06.0**	**-1.3**
RTAL				*i* S	**Sn**	**00 14 23.8**	**-3.3**
CHUJ	**Union Juarez**	**1.49**	**41**	*e*P	**Pn**	**00 14 07.0**	**-0.6**
CHUJ				*e*S	**Sn**	**00 14 24.1**	**-3.4**
PAVE	**Pavencul**	**1.53**	**36**	*e*P	**Pb**	**00 14 08.0**	**-0.9**
PAVE				*e*S	**Sg**	**00 14 29.9**	**+0.8**
PCIG		**1.74**	**357**	*e*P	**Pb**	**00 14 11.4**	**-1.0**
PCIG				*e*S	**Sn**	**00 14 31.6**	**-1.8**
STG2	**El Palmar, Qui**	**1.75**	**74**	*e*P	**Pn**	**00 14 08.1**	**-3.0**
STG5	**El Palmar, Qui**	**1.77**	**75**	*i* P	**Pn**	**00 14 08.2**	**-3.1**
STG5				*i* S	**Sn**	**00 14 31.0**	**-3.3**
STG8	**El Palmar, Qui**	**1.78**	**74**	*i* P	**Pn**	**00 14 08.7**	**-2.8**
STG8				IAML		00 14 33.2	
	comp=E,306nm,0.2s						
QUIS	**Sacapulas**	**2.36**	**56**	*i* P	**Pn**	**00 14 20.4**	**+0.9**
QUIS				IAML		00 15 03.0	
	comp=E,418nm,0.5s						
CCIG	**Comitan**	**2.50**	**22**	*e*P	**Pb**	**00 14 24.8**	**-0.7**
CCIG				*e*S	**Sg**	**00 14 58.6**	**-1.7**
APG	**El Apazote**	**2.77**	**68**	Pn	**Pn**	**00 14 24.9**	**-0.3**
	comp=E,0.3nm,0.3s,baz=186,slow=12,SNR=18						
APG				Sn	**Sn**	**00 14 56.7**	**-2.4**
	comp=E,0.2nm,0.3s,baz=231,slow=21,SNR=5.6						

APG	**El Apazote**	**2.77**	**68**	*e*P	**Pn**	**00 14 25.1**	**-0.1**
TGIG		**2.80**	**360**	*e*P	**Pb**	**00 14 28.1**	**-2.5**
TGIG				*e*S	**Sb**	**00 15 03.9**	**-1.4**
HUIG	**Huatulco**	**3.41**	**302**	*e*P	**Pn**	**00 14 31.8**	**-2.1**
HUIG				*e*S	**Sn**	**00 15 08.2**	**-6.4**
CMIG	**Matias Romero**	**3.55**	**331**	Pn	**Pn**	**00 14 37.1**	**+1.2**
	comp=E,3.1nm,0.3s,baz=181,slow=12,SNR=30						
CMIG				Sn	**Sn**	**00 15 20.2**	**+2.0**
	comp=E,7.0nm,0.3s,baz=37,slow=22,SNR=10						
	comp=E,7.6nm,0.2s						
CMIG	**Matias Romero**	**3.55**	**331**	*e*P	**Pn**	**00 14 37.0**	**+1.2**
CMIG				*e*S	**Sn**	**00 15 16.9**	**-1.3**
PEIG	**Puerto Escondi**	**4.39**	**298**	*e*P	**Pn**	**00 14 45.7**	**-1.7**
PEIG				*e*S	Sn	00 15 27.7	-11
NEUV	**Arroyo Zacate**	**4.54**	**326**	*e*P	**Pn**	**00 14 49.3**	**-0.1**
NEUV				*e*S	**Sn**	**00 15 35.1**	**-7.5**
JAUV	**Jalcomulco**	**6.44**	**327**	*e*P	**Pn**	**00 15 14.8**	**-0.7**
JAUV				*e*S	**Sn**	**00 16 24.3**	**-5.1**
TEIG	**Tepich**	**7.76**	**36**	Pn	**Pn**	**00 15 34.4**	**+0.8**
	baz=131,slow=23,SNR=1.2						
TEIG				Sn	**Sn**	**00 16 58.7**	**-3.2**
	baz=130,slow=24,SNR=1.3						
JTS	**Las Juntas de**	**8.77**	**114**	Pn	**Pn**	**00 15 46.4**	**-1.1**
	comp=E,0.4nm,0.3s,baz=66,slow=21,SNR=2.1						
	comp=E,3.3nm,0.6s						
TXAR	**Lajitas Array**	**18.16**	**329**	P	**P**	**00 17 56.5**	**+3.1**
	comp=E,0.1nm,0.3s,baz=149,slow=11,SNR=5.3						
	comp=E,0.3nm,0.5s						
NVAR	**Mina Array Bea**	**33.03**	**322**	P	**P**	**00 20 19.2**	**+2.6**
	comp=E,0.9nm,0.7s,baz=131,slow=5.3,SNR=6.0						
	comp=E,0.9nm,0.7s						
YKA	**Yellowknife Ar**	**50.82**	**347**	P	**P**	**00 22 42.2**	**+1.1**
	comp=E,1.0nm,0.9s,baz=156,slow=6.9,SNR=9.2						
	comp=E,1.0nm,0.9s						
ILAR	**Eielson Array**	**62.45**	**337**	P	**P**	**00 24 07.3**	**+3.4**
	comp=E,0.4nm,0.6s,baz=110,slow=7.6,SNR=6.9						
	comp=E,0.4nm,0.6s						

IDC 24 00:18:55.9±3.0**, 16°.24S**×**176°.19W, h0km, mb3.9**/2**, mbtmp3.9**/2**, MS3.7**/19**, Error ellipse: s-maj=354.0km s-min=62.9km az=166.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**36.34**	**276**	LR	LR	00 39 50.4	
	comp=Z,131nm,18.2s,baz=22,slow=34						
H11S2	**WAKE ISLAND Hy**	**38.40**	**333**	T	T	01 06 56.9	
	baz=149,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**38.41**	**333**	T	T	01 07 03.6	
	baz=149,slow=76,SNR=14						
H11S1	**WAKE ISLAND Hy**	**38.42**	**333**	T	T	01 07 03.9	
	baz=149,slow=76,SNR=18						
H11N3	**WAKE ISLAND Hy**	**39.40**	**334**	T	T	01 08 13.5	
	baz=150,slow=76,SNR=6.6						
H11N1	**WAKE ISLAND Hy**	**39.41**	**334**	T	T	01 08 07.4	
	baz=150,slow=76,SNR=9.6						
H11N2	**WAKE ISLAND Hy**	**39.42**	**334**	T	T	01 08 18.4	
	baz=150,slow=76,SNR=6.7						
WRA	**Warramunga Arr**	**47.04**	**258**	P	P	00 27 29.6	-0.1
	0.5nm,0.7s,baz=93,slow=7.9,SNR=5.5						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**47.30**	**253**	P	P	00 27 31.5	-0.1
	2.6nm,0.6s,baz=87,slow=7.7,SNR=33						
	2.6nm,0.6s						
GUMO	**Guam**	**48.58**	**305**	LR	LR	00 43 34.4	
	comp=Z,65nm,21.8s,baz=82,slow=30						
JCJ	**Chichijima**	**59.05**	**316**	LR	LR	00 51 08.8	
	comp=Z,64nm,18.7s,baz=3.0,slow=33						
DAV	**Davao City (W)**	**62.10**	**287**	LR	LR	00 55 42.8	
	comp=Z,104nm,18.3s,baz=344,slow=36						
MJAR	**Matsushiro Arr**	**67.88**	**322**	LR	LR	00 53 31.0	
	comp=Z,92nm,21.2s,baz=127,slow=31						
SHEM	**Shemya Is, Ala**	**69.19**	**354**	LR	LR	00 52 33.6	
	comp=Z,80nm,21.3s,baz=248,slow=29						
JNU	**Nakatsue**	**70.44**	**315**	LR	LR	00 56 33.0	
	comp=Z,42nm,18.7s,baz=129,slow=32						
ASAJ	**Asahikawa**	**70.87**	**330**	LR	LR	00 55 03.6	
	comp=Z,70nm,20.6s,baz=130,slow=31						
PETK	**Petropavlovsk-**	**72.64**	**344**	LR	LR	00 54 14.0	
	comp=Z,29nm,21.9s,baz=80,slow=29						
KSRS	**Korea Array**	**74.90**	**317**	LR	LR	00 57 37.3	
	comp=Z,30nm,21.7s,baz=50,slow=31						
PFO	**Pinyon Flats O**	**75.46**	**48**	LR	LR	00 58 01.4	
	comp=Z,84nm,19.8s,baz=240,slow=31						
LPIG	**La Paz**	**75.77**	**59**	LR	LR	00 56 16.0	
	comp=Z,39nm,19.0s,baz=242,slow=30						
MA2	**Magadan**	**80.18**	**344**	LR	LR	01 01 49.6	
	comp=Z,25nm,20.8s,baz=54,slow=32						
SEY	**Seymchan**	**82.65**	**346**	LR	LR	01 02 50.5	
	comp=Z,57nm,19.6s,baz=130,slow=32						
ANMO	**Albuquerque**	**83.40**	**51**	LR	LR	01 01 33.7	
	comp=Z,64nm,18.8s,baz=278,slow=31						
YAK	**Yakutsk**	**88.84**	**338**	LR	LR	01 04 08.6	
	comp=Z,35nm,21.1s,baz=102,slow=30						
CMAR	**Chiang Mai Arr**	**90.34**	**289**	LR	LR	01 07 32.1	
	comp=Z,24nm,21.7s,baz=220,slow=32						
PLCA	**Paso Flores**	**90.92**	**133**	LR	LR	01 03 31.8	
	comp=Z,35nm,20.4s,baz=174,slow=29						
ULM	**Lac du Bonnet**	**96.28**	**40**	LR	LR	01 10 20.9	
	comp=Z,63nm,19.4s,baz=3.5,slow=32						
TORD	**Torodi Ar. Bea**	**176.31**	**146**	PKP	PKPdf	00 39 08.7	-0.5
	0.9nm,0.5s,baz=22,slow=1.3,SNR=12						

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*SNET **24** 00:19:54.8±0.9, 13°.25N×89°.59W, h42km, ML4.7*
*CATAC **24** 00:19:54.1±0.4, 13°N±3°×9°0W±°, h28km±2km, M4.9/19, MLv4.9/19, Error ellipse: s-maj=5.9km s-min=2.8km az=24.0, confirmed*
*GCG **24** 00:19:55.7±0.8, 13°.33N×89°.67W, h35km±14km, MD4.5, ML4.5*
*IDC **24** 00:19:56.7±1.6, 13°.44N×89°.48W, h85km±14km, mb3.6/11, mbtmp4.0/14, MS3.4/2, Error ellipse: s-maj=25.7km s-min=11.5km az=56.0*
*NEIC **24** 00:19:56.4±2.2, 13°.37N±0°.06×89°.43W±0°.07, h75km±5km, mb4.4/113, Error ellipse: s-maj=10.6km s-min=7.7km az=51.0*
*UCR **24** 00:20:02.7±1.4, 13°.32N×88°.95W, h75km, MW4.3*
ISC 24 00:19:54.0±0.7**, 13°.31N**±0°.04×**89°.55W**±0°.03**, h61**km±5km**, n286,** σ1§**71**/299**, mb4.3**/53**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.28**	**51**	*e*P	**Pn**	**00 20 04.2**	**+0.1**
LALI				*e*S	**Sn**	**00 20 11.0**	**-0.5**
LALI	**Alcalda de L**	**0.28**	**51**	*i* P	**Pn**	**00 20 04.4**	**+0.2**
LALI				*i* S	**Sn**	**00 20 11.0**	**-0.5**
LALI				IAML		00 20 12.3	
	comp=E,29µm,0.4s						
LALI	**Alcalda de L**	**0.28**	**51**	S	**Sn**	**00 20 11.1**	**-0.5**
LALI	**Alcalda de L**	**0.28**	**51**	P	**Pn**	**00 20 04.4**	**+0.2**
JAYA	**Jayaque - finc**	**0.36**	**16**	*i* P	**Pn**	**00 20 05.1**	**+0.2**
JAYA	**Jayaque - finc**	**0.36**	**16**	S	**Sn**	**00 20 13.1**	**+0.3**
JAYA	**Jayaque - finc**	**0.36**	**16**	P	**Pn**	**00 20 05.1**	**+0.2**
PMON	**Piamonte**	**0.46**	**30**	*e*P	**Pn**	**00 20 06.3**	**+0.5**
PMON				*e*S	**Sn**	**00 20 15.3**	**+1.0**
PMON	**Piamonte**	**0.46**	**30**	P	**Pn**	**00 20 06.4**	**+0.5**
PANCS	**Alcalda de**	**0.47**	**50**	*e*P	**Pn**	**00 20 06.3**	**+0.5**
PANCS				*e*S	**Sn**	**00 20 15.8**	**+1.4**
PANCS	**Alcalda de**	**0.47**	**50**	P	**Pn**	**00 20 06.4**	**+0.5**
LOMA	**Loma Larga**	**0.49**	**48**	*e*P	**Pn**	**00 20 06.4**	**+0.2**
LOMA				*e*S	**Sn**	**00 20 16.1**	**+1.1**
LOMA	**Loma Larga**	**0.49**	**48**	S	**Sn**	**00 20 15.7**	**+0.7**
LOMA	**Loma Larga**	**0.49**	**48**	P	**Pn**	**00 20 06.5**	**+0.3**
BOQS	**Boqueron**	**0.50**	**32**	*e*P	**Pn**	**00 20 07.2**	**+0.8**
UEES	**Universidad Ev**	**0.50**	**37**	*e*P	**Pn**	**00 20 07.0**	**+0.7**
UEES				*e*S	**Sn**	**00 20 16.3**	**+1.2**
UEES	**Universidad Ev**	**0.50**	**37**	P	**Pn**	**00 20 07.0**	**+0.7**
CEDA	**San Andres**	**0.51**	**17**	*e*P	**Pn**	**00 20 07.1**	**+0.8**
CEDA	**San Andres**	**0.51**	**17**	S	**Sn**	**00 20 16.7**	**+1.5**
CEDA	**San Andres**	**0.51**	**17**	P	**Pn**	**00 20 07.1**	**+0.8**
UTEC	**Universidad Te**	**0.52**	**41**	*e*P	**Pn**	**00 20 07.1**	**+0.7**
UTEC				*e*S	**Sn**	**00 20 16.7**	**+1.4**
UTEC	**Universidad Te**	**0.52**	**41**	P	**Pn**	**00 20 07.1**	**+0.7**
PIC2	**El Picacho**	**0.52**	**33**	*e*P	**Pn**	**00 20 07.3**	**+0.8**
CEVE	**Cerro Verde**	**0.52**	**352**	*e*P	**Pn**	**00 20 07.0**	**+0.4**
CEVE				*e*S	**Sn**	**00 20 18.3**	**+2.6**
CEVE	**Cerro Verde**	**0.52**	**352**	S	**Sn**	**00 20 16.5**	**+0.8**
CEVE	**Cerro Verde**	**0.52**	**352**	P	**Pn**	**00 20 07.2**	**+0.6**
UESS	**Universidad de**	**0.53**	**40**	*e*P	**Pn**	**00 20 07.5**	**+1.0**
UESS				*e*S	**Sn**	**00 20 17.3**	**+1.8**
SBLS	**San Blas**	**0.53**	**352**	*e*P	**Pn**	**00 20 07.1**	**+0.4**
IGN	**Direccin Gen**	**0.55**	**43**	*e*P	**Pn**	**00 20 07.7**	**+1.0**
IGN	**Direccin Gen**	**0.55**	**43**	S	**Sn**	**00 20 17.5**	**+1.7**
IGN	**Direccin Gen**	**0.55**	**43**	P	**Pn**	**00 20 07.7**	**+1.0**
UDBS	**Universidad Do**	**0.56**	**44**	*e*P	**Pn**	**00 20 07.8**	**+1.0**
UDBS	**Universidad Do**	**0.56**	**44**	S	**Sn**	**00 20 17.7**	**+1.7**
UDBS	**Universidad Do**	**0.56**	**44**	P	**Pn**	**00 20 07.8**	**+1.0**
SNJE	**San Jose**	**0.56**	**354**	*e*P	**Pn**	**00 20 07.6**	**+0.6**
LFRS	**El Faro**	**0.57**	**57**	*e*P	**Pn**	**00 20 07.7**	**+0.7**
RTR	**El Retiro**	**0.59**	**351**	*e*P	**Pn**	**00 20 07.8**	**+0.5**
LFU	**La Fuente**	**0.61**	**44**	*e*P	**Pn**	**00 20 08.6**	**+1.3**
NUBE	**Las Nubes**	**0.63**	**339**	*e*P	**Pn**	**00 20 08.0**	**+0.2**
NUBE	**Las Nubes**	**0.63**	**339**	*i* P	**Pn**	**00 20 07.9**	**+0.2**
NUBE				*e*S	**Sn**	**00 20 17.8**	**+0.1**
NUBE	**Las Nubes**	**0.63**	**339**	S	**Sn**	**00 20 18.1**	**+0.4**
NUBE	**Las Nubes**	**0.63**	**339**	P	**Pn**	**00 20 07.9**	**+0.2**
LBRS	**Las Brisas**	**0.65**	**49**	*e*P	**Pn**	**00 20 09.1**	**+1.3**
UNIC	**Universidad Ca**	**0.67**	**0**	*e*P	**Pn**	**00 20 08.9**	**+0.9**
UNIC	**Universidad Ca**	**0.67**	**0**	S	**Sn**	**00 20 20.5**	**+2.2**
UNIC	**Universidad Ca**	**0.67**	**0**	P	**Pn**	**00 20 09.0**	**+0.9**
FAME	**Alcaldia de Sa**	**0.70**	**320**	S	**Sn**	**00 20 18.4**	**-0.4**
FAME	**Alcaldia de Sa**	**0.70**	**320**	P	**Pn**	**00 20 08.2**	**-0.2**
PAVA	**Las Pavas**	**0.72**	**56**	*e*P	**Pn**	**00 20 10.2**	**+1.5**
PAVA	**Las Pavas**	**0.72**	**56**	S	**Sn**	**00 20 22.0**	**+2.6**
PAVA	**Las Pavas**	**0.72**	**56**	P	**Pn**	**00 20 10.0**	**+1.3**
LOAL	**Lomas de Alarc**	**0.72**	**342**	S	**Sn**	**00 20 21.3**	**+1.9**
LOAL	**Lomas de Alarc**	**0.72**	**342**	P	**Pn**	**00 20 09.6**	**+0.9**
SNVI	**San Vicente**	**0.75**	**66**	*e*P	**Pn**	**00 20 10.1**	**+0.9**
TECO	**Alcaldia de Te**	**0.78**	**73**	*e*P	**Pn**	**00 20 10.0**	**+0.7**
TECO	**Alcaldia de Te**	**0.78**	**73**	S	**Sn**	**00 20 22.0**	**+1.3**
TECO	**Alcaldia de Te**	**0.78**	**73**	P	**Pn**	**00 20 10.0**	**+0.7**
RBDL	**Robledal**	**0.81**	**350**	*e*P	**Pn**	**00 20 10.7**	**+0.8**
UESV	**Universidad de**	**0.81**	**66**	P	**Pn**	**00 20 11.1**	**+1.3**
UESV	**Universidad de**	**0.81**	**66**	S	**Sn**	**00 20 23.6**	**+2.3**
SCLA	**Alcaldia de Sa**	**0.89**	**64**	*e*P	**Pn**	**00 20 12.1**	**+1.4**
SCLA	**Alcaldia de Sa**	**0.89**	**64**	P	**Pn**	**00 20 12.0**	**+1.3**
SCLA	**Alcaldia de Sa**	**0.89**	**64**	S	**Sn**	**00 20 25.8**	**+2.7**
ESSJ	**San Jos, E**	**0.96**	**285**	*i* P	Pn	00 20 17.6	+6.0
ESSJ				*e*S	Sn	00 20 35.6	+11
PQSS	**Presa 15 de Se**	**1.01**	**72**	P	**Pn**	**00 20 11.6**	**-0.7**
LLGN	**La Laguna**	**1.03**	**35**	*e*P	**Pn**	**00 20 13.7**	**+1.1**
LLGN	**La Laguna**	**1.03**	**35**	S	**Sn**	**00 20 29.5**	**+3.1**
LLGN	**La Laguna**	**1.03**	**35**	P	**Pn**	**00 20 13.8**	**+1.2**
TECA	**Tecapa**	**1.03**	**80**	*e*P	**Pn**	**00 20 13.6**	**+0.8**
MTO3	**Montecristo**	**1.10**	**10**		**Pn**	**00 20 14.7**	**+1.1**
MTO3	**Montecristo**	**1.10**	**10**	*i* P	**Pn**	**00 20 14.7**	**+1.1**
MTO3	**Montecristo**	**1.10**	**10**	P	**Pn**	**00 20 14.7**	**+1.1**
MTO3	**Montecristo**	**1.10**	**10**	S	**Sn**	**00 20 30.6**	**+2.5**
PACA	**Pacayal**	**1.20**	**82**	*e*P	**Pn**	**00 20 16.3**	**+1.4**
PACA				*e*S	**Sn**	**00 20 34.0**	**+3.5**
PACA	**Pacayal**	**1.20**	**82**	S	**Sn**	**00 20 33.3**	**+2.9**
PACA	**Pacayal**	**1.20**	**82**	P	**Pn**	**00 20 16.6**	**+1.7**
PCG5	**San Vicente Pa**	**1.21**	**318**	*e*P	**Pn**	**00 20 19.5**	**+4.5**
PCG5				*e*S	**Sn**	**00 20 37.4**	**+6.7**
RANC	**El Ranchito**	**1.23**	**84**	*e*P	**Pn**	**00 20 16.5**	**+1.1**
VSM	**San Miguel**	**1.25**	**84**	*e*P	**Pn**	**00 20 16.7**	**+1.1**
ESQI	**Esquipulas**	**1.26**	**9**	Pn	**Pn**	**00 20 17.2**	**+1.5**
ESQI	**Esquipulas**	**1.26**	**9**	*e*P	**Pn**	**00 20 17.2**	**+1.5**
ESQI	**Esquipulas**	**1.26**	**9**	S	**Sn**	**00 20 34.5**	**+2.7**
ESQI	**Esquipulas**	**1.26**	**9**	P	**Pn**	**00 20 17.1**	**+1.4**
ZAFR2	**Estanzuela, Za**	**1.27**	**9**	*i* P	Pn	00 20 22.3	+6.6
BLLM	**Bellamira**	**1.28**	**84**	*e*P	**Pn**	**00 20 17.1**	**+1.2**
FG16	**Alotenango, Sa**	**1.34**	**316**	*e*P	Pn	00 20 22.1	+5.3
FG16				IAML		00 20 46.9	
	comp=N,30µm,0.4s						
CNRM	**Centro Naciona**	**1.35**	**83**	*e*P	**Pn**	**00 20 18.3**	**+1.6**
CNRM	**Centro Naciona**	**1.35**	**83**	S	**Sn**	**00 20 36.8**	**+3.0**
CNRM	**Centro Naciona**	**1.35**	**83**	P	**Pn**	**00 20 18.3**	**+1.6**
LCND	**La Caada**	**1.61**	**90**	*e*P	**Pn**	**00 20 21.7**	**+1.4**
LCND	**La Caada**	**1.61**	**90**	P	**Pn**	**00 20 21.7**	**+1.4**
LCND	**La Caada**	**1.61**	**90**	S	**Sn**	**00 20 43.0**	**+2.8**
ESSG	**Sabana Grande**	**1.64**	**311**	*e*P	**Pn**	**00 20 20.8**	**+0.1**
ESSG				*e*S	**Sn**	**00 20 39.9**	**-1.0**
ESSG				IAML		00 20 43.6	
	comp=N,7µm,0.3s						
SARH	**Santa Rosa de**	**1.65**	**28**	*i* P	**Pn**	**00 20 22.9**	**+2.1**
CNCH	**Conchagua**	**1.67**	**91**	*e*P	**Pn**	**00 20 22.3**	**+1.2**
CNCH	**Conchagua**	**1.67**	**91**	S	**Sn**	**00 20 44.3**	**+2.6**
CNCH	**Conchagua**	**1.67**	**91**	P	**Pn**	**00 20 22.6**	**+1.4**
APG	**El Apazote**	**1.90**	**332**	P	**Pn**	**00 20 25.4**	**+1.0**
	comp=N,9.9nm,0.4s,baz=145,slow=10.0,SNR=56						
APG				S	**Sn**	**00 20 43.2**	**-4.2**
	comp=N,29nm,0.3s,baz=160,slow=10.0,SNR=11						
APG	**El Apazote**	**1.90**	**332**	*i* P	**Pn**	**00 20 25.6**	**+1.2**
STG5	**El Palmar, Qui**	**2.06**	**302**	*e*P	**Pn**	**00 20 31.1**	**+4.7**
STG8	**El Palmar, Qui**	**2.08**	**303**	*e*P	Pn	00 20 32.2	+5.3
STG8				IAML		00 21 06.1	
	comp=E,4µm,0.2s						
STG2	**El Palmar, Qui**	**2.10**	**302**	*e*P	Pn	00 20 32.4	+5.4
STG2				*e*S	**Sn**	**00 21 00.7**	**+8.6**
TGUH	**Tegucigalpa,Un**	**2.33**	**71**	Pn	**Pn**	**00 20 31.2**	**+1.0**
SOKI	**Kika Raxquin**	**2.34**	**310**	*e*P	**Pn**	**00 20 32.2**	**+1.6**
SOKI				IAML		00 21 05.1	
	comp=E,3µm,0.5s						
RTAL	**Retalhuleu**	**2.41**	**300**	Pn	**Pn**	**00 20 33.0**	**+1.9**
CRIN	**San Cristobal**	**2.51**	**104**	Pn	**Pn**	**00 20 34.0**	**+1.5**
PKGN	**Cerro Pekin**	**2.59**	**104**	P	**Pn**	**00 20 35.8**	**+2.3**
PKGN				S	**Sn**	**00 21 06.5**	**+2.7**
HERN	**Volcan Telica**	**2.74**	**104**	Pn	**Pn**	**00 20 36.1**	**+0.4**
HUEH	**Huehuetenango**	**2.75**	**317**	Pn	**Pn**	**00 20 38.4**	**+2.4**
SMCA	**Catarina**	**2.89**	**302**	*e*P	**Pn**	**00 20 38.2**	**+0.5**
SMCA				*e*S	**Sn**	**00 21 11.2**	**-0.2**
CNGN	**Cerro Negro**	**2.89**	**106**	Pn	**Pn**	**00 20 37.7**	**0.0**
COPN	**Copaltepe**	**3.10**	**111**	*e*P	**Pn**	**00 20 41.2**	**+0.7**
MGAN	**Managua**	**3.42**	**109**	Pn	**Pn**	**00 20 46.1**	**+1.2**
MGAN	**Managua**	**3.42**	**109**	*e*P	**Pn**	**00 20 46.5**	**+1.6**
MGAN				*e*S	**Sn**	**00 21 23.2**	**-1.2**
PETF	**Flores**	**3.60**	**355**	Pn	**Pn**	**00 20 48.2**	**+0.8**
PETF	**Flores**	**3.60**	**355**	*i* P	**Pn**	**00 20 49.9**	**+2.6**
BOAB	**BOACO BROADBAN**	**3.88**	**102**	Pn	**Pn**	**00 20 51.2**	**-0.1**
LCRUZ	**La Cruz**	**4.43**	**120**	*e*P	**Pn**	**00 21 00.8**	**+2.1**
SIUN	**Universidad Ur**	**4.66**	**84**	Pn	**Pn**	**00 21 01.7**	**-0.2**
ELI1	**Hacienda Flor**	**4.72**	**124**	*e*P	**Pn**	**00 21 06.0**	**+3.2**
LAPC	**Finca la Perla**	**4.75**	**122**	*e*P	**Pn**	**00 21 06.1**	**+2.9**
ALIBA	**Liberia Airpor**	**4.76**	**124**	*e*P	**Pn**	**00 21 06.7**	**+3.4**
BUAI	**Buenos Aires**	**4.78**	**120**	*e*P	**Pn**	**00 21 06.8**	**+3.2**
VMAR	**Armenia, Volca**	**5.00**	**119**	*e*P	**Pn**	**00 21 07.9**	**+1.3**
ELVJ	**El Viejo (Barb**	**5.02**	**124**	*e*P	**Pn**	**00 21 08.6**	**+1.8**
JUD3	**Juan Diaz 3**	**5.02**	**128**	Pn	**Pn**	**00 21 08.0**	**+1.2**
JUD3	**Juan Diaz 3**	**5.02**	**128**	*e*P	**Pn**	**00 21 09.3**	**+2.4**
CUI	**Cuipilapa**	**5.04**	**121**	*e*P	**Pn**	**00 21 09.5**	**+2.4**
NICO	**Nicoya**	**5.11**	**128**	*e*P	**Pn**	**00 21 10.4**	**+2.3**
JTS	**Las Juntas de**	**5.41**	**123**	P	**Pn**	**00 21 14.9**	**+2.7**
	comp=E,20nm,0.3s,baz=112,slow=22,SNR=30						
JTS				S	**Sn**	**00 22 10.6**	**-2.6**
	comp=E,22nm,0.3s,baz=265,slow=21,SNR=1.3						
JTS	**Las Juntas de**	**5.41**	**123**	Pn	**Pn**	**00 21 13.5**	**+1.3**
JTS	**Las Juntas de**	**5.41**	**123**	*e*P	**Pn**	**00 21 14.7**	**+2.5**
ARE1	**Arenal 1**	**5.51**	**120**	*e*P	**Pn**	**00 21 17.0**	**+3.5**
CEDE	**Laguna Cedeo**	**5.51**	**120**	*e*P	**Pn**	**00 21 17.4**	**+3.7**
VARE2	**V. Arenal**	**5.51**	**120**	*e*P	**Pn**	**00 21 16.9**	**+3.3**
SOCE	**Pocosol**	**5.63**	**121**	Pn	**Pn**	**00 21 17.1**	**+1.7**
BILN	**Bilwi Airport**	**6.05**	**82**	Pn	**Pn**	**00 21 22.5**	**+1.7**
BILN	**Bilwi Airport**	**6.05**	**82**	*e*P	**Pn**	**00 21 22.4**	**+1.5**
CMIG	**Matias Romero**	**6.38**	**307**	P	**Pn**	**00 21 27.7**	**+2.3**
	comp=E,14nm,0.6s,baz=108,slow=9.6,SNR=18						
CMIG				S	**Sn**	**00 22 33.7**	**-3.2**
	comp=E,51nm,0.4s,baz=267,slow=20,SNR=13						
CMIG				LR	LR	00 24 01.1	
	comp=E,227nm,21.9s,baz=104,slow=38						
ABRB	**Las Abras (San**	**6.59**	**119**	*e*P	**Pn**	**00 21 26.4**	**-2.2**
PIEC	**Cerro El Cedra**	**6.59**	**123**	*e*P	**Pn**	**00 21 32.4**	**+3.7**
BUS1	**Rivas**	**6.80**	**123**	*e*P	**Pn**	**00 21 35.2**	**+3.5**
TEIG	**Tepich**	**6.99**	**10**	P	**Pn**	**00 21 36.3**	**+2.5**
	baz=136,slow=24,SNR=45						
TEIG	**Tepich**	**6.99**	**10**	Pn	**Pn**	**00 21 36.5**	**+2.8**
EDPE	**Pejibaye, P**	**7.17**	**125**	*e*P	**Pn**	**00 21 40.0**	**+3.7**
PIRO	**Carate, Puerto**	**7.81**	**128**	Pn	**Pn**	**00 21 48.5**	**+3.5**
PIRO	**Carate, Puerto**	**7.81**	**128**	*e*P	**Pn**	**00 21 49.1**	**+4.1**
BRU2	**Volcan**	**8.09**	**123**	Pn	**Pn**	**00 21 52.0**	**+2.9**
BRU2	**Volcan**	**8.09**	**123**	*e*P	**Pn**	**00 21 51.9**	**+2.9**
SOR	**Soroa**	**11.29**	**32**	Pn	**Pn**	**00 22 36.2**	**+3.5**
833A	**Chaparral WMA,**	**17.53**	**330**	Pn	**P**	**00 23 58.6**	**+3.9**
VBMS	**Vicksburg**	**18.84**	**357**	P	**Pn**	**00 24 12.0**	**+1.9**
VBMS				IAmb	IAmb	00 24 13.9	
	comp=Z,28nm,0.8s						
NATX	**Nacogdoches**	**18.95**	**346**	P	**Pn**	**00 24 12.4**	**+0.9**
SDV	**Santo Domingo**	**19.07**	**101**	P	**Pn**	**00 24 13.7**	**+0.4**
	comp=Z,7.1nm,0.6s,baz=272,slow=6.1,SNR=11						
SDV	**Santo Domingo**	**19.07**	**101**	P	**P**	**00 24 11.3**	**-0.6**
LRAL	**Lakeview Retre**	**19.77**	**6**	P	**Pn**	**00 24 22.2**	**+1.0**
LRAL				IAmb	IAmb	00 24 41.6	
	comp=Z,19nm,1.4s						
BRDY	**Brady**	**19.89**	**336**	P	**P**	**00 24 22.2**	**+1.7**
BRDY				IAmb	IAmb	00 24 23.5	
	comp=Z,9.3nm,0.7s						
WHTX	**Lake Whitney,**	**19.96**	**340**	P	**Pn**	**00 24 23.4**	**0.0**
WHTX				IAmb	IAmb	00 24 23.9	
	comp=Z,17nm,0.7s						
SAND	**Sanderson**	**20.24**	**327**	P	**P**	**00 24 25.9**	**+1.5**
OZNA	**Ozona**	**20.52**	**331**	P	**P**	**00 24 28.3**	**+0.9**
WLAR	**White Oak Lake**	**20.54**	**352**	P	**P**	**00 24 27.1**	**-0.4**
WLAR				IAmb	IAmb	00 24 53.5	
	comp=Z,22nm,1.0s						
TXAR	**Lajitas Array**	**20.63**	**323**	P	Pn	00 24 31.8	+0.3
	comp=Z,1.7nm,0.5s,baz=142,slow=10,SNR=35						
TXAR	**Lajitas Array**	**20.63**	**323**	P	Pn	00 24 31.6	0.0
TX31	**Lajitas Ar. Si**	**20.64**	**323**	P	**P**	**00 24 30.9**	**+2.2**
Y49A	**Blount Mountai**	**20.65**	**7**	P	**P**	**00 24 29.8**	**+1.1**
Y49A				IAmb	IAmb	00 24 49.0	
	comp=Z,28nm,1.4s						
GOGA	**Godfrey**	**20.76**	**14**	P	**P**	**00 24 31.0**	**+1.1**
GOGA				IAmb	IAmb	00 24 50.4	
	comp=Z,19nm,1.1s						
PLPT	**Palo Pinto**	**21.00**	**339**	P	**P**	**00 24 33.0**	**+0.5**
PLPT				IAmb	IAmb	00 24 54.8	
	comp=Z,34nm,1.4s						
OXF	**Oxford**	**21.11**	**0**	P	**P**	**00 24 36.7**	**+3.1**
X40A	**Basin Creek Fa**	**21.29**	**353**	P	**P**	**00 24 36.2**	**+0.6**
ABTX	**Abilene, Hawle**	**21.33**	**336**	P	**P**	**00 24 36.9**	**+0.9**
MIAR	**Mount Ida**	**21.45**	**351**	P	**P**	**00 24 38.2**	**+0.9**
MIAR				IAmb	IAmb	00 24 59.3	
	comp=Z,20nm,1.2s						
UALR	**University of**	**21.52**	**354**	P	**P**	**00 24 39.1**	**+1.1**
UALR				IAmb	IAmb	00 25 03.9	
	comp=Z,12nm,0.9s						
MNHN	**Monahans**	**21.67**	**328**	P	**P**	**00 24 42.0**	**+2.3**
MNHN				IAmb	IAmb	00 25 02.1	
	comp=Z,7.7nm,0.9s						
HODGE	**Hodges**	**21.86**	**16**	P	**P**	**00 24 40.6**	**-1.0**
SLBS	**Sierra La Lagu**	**21.89**	**301**	P	**P**	**00 24 43.6**	**+1.3**
WTFS	**Witchita Falls**	**21.92**	**340**		**P**	**00 24 42.5**	**+0.2**
WTFS				IAmb	IAmb	00 24 43.8	
	comp=Z,9.0nm,0.7s						
WHAR	**Wooly Hollow**	**22.02**	**354**	P	**P**	**00 24 44.8**	**+1.4**
WHAR				IAmb	IAmb	00 25 17.1	
	comp=Z,12nm,1.0s						
SWET	**Sewanee**	**22.05**	**8**	P	**P**	**00 24 44.6**	**+0.8**
SWET				IAmb	IAmb	00 25 02.6	
	comp=Z,33nm,1.5s						
CRPR	**Cabo Rojo, PR**	**22.10**	**75**	P	**P**	**00 24 42.5**	**-1.8**
APMT	**Aspermont**	**22.13**	**336**		**P**	**00 24 44.6**	**-0.1**
APMT				IAmb	IAmb	00 24 45.9	
	comp=Z,8.4nm,0.7s						
SN07	**Snyder 07**	**22.25**	**334**	P	**P**	**00 24 46.4**	**+0.5**
POST	**Post**	**22.49**	**333**	P	**P**	**00 24 48.7**	**+0.2**
POST				IAmb	IAmb	00 24 49.6	
	comp=Z,6.5nm,0.8s						
W35A	**Tecumseh**	**22.73**	**344**	P	**P**	**00 24 50.7**	**-0.4**
W35A				IAmb	IAmb	00 25 07.9	
	comp=Z,10nm,0.8s						
DKNS	**Dickens**	**22.76**	**335**		**P**	**00 24 50.6**	**-0.7**
TKL	**Tuckaleechee C**	**22.85**	**12**	P	**P**	**00 24 52.8**	**+0.6**
	comp=Z,4.2nm,1.0s,baz=180,slow=5.1,SNR=2.2						
	comp=Z,4.2nm,1.0s						
TKL	**Tuckaleechee C**	**22.85**	**12**	P	**P**	**00 24 52.4**	**+0.1**
TKL				IAmb	IAmb	00 25 34.3	
	comp=Z,25nm,1.3s						
CLTN	**Cedars of Leba**	**22.87**	**7**	P	**P**	**00 24 52.6**	**+0.3**
CLTN				IAmb	IAmb	00 24 54.8	
	comp=Z,11nm,1.4s						
WMOK	**Wichita Mounta**	**22.91**	**340**	P	**P**	**00 24 51.8**	**-1.1**
FNO	**Franklin**	**22.97**	**343**	P	**P**	**00 24 53.4**	**-0.1**
FNO				IAmb	IAmb	00 24 55.4	
	comp=Z,7.5nm,0.6s						
V53A	**Saluda**	**23.08**	**14**	P	**P**	**00 24 54.3**	**-0.3**
V53A				IAmb	IAmb	00 25 25.1	
	comp=Z,16nm,1.2s						
U49A	**Red Boiling Sp**	**23.35**	**8**		**P**	**00 24 56.9**	**-0.2**
U49A				IAmb	IAmb	00 24 60.0	
	comp=Z,14nm,0.9s						
MNTX	**Cornudas Mount**	**23.38**	**324**		**P**	**00 24 58.4**	**+0.9**
PBMO	**Poplar Bluff**	**23.38**	**358**	P	**P**	**00 24 55.7**	**-1.7**
PBMO				IAmb	IAmb	00 25 00.6	
	comp=Z,10nm,1.1s						
T45A	**Paducah**	**23.62**	**2**	P	**P**	**00 25 03.0**	**+3.4**
T42A	**Van Buren**	**23.66**	**357**		**P**	**00 25 00.4**	**+0.5**
V55A	**Taylorsville**	**23.67**	**17**	P	**P**	**00 25 00.6**	**+0.6**
T47A	**Sharon Grove**	**23.68**	**5**	P	**P**	**00 25 00.4**	**+0.3**
T47A				IAmb	IAmb	00 25 22.1	
	comp=Z,14nm,0.9s						
TZTN	**Tazewell**	**23.75**	**12**	P	**P**	**00 25 00.4**	**-0.4**
SMWD	**Samnorwood**	**23.75**	**338**		**P**	**00 25 00.6**	**-0.4**
SMWD				IAmb	IAmb	00 25 02.5	
	comp=Z,13nm,0.7s						
MGMO	**Mountain Grove**	**23.87**	**355**	P	**P**	**00 25 02.1**	**+0.2**
CGM3	**Cape Girardeau**	**23.89**	**360**	P	**P**	**00 25 00.8**	**-1.2**
CGM3				IAmb	IAmb	00 25 23.9	
	comp=Z,9.6nm,0.9s						
T50A	**Nancy**	**23.98**	**9**	P	**P**	**00 25 03.3**	**+0.4**
T50A				IAmb	IAmb	00 25 29.9	
	comp=Z,21nm,1.4s						
V58A	**Windy Hill, Pi**	**24.28**	**21**	P	**P**	**00 25 05.8**	**+0.2**
S44A	**Carbondale**	**24.29**	**1**	P	**P**	**00 25 06.4**	**+0.8**
S44A				IAmb	IAmb	00 25 26.0	
	comp=Z,13nm,0.9s						
SIUC	**Southern Illin**	**24.31**	**1**	P	**P**	**00 25 07.1**	**+1.3**
SIUC				IAmb	IAmb	00 25 33.5	
	comp=Z,13nm,0.8s						
CCM	**Cathedral Cave**	**24.69**	**357**	P	**P**	**00 25 08.9**	**-0.4**
S51A	**Beattyville**	**24.80**	**11**	P	**P**	**00 25 10.6**	**+0.3**
S51A				IAmb	IAmb	00 25 38.6	
	comp=Z,12nm,1.0s						
R40A	**Maddies Statio**	**25.00**	**355**	P	**P**	**00 25 12.0**	**-0.1**
R40A				IAmb	IAmb	00 25 36.1	
	comp=Z,16nm,1.4s						
T59A	**Double "B" Far**	**25.89**	**22**	P	**P**	**00 25 20.6**	**+0.4**
T59A				IAmb	IAmb	00 25 44.6	
	comp=Z,8.3nm,0.8s						
RTBA	**Rita Blanca**	**25.89**	**335**	P	**P**	**00 25 22.3**	**+1.9**
RTBA				IAmb	IAmb	00 26 01.6	
	comp=Z,9.9nm,1.1s						
BNM	**Barren Site**	**25.90**	**326**	P	**P**	**00 25 21.3**	**+0.7**
P40A	**Paris**	**26.21**	**356**	P	**P**	**00 25 22.9**	**-0.2**
P40A				IAmb	IAmb	00 25 42.9	
	comp=Z,10nm,1.2s						
V12A	**Nelson**	**31.89**	**319**	P	**P**	**00 26 15.5**	**+1.8**
V12A				IAmb	IAmb	00 26 17.4	
	comp=Z,4.0nm,0.9s						
WSHM	**Spangler Hills**	**33.55**	**316**	IAmb	IAmb	00 26 31.9	
	comp=Z,3.2nm,0.7s						
PDAR	**Pinedale Array**	**34.07**	**333**	P	**P**	**00 26 33.1**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=133,slow=10,SNR=3.8						
PDAR				PcP	**PcP**	**00 29 09.0**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=132,slow=4.3,SNR=6.1						
	comp=Z,0.3nm,0.7s						
LOHW	**Long Hollow**	**35.20**	**333**	P	**P**	**00 26 43.9**	**+1.2**
LOHW				IAmb	IAmb	00 26 45.3	
	comp=Z,2.2nm,0.7s						
TBO	**Thunder Bay**	**35.23**	**0**	P	**P**	**00 26 41.9**	**-0.6**
AGMN	**Agassiz Nation**	**35.27**	**353**	P	**P**	**00 26 42.7**	**-0.2**
AGMN				IAmb	IAmb	00 26 43.6	
	comp=Z,4.6nm,0.8s						
MOOW	**Moose Ponds**	**35.38**	**333**	P	**P**	**00 26 44.9**	**+0.8**
NV11	**Mina Array Sit**	**35.63**	**320**	P	**P**	**00 26 48.1**	**+1.9**
NVAR	**Mina Array Bea**	**35.72**	**320**	P	**P**	**00 26 48.0**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=143,slow=7.8,SNR=8.6						
NVAR				PcP	**PcP**	**00 29 14.7**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=124,slow=4.5,SNR=6.9						
	comp=Z,1.3nm,0.7s						
NVAR	**Mina Array Bea**	**35.72**	**320**	P	**P**	**00 26 47.7**	**+0.6**
MDPB	**Devils Postpil**	**35.75**	**318**	P	**P**	**00 26 50.0**	**+2.5**
MDPB				IAmb	IAmb	00 27 06.7	
	comp=Z,2.3nm,0.9s						
PKD	**Bear Valley Ra**	**35.82**	**314**	P	**P**	**00 26 49.3**	**+1.5**
YNE	**Yellowstone No**	**36.08**	**335**	P	**P**	**00 26 50.6**	**+0.6**
LPAZ	**La Paz**	**36.24**	**144**	P	**P**	**00 26 52.9**	**+0.7**
EPLO	**Experimental L**	**36.42**	**355**	P	**P**	**00 26 51.1**	**-1.6**
YHL	**Hebgen Lake**	**36.44**	**334**	P	**P**	**00 26 54.7**	**+1.4**
MCMT	**McKenzie Canyo**	**37.16**	**332**		**P**	**00 27 01.2**	**+1.9**
ULM	**Lac du Bonnet**	**37.20**	**353**	P	**P**	**00 26 57.5**	**-1.8**
	comp=Z,2.7nm,0.6s,baz=160,slow=8.5,SNR=3.3						
	comp=Z,2.7nm,0.6s						
ULM	**Lac du Bonnet**	**37.20**	**353**	IAmb	IAmb	00 27 28.1	
	comp=Z,4.1nm,1.0s						
BOZ	**Bozeman (W)**	**37.23**	**334**	P	**P**	**00 27 00.7**	**+0.9**
DLMT	**Dillon**	**37.46**	**333**	P	**P**	**00 27 02.7**	**+0.9**
DLMT				IAmb	IAmb	00 27 05.7	
	comp=Z,6.4nm,1.4s						

LRM	Limekiln Ridge	37.76	334	P	P	00 27 05.4	+1.0
D62A	Allapoint, All	37.80	23	P	P	00 27 04.8	+0.4
LYMT	Lyon Mountain	38.60	335	P	P	00 27 12.5	+1.1
BPMT	Black Pine Rid	38.67	333	P	P	00 27 13.0	+0.9
OVMT	Ovando	38.97	334	P	P	00 27 15.0	+0.7
SIV	San Ignacio	40.50	135	P	P	00 27 28.0	+0.7
	comp=Z,2.7nm,0.7s,baz=300,slow=6.4,SNR=15						
SIV				PcP	PcP	00 29 29.8	+0.7
	comp=Z,2.2nm,0.5s,baz=280,slow=3.2,SNR=10						
	comp=Z,2.7nm,0.7s						
PINE	Pine Mountain	40.58	325	P	P	00 27 29.0	+1.1
PINE				IAmb	IAmb	00 28 10.8	
	comp=Z,6.6nm,1.5s						
I02E	Swisshome, OR	42.44	323	P	P	00 27 44.9	+2.1
FFC	Flin Flon	42.45	349	P	P	00 27 42.4	-0.5
SCHQ	Schefferville	45.08	18	P	P	00 28 02.4	-1.5
	comp=Z,3.1nm,0.6s,baz=221,slow=6.5,SNR=9.0						
	comp=Z,3.1nm,0.6s						
SCHQ	Schefferville	45.08	18	P	P	00 28 02.4	-1.5
FCC	Fort Churchill	45.49	357	P	P	00 28 06.3	-0.7
FCC				IAmb	IAmb	00 28 06.9	
	comp=Z,3.0nm,0.6s						
AC05	El Transito	45.86	156	P	P	00 28 11.0	+0.6
KUQ	Kuujjuuaa	47.48	15	P	P	00 28 22.0	-0.6
CPUP	Villa Florida	50.34	142	P	P	00 28 44.9	-0.1
	comp=Z,1.1nm,0.5s,baz=341,slow=10,SNR=4.2						
	comp=Z,1.1nm,0.5s						
CPUP	Villa Florida	50.34	142	P	P	00 28 44.6	-0.4
CPUP				IAmb	IAmb	00 29 13.5	
	comp=Z,5.3nm,1.4s						
BLKN	Baker Lake	51.14	356	P	P	00 28 50.2	-0.2
BLKN				IAmb	IAmb	00 29 28.4	
	comp=Z,8.6nm,1.5s						
YKAW1	Yellowknife Wh	52.22	346	P	P	00 28 57.9	-0.7
YKAW1				IAmb	IAmb	00 28 58.8	
	comp=Z,5.0nm,1.1s						
YKA	Yellowknife Ar	52.26	346	P	P	00 28 57.9	-0.9
	comp=Z,0.7nm,0.4s,baz=132,slow=4.2,SNR=43						
YKA				PcP	PcP	00 30 10.2	+0.8
	comp=Z,0.3nm,0.7s,baz=155,slow=4.1,SNR=3.9						
	comp=Z,0.7nm,0.4s						
YKA	Yellowknife Ar	52.26	346	P	P	00 28 58.5	-0.4
YKAW3	Yellowknife Wh	52.32	346	P	P	00 28 58.8	-0.4
YKAW3				IAmb	IAmb	00 29 00.2	
	comp=Z,5.6nm,1.1s						
ITAB	Concordia	54.25	138	P	P	00 29 13.3	-0.6
ILON	Igloolik, Nuna	56.24	3	P	P	00 29 26.5	-1.1
ILON				IAmb	IAmb	00 29 27.2	
	comp=Z,3.2nm,0.6s						
PLCA	Paso Flores	56.58	163	P	P	00 29 30.6	0.0
	comp=Z,1.3nm,0.7s,baz=337,slow=7.0,SNR=3.4						
	comp=Z,1.3nm,0.7s						
PLCA	Paso Flores	56.58	163	P	P	00 29 30.8	+0.2
PLCA				IAmb	IAmb	00 29 32.3	
	comp=Z,4.3nm,1.1s						
SFJD	Kangerlussuaq	59.47	17	P	P	00 29 49.1	-1.2
POIN	Pond Inlet	59.76	4	P	P	00 29 51.4	-0.8
POIN				IAmb	IAmb	00 30 24.1	
	comp=Z,3.7nm,1.2s						
TABL	Table Mountain	60.10	333	P	P	00 29 55.0	-0.1
G31M	Satah River	61.12	342	P	P	00 30 00.6	-1.0
RES	Resolute Bay	61.44	358	P	P	00 30 02.1	-1.5
RES				IAmb	IAmb	00 30 02.6	
	comp=Z,1.5nm,0.6s						
INK	Inuvik	61.78	343	P	P	00 30 04.8	-1.2
	comp=Z,1.0nm,0.6s,baz=153,slow=4.1,SNR=5.3						
	comp=Z,1.0nm,0.6s						
INK	Inuvik	61.78	343	P	P	00 30 05.3	-0.7
INK				IAmb	IAmb	00 30 27.0	
	comp=Z,6.8nm,1.5s						
F30M	Barrier River	62.01	342	P	P	00 30 06.8	-0.9
A36M	Sachs Harbour	62.40	348	P	P	00 30 09.1	-1.0
A36M				IAmb	IAmb	00 30 09.4	
	comp=Z,2.9nm,0.9s						
H27K	Steamboat Moun	63.12	339	P	P	00 30 14.8	-0.2
F28M	Old Crow	63.30	341	P	P	00 30 16.0	-0.2
J25K	Salcha River,	63.76	337	P	P	00 30 18.4	-0.9
ILAR	Eielson Array	64.42	336	P	P	00 30 22.4	-1.2
	comp=Z,0.4nm,0.6s,baz=135,slow=5.1,SNR=7.5						
	comp=Z,0.4nm,0.6s						
ILAR	Eielson Array	64.42	336	P	P	00 30 22.8	-0.7
F25K	Christian Rive	65.20	339	P	P	00 30 28.6	-0.1
E25K	Arctic Village	65.42	340	P	P	00 30 29.8	-0.3
D25K	Kavik River	66.23	341	P	P	00 30 34.9	-0.4
D25K				IAmb	IAmb	00 30 56.5	
	comp=Z,6.4nm,1.3s						
NOA	NORSAR Array B	83.61	29	LR	LR	01 10 42.5	
	comp=Z,35nm,18.1s,baz=285,slow=36						
TORD	Torodi Ar. Bea	88.22	77	P	P	00 32 36.2	-3.0
	comp=Z,0.2nm,0.5s,baz=282,slow=7.2,SNR=1.7						
KURK	Kurchatov	115.41	8		PKiKP	00 38 28.3	-0.7
KURBB	Kurchatov Arra	115.49	8	PKP	PKiKP	00 38 28.3	-0.8
	comp=Z,0.4nm,0.6s,baz=355,slow=1.3,SNR=5.5						
SONM	Songino Array	117.49	348	PKP	PKPdf	00 38 31.2	-2.1
	comp=Z,0.5nm,0.6s,baz=298,slow=3.1,SNR=3.0						
KSRS	Korea Array	118.44	327	PKP	PKPdf	00 38 33.0	-2.2
	comp=Z,1.4nm,0.7s,baz=29,slow=2.8,SNR=2.3						
MKAR	Makanchi Array	119.73	6	PKP	PKPdf	00 38 35.6	-1.8
	comp=Z,0.2nm,0.4s,baz=306,slow=3.2,SNR=7.3						
WRA	Warramunga Arr	137.53	255	PKP	PKPdf	00 39 12.3	+0.4
	comp=Z,0.3nm,0.4s,baz=86,slow=2.1,SNR=5.8						
ASAR	Alice Springs	137.67	249	PKhKP	PKPpre	00 39 07.9	
	comp=Z,0.5nm,0.5s,baz=93,slow=1.7,SNR=7.4						
FITZ	Fitzroy Crossi	145.83	257	PKPbc	PKPbc	00 39 27.9	+0.6
	comp=Z,3.2nm,0.6s,baz=169,slow=2.3,SNR=14						
CMAR	Chiang Mai Arr	147.34	345	PKPbc	PKPdf	00 39 29.7	+0.3
	comp=Z,1.8nm,0.4s,baz=347,slow=4.3,SNR=10						

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*CATAC **24** 00:24:10.5±0.7, 11°N±4°×8°6W±°, h19^{km}±5^{km}, M4.7/15, MLv4.7/15, Error ellipse: s-maj=8.5km s-min=7.3km az=26.1, confirmed*

*UCR **24** 00:24:10.4±1.1, 10°.86N×86°.49W, h6^{km}±11^{km}, MW4.8*

*NEIC **24** 00:24:13.3±1.6, 10°.90N±0°.06×86°.47W±0°.08, h35^{km}±2^{km}, mb4.5/68, Error ellipse: s-maj=16.6km s-min=3.0km az=235.0*

*IDC **24** 00:24:15.7±1.4, 11°.48N×85°.96W, h46^{km}±19^{km}, mb3.8/12, mbtmp4.0/14, ML2.1/2, MS4.0/2, Error ellipse: s-maj=38.3km s-min=11.1km az=48.0*

ISC 24 00:24:13.4±1.2, **10°.87N**±0°.05×**86°.45W**±0°.06, **h47**^{km}±11^{km}, **n151**, σ**1^{s}.13**/156, **mb4.4**/43, **Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCRUZ	La Cruz	0.83	75	*e*P	Pn	00 24 27.4	-1.5
LCRUZ				*e*S	Sn	00 24 40.5	+0.4
ELI1	Hacienda Flor	0.91	104	*e*P	Pn	00 24 29.6	-0.2
ELI1				*e*S	Sn	00 24 43.3	+1.4
ALIBA	Liberia Airpor	0.93	107	*e*P	Pn	00 24 29.8	-0.4
NADN	Granada	0.96	25	*e*P	Pn	00 24 30.1	-0.6
DELF	Filadelfia	0.97	115	*e*P	Pn	00 24 29.8	-0.9
LAPC	Finca la Perla	1.00	96	*e*P	Pn	00 24 30.1	-1.1
ERIA	Liberia	1.02	103	*e*P	Pn	00 24 30.2	-1.1
MORN	Al O del Volca	1.03	49	P	Pn	00 24 31.4	-0.2
VRLE	La Escondida,	1.06	94	*e*P	Pn	00 24 31.3	-0.8
GPS3	Bodega del ICE	1.07	96	*e*P	Pn	00 24 32.9	+0.8
GPS2	Hotel Rincn d	1.08	96	*e*P	Pn	00 24 31.6	-0.7
NANN	Nandasmo	1.11	17	P	Pn	00 24 33.4	+0.7
JUD3	Juan Diaz 3	1.13	128		Pn	00 24 32.4	-0.6
JUD3	Juan Diaz 3	1.13	128	*e*P	Pn	00 24 31.7	-1.3
ELVJ	El Viejo (Barb	1.18	110	*e*P	Pn	00 24 31.2	-2.4
MAS3	Al N del Volca	1.18	13	P	Pn	00 24 33.3	-0.4
MESS	Mesas	1.24	96	*e*P	Pn	00 24 33.8	-0.6
COLC	Colonia	1.24	99	*e*P	Pn	00 24 33.7	-0.7
UNAN	Cigeo UNAN	1.25	8	P	Pn	00 24 34.3	-0.2
UNAN				S	Sn	00 24 52.2	+2.0
CLARA	Aguas Claras	1.25	94	*e*P	Pn	00 24 34.5	-0.1
HORNC	Hornillas	1.26	97	*e*P	Pn	00 24 34.3	-0.4
CUI	Cuipilapa	1.28	99	*e*P	Pn	00 24 34.3	-0.7
TISN	Laguna Tiscapa	1.28	8	P	Pn	00 24 32.8	-2.1
MGAN	Managua	1.29	9		Pn	00 24 34.6	-0.4
MGAN	Managua	1.29	9	P	Pn	00 24 34.9	-0.2
MGAN	Managua	1.29	9	S	Sn	00 24 53.5	+2.4
MGAN	Managua	1.29	9	*e*P	Pn	00 24 34.6	-0.4
COPN	Copaltepe	1.31	354	P	Pn	00 24 34.6	-0.8
COPN	Copaltepe	1.31	354	*e*P	Pn	00 24 34.2	-1.2
CMARA	Lajas Hojancha	1.31	130	*e*P	Pn	00 24 33.7	-1.7
APQ2	Apoyeque	1.33	5	P	Pn	00 24 35.2	-0.4
APQ2				S	Sn	00 24 53.7	+1.6
AMTN	Mateare	1.36	1	P	Pn	00 24 35.9	-0.1
AMTN	Mateare	1.36	1	S	Sn	00 24 55.5	+2.5
APYN	Apoyeque	1.36	4	P	Pn	00 24 36.6	+0.5
UPAL	Upala	1.41	89	*e*P	Pn	00 24 36.9	+0.2
INVE	Universidad In	1.42	106	*e*P	Pn	00 24 37.2	+0.4
TENO	El Achiote	1.45	96	*e*P	Pn	00 24 37.1	-0.3
MOM2	El Cardon	1.56	359	P	Pn	00 24 38.5	-0.3
MOM2				S	Sn	00 25 00.1	+2.3
JUNT	Juntas	1.57	112	*e*P	Pn	00 24 39.6	+0.7
JTS	Las Juntas de	1.58	111	P	Pn	00 24 39.4	+0.4
	105nm,0.4s,baz=290,slow=23,SNR=24						
JTS				S	Sn	00 24 59.9	+1.6
	199nm,0.5s,baz=355,slow=20,SNR=7.4						
JTS	Las Juntas de	1.58	111		Pn	00 24 38.1	-0.9
CNGN	Cerro Negro	1.64	351		Pn	00 24 39.3	-0.7
CNGN	Cerro Negro	1.64	351	*e*P	Pn	00 24 39.1	-0.8
TABAC	Tabacon	1.69	102	*e*P	Pn	00 24 42.1	+1.5
CASO	Castillo	1.74	104	*e*P	Pn	00 24 41.1	-0.1
VARE2	V. Arenal	1.75	103	*e*P	Pn	00 24 42.1	+0.7
BOAB	BOACO BROADBAN	1.75	26		Pn	00 24 40.8	-0.6
BOAB	BOACO BROADBAN	1.75	26	P	Pn	00 24 40.8	-0.6
BOAB	BOACO BROADBAN	1.75	26	S	Sn	00 25 04.8	+2.4
REZ	Monterrey de S	1.75	101	*e*P	Pn	00 24 42.7	+1.3
CEDE	Laguna Cedeo	1.75	102	*e*P	Pn	00 24 43.2	+1.7
HERN	Volcan Telica	1.77	348	Pn	Pn	00 24 40.8	-1.0
VACR	Volcan Arenal	1.78	103	*e*P	Pn	00 24 43.3	+1.4
SOCE	Pocosol	1.86	105		Pn	00 24 43.5	+0.6
SOCE	Pocosol	1.86	105	*e*P	Pn	00 24 44.8	+1.9
CRIN	San Cristobal	1.91	342		Pn	00 24 42.8	-0.9
CRIN	San Cristobal	1.91	342	*e*P	Pn	00 24 42.8	-0.9
CSGN	Cosiguina Volc	2.36	333	*e*P	Pn	00 24 49.2	-0.6
HDC	Heredia	2.45	110	Pn	Pn	00 24 50.8	-0.3
RAFA	San Farael, Vo	2.75	109		Pn	00 24 55.6	+0.3
ABRB	Las Abras (San	2.82	107	*e*P	Pn	00 24 58.2	+2.0
EGUB	Earth Gu¡pi	2.88	103	Pn	Pn	00 24 57.9	+1.0
SIUN	Universidad Ur	3.27	30	Pn	Pn	00 25 03.0	+0.8
TGUH	Tegucigalpa,Un	3.27	346		Pn	00 25 01.9	-0.4
PIRO	Carate, Puerto	3.92	128		Pn	00 25 12.1	+0.9
ALCO	Alturas Coton,	4.04	118	*e*P	Pn	00 25 12.4	-0.5
BRU2	Volcan	4.24	119	Pn	Pn	00 25 17.1	+1.4
BILN	Bilwi Airport	4.36	43	Pn	Pn	00 25 16.4	-0.8
MTO3	Montecristo	4.52	321	Pn	Pn	00 25 20.1	+0.6
APG	El Apazote	5.68	317	P	Pn	00 25 36.8	+1.3
	baz=224,slow=20,SNR=1.2						
CMIG	Matias Romero	10.26	308	P	Pn	00 26 39.4	+1.3
	1.4nm,0.3s,baz=173,slow=14,SNR=1.8						
SDV	Santo Domingo	15.70	96	P	Pn	00 27 49.4	-2.4
	0.1nm,0.3s,baz=51,slow=14,SNR=1.6						
	0.9nm,0.3s						
AGPR	Aguadilla, PR	20.16	66	P	P	00 28 43.4	-0.6
HKT	Hockley	20.91	337		P	00 28 50.6	-1.3
833A	Chaparral WMA,	21.19	327		P	00 28 55.0	0.0
NATX	Nacogdoches	22.14	341		P	00 29 04.6	-0.5
DRIO	Del Rio	22.71	326		P	00 29 11.1	-0.3
Z41A	Richland Creek	23.04	346	P	P	00 29 14.7	+0.1
Z41A				IAmb	IAmb	00 29 15.3	
	comp=Z,14nm,0.7s						
WHTX	Lake Whitney,	23.35	336		P	00 29 17.6	-0.2
WHTX				IAmb	IAmb	00 29 19.2	
	comp=Z,13nm,0.8s						
BRDY	Brady	23.41	332		P	00 29 17.6	-0.8
BRDY				IAmb	IAmb	00 29 19.8	
	comp=Z,7.6nm,0.7s						
X48A	Hartselle	23.48	359	P	P	00 29 19.4	+0.5
WLAR	White Oak Lake	23.52	346	P	P	00 29 19.6	+0.2
WLAR				IAmb	IAmb	00 29 20.4	
	comp=Z,15nm,0.9s						
X40A	Basin Creek Fa	24.22	347	P	P	00 29 26.2	+0.4
BG3	Lake Jocassee	24.23	7	P	P	00 29 26.9	+1.0
BG3				IAmb	IAmb	00 29 50.6	
	comp=Z,21nm,1.4s						
W50A	Signal Mountai	24.24	2	P	P	00 29 26.2	+0.1
UALR	University of	24.40	348		P	00 29 27.1	-0.3
UALR				IAmb	IAmb	00 29 27.8	
	comp=Z,17nm,0.7s						
TXAR	Lajitas Array	24.41	321	P	P	00 29 28.6	+0.8
	comp=Z,4.1nm,0.8s,baz=138,slow=11,SNR=7.8						
	comp=Z,4.1nm,0.8s						
PLPT	Palo Pinto	24.42	335	P	P	00 29 28.4	+0.8
PLPT				IAmb	IAmb	00 29 29.2	
	comp=Z,7.8nm,0.7s						
MIAR	Mount Ida	24.45	346		P	00 29 27.1	-0.9
MIAR				IAmb	IAmb	00 29 28.8	
	comp=Z,9.4nm,0.9s						
CPCT	Cooper Cave	24.53	4	P	P	00 29 29.4	+0.7
TKL	Tuckaleechee C	24.80	5	P	P	00 29 27.9	-3.2
	comp=Z,6.4nm,1.0s,baz=185,slow=12,SNR=5.2						
	comp=Z,6.4nm,1.0s						
ABTX	Abilene, Hawle	24.83	333	P	P	00 29 32.8	+1.4
ABTX				IAmb	IAmb	00 29 58.5	
	comp=Z,7.9nm,0.9s						
WHAR	Wooly Hollow	24.89	349		P	00 29 31.4	-0.5
WHAR				IAmb	IAmb	00 29 31.7	
	comp=Z,13nm,0.7s						
V53A	Saluda	24.91	7	P	P	00 29 32.8	+0.6
V53A				IAmb	IAmb	00 29 40.4	
	comp=Z,13nm,1.3s						
MNHN	Monahans	25.36	326	P	P	00 29 37.2	+0.8
MNHN				IAmb	IAmb	00 29 38.9	
	comp=Z,7.7nm,0.8s						
LCAR	Lake Charles	25.45	351		P	00 29 35.7	-1.3
LCAR				IAmb	IAmb	00 29 36.5	
	comp=Z,8.6nm,0.8s						
U49A	Red Boiling Sp	25.54	1	P	P	00 29 37.8	0.0
APMT	Aspermont	25.64	333		P	00 29 40.2	+1.4
APMT				IAmb	IAmb	00 29 41.5	
	comp=Z,12nm,0.8s						
V58A	Windy Hill, Pi	25.69	14	P	P	00 29 39.3	+0.2
ODSA	Odessa	25.85	327	P	P	00 29 41.1	+0.4
ODSA				IAmb	IAmb	00 29 42.4	
	comp=Z,6.9nm,0.7s						
HHAR	Hobbs	26.20	346		P	00 29 42.7	-1.1
HHAR				IAmb	IAmb	00 29 43.3	
	comp=Z,8.4nm,0.7s						
WMOK	Wichita Mounta	26.29	337	IAmb	IAmb	00 29 47.8	
	comp=Z,15nm,0.9s						
T42A	Van Buren	26.38	352	P	P	00 29 45.0	-0.4
T42A				IAmb	IAmb	00 29 45.2	
	comp=Z,7.1nm,0.9s						
Q51A	Peebles	28.18	5	P	P	00 30 01.8	+0.3
Q52A	Bidwell	28.23	7	P	P	00 30 01.8	-0.1
P46A	Rosedale	28.64	359	P	P	00 30 05.4	-0.2
P46A				IAmb	IAmb	00 30 05.7	
	comp=Z,12nm,0.8s						
ANMO	Albuquerque	30.11	326	P	P	00 30 20.8	+1.9
	comp=Z,1.5nm,0.7s,baz=80,slow=6.3,SNR=5.2						
	comp=Z,1.5nm,0.7s						
L42A	Oliver, Polo	31.14	355	P	P	00 30 26.8	-1.0
F33A	5 Mile Ranch,	35.85	348	P	P	00 31 07.3	-1.3
SIV	San Ignacio	36.65	136	P	P	00 31 18.1	+2.3
	comp=Z,1.6nm,0.7s,baz=303,slow=7.3,SNR=6.6						
	comp=Z,1.6nm,0.7s						
PDAR	Pinedale Array	37.62	332	P	P	00 31 23.9	-0.1
	comp=Z,1.0nm,0.7s,baz=128,slow=10,SNR=9.1						
	comp=Z,1.0nm,0.7s						
HWUT	Hardware Ranch	37.73	329	P	P	00 31 25.4	+0.5
HWUT				IAmb	IAmb	00 31 26.7	
	comp=Z,4.3nm,0.8s						
AGMN	Agassiz Nation	38.14	350		P	00 31 26.4	-1.6
F64A	Sherman	38.15	21	P	P	00 31 28.1	0.0
ELK	Elko	39.12	325	P	P	00 31 37.8	+1.1
	comp=Z,1.3nm,0.8s,baz=142,slow=7.5,SNR=6.4						
	comp=Z,1.3nm,0.8s						
EPLO	Experimental L	39.16	353		P	00 31 34.5	-2.1
EPLO				IAmb	IAmb	00 31 35.4	
	comp=Z,7.4nm,0.7s						
RLMT	Red Lodge	39.35	334	P	P	00 31 38.9	+0.4
NVAR	Mina Array Bea	39.53	319	P	P	00 31 41.4	+1.3
	comp=Z,1.1nm,0.7s,baz=144,slow=6.8,SNR=5.8						
NVAR				PcP	PcP	00 33 49.8	+2.8
	comp=Z,1.6nm,0.7s,baz=140,slow=4.1,SNR=6.0						
	comp=Z,1.1nm,0.7s						
ULM	Lac du Bonnet	40.03	351	P	P	00 31 40.6	-3.1
	comp=Z,4.5nm,0.6s,baz=168,slow=10,SNR=6.7						
	comp=Z,4.5nm,0.6s						
DGMT	Dagmar	40.32	342	P	P	00 31 46.3	0.0
DGMT				IAmb	IAmb	00 31 46.8	
	comp=Z,12nm,0.8s						
HLID	Hailey	40.60	328	P	P	00 31 50.2	+1.4
MCMT	McKenzie Canyo	40.74	331	P	P	00 31 51.7	+1.6
SCHQ	Schefferville	46.52	16	P	P	00 32 33.5	-2.5
	comp=Z,5.7nm,1.1s,baz=219,slow=11,SNR=2.7						
SCHQ				LR	LR	00 52 03.6	
	comp=Z,181nm,18.2s,baz=218,slow=36						
	comp=Z,5.7nm,1.1s						
YKA	Yellowknife Ar	55.39	345	P	P	00 33 40.8	-1.7
	comp=Z,1.1nm,0.8s,baz=145,slow=6.6,SNR=10						
	comp=Z,1.1nm,0.8s						
INK	Inuvik	65.00	343	P	P	00 34 47.1	-1.1
	comp=Z,1.8nm,0.9s,baz=114,slow=8.4,SNR=6.1						
	comp=Z,1.8nm,0.9s						
IL31		67.86	336	P	P	00 35 06.3	-0.2
ILAR	Eielson Array	67.86	336	P	P	00 35 06.0	-0.6
	comp=Z,1.0nm,0.7s,baz=132,slow=4.2,SNR=21						
	comp=Z,1.0nm,0.7s						
ILAR	Eielson Array	67.86	336	P	P	00 35 06.1	-0.5
J20K	Nowinta River	70.63	335	P	P	00 35 23.9	+0.2
J20K				IAmb	IAmb	00 35 34.9	
	comp=Z,10nm,1.5s						
E22K	Anaktuvuk Pass	70.91	339	P	P	00 35 27.3	+1.9
G21K	Allakaket	71.03	337	P	P	00 35 26.5	+0.3
N17K	Nushagak Hills	71.15	330	P	P	00 35 26.9	-0.1
N17K				IAmb	IAmb	00 35 39.5	
	comp=Z,8.4nm,1.2s						
L18K	Granite Mounta	71.27	332	P	P	00 35 27.6	-0.1
M16K	Timber Creek	72.10	331	P	P	00 35 33.6	+0.9
K17K	Iditarod	72.11	333	P	P	00 35 32.5	-0.2
K17K				IAmb	IAmb	00 35 39.6	
	comp=Z,11nm,1.4s						
H18K	Honhosa River	72.63	335	P	P	00 35 36.0	+0.2
E19K	Redstone River	72.69	338	P	P	00 35 35.5	-0.6
E19K				IAmb	IAmb	00 35 42.1	
	comp=Z,7.3nm,1.4s						
D20K	Etivluk River	72.78	339	P	P	00 35 36.6	0.0
D20K				IAmb	IAmb	00 35 37.2	
	comp=Z,2.8nm,0.8s						
H17K	Granite Mounta	73.23	335	P	P	00 35 39.7	+0.4
H17K				IAmb	IAmb	00 35 58.5	
	comp=Z,4.7nm,1.1s						
J16K	Anvik River	73.24	333	P	P	00 35 40.1	+0.7
J16K				IAmb	IAmb	00 35 40.4	
	comp=Z,6.7nm,1.1s						
D19K	Kuna River	73.26	339	P	P	00 35 39.2	-0.3
B20K	Meade River	73.29	340	P	P	00 35 39.4	-0.2
I17K	Unalakleet	73.38	334	P	P	00 35 40.9	+0.7
I17K				IAmb	IAmb	00 35 51.7	
	comp=Z,8.3nm,1.4s						
K15K	Wolf Creek Mou	73.51	332	P	P	00 35 41.9	+0.8
C19K	Lookout Ridge	73.92	339	P	P	00 35 44.2	+0.8
M13K	Dall Lake	74.15	330	P	P	00 35 46.3	+1.5
J14K	Nanvaranak Lak	74.50	332	P	P	00 35 45.5	-1.3
C16K	Lisburne Hills	75.86	338	P	P	00 35 54.6	+0.1
C16K				IAmb	IAmb	00 35 57.0	
	comp=Z,11nm,1.4s						
MDT	Midelt	77.38	59	LR	LR	01 06 12.0	
	comp=Z,90nm,20.7s,baz=304,slow=33						
WRA	Warramunga Arr	139.75	252	PKP	PKiKP	00 43 39.1	-0.4
	comp=Z,0.4nm,0.7s,baz=77,slow=18,SNR=1.4						
CMAR	Chiang Mai Arr	150.38	350	PKPbc	PKPbc	00 44 01.4	+0.7
	comp=Z,0.7nm,0.3s,baz=25,slow=3.3,SNR=4.9						

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*CATAC **24** 00:25:08.6±0.6, 11°N±3°×8°7W±°, h17^{km}±6^{km}, M4.8/18, MLv4.8/18, Error ellipse: s-maj=8.8km s-min=3.8km az=47.3, confirmed*

*UCR **24** 00:25:08.6±1.2, 10°.96N×86°.38W, h0^{km}±11^{km}, MW5.1*

*NEIC **24** 00:25:10.0±1.9, 10°.86N±0°.07×86°.5W±0°.1, h35^{km}±2^{km}, mb4.7/318, Error ellipse: s-maj=19.9km s-min=7.1km az=236.0*

*IDC **24** 00:25:12.6±1.2, 11°.40N×86°.00W, h47^{km}±13^{km}, mb4.0/14, mbtmp4.3/16, ML3.0/3, MS3.8/3, Error ellipse: s-maj=28.0km s-min=9.0km az=48.0*

ISC 24 00:25:11.6±1.0, **10°.92N**±0°.05×**86°.42W**±0°.06, **h52**^{km}±9^{km}, **n376**, σ**1^{s}.05**/365, **mb4.6**/160, **MS4.2**/3, **Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCRUZ	La Cruz	0.79	78	*e*P	Pn	00 25 24.5	-2.2
LCRUZ				*e*S	Sn	00 25 37.7	+0.1
ELI1	Hacienda Flor	0.89	107	P	Pn	00 25 27.3	-0.7
ELI1	Hacienda Flor	0.89	107	S	Sn	00 25 41.1	+1.1
ELI1	Hacienda Flor	0.89	107	*e*P	Pn	00 25 27.3	-0.7
NADN	Granada	0.91	25	*e*P	Pn	00 25 27.2	-1.1
ALIBA	Liberia Airpor	0.92	110	*e*P	Pn	00 25 26.9	-1.3
DELF	Filadelfia	0.97	119	*e*P	Pn	00 25 28.0	-1.0
LAPC	Finca la Perla	0.98	99	*e*P	Pn	00 25 27.6	-1.6
MORN	Al O del Volca	0.98	50	P	Pn	00 25 28.6	-0.6
MORN				S	Sn	00 25 44.8	+2.6
ERIA	Liberia	1.00	106	*e*P	Pn	00 25 28.4	-1.0
VRLE	La Escondida,	1.04	97	*e*P	Pn	00 25 28.8	-1.3
VORI	VORI	1.06	95	*e*P	Pn	00 25 29.1	-1.2
NANN	Nandasmo	1.06	16	P	Pn	00 25 31.2	+0.9
GPS2	Hotel Rincn d	1.06	99	*e*P	Pn	00 25 29.1	-1.2
BUAI	Buenos Aires	1.07	92	*e*P	Pn	00 25 29.4	-1.0
PEJA	Penjamo Buenos	1.09	91	*e*P	Pn	00 25 30.0	-0.6
MAS3	Al N del Volca	1.13	12	P	Pn	00 25 30.6	-0.6
MAS3				S	Sn	00 25 47.5	+1.8
JUD3	Juan Diaz 3	1.14	131	Pn	Pn	00 25 29.2	-2.2
ELVJ	El Viejo (Barb	1.17	113	*e*P	Pn	00 25 29.6	-2.1
PLVR	Palo Verde	1.19	118	*e*P	Pn	00 25 31.6	-0.6
UNAN	Cigeo UNAN	1.20	7	P	Pn	00 25 31.9	-0.2
UNAN				S	Sn	00 25 49.3	+2.0
BAGA	Bagaces	1.20	109	*e*P	Pn	00 25 31.7	-0.5
COLC	Colonia	1.22	102	*e*P	Pn	00 25 31.4	-1.0
HORNC	Hornillas	1.23	99	*e*P	Pn	00 25 31.6	-1.1
MGAN	Managua	1.24	8	Pn	Pn	00 25 31.8	-0.8
MGAN	Managua	1.24	8	S	Sn	00 25 50.3	+2.1
MGAN	Managua	1.24	8	*e*P	Pn	00 25 31.5	-1.1
ALLN	Telcor Managua	1.24	7	S	Sn	00 25 50.6	+2.2
CUI	Cuipilapa	1.26	102	*e*P	Pn	00 25 31.8	-1.1
COPN	Copaltepe	1.27	352	P	Pn	00 25 31.9	-1.1
COPN	Copaltepe	1.27	352	*e*P	Pn	00 25 31.7	-1.4
APQ2	Apoyeque	1.28	4	P	Pn	00 25 32.3	-0.9
APQ2				S	Sn	00 25 50.9	+1.7
VMAR	Armenia, Volca	1.29	94	*e*P	Pn	00 25 32.8	-0.6
AMTN	Mateare	1.31	359	S	Sn	00 25 52.0	+1.9
AMTN	Mateare	1.31	359	P	Pn	00 25 33.2	-0.5
MOTZ	Rio Naranjo	1.34	100	*e*P	Pn	00 25 33.7	-0.4
UPAL	Upala	1.38	91	S	Sn	00 25 55.1	+3.4
UPAL	Upala	1.38	91	*e*P	Pn	00 25 34.0	-0.5
CNAS	Canas	1.39	110	*e*P	Pn	00 25 34.7	+0.1
TIMP	Tierras Morena	1.42	103	*e*P	Pn	00 25 34.8	-0.3
TENO	El Achiote	1.43	98	*e*P	Pn	00 25 34.4	-0.9
TILA	Tilaran	1.49	107	*e*P	Pn	00 25 36.4	+0.3
MOM2	El Cardon	1.51	358	S	Sn	00 25 57.2	+2.2
QUEB	Quebradon, Cot	1.52	101	*e*P	Pn	00 25 37.1	+0.6
CHIK	Chiripa	1.56	107	*e*P	Pn	00 25 37.6	+0.5
JUNT	Juntas	1.57	114	*e*P	Pn	00 25 37.2	+0.1
JTS	Las Juntas de	1.57	113	P	Pn	00 25 36.7	-0.4
	229nm,0.3s,baz=251,slow=15,SNR=3.9						
JTS				LR	LR	00 25 53.9	
	comp=Z,364nm,19.6s,baz=328,slow=27						
JTS				S	Sn	00 25 56.0	-0.4
	886nm,0.4s,baz=262,slow=20,SNR=3.8						
JTS	Las Juntas de	1.57	113	Pn	Pn	00 25 36.4	-0.7
JTS	Las Juntas de	1.57	113	*e*P	Pn	00 25 36.6	-0.5
ALEN	Leon	1.60	344	S	Sn	00 25 58.3	+1.3
ALEN	Leon	1.60	344	P	Pn	00 25 35.6	-2.0
CNGN	Cerro Negro	1.60	350	Pn	Pn	00 25 37.0	-0.5
CNGN				Sn	Sn	00 25 58.9	+1.7
TABAC	Tabacon	1.68	104	*e*P	Pn	00 25 39.7	+1.1
BOAB	BOACO BROADBAN	1.69	26	Pn	Pn	00 25 38.3	-0.5
BOAB	BOACO BROADBAN	1.69	26	P	Pn	00 25 38.7	-0.2
CASO	Castillo	1.72	106	*e*P	Pn	00 25 40.3	+1.0
ARE1	Arenal 1	1.73	105	*e*P	Pn	00 25 40.2	+0.9
VARE2	V. Arenal	1.73	105	*e*P	Pn	00 25 40.2	+0.9
HERN	Volcan Telica	1.73	347	Pn	Pn	00 25 39.5	+0.1
REZ	Monterrey de S	1.73	103	*e*P	Pn	00 25 39.1	-0.3
CEDE	Laguna Cedeo	1.74	104	*e*P	Pn	00 25 40.9	+1.4
POLN	Al Sur del Vol	1.77	347	P	Pn	00 25 39.5	-0.4
VACR	Volcan Arenal	1.77	104	*e*P	Pn	00 25 41.5	+1.6
FORC	Fortuna	1.78	104	*e*P	Pn	00 25 41.5	+1.5
SOCE	Pocosol	1.85	106	Pn	Pn	00 25 39.6	-1.3
SOCE	Pocosol	1.85	106	P	Pn	00 25 42.2	+1.2
SOCE	Pocosol	1.85	106	*e*P	Pn	00 25 42.5	+1.5
CRIN	San Cristobal	1.88	341	Pn	Pn	00 25 41.2	-0.2
COVE	Coope Vega, Sa	1.99	95	P	Pn	00 25 43.9	+1.0
QUEU	Ciudad Quesada	2.04	107	*e*P	Pn	00 25 45.8	+2.2
MATN	Matagalpa	2.06	13	P	Pn	00 25 42.6	-1.3
MATN	Matagalpa	2.06	13	S	Sn	00 26 10.4	+1.9
LIMN	Finca el Limon	2.13	1	P	Pn	00 25 44.4	-0.6
LIMN				S	Sn	00 26 12.7	+2.4
ATEO	Atenas	2.21	115	*e*P	Pn	00 25 48.4	+2.5
HDC	Heredia	2.44	112	Pn	Pn	00 25 49.6	+0.4
ACOS	Acosta	2.48	116	*e*P	Pn	00 25 50.6	+0.9
RCON	San Juan de Ri	2.57	6	P	Pn	00 25 51.2	+0.2
RCON	San Juan de Ri	2.57	6	S	Sn	00 26 23.8	+2.8
ABRB	Las Abras (San	2.81	109	*e*P	Pn	00 25 56.6	+2.4
APG	El Apazote	5.66	316	P	Pn	00 26 34.3	+0.8

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      0.1nm,0.3s,baz=117,slow=7.7,SNR=2.6
CMIG  Matias Romero     10.25 308  P     Pn    00 27 36.2  0.0
      1.0nm,0.3s,baz=131,slow=9.4,SNR=3.5
CMIG                               S     Sn    00 29 31.2 +1.5
      3.8nm,0.8s,baz=68,slow=8.0,SNR=1.8
      4.2nm,0.4s
SDV   Santo Domingo     15.68  96  P     Pn    00 28 47.1 -2.4
      0.5nm,0.3s,baz=261,slow=9.5,SNR=4.4
      3.7nm,0.7s
HBVL  Hebbronville      19.78 326        P     00 29 38.0 +0.4
HKT   Hockley           20.87 337        P     00 29 50.2 +0.9
HKT                                IAmb  IAmb  00 29 51.2
      comp=Z,28nm,1.1s
250A  Grady             20.96   0  P     P     00 29 53.1 +2.7
833A  Chaparral WMA,    21.16 327        P     00 29 52.6 +0.1
833A                               IAmb  IAmb  00 29 56.6
      comp=Z,13nm,0.7s
VBMS  Vicksburg         21.54 350  P     P     00 29 56.8 +0.3
VBMS                               IAmb  IAmb  00 30 00.1
      comp=Z,42nm,0.9s
152A  Waverly Hall      21.71   4  P     P     00 30 00.2 +1.9
152A                               IAmb  IAmb  00 30 03.6
      comp=Z,20nm,0.7s
LRAL  Lakeview Retre    22.02 359        P     00 30 03.3 +1.6
LRAL                               IAmb  IAmb  00 30 05.7
      comp=Z,20nm,0.8s
HNDO  Hondo             22.07 329  P     P     00 30 01.4 -0.9
NATX  Nacogdoches       22.10 341        P     00 30 03.1 +0.6
DRIO  Del Rio           22.69 326        P     00 30 08.7 -0.2
237A  Washetta, Mont    22.71 339  P     P     00 30 09.1 +0.1
237A                               IAmb  IAmb  00 30 11.3
      comp=Z,19nm,0.7s
Y49A  Blount Mountai    22.84   0  P     P     00 30 10.7 +0.3
Y49A                               IAmb  IAmb  00 30 12.6
      comp=Z,20nm,0.8s
Y52A  Lilburn           22.94   5  P     P     00 30 11.9 +0.4
Y52A                               IAmb  IAmb  00 30 13.1
      comp=Z,18nm,0.9s
Z41A  Richland Creek    23.00 346  P     P     00 30 10.4 -1.6
Z41A                               IAmb  IAmb  00 30 12.6
      comp=Z,26nm,0.8s
JCT   Junction City     23.10 329  P     P     00 30 14.0 +0.8
WHTX  Lake Whitney,     23.32 336        P     00 30 15.2  0.0
WHTX                               IAmb  IAmb  00 30 17.3
      comp=Z,30nm,0.7s
BRDY  Brady             23.38 332        P     00 30 15.5 -0.3
BRDY                               IAmb  IAmb  00 30 17.1
      comp=Z,14nm,0.7s
X48A  Hartselle         23.44 359  P     P     00 30 16.7 +0.4
WLAR  White Oak Lake    23.48 346  P     P     00 30 17.3 +0.6
WLAR                               IAmb  IAmb  00 30 18.0
      comp=Z,28nm,0.8s
X51A  Calhoun           23.59   3  P     P     00 30 18.1 +0.5
X51A                               IAmb  IAmb  00 30 51.7
      comp=Z,40nm,1.4s
Z38A  Mt. Pleasant      23.59 342        P     00 30 18.5 +0.7
Z38A                               IAmb  IAmb  00 30 19.5
      comp=Z,27nm,0.9s
OXF   Oxford            23.65 354        P     00 30 17.4 -0.8
Y58A  Scranton          23.70  14  P     P     00 30 19.3 +0.5
JSC   Jenkinsville      23.73  11  P     P     00 30 18.7 -0.4
OZNA  Ozona             24.14 328  P     P     00 30 23.7 +0.8
X40A  Basin Creek Fa    24.18 347  P     P     00 30 23.4 +0.2
SWET  Sewanee           24.20   1  P     P     00 30 23.5 +0.2
SWET                               IAmb  IAmb  00 30 33.4
      comp=Z,30nm,1.4s
W50A  Signal Mountai    24.20   2  P     P     00 30 23.2 -0.1
W50A                               IAmb  IAmb  00 30 26.2
      comp=Z,12nm,0.8s
BIRD  Birdtown, Kers    24.24  12  P     P     00 30 24.0 +0.3
BIRD                               IAmb  IAmb  00 30 25.0
      comp=Z,13nm,0.7s
UALR  University of     24.36 348        P     00 30 23.8 -0.9
PLPT  Palo Pinto        24.39 335  P     P     00 30 25.6 +0.5
PLPT                               IAmb  IAmb  00 30 26.4
      comp=Z,16nm,0.7s
TX31  Lajitas Ar. Si    24.40 321        P     00 30 25.8 +0.5
TXAR  Lajitas Array     24.40 321  P     P     00 30 26.2 +0.9
      comp=Z,8.2nm,0.8s,baz=140,slow=9.9,SNR=14
TXAR                               PcP   PcP   00 34 05.0 +1.4
      comp=Z,0.7nm,0.7s,baz=140,slow=5.6,SNR=4.0
      comp=Z,8.2nm,0.8s
TXAR  Lajitas Array     24.40 321  P     P     00 30 25.9 +0.6
MIAR  Mount Ida         24.41 346        P     00 30 24.9 -0.3
MIAR                               IAmb  IAmb  00 30 26.4
      comp=Z,18nm,0.8s
CPCT  Cooper Cave       24.48   4  P     P     00 30 26.0 +0.1
KMSC  Kings Mountain    24.56  10  P     P     00 30 27.5 +0.9
KMSC                               IAmb  IAmb  00 31 11.1
      comp=Z,34nm,1.5s
V48A  Smith Brothers    24.72 359  IAmb  IAmb  00 30 29.1
      comp=Z,15nm,1.0s
TKL   Tuckaleechee C    24.75   5  P     P     00 30 26.5 -1.8
      comp=Z,7.5nm,0.7s,baz=180,slow=14,SNR=7.2
      comp=Z,7.5nm,0.7s
TKL   Tuckaleechee C    24.75   5  P     P     00 30 29.7 +1.4
ABTX  Abilene, Hawle    24.80 333  P     P     00 30 31.1 +2.2
WHAR  Wooly Hollow      24.85 349  P     P     00 30 28.6 -0.6
V53A  Saluda            24.86   7  P     P     00 30 29.8 +0.4
LOOK  Love County       24.99 338  P     P     00 30 33.1 +2.5
CLTN  Cedars of Leba    25.07   0  P     P     00 30 32.1 +1.0
CLTN                               IAmb  IAmb  00 30 43.4
      comp=Z,19nm,1.3s
ALPN  Alpine            25.12 323  P     P     00 30 31.4 -0.6
WVT   Waverly           25.14 357  P     P     00 30 31.3 -0.5
WVT                                IAmb  IAmb  00 31 05.0
      comp=Z,32nm,1.4s
LNXT  Lenox             25.23 354  P     P     00 30 32.5 -0.2
V55A  Taylorsville      25.27  10  P     P     00 30 34.7 +1.7
V55A                               IAmb  IAmb  00 30 46.8
      comp=Z,16nm,1.1s
WTFS  Witchita Falls    25.28 336        P     00 30 33.0 -0.2
WTFS                               IAmb  IAmb  00 30 43.5
      comp=Z,17nm,0.8s
MNHN  Monahans          25.34 326  P     P     00 30 34.9 +1.0
MNHN                               IAmb  IAmb  00 30 36.5
      comp=Z,17nm,0.7s
FCAR  Ozark Folk Cen    25.40 349  P     P     00 30 33.5 -0.7
FCAR                               IAmb  IAmb  00 30 34.0
      comp=Z,12nm,0.7s
LCAR  Lake Charles      25.41 351        P     00 30 33.2 -1.1
LCAR                               IAmb  IAmb  00 30 33.7
      comp=Z,14nm,0.7s
U49A  Red Boiling Sp    25.49   1  P     P     00 30 34.9 -0.2
U49A                               IAmb  IAmb  00 30 35.6
      comp=Z,11nm,0.8s
APMT  Aspermont         25.61 333        P     00 30 36.7 +0.5
APMT                               IAmb  IAmb  00 30 38.8
      comp=Z,22nm,0.8s
V58A  Windy Hill, Pi    25.64  14  P     P     00 30 36.6 +0.2
V58A                               IAmb  IAmb  00 30 37.3
      comp=Z,17nm,0.6s
TZTN  Tazewell          25.65   5  P     P     00 30 36.4 -0.1
TZTN                               IAmb  IAmb  00 30 48.0
      comp=Z,18nm,1.2s
PARMO Parma             25.81 354  P     P     00 30 36.3 -1.6
ODSA  Odessa            25.83 327  P     P     00 30 38.8 +0.5
ODSA                               IAmb  IAmb  00 30 39.6
      comp=Z,12nm,0.7s
T47A  Sharon Grove      25.97 359  P     P     00 30 39.1 -0.2
T47A                               IAmb  IAmb  00 30 40.3
      comp=Z,17nm,0.7s
PBMO  Poplar Bluff      26.00 353  P     P     00 30 38.7 -0.9
PBMO                               IAmb  IAmb  00 30 39.2
      comp=Z,13nm,0.8s
T50A  Nancy             26.03   3  P     P     00 30 40.2 +0.2
HHAR  Hobbs             26.16 346        P     00 30 40.1 -1.0
HHAR                               IAmb  IAmb  00 30 40.5
      comp=Z,13nm,0.6s
VHRN  Van Horn          26.23 322        P     00 30 42.9 +0.9
WMOK  Wichita Mounta    26.26 337        P     00 30 43.4 +1.4
WMOK                               IAmb  IAmb  00 30 45.1
      comp=Z,27nm,0.9s
TUL3  Leonard           26.30 343  IAmb  IAmb  00 30 41.7
      comp=Z,17nm,0.9s
TUL3                                     P     00 30 41.8 -0.5
T42A  Van Buren         26.34 352  P     P     00 30 42.1 -0.6
T42A                               IAmb  IAmb  00 30 42.9
      comp=Z,11nm,0.7s
U38A  Gravette          26.41 345        P     00 30 42.4 -1.0
U38A                               IAmb  IAmb  00 30 42.8
      comp=Z,14nm,0.8s
CGM3  Cape Girardeau    26.43 354  P     P     00 30 42.9 -0.6
MGMO  Mountain Grove    26.65 350  P     P     00 30 44.3 -1.2
MGMO                               IAmb  IAmb  00 30 45.9
      comp=Z,9.0nm,0.7s
OK052 Battle Ridge R    26.68 341  P     P     00 30 44.2 -1.6
OK052                              IAmb  IAmb  00 30 45.4
      comp=Z,26nm,0.9s
S44A  Carbondale        26.79 355  P     P     00 30 46.0 -0.7
S44A                               IAmb  IAmb  00 30 46.7
      comp=Z,14nm,0.8s
SIUC  Southern Illin    26.80 355  P     P     00 30 46.1 -0.7
SIUC                               IAmb  IAmb  00 30 46.8
      comp=Z,16nm,0.8s
QUOK  Quay              26.82 341  P     P     00 30 46.2 -0.8
BOAV  Boa Vista         27.05 106  P     P     00 30 48.9 -0.5
MNTX  Cornudas Mount    27.11 323  P     P     00 30 51.3 +1.5
T59A  Double "B" Far    27.15  16  P     P     00 30 49.8 -0.2
T59A                               IAmb  IAmb  00 31 15.8
      comp=Z,20nm,1.3s
SMWD  Samnorwood        27.17 335  P     P     00 30 52.1 +1.9
SMWD                               IAmb  IAmb  00 31 02.6
      comp=Z,14nm,0.7s
FVM   French Village    27.19 353  P     P     00 30 49.7 -0.6
WCI   Wyandotte Cave    27.20   0        P     00 30 50.0 -0.5
WCI                                IAmb  IAmb  00 30 51.0
      comp=Z,25nm,0.8s
CCM   Cathedral Cave    27.37 352        P     00 30 51.2 -0.8
CCM                                IAmb  IAmb  00 30 53.1
      comp=Z,9.4nm,0.8s
S57A  Dark Hollow, R    27.56  13  P     P     00 30 53.7 +0.1
S57A                               IAmb  IAmb  00 31 29.6
      comp=Z,25nm,1.5s
OLIL  Olney             27.74 357  IAmb  IAmb  00 30 55.4
      comp=Z,15nm,0.8s
OLIL                               P     P     00 30 55.5 +0.2
R40A  Maddies Statio    27.76 350  P     P     00 30 54.2 -1.2
R40A                               IAmb  IAmb  00 30 54.5
      comp=Z,7.9nm,0.7s
R55A  Marlinton         27.83  11  P     P     00 30 56.5 +0.3
R55A                               IAmb  IAmb  00 31 35.2
      comp=Z,32nm,1.4s
R58B  Mineral           28.00  14  P     P     00 30 58.1 +0.5
R58B                               IAmb  IAmb  00 31 39.9
      comp=Z,18nm,1.2s
Q51A  Peebles           28.13   5  P     P     00 30 58.7  0.0
Q52A  Bidwell           28.18   7  P     P     00 30 58.8 -0.3
Q52A                               IAmb  IAmb  00 30 59.8
      comp=Z,16nm,0.8s
Q54A  Coxs Mills        28.39   9  P     P     00 31 01.5 +0.4
Q54A                               IAmb  IAmb  00 31 05.5
      comp=Z,17nm,1.0s
P48A  Milroy            28.44   2  P     P     00 31 00.5 -1.0
P48A                               IAmb  IAmb  00 31 01.5
      comp=Z,18nm,0.9s
P46A  Rosedale          28.59 359  P     P     00 31 02.6 -0.2
Q56A  Snyder Ridge,     28.74  12  P     P     00 31 05.0 +0.8
Q56A                               IAmb  IAmb  00 31 17.9
      comp=Z,25nm,1.3s
P53A  Whipple           28.80   8  P     P     00 31 04.7  0.0
P53A                               IAmb  IAmb  00 31 17.0
      comp=Z,22nm,1.1s
P40A  Paris             28.93 351  P     P     00 31 04.9 -1.0
P40A                               IAmb  IAmb  00 31 29.0
      comp=Z,15nm,1.4s
MACA  Manacapuru-AM     29.18 117        P     00 31 09.1 +0.7
MACA                               IAmb  IAmb  00 31 09.7
      comp=Z,13nm,0.6s
O48B  Farmland          29.25   2  P     P     00 31 07.7 -1.0
O48B                               IAmb  IAmb  00 31 08.2
      comp=Z,12nm,0.8s
P38A  Dawn              29.28 349        P     00 31 07.9 -1.1
SFIN  Lafayette         29.35 359        P     00 31 08.8 -0.8
SFIN                               IAmb  IAmb  00 31 09.4
      comp=Z,17nm,0.8s
ACSO  Alum Creek Sta    29.36   5  P     P     00 31 10.0 +0.4
ACSO                               IAmb  IAmb  00 31 10.3
      comp=Z,16nm,0.8s
O52A  Adamsville        29.36   7  P     P     00 31 08.9 -0.8
P57A  Homestead Farm    29.42  13  P     P     00 31 10.6 +0.4
P57A                               IAmb  IAmb  00 31 11.2
      comp=Z,8.9nm,0.6s
O53A  New Philadelph    29.58   8  IAmb  IAmb  00 31 23.0
      comp=Z,18nm,0.8s
HDIL  Hopedale          29.63 356  P     P     00 31 11.5 -0.5
ABQ   Albuquerque       30.09 326        P     00 31 17.9 +1.5
ANMO  Albuquerque       30.09 326  P     P     00 31 16.7 +0.3
      comp=Z,3.4nm,0.8s,baz=131,slow=5.1,SNR=8.2
ANMO                               LR    LR    00 44 08.9
      comp=Z,34nm,18.4s,baz=90,slow=38
      comp=Z,3.4nm,0.8s
ANMO  Albuquerque       30.09 326        P     00 31 17.4 +0.9
TASM  ASL Pad, Albuq    30.09 326  P     P     00 31 17.7 +1.3
TASM                               IAmb  IAmb  00 31 19.3
      comp=Z,4.0nm,0.8s
TASM  ASL Pad, Albuq    30.09 326  P     P     00 31 17.0 +0.6
TASM  ASL Pad, Albuq    30.09 326  P     P     00 31 17.2 +0.7
TASM                               IAmb  IAmb  00 31 19.3
      comp=Z,4.3nm,0.9s
TASM  ASL Pad, Albuq    30.09 326  P     P     00 31 17.5 +1.0
TASM                               IAmb  IAmb  00 31 19.3
      comp=Z,4.1nm,0.8s
N53A  Lisbon            30.18   8  P     P     00 31 15.9 -1.0
N53A                               IAmb  IAmb  00 31 28.1
      comp=Z,12nm,0.7s
M57A  Sunshine Farm,    31.39  13  IAmb  IAmb  00 31 39.4
      comp=Z,12nm,0.7s
BINY  Binghamton        32.48  15  P     P     00 31 36.9 -0.3
PV13  Radium Mtn., P    33.74 327  IAmb  IAmb  00 31 50.7
      comp=Z,4.3nm,0.7s
PV03  Paradox Valley    33.83 327  IAmb  IAmb  00 31 52.0
      comp=Z,6.1nm,0.7s
PV05  Paradox Valley    33.83 327  IAmb  IAmb  00 31 51.0
      comp=Z,8.1nm,0.7s
ECSD  EROS Data Cent    33.87 347  IAmb  IAmb  00 31 48.4
      comp=Z,5.1nm,0.7s
PV16  Nyswonger Mesa    33.90 327  IAmb  IAmb  00 31 51.8
      comp=Z,6.3nm,0.7s
PV04  Paradox Valley    33.96 327  IAmb  IAmb  00 31 55.7
      comp=Z,10nm,1.1s
K62A  Royalston         33.97  19  P     P     00 31 51.3 +1.2
SADO  Sadowa            34.31   9  P     P     00 31 52.4 -0.6
G40A  Rib Lake          34.39 355  P     P     00 31 52.6 -1.1
G40A                               IAmb  IAmb  00 32 13.3
      comp=Z,20nm,1.4s
BUKO  Buck Lake         34.93   9  P     P     00 31 57.2 -1.2
O20A  White River Ci    34.94 330  P     P     00 31 59.9 +1.1
O20A                               IAmb  IAmb  00 32 00.4
      comp=Z,5.8nm,0.8s
LONY  Lake Ozonia       35.10  15  P     P     00 31 59.2 -0.7
LONY                               IAmb  IAmb  00 32 10.7
      comp=Z,7.6nm,0.8s
SRU   San Rafael Swe    35.35 327  P     P     00 32 02.7 +0.4
SRU                                IAmb  IAmb  00 32 04.3
      comp=Z,7.3nm,0.8s
LBNH  Lisbon            35.48  18  P     P     00 32 02.2 -1.0
P18A  Preston Nutter    35.57 328  P     P     00 32 05.5 +1.1
F33A  5 Mile Ranch,     35.81 348  P     P     00 32 04.3 -1.7
E38A  The Farm, Brul    35.84 354  P     P     00 32 04.4 -1.8
RSSD  Black Hills       36.42 338        P     00 32 12.5 +1.1
SIV   San Ignacio       36.66 136  P     P     00 32 15.7 +2.1
      comp=Z,4.3nm,0.8s,baz=315,slow=8.5,SNR=11
SIV                                PcP   PcP   00 34 37.0 +1.3
      comp=Z,1.0nm,0.6s,baz=328,slow=3.4,SNR=3.8
      comp=Z,4.3nm,0.8s
PDAR  Pinedale Array    37.59 332  P     P     00 32 20.9 -0.6
      comp=Z,2.4nm,0.7s,baz=129,slow=10,SNR=16
PDAR                               PcP   PcP   00 34 39.2 +0.8
      comp=Z,1.3nm,0.8s,baz=136,slow=4.3,SNR=6.5
      comp=Z,2.4nm,0.7s
PDAR  Pinedale Array    37.59 332  P     P     00 32 21.1 -0.3
PTLB  Pontes e Lacer    37.63 134        P     00 32 22.8 +1.1
TBO   Thunder Bay       37.70 357  P     P     00 32 20.1 -1.9
TBO                                IAmb  IAmb  00 32 34.7
      comp=Z,20nm,1.3s
HWUT  Hardware Ranch    37.70 329  P     P     00 32 22.9 +0.6
HWUT                               IAmb  IAmb  00 32 24.0
      comp=Z,7.4nm,0.7s
G65A  Princeton         37.80  22  P     P     00 32 23.1 +0.2
F64A  Sherman           38.09  21  P     P     00 32 24.7 -0.6
F64A                               IAmb  IAmb  00 33 03.7
      comp=Z,22nm,1.4s
ELK   Elko              39.09 324  P     P     00 32 34.2 +0.1
      comp=Z,2.9nm,0.8s,baz=130,slow=6.5,SNR=12
ELK                                PcP   PcP   00 34 44.4 +1.3
      comp=Z,1.4nm,1.0s,baz=116,slow=3.6,SNR=5.6
      comp=Z,2.9nm,0.8s
EPLO  Experimental L    39.11 352        P     00 32 31.7 -2.1
RLMT  Red Lodge         39.32 334  P     P     00 32 35.9  0.0
LMN   Caledonia Moun    39.40  24  P     P     00 32 36.1 -0.2
NVAR  Mina Array Bea    39.52 319  P     P     00 32 39.2 +1.5
      comp=Z,2.4nm,0.7s,baz=136,slow=7.6,SNR=11
NVAR                               PcP   PcP   00 34 46.9 +2.3
      comp=Z,4.5nm,0.7s,baz=137,slow=4.1,SNR=17
      comp=Z,2.4nm,0.7s
NVAR  Mina Array Bea    39.52 319  P     P     00 32 41.3 +3.6
YHB   Horse Butte       39.88 332  P     P     00 32 41.9 +1.3
YHB                                IAmb  IAmb  00 32 42.8
      comp=Z,6.3nm,0.7s
AC01  Pan de Azucar     39.93 158  P     P     00 32 40.5 -0.4
YHL   Hebgen Lake       39.95 332  P     P     00 32 43.2 +1.9
ULM   Lac du Bonnet     39.99 351  P     P     00 32 38.5 -2.6
      comp=Z,13nm,0.7s,baz=160,slow=8.2,SNR=13
      comp=Z,13nm,0.7s
ULM   Lac du Bonnet     39.99 351        P     00 32 38.8 -2.3
ULM                                IAmb  IAmb  00 32 39.1
      comp=Z,11nm,0.6s
BATG  Bathurst New B    40.11  22  P     P     00 32 41.7 -0.5
BATG                               IAmb  IAmb  00 33 24.0
      comp=Z,26nm,1.4s
MCMT  McKenzie Canyo    40.71 331        P     00 32 48.6 +1.1
LRM   Limekiln Ridge    41.27 332  P     P     00 32 52.8 +0.7
PLID  Pearl Lake        42.45 329  P     P     00 33 01.2 -0.5
J08A  Circle Bar Ran    42.62 325  P     P     00 33 02.7 -0.3
HAWA  Hanford           45.16 328        P     00 33 23.5 +0.4
HAWA                               IAmb  IAmb  00 33 24.3
      comp=Z,5.7nm,0.7s
E07A  Sunnyside         45.44 328        P     00 33 26.1 +0.7
MXC   Moxie City        45.68 327  P     P     00 33 28.2 +0.9
MXC                                IAmb  IAmb  00 33 29.3
      comp=Z,6.1nm,0.8s
KEBM  Edson Butte       45.80 321  P     P     00 33 30.3 +1.9
I02E  Swisshome, OR     46.19 323  P     P     00 33 32.0 +0.7
BDFB  Brasilia          46.28 124  P     P     00 33 32.5  0.0
      comp=Z,1.8nm,0.6s,baz=306,slow=12,SNR=3.7
      comp=Z,1.8nm,0.6s
SCHQ  Schefferville     46.46  16  P     P     00 33 29.7 -3.6
      comp=Z,1.8nm,0.4s,baz=226,slow=5.0,SNR=11
      comp=Z,1.8nm,0.4s
SCHQ  Schefferville     46.46  16        P     00 33 31.2 -2.1
G03D  McMinnville, O    46.48 324  P     P     00 33 33.7 +0.2
EDM   Edmonton          47.40 338  IAmb  IAmb  00 33 40.0
      comp=Z,7.8nm,0.9s
ITAB  Concordia         50.44 139  P     P     00 34 05.2 +1.0
ITAB                               IAmb  IAmb  00 34 09.5
      comp=Z,7.5nm,1.0s
YKAW1 Yellowknife Wh    55.31 345  IAmb  IAmb  00 34 38.7
      comp=Z,3.3nm,0.7s
YKA   Yellowknife Ar    55.35 345  P     P     00 34 38.3 -1.7
      comp=Z,2.4nm,0.8s,baz=145,slow=6.7,SNR=20
YKA                                PcP   PcP   00 35 40.2 +0.3
      comp=Z,0.4nm,0.7s,baz=156,slow=3.4,SNR=3.9
      comp=Z,2.4nm,0.8s
YKA   Yellowknife Ar    55.35 345  P     P     00 34 37.8 -2.1
YKAW3 Yellowknife Wh    55.41 345  IAmb  IAmb  00 34 39.4
      comp=Z,3.4nm,0.7s
M29M  Somme Creek       63.42 336  IAmb  IAmb  00 35 36.6
      comp=Z,8.3nm,0.9s
L29M  L29M              63.62 337  P     P     00 35 36.3 -0.7
J30M  Hart River        63.72 338  P     P     00 35 38.0 +0.2
J30M                               IAmb  IAmb  00 35 43.4
      comp=Z,4.8nm,1.1s
H31M  Peel River        63.73 340  P     P     00 35 37.3 -0.4
K29M  Barlow Dome       63.77 337  P     P     00 35 37.6 -0.5
YAH   Yahtse            63.84 333  P     P     00 35 39.3 +0.6
CTGM  Chitina Glacie    63.92 334  P     P     00 35 39.7 +0.6
RES   Resolute Bay      63.93 357        P     00 35 37.5 -1.2
RES                                IAmb  IAmb  00 35 38.0
      comp=Z,3.2nm,0.6s
GRNC  Granite Creek     64.00 333  P     P     00 35 39.4 -0.4
I30M  Mount Dempster    64.09 339  IAmb  IAmb  00 35 40.3
      comp=Z,4.8nm,0.8s
BARN  Barnard Glacie    64.11 334        P     00 35 40.8 +0.4
G31M  Satah River       64.36 341        P     00 35 41.0 -0.7
G31M                               IAmb  IAmb  00 35 41.5
      comp=Z,4.3nm,0.7s
M27K  Edge Creek, AK    64.78 335  P     P     00 35 44.5 -0.3
M27K                               IAmb  IAmb  00 36 12.4
      comp=Z,8.0nm,1.2s
EPYK  Eagle Plains      64.85 340  P     P     00 35 44.5 -0.5
EPYK                               IAmb  IAmb  00 35 55.1
      comp=Z,8.7nm,1.1s
VRDI  Verde Repeater    64.96 333  P     P     00 35 46.1 +0.1
INK   Inuvik            64.97 343  P     P     00 35 44.4 -1.2
      comp=Z,4.0nm,0.8s,baz=121,slow=6.1,SNR=12
      comp=Z,4.0nm,0.8s
INK   Inuvik            64.97 343        P     00 35 44.8 -0.8
INK                                IAmb  IAmb  00 35 45.5
      comp=Z,4.9nm,0.8s
BCAR  Beaver Creek A    65.06 336  P     P     00 35 46.4  0.0
L27K  Beaver Creek,     65.08 336  IAmb  IAmb  00 35 47.4
      comp=Z,5.3nm,0.8s
GLB   Gilahina Butte    65.21 334  P     P     00 35 47.4  0.0
GLB                                IAmb  IAmb  00 36 12.4
      comp=Z,9.5nm,1.2s
F30M  Barrier River     65.24 341  IAmb  IAmb  00 35 47.7
      comp=Z,7.3nm,0.8s
H29M  Whitestone        65.33 339  P     P     00 35 47.3 -0.8
H29M                               IAmb  IAmb  00 35 48.2
      comp=Z,4.3nm,0.8s
BMRM  Bremner River     65.37 333  P     P     00 35 48.7 +0.2
I28M  Miner Creek       65.49 338  P     P     00 35 49.2  0.0
G29M  Pine Creek        65.58 340  P     P     00 35 49.5 -0.2
G29M                               IAmb  IAmb  00 35 49.8
      comp=Z,5.2nm,1.0s
K27K  Chicken           65.61 336  P     P     00 35 50.0 +0.1
K27K                               IAmb  IAmb  00 35 51.2
      comp=Z,4.1nm,1.0s
N25K  Chitina, Valde    65.62 334  P     P     00 35 50.4 +0.2
N25K                               IAmb  IAmb  00 36 08.2
      comp=Z,16nm,1.4s
KLU   Klutina           66.16 333  P     P     00 35 53.8 +0.2
I27K  Kandik River      66.17 338  P     P     00 35 53.5 -0.1
I27K                               IAmb  IAmb  00 35 54.0
      comp=Z,4.9nm,1.0s
E29M  Blow River        66.34 342  P     P     00 35 54.4 -0.1
SCRK  Sand Creek        66.35 336  P     P     00 35 54.5 -0.4
J26L  Joseph Creek      66.41 337  IAmb  IAmb  00 35 55.8
      comp=Z,4.7nm,0.8s
H27K  Steamboat Moun    66.44 339  IAmb  IAmb  00 35 56.4
      comp=Z,5.9nm,1.0s
PAX   Paxson            66.54 335  P     P     00 35 56.0 -0.1
PAX                                IAmb  IAmb  00 36 04.8
      comp=Z,8.0nm,1.4s
F28M  Old Crow          66.56 340  IAmb  IAmb  00 35 57.6
      comp=Z,3.3nm,0.8s
I26K  Coal Creek Min    66.61 337  IAmb  IAmb  00 35 56.4
      comp=Z,7.7nm,0.8s
SCM   Sheep Creek Mo    66.91 333  P     P     00 35 58.5 +0.1
MLOA  Mauna Loa Obse    66.91 287  P     P     00 36 00.2 +0.6
SLKM  Skilak Lake       67.79 331  P     P     00 36 03.9  0.0
IL31                    67.82 336  IAmb  IAmb  00 36 04.0
      comp=Z,3.4nm,0.7s
ILAR  Eielson Array     67.82 336  P     P     00 36 03.1 -0.8
      comp=Z,2.3nm,0.6s,baz=129,slow=4.2,SNR=33
      comp=Z,2.3nm,0.6s
ILAR  Eielson Array     67.82 336  P     P     00 36 03.4 -0.6
F26K  Sheenjek River    68.03 340  P     P     00 36 05.4 +0.1
BMAR  Burnt Mountain    68.06 339  P     P     00 36 05.3 -0.3
RND   Reindeer          68.13 335  P     P     00 36 06.1 +0.1
CCB   Clear Creek Bu    68.14 336  P     P     00 36 05.1 -0.9
POKR  Poker Plat Res    68.17 337  P     P     00 36 06.0 -0.2
POKR                               IAmb  IAmb  00 36 06.4
      comp=Z,4.6nm,0.7s
WRH   Wood River Hil    68.19 336  P     P     00 36 05.0 -1.3
WRH                                IAmb  IAmb  00 36 32.4
      comp=Z,5.3nm,1.2s
KDAK  Kodiak Island     68.19 328  P     P     00 36 06.3 -0.1
SUA   Susitna One       68.33 332  P     P     00 36 06.4 -1.0
SUA                                IAmb  IAmb  00 36 18.8
      comp=Z,8.0nm,1.2s
F25K  Christian Rive    68.50 339  P     P     00 36 08.1 -0.2
F25K                               IAmb  IAmb  00 36 14.6
      comp=Z,7.1nm,1.5s
H24K  Noodor Dome       68.62 337  P     P     00 36 09.1 +0.1
H24K                               IAmb  IAmb  00 36 43.1
      comp=Z,9.6nm,1.4s
L22K  Petersville       68.66 333  P     P     00 36 08.8 -0.6
E25K  Arctic Village    68.70 340  P     P     00 36 09.2 -0.3
TRF   Thorofare Moun    68.75 334  P     P     00 36 09.9 -0.1
TRF                                IAmb  IAmb  00 36 10.7
      comp=Z,9.4nm,1.0s
C27K  Jago River        68.77 342  P     P     00 36 09.7 -0.1
G24K  Hadweenzic Riv    68.80 338  P     P     00 36 09.3 -0.7
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G24K				IAmb	IAmb	00 36 11.0	
	comp=Z,11nm,1.5s						
SKT	Skwentna	68.84	333	P	P	00 36 10.0	-0.4
SKT				IAmb	IAmb	00 36 31.1	
	comp=Z,14nm,1.4s						
I23K	Minto, Yukon-K	68.94	336	P	P	00 36 10.7	-0.3
I23K				IAmb	IAmb	00 36 13.9	
	comp=Z,7.3nm,1.3s						
RED	Redoubt Volcan	68.97	331	P	P	00 36 11.2	-0.2
RED				IAmb	IAmb	00 36 11.8	
	comp=Z,10nm,0.9s						
KTH	Kantishna Hill	69.05	334	P	P	00 36 10.9	-0.9
F24K	Squaw Lake	69.26	339	P	P	00 36 13.1	+0.1
PPLA	Purkeypile	69.40	333	P	P	00 36 13.3	-0.7
D25K	Kavik River	69.48	341	IAmb	IAmb	00 36 14.5	
	comp=Z,5.2nm,0.7s						
M20K	Styx River	69.54	332	P	P	00 36 13.9	-0.9
M20K				IAmb	IAmb	00 36 42.9	
	comp=Z,16nm,1.4s						
E24K	Your Creek	69.69	339	P	P	00 36 15.3	-0.3
E24K				IAmb	IAmb	00 36 20.0	
	comp=Z,5.8nm,1.4s						
ACHA	Angle Creek He	69.71	328	P	P	00 36 16.2	+0.2
G23K	Bananza Creek	69.74	338	P	P	00 36 16.2	+0.2
N19K	Bonanza Creek	69.89	331		P	00 36 16.5	-0.5
N19K				IAmb	IAmb	00 36 17.0	
	comp=Z,5.5nm,0.8s						
H22K	Ishtalitna Cre	69.98	337	P	P	00 36 16.7	-0.8
COLD	Coldfoot	69.99	338	P	P	00 36 17.7	+0.3
I21K	Tanana	70.00	336	P	P	00 36 17.2	-0.3
I21K				IAmb	IAmb	00 36 55.5	
	comp=Z,7.6nm,1.4s						
O18K	Koktuh Hills	70.02	330	P	P	00 36 18.0	+0.3
O18K				IAmb	IAmb	00 36 38.0	
	comp=Z,12nm,1.1s						
PLK4	Peulik 4	70.13	328	P	P	00 36 19.0	+0.5
K20K	Telida	70.35	334	P	P	00 36 19.0	-0.7
K20K				IAmb	IAmb	00 36 19.5	
	comp=Z,4.7nm,0.8s						
C24K	Franklin Bluff	70.39	341	P	P	00 36 19.6	-0.2
C24K				IAmb	IAmb	00 36 22.6	
	comp=Z,3.7nm,0.8s						
L19K	White Mountain	70.40	332	P	P	00 36 19.2	-0.8
L19K				IAmb	IAmb	00 36 59.7	
	comp=Z,9.7nm,1.3s						
H21K	Melozitna Rive	70.47	336	P	P	00 36 19.2	-1.2
N18K	Kilae Creek	70.53	331	P	P	00 36 20.4	-0.4
J20K	Nowinta River	70.60	335	P	P	00 36 20.6	-0.6
J20K				IAmb	IAmb	00 36 20.9	
	comp=Z,3.3nm,0.7s						
D23K	Nanushuk River	70.77	340	P	P	00 36 22.4	+0.3
D23K				IAmb	IAmb	00 36 24.5	
	comp=Z,7.6nm,1.5s						
E22K	Anaktuvuk Pass	70.88	339	P	P	00 36 23.0	+0.1
G21K	Allakaket	71.00	337	P	P	00 36 23.5	-0.1
G21K				IAmb	IAmb	00 36 24.5	
	comp=Z,6.2nm,0.7s						
C23K	Itkillik River	71.05	341	P	P	00 36 23.9	+0.1
N17K	Nushagak Hills	71.12	330	P	P	00 36 24.5	0.0
N17K				IAmb	IAmb	00 36 55.9	
	comp=Z,8.2nm,1.3s						
J19K	Poorman	71.18	334	P	P	00 36 23.5	-1.2
J19K				IAmb	IAmb	00 36 24.1	
	comp=Z,4.4nm,0.8s						
L18K	Granite Mounta	71.24	332	P	P	00 36 24.3	-0.8
D22K	Ayikyak River	71.42	340	P	P	00 36 25.8	-0.3
M17K	Holitna River	71.42	331	P	P	00 36 25.2	-1.0
E21K	Killik River	71.73	339	P	P	00 36 28.6	+0.6
H19K	Roundabout Mou	71.89	336	IAmb	IAmb	00 36 29.6	
	comp=Z,12nm,1.1s						
M16K	Timber Creek	72.07	331	P	P	00 36 29.9	-0.2
M16K				IAmb	IAmb	00 36 32.8	
	comp=Z,19nm,1.4s						
K17K	Iditarod	72.08	333	P	P	00 36 29.4	-0.8
K17K				IAmb	IAmb	00 36 30.4	
	comp=Z,8.7nm,0.9s						
B22K	Teshekpuk Lake	72.13	341	P	P	00 36 29.2	-1.0
G19K	Purcell Mounta	72.30	336	P	P	00 36 31.2	-0.2
B21K	Ikpikpuk River	72.30	340	P	P	00 36 30.4	-0.9
B21K				IAmb	IAmb	00 37 06.6	
	comp=Z,7.3nm,1.4s						
L16K	Owhat River	72.44	331	P	P	00 36 32.2	-0.1
L16K				IAmb	IAmb	00 36 32.8	
	comp=Z,5.9nm,0.9s						
J17K	VABM Dome	72.56	333	P	P	00 36 33.1	+0.1
J17K				IAmb	IAmb	00 36 41.5	
	comp=Z,7.2nm,1.2s						
H18K	Honhosa River	72.59	335	P	P	00 36 33.4	+0.3
H18K				IAmb	IAmb	00 36 34.5	
	comp=Z,12nm,1.1s						
E19K	Redstone River	72.66	338	P	P	00 36 32.7	-0.9
D20K	Etivluk River	72.74	339	IAmb	IAmb	00 36 34.1	
	comp=Z,4.3nm,0.7s						
G18K	Tagagawik	72.87	336	P	P	00 36 35.0	+0.3
G18K				IAmb	IAmb	00 37 13.3	
	comp=Z,12nm,1.4s						
H17K	Granite Mounta	73.20	335	P	P	00 36 37.3	+0.6
H17K				IAmb	IAmb	00 36 38.2	
	comp=Z,5.3nm,0.9s						
J16K	Anvik River	73.21	333	P	P	00 36 37.4	+0.5
D19K	Kuna River	73.22	339	P	P	00 36 36.3	-0.6
B20K	Meade River	73.26	340	P	P	00 36 37.5	+0.5
B20K				IAmb	IAmb	00 36 55.1	
	comp=Z,11nm,1.5s						
M14K	Bethel	73.48	330	P	P	00 36 39.1	+0.7
K15K	Wolf Creek Mou	73.48	332	P	P	00 36 39.1	+0.7
K15K				IAmb	IAmb	00 36 40.3	
	comp=Z,6.4nm,0.8s						
C19K	Lookout Ridge	73.88	339	P	P	00 36 41.0	+0.3
L14K	Kuka Creek	73.90	331	P	P	00 36 41.2	+0.3
C18K	Utukok River	74.36	338	P	P	00 36 43.0	-0.6
J14K	Nanvaranak Lak	74.47	332	P	P	00 36 45.5	+1.3
F15K	North Star Dit	75.28	335	P	P	00 36 48.8	0.0
ANM	Nome	75.47	334	P	P	00 36 50.5	+0.6
ANM				IAmb	IAmb	00 37 13.8	
	comp=Z,12nm,1.2s						
C16K	Lisburne Hills	75.83	338	P	P	00 36 52.0	+0.1
C16K				IAmb	IAmb	00 36 52.6	
	comp=Z,6.5nm,0.9s						
ESDC	Sonseca Array	77.34	52	P	P	00 36 59.0	-2.2
	comp=Z,0.6nm,0.9s,baz=304,slow=4.7,SNR=2.4						
	comp=Z,0.6nm,0.9s						
SPITS	Spitsbergen Ar	82.00	12	LR	LR	01 14 25.5	
	comp=Z,110nm,19.0s,baz=196,slow=36						
OBN	Obninsk	98.81	29	LR	LR	01 23 35.9	
	comp=Z,73nm,18.2s,baz=273,slow=36						
KURBB	Kurchatov Arra	117.33	11	PKP	PKPdf	00 43 51.4	+0.1
	comp=Z,0.2nm,0.6s,baz=354,slow=1.9,SNR=2.5						
MKAR	Makanchi Array	121.67	9	PKP	PKPdf	00 43 59.0	-0.8
	comp=Z,0.2nm,0.4s,baz=296,slow=3.9,SNR=5.2						
ASAR	Alice Springs	139.61	246	PKP	PKiKP	00 44 35.6	-1.1
	comp=Z,0.5nm,0.6s,baz=111,slow=2.0,SNR=5.1						
WRA	Warramunga Arr	139.79	252	PKP	PKPdf	00 44 35.8	+1.1
	comp=Z,0.6nm,0.6s,baz=95,slow=2.6,SNR=5.0						
FITZ	Fitzroy Crossi	148.19	253	PKPbc	PKiKP	00 44 53.9	-0.6
	comp=Z,2.0nm,0.8s,baz=39,slow=0.8,SNR=3.0						
CMAR	Chiang Mai Arr	150.34	350	PKPbc	PKiKP	00 44 58.8	-0.1
	comp=Z,2.0nm,0.3s,baz=16,slow=3.4,SNR=10						

NOU 24 00:29:44.0, 15.°66S×167.°16E, h22^{km}, MLv4.5/12, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.22	11	P	Pb	00 29 51.4	+1.6
SANVU	Saraoutou	0.22	11	S	Sb	00 29 56.0	+2.3
DVP	Devils Point	2.28	155	P	Pn	00 30 21.0	+0.7
KOUNC	Koumac, New Ca	5.58	209	P	Pn	00 31 06.6	+0.9
MARNC	Mare, Loyalty	5.85	172	P	Pn	00 31 10.4	+1.0
YATNC	Mamie plateau,	6.37	182	P	Pn	00 31 16.3	-0.3
OUENC	Ouen Island, N	6.73	183	P	Pn	00 31 21.3	-0.2

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*TAP **24** 00:46:40.6, 24.°72N×122.°30E, h105^{km}, ML2.8, C*
*JMA **24** 00:46:41.2±0.1, 24.°6N±0.°9×122.°4E±0.°3, h95^{km}±1^{km}, MV2.0/10, NW OFF ISHIGAKIJIMA IS*
ISC 24 00:46:40.7±1.7, 24.°69N±0.°05×122.°40E±0.°03, h98^{km}±9^{km}, n56, σ0^{s}69/100, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS2	EOS2	0.31	209	i P	Pn	00 46 55.5	+0.4
EOS2				i S	Sn	00 47 06.7	+0.9
EOS3	EOS3	0.41	191	i P	Pn	00 46 56.1	+0.5
EOS3				S	Sn	00 47 07.8	+1.2
TWB1	Santiao Chiao	0.49	310	eS	Sn	00 47 08.2	+0.3
TWC	Suao	0.51	261	i P	Pn	00 46 56.1	-0.3
TWC				S	Sn	00 47 07.4	-0.7
ESAO	Su ao	0.52	257	eP	Pn	00 46 57.2	+0.7
ESAO				eS	Sn	00 47 08.2	-0.1
NTC	Toucheng	0.54	287	eP	Pn	00 46 56.5	-0.1
NTC				eS	Sn	00 47 08.5	-0.1
JYNG	Yonagunijimaku	0.55	116	P	Pn	00 46 56.6	-0.2
JYNG				eS	Sn	00 47 08.1	-0.6
EOS4	EOS4	0.58	188	eP	Pn	00 46 56.8	+0.3
EOS4				eS	Sn	00 47 09.1	+0.8
TIPB	Shuangxi	0.59	298	i P	Pn	00 46 57.2	+0.1
TIPB				i S	Sn	00 47 08.7	-0.7
YOJ	Yonaguni jima	0.60	113	eP	Pn	00 46 57.1	-0.1
YOJ				eS	Sn	00 47 09.7	+0.3
YOJ	Yonaguni jima	0.60	113	eP	Pn	00 46 56.9	-0.2
YOJ				eS	Sn	00 47 09.2	-0.2
EWUT	Wuta	0.62	247	i P	Pn	00 46 57.3	+0.1
EWUT				S	Sn	00 47 09.7	0.0
ENA	Nanau	0.66	246	P	Pn	00 46 57.8	+0.2
ENA				S	Sn	00 47 10.4	+0.1
TWE	Neicheng	0.67	272	eP	Pn	00 46 58.2	+0.5
TWE				eS	Sn	00 47 09.9	-0.5
EAHA	Aohua	0.70	239	eP	Pn	00 46 58.0	0.0
EAHA				eS	Sn	00 47 11.5	+0.5
FUSB	Fushanzhiwuyua	0.74	275	P	Pn	00 46 58.6	+0.2
FUSB				eS	Sn	00 47 11.1	-0.7
ENTT	Nioudou	0.76	266	eP	Pn	00 46 59.3	+0.7
ENTT				eS	Sn	00 47 12.3	+0.3
TWA	Mucha	0.80	291	eS	Sn	00 47 11.5	-1.1
LATG	Datong	0.81	259	eP	Pn	00 46 59.5	+0.3
LATG				eS	Sn	00 47 13.3	+0.2
NWLT	Wulai	0.82	276	eP	Pn	00 46 59.4	+0.2
NWLT				eS	Sn	00 47 12.2	-0.9
ETL	Fush Village	0.89	233	eP	Pn	00 46 59.8	-0.1
ETL				eS	Sn	00 47 13.6	-0.7
NACB	Ninganchiao	0.90	235	eP	Pn	00 46 59.6	-0.4
NACB				eS	Sn	00 47 13.4	-1.0
YHNB	Yeheng	0.93	269	P	Pn	00 47 00.9	+0.5
YHNB				S	Sn	00 47 15.1	-0.1
NSK	Sanguang	0.95	269	eP	Pn	00 47 00.9	+0.3
NSK				eS	Sn	00 47 15.2	-0.3
TWD	Chiawan	0.95	230	eP	Pn	00 47 00.7	+0.2
TWD				eS	Sn	00 47 15.2	-0.3
NNSB	Datong	0.96	254	eP	Pn	00 47 01.0	+0.2
NNSB				eS	Sn	00 47 15.6	-0.2
NNSH	Datong	0.96	254	eP	Pn	00 47 00.9	+0.1
ETLH	Xiulin Townshi	0.97	240	eP	Pn	00 47 00.7	-0.1
ETLH				eS	Sn	00 47 15.2	-0.7
NNS	Nan Shan	0.97	255	eP	Pn	00 47 00.6	-0.3
NNS				eS	Sn	00 47 15.6	-0.4
TWS1	Kuangyinshan	0.98	295	eP	Pn	00 46 59.9	-0.9
ETM	Tongmen	1.10	229	eP	Pn	00 47 01.9	-0.3
ETM				eS	Sn	00 47 17.1	-1.2
TEYL	Yanliau Villag	1.10	222	eS	Sn	00 47 17.6	-0.7
LXIB	Xiulin Townshi	1.12	234	eP	Pn	00 47 02.1	-0.5
LXIB				eS	Sn	00 47 17.9	-1.1
FUSS	Fushou	1.14	247	eP	Pn	00 47 02.3	-0.6
FUSS				eS	Sn	00 47 19.2	-0.5
NFF	Wufeng Townshi	1.17	267	eP	Pn	00 47 03.5	+0.5
NFF				eS	Sn	00 47 19.2	-0.6
WHF	Hehuan Shan	1.17	242	P	Pn	00 47 02.9	-0.5
WHF				S	Sn	00 47 19.5	-1.0
SHUL	Shoufeng	1.18	220	eS	Sn	00 47 19.7	-0.3
TWT	Tachien	1.20	249	eS	Sn	00 47 20.6	-0.1
TDCB	Techi	1.22	249	eP	Pn	00 47 04.3	+0.7
TDCB				eS	Sn	00 47 20.7	-0.2
LIOB	Emei	1.26	268	eS	Sn	00 47 21.8	+0.1
IRIF	Iriomote-Funau	1.26	106	eP	Pn	00 47 04.3	+0.3
IRIF				eS	Sn	00 47 21.3	-0.3
NSTT	Nanjuang	1.27	267	eP	Pn	00 47 04.4	+0.2
NSTT				eS	Sn	00 47 21.7	-0.3
OWD	Renai	1.34	237	eS	Sn	00 47 22.6	-0.9
WUSB	Renai	1.36	239	eP	Pn	00 47 05.7	+0.4
WUSB				eS	Sn	00 47 23.6	-0.4
WHP	Taichung City	1.39	253	eP	Pn	00 47 06.9	+1.3
WHP				eS	Sn	00 47 24.9	+0.4
VWDT	VWDT	1.48	231	eP	Pn	00 47 07.0	+0.3
VWDT				eS	Sn	00 47 25.8	-0.6
HGSD	Ruisui	1.49	217	eP	Pn	00 47 06.3	-0.6
HGSD				eS	Sn	00 47 26.0	-0.6
JKRS	Kuro-shima	1.53	107	eS	Sn	00 47 27.6	+0.2
EHY	Hungye	1.54	220	eP	Pn	00 47 07.7	+0.3
EHY				eS	Sn	00 47 25.1	-2.6
SSLB	Suanglung	1.60	236	eP	Pn	00 47 09.1	+0.9
SSLB				eS	Sn	00 47 29.7	+0.7
TYC	Yuchr	1.61	241	eP	Pn	00 47 09.7	+1.4
TYC				eS	Sn	00 47 30.3	+1.0
JIJ	Ishigaki jima	1.62	101	eS	Sn	00 47 28.7	-0.7
YULB	Yu-li	1.64	218	eP	Pn	00 47 08.0	-0.8
YULB				eS	Sn	00 47 28.2	-1.8
WHYT	Xinyi Township	1.73	235	eP	Pn	00 47 11.3	+1.4
WHYT				eS	Sn	00 47 32.7	+0.8
JISG	Ishigakijimahi	1.74	93	eS	Sn	00 47 32.2	+0.1
ALS	Alishan	1.88	231	eP	Pn	00 47 13.3	+1.3
ALS				eS	Sn	00 47 36.7	+1.1

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*IDC **24** 00:50:32.6±1.8, 8.°90N×77.°12W, h0^{km}, mb3.8/1, mbtmp3.9/3, ML2.4/2, MS3.0/1, Error ellipse: s-maj=45.8km s-min=28.9km az=20.0*
*UPA **24** 00:50:34.8±0.7, 8.°72N×77.°26W, h0^{km}±4^{km}, MW3.7*
*RSNC **24** 00:50:35.6±0.0, 9°N±1°×7°7W±°, h17^{km}±2^{km}, M3.5, mB4.9, mb4.2, ML3.1, Mw(mB)4.2*
ISC 24 00:50:34.1±1.2, 8.°85N±0.°03×77.°16W±0.°02, h9^{km}±8^{km}, n63, σ1^{s}31/102, 1D, Panama-Colombia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPC	Capurgana	0.29	222	P	Pg	00 50 39.7	-0.1
CAPC				S	Sg	00 50 43.6	-0.1
LCBC	Los crdobas,	0.78	90	P	Pn	00 50 52.0	+0.7
LCBC				S	Sn	00 51 03.3	+0.2
UPD2	Meteti	0.90	251	eP	Pg	00 50 50.9	-0.5
UPD2				eS	Sg	00 51 02.8	-0.4
UPD2	Meteti	0.90	251	⇓iP	Pg	00 50 51.0	-0.5
UPD2				eS	Sg	00 51 03.0	-0.2
APAC	Apartado, Choc	1.10	149	P	Pg	00 50 54.9	-0.4
APAC				S	Sn	00 51 12.0	+0.8
TOTI	Torti	1.14	274	eP	Pg	00 50 55.3	-0.8
TOTI				eS	Sg	00 51 11.3	+0.4
TOTI	Torti	1.14	274	eP	Pg	00 50 55.2	-0.9
TOTI				eS	Sg	00 51 11.2	+0.2
CNTA3	Canitas, Panam	1.75	282	eP	Pn	00 51 04.4	-0.2
CNTA3				eS	Sn	00 51 27.6	+0.4
CNTA3	Canitas, Panam	1.75	282	eP	Pn	00 51 04.5	-0.2
CNTA3				eS	Sn	00 51 26.6	-0.6
PTAC	Punta Ardita,	1.81	201	P	Pn	00 51 04.0	-1.5
PTAC				S	Sn	00 51 26.5	-2.2
UREC	San Jos de Ur	1.94	124	P	Pn	00 51 06.3	-1.0
UREC				S	Sn	00 51 29.9	-2.0
DBBC	Dabeiba	2.05	153	P	Pn	00 51 07.5	-1.4
DBBC				S	Sg	00 51 40.9	+0.9
SJCC	San Jacinto, C	2.21	62	P	Pn	00 51 11.6	+0.6
SJCC				S	Sn	00 51 39.1	+0.5
UPA	Univ. de Panam	2.35	273	eP	Pn	00 51 00.3	-13
UPA				eS	Sn	00 51 29.7	-12
UPA	Univ. de Panam	2.35	273	eP	Pn	00 51 00.9	-12
UPA				eS	Sn	00 51 30.8	-11
FLAM	Flamenco Islan	2.35	272	eP	Pn	00 51 12.6	-0.4
FLAM				eS	Sn	00 51 41.7	-0.4
FLAM	Flamenco Islan	2.35	272	eP	Pn	00 51 12.9	-0.1
FLAM				eS	Sn	00 51 42.1	0.0
GAMB1	Gamboa	2.54	276	eP	Pn	00 51 15.7	+0.2
GAMB1				eS	Sn	00 51 47.2	+0.7
GAMB1	Gamboa	2.54	276	eP	Pn	00 51 15.8	+0.2
GAMB1				eS	Sn	00 51 47.3	+0.7
FRIJ	El Hiral	2.57	278	eP	Pn	00 51 16.6	+0.7
FRIJ				eS	Sn	00 51 48.1	+0.8
CHOR3	La Chorrera	2.58	271	eP	Pn	00 51 16.8	+0.7
CHOR3				eS	Sn	00 51 47.4	-0.2
CHOR3	La Chorrera	2.58	271	eP	Pn	00 51 17.0	+0.9
CHOR3				eS	Sn	00 51 47.9	+0.2
SOLC	Bahia Solano	2.62	186	P	Pn	00 51 17.6	+1.0
SOLC				S	Sn	00 51 48.7	+0.1
BCIP	Isla Barro Col	2.67	277	eP	Pn	00 51 17.8	+0.5
BCIP				eS	Sn	00 51 49.8	0.0
BCIP	Isla Barro Col	2.67	277	eP	Pn	00 51 17.6	+0.3
BCIP				eS	Sn	00 51 50.1	+0.3
BCIP	Isla Barro Col	2.67	277	P	Pn	00 51 17.6	+0.3
BCIP				S	Sn	00 51 46.4	-3.4
ARGC	Ariguani, Magd	3.04	71	P	Pn	00 51 23.6	+1.2
ARGC				S	Sn	00 51 59.3	+0.3
HELC	Santa Helena	3.10	149	P	Pn	00 51 22.3	-1.2
HELC				S	Sb	00 52 10.6	+2.9
CBOC	Ciudad Bolivar	3.18	159	P	Pn	00 51 25.2	+0.7
CBOC				S	Sn	00 52 05.7	+3.1
AZU	Azuero	3.26	251	eP	Pn	00 51 25.1	-0.3
AZU				eS	Sn	00 52 03.4	-1.1
AZU	Azuero	3.26	251	eP	Pn	00 51 25.3	-0.2
AZU				eS	Sn	00 52 03.8	-0.7
CHIT3	Chitre	3.35	255	eP	Pn	00 51 26.3	-0.4
PTBC	PUERTO BERRIO,	3.52	130	P	Pn	00 51 27.8	-1.3
PTBC				S	Sn	00 52 08.6	-2.4
SMRC	Santa Marta, M	3.69	51	P	Pn	00 51 30.1	-1.3
SMRC				S	Sn	00 52 13.1	-1.9
OCAC	Ocana	3.84	99	P	Pn	00 51 33.4	-0.2
OCAC				S	Sn	00 52 17.2	-1.8
BRJC	Barrancabermej	3.86	119	P	Pn	00 51 34.3	+0.6
BRJC				S	Sn	00 52 17.9	-1.3
CACAO	El Cacao, Vera	3.96	248	eP	Pn	00 51 34.2	-0.9
CACAO	El Cacao, Vera	3.96	248	eP	Pn	00 51 34.5	-0.7
NORC	Norcasia	3.98	145	P	Pn	00 51 34.8	-0.6
NORC				S	Sn	00 52 22.4	+0.2
PLMC	San Jos del P	4.01	167	P	Pn	00 51 34.9	-1.0
PLMC				S	Sn	00 52 24.1	+0.9
GMAL	Guarumal, Vera	4.18	255	eP	Pn	00 51 37.7	-0.4
SPBC	San Pablo de B	4.41	136	P	Pn	00 51 45.1	+3.7
BARC	Barichara	4.53	119	P	Pn	00 51 43.5	+0.3
PAMC	Pamplona, Colo	4.66	108	P	Pn	00 51 45.4	+0.2
PAMC				S	Sn	00 52 38.6	-1.1
ANIL	Santa Ana	4.67	158	P	Pn	00 51 46.7	+1.6
ROSC	El Rosal	4.88	145	Pn	Pn	00 51 49.5	+1.5
	2.7nm,0.3s,baz=121,slow=23,SNR=3.9						
ROSC				Sn	Sn	00 52 45.0	+0.1
	2.0nm,0.3s,baz=26,slow=23,SNR=1.8						
	7.6nm,0.4s						
YOTC	Yotoco, Valle	4.90	171	P	Pn	00 51 47.4	-0.8
YOTC				S	Sn	00 52 40.4	-4.8
RUSC	La Rusia	5.00	126	P	Pn	00 51 48.9	-0.9
	572nm18nm,0.9s						
RUSC				S	Sn	00 52 45.2	-2.7
	572nm18nm,0.9s						
ORTC	Ortega, Tolima	5.26	159	P	Pn	00 51 55.2	+2.1
CVER	Cruz Verde, Cu	5.28	144	P	Pn	00 51 53.4	-0.3
	2µm40nm,0.9s						
CHIC	Chingaza	5.40	141	P	Pn	00 51 54.9	-0.4
	21nm,0.8s						
CHIC				S	Sn	00 52 57.1	-0.7
	21nm,0.8s						
PRAC	Prado	5.58	156	P	Pn	00 51 58.1	+0.7
	40nm,0.8s						
JAMC	Jamundi, Valle	5.62	175	P	Pn	00 51 58.0	-0.1
	14nm,0.7s						
URIC	Uribia, Colomb	5.82	60	P	Pn	00 52 02.4	+1.8
	19nm,1.0s						
URIC				S	Sn	00 53 04.3	-3.2
	19nm,1.0s						
URMC	La Uribe, Meta	6.21	153	P	Pn	00 52 11.2	+5.0
POPC	Popayan, Colom	6.29	176	P	Pn	00 52 09.0	+1.7
SDV	Santo Domingo	6.45	89	Pn	Pn	00 52 09.2	-0.3
	0.9nm,0.3s,baz=296,slow=9.2,SNR=16						
SDV				Sn	Sn	00 53 21.5	-1.8
	9.9nm,0.3s,baz=49,slow=16,SNR=16						
	8.9nm,0.6s						
SDV	Santo Domingo	6.45	89	P	Pn	00 52 09.1	-0.3
SDV				S	Sn	00 53 20.8	-2.5
BBAC	Balboa, Cauca	6.79	181	P	Pn	00 52 15.7	+1.5
JTS	Las Juntas de	7.82	281	LR	LR	00 56 14.3	
	comp=Z,110nm,19.5s,baz=66,slow=44						
LPAZ	La Paz	26.53	160	P	P	00 56 12.6	-0.4
	1.2nm,0.8s,baz=346,slow=8.8,SNR=4.1						
	1.2nm,0.8s						
ASAR	Alice Springs	146.85	240	PKPbc	PKPdf	01 10 16.3	+0.3
	0.8nm,0.8s,baz=108,slow=3.8,SNR=5.8						
WRA	Warramunga Arr	147.63	247	PKPbc	PKPbc	01 10 20.5	+0.4
	0.8nm,1.0s,baz=102,slow=2.7,SNR=2.3						

NNC 24 00:59:19.4±7.5, 37.°57N×71.°30E, h0^{km}, mb3.5, mpv3.2, 3C-2D, Error ellipse: s-maj=72.9km s-min=50.0km az=146.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.56	354	⇓P	Pn	01 00 44.6	+1.2
	1.4nm,0.2s,baz=176,slow=11,SNR=69						
KK31				⇑S	Sn	01 01 49.4	+1.5
	1.1nm,0.3s,baz=174,slow=19,SNR=8.3						
AAK	Ala-Archa	5.62	25	⇑P	Pn	01 00 44.2	-0.1
	0.7nm,0.5s						
AAK				⇑S	Sn	01 01 50.3	+0.7
	0.8nm,0.5s						
AB31	Akbulak array	14.28	328	⇓P	Pn	01 02 39.3	-3.4
	0.2nm,0.4s,baz=160,slow=11,SNR=9.9						

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*CATAC **24** 01:29:10.7±0.9, 10°N±7°×8°7W±°, h1^{km}, M3.3/11, MLv3.3/11, Error ellipse: s-maj=14.8km s-min=10.5km az=162.2, confirmed*
*UCR **24** 01:29:16.4±0.7, 10.°77N×86.°54W, h6^{km}±8^{km}, MW3.5*
ISC 24 01:29:15.8±2.0, 10.°60N±0.°08×86.°67W±0.°09, h23^{km}, n36, σ1^{s}09/39, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALIBA	Liberia Airpor	1.11	90	eP	Pb	01 29 36.3	0.0
ALIBA				eS	Sb	01 29 51.1	+0.8
LCRUZ	La Cruz	1.13	65	eP	Pn	01 29 33.7	-2.5
JUD3	Juan Diaz 3	1.20	111	eP	Pb	01 29 38.3	+0.4
LAPC	Finca la Perla	1.23	82	eP	Pn	01 29 36.7	-0.9
NICO	Nicoya	1.29	111	eP	Pb	01 29 41.6	+2.1
GPS3	Bodega del ICE	1.29	83	eP	Pb	01 29 41.6	+2.1
VRLE	La Escondida,	1.30	82	eP	Pn	01 29 38.0	-0.6
VRLE				eS	Sn	01 29 53.5	-1.8
NADN	Granada	1.30	29	P	Pn	01 29 39.2	+0.6
GPS2	Hotel Rincn d	1.31	83	eP	Pn	01 29 38.3	-0.4
PLVR	Palo Verde	1.32	101	eP	Pb	01 29 40.7	+0.7
ELVJ	El Viejo (Barb	1.33	96	eP	Pn	01 29 38.6	-0.4
JAPN	Al SSO del Vol	1.34	47	P	Pn	01 29 38.3	-0.9
JAPN	Al SSO del Vol	1.34	47	eP	Pn	01 29 38.0	-1.1
MORN	Al O del Volca	1.38	47	P	Pn	01 29 38.8	-0.9
MORN				S	Sb	01 29 59.4	+1.3
CRUN	El Crucero	1.42	15	P	Pb	01 29 41.8	+0.1
NANN	Nandasmo	1.44	22	P	Pn	01 29 40.4	0.0
NANN	Nandasmo	1.44	22	S	Sb	01 30 02.1	+2.3
MESS	Mesas	1.46	84	eP	Pn	01 29 41.0	+0.2
HORNC	Hornillas	1.47	86	eP	Pn	01 29 40.8	-0.2
CLARA	Aguas Claras	1.48	83	eP	Pn	01 29 41.4	+0.2
CUI	Cuipilapa	1.48	88	eP	Pn	01 29 41.0	-0.1
VMAR	Armenia, Volca	1.55	82	eP	Pn	01 29 42.1	+0.1
COPN	Copaltepe	1.57	3	P	Pn	01 29 41.9	-0.4
COPN	Copaltepe	1.57	3	eP	Pn	01 29 41.4	-0.9
JTS	Las Juntas de	1.72	100	eP	Pb	01 29 45.5	-1.3
MOMN	Momotombo	1.80	4	P	Pn	01 29 45.3	-0.3
CNGA	Al SSO del Vol	1.88	359	P	Pn	01 29 47.1	+0.5
CNGN	Cerro Negro	1.89	359	P	Pn	01 29 46.7	0.0
CNGN	Cerro Negro	1.89	359	eP	Pn	01 29 46.7	0.0
PACN	Al O del Volca	1.89	356	P	Pn	01 29 47.6	+0.8
ARE1	Arenal 1	1.93	94	eP	Pb	01 29 49.8	-0.5
VARE2	V. Arenal	1.93	94	eP	Pb	01 29 50.0	-0.4
CEDE	Laguna Cedeo	1.94	93	eP	Pb	01 29 50.0	-0.5
VACR	Volcan Arenal	1.97	94	eP	Pb	01 29 49.4	-1.6
PKGN	Cerro Pekin	2.08	352	P	Pb	01 29 51.2	-1.6
MATN	Matagalpa	2.43	17	P	Pn	01 29 55.6	+1.4

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*CATAC **24** 01:31:31.4±0.4, 14°N±3°×9°1W±°, h1^{km}, M3.8/16, MLv3.8/16, Error ellipse: s-maj=6.0km s-min=3.3km az=28.4, confirmed*
*SNET **24** 01:31:32.2±2.1, 13.°64N×91.°15W, h12^{km}, ML3.7*
*GCG **24** 01:31:33.3±0.7, 13.°75N×91.°36W, h54^{km}±12^{km}, MD4.3, ML3.5*
ISC 24 01:31:33.0±1.7, 13.°72N±0.°07×91.°06W±0.°05, h2^{km}±11^{km}, n45, σ0^{s}94/53, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESSJ	San Jos, E	0.56	106	i P	Pg	01 31 45.1	+1.3
ESSG	Sabana Grande	0.70	18	i P	Pn	01 31 48.6	-1.3

ESSG				iS	Sn	01 32 00.7	-0.6
STG5	El Palmar, Qui	0.74	338	eP	Pn	01 31 50.9	+0.4
FG16	Alotenango, Sa	0.77	44	eP	Pn	01 31 49.9	-1.0
FG16				IAML		01 32 18.4	
	comp=N,10μm,0.2s						
STG2	El Palmar, Qui	0.78	337	eP	Pn	01 31 51.9	+0.9
STG2				eS	Sn	01 32 05.6	+2.3
STG8	El Palmar, Qui	0.78	339	iP	Pn	01 31 52.0	+0.8
STG8				iS	Sn	01 32 06.4	+2.9
STG8				IAML		01 32 15.2	
	comp=N,2μm,0.3s						
PCG5	San Vicente Pa	0.83	53	iP	Pb	01 31 50.4	+0.3
RTAL	Retalhuleu	1.01	322	P	Pg	01 31 51.9	-0.4
FAME	Alcaldia de Sa	1.02	83	P	Pg	01 31 52.8	+0.3
FAME	Alcaldia de Sa	1.02	83	S	Sn	01 32 08.7	-0.5
SOKI	Kika Raxquin	1.15	343	eP	Pg	01 31 53.4	-1.6
SOKI				iS	Sg	01 32 09.5	-0.4
SOKI				IAML		01 32 12.7	
	comp=N,943nm,0.3s						
NUBE	Las Nubes	1.25	82	eP	Pb	01 31 56.4	-1.0
NUBE				eS	Sg	01 32 13.2	-0.2
NUBE	Las Nubes	1.25	82	eP	Pb	01 31 56.5	-0.9
NUBE	Las Nubes	1.25	82	P	Pb	01 31 57.1	-0.3
NUBE	Las Nubes	1.25	82	S	Sn	01 32 14.6	-0.6
LOAL	Lomas de Alarc	1.27	77	P	Pg	01 31 58.1	+0.7
LOAL	Lomas de Alarc	1.27	77	S	Sn	01 32 17.1	+1.6
RTR	El Retiro	1.38	82	eP	Pn	01 31 58.8	-0.6
CEVE	Cerro Verde	1.40	85	eP	Pn	01 31 59.1	-0.6
CEVE				eS	Sn	01 32 18.9	+0.1
CEVE	Cerro Verde	1.40	85	P	Pn	01 31 59.3	-0.4
SBLS	San Blas	1.40	85	eP	Pn	01 31 59.1	-0.6
APG	El Apazote	1.40	24	iP	Pg	01 32 00.5	+0.6
UNIC	Universidad Ca	1.49	80	P	Pn	01 32 01.1	+0.3
UNIC	Universidad Ca	1.49	80	S	Sg	01 32 21.9	+1.0
QUIS	Sacapulas	1.56	359	eP	Pn	01 32 01.8	0.0
JAYA	Jayaque - finc	1.57	92	eP	Pn	01 32 01.8	-0.2
JAYA	Jayaque - finc	1.57	92	eP	Pn	01 32 00.8	-1.1
JAYA	Jayaque - finc	1.57	92	P	Pn	01 32 02.5	+0.6
JAYA	Jayaque - finc	1.57	92	S	Sb	01 32 22.7	-0.4
HUEH	Huehuetenango	1.65	345	P	Pn	01 32 02.4	-0.7
PMON	Piamonte	1.69	90	eP	Pn	01 32 03.9	+0.2
PMON				eS	Sb	01 32 26.0	-0.8
PMON	Piamonte	1.69	90	P	Pn	01 32 04.2	+0.5
PMON	Piamonte	1.69	90	S	Sg	01 32 27.2	-0.2
LALI	Alcalda de L	1.71	98	eP	Pn	01 32 03.9	+0.2
LALI				eS	Sn	01 32 25.4	-0.6
BOQS	Boqueron	1.73	89	eP	Pn	01 32 04.8	+0.6
MTO3	Montecristo	1.78	68	iP	Pb	01 32 06.0	-0.4
MTO3	Montecristo	1.78	68	P	Pb	01 32 06.2	-0.2
MTO3	Montecristo	1.78	68	S	Sg	01 32 31.9	+1.6
LOMA	Loma Larga	1.84	92	P	Pn	01 32 05.9	+0.3
LOMA	Loma Larga	1.84	92	S	Sb	01 32 30.8	-0.1
ESQI	Esquipulas	1.86	63	P	Pb	01 32 06.9	-0.9
ESQI	Esquipulas	1.86	63	S	Sg	01 32 32.9	0.0
SARH	Santa Rosa de	2.46	64	eP	Pn	01 32 14.9	+0.7
SARH	Santa Rosa de	2.46	64	P	Pn	01 32 15.2	+1.0
LCND	La Caada	3.11	97	P	Pn	01 32 21.3	-1.8

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*NEIC **24** 01:32:56.1±1.2, 57°.5S±0°.1×25°.7W±0°.2, h35^{km}±1^{km}, mb4.7/18, Error ellipse: s-maj=22.5km s-min=18.3km az=233.0*

*IDC **24** 01:32:59.5±4.3, 57°.43S×25°.79W, h65^{km}±38^{km}, mb4.2/11, mbtmp4.5/13, ML4.7/2, MS3.5/11, Error ellipse: s-maj=20.6km s-min=14.3km az=57.0*

ISC 24 01:32:56.8±2.8, **57°.50S**±0°.09×**25°.7W**±0°.1, **h44**^{km}±25^{km}, **n93,** σ**1**^{s}**17**/86, **mb4.6**/13, **MS3.7**/9, **3C-3D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	15.13	158	⇓P	Pn	01 36 28.7	+1.6
	comp=Z,10nm,0.4s						
VNA3	Neumayer Olymp	15.34	160	⇑P	Pn	01 36 30.5	+0.6
	comp=Z,4.6nm,0.2s						
VNA3				⇓S	Sn	01 39 03.2	-15
	comp=E,2.8nm,0.3s						
VNA2	Neumayer--Watz	15.52	157	⇑P	Pn	01 36 33.5	+1.2
	comp=Z,6.9nm,0.3s,baz=320,slow=12						
SNAA	Sanae	17.07	155	⇑P	P	01 36 54.2	+1.1
	comp=Z,140nm,0.3s						
SNAA				⇓S	Sn	01 39 52.8	-7.5
	comp=N,32nm,0.5s						
SNAA	Sanae	17.07	155	P	P	01 36 54.9	+1.8
	comp=N,2.6nm,0.3s,baz=314,slow=14,SNR=120						
SNAA				S	Sn	01 39 50.0	-10
	comp=N,1.1nm,0.7s,baz=332,slow=16,SNR=2.1						
SNAA				LR	LR	01 43 08.4	
	comp=N,68nm,19.3s,baz=334,slow=36						
	comp=N,7.2nm,0.4s						
SNAA	Sanae	17.07	155	P	Pn	01 36 53.2	+1.4
PMSA	Palmer Station	19.64	232	P	P	01 37 22.4	+1.2
	comp=N,2.4nm,0.3s,baz=52,slow=5.0,SNR=8.3						
PMSA				LR	LR	01 43 10.7	
	comp=N,166nm,19.9s,baz=99,slow=31						
	comp=N,27nm,1.2s						
PMSA	Palmer Station	19.64	232	P	P	01 37 20.3	-1.0
PMSA				IAmb	IAmb	01 37 41.0	
	comp=Z,87nm,1.2s						
BELA	Belgrano 2	20.70	185	P	P	01 37 33.0	+0.3
BELA				IAmb	IAmb	01 37 37.8	
	comp=Z,13nm,0.4s						
QSPA	South Pole Qui	32.74	180	P	P	01 39 26.6	+1.5
	comp=Z,14nm,0.5s,baz=214,slow=1.1,SNR=162						
	comp=Z,14nm,0.5s						
QSPA	South Pole Qui	32.74	180	P	P	01 39 25.9	+0.8
PLCA	Paso Flores	33.10	281	P	P	01 39 27.2	-1.1
	comp=Z,2.8nm,0.8s,baz=197,slow=3.3,SNR=6.1						
PLCA				LR	LR	01 51 17.8	
	comp=Z,70nm,19.4s,baz=126,slow=33						
	comp=Z,2.8nm,0.8s						
PLCA	Paso Flores	33.10	281	P	P	01 39 27.4	-0.9
PLCA				IAmb	IAmb	01 39 32.9	
	comp=Z,9.0nm,1.2s						
CPUP	Villa Florida	38.41	311	P	P	01 40 12.6	-1.2
	comp=Z,1.8nm,0.5s,baz=152,slow=11,SNR=8.2						
CPUP				PcP	PcP	01 42 26.3	-0.1
	comp=Z,1.1nm,0.5s,baz=114,slow=1.5,SNR=7.0						
	comp=Z,1.8nm,0.5s						
CPUP	Villa Florida	38.41	311	P	P	01 40 13.2	-0.6
CPUP					PcP	01 42 26.6	+0.2
MAW	Mawson	38.48	142	P	P	01 40 14.6	+0.7
	comp=Z,1.2nm,0.4s,baz=254,slow=16,SNR=1.9						
	comp=Z,1.2nm,0.4s						
BSCB	Bom Sucesso	39.06	331	eP	P	01 40 20.7	+1.3
BSFB	Barra de Sao F	40.23	337	eP	P	01 40 29.5	+0.5
SUR	Sutherland	40.24	72	LR	LR	01 53 37.8	
	comp=Z,97nm,18.5s,baz=188,slow=31						
SJMB	Sao Joao De Ma	40.42	337	eP	P	01 40 31.4	+0.8
DIAM	Diamantina, MG	41.38	334	eP	P	01 40 39.5	+0.9
PMNB	Patos De Minas	41.85	330	eP	P	01 40 43.4	+0.9
IPMB	Ipameri, GO	42.88	328	eP	P	01 40 51.6	+0.8
AQDB	Aquidauana	43.04	317		P	01 40 51.4	-0.6
BDFB	Brasilia	45.05	329	P	P	01 41 09.0	+0.7
	comp=Z,5.0nm,0.4s,baz=129,slow=4.4,SNR=13						
BDFB				LR	LR	01 57 21.4	
	comp=Z,40nm,19.8s,baz=49,slow=32						
	comp=Z,5.0nm,0.4s						
BDFB	Brasilia	45.05	329		P	01 41 09.1	+0.9
BDFB				IAmb	IAmb	01 41 10.0	
	comp=Z,5.1nm,0.6s						
VNDA	Vanda	45.16	182	P	P	01 41 10.2	+1.9
	comp=Z,6.5nm,0.5s,baz=185,slow=7.0,SNR=71						
	comp=Z,6.5nm,0.5s						
VNDA	Vanda	45.16	182	P	P	01 41 10.0	+1.7
VNDA				IAmb	IAmb	01 41 10.9	
	comp=Z,8.2nm,0.6s						
BOSA	Boshof	45.54	73	P	P	01 41 12.2	+0.1
	comp=Z,2.4nm,1.0s,baz=76,slow=14,SNR=2.0						
BOSA				LR	LR	01 56 02.6	
	comp=Z,89nm,19.9s,baz=202,slow=30						
	comp=Z,2.4nm,1.0s						
BOSA	Boshof	45.54	73	P	P	01 41 10.8	-1.3
BOSA				IAmb	IAmb	01 41 16.8	
	comp=Z,14nm,1.4s						
ARAG	Araguaiana, MT	46.12	324	eP	P	01 41 17.4	+0.8
H04S2	CROZET ISLANDS	46.20	112	T	T	02 31 59.6	
	baz=226,slow=75,SNR=9.7						
H04S3	CROZET ISLANDS	46.21	112	T	T	02 31 57.5	
	baz=226,slow=75,SNR=10.0						
H04S1	CROZET ISLANDS	46.22	112	T	T	02 31 55.1	
	baz=226,slow=75,SNR=8.3						
SDBA	SAO DESIDERIO	47.34	334	eP	P	01 41 26.7	+0.5
LBTB	Lobatse	48.66	70	LR	LR	01 59 37.8	
	comp=Z,68nm,18.6s,baz=199,slow=33						
PTLB	Pontes e Lacer	48.93	315		P	01 41 38.2	-0.2
PTLB				IAmb	IAmb	01 41 38.9	
	comp=Z,4.1nm,0.7s						
PTLB	Pontes e Lacer	48.93	315	eP	P	01 41 38.4	0.0
H10S2	ASCENSION HYDR	49.17	14	T	T	02 35 26.6	
	baz=188,slow=74,SNR=71						
H10S3	ASCENSION HYDR	49.18	14	T	T	02 35 26.9	
	baz=32,slow=74,SNR=81						
GO01	Chusmiza	49.43	301	P	P	01 41 42.0	-0.8
GO01				IAmb	IAmb	01 41 45.2	
	comp=Z,5.4nm,0.6s						
GO01				PcP	PcP	01 43 04.7	+0.2
SNDB	Serra Nova Dou	49.48	326	eP	P	01 41 43.5	+0.9
H10N1	ASCENSION HYDR	50.29	14	T	T	02 36 44.1	
	baz=187,slow=76,SNR=19						
H10N3	ASCENSION HYDR	50.29	14	T	T	02 36 50.7	
	baz=187,slow=76,SNR=43						
H10N2	ASCENSION HYDR	50.31	14	T	T	02 36 47.3	
	baz=187,slow=76,SNR=31						
SMTB	Santa Maria do	51.41	332	eP	P	01 41 58.3	+1.1
PDRB	Porto dos Gac	51.59	320	eP	P	01 41 58.1	-0.4
VILB	Vilhena	51.62	315		P	01 41 58.5	-0.3
VILB	Vilhena	51.62	315	eP	P	01 41 58.5	-0.3
LPAZ	La Paz	51.91	304	P	P	01 42 01.1	-0.4
	comp=Z,7.9nm,0.5s,baz=142,slow=5.1,SNR=46						
LPAZ				PcP	PcP	01 43 14.2	+0.3
	comp=Z,2.0nm,0.5s,baz=94,slow=5.0,SNR=1.9						
	comp=Z,7.9nm,0.5s						
LPAZ	La Paz	51.91	304		P	01 42 01.2	-0.4
LPAZ					PcP	01 43 13.8	0.0
LPAZ	La Paz	51.91	304	eP	P	01 42 01.2	-0.4
CLDB	Colider	51.95	321	eP	P	01 42 01.0	-0.2
NPGB	Novo Progresso	55.39	323	eP	P	01 42 26.4	-0.1
ITTB	Itaituba	58.03	324	eP	P	01 42 45.2	+0.1
LSZ	Lusaka	58.14	67	LR	LR	02 05 09.6	
	comp=Z,47nm,18.8s,baz=176,slow=33						
MACA	Manacapuru-AM	60.83	319	eP	P	01 43 03.6	-0.8
TEFE	Tefe	61.97	315	eP	P	01 43 11.5	-0.6
BOAV	Boa Vista	65.95	321	P	P	01 43 38.0	-0.2
BOAV				PcP	PcP	01 44 08.8	+0.2
BOAV	Boa Vista	65.95	321	eP	P	01 43 37.8	-0.4
DBIC	Dimbokro	66.16	23	P	P	01 43 40.0	+0.5
	comp=Z,1.1nm,0.4s,baz=189,slow=3.6,SNR=1.6						
DBIC				LR	LR	02 06 55.9	
	comp=Z,49nm,20.0s,baz=200,slow=31						
	comp=Z,1.1nm,0.4s						
DBIC	Dimbokro	66.16	23	P	P	01 43 39.6	+0.1
DBIC				IAmb	IAmb	01 44 14.2	
	comp=Z,13nm,1.4s						
MBAR	Mbarara	72.08	61	LR	LR	02 14 19.3	
	comp=Z,24nm,18.1s,baz=181,slow=34						
TORD	Torodi Ar. Bea	73.93	28	P	P	01 44 27.9	+0.9
	comp=Z,5.2nm,0.6s,baz=200,slow=5.1,SNR=46						
	comp=Z,5.2nm,0.6s						
TORD	Torodi Ar. Bea	73.93	28	P	P	01 44 27.9	+0.8
SDV	Santo Domingo	75.63	314	P	P	01 44 37.3	0.0
SDV				IAmb	IAmb	01 44 37.9	
	comp=Z,4.6nm,0.7s						
FURI	Furi	84.16	64	LR	LR	02 22 12.8	
	comp=Z,39nm,18.1s,baz=158,slow=35						
ASAR	Alice Springs	97.34	161	P	P	01 46 24.9	-0.4
	comp=Z,0.5nm,0.6s,baz=180,slow=5.1,SNR=5.5						
	comp=Z,0.5nm,0.6s						
ASAR	Alice Springs	97.34	161	P	P	01 46 24.4	-0.8
HFS	Hagfors	121.32	22	PKP	PKPdf	01 51 42.1	-1.3
	comp=Z,1.5nm,0.9s,baz=160,slow=4.7,SNR=4.7						
NOA	NORSAR Array B	121.68	20	PKP	PKPdf	01 51 44.1	-0.1
	comp=Z,0.2nm,0.5s,baz=207,slow=2.0,SNR=1.7						
PDAR	Pinedale Array	121.83	300	PKP	PKPdf	01 51 44.6	-0.7
	comp=Z,0.6nm,0.5s,baz=123,slow=4.8,SNR=14						
ULM	Lac du Bonnet	121.88	315	PKP	PKPdf	01 51 43.2	-1.7
	comp=Z,1.9nm,0.5s,baz=114,slow=4.5,SNR=4.1						
ULM	Lac du Bonnet	121.88	315		PKPdf	01 51 44.0	-0.9
NVAR	Mina Array Bea	122.73	291	PKP	PKiKP	01 51 48.2	+0.8
	comp=Z,0.7nm,0.6s,baz=130,slow=2.6,SNR=9.1						
NVAR	Mina Array Bea	122.73	291		PKiKP	01 51 48.0	+0.6
CMAR	Chiang Mai Arr	123.77	110	PKP	PKPdf	01 51 49.8	+0.3
	comp=Z,1.3nm,0.3s,baz=227,slow=1.1,SNR=1.5						
FINES	FINESS Array B	125.28	28	PKP	PKPdf	01 51 50.8	-0.2
	comp=Z,1.8nm,0.5s,baz=157,slow=2.0,SNR=41						
FINES	FINESS Array B	125.28	28		PKPdf	01 51 50.7	-0.3
ARCES	ARCESS Array B	131.98	22	PKP	PKPdf	01 52 02.5	-1.1
	comp=Z,0.5nm,0.4s,baz=219,slow=2.0,SNR=14						
ARCES	ARCESS Array B	131.98	22		PKPdf	01 52 03.4	-0.2
BVAR	Borovoye Array	134.84	58	PKP	PKPdf	01 52 09.8	+0.4
	comp=Z,0.6nm,0.4s,baz=182,slow=1.8,SNR=5.9						
MKAR	Makanchi Array	136.54	72	PKP	PKPdf	01 52 11.5	-1.3
	comp=Z,0.3nm,0.7s,baz=214,slow=1.0,SNR=2.3						
MKAR	Makanchi Array	136.54	72		PKPdf	01 52 11.9	-0.9
KURBB	Kurchatov Arra	137.15	65	PKP	PKPdf	01 52 14.8	+1.0
	comp=Z,0.3nm,0.4s,baz=232,slow=2.6,SNR=2.0						
YKA	Yellowknife Ar	137.81	316	PKP	PKPdf	01 52 14.6	-0.1
	comp=Z,1.5nm,0.4s,baz=319,slow=2.0,SNR=20						
ZALV	Zalesovo Beam	142.24	65	PKhKP	PKPpre	01 52 17.0	
	comp=Z,0.9nm,0.4s,baz=235,slow=5.1,SNR=4.3						
NRIK	Noril'sk	149.59	40	PKPbc	PKPbc	01 52 39.1	-0.5
	comp=Z,1.4nm,0.4s,baz=11,slow=1.6,SNR=4.7						
NRIK	Noril'sk	149.59	40		PKPbc	01 52 39.4	-0.2
SONM	Songino Array	149.95	88	PKPbc	PKPbc	01 52 41.3	-0.1
	comp=Z,4.2nm,0.7s,baz=222,slow=3.2,SNR=12						
SONM	Songino Array	149.95	88		PKPbc	01 52 41.6	+0.3
ILAR	Eielson Array	151.71	309	PKPbc	PKPbc	01 52 44.7	-0.1
	comp=Z,7.8nm,0.5s,baz=137,slow=3.8,SNR=178						
ILAR	Eielson Array	151.71	309		PKPbc	01 52 44.9	+0.2

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*NEIC **24** 01:45:35.7±1.9, 9°.52N±0°.03×81°.95W±0°.04, h10^{km}±1^{km}, mb4.6/9, Error ellipse: s-maj=6.4km s-min=5.7km az=227.0*

*UCR **24** 01:45:35.5±0.9, 9°.62N×81°.92W, h10^{km}±14^{km}, MW4.1*

*CATAC **24** 01:45:36.9±0.8, 10°N±2°×8°2W±°, h25^{km}±7^{km}, M4.1/16, MLv4.1/16, Error ellipse: s-maj=4.3km s-min=3.1km az=174.6, confirmed*

*UPA **24** 01:45:37.2±1.2, 9°.60N×81°.96W, h32^{km}±7^{km}, MW4.1*

ISC 24 01:45:35.0±1.3, **9°.59N**±0°.03×**81°.93W**±0°.02, **h9**^{km}±9^{km}, **n144,** σ**0**^{s}**82**/177, **mb4.6**/5, **10D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNI2	El Empalme, Bo	0.56	253	⇓iP	Pn	01 45 48.7	-0.4
CNI2				eS	Sb	01 45 57.3	+2.4
CHGR2	Aguacate	0.68	198	eP	Pb	01 45 49.3	+0.3
CHGR2				eS	Sb	01 45 58.9	+0.4
RBALA	Bur	0.74	197	eP	Pg	01 45 49.6	+0.4
PBNVO	Pueblo Nuevo,	0.74	200	eP	Pb	01 45 50.0	0.0
BRIBI	Bribri	0.87	272	eP	Pn	01 45 53.5	0.0
LNBQ3	Los Naranjos,	0.94	212	eP	Pg	01 45 53.3	+0.3
LNBQ3				eS	Sg	01 46 05.8	+0.6
BQSF3	Alto Boquete,	0.97	211	eP	Pg	01 45 53.8	0.0
BQSF3				eS	Sg	01 46 07.0	+0.5
BQTLY	Boquete Panama	0.97	212	eP	Pg	01 45 53.7	0.0
PSOM3	Paja de Sombre	0.97	203	⇓iP	Pg	01 45 53.7	-0.1
PSOM3				eS	Sg	01 46 06.5	0.0
PTAR3	Potrerillos Ar	1.05	212	eP	Pg	01 45 55.0	-0.1
PTAR3				eS	Sg	01 46 09.2	+0.4
CLLRA	Cordillera,	1.07	219	eP	Pg	01 45 55.5	-0.2
BRU2	Volcan	1.09	224	Pg	Pg	01 45 55.3	-0.6
BRU2				Sg	Sg	01 46 08.6	-1.4
BRU2	Volcan	1.09	224	⇓iP	Pg	01 45 55.4	-0.6
BRU2				eS	Sg	01 46 10.2	+0.1
BRU2	Volcan	1.09	224	P	Pg	01 45 55.3	-0.6
BRU2	Volcan	1.09	224	S	Sg	01 46 09.6	-0.5
BRU2	Volcan	1.09	224	eP	Pg	01 45 55.3	-0.6
JEFFS	S de V. Baru	1.09	213	eP	Pg	01 45 55.6	-0.3
ALCO	Alturas Coton,	1.09	235	eP	Pg	01 45 55.2	-0.8
SCLRA	Santa Clara, W	1.12	228	eP	Pg	01 45 56.2	-0.4
MLIR3	Monte Lirio, C	1.18	228	eP	Pg	01 45 57.7	0.0
MLIR3				eS	Sg	01 46 13.0	-0.1
RSRNO	Rio Sereno	1.19	230	eP	Pg	01 45 57.6	-0.4
LOMA3	Las Lomas, Chi	1.23	202	eP	Pn	01 45 58.3	-0.1
LOMA3				eS	Sb	01 46 14.0	-0.5
DMCAL	E. de Neily	1.25	223	eP	Pn	01 45 58.7	0.0
CHIR3	Chiriqui UPA,	1.25	198	eP	Pn	01 45 58.3	-0.3
CHIR3				eS	Sb	01 46 14.5	-0.4
DVD	David	1.25	204	eP	Pn	01 45 58.5	-0.2
DVD				eS	Sb	01 46 14.9	-0.1
BAGA3	Bagala, Chiriq	1.26	208	eP	Pn	01 45 58.8	0.0
BAGA3				eS	Sb	01 46 14.8	-0.3
LOCO3	Loma Colorada,	1.26	202	eP	Pn	01 45 58.7	-0.1
LOCO3				eS	Sb	01 46 14.7	-0.7
VITO	San Vito	1.28	233	eP	Pn	01 45 58.9	-0.2
PDCAN	Manzana , Fuen	1.31	170	eP	Pn	01 45 59.3	-0.2
DRK0	Durika	1.33	256	iP	Pn	01 45 58.8	-1.2
DRK0				eS	Sb	01 46 15.6	-2.0
DRK0	Durika	1.33	256	P	Pn	01 45 59.0	-0.9
DRK0	Durika	1.33	256	S	Sb	01 46 16.2	-1.4
DRK0	Durika	1.33	256	eP	Pn	01 45 58.8	-1.2
EDP2	Potrero Grande	1.35	245	eP	Pn	01 45 59.5	-0.6
NANC3	Nancito, Chiri	1.35	172	⇓iP	Pn	01 46 00.2	+0.1
NANC3				eS	Sb	01 46 17.8	-0.1
REME3	Remedios, Chir	1.35	176	eP	Pb	01 46 00.5	0.0
SAFE3	Santa Fe, Vera	1.36	141	eP	Pn	01 45 59.8	-0.4
NELY	Ciudad Neily	1.37	227	eP	Pn	01 46 00.4	+0.1
CDITO	Canoas	1.37	223	P	Pn	01 46 00.2	-0.1
CDITO	Canoas	1.37	223	S	Sb	01 46 18.3	-0.1
LPPC	Paso Canoas	1.38	221	eP	Pn	01 46 00.3	-0.1
BURE	Buenos Aires	1.45	254	eP	Pn	01 46 00.9	-0.4
FIMO	Fila Mora	1.52	247	eP	Pn	01 46 03.1	+0.5
EDAD	Golfito	1.53	233	eP	Pn	01 46 02.3	-0.3
FITO	Golfito	1.54	232	eP	Pn	01 46 02.2	-0.4
PVID3	Puerto Vidal,	1.56	168	eP	Pn	01 46 02.8	-0.2
PVID3				eS	Sn	01 46 22.5	-0.8
SAJE	San Jernim	1.57	261	eP	Pn	01 46 02.8	-0.5
MESA3	La Mesa, Verag	1.61	153	⇓iP	Pn	01 46 03.7	+0.2
MESA3				eS	Sn	01 46 23.6	-0.9
IRES	Siquirres	1.63	288	eP	Pb	01 46 04.9	-0.3
PANP	Palmar Norte	1.63	248	eP	Pn	01 46 04.7	+0.9
CALO3	Calobre, Verag	1.66	139	⇓iP	Pn	01 46 04.4	+0.1
CALO3				eS	Sn	01 46 24.2	-1.4
PTPA	Petro Terminal	1.66	214	eP	Pn	01 46 04.6	+0.3
PTPM	Petroterminale	1.66	214	⇓iP	Pn	01 46 04.7	+0.4
PTPM				eS	Sn	01 46 24.6	-1.1
EDPE	Pejibaye, P	1.67	255	eP	Pn	01 46 05.1	+0.6
LCOCO	El Coco	1.68	287	eP	Pn	01 46 04.7	+0.1
PTJ1	Puerto Jimnez	1.71	232	eP	Pn	01 46 05.2	+0.2
PTJ1	Puerto Jimnez	1.71	232	P	Pn	01 46 05.3	+0.4
PTJ1	Puerto Jimnez	1.71	232	S	Sn	01 46 27.7	+0.8
RVLA	Villa Bonita	1.71	288	eP	Pn	01 46 05.0	0.0
LMNES	Limones	1.74	212	eP	Pn	01 46 05.7	+0.4
LIMO3	Limones	1.74	212	eP	Pn	01 46 06.0	+0.7
RESJ	San Isidro (Tu	1.74	285	eP	Pn	01 46 05.9	+0.4
EGUB	Earth Gu¡pi	1.75	291	Pn	Pn	01 46 05.5	0.0
EGUB				Sn	Sn	01 46 27.7	-0.2
EGUB	Earth Gu¡pi	1.75	291	eP	Pn	01 46 05.5	0.0
STIA3	Santiago, Vera	1.76	147	eP	Pn	01 46 06.0	+0.4
STIA3				eS	Sn	01 46 27.9	-0.2
TURIB	Turrialba	1.76	281	eP	Pn	01 46 05.6	-0.1
RSUS3	Rio de Jesus,	1.77	154	eP	Pn	01 46 05.8	+0.1
RSUS3				eS	Sn	01 46 27.1	-1.2
BUS1	Rivas	1.79	269	eP	Pn	01 46 06.4	-0.1
ABRB	Las Abras (San	1.81	283	eP	Pn	01 46 06.9	+0.4
VTCV	VTCV, Calle Va	1.81	283	eP	Pn	01 46 06.7	+0.2
PIRO	Carate, Puerto	1.82	230	Pn	Pn	01 46 06.0	-0.5
PIRO	Carate, Puerto	1.82	230	P	Pn	01 46 06.8	+0.4
PIRO	Carate, Puerto	1.82	230	S	Sn	01 46 30.1	+0.5
PIRO	Carate, Puerto	1.82	230	eP	Pn	01 46 06.4	0.0
CVTV	Tajo	1.84	283	eP	Pn	01 46 07.1	0.0
CVTR	Volcan Turrial	1.85	284	eP	Pn	01 46 07.0	-0.3
VTR0	Volcan Turrial	1.85	284	eP	Pn	01 46 07.3	0.0
CRIS3	El Cristo, Coc	1.85	135	eP	Pn	01 46 07.2	+0.2
CVTQ	Turrialba Volc	1.85	283	eP	Pn	01 46 07.5	+0.2
RAFA	San Farael, Vo	1.89	281	Pn	Pn	01 46 07.9	+0.1
RAFA	San Farael, Vo	1.89	281	eP	Pn	01 46 07.8	+0.1
REPA	Paraso	1.92	277	eP	Pn	01 46 08.8	+0.8
VICA	Volcano Irazu	1.93	282	eP	Pn	01 46 08.4	+0.1
CARI	Cariari	1.94	294	eP	Pn	01 46 07.9	-0.2
GMAL	Guarumal, Vera	1.94	159	⇓iP	Pn	01 46 07.9	-0.2
GMAL				eS	Sn	01 46 31.0	-1.6
GMAL	Guarumal, Vera	1.94	159	eP	Pn	01 46 07.9	-0.2
PIEC	Cerro El Cedra	2.00	271	eP	Pn	01 46 09.5	+0.3
TRT2	Tortugero	2.02	299	P	Pn	01 46 08.5	-0.7
TRT2	Tortugero	2.02	299	S	Sb	01 46 36.3	-0.9
TRT2	Tortugero	2.02	299	eP	Pn	01 46 08.4	-0.9
CVIMO	Finca Echandi	2.03	283	eP	Pn	01 46 10.1	+0.5
LCR2	La Lucha 2	2.05	274	P	Pn	01 46 10.6	+0.8
RAZU	San Marcos de	2.06	272	eP	Pn	01 46 11.0	+1.0
BCIP	Isla Barro Col	2.11	101	Pn	Pn	01 46 10.6	+0.2
BCIP	Isla Barro Col	2.11	101	eP	Pn	01 46 10.7	+0.2
BCIP				eS	Sn	01 46 36.3	-0.5
BCIP	Isla Barro Col	2.11	101	eP	Pn	01 46 10.7	+0.2
AMPA	Desamparados	2.12	279	eP	Pn	01 46 11.6	+0.8
MARI3	Mariato, Verag	2.14	154	eP	Pn	01 46 11.6	+0.7
MARI3				eS	Sn	01 46 36.7	-0.8
HDC	Heredia	2.19	281	Pn	Pn	01 46 11.8	+0.1
HDC	Heredia	2.19	281	eP	Pn	01 46 12.7	+1.0
CHIT3	Chitre	2.21	137	eP	Pn	01 46 11.9	+0.1
CHIT3				eS	Sn	01 46 38.3	-0.9
FRIJ	El Hiral	2.21	99	⇓iP	Pn	01 46 12.3	+0.5
FRIJ				eS	Sn	01 46 38.2	-1.0
ACOS	Acosta	2.21	276	eP	Pn	01 46 12.6	+0.6
HEME	Heredia, Merce	2.21	281	eP	Pb	01 46 14.1	-1.1
PICV	PH. Pirrs	2.23	271	eP	Pn	01 46 12.8	+0.6
GAMB1	Gamboa	2.24	102	eP	Pn	01 46 12.6	+0.3
CHOR3	La Chorrera	2.25	108	eP	Pn	01 46 12.9	+0.5
CHOR3				eS	Sn	01 46 39.0	-1.2
ARRA3	Arraijan, Pana	2.33	105	eP	Pn	01 46 14.0	+0.5
ARRA3				eS	Sn	01 46 40.5	-1.7
ARTO	Ro Cuarto	2.37	289	eP	Pn	01 46 14.7	+0.5
TCS1	Tacares	2.38	281	P	Pn	01 46 15.6	+1.3
TCS1	Tacares	2.38	281	eP	Pn	01 46 15.6	+1.3
AZU	Azuero	2.42	137	⇓iP	Pn	01 46 14.7	-0.1
AZU				eS	Sn	01 46 44.1	-0.5
AZU	Azuero	2.42	137	eP	Pn	01 46 14.4	-0.3
ATEO	Atenas	2.44	279	eP	Pn	01 46 16.4	+1.3
CACAO	El Cacao, Vera	2.47	154	eP	Pn	01 46 16.1	+0.7
CACAO				eS	Sn	01 46 44.7	-1.0
CAZU	Cerro Azul, Pa	2.52	98	eP	Pn	01 46 16.4	+0.2
COVE	Coope Vega, Sa	2.68	295	P	Pn	01 46 18.4	+0.1
ARZA	Esparza	2.73	279	eP	Pn	01 46 21.0	+2.0
SOCE	Pocosol	2.76	287	Pn	Pn	01 46 20.2	+0.8
SOCE	Pocosol	2.76	287	P	Pn	01 46 21.0	+1.5
JTS	Las Juntas de	3.06	283	Pn	Pn	01 46 24.8	+1.2
JTS	Las Juntas de	3.06	283	eP	Pn	01 46 24.0	+0.5
JTS				eS	Sn	01 46 57.2	-3.0
JTS	Las Juntas de	3.06	283	eP	Pn	01 46 24.6	+1.0
VMAR	Armenia, Volca	3.36	292	eP	Pn	01 46 28.3	+0.6
JUD3	Juan Diaz 3	3.60	280		Pn	01 46 33.1	+2.1
TOTI	Torti	3.63	100	eP	Pn	01 46 31.9	+0.4
UPD2	Meteti	4.00	105	eP	Pn	01 46 36.6	0.0
BOAB	BOACO BROADBAN	4.64	308	Pn	Pn	01 46 45.4	+0.1
BOAB	BOACO BROADBAN	4.64	308	P	Pn	01 46 45.7	+0.4
BILN	Bilwi Airport	4.65	342	Pn	Pn	01 46 46.0	+0.6
SIUN	Universidad Ur	4.96	326	Pn	Pn	01 46 50.0	+0.3
SIUN	Universidad Ur	4.96	326	P	Pn	01 46 50.1	+0.4
MTDJ	Mount Denham	9.59	26	Pn	Pn	01 47 54.4	+1.0
SDV	Santo Domingo	11.18	93	Pn	Pn	01 48 15.7	+0.5
TEIG	Tepich	12.22	331	Pn	Pn	01 48 30.9	+1.5
MAGL	Barre de l'ile	21.10	70	P	P	01 50 17.4	-2.6
LRAL	Lakeview Retre	23.80	349	P	P	01 50 50.5	+2.3
LRAL				IAmb	IAmb	01 51 13.4	
	comp=Z,20nm,1.4s						
Y49A	Blount Mountai	24.50	351	P	P	01 50 57.0	+2.2
Y49A				IAmb	IAmb	01 51 30.0	
	comp=Z,23nm,1.4s						
833A	Chaparral WMA,	24.84	321	P	P	01 50 59.3	+1.5
SWET	Sewanee	25.77	352	P	P	01 51 06.7	+0.5
V55A	Taylorsville	26.15	1	P	P	01 51 10.5	+0.9
V55A				IAmb	IAmb	01 51 36.4	
	comp=Z,20nm,1.3s						
V48A	Smith Brothers	26.41	351	P	P	01 51 14.1	+2.1
V48A				IAmb	IAmb	01 51 14.5	
	comp=Z,7.5nm,0.8s						
WVT	Waverly	26.96	349	P	P	01 51 17.4	+0.5
P48A	Milroy	29.91	355	P	P	01 51 43.9	+0.7
P48A				IAmb	IAmb	01 52 27.2	
	comp=Z,18nm,1.4s						

IDC 24 01:48:53.1±8.3, **50°.04N**×**129°.70W**, **h0**^{km}, **mb3.7**/2, **mbtmp3.8**/3, **ML3.7**/1, **MS2.8**/2, **Error ellipse: s-maj=113.4km s-min=72.6km az=106.0, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEW	Newport	8.43	97	LR	LR	01 54 16.5	
	comp=Z,52nm,19.8s,baz=304,slow=38						
PDAR	Pinedale Array	15.65	110	Pn	P	01 52 37.6	-1.8
	baz=310,slow=15,SNR=12						
PDAR				LR	LR	01 59 08.5	
	comp=Z,34nm,18.8s,baz=10.0,slow=39						
	2.8nm,1.1s						

ULM	**Lac du Bonnet**	**21.57**	**76**	P	P	01 53 44.1	+0.1
	3.4nm,0.5s,baz=280,slow=8.7,SNR=3.9						
	3.4nm,0.5s						
TXAR	**Lajitas Array**	**28.54**	**127**	P	P	01 54 50.5	0.0
	0.6nm,1.0s,baz=324,slow=6.0,SNR=4.0						
	0.6nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**58.10**	**263**	T	T	03 01 29.7	
	baz=42,slow=76,SNR=39						
H11N3	**WAKE ISLAND Hy**	**58.10**	**263**	T	T	03 01 28.7	
	baz=42,slow=76,SNR=34						
H11N1	**WAKE ISLAND Hy**	**58.12**	**263**	T	T	03 01 30.5	
	baz=42,slow=76,SNR=29						
H11S1	**WAKE ISLAND Hy**	**59.12**	**262**	T	T	03 02 41.7	
	baz=34,slow=76,SNR=6.9						
H11S2	**WAKE ISLAND Hy**	**59.13**	**262**	T	T	03 02 50.0	
	baz=34,slow=76,SNR=10						
H11S3	**WAKE ISLAND Hy**	**59.14**	**262**	T	T	03 02 43.6	
	baz=34,slow=76,SNR=6.3						

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*DJA **24** 01:58:17.0±4.2, 8°N±36°×12°5E±°, h92^{km}±35^{km}, M4.7/7, mb4.7/7, mB5.2/2, MLv4.7/7, Mw(mB)4.5/2*

*IDC **24** 01:58:22.0±0.9, 6°.66N×124°.95E, h0^{km}, mb3.7/7, mbtmp3.7/7, MS2.9/5, Error ellipse: s-maj=19.3km s-min=9.8km az=137.0*

ISC 24 01:58:24.3±0.8**, 6°.77N**±0°.09×**125°.1E**±0°.1**, h10**^{km}**, n20, σ1**^{s}**.78**/15**, mb3.7**/8**, MS2.7**/5**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.57**	**59**	Pg	**Pb**	**01 58 36.4**	**-0.1**
	752nm,0.3s,baz=251,slow=8.9,SNR=23						
DAV				Lg	Lg	01 58 46.7	
	563nm,0.3s,baz=110,slow=24,SNR=7.5						
DAV				LR	LR	01 59 04.5	
	comp=Z,2µm,21.1s,baz=345,slow=57						
DAV	**Davao City (W)**	**0.57**	**59**	P	**Pb**	**01 58 36.3**	**-0.2**
DAV	**Davao City (W)**	**0.57**	**59**	P	**Pn**	**01 58 39.0**	**+0.4**
GTOI	**Gorontalo**	**6.44**	**199**	P	**Pn**	**02 00 00.2**	**+0.9**
	0.3nm846nm69nm,0.6s						
MRSI	**Marisa**	**7.00**	**207**	P	**Pn**	**02 00 09.0**	**+2.1**
	0.2nm41nm,0.7s						
SANI	**Sanana**	**8.81**	**174**	P	**Pn**	**02 00 35.4**	**+3.5**
	11nm,0.5s						
MMSI	**Mamuju**	**11.24**	**213**	P	**Pn**	**02 01 05.4**	**+0.2**
GUMO	**Guam**	**20.61**	**69**	LR	LR	02 09 39.5	
	comp=Z,22nm,20.1s,baz=114,slow=33						
FITZ	**Fitzroy Crossi**	**24.72**	**179**	P	**P**	**02 03 43.5**	**-2.5**
	1.7nm,0.4s,baz=6.3,slow=9.2,SNR=23						
	1.7nm,0.4s						
PSI	**Prapat**	**26.36**	**263**	LR	LR	02 15 11.4	
	comp=Z,39nm,19.6s,baz=63,slow=38						
CMAR	**Chiang Mai Arr**	**27.98**	**297**	LR	LR	02 15 34.6	
	comp=Z,19nm,18.2s,baz=125,slow=37						
WRA	**Warramunga Arr**	**28.07**	**161**	P	**P**	**02 04 14.9**	**-1.3**
	0.6nm,0.4s,baz=336,slow=9.6,SNR=8.5						
	0.6nm,0.4s						
KSRS	**Korea Array**	**30.65**	**4**	LR	LR	02 17 11.6	
	comp=Z,17nm,21.4s,baz=225,slow=37						
ASAR	**Alice Springs**	**31.45**	**164**	P	**P**	**02 04 45.1**	**-1.1**
	0.3nm,0.4s,baz=337,slow=6.5,SNR=9.2						
	0.3nm,0.4s						
MJAR	**Matsushiro Arr**	**31.97**	**20**	LR	LR	02 18 43.3	
	comp=Z,27nm,18.2s,baz=89,slow=38						
GTA	**Gaotai**	**39.66**	**329**	*e*P	**P**	**02 05 58.8**	**+2.0**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
STKA	**Stephens Creek**	**41.54**	**159**	P	**P**	**02 06 10.9**	**-1.2**
	comp=Z,1.6nm,0.8s,baz=346,slow=13,SNR=3.7						
	comp=Z,1.6nm,0.8s						
MKAR	**Makanchi Array**	**54.14**	**325**	P	**P**	**02 07 49.8**	**0.0**
	comp=Z,0.5nm,0.7s,baz=126,slow=8.4,SNR=9.7						
	comp=Z,0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**58.31**	**327**	P	**P**	**02 08 17.3**	**-2.1**
	comp=Z,0.2nm,0.4s,baz=127,slow=5.8,SNR=4.0						
	comp=Z,0.2nm,0.4s						
ILAR	**Eielson Array**	**83.08**	**26**	P	**P**	**02 10 51.0**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=266,slow=7.3,SNR=2.8						
	comp=Z,0.4nm,0.8s						

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*NEIC **24** 02:13:29.3±1.6, 18°.15N±0°.07×68°.06W±0°.04, h35^{km}±2^{km}, ML2.2/11, Md2.8/4(RSPR), Error ellipse: s-maj=12.5km s-min=6.4km az=7.0*

*RSPR **24** 02:13:30.8, 17°.87N×68°.06W, h27^{km}±9^{km}, MD2.8/4*

*SDD **24** 02:13:31.7±1.4, 18°.59N×68°.10W, h17^{km}±41^{km}, MD2.7, ML1.8, Presumed earthquake*

ISC 24 02:13:26.9±1.2**, 18°.4N**±0°.1×**68°.03W**±0°.05**, h1**^{km}±12^{km}**, n23, σ0**^{s}**.90**/30**, 8C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCDR	**Punta Cana, DR**	**0.36**	**292**	⇑*e*Pg	**Pb**	**02 13 37.5**	**+1.3**
PCDR				IAML		02 13 45.9	
	comp=N,6.8nm,0.3s						
IDE	**Isla Desecheo**	**0.52**	**89**		**Pb**	**02 13 40.1**	**+1.2**
IDE					**Sb**	**02 13 47.1**	**+0.2**
HIDR	**Higuey Centro**	**0.69**	**288**	⇑*e*Pg	**Pb**	**02 13 43.0**	**+1.2**
HIDR				⇑*e*Sg	**Sg**	**02 13 49.4**	**+0.3**
HIDR				IAML		02 13 54.7	
	comp=N,171nm,0.2s						
HIDR				IAML		02 14 10.7	
	comp=N,40nm,1.1s						
AGPR	**Aguadilla, PR**	**0.87**	**84**	Pn	**Pn**	**02 13 47.4**	**+1.1**
LSP	**Las Mesas**	**0.92**	**103**		**Pb**	**02 13 45.8**	**+0.2**
LSP					**Sb**	**02 13 58.2**	**-0.1**
LSP	**Las Mesas**	**0.92**	**103**	⇓*e*P	**Pb**	**02 13 45.8**	**+0.2**
LSP	**Las Mesas**	**0.92**	**103**	*e*S	**Sb**	**02 13 58.2**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.95**	**113**		**Pg**	**02 13 45.2**	**+0.1**
CRPR					**Sg**	**02 13 57.5**	**+0.2**
CRPR	**Cabo Rojo, PR**	**0.95**	**113**	⇑*e*P	**Pg**	**02 13 45.9**	**+0.8**
CRPR	**Cabo Rojo, PR**	**0.95**	**113**	*e*S	**Sg**	**02 13 57.8**	**+0.5**
MLPR	**Magueyes Islan**	**1.02**	**113**	⇓*e*P	**Pg**	**02 13 46.6**	**+0.1**
MIDR	**Miches**	**1.14**	**302**	⇑*e*Pg	**Pg**	**02 13 48.1**	**-0.8**
MIDR				⇑*e*Sg	**Sg**	**02 14 02.2**	**-1.5**
MIDR				IAML		02 14 05.0	
	comp=N,28nm,0.3s						
AOPR	**Arecibo Observ**	**1.21**	**91**		**Pg**	**02 13 50.0**	**-0.1**
AOPR					**Sn**	**02 14 07.8**	**-0.1**
AOPR				IAML		02 14 09.3	
	comp=E,51nm,1.6s						
AOPR				IAML		02 14 16.1	
	comp=N,46nm,2.7s						
AOPR	**Arecibo Observ**	**1.21**	**91**	⇓*e*P	**Pn**	**02 13 51.6**	**+0.7**
AOPR	**Arecibo Observ**	**1.21**	**91**	*e*S	**Sn**	**02 14 08.0**	**+0.1**
DR12	**Loma Pena Alta**	**1.35**	**288**	Pn	**Pn**	**02 13 52.8**	**-0.1**
HATOM	**Hato Mayor del**	**1.35**	**288**	⇓*e*Pg	**Pn**	**02 13 53.3**	**+0.4**
HATOM				⇑*e*Sg	**Sg**	**02 14 09.3**	**-1.0**
HATOM				IAML		02 14 14.8	
	comp=N,94nm,0.3s						
HATOM				IAML		02 14 44.3	
	comp=N,17nm,2.0s						
OBIP	**Obispado Ponce**	**1.39**	**104**		**Pn**	**02 13 51.5**	**-1.9**
OBIP				IAML		02 14 13.5	
	comp=N,22nm,2.5s						
OBIP	**Obispado Ponce**	**1.39**	**104**	⇓*e*P	**Pn**	**02 13 51.7**	**-1.7**
CELP	**Cerrillos**	**1.41**	**102**	Pn	**Pn**	**02 13 52.0**	**-1.6**
CELP				IAML		02 14 22.9	
	comp=N,25nm,2.9s						
CELP				IAML		02 14 26.5	
	comp=N,25nm,3.0s						
ECPR	**Experimental S**	**1.58**	**92**	Pn	**Pn**	**02 13 56.0**	**-0.1**
ECPR				IAML		02 14 06.2	
	comp=N,25nm,3.1s						
ECPR				IAML		02 14 21.6	
	comp=N,29nm,0.2s						
ECPR	**Experimental S**	**1.58**	**92**	⇑*e*P	**Pb**	**02 13 56.8**	**-0.2**
ECPR	**Experimental S**	**1.58**	**92**	*e*S	**Sn**	**02 14 16.5**	**-0.6**

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*IDC **24** 02:30:57.6±1.6, 56°.14N×113°.92E, h0^{km}, mb3.1/4, mbtmp3.5/9, ML3.6/5, Error ellipse: s-maj=26.9km s-min=19.5km az=77.0*

*MOS **24** 02:30:58.6±1.8, 56°.34N×113°.98E, h10^{km}, mb3.6/1, Error ellipse: s-maj=15.8km s-min=8.0km az=76.1*

*BYKL **24** 02:31:00.2±0.2, 56°.35N×114°.19E, h12^{km}±3^{km}*

ISC 24 02:30:58.5±1.3**, 56°.24N**±0°.03×**114°.06E**±0°.02**, h7**^{km}±10^{km}**, n53, σ2**^{s}**.40**/84**, mb3.1**/4**, 5C, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.30**	**247**	*e*Pg	**Pb**	**02 31 07.8**	**+1.4**
SVKR				*e*Sg	**Sb**	**02 31 13.2**	**+1.6**
SVKR				Pmax			
	920nm,0.2s						
SVKR				Smax			
	8µm,0.3s						
SVKR	**Severomuysk**	**0.30**	**247**	*e*PG	**Pb**	**02 31 07.8**	**+1.4**
SVKR				*e*		02 31 13.4	
SVKR				pmax	pmax		
	comp=Z,790nm,0.1s						
SVKR				smax	smax		
	comp=N,8µm,0.3s						
UKT	**Uakit**	**0.79**	**198**	⇑*i*Pg	**Pn**	**02 31 17.2**	**+1.0**
UKT				*e*Sg	**Sn**	**02 31 29.6**	**+1.3**
UKT				Pmax			
	comp=N,358nm,0.3s						
UKT				Smax			
	comp=N,1µm,0.3s						
UKT	**Uakit**	**0.79**	**198**	⇑*i*PG	**Pn**	**02 31 17.2**	**+1.0**
UKT				*e*		02 31 29.5	
UKT				pmax	pmax		
	comp=Z,357nm,0.5s						
UKT				smax	smax		
	comp=E,773nm,0.4s						
YOAB	**Uoyan, Buryati**	**1.31**	**267**	*e*Pg	**Pn**	**02 31 25.9**	**+2.6**
YOAB				*e*		02 31 42.4	
YOAB				*e*Sg	**Sn**	**02 31 44.0**	**+3.0**
YOAB				*e*Sb	**Sb**	**02 31 45.9**	**+5.4**
YOAB				Pmax			
	comp=E,93nm,0.3s						
YOAB				max			
	comp=E,693nm,0.2s						
BOD	**Bodaibo**	**1.59**	**359**	⇑*i*Pg	**Pn**	**02 31 26.6**	**-0.5**
BOD				*e*Sg	**Sn**	**02 31 46.1**	**-1.8**
BOD				Pmax			
	comp=E,945nm,0.2s						
BOD				Smax			
	comp=E,1µm,0.4s						
BOD	**Bodaibo**	**1.59**	**359**	⇑*i*PG	**Pn**	**02 31 26.5**	**-0.5**
BOD				*e*		02 31 45.6	
BOD				pmax	pmax		
	comp=Z,951nm,0.2s						
BOD				smax	smax		
	comp=E,1µm,0.4s						
KMO	**Kumora**	**1.64**	**259**	*e*Pg	**Pg**	**02 31 30.9**	**+1.0**
KMO				*e*Sg	**Sg**	**02 31 54.3**	**+3.2**
KMO				Pmax			
	comp=E,195nm,0.4s						
KMO				Smax			
	comp=E,749nm,0.6s						
KMO	**Kumora**	**1.64**	**259**	*e*PN	**Pg**	**02 31 30.8**	**+0.9**
KMO				*e*		02 31 54.0	
KMO				pmax	pmax		
	comp=Z,72nm,0.4s						
KMO				smax	smax		
	comp=E,590nm,0.6s						
YLYR	**Ulyunkhan**	**2.14**	**232**	⇑*i*Pn	**Pb**	**02 31 38.2**	**+0.6**
YLYR				*e*Pg	**Pg**	**02 31 40.2**	**+0.8**
YLYR				*e*Sg	**Sg**	**02 32 10.6**	**+3.5**
YLYR				Pmax			
	comp=E,83nm,0.4s						
YLYR				Smax			
	comp=E,597nm,0.3s						
YLYR	**Ulyunkhan**	**2.14**	**232**	*e*PN	**Pg**	**02 31 40.1**	**+0.7**
YLYR				*e*		02 32 11.0	
YLYR				pmax	pmax		
	comp=Z,120nm,0.5s						
YLYR				smax	smax		
	comp=E,802nm,0.5s						
CRS	**Chara**	**2.42**	**72**	*e*Pn	**Pn**	**02 31 39.2**	**+0.5**
CRS				*e*Pg	**Pb**	**02 31 42.7**	**+0.2**
CRS				*e*Sg	**Sb**	**02 32 13.0**	**+0.4**
CRS				Pmax			
	comp=E,144nm,0.9s						
CRS				Smax			
	comp=E,549nm,0.5s						
CRS	**Chara**	**2.42**	**72**	*e*PN	**Pb**	**02 31 42.9**	**+0.4**
CRS				*e*		02 32 13.4	
CRS				pmax	pmax		
	comp=Z,140nm,0.6s						
CRS				smax	smax		
	comp=E,545nm,0.5s						
NIZB	**Nizh Angarsk**	**2.58**	**261**	*e*Pn	**Pb**	**02 31 43.9**	**-1.2**
NIZB				*e*Pg	**Pg**	**02 31 47.9**	**0.0**
NIZB				*e*Sn	**Sb**	**02 32 15.1**	**-1.8**
NIZB				*e*Sg	**Sg**	**02 32 22.4**	**+1.2**
NIZB				Pmax			
	comp=E,39nm,0.2s						
NIZB				Smax			
	comp=E,189nm,0.6s						
SYVR	**Suvo**	**3.49**	**224**	*e*Pn	**Pn**	**02 31 56.3**	**+3.0**
SYVR				*e*		02 32 00.1	
SYVR				*e*Pg	**Pg**	**02 32 05.0**	**-0.3**
SYVR				*e*Sg	**Sg**	**02 32 52.6**	**+2.2**
SYVR				Pmax			
	comp=E,29nm,0.6s						
SYVR				Smax			
	comp=E,251nm,0.6s						
SYVR	**Suvo**	**3.49**	**224**	*e*PN	**Pn**	**02 31 56.2**	**+3.0**
SYVR				*e*		02 32 06.0	
SYVR				*e*		02 32 52.5	
SYVR				pmax	pmax		
	comp=Z,29nm,0.6s						
SYVR				smax	smax		
	comp=E,256nm,0.7s						
TUP	**Tupik**	**3.83**	**116**	*e*Pn	**Pn**	**02 31 58.8**	**+0.9**
TUP				*e*		02 32 02.7	
TUP				*e*Pg	**Pb**	**02 32 08.2**	**+1.8**
TUP				*e*Sn	**Sn**	**02 32 42.1**	**-1.1**
TUP				*e*Sg	**Sb**	**02 32 58.2**	**+5.3**
TUP				Pmax			
	comp=E,42nm,0.4s						
TUP				Smax			
	comp=E,316nm,0.8s						
TUP	**Tupik**	**3.83**	**116**	*e*PN	**Pn**	**02 31 58.8**	**+0.9**
TUP				*e*		02 32 07.3	
TUP				*e*S	**Sn**	**02 32 42.0**	**-1.1**
TUP				*e*		02 32 58.3	
TUP				pmax	pmax		
	comp=Z,42nm,0.4s						
TUP				smax	smax		
	comp=N,268nm,0.5s						
CIT	**Chita**	**4.24**	**184**	*e*Sg	**Sg**	**02 33 15.1**	**+0.7**
CIT				Smax			
	comp=N,334nm,0.3s						
CIT	**Chita**	**4.24**	**184**	*e*PN	**Pn**	**02 32 06.2**	**+2.7**
CIT				*e*		02 32 18.0	
CIT				*e*		02 33 14.6	
CIT				pmax	pmax		
	comp=Z,89nm,0.3s						
CIT				smax	smax		
	comp=E,334nm,0.3s						
YKLR	**Yuktali**	**4.24**	**82**	*e*Pg	**Pb**	**02 32 14.2**	**+0.9**
YKLR				*e*Sg	**Sb**	**02 33 08.6**	**+3.9**
MXMB	**Maximikha**	**4.28**	**228**	*e*Pg	**Pg**	**02 32 19.2**	**-1.3**
MXMB				*e*Sg	**Sg**	**02 33 17.1**	**+1.1**
OGRR	**Ongureny**	**4.54**	**238**	*e*Pn	**Pn**	**02 32 11.0**	**+3.3**
OGRR				*e*Pg	**Pg**	**02 32 23.5**	**-2.0**
OGRR				*e*Sg	**Sg**	**02 33 23.6**	**-0.7**
OGRR				Pmax			
	comp=E,16nm,0.8s						
OGRR				Smax			
	comp=E,63nm,0.3s						
OGRR	**Ongureny**	**4.54**	**238**	*e*PN	**Pn**	**02 32 10.6**	**+2.9**
OGRR				*e*		02 32 23.2	
OGRR				*e*		02 33 22.6	
OGRR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
OGRR				smax	smax		
	comp=E,79nm,1.3s						
GORB	**Goryachinsk**	**4.67**	**228**	*e*Pg	**Pg**	**02 32 26.9**	**-1.1**
GORB				*e*Sg	**Sg**	**02 33 29.2**	**+0.7**
UZR	**Uzur**	**4.68**	**234**	*e*Pg	**Pg**	**02 32 26.4**	**-1.7**
UZR				*e*Sg	**Sg**	**02 33 28.1**	**-0.5**
UZR				Pmax			
	comp=E,14nm,0.4s						
UZR				Smax			
	comp=E,80nm,0.8s						
KELR	**Kotokel**	**4.92**	**227**	*e*Pg	**Pg**	**02 32 31.7**	**-1.1**
KELR				*e*Sg	**Sg**	**02 33 37.3**	**+0.7**
ZRHB	**Zarechye**	**5.46**	**230**	*e*Sg	**Sg**	**02 33 53.8**	**-0.1**
ZRHB				Smax			
	comp=E,279nm,1.3s						
TRG	**Tyrgan**	**5.68**	**235**	*e*Pg	**Pg**	**02 32 44.0**	**-3.3**
TRG				*e*Sg	**Sg**	**02 33 58.8**	**-2.0**
TRG				Pmax			
	comp=E,5.0nm,0.4s						
TRG				Smax			
	comp=E,48nm,0.6s						
UUDB	**Ulan-Yde**	**5.77**	**223**	*e*Sg	**Sg**	**02 34 03.6**	**-0.1**
UUDB				Smax			
	comp=E,131nm,0.8s						
FFNB	**Fofonovo**	**6.00**	**229**	*e*Sg	**Sg**	**02 34 10.5**	**-0.4**
CLNS	**Chul'man**	**6.03**	**80**	*e*Sg	**Sb**	**02 34 04.7**	**+8.5**
STDB	**Stepnoy Dvoret**	**6.08**	**231**	*e*Sg	**Sg**	**02 34 12.9**	**-0.6**
HRMR	**Khuramsha**	**6.24**	**225**	*e*	**Pb**	**02 32 51.0**	**+3.6**
HRMR				*e*Pg	**Pg**	**02 32 55.2**	**-2.7**
HRMR				*e*Sg	**Sg**	**02 34 17.6**	**-1.0**
HRMR				Pmax			
	comp=E,27nm,0.5s						
HRMR				Smax			
	comp=E,120nm,0.8s						
BGT	**Bolshoye Golou**	**6.59**	**234**	*e*Sg	**Sg**	**02 34 27.2**	**-2.7**
BGT				Smax			
	comp=E,39nm,1.0s						
KPC	**Khapcheranga**	**6.62**	**189**	*e*	**Pn**	**02 32 37.9**	**+1.6**
KPC				*e*Pg	**Pg**	**02 33 01.8**	**-3.5**
KPC				*e*Sg	**Sg**	**02 34 29.8**	**-1.2**
KPC				Pmax			
	comp=E,7.0nm,0.6s						
KPC				Smax			
	comp=E,98nm,1.0s						
KPC	**Khapcheranga**	**6.62**	**189**	*e*PN	**Pn**	**02 32 37.4**	**+1.1**
KPC				*e*		02 33 00.6	
KPC				*e*		02 34 28.8	
KPC				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KPC				smax	smax		
	comp=E,98nm,1.0s						
LSTR	**Listvyanka**	**6.97**	**235**	*e*Sg	**Sg**	**02 34 39.8**	**-2.4**
LSTR				Smax			
	comp=E,47nm,1.7s						
HILR	**Hailar Array B**	**7.52**	**150**	Pn	**Pn**	**02 32 48.0**	**-0.7**
	baz=333,slow=13						
HILR				Lg	Lg	02 34 53.5	
	baz=339,slow=32						
	comp=E,1.8nm,0.3s						
TLY	**Talaya**	**7.65**	**238**	*e*		02 34 42.6	
TLY				*e*Sg	**Sg**	**02 35 01.6**	**-2.2**
TLY				Smax			
	comp=E,22nm,1.0s						
HIA	**Hailar**	**7.79**	**151**	*e*Sg	**Sg**	**02 35 02.9**	**-5.3**
HIA				Smax			
	comp=E,87nm,1.5s						
ARS	**Arshan**	**8.09**	**243**	*e*		02 34 52.2	
ARS				*e*Sg	**Sg**	**02 35 14.3**	**-3.7**
ARS				Smax			
	comp=E,84nm,0.8s						
ZAK	**Zakamensk**	**8.71**	**232**	*e*Sg	**Sg**	**02 35 32.8**	**-5.1**
ZAK				Smax			
	comp=E,21nm,1.4s						
SONM	**Songino Array**	**9.64**	**212**	Pn	**Pn**	**02 33 18.0**	**+0.2**
	comp=E,0.1nm,0.3s,baz=24,slow=12,SNR=1.9						
SONM				Lg	Lg	02 35 59.2	
	comp=E,1.2nm,0.3s,baz=20,slow=28,SNR=12						
	comp=E,0.4nm,0.5s						
SONM	**Songino Array**	**9.64**	**212**	P	**Pn**	**02 33 18.0**	**+0.2**
TIXI	**Tiksi**	**16.69**	**16**	Pn	**Pn**	**02 34 46.4**	**-6.2**
	comp=E,0.5nm,0.3s,baz=228,slow=9.4,SNR=10						
	comp=E,1.5nm,0.3s						
ZALV	**Zalesovo Beam**	**16.83**	**274**	Pn	**Pn**	**02 34 54.1**	**-0.3**
	comp=E,0.2nm,0.3s,baz=58,slow=14,SNR=1.5						
	comp=E,0.3nm,0.3s						
NRIK	**Noril'sk**	**17.65**	**329**	P	**Pn**	**02 35 03.9**	**-0.6**
	comp=E,0.4nm,0.3s,baz=107,slow=13,SNR=4.0						
NRIK				S	Sn	02 38 03.9	-17
	comp=E,2.6nm,0.5s,baz=281,slow=21,SNR=5.7						
	comp=E,2.0nm,0.5s						
KURK	**Kurchatov**	**21.63**	**270**	P	**P**	**02 35 49.2**	**+0.1**
KURBB	**Kurchatov Arra**	**21.72**	**270**	P	**P**	**02 35 49.2**	**-0.8**
	comp=E,0.2nm,0.4s,baz=67,slow=11,SNR=1.5						
	comp=E,0.2nm,0.4s						
MKAR	**Makanchi Array**	**21.73**	**258**	P	**P**	**02 35 49.6**	**-0.6**
	comp=E,0.3nm,0.5s,baz=50,slow=7.9,SNR=6.2						
	comp=E,0.3nm,0.5s						
BVAR	**Borovoye Array**	**25.16**	**281**	P	**P**	**02 36 23.2**	**-1.0**
	comp=E,0.5nm,0.8s,baz=43,slow=6.7,SNR=4.0						
	comp=E,0.5nm,0.8s						
FINES	**FINESS Array B**	**42.52**	**315**	P	**P**	**02 38 53.6**	**-0.5**
	comp=E,0.9nm,0.9s,baz=61,slow=13,SNR=1.3						
	comp=E,0.9nm,0.9s						

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*IDC **24** 02:38:51.2±1.0, 56°.95S×141°.76W, h0^{km}, mb4.1/7, mbtmp4.1/7, MS3.9/34, Error ellipse: s-maj=35.9km s-min=23.4km az=25.0*

*NEIC **24** 02:38:53.0±1.6, 56°.9S±0°.2×141°.6W±0°.2, h10^{km}±1^{km}, mb4.6/14, Error ellipse: s-maj=29.6km s-min=19.0km az=15.0*

*GCMT **24** 02:38:54.0±0.3, 56°.89S±0°.02×141°.28W±0°.03, h21^{km}±1^{km}, MW4.9/81, Moment Tensor Solution. s13,c14; s81,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.52±.18; $M_{\theta\theta}$2.39±.17; $M_{\phi\phi}$-1.86±.14; $M_{r\theta}$0.62±.25; $M_{\theta\phi}$2.00±.12; $M_{\phi r}$1.03±.27; Best double couple: $M_0$3.15700×10^{16} NP1:ϕ_s113.00000°,δ67.00000°,λ-3.00000°. NP2: ϕ_s205.00000°,δ87.00000°,λ-157.00000°. Principal axes: T 3.4210, Plg14.0000°, Azm337.0000°; N -0.5220, Plg67.0000°, Azm211.0000°; P -2.8920, Plg18.0000°, Azm71.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 02:38:52.6±0.7**, 56°.9S**±0°.2×**141°.6W**±0°.1**, h10**^{km}**, n76, σ0**^{s}**.78**/34**, mb4.5**/15**, MS4.0**/34**, 4C, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBA	**Scott Base**	**27.24**	**201**	P	**P**	**02 44 37.0**	**+0.7**
SBA				IAmb	IAmb	02 44 55.2	
	comp=Z,13nm,1.4s						
VNDA	**Vanda**	**28.15**	**203**	LR	LR	02 52 33.0	
	comp=Z,184nm,21.3s,baz=78,slow=29						
URZ	**Urewera**	**32.84**	**287**	LR	LR	02 55 51.3	
	comp=Z,261nm,20.8s,baz=318,slow=31						
QSPA	**South Pole Qui**	**33.27**	**180**	P	**P**	**02 45 30.3**	**+0.4**
	comp=Z,1.9nm,0.9s,baz=57,slow=3.6,SNR=5.0						
QSPA				LR	LR	02 56 25.7	
	comp=Z,457nm,21.3s,baz=70,slow=32						
	comp=Z,1.9nm,0.9s						
QSPA	**South Pole Qui**	**33.27**	**180**	P	**P**	**02 45 30.8**	**+0.9**
QSPA				IAmb	IAmb	02 46 02.2	
	comp=Z,9.3nm,1.3s						
PMSA	**Palmer Station**	**36.30**	**135**	LR	LR	02 56 30.9	
	comp=Z,290nm,20.5s,baz=257,slow=29						
RAR	**Rarotonga**	**38.06**	**332**	LR	LR	02 59 25.1	
	comp=Z,189nm,18.1s,baz=190,slow=32						
BELA	**Belgrano 2**	**38.45**	**161**	P	**P**	**02 46 13.7**	**-0.2**
PPT	**Papeete**	**39.71**	**348**	LR	LR	02 58 45.9	
	comp=Z,269nm,18.2s,baz=200,slow=30						
LL07	**Hotel Espejo d**	**44.22**	**102**	P	**P**	**02 47 02.2**	**+0.6**
H03S2	**Juan Fernandez**	**47.70**	**89**	T	T	03 38 33.2	
	baz=220,slow=74,SNR=171						
H03S1	**Juan Fernandez**	**47.71**	**89**	T	T	03 38 34.5	
	baz=220,slow=74,SNR=175						
H03S3	**Juan Fernandez**	**47.72**	**89**	T	T	03 38 34.8	
	baz=220,slow=74,SNR=162						
VNA3	**Neumayer Olymp**	**47.76**	**161**	⇑P	**P**	**02 47 28.3**	**-0.9**
	comp=Z,5.3nm,0.7s						
H03N3	**Juan Fernandez**	**47.99**	**88**	T	T	03 39 04.2	
	baz=223,slow=72,SNR=88						
H03N2	**Juan Fernandez**	**48.00**	**88**	T	T	03 39 01.2	
	baz=223,slow=72,SNR=87						
H03N1	**Juan Fernandez**	**48.01**	**88**	T	T	03 39 01.6	
	baz=223,slow=72,SNR=116						
VNA2	**Neumayer--Watz**	**48.43**	**162**	⇑P	**P**	**02 47 33.8**	**-0.5**
	comp=Z,9.9nm,0.7s,baz=206,slow=8.1						
SNAA	**Sanae**	**48.52**	**164**	⇑P	**P**	**02 47 34.5**	**-0.6**
	comp=Z,65nm,0.5s						
SNAA	**Sanae**	**48.52**	**164**	P	**P**	**02 47 34.5**	**-0.6**
	comp=Z,1.9nm,0.5s,baz=211,slow=11,SNR=32						
SNAA				LR	LR	03 07 18.2	
	comp=Z,170nm,18.3s,baz=216,slow=35						
	comp=Z,1.9nm,0.5s						
SNAA	**Sanae**	**48.52**	**164**	P	**P**	**02 47 34.6**	**-0.6**
SNAA				IAmb	IAmb	02 47 35.8	
	comp=Z,3.1nm,0.8s						
TROLL	**Troll, Antarti**	**48.98**	**166**	⇑P	**P**	**02 47 38.5**	**-0.3**
	comp=Z,125nm,0.6s						
TRQA	**Tornquist**	**53.76**	**106**	P	**P**	**02 48 13.5**	**-1.3**
TRQA				IAmb	IAmb	02 48 14.2	
	comp=Z,6.8nm,1.0s						

MAW	Mawson	54.51	191	LR	LR	03 08 45.8	
	comp=Z,174nm,20.8s,baz=158,slow=33						
EIDS	Eidsvold	56.79	274	P	P	02 48 36.7	-0.1
EIDS				IAmb	IAmb	02 48 38.0	
	comp=Z,16nm,1.4s						
STKA	Stephens Creek	56.91	261	P	P	02 48 37.6	0.0
	comp=Z,3.0nm,1.0s,baz=169,slow=10,SNR=4.7						
STKA				LR	LR	03 07 49.3	
	comp=Z,176nm,21.9s,baz=190,slow=31						
	comp=Z,3.0nm,1.0s						
STKA	Stephens Creek	56.91	261	P	P	02 48 37.4	-0.2
INKA	Innaminka	60.59	264	P	P	02 49 03.2	0.0
INKA				IAmb	IAmb	02 49 05.6	
	comp=Z,4.5nm,1.1s						
CTA	Charters Tower	63.67	273	P	P	02 49 24.4	+0.5
	comp=Z,5.0nm,1.0s,baz=156,slow=8.5,SNR=3.8						
CTA				LR	LR	03 14 52.2	
	comp=Z,51nm,18.3s,baz=64,slow=34						
	comp=Z,5.0nm,1.0s						
CTAO	Charters Tower	63.67	273	P	P	02 49 24.2	+0.3
FORT	Forrest	64.99	252	P	P	02 49 32.8	+0.3
FORT				IAmb	IAmb	02 49 47.2	
	comp=Z,11nm,1.2s						
CPUP	Villa Florida	65.30	101	LR	LR	03 13 06.9	
	comp=Z,33nm,18.8s,baz=265,slow=31						
NNA	Nana	66.33	75	LR	LR	03 11 40.7	
	comp=Z,94nm,19.1s,baz=218,slow=30						
LPAZ	La Paz	67.48	85	P	P	02 49 50.1	+0.7
	comp=Z,1.5nm,0.9s,baz=193,slow=6.3,SNR=3.6						
LPAZ				LR	LR	03 13 39.8	
	comp=Z,24nm,18.0s,baz=236,slow=31						
	comp=Z,1.5nm,0.9s						
LPAZ	La Paz	67.48	85	P	P	02 49 49.9	+0.5
ASAR	Alice Springs	67.55	261	P	P	02 49 48.0	-1.0
	comp=Z,0.9nm,0.7s,baz=142,slow=6.5,SNR=14						
ASAR				LR	LR	03 14 52.9	
	comp=Z,86nm,21.4s,baz=110,slow=32						
	comp=Z,0.9nm,0.7s						
ASAR	Alice Springs	67.55	261	P	P	02 49 48.8	-0.3
H01W1	Cape Leeuwin H	68.59	239	T	T	04 05 28.8	
	baz=144						
H01W2	Cape Leeuwin H	68.60	239	T	T	04 05 29.2	
	baz=144,slow=74						
H01W3	Cape Leeuwin H	68.61	239	T	T	04 05 30.1	
	baz=144,slow=74						
NWAO	Narrogin (SRO)	68.72	242	LR	LR	03 13 38.3	
	comp=Z,126nm,21.8s,baz=173,slow=30						
ATAH	Atahualpa	69.59	71	LR	LR	03 13 02.2	
	comp=Z,113nm,20.9s,baz=247,slow=29						
WR8	Warramunga Arr	70.22	264	P	P	02 50 05.1	-0.5
WR8				IAmb	IAmb	02 50 06.2	
	comp=Z,3.3nm,0.9s						
WRA	Warramunga Arr	70.31	264	P	P	02 50 05.4	-0.8
	comp=Z,1.3nm,0.8s,baz=144,slow=6.1,SNR=9.3						
	comp=Z,1.3nm,0.8s						
WRA	Warramunga Arr	70.31	264	P	P	02 50 06.2	0.0
SIV	San Ignacio	71.60	91	LR	LR	03 16 56.1	
	comp=Z,36nm,18.5s,baz=268,slow=32						
FITZ	Fitzroy Crossi	76.53	258	LR	LR	03 19 58.9	
	comp=Z,168nm,21.5s,baz=136,slow=32						
JTS	Las Juntas de	81.45	56	LR	LR	03 19 16.1	
	comp=Z,134nm,20.3s,baz=120,slow=30						
ROSC	El Rosal	81.89	68	LR	LR	03 20 33.1	
	comp=Z,63nm,20.8s,baz=181,slow=30						
CMIG	Matias Romero	83.35	45	LR	LR	03 21 43.2	
	comp=Z,21nm,19.2s,baz=196,slow=31						
BATI	Baumata	84.11	260	LR	LR	03 26 20.7	
	comp=Z,209nm,18.8s,baz=172,slow=34						
LPIG	La Paz	84.88	28	LR	LR	03 19 49.5	
	comp=Z,35nm,19.7s,baz=202,slow=29						
SDV	Santo Domingo	87.22	69	LR	LR	03 24 35.3	
	comp=Z,64nm,18.4s,baz=260,slow=31						
SUR	Sutherland	89.84	165	LR	LR	03 30 00.3	
	comp=Z,57nm,18.4s,baz=166,slow=34						
PFO	Pinyon Flats O	92.63	21	LR	LR	03 24 16.4	
	comp=Z,74nm,19.2s,baz=252,slow=29						
BOSA	Boshof	94.11	168	LR	LR	03 33 34.9	
	comp=Z,122nm,18.1s,baz=195,slow=35						
ANMO	Albuquerque	96.20	28	LR	LR	03 27 50.0	
	comp=Z,68nm,18.4s,baz=202,slow=30						
NVAR	Mina Array Bea	96.98	18	LR	LR	03 27 50.8	
	comp=Z,86nm,18.6s,baz=212,slow=30						
SJG	San Juan	97.31	68	LR	LR	03 33 53.9	
	comp=Z,28nm,19.5s,baz=225,slow=34						
DAV	Davao City (W)	97.41	272	LR	LR	03 34 48.0	
	comp=Z,32nm,19.8s,baz=147,slow=34						
LBTB	Lobatse	97.71	168	LR	LR	03 33 01.6	
	comp=Z,83nm,19.7s,baz=178,slow=33						
YBH	Yreka Blue Hor	99.53	14	LR	LR	03 26 39.9	
	comp=Z,7.8nm,21.7s,baz=186,slow=29						
ELK	Elko	99.78	20	LR	LR	03 27 55.7	
	comp=Z,57nm,20.8s,baz=196,slow=30						
H10S3	ASCENSION HYDR	101.34	126	T	T	04 46 25.5	
	baz=207,slow=74,SNR=7.4						
H10S2	ASCENSION HYDR	101.34	126	T	T	04 46 28.6	
	baz=13,slow=74,SNR=9.2						
H10N3	ASCENSION HYDR	102.40	126	T	T	04 47 55.6	
	baz=206,slow=75,SNR=8.9						
H10N1	ASCENSION HYDR	102.41	126	T	T	04 47 37.9	
	baz=206,slow=75,SNR=10						
H10N2	ASCENSION HYDR	102.42	126	T	T	04 47 58.8	
	baz=206,slow=75,SNR=10.0						
ILAR	Eielson Array	121.40	357	PKP	PKiKP	02 57 45.7	+1.2
	comp=Z,0.6nm,0.8s,baz=195,slow=2.8,SNR=4.5						
ILAR	Eielson Array	121.40	357		PKiKP	02 57 45.1	+0.5
MKAR	Makanchi Array	151.54	268	PKPbc	PKPbc	02 58 44.7	-1.2
	comp=Z,1.4nm,0.9s,baz=84,slow=3.8,SNR=8.7						
MKAR	Makanchi Array	151.54	268	PKPdf	PKPdf	02 58 39.7	0.0
ZALV	Zalesovo Beam	153.88	283	PKPab	PKPab	02 59 02.1	-2.1
	comp=Z,0.7nm,0.5s,baz=134,slow=4.2,SNR=1.5						
ZALV	Zalesovo Beam	153.88	283	PKPdf	PKPdf	02 58 43.7	+0.8
KURBB	Kurchatov Arra	155.74	272	PKPab	PKPab	02 59 12.5	+0.4
	comp=Z,0.3nm,0.6s,baz=104,slow=3.2,SNR=4.1						
BVAR	Borovoye Array	161.33	272	PKPab	PKPab	02 59 37.8	+1.4
	comp=Z,1.0nm,0.9s,baz=90,slow=4.3,SNR=5.3						

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*NOU **24** 03:03:44.7, 39°.03S×176°.17E, h63^{km}, MLv4.2/18, North Island, New Zealand*

*WEL **24** 03:03:45.8±0.6, 39°S±3°×17°6E±$^{\circ}$, h51^{km}±7^{km}, M3.6/44, ML3.6/44, MLv3.6/44, Error ellipse: s-maj=4.5km s-min=3.6km az=154.8, confirmed*

*IDC **24** 03:03:45.7±1.8, 38°.72S×176°.40E, h103^{km}±28^{km}, mb3.3/2, mbtmp3.6/2, Error ellipse: s-maj=71.4km s-min=33.4km az=28.0*

ISC 24 03:03:44.0±1.0, **39°.01S**±0°.03×**176°.15E**±0°.03, **h79**^{km}±5^{km}, **n166,** σ**0^{s}.97**/176, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATZ	Hinemaiaia	0.12	339	P	Pn	03 03 55.4	-0.1
HATZ				S	Sn	03 04 02.4	-1.5
RITZ	Rihia Road	0.23	277	P	Pn	03 03 56.4	+0.6
MRHZ	Matea Rd	0.27	51	P	Pn	03 03 55.9	-0.2
BKZ	Black Stump Fm	0.31	121	P	Pn	03 03 56.7	+0.4
BKZ	Black Stump Fm	0.31	121	S	Sn	03 04 05.4	-0.1
BKZ	Black Stump Fm	0.31	121	P	Pn	03 03 56.7	+0.4
BKZ				S	Sn	03 04 05.3	-0.1
RATZ	Rangitukua	0.32	295	P	Pn	03 03 56.5	+0.1
KATZ	Kakaramea	0.35	275	P	Pn	03 03 57.3	+0.6
TMVZ	Te Maari	0.36	252	P	Pn	03 03 57.4	+0.6
TMVZ				S	Sn	03 04 05.4	-0.7
ETVZ	East Tongariro	0.36	249	P	Pn	03 03 57.4	+0.7
ETVZ				S	Sn	03 04 05.6	-0.6
WHTZ	Whakaora	0.37	336	P	Pn	03 03 57.0	+0.3
NTVZ	North Tongarir	0.38	256	P	Pn	03 03 57.5	+0.6
KRVZ	Karewarewa	0.40	257	P	Pn	03 03 57.6	+0.6
OTVZ	Oturere	0.41	247	P	Pn	03 03 57.9	+0.8
OTVZ				S	Sn	03 04 06.2	-0.6
NNVZ	North Ngauruho	0.43	253	P	Pn	03 03 58.0	+0.7
SNVZ	South Ngauruho	0.43	245	P	Pn	03 03 58.2	+0.8
WATZ	Wairara	0.44	312	P	Pn	03 03 57.3	+0.1
WATZ				S	Sn	03 04 06.0	-1.0
WTVZ	West Tongariro	0.45	256	P	Pn	03 03 58.0	+0.6
NGZ	Ngauruhoe	0.46	248	P	Pn	03 03 58.2	+0.7
TUVZ	Tukino	0.46	236	P	Pn	03 03 58.4	+0.8
ALRZ	Allen Road	0.47	19	P	Pn	03 03 57.2	-0.2
KWHZ	Kaweka Forest	0.47	153	P	Pn	03 03 58.4	+0.8
WPRZ	Whakapapatarin	0.48	1	P	Pn	03 03 57.4	-0.2
MOVZ	Moawhango	0.50	217	P	Pn	03 03 58.5	+0.6
COVZ	Chateau Observ	0.51	247	P	Pn	03 03 58.6	+0.7
COVZ				S	Sn	03 04 08.4	+0.3
WHVZ	Whangaehu Hut	0.52	237	P	Pn	03 03 58.9	+0.8
NMHZ	Naumai	0.52	100	P	Pn	03 03 59.2	+1.3
NMHZ				S	Sn	03 04 09.6	+1.3
FWVZ	Far West T-bar	0.53	241	P	Pn	03 03 59.0	+0.8
MAVZ	Matarangi	0.53	240	P	Pn	03 03 59.0	+0.8
WNVZ	Wahianoa	0.53	233	P	Pn	03 03 59.0	+0.8
PRRZ	Plateau Road	0.54	21	P	Pn	03 03 57.9	-0.2
TRVZ	Turoa	0.55	238	P	Pn	03 03 59.2	+0.8
TWVZ	Taurewa	0.56	263	P	Pn	03 03 58.9	+0.6
MTHZ	Maungataniwha	0.56	74	P	Pn	03 03 58.5	+0.2
MTHZ				S	Sn	03 04 09.0	+0.1
KUTZ	Kaahu Road	0.57	334	P	Pn	03 03 58.5	+0.1
MCHZ	McNeill Hill	0.61	136	P	Pn	03 04 00.3	+1.6
HRRZ	Handcock Road	0.62	10	P	Pn	03 03 58.9	0.0
MTVZ	Mangateitei	0.65	234	P	Pn	03 04 00.2	+1.1
KRHZ	Kereru	0.66	165	P	Pn	03 04 00.4	+1.2
HSRZ	Hossack Road	0.70	6	P	Pn	03 03 59.7	+0.1
ARHZ	Aropaoanui	0.71	112	P	Pn	03 04 00.8	+1.1
MUGZ	Murupara	0.72	43	P	Pn	03 03 59.6	-0.2
RRRZ	Republican Roa	0.72	23	P	Pn	03 03 59.8	-0.1
RAHZ	Arahi	0.74	83	P	Pn	03 04 01.0	+1.0
RTZ	Ruatahuna	0.76	59	P	Pn	03 04 00.4	+0.1
HLRZ	Highlands Stat	0.77	12	P	Pn	03 04 01.2	+0.8
TARZ	Mount Tarawera	0.82	20	P	Pn	03 04 01.2	+0.1
TLZ	Tolley Road	0.83	325	P	Pn	03 04 01.5	+0.4
UTU	Utuhina	0.83	3	P	Pn	03 04 01.5	+0.4
WHHZ	Waihua	0.85	95	P	Pn	03 04 03.4	+2.2
MKRZ	Makatiti	0.90	16	P	Pn	03 04 02.5	+0.5
NGRZ	Ngongotaha	0.90	2	P	Pn	03 04 02.3	+0.3
PNHZ	Pukenui	0.91	177	P	Pn	03 04 03.0	+1.0
OMRZ	Omania	0.92	11	P	Pn	03 04 02.1	+0.1
SNGZ	Shannon Statio	0.96	77	P	Pn	03 04 03.2	+0.7
KAHZ	Kahuranaki	0.97	145	P	Pn	03 04 03.9	+1.2
CKHZ	Cape Kidnapper	0.97	132	P	Pn	03 04 04.0	+1.4
KARZ	Kaharoa	0.99	4	P	Pn	03 04 03.2	+0.3
EDRZ	Edgecumbe	1.01	28	P	Pn	03 04 03.2	0.0
LIRZ	Lichensteins R	1.02	11	P	Pn	03 04 03.8	+0.5
URZ	Urewera	1.06	46	P	Pn	03 04 03.7	0.0
	1µm,0.5s,baz=240,slow=7.9,SNR=1611						
URZ				S	Sn	03 04 18.2	-0.2
	2µm,0.6s,baz=76,slow=18,SNR=74						
URZ	Urewera	1.06	46	P	Pn	03 04 03.7	0.0
URZ	Urewera	1.06	46	P	Sn	03 04 18.3	-0.2
URZ	Urewera	1.06	46	P	Pn	03 04 03.7	0.0
TSZ	Takapari Road	1.06	188	P	Pn	03 04 05.1	+1.3
WPHZ	Waipukurau	1.08	168	P	Pn	03 04 05.0	+1.0
VRZ	Vera Road	1.09	263	P	Pn	03 04 05.3	+1.3
MARZ	Manawahe	1.10	22	P	Pn	03 04 04.4	+0.1
RAGZ	Rawiri	1.11	63	P	Pn	03 04 05.0	+0.5
HIZ	Hauiti	1.12	296	P	Pn	03 04 05.4	+0.9
HIZ	Hauiti	1.12	296	P	Sn	03 04 20.3	+0.5
HIZ	Hauiti	1.12	296	P	Pn	03 04 05.3	+0.9
PXZ	Pawanui	1.16	152	P	Pn	03 04 05.8	+0.8
KMRZ	Kaimai	1.17	352	P	Pn	03 04 05.7	+0.6
WAZ	Wanganui	1.17	230	P	Pn	03 04 07.1	+2.0
KNZ	Kokohu	1.19	91	P	Pn	03 04 06.6	+1.3
OPRZ	Ohinepanea	1.20	16	P	Pn	03 04 05.6	+0.1
MWZ	Matawai	1.27	59	P	Pn	03 04 06.7	+0.3
TGRZ	Tauranga	1.28	4	P	Pn	03 04 06.9	+0.4
DVHZ	Dannevirke	1.29	179	P	Pn	03 04 07.1	+0.5
RIGZ	Rimuhau	1.30	77	P	Pn	03 04 07.9	+1.2
PRHZ	Porangahau	1.31	163	P	Pn	03 04 07.6	+0.7
WHRZ	Whale Island	1.32	30	P	Pn	03 04 05.1	-1.9
PRGZ	Paritu Road	1.36	87	P	Pn	03 04 08.5	+1.0
OHWZ	Ohakea	1.36	208	P	Pn	03 04 09.5	+2.0
TOZ	Tahuroa Road	1.37	338	P	Pn	03 04 08.2	+0.6
MHGZ	Mahia Peninsul	1.38	97	P	Pn	03 04 08.8	+1.1
POWZ	Post Office Ro	1.42	192	P	Pn	03 04 09.0	+0.8
LREZ	Lake Rotokare	1.43	251	P	Pn	03 04 10.3	+2.0
TKGZ	Te Karaka	1.45	68	P	Pn	03 04 09.6	+1.0
ANWZ	Angora Road	1.47	170	P	Pn	03 04 09.8	+0.8
DREZ	Durham Road	1.52	262	P	Pn	03 04 11.9	+2.3
PRWZ	Pori Road	1.55	185	P	Pn	03 04 10.7	+0.7
PREZ	Palmer Road	1.58	257	P	Pn	03 04 13.1	+2.7
RUGZ	Raukumara Rang	1.59	50	P	Pn	03 04 10.5	-0.1
NEZ	North Egmont	1.62	260	P	Pn	03 04 13.9	+3.0
TWGZ	Tauwhareparae	1.66	61	P	Pn	03 04 12.4	+1.0
BFZ	Birch Farm	1.68	177	P	Pn	03 04 11.5	-0.1
BFZ	Birch Farm	1.68	177	P	Pn	03 04 11.7	+0.1
KHEZ	Kahui Hut	1.68	259	P	Pn	03 04 13.8	+2.1
KHEZ	Kahui Hut	1.68	259	P	Pn	03 04 14.0	+2.2
PKE	Pukeiti	1.69	263	P	Pn	03 04 13.7	+1.9
CNGZ	Carnagh Statio	1.69	73	P	Pn	03 04 12.7	+0.9
MRZ	Mangatainoka R	1.71	195	P	Pn	03 04 12.2	+0.2
TIWZ	Tintock	1.78	186	P	Pn	03 04 13.3	+0.3
HAZ	Te Kaha	1.79	46	P	Pn	03 04 12.8	-0.3
NBEZ	Newall Road No	1.79	261	P	Pn	03 04 14.7	+1.7
NMEZ	Namu Road	1.81	256	P	Pn	03 04 15.4	+2.1
PKGZ	Pakihiroa	1.90	54	P	Pn	03 04 15.0	+0.5
PUZ	Puketiti	1.90	61	P	Pn	03 04 14.6	+0.1
CPWZ	Castlepoint	1.90	179	P	Pn	03 04 15.2	+0.7
HOWZ	Holdsworth Sta	1.95	194	P	Pn	03 04 15.0	-0.2
OGWZ	Otaki Gorge	1.96	202	P	Pn	03 04 15.6	+0.3
MKAZ	Moumakai	2.05	337	P	Pn	03 04 17.2	+0.6
KIW	Kapiti Island	2.08	207	P	Pn	03 04 17.1	+0.1
TMWZ	Te Maipa	2.11	185	P	Pn	03 04 16.9	-0.4
WMGZ	Waiomatatini S	2.14	57	P	Pn	03 04 17.8	+0.1
MTW	Mount Morrison	2.21	193	P	Pn	03 04 18.0	-0.6
MXZ	Matakaoa Point	2.23	50	P	Pn	03 04 20.3	+1.4
MXZ	Matakaoa Point	2.23	50	P	Pn	03 04 19.9	+1.0
CAW	Cannon Point	2.26	201	P	Pn	03 04 18.9	-0.4
ETAZ	East Tamaki Re	2.26	334	P	Pn	03 04 20.1	+0.7
AWAZ	Awhitu Peninsu	2.27	328	P	Pn	03 04 20.5	+0.9
KUZ	Kuaotunu	2.28	351	P	Pn	03 04 19.9	+0.3
KUZ	Kuaotunu	2.28	351	S	Sn	03 04 47.5	+0.6
KUZ	Kuaotunu	2.28	351	P	Pn	03 04 20.1	+0.5
WIAZ	Waiheke Island	2.35	340	P	Pn	03 04 21.2	+0.6
EPAZ	Eden Park BICE	2.40	332	P	Pn	03 04 22.1	+0.9
WTAZ	Waiatarua	2.41	329	P	Pn	03 04 22.6	+1.1
TRWZ	Traveller	2.42	188	P	Pn	03 04 20.8	-0.6
HBAZ	Herne Bay Bore	2.43	332	P	Pn	03 04 22.4	+0.8
MBAZ	Motutapu North	2.44	336	P	Pn	03 04 22.5	+0.8
DUWZ	D'Urville Isla	2.48	223	P	Pn	03 04 22.2	-0.1
MSWZ	Moikau Station	2.50	196	P	Pn	03 04 21.4	-1.2
WEL	Wellington	2.51	204	P	Pn	03 04 22.2	-0.5
RVAZ	Riverhead Bore	2.55	330	P	Pn	03 04 24.3	+1.0
SNZO	South Karori	2.55	205	P	Pn	03 04 22.8	-0.5
BHW	Baring Head	2.59	202	P	Pn	03 04 22.7	-1.0
ABAZ	Army Bay	2.62	336	P	Pn	03 04 25.1	+1.0
TCW	Tory Channel	2.63	212	P	Pn	03 04 23.7	-0.6
GRZ	Great Barrier	2.80	349	P	Pn	03 04 26.5	-0.2
TUWZ	Tuamarina	2.95	214	P	Pn	03 04 28.5	-0.1
NNZ	Nelson	3.06	223	P	Pn	03 04 29.6	-0.6
TKNZ	Takaka Hill	3.18	229	P	Pn	03 04 30.9	-0.9
BSWZ	Blackbirch Sta	3.21	212	P	Pn	03 04 31.2	-1.0
QRZ	Quartz Range	3.32	236	P	Pn	03 04 33.7	0.0
QRZ	Quartz Range	3.32	236	P	Pn	03 04 32.9	-0.8
WCZ	Waipu Caves	3.38	334	P	Pn	03 04 35.4	+0.9
MRNZ	Matariki Terra	3.53	226	P	Pn	03 04 35.5	-1.0
THZ	Tophouse	3.70	221	P	Pn	03 04 37.8	-1.1
KHZ	Kahutara	3.94	209	P	Pn	03 04 40.9	-1.2
KHZ	Kahutara	3.94	209	P	Pn	03 04 40.5	-1.5
OUZ	Omahuta	4.29	331	P	Pn	03 04 48.3	+1.4
OUZ	Omahuta	4.29	331	P	Pn	03 04 48.1	+1.2
DSZ	Denniston Nort	4.30	229	P	Pn	03 04 45.1	-1.9
GVZ	Greta Valley S	4.61	210	P	Pn	03 04 49.7	-1.5
INZ	Inchbonnie	5.15	222	P	Pn	03 04 56.7	-1.8
ARCZ	Arundel	6.19	215	P	Pn	03 05 10.8	-1.9
CTZ	Chatham Island	7.21	133	P	Pn	03 05 27.3	+0.7
CTZ	Chatham Island	7.21	133	P	Pn	03 05 27.3	+0.7
ODZ	Otahua Downs	7.29	212	P	Pn	03 05 27.6	-0.2
JCZ	Jackson Bay	7.49	225	P	Pn	03 05 32.1	+1.5
JCZ	Jackson Bay	7.49	225	P	Pn	03 05 31.5	+0.9
ASAR	Alice Springs	38.83	281	P	P	03 11 02.1	+0.7
	1.0nm,0.7s,baz=125,slow=7.8,SNR=12						
	1.0nm,0.7s						
WRA	Warramunga Arr	40.63	286	P	P	03 11 16.7	+0.3
	0.5nm,0.7s,baz=128,slow=7.0,SNR=5.3						
	0.5nm,0.7s						
TORD	Torodi Ar. Bea	153.78	192	PKPbc	PKPbc	03 23 33.6	-0.8
	0.4nm,0.6s,baz=151,slow=2.5,SNR=5.3						

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*GCG **24** 03:12:31.4±1.0, 14°.82N×89°.48W, h1^{km}±4^{km}, MD4.2, ML3.4*

*SNET **24** 03:12:32.8±1.0, 14°.69N×89°.50W, h5^{km}, ML3.2*

*CATAC **24** 03:12:33.2±0.3, 15°N±2°×9°0W±$^{\circ}$, h1^{km}, M3.2/12, MLv3.2/12, Error ellipse: s-maj=3.8km s-min=2.5km az=27.8, confirmed*

ISC 24 03:12:32.3±1.3, **14°.77N**±0°.04×**89°.50W**±0°.03, **h1**^{km}±12^{km}, **n42,** σ**0^{s}.90**/51, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAFR2	Estanzuela, Za	0.24	142	*i* P	Pg	03 12 35.9	-1.0
ZAFR2				*i* S	Sg	03 12 39.1	-0.9
ESQI	Esquipulas	0.26	143	*e*P	Pg	03 12 37.6	+0.3
ESQI				*e*S	Sg	03 12 41.1	+0.4
ESQI	Esquipulas	0.26	143	P	Pg	03 12 37.6	+0.3
MTO3	Montecristo	0.39	159	*e*P	Pg	03 12 39.7	-0.2
MTO3				*e*S	Sg	03 12 45.7	+0.8
MTO3	Montecristo	0.39	159	*e*P	Pg	03 12 38.6	-1.2
MTO3	Montecristo	0.39	159	P	Pg	03 12 39.5	-0.3
MTO3	Montecristo	0.39	159	S	Sg	03 12 44.8	-0.1
SARH	Santa Rosa de	0.72	89	*i* P	Pg	03 12 46.0	0.0
SARH				*i* S	Sb	03 12 57.2	-0.7
SARH	Santa Rosa de	0.72	89	P	Pg	03 12 46.3	+0.2
UNIC	Universidad Ca	0.78	183	P	Pg	03 12 47.3	0.0
UNIC	Universidad Ca	0.78	183	S	Sg	03 12 57.7	+0.3
LLGN	La Laguna	0.81	138	P	Pg	03 12 47.9	+0.1
LLGN	La Laguna	0.81	138	S	Sg	03 12 59.1	+0.7
LOAL	Lomas de Alarc	0.81	199	P	Pg	03 12 48.2	+0.4
LOAL	Lomas de Alarc	0.81	199	S	Sg	03 12 58.4	0.0
RTR	El Retiro	0.88	189	*e*P	Pg	03 12 49.0	-0.1
NUBE	Las Nubes	0.90	197	*e*P	Pg	03 12 49.2	-0.4
NUBE				*e*S	Sg	03 13 00.8	-0.5
NUBE	Las Nubes	0.90	197	*e*P	Pg	03 12 49.0	-0.6
NUBE				*i* S	Sg	03 13 01.6	+0.3
NUBE	Las Nubes	0.90	197	P	Pg	03 12 49.4	-0.2
SBLS	San Blas	0.93	187	*e*P	Pg	03 12 49.7	-0.4
APG	El Apazote	0.96	284	*e*P	Pg	03 12 48.9	-1.8
GCG4	OSOP	1.01	260	*i* P	Pg	03 12 52.5	+0.8
GCG4				IAML		03 13 09.5	
	comp=N,930nm,0.3s						
FAME	Alcaldia de Sa	1.04	208	P	Pg	03 12 51.5	-0.8
FAME	Alcaldia de Sa	1.04	208	S	Sg	03 13 05.5	-0.3
BOQS	Boqueron	1.05	168	*e*P	Pg	03 12 51.6	-0.8
PMON	Piamonte	1.07	170	*e*P	Pg	03 12 52.3	-0.4
PMON				*e*S	Sg	03 13 06.1	-0.5
PMON	Piamonte	1.07	170	P	Pb	03 12 53.3	-0.3
PMON	Piamonte	1.07	170	S	Sb	03 13 07.1	-0.9
UEES	Universidad Ev	1.08	166	*e*P	Pg	03 12 52.2	-0.7
JAYA	Jayaque - finc	1.11	177	*e*P	Pg	03 12 53.8	+0.2
JAYA	Jayaque - finc	1.11	177	P	Pg	03 12 53.7	+0.2
JAYA	Jayaque - finc	1.11	177	S	Sg	03 13 08.1	+0.2
PAVA	Las Pavas	1.18	152	*e*P	Pg	03 12 53.9	-1.1
PAVA	Las Pavas	1.18	152	P	Pg	03 12 54.5	-0.5
LALI	Alcalda de L	1.28	172	P	Pn	03 12 58.3	+1.0
QUIS	Sacapulas	1.62	289	*e*P	Pn	03 13 01.2	-0.8
QUIS				*i* S	Sn	03 13 22.7	-0.9
QUIS				IAML		03 13 27.1	
	comp=N,1µm,0.3s						
STG5	El Palmar, Qui	1.82	259	*e*P	Pb	03 13 06.6	+0.2
STG5				*i* S	Sg	03 13 34.7	+3.8
HUEH	Huehuetenango	2.01	286	*e*P	Pn	03 13 07.8	+0.4
HUEH	Huehuetenango	2.01	286	P	Pn	03 13 08.0	+0.5
HUEH	Huehuetenango	2.01	286	S	Sb	03 13 35.8	+0.5
PETF	Flores	2.16	351	*e*P	Pn	03 13 08.8	-0.6
PETF				IAML		03 13 48.7	
	comp=N,274nm,0.5s						
YUSH	Yuscaran	2.70	107	P	Pn	03 13 19.1	+2.2

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*MOS **24** 03:14:45.8±0.8, 54°.48N×159°.84E, h144^{km}, mb4.5/29, Error ellipse: s-maj=9.7km s-min=3.8km az=79.0*

*KRSC **24** 03:14:45.5±1.3, 54°.35N×160°.26E, h136^{km}±17^{km}, Ml4.9*

*NEIC **24** 03:14:47.0±1.6, 54°.50N±0°.08×159°.8E±0°.2, h135^{km}±4^{km}, mb4.5/98, Error ellipse: s-maj=14.7km s-min=9.7km az=129.0*

*IDC **24** 03:14:47.0±0.5, 54°.65N×159°.60E, h133^{km}±4^{km}, mb4.0/35, mbtmp4.4/37, MS3.4/6, Error ellipse: s-maj=10.1km s-min=6.6km az=140.0*

ISC 24 03:14:46.5±0.4, **54°.43N**±0°.03×**159°.98E**±0°.03, **h137**^{km}±3^{km}, **h137**^{km}**:pP-P, n553,** σ**1^{s}.26**/607, **mb4.4**/99, **10C-3D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KII	Karymskiy	0.50	218	PN	Pn	03 15 06.6	+0.2
KII	Karymskiy	0.50	218	*e*P	Pn	03 15 06.6	+0.2
KZV	Kizimen	0.71	15	PN	Pn	03 15 08.0	+0.2
KZV	Kizimen	0.71	15	*e*P	Pn	03 15 08.0	+0.2
TUMD	Tumrok D	0.81	17	PN	Pn	03 15 08.2	-0.2
TUMD	Tumrok D	0.81	17	*e*P	Pn	03 15 08.2	-0.2
TUMR	Tumrok	0.86	6	PN	Pn	03 15 09.5	+0.6
TUMR	Tumrok	0.86	6	*e*P	Pn	03 15 09.5	+0.6
MKZ	Mys Kozlova	1.03	82	PN	Pn	03 15 09.2	-1.0
MKZ	Mys Kozlova	1.03	82	*e*P	Pn	03 15 09.3	-1.0
NLC	Nalytchevo	1.31	197	PN	Pn	03 15 12.9	-0.1
NLC				S	Sn	03 15 33.1	-0.1
NLC	Nalytchevo	1.31	197	*e*P	Pn	03 15 13.0	-0.1
NLC				*e*S	Sn	03 15 33.2	-0.1
SDLR	Sedlovina	1.32	210	PN	Pn	03 15 13.8	+0.5
SDLR				S	Sn	03 15 35.2	+1.5
SDLR	Sedlovina	1.32	210	*e*P	Pn	03 15 13.8	+0.5
SDLR				*e*S	Sn	03 15 35.2	+1.5
KRX	Arik	1.33	217	PN	Pn	03 15 14.3	+0.9
KRX				S	Sn	03 15 36.1	+2.3
KRX	Arik	1.33	217	*e*P	Pn	03 15 14.3	+0.9
KRX				*e*S	Sn	03 15 36.2	+2.3
SPN	Mys Shipunski	1.33	179	PN	Pn	03 15 12.2	-1.0
SPN				S	Sn	03 15 31.4	-2.2
SPN	Mys Shipunski	1.33	179	*e*P	Pn	03 15 12.3	-1.0
SPN				*e*S	Sn	03 15 31.4	-2.2
KMNR	Kamenistaya	1.34	6	PN	Pn	03 15 14.1	+0.8
KMNR	Kamenistaya	1.34	6	*e*P	Pn	03 15 14.2	+0.8
KRER	Koryakskii	1.34	213	PN	Pn	03 15 14.3	+0.7
KRER				S	Sn	03 15 35.7	+1.6
KRER	Koryakskii	1.34	213	*e*P	Pn	03 15 14.3	+0.7
KRER				*e*S	Sn	03 15 35.8	+1.6
SMAR	Somma	1.36	211	PN	Pn	03 15 14.3	+0.5
SMAR				S	Sn	03 15 35.4	+0.9
SMAR	Somma	1.36	211	*e*P	Pn	03 15 14.4	+0.5
SMAR				*e*S	Sn	03 15 35.4	+0.9
AVH	Avacha	1.38	213	PN	Pn	03 15 14.8	+1.0
AVH				S	Sn	03 15 36.6	+2.0
AVH	Avacha	1.38	213	*e*P	Pn	03 15 14.8	+1.0
AVH				*e*S	Sn	03 15 36.7	+2.0
UGLR	Uglovaya	1.40	210	PN	Pn	03 15 14.6	+0.5
UGLR				S	Sn	03 15 36.6	+1.5
UGLR	Uglovaya	1.40	210	*e*P	Pn	03 15 14.7	+0.5
UGLR				*e*S	Sn	03 15 36.7	+1.5
GNL	Ganaly	1.41	239	PN	Pn	03 15 15.0	+0.9
GNL	Ganaly	1.41	239	*e*P	Pn	03 15 15.0	+0.9
KIRR	Kirishev	1.54	8	PN	Pn	03 15 16.1	+0.5
KIRR	Kirishev	1.54	8	*e*P	Pn	03 15 16.1	+0.5
BZWR	Bezymyannyi-We	1.57	11	PN	Pn	03 15 16.6	+0.7
BZWR	Bezymyannyi-We	1.57	11	*e*P	Pn	03 15 16.7	+0.7
BZGR	Bezymyannyi-Gr	1.57	15	PN	Pn	03 15 16.3	+0.5
BZGR	Bezymyannyi-Gr	1.57	15	*e*P	Pn	03 15 16.4	+0.5
DALK	Dalny	1.58	208	PN	Pn	03 15 16.2	+0.3
DALK				S	Sn	03 15 38.7	+0.4
DALK	Dalny	1.58	208	*e*P	Pn	03 15 16.3	+0.3
DALK				*e*S	Sn	03 15 38.8	+0.4
INSR	Institute	1.59	211	PN	Pn	03 15 16.5	+0.5
INSR				S	Sn	03 15 39.5	+0.9
INSR	Institute	1.59	211	*e*P	Pn	03 15 16.6	+0.5
INSR				*e*S	Sn	03 15 39.5	+0.9
PET	Petropavlovsk	1.61	210		Pn	03 15 16.9	+0.6
PET				Sn	Sn	03 15 39.6	+0.6
PET	Petropavlovsk	1.61	210	*ce*PN	Pn	03 15 16.7	+0.4
PET				pmax	pmax		
	comp=Z,650nm,0.6s						
PET	Petropavlovsk	1.61	210	*e*P	Pn	03 15 16.8	+0.5
PET				*e*S	Sn	03 15 39.8	+0.7
PET	Petropavlovsk	1.61	210	P	Pn	03 15 16.7	+0.4
KOZ	Kozyrevsk	1.63	358	PN	Pn	03 15 17.1	+0.6
KOZ	Kozyrevsk	1.63	358	*e*P	Pn	03 15 17.1	+0.6
ZLN	Zelenaya	1.66	16	PN	Pn	03 15 18.1	+1.2
ZLN	Zelenaya	1.66	16	*e*P	Pn	03 15 18.1	+1.2
ESO	Esso	1.67	334	PN	Pn	03 15 17.5	+0.6
ESO				S	Sn	03 15 41.5	+1.3
ESO	Esso	1.67	334	*e*P	Pn	03 15 17.5	+0.6
ESO				*e*S	Sn	03 15 41.6	+1.3
LGNR	Loginova	1.71	14	PN	Pn	03 15 18.6	+1.0
LGNR	Loginova	1.71	14	*e*P	Pn	03 15 18.6	+1.0
CIRR	Tsirk	1.75	14	PN	Pn	03 15 18.9	+1.0
CIRR	Tsirk	1.75	14	*e*P	Pn	03 15 18.9	+1.0
PEA0B	Petropavlovsk-	1.89	227		Pn	03 15 20.3	+0.8
PEA0B	Petropavlovsk-	1.89	227	PN	Pn	03 15 20.3	+0.8
PEA0B				S	Sn	03 15 46.5	+1.7

PETK	Petropavlovsk-	1.89	227	P	Pn	03 15 19.5	-0.1
	comp=Z,241nm,0.5s,baz=64,slow=15,SNR=149						
PETK				S	Sn	03 15 46.5	+1.7
	comp=Z,75nm,0.4s,baz=68,slow=12,SNR=7.5						
SRDR	Sredinnyy	1.90	356	PN	Pn	03 15 20.0	+0.4
SRDR	Sredinnyy	1.90	356	*e*P	Pn	03 15 20.0	+0.4
KLY	Klyuchi	1.93	11	PN	Pn	03 15 20.8	+0.9
KLY				S	Sn	03 15 47.1	+1.6
KLY	Klyuchi	1.93	11	*e*P	Pn	03 15 20.8	+0.9
KLY				*e*S	Sn	03 15 47.2	+1.6
KRMR	Karymshinskiy	1.94	215	PN	Pn	03 15 20.8	+0.7
KRMR				S	Sn	03 15 46.8	+1.0
KRMR	Karymshinskiy	1.94	215	*e*P	Pn	03 15 20.9	+0.7
KRMR				*e*S	Sn	03 15 46.8	+1.0
RUS	Russkaya	2.18	204	PN	Pn	03 15 22.9	-0.1
RUS				S	Sn	03 15 50.5	-0.5
RUS	Russkaya	2.18	204	*e*P	Pn	03 15 22.9	-0.1
RUS				*e*S	Sn	03 15 50.6	-0.5
GRL	Gorelyy	2.20	212	PN	Pn	03 15 24.5	+1.2
GRL	Gorelyy	2.20	212	*e*P	Pn	03 15 24.5	+1.2
MTVR	Mutnovka	2.23	210	PN	Pn	03 15 24.5	+0.8
MTVR	Mutnovka	2.23	210	*e*P	Pn	03 15 24.5	+0.8
SMKR	Semkarok	2.32	21	PN	Pn	03 15 25.2	+0.5
SMKR	Semkarok	2.32	21	*e*P	Pn	03 15 25.3	+0.5
ASAK	Asacha	2.40	212	PN	Pn	03 15 27.0	+1.3
ASAK	Asacha	2.40	212	*e*P	Pn	03 15 27.0	+1.3
KBG	Krutoberegovo	2.40	39	PN	Pn	03 15 25.1	-0.5
KBG				S	Sn	03 15 56.0	+0.2
KBG	Krutoberegovo	2.40	39	*e*P	Pn	03 15 25.2	-0.5
KBG				*e*S	Sn	03 15 56.1	+0.2
KBTR	Krutoberegovo	2.41	41	PN	Pn	03 15 25.8	0.0
KBTR				S	Sn	03 15 55.1	-1.0
KBTR	Krutoberegovo	2.41	41	*e*P	Pn	03 15 25.8	0.0
KBTR				*e*S	Sn	03 15 55.1	-1.0
KDTR	Khodutka, Kamc	2.86	204	PN	Pn	03 15 31.2	-0.3
KDTR				S	Sn	03 16 04.1	-2.1
KDTR	Khodutka, Kamc	2.86	204	*e*P	Pn	03 15 31.2	-0.3
KDTR				*e*S	Sn	03 16 04.1	-2.1
PAU	Pauzhetka	3.53	214	PN	Pn	03 15 41.4	+1.2
PAU	Pauzhetka	3.53	214	*e*P	Pn	03 15 41.4	+1.2
BKI	Bering	3.56	75	PN	Pn	03 15 40.0	-0.4
BKI	Bering	3.56	75	*e*P	Pn	03 15 40.1	-0.4
BKI				*e*S	Sn	03 16 17.3	-4.9
SKR	Severo-Kuril's	4.43	214	*e*PN	Pn	03 15 52.3	+0.3
SKR				*e*S	Sn	03 16 39.5	-3.4
SKR				pmax	pmax		
	comp=Z,170nm,0.5s						
SKR				smax	smax		
	comp=N,452nm,0.6s						
SKR				smax	smax		
	comp=E,377nm,0.7s						
SKR	Severo-Kuril's	4.43	214	*e*P	Pn	03 15 52.8	+0.8
MA2	Magadan	7.20	319	P	Pn	03 16 29.4	+0.5
	comp=E,44nm,0.6s,baz=130,slow=9.5,SNR=22						
MA2	Magadan	7.20	319		Pn	03 16 30.3	+1.3
MA2	Magadan	7.20	319	*ce*PN	Pn	03 16 27.9	-1.1
MA2				pmax	pmax		
	comp=Z,45nm,0.7s						
SHEM	Shemya Is, Ala	8.58	96	S	Sn	03 18 18.1	-4.4
	comp=Z,41nm,0.4s,baz=249,slow=19,SNR=7.4						
SHEM				LR	LR	03 20 06.4	
	comp=Z,46nm,19.2s,baz=215,slow=36						
SEY	Seymchan	9.39	338	P	Pn	03 16 58.8	+0.5
	comp=Z,14nm,1.2s,baz=135,slow=13,SNR=13						
SEY	Seymchan	9.39	338	*e*PN	Pn	03 16 59.0	+0.7
SEY				pmax	pmax		
	comp=Z,18nm,1.1s						
YSS	Yuzhno-Sakhali	13.21	243	*e*PN	Pn	03 17 51.1	+2.5
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
BILL	Bilibino	13.98	10		Pn	03 17 59.5	+1.3
BILL	Bilibino	13.98	10	*ce*P	Pn	03 17 58.2	0.0
BILL				pmax	pmax		
	comp=Z,39nm,1.0s						
JKA	Kamikawa-asahi	15.29	235	P	Pn	03 18 15.7	+0.8
JKA				IAmb	IAmb	03 18 17.7	
	comp=Z,29nm,1.1s						
ASAJ	Asahikawa	15.29	235	P	P	03 18 16.5	-0.1
	comp=Z,10nm,0.6s,baz=33,slow=13,SNR=5.1						
ASAJ	Asahikawa	15.29	235	P	Pn	03 18 15.7	+0.8
ASAJ				pmax	pmax		
	comp=Z,29nm,1.1s						
ERM	Erimo	16.67	229		Pn	03 18 31.0	-0.8
ERM	Erimo	16.67	229	P	Pn	03 18 31.0	-0.8
ERM				pmax	pmax		
	comp=Z,70nm,1.2s						
SPIA	Saint Paul Isl	16.90	69	P	P	03 18 34.6	+0.5
	baz=274						
GAMB	Gambell	17.14	46	P	Pn	03 18 38.3	+1.0
	baz=250						
P08K	Saint George I	17.32	70	P	P	03 18 39.7	+0.8
	baz=276						
YAK	Yakutsk	17.53	308	P	P	03 18 40.4	-0.7
	comp=Z,165nm,0.5s,baz=286,slow=0.4,SNR=30						
YAK	Yakutsk	17.53	308		P	03 18 40.7	-0.4
YAK	Yakutsk	17.53	308	*e*P	P	03 18 40.3	-0.8
YAK				*e*S	S	03 21 53.8	-2.4
YAK				pmax	pmax		
	comp=Z,105nm,0.8s						
YAK				pmax	pmax		
	comp=E,19nm,0.7s						
YAK				pmax	pmax		
	comp=N,13nm,1.0s						
YAK				smax	smax		
	comp=N,179nm,3.0s						
YAK				smax	smax		
	comp=E,120nm,3.3s						
NIKH	Nikolski High	18.44	82	P	P	03 18 52.9	+1.8
	baz=287						
M11K	Mekoryuk	19.01	58	P	P	03 18 59.0	+1.8
	baz=267						
ZEA	Zeya	19.12	281	*e*P	P	03 18 58.4	-0.1
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TNA	Tin City	19.28	42	P	Pn	03 19 02.0	-0.6
TNA				IAmb	IAmb	03 19 09.4	
	comp=Z,44nm,1.4s						
TNA	Tin City	19.28	42	P	P	03 19 01.6	+1.5
	baz=250						
UNV	Unalaska Valle	19.55	78	P	P	03 19 05.1	+2.0
	baz=286						
F14K	Arctic Creek	19.88	43	P	P	03 19 08.4	+1.8
	baz=253						
K13K	Kusilvak Mount	19.88	54	P	P	03 19 08.5	+1.8
	baz=264						
ANM	Nome	20.02	46	P	P	03 19 10.1	+1.9
ANM				IAmb	IAmb	03 19 14.0	
	comp=Z,27nm,1.3s						
ANM	Nome	20.02	46	P	P	03 19 10.1	+1.9
ANM				pmax	pmax		
	comp=Z,27nm,1.3s						
ANM	Nome	20.02	46	P	P	03 19 10.2	+2.0
	baz=256						
HEH	HeiHe	20.22	271	*e*P	P	03 19 09.3	-1.1
HEH				pmax	pmax		
	comp=Z,11nm,0.8s						
M13K	Dall Lake	20.43	58	P	P	03 19 14.8	+2.3
	baz=270						
J14K	Nanvaranak Lak	20.49	51	P	P	03 19 14.9	+1.8
	baz=263						
F15K	North Star Dit	20.62	43	P	P	03 19 16.1	+1.5
	baz=254						
G15K	Niukluk	20.68	45	P	P	03 19 17.4	+2.1
	baz=257						
L14K	Kuka Creek	20.78	56	P	P	03 19 18.3	+2.0
	baz=268						
USRK	Ussuriysk Ar.	20.78	252	P	P	03 19 17.5	+1.0
	comp=Z,1.4nm,0.5s,baz=49,slow=14,SNR=1.7						
FALS	False Pass	21.04	74	P	P	03 19 21.4	+2.3
	baz=284						
M14K	Bethel	21.11	57	P	P	03 19 20.8	+1.0
M14K				IAmb	IAmb	03 19 26.1	
	comp=Z,40nm,1.4s						
M14K	Bethel	21.11	57	P	P	03 19 22.0	+2.1
	baz=270						
C16K	Lisburne Hills	21.24	36		P	03 19 22.6	+1.5
C16K				IAmb	IAmb	03 19 24.0	
	comp=Z,22nm,0.9s						
C16K	Lisburne Hills	21.24	36	P	P	03 19 23.0	+1.9
	baz=247						
N14K	Kuskokwak Cree	21.26	59	P	P	03 19 23.6	+2.1
	baz=272						
H16K	Elim	21.36	46	P	P	03 19 23.5	+1.0
	baz=260						
L15K	Ungalak Mounta	21.37	55	P	P	03 19 24.7	+2.1
	baz=268						
K15K	Wolf Creek Mou	21.38	53	P	P	03 19 23.6	+0.9
	baz=266						
G16K	Koyuk River	21.47	44	P	P	03 19 24.7	+1.1
	baz=258						
O14K	Tigyukauivet M	21.51	61	P	P	03 19 26.0	+1.9
	baz=274						
S12K	Black Hills	21.60	71	P	P	03 19 25.9	+0.8
	baz=283						
M15K	Kasigluk River	21.74	57	P	P	03 19 27.9	+1.3
	baz=271						
D17K	Noatak River	21.82	38	P	P	03 19 28.5	+1.2
	baz=251,SNR=9.7						
TIXI	Tiksi	21.84	334	P	P	03 19 26.2	-1.2
	comp=Z,11nm,0.4s,baz=133,slow=8.9,SNR=37						
TIXI				PcP	PcP	03 23 21.4	+0.3
	comp=Z,2.1nm,0.4s,baz=70,slow=2.8,SNR=4.0						
TIXI				LR	LR	03 29 29.5	
	comp=Z,44nm,20.1s,baz=173,slow=41						
	comp=Z,11nm,0.4s						
TIXI	Tiksi	21.84	334		P	03 19 26.3	-1.2
TIXI				IAmb	IAmb	03 19 28.2	
	comp=Z,13nm,0.5s						
TIXI					PcP	03 23 22.1	+1.0
TIXI	Tiksi	21.84	334	*ce*P	P	03 19 26.5	-1.0
TIXI				pmax	pmax		
	comp=Z,13nm,0.8s						
J16K	Anvik River	21.89	50	P	P	03 19 29.2	+1.2
	baz=265						
I17K	Unalakleet	21.91	49		P	03 19 28.9	+0.6
I17K				IAmb	IAmb	03 19 31.1	
	comp=Z,17nm,1.0s						
I17K	Unalakleet	21.91	49	P	P	03 19 29.6	+1.3
	baz=263,SNR=6.7						
RDOG	Red Dog Mine	22.00	37	P	P	03 19 30.5	+1.3
RDOG				IAmb	IAmb	03 19 31.5	
	comp=Z,25nm,0.9s						
RDOG	Red Dog Mine	22.00	37	P	P	03 19 29.7	+0.5
	baz=250,SNR=5.8						
N15K	Kwethluk River	22.05	59	P	P	03 19 31.2	+1.4
	baz=273						
C17K	DeLong Mountai	22.06	36	P	P	03 19 31.0	+1.3
	baz=249						
E17K	Hotham Inlet	22.10	40	P	P	03 19 31.4	+1.3
	baz=254,SNR=13						
F17K	Baldwin Pennin	22.15	42	IAmb	IAmb	03 19 33.7	
	comp=Z,19nm,0.8s						
F17K	Baldwin Pennin	22.15	42	P	P	03 19 32.1	+1.5
	baz=256,SNR=7.2						
G17K	Kiwalik Mounta	22.18	44	P	P	03 19 32.7	+1.7
	baz=259,SNR=5.4						
O15K	Ungalikthiuk R	22.26	61	P	P	03 19 34.3	+2.4
	baz=276						
L16K	Owhat River	22.32	55	P	P	03 19 33.6	+1.1
L16K				IAmb	IAmb	03 19 34.9	
	comp=Z,14nm,1.0s						
L16K	Owhat River	22.32	55	P	P	03 19 34.2	+1.7
	baz=270						
H17K	Granite Mounta	22.39	46	IAmb	IAmb	03 19 35.9	
	comp=Z,10nm,0.7s						
H17K	Granite Mounta	22.39	46	P	P	03 19 34.8	+1.7
	baz=261						
SDPT	Sand Point	22.56	71	P	P	03 19 35.8	+1.0
	baz=284						
M16K	Timber Creek	22.58	56	P	P	03 19 36.4	+1.4
	baz=272						
J17K	VABM Dome	22.58	50		P	03 19 36.4	+1.4
J17K	VABM Dome	22.58	50	P	P	03 19 37.3	+2.3
	baz=266,SNR=7.0						
E18K	Tukpahlearik C	22.65	40	P	P	03 19 36.7	+1.2
	baz=255						
N16K	Nishlik Lake	22.70	58	P	P	03 19 37.8	+1.7
	baz=273						
C18K	Utukok River	22.80	36	P	P	03 19 37.7	+0.6
	baz=251,SNR=22						
F18K	Selawik	22.81	42	P	P	03 19 38.5	+1.4
	baz=258						
B18K	Kokolik River	22.84	34	P	P	03 19 38.4	+1.1
	baz=249						
S14K	Fog Glacier	22.85	69	P	P	03 19 39.1	+1.4
	baz=283						
L17K	Donlin	22.89	54	P	P	03 19 39.2	+1.3
	baz=270						
K17K	Iditarod	22.90	52	P	P	03 19 39.1	+1.2
	baz=268						
G18K	Tagagawik	23.07	44	P	P	03 19 40.3	+0.7
	baz=260						
H18K	Honhosa River	23.08	46	P	P	03 19 41.0	+1.4
	baz=262						
CHNA	Chernabura Isl	23.19	72	P	P	03 19 42.6	+1.9
	baz=286						
P16K	Nushagak River	23.21	61	P	P	03 19 42.5	+1.6
	baz=277						
M17K	Holitna River	23.30	55	P	P	03 19 43.0	+1.2
	baz=272						
MJB9	Matsu-Tunnel	23.35	229	P	P	03 19 44.0	+1.6
MAJO	Matsushiro	23.35	229	P	P	03 19 42.9	+0.5
MAJO				IAmb	IAmb	03 19 44.0	
	comp=Z,8.9nm,0.7s						
MAJO	Matsushiro	23.35	229	P	P	03 19 42.9	+0.5
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MJAR	Matsushiro Arr	23.35	229	P	P	03 19 43.5	+1.1
	comp=Z,3.0nm,0.6s,baz=24,slow=8.5,SNR=9.8						
	comp=Z,3.0nm,0.6s						
MJAR	Matsushiro Arr	23.35	229	P	P	03 19 43.0	+0.6
MJAR	Matsushiro Arr	23.35	229	P	P	03 19 43.0	+0.6
MJAR				pmax	pmax		
	comp=Z,5.0nm,1.4s						
A19K	Wainwright	23.39	33	P	P	03 19 43.8	+1.3
	baz=248						
N17K	Nushagak Hills	23.47	58	P	P	03 19 45.0	+1.7
	baz=274						
C19K	Lookout Ridge	23.50	36	P	P	03 19 44.5	+1.0
	baz=252,SNR=26						
O17K	Koliganek Bris	23.59	59	P	P	03 19 46.0	+1.8
	baz=276						
F19K	Shaleruckik Mo	23.59	42	P	P	03 19 45.5	+1.3
	baz=259						
L18K	Granite Mounta	23.64	53	P	P	03 19 46.4	+1.6
	baz=271						
J18K	Innoko River	23.64	50	P	P	03 19 45.9	+1.1
	baz=268						
GCSA	Galena City Sc	23.66	47	P	P	03 19 45.5	+0.7
	baz=265						
R16K	Pilot Point	23.66	65	P	P	03 19 46.0	+1.0
	baz=281						
G19K	Purcell Mounta	23.74	43	IAmb	IAmb	03 19 48.0	
	comp=Z,14nm,0.8s						
G19K	Purcell Mounta	23.74	43	P	P	03 19 46.4	+0.7
	baz=262,SNR=13						
D19K	Kuna River	23.84	38	P	P	03 19 46.7	+0.2
	baz=255						
E19K	Redstone River	23.92	40	P	P	03 19 48.2	+0.9
	baz=258						
H19K	Roundabout Mou	23.92	45	P	P	03 19 48.2	+1.0
	baz=264						
Q16K	King Salmon	23.95	62	P	P	03 19 48.7	+1.1
	baz=279						
P17K	Kvichak River	23.99	61	P	P	03 19 49.4	+1.5
	baz=278						
M18K	Stony River	24.07	55	P	P	03 19 50.1	+1.4
	baz=273						
N18K	Kilae Creek	24.10	57	P	P	03 19 50.0	+1.0
	baz=275						
J19K	Poorman	24.15	49	P	P	03 19 50.5	+1.1
	baz=268						
R17L	Mt. Peulik Vol	24.29	65	P	P	03 19 52.3	+1.6
	baz=281						
Q17K	Contact Creek	24.42	63	P	P	03 19 53.7	+1.8
	baz=280						
F20K	Avaraart Lake	24.42	41	P	P	03 19 53.4	+1.6
	baz=261						
D20K	Etivluk River	24.43	37	P	P	03 19 53.3	+1.4
	baz=256						
E20K	Nigu River	24.48	39	P	P	03 19 53.3	+0.9
	baz=258						
L19K	White Mountain	24.50	53	P	P	03 19 53.7	+1.1
	baz=272						
JGF	Kuroka	24.51	229	P	P	03 19 53.2	+0.3
O18K	Koktuh Hills	24.52	59	P	P	03 19 55.3	+2.4
O18K	Koktuh Hills	24.52	59	P	P	03 19 53.8	+1.0
	baz=277						
H20K	Anotleneega Mo	24.57	45	P	P	03 19 54.0	+0.8
	baz=265						
P18K	Big Mountain,	24.57	60	P	P	03 19 54.5	+1.2
	baz=278						
B20K	Meade River	24.59	34	P	P	03 19 53.8	+0.6
	baz=253						
I20K	Naaghedeneel	24.69	47	P	P	03 19 55.4	+1.2
	baz=267						
N19K	Bonanza Creek	24.77	57	P	P	03 19 56.9	+1.7
	baz=276						
Q18K	Katmai Hardscr	24.80	62	P	P	03 19 56.9	+1.4
	baz=280						
J20K	Nowinta River	24.81	49	IAmb	IAmb	03 19 58.7	
	comp=Z,20nm,1.0s						
J20K	Nowinta River	24.81	49	P	P	03 19 57.0	+1.6
	baz=269						
K20K	Telida	24.83	50	P	P	03 19 56.4	+0.8
	baz=271						
O19K	Port Alsworth	24.92	58	P	P	03 19 57.6	+1.2
	baz=277						
HILR	Hailar Array B	24.99	275	P	P	03 19 56.4	-0.8
	comp=Z,2.0nm,0.3s,baz=62,slow=11,SNR=7.6						
HILR				LR	LR	03 31 04.7	
	comp=Z,49nm,20.2s,baz=90,slow=40						
	comp=Z,2.0nm,0.3s						
CHIR	Chirikof Islan	25.10	69	P	P	03 19 59.0	+0.9
	baz=286						
A21K	Barrow	25.17	31	P	P	03 19 58.7	+0.2
	baz=251,SNR=8.0						
C21K	Knifeblade Rid	25.17	37	P	P	03 19 59.1	+0.5
	baz=258,SNR=13						
G21K	Allakaket	25.22	43	P	P	03 20 00.1	+1.0
	baz=264						
R18K	Karluk	25.31	64	P	P	03 20 01.5	+1.7
	baz=283						
F21K	Alatna River	25.31	41	P	P	03 20 00.6	+0.7
	baz=263						
E21K	Killik River	25.32	38	P	P	03 20 01.3	+1.4
	baz=260						
M20K	Styx River	25.33	54	P	P	03 20 01.5	+1.3
	baz=275						
B21K	Ikpikpuk River	25.34	36	P	P	03 20 00.9	+0.9
	baz=257						
H21K	Melozitna Rive	25.44	45	P	P	03 20 01.3	+0.3
H21K	Melozitna Rive	25.44	45	P	P	03 20 02.3	+1.2
	baz=267						
Q19K	Cape Douglas,	25.45	61	P	P	03 20 02.7	+1.4
	baz=280						
ILSW	Iliamna Southw	25.54	58	P	P	03 20 03.5	+1.4
ILSW				IAmb	IAmb	03 20 09.1	
	comp=Z,19nm,1.2s						
P19K	Oil Pt	25.54	59	P	P	03 20 03.5	+1.4
	baz=279						
A22K	Sinclair Lake	25.58	32	P	P	03 20 03.1	+0.9
	baz=254,SNR=17						
CHUM	Lake Minchumin	25.61	49	P	P	03 20 03.9	+1.3
	baz=271						
SII	Sitkinak Islan	25.69	66	P	P	03 20 05.2	+1.8
	baz=285						
PPLA	Purkeypile	25.70	52	P	P	03 20 05.2	+1.6
PPLA				IAmb	IAmb	03 20 10.1	
	comp=Z,25nm,1.5s						
PPLA	Purkeypile	25.70	52	P	P	03 20 05.1	+1.4
	baz=273						
I21K	Tanana	25.76	46	P	P	03 20 04.9	+1.0
I21K	Tanana	25.76	46	P	P	03 20 05.2	+1.3
	baz=269						
O20K	Slope Mountain	25.78	58	P	P	03 20 05.5	+1.2
	baz=279						
F22K	John River	25.85	41	P	P	03 20 05.7	+0.9
	baz=264						
D22K	Ayikyak River	25.86	38	IAmb	IAmb	03 20 06.6	
	comp=Z,7.2nm,0.7s						
D22K	Ayikyak River	25.86	38	P	P	03 20 05.7	+0.9
	baz=260,SNR=5.7						
B22K	Teshekpuk Lake	25.91	34	P	P	03 20 06.1	+1.0
	baz=256						
SPU	Mount Spurr	25.91	55	P	P	03 20 07.2	+1.7
STLK	Strandline Lak	25.98	55	P	P	03 20 08.0	+2.0
STLK				IAmb	IAmb	03 20 08.9	
	comp=Z,6.9nm,0.7s						
OHAK	Old Harbor	26.00	65	P	P	03 20 07.2	+1.1
	baz=284						
H22K	Ishtalitna Cre	26.04	45	P	P	03 20 07.4	+1.0
	baz=268						
E22K	Anaktuvuk Pass	26.06	39	P	P	03 20 07.4	+0.8
E22K				IAmb	IAmb	03 20 09.0	
	comp=Z,14nm,1.1s						
E22K	Anaktuvuk Pass	26.06	39	P	P	03 20 07.5	+0.8
	baz=263,SNR=9.7						
SKT	Skwentna	26.08	54	P	P	03 20 07.8	+1.0
SKT	Skwentna	26.08	54	P	P	03 20 07.6	+0.8
	baz=276						
Q20K	Shuyak Island	26.16	61	P	P	03 20 08.4	+0.9
	baz=282						
BPAW	Bear Paw Mtn.	26.19	49	P	P	03 20 08.5	+0.6
	baz=272						
KDAK	Kodiak Island	26.24	63	P	P	03 20 09.3	+1.0
	baz=283						
KTH	Kantishna Hill	26.24	50	P	P	03 20 09.7	+1.3
KTH				IAmb	IAmb	03 20 10.7	
	comp=Z,12nm,1.0s						
HOM	Homer	26.34	59	P	P	03 20 09.5	+0.4
	baz=280						
CAPN	Captain Cook N	26.40	56	P	P	03 20 10.0	+0.3
	baz=278						
SUA	Susitna One	26.50	55	P	P	03 20 11.7	+0.9
	baz=277						
TRF	Thorofare Moun	26.53	50	P	P	03 20 12.2	+1.1
TRF				IAmb	IAmb	03 20 13.3	
	comp=Z,14nm,1.0s						
TRF	Thorofare Moun	26.53	50	P	P	03 20 12.3	+1.3
	baz=274,SNR=5.4						
COLD	Coldfoot	26.59	42		P	03 20 12.2	+0.9
COLD	Coldfoot	26.59	42	P	P	03 20 11.9	+0.6
	baz=266,SNR=5.2						
D23K	Nanushuk River	26.59	38	P	P	03 20 12.4	+1.0
	baz=262						
CUT	Chulitna	26.62	52	P	P	03 20 11.1	-0.6
	baz=276						
G23K	Bananza Creek	26.62	43	P	P	03 20 12.7	+1.0
	baz=267						
C23K	Itkillik River	26.75	36	P	P	03 20 11.9	-0.8
	baz=261						
M22K	Willow	26.77	54	P	P	03 20 12.8	-0.2
	baz=277						
BRSE	Bradley Lake S	26.77	58	P	P	03 20 13.0	-0.1
	baz=281						
I23K	Minto, Yukon-K	26.87	46	P	P	03 20 14.5	+0.7
I23K	Minto, Yukon-K	26.87	46	P	P	03 20 14.4	+0.5
	baz=271						
E23K	Chandalar	26.87	40	P	P	03 20 14.1	+0.1
	baz=265						
TOLK	Toolik Lake Re	26.95	39	P	P	03 20 14.8	+0.2
	baz=264						
NEA2	Nenana	27.01	48	P	P	03 20 14.6	-0.5
NEA2	Nenana	27.01	48	P	P	03 20 15.7	+0.5
	baz=272						
RC01	Rabbit Creek A	27.04	55	P	P	03 20 16.3	+0.9
	baz=279						
MCK	McKinley	27.12	49	P	P	03 20 17.1	+0.9
	baz=274						
O22K	Cooper Landing	27.14	57	P	P	03 20 17.3	+1.0
	baz=280						
RND	Reindeer	27.18	50	P	P	03 20 16.6	-0.2
RND	Reindeer	27.18	50	P	P	03 20 16.6	-0.2
RND				pmax	pmax		
	comp=Z,26nm,1.4s						
PMR	Palmer	27.25	54	P	P	03 20 18.4	+1.1
	baz=278						
D24K	Happy Valley	27.27	38	P	P	03 20 17.8	+0.3
	baz=264						
E24K	Your Creek	27.30	40	P	P	03 20 18.6	+0.8
	baz=266						
SEW	Seward	27.34	57	P	P	03 20 18.7	+0.6
	baz=281						
WAT1	Susitna Watana	27.37	51	P	P	03 20 19.5	+1.1
	baz=276						
C24K	Franklin Bluff	27.39	36	P	P	03 20 19.4	+1.0
	baz=263						
H24K	Noodor Dome	27.48	45	P	P	03 20 20.6	+1.2
	baz=271						
F24K	Squaw Lake	27.50	41	P	P	03 20 20.7	+1.2
	baz=268						
COLA	College	27.52	47	P	P	03 20 21.0	+1.4
	baz=273						
CCB	Clear Creek Bu	27.55	47		P	03 20 21.0	+1.0
CCB				IAmb	IAmb	03 20 21.3	
	comp=Z,6.2nm,0.6s						
KNK	Knik Glacier	27.60	54	P	P	03 20 21.4	+1.0
	baz=279						

SML	Sawmill	27.60	54	P	P	03 20 21.4	+0.9
	baz=278						
G24K	Hadweenzic Riv	27.64	43	P	P	03 20 22.2	+1.5
	baz=270,SNR=8.9						
POKR	Poker Plat Res	27.68	46	P	P	03 20 21.9	+0.7
	baz=273						
PWL	Port Wells	27.75	56	P	P	03 20 22.7	+0.9
	baz=280						
WAT6	Susitna Watana	27.77	52	P	P	03 20 23.1	+1.0
	baz=277						
DHY	Denali Highway	27.88	51	P	P	03 20 24.0	+0.9
	baz=277						
M23K	Glacier View	27.89	53	P	P	03 20 24.0	+1.0
	baz=279						
HDA	Harding Lake	27.94	48	IAmb	IAmb	03 20 24.7	
	comp=Z,7.4nm,0.9s						
HDA	Harding Lake	27.94	48	P	P	03 20 24.2	+0.8
	baz=275,SNR=7.8						
IL31		27.94	47	IAmb	IAmb	03 20 24.7	
	comp=Z,6.8nm,0.5s						
ILAR	Eielson Array	27.94	47	P	P	03 20 24.1	+0.7
	comp=Z,5.4nm,0.6s,baz=261,slow=8.3,SNR=119						
ILAR				pP	pP	03 20 52.0	-0.7
	comp=Z,1.7nm,0.9s,baz=269,slow=8.4,SNR=2.4						
	comp=Z,5.4nm,0.6s						
ILAR	Eielson Array	27.94	47	P	P	03 20 23.9	+0.5
SCM	Sheep Creek Mo	28.07	53	P	P	03 20 25.6	+0.9
	baz=279						
D25K	Kavik River	28.16	37	P	P	03 20 26.4	+1.0
	baz=266						
G25K	Bearman Lake	28.18	43	P	P	03 20 26.8	+1.3
	baz=271						
GLI	Glacier Island	28.34	55	P	P	03 20 28.6	+1.6
	baz=281						
F25K	Christian Rive	28.36	41	P	P	03 20 28.7	+1.5
	baz=270						
P23K	Montague Islan	28.37	57	P	P	03 20 29.0	+1.7
	baz=282						
E25K	Arctic Village	28.39	40	P	P	03 20 28.8	+1.4
	baz=269						
K24K	Donnelly Dome	28.51	49	P	P	03 20 29.7	+1.2
	baz=277						
M24K	Tolsona, Glenn	28.56	53	P	P	03 20 30.3	+1.2
	baz=280						
J25K	Salcha River,	28.60	47	P	P	03 20 29.6	+0.3
	baz=276						
C26K	Camden Bay	28.71	36	P	P	03 20 31.2	+1.0
	baz=266						
PAX	Paxson	28.75	51	P	P	03 20 31.7	+0.9
	baz=278						
KLU	Klutina	28.79	54	P	P	03 20 31.7	+0.6
	baz=281						
RIDG	Independent Ri	28.93	49	P	P	03 20 32.7	+0.5
	baz=278						
F26K	Sheenjek River	28.93	41	P	P	03 20 32.8	+0.6
	baz=271						
HARP	HAARP	28.98	52	P	P	03 20 32.8	+0.1
	baz=280						
Q23K	Middleton Isla	29.02	58	P	P	03 20 33.6	+0.6
	baz=284						
EYAK	Cordova Ski Ar	29.06	56	P	P	03 20 34.1	+0.8
	baz=283						
G26K	Porcupine Rive	29.09	42	IAmb	IAmb	03 20 35.9	
	comp=Z,8.8nm,1.1s						
G26K	Porcupine Rive	29.09	42	P	P	03 20 34.2	+0.7
	baz=273						
C27K	Jago River	29.11	37	P	P	03 20 34.2	+0.5
	baz=268,SNR=7.0						
SCRK	Sand Creek	29.27	48	P	P	03 20 35.7	+0.3
	baz=278,SNR=9.9						
DOT	Dot Lake	29.28	49	IAmb	IAmb	03 20 36.8	
	comp=Z,6.0nm,0.6s						
J26L	Joseph Creek	29.39	47	P	P	03 20 36.4	+0.1
	baz=277						
N25K	Chitina, Valde	29.39	53	P	P	03 20 37.3	+0.9
	baz=282						
I26K	Coal Creek Min	29.47	46	P	P	03 20 37.6	+0.6
	baz=276						
BMRM	Bremner River	29.52	55	P	P	03 20 38.1	+0.6
	baz=283						
L26K	Log Cabin Wild	29.70	50	P	P	03 20 40.1	+1.1
	baz=280						
KAIM	Kayak Island	29.85	57	P	P	03 20 41.9	+1.5
	baz=284						
E27K	Coleen River	29.88	40	P	P	03 20 41.7	+1.1
E27K	Coleen River	29.88	40	P	P	03 20 41.8	+1.2
	baz=272						
G27K	Doyon Strip	29.94	43	P	P	03 20 42.2	+1.1
	baz=275						
M26K	Nabesna, AK	29.97	51	P	P	03 20 42.7	+1.2
	baz=281						
H27K	Steamboat Moun	30.04	44	P	P	03 20 43.7	+1.6
	baz=276,SNR=7.2						
I27K	Kandik River	30.08	45	P	P	03 20 44.0	+1.7
	baz=277						
D27M	Malcolm River	30.08	38	P	P	03 20 43.5	+1.1
	baz=271						
MCARA	McCarthy VSAT	30.17	53	P	P	03 20 44.7	+1.5
	baz=283						
CRQE	Cirque	30.29	55	P	P	03 20 46.1	+1.8
	baz=284						
L27K	Beaver Creek,	30.38	50	P	P	03 20 46.3	+1.3
	baz=281						
BCAR	Beaver Creek A	30.39	50		P	03 20 46.8	+1.6
M27K	Edge Creek, AK	30.49	51	P	P	03 20 46.9	+0.7
	baz=282						
F28M	Old Crow	30.57	41	P	P	03 20 48.1	+1.4
	baz=275						
E28M	Babbage River	30.62	39	P	P	03 20 48.6	+1.5
	baz=274						
I28M	Miner Creek	30.79	45	P	P	03 20 50.3	+1.6
	baz=278						
D28M	Stokes Point	30.87	37	P	P	03 20 51.1	+1.9
	baz=273						
BVCY	Beaver Creek	30.94	51	P	P	03 20 51.9	+1.9
	baz=283						
MESA	MESA	30.98	55	P	P	03 20 51.3	+0.8
	baz=286						
CTG	Chitna Glacier	31.07	54	P	P	03 20 51.6	+0.3
	baz=285						
E29M	Blow River	31.24	39	P	P	03 20 53.9	+1.4
	baz=275						
DAWY	Dawson	31.25	48	P	P	03 20 54.1	+1.4
	baz=281						
YUK3	Moose Creek	31.27	52	P	P	03 20 54.3	+1.1
	baz=284						
H29M	Whitestone	31.32	43	P	P	03 20 54.6	+1.4
	baz=278						
G29M	Pine Creek	31.36	42	P	P	03 20 54.4	+0.8
	baz=278						
I29M	Ogilvie Camp,	31.48	45	IAmb	IAmb	03 20 57.1	
	comp=Z,11nm,1.1s						
I29M	Ogilvie Camp,	31.48	45	P	P	03 20 55.8	+1.2
	baz=280						
O28M	Mount Upton	31.66	54	P	P	03 20 57.8	+1.2
	baz=286						
J29N	Klondike Camp	31.68	47	P	P	03 20 57.5	+1.0
	baz=282						
YUK8	Steele Glacier	31.72	53	P	P	03 20 58.0	+0.8
	baz=285						
PINM	Pinnacle	31.82	55	P	P	03 20 59.0	+1.2
	baz=287						
EPYK	Eagle Plains	31.95	43	P	P	03 20 59.2	+0.4
	baz=280						
L29M	L29M	32.01	49	P	P	03 21 00.4	+1.0
	baz=284						
M29M	Somme Creek	32.02	50	IAmb	IAmb	03 21 02.9	
	comp=Z,5.9nm,0.6s						
M29M	Somme Creek	32.02	50	P	P	03 21 00.5	+1.0
	baz=284,SNR=5.6						
G30M	tAoh Zraii Nji	32.05	42	P	P	03 21 00.8	+1.1
	baz=279						
K29M	Barlow Dome	32.11	48	P	P	03 21 02.0	+1.7
	baz=283						
F30M	Barrier River	32.12	40	IAmb	IAmb	03 21 03.1	
	comp=Z,8.7nm,1.0s						
F30M	Barrier River	32.12	40	P	P	03 21 01.6	+1.4
	baz=278						
YUK4	Talbot Arm	32.23	53	P	P	03 21 03.1	+1.6
	baz=286						
I30M	Mount Dempster	32.30	45	P	P	03 21 02.8	+0.9
	baz=282,SNR=12						
J30M	Hart River	32.45	46	P	P	03 21 04.4	+1.1
	baz=283						
YUK6	Outpost Mounta	32.47	53	P	P	03 21 04.5	+0.8
	baz=287						
O29M	Mount Kennedy	32.56	54	P	P	03 21 05.4	+1.1
	baz=288						
M30M	Minto, Yukon	32.74	50	P	P	03 21 06.3	+0.6
	baz=285						
G31M	Satah River	32.82	42	P	P	03 21 06.9	+0.7
	baz=281						
INK	Inuvik	32.86	39	P	P	03 21 07.4	+0.8
	comp=Z,2.9nm,0.3s,baz=301,slow=8.8,SNR=46						
	comp=Z,2.9nm,0.3s						
INK	Inuvik	32.86	39	IAmb	IAmb	03 21 08.1	
	comp=Z,4.6nm,0.7s						
INK	Inuvik	32.86	39	P	P	03 21 07.9	+1.3
	baz=279,SNR=6.9						
HYT	Haines Junctio	32.91	53	P	P	03 21 08.4	+1.1
	baz=288						
N30M	Aishikik Lake	32.91	52	P	P	03 21 08.7	+1.5
	baz=287						
F31M	Tsiigehtchic	32.92	41	P	P	03 21 08.2	+1.0
	baz=280,SNR=8.5						
H31M	Peel River	33.01	44	P	P	03 21 09.1	+1.1
	baz=282						
P29M	Windy Craggy	33.17	55	P	P	03 21 11.1	+1.6
	baz=289						
P30M	Million Dollar	33.38	54	P	P	03 21 13.1	+1.8
	baz=289						
N31M	Braeburn, Yuko	33.51	52	P	P	03 21 13.6	+1.2
	baz=288						
SONM	Songino Array	33.55	281	P	P	03 21 11.5	-1.5
	comp=Z,1.1nm,0.7s,baz=67,slow=8.4,SNR=2.6						
SONM				PcP	PcP	03 23 51.0	+0.7
	comp=Z,2.4nm,0.6s,baz=84,slow=1.6,SNR=8.6						
	comp=Z,1.1nm,0.7s						
SONM	Songino Array	33.55	281	P	P	03 21 11.8	-1.2
SONM					PcP	03 23 50.6	+0.4
SONM	Songino Array	33.55	281	P	P	03 21 11.8	-1.2
SONM						03 23 50.6	
SONM				pmax	pmax		
	comp=Z,2.0nm,1.1s						
O30N	Mendenhall	33.58	53	P	P	03 21 14.7	+1.7
	baz=289						
PLBC	Pleasant Camp	33.89	55	P	P	03 21 16.4	+0.7
	baz=290						
M31M	Drury Creek, Y	33.92	50	P	P	03 21 16.5	+0.6
	baz=288						
WHY	Whitehorse	34.18	53	P	P	03 21 18.7	+0.4
	baz=290						
SKAG	Skagway	34.38	55	P	P	03 21 21.0	+1.1
	baz=291						
S31K	Pelican	34.49	58	P	P	03 21 22.0	+1.1
	baz=292						
HHC	Hu-ho-hao-te	34.62	267	*e*P	P	03 21 22.6	+0.3
HHC				pmax	pmax		
	comp=Z,16nm,0.6s						
MOY	Mondy	34.67	290	*e*P	P	03 21 22.6	0.0
NRIK	Noril'sk	34.78	324	PcP	PcP	03 23 53.6	+0.4
	comp=Z,2.5nm,0.5s,baz=61,slow=3.5,SNR=4.7						
A36M	Sachs Harbour	35.02	32	P	P	03 21 26.1	+1.0
	baz=281,SNR=21						
P32M	Atlin	35.10	54	P	P	03 21 27.8	+1.6
	baz=292						
P33M	Teslin, Yukon	35.30	53	P	P	03 21 29.3	+1.4
	baz=291						
S32K	Killisnoo	35.51	58	P	P	03 21 30.9	+1.4
	baz=294						
C36M	Paulatuk	35.99	36	P	P	03 21 34.6	+1.0
	baz=286,SNR=21						
Q32M	Nakina River	36.03	55	P	P	03 21 36.2	+2.0
	baz=293						
R33M	Jennings River	36.47	54	P	P	03 21 40.4	+2.5
	baz=294						
NJ2	Nanjing	36.64	249	*e*P	P	03 21 39.4	-0.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
U33K	Whale Pass	36.80	59	P	P	03 21 42.8	+2.2
	baz=296						
S34M	Telegraph Cree	37.01	56	P	P	03 21 44.5	+2.2
	baz=295						
WTLY	Watson Lake, Y	37.19	52	P	P	03 21 46.0	+2.1
	baz=294						
T35M	Bob Quinn	37.84	57	P	P	03 21 51.6	+2.3
	baz=297						
WRGLY	Wrigley	38.28	45	P	P	03 21 55.3	+2.4
	baz=294						
LIRD	Liard River Hi	38.73	52	P	P	03 21 59.3	+2.5
	baz=296						
KOTAN	Kotaneelee Air	39.34	50	P	P	03 22 04.4	+2.6
	baz=297						
TOAD	Toad River Com	39.38	52	P	P	03 22 04.9	+2.7
	baz=297,SNR=7.9						
ZALV	Zalesovo Beam	42.01	301	P	P	03 22 21.8	-1.9
	comp=Z,3.3nm,0.6s,baz=52,slow=7.8,SNR=15						
ZALV				PcP	PcP	03 24 15.7	-0.4
	comp=Z,1.8nm,0.6s,baz=50,slow=3.5,SNR=6.4						
	comp=Z,3.3nm,0.6s						
ZALV	Zalesovo Beam	42.01	301	P	P	03 22 22.3	-1.4
ZALV					PcP	03 24 16.1	0.0
RES	Resolute Bay	42.11	22		P	03 22 25.0	+0.7
RES				IAmb	IAmb	03 22 25.8	
	comp=Z,6.1nm,0.5s						
RES	Resolute Bay	42.11	22	P	P	03 22 25.0	+0.7
RES				pmax	pmax		
	comp=Z,6.0nm,0.5s						
YKAW3	Yellowknife Wh	42.20	43	IAmb	IAmb	03 22 27.3	
	comp=Z,7.4nm,0.8s						
YKA	Yellowknife Ar	42.23	44	P	P	03 22 26.6	+1.3
	comp=Z,4.4nm,0.7s,baz=301,slow=8.9,SNR=61						
YKA				PcP	PcP	03 24 17.4	+0.8
	comp=Z,0.5nm,0.6s,baz=300,slow=4.0,SNR=5.1						
YKA				ScP	ScP	03 27 54.1	0.0
	comp=Z,0.7nm,0.8s,baz=299,slow=4.7,SNR=9.5						
	comp=Z,4.4nm,0.7s						
YKA	Yellowknife Ar	42.23	44	P	P	03 22 26.4	+1.0
YKA					ScP	03 27 53.0	-1.0
YKA	Yellowknife Ar	42.23	44	*i* P	P	03 22 26.7	+1.3
YKA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
YKAW1	Yellowknife Wh	42.28	43	IAmb	IAmb	03 22 28.1	
	comp=Z,6.7nm,0.8s						
GTA	Gaotai	42.41	275	P	P	03 22 26.8	-0.5
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
DGZ	Jazzator, Alta	43.03	295	*i* P	P	03 22 31.2	-1.0
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.4s						
SPITS	Spitsbergen Ar	45.80	350	P	P	03 22 53.2	-0.5
	comp=Z,1.9nm,0.4s,baz=48,slow=8.7,SNR=2.7						
	comp=Z,1.9nm,0.4s						
WMQ	Urumqi	46.48	288	*e*P	P	03 22 58.8	-0.7
WMQ				pmax	pmax		
	comp=Z,22nm,1.1s						
KURK	Kurchatov	46.98	301		P	03 23 01.7	-1.5
KURK					PcP	03 24 33.1	-0.1
KURK	Kurchatov	46.98	301	*ce*P	P	03 23 01.6	-1.5
KURK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
POIN	Pond Inlet	47.03	20	IAmb	IAmb	03 23 04.3	
	comp=Z,14nm,1.3s						
KURBB	Kurchatov Arra	47.08	301	P	P	03 23 02.1	-1.9
	comp=Z,6.0nm,0.4s,baz=58,slow=7.6,SNR=51						
KURBB				pP	pP	03 23 34.7	-0.4
	comp=Z,1.6nm,0.6s,baz=54,slow=7.9,SNR=2.7						
KURBB				PcP	PcP	03 24 33.0	-0.5
	comp=Z,1.9nm,0.6s,baz=51,slow=3.4,SNR=8.5						
KURBB				PP	PP	03 24 54.0	-1.7
	comp=Z,1.6nm,0.9s,baz=54,slow=9.6,SNR=4.2						
	comp=Z,6.0nm,0.4s						
GOMU	GeErMu	47.49	275	P	P	03 23 06.8	-1.0
GOMU				PcP	PcP	03 24 36.8	+1.0
GOMU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MK31	Makanchi Array	47.52	294	*ce*P	P	03 23 05.7	-1.8
MKAR	Makanchi Array	47.52	294	P	P	03 23 05.7	-1.9
	comp=Z,6.5nm,0.6s,baz=57,slow=7.7,SNR=87						
	comp=Z,6.5nm,0.6s						
MKAR	Makanchi Array	47.52	294		P	03 23 05.8	-1.7
MAKZ	Makanchi	47.68	295		P	03 23 07.0	-1.7
MAKZ				IAmb	IAmb	03 23 07.4	
	comp=Z,5.3nm,0.5s						
MAKZ	Makanchi	47.68	295	P	P	03 23 07.0	-1.7
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.5s						
EDM	Edmonton	48.02	54		P	03 23 12.6	+1.3
EDM				IAmb	IAmb	03 23 13.6	
	comp=Z,11nm,0.9s						
EDM	Edmonton	48.02	54	P	P	03 23 12.6	+1.3
EDM				pmax	pmax		
	comp=Z,11nm,0.9s						
NEW	Newport	49.30	61	P	P	03 23 22.3	+1.1
	comp=Z,0.7nm,0.4s,baz=350,slow=11,SNR=3.5						
	comp=Z,0.7nm,0.4s						
BVAR	Borovoye Array	49.51	307	P	P	03 23 20.9	-1.7
	comp=Z,7.6nm,0.5s,baz=60,slow=8.1,SNR=44						
BVAR				PcP	PcP	03 24 42.0	-0.3
	comp=Z,3.6nm,0.4s,baz=71,slow=2.6,SNR=14						
BVAR				PP	PP	03 25 16.9	-0.8
	comp=Z,1.3nm,0.6s,baz=61,slow=10,SNR=4.1						
	comp=Z,7.6nm,0.5s						
BORK	Borovoye	49.53	307		P	03 23 21.5	-1.2
BORK	Borovoye	49.53	307	*ce*P	P	03 23 21.3	-1.4
BORK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PZH	PanZhiHua	50.52	261	P	P	03 23 31.8	+1.1
ARCES	ARCESS Array B	51.99	341	P	P	03 23 38.9	-2.0
	comp=Z,1.8nm,0.7s,baz=52,slow=6.9,SNR=11						
ARCES				PcP	PcP	03 24 51.0	-0.3
	comp=Z,1.5nm,0.5s,baz=22,slow=4.2,SNR=15						
	comp=Z,1.8nm,0.7s						
ARCES	ARCESS Array B	51.99	341	P	P	03 23 39.5	-1.5
ARCES				IAmb	IAmb	03 23 44.5	
	comp=Z,9.4nm,1.1s						
ARCES					PcP	03 24 51.7	+0.4
FFC	Flin Flon	52.15	47		P	03 23 43.4	+1.1
FFC				IAmb	IAmb	03 23 44.9	
	comp=Z,8.3nm,1.2s						
FFC	Flin Flon	52.15	47	P	P	03 23 43.4	+1.1
FFC				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ARTI	Arti	52.47	317		P	03 23 43.2	-1.4
ARTI	Arti	52.47	317	*d i*P	P	03 23 43.0	-1.6
ARTI				*PP	pP	03 24 15.4	-1.0
ARTI						03 24 51.6	
ARTI						03 25 40.1	
ARTI				S	S	03 30 57.4	-2.6
ARTI				SS	SS	03 34 34.0	-4.9
ARTI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
FCC	Fort Churchill	52.48	39		P	03 23 45.3	+0.7
FCC				IAmb	IAmb	03 23 45.7	
	comp=Z,5.0nm,0.6s						
FCC	Fort Churchill	52.48	39	P	P	03 23 45.3	+0.7
FCC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SUMG	Summit	52.64	7		P	03 23 46.3	+0.2
SUMG				IAmb	IAmb	03 23 47.2	
	comp=Z,9.6nm,0.9s						
SUMG	Summit	52.64	7	P	P	03 23 46.3	+0.2
SUMG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
AAK	Ala-Archa	54.43	295	*ce*P	P	03 23 58.8	-0.5
AAK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
NVAR	Mina Array Bea	55.36	71	P	P	03 24 08.3	+2.2
	comp=Z,0.5nm,0.6s,baz=306,slow=7.9,SNR=5.7						
NVAR				pP	pP	03 24 39.9	+1.7
	comp=Z,0.4nm,0.6s,baz=301,slow=7.7,SNR=2.9						
	comp=Z,0.5nm,0.6s						
NVAR	Mina Array Bea	55.36	71	P	P	03 24 07.3	+1.1
ELK	Elko	55.39	67	P	P	03 24 08.4	+2.1
	comp=Z,1.1nm,0.6s,baz=328,slow=9.7,SNR=5.6						
	comp=Z,1.1nm,0.6s						
RLMT	Red Lodge	55.41	59	IAmb	IAmb	03 24 09.4	
	comp=Z,5.7nm,1.0s						
KLMR	Klimovskoe	55.76	329	*e*P	P	03 24 05.9	-2.4
KLMR				*e**PP	pP	03 24 38.0	-2.5
KLMR				*e**SP	sP	03 24 54.2	-1.4
KLMR				pmax	pmax		
	comp=Z,11nm,1.1s						
KSH	Kashi	55.84	292	P	P	03 24 12.1	+2.7
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KK31	Karatay Array	56.18	298	IAmb	IAmb	03 24 10.5	
	comp=Z,4.0nm,0.6s						
FRB	Frobisher Bay	56.30	24	LR	LR	03 49 26.2	
	comp=Z,67nm,21.7s,baz=8.0,slow=37						
AB31	Akbulak array	56.88	310	IAmb	IAmb	03 24 15.7	
	comp=Z,4.7nm,0.8s						
ABKAR	Akbulak array	56.88	310		P	03 24 15.1	-1.4
PD31	Pinedale Array	56.94	61	IAmb	IAmb	03 24 20.2	
	comp=Z,6.2nm,1.1s						
PDAR	Pinedale Array	56.94	61	P	P	03 24 19.2	+1.9
	comp=Z,2.3nm,0.6s,baz=352,slow=3.0,SNR=34						
	comp=Z,2.3nm,0.6s						
PDAR	Pinedale Array	56.94	61	P	P	03 24 19.0	+1.7
ULM	Lac du Bonnet	57.96	47	P	P	03 24 25.1	+1.1
	comp=Z,3.6nm,0.4s,baz=319,slow=4.9,SNR=6.9						
	comp=Z,3.6nm,0.4s						
CMAR	Chiang Mai Arr	58.40	257	P	P	03 24 27.6	+0.1
	comp=Z,1.0nm,0.3s,baz=21,slow=6.9,SNR=6.1						
	comp=Z,1.0nm,0.3s						
CMAR	Chiang Mai Arr	58.40	257	*i* P	P	03 24 29.1	+1.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
RSSD	Black Hills	58.73	57		P	03 24 31.2	+1.5
RSSD	Black Hills	58.73	57	P	P	03 24 31.2	+1.5
RSSD				pmax	pmax		
	comp=Z,10.0nm,0.7s						
FINES	FINESS Array B	58.87	336	P	P	03 24 28.8	-1.3
	comp=Z,3.0nm,0.6s,baz=29,slow=9.4,SNR=25						
FINES				PcP	sP	03 25 16.7	-1.0
	comp=Z,1.6nm,0.5s,baz=34,slow=4.5,SNR=6.4						
	comp=Z,3.0nm,0.6s						
FINES	FINESS Array B	58.87	336	P	P	03 24 29.0	-1.1
FINES					sP	03 25 16.9	-0.7
FINES	FINESS Array B	58.87	336	*i* P	P	03 24 29.5	-0.6
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRDH	Bariadhala	59.31	266	LR	LR	03 51 43.8	
	comp=Z,104nm,18.1s,baz=250,slow=38						
CHGR	Chuyangaron	60.11	295		P	03 24 37.6	-1.6
CHGR	Chuyangaron	60.11	295	P	P	03 24 37.6	-1.6
CHGR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
OBN	Obninsk	61.35	327	*e*P	P	03 24 46.1	-1.0
OBN				*e**PP	pP	03 25 19.4	-0.5
OBN				*e*		03 25 27.7	
OBN				*e**SP	sP	03 25 35.8	+0.9
OBN				*e*		03 27 03.2	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
NB2	NORSAR Subarra	62.24	343	P	P	03 24 51.8	-1.3
	comp=Z,1.1nm,0.4s,baz=21,slow=6.9						
NB2				PCP	PcP	03 25 31.2	-0.4
	comp=Z,1.8nm,0.7s,baz=23,slow=3.3						
NOA	NORSAR Array B	62.24	343	P	P	03 24 52.0	-1.1
	comp=Z,0.8nm,0.4s,baz=21,slow=6.1,SNR=30						
NOA				PcP	PcP	03 25 31.5	-0.1
	comp=Z,2.4nm,0.9s,baz=26,slow=4.0,SNR=7.5						
	comp=Z,0.8nm,0.4s						
HFS	Hagfors	62.66	342	P	P	03 24 54.6	-1.1
	comp=Z,1.8nm,0.4s,baz=49,slow=4.9,SNR=39						
HFS				PcP	PcP	03 25 32.9	-0.4
	comp=Z,1.9nm,0.4s,baz=69,slow=4.9,SNR=10						
	comp=Z,1.8nm,0.4s						
ANMO	Albuquerque	64.35	65	P	P	03 25 09.1	+1.6
	comp=Z,0.7nm,0.6s,baz=4.0,slow=3.1,SNR=2.6						
	comp=Z,0.7nm,0.6s						
ANMO	Albuquerque	64.35	65	P	P	03 25 08.8	+1.2
ANMO	Albuquerque	64.35	65	P	P	03 25 08.8	+1.2
SCHQ	Schefferville	64.50	28	P	P	03 25 08.0	0.0
	comp=Z,5.5nm,0.7s,baz=342,slow=5.1,SNR=12						
	comp=Z,5.5nm,0.7s						
SCHQ	Schefferville	64.50	28	P	P	03 25 08.1	+0.1
AK21	Malin Array Si	67.42	329	P	P	03 25 25.3	-1.4
AK22	Malin Array Si	67.43	329	P	P	03 25 25.1	-1.6
AK04	Malin Array Si	67.43	329	P	P	03 25 25.2	-1.5
AKASG	Malin Array Be	67.43	329	P	P	03 25 24.6	-2.1
	comp=Z,1.2nm,0.4s,baz=32,slow=5.9,SNR=9.1						
	comp=Z,1.2nm,0.4s						
AKASG	Malin Array Be	67.43	329	P	P	03 25 26.4	-0.4
AKASG	Malin Array Be	67.43	329	*i* P	P	03 25 25.7	-1.0
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKBB	Malin Array Si	67.43	329	*ce*P	P	03 25 25.9	-0.8
AKBB				pmax	pmax		
	comp=Z,21nm,3.5s						
AKBB	Malin Array Si	67.43	329	P	P	03 25 25.2	-1.5
KIEV	Kiev	67.44	329	P	P	03 25 25.2	-1.6
	comp=Z,23nm,0.8s						
AK01	Malin Array Si	67.44	329	P	P	03 25 25.3	-1.5
AK18	Malin Array Si	67.46	329	P	P	03 25 25.8	-1.1
AK20	Malin Array Si	67.46	329	P	P	03 25 25.6	-1.3
AK15	Malin Array Si	67.47	329	P	P	03 25 25.7	-1.3
AK11	Malin Array Si	67.47	329	P	P	03 25 25.8	-1.2
AK02	Malin Array Si	67.48	329	P	P	03 25 25.7	-1.3
AK19	Malin Array Si	67.48	329	P	P	03 25 25.2	-1.8

AK08	**Malin Array Si**	**67.48**	**329**	P	**P**	**03 25 25.4**	**-1.7**
AK09	**Malin Array Si**	**67.49**	**328**	P	**P**	**03 25 25.9**	**-1.2**
AK16	**Malin Array Si**	**67.50**	**329**	P	**P**	**03 25 25.9**	**-1.2**
AK17	**Malin Array Si**	**67.50**	**329**	P	**P**	**03 25 25.7**	**-1.5**
AK12	**Malin Array Si**	**67.50**	**329**	P	**P**	**03 25 25.9**	**-1.3**
KIV	**Kislovodsk**	**68.42**	**316**	*e*P	**P**	**03 25 30.8**	**-2.4**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KBZ	**Khabaz**	**68.52**	**316**	P	**P**	**03 25 32.5**	**-1.2**
	comp=Z,4.4nm,0.9s,baz=80,slow=5.9,SNR=6.7						
	comp=Z,4.4nm,0.9s						
KBZ	**Khabaz**	**68.52**	**316**	*ce*P	**P**	**03 25 34.3**	**+0.7**
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LUBAR	**Lubar, Ukraine**	**68.56**	**329**	P	**P**	**03 25 32.7**	**-1.1**
SADO	**Sadowa**	**69.15**	**41**	LR	LR	03 58 40.9	
	comp=Z,86nm,18.1s,baz=87,slow=38						
EKA	**Eskdalemuir Ar**	**69.72**	**350**	P	**P**	**03 25 40.0**	**-0.8**
	comp=Z,4.3nm,0.7s,baz=17,slow=5.5,SNR=20						
	comp=Z,4.3nm,0.7s						
KMPD	**K-Podol'skiy**	**70.16**	**329**	P	**P**	**03 25 42.5**	**-1.2**
TX31	**Lajitas Ar. Si**	**70.18**	**67**		**P**	**03 25 45.9**	**+1.6**
TXAR	**Lajitas Array**	**70.18**	**67**	P	**P**	**03 25 46.0**	**+1.8**
	comp=Z,0.8nm,0.5s,baz=293,slow=4.8,SNR=32						
TXAR				pP	**pP**	**03 26 18.6**	**+0.9**
	comp=Z,1.0nm,0.6s,baz=294,slow=4.7,SNR=4.5						
	comp=Z,0.8nm,0.5s						
TXAR	**Lajitas Array**	**70.18**	**67**	P	**P**	**03 25 45.5**	**+1.3**
KWP	**Kalwaria Pacla**	**70.28**	**332**	P	**P**	**03 25 43.7**	**-0.7**
	comp=Z,5.6nm,1.1s						
STHS	**Stebnicka Huta**	**70.87**	**333**	*e*P	**P**	**03 25 48.7**	**+0.7**
STHS	**Stebnicka Huta**	**70.87**	**333**	*e*P	**P**	**03 25 48.7**	**+0.7**
CLL	**Collm**	**71.08**	**339**	*e*P	**P**	**03 25 49.0**	**-0.2**
MTN	**Manton Dam**	**71.34**	**210**		**P**	**03 25 51.4**	**+0.3**
MTN				IAmb	IAmb	03 25 53.0	
	comp=Z,11nm,1.0s						
BUR08	**Bucovina Ar. S**	**71.36**	**330**		**P**	**03 25 50.6**	**-0.6**
LANS	**Liptovska Anna**	**71.58**	**334**	*e*P	**P**	**03 25 53.7**	**+1.4**
LANS	**Liptovska Anna**	**71.58**	**334**	*e*P	**P**	**03 25 53.7**	**+1.4**
MEM	**Membach**	**73.08**	**343**	*d*P	**P**	**03 26 01.1**	**0.0**
	comp=Z,9.7nm,1.0s						
GERES	**GERESS Array B**	**73.25**	**337**	P	**P**	**03 26 01.6**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=40,slow=5.9,SNR=8.5						
	comp=Z,0.8nm,0.5s						
WATA	**Walderalm**	**75.14**	**338**	*e*P	**P**	**03 26 11.6**	**-1.7**
	comp=Z,4.1nm,1.3s						
CTAO	**Charters Tower**	**75.14**	**193**		**P**	**03 26 14.2**	**+0.9**
CTAO				IAmb	IAmb	03 26 15.2	
	comp=Z,8.8nm,0.8s						
CTAO	**Charters Tower**	**75.14**	**193**	P	**P**	**03 26 14.2**	**+0.9**
CTAO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SQTA	**Sankt Quirin**	**75.33**	**339**	*e*P	**P**	**03 26 13.0**	**-1.4**
	comp=Z,7.1nm,1.8s						
BRTR	**Keskin Array B**	**75.55**	**320**	P	**P**	**03 26 14.8**	**-1.0**
	comp=Z,0.8nm,0.6s,baz=18,slow=3.1,SNR=5.2						
BRTR				pP	**pP**	**03 26 47.5**	**-2.3**
	comp=Z,0.7nm,0.7s,baz=46,slow=3.6,SNR=2.6						
	comp=Z,0.8nm,0.6s						
BRTR	**Keskin Array B**	**75.55**	**320**	P	**P**	**03 26 15.2**	**-0.6**
FETA	**Feichten**	**75.62**	**339**	*i* P	**P**	**03 26 15.9**	**-0.2**
	comp=Z,4.4nm,1.0s						
WB0	**Warramunga Arr**	**77.09**	**205**		**P**	**03 26 25.2**	**+0.9**
WB0				IAmb	IAmb	03 26 26.0	
	comp=Z,6.2nm,0.8s						
WR8	**Warramunga Arr**	**77.24**	**205**	P	**P**	**03 26 25.9**	**+0.7**
WRA	**Warramunga Arr**	**77.27**	**205**	P	**P**	**03 26 26.2**	**+0.9**
	comp=Z,4.2nm,0.5s,baz=21,slow=6.1,SNR=50						
WRA				pP	**pP**	**03 26 58.5**	**-1.0**
	comp=Z,3.8nm,0.8s,baz=19,slow=5.8,SNR=7.4						
	comp=Z,4.2nm,0.5s						
WRA	**Warramunga Arr**	**77.27**	**205**	P	**P**	**03 26 26.0**	**+0.6**
FITZ	**Fitzroy Crossi**	**77.98**	**213**	P	**P**	**03 26 30.3**	**+1.1**
	comp=Z,3.2nm,0.6s,baz=4.0,slow=3.9,SNR=18						
	comp=Z,3.2nm,0.6s						
FITZ	**Fitzroy Crossi**	**77.98**	**213**	P	**P**	**03 26 30.3**	**+1.1**
AS31	**Alice Springs**	**80.95**	**204**		**P**	**03 26 46.9**	**+1.6**
ASAR	**Alice Springs**	**80.95**	**204**	P	**P**	**03 26 46.8**	**+1.5**
	comp=Z,5.4nm,0.8s,baz=17,slow=5.1,SNR=46						
ASAR				pP	**pP**	**03 27 19.2**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=16,slow=5.5,SNR=5.4						
	comp=Z,5.4nm,0.8s						
ASAR	**Alice Springs**	**80.95**	**204**		**P**	**03 26 46.6**	**+1.3**
RAYN	**Ar Rayn**	**84.27**	**303**		**P**	**03 27 02.2**	**-0.6**
RAYN				IAmb	IAmb	03 27 02.3	
	comp=Z,4.7nm,0.8s						
RAYN	**Ar Rayn**	**84.27**	**303**	P	**P**	**03 27 02.2**	**-0.6**
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ESDC	**Sonseca Array**	**85.26**	**348**	P	**P**	**03 27 08.4**	**+0.9**
	comp=Z,7.6nm,0.9s,baz=2.9,slow=4.9,SNR=47						
	comp=Z,7.6nm,0.9s						
ESDC	**Sonseca Array**	**85.26**	**348**		**P**	**03 27 08.0**	**+0.5**
ESDC				IAmb	IAmb	03 27 09.2	
	comp=Z,7.2nm,0.9s						
KEST	**Kesra**	**86.70**	**336**	P	**P**	**03 27 15.1**	**+0.4**
	comp=Z,2.2nm,0.4s,baz=11,slow=3.7,SNR=8.3						
	comp=Z,2.2nm,0.4s						
KEST	**Kesra**	**86.70**	**336**	P	**P**	**03 27 14.9**	**+0.2**
KEST				IAmb	IAmb	03 27 21.2	
	comp=Z,9.5nm,1.1s						
ELIB	**Princess Elisa**	**154.62**	**210**	*d*PKP	**PKPab**	**03 34 44.8**	**-0.2**

IDC 24 03:14:52.1±3.9**, 5°.75N**×**125°.00E, h0**^{km}**, mb3.7**/4**, mbtmp3.7**/4**, Error ellipse: s-maj=130.8km s-min=12.8km az=104.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.43**	**24**	Pg	Pg	03 15 19.6	0.0
	49nm,0.3s,baz=283,slow=15,SNR=3.7						
DAV				Lg	Lg	03 15 37.2	
	128nm,0.3s,baz=272,slow=23,SNR=16						
FITZ	**Fitzroy Crossi**	**23.70**	**178**	P	P	03 20 07.7	+1.9
	1.0nm,0.6s,baz=2.7,slow=11,SNR=7.1						
	1.0nm,0.6s						
WRA	**Warramunga Arr**	**27.14**	**160**	P	P	03 20 36.5	-0.7
	0.6nm,0.6s,baz=334,slow=10,SNR=9.8						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**30.50**	**164**	P	P	03 21 06.8	-0.4
	1.0nm,0.6s,baz=341,slow=7.1,SNR=20						
	1.0nm,0.6s						
STKA	**Stephens Creek**	**40.63**	**158**	P	P	03 22 33.0	-1.0
	0.5nm,0.3s,baz=340,slow=9.3,SNR=2.8						
	0.5nm,0.3s						

*IDC **24** 04:03:03.4±1.3, 52°.94N×132°.72W, h0^{km}, mb3.7/3, mbtmp3.3/10, ML3.1/6, Error ellipse: s-maj=25.3km s-min=11.7km az=39.0*

ISC 24 04:03:06.8±1.3**, 53°.1N**±0°.1×**132°.6W**±0°.1**, h22**^{km}**, n16,** σ**1**^{s}.**28**/11**, mb3.9**/3**, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBB	**Bella Bella**	**2.86**	**107**	Pn	**Pn**	**04 03 50.4**	**-0.7**
	1.9nm,0.3s,baz=271,slow=8.9,SNR=16						
BBB				Sn	**Sn**	**04 04 25.5**	**+0.7**
	10nm,0.3s,baz=170,slow=21,SNR=7.9						
	7.3nm,0.4s						
YKA	**Yellowknife Ar**	**13.38**	**38**	Pn	**Pn**	**04 06 14.2**	**-0.9**
	baz=225,slow=13,SNR=8.9						
YKA				Lg	Lg	04 10 10.1	
	baz=232,slow=28,SNR=5.3						
	0.8nm,0.9s						
ILAR	**Eielson Array**	**13.79**	**334**	Pn	**Pn**	**04 06 20.1**	**-0.6**
	baz=148,slow=11,SNR=4.5						
ILAR				Lg	Lg	04 10 27.2	
	baz=147,slow=23,SNR=2.3						
	0.2nm,0.7s						
INK	**Inuvik**	**15.27**	**359**	Pn	**Pn**	**04 06 41.3**	**+0.6**
	0.1nm,0.3s,baz=207,slow=12,SNR=4.2						
	0.7nm,0.7s						
ELK	**Elko**	**17.05**	**129**	P	**Pn**	**04 07 01.9**	**-2.0**
	baz=300,slow=8.1,SNR=3.8						
	0.2nm,0.6s						
NVAR	**Mina Array Bea**	**17.68**	**140**	P	**Pn**	**04 07 10.2**	**-1.4**
	0.1nm,0.2s,baz=317,slow=13,SNR=0.8						
PDAR	**Pinedale Array**	**18.48**	**115**	P	**Pn**	**04 07 22.6**	**+1.1**
	baz=320,slow=11,SNR=1.7						
	0.4nm,0.9s						
TXAR	**Lajitas Array**	**31.81**	**127**	P	**P**	**04 09 31.2**	**+1.5**
	0.3nm,0.8s,baz=331,slow=12,SNR=2.2						
	0.3nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**56.83**	**258**	T	T	05 14 23.8	
	baz=38,slow=76,SNR=526						
H11N3	**WAKE ISLAND Hy**	**56.83**	**258**	T	T	05 14 29.7	
	baz=38,slow=76,SNR=532						
H11N1	**WAKE ISLAND Hy**	**56.85**	**258**	T	T	05 14 25.1	
	baz=38,slow=76,SNR=404						
H11S1	**WAKE ISLAND Hy**	**57.90**	**258**	T	T	05 15 44.0	
	baz=38,slow=75,SNR=23						
H11S2	**WAKE ISLAND Hy**	**57.91**	**258**	T	T	05 15 48.0	
	baz=38,slow=75,SNR=16						
H11S3	**WAKE ISLAND Hy**	**57.91**	**258**	T	T	05 16 01.5	
	baz=38,slow=75,SNR=17						
KURBB	**Kurchatov Arra**	**73.38**	**340**	P	**P**	**04 14 37.4**	**+0.8**
	1.0nm,0.8s,baz=20,slow=5.4,SNR=5.9						
	1.0nm,0.8s						
MKAR	**Makanchi Array**	**76.13**	**336**	P	**P**	**04 14 53.2**	**+0.6**
	0.9nm,0.7s,baz=24,slow=4.5,SNR=9.1						
	0.9nm,0.7s						

*CNRM **24** 04:16:43.7, 36°.40N×9°.56W, h78^{km}, ML3.3*

*MDD **24** 04:16:43.2±0.7, 36°.55N×9°.98W, h40^{km}±18^{km}, mb_Lg3.0/15, Error ellipse: s-maj=8.0km s-min=4.1km az=95.0*

*SFS **24** 04:16:44.2, 36°.54N×9°.86W, h67^{km}, ML3.2/11, ML2.7/15, MLv2.4/15*

*INMG **24** 04:16:44.9±1.2, 36°.65N×9°.81W, h15^{km}±4^{km}, ML2.0, Error ellipse: s-maj=5.0km s-min=3.4km az=49.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Cabo S.Vicente*

*IGIL **24** 04:16:45.2, 36°.65N×9°.80W, h16^{km}, ML1.8*

ISC 24 04:16:41.8±0.8**, 36°.48N**±0°.02×**9°.76W**±0°.05**, h79**^{km}±10^{km}**, n74,** σ**1**^{s}.**34**/88**, 2C, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**0.99**	**49**	*e*P	**Pn**	**04 17 01.6**	**+0.9**
PFVI				*e*S	**Sn**	**04 17 13.7**	**-1.1**
PFVI				*i* IAML		04 17 14.6	
PFVI				*i* IAML		04 17 15.0	
PFVI				*i* IAML		04 17 15.4	
MORF	**Marmelete**	**1.21**	**47**	*e*P	**Pn**	**04 17 04.6**	**+1.3**
MORF				*e*S	**Sn**	**04 17 19.1**	**-0.5**
MORF				IAML		04 17 22.0	
	comp=E,34nm,0.2s						
MORF	**Marmelete**	**1.21**	**47**	*e*P	**Pn**	**04 17 04.7**	**+1.3**
MORF				*e*S	**Sn**	**04 17 19.4**	**-0.2**
MORF				*i* IAML		04 17 19.8	
MORF				*i* IAML		04 17 20.2	
MORF				*i* IAML		04 17 22.0	
PTEO	**Sao Teotonio**	**1.35**	**38**	*e*P	**Pn**	**04 17 06.2**	**+1.1**
PTEO				*e*S	**Sn**	**04 17 22.3**	**-0.3**
PTEO				*i* IAML		04 17 22.5	
PTEO				*i* IAML		04 17 22.6	
PTEO				*i* IAML		04 17 24.2	
PBDV	**Barranco-do-Ve**	**1.65**	**62**	Pn	Pn	04 17 11.3	+2.2
PBDV				Sn	**Sn**	**04 17 31.0**	**+1.2**
PBDV	**Barranco-do-Ve**	**1.65**	**62**	⇑*i*P	Pn	04 17 11.3	+2.2
PBDV				*e*S	**Sn**	**04 17 31.0**	**+1.2**
PBDV				*i* IAML		04 17 33.4	
PBDV				*i* IAML		04 17 36.9	
PBDV				*i* IAML		04 17 44.4	
PCVE	**Castro Verde**	**1.79**	**50**	Pn	Pn	04 17 13.0	+2.1
PCVE	**Castro Verde**	**1.79**	**50**	*e*P	Pn	04 17 13.0	+2.1
PCVE				*e*S	**Sn**	**04 17 33.8**	**+0.8**
PCVE				*i* IAML		04 17 34.9	
PCVE				*i* IAML		04 17 35.2	
PCVE				*i* IAML		04 17 35.4	
MESJ	**Messejana**	**1.83**	**42**	*e*P	**Pn**	**04 17 12.8**	**+1.4**
MESJ				*e*S	**Sn**	**04 17 33.5**	**-0.5**
MESJ				IAML		04 17 35.4	
	comp=E,4.5nm,0.1s						
MESJ	**Messejana**	**1.83**	**42**	*e*P	**Pn**	**04 17 12.8**	**+1.4**
MESJ				*e*S	**Sn**	**04 17 33.8**	**-0.1**
MESJ				*i* IAML		04 17 35.3	
MESJ				*i* IAML		04 17 35.3	
MESJ				*i* IAML		04 17 42.3	
PVAQ	**Vaqueiros**	**1.88**	**60**	⇑*i*P	Pn	04 17 14.2	+2.2
PVAQ				*e*S	**Sn**	**04 17 35.7**	**+0.7**
PVAQ				*i* IAML		04 17 37.2	
PVAQ				*i* IAML		04 17 37.7	
PVAQ				*i* IAML		04 17 38.6	
PVAQ	**Vaqueiros**	**1.88**	**60**	P	**Pn**	**04 17 12.1**	**+0.1**
EGRO	**El Granado**	**2.10**	**59**	Pn	Pn	04 17 17.6	+2.6
EGRO				Sn	**Sn**	**04 17 41.8**	**+1.4**
EGRO	**El Granado**	**2.10**	**59**	P	Pn	04 17 17.4	+2.3
EGRO				P		04 17 17.4	
EGRO				S	**Sn**	**04 17 42.0**	**+1.6**
EGRO				S	**Sn**	**04 17 42.0**	**+1.6**
EGRO				*i* IVmb_Lg		04 17 47.4	
PBEJ	**Beja**	**2.16**	**44**	*e*P	**Pn**	**04 17 17.3**	**+1.5**
PBEJ				*e*S	**Sn**	**04 17 41.4**	**-0.4**
PBEJ				*i* IAML		04 17 42.8	
PBEJ				*i* IAML		04 17 43.2	
PBEJ				*i* IAML		04 17 43.4	
MOE	**Montemor**	**2.33**	**28**	*e*P	**Pn**	**04 17 19.3**	**+1.3**
MOE				*e*S	**Sn**	**04 17 45.5**	**-0.3**
MOE				*i* IAML		04 17 47.2	
MOE				*i* IAML		04 17 47.6	
MOE				*i* IAML		04 17 47.9	
EVO	**Evora**	**2.47**	**34**	Pn	**Pn**	**04 17 21.0**	**+1.0**
EVO				Sn	**Sn**	**04 17 48.3**	**-1.0**
EVO	**Evora**	**2.47**	**34**	*e*P	**Pn**	**04 17 21.0**	**+1.0**
EVO				*e*S	**Sn**	**04 17 48.4**	**-1.0**
EVO				*i* IAML		04 17 50.3	
EVO				*i* IAML		04 17 50.4	
EVO				*i* IAML		04 17 50.4	
PMAFR	**Mafra**	**2.50**	**9**	*e*P	**Pn**	**04 17 20.9**	**+0.5**
PMAFR				*e*S	**Sn**	**04 17 47.8**	**-2.1**
PMAFR				*i* IAML		04 17 48.4	
PMAFR				*i* IAML		04 17 51.0	
PMAFR				*i* IAML		04 17 51.2	
PARRA	**Arraiolos**	**2.70**	**30**	*e*P	**Pn**	**04 17 24.0**	**+1.0**
PARRA				*e*S	**Sn**	**04 17 53.8**	**-1.0**
PARRA				*i* IAML		04 17 55.4	
PARRA				*i* IAML		04 17 55.4	
PARRA				*i* IAML		04 17 55.7	
PBAR	**Barrancos**	**2.75**	**51**	Sn	**Sn**	**04 17 56.7**	**+0.8**
PBAR				Pn	Pn	04 17 25.7	+1.9
PBAR	**Barrancos**	**2.75**	**51**	*e*P	Pn	04 17 25.9	+2.2
PBAR				*e*S	**Sn**	**04 17 56.1**	**+0.2**
PBAR				*i* IAML		04 17 57.4	
PBAR				*i* IAML		04 17 58.3	
PBAR				*i* IAML		04 17 58.4	
EMIN	**Mina Concepcio**	**2.78**	**62**	Pn	Pn	04 17 26.2	+2.0
EMIN	**Mina Concepcio**	**2.78**	**62**	P	**Pn**	**04 17 25.6**	**+1.5**
EMIN				S	**Sn**	**04 17 58.2**	**+1.4**
EMIN				*i* IVmb_Lg		04 18 01.3	
PMTG	**Montargil**	**2.86**	**25**	*e*P	**Pn**	**04 17 26.0**	**+0.9**
PMTG				*e*S	**Sn**	**04 17 56.8**	**-1.7**
PMTG				*i* IAML		04 17 57.7	
PMTG				*i* IAML		04 17 57.9	
PMTG				*i* IAML		04 17 58.5	
PESTR	**Estremoz**	**2.94**	**35**	*e*S	**Sn**	**04 17 59.9**	**-0.6**
PESTR				*i* IAML		04 18 01.0	
PESTR				*i* IAML		04 18 01.2	
PESTR				*i* IAML		04 18 01.2	
PESTR	**Estremoz**	**2.94**	**35**	P	Pn	04 17 28.2	+1.9
PESTR	**Estremoz**	**2.94**	**35**	S	**Sn**	**04 18 01.3**	**+0.8**
PSBE	**So Bento**	**3.12**	**14**	*e*P	**Pn**	**04 17 29.6**	**+0.8**
PSBE				*e*S	**Sn**	**04 18 03.4**	**-1.6**
PSBE				*i* IAML		04 18 06.1	
PSBE				*i* IAML		04 18 06.1	
PSBE				*i* IAML		04 18 07.3	
EBAD	**Badajoz**	**3.15**	**43**	Pn	**Pn**	**04 17 30.3**	**+1.1**
EBAD				Sn	**Sn**	**04 18 04.9**	**-0.7**
EBAD	**Badajoz**	**3.15**	**43**	P	**Pn**	**04 17 30.2**	**+1.1**
EBAD				S	**Sn**	**04 18 05.5**	**-0.1**
EBAD				*i* IVmb_Lg		04 18 07.9	
ESPR	**Espera**	**3.16**	**82**	Pn	Pn	04 17 32.5	+3.2
ESPR	**Espera**	**3.16**	**82**	P	Pn	04 17 32.5	+3.2
ESPR				S	**Sn**	**04 18 08.3**	**+2.3**
ESPR				*i* IVmb_Lg		04 18 10.3	
PSARD	**Sardoal**	**3.36**	**22**	*e*P	**Pn**	**04 17 33.0**	**+1.0**
PSARD				*e*S	**Sn**	**04 18 08.6**	**-2.2**
PSARD				*i* IAML		04 18 11.3	
PSARD				*i* IAML		04 18 11.7	
PSARD				*i* IAML		04 18 12.0	
PMRV	**Marv??o**	**3.49**	**32**	*e*P	**Pn**	**04 17 35.0**	**+1.3**
PMRV				*e*S	**Sn**	**04 18 12.4**	**-1.5**
PMRV				*i* IAML		04 18 14.1	
PMRV				*i* IAML		04 18 14.1	
PMRV				*i* IAML		04 18 14.4	
PCAS	**Casmilo, Conde**	**3.70**	**15**	*e*S	**Sn**	**04 18 17.2**	**-1.9**
PCAS				*i* IAML		04 18 19.1	
PCAS				*i* IAML		04 18 19.1	
PCAS				*i* IAML		04 18 19.7	
AVE	**Averroes**	**3.72**	**148**	Pn	Pn	04 17 40.2	+3.3
AVE				Sn	**Sn**	**04 18 20.8**	**+1.3**
AVE	**Averroes**	**3.72**	**148**	P	**Pn**	**04 17 36.4**	**-0.5**
AVE	**Averroes**	**3.72**	**148**	S	**Sn**	**04 18 18.8**	**-0.6**
PCBR	**Castelo Branco**	**3.81**	**28**	*e*S	**Sn**	**04 18 20.6**	**-1.0**
PCBR				*i* IAML		04 18 21.5	
PCBR				*i* IAML		04 18 22.1	
PCBR				*i* IAML		04 18 23.4	
ECAB	**El Cabril**	**3.81**	**64**	Pn	Pn	04 17 40.8	+2.6
ECAB				Sn	**Sn**	**04 18 22.2**	**+0.4**
ECAB	**El Cabril**	**3.81**	**64**	P	Pn	04 17 40.7	+2.5
ECAB				S	**Sn**	**04 18 22.2**	**+0.4**
ECAB				*i* IVmb_Lg		04 18 29.6	
MTE	**Manteigas**	**4.28**	**23**	*e*P	**Pn**	**04 17 45.6**	**+1.0**
MTE				*e*S	**Sn**	**04 18 32.3**	**-1.0**
MTE				*i* IAML		04 18 34.0	
MTE				*i* IAML		04 18 34.4	
MTE				*i* IAML		04 18 34.5	
EADA	**Adamuz**	**4.46**	**66**	Pn	Pn	04 17 49.9	+2.9
EADA	**Adamuz**	**4.46**	**66**	P	Pn	04 17 49.9	+2.9
EADA				S	**Sn**	**04 18 38.4**	**+0.7**
EADA				*i* IVmb_Lg		04 18 41.4	
PVIS	**Viseu**	**4.47**	**19**	*e*P	Pn	04 17 48.6	+1.4
PVIS				*e*S	**Sn**	**04 18 36.2**	**-1.8**
EPLA	**Plasencia**	**4.60**	**38**	S	**Sn**	**04 18 39.5**	**-1.6**
EPLA				*i* IVmb_Lg		04 18 44.3	
CIBOR	**Castaar de Ib**	**4.65**	**46**	P	Pn	04 17 51.4	+1.8
CIBOR				S	**Sn**	**04 18 41.8**	**-0.5**
IFR	**Ifrane**	**4.82**	**127**	Pn	Pn	04 17 54.7	+2.6
IFR				Sn	**Sn**	**04 18 45.8**	**-0.9**
LCRM	**LCR**	**4.89**	**123**	P	**Pn**	**04 17 52.6**	**-0.4**
LCRM	**LCR**	**4.89**	**123**	S	**Sn**	**04 18 46.2**	**-2.2**
POLO	**Lamas de Olo**	**5.12**	**17**	*e*S	**Sn**	**04 18 50.2**	**-3.7**
POLO				*i* IAML		04 18 52.9	
POLO				*i* IAML		04 18 53.6	
POLO				*i* IAML		04 18 54.4	
MVO	**Moncorvo**	**5.14**	**24**	*e*P	Pn	04 17 57.7	+1.4
AKLM	**AKL**	**5.20**	**111**	P	Pn	04 17 54.9	-2.3
AKLM	**AKL**	**5.20**	**111**	S	**Sn**	**04 18 51.9**	**-3.9**
PAB	**San Pablo**	**5.26**	**53**	P	**Pn**	**04 17 59.5**	**+1.7**
PAB				S	**Sn**	**04 18 56.1**	**-1.0**
PAB				*i* IVmb_Lg		04 19 06.6	
PSIM	**Granatula de C**	**5.31**	**62**	P	Pn	04 18 01.3	+2.8
PSIM				S	**Sn**	**04 18 58.3**	**0.0**
MD31	**MD31**	**5.47**	**130**	P	**Pn**	**04 18 01.1**	**+0.2**
MD31	**MD31**	**5.47**	**130**	S	**Sn**	**04 19 00.1**	**-2.5**
TISM	**Timmit**	**5.49**	**149**	P	**Pn**	**04 18 01.1**	**+0.1**
TISM	**Timmit**	**5.49**	**149**	S	**Sn**	**04 19 00.8**	**-1.9**
OUK	**Oukaimeden**	**5.49**	**163**	P	**Pn**	**04 18 01.9**	**+0.5**
OUK	**Oukaimeden**	**5.49**	**163**	S	**Sn**	**04 19 03.0**	**-0.4**
EQES	**Quesada**	**5.50**	**74**	P	Pn	04 18 03.7	+2.3
EQES				S	**Sn**	**04 19 03.5**	**+0.2**
EQES				*i* IVmb_Lg		04 19 10.2	
MDT	**Midelt**	**5.61**	**129**	P	**Pn**	**04 18 02.6**	**-0.1**
MDT	**Midelt**	**5.61**	**129**	S	**Sn**	**04 19 04.7**	**-1.0**
PBRG	**Braganca**	**5.81**	**23**	*e*S	**Sn**	**04 19 08.6**	**-2.1**
PBRG				*i* IAML		04 19 09.9	
PBRG				*i* IAML		04 19 10.6	
PBRG				*i* IAML		04 19 13.4	
TIO	**Tiouine**	**5.92**	**159**	Pn	Pn	04 18 09.8	+2.8
TIO				Sn	**Sn**	**04 19 12.7**	**-0.8**
TIO	**Tiouine**	**5.92**	**159**	P	Pn	04 18 08.3	+1.2
TIO	**Tiouine**	**5.92**	**159**	S	**Sn**	**04 19 13.3**	**-0.2**
GUD	**Guadarrama**	**6.05**	**45**	P	**Pn**	**04 18 09.9**	**+1.2**
GUD				S	**Sn**	**04 19 13.9**	**-2.7**
GUD				*i* IVmb_Lg		04 19 23.0	
OUZM	**OUZ**	**6.09**	**155**	P	Pn	04 18 10.6	+1.2
OUZM	**OUZ**	**6.09**	**155**	S	**Sn**	**04 19 17.7**	**-0.1**
ETOB	**Tobarra**	**6.87**	**69**	P	**Pn**	**04 18 21.9**	**+1.9**
ETOB				*i* IVmb_Lg		04 19 47.5	

*IDC **24** 04:20:43.5±0.8, 6°.44N×125°.08E, h0^{km}, mb3.7/8, mbtmp3.7/8, MS2.8/4, Error ellipse: s-maj=20.5km s-min=9.5km az=117.0*

ISC 24 04:20:48.5±0.9**, 6°.6N**±0°.1×**125°.4E**±0°.3**, h35**^{km}**, n13,** σ**0**^{s}.**52**/9**, mb3.6**/8**, MS2.5**/4**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.50**	**15**	Pg	**Pn**	**04 20 58.9**	**-0.3**
	359nm,0.3s,baz=206,slow=1.2,SNR=85						
DAV				Lg	Lg	04 21 10.4	
	701nm,0.3s,baz=87,slow=23,SNR=8.4						
DAV				LR	LR	04 21 28.4	
	comp=Z,850nm,21.9s,baz=336,slow=56						
FITZ	**Fitzroy Crossi**	**24.52**	**180**	P	**P**	**04 26 04.1**	**-0.7**
	1.3nm,0.4s,baz=10,slow=7.8,SNR=16						
	1.3nm,0.4s						
JCJ	**Chichijima**	**25.88**	**36**	LR	LR	04 38 25.2	
	comp=Z,11nm,18.8s,baz=350,slow=40						
WRA	**Warramunga Arr**	**27.77**	**162**	P	**P**	**04 26 33.7**	**-0.5**
	1.2nm,0.9s,baz=334,slow=11,SNR=6.7						
	1.2nm,0.9s						
CMAR	**Chiang Mai Arr**	**28.39**	**297**	LR	LR	04 37 03.9	
	comp=Z,12nm,21.3s,baz=10.0,slow=35						
KSRS	**Korea Array**	**30.81**	**4**	LR	LR	04 38 12.7	
	comp=Z,13nm,20.9s,baz=315,slow=34						
ASAR	**Alice Springs**	**31.18**	**165**	P	**P**	**04 27 04.3**	**-0.1**
	0.5nm,0.5s,baz=344,slow=7.1,SNR=9.7						
	0.5nm,0.5s						
STKA	**Stephens Creek**	**41.23**	**159**	P	**P**	**04 28 30.7**	**+0.5**
	2.9nm,0.9s,baz=346,slow=5.3,SNR=5.8						
	2.9nm,0.9s						
MKAR	**Makanchi Array**	**54.50**	**325**	P	**P**	**04 30 12.5**	**-0.3**
	0.3nm,0.7s,baz=124,slow=8.1,SNR=4.1						
	0.3nm,0.7s						
YAK	**Yakutsk**	**55.42**	**2**	LR	LR	04 55 47.5	
	comp=Z,26nm,19.1s,baz=250,slow=38						
KURBB	**Kurchatov Arra**	**58.66**	**327**	P	**P**	**04 30 42.5**	**+0.2**
	1.2nm,0.8s,baz=126,slow=6.3,SNR=11						
	1.2nm,0.8s						
BVAR	**Borovoye Array**	**64.25**	**327**	P	**P**	**04 31 20.4**	**+0.4**
	0.4nm,0.6s,baz=107,slow=9.8,SNR=3.8						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**83.10**	**26**	P	**P**	**04 33 10.7**	**+0.3**
	0.2nm,0.6s,baz=243,slow=4.0,SNR=6.0						
	0.2nm,0.6s						

*AUST **24** 04:40:02.4±0.4, 36°S±2°×15°0E±°, h10^{km}, ML3.0/14, Error ellipse: s-maj=6.2km s-min=3.6km az=134.3*

*NOU **24** 04:40:02.9, 36°.16S×150°.25E, h0^{km}, MLv3.7/8, Near SE Coast of Australia*

ISC 24 04:40:01.0±2.2**, 36°.13S**±0°.06×**150°.37E**±0°.07**, h1**^{km}±13^{km}**, n21,** σ**0**^{s}.**78**/29**, Near southeast coast of Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNB	**Canberra Magne**	**1.15**	**314**	P	**Pg**	**04 40 23.2**	**+0.1**
CNB				S	**Sg**	**04 40 38.7**	**+0.8**
CNB	**Canberra Magne**	**1.15**	**314**	P	**Pg**	**04 40 23.1**	**+0.1**
CNB	**Canberra Magne**	**1.15**	**314**	S	**Sg**	**04 40 38.1**	**+0.1**
PHB	**Parliment Hous**	**1.30**	**309**	P	**Pg**	**04 40 26.2**	**+0.2**
MILA	**Mila**	**1.34**	**226**	P	**Pn**	**04 40 26.7**	**-0.2**
MILA				S	**Sn**	**04 40 46.1**	**+0.6**
CAN	**Canberra**	**1.37**	**305**	P	**Pn**	**04 40 27.1**	**-0.2**
CAN				S	**Sb**	**04 40 45.8**	**+0.3**
CAN	**Canberra**	**1.37**	**305**	P	**Pn**	**04 40 27.1**	**-0.2**
CAN	**Canberra**	**1.37**	**305**	S	**Sb**	**04 40 45.9**	**+0.3**
WOLH	**Wollongong Har**	**1.77**	**14**	P	**Pn**	**04 40 31.4**	**-1.2**
WOLH				S	**Sn**	**04 40 55.2**	**-0.5**
WTPK	**Wilton Park**	**1.91**	**7**	P	**Pn**	**04 40 33.8**	**-0.9**
WTPK				S	**Sn**	**04 40 59.6**	**+0.2**
OKDL	**Oakdale**	**2.05**	**3**	P	**Pn**	**04 40 36.4**	**-0.2**
OKDL				S	**Sn**	**04 41 03.8**	**+0.9**
MABG	**Mt Annan Botan**	**2.08**	**9**	P	**Pn**	**04 40 36.1**	**-0.8**
MABG				S	**Sn**	**04 41 04.0**	**+0.6**
SYDH	**Sydney Hard Ro**	**2.38**	**8**	P	**Pn**	**04 40 42.1**	**+1.1**
SYDH	**Sydney Hard Ro**	**2.38**	**8**	P	**Pb**	**04 40 44.3**	**-0.3**
SYDH	**Sydney Hard Ro**	**2.38**	**8**	S	**Sb**	**04 41 14.5**	**+0.1**
RIV	**Riverview**	**2.38**	**16**	P	**Pn**	**04 40 42.5**	**+1.4**
YNG	**Young**	**2.44**	**318**	P	**Pn**	**04 40 41.4**	**-0.5**
YARR	**Yarramundi, NS**	**2.52**	**6**	P	**Pn**	**04 40 43.9**	**+0.9**
CATI	**Cattai, Sydney**	**2.60**	**10**	P	**Pn**	**04 40 45.8**	**+1.7**
CATI				S	**Sb**	**04 41 20.2**	**-0.6**
MGCD	**Mangrove Creek**	**2.97**	**12**	P	**Pb**	**04 40 53.7**	**-1.1**

CMSA	Cobar Meteorol	6.01	318	P	Pn	04 41 30.1	-0.9
	comp=Z,6.9nm,0.5s,comp=Z,0.1nm						

GCG 24 04:49:40.1±0.8, 14°.76N×89°.55W, h6^{km}±6^{km}, MD3.5

CATAC 24 04:49:41.0±0.8, 15°N±5°×9°0W±°, h4^{km}±3^{km}, M2.5/7, MLv2.5/7, Error ellipse: s-maj=12.6km s-min=4.8km az=140.8, confirmed

ISC 24 04:49:40.5±1.1, 14°.78N±0°.04×89°.54W±0°.03, h6^{km}, n22, σ0^{s}48/25, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESQI	Esquipulas	0.29	138	P	Pg	04 49 46.5	+0.3
ESQI	Esquipulas	0.29	138	S	Sg	04 49 51.0	+0.9
MTO3	Montecristo	0.41	155	eP	Pg	04 49 48.6	0.0
MTO3	Montecristo	0.41	155	P	Pg	04 49 48.9	+0.3
MTO3	Montecristo	0.41	155	S	Sg	04 49 54.4	+0.3
SARH	Santa Rosa de	0.75	90	eP	Pg	04 49 54.8	-0.2
SARH				iS	Sb	04 50 06.1	-0.6
SARH	Santa Rosa de	0.75	90	P	Pg	04 49 55.2	+0.2
SARH	Santa Rosa de	0.75	90	S	Sg	04 50 05.4	+0.6
LLGN	La Laguna	0.84	137	P	Pg	04 49 56.7	0.0
LLGN	La Laguna	0.84	137	S	Sb	04 50 08.2	-0.9
NUBE	Las Nubes	0.90	195	eP	Pg	04 49 57.8	-0.1
NUBE				iS	Sb	04 50 10.4	-0.6
NUBE	Las Nubes	0.90	195	P	Pb	04 49 58.5	-0.1
NUBE	Las Nubes	0.90	195	S	Sb	04 50 11.7	+0.7
APG	El Apazote	0.92	284	eP	Pg	04 49 58.1	-0.2
APG				iS	Sg	04 50 10.7	+0.5
CEVE	Cerro Verde	0.95	185	P	Pb	04 50 00.1	+0.6
CEVE	Cerro Verde	0.95	185	S	Sb	04 50 12.3	-0.1
CEDA	San Andres	0.98	172	P	Pb	04 49 59.8	-0.1
FAME	Alcaldia de Sa	1.04	206	P	Pg	04 50 00.3	-0.1
PMON	Piamonte	1.08	168	P	Pb	04 50 01.8	+0.1
PMON	Piamonte	1.08	168	S	Sn	04 50 17.1	-0.6
PAVA	Las Pavas	1.21	151	P	Pg	04 50 03.1	-0.6
PAVA	Las Pavas	1.21	151	S	Sg	04 50 19.5	+0.1

IDC 24 05:32:02.7±0.8, 53°.00N×132°.82W, h0^{km}, mb3.9/12, mbtmp3.7/21, ML3.3/9, MS3.6/25, Error ellipse: s-maj=18.3km s-min=9.0km az=37.0

NEIC 24 05:32:05.6±2.3, 53°.07N±0°.06×132°.8W±0°.1, h10^{km}±1^{km}, mb4.1/68, Error ellipse: s-maj=15.4km s-min=7.2km az=235.0

ISC 24 05:32:06.1±0.6, 53°.15N±0°.07×132°.77W±0°.06, h18^{km}, n153, σ1^{s}49/110, mb4.1/23, MS3.6/20, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DIB	Dawson Inlet,	0.18	73		Pg	05 32 09.5	-1.3
H02S2	DAWSON INLET T	0.18	73	Pn	Pg	05 32 09.7	-1.1
H02S2				Sn	Sg	05 32 13.8	-0.2
MOBC	Moresby Island	0.48	90	Pg	Pg	05 32 14.2	-1.7
HG4B	Hotspring	1.28	131		Pn	05 32 26.3	-2.9
RUBB	Prince Rupert	1.90	51		Pn	05 32 38.0	+0.3
V35K	Ketchikan	2.29	17		Pn	05 32 42.7	-0.2
CRAG	Craig	2.33	355		Pn	05 32 42.7	-0.8
U33K	Whale Pass	2.98	356		Pn	05 32 51.6	-0.8
BBB	Bella Bella	2.99	107	Pn	Pn	05 32 50.5	-2.2
	5.0nm,0.3s,baz=281,slow=8.9,SNR=59						
BBB				Sn	Sn	05 33 28.0	0.0
	75nm,0.3s,baz=304,slow=17,SNR=5.8						
BBB				LR	LR	05 34 00.8	
	comp=Z,389nm,19.6s,baz=321,slow=40						
	15nm,0.4s						
U35K	Hyder	3.20	29		Pn	05 32 56.5	+1.1
WRAK	Wrangell Islan	3.29	4		Pn	05 32 56.9	+0.3
HOLB	Holberg	3.81	129	Pn	Pn	05 33 02.6	-1.3
T35M	Bob Quinn	4.10	20		Pn	05 33 09.0	+1.1
SIT	Sitka	4.18	340		Pn	05 33 07.8	-1.1
S32K	Killisnoo	4.45	347		Pn	05 33 12.9	+0.3
S34M	Telegraph Cree	4.86	10		Pn	05 33 20.3	+2.0
S31K	Pelican	5.21	339	Pn	Pn	05 33 23.1	+0.1
BESE	Bessie Mountai	5.57	349	Pn	Pn	05 33 27.9	-0.1
CBB	Campbell River	5.57	121		Pn	05 33 27.6	-0.4
Q32M	Nakina River	5.83	3		Pn	05 33 33.2	+1.4
R33M	Jennings River	6.34	8		Pn	05 33 40.2	+1.5
P32M	Atlin	6.48	356	Pn	Pn	05 33 40.7	+0.2
P33M	Teslin, Yukon	7.08	360		Pn	05 33 50.0	+1.2
LLLB	Lillooet	7.20	106		Pn	05 33 51.7	+1.2
WHY	Whitehorse	7.62	352		Pn	05 33 57.0	+0.8
TABL	Table Mountain	8.63	331	Pn	Pn	05 34 13.5	+3.4
N30M	Aishikik Lake	8.65	346	Pn	Pn	05 34 11.3	+1.0
LOGN	Logan Glacier	8.90	333	Pn	Pn	05 34 14.9	+1.1
ISLE	Juniper Island	9.12	329	Pn	Pn	05 34 16.8	+0.1
BARN	Barnard Glacie	9.28	332	Pn	Pn	05 34 20.9	+1.9
LON	Longmire	9.53	128		Pn	05 34 24.0	+1.7
LTY	Liberty	9.74	122		Pn	05 34 25.1	-0.1
MCARA	McCarthy VSAT	9.94	330	Pn	Pn	05 34 28.6	+0.7
VRDI	Verde Repeater	9.95	329	Pn	Pn	05 34 30.1	+2.0
G04A	Mulino	10.41	136		Pn	05 34 36.1	+1.7
E07A	Sunnyside	10.62	123		Pn	05 34 39.0	+1.7
WAH2	Wahluke Slope	10.64	122		Pn	05 34 37.9	+0.4
H04A	Detroit Lake	10.95	136		Pn	05 34 44.5	+2.7
BCAR	Beaver Creek A	11.01	338	Pn	Pn	05 34 43.8	+1.2
NEW	Newport	11.05	110	Pn	Pn	05 34 41.9	-1.3
	0.1nm,0.3s,baz=275,slow=9.1,SNR=4.8						
NEW				Lg	Lg	05 37 47.6	
	0.1nm,0.3s,baz=302,slow=19,SNR=3.2						
NEW				LR	LR	05 38 05.0	
	comp=Z,80nm,20.3s,baz=302,slow=33						
	2.0nm,0.8s						
NEW	Newport	11.05	110		Pn	05 34 45.8	+2.6
DAWY	Dawson	11.47	345	Pn	Pn	05 34 50.6	+1.8
SCM	Sheep Creek Mo	11.68	324	Pn	Pn	05 34 53.0	+1.2
SML	Sawmill	12.03	322	Pn	Pn	05 34 58.3	+1.8
KDAK	Kodiak Island	12.15	300	Pn	Pn	05 34 57.3	-0.8
	0.1nm,0.3s,baz=12,slow=4.4,SNR=2.4						
KDAK				Sn	Sn	05 37 08.8	-4.0
	0.1nm,0.3s,baz=105,slow=20,SNR=1.7						
	9.7nm,1.0s						
GHO	Glory Hole Cre	12.22	321	Pn	Pn	05 35 00.2	+1.0
I30M	Mount Dempster	12.25	353		Pn	05 35 01.7	+2.1
F10A	Beach Ranch, E	12.37	119		Pn	05 35 01.9	+0.6
DHY	Denali Highway	12.56	328		Pn	05 35 05.2	+1.4
SUA	Susitna One	12.76	318	Pn	Pn	05 35 08.7	+2.2
STLK	Strandline Lak	13.22	317	Pn	Pn	05 35 13.4	+0.6
YKA	Yellowknife Ar	13.41	39	Pn	Pn	05 35 13.5	-1.8
	0.1nm,0.3s,baz=226,slow=13,SNR=20						
YKA				Sn	Sn	05 37 39.7	-4.0
	baz=240,slow=16,SNR=2.0						
YKA				Lg	Lg	05 39 04.6	
	0.1nm,0.3s,baz=229,slow=24,SNR=4.0						
	1.8nm,1.0s						
YKAW1	Yellowknife Wh	13.45	39		Pn	05 35 14.6	-1.2
YKAW3	Yellowknife Wh	13.45	38		Pn	05 35 16.6	+0.8
MSO	Missoula	13.64	110		Pn	05 35 21.1	+2.5
ILAR	Eielson Array	13.69	334	Pn	Pn	05 35 18.0	-1.1
	baz=157,slow=13,SNR=5.2						
ILAR				Lg	Lg	05 39 19.0	
	baz=236,slow=10,SNR=4.4						
ILAR				LR	LR	05 40 36.6	
	comp=Z,454nm,20.6s,baz=152,slow=37						
	0.2nm,0.8s						
TRF	Thorofare Moun	13.78	325		Pn	05 35 22.3	+1.9
G31M	Satah River	13.84	358		Pn	05 35 22.7	+1.6
PPLA	Purkeypile	14.12	321	Pn	Pn	05 35 27.0	+1.9
F31M	Tsiigehtchic	14.35	358		Pn	05 35 30.3	+2.3
F30M	Barrier River	14.58	355		Pn	05 35 33.6	+2.3
L19K	White Mountain	14.81	316	Pn	Pn	05 35 35.9	+1.5
MFID	Camas Ranch	14.86	124	P	P	05 35 42.7	+1.7
F28M	Old Crow	14.91	349		Pn	05 35 38.8	+3.0
INK	Inuvik	15.21	359	Pn	Pn	05 35 39.4	-0.3
	0.1nm,0.3s,baz=182,slow=12,SNR=6.7						
INK				Lg	Lg	05 40 06.3	
	baz=144,slow=8.7,SNR=5.9						
INK				LR	LR	05 42 13.3	
	comp=Z,308nm,18.9s,baz=286,slow=40						
	1.6nm,0.9s						
INK	Inuvik	15.21	359		Pn	05 35 41.4	+1.7
INK				IAmb	IAmb	05 35 47.2	
	comp=Z,14nm,1.3s						
DLMT	Dillon	15.27	113	P	P	05 35 47.3	+1.8
DLMT				IAmb	IAmb	05 36 18.5	
	comp=Z,9.8nm,1.1s						
BMAR	Burnt Mountain	15.43	343	P	P	05 35 47.8	+0.7
I21K	Tanana	15.48	329	IAmb	IAmb	05 35 52.4	
	comp=Z,11nm,0.9s						
E29M	Blow River	15.48	353	IAmb	IAmb	05 35 52.1	
	comp=Z,12nm,0.9s						
J20K	Nowinta River	15.58	324	Pn	Pn	05 35 46.5	+2.0
J20K				IAmb	IAmb	05 36 00.8	
	comp=Z,12nm,1.1s						
L18K	Granite Mounta	15.60	315	Pn	Pn	05 35 46.0	+1.3
H22K	Ishtalitna Cre	15.79	331	IAmb	IAmb	05 35 56.1	
	comp=Z,13nm,1.2s						
J19K	Poorman	16.02	322	P	P	05 35 52.3	-1.2
J19K				IAmb	IAmb	05 36 11.5	
	comp=Z,17nm,1.2s						
G23K	Bananza Creek	16.02	335	P	P	05 35 54.2	+0.6
G23K				IAmb	IAmb	05 35 57.8	
	comp=Z,9.3nm,0.9s						
H21K	Melozitna Rive	16.05	329	IAmb	IAmb	05 36 04.0	
	comp=Z,26nm,1.4s						
F24K	Squaw Lake	16.16	339	P	P	05 35 56.9	+1.7
F24K				IAmb	IAmb	05 36 15.2	
	comp=Z,16nm,1.4s						
K17K	Iditarod	16.48	316	P	P	05 36 00.0	+1.3
YHH	Holmes Hill	16.59	111		P	05 35 59.7	-0.7
YMR	Madison River	16.60	112	IAmb	IAmb	05 36 03.9	
	comp=Z,19nm,1.4s						
G21K	Allakaket	16.84	331	IAmb	IAmb	05 36 12.7	
	comp=Z,23nm,1.4s						
YNE	Yellowstone No	16.94	110	IAmb	IAmb	05 36 07.2	
	comp=Z,21nm,1.4s						
E23K	Chandalar	16.98	338	P	P	05 36 06.8	+2.4
E23K				IAmb	IAmb	05 36 09.8	
	comp=Z,10nm,1.1s						
H17A	Grant Village	16.99	112	P	P	05 36 05.4	+0.6
YMP	Mirror Lake Pl	17.01	111	IAmb	IAmb	05 36 35.7	
	comp=Z,15nm,1.3s						
ELK	Elko	17.18	129	P	Pn	05 36 03.9	-1.4
	baz=296,slow=9.5,SNR=4.7						
	comp=Z,0.2nm,0.4s						
RLMT	Red Lodge	17.29	108		P	05 36 09.0	+1.0
LOHW	Long Hollow	17.48	114	P	P	05 36 10.2	+0.2
NVAR	Mina Array Bea	17.79	140	P	Pn	05 36 10.7	-2.1
	baz=319,slow=10,SNR=3.6						
	comp=Z,0.2nm,0.6s						
H17K	Granite Mounta	18.10	321	IAmb	IAmb	05 36 20.2	
	comp=Z,21nm,1.4s						
G18K	Tagagawik	18.12	325	IAmb	IAmb	05 36 34.4	
	comp=Z,15nm,1.1s						
FFC	Flin Flon	18.13	73		P	05 36 17.6	+0.7
PDAR	Pinedale Array	18.61	115	P	P	05 36 21.4	-1.1
	baz=310,slow=11,SNR=8.1						
PDAR				LR	LR	05 42 59.9	
	comp=Z,52nm,19.6s,baz=314,slow=35						
	comp=Z,0.7nm,0.7s						
C23K	Itkillik River	18.64	341	IAmb	IAmb	05 36 42.8	
	comp=Z,16nm,1.3s						
D19K	Kuna River	19.49	332	IAmb	IAmb	05 36 35.4	
	comp=Z,8.7nm,1.1s						
BSUT	Blindstream Ca	19.54	121	IAmb	IAmb	05 37 12.2	
	comp=Z,13nm,1.2s						
C18K	Utukok River	20.48	330	P	Pn	05 36 44.9	+0.1
P18A	Preston Nutter	20.48	122	IAmb	IAmb	05 36 57.0	
	comp=Z,9.5nm,1.2s						
SRU	San Rafael Swe	20.73	124	IAmb	IAmb	05 37 02.4	
	comp=Z,7.5nm,1.0s						
RSSD	Black Hills	20.90	104		Pn	05 36 49.4	-0.7
RSSD				IAmb	IAmb	05 36 56.0	
	comp=Z,5.1nm,0.8s						
LCMT	Little Creek M	21.11	132	IAmb	IAmb	05 37 04.3	
	comp=Z,5.8nm,1.1s						
O20A	White River Ci	21.15	118		P	05 36 51.7	+1.5
HAYD	Hayden	21.40	116	IAmb	IAmb	05 37 05.2	
	comp=Z,8.9nm,1.0s						
C16K	Lisburne Hills	21.59	327		P	05 36 55.1	+0.7
BLKN	Baker Lake	21.76	45		P	05 36 57.2	+0.9
BLKN				IAmb	IAmb	05 36 58.0	
	comp=Z,9.0nm,1.0s						
PV20	West Nyswonger	22.10	123	P	P	05 37 00.6	+0.2
PV20				IAmb	IAmb	05 37 36.0	
	comp=Z,9.3nm,1.0s						
FCC	Fort Churchill	22.13	60		P	05 37 00.9	+0.6
PV11	David Mesa, Pa	22.18	122	IAmb	IAmb	05 37 06.9	
	comp=Z,7.6nm,0.8s						
PV03	Paradox Valley	22.23	122	P	P	05 37 02.8	+1.0
PV03				IAmb	IAmb	05 37 18.2	
	comp=Z,7.1nm,1.0s						
PV13	Radium Mtn., P	22.32	123	P	P	05 37 03.9	+1.1
PV13				IAmb	IAmb	05 37 11.5	
	comp=Z,5.2nm,0.9s						
PV02	Paradox Valley	22.32	122	P	P	05 37 03.8	+0.9
PV01	Paradox Valley	22.46	122	IAmb	IAmb	05 37 23.2	
	comp=Z,7.4nm,1.1s						
PFO	Pinyon Flats O	22.74	143	LR	LR	05 45 50.9	
	comp=Z,191nm,18.6s,baz=350,slow=37						
ULM	Lac du Bonnet	22.89	82	P	P	05 37 07.7	-0.7
	comp=Z,4.5nm,0.8s,baz=283,slow=9.2,SNR=4.2						
ULM				LR	LR	05 46 07.4	
	comp=Z,138nm,19.2s,baz=1.5,slow=37						
	comp=Z,4.5nm,0.8s						
EPLO	Experimental L	24.39	82	P	P	05 37 23.9	+0.8
X18A	Snowflake	24.66	130	IAmb	IAmb	05 37 30.9	
	comp=Z,4.6nm,0.9s						
ECSD	EROS Data Cent	25.52	97	IAmb	IAmb	05 37 36.7	
	comp=Z,5.5nm,1.1s						
ANMO	Albuquerque	26.01	124	LR	LR	05 48 12.4	
	comp=Z,72nm,19.5s,baz=327,slow=37						
RES	Resolute Bay	26.37	22	LR	LR	05 46 51.2	
	comp=Z,86nm,20.4s,baz=317,slow=34						
SHEM	Shemya Is, Ala	31.41	291	LR	LR	05 49 48.1	
	comp=Z,69nm,18.1s,baz=354,slow=34						
TXAR	Lajitas Array	31.94	127	P	P	05 38 30.7	0.0
	comp=Z,0.7nm,0.7s,baz=329,slow=7.9,SNR=4.5						
	comp=Z,0.7nm,0.7s						
FRB	Frobisher Bay	33.75	46	LR	LR	05 51 47.6	
	comp=Z,55nm,20.6s,baz=161,slow=35						
SADO	Sadowa	35.44	82	LR	LR	05 53 56.7	
	comp=Z,294nm,18.3s,baz=315,slow=37						
SCHQ	Schefferville	37.52	60	LR	LR	05 53 16.7	
	comp=Z,104nm,18.3s,baz=293,slow=34						
TKL	Tuckaleechee C	38.27	97	LR	LR	05 55 57.5	
	comp=Z,168nm,19.9s,baz=312,slow=38						
SFJD	Kangerlussuaq	39.97	37	LR	LR	05 57 18.7	
	comp=Z,169nm,19.1s,baz=343,slow=38						
MA2	Magadan	40.63	311	LR	LR	05 56 12.4	
	comp=Z,62nm,20.7s,baz=106,slow=36						
YAK	Yakutsk	48.19	321	LR	LR	06 01 31.4	
	comp=Z,49nm,19.2s,baz=110,slow=37						
BORG	Borgarnes	51.20	31	LR	LR	06 02 20.1	
	comp=Z,53nm,18.1s,baz=335,slow=35						
H11N2	WAKE ISLAND Hy	56.72	258	T	T	06 43 21.6	
	baz=38,slow=76						
H11N3	WAKE ISLAND Hy	56.72	258	T	T	06 43 22.1	
	baz=38,slow=76						
H11N1	WAKE ISLAND Hy	56.74	258	T	T	06 43 23.2	
	baz=38,slow=76						
H11S1	WAKE ISLAND Hy	57.79	258	T	T	06 44 41.9	
	baz=39						
H11S2	WAKE ISLAND Hy	57.80	258	T	T	06 44 39.3	
	baz=39						
H11S3	WAKE ISLAND Hy	57.81	258	T	T	06 44 43.9	
	baz=39						
SJG	San Juan	61.71	98	LR	LR	06 10 27.1	
	comp=Z,48nm,18.5s,baz=151,slow=37						
NB2	NORSAR Subarra	62.60	19	P	P	05 42 28.9	+0.3
	comp=Z,0.8nm,0.7s,baz=336,slow=6.9						
NOA	NORSAR Array B	62.60	19	P	P	05 42 28.9	+0.3
	comp=Z,0.5nm,0.7s,baz=338,slow=6.9,SNR=4.3						
NOA				LR	LR	06 10 55.5	
	comp=Z,58nm,19.2s,baz=0.0,slow=37						
	comp=Z,0.5nm,0.7s						
HFS	Hagfors	63.91	18	P	P	05 42 37.6	+0.4
	comp=Z,1.1nm,0.6s,baz=298,slow=3.1,SNR=5.6						
HFS				LR	LR	06 08 21.0	
	comp=Z,38nm,19.9s,baz=312,slow=34						
	comp=Z,1.1nm,0.6s						
FINES	FINESS Array B	64.52	11	LR	LR	06 13 00.0	
	comp=Z,38nm,18.9s,baz=304,slow=38						
ZALV	Zalesovo Beam	68.79	337	P	P	05 43 09.0	+0.4
	comp=Z,0.6nm,0.3s,baz=28,slow=6.7,SNR=5.2						
	comp=Z,0.6nm,0.3s						
BVAR	Borovoye Array	72.44	346	P	P	05 43 31.2	+0.3
	comp=Z,0.5nm,0.6s,baz=46,slow=4.2,SNR=4.1						
	comp=Z,0.5nm,0.6s						
KURK	Kurchatov	73.18	340	P	P	05 43 36.3	+1.0
KURK	Kurchatov	73.18	340	IAmb	IAmb	05 43 49.2	
	comp=Z,2.1nm,1.0s						
KURBB	Kurchatov Arra	73.29	340	P	P	05 43 36.3	+0.4
	comp=Z,1.3nm,0.6s,baz=21,slow=5.6,SNR=8.6						
	comp=Z,1.3nm,0.6s						
GERES	GERESS Array B	74.48	22	P	P	05 43 44.4	+1.3
	comp=Z,0.6nm,0.7s,baz=308,slow=4.8,SNR=3.9						
	comp=Z,0.6nm,0.7s						
AKASG	Malin Array Be	75.42	12	P	P	05 43 49.3	+1.0
	comp=Z,0.3nm,0.4s,baz=356,slow=6.6,SNR=1.6						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	76.04	336	P	P	05 43 52.3	+0.3
	comp=Z,1.6nm,0.7s,baz=32,slow=5.5,SNR=16						
	comp=Z,1.6nm,0.7s						
ESDC	Sonseca Array	77.51	38	P	P	05 44 00.3	-0.2
	comp=Z,0.7nm,0.9s,baz=338,slow=4.8,SNR=3.6						
	comp=Z,0.7nm,0.9s						
RAR	Rarotonga	77.67	206	LR	LR	06 10 03.9	
	comp=Z,40nm,20.3s,baz=356,slow=29						
MDP	Montagnes des	80.02	95	LR	LR	06 23 27.4	
	comp=Z,38nm,18.0s,baz=231,slow=38						
LPAZ	La Paz	88.55	120	P	P	05 44 56.4	-2.0
	comp=Z,0.9nm,0.6s,baz=319,slow=3.2,SNR=4.6						
	comp=Z,0.9nm,0.6s						
EIL	Elat	96.84	11	LR	LR	06 38 48.4	
	comp=Z,84nm,18.0s,baz=242,slow=41						

BGR 24 05:52:45.0, 5°.49N×94°.98E, h33^{km}, mb4.9

BJI 24 05:52:53.0, 6°.76N×92°.22E, h19^{km}, mB5.2/32, mb4.8/63, Ms4.9/59, Ms7 4.7/58

IDC 24 05:52:54.2±0.4, 7°.05N×92°.38E, h0^{km}, mb4.5/34, mbtmp4.5/37, ML4.7/3, MS4.3/63, Error ellipse: s-maj=14.4km s-min=11.3km az=71.0

DJA 24 05:52:56.1±0.2, 7°N±3°×9°2E±°, h10^{km}, M5.1/60, mb5.1/60, mB5.5/31, MLv5.2/7, Mw(mB)5.0/31, MwMwp4.8/2, Mwp5.1/2

NEIC 24 05:52:56.4, 7°.07N×92°.40E, h12^{km}

NEIC 24 05:52:56.4±2.2, 7°.08N±0°.06×92°.41E±0°.02, h10^{km}±1^{km}, mb5.2/113, Mww5.1/13, Error ellipse: s-maj=10.5km s-min=3.1km az=163.0

NEIC 24 05:52:56.4, 6°.77N×92°.00E, h12^{km}, Moment Tensor Solution. Duration: 1^{s}8 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.34; M$_{\theta\theta}$-0.41; M$_{\phi\phi}$-1.93; M$_{r\theta}$1.84; M$_{\theta\phi}$1.02; M$_{\phi r}$-4.34; Fault plane solution: M$_0$5.28000×10^{16} NP1: ϕ_s329.65000°, δ13.51000°, λ83.18000°. NP2: ϕ_s156.66000°, δ76.59000°, λ91.63000°. Principal axes: T 5.2372, Plg58.0000°, Azm69.0000°; N 0.0914, Plg2.0000°, Azm336.0000°; P -5.3286, Plg32.0000°, Azm245.0000°;

NDI 24 05:52:58.7±1.2, 7°.03N×92°.38E, h10^{km}, mb5.2, ML5.1, MW5.0

GCMT 24 05:52:58.4±0.2, 7°.07N±0°.02×92°.41E±0°.01, h12^{km}, MW4.9/110, Moment Tensor Solution. s29,c31; s110,c154; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.88±.06; M$_{\theta\theta}$-0.59±.06; M$_{\phi\phi}$-2.30±.06; M$_{r\theta}$-1.09±.26; M$_{\theta\phi}$1.03±.05; M$_{\phi r}$0.20±.21; Best double couple: M$_0$3.02800×10^{16} NP1: ϕ_s169.00000°, δ40.00000°, λ113.00000°. NP2: ϕ_s320.00000°, δ53.00000°, λ71.00000°. Principal axes: T 3.1960, Plg74.0000°, Azm176.0000°; N -0.3420, Plg15.0000°, Azm331.0000°; P -2.8590, Plg7.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

BKK 24 05:53:01.4±2.0, 7°N±13°×9°3E±1°2, h10^{km}, M4.9/15, mB5.3/12, mb5.0/15, Mjma5.0/14, ML4.9/4, MLv5.1/4, Mw(mB)4.7/12

ISC 24 05:52:57.5±0.3, 7°.00N±0°.04×92°.31E±0°.04, h23^{km}, n393, σ1^{s}85/334, mb5.0/150, MS4.5/87, 11C-8D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	1.60	89	eP	Pb	05 53 27.0	+0.6
CMBY				eS	Sb	05 53 47.2	+1.0
CMBY				IAML		05 54 17.1	
	comp=N,28µm,0.8s						
CMBY				IAML		05 54 18.0	
	comp=E,27µm,1.2s						
PBA	Port Blair	4.65	5	Pn	Pn	05 54 04.2	-2.1
PBA	Port Blair	4.65	5	eP	Pn	05 54 10.0	+3.6
PBA				eS	Sn	05 54 59.8	+0.2
PBA				IAML		05 55 20.7	
	comp=E,8µm,0.9s						
PBA				IAML		05 55 24.9	
	comp=N,8µm,1.4s						
MLSI	Meulaboh, Aceh	4.89	123	P	Pn	05 54 05.3	-4.4
LHMI	Lhok Sumawe	4.93	111	Pn	Pn	05 54 08.4	-1.9
LHMI	Lhok Sumawe	4.93	111	P	Pn	05 54 09.0	-1.3
SNSI	Sinabang, Aceh	6.07	139	P	Pn	05 54 20.0	-5.9
	comp=N,1.7nmcomp=N,3µmcomp=N,128nm,0.8s						
DGPR	DIGLIPUR	6.17	6	eP	Pn	05 54 29.5	+2.2
DGPR				eS	Sn	05 55 34.6	-2.5
DGPR				IAML		05 57 12.9	
	comp=E,4µm,3.5s						
DGPR				IAML		05 57 47.3	
	comp=N,4µm,3.2s						
KCSI	Kotacane, Aceh	6.44	122	P	Pn	05 54 28.6	-2.4
	comp=N,0.6nmcomp=N,2µmcomp=N,128nm,0.8s						
RNTT	Ranong	6.55	68	P	Pn	05 54 32.7	+0.2
	comp=N,0.6nmcomp=N,0.8nmcomp=N,13nmcomp=N,3µm						
	comp=N,209nm,0.8s						
TSI	Tuntungan	7.13	119	P	Pn	05 54 40.7	+0.2
	comp=N,1.2nmcomp=N,117nm,0.8s						
GSI	Gunungsitoli	7.72	137	Pn	Pn	05 54 46.8	-1.8
GSI	Gunungsitoli	7.72	137	P	Pn	05 54 43.2	-5.4
	comp=N,0.4nmcomp=N,45nm,0.7s						
PSI	Prapat	7.79	122	Pn	Pn	05 54 49.3	-0.5
	comp=N,4.2nm,0.3s,baz=311,slow=12,SNR=14						
PSI				Sn	Sn	05 56 15.5	-1.9
	comp=N,2.4nm,0.3s,baz=72,slow=12,SNR=1.6						
PSI				LR	LR	05 58 17.1	
	comp=N,692nm,21.1s,baz=318,slow=41						
	comp=N,18nm,0.5s						
PSI	Prapat	7.79	122	P	Pn	05 54 44.5	-5.3
RPSI	Rantau Prapat	7.85	123		Pn	05 54 49.3	-1.1
RPSI					Sn	05 56 15.5	-3.2
KULM	Kulim	8.46	101	Pn	Pn	05 54 57.8	-1.0
KULM	Kulim	8.46	101	P	Pn	05 54 59.1	+0.3
	comp=N,1µmcomp=N,46nm,0.8s						
IPM	Ipoh	9.02	106	Pn	Pn	05 55 05.8	-0.7
IPM	Ipoh	9.02	106	P	Pn	05 55 06.0	-0.5
PHET	Kaeng Krachan	9.30	50	P	Pn	05 55 06.8	-3.4
MNSI	Mandailing Nat	9.51	130	P	Pn	05 55 10.3	-2.9
	comp=N,41nm,0.6s						
PDSI	Padang	11.31	134	P	Pn	05 55 38.4	+0.6
	comp=N,5µmcomp=N,21nm,0.8s						
PALK	Pallekele	11.52	272	Pn	Pn	05 55 40.6	-0.2
	comp=N,8.4nm,0.3s,baz=86,slow=12,SNR=24						
PALK				Sn	Sn	05 57 42.2	-6.7
	comp=N,16nm,0.3s,baz=180,slow=23,SNR=6.2						
PALK				LR	LR	05 59 41.0	
	comp=N,4µm,19.7s,baz=84,slow=35						
	comp=N,14nm,0.3s						
PALK	Pallekele	11.52	272	Pn	Pn	05 55 41.4	+0.6
PALK	Pallekele	11.52	272	P	Pn	05 55 41.1	+0.3
	comp=N,33nm,0.6s						
KRJI	Kerinci	12.84	134	P	Pn	05 56 02.7	+3.8
CM31	Chiang Mai Arr	13.09	29	Pn	Pn	05 56 04.0	+1.7
CMAR	Chiang Mai Arr	13.09	29	Pn	Pn	05 56 01.3	-1.0
	comp=N,1.5nm,0.3s,baz=231,slow=14,SNR=68						
CMAR				LR	LR	06 01 00.1	
	comp=N,1µm,20.4s,baz=210,slow=37						
	comp=N,4.2nm,0.3s						
CMAR	Chiang Mai Arr	13.09	29	Pn	Pn	05 56 03.3	+1.1
UTTA	Uttaradit	13.37	36	P	Pn	05 56 08.6	+2.6
	comp=N,0.1nmcomp=N,488nmcomp=N,53nm,0.9s						
CHTO	Chiang Mai	13.40	28	Pn	Pn	05 56 07.2	+0.7
CHTO	Chiang Mai	13.40	28	P	Pn	05 56 06.6	+0.2
	comp=N,959nmcomp=N,43nm,0.9s						
CHTO	Chiang Mai	13.40	28	P	Pn	05 56 09.2	+2.8
	comp=N,1.2nmcomp=N,954nmcomp=N,43nm,0.9s						
LAMP	Lampang	13.49	31	P	Pn	05 56 10.5	+2.8
	comp=N,1.3nmcomp=N,781nmcomp=N,51nm,0.9s						
VIS	Vishakhapatnam	13.80	321	eP	Pn	05 56 13.4	+1.5
VIS				IAmb	IAmb	05 56 31.0	
	comp=Z,209nm,0.2s						
VIS				IAmb	IAmb	05 56 31.1	
	comp=E,88nm,0.9s						
VIS				eS	Sn	05 58 36.4	-8.1
MASI	Maura Aman, Be	14.13	135	P	Pn	05 56 15.0	-1.5
	comp=E,121nm,0.8s						
VJD	Vijayawada	14.82	311	eP	Pn	05 56 27.9	+2.0
VJD				IAmb	IAmb	05 56 34.0	
	comp=Z,60nm,0.7s						
UBPT	Khong Chiam	15.30	56	P	Pn	05 56 33.0	+0.8
	comp=Z,1.8nmcomp=Z,2µmcomp=Z,57nm,1.4s						
SAIH	SAIHA	15.42	2	eP	Pn	05 56 34.5	+0.7
BRDH	Bariadhala	15.60	358	Pn	Pn	05 56 34.6	-1.5
	baz=246,slow=19						

PANO	Nakornpanom	15.69	49	P	P	05 56 41.1	0.0
	comp=Z,0.2nmcomp=Z,45nm,1.0s						
MDSI	Maura Dua	16.44	134	P	Pn	05 56 45.0	-2.0
	comp=Z,1µmcomp=Z,68nm,0.9s						
PPBI	Pangkal Pinang	16.53	123	P	Pn	05 56 46.2	-1.8
LWLI	Liwa	16.73	135	P	Pn	05 56 50.1	-0.6
	comp=Z,191nm,0.7s						
HYB	Hyderabad	16.96	309	eP	Pn	05 56 52.8	-0.7
KLSI		16.98	133	P	Pn	05 56 53.1	-0.7
	comp=Z,2µmcomp=Z,139nm,1.2s						
KLI	Kotabumi	17.19	133	P	P	05 56 58.1	+0.3
KASI	Kota Agung	17.39	135	P	Pn	05 56 56.9	-2.0
	comp=Z,70nm,0.7s						
BOK	Bokaro	17.80	340	eP	P	05 57 06.1	+1.5
BOK				IAmb	IAmb	05 57 16.0	
	comp=Z,122nm,1.6s						
BOK				eS	Sn	06 00 08.9	-13
TPI	Tanjungpandan	18.12	122	P	Pn	05 57 05.7	-2.2
	comp=Z,1µmcomp=Z,40nm,1.3s						
SHL	Shillong	18.47	359	P	P	05 57 11.6	-0.5
SHL	Shillong	18.47	359	eP	Pn	05 57 14.1	+1.9
SHL				IAmb	IAmb	05 57 22.5	
	comp=Z,104nm,1.9s						
KOHI	KOHIMA	18.70	5	eP	Pn	05 57 18.4	+3.4
KOHI				IAmb	IAmb	05 57 22.6	
	comp=Z,103nm,1.6s						
KOHI				eS	Sn	06 00 28.2	-15
TNCH	TengChong	18.89	18	eP	Pn	05 57 17.5	+0.2
TNCH				S	S	06 00 50.4	+0.3
TNCH				pmax	pmax		
	comp=Z,670nm,5.5s						
TNCH				LR	LR		
	comp=Z,2µm,10.7s						
TNCH				LR	LR		
	comp=Z,2µm,10.5s						
TNCH				LR	LR		
	comp=Z,2µm,11.7s						
NGP	Nagpur	19.05	319	eP	Pn	05 57 23.1	+3.8
NGP				eS	Sn	06 00 37.5	-15
MOKO	MOKOCHONG	19.33	6	eP	Pn	05 57 26.8	+4.2
MOKO				IAmb	IAmb	05 57 29.8	
	comp=Z,105nm,0.9s						
MOKO				eS	Sn	06 00 42.8	-16
TEZP	TEZPUR	19.52	1	eP	Pn	05 57 28.8	+4.1
DBJI	Dramaga	19.71	133	P	P	05 57 25.5	-0.1
	comp=Z,8µmcomp=Z,121nm,0.8s						
SBUM	Sibu	20.34	102	P	P	05 57 31.6	-0.9
SBUM	Sibu	20.34	102	P	Pn	05 57 34.3	-0.3
KAD	Karad	20.45	302	eP	Pn	05 57 43.4	+7.5
KMI	Kunming	20.60	28	P	P	05 57 36.3	+0.9
KMI				S	S	06 01 22.0	-3.0
KMI				SS	SnSn	06 01 51.4	+6.6
KMI				pmax	pmax		
	comp=Z,26nm,0.9s						
KMI				LR	LR		
	comp=Z,1µm,10.6s						
KMI				LR	LR		
	comp=Z,1µm,11.1s						
KMI				LR	LR		
	comp=Z,1µm,13.2s						
QIZ	Qiongzhong	20.82	53	IAmb	IAmb	05 57 50.2	
	comp=Z,93nm,1.2s						
QIZ	Qiongzhong	20.82	53	P	Pn	05 57 40.0	-0.2
QIZ				S	S	06 01 30.3	+1.2
QIZ				pmax	pmax		
	comp=Z,30nm,1.4s						
QIZ				pmax	pmax		
	comp=Z,430nm,3.6s						
QIZ				LR	LR		
	comp=Z,4µm,12.5s						
QIZ				LR	LR		
	comp=Z,6µm,12.1s						
QIZ				LR	LR		
	comp=Z,9µm,12.7s						
BBJI	Bungbulang	20.98	133	P	P	05 57 39.1	-0.4
PZH	PanZhiHua	21.38	24	P	P	05 57 43.8	+0.1
PZH				S	S	06 01 37.0	-3.1
PZH				pmax	pmax		
	comp=Z,60nm,1.4s						
PZH				pmax	pmax		
	comp=Z,320nm,5.3s						
PZH				LR	LR		
	comp=Z,1µm,11.2s						
PZH				LR	LR		
	comp=Z,1µm,11.9s						
PZH				LR	LR		
	comp=Z,2µm,11.5s						
BHPL	Bhopal	21.58	320	eP	P	05 57 57.9	+12
LSA	Lhasa	22.61	357	P	P	05 57 52.5	-4.7
LSA				LR	LR		
	comp=Z,700nm,13.3s						
LSA				LR	LR		
	comp=Z,1µm,12.2s						
LSA				LR	LR		
	comp=Z,1µm,11.9s						
GYA	Guiyang	23.69	34	⇑P	P	05 58 09.5	+1.6
GYA				S	S	06 02 21.9	+0.1
GYA				pmax	pmax		
	comp=Z,63nm,1.5s						
GYA				LR	LR		
	comp=Z,2µm,11.7s						
GYA				LR	LR		
	comp=Z,2µm,10.7s						
GYA				LR	LR		
	comp=Z,3µm,11.2s						
KKM	Kota Kinabalu	23.77	91	P	P	05 58 09.6	+0.9
KKM	Kota Kinabalu	23.77	91	P	P	05 58 06.6	-2.1
	comp=Z,2µmcomp=Z,75nm,2.2s						
TBJI	Tambak Boyo	23.84	125	P	P	05 58 05.0	-4.2
NGJI	Ngawi	23.84	126	P	P	05 58 06.9	-2.4
	comp=Z,66nm,0.9s						
MTKI	Muara Teweh, K	23.87	108	P	P	05 58 11.7	+2.1
	comp=Z,49nm,0.4s						
PCJI	Pacitan	24.11	128	P	P	05 58 15.5	+3.7
	comp=Z,48nm,1.6s						
SJI	Sawahan	24.30	127	P	P	05 58 12.3	-1.4
	comp=Z,31nm,1.2s						
SNJI	Sawahan-Nganju	24.32	127	P	P	05 58 11.8	-2.1
	comp=Z,37nm,1.1s						
H08S3	Diego Garcia H	24.54	234	T	T	06 24 35.5	
	baz=54,slow=75,SNR=677						
H08S2	Diego Garcia H	24.54	234	T	T	06 24 30.5	
	baz=54,slow=75,SNR=215						
H08S1	Diego Carcia H	24.56	234	T	T	06 24 43.4	
	baz=54,slow=75,SNR=125						
BBKI	Banjar Baru	24.77	114	P	P	05 58 18.1	+0.2
	comp=Z,173nm,0.8s						
KMMI	Kalianget	25.72	122	P	P	05 58 30.3	+3.9
BLJI	Banyuglugur	25.79	124	P	P	05 58 31.5	+4.5
GZH	Guangzhou	25.79	49	P	P	05 58 33.4	+6.4
GZH				S	S	06 03 06.4	+11
GZH				LR	LR		
	comp=Z,2µm,11.2s						
GZH				LR	LR		
	comp=Z,2µm,11.8s						
GMJI	Gumukmas	25.96	125	P	P	05 58 33.3	+4.7
	comp=Z,24nm,0.9s						
CD2	Chengdu	26.09	23	P	P	05 58 29.1	-0.6
CD2				S	S	06 02 56.3	-3.6
CD2				pmax	pmax		
	comp=Z,40nm,0.7s						
CD2				pmax	pmax		
	comp=Z,340nm,5.5s						
CD2				LR	LR		
	comp=Z,3µm,10.0s						
CD2				LR	LR		
	comp=Z,2µm,11.4s						
CD2				LR	LR		
	comp=Z,3µm,9.8s						
ABJI	Asem Bagus	26.34	124	P	P	05 58 34.1	+2.0
JAGI	Jajag, Banyuwa	26.65	125	P	P	05 58 37.2	+2.4
JAGI				IAmb	IAmb	05 59 10.7	
	comp=Z,38nm,0.9s						
JAGI	Jajag, Banyuwa	26.65	125	P	P	05 58 36.3	+1.5
	comp=Z,1µmcomp=Z,48nm,0.8s						
SRBI	Singaraja	27.31	123	P	P	05 58 40.4	-0.4
	comp=Z,2µmcomp=Z,147nm,1.1s						
KHKI	Kahang-Kahang	27.79	123	P	P	05 58 44.8	-0.3
	comp=Z,62nm,0.7s						
ENH	Enshi	28.22	33	P	P	05 58 48.3	-0.5
ENH				IAmb	IAmb	05 59 02.2	
	comp=Z,81nm,1.2s						
MPSI	Mapaga	28.30	102	P	P	05 58 49.8	+0.1
	comp=Z,725nmcomp=Z,25nm,1.1s						
CNSH	ChangSha	28.72	40	P	P	05 58 44.4	-8.8
CNSH				S	S	06 03 33.9	-7.4
CNSH				pmax	pmax		
	comp=Z,16nm,2.1s						
CNSH				LR	LR		
	comp=N,2µm,12.9s						
CNSH				LR	LR		
	comp=E,2µm,12.8s						
CNSH				LR	LR		
	comp=Z,2µm,12.4s						
TGY	Tagaytay City	28.99	74	LR	LR	06 10 33.3	
	comp=Z,870nm,18.5s,baz=256,slow=37						
TWSI	Taliwang, Sumb	29.05	122	P	P	05 58 54.7	-1.7
	comp=Z,536nmcomp=Z,40nm,0.8s						
PLAI	Plampang	29.86	121	P	P	05 59 03.6	+0.1
	comp=Z,35nm,0.8s						
KAPI	Kappang	29.87	113	P	P	05 59 03.7	+0.1
KAPI				IAmb	IAmb	05 59 12.0	
	comp=Z,46nm,1.4s						
BKSI	Bulukumba	30.33	113	P	P	05 59 08.0	+0.3
	comp=Z,1µmcomp=Z,61nm,1.3s						
LZDM	Lanzhou Array	30.65	18	P	P	05 59 10.2	-0.4
	comp=Z,1.6nm,0.4s,baz=185,slow=10,SNR=4.6						
LZDM				LR	LR	06 13 05.2	
	comp=Z,454nm,18.9s,baz=155,slow=40						
	comp=Z,1.6nm,0.4s						
LZH	Lanzhou	30.82	18	eP	P	05 59 12.9	+1.0
LZH				sP	sP	05 59 19.8	-0.1
LZH				S	S	06 04 14.6	+0.2
LZH				pmax	pmax		
	comp=Z,14nm,1.2s						
LZH				LR	LR		
	comp=Z,720nm,14.1s						
LZH				LR	LR		
	comp=Z,920nm,13.4s						
LZH				LR	LR		
	comp=Z,950nm,14.4s						
XAN	Xi'an	30.98	27	⇑P	P	05 59 11.8	-1.5
XAN				pP	pP	05 59 16.8	-2.2
XAN				sP	sP	05 59 19.8	-1.5
XAN				pmax	pmax		
	comp=Z,17nm,1.0s						
XAN				LR	LR		
	comp=Z,700nm,12.4s						
XAN				LR	LR		
	comp=Z,2µm,12.4s						
XAN				LR	LR		
	comp=Z,2µm,11.7s						
WHN	Wuhan	31.24	39	P	P	05 59 23.5	+8.0
WHN				S	S	06 04 27.3	+6.5
WHN				pmax	pmax		
	comp=Z,200nm,1.4s						
WHN				LR	LR		
	comp=N,4µm,9.6s						
WHN				LR	LR		
	comp=E,5µm,11.7s						
WHN				LR	LR		
	comp=Z,5µm,11.5s						
GTOI	Gorontalo	31.26	100	P	P	05 59 14.7	-1.2
	comp=Z,527nmcomp=Z,38nm,0.9s						
LUWI	Luwuk	31.43	104	P	P	05 59 16.3	-1.1
WBSI	Waikabubak, Su	31.64	121	P	P	05 59 15.9	-3.4
TWG	Pinlang	31.84	57	P	P	05 59 20.8	-0.1
TWG				IAmb	IAmb	05 59 31.2	
	comp=Z,52nm,1.0s						
NIL	Nilore	31.86	329		P	05 59 20.6	-0.4
NIL				IAmb	IAmb	06 00 13.2	
	comp=Z,26nm,0.9s						
SSLB	Suanglung	32.16	56	P	P	05 59 21.2	-2.6
YULB	Yu-li	32.27	57	P	P	05 59 23.5	-1.2
YULB				IAmb	IAmb	05 59 34.9	
	comp=Z,50nm,0.9s						
GTA	Gaotai	32.97	11	P	P	05 59 31.9	+1.1
GTA				sP	sP	05 59 40.0	+1.3
GTA				S	S	06 04 51.6	+3.7
GTA				pmax	pmax		
	comp=Z,19nm,1.0s						
GTA				pmax	pmax		
	comp=Z,310nm,5.6s						
GTA				LR	LR		
	comp=Z,480nm,18.7s						
GTA				LR	LR		
	comp=Z,320nm,15.1s						
GTA				LR	LR		
	comp=Z,350nm,20.7s						
DAV	Davao City (W)	33.01	88	LR	LR	06 15 41.9	
	comp=Z,575nm,18.7s,baz=208,slow=42						
LYN	LuoYang	33.12	31	⇑P	P	05 59 32.1	+0.1
LYN				sP	sP	05 59 40.1	+0.1
LYN				S	S	06 04 50.8	+0.7
LYN				pmax	pmax		
	comp=Z,34nm,0.9s						
LYN				pmax	pmax		
	comp=Z,170nm,3.5s						
LYN				LR	LR		
	comp=Z,2µm,13.3s						
LYN				LR	LR		
	comp=Z,2µm,14.6s						
LYN				LR	LR		
	comp=Z,3µm,14.9s						
EDFI	Ende, Flores	33.20	118	P	P	05 59 29.1	-4.0
	comp=Z,19nm,0.8s						
KBL	Kabul	34.81	325	P	P	05 59 47.1	+0.2
NJ2	Nanjing	35.11	41	eP	P	05 59 50.3	+1.0
NJ2				pP	pP	05 59 52.8	-2.2
NJ2				pmax	pmax		
	comp=Z,16nm,0.6s						
NJ2				LR	LR		
	comp=Z,1µm,11.8s						
NJ2				LR	LR		
	comp=Z,1µm,11.4s						
NJ2				LR	LR		
	comp=Z,2µm,11.2s						
KSH	Kashi	35.56	338	P	P	05 59 48.8	-4.4
KSH				sP	sP	06 00 00.9	-0.3
KSH				S	S	06 05 24.6	-3.3
KSH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,210nm,5.2s						
KSH				LR	LR		
	comp=Z,740nm,15.5s						
KSH				LR	LR		
	comp=Z,400nm,16.8s						
KSH				LR	LR		
	comp=Z,760nm,15.1s						
BATI	Baumata	35.59	118	LR	LR	06 15 46.5	
	comp=Z,605nm,20.9s,baz=296,slow=39						
BATI	Baumata	35.59	118	P	P	05 59 52.7	-1.0
MANEM	Manem	35.72	331	P	P	05 59 56.5	+1.7
MANEM				IAmb	IAmb	06 00 47.9	
	comp=Z,34nm,0.9s						
SOEI	Soe	35.92	117	P	P	05 59 53.5	-3.1
SSE	Sheshan	36.11	45	P	P	05 59 58.4	+0.5
SSE				S	S	06 05 38.5	+2.2
SSE				pmax	pmax		
	comp=Z,14nm,0.7s						
SSE				pmax	pmax		
	comp=Z,210nm,4.8s						
SSE				LR	LR		
	comp=Z,740nm,12.0s						
SSE				LR	LR		
	comp=Z,740nm,12.2s						
HNS	HongShan	36.48	31	⇓P	P	06 00 01.8	+0.9
HNS				pmax	pmax		
	comp=Z,25nm,0.9s						
HNS				LR	LR		
	comp=Z,870nm,12.3s						
HNS				LR	LR		
	comp=Z,1µm,11.8s						
HNS				LR	LR		
	comp=Z,1µm,12.9s						
TIA	Tai'an	36.88	34	P	P	06 00 04.8	+0.3
TIA				pmax	pmax		
	comp=Z,22nm,1.1s						
TIA				LR	LR		
	comp=Z,920nm,12.4s						
TIA				LR	LR		
	comp=Z,1µm,11.0s						
TIA				LR	LR		
	comp=Z,1µm,16.4s						
WMQ	Urumqi	36.90	354	eP	P	06 00 08.0	+3.4
WMQ				sP	sP	06 00 13.9	+1.4
WMQ				pmax	pmax		
	comp=Z,240nm,5.5s						
WMQ				LR	LR		
	comp=Z,210nm,23.9s						
BTO	Baotou	37.02	23	eP	P	06 00 05.9	+0.2
BTO				S	S	06 05 52.8	+2.6
BTO				pmax	pmax		
	comp=Z,24nm,0.7s						
BTO				pmax	pmax		
	comp=Z,180nm,3.9s						
BTO				LR	LR		
	comp=Z,800nm,14.0s						
BTO				LR	LR		
	comp=Z,2µm,13.1s						
BTO				LR	LR		
	comp=Z,1µm,12.1s						
DRK	Karamyk	37.23	333	IAmb	IAmb	06 00 18.4	
	comp=Z,51nm,0.8s						
SHAA	Shahritus	37.53	328	P	P	06 00 09.2	-0.8
SHAA				IAmb	IAmb	06 01 05.0	
	comp=Z,32nm,1.1s						
GAR	Garm	37.53	331	IAmb	IAmb	06 00 19.6	
	comp=Z,88nm,1.7s						
SHLS	Shalkode	37.75	345	eP	P	06 00 11.2	-0.7
	comp=Z,38nm,1.3s						
CHGR	Chuyangaron	37.83	330	IAmb	IAmb	06 00 21.6	
	comp=Z,37nm,1.2s						
HHC	Hu-ho-hao-te	37.84	24	eP	P	06 00 13.3	+0.7
HHC				sP	sP	06 00 19.8	-0.8
HHC				S	S	06 06 04.3	+1.7
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,96nm,5.7s						
HHC				LR	LR		
	comp=Z,860nm,11.1s						
HHC				LR	LR		
	comp=Z,1µm,13.9s						
HHC				LR	LR		
	comp=Z,760nm,12.7s						
UZB	Uzynbulak	37.86	344	eP	P	06 00 13.3	+0.5
	comp=Z,15nm,1.1s						
SATY	Saty	37.95	343	eP	P	06 00 13.9	+0.4
	comp=Z,12nm,1.0s						
TNSS	Tian-Shan	38.36	342	eP	P	06 00 17.6	+0.2
MDOK	Medeo	38.45	342	eP	P	06 00 17.9	+0.2
UCH	Uchtor	38.46	339	P	P	06 00 19.9	+1.6
	SNR=13						
AAA	Alma-Ata	38.53	342	eP	P	06 00 18.8	+0.5
KBK	Karagaybulak	38.68	339	P	P	06 00 22.1	+2.3
	SNR=18						
AAK	Ala-Archa	38.83	339	P	P	06 00 23.4	+2.4
	SNR=12						
AAK	Ala-Archa	38.83	339	LR	LR	06 18 52.4	
	comp=Z,510nm,18.5s,baz=152,slow=40						
AAK	Ala-Archa	38.83	339	P	P	06 00 22.6	+1.6
AAK				IAmb	IAmb	06 00 51.1	
	comp=Z,47nm,1.2s						
CHMS	Chumysh	39.05	339	P	P	06 00 24.5	+1.8
	SNR=5.3						
EKS2	Erkin-Say	39.11	338	P	P	06 00 25.4	+2.1
	SNR=5.9						
PSA00	Pilbara Seismi	39.19	137	P	P	06 00 23.2	-0.8
BJI	Beijing	39.24	29	P	P	06 00 25.9	+1.6
BJI				S	S	06 06 26.9	+3.4
BJI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BJI				LR	LR		
	comp=Z,220nm,12.3s						
BJI				LR	LR		
	comp=Z,370nm,15.1s						
BJI				LR	LR		
	comp=Z,370nm,11.9s						
USP	Ospenovka	39.38	339	P	P	06 00 26.9	+1.5
	SNR=15						
JOW	Kunigami	39.44	56	LR	LR	06 19 03.8	
	comp=Z,1µm,18.2s,baz=250,slow=40						
SIJI	Sorong	39.64	100	P	P	06 00 25.0	-3.0
	comp=Z,23nm,1.0s						
TDK	Taldyqorghan	39.74	345	eP	P	06 00 28.9	+0.5
	comp=Z,9.9nm,0.7s						
DZA	Taraz	40.25	336	eP	P	06 00 33.0	+0.3
CHM	Chimkent	40.51	334	eP	P	06 00 35.2	+0.4
MKAR	Makanchi Array	40.58	349	P	P	06 00 35.6	+0.3
	comp=Z,7.2nm,0.5s,baz=168,slow=8.7,SNR=76						
MKAR				LR	LR	06 20 19.7	
	comp=Z,300nm,19.7s,baz=170,slow=41						
	comp=Z,7.2nm,0.5s						
MKAR	Makanchi Array	40.58	349	P	P	06 00 35.0	-0.3
MAKZ	Makanchi	40.65	349	P	P	06 00 35.6	-0.3
KKAR	Karatay Array	40.76	335	P	P	06 00 37.5	+0.6
ZSN	Zaisan	40.81	352	eP	P	06 00 37.9	+0.7
FITZ	Fitzroy Crossi	41.28	128	LR	LR	06 19 02.3	
	comp=Z,216nm,18.9s,baz=320,slow=38						
FITZ	Fitzroy Crossi	41.28	128	P	P	06 00 40.7	-0.7
DL2	Dalian	41.32	35	P	P	06 00 43.6	+2.1
DL2				S	S	06 06 59.6	+4.9
DL2				pmax	pmax		
	comp=Z,63nm,1.4s						
DL2				pmax	pmax		
	comp=Z,370nm,4.3s						
DL2				LR	LR		
	comp=Z,380nm,19.4s						
DL2				LR	LR		
	comp=Z,860nm,17.3s						
DL2				LR	LR		
	comp=Z,460nm,19.2s						
XLT	XiLinHaoTe	42.24	26	eP	P	06 00 56.5	+7.4
XLT				pmax	pmax		
	comp=Z,19nm,1.7s						
XLT				LR	LR		
	comp=N,30nm,12.0s						
XLT				LR	LR		
	comp=E,780nm,13.3s						
XLT				LR	LR		
	comp=Z,410nm,13.2s						
SONM	Songino Array	42.43	14	P	P	06 00 50.7	+0.1
	comp=Z,5.5nm,0.9s,baz=200,slow=8.3,SNR=11						
SONM				PcP	PcP	06 02 44.4	+0.9
	comp=Z,2.6nm,0.8s,baz=208,slow=4.1,SNR=2.4						
SONM				LR	LR	06 20 50.7	
	comp=Z,505nm,19.4s,baz=186,slow=40						
	comp=Z,5.5nm,0.9s						
SONM	Songino Array	42.43	14	P	P	06 00 49.4	-1.2
KNRA	Kununurra	42.55	122	P	P	06 00 50.9	-1.0
ULN	Ulaanbaatar	42.62	15	P	P	06 00 51.5	-0.7
ULN	Ulaanbaatar	42.62	15	P	P	06 00 53.8	+1.6
	comp=Z,37nm,1.8s						
MTN	Manton Dam	43.32	117	P	P	06 00 56.2	-1.9
JNU	Nakatsue	44.18	49	LR	LR	06 20 44.9	
	comp=Z,926nm,18.2s,baz=234,slow=38						
KSRS	Korea Array	44.31	42	P	P	06 01 05.3	-0.5
	comp=Z,0.9nm,0.5s,baz=230,slow=9.7,SNR=5.0						
KSRS				LR	LR	06 20 43.3	
	comp=Z,343nm,18.4s,baz=230,slow=38						
	comp=Z,0.9nm,0.5s						
KURBB	Kurchatov Arra	44.98	348	P	P	06 01 11.6	+0.7
	comp=Z,7.0nm,0.6s,baz=170,slow=6.8,SNR=56						
KURBB				PcP	PcP	06 02 52.8	+1.0
	comp=Z,2.1nm,0.3s,baz=157,slow=2.8,SNR=4.2						
KURBB				LR	LR	06 23 50.0	
	comp=Z,349nm,19.3s,baz=171,slow=41						
	comp=Z,7.0nm,0.6s						
KURK	Kurchatov	45.05	348	P	P	06 01 11.5	0.0
KURK				IAmb	IAmb	06 01 20.9	
	comp=Z,24nm,1.1s						
H01W3	Cape Leeuwin H	46.48	155	T	T	06 51 16.4	
	baz=331,slow=76,SNR=11						
H01W2	Cape Leeuwin H	46.49	155	T	T	06 51 17.4	
	baz=331,slow=76,SNR=14						
H01W1	Cape Leeuwin H	46.49	155	T	T	06 51 17.0	
	baz=331,slow=76,SNR=14						
CN2	Changchun	46.74	33	eP	P	06 01 24.6	-0.3
CN2				esP	pwP	06 01 38.4	+2.1
CN2				eS	S	06 08 10.6	-2.9
CN2				pmax	pmax		
	comp=Z,10.0nm,1.5s						
CN2				LR	LR		
	comp=Z,700nm,13.0s						
CN2				LR	LR		
	comp=Z,700nm,13.0s						
CN2				LR	LR		
	comp=Z,800nm,14.0s						
ZAA0	Zalesovo Array	47.20	354	IAmb	IAmb	06 01 37.9	
	comp=Z,38nm,1.4s						
ZALV	Zalesovo Beam	47.20	354	P	P	06 01 28.9	+0.5
	comp=Z,7.6nm,0.7s,baz=168,slow=9.0,SNR=21						
ZALV				LR	LR	06 26 04.3	
	comp=Z,328nm,18.7s,baz=122,slow=42						
	comp=Z,7.6nm,0.7s						
ZALV	Zalesovo Beam	47.20	354	P	P	06 01 28.1	-0.3
RAYN	Ar Rayn	47.81	295	P	P	06 01 35.6	+1.9

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HIA   Hailar            48.04  24     P      P      06 01 34.9 -0.1
HIA                                   IAmb   IAmb   06 01 43.9
      comp=Z,28nm,1.2s
HILR  Hailar Array B    48.27  24     P      P      06 01 37.1 +0.2
      comp=Z,4.1nm,0.9s,baz=195,slow=9.2,SNR=4.6
      comp=Z,4.1nm,0.9s
ATD   Arta Tunnel       48.98 279     LR     LR     06 19 07.2
      comp=Z,9.2nm,21.0s,baz=88,slow=32
BNX   BinXian           49.06  32    ⇑P      P      06 01 43.4 +0.5
BNX                                   pmax   pmax
      comp=Z,12nm,1.2s
JAY   Jayapura          49.21  99     LR     LR     06 24 48.7
      comp=Z,143nm,18.5s,baz=305,slow=39
WB0   Warramunga Arr    49.22 124     P      P      06 01 43.7 -0.8
WB0                                   IAmb   IAmb   06 02 07.6
      comp=Z,18nm,0.7s
BVAR  Borovoye Array    49.25 343     P      P      06 01 44.1 -0.1
      comp=Z,6.2nm,0.8s,baz=142,slow=7.5,SNR=20
      comp=Z,6.2nm,0.8s
WRA   Warramunga Arr    49.26 124     P      P      06 01 44.2 -0.6
      comp=Z,10nm,0.9s,baz=302,slow=8.7,SNR=25
      comp=Z,10nm,0.9s
WRA   Warramunga Arr    49.26 124     P      P      06 01 43.8 -1.0
WRAB  Tennant Creek     49.26 124     P      P      06 01 43.6 -1.2
WRAB                                  IAmb   IAmb   06 01 59.9
      comp=Z,23nm,0.8s
BORK  Borovoye          49.29 343     P      P      06 01 44.6  0.0
WR8   Warramunga Arr    49.40 124     P      P      06 01 44.9 -0.9
WR8                                   IAmb   IAmb   06 02 00.6
      comp=Z,25nm,0.9s
MDJ   Mudanjiang        49.55  35     P      P      06 01 47.8 +1.2
MDJ                                   pmax   pmax
      comp=Z,11nm,1.0s
AB31  Akbulak array     50.15 333     IAmb   IAmb   06 02 01.2
      comp=Z,59nm,1.6s
ABKAR Akbulak array     50.15 333     P      P      06 01 51.8 +0.6
USRK  Ussuriysk Ar.     50.68  36     P      P      06 01 53.9 -1.3
      comp=Z,2.2nm,0.8s,baz=182,slow=7.1,SNR=4.7
      comp=Z,2.2nm,0.8s
ASAR  Alice Springs     50.77 128     P      P      06 01 56.0 -0.4
      comp=Z,6.7nm,0.8s,baz=307,slow=7.5,SNR=72
ASAR                                  LR     LR     06 24 42.0
      comp=Z,170nm,19.6s,baz=294,slow=38
      comp=Z,6.7nm,0.8s
ASAR  Alice Springs     50.77 128            P      06 01 55.4 -0.9
FORT  Forrest           50.82 140     IAmb   IAmb   06 02 21.5
      comp=Z,20nm,0.9s
JHJ   Hachijo jima 2    51.03  53     LR     LR     06 24 15.4
      comp=Z,390nm,20.4s,baz=264,slow=37
MJAR  Matsushiro Arr    51.09  48     P      P      06 01 58.8 +0.3
      comp=Z,1.0nm,0.4s,baz=244,slow=7.8,SNR=4.3
MJAR                                  PcP    PcP    06 03 14.5 +0.3
      comp=Z,1.6nm,0.6s,baz=246,slow=3.7,SNR=4.0
MJAR                                  LR     LR     06 25 04.6
      comp=Z,502nm,20.0s,baz=237,slow=38
      comp=Z,1.0nm,0.4s
OPO   Ambohidratompo    51.24 240     LR     LR     06 19 28.5
      comp=Z,395nm,20.4s,baz=189,slow=31
JCJ   Chichijima        51.30  61     LR     LR     06 24 22.1
      comp=Z,230nm,19.3s,baz=339,slow=37
GUMO  Guam              52.04  78     LR     LR     06 22 10.5
      comp=Z,136nm,22.0s,baz=272,slow=34
HEH   HeiHe             52.11  28    eP      P      06 02 05.6 -0.2
HEH                                   pmax   pmax
      comp=Z,9.0nm,1.0s
FURI  Furi              53.12 276     LR     LR     06 22 24.0
      comp=Z,814nm,19.2s,baz=90,slow=33
ARTI  Arti              56.04 338     LR     LR     06 28 14.5
      comp=Z,360nm,18.1s,baz=144,slow=38
ARTI  Arti              56.04 338     P      P      06 02 33.7 -0.7
KBZ   Khabaz            56.53 319     P      P      06 02 38.9 +0.8
      comp=Z,6.0nm,0.9s,baz=157,slow=5.2,SNR=6.8
      comp=Z,6.0nm,0.9s
KIV   Kislovodsk        56.76 319     P      P      06 02 40.4 +0.5
      comp=Z,15nm,0.9s
ASAJ  Asahikawa         57.26  41     LR     LR     06 28 29.0
      comp=Z,219nm,18.6s,baz=136,slow=37
BBOO  Buckleboo         57.41 136     IAmb   IAmb   06 03 43.2
      comp=Z,22nm,1.3s
EIL   Elat              58.29 301     LR     LR     06 28 32.2
      comp=Z,199nm,18.7s,baz=0.5,slow=37
CTA   Charters Tower    59.48 118     LR     LR     06 31 01.0
      comp=Z,112nm,18.2s,baz=276,slow=38
CTAO  Charters Tower    59.48 118     P      P      06 02 58.1 -1.1
CTAO                                  IAmb   IAmb   06 03 08.2
      comp=Z,17nm,1.1s
STKA  Stephens Creek    60.84 132     P      P      06 03 08.6 +0.3
      comp=Z,6.6nm,0.7s,baz=312,slow=5.7,SNR=19
      comp=Z,6.6nm,0.7s
STKA  Stephens Creek    60.84 132     P      P      06 03 08.4 +0.1
YAK   Yakutsk           61.40  19     LR     LR     06 32 41.1
      comp=Z,472nm,20.3s,baz=226,slow=39
BR104 Keskin Array S    61.63 312     P      P      06 03 13.9 +0.1
      comp=Z,3.7nm,0.8s
BR131 Keskin Array S    61.64 312     IAmb   IAmb   06 03 15.3
      comp=Z,17nm,1.5s
BRTR  Keskin Array B    61.64 312     P      P      06 03 14.2 +0.3
      comp=Z,1.8nm,0.6s,baz=136,slow=6.9,SNR=12
BRTR                                  LR     LR     06 31 59.9
      comp=Z,81nm,20.0s,baz=105,slow=38
      comp=Z,1.8nm,0.6s
BRTR  Keskin Array B    61.64 312     P      P      06 03 13.1 -0.8
BR105 Keskin Array S    61.65 312     P      P      06 03 14.0 +0.1
      comp=Z,5.8nm,1.2s
BR106 Keskin Array S    61.65 312     P      P      06 03 14.0  0.0
      comp=Z,3.8nm,1.3s
MBAR  Mbarara           61.89 266     LR     LR     06 26 20.4
      comp=Z,674nm,21.6s,baz=79,slow=32
NRIK  Noril'sk          62.34 358     P      P      06 03 17.8  0.0
      comp=Z,4.6nm,0.5s,baz=154,slow=7.8,SNR=7.4
NRIK                                  LR     LR     06 34 51.6
      comp=Z,208nm,18.7s,baz=202,slow=40
      comp=Z,4.6nm,0.5s
NRIK  Noril'sk          62.34 358     P      P      06 03 17.1 -0.7
H04N2 CROZET ISLANDS    64.06 210     T      T      07 14 14.9
      baz=46,slow=75,SNR=134
H04N1 CROZET ISLANDS    64.06 210     T      T      07 14 06.3
      baz=46,slow=75,SNR=130
H04N3 CROZET ISLANDS    64.07 210     T      T      07 14 06.4
      baz=46,slow=75,SNR=170
H04S1 CROZET ISLANDS    64.47 210     T      T      07 14 56.3
      baz=46,slow=75,SNR=3.9
H04S3 CROZET ISLANDS    64.48 210     T      T      07 15 01.4
      baz=46,slow=75,SNR=21
H04S2 CROZET ISLANDS    64.49 210     T      T      07 14 42.1
      baz=46,slow=75,SNR=11
OBN   Obninsk           65.16 328     P      P      06 03 35.5 -1.1
EIDS  Eidsvold          65.54 122     P      P      06 03 39.6 -0.1
EIDS                                  IAmb   IAmb   06 03 49.2
      comp=Z,30nm,1.4s
CFR   Carcaliu          66.96 316    ⇑P      P      06 03 49.6 +1.2
LSZ   Lusaka            67.27 250     LR     LR     06 29 57.6
      comp=Z,682nm,18.4s,baz=117,slow=33
AK09  Malin Array Si    67.66 322     P      P      06 03 53.1 +0.4
GHRR                    67.67 317     P      P      06 03 53.3 +0.4
AK10  Malin Array Si    67.67 322     P      P      06 03 52.4 -0.4
AK08  Malin Array Si    67.68 322     P      P      06 03 52.4 -0.5
AK07  Malin Array Si    67.69 322     P      P      06 03 52.5 -0.4
AK06  Malin Array Si    67.70 322     P      P      06 03 52.6 -0.4
AK05  Malin Array Si    67.71 322     P      P      06 03 52.7 -0.4
AKASG Malin Array Be    67.72 322     P      P      06 03 52.0 -1.1
      comp=Z,0.7nm,0.6s,baz=92,slow=4.6,SNR=7.1
AKASG                                 LR     LR     06 36 57.6
      comp=Z,127nm,20.7s,baz=122,slow=39
      comp=Z,0.7nm,0.6s
AKASG Malin Array Be    67.72 322     P      P      06 03 53.6 +0.5
AK12  Malin Array Si    67.75 322     P      P      06 03 53.1 -0.2
AK16  Malin Array Si    67.78 322     P      P      06 03 53.0 -0.5
VRI   Vrincioaia        68.08 317    ⇑P      P      06 03 56.9 +1.3
PLOR  Plostina          68.13 317    ⇓P      P      06 03 57.5 +1.6
TESR  Tescani           68.28 317    ⇓P      P      06 03 58.0 +1.2
MA2   Magadan           68.38  28     P      P      06 03 56.1 -1.0
      comp=Z,4.0nm,0.4s,baz=170,slow=12,SNR=2.0
MA2                                   LR     LR     06 35 32.6
      comp=Z,153nm,20.0s,baz=264,slow=38
      comp=Z,4.0nm,0.4s
LUBAR Lubar, Ukraine    68.41 321     P      P      06 03 56.9 -0.6
TIXI  Tiksi             68.45  12     P      P      06 03 57.1 -0.2
      comp=Z,27nm,0.9s,baz=232,slow=3.4,SNR=50
TIXI                                  LR     LR     06 38 22.3
      comp=Z,334nm,18.3s,baz=204,slow=40
      comp=Z,27nm,0.9s
TIXI  Tiksi             68.45  12     P      P      06 03 56.5 -0.8
MLR   Muntele Rosu      68.53 316     LR     LR     06 39 43.3
      comp=Z,122nm,18.7s,baz=78,slow=41
MLR   Muntele Rosu      68.53 316     P      P      06 03 59.5 +0.9
MLR                                   IAmb   IAmb   06 04 08.6
      comp=Z,24nm,1.0s
MLR   Muntele Rosu      68.53 316    ⇓P      P      06 03 60.0 +1.4
DOPR  Dopca             69.02 317    ⇑P      P      06 04 02.2 +0.8
ARR   Arges             69.41 316    ⇑P      P      06 04 04.2 +0.2
BURAR Bucovina Array    69.48 318     P      P      06 04 03.8 -0.6
BURAR Bucovina Array    69.48 318    ⇑P      P      06 04 05.8 +1.5
MNK   Minsk             69.62 326    i P     P      06 04 02.9 -2.1
      comp=E,20nm,0.8s
MNK                                  i P     P      06 04 02.9 -2.1
      comp=N,18nm,0.8s
MNK                                  i P     P      06 04 02.9 -2.1
      comp=Z,20nm,0.9s,baz=107
MNK                                  i PP    PP     06 06 35.9 -3.0
MNK                                  i PPP   PPP    06 08 18.4
MNK                                  i S     S      06 13 12.2 +0.3
MNK                                  i SSS   SSS    06 21 00.4
MNK                                  i LQ    LQ     06 30 20.7
MNK                                  i LR    LR     06 35 07.7
MNK                                  i LRM   MLR    06 38 42.8
      comp=E,143nm,15.6s
PETK  Petropavlovsk-    69.77  36     LR     LR     06 36 52.4
      comp=E,171nm,18.7s,baz=246,slow=38
RNPP5 Staryi Chortor    69.90 322     P      P      06 04 06.1 -0.6
RNPP9 Sopachiv          69.94 322     P      P      06 04 06.8 -0.1
RNPP8 Varash            69.94 322     P      P      06 04 07.3 +0.4
RNPP1 Kostyukhnivka     70.00 322     P      P      06 04 06.9 -0.4
NACGM Naroch            70.35 326    eP      P      06 04 09.4 +0.1
      comp=Z,20nm,1.0s,baz=106
SEY   Seymchan          70.48  25     P      P      06 04 10.2 +0.2
      comp=Z,1.8nm,0.6s,baz=206,slow=11,SNR=3.8
SEY                                   LR     LR     06 37 34.9
      comp=Z,314nm,20.1s,baz=212,slow=38
      comp=Z,1.8nm,0.6s
MARR  Marisel-Cluj      70.70 317    ⇑P      P      06 04 13.0 +1.2
DRGR                    70.99 317     P      P      06 04 14.3 +0.7
KHWEE KHWEE             71.51 244     P      P      06 04 18.2 +1.0
BZS   Buzias            71.55 316    ⇓P      P      06 04 17.9 +1.0
SUW   Suwalki           72.16 325     P      P      06 04 19.8 -0.5
LBTB  Lobatse           72.23 241     LR     LR     06 32 00.5
      comp=Z,581nm,20.2s,baz=70,slow=32
LBTB  Lobatse           72.23 241     P      P      06 04 23.2 +1.7
STHS  Stebnicka Huta    72.42 320    eP      P      06 04 24.7 +2.6
FINES FINESS Array B    72.64 333     P      P      06 04 23.1  0.0
      comp=Z,3.4nm,0.7s,baz=102,slow=6.7,SNR=19
      comp=Z,3.4nm,0.7s
FINES FINESS Array B    72.64 333     P      P      06 04 22.4 -0.7
PSZ   Piszkesteto       73.07 318    ⇓P      P      06 04 27.0 +1.0
OJC   Ojcow             73.48 320     P      P      06 04 28.7 +0.4
BOSA  Boshof            73.59 238     P      P      06 04 30.4 +1.0
      comp=Z,6.2nm,0.6s,baz=85,slow=4.0,SNR=20
BOSA                                  LR     LR     06 32 44.0
      comp=Z,280nm,19.2s,baz=43,slow=32
      comp=Z,6.2nm,0.6s
BOSA  Boshof            73.59 238     P      P      06 04 31.1 +1.6
BOSA                                  IAmb   IAmb   06 04 32.3
      comp=Z,38nm,1.5s
JAVC  Velka Javorina    74.66 319    eP      P      06 04 36.8 +1.5
STEB  Steborice         74.73 320    eP      P      06 04 36.3 +0.7
STEB                                 ex      x      06 04 44.5
MORC  Moravsky Berou    74.86 320     IAmb   IAmb   06 04 46.3
      comp=Z,44nm,1.8s
MORC  Moravsky Berou    74.86 320    ⇑P      P      06 04 38.0 +1.5
MORC  Moravsky Berou    74.86 320    eP      P      06 04 37.2 +0.8
MODS  Modra-Piesok      74.86 318    eP      P      06 04 39.2 +2.8
VRAC  Vranov            75.42 319     LR     LR     06 43 24.4
      comp=Z,59nm,18.2s,baz=88,slow=40
VRAC  Vranov            75.42 319    eP      P      06 04 39.9 +0.3
RONA  Rosalia, Austr    75.45 317    i P     P      06 04 41.3 +1.4
      comp=Z,5.3nm,0.7s
ARCES ARCESS Array B    75.47 340     P      P      06 04 39.1 -0.4
      comp=Z,2.1nm,0.6s,baz=100,slow=6.5,SNR=8.1
ARCES                                 LR     LR     06 40 00.3
      comp=Z,219nm,18.7s,baz=107,slow=38
      comp=Z,2.1nm,0.6s
ARCES ARCESS Array B    75.47 340     IAmb   IAmb   06 05 02.5
      comp=Z,60nm,1.6s
KRUC  Moravsky          75.52 319    eP      P      06 04 40.6 +0.4
DPC   Dobruska-Polom    75.71 320    eP      P      06 04 42.0 +0.7
DPC                                  ex      x      06 04 50.1
CONA  Conrad Observa    75.76 318    i P     P      06 04 42.2 +0.5
      comp=Z,5.0nm,1.3s
OSTC  Ostas             75.80 320    eP      P      06 04 42.9 +1.1
CHVC  Chvalec           75.90 320    eP      P      06 04 43.9 +1.5
ARSA  Arzberg           75.93 317     P      P      06 04 42.8 +0.2
ARSA                                  IAmb   IAmb   06 04 52.7
      comp=Z,37nm,1.6s
ARSA  Arzberg           75.93 317    i P     P      06 04 43.9 +1.4
      comp=Z,7.2nm,1.2s
SOKA  Soboth            76.22 316    i P     P      06 04 45.5 +1.2
      comp=Z,12nm,1.2s
OBKA  Obir              76.54 316    i P     P      06 04 47.7 +1.5
      comp=Z,16nm,1.5s
PRU   Pruhonice         76.81 320    eP      P      06 04 48.7 +1.2
MOA   Molln             76.82 317    i P     P      06 04 47.7 +0.1
      comp=Z,4.6nm,1.3s
ZVC   Zvikov            76.99 319    eP      P      06 04 49.6 +1.1
MYKA  Terra Mystica     77.17 316    i P     P      06 04 50.3 +0.6
      comp=Z,8.8nm,1.5s
BIOA  Bad Ischl, Aus    77.24 317    i P     P      06 04 50.8 +0.8
      comp=Z,6.6nm,1.2s
GEC2  GERESS Array S    77.27 318     IAmb   IAmb   06 05 00.2
      comp=Z,64nm,1.8s
GERES GERESS Array B    77.27 318     P      P      06 04 51.4 +1.1
      comp=Z,4.2nm,0.9s,baz=84,slow=4.7,SNR=14
GERES                                 LR     LR     06 44 22.9
      comp=Z,85nm,18.3s,baz=308,slow=40
      comp=Z,4.2nm,0.9s
MAW   Mawson            77.32 191     P      P      06 04 51.2 +1.3
      comp=Z,6.1nm,0.3s,baz=41,slow=6.3,SNR=21
MAW                                   LR     LR     06 33 22.5
      comp=Z,164nm,18.7s,baz=34,slow=31
      comp=Z,6.1nm,0.3s
KHC   Kasperske Hory    77.37 319    eP      P      06 04 50.8 +0.1
KHC                                  ex      x      06 04 58.2
STAL  STALIGIAL         77.79 316     IAmb   IAmb   06 04 55.8
      comp=Z,21nm,1.2s
LESA  Schwarzleotal     77.87 317    i P     P      06 04 53.9 +0.3
      comp=Z,9.8nm,1.1s
CLL   Collm             77.89 321    i P     P      06 04 54.7 +1.2
      comp=Z,9.0nm,1.5s
ABTA  Abfaltersbach     77.95 316    i P     P      06 04 55.0 +0.9
      comp=Z,8.6nm,1.5s
CIMO  Cimolais          77.98 316     IAmb   IAmb   06 05 03.8
      comp=Z,26nm,1.2s
TSUM  Tsumeb            78.02 249     LR     LR     06 35 45.6
      comp=Z,496nm,19.6s,baz=130,slow=33
HFS   Hagfors           78.30 330     P      P      06 04 55.7 +0.1
      comp=Z,1.8nm,0.5s,baz=104,slow=6.3,SNR=28
HFS                                   LR     LR     06 43 33.1
      comp=Z,211nm,18.1s,baz=90,slow=39
      comp=Z,1.8nm,0.5s
SUR   Sutherland        78.35 235     LR     LR     06 35 29.3
      comp=Z,292nm,18.8s,baz=102,slow=33
CTI   Castel Tesino     78.52 315     IAmb   IAmb   06 05 07.2
      comp=Z,71nm,1.8s
WTTA  Wattenberg        78.57 317    i P     P      06 04 57.6  0.0
      comp=Z,13nm,1.2s
WATA  Walderalm         78.61 317    i P     P      06 04 58.0 +0.2
      comp=Z,16nm,1.3s
SQTA  Sankt Quirin      78.86 317    i P     P      06 04 59.0 -0.1
      comp=Z,7.4nm,0.9s
GRF   Grafenberg Arr    78.94 319    eP      P      06 05 00.9 +1.6
      comp=Z,9.9nm,1.0s,baz=104,slow=4.7
RETA  Reutte            79.17 317    i P     P      06 05 00.9 +0.2
      comp=Z,13nm,1.1s
FETA  Feichten          79.18 316    i P     P      06 05 00.4 -0.5
      comp=Z,7.3nm,1.1s
SHEM  Shemya Is, Ala    79.50  38     LR     LR     06 41 21.5
      comp=Z,95nm,20.5s,baz=292,slow=37
NB2   NORSAR Subarra    79.60 331     P      P      06 05 02.2 -0.6
      comp=Z,2.1nm,0.6s,baz=97,slow=5.1
NOA   NORSAR Array B    79.60 331     P      P      06 05 02.5 -0.3
      comp=Z,2.9nm,1.1s,baz=95,slow=5.7,SNR=8.8
NOA                                   LR     LR     06 44 04.8
      comp=Z,217nm,19.9s,baz=5.0,slow=39
      comp=Z,2.9nm,1.1s
DAVOX Davos/Dischmat    79.76 316     LR     LR     06 48 26.9
      comp=Z,57nm,18.4s,baz=69,slow=42
DAVA  Damuels           79.77 317    i P     P      06 05 04.0 -0.1
      comp=Z,11nm,1.1s
SPITS Spitsbergen Ar    80.32 348     P      P      06 05 06.2 -0.1
      comp=Z,8.4nm,0.7s,baz=96,slow=7.7,SNR=10.0
SPITS                                 LR     LR     06 48 32.2
      comp=Z,206nm,18.1s,baz=95,slow=42
      comp=Z,8.4nm,0.7s
SENIN Lac Senin/Sane    81.54 316     IAmb   IAmb   06 05 23.6
      comp=Z,70nm,1.8s
EDA   Edea              81.78 273     P      P      06 05 15.3  0.0
SYO   Syowa Base        84.05 197   ⇓eP      P      06 05 29.6 +3.8
NOR   Nord              85.86 352    i P     P      06 05 33.0 -1.9
EKA   Eskdalemuir Ar    87.41 325     P      P      06 05 43.3 +0.4
      comp=Z,5.9nm,1.0s,baz=103,slow=3.8,SNR=7.3
EKA                                   LR     LR     06 47 51.1
      comp=Z,45nm,18.5s,baz=66,slow=38
      comp=Z,5.9nm,1.0s
DAG   Danmarks Havn     87.94 348    i P     P      06 05 44.0 -1.1
TORD  Torodi Ar. Bea    89.03 283     P      P      06 05 52.0 +0.6
      comp=Z,2.2nm,1.0s,baz=62,slow=5.2,SNR=6.9
      comp=Z,2.2nm,1.0s
C18K  Utukok River      89.46  21     IAmb   IAmb   06 06 24.4
      comp=Z,39nm,1.6s
E18K  Tukpahlearik C    90.06  22     IAmb   IAmb   06 06 05.5
      comp=Z,16nm,0.9s
F17K  Baldwin Pennin    90.12  23     IAmb   IAmb   06 06 05.2
      comp=Z,12nm,0.8s
URZ   Urewera           90.22 128     LR     LR     06 47 23.6
      comp=Z,147nm,19.7s,baz=292,slow=36
ELIB  Princess Elisa    90.22 197    dP      P      06 05 59.3 +3.3
      comp=Z,10nm,1.1s
B20K  Meade River       90.35  19     P      P      06 05 56.9 +0.4
ESDC  Sonseca Array     90.39 310     P      P      06 05 57.9 +0.5
      comp=Z,1.2nm,0.6s,baz=59,slow=4.3,SNR=13
ESDC                                  LR     LR     06 52 29.3
      comp=Z,85nm,18.3s,baz=100,slow=40
      comp=Z,1.2nm,0.6s
ESDC  Sonseca Array     90.39 310            P      06 05 57.7 +0.2
D19K  Kuna River        90.58  20     IAmb   IAmb   06 06 20.4
      comp=Z,40nm,1.8s
D20K  Etivluk River     91.01  20     IAmb   IAmb   06 06 09.7
      comp=Z,27nm,1.3s
H17K  Granite Mounta    91.12  24     IAmb   IAmb   06 06 10.6
      comp=Z,32nm,1.6s
E19K  Redstone River    91.27  21     IAmb   IAmb   06 06 23.5
      comp=Z,32nm,1.4s
F19K  Shaleruckik Mo    91.30  22     IAmb   IAmb   06 06 23.5
      comp=Z,14nm,1.1s
F20K  Avaraart Lake     91.96  21     IAmb   IAmb   06 06 27.2
      comp=Z,9.6nm,0.9s
VNDA  Vanda             92.44 168     P      P      06 06 06.0 -0.1
      comp=Z,0.4nm,0.7s,baz=351,slow=2.1,SNR=1.7
VNDA                                  LR     LR     06 44 29.3
      comp=Z,87nm,18.1s,baz=308,slow=34
      comp=Z,0.4nm,0.7s
D23K  Nanushuk River    92.86  19     IAmb   IAmb   06 06 18.4
      comp=Z,19nm,1.2s
RAO   Raoul Island      93.17 119     LR     LR     06 52 26.2
      comp=Z,74nm,18.2s,baz=96,slow=38
NEEM  North Greenlan    93.22 352    i P     P      06 06 10.0 -0.1
TOLK  Toolik Lake Re    93.37  19     P      P      06 06 10.7 +0.1
BORG  Borgarnes         93.52 337     LR     LR     06 50 53.2
      comp=Z,139nm,18.5s,baz=67,slow=37
H21K  Melozitna Rive    93.61  22     IAmb   IAmb   06 06 21.3
      comp=Z,36nm,2.0s
E24K  Your Creek        94.00  19     IAmb   IAmb   06 06 48.6
      comp=Z,16nm,1.6s
D25K  Kavik River       94.02  18     IAmb   IAmb   06 06 23.3
      comp=Z,13nm,0.9s
C27K  Jago River        94.64  17     IAmb   IAmb   06 06 19.6
      comp=Z,16nm,1.4s
E25K  Arctic Village    94.91  19     IAmb   IAmb   06 09 02.9
      comp=Z,22nm,1.9s
F26K  Sheenjek River    95.59  19     IAmb   IAmb   06 06 31.3
      comp=Z,27nm,1.9s
G26K  Porcupine Rive    96.13  19     IAmb   IAmb   06 06 39.1
      comp=Z,4.9nm,0.8s
ILAR  Eielson Array     96.23  22     P      P      06 06 23.1 -0.6
      comp=Z,0.5nm,0.8s,baz=307,slow=3.7,SNR=5.3
ILAR                                  PP     PP     06 10 14.1 -2.5
      comp=Z,0.7nm,0.9s,baz=245,slow=6.5,SNR=5.3
ILAR                                  LR     LR     06 54 42.7
      comp=Z,172nm,18.5s,baz=301,slow=39
      comp=Z,0.5nm,0.8s
DBIC  Dimbokro          96.26 277     LR     LR     06 49 08.5
      comp=Z,308nm,19.0s,baz=116,slow=35
KULLO Kullorsuaq        96.45 352    i P     P      06 06 27.2 +2.7
E28M  Babbage River     96.45  17     IAmb   IAmb   06 06 47.9
      comp=Z,5.0nm,0.9s
E29M  Blow River        97.06  17     IAmb   IAmb   06 06 47.9
      comp=Z,20nm,1.7s
KDAK  Kodiak Island     97.09  29     LR     LR     06 55 19.5
      comp=Z,117nm,18.1s,baz=295,slow=39
INK   Inuvik            98.32  16     LR     LR     06 57 59.9
      comp=Z,162nm,18.1s,baz=338,slow=40
RES   Resolute Bay      98.34   2     P      Pdif   06 06 33.5 +0.4
      comp=Z,2.3nm,1.0s,baz=9.5,slow=6.1,SNR=6.7
RES                                   LR     LR     06 54 27.0
      comp=Z,87nm,21.6s,baz=17,slow=38
      comp=Z,2.3nm,1.0s
RES   Resolute Bay      98.34   2     IAmb   IAmb   06 06 51.8
      comp=Z,4.3nm,0.5s
YKA   Yellowknife Ar   107.68  13     PP     PP     06 11 39.9 -2.5
      comp=Z,1.3nm,1.1s,baz=335,slow=7.5,SNR=5.2
PPT2  Papeete2         118.85 106    eLR     LR     06 47 51.8
      comp=Z,73nm,23.8s
PLID  Pearl Lake       122.25  23            PKiKP  06 11 51.7 +0.3
HLID  Hailey           124.15  23            PKiKP  06 11 55.8 +0.7
ELK   Elko             126.16  26     PKP    PKiKP  06 11 59.6 +0.3
      comp=Z,0.6nm,0.7s,baz=141,slow=1.4,SNR=4.0
NVAR  Mina Array Bea   126.59  30     PKP    PKiKP  06 12 00.8 +0.6
      comp=Z,1.1nm,0.7s,baz=306,slow=2.1,SNR=8.8
PDAR  Pinedale Array   126.62  20     PKP    PKiKP  06 12 00.2 +0.1
      comp=Z,1.1nm,0.8s,baz=91,slow=1.4,SNR=8.9
TAOE  Nuku Hiva Isla   128.04  96    eLR     LR     06 52 13.6
      comp=Z,105nm,25.8s
ECSD  EROS Data Cent   128.86   8            PKiKP  06 12 04.6 +0.3
TXAR  Lajitas Array    140.74  22     PKP    PKPdf  06 12 26.0 -0.3
      comp=Z,0.4nm,0.5s,baz=188,slow=0.6,SNR=6.5
TXAR                                  PP     PP     06 15 25.1 +0.3
      comp=Z,0.1nm,0.3s,baz=339,slow=7.8,SNR=5.6
PLCA  Paso Flores      143.09 202     PKP    PKPdf  06 12 28.9 -1.2
      comp=Z,1.9nm,0.9s,baz=213,slow=5.6,SNR=4.3
CPUP  Villa Florida    145.29 233     PKPbc  PKPdf  06 12 34.4 +0.1
      comp=Z,12nm,1.0s,baz=126,slow=5.0,SNR=22
CPUP  Villa Florida    145.29 233            PKPdf  06 12 35.0 +0.7
BO02  Sierra Bellavi   148.26 207     PKPbc  PKiKP  06 12 43.8 -0.4
PTLB  Pontes e Lacer   150.79 251            PKPdf  06 12 46.0 +2.5
LPAZ  La Paz           158.76 243     PKP    PKPdf  06 12 55.4 +0.1
      comp=Z,1.1nm,0.7s,baz=146,slow=1.9,SNR=3.8
LPAZ                                  PKPab  PKPab  06 13 32.4 +1.5
      comp=Z,4.0nm,1.0s,baz=89,slow=5.1,SNR=7.0
```

GCG ***24*** *05:59:16.8±0.8, 14°.39N×92°.87W, h154km±41km, MD4.3, ML3.2*

IDC ***24*** *05:59:21.1±4.1, 14°.37N×92°.91W, h0km, mb3.3/3, mbtmp3.2/5, ML3.2/2, MS2.2/1, Error ellipse: s-maj=83.4km s-min=24.2km az=15.0*

ISC 24 05:59:21.6±1.5**, 13°.9N**±0°.1×**92°.94W**±0°.07**, h35km, n12,** σ**2s.05**/16**, mb3.4**/3**, 1D, Off coast of Chiapas**

```
Code  Station Name       Δ°   AZ°   Phase ID        Time       Res
                                    Op     ISC      h  m  s    ISC
SMCA  Catarina          1.29  40  ⇓eP      Pn     05 59 42.1 -1.1
STG2  El Palmar, Qui    1.62  69   eP      Pn     05 59 44.9 -2.9
STG2                               eS      Sn     06 00 06.1 -1.4
STG5  El Palmar, Qui    1.63  71   i P     Pn     05 59 45.0 -3.0
STG5                               i S     Sn     06 00 07.4 -0.4
STG8  El Palmar, Qui    1.65  69   i P     Pn     05 59 45.5 -2.8
STG8                                IAML          06 00 08.6
      comp=N,191nm,0.2s
APG   El Apazote        2.65  64    Pn     Pn     06 00 02.4 +0.3
      comp=N,0.1nm,0.3s,baz=206,slow=14,SNR=4.6
APG                                 Sn     Sn     06 00 34.6 +1.4
      comp=N,0.2nm,0.3s,baz=227,slow=19,SNR=4.0
NUBE  Las Nubes         3.07  89   eP      Pn     06 00 06.2 -1.5
CMIG  Matias Romero     3.71 330    Pn     Pn     06 00 14.0 -2.5
      comp=N,1.8nm,0.3s,baz=142,slow=11,SNR=60
CMIG                                Sn     Sn     06 00 55.4 -3.7
      comp=N,3.2nm,0.3s,baz=144,slow=19,SNR=8.9
CMIG                                LR     LR     06 01 07.0
      comp=N,34nm,18.8s,baz=46,slow=32
      comp=N,3.7nm,0.3s
TEIG  Tepich            7.74  35    Pn     Pn     06 01 11.6 -0.2
      baz=130,slow=23,SNR=6.5
TEIG                                Sn     Sn     06 02 38.4 +0.1
      baz=131,slow=24,SNR=1.4
TXAR  Lajitas Array    18.32 329    P      P      06 03 31.7 -1.3
      baz=154,slow=10,SNR=4.3
      comp=N,0.2nm,0.7s
NVAR  Mina Array Bea   33.21 322    P      P      06 05 57.1 +1.6
      comp=N,0.1nm,0.3s,baz=143,slow=5.2,SNR=1.3
      comp=N,0.1nm,0.3s
YKA   Yellowknife Ar   50.95 347    P      P      06 08 20.4 +1.0
      comp=N,0.3nm,0.7s,baz=149,slow=7.2,SNR=5.9
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	comp=N,0.3nm,0.7s						
ILAR	**Eielson Array**	**62.60**	**337**	P	**P**	**06 09 43.6**	**+1.5**
	comp=N,0.3nm,0.6s,baz=126,slow=5.4,SNR=4.3						
	comp=N,0.3nm,0.6s						

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*IDC **24** 06:05:38.2±1.3,2°.47N×126°.68E,h0^{km},mb3.7/6, mbtmp3.8/6,Error ellipse: s-maj=101.9km s-min=17.5km az=68.0*
*DJA **24** 06:05:41.9±0.4,3°N±4°×12°7E±°,h10^{km},M3.5/6,MLv3.5/6*
ISC 24 06:05:44.7±1.1,**2°.6N**±0°.1×**127°.2E**±0°.2,**h53**^{km},**n9**, σ**0^{s}.79**/10,**mb4.1**/5,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**0.96**	**139**	P	**Pn**	**06 06 01.3**	**-0.7**
TNTI	**Ternate**	**1.80**	**173**	P	**Pn**	**06 06 12.7**	**-0.6**
SGSI	**Sangihe**	**1.97**	**304**	P	**Pn**	**06 06 15.3**	**-0.4**
FITZ	**Fitzroy Crossi**	**20.59**	**184**	P	**P**	**06 10 19.2**	**-0.3**
	1.1nm,0.7s,baz=19,slow=12,SNR=6.3						
	1.1nm,0.7s						
WRA	**Warramunga Arr**	**23.46**	**163**	P	**P**	**06 10 49.6**	**0.0**
	1.0nm,0.5s,baz=337,slow=11,SNR=16						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**26.89**	**166**	P	**P**	**06 11 21.1**	**+0.2**
	0.5nm,0.6s,baz=347,slow=7.4,SNR=12						
ASAR				PcP	**PcP**	**06 14 43.6**	**+1.4**
	0.2nm,0.6s,baz=339,slow=3.1,SNR=2.4						
	0.5nm,0.6s						
STKA	**Stephens Creek**	**36.90**	**159**	P	**P**	**06 12 49.1**	**+0.7**
	1.3nm,0.5s,baz=333,slow=9.4,SNR=4.4						
	1.3nm,0.5s						
MKAR	**Makanchi Array**	**58.75**	**325**	P	**P**	**06 15 37.0**	**-0.3**
	0.7nm,0.5s,baz=119,slow=8.0,SNR=16						
	0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**62.94**	**328**	P	**P**	**06 16 04.8**	**-0.8**
	0.6nm,0.3s,baz=131,slow=6.5,SNR=8.4						
	0.6nm,0.3s						

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*SKHL **24** 06:33:32.7±0.8,45°.80N×153°.20E,h35^{km}±9^{km},mb4.4/2*
*IDC **24** 06:33:34.8±3.5,47°.15N×152°.70E,h74^{km}±28^{km},mb3.3/7, mbtmp3.6/9,Error ellipse: s-maj=48.8km s-min=25.3km az=165.0*
ISC 24 06:33:29.6±1.2,**46°.8N**±0°.2×**153°.0E**±0°.2,**h35**^{km},**n20**, σ**2^{s}.47**/13,**mb3.7**/7,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.90**	**249**	*e*P	**Pn**	**06 34 29.5**	**+2.6**
KUR				AMB	AMB	06 34 32.7	
	70nm,0.5s						
KUR				*e*S	**Sn**	**06 35 12.7**	**+1.3**
KUR				A	A	06 35 17.8	
	160nm,0.4s						
KUR				A	A	06 35 17.8	
	80nm,0.4s						
AKK	**Akkeshi**	**6.90**	**240**	*e*P	**Pn**	**06 35 09.5**	**+1.3**
AKK				*e*S	**Sn**	**06 36 21.6**	**-3.9**
PETK	**Petropavlovsk-**	**7.04**	**24**	P	**Pn**	**06 35 12.0**	**+1.9**
	2.3nm,0.8s,baz=188,slow=9.0,SNR=4.6						
PETK				S	Sn	06 36 19.0	-10
	2.5nm,0.4s,baz=258,slow=19,SNR=5.7						
ASAJ	**Asahikawa**	**7.79**	**254**	P	**Pn**	**06 35 23.9**	**+3.5**
	2.9nm,0.3s,baz=146,slow=20,SNR=1.4						
H11N2	**WAKE ISLAND Hy**	**29.25**	**152**	T	T	07 10 47.2	
	baz=340,slow=76,SNR=89						
H11N1	**WAKE ISLAND Hy**	**29.27**	**152**	T	T	07 10 52.3	
	baz=340,slow=76,SNR=23						
H11N3	**WAKE ISLAND Hy**	**29.27**	**152**	T	T	07 10 59.2	
	baz=340,slow=76,SNR=24						
H11S1	**WAKE ISLAND Hy**	**30.34**	**154**	T	T	07 12 28.2	
	baz=341,slow=76,SNR=70						
H11S3	**WAKE ISLAND Hy**	**30.35**	**154**	T	T	07 12 29.2	
	baz=341,slow=76,SNR=62						
H11S2	**WAKE ISLAND Hy**	**30.36**	**154**	T	T	07 12 24.3	
	baz=341,slow=76,SNR=51						
ILAR	**Eielson Array**	**36.59**	**39**	P	**P**	**06 40 30.4**	**-1.4**
	0.3nm,0.7s,baz=244,slow=9.7,SNR=4.0						
	0.3nm,0.7s						
FINES	**FINESS Array B**	**64.01**	**335**	P	**P**	**06 43 57.0**	**-2.0**
	0.4nm,0.5s,baz=11,slow=12,SNR=5.1						
	0.4nm,0.5s						
PDAR	**Pinedale Array**	**64.80**	**54**	P	**P**	**06 44 06.1**	**+1.3**
	0.2nm,0.6s,baz=298,slow=5.7,SNR=2.3						
	0.2nm,0.6s						
NOA	**NORSAR Array B**	**68.20**	**341**	P	**P**	**06 44 24.4**	**-1.6**
	0.5nm,0.7s,baz=29,slow=6.6,SNR=2.4						
	0.5nm,0.7s						
HFS	**Hagfors**	**68.43**	**339**	P	**P**	**06 44 25.6**	**-1.8**
	0.9nm,0.5s,baz=35,slow=5.4,SNR=9.2						
	0.9nm,0.5s						
AKASG	**Malin Array Be**	**71.50**	**326**	P	**P**	**06 44 44.0**	**-2.4**
	0.3nm,0.3s,baz=39,slow=6.2,SNR=2.4						
	0.3nm,0.3s						
TXAR	**Lajitas Array**	**77.55**	**60**	P	**P**	**06 45 22.7**	**+0.7**
	0.2nm,0.6s,baz=308,slow=5.3,SNR=3.7						
	0.2nm,0.6s						
H03N2	**Juan Fernandez**	**138.82**	**90**	T	T	09 28 16.0	
	baz=308,slow=77,SNR=18						
H03N1	**Juan Fernandez**	**138.83**	**90**	T	T	09 28 21.4	
	baz=308,slow=77,SNR=19						
H03N3	**Juan Fernandez**	**138.83**	**90**	T	T	09 28 09.8	
	baz=308,slow=77,SNR=18						

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*NEIC **24** 06:33:59.4±1.3,38°.83N±0°.01×122°.72W±0°.01,h5^{km}±5^{km}, Error ellipse: s-maj=1.9km s-min=1.6km az=199.0*
*NCEDC **24** 06:33:59.5±1.0,38°.82N±0°.01×122°.76W±0°.02,h2^{km}±2^{km}, ML3.2/57,ML3.0/69(NEIC),Error ellipse: s-maj=2.1km s-min=1.7km az=215.0*
*IDC **24** 06:34:05.1±3.0,38°.86N×122°.22W,h0^{km},mbtmp3.0/4, ML2.9/4,Error ellipse: s-maj=41.3km s-min=12.9km az=35.0*
ISC 24 06:34:00.1±0.8,**38°.82N**±0°.02×**122°.74W**±0°.02,**h10**^{km},**n98**, σ**1^{s}.00**/94,**Northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GDXM	**Geysers**	**0.04**	**256**		**Pg**	**06 34 00.3**	**-1.8**
GDXM					**Sg**	**06 34 01.1**	**-2.6**
GDXM	**Geysers**	**0.04**	**256**	IAML		06 34 01.4	
	comp=N,295μm,0.2s						
GDXM				IAML		06 34 01.5	
	comp=E,217μm,0.2s						
GBGM	**Boggs Mountain**	**0.05**	**95**		**Pg**	**06 34 01.3**	**-1.0**
GGPM	**Geyser Peak**	**0.10**	**236**		**Pg**	**06 34 01.5**	**-1.3**
GAXM	**Alexander Vall**	**0.11**	**185**		**Pg**	**06 34 01.8**	**-1.0**
GAXM					**Sg**	**06 34 03.6**	**-1.1**
GPMM	**Pine Mountain**	**0.16**	**280**		**Pg**	**06 34 02.9**	**-0.8**
GCVM	**Cloverdale**	**0.22**	**257**		**Pg**	**06 34 04.2**	**-0.4**
NMTM	**Middletown**	**0.23**	**93**		**Pg**	**06 34 04.8**	**-0.1**
MNRC	**McLaughlin Min**	**0.24**	**75**	Pg	**Pg**	**06 34 05.4**	**+0.3**
HOPS	**Hopland Field**	**0.31**	**304**	Pg	**Pg**	**06 34 05.9**	**-0.4**
HOPS				IAML		06 34 15.0	
	comp=E,2μm,0.7s						
GHGM	**Hogback Ridge**	**0.32**	**348**		**Pg**	**06 34 05.8**	**-0.6**
GSNM	**Snow Mountain**	**0.37**	**289**		**Pg**	**06 34 07.0**	**-0.5**
GALB	**Galbreath Wild**	**0.40**	**276**		**Pg**	**06 34 07.6**	**-0.5**
NTYM	**Taylor**	**0.43**	**172**		**Pg**	**06 34 08.6**	**+0.1**
NIMB	**Iron Mountain**	**0.45**	**124**		**Pg**	**06 34 09.2**	**+0.2**
OAKV	**Oakville Exper**	**0.47**	**146**		**Pg**	**06 34 09.0**	**-0.2**
BONV	**Boonville, CA**	**0.50**	**290**		**Pg**	**06 34 09.8**	**-0.1**
CVS	**Carmenet Viney**	**0.52**	**155**		**Pg**	**06 34 10.0**	**-0.2**
CVS	**Carmenet Viney**	**0.52**	**155**	IAML		06 34 18.3	
	comp=E,2μm,0.5s						
CVS				IAML		06 34 18.8	
	comp=N,1μm,0.5s						
NAPC	**Atlas Peak**	**0.54**	**134**		**Pg**	**06 34 10.4**	**-0.2**
QRDG	**Quail Ridge Na**	**0.58**	**126**		**Pb**	**06 34 11.5**	**-0.8**
GWRM	**Wonder Ranch**	**0.58**	**312**		**Pg**	**06 34 10.9**	**-0.5**
GFC	**Funks Creek**	**0.62**	**35**		**Pn**	**06 34 14.0**	**-0.9**
NDHM	**Dunnigan Hills**	**0.65**	**94**		**Pn**	**06 34 14.2**	**-1.2**
GHOM	**Hamilton Openi**	**0.66**	**290**		**Pg**	**06 34 12.7**	**-0.2**
LOC	**Lincoln School**	**0.67**	**178**		**Pg**	**06 34 12.5**	**-0.5**
SNT	**Sears Point**	**0.67**	**160**		**Pg**	**06 34 12.5**	**-0.6**
NGVM		**0.68**	**142**		**Pg**	**06 34 13.0**	**-0.2**
MCCM	**Marconi Confer**	**0.68**	**189**	Pg	**Pb**	**06 34 13.5**	**-0.6**
MCCM				IAML		06 34 31.2	
	comp=N,668nm,1.0s						
MCCM				IAML		06 34 34.3	
	comp=E,694nm,1.1s						
NADM	**Allendale**	**0.70**	**120**		**Pn**	**06 34 15.0**	**-1.1**
RUSS	**Russell Ranch**	**0.74**	**111**		**Pn**	**06 34 15.7**	**-0.9**
NOLM	**Olema**	**0.78**	**183**		**Pg**	**06 34 15.0**	**-0.1**
GNAM	**Navarro Ridge**	**0.79**	**299**		**Pg**	**06 34 15.1**	**-0.3**
DCMP	**DeCamp, Califo**	**0.80**	**325**		**Pg**	**06 34 15.0**	**-0.5**
SVIN	**Saint Vincent'**	**0.80**	**168**		**Pg**	**06 34 14.9**	**-0.7**
KRKM	**Rackout Spring**	**0.82**	**335**		**Pb**	**06 34 16.2**	**-0.3**
OSUM	**Sutter Buttes**	**0.83**	**57**		**Pg**	**06 34 15.7**	**-0.3**
NLHM	**Lake Herman**	**0.84**	**146**		**Pg**	**06 34 15.8**	**-0.5**
SUTB	**Sutter Butte**	**0.85**	**61**		**Pg**	**06 34 15.5**	**-1.0**
SUTB	**Sutter Butte**	**0.85**	**61**	IAML		06 34 38.4	
	comp=N,509nm,0.6s						
SUTB				IAML		06 34 40.5	
	comp=E,554nm,0.6s						
PINL	**Point Pinole R**	**0.86**	**160**		**Pb**	**06 34 16.9**	**-0.2**
CPMM	**Point Molate**	**0.91**	**163**		**Pg**	**06 34 17.1**	**-0.4**
JEPS	**Jepson Natural**	**0.91**	**128**		**Pn**	**06 34 18.2**	**-0.7**
CSPM	**San Pablo Ridg**	**0.92**	**158**		**Pb**	**06 34 17.9**	**-0.3**
MNDO	**Woodland Fire**	**0.92**	**303**		**Pg**	**06 34 17.7**	**-0.2**
CPIM	**Pinole Ridge**	**0.93**	**153**		**Pb**	**06 34 18.0**	**-0.2**
GVV	**Valley View**	**0.96**	**3**		**Pn**	**06 34 19.0**	**-0.7**
CTAM	**Taylor**	**0.97**	**144**		**Pn**	**06 34 19.6**	**-0.2**
AGC	**Angel Island**	**0.99**	**166**		**Pg**	**06 34 18.7**	**-0.4**
BRIB	**Briones**	**1.01**	**153**		**Pg**	**06 34 18.6**	**-0.9**
BRK	**Berkeley--Havi**	**1.02**	**158**		**Pg**	**06 34 19.2**	**-0.5**
VAK	**Adit at Lawren**	**1.02**	**157**		**Pg**	**06 34 18.7**	**-0.9**
BL67	**Building 67, L**	**1.02**	**158**		**Pb**	**06 34 19.5**	**-0.3**
BKS	**Berkeley--Byer**	**1.02**	**157**		**Pg**	**06 34 18.8**	**-1.0**
INGLE	**Inglenook, Smi**	**1.03**	**314**		**Pg**	**06 34 19.5**	**-0.4**
JPRM	**Presidio of Sa**	**1.04**	**168**		**Pg**	**06 34 19.7**	**-0.4**
OSTM	**Stimpson Lane**	**1.05**	**58**		**Pg**	**06 34 18.6**	**-1.7**
KCPM	**Cahto Peak**	**1.08**	**323**		**Pg**	**06 34 20.2**	**-0.7**
KCPM				IAML		06 34 47.2	
	comp=N,493nm,0.8s						
GROM	**Round Mountain**	**1.10**	**3**		**Pn**	**06 34 21.8**	**+0.1**
CRHM	**Round Hill Res**	**1.12**	**148**		**Pb**	**06 34 20.7**	**-0.9**
CMCM	**Mills College**	**1.13**	**157**		**Pb**	**06 34 21.1**	**-0.6**
KBNM	**Bluenose Ridge**	**1.13**	**342**		**Pn**	**06 34 23.0**	**+0.9**
BGC	**Bolinger Road**	**1.14**	**152**		**Pb**	**06 34 20.8**	**-1.0**
FARB	**Farallon Islan**	**1.14**	**190**		**Pb**	**06 34 21.2**	**-0.6**
FARB	**Farallon Islan**	**1.14**	**190**	IAML		06 34 48.3	
	comp=E,197nm,0.8s						
PAM	**Palermo**	**1.14**	**56**		**Pb**	**06 34 19.8**	**-2.1**
CSLM	**San Leandro Hi**	**1.20**	**156**		**Pb**	**06 34 22.2**	**-0.6**
ORV	**Oroville**	**1.21**	**52**		**Pn**	**06 34 21.0**	**-2.2**
SAC	**San Andreas**	**1.26**	**168**		**Pn**	**06 34 22.4**	**-1.3**
JCPM	**Coyote Point**	**1.27**	**165**		**Pn**	**06 34 23.4**	**-0.5**
JCHM	**Cahill Ridge**	**1.33**	**167**		**Pn**	**06 34 23.0**	**-1.7**
O02D	**Mt. Diablo Mer**	**1.36**	**358**		**Pg**	**06 34 25.8**	**-0.4**
JRSC	**Jasper Ridge**	**1.47**	**164**		**Pn**	**06 34 26.5**	**-0.1**
JRSC				IAML		06 34 49.3	
	comp=N,203nm,0.7s						
KMRM	**Mail Ridge**	**1.59**	**332**		**Pb**	**06 34 29.5**	**-0.1**
KMRM				IAML		06 34 38.8	
	comp=N,186nm,0.8s						
KMRM				IAML		06 34 38.9	
	comp=E,172nm,0.8s						
WELL	**Weller Preserv**	**1.62**	**103**	IAML		06 34 54.4	
	comp=E,91nm,0.3s						
O03E	**Paynes Creek**	**1.64**	**26**		**Pn**	**06 34 28.1**	**-1.0**
MHC	**Mount Hamilton**	**1.71**	**149**		**Pn**	**06 34 30.0**	**-0.1**
MHC				IAML		06 34 56.4	
	comp=E,107nm,0.7s						
MHC				IAML		06 35 06.7	
	comp=N,90nm,0.8s						
KHBM	**Hayfork Bally**	**1.88**	**349**		**Pb**	**06 34 34.5**	**-0.1**
KMPM	**Mount Pierce**	**1.92**	**327**	Pn	**Pn**	**06 34 33.0**	**+0.1**
KMPM				IAML		06 34 45.3	
	comp=N,125nm,1.0s						
KMPM				IAML		06 35 24.7	
	comp=E,160nm,2.2s						
CMB	**Columbia Colle**	**2.01**	**112**		**Pn**	**06 34 33.7**	**-0.4**
CMB				IAML		06 35 09.6	
	comp=N,77nm,0.7s						
BEKR	**Beckworth**	**2.12**	**60**	Pn	**Pn**	**06 34 36.5**	**+0.7**
N02D	**Trinity Center**	**2.15**	**1**	Pn	**Pn**	**06 34 36.9**	**+0.7**
HATC	**Hat Creek Radi**	**2.23**	**26**		**Pn**	**06 34 38.1**	**+0.9**
HATC				IAML		06 35 38.7	
	comp=N,71nm,4.4s						
HATC				IAML		06 35 41.7	
	comp=E,68nm,1.5s						
SAO	**San Andreas Ge**	**2.29**	**153**		**Pn**	**06 34 37.0**	**-1.0**
PNTR	**Pine Nut**	**2.46**	**83**		**Pn**	**06 34 41.8**	**+1.2**
BBGB	**Big Mountain B**	**2.61**	**148**	Pn	**Pn**	**06 34 42.5**	**0.0**
PAHR	**Pah Rah Range**	**2.75**	**70**		**Pn**	**06 34 44.9**	**+0.5**
PAHR				IAML		06 35 45.8	
	comp=N,30nm,1.7s						
PAHR				IAML		06 35 49.1	
	comp=E,31nm,2.2s						
YBH	**Yreka Blue Hor**	**2.91**	**0**	Pn	**Pg**	**06 34 54.1**	**-1.8**
	comp=E,0.1nm,0.3s,baz=172,slow=6.4,SNR=8.3						
PMPB	**Monarch Peak**	**3.02**	**149**	Pn	**Pn**	**06 34 49.0**	**+1.0**
PMPB				IAML		06 35 30.3	
	comp=E,58nm,1.0s						
PMPB				IAML		06 36 04.4	
	comp=N,62nm,3.9s						
MDPB	**Devils Postpil**	**3.12**	**111**		**Pn**	**06 34 50.9**	**+1.3**
MDPB				IAML		06 35 39.0	
	comp=E,40nm,0.7s						
MDPB				IAML		06 35 39.5	
	comp=N,58nm,0.8s						
RYN	**Ryan**	**3.31**	**92**		**Pn**	**06 34 52.9**	**+0.8**
RYN				IAML		06 36 02.6	
	comp=E,32nm,1.0s						
RYN				IAML		06 36 03.3	
	comp=N,31nm,1.3s						
NVAR	**Mina Array Bea**	**3.50**	**95**	Pn	**Pn**	**06 34 55.2**	**+0.5**
	comp=N,0.7nm,0.3s,baz=271,slow=15,SNR=20						
NVAR				Lg	Lg	06 35 42.9	
	baz=213,slow=33						
	comp=N,3.0nm,0.7s						
NVAR	**Mina Array Bea**	**3.50**	**95**		**Pn**	**06 34 54.8**	**0.0**
NV11	**Mina Array Sit**	**3.61**	**95**	IAML		06 36 00.8	
	comp=E,21nm,1.7s						
NV11				IAML		06 36 22.6	
	comp=N,29nm,2.2s						
CWC	**Cottonwood Cre**	**4.40**	**121**	Pn	**Pn**	**06 35 09.4**	**+2.3**
ELK	**Elko**	**6.09**	**69**	Pn	**Pn**	**06 35 33.0**	**+2.6**
	comp=N,0.1nm,0.3s,baz=252,slow=13,SNR=6.7						
	comp=N,1.2nm,0.8s						
PDAR	**Pinedale Array**	**10.74**	**64**	Pn	**Pn**	**06 36 36.8**	**+2.5**
	baz=232,slow=7.3,SNR=4.8						
	comp=N,1.0nm,1.0s						
TXAR	**Lajitas Array**	**18.39**	**115**	P	**P**	**06 38 18.2**	**+2.9**
	baz=297,slow=11,SNR=4.4						
	comp=N,0.6nm,1.1s						

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*IDC **24** 06:52:22.0±0.9,61°.32N×148°.92W,h0^{km},mb3.4/3, mbtmp3.3/7,ML3.1/4,MS3.2/1,Error ellipse: s-maj=21.6km s-min=8.3km az=106.0*
*AEIC **24** 06:52:23.7±1.1,61°.49N±0°.04×149°.86W±0°.06,h42^{km}±5^{km}, ML3.5,ML3.7/212(NEIC),Error ellipse: s-maj=5.4km s-min=3.7km az=160.0*
*NEIC **24** 06:52:23.3±1.3,61°.52N±0°.03×149°.87W±0°.05,h43^{km}±5^{km}, Error ellipse: s-maj=4.1km s-min=3.1km az=139.0*
ISC 24 06:52:23.4±0.8,**61°.51N**±0°.03×**149°.87W**±0°.03,**h42**^{km}, **n211**,σ**0^{s}.74**/174,**mb3.2**/3,**Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
M22K	**Willow**	**0.28**	**335**		**Pn**	**06 52 30.9**	**-0.6**
M22K				IAML		06 52 38.1	
	comp=E,9μm,0.5s						
M22K	**Willow**	**0.28**	**335**		**Sn**	**06 52 37.8**	**+0.5**
PMR	**Palmer**	**0.37**	**76**		**Pn**	**06 52 32.0**	**-0.5**
PMR	**Palmer**	**0.37**	**76**		**Sn**	**06 52 39.3**	**+0.3**
PMR	**Palmer**	**0.37**	**76**	P	**Pn**	**06 52 31.7**	**-0.9**
SUA	**Susitna One**	**0.42**	**265**		**Pn**	**06 52 32.9**	**-0.5**
SUA	**Susitna One**	**0.42**	**265**		**Sn**	**06 52 41.0**	**+0.6**
RC01	**Rabbit Creek A**	**0.42**	**171**		**Pn**	**06 52 32.8**	**-0.5**
RC01				IAML		06 52 41.4	
	comp=E,6μm,0.3s						
RC01				IAML		06 52 42.1	
	comp=N,4μm,0.5s						
RC01	**Rabbit Creek A**	**0.42**	**171**		**Sn**	**06 52 40.8**	**+0.7**
GHO	**Glory Hole Cre**	**0.53**	**59**		**Pn**	**06 52 34.3**	**-0.4**
GHO	**Glory Hole Cre**	**0.53**	**59**		**Sn**	**06 52 43.0**	**+0.4**
KNK	**Knik Glacier**	**0.69**	**97**		**Pn**	**06 52 36.6**	**-0.2**
KNK	**Knik Glacier**	**0.69**	**97**		**Sn**	**06 52 47.4**	**+1.1**
SML	**Sawmill**	**0.80**	**67**		**Pn**	**06 52 37.6**	**-0.7**
SML				IAML		06 52 50.4	
	comp=E,5μm,0.5s						
SML				IAML		06 52 51.5	
	comp=N,3μm,0.7s						
SML	**Sawmill**	**0.80**	**67**		**Sn**	**06 52 49.1**	**+0.1**
CUT	**Chulitna**	**0.92**	**348**		**Pn**	**06 52 39.2**	**-0.7**
CUT	**Chulitna**	**0.92**	**348**		**Sn**	**06 52 52.1**	**+0.2**
SKT	**Skwentna**	**0.92**	**302**		**Pn**	**06 52 39.1**	**-0.9**
SKT					**Sn**	**06 52 51.8**	**-0.3**
STLK	**Strandline Lak**	**0.94**	**270**		**Pn**	**06 52 39.8**	**-0.4**
STLK				IAML		06 52 53.2	
	comp=N,3μm,0.3s						
STLK				IAML		06 52 53.5	
	comp=E,2μm,0.3s						
STLK	**Strandline Lak**	**0.94**	**270**		**Sn**	**06 52 53.0**	**+0.5**
CAPN	**Captain Cook N**	**0.97**	**221**		**Pn**	**06 52 41.5**	**+1.0**
PWL	**Port Wells**	**0.99**	**130**		**Pn**	**06 52 40.5**	**-0.3**
PWL					**Sn**	**06 52 54.8**	**+1.2**
SLKM	**Skilak Lake**	**1.01**	**190**		**Pn**	**06 52 40.5**	**-0.7**
SLKM				IAML		06 52 58.8	
	comp=E,2μm,0.6s						
SLKM	**Skilak Lake**	**1.01**	**190**		**Sn**	**06 52 55.5**	**+1.2**
O22K	**Cooper Landing**	**1.03**	**176**		**Pn**	**06 52 41.0**	**-0.4**
O22K	**Cooper Landing**	**1.03**	**176**		**Sn**	**06 52 55.9**	**+1.3**
SPCG	**Spurr Capps Gl**	**1.05**	**259**		**Pn**	**06 52 41.7**	**-0.2**
SPCG					**Sn**	**06 52 56.0**	**+0.6**
M23K	**Glacier View**	**1.06**	**73**		**Sn**	**06 52 57.2**	**+1.6**
SPU	**Mount Spurr**	**1.10**	**254**		**Pn**	**06 52 42.0**	**-0.4**
L22K	**Petersville**	**1.11**	**338**		**Pn**	**06 52 41.9**	**-0.7**
L22K	**Petersville**	**1.11**	**338**	IAML		06 52 58.3	
	comp=E,2μm,0.3s						
L22K				IAML		06 52 58.9	
	comp=N,2μm,0.5s						
SPCR	**Spurr Chakacha**	**1.17**	**256**		**Pn**	**06 52 43.0**	**-0.4**
SPCR	**Spurr Chakacha**	**1.17**	**256**		**Pn**	**06 52 43.0**	**-0.4**
SPBG	**Spurr Blockage**	**1.23**	**260**		**Pn**	**06 52 43.9**	**-0.3**
SCM	**Sheep Creek Mo**	**1.26**	**74**		**Pn**	**06 52 44.6**	**0.0**
WAT7	**Susitna Watana**	**1.42**	**19**		**Pn**	**06 52 46.8**	**0.0**
SEW	**Seward**	**1.42**	**171**		**Pn**	**06 52 45.8**	**-0.9**
WAT6	**Susitna Watana**	**1.48**	**42**		**Pn**	**06 52 47.4**	**-0.2**
GLI	**Glacier Island**	**1.48**	**114**		**Pn**	**06 52 47.3**	**-0.4**
GLI				IAML		06 53 14.3	
	comp=E,2μm,0.6s						
RDT	**Redoubt**	**1.55**	**234**		**Pn**	**06 52 48.3**	**-0.3**
M20K	**Styx River**	**1.60**	**285**		**Pn**	**06 52 49.1**	**-0.2**
M20K	**Styx River**	**1.60**	**285**	IAML		06 53 11.7	
	comp=N,1μm,0.9s						
M20K				IAML		06 53 12.8	
	comp=E,1μm,0.7s						
RDJH	**Redoubt Jeurge**	**1.69**	**239**		**Pn**	**06 52 50.6**	**0.0**
RDSO	**Redoubt South**	**1.75**	**234**		**Pn**	**06 52 51.2**	**-0.3**
PPLA	**Purkeypile**	**1.77**	**323**		**Pn**	**06 52 51.4**	**-0.2**
PPLA				IAML		06 53 15.6	
	comp=E,716nm,0.4s						
PPLA				IAML		06 53 17.1	
	comp=N,933nm,0.9s						
RED	**Redoubt Volcan**	**1.79**	**234**		**Pn**	**06 52 51.5**	**-0.4**
RED				IAML		06 53 16.4	
	comp=N,757nm,0.7s						
RED				IAML		06 53 16.6	
	comp=E,1μm,0.6s						
FID	**Port Fidalgo**	**1.81**	**113**		**Pn**	**06 52 51.5**	**-0.6**
FID				IAML		06 53 24.8	
	comp=N,1μm,0.6s						
FID				IAML		06 53 25.3	
	comp=E,1μm,0.5s						
BRLK	**Bradley Lake**	**1.82**	**196**	IAML		06 53 18.8	
	comp=E,647nm,0.5s						
BRSE	**Bradley Lake S**	**1.82**	**194**		**Pn**	**06 52 51.4**	**-0.9**
KLU	**Klutina**	**1.90**	**89**	IAML		06 53 18.2	
	comp=N,751nm,0.5s						
KLU				IAML		06 53 24.8	
	comp=E,1μm,0.5s						
P23K	**Montague Islan**	**1.94**	**140**		**Pn**	**06 52 53.1**	**-0.7**
DHY	**Denali Highway**	**1.96**	**35**		**Pn**	**06 52 54.7**	**+0.4**
DHY				IAML		06 53 25.6	
	comp=N,467nm,0.4s						
DHY				IAML		06 53 25.9	
	comp=E,500nm,0.4s						
TRF	**Thorofare Moun**	**1.96**	**355**		**Pn**	**06 52 54.5**	**+0.2**
TRF				IAML		06 53 31.2	
	comp=N,628nm,0.5s						
TRF				IAML		06 53 31.6	
	comp=E,443nm,0.7s						
RND	**Reindeer**	**1.97**	**14**		**Pn**	**06 52 54.6**	**+0.3**
HIN	**Hinchinbrook I**	**1.99**	**123**		**Pn**	**06 52 54.4**	**-0.2**
HIN				IAML		06 53 28.4	
	comp=E,1μm,0.6s						
HIN				IAML		06 53 28.8	
	comp=N,794nm,0.8s						
DIV	**Divide**	**2.01**	**99**		**Pn**	**06 52 54.4**	**-0.6**
DIV				IAML		06 53 26.1	
	comp=E,580nm,0.5s						
DIV				IAML		06 53 28.8	
	comp=N,908nm,0.7s						
HOM	**Homer**	**2.05**	**206**		**Pn**	**06 52 55.4**	**0.0**
CNPM	**China Poot**	**2.10**	**199**		**Pn**	**06 52 55.5**	**-0.6**
CNPM				IAML		06 53 27.7	
	comp=N,535nm,0.4s						
CNPM				IAML		06 53 29.3	
	comp=E,532nm,0.6s						
KTH	**Kantishna Hill**	**2.11**	**347**		**Pn**	**06 52 56.7**	**+0.4**
KTH				IAML		06 53 25.0	
	comp=E,877nm,0.6s						
KTH				IAML		06 53 26.8	
	comp=N,573nm,0.4s						
ILSW	**Iliamna Southw**	**2.22**	**228**		**Pn**	**06 52 57.9**	**+0.1**
EYAK	**Cordova Ski Ar**	**2.23**	**114**		**Pn**	**06 52 57.2**	**-0.5**
EYAK				IAML		06 53 35.4	
	comp=E,429nm,0.6s						
EYAK				IAML		06 53 36.8	
	comp=N,523nm,0.5s						
EYAK	**Cordova Ski Ar**	**2.23**	**114**	P	**Pn**	**06 52 57.0**	**-0.7**
MCK	**McKinley**	**2.28**	**11**		**Pn**	**06 52 59.4**	**+0.8**
MCK				IAML		06 53 38.5	
	comp=N,397nm,0.8s						
MCK				IAML		06 53 38.9	
	comp=E,363nm,0.5s						
N19K	**Bonanza Creek**	**2.34**	**255**		**Pn**	**06 52 59.4**	**0.0**
P19K	**Oil Pt**	**2.49**	**223**		**Pn**	**06 53 01.5**	**0.0**
N25K	**Chitina, Valde**	**2.53**	**85**		**Pn**	**06 53 01.5**	**-0.5**
N25K	**Chitina, Valde**	**2.53**	**85**	IAML		06 53 42.0	
	comp=N,461nm,0.7s						
N25K				IAML		06 53 42.2	
	comp=E,361nm,0.4s						
PAX	**Paxson**	**2.53**	**53**		**Pn**	**06 53 02.7**	**+0.6**
PAX	**Paxson**	**2.53**	**53**	IAML		06 53 46.7	
	comp=N,315nm,0.5s						
O19K	**Port Alsworth**	**2.54**	**241**		**Pn**	**06 53 02.2**	**+0.1**
BMRM	**Bremner River**	**2.60**	**100**		**Pn**	**06 53 03.2**	**+0.2**
BMRM				IAML		06 53 44.0	
	comp=E,408nm,0.7s						
BMRM				IAML		06 53 49.6	
	comp=N,411nm,0.6s						
CHUM	**Lake Minchumin**	**2.64**	**336**		**Pn**	**06 53 03.1**	**-0.3**
BPAW	**Bear Paw Mtn.**	**2.65**	**349**		**Pn**	**06 53 03.3**	**-0.4**
GOAT	**Goat Mountain**	**2.67**	**108**		**Pn**	**06 53 03.1**	**-0.9**
K20K	**Telida**	**2.69**	**315**	IAML		06 53 44.1	
	comp=E,217nm,0.8s						
WASW	**Wrangell South**	**2.75**	**79**		**Pn**	**06 53 05.2**	**+0.1**
WAZA	**Wrangell Mount**	**2.78**	**76**		**Pn**	**06 53 06.1**	**+0.5**
M18K	**Stony River**	**2.85**	**272**		**Pn**	**06 53 06.1**	**-0.3**
GLB	**Gilahina Butte**	**2.91**	**89**	IAML		06 53 52.7	
	comp=N,230nm,0.8s						
K24K	**Donnelly Dome**	**2.98**	**38**		**Pn**	**06 53 11.4**	**+3.2**
WRH	**Wood River Hil**	**3.09**	**15**		**Pn**	**06 53 09.4**	**-0.2**
WRH	**Wood River Hil**	**3.09**	**15**	IAML		06 54 02.1	
	comp=N,162nm,0.8s						
O18K	**Koktuh Hills**	**3.10**	**240**		**Pn**	**06 53 09.6**	**-0.3**
VRDI	**Verde Repeater**	**3.10**	**92**		**Pn**	**06 53 08.9**	**-1.1**
VRDI	**Verde Repeater**	**3.10**	**92**	IAML		06 54 06.2	
	comp=N,154nm,0.7s						
NEA2	**Nenana**	**3.12**	**6**		**Pn**	**06 53 10.5**	**+0.4**
SYI	**Shuyak Island**	**3.17**	**205**		**Pn**	**06 53 10.1**	**-0.6**
Q19K	**Cape Douglas,**	**3.20**	**218**		**Pn**	**06 53 11.6**	**+0.4**
HDA	**Harding Lake**	**3.21**	**23**		**Pn**	**06 53 11.6**	**+0.3**
HDA	**Harding Lake**	**3.21**	**23**	IAML		06 54 07.2	
	comp=N,278nm,0.6s						
HDA				IAML		06 54 09.9	
	comp=E,206nm,0.5s						
RIDG	**Independent Ri**	**3.23**	**44**		**Pn**	**06 53 15.2**	**+3.6**
RIDG				IAML		06 53 59.5	
	comp=E,253nm,0.7s						
RIDG				IAML		06 54 04.8	
	comp=N,258nm,0.6s						
CCB	**Clear Creek Bu**	**3.29**	**16**		**Pn**	**06 53 11.9**	**-0.5**
L18K	**Granite Mounta**	**3.31**	**285**		**Pn**	**06 53 12.3**	**-0.3**
L18K	**Granite Mounta**	**3.31**	**285**	IAML		06 54 15.6	
	comp=N,134nm,0.8s						

J20K	Nowinta River	3.32	326		Pn	06 53 12.4	-0.3
J20K	Nowinta River	3.32	326	IAML		06 53 52.0	
	comp=N,230nm,0.5s						
J20K				IAML		06 54 14.1	
	comp=E,207nm,0.8s						
CRQM	Cirque	3.35	100		Pn	06 53 12.7	-0.8
CRQM	Cirque	3.35	100	IAML		06 54 20.2	
	comp=N,306nm,0.8s						
M26K	Nabesna, AK	3.37	72	IAML		06 54 13.1	
	comp=N,154nm,0.5s						
M26K				IAML		06 54 16.1	
	comp=E,140nm,0.7s						
KHIT	Khitrov Hills	3.40	105		Pn	06 53 12.9	-1.0
L26K	Log Cabin Wild	3.41	61		Pn	06 53 15.1	+1.0
L26K				IAML		06 54 11.1	
	comp=E,235nm,0.7s						
L26K				IAML		06 54 15.9	
	comp=N,299nm,0.5s						
DOT	Dot Lake	3.44	49	IAML		06 54 11.9	
	comp=N,210nm,0.7s						
DOT				IAML		06 54 14.5	
	comp=E,256nm,0.6s						
TGL	Tana Glacier	3.50	99		Pn	06 53 14.6	-0.7
TGL	Tana Glacier	3.50	99	IAML		06 54 15.0	
	comp=N,241nm,0.6s						
COLA	College	3.50	14		Pn	06 53 15.5	+0.2
ILAR	Eielson Array	3.55	21	Pn	Pn	06 53 16.6	+0.7
	comp=N,2.6nm,0.3s,baz=203,slow=14,SNR=49						
ILAR				Pg		06 53 24.6	
	comp=N,6.3nm,0.3s,baz=199,slow=14,SNR=27						
ILAR				Sn	Sn	06 53 57.5	+0.9
	comp=N,7.4nm,0.3s,baz=207,slow=22,SNR=2.0						
ILAR				Lg	Lg	06 54 15.4	
	comp=N,13nm,0.3s,baz=203,slow=30,SNR=2.3						
	comp=N,6.5nm,0.3s						
ILAR	Eielson Array	3.55	21		Pn	06 53 16.9	+0.9
PTPK	Patty Peak	3.58	92		Pn	06 53 16.1	-0.5
M17K	Holitna River	3.63	272		Pn	06 53 16.6	-0.5
J19K	Poorman	3.64	316		Pn	06 53 16.4	-0.7
J19K	Poorman	3.64	316	IAML		06 54 16.9	
	comp=N,174nm,0.7s						
J19K				IAML		06 54 28.8	
	comp=E,121nm,1.3s						
I23K	Minto, Yukon-K	3.66	3		Pn	06 53 17.4	-0.1
I23K	Minto, Yukon-K	3.66	3	IAML		06 54 34.0	
	comp=N,102nm,0.8s						
BALM	Baldy	3.67	94		Pn	06 53 16.6	-1.0
SCRK	Sand Creek	3.67	45		Pn	06 53 17.7	0.0
SCRK	Sand Creek	3.67	45	IAML		06 54 18.7	
	comp=N,107nm,0.6s						
SCRK				IAML		06 54 21.9	
	comp=E,120nm,0.7s						
SNH	Sunshine Point	3.69	108		Pn	06 53 17.1	-0.8
SNH	Sunshine Point	3.69	108	IAML		06 54 24.7	
	comp=E,136nm,1.3s						
SNH				IAML		06 54 42.8	
	comp=N,144nm,1.4s						
N17K	Nushagak Hills	3.69	258		Pn	06 53 17.5	-0.4
N17K	Nushagak Hills	3.69	258	IAML		06 54 18.7	
	comp=N,111nm,1.1s						
J25K	Salcha River,	3.73	31	IAML		06 54 08.2	
	comp=E,127nm,0.5s						
J25K				IAML		06 54 10.4	
	comp=N,104nm,0.4s						
J18K	Innoko River	3.73	305		Pn	06 53 18.2	-0.3
J18K				IAML		06 54 01.4	
	comp=N,92nm,0.7s						
POKR	Poker Plat Res	3.79	16		Pn	06 53 19.6	+0.4
KAHG	Katmai Hook Gl	3.83	220		Pn	06 53 19.6	-0.2
KAHC	Katmai Hardscr	3.85	224		Pn	06 53 19.7	-0.5
KARR	Katmai Rainbow	3.87	221		Pn	06 53 20.6	+0.2
M27K	Edge Creek, AK	3.88	74		Pn	06 53 20.9	+0.4
I20K	Naaghedeneel	3.91	330		Pn	06 53 21.0	+0.1
O17K	Koliganek Bris	3.96	247		Pn	06 53 21.4	-0.1
KDAK	Kodiak Island	3.98	201	Pn	Pn	06 53 21.6	-0.2
	comp=N,0.4nm,0.3s,baz=23,slow=10.0,SNR=28						
KDAK				Pg		06 53 29.4	
	comp=N,3.8nm,0.3s,baz=8.8,slow=12,SNR=6.5						
KDAK				Sn	Sn	06 54 07.6	+0.5
	comp=N,4.1nm,0.3s,baz=36,slow=19,SNR=3.5						
	comp=N,6.5nm,0.3s						
KDAK	Kodiak Island	3.98	201		Pn	06 53 19.9	-1.9
KDAK				IAML		06 54 27.7	
	comp=N,78nm,0.9s						
BARN	Barnard Glacie	3.99	93		Pn	06 53 21.7	-0.5
BARN	Barnard Glacie	3.99	93	IAML		06 54 28.8	
	comp=N,88nm,0.5s						
BARN				IAML		06 54 35.9	
	comp=E,126nm,0.7s						
KAWH	Katmai	3.99	221		Pn	06 53 22.0	-0.1
GRNC	Granite Creek	4.01	98		Pn	06 53 21.6	-0.9
GRNC	Granite Creek	4.01	98	IAML		06 54 36.8	
	comp=N,113nm,0.9s						
BC01	Beaver Creek A	4.07	64		Pn	06 53 23.2	+0.1
L27K	Beaver Creek,	4.07	64		Pn	06 53 23.2	+0.1
BCAR	Beaver Creek A	4.09	64		Pn	06 53 23.6	+0.2
MESA	MESA	4.10	105		Pn	06 53 23.0	-0.7
MESA	MESA	4.10	105	IAML		06 54 33.2	
	comp=E,143nm,1.3s						
MESA				IAML		06 54 38.0	
	comp=N,166nm,1.2s						
YAH	Yahtse	4.13	103		Pn	06 53 23.3	-0.8
YAH	Yahtse	4.13	103	IAML		06 54 37.7	
	comp=E,99nm,0.9s						
YAH				IAML		06 54 42.6	
	comp=N,112nm,1.0s						
K17K	Iditarod	4.14	291	IAML		06 54 31.4	
	comp=E,99nm,0.9s						
K17K				IAML		06 54 46.4	
	comp=N,126nm,1.4s						
J26L	Joseph Creek	4.16	41	IAML		06 54 21.8	
	comp=E,116nm,0.5s						
J26L				IAML		06 54 21.8	
	comp=N,80nm,0.6s						
LOGN	Logan Glacier	4.35	95		Pn	06 53 26.3	-0.8
LOGN	Logan Glacier	4.35	95	IAML		06 54 37.4	
	comp=N,86nm,0.7s						
LOGN				IAML		06 54 51.7	
	comp=E,71nm,0.9s						
H21K	Melozitna Rive	4.37	344		Pn	06 53 26.9	-0.3
TABL	Table Mountain	4.39	100		Pn	06 53 26.8	-0.8
TABL	Table Mountain	4.39	100	IAML		06 54 38.7	
	comp=E,80nm,1.1s						
TABL				IAML		06 54 45.7	
	comp=N,74nm,0.7s						
M16K	Timber Creek	4.41	268		Pn	06 53 27.6	-0.2
M16K	Timber Creek	4.41	268	IAML		06 54 49.1	
	comp=N,73nm,1.2s						
Q16K	King Salmon	4.42	233		Pn	06 53 28.1	+0.2
CNTC	Contact Creek	4.44	226		Pn	06 53 27.8	-0.5
N16K	Nishlik Lake	4.45	260		Pn	06 53 27.9	-0.5
O16K	Kokwok River B	4.49	248		Pn	06 53 28.6	-0.2
O16K	Kokwok River B	4.49	248	IAML		06 54 41.6	
	comp=N,76nm,0.9s						
YUK3	Moose Creek	4.50	82		Pn	06 53 28.9	-0.3
H20K	Anotleneega Mo	4.59	333		Pn	06 53 29.7	-0.5
L16K	Owhat River	4.59	277	IAML		06 54 53.9	
	comp=N,77nm,0.9s						
L16K				IAML		06 54 54.7	
	comp=E,53nm,0.8s						
J17K	VABM Dome	4.68	298		Pn	06 53 31.1	-0.3
J17K	VABM Dome	4.68	298	IAML		06 54 51.5	
	comp=N,58nm,0.8s						
J17K				IAML		06 54 54.9	
	comp=E,46nm,0.9s						
O28M	Mount Upton	4.75	95		Pn	06 53 32.5	-0.2
O28M	Mount Upton	4.75	95	IAML		06 54 54.5	
	comp=N,65nm,1.0s						
O28M				IAML		06 54 58.0	
	comp=E,46nm,1.4s						
PCA	Pinnacle	4.92	102		Pn	06 53 34.9	+0.1
H19K	Roundabout Mou	5.00	327		Pn	06 53 35.8	+0.1
H19K	Roundabout Mou	5.00	327	IAML		06 55 08.8	
	comp=N,66nm,1.1s						
H19K				IAML		06 55 13.0	
	comp=E,57nm,1.1s						
N15K	Kwethluk River	5.18	259		Pn	06 53 38.4	+0.2
N15K	Kwethluk River	5.18	259	IAML		06 55 15.7	
	comp=N,63nm,0.9s						
G23K	Bananza Creek	5.23	359		Pn	06 53 38.9	-0.1
G21K	Allakaket	5.28	344		Pn	06 53 39.9	+0.2
G21K	Allakaket	5.28	344	IAML		06 54 40.8	
	comp=E,46nm,0.6s						
G21K				IAML		06 54 40.8	
	comp=N,39nm,0.8s						
H18K	Honhosa River	5.29	317		Pn	06 53 39.6	-0.2
H18K	Honhosa River	5.29	317	IAML		06 55 24.6	
	comp=N,43nm,1.0s						
H18K				IAML		06 55 26.9	
	comp=E,30nm,1.1s						
J16K	Anvik River	5.30	294		Pn	06 53 39.4	-0.5
J16K	Anvik River	5.30	294	IAML		06 55 09.4	
	comp=N,33nm,1.2s						
J16K				IAML		06 55 25.6	
	comp=E,30nm,0.9s						
M15K	Kasigluk River	5.31	266		Pn	06 53 39.6	-0.5
SII	Sitkinak Islan	5.44	206	P	Pn	06 53 47.1	+5.2
DAWY	Dawson	5.45	57		Pn	06 53 42.1	0.0
M29M	Somme Creek	5.46	75		Pn	06 53 42.3	0.0
O15K	Ungalikthiuk R	5.47	249		Pn	06 53 42.4	+0.1
I17K	Unalakleet	5.52	300		Pn	06 53 42.8	-0.2
L15K	Ungalak Mounta	5.55	277		Pn	06 53 42.6	-0.7
K15K	Wolf Creek Mou	5.57	283		Pn	06 53 43.4	-0.2
O29M	Mount Kennedy	5.64	97		Pn	06 53 44.3	-0.5
H17K	Granite Mounta	5.69	312		Pn	06 53 45.4	+0.1
COLD	Coldfoot	5.75	359		Pn	06 53 47.5	+1.4
G18K	Tagagawik	5.88	322		Pn	06 53 47.6	-0.3
M14K	Bethel	5.91	268		Pn	06 53 48.1	-0.1
F21K	Alatna River	5.95	346		Pn	06 53 49.0	+0.2
N14K	Kuskokwak Cree	6.01	260		Pn	06 53 49.8	+0.1
HYT	Haines Junctio	6.03	91		Pn	06 53 49.6	-0.5
O14K	Tigyukauivet M	6.08	253		Pn	06 53 50.8	+0.1
F20K	Avaraart Lake	6.12	338		Pn	06 53 51.1	-0.1
N30M	Aishikik Lake	6.13	85		Pn	06 53 50.0	-1.4
L14K	Kuka Creek	6.15	274		Pn	06 53 52.2	+0.6
P29M	Windy Craggy	6.27	102		Pn	06 53 52.9	-0.4
F19K	Shaleruckik Mo	6.36	331		Pn	06 53 54.6	+0.2
BMAR	Burnt Mountain	6.37	19		Pn	06 53 55.2	+0.6
BM01	Burnt Mountain	6.40	19		Pn	06 53 55.7	+0.7
H16K	Elim	6.43	305		Pn	06 53 55.6	+0.1
J14K	Nanvaranak Lak	6.54	287		Pn	06 53 56.7	-0.1
O30N	Mendenhall	6.71	90		Pn	06 53 58.6	-0.8
E17K	Hotham Inlet	7.63	322		Pn	06 54 12.1	+0.3
JIS	Juneau Island	8.43	106	P	Pn	06 54 21.5	-1.3
INK	Inuvik	9.70	38	Pn	Pn	06 54 40.4	+0.2
	comp=E,0.1nm,0.3s,baz=233,slow=11,SNR=11						
INK				Sn	Sn	06 56 29.1	+1.4
	comp=E,0.3nm,0.3s,baz=237,slow=14,SNR=3.9						
INK				Lg	Lg	06 57 23.4	
	comp=E,0.1nm,0.3s,baz=197,slow=15,SNR=1.5						
	comp=E,0.5nm,0.5s						
YKA	Yellowknife Ar	16.47	71	Pn	Pn	06 56 07.6	-3.4
	comp=E,0.1nm,0.3s,baz=282,slow=11,SNR=8.0						
	comp=E,0.2nm,0.9s						
NVAR	Mina Array Bea	30.22	125	P	P	06 58 31.0	+1.0
	comp=E,0.3nm,0.7s,baz=310,slow=8.3,SNR=3.7						
	comp=E,0.3nm,0.7s						
PDAR	Pinedale Array	30.35	109	P	P	06 58 31.3	+0.2
	comp=E,0.3nm,0.6s,baz=320,slow=7.2,SNR=4.3						
	comp=E,0.3nm,0.6s						
YAK	Yakutsk	35.77	307	LR	LR	07 16 27.9	
	comp=E,34nm,19.0s,baz=252,slow=40						
TXAR	Lajitas Array	44.15	115	P	P	07 00 27.6	-0.2
	comp=E,0.1nm,0.3s,baz=333,slow=10,SNR=2.2						
	comp=E,0.1nm,0.3s						

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*IDC **24** 06:56:59.7±3.4, 36°.64S×178°.93E, h0^{km}, mb3.6/2, mbtmp3.6/3, ML3.3/1, Error ellipse: s-maj=75.5km s-min=42.6km az=118.0*

*WEL **24** 06:57:02.8±1.1, 37°S±6°×17°9E±°, h12^{km}, M3.4/24, ML3.4/21, MLv3.4/24, Error ellipse: s-maj=12.4km s-min=7.1km az=100.2, confirmed*

ISC 24 06:57:01.8±3.2**, 37°.0S**±0°.1×**179°.4E**±0°.2**, h53**^{km}±25^{km}**, n51, σ1^s.03**/59**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.03	238	P	Pn	06 57 18.5	-1.4
WMGZ	Waiomatatini S	1.12	225	P	Pn	06 57 22.2	+1.0
WMGZ				S	Sn	06 57 35.3	-0.3
PKGZ	Pakihiroa	1.35	231	P	Pn	06 57 24.9	+0.6
PKGZ				S	Sn	06 57 40.7	-0.5
PUZ	Puketiti	1.39	221	P	Pn	06 57 25.8	+1.0
PUZ				S	Sn	06 57 41.5	-0.5
HAZ	Te Kaha	1.48	240	P	Pn	06 57 25.2	-0.9
HAZ				S	Sn	06 57 44.4	0.0
TWGZ	Tauwhareparae	1.61	224	P	Pn	06 57 29.2	+1.2
TWGZ				S	Sn	06 57 47.5	-0.1
RUGZ	Raukumara Rang	1.66	235	P	Pn	06 57 29.4	+0.7
CNGZ	Carnagh Statio	1.74	213	P	Pn	06 57 31.8	+2.2
TKGZ	Te Karaka	1.88	221	P	Pn	06 57 32.5	+1.1
TKGZ				S	Sn	06 57 53.7	-0.2
MWZ	Matawai	1.98	228	P	Pn	06 57 33.9	+1.0
MWZ				S	Sn	06 57 55.0	-1.6
RIGZ	Rimuhau	2.12	217	P	Pn	06 57 35.8	+1.0
RAGZ	Rawiri	2.15	226	P	Pn	06 57 36.3	+1.0
URZ	Urewera	2.20	235	Pn	Pn	06 57 36.7	+0.9
	9.4nm,0.3s,baz=51,slow=6.5,SNR=54						
URZ				Sn	Sn	06 58 00.9	-1.0
	20nm,0.3s,baz=190,slow=18,SNR=24						
	23nm,0.3s						
URZ	Urewera	2.20	235	P	Pn	06 57 36.7	+0.9
EDRZ	Edgecumbe	2.38	242	P	Pn	06 57 39.4	+1.0
SNGZ	Shannon Statio	2.40	222	P	Pn	06 57 39.3	+0.7
OPRZ	Ohinepanea	2.41	249	P	Pn	06 57 39.4	+0.6
MHGZ	Mahia Peninsul	2.43	209	P	Pn	06 57 40.2	+1.2
RTZ	Ruatahuna	2.49	230	P	Pn	06 57 40.9	+1.0
MUGZ	Murupara	2.54	234	P	Pn	06 57 41.4	+0.8
TARZ	Mount Tarawera	2.60	241	P	Pn	06 57 42.8	+1.3
RAHZ	Arahi	2.63	223	P	Pn	06 57 43.2	+1.4
MTHZ	Maungataniwha	2.73	227	P	Pn	06 57 44.0	+0.9
NMHZ	Naumai	2.91	224	P	Pn	06 57 46.8	+1.1
ARHZ	Aropaoanui	2.93	220	P	Pn	06 57 46.3	+0.4
KUZ	Kuaotunu	2.97	274	P	Pn	06 57 45.6	-0.8
BKZ	Black Stump Fm	3.14	226	P	Pn	06 57 49.4	+0.7
TOZ	Tahuroa Road	3.19	256	P	Pn	06 57 49.8	+0.4
MCHZ	McNeill Hill	3.22	221	P	Pn	06 57 50.1	+0.2
KWHZ	Kaweka Forest	3.35	224	P	Pn	06 57 51.5	-0.3
MKAZ	Moumakai	3.40	267	P	Pn	06 57 51.7	-0.5
KAHZ	Kahuranaki	3.40	215	P	Pn	06 57 52.0	-0.4
KRHZ	Kereru	3.54	221	P	Pn	06 57 54.4	+0.2
ETAZ	East Tamaki Re	3.59	270	P	Pn	06 57 55.7	+0.9
TMVZ	Te Maari	3.59	233	P	Pn	06 57 55.4	+0.4
NTVZ	North Tongarir	3.60	234	P	Pn	06 57 55.7	+0.5
KRVZ	Karewarewa	3.62	234	P	Pn	06 57 56.3	+0.9
OTVZ	Oturere	3.64	233	P	Pn	06 57 55.9	+0.1
NNVZ	North Ngauruho	3.66	234	P	Pn	06 57 57.4	+1.5
SNVZ	South Ngauruho	3.67	233	P	Pn	06 57 56.5	+0.3
NGZ	Ngauruhoe	3.69	233	P	Pn	06 57 56.7	+0.3
MOVZ	Moawhango	3.73	229	P	Pn	06 57 57.2	+0.2
WNVZ	Wahianoa	3.78	231	P	Pn	06 57 57.6	-0.1
PNHZ	Pukenui	3.83	220	P	Pn	06 57 57.1	-1.1
RVAZ	Riverhead Bore	3.88	272	P	Pn	06 57 60.0	+1.1
WCZ	Waipu Caves	4.22	283	P	Pn	06 58 04.4	+0.9
BFZ	Birch Farm	4.41	213	P	Pn	06 58 04.1	-2.0
MRZ	Mangatainoka R	4.70	218	P	Pn	06 58 08.6	-1.5
ASAR	Alice Springs	41.09	276	P	P	07 04 41.7	+1.1
	0.4nm,0.5s,baz=121,slow=8.0,SNR=14						
	0.4nm,0.5s						
WRA	Warramunga Arr	42.69	281	P	P	07 04 55.2	+1.7
	0.6nm,0.5s,baz=120,slow=8.3,SNR=1.1						
	0.6nm,0.5s						
FINES	FINESS Array B	150.40	334	PKPbc	PKPab	07 16 50.5	-2.5
	1.1nm,0.9s,baz=20,slow=4.6,SNR=2.0						

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*IDC **24** 07:23:12.5±1.1, 54°.07S×140°.21E, h0^{km}, mb3.9/6, mbtmp3.9/6, MS3.6/7, Error ellipse: s-maj=77.9km s-min=19.8km az=88.0*

*NEIC **24** 07:23:14.0±1.1, 54°.12S±0°.04×140°.5E±0°.4, h10^{km}±1^{km}, mb4.3/11, Error ellipse: s-maj=35.2km s-min=7.3km az=93.0*

ISC 24 07:23:13.5±0.6**, 54°.08S**±0°.10×**140°.7E**±0°.2**, h10**^{km}**, n50, σ0^s.68**/38**, mb4.1**/9**, MS3.5**/7**, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOO	Toolangi	16.84	13		P	07 27 10.9	-0.4
WHZ	Wether Hill Ro	19.23	76	P	Pn	07 27 38.0	-0.5
WHZ				IAmb	IAmb	07 28 09.2	
	comp=Z,27nm,1.3s						
MLZ	Mavora Lakes	19.63	75	P	Pn	07 27 43.7	+0.3
MLZ				IAmb	IAmb	07 27 44.3	
	comp=Z,18nm,0.9s						
STKA	Stephens Creek	22.20	2	P	P	07 28 10.7	+0.8
	comp=Z,7.2nm,1.0s,baz=171,slow=11,SNR=10						
STKA				LR	LR	07 35 00.2	
	comp=Z,156nm,21.7s,baz=198,slow=32						
	comp=Z,7.2nm,1.0s						
STKA	Stephens Creek	22.20	2	P	P	07 28 10.5	+0.6
VNDA	Vanda	24.74	169	P	P	07 28 36.7	+2.1
	comp=Z,0.8nm,0.7s,baz=317,slow=16,SNR=3.7						
VNDA				LR	LR	07 37 33.4	
	comp=Z,104nm,21.2s,baz=342,slow=35						
	comp=Z,0.8nm,0.7s						
VNDA	Vanda	24.74	169		P	07 28 35.1	+0.4
VNDA				IAmb	IAmb	07 28 47.8	
	comp=Z,5.2nm,1.1s						
FORT	Forrest	25.02	333	P	P	07 28 37.1	-0.3
FORT				IAmb	IAmb	07 28 42.1	
	comp=Z,12nm,1.4s						
H01W1	Cape Leeuwin H	26.71	305	T	T	07 56 56.0	
	baz=142,slow=74,SNR=6.7						
H01W2	Cape Leeuwin H	26.72	305	T	T	07 56 59.7	
	baz=142,slow=74,SNR=6.6						
H01W3	Cape Leeuwin H	26.73	305	T	T	07 56 52.3	
	baz=142,slow=74,SNR=5.5						
ASAR	Alice Springs	30.80	348	P	P	07 29 29.0	-0.4
	comp=Z,1.0nm,0.8s,baz=166,slow=9.9,SNR=13						
ASAR				PcP	PcP	07 32 25.9	-0.5
	comp=Z,0.9nm,0.7s,baz=154,slow=3.2,SNR=8.9						
ASAR				LR	LR	07 40 04.4	
	comp=Z,90nm,21.5s,baz=112,slow=33						
	comp=Z,1.0nm,0.8s						
WR8	Warramunga Arr	34.40	350	P	P	07 30 00.9	+0.1
WR8				IAmb	IAmb	07 30 03.5	
	comp=Z,5.1nm,1.2s						
WRA	Warramunga Arr	34.43	349	P	P	07 30 01.3	+0.2
	comp=Z,2.3nm,0.9s,baz=171,slow=7.6,SNR=7.3						
WRA				PcP	PcP	07 32 35.7	-0.7
	comp=Z,2.2nm,1.0s,baz=160,slow=2.7,SNR=2.5						
	comp=Z,2.3nm,0.9s						
WRA	Warramunga Arr	34.43	349	IAmb	IAmb	07 30 05.8	
	comp=Z,0.5nm,1.0s						
WB0	Warramunga Arr	34.60	349	P	P	07 30 02.5	-0.1
WB0				IAmb	IAmb	07 30 04.6	
	comp=Z,4.8nm,1.1s						
QSPA	South Pole Qui	36.03	180	P	P	07 30 14.2	-0.4
MAW	Mawson	37.46	218	LR	LR	07 44 04.8	
	comp=Z,75nm,18.9s,baz=103,slow=34						
FITZ	Fitzroy Crossi	37.76	336	LR	LR	07 43 51.0	
	comp=Z,75nm,21.8s,baz=156,slow=33						
BATI	Baumata	45.84	336	LR	LR	07 49 37.9	
	comp=Z,167nm,19.7s,baz=180,slow=35						
SNAA	Sanae	51.94	194	P	P	07 32 21.2	-0.7
	comp=Z,1.1nm,0.7s,baz=180,slow=19,SNR=2.6						
SNAA				LR	LR	07 54 02.4	
	comp=Z,138nm,19.5s,baz=203,slow=36						
	comp=Z,1.1nm,0.7s						
SNAA	Sanae	51.94	194	IAmb	IAmb	07 32 24.9	
	comp=Z,5.8nm,1.3s						
H04S1	CROZET ISLANDS	53.42	239	T	T	08 30 51.0	
	baz=132,slow=74,SNR=6.2						
H04S2	CROZET ISLANDS	53.43	239	T	T	08 30 50.0	
	baz=132,slow=74,SNR=8.0						
H04S3	CROZET ISLANDS	53.44	239	T	T	08 30 46.0	
	baz=132,slow=74,SNR=6.6						
CMAR	Chiang Mai Arr	80.63	320	P	P	07 35 26.4	+0.2
	comp=Z,0.7nm,0.3s,baz=172,slow=4.7,SNR=6.1						
	comp=Z,0.7nm,0.3s						
H03S2	Juan Fernandez	85.97	148	T	T	09 12 52.8	
	baz=195,slow=74,SNR=4.4						
H03S1	Juan Fernandez	85.97	148	T	T	09 12 58.0	
	baz=195,slow=74,SNR=5.0						
H03S3	Juan Fernandez	85.99	148	T	T	09 12 59.3	
	baz=195,slow=74,SNR=4.5						
RONA	Rosalia, Austr	145.17	283	*i* PKP	PKPdf	07 42 50.1	-0.2
	comp=Z,5.6nm,0.9s						
SOKA	Soboth	145.35	280	*i* PKP	PKPab	07 42 50.8	0.0
	comp=Z,5.2nm,1.0s						
ARSA	Arzberg	145.38	282	*i* PKP	PKPab	07 42 50.9	+0.1
	comp=Z,9.8nm,0.8s						
CONA	Conrad Observa	145.54	283	*e*PKP	PKiKP	07 42 55.0	0.0
	comp=Z,4.5nm,1.3s						
OBKA	Obir	145.54	280	*i* PKP	PKiKP	07 42 56.2	+1.1
	comp=Z,7.6nm,1.3s						
FINES	FINESS Array B	145.76	309	PKPbc	PKPab	07 42 51.8	0.0
	comp=Z,1.5nm,0.8s,baz=125,slow=5.3,SNR=5.6						
MYKA	Terra Mystica	146.13	279	*e*PKP	PKPdf	07 42 51.1	-0.9
	comp=Z,5.4nm,1.1s						
MOA	Molln	146.42	282	*e*PKP	PKPab	07 42 54.6	-0.1
	comp=Z,3.6nm,1.1s						
KBA	Koelnbreinsper	146.55	280	*i* PKP	PKPdf	07 42 52.1	-0.8
	comp=Z,14nm,0.7s						
BIOA	Bad Ischl, Aus	146.70	281	*e*PKP	PKPbc	07 42 54.3	-0.3
	comp=Z,2.3nm,1.0s						
ABTA	Abfaltersbach	146.85	279	*e*PKP	PKPbc	07 42 55.4	+0.2
	comp=Z,4.7nm,1.0s						
LESA	Schwarzleotal	147.12	280	*i* PKP	PKPbc	07 42 55.4	-0.5
	comp=Z,3.7nm,0.7s						
GERES	GERESS Array B	147.25	283	PKPbc	PKPdf	07 42 54.5	+0.6
	comp=Z,1.3nm,0.8s,baz=158,slow=1.4,SNR=7.5						
ARCES	ARCESS Array B	147.64	324	PKPbc	PKPdf	07 42 54.5	+0.7
	comp=Z,2.8nm,0.9s,baz=123,slow=3.3,SNR=4.5						
WTTA	Wattenberg	147.64	279	*e*PKP	PKiKP	07 42 59.0	-0.5
	comp=Z,5.4nm,1.0s						
WATA	Walderalm	147.71	279	*i* PKP	PKPab	07 43 01.7	+1.8
	comp=Z,3.1nm,0.8s						
SQTA	Sankt Quirin	147.86	279	*i* PKP	PKPbc	07 42 57.7	-0.3
	comp=Z,4.3nm,0.8s						
FETA	Feichten	148.04	278	*e*PKP	PKPbc	07 42 57.6	-0.9
	comp=Z,2.8nm,0.8s						
RETA	Reutte	148.26	279	*e*PKP	PKPbc	07 42 58.7	-0.3
	comp=Z,3.4nm,0.9s						
SPITS	Spitsbergen Ar	149.22	341	PKPbc	PKPbc	07 43 00.3	-0.2
	comp=Z,6.7nm,0.7s,baz=81,slow=5.2,SNR=2.4						
ESDC	Sonseca Array	152.24	253	PKPbc	PKiKP	07 43 09.0	-0.1
	comp=Z,1.4nm,0.6s,baz=99,slow=1.1,SNR=13						

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*SDD **24** 07:24:00.5±3.0, 20°.22N×71°.43W, h0^{km}±34^{km}, MD3.0, ML2.8, MW3.3, Presumed earthquake*

*OSPL **24** 07:24:11.9±1.5, 19°.26N×70°.44W, h0^{km}±33^{km}, ML1.6, Presumed earthquake*

ISC 24 07:24:08.3±2.2**, 19°.8N**±0°.1×**71°.02W**±0°.08**, h19**^{km}**, n9, σ1^s.80**/13**, 4C, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SODR	Sosua Marina B	0.42	95	⇑*i*P	Pg	07 24 15.9	-1.1
SODR				⇑*e*Sg	Sn	07 24 30.7	+4.1
SODR				IAML		07 24 34.2	
	comp=N,218nm,0.8s						
SC01	Santiago de lo	0.46	142	⇑*i*P	Pg	07 24 16.9	-0.7
SC01				IAML		07 24 24.4	
SC01	Santiago de lo	0.46	142	*i* P	Pb	07 24 17.8	0.0
SC01				*e*S	Sg	07 24 22.2	-1.7
SC01				IAML		07 24 24.6	
	comp=Z,82nm,0.3s						
SDDR	Presa de Saban	0.84	197	⇑*i*P	Pb	07 24 23.3	-1.0
SDDR				IAML		07 24 50.4	
	comp=N,28nm,1.8s						
SDDR	Presa de Saban	0.84	197	*i* P	Pn	07 24 26.3	+1.1
SDDR				*e*S	Sn	07 24 38.2	+1.1
SDDR				IAML		07 24 40.6	
	comp=Z,18nm,0.9s						
LONE3	El Aguacate, B	1.25	199	*i* P	Pg	07 24 32.6	+0.1
NEDR	Neiba UASD	1.35	196	*i* P	Pn	07 24 29.9	-2.2
NEDR				*i* Sg	Sg	07 24 53.7	+1.6
NEDR				IAML		07 24 55.1	
	comp=N,144nm,0.3s						
LODU1	El Espartillar	1.49	197	*i* P	Pg	07 24 36.8	-0.3
PODR	Polo	1.63	189	*i* P	Pn	07 24 35.7	-0.5
PODR				IAML		07 24 59.5	
	comp=N,590nm,0.3s						

IDC 24 07:25:00.4±5.2**, 17°.20S**×**174°.91W, h0**^{km}**, mb4.0**/3**, mbtmp4.0**/3**, Error ellipse: s-maj=182.0km s-min=103.7km az=156.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.90	241	P	P	07 32 54.4	+1.5
	1.2nm,0.5s,baz=90,slow=11,SNR=3.6						
	1.2nm,0.5s						
WRA	Warramunga Arr	48.05	258	P	P	07 33 41.0	-1.0
	0.9nm,0.6s,baz=99,slow=9.5,SNR=7.4						
	0.9nm,0.6s						
ASAR	Alice Springs	48.20	253	P	P	07 33 42.9	-0.2
	2.1nm,0.7s,baz=92,slow=7.6,SNR=30						
ASAR				PcP	PcP	07 35 09.9	-0.7
	0.2nm,0.5s,baz=98,slow=4.9,SNR=4.3						
	2.1nm,0.7s						

*IDC **24** 07:29:36.6±0.7, 15°.26S×173°.41W, h0^{km}, mb4.0/14, mbtmp4.0/14, MS3.5/8, Error ellipse: s-maj=30.6km s-min=16.1km az=134.0*

*NEIC **24** 07:29:38.3±1.5, 15°.39S±0°.08×173°.40W±0°.07, h10^{km}±1^{km}, mb4.5/27, Error ellipse: s-maj=16.9km s-min=3.7km az=140.0*

ISC 24 07:29:42.1±0.5**, 15°.39S**±0°.08×**173°.43W**±0°.10**, h42**^{km}**, n62, σ1^{s}.14**/48**, mb4.3**/23**, MS3.7**/7**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.17**	**48**		**Pn**	**07 30 13.5**	**-2.4**
NIUE	**Niue**	**4.96**	**138**		**Pn**	**07 30 51.6**	**-2.6**
MSVF	**Nonsavu**	**8.50**	**253**	Pn	**Pn**	**07 31 39.6**	**-3.2**
RAR	**Rarotonga**	**14.20**	**116**	LR	LR	07 37 41.8	
	comp=Z,36nm,18.7s,baz=336,slow=34						
DZM	**Mont Dzumac**	**20.18**	**248**	P	**P**	**07 34 13.8**	**+0.4**
	3.6nm,0.9s,baz=116,slow=10						
	3.6nm,0.9s						
DZM	**Mont Dzumac**	**20.18**	**248**	IAmb	IAmb	07 34 39.3	
	comp=Z,18nm,1.1s						
PPT2	**Papeete2**	**22.97**	**99**	*e*LR	LR	07 39 52.3	
	comp=Z,90nm,27.5s						
PPT2				*e*LR	LR	07 40 00.1	
	comp=Z,122nm,31.5s						
URZ	**Urewera**	**24.27**	**198**	P	**P**	**07 34 56.0**	**+0.7**
	comp=Z,9.6nm,0.6s,baz=3.0,slow=5.7,SNR=9.5						
	comp=Z,9.6nm,0.6s						
BKZ	**Black Stump Fm**	**25.29**	**199**	P	**P**	**07 35 03.9**	**-0.8**
BKZ				IAmb	IAmb	07 35 34.5	
	comp=Z,41nm,1.5s						
TCW	**Tory Channel**	**27.85**	**200**	P	**P**	**07 35 28.0**	**+0.3**
TAOE	**Nuku Hiva Isla**	**33.15**	**83**	*e*LR	LR	07 44 31.5	
	comp=Z,118nm,28.2s						
WHZ	**Wether Hill Ro**	**34.19**	**203**	P	**P**	**07 36 24.2**	**+0.6**
WHZ				IAmb	IAmb	07 36 54.9	
	comp=Z,11nm,1.2s						
H11S2	**WAKE ISLAND Hy**	**38.94**	**329**	T	T	08 17 55.2	
	baz=146,slow=76,SNR=16						
H11S3	**WAKE ISLAND Hy**	**38.95**	**329**	T	T	08 17 56.3	
	baz=146,slow=76,SNR=13						
H11S1	**WAKE ISLAND Hy**	**38.96**	**329**	T	T	08 17 56.5	
	baz=146,slow=76,SNR=11						
STKA	**Stephens Creek**	**44.02**	**240**	P	**P**	**07 37 46.2**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=67,slow=15,SNR=3.6						
	comp=Z,1.0nm,0.7s						
STKA	**Stephens Creek**	**44.02**	**240**	IAmb	IAmb	07 37 58.1	
	comp=Z,23nm,1.2s						
WR8	**Warramunga Arr**	**49.67**	**257**	P	**P**	**07 38 29.3**	**-0.9**
WR8				IAmb	IAmb	07 38 49.7	
	comp=Z,5.9nm,1.4s						
WRAB	**Tennant Creek**	**49.81**	**257**	P	**P**	**07 38 29.1**	**-2.2**
WRA	**Warramunga Arr**	**49.82**	**257**	P	**P**	**07 38 31.5**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=87,slow=2.9,SNR=6.2						
	comp=Z,0.4nm,0.7s						
WRA	**Warramunga Arr**	**49.82**	**257**	P	**P**	**07 38 30.6**	**-0.7**
AS31	**Alice Springs**	**50.09**	**252**	P	**P**	**07 38 33.0**	**-0.4**
ASAR	**Alice Springs**	**50.09**	**252**	P	**P**	**07 38 33.7**	**+0.3**
	comp=Z,1.5nm,0.5s,baz=86,slow=8.4,SNR=34						
	comp=Z,1.5nm,0.5s						
ASAR	**Alice Springs**	**50.09**	**252**	P	**P**	**07 38 33.0**	**-0.4**
VNDA	**Vanda**	**63.38**	**186**	P	**P**	**07 40 09.8**	**+3.0**
	comp=Z,1.7nm,1.2s,baz=5.0,slow=4.1,SNR=3.2						
	comp=Z,1.7nm,1.2s						
PETK	**Petropavlovsk-**	**72.61**	**342**	P	**P**	**07 41 05.8**	**+0.8**
	comp=Z,5.4nm,0.9s,baz=168,slow=6.4,SNR=3.5						
	comp=Z,5.4nm,0.9s						
PFO	**Pinyon Flats O**	**72.93**	**47**	LR	LR	08 04 42.1	
	comp=Z,63nm,19.4s,baz=240,slow=29						
LPIG	**La Paz**	**73.05**	**58**	LR	LR	08 06 26.1	
	comp=Z,31nm,18.0s,baz=250,slow=30						
NVAR	**Mina Array Bea**	**74.34**	**42**	P	**P**	**07 41 16.1**	**+0.4**
	comp=Z,2.1nm,0.9s,baz=228,slow=9.1,SNR=11						
NVAR				LR	LR	08 07 25.0	
	comp=Z,42nm,18.9s,baz=281,slow=30						
	comp=Z,2.1nm,0.9s						
QSPA	**South Pole Qui**	**74.66**	**180**	P	**P**	**07 41 17.6**	**+0.5**
K05A	**Summer Lake**	**75.28**	**37**	P	**P**	**07 41 21.7**	**+0.6**
SHPR	**Sheep Range**	**75.37**	**45**		**P**	**07 41 21.8**	**+0.1**
PINE	**Pine Mountain**	**75.91**	**36**		**P**	**07 41 25.3**	**+0.7**
PINE				IAmb	IAmb	07 41 27.1	
	comp=Z,11nm,1.1s						
KSRS	**Korea Array**	**76.13**	**316**	P	**P**	**07 41 27.5**	**+1.7**
	comp=Z,0.5nm,0.5s,baz=126,slow=6.6,SNR=1.8						
	comp=Z,0.5nm,0.5s						
ELK	**Elko**	**77.59**	**41**	LR	LR	08 06 47.6	
	comp=Z,34nm,20.3s,baz=300,slow=29						
MFID	**Camas Ranch**	**78.69**	**39**		**P**	**07 41 40.5**	**+0.4**
MFID				IAmb	IAmb	07 41 53.0	
	comp=Z,5.6nm,1.5s						
SUA	**Susitna One**	**78.69**	**11**	P	**P**	**07 41 38.0**	**-1.7**
F10A	**Beach Ranch, E**	**79.32**	**36**	P	**P**	**07 41 43.4**	**-0.1**
F10A				IAmb	IAmb	07 41 44.2	
	comp=Z,6.7nm,1.2s						
HLID	**Hailey**	**79.63**	**39**		**P**	**07 41 45.7**	**+0.3**
HLID				IAmb	IAmb	07 41 46.8	
	comp=Z,4.5nm,0.9s						
J18K	**Innoko River**	**79.67**	**8**	P	**P**	**07 41 45.6**	**+0.7**
J18K				IAmb	IAmb	07 41 47.0	
	comp=Z,4.6nm,1.0s						
L22K	**Petersville**	**79.67**	**10**	P	**P**	**07 41 43.4**	**-1.6**
L22K				IAmb	IAmb	07 41 46.9	
	comp=Z,6.3nm,1.1s						
SCM	**Sheep Creek Mo**	**79.69**	**12**	P	**P**	**07 41 45.3**	**+0.1**
TXAR	**Lajitas Array**	**80.63**	**56**	P	**P**	**07 41 51.1**	**+0.1**
	comp=Z,1.1nm,1.0s,baz=224,slow=6.9,SNR=9.4						
TXAR				LR	LR	08 12 02.9	
	comp=Z,34nm,19.1s,baz=351,slow=32						
	comp=Z,1.1nm,1.0s						
ANMO	**Albuquerque**	**80.81**	**50**	LR	LR	08 10 31.7	
	comp=Z,27nm,20.1s,baz=27,slow=30						
MCMT	**McKenzie Canyo**	**81.26**	**39**		**P**	**07 41 54.3**	**+0.1**
LOHW	**Long Hollow**	**82.02**	**41**	IAmb	IAmb	07 41 59.4	
	comp=Z,4.4nm,1.3s						
PD31	**Pinedale Array**	**82.27**	**42**	P	**P**	**07 41 59.6**	**0.0**
PDAR	**Pinedale Array**	**82.27**	**42**	P	**P**	**07 41 59.2**	**-0.3**
	comp=Z,1.0nm,0.9s,baz=236,slow=2.7,SNR=7.0						
	comp=Z,1.0nm,0.9s						
ILAR	**Eielson Array**	**82.44**	**11**	P	**P**	**07 41 59.5**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=229,slow=6.3,SNR=23						
	comp=Z,0.8nm,0.7s						
G26K	**Porcupine Rive**	**84.97**	**11**		**P**	**07 42 13.5**	**+1.0**
HILR	**Hailar Array B**	**87.30**	**323**	P	**P**	**07 42 24.2**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=145,slow=5.3,SNR=1.6						
	comp=Z,0.4nm,0.3s						
YKA	**Yellowknife Ar**	**90.10**	**23**	P	**P**	**07 42 36.5**	**-0.8**
	comp=Z,0.7nm,0.9s,baz=245,slow=4.6,SNR=8.4						
	comp=Z,0.7nm,0.9s						
LZDM	**Lanzhou Array**	**93.28**	**306**	LR	LR	08 24 03.7	
	comp=Z,35nm,18.7s,baz=140,slow=35						
GERES	**GERESS Array B**	**146.13**	**352**	PKPbc	**PKPbc**	**07 49 17.9**	**0.0**
	comp=Z,0.4nm,0.7s,baz=60,slow=6.1,SNR=3.6						
BRTR	**Keskin Array B**	**146.13**	**321**	PKPbc	**PKPab**	**07 49 19.1**	**+0.2**
	comp=Z,1.8nm,0.9s,baz=2.5,slow=1.6,SNR=7.1						
RETA	**Reutte**	**147.81**	**355**	*e*PKP	**PKPbc**	**07 49 23.6**	**+0.9**
	comp=Z,5.7nm,1.2s						
WATA	**Walderalm**	**147.88**	**354**	*e*PKP	**PKiKP**	**07 49 24.1**	**-0.8**
	comp=Z,1.6nm,0.5s						
SOKA	**Soboth**	**148.01**	**349**	*i* PKP	**PKPdf**	**07 49 21.7**	**+1.5**
	comp=Z,4.8nm,1.3s						
OBKA	**Obir**	**148.26**	**350**	*i* PKP	**PKPdf**	**07 49 21.0**	**+0.4**
	comp=Z,12nm,1.5s						
FETA	**Feichten**	**148.27**	**355**	*i* PKP	**PKPbc**	**07 49 24.1**	**+0.1**
	comp=Z,2.9nm,1.2s						
ABTA	**Abfaltersbach**	**148.34**	**352**	*i* PKP	**PKPdf**	**07 49 21.3**	**+0.6**
	comp=Z,6.3nm,1.2s						
FUORN	**Ofenpass-Fuorn**	**148.71**	**355**		**PKPbc**	**07 49 25.9**	**+0.6**

IDC 24 07:34:08.6±15.0**, 17°.87S**×**178°.03W, h411**^{km}±142^{km}**, mb3.1**/4**, mbtmp3.8**/4**, Error ellipse: s-maj=154.2km s-min=52.9km az=131.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.96**	**241**	P	P	07 40 57.5	+0.1
	0.7nm,0.5s,baz=76,slow=12,SNR=3.3						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**44.99**	**259**	P	P	07 41 44.7	-0.9
	0.3nm,0.4s,baz=94,slow=8.2,SNR=4.6						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**45.15**	**254**	P	P	07 41 47.0	+0.2
	3.3nm,0.6s,baz=90,slow=7.9,SNR=33						
ASAR				PcP	PcP	07 43 18.2	-0.9
	0.3nm,0.4s,baz=96,slow=4.2,SNR=4.5						
	3.3nm,0.6s						
ILAR	**Eielson Array**	**85.77**	**13**	P	P	07 46 02.2	-0.2
	0.6nm,1.0s,baz=214,slow=7.5,SNR=2.2						
	0.6nm,1.0s						
BRTR	**Keskin Array B**	**145.01**	**315**	PKPbc	PKPbc	07 52 58.5	-0.1
	0.7nm,0.8s,baz=46,slow=4.2,SNR=2.8						
GERES	**GERESS Array B**	**147.66**	**345**	PKPbc	PKPbc	07 53 04.9	-0.7
	0.4nm,0.5s,baz=96,slow=3.9,SNR=2.4						

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*NNC **24** 07:47:46.2±17.0, 36°.84N×70°.27E, h156^{km}±249^{km}, mb2.9, mpv3.6, Error ellipse: s-maj=160.8km s-min=98.5km az=3.0*

ISC 24 07:47:44.3±3.6**, 36°.7N**±0°.2×**70°.4E**±0°.2**, h150**^{km}**, n10, σ0^{s}.83**/12**, 3C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UCH	**Uchtor**	**6.39**	**29**	P	**Pn**	**07 49 16.9**	**+0.3**
	SNR=42						
KK31	**Karatay Array**	**6.41**	**1**	P	**Pn**	**07 49 17.1**	**+0.6**
	1.7nm,0.2s,baz=173,slow=12,SNR=38						
KK31				⇓S	**Sn**	**07 50 28.5**	**-0.2**
	1.9nm,0.3s,baz=186,slow=25,SNR=7.6						
EKS2	**Erkin-Say**	**6.51**	**23**	P	**Pn**	**07 49 18.8**	**+0.8**
	SNR=20						
AAK	**Ala-Archa**	**6.73**	**27**	P	**Pn**	**07 49 21.3**	**+0.5**
	SNR=10						
AAK	**Ala-Archa**	**6.73**	**27**	⇑P	**Pn**	**07 49 20.9**	**0.0**
	1.6nm,0.4s						
AAK				⇑S	**Sn**	**07 50 36.1**	**-0.5**
	3.5nm,0.5s						
KBK	**Karagaybulak**	**6.92**	**29**	P	**Pn**	**07 49 23.9**	**+0.5**
	SNR=7.0						
CHMS	**Chumysh**	**7.14**	**27**	P	**Pn**	**07 49 26.7**	**+0.5**
	SNR=5.4						
TKM2	**Tokmak 2**	**7.40**	**31**	P	**Pn**	**07 49 29.8**	**0.0**
	SNR=12						
AB31	**Akbulak array**	**14.69**	**332**	⇑P	**Pn**	**07 51 05.2**	**+0.5**
	0.9nm,0.5s,baz=139,slow=11,SNR=28						
AKTO	**Aktyubinsk**	**16.38**	**331**	⇓P	**Pn**	**07 51 23.6**	**-2.0**
	1.2nm,0.5s						

RSNC 24 07:49:06.7±0.0**, 7°N**±1°×**7°3W**±°**, h148**^{km}±1^{km}**, M2.9, mB4.5, mb3.3, ML2.7, Mw(mB)3.6, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**183**	P	Pn	07 49 26.7	-0.5
BARC				S	Sn	07 49 42.1	-0.6
BRJC	**Barrancabermej**	**0.59**	**284**	P	Pn	07 49 28.4	+0.1
BRJC				S	Sn	07 49 45.4	+0.7
PAMC	**Pamplona, Colo**	**0.69**	**43**	P	Pn	07 49 29.5	0.0
PAMC				S	Sn	07 49 46.5	-0.3
RUSC	**La Rusia**	**0.94**	**175**	P	Pn	07 49 30.6	-0.7
RUSC				S	Sn	07 49 49.5	-0.6
PTBC	**PUERTO BERRIO,**	**1.31**	**257**	P	Pn	07 49 33.2	-1.0
PTBC				S	Sn	07 49 54.5	-0.7
OCAC	**Ocana**	**1.41**	**354**	P	Pn	07 49 34.7	-0.6
OCAC				S	Sn	07 49 57.0	-0.3
SPBC	**San Pablo de B**	**1.47**	**218**	P	Pn	07 49 35.6	-0.4
SPBC				S	Sn	07 49 57.8	-0.5
CHIC	**Chingaza**	**2.26**	**194**	P	Pn	07 49 44.7	-0.5
CHIC				S	Sn	07 50 14.0	-0.8
CVER	**Cruz Verde, Cu**	**2.46**	**201**	P	Pn	07 49 47.6	-0.2
UREC	**San Jos de Ur**	**2.52**	**291**	P	Pn	07 49 46.4	-1.6
UREC				S	Sn	07 50 17.9	-1.8
VILC	**Villavicencio,**	**2.75**	**191**	P	Pn	07 49 50.4	-0.6
VILC				S	Sn	07 50 24.0	-1.2
RECRC	**Villamaria, Ca**	**2.86**	**230**	P	Pn	07 49 53.1	+0.4
RECRC				S	Sn	07 50 29.2	+1.0
NIZA	**Niza - Manizal**	**2.89**	**233**	P	Pn	07 49 52.4	-0.5
NIZA				S	Sn	07 50 29.7	+1.2
CBOC	**Ciudad Bolivar**	**2.98**	**251**	P	Pn	07 49 54.6	+0.6
CBOC				S	Sn	07 50 31.1	+0.7
DBBC	**Dabeiba**	**3.02**	**274**	P	Pn	07 49 54.4	0.0
DBBC				S	Sn	07 50 29.8	-1.4
ARGC	**Ariguani, Magd**	**3.19**	**341**	P	Pn	07 49 57.0	+0.5
ARGC				S	Sn	07 50 35.8	+0.8
ANIL	**Santa Ana**	**3.21**	**224**	P	Pn	07 49 58.3	+1.2
ANIL				S	Sn	07 50 37.0	+1.0
SDV	**Santo Domingo**	**3.24**	**51**	P	Pn	07 49 56.0	-1.2
SDV				S	Sn	07 50 34.3	-2.0
PRAC	**Prado**	**3.54**	**209**	P	Pn	07 50 00.1	-0.9
PRAC				S	Sn	07 50 42.3	-0.7
ORTC	**Ortega, Tolima**	**3.56**	**216**	P	Pn	07 50 00.8	-0.5
ORTC				S	Sn	07 50 43.8	+0.2
SJCC	**San Jacinto, C**	**3.64**	**327**	P	Pn	07 50 00.5	-1.8
SJCC				S	Sn	07 50 42.4	-3.0
URMC	**La Uribe, Meta**	**3.76**	**199**	P	Pn	07 50 03.5	-0.4
URMC				S	Sn	07 50 47.5	-0.7
YOTC	**Yotoco, Valle**	**4.24**	**228**	P	Pn	07 50 09.5	-0.7
YOTC				S	Sn	07 50 59.1	-0.5
CAPC	**Capurgana**	**4.51**	**294**	P	Pn	07 50 13.0	-0.7
CAPC				S	Sn	07 51 03.8	-2.1
MACC	**Macarena, Meta**	**4.70**	**188**	P	Pn	07 50 13.6	-2.6
MACC				S	Sn	07 51 05.8	-4.6
URIC	**Uribia, Colomb**	**4.98**	**13**	P	Pn	07 50 16.9	-2.9
URIC				S	Sn	07 51 14.7	-2.2
JAMC	**Jamundi, Valle**	**5.01**	**224**	P	Pn	07 50 19.8	-0.6
	5.5nm,2.0s						
JAMC				S	Sn	07 51 18.8	+0.9
	5.5nm,2.0s						
GARC	**Garzon, Huila**	**5.16**	**207**	P	Pn	07 50 20.8	-1.7
GARC				S	Sn	07 51 20.1	-1.5
POPC	**Popayan, Colom**	**5.51**	**220**	P	Pn	07 50 27.0	-0.1
	3.7nm,1.6s						
POPC				S	Sn	07 51 30.1	+0.2
	3.7nm,1.6s						
FLOC	**Florencia**	**5.77**	**206**	P	Pn	07 50 29.1	-1.3
	5.9nm,0.7s						
FLOC				S	Sn	07 51 35.4	-0.4
	5.9nm,0.7s						
BBAC	**Balboa, Cauca**	**6.27**	**221**	P	Pn	07 50 37.1	-0.2
BBAC				S	Sn	07 51 47.8	-0.3

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*IDC **24** 07:55:25.5±0.8, 54°.09S×140°.95E, h0^{km}, mb4.1/6, mbtmp4.1/6, MS3.8/27, Error ellipse: s-maj=63.3km s-min=18.5km az=85.0*

*NEIC **24** 07:55:27.5±1.4, 54°.15S±0°.07×140°.4E±0°.3, h10^{km}±1^{km}, mb4.6/18, Error ellipse: s-maj=27.6km s-min=4.2km az=115.0*

ISC 24 07:55:27.3±0.5**, 54°.18S**±0°.08×**140°.5E**±0°.2**, h10**^{km}**, n83, σ1^{s}.19**/56**, mb4.5**/13**, MS3.9**/28**, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOO	**Toolangi**	**16.97**	**14**		**Pn**	**07 59 24.9**	**+0.2**
AUMBR	**Murray Bridge**	**19.06**	**357**	P	**Pn**	**07 59 52.2**	**+1.8**
WHZ	**Wether Hill Ro**	**19.40**	**76**	P	**Pn**	**07 59 53.8**	**-0.6**
WHZ				IAmb	IAmb	08 00 07.9	
	comp=Z,21nm,1.2s						
HTT	**Hallett**	**20.77**	**356**	P	**P**	**08 00 09.0**	**+0.6**
AUJCS	**Jamestown Cent**	**21.02**	**356**	P	**P**	**08 00 12.8**	**+1.8**
BBOO	**Buckleboo**	**21.59**	**350**	P	**P**	**08 00 17.1**	**0.0**
BBOO				IAmb	IAmb	08 00 48.6	
	comp=Z,26nm,1.4s						
STKA	**Stephens Creek**	**22.31**	**3**	P	**P**	**08 00 23.7**	**-1.1**
	comp=Z,36nm,1.4s,baz=167,slow=12,SNR=16						
STKA				LR	LR	08 07 54.5	
	comp=Z,526nm,18.3s,baz=200,slow=34						
	comp=Z,36nm,1.4s						
STKA	**Stephens Creek**	**22.31**	**3**		**P**	**08 00 25.0**	**+0.2**
STKA	**Stephens Creek**	**22.31**	**3**	P	**P**	**08 00 25.5**	**+0.7**
CMSA	**Cobar Meteorol**	**22.94**	**11**	P	**P**	**08 00 33.3**	**+1.8**
VNDA	**Vanda**	**24.68**	**169**	P	**P**	**08 00 48.0**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=316,slow=12,SNR=7.0						
VNDA				LR	LR	08 09 55.4	
	comp=Z,386nm,18.6s,baz=337,slow=35						
	comp=Z,1.3nm,0.8s						
VNDA	**Vanda**	**24.68**	**169**		**P**	**08 00 48.3**	**+0.4**
VNDA				IAmb	IAmb	08 01 02.7	
	comp=Z,23nm,1.5s						
FORT	**Forrest**	**25.04**	**334**	P	**P**	**08 00 51.1**	**-0.4**
FORT				IAmb	IAmb	08 00 58.8	
	comp=Z,14nm,1.2s						
INKA	**Innaminka**	**26.41**	**1**		**P**	**08 01 03.9**	**-0.1**
H01W1	**Cape Leeuwin H**	**26.65**	**306**	T	T	08 29 08.0	
	baz=142,slow=74,SNR=30						
H01W2	**Cape Leeuwin H**	**26.65**	**306**	T	T	08 29 08.5	
	baz=142,slow=74,SNR=18						
H01W3	**Cape Leeuwin H**	**26.66**	**306**	T	T	08 29 06.5	
	baz=142,slow=74,SNR=21						
QLP	**Quilpie**	**27.71**	**7**	P	**P**	**08 01 21.1**	**+5.5**
URZ	**Urewera**	**29.52**	**72**	LR	LR	08 11 20.4	
	comp=Z,201nm,21.5s,baz=220,slow=33						
ASAR	**Alice Springs**	**30.87**	**348**	P	**P**	**08 01 43.0**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=166,slow=10,SNR=15						
ASAR				PcP	**PcP**	**08 04 38.5**	**-2.0**
	comp=Z,1.1nm,1.0s,baz=155,slow=3.1,SNR=5.6						
ASAR				LR	LR	08 12 28.5	
	comp=Z,228nm,20.9s,baz=140,slow=33						
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**30.87**	**348**		**P**	**08 01 42.7**	**-1.0**
AS31	**Alice Springs**	**30.87**	**348**	P	**P**	**08 01 43.1**	**-0.6**
CTA	**Charters Tower**	**34.32**	**10**	LR	LR	08 15 22.5	
	comp=Z,330nm,19.2s,baz=210,slow=35						
WR8	**Warramunga Arr**	**34.47**	**350**		**P**	**08 02 14.4**	**-0.9**
WR8				IAmb	IAmb	08 02 20.5	
	comp=Z,8.5nm,1.2s						
WRA	**Warramunga Arr**	**34.50**	**350**	P	**P**	**08 02 14.2**	**-1.3**
	comp=Z,4.3nm,1.2s,baz=175,slow=7.8,SNR=8.4						
WRA				PcP	**PcP**	**08 04 49.1**	**-1.3**
	comp=Z,2.0nm,1.0s,baz=173,slow=2.6,SNR=5.0						
	comp=Z,4.3nm,1.2s						
WRAB	**Tennant Creek**	**34.51**	**350**	P	**P**	**08 02 14.9**	**-0.6**
WB0	**Warramunga Arr**	**34.67**	**350**	P	**P**	**08 02 16.1**	**-0.9**
WB0				IAmb	IAmb	08 02 21.9	
	comp=Z,7.8nm,1.1s						
QSPA	**South Pole Qui**	**35.93**	**180**	P	**P**	**08 02 27.2**	**-0.4**
QSPA				IAmb	IAmb	08 02 41.0	
	comp=Z,14nm,1.2s						
DZM	**Mont Dzumac**	**37.59**	**42**	LR	LR	08 14 22.3	
	comp=Z,3μm,19.9s,baz=294,slow=30						
FITZ	**Fitzroy Crossi**	**37.79**	**337**	LR	LR	08 17 03.2	
	comp=Z,235nm,20.9s,baz=160,slow=34						
FITZ	**Fitzroy Crossi**	**37.79**	**337**	P	**P**	**08 02 43.0**	**-0.6**
PMG	**Port Moresby**	**44.97**	**9**	LR	LR	08 20 27.7	
	comp=Z,172nm,20.8s,baz=182,slow=34						
BATI	**Baumata**	**45.87**	**337**	LR	LR	08 22 13.3	
	comp=Z,392nm,20.9s,baz=180,slow=35						
BELA	**Belgrano 2**	**48.17**	**181**	P	**P**	**08 04 07.5**	**+0.5**
BELA				IAmb	IAmb	08 04 13.3	
	comp=Z,8.0nm,1.1s						
JAY	**Jayapura**	**51.50**	**0**	LR	LR	08 26 08.3	
	comp=Z,148nm,21.7s,baz=188,slow=36						
SNAA	**Sanae**	**51.81**	**194**	P	**P**	**08 04 35.2**	**+0.4**
	comp=Z,3.4nm,1.1s,baz=186,slow=7.8,SNR=5.5						
SNAA				LR	LR	08 26 16.9	
	comp=Z,452nm,19.7s,baz=154,slow=36						
	comp=Z,3.4nm,1.1s						
SNAA	**Sanae**	**51.81**	**194**		**P**	**08 04 35.7**	**+0.9**
SNAA				IAmb	IAmb	08 04 45.9	
	comp=Z,12nm,1.3s						
H04S1	**CROZET ISLANDS**	**53.25**	**239**	T	T	09 03 13.8	
	baz=132,slow=74,SNR=23						
H04S2	**CROZET ISLANDS**	**53.25**	**239**	T	T	09 03 01.9	
	baz=132,slow=74,SNR=20						
H04S3	**CROZET ISLANDS**	**53.26**	**239**	T	T	09 03 04.4	
	baz=132,slow=74,SNR=24						
PMSA	**Palmer Station**	**59.88**	**168**	LR	LR	08 28 57.4	
	comp=Z,72nm,20.5s,baz=196,slow=34						
DAV	**Davao City (W)**	**62.30**	**343**	LR	LR	08 32 21.2	
	comp=Z,44nm,21.8s,baz=190,slow=36						
PPT	**Papeete**	**64.22**	**84**	LR	LR	08 28 07.3	
	comp=Z,27nm,20.7s,baz=220,slow=31						
GUMO	**Guam**	**67.60**	**5**	LR	LR	08 36 22.3	
	comp=Z,57nm,18.3s,baz=160,slow=36						
PALK	**Pallekele**	**78.94**	**299**	LR	LR	08 34 39.4	
	comp=Z,34nm,21.9s,baz=131,slow=30						
SUR	**Sutherland**	**79.34**	**228**	LR	LR	08 35 48.0	
	comp=Z,74nm,19.9s,baz=164,slow=30						
BOSA	**Boshof**	**80.49**	**234**	LR	LR	08 36 27.2	
	comp=Z,58nm,21.0s,baz=205,slow=30						
CMAR	**Chiang Mai Arr**	**80.61**	**320**	P	**P**	**08 07 41.6**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=161,slow=3.8,SNR=9.5						
CMAR				LR	LR	08 41 18.7	
	comp=Z,19nm,21.2s,baz=145,slow=34						
	comp=Z,0.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**80.61**	**320**		**P**	**08 07 39.6**	**-0.4**
CHTO	**Chiang Mai**	**80.94**	**321**	P	**P**	**08 07 41.8**	**+0.1**
CHTO				IAmb	IAmb	08 07 49.1	
	comp=Z,6.0nm,1.0s						
JOW	**Kunigami**	**81.36**	**349**	LR	LR	08 42 44.0	
	comp=Z,64nm,20.6s,baz=142,slow=35						
PLCA	**Paso Flores**	**81.78**	**157**	LR	LR	08 38 19.3	
	comp=Z,34nm,20.2s,baz=198,slow=32						
LBTB	**Lobatse**	**83.35**	**236**	LR	LR	08 37 52.1	
	comp=Z,58nm,20.4s,baz=164,slow=30						
JHJ	**Hachijo jima 2**	**86.94**	**359**	LR	LR	08 44 31.6	
	comp=Z,37nm,21.3s,baz=34,slow=34						
JNU	**Nakatsue**	**87.34**	**352**	LR	LR	08 46 44.2	
	comp=Z,38nm,19.6s,baz=112,slow=35						
SHL	**Shillong**	**89.77**	**317**	P	**P**	**08 08 24.4**	**-1.5**
LSZ	**Lusaka**	**90.19**	**243**	LR	LR	08 43 11.9	
	comp=Z,54nm,19.9s,baz=156,slow=32						
MJAR	**Matsushiro Arr**	**90.38**	**358**	LR	LR	08 45 30.6	
	comp=Z,31nm,21.9s,baz=175,slow=33						
KSRS	**Korea Array**	**91.91**	**350**	LR	LR	08 49 52.2	
	comp=Z,15nm,19.4s,baz=70,slow=36						
CPUP	**Villa Florida**	**98.36**	**164**	LR	LR	08 51 27.4	
	comp=Z,28nm,18.9s,baz=86,slow=34						
NVAR	**Mina Array Bea**	**126.20**	**73**	PKP	**PKiKP**	**08 14 29.9**	**-0.1**
	comp=Z,1.0nm,0.9s,baz=228,slow=6.2,SNR=5.0						
YKA	**Yellowknife Ar**	**141.88**	**47**	PKP	**PKPdf**	**08 14 56.7**	**-1.1**
	comp=Z,0.3nm,0.9s,baz=264,slow=2.8,SNR=4.6						
RONA	**Rosalia, Austr**	**145.04**	**283**	*e*PKP	**PKPdf**	**08 15 03.7**	**-0.2**
	comp=Z,14nm,1.3s						
SOKA	**Soboth**	**145.22**	**280**	*i* PKP	**PKPdf**	**08 15 04.5**	**+0.2**
	comp=Z,11nm,1.1s						
ARSA	**Arzberg**	**145.25**	**282**	*i* PKP	**PKPdf**	**08 15 04.3**	**0.0**
	comp=Z,12nm,0.9s						
OBKA	**Obir**	**145.41**	**280**	*e*PKP	**PKPab**	**08 15 04.9**	**0.0**
	comp=Z,14nm,1.6s						
CONA	**Conrad Observa**	**145.41**	**283**	*e*PKP	**PKPbc**	**08 15 04.4**	**-0.2**
	comp=Z,6.3nm,1.3s						
FINES	**FINESS Array B**	**145.71**	**309**	PKPbc	**PKPab**	**08 15 05.6**	**+0.3**
	comp=Z,2.5nm,0.9s,baz=106,slow=4.2,SNR=8.1						
MYKA	**Terra Mystica**	**146.00**	**279**	*i* PKP	**PKPbc**	**08 15 06.5**	**0.0**
	comp=Z,12nm,1.3s						
MOA	**Molln**	**146.29**	**282**	*e*PKP	**PKPbc**	**08 15 07.0**	**-0.2**
	comp=Z,4.9nm,1.1s						
BIOA	**Bad Ischl, Aus**	**146.57**	**281**	*e*PKP	**PKiKP**	**08 15 12.5**	**+1.6**
	comp=Z,5.6nm,1.1s						
ABTA	**Abfaltersbach**	**146.72**	**279**	*e*PKP	**PKPbc**	**08 15 08.8**	**+0.1**
	comp=Z,14nm,1.8s						
LESA	**Schwarzleotal**	**146.98**	**280**	*i* PKP	**PKPbc**	**08 15 08.9**	**-0.4**
	comp=Z,6.9nm,1.0s						
GERES	**GERESS Array B**	**147.12**	**283**	PKPbc	**PKPbc**	**08 15 08.6**	**-1.1**
	comp=Z,2.8nm,1.0s,baz=131,slow=3.7,SNR=5.0						
WTTA	**Wattenberg**	**147.50**	**279**	*e*PKP	**PKPab**	**08 15 14.1**	**+1.1**
	comp=Z,7.0nm,1.2s						
WATA	**Walderalm**	**147.58**	**279**	*i* PKP	**PKPbc**	**08 15 10.1**	**-0.9**
	comp=Z,6.6nm,1.2s						
ARCES	**ARCESS Array B**	**147.63**	**323**	PKPbc	**PKPbc**	**08 15 09.7**	**-0.7**
	comp=Z,4.3nm,1.0s,baz=72,slow=4.7,SNR=7.5						
SQTA	**Sankt Quirin**	**147.73**	**279**	*i* PKiKP	**PKPab**	**08 15 16.1**	**+2.2**
	comp=Z,7.9nm,0.9s						
FETA	**Feichten**	**147.90**	**278**	*e*PKP	**PKPbc**	**08 15 11.6**	**-0.3**
	comp=Z,9.0nm,1.2s						
RETA	**Reutte**	**148.13**	**279**	*i* PKP	**PKPab**	**08 15 14.8**	**-0.6**
	comp=Z,3.3nm,0.6s						
DAVA	**Damuels**	**148.54**	**278**	*e*PKP	**PKPbc**	**08 15 13.5**	**-0.1**
	comp=Z,10nm,1.1s						
SPITS	**Spitsbergen Ar**	**149.27**	**340**	PKPbc	**PKPbc**	**08 15 13.7**	**-0.7**
	comp=Z,3.2nm,0.5s,baz=95,slow=3.3,SNR=11						
ESDC	**Sonseca Array**	**152.06**	**253**	PKPbc	**PKiKP**	**08 15 22.6**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=113,slow=1.4,SNR=11						

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*SOME **24** 07:59:14.5, 44°.22N×83°.42E, h10^{km}*

*NNC **24** 07:59:17.1±1.7, 44°.21N×83°.27E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=12.9km s-min=7.8km az=123.0*

ISC 24 07:59:16.5±2.8**, 44°.1N**±0°.1×**83°.6E**±0°.1**, h20**^{km}**, n31, σ1^{s}.39**/28**, 4C, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.44**	**256**	Pg	**Pb**	**07 59 58.1**	**-1.7**
	11nm,0.3s						
KTMS				Lg	Lg	08 00 29.3	
	75nm,0.4s						
KTMS	**Ketmen**	**2.44**	**256**	*e*P	**Pb**	**07 59 58.1**	**-1.7**
	11nm,0.3s						
KTMS				*e*S	**Sb**	**08 00 29.3**	**-0.1**
	75nm,0.4s						
MK31	**Makanchi Array**	**2.86**	**342**	Pg	**Pb**	**08 00 06.2**	**-0.7**
	0.5nm,0.2s,baz=160,slow=16,SNR=9.6						
MK31				Lg	Lg	08 00 40.4	
	14nm,0.4s,baz=158,slow=26,SNR=18						
PDGK	**Podgornoye**	**3.07**	**257**	⇑Pg	**Pb**	**08 00 08.7**	**-1.8**

	3.1nm,0.5s						
PDGK				⇑Lg	Lg	08 00 46.4	
	41nm,0.6s						
SHLS	**Shalkode**	**3.14**	**254**	Pg	**Pn**	**08 00 05.7**	**+0.7**
	14nm,0.3s						
SHLS				Lg	Lg	08 00 42.2	
	155nm,0.4s						
SHLS	**Shalkode**	**3.14**	**254**	*e*P	**Pn**	**08 00 05.7**	**+0.7**
	14nm,0.3s						
SHLS				*e*S	**Sn**	**08 00 42.2**	**+0.2**
	155nm,0.4s						
KNOS	**Konyrlen**	**3.19**	**276**	Pg	**Pb**	**08 00 11.0**	**-1.5**
	19nm,0.3s						
KNOS				Lg	Lg	08 00 51.2	
	25nm,0.3s						
KAPS	**Kapalarasan**	**3.25**	**293**	Pg	**Pb**	**08 00 13.0**	**-0.6**
	5.5nm,0.4s						
KAPS				Lg	Lg	08 00 54.3	
	55nm,0.1s						
UZB	**Uzynbulak**	**3.45**	**256**	Pg	**Pb**	**08 00 15.1**	**-1.9**
	6.8nm,0.4s						
UZB				Lg	Lg	08 00 58.2	
	22nm,0.7s						
UZB	**Uzynbulak**	**3.45**	**256**	*e*P	**Pb**	**08 00 15.1**	**-1.9**
	6.8nm,0.4s						
UZB				*e*S	**Sb**	**08 00 58.2**	**-0.4**
	22nm,0.7s						
KPKS	**Kokpek**	**3.61**	**262**	Pg	**Pb**	**08 00 17.8**	**-2.0**
	0.4nm,0.7s						
KPKS				Lg	Lg	08 01 03.0	
	18nm,0.5s						
KPKS	**Kokpek**	**3.61**	**262**	*e*P	**Pb**	**08 00 17.8**	**-2.0**
	0.4nm,0.7s						
KPKS				*e*S	**Sb**	**08 01 03.0**	**-0.1**
	18nm,0.5s						
BLB	**Baldybastay**	**3.69**	**272**	Pg	**Pb**	**08 00 19.6**	**-1.5**
	18nm,0.3s						
BLB				Lg	Lg	08 01 06.2	
	49nm,0.5s						
SATY	**Saty**	**3.91**	**257**	Pg	**Pb**	**08 00 24.5**	**-0.4**
	1.8nm,0.1s						
SATY				Lg	Lg	08 01 14.4	
	13nm,0.2s						
KURS	**Kuram**	**3.97**	**263**	Pg	**Pb**	**08 00 25.6**	**-0.3**
	5.3nm,1.1s						
KURS				Lg	Lg	08 01 15.9	
	7.6nm,0.6s						
ARXS	**Arharly**	**4.15**	**274**	Pg	**Pb**	**08 00 27.5**	**-1.4**
	11nm,0.4s						
ARXS				Lg	Lg	08 01 19.6	
	12nm,0.8s						
ARXS	**Arharly**	**4.15**	**274**	*e*P	**Pb**	**08 00 27.5**	**-1.4**
	11nm,0.4s						
ARXS				*e*S	**Sb**	**08 01 19.6**	**+0.9**
	12nm,0.8s						
KOTS	**Kotyrbulak**	**4.78**	**262**	Pg	**Pb**	**08 00 41.6**	**+1.9**
	3.6nm,0.4s						
KOTS				Lg	Lg	08 01 43.7	
	32nm,0.6s						
KOTS	**Kotyrbulak**	**4.78**	**262**	*e*P	**Pb**	**08 00 41.6**	**+1.9**
	3.6nm,0.4s						
KOTS				*e*S	Sb	08 01 43.7	+6.9
	32nm,0.6s						
MDOK	**Medeo**	**4.84**	**261**	Pg	Pb	08 00 43.7	+3.0
	3.4nm,1.0s						
MDOK				Lg	Lg	08 01 46.8	
	10nm,0.7s						
TNSS	**Tian-Shan**	**4.94**	**260**	Pg	Pb	08 00 46.2	+3.6
	1.5nm,0.5s						
TNSS				Lg	Lg	08 01 51.9	
	2.2nm,1.0s						
TNSS	**Tian-Shan**	**4.94**	**260**	*e*P	Pb	08 00 46.2	+3.6
	1.5nm,0.5s						
TNSS				*e*S	Sb	08 01 51.9	+10
	2.2nm,1.0s						
KTBS	**Karatobe**	**5.01**	**268**	Pg	Pb	08 00 47.2	+3.6
	3.5nm,0.6s						
KTBS				Lg	Lg	08 01 52.8	
	5.4nm,0.6s						
MTBS	**Maitube**	**5.29**	**262**	Pg	**Pb**	**08 00 50.0**	**+1.7**
	1.9nm,0.3s						
MTBS				Lg	Lg	08 01 57.9	
	8.3nm,0.8s						
MTBS	**Maitube**	**5.29**	**262**	*e*P	**Pb**	**08 00 50.0**	**+1.7**
	1.9nm,0.3s						
MTBS				*e*S	Sb	08 01 57.9	+6.5
	8.3nm,0.8s						
KST	**Kastek**	**5.64**	**262**	Pg	Pb	08 00 57.3	+2.9
	2.2nm,0.6s						
KST				Lg	Lg	08 02 10.5	
	6.9nm,0.7s						
KST	**Kastek**	**5.64**	**262**	*e*P	Pb	08 00 57.2	+2.9
	2.2nm,0.6s						
KST				*e*S	Sb	08 02 10.5	+8.9
	6.9nm,0.7s						
DGS	**Degeres**	**5.74**	**264**	Pg	**Pb**	**08 00 56.1**	**+0.2**
	2.4nm,0.6s						
DGS				Lg	Lg	08 02 08.4	
	10nm,0.5s						
KRBS	**Karabastau**	**5.74**	**269**	Pg	**Pb**	**08 00 55.8**	**-0.1**
	1.3nm,0.5s						
KRBS				Lg	Lg	08 02 08.0	
	2.7nm,0.5s						
KURBB	**Kurchatov Arra**	**7.39**	**334**	⇑Lg	Lg	08 03 05.3	
	12nm,0.6s						
KURK	**Kurchatov**	**7.44**	**335**	⇑Lg	Lg	08 03 04.2	
	1.8nm,0.6s						

SDD ***24*** *08:06:17.2±2.2, 19°.31N×70°.45W, h26^{km}±13^{km}, MD3.5, ML2.9, MW3.4, Presumed earthquake*

OSPL ***24*** *08:06:17.3±1.8, 19°.27N×70°.42W, h0^{km}±12^{km}, ML2.6, Presumed earthquake*

ISC 24 08:06:16.0±1.0**, 19°.28N**±0°.02×**70°.44W**±0°.02**, h8**^{km}±9^{km}**, n33, σ1^{s}71**/58**, 26C-16D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SC01	**Santiago de lo**	**0.30**	**298**	⇓*e*Pg	**Pg**	**08 06 23.1**	**+1.1**
SC01				⇓*e*Sg	**Sb**	**08 06 29.2**	**+0.3**
SC01				IAML		08 06 29.4	
	comp=N,6µm,0.8s						
SC01	**Santiago de lo**	**0.30**	**298**	*i* P	**Pg**	**08 06 22.9**	**+0.9**
SC01				*e*S	**Sb**	**08 06 29.1**	**+0.1**
SC01				IAML		08 06 30.0	
	comp=Z,683nm,0.3s						
SODR	**Sosua Marina B**	**0.48**	**345**	⇓*e*Pg	**Pg**	**08 06 26.0**	**+0.6**
SODR				⇑*e*Sg	**Sg**	**08 06 33.2**	**+1.5**
SODR				IAML		08 06 35.9	
	comp=N,2µm,0.8s						
ABDR	**Alto Bandera**	**0.50**	**200**	⇑*e*Pg	**Pg**	**08 06 26.4**	**+0.7**
ABDR				IAML		08 06 56.3	
	comp=N,0.3nm,0.4s						
DR08	**Loma La Naviza**	**0.51**	**128**	⇑*e*Pg	**Pg**	**08 06 25.8**	**-0.1**
DR08				⇑*e*Sg	**Sg**	**08 06 33.4**	**+0.8**
DR08				IAML		08 06 36.4	
	comp=N,11µm,0.2s						
NAG1	**Nagua**	**0.55**	**83**	⇑*e*Pg	**Pg**	**08 06 26.7**	**0.0**
NADR	**Nagua**	**0.56**	**83**	⇑*e*Pg	**Pg**	**08 06 26.6**	**-0.2**
NADR				⇑*e*Sg	**Sb**	**08 06 36.0**	**-0.2**
NADR				IAML		08 06 38.7	
	comp=N,2µm,0.2s						
CADR	**Cabrera**	**0.61**	**51**	⇓*e*Pg	**Pg**	**08 06 27.6**	**-0.2**
CADR				⇓*e*Sg	**Sg**	**08 06 35.5**	**-0.3**
CADR				IAML		08 06 43.3	
	comp=N,1µm,0.5s						
LUDR	**Luperon**	**0.77**	**322**	⇓*e*Pg	**Pg**	**08 06 31.4**	**+0.5**
SDDR	**Presa de Saban**	**0.85**	**250**	⇑*e*Pg	**Pg**	**08 06 31.8**	**-0.6**
SDDR				⇓*e*Sg	**Sg**	**08 06 42.5**	**-1.0**
SDDR				IAML		08 06 45.5	
	comp=N,108nm,0.2s						
SDDR	**Presa de Saban**	**0.85**	**250**	*i* P	**Pg**	**08 06 32.8**	**+0.4**
SDDR				*e*S	**Sg**	**08 06 44.1**	**+0.6**
SDDR				IAML		08 06 44.3	
	comp=Z,101nm,0.2s						
REDR	**Restauracion**	**0.91**	**263**	⇑*e*Pg	**Pn**	**08 06 36.8**	**+1.7**
REDR				⇑*e*Sg	**Sn**	**08 06 51.2**	**+2.9**
REDR				IAML		08 06 53.8	
	comp=N,1µm,0.2s						
LOPP1	**Punta Rusia, P**	**0.91**	**309**	*i* P	**Pg**	**08 06 33.8**	**+0.3**
LOPP1				*e*S	**Sg**	**08 06 46.1**	**+0.7**
LOPP1				IAML		08 06 54.1	
	comp=Z,316nm,0.4s						
SDD	**Santo Domingo**	**0.96**	**148**	⇓*e*Pg	**Pb**	**08 06 34.0**	**-0.9**
SDD				⇑*e*Sg	**Sb**	**08 06 47.0**	**-0.8**
SDD				IAML		08 06 47.6	
	comp=N,54nm,0.3s						
SDD	**Santo Domingo**	**0.96**	**148**	*i* P	**Pb**	**08 06 33.6**	**-1.3**
SDD				*e*S	**Sb**	**08 06 46.5**	**-1.3**
HATOM	**Hato Mayor del**	**1.12**	**116**	⇓*e*Pg	**Pb**	**08 06 35.8**	**-1.9**
HATOM				⇑*e*Sg	**Sb**	**08 06 50.5**	**-1.9**
HATOM				IAML		08 06 51.5	
	comp=N,256nm,0.2s						
LONE3	**El Aguacate, B**	**1.17**	**235**	*i* P	**Pn**	**08 06 37.8**	**-1.1**
LONE3				*e*S	**Sb**	**08 06 54.0**	**0.0**
SMDR	**Samana, DR**	**1.19**	**89**	⇓*e*Pg	**Pn**	**08 06 38.0**	**-0.9**
SMDR				⇓*e*Sg	**Sb**	**08 06 52.5**	**-1.8**
SMDR				IAML		08 06 55.9	
	comp=N,261nm,0.5s						
NEDR	**Neiba UASD**	**1.22**	**229**	⇑*e*Pg	**Pn**	**08 06 38.6**	**-0.7**
NEDR				⇑*e*Sg	**Sb**	**08 06 55.1**	**-0.1**
NEDR				IAML		08 06 59.3	
	comp=N,109nm,0.3s						
MCDR	**Montecristi**	**1.29**	**298**	⇑*e*Pg	**Pn**	**08 06 39.4**	**-1.1**
MCDR				⇓*e*Sg	**Sb**	**08 06 55.0**	**-2.4**
MCDR				IAML		08 07 04.5	
	comp=N,446nm,0.3s						
LODU1	**El Espartillar**	**1.34**	**227**	*i* P	**Pn**	**08 06 41.4**	**+0.3**
MIDR	**Miches**	**1.35**	**102**	⇑*e*Pg	**Pn**	**08 06 39.9**	**-1.2**
MIDR				IAML		08 07 02.8	
	comp=N,84nm,0.4s						
PODR	**Polo**	**1.36**	**216**	⇑*e*Pg	**Pn**	**08 06 41.5**	**-0.1**
PODR				⇑*e*Sg	**Sn**	**08 06 59.1**	**-0.9**
PODR				IAML		08 07 04.5	
	comp=N,281nm,0.3s						
PODR	**Polo**	**1.36**	**216**	*i* P	**Pn**	**08 06 41.5**	**-0.1**
PODR				*e*S	**Sn**	**08 07 00.2**	**+0.3**
JIDR	**Jimani**	**1.55**	**240**	⇑*e*Pg	**Pn**	**08 06 42.6**	**-1.3**
JIDR				⇑*e*Sg	**Sn**	**08 07 01.2**	**-2.9**
JIDR				IAML		08 07 07.1	
	comp=N,175nm,0.8s						
LOVI	**El Cajuil, Ovi**	**1.72**	**211**	*i* P	**Pn**	**08 06 47.3**	**+1.1**
LOVI				IAML		08 07 17.3	
	comp=Z,72nm,1.0s						
HIDR	**Higuey Centro**	**1.77**	**113**	⇓*e*Pg	**Pn**	**08 06 46.7**	**-0.3**
HIDR				⇓*e*Sg	**Sn**	**08 07 08.7**	**-1.1**
HIDR				IAML		08 07 17.4	
	comp=N,316nm,0.3s						
LOBH	**Bahia de las A**	**1.81**	**219**	*i* P	**Pn**	**08 06 49.1**	**+1.6**
GRTK	**Grand Turk**	**2.31**	**344**	⇑*e*Pg	**Pn**	**08 06 52.5**	**-1.9**
GRTK				⇑*e*Sg	**Sn**	**08 07 23.1**	**0.0**
GRTK				IAML		08 07 33.9	
	comp=N,92nm,1.4s						
CRPR	**Cabo Rojo, PR**	**3.41**	**111**	⇓*e*Pg	**Pb**	**08 07 13.9**	**-2.8**
CRPR				⇓*e*Sg	**Sn**	**08 07 54.3**	**+4.2**
CRPR				IAML		08 08 00.1	
	comp=N,49nm,4.1s						
MLPR	**Magueyes Islan**	**3.48**	**112**	⇑*e*Pg	**Pn**	**08 07 14.7**	**+4.2**
MLPR				⇑*e*Sg	**Sn**	**08 07 55.2**	**+3.3**
MLPR				IAML		08 08 12.3	
	comp=N,6.8nm,0.7s						
AOPR	**Arecibo Observ**	**3.62**	**104**	*e*Pg	**Pn**	**08 07 15.7**	**+3.3**
AOPR				⇑*e*Sg	**Sn**	**08 07 59.7**	**+4.4**
AOPR				IAML		08 08 11.8	
	comp=N,90nm,0.3s						
QMBU	**Quimbuelo**	**4.21**	**283**	⇑*e*Pg	**Pn**	**08 07 23.2**	**+2.6**
QMBU				IAML		08 08 44.1	
	comp=N,23nm,1.8s						

IDC ***24*** *08:07:50.1±1.8, 13°.43N×120°.66E, h62^{km}±19^{km}, mb3.7/9, mbtmp4.0/9, MS2.9/1, Error ellipse: s-maj=42.5km s-min=15.4km az=66.0*

NEIC ***24*** *08:07:51.4±1.2, 13°.49N±0°.09×120°.7E±0°.2, h71^{km}±6^{km}, mb4.1/7, Error ellipse: s-maj=26.3km s-min=12.4km az=92.0*

ISC 24 08:07:50.8±0.9**, 13°.5N**±0°.1×**120°.7E**±0°.2**, h70**^{km}**, n19, σ0^{s}58**/18**, mb4.0**/13**, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**0.66**	**20**	P	**Pn**	**08 08 05.2**	**-0.2**
	1µm,0.3s,baz=226,slow=8.8,SNR=38						
TGY				S	**Sn**	**08 08 17.0**	**+0.9**
	11µm,0.8s,baz=348,slow=23,SNR=26						
TPUB	**Ta-pu**	**9.78**	**360**	Pn	**Pn**	**08 10 07.3**	**-1.3**
CMAR	**Chiang Mai Arr**	**21.50**	**286**	P	**P**	**08 12 33.5**	**-0.5**
	2.1nm,0.3s,baz=76,slow=8.3,SNR=4.5						
	2.1nm,0.3s						
KSRS	**Korea Array**	**24.74**	**14**	LR	LR	08 23 08.1	
	comp=Z,24nm,18.4s,baz=5.0,slow=37						
WB0	**Warramunga Arr**	**35.67**	**158**	P	**P**	**08 14 42.3**	**-0.2**
WB0				IAmb	IAmb	08 14 54.9	
	comp=Z,2.3nm,0.9s						
WRA	**Warramunga Arr**	**35.81**	**158**	P	**P**	**08 14 43.3**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=339,slow=9.2,SNR=8.4						
	comp=Z,1.0nm,0.5s						
WR8	**Warramunga Arr**	**35.88**	**158**	P	**P**	**08 14 44.5**	**+0.2**
WR8				IAmb	IAmb	08 14 44.8	
	comp=Z,4.9nm,1.2s						
SONM	**Songino Array**	**36.28**	**344**	P	**P**	**08 14 48.2**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=159,slow=9.1,SNR=2.6						
	comp=Z,0.9nm,0.5s						
SONM	**Songino Array**	**36.28**	**344**	IAmb	IAmb	08 14 48.9	
	comp=Z,1.9nm,1.0s						
AS31	**Alice Springs**	**39.10**	**161**	P	**P**	**08 15 10.9**	**-0.5**
AS31				IAmb	IAmb	08 15 27.2	
	comp=Z,0.7nm,0.6s						
ASAR	**Alice Springs**	**39.10**	**161**	P	**P**	**08 15 11.7**	**+0.2**
	comp=Z,1.3nm,0.4s,baz=334,slow=6.7,SNR=56						
	comp=Z,1.3nm,0.4s						
MKAR	**Makanchi Array**	**46.22**	**324**	P	**P**	**08 16 09.5**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=135,slow=9.4,SNR=7.8						
	comp=Z,0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**50.38**	**326**	P	**P**	**08 16 41.4**	**+0.6**
	comp=Z,2.2nm,0.7s,baz=129,slow=7.5,SNR=13						
	comp=Z,2.2nm,0.7s						
KURK	**Kurchatov**	**50.38**	**326**		**P**	**08 16 40.8**	**0.0**
BVAR	**Borovoye Array**	**55.96**	**326**	P	**P**	**08 17 21.3**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=134,slow=8.3,SNR=3.0						
	comp=Z,0.5nm,0.5s						
AB31	**Akbulak array**	**60.91**	**319**	P	**P**	**08 17 56.2**	**-0.1**
AB31				IAmb	IAmb	08 17 57.3	
	comp=Z,1.3nm,0.8s						
ABKAR	**Akbulak array**	**60.91**	**319**	P	**P**	**08 17 56.7**	**+0.4**
ARCES	**ARCESS Array B**	**79.30**	**339**	P	**P**	**08 19 48.3**	**-0.1**
	comp=Z,2.4nm,0.9s,baz=78,slow=5.0,SNR=4.1						
	comp=Z,2.4nm,0.9s						
HFS	**Hagfors**	**86.68**	**331**	P	**P**	**08 20 27.0**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=90,slow=7.4,SNR=1.3						
	comp=Z,0.7nm,0.8s						

IDC ***24*** *08:35:10.1±1.4, 3°.18N×126°.29E, h0^{km}, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=113.9km s-min=18.8km az=67.0*

DJA ***24*** *08:35:30.4±0.8, 3°N±5°×12°6E±°, h112^{km}±14^{km}, M4.0/8, mB5.0/1, MLv4.0/8, Mw(mB)4.4/1*

ISC 24 08:35:28.1±1.0**, 2°.43N**±0°.07×**125°.91E**±0°.08**, h100**^{km}**, n12, σ2^{s}98**/12**, mb3.6**/5**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.30**	**343**	P	**Pn**	**08 35 53.9**	**+1.9**
SGSI				S	**Sn**	**08 36 12.5**	**+2.5**
GAMI	**Galela, Maluku**	**1.96**	**107**	P	**Pn**	**08 36 03.3**	**+3.0**
GTOI	**Gorontalo**	**3.41**	**238**	P	**Pn**	**08 36 21.8**	**+2.5**
MRSI	**Marisa**	**4.42**	**244**	P	**Pn**	**08 36 35.3**	**+2.3**
SANI	**Sanana**	**4.45**	**179**	P	**Pn**	**08 36 36.9**	**+3.4**
NLAI	**Namlea**	**5.76**	**168**	P	**Pn**	**08 36 54.0**	**+2.8**
FITZ	**Fitzroy Crossi**	**20.40**	**181**	P	**P**	**08 39 56.0**	**-1.2**
	0.9nm,0.5s,baz=3.8,slow=10,SNR=2.0						
	0.9nm,0.5s						
WRA	**Warramunga Arr**	**23.73**	**160**	P	**P**	**08 40 29.0**	**-2.3**
	1.1nm,0.6s,baz=341,slow=9.2,SNR=9.4						
	1.1nm,0.6s						
ASAR	**Alice Springs**	**27.08**	**164**	P	**P**	**08 41 00.1**	**-1.5**
	0.1nm,0.4s,baz=346,slow=7.8,SNR=8.2						
ASAR				PcP	**PcP**	**08 44 15.9**	**-4.5**
	0.2nm,0.6s,baz=338,slow=2.3,SNR=2.2						
	0.1nm,0.4s						
STKA	**Stephens Creek**	**37.23**	**158**	P	**P**	**08 42 29.2**	**-0.8**
	0.6nm,0.4s,baz=332,slow=9.8,SNR=5.5						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**58.16**	**326**	P	P	08 45 03.6	-7.9
	0.6nm,0.5s,baz=121,slow=7.5,SNR=8.6						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**62.39**	**328**	P	P	08 45 31.8	-8.4
	0.3nm,0.4s,baz=127,slow=5.9,SNR=4.2						
	0.3nm,0.4s						

NEIC ***24*** *08:39:12.8±0.6, 18°.3N±0°.2×65°.10W±0°.03, h35^{km}±2^{km}, ML2.1/9, Md3.3/3(RSPR), Error ellipse: s-maj=30.6km s-min=3.1km az=173.0*

RSPR 24 08:39:14.1, 18°.33N×65°.11W, h35^{km}±5^{km}**, MD3.3**/3**, 4C, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUMP	**Col San Antoni**	**0.73**	**255**		Pn	08 39 25.8	-2.1
HUMP					Sn	08 39 36.3	-1.5
HUMP	**Col San Antoni**	**0.73**	**255**	⇑*e*P	Pn	08 39 25.8	-2.1
HUMP	**Col San Antoni**	**0.73**	**255**	*e*S	Sn	08 39 36.3	-1.5
ECPR	**Experimental S**	**1.19**	**270**	Pn	Pn	08 39 33.0	-1.3
ECPR				IAML		08 39 49.4	
	44nm,0.2s						
ECPR				IAML		08 39 49.8	
	36nm,0.2s						
ECPR	**Experimental S**	**1.19**	**270**	*e*S	Sn	08 39 48.0	-1.2
CELP	**Cerrillos**	**1.42**	**260**	Pn	Pn	08 39 36.1	-1.2
CELP				IAML		08 39 48.1	
	18nm,3.0s						
CELP				IAML		08 40 32.4	
	20nm,3.3s						
AOPR	**Arecibo Observ**	**1.56**	**271**		Pn	08 39 38.2	-1.1
AOPR					Sn	08 39 56.7	-1.7
AOPR	**Arecibo Observ**	**1.56**	**271**	IAML		08 40 05.2	
	comp=N,30nm,1.5s						
AOPR	**Arecibo Observ**	**1.56**	**271**	⇑*e*P	Pn	08 39 38.2	-1.1
AOPR	**Arecibo Observ**	**1.56**	**271**	*e*S	Sn	08 39 56.7	-1.7
MLPR	**Magueyes Islan**	**1.87**	**259**	⇑*e*P	Pn	08 39 42.5	-1.1
MLPR	**Magueyes Islan**	**1.87**	**259**	*e*S	Sn	08 40 04.8	-1.3
CRPR	**Cabo Rojo, PR**	**1.93**	**261**		Pn	08 39 43.4	-1.0
CRPR					Sn	08 40 06.3	-1.1
CRPR	**Cabo Rojo, PR**	**1.93**	**261**	⇑*e*P	Pn	08 39 43.4	-1.0
CRPR	**Cabo Rojo, PR**	**1.93**	**261**	*e*S	Sn	08 40 06.3	-1.1

TRN 24 08:39:41.7, 16°.58N×61°.07W, h29^{km}**, MD3.6, North-east of Guadeloupe., Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DSDZ	**La Diserade, G**	**0.27**	**178**	*e*P	Pn	08 39 50.3	+0.6
DSDZ				*e*S	Sn	08 39 54.9	+0.1
DHSZ	**Broadband at M**	**0.73**	**245**	*e*P	Pn	08 39 57.6	+1.6
DHSZ				*e*S	Sn	08 40 08.5	+2.3
MMLZ	**Guadeloupe Bro**	**0.78**	**227**	*e*P	Pb	08 39 58.8	+2.1
MMLZ				*e*S	Sn	08 40 09.9	+2.4
ATGZ	**Broadband at L**	**0.79**	**232**	*e*P	Pb	08 39 58.6	+1.7
TBG	**Guadaloupe-3**	**0.91**	**217**	*e*P	Pb	08 40 00.7	+1.8
TBG				*e*S	Sb	08 40 13.7	+3.0
DWS	**Wesley**	**1.03**	**193**	*e*P	Pb	08 40 01.7	+0.7
DWS				*e*S	Sb	08 40 15.8	+1.5
MBWH	**Windy Hill**	**1.08**	**279**	*e*P	Pb	08 40 02.7	+0.9
MBWH				*e*S	Sb	08 40 17.1	+1.5
DSLB	**Salisbury**	**1.19**	**196**	*e*P	Pb	08 40 04.2	+0.6
DSLB				*e*S	Sb	08 40 20.0	+1.4
ANWB	**Willy Bob**	**1.27**	**328**	*e*P	Pn	08 40 03.8	+0.3
ANWB				*e*S	Sb	08 40 21.4	+0.2
SKI	**Saint Kitts**	**1.76**	**295**	*e*P	Pb	08 40 12.8	-0.5
SKI				*e*S	Sb	08 40 34.1	-0.9
BIM	**Bigot**	**2.06**	**180**	*e*P	Pb	08 40 17.0	-1.4
BIM				*e*S	Sn	08 40 40.1	+1.1
SLBI	**Saint Lucia, B**	**2.55**	**178**	*e*P	Pn	08 40 23.8	+2.7
SLBI				*e*S	Sn	08 40 52.8	+1.7

IDC ***24*** *08:55:01.9±1.1, 53°.94S×142°.04E, h0^{km}, mb4.0/5, mbtmp4.0/5, MS3.7/18, Error ellipse: s-maj=75.4km s-min=21.6km az=85.0*

NEIC ***24*** *08:55:03.1±1.3, 54°.0S±0°.1×142°.4E±0°.2, h10^{km}±1^{km}, mb4.2/12, Error ellipse: s-maj=20.1km s-min=17.4km az=107.0*

ISC 24 08:55:03.8±0.7**, 53°.96S**±0°.09×**142°.1E**±0°.3**, h10**^{km}**, n49, σ1^{s}35**/27**, mb4.2**/10**, MS3.7**/18**, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOO	**Toolangi**	**16.56**	**10**		**Pn**	**08 58 54.9**	**-1.1**
CAN	**Canberra**	**19.26**	**17**	P	**P**	**08 59 27.5**	**-0.8**
CAN				IAmb	IAmb	08 59 45.0	
	comp=Z,25nm,1.3s						
HTT	**Hallett**	**20.65**	**352**	P	Pn	08 59 47.8	+2.1
AUJCS	**Jamestown Cent**	**20.90**	**352**	P	Pn	08 59 50.3	+1.6
STKA	**Stephens Creek**	**22.08**	**359**	P	**P**	**08 59 57.9**	**-0.9**
	comp=Z,4.1nm,0.9s,baz=161,slow=12,SNR=10						
STKA				LR	LR	09 07 23.0	
	comp=Z,286nm,18.9s,baz=198,slow=34						
	comp=Z,4.1nm,0.9s						
STKA	**Stephens Creek**	**22.08**	**359**	P	**P**	**09 00 03.1**	**+4.3**
CMSA	**Cobar Meteorol**	**22.56**	**8**	P	P	09 00 11.0	+7.0
VNDA	**Vanda**	**24.71**	**170**	P	**P**	**09 00 25.3**	**+0.7**
	comp=Z,1.3nm,0.7s,baz=322,slow=9.1,SNR=7.2						
VNDA				LR	LR	09 09 33.1	
	comp=Z,232nm,18.2s,baz=336,slow=35						
	comp=Z,1.3nm,0.7s						
VNDA	**Vanda**	**24.71**	**170**	P	**P**	**09 00 25.9**	**+1.2**
VNDA				IAmb	IAmb	09 00 32.1	
	comp=Z,3.1nm,0.8s						
AULRC	**Lightning Ridg**	**24.89**	**12**	P	P	09 00 33.9	+7.4
FORT	**Forrest**	**25.29**	**331**	P	**P**	**09 00 30.3**	**+0.2**
H01W1	**Cape Leeuwin H**	**27.31**	**303**	T	T	09 28 43.8	
	baz=141,slow=74,SNR=12						
H01W2	**Cape Leeuwin H**	**27.32**	**303**	T	T	09 28 44.3	
	baz=141,slow=74,SNR=9.4						
H01W3	**Cape Leeuwin H**	**27.33**	**303**	T	T	09 28 45.2	
	baz=141,slow=74,SNR=10						
NWAO	**Narrogin (SRO)**	**27.46**	**310**	LR	LR	09 10 39.7	
	comp=Z,70nm,18.2s,baz=106,slow=34						
ASAR	**Alice Springs**	**30.88**	**345**	P	**P**	**09 01 20.5**	**+0.3**
	comp=Z,1.4nm,1.0s,baz=166,slow=10,SNR=12						
ASAR				PcP	**PcP**	**09 04 17.1**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=152,slow=2.7,SNR=5.7						
ASAR				LR	LR	09 12 07.4	
	comp=Z,144nm,20.2s,baz=140,slow=33						
	comp=Z,1.4nm,1.0s						
QIS	**Mount Isa**	**33.40**	**356**	P	**P**	**09 01 45.1**	**+2.7**
CTA	**Charters Tower**	**33.97**	**7**	LR	LR	09 14 39.7	
	comp=Z,105nm,20.9s,baz=210,slow=35						
WR8	**Warramunga Arr**	**34.44**	**347**	P	**P**	**09 01 51.1**	**-0.3**
WR8				IAmb	IAmb	09 02 14.0	
	comp=Z,4.6nm,1.1s						
WRA	**Warramunga Arr**	**34.48**	**347**	P	**P**	**09 01 52.1**	**+0.4**
	comp=Z,3.9nm,1.2s,baz=164,slow=8.1,SNR=5.7						
WRA				PcP	**PcP**	**09 04 26.9**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=160,slow=2.9,SNR=3.1						
	comp=Z,3.9nm,1.2s						
WRAB	**Tennant Creek**	**34.48**	**347**	P	**P**	**09 01 53.3**	**+1.5**
WB0	**Warramunga Arr**	**34.64**	**347**	P	**P**	**09 01 52.0**	**-1.2**
WB0				IAmb	IAmb	09 02 01.0	
	comp=Z,3.8nm,1.2s						
QSPA	**South Pole Qui**	**36.15**	**180**	P	**P**	**09 02 06.0**	**+0.1**
QSPA				IAmb	IAmb	09 02 17.4	
	comp=Z,2.6nm,0.9s						
FITZ	**Fitzroy Crossi**	**37.99**	**334**	LR	LR	09 16 29.7	
	comp=Z,139nm,21.9s,baz=171,slow=34						
FITZ	**Fitzroy Crossi**	**37.99**	**334**	P	**P**	**09 02 20.4**	**-1.3**
MAW	**Mawson**	**38.05**	**218**	LR	LR	09 16 55.3	
	comp=Z,77nm,18.1s,baz=91,slow=34						
BATI	**Baumata**	**46.06**	**334**	LR	LR	09 21 41.1	
	comp=Z,169nm,20.8s,baz=176,slow=35						
JAY	**Jayapura**	**51.29**	**358**	LR	LR	09 25 12.3	
	comp=Z,98nm,20.7s,baz=192,slow=35						
SNAA	**Sanae**	**52.24**	**193**	LR	LR	09 25 55.0	
	comp=Z,249nm,19.3s,baz=134,slow=36						
SNAA	**Sanae**	**52.24**	**193**	P	**P**	**09 04 13.6**	**-0.9**
SNAA				IAmb	IAmb	09 04 30.4	
	comp=Z,10.0nm,1.5s						
PMSA	**Palmer Station**	**59.89**	**167**	LR	LR	09 28 34.9	
	comp=Z,100nm,18.3s,baz=190,slow=34						
DAV	**Davao City (W)**	**62.38**	**341**	LR	LR	09 33 19.3	
	comp=Z,32nm,19.9s,baz=166,slow=37						
GUMO	**Guam**	**67.32**	**3**	LR	LR	09 36 00.1	
	comp=Z,21nm,19.9s,baz=96,slow=36						
H08S2	**Diego Garcia H**	**71.89**	**282**	T	T	10 24 15.3	
	baz=144						
H08S1	**Diego Carcia H**	**71.90**	**282**	T	T	10 24 23.1	
	baz=144						
H08S3	**Diego Garcia H**	**71.91**	**282**	T	T	10 24 16.6	
	baz=144						
SUR	**Sutherland**	**80.19**	**227**	LR	LR	09 36 17.1	
	comp=Z,50nm,18.8s,baz=164,slow=31						
JCJ	**Chichijima**	**80.72**	**0**	P	**P**	**09 07 15.3**	**-1.5**
	comp=Z,80nm,0.7s,baz=102,slow=23,SNR=1.8						
CMAR	**Chiang Mai Arr**	**81.06**	**319**	P	**P**	**09 07 18.5**	**-0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,0.9nm,0.3s,baz=183,slow=5.0,SNR=6.1						
CMAR				LR	LR	09 41 06.6	
	comp=Z,15nm,21.1s,baz=220,slow=34						
	comp=Z,0.9nm,0.3s						
BOSA	Boshof	81.38	233	LR	LR	09 34 33.8	
	comp=Z,29nm,21.8s,baz=206,slow=29						
LBTB	Lobatse	84.26	235	LR	LR	09 39 09.5	
	comp=Z,49nm,19.2s,baz=162,slow=31						
KSRS	Korea Array	91.87	349	LR	LR	09 49 49.5	
	comp=Z,8.6nm,19.4s,baz=115,slow=36						
FINES	FINESS Array B	146.31	309	PKPbc	PKPdf	09 14 42.0	0.0
	comp=Z,1.4nm,0.8s,baz=107,slow=2.0,SNR=4.1						
VRAC	Vranov	146.57	285	PKPbc	PKPdf	09 14 43.3	+0.4
	comp=Z,1.0nm,0.4s,baz=140,slow=4.4,SNR=3.2						
GERES	GERESS Array B	148.00	282	PKPbc	PKPdf	09 14 47.0	+1.6
	comp=Z,0.7nm,0.8s,baz=103,slow=2.9,SNR=3.9						
ARCES	ARCESS Array B	148.02	324	PKPbc	PKPdf	09 14 44.7	+0.1
	comp=Z,4.6nm,0.9s,baz=28,slow=2.9,SNR=4.1						
DAVOX	Davos/Dischmat	149.19	276	PKPbc	PKPbc	09 14 52.3	+0.5
	comp=Z,1.5nm,0.4s,baz=117,slow=5.5,SNR=4.1						
SPITS	Spitsbergen Ar	149.38	341	PKPbc	PKPbc	09 14 50.2	-1.0
	comp=Z,6.1nm,0.8s,baz=42,slow=2.3,SNR=4.4						
ESDC	Sonseca Array	153.04	252	PKPbc	PKPbc	09 15 00.0	-0.8
	comp=Z,1.0nm,0.7s,baz=90,slow=1.3,SNR=8.8						

IDC ***24*** *09:08:57.3±20.0, 23°.11S×177°.02W, h262^{km}±224^{km}, mb3.3/6, mbtmp3.9/6, Error ellipse: s-maj=257.7km s-min=34.4km az=166.0*

ISC 24 09:08:46.2±1.0**, 23°.4S**±0°.4×**176°.8W**±0°.2**, h167^{km}, n8, σ0^{s}.79**/8**, mb3.4**/6**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	45.03	259	P	P	09 16 46.2	+0.7
	0.8nm,0.9s,baz=97,slow=7.8,SNR=10						
	0.8nm,0.9s						
WRA	Warramunga Arr	45.39	265	P	P	09 16 48.5	+0.1
	0.8nm,0.5s,baz=102,slow=8.6,SNR=9.6						
	0.8nm,0.5s						
NVAR	Mina Array Bea	82.37	42	P	P	09 20 50.1	+0.4
	0.7nm,0.8s,baz=232,slow=9.3,SNR=4.3						
	0.7nm,0.8s						
TXAR	Lajitas Array	87.68	57	P	P	09 21 16.6	+0.3
	0.5nm,1.0s,baz=252,slow=4.6,SNR=2.5						
	0.5nm,1.0s						
ROCH	El Roble	89.77	126	i P	P	09 21 26.2	-0.1
PDAR	Pinedale Array	90.30	43	P	P	09 21 28.7	+0.3
	0.3nm,0.8s,baz=268,slow=7.7,SNR=2.2						
	0.3nm,0.8s						
CMAR	Chiang Mai Arr	92.14	289	P	P	09 21 36.9	-0.3
	1.5nm,0.3s,baz=133,slow=3.4,SNR=6.7						
	1.5nm,0.3s						
AKASG	Malin Array Be	146.09	330	PKPbc	PKPdf	09 28 03.7	-1.5
	0.4nm,0.4s,baz=41,slow=4.5,SNR=4.0						

DJA ***24*** *09:14:22.7±0.8, 5°N±6°×12°6E±°, h120^{km}±14^{km}, M4.4/10, mB4.9/4, mb4.7/5, MLv4.3/10, Mw(mB)4.2/4*

IDC ***24*** *09:14:24.0±1.5, 5°.33N×125°.97E, h121^{km}±15^{km}, mb3.3/6, mbtmp3.6/6, Error ellipse: s-maj=61.2km s-min=15.3km az=71.0*

ISC 24 09:14:22.1±0.8**, 5°.27N**±0°.07×**126°.4E**±0°.1**, h100^{km}, n14, σ1^{s}.44**/16**, mb3.6**/6**, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	1.77	208	P	Pn	09 14 52.6	+0.8
DAV	Davao City (W)	1.95	337	P	Pn	09 14 54.6	+0.5
	106nm,0.4s,baz=52,slow=17,SNR=1.9						
DAV				S	Sn	09 15 18.6	+0.1
	202nm,0.4s,baz=290,slow=23,SNR=4.3						
DAV	Davao City (W)	1.95	337	P	Pn	09 14 56.1	+2.0
TNTI	Ternate	4.58	167	P	Pn	09 15 28.1	-1.0
GTOI	Gorontalo	5.68	216	P	Pn	09 15 43.8	-0.3
	0.4nm1μm132nm,0.8s						
MRSI	Marisa	6.49	223	P	Pn	09 15 55.1	+0.1
LUWI	Luwuk	7.22	210	P	Pn	09 16 04.9	-0.1
	2μm99nm,0.9s						
SANI	Sanana	7.28	183	P	Pn	09 16 04.5	-1.3
WRA	Warramunga Arr	26.25	163	P	P	09 19 49.2	+1.1
	0.8nm,0.5s,baz=342,slow=9.2,SNR=7.4						
	0.8nm,0.5s						
ASAR	Alice Springs	29.68	166	P	P	09 20 19.1	+0.4
	0.4nm,0.8s,baz=338,slow=7.2,SNR=5.4						
ASAR				PcP	PcP	09 23 21.5	+0.7
	0.2nm,0.6s,baz=342,slow=3.2,SNR=4.1						
	0.4nm,0.8s						
STKA	Stephens Creek	39.69	160	P	P	09 21 46.9	+2.3
	0.9nm,0.6s,baz=331,slow=10,SNR=3.6						
	0.9nm,0.6s						
MKAR	Makanchi Array	56.09	325	P	P	09 23 48.6	-2.4
	0.3nm,0.3s,baz=124,slow=7.6,SNR=9.4						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	60.26	327	P	P	09 24 17.3	-2.5
	0.3nm,0.4s,baz=126,slow=7.3,SNR=1.7						
	0.3nm,0.4s						
ILAR	Eielson Array	83.89	25	P	P	09 26 40.2	-0.3
	0.4nm,0.8s,baz=255,slow=5.1,SNR=6.5						
	0.4nm,0.8s						

GCG 24 09:35:03.0±0.8**, 14°.07N**×**90°.24W, h22^{km}**±17^{km}**, MD3.5, Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NUBE	Las Nubes	0.47	110	eP	Pb	09 35 13.2	+0.4
NUBE				eS	Sb	09 35 19.6	+0.2
MTO3	Montecristo	0.91	69	i P	Pb	09 35 20.4	+0.1
APG	El Apazote	0.96	347	eP	Pb	09 35 20.9	-0.2
STG5	El Palmar, Qui	1.13	287	eP	Pb	09 35 28.0	+4.1
STG5				i S	Sn	09 35 46.5	+8.0

SNET ***24*** *09:45:51.0±0.7, 14°.74N×89°.47W, h3^{km}±4^{km}, ML3.3*

GCG ***24*** *09:45:51.1±1.3, 14°.78N×89°.49W, h1^{km}±5^{km}, MD4.5, ML3.5*

CATAC ***24*** *09:45:52.3±0.3, 15°N±2°×9°0W±°, h5^{km}±2^{km}, M3.3/16, MLv3.3/16, Error ellipse: s-maj=5.2km s-min=3.1km az=141.2, confirmed*

ISC 24 09:45:51.7±1.0**, 14°.75N**±0°.03×**89°.50W**±0°.02**, h10^{km}**±8^{km}**, n56, σ0^{s}.82**/65**, Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZAFR2	Estanzuela, Za	0.22	139	i P	Pg	09 45 55.7	-0.7
ZAFR2				i S	Sg	09 45 58.9	-0.7
ESQI	Esquipulas	0.24	140	eP	Pg	09 45 57.4	+0.6
ESQI				eS	Sg	09 46 00.1	-0.1
ESQI	Esquipulas	0.24	140	P	Pg	09 45 57.5	+0.7
ESQI	Esquipulas	0.24	140	S	Sg	09 46 02.0	+1.8
MTO3	Montecristo	0.37	158	eP	Pb	09 45 59.5	-1.1
MTO3				eS	Sb	09 46 05.1	-1.4
MTO3	Montecristo	0.37	158	i P	Pb	09 45 59.5	-1.1
MTO3	Montecristo	0.37	158	P	Pb	09 45 59.5	-1.1
RBDL	Robledal	0.66	196	eP	Pb	09 46 05.2	-0.2
SARH	Santa Rosa de	0.72	88	i P	Pb	09 46 05.8	-0.5
SARH				i S	Sb	09 46 17.0	+0.7
SARH	Santa Rosa de	0.72	88	P	Pb	09 46 05.9	-0.5
UNIC	Universidad Ca	0.76	183	eP	Pb	09 46 06.6	-0.5
UNIC	Universidad Ca	0.76	183	P	Pb	09 46 06.4	-0.8
UNIC	Universidad Ca	0.76	183	S	Sb	09 46 17.2	-0.3
LOAL	Lomas de Alarc	0.79	200	P	Pb	09 46 07.2	-0.4
LOAL	Lomas de Alarc	0.79	200	S	Sb	09 46 18.2	-0.2
LLGN	La Laguna	0.79	137	eP	Pb	09 46 07.5	-0.2
LLGN	La Laguna	0.79	137	P	Pb	09 46 07.5	-0.2
RTR	El Retiro	0.86	189	eP	Pb	09 46 08.7	-0.1
NUBE	Las Nubes	0.88	198	eP	Pb	09 46 08.8	-0.5
NUBE				eS	Sb	09 46 20.8	-0.3
NUBE	Las Nubes	0.88	198	eP	Pb	09 46 08.7	-0.5
NUBE				i S	Sb	09 46 21.4	+0.2
NUBE	Las Nubes	0.88	198	P	Pb	09 46 08.5	-0.7
CEVE	Cerro Verde	0.92	187	eP	Pb	09 46 09.5	-0.4
CEVE	Cerro Verde	0.92	187	P	Pb	09 46 09.8	-0.1
CEDA	San Andres	0.95	174	eP	Pb	09 46 09.9	-0.3
APG	El Apazote	0.96	285	eP	Pg	09 46 08.9	-1.5
GCG4	OSOP	1.01	261	eP	Pb	09 46 11.3	-0.1
GCG4				i S	Sg	09 46 24.5	+0.1
GCG4				IAML		09 46 29.9	
	comp=E,789nm,0.3s						
FAME	Alcaldia de Sa	1.03	209	P	Pg	09 46 11.0	-0.5
FAME	Alcaldia de Sa	1.03	209	S	Sb	09 46 25.7	+0.5
PMON	Piamonte	1.05	170	eP	Pb	09 46 11.9	0.0
PMON				eS	Sb	09 46 25.4	-0.4
PMON	Piamonte	1.05	170	P	Pb	09 46 12.0	0.0
UEES	Universidad Ev	1.06	166	S	Sn	09 46 27.4	-0.1
FG16	Alotenango, Sa	1.08	244	eP	Pn	09 46 16.7	+3.6
FG16				IAML		09 46 40.3	
	comp=N,2μm,0.2s						
JAYA	Jayaque - finc	1.09	177	eP	Pn	09 46 13.1	-0.1
JAYA	Jayaque - finc	1.09	177	P	Pn	09 46 13.1	-0.1
JAYA	Jayaque - finc	1.09	177	S	Sb	09 46 26.6	-0.4
AVCB	Coban	1.13	310	eP	Pg	09 46 11.7	-1.8
AVCB				IAML		09 46 31.4	
	comp=N,5μm,0.4s						
LOMA	Loma Larga	1.14	164	eP	Pg	09 46 13.0	-0.7
LOMA	Loma Larga	1.14	164	P	Pg	09 46 13.1	-0.7
LOMA	Loma Larga	1.14	164	S	Sn	09 46 30.3	+0.7
PAVA	Las Pavas	1.17	152	P	Pn	09 46 14.1	0.0
PAVA	Las Pavas	1.17	152	S	Sn	09 46 30.7	+0.5
LALI	Alcalda de L	1.27	172	eP	Pn	09 46 15.8	+0.4
LALI	Alcalda de L	1.27	172	P	Pn	09 46 15.7	+0.4
LALI	Alcalda de L	1.27	172	S	Sn	09 46 32.7	+0.3
SCLA	Alcaldia de Sa	1.28	144	P	Pn	09 46 16.4	+0.6
SCLA	Alcaldia de Sa	1.28	144	S	Sn	09 46 34.4	+1.4
IZABA	Izabal, Puerto	1.32	42	P	Pb	09 46 16.9	+0.4
ESSG	Sabana Grande	1.34	254	i P	Pn	09 46 16.5	0.0
PQSS	Presa 15 de Se	1.44	141	P	Pn	09 46 16.7	-1.2
PACA	Pacayal	1.71	138	P	Pg	09 46 23.9	-0.7
STG8	El Palmar, Qui	1.81	261	eP	Pg	09 46 26.5	-0.1
STG5	El Palmar, Qui	1.82	259	eP	Pg	09 46 26.4	-0.3
SOKI	Kika Raxquin	1.84	272	eP	Pb	09 46 25.6	-0.1
HUEH	Huehuetenango	2.01	287	eP	Pb	09 46 27.8	-0.8
HUEH				i S	Sb	09 46 54.3	+0.5
HUEH				IAML		09 47 03.4	
	comp=N,689nm,0.5s						
HUEH	Huehuetenango	2.01	287	P	Pb	09 46 27.8	-0.8
PETF	Flores	2.18	351	eP	Pn	09 46 28.6	+0.5
PETF				IAML		09 47 08.4	
	comp=N,279nm,0.4s						

IDC ***24*** *09:55:20.1±4.2, 39°.12N×30°.00W, h0^{km}, mb3.5/4, mbtmp3.5/4, MS3.6/1, Error ellipse: s-maj=126.4km s-min=22.2km az=170.0*

SVSA ***24*** *09:55:22.2±1.2, 39°.42N×29°.93W, h10^{km}, ML3.3(INMG), Error ellipse: s-maj=12.9km s-min=6.6km az=51.0, #DIST_RANGE: LOCAL #IPMA_REGION: Crista Mdia Atlntico N*

ISC 24 09:55:19.8±0.8**, 39°.1N**±0°.1×**29°.91W**±0°.07**, h10^{km}, n18, σ1^{s}.57**/28**, mb3.6**/4**, Azores Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCED	Cedros	1.04	115	eP	Pn	09 55 40.9	+0.5
PCED				eS	Sn	09 55 54.1	-0.9
PCED				i IAML		09 55 55.2	
PCED				i IAML		09 55 55.6	
PCED				i IAML		09 55 55.8	
H07S1	FLORES T-PHASE	1.05	288	Pn	Pn	09 55 41.2	+0.4
H07S1				Sn	Sg	09 55 49.1	-4.8
H07S1				T	T	09 56 43.1	
	SNR=4.5						
CALA	Caldeira	1.06	117	eP	Pn	09 55 41.1	+0.3
CALA				eS	Sn	09 55 56.0	+0.4
CALA				i IAML		09 55 58.9	
CALA				i IAML		09 55 59.4	
CALA				i IAML		09 55 59.6	
PFCBR	Castelo Branco	1.08	120	eP	Pn	09 55 41.5	+0.5
PFCBR				eS	Sn	09 55 55.9	-0.1
PFCBR				i IAML		09 55 56.7	
PFCBR				i IAML		09 55 57.3	
PFCBR				i IAML		09 55 57.4	
HOR	Horta	1.14	118	eP	Pn	09 55 42.2	+0.4
HOR				eS	Sn	09 55 57.5	+0.1
HOR				i IAML		09 55 59.0	
HOR				i IAML		09 55 59.1	
HOR				i IAML		09 56 00.4	
PCAN	Candelaria	1.27	118	eP	Pg	09 55 44.7	+0.6
PCAN				eS	Sn	09 56 00.9	+0.2
PCAN				i IAML		09 56 02.1	
PCAN				i IAML		09 56 02.2	
PCAN				i IAML		09 56 02.2	
PICO	Pico	1.29	116	eP	Pg	09 55 44.4	-0.2
PICO				eS	Sn	09 56 01.7	+0.4
PICO				i IAML		09 56 02.2	
PICO				i IAML		09 56 02.3	
PICO				i IAML		09 56 03.9	
ROSA	Rosais	1.35	104	eP	Pb	09 55 44.2	-0.9
ROSA				eS	Sb	09 56 00.8	-1.7
ROSA				i IAML		09 56 01.3	
ROSA				i IAML		09 56 01.7	
ROSA				i IAML		09 56 02.4	
PPNO	Prainha do Nor	1.42	114	eP	Pg	09 55 46.4	-0.6
PPNO				eS	Sg	09 56 04.0	-1.4
PPNO				i IAML		09 56 07.3	
PPNO				i IAML		09 56 08.0	
PMAN	Manadas	1.48	106	eP	Pb	09 55 46.4	-1.2
PID	Ribeirinha	1.53	113	eP	Pb	09 55 47.4	-0.9
PID				eS	Sg	09 56 07.3	-1.7
PID				i IAML		09 56 13.2	
PID				i IAML		09 56 13.6	
PID				i IAML		09 56 16.3	
PAGU	Agualva, Azore	2.15	97	eP	Pn	09 55 55.0	-0.7
PAGU				eS	Sn	09 56 18.7	-3.7
PAGU				i IAML		09 56 20.8	
PAGU				i IAML		09 56 21.2	
PAGU				i IAML		09 56 22.4	
CMLA	Cha da Macela	3.68	109	eP	Pn	09 56 17.5	+0.7
NOA	NORSAR Array B	33.52	35	P	P	10 02 01.1	+1.8
	0.6nm,0.8s,baz=246,slow=7.7,SNR=2.4						
	0.6nm,0.8s						
FINES	FINESS Array B	40.56	38	P	P	10 03 00.4	+1.4
	0.9nm,0.7s,baz=277,slow=5.5,SNR=2.1						
	0.9nm,0.7s						
KVAR	Kislovodsk Arr	52.97	60	LR	LR	10 28 40.4	
	comp=Z,58nm,18.2s,baz=148,slow=38						
TXAR	Lajitas Array	60.26	285	P	P	10 05 29.7	+1.0
	0.1nm,0.6s,baz=39,slow=6.0,SNR=1.5						
	0.1nm,0.6s						
MKAR	Makanchi Array	75.29	41	P	P	10 07 05.2	+2.2
	0.8nm,0.8s,baz=317,slow=6.1,SNR=6.3						
	0.8nm,0.8s						

DJA 24 09:55:46.9±0.4**, 8°S**±7°×**10°8E**±°**, h105^{km}**±6^{km}**, M3.5**/10**, mB5.2**/1**, mb4.0**/3**, MLv3.3**/10**, Mw(mB)4.6**/1**, Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BBJI	Bungbulang	0.52	323	P	Pn	09 56 04.2	+0.8
BBJI				S	Sn	09 56 18.9	+3.1
CNJI	Cibinong	1.00	305	P	Pn	09 56 07.4	-0.3
CNJI				S	Sn	09 56 23.5	+0.1
KPJI	Karang Pucung	1.10	61	P	Pn	09 56 09.2	+0.4
SKJI	Sukabumi	1.64	302	P	Pn	09 56 15.4	+0.2
UGM	Wanagama	2.54	91	P	Pn	09 56 26.9	+0.2
PCJI	Pacitan	3.20	96	P	Pn	09 56 35.5	0.0
NGJI	Ngawi	3.51	82	P	Pn	09 56 40.3	+0.7
SNJI	Sawahan-Nganju	3.77	89	P	Pn	09 56 42.8	-0.4
JAGI	Jajag, Banyuwa	6.16	96	P	Pn	09 57 14.6	-0.8
	20nm,1.0s						
SISI	Saibi	10.98	306	P	Pn	09 58 21.0	+0.1
	1μm28nm,1.1s						

UCR ***24*** *10:06:38.0±1.2, 4°.51N×82°.62W, h15^{km}±999^{km}, MW4.1*

UPA ***24*** *10:06:43.5±1.0, 4°.75N×82°.61W, h42^{km}±30^{km}, MW4.6*

IDC ***24*** *10:06:44.7±0.7, 4°.94N×82°.71W, h0^{km}, mb4.1/12, mbtmp4.3/17, ML3.5/5, MS3.6/33, Error ellipse: s-maj=23.8km s-min=12.8km az=56.0*

CATAC ***24*** *10:06:46.9±1.0, 5°N±14°×8°3W±°, h11^{km}±17^{km}, M4.8/9, mb5.0/5, mB5.3/5, MLv4.8/9, Mw(mB)4.7/5, Error ellipse: s-maj=30.2km s-min=10.9km az=4.4, confirmed*

NEIC ***24*** *10:06:47.6±1.2, 5°.15N±0°.09×82°.4W±0°.2, h10^{km}±1^{km}, mb4.6/143, Error ellipse: s-maj=27.0km s-min=13.1km az=252.0*

RSNC ***24*** *10:06:48.5±0.4, 5°N±2°×8°2W±°, h0^{km}, M4.5, mb5.0, mB5.1, ML3.8, Mw(mB)4.5, MwMwp4.5, Mwp4.9*

GCMT ***24*** *10:06:50.6±0.3, 5°.01N±0°.01×82°.63W±0°.02, h24^{km}±1^{km}, MW4.8/91, Moment Tensor Solution. s25,c29; s91,c126; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.02±.12; $M_{\theta\theta}$0.28±.09; $M_{\phi\phi}$-0.29±.11; $M_{r\theta}$0.22±.11; $M_{\theta\phi}$2.28±.08; $M_{\phi r}$0.23±.12; Best double couple: $M_0$2.31900×10^{16} NP1:ϕ_s94.00000°, δ84.00000°, λ5.00000°. NP2: ϕ_s3.00000°, δ85.00000°, λ174.00000°. Principal axes: T 2.3330, Plg8.0000°, Azm319.0000°; N -0.0260, Plg82.0000°, Azm142.0000°; P -2.3060, Plg1.0000°, Azm49.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 10:06:46.3±0.4**, 4°.97N**±0°.04×**82°.59W**±0°.05**, h12^{km}, n367, σ2^{s}.28**/351**, mb4.6**/67**, MS3.7**/28**, 3D, South of Panama**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MAPC	Malpelo	1.37	135	P	Pn	10 07 07.4	-3.9
MAPC				S	Sn	10 07 22.6	-6.8
CACAO	El Cacao, Vera	2.91	36	⇓iP	Pn	10 07 30.1	-2.4
CACAO				eS	Sn	10 08 05.1	-2.4
GMAL	Guarumal, Vera	3.08	26	eP	Pn	10 07 32.3	-2.5
LMNES	Limones	3.12	355	eP	Pn	10 07 31.9	-3.4
LIMO3	Limones	3.12	355	eP	Pn	10 07 32.3	-3.0
PTPA	Petro Terminal	3.22	355	eP	Pn	10 07 33.3	-3.4
PTPM	Petroterminale	3.22	355	eP	Pn	10 07 33.6	-3.1
PTPM				eS	Sn	10 08 13.1	-1.9
TOSI3	Tonosi	3.22	41	eP	Pn	10 07 33.4	-3.4
LOCO3	Loma Colorada,	3.42	3	eP	Pn	10 07 37.2	-2.3
LOMA3	Las Lomas, Chi	3.44	3	eP	Pn	10 07 37.5	-2.2
DVD	David	3.44	2	eP	Pn	10 07 37.4	-2.4
MESA3	La Mesa, Verag	3.45	24	eP	Pn	10 07 37.6	-2.3
BAGA3	Bagala, Chiriq	3.47	1	eP	Pn	10 07 38.2	-2.0
PIRO	Carate, Puerto	3.49	348	Pn	Pn	10 07 37.2	-3.2
PIRO				Sn	Sn	10 08 16.8	-4.8
PIRO	Carate, Puerto	3.49	348	eP	Pn	10 07 38.0	-2.4
PIRO	Carate, Puerto	3.49	348	P	Pn	10 07 36.5	-3.9
PIRO	Carate, Puerto	3.49	348	S	Sn	10 08 14.7	-6.9
PIRO	Carate, Puerto	3.49	348	eP	Pn	10 07 36.8	-3.6
LPPC	Paso Canoas	3.54	356	eP	Pn	10 07 38.2	-3.0
CDITO	Canoas	3.59	355	P	Pn	10 07 38.2	-3.6
CDITO	Canoas	3.59	355	S	Sn	10 08 21.3	-2.8
PTJ1	Puerto Jimnez	3.61	349	eP	Pn	10 07 39.9	-2.1
PTJ1	Puerto Jimnez	3.61	349	P	Pn	10 07 38.7	-3.4
PTJ1	Puerto Jimnez	3.61	349	S	Sn	10 08 20.3	-4.3
AZU	Azuero	3.62	39	eP	Pn	10 07 40.1	-2.1
AZU				eS	Sn	10 08 22.0	-2.9
CHIT3	Chitre	3.66	36	eP	Pn	10 07 41.1	-1.7
CHIT3				eS	Sn	10 08 23.5	-2.4
NELY	Ciudad Neily	3.67	354	eP	Pn	10 07 39.9	-2.9
JEFFS	S de V. Baru	3.67	1	eP	Pn	10 07 40.8	-2.3
DMCAL	E. de Neily	3.68	357	eP	Pn	10 07 40.7	-2.4
PTAR3	Potrerillos Ar	3.70	1	eP	Pn	10 07 42.0	-1.4
PSOM3	Paja de Sombre	3.70	4	eP	Pn	10 07 41.6	-1.7
EDAD	Golfito	3.70	351	eP	Pn	10 07 40.1	-3.3
CLLRA	Cordillera,	3.75	360	eP	Pn	10 07 41.8	-2.3
BQSF3	Alto Boquete,	3.75	2	eP	Pn	10 07 42.1	-2.0
BQTLY	Boquete Panama	3.76	2	eP	Pn	10 07 41.9	-2.4
LNBQ3	Los Naranjos,	3.79	2	eP	Pn	10 07 42.2	-2.5
BRU2	Volcan	3.80	358		Pn	10 07 42.4	-2.3
BRU2				Sn	Sn	10 08 26.9	-2.6
BRU2	Volcan	3.80	358	⇓iP	Pn	10 07 42.5	-2.3
BRU2				eS	Sn	10 08 28.5	-1.0
BRU2	Volcan	3.80	358	P	Pn	10 07 41.9	-2.9
BRU2	Volcan	3.80	358	S	Sn	10 08 25.8	-3.7
BRU2	Volcan	3.80	358	eP	Pn	10 07 42.2	-2.5
MLIR3	Monte Lirio, C	3.80	356	eP	Pn	10 07 43.2	-1.6
MLIR3				eS	Sn	10 08 28.5	-1.1
RSRNO	Rio Sereno	3.83	356	eP	Pn	10 07 43.5	-1.7
SCLRA	Santa Clara, W	3.84	357	eP	Pn	10 07 43.5	-1.9
RBALA	Bur	3.90	6	eP	Pn	10 07 44.4	-1.7
PBNVO	Pueblo Nuevo,	3.91	6	eP	Pn	10 07 44.0	-2.2
ALCO	Alturas Coton,	3.96	356	eP	Pn	10 07 44.9	-2.2
CHGR2	Aguacate	3.96	6	eP	Pn	10 07 45.4	-1.6
PANP	Palmar Norte	4.05	348	eP	Pn	10 07 45.4	-2.8
EDP2	Potrero Grande	4.06	352	eP	Pn	10 07 46.5	-1.8
FIMO	Fila Mora	4.06	349	eP	Pn	10 07 46.0	-2.4
BURE	Buenos Aires	4.24	350	eP	Pn	10 07 48.8	-1.9
EDPE	Pejibaye, P	4.27	347	eP	Pn	10 07 48.9	-2.3
DRK0	Durika	4.31	351	⇓iP	Pn	10 07 49.5	-2.4
DRK0				eS	Sn	10 08 40.0	-2.2
DRK0	Durika	4.31	351	P	Pn	10 07 49.3	-2.5
DRK0	Durika	4.31	351	S	Sn	10 08 37.8	-4.5
DRK0	Durika	4.31	351	eP	Pn	10 07 49.4	-2.5
CNI2	El Empalme, Bo	4.42	1	eP	Pn	10 07 51.6	-1.6
SAJE	San Jernim	4.44	348	eP	Pn	10 07 51.1	-2.6
ZEDO	Perez Zeledon	4.49	346	eP	Pn	10 07 51.7	-2.5
BRIBI	Bribri	4.62	357	eP	Pn	10 07 54.4	-1.6
BUS1	Rivas	4.69	346	eP	Pn	10 07 54.9	-2.5
SVQ2	Quepos	4.70	341	eP	Pn	10 07 53.8	-3.2
PIEC	Cerro El Cedra	4.81	344	eP	Pn	10 07 56.4	-2.5
GR1C	Gorgona, Isla	4.82	114	P	Pn	10 07 57.0	-1.8
GR1C				S	Sn	10 08 49.0	-5.6
PITB	Pirrs, San	4.87	343	eP	Pn	10 07 57.2	-2.4
PICV	PH. Pirrs	4.89	341	eP	Pn	10 07 56.7	-3.1
TUMC	Tumaco	4.96	129	P	Pn	10 08 00.3	-0.4
TUMC				S	Sn	10 08 55.0	-3.0
BCIP	Isla Barro Col	4.98	33	eP	Pn	10 08 00.7	-0.2
BCIP				eS	Sn	10 08 55.1	-3.3
BCIP	Isla Barro Col	4.98	33	P	Pn	10 08 01.0	+0.1
BCIP				S	Sn	10 08 57.0	-1.4
REPA	Paraso	4.99	345	eP	Pn	10 07 59.0	-2.2
TURIB	Turrialba	5.02	348	eP	Pn	10 07 59.6	-2.0
VINA	Juan Vinas	5.02	347	eP	Pn	10 07 59.9	-1.8
ACOS	Acosta	5.04	342	eP	Pn	10 07 59.3	-2.6
PCAYA	Pacayas	5.06	346	eP	Pn	10 08 00.6	-1.6
RAFA	San Farael, Vo	5.10	346		Pn	10 08 01.4	-1.4
RAFA	San Farael, Vo	5.10	346	eP	Pn	10 08 01.0	-1.8
VTCV	VTCV, Calle Va	5.10	347	eP	Pn	10 08 00.9	-1.9
AMPA	Desamparados	5.11	343	eP	Pn	10 07 59.7	-3.1
ABRB	Las Abras (San	5.12	347	eP	Pn	10 08 01.8	-1.3
CVTV	Tajo	5.13	347	eP	Pn	10 08 01.6	-1.7
RESJ	San Isidro (Tu	5.13	348	eP	Pn	10 08 01.6	-1.5
LUJA	Lujan	5.14	343	eP	Pn	10 08 00.7	-2.5
SJS3	Mercedes San J	5.14	344	eP	Pn	10 08 00.1	-3.2
CENT	San Jose	5.14	343	eP	Pn	10 08 02.2	-1.1
SJS	Escuela Geolog	5.14	344	eP	Pn	10 08 00.0	-3.3
CVTR	Volcan Turrial	5.15	347	eP	Pn	10 08 02.1	-1.5
VTUN	Crater Central	5.15	347	eP	Pn	10 08 01.9	-1.8
MEXI	Barrio Mexico	5.16	343	eP	Pn	10 08 01.7	-1.7
CORON	Coronado	5.16	344	eP	Pn	10 08 02.2	-1.4
LCOCO	El Coco	5.17	349	eP	Pn	10 08 01.9	-1.6
IRES	Siquirres	5.17	350	eP	Pn	10 08 02.6	-0.9
SANTA	Santa Ana	5.18	342	eP	Pn	10 08 00.6	-3.1
CVIMO	Finca Echandi	5.20	345	eP	Pn	10 08 02.0	-2.1
RVLA	Villa Bonita	5.20	349	eP	Pn	10 08 02.1	-1.8
PIZC	Pizarro, Choco	5.21	90	P	Pn	10 08 03.1	-0.9
PIZC				S	Sn	10 09 02.6	-1.5
PTAC	Punta Ardita,	5.22	65	P	Pn	10 08 04.6	+0.4
	50μm2μm,0.7s						
PTAC				S	Sn	10 08 59.1	-5.3
	50μm2μm,0.7s						
HDC	Heredia	5.22	343		Pn	10 08 02.7	-1.6
HDC	Heredia	5.22	343	eP	Pn	10 08 01.9	-2.5
HDC	Heredia	5.22	343	eP	Pn	10 08 02.5	-1.8
HDC				eS	Sn	10 09 01.5	-3.1
HEME	Heredia, Merce	5.22	343	eP	Pn	10 08 03.2	-1.1
ATEO	Atenas	5.28	340	eP	Pn	10 08 02.2	-2.9
EGUB	Earth Gu¡pi	5.30	349		Pn	10 08 04.8	-0.5
EGUB	Earth Gu¡pi	5.30	349	eP	Pn	10 08 04.6	-0.7
PILE	Guapiles	5.34	347	eP	Pn	10 08 04.3	-1.6
PALD	Palmares	5.37	340	eP	Pn	10 08 03.8	-2.6
ARZA	Esparza	5.39	338	eP	Pn	10 08 04.0	-2.6
RAMO	San Ramon	5.41	340	eP	Pn	10 08 04.8	-2.2
VPS8	V Poas	5.43	342	eP	Pn	10 08 04.8	-2.6
CARI	Cariari	5.48	348	eP	Pn	10 08 06.6	-1.1
ARTO	Ro Cuarto	5.57	343	eP	Pn	10 08 07.7	-1.4
QUEU	Ciudad Quesada	5.62	341	eP	Pn	10 08 08.3	-1.5
INDI	Punta indio, G	5.66	329	eP	Pn	10 08 07.7	-2.5
TRT2	Tortugero	5.66	348	P	Pn	10 08 08.3	-2.0
TRT2	Tortugero	5.66	348	S	Sn	10 09 11.9	-3.4
TRT2	Tortugero	5.66	348	eP	Pn	10 08 08.8	-1.5
ITAL	Pital	5.69	343	eP	Pn	10 08 08.6	-2.1
SOCE	Pocosol	5.74	340		Pn	10 08 09.7	-1.7
SOCE	Pocosol	5.74	340	P	Pn	10 08 09.8	-1.6
SOCE	Pocosol	5.74	340	S	Sn	10 09 13.4	-3.9
SOCE	Pocosol	5.74	340	eP	Pn	10 08 09.7	-1.7
CMARA	Lajas Hojancha	5.75	331	S	Sn	10 09 09.8	-7.7
JUNT	Juntas	5.78	336	eP	Pn	10 08 09.1	-2.8
JTS	Las Juntas de	5.78	336	Pn	Pn	10 08 09.7	-2.2
	42nm,0.3s,baz=96,slow=8.4,SNR=99						
JTS				LR	LR	10 09 10.2	
	comp=Z,167nm,21.2s,baz=152,slow=25						

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JTS                                    Sn     Sn     10 09 13.3 -4.9
       48nm,0.3s,baz=292,slow=20,SNR=23
JTS    Las Juntas de      5.78 336            Pn     10 08 09.6 -2.4
JTS    Las Juntas de      5.78 336     eP     Pn     10 08 09.7 -2.2
JTS                                    eS     Sn     10 09 14.8 -3.4
JTS    Las Juntas de      5.78 336     eP     Pn     10 08 09.1 -2.8
JTS    Las Juntas de      5.78 336     P      Pn     10 08 09.5 -2.4
JTS                                    S      Sn     10 09 12.8 -5.5
TOTI   Torti              5.79  47     eP     Pn     10 08 09.3 -2.7
CASO   Castillo           5.83 339     eP     Pn     10 08 11.0 -1.6
VACR   Volcan Arenal      5.84 339     eP     Pn     10 08 11.0 -1.8
ARE1   Arenal 1           5.85 339     eP     Pn     10 08 11.5 -1.3
VARE2  V. Arenal          5.85 339     eP     Pn     10 08 11.4 -1.5
CEDE   Laguna Cedeo       5.87 339     eP     Pn     10 08 11.7 -1.4
JUD3   Juan Diaz 3        5.93 331            Pn     10 08 11.5 -2.5
JUD3   Juan Diaz 3        5.93 331     eP     Pn     10 08 11.6 -2.5
SAJU   San Juanillo,      5.93 329     eP     Pn     10 08 11.5 -2.6
FLF1   Flavio Alfaro-     5.96 153     P      Pn     10 08 13.4 -1.1
COVE   Coope Vega, Sa     5.99 343     S      Sn     10 09 21.2 -2.1
INVE   Universidad In     5.99 336     eP     Pn     10 08 12.5 -2.4
PLVR   Palo Verde         6.00 333     eP     Pn     10 08 11.6 -3.5
PAC1   Pacto, Paraso      6.02 141     P      Pn     10 08 14.0 -1.3
PAC1                                   S      Sn     10 09 20.7 -3.6
QUEB   Quebradon, Cot     6.06 338     eP     Pn     10 08 14.2 -1.6
ELVJ   El Viejo (Barb     6.08 334     eP     Pn     10 08 13.2 -2.9
BBAC   Balboa, Cauca      6.08 119     P      Pn     10 08 14.9 -1.4
       3µm93nm,0.5s
BBAC                                   S      Sn     10 09 18.0 -8.0
       3µm93nm,0.5s
BAGA   Bagaces            6.12 335     eP     Pn     10 08 14.9 -1.7
JAMC   Jamundi, Valle     6.15 106     P      Pn     10 08 16.4 -0.8
       1µm53nm,0.8s
JAMC                                   S      Sn     10 09 23.1 -4.6
       1µm53nm,0.8s
TENO   El Achiote         6.17 338     eP     Pn     10 08 15.9 -1.4
CUI    Cuipilapa          6.20 336     eP     Pn     10 08 16.2 -1.5
CMBC   Cumbal             6.22 130     P      Pn     10 08 18.3  0.0
CMBC                                   S      Sn     10 09 25.8 -3.8
CUSE   Cuicocha Este      6.24 138     P      Pn     10 08 17.7 -1.0
CUSE                                   S      Sn     10 09 28.1 -2.2
HORNC  Hornillas          6.25 336     eP     Pn     10 08 16.9 -1.6
OTAV   Otavalo            6.26 139            Pn     10 08 18.2 -0.7
OTAV   Otavalo            6.26 139     eP     Pn     10 08 16.8 -2.1
OTAV   Otavalo            6.26 139     P      Pn     10 08 18.0 -0.9
       2µm580nm42nm,0.6s
OTAV                                   S      Sn     10 09 26.2 -4.5
       2µm580nm42nm,0.6s
PLMC   San Jos del P      6.28  90     P      Pn     10 08 18.9  0.0
PLMC                                   S      Sn     10 09 27.2 -3.5
MESS   Mesas              6.29 336     eP     Pn     10 08 16.6 -2.3
YOTC   Yotoco, Valle      6.30  99     P      Pn     10 08 19.4 +0.2
YOTC                                   S      Sn     10 09 28.5 -2.7
ALIBA  Liberia Airpor     6.31 332     eP     Pn     10 08 17.5 -1.7
VMAR   Armenia, Volca     6.32 337     eP     Pn     10 08 17.5 -1.9
CAPC   Capurgana          6.34  55     P      Pn     10 08 21.5 +1.8
       2µm143nm,1.1s
CAPC                                   S      Sn     10 09 35.1 +3.0
       2µm143nm,1.1s
ELI1   Hacienda Flor      6.36 333     S      Sn     10 09 28.7 -3.7
ELI1   Hacienda Flor      6.36 333     eP     Pn     10 08 17.8 -2.0
POPC   Popayan, Colom     6.37 112     P      Pn     10 08 18.6 -1.7
       959nm79nm,0.7s
POPC                                   S      Sn     10 09 28.1 -5.1
       959nm79nm,0.7s
TULM   Tulcn-Chalpat      6.39 131     P      Pn     10 08 20.5 -0.3
       1µm93nm,0.7s
VRLE   La Escondida,      6.40 335     eP     Pn     10 08 18.3 -2.3
LAPC   Finca la Perla     6.41 334     eP     Pn     10 08 18.4 -2.2
GCUF   Volcan Galeras     6.42 125     P      Pn     10 08 20.9 -0.3
GCUF                                   S      Sn     10 09 32.7 -2.0
CRUC   La Cruz            6.56 121     P      Pn     10 08 24.2 +1.2
CRUC                                   S      Sn     10 09 35.4 -2.7
DBBC   Dabeiba            6.66  72     P      Pn     10 08 25.2 +1.1
DBBC                                   S      Sn     10 09 39.0 -1.0
PPLP   Puerto Lpez        6.72 164     P      Pn     10 08 22.2 -2.7
PPLP                                   S      Sn     10 09 37.6 -3.9
BONI   La Bonita          6.76 131     P      Pn     10 08 25.9 +0.3
       2µm111nm,0.4s
LCRUZ  La Cruz            6.77 334     eP     Pn     10 08 23.4 -2.2
SLOR   San Lorenzo -      6.98 144            Pn     10 08 30.8 +1.9
ANIL   Santa Ana          7.17  94     P      Pn     10 08 32.8 +1.4
       2µm86nm,0.5s
ANIL                                   S      Sn     10 09 52.2 -0.8
       2µm86nm,0.5s
LCBC   Los crdobas,       7.28  58     P      Pn     10 08 38.1 +5.6
ORTC   Ortega, Tolima     7.39  98     P      Pn     10 08 36.2 +2.0
ORTC                                   S      Sn     10 09 57.3 -0.8
UREC   San Jos de Ur      7.53  68     P      Pn     10 08 38.2 +2.2
       2µm240nm,0.8s
UREC                                   S      Sn     10 10 01.4 -0.1
       2µm240nm,0.8s
GARC   Garzon, Huila      7.60 111     P      Pn     10 08 38.6 +1.4
FLOC   Florencia          7.70 116     P      Pn     10 08 39.1 +0.8
       698nm64nm,1.0s
FLOC                                   S      Sn     10 10 03.1 -2.4
       698nm64nm,1.0s
PRAC   Prado              7.78  99     P      Pn     10 08 41.3 +1.9
PRAC                                   S      Sn     10 10 05.2 -2.4
MGAN   Managua            7.99 333     Pn     Pn     10 08 44.6 +2.3
BOAB   BOACO BROADBAN     8.03 338     Pn     Pn     10 08 41.5 -1.3
COHC   Cochancay          8.11 156     Pn     Pn     10 08 44.8 +0.9
PTBC   PUERTO BERRIO,     8.24  79     P      Pn     10 08 49.3 +3.6
ROSC   El Rosal           8.24  91     Pn     Pn     10 08 48.1 +2.1
       4.4nm,0.3s,baz=262,slow=17,SNR=7.7
ROSC                                   Sn     Sn     10 10 24.3 +5.0
       1.8nm,0.3s,baz=203,slow=23,SNR=1.8
       7.0nm,0.4s
URMC   La Uribe, Meta     8.36 102     P      Pn     10 08 49.0 +1.5
       641nm54nm,0.9s
URMC                                   S      Sn     10 10 21.0 -1.0
       641nm54nm,0.9s
CNGN   Cerro Negro        8.51 332     Pn     Pn     10 08 50.7 +1.2
HERN   Volcan Telica      8.67 331     Pn     Pn     10 08 52.8 +1.1
SJCC   San Jacinto, C     8.82  56     P      Pn     10 08 56.8 +3.0
       95nm,1.0s
SJCC                                   S      Sn     10 10 34.7 +1.4
       95nm,1.0s
VILC   Villavicencio,     8.91  95     S      Sn     10 10 34.6 -0.8
SIUN   Universidad Ur     8.95 346     Pn     Pn     10 08 54.3 -1.2
MACC   Macarena, Meta     9.16 108     P      Pn     10 08 59.3 +0.9
       44nm,0.6s
MACC                                   S      Sn     10 10 39.6 -2.0
       44nm,0.6s
PAYG   Puerto Ayora       9.52 234            Pn     10 09 05.9 +2.6
MCRA   Macar, Loja        9.65 164     S      Sn     10 10 49.4 -4.1
CNCH   Conchagua          9.74 328     eP     Pn     10 09 07.8 +1.4
OCAC   Ocana              9.76  70     P      Pn     10 09 08.5 +1.8
OCAC                                   S      Sn     10 10 57.0 +0.6
LCND   La Caada           9.80 328     eP     Pn     10 09 07.7 +0.6
RANC   El Ranchito       10.12 327     eP     Pn     10 09 12.9 +1.3
RANC                                   eS            10 09 41.7
RANC                                   IAML          10 09 45.7
       comp=Z,441nm,0.3s
TGUH   Tegucigalpa,Un    10.14 333     Pn     Pn     10 09 13.2 +1.3
PACA   Pacayal           10.16 327     eP     Pn     10 09 13.8 +1.6
TECO   Alcaldia de Te    10.47 325     eP     Pn     10 09 17.8 +1.4
SCLA   Alcaldia de Sa    10.58 325     eP     Pn     10 09 19.9 +2.1
PMON   Piamonte          10.93 323     eP     Pn     10 09 24.8 +2.1
SBLS   San Blas          11.21 322     eP     Pn     10 09 30.0 +3.3
NUBE   Las Nubes         11.36 322     eP     Pn     10 09 30.8 +2.1
FAME   Alcaldia de Sa    11.46 321     eP     Pn     10 09 32.8 +2.9
MTO3   Montecristo       11.50 325            Pn     10 09 32.9 +2.3
ESQI   Esquipulas        11.62 326            Pn     10 09 35.7 +3.5
SDV    Santo Domingo     12.48  71     Pn     Pn     10 09 45.8 +1.8
       comp=Z,1.0nm,0.3s,baz=250,slow=9.0,SNR=11
SDV                                    Sn     Sn     10 12 00.0 -3.3
       comp=Z,0.7nm,0.3s,baz=178,slow=21,SNR=1.4
SDV                                    LR     LR     10 14 13.8
       comp=Z,270nm,20.9s,baz=231,slow=36
       comp=Z,17nm,0.7s
SDV    Santo Domingo     12.48  71            Pn     10 09 45.7 +1.7
SDV    Santo Domingo     12.48  71     eP     Pn     10 09 42.7 -1.4
SDV                                    eS     Sn     10 12 04.6 +1.2
APG    El Apazote        12.63 323     Pn     Pn     10 09 46.9 +0.8
       comp=Z,0.1nm,0.3s,baz=163,slow=7.0,SNR=4.0
APG                                    LR     LR     10 13 59.4
       comp=Z,40nm,20.1s,baz=290,slow=35
ATAH   Atahualpa         12.73 161     Pn     Pn     10 09 47.5 -0.2
       comp=Z,1.2nm,0.3s,baz=346,slow=9.7,SNR=10
ATAH                                   LR     LR     10 14 20.3
       comp=Z,1µm,19.6s,baz=337,slow=36
       comp=Z,11nm,0.9s
CMIG   Matias Romero     17.04 316     Pn     P      10 10 50.6 +4.3
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       comp=Z,1.1nm,0.3s,baz=162,slow=10,SNR=11
CMIG                                   LR     LR     10 16 06.4
       comp=Z,367nm,21.5s,baz=134,slow=33
SOR    Soroa             17.72 359            Pn     10 10 53.2 +0.2
SOR                                    IAmb   IAmb   10 11 04.2
       comp=Z,73nm,1.5s
SDDR   Presa de Saban    17.76  37            P      10 10 55.2 +0.8
SDDR                                   IAmb   IAmb   10 11 01.1
       comp=Z,43nm,1.2s
NNA    Nana              17.79 161     P      P      10 10 55.1 +0.4
       comp=Z,1.3nm,0.3s,baz=326,slow=8.0,SNR=8.2
       comp=Z,18nm,0.6s
NNA    Nana              17.79 161            P      10 10 55.9 +1.1
SDD    Santo Domingo     18.24  42            Pn     10 10 57.9 -1.6
SC01   Santiago de lo    18.44  38     P      P      10 10 60.0 -1.8
TEFE   Tefe              19.82 115     eP     P      10 11 16.8 -0.2
CRPR   Cabo Rojo, PR     19.92  48     P      P      10 11 17.5 -0.6
CRPR                                   IAmb   IAmb   10 11 38.0
       comp=Z,52nm,1.3s
AOPR   Arecibo Observ    20.39  48     P      P      10 11 22.5 -0.7
SJG    San Juan          20.70  50     P      Pn     10 11 28.9 -0.1
       comp=Z,24nm,0.7s,baz=250,slow=6.8,SNR=6.1
SJG                                    LR     LR     10 18 55.8
       comp=Z,162nm,20.9s,baz=252,slow=35
       comp=Z,24nm,0.7s
SJG    San Juan          20.70  50     P      P      10 11 23.8 -2.8
GCPR   Guaynabo City     20.87  49     P      P      10 11 27.5 -0.9
GCPR                                   IAmb   IAmb   10 11 38.1
       comp=Z,28nm,0.8s
HUMP   Col San Antoni    20.95  50     P      P      10 11 28.3 -0.9
BOAV   Boa Vista         22.16  96     P      P      10 11 39.9 -2.5
MACA   Manacapuru-AM     23.33 110     P      P      10 11 54.7 +0.1
MACA                                   IAmb   IAmb   10 11 55.8
       comp=Z,9.9nm,0.7s
JRQG   Juriquilla Cam    23.36 314     P      P      10 11 57.0 +1.9
LPAZ   La Paz            25.51 146     P      P      10 12 16.6 +1.1
       comp=Z,5.2nm,0.8s,baz=343,slow=12,SNR=18
LPAZ                                   LR     LR     10 23 29.2
       comp=Z,398nm,19.7s,baz=301,slow=39
       comp=Z,5.2nm,0.8s
LPAZ   La Paz            25.51 146            P      10 12 16.6 +1.1
LPAZ   La Paz            25.51 146     eP     P      10 12 14.6 -0.9
PB18   Visviri           25.89 150     P      P      10 12 20.5 +1.7
PB12   IPOC Station P    26.37 153     P      P      10 12 25.2 +2.5
PB12                                   IAmb   IAmb   10 12 26.6
       comp=Z,14nm,0.9s
PB11   IPOC Station P    27.68 153     IAmb   IAmb   10 12 42.0
       comp=Z,12nm,0.8s
GO01   Chusmiza          27.81 152     IAmb   IAmb   10 12 45.8
       comp=Z,13nm,0.8s
833A   Chaparral WMA,    28.18 327     IAmb   IAmb   10 13 18.6
       comp=Z,12nm,1.1s
VILB   Vilhena           28.49 129     P      P      10 12 42.1 +0.4
VILB   Vilhena           28.49 129     eP     P      10 12 42.2 +0.5
SIV    San Ignacio       29.79 135     LR     LR     10 24 59.9
       comp=Z,557nm,19.2s,baz=304,slow=37
TKL    Tuckaleechee C    30.55 358     LR     LR     10 26 10.9
       comp=Z,158nm,18.0s,baz=180,slow=38
PTLB   Pontes e Lacer    30.84 132     P      P      10 13 03.1 +0.6
PTLB                                   IAmb   IAmb   10 13 09.5
       comp=Z,7.5nm,0.9s
PTLB   Pontes e Lacer    30.84 132     eP     P      10 13 03.0 +0.5
HPIG                     31.01 317     P      P      10 13 04.4 +0.2
TXAR   Lajitas Array     31.39 323     P      P      10 13 07.5 +0.2
       comp=Z,0.7nm,0.9s,baz=148,slow=9.1,SNR=5.4
TXAR                                   LR     LR     10 24 48.1
       comp=Z,93nm,21.3s,baz=116,slow=35
       comp=Z,0.7nm,0.9s
TX31   Lajitas Ar. Si    31.39 323     P      P      10 13 07.9 +0.6
LCAR   Lake Charles      31.94 347     P      P      10 13 10.8 -1.1
LCAR                                   IAmb   IAmb   10 13 11.8
       comp=Z,9.2nm,0.8s
GO02   Mina Guanaco      32.51 158     P      P      10 13 18.8 +1.3
X34A   Smith Ranch, M    32.69 336     P      P      10 13 17.5 -1.1
LPIG   La Paz            32.76 308     LR     LR     10 23 40.7
       comp=Z,111nm,19.2s,baz=131,slow=31
CGM3   Cape Girardeau    32.82 350     P      P      10 13 19.1 -0.6
T42A   Van Buren         32.84 347     IAmb   IAmb   10 13 21.8
       comp=Z,6.3nm,0.8s
WMOK   Wichita Mounta    33.20 335     P      P      10 13 22.6 -0.5
VHRN   Van Horn          33.22 323            P      10 13 24.6 +1.1
MGMO   Mountain Grove    33.23 346     P      P      10 13 22.5 -0.8
MGMO                                   IAmb   IAmb   10 13 25.2
       comp=Z,9.1nm,1.0s
DEOK   Depew             33.29 339     P      P      10 13 22.6 -1.2
CCM    Cathedral Cave    33.86 348     P      P      10 13 27.1 -1.6
GDL2   Guadalupe Moun    33.90 326     P      P      10 13 29.4 +0.1
MNTX   Cornudas Mount    34.11 324     P      P      10 13 31.1  0.0
AC02   Maricunga         34.20 158     IAmb   IAmb   10 13 37.5
       comp=Z,9.1nm,0.9s
319A   Douglas           36.30 320     P      P      10 13 51.8 +1.7
319A                                   IAmb   IAmb   10 13 53.0
       comp=Z,15nm,1.2s
R32A   Long Quarter,     36.38 338     P      P      10 13 50.2 -0.3
AQDB   Aquidauana        36.56 135     IAmb   IAmb   10 13 59.5
       comp=Z,14nm,1.0s
Y22A   Socorro           36.65 325     IAmb   IAmb   10 13 56.2
       comp=Z,17nm,1.3s
ABQ    Albuquerque       37.10 327     IAmb   IAmb   10 13 59.7
       comp=Z,12nm,1.3s
TASM   ASL Pad, Albuq    37.11 327     P      P      10 13 57.7 +0.7
TASM                                   IAmb   IAmb   10 13 59.7
       comp=Z,13nm,1.3s
TASM   ASL Pad, Albuq    37.11 327     IAmb   IAmb   10 13 59.7
       comp=Z,12nm,1.2s
TASM   ASL Pad, Albuq    37.11 327     IAmb   IAmb   10 13 59.7
       comp=Z,13nm,1.3s
TASM   ASL Pad, Albuq    37.11 327     IAmb   IAmb   10 13 59.7
       comp=Z,12nm,1.2s
TUC    Tucson            37.88 319     P      P      10 14 04.4 +1.0
TUC                                    IAmb   IAmb   10 14 05.8
       comp=Z,8.7nm,1.1s
H03N2  Juan Fernandez    38.36 175     T      T      10 54 52.1
       baz=354,slow=76,SNR=14
H03N1  Juan Fernandez    38.36 175     T      T      10 54 45.2
       baz=354,slow=76,SNR=14
H03N3  Juan Fernandez    38.38 175     T      T      10 54 52.1
       baz=354,slow=76,SNR=15
CPUP   Villa Florida     39.59 143     P      P      10 14 18.2 +0.5
       comp=Z,1.8nm,0.9s,baz=320,slow=6.1,SNR=4.3
       comp=Z,1.8nm,0.9s
SADO   Sadowa            39.75   4     LR     LR     10 30 35.7
       comp=Z,118nm,18.1s,baz=212,slow=36
BDFB   Brasilia          39.89 122     LR     LR     10 31 19.3
       comp=Z,177nm,18.1s,baz=291,slow=37
MT08   Bocatoma Ro       40.02 164     P      P      10 14 22.4 +0.8
MT08                                   IAmb   IAmb   10 14 26.5
       comp=Z,12nm,0.9s
Y14A   Wickenburg        40.35 319     P      P      10 14 24.9 +0.8
Y14A                                   IAmb   IAmb   10 14 26.6
       comp=Z,12nm,1.3s
WUAZ   Wupatki           40.35 323     P      P      10 14 25.1 +0.9
WUAZ                                   IAmb   IAmb   10 14 27.1
       comp=Z,15nm,1.2s
ISCO   Idaho Springs     40.42 332     P      P      10 14 25.7 +0.8
K30B   Basset            40.47 341     P      P      10 14 24.9 -0.1
K30B                                   IAmb   IAmb   10 14 25.9
       comp=Z,18nm,1.1s
PV15   Paradox Valley    40.72 328     IAmb   IAmb   10 14 32.4
       comp=Z,9.9nm,0.9s
PV02   Paradox Valley    40.75 328     IAmb   IAmb   10 14 30.0
       comp=Z,12nm,0.9s
PV13   Radium Mtn., P    40.76 328     P      P      10 14 28.7 +1.1
PV13                                   IAmb   IAmb   10 14 32.5
       comp=Z,12nm,0.9s
PV03   Paradox Valley    40.84 328     P      P      10 14 28.6 +0.4
PV12   Saucer Basin,     40.87 328     P      P      10 14 29.5 +1.0
PV07   Paradox Valley    40.87 328     IAmb   IAmb   10 14 32.9
       comp=Z,9.6nm,1.1s
PV11   David Mesa, Pa    40.89 328     IAmb   IAmb   10 14 31.7
       comp=Z,9.8nm,1.0s
PV16   Nyswonger Mesa    40.92 328     IAmb   IAmb   10 14 32.5
       comp=Z,13nm,1.3s
PV19   Morning Glory     40.96 328     IAmb   IAmb   10 14 30.8
       comp=Z,8.8nm,1.0s
PV20   West Nyswonger    40.97 328     IAmb   IAmb   10 14 33.3
       comp=Z,14nm,1.1s
GLA    Glamis            41.02 317     P      P      10 14 30.7 +1.1
GLA                                    IAmb   IAmb   10 14 32.1
       comp=Z,16nm,1.2s
PV10   Paradox Valley    41.03 328     IAmb   IAmb   10 14 33.5
       comp=Z,13nm,1.1s
RPN    Rapa Nui          41.07 218     LR     LR     10 27 24.7
       comp=Z,76nm,20.5s,baz=38,slow=30
U15A   North Rim         41.51 323     IAmb   IAmb   10 14 37.0
       comp=Z,14nm,1.3s
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W13A   Hualapai Mount    41.64 320     IAmb   IAmb   10 14 37.8
       comp=Z,12nm,1.2s
HMU    Henry Mountain    41.65 326     IAmb   IAmb   10 14 36.9
       comp=Z,10nm,1.2s
BC3    Big Chuckawall    41.80 317     P      P      10 14 36.8 +0.8
NEE2   Needles Airpor    41.91 319     P      P      10 14 38.5 +1.7
NEE2                                   IAmb   IAmb   10 14 40.0
       comp=Z,12nm,1.3s
PKCU   Pink Cliffs       42.20 324     IAmb   IAmb   10 14 43.4
       comp=Z,20nm,1.2s
PFO    Pinyon Flats O    42.46 316     LR     LR     10 31 42.8
       comp=Z,94nm,18.4s,baz=106,slow=35
V12A   Nelson            42.65 320     IAmb   IAmb   10 14 45.5
       comp=Z,13nm,1.1s
BI02   San Fabin de      42.75 167     P      P      10 14 44.7 +1.0
BI02                                   IAmb   IAmb   10 14 53.8
       comp=Z,10nm,1.1s
RSSD   Black Hills       43.32 337     P      P      10 14 49.1 +0.7
RSSD                                   IAmb   IAmb   10 14 50.7
       comp=Z,18nm,1.5s
SHPR   Sheep Range       43.33 321     P      P      10 14 49.9 +1.3
GSC    Goldstone, Bar    43.67 318     IAmb   IAmb   10 14 54.5
       comp=Z,15nm,1.4s
SHOC   Shoshone, Teco    43.67 319     IAmb   IAmb   10 14 53.6
       comp=Z,18nm,1.2s
QSM    Queen of Sheba    44.10 319     IAmb   IAmb   10 14 57.5
       comp=Z,12nm,1.2s
WSHM   Spangler Hills    44.30 318     P      P      10 14 57.2 +1.0
WSHM                                   IAmb   IAmb   10 14 58.6
       comp=Z,11nm,1.2s
LRMC   Laurel Mtn Rad    44.35 318     IAmb   IAmb   10 14 59.2
       comp=Z,13nm,1.3s
S11A   Rachel            44.40 322     IAmb   IAmb   10 15 00.2
       comp=Z,15nm,1.1s
CLC    China Lake        44.49 318     IAmb   IAmb   10 14 59.9
       comp=Z,11nm,1.3s
PD31   Pinedale Array    44.59 332     P      P      10 14 59.0 +0.3
PDAR   Pinedale Array    44.59 332     P      P      10 14 59.0 +0.3
       comp=Z,1.2nm,0.8s,baz=129,slow=12,SNR=11
PDAR                                   LR     LR     10 34 42.2
       comp=Z,46nm,19.9s,baz=127,slow=38
       comp=Z,1.2nm,0.8s
HWUT   Hardware Ranch    44.72 329     P      P      10 14 59.9 +0.3
HWUT                                   IAmb   IAmb   10 15 00.7
       comp=Z,6.0nm,0.9s
BGU    Big Grassy Mou    45.01 327     P      P      10 15 02.4 +0.5
BGU                                    IAmb   IAmb   10 15 03.9
       comp=Z,12nm,1.4s
VES    Vestal, Richgr    45.50 317     P      P      10 15 07.4 +1.7
ELK    Elko              46.11 325     LR     LR     10 35 52.5
       comp=Z,85nm,18.6s,baz=136,slow=38
NVAR   Mina Array Bea    46.48 321     P      P      10 15 14.4 +0.8
       comp=Z,5.3nm,0.9s,baz=136,slow=7.4,SNR=34
       comp=Z,5.3nm,0.9s
NVAR   Mina Array Bea    46.48 321     P      P      10 15 14.7 +1.0
MDPB   Devils Postpil    46.51 319     P      P      10 15 14.9 +0.9
YMR    Madison River     46.70 332     IAmb   IAmb   10 15 33.0
       comp=Z,5.3nm,1.1s
RYN    Ryan              46.74 321     IAmb   IAmb   10 15 19.6
       comp=Z,8.7nm,1.2s
PLCA   Paso Flores       46.80 167     P      P      10 15 15.7 -0.3
       comp=Z,4.9nm,1.0s,baz=324,slow=4.7,SNR=5.2
       comp=Z,4.9nm,1.0s
YHL    Hebgen Lake       46.94 332     IAmb   IAmb   10 15 19.9
       comp=Z,10nm,1.3s
BOZ    Bozeman (W)       47.71 333     P      P      10 15 23.9 +0.8
BOZ                                    IAmb   IAmb   10 15 24.4
       comp=Z,6.3nm,1.1s
ORV    Oroville          49.16 320     P      P      10 15 35.7 +1.5
ORV                                    IAmb   IAmb   10 15 36.5
       comp=Z,8.7nm,1.1s
BPMT   Black Pine Rid    49.18 332     P      P      10 15 34.8 +0.2
MSO    Missoula          49.70 332            P      10 15 38.8 +0.4
MSO                                    IAmb   IAmb   10 15 43.0
       comp=Z,9.1nm,1.4s
JTMT   Jette             50.53 333     P      P      10 15 45.1 +0.5
YBH    Yreka Blue Hor    51.15 322     LR     LR     10 37 20.1
       comp=Z,7.2nm,18.1s,baz=117,slow=36
G08A   Pilot Rock        51.15 327     P      P      10 15 50.8 +1.4
SCHQ   Schefferville     51.32  12     P      P      10 15 51.8 +1.5
       comp=Z,4.4nm,0.9s,baz=128,slow=8.5,SNR=4.0
SCHQ                                   LR     LR     10 38 43.7
       comp=Z,46nm,19.6s,baz=190,slow=37
       comp=Z,4.4nm,0.9s
NEW    Newport           52.23 331     LR     LR     10 39 14.4
       comp=Z,74nm,18.8s,baz=112,slow=37
EDM    Edmonton          54.30 338     P      P      10 16 12.0 -0.4
B04A   Port Angeles      55.33 328     P      P      10 16 20.6 +0.7
FRB    Frobisher Bay     59.54   7     LR     LR     10 41 40.8
       comp=Z,48nm,21.7s,baz=148,slow=35
BBB    Bella Bella       60.16 330     LR     LR     10 45 31.3
       comp=Z,66nm,18.9s,baz=205,slow=39
YKA    Yellowknife Ar    62.06 344     P      P      10 17 06.1 -0.4
       comp=Z,1.9nm,0.9s,baz=145,slow=5.6,SNR=23
       comp=Z,1.9nm,0.9s
YKA    Yellowknife Ar    62.06 344     P      P      10 17 06.4 -0.1
YKAW3  Yellowknife Wh    62.12 344            P      10 17 07.0 +0.1
YKAW3                                         pP     10 17 07.2 -2.6
YKAW3                                  IAmb   IAmb   10 17 09.8
       comp=Z,4.0nm,1.0s
RES    Resolute Bay      70.02 357     LR     LR     10 49 09.4
       comp=Z,90nm,19.3s,baz=27,slow=36
TULEG  Thule             71.91   3            P      10 18 08.7 -0.3
TULEG                                  IAmb   IAmb   10 18 11.4
       comp=Z,6.8nm,1.1s
J26L   Joseph Creek      73.33 337            P      10 18 19.0 +1.2
J26L                                   IAmb   IAmb   10 18 21.9
       comp=Z,7.1nm,1.0s
ILAR   Eielson Array     74.75 336     P      P      10 18 26.1 +0.2
       comp=Z,2.2nm,0.8s,baz=116,slow=4.3,SNR=16
ILAR                                   LR     LR     10 53 06.5
       comp=Z,43nm,21.9s,baz=128,slow=37
       comp=Z,2.2nm,0.8s
KDAK   Kodiak Island     75.21 329     LR     LR     10 52 13.7
       comp=Z,61nm,18.4s,baz=74,slow=36
COLD   Coldfoot          76.88 338     IAmb   IAmb   10 18 39.8
       comp=Z,5.7nm,1.1s
MDT    Midelt            77.22  58     LR     LR     10 54 23.1
       comp=Z,21nm,18.4s,baz=302,slow=37
ESDC   Sonseca Array     78.09  51     P      P      10 18 45.9 +0.5
       comp=Z,1.1nm,0.8s,baz=263,slow=5.7,SNR=6.0
ESDC                                   LR     LR     10 55 35.0
       comp=Z,15nm,18.2s,baz=270,slow=38
       comp=Z,1.1nm,0.8s
TORD   Torodi Ar. Bea    83.33  77     P      P      10 19 15.2 +1.3
       comp=Z,0.4nm,0.6s,baz=303,slow=4.4,SNR=2.1
       comp=Z,0.4nm,0.6s
NOA    NORSAR Array B    87.53  29     LR     LR     10 58 44.0
       comp=Z,14nm,18.1s,baz=0.0,slow=36
DAVOX  Davos/Dischmat    88.10  43     LR     LR     10 57 06.9
       comp=Z,45nm,20.6s,baz=258,slow=34
HFS    Hagfors           88.85  30     LR     LR     10 56 52.3
       comp=Z,39nm,18.4s,baz=267,slow=34
VRAC   Vranov            92.23  40     LR     LR     10 54 40.4
       comp=Z,58nm,20.1s,baz=298,slow=31
FINES  FINESS Array B    94.45  27     LR     LR     10 58 03.4
       comp=Z,21nm,21.5s,baz=312,slow=33
QSPA   South Pole Qui    94.99 180     P      P      10 20 09.6 +1.0
AKASG  Malin Array Be    99.72  37     LR     LR     11 01 18.4
       comp=Z,23nm,21.9s,baz=339,slow=33
HHC    Hu-ho-hao-te     132.59 345     eP     PKPdf  10 25 57.8 -3.7
NJ2    Nanjing          137.90 332     eP     PKPdf  10 26 11.5  0.0
NJ2                                    pmax   pmax
       comp=Z,11nm,0.5s
ASAR   Alice Springs    140.24 238     PKP    PKPdf  10 26 13.8 -2.2
       comp=Z,0.3nm,0.8s,baz=110,slow=2.3,SNR=4.4
WRA    Warramunga Arr   141.12 244     PKP    PKPdf  10 26 18.7 +1.0
       comp=Z,1.2nm,0.9s,baz=111,slow=2.2,SNR=2.7
H01W1  Cape Leeuwin H   146.44 205     T      T      13 10 55.7
       baz=146
H01W2  Cape Leeuwin H   146.44 205     T      T      13 10 45.9
       baz=146,slow=74
H01W3  Cape Leeuwin H   146.46 205     T      T      13 10 49.6
       baz=146,slow=74
PZH    PanZhiHua        148.43 353     PKPbc  PKPdf  10 26 29.3 -1.0
```

IDC 24 10:15:15.5±7.6, 6°.03S×149°.06E, h40km±74km, mb3.1/2, mbtmp3.5/4, ML3.7/1, Error ellipse: s-maj=97.5km s-min=40.1km az=126.0, New Britain region

```
Code   Station Name        Δ°   AZ°    Phase ID         Time      Res
                                       Op     ISC       h  m  s   ISC
PMG    Port Moresby       3.85 209     P      Pn     10 16 13.9 +1.7
       19nm,0.6s,baz=41,slow=4.4,SNR=9.5
PMG                                    S      Sn     10 16 55.5 -0.7
       24nm,0.4s,baz=22,slow=22,SNR=7.1
```

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.90**	**225**	P	P	10 19 44.3	+0.6
	0.2nm,0.3s,baz=50,slow=10,SNR=8.9						
	1.2nm,0.5s						
ASAR	**Alice Springs**	**22.81**	**218**	P	P	10 20 16.1	+1.1
	0.3nm,0.5s,baz=53,slow=9.7,SNR=17						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**84.71**	**23**	P	P	10 27 43.9	-1.0
	0.3nm,0.7s,baz=258,slow=5.3,SNR=1.4						
	0.3nm,0.7s						

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*UPP **24** 10:20:07.8±3.2, 64°.54N×31°.76E, h0km, ML1.9, Presumed earthquake*

*KOLA **24** 10:20:12.5, 64°.60N×30°.83E, h0km, ML2.1, Error ellipse: s-maj=19.7km s-min=13.3km az=160.0, Karelia*

*MOS **24** 10:20:14.0±0.3, 64°.76N±0°.02×30°.82E±0°.09, h0km, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*IDC **24** 10:20:16.2±1.5, 64°.80N×30°.38E, h0km, mbtmp2.9/4, ML2.1/4, Error ellipse: s-maj=18.3km s-min=7.4km az=102.0*

ISC 24 10:20:15.1±1.2**, 64°.81N**±0°.04×**30°.23E**±0°.07**, h0km, n25, σ2s.55**/34**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JOF	**Joensuu**	**1.96**	**165**	eP	**Pn**	**10 20 50.0**	**+0.5**
APA0	**Apatity Array**	**3.02**	**21**	P	**Pn**	**10 21 03.2**	**-0.9**
APA0				S	**Sn**	**10 21 40.7**	**-0.2**
APA	**Apatity**	**3.05**	**24**	S	**Sn**	**10 21 40.4**	**-1.3**
KEF	**Keuruu**	**3.58**	**225**	eP	**Pn**	**10 21 14.4**	**+2.7**
PAJU	**Pajala**	**3.67**	**310**	P	**Pn**	**10 21 14.1**	**+1.2**
SJUU	**Sjulsmark**	**3.71**	**285**	P	**Pn**	**10 21 15.1**	**+1.7**
ERTU	**Ertsjaerv**	**3.76**	**301**	P	**Pn**	**10 21 16.3**	**+2.1**
VAF	**Ylistaro**	**3.78**	**245**	eP	**Pn**	**10 21 17.6**	**+3.2**
BURU	**Burvik**	**3.81**	**271**	P	**Pn**	**10 21 16.4**	**+1.5**
BURU				S	**Sn**	**10 22 07.7**	**+7.4**
FINES	**FINESS Array B**	**3.87**	**211**	Pn	**Pn**	**10 21 16.9**	**+1.1**
	0.1nm,0.3s,baz=32,slow=14,SNR=9.9						
FINES				Pg	**Pb**	**10 21 23.6**	**-0.5**
	0.4nm,0.3s,baz=28,slow=16,SNR=3.0						
FINES				Sn	**Sn**	**10 22 03.5**	**+1.7**
	0.3nm,0.3s,baz=33,slow=21,SNR=3.5						
FINES				Lg	Lg	10 22 17.1	
	2.0nm,0.3s,baz=30,slow=28,SNR=16						
	0.4nm,0.3s						
HARU	**Harads**	**4.09**	**294**	P	**Pn**	**10 21 20.9**	**+2.2**
ODEU	**Stanfors**	**4.12**	**269**	P	**Pn**	**10 21 19.9**	**+0.8**
UMAU	**Umeaa**	**4.26**	**262**	P	**Pn**	**10 21 21.7**	**+0.7**
TERR	**Teriberka**	**4.80**	**21**	P	**Pn**	**10 21 26.7**	**-1.8**
TERR				S	**Sn**	**10 22 20.9**	**-3.9**
ARCES	**ARCESS Array B**	**5.09**	**341**	Pn	**Pn**	**10 21 32.5**	**0.0**
	0.7nm,0.3s,baz=152,slow=13,SNR=64						
ARCES				Sn	**Sn**	**10 22 29.8**	**-1.9**
	0.3nm,0.3s,baz=152,slow=23,SNR=7.2						
ARCES				Lg	Lg	10 22 52.6	
	0.5nm,0.3s,baz=155,slow=33,SNR=7.6						
	2.3nm,0.2s						
ARCES	**ARCESS Array B**	**5.09**	**341**	P	**Pn**	**10 21 32.4**	**0.0**
ARCES				S	**Sn**	**10 22 31.5**	**-0.3**
VADS	**Vadso**	**5.34**	**357**	P	**Pn**	**10 21 35.2**	**-0.7**
VADS				S	**Sn**	**10 22 38.1**	**+0.1**
MEF	**Metsahovi**	**5.34**	**213**	eP	**Pn**	**10 21 38.7**	**+2.7**
RAF	**Rauma**	**5.42**	**229**	eP	**Pn**	**10 21 38.7**	**+1.7**
FAUS	**Fauske**	**6.59**	**300**	S	**Sn**	**10 23 09.3**	**+0.6**
AAL	**Aland**	**6.64**	**230**	eP	**Pn**	**10 21 55.0**	**+1.3**
MTSE	**Matsula**	**6.83**	**209**	eP	**Pn**	**10 21 57.0**	**+0.7**
I43RU	**DUBNA INFRASON**	**8.80**	**154**	I	I	11 12 30.0	
	baz=347,slow=316,SNR=3.6						
HFS	**Hagfors**	**8.96**	**246**	Pn	**Pn**	**10 22 24.4**	**-1.2**
	0.1nm,0.3s,baz=45,slow=16,SNR=11						
HFS				Sn	**Sn**	**10 24 00.9**	**-6.3**
	0.1nm,0.3s,baz=57,slow=21,SNR=1.6						
HFS				Lg	Lg	10 24 58.0	
	0.5nm,0.3s,baz=59,slow=30,SNR=8.3						
	0.9nm,0.8s						
NOA	**NORSAR Array B**	**9.44**	**255**	Pn	**Pn**	**10 22 30.8**	**-1.4**
	baz=160,slow=11,SNR=8.7						
NOA				Sn	**Sn**	**10 24 13.7**	**-5.3**
	baz=45,slow=23,SNR=1.8						
NOA				Lg	Lg	10 25 14.8	
	baz=44,slow=26,SNR=5.1						
	0.1nm,0.3s						

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*HEL **24** 10:28:07.3±0.3, 60°.93N×29°.22E, h0km, ML1.4, Suspected explosion*

*IDC **24** 10:28:09.5±2.4, 60°.81N×28°.95E, h0km, mbtmp3.3/2, ML1.9/2, Error ellipse: s-maj=21.8km s-min=14.5km az=4.0*

ISC 24 10:28:05.0±1.3**, 60°.87N**±0°.05×**29°.22E**±0°.05**, h0km, n21, σ1s.73**/31**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RUF	**Ruokolahti**	**0.57**	**347**	PG	**Pb**	**10 28 17.0**	**-0.9**
RUF				SG	**Sg**	**10 28 23.4**	**+0.1**
RUF				MSG		10 28 23.9	
	comp=Z,4.8nm,0.2s						
VJF	**Virojoki**	**0.88**	**248**	PG	**Pn**	**10 28 23.9**	**-0.7**
	baz=62						
VJF				MSG		10 28 35.3	
	comp=Z,5.5nm,0.2s						
VJF				SG	**Sb**	**10 28 36.1**	**+0.7**
FIA0	**FINESS Array S**	**1.63**	**292**	PG	**Pb**	**10 28 35.6**	**-0.2**
FIA0				MSG		10 28 55.5	
	comp=Z,4.0nm,0.2s						
FIA0				SN	**Sg**	**10 28 57.4**	**+0.2**
FINES	**FINESS Array B**	**1.63**	**292**	Pg	**Pg**	**10 28 35.9**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=115,slow=16,SNR=13						
FINES				Lg	Lg	10 28 57.5	
	comp=Z,0.6nm,0.3s,baz=112,slow=34,SNR=17						
PVF	**Pernaja**	**1.68**	**260**	PG	**Pg**	**10 28 37.1**	**-0.1**
	baz=72						
PVF				MSG		10 28 57.8	
	comp=Z,3.0nm,0.2s						
PVF				SN	**Sg**	**10 29 02.0**	**+3.0**
NUR	**Nurmijarvi**	**2.27**	**263**	PB	**Pb**	**10 28 46.7**	**-0.2**
	baz=81						
NUR				MSG		10 29 14.9	
	comp=Z,1.8nm,0.2s						
NUR				SG	**Sg**	**10 29 17.3**	**-0.7**
JOF	**Joensuu**	**2.28**	**25**	eP	**Pb**	**10 28 46.3**	**-0.7**
JOF	**Joensuu**	**2.28**	**25**	PG	**Pg**	**10 28 47.2**	**-1.5**
JOF				SG	**Sb**	**10 29 15.4**	**-0.3**
SUF	**Sumiainen**	**2.36**	**323**	PG	**Pb**	**10 28 48.8**	**+0.6**
SUF				MSG		10 29 15.7	
	comp=Z,0.8nm,0.2s						
SUF				SG	**Sb**	**10 29 19.4**	**+1.5**
KEF	**Keuruu**	**2.45**	**304**	eP	**Pb**	**10 28 49.6**	**-0.3**
KEF	**Keuruu**	**2.45**	**304**	PB	**Pb**	**10 28 49.5**	**-0.5**
KEF				MSG		10 29 19.1	
	comp=Z,1.2nm,0.2s						
KEF				SG	**Sg**	**10 29 22.8**	**-0.9**
MEF	**Metsahovi**	**2.47**	**257**	eP	**Pb**	**10 28 49.1**	**-1.1**
MEF	**Metsahovi**	**2.47**	**257**	PN	**Pb**	**10 28 49.6**	**-0.6**
MEF				MSG		10 29 20.6	
	comp=Z,1.3nm,0.2s						
MEF				SB	**Sb**	**10 29 21.2**	**+0.1**
NIF	**Nilsia**	**2.61**	**346**	PG	**Pb**	**10 28 52.3**	**-0.3**
	baz=161						
NIF				MSG		10 29 22.7	
	comp=Z,0.9nm,0.2s						
NIF				SG	**Sb**	**10 29 25.7**	**+0.5**
KPF	**Kankaanpaa**	**3.57**	**289**	PB	**Pb**	**10 29 08.4**	**-0.6**
	baz=105						
RAF	**Rauma**	**3.64**	**276**	PN	**Pb**	**10 29 05.9**	**-4.2**
VAF	**Ylistaro**	**3.78**	**308**	eP	**Pb**	**10 29 08.6**	**-3.9**
VAF	**Ylistaro**	**3.78**	**308**	PB	**Pb**	**10 29 08.9**	**-3.6**
	baz=123						
I43RU	**DUBNA INFRASON**	**5.88**	**132**	I	I	11 04 30.0	
	baz=323,slow=324,SNR=2.5						
HFS	**Hagfors**	**7.70**	**271**	Pn	**Pn**	**10 29 59.4**	**+1.2**
	baz=81,slow=18,SNR=1.8						
HFS				Sn	**Sn**	**10 31 23.6**	**-2.4**
	baz=76,slow=24,SNR=1.4						
	comp=Z,1.0nm,0.9s						
ARCES	**ARCESS Array B**	**8.84**	**351**	Pn	**Pn**	**10 30 16.9**	**+3.1**
	baz=175,slow=12,SNR=2.0						
	comp=Z,3.2nm,1.1s						

NOU 24 10:32:41.2, 14°.06S×167°.38E, h143km, MLv4.8/13**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**1.39**	**187**	P	Pn	10 33 09.1	0.0
DVP	**Devils Point**	**3.73**	**168**	P	Pn	10 33 38.6	+0.9
RTV	**Rentapao**	**3.84**	**165**	P	Pn	10 33 39.4	+0.2
MARNC	**Mare, Loyalty**	**7.41**	**175**	P	Pn	10 34 25.2	-1.5
YATNC	**Mamie plateau,**	**7.97**	**183**	P	Pn	10 34 34.0	-0.2
DZM	**Mont Dzumac**	**8.02**	**186**	P	Pn	10 34 34.4	-0.6
OUENC	**Ouen Island, N**	**8.33**	**183**	P	Pn	10 34 39.4	+0.4
PINNC	**Pines Island,**	**8.51**	**180**	P	Pn	10 34 42.3	+0.9

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*SJA **24** 10:48:51.7±0.7, 21°.50S×69°.50W, h78km±2km, ML3.8, MW3.8*

*GUC **24** 10:48:53.6±0.8, 21°.49S×69°.47W, h72km±3km, ML3.8*

ISC 24 10:48:53.0±1.3**, 21°.52S**±0°.02×**69°.50W**±0°.05**, h76**km±6km**, n35, σ1s.06**/64**, 6C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.37**	**139**	⇑iP	**Pn**	**10 49 06.0**	**+0.4**
PB09				i S	**Sn**	**10 49 14.7**	**-0.1**
PB09				IAML		10 49 15.9	
	comp=N,12µm,0.3s						
PB09	**IPOC Station P**	**0.37**	**139**	eP	**Pn**	**10 49 05.7**	**+0.1**
PB09				eS	**Sn**	**10 49 15.2**	**+0.4**
PB09				IAML		10 49 15.9	
	comp=Z,7µm,0.3s						
PB07	**IPOC Station P**	**0.42**	**240**	⇑iP	**Pn**	**10 49 05.9**	**-0.1**
PB07				i S	**Sn**	**10 49 15.6**	**+0.2**
PB07				IAML		10 49 16.5	
	comp=N,6µm,0.2s						
PB07	**IPOC Station P**	**0.42**	**240**	eP	**Pn**	**10 49 05.7**	**-0.2**
PB07				eS	**Sn**	**10 49 15.9**	**+0.5**
PB07				IAML		10 49 16.5	
	comp=Z,2µm,0.1s						
PB02	**IPOC Station P**	**0.42**	**298**	⇓iP	**Pn**	**10 49 05.5**	**-0.3**
PB02				i S	**Sn**	**10 49 14.9**	**-0.4**
PB02				IAML		10 49 16.4	
	comp=E,6µm,0.2s						
PB02	**IPOC Station P**	**0.42**	**298**	eP	**Pn**	**10 49 05.3**	**-0.6**
PB02				eS	**Sn**	**10 49 15.4**	**+0.1**
PB02				IAML		10 49 17.2	
	comp=Z,6µm,0.2s						
PB01	**IPOC Station P**	**0.47**	**1**	i P	**Pn**	**10 49 05.7**	**-0.6**
PB01				i S	**Sn**	**10 49 15.4**	**-0.6**
PB01				IAML		10 49 15.9	
	comp=N,7µm,0.6s						
PB01	**IPOC Station P**	**0.47**	**1**	eP	**Pn**	**10 49 05.7**	**-0.6**
PB01				eS	**Sn**	**10 49 15.8**	**-0.2**
PB01				IAML		10 49 16.1	
	comp=Z,3µm,0.2s						
PB03	**IPOC Station P**	**0.58**	**204**	⇑iP	**Pn**	**10 49 07.5**	**+0.2**
PB03				i S	**Sn**	**10 49 18.3**	**+0.3**
PB03				IAML		10 49 19.0	
	comp=E,11µm,0.1s						
PB03	**IPOC Station P**	**0.58**	**204**	eP	**Pn**	**10 49 06.8**	**-0.6**
PB03				eS	**Sn**	**10 49 18.7**	**+0.8**
PB03				IAML		10 49 19.9	
	comp=Z,3µm,0.2s						
PATCX	**Punta Patache**	**0.92**	**318**	⇓iP	**Pn**	**10 49 10.8**	**-0.3**
PATCX				i S	**Sn**	**10 49 24.6**	**+0.2**
PATCX				IAML		10 49 27.8	
	comp=N,3µm,0.3s						
PATCX	**Punta Patache**	**0.92**	**318**	eP	**Pn**	**10 49 10.7**	**-0.3**
PATCX				eS	**Sn**	**10 49 25.4**	**+1.0**
PATCX				IAML		10 49 27.3	
	comp=Z,1µm,0.2s						
PX03	**IPOC Station P**	**1.11**	**354**	eP	**Pn**	**10 49 12.2**	**-1.2**
PX03				i S	**Sn**	**10 49 27.8**	**-0.8**
PX03				IAML		10 49 29.2	
	comp=N,3µm,0.3s						
TA01	**Diego Aracena**	**1.14**	**326**	eP	**Pn**	**10 49 13.3**	**-0.3**
TA01				i S	**Sn**	**10 49 29.1**	**+0.1**
TA01				IAML		10 49 30.6	
	comp=E,4µm,0.4s						
TA01	**Diego Aracena**	**1.14**	**326**	eP	**Pn**	**10 49 13.3**	**-0.3**
TA01				eS	**Sn**	**10 49 30.3**	**+1.3**
TA01				IAML		10 49 30.6	
	comp=Z,1µm,0.5s						
PB06	**IPOC Station P**	**1.19**	**183**	⇑iP	**Pn**	**10 49 14.9**	**+0.6**
PB06				i S	**Sn**	**10 49 31.3**	**+1.1**
PB06				IAML		10 49 32.3	
	comp=N,6µm,0.3s						
PB06	**IPOC Station P**	**1.19**	**183**	eP	**Pn**	**10 49 14.9**	**+0.6**
PB06				eS	**Sn**	**10 49 31.3**	**+1.1**
PB06				IAML		10 49 32.3	
	comp=Z,2µm,0.5s						
TA02	**Huaiquique**	**1.37**	**334**	eP	**Pn**	**10 49 16.3**	**-0.3**
TA02				eS	**Sn**	**10 49 36.8**	**+2.5**
TA02				IAML		10 49 39.2	
	comp=Z,2µm,0.1s						
PB08	**IPOC Station P**	**1.41**	**13**	eP	**Pn**	**10 49 17.2**	**-0.1**
PB08				i S	**Sn**	**10 49 36.0**	**+0.3**
PB08				IAML		10 49 37.3	
	comp=N,1µm,0.3s						
PB08	**IPOC Station P**	**1.41**	**13**	eP	**Pn**	**10 49 17.1**	**-0.3**
PB08				eS	**Sn**	**10 49 36.3**	**+0.7**
PB08				IAML		10 49 36.9	
	comp=Z,691nm,0.3s						
PB05	**IPOC Station P**	**1.48**	**206**	eP	**Pn**	**10 49 18.2**	**+0.1**
PB05				i S	**Sn**	**10 49 35.6**	**-1.3**
PB05				IAML		10 49 42.6	
	comp=E,1µm,0.5s						
PB05	**IPOC Station P**	**1.48**	**206**	eP	**Pn**	**10 49 18.2**	**+0.1**
PB05				eS	**Sn**	**10 49 39.1**	**+2.2**
PB05				IAML		10 49 42.1	
	comp=Z,560nm,0.2s						
PB11	**IPOC Station P**	**1.75**	**355**	eP	**Pn**	**10 49 21.2**	**-0.6**
PB11				i S	**Sn**	**10 49 43.6**	**+0.2**
PB11				IAML		10 49 46.5	
	comp=N,2µm,0.1s						
PB11	**IPOC Station P**	**1.75**	**355**	eP	**Pn**	**10 49 21.2**	**-0.6**
PB11				eS	**Sn**	**10 49 44.3**	**+0.9**
PB11				IAML		10 49 47.6	
	comp=Z,923nm,0.2s						
GO01	**Chusmiza**	**1.86**	**9**	⇑iP	**Pn**	**10 49 23.6**	**+0.1**
GO01				i S	**Sn**	**10 49 46.9**	**+0.4**
GO01	**Chusmiza**	**1.86**	**9**	eP	**Pn**	**10 49 23.4**	**0.0**
GO01				eS	**Sn**	**10 49 48.1**	**+1.7**
GO01				IAML		10 49 48.6	
	comp=Z,788nm,0.2s						
AF01	**San Pedro de A**	**1.88**	**140**	eP	**Pn**	**10 49 22.2**	**-1.4**
AF01				eS	Sn	10 49 32.2	-14
AF01				IAML		10 50 09.1	
	comp=Z,795nm,1.4s						
PB10	**IPOC Station P**	**2.21**	**206**	eP	**Pn**	**10 49 27.1**	**-0.6**
PB10	**IPOC Station P**	**2.21**	**206**	eP	**Pn**	**10 49 26.9**	**-0.8**
PB10				eS	**Sn**	**10 49 53.1**	**-1.1**
PB10				IAML		10 50 04.9	
	comp=Z,302nm,0.7s						
PB12	**IPOC Station P**	**2.99**	**345**	⇑iP	**Pn**	**10 49 36.7**	**-1.6**
PB12	**IPOC Station P**	**2.99**	**345**	eP	**Pn**	**10 49 36.9**	**-1.5**
PB12				eS	**Sn**	**10 50 09.9**	**-3.2**
PB12				IAML		10 50 28.9	
	comp=Z,329nm,0.5s						
PB14	**IPOC Station P**	**3.21**	**195**	eP	**Pn**	**10 49 40.0**	**-1.4**
PB14				eS	Sn	10 50 29.6	+11
PB14				IAML		10 50 34.2	
	comp=Z,164nm,0.3s						
AP01	**Chacalluta**	**3.23**	**346**	eP	**Pn**	**10 49 43.1**	**+1.7**
AP01				eS	**Sn**	**10 50 22.4**	**+3.6**
AP01				IAML		10 50 31.2	
	comp=Z,398nm,0.8s						
GO02	**Mina Guanaco**	**3.63**	**181**	eP	**Pn**	**10 49 46.9**	**-0.3**
GO02				eS	Sn	10 50 42.7	+14
GO02				IAML		10 50 59.9	
	comp=Z,227nm,0.5s						
AC02	**Maricunga**	**5.31**	**176**	eP	**Pn**	**10 50 10.1**	**-0.2**
AC02				eS	Sn	10 51 22.9	+13
AC02				IAML		10 51 43.0	
	comp=Z,52nm,0.5s						

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*SDD **24** 11:05:46.4±1.9, 18°.66N×71°.45W, h10km±24km, MD2.5, ML2.2, Presumed earthquake*

*OSPL **24** 11:05:46.7±0.5, 18°.63N×71°.32W, h18km±9km, ML1.4, Presumed earthquake*

ISC 24 11:05:46.3±1.1**, 18°.66N**±0°.04×**71°.47W**±0°.06**, h19**km±2km**, n8, σ1s.19**/15**, 6C-2D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LONE3	**El Aguacate, B**	**0.05**	**172**	i P	**Pg**	**11 05 50.3**	**+0.5**
LONE3				eS	**Sg**	**11 05 53.5**	**+1.3**
LONE3				IAML		11 05 54.4	
	comp=Z,70nm,0.1s						
NEDR	**Neiba UASD**	**0.18**	**165**	⇑iP	**Pb**	**11 05 50.7**	**+0.4**
NEDR				⇑iSg	**Sb**	**11 05 52.3**	**-0.4**
NEDR				IAML		11 05 59.1	
	comp=N,190nm,0.3s						
LODU1	**El Espartillar**	**0.30**	**181**	i P	**Pg**	**11 05 53.1**	**+0.2**
LODU1				eS	**Sg**	**11 05 57.4**	**-0.1**
LODU1				IAML		11 05 58.2	
	comp=Z,44nm,1.2s						
SDDR	**Presa de Saban**	**0.36**	**28**	⇓iSg	**Sg**	**11 05 57.3**	**-2.0**
SDDR				IAML		11 06 09.5	
	comp=N,225nm,0.3s						
JIDR	**Jimani**	**0.40**	**246**	⇑iP	**Pg**	**11 05 53.4**	**-1.2**
JIDR				⇑eSg	**Sg**	**11 05 59.5**	**-0.7**
JIDR				IAML		11 06 00.0	
	comp=N,719nm,0.3s						
REDR	**Restauracion**	**0.51**	**8**	⇓ePg	**Pn**	**11 05 59.3**	**+0.6**
REDR				⇑eSg	**Sn**	**11 06 07.4**	**+0.5**
REDR				IAML		11 06 09.2	
	comp=N,66nm,0.2s						
PODR	**Polo**	**0.52**	**160**	⇑iP	**Pg**	**11 05 54.5**	**-2.3**
PODR				i Sg	**Sg**	**11 06 03.8**	**-0.1**
PODR				IAML		11 06 11.6	
	comp=N,228nm,0.3s						
PODR	**Polo**	**0.52**	**160**	i P	**Pn**	**11 05 58.9**	**0.0**
PODR				eS	**Sb**	**11 06 05.4**	**+1.2**

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*IDC **24** 11:07:57.9±2.0, 50°.61N×129°.43W, h0km, mb3.0/1, mbtmp3.1/5, ML3.2/4, MS3.4/2, Error ellipse: s-maj=26.5km s-min=10.1km az=92.0*

ISC 24 11:07:58.3±1.4**, 50°.8N**±0°.1×**129°.5W**±0°.1**, h10km, n14, σ1s.30**/8**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BBB	**Bella Bella**	**1.63**	**33**	Pg	**Pg**	**11 08 29.9**	**+0.4**
	13nm,0.3s,baz=223,slow=16,SNR=120						
BBB				Lg	Lg	11 08 54.1	
	28nm,0.3s,baz=321,slow=21,SNR=18						
BBB				LR	LR	11 09 05.5	
	comp=Z,134nm,20.1s,baz=225,slow=38						
H02S2	**DAWSON INLET T**	**2.99**	**324**	Pn	**Pn**	**11 08 44.7**	**-1.1**
H02S2				Sn	**Sn**	**11 09 21.3**	**-0.4**
NEW	**Newport**	**8.47**	**103**	Pn	**Pn**	**11 10 00.0**	**-1.0**
	0.3nm,0.3s,baz=291,slow=14,SNR=5.2						
NEW				LR	LR	11 13 16.2	
	comp=Z,156nm,18.3s,baz=300,slow=38						
	0.9nm,0.4s						
YKA	**Yellowknife Ar**	**14.24**	**29**	Pn	**Pn**	**11 11 19.5**	**-0.3**
	baz=229,slow=12,SNR=6.3						
	0.1nm,0.7s						
PDAR	**Pinedale Array**	**15.84**	**113**	Pn	**Pn**	**11 11 42.4**	**+0.8**
	baz=298,slow=13,SNR=8.3						
	0.8nm,0.8s						
ILAR	**Eielson Array**	**16.67**	**334**	Pn	**P**	**11 11 56.4**	**+2.3**
	baz=132,slow=9.9,SNR=4.7						
	0.3nm,0.8s						
TXAR	**Lajitas Array**	**28.94**	**128**	P	**P**	**11 13 57.9**	**+0.1**
	0.2nm,1.0s,baz=332,slow=11,SNR=4.2						
	0.2nm,1.0s						
SADO	**Sadowa**	**33.84**	**80**	LR	LR	11 29 01.3	
	comp=Z,87nm,19.2s,baz=1.5,slow=37						
H11N2	**WAKE ISLAND Hy**	**58.30**	**262**	T	T	12 20 37.2	
	baz=42,slow=75,SNR=38						
H11N3	**WAKE ISLAND Hy**	**58.30**	**262**	T	T	12 20 37.3	
	baz=42,slow=75,SNR=37						
H11N1	**WAKE ISLAND Hy**	**58.32**	**262**	T	T	12 20 37.5	
	baz=42,slow=75,SNR=34						
H11S1	**WAKE ISLAND Hy**	**59.34**	**262**	T	T	12 21 49.7	
	baz=40,slow=78						
H11S2	**WAKE ISLAND Hy**	**59.34**	**262**	T	T	12 21 57.7	
	baz=40,slow=78						
H11S3	**WAKE ISLAND Hy**	**59.35**	**262**	T	T	12 21 57.5	
	baz=40,slow=78						

WEL 24 11:14:27.4±2.1**, 33°S**±25°×**17°9W**±2°3**, h190**km±88km**, mB4.2**/1**, ML4.1**/7**, MLv3.8**/2**, Mw(mB)3.2**/1**, Error ellipse: s-maj=34.0km s-min=27.4km az=33.1, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PKGZ	**Pakihiroa**	**5.09**	**209**	P	Pn	11 15 41.9	-0.8
PKGZ				S	Sn	11 16 41.3	-0.8
HAZ	**Te Kaha**	**5.12**	**212**	P	Pn	11 15 42.1	-1.0
HAZ				S	Sn	11 16 44.8	+2.1
RUGZ	**Raukumara Rang**	**5.34**	**211**	P	Pn	11 15 44.6	-1.5
RUGZ				S	Sn	11 16 50.4	+2.3
TWGZ	**Tauwhareparae**	**5.40**	**208**	P	Pn	11 15 48.0	+1.3
TWGZ				S	Sn	11 16 49.6	+0.3
CNGZ	**Carnagh Statio**	**5.59**	**205**	P	Pn	11 15 48.8	-0.3
MWZ	**Matawai**	**5.72**	**210**	P	Pn	11 15 51.4	+0.5
MWZ				S	Sn	11 16 54.9	-1.8
URZ	**Urewera**	**5.84**	**213**	P	Pn	11 15 52.7	+0.3
MUGZ	**Murupara**	**6.17**	**214**	P	Pn	11 15 56.8	+0.1
MUGZ				S	Sn	11 17 06.8	-0.5
SNGZ	**Shannon Statio**	**6.17**	**209**	P	Pn	11 15 58.0	+1.2
SNGZ				S	Sn	11 17 08.0	+0.6
RTZ	**Ruatahuna**	**6.19**	**212**	P	Pn	11 15 56.5	-0.5
OUZ	**Omahuta**	**6.51**	**252**	P	Pn	11 16 01.1	0.0

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*NOU **24** 11:49:31.9, 16°.79S×173°.69W, h206km, mb4.6/31, Tonga Islands*

*IDC **24** 11:49:33.5±4.9, 17°.32S×174°.47W, h143km±42km, mb3.9/10, mbtmp4.4/12, Error ellipse: s-maj=21.1km s-min=15.3km az=150.0*

*NEIC **24** 11:49:33.8±1.7, 17°.31S±0°.08×174°.4W±0°.1, h144km±6km, mb4.8/30, Error ellipse: s-maj=14.9km s-min=11.6km az=105.0*

ISC 24 11:49:33.7±0.3**, 17°.33S**±0°.05×**174°.41W**±0°.05**, h150km, n214, σ1s.48**/214**, mb4.7**/32**, 7C-13D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.24**	**37**		**Pn**	**11 50 37.1**	**-0.1**
AFI					**Sn**	**11 51 23.1**	**-3.6**
AFI	**Afiamalu**	**4.24**	**37**	P	**Pn**	**11 50 37.1**	**-0.1**
AFI				S	**Sn**	**11 51 22.2**	**-4.5**
NIUE	**Niue**	**4.60**	**113**		**Pn**	**11 50 41.7**	**0.0**
NIUE	**Niue**	**4.60**	**113**	P	**Pn**	**11 50 41.8**	**0.0**
NIUE				S	**Sn**	**11 51 31.7**	**-3.1**
MSVF	**Nonsavu**	**7.21**	**266**		Pn	11 51 25.3	+8.7
MSVF	**Nonsavu**	**7.21**	**266**	P	Pn	11 51 25.0	+8.4
RAO	**Raoul Island**	**12.29**	**195**	Pn	**Pn**	**11 52 23.8**	**+0.1**
RAR	**Rarotonga**	**14.35**	**108**	P	**Pn**	**11 52 50.4**	**+0.5**
	20nm,0.9s,baz=17,slow=19,SNR=1.3						
RAR	**Rarotonga**	**14.35**	**108**		**Pn**	**11 52 50.7**	**+0.7**
MARNC	**Mare, Loyalty**	**17.07**	**253**	P	**Pn**	**11 53 24.4**	**+1.0**
MARNC	**Mare, Loyalty**	**17.07**	**253**	P	**Pn**	**11 53 25.0**	**+1.6**
PINNC	**Pines Island,**	**17.84**	**250**	P	**Pn**	**11 53 32.5**	**-0.2**
DZM	**Mont Dzumac**	**18.63**	**252**	P	**P**	**11 53 39.9**	**-0.1**
	9.0nm,0.8s,baz=73,slow=17,SNR=3.9						
DZM	**Mont Dzumac**	**18.63**	**252**	P	**P**	**11 53 40.7**	**+0.7**
DZM	**Mont Dzumac**	**18.63**	**252**	P	**Pn**	**11 53 43.6**	**+1.5**
OUZ	**Omahuta**	**20.78**	**209**	P	**P**	**11 54 04.5**	**+1.6**
OUZ	**Omahuta**	**20.78**	**209**	P	**P**	**11 54 03.3**	**+0.4**
WCZ	**Waipu Caves**	**21.05**	**206**	P	**P**	**11 54 07.3**	**+1.5**
MXZ	**Matakaoa Point**	**21.15**	**196**	P	**P**	**11 54 08.6**	**+1.8**
MXZ	**Matakaoa Point**	**21.15**	**196**	P	**P**	**11 54 09.0**	**+2.1**
KUZ	**Kuaotunu**	**21.22**	**202**	P	**P**	**11 54 09.5**	**+1.9**
KUZ	**Kuaotunu**	**21.22**	**202**	P	**P**	**11 54 09.2**	**+1.7**
WMGZ	**Waiomatatini S**	**21.36**	**196**	P	**P**	**11 54 11.5**	**+2.3**
HAZ	**Te Kaha**	**21.48**	**197**	P	**P**	**11 54 10.8**	**+0.5**
HAZ				S	**S**	**11 57 54.7**	**-4.5**
PKGZ	**Pakihiroa**	**21.50**	**196**	P	**P**	**11 54 11.2**	**+0.6**
PKGZ				S	**S**	**11 57 53.6**	**-6.0**
PUZ	**Puketiti**	**21.64**	**196**	P	**P**	**11 54 13.0**	**+0.9**
RUGZ	**Raukumara Rang**	**21.70**	**197**	P	**P**	**11 54 13.2**	**+0.3**
TWGZ	**Tauwhareparae**	**21.81**	**196**	P	**P**	**11 54 14.8**	**+0.8**
OPRZ	**Ohinepanea**	**21.92**	**199**	P	**P**	**11 54 16.8**	**+1.8**
MARZ	**Manawahe**	**22.02**	**199**	P	**P**	**11 54 18.7**	**+2.7**
MWZ	**Matawai**	**22.09**	**197**	P	**P**	**11 54 17.2**	**+0.5**
URZ	**Urewera**	**22.14**	**198**	P	**P**	**11 54 16.8**	**-0.4**
URZ	**Urewera**	**22.14**	**198**	P	**P**	**11 54 16.8**	**-0.4**
TOZ	**Tahuroa Road**	**22.17**	**202**		**P**	**11 54 19.2**	**+1.6**

TOZ				IAmb	IAmb	11 54 21.5	
	comp=Z,43nm,1.0s						
TOZ	Tahuroa Road	22.17	202	P	P	11 54 19.0	+1.4
RTZ	Ruatahuna	22.50	198		P	11 54 21.4	+0.6
RTZ	Ruatahuna	22.50	198	P	P	11 54 21.4	+0.6
KNZ	Kokohu	22.69	196	P	P	11 54 24.5	+2.1
TLZ	Tolley Road	22.70	201	P	P	11 54 23.4	+0.8
HIZ	Hauiti	23.10	202	P	P	11 54 27.9	+1.6
HIZ	Hauiti	23.10	202	P	P	11 54 27.9	+1.6
BKZ	Black Stump Fm	23.16	198		P	11 54 26.5	-0.4
BKZ				IAmb	IAmb	11 54 29.1	
	comp=Z,92nm,1.6s						
BKZ	Black Stump Fm	23.16	198	P	P	11 54 26.3	-0.6
BKZ	Black Stump Fm	23.16	198	P	P	11 54 25.7	-1.1
NGZ	Ngauruhoe	23.44	200	P	P	11 54 30.1	+0.5
VRZ	Vera Road	23.68	201	P	P	11 54 35.5	+4.0
PXZ	Pawanui	23.85	197	P	P	11 54 34.3	+1.2
TSZ	Takapari Road	24.14	198	P	P	11 54 35.5	-0.2
BFZ	Birch Farm	24.63	197	P	P	11 54 39.9	-0.3
BFZ	Birch Farm	24.63	197	P	P	11 54 39.5	-0.6
MRZ	Mangatainoka R	24.81	198	P	P	11 54 40.2	-1.6
SNZO	South Karori	25.67	199	P	P	11 54 48.3	-1.2
QRZ	Quartz Range	25.98	203	P	P	11 54 52.5	+0.1
QRZ	Quartz Range	25.98	203	P	P	11 54 52.3	-0.1
TUWZ	Tuamarina	26.02	200	P	P	11 54 51.4	-1.3
NNZ	Nelson	26.02	201	P	P	11 54 50.5	-2.2
THZ	Tophouse	26.67	201		P	11 54 58.6	-0.1
THZ				IAmb	IAmb	11 54 59.6	
	comp=Z,31nm,1.0s						
THZ	Tophouse	26.67	201	P	P	11 54 57.3	-1.3
KHZ	Kahutara	27.04	200	P	P	11 55 01.6	-0.2
KHZ	Kahutara	27.04	200	P	P	11 55 00.9	-0.9
DSZ	Denniston Nort	27.05	203	P	P	11 55 01.7	-0.4
GVZ	Greta Valley S	27.70	200	P	P	11 55 06.8	-0.9
LTZ	Lake Taylor	27.79	201	P	P	11 55 06.6	-1.9
INZ	Inchbonnie	28.04	203	P	P	11 55 10.5	-0.2
INZ	Inchbonnie	28.04	203	P	P	11 55 10.3	-0.4
OXZ	Oxford	28.35	201	P	P	11 55 11.9	-1.6
OXZ	Oxford	28.35	201	P	P	11 55 11.9	-1.6
MQZ	McQueen's Vall	28.48	200	P	P	11 55 14.9	+0.3
WVZ	Waitaha Valley	28.60	203	P	P	11 55 15.7	0.0
RPZ	Rata Peaks	29.04	202	P	P	11 55 19.6	0.0
RPZ	Rata Peaks	29.04	202	P	P	11 55 20.8	+1.2
JCZ	Jackson Bay	30.20	204	P	P	11 55 29.8	-0.2
JCZ	Jackson Bay	30.20	204	P	P	11 55 29.0	-0.9
ODZ	Otahua Downs	30.34	201	P	P	11 55 30.5	-0.6
ODZ	Otahua Downs	30.34	201	P	P	11 55 30.1	-1.0
MLZ	Mavora Lakes	31.54	204	P	P	11 55 41.2	-0.4
WHZ	Wether Hill Ro	32.05	204	P	P	11 55 45.3	-0.7
WHZ	Wether Hill Ro	32.05	204	P	P	11 55 45.6	-0.4
ARMA	Armidale	33.54	241	P	P	11 56 00.3	+0.9
ARMA				IAmb	IAmb	11 56 00.8	
	comp=Z,18nm,0.9s						
ARMA	Armidale	33.54	241	P	P	11 56 00.0	+0.6
CNB	Canberra Magne	36.82	234	P	P	11 56 26.3	-1.1
CTA	Charters Tower	37.30	259	P	P	11 56 30.9	-0.7
CTAO	Charters Tower	37.30	259		P	11 56 31.2	-0.4
CTAO				IAmb	IAmb	11 56 32.1	
	comp=Z,10nm,0.7s						
CTAO	Charters Tower	37.30	259	P	P	11 56 30.9	-0.7
PMG	Port Moresby	38.15	277	P	P	11 56 36.1	-2.6
PMG	Port Moresby	38.15	277	P	P	11 56 35.7	-3.0
CMSA	Cobar Meteorol	38.76	241	P	P	11 56 43.7	+0.1
MTSU	Mount Surprise	39.26	262	P	P	11 56 47.6	-0.4
QLP	Quilpie	39.30	249	P	P	11 56 48.0	-0.2
H11S2	WAKE ISLAND Hy	40.15	332	T	T	12 39 46.0	
	baz=145						
H11S3	WAKE ISLAND Hy	40.16	332	T	T	12 39 52.0	
	baz=145						
H11S1	WAKE ISLAND Hy	40.17	332	T	T	12 39 56.5	
	baz=145						
TOO	Toolangi	40.51	232	P	P	11 56 58.2	+0.2
H11N3	WAKE ISLAND Hy	41.14	333	T	T	12 41 16.2	
	baz=148						
H11N1	WAKE ISLAND Hy	41.14	333	T	T	12 41 02.9	
	baz=148						
H11N2	WAKE ISLAND Hy	41.16	333	T	T	12 41 06.7	
	baz=148						
STKA	Stephens Creek	42.25	242	P	P	11 57 12.5	+0.2
	comp=Z,7.5nm,0.6s,baz=78,slow=7.2,SNR=23						
	comp=Z,7.5nm,0.6s						
STKA	Stephens Creek	42.25	242		P	11 57 12.8	+0.5
STKA	Stephens Creek	42.25	242	P	P	11 57 12.9	+0.6
INKA	Innaminka	42.49	248		P	11 57 15.5	+1.2
INKA				IAmb	IAmb	11 57 16.1	
	comp=Z,12nm,0.8s						
HTT	Hallett	44.73	240	P	P	11 57 31.9	-0.3
BBOO	Buckleboo	47.02	241		P	11 57 49.9	-0.2
BBOO				IAmb	IAmb	11 57 50.9	
	comp=Z,43nm,1.5s						
BBOO	Buckleboo	47.02	241	P	P	11 57 49.6	-0.5
WR8	Warramunga Arr	48.33	258		P	11 57 59.8	-0.6
WB0	Warramunga Arr	48.45	259		P	11 58 00.6	-0.7
WB0				IAmb	IAmb	11 58 01.4	
	comp=Z,12nm,0.7s						
WRAB	Tennant Creek	48.48	258	P	P	11 58 00.5	-1.0
WRAB				IAmb	IAmb	11 58 01.5	
	comp=Z,11nm,0.7s						
WRAB	Tennant Creek	48.48	258	P	P	11 58 00.8	-0.7
WRA	Warramunga Arr	48.49	258	P	P	11 58 01.0	-0.6
	comp=Z,9.2nm,0.5s,baz=97,slow=6.9,SNR=173						
WRA				PcP	PcP	11 59 25.9	+0.5
	comp=Z,0.6nm,0.8s,baz=108,slow=2.6,SNR=2.1						
	comp=Z,9.2nm,0.5s						
WRA	Warramunga Arr	48.49	258		P	11 58 00.2	-1.4
ASAR	Alice Springs	48.62	254	P	P	11 58 02.4	-0.2
	comp=Z,53nm,0.6s,baz=88,slow=8.7,SNR=955						
ASAR				PcP	PcP	11 59 26.2	+0.3
	comp=Z,1.1nm,0.5s,baz=88,slow=4.9,SNR=1.6						
ASAR				S	S	12 04 47.6	-5.7
	comp=Z,0.4nm,0.8s,baz=91,slow=13,SNR=4.6						
ASAR	Alice Springs	48.62	254		P	11 58 02.5	0.0
SIJI	Sorong	55.84	281	P	P	11 58 57.3	+1.3
	comp=Z,45nm,0.8s						
SWI	Sorong	55.85	281	P	P	11 58 57.5	+1.5
KRAI	Karang Ratu	57.75	277	P	P	11 59 12.9	+3.5
SBA	Scott Base	61.26	184		P	11 59 33.3	+0.9
SBA				IAmb	IAmb	11 59 35.8	
	comp=Z,13nm,0.8s						
VNDA	Vanda	61.37	186	P	P	11 59 33.9	+0.8
	comp=Z,6.7nm,0.9s,baz=6.3,slow=6.6,SNR=19						
	comp=Z,6.7nm,0.9s						
VNDA	Vanda	61.37	186		P	11 59 34.4	+1.2
VNDA				IAmb	IAmb	11 59 35.7	
	comp=Z,6.9nm,0.9s						
VNDA	Vanda	61.37	186	P	P	11 59 34.8	+1.7
VNDA				pP	pP	12 00 08.0	-0.4
VNDA				PcP	PcP	12 00 15.1	+1.2
DBNI	Kabupaten Domp	65.89	268	P	P	12 00 03.8	-0.1
CCD	Concordia, Ant	66.37	194	P	P	12 00 06.9	+0.6
CCD				PcP	PcP	12 00 34.9	-0.2
QSPA	South Pole Qui	72.72	180	P	P	12 00 46.0	+0.8
QSPA				IAmb	IAmb	12 00 47.0	
	comp=Z,22nm,0.8s						
QSPA	South Pole Qui	72.72	180	P	P	12 00 46.0	+0.8
NVAR	Mina Array Bea	76.40	42	P	P	12 01 08.0	+1.1
	comp=Z,1.3nm,0.9s,baz=228,slow=7.8,SNR=6.3						
	comp=Z,1.3nm,0.9s						
KSRS	Korea Array	76.87	316	P	P	12 01 10.1	+0.8
	comp=Z,2.5nm,0.9s,baz=145,slow=6.8,SNR=8.1						
	comp=Z,2.5nm,0.9s						
NJ2	Nanjing	80.56	308	eP	P	12 01 31.3	+1.7
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
BELA	Belgrano 2	82.23	172	P	P	12 01 37.9	+0.3
TXAR	Lajitas Array	82.48	56	P	P	12 01 41.7	+1.8
	comp=Z,0.3nm,0.8s,baz=274,slow=5.0,SNR=2.9						
	comp=Z,0.3nm,0.8s						
TRF	Thorofare Moun	82.69	11	P	P	12 01 40.6	+0.4
TRF				IAmb	IAmb	12 03 37.0	
	comp=Z,44nm,1.8s						
CCB	Clear Creek Bu	84.23	11	P	P	12 01 48.3	+0.5
PDAR	Pinedale Array	84.34	42	P	P	12 01 49.4	+0.2
	comp=Z,0.9nm,0.7s,baz=211,slow=3.4,SNR=11						
	comp=Z,0.9nm,0.7s						
PDAR	Pinedale Array	84.34	42	P	P	12 01 49.3	0.0
COLA	College	84.43	11	P	P	12 01 49.1	+0.2
COLA				pP	pP	12 02 25.1	-0.7
IL31		84.52	11	P	P	12 01 49.7	+0.5
IL31				IAmb	IAmb	12 01 50.2	
	comp=Z,18nm,1.8s						
ILAR	Eielson Array	84.52	11	P	P	12 01 49.5	+0.2
	comp=Z,0.8nm,0.5s,baz=227,slow=6.1,SNR=46						
	comp=Z,0.8nm,0.5s						
H22K	Ishtalitna Cre	84.77	9	P	P	12 01 51.7	+1.1
H03S2	Juan Fernandez	84.94	124	T	T	13 35 18.7	
	baz=249						
H03S1	Juan Fernandez	84.96	124	T	T	13 35 22.5	
	baz=249						
H03S3	Juan Fernandez	84.96	124	T	T	13 35 18.7	
	baz=249						
MAW	Mawson	85.66	199	P	P	12 01 55.5	+0.4
	comp=Z,8.2nm,0.6s,baz=137,slow=5.4,SNR=19						
	comp=Z,8.2nm,0.6s						
D22K	Ayikyak River	87.38	8	P	P	12 02 04.7	+1.3
D22K				IAmb	IAmb	12 04 42.8	
	comp=Z,23nm,1.9s						
HHC	Hu-ho-hao-te	89.63	313	eP	P	12 02 13.8	-0.9
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ELIB	Princess Elisa	90.13	185	dP	P	12 02 16.4	-0.1
	comp=Z,8.6nm,0.8s						
TROLL	Troll, Antarti	90.86	179	⇓P	P	12 02 20.0	+0.1
	comp=Z,214nm,0.8s						
VNA3	Neumayer Olymp	91.03	175	⇓P	P	12 02 20.5	0.0
	comp=Z,6.3nm,0.7s						
SNAA	Sanae	91.03	177	P	P	12 02 20.5	-0.2
VNA2	Neumayer--Watz	91.51	176	⇑P	P	12 02 23.4	+0.6
	comp=Z,6.6nm,0.7s,baz=180,slow=3.2						
PZH	PanZhiHua	92.28	297	P	P	12 02 27.3	0.0
CMAR	Chiang Mai Arr	92.30	288	P	P	12 02 28.8	+1.3
	comp=Z,0.4nm,0.3s,baz=100,slow=2.6,SNR=7.3						
	comp=Z,0.4nm,0.3s						
CMAR	Chiang Mai Arr	92.30	288	P	P	12 02 28.9	+1.5
A36M	Sachs Harbour	95.00	14	P	P	12 02 39.8	+1.3
A36M				IAmb	IAmb	12 06 00.9	
	comp=Z,2.7nm,0.8s						
ZALV	Zalesovo Beam	110.14	322	PKiKP	PKiKP	12 07 47.3	0.0
	comp=Z,0.5nm,0.4s,baz=92,slow=5.3,SNR=2.6						
MKAR	Makanchi Array	111.48	314	PKiKP	PKiKP	12 07 49.7	-0.5
	comp=Z,0.2nm,0.6s,baz=63,slow=2.0,SNR=6.0						
KURBB	Kurchatov Arra	114.00	318	PKiKP	PKiKP	12 07 54.4	-0.4
	comp=Z,0.4nm,0.6s,baz=79,slow=2.0,SNR=4.7						
BVAR	Borovoye Array	118.79	321	PKP	PKPdf	12 08 03.4	-0.5
	comp=Z,2.3nm,0.6s,baz=79,slow=1.1,SNR=13						
ARCES	ARCESS Array B	126.37	351	PKP	PKPdf	12 08 18.1	+0.1
	comp=Z,1.5nm,0.5s,baz=270,slow=0.1,SNR=5.3						
KIF	Kilpisjarvi	127.47	353	eP	Pdif	12 04 54.6	-8.7
SALU	Saltoluokta	129.28	354	eP	Pdif	12 04 46.0	-26
FIA1	FINESS Array S	133.60	347	PKPdf	PKiKP	12 08 33.5	+0.3
FINES	FINESS Array B	133.60	347	PKP	PKiKP	12 08 32.6	-0.6
	comp=Z,1.4nm,0.8s,baz=25,slow=5.0,SNR=5.1						
FINES	FINESS Array B	133.60	347	PKPdf	PKiKP	12 08 33.5	+0.3
HFS	Hagfors	136.85	354	PKP	PKPdf	12 08 38.3	+0.3
	comp=Z,0.8nm,0.6s,baz=22,slow=5.3,SNR=1.7						
AKASG	Malin Array Be	141.72	336	PKP	PKPdf	12 08 46.9	-0.3
	comp=Z,1.1nm,0.6s,baz=46,slow=2.7,SNR=5.1						
SORM	Soroca	144.08	334	⇑P	PKPbc	12 08 50.3	+0.5
PRAR	RASCA	145.57	335	⇓P		12 06 33.3	
CLL	Collm	145.59	352	i PKPdf	PKPdf	12 08 53.8	-0.2
CLL				i PKPbc	PKPab	12 08 54.9	0.0
	comp=Z,15nm,0.9s						
BURAR	Bucovina Array	145.76	336	⇑P	PKiKP	12 08 57.7	-1.0
OSTC	Ostas	145.78	348	ePKP	PKPab	12 08 56.7	+1.0
DPC	Dobruska-Polom	145.95	348	ePKP	PKPab	12 08 56.8	+0.4
STEB	Steborice	146.03	346	ePKP	PKPab	12 08 57.0	+0.4
PVCC	Panska Ves	146.11	350	ePKP	PKPab	12 08 57.0	+0.1
HSKC	Hora Svate Kat	146.21	351	ePKP	PKPab	12 08 57.1	-0.2
MORC	Moravsky Berou	146.23	346	⇑P	PKPab	12 08 58.0	+0.6
MORC	Moravsky Berou	146.23	346	ePKP	PKPab	12 08 57.2	-0.2
TPGR	Topolog	146.54	330	⇓P	PKiKP	12 08 59.9	-0.3
MAUC	Maruska	146.54	345	ePKP	PKPab	12 08 58.6	-0.1
PRU	Pruhonice	146.63	349	ePKP	PKPbc	12 08 58.2	+0.6
TURR	Turia	146.70	334	⇓P	PKiKP	12 09 00.8	+0.2
VRAC	Vranov	146.88	347	ePKP	PKPbc	12 08 59.0	+0.7
BRTR	Keskin Array B	146.99	318	PKPbc	PKPbc	12 08 58.9	-0.3
	comp=Z,3.3nm,0.8s,baz=144,slow=3.8,SNR=13						
BRTR	Keskin Array B	146.99	318		PKPbc	12 08 59.9	+0.7
MESR	Meseseni	147.00	338	⇓P	PKiKP	12 09 08.8	+7.7
DOPR	Dopca	147.03	334	⇓P	PKPab	12 09 00.5	-0.2
KRUC	Moravsky	147.16	347	ePKP	PKPbc	12 08 59.2	+0.1
MLR	Muntele Rosu	147.18	333	⇑P	PKPbc	12 09 00.4	+0.9
ZVC	Zvikov	147.22	350	ePKP	PKPbc	12 09 00.3	+1.0
MARR	Marisel-Cluj	147.34	337	⇓P	PKPbc	12 09 00.5	+0.7
DRGR		147.39	338	⇓P	PKPbc	12 09 00.1	+0.2
MODS	Modra-Piesok	147.60	345	ePKP	PKPbc	12 08 59.2	-1.1
KHC	Kasperske Hory	147.62	350	ePKP	PKPbc	12 09 01.4	+1.0
CKRC	Cesky Krumlov	147.80	349	ePKP	PKPbc	12 09 01.6	+0.7
ARR	Arges	147.83	334	⇓P	PKiKP	12 09 02.6	-0.4
GERES	GERESS Array B	147.88	350	PKPbc	PKPbc	12 09 01.8	+0.6
	comp=Z,1.9nm,0.6s,baz=5.0,slow=3.1,SNR=17						
CONA	Conrad Observa	148.34	347	i PKP	PKiKP	12 09 03.5	-0.4
	comp=Z,7.5nm,0.8s						
RONA	Rosalia, Austr	148.46	346	i PKP	PKiKP	12 09 03.9	-0.3
	comp=Z,5.3nm,0.7s						
GZR	Gura Zlata	148.55	336	⇓P	PKPbc	12 09 03.4	+0.5
MOA	Molln	148.74	349	ePKP	PKiKP	12 09 04.2	-0.5
	comp=Z,5.7nm,1.6s						
BZS	Buzias	148.79	338	⇑P	PKPbc	12 09 04.0	+0.5
MMAI	Mount Meron Ar	148.97	306	PKPbc	PKPbc	12 09 04.6	+0.1
	comp=Z,2.8nm,0.5s,baz=344,slow=2.1,SNR=2.1						
ARSA	Arzberg	149.06	347	ePKP	PKiKP	12 09 05.3	0.0
	comp=Z,3.3nm,1.0s						
HERR	Herculane	149.12	336	⇑P	PKPbc	12 09 04.8	+0.5
MORH	Mrgy, Hungar	149.22	342	⇓P	PKPbc	12 09 04.6	+0.1
LESA	Schwarzleotal	149.43	351	i PKP	PKiKP	12 09 06.1	-0.1
	comp=Z,5.0nm,1.3s						
RETA	Reutte	149.63	353	i PKiKP	PKiKP	12 09 06.3	-0.3
	comp=Z,5.8nm,0.8s						
KBA	Koelnbreinsper	149.65	349	i PKiKP	PKiKP	12 09 06.4	-0.4
	comp=Z,2.1nm,0.6s,SNR=5.0						
WATA	Walderalm	149.67	352	i PKiKP	PKPbc	12 09 06.2	+0.4
	comp=Z,2.9nm,0.7s						
SOKA	Soboth	149.71	347	i PKiKP	PKPbc	12 09 06.0	+0.2
	comp=Z,3.3nm,0.8s						
WTTA	Wattenberg	149.74	352	i PKP	PKiKP	12 09 06.7	-0.2
	comp=Z,7.9nm,0.5s						
SQTA	Sankt Quirin	149.84	352	i PKiKP	PKPbc	12 09 05.8	-0.4
	comp=Z,8.4nm,0.9s						
DAVA	Damuels	149.92	354	i PKP	PKiKP	12 09 07.4	+0.1
	comp=Z,11nm,1.0s						
OBKA	Obir	149.97	348	i PKP	PKiKP	12 09 07.5	+0.2
	comp=Z,11nm,1.7s						
MYKA	Terra Mystica	150.03	349	i PKiKP	PKPbc	12 09 06.3	-0.3
	comp=Z,5.3nm,1.1s						
FETA	Feichten	150.09	353	i PKiKP	PKPbc	12 09 07.0	+0.1
	comp=Z,9.1nm,1.3s						
ABTA	Abfaltersbach	150.11	350	i PKiKP	PKPbc	12 09 07.0	+0.1
	comp=Z,8.2nm,0.6s,SNR=11						
TORD	Torodi Ar. Bea	174.39	137	PKP	PKPdf	12 09 25.5	-0.8
	comp=Z,1.0nm,0.9s,baz=128,slow=0.7,SNR=4.9						
TORD				PKPab	PKPab	12 11 00.3	+0.7
	comp=Z,0.3nm,0.5s,baz=250,slow=2.2,SNR=2.6						

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*ISU **24** 11:58:20, 38°.37N×68°.45E, h21^{km}*
*NNC **24** 11:58:22.6±13.0, 39°.20N×68°.69E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=96.4km s-min=64.5km az=179.0*
ISC 24 11:58:24.4±3.4**, 39°.2N**±0°.3×**68°.56E**±0°.08**, h10**^{km}**, n5, σ1^{s}61**/7**, 2C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRSA	Karasay	1.13	326	S	Sn	11 59 13.3	+11
AGL	Agalyk	1.34	285	P	Pg	11 58 49.8	-0.4
AGL				S	Sg	11 59 09.8	+2.2
CHMI	Chimion	2.54	64	S	Sb	11 59 42.2	+0.9
KK31	Karatay Array	4.19	20	⇑Pn	Pn	11 59 28.5	0.0
	0.2nm,0.2s,baz=65,slow=12,SNR=8.0						
KK31				Pg	Pb	11 59 39.1	+0.9
	0.5nm,0.3s,baz=191,slow=15,SNR=5.0						
KK31				⇑Sn	Sn	12 00 17.0	-0.4
	0.2nm,0.3s,baz=176,slow=25						
KK31				⇓Lg	Lg	12 00 34.2	
	1.0nm,0.4s,baz=202,slow=26,SNR=5.8						
AB31	Akbulak array	11.81	331	P	Pn	12 01 10.9	-1.9
	0.1nm,0.3s,baz=141,slow=13,SNR=9.8						

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*IDC **24** 12:01:44.2±1.1, 54°.05S×141°.18E, h0^{km}, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=90.2km s-min=23.1km az=84.0*
ISC 24 12:01:45.7±1.2**, 54°.1S**±0°.2×**141°.1E**±0°.6**, h10**^{km}**, n15, σ0^{s}84**/11**, mb3.5**/5**, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	22.18	1	P	P	12 06 42.2	+0.5
	1.0nm,0.5s,baz=167,slow=13,SNR=3.8						
	1.0nm,0.5s						
VNDA	Vanda	24.72	169	P	P	12 07 07.2	+0.6
	0.5nm,0.6s,baz=330,slow=12,SNR=5.4						
	0.5nm,0.6s						
H01W1	Cape Leeuwin H	26.88	305	T	T	12 35 17.9	
	baz=142,slow=74,SNR=10						
H01W2	Cape Leeuwin H	26.89	304	T	T	12 35 22.3	
	baz=142,slow=74,SNR=6.8						
H01W3	Cape Leeuwin H	26.90	305	T	T	12 35 21.8	
	baz=142,slow=74,SNR=6.6						
ASAR	Alice Springs	30.83	347	P	P	12 08 02.0	+0.2
	0.4nm,0.6s,baz=166,slow=9.8,SNR=11						
ASAR				PcP	PcP	12 10 58.2	-0.4
	0.4nm,0.7s,baz=155,slow=2.7,SNR=6.9						
	0.4nm,0.6s						
WRA	Warramunga Arr	34.45	349	P	P	12 08 33.1	-0.3
	0.6nm,0.7s,baz=171,slow=7.5,SNR=4.6						
WRA				PcP	PcP	12 11 07.0	-1.6
	0.8nm,0.9s,baz=167,slow=2.1,SNR=4.0						
	0.6nm,0.7s						
H08S2	Diego Garcia H	71.35	283	T	T	13 30 52.5	
	baz=150						
H08S1	Diego Carcia H	71.36	283	T	T	13 30 52.4	
	baz=150						
H08S3	Diego Garcia H	71.36	283	T	T	13 30 50.8	
	baz=150						
CMAR	Chiang Mai Arr	80.76	320	P	P	12 14 00.1	+1.0
	0.4nm,0.3s,baz=162,slow=8.1,SNR=1.5						
	0.4nm,0.3s						
FINES	FINESS Array B	145.92	309	PKPbc	PKPbc	12 21 23.6	-0.4
	0.8nm,0.8s,baz=134,slow=8.2,SNR=4.6						
GERES	GERESS Array B	147.45	283	PKPbc	PKPbc	12 21 28.0	-1.0
	0.2nm,0.5s,baz=134,slow=3.9,SNR=3.7						
SPITS	Spitsbergen Ar	149.28	341	PKPbc	PKPbc	12 21 32.9	+0.1
	3.9nm,0.7s,baz=94,slow=9.1,SNR=4.9						
ESDC	Sonseca Array	152.45	253	PKPbc	PKiKP	12 21 41.7	0.0
	0.6nm,0.7s,baz=158,slow=1.0,SNR=6.4						

IDC 24 12:09:34.9±396.0**, 46°.32N×67°.50E, h0**^{km}**, Error ellipse: s-maj=190.7km s-min=133.5km az=179.0, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	7.52	306	I	I	12 54 05.0	
	baz=118,slow=319						
I46RU	ZALESOVO INFRA	13.45	49	I	I	13 31 20.0	
	baz=243,slow=328,SNR=2.4						
I34MN	SONGINO INFRAS	26.36	72	I	I	14 50 30.0	
	baz=279,slow=341,SNR=1.0						

NOU 24 12:10:22.3, 15°.13S×167°.56E, h125^{km}**, MLv4.7**/9**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.47	227	P	Pn	12 10 42.0	+1.4
DVP	Devils Point	2.65	167	P	Pn	12 11 04.3	+0.1
RTV	Rentapao	2.77	163	P	Pn	12 11 06.0	+0.2
OUENC	Ouen Island, N	7.28	185	P	Pn	12 12 07.5	+1.4

IDC 24 12:10:23.6±406.0**, 45°.95N×64°.92E, h0**^{km}**, Error ellipse: s-maj=195.7km s-min=125.1km az=172.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	6.41	317	I	I	12 46 11.8	
	0.2nm,0.8s,baz=129,slow=320,SNR=3.8						
I46RU	ZALESOVO INFRA	15.06	51	I	I	13 43 00.0	
	0.1nm,1.4s,baz=243,slow=311,SNR=1.7						
I34MN	SONGINO INFRAS	28.18	71	I	I	15 03 40.0	
	0.1nm,0.9s,baz=278,slow=340,SNR=4.9						
I18DK	QAANAAQ INFRAS	53.63	349	I	I	18 08 59.3	
	0.1nm,1.0s,baz=22,slow=334,SNR=5.9						
I53US	FAIRBANKS INFR	66.58	15	I	I	19 20 50.0	
	baz=333,slow=339,SNR=0.5						
I10CA	LAC DU BONNET	82.81	348	I	I	21 24 53.5	
	baz=345,slow=282,SNR=1.1						

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*AEIC **24** 12:22:43.9±1.6, 62°.74N±0°.02×151°.87W±0°.03, h11^{km}±5^{km}, ML3.4, ML3.6/218(NEIC), Error ellipse: s-maj=2.5km s-min=2.2km az=194.0*
*IDC **24** 12:22:43.1±0.9, 62°.85N×152°.07W, h0^{km}, mb3.6/7, mbtmp3.4/11, ML3.1/4, Error ellipse: s-maj=17.6km s-min=12.2km az=116.0*
*NEIC **24** 12:22:44.1±1.4, 62°.72N±0°.02×151°.88W±0°.04, h10^{km}±2^{km}, Error ellipse: s-maj=2.8km s-min=2.5km az=84.0*
ISC 24 12:22:44.2±0.9**, 62°.73N**±0°.02×**151°.87W**±0°.03**, h12**^{km}±7^{km}**, n186, σ0^{s}79**/165**, mb3.7**/7**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPLA	Purkeypile	0.22	319		Sg	12 22 53.0	+0.8
PPLA	Purkeypile	0.22	319	Pg	Pg	12 22 49.2	+0.3
PPLA				IAML		12 22 53.6	
	comp=N,9μm,0.8s						
PPLA				IAML		12 22 54.0	
	comp=E,9μm,0.9s						
L22K	Petersville	0.55	112		Pg	12 22 54.8	-0.1
L22K	Petersville	0.55	112		Sg	12 23 01.8	-0.4
L22K				IAML		12 23 07.2	
	comp=E,3μm,0.3s						
L22K				IAML		12 23 07.3	
	comp=N,3μm,0.4s						
SKT	Skwentna	0.77	168		Pg	12 22 58.6	-0.4
SKT				IAML		12 23 11.1	
	comp=E,4μm,0.4s						
SKT				IAML		12 23 11.4	
	comp=N,2μm,0.3s						
SKT	Skwentna	0.77	168		Sg	12 23 08.8	-0.4
CUT	Chulitna	0.81	113		Pg	12 22 59.7	-0.2
CUT					Sn	12 23 13.4	0.0
CUT				IAML		12 23 14.0	
	comp=N,3μm,0.4s						
KTH	Kantishna Hill	0.93	27		Sg	12 23 14.0	-0.3
KTH	Kantishna Hill	0.93	27		Pg	12 23 01.6	-0.5
TRF	Thorofare Moun	1.02	44		Sb	12 23 17.4	+0.2
TRF	Thorofare Moun	1.02	44		Pg	12 23 03.5	-0.4
TRF				IAML		12 23 22.1	
	comp=N,2μm,0.7s						
TRF				IAML		12 23 22.2	
	comp=E,2μm,0.5s						
M20K	Styx River	1.04	215		Pb	12 23 02.9	-1.2
M20K					Sb	12 23 17.0	-0.7
M20K				IAML		12 23 18.2	
	comp=E,963nm,0.4s						
M20K				IAML		12 23 18.9	
	comp=N,950nm,0.8s						
CHUM	Lake Minchumin	1.17	350		Pn	12 23 06.5	+0.1
CHUM					Sb	12 23 21.1	-0.4
CHUM					Sg	12 23 21.9	-0.1
K20K	Telida	1.18	303		Pb	12 23 06.1	-0.5
STLK	Strandline Lak	1.24	179		Pn	12 23 06.6	-0.8
STLK	Strandline Lak	1.24	179	IAML		12 23 24.3	
	comp=E,1μm,0.3s						
STLK				IAML		12 23 25.8	
	comp=N,1μm,0.3s						
M22K	Willow	1.28	139		Sb	12 23 25.2	+0.7
M22K	Willow	1.28	139		Pn	12 23 07.5	-0.4
SUA	Susitna One	1.38	157		Sn	12 23 27.8	+0.2
SUA	Susitna One	1.38	157		Pn	12 23 09.0	-0.3
SUA				IAML		12 23 28.4	
	comp=E,1μm,0.9s						
SUA				IAML		12 23 29.1	
	comp=N,1μm,0.5s						
WAT7	Susitna Watana	1.39	84		Pn	12 23 09.5	-0.1
WAT7					Sn	12 23 27.8	-0.2
SPNN	North Nagishla	1.42	196		Pn	12 23 09.3	-0.7
BPAW	Bear Paw Mtn.	1.43	16		Pn	12 23 09.8	-0.2
SPCP	Crater Peak Br	1.48	185		Pn	12 23 10.0	-0.7
L19K	White Mountain	1.49	250		Pn	12 23 10.4	-0.4
L19K				IAML		12 23 38.9	
	comp=N,685nm,0.7s						
WAT1	Susitna Watana	1.53	85		Pn	12 23 10.8	-0.6
WAT1					Sb	12 23 32.3	+0.4
RND	Reindeer	1.53	62		Pn	12 23 11.7	+0.2
RND				IAML		12 23 33.9	
	comp=N,1μm,0.6s						
RND				IAML		12 23 35.9	
	comp=E,511nm,0.4s						
SPCR	Spurr Chakacha	1.54	186		Sb	12 23 32.6	+0.3

SPU	**Mount Spurr**	**1.56**	**183**		**Pn**	**12 23 11.2**	**-0.5**
MCK	**McKinley**	**1.67**	**52**		**Pn**	**12 23 14.1**	**+0.9**
MCK				IAML		12 23 40.8	
	comp=N,786nm,1.2s						
MCK				IAML		12 23 44.9	
	comp=E,483nm,0.5s						
GHO	**Glory Hole Cre**	**1.68**	**124**		**Pn**	**12 23 13.2**	**-0.3**
GHO				IAML		12 23 41.5	
	comp=E,787nm,0.6s						
GHO				IAML		12 23 44.9	
	comp=N,685nm,0.7s						
PMR	**Palmer**	**1.72**	**130**		**Pn**	**12 23 13.5**	**-0.5**
PMR				IAML		12 23 39.7	
	comp=E,512nm,0.8s						
PMR				IAML		12 23 41.0	
	comp=N,596nm,0.9s						
J20K	**Nowinta River**	**1.77**	**326**		**Pn**	**12 23 14.8**	**+0.1**
J20K				IAML		12 23 41.0	
	comp=N,810nm,0.5s						
SML	**Sawmill**	**1.90**	**118**		**Pn**	**12 23 16.5**	**0.0**
SML				IAML		12 23 42.5	
	comp=E,858nm,0.8s						
WAT6	**Susitna Watana**	**1.91**	**93**		**Pn**	**12 23 15.7**	**-1.1**
RC01	**Rabbit Creek A**	**1.93**	**148**		**Pn**	**12 23 16.9**	**0.0**
RC01				IAML		12 23 44.6	
	comp=E,703nm,0.4s						
RC01				IAML		12 23 44.6	
	comp=N,776nm,0.4s						
KNK	**Knik Glacier**	**2.08**	**128**		**Pn**	**12 23 19.4**	**+0.4**
KNK				IAML		12 23 50.0	
	comp=N,436nm,0.4s						
DHY	**Denali Highway**	**2.09**	**78**		**Pn**	**12 23 18.6**	**-0.6**
DHY				IAML		12 23 50.9	
	comp=N,692nm,0.5s						
DHY				IAML		12 23 51.7	
	comp=E,545nm,0.4s						
J19K	**Poorman**	**2.11**	**309**		**Pn**	**12 23 19.6**	**+0.2**
J19K	**Poorman**	**2.11**	**309**	IAML		12 23 56.5	
	comp=N,543nm,0.6s						
J19K				IAML		12 23 58.5	
	comp=E,448nm,0.8s						
RDJH	**Redoubt Jeurge**	**2.19**	**192**		**Pn**	**12 23 21.2**	**+0.6**
M18K	**Stony River**	**2.24**	**238**		**Pn**	**12 23 21.3**	**+0.2**
NEA2	**Nenana**	**2.25**	**33**		**Pn**	**12 23 20.4**	**-0.8**
N19K	**Bonanza Creek**	**2.29**	**214**	Pn	**Pn**	**12 23 24.0**	**+2.1**
N19K				IAML		12 23 57.8	
	comp=E,273nm,0.8s						
L18K	**Granite Mounta**	**2.29**	**259**		**Pn**	**12 23 21.6**	**-0.2**
L18K	**Granite Mounta**	**2.29**	**259**	IAML		12 24 02.7	
	comp=N,242nm,1.0s						
SCM	**Sheep Creek Mo**	**2.31**	**111**		**Pn**	**12 23 23.1**	**+1.0**
SCM				IAML		12 23 59.1	
	comp=E,489nm,0.6s						
SCM				IAML		12 24 02.7	
	comp=N,497nm,1.2s						
J18K	**Innoko River**	**2.32**	**291**		**Pn**	**12 23 22.4**	**+0.1**
RDSO	**Redoubt South**	**2.32**	**191**		**Pn**	**12 23 23.1**	**+0.7**
RED	**Redoubt Volcan**	**2.36**	**191**		**Pn**	**12 23 23.6**	**+0.7**
SLKM	**Skilak Lake**	**2.37**	**160**		**Pn**	**12 23 23.3**	**+0.5**
SLKM				IAML		12 23 59.6	
	comp=E,232nm,0.4s						
I20K	**Naaghedeneel**	**2.37**	**332**		**Pn**	**12 23 23.6**	**+0.7**
WRH	**Wood River Hil**	**2.43**	**42**		**Pn**	**12 23 22.8**	**-0.9**
I21K	**Tanana**	**2.46**	**359**		**Pn**	**12 23 23.9**	**-0.1**
O22K	**Cooper Landing**	**2.48**	**155**		**Pn**	**12 23 25.0**	**+0.6**
PWL	**Port Wells**	**2.52**	**137**		**Pn**	**12 23 25.4**	**+0.4**
CCB	**Clear Creek Bu**	**2.64**	**42**		**Pn**	**12 23 25.9**	**-0.7**
CCB				IAML		12 24 08.7	
	comp=N,197nm,0.4s						
CCB				IAML		12 24 08.9	
	comp=E,299nm,0.6s						
I23K	**Minto, Yukon-K**	**2.67**	**23**		**Pn**	**12 23 26.5**	**-0.4**
I23K				IAML		12 24 13.1	
	comp=E,165nm,0.5s						
I23K				IAML		12 24 16.1	
	comp=N,157nm,0.7s						
M24K	**Tolsona, Glenn**	**2.72**	**101**		**Pn**	**12 23 28.5**	**+0.7**
HDA	**Harding Lake**	**2.77**	**50**		**Pn**	**12 23 28.2**	**-0.2**
HDA				IAML		12 24 12.6	
	comp=E,199nm,0.7s						
HDA				IAML		12 24 15.0	
	comp=N,384nm,0.5s						
COLA	**College**	**2.79**	**38**		**Pn**	**12 23 28.5**	**-0.2**
O19K	**Port Alsworth**	**2.80**	**206**		**Pn**	**12 23 29.0**	**+0.2**
N18K	**Kilae Creek**	**2.81**	**225**		**Pn**	**12 23 28.8**	**-0.2**
N18K	**Kilae Creek**	**2.81**	**225**	IAML		12 24 22.0	
	comp=N,212nm,0.7s						
N18K				IAML		12 24 27.1	
	comp=E,181nm,0.9s						
ILSW	**Iliamna Southw**	**2.83**	**193**		**Pn**	**12 23 29.8**	**+0.5**
ILS	**Iliamna Low So**	**2.84**	**192**		**Pn**	**12 23 30.9**	**+1.5**
SEW	**Seward**	**2.88**	**155**		**Pn**	**12 23 32.1**	**+2.3**
SEW				IAML		12 24 17.0	
	comp=E,137nm,0.6s						
GLI	**Glacier Island**	**2.93**	**127**		**Pn**	**12 23 31.4**	**+0.8**
GLI				IAML		12 24 15.7	
	comp=N,259nm,0.8s						
M17K	**Holitna River**	**2.94**	**245**		**Pn**	**12 23 30.4**	**-0.3**
PAX	**Paxson**	**2.94**	**83**		**Pn**	**12 23 31.9**	**+1.1**
PAX				IAML		12 24 19.5	
	comp=E,235nm,0.7s						
K24K	**Donnelly Dome**	**2.96**	**66**		**Pn**	**12 23 31.9**	**+0.9**
K17K	**Iditarod**	**2.96**	**273**		**Pn**	**12 23 31.0**	**0.0**
K17K	**Iditarod**	**2.96**	**273**	IAML		12 24 23.9	
	comp=N,204nm,1.2s						
K17K				IAML		12 24 31.2	
	comp=E,183nm,0.7s						
H21K	**Melozitna Rive**	**2.97**	**353**		**Pn**	**12 23 31.4**	**+0.3**
BRLK	**Bradley Lake**	**3.02**	**170**		**Pn**	**12 23 33.2**	**+1.4**
BRLK				IAML		12 24 16.6	
	comp=E,148nm,0.4s						
ILAR	**Eielson Array**	**3.02**	**45**	Pn	**Pn**	**12 23 30.9**	**-0.9**
	comp=E,1.0nm,0.3s,baz=232,slow=14,SNR=32						
ILAR				Lg	Lg	12 24 17.1	
	comp=E,19nm,0.3s,baz=231,slow=28,SNR=18						
	comp=E,2.1nm,0.4s						
ILAR	**Eielson Array**	**3.02**	**45**		**Pn**	**12 23 31.8**	**0.0**
L17K	**Donlin**	**3.05**	**262**		**Pn**	**12 23 32.0**	**-0.2**
BRSE	**Bradley Lake S**	**3.05**	**169**		**Pn**	**12 23 32.7**	**+0.4**
KLU	**Klutina**	**3.06**	**111**		**Pn**	**12 23 33.4**	**+1.0**
KLU				IAML		12 24 25.2	
	comp=N,181nm,0.6s						
KLU				IAML		12 24 25.9	
	comp=E,190nm,0.8s						
POKR	**Poker Plat Res**	**3.09**	**37**		**Pn**	**12 23 32.5**	**-0.3**
POKR	**Poker Plat Res**	**3.09**	**37**	IAML		12 24 26.9	
	comp=N,127nm,0.5s						
P19K	**Oil Pt**	**3.16**	**193**	Pn	**Pn**	**12 23 35.5**	**+1.7**
P19K				IAML		12 24 32.1	
	comp=N,133nm,0.9s						
P19K				IAML		12 24 32.1	
	comp=E,138nm,1.4s						
CNPM	**China Poot**	**3.23**	**174**		**Pn**	**12 23 36.2**	**+1.5**
CNPM				IAML		12 24 28.2	
	comp=E,150nm,0.9s						
FID	**Port Fidalgo**	**3.25**	**125**		**Pn**	**12 23 34.9**	**-0.1**
DIV	**Divide**	**3.30**	**116**		**Pn**	**12 23 36.8**	**+1.0**
DIV				IAML		12 24 33.0	
	comp=E,198nm,0.7s						
RIDG	**Independent Ri**	**3.34**	**69**		**Pn**	**12 23 36.7**	**+0.5**
J17K	**VABM Dome**	**3.35**	**285**		**Pn**	**12 23 36.4**	**+0.1**
J17K				IAML		12 24 41.4	
	comp=N,95nm,0.8s						
N17K	**Nushagak Hills**	**3.37**	**231**		**Pn**	**12 23 36.5**	**-0.1**
N17K	**Nushagak Hills**	**3.37**	**231**	IAML		12 24 35.8	
	comp=E,178nm,0.8s						
N17K				IAML		12 24 38.3	
	comp=N,207nm,1.0s						
H19K	**Roundabout Mou**	**3.45**	**326**	IAML		12 24 33.7	
	comp=E,145nm,0.5s						
H19K				IAML		12 24 37.6	
	comp=N,99nm,0.9s						
J25K	**Salcha River,**	**3.46**	**54**		**Pn**	**12 23 38.1**	**+0.2**
J25K	**Salcha River,**	**3.46**	**54**	IAML		12 24 34.8	
	comp=E,119nm,0.5s						
J25K				IAML		12 24 36.5	
	comp=N,134nm,0.5s						
HIN	**Hinchinbrook I**	**3.48**	**130**	Pn	**Pn**	**12 23 39.9**	**+1.8**
N25K	**Chitina, Valde**	**3.59**	**105**	IAML		12 24 40.2	
	comp=N,124nm,1.4s						
N25K				IAML		12 24 40.9	
	comp=E,95nm,0.7s						
EYAK	**Cordova Ski Ar**	**3.65**	**124**		**Pn**	**12 23 41.8**	**+1.3**
EYAK				IAML		12 24 43.5	
	comp=E,92nm,0.8s						
EYAK				IAML		12 24 48.8	
	comp=N,115nm,0.8s						
DOT	**Dot Lake**	**3.66**	**72**		**Pn**	**12 23 41.1**	**+0.6**
DOT	**Dot Lake**	**3.66**	**72**	IAML		12 24 43.4	
	comp=E,183nm,0.6s						
L16K	**Owhat River**	**3.70**	**257**		**Pn**	**12 23 40.9**	**-0.3**
L16K				IAML		12 24 46.9	
	comp=N,92nm,0.8s						
L16K				IAML		12 24 52.1	
	comp=E,95nm,1.1s						
H18K	**Honhosa River**	**3.76**	**313**	IAML		12 24 48.1	
	comp=N,81nm,1.2s						
SCRK	**Sand Creek**	**3.77**	**67**		**Pn**	**12 23 42.3**	**+0.1**
M16K	**Timber Creek**	**3.77**	**246**		**Pn**	**12 23 42.6**	**+0.5**
M16K	**Timber Creek**	**3.77**	**246**	IAML		12 24 54.4	
	comp=E,61nm,0.7s						
M16K				IAML		12 24 55.3	
	comp=N,108nm,0.7s						
G21K	**Allakaket**	**3.86**	**350**		**Pn**	**12 23 43.8**	**+0.4**
G21K	**Allakaket**	**3.86**	**350**	IAML		12 24 52.1	
	comp=N,100nm,0.8s						
G21K				IAML		12 24 58.2	
	comp=E,68nm,0.9s						
BMRM	**Bremner River**	**3.87**	**114**		**Pn**	**12 23 44.1**	**+0.5**
O17K	**Koliganek Bris**	**3.90**	**223**		**Pn**	**12 23 43.7**	**-0.1**
N16K	**Nishlik Lake**	**4.00**	**239**		**Pn**	**12 23 46.2**	**+1.0**
GLB	**Gilahina Butte**	**4.01**	**105**		**Pn**	**12 23 46.3**	**+0.9**
GLB				IAML		12 24 50.8	
	comp=E,102nm,0.8s						
GLB				IAML		12 24 54.6	
	comp=N,112nm,0.7s						
J16K	**Anvik River**	**4.02**	**282**		**Pn**	**12 23 45.6**	**+0.1**
J16K				IAML		12 25 01.8	
	comp=E,53nm,0.8s						
J16K				IAML		12 25 02.1	
	comp=N,62nm,0.9s						
G23K	**Bananza Creek**	**4.07**	**10**		**Pn**	**12 23 46.8**	**+0.5**
G19K	**Purcell Mounta**	**4.10**	**329**		**Pn**	**12 23 47.2**	**+0.6**
G19K	**Purcell Mounta**	**4.10**	**329**	IAML		12 24 58.3	
	comp=N,56nm,0.7s						
J26L	**Joseph Creek**	**4.11**	**61**		**Pn**	**12 23 47.2**	**+0.3**
J26L	**Joseph Creek**	**4.11**	**61**	IAML		12 24 54.9	
	comp=N,77nm,0.6s						
J26L				IAML		12 24 57.8	
	comp=E,71nm,0.7s						
SYI	**Shuyak Island**	**4.14**	**184**		**Pn**	**12 23 48.5**	**+1.3**
I17K	**Unalakleet**	**4.15**	**290**		**Pn**	**12 23 48.1**	**+0.9**
P17K	**Kvichak River**	**4.19**	**214**		**Pn**	**12 23 49.4**	**+1.6**
H17K	**Granite Mounta**	**4.19**	**305**		**Pn**	**12 23 49.1**	**+1.2**
H17K	**Granite Mounta**	**4.19**	**305**	IAML		12 25 06.6	
	comp=E,65nm,0.9s						
VRDI	**Verde Repeater**	**4.25**	**107**		**Pn**	**12 23 49.8**	**+0.9**
VRDI	**Verde Repeater**	**4.25**	**107**	IAML		12 24 58.7	
	comp=N,67nm,1.1s						
VRDI				IAML		12 25 02.7	
	comp=E,45nm,0.9s						
G18K	**Tagagawik**	**4.33**	**320**		**Pn**	**12 23 50.8**	**+0.9**
O16K	**Kokwok River B**	**4.36**	**227**		**Pn**	**12 23 50.5**	**+0.3**
O16K	**Kokwok River B**	**4.36**	**227**	IAML		12 25 05.1	
	comp=E,75nm,0.9s						
O16K				IAML		12 25 05.7	
	comp=N,64nm,0.8s						
K15K	**Wolf Creek Mou**	**4.50**	**269**		**Pn**	**12 23 52.2**	**+0.1**
K15K	**Wolf Creek Mou**	**4.50**	**269**	IAML		12 24 46.2	
	comp=N,58nm,1.1s						
F21K	**Alatna River**	**4.56**	**352**		**Pn**	**12 23 53.4**	**+0.4**
COLD	**Coldfoot**	**4.57**	**8**		**Pn**	**12 23 53.6**	**+0.6**
K27K	**Chicken**	**4.60**	**69**		**Pn**	**12 23 53.5**	**+0.1**
K27K	**Chicken**	**4.60**	**69**	IAML		12 25 10.2	
	comp=N,72nm,1.0s						
K27K				IAML		12 25 16.1	
	comp=E,49nm,1.4s						
CRQM	**Cirque**	**4.60**	**112**		**Pn**	**12 23 54.7**	**+1.1**
BC01	**Beaver Creek A**	**4.61**	**81**		**Pn**	**12 23 54.3**	**+0.6**
L27K	**Beaver Creek,**	**4.61**	**81**		**Pn**	**12 23 54.2**	**+0.6**
L27K	**Beaver Creek,**	**4.61**	**81**	IAML		12 25 13.3	
	comp=N,45nm,1.4s						
I26K	**Coal Creek Min**	**4.62**	**52**		**Pn**	**12 23 54.6**	**+0.8**
I26K	**Coal Creek Min**	**4.62**	**52**	IAML		12 25 24.8	
	comp=N,76nm,0.9s						
L15K	**Ungalak Mounta**	**4.62**	**261**		**Pn**	**12 23 53.3**	**-0.5**
BCAR	**Beaver Creek A**	**4.63**	**81**		**Pn**	**12 23 55.2**	**+1.3**
F20K	**Avaraart Lake**	**4.63**	**341**		**Pn**	**12 23 55.2**	**+1.3**
F20K	**Avaraart Lake**	**4.63**	**341**	IAML		12 25 12.7	
	comp=N,57nm,0.8s						
F20K				IAML		12 25 12.7	
	comp=E,50nm,0.8s						
M27K	**Edge Creek, AK**	**4.64**	**90**	IAML		12 25 18.8	
	comp=N,86nm,1.2s						
M27K				IAML		12 25 19.4	
	comp=E,54nm,1.1s						
M15K	**Kasigluk River**	**4.67**	**248**		**Pn**	**12 23 54.7**	**+0.3**
KAKN	**Katmai Knife C**	**4.72**	**201**		**Pn**	**12 23 56.0**	**+0.8**
TGL	**Tana Glacier**	**4.73**	**111**	Pn	**Pn**	**12 23 56.1**	**+0.7**
TGL				IAML		12 25 16.2	
	comp=N,79nm,1.1s						
G25K	**Bearman Lake**	**4.74**	**29**		**Pn**	**12 23 55.2**	**-0.2**
G17K	**Kiwalik Mounta**	**4.75**	**310**		**Pn**	**12 23 56.0**	**+0.6**
BALM	**Baldy**	**4.82**	**106**		**Pn**	**12 23 57.2**	**+0.6**
F19K	**Shaleruckik Mo**	**4.83**	**331**		**Pn**	**12 23 57.4**	**+0.8**
F19K	**Shaleruckik Mo**	**4.83**	**331**	IAML		12 25 19.9	
	comp=N,34nm,0.8s						
F19K				IAML		12 25 29.1	
	comp=E,28nm,1.2s						
KIAG	**Kiagna River**	**4.86**	**108**		**Pn**	**12 23 57.9**	**+0.6**
WAX	**Waxell Ridge**	**4.88**	**114**		**Pn**	**12 23 58.8**	**+1.4**
KDAK	**Kodiak Island**	**4.98**	**184**	Pn	**Pn**	**12 23 58.3**	**-0.4**
	comp=E,0.4nm,0.3s,baz=8.4,slow=8.8,SNR=22						
KDAK				Sn	**Sn**	**12 24 55.4**	**-0.7**
	comp=E,0.4nm,0.3s,baz=10.0,slow=17,SNR=1.6						
	comp=E,6.2nm,0.8s						
KDAK	**Kodiak Island**	**4.98**	**184**	Pn	**Pn**	**12 23 59.3**	**+0.6**
KDAK				IAML		12 25 25.5	
	comp=E,29nm,1.0s						
F24K	**Squaw Lake**	**5.09**	**18**		**Pn**	**12 24 00.8**	**+0.5**
BARN	**Barnard Glacie**	**5.11**	**105**		**Pn**	**12 24 01.3**	**+0.6**
BARN	**Barnard Glacie**	**5.11**	**105**	IAML		12 25 24.5	
	comp=N,40nm,1.5s						
BARN				IAML		12 25 24.8	
	comp=E,63nm,1.3s						
F18K	**Selawik**	**5.12**	**323**		**Pn**	**12 24 01.3**	**+0.7**
M14K	**Bethel**	**5.19**	**252**	Pn	**Pn**	**12 24 03.0**	**+1.5**
M14K				IAML		12 25 28.5	
	comp=E,43nm,1.3s						
M14K				IAML		12 25 33.9	
	comp=N,41nm,1.4s						
GRNC	**Granite Creek**	**5.21**	**108**		**Pn**	**12 24 02.9**	**+0.8**
GRNC	**Granite Creek**	**5.21**	**108**	IAML		12 25 28.9	
	comp=E,25nm,1.4s						
GRNC				IAML		12 25 36.5	
	comp=N,51nm,1.0s						
YUK2	**White River**	**5.24**	**96**		**Pn**	**12 24 03.7**	**+1.3**
E19K	**Redstone River**	**5.26**	**337**		**Pn**	**12 24 03.8**	**+1.3**
L14K	**Kuka Creek**	**5.28**	**260**	Pn	**Pn**	**12 24 02.8**	**0.0**
L14K				IAML		12 25 41.0	
	comp=N,44nm,1.3s						
E22K	**Anaktuvuk Pass**	**5.43**	**0**		**Pn**	**12 24 05.7**	**+0.8**
E23K	**Chandalar**	**5.43**	**9**		**Pn**	**12 24 06.0**	**+1.0**
OHAK	**Old Harbor**	**5.57**	**188**	Pn	**Pn**	**12 24 05.4**	**-1.4**
BMAR	**Burnt Mountain**	**5.63**	**30**	Pn	**Pn**	**12 24 08.0**	**+0.3**
BM01	**Burnt Mountain**	**5.66**	**30**		**Pn**	**12 24 07.7**	**-0.4**
G27K	**Doyon Strip**	**5.98**	**42**		**Pn**	**12 24 12.5**	**0.0**
K13K	**Kusilvak Mount**	**6.01**	**268**		**Pn**	**12 24 13.1**	**+0.3**
D22K	**Ayikyak River**	**6.18**	**357**		**Pn**	**12 24 17.6**	**+2.4**
M29M	**Somme Creek**	**6.20**	**87**		**Pn**	**12 24 16.6**	**+1.1**
ANM	**Nome**	**6.29**	**293**		**Pn**	**12 24 17.5**	**+0.9**
L29M	**L29M**	**6.29**	**80**		**Pn**	**12 24 17.9**	**+1.1**
D20K	**Etivluk River**	**6.32**	**344**		**Pn**	**12 24 18.2**	**+1.2**
E28M	**Babbage River**	**7.78**	**35**	Pn	**Pn**	**12 24 36.9**	**-0.1**
INK	**Inuvik**	**9.42**	**46**	Pn	**Pn**	**12 24 58.7**	**-0.8**
	comp=N,0.1nm,0.3s,baz=250,slow=13,SNR=6.0						
	comp=N,0.6nm,0.6s						
YKA	**Yellowknife Ar**	**17.00**	**74**	P	**Pn**	**12 26 40.9**	**-0.5**
	comp=N,0.2nm,0.3s,baz=288,slow=11,SNR=18						
	comp=N,0.5nm,0.7s						
PDAR	**Pinedale Array**	**31.64**	**109**	P	**P**	**12 29 08.0**	**+0.9**
	comp=N,0.4nm,0.9s,baz=297,slow=9.6,SNR=3.0						
	comp=N,0.4nm,0.9s						
NVAR	**Mina Array Bea**	**31.70**	**124**	P	**P**	**12 29 08.8**	**+1.1**
	comp=N,0.2nm,0.5s,baz=317,slow=6.7,SNR=3.0						
	comp=N,0.2nm,0.5s						
TXAR	**Lajitas Array**	**45.52**	**114**	P	**P**	**12 31 04.5**	**+1.0**
	comp=N,0.7nm,0.8s,baz=331,slow=6.8,SNR=8.7						
	comp=N,0.7nm,0.8s						
SONM	**Songino Array**	**53.64**	**305**	P	**P**	**12 32 06.0**	**+0.8**
	comp=N,0.8nm,0.9s,baz=45,slow=8.0,SNR=1.8						
	comp=N,0.8nm,0.9s						
ZALV	**Zalesovo Beam**	**55.50**	**323**	P	**P**	**12 32 17.9**	**-0.5**
	comp=N,0.3nm,0.3s,baz=17,slow=6.5,SNR=1.5						
	comp=N,0.3nm,0.3s						
EKA	**Eskdalemuir Ar**	**59.77**	**20**	P	**P**	**12 32 47.4**	**-1.0**
	comp=N,1.4nm,0.9s,baz=348,slow=6.7,SNR=3.5						
	comp=N,1.4nm,0.9s						
MKAR	**Makanchi Array**	**62.63**	**321**	P	**P**	**12 33 06.9**	**-1.2**
	comp=N,0.2nm,0.5s,baz=42,slow=6.0,SNR=6.3						
	comp=N,0.2nm,0.5s						

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*IDC **24** 12:44:31.7±0.6, 1°.43S×69°.39E, h0^{km}, mb4.2/19,*
mbtmp4.2/20, ML4.7/1, MS3.6/21, Error ellipse:
s-maj=20.7km s-min=15.5km az=42.0
*NEIC **24** 12:44:34.7±1.4, 1°.32S±0°.07×69°.47E±0°.09, h10^{km}±1^{km},*
mb4.4/18, Error ellipse: s-maj=16.1km s-min=11.1km
az=77.0
ISC 24 12:44:34.1±0.5**, 1°.33S**±0°.08×**69°.46E**±0°.08**, h11^{km}, n72,**
σ**0^{s}.88**/56**, mb4.4**/29**, MS3.6**/21**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KAAM	**Kaadhehdhoo**	**3.97**	**63**		**Pn**	**12 45 33.7**	**-1.3**
DGAR	**Diego Garcia**	**6.74**	**154**	Pn	**Pn**	**12 46 13.6**	**+0.5**
HMDM	**Hanimaadhoo**	**8.86**	**25**	Pn	**Pn**	**12 46 43.6**	**+1.4**
PALK	**Pallekele**	**14.10**	**53**	Pn	**Pn**	**12 47 55.4**	**+1.4**
	3.3nm,0.3s,baz=233,slow=12,SNR=13						
PALK				Sn	Sn	12 50 22.6	-8.1
	2.2nm,0.3s,baz=354,slow=21,SNR=6.3						
PALK				LR	LR	12 52 12.9	
	comp=Z,189nm,21.9s,baz=237,slow=32						
	6.6nm,0.3s						
PALK	**Pallekele**	**14.10**	**53**	Pn	**Pn**	**12 47 55.5**	**+1.5**
PSI	**Prapat**	**29.74**	**82**	LR	LR	13 02 02.7	
	comp=Z,88nm,18.8s,baz=214,slow=35						
BRDH	**Bariadhala**	**32.20**	**41**	LR	LR	13 06 14.9	
	comp=Z,123nm,18.4s,baz=286,slow=40						
FURI	**Furi**	**32.31**	**289**	LR	LR	13 03 07.5	
	comp=Z,86nm,18.3s,baz=154,slow=35						
LODK	**Lodwar**	**34.41**	**278**	P	**P**	**12 51 23.7**	**+1.8**
LODK				IAmb	IAmb	12 51 26.6	
	comp=Z,3.8nm,1.0s						
CMAR	**Chiang Mai Arr**	**35.03**	**54**	P	**P**	**12 51 28.8**	**+1.6**
	comp=Z,0.9nm,0.6s,baz=248,slow=11,SNR=13						
CMAR				PcP	**PcP**	**12 53 59.0**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=221,slow=3.9,SNR=4.7						
CMAR				LR	LR	13 04 04.5	
	comp=Z,47nm,21.8s,baz=245,slow=33						
	comp=Z,0.9nm,0.6s						
CHTO	**Chiang Mai**	**35.22**	**54**		**P**	**12 51 29.9**	**+1.2**
CHTO				IAmb	IAmb	12 51 31.6	
	comp=Z,4.9nm,1.0s						
MBAR	**Mbarara**	**38.72**	**271**	LR	LR	13 05 08.3	
	comp=Z,65nm,20.1s,baz=85,slow=32						
LSZ	**Lusaka**	**43.01**	**249**	P	**P**	**12 52 33.2**	**-1.0**
	comp=Z,9.6nm,0.6s,baz=75,slow=6.4,SNR=24						
LSZ				LR	LR	13 08 15.4	
	comp=Z,154nm,18.2s,baz=145,slow=33						
	comp=Z,9.6nm,0.6s						
LSZ	**Lusaka**	**43.01**	**249**		**P**	**12 52 33.5**	**-0.7**
AAK	**Ala-Archa**	**44.00**	**5**	LR	LR	13 10 08.1	
	comp=Z,35nm,18.7s,baz=224,slow=35						
EIL	**Elat**	**45.12**	**316**	LR	LR	13 10 00.9	
	comp=Z,61nm,19.1s,baz=52,slow=34						
LPHEP	**Lephephe**	**47.59**	**239**	P	**P**	**12 53 10.2**	**-0.3**
LBTB	**Lobatse**	**48.42**	**237**	LR	LR	13 11 19.3	
	comp=Z,41nm,19.2s,baz=65,slow=33						
MAKZ	**Makanchi**	**49.18**	**11**		**P**	**12 53 20.6**	**-1.6**
MAKZ				IAmb	IAmb	12 53 22.9	
	comp=Z,5.7nm,1.3s						
MKAR	**Makanchi Array**	**49.23**	**12**	P	**P**	**12 53 22.4**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=189,slow=7.2,SNR=14						
MKAR				PcP	**PcP**	**12 54 45.3**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=224,slow=3.3,SNR=8.3						
	comp=Z,1.6nm,0.8s						
MKAR	**Makanchi Array**	**49.23**	**12**	P	**P**	**12 53 21.6**	**-1.0**
BOSA	**Boshof**	**50.13**	**233**	LR	LR	13 11 13.9	
	comp=Z,33nm,19.3s,baz=53,slow=32						
KBZ	**Khabaz**	**50.77**	**335**	P	**P**	**12 53 34.9**	**+0.6**
	comp=Z,4.7nm,0.9s,baz=176,slow=7.4,SNR=5.8						
	comp=Z,4.7nm,0.9s						
KVAR	**Kislovodsk Arr**	**51.04**	**335**	LR	LR	13 14 35.5	
	comp=Z,454nm,21.8s,baz=349,slow=35						
AB31	**Akbulak array**	**51.05**	**352**		**P**	**12 53 36.2**	**-0.1**
AB31				IAmb	IAmb	12 53 37.5	
	comp=Z,3.3nm,0.8s						
ABKAR	**Akbulak array**	**51.05**	**352**		**P**	**12 53 36.5**	**+0.2**
KURBB	**Kurchatov Arra**	**52.33**	**7**	P	**P**	**12 53 45.6**	**-0.3**
	comp=Z,1.1nm,0.2s,baz=200,slow=8.0,SNR=8.8						
KURBB				PcP	**PcP**	**12 54 56.6**	**-0.3**
	comp=Z,0.4nm,0.2s,baz=208,slow=3.4,SNR=4.4						
	comp=Z,1.1nm,0.2s						
BRTR	**Keskin Array B**	**52.37**	**325**	P	**P**	**12 53 46.2**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=149,slow=11,SNR=3.9						
	comp=Z,0.8nm,0.8s						
KURK	**Kurchatov**	**52.43**	**7**		**P**	**12 53 46.5**	**-0.1**
KURK				IAmb	IAmb	12 53 47.4	
	comp=Z,4.8nm,0.8s						
H01W3	**Cape Leeuwin H**	**53.31**	**134**	T	T	13 51 20.9	
	baz=298,slow=75,SNR=3.2						
H01W2	**Cape Leeuwin H**	**53.31**	**134**	T	T	13 51 14.6	
	baz=298,slow=75,SNR=4.2						
H01W1	**Cape Leeuwin H**	**53.32**	**134**	T	T	13 51 16.1	
	baz=298,slow=75,SNR=4.3						
TSUM	**Tsumeb**	**53.78**	**247**	LR	LR	13 14 30.8	
	comp=Z,81nm,19.0s,baz=326,slow=34						
BVAR	**Borovoye Array**	**54.16**	**1**	P	**P**	**12 53 59.3**	**0.0**
	comp=Z,0.3nm,0.4s,baz=170,slow=9.0,SNR=3.6						
BVAR				PcP	**PcP**	**12 55 03.1**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=143,slow=2.9,SNR=4.0						
	comp=Z,0.3nm,0.4s						
SUR	**Sutherland**	**55.17**	**231**	LR	LR	13 14 09.0	
	comp=Z,76nm,19.4s,baz=146,slow=32						
ZAA0	**Zalesovo Array**	**56.55**	**11**		**P**	**12 54 15.9**	**-0.5**
ZAA0				IAmb	IAmb	12 54 16.7	
	comp=Z,4.3nm,0.8s						
ZALV	**Zalesovo Beam**	**56.55**	**11**	P	**P**	**12 54 15.8**	**-0.6**
	comp=Z,3.6nm,0.6s,baz=207,slow=7.1,SNR=17						
	comp=Z,3.6nm,0.6s						
ZALV	**Zalesovo Beam**	**56.55**	**11**		**P**	**12 54 15.9**	**-0.5**
DAV	**Davao City (W)**	**56.61**	**81**	LR	LR	13 18 08.4	
	comp=Z,22nm,20.9s,baz=224,slow=36						
SONM	**Songino Array**	**58.58**	**28**	P	**P**	**12 54 31.3**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=229,slow=6.8,SNR=3.6						
SONM				LR	LR	13 19 54.2	
	comp=Z,98nm,18.5s,baz=197,slow=36						
	comp=Z,1.6nm,0.6s						
SONM	**Songino Array**	**58.58**	**28**	P	**P**	**12 54 31.6**	**+0.5**
AKASG	**Malin Array Be**	**62.12**	**332**	P	**P**	**12 54 54.1**	**-1.0**
	comp=Z,0.5nm,0.4s,baz=137,slow=5.6,SNR=1.5						
	comp=Z,0.5nm,0.4s						
JOW	**Kunigami**	**63.11**	**59**	LR	LR	13 20 36.1	
	comp=Z,107nm,21.8s,baz=156,slow=34						
WRA	**Warramunga Arr**	**65.98**	**111**	P	**P**	**12 55 20.3**	**-0.8**
	comp=Z,2.2nm,0.8s,baz=283,slow=6.1,SNR=12						
	comp=Z,2.2nm,0.8s						
WRA	**Warramunga Arr**	**65.98**	**111**	P	**P**	**12 55 21.0**	**-0.1**
WRAB	**Tennant Creek**	**65.99**	**111**	P	**P**	**12 55 20.9**	**-0.3**
WRAB				IAmb	IAmb	12 55 24.5	
	comp=Z,6.5nm,1.5s						
WB0	**Warramunga Arr**	**66.01**	**111**	P	**P**	**12 55 20.5**	**-0.8**
WB0				IAmb	IAmb	12 55 21.9	
	comp=Z,6.2nm,1.2s						
WR8	**Warramunga Arr**	**66.13**	**111**		**P**	**12 55 22.0**	**-0.1**
WR8				IAmb	IAmb	12 55 22.2	
	comp=Z,4.0nm,0.8s						
ASAR	**Alice Springs**	**66.13**	**115**	P	**P**	**12 55 21.4**	**-0.7**
	comp=Z,1.9nm,0.7s,baz=282,slow=6.1,SNR=46						
	comp=Z,1.9nm,0.7s						
ASAR	**Alice Springs**	**66.13**	**115**	P	**P**	**12 55 21.6**	**-0.5**
AS31	**Alice Springs**	**66.14**	**115**	P	**P**	**12 55 21.9**	**-0.2**
KSRS	**Korea Array**	**66.28**	**48**	LR	LR	13 25 53.3	
	comp=Z,15nm,18.8s,baz=260,slow=37						
HILR	**Hailar Array B**	**66.52**	**33**	P	**P**	**12 55 24.9**	**+0.9**
	comp=Z,3.0nm,0.6s,baz=235,slow=6.7,SNR=3.0						
	comp=Z,3.0nm,0.6s						
MODS	**Modra-Piesok**	**66.95**	**325**	*e*P	**P**	**12 55 28.0**	**+1.2**
JNU	**Nakatsue**	**67.12**	**53**	LR	LR	13 24 58.6	
	comp=Z,39nm,18.1s,baz=306,slow=36						
FINES	**FINESS Array B**	**70.80**	**340**	P	**P**	**12 55 49.7**	**-0.7**
	comp=Z,1.9nm,0.8s,baz=102,slow=6.6,SNR=4.9						
	comp=Z,1.9nm,0.8s						
FINES	**FINESS Array B**	**70.80**	**340**	P	**P**	**12 55 50.4**	**0.0**
CLL	**Collm**	**70.80**	**326**	*e*P	**P**	**12 55 53.0**	**+2.3**
SENIN	**Lac Senin/Sane**	**72.14**	**320**	P	**P**	**12 56 00.2**	**+1.1**

INKA	Innaminka	72.85	119		P	12 56 03.7	+0.2
INKA				IAmb	IAmb	12 56 04.7	
	comp=Z,2.4nm,0.9s						
STKA	Stephens Creek	74.16	123	P	P	12 56 10.4	-0.7
	comp=Z,2.4nm,0.8s,baz=278,slow=9.2,SNR=5.6						
	comp=Z,2.4nm,0.8s						
HFS	Hagfors	74.84	335	P	P	12 56 13.6	-0.8
	comp=Z,2.2nm,0.8s,baz=96,slow=4.3,SNR=3.0						
	comp=Z,2.2nm,0.8s						
ARCES	ARCESS Array B	76.61	345	P	P	12 56 24.2	-0.3
	comp=Z,2.4nm,0.7s,baz=141,slow=5.8,SNR=7.0						
	comp=Z,2.4nm,0.7s						
CTA	Charters Tower	77.14	110	P	P	12 56 27.9	-0.5
	comp=Z,5.1nm,1.1s,baz=270,slow=8.1,SNR=3.8						
CTA				LR	LR	13 29 16.9	
	comp=Z,46nm,18.1s,baz=40,slow=35						
	comp=Z,5.1nm,1.1s						
ESDC	Sonseca Array	78.14	311	P	P	12 56 33.5	-0.2
	comp=Z,0.9nm,0.9s,baz=104,slow=5.3,SNR=5.5						
	comp=Z,0.9nm,0.9s						
TIXI	Tiksi	81.99	16		P	12 56 53.6	-0.1
SEY	Seymchan	87.94	27	LR	LR	13 38 12.6	
	comp=Z,78nm,19.2s,baz=29,slow=37						
QSPA	South Pole Qui	88.66	180	P	P	12 57 27.5	+0.2
DZM	Mont Dzumac	95.98	112	LR	LR	13 38 25.5	
	comp=Z,895nm,20.9s,baz=339,slow=34						
YKA	Yellowknife Ar	118.91	2	PKP	PKPdf	13 03 21.1	-1.4
	comp=Z,0.3nm,0.8s,baz=341,slow=2.3,SNR=8.0						
PDAR	Pinedale Array	138.73	359	PKP	PKPdf	13 03 60.0	-1.1
	comp=Z,1.0nm,0.7s,baz=50,slow=2.3,SNR=10						
TXAR	Lajitas Array	151.39	347	PKPbc	PKiKP	13 04 29.1	-0.3
	comp=Z,3.9nm,0.8s,baz=12,slow=3.1,SNR=39						

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*EST **24** 12:51:42.9±0.3, 57°.74N×27°.94E, h0^{km}, ML1.2(HEL), Explosion*
*IDC **24** 12:51:43.4±3.0, 57°.93N×28°.31E, h0^{km}, mbtmp2.8/3, ML1.7/3, Error ellipse: s-maj=24.6km s-min=15.9km az=122.0*
*LVSN **24** 12:51:55.8±3.6, 58°.01N×27°.41E, h0^{km}±30^{km}, ML2.1*
ISC 24 12:51:46.6±1.1**, 57°.95N**±0°.03×**27°.55E**±0°.04**, h0^{km}, n33, σ1^{s}45**/55**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EE07	Piusa Caves, O	0.12	201	*e*P	Pg	12 51 48.0	-0.9
EE07				*e*S	Sg	12 51 52.0	+1.5
VSU	Vasula	0.67	320	*e*S	Sb	12 52 12.3	+1.4
VSU	Vasula	0.67	320	*e*P	Pg	12 51 59.7	+0.3
VSU				*e*S	Sb	12 52 11.7	+0.8
EE03	Tooma soojaam,	1.14	324	*e*P	Pg	12 52 08.7	+0.2
EE03				*e*PN	Pn	12 52 09.8	-0.1
EE03				*e*S	Sn	12 52 26.8	+0.7
EE08	Sarghaua, Vand	1.41	301	*e*PN	Pg	12 52 13.7	0.0
EE08				*e*SG	Sn	12 52 35.2	+2.5
EE04	Vaivara Sinima	1.43	7	*e*S	Sg	12 52 33.0	+0.3
ARBE	Arbavere	1.70	332	*e*S	Sg	12 52 43.8	+2.7
ARBE				AML	AML	12 52 45.9	
	comp=Z,30nm,0.7s						
ARBE				AML	AML	12 52 46.5	
	comp=E,74nm,0.2s						
ARBE				AML	AML	12 52 46.9	
	comp=N,103nm,0.5s						
ARBE	Arbavere	1.70	332	*e*PB	Pn	12 52 18.0	+0.5
ARBE				*e*SG	Sg	12 52 43.5	+2.4
EE02	Kiisa, Saku	1.94	311	*e*PG	Pb	12 52 22.7	-0.1
EE02				*e*SB	Sg	12 52 50.3	+1.3
MTSE	Matsula	2.11	293	*e*S	Sg	12 52 55.9	+1.5
MTSE	Matsula	2.11	293	*e*PG	Pb	12 52 25.4	-0.4
MTSE				*e*SG	Sg	12 52 55.6	+1.2
EE01	Perakula, Nova	2.41	303	*e*SB	Sg	12 53 03.5	-0.5
VJF	Virojoki	2.59	0	*e*S	Sn	12 53 03.7	+1.8
VJF				MSG		12 53 07.9	
	comp=Z,0.6nm,0.1s						
EE06	Soera, Palade,	2.67	294	*e*SB	Sg	12 53 11.3	-1.1
PVF	Pernaja	2.74	342	*e*PB	Pb	12 52 35.5	-0.9
PVF				*e*S	Sn	12 53 07.4	+1.8
PVF				*e*SB	Sg	12 53 12.9	-1.7
PVF				MSG		12 53 14.6	
	comp=Z,0.4nm,0.1s						
MEF	Metsahovi	2.79	326	*e*P	Pg	12 52 39.0	-1.2
MEF				*e*S	Sb	12 53 13.2	+1.1
MEF				AML	AML	12 53 18.1	
	comp=Z,3.8nm,0.5s						
MEF				AML	AML	12 53 25.4	
	comp=E,6.0nm,0.6s						
MEF				AML	AML	12 53 25.5	
	comp=N,8.6nm,0.6s						
MEF	Metsahovi	2.79	326	*e*PG	Pb	12 52 38.8	+1.4
MEF				*e*SB	Sg	12 53 15.6	-0.7
SLIT	Slitere, Latvi	2.83	266	*e*S	Sb	12 53 12.8	-0.4
SLIT				AML	AML	12 53 16.8	
	comp=N,74nm,0.3s						
SLIT				AML	AML	12 53 17.6	
	comp=Z,29nm,0.3s						
SLIT				AML	AML	12 53 19.0	
	comp=E,43nm,0.4s						
SLIT	Slitere, Latvi	2.83	266	*e*SG	Sb	12 53 15.2	+2.0
TVF	Tvarminne	2.93	312	*e*SB	Sg	12 53 19.5	-1.1
NUR	Nurmijarvi	2.96	331	*e*SB	Sg	12 53 20.3	-1.5
NUR				MSG		12 53 25.5	
	comp=Z,0.5nm,0.1s						
RUF	Ruokolahti	3.55	11	*e*SB	Sb	12 53 34.0	+0.1
FIA0	FINESS Array S	3.58	349	*e*P	Pn	12 52 42.7	-0.6
FIA0				*e*PG	Pb	12 52 51.3	+0.6
FIA0				*e*S	Sn	12 53 27.0	+0.8
FIA0				MSG		12 53 45.4	
	comp=Z,0.4nm,0.2s						
FINES	FINESS Array B	3.58	349	Pn	Pn	12 52 42.0	-1.3
	comp=Z,0.1nm,0.3s,baz=163,slow=16,SNR=8.9						
FINES				Pg	Pb	12 52 51.5	+0.8
	comp=Z,0.2nm,0.3s,baz=167,slow=16,SNR=8.1						
FINES				Sn	Sn	12 53 27.8	+1.6
	comp=Z,0.3nm,0.3s,baz=165,slow=22,SNR=7.8						
FINES				Lg	Lg	12 53 40.4	
	comp=Z,0.4nm,0.3s,baz=163,slow=26,SNR=7.6						
	comp=Z,0.5nm,0.4s						
FIA1	FINESS Array S	3.58	349	*e*P	Pn	12 52 42.7	-0.6
FIA1				*e*PG	Pb	12 52 51.3	+0.5
FIA1				*e*S	Sn	12 53 26.8	+0.5
FIA1				MSG		12 53 43.7	
	comp=Z,0.4nm,0.1s						
RAF	Rauma	4.26	319	*e*SG	Sg	12 54 03.0	-0.4
KEF	Keuruu	4.43	344	*e*S	Sn	12 53 48.1	+0.8
KEF				*e*SG	Sg	12 54 06.0	-3.0
AAL	Aland	4.49	303	*e*SG	Sg	12 54 08.7	-2.1
KPF	Kankaanpaa	4.77	327	*e*S	Sn	12 53 56.1	+0.6
KPF				*e*SG	Sg	12 54 17.2	-2.4
JOF	Joensuu	5.32	19	*e*S	Sn	12 54 06.8	-2.3
I43RU	DUBNA INFRASON	5.38	99	I	I	13 22 20.0	
	baz=287,slow=322,SNR=0.9						
HFS	Hagfors	7.47	293	Pn	Pn	12 53 35.3	-1.5
	baz=118,slow=15,SNR=1.4						
HFS				Pg	Pb	12 53 57.0	0.0
	baz=99,slow=16,SNR=3.1						
HFS				Sn	Sn	12 55 02.3	+0.2
	comp=Z,0.2nm,0.3s,baz=105,slow=27,SNR=6.7						
HFS				Lg	Lg	12 55 38.3	
	comp=Z,0.2nm,0.3s,baz=93,slow=31,SNR=2.1						
	comp=Z,3.1nm,1.2s						
NOA	NORSAR Array B	8.86	297	Pn	Pn	12 53 55.4	-0.4
	baz=100,slow=9.0,SNR=1.7						
NOA				Sn	Sn	12 55 32.0	-4.3
	baz=93,slow=15,SNR=1.7						
NOA				Lg	Lg	12 56 26.8	
	baz=116,slow=20,SNR=3.8						
	comp=Z,0.3nm,1.0s						

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*IDC **24** 12:58:17.7±3.1, 39°.88N×48°.89E, h0^{km}, mb3.7/5, mbtmp3.7/10, ML3.4/5, MS3.4/1, Error ellipse: s-maj=55.0km s-min=18.4km az=4.0*
*TIF **24** 12:58:18.3, 40°.13N×49°.17E, h12^{km}±14^{km}*
*MOS **24** 12:58:20.2±1.5, 40°.18N×49°.08E, h10^{km}, mb3.8/1, Error ellipse: s-maj=15.2km s-min=6.2km az=113.3*
*DRS **24** 12:58:21.2, 40°.45N×49°.80E, h6^{km}*
*AZER **24** 12:58:22.0, 40°.24N×48°.84E, h5^{km}, ml3.3*
*TEH **24** 12:58:23.9, 40°.27N×48°.76E, h20^{km}±23^{km}*
ISC 24 12:58:22.7±1.1**, 40°.24N**±0°.02×**48°.90E**±0°.02**, h9^{km}**±8^{km}**, n85, σ1^{s}79**/134**, mb3.7**/5**, 1D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALIB	&Aumlli-Bayram	0.29	164	P	Pn	12 58 32.0	-1.2
ALIB				S	Sb	12 58 40.9	+5.8
ALIB	&Aumlli-Bayram	0.29	164	Pg	Pn	12 58 31.9	-1.2
GBS	Qobustan	0.30	6	P	Pb	12 58 29.9	-0.4
GBS				S	Sb	12 58 38.2	+2.9
GBS	Qobustan	0.30	6	Pg	Pb	12 58 29.8	-0.4
PQL	Pirkuli	0.60	337	P	Pb	12 58 34.7	-0.7
PQL				S	Sn	12 58 46.6	-0.8
PQL	Pirkuli	0.60	337	Pg	Pb	12 58 34.6	-0.7
ATGJ	Altiaghaj	0.62	3	P	Pn	12 58 36.0	-1.8
ATGJ				S	Sn	12 58 50.2	+2.3
ATGJ	Altiaghaj	0.62	3	Pg	Pn	12 58 36.0	-1.8
GOBA	Gobu	0.66	76	P	Pn	12 58 40.0	+1.8
GOBA				S	Sn	12 58 53.3	+4.7
IML	Ismayilli	0.78	315	P	Pg	12 58 37.7	0.0
IML				S	Sb	12 58 51.4	+2.3
IML	Ismayilli	0.78	315	Pg	Pg	12 58 37.7	0.0
SIZA	Siyzn	0.83	360	P	Pn	12 58 39.7	-1.1
SIZA				S	Sn	12 58 55.1	+1.9
SIZA	Siyzn	0.83	360	Pg	Pn	12 58 39.6	-1.1
NDR	Nardaran	0.90	67	P	Pn	12 58 43.3	+1.8
NDR				S	Sn	12 58 59.4	+4.8
NDR	Nardaran	0.90	67	Pg	Pn	12 58 43.2	+1.8
ZRD	Zardab	0.93	273	P	Pb	12 58 41.7	+0.8
ZRD				S	Sn	12 58 56.9	+1.5
GALA	Gala	0.97	80	P	Pn	12 58 44.3	+1.8
GALA				S	Sn	12 59 02.0	+5.6
GLBA	Clilabad	1.07	202	P	Pn	12 58 44.5	+0.7
GLBA				S	Sn	12 59 01.7	+2.9
GLBA	Clilabad	1.07	202	Pg	Pn	12 58 44.5	+0.7
QBL	Gabala	1.07	311	P	Pg	12 58 41.8	-1.5
QBL				S	Sb	12 58 59.7	+2.1
QBL	Gabala	1.07	311	Pg	Pg	12 58 41.7	-1.6
XNQ	Khinaliq	1.09	328	P	Pg	12 58 42.9	-0.8
XNQ				S	Sn	12 59 03.0	+3.2
XNQ	Khinaliq	1.09	328	Pg	Pb	12 58 43.8	-0.1
BLQ	Beylaqan	1.15	244	P	Pg	12 58 44.1	-0.7
BLQ				S	Sn	12 59 02.7	+1.8
BLQ	Beylaqan	1.15	244	Pg	Pg	12 58 44.1	-0.7
QUBA	Quba, Azerbaij	1.16	345	P	Pn	12 58 45.7	+0.7
QUBA				S	Sn	12 59 04.0	+3.0
QUB	Quba	1.21	340	Pg	Pn	12 58 45.7	-0.2
BRDA	Brd	1.32	272	P	Pg	12 58 48.5	+0.5
BRDA				S	Sn	12 59 07.7	+2.8
QSAR	Qusar	1.36	339	Pn	Pg	12 58 48.7	-0.2
QSAR				Sn	Sn	12 59 09.6	+3.5
AGDM	Agdam	1.38	265	Pn	Pn	12 58 48.2	+0.1
AGDM				Sn	Sg	12 59 09.2	+2.2
YRD	Yardimli	1.42	201	Pg	Pn	12 58 48.2	-0.6
YRD				Sn	Sn	12 59 10.7	+3.1
QRD	Qoradiz	1.44	238	Pg	Pn	12 58 47.7	-1.3
QRD				Sn	Sb	12 59 10.2	+2.0
KSMR	Kasumkent	1.48	337	*e*Pg	Pb	12 58 50.1	-0.4
	151nm,0.6s						
KSMR				*e*Sg	Sg	12 59 13.0	+2.6
	562nm,0.4s						
KSMR	Kasumkent	1.48	337	*e*PG	Pb	12 58 50.0	-0.4
KSMR				*e*S	Sg	12 59 12.9	+2.6
KSMR				pmax	pmax		
	comp=Z,151nm,0.6s						
MNGR	Mingechevir, A	1.48	292	Pn	Pb	12 58 50.8	+0.4
MNGR				Sn	Sb	12 59 11.9	+2.6
LKRN	Lenkeran, Azer	1.53	184	Pg	Pb	12 58 49.6	-1.6
LKRN				Sn	Sg	12 59 14.1	+2.1
SEKA	Sheki	1.61	307	Pn	Pn	12 58 52.0	+0.6
SEKA				Sn	Sn	12 59 13.6	+1.2
LRK	Lerik	1.65	195	Pg	Pn	12 58 51.5	-0.5
LRK				Sn	Sg	12 59 16.8	+0.9
ASTR	Astara	1.68	183	Pg	Pn	12 58 51.5	-0.7
ASTR				Sn	Sg	12 59 16.2	-0.5
DRN	Derbent	1.84	347	*e*Pg	Pn	12 58 52.4	-2.1
	comp=Z,70nm,0.4s						
DRN				*e*Sg	Sn	12 59 17.6	-0.2
	comp=Z,179nm,0.9s						
DRN	Derbent	1.84	347	*e*PN	Pn	12 58 52.3	-2.1
DRN				pmax	pmax		
	comp=Z,70nm,0.4s						
GAS1	Astara - Iran	1.85	181	Pn	Pg	12 58 56.3	-1.9
GANJ	Ganja	2.01	282	Pn	Pn	12 58 57.5	+0.7
GANJ				Sg	Sn	12 59 23.4	+1.3
VSHL	Vashlovani	2.14	298	P	Pn	12 58 60.0	+1.4
VSHL				S	Sb	12 59 30.2	+1.9
URKR	Urkarakh	2.15	334	*e*Pn	Pn	12 58 59.8	+1.0
	comp=Z,29nm,0.1s						
URKR				*e*Sn	Sb	12 59 30.4	+1.7
	comp=Z,50nm,0.6s						
URKR	Urkarakh	2.15	334	*e*PN	Pn	12 58 59.8	+1.0
URKR				*e*S	Sb	12 59 30.3	+1.7
URKR				pmax	pmax		
	comp=Z,29nm,0.1s						
ZKTA	Zakatala	2.22	310	Pn	Pb	12 59 01.9	-1.1
ZKTA				Sn	Sb	12 59 32.0	+1.5
KMKR	Kumukh	2.33	325	*e*Pn	Pn	12 59 02.6	+1.3
	comp=Z,33nm,0.8s						
KMKR				*e*Sn	Sb	12 59 35.6	+1.7
	comp=Z,77nm,0.5s						
KMKR	Kumukh	2.33	325	*e*PN	Pn	12 59 02.6	+1.3
KMKR				*e*S	Sb	12 59 35.5	+1.7
KMKR				pmax	pmax		
	comp=Z,33nm,0.8s						
IHRS	Heris	2.40	217	Pn	Pn	12 59 03.5	+1.1
GDB	GEDABAY	2.45	282	Pn	Pn	12 59 03.7	+0.8
GDB				Sn	Sn	12 59 36.0	+2.9
LGD	Lagodekhi	2.56	309	P	Pn	12 59 06.4	+1.9
LGD				S	Sb	12 59 40.5	0.0
LGD	Lagodekhi	2.56	309	*e*PN	Pn	12 59 06.3	+1.9
LGD				*e*S	Sb	12 59 40.4	0.0
ISRB	Sarab	2.60	202	Pn	Pb	12 59 06.7	-2.8
ORD	Ordubad	2.60	241	Pn	Pn	12 59 06.0	+1.0
ORD				Sn	Sn	12 59 40.7	+4.0
SBZ	Shahbuz	2.71	253	Pg	Pb	12 59 10.3	-1.1
SBZ				Sn	Sb	12 59 44.8	0.0
ARKR	Arakani	2.76	329	*e*Pn	Pn	12 59 08.3	+1.2
	comp=Z,17nm,0.5s						
ARKR				*e*Sn	Sb	12 59 45.7	-0.5
	comp=Z,31nm,0.5s						
ARKR	Arakani	2.76	329	*e*PN	Pn	12 59 08.3	+1.2
ARKR				*e*S	Sb	12 59 45.6	-0.5
ARKR				pmax	pmax		
	comp=Z,17nm,0.5s						
QZX	Qazax, Azerbai	2.81	288	Pn	Pn	12 59 09.8	+2.0
QZX				Sn	Sn	12 59 45.6	+3.9
XNZR	Khunzakh	2.83	325	*e*Pn	Pn	12 59 09.8	+1.6
	comp=Z,11nm,0.7s						
XNZR				*e*Sn	Sb	12 59 48.3	0.0
	comp=Z,25nm,0.6s						
HNZR	Khunzah	2.84	325	*e*PN	Pn	12 59 09.8	+1.5
HNZR				*e*S	Sb	12 59 48.3	-0.2
HNZR				pmax	pmax		
	comp=Z,11nm,0.7s						
IMRD	Marand	2.91	239	Pn	Pn	12 59 10.7	+1.5
MAK	Makhachkala	2.91	339	⇓*i*PN	Pn	12 59 08.9	-0.2
MAK				*e*S	Sn	12 59 46.3	+2.1
MAK				pmax	pmax		
	comp=Z,187nm,0.3s						
MAK				smax	smax		
	comp=E,187nm,0.3s						
MAK				smax	smax		
	comp=E,212nm,1.0s						
MAK				MLR	MLR		
	comp=Z,283nm,12.0s						
UNCR	Uncukul	2.93	328	*e*Pn	Pn	12 59 10.5	+0.9
	comp=Z,9.0nm,0.4s						
UNCR				*e*Sn	Sb	12 59 50.0	-1.1
	comp=Z,36nm,0.5s						
UNCR	Uncukul	2.93	328	*e*PN	Pn	12 59 10.4	+0.9
UNCR				*e*S	Sb	12 59 50.0	-1.1
UNCR				pmax	pmax		
	comp=Z,9.0nm,0.4s						
DGRG	David-gareji	2.94	295	P	Pn	12 59 10.9	+1.4
DGRG	David-gareji	2.94	295	*e*PN	Pn	12 59 10.9	+1.4
KRNR	Karanay	2.99	331	*e*Pn	Pn	12 59 11.1	+0.8
	comp=Z,12nm,0.5s						
KRNR				*e*Sn	Sb	12 59 51.1	-1.6
	comp=Z,20nm,0.6s						
KRNR	Karanay	2.99	331	*e*PN	Pn	12 59 11.1	+0.8
KRNR				*e*S	Sb	12 59 51.1	-1.6
KRNR				pmax	pmax		
	comp=Z,12nm,0.5s						
IHSH	Hashtrud	3.20	204	Pn	Pn	12 59 14.5	+1.1
ISHB	Shabestar	3.21	234	Pn	Pn	12 59 14.6	+1.1
CHRG	Chargali	3.65	306	P	Pn	12 59 20.1	+0.6
SHTL	Shatili	3.71	312	P	Pn	12 59 21.6	+1.3
SHTL	Shatili	3.71	312	*e*PN	Pn	12 59 21.5	+1.3
IDMV	Damavand	5.27	151	Pn	Pn	12 59 43.3	+1.4
KBZ	Khabaz	5.67	310	Pn	Pn	12 59 50.5	+3.5
	comp=Z,0.2nm,0.3s,baz=104,slow=4.2,SNR=4.3						
	comp=Z,1.6nm,0.7s						
AKTO	Aktyubinsk	12.03	29	Pn	Pn	13 01 14.6	+0.3
	comp=Z,0.2nm,0.3s,baz=211,slow=11,SNR=1.3						
	comp=Z,0.7nm,0.3s						
AKASG	Malin Array Be	17.26	314	P	Pn	13 02 22.2	-1.5
	comp=Z,0.5nm,0.3s,baz=120,slow=12,SNR=2.2						
	comp=Z,0.5nm,0.4s						
ARTI	Arti	17.32	18	P	Pn	13 02 23.5	-0.9
	comp=Z,0.6nm,0.3s,baz=207,slow=11,SNR=4.7						
	comp=Z,2.5nm,0.5s						
BVAR	Borovoye Array	19.43	42	P	P	13 02 47.3	-1.8
	baz=234,slow=9.0,SNR=6.6						
	comp=Z,1.1nm,0.7s						
MKAR	Makanchi Array	24.95	64	P	P	13 03 44.6	-1.7
	comp=Z,0.5nm,0.7s,baz=266,slow=8.2,SNR=10						
	comp=Z,0.5nm,0.7s						
FINES	FINESS Array B	25.40	334	P	P	13 03 48.6	-1.5
	comp=Z,1.1nm,0.6s,baz=132,slow=10.0,SNR=7.6						
	comp=Z,1.1nm,0.6s						
ZALV	Zalesovo Beam	27.69	48	P	P	13 04 09.8	-1.1
	comp=Z,0.3nm,0.3s,baz=267,slow=10,SNR=1.9						
	comp=Z,0.3nm,0.3s						
HFS	Hagfors	29.53	324	P	P	13 04 24.7	-2.4
	comp=Z,1.6nm,0.9s,baz=101,slow=7.5,SNR=3.6						
HFS				LR	LR	13 16 15.4	
	comp=Z,72nm,21.1s,baz=60,slow=36						
	comp=Z,1.6nm,0.9s						
EKA	Eskdalemuir Ar	37.16	312	P	P	13 05 32.7	-0.9
	comp=Z,1.4nm,0.7s,baz=81,slow=6.7,SNR=2.9						
	comp=Z,1.4nm,0.7s						

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*MOS **24** 13:00:53.5±1.4, 39°.97N×48°.95E, h10^{km}, mb4.4/2, Error ellipse: s-maj=12.9km s-min=5.5km az=108.4*
*IDC **24** 13:00:54.0±1.2, 40°.14N×48°.83E, h0^{km}, mb3.6/11, mbtmp3.6/15, ML3.3/4, MS3.2/4, Error ellipse: s-maj=29.3km s-min=14.0km az=8.0*
*DRS **24** 13:00:55.0, 40°.39N×50°.01E, h13^{km}*
*AZER **24** 13:00:56.9, 40°.26N×48°.78E, h4^{km}, ml3.5*
*TEH **24** 13:00:59.6, 40°.27N×48°.78E, h20^{km}±54^{km}*
ISC 24 13:00:58.0±1.1**, 40°.26N**±0°.02×**48°.82E**±0°.02**, h13^{km}**±8^{km}**, n112, σ2^{s}12**/154**, mb3.7**/12**, 5C-2D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBS	Qobustan	0.29	20	P	Pb	13 01 05.0	-0.1
GBS				S	Sb	13 01 12.3	+2.4
GBS	Qobustan	0.29	20	Pg	Pb	13 01 05.0	-0.1
ALIB	&Aumlli-Bayram	0.34	154	P	Pb	13 01 07.2	+1.3
ALIB				S	Sb	13 01 13.8	+2.7
ALIB	&Aumlli-Bayram	0.34	154	Pg	Pb	13 01 07.0	+1.2
KDMR	Kurdemir	0.50	283	P	Pb	13 01 10.1	+1.5
KDMR				S	Sn	13 01 19.6	+0.5
KDMR	Kurdemir	0.50	283	Pg	Pb	13 01 10.2	+1.7
SAAT	Saatly	0.50	217	P	Pn	13 01 11.2	+0.4
SAAT				S	Sb	13 01 18.5	+2.7
PQL	Pirkuli	0.55	342	P	Pb	13 01 09.7	+0.1
PQL				S	Sn	13 01 21.0	+0.2
PQL	Pirkuli	0.55	342	Pg	Pb	13 01 10.2	+0.6
ATGJ	Altiaghaj	0.60	9	P	Pb	13 01 11.0	+0.4
ATGJ				S	Sn	13 01 25.0	+2.9
ATGJ	Altiaghaj	0.60	9	Pg	Pb	13 01 10.9	+0.4
GOBA	Gobu	0.71	79	P	Pn	13 01 14.6	+0.8
GOBA				S	Sn	13 01 29.0	+4.4
GOBA	Gobu	0.71	79	Pg	Pn	13 01 14.4	+0.6
IML	Ismayilli	0.72	318	P	Pb	13 01 12.6	+0.2
IML				S	Sn	13 01 25.7	+0.9
IML	Ismayilli	0.72	318	Pg	Pb	13 01 13.0	+0.6
SIZA	Siyzn	0.81	4	P	Pb	13 01 14.9	+0.8
SIZA				S	Sn	13 01 30.2	+3.0
SIZA	Siyzn	0.81	4	Pg	Pb	13 01 14.9	+0.8
ZRD	Zardab	0.87	271	P	Pb	13 01 16.1	+1.2
ZRD				S	Sn	13 01 30.8	+2.6
NDR	Nardaran	0.95	70	P	Pn	13 01 18.3	+1.3
NDR				S	Sn	13 01 36.0	+5.6
NDR	Nardaran	0.95	70	Pg	Pn	13 01 18.3	+1.3
QBL	Gabala	1.01	313	P	Pg	13 01 17.1	-0.5
QBL				S	Sn	13 01 35.5	+3.5
QBL	Gabala	1.01	313	Pg	Pg	13 01 17.0	-0.5
GALA	Gala	1.03	81	P	Pn	13 01 20.4	+2.2
GALA				S	Sn	13 01 37.4	+4.9
XNQ	Khinaliq	1.04	331	P	Pg	13 01 17.8	-0.3
XNQ				S	Sn	13 01 36.1	+3.1
XNQ	Khinaliq	1.04	331	Pg	Pg	13 01 17.9	-0.3
GLBA	Clilabad	1.07	198	P	Pn	13 01 19.4	+0.8
GLBA				S	Sn	13 01 36.0	+2.7
GLBA	Clilabad	1.07	198	Pg	Pn	13 01 19.4	+0.8
BLQ	Beylaqan	1.11	241	P	Pg	13 01 19.1	-0.2
BLQ				S	Sn	13 01 36.6	+2.4
BLQ	Beylaqan	1.11	241	Pg	Pb	13 01 19.6	+0.6
QUBA	Quba, Azerbaij	1.12	347	P	Pn	13 01 20.4	+1.0
QUBA				S	Sn	13 01 39.4	+4.7
QUB	Quba	1.17	343	Pg	Pb	13 01 20.9	+0.8
BRDA	Brd	1.25	271	P	Pn	13 01 22.7	+1.5
BRDA				S	Sn	13 01 41.5	+3.7
AGDM	Agdam	1.32	264	Pn	Pg	13 01 22.8	-0.5
AGDM				Sn	Sn	13 01 44.3	+4.8
QSAR	Qusar	1.32	342	Pn	Pb	13 01 23.5	+0.9
QSAR				Sn	Sn	13 01 43.9	+4.3
QSAR	Qusar	1.32	342	Pg	Pb	13 01 23.7	+1.1
QRD	Qoradiz	1.40	236	Pn	Pn	13 01 23.5	+0.3
QRD				Sn	Sn	13 01 43.8	+2.2
QRD	Qoradiz	1.40	236	Pg	Pn	13 01 23.9	+0.7
MNGR	Mingechevir, A	1.41	292	Pn	Pb	13 01 25.1	+0.8
MNGR				Sn	Sn	13 01 46.3	+4.4
YRD	Yardimli	1.42	198	Pn	Pn	13 01 23.7	0.0
YRD				Sn	Sn	13 01 45.6	+3.4
YRD	Yardimli	1.42	198	Pg	Pn	13 01 23.6	0.0
KSMR	Kasumkent	1.44	339	*e*Pg	Pg	13 01 25.1	-0.5
	290nm,0.4s						
KSMR				*e*Sg	Sn	13 01 49.1	+6.6
	1µm,0.4s						
KSMR	Kasumkent	1.44	339	*e*PN	Pg	13 01 25.1	-0.5
KSMR				*e*S	Sn	13 01 49.1	+6.6
KSMR				pmax	pmax		
	comp=Z,290nm,0.4s						
SEKA	Sheki	1.55	308	Pn	Pn	13 01 25.7	+0.4
SEKA				Sn	Sg	13 01 48.6	+0.6
SEKA	Sheki	1.55	308	Pg	Pn	13 01 26.9	+1.6
LKRN	Lenkeran, Azer	1.55	181	Pg	Pn	13 01 24.9	-0.4
LKRN				Sn	Sg	13 01 49.1	+1.2
LKRN	Lenkeran, Azer	1.55	181	Pg	Pn	13 01 26.0	+0.8
LRK	Lerik	1.66	193	Pg	Pn	13 01 26.7	-0.2
LRK				Sn	Sg	13 01 50.9	-0.5
LRK	Lerik	1.66	193	Pg	Pn	13 01 26.8	-0.1
ASTR	Astara	1.70	181	Pg	Pn	13 01 26.7	-0.6
ASTR				Sn	Sb	13 01 51.2	+0.8
ASTR	Astara	1.70	181	Pg	Pn	13 01 26.9	-0.4
DRN	Derbent	1.80	348	*e*Pg	Pn	13 01 27.2	-1.6
	comp=Z,106nm,0.6s						
DRN				*e*Sg	Sn	13 01 53.5	+2.1
	comp=Z,413nm,0.4s						
DRN	Derbent	1.80	348	*e*PN	Pn	13 01 27.1	-1.6
DRN				pmax	pmax		
	comp=Z,106nm,0.6s						
GAS1	Astara - Iran	1.87	179	Pn	Pn	13 01 31.5	+1.8
GANJ	Ganja	1.94	282	Pg	Pn	13 01 31.5	+0.9
GANJ				Sn	Sn	13 01 57.6	+2.7
URKR	Urkarakh	2.10	335	*e*Pn	Pn	13 01 34.0	+1.0
	comp=Z,42nm,0.1s						
URKR				*e*Sn	Sg	13 02 05.6	+0.1
	comp=Z,128nm,0.1s						
URKR	Urkarakh	2.10	335	*e*PN	Pn	13 01 33.9	+1.0
URKR				*e*S	Sg	13 02 05.6	+0.1
URKR				pmax	pmax		
	comp=Z,42nm,0.1s						
ZKTA	Zakatala	2.16	310	Pn	Pb	13 01 36.8	-0.1
ZKTA				Sn	Sg	13 02 06.6	-0.7
KMKR	Kumukh	2.27	326	*e*PN	Pn	13 01 37.6	+2.2
KMKR				*e*S	Sg	13 02 11.8	+0.7
KMKR				pmax	pmax		
	comp=Z,64nm,0.7s						
SGKR	Sergokala	2.36	339	*e*PN	Pn	13 01 39.1	+2.6
GDB	GEDABAY	2.38	282	Pn	Pn	13 01 38.8	+2.0
GDB				Sn	Sn	13 02 08.7	+2.7
IHRS	Heris	2.38	216	Pn	Pn	13 01 38.6	+1.7
ORD	Ordubad	2.56	239	Pn	Pn	13 01 40.9	+1.8
ORD				Sn	Sb	13 02 15.7	+0.6

ISRB	Sarab	2.59	201	Pn	Pn	13 01 41.8	+2.0
SBZ	Shahbuz	2.66	252	Pn	Pn	13 01 42.6	+2.0
SBZ				Sn	Sn	13 02 15.9	+3.2
ARKR	Arakani	2.71	330	ePN	Pn	13 01 44.3	+3.0
QZX	Qazax, Azerbai	2.74	288	Pn	Pn	13 01 43.9	+2.3
QZX				Sn	Sn	13 02 18.8	+4.2
NAX	Nakhchivan	2.78	248	Pn	Pn	13 01 44.8	+2.5
NAX				Sn	Sb	13 02 20.6	-1.0
IMRD	Marand	2.86	238	Pn	Pn	13 01 45.6	+2.1
MAK	Makhachkala	2.87	340	⇑iPN	Pn	13 01 45.6	+2.2
MAK				eS	Sn	13 02 22.3	+4.6
MAK				pmax	pmax		
	comp=Z,224nm,0.3s						
MAK				smax	smax		
	comp=E,322nm,0.6s						
MAK				smax	smax		
	comp=E,294nm,0.4s						
MAK				MLR	MLR		
	comp=Z,268nm,12.0s						
UNCR	Uncukul	2.88	329	ePn	Pn	13 01 45.3	+1.7
	comp=Z,18nm,0.3s						
UNCR				eSn	Sb	13 02 26.0	+1.5
	comp=Z,65nm,0.6s						
UNCR	Uncukul	2.88	329	ePN	Pn	13 01 45.3	+1.7
UNCR				eS	Sb	13 02 25.9	+1.5
UNCR				pmax	pmax		
	comp=Z,18nm,0.3s						
KRNR	Karanay	2.94	331	ePn	Pn	13 01 45.4	+0.9
	comp=Z,14nm,0.8s						
KRNR				eSn	Sb	13 02 26.1	0.0
	comp=Z,39nm,0.6s						
KRNR	Karanay	2.94	331	ePN	Pn	13 01 45.3	+0.9
KRNR				eS	Sb	13 02 26.0	0.0
KRNR				pmax	pmax		
	comp=Z,14nm,0.8s						
BTLR	Botlikh	3.09	322	⇑ePN	Pn	13 01 48.1	+1.6
ISHB	Shabestar	3.17	232	Pn	Pn	13 01 49.7	+1.9
IHSH	Hashtrud	3.19	203	Pn	Pn	13 01 50.1	+2.0
DLMR	Dylym	3.25	330	ePN	Pn	13 01 51.9	+3.3
DVE	Vedeno	3.36	324	⇑ePN	Pn	13 01 51.6	+1.3
ZNJK	Zanjan	3.59	182	Pn	Pn	13 01 53.5	0.0
MZPU	Pul - Mazandar	4.39	150	Pn	Pn	13 02 03.3	-1.2
QABG	Abgarm-Qazvin	4.59	172	Pn	Pn	13 02 06.5	-0.7
IDMV	Damavand	5.32	150	Pn	Pn	13 02 18.4	+1.0
IFIR	Firoozkooh	5.56	145	Pn	Pn	13 02 20.9	+0.2
IKIA	Kiasar	5.57	135	Pn	Pn	13 02 19.9	-0.9
KBZ	Khabaz	5.61	310	Pn	Pn	13 02 23.3	+2.3
	comp=Z,0.2nm,0.3s,baz=24,slow=22,SNR=1.4						
	comp=Z,2.2nm,0.7s						
IVRN	Varamin	5.74	155	Pn	Pn	13 02 23.6	+0.6
ILAS	Lasjerd	5.87	145	Pn	Pn	13 02 25.3	+0.4
ARXR	Arkhyz	6.52	303	⇑eP	Pn	13 02 37.4	+3.7
KRSH	Karshahi	6.82	156	Pn	Pn	13 02 38.5	+0.6
OBN	Obninsk	16.95	335	eP	P	13 04 58.7	+2.2
OBN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ARTI	Arti	17.32	18	P	Pn	13 04 58.8	-0.4
	comp=Z,0.7nm,0.3s,baz=213,slow=7.4,SNR=5.3						
	comp=Z,2.9nm,0.4s						
KIRV	Kirov	18.34	1	LR	LR	13 12 38.3	
	comp=Z,58nm,19.7s,baz=167,slow=38						
AAK	Ala-Archa	19.37	75	P	P	13 05 21.6	-2.0
	comp=Z,0.2nm,0.3s,baz=269,slow=14,SNR=3.5						
	comp=Z,0.9nm,0.5s						
BORK	Borovoye	19.43	42	⇓eP	Pn	13 05 26.1	+1.0
BORK				pmax	pmax		
	comp=Z,19nm,4.8s						
BVAR	Borovoye Array	19.46	42	P	P	13 05 22.3	-1.9
	baz=235,slow=10,SNR=7.7						
BVAR				LR	LR	13 14 49.6	
	comp=Z,48nm,20.1s,baz=217,slow=43						
	comp=Z,1.9nm,0.7s						
KLMR	Klimovskoe	21.40	347	eP	P	13 05 46.1	+0.9
KLMR				pmax	pmax		
	comp=Z,15nm,1.0s						
KURBB	Kurchatov Arra	23.13	53	P	P	13 06 01.9	-1.7
	comp=Z,1.2nm,0.2s,baz=261,slow=10,SNR=5.5						
KURBB				LR	LR	13 15 05.1	
	comp=Z,56nm,21.1s,baz=160,slow=37						
	comp=Z,1.2nm,0.2s						
KURK	Kurchatov	23.21	53	P	P	13 06 01.9	-2.6
MK31	Makanchi Array	25.00	64	deP	P	13 06 26.3	+4.9
MKAR	Makanchi Array	25.00	64	P	P	13 06 20.2	-1.2
	comp=Z,1.1nm,0.6s,baz=257,slow=10,SNR=9.7						
	comp=Z,1.1nm,0.6s						
FINES	FINESS Array B	25.35	334	P	P	13 06 23.6	-0.7
	comp=Z,1.0nm,0.6s,baz=134,slow=10.0,SNR=9.7						
	comp=Z,1.0nm,0.6s						
GERES	GERESS Array B	26.26	301	P	P	13 06 31.5	-1.3
	comp=Z,0.1nm,0.4s,baz=99,slow=8.2,SNR=1.6						
	comp=Z,0.1nm,0.4s						
ZALV	Zalesovo Beam	27.73	48	P	P	13 06 45.5	-0.4
	comp=Z,0.3nm,0.3s,baz=240,slow=12,SNR=1.5						
	comp=Z,0.3nm,0.3s						
HFS	Hagfors	29.47	324	P	P	13 06 59.7	-1.6
	comp=Z,0.7nm,0.5s,baz=123,slow=10,SNR=8.7						
	comp=Z,0.7nm,0.5s						
NB2	NORSAR Subarra	30.97	325	P	P	13 07 12.5	-2.1
	comp=Z,1.7nm,0.8s,baz=118,slow=8.6						
NOA	NORSAR Array B	30.97	325	P	P	13 07 13.4	-1.2
	comp=Z,0.1nm,0.4s,baz=107,slow=9.3,SNR=5.8						
	comp=Z,0.1nm,0.4s						
ESDC	Sonseca Array	39.95	287	P	P	13 08 30.3	-1.7
	comp=Z,0.6nm,0.8s,baz=77,slow=11,SNR=2.7						
	comp=Z,0.6nm,0.8s						
ULN	Ulaanbaatar	41.65	59	ceP	P	13 08 51.6	+5.5
ULN				pmax	pmax		
	comp=Z,6.0nm,2.5s						
CMAR	Chiang Mai Arr	48.07	102	P	P	13 09 35.4	-1.9
	comp=Z,0.8nm,0.5s,baz=311,slow=6.3,SNR=6.2						
	comp=Z,0.8nm,0.5s						
TORD	Torodi Ar. Bea	49.25	250	P	P	13 09 44.1	-2.3
	comp=Z,0.3nm,0.6s,baz=40,slow=14,SNR=1.5						
	comp=Z,0.3nm,0.6s						
YAK	Yakutsk	51.32	37	LR	LR	13 35 49.5	
	comp=Z,46nm,18.4s,baz=275,slow=41						
KSRS	Korea Array	59.67	65	P	P	13 10 59.3	-2.6
	comp=Z,0.5nm,0.4s,baz=295,slow=6.7,SNR=4.9						
	comp=Z,0.5nm,0.4s						

NOU 24 13:03:14.7, 17°.63S×169°.92E, h25^{km}, MLv4.3/8, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTV	Rentapao	1.43	263	P	Pn	13 03 37.0	-2.1
RTV	Rentapao	1.43	263	S	Sb	13 03 59.6	+1.0
RTV	Rentapao	1.43	263	P	Pn	13 03 37.3	-1.8
YATNC	Mamie plateau,	5.25	212	P	Pn	13 04 31.9	+0.3
	16nm,1.2s						
DZM	Mont Dzumac	5.50	216	P	Pn	13 04 34.3	-0.8

*NOU **24** 13:38:18.3, 32°.46S×179°.30W, h394^{km}, mb4.3/26, South of Kermadec Islands*

*IDC **24** 13:38:19.0±2.0, 32°.14S×179°.71E, h338^{km}±19^{km}, mb3.7/6, mbtmp4.4/8, Error ellipse: s-maj=21.0km s-min=14.6km az=7.0*

*WEL **24** 13:38:21.6±1.0, 32°S±6°×18°0W±1°6, h282^{km}±18^{km}, mB5.4/11, ML5.0/12, MLv5.3/13, Mw(mB)4.8/11, Error ellipse: s-maj=22.0km s-min=5.2km az=108.2, confirmed*

*NEIC **24** 13:38:33.5±1.4, 33°.45S±0°.09×178°.3E±0°.2, h404^{km}±5^{km}, mb4.1/15, Error ellipse: s-maj=21.7km s-min=12.5km az=88.0*

ISC 24 13:38:28.4±0.9, **32°.96S**±0°.08×**179°.3E**±0°.1, **h400^{km}, n211, σ1^{s}90**/174, **mb4.0**/16, **3C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	4.40	34	P	Pn	13 39 22.1	-22
GLKZ				S	S	13 40 08.0	-38
RAO	Raoul Island	4.41	34	Pn	Pn	13 39 58.6	+14
MXZ	Matakaoa Point	4.66	189	Pn	Pn	13 39 46.4	-0.5
MXZ				Sn	S	13 40 45.8	-4.9
MXZ	Matakaoa Point	4.66	189	P	Pn	13 39 46.3	-0.5
MXZ	Matakaoa Point	4.66	189	P	Pn	13 39 47.1	+0.2
MXZ				S	S	13 40 49.5	-1.1
KUZ	Kuaotunu	4.77	217	P	Pn	13 39 49.4	+1.4
KUZ	Kuaotunu	4.77	217	P	Pn	13 39 49.7	+1.8
WMGZ	Waiomatatini S	4.90	188	P	Pn	13 39 46.6	-2.7
HAZ	Te Kaha	4.94	194	P	Pn	13 39 46.2	-3.5
HAZ				S	S	13 40 56.4	+0.6
PKGZ	Pakihiroa	5.00	191	P	Pn	13 39 47.1	-3.1
PKGZ				S	S	13 40 57.0	+0.1
WCZ	Waipu Caves	5.04	232	P	Pn	13 39 51.5	+0.8
WIAZ	Waiheke Island	5.12	220	P	Pn	13 39 53.3	+1.8
RUGZ	Raukumara Rang	5.16	194	P	Pn	13 39 49.0	-3.2
PUZ	Puketiti	5.17	189	P	Pn	13 39 48.6	-3.5
PUZ				S	S	13 41 00.9	+0.6
OUZ	Omahuta	5.22	243	P	Pn	13 39 52.4	-0.2
MBAZ	Motutapu North	5.23	222	P	Pn	13 39 54.9	+2.2
TWGZ	Tauwhareparae	5.31	191	P	Pn	13 39 51.1	-2.6
MKAZ	Moumakai	5.33	218	P	Pn	13 39 56.0	+2.2
ETAZ	East Tamaki Re	5.35	221	P	Pn	13 39 56.4	+2.5
OPRZ	Ohinepanea	5.36	204	P	Pn	13 39 53.3	-0.7
TGRZ	Tauranga	5.36	206	P	Pn	13 39 56.0	+1.9
MARZ	Manawahe	5.44	202	P	Pn	13 39 56.0	+1.0
EDRZ	Edgecumbe	5.54	201	P	Pn	13 39 57.6	+1.6
MWZ	Matawai	5.55	194	P	Pn	13 39 53.2	-2.9
LIRZ	Lichensteins R	5.56	204	P	Pn	13 39 59.4	+3.3
URZ	Urewera	5.58	198	P	Pn	13 39 53.1	-3.2
	61nm,0.3s,baz=294,slow=2.4,SNR=59						
URZ				S	S	13 41 10.8	+2.8
	225nm,0.5s,baz=242,slow=23,SNR=23						
URZ	Urewera	5.58	198	P	Pn	13 39 54.4	-1.9
URZ	Urewera	5.58	198	P	Pn	13 39 53.2	-3.1
URZ				S	S	13 41 09.8	+1.9
KMRZ	Kaimai	5.58	208	P	Pn	13 39 58.8	+2.3
AWAZ	Awhitu Peninsu	5.58	221	P	Pn	13 39 59.7	+3.3
CNGZ	Carnagh Statio	5.58	189	P	Pn	13 39 55.3	-1.1
TKGZ	Te Karaka	5.59	191	P	Pn	13 39 53.3	-3.2
KARZ	Kaharoa	5.62	205	P	Pn	13 39 59.1	+2.3
OMRZ	Omania	5.65	204	P	Pn	13 39 59.9	+2.7
TOZ	Tahuroa Road	5.67	212	P	Pn	13 39 59.2	+1.8
NGRZ	Ngongotaha	5.71	205	P	Pn	13 40 00.9	+3.0
TARZ	Mount Tarawera	5.73	202	P	Pn	13 40 00.1	+2.0
RAGZ	Rawiri	5.73	195	P	Pn	13 39 55.5	-2.6
HLRZ	Highlands Stat	5.79	203	P	Pn	13 40 01.0	+2.3
RRRZ	Republican Roa	5.82	202	P	Pn	13 40 00.1	+1.1
RIGZ	Rimuhau	5.87	192	P	Pn	13 39 56.2	-3.4
RIGZ				S	S	13 41 14.8	+1.0
MUGZ	Murupara	5.87	199	P	Pn	13 39 57.2	-2.4
HSRZ	Hossack Road	5.88	204	P	Pn	13 40 02.1	+2.5
HRRZ	Handcock Road	5.94	203	P	Pn	13 40 02.3	+2.0
RTZ	Ruatahuna	5.95	198	Pn	Pn	13 39 57.1	-3.3
RTZ	Ruatahuna	5.95	198	P	Pn	13 39 57.3	-3.1
PRRZ	Plateau Road	6.00	202	P	Pn	13 40 01.5	+0.5
SNGZ	Shannon Statio	6.02	194	P	Pn	13 39 58.6	-2.6
PRGZ	Paritu Road	6.06	190	P	Pn	13 39 59.4	-2.2
ALRZ	Allen Road	6.08	202	P	Pn	13 40 02.2	+0.4
WPRZ	Whakapapatarin	6.10	204	P	Pn	13 40 04.1	+2.0
TLZ	Tolley Road	6.16	208	P	Pn	13 40 05.8	+3.0
KNZ	Kokohu	6.19	192	P	Pn	13 40 01.1	-1.8
KUTZ	Kaahu Road	6.19	206	P	Pn	13 40 05.5	+2.5
MTHZ	Maungataniwha	6.20	198	P	Pn	13 40 01.1	-2.1
RAHZ	Arahi	6.21	196	P	Pn	13 40 00.4	-2.8
MHGZ	Mahia Peninsul	6.28	190	P	Pn	13 40 02.9	-1.1
WHTZ	Whakaora	6.30	204	P	Pn	13 40 04.8	+0.5
MRHZ	Matea Rd	6.30	201	P	Pn	13 40 04.8	+0.5
WHHZ	Waihua	6.33	194	P	Pn	13 40 04.8	+0.3
WATZ	Wairara	6.42	206	P	Pn	13 40 07.8	+2.2
NMHZ	Naumai	6.44	197	P	Pn	13 40 03.8	-2.0
RATZ	Rangitukua	6.54	205	P	Pn	13 40 08.7	+1.8
ARHZ	Aropaoanui	6.56	196	P	Pn	13 40 06.1	-0.9
BKZ	Black Stump Fm	6.59	199	Pn	Pn	13 40 05.6	-1.9
BKZ	Black Stump Fm	6.59	199	P	Pn	13 40 06.7	-0.8
BKZ	Black Stump Fm	6.59	199	P	Pn	13 40 05.4	-2.0
HIZ	Hauiti	6.60	212	P	Pn	13 40 11.2	+3.7
HIZ	Hauiti	6.60	212	P	Pn	13 40 11.1	+3.6
RITZ	Rihia Road	6.61	204	P	Pn	13 40 09.2	+1.5
KATZ	Kakaramea	6.67	205	P	Pn	13 40 09.9	+1.5
NTVZ	North Tongarir	6.78	204	P	Pn	13 40 11.0	+1.3
TMVZ	Te Maari	6.79	204	P	Pn	13 40 10.9	+1.1
KRVZ	Karewarewa	6.79	205	P	Pn	13 40 11.0	+1.3
MCHZ	McNeill Hill	6.80	197	P	Pn	13 40 07.3	-2.4
ETVZ	East Tongariro	6.80	204	P	Pn	13 40 10.3	+0.3
WTVZ	West Tongariro	6.83	205	P	Pn	13 40 10.9	+0.7
NNVZ	North Ngauruho	6.83	205	P	Pn	13 40 11.2	+0.9
TWVZ	Taurewa	6.84	206	P	Pn	13 40 11.6	+1.2
OTVZ	Oturere	6.84	204	P	Pn	13 40 08.8	-1.6
KWHZ	Kaweka Forest	6.85	199	P	Pn	13 40 08.5	-1.9
SNVZ	South Ngauruho	6.87	204	P	Pn	13 40 09.7	-1.1
NGZ	Ngauruhoe	6.88	204	P	Pn	13 40 12.0	+1.2
CKHZ	Cape Kidnapper	6.92	194	P	Pn	13 40 11.1	+0.1
COVZ	Chateau Observ	6.92	205	P	Pn	13 40 12.1	+0.9
TUVZ	Tukino	6.94	204	P	Pn	13 40 12.0	+0.5
FWVZ	Far West T-bar	6.97	204	P	Pn	13 40 12.3	+0.4
MAVZ	Matarangi	6.97	204	P	Pn	13 40 12.5	+0.4
WHVZ	Whangaehu Hut	6.98	204	P	Pn	13 40 12.6	+0.6
TRVZ	Turoa	7.01	204	P	Pn	13 40 12.6	+0.3
WNVZ	Wahianoa	7.01	204	P	Pn	13 40 10.6	-1.8
MOVZ	Moawhango	7.04	203	P	Pn	13 40 11.6	-0.9
PKVZ	Pokaka	7.07	206	P	Pn	13 40 12.4	-0.4
KRHZ	Kereru	7.07	198	P	Pn	13 40 10.5	-2.3
KAHZ	Kahuranaki	7.09	195	P	Pn	13 40 10.3	-2.7
MTVZ	Mangateitei	7.11	204	P	Pn	13 40 14.2	+0.9
VRZ	Vera Road	7.16	209	P	Pn	13 40 16.3	+2.6
PXZ	Pawanui	7.32	195	P	P	13 40 14.0	-2.1
PNHZ	Pukenui	7.37	199	P	Pn	13 40 12.8	-3.3
DREZ	Durham Road	7.45	212	P	P	13 40 21.5	+4.0
WPHZ	Waipukurau	7.45	197	P	P	13 40 16.7	-0.9
PKE	Pukeiti	7.55	213	P	P	13 40 22.8	+4.1
TSZ	Takapari Road	7.57	200	P	Pn	13 40 15.3	-3.1
LREZ	Lake Rotokare	7.59	210	P	P	13 40 21.1	+2.1
PREZ	Palmer Road	7.59	211	P	P	13 40 22.6	+3.4
PRHZ	Porangahau	7.60	195	P	P	13 40 18.2	-1.0
WAZ	Wanganui	7.61	206	P	P	13 40 19.6	+0.2
KHEZ	Kahui Hut	7.62	212	P	P	13 40 22.3	+2.8
KHEZ	Kahui Hut	7.62	212	P	P	13 40 23.4	+3.9
NBEZ	Newall Road No	7.66	213	P	P	13 40 24.2	+4.3
DVHZ	Dannevirke	7.74	198	P	P	13 40 18.5	-2.3
ANWZ	Angora Road	7.82	196	P	P	13 40 19.9	-1.7
POWZ	Post Office Ro	7.93	200	P	P	13 40 22.0	-0.9
PRWZ	Pori Road	8.03	198	P	P	13 40 23.9	-0.2
BFZ	Birch Farm	8.08	197	P	Pn	13 40 21.3	-2.9
BFZ	Birch Farm	8.08	197	P	P	13 40 23.8	-0.8
BFZ	Birch Farm	8.08	197	P	P	13 40 22.8	-1.7
MRZ	Mangatainoka R	8.24	200		Pn	13 40 22.8	-3.2
MRZ	Mangatainoka R	8.24	200	P	Pn	13 40 22.9	-3.1
TIWZ	Tintock	8.26	198	P	P	13 40 25.6	-1.0
CPWZ	Castlepoint	8.31	196	P	P	13 40 27.6	+0.5
HOWZ	Holdsworth Sta	8.47	200	P	P	13 40 26.1	-2.8
OGWZ	Otaki Gorge	8.50	201	P	P	13 40 26.2	-3.0
TMWZ	Te Maipa	8.57	197	P	P	13 40 28.0	-2.0
KIW	Kapiti Island	8.62	203	P	P	13 40 29.7	-0.9
MTW	Mount Morrison	8.72	199	P	P	13 40 30.9	-0.8
CAW	Cannon Point	8.80	201	P	P	13 40 29.7	-2.8
TRWZ	Traveller	8.90	198	P	P	13 40 33.5	-0.1
DUWZ	D'Urville Isla	8.92	207	P	P	13 40 33.4	-0.5
MSWZ	Moikau Station	9.03	200		Pn	13 40 31.9	-3.2
MSWZ	Moikau Station	9.03	200	P	P	13 40 34.1	-1.0
WEL	Wellington	9.05	202	P	P	13 40 34.0	-1.3
SNZO	South Karori	9.10	202	P	P	13 40 34.8	-1.0
BHW	Baring Head	9.13	201	P	P	13 40 35.3	-0.9
TCW	Tory Channel	9.15	204		P	13 40 34.1	-2.3
TCW	Tory Channel	9.15	204	P	P	13 40 34.8	-1.7
TUWZ	Tuamarina	9.46	205	P	P	13 40 37.9	-2.0
TUWZ	Tuamarina	9.46	205	P	P	13 40 39.1	-0.7
NNZ	Nelson	9.49	208	P	P	13 40 39.3	-0.9
TKNZ	Takaka Hill	9.51	210	P	P	13 40 38.7	-1.7
TKNZ	Takaka Hill	9.51	210	P	P	13 40 38.9	-1.5
QRZ	Quartz Range	9.52	213	P	P	13 40 41.4	+0.8
QRZ	Quartz Range	9.52	213	P	P	13 40 40.6	0.0
CMWZ	Cape Campbell	9.65	203	P	P	13 40 43.5	+1.5
BSWZ	Blackbirch Sta	9.74	205	P	P	13 40 43.5	+0.5
MRNZ	Matariki Terra	9.89	210	P	Pn	13 40 45.0	-0.1
THZ	Tophouse	10.14	208		Pn	13 40 45.8	-2.1
THZ	Tophouse	10.14	208	P	Pn	13 40 46.3	-1.6
KHZ	Kahutara	10.47	204		Pn	13 40 49.4	-2.3
KHZ	Kahutara	10.47	204	P	Pn	13 40 51.2	-0.5
KHZ	Kahutara	10.47	204	P	Pn	13 40 51.0	-0.7
DSZ	Denniston Nort	10.59	212	P	Pn	13 40 52.6	-0.6
GVZ	Greta Valley S	11.13	204	P	Pn	13 40 58.7	-0.7
LTZ	Lake Taylor	11.25	207	P	Pn	13 41 00.3	-0.6
AMCZ	Amberley	11.45	205	P	Pn	13 41 03.7	+0.6
INZ	Inchbonnie	11.54	210	P	Pn	13 41 04.5	+0.4
OXZ	Oxford	11.81	207		P	13 41 01.4	-4.4
OXZ	Oxford	11.81	207	P	Pn	13 41 05.9	-1.3
RPZ	Rata Peaks	12.52	209	P	Pn	13 41 16.0	+0.5
JCZ	Jackson Bay	13.79	213	P	Pn	13 41 29.7	-0.5
ODZ	Otahua Downs	13.79	206	P	Pn	13 41 28.7	-1.5
OUENC	Ouen Island, N	15.19	311	P	P	13 41 39.4	-3.7
MSVF	Nonsavu	15.20	356	P	P	13 41 30.0	-13
YATNC	Mamie plateau,	15.42	312	P	P	13 41 43.0	-2.6
DZM	Mont Dzumac	15.70	310	P	P	13 41 39.7	-9.0
	4.8nm,0.6s,baz=163,slow=20,SNR=16						
DZM	Mont Dzumac	15.70	310	P	P	13 41 45.5	-3.1
CMSA	Cobar Meteorol	28.36	264	P	P	13 43 49.8	+1.9
STKA	Stephens Creek	31.71	262	P	P	13 44 18.5	+1.4
	2.3nm,0.5s,baz=107,slow=7.3,SNR=8.9						
	2.3nm,0.5s						
STKA	Stephens Creek	31.71	262	P	P	13 44 19.4	+2.4
CTA	Charters Tower	32.05	285	P	P	13 44 18.9	-1.3
CTAO	Charters Tower	32.05	285	P	P	13 44 19.0	-1.1
CTAO				IAmb	IAmb	13 44 21.1	
	comp=Z,6.8nm,0.8s						
CTAO	Charters Tower	32.05	285	P	P	13 44 18.9	-1.3
INKA	Innaminka	33.51	269	P	P	13 44 33.3	+0.8
HTT	Hallett	33.61	258	P	P	13 44 35.3	+1.9
MTSU	Mount Surprise	34.63	287	P	P	13 44 40.9	-1.3
BBOO	Buckleboo	36.09	258	P	P	13 44 55.1	+0.8
QIS	Mount Isa	37.29	279	P	P	13 45 03.6	-0.8
COEN	Coen	37.87	291	P	P	13 45 07.0	-2.3
COEN				IAmb	IAmb	13 45 07.8	
	comp=Z,6.7nm,0.8s						
AS31	Alice Springs	40.73	271	P	P	13 45 31.9	-0.6
AS31				IAmb	IAmb	13 45 33.3	
	comp=Z,2.1nm,0.7s						
ASAR	Alice Springs	40.73	271	P	P	13 45 31.8	-0.8
	comp=Z,7.5nm,0.8s,baz=106,slow=7.6,SNR=126						
ASAR				S	S	13 51 18.0	+5.2
	comp=Z,1.0nm,1.1s,baz=108,slow=15,SNR=6.8						
	comp=Z,7.5nm,0.8s						
WR0	Warramunga Arr	41.78	277	P	P	13 45 39.5	-1.5
WR0				IAmb	IAmb	13 45 40.2	
	comp=Z,10nm,1.0s						
WR8	Warramunga Arr	41.82	277	P	P	13 45 39.9	-1.4
WRAB	Tennant Creek	41.95	277	P	P	13 45 40.9	-1.5
WRAB				IAmb	IAmb	13 45 41.5	
	comp=Z,9.4nm,0.8s						
WRAB	Tennant Creek	41.95	277	P	P	13 45 40.7	-1.7
WRA	Warramunga Arr	41.96	276	P	P	13 45 40.6	-1.8
	comp=Z,7.8nm,0.4s,baz=114,slow=8.1,SNR=199						
WRA				PcP	PP	13 47 25.9	-3.7
	comp=Z,0.4nm,0.6s,baz=124,slow=3.5,SNR=2.4						
	comp=Z,7.8nm,0.4s						
WRA	Warramunga Arr	41.96	276	P	P	13 45 39.8	-2.6
WB0	Warramunga Arr	41.99	277	P	P	13 45 41.2	-1.5
MTN	Manton Dam	48.17	283	P	P	13 46 27.7	-2.9
MTN				IAmb	IAmb	13 47 07.3	
	comp=Z,9.0nm,1.1s						
KNRA	Kununurra	48.66	278	P	P	13 46 33.0	-1.2
KNRA				IAmb	IAmb	13 46 35.4	
	comp=Z,8.5nm,0.9s						
FITZ	Fitzroy Crossi	50.10	273	P	P	13 46 44.1	-0.8
QSPA	South Pole Qui	57.16	180	P	P	13 47 38.5	+3.5
QSPA				IAmb	IAmb	13 47 40.0	
	comp=Z,6.9nm,0.9s						
BELA	Belgrano 2	67.56	173	P	P	13 48 44.7	+2.0
SNAA	Sanae	75.65	179	⇑P	P	13 49 32.9	+2.4
	comp=Z,14nm,0.4s						
SNAA	Sanae	75.65	179	P	P	13 49 32.3	+1.8
	comp=Z,0.7nm,0.3s,baz=190,slow=11,SNR=10						
	comp=Z,0.7nm,0.3s						
SNAA	Sanae	75.65	179	P	P	13 49 32.7	+2.3
SNAA				IAmb	IAmb	13 49 43.9	
	comp=Z,5.4nm,1.3s						
VNA3	Neumayer Olymp	75.90	177	⇑P	P	13 49 33.9	+2.1
	comp=Z,16nm,0.7s						
VNA2	Neumayer--Watz	76.31	178	⇑P	P	13 49 36.8	+2.8
	comp=Z,5.6nm,0.6s,baz=157,slow=5.2						
PLCA	Paso Flores	82.45	134	P	P	13 50 07.7	+0.2
	comp=Z,1.1nm,0.6s,baz=225,slow=8.6,SNR=4.1						
	comp=Z,1.1nm,0.6s						
NVAR	Mina Array Bea	91.69	44	P	P	13 50 46.3	-5.4
	comp=Z,0.6nm,0.7s,baz=218,slow=7.1,SNR=4.7						
	comp=Z,0.6nm,0.7s						
PZH	PanZhiHua	94.44	299	P	P	13 50 58.3	-6.2
MKAR	Makanchi Array	117.61	310	PKP	PKPdf	13 56 23.3	-4.1
	comp=Z,0.2nm,0.6s,baz=126,slow=2.0,SNR=2.6						
ZALV	Zalesovo Beam	118.37	318	PKP	PKPdf	13 56 22.8	-5.7
	comp=Z,0.3nm,0.3s,baz=93,slow=7.9,SNR=1.4						
KURBB	Kurchatov Arra	121.14	313	PKP	PKPdf	13 56 29.1	-4.8
	comp=Z,0.8nm,0.6s,baz=114,slow=2.1,SNR=11						
BVAR	Borovoye Array	126.57	315	PKP	PKPdf	13 56 40.2	-4.1
	comp=Z,0.7nm,0.5s,baz=129,slow=2.0,SNR=5.3						
ARCES	ARCESS Array B	140.54	346	PKP	PKPdf	13 57 07.8	-2.2
	comp=Z,3.2nm,1.1s,baz=42,slow=2.2,SNR=3.5						
FINES	FINESS Array B	146.65	337	PKPbc	PKPdf	13 57 18.1	-2.7
	comp=Z,5.2nm,0.5s,baz=37,slow=4.0,SNR=76						
NB2	NORSAR Subarra	150.84	348	PKP	PKPdf	13 57 29.1	+1.5
	comp=Z,1.1nm,0.5s,baz=18,slow=2.6						
NOA	NORSAR Array B	150.84	348	PKPbc	PKPdf	13 57 28.7	+1.1
	comp=Z,1.9nm,0.6s,baz=16,slow=4.1,SNR=16						
HFS	Hagfors	151.19	345	PKPbc	PKPdf	13 57 29.5	+1.4
	comp=Z,4.3nm,0.7s,baz=94,slow=1.9,SNR=17						
BRTR	Keskin Array B	151.62	294	PKPbc	PKPdf	13 57 32.2	+2.6
	comp=Z,0.7nm,0.5s,baz=129,slow=4.3,SNR=3.7						
AKASG	Malin Array Be	151.77	318	PKPbc	PKPdf	13 57 31.7	+2.5
	comp=Z,1.3nm,0.5s,baz=68,slow=2.1,SNR=4.9						

*IDC **24** 13:52:43.0±0.5, 22°.79S×172°.89W, h0^{km}, mb4.5/17, mbtmp4.5/19, ML4.3/2, MS3.7/20, Error ellipse: s-maj=20.6km s-min=13.8km az=155.0*

*NOU **24** 13:52:42.3, 22°.61S×172°.44W, h0^{km}, mb5.4/15, Tonga Islands Region*

*NEIC **24** 13:52:45.5±1.0, 22°.76S±0°.08×172°.92W±0°.10, h10^{km}±1^{km}, mb4.9/134, Error ellipse: s-maj=15.8km s-min=12.5km az=116.0*

*GCMT **24** 13:52:47.5±0.3, 22°.70S±0°.04×172°.82W±0°.03, h17^{km}±1^{km}, MW4.8/76, Moment Tensor Solution. s17,c18; s76,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.05±.19; M$_{\theta\theta}$0.72±.12; M$_{\phi\phi}$1.33±.11; M$_{r\theta}$-0.04±.34; M$_{\theta\phi}$1.09±.06; M$_{\phi r}$0.55±.30; Best double couple: M$_0$2.17600×10^{16} NP1:ϕ_s47.00000°, δ40.00000°, λ-75.00000°. NP2: ϕ_s207.00000°, δ51.00000°, λ-103.00000°. Principal axes: T 2.1990, Plg6.0000°, Azm306.0000°; N -0.0430, Plg10.0000°, Azm215.0000°; P -2.1530, Plg79.0000°, Azm66.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 13:52:45.0±0.7, **22°.77S**±0°.06×**172°.88W**±0°.06, **h12^{km}**±4^{km}, **h12^{km}:pP-P, n259, σ1^{s}34**/213, **mb5.0**/84, **MS3.7**/18, **15C-5D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.60	37	Pn	Pn	13 53 48.0	-6.3
NIUE				Sn	Sn	13 54 32.2	-15
NIUE	Niue	4.60	37	P	Pn	13 53 48.1	-6.2
NIUE	Niue	4.60	37	P	Pn	13 53 47.5	-6.8
NIUE				S	Sn	13 54 33.2	-14
RAO	Raoul Island	7.88	214	Pn	Pn	13 54 37.9	-1.6
GLKZ	Green Lake	7.89	214	P	Pn	13 54 37.2	-2.4
GLKZ				S	Sn	13 56 01.5	-7.4
AFI	Afiamalu	8.87	7	Pn	Pn	13 54 52.4	-0.8
MSVF	Nonsavu	9.87	299		Pn	13 55 06.0	-0.9
MSVF	Nonsavu	9.87	299	P	Pn	13 55 08.5	+1.6
	88nm,0.8s						
RAR	Rarotonga	12.26	85	Pn	Pn	13 55 33.7	-5.8
	16nm,0.3s,baz=225,slow=7.8,SNR=19						
RAR				Sn	Sn	13 57 38.4	-18
	0.9nm,0.3s,baz=292,slow=11,SNR=1.6						
RAR				LR	LR	13 58 43.8	
	comp=Z,360nm,22.0s,baz=272,slow=29						
RAR	Rarotonga	12.26	85	P	Pn	13 55 32.9	-6.6
RAR	Rarotonga	12.26	85	P	Pn	13 55 33.5	-6.0
RAR				S	Sn	13 57 36.0	-20
FUNA	Funafuti	16.07	331	Pn	Pn	13 56 27.1	-3.9
PKGZ	Pakihiroa	16.93	205	P	Pn	13 56 34.1	-7.7
PKGZ				S	Sn	13 59 37.8	-12
HAZ	Te Kaha	16.96	206	P	Pn	13 56 35.4	-6.7
HAZ				S	Sn	13 59 38.5	-12
OUZ	Omahuta	17.12	221	P	P	13 56 49.3	+3.5
	26nm,1.4s						
TWGZ	Tauwhareparae	17.24	205	P	Pn	13 56 40.2	-5.5
TWGZ				S	Sn	13 59 43.9	-14
TKGZ	Te Karaka	17.52	205	P	Pn	13 56 43.7	-5.4
TKGZ				S	Sn	13 59 49.9	-14
MWZ	Matawai	17.56	206	P	Pn	13 56 43.6	-6.0
MWZ				S	Sn	13 59 50.5	-15
URZ	Urewera	17.66	207	P	Pn	13 56 50.0	-0.9
	1.5nm,0.3s,baz=359,slow=5.0,SNR=13						
URZ				S	Sn	13 59 52.7	-15

	20nm,0.9s,baz=245,slow=17,SNR=8.7						
URZ				LR	LR	14 05 16.4	
	comp=Z,111nm,18.4s,baz=16,slow=43						
	6.6nm,0.6s						
URZ	**Urewera**	17.66	207	P	Pn	13 56 50.0	-0.9
URZ				S	Sn	13 59 51.4	-16
MARNC	**Mare, Loyalty**	17.73	270	Pn	Pn	13 56 48.8	-3.1
MARNC				IAmb	IAmb	13 56 59.1	
	comp=Z,61nm,0.9s						
MARNC	**Mare, Loyalty**	17.73	270	P	P	13 56 56.8	+4.1
	comp=Z,0.4nm,1.5s						
RIGZ	**Rimuhau**	17.79	205	P	Pn	13 56 50.6	-1.9
RIGZ				S	Sn	13 59 57.4	-13
TOZ	**Tahuroa Road**	17.95	211	Pn	Pn	13 56 49.9	-4.5
SNGZ	**Shannon Statio**	18.02	205	P	Pn	13 56 55.4	+0.1
SNGZ				S	Sn	14 00 01.5	-15
RTZ	**Ruatahuna**	18.02	206	Pn	Pn	13 56 49.2	-6.2
PINNC	**Pines Island,**	18.15	267	Pn	Pn	13 56 55.3	-1.7
RAHZ	**Arahi**	18.23	206	P	Pn	13 56 55.7	-2.2
RAHZ				S	Sn	14 00 06.9	-15
MTHZ	**Maungataniwha**	18.28	206	P	Pn	13 56 58.6	+0.1
DVP	**Devils Point**	18.45	282	P	Pn	13 57 03.8	+3.1
	comp=Z,2µm,0.9s						
BKZ	**Black Stump Fm**	18.69	207		P	13 57 02.1	-1.1
BKZ	**Black Stump Fm**	18.69	207	P	P	13 57 02.7	-0.5
MCHZ	**McNeill Hill**	18.84	206	P	P	13 57 05.3	+0.6
KWHZ	**Kaweka Forest**	18.94	206	P	P	13 57 05.8	0.0
OTVZ	**Oturere**	19.04	208	P	Pn	13 57 09.8	+1.9
KAHZ	**Kahuranaki**	19.07	205	P	P	13 57 06.6	-0.7
DZM	**Mont Dzumac**	19.13	268	P	P	13 57 09.2	+1.0
	comp=Z,0.6nm,0.3s,baz=91,slow=16,SNR=12						
	comp=Z,22nm,0.8s						
DZM	**Mont Dzumac**	19.13	268	*e*P	P	13 57 09.1	+1.0
	comp=Z,42nm,0.8s						
DZM				*e*S	Sn	14 00 37.7	-5.6
	comp=Z,758nm,27.5s						
DZM				*e*LR	LR	14 01 33.0	
	comp=Z,415nm,24.4s						
DZM	**Mont Dzumac**	19.13	268		P	13 57 08.8	+0.7
DZM	**Mont Dzumac**	19.13	268	P	Pn	13 57 11.0	+2.0
	comp=Z,29nm,0.8s						
PXZ	**Pawanui**	19.28	204	P	P	13 57 09.7	+0.1
PNHZ	**Pukenui**	19.44	206	P	P	13 57 11.9	+0.5
PNHZ				S	Sn	14 00 29.7	-21
WPHZ	**Waipukurau**	19.47	205	P	P	13 57 12.0	+0.2
WPHZ				S	S	14 00 35.3	-16
PRHZ	**Porangahau**	19.57	205	P	P	13 57 13.1	+0.3
DVHZ	**Dannevirke**	19.78	205	P	P	13 57 17.0	+1.9
PRWZ	**Pori Road**	20.08	205	P	Pn	13 57 22.2	+2.1
BFZ	**Birch Farm**	20.08	205	P	P	13 57 18.4	+0.1
BFZ				IAmb	IAmb	13 57 27.8	
	comp=Z,94nm,0.8s						
BFZ	**Birch Farm**	20.08	205	P	P	13 57 19.4	+1.1
	comp=Z,148nm,0.8s						
BFZ	**Birch Farm**	20.08	205	P	P	13 57 18.3	-0.1
SANVU	**Saraoutou**	20.16	288		P	13 57 19.1	-0.3
SANVU				IAmb	IAmb	13 57 22.9	
	comp=Z,132nm,1.2s						
SANVU	**Saraoutou**	20.16	288	P	Pn	13 57 22.6	+1.3
	comp=Z,83nm,1.3s						
MRZ	**Mangatainoka R**	20.33	206		P	13 57 21.2	+0.2
MRZ				IAmb	IAmb	13 57 28.8	
	comp=Z,74nm,1.0s						
MRZ	**Mangatainoka R**	20.33	206	P	P	13 57 21.2	+0.2
MSWZ	**Moikau Station**	21.10	205		P	13 57 30.5	+1.1
TBI	**Tubuai**	21.56	96	*e*S	S	14 01 29.2	-4.1
	comp=Z,4µm,27.2s						
TBI				*e*LR	LR	14 02 37.2	
	comp=Z,1µm,22.2s						
TBI				*e*LR	LR	14 02 44.1	
	comp=Z,878nm,33.5s						
TUWZ	**Tuamarina**	21.65	208	P	P	13 57 35.3	0.0
BSWZ	**Blackbirch Sta**	21.91	207	P	P	13 57 38.7	+0.6
PPT2	**Papeete2**	22.46	81	*e*S	S	14 01 43.3	-7.6
	comp=Z,1µm,26.0s						
PPT2				*e*LR	LR	14 02 58.1	
	comp=Z,343nm,23.8s						
PPT2				*e*LR	LR	14 03 05.8	
	comp=Z,322nm,24.5s						
PPT	**Papeete**	22.47	81	LR	LR	14 06 00.5	
	comp=Z,131nm,18.2s,baz=209,slow=36						
KHZ	**Kahutara**	22.63	207		P	13 57 45.9	+0.1
KHZ				IAmb	IAmb	13 57 52.8	
	comp=Z,43nm,0.9s						
KHZ	**Kahutara**	22.63	207	P	P	13 57 48.4	+2.6
	comp=Z,41nm,0.7s						
ODZ	**Otahua Downs**	25.99	207	P	P	13 58 19.4	+1.8
ODZ				IAmb	IAmb	13 58 21.4	
	comp=Z,22nm,1.1s						
ODZ	**Otahua Downs**	25.99	207	P	P	13 58 20.2	+2.6
	comp=Z,47nm,1.5s						
EIDS	**Eidsvold**	32.94	258	P	P	13 59 19.3	-0.3
EIDS				IAmb	IAmb	13 59 20.2	
	comp=Z,8.9nm,0.8s						
TAOE	**Nuku Hiva Isla**	34.30	72	*e*LR	LR	14 08 21.9	
	comp=Z,87nm,22.4s						
RKT	**Rikitea**	34.85	98	*e*LR	LR	14 08 44.4	
	comp=Z,3µm,36.2s						
CTA	**Charters Tower**	38.05	266	LR	LR	14 13 13.4	
	comp=Z,68nm,21.1s,baz=56,slow=32						
CTAO	**Charters Tower**	38.05	266		P	14 00 03.1	-0.5
TOO	**Toolangi**	38.57	238	P	P	14 00 08.5	+0.7
PMG	**Port Moresby**	40.48	283	LR	LR	14 14 55.1	
	comp=Z,100nm,19.4s,baz=136,slow=33						
PMG	**Port Moresby**	40.48	283	P	P	14 00 22.0	-2.0
PATS	**Pohnpei**	40.74	313	P	P	14 00 24.4	-1.7
STKA	**Stephens Creek**	41.20	247	P	P	14 00 30.1	+0.4
	comp=Z,5.3nm,0.6s,baz=91,slow=9.9,SNR=15						
STKA				LR	LR	14 16 47.5	
	comp=Z,72nm,18.2s,baz=34,slow=35						
	comp=Z,5.3nm,0.6s						
STKA	**Stephens Creek**	41.20	247	P	P	14 00 29.9	+0.1
STKA				IAmb	IAmb	14 00 31.6	
	comp=Z,32nm,0.8s						
INKA	**Innaminka**	42.04	253	P	P	14 00 36.6	0.0
COEN	**Coen**	42.48	274	P	P	14 00 40.4	0.0
BBOO	**Buckleboo**	45.89	246	P	P	14 01 07.4	-0.1
BBOO				IAmb	IAmb	14 01 09.5	
	comp=Z,8.1nm,1.0s						
AS31	**Alice Springs**	48.67	258		P	14 01 29.1	-0.3
ASAR	**Alice Springs**	48.67	258	P	P	14 01 29.5	+0.1
	comp=Z,22nm,0.9s,baz=101,slow=6.5,SNR=140						
ASAR				PcP	PcP	14 02 55.5	+0.7
	comp=Z,2.1nm,0.7s,baz=111,slow=4.3,SNR=4.2						
ASAR				S	S	14 08 30.9	-0.9
	comp=Z,0.2nm,0.8s,baz=319,slow=5.2,SNR=3.7						
ASAR				LR	LR	14 19 45.6	
	comp=Z,78nm,20.0s,baz=96,slow=33						
	comp=Z,22nm,0.9s						
WR8	**Warramunga Arr**	48.88	263	P	P	14 01 30.4	-0.5
WR8				IAmb	IAmb	14 01 32.4	
	comp=Z,13nm,0.8s						
WB0	**Warramunga Arr**	49.02	263	P	P	14 01 31.1	-0.9
WB0				IAmb	IAmb	14 01 32.3	
	comp=Z,18nm,0.8s						
WRAB	**Tennant Creek**	49.02	263	P	P	14 01 31.1	-0.9
WRAB				IAmb	IAmb	14 01 32.4	
	comp=Z,16nm,0.8s						
WRA	**Warramunga Arr**	49.02	263	P	P	14 01 31.4	-0.7
	comp=Z,13nm,0.7s,baz=102,slow=8.0,SNR=80						
WRA				PcP	PcP	14 02 56.0	0.0
	comp=Z,1.3nm,0.6s,baz=101,slow=7.9,SNR=1.3						
	comp=Z,13nm,0.7s						
JAY	**Jayapura**	49.27	287	P	P	14 01 33.2	-0.9
	comp=Z,16nm,0.7s,baz=137,slow=6.7,SNR=5.9						
JAY				LR	LR	14 22 39.2	
	comp=Z,96nm,18.2s,baz=76,slow=36						
	comp=Z,16nm,0.7s						
FORT	**Forrest**	52.81	248	P	P	14 02 00.8	+0.3
FORT				IAmb	IAmb	14 02 01.5	
	comp=Z,18nm,0.8s						
GUMO	**Guam**	54.93	307	LR	LR	14 22 41.6	
	comp=Z,45nm,21.8s,baz=118,slow=33						
KNRA	**Kununurra**	55.26	266	P	P	14 02 18.8	+0.3
VNDA	**Vanda**	56.14	186	LR	LR	14 23 44.5	
	comp=Z,29nm,18.0s,baz=7.5,slow=33						
RPN	**Rapa Nui**	57.25	108	LR	LR	14 22 08.1	
	comp=Z,58nm,18.7s,baz=246,slow=31						
FITZ	**Fitzroy Crossi**	57.45	262	P	P	14 02 33.8	-0.4
BNDI	**Bandanaira**	58.10	279	P	P	14 02 39.6	+0.8
	comp=Z,104nm,1.1s						
SIJI	**Sorong**	58.41	284	P	P	14 02 40.7	-0.2
	comp=Z,61nm,0.9s						
SWI	**Sorong**	58.42	284	P	P	14 02 40.6	-0.4
KRAI	**Karang Ratu**	59.96	280	P	P	14 02 51.9	+0.2
SOEI	**Soe**	61.32	271	P	P	14 03 02.7	+1.6
BATI	**Baumata**	61.72	270	LR	LR	14 28 47.2	
	comp=Z,105nm,20.4s,baz=150,slow=35						
PSA00	**Pilbara Seismi**	61.80	257	P	P	14 03 04.2	+0.1
MBWA	**Marble Bar**	62.01	257	P	P	14 03 05.6	0.0
TNTI	**Ternate**	62.63	283	P	P	14 03 09.5	-0.3
SANI	**Sanana**	62.67	280	P	P	14 03 13.4	+3.3
MORW	**Morawa**	63.38	248	P	P	14 03 14.5	-0.1
EDFI	**Ende, Flores**	64.05	271	P	P	14 03 18.9	-0.4
DAV	**Davao City (W)**	67.08	289	LR	LR	14 28 30.5	
	comp=Z,26nm,20.4s,baz=181,slow=32						
QSPA	**South Pole Qui**	67.31	180		P	14 03 41.1	+1.5
JAGI	**Jajag, Banyuwa**	71.11	269	P	P	14 04 03.3	-0.5
MJAR	**Matsushiro Arr**	74.90	321	P	P	14 04 25.5	-0.3
	comp=Z,2.2nm,0.8s,baz=171,slow=6.3,SNR=4.3						
	comp=Z,2.2nm,0.8s						
MJAR	**Matsushiro Arr**	74.90	321	P	P	14 04 25.2	-0.6
MJAR				IAmb	IAmb	14 04 34.6	
	comp=Z,26nm,1.9s						
PKD	**Bear Valley Ra**	76.54	41	P	P	14 04 35.1	-0.1
PKD				IAmb	IAmb	14 05 22.6	
	comp=Z,17nm,1.2s						
BELA	**Belgrano 2**	76.67	172	P	P	14 04 35.8	+0.4
PMSA	**Palmer Station**	77.29	155	LR	LR	14 35 33.4	
	comp=Z,54nm,18.1s,baz=240,slow=33						
MNRC	**McLaughlin Min**	77.39	38	P	P	14 04 41.2	+1.2
KMRM	**Mail Ridge**	77.61	36	P	P	14 04 42.5	+1.3
LRMC	**Laurel Mtn Rad**	78.02	43	P	P	14 04 44.4	+0.7
LRMC				IAmb	IAmb	14 04 47.1	
	comp=Z,10.0nm,1.1s						
O02D	**Mt. Diablo Mer**	78.09	37	P	P	14 04 45.4	+1.6
O02D				IAmb	IAmb	14 04 48.2	
	comp=Z,12nm,0.9s						
ORV	**Oroville**	78.39	38	P	P	14 04 46.0	+0.6
GSC	**Goldstone, Bar**	78.47	44	P	P	14 04 46.4	+0.4
O03E	**Paynes Creek**	78.72	37	P	P	14 04 48.0	+0.6
O03E				IAmb	IAmb	14 04 55.5	
	comp=Z,13nm,0.9s						
QSM	**Queen of Sheba**	78.84	43	P	P	14 04 48.5	+0.5
QSM				IAmb	IAmb	14 04 51.5	
	comp=Z,10nm,1.2s						
PNTR	**Pine Nut**	79.17	39	P	P	14 04 51.0	+0.9
PNTR				IAmb	IAmb	14 04 53.8	
	comp=Z,19nm,1.0s						
BEKR	**Beckworth**	79.25	38	P	P	14 04 50.9	+0.5
HATC	**Hat Creek Radi**	79.26	37	P	P	14 04 51.2	+0.9
HATC				IAmb	IAmb	14 04 54.2	
	comp=Z,16nm,0.8s						
RYN	**Ryan**	79.51	40	P	P	14 04 52.8	+0.9
NVAR	**Mina Array Bea**	79.52	41	P	P	14 04 52.6	+0.7
	comp=Z,6.6nm,0.7s,baz=223,slow=9.0,SNR=58						
NVAR				LR	LR	14 34 36.9	
	comp=Z,60nm,18.2s,baz=261,slow=32						
	comp=Z,6.6nm,0.7s						
NV11	**Mina Array Sit**	79.61	41	P	P	14 04 53.0	+0.7
NV11				IAmb	IAmb	14 04 56.0	
	comp=Z,10.0nm,0.9s						
PAHR	**Pah Rah Range**	79.71	39	P	P	14 04 53.6	+0.8
PAHR				IAmb	IAmb	14 04 56.5	
	comp=Z,8.0nm,0.9s						
PETK	**Petropavlovsk-**	79.76	342	P	P	14 04 53.4	+0.8
	comp=Z,3.0nm,0.9s,baz=141,slow=10,SNR=1.7						
	comp=Z,3.0nm,0.9s						
TPNV	**Topopah Spring**	79.84	43		P	14 04 54.3	+0.6
W13A	**Hualapai Mount**	80.24	45	P	P	14 04 56.5	+0.5
K05A	**Summer Lake**	80.87	36	P	P	14 04 59.7	+0.6
K05A				IAmb	IAmb	14 05 05.8	
	comp=Z,12nm,1.1s						
MAW	**Mawson**	81.00	199	P	P	14 05 00.1	+0.8
	comp=Z,3.0nm,0.8s,baz=117,slow=9.0,SNR=3.7						
	comp=Z,3.0nm,0.8s						
PINE	**Pine Mountain**	81.56	35	P	P	14 05 04.2	+1.4
PINE				IAmb	IAmb	14 05 16.2	
	comp=Z,11nm,1.3s						
KSRS	**Korea Array**	81.77	316	P	P	14 05 04.5	+0.8
	comp=Z,1.7nm,0.8s,baz=124,slow=5.9,SNR=4.8						
	comp=Z,1.7nm,0.8s						
SZCU	**Shurtz Canyon**	82.24	44	IAmb	IAmb	14 08 13.0	
	comp=Z,5.9nm,0.8s						
PSUT	**Pine Spring**	82.31	43	IAmb	IAmb	14 05 10.8	
	comp=Z,9.6nm,1.5s						
J08A	**Circle Bar Ran**	82.61	37	P	P	14 05 08.8	+0.6
PKCU	**Pink Cliffs**	82.65	44	IAmb	IAmb	14 05 13.8	
	comp=Z,23nm,1.4s						
ELK	**Elko**	82.81	40		P	14 05 09.9	+0.5
USRK	**Ussuriysk Ar.**	83.56	324	P	P	14 05 14.0	+1.1
	comp=Z,4.3nm,0.9s,baz=148,slow=6.8,SNR=4.6						
	comp=Z,4.3nm,0.9s						
USRK	**Ussuriysk Ar.**	83.56	324	P	P	14 05 14.0	+1.1
G08A	**Pilot Rock**	83.62	35		P	14 05 14.3	+0.9
G08A				IAmb	IAmb	14 05 14.9	
	comp=Z,8.9nm,1.1s						
VHRN	**Van Horn**	84.09	53		P	14 05 16.6	+0.5
VHRN				IAmb	IAmb	14 05 19.7	
	comp=Z,11nm,1.6s						
MFID	**Camas Ranch**	84.13	38		P	14 05 16.5	+0.5
MFID				IAmb	IAmb	14 05 19.8	
	comp=Z,5.5nm,0.9s						
BRLK	**Bradley Lake**	84.19	11	P	P	14 05 16.7	+0.9
BMO	**Blue Mountains**	84.22	36		P	14 05 16.8	+0.3
PLCA	**Paso Flores**	84.24	132	P	P	14 05 17.4	+0.6
	comp=Z,4.1nm,0.9s,baz=245,slow=4.6,SNR=4.2						
PLCA				LR	LR	14 33 30.5	
	comp=Z,68nm,21.3s,baz=240,slow=29						
	comp=Z,4.1nm,0.9s						
PLCA	**Paso Flores**	84.24	132	IAmb	IAmb	14 05 20.4	
	comp=Z,21nm,1.6s						
MNTX	**Cornudas Mount**	84.27	52		P	14 05 17.2	+0.3
TXAR	**Lajitas Array**	84.35	55	P	P	14 05 17.8	+0.3
	comp=Z,2.6nm,1.1s,baz=204,slow=7.8,SNR=12						
	comp=Z,2.6nm,1.1s						
TXAR	**Lajitas Array**	84.35	55	P	P	14 05 17.6	+0.2
SRU	**San Rafael Swe**	84.76	44	IAmb	IAmb	14 05 23.1	
	comp=Z,14nm,1.5s						
D08A	**Wollman Farm,**	84.81	34	IAmb	IAmb	14 05 20.6	
	comp=Z,7.3nm,1.0s						
P17A	**Butcher Ranch,**	84.83	43	IAmb	IAmb	14 05 23.8	
	comp=Z,5.9nm,1.0s						
ELIB	**Princess Elisa**	84.88	185	*d*P	P	14 05 20.3	+0.8
	comp=Z,12nm,0.8s						
HVU	**Hansel Valley**	84.92	41		P	14 05 20.5	+0.4
F10A	**Beach Ranch, E**	84.99	35	P	P	14 05 20.2	0.0
F10A				IAmb	IAmb	14 05 21.0	
	comp=Z,8.1nm,1.0s						
NJ2	**Nanjing**	85.01	308	*e*P	P	14 05 21.1	+0.6
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HLID	**Hailey**	85.03	38		P	14 05 20.9	+0.3
HLID				IAmb	IAmb	14 05 23.6	
	comp=Z,13nm,1.8s						
P18A	**Preston Nutter**	85.23	43	IAmb	IAmb	14 08 33.5	
	comp=Z,13nm,1.7s						
TROLL	**Troll, Antarti**	85.42	179	⇑P	P	14 05 23.1	+0.9
	comp=Z,40nm,0.5s						
BSUT	**Blindstream Ca**	85.42	43		P	14 05 23.6	+0.7
BSUT				IAmb	IAmb	14 06 16.9	
	comp=Z,26nm,2.0s						
BI02	**San Fabin de**	85.44	128		P	14 05 24.0	+1.0
BI02				IAmb	IAmb	14 05 24.7	
	comp=Z,8.3nm,0.8s						
VNA3	**Neumayer Olymp**	85.51	175	⇑P	P	14 05 23.0	+0.4
	comp=Z,1.0nm,0.6s						
SNAA	**Sanae**	85.56	177	P	P	14 05 22.5	-0.3
	comp=Z,4.6nm,1.0s,baz=231,slow=6.5,SNR=5.7						
	comp=Z,4.6nm,1.0s						
SNAA	**Sanae**	85.56	177	P	P	14 05 23.1	+0.3
SNAA				IAmb	IAmb	14 05 24.4	
	comp=Z,7.3nm,1.1s						
KNK	**Knik Glacier**	86.17	11	P	P	14 05 26.1	+0.5
GHO	**Glory Hole Cre**	86.42	11	P	P	14 05 27.2	+0.3
SCM	**Sheep Creek Mo**	86.77	12	P	P	14 05 29.4	+0.7
CN2	**Changchun**	87.03	320	*e*P	P	14 05 30.5	+0.2
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BNX	**BinXian**	87.06	323	⇑P	P	14 05 31.3	+1.0
BNX				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BARN	**Barnard Glacie**	87.27	15	P	P	14 05 31.8	+0.6
PDAR	**Pinedale Array**	87.43	41	P	P	14 05 31.7	-0.9
	comp=Z,2.4nm,0.8s,baz=218,slow=3.1,SNR=22						
	comp=Z,2.4nm,0.8s						
PDAR	**Pinedale Array**	87.43	41		P	14 05 32.4	-0.2
LRM	**Limekiln Ridge**	87.51	38	P	P	14 05 32.7	-0.2
YHL	**Hebgen Lake**	87.66	39	P	P	14 05 33.9	+0.2
YHL				IAmb	IAmb	14 05 35.5	
	comp=Z,22nm,1.9s						
BOZ	**Bozeman (W)**	87.84	38	IAmb	IAmb	14 08 43.9	
	comp=Z,20nm,2.0s						
RND	**Reindeer**	87.95	11	P	P	14 05 34.8	+0.5
M27K	**Edge Creek, AK**	88.36	14	P	P	14 05 37.1	+0.7
O30N	**Mendenhall**	88.42	17	P	P	14 05 37.9	+1.3
L26K	**Log Cabin Wild**	88.64	13	IAmb	IAmb	14 05 41.3	
	comp=Z,12nm,1.2s						
BCAR	**Beaver Creek A**	89.01	14	P	P	14 05 40.0	+0.7
DOT	**Dot Lake**	89.05	12	IAmb	IAmb	14 06 23.3	
	comp=Z,9.2nm,1.0s						
WRH	**Wood River Hil**	89.07	10	P	P	14 05 39.8	+0.3
HDA	**Harding Lake**	89.20	11	P	P	14 05 40.4	+0.2
HDA				IAmb	IAmb	14 05 41.2	
	comp=Z,9.2nm,1.0s						
CCB	**Clear Creek Bu**	89.28	11		P	14 05 40.8	+0.4
PSI	**Prapat**	89.41	273	LR	LR	14 50 31.7	
	comp=Z,32nm,18.2s,baz=126,slow=39						
IL31		89.55	11	IAmb	IAmb	14 05 44.2	
	comp=Z,13nm,1.2s						
ILAR	**Eielson Array**	89.55	11	P	P	14 05 41.5	-0.2
	comp=Z,3.2nm,0.8s,baz=218,slow=5.2,SNR=28						
	comp=Z,3.2nm,0.8s						
ILAR	**Eielson Array**	89.55	11	P	P	14 05 40.5	-1.2
J25K	**Salcha River,**	89.67	11	P	P	14 05 42.8	+0.3
J25K				IAmb	IAmb	14 05 45.7	
	comp=Z,7.9nm,0.9s						
M30M	**Minto, Yukon**	89.75	16	P	P	14 05 43.1	+0.3
L29M	**L29M**	89.88	15	IAmb	IAmb	14 05 47.5	
	comp=Z,14nm,1.0s						
H22K	**Ishtalitna Cre**	89.89	9	IAmb	IAmb	14 06 13.4	
	comp=Z,4.6nm,0.6s						
F19K	**Shaleruckik Mo**	90.05	6	IAmb	IAmb	14 05 45.1	
	comp=Z,5.7nm,1.0s						
DAWY	**Dawson**	90.41	14	IAmb	IAmb	14 05 47.7	
	comp=Z,8.8nm,1.0s						
K29M	**Barlow Dome**	90.65	15	IAmb	IAmb	14 05 51.7	
	comp=Z,11nm,1.0s						
E19K	**Redstone River**	90.71	6	IAmb	IAmb	14 05 50.6	
	comp=Z,5.0nm,0.9s						
LYN	**LuoYang**	90.89	307	P	P	14 05 50.8	+2.1
LYN				pmax	pmax		
	comp=Z,18nm,0.5s						
NNA	**Nana**	90.90	103	LR	LR	14 37 16.4	
	comp=Z,58nm,21.7s,baz=232,slow=29						
J29N	**Klondike Camp**	91.01	14	IAmb	IAmb	14 05 52.9	
	comp=Z,7.8nm,0.9s						
ATAH	**Atahualpa**	91.39	98	LR	LR	14 37 17.7	
	comp=Z,61nm,21.4s,baz=260,slow=29						
H27K	**Steamboat Moun**	91.85	12	IAmb	IAmb	14 06 05.0	
	comp=Z,7.8nm,1.2s						
E22K	**Anaktuvuk Pass**	91.96	8	IAmb	IAmb	14 05 57.0	
	comp=Z,6.0nm,1.1s						
G26K	**Porcupine Rive**	92.07	11	IAmb	IAmb	14 05 55.6	
	comp=Z,14nm,1.4s						
I30M	**Mount Dempster**	92.08	15	IAmb	IAmb	14 05 57.2	
	comp=Z,7.1nm,0.9s						
C19K	**Lookout Ridge**	92.12	5	IAmb	IAmb	14 05 59.7	
	comp=Z,4.7nm,0.7s						
E23K	**Chandalar**	92.17	9	IAmb	IAmb	14 06 10.0	
	comp=Z,17nm,1.8s						
BMAR	**Burnt Mountain**	92.36	11		P	14 05 56.0	+1.1
XAN	**Xi'an**	93.30	305	⇓P	P	14 06 01.9	+1.9
XAN				pmax	pmax		
	comp=Z,4.0nm,1.5s						
G30M	**tAoh Zraii Nji**	93.59	14	IAmb	IAmb	14 06 12.0	
	comp=Z,12nm,1.3s						
G31M	**Satah River**	93.97	14	IAmb	IAmb	14 06 05.8	
	comp=Z,6.2nm,0.9s						
HHC	**Hu-ho-hao-te**	94.36	313	*e*P	P	14 06 05.5	+0.7
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
D27M	**Malcolm River**	94.60	11	IAmb	IAmb	14 06 09.2	
	comp=Z,11nm,1.4s						
BTO	**Baotou**	95.31	312	*e*P	P	14 06 11.3	+2.2
BTO				pmax	pmax		
	comp=Z,14nm,0.5s						
BTO				pmax	pmax		
	comp=Z,190nm,4.4s						
CMAR	**Chiang Mai Arr**	95.35	288	P	P	14 06 10.8	+1.1
	comp=Z,0.7nm,0.8s,baz=110,slow=3.5,SNR=6.9						
	comp=Z,0.7nm,0.8s						
PZH	**PanZhiHua**	95.97	296	P	P	14 06 13.6	+1.1
CD2	**Chengdu**	96.02	301	*e*P	P	14 06 13.0	+0.5
YKA	**Yellowknife Ar**	96.63	23	P	P	14 06 14.5	+0.1
	comp=Z,0.4nm,0.8s,baz=240,slow=4.9,SNR=6.3						
	comp=Z,0.4nm,0.8s						
LPAZ	**La Paz**	96.80	111	LR	LR	14 40 02.8	
	comp=Z,39nm,20.5s,baz=260,slow=29						
ZALV	**Zalesovo Beam**	115.25	320	PKP	PKiKP	14 11 25.2	-0.9
	comp=Z,1.1nm,0.8s,baz=166,slow=1.2,SNR=2.2						
MKAR	**Makanchi Array**	116.22	312	PKP	PKPdf	14 11 27.8	-0.4
	comp=Z,0.7nm,0.7s,baz=42,slow=1.6,SNR=8.1						
KURBB	**Kurchatov Arra**	118.95	316	PKP	PKPdf	14 11 32.4	-0.9
	comp=Z,0.5nm,0.3s,baz=86,slow=1.4,SNR=5.0						
BVAR	**Borovoye Array**	123.88	319	PKP	PKPdf	14 11 42.6	-0.1
	comp=Z,2.0nm,0.9s,baz=100,slow=1.8,SNR=6.0						
SPITS	**Spitsbergen Ar**	124.36	358	PKP	PKPdf	14 11 43.2	+0.2
	comp=Z,12nm,1.0s,baz=355,slow=7.2,SNR=2.1						
ARCES	**ARCESS Array B**	131.93	351	PKP	PKPdf	14 11 58.0	+0.4
	comp=Z,3.7nm,0.9s,baz=79,slow=2.6,SNR=8.6						
FINES	**FINESS Array B**	139.19	346	PKhKP	PKPpre	14 12 03.6	
	comp=Z,1.1nm,0.7s,baz=80,slow=2.1,SNR=6.4						
FINES				PKP	PKPdf	14 12 10.5	-0.8
	comp=Z,1.1nm,0.7s,baz=35,slow=5.1,SNR=2.8						
HFS	**Hagfors**	142.38	355	PKhKP	PKPpre	14 12 11.4	
	comp=Z,1.8nm,0.7s,baz=108,slow=1.9,SNR=9.0						
EKA	**Eskdalemuir Ar**	146.59	11	PKPbc	PKPdf	14 12 25.1	+0.6
	comp=Z,2.6nm,0.8s,baz=328,slow=3.0,SNR=5.6						
AKASG	**Malin Array Be**	147.22	334	PKPbc	PKPdf	14 12 25.5	-0.3
	comp=Z,1.5nm,0.5s,baz=36,slow=3.1,SNR=10						
CLL	**Collm**	151.15	352	*i* PKPdf	PKPdf	14 12 35.4	+3.4
CLL				*i* PKPbc	PKPbc	14 12 38.2	+0.3
	comp=Z,19nm,1.0s						
CLL				*i* PKiKP	sPKPbc	14 12 40.8	-0.1
CLL				*i* PKPab	pPKPab	14 12 47.7	-0.1
	comp=Z,15nm,1.0s						
STHS	**Stebnicka Huta**	151.16	341	*e*PKP	PKPbc	14 12 38.9	+0.8
OSTC	**Ostas**	151.37	348	⇑*e*PKP	PKPbc	14 12 39.4	+0.9
OSTC				⇑*e*PKP	sPKPab	14 12 49.6	+0.1
UPC	**Upice**	151.45	348	⇑*e*PKP	PKPbc	14 12 39.4	+0.7
DPC	**Dobruska-Polom**	151.54	348	⇑*e*PKP	PKPbc	14 12 39.8	+0.9
STEB	**Steborice**	151.62	345	⇑*e*PKP	PKPbc	14 12 39.7	+0.6
PVCC	**Panska Ves**	151.69	350	⇑*e*PKP	PKiKP	14 12 40.2	+0.6
PVCC				⇑*e*PKP	pPKPab	14 12 49.9	-0.2
KRLC	**Kraliky**	151.71	347	⇑*e*PKP	PKPbc	14 12 40.0	+0.7
MORC	**Moravsky Berou**	151.82	346	*e*PKP	PKPbc	14 12 40.0	+0.4
BRTR	**Keskin Array B**	151.87	313	PKP	PKPdf	14 12 32.1	-1.6
	comp=Z,0.9nm,0.9s,baz=26,slow=1.6,SNR=2.9						
BRTR				PKPbc	PKPbc	14 12 40.3	+0.1
	comp=Z,1.7nm,0.9s,baz=131,slow=5.6,SNR=6.8						
LANS	**Liptovska Anna**	151.91	343	*e*PKP	PKiKP	14 12 41.4	+1.2
MAUC	**Maruska**	152.14	345	⇑*e*PKP	PKiKP	14 12 41.4	+0.8
MEM	**Membach**	152.20	2	*d*PKP	PKiKP	14 12 41.9	+1.2
PRU	**Pruhonice**	152.21	350	⇑*e*PKP	PKPbc	14 12 41.2	+0.8
BTNL	**Ternell**	152.22	1	*d*PKP	PKPbc	14 12 40.9	+0.4
BMRD	**Maredsous**	152.46	3	*d*PKP	PKPbc	14 12 41.6	+0.7
VRAC	**Vranov**	152.47	347	*e*PKP	PKPbc	14 12 41.7	+0.7
KRUC	**Moravsky**	152.75	347	*e*PKP	PKPbc	14 12 42.0	+0.4
ZVC	**Zvikov**	152.80	350	⇑*e*PKP	PKiKP	14 12 42.7	+0.7
MMAI	**Mount Meron Ar**	153.07	298	PKP	PKPdf	14 12 34.7	-1.0
	comp=Z,1.0nm,0.3s,baz=52,slow=2.4,SNR=2.1						
MMAI				PKPbc	pPKPbc	14 12 44.8	-0.5
	comp=Z,9.8nm,0.9s,baz=294,slow=39,SNR=2.0						
MMAI				PKPab	PKPab	14 12 55.4	+0.9
	comp=Z,3.0nm,0.5s,baz=99,slow=5.2,SNR=3.8						
MODS	**Modra-Piesok**	153.19	345	*e*PKP	PKiKP	14 12 45.2	+2.4
KHC	**Kasperske Hory**	153.20	351	⇑*e*PKP	PKPbc	14 12 43.5	+0.8
GERES	**GERESS Array B**	153.46	350	PKPbc	PKPbc	14 12 43.0	-0.4
	comp=Z,1.1nm,0.9s,baz=0.0,slow=2.7,SNR=6.8						
GERES				PKPab	PKPab	14 12 54.6	-0.9
	comp=Z,0.7nm,0.9s,baz=343,slow=4.2,SNR=4.2						
CONA	**Conrad Observa**	153.94	347	*i* PKiKP	PKPbc	14 12 45.1	+0.7
	comp=Z,2.9nm,0.9s						
RONA	**Rosalia, Austr**	154.06	346	*i* PKP	PKPbc	14 12 44.3	-0.3
	comp=Z,1.7nm,0.6s						
LESA	**Schwarzleotal**	155.00	351	*i* pPKP	pPKPdf	14 12 39.5	-0.6
	comp=Z,3.6nm,1.0s						
SQTA	**Sankt Quirin**	155.38	353	*e*pPKP	pPKPdf	14 12 41.3	+0.6
	comp=Z,6.2nm,1.3s						
FETA	**Feichten**	155.63	354	*e*pPKP	pPKPdf	14 12 40.9	-0.2
	comp=Z,4.8nm,1.2s						
DBIC	**Dimbokro**	160.27	142	PKPab	PKPab	14 13 25.0	-0.6
	comp=Z,3.5nm,0.7s,baz=226,slow=5.9,SNR=5.0						
ESDC	**Sonseca Array**	160.69	27	PKP	PKPdf	14 12 45.4	+0.2
	comp=Z,0.7nm,0.9s,baz=347,slow=2.0,SNR=4.6						
ESDC				PKPab	PKPab	14 13 25.6	-1.3
	comp=Z,0.8nm,0.9s,baz=298,slow=2.8,SNR=3.1						

TORD	Torodi Ar. Bea	169.13	151	PKP	PKPdf	14 12 52.1	-0.9
	comp=Z,2.5nm,0.9s,baz=12,slow=1.0,SNR=9.1						
TORD				PKPab	PKPab	14 14 02.5	-2.0
	comp=Z,0.7nm,0.6s,baz=218,slow=2.9,SNR=1.4						

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*IDC **24** 13:55:19.1±3.4,36°.38N×71°.31E,h202^{km}±29^{km},mb3.7/12,mbtmp4.2/18,MS3.4/1,Error ellipse: s-maj=23.2km s-min=16.4km az=18.0*

*MOS **24** 13:55:23.1±0.7,36°.70N×71°.22E,h238^{km},mb4.1/9,Error ellipse: s-maj=11.9km s-min=5.5km az=87.1*

*NEIC **24** 13:55:24.2±0.9,36°.71N±0°.07×71°.18E±0°.06,h234^{km}±6^{km},mb4.2/37,Error ellipse: s-maj=10.4km s-min=7.4km az=169.0*

*NNC **24** 13:55:26.3±6.0,36°.95N×71°.12E,h224^{km}±73^{km},mb2.7,mpv3.5,Error ellipse: s-maj=60.7km s-min=32.5km az=17.0*

ISC 24 13:55:23.7±0.5,**36°.63N**±0°.05×**71°.22E**±0°.05,**h234**^{km},**n143,** σ1^{s}.**31**/152,**mb4.2**/33,**12C-10D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANEM	Manem	0.98	22		Pn	13 55 57.7	+0.5
MANEM				Sn	S	13 56 22.4	-1.1
GAR	Garm	2.47	344		Pn	13 56 09.1	-0.5
CHGR	Chuyangaron	2.60	322		Pn	13 56 10.4	-0.6
CHGR	Chuyangaron	2.60	322	*d i*PN	Pn	13 56 10.3	-0.6
SHAA	Shahritus	2.64	292		Pn	13 56 11.0	-0.3
KBL	Kabul	2.73	221		Pn	13 56 13.2	+0.7
KBL	Kabul	2.73	221	PN	Pn	13 56 13.2	+0.7
NIL	Nilore	3.41	150		Pn	13 56 21.5	+1.6
NIL	Nilore	3.41	150	PN	Pn	13 56 21.5	+1.6
BTK	Batken	3.44	355	Pn	Pn	13 56 19.6	-0.5
BTK	Batken	3.44	355	PN	Pn	13 56 19.6	-0.5
JMU	Jammu	4.86	141	*e*P	Pn	13 56 38.2	+0.9
JMU				*e*S	S	13 57 33.4	-2.2
JMU				IAML		13 57 36.8	
	comp=E,351nm,0.4s						
JMU				IAML		13 57 37.0	
	comp=N,540nm,0.7s						
ARSB	Arslanbob	4.88	16		Pn	13 56 36.8	-0.8
ARSB	Arslanbob	4.88	16	PN	Pn	13 56 36.8	-0.8
ALCI	Alchi Leh	5.44	115	*e*P	Pn	13 56 45.0	+0.2
ALCI				*e*S	S	13 57 45.4	-3.8
ALCI				IAML		13 57 51.1	
	comp=E,120nm,0.6s						
ALCI				IAML		13 57 51.1	
	comp=N,110nm,0.8s						
DHRM	DHARAMSHALA	6.06	135	*e*P	Pn	13 56 53.5	+1.0
DHRM				*e*S	S	13 57 59.3	-3.9
DHRM				IAML		13 58 02.4	
	comp=N,295nm,0.5s						
DHRM				IAML		13 58 02.7	
	comp=E,266nm,0.6s						
KK31	Karatay Array	6.49	355		Pn	13 56 56.8	-0.8
KK31	Karatay Array	6.49	355	⇓P	Pn	13 56 56.7	-0.9
	comp=E,2.2nm,0.3s,baz=182,slow=16,SNR=31						
KK31				⇑S	S	13 58 06.7	-5.9
	comp=E,16nm,0.5s,baz=184,slow=22,SNR=15						
KK31	Karatay Array	6.49	355	PN	Pn	13 56 56.8	-0.8
KKAR	Karatay Array	6.49	355		Pn	13 56 56.8	-0.8
KKAR	Karatay Array	6.49	355	PN	Pn	13 56 56.8	-0.8
AAK	Ala-Archa	6.51	22	P	Pn	13 56 57.2	-0.8
	comp=E,7.3nm,0.4s,baz=195,slow=7.1,SNR=27						
AAK				S	S	13 58 10.5	-2.8
	comp=E,10nm,0.6s,baz=325,slow=23,SNR=4.7						
AAK	Ala-Archa	6.51	22		Pn	13 56 57.3	-0.7
AAK	Ala-Archa	6.51	22	⇓P	Pn	13 56 57.6	-0.4
	comp=E,1.4nm,0.4s						
AAK				⇑S	S	13 58 11.0	-2.4
	comp=E,19nm,0.9s						
BHK	Bhakra	6.75	139	*e*S	S	13 58 18.0	-0.9
BHK				IAML		13 58 18.4	
	comp=N,180nm,0.5s						
BHK				IAML		13 58 19.0	
	comp=E,242nm,0.5s						
BOOM	Boomskoye usch	6.90	30		Pn	13 57 02.3	-0.6
BOOM	Boomskoye usch	6.90	30	PN	Pn	13 57 02.3	-0.6
KDJ	Kajisay	7.17	38	Pn	Pn	13 57 06.1	-0.4
KDJ	Kajisay	7.17	38	PN	Pn	13 57 06.1	-0.4
TARG	Taragay, Kyrgy	7.22	43		Pn	13 57 06.4	-0.9
TARG	Taragay, Kyrgy	7.22	43	PN	Pn	13 57 06.4	-0.9
SMLA	Simla	7.39	136	*e*P	Pn	13 57 09.5	+0.4
SMLA				*e*S	S	13 58 29.4	-4.2
SMLA				IAML		13 58 33.1	
	comp=N,158nm,0.7s						
SMLA				IAML		13 58 33.5	
	comp=E,224nm,0.4s						
HRA	Herat	7.65	256		Pn	13 57 13.3	+0.7
WUS	Wushi	7.73	51		Pn	13 57 13.0	-0.5
DDI	Dehra Dun	8.49	136	*e*P	Pn	13 57 24.9	+1.6
DDI				*e*S	S	13 58 54.5	-5.1
PDGK	Podgornoye	9.22	41	⇓P	Pn	13 57 31.0	-1.5
	comp=E,2.1nm,0.7s						
MAKZ	Makanchi	12.95	35		Pn	13 58 18.3	-1.0
MAKZ	Makanchi	12.95	35	P	Pn	13 58 18.3	-1.0
MK31	Makanchi Array	13.08	36	⇑P	Pn	13 58 20.9	-0.1
	comp=E,0.4nm,0.3s,baz=213,slow=13,SNR=11						
MK31	Makanchi Array	13.08	36	⇓*e*P	Pn	13 58 21.5	+0.5
MKAR	Makanchi Array	13.08	36	P	Pn	13 58 20.2	-0.7
	comp=E,0.4nm,0.3s,baz=209,slow=10,SNR=10						
MKAR	Makanchi Array	13.08	36	Pn	Pn	13 58 19.7	-1.3
DANN	Dangsing	13.42	124	Pn	S	14 01 11.7	+17
	baz=122,slow=0.0						
WMQ	Urumqi	14.48	55	*e*P	P	13 58 39.9	+1.3
DMN	Daman	14.80	123	Pn	S	14 01 30.2	+4.0
	baz=121,slow=0.0						
KURBB	Kurchatov Arra	14.94	18	P	Pn	13 58 41.8	-1.7
	comp=E,0.7nm,0.5s,baz=206,slow=11,SNR=7.3						
PKIN	Phulchoki	15.02	123	Pn	S	14 01 33.2	+2.1
	baz=120,slow=0.0						
KURK	Kurchatov	15.05	18	P	P	13 58 44.0	-0.8
KURK	Kurchatov	15.05	18	⇓*e*P	P	13 58 43.4	-1.4
KURK				pmax	pmax		
	comp=Z,5.0nm,2.3s						
AB31	Akbulak array	15.06	330		P	13 58 43.5	-1.3
AB31	Akbulak array	15.06	330	⇑P	Pn	13 58 45.6	+0.6
	comp=Z,1.6nm,0.5s,baz=142,slow=12,SNR=4.7						
ABKAR	Akbulak array	15.06	330		P	13 58 43.5	-1.4
GUN	Gumba	15.13	121	Pn	S	14 01 36.0	+2.2
	baz=116,slow=0.0						
BVAR	Borovoye Array	16.41	358	P	Pn	13 59 00.1	-0.9
	comp=Z,2.7nm,0.5s,baz=161,slow=9.5,SNR=14						
BORK	Borovoye	16.43	358	P	P	13 58 58.5	-1.4
BORK				IAmb	IAmb	13 59 03.6	
	comp=Z,3.8nm,0.5s						
BORK	Borovoye	16.43	358	⇑*i*P	P	13 59 00.1	+0.2
AKTO	Aktyubinsk	16.76	330	P	Pn	13 59 04.3	-0.9
	comp=Z,6.0nm,0.4s,baz=139,slow=8.2,SNR=18						
AKTO	Aktyubinsk	16.76	330	⇑P	P	13 59 03.9	+0.4
	comp=Z,2.9nm,0.5s						
DGZ	Jazzator, Alta	17.57	37	⇑*e*P	P	13 59 13.4	+0.8
ZAA0	Zalesovo Array	19.73	24		P	13 59 34.9	-0.6
ZAA0				IAmb	IAmb	13 59 38.2	
	comp=Z,3.8nm,0.3s						
ZALV	Zalesovo Beam	19.73	24	P	P	13 59 35.3	-0.2
	comp=Z,2.8nm,0.4s,baz=214,slow=11,SNR=14						
ZALV	Zalesovo Beam	19.73	24		P	13 59 34.9	-0.6
ARTI	Arti	21.58	340	P	P	13 59 55.3	+0.6
	comp=Z,3.9nm,0.4s,baz=138,slow=10,SNR=8.0						
	comp=Z,3.9nm,0.4s						
ARTI	Arti	21.58	340	P	P	13 59 54.7	0.0
ARTI	Arti	21.58	340	*c i*P	P	13 59 55.0	+0.3
ARTI				S	S	14 03 39.5	+2.2
ARTI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KBZ	Khabaz	22.70	297	⇓*e*P	P	14 00 06.2	+1.0
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BELG	Belogornoye	22.90	321	LR	LR	14 11 35.6	
	comp=Z,89nm,18.6s,baz=87,slow=42						
BELG	Belogornoye	22.90	321	⇑*e*P	P	14 00 06.7	-0.2
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KNGR	Kungurtug, Tuv	23.46	45	*de*P	P	14 00 15.1	+2.9
KIRV	Kirov	26.20	334	⇓*e*P	P	14 00 37.7	+1.1
ILGA	Ilgaz	29.39	290	P	P	14 01 04.3	-1.1
BR131	Keskin Array S	29.56	288	⇓*e*P	P	14 01 06.5	-0.4
OBN	Obninsk	29.95	319	*e*P	P	14 01 11.7	+1.8
OBN				*e**PP	pP	14 01 55.6	-1.2
OBN				*e**SP	PP	14 02 22.8	+0.3
OBN				pmax	pmax		
	comp=Z,5.0nm,0.4s						
HHC	Hu-ho-hao-te	31.55	70	*e*P	P	14 01 26.1	+1.8
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AKBB	Malin Array Si	33.00	309	⇑*e*P	P	14 01 36.6	0.0
AKBB				pmax	pmax		
	comp=Z,12nm,1.9s						
NRIK	Noril'sk	33.97	10	P	P	14 01 45.2	+0.6
	comp=Z,2.5nm,0.5s,baz=213,slow=6.9,SNR=5.0						
	comp=Z,2.5nm,0.5s						
NRIK	Noril'sk	33.97	10	IAmb	IAmb	14 01 46.2	
	comp=Z,3.2nm,0.8s						
NRIK	Noril'sk	33.97	10	*ce*P	P	14 01 45.6	+0.9
NRIK				pmax	pmax		
	comp=Z,11nm,2.4s						
JOF	Joensuu	35.84	330	*e*P	P	14 02 01.6	+0.8
ARBE	Arbavere	36.86	323	*e*P	P	14 02 10.0	+0.7
LVZ	Lovozero	37.40	338	P	P	14 02 13.9	0.0
LVZ	Lovozero	37.40	338	P	P	14 02 13.9	0.0
LVZ				pmax	pmax		
	comp=Z,77nm,1.5s						
FIA1	FINESS Array S	37.47	326	P	P	14 02 14.4	0.0
FINES	FINESS Array B	37.47	326	P	P	14 02 14.8	+0.3
	comp=Z,2.6nm,0.5s,baz=117,slow=9.7,SNR=32						
	comp=Z,2.6nm,0.5s						
FINES	FINESS Array B	37.47	326	P	P	14 02 14.6	+0.2
MTSE	Matsula	37.73	321	*e*P	P	14 02 17.1	+0.5
KEF	Keuruu	38.26	327	*e*P	P	14 02 21.7	+0.6
VAF	Ylistaro	39.51	328	*e*P	P	14 02 31.8	+0.4
AAL	Aland	39.97	323	*e*P	P	14 02 34.8	-0.3
ARA0	ARCESS Array S	41.09	337	*e*P	P	14 02 45.1	+0.9
ARCES	ARCESS Array B	41.09	337	P	P	14 02 44.6	+0.3
	comp=Z,2.6nm,0.4s,baz=117,slow=8.6,SNR=36						
	comp=Z,2.6nm,0.4s						
ARCES	ARCESS Array B	41.09	337	P	P	14 02 44.5	+0.3
ARCES				IAmb	IAmb	14 02 57.3	
	comp=Z,24nm,1.4s						
ARCES	ARCESS Array B	41.09	337	P	P	14 02 44.5	+0.3
ARCES				pmax	pmax		
	comp=Z,24nm,1.4s						
KTK1	Kautokeino	41.57	336	*e*P	P	14 02 48.6	+0.5
HAMF	Hammerfest	42.17	339	*e*P	P	14 02 54.3	+1.4
JETT	Jettan, Norway	42.71	336	*e*P	P	14 02 58.3	+1.0
HFS	Hagfors	43.07	322	P	P	14 03 00.4	+0.1
	comp=Z,5.0nm,0.5s,baz=98,slow=11,SNR=52						
	comp=Z,5.0nm,0.5s						
TRO	Tromso	43.22	336	*e*P	P	14 03 02.1	+0.8
FAUS	Fauske	43.77	332	*e*P	P	14 03 06.3	+0.6
MOR8	Moi Rana	43.79	331	*e*P	P	14 03 04.8	-1.2
STEI	Steigen	43.94	333	*e*P	P	14 03 07.7	+0.7
NC405	NORSAR Array S	44.15	323	P	P	14 03 08.8	-0.1
NC405				IAmb	IAmb	14 03 28.8	
	comp=Z,14nm,1.4s						
NC602	NORSAR Array S	44.20	323	P	P	14 03 09.0	-0.3
NC602	NORSAR Array S	44.20	323	*e*P	P	14 03 09.3	+0.1
NC303	NORSAR Array S	44.32	323	P	P	14 03 10.5	+0.2
NB201	NORSAR Array S	44.34	323	P	P	14 03 10.4	-0.1
NB201				IAmb	IAmb	14 03 15.1	
	comp=Z,23nm,1.5s						
VAGH	Vaagaholmen	44.38	331	*e*P	P	14 03 12.1	+1.6
NB2	NORSAR Subarra	44.38	323	P	P	14 03 10.7	-0.1
	comp=Z,1.4nm,0.5s,baz=97,slow=7.9						
NB2	NORSAR Subarra	44.38	323	P	P	14 03 10.7	-0.1
	baz=97,slow=7.9						
NOA	NORSAR Array B	44.38	323	P	P	14 03 10.6	-0.2
	comp=Z,2.3nm,0.6s,baz=96,slow=7.7,SNR=19						
	comp=Z,2.3nm,0.6s						
NBO00	NORSAR Array S	44.59	323	P	P	14 03 12.1	-0.3
NBO00				IAmb	IAmb	14 03 17.8	
	comp=Z,19nm,1.4s						
NC204	NORSAR Array S	44.62	323	P	P	14 03 12.6	0.0
NC204				IAmb	IAmb	14 03 25.3	
	comp=Z,21nm,1.4s						
TIXI	Tiksi	45.59	22	P	P	14 03 20.1	+0.1
TIXI	Tiksi	45.59	22	⇑*i*P	P	14 03 20.1	+0.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SPB2	Spitsbergen Ar	47.40	347	P	P	14 03 34.8	+0.8
SPITS	Spitsbergen Ar	47.41	347	P	P	14 03 35.1	+1.1
	comp=Z,17nm,1.1s,baz=116,slow=11,SNR=8.3						
	comp=Z,17nm,1.1s						
SPITS	Spitsbergen Ar	47.41	347	P	P	14 03 35.0	+1.0
SPITS				pmax	pmax		
	comp=Z,44nm,1.3s						
ESDC	Sonseca Array	57.55	298	P	P	14 04 49.5	+0.5
	comp=Z,0.9nm,0.8s,baz=62,slow=7.1,SNR=9.4						
	comp=Z,0.9nm,0.8s						
TORD	Torodi Ar. Bea	65.89	269	P	P	14 05 43.4	-1.3
	comp=Z,1.8nm,0.6s,baz=50,slow=8.1,SNR=10						
	comp=Z,1.8nm,0.6s						
C18K	Utukok River	68.09	18	P	P	14 05 58.2	+0.4
C18K				IAmb	IAmb	14 06 10.7	
	comp=Z,8.9nm,1.5s						
D19K	Kuna River	68.97	17	P	P	14 06 03.5	+0.4
D19K				IAmb	IAmb	14 06 04.0	
	comp=Z,4.0nm,0.7s						
F15K	North Star Dit	69.26	21	P	P	14 06 05.5	+0.5
F17K	Baldwin Pennin	69.70	20	P	P	14 06 08.3	+0.7
F17K				IAmb	IAmb	14 06 49.7	
	comp=Z,6.8nm,1.2s						
TOLK	Toolik Lake Re	70.75	15	P	P	14 06 14.6	+0.6
TOLK				IAmb	IAmb	14 06 17.6	
	comp=Z,4.9nm,1.2s						
G19K	Purcell Mounta	71.03	19	P	P	14 06 15.9	+0.2
G19K				IAmb	IAmb	14 06 16.7	
	comp=Z,3.1nm,0.9s						
A36M	Sachs Harbour	71.06	5	P	P	14 06 16.2	+0.5
A36M				IAmb	IAmb	14 06 17.2	
	comp=Z,4.6nm,0.8s						
E28M	Babbage River	72.61	11	P	P	14 06 25.4	+0.4
E28M				IAmb	IAmb	14 07 05.3	
	comp=Z,5.1nm,1.4s						
C36M	Paulatuk	73.73	6	P	P	14 06 31.8	+0.2
INK	Inuvik	73.75	9	P	P	14 06 32.3	+0.7
INK				IAmb	IAmb	14 06 33.1	
	comp=Z,2.6nm,0.6s						
INK	Inuvik	73.75	9	P	P	14 06 32.3	+0.7
INK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
G27K	Doyon Strip	73.86	13	P	P	14 06 32.8	+0.4
F30M	Barrier River	74.09	10	P	P	14 06 34.1	+0.4
F30M				IAmb	IAmb	14 06 35.1	
	comp=Z,4.9nm,0.9s						
F31M	Tsiigehtchic	74.53	10	P	P	14 06 36.7	+0.6
F31M				IAmb	IAmb	14 06 45.8	
	comp=Z,12nm,1.5s						
G31M	Satah River	74.95	10	P	P	14 06 38.9	+0.3
I28M	Miner Creek	75.40	13	P	P	14 06 41.2	-0.1
SCRK	Sand Creek	75.92	15	P	P	14 06 44.3	0.0
DHY	Denali Highway	75.95	17	P	P	14 06 44.7	+0.1
DHY				IAmb	IAmb	14 06 59.6	
	comp=Z,11nm,1.4s						
YKAW3	Yellowknife Wh	81.04	3	P	P	14 07 12.3	+0.2
YKA	Yellowknife Ar	81.11	3	P	P	14 07 12.5	+0.1
	comp=Z,0.7nm,0.6s,baz=345,slow=5.7,SNR=19						
	comp=Z,0.7nm,0.6s						
YKA	Yellowknife Ar	81.11	3	P	P	14 07 12.0	-0.4
WRA	Warramunga Arr	81.91	122	P	P	14 07 14.2	-3.1
	comp=Z,0.5nm,0.7s,baz=309,slow=5.0,SNR=2.3						
	comp=Z,0.5nm,0.7s						
AS31	Alice Springs	84.19	125	P	P	14 07 28.1	-0.8
ASAR	Alice Springs	84.19	125	P	P	14 07 27.5	-1.4
	comp=Z,0.5nm,0.6s,baz=305,slow=5.0,SNR=7.3						
	comp=Z,0.5nm,0.6s						

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*BGR **24** 14:36:40.1,42°.73N×148°.16E,h33^{km},mb4.9*

*MOS **24** 14:36:52.7±0.8,43°.55N×146°.10E,h101^{km},mb5.3/49,Error ellipse: s-maj=6.3km s-min=4.2km az=113.8*

MOS Felt (III-IV) at Golovnino, Yuzhno-Kuril'sk; (III) at Goryachiy Plyazh, Malokuril'skoye.

*BJI **24** 14:36:52.1,43°.65N×146°.03E,h92^{km},mB5.2/21,mb4.9/71*

*SKHL **24** 14:36:53.8±0.9,43°.60N×146°.20E,h100^{km}±3^{km},mb6.2/6,mbv5.7/2,msh5.5/3,msha6.9/4*

*IDC **24** 14:36:53.4±0.6,43°.63N×146°.13E,h92^{km}±5^{km},mb4.5/44,mbtmp4.8/51,MS3.6/41,Error ellipse: s-maj=9.8km s-min=8.6km az=149.0*

*JMA **24** 14:36:54.3±0.2,43°.5N±0°.5×146°.2E±1°.0,h93^{km}±1^{km},MD4.8/40,MW4.8/40,NEAR KUNASHIRI ISLAND*

JMA Felt III J1 at NEAR KUNASHIRI ISLAND .

*NIED **24** 14:36:54.3,43°.50N×146°.17E,h93^{km},MW4.9,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.35; $M_{\theta\theta}$1.27; $M_{\phi\phi}$0.09; $M_{r\theta}$2.05; $M_{\theta\phi}$0.46; $M_{\phi r}$1.16; Fault plane solution: $M_0$2.73000×10^{16} NP1:ϕ_s81.00000°,δ16.00000°,λ-72.00000°. NP2:ϕ_s242.00000°,δ75.00000°,λ-95.00000°.*

*NEIC **24** 14:36:54.1±1.1,43°.60N±0°.07×146°.1E±0°.1,h94^{km}±5^{km},mb5.0/335 Error ellipse: s-maj=11.7km s-min=9.5km az=116.0*

*GCMT **24** 14:36:56.1±0.3,43°.61N±0°.02×146°.13E±0°.03,h95^{km}±4^{km},MW4.9/93,Moment Tensor Solution. s33,c36; s93,c127; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.92±.13; $M_{\theta\theta}$1.12±.15; $M_{\phi\phi}$-0.20±.14; $M_{r\theta}$1.79±.07; $M_{\theta\phi}$0.90±.11; $M_{\phi r}$1.63±.06; Best double couple: $M_0$2.74600×10^{16} NP1:ϕ_s92.00000°,δ17.00000°,λ-47.00000°. NP2:ϕ_s227.00000°,δ77.00000°,λ-102.00000°. Principal axes: T 3.0050, Plg31.0000°, Azm327.0000°; N -0.5220, Plg12.0000°, Azm230.0000°; P -2.4860, Plg56.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 14:36:53.8±0.3,**43°.61N**±0°.03×**146°.12E**±0°.03,**h96**^{km}±2^{km},**h96**^{km}**:pP-P,n1001,**σ1^{s}.**14**/917,**mb5.0**/320,**57C-62D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	0.37	229	⇓P	Pn	14 37 08.3	0.0
NEM2				⇓S	Sn	14 37 18.6	-0.5
NEM2	Nemuro 2	0.37	229	A	A	14 37 08.3	
	comp=N,275nm,0.8s,comp=E,181nm,0.6s						
NMR	Nemuro--Hokkai	0.37	230	⇓*i*PN	Pn	14 37 08.3	0.0
NMR				*e*S	Sn	14 37 18.4	-0.7
NMR	Nemuro--Hokkai	0.37	230	*i* P	Pn	14 37 08.3	0.0
NMR				*e*S	Sn	14 37 18.4	-0.7
GLVR	Golovnino	0.46	287	⇓*i*PN	Pn	14 37 09.6	+0.8
GLVR				*e*S	Sn	14 37 21.8	+1.7
GLVR				pmax	pmax		
	comp=Z,63µm,0.2s						
GLVR				pmax	pmax		
	comp=E,5µm,0.1s						
GLVR				smax	smax		
	comp=N,241µm,0.4s						
GLVR				smax	smax		
	comp=E,148µm,0.2s						
GLVR	Golovnino	0.46	287	*i* P	Pn	14 37 09.6	+0.8
GLVR				AMB	AMB	14 37 10.4	
	comp=E,63µm,0.2s						
GLVR				*e*S	Sn	14 37 21.8	+1.7
GLVR				A	A	14 37 22.2	
	comp=E,241µm,0.3s						
GLVR				A	A	14 37 22.2	
	comp=E,148µm,0.3s						
YUK	Yuzh-Kuril'sk	0.47	336	*d i*PN	Pn	14 37 09.5	+0.6
YUK				*e*S	Sn	14 37 21.0	+0.8
YUK				pmax	pmax		
	comp=N,10µm,0.2s						
YUK				pmax	pmax		
	comp=Z,38µm,0.2s						
YUK				pmax	pmax		
	comp=E,17µm,0.1s						
YUK				smax	smax		
	comp=N,32µm,0.2s						
YUK				smax	smax		
	comp=E,50µm,0.3s						
YUK	Yuzh-Kuril'sk	0.47	336	*i* P	Pn	14 37 09.5	+0.6
YUK				AMB	AMB	14 37 10.6	
	comp=E,29µm,0.2s						
YUK				*e*S	Sn	14 37 21.0	+0.8
YUK				A	A	14 37 22.8	
	comp=E,46µm,0.4s						
YUK				A	A	14 37 22.8	
	comp=E,64µm,0.4s						
JRA	Rausu	0.80	295	⇓P	Pn	14 37 13.0	+1.2
JRA				⇓S	Sn	14 37 26.9	+1.7
JRA	Rausu	0.80	295	A	A	14 37 13.0	
	comp=N,88nm,0.6s,comp=E,105nm,0.4s						
RUSJ	Misakicho	0.80	308	⇓*i*PN	Pn	14 37 13.2	+1.4
RUSJ				*e*S	Sn	14 37 27.4	+2.0
JNSB	Nemuroshibetsu	0.83	282	⇓*i*P	Pn	14 37 13.2	+1.1
JNSB				⇓*e*S	Sn	14 37 27.2	+1.4
JNSB	Nemuroshibetsu	0.83	282	A	A	14 37 13.2	
	comp=N,92nm,2.5s,comp=E,87nm,1.3s						
JKHN	Kushirohamanak	0.88	233	⇓*i*P	Pn	14 37 12.8	+0.3
JKHN				⇓*e*S	Sn	14 37 26.5	-0.1
JKHN	Kushirohamanak	0.88	233	A	A	14 37 12.8	
	comp=N,154nm,1.5s,comp=E,58nm,0.9s						
JNK	Nakash	1.02	269	⇓P	Pn	14 37 14.6	+0.5
JNK				⇓S	Sn	14 37 29.1	-0.3
JNK	Nakash	1.02	269	A	A	14 37 14.6	
	comp=N,42nm,0.4s,comp=E,28nm,0.5s						
JAK	Akkeshi	1.21	240	⇓P	Pn	14 37 16.4	+0.1
JAK				⇓S	Sn	14 37 32.8	-0.4
JAK	Akkeshi	1.21	240	A	A	14 37 16.4	
	comp=N,132nm,1.0s,comp=E,53nm,0.8s						
JTKR	Abashiri--Toko	1.64	283	⇓*i*P	Pn	14 37 23.0	+1.4
JTKR				⇓S	Sn	14 37 44.1	+1.4
JTKR	Abashiri--Toko	1.64	283	A	A	14 37 23.0	
	comp=N,7.0nm,2.5s,comp=E,20nm,1.4s						
JAR	Ashorobuto	1.74	260	⇓*i*P	Pn	14 37 24.0	+1.1
JAR				⇓S	Sn	14 37 45.9	+1.0
JAR	Ashorobuto	1.74	260	A	A	14 37 24.0	
	comp=N,23nm,1.1s,comp=E,35nm,2.1s						
JOB	Onbets	1.81	248	⇓*i*P	Pn	14 37 24.6	+0.8
JOB				⇓S	Sn	14 37 46.9	+0.3
JOB	Onbets	1.81	248	A	A	14 37 24.6	
	comp=N,40nm,0.8s,comp=E,47nm,1.0s						
JMP	Maruseppu	2.04	282	⇓*i*P	Pn	14 37 28.2	+1.5
JMP				⇓S	Sn	14 37 54.0	+2.1
JMP	Maruseppu	2.04	282	A	A	14 37 28.2	
	comp=N,7.0nm,1.2s,comp=E,20nm,1.3s						
KUR	Kuril'sk	2.05	37	*d i*PN	Pn	14 37 27.2	+0.4
KUR				*e*S	Sn	14 37 52.5	+0.5
KUR				pmax	pmax		
	comp=Z,628nm,0.5s						
KUR				smax	smax		
	comp=E,6µm,1.8s						
KUR				smax	smax		
	comp=N,5µm,1.2s						
KUR				smax	smax		
	comp=N,3µm,0.2s						
KUR				smax	smax		
	comp=E,2µm,0.3s						
KUR	Kuril'sk	2.05	37	*i* P	Pn	14 37 27.2	+0.4
KUR				AMB	AMB	14 37 31.2	
	comp=E,1µm,0.3s						
KUR				*e*S	Sn	14 37 53.4	+1.4
KUR				A	A	14 37 53.7	
	comp=E,5µm,2.0s						
KUR				A	A	14 37 53.7	
	comp=E,6µm,2.0s						
KUR				A	A	14 37 55.1	
	comp=E,3µm,0.2s						
KUR				A	A	14 37 55.1	
	comp=E,4µm,0.2s						
JCH	Churui	2.25	245	⇓*i*P	Pn	14 37 29.8	+0.3
JCH				⇓S	Sn	14 37 55.9	-0.9
JCH	Churui	2.25	245	A	A	14 37 29.8	
	comp=N,26nm,1.1s,comp=E,16nm,2.2s						
JTHR	Tokachihiroo	2.46	239	A	A	14 37 32.8	
	comp=N,10.0nm,1.9s,comp=E,8.0nm,1.6s						
JKA	Kamikawa-asahi	2.60	282		Pn	14 37 36.0	+2.0
JKA	Kamikawa-asahi	2.60	282		Sn	14 38 03.6	-1.4
ASAJ	Asahikawa	2.60	282	P	Pn	14 37 36.0	+2.0
	comp=E,1µm,0.6s,baz=116,slow=9.6,SNR=1888						
ASAJ				S	Sn	14 38 03.6	-1.4
	comp=E,769nm,0.7s,baz=126,slow=20,SNR=4.0						
ASAJ	Asahikawa	2.60	282	A	A	14 37 36.0	
	comp=N,8.0nm,3.0s,comp=E,10.0nm,3.8s						
JFR	Furan	2.61	261	A	A	14 37 35.6	
	comp=N,9.0nm,1.0s,comp=E,10.0nm,1.2s						
ERM	Erimo	2.70	235		Pn	14 37 35.9	+0.5
ERM	Erimo	2.70	235	PN	Pn	14 37 35.9	+0.5
JNBK	Urakawa-nobuka	2.81	243	A	A	14 37 37.8	
	comp=N,7.0nm,2.0s,comp=E,7.0nm,2.0s						
JAB	Ashibetsu	2.84	269	A	A	14 37 38.9	
	comp=N,6.0nm,1.9s,comp=E,15nm,3.3s						
JSHD	Hidakashinhida	2.94	247	A	A	14 37 39.6	
	comp=N,9.0nm,4.5s,comp=E,8.0nm,3.0s						
JSS	Shosan	3.18	286	A	A	14 37 44.1	
	comp=N,6.0nm,3.0s,comp=E,10.0nm,2.7s						
JHR	Hokuryu	3.19	274	A	A	14 37 43.9	
	comp=N,9.0nm,3.4s,comp=E,9.0nm,2.8s						
JIAM	Iburiatsuma	3.23	254	A	A	14 37 43.9	
	comp=N,23nm,1.6s,comp=E,12nm,5.3s						
JISS	Ishikarishitsu	3.44	266	A	A	14 37 47.1	

	comp=N,7.0nm,1.7s,comp=E,15nm,1.6s						
JWK2	**Keihoku**	**3.47**	**301**	A	A	14 37 48.4	
	comp=N,7.0nm,3.7s,comp=E,13nm,2.6s						
YSS	**Yuzhno-Sakhali**	**4.10**	**326**		**Pn**	**14 37 55.1**	**+0.9**
YSS	**Yuzhno-Sakhali**	**4.10**	**326**	α*e*PN	**Pn**	**14 37 55.9**	**+1.7**
YSS				*e*S	**Sn**	**14 38 41.6**	**+0.5**
YSS				pmax	pmax		
	comp=Z,500nm,4.6s						
YSS				pmax	pmax		
	comp=Z,120nm,0.6s						
YSS				smax	smax		
	comp=N,350nm,1.0s						
YSS				smax	smax		
	comp=E,310nm,1.1s						
YSS				MLR	MLR		
	comp=Z,1µm,12.0s						
YSS				MLR	MLR		
	comp=N,1µm,10.0s						
YSS				MLR	MLR		
	comp=E,800nm,9.0s						
YSS	**Yuzhno-Sakhali**	**4.10**	**326**	*e*P	**Pn**	**14 37 55.6**	**+1.4**
YSS				AMB	AMB	14 38 04.9	
	comp=E,120nm,0.6s						
YSS				*e*S	**Sn**	**14 38 41.8**	**+0.7**
JAHD	**Aomorihigashid**	**4.25**	**238**	A	A	14 37 57.4	
	comp=N,17nm,0.9s,comp=E,21nm,0.9s						
JARK	**Aomorirokkasho**	**4.38**	**235**	A	A	14 37 59.2	
	comp=N,12nm,0.9s,comp=E,5.0nm,0.8s						
JTM	**Tenmabayashi**	**4.70**	**235**		**Sn**	**14 38 51.1**	**-4.4**
JANG	**Nango**	**4.71**	**228**	A	A	14 38 03.7	
	comp=N,4.0nm,2.8s,comp=E,3.0nm,1.3s						
JOM	**Ohasama**	**5.50**	**223**	A	A	14 38 14.3	
	comp=N,3.0nm,1.8s,comp=E,5.0nm,1.8s						
UGL	**Uglegorsk**	**6.15**	**334**	⇑*i*PN	**Pn**	**14 38 24.6**	**+2.7**
UGL				*e*S	**Sn**	**14 39 36.2**	**+5.5**
UGL				pmax	pmax		
	comp=Z,600nm,0.9s						
UGL				pmax	pmax		
	comp=Z,2µm,2.5s						
UGL	**Uglegorsk**	**6.15**	**334**	*i* P	**Pn**	**14 38 24.4**	**+2.5**
UGL				AMB	AMB	14 38 25.5	
	comp=Z,370nm,0.5s						
UGL				AMB	AMB	14 38 28.3	
	comp=Z,2µm,2.5s						
UGL				*e*S	**Sn**	**14 39 31.2**	**+0.5**
UGL				A	A	14 39 40.8	
	comp=Z,2µm,4.9s						
UGL				A	A	14 39 40.8	
	comp=Z,2µm,4.9s						
TEY	**Ternei**	**6.98**	**285**	⇑*e*PN	Pn	14 38 24.9	-8.3
TEY				*e*		14 39 48.5	
TEY				pmax	pmax		
	comp=Z,20nm,1.7s						
TEY				pmax	pmax		
	comp=Z,100nm,3.2s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.2s						
TYV	**Tymovskoe**	**7.63**	**343**	*e*PN	**Pn**	**14 38 43.8**	**+1.7**
TYV				*e*S	**Sn**	**14 40 06.8**	**0.0**
TYV				pmax	pmax		
	comp=Z,56nm,0.8s						
TYV				pmax	pmax		
	comp=Z,500nm,3.7s						
TYV				smax	smax		
	comp=N,300nm,5.5s						
TYV				smax	smax		
	comp=E,200nm,5.5s						
TYV				smax	smax		
	comp=N,22nm,1.3s						
TYV				smax	smax		
	comp=E,32nm,1.3s						
TYV	**Tymovskoe**	**7.63**	**343**	*e*P	**Pn**	**14 38 43.8**	**+1.7**
TYV				AMB	AMB	14 38 44.8	
	comp=E,500nm,4.0s						
TYV				*e*S	**Sn**	**14 40 06.8**	**0.0**
TYV				A	A	14 40 09.5	
	comp=E,3µm,5.0s						
TYV				A	A	14 40 09.5	
	comp=E,2µm,5.0s						
TYV				A	A	14 40 11.7	
	comp=E,20nm,0.7s						
TYV				A	A	14 40 11.7	
	comp=E,30nm,0.7s						
JSD	**Sado**	**8.15**	**230**		**Pn**	**14 38 49.0**	**-0.2**
MJB9	**Matsu-Tunnel**	**9.30**	**223**		**Pn**	**14 39 05.1**	**+0.1**
MAJO	**Matsushiro**	**9.30**	**223**		**Pn**	**14 39 04.2**	**-0.7**
MAJO	**Matsushiro**	**9.30**	**223**	*c i*PN	**Pn**	**14 39 05.2**	**+0.2**
MJAR	**Matsushiro Arr**	**9.30**	**223**	P	**Pn**	**14 39 04.6**	**-0.4**
	comp=E,16nm,1.0s,baz=27,slow=13,SNR=19						
MJAR				S	**Sn**	**14 40 45.8**	**-2.0**
	comp=E,5.7nm,0.9s,baz=22,slow=26,SNR=1.8						
MJAR				LR	LR	14 42 54.3	
	comp=E,239nm,21.9s,baz=32,slow=39						
MJAR	**Matsushiro Arr**	**9.30**	**223**		**Pn**	**14 39 04.4**	**-0.5**
GRNR	**Gornyy**	**9.73**	**321**	⇑*i*PN	**Pn**	**14 39 12.3**	**+1.6**
GRNR				pmax	pmax		
	comp=Z,30nm,0.7s						
GRNR				MLR	MLR		
	comp=E,190nm,16.0s						
GRNR				MLR	MLR		
	comp=N,140nm,10.0s						
GRNR				MLR	MLR		
	comp=Z,300nm,12.0s						
GRNR	**Gornyy**	**9.73**	**321**	*e*P	**Pn**	**14 39 12.3**	**+1.6**
SKR	**Severo-Kuril's**	**9.81**	**40**	*e*PN	**Pn**	**14 39 12.8**	**+1.0**
SKR				*e*S	**Sn**	**14 41 00.0**	**+0.1**
SKR				pmax	pmax		
	comp=Z,86nm,0.9s						
SKR				smax	smax		
	comp=N,72nm,0.7s						
SKR				smax	smax		
	comp=E,76nm,0.9s						
SKR	**Severo-Kuril's**	**9.81**	**40**	*e*P	**Pn**	**14 39 12.8**	**+1.0**
SKR				AMB	AMB	14 39 15.6	
	comp=E,90nm,0.4s						
SKR				*e*S	**Sn**	**14 40 56.6**	**-3.3**
SKR				A	A	14 41 08.2	
	comp=E,70nm,0.3s						
SKR				A	A	14 41 08.2	
	comp=E,80nm,0.3s						
OKH	**Okha**	**10.17**	**349**	*e*P	**Pn**	**14 39 17.8**	**+1.2**
NKL	**Nikolayevsk**	**10.21**	**341**	*e*P	**Pn**	**14 39 17.6**	**+0.5**
USRK	**Ussuriysk Ar.**	**10.22**	**278**	P	**Pn**	**14 39 17.3**	**-0.1**
	comp=E,9.9nm,0.4s,baz=89,slow=14,SNR=45						
VLA	**Vladivostok**	**10.38**	**272**	*d i*PN	**Pn**	**14 39 19.7**	**+0.1**
VLA	**Vladivostok**	**10.38**	**272**	*e*P	**Pn**	**14 39 19.7**	**+0.1**
JGF	**Kuroka**	**10.47**	**223**	Pn	**Pn**	**14 39 20.3**	**-0.5**
PAU	**Pauzhetka**	**10.67**	**39**	*e*P	**Pn**	**14 39 21.4**	**-2.0**
PAU				*e*S	**Sn**	**14 41 15.1**	**-5.6**
JHJ	**Hachijo jima 2**	**11.59**	**207**	LR	LR	14 44 40.2	
	comp=E,122nm,18.4s,baz=64,slow=40						
MDJ	**Mudanjiang**	**11.93**	**281**		**Pn**	**14 39 39.8**	**-0.6**
MDJ	**Mudanjiang**	**11.93**	**281**	P	**Pn**	**14 39 40.0**	**-0.4**
MDJ				pmax	pmax		
	comp=E,47nm,1.1s						
PEA0B	**Petropavlovsk-**	**12.22**	**35**	⇑*e*PN	**Pn**	**14 39 42.9**	**-1.3**
PETK	**Petropavlovsk-**	**12.22**	**35**	P	**Pn**	**14 39 42.5**	**-1.7**
	comp=E,4.0nm,0.6s,baz=215,slow=11,SNR=31						
PETK				LR	LR	14 44 48.2	
	comp=E,113nm,18.4s,baz=226,slow=39						
PETK	**Petropavlovsk-**	**12.22**	**35**		**Pn**	**14 39 44.2**	**0.0**
PETK	**Petropavlovsk-**	**12.22**	**35**	PN	**Pn**	**14 39 44.2**	**0.0**
BNX	**BinXian**	**13.49**	**286**	⇓P	**Pn**	**14 40 00.3**	**-0.8**
BNX				pmax	pmax		
	comp=E,61nm,0.8s						
HEH	**HeiHe**	**14.39**	**304**	*e*P	**Pn**	**14 40 12.5**	**-0.1**
HEH				pmax	pmax		
	comp=E,11nm,1.0s						
CN2	**Changchun**	**14.96**	**278**	*e*P	**Pn**	**14 40 17.8**	**-2.1**
CN2				*e*S	Sn	14 42 55.3	-9.5
CN2				pmax	pmax		
	comp=E,20nm,0.8s						
CN2				pmax	pmax		
	comp=E,100nm,3.0s						
CN2				LR	LR		
	comp=E,300nm,11.0s						
CN2				LR	LR		
	comp=E,200nm,11.0s						
CN2				LR	LR		
	comp=E,200nm,12.0s						
KSRS	**Korea Array**	**15.13**	**252**	P	**Pn**	**14 40 21.5**	**-0.7**
	comp=E,6.4nm,0.9s,baz=60,slow=13,SNR=14						
KSRS				LR	LR	14 46 26.8	
	comp=E,53nm,18.2s,baz=60,slow=38						
KSAR	**Wonju Array Be**	**15.16**	**252**		**Pn**	**14 40 21.4**	**-1.2**
KSAR	**Wonju Array Be**	**15.16**	**252**	P	**Pn**	**14 40 21.4**	**-1.2**
JNU	**Nakatsue**	**15.87**	**234**	P	**Pn**	**14 40 30.1**	**-1.5**
	comp=E,5.0nm,0.9s,baz=118,slow=18,SNR=1.8						
JNU				LR	LR	14 46 55.2	
	comp=E,94nm,19.1s,baz=54,slow=38						
ZEA	**Zeya**	**16.02**	**316**	*e*P	**Pn**	**14 40 33.6**	**+0.4**
ZEA				pmax	pmax		
	comp=N,10.0nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.5s						
ZEA	**Zeya**	**16.02**	**316**	*e*P	**Pn**	**14 40 33.6**	**+0.4**
TJN	**Taejon**	**16.07**	**250**	⇓*e*P	**Pn**	**14 40 32.1**	**-1.9**
TJN				pmax	pmax		
	comp=Z,2.0nm,2.3s						
MA2	**Magadan**	**16.24**	**8**	LR	LR	14 46 50.6	
	comp=Z,79nm,19.6s,baz=212,slow=37						
DL2	**Dalian**	**18.98**	**264**	P	**P**	**14 41 07.8**	**+0.3**
DL2				sP	**sP**	**14 41 36.1**	**-1.8**
DL2				pmax	pmax		
	comp=Z,110nm,1.2s						
DL2				pmax	pmax		
	comp=Z,560nm,5.0s						
HIA	**Hailar**	**18.99**	**297**		**P**	**14 41 05.9**	**-1.6**
HIA	**Hailar**	**18.99**	**297**	P	**P**	**14 41 05.9**	**-1.6**
HILR	**Hailar Array B**	**19.02**	**297**	P	**P**	**14 41 06.5**	**-1.4**
	comp=Z,13nm,0.3s,baz=97,slow=8.9,SNR=53						
SEY	**Seymchan**	**19.70**	**9**	P	**P**	**14 41 13.2**	**-1.8**
	comp=Z,5.7nm,0.5s,baz=188,slow=9.2,SNR=25						
SEY				LR	LR	14 49 14.5	
	comp=Z,63nm,21.4s,baz=174,slow=38						
SEY	**Seymchan**	**19.70**	**9**	⇓*e*P	**P**	**14 41 13.8**	**-1.3**
SEY				pmax	pmax		
	comp=Z,16nm,1.1s						
SEY				MLR	MLR		
	comp=Z,91nm,11.0s						
YAK	**Yakutsk**	**20.84**	**338**	P	**P**	**14 41 26.1**	**-1.3**
	comp=Z,12nm,0.3s,baz=123,slow=2.8,SNR=10						
YAK				LR	LR	14 49 31.1	
	comp=Z,95nm,21.0s,baz=125,slow=36						
	comp=Z,12nm,0.3s						
YAK	**Yakutsk**	**20.84**	**338**	*e*P	**P**	**14 41 23.6**	**-3.8**
YAK				*e*S	**S**	**14 45 11.2**	**-3.0**
YAK				*e**SS	**sS**	**14 45 43.1**	**-1.9**
YAK				*e*		14 52 36.9	
YAK				pmax	pmax		
	comp=N,6.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.2s						
YAK				smax	smax		
	comp=N,44nm,1.5s						
YAK				smax	smax		
	comp=E,56nm,1.6s						
XLT	**XiLinHaoTe**	**21.65**	**281**	*e*P	**P**	**14 41 34.8**	**-1.5**
XLT				pmax	pmax		
	comp=E,28nm,1.0s						
BJI	**Beijing**	**22.54**	**271**	P	**P**	**14 41 44.5**	**-1.1**
BJI				pmax	pmax		
	comp=E,12nm,1.1s						
BJT	**Baijiatuau**	**22.55**	**271**		**P**	**14 41 43.9**	**-1.9**
BJT	**Baijiatuau**	**22.55**	**271**	P	**P**	**14 41 43.9**	**-1.9**
TIA	**Tai'an**	**23.36**	**261**	P	**P**	**14 41 52.9**	**-0.7**
TIA				S	**S**	**14 45 55.6**	**-3.4**
TIA				pmax	pmax		
	comp=E,89nm,1.1s						
NJ2	**Nanjing**	**24.32**	**251**	⇑P	**P**	**14 42 03.1**	**+0.8**
NJ2				pmax	pmax		
	comp=E,26nm,0.8s						
BOD	**Bodaibo**	**24.52**	**317**	*e*P	**P**	**14 42 00.8**	**-3.1**
BOD				pmax	pmax		
	comp=Z,32nm,1.5s						
HNS	**HongShan**	**24.59**	**266**	⇑P	**P**	**14 42 05.1**	**+0.4**
HNS				S	**S**	**14 46 20.8**	**+2.1**
HNS				pmax	pmax		
	comp=Z,64nm,1.4s						
HHC	**Hu-ho-hao-te**	**25.63**	**276**	⇓*i*P	**P**	**14 42 15.3**	**+1.0**
HHC				pmax	pmax		
	comp=Z,44nm,1.4s						
BILL	**Bilibino**	**26.71**	**17**	⇓*e*P	**P**	**14 42 21.4**	**-2.2**
BILL				pmax	pmax		
	comp=Z,19nm,2.5s						
BILL				MLR	MLR		
	comp=Z,131nm,20.0s						
BTO	**Baotou**	**26.82**	**276**	*e*P	**P**	**14 42 26.1**	**+1.1**
BTO				pP	**pP**	**14 42 48.8**	**+2.3**
BTO				sP	**sP**	**14 43 02.6**	**+4.9**
BTO				S	**S**	**14 46 57.0**	**+2.8**
BTO				pmax	pmax		
	comp=Z,64nm,1.2s						
BTO				pmax	pmax		
	comp=Z,550nm,3.5s						
BTO				LR	LR		
	comp=Z,290nm,5.5s						
BTO				LR	LR		
	comp=Z,300nm,11.6s						
BTO				LR	LR		
	comp=Z,290nm,5.2s						
ULN	**Ulaanbaatar**	**27.39**	**293**	P	**P**	**14 42 30.1**	**0.0**
ULN	**Ulaanbaatar**	**27.39**	**293**	P	**P**	**14 42 30.4**	**+0.3**
ULN	**Ulaanbaatar**	**27.39**	**293**	*c i*P	**P**	**14 42 30.4**	**+0.3**
ULN				pmax	pmax		
	comp=Z,118nm,1.3s						
ULN	**Ulaanbaatar**	**27.39**	**293**	*e*P	**P**	**14 42 30.4**	**+0.3**
LYN	**LuoYang**	**27.49**	**262**	P	**P**	**14 42 32.3**	**+1.4**
LYN				pP	pP	14 42 54.8	+2.3
LYN				sP	sP	14 43 04.4	+0.7
LYN				S	**S**	**14 47 11.9**	**+7.2**
LYN				pmax	pmax		
	comp=Z,34nm,1.4s						
SONM	**Songino Array**	**27.84**	**293**	P	**P**	**14 42 34.4**	**+0.3**
	comp=Z,84nm,1.1s,baz=86,slow=8.4,SNR=202						
SONM				LR	LR	14 54 30.2	
	comp=Z,219nm,20.2s,baz=82,slow=38						
	comp=Z,84nm,1.1s						
SONM	**Songino Array**	**27.84**	**293**	P	**P**	**14 42 34.1**	**0.0**
SONM	**Songino Array**	**27.84**	**293**	P	**P**	**14 42 34.1**	**0.0**
SONM				pmax	pmax		
	comp=Z,110nm,1.2s						
WHN	**Wuhan**	**28.32**	**253**	P	**P**	**14 42 39.0**	**+0.7**
WHN				pmax	pmax		
	comp=Z,140nm,1.5s						
TIXI	**Tiksi**	**29.35**	**349**	LR	LR	14 54 42.9	
	comp=Z,90nm,20.8s,baz=198,slow=36						
TIXI	**Tiksi**	**29.35**	**349**	⇓*e*P	**P**	**14 42 46.9**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,13nm,3.3s						
TIXI				MLR	MLR		
	comp=Z,79nm,17.0s						
TLY	**Talaya**	**29.38**	**301**	P	**P**	**14 42 47.6**	**0.0**
TLY	**Talaya**	**29.38**	**301**	⇓*e*P	**P**	**14 42 45.4**	**-2.2**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**29.49**	**137**	T	T	15 13 48.8	
	baz=329,slow=75,SNR=926						
H11N1	**WAKE ISLAND Hy**	**29.50**	**137**	T	T	15 13 52.5	
	baz=329,slow=75,SNR=1055						
H11N3	**WAKE ISLAND Hy**	**29.51**	**137**	T	T	15 13 50.6	
	baz=329,slow=75,SNR=1263						
ZAK	**Zakamensk**	**29.66**	**298**	*e*P	**P**	**14 42 49.7**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,16nm,1.8s						
GUMO	**Guam**	**29.93**	**182**	LR	LR	14 52 41.3	
	comp=Z,35nm,20.2s,baz=340,slow=32						
XAN	**Xi'an**	**30.30**	**264**	⇑P	**P**	**14 42 55.8**	**-0.1**
XAN				pP	pP	14 43 18.4	+0.8
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SPIA	**Saint Paul Isl**	**30.37**	**48**	P	**P**	**14 42 57.2**	**+1.0**
	baz=262						
H11S1	**WAKE ISLAND Hy**	**30.44**	**139**	T	T	15 15 01.9	
	baz=329,slow=76,SNR=3980						
H11S3	**WAKE ISLAND Hy**	**30.45**	**139**	T	T	15 15 02.1	
	baz=329,slow=76,SNR=2796						
H11S2	**WAKE ISLAND Hy**	**30.46**	**139**	T	T	15 15 02.4	
	baz=329,slow=76,SNR=2718						
P08K	**Saint George I**	**30.68**	**49**	P	**P**	**14 43 00.1**	**+1.2**
	baz=264						
NIKH	**Nikolski High**	**30.92**	**56**	P	**P**	**14 43 01.8**	**+0.7**
	baz=271						
MOY	**Mondy**	**31.03**	**301**	*e*P	**P**	**14 43 02.2**	**0.0**
MOY				pmax	pmax		
	comp=Z,19nm,1.4s						
GAMB	**Gambell**	**31.25**	**35**	P	**P**	**14 43 04.2**	**+0.4**
	baz=250						
UNV	**Unalaska Valle**	**32.31**	**55**	P	**P**	**14 43 14.4**	**+1.1**
	baz=271						
M11K	**Mekoryuk**	**32.92**	**43**	P	**P**	**14 43 19.4**	**+1.0**
	baz=261						
LZH	**Lanzhou**	**33.03**	**271**	*e*P	**P**	**14 43 20.6**	**+0.6**
LZH				pP	pP	14 43 43.6	+1.8
LZH				pmax	pmax		
	comp=Z,39nm,1.3s						
LZDM	**Lanzhou Array**	**33.20**	**271**	P	**P**	**14 43 21.3**	**-0.3**
	comp=Z,2.2nm,0.3s,baz=73,slow=5.0,SNR=7.1						
	comp=Z,2.2nm,0.3s						
KNGR	**Kungurtug, Tuv**	**33.31**	**299**	⇓*e*P	**P**	**14 43 23.5**	**+1.3**
KNGR				pmax	pmax		
	comp=Z,16nm,1.4s						
TNA	**Tin City**	**33.37**	**33**	P	**P**	**14 43 22.5**	**+0.2**
TNA				IAmb	IAmb	14 43 24.4	
	comp=Z,26nm,1.0s						
TNA	**Tin City**	**33.37**	**33**	P	**P**	**14 43 23.5**	**+1.1**
	baz=252						
K13K	**Kusilvak Mount**	**33.91**	**40**	P	**P**	**14 43 27.4**	**+0.3**
K13K				IAmb	IAmb	14 43 29.6	
	comp=Z,22nm,0.9s						
K13K	**Kusilvak Mount**	**33.91**	**40**	P	**P**	**14 43 28.8**	**+1.7**
	baz=260,SNR=7.6						
F14K	**Arctic Creek**	**33.98**	**33**	P	**P**	**14 43 29.6**	**+1.9**
	baz=254						
FALS	**False Pass**	**34.09**	**53**	P	**P**	**14 43 30.7**	**+1.9**
	baz=272						
ANM	**Nome**	**34.13**	**35**		**P**	**14 43 30.2**	**+1.2**
ANM				IAmb	IAmb	14 43 31.5	
	comp=Z,19nm,1.2s						
ANM	**Nome**	**34.13**	**35**	P	**P**	**14 43 30.2**	**+1.2**
ANM				pmax	pmax		
	comp=Z,19nm,1.2s						
ANM	**Nome**	**34.13**	**35**	P	**P**	**14 43 30.5**	**+1.5**
	baz=256						
M13K	**Dall Lake**	**34.33**	**43**	P	**P**	**14 43 32.1**	**+1.5**
	baz=264						
J14K	**Nanvaranak Lak**	**34.55**	**39**	P	**P**	**14 43 34.1**	**+1.6**
	baz=260						
GTA	**Gaotai**	**34.58**	**279**	P	**P**	**14 43 34.0**	**+0.7**
GTA				pP	pP	14 43 56.6	+1.3
GTA				ScP	**ScP**	**14 49 43.1**	**+1.0**
GTA				ScS	**ScS**	**14 53 45.4**	**0.0**
GTA				pmax	pmax		
	comp=Z,16nm,1.4s						
F15K	**North Star Dit**	**34.72**	**33**	P	**P**	**14 43 35.9**	**+1.8**
	baz=255						
L14K	**Kuka Creek**	**34.75**	**41**	IAmb	IAmb	14 43 37.4	
	comp=Z,22nm,0.8s						
L14K	**Kuka Creek**	**34.75**	**41**	P	**P**	**14 43 36.0**	**+1.6**
	baz=263						
G15K	**Niukluk**	**34.79**	**35**	P	**P**	**14 43 36.0**	**+1.3**
	baz=257						
S12K	**Black Hills**	**34.84**	**51**	P	**P**	**14 43 36.0**	**+0.8**
	baz=272						
M14K	**Bethel**	**35.04**	**42**	P	**P**	**14 43 38.3**	**+1.4**
M14K	**Bethel**	**35.04**	**42**	P	**P**	**14 43 37.9**	**+1.0**
	baz=265						
N14K	**Kuskokwak Cree**	**35.11**	**44**	P	**P**	**14 43 38.4**	**+0.9**
	baz=266						
C16K	**Lisburne Hills**	**35.22**	**29**	P	**P**	**14 43 39.0**	**+0.7**
	baz=251						
O14K	**Tigyukauivet M**	**35.29**	**45**	P	**P**	**14 43 39.6**	**+0.6**
	baz=268						
L15K	**Ungalak Mounta**	**35.36**	**41**	P	**P**	**14 43 40.4**	**+0.8**
	baz=264						
K15K	**Wolf Creek Mou**	**35.41**	**40**	P	**P**	**14 43 41.4**	**+1.4**
	baz=263						
H16K	**Elim**	**35.47**	**36**	P	**P**	**14 43 41.8**	**+1.3**
	baz=259,SNR=10						
G16K	**Koyuk River**	**35.57**	**34**	P	**P**	**14 43 42.4**	**+1.1**
	baz=258						
CD2	**Chengdu**	**35.65**	**264**	P	**P**	**14 43 42.4**	**-0.1**
M15K	**Kasigluk River**	**35.66**	**43**	P	**P**	**14 43 43.2**	**+1.1**
	baz=266						
SDPT	**Sand Point**	**35.76**	**52**	P	**P**	**14 43 43.8**	**+0.8**
	baz=274						
D17K	**Noatak River**	**35.85**	**30**	P	**P**	**14 43 44.1**	**+0.4**
	baz=254,SNR=8.1						
N15K	**Kwethluk River**	**35.92**	**43**	IAmb	IAmb	14 43 48.6	
	comp=Z,21nm,0.8s						
N15K	**Kwethluk River**	**35.92**	**43**	P	**P**	**14 43 45.9**	**+1.4**
	baz=267						
J16K	**Anvik River**	**35.96**	**38**	IAmb	IAmb	14 43 47.5	
	comp=Z,13nm,1.1s						
J16K	**Anvik River**	**35.96**	**38**	P	**P**	**14 43 46.3**	**+1.6**
	baz=263						
I17K	**Unalakleet**	**36.01**	**37**	IAmb	IAmb	14 43 47.6	
	comp=Z,28nm,0.9s						
I17K	**Unalakleet**	**36.01**	**37**	P	**P**	**14 43 46.3**	**+1.3**
	baz=262,SNR=10						
RDOG	**Red Dog Mine**	**36.02**	**30**	P	**P**	**14 43 46.1**	**+0.9**
	baz=254						
O15K	**Ungalikthiuk R**	**36.03**	**45**	P	**P**	**14 43 46.5**	**+1.1**
	baz=269						
C17K	**DeLong Mountai**	**36.04**	**29**	P	**P**	**14 43 45.6**	**+0.3**
	baz=253						
E17K	**Hotham Inlet**	**36.16**	**32**	P	**P**	**14 43 46.9**	**+0.5**
	baz=256,SNR=12						
GYA	**Guiyang**	**36.16**	**255**	⇑P	**P**	**14 43 47.5**	**+0.5**
GYA				pmax	pmax		
	comp=Z,17nm,0.7s						
S14K	**Fog Glacier**	**36.22**	**50**	P	**P**	**14 43 47.8**	**+0.6**
	baz=273						
F17K	**Baldwin Pennin**	**36.24**	**33**	IAmb	IAmb	14 43 49.1	
	comp=Z,14nm,1.1s						
F17K	**Baldwin Pennin**	**36.24**	**33**	P	**P**	**14 43 47.7**	**+0.7**
	baz=258						
G17K	**Kiwalik Mounta**	**36.29**	**34**	P	**P**	**14 43 48.9**	**+1.4**
	baz=260,SNR=24						
CHNA	**Chernabura Isl**	**36.30**	**53**	P	**P**	**14 43 48.7**	**+1.0**
	baz=275						
L16K	**Owhat River**	**36.32**	**41**	P	**P**	**14 43 48.8**	**+1.0**
L16K				IAmb	IAmb	14 43 50.1	
	comp=Z,16nm,0.8s						
L16K	**Owhat River**	**36.32**	**41**	P	**P**	**14 43 48.8**	**+1.0**
	baz=266						
H17K	**Granite Mounta**	**36.50**	**35**		**P**	**14 43 50.7**	**+1.4**
H17K				IAmb	IAmb	14 43 51.8	
	comp=Z,18nm,0.9s						
H17K	**Granite Mounta**	**36.50**	**35**	P	**P**	**14 43 50.3**	**+1.0**
	baz=261						
M16K	**Timber Creek**	**36.52**	**42**	P	**P**	**14 43 50.5**	**+1.0**
	baz=267						
N16K	**Nishlik Lake**	**36.59**	**43**	P	**P**	**14 43 51.6**	**+1.5**
	baz=268						
J17K	**VABM Dome**	**36.66**	**38**	P	**P**	**14 43 52.4**	**+1.7**
J17K	**VABM Dome**	**36.66**	**38**	P	**P**	**14 43 52.5**	**+1.9**
	baz=264,SNR=10						
E18K	**Tukpahlearik C**	**36.71**	**31**	P	**P**	**14 43 51.7**	**+0.7**
	baz=257						
B18K	**Kokolik River**	**36.78**	**28**	P	**P**	**14 43 52.3**	**+0.7**
	baz=253,SNR=19						
C18K	**Utukok River**	**36.79**	**29**	IAmb	IAmb	14 43 53.4	
	comp=Z,17nm,0.9s						
C18K	**Utukok River**	**36.79**	**29**	P	**P**	**14 43 51.8**	**0.0**
	baz=255						
F18K	**Selawik**	**36.90**	**33**	P	**P**	**14 43 53.8**	**+1.2**
	baz=259,SNR=6.4						
L17K	**Donlin**	**36.91**	**40**	P	**P**	**14 43 53.5**	**+0.7**
	baz=266						
O16K	**Kokwok River B**	**36.92**	**44**	P	**P**	**14 43 54.2**	**+1.3**
	baz=270						
K17K	**Iditarod**	**36.95**	**39**	P	**P**	**14 43 54.4**	**+1.3**
	baz=266,SNR=9.6						
P16K	**Nushagak River**	**36.97**	**45**	P	**P**	**14 43 54.5**	**+1.2**
P16K	**Nushagak River**	**36.97**	**45**	P	**P**	**14 43 54.0**	**+0.6**
	baz=271						
G18K	**Tagagawik**	**37.17**	**34**	P	**P**	**14 43 55.9**	**+0.9**
	baz=261						
H18K	**Honhosa River**	**37.18**	**35**	P	**P**	**14 43 56.1**	**+1.0**
	baz=262						
A19K	**Wainwright**	**37.27**	**27**	P	**P**	**14 43 56.2**	**+0.5**
	baz=253,SNR=23						
M17K	**Holitna River**	**37.28**	**41**	IAmb	IAmb	14 43 58.9	
	comp=Z,23nm,0.8s						
M17K	**Holitna River**	**37.28**	**41**	P	**P**	**14 43 56.8**	**+0.9**
	baz=268						
N17K	**Nushagak Hills**	**37.38**	**43**	P	**P**	**14 43 57.2**	**+0.5**
	baz=269						
O17K	**Koliganek Bris**	**37.42**	**44**	P	**P**	**14 43 58.7**	**+1.6**
	baz=270,SNR=5.4						
C19K	**Lookout Ridge**	**37.47**	**29**	P	**P**	**14 43 56.8**	**-0.7**
C19K				IAmb	IAmb	14 43 59.1	
	comp=Z,22nm,1.1s						
C19K	**Lookout Ridge**	**37.47**	**29**	P	**P**	**14 43 58.5**	**+1.0**
	baz=256,SNR=16						
L18K	**Granite Mounta**	**37.66**	**40**	P	**P**	**14 44 00.5**	**+1.4**
	baz=268,SNR=6.7						
F19K	**Shaleruckik Mo**	**37.67**	**33**	P	**P**	**14 43 59.7**	**+0.5**

	baz=261,SNR=9.7						
Q16K	King Salmon	37.67	46	P	P	14 43 59.7	+0.4
	baz=272						
J18K	Innoko River	37.72	38		P	14 44 00.8	+1.1
J18K				IAmb	IAmb	14 44 02.0	
	comp=Z,17nm,0.9s						
J18K	Innoko River	37.72	38	P	P	14 44 01.1	+1.4
	baz=266,SNR=9.6						
GCSA	Galena City Sc	37.76	36	P	P	14 44 01.5	+1.6
	baz=264,SNR=6.5						
P17K	Kvichak River	37.77	45	P	P	14 44 01.0	+0.9
	baz=272						
G19K	Purcell Mounta	37.84	34	P	P	14 44 01.0	+0.4
G19K				IAmb	IAmb	14 44 02.3	
	comp=Z,20nm,0.9s						
G19K	Purcell Mounta	37.84	34	P	P	14 44 01.1	+0.4
	baz=262,SNR=16						
D19K	Kuna River	37.86	30	IAmb	IAmb	14 44 02.2	
	comp=Z,22nm,1.1s						
D19K	Kuna River	37.86	30	P	P	14 44 01.0	+0.3
	baz=258						
R17L	Mt. Peulik Vol	37.89	48	P	P	14 44 01.8	+0.6
	baz=274						
E19K	Redstone River	37.99	32	IAmb	IAmb	14 44 05.5	
	comp=Z,16nm,0.9s						
E19K	Redstone River	37.99	32	P	P	14 44 02.5	+0.7
	baz=260						
N18K	Kilae Creek	38.02	43	P	P	14 44 02.9	+0.7
	baz=270						
H19K	Roundabout Mou	38.03	35	P	P	14 44 03.2	+1.1
	baz=264,SNR=35						
M18K	Stony River	38.05	41	P	P	14 44 03.4	+1.0
	baz=269						
Q17K	Contact Creek	38.10	47	P	P	14 44 03.9	+0.9
	baz=274						
J19K	Poorman	38.24	37	P	P	14 44 05.2	+1.2
	baz=266,SNR=16						
O18K	Koktuh Hills	38.38	44	P	P	14 44 05.6	+0.4
	baz=272						
P18K	Big Mountain,	38.38	45	P	P	14 44 05.2	-0.1
	baz=273						
D20K	Etivluk River	38.44	30	IAmb	IAmb	14 44 07.1	
	comp=Z,20nm,0.9s						
D20K	Etivluk River	38.44	30	P	P	14 44 06.4	+0.8
	baz=259						
CHIR	Chirikof Islan	38.46	51	P	P	14 44 05.9	0.0
	baz=277						
F20K	Avaraart Lake	38.51	32	P	P	14 44 06.8	+0.7
	baz=262						
B20K	Meade River	38.51	27	P	P	14 44 07.0	+0.8
	baz=257						
E20K	Nigu River	38.51	30	P	P	14 44 07.3	+1.0
	baz=260,SNR=16						
L19K	White Mountain	38.52	40	P	P	14 44 07.5	+1.1
	baz=269						
Q18K	Katmai Hardscr	38.54	46	P	P	14 44 07.7	+1.1
	baz=274						
H20K	Anotleneega Mo	38.67	35	P	P	14 44 08.8	+1.2
	baz=265						
I20K	Naaghedeneel	38.79	36	P	P	14 44 10.0	+1.5
	baz=266						
O19K	Port Alsworth	38.81	43	P	P	14 44 10.2	+1.5
	baz=272						
J20K	Nowinta River	38.90	37	P	P	14 44 10.8	+1.3
J20K				IAmb	IAmb	14 44 12.0	
	comp=Z,32nm,1.0s						
J20K	Nowinta River	38.90	37	P	P	14 44 11.0	+1.5
	baz=268,SNR=17						
K20K	Telida	38.91	38	IAmb	IAmb	14 44 12.3	
	comp=Z,19nm,1.0s						
K20K	Telida	38.91	38	P	P	14 44 11.3	+1.7
	baz=269,SNR=7.2						
A21K	Barrow	38.99	26	P	P	14 44 10.6	+0.4
	baz=256,SNR=12						
NRIK	Noril'sk	39.01	331	P	P	14 44 10.9	+0.6
	comp=Z,2.4nm,0.5s,baz=105,slow=7.0,SNR=2.9						
NRIK				PcP	PcP	14 46 18.8	+0.3
	comp=Z,2.8nm,0.6s,baz=104,slow=4.2,SNR=4.6						
	comp=Z,2.4nm,0.5s						
NRIK	Noril'sk	39.01	331	IAmb	IAmb	14 44 13.9	
	comp=Z,15nm,1.6s						
NRIK	Noril'sk	39.01	331⇓	iP	P	14 44 09.7	-0.7
NRIK				pmax	pmax		
	comp=Z,9.0nm,1.5s						
C21K	Knifeblade Rid	39.17	29	P	P	14 44 12.5	+0.8
	baz=261						
SII	Sitkinak Islan	39.17	49	P	P	14 44 12.2	+0.4
	baz=277						
Q19K	Cape Douglas,	39.23	45	P	P	14 44 12.9	+0.6
	baz=274						
B21K	Ikpikpuk River	39.30	28	IAmb	IAmb	14 44 14.4	
	comp=Z,38nm,1.1s						
B21K	Ikpikpuk River	39.30	28	P	P	14 44 13.8	+1.0
	baz=260						
G21K	Allakaket	39.32	33		P	14 44 13.9	+1.0
G21K	Allakaket	39.32	33	P	P	14 44 14.2	+1.2
	baz=265						
M20K	Styx River	39.34	41	P	P	14 44 14.8	+1.5
	baz=271						
E21K	Killik River	39.35	30	P	P	14 44 14.2	+0.9
	baz=262						
P19K	Oil Pt	39.38	44	P	P	14 44 14.4	+0.7
	baz=274						
F21K	Alatna River	39.40	32	P	P	14 44 14.5	+0.9
	baz=264						
A22K	Sinclair Lake	39.44	26	P	P	14 44 14.5	+0.6
	baz=258,SNR=31						
GOMU	GeErMu	39.52	277	P	P	14 44 13.3	-2.1
GOMU				pmax	pmax		
	comp=Z,83nm,1.0s						
H21K	Melozitna Rive	39.55	35	IAmb	IAmb	14 44 17.7	
	comp=Z,35nm,1.2s						
H21K	Melozitna Rive	39.55	35	P	P	14 44 16.0	+1.2
	baz=267						
OHAK	Old Harbor	39.58	48	P	P	14 44 15.6	+0.4
	baz=277						
PZH	PanZhiHua	39.62	259	P	P	14 44 16.1	0.0
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,210nm,4.3s						
O20K	Slope Mountain	39.66	44	P	P	14 44 16.5	+0.5
	baz=274						
CHUM	Lake Minchumin	39.70	38	P	P	14 44 17.8	+1.7
	baz=270,SNR=9.5						
KMI	Kunming	39.76	257	P	P	14 44 17.9	+0.5
KMI				pP	pP	14 44 40.9	+1.2
KMI				pmax	pmax		
	comp=Z,21nm,1.0s						
PPLA	Purkeypile	39.76	39	P	P	14 44 17.9	+1.1
	baz=271,SNR=6.1						
SPCR	Spurr Chakacha	39.80	42	P	P	14 44 18.6	+1.5
	baz=273						
B22K	Teshekpuk Lake	39.83	27	P	P	14 44 17.7	+0.6
	baz=261						
DGZ	Jazzator, Alta	39.84	300*c*	*i*P	P	14 44 18.8	+1.1
DGZ				pmax	pmax		
	comp=Z,42nm,1.4s						
I21K	Tanana	39.87	36	IAmb	IAmb	14 44 20.1	
	comp=Z,44nm,1.3s						
I21K	Tanana	39.87	36	P	P	14 44 18.6	+1.1
	baz=268,SNR=9.2						
SPU	Mount Spurr	39.88	42	P	P	14 44 18.4	+0.7
D22K	Ayikyak River	39.88	30		P	14 44 17.6	0.0
D22K				IAmb	IAmb	14 44 20.1	
	comp=Z,30nm,1.4s						
D22K	Ayikyak River	39.88	30	P	P	14 44 18.0	+0.5
	baz=263,SNR=12						
KDAK	Kodiak Island	39.89	47	P	P	14 44 18.0	+0.2
KDAK	Kodiak Island	39.89	47	P	P	14 44 21.1	+3.3
KDAK	Kodiak Island	39.89	47	P	P	14 44 18.1	+0.3
	baz=277						
Q20K	Shuyak Island	39.90	46	P	P	14 44 18.2	+0.3
	baz=276						
SYI	Shuyak Island	39.90	46	IAmb	IAmb	14 44 51.0	
	comp=Z,31nm,0.8s						
F22K	John River	39.92	32	P	P	14 44 18.9	+0.9
	baz=265						
SKT	Skwentna	40.09	41	P	P	14 44 20.3	+0.9
	baz=272						
E22K	Anaktuvuk Pass	40.12	31	P	P	14 44 19.9	+0.3
E22K				IAmb	IAmb	14 44 21.3	
	comp=Z,24nm,1.1s						
E22K	Anaktuvuk Pass	40.12	31	P	P	14 44 19.8	+0.2
	baz=265,SNR=18						
H22K	Ishtalitna Cre	40.15	34	IAmb	IAmb	14 44 22.4	
	comp=Z,29nm,1.1s						
H22K	Ishtalitna Cre	40.15	34	P	P	14 44 20.6	+0.8
	baz=268						
HOM	Homer	40.19	44	P	P	14 44 20.4	+0.2
	baz=275						
BPAW	Bear Paw Mtn.	40.28	37	P	P	14 44 20.9	-0.1
	baz=270						
CAPN	Captain Cook N	40.34	42	P	P	14 44 21.2	-0.3
	baz=274						
CNPM	China Poot	40.41	44	IAmb	IAmb	14 44 23.8	
	comp=Z,60nm,1.6s						
L22K	Petersville	40.42	40	IAmb	IAmb	14 44 26.8	
	comp=Z,16nm,1.2s						
ZAA0	Zalesovo Array	40.49	307	P	P	14 44 21.0	-1.8
ZAA0				IAmb	IAmb	14 44 23.6	
	comp=Z,23nm,1.1s						
ZALV	Zalesovo Beam	40.49	307	P	P	14 44 21.7	-1.1
	comp=Z,6.0nm,0.3s,baz=86,slow=7.6,SNR=38						
ZALV				PcP	PcP	14 46 24.0	+0.5
	comp=Z,7.8nm,0.7s,baz=81,slow=2.8,SNR=12						
ZALV				LR	LR	15 01 39.7	
	comp=Z,63nm,19.1s,baz=50,slow=37						
	comp=Z,6.0nm,0.3s						
ZALV	Zalesovo Beam	40.49	307	P	P	14 44 21.1	-1.7
ZALV					PcP	14 46 24.0	+0.5
ZALV	Zalesovo Beam	40.49	307	*i* P	P	14 44 22.2	-0.6
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.3s						
SUA	Susitna One	40.49	41	P	P	14 44 23.3	+0.5
SUA	Susitna One	40.49	41	P	P	14 44 23.0	+0.2
	baz=274						
D23K	Nanushuk River	40.61	30	IAmb	IAmb	14 44 25.6	
	comp=Z,28nm,1.3s						
D23K	Nanushuk River	40.61	30	P	P	14 44 24.3	+0.8
	baz=265,SNR=6.7						
TRF	Thorofare Moun	40.61	38	IAmb	IAmb	14 44 29.2	
	comp=Z,17nm,1.1s						
TRF	Thorofare Moun	40.61	38	P	P	14 44 24.4	+0.6
	baz=272						
DAV	Davao City (W)	40.61	212	LR	LR	15 00 37.3	
	comp=Z,41nm,19.0s,baz=32,slow=35						
BRSE	Bradley Lake S	40.63	44	P	P	14 44 24.7	+0.7
	baz=276						
CUT	Chulitna	40.66	40	P	P	14 44 24.5	+0.4
	baz=273						
COLD	Coldfoot	40.67	32	IAmb	IAmb	14 44 26.1	
	comp=Z,12nm,0.8s						
COLD	Coldfoot	40.67	32	P	P	14 44 24.9	+0.8
	baz=268,SNR=13						
C23K	Itkillik River	40.72	28	IAmb	IAmb	14 44 26.0	
	comp=Z,36nm,1.1s						
C23K	Itkillik River	40.72	28	P	P	14 44 25.2	+0.8
	baz=264,SNR=12						
G23K	Bananza Creek	40.72	33	IAmb	IAmb	14 44 27.0	
	comp=Z,27nm,0.9s						
G23K	Bananza Creek	40.72	33	P	P	14 44 25.3	+0.8
	baz=268,SNR=28						
M22K	Willow	40.77	41	P	P	14 44 25.7	+0.7
	baz=274						
E23K	Chandalar	40.93	31	IAmb	IAmb	14 44 29.4	
	comp=Z,18nm,1.2s						
E23K	Chandalar	40.93	31	P	P	14 44 27.2	+0.8
	baz=267,SNR=14						
I23K	Minto, Yukon-K	40.98	36	IAmb	IAmb	14 44 29.2	
	comp=Z,42nm,1.3s						
I23K	Minto, Yukon-K	40.98	36	P	P	14 44 28.1	+1.5
	baz=271,SNR=12						
TOLK	Toolik Lake Re	40.98	30	P	P	14 44 27.0	+0.3
	baz=266						
RC01	Rabbit Creek A	41.01	42	P	P	14 44 27.5	+0.5
	baz=275						
O22K	Cooper Landing	41.07	43	P	P	14 44 27.9	+0.5
	baz=276						
NEA2	Nenana	41.11	36	IAmb	IAmb	14 44 30.1	
	comp=Z,35nm,1.0s						
NEA2	Nenana	41.11	36	P	P	14 44 29.1	+1.3
	baz=272,SNR=32						
MCK	McKinley	41.20	38	IAmb	IAmb	14 44 30.5	
	comp=Z,12nm,0.8s						
MCK	McKinley	41.20	38	P	P	14 44 29.3	+0.8
	baz=273,SNR=8.5						
SEW	Seward	41.24	43	P	P	14 44 29.6	+0.7
	baz=276						
PMR	Palmer	41.25	41	P	P	14 44 29.8	+0.9
	baz=275						
D24K	Happy Valley	41.29	29	P	P	14 44 29.6	+0.4
	baz=267						
GHO	Glory Hole Cre	41.34	41	P	P	14 44 30.2	+0.5
C24K	Franklin Bluff	41.37	29	P	P	14 44 30.1	+0.3
	baz=266						
WAT1	Susitna Watana	41.43	39	P	P	14 44 30.8	+0.4
	baz=274						
WMQ	Urumqi	41.45	291	*e*P	P	14 44 32.3	+1.4
WMQ				pP	pP	14 44 54.8	+1.4
WMQ				PP	PP	14 46 05.5	-2.8
WMQ				pmax	pmax		
	comp=Z,31nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,240nm,4.1s						
WMQ				LR	LR		
	comp=Z,120nm,21.5s						
WRH	Wood River Hil	41.54	37	IAmb	IAmb	14 44 34.4	
	comp=Z,17nm,0.9s						
F24K	Squaw Lake	41.57	32	P	P	14 44 32.7	+1.2
	baz=269						
H24K	Noodor Dome	41.58	35	IAmb	IAmb	14 44 34.5	
	comp=Z,38nm,1.0s						
H24K	Noodor Dome	41.58	35	P	P	14 44 33.2	+1.5
	baz=271						
KNK	Knik Glacier	41.59	41	IAmb	IAmb	14 44 35.0	
	comp=Z,12nm,0.6s						
KNK	Knik Glacier	41.59	41	P	P	14 44 32.9	+1.1
	baz=276						
SML	Sawmill	41.61	41	IAmb	IAmb	14 45 06.0	
	comp=Z,26nm,1.0s						
SML	Sawmill	41.61	41	P	P	14 44 33.2	+1.2
	baz=275,SNR=8.1						
COLA	College	41.62	36	P	P	14 44 32.6	+0.7
COLA	College	41.62	36*c*	*i*P	P	14 44 33.2	+1.3
COLA				pmax	pmax		
	comp=Z,66nm,1.0s						
COLA	College	41.62	36	P	P	14 44 33.5	+1.6
	baz=272						
PWL	Port Wells	41.71	42	P	P	14 44 34.0	+1.3
	baz=276						
G24K	Hadweenzic Riv	41.73	33	IAmb	IAmb	14 44 35.6	
	comp=Z,34nm,0.9s						
G24K	Hadweenzic Riv	41.73	33	P	P	14 44 34.7	+1.8
	baz=271,SNR=16						
POKR	Poker Plat Res	41.79	36	P	P	14 44 35.2	+1.8
	baz=272,SNR=16						
WAT6	Susitna Watana	41.82	39	P	P	14 44 34.1	+0.3
	baz=275						
DHY	Denali Highway	41.94	39	IAmb	IAmb	14 44 36.4	
	comp=Z,11nm,0.7s						
DHY	Denali Highway	41.94	39	P	P	14 44 35.4	+0.6
	baz=275,SNR=5.4						
HDA	Harding Lake	42.04	37	IAmb	IAmb	14 44 36.8	
	comp=Z,14nm,0.8s						
HDA	Harding Lake	42.04	37	P	P	14 44 35.9	+0.6
	baz=274,SNR=13						
IL31		42.04	36	IAmb	IAmb	14 44 38.3	
	comp=Z,27nm,0.9s						
ILAR	Eielson Array	42.04	36	P	P	14 44 35.4	0.0
	comp=Z,23nm,0.9s,baz=262,slow=5.7,SNR=106						
ILAR				PcP	PcP	14 46 27.3	-1.1
	comp=Z,0.5nm,0.6s,baz=271,slow=3.0,SNR=1.3						
	comp=Z,23nm,0.9s						
ILAR	Eielson Array	42.04	36	P	P	14 44 35.9	+0.5
SCM	Sheep Creek Mo	42.08	41	P	P	14 44 36.4	+0.5
	baz=276						
ZSN	Zaisan	42.11	297⇑	*i*P	P	14 44 36.8	+0.6
ZSN	Zaisan	42.11	297*c*	*i*P	P	14 44 36.8	+0.6
D25K	Kavik River	42.17	29	P	P	14 44 36.7	+0.3
	baz=269						
G25K	Bearman Lake	42.28	33	P	P	14 44 38.8	+1.6
	baz=272						
F25K	Christian Rive	42.44	32	P	P	14 44 40.0	+1.4
	baz=271						
E25K	Arctic Village	42.45	31	P	P	14 44 40.2	+1.5
	baz=271,SNR=6.8						
M24K	Tolsona, Glenn	42.59	40	P	P	14 44 40.6	+0.6
	baz=277						
K24K	Donnelly Dome	42.60	37	IAmb	IAmb	14 44 41.4	
	comp=Z,24nm,0.9s						
K24K	Donnelly Dome	42.60	37	P	P	14 44 40.6	+0.6
	baz=275,SNR=7.1						
C26K	Camden Bay	42.69	28	P	P	14 44 41.5	+1.0
	baz=270						
J25K	Salcha River,	42.70	36		P	14 44 40.3	-0.5
J25K	Salcha River,	42.70	36	P	P	14 44 41.3	+0.5
	baz=275						
KLU	Klutina	42.79	41	IAmb	IAmb	14 45 22.8	
	comp=Z,68nm,1.8s						
KLU	Klutina	42.79	41	P	P	14 44 42.4	+0.8
	baz=278						
PAX	Paxson	42.82	39	P	P	14 44 42.8	+1.0
	baz=276						
BMAR	Burnt Mountain	42.85	32	P	P	14 44 43.1	+1.2
Q23K	Middleton Isla	42.89	44	P	P	14 44 42.6	+0.4
	baz=280						
F26K	Sheenjek River	43.00	32	IAmb	IAmb	14 44 46.0	
	comp=Z,16nm,1.0s						
F26K	Sheenjek River	43.00	32	P	P	14 44 44.5	+1.3
	baz=273,SNR=12						
EYAK	Cordova Ski Ar	43.01	42	P	P	14 44 43.0	-0.2
	baz=279						
RIDG	Independent Ri	43.01	38	IAmb	IAmb	14 44 44.9	
	comp=Z,12nm,0.8s						
RIDG	Independent Ri	43.01	38	P	P	14 44 43.9	+0.6
	baz=276						
HARP	HAARP	43.03	39	P	P	14 44 44.7	+1.2
	baz=277						
C27K	Jago River	43.11	29	IAmb	IAmb	14 44 46.2	
	comp=Z,22nm,1.1s						
C27K	Jago River	43.11	29	P	P	14 44 44.5	+0.6
	baz=271,SNR=27						
G26K	Porcupine Rive	43.18	33	P	P	14 44 46.4	+1.9
	baz=274						
SCRK	Sand Creek	43.37	37	IAmb	IAmb	14 44 47.7	
	comp=Z,59nm,1.6s						
SCRK	Sand Creek	43.37	37	P	P	14 44 46.8	+0.6
	baz=277,SNR=14						
N25K	Chitina, Valde	43.40	41	P	P	14 44 47.2	+0.7
	baz=279						
J26L	Joseph Creek	43.49	36	IAmb	IAmb	14 44 48.5	
	comp=Z,28nm,1.7s						
J26L	Joseph Creek	43.49	36	P	P	14 44 47.9	+0.7
	baz=276						
BMRM	Bremner River	43.50	42	P	P	14 44 48.0	+0.7
	baz=279						
I26K	Coal Creek Min	43.58	35	P	P	14 44 48.5	+0.8
	baz=276						
MENT	Mentasta	43.62	39	IAmb	IAmb	14 45 34.4	
	comp=Z,21nm,1.3s						
L26K	Log Cabin Wild	43.77	38	IAmb	IAmb	14 44 52.1	
	comp=Z,15nm,0.7s						
L26K	Log Cabin Wild	43.77	38	P	P	14 44 51.2	+1.8
	baz=278,SNR=9.1						
E27K	Coleen River	43.94	31	IAmb	IAmb	14 44 53.9	
	comp=Z,25nm,1.6s						
E27K	Coleen River	43.94	31	P	P	14 44 52.6	+2.0
	baz=274,SNR=5.9						
MK31	Makanchi Array	43.99	297*c*	*i*P	P	14 44 51.7	+0.4
MKAR	Makanchi Array	43.99	297	P	P	14 44 51.7	+0.4
	comp=Z,19nm,0.5s,baz=80,slow=9.0,SNR=352						
MKAR				ScP	ScP	14 50 19.9	+1.8
	comp=Z,0.2nm,0.6s,baz=61,slow=6.2,SNR=1.4						
MKAR				LR	LR	15 03 58.0	
	comp=Z,135nm,19.4s,baz=66,slow=37						
	comp=Z,19nm,0.5s						
MKAR	Makanchi Array	43.99	297	P	P	14 44 51.5	+0.2
M26K	Nabesna, AK	44.03	39	IAmb	IAmb	14 44 58.5	
	comp=Z,12nm,0.9s						
M26K	Nabesna, AK	44.03	39	P	P	14 44 53.3	+1.9
	baz=279,SNR=7.4						
G27K	Doyon Strip	44.03	33	IAmb	IAmb	14 44 54.3	
	comp=Z,22nm,1.4s						
G27K	Doyon Strip	44.03	33	P	P	14 44 53.3	+1.9
	baz=276						
D27M	Malcolm River	44.09	29	P	P	14 44 53.2	+1.3
	baz=274						
H27K	Steamboat Moun	44.15	34	P	P	14 44 54.1	+1.7
	baz=276						
I27K	Kandik River	44.18	35	IAmb	IAmb	14 44 56.2	
	comp=Z,16nm,1.1s						
I27K	Kandik River	44.18	35	P	P	14 44 54.4	+1.7
	baz=277						
MCARA	McCarthy VSAT	44.18	41	P	P	14 44 54.4	+1.8
	baz=280						
MAKZ	Makanchi	44.19	298	P	P	14 44 53.1	+0.2
MAKZ	Makanchi	44.19	298	P	P	14 44 53.1	+0.2
MAKZ				pmax	pmax		
	comp=Z,28nm,0.7s						
CRQE	Cirque	44.27	42	P	P	14 44 55.1	+1.6
	baz=281						
L27K	Beaver Creek,	44.45	38	IAmb	IAmb	14 44 57.7	
	comp=Z,20nm,0.7s						
L27K	Beaver Creek,	44.45	38	P	P	14 44 56.7	+1.9
	baz=279						
BCAR	Beaver Creek A	44.47	38	P	P	14 44 56.6	+1.6
M27K	Edge Creek, AK	44.55	39	IAmb	IAmb	14 44 58.5	
	comp=Z,16nm,0.8s						
M27K	Edge Creek, AK	44.55	39	P	P	14 44 57.5	+1.8
	baz=280						
F28M	Old Crow	44.64	32	IAmb	IAmb	14 44 59.0	
	comp=Z,20nm,0.9s						
F28M	Old Crow	44.64	32	P	P	14 44 58.0	+1.8
	baz=276,SNR=15						
E28M	Babbage River	44.66	30	P	P	14 44 57.4	+1.1
	baz=276,SNR=6.3						
D28M	Stokes Point	44.88	29	P	P	14 44 59.2	+1.3
	baz=276						
I28M	Miner Creek	44.90	35		P	14 44 59.8	+1.4
I28M	Miner Creek	44.90	35	P	P	14 45 00.1	+1.8
	baz=279,SNR=26						
KURK	Kurchatov	44.99	304		PcP	14 46 38.9	+0.3
KURK	Kurchatov	44.99	304		P	14 44 59.0	-0.1
KURK	Kurchatov	44.99	304*c*	*i*P	P	14 44 58.9	-0.3
KURK				pmax	pmax		
	comp=Z,70nm,1.4s						
KURK	Kurchatov	44.99	304	*e*P	P	14 44 58.9	-0.3
KURK	Kurchatov	44.99	304	P	P	14 44 58.9	-0.3
KURK				pP	pP	14 45 21.8	0.0
KURK				PcP	PcP	14 46 39.2	+0.6
BVCY	Beaver Creek	45.00	39	P	P	14 45 00.8	+1.6
	baz=281,SNR=5.9						
CTG	Chitna Glacier	45.06	41	P	P	14 45 00.9	+1.0
	baz=282						
CTGM	Chitina Glacie	45.07	41	P	P	14 45 01.1	+1.2
CTGM				IAmb	IAmb	14 45 45.9	
	comp=Z,50nm,1.4s						
KURBB	Kurchatov Arra	45.07	304	P	P	14 44 59.6	-0.2
	comp=Z,14nm,0.5s,baz=75,slow=8.9,SNR=136						
KURBB				PcP	PcP	14 46 38.9	0.0
	comp=Z,3.3nm,0.7s,baz=84,slow=3.5,SNR=5.1						
	comp=Z,14nm,0.5s						
E29M	Blow River	45.28	30	P	P	14 45 02.6	+1.3
	baz=278						
YUK3	Moose Creek	45.31	40	P	P	14 45 03.0	+1.2
	baz=282						
DAWY	Dawson	45.35	37	P	P	14 45 03.0	+1.1
DAWY				IAmb	IAmb	14 45 26.0	
	comp=Z,28nm,1.8s						
DAWY	Dawson	45.35	37	P	P	14 45 02.9	+0.9
	baz=280						
H29M	Whitestone	45.42	33	IAmb	IAmb	14 45 05.1	
	comp=Z,33nm,1.0s						
H29M	Whitestone	45.42	33	P	P	14 45 03.7	+1.3
	baz=279						
G29M	Pine Creek	45.45	32	P	P	14 45 04.4	+1.8
	baz=279,SNR=26						
LSA	Lhasa	45.45	271	IAmb	IAmb	14 45 06.0	
	comp=Z,15nm,1.0s						
LSA	Lhasa	45.45	271	P	P	14 45 00.3	-3.3
LSA				pmax	pmax		
	comp=Z,15nm,1.1s						
LSA	Lhasa	45.45	271	*i* P	P	14 45 04.7	+1.1
	SNR=6.2						
I29M	Ogilvie Camp,	45.58	35	P	P	14 45 05.3	+1.6
	baz=280,SNR=8.3						
O28M	Mount Upton	45.66	41	P	P	14 45 05.5	+0.8
	baz=283						
YUK8	Steele Glacier	45.74	40	P	P	14 45 06.3	+1.0
	baz=283						
PINM	Pinnacle	45.78	42	P	P	14 45 06.9	+1.6
	baz=284						
J29N	Klondike Camp	45.79	36	P	P	14 45 06.6	+1.2
	baz=281						
EPYK	Eagle Plains	46.05	33	P	P	14 45 09.1	+1.7
	baz=280,SNR=29						
M29M	Somme Creek	46.09	39	IAmb	IAmb	14 45 49.5	
	comp=Z,31nm,1.8s						
M29M	Somme Creek	46.09	39	P	P	14 45 09.4	+1.6
	baz=283						
L29M	L29M	46.10	38	IAmb	IAmb	14 45 11.0	
	comp=Z,11nm,0.7s						
L29M	L29M	46.10	38	P	P	14 45 09.8	+2.0

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       baz=282,SNR=6.5
G30M  tAoh Zraii Nji   46.13  32   IAmb    IAmb     14 45 10.4
       comp=Z,35nm,0.9s
G30M  tAoh Zraii Nji   46.13  32   P       P        14 45 09.4 +1.3
       baz=280,SNR=22
JAY   Jayapura         46.17 188   LR      LR       15 03 19.5
       comp=Z,31nm,19.6s,baz=315,slow=34
F30M  Barrier River    46.19  31           P        14 45 10.0 +1.6
F30M  Barrier River    46.19  31   P       P        14 45 10.1 +1.7
       baz=280
K29M  Barlow Dome      46.21  37   IAmb    IAmb     14 45 11.6
       comp=Z,28nm,1.4s
K29M  Barlow Dome      46.21  37   P       P        14 45 10.6 +1.8
       baz=282
I30M  Mount Dempster   46.41  35   P       P        14 45 12.0 +1.7
       baz=282
YUK6  Outpost Mounta   46.49  41   P       P        14 45 12.0 +0.9
       baz=284
CHTO  Chiang Mai       46.53 253   P       P        14 45 11.4  -0.3
CHTO  Chiang Mai       46.53 253   P       P        14 45 12.5 +0.8
       comp=Z,11nm,1.2s
CHTO  Chiang Mai       46.53 253   P       P        14 45 11.4  -0.3
CHTO                               pmax    pmax
       comp=Z,9.0nm,1.0s
O29M  Mount Kennedy    46.54  42   IAmb    IAmb     14 45 13.6
       comp=Z,26nm,0.7s
O29M  Mount Kennedy    46.54  42   P       P        14 45 11.3  -0.2
       baz=285
J30M  Hart River       46.56  35   IAmb    IAmb     14 45 14.3
       comp=Z,34nm,1.4s
J30M  Hart River       46.56  35   P       P        14 45 13.2 +1.7
       baz=282
CMAR  Chiang Mai Arr   46.77 253   P       P        14 45 13.9 +0.4
       comp=Z,1.8nm,0.8s,baz=39,slow=8.1,SNR=18
CMAR                               PcP     PcP      14 46 45.4 +0.1
       comp=Z,0.4nm,0.4s,baz=69,slow=3.7,SNR=4.2
CMAR                               LR      LR       15 05 13.7
       comp=Z,15nm,19.5s,baz=75,slow=36
       comp=Z,1.8nm,0.8s
CMAR  Chiang Mai Arr   46.77 253   P       P        14 45 13.5   0.0
CMAR  Chiang Mai Arr   46.77 253 i P       P        14 45 14.6 +1.0
M30M  Minto, Yukon     46.81  38   P       P        14 45 15.2 +1.7
M30M  Minto, Yukon     46.81  38   P       P        14 45 15.5 +2.0
       baz=284,SNR=5.3
G31M  Satah River      46.90  32   IAmb    IAmb     14 45 16.0
       comp=Z,33nm,0.9s
G31M  Satah River      46.90  32   P       P        14 45 14.9 +1.0
       baz=282,SNR=17
INK   Inuvik           46.90  30   IAmb    IAmb     14 45 15.9
       comp=Z,22nm,1.3s
INK   Inuvik           46.90  30   P       P        14 45 14.9 +1.0
       baz=281,SNR=12
HYT   Haines Junctio   46.92  41   P       P        14 45 16.5 +2.2
       baz=285,SNR=16
N30M  Aishikik Lake    46.95  40   P       P        14 45 15.8 +1.3
       baz=285
MAYO  Mayo, Yukon      46.97  37   P       P        14 45 16.3 +1.7
MAYO                               IAmb    IAmb     14 45 17.0
       comp=Z,16nm,0.7s
MAYO  Mayo, Yukon      46.97  37   P       P        14 45 16.5 +1.9
       baz=284
F31M  Tsiigehtchic     46.99  31   IAmb    IAmb     14 45 16.7
       comp=Z,36nm,0.9s
F31M  Tsiigehtchic     46.99  31   P       P        14 45 15.8 +1.1
       baz=282,SNR=23
H31M  Peel River       47.11  34   P       P        14 45 17.1 +1.4
       baz=283
P29M  Windy Craggy     47.13  42   P       P        14 45 17.9 +2.0
       baz=286
PDGK  Podgornoye       47.14 294   P       P        14 45 16.1  -0.3
TDK   Taldyqorghan     47.17 296⇑iP      P        14 45 17.1 +0.6
       comp=Z,37nm,0.6s
TDK   Taldyqorghan     47.17 296c iP      P        14 45 17.0 +0.6
TDK                                pmax    pmax
       comp=Z,37nm,0.6s
SHLS  Shalkode         47.23 294⇑iP      P        14 45 15.2  -1.9
       comp=Z,22nm,1.2s
SHLS  Shalkode         47.23 294c iP      P        14 45 15.1  -1.9
SHLS                               pmax    pmax
       comp=Z,22nm,1.2s
P30M  Million Dollar   47.37  42   P       P        14 45 19.5 +1.7
       baz=286
UZB   Uzynbulak        47.53 294  eP       P        14 45 19.7 +0.2
UZB   Uzynbulak        47.53 294  eP       P        14 45 19.6 +0.2
N31M  Braeburn, Yuko   47.55  40   P       P        14 45 21.0 +1.8
N31M                               IAmb    IAmb     14 45 22.8
       comp=Z,16nm,0.8s
N31M  Braeburn, Yuko   47.55  40   P       P        14 45 20.8 +1.6
       baz=286
O30N  Mendenhall       47.60  41   P       P        14 45 21.4 +1.9
O30N                               IAmb    IAmb     14 45 54.7
       comp=Z,17nm,0.7s
O30N  Mendenhall       47.60  41   P       P        14 45 21.3 +1.7
       baz=286
PLBC  Pleasant Camp    47.85  42   P       P        14 45 23.2 +1.8
       baz=287
SATY  Saty             47.98 294⇑iP      P        14 45 23.3 +0.5
       comp=Z,32nm,1.3s
SATY  Saty             47.98 294c iP      P        14 45 23.3 +0.5
SATY                               pmax    pmax
       comp=Z,32nm,1.3s
M31M  Drury Creek, Y   47.99  38   P       P        14 45 24.4 +1.9
       baz=286,SNR=5.7
MRSI  Marisa           48.06 213   P       P        14 45 23.7 +0.2
       comp=Z,793nmcomp=Z,38nm,1.1s
WHY   Whitehorse       48.21  40   P       P        14 45 25.9 +1.7
       baz=287
WUS   Wushi            48.24 291   P       P        14 45 25.4 +0.6
A36M  Sachs Harbour    48.81  24   IAmb    IAmb     14 45 30.2
       comp=Z,19nm,1.0s
A36M  Sachs Harbour    48.81  24   P       P        14 45 29.5 +0.9
       baz=285,SNR=13
MDOK  Medeo            48.83 295  eP       P        14 45 29.9 +0.5
MDOK  Medeo            48.83 295  eP       P        14 45 29.8 +0.5
AAA   Alma-Ata         48.90 295  eP       P        14 45 30.4 +0.6
       comp=Z,28nm,0.7s
AAA   Alma-Ata         48.90 295  eP       P        14 45 30.4 +0.6
AAA                                pmax    pmax
       comp=Z,27nm,0.7s
AAA   Alma-Ata         48.90 295  eP       P        14 45 30.4 +0.6
N32M  Quiet Lake       48.90  39   P       P        14 45 31.2 +1.7
       baz=288
SANI  Sanana           48.92 207   P       P        14 45 29.0  -1.1
       comp=Z,24nm,1.4s
TNSS  Tian-Shan        48.95 295  eP       P        14 45 30.8 +0.1
TNSS  Tian-Shan        48.95 295  eP       P        14 45 30.7 +0.1
TARG  Taragay, Kyrgy   48.96 293   IAmb    IAmb     14 45 32.9
       comp=Z,28nm,1.2s
BVA0  Borovoye Array   49.02 309   P       P        14 45 29.9  -0.6
BVAR  Borovoye Array   49.02 309   P       P        14 45 30.4  -0.1
       comp=Z,15nm,0.5s,baz=78,slow=9.0,SNR=70
BVAR                               PcP     PcP      14 46 52.6  -0.3
       comp=Z,2.8nm,0.6s,baz=51,slow=4.6,SNR=3.7
       comp=Z,15nm,0.5s
BORK  Borovoye         49.05 309           P        14 45 30.7   0.0
BORK                               IAmb    IAmb     14 45 32.5
       comp=Z,19nm,0.8s
BORK  Borovoye         49.05 309c iP      P        14 45 30.3  -0.4
BORK                               pmax    pmax
       comp=Z,66nm,1.6s
P32M  Atlin            49.09  42   P       P        14 45 32.1 +1.1
       baz=289
SIT   Sitka            49.13  45   P       P        14 45 33.1 +1.9
       baz=290
R32K  Eaglecrest       49.13  43   P       P        14 45 33.1 +1.9
       baz=289
P33M  Teslin, Yukon    49.32  41   P       P        14 45 34.3 +1.5
P33M                               IAmb    IAmb     14 45 35.3
       comp=Z,9.1nm,0.8s
P33M  Teslin, Yukon    49.32  41   P       P        14 45 34.5 +1.8
       baz=289
KRAI  Karang Ratu      49.37 204   P       P        14 45 35.4 +1.9
       comp=Z,14nm,1.1s
S32K  Killisnoo        49.37  44   P       P        14 45 35.0 +2.0
       baz=290
C36M  Paulatuk         49.95  28   IAmb    IAmb     14 45 38.7
       comp=Z,22nm,1.2s
C36M  Paulatuk         49.95  28   P       P        14 45 37.5 +0.3
       baz=288,SNR=14
Q32M  Nakina River     50.00  42   P       P        14 45 39.5 +1.4
       baz=290
R33M  Jennings River   50.48  41   P       P        14 45 43.2 +1.6
       baz=291
U33K  Whale Pass       50.60  46   P       P        14 45 44.4 +2.0
       baz=292
AAK   Ala-Archa        50.74 295   LR      LR       15 07 55.3
       comp=Z,80nm,20.0s,baz=64,slow=37
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AAK   Ala-Archa        50.74 295   P       P        14 45 44.2 +0.3
AAK                                IAmb    IAmb     14 45 45.6
       comp=Z,19nm,0.9s
AAK   Ala-Archa        50.74 295 i P       P        14 45 44.3 +0.4
       SNR=27
AAK   Ala-Archa        50.74 295c iP      P        14 45 44.3 +0.4
AAK                                pmax    pmax
       comp=Z,27nm,1.0s
AAK   Ala-Archa        50.74 295   P       P        14 45 44.4 +0.4
AAK                                PcP     PcP      14 46 59.4  -0.3
CRAG  Craig            50.84  46   P       P        14 45 46.0 +1.8
       baz=292
WRAK  Wrangell Islan   50.89  45   P       P        14 45 46.4 +1.9
       baz=292
KSH   Kashi            51.22 291   P       P        14 45 51.8 +4.4
KSH                                pP      pP       14 46 14.9 +4.2
KSH                                pmax    pmax
       comp=Z,17nm,1.1s
WTLY  Watson Lake, Y   51.24  40   P       P        14 45 48.4 +1.2
       baz=292
V35K  Ketchikan        51.69  46   P       P        14 45 52.4 +1.9
       baz=294
T35M  Bob Quinn        51.74  44   P       P        14 45 52.6 +1.7
       baz=293
DZA   Taraz            52.69 297  eP       P        14 45 58.7 +0.4
       comp=Z,22nm,0.9s
DZA   Taraz            52.69 297  eP       P        14 45 58.6 +0.4
DZA                                pmax    pmax
       comp=Z,22nm,0.9s
SVE   Sverdlovsk       52.73 316deP       P        14 45 58.5 +0.3
SVE                                pmax    pmax
       comp=Z,61nm,1.1s
PMG   Port Moresby     52.77 179   LR      LR       15 11 35.5
       comp=Z,32nm,18.0s,baz=108,slow=39
LIRD  Liard River Hi   52.77  40   P       P        14 46 00.2 +1.7
       baz=294
KK31  Karatay Array    53.12 298 i P       P        14 46 01.5 +0.2
KKAR  Karatay Array    53.12 298   P       P        14 46 01.4 +0.1
KKAR  Karatay Array    53.12 298   P       P        14 46 01.4 +0.1
TOAD  Toad River Com   53.41  40   P       P        14 46 04.4 +1.2
       baz=295
BRLS  Borolday         53.59 298⇑iP      P        14 46 06.8 +2.0
BRLS  Borolday         53.59 298c iP      P        14 46 06.7 +2.0
ARTI  Arti             54.05 317   P       P        14 46 07.2  -0.7
ARTI  Arti             54.05 317c iP      P        14 46 07.4  -0.5
ARTI                               *PP     pP       14 46 30.3  -1.0
ARTI                                                14 47 10.2
ARTI                                                14 48 09.7
ARTI                               S       S        14 53 36.9 +0.5
ARTI                               SS      SS       14 57 15.4  -3.0
ARTI                               pmax    pmax
       comp=Z,120nm,1.3s
ARTI  Arti             54.05 317   P       P        14 46 07.1  -0.8
ARTI                               PcP     PcP      14 47 12.2 +0.6
DRK   Karamyk          54.05 293   IAmb    IAmb     14 46 10.2
       comp=Z,18nm,1.0s
CHM   Chimkent         54.08 297  eP       P        14 46 09.0 +0.5
       comp=Z,11nm,0.5s
CHM   Chimkent         54.08 297  eP       P        14 46 08.9 +0.5
CHM                                pmax    pmax
       comp=Z,11nm,0.5s
SPITS Spitsbergen Ar   54.78 349   P       P        14 46 10.9  -1.9
       comp=Z,14nm,1.1s,baz=51,slow=9.4,SNR=5.8
SPITS                              PcP     PcP      14 47 14.4 +0.3
       comp=Z,3.5nm,0.6s,baz=59,slow=8.7,SNR=1.2
       comp=Z,14nm,1.1s
MANEM Manem            55.12 291   IAmb    IAmb     14 46 17.7
       comp=Z,23nm,0.9s
RES   Resolute Bay     55.31  16   LR      LR       15 11 34.6
       comp=Z,55nm,19.0s,baz=54,slow=38
NIL   Nilore           56.12 286           P        14 46 23.4 +0.3
NIL   Nilore           56.12 286   P       P        14 46 23.4 +0.3
NIL                                pmax    pmax
       comp=Z,87nm,1.2s
CHGR  Chuyangaron      56.23 293c iP      P        14 46 24.1 +0.1
CHGR                               pmax    pmax
       comp=Z,128nm,1.1s
YKAW3 Yellowknife Wh   56.30  33   P       P        14 46 24.8 +0.9
YKAW3                              IAmb    IAmb     14 46 26.2
       comp=Z,7.1nm,0.8s
YKA   Yellowknife Ar   56.33  33   P       P        14 46 24.3 +0.2
       comp=Z,5.3nm,0.8s,baz=302,slow=7.8,SNR=40
       comp=Z,5.3nm,0.8s
YKA   Yellowknife Ar   56.33  33   P       P        14 46 24.9 +0.8
YKA   Yellowknife Ar   56.33  33 i P       P        14 46 25.0 +0.8
YKA                                pmax    pmax
       comp=Z,6.0nm,0.8s
AB31  Akbulak array    56.57 308   P       P        14 46 26.5 +0.4
ABKAR Akbulak array    56.57 308   P       P        14 46 26.2 +0.1
AKTO  Aktyubinsk       57.06 310   LR      LR       15 10 19.4
       comp=Z,70nm,20.7s,baz=186,slow=35
AKTO  Aktyubinsk       57.06 310   P       P        14 46 29.3  -0.2
KIRV  Kirov            57.24 322   P       P        14 46 30.6  -0.1
       comp=Z,18nm,0.5s,baz=51,slow=5.9,SNR=5.1
KIRV                               LR      LR       15 13 38.6
       comp=Z,83nm,20.9s,baz=55,slow=38
       comp=Z,18nm,0.5s
KIRV  Kirov            57.24 322c iP      P        14 46 30.4  -0.2
COEN  Coen             57.35 183   P       P        14 46 31.8   0.0
COEN                               IAmb    IAmb     14 46 33.8
       comp=Z,26nm,1.4s
SHAA  Shahritus        57.50 293   IAmb    IAmb     14 46 34.0
       comp=Z,49nm,0.7s
MTN   Manton Dam       57.82 197   P       P        14 46 34.8  -0.3
MTN                                IAmb    IAmb     14 46 36.1
       comp=Z,22nm,1.1s
TULEG Thule            58.08   9   P       P        14 46 35.2  -1.1
TULEG Thule            58.08   9 i P       P        14 46 33.9  -2.4
TULEG                              IAmb    IAmb     14 46 36.1
       comp=Z,42nm,1.2s
APA   Apatity          58.20 335  eP       P        14 46 36.5  -0.7
APA                                pmax    pmax
       comp=Z,9.0nm,1.3s
KBL   Kabul            58.53 289   P       P        14 46 39.5  -0.9
KBL   Kabul            58.53 289   P       P        14 46 39.5  -0.9
KBL                                pmax    pmax
       comp=Z,38nm,1.1s
NEEM  North Greenlan   58.75   4 i P       P        14 46 39.5  -1.7
NEEM                               IAmb    IAmb     14 46 42.0
       comp=Z,17nm,0.8s
ARA0  ARCESS Array S   59.12 339  eP       P        14 46 44.8 +1.2
ARCES ARCESS Array B   59.12 339   P       P        14 46 42.8  -0.8
       comp=Z,2.5nm,0.4s,baz=37,slow=7.3,SNR=25
ARCES                              LR      LR       15 18 40.0
       comp=Z,31nm,18.1s,baz=16,slow=42
       comp=Z,2.5nm,0.4s
ARCES ARCESS Array B   59.12 339   P       P        14 46 42.6  -0.9
ARCES ARCESS Array B   59.12 339   P       P        14 46 42.7  -0.9
ARCES                              pmax    pmax
       comp=Z,67nm,1.6s
POIN  Pond Inlet       60.02  14   IAmb    IAmb     14 46 50.0
       comp=Z,17nm,1.0s
KLMR  Klimovskoe       60.15 327  eP       P        14 46 48.9  -1.9
KLMR                               pmax    pmax
       comp=Z,79nm,1.4s
JETT  Jettan, Norway   60.36 341  eP       P        14 46 51.2  -0.9
TRO   Tromso           60.66 341  eP       P        14 46 53.2  -0.8
KNRA  Kununurra        61.10 199   P       P        14 46 57.7   0.0
KNRA                               IAmb    IAmb     14 46 58.8
       comp=Z,36nm,1.8s
LON   Longmire         61.25  52   P       P        14 46 59.7 +1.1
LON                                IAmb    IAmb     14 47 47.8
       comp=Z,19nm,1.7s
LON   Longmire         61.25  52   P       P        14 46 59.7 +1.1
LON                                pmax    pmax
       comp=Z,19nm,1.7s
BELG  Belogornoye      61.49 316   P       P        14 47 00.2 +0.3
       comp=Z,71nm,0.7s,baz=218,slow=0.2,SNR=38
       comp=Z,71nm,0.7s
BELG  Belogornoye      61.49 316c iP      P        14 47 00.2 +0.3
BELG                               pmax    pmax
       comp=Z,35nm,1.4s
B08A  Colville Reser   61.72  49   IAmb    IAmb     14 47 03.5
       comp=Z,5.8nm,0.6s
ILON  Igloolik, Nuna   61.95  17   P       P        14 47 02.4  -0.4
EDM   Edmonton         62.01  42   IAmb    IAmb     14 47 05.2
       comp=Z,15nm,0.7s
DBG   Daneborg         62.02 356 i P       P        14 47 01.1  -2.0
DBG                                IAmb    IAmb     14 47 03.3
       comp=Z,15nm,1.3s
HYB   Hyderabad        62.02 268  eP       P        14 47 04.4 +0.3
HYB                               esP      sP       14 47 38.9 +0.2
MXC   Moxie City       62.21  51   IAmb    IAmb     14 47 32.6
       comp=Z,45nm,1.9s
WAH2  Wahluke Slope    62.52  51   IAmb    IAmb     14 47 08.6
       comp=Z,9.9nm,0.5s
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C09A  Chrisman Ranch   62.63  49   IAmb    IAmb     14 47 09.2
       comp=Z,7.7nm,0.7s
D08A  Wollman Farm,    62.70  50   IAmb    IAmb     14 47 09.7
       comp=Z,6.3nm,0.6s
STEI  Steigen          62.83 341  eP       P        14 47 08.1  -0.6
I05D  Terrebonne, OR   62.90  54   IAmb    IAmb     14 47 12.7
       comp=Z,48nm,2.0s
NEW   Newport          62.98  48   P       P        14 47 09.9  -0.2
       comp=Z,2.8nm,0.7s,baz=305,slow=4.2,SNR=7.5
       comp=Z,2.8nm,0.7s
LOF   Lofoten          63.06 342  eP       P        14 47 10.1  -0.1
HRA   Herat            63.23 293   P       P        14 47 11.9  -0.2
HRA                                IAmb    IAmb     14 47 13.9
       comp=Z,18nm,0.8s
FAUS  Fauske           63.25 341  eP       P        14 47 10.4  -1.1
E09A  Wood Farm, Sta   63.45  50   IAmb    IAmb     14 47 15.0
       comp=Z,8.9nm,0.7s
LNOR  Lincton Mounta   63.75  51   P       P        14 47 15.5 +0.2
LNOR                               IAmb    IAmb     14 47 27.8
       comp=Z,22nm,1.8s
WB0   Warramunga Arr   63.98 192   P       P        14 47 16.2  -0.6
WB0                                IAmb    IAmb     14 47 17.4
       comp=Z,27nm,1.2s
SUMG  Summit           64.07   2   P       P        14 47 17.5 +0.2
SUMG  Summit           64.07   2   P       P        14 47 17.5 +0.2
SUMG                               pmax    pmax
       comp=Z,92nm,1.2s
SUMG  Summit           64.07   2 i P       P        14 47 17.0  -0.3
MOS   Moscow           64.12 323  eP       P        14 47 15.1  -2.2
MOS                               e                 14 47 41.3
MOS                                pmax    pmax
       comp=Z,200nm,1.9s
MOS                                pmax    pmax
       comp=Z,95nm,1.5s
MOS                                pmax    pmax
       comp=N,42nm,0.6s
WR8   Warramunga Arr   64.14 192   IAmb    IAmb     14 47 19.3
       comp=Z,24nm,1.3s
WRAB  Tennant Creek    64.15 192   P       P        14 47 17.8  -0.1
WRAB                               IAmb    IAmb     14 47 18.6
       comp=Z,19nm,1.1s
WRAB  Tennant Creek    64.15 192d iP      P        14 47 17.4  -0.5
WRAB                               pmax    pmax
       comp=Z,23nm,1.3s
WRAB  Tennant Creek    64.15 192   P       P        14 47 17.2  -0.7
WRAB                               pP      pP       14 47 41.4  -0.5
WRAB                               PcP     sP       14 47 52.9 +0.4
WRA   Warramunga Arr   64.16 192   P       P        14 47 17.4  -0.6
       comp=Z,6.6nm,0.9s,baz=10,slow=6.6,SNR=20
WRA                                pP      pP       14 47 41.8  -0.2
       comp=Z,2.5nm,0.7s,baz=7.6,slow=6.6,SNR=3.3
       comp=Z,6.6nm,0.9s
VAGH  Vaagaholmen      64.25 341  eP       P        14 47 17.0  -1.0
F10A  Beach Ranch, E   64.28  50   IAmb    IAmb     14 48 06.9
       comp=Z,22nm,1.9s
RAUS  Rausandaksla     64.30 341  eP       P        14 47 17.6  -0.8
PUL   Pulkovo          64.35 330⇓eP      P        14 47 17.8  -1.0
PUL                                pmax    pmax
       comp=Z,103nm,0.5s
MOR8  Moi Rana         64.42 340  eP       P        14 47 17.1  -2.1
O02D  Mt. Diablo Mer   64.46  58   P       P        14 47 21.4 +1.4
O02D                               IAmb    IAmb     14 48 47.1
       comp=Z,32nm,1.8s
FIA1  FINESS Array S   64.66 333   P       P        14 47 20.3  -0.4
FINES FINESS Array B   64.66 333   P       P        14 47 20.4  -0.4
       comp=Z,18nm,0.5s,baz=43,slow=7.4,SNR=236
       comp=Z,18nm,0.5s
FINES FINESS Array B   64.66 333   P       P        14 47 20.3  -0.5
LEIR  Leirfjorden      64.79 341  eP       P        14 47 20.6  -0.9
OBN   Obninsk          64.98 323   P       P        14 47 22.7  -0.2
       comp=Z,18nm,0.4s,baz=154,slow=0.7,SNR=15
       comp=Z,18nm,0.4s
OBN   Obninsk          64.98 323   IAmb    IAmb     14 47 23.8
       comp=Z,97nm,1.1s
OBN   Obninsk          64.98 323c iP      P        14 47 22.8  -0.2
OBN                               e                 14 47 55.3
OBN                               e                 14 49 44.9
OBN                               eS       S        14 55 56.2  -0.8
OBN                               eSS      SS       15 00 12.6 +3.1
OBN                                pmax    pmax
       comp=Z,99nm,1.2s
OBN                                MLR     MLR
       comp=Z,60nm,15.0s
OBN   Obninsk          64.98 323   P       P        14 47 22.1  -0.9
       comp=Z,76nm,1.2s
OBN   Obninsk          64.98 323   P       P        14 47 22.7  -0.2
OBN                                sP      PcP      14 47 56.4 +1.2
VRH   Novokhopyorsk    65.13 318  eP       P        14 47 23.2  -0.8
VRH                                pmax    pmax
       comp=Z,140nm,1.2s
SAATT Saattut          65.17   6 i P       P        14 47 22.4  -1.5
SAATT                              IAmb    IAmb     14 47 25.1
       comp=Z,78nm,1.0s
PLID  Pearl Lake       65.51  50   P       P        14 47 27.4 +0.5
LPSR  Galich'ya Gora   65.56 320  eP       P        14 47 26.1  -0.7
LPSR                               pmax    pmax
       comp=Z,120nm,1.3s
SCO   Scoresbysund     65.89 356   P       P        14 47 29.2 +0.6
SCO                                IAmb    IAmb     14 47 57.7
       comp=Z,42nm,1.6s
SCO   Scoresbysund     65.89 356   P       P        14 47 29.2 +0.6
SCO                                pmax    pmax
       comp=Z,42nm,1.6s
VORR  Voronezh         66.04 319  eP       P        14 47 30.0 +0.2
VORR                               pmax    pmax
       comp=Z,90nm,0.5s
BPMT  Black Pine Rid   66.08  48   P       P        14 47 31.4 +0.9
FFC   Flin Flon        66.25  36   P       P        14 47 31.9 +0.7
FFC                                IAmb    IAmb     14 47 32.9
       comp=Z,9.5nm,0.8s
FFC   Flin Flon        66.25  36   P       P        14 47 31.9 +0.7
FFC                                pmax    pmax
       comp=Z,9.0nm,0.9s
VSR   Storozhevoye     66.35 319  eP       P        14 47 31.6  -0.3
VSR                                pmax    pmax
       comp=Z,160nm,1.3s
NSS   Namsos           66.36 340  eP       P        14 47 31.9 +0.3
VORD  Divnogorie       66.45 319  eP       P        14 47 31.9  -0.6
VORD                               pmax    pmax
       comp=Z,90nm,1.1s
FCC   Fort Churchill   66.52  30   IAmb    IAmb     14 47 34.0
       comp=Z,10nm,0.9s
VSU   Vasula           66.59 330c iP      P        14 47 32.2  -1.0
VSU                                pmax    pmax
       comp=Z,122nm,1.3s
EGMT  Eagleton         67.02  45   IAmb    IAmb     14 47 37.8
       comp=Z,10nm,0.7s
PNTR  Pine Nut         67.08  57   IAmb    IAmb     14 47 39.0
       comp=Z,39nm,1.9s
DLMT  Dillon           67.22  49   IAmb    IAmb     14 47 47.9
       comp=Z,26nm,1.6s
MAK   Makhachkala      67.24 308  eP       P        14 47 37.4  -0.2
MAK                               e*PP     pP       14 48 02.4 +0.5
MAK                               e*SP     sP       14 48 13.2 +0.7
MAK                               eS       S        14 56 24.4  -0.4
MAK                               e*SS     sS       14 57 07.9 +2.3
MAK                                pmax    pmax
       comp=Z,652nm,1.7s
MAK                                MLR     MLR
       comp=Z,133nm,13.0s
PALK  Pallekele        67.28 258   LR      LR       15 19 20.4
       comp=Z,25nm,18.4s,baz=62,slow=38
BOZ   Bozeman (W)      67.59  48   P       P        14 47 41.0 +1.0
BOZ                                IAmb    IAmb     14 47 41.7
       comp=Z,9.5nm,0.6s
BOZ   Bozeman (W)      67.59  48   P       P        14 47 41.1 +1.0
BOZ                                pmax    pmax
       comp=Z,10.0nm,0.6s
ASAR  Alice Springs    67.88 192   P       P        14 47 41.8   0.0
       comp=Z,7.8nm,0.8s,baz=8.9,slow=5.6,SNR=113
ASAR                               pP      PcP      14 48 06.8  -0.7
       comp=Z,3.2nm,0.6s,baz=8.6,slow=5.4,SNR=5.3
ASAR                               LR      LR       15 14 30.8
       comp=Z,36nm,21.9s,baz=76,slow=33
ASAR                               PKP2bc  P'P'bc   15 16 04.5 +3.3
       comp=Z,0.5nm,0.8s,baz=185,slow=2.5,SNR=7.7
       comp=Z,7.8nm,0.8s
ASAR  Alice Springs    67.88 192   P       P        14 47 42.0 +0.2
AKT   Akhty            68.05 307  eP       P        14 47 42.6  -0.3
AKT                               e*SP     sP       14 48 17.4  -0.4
AKT                               ePPP     PPP      14 51 52.5
AKT                                pmax    pmax
       comp=Z,76nm,1.2s
NVAR  Mina Array Bea   68.28  57   P       P        14 47 45.0 +0.4
       comp=Z,3.3nm,0.6s,baz=289,slow=6.8,SNR=26
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NVAR                              pP     pP      14 48 08.7 -0.2
       comp=Z,1.8nm,0.7s,baz=284,slow=6.4,SNR=2.9
       comp=Z,3.3nm,0.6s
YHB    Horse Butte       68.37  48   IAmb   IAmb    14 47 47.6
       comp=Z,28nm,1.7s
ELK    Elko              68.66  54   P      P       14 47 47.4 +0.5
       comp=Z,0.8nm,0.5s,baz=130,slow=4.4,SNR=3.5
       comp=Z,0.8nm,0.5s
SFJD   Kangerlussuaq     68.98   7   LR     LR      15 21 36.2
       comp=Z,44nm,19.0s,baz=339,slow=39
MNK    Minsk             69.03 327 i P      P       14 47 48.2 -0.4
       comp=E,52nm,1.1s
MNK                                i P      P       14 47 48.2 -0.4
       comp=N,26nm,1.2s
MNK                                i P      P       14 47 48.2 -0.4
       comp=Z,85nm,1.0s,baz=43
MNK                                i pP     pP      14 48 12.7 -0.4
MNK                                i PP     PP      14 50 20.4 -1.3
MNK                                i PPP    PPP     14 52 05.2
MNK                                i S      S       14 56 46.4 +0.7
MNK                                i SS     SS      15 01 12.8 +0.6
MNK                                i SSS    SSS     15 04 33.7
MNK                                i LQ     LQ      15 13 08.4
MNK                                i LR     LR      15 18 45.1
MNK                                i LRM    MLR     15 22 29.6
       comp=Z,72nm,15.1s
MNK    Minsk             69.03 327 i P      P       14 47 48.2 -0.4
MNK                                i *PP    PcP     14 48 12.6 +0.5
MNK                                i                14 50 20.3
MNK                                i PPP    PPP     14 52 05.2
MNK                                i S      S       14 56 46.3 +0.6
MNK                                i SS     SS      15 01 12.7 +0.5
MNK                                  pmax   pmax
       comp=Z,85nm,1.0s
MNK                                  pmax   pmax
       comp=N,26nm,1.2s
MNK                                  pmax   pmax
       comp=E,52nm,1.1s
MNK                                  MLR    MLR
       comp=Z,72nm,15.0s
MNK                                  MLR    MLR
       comp=E,220nm,19.0s
MNK                                  MLR    MLR
       comp=N,269nm,24.0s
MOL    Molde             69.09 341 eP       P       14 47 49.4 +0.6
NCK    Nalchik           69.10 310⇓iP       P       14 47 50.5 +1.2
NCK                                  pmax   pmax
       comp=Z,69nm,1.2s
DOMB   Dombas            69.17 340 eP       P       14 47 49.5  0.0
NACGM  Naroch            69.17 327 eP       P       14 47 49.6 +0.1
       comp=E,33nm,1.2s
PSA00  Pilbara Seismi    69.21 206   P      P       14 47 50.2 +0.1
NC303  NORSAR Array S    69.27 338   IAmb   IAmb    14 47 51.0
       comp=Z,37nm,1.1s
KVAR   Kislovodsk Arr    69.29 311   P      P       14 47 52.5 +1.9
       comp=Z,28nm,1.0s,baz=65,slow=14,SNR=7.9
       comp=Z,28nm,1.0s
KIV    Kislovodsk        69.30 311 ⇑P       P       14 47 52.8 +2.1
KIV    Kislovodsk        69.30 311 i P      P       14 47 52.1 +1.5
       SNR=12
KIV    Kislovodsk        69.30 311 eP       P       14 47 51.5 +0.9
KIV                                  pmax   pmax
       comp=Z,87nm,1.1s
KIV                                  MLR    MLR
       comp=Z,58nm,17.0s
KIV    Kislovodsk        69.30 311   P      P       14 47 51.7 +1.1
KBZ    Khabaz            69.33 311   P      P       14 47 51.7 +1.0
       comp=Z,34nm,0.9s,baz=61,slow=3.1,SNR=40
KBZ                                  LR     LR      15 20 57.0
       comp=Z,72nm,18.7s,baz=39,slow=38
       comp=Z,34nm,0.9s
KBZ    Khabaz            69.33 311c iP      P       14 47 51.6 +0.9
KBZ                                  pmax   pmax
       comp=Z,60nm,1.1s
KBZ    Khabaz            69.33 311 eP       P       14 47 51.6 +0.9
SHA1   Shidzhatmaz       69.46 311c iP      P       14 47 52.8 +1.0
NB2    NORSAR Subarra    69.46 338   P      P       14 47 51.0 -0.3
       comp=Z,72nm,1.2s,baz=33,slow=6.2
NB2    NORSAR Subarra    69.46 338   P      P       14 47 51.0 -0.3
       baz=33,slow=6.2
NOA    NORSAR Array B    69.46 338   P      P       14 47 51.0 -0.3
       comp=Z,24nm,0.9s,baz=31,slow=6.6,SNR=100
NOA                                  LR     LR      15 22 49.1
       comp=Z,28nm,19.4s,baz=345,slow=40
       comp=Z,24nm,0.9s
HFS    Hagfors           69.53 337   P      P       14 47 51.3 -0.3
       comp=Z,16nm,0.4s,baz=54,slow=7.5,SNR=310
HFS                                  LR     LR      15 20 35.6
       comp=Z,58nm,21.3s,baz=39,slow=38
       comp=Z,16nm,0.4s
AKN    Aaknes            69.56 341 eP       P       14 47 52.8 +1.0
NC602  NORSAR Array S    69.63 338 eP       P       14 47 52.1 -0.1
LAO    LASA Array        69.70  44   IAmb   IAmb    14 48 01.9
       comp=Z,38nm,2.0s
NAO01  NORSAR Array S    69.71 338   IAmb   IAmb    14 47 53.5
       comp=Z,30nm,1.1s
NEUR   Neytrino          69.75 311c iP      P       14 47 54.4 +0.9
NEUR                                 pmax   pmax
       comp=Z,19nm,1.3s
DUG    Dugway, Tooele    70.42  53   P      P       14 47 58.5 +0.9
DUG    Dugway, Tooele    70.42  53   P      P       14 47 58.5 +0.9
DUG                                  pmax   pmax
       comp=Z,6.0nm,1.0s
TPNV   Topopah Spring    70.48  57   P      P       14 47 58.6 +0.5
TPNV   Topopah Spring    70.48  57   P      P       14 47 58.6 +0.5
TPNV                                 pmax   pmax
       comp=Z,11nm,1.3s
FOO    Floro             70.52 341 eP       P       14 47 57.6  0.0
SKAR   Skarslia          70.53 339 eP       P       14 47 58.4 +0.6
PDAR   Pinedale Array    70.57  49   P      P       14 47 59.0 +0.5
       comp=Z,3.8nm,0.6s,baz=259,slow=1.9,SNR=56
       comp=Z,3.8nm,0.6s
PDAR   Pinedale Array    70.57  49   P      P       14 47 58.9 +0.3
HYA    Hoyanger          70.63 341 eP       P       14 47 58.4 +0.1
SUE    Sulen             71.06 341 eP       P       14 48 01.4 +0.5
VSLR   Vesyoloye         71.06 312d iP      P       14 48 02.3 +1.0
VSLR                                 pmax   pmax
       comp=Z,67nm,0.9s
KONO   Kongsberg         71.07 338 eP       P       14 48 01.2 +0.2
KONO   Kongsberg         71.07 338   P      P       14 48 01.5 +0.5
STRU   Stroemstad        71.16 337 i P      P       14 48 01.6 +0.1
AK03   Malin Array Si    71.23 323   P      P       14 48 01.6 -0.5
SUW    Suwalki           71.23 328   P      P       14 48 02.1  0.0
SUW    Suwalki           71.23 328   P      P       14 48 02.1  0.0
AK23   Malin Array Si    71.25 323   P      P       14 48 01.7 -0.5
AKASG  Malin Array Be    71.25 323   P      P       14 48 02.2  0.0
       comp=Z,17nm,0.5s,baz=41,slow=6.2,SNR=86
AKASG                                LR     LR      15 21 36.3
       comp=Z,69nm,18.1s,baz=34,slow=38
       comp=Z,17nm,0.5s
AKASG  Malin Array Be    71.25 323   P      P       14 48 02.6 +0.4
AKASG                                IAmb   IAmb    14 48 03.6
       comp=Z,31nm,1.1s
AKBB   Malin Array Si    71.25 323c iP      P       14 48 02.3 +0.1
AKBB                                 pmax   pmax
       comp=Z,84nm,1.1s
AKBB   Malin Array Si    71.25 323   P      P       14 48 01.7 -0.5
AK04   Malin Array Si    71.26 323   P      P       14 48 01.7 -0.6
AK01   Malin Array Si    71.26 323   P      P       14 48 01.8 -0.5
KIEV   Kiev              71.26 323   P      P       14 48 02.0 -0.2
KIEV   Kiev              71.26 323 ⇑P       P       14 48 02.3  0.0
KIEV   Kiev              71.26 323 i P      P       14 48 02.3  0.0
       SNR=5.1
KIEV   Kiev              71.26 323   P      P       14 48 02.0 -0.2
KIEV                                 pmax   pmax
       comp=Z,61nm,1.0s
KIEV   Kiev              71.26 323   P      P       14 48 01.7 -0.6
KIEV   Kiev              71.26 323   P      P       14 48 02.1 -0.2
AK22   Malin Array Si    71.27 323   P      P       14 48 01.8 -0.6
AK21   Malin Array Si    71.27 323   P      P       14 48 01.8 -0.6
AK08   Malin Array Si    71.28 323   P      P       14 48 01.9 -0.5
AK09   Malin Array Si    71.28 323   P      P       14 48 01.9 -0.6
AK02   Malin Array Si    71.29 323   P      P       14 48 01.9 -0.6
AK11   Malin Array Si    71.29 323   P      P       14 48 01.9 -0.6
AK15   Malin Array Si    71.30 323   P      P       14 48 02.0 -0.5
ASK    Askoy             71.47 341 eP       P       14 48 03.6 +0.3
BER    Bergen            71.52 341 eP       P       14 48 04.2 +0.6
ANN    Anapa             71.52 315 eP       P       14 48 02.6 -1.4
ANN                                e*PP     pP      14 48 27.9 -0.6
ANN                                e                14 50 43.6
ANN                                eS       S       14 57 12.5 -2.4
ANN                                  pmax   pmax
       comp=Z,30nm,0.6s
ODD1   Odda              71.61 340 eP       P       14 48 05.0 +0.7
MI28   Mi28,Pidlybu      71.75 324   P      P       14 48 04.1 -1.1
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BORU   Boraas            71.87 336 i P      P       14 48 05.1 -0.7
TJOU   Tjoern            71.87 336 i P      P       14 48 05.8  0.0
RDMU   Red Mountain      72.03  51   IAmb   IAmb    14 48 43.1
       comp=Z,18nm,1.0s
ULM    Lac du Bonnet     72.06  37   P      P       14 48 06.6 -0.5
       comp=Z,4.8nm,0.6s,baz=312,slow=5.9,SNR=6.6
       comp=Z,4.8nm,0.6s
BLS5   Blasjo            72.08 340 eP       P       14 48 07.7 +0.5
RNPP9  Sopachiv          72.14 325   P      P       14 48 07.1 -0.4
RNPP8  Varash            72.21 325   P      P       14 48 07.4 -0.6
RNPP5  Staryi Chortor    72.28 325   P      P       14 48 07.8 -0.6
K22A   Casper            72.29  48   IAmb   IAmb    14 48 10.9
       comp=Z,8.5nm,0.6s
ONAU   Onsala            72.32 336 i P      P       14 48 08.1 -0.4
LUBAR  Lubar, Ukraine    72.46 323   P      P       14 48 09.0 -0.5
BANOM  Banah             72.49 289   P      P       14 48 10.7 +0.6
DEL    Delary            72.50 334 i P      P       14 48 08.8 -0.8
PFO    Pinyon Flats O    72.52  60   LR     LR      15 13 47.4
       comp=Z,28nm,21.3s,baz=334,slow=30
SHME   Shamm             72.52 289   P      P       14 48 10.7 +0.4
HOMB   Homborsund        72.55 338 i P      P       14 48 10.5 +0.7
KMY    Karmoy            72.57 340 eP       P       14 48 10.8 +0.9
RSSD   Black Hills       72.59  45   P      P       14 48 10.9 +0.2
RSSD   Black Hills       72.59  45   P      P       14 48 10.9 +0.2
RSSD                                 pmax   pmax
       comp=Z,5.0nm,0.8s
MSFE   Esma-Masafi       72.95 289   P      P       14 48 13.4 +0.5
SIM    Simferopol'       73.10 317 eP       P       14 48 14.3 +0.9
SIM                                  pmax   pmax
       comp=Z,51nm,1.0s
KOPT   Kop Dagi          73.14 309   IAmb   IAmb    14 48 17.1
       comp=Z,26nm,1.2s
BSD    Bornholm Skovb    73.28 333 i P      P       14 48 14.5 +0.3
BSD                                  IAmb   IAmb    14 48 14.9
       comp=Z,28nm,0.7s
HATD   Hatta, Dubai      73.32 288 i P      P       14 48 16.0 +1.0
       SNR=6.5
LUNU   Lund              73.33 334 i P      P       14 48 14.7 +0.2
EPLO   Experimental L    73.41  36   P      P       14 48 15.1 -0.1
EPLO                                 IAmb   IAmb    14 48 15.9
       comp=Z,42nm,1.7s
ASHO   Ashiyiah          73.46 288   P      P       14 48 16.2 +0.3
AGMN   Agassiz Nation    73.51  38   P      P       14 48 15.8  0.0
SORM   Soroca            73.53 322 ⇑P       P       14 48 15.8  0.0
SORM   Soroca            73.53 322   P      P       14 48 15.7  0.0
PV10   Paradox Valley    73.82  52   IAmb   IAmb    14 48 53.8
       comp=Z,24nm,0.9s
PV20   West Nyswonger    73.88  52   IAmb   IAmb    14 48 53.3
       comp=Z,15nm,0.9s
PV19   Morning Glory     73.89  52   IAmb   IAmb    14 48 53.4
       comp=Z,35nm,1.2s
PV18   Skein Mesa, Pa    73.98  52   IAmb   IAmb    14 48 53.9
       comp=Z,20nm,1.1s
PV05   Paradox Valley    73.98  53   P      P       14 48 19.9 +0.9
PV03   Paradox Valley    74.01  52   P      P       14 48 19.7 +0.6
ALNE   Al Ain            74.08 288   P      P       14 48 19.6 +0.2
MILM   Milestii Mici     74.22 321 ⇓P       P       14 48 18.8 -1.1
MILM   Milestii Mici     74.22 321   P      P       14 48 18.7 -1.1
X16A   Lo Mia Camp, P    75.08  57   P      P       14 48 25.8 +0.4
F33A   5 Mile Ranch,     75.15  40   IAmb   IAmb    14 48 26.1
       comp=Z,18nm,1.4s
STKA   Stephens Creek    75.24 184   P      P       14 48 25.2 -0.5
       comp=Z,4.5nm,0.8s,baz=352,slow=8.1,SNR=10
       comp=Z,4.5nm,0.8s
STKA   Stephens Creek    75.24 184   IAmb   IAmb    14 48 27.4
       comp=Z,34nm,1.1s
STKA   Stephens Creek    75.24 184⇑eP       P       14 48 25.6 -0.1
BUR08  Bucovina Ar. S    75.29 323   IAmb   IAmb    14 48 27.9
       comp=Z,33nm,0.9s
BURAR  Bucovina Array    75.30 323   P      P       14 48 26.6 +0.3
BURAR  Bucovina Array    75.30 323 ⇑P       P       14 48 26.9 +0.6
BURAR  Bucovina Array    75.30 323   P      P       14 48 26.9 +0.6
TESR   Tescani           75.51 322 ⇑P       P       14 48 27.9 +0.6
STHS   Stebnicka Huta    75.57 326 eP       P       14 48 28.8 +1.1
STHS                               e                14 48 49.9
STHS                                 pmax   pmax
       comp=Z,29nm,1.1s
STHS   Stebnicka Huta    75.57 326 eP       P       14 48 28.8 +1.1
STHS                               e                14 48 49.9
BSEG   Bad Segeberg      75.74 335 eP       P       14 48 28.7 +0.3
       comp=Z,14nm,1.0s,baz=31,slow=5.4
CFR    Carcaliu          75.83 320 ⇑P       P       14 48 29.6 +0.5
CFR    Carcaliu          75.83 320   P      P       14 48 29.6 +0.5
RUE    Ruedersdorf       75.85 332 eP       P       14 48 29.9 +0.8
       comp=Z,28nm,1.1s,baz=31,slow=5.4
ODBI   Odobesti          75.89 321 ⇓P       P       14 48 30.4 +0.9
TPGR   Topolog           75.94 320 ⇓P       P       14 48 30.9 +1.1
VRI    Vrincioaia        75.96 321 ⇓P       P       14 48 31.0 +1.0
VRI    Vrincioaia        75.96 321   P      P       14 48 31.0 +1.0
TURR   Turia             76.14 322 ⇑P       P       14 48 32.1 +1.1
COVR   Voineasa-Covas    76.22 321 ⇑P       P       14 48 32.4 +1.0
LANS   Liptovska Anna    76.49 327 eP       P       14 48 34.5 +1.6
DOPR   Dopca             76.49 322 ⇑P       P       14 48 34.5 +1.6
STEB   Steborice         76.51 329 eP       P       14 48 33.6 +0.6
BNN    Bunyan            76.54 311   IAmb   IAmb    14 48 35.6
       comp=Z,17nm,1.0s
OSTC   Ostas             76.58 330 eP       P       14 48 34.1 +0.7
OSTC   Ostas             76.58 330 eP       P       14 48 34.1 +0.7
MLR    Muntele Rosu      76.60 321   P      P       14 48 34.2 +0.4
       comp=Z,11nm,0.8s,baz=135,slow=6.0,SNR=9.8
MLR                                  LR     LR      15 26 31.3
       comp=Z,69nm,19.6s,baz=80,slow=39
       comp=Z,11nm,0.8s
MLR    Muntele Rosu      76.60 321   IAmb   IAmb    14 48 36.4
       comp=Z,26nm,1.1s
MLR    Muntele Rosu      76.60 321 ⇓P       P       14 48 34.8 +1.0
BBOO   Buckleboo         76.61 189   IAmb   IAmb    14 48 35.0
       comp=Z,15nm,1.1s
CHVC   Chvalec           76.61 330 eP       P       14 48 34.2 +0.6
CHVC   Chvalec           76.61 330 eP       P       14 48 34.2 +0.6
UPC    Upice             76.69 330 eP       P       14 48 34.7 +0.7
UPC    Upice             76.69 330 eP       P       14 48 34.7 +0.7
E38A   The Farm, Brul    76.70  37   IAmb   IAmb    14 48 42.0
       comp=Z,59nm,1.7s
DPC    Dobruska-Polom    76.71 330 eP       P       14 48 35.0 +0.9
DPC    Dobruska-Polom    76.71 330 eP       P       14 48 35.0 +0.9
MORC   Moravsky Berou    76.72 329   IAmb   IAmb    14 48 36.2
       comp=Z,33nm,1.1s
MORC   Moravsky Berou    76.72 329 eP       P       14 48 34.5 +0.3
MORC                               e                14 48 59.7
KRLC   Kraliky           76.77 329 eP       P       14 48 35.1 +0.6
KRLC   Kraliky           76.77 329 eP       P       14 48 35.1 +0.6
FLTG   Flechtingen       76.81 333 eP       P       14 48 34.9 +0.3
       comp=Z,23nm,0.9s,baz=31,slow=5.4
MARR   Marisel-Cluj      76.94 324 ⇓P       P       14 48 36.5 +0.9
MAUC   Maruska           76.95 328 eP       P       14 48 36.3 +0.8
CLL    Collm             77.09 332⇑iP       P       14 48 36.0 -0.2
CLL                                i *PP    pP      14 49 01.1 +0.1
CLL                                  pmax   pmax
       comp=Z,47nm,0.9s
CLL    Collm             77.09 332 eP       P       14 48 36.8 +0.6
       comp=Z,27nm,0.8s,baz=31,slow=5.4
CLL    Collm             77.09 332⇑iP       P       14 48 36.0 -0.2
       comp=Z,47nm,0.9s
CLL                                i pP     pP      14 49 01.1 +0.1
       comp=Z,16nm,1.2s
BR131  Keskin Array S    77.10 313c iP      P       14 48 37.3 +0.7
BRTR   Keskin Array B    77.10 313   P      P       14 48 37.1 +0.5
       comp=Z,4.4nm,0.8s,baz=79,slow=3.1,SNR=21
BRTR                                 PP     PP      14 51 32.5 +1.7
       comp=Z,0.7nm,0.6s,baz=92,slow=3.7,SNR=3.9
BRTR                                 LR     LR      15 26 18.2
       comp=Z,48nm,18.2s,baz=34,slow=38
       comp=Z,4.4nm,0.8s
BRTR   Keskin Array B    77.10 313   P      P       14 48 36.7  0.0
BRG    Berggiesshubel    77.13 331 eP       P       14 48 37.1 +0.7
       comp=Z,9.7nm,1.0s,baz=31,slow=5.4
ASSE   Asse, Remlinge    77.17 334 eP       P       14 48 36.9 +0.4
       comp=Z,12nm,0.9s,baz=31,slow=5.4
PVCC   Panska Ves        77.20 331 eP       P       14 48 37.6 +0.8
PVCC   Panska Ves        77.20 331 eP       P       14 48 37.6 +0.8
ARR    Arges             77.29 322 ⇑P       P       14 48 39.2 +1.6
PSZ    Piszkesteto       77.30 326   IAmb   IAmb    14 48 39.7
       comp=Z,24nm,1.0s
PSZ    Piszkesteto       77.30 326 ⇓P       P       14 48 38.8 +1.3
PSZ    Piszkesteto       77.30 326   P      P       14 48 38.8 +1.3
RICC   Richard           77.35 331 eP       P       14 48 39.1 +1.4
JAVC   Velka Javorina    77.42 328 eP       P       14 48 39.4 +1.2
JAVC                               e                14 49 04.8
VRAC   Vranov            77.46 329   P      P       14 48 39.3 +1.0
       comp=Z,20nm,1.1s,baz=37,slow=5.3,SNR=17
VRAC                                 LR     LR      15 27 20.2
       comp=Z,75nm,18.2s,baz=29,slow=39
       comp=Z,20nm,1.1s
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VRAC   Vranov            77.46 329 ⇑P       P       14 48 39.5 +1.2
VRAC   Vranov            77.46 329 eP       P       14 48 38.8 +0.5
VRAC                               e                14 49 03.9
VRAC   Vranov            77.46 329   P      P       14 48 39.5 +1.2
CLZ    Clausthal         77.51 334 eP       P       14 48 39.2 +0.6
       comp=Z,17nm,0.8s,baz=31,slow=5.4
HSKC   Hora Svate Kat    77.53 331 eP       P       14 48 39.0 +0.3
NEUB   Neuenburg         77.59 333 eP       P       14 48 39.4 +0.4
       comp=Z,23nm,0.9s,baz=31,slow=5.4
PRU    Pruhonice         77.66 330 eP       P       14 48 40.0 +0.6
PRU    Pruhonice         77.66 330 eP       P       14 48 40.0 +0.6
KRUC   Moravsky          77.74 329 eP       P       14 48 40.2 +0.3
KRUC                               e                14 49 05.0
SMOL   Smolenice         77.80 328 eP       P       14 48 41.6 +1.4
SMOL                                 pmax   pmax
       comp=Z,11nm,0.9s
SIRR   Siria             77.88 324 ⇓P       P       14 48 41.7 +1.0
TREC   Trest             77.89 329 eP       P       14 48 41.4 +0.7
TREC   Trest             77.89 329 eP       P       14 48 41.4 +0.7
GTTG   Gottingen         77.90 334 eP       P       14 48 41.2 +0.5
       comp=Z,34nm,1.2s,baz=31,slow=5.4
IBBN   Ibbenburen        77.93 335 eP       P       14 48 40.7 -0.1
       comp=Z,21nm,0.8s,baz=31,slow=5.4
MODS   Modra-Piesok      77.97 328 eP       P       14 48 42.5 +1.3
MODS                                 pmax   pmax
       comp=Z,46nm,1.1s
MODS   Modra-Piesok      77.97 328 eP       P       14 48 42.5 +1.3
SCHQ   Schefferville     78.00  19   P      P       14 48 41.1  0.0
       comp=Z,6.4nm,0.7s,baz=10,slow=6.4,SNR=14
SCHQ                                 LR     LR      15 26 38.8
       comp=Z,63nm,18.4s,baz=281,slow=38
       comp=Z,6.4nm,0.7s
L34A   Svendsen Farm,    78.01  43   IAmb   IAmb    14 48 41.9
       comp=Z,15nm,0.6s
SRO    Srobarova         78.02 327 eP       P       14 48 42.7 +1.3
TANN   Tannenbergstha    78.03 332 eP       P       14 48 41.7 +0.2
       comp=Z,4.4nm,1.0s,baz=31,slow=5.4
EKA    Eskdalemuir Ar    78.04 343   P      P       14 48 41.8 +0.4
       comp=Z,5.8nm,0.6s,baz=24,slow=5.2,SNR=28
EKA                                  LR     LR      15 28 42.0
       comp=Z,85nm,18.3s,baz=322,slow=40
       comp=Z,5.8nm,0.6s
EKB    Eskdalemuir       78.05 343   P      P       14 48 41.8 +0.3
GZR    Gura Zlata        78.09 323 ⇑P       P       14 48 42.4 +0.4
GZR    Gura Zlata        78.09 323   P      P       14 48 42.3 +0.4
MOX    Moxa              78.12 332 eP       P       14 48 41.9 -0.1
       comp=Z,6.3nm,0.8s,baz=31,slow=5.4
ZVC    Zvikov            78.24 330 eP       P       14 48 43.3 +0.7
BZS    Buzias            78.42 324 ⇑P       P       14 48 43.9 +0.3
BZS    Buzias            78.42 324   P      P       14 48 43.9 +0.3
UBBA   Unterbreizbach    78.51 333 eP       P       14 48 43.9  0.0
       comp=Z,5.0nm,0.8s,baz=31,slow=5.4
MANZ   Manzenberg        78.51 332 eP       P       14 48 44.7 +0.5
       comp=Z,1.9nm,1.0s,baz=31,slow=5.4
ROTZ   Rotzenmuhle       78.67 332 eP       P       14 48 45.7 +0.7
       comp=Z,2.3nm,1.0s,baz=31,slow=5.4
KASTN  Kahler Asten      78.68 334 eP       P       14 48 45.3 +0.2
       comp=Z,11nm,0.9s,baz=31,slow=5.4
CKRC   Cesky Krumlov     78.71 330 eP       P       14 48 45.6 +0.3
CKRC   Cesky Krumlov     78.71 330 eP       P       14 48 45.6 +0.3
KHC    Kasperske Hory    78.72 330   IAmb   IAmb    14 48 47.2
       comp=Z,20nm,1.0s
KHC    Kasperske Hory    78.72 330c iP      P       14 48 46.0 +0.6
KHC                                  pmax   pmax
       comp=Z,22nm,1.0s
KHC    Kasperske Hory    78.72 330 eP       P       14 48 45.9 +0.6
BUG    Bochum--Univer    78.83 335 eP       P       14 48 46.0 +0.2
       comp=Z,14nm,0.9s,baz=31,slow=5.4
CONA   Conrad Observa    78.88 328 i P      P       14 48 47.0 +0.7
       comp=Z,24nm,1.6s,SNR=8.1
RONA   Rosalia, Austr    78.90 328 i P      P       14 48 47.6 +1.3
       comp=Z,23nm,1.3s,SNR=11
GEC2   GERESS Array S    78.91 330 eP       P       14 48 46.7 +0.2
       comp=Z,4.8nm,0.9s,baz=31,slow=5.4
GERES  GERESS Array B    78.91 330   P      P       14 48 46.6 +0.2
       comp=Z,3.9nm,0.8s,baz=27,slow=6.1,SNR=17
GERES                                pP     pP      14 49 08.8 -2.6
       comp=Z,1.1nm,0.8s,baz=47,slow=5.9,SNR=2.9
GERES                                LR     LR      15 30 25.8
       comp=Z,50nm,19.0s,baz=32,slow=41
       comp=Z,3.9nm,0.8s
WET    Wettzell          78.96 331 eP       P       14 48 47.0 +0.4
       comp=Z,11nm,0.9s,baz=31,slow=5.4
GRA1   Grafenberg Arr    79.07 332   IAmb   IAmb    14 48 49.1
       comp=Z,25nm,0.8s
GRF    Grafenberg Arr    79.07 332 eP       P       14 48 47.6 +0.5
       comp=Z,16nm,0.8s,baz=31,slow=5.4
MORH   Mrgy, Hungar      79.18 326 ⇑P       P       14 48 47.9 +0.1
TNS    Taunus Mts        79.53 334 eP       P       14 48 50.3 +0.6
       comp=Z,7.9nm,1.0s,baz=31,slow=5.4
MOA    Molln             79.54 329 i P      P       14 48 49.9 +0.1
       comp=Z,4.4nm,1.0s
ARSA   Arzberg           79.56 328   IAmb   IAmb    14 48 51.9
       comp=Z,39nm,2.0s
ARSA   Arzberg           79.56 328 i P      P       14 48 50.7 +0.8
       comp=Z,11nm,1.3s
BEBN   Eben Emael        79.88 336 dP       P       14 48 51.4  0.0
       comp=Z,32nm,0.9s
BIOA   Bad Ischl, Aus    79.90 330 i P      P       14 48 52.6 +0.8
       comp=Z,22nm,1.4s,SNR=7.6
BTNL   Ternell           79.93 335 dP       P       14 48 51.2 -0.6
       comp=Z,10nm,0.9s
MEM    Membach           79.94 335 dP       P       14 48 52.0 +0.2
       comp=Z,15nm,1.0s
BOVS   Bovan             79.95 323 ⇓P       P       14 48 51.9 -0.2
ALN    Alexandroupoli    80.08 318   P      P       14 48 53.1 +0.4
ALN                                  IAmb   IAmb    14 48 53.6
       comp=Z,26nm,1.4s
ALN    Alexandroupoli    80.08 318   P      P       14 48 53.1 +0.4
ALN                                  pmax   pmax
       comp=Z,26nm,1.4s
BSTI   Sart Tilman       80.10 336 dP       P       14 48 53.3 +0.6
GROS   Grobnik           80.23 328 i P      P       14 48 53.8 +0.2
SOKA   Soboth            80.23 328 i P      P       14 48 54.2 +0.6
       comp=Z,14nm,0.9s,SNR=8.9
PERS   Pernice           80.23 328 i P      P       14 48 54.0 +0.4
BCLA   Clavier           80.32 336 dP       P       14 48 54.1 +0.2
BGES   Gesves            80.42 336 dP       P       14 48 55.0 +0.6
LESA   Schwarzleotal     80.48 330 i P      P       14 48 55.6 +0.7
       comp=Z,20nm,1.2s,SNR=6.3
KBA    Koelnbreinsper    80.53 329 i P      P       14 48 56.5 +1.2
       comp=Z,14nm,1.0s,SNR=8.7
STU    Stuttgart         80.54 333   IAmb   IAmb    14 48 56.5
       comp=Z,23nm,1.1s
STU    Stuttgart         80.54 333 eP       P       14 48 55.5 +0.4
       comp=Z,40nm,1.0s,baz=31,slow=5.4
OBKA   Obir              80.55 328 i P      P       14 48 54.3 -1.1
       comp=Z,7.0nm,1.2s
RCHB   Rochefort         80.58 336 dP       P       14 48 54.8 -0.5
       comp=Z,7.6nm,1.2s
BMRD   Maredsous         80.59 336 dP       P       14 48 55.4 +0.1
       comp=Z,14nm,1.1s
MNTX   Cornudas Mount    80.62  55   P      P       14 48 56.4 +0.5
MANT   Manisa            80.66 315   IAmb   IAmb    14 48 57.2
       comp=Z,14nm,0.9s
ASF    Jabal al Asfar    80.71 306   P      P       14 48 57.5 +1.0
       comp=Z,9.8nm,0.9s,baz=281,slow=3.8,SNR=6.0
       comp=Z,9.8nm,0.9s
MYKA   Terra Mystica     80.80 329 i P      P       14 48 56.4 -0.2
       comp=Z,6.1nm,0.9s
DOU    Dourbes           80.82 336 dP       P       14 48 56.4 -0.2
       comp=Z,6.9nm,1.2s
WATA   Walderalm         80.95 331 i P      P       14 48 58.0 +0.5
       comp=Z,6.2nm,0.5s,SNR=5.9
MMAI   Mount Meron Ar    80.98 307   P      P       14 48 59.0 +1.1
       comp=Z,11nm,0.7s,baz=37,slow=7.3,SNR=8.0
       comp=Z,11nm,0.7s
WTTA   Wattenberg        80.99 331 i P      P       14 48 58.4 +0.7
       comp=Z,3.1nm,0.7s,SNR=6.3
RETA   Reutte            81.11 331 i P      P       14 48 58.8 +0.5
       comp=Z,18nm,1.5s
ABTA   Abfaltersbach     81.11 330 eP       P       14 48 57.6 -0.7
       comp=Z,7.8nm,1.2s
SQTA   Sankt Quirin      81.18 331 i P      P       14 48 59.0 +0.3
       comp=Z,18nm,1.1s
P38A   Dawn              81.19  42   IAmb   IAmb    14 48 59.8
       comp=Z,9.5nm,0.5s
BFO    Black Forest      81.21 333   P      P       14 48 58.9 +0.2
BFO                                  IAmb   IAmb    14 48 59.9
       comp=Z,17nm,1.1s
BFO    Black Forest      81.21 333   P      P       14 48 58.9 +0.2
BFO                                  pmax   pmax
       comp=Z,17nm,1.1s
BFO    Black Forest      81.21 333 eP       P       14 48 58.5 -0.2
       comp=Z,7.6nm,0.9s,baz=31,slow=5.4
JAVS   Javornik          81.25 328 i P      P       14 48 58.3 -0.8
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RAR	Rarotonga	81.36	130	LR	LR	15 21 42.7	
	comp=Z,35nm,20.5s,baz=328,slow=33						
RAYN	Ar Rayn	81.38	294	P	P	14 48 60.0	-0.1
RAYN				IAmb	IAmb	14 49 01.5	
	comp=Z,69nm,1.9s						
RAYN	Ar Rayn	81.38	294	*i* P	P	14 49 00.6	+0.5
	SNR=7.9						
RAYN	Ar Rayn	81.38	294	P	P	14 49 00.0	-0.1
RAYN				pmax	pmax		
	comp=Z,69nm,2.0s						
RAYN	Ar Rayn	81.38	294	P	P	14 49 00.4	+0.3
RAYN				PcP	PcP	14 49 06.5	+0.6
RAYN				pP	pP	14 49 25.7	+0.6
RAYN				sP	sP	14 49 34.7	-0.8
FETA	Feichten	81.52	331	*i* P	P	14 49 00.5	-0.1
	comp=Z,8.6nm,1.0s						
DAVA	Damuels	81.59	332	*i* P	P	14 49 01.5	+0.6
	comp=Z,13nm,1.1s						
P40A	Paris	81.98	42	IAmb	IAmb	14 49 03.8	
	comp=Z,10.0nm,0.6s						
CTI	Castel Tesino	82.02	330	IAmb	IAmb	14 49 10.7	
	comp=Z,32nm,1.8s						
DAVOX	Davos/Dischmat	82.03	331	P	P	14 49 03.4	+0.2
	comp=Z,4.9nm,0.8s,baz=20,slow=2.9,SNR=8.2						
DAVOX				LR	LR	15 30 18.4	
	comp=Z,59nm,19.5s,baz=80,slow=39						
	comp=Z,4.9nm,0.8s						
FUORN	Ofenpass-Fuorn	82.03	331	P	P	14 49 03.7	+0.4
FUORN				IAmb	IAmb	14 49 05.1	
	comp=Z,15nm,0.9s						
TUE	Stuetta	82.48	331	IAmb	IAmb	14 49 07.0	
	comp=Z,51nm,2.0s						
TEOL	Teolo	82.60	330	IAmb	IAmb	14 49 06.9	
	comp=Z,14nm,0.8s						
R40A	Maddies Statio	82.84	42	P	P	14 49 07.2	-0.2
R40A				IAmb	IAmb	14 49 08.0	
	comp=Z,6.9nm,0.6s						
LDAQ	Lac Daran	83.05	24	P	P	14 49 08.2	-0.2
SADO	Sadowa	83.21	31	LR	LR	15 27 28.1	
	comp=Z,60nm,18.1s,baz=332,slow=36						
SENIN	Lac Senin/Sane	83.27	333	P	P	14 49 09.3	-0.4
TX31	Lajitas Ar. Si	83.34	56	P	P	14 49 10.6	+0.3
TX31				IAmb	IAmb	14 49 38.0	
	comp=Z,19nm,1.6s						
TXAR	Lajitas Array	83.35	56	P	P	14 49 10.7	+0.4
	comp=Z,2.5nm,0.7s,baz=300,slow=3.5,SNR=37						
TXAR				pP	pP	14 49 34.6	-0.8
	comp=Z,1.4nm,0.7s,baz=298,slow=3.9,SNR=4.3						
	comp=Z,2.5nm,0.7s						
CCM	Cathedral Cave	83.53	42	P	P	14 49 11.3	+0.3
CCM				IAmb	IAmb	14 49 12.4	
	comp=Z,27nm,1.6s						
CCM	Cathedral Cave	83.53	42	P	P	14 49 11.3	+0.3
CCM				pmax	pmax		
	comp=Z,27nm,1.7s						
TRQ	Mont Tremblant	83.56	27	P	P	14 49 11.2	+0.2
TRQ				IAmb	IAmb	14 49 11.4	
	comp=Z,14nm,0.8s						
EIL	Elat	83.67	305	P	P	14 49 12.8	+1.0
	comp=Z,17nm,0.9s,baz=43,slow=7.5,SNR=4.1						
	comp=Z,17nm,0.9s						
LMQ	La Malbaie	83.70	24	P	P	14 49 11.7	+0.1
LMQ				IAmb	IAmb	14 50 01.4	
	comp=Z,40nm,1.5s						
N47A	Urbana	83.82	37	P	P	14 49 12.5	+0.1
FDMO	Fiordimonte	84.03	327	P	P	14 49 13.1	-0.4
MURB	Monte Urbino	84.06	328	IAmb	IAmb	14 49 15.9	
	comp=Z,27nm,1.0s						
P46A	Rosedale	84.18	39	IAmb	IAmb	14 49 15.2	
	comp=Z,15nm,0.7s						
NRCA	Norcia	84.20	327	IAmb	IAmb	14 49 16.0	
	comp=Z,19nm,0.9s						
TAOE	Nuku Hiva Isla	84.49	108	*e*LR	LR	15 15 55.9	
	comp=Z,110nm,23.5s						
PPT	Papeete	84.59	120	LR	LR	15 17 33.1	
	comp=Z,78nm,21.8s,baz=308,slow=29						
PPT2	Papeete2	84.61	120	*e*P	P	14 49 19.6	+3.0
	comp=Z,45nm,22.8s						
PPT2	Papeete2	84.61	120	*e*SS	SS	15 04 56.6	-13
	comp=Z,239nm,31.2s						
PPT2	Papeete2	84.61	120	*e*LR	LR	15 15 51.1	
	comp=Z,310nm,30.2s						
PPT2				*e*LR	LR	15 15 59.9	
	comp=Z,176nm,32.0s						
E62A	Clayton Lake	84.77	24	P	P	14 49 17.5	+0.4
S44A	Carbondale	84.77	41	IAmb	IAmb	14 49 18.6	
	comp=Z,15nm,0.6s						
SIUC	Southern Illin	84.78	41	IAmb	IAmb	14 49 18.6	
	comp=Z,15nm,0.6s						
IDI	Anoyia	85.00	315	P	P	14 49 17.9	-0.7
	comp=Z,9.5nm,0.5s,baz=32,slow=11,SNR=11						
	comp=Z,9.5nm,0.5s						
BATG	Bathurst New B	85.14	21	P	P	14 49 19.5	+0.6
L56A	Greenwood	86.06	31	P	P	14 49 24.1	+0.5
M57A	Sunshine Farm,	86.91	31	P	P	14 49 28.5	+0.7
U49A	Red Boiling Sp	87.36	39	P	P	14 49 30.6	+0.6
U49A				IAmb	IAmb	14 50 30.5	
	comp=Z,38nm,1.7s						
CPCT	Cooper Cave	88.81	39	P	P	14 49 37.1	+0.2
TKL	Tuckaleechee C	88.98	39	P	P	14 49 37.6	-0.1
	comp=Z,6.5nm,0.6s,baz=280,slow=3.0,SNR=14						
	comp=Z,6.5nm,0.6s						
TKL	Tuckaleechee C	88.98	39	P	P	14 49 38.1	+0.4
TKL	Tuckaleechee C	88.98	39	P	P	14 49 38.1	+0.4
TKL				pmax	pmax		
	comp=Z,95nm,2.0s						
TBI	Tubuai	89.00	124	*e*LR	LR	15 17 55.6	
	comp=Z,1μm,35.0s						
TBI				*e*LR	LR	15 18 12.1	
	comp=Z,1μm,26.8s						
BG3	Lake Jocassee	89.91	38	P	P	14 49 42.8	+0.7
KEST	Kesra	91.78	326	LR	LR	15 34 11.3	
	comp=Z,50nm,20.7s,baz=244,slow=38						
ESDC	Sonseca Array	92.80	337	P	P	14 49 54.9	-0.6
	comp=Z,2.2nm,0.7s,baz=13,slow=4.4,SNR=18						
	comp=Z,2.2nm,0.7s						
ESDC	Sonseca Array	92.80	337	P	P	14 49 55.3	-0.1
TORD	Torodi Ar. Bea	114.85	321	PP	PP	14 56 18.4	-3.8
	comp=Z,4.0nm,1.0s,baz=30,slow=5.8,SNR=13						
H03N2	Juan Fernandez	143.71	89	T	T	17 37 20.2	
	baz=302,slow=77,SNR=8.2						
H03N3	Juan Fernandez	143.72	89	T	T	17 37 13.6	
	baz=302,slow=77,SNR=11						
H03N1	Juan Fernandez	143.73	89	T	T	17 37 21.5	
	baz=302,slow=77,SNR=12						
NVL	N'lazarevskaya	144.74	204	*i* PKIKP	PKiKP	14 56 22.9	+1.3
NVL				*e*		14 59 37.1	
NVL				*e*PPP	PPP	15 02 49.2	
NVL				*e*SS	SS	15 18 18.5	+2.0
NVL				*e*SSS	SSS	15 23 45.1	
NVL				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TROLL	Troll, Antarti	146.61	200	⇓P	PKPbc	14 56 23.6	+0.6
	comp=Z,269nm,0.5s						
SNAA	Sanae	148.09	198	PKPbc	PKPbc	14 56 26.3	-0.6
	comp=Z,4.6nm,1.0s,baz=129,slow=1.6,SNR=6.6						
SNAA	Sanae	148.09	198		PKPbc	14 56 27.0	+0.1
SNAA	Sanae	148.09	198	PKP2	PKPbc	14 56 27.0	+0.1
BDFB	Brasilia	149.63	28	PKPbc	PKPbc	14 56 32.2	-0.3
	comp=Z,4.3nm,0.6s,baz=338,slow=1.7,SNR=9.2						
BDFB	Brasilia	149.63	28		PKPbc	14 56 32.5	0.0
BDFB	Brasilia	149.63	28	PKP2	PKPbc	14 56 32.5	0.0
VNA2	Neumayer--Watz	149.64	197	P	PKPbc	14 56 31.2	+0.5
	comp=Z,7.9nm,0.6s,baz=129,slow=2.5						
VNA3	Neumayer Olymp	149.84	195	⇓P	PKPbc	14 56 31.4	+0.2
	comp=Z,0.8nm,0.4s						
PLCA	Paso Flores	152.81	97	PKPbc	PKiKP	14 56 39.5	+0.2
	comp=Z,1.6nm,0.5s,baz=260,slow=5.1,SNR=7.3						
PLCA	Paso Flores	152.81	97		PKPbc	14 56 39.3	+0.1
CPUP	Villa Florida	154.32	56	PKPbc	PKPbc	14 56 41.1	-1.6
	comp=Z,1.0nm,0.7s,baz=284,slow=17,SNR=2.5						
CPUP				PKPab	PKPab	14 56 56.9	-0.2
	comp=Z,0.7nm,0.6s,baz=302,slow=6.2,SNR=4.7						

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*SNET **24** 15:02:10.5±0.3, 12.°52N×88.°19W, h31^{km}±30^{km}, ML3.8*
*CATAC **24** 15:02:10.5±0.4, 12°N±3°×8°8W±°, h39^{km}±8^{km}, M3.8/20, MLv3.8/20, Error ellipse: s-maj=7.0km s-min=2.7km az=24.6, confirmed*
*UCR **24** 15:02:15.4±1.1, 12.°51N×87.°78W, h15^{km}±149^{km}, MW3.8*
ISC 24 15:02:10.9±1.5**, 12.°54N**±0.°05×**88.°20W**±0.°04**, h29**^{km}±13^{km}**, n57,** σ**0.**^{s}**92**/65**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	0.76	55	P	Pn	15 02 25.4	-0.4
CSGN				S	Sn	15 02 36.7	+0.4
CSGN	Cosiguina Volc	0.76	55	*e*P	Pn	15 02 25.3	-0.5
POTN	Potosi Cosigui	0.81	55	P	Pn	15 02 26.1	-0.4
POTN				S	Sn	15 02 38.2	+0.6
POTN	Potosi Cosigui	0.81	55	*e*P	Pn	15 02 26.1	-0.4
CNCH	Conchagua	0.82	26	*e*P	Pb	15 02 26.6	-0.1
CNCH				*e*S	Sn	15 02 38.5	+0.7
CNCH	Conchagua	0.82	26	P	Pb	15 02 26.5	-0.1
LCND	La Caada	0.82	21	*e*P	Pn	15 02 26.4	-0.2
LCND	La Caada	0.82	21	P	Pn	15 02 26.4	-0.2
LCY	Lacayo	0.89	354	*e*P	Pn	15 02 27.6	0.0
RANC	El Ranchito	0.90	354	*e*P	Pn	15 02 27.8	0.0
BLLM	Bellamira	0.90	357	*e*P	Pn	15 02 27.8	0.0
PACA	Pacayal	0.94	352	*e*P	Pn	15 02 28.4	+0.1
PACA				*e*S	Sb	15 02 41.2	+0.4
PACA	Pacayal	0.94	352	P	Pn	15 02 28.2	-0.1
TECA	Tecapa	1.00	343	*e*P	Pn	15 02 29.3	+0.1
CRIN	San Cristobal	1.13	82	P	Pn	15 02 30.6	-0.3
CRIN	San Cristobal	1.13	82	S	Sb	15 02 45.5	-0.7
CRIN	San Cristobal	1.13	82	*e*P	Pn	15 02 30.5	-0.3
PKGN	Cerro Pekin	1.20	84	P	Pn	15 02 31.1	-0.6
UESV	Universidad de	1.24	332	S	Sn	15 02 48.2	+0.2
SCLA	Alcaldia de Sa	1.27	336	*e*P	Pn	15 02 33.1	+0.3
SCLA	Alcaldia de Sa	1.27	336	P	Pn	15 02 33.1	+0.3
SCLA	Alcaldia de Sa	1.27	336	S	Sn	15 02 49.6	+0.7
QUEN	Al S del Volca	1.31	87	P	Pn	15 02 31.8	-1.5
POLN	Al Sur del Vol	1.35	85	P	Pn	15 02 33.0	-0.9
POLN				S	Sn	15 02 50.1	-0.9
PAVA	Las Pavas	1.38	328	P	Pn	15 02 34.5	+0.2
PAVA	Las Pavas	1.38	328	S	Sn	15 02 50.8	-0.8
LOMA	Loma Larga	1.46	319	P	Pn	15 02 34.4	-1.0
LOMA	Loma Larga	1.46	319	S	Sn	15 02 52.2	-1.4
CNGA	Al SSO del Vol	1.46	91	P	Pn	15 02 34.5	-0.9
CNGA				S	Sn	15 02 52.6	-0.9
CNGN	Cerro Negro	1.46	91	*e*P	Pn	15 02 33.4	-2.0
LFU	La Fuente	1.50	324	*e*P	Pn	15 02 36.0	0.0
PMON	Piamonte	1.60	317	P	Pn	15 02 36.9	-0.4
PMON	Piamonte	1.60	317	S	Sn	15 02 56.9	-0.2
COPN	Copaltepe	1.61	103	P	Pn	15 02 36.0	-1.4
COPN	Copaltepe	1.61	103	*e*P	Pn	15 02 35.9	-1.4
MOMN	Momotombo	1.62	94	P	Pn	15 02 36.5	-1.1
JAYA	Jayaque - finc	1.65	312	*e*P	Pn	15 02 38.1	0.0
JAYA	Jayaque - finc	1.65	312	S	Sn	15 02 57.0	-1.5
JAYA	Jayaque - finc	1.65	312	P	Pn	15 02 38.3	+0.1
AESN	El Sauce Leon	1.65	78	P	Pn	15 02 37.5	-0.5
MOM2	El Cardon	1.67	93	P	Pn	15 02 37.5	-0.8
MOM2				S	Sn	15 02 57.7	-1.1
TGUH	Tegucigalpa,Un	1.76	31	P	Pn	15 02 40.4	+0.8
TGUH				S	Sn	15 03 01.9	+0.8
LIMN	Finca el Limon	1.86	73	P	Pn	15 02 40.3	-0.7
LIMN				S	Sn	15 03 03.3	-0.3
TISN	Laguna Tiscapa	1.92	102	P	Pn	15 02 41.0	-0.7
YUSH	Yuscaran	1.93	43	P	Pn	15 02 42.2	+0.3
NUBE	Las Nubes	2.06	312	*e*P	Pn	15 02 43.5	-0.2
NUBE	Las Nubes	2.06	312	S	Sn	15 03 07.4	-1.0
NUBE	Las Nubes	2.06	312	P	Pn	15 02 43.3	-0.3
JUD3	Juan Diaz 3	3.51	132	*e*P	Pn	15 03 03.6	-0.1
JTS	Las Juntas de	3.88	125	*e*P	Pn	15 03 09.3	+0.5
PIEC	Cerro El Cedra	5.07	124	*e*P	Pn	15 03 27.4	+2.2
BUS1	Rivas	5.28	124	*e*P	Pn	15 03 30.4	+2.1
SAJE	San Jernim	5.59	124	*e*P	Pn	15 03 18.0	-14
EDPE	Pejibaye, P	5.65	126	*e*P	Pn	15 03 35.1	+2.1
DRK0	Durika	5.85	123	*e*P	Pn	15 03 37.2	+1.3
PIRO	Carate, Puerto	6.30	130	*e*P	Pn	15 03 43.6	+1.7
ALCO	Alturas Coton,	6.36	124	*e*P	Pn	15 03 44.6	+1.7

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*NDI **24** 15:16:36.3±1.1, 25.°89N×95.°70E, h119^{km}±9^{km}, ML3.9, MW3.8*
*IDC **24** 15:16:39.6±3.7, 25.°41N×95.°34E, h140^{km}±41^{km}, mb3.0/4, mbtmp3.4/5, Error ellipse: s-maj=152.7km s-min=18.3km az=60.0*
ISC 24 15:16:36.4±1.1**, 25.°83N**±0.°07×**95.°65E**±0.°09**, h100**^{km}**, n13,** σ**1.**^{s}**69**/20**, mb3.3**/4**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOKO	MOKOCHONG	1.13	296	*e*P	Pn	15 17 00.0	+1.6
MOKO				*e*S	Sn	15 17 16.8	+1.8
MOKO				IAML		15 17 20.7	
	comp=N,3μm,0.5s						
MOKO				IAML		15 17 22.1	
	comp=E,3μm,0.3s						
KOHI	KOHIMA	1.39	266	*e*P	Pn	15 17 02.9	+1.4
KOHI				*e*S	Sn	15 17 21.9	+1.4
KOHI				IAML		15 17 24.6	
	comp=E,1μm,0.3s						
KOHI				IAML		15 17 25.6	
	comp=N,1μm,0.5s						
IMP	Imphal	1.83	238	*e*P	Pn	15 17 08.2	+1.3
IMP				*e*S	Sn	15 17 32.4	+2.3
IMP				IAML		15 17 33.0	
	comp=N,200nm,0.3s						
IMP				IAML		15 17 33.2	
	comp=E,80nm,0.4s						
ITAN	ITANAGAR	2.17	308	*e*S	Sn	15 17 37.6	-0.1
ITAN				IAML		15 17 38.8	
	comp=N,2μm,0.3s						
ITAN				IAML		15 17 39.9	
	comp=E,1μm,0.3s						
ZIRO	ZIRO	2.33	317	*e*P	Pn	15 17 13.7	+0.2
ZIRO				*e*S	Sn	15 17 40.8	-1.1
ZIRO				IAML		15 17 43.1	
	comp=E,2μm,0.4s						
ZIRO				IAML		15 17 43.9	
	comp=N,2μm,0.4s						
SHL	Shillong	3.41	266	*e*P	Pn	15 17 27.3	-0.5
SHL				*e*S	Sn	15 18 04.8	-2.6
SHL				IAML		15 18 07.4	
	comp=N,446nm,0.3s						
SHL				IAML		15 18 07.7	
	comp=E,277nm,0.4s						
GUWA	GUWAHATI	3.58	277	*e*P	Pn	15 17 29.8	-0.1
GUWA				*e*S	Sn	15 18 09.5	-1.8
GUWA				IAML		15 18 10.0	
	comp=E,212nm,0.6s						
GUWA				IAML		15 18 11.2	
	comp=N,196nm,0.4s						
TAWA	Tawang	3.81	298	*e*P	Pn	15 17 33.6	+0.2
TAWA				*e*S	Sn	15 18 15.3	-2.2
TAWA				IAML		15 18 19.3	
	comp=E,2μm,0.2s						
TAWA				IAML		15 18 19.7	
	comp=N,1μm,0.2s						
CMAR	Chiang Mai Arr	7.95	157	P	Pn	15 18 28.8	-0.4
	comp=N,1.7nm,0.7s,baz=333,slow=13,SNR=22						
MKAR	Makanchi Array	23.46	337	P	P	15 21 38.5	+1.5
	comp=N,0.3nm,0.6s,baz=153,slow=9.7,SNR=2.7						
	comp=N,0.3nm,0.6s						
KURBB	Kurchatov Arra	28.03	336	P	P	15 22 20.1	+2.2
	comp=N,0.1nm,0.4s,baz=147,slow=9.9,SNR=2.0						
	comp=N,0.1nm,0.4s						
WRA	Warramunga Arr	59.01	137	P	P	15 26 24.3	-1.7
	comp=N,0.4nm,0.4s,baz=320,slow=7.4,SNR=15						
	comp=N,0.4nm,0.4s						
ASAR	Alice Springs	61.58	140	P	P	15 26 41.2	-2.3
	comp=N,0.4nm,0.5s,baz=324,slow=6.6,SNR=19						
	comp=N,0.4nm,0.5s						

UCR 24 15:20:54.4±0.5**, 8.°61N**×**84.°50W, h16**^{km}±3^{km}**, MW3.5, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PICV	PH. Pirrs	1.05	16	*e*P	Pb	15 21 13.2	-1.1
EDPE	Pejibaye, P	1.06	59	*e*P	Pb	15 21 13.3	-1.2
PIEC	Cerro El Cedra	1.14	28	*e*P	Pb	15 21 14.7	-1.2
PITB	Pirrs, San	1.14	24	*e*P	Pb	15 21 14.4	-1.6
PIRO	Carate, Puerto	1.17	100	*e*P	Pn	15 21 15.4	-0.7
FIMO	Fila Mora	1.19	72	*e*P	Pn	15 21 15.1	-1.5
BUS1	Rivas	1.19	38	*e*P	Pn	15 21 15.3	-1.6
SAJE	San Jernim	1.22	53	*e*P	Pn	15 21 15.9	-1.1
EDAD	Golfito	1.32	88	*e*P	Pn	15 21 16.9	-1.4
DRK0	Durika	1.40	62	*e*P	Pn	15 21 17.9	-1.5
VICA	Volcano Irazu	1.51	25	*e*P	Pn	15 21 20.7	-0.5
VTUN	Crater Central	1.58	27	*e*P	Pn	15 21 21.6	-0.5
ABRB	Las Abras (San	1.58	29	*e*P	Pn	15 21 21.9	-0.2
ALCO	Alturas Coton,	1.68	78	*e*P	Pn	15 21 22.5	-0.8
DMCAL	E. de Neily	1.69	88	*e*P	Pn	15 21 23.0	-0.4
JTS	Las Juntas de	1.73	345	*e*P	Pn	15 21 23.3	-0.6
LCOCO	El Coco	1.73	32	*e*P	Pn	15 21 24.1	+0.1
BRU2	Volcan	1.79	84	*e*P	Pn	15 21 24.6	-0.3
CLLRA	Cordillera,	1.87	86	*e*P	Pn	15 21 25.8	-0.1
JEFFS	S de V. Baru	1.94	88	*e*P	Pn	15 21 25.9	-1.0
TRT2	Tortugero	2.07	21	*e*P	Pn	15 21 28.9	+0.3
RBALA	Bur	2.33	83	*e*P	Pn	15 21 31.8	-0.4

IDC 24 15:42:09.4±1.8**, 8.°21S**×**122.°32E, h197**^{km}±12^{km}**, mb2.7**/1**, mbtmp3.2**/4**, Error ellipse: s-maj=225.0km s-min=17.4km az=57.0, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.39	146	P	Pn	15 42 53.5	+1.5
	12nm,0.3s,baz=46,slow=4.3,SNR=6.8						
BATI				S	Sn	15 43 25.3	+0.1
	31nm,0.4s,baz=268,slow=18,SNR=9.3						
WRA	Warramunga Arr	16.48	136	P	P	15 45 47.2	-1.7
	0.5nm,1.0s,baz=310,slow=12,SNR=6.1						
WRA				S	S	15 48 42.6	-8.8
	0.8nm,0.8s,baz=309,slow=15,SNR=3.2						
ASAR	Alice Springs	18.96	145	P	P	15 46 15.8	-0.3
	1.0nm,0.8s,baz=329,slow=12,SNR=14						
ASAR				S	S	15 49 42.4	+1.4
	0.2nm,0.9s,baz=313,slow=19,SNR=2.7						
MKAR	Makanchi Array	65.31	331	P	P	15 52 30.3	-0.1
	0.1nm,0.6s,baz=129,slow=6.3,SNR=1.7						
	0.1nm,0.6s						

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*IDC **24** 15:46:02.3±7.0, 15.°85S×175.°56W, h93^{km}±57^{km}, mb4.0/5, mbtmp4.3/6, ML3.6/1, Error ellipse: s-maj=50.5km s-min=20.7km az=118.0*
*NEIC **24** 15:46:30.7±0.8, 16.°2S±0.°2×175.°7W±0.°2, h369^{km}±12^{km}, mb4.1/34, Error ellipse: s-maj=28.4km s-min=13.7km az=140.0*
ISC 24 15:46:29.2±0.7**, 16.°2S**±0.°1×**175.°8W**±0.°1**, h350**^{km}**, n44,** σ**0.**^{s}**83**/43**, mb4.0**/21**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.50	60	Pn	Pn	15 47 44.7	+1.0
AFI				Sn	S	15 48 44.8	+1.2
MSVF	Nonsavu	6.08	255	Pn	Pn	15 48 04.3	+3.2
DZM	Mont Dzumac	17.76	248	P	P	15 50 08.9	-5.0
	0.2nm,0.3s,baz=94,slow=19,SNR=1.9						
	3.7nm,0.8s						
DZM	Mont Dzumac	17.76	248	IAmb	IAmb	15 50 48.0	
	comp=Z,17nm,1.2s						
URZ	Urewera	22.85	194	P	P	15 51 01.1	-1.9
	comp=Z,9.3nm,1.1s,baz=325,slow=21,SNR=1.3						
URZ				S	S	15 55 07.5	+21
	comp=Z,4.1nm,0.7s,baz=16,slow=13,SNR=1.6						
	comp=Z,9.3nm,1.1s						
BKZ	Black Stump Fm	23.86	195	P	P	15 51 12.1	-0.2
BKZ				IAmb	IAmb	15 51 24.3	
	comp=Z,22nm,1.4s						
SNZO	South Karori	26.34	196	P	P	15 51 33.5	-0.8
TKNZ	Takaka Hill	26.59	199	P	P	15 51 35.8	-0.9
DSZ	Denniston Nort	27.61	200	P	P	15 51 45.6	-0.1
OXZ	Oxford	28.96	199	P	P	15 51 57.1	-0.4
EIDS	Eidsvold	32.21	248	P	P	15 52 25.3	-0.8
EIDS				IAmb	IAmb	15 52 36.5	
	comp=Z,9.0nm,1.1s						
WHZ	Wether Hill Ro	32.58	201	P	P	15 52 28.6	-0.5
ARMA	Armidale	32.95	239	P	P	15 52 32.7	+0.1
ARMA				IAmb	IAmb	15 52 59.9	
	comp=Z,18nm,1.4s						
CTAO	Charters Tower	36.21	258	P	P	15 52 59.9	-0.4
CTAO				IAmb	IAmb	15 53 13.9	
	comp=Z,12nm,1.5s						
CAN	Canberra	36.72	232	P	P	15 53 04.3	-0.1
TOO	Toolangi	40.18	230	P	P	15 53 33.2	+0.4
STKA	Stephens Creek	41.64	240	P	P	15 53 44.6	0.0
	comp=Z,1.0nm,0.3s,baz=80,slow=7.0,SNR=14						
	comp=Z,1.0nm,0.3s						
STKA	Stephens Creek	41.64	240	P	P	15 53 44.6	0.0
STKA				IAmb	IAmb	15 53 52.3	
	comp=Z,19nm,1.3s						
INKA	Innaminka	41.71	246	P	P	15 53 45.2	-0.1
BBOO	Buckleboo	46.41	240	P	P	15 54 22.1	-0.2
BBOO				IAmb	IAmb	15 54 59.1	
	comp=Z,8.7nm,1.3s						
WR8	Warramunga Arr	47.26	258		P	15 54 28.2	-0.7
WB0	Warramunga Arr	47.38	258	P	P	15 54 29.2	-0.6
WB0				IAmb	IAmb	15 54 30.1	
	comp=Z,8.2nm,0.8s						
WRAB	Tennant Creek	47.40	258	P	P	15 54 29.4	-0.6
WRAB				IAmb	IAmb	15 54 30.2	
	comp=Z,5.1nm,0.6s						
WRA	Warramunga Arr	47.41	258	P	P	15 54 29.6	-0.5
	comp=Z,4.8nm,0.6s,baz=92,slow=8.0,SNR=73						
	comp=Z,4.8nm,0.6s						
WRA	Warramunga Arr	47.41	258		P	15 54 29.4	-0.7
AS31	Alice Springs	47.67	253		P	15 54 31.9	-0.1
AS31				IAmb	IAmb	15 54 32.4	
	comp=Z,3.6nm,0.5s						
ASAR	Alice Springs	47.67	253	P	P	15 54 31.8	-0.2
	comp=Z,9.4nm,0.4s,baz=88,slow=7.8,SNR=536						
	comp=Z,9.4nm,0.4s						
MTN	Manton Dam	51.37	266	P	P	15 54 59.6	-0.1
MTN				IAmb	IAmb	15 55 05.3	
	comp=Z,8.3nm,1.1s						
FORT	Forrest	52.99	244	P	P	15 55 10.7	-0.6
FORT				IAmb	IAmb	15 55 28.6	
	comp=Z,9.2nm,1.2s						
KNRA	Kununurra	53.16	262	P	P	15 55 12.4	-0.4
KNRA				IAmb	IAmb	15 55 38.9	
	comp=Z,11nm,1.3s						
FITZ	Fitzroy Crossi	55.78	259	P	P	15 55 31.9	+0.4
PSA00	Pilbara Seismi	60.76	254	P	P	15 56 05.6	+0.1
PSA00				IAmb	IAmb	15 56 11.5	
	comp=Z,13nm,1.2s						
JSD	Sado	69.05	323	P	P	15 56 57.4	-0.6
PET	Petropavlovsk	72.38	344	P	P	15 57 15.9	-1.6
BMRM	Bremner River	80.86	15	P	P	15 58 04.1	-0.5
CCB	Clear Creek Bu	83.39	12	P	P	15 58 16.4	-1.0
ILAR	Eielson Array	83.68	12	P	P	15 58 18.5	-0.5
	comp=Z,0.5nm,0.6s,baz=214,slow=5.3,SNR=20						
	comp=Z,0.5nm,0.6s						
J25K	Salcha River,	83.86	13	P	P	15 58 19.7	-0.2
J25K				IAmb	IAmb	15 58 21.0	
	comp=Z,6.3nm,1.3s						
E19K	Redstone River	84.52	7	P	P	15 58 23.1	0.0
DAWY	Dawson	84.78	15	P	P	15 58 24.1	-0.4
D19K	Kuna River	85.42	6	P	P	15 58 27.9	+0.4
D20K	Etivluk River	85.80	7	P	P	15 58 29.7	+0.3
D20K				IAmb	IAmb	15 59 05.6	
	comp=Z,4.3nm,1.4s						
D22K	Ayikyak River	86.45	8	P	P	15 58 32.7	+0.2
D22K				IAmb	IAmb	15 59 13.9	
	comp=Z,5.1nm,1.4s						
G31M	Satah River	88.35	15	P	P	15 58 41.6	+0.2
G31M				IAmb	IAmb	15 59 03.1	
	comp=Z,2.6nm,1.2s						

SJA 24 15:57:33.5±0.6**, 27.°39S**×**67.°18W, h160**^{km}±4^{km}**, ML3.4, MW3.5, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TINO	Tinogasta	0.76	207	*e*P	Pn	15 57 57.7	+0.2
TINO				*e*S	Sn	15 58 15.0	-1.1
AANI	Anillaco	1.43	172	*e*P	Pn	15 58 03.9	+0.6
AANI				IAML		15 58 35.7	
	comp=Z,418nm,0.6s						
CYA	Choya	1.61	131	*e*P	Pn	15 58 06.0	+1.1
CYA				*e*S	Sn	15 58 29.1	-0.1
VCA	Vinchina	1.62	214	*e*P	Pn	15 58 06.1	+0.9
VCA				*e*S	Sn	15 58 25.0	-4.7
VCA				*e*S		15 58 29.8	
VCA				IAML		15 58 31.3	
	comp=Z,317nm,0.4s						
FSA	Cafayete	1.66	40	*e*P	Pn	15 58 06.6	+0.8
AHML	Horco Molle	1.75	70	*e*P	Pn	15 57 52.0	-14
AHML				*e*S	Sn	15 58 16.7	-15
AC02	Maricunga	1.83	287	*e*P	Pn	15 58 08.8	+1.0
AC02				*e*S	Sn	15 58 24.0	-10
ACLC	CERRO LA CRUZ	2.04	174	*e*P	Pn	15 58 10.8	+1.0
ACLC				*e*S	Sn	15 58 32.5	-5.5
ACLC				*e*S		15 58 38.2	
ACLC				IAML		15 58 38.6	
	comp=Z,129nm,0.5s						
AGUA	GUANDACOL	2.39	209	*e*P	Pn	15 58 14.6	+0.7

AGUA				IAML		15 58 49.0	
	comp=Z,124nm,0.2s						
GO03	**Copiapo**	**2.72**	**265**	*e*P	Pn	15 58 17.6	-0.3
GO03				*e*S	Sn	15 58 50.2	-2.0
GO03				IAML		15 58 52.1	
	comp=Z,180nm,0.5s						
SLA	**San Lorenzo**	**3.05**	**30**	*e*P	Pn	15 58 07.9	-14
GO02	**Mina Guanaco**	**3.10**	**315**	*e*P	Pn	15 58 23.8	+0.9
SALTA		**3.24**	**14**	*e*P	Pn	15 58 25.0	+0.2
SALTA				*e*P		15 58 25.5	
ACDV	**Cuesta del Vie**	**3.25**	**211**	*e*P	Pn	15 58 25.5	+0.9
AVFE	**Valle Fertil**	**3.27**	**184**	*e*P	Pn	15 58 25.3	+0.6
AROD	**Rodeo**	**3.42**	**216**	*e*P	Pn	15 58 27.8	+0.9
AROD				*e*S	Sn	15 59 09.5	+1.1
ACCO	**Cerro Coronel**	**3.59**	**207**	*e*P	Pn	15 58 29.7	+0.7
ACCO				*e*S	Sn	15 59 12.4	+0.1
AZAP	**Zapla**	**3.68**	**32**	*e*P	Pn	15 58 31.3	+1.1
ACHE	**Chepes**	**3.78**	**173**	*e*P	Pn	15 58 32.5	+1.1
RTLL	**Cerro Villicun**	**4.09**	**196**	*e*P	Pn	15 58 36.1	+1.0
RTLL				*e*S	Sn	15 59 22.5	-0.7
RTLL				IAML		15 59 25.1	
	comp=Z,33nm,0.4s						
HJA	**Humahuaca**	**4.46**	**21**	*e*P	Pn	15 58 42.6	+2.2
TCA	**Tanti**	**4.53**	**151**	*e*P	Pn	15 58 41.8	+0.8
TCA				*e*S	Sn	15 59 31.9	-1.9
TCA				IAML		15 59 33.3	
	comp=Z,24nm,0.5s						
MRA	**San Martin**	**5.17**	**166**	*e*P	Pn	15 58 49.1	-0.3
MRA				*e*S	Sn	15 59 45.9	-2.9
MRA				IAML		15 59 48.4	
	comp=Z,23nm,1.4s						
YJA	**Yavi**	**5.41**	**17**	*e*P	Pn	15 58 50.0	-2.9

IDC 24 16:28:43.4±1.6**,31°.26N×110°.60E,h0^{km},mb3.4**/4**, mbtmp3.4**/5**,ML3.8**/1**,Error ellipse: s-maj=66.9km s-min=24.1km az=61.0,Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**16.54**	**222**	Pn	Pn	16 32 37.0	+0.1
	0.1nm,0.3s,baz=38,slow=11,SNR=14						
	1.2nm,0.8s						
MKAR	**Makanchi Array**	**26.72**	**314**	P	P	16 34 23.7	-0.7
	0.3nm,0.6s,baz=111,slow=9.9,SNR=4.8						
	0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**29.27**	**328**	P	P	16 34 47.2	+0.1
	0.9nm,0.7s,baz=120,slow=10,SNR=3.7						
	0.9nm,0.7s						
BVAR	**Borovoye Array**	**36.24**	**319**	P	P	16 35 48.5	+0.5
	0.4nm,0.5s,baz=100,slow=7.5,SNR=2.8						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**59.00**	**155**	P	P	16 38 45.0	0.0
	0.2nm,0.9s,baz=339,slow=8.2,SNR=3.5						
	0.2nm,0.9s						

GCG 24 16:34:32.3±1.9**,13°.38N×91°.39W,h32^{km},MD3.7,ML3.2, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESSJ	**San Jos, E**	**0.88**	**78**	*i* P	Pn	16 34 47.7	-0.7
STG5	**El Palmar, Qui**	**1.02**	**2**	*i* P	Pb	16 34 54.4	+2.8
STG2	**El Palmar, Qui**	**1.05**	**1**	*i* P	Pb	16 34 55.8	+3.7
STG8	**El Palmar, Qui**	**1.07**	**2**	*i* P	Pb	16 34 55.4	+3.0
ESSG	**Sabana Grande**	**1.14**	**28**	*i* P	Pn	16 34 51.4	-0.6
SOKI	**Kika Raxquin**	**1.44**	**359**	*i* P	Pn	16 34 57.2	+0.7
NUBE	**Las Nubes**	**1.65**	**71**	*i* P	Pn	16 34 58.6	-0.5
APG	**El Apazote**	**1.85**	**29**	*i* P	Pn	16 35 03.5	+1.5
JAYA	**Jayaque - finc**	**1.90**	**81**	*i* P	Pn	16 35 03.2	+0.5
QUIS	**Sacapulas**	**1.92**	**8**	*i* P	Pb	16 35 05.4	-1.5
MTO3	**Montecristo**	**2.21**	**62**	*i* P	Pn	16 35 07.7	+0.7

NEIC ***24*** *16:35:58.0±0.5, 5°.6S±0°.1×154°.8E±0°.1, h107^{km}±9^{km}, mb4.1/17, Error ellipse: s-maj=17.8km s-min=14.0km az=204.0*

IDC ***24*** *16:36:09.2±10.0, 5°.89S×154°.15E, h176^{km}±64^{km}, mb3.5/3, mbtmp4.0/4, Error ellipse: s-maj=104.4km s-min=73.9km az=17.0*

ISC 24 16:35:59.1±0.9**,5°.6S**±0°.1×**154°.7E**±0°.1**,h118^{km},n23, σ0^{s}.99**/23**,mb4.0**/12**,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**2.87**	**300**		**Pn**	**16 36 43.6**	**0.0**
PMG	**Port Moresby**	**8.33**	**243**	P	**Pn**	**16 37 59.5**	**+2.5**
	10nm,0.4s,baz=69,slow=8.4,SNR=15						
PMG				S	**Sn**	**16 39 26.9**	**-2.6**
	2.8nm,0.5s,baz=80,slow=18,SNR=1.5						
PMG	**Port Moresby**	**8.33**	**243**		**Pn**	**16 37 57.8**	**+0.8**
PINNC	**Pines Island,**	**20.92**	**145**	P	**P**	**16 40 30.6**	**-1.9**
WB0	**Warramunga Arr**	**24.21**	**233**	P	**P**	**16 41 05.2**	**+0.2**
WB0				IAmb	IAmb	16 41 06.5	
	comp=Z,2.1nm,0.6s						
WR8	**Warramunga Arr**	**24.23**	**232**	P	**P**	**16 41 05.6**	**+0.4**
MTN	**Manton Dam**	**24.29**	**251**	P	**P**	**16 41 06.5**	**+0.9**
MTN				IAmb	IAmb	16 41 48.4	
	comp=Z,8.6nm,1.1s						
WRAB	**Tennant Creek**	**24.33**	**232**	P	**P**	**16 41 06.5**	**+0.5**
WRAB				IAmb	IAmb	16 41 27.7	
	comp=Z,5.8nm,1.4s						
WRA	**Warramunga Arr**	**24.35**	**232**	P	**P**	**16 41 06.7**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=57,slow=10,SNR=29						
	comp=Z,1.3nm,0.5s						
INKA	**Innaminka**	**25.66**	**209**	P	**P**	**16 41 17.9**	**-0.1**
INKA				IAmb	IAmb	16 41 18.7	
	comp=Z,3.2nm,0.5s						
AS31	**Alice Springs**	**26.85**	**226**	P	**P**	**16 41 28.9**	**+0.1**
ASAR	**Alice Springs**	**26.85**	**226**	P	**P**	**16 41 28.8**	**0.0**
	comp=Z,0.8nm,0.4s,baz=56,slow=9.2,SNR=59						
	comp=Z,0.8nm,0.4s						
ASAR	**Alice Springs**	**26.85**	**226**	P	**P**	**16 41 28.6**	**-0.3**
KNRA	**Kununurra**	**27.30**	**247**	P	**P**	**16 41 33.3**	**+0.4**
KNRA				IAmb	IAmb	16 42 01.4	
	comp=Z,6.0nm,0.9s						
STKA	**Stephens Creek**	**28.84**	**203**	P	**P**	**16 41 46.0**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=27,slow=9.0,SNR=3.2						
	comp=Z,0.9nm,0.5s						
STKA	**Stephens Creek**	**28.84**	**203**	IAmb	IAmb	16 41 53.2	
	comp=Z,48nm,1.5s						
FITZ	**Fitzroy Crossi**	**30.92**	**244**	P	**P**	**16 42 04.8**	**-0.2**
BBOO	**Buckleboo**	**32.12**	**210**	P	**P**	**16 42 15.1**	**-0.3**
FORT	**Forrest**	**35.36**	**222**	P	**P**	**16 42 43.6**	**+0.1**
FORT				IAmb	IAmb	16 43 01.5	
	comp=Z,5.9nm,0.8s						
GVZ	**Greta Valley S**	**40.59**	**159**	P	**P**	**16 43 27.2**	**+0.1**
BILL	**Bilibino**	**73.95**	**5**	P	**P**	**16 47 21.3**	**+0.2**
BILL				IAmb	IAmb	16 47 21.9	
	comp=Z,5.8nm,1.4s						
B21K	**Ikpikpuk River**	**82.56**	**16**	P	**P**	**16 48 08.3**	**-0.1**
B21K				IAmb	IAmb	16 48 35.9	
	comp=Z,5.8nm,1.4s						
QSPA	**South Pole Qui**	**84.34**	**180**	P	**P**	**16 48 18.7**	**+0.9**
QSPA				IAmb	IAmb	16 48 54.0	
	comp=Z,2.3nm,1.2s						

JMA ***24*** *16:38:41.1±0.2, 34°.9N±0°.7×140°.4E±0°.8, h72^{km}±1^{km}, MV2.8/32, SE OFF BOSO PENINSULA*

IDC ***24*** *16:38:41.5±1.3, 34°.09N×138°.29E, h0^{km}, mb3.2/3, mbtmp3.2/4, ML2.6/1, Error ellipse: s-maj=36.7km s-min=19.8km az=55.0*

ISC 24 16:38:42.8±1.0**,34°.84N**±0°.05×**140°.39E**±0°.06**,h61^{km}**±7^{km}**, n17,σ0^{s}.81**/22**,mb3.0**/3**,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO3	**Boso 3**	**0.11**	**113**	P	**Pn**	**16 38 51.6**	**0.0**
BSO3				*e*X		16 38 59.9	
BSO4	**Boso 4**	**0.15**	**344**	P	**Pn**	**16 38 52.0**	**-0.1**
BSO4				X		16 39 00.5	
KTR	**Katsuura**	**0.31**	**349**	P	**Pn**	**16 38 52.5**	**-0.5**
KTR				*e*S	**Sn**	**16 39 00.6**	**+0.2**
JKUC	**kamogawauchiur**	**0.35**	**334**	P	**Pn**	**16 38 52.8**	**-0.6**
JKUC				*e*S	**Sn**	**16 39 01.2**	**+0.1**
TATJ	**Tateyama 2**	**0.45**	**295**	P	**Pn**	**16 38 54.5**	**+0.2**
TATJ				*e*S	**Sn**	**16 39 04.4**	**+1.7**
BSO1	**Boso 1**	**0.52**	**111**	P	**Pn**	**16 38 54.3**	**-0.2**
BSO1				*e*X		16 39 04.1	
JIM2	**Oshima 3**	**0.80**	**261**	P	**Pn**	**16 38 57.5**	**-0.8**
JIM2				*e*S	**Sn**	**16 39 08.9**	**-0.8**
JTHY	**Toshimahigashi**	**0.96**	**251**	P	**Pn**	**16 39 00.1**	**-0.3**
JTHY				*e*S	**Sn**	**16 39 13.5**	**+0.1**
JMYK	**Miyake Tsubota**	**1.05**	**222**	*e*P	**Pn**	**16 39 01.4**	**-0.1**
JMYK				*e*S	**Sn**	**16 39 16.2**	**+0.9**
JHJ	**Hachijo jima 2**	**1.79**	**196**	Pn	**Pn**	**16 39 11.8**	**+0.3**
	33nm,0.3s,baz=336,slow=20,SNR=13						
JHJ				Sn	**Sn**	**16 39 33.8**	**+0.6**
	32nm,0.3s,baz=108,slow=22,SNR=8.1						
MJAR	**Matsushiro Arr**	**2.45**	**314**	Pn	**Pn**	**16 39 20.9**	**+0.4**
	1.3nm,0.3s,baz=169,slow=14,SNR=61						
MJAR				Sn	**Sn**	**16 39 50.3**	**+0.9**
	0.5nm,0.3s,baz=143,slow=13,SNR=5.6						
	9.2nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**27.84**	**116**	T	T	17 14 10.5	
	baz=308,slow=75,SNR=5.7						
H11N1	**WAKE ISLAND Hy**	**27.85**	**116**	T	T	17 14 05.8	
	baz=308,slow=75,SNR=6.1						
H11N3	**WAKE ISLAND Hy**	**27.86**	**116**	T	T	17 14 11.5	
	baz=308,slow=75,SNR=5.4						
MKAR	**Makanchi Array**	**44.61**	**304**	P	**P**	**16 46 48.9**	**-0.1**
	0.1nm,0.5s,baz=93,slow=7.2,SNR=1.6						
	0.1nm,0.5s						
WRA	**Warramunga Arr**	**54.79**	**187**	P	**P**	**16 48 04.8**	**-1.7**
	0.2nm,0.4s,baz=5.4,slow=8.2,SNR=6.8						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**58.51**	**187**	P	**P**	**16 48 34.1**	**+1.2**
	0.1nm,0.7s,baz=6.7,slow=15,SNR=4.1						
	0.1nm,0.7s						

SJA ***24*** *16:43:26.2±0.6, 27°.07S×63°.25W, h590^{km}±6^{km}, ML6.0, MW6.1*

CATAC ***24*** *16:43:31.6±0.3, 27°S±4°×6°3W±°, h554^{km}±5^{km}, M6.1/12, mb6.2/12, mB6.3/12, MLv6.8/2, Mw(mB)6.0/12, MwMwp5.5/6, Mwp5.7/6, Error ellipse: s-maj=9.5km s-min=6.2km az=15.4, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.73; $M_{\theta\theta}$-0.47; $M_{\phi\phi}$1.20; $M_{r\theta}$-0.58; $M_{\theta\phi}$-0.14; $M_{\phi r}$0.17; Fault plane solution: $M_0$1.21977×10^{18} NP1:ϕ_s143.51856°, δ61.99920°, λ-133.81909°. NP2:ϕ_s27.44851°, δ50.42646°, λ-37.52306°. Principal axes: T 1.2408, Plg6.8055°, Azm263.0607°; N -0.0432, Plg37.6860°, Azm167.7710°; P -1.1976, Plg51.4855°, Azm1.6849°; confirmed*

NEIC ***24*** *16:43:32.7, 26°.98S×63°.37W, h561^{km}*

VAO ***24*** *16:43:32.2±0.1, 26°.91S×63°.37W, h575^{km}±1^{km}, mb6.1, Presumed earthquake*

GFZ ***24*** *16:43:32.6, 26°.96S×63°.37W, h621^{km}, MW6.0, Moment Tensor Solution. s40 Moment tensor: M_{rr}-1.05; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$1.06; $M_{r\theta}$-0.52; $M_{\theta\phi}$-0.18; $M_{\phi r}$0.15; Fault plane solution: NP1:ϕ_s150.00000°, δ55.00000°, λ-115.00000°. NP2:ϕ_s10.00000°, δ42.00000°, λ-57.00000°. Principal axes: T 1.1200, Plg7.0000°, Azm258.0000°; N 0.1500, Plg21.0000°, Azm165.0000°; P -1.2600, Plg68.0000°, Azm5.0000°;*

IDC ***24*** *16:43:32.9±0.3, 26°.87S×63°.33W, h563^{km}±2^{km}, mb5.5/22, mbtmp6.4/28 Error ellipse: s-maj=7.6km s-min=5.8km az=72.0*

MOS ***24*** *16:43:32.3±0.8, 26°.92S×63°.37W, h562^{km}, mb6.1/21, Error ellipse: s-maj=9.9km s-min=7.2km az=77.8*

IPGP ***24*** *16:43:32.0, 26°.98S×63°.37W, h573^{km}, Mw6.0, Fault plane solution: NP1:ϕ_s2.00000°, δ38.00000°, λ-65.00000°. NP2:ϕ_s152.00000°, δ56.00000°, λ-108.00000°.*

GCMT ***24*** *16:43:33.8±0.1, 26°.89S±0°.01×63°.29W±0°.01, h577^{km}, MW6.0/154, Moment Tensor Solution. s154,c311; s118,c148; Duration: 2^{s}.5 Moment tensor: Scale 10^{18} Nm; M_{rr}-1.12±.01; $M_{\theta\theta}$-0.09±.01; $M_{\phi\phi}$1.22±.01; $M_{r\theta}$-0.40±.01; $M_{\theta\phi}$-0.12±.01; $M_{\phi r}$0.36±.01; Best double couple: $M_0$1.29600×10^{18} NP1:ϕ_s11.00000°, δ38.00000°, λ-63.00000°. NP2:ϕ_s158.00000°, δ57.00000°, λ-110.00000°. Principal axes: T 1.2960, Plg10.0000°, Azm262.0000°; N 0.0060, Plg16.0000°, Azm170.0000°; P -1.2960, Plg71.0000°, Azm21.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

NEIC ***24*** *16:43:33.7, 27°.01S×63°.38W, h580^{km}*

NEIC ***24*** *16:43:33.7, 26°.91S×63°.49W, h580^{km}, Moment Tensor Solution. Duration: 5^{s}.1 Moment tensor: Scale 10^{18}Nm; M_{rr}-1.04; $M_{\theta\theta}$-0.10; $M_{\phi\phi}$1.14; $M_{r\theta}$-0.53; $M_{\theta\phi}$-0.16; $M_{\phi r}$0.26; Fault plane solution: $M_0$1.25000×10^{18} NP1:ϕ_s13.56000°, δ40.98000°, λ-55.30000°. NP2:ϕ_s151.03000°, δ57.37000°, λ-116.32000°. Principal axes: T 1.2139, Plg9.0000°, Azm260.0000°; N 0.0731, Plg22.0000°, Azm166.0000°; P -1.2870, Plg66.0000°, Azm10.0000°;*

NEIC ***24*** *16:43:33.4±1.9, 26°.96S±0°.08×63°.39W±0°.10, h572^{km}±3^{km}, mb6.2/763, Mwb6.1/69, Mww6.0/61 Error ellipse: s-maj=12.9km s-min=11.0km az=73.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-1.41; $M_{\theta\theta}$0.05; $M_{\phi\phi}$1.36; $M_{r\theta}$-0.42; $M_{\theta\phi}$-0.37; $M_{\phi r}$0.54; Fault plane solution: $M_0$1.59000×10^{18} NP1:ϕ_s155.64000°, δ57.57000°, λ-100.75000°. NP2:ϕ_s355.14000°, δ33.98000°, λ-73.64000°. Principal axes: T 1.5889, Plg12.0000°, Azm253.0000°; N -0.0008, Plg9.0000°, Azm161.0000°; P -1.5881, Plg75.0000°, Azm35.0000°;*

OSUNB ***24*** *16:43:33.0±0.2, 26°.89S×63°.30W, h576^{km}±2^{km}, mb6.0/67 Error ellipse: s-maj=1.6km s-min=1.4km az=0.0*

BJI ***24*** *16:43:35.0, 27°.10S×63°.30W, h592^{km}, mB5.8/61*

ISC 24 16:43:32.4±0.2**,26°.93S**±0°.02×**63°.40W**±0°.03**,h569^{km}**±1^{km}**, h569^{km}:pP-P,n1998,σ1^{s}.57**/2183**,mb6.2**/450**,44C-141D, Santiago del Estero Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AHML	**Horco Molle**	**1.73**	**274**	*e*P	P	16 44 27.1	-16
AHML				IAML		16 45 23.1	
	comp=Z,3μm,2.9s						
FSA	**Cafayete**	**2.45**	**289**	*e*P	**P**	**16 44 45.4**	**-0.8**
FSA				*e*S	**S**	**16 45 52.2**	**+6.1**
CYA	**Choya**	**2.61**	**234**	*e*P	**P**	**16 44 45.4**	**-1.3**
CYA				*e*S	**S**	**16 45 43.4**	**-3.9**
CYA				IAML		16 45 44.6	
	comp=Z,3μm,1.1s						
SLA	**San Lorenzo**	**2.90**	**319**	*e*P	**P**	**16 44 48.4**	**-0.3**
SLA				IAML		16 45 56.1	
	comp=Z,591nm,2.0s						
AZAP	**Zapla**	**3.08**	**331**	*e*P	**P**	**16 44 49.3**	**-0.6**
AZAP				IAML		16 45 58.9	
	comp=Z,3μm,1.0s						
SALTA		**3.78**	**315**	*e*P	**P**	**16 44 54.9**	**+0.1**
SALTA				IAML		16 46 04.3	
	comp=Z,3μm,2.1s						
TINO	**Tinogasta**	**3.87**	**252**	*e*P	**P**	**16 44 54.3**	**-0.4**
TINO				*e*S	**S**	**16 45 59.1**	**-2.8**
ACLC	**CERRO LA CRUZ**	**4.00**	**231**	*e*P	**P**	**16 44 54.2**	**-1.5**
ACLC				*e*S	**S**	**16 46 00.0**	**-3.8**
ACLC				IAML		16 46 01.1	
	comp=Z,9μm,2.2s						
HJA	**Humahuaca**	**4.13**	**333**	*e*P	**P**	**16 44 57.8**	**+0.7**
HJA				IAML		16 46 29.8	
	comp=Z,776nm,1.8s						
TCA	**Tanti**	**4.51**	**193**	*e*P	**P**	**16 44 57.6**	**-1.8**
TCA				IAML		16 46 26.7	
	comp=Z,2μm,1.0s						
VCA	**Vinchina**	**4.62**	**246**	*e*P	**P**	**16 45 00.2**	**-0.2**
VCA				*e*S	**S**	**16 46 11.6**	**-0.7**
VCA				IAML		16 46 13.6	
	comp=Z,38μm,0.7s						
YJA	**Yavi**	**5.11**	**337**	*e*P	**P**	**16 45 06.4**	**+1.5**
YJA				*e*S	**S**	**16 46 23.0**	**+2.9**
YJA				IAML		16 46 23.4	
	comp=Z,306nm,1.1s						
AC02	**Maricunga**	**5.11**	**270**		**P**	**16 45 06.0**	**+1.1**
AC02	**Maricunga**	**5.11**	**270**	*e*P	**P**	**16 45 06.1**	**+1.3**
AC02				*e*S	**S**	**16 46 21.9**	**+1.6**
AC02				IAML		16 46 22.9	
	comp=Z,4μm,1.8s						
AGUA	**GUANDACOL**	**5.16**	**239**	*e*P	**P**	**16 45 04.7**	**0.0**
AGUA				*e*S	**S**	**16 46 19.5**	**-0.7**
AGUA				IAML		16 46 20.3	
	comp=Z,35μm,1.7s						
CPUP	**Villa Florida**	**5.47**	**85**	P	**P**	**16 45 07.7**	**+0.5**
	comp=Z,4μm,0.9s,baz=259,slow=8.6,SNR=4502						
CPUP				S	**S**	**16 46 22.2**	**-2.6**
	comp=Z,741nm,0.9s,baz=111,slow=16,SNR=4.6						
CPUP				PKiKP	**PKiKP**	**16 59 00.9**	**-0.2**
	comp=Z,21nm,1.1s,baz=41,slow=1.5,SNR=6.8						
CPUP	**Villa Florida**	**5.47**	**85**	P	**P**	**16 45 07.8**	**+0.5**
CPUP				S	**S**	**16 46 24.7**	**-0.2**
GO02	**Mina Guanaco**	**5.84**	**286**	P	**P**	**16 45 11.5**	**+0.7**
GO02	**Mina Guanaco**	**5.84**	**286**	⇑*e*P	**P**	**16 45 11.6**	**+0.7**
GO02				⇓*e*S	**S**	**16 46 28.3**	**-3.0**
AF01	**San Pedro de A**	**5.87**	**311**	P	**P**	**16 45 11.4**	**+0.2**
GO03	**Copiapo**	**6.12**	**262**	P	**P**	**16 45 13.0**	**0.0**
AC06	**Mina Casimiro**	**6.21**	**264**	P	**P**	**16 45 13.7**	**-0.1**
CFA	**Coronel Fontan**	**6.29**	**221**	P	**P**	**16 45 14.5**	**+0.1**
	comp=Z,6μm,0.8s,baz=54,slow=9.5,SNR=8141						
CFA				S	**S**	**16 46 35.8**	**-2.3**
	comp=Z,6μm,1.1s,baz=143,slow=23,SNR=68						
CFA				P3KPbc		17 21 43.2	
	comp=Z,2.7nm,0.8s,baz=283,slow=3.9,SNR=6.5						
AC05	**El Transito**	**6.37**	**251**		**P**	**16 45 15.8**	**+0.5**
AC01	**Pan de Azucar**	**6.49**	**275**		**P**	**16 45 16.3**	**-0.1**
AC01	**Pan de Azucar**	**6.49**	**275**	P	**P**	**16 45 16.4**	**0.0**
AC01	**Pan de Azucar**	**6.49**	**275**	S	**S**	**16 46 39.8**	**-1.7**
PSAL	**Palomas, Salto**	**6.55**	**131**	*e*P	**P**	**16 45 17.1**	**+0.3**
PSAL				*e*S	**S**	**16 46 41.8**	**-0.4**
CO01	**Juntas del Tor**	**6.63**	**241**	P	**P**	**16 45 19.0**	**+1.2**
PB14	**IPOC Station P**	**6.71**	**288**	S	**S**	**16 46 44.4**	**-1.4**
PB14				P	**P**	**16 45 19.0**	**+0.1**
LCO	**Las Campanas**	**6.78**	**251**		**P**	**16 45 19.2**	**-0.1**
LCO	**Las Campanas**	**6.78**	**251**	P	**P**	**16 45 19.2**	**-0.1**
AC04	**Llanos de Chal**	**6.92**	**258**		**P**	**16 45 20.3**	**-0.1**
PB06	**IPOC Station P**	**7.00**	**306**	⇑*e*P	**P**	**16 45 21.0**	**-0.4**
PB06				*e*S	**S**	**16 46 47.2**	**-3.3**
GO04	**Tololo Observa**	**7.26**	**242**	P	**P**	**16 45 23.6**	**-0.2**
GO04	**Tololo Observa**	**7.26**	**242**	⇑*e*P	**P**	**16 45 22.9**	**-0.9**
GO04				*e*S	**S**	**16 46 49.9**	**-5.2**
PB10	**IPOC Station P**	**7.31**	**296**		**P**	**16 45 24.3**	**+0.2**
PB10	**IPOC Station P**	**7.31**	**296**	⇑*e*P	**P**	**16 45 24.3**	**+0.2**
PB10				*e*S	**S**	**16 46 48.9**	**-6.7**
PB09	**IPOC Station P**	**7.38**	**313**	⇑*e*P	**P**	**16 45 25.6**	**+0.6**
PB09				*e*S	**S**	**16 46 54.5**	**-2.6**
CO03	**El Pedregal**	**7.48**	**237**		**P**	**16 45 25.6**	**-0.1**
CO03	**El Pedregal**	**7.48**	**237**	P	**P**	**16 45 25.5**	**-0.2**
CO03	**El Pedregal**	**7.48**	**237**	S	**S**	**16 46 55.6**	**-3.0**
CO05	**La Serena**	**7.51**	**245**	P	**P**	**16 45 25.1**	**-0.8**
CO05	**La Serena**	**7.51**	**245**	⇑*e*P	**P**	**16 45 25.3**	**-0.6**
CO05				*e*S	S	16 46 49.9	-9.1
CO02	**Combarbal**	**7.89**	**236**	P	**P**	**16 45 29.1**	**-0.6**
CO02	**Combarbal**	**7.89**	**236**	⇑*e*P	**P**	**16 45 29.4**	**-0.3**
CO02				*e*S	**S**	**16 46 59.9**	**-6.0**
PB01	**IPOC Station P**	**8.08**	**315**	⇑*e*P	**P**	**16 45 31.5**	**-0.2**
PB01				*e*S	**S**	**16 47 06.4**	**-2.9**
CO06	**Fray Jorge**	**8.13**	**241**		**P**	**16 45 30.9**	**-1.0**
VA03	**San Esteban**	**8.50**	**225**	P	**P**	**16 45 35.5**	**-0.1**
PB08	**IPOC Station P**	**8.57**	**321**	S	**S**	**16 47 17.1**	**-1.7**
PB08				P	**P**	**16 45 37.6**	**+0.8**
AMBA	**Amambai (Brazi**	**8.61**	**64**	*e*P	**P**	**16 45 38.2**	**+1.4**
AMBA				*e*S	**S**	**16 47 19.9**	**+1.2**
MT08	**Bocatoma Ro**	**8.65**	**220**	P	**P**	**16 45 37.9**	**+0.7**
PEL	**Peldehue**	**8.84**	**224**		**P**	**16 45 38.4**	**-0.5**
PEL	**Peldehue**	**8.84**	**224**	P	**P**	**16 45 38.4**	**-0.5**
PEL	**Peldehue**	**8.84**	**224**	P	**P**	**16 45 38.6**	**-0.3**
PEL				S	**S**	**16 47 20.6**	**-2.2**
TA01	**Diego Aracena**	**8.87**	**314**	P	**P**	**16 45 39.3**	**0.0**
TA01	**Diego Aracena**	**8.87**	**314**	P	**P**	**16 45 39.4**	**0.0**
TA01	**Diego Aracena**	**8.87**	**314**	S	**S**	**16 47 20.6**	**-2.8**
BDQN	**Bodoquena, MS**	**8.87**	**45**	*e*P	**P**	**16 45 40.1**	**+0.7**
BDQN				*e*S	**S**	**16 47 24.1**	**+0.5**
ROCH	**El Roble**	**8.93**	**226**	⇑*e*P	**P**	**16 45 39.2**	**-0.8**
ROCH				*e*S	**S**	**16 47 20.8**	**-3.9**
GO01	**Chusmiza**	**8.97**	**322**	P	**P**	**16 45 41.3**	**+0.3**
PB11	**IPOC Station P**	**9.16**	**320**		**P**	**16 45 42.4**	**0.0**
CPSB	**Cacapava Do Su**	**9.41**	**114**	P	**P**	**16 45 44.3**	**-0.3**
CPSB				S	**S**	**16 47 31.2**	**-2.0**
CPSB	**Cacapava Do Su**	**9.41**	**114**	*e*P	**P**	**16 45 44.4**	**-0.3**
CPSB				*e*S	**S**	**16 47 31.3**	**-1.9**
AQDB	**Aquidauana**	**9.54**	**49**		**P**	**16 45 46.8**	**+0.7**
AQDB	**Aquidauana**	**9.54**	**49**	P	**P**	**16 45 47.0**	**+0.9**
AQDB				S	**S**	**16 47 36.9**	**+1.1**
AQDB	**Aquidauana**	**9.54**	**49**	*e*P	**P**	**16 45 46.9**	**+0.9**
AQDB				*e*S	**S**	**16 47 36.2**	**+0.4**
PLTB	**Pedras Altas**	**9.81**	**122**	P	**P**	**16 45 48.0**	**-0.7**
PLTB				S	**S**	**16 47 38.5**	**-2.1**
ITAB	**Concordia**	**10.05**	**94**		**P**	**16 45 50.6**	**-0.5**
ITAB	**Concordia**	**10.05**	**94**	P	**P**	**16 45 50.7**	**-0.5**
ITAB				S	**S**	**16 47 42.3**	**-2.8**
ITAB	**Concordia**	**10.05**	**94**	*e*P	**P**	**16 45 50.8**	**-0.4**
ITAB				*e*S	**S**	**16 47 44.6**	**-0.5**
PTGB	**Pitanga**	**10.45**	**80**	P	**P**	**16 45 55.7**	**+0.3**
PTGB				S	**S**	**16 47 52.6**	**-0.2**
PTGB	**Pitanga**	**10.45**	**80**	*e*P	**P**	**16 45 55.7**	**+0.3**
PTGB				*e*S	**S**	**16 47 53.6**	**+0.9**
PB12	**IPOC Station P**	**10.45**	**321**		**P**	**16 45 55.2**	**-0.2**
TRCB	**Terra Rica**	**10.61**	**70**	P	**P**	**16 45 57.5**	**+0.6**
TRCB				S	**S**	**16 47 55.1**	**-0.5**
AP01	**Chacalluta**	**10.65**	**322**	P	**P**	**16 45 57.3**	**0.0**
SIV	**San Ignacio**	**11.10**	**12**	P	**P**	**16 46 02.3**	**+0.3**
	comp=Z,2μm,0.9s,baz=196,slow=8.9,SNR=4484						
SIV				S	**S**	**16 48 05.0**	**+0.1**
	comp=Z,319nm,1.0s,baz=20,slow=11,SNR=9.7						
SIV				P3KPbc		17 21 46.7	
	comp=Z,2.9nm,1.0s,baz=104,slow=2.2,SNR=4.1						
TRQA	**Tornquist**	**11.16**	**174**	P	**P**	**16 45 59.8**	**-2.4**
CNLB	**Canela**	**11.33**	**105**	P	**P**	**16 46 03.6**	**-0.6**
CNLB				S	**S**	**16 48 07.2**	**-1.7**
CNLB	**Canela**	**11.33**	**105**	*e*P	**P**	**16 46 03.6**	**-0.6**
CNLB				*e*S	**S**	**16 48 07.3**	**-1.7**
LPAZ	**La Paz**	**11.46**	**337**	P	**P**	**16 46 06.3**	**0.0**
	comp=Z,600nm,0.3s,baz=139,slow=4.6,SNR=3099						
LPAZ				S	**S**	**16 48 09.3**	**-3.4**
	comp=Z,317nm,0.7s,baz=120,slow=15,SNR=5.2						
LPAZ				ScP	**ScP**	**16 53 46.7**	**+2.4**
	comp=Z,76nm,1.0s,baz=344,slow=2.8,SNR=5.2						
LPAZ				ScS	**ScS**	**16 57 22.2**	**+1.3**
	comp=Z,26nm,1.1s,baz=266,slow=13,SNR=4.2						
LPAZ				PKiKP	**PKiKP**	**16 59 03.3**	**0.0**
	comp=Z,13nm,0.8s,baz=52,slow=2.0,SNR=8.3						
LPAZ	**La Paz**	**11.46**	**337**		**P**	**16 46 06.2**	**-0.1**
LPAZ	**La Paz**	**11.46**	**337**	P	**P**	**16 46 06.3**	**0.0**
LPAZ				S	**S**	**16 48 08.3**	**-4.4**
LPAZ	**La Paz**	**11.46**	**337**	*e*P	**P**	**16 46 06.4**	**0.0**
LPAZ				*e*S	**S**	**16 48 09.8**	**-2.9**
BI02	**San Fabin de**	**11.78**	**213**		**P**	**16 46 07.7**	**-1.0**
PTLB	**Pontes e Lacer**	**12.10**	**20**		**P**	**16 46 12.4**	**+0.2**
PTLB	**Pontes e Lacer**	**12.10**	**20**	P	**P**	**16 46 12.5**	**+0.4**
PTLB	**Pontes e Lacer**	**12.10**	**20**	*e*P	**P**	**16 46 12.7**	**+0.5**
PTLB				*e*S	**S**	**16 48 23.4**	**-0.1**
PP1B	**Ponte de Pedra**	**12.18**	**42**	*e*P	**P**	**16 46 13.3**	**+0.3**
PP1B				*e*S	**S**	**16 48 25.1**	**0.0**
C2SB	**Chapadao do Su**	**12.68**	**52**	P	**P**	**16 46 18.5**	**+0.5**
C2SB				S	**S**	**16 48 34.6**	**+0.2**
C2SB	**Chapadao do Su**	**12.68**	**52**	*e*P	**P**	**16 46 18.5**	**+0.5**
C2SB				*e*S	**S**	**16 48 34.6**	**+0.2**
BI05	**Punta Hualpn**	**12.84**	**218**	P	**P**	**16 46 18.2**	**-1.3**
FRTB	**Fartura**	**13.03**	**77**	P	**P**	**16 46 21.1**	**-0.7**
TIJ01	**Guaruva-PR**	**13.04**	**86**	P	**P**	**16 46 19.7**	**-2.1**
TIJ01				S	**S**	**16 48 36.6**	**-4.6**
SALV	**Santo Antonio**	**13.11**	**35**	P	**P**	**16 46 22.2**	**-0.3**
SALV				S	**S**	**16 48 41.7**	**-0.8**
SALV	**Santo Antonio**	**13.11**	**35**	*e*P	**P**	**16 46 22.2**	**-0.3**
SALV				*e*S	**S**	**16 48 42.0**	**-0.5**
MAS01	**UHE Manso**	**13.91**	**32**	P	**P**	**16 46 31.0**	**+0.2**
MAS01				S	**S**	**16 48 58.5**	**+1.1**
ITRB	**Iturama**	**13.97**	**62**	P	**P**	**16 46 30.9**	**-0.5**
ITRB				S	**S**	**16 48 57.0**	**-1.3**
ITRB	**Iturama**	**13.97**	**62**	*e*P	**P**	**16 46 30.9**	**-0.5**
ITRB				*e*S	**S**	**16 48 57.5**	**-0.9**
VILB	**Vilhena**	**14.23**	**13**		**P**	**16 46 32.5**	**-1.5**
VILB	**Vilhena**	**14.23**	**13**	P	**P**	**16 46 32.6**	**-1.4**
VILB	**Vilhena**	**14.23**	**13**	*e*P	**P**	**16 46 32.6**	**-1.4**
VILB				*e*S	**S**	**16 49 01.1**	**-2.1**
LC02	**Puerto Saavedr**	**14.49**	**213**	P	**P**	**16 46 34.6**	**-1.6**
PET01	**Itanhaem-SP**	**14.79**	**83**	P	**P**	**16 46 38.4**	**-1.0**
PET01				S	**S**	**16 49 12.5**	**-0.5**
PET01	**Itanhaem-SP**	**14.79**	**83**	*e*P	**P**	**16 46 38.5**	**-0.9**
PET01				*e*S	**S**	**16 49 11.8**	**-1.2**
BB19B	**Bebedouro**	**14.79**	**70**	P	**P**	**16 46 38.8**	**-0.7**
BB19B				S	**S**	**16 49 12.5**	**-0.8**
BB19B	**Bebedouro**	**14.79**	**70**	*e*P	**P**	**16 46 38.9**	**-0.7**
BB19B				*e*S	**S**	**16 49 12.2**	**-1.1**
SPB	**Sao Paulo**	**14.83**	**81**	P	**P**	**16 46 39.2**	**-0.6**
SPB	**Sao Paulo**	**14.83**	**81**	P	**P**	**16 46 39.2**	**-0.6**
SPB				S	**S**	**16 49 11.5**	**-2.3**

SPB	Sao Paulo	14.83	81	*e*P	P	16 46 39.3	-0.6
SPB				*e*S	S	16 49 12.4	-1.4
H03N1	Juan Fernandez	14.89	240	P	P	16 46 40.2	+0.2
	baz=122,slow=18,SNR=825						
VA04	Juan Fernndez	14.90	240	P	P	16 46 39.7	-0.7
H03N2	Juan Fernandez	14.91	240	P	P	16 46 40.5	+0.3
	baz=122,slow=18,SNR=496						
H03N3	Juan Fernandez	14.91	240	P	P	16 46 40.3	+0.1
	baz=122,slow=18,SNR=623						
PLCA	Paso Flores	14.98	201	P	P	16 46 39.5	-1.7
	comp=Z,706nm,0.9s,baz=21,slow=11,SNR=514						
PLCA				S	S	16 49 12.5	-3.7
	comp=Z,72nm,0.9s,baz=28,slow=19,SNR=1.4						
PLCA				PcP	PcP	16 51 10.2	+1.8
	comp=Z,275nm,0.9s,baz=11,slow=2.6,SNR=7.7						
PLCA				ScP	ScP	16 53 50.8	+1.7
	comp=Z,85nm,0.7s,baz=12,slow=2.8,SNR=13						
PLCA				ScS	ScS	16 57 28.1	+0.7
	comp=Z,14nm,1.1s,baz=288,slow=19,SNR=5.4						
PLCA				PKiKP	PKiKP	16 59 03.4	+0.4
	comp=Z,17nm,0.9s,baz=125,slow=0.9,SNR=7.1						
PLCA				P3KPbc		17 21 27.8	
	comp=Z,3.0nm,1.1s,baz=243,slow=2.3,SNR=2.8						
PLCA	Paso Flores	14.98	201	P	P	16 46 39.3	-1.9
PLCA				S	S	16 49 13.9	-2.3
PLCA	Paso Flores	14.98	201	*e*P	P	16 46 39.5	-1.7
PLCA				*e*S	S	16 49 16.0	-0.2
H03S3	Juan Fernandez	15.04	239	P	P	16 46 40.8	-0.6
	baz=36,slow=14,SNR=458						
H03S1	Juan Fernandez	15.04	239	P	P	16 46 40.6	-0.9
	baz=36,slow=14,SNR=320						
H03S2	Juan Fernandez	15.05	239	P	P	16 46 41.0	-0.6
	baz=36,slow=14,SNR=273						
RCLB	Rio Claro- Sao	15.11	76	P	P	16 46 41.8	-0.9
RCLB				S	S	16 49 17.2	-1.6
RCLB	Rio Claro- Sao	15.11	76	*e*P	P	16 46 41.8	-0.9
RCLB				*e*S	S	16 49 16.6	-2.2
ARAG	Araguaiana, MT	15.52	46	*e*P	P	16 46 46.0	-0.8
ARAG				*e*S	S	16 49 24.7	-1.1
ITU3	Corumbazu	15.97	60	P	P	16 46 50.4	-0.6
ITU3				S	S	16 49 31.9	-1.2
PDRB	Porto dos Gac	16.48	24	P	P	16 46 54.9	-0.9
PDRB				S	S	16 49 40.7	-0.8
PDRB	Porto dos Gac	16.48	24	*e*P	P	16 46 54.9	-0.9
PDRB				*e*S	S	16 49 41.1	-0.4
PARB	Paraibuna	16.49	81	P	P	16 46 55.6	-0.3
PARB				S	S	16 49 40.3	-1.4
PARB	Paraibuna	16.49	81	*e*P	P	16 46 55.6	-0.3
PARB				*e*S	S	16 49 40.5	-1.1
IPMB	Ipameri, GO	16.61	61	P	P	16 46 56.2	-0.8
IPMB				S	S	16 49 42.9	-0.8
IPMB	Ipameri, GO	16.61	61	*e*P	P	16 46 56.0	-1.0
IPMB				*e*S	S	16 49 43.2	-0.5
CANS	Sao Roque de M	16.93	71	P	P	16 47 00.2	+0.3
CANS				S	S	16 49 49.2	+0.4
BAT3	Ipameri	17.47	60	P	P	16 47 05.0	+0.2
BAT3				S	S	16 49 56.7	-1.0
CLDB	Colider	17.51	26	P	P	16 47 05.5	+0.4
CLDB				S	S	16 49 57.2	-1.0
CLDB	Colider	17.51	26	*e*P	P	16 47 04.6	-0.4
CLDB				*e*S	S	16 49 57.9	-0.3
BAT2	UHE Batalha	17.55	60	P	P	16 47 05.8	+0.3
BAT2				S	S	16 49 58.0	-0.9
PMNB	Patos De Minas	17.73	65	P	P	16 47 07.6	+0.5
PMNB				S	S	16 50 00.8	-1.0
PMNB	Patos De Minas	17.73	65	*e*P	P	16 47 07.0	-0.1
PMNB				*e*S	S	16 50 01.1	-0.7
BSCB	Bom Sucesso	18.01	75	P	P	16 47 10.2	+0.5
BSCB				S	S	16 50 05.1	-1.4
BSCB	Bom Sucesso	18.01	75	*e*P	P	16 47 09.8	0.0
BSCB				*e*S	S	16 50 05.9	-0.6
BDFB	Brasilia	18.19	55	P	P	16 47 12.0	+0.5
	comp=Z,3µm,0.9s,baz=231,slow=6.6,SNR=1697						
BDFB				S	S	16 50 07.8	-1.7
	comp=Z,548nm,1.1s,baz=238,slow=27,SNR=3.8						
BDFB				PKiKP	PKiKP	16 59 04.7	-0.2
	comp=Z,9.7nm,0.6s,baz=37,slow=2.1,SNR=4.8						
BDFB	Brasilia	18.19	55		P	16 47 12.0	+0.5
VAS01	Vassouras-RJ	18.73	80	P	P	16 47 16.9	+0.8
VAS01				S	S	16 50 16.8	-1.1
VAS01	Vassouras-RJ	18.73	80	*e*P	P	16 47 16.6	+0.5
VAS01				*e*S	S	16 50 17.0	-0.9
SNDB	Serra Nova Dou	18.73	40	P	P	16 47 16.5	+0.3
SNDB				S	S	16 50 15.3	-2.8
SNDB	Serra Nova Dou	18.73	40	*e*P	P	16 47 15.9	-0.3
SNDB				*e*S	S	16 50 15.8	-2.2
SIM2	UHE Simplicio	19.40	80	P	P	16 47 23.0	+0.7
NNA	Nana	19.50	317	P	P	16 47 24.1	+0.8
	comp=Z,336nm,0.8s,baz=157,slow=8.2,SNR=126						
NNA				S	S	16 50 29.3	-1.2
	comp=Z,22nm,0.8s,baz=299,slow=15,SNR=6.9						
NNA				PcP	PcP	16 51 17.7	+1.4
	comp=Z,209nm,0.8s,baz=224,slow=2.2,SNR=9.9						
NNA				ScP	ScP	16 54 00.8	+1.9
	comp=Z,200nm,0.9s,baz=246,slow=0.2,SNR=13						
NNA				PKiKP	PKiKP	16 59 05.2	-0.1
	comp=Z,16nm,0.6s,baz=252,slow=1.9,SNR=6.0						
NNA	Nana	19.50	317		P	16 47 23.2	-0.1
NNA	Nana	19.50	317	P	P	16 47 23.7	+0.4
NNA				S	S	16 50 29.8	-0.7
DUB01	Friburgo-RJ	19.73	80	P	P	16 47 26.0	+0.7
DUB01				S	S	16 50 31.7	-2.3
DUB01	Friburgo-RJ	19.73	80	*e*P	P	16 47 25.2	-0.1
DUB01				*e*S	S	16 50 32.9	-1.1
CAN3	Cana Brava	19.74	49	P	P	16 47 26.2	+0.7
CAN3				S	S	16 50 32.7	-1.6
COYC	Coyhaique	19.86	198		P	16 47 25.6	-0.4
JQT1	Jequitai-MG	20.09	65	P	P	16 47 29.2	+0.6
JQT1				S	S	16 50 38.4	-1.4
DIAM	Diamantina, MG	20.12	69	P	P	16 47 30.0	+1.1
DIAM				S	S	16 50 39.7	-0.8
DIAM	Diamantina, MG	20.12	69	*e*P	P	16 47 28.8	-0.2
DIAM				*e*S	S	16 50 40.1	-0.3
CAM01	Campos-RJ	20.44	80	P	P	16 47 32.1	+0.4
CAM01	Campos-RJ	20.44	80	*e*P	P	16 47 31.6	0.0
CAM01				*e*S	S	16 50 44.8	-0.3
MC01	Montes Claros	20.71	65	P	P	16 47 34.4	+0.2
MC01				S	S	16 50 48.3	-1.3
NPGB	Novo Progresso	21.20	23	P	P	16 47 38.2	-0.4
NPGB				S	S	16 50 57.7	+0.4
NPGB	Novo Progresso	21.20	23	*e*P	P	16 47 38.1	-0.5
NPGB				*e*S	S	16 50 56.5	-0.8
JANB	Januaria	21.35	60	P	P	16 47 40.5	+0.5
JANB				S	S	16 50 58.0	-1.7
JANB	Januaria	21.35	60	*e*P	P	16 47 39.7	-0.3
JANB				*e*S	S	16 50 58.1	-1.6
AY03	Cochrane	21.54	197	P	P	16 47 40.6	-0.6
ALF01	Guarapari-ES	21.67	78	P	P	16 47 43.3	+0.6
ALF01				S	S	16 51 03.3	-1.2
ALF01	Guarapari-ES	21.67	78	*e*P	P	16 47 42.8	+0.1
ALF01				*e*S	S	16 51 03.9	-0.7
SJMB	Sao Joao De Ma	22.03	73	P	P	16 47 46.7	+0.7
SJMB				S	S	16 51 09.2	-1.2
RIB01	Linhares ES	22.45	75	P	P	16 47 50.1	+0.3
RIB01				S	S	16 51 17.5	+0.5
RIB01	Linhares ES	22.45	75	*e*P	P	16 47 49.8	+0.1
RIB01				*e*S	S	16 51 15.8	-1.2
SDBA	SAO DESIDERIO	22.59	54	P	P	16 47 51.6	+0.6
SDBA				S	S	16 51 17.0	-2.3
SDBA	SAO DESIDERIO	22.59	54	*e*P	P	16 47 51.9	+0.8
SDBA				*e*S	S	16 51 17.1	-2.1
TEFE	Tefe	23.32	357	P	P	16 47 57.5	0.0
TEFE	Tefe	23.32	357	*e*P	P	16 47 57.6	+0.2
TEFE				*e*S	S	16 51 29.0	-1.6
SMTB	Santa Maria do	23.39	43	P	P	16 47 58.5	+0.4
SMTB				S	S	16 51 30.4	-1.5
SMTB	Santa Maria do	23.39	43	*e*P	P	16 47 57.5	-0.6
SMTB				*e*S	S	16 51 30.8	-1.1
ITTB	Itaituba	23.60	19	P	P	16 47 59.8	-0.2
ITTB				S	S	16 51 32.5	-2.6
ITTB	Itaituba	23.60	19	*e*P	P	16 48 00.0	0.0
ITTB				*e*S	S	16 51 33.6	-1.5
MACA	Manacapuru-AM	23.78	7		P	16 48 01.2	-0.4
MACA	Manacapuru-AM	23.78	7	P	P	16 48 01.1	-0.4
MACA				S	S	16 51 34.9	-2.9
MACA	Manacapuru-AM	23.78	7	*e*P	P	16 48 01.2	-0.4
MACA				*e*S	S	16 51 36.1	-1.8
GUA01	Guaratinga, BA	24.17	70	P	P	16 48 05.8	+0.8
GUA01				S	S	16 51 43.6	-0.5
GUA01	Guaratinga, BA	24.17	70	*e*P	P	16 48 05.4	+0.3
GUA01				*e*S	S	16 51 43.0	-1.1
PRPB	Parauapebas	24.36	34	P	P	16 48 06.3	-0.4
PRPB				S	S	16 51 43.9	-3.2
PRPB	Parauapebas	24.36	34	*e*P	P	16 48 06.4	-0.4
PRPB				*e*S	S	16 51 44.1	-3.0
ANA01	Lindo Horizont	24.47	64	P	P	16 48 08.4	+0.7
ABR01	Abrolhos, BA	24.48	74	P	P	16 48 04.1	-3.6
ABR01				S	S	16 51 45.4	-3.4
ABR01	Abrolhos, BA	24.48	74	*e*P	P	16 48 04.3	-3.4
ABR01				*e*S	S	16 51 44.3	-4.5
CMC01	Camacan, BA	25.02	67	P	P	16 48 13.2	+0.7
CMC01	Camacan, BA	25.02	67	*e*P	P	16 48 13.3	+0.7
CMC01				*e*S	S	16 51 56.9	-0.5
EFI	East Falkland	25.04	172		P	16 48 11.8	-0.4
EFI	East Falkland	25.04	172	*d i*P	P	16 48 11.4	-0.8
EFI				pmax	pmax		
	comp=Z,217nm,1.5s						
PAL01	Palmeiras do T	25.19	40	P	P	16 48 14.1	+0.1
PAL01				S	S	16 51 56.5	-3.5
PAL2	UHE Estreito -	25.23	40	P	P	16 48 15.0	+0.6
PAL2				S	S	16 51 58.6	-2.2
GO09	Cerro Castillo	25.24	193		P	16 48 13.5	-0.4
NBIT	Itapeh - BA	25.32	67	P	P	16 48 16.3	+1.1
NBIT	Itapeh - BA	25.32	67	*e*P	P	16 48 15.8	+0.6
TUC4	UHE Tucurui	26.16	33	P	P	16 48 22.7	+0.1
TUC4				S	S	16 52 13.0	-2.2
SGC2	Sao Gabriel da	26.84	352	P	P	16 48 28.2	-0.3
SGC2				S	S	16 52 22.2	-3.7
SGC2	Sao Gabriel da	26.84	352	P	P	16 48 26.7	-1.9
NBBC	Barra do Corda	27.41	42	P	P	16 48 34.4	+0.8
MCRA	Macar, Loja	27.45	322	P	P	16 48 34.5	+0.6
USHA	Ushuaia	28.12	186	P	P	16 48 39.5	+0.3
	comp=Z,165nm,0.6s,baz=325,slow=0.5,SNR=50						
USHA				PcP	PcP	16 51 35.4	+1.0
	comp=Z,178nm,0.7s,baz=328,slow=1.4,SNR=7.8						
USHA				ScP	ScP	16 54 23.9	+2.0
	comp=Z,65nm,0.6s,baz=7.3,slow=2.8,SNR=5.3						
	comp=Z,165nm,0.6s						
TMAB	Tom-Au,PA,Br	28.49	34	P	P	16 48 43.9	+0.9
TMAB				S	S	16 52 51.6	0.0
TMAB	Tom-Au,PA,Br	28.49	34	*e*P	P	16 48 42.7	-0.3
TMAB				*e*pP	pP	16 50 13.9	-0.8
TMAB				*e*S	S	16 52 52.6	+1.1
COHC	Cochancay	28.68	325	P	P	16 48 46.6	+2.0
NBLA	Lagarto - SE	28.86	62	P	P	16 48 46.1	0.0
PTLC	Puerto Leguiza	29.09	336	P	P	16 48 42.5	-5.7
BOAV	Boa Vista	29.29	6		P	16 48 50.0	+0.2
BOAV	Boa Vista	29.29	6	P	P	16 48 50.1	+0.2
BOAV				S	S	16 53 03.0	-0.8
BOAV	Boa Vista	29.29	6	*e*P	P	16 48 50.2	+0.4
BOAV				*e*pP	pP	16 50 21.8	-0.3
BOAV				*e*S	S	16 53 03.1	-0.8
BOAV	Boa Vista	29.29	6	P	P	16 48 49.5	-0.3
PIAT	Ana Tenorio	29.47	329	P	P	16 48 54.4	+2.5
NBTA	Tacaratu-PE	29.80	58	P	P	16 48 54.4	0.0
NBTA				S	S	16 53 09.4	-2.4
NBTA	Tacaratu-PE	29.80	58	*e*P	P	16 48 53.1	-1.2
NBTA				*e*pP	pP	16 50 22.2	-4.6
NBTA				*e*S	S	16 53 09.5	-2.4
ROSB	Rosrio	30.20	41	S	S	16 53 15.4	-2.5
PPLP	Puerto Lpez	30.25	324	P	P	16 48 58.4	+0.2
NBMA	Muriti-CE	30.43	55	P	P	16 49 00.1	+0.4
BONI	La Bonita	30.43	331	P	P	16 49 01.1	+1.1
MACC	Macarena, Meta	30.61	339	P	P	16 49 00.0	-1.3
GUVC	San Jose del G	30.62	342	P	P	16 49 00.0	-1.4
OTAV	Otavalo	30.65	329	P	P	16 49 03.8	+1.7
OTAV				IAmb	IAmb	16 49 07.6	
	comp=Z,462nm,0.8s						
OTAV	Otavalo	30.65	329	P	P	16 49 03.8	+1.7
OTAV				pmax	pmax		
	comp=Z,462nm,0.8s						
OTAV	Otavalo	30.65	329	P	P	16 49 03.9	+1.8
OTAV				S	S	16 53 27.7	+2.1
OTAV	Otavalo	30.65	329	*e*P	P	16 49 02.9	+0.8
OTAV				*e*pP	pP	16 50 35.2	-0.9
OTAV	Otavalo	30.65	329	P	P	16 49 04.2	+2.1
OTAV	Otavalo	30.65	329	P	P	16 49 03.8	+1.7
CUSE	Cuicocha Este	30.68	330	P	P	16 49 04.8	+2.4
NBPS	Pedro II - PI	30.69	47	P	P	16 49 02.3	+0.2
NBPS				S	S	16 53 23.7	-1.9
NBPS	Pedro II - PI	30.69	47	*e*P	P	16 49 01.8	-0.3
NBPS				*e*pP	pP	16 50 35.3	+0.3
NBPS				*e*S	S	16 53 23.7	-1.9
FLOC	Florencia	30.71	335	P	P	16 49 00.8	-1.3
TULM	Tulcn-Chalpat	30.78	331	P	P	16 49 04.1	+0.9
FLF1	Flavio Alfaro-	30.79	326	P	P	16 49 04.9	+2.1
PAC1	Pacto, Paraso	30.83	329	P	P	16 49 05.7	+2.4
NBAN	Anadia - AL	30.84	61	P	P	16 49 03.3	+0.1
CMBC	Cumbal	31.00	331	P	P	16 49 08.3	+3.2
GCUF	Volcan Galeras	31.05	332	P	P	16 49 07.3	+1.7
NBPB	Pedra_Branca-C	31.11	51	P	P	16 49 06.1	+0.6
CRUC	La Cruz	31.20	333	P	P	16 49 09.3	+2.6
GARC	Garzon, Huila	31.21	336	P	P	16 49 06.7	+0.1
BETC	Betania	31.65	337	P	P	16 49 10.0	-0.2
BBAC	Balboa, Cauca	31.73	333	P	P	16 49 12.9	+1.9
URMC	La Uribe, Meta	31.82	339	P	P	16 49 10.5	-1.1
NBCA	Caruaru-PE	31.93	59	P	P	16 49 12.8	+0.2
SBBR	Sobral	31.95	48	P	P	16 49 11.7	-1.0
SBBR				S	S	16 53 40.7	-4.0
POPC	Popayan, Colom	31.98	334	P	P	16 49 14.4	+1.2
PTGC	Puerto Gaitan,	32.08	343	P	P	16 49 13.9	+0.2
TUMC	Tumaco	32.18	330	P	P	16 49 17.3	+2.7
PRAC	Prado	32.42	338	P	P	16 49 16.7	0.0
VILC	Villavicencio,	32.42	341	P	P	16 49 18.1	+1.3
NBMO	Morrinhos-CE	32.43	48	P	P	16 49 16.3	-0.4
NBMO				S	S	16 53 49.1	-2.8
NBMO	Morrinhos-CE	32.43	48	*e*P	P	16 49 15.7	-1.0
NBMO				*e*pP	pP	16 50 51.0	+0.3
NBMO				*e*S	S	16 53 49.6	-2.4
JAMC	Jamundi, Valle	32.59	335	P	P	16 49 18.6	+0.2
NBPA	Parau_RN	32.72	55	P	P	16 49 19.8	+0.6
NBPA				S	S	16 53 55.6	-0.8
NBPA	Parau_RN	32.72	55	*e*P	P	16 49 19.3	+0.1
NBPA				*e*pP	pP	16 50 53.2	-0.1
NBPA				*e*S	S	16 53 55.4	-1.1
ORTC	Ortega, Tolima	32.73	338	P	P	16 49 19.4	+0.1
CHIC	Chingaza	32.92	341	P	P	16 49 22.2	+0.8
CVER	Cruz Verde, Cu	32.92	340	P	P	16 49 21.6	+0.2
GR1C	Gorgona, Isla	33.00	332	P	P	16 49 23.1	+1.6
YOTC	Yotoco, Valle	33.18	336	P	P	16 49 22.5	-0.7
ROSC	El Rosal	33.30	340	P	P	16 49 25.6	+1.0
	comp=Z,889nm,0.6s,baz=159,slow=5.3,SNR=195						
ROSC				PcP	PcP	16 51 50.9	+1.2
	comp=Z,318nm,0.7s,baz=124,slow=4.1,SNR=4.8						
ROSC				S	S	16 54 04.5	-1.3
	comp=Z,168nm,1.1s,baz=182,slow=22,SNR=6.7						
ROSC				ScP	ScP	16 54 42.4	+1.9
	comp=Z,152nm,0.8s,baz=221,slow=19,SNR=5.5						
	comp=Z,889nm,0.6s						
ROSC	El Rosal	33.30	340	P	P	16 49 25.0	+0.5
ANIL	Santa Ana	33.32	338	P	P	16 49 22.4	-2.2
RCBR	Riachuelo	33.56	56	P	P	16 49 26.6	+0.3
RCBR	Riachuelo	33.56	56	P	P	16 49 26.6	+0.3
RCBR				pmax	pmax		
	comp=Z,314nm,1.0s						
RCBR	Riachuelo	33.56	56	P	P	16 49 26.8	+0.4
RCBR				S	S	16 54 05.2	-4.1
RCBR	Riachuelo	33.56	56	P	P	16 49 27.2	+0.8
RCBR				S	S	16 54 08.5	-0.7
RCBR	Riachuelo	33.56	56	*e*P	P	16 49 27.1	+0.8
RCBR				*e*pP	pP	16 51 00.5	-0.5
RCBR				*e*S	S	16 54 07.5	-1.7
RCBR	Riachuelo	33.56	56	P	P	16 49 27.1	+0.8
RCBR				pP	pP	16 51 01.9	+1.0
RCBR				PcP	PcP	16 51 50.9	+0.8
NBPV	Pedro Velho	33.63	58	P	P	16 49 27.8	+1.0
NBPV				S	S	16 54 09.6	-0.6
NBPV	Pedro Velho	33.63	58	*e*P	P	16 49 27.5	+0.7
NBPV				*e*pP	pP	16 51 01.0	-0.5
NBPV				*e*S	S	16 54 06.7	-3.6
HOPE	Hope Point	33.73	151	P	P	16 49 27.4	+0.3
HOPE	Hope Point	33.73	151	P	P	16 49 27.4	+0.3
HOPE				pmax	pmax		
	comp=Z,307nm,1.1s						
RECRC	Villamaria, Ca	33.74	338	P	P	16 49 28.6	+0.2
NIZA	Niza - Manizal	33.88	338	P	P	16 49 28.8	-0.4
RUSC	La Rusia	33.95	343	P	P	16 49 28.8	-1.2
SPBC	San Pablo de B	34.00	341	P	P	16 49 28.3	-1.7
PLMC	San Jos del P	34.01	337	P	P	16 49 29.1	-1.0
NORC	Norcasia	34.16	339	P	P	16 49 29.1	-2.2
PIZC	Pizarro, Choco	34.46	335	P	P	16 49 33.9	+0.1
BARC	Barichara	34.64	343	P	P	16 49 34.5	-1.1
CBOC	Ciudad Bolivar	34.81	338	P	P	16 49 36.2	-0.7
PTBC	PUERTO BERRIO,	34.95	341	P	P	16 49 35.9	-2.0
HELC	Santa Helena	34.96	339	P	P	16 49 36.7	-1.6
BRJC	Barrancabermej	35.16	342	P	P	16 49 35.8	-3.8
PAMC	Pamplona, Colo	35.24	344	P	P	16 49 39.5	-1.3
MAPC	Malpelo	35.43	327	P	P	16 49 43.4	+1.6
DBBC	Dabeiba	35.95	338	P	P	16 49 45.4	-0.9
OCAC	Ocana	36.26	343	P	P	16 49 45.7	-3.1
SDV	Santo Domingo	36.29	348	P	P	16 49 48.0	-1.1
SDV	Santo Domingo	36.29	348	P	P	16 49 48.1	-1.1
SDV				S	S	16 54 43.9	-6.3
SDV	Santo Domingo	36.29	348	*e*P	P	16 49 48.1	-1.0
SDV				*e*pP	pP	16 51 25.2	-0.9
SDV				*e*S	S	16 54 44.0	-6.2
SDV	Santo Domingo	36.29	348	P	P	16 49 48.2	-0.9
UREC	San Jos de Ur	36.42	339	P	P	16 49 48.2	-1.8
PTAC	Punta Ardita,	36.64	336	P	P	16 49 52.7	+0.9
PAYG	Puerto Ayora	36.72	311	P	P	16 49 53.2	+0.7
PAYG	Puerto Ayora	36.72	311	P	P	16 49 55.2	+2.7
APAC	Apartado, Choc	36.90	338	P	P	16 49 54.4	+0.4
TRN	Trinidad (W)	37.40	3	*e*P	P	16 49 58.4	+0.4
DMDM	Guralp CMG5TDE	37.44	3	*e*P	P	16 49 59.4	+1.1
LCBC	Los crdobas,	37.73	339	P	P	16 50 01.1	+0.4
PMSA	Palmer Station	37.85	180	ScP	ScP	16 54 58.2	+2.2
	comp=Z,47nm,0.8s,baz=54,slow=4.4,SNR=5.6						
PMSA	Palmer Station	37.85	180	P	P	16 50 01.3	+0.3
PMSA	Palmer Station	37.85	180	*e*P	P	16 50 01.9	+0.9
PMSA				*e*pP	pP	16 51 37.9	-0.2
PMSA				*e*S	S	16 55 11.3	-0.5
ARGC	Ariguani, Magd	38.05	342	P	P	16 50 02.0	-1.3
SJCC	San Jacinto, C	38.35	341	P	P	16 50 04.5	-1.3
GRFF	Grenada Fort F	38.78	3	*e*P	P	16 50 09.3	+0.1
GRGR	Grenville	38.87	3	P	P	16 50 09.6	-0.2
GRGR	Grenville	38.87	3	*e*P	P	16 50 09.8	0.0
GRGR	Grenville	38.87	3	P	P	16 50 10.1	+0.2
GRW	Mount Saint Ca	38.89	3	*e*P	P	16 50 11.1	+0.9
GRHS	Sauteurs	38.96	3	*e*P	P	16 50 10.4	-0.2
GRSS	Sisters	39.03	3	*e*P	P	16 50 10.7	-0.5
GCMP	Grenada, Carri	39.23	3	*e*P	P	16 50 12.4	-0.3
BCIP	Isla Barro Col	39.26	334	P	P	16 50 14.9	+1.9
BCIP				S	S	16 55 30.2	-3.6
BCIP	Isla Barro Col	39.26	334	P	P	16 50 15.2	+2.1
URIC	Uribia, Colomb	39.30	347	P	P	16 50 10.2	-3.1
SMRC	Santa Marta, M	39.30	343	P	P	16 50 11.0	-2.3
BBGH	Gun Hill	40.01	6	P	P	16 50 20.6	+1.6
BBGH	Gun Hill	40.01	6	*e*P	P	16 50 20.9	+1.9
SVB	Belmont	40.02	3	*e*P	P	16 50 18.5	-0.6
BRU2	Volcan	40.14	330	IAmb	IAmb	16 50 23.8	
	comp=Z,2µm,1.6s						
BRU2	Volcan	40.14	330	P	P	16 50 22.4	+2.1
MCLT	Moule a Chique	40.47	4	*e*P	P	16 50 22.1	-0.6
SLAC	Saint Lucia, A	40.66	4	*e*P	P	16 50 23.4	-0.8
RPN	Rapa Nui	40.73	259	P	P	16 50 25.4	+0.6
RPN				IAmb	IAmb	16 50 28.1	
	comp=Z,767nm,1.1s						
RPN	Rapa Nui	40.73	259	P	P	16 50 25.4	+0.6
RPN				pmax	pmax		
	comp=Z,767nm,1.2s						
RPN	Rapa Nui	40.73	259	P	P	16 50 26.1	+1.3
SLBI	Saint Lucia, B	40.77	4	*e*P	P	16 50 24.6	-0.4
VA02	Isla de Pascua	40.82	259	P	P	16 50 25.3	-0.1
OCHAL	Ojochal	40.84	329	P	P	16 50 28.4	+2.7
H05S1	Guadeloupe/Mar	41.18	4	P	P	16 50 27.5	-0.8
	SNR=68						
MPOM	Morne Pois Mar	41.20	4	IAmb	IAmb	16 50 28.9	
	comp=Z,1µm,1.0s						
BIM	Bigot	41.26	3	*e*P	P	16 50 28.4	-0.6
BUS1	Rivas	41.29	329	*e*P	P	16 50 32.3	+2.5
PIEC	Cerro El Cedra	41.45	328	*e*P	P	16 50 33.4	+2.6
ILAM	Ilet Lapin Mar	41.53	4	*e*P	P	16 50 30.2	-0.9
CXM	Morne La Croix	41.55	3	IAmb	IAmb	16 50 31.8	
	comp=Z,3µm,0.9s						
PICV	PH. Pirrs	41.56	328	*e*P	P	16 50 33.7	+2.3
TURIB	Turrialba	41.57	329	*e*P	P	16 50 34.2	+2.6
SVN	Savane Anatole	41.58	3	*e*P	P	16 50 31.0	-0.5
REPA	Paraso	41.59	329	*e*P	P	16 50 34.4	+2.6
VTCV	VTCV, Calle Va	41.66	329	*e*P	P	16 50 35.2	+2.9
RESJ	San Isidro (Tu	41.66	329	*e*P	P	16 50 35.4	+3.1
LCOCO	El Coco	41.67	329	*e*P	P	16 50 35.1	+2.9
ABRB	Las Abras (San	41.67	329	*e*P	P	16 50 35.2	+2.7
RAFA	San Farael, Vo	41.68	329	P	P	16 50 34.5	+1.8
RAFA	San Farael, Vo	41.68	329	*e*P	P	16 50 35.5	+2.9
CVTV	Tajo	41.69	329	*e*P	P	16 50 35.6	+2.8
CVTQ	Turrialba Volc	41.70	329	*e*P	P	16 50 35.6	+2.8
ACOS	Acosta	41.70	328	*e*P	P	16 50 35.0	+2.3
VTR0	Volcan Turrial	41.70	329	*e*P	P	16 50 35.7	+2.7
CVTR	Volcan Turrial	41.71	329	*e*P	P	16 50 35.5	+2.5
RVLA	Villa Bonita	41.71	329	*e*P	P	16 50 35.4	+2.9
VICA	Volcano Irazu	41.71	329	*e*P	P	16 50 35.4	+2.4
LUJA	Lujan	41.77	329	*e*P	P	16 50 35.9	+2.7
ECI	Escuela Centro	41.77	329	*e*P	P	16 50 36.0	+2.8
SJS3	Mercedes San J	41.77	329	*e*P	P	16 50 36.3	+3.1
CENT	San Jose	41.78	329	*e*P	P	16 50 35.8	+2.5
CVIMO	Finca Echandi	41.80	329	*e*P	P	16 50 36.3	+2.9
EGUB	Earth Gu¡pi	41.80	329	*e*P	P	16 50 35.8	+2.6
HDC	Heredia	41.85	329	*e*P	P	16 50 36.6	+2.8
HDC	Heredia	41.85	329	*e*P	P	16 50 33.4	-0.5
HEME	Heredia, Merce	41.86	328	*e*P	P	16 50 37.8	+4.0
PILE	Guapiles	41.89	329	*e*P	P	16 50 37.0	+3.0
ATEO	Atenas	41.96	328	*e*P	P	16 50 37.6	+3.0
TCS1	Tacares	41.98	328	*e*P	P	16 50 37.7	+3.0
CARI	Cariari	42.00	329	*e*P	P	16 50 37.5	+2.7
DLPL	La Plaine	42.06	3	*e*P	P	16 50 34.8	-0.5
VPS8	V Poas	42.07	328	*e*P	P	16 50 38.5	+2.7
RAMO	San Ramon	42.09	328	*e*P	P	16 50 38.8	+3.1
ARZA	Esparza	42.11	328	*e*P	P	16 50 38.5	+2.8
ROBF	Roble, Puntare	42.13	328	*e*P	P	16 50 38.6	+2.8
DSLB	Salisbury	42.16	3	*e*P	P	16 50 35.3	-0.7
TRT2	Tortugero	42.17	329	P	P	16 50 38.6	+2.5
TRT2	Tortugero	42.17	329	*e*P	P	16 50 38.6	+2.5
ARTO	Ro Cuarto	42.20	329	*e*P	P	16 50 38.8	+2.4
VPL2	V. Platanar	42.25	328	*e*P	P	16 50 40.0	+3.0
DWS	Wesley	42.29	3	*e*P	P	16 50 36.5	-0.5
JTS	Las Juntas de	42.50	328	P	P	16 50 40.8	+2.0
JTS				IAmb	IAmb	16 50 42.1	
	comp=Z,778nm,0.9s						
JTS	Las Juntas de	42.50	328	*d i*P	P	16 50 41.1	+2.3
JTS				pmax	pmax		
	comp=Z,839nm,0.9s						
JTS	Las Juntas de	42.50	328	*e*P	P	16 50 41.1	+2.3
FORC	Fortuna	42.52	328	*e*P	P	16 50 41.5	+2.6
VACR	Volcan Arenal	42.53	328	*e*P	P	16 50 41.5	+2.5
ARE1	Arenal 1	42.54	328	*e*P	P	16 50 41.6	+2.5
VARE2	V. Arenal	42.54	328	*e*P	P	16 50 41.7	+2.6
CEDE	Laguna Cedeo	42.55	328	*e*P	P	16 50 41.5	+2.3
TBG	Guadaloupe-3	42.56	3	*e*P	P	16 50 37.7	-1.4
TABAC	Tabacon	42.59	328	*e*P	P	16 50 42.2	+2.6
NICO	Nicoya	42.60	327	*e*P	P	16 50 42.1	+2.6
TILA	Tilaran	42.66	328	*e*P	P	16 50 42.6	+2.5
JUD3	Juan Diaz 3	42.68	327	*e*P	P	16 50 42.4	+2.2
INVE	Universidad In	42.72	328	*e*P	P	16 50 42.9	+2.5
PLVR	Palo Verde	42.74	327	*e*P	P	16 50 43.4	+2.5
MMLZ	Guadeloupe Bro	42.75	2	*e*P	P	16 50 39.8	-0.8
QUEB	Quebradon, Cot	42.76	328	*e*P	P	16 50 42.9	+2.1
CBE	Ff, Capester	42.78	3	IAmb	IAmb	16 50 44.4	
	comp=Z,908nm,1.0s						
SACU	Santa Cruz	42.78	327	*e*P	P	16 50 43.4	+2.5
TIMP	Tierras Morena	42.79	328	*e*P	P	16 50 43.4	+2.4
ATGZ	Broadband at L	42.80	2	*e*P	P	16 50 40.1	-0.9
BAGA	Bagaces	42.86	327	*e*P	P	16 50 44.4	+2.9
TENO	El Achiote	42.87	328	*e*P	P	16 50 44.0	+2.3
MOTZ	Rio Naranjo	42.90	328	*e*P	P	16 50 44.5	+2.6
CUI	Cuipilapa	42.92	328	*e*P	P	16 50 44.2	+2.1
DELF	Filadelfia	42.93	327	*e*P	P	16 50 44.7	+2.7
COLC	Colonia	42.95	328	*e*P	P	16 50 44.5	+2.2
DHSZ	Broadband at M	42.97	2	*e*P	P	16 50 41.3	-1.1
HORNC	Hornillas	42.98	328	*e*P	P	16 50 44.6	+2.1
MESS	Mesas	43.01	328	*e*P	P	16 50 45.1	+2.3
VMAR	Armenia, Volca	43.03	328	*e*P	P	16 50 44.9	+2.0
DSDZ	La Diserade, G	43.04	3	*e*P	P	16 50 41.9	-1.0
H05N1	Guadeloupe/Mar	43.05	3	P	P	16 50 41.6	-1.3
	SNR=172						
ALIBA	Liberia Airpor	43.05	327	*e*P	P	16 50 45.9	+2.9
UPAL	Upala	43.06	328	*e*P	P	16 50 45.1	+2.0
SAIC	Isla e San And	43.07	333	P	P	16 50 45.2	+2.0
GPS2	Hotel Rincn d	43.09	327	*e*P	P	16 50 45.4	+2.0
ELI1	Hacienda Flor	43.10	327	*e*P	P	16 50 46.1	+2.8
GPS3	Bodega del ICE	43.10	327	*e*P	P	16 50 45.9	+2.4
VRLE	La Escondida,	43.13	327	*e*P	P	16 50 45.7	+1.9
LAPC	Finca la Perla	43.15	327	*e*P	P	16 50 45.5	+1.7

VORI	VORI	43.15	328	*e*P	P	16 50 46.1	+2.1
BUAI	Buenos Aires	43.19	328	*e*P	P	16 50 46.1	+1.9
PEJA	Penjamo Buenos	43.20	328	*e*P	P	16 50 46.2	+2.0
MLYT	Lee's Yard	43.41	2	*e*P	P	16 50 43.7	-2.0
MBWH	Windy Hill	43.43	2	*e*P	P	16 50 43.6	-2.3
LCRUZ	La Cruz	43.51	327	*e*P	P	16 50 48.1	+1.5
PRVC	Isla de Provid	43.70	334	P	P	16 50 49.0	+1.0
PRVC	Isla de Provid	43.70	334	P	P	16 50 49.6	+1.6
SKI	Saint Kitts	44.00	1	*e*P	P	16 50 49.1	-1.3
H09W1	TRISTAN DA CUN	44.02	116	P	P	16 50 51.5	+1.2
	SNR=13						
H09N1	TRISTAN DA CUN	44.03	116	P	P	16 50 51.8	+1.4
	SNR=20						
SEUS	St. Eustatius	44.16	1	IAmb	IAmb	16 50 51.0	
	comp=Z,808nm,0.8s						
SABA	Saba	44.28	0	P	P	16 50 51.3	-1.2
ANWB	Willy Bob	44.36	2	P	P	16 50 51.3	-1.8
ANWB	Willy Bob	44.36	2	*e*P	P	16 50 51.1	-1.9
MGAN	Managua	44.73	327	IAmb	IAmb	16 50 57.6	
	comp=Z,888nm,0.8s						
MGAN	Managua	44.73	327	P	P	16 50 56.7	+0.7
OBIP	Obispado Ponce	44.81	356	IAmb	IAmb	16 50 56.5	
	comp=Z,778nm,0.7s						
SJG	San Juan	44.85	356	P	P	16 50 55.7	-1.1
SJG				IAmb	IAmb	16 50 56.5	
	comp=Z,753nm,0.8s						
SJG	San Juan	44.85	356	P	P	16 50 55.7	-1.1
SJG				pmax	pmax		
	comp=Z,753nm,0.9s						
SJG	San Juan	44.85	356	*e*P	P	16 50 55.1	-1.7
SJG	San Juan	44.85	356	P	P	16 50 55.5	-1.3
SJG	San Juan	44.85	356	P	P	16 50 54.6	-2.2
SJG				PcP	PcP	16 52 26.9	+0.7
SJG				PP	PP	16 52 50.8	-1.2
HUMP	Col San Antoni	44.87	357	IAmb	IAmb	16 50 58.3	
	comp=Z,453nm,0.8s						
GCPR	Guaynabo City	45.04	356	IAmb	IAmb	16 50 58.4	
	comp=Z,411nm,0.6s						
AOPR	Arecibo Observ	45.12	356	IAmb	IAmb	16 51 02.7	
	comp=Z,711nm,0.7s						
AOPR	Arecibo Observ	45.12	356	*e*P	P	16 50 57.3	-1.7
AGPR	Aguadilla, PR	45.27	355	IAmb	IAmb	16 50 58.8	
	comp=Z,515nm,0.6s						
HERN	Volcan Telica	45.41	327	IAmb	IAmb	16 51 04.8	
	comp=Z,288nm,0.8s						
SIUN	Universidad Ur	45.42	330	IAmb	IAmb	16 51 02.7	
	comp=Z,340nm,1.2s						
SIUN	Universidad Ur	45.42	330	P	P	16 51 01.3	+0.1
SDD	Santo Domingo	45.56	351	IAmb	IAmb	16 51 01.9	
	comp=Z,366nm,0.6s						
CRIN	San Cristobal	45.60	327	IAmb	IAmb	16 51 03.2	
	comp=Z,543nm,0.7s						
CRIN	San Cristobal	45.60	327	P	P	16 51 02.8	+0.1
PAPH	Port-au-Prince	46.00	348	*e*P	P	16 51 05.9	+0.3
SDDR	Presa de Saban	46.27	350	IAmb	IAmb	16 51 11.4	
	comp=Z,443nm,0.7s						
SDDR	Presa de Saban	46.27	350	*e*P	P	16 51 05.7	-2.0
HOJ	Hope	46.51	342	⇓*i*P	P	16 51 09.8	+0.4
STH	Stony Hill	46.59	342	⇓*i*P	P	16 51 10.4	+0.3
SC01	Santiago de lo	46.62	350	IAmb	IAmb	16 51 38.4	
	comp=Z,609nm,1.0s						
TGUH	Tegucigalpa,Un	46.88	327	IAmb	IAmb	16 51 14.0	
	comp=Z,955nm,0.9s						
MTDJ	Mount Denham	46.93	341	⇓*i*P	P	16 51 13.5	+0.7
MTDJ	Mount Denham	46.93	341	*e*P	P	16 51 13.4	+0.6
GTBY	Guantanamo Bay	47.94	345	*e*P	P	16 51 16.7	-3.4
GTBY	Guantanamo Bay	47.94	345	P	P	16 51 20.3	+0.2
MASC	Masc	47.99	346	*e*P	P	16 51 17.1	-3.3
QMBU	Quimbuelo	48.14	346	*e*P	P	16 51 18.8	-2.9
MARVS	Santiago de Cu	48.20	344	*e*P	P	16 51 19.0	-3.1
MTO3	Montecristo	48.20	325	IAmb	IAmb	16 51 24.2	
	comp=Z,876nm,0.9s						
CHIV	Chivirico	48.30	344	IAmb	IAmb	16 51 38.1	
	comp=Z,748nm,1.3s						
CHIV	Chivirico	48.30	344	*e*P	P	16 51 20.5	-2.3
ESQI	Esquipulas	48.33	325	IAmb	IAmb	16 51 25.5	
	comp=Z,1µm,0.9s						
NMDO	Nuevo Mundo	48.52	345	IAmb	IAmb	16 51 26.4	
	comp=Z,742nm,0.9s						
NMDO	Nuevo Mundo	48.52	345	*e*P	P	16 51 23.5	-0.9
MOAC	Moa	48.62	346	*e*P	P	16 51 25.3	+0.2
PINC	Pinares de May	48.64	344	*e*P	P	16 51 24.5	-0.8
YAR	Yar	48.67	344	*e*P	P	16 51 24.3	-1.3
GRTK	Grand Turk	48.73	350	*e*P	P	16 51 26.1	+0.2
HLGC	Holguin	49.09	344	*e*P	P	16 51 29.1	+0.4
RTAL	Retalhuleu	49.53	323	IAmb	IAmb	16 51 34.7	
	comp=Z,506nm,0.7s						
CCCC	Cccc	49.83	342	*e*P	P	16 51 34.3	+0.3
H10N3	ASCENSION HYDR	50.02	77	P	P	16 51 36.2	+0.9
	baz=220,slow=74,SNR=4.1						
H10N1	ASCENSION HYDR	50.04	77	P	P	16 51 36.3	+0.8
	baz=220,slow=74,SNR=5.5						
H10N2	ASCENSION HYDR	50.04	77	P	P	16 51 37.1	+1.7
	baz=220,slow=74,SNR=5.2						
ASCN	Ascension	50.10	77	P	P	16 51 36.9	+0.6
PETF	Flores	50.59	326	IAmb	IAmb	16 51 41.5	
	comp=Z,976nm,1.0s						
MGV	Manicaragua	51.32	340	*e*P	P	16 51 45.1	+0.3
CAIB	Caibarien	51.53	341	IAmb	IAmb	16 51 48.8	
	comp=Z,4µm,1.4s						
TEIG	Tepich	52.71	330	P	P	16 51 54.9	0.0
TEIG	Tepich	52.71	330	P	P	16 51 55.5	+0.6
TEIG	Tepich	52.71	330	P	P	16 51 55.0	+0.1
TEIG				PcP	PcP	16 52 56.3	+1.2
TEIG				pP	pP	16 53 42.8	-0.4
BELA	Belgrano 2	52.72	173	P	P	16 51 55.1	+0.9
SOR	Soroa	52.94	337	IAmb	IAmb	16 51 58.7	
	comp=Z,2µm,1.0s						
SOR	Soroa	52.94	337	*e*P	P	16 51 56.2	-0.3
VNA3	Neumayer Olymp	53.34	161	⇓P	P	16 51 59.5	+0.8
	comp=Z,680nm,0.8s						
VNA3				⇑PcP	PcP	16 52 57.5	+0.8
	comp=Z,172nm,0.8s						
VNA3				⇑pP	pP	16 53 46.4	+0.4
	comp=Z,469nm,0.8s						
VNA3				⇑ScP	ScP	16 56 01.6	+1.3
	comp=Z,104nm,0.7s						
VNA3				⇑S	S	16 58 49.2	+1.3
	comp=Z,485nm,2.5s						
VNA1	Neumayer--Stat	53.50	160	⇓P	P	16 52 01.2	+1.4
	comp=Z,562nm,1.0s						
VNA1				⇑PcP	PcP	16 52 58.8	+1.4
	comp=Z,241nm,0.9s						
VNA1				⇓pP	pP	16 53 48.5	+1.4
	comp=Z,719nm,1.0s						
VNA1				⇓ScP	ScP	16 56 02.9	+2.0
	comp=Z,153nm,0.9s						
VNA2	Neumayer--Watz	53.88	160	⇓P	P	16 52 03.3	+0.8
	comp=Z,1µm,0.8s,baz=287,slow=8.0						
VNA2				⇓PcP	PcP	16 52 59.7	+0.8
	comp=Z,92nm,0.6s,baz=290,slow=5.2						
VNA2				⇑pP	pP	16 53 50.6	+0.5
	comp=Z,414nm,0.8s,baz=297,slow=9.0						
VNA2				⇓ScP	ScP	16 56 04.1	+1.4
	comp=Z,46nm,0.6s,baz=312,slow=6.2						
VNA2				⇓S	S	16 58 55.8	+0.8
	comp=Z,605nm,2.8s,baz=18,slow=32						
VNA2				⇓x	x	16 58 56.1	
	comp=E,746nm,1.6s,baz=337,slow=19						
SHEL	Horse Pasture	54.37	91	P	P	16 52 07.2	+0.3
SHEL	Horse Pasture	54.37	91	P	P	16 52 07.2	+0.3
SHEL				pmax	pmax		
	comp=Z,202nm,0.9s						
SNAA	Sanae	55.52	160	⇓P	P	16 52 14.6	+0.6
	comp=Z,37µm,1.6s						
SNAA				⇓PcP	PcP	16 53 06.0	+0.7
	comp=Z,4µm,0.9s						
SNAA				⇑pP	pP	16 54 02.5	-0.1
	comp=Z,7µm,1.0s						
SNAA				⇑S	S	16 59 16.9	+0.5
	comp=Z,2µm,1.5s						
SNAA	Sanae	55.52	160	P	P	16 52 14.6	+0.6
	comp=Z,280nm,0.9s,baz=289,slow=6.5,SNR=468						
SNAA				PcP	PcP	16 53 06.2	+0.9
	comp=Z,176nm,0.9s,baz=302,slow=5.1,SNR=9.4						
SNAA				pP	pP	16 54 03.0	+0.4
	comp=Z,398nm,1.1s,baz=296,slow=6.7,SNR=17						
SNAA				ScP	ScP	16 56 11.1	+1.2
	comp=Z,42nm,0.8s,baz=260,slow=4.7,SNR=4.0						
SNAA				S	S	16 59 16.4	-0.1
	comp=Z,8.8nm,0.9s,baz=277,slow=23,SNR=8.4						
	comp=Z,280nm,0.9s						
SNAA	Sanae	55.52	160	P	P	16 52 14.3	+0.3
SNAA				IAmb	IAmb	16 54 04.1	
	comp=Z,1µm,1.3s						
SACV	Santiago Islan	56.81	48	P	P	16 52 23.4	-0.3
TROLL	Troll, Antarti	57.23	160	⇓P	P	16 52 26.7	+0.9
	comp=Z,47µm,0.9s						
TROLL				⇓PcP	PcP	16 53 13.3	+1.2
	comp=Z,26µm,0.9s						
TROLL				⇑pP	pP	16 54 15.5	+0.1
	comp=Z,77µm,1.1s						
TROLL				⇓ScP	ScP	16 56 19.4	+1.8
	comp=Z,8µm,0.7s						
TROLL				⇓S	S	16 59 39.6	+1.1
	comp=N,52µm,2.1s						
DWPF	Disney Wildern	57.40	341	P	P	16 52 28.0	+0.6
DWPF				IAmb	IAmb	16 52 29.6	
	comp=Z,1µm,0.9s						
DWPF	Disney Wildern	57.40	341	*e*P	P	16 52 25.0	-2.3
DWPF	Disney Wildern	57.40	341	P	P	16 52 27.9	+0.6
DWPF				PcP	PcP	16 53 14.5	+1.2
DWPF				sP	sP	16 55 18.8	+0.1
656A	Willston	58.91	340	IAmb	IAmb	16 52 38.9	
	comp=Z,653nm,0.6s						
BBSR	BB Station	58.98	359	P	P	16 52 38.0	0.0
BBSR	BB Station	58.98	359	P	P	16 52 38.5	+0.5
PTCN	Pitcairn Islan	59.32	256	P	P	16 52 42.6	+2.0
PTCN				IAmb	IAmb	16 52 43.8	
	comp=Z,2µm,1.4s						
JRQG	Juriquilla Cam	59.41	319	P	P	16 52 42.8	+1.4
NVL	N'lazarevskaya	59.97	158	*e*P	P	16 52 44.8	+0.8
NVL				*e*		16 54 35.5	
NVL				*e*S	S	17 00 14.7	+1.9
NVL				*e*SS	SS	17 04 25.1	+3.0
NVL				pmax	pmax		
	comp=Z,570nm,0.7s						
553A	Crawfordville	60.26	339	P	P	16 52 47.2	+0.8
553A				IAmb	IAmb	16 52 48.2	
	comp=Z,2µm,0.7s						
257A	Skidaway Islan	60.94	343	P	P	16 52 51.9	+1.0
MBO	M'Bour	61.00	53	P	P	16 52 52.4	+0.8
MBO				IAmb	IAmb	16 52 54.3	
	comp=Z,3µm,1.8s						
451A	Vernon	61.08	338	IAmb	IAmb	16 52 53.6	
	comp=Z,1µm,1.0s						
TIGA	Tifton	61.16	340	IAmb	IAmb	16 52 54.0	
	comp=Z,803nm,0.9s						
352A	Blakely	61.61	339	IAmb	IAmb	16 52 56.9	
	comp=Z,1µm,0.9s						
RGRS	Roger Stewart	61.61	344	IAmb	IAmb	16 52 57.9	
	comp=Z,3µm,0.9s						
CSU	Charleston Sou	61.66	344	IAmb	IAmb	16 52 58.2	
	comp=Z,2µm,1.0s						
250A	Grady	62.50	338	IAmb	IAmb	16 53 02.5	
	comp=Z,2µm,1.2s						
Y57A	Sumter	62.72	344	IAmb	IAmb	16 53 04.2	
	comp=Z,872nm,0.6s						
346A	Big Creek Wild	63.10	335	IAmb	IAmb	16 53 06.6	
	comp=Z,1µm,1.1s						
JSC	Jenkinsville	63.19	343	IAmb	IAmb	16 53 07.8	
	comp=Z,1µm,0.9s						
QSPA	South Pole Qui	63.29	180	P	P	16 53 07.1	+1.2
BIRD	Birdtown, Kers	63.34	344	IAmb	IAmb	16 53 08.3	
	comp=Z,852nm,0.6s						
W59A	Clinton	63.38	346	IAmb	IAmb	16 53 09.1	
	comp=Z,1µm,1.2s						
Y52A	Lilburn	63.56	341	IAmb	IAmb	16 53 08.9	
	comp=Z,409nm,0.6s						
V61A	Roper	63.61	348	IAmb	IAmb	16 53 10.6	
	comp=Z,2µm,1.1s						
ELIB	Princess Elisa	63.65	160	*d*P	P	16 53 09.3	+1.1
ELIB				*d*PcP	PcP	16 53 39.4	+1.2
ELIB				*d*pP	pP	16 55 00.1	-1.0
LRAL	Lakeview Retre	63.72	338	IAmb	IAmb	16 53 10.4	
	comp=Z,862nm,0.8s						
PAULI	Pauline	63.84	343	IAmb	IAmb	16 53 12.0	
	comp=Z,1µm,1.1s						
KMSC	Kings Mountain	64.02	344	IAmb	IAmb	16 53 13.2	
	comp=Z,1µm,0.9s						
V58A	Windy Hill, Pi	64.12	346	IAmb	IAmb	16 53 13.5	
	comp=Z,902nm,1.1s						
RKT	Rikitea	64.17	256	*e*S	S	17 01 05.3	-0.4
	comp=Z,7µm,36.2s						
RKT				*e*sS	sS	17 04 25.3	-2.9
	comp=Z,7µm,25.2s						
RKT				*e*LR	LR	17 13 09.7	
	comp=Z,5µm,31.0s						
VBMS	Vicksburg	64.24	335	IAmb	IAmb	16 53 14.3	
	comp=Z,1µm,1.0s						
Y49A	Blount Mountai	64.28	339	IAmb	IAmb	16 53 13.9	
	comp=Z,1µm,0.8s						
BG3	Lake Jocassee	64.30	342	IAmb	IAmb	16 53 14.7	
	comp=Z,1µm,1.3s						
X51A	Calhoun	64.45	340	IAmb	IAmb	16 53 15.2	
	comp=Z,1µm,0.9s						
HKT	Hockley	64.52	329	P	P	16 53 15.3	+1.4
HKT				IAmb	IAmb	16 53 16.9	
	comp=Z,782nm,1.1s						
HKT	Hockley	64.52	329	*d i*P	P	16 53 15.2	+1.3
HKT				pmax	pmax		
	comp=Z,891nm,1.3s						
HKT	Hockley	64.52	329	P	P	16 53 15.3	+1.3
HKT				PcP	PcP	16 53 43.8	+1.7
W52A	Murphy	64.67	341	IAmb	IAmb	16 53 16.8	
	comp=Z,1µm,1.2s						
H06S1	SOCORRO T	64.71	309	P	P	16 53 17.3	+1.9
	SNR=39						
H06E1	SOCORRO T-PHAS	64.72	309	P	P	16 53 17.3	+1.8
	SNR=19						
H06N1	SOCORRO T-PHAS	64.82	309	P	P	16 53 17.9	+1.8
	SNR=14						
EF04	Eagle Ford 04	64.82	327	IAmb	IAmb	16 53 18.1	
	comp=Z,700nm,0.9s						
EF02	Christine	64.83	326	IAmb	IAmb	16 53 18.6	
	comp=Z,2µm,1.0s						
V53A	Saluda	64.90	343	IAmb	IAmb	16 53 18.4	
	comp=Z,1µm,1.0s						
T59A	Double "B" Far	64.94	348	IAmb	IAmb	16 53 19.0	
	comp=Z,993nm,1.3s						
MLDN	Muldoon	64.95	328	IAmb	IAmb	16 53 19.7	
	comp=Z,1µm,0.9s						
HNVL	Huntsville, TX	65.03	330	IAmb	IAmb	16 53 20.4	
	comp=Z,1µm,1.1s						
TKL	Tuckaleechee C	65.16	342	IAmb	IAmb	16 53 19.4	
	comp=Z,1µm,1.1s						
CPCT	Cooper Cave	65.17	341	IAmb	IAmb	16 53 19.6	
	comp=Z,900nm,0.8s						
W50A	Signal Mountai	65.17	340	IAmb	IAmb	16 53 19.7	
	comp=Z,1µm,0.8s						
DBIC	Dimbokro	65.75	68	P	P	16 53 22.4	+0.4
	comp=Z,573nm,0.7s,baz=252,slow=7.0,SNR=621						
DBIC				S	S	17 01 22.7	-2.0
	comp=Z,9.3nm,0.7s,baz=4.9,slow=16,SNR=13						
DBIC				PKPPKP	P'P'df	17 21 48.6	-3.7
	comp=Z,7.6nm,0.9s,baz=0.0,slow=1.0,SNR=4.8						
	comp=Z,573nm,0.7s						
DBIC	Dimbokro	65.75	68	IAmb	IAmb	16 53 23.5	
	comp=Z,682nm,0.8s						
DBIC	Dimbokro	65.75	68	P	P	16 53 22.3	+0.2
BLA	Blacksburg	65.78	345	IAmb	IAmb	16 53 24.7	
	comp=Z,2µm,1.4s						
HNDO	Hondo	65.82	326	IAmb	IAmb	16 53 24.8	
	comp=Z,1µm,0.9s						
PLAL	Pickwick Lake	65.85	338	IAmb	IAmb	16 53 23.6	
	comp=Z,1µm,1.1s						
OXF	Oxford	65.89	337	IAmb	IAmb	16 53 23.6	
	comp=Z,2µm,1.1s						
TZTN	Tazewell	65.93	342	IAmb	IAmb	16 53 23.7	
	comp=Z,419nm,0.7s						
R58B	Mineral	65.96	348	IAmb	IAmb	16 53 25.7	
	comp=Z,742nm,0.9s						
S57A	Dark Hollow, R	65.98	347	IAmb	IAmb	16 53 25.7	
	comp=Z,580nm,0.9s						
435B	Jarrell	66.03	328	IAmb	IAmb	16 53 26.0	
	comp=Z,860nm,0.8s						
Z41A	Richland Creek	66.06	333	IAmb	IAmb	16 53 27.1	
	comp=Z,800nm,0.9s						
CBN	Corbin Frederi	66.10	348	IAmb	IAmb	16 53 26.4	
	comp=Z,556nm,0.6s						
CCAR	Cane Creek	66.23	334	IAmb	IAmb	16 53 27.1	
	comp=Z,964nm,1.0s						
CLTN	Cedars of Leba	66.31	340	IAmb	IAmb	16 53 26.4	
	comp=Z,758nm,0.7s						
DRIO	Del Rio	66.42	325	IAmb	IAmb	16 53 28.0	
	comp=Z,605nm,0.9s						
U49A	Red Boiling Sp	66.53	340	IAmb	IAmb	16 53 27.2	
	comp=Z,666nm,0.6s						
T50A	Nancy	66.73	341	IAmb	IAmb	16 53 28.9	
	comp=Z,788nm,0.9s						
WVT	Waverly	66.82	339	P	P	16 53 28.2	0.0
WVT	Waverly	66.82	339	P	P	16 53 28.2	0.0
WVT				pmax	pmax		
	comp=Z,1µm,0.9s						
Z38A	Mt. Pleasant	66.96	332	IAmb	IAmb	16 53 31.3	
	comp=Z,640nm,0.7s						
S51A	Beattyville	66.97	343	IAmb	IAmb	16 53 30.9	
	comp=Z,1µm,1.2s						
WHTX	Lake Whitney,	66.98	329	IAmb	IAmb	16 53 30.9	
	comp=Z,468nm,0.7s						
BRDY	Brady	67.12	327	IAmb	IAmb	16 53 31.8	
	comp=Z,777nm,0.7s						
UALR	University of	67.21	334	IAmb	IAmb	16 53 32.4	
	comp=Z,972nm,1.0s						
HPIG		67.24	319	IAmb	IAmb	16 53 33.8	
	comp=Z,545nm,1.0s						
Q56A	Snyder Ridge,	67.27	347	IAmb	IAmb	16 53 33.5	
	comp=Z,580nm,0.8s						
SLBS	Sierra La Lagu	67.48	314	P	P	16 53 34.0	+1.4
SLBS	Sierra La Lagu	67.48	314	P	P	16 53 34.3	+1.6
WUPA	West Chester U	67.48	350	IAmb	IAmb	16 53 35.1	
	comp=Z,798nm,1.4s						
MIAR	Mount Ida	67.49	333	IAmb	IAmb	16 53 34.5	
	comp=Z,1µm,1.4s						
Q54A	Coxs Mills	67.56	345	IAmb	IAmb	16 53 34.8	
	comp=Z,995nm,1.3s						
WHAR	Wooly Hollow	67.64	335	IAmb	IAmb	16 53 35.2	
	comp=Z,1µm,1.1s						
MVL	Millersville	67.67	349	IAmb	IAmb	16 53 36.1	
	comp=Z,610nm,0.9s						
R50A	Paris	67.77	342	IAmb	IAmb	16 53 35.1	
	comp=Z,636nm,0.7s						
FW06	Azle	67.85	329	IAmb	IAmb	16 53 36.9	
	comp=Z,821nm,0.8s						
OZNA	Ozona	67.88	325	IAmb	IAmb	16 53 36.4	
	comp=Z,717nm,0.7s						
LCAR	Lake Charles	67.91	336	IAmb	IAmb	16 53 36.6	
	comp=Z,2µm,1.1s						
TXAR	Lajitas Array	67.96	322	P	P	16 53 36.6	+1.2
	comp=Z,133nm,0.5s,baz=150,slow=7.4,SNR=2130						
TXAR				S	S	17 01 50.6	+0.4
	comp=Z,2.2nm,0.9s,baz=52,slow=7.9,SNR=2.1						
TXAR				PKKP	PKKPdf	17 13 32.3	-0.1
	comp=Z,2.7nm,1.1s,baz=338,slow=2.8,SNR=4.0						
TXAR				PKP2bc	P'P'bc	17 21 47.1	-2.4
	comp=Z,11nm,0.9s,baz=297,slow=4.2,SNR=18						
	comp=Z,133nm,0.5s						
TXAR	Lajitas Array	67.96	322	P	P	16 53 36.4	+0.9
MCWV	Mont Chateau	68.00	346	IAmb	IAmb	16 53 38.1	
	comp=Z,889nm,0.8s						
R49A	Shelbyville	68.01	342	IAmb	IAmb	16 53 36.8	
	comp=Z,1µm,1.2s						
BRNJ	Basking Ridge	68.06	351	IAmb	IAmb	16 53 38.5	
	comp=Z,771nm,0.8s						
CPNY	Central Park	68.08	351	IAmb	IAmb	16 53 38.4	
	comp=Z,792nm,1.2s						
N62A	Caumsett State	68.16	352	IAmb	IAmb	16 53 38.8	
	comp=Z,1µm,1.0s						
Q51A	Peebles	68.21	343	IAmb	IAmb	16 53 38.4	
	comp=Z,925nm,0.9s						
WCI	Wyandotte Cave	68.28	341	P	P	16 53 37.0	0.0
WCI				IAmb	IAmb	16 53 38.1	
	comp=Z,1µm,0.9s						
WCI	Wyandotte Cave	68.28	341	P	P	16 53 37.0	0.0
WCI				pmax	pmax		
	comp=Z,1µm,0.9s						
WCI	Wyandotte Cave	68.28	341	P	P	16 53 36.8	-0.2
WCI				PcP	PcP	16 53 58.1	+0.3
WCI				pP	pP	16 55 32.6	0.0
PAL	Palisades	68.29	351	IAmb	IAmb	16 53 39.5	
	comp=Z,684nm,1.1s						
WSPT	Westport, CT	68.38	352	IAmb	IAmb	16 53 39.7	
	comp=Z,594nm,0.6s						
USIN	University of	68.45	340	IAmb	IAmb	16 53 38.8	
	comp=Z,920nm,0.8s						
M65A	Busby, Falmout	68.47	354	IAmb	IAmb	16 53 40.6	
	comp=Z,1µm,1.1s						
M65A	Busby, Falmout	68.47	354	Pdiff	P	16 53 39.5	+1.3
	baz=173						
ABTX	Abilene, Hawle	68.53	328	IAmb	IAmb	16 53 40.8	
	comp=Z,825nm,0.9s						
LOOK	Love County	68.54	330	IAmb	IAmb	16 53 41.0	
	comp=Z,1µm,0.8s						
SSPA	Standing Stone	68.56	348	P	P	16 53 40.1	+1.4
SSPA				IAmb	IAmb	16 53 40.9	
	comp=Z,586nm,0.7s						
P51A	Williamsport	68.57	344	IAmb	IAmb	16 53 40.3	
	comp=Z,619nm,0.7s						
O54A	Avella	68.61	346	IAmb	IAmb	16 53 40.6	
	comp=Z,438nm,0.6s						
SGCY	Sterling City	68.68	326	IAmb	IAmb	16 53 42.1	
	comp=Z,1µm,0.9s						
O53A	New Philadelph	68.86	345	IAmb	IAmb	16 53 42.7	
	comp=Z,868nm,1.1s						
L64A	Middleborough	68.86	354	IAmb	IAmb	16 53 43.2	
	comp=Z,1µm,1.1s						
UCCT	U. Connecticut	68.86	353	IAmb	IAmb	16 53 42.9	
	comp=Z,448nm,0.8s						
O52A	Adamsville	68.87	345	IAmb	IAmb	16 53 42.5	
	comp=Z,860nm,0.9s						
WTFS	Witchita Falls	68.93	329	IAmb	IAmb	16 53 42.7	
	comp=Z,700nm,0.7s						
KSPA	Keystone Colle	69.10	350	IAmb	IAmb	16 53 44.8	
	comp=Z,1µm,0.9s						
M57A	Sunshine Farm,	69.10	349	IAmb	IAmb	16 53 44.8	
	comp=Z,693nm,0.8s						
ACRG	Accra	69.10	72	P	P	16 53 42.4	-0.2
ACRG				IAmb	IAmb	16 53 43.8	
	comp=Z,549nm,0.6s						
HHAR	Hobbs	69.15	334	IAmb	IAmb	16 53 44.3	
	comp=Z,993nm,0.8s						
P48A	Milroy	69.17	342	IAmb	IAmb	16 53 43.0	
	comp=Z,476nm,0.7s						
ACSO	Alum Creek Sta	69.26	344	IAmb	IAmb	16 53 44.5	
	comp=Z,1µm,1.0s						
OLIL	Olney	69.29	340	IAmb	IAmb	16 53 44.0	
	comp=Z,1µm,1.1s						
N53A	Lisbon	69.31	346	IAmb	IAmb	16 53 45.6	
	comp=Z,650nm,1.0s						
X34A	Smith Ranch, M	69.34	330	IAmb	IAmb	16 53 45.8	
	comp=Z,819nm,0.8s						
W35A	Tecumseh	69.39	331	IAmb	IAmb	16 53 45.2	
	comp=Z,675nm,1.1s						
U38A	Gravette	69.46	334	IAmb	IAmb	16 53 45.6	
	comp=Z,596nm,0.8s						
SN07	Snyder 07	69.52	327	IAmb	IAmb	16 53 46.0	
	comp=Z,455nm,0.7s						
O49A	Covington	69.56	343	IAmb	IAmb	16 53 46.1	
	comp=Z,732nm,0.9s						
L61B	Northampton	69.56	353	IAmb	IAmb	16 53 47.3	
	comp=Z,677nm,0.9s						
TUL3	Leonard	69.58	332	IAmb	IAmb	16 53 46.3	
	comp=Z,586nm,0.6s						
SYO	Syowa Base	69.64	158	⇓*i*P	P	16 53 45.8	+1.0
SYO	Syowa Base	69.64	158	⇑*i*pP	pP	16 55 38.6	-2.1
SYO	Syowa Base	69.64	158	⇓*i*PP	PP	16 56 23.8	-4.7
PECS	Pecos	69.66	324	IAmb	IAmb	16 53 48.3	
	comp=Z,856nm,1.3s						
CCM	Cathedral Cave	69.72	337	P	P	16 53 46.0	+0.3
CCM	Cathedral Cave	69.72	337	P	P	16 53 46.0	+0.3
CCM				pmax	pmax		
	comp=Z,1µm,0.8s						
CCM	Cathedral Cave	69.72	337	P	P	16 53 45.7	0.0
K62A	Royalston	69.72	353	IAmb	IAmb	16 53 48.7	
	comp=Z,574nm,1.0s						
Q44A	Meyer Farm, Va	69.73	339	IAmb	IAmb	16 53 46.5	
	comp=Z,1µm,1.2s						
N51A	Ashland	69.76	345	IAmb	IAmb	16 53 47.6	
	comp=Z,851nm,0.8s						
P46A	Rosedale	69.83	341	IAmb	IAmb	16 53 47.4	
	comp=Z,1µm,1.1s						
AUSN	Aus	69.85	110	*e*P	P	16 53 46.8	-0.3
SLM	Saint Louis	69.89	338	IAmb	IAmb	16 53 47.8	
	comp=Z,1µm,1.1s						
TRY	Troy	69.96	352	IAmb	IAmb	16 53 50.2	
	comp=Z,1µm,1.0s						
M52A	Chesterland	70.12	346	IAmb	IAmb	16 53 50.1	
	comp=Z,835nm,0.9s						
QUOK	Quay	70.18	332	IAmb	IAmb	16 53 50.7	
	comp=Z,2µm,1.2s						
OK029	Liberty Lake	70.18	331	IAmb	IAmb	16 53 50.6	
	comp=Z,1µm,1.1s						
R40A	Maddies Statio	70.29	336	IAmb	IAmb	16 53 50.4	
	comp=Z,947nm,0.9s						
K57A	Scipio Center	70.36	350	IAmb	IAmb	16 53 51.6	
	comp=Z,783nm,1.1s						
M50A	Fremont	70.38	344	IAmb	IAmb	16 53 51.2	
	comp=Z,1µm,0.9s						
J61A	Chester	70.43	353	IAmb	IAmb	16 53 53.2	
	comp=Z,617nm,1.0s						

HNH	**Hanover**	**70.76**	**353**	IAmb	IAmb	16 53 55.3	
	comp=Z,1µm,1.1s						
SMWD	**Samnorwood**	**70.86**	**329**	IAmb	IAmb	16 53 54.9	
	comp=Z,1µm,1.0s						
BLOK	**Blackwell**	**70.90**	**332**	IAmb	IAmb	16 53 55.1	
	comp=Z,1µm,1.0s						
J57A	**Williamstown**	**70.94**	**350**	IAmb	IAmb	16 53 55.2	
	comp=Z,861nm,0.9s						
MACI	**Morro de la Ar**	**70.97**	**43**	P	**P**	**16 53 53.9**	**+0.4**
MACI				IAmb	IAmb	16 53 55.6	
	comp=Z,616nm,0.8s						
J55A	**Hilton**	**71.09**	**349**	IAmb	IAmb	16 53 55.3	
	comp=Z,524nm,0.7s						
MEDO	**Medina**	**71.11**	**348**	IAmb	IAmb	16 53 55.5	
	comp=Z,432nm,0.7s						
NCB	**Newcomb**	**71.25**	**352**	IAmb	IAmb	16 53 57.3	
	comp=Z,534nm,0.8s						
LBNH	**Lisbon**	**71.25**	**354**	IAmb	IAmb	16 53 57.9	
	comp=Z,946nm,1.1s						
P40A	**Paris**	**71.31**	**337**	IAmb	IAmb	16 53 56.6	
	comp=Z,1µm,0.8s						
OK038	**West end E0370**	**71.32**	**331**	IAmb	IAmb	16 53 57.6	
	comp=Z,1µm,0.8s						
AMTX	**Amarillo**	**71.35**	**327**	IAmb	IAmb	16 53 57.7	
	comp=Z,748nm,0.8s						
WVL	**Waterville**	**71.38**	**355**	IAmb	IAmb	16 53 58.4	
	comp=Z,976nm,0.9s						
AAM	**Ann Arbor**	**71.38**	**344**	IAmb	IAmb	16 53 56.9	
	comp=Z,3µm,1.9s						
EPT	**El Paso**	**71.39**	**322**	IAmb	IAmb	16 53 58.1	
	comp=Z,502nm,0.9s						
SBA	**Scott Base**	**71.39**	**190**	P	**P**	**16 53 56.8**	**+1.7**
SBA	**Scott Base**	**71.39**	**190**	P	**P**	**16 53 56.8**	**+1.7**
SBA				pmax	pmax		
	comp=Z,108nm,1.0s						
EOSO	**Osorio**	**71.42**	**44**	P	**P**	**16 53 57.0**	**+0.9**
H62A	**Milan**	**71.51**	**354**	IAmb	IAmb	16 53 59.0	
	comp=Z,424nm,0.7s						
NOKA	**Waynoka**	**71.53**	**330**	IAmb	IAmb	16 53 58.5	
	comp=Z,576nm,0.8s						
SUR	**Sutherland**	**71.56**	**117**	P	**P**	**16 53 58.8**	**+1.6**
SUR				S	**S**	**17 02 31.0**	**-0.7**
SUR	**Sutherland**	**71.56**	**117**	P	**P**	**16 53 57.8**	**+0.6**
PECO	**Prince Edward**	**71.61**	**350**	IAmb	IAmb	16 53 59.0	
	comp=Z,1µm,0.9s						
M44A	**Midewin, Midew**	**71.70**	**341**	IAmb	IAmb	16 53 58.4	
	comp=Z,804nm,1.2s						
GGN	**Saint George**	**71.77**	**357**	IAmb	IAmb	16 54 00.7	
	comp=Z,1µm,1.1s						
L46A	**Eue Claire**	**71.79**	**342**	IAmb	IAmb	16 53 58.8	
	comp=Z,1µm,0.9s						
G65A	**Princeton**	**71.88**	**357**	IAmb	IAmb	16 54 01.4	
	comp=Z,628nm,0.7s						
PH02	**Texas Public H**	**71.89**	**328**	IAmb	IAmb	16 54 00.9	
	comp=Z,533nm,0.8s						
LONY	**Lake Ozonia**	**71.93**	**352**	IAmb	IAmb	16 54 01.5	
	comp=Z,1µm,1.1s						
N41A	**Harden Midland**	**71.96**	**338**	IAmb	IAmb	16 54 00.1	
	comp=Z,1µm,1.1s						
GBN	**Guysborough**	**72.01**	**1**	IAmb	IAmb	16 54 01.9	
	comp=Z,906nm,1.1s						
ARMS	**Ukamas**	**72.25**	**113**	*e*P	**P**	**16 54 01.0**	**0.0**
DELO	**Deloro Mine**	**72.28**	**349**	IAmb	IAmb	16 54 02.9	
	comp=Z,655nm,1.0s						
VNDA	**Vanda**	**72.36**	**189**	P	**P**	**16 54 02.8**	**+2.1**
	comp=Z,121nm,0.9s,baz=140,slow=5.0,SNR=374						
VNDA				pP	**pP**	**16 55 58.1**	**+0.1**
	comp=Z,11nm,0.8s,baz=143,slow=7.2,SNR=2.2						
VNDA				S	**S**	**17 02 39.7**	**+1.0**
	comp=Z,1.7nm,0.8s,baz=273,slow=20,SNR=7.4						
VNDA				PKPPKP	P'P'df	17 21 27.9	-13
	comp=Z,24nm,1.0s,baz=292,slow=4.5,SNR=12						
	comp=Z,121nm,0.9s						
VNDA	**Vanda**	**72.36**	**189**	P	**P**	**16 54 02.1**	**+1.4**
L44A	**Lake County Fo**	**72.39**	**341**	IAmb	IAmb	16 54 02.6	
	comp=Z,930nm,0.8s						
319A	**Douglas**	**72.65**	**320**	IAmb	IAmb	16 54 06.4	
	comp=Z,1µm,1.0s						
121A	**Cookes Peak, D**	**72.67**	**322**	IAmb	IAmb	16 54 06.7	
	comp=Z,724nm,1.1s						
L42A	**Oliver, Polo**	**72.76**	**340**	IAmb	IAmb	16 54 04.8	
	comp=Z,1µm,1.2s						
SADO	**Sadowa**	**72.79**	**348**	P	**P**	**16 54 04.4**	**+0.9**
	comp=Z,471nm,0.5s,baz=196,slow=6.1,SNR=504						
	comp=Z,471nm,0.5s						
SADO	**Sadowa**	**72.79**	**348**	IAmb	IAmb	16 54 05.0	
	comp=Z,627nm,0.6s						
H07N1	**FLORES T-PHASE**	**72.79**	**26**	P	**P**	**16 54 05.8**	**+2.1**
	SNR=20						
PCAN	**Candelaria**	**72.80**	**28**	*e*P	**P**	**16 54 05.4**	**+1.6**
PCAN				*i* IAmb	IAmb	16 54 06.9	
	comp=Z,800nm,1.3s						
N38A	**Joes South For**	**72.85**	**337**	IAmb	IAmb	16 54 05.2	
	comp=Z,1µm,1.0s						
PICO	**Pico**	**72.86**	**28**	*e*P	**P**	**16 54 06.0**	**+1.9**
PICO				*i* IAmb	IAmb	16 54 07.3	
	comp=Z,893nm,0.9s						
PPNO	**Prainha do Nor**	**72.90**	**28**	*e*P	**P**	**16 54 06.3**	**+2.0**
PPNO				*i* IAmb	IAmb	16 54 07.6	
	comp=Z,1µm,1.2s						
PID	**Ribeirinha**	**72.94**	**28**	*e*P	**P**	**16 54 05.7**	**+1.2**
PID				*i* IAmb	IAmb	16 54 09.2	
	comp=Z,961nm,1.6s						
PSMN	**Pico do Norte,**	**73.10**	**31**	*e*P	**P**	**16 54 06.2**	**+0.7**
PSMN				*i* IAmb	IAmb	16 54 09.3	
	comp=Z,929nm,1.6s						
PMAN	**Manadas**	**73.11**	**28**	*e*P	**P**	**16 54 07.5**	**+2.0**
PMAN				*i* IAmb	IAmb	16 54 08.9	
	comp=Z,2µm,1.2s						
RTBA	**Rita Blanca**	**73.11**	**328**	IAmb	IAmb	16 54 08.6	
	comp=Z,2µm,1.9s						
ROSA	**Rosais**	**73.12**	**28**	*e*P	**P**	**16 54 07.2**	**+1.7**
ROSA				*i* IAmb	IAmb	16 54 08.9	
	comp=Z,1µm,1.3s						
SRBC	**Serra Branca**	**73.47**	**28**	*e*P	**P**	**16 54 09.2**	**+1.7**
SRBC				*i* IAmb	IAmb	16 54 12.2	
	comp=Z,1µm,1.2s						
BUKO	**Buck Lake**	**73.48**	**348**	IAmb	IAmb	16 54 09.8	
	comp=Z,1µm,1.1s						
ADH	**Angra Heroismo**	**73.50**	**29**	*e*P	**P**	**16 54 09.5**	**+1.8**
ADH				*i* IAmb	IAmb	16 54 10.9	
	comp=Z,1µm,1.3s						
CMLA	**Cha da Macela**	**73.52**	**30**	P	**P**	**16 54 08.8**	**+1.0**
CMLA	**Cha da Macela**	**73.52**	**30**	P	**P**	**16 54 08.8**	**+1.0**
CMLA				pmax	pmax		
	comp=Z,287nm,0.7s						
PGRON	**Lagoa das Cont**	**73.59**	**31**	*e*P	**P**	**16 54 09.6**	**+1.3**
PGRON				*i* IAmb	IAmb	16 54 10.8	
	comp=Z,913nm,1.3s						
ALKP	**Alkanpan, Nort**	**73.59**	**116**	*e*P	**P**	**16 54 08.7**	**-0.1**
I45A	**Fountain**	**73.66**	**343**	IAmb	IAmb	16 54 09.6	
	comp=Z,659nm,1.2s						
BART	**Pico Bartolome**	**73.69**	**31**	*e*P	**P**	**16 54 09.8**	**+0.9**
BART				*i* IAmb	IAmb	16 54 12.9	
	comp=Z,739nm,1.3s						
TSUM	**Tsumeb**	**73.77**	**104**	S	**S**	**17 02 56.2**	**-0.2**
	comp=Z,21nm,1.1s,baz=20,slow=21,SNR=15						
TSUM	**Tsumeb**	**73.77**	**104**	P	**P**	**16 54 10.5**	**+0.6**
TSUM	**Tsumeb**	**73.77**	**104**	P	**P**	**16 54 10.6**	**+0.6**
ANMO	**Albuquerque**	**73.80**	**324**	P	**P**	**16 54 11.2**	**+1.5**
ANMO	**Albuquerque**	**73.80**	**324**	*d i*P	**P**	**16 54 11.5**	**+1.8**
ANMO				pmax	pmax		
	comp=Z,459nm,0.8s						
TASM	**ASL Pad, Albuq**	**73.80**	**324**	IAmb	IAmb	16 54 12.8	
	comp=Z,504nm,0.9s						
TASM	**ASL Pad, Albuq**	**73.80**	**324**	IAmb	IAmb	16 54 12.8	
	comp=Z,510nm,0.9s						
TASM	**ASL Pad, Albuq**	**73.80**	**324**	IAmb	IAmb	16 54 12.8	
	comp=Z,495nm,0.9s						
TASM	**ASL Pad, Albuq**	**73.80**	**324**	IAmb	IAmb	16 54 12.8	
	comp=Z,507nm,0.9s						
SCIA	**State Center**	**73.83**	**337**	IAmb	IAmb	16 54 11.1	
	comp=Z,735nm,0.7s						
BATG	**Bathurst New B**	**73.90**	**358**	IAmb	IAmb	16 54 12.3	
	comp=Z,482nm,0.8s						
PMOZ	**Porto Moniz, M**	**73.91**	**39**	P	**P**	**16 54 11.5**	**+1.2**
PMOZ	**Porto Moniz, M**	**73.91**	**39**	P	**P**	**16 54 10.3**	**+0.1**
PMOZ	**Porto Moniz, M**	**73.91**	**39**	⇓ *i*P	**P**	**16 54 10.8**	**+0.6**
PMOZ				*i* IAmb	IAmb	16 54 14.3	
	comp=Z,395nm,1.6s						
FUL	**Funchal**	**73.95**	**40**	⇓ *i*P	**P**	**16 54 11.2**	**+0.9**
FUL				*i* IAmb	IAmb	16 54 12.5	
	comp=Z,530nm,1.2s						
PMAR	**Madeira**	**73.99**	**39**	⇓ *i*P	**P**	**16 54 11.5**	**+0.6**
PMAR				*i* IAmb	IAmb	16 54 16.7	
	comp=Z,708nm,1.2s						
BFON	**Badsfontein, M**	**74.05**	**118**	*e*P	**P**	**16 54 11.4**	**0.0**
TUC	**Tucson**	**74.20**	**320**	P	**P**	**16 54 13.3**	**+1.4**
TUC	**Tucson**	**74.20**	**320**	P	**P**	**16 54 13.3**	**+1.4**
TUC				pmax	pmax		
	comp=Z,305nm,1.0s						
I42A	**Draeger Farm,**	**74.26**	**341**	IAmb	IAmb	16 54 13.6	
	comp=Z,2µm,1.0s						
TAOE	**Nuku Hiva Isla**	**74.27**	**268**	*e*P	**P**	**16 54 14.5**	**+1.8**
	comp=Z,444nm,1.4s						
TAOE				*e*S	**S**	**17 02 56.5**	**-5.2**
	comp=Z,1µm,27.2s						
TAOE	**Nuku Hiva Isla**	**74.27**	**268**	*e*LQ	LQ	17 14 21.1	
	comp=Z,2µm,40.3s						
TAOE				*e*LR	LR	17 17 50.2	
	comp=Z,451nm,24.6s						
LMQ	**La Malbaie**	**74.39**	**355**	IAmb	IAmb	16 54 15.2	
	comp=Z,894nm,1.2s						
H43A	**Windswept, Lux**	**74.47**	**342**	IAmb	IAmb	16 54 14.7	
	comp=Z,1µm,0.8s						
T25A	**Trinidad**	**74.48**	**327**	IAmb	IAmb	16 54 16.9	
	comp=Z,956nm,0.9s						
KOOLE	**Kule**	**74.53**	**108**	P	**P**	**16 54 14.4**	**+0.2**
KOOLE				IAmb	IAmb	16 54 16.0	
	comp=Z,819nm,0.8s						
KOOLE	**Kule**	**74.53**	**108**	*i* P	**P**	**16 54 14.9**	**+0.7**
PMPS	**Porto Santo**	**74.57**	**40**	⇓ *i*P	**P**	**16 54 14.8**	**+1.0**
PMPS				*i* IAmb	IAmb	16 54 17.3	
	comp=Z,385nm,1.5s						
PMPST	**Porto Santo, M**	**74.58**	**40**	⇓ *i*P	**P**	**16 54 15.1**	**+1.1**
PMPST				*i* IAmb	IAmb	16 54 17.6	
	comp=Z,751nm,1.5s						
TOA0	**Torodi Ar. Sit**	**74.67**	**66**	P	**P**	**16 54 15.3**	**+0.5**
	SNR=159						
TOA0				S	**S**	**17 03 04.3**	**-1.5**
TORD	**Torodi Ar. Bea**	**74.67**	**66**	P	**P**	**16 54 15.1**	**+0.2**
	comp=Z,1µm,0.8s,baz=264,slow=4.4,SNR=3361						
TORD				PKiKP	**PKiKP**	**17 00 00.1**	**-0.1**
	comp=Z,7.8nm,0.7s,baz=312,slow=1.9,SNR=5.5						
TORD				S	**S**	**17 03 03.7**	**-2.1**
	comp=Z,32nm,0.9s,baz=244,slow=7.2,SNR=17						
TORD				PKKP	**PKKPdf**	**17 13 15.5**	**-5.2**
	comp=Z,3.3nm,0.8s,baz=46,slow=6.5,SNR=6.1						
TORD				PKPPKP	**P'P'df**	**17 21 32.6**	**-4.3**
	comp=Z,2.6nm,0.9s,baz=43,slow=2.1,SNR=4.6						
	comp=Z,1µm,0.8s						
TORD	**Torodi Ar. Bea**	**74.67**	**66**	P	**P**	**16 54 14.8**	**0.0**
TORD				IAmb	IAmb	16 54 16.2	
	comp=Z,848nm,0.8s						
I40A	**Norwalk**	**74.76**	**340**	IAmb	IAmb	16 54 16.2	
	comp=Z,1µm,1.2s						
LDAQ	**Lac Daran**	**74.88**	**355**	IAmb	IAmb	16 54 17.9	
	comp=Z,2µm,1.7s						
LKGWB	**Lokgwabe**	**74.96**	**110**	*i* P	**P**	**16 54 19.6**	**+3.1**
214A	**Organ Pipe Nat**	**75.14**	**318**	IAmb	IAmb	16 54 20.3	
	comp=Z,711nm,0.9s						
KSCO	**Kaye Shedlock'**	**75.14**	**329**	IAmb	IAmb	16 54 20.4	
	comp=Z,2µm,1.1s						
E46A	**Sault Ste Mari**	**75.37**	**345**	IAmb	IAmb	16 54 19.8	
	comp=Z,1µm,1.1s						
SDCO	**Great Sand Dun**	**75.49**	**327**	IAmb	IAmb	16 54 22.6	
	comp=Z,990nm,1.3s						
GRHM	**Grahamstown, E**	**75.59**	**120**	P	**P**	**16 54 20.1**	**+0.3**
GRHM				IAmb	IAmb	16 54 22.0	
	comp=Z,694nm,0.9s						
W18A	**Petrified Fore**	**75.68**	**322**	IAmb	IAmb	16 54 23.5	
	comp=Z,704nm,0.9s						
SFX	**San Felipe**	**75.73**	**316**	IAmb	IAmb	16 54 23.1	
	comp=Z,569nm,0.9s						
VLDQ	**Val d'Or**	**75.76**	**350**	IAmb	IAmb	16 54 22.6	
	comp=Z,1µm,0.9s						
F42A	**Maple Grove Fa**	**75.76**	**342**	IAmb	IAmb	16 54 21.6	
	comp=Z,412nm,0.6s						
DRLN	**Deer Lake**	**76.02**	**4**	P	**P**	**16 54 23.0**	**+1.5**
GRTLG	**Ghanzi**	**76.05**	**107**	*i* P	**P**	**16 54 22.9**	**+0.3**
X16A	**Lo Mia Camp, P**	**76.11**	**321**	IAmb	IAmb	16 54 26.1	
	comp=Z,981nm,1.0s						
ICQ	**Pointe Anglais**	**76.18**	**357**	IAmb	IAmb	16 54 25.1	
	comp=Z,1µm,1.0s						
KGCAE	**Kacgae**	**76.29**	**109**	*i* P	**P**	**16 54 24.4**	**+0.4**
OGNE	**Ogallala**	**76.45**	**331**	IAmb	IAmb	16 54 27.1	
	comp=Z,1µm,0.9s						
TBI	**Tubuai**	**76.47**	**251**	*e*pP	**pP**	**16 56 24.7**	**+0.8**
	comp=Z,1µm,30.0s						
TBI				*e*S	**S**	**17 03 25.2**	**+0.2**
	comp=Z,7µm,34.2s						
TBI				*e*sS	sS	17 06 52.8	-4.2
	comp=Z,10µm,30.5s						
TBI				*e*LQ	LQ	17 15 16.8	
	comp=Z,5µm,40.8s						
TBI				*e*LR	LR	17 18 46.4	
	comp=Z,5µm,26.2s						
TBI				*e*LR	LR	17 18 48.5	
	comp=Z,1µm,27.5s						
BOSA	**Boshof**	**76.53**	**115**	P	**P**	**16 54 25.6**	**+0.4**
	comp=Z,399nm,0.7s,baz=254,slow=4.3,SNR=921						
BOSA				pP	**pP**	**16 56 22.8**	**-1.3**
	comp=Z,45nm,1.0s,baz=246,slow=6.7,SNR=3.2						
BOSA				S	**S**	**17 03 24.4**	**-1.3**
	comp=Z,5.1nm,0.8s,baz=124,slow=19,SNR=8.1						
BOSA				PKKPbc	**PKKPbc**	**17 13 30.7**	**+0.4**
	comp=Z,4.4nm,0.8s,baz=94,slow=3.9,SNR=7.3						
BOSA				PKPPKP	**P'P'df**	**17 21 28.1**	**-6.9**
	comp=Z,4.2nm,1.0s,baz=113,slow=7.1,SNR=3.5						
	comp=Z,399nm,0.7s						
BOSA	**Boshof**	**76.53**	**115**	*e*P	**P**	**16 54 24.9**	**-0.2**
BOSA	**Boshof**	**76.53**	**115**	*i* P	**P**	**16 54 26.0**	**+0.8**
BOSA	**Boshof**	**76.53**	**115**	P	**P**	**16 54 25.5**	**+0.4**
BOSA	**Boshof**	**76.53**	**115**	P	**P**	**16 54 25.6**	**+0.4**
BOSA				sP	**sP**	**16 57 22.9**	**+0.4**
VTX	**Valle De La Tr**	**76.55**	**316**	IAmb	IAmb	16 54 28.2	
	comp=Z,716nm,1.1s						
ECSD	**EROS Data Cent**	**76.64**	**336**	IAmb	IAmb	16 54 26.9	
	comp=Z,1µm,0.9s						
SPMN	**Marine on St.**	**76.64**	**339**	IAmb	IAmb	16 54 26.6	
	comp=Z,996nm,1.1s						
WUAZ	**Wupatki**	**76.87**	**322**	IAmb	IAmb	16 54 30.4	
	comp=Z,861nm,1.1s						
K30B	**Basset**	**76.88**	**333**	IAmb	IAmb	16 54 29.5	
	comp=Z,1µm,1.2s						
SKOMA	**Sekoma**	**77.08**	**111**	*i* P	**P**	**16 54 28.4**	**+0.3**
XAUDM	**Khaudum**	**77.29**	**104**	*i* P	**P**	**16 54 30.6**	**+1.1**
BLYC	**Blythe**	**77.42**	**318**	IAmb	IAmb	16 54 32.9	
	comp=Z,690nm,1.0s						
PV15	**Paradox Valley**	**77.44**	**325**	IAmb	IAmb	16 54 33.5	
	comp=Z,2µm,1.1s						
PV02	**Paradox Valley**	**77.47**	**325**	IAmb	IAmb	16 54 33.4	
	comp=Z,2µm,1.5s						
PV13	**Radium Mtn., P**	**77.47**	**325**	IAmb	IAmb	16 54 33.3	
	comp=Z,737nm,1.0s						
E38A	**The Farm, Brul**	**77.50**	**341**	IAmb	IAmb	16 54 31.5	
	comp=Z,542nm,0.8s						
PV05	**Paradox Valley**	**77.56**	**325**	IAmb	IAmb	16 54 33.4	
	comp=Z,775nm,1.0s						
PV12	**Saucer Basin,**	**77.59**	**325**	IAmb	IAmb	16 54 33.9	
	comp=Z,1µm,0.9s						
PV18	**Skein Mesa, Pa**	**77.59**	**325**	IAmb	IAmb	16 54 33.7	
	comp=Z,900nm,0.9s						
PV07	**Paradox Valley**	**77.60**	**325**	IAmb	IAmb	16 54 34.0	
	comp=Z,984nm,0.9s						
PV11	**David Mesa, Pa**	**77.61**	**325**	IAmb	IAmb	16 54 33.9	
	comp=Z,1µm,1.5s						
GMARE	**Gumare**	**77.65**	**106**	*i* P	**P**	**16 54 32.1**	**+0.7**
MAW	**Mawson**	**77.66**	**162**	P	**P**	**16 54 31.4**	**+1.1**
	comp=Z,348nm,0.8s,baz=221,slow=6.3,SNR=462						
MAW				pP	**pP**	**16 56 29.7**	**0.0**
	comp=Z,85nm,0.9s,baz=238,slow=6.5,SNR=8.6						
MAW				PKPPKP	P'P'df	17 21 23.0	-8.5
	comp=Z,9.2nm,0.9s,baz=328,slow=4.8,SNR=6.0						
	comp=Z,348nm,0.8s						
PV19	**Morning Glory**	**77.67**	**325**	IAmb	IAmb	16 54 34.2	
	comp=Z,1µm,1.4s						
PV20	**West Nyswonger**	**77.69**	**325**	IAmb	IAmb	16 54 34.2	
	comp=Z,1µm,1.2s						
PV22	**Blue Mesa, Par**	**77.74**	**325**	IAmb	IAmb	16 54 34.8	
	comp=Z,1µm,0.9s						
PV10	**Paradox Valley**	**77.75**	**325**	IAmb	IAmb	16 54 34.3	
	comp=Z,1µm,1.0s						
PV23	**Carpenter Ridg**	**77.80**	**325**	IAmb	IAmb	16 54 35.0	
	comp=Z,1µm,1.1s						
SALN	**Salton City**	**77.97**	**317**	IAmb	IAmb	16 54 35.8	
	comp=Z,779nm,1.0s						
U15A	**North Rim**	**78.05**	**322**	IAmb	IAmb	16 54 36.9	
	comp=Z,837nm,0.9s						
TJX	**Tijuana**	**78.10**	**316**	IAmb	IAmb	16 54 36.3	
	comp=Z,774nm,1.0s						
SUSD	**Miller**	**78.11**	**335**	IAmb	IAmb	16 54 34.8	
	comp=Z,1µm,0.9s						
VAH	**Vaihoa**	**78.21**	**259**	*e*P	**P**	**16 54 35.7**	**+1.5**
	comp=Z,18nm,0.8s						
LBTB	**Lobatse**	**78.25**	**112**	S	**S**	**17 03 41.5**	**-2.4**
	comp=Z,3.3nm,0.8s,baz=115,slow=22,SNR=6.4						
LBTB	**Lobatse**	**78.25**	**112**	IAmb	IAmb	16 54 36.2	
	comp=Z,766nm,0.9s						
LBTB	**Lobatse**	**78.25**	**112**	*i* P	**P**	**16 54 35.6**	**+1.0**
PFO	**Pinyon Flats O**	**78.49**	**317**	P	**P**	**16 54 37.1**	**+1.6**
PFO	**Pinyon Flats O**	**78.49**	**317**	*d i*P	**P**	**16 54 37.2**	**+1.7**
PFO				pmax	pmax		
	comp=Z,776nm,1.1s						
PFO	**Pinyon Flats O**	**78.49**	**317**	P	**P**	**16 54 37.4**	**+1.9**
PFO				sP	**sP**	**16 57 35.5**	**+1.7**
PMOR	**Pomariorio Ree**	**78.54**	**259**	*e*P	**P**	**16 54 36.0**	**0.0**
	comp=Z,155nm,0.8s						
DANC	**Danby, Needles**	**78.55**	**318**	IAmb	IAmb	16 54 39.0	
	comp=Z,1µm,0.9s						
DNR	**Dunn Ranch,Anz**	**78.56**	**317**	IAmb	IAmb	16 54 39.2	
	comp=Z,1µm,0.9s						
TVO	**Taravao**	**78.56**	**256**	*e*P	**P**	**16 54 37.8**	**+1.6**
	comp=Z,44nm,0.9s						
TIO	**Tiouine**	**78.63**	**47**	S	**S**	**17 03 50.0**	**+2.4**
TIO				P	**P**	**16 54 38.1**	**+1.7**
O20A	**White River Ci**	**78.69**	**327**	IAmb	IAmb	16 54 40.3	
	comp=Z,1µm,0.9s						
EYMN	**Ely**	**78.69**	**341**	IAmb	IAmb	16 54 37.9	
	comp=Z,743nm,0.8s						
TIAR	**Tiarei**	**78.74**	**256**	*e*P	**P**	**16 54 38.6**	**+1.5**
	comp=Z,175nm,1.0s						
TBO	**Thunder Bay**	**78.76**	**343**	IAmb	IAmb	16 54 38.4	
	comp=Z,1µm,1.0s						
PAE	**Paea**	**78.89**	**256**	*e*P	**P**	**16 54 36.8**	**-1.1**
	comp=Z,38nm,1.0s						
PAE				*e*pP	**pP**	**16 56 39.3**	**+1.3**
	comp=Z,38nm,1.0s						
PPTF	**Pamatai, Papee**	**78.91**	**256**	P	**P**	**16 54 40.7**	**+2.6**
PPT2	**Papeete2**	**78.92**	**256**	*e*P	**P**	**16 54 38.9**	**+0.8**
	comp=Z,130nm,1.0s						
PPT2				*e*pP	**pP**	**16 56 32.5**	**-5.8**
	comp=Z,383nm,27.8s						
PPT2				*e*S	**S**	**17 03 48.8**	**-2.2**
	comp=Z,1µm,25.5s						
PPT2				*e*sS	**sS**	**17 07 18.8**	**-6.0**
	comp=Z,2µm,26.2s						
PPT2				*e*LQ	LQ	17 15 56.9	
	comp=Z,1µm,31.8s						
PPT2				*e*LR	LR	17 19 59.9	
	comp=Z,748nm,25.2s						
PPT2				*e*LR	LR	17 20 08.5	
	comp=Z,896nm,24.0s						
PPT	**Papeete**	**78.93**	**256**	P	**P**	**16 54 40.3**	**+2.2**
	comp=Z,124nm,0.9s,baz=82,slow=5.4,SNR=11						
PPT				pP	**pP**	**16 56 37.2**	**-1.1**
	comp=Z,78nm,0.9s,baz=129,slow=13,SNR=4.5						
	comp=Z,124nm,0.9s						
SRU	**San Rafael Swe**	**79.07**	**325**	IAmb	IAmb	16 54 41.4	
	comp=Z,1µm,0.9s						
LPHEP	**Lephephe**	**79.15**	**111**	*i* P	**P**	**16 54 39.8**	**+0.5**
MTPU	**Mount Pierson**	**79.16**	**323**	IAmb	IAmb	16 54 42.2	
	comp=Z,602nm,0.9s						
P18A	**Preston Nutter**	**79.31**	**325**	IAmb	IAmb	16 54 43.2	
	comp=Z,761nm,0.8s						
PHDHD	**Phuduhudu**	**79.36**	**107**	*i* P	**P**	**16 54 41.1**	**+0.7**
KHWEE	**KHWEE**	**79.40**	**109**	IAmb	IAmb	16 54 42.5	
	comp=Z,1µm,0.9s						
KHWEE	**KHWEE**	**79.40**	**109**	*i* P	**P**	**16 54 41.3**	**+0.7**
CCUT	**Cedar City**	**79.45**	**322**	IAmb	IAmb	16 54 44.4	
	comp=Z,1µm,0.9s						
P17A	**Butcher Ranch,**	**79.45**	**325**	IAmb	IAmb	16 54 43.5	
	comp=Z,1µm,1.0s						
RDMU	**Red Mountain**	**79.68**	**326**	IAmb	IAmb	16 54 44.6	
	comp=Z,2µm,1.0s						
K22A	**Casper**	**79.82**	**329**	IAmb	IAmb	16 54 46.1	
	comp=Z,942nm,1.1s						
RSSD	**Black Hills**	**79.89**	**332**	P	**P**	**16 54 43.5**	**+0.7**
RSSD	**Black Hills**	**79.89**	**332**	P	**P**	**16 54 43.5**	**+0.7**
RSSD				pmax	pmax		
	comp=Z,561nm,1.0s						
AVE	**Averroes**	**80.09**	**45**	P	**P**	**16 54 44.9**	**+1.1**
AVE	**Averroes**	**80.09**	**45**	IAmb	IAmb	16 54 46.2	
	comp=Z,1µm,1.5s						
BSUT	**Blindstream Ca**	**80.25**	**325**	IAmb	IAmb	16 54 48.2	
	comp=Z,938nm,1.0s						
CCCA	**Chr Cany lake**	**80.34**	**318**	IAmb	IAmb	16 54 48.2	
	comp=Z,1µm,1.5s						
AGMN	**Agassiz Nation**	**80.35**	**339**	IAmb	IAmb	16 54 46.9	
	comp=Z,1µm,0.8s						
PSUT	**Pine Spring**	**80.42**	**322**	IAmb	IAmb	16 54 48.9	
	comp=Z,695nm,1.0s						
MREMI	**Moremi**	**80.81**	**111**	*i* P	**P**	**16 54 48.8**	**+0.8**
S11A	**Rachel**	**80.85**	**320**	IAmb	IAmb	16 54 51.6	
	comp=Z,772nm,1.0s						
RTC	**Rabat Centre**	**80.89**	**45**	P	**P**	**16 54 48.7**	**+0.8**
EPLO	**Experimental L**	**80.90**	**341**	IAmb	IAmb	16 54 49.5	
	comp=Z,2µm,1.2s						
KSANE	**Kasane**	**80.90**	**105**	*i* P	**P**	**16 54 49.7**	**+1.1**
SPR3	**Spring Creek 3**	**81.02**	**322**	IAmb	IAmb	16 54 51.7	
	comp=Z,695nm,1.0s						
PDAR	**Pinedale Array**	**81.33**	**328**	P	**P**	**16 54 51.4**	**+1.1**
	comp=Z,240nm,0.6s,baz=131,slow=8.0,SNR=2241						
PDAR				PKiKP	**PKiKP**	**17 00 09.6**	**-0.2**
	comp=Z,2.1nm,0.8s,baz=78,slow=2.8,SNR=6.2						
PDAR				S	**S**	**17 04 14.6**	**-0.2**
	comp=Z,4.2nm,1.2s,baz=86,slow=19,SNR=3.3						
PDAR				PKKPbc	**PKKPbc**	**17 13 20.4**	**-1.0**
	comp=Z,5.0nm,0.6s,baz=214,slow=0.7,SNR=14						
PDAR				PKPPKP	**P'P'df**	**17 21 18.4**	**-4.5**
	comp=Z,2.0nm,0.9s,baz=337,slow=3.7,SNR=6.9						
	comp=Z,240nm,0.6s						
PDAR	**Pinedale Array**	**81.33**	**328**	P	**P**	**16 54 51.3**	**+1.0**
BROLN	**Tlhalogang**	**81.34**	**109**	*i* P	**P**	**16 54 51.2**	**+0.5**
SCHQ	**Schefferville**	**81.48**	**358**	P	**P**	**16 54 51.4**	**+1.0**
	comp=Z,598nm,0.8s,baz=174,slow=4.1,SNR=426						
SCHQ				PKKPbc	**PKKPbc**	**17 13 20.1**	**-1.5**
	comp=Z,9.0nm,0.6s,baz=7.5,slow=4.4,SNR=13						
SCHQ				PKPPKP	**P'P'df**	**17 21 24.6**	**+3.3**
	comp=Z,8.7nm,0.9s,baz=275,slow=4.6,SNR=4.1						
	comp=Z,598nm,0.8s						
MD01	**Midelt array s**	**81.51**	**47**	P	**P**	**16 54 52.4**	**+1.1**
MDT	**Midelt**	**81.57**	**47**	S	**SKSac**	**17 04 17.1**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=334,slow=22,SNR=7.0						
VES	**Vestal, Richgr**	**81.58**	**317**	IAmb	IAmb	16 54 54.1	
	comp=Z,1µm,1.3s						
IFR	**Ifrane**	**81.69**	**46**	P	**P**	**16 54 53.8**	**+1.5**
BGU	**Big Grassy Mou**	**81.71**	**324**	IAmb	IAmb	16 54 54.9	
	comp=Z,556nm,1.0s						
PFVI	**Vila Bisbo**	**81.79**	**41**	P	**P**	**16 54 53.4**	**+0.9**
PFVI	**Vila Bisbo**	**81.79**	**41**	⇓ *i*P	**P**	**16 54 53.3**	**+0.9**
PFVI				*i* IAmb	IAmb	16 54 57.5	
	comp=Z,346nm,1.1s						
TIN	**Tinemaha, Big**	**81.89**	**319**	IAmb	IAmb	16 54 56.2	
	comp=Z,817nm,1.1s						
MORF	**Marmelete**	**82.01**	**41**	*e*P	**P**	**16 54 54.6**	**+1.0**
MORF				IAmb	IAmb	16 54 56.5	
	comp=Z,496nm,1.5s						
MORF	**Marmelete**	**82.01**	**41**	⇓ *i*P	**P**	**16 54 54.5**	**+1.0**
MORF				*i* IAmb	IAmb	16 54 56.9	
	comp=Z,320nm,1.9s						
MORF	**Marmelete**	**82.01**	**41**	*e*P	**P**	**16 54 54.6**	**+1.0**
ULM	**Lac du Bonnet**	**82.06**	**340**	P	**P**	**16 54 54.2**	**+0.8**
	comp=Z,671nm,0.8s,baz=148,slow=5.9,SNR=548						
ULM				pP	**pP**	**16 56 54.5**	**-0.7**
	comp=Z,59nm,1.1s,baz=147,slow=8.9,SNR=1.7						
ULM				S	**SKSac**	**17 04 18.9**	**-0.6**
	comp=Z,18nm,0.9s,baz=328,slow=18,SNR=8.8						
ULM				PKKPbc	**PKKPbc**	**17 13 18.4**	**-1.5**
	comp=Z,31nm,0.7s,baz=344,slow=2.0,SNR=27						
ULM				PKPPKP	**P'P'df**	**17 21 21.9**	**+1.3**
	comp=Z,12nm,1.0s,baz=25,slow=3.5,SNR=4.2						
	comp=Z,671nm,0.8s						
ULM	**Lac du Bonnet**	**82.06**	**340**	IAmb	IAmb	16 54 55.4	
	comp=Z,888nm,0.9s						
PTEO	**Sao Teotonio**	**82.13**	**41**	⇓ *i*P	**P**	**16 54 55.5**	**+1.4**
PTEO				*i* IAmb	IAmb	16 54 57.7	
	comp=Z,730nm,1.6s						
HVU	**Hansel Valley**	**82.19**	**325**	IAmb	IAmb	16 54 57.0	
	comp=Z,545nm,0.9s						
PBDV	**Barranco-do-Ve**	**82.39**	**42**	P	**P**	**16 54 57.0**	**+1.4**
PBDV	**Barranco-do-Ve**	**82.39**	**42**	⇓ *i*P	**P**	**16 54 56.9**	**+1.4**
PBDV				*i* IAmb	IAmb	16 54 58.4	
	comp=Z,532nm,1.5s						
PCVE	**Castro Verde**	**82.59**	**41**	P	**P**	**16 54 57.8**	**+1.4**
PCVE	**Castro Verde**	**82.59**	**41**	⇓ *i*P	**P**	**16 54 57.9**	**+1.4**
PCVE				*i* IAmb	IAmb	16 54 59.2	
	comp=Z,372nm,1.9s						
MESJ	**Messejana**	**82.62**	**41**	*e*P	**P**	**16 54 57.8**	**+1.2**
MESJ				IAmb	IAmb	16 54 59.0	
	comp=Z,344nm,0.9s						

MESJ				*e*SKSac	SKSac	17 04 24.6	+0.8
MESJ	Messejana	82.62	41	⇓*i*P	P	16 54 58.0	+1.4
MESJ				*i* IAmb	IAmb	16 54 59.3	
	comp=Z,537nm,1.1s						
MESJ	Messejana	82.62	41	*e*P	P	16 54 57.8	+1.2
MESJ				*e*		17 04 24.6	
PVAQ	Vaqueiros	82.63	42	IAmb	IAmb	16 54 59.3	
	comp=Z,1µm,1.7s						
PVAQ	Vaqueiros	82.63	42	⇓*i*P	P	16 54 57.8	+1.2
PVAQ				*i* IAmb	IAmb	16 55 00.2	
	comp=Z,515nm,1.7s						
LIS	Lisbon	82.68	40	*e*P	P	16 54 58.1	+1.3
LIS				IAmb	IAmb	16 54 58.7	
	comp=Z,358nm,1.2s						
LIS	Lisbon	82.68	40	⇓*i*P	P	16 54 58.2	+1.3
LIS				*i* IAmb	IAmb	16 55 00.5	
	comp=Z,659nm,1.4s						
LIS	Lisbon	82.68	40	*e*P	P	16 54 58.1	+1.3
ELK	Elko	82.75	323	PKPPKP		17 21 15.7	
	comp=Z,2.0nm,0.9s,baz=329,slow=5.4,SNR=4.2						
PMAFR	Mafra	82.77	40	P	P	16 54 58.4	+1.0
PMAFR	Mafra	82.77	40	⇓*i*P	P	16 54 58.1	+0.8
PMAFR				*i* IAmb	IAmb	16 55 00.9	
	comp=Z,412nm,1.3s						
EGRO	El Granado	82.85	42	P	P	16 54 59.0	+1.3
NVAR	Mina Array Bea	82.86	320	P	P	16 54 59.6	+1.6
	comp=Z,140nm,0.8s,baz=146,slow=5.1,SNR=457						
NVAR				PKKPbc	PKKPbc	17 13 18.4	+0.8
	comp=Z,7.5nm,0.8s,baz=331,slow=3.8,SNR=15						
NVAR				PKPPKP	P'P'df	17 21 19.6	-1.0
	comp=Z,4.2nm,0.9s,baz=279,slow=2.6,SNR=8.8						
	comp=Z,140nm,0.8s						
NVAR	Mina Array Bea	82.86	320	P	P	16 54 59.3	+1.3
LAO	LASA Array	82.87	332	IAmb	IAmb	16 54 59.9	
	comp=Z,640nm,0.9s						
CNIL	Conil	82.95	43	P	P	16 54 59.7	+1.4
MUSN	Musina, Limpop	82.95	111	*i* P	P	16 55 00.5	+1.7
TAM	Tamanrasset	82.95	60	IAmb	IAmb	16 55 00.9	
	comp=Z,722nm,0.7s						
TAM	Tamanrasset	82.95	60	P	P	16 54 59.7	+0.9
TAM				sP	sP	16 57 58.0	0.0
PBEJ	Beja	82.96	41	⇓*i*P	P	16 54 59.3	+1.0
PBEJ				*i* IAmb	IAmb	16 55 01.8	
	comp=Z,504nm,1.5s						
RLMT	Red Lodge	82.99	329	IAmb	IAmb	16 55 01.1	
	comp=Z,695nm,1.2s						
MOE	Montemor	83.01	40	⇓*i*P	P	16 54 59.7	+1.1
MOE				*i* IAmb	IAmb	16 55 01.1	
	comp=Z,709nm,1.0s						
HULI	Fort Hunter Li	83.02	316	IAmb	IAmb	16 55 02.1	
	comp=Z,1µm,1.2s						
ECEU	Ceuta	83.06	44	P	P	16 55 00.4	+1.6
EVO	Evora	83.21	41	P	P	16 55 00.5	+1.0
EVO	Evora	83.21	41	⇓*i*P	P	16 55 00.6	+1.0
EVO				*i* IAmb	IAmb	16 55 01.5	
	comp=Z,375nm,1.0s						
BBGB	Big Mountain B	83.26	317	IAmb	IAmb	16 55 05.0	
	comp=Z,711nm,0.9s						
PARRA	Arraiolos	83.38	40	⇓*i*P	P	16 55 01.5	+1.1
PARRA				*i* IAmb	IAmb	16 55 03.6	
	comp=Z,611nm,1.6s						
ESPR	Espera	83.39	43	P	P	16 55 01.8	+1.3
PSBE	So Bento	83.42	39	⇓*i*P	P	16 55 01.9	+1.2
PSBE				*i* IAmb	IAmb	16 55 03.4	
	comp=Z,1µm,1.2s						
YMR	Madison River	83.44	328	IAmb	IAmb	16 55 04.0	
	comp=Z,827nm,1.2s						
PMTG	Montargil	83.45	40	⇓*i*P	P	16 55 01.8	+1.1
PMTG				*i* IAmb	IAmb	16 55 03.2	
	comp=Z,1µm,1.2s						
EMIN	Mina Concepcio	83.49	42	P	P	16 55 02.1	+1.2
PBAR	Barrancos	83.54	41	P	P	16 55 02.2	+1.0
PBAR	Barrancos	83.54	41	⇓*i*P	P	16 55 02.1	+0.9
PBAR				*i* IAmb	IAmb	16 55 03.7	
	comp=Z,431nm,1.4s						
YHL	Hebgen Lake	83.68	328	IAmb	IAmb	16 55 05.4	
	comp=Z,799nm,1.5s						
PESTR	Estremoz	83.68	41	P	P	16 55 03.1	+1.2
PESTR	Estremoz	83.68	41	⇓*i*P	P	16 55 02.9	+1.0
PESTR				*i* IAmb	IAmb	16 55 04.4	
	comp=Z,682nm,1.4s						
PSARD	Sardoal	83.84	40	⇓*i*P	P	16 55 03.3	+0.6
PSARD				*i* IAmb	IAmb	16 55 04.8	
	comp=Z,587nm,1.5s						
EMIJ	Mijas	83.86	44	P	P	16 55 03.6	+0.7
EBAD	Badajoz	83.94	41	P	P	16 55 04.4	+1.2
PCAS	Casmilo, Conde	83.96	39	⇓*i*P	P	16 55 04.3	+1.1
PCAS				*i* IAmb	IAmb	16 55 05.8	
	comp=Z,977nm,1.3s						
PNTR	Pine Nut	84.05	319	IAmb	IAmb	16 55 07.2	
	comp=Z,824nm,0.8s						
PMRV	Marv??o	84.17	40	⇓*i*P	P	16 55 04.8	+0.5
PMRV				*i* IAmb	IAmb	16 55 06.3	
	comp=Z,628nm,1.2s						
EMLI	Melilla	84.20	46	P	P	16 55 05.7	+1.2
WMELI	Melilla	84.22	46	P	P	16 55 05.6	+1.1
PAHR	Pah Rah Range	84.34	320	IAmb	IAmb	16 55 08.4	
	comp=Z,771nm,1.0s						
BCYI	Bear Canyon	84.35	326	IAmb	IAmb	16 55 08.8	
	comp=Z,570nm,1.0s						
PCBR	Castelo Branco	84.39	40	⇓*i*P	P	16 55 05.9	+0.6
PCBR				*i* IAmb	IAmb	16 55 07.4	
	comp=Z,812nm,1.2s						
ECAB	El Cabril	84.44	42	P	P	16 55 06.2	+0.5
LSZ	Lusaka	84.61	104	S	SKSac	17 04 36.8	-1.0
	comp=Z,2.0nm,0.5s,baz=100,slow=21,SNR=8.8						
LSZ				PKKPbc	PKKPbc	17 13 15.1	+2.9
	comp=Z,22nm,0.6s,baz=90,slow=1.8,SNR=33						
LSZ	Lusaka	84.61	104	P	P	16 55 09.9	+2.7
LSZ				S	SKSac	17 04 31.5	-6.3
LSZ	Lusaka	84.61	104	*i* P	P	16 55 10.7	+3.5
EGOR	Sierra Gorda,	84.62	44	P	P	16 55 07.5	+0.8
PTO	Porto	84.64	38	⇓*i*P	P	16 55 07.3	+0.8
PTO				*i* IAmb	IAmb	16 55 08.8	
	comp=Z,1µm,1.3s						
DLMT	Dillon	84.73	328	IAmb	IAmb	16 55 10.0	
	comp=Z,949nm,1.1s						
MTE	Manteigas	84.73	39	⇓*i*P	P	16 55 07.5	+0.5
MTE				*i* IAmb	IAmb	16 55 09.3	
	comp=Z,1µm,1.0s						
PVIS	Viseu	84.75	39	⇓*i*P	P	16 55 07.4	+0.3
ELGU	Los Guajares,	84.76	44	P	P	16 55 07.3	0.0
KUQ	Kuujjuuaa	84.81	357	IAmb	IAmb	16 55 08.9	
	comp=Z,638nm,1.2s						
EADA	Adamuz	85.01	43	P	P	16 55 09.1	+0.7
EQTA	Presa de Quent	85.09	44	P	P	16 55 09.5	+0.6
FARB	Farallon Islan	85.18	317	IAmb	IAmb	16 55 11.2	
	comp=Z,278nm,0.7s						
PVRL	Vila Real	85.22	39	⇓*i*P	P	16 55 10.2	+0.8
PVRL				*i* IAmb	IAmb	16 55 11.7	
	comp=Z,1µm,1.1s						
POLO	Lamas de Olo	85.25	39	⇓*i*P	P	16 55 10.2	+0.7
POLO				*i* IAmb	IAmb	16 55 12.6	
	comp=Z,433nm,1.2s						
CVS	Carmenet Viney	85.26	317	IAmb	IAmb	16 55 12.3	
	comp=Z,853nm,1.1s						
PCAB	Cabril	85.34	38	⇓*i*P	P	16 55 10.5	+0.6
PCAB				*i* IAmb	IAmb	16 55 12.2	
	comp=Z,738nm,1.0s						
PGAV	Gavieira, Arco	85.38	38	⇓*i*P	P	16 55 10.6	+0.4
PGAV				*i* IAmb	IAmb	16 55 15.1	
	comp=Z,616nm,1.4s						
MCCM	Marconi Confer	85.39	317	IAmb	IAmb	16 55 12.9	
	comp=Z,660nm,1.1s						
EGMT	Eagleton	85.42	331	IAmb	IAmb	16 55 12.3	
	comp=Z,623nm,1.1s						
SUTB	Sutter Butte	85.42	318	IAmb	IAmb	16 55 12.8	
	comp=Z,839nm,1.2s						
ORV	Oroville	85.47	319	IAmb	IAmb	16 55 13.6	
	comp=Z,700nm,1.1s						
MVO	Moncorvo	85.53	39	⇓*i*P	P	16 55 11.8	+0.9
MVO				*i* IAmb	IAmb	16 55 13.3	
	comp=Z,994nm,1.2s						
ENIJ	Nijar	85.71	45	P	P	16 55 12.0	+0.1
PAB	San Pablo	86.03	42	P	P	16 55 14.0	+0.7
PAB				IAmb	IAmb	16 55 15.6	
	comp=Z,388nm,1.1s						
PAB	San Pablo	86.03	42	P	P	16 55 14.0	+0.7
PAB				pmax	pmax		
	comp=Z,388nm,1.1s						
HOPS	Hopland Field	86.04	318	IAmb	IAmb	16 55 16.5	
	comp=Z,522nm,1.3s						
PBRG	Braganca	86.12	39	⇓*i*P	P	16 55 14.5	+0.8
PBRG				*i* IAmb	IAmb	16 55 16.9	
	comp=Z,452nm,1.6s						
O03E	Paynes Creek	86.12	319	IAmb	IAmb	16 55 15.6	
	comp=Z,762nm,1.1s						
ESDC	Sonseca Array	86.34	42	P	P	16 55 15.7	+0.9
	comp=Z,104nm,0.7s,baz=238,slow=4.6,SNR=451						
ESDC				pP	pP	16 57 18.5	+0.8
	comp=Z,22nm,1.1s,baz=244,slow=4.5,SNR=4.3						
ESDC				PKiKP	PKiKP	17 00 18.8	+1.0
	comp=Z,2.7nm,0.8s,baz=269,slow=1.7,SNR=7.9						
ESDC				PKPPKP	P'P'df	17 21 08.7	-5.4
	comp=Z,1.8nm,1.1s,baz=33,slow=2.2,SNR=5.5						
	comp=Z,104nm,0.7s						
DCMP	DeCamp, Califo	86.50	318	IAmb	IAmb	16 55 18.9	
	comp=Z,327nm,0.9s						
H04N3	CROZET ISLANDS	86.56	141	P	P	16 55 15.3	-0.3
	baz=145,slow=73,SNR=3.5						
H04N1	CROZET ISLANDS	86.57	141	P	P	16 55 16.2	+0.7
	baz=145,slow=73,SNR=4.4						
H04N2	CROZET ISLANDS	86.58	141	P	P	16 55 16.4	+0.8
	baz=145,slow=73,SNR=5.3						
KCPM	Cahto Peak	86.78	318	IAmb	IAmb	16 55 20.5	
	comp=Z,662nm,1.1s						
CART	Cartagena	86.85	45	P	P	16 55 17.0	-0.2
EMUR	La Murta	86.86	45	P	P	16 55 17.1	-0.1
M03C	McCloud	86.94	320	IAmb	IAmb	16 55 19.8	
	comp=Z,809nm,0.9s						
CASY	Casey	86.97	178	P	P	16 55 18.4	+1.1
CASY				IAmb	IAmb	16 55 20.0	
	comp=Z,328nm,0.9s						
CASY	Casey	86.97	178	P	P	16 55 18.0	+0.7
CASY				sP	sP	16 58 18.9	+1.2
N02D	Trinity Center	87.08	319	IAmb	IAmb	16 55 21.4	
	comp=Z,345nm,0.9s						
ETOB	Tobarra	87.16	44	P	P	16 55 19.3	+0.7
KHBM	Hayfork Bally	87.19	319	IAmb	IAmb	16 55 21.9	
	comp=Z,663nm,1.0s						
M02C	Callahan	87.44	320	IAmb	IAmb	16 55 22.4	
	comp=Z,1µm,1.7s						
F10A	Beach Ranch, E	87.44	326	IAmb	IAmb	16 55 28.7	
	comp=Z,307nm,0.8s						
YBH	Yreka Blue Hor	87.57	320	IAmb	IAmb	16 55 22.2	
	comp=Z,295nm,0.9s						
KHMM	Horse Mountain	87.62	319	IAmb	IAmb	16 55 24.1	
	comp=Z,437nm,0.9s						
L04D	Klamath Falls	87.65	320	IAmb	IAmb	16 55 23.2	
	comp=Z,652nm,1.0s						
J05D	Fort Rock, OR	87.74	322	IAmb	IAmb	16 55 25.2	
	comp=Z,635nm,1.4s						
FFC	Flin Flon	87.83	339	P	P	16 55 22.0	+0.7
FFC				IAmb	IAmb	16 55 23.7	
	comp=Z,555nm,1.0s						
FFC	Flin Flon	87.83	339	P	P	16 55 22.0	+0.7
FFC				pmax	pmax		
	comp=Z,555nm,1.0s						
PINE	Pine Mountain	87.92	322	IAmb	IAmb	16 55 25.4	
	comp=Z,356nm,1.0s						
ECHE	Chera	88.09	43	P	P	16 55 23.8	+0.8
BBOR	Butler Butte	88.29	321	IAmb	IAmb	16 55 25.8	
	comp=Z,318nm,1.0s						
L02F	Cave Junction	88.31	320	IAmb	IAmb	16 55 26.9	
	comp=Z,645nm,1.1s						
I05D	Terrebonne, OR	88.49	323	IAmb	IAmb	16 55 27.2	
	comp=Z,244nm,0.8s						
WIFE	Three Sisters-	88.57	322	IAmb	IAmb	16 55 28.1	
	comp=Z,252nm,0.9s						
IVI	Ivigtut	88.69	7	P	P	16 55 26.9	+1.8
IVI				pP	pP	16 57 30.4	+1.5
G06A	Carlson Farm,	88.70	324	IAmb	IAmb	16 55 28.8	
	comp=Z,278nm,1.1s						
I04A	Tendick Farm,	88.73	322	IAmb	IAmb	16 55 27.9	
	comp=Z,461nm,1.5s						
NEW	Newport	88.98	327	PKPPKP		17 21 08.7	
	comp=Z,0.8nm,0.3s,baz=251,slow=6.0,SNR=3.0						
NRS	Narsarsuaq	88.98	9	IAmb	IAmb	16 55 28.7	
	comp=Z,467nm,1.0s						
G05A	Wamic	89.07	323	IAmb	IAmb	16 55 30.3	
	comp=Z,437nm,0.9s						
H04A	Detroit Lake	89.17	322	IAmb	IAmb	16 55 29.7	
	comp=Z,292nm,0.8s						
I03D	Drain, OR	89.19	321	IAmb	IAmb	16 55 30.5	
	comp=Z,358nm,1.1s						
EIBI	Ibiza	89.19	45	P	P	16 55 29.1	+1.1
C09A	Chrisman Ranch	89.22	327	IAmb	IAmb	16 55 30.1	
	comp=Z,497nm,0.9s						
HOOD	Mount Hood Mea	89.30	323	IAmb	IAmb	16 55 31.1	
	comp=Z,342nm,1.0s						
EPH	Ephrata	89.57	326	IAmb	IAmb	16 55 31.5	
	comp=Z,157nm,1.1s						
COR	Corvallis	89.72	322	P	P	16 55 31.4	+1.1
COR	Corvallis	89.72	322	P	P	16 55 31.4	+1.1
COR				pmax	pmax		
	comp=Z,622nm,0.9s						
I02E	Swisshome, OR	89.72	321	IAmb	IAmb	16 55 33.3	
	comp=Z,569nm,1.0s						
G03D	McMinnville, O	90.10	322	IAmb	IAmb	16 55 36.8	
	comp=Z,246nm,0.9s						
FRB	Frobisher Bay	90.46	358	P	P	16 55 33.5	+0.2
	comp=Z,49nm,0.8s,baz=183,slow=4.8,SNR=48						
FRB				pP	pP	16 57 37.4	-0.1
	comp=Z,15nm,0.8s,baz=190,slow=6.1,SNR=1.9						
	comp=Z,49nm,0.8s						
F04D	Rainier, OR	90.52	323	IAmb	IAmb	16 55 36.1	
	comp=Z,269nm,0.6s						
ETOS	Mallorca	90.55	45	P	P	16 55 35.0	+0.7
D05A	Enumclaw	90.69	324	IAmb	IAmb	16 55 36.7	
	comp=Z,326nm,1.0s						
RADR	Rader Ridge	91.16	323	IAmb	IAmb	16 55 39.4	
	comp=Z,371nm,0.9s						
CEST	Esterri de Car	91.24	42	IAmb	IAmb	16 55 40.5	
	comp=Z,376nm,1.6s						
VAL	Valentia	91.28	30	P	P	16 55 37.6	+0.3
VAL	Valentia	91.28	30	P	P	16 55 37.6	+0.3
CORI	Orista	91.35	43	IAmb	IAmb	16 55 40.1	
	comp=Z,350nm,1.3s						
MAHO	Mahon	91.54	45	P	P	16 55 40.5	+1.7
WISH	Wishkah	91.58	324	IAmb	IAmb	16 55 41.6	
	comp=Z,237nm,1.2s						
B04A	Port Angeles	92.03	324	IAmb	IAmb	16 55 43.5	
	comp=Z,293nm,1.5s						
A04D	Lummi Island	92.05	325	IAmb	IAmb	16 55 43.0	
	comp=Z,209nm,0.8s						
EJON	La Jonquera	92.13	43	P	P	16 55 42.4	+0.8
PGC	Sidney	92.38	325	IAmb	IAmb	16 55 44.8	
	comp=Z,237nm,1.1s						
CCA1	Carnmenellis	92.43	33	*e*P	P	16 55 42.8	+0.1
CCA1				IAmb	IAmb	16 55 44.5	
	comp=Z,101nm,1.0s						
KEST	Kesra	92.67	51	P	P	16 55 45.6	+1.3
	comp=Z,126nm,0.9s,baz=218,slow=2.3,SNR=63						
KEST				PKKP	PKKPbc	17 12 54.9	+1.4
	comp=Z,14nm,0.7s,baz=258,slow=0.5,SNR=12						
	comp=Z,126nm,0.9s						
KEST	Kesra	92.67	51	P	P	16 55 46.0	+1.8
	SNR=7.6						
KEST	Kesra	92.67	51	IAmb	IAmb	16 55 46.7	
	comp=Z,152nm,0.9s						
IGLA	Glengowla, Co	92.69	29	P	P	16 55 43.7	-0.1
IGLA	Glengowla, Co	92.69	29	*e*P	P	16 55 43.3	-0.4
IGLA				IAmb	IAmb	16 55 44.5	
	comp=Z,308nm,1.2s						
SYZ	Scrubby Hill	92.80	213	P	P	16 55 45.1	+0.4
LLLB	Lillooet	92.85	327	IAmb	IAmb	16 55 46.1	
	comp=Z,269nm,1.3s						
MQZ	McQueen’s Vall	92.94	217	P	P	16 55 46.3	+0.9
ODZ	Otahua Downs	93.09	215	P	P	16 55 47.3	+1.2
IWEX	Carrickbyrne,	93.14	31	P	P	16 55 45.7	-0.2
IWEX	Carrickbyrne,	93.14	31	*e*P	P	16 55 45.1	-0.7
APZ	The Paps	93.15	213	P	P	16 55 47.4	+1.0
HOWZ	Holdsworth Sta	93.19	221	P	P	16 55 48.4	+1.7
MRZ	Mangatainoka R	93.30	221	P	P	16 55 48.8	+1.7
MBAR	Mbarara	93.43	92	P	P	16 55 50.8	+2.4
MBAR				S	SKSac	17 05 24.0	-5.0
OXZ	Oxford	93.53	217	P	P	16 55 48.7	+0.6
OZB	Mount Ozzard	93.63	324	IAmb	IAmb	16 55 50.5	
	comp=Z,232nm,0.9s						
LTZ	Lake Taylor	93.77	218	P	P	16 55 50.8	+1.5
LBZ	Lake Benmore	93.78	215	P	P	16 55 50.2	+0.9
RPZ	Rata Peaks	93.79	216	P	P	16 55 50.5	+1.2
WHZ	Wether Hill Ro	93.84	213	P	P	16 55 50.6	+1.1
DSB	Dublin	93.90	30	P	P	16 55 49.5	+0.1
DSB	Dublin	93.90	30	P	P	16 55 49.4	+0.1
DSB	Dublin	93.90	30	IAmb	IAmb	16 55 50.5	
	comp=Z,131nm,0.8s						
DSB	Dublin	93.90	30	*e*P	P	16 55 49.4	0.0
URZ	Urewera	93.91	223	P	P	16 55 50.8	+0.9
	comp=Z,7.0nm,0.8s,baz=135,slow=20,SNR=2.3						
THZ	Tophouse	94.11	219	P	P	16 55 51.7	+0.9
THZ	Tophouse	94.11	219	P	P	16 55 52.6	+1.8
SFJD	Kangerlussuaq	94.13	5	P	P	16 55 50.9	+0.8
	comp=Z,74nm,0.9s,baz=184,slow=3.3,SNR=25						
SFJD				pP	pP	16 57 55.1	+0.6
	comp=Z,34nm,1.0s,baz=222,slow=6.6,SNR=3.3						
	comp=Z,74nm,0.9s						
SFJD	Kangerlussuaq	94.13	5	P	P	16 55 50.9	+0.8
SFJD	Kangerlussuaq	94.13	5	P	P	16 55 50.7	+0.7
MLZ	Mavora Lakes	94.14	214	P	P	16 55 51.4	+0.5
ETVZ	East Tongariro	94.20	222	P	P	16 55 53.3	+1.9
NNZ	Nelson	94.20	219	P	P	16 55 52.8	+1.6
OTVZ	Oturere	94.21	222	P	P	16 55 53.4	+1.9
SNVZ	South Ngauruho	94.21	222	P	P	16 55 53.4	+1.9
TMVZ	Te Maari	94.22	222	P	P	16 55 53.0	+1.5
CBB	Campbell River	94.22	325	IAmb	IAmb	16 55 53.0	
	comp=Z,151nm,1.0s						
MRNZ	Matariki Terra	94.43	219	P	P	16 55 54.2	+1.9
ILTH	Belurgan, Co L	94.44	30	P	P	16 55 51.5	-0.2
ILTH	Belurgan, Co L	94.44	30	*e*P	P	16 55 51.2	-0.5
ILTH				IAmb	IAmb	16 55 52.5	
	comp=Z,205nm,0.9s						
BLKN	Baker Lake	94.46	346	IAmb	IAmb	16 55 54.0	
	comp=Z,327nm,2.0s						
IDGL	Inch Island, C	94.62	29	P	P	16 55 52.4	-0.1
MONM	Monmouth	94.67	33	*e*P	P	16 55 52.7	-0.2
MONM				IAmb	IAmb	16 55 54.2	
	comp=Z,100nm,0.9s						
MCH1	Michaelchurch	94.67	33	*e*P	P	16 55 52.4	-0.4
MCH1				IAmb	IAmb	16 55 55.5	
	comp=Z,46nm,0.8s						
JCZ	Jackson Bay	94.72	215	P	P	16 55 54.8	+1.2
DSZ	Denniston Nort	94.73	218	P	P	16 55 53.8	+0.1
STRD	Stroud	94.94	33	*e*P	P	16 55 53.8	-0.2
STRD				IAmb	IAmb	16 55 54.9	
	comp=Z,137nm,0.7s						
QRZ	Quartz Range	94.94	219	P	P	16 55 54.7	+0.2
HLM1	Long Mynd	95.06	32	*e*P	P	16 55 54.0	-0.7
HLM1				IAmb	IAmb	16 55 55.9	
	comp=Z,72nm,1.2s						
FOEL	Foel Wylfa	95.14	32	*e*P	P	16 55 54.8	-0.1
CLGH	Cloghs, Cushen	95.23	29	*e*P	P	16 55 55.3	0.0
CLGH				IAmb	IAmb	16 55 56.5	
	comp=Z,125nm,0.8s						
IOMK	Kirk Michael	95.38	30	*e*P	P	16 55 55.9	-0.1
IOMK				IAmb	IAmb	16 55 57.1	
	comp=Z,39nm,0.9s						
GAL1	Galloway	95.70	30	*e*P	P	16 55 56.8	-0.7
GAL1				IAmb	IAmb	16 55 57.9	
	comp=Z,78nm,1.0s						
STNC	Stoke	95.73	32	*e*P	P	16 55 58.0	+0.4
CWF	Charnwood Fore	95.95	33	*e*P	P	16 55 58.5	-0.1
NEWG	New Galloway	96.08	30	*e*P	P	16 55 59.0	-0.1
NEWG				IAmb	IAmb	16 56 00.1	
	comp=Z,63nm,0.8s						
LBWR	Ladybower, Pea	96.15	32	*e*P	P	16 55 59.7	+0.2
LBWR				IAmb	IAmb	16 56 00.9	
	comp=Z,85nm,0.8s						
ELSH	Elham, Standar	96.21	35	*e*P	P	16 56 00.4	+0.6
ELSH				IAmb	IAmb	16 56 01.6	
	comp=Z,404nm,0.9s						
KESW	Keswick, Cumbr	96.25	31	*e*P	P	16 56 00.1	+0.1
KESW				IAmb	IAmb	16 56 01.1	
	comp=Z,110nm,0.7s						
ILULI	Ilulissat	96.28	4	IAmb	IAmb	16 56 02.5	
	comp=Z,142nm,1.4s						
LAWE	Loch Awe, Argy	96.31	28	*e*P	P	16 55 59.9	-0.3
LAWE				IAmb	IAmb	16 56 01.5	
	comp=Z,52nm,0.9s						
PGBU	Glenifferbraes	96.41	29	*e*P	P	16 56 00.7	+0.1
PGBU				IAmb	IAmb	16 56 01.8	
	comp=Z,186nm,0.8s						
HPK	Haverah Park	96.54	32	*e*P	P	16 56 00.9	-0.3
HPK				IAmb	IAmb	16 56 02.5	
	comp=Z,66nm,0.6s						
ESK	Eskdalemuir	96.66	30	P	P	16 56 01.5	-0.2
ESK				IAmb	IAmb	16 56 02.7	
	comp=Z,272nm,1.5s						
ESK	Eskdalemuir	96.66	30	*e*P	P	16 56 01.5	-0.2
ESK				IAmb	IAmb	16 56 02.6	
	comp=Z,57nm,0.7s						
ESK	Eskdalemuir	96.66	30	P	P	16 56 01.5	-0.2
ESK				pmax	pmax		
	comp=Z,272nm,1.5s						
ELMS	Elmsett, Ipswi	96.69	34	*e*P	P	16 56 02.2	+0.2
ELMS				IAmb	IAmb	16 56 03.6	
	comp=Z,166nm,0.8s						
EKA	Eskdalemuir Ar	96.69	30	P	P	16 56 01.8	-0.1
	comp=Z,42nm,0.6s,baz=228,slow=3.3,SNR=217						
EKA				PP	PP	17 00 03.8	-3.0
	comp=Z,10.0nm,0.9s,baz=239,slow=6.4,SNR=5.7						
EKA				PKiKP	PKiKP	17 00 35.2	+0.4
	comp=Z,6.4nm,0.8s,baz=235,slow=2.3,SNR=5.3						
EKA				PKKPbc	PKKPbc	17 12 42.5	-1.0
	comp=Z,10nm,0.7s,baz=41,slow=3.4,SNR=13						
	comp=Z,42nm,0.6s						
VOI	Vohitsoka	96.84	119	P	P	16 56 05.8	+2.1
LMK	Market Rasen	96.85	32	*e*P	P	16 56 03.1	+0.4
LMK				IAmb	IAmb	16 56 04.1	
	comp=Z,274nm,0.7s						
WACR	West Acre	96.88	33	*e*P	P	16 56 02.2	-0.6
WACR				IAmb	IAmb	16 56 04.6	
	comp=Z,405nm,0.8s						
KPL	Plockton	96.90	28	*e*P	P	16 56 02.5	-0.3
KPL				IAmb	IAmb	16 56 03.6	
	comp=Z,48nm,0.7s						
EDMD	Edmundbyers	96.92	31	*e*P	P	16 56 02.7	-0.2
EDMD				IAmb	IAmb	16 56 04.3	
	comp=Z,65nm,0.6s						
SENIN	Lac Senin/Sane	96.93	41	IAmb	IAmb	16 56 05.8	
	comp=Z,97nm,0.8s						
LEWI	Lewis, Hebride	96.94	26	*e*P	P	16 56 02.8	-0.1
LEWI				IAmb	IAmb	16 56 03.9	
	comp=Z,44nm,0.8s						
ILON	Igloolik, Nuna	96.95	354	IAmb	IAmb	16 56 04.4	
	comp=Z,136nm,1.1s						
INVG	Invergeldie, C	96.99	29	*e*P	P	16 56 03.0	-0.2
INVG				IAmb	IAmb	16 56 04.5	
	comp=Z,60nm,0.7s						
BORG	Borgarnes	97.05	17	P	P	16 56 05.0	+1.8
BORG	Borgarnes	97.05	17	P	P	16 56 05.0	+1.8
BORG				pmax	pmax		
	comp=Z,57nm,0.8s						
MSSA	Maissana	97.20	44	IAmb	IAmb	16 56 06.4	
	comp=Z,126nm,1.2s						
DOU	Dourbes	97.42	37	*d*P	P	16 56 05.7	+0.5
	comp=Z,76nm,1.0s						
BMRD	Maredsous	97.63	37	*d*P	P	16 56 06.8	+0.6
	comp=Z,154nm,0.9s						
VLC	Villacollemand	97.66	44	P	Pdif	16 56 05.3	-1.3
UCC	Uccle	97.69	36	*d*P	P	16 56 06.8	+0.4
	comp=Z,102nm,0.9s						
RCHB	Rochefort	97.80	37	*d*P	P	16 56 07.3	+0.3
	comp=Z,68nm,1.1s						
BGES	Gesves	97.85	37	*d*P	P	16 56 07.8	+0.6
	comp=Z,76nm,0.9s						
DRUM	Mains of Drumt	97.97	29	*e*P	Pdif	16 56 07.5	0.0
DRUM				IAmb	IAmb	16 56 08.6	
	comp=Z,28nm,0.8s						
BCLA	Clavier	97.98	37	*d*P	P	16 56 08.6	+0.8
	comp=Z,49nm,0.9s						
YKA	Yellowknife Ar	98.00	339	P	P	16 56 08.3	+0.7
	comp=Z,67nm,0.7s,baz=132,slow=3.7,SNR=1197						
YKA				pP	pP	16 58 13.4	+0.8
	comp=Z,25nm,1.2s,baz=139,slow=4.0,SNR=6.1						
YKA				PP	PP	17 00 09.8	-6.7
	comp=Z,13nm,1.1s,baz=140,slow=6.2,SNR=4.0						
YKA				PKiKP	PKiKP	17 00 37.3	+0.4
	comp=Z,1.4nm,0.6s,baz=136,slow=2.1,SNR=5.8						
YKA				PKKPbc	PKKPbc	17 12 38.0	-2.2
	comp=Z,0.9nm,0.4s,baz=313,slow=4.3,SNR=20						
YKA				PKPPKP	P'P'df	17 20 41.6	-9.2
	comp=Z,0.8nm,0.8s,baz=288,slow=2.5,SNR=4.8						
	comp=Z,67nm,0.7s						
YKA	Yellowknife Ar	98.00	339		P	16 56 07.6	0.0
WLF	Walferdange	98.03	38	P	P	16 56 09.3	+1.2
WLF	Walferdange	98.03	38	*e*P	P	16 56 08.9	+0.9
	comp=Z,328nm,0.9s,baz=242,slow=4.4						
WLF	Walferdange	98.03	38	*d*P	P	16 56 09.1	+1.0
	comp=Z,216nm,1.0s						
MCD	Coleburn Disti	98.06	28	*e*P	Pdif	16 56 07.8	-0.1
MCD				IAmb	IAmb	16 56 08.9	
	comp=Z,42nm,0.8s						
BSTI	Sart Tilman	98.21	37	*d*P	P	16 56 09.5	+0.7
	comp=Z,16nm,1.0s						
BHOU	Houvegnez	98.32	37	*d*P	P	16 56 10.5	+1.2
	comp=Z,109nm,0.9s						

BIGH	**Upper Bighouse**	**98.36**	**27**	*e*P	Pdif	16 56 09.0	-0.2
BIGH				IAmb	IAmb	16 56 11.1	
	comp=Z,47nm,0.9s						
BEBN	**Eben Emael**	**98.39**	**37**	*d*P	**P**	**16 56 10.0**	**+0.4**
	comp=Z,81nm,0.9s						
MEM	**Membach**	**98.46**	**37**	*d*P	**P**	**16 56 10.5**	**+0.6**
	comp=Z,72nm,0.9s						
BTNL	**Ternell**	**98.52**	**37**	*d*P	**P**	**16 56 10.9**	**+0.6**
	comp=Z,66nm,1.0s						
BFO	**Black Forest**	**98.56**	**40**	*e*P	**P**	**16 56 11.3**	**+0.8**
	comp=Z,76nm,0.9s,baz=242,slow=4.4						
DAVOX	**Davos/Dischmat**	**98.67**	**42**	P	**P**	**16 56 12.2**	**+0.9**
	comp=Z,78nm,0.7s,baz=231,slow=4.8,SNR=164						
	comp=Z,78nm,0.7s						
AQU	**L'Aquila**	**98.70**	**47**	P	**P**	**16 56 12.4**	**+1.1**
DAVA	**Damuels**	**98.92**	**41**	*i* Pdiff	**P**	**16 56 13.4**	**+1.1**
	comp=Z,96nm,0.9s,SNR=34						
DAVA				*i* PP	**PP**	**17 00 21.9**	**-2.1**
	comp=Z,74nm,1.3s,SNR=6.2						
DAVA				*e*SKS	**SKSac**	**17 05 59.9**	**+4.2**
	comp=Z,9.8nm,1.3s						
DAVA				*i* PKKP	**PKKPbc**	**17 12 37.2**	**-0.1**
	comp=Z,3.8nm,0.4s						
KIBK	**Kibwezi**	**99.14**	**97**	P	**Pdif**	**16 56 18.0**	**+4.1**
KIBK	**Kibwezi**	**99.14**	**97**	P	**Pdif**	**16 56 17.5**	**+3.5**
UBR	**Ueberruh**	**99.26**	**41**	*e*P	**Pdif**	**16 56 14.6**	**+1.0**
	comp=Z,194nm,1.1s,baz=242,slow=4.4						
STU	**Stuttgart**	**99.28**	**40**	*e*P	**Pdif**	**16 56 14.4**	**+0.8**
	comp=Z,342nm,1.0s,baz=242,slow=4.4						
FETA	**Feichten**	**99.30**	**42**	*i* Pdiff	**Pdif**	**16 56 14.9**	**+1.0**
	comp=Z,100nm,1.0s,SNR=24						
FETA				*e*PP	**PP**	**17 00 24.3**	**-2.5**
	comp=Z,30nm,1.3s						
FETA				*e*SKS	**SKSac**	**17 06 00.0**	**+2.5**
	comp=Z,10nm,1.4s						
FETA				*i* PKKP	**PKKPbc**	**17 12 36.2**	**0.0**
	comp=Z,18nm,1.2s						
LODK	**Lodwar**	**99.35**	**91**	P	**Pdif**	**16 56 17.8**	**+2.9**
	SNR=12						
TOAD	**Toad River Com**	**99.54**	**332**	Pdiff	**Pdif**	**16 56 15.0**	**+0.4**
	baz=127						
RETA	**Reutte**	**99.55**	**41**	*i* Pdiff	**Pdif**	**16 56 15.9**	**+1.0**
	comp=Z,93nm,1.1s,SNR=25						
RETA				*i* PP	**PP**	**17 00 25.1**	**-3.5**
	comp=Z,43nm,1.3s						
RETA				*i* SKS	**SKSac**	**17 06 01.5**	**+3.0**
	comp=Z,12nm,1.2s						
RETA				*i* PKKP	**PKKPbc**	**17 12 35.3**	**-0.1**
	comp=Z,14nm,1.5s						
BUG	**Bochum--Univer**	**99.58**	**37**	*e*P	**Pdif**	**16 56 15.8**	**+1.0**
	comp=Z,162nm,1.0s,baz=242,slow=4.4						
TNS	**Taunus Mts**	**99.59**	**38**	*e*P	**Pdif**	**16 56 15.9**	**+0.9**
	comp=Z,143nm,1.1s,baz=242,slow=4.4						
SQTA	**Sankt Quirin**	**99.68**	**42**	*i* Pdiff	**Pdif**	**16 56 16.6**	**+1.0**
	comp=Z,140nm,1.0s,SNR=49						
SQTA				*i* PP	**PP**	**17 00 27.1**	**-2.5**
	comp=Z,36nm,1.2s						
SQTA				*e*SKS	**SKSac**	**17 06 01.8**	**+2.6**
	comp=Z,9.2nm,1.2s						
SQTA				*i* PKKP	**PKKPbc**	**17 12 35.1**	**0.0**
	comp=Z,9.6nm,0.6s,SNR=4.7						
SQTA	**Sankt Quirin**	**99.68**	**42**	*e*P	**PKKPbc**	**17 12 35.1**	**0.0**
	comp=Z,9.6nm,0.6s,SNR=4.7						
U35K	**Hyder**	**99.95**	**328**	Pdiff	**Pdif**	**16 56 16.9**	**+0.5**
	baz=124						
WATA	**Walderalm**	**99.95**	**42**	*i* Pdiff	**Pdif**	**16 56 17.5**	**+0.7**
	comp=Z,94nm,1.3s,SNR=27						
WATA				*i* PP	**PP**	**17 00 28.2**	**-3.5**
	comp=Z,25nm,1.1s						
WATA				*i* SKS	**SKSac**	**17 06 03.0**	**+2.3**
	comp=Z,9.5nm,1.0s						
WATA				*i* PKKP	**PKKPbc**	**17 12 35.0**	**+0.6**
	comp=Z,9.3nm,1.0s						
WTTA	**Wattenberg**	**99.95**	**42**	*i* Pdiff	**Pdif**	**16 56 17.9**	**+1.0**
	comp=Z,107nm,1.2s,SNR=25						
WTTA				*i* PP	**PP**	**17 00 28.3**	**-3.5**
	comp=Z,29nm,1.2s						
WTTA				*i* SKS	**SKSac**	**17 06 02.9**	**+2.2**
	comp=Z,15nm,1.2s						
WTTA				*i* PKKP	**PKKPbc**	**17 12 34.2**	**-0.2**
	comp=Z,16nm,1.1s,SNR=4.2						
WTTA	**Wattenberg**	**99.95**	**42**	*e*P	**PKKPbc**	**17 12 34.2**	**-0.2**
	comp=Z,16nm,1.1s,SNR=4.2						
KASTN	**Kahler Asten**	**100.07**	**37**	*e*P	**Pdif**	**16 56 17.8**	**+0.7**
	comp=Z,68nm,1.0s,baz=242,slow=4.4						
FUR	**Furstenfeldbru**	**100.18**	**41**	*e*P	**Pdif**	**16 56 18.3**	**+0.7**
	comp=Z,126nm,1.3s,baz=242,slow=4.4						
LIRD	**Liard River Hi**	**100.23**	**332**	Pdiff	**Pdif**	**16 56 18.5**	**+0.9**
	baz=126						
ABTA	**Abfaltersbach**	**100.23**	**43**	*i* Pdiff	**Pdif**	**16 56 19.1**	**+1.1**
	comp=Z,70nm,1.1s,SNR=20						
ABTA				*i* PP	**PP**	**17 00 31.7**	**-2.1**
	comp=Z,42nm,1.2s						
ABTA				*i* SKS	**SKSac**	**17 06 02.9**	**+0.9**
	comp=Z,12nm,1.4s						
ABTA				*i* PKKP	**PKKPbc**	**17 12 32.9**	**-0.6**
	comp=Z,8.8nm,0.8s						
IBBN	**Ibbenburen**	**100.28**	**36**	*e*P	**Pdif**	**16 56 18.9**	**+1.0**
	comp=Z,193nm,0.9s,baz=242,slow=4.4						
V35K	**Ketchikan**	**100.39**	**327**	Pdiff	**Pdif**	**16 56 19.4**	**+1.1**
	baz=123						
LRW	**Lerwick**	**100.47**	**27**	*e*P	**Pdif**	**16 56 19.2**	**+0.6**
LRW				IAmb	IAmb	16 56 21.0	
	comp=Z,27nm,0.9s						
T35M	**Bob Quinn**	**100.65**	**329**	Pdiff	**Pdif**	**16 56 20.9**	**+1.4**
	baz=123						
LESA	**Schwarzleotal**	**100.65**	**42**	*i* Pdiff	**Pdif**	**16 56 20.7**	**+0.9**
	comp=Z,40nm,0.7s,SNR=22						
LESA				*i* PP	**PP**	**17 00 33.6**	**-3.2**
	comp=Z,44nm,1.3s						
LESA				*i* SKS	**SKSac**	**17 06 07.6**	**+3.7**
	comp=Z,11nm,0.9s						
LESA				*i* PKKP	**PKKPbc**	**17 12 31.9**	**-0.4**
	comp=Z,14nm,1.0s,SNR=6.2						
LESA	**Schwarzleotal**	**100.65**	**42**	*e*P	**PKKPbc**	**17 12 31.9**	**-0.4**
	comp=Z,14nm,1.0s,SNR=6.2						
SUMG	**Summit**	**100.70**	**7**	P	**Pdif**	**16 56 21.4**	**+1.5**
UBBA	**Unterbreizbach**	**100.75**	**38**	*e*P	**Pdif**	**16 56 20.8**	**+0.9**
	comp=Z,48nm,1.4s,baz=242,slow=4.4						
MYKA	**Terra Mystica**	**100.86**	**43**	*i* Pdiff	**Pdif**	**16 56 22.0**	**+1.2**
	comp=Z,34nm,0.9s,SNR=14						
MYKA				*i* PP	**PP**	**17 00 36.4**	**-2.0**
	comp=Z,61nm,1.4s,SNR=5.7						
MYKA				*i* SKS	**SKSac**	**17 06 07.5**	**+2.6**
	comp=Z,14nm,1.2s						
GRF	**Grafenberg Arr**	**100.89**	**40**	*e*P	**Pdif**	**16 56 21.6**	**+0.9**
	comp=Z,110nm,1.0s,baz=242,slow=4.4						
KBA	**Koelnbreinsper**	**100.89**	**43**	*e*Pdiff	**Pdif**	**16 56 21.8**	**+0.8**
	comp=Z,34nm,0.7s						
KBA				PP	**PP**	**17 00 36.0**	**-2.7**
	comp=Z,38nm,1.3s						
CEY	**Cerknica**	**100.94**	**44**	*i* Pdiff	**Pdif**	**16 56 22.2**	**+1.1**
GTTG	**Gottingen**	**101.09**	**38**	*e*P	**Pdif**	**16 56 22.6**	**+1.0**
	comp=Z,58nm,1.0s,baz=242,slow=4.4						
LJU	**Ljubljana**	**101.14**	**44**	*e*Pdiff	**Pdif**	**16 56 22.9**	**+1.0**
LJU				*e*PP	**PP**	**17 00 37.2**	**-3.1**
CRAG	**Craig**	**101.19**	**327**	Pdiff	**Pdif**	**16 56 23.1**	**+1.2**
	baz=122						
WRAK	**Wrangell Islan**	**101.32**	**328**	Pdiff	**Pdif**	**16 56 23.8**	**+1.4**
	baz=122						
RETH	**Rethem/Aller,**	**101.35**	**36**	*e*P	**Pdif**	**16 56 23.5**	**+0.9**
	comp=Z,72nm,1.0s,baz=242,slow=4.4						
BIOA	**Bad Ischl, Aus**	**101.35**	**42**	*i* Pdiff	**Pdif**	**16 56 23.4**	**+0.5**
	comp=Z,48nm,1.5s,SNR=16						
BIOA				*i* PP	**PP**	**17 00 38.1**	**-3.8**
	comp=Z,62nm,2.1s						
BIOA				*e*SKS	**SKSac**	**17 06 07.5**	**+0.4**
	comp=Z,6.0nm,0.9s						
BIOA				*i* PKKP	**PKKPbc**	**17 12 30.9**	**+0.7**
	comp=Z,6.1nm,1.1s						
OBKA	**Obir**	**101.36**	**44**	*i* Pdiff	**Pdif**	**16 56 24.4**	**+1.3**
	comp=Z,39nm,1.1s,SNR=9.0						
OBKA				*i* PP	**PP**	**17 00 39.7**	**-2.5**
	comp=Z,60nm,1.2s,SNR=5.6						
CLZ	**Clausthal**	**101.45**	**37**	*e*P	**Pdif**	**16 56 24.2**	**+1.0**
	comp=Z,48nm,1.1s,baz=242,slow=4.4						
ROTZ	**Rotzenmuhle**	**101.48**	**40**	*e*P	**Pdif**	**16 56 24.6**	**+1.2**
	comp=Z,7.8nm,1.0s,baz=242,slow=4.4						
WRGLY	**Wrigley**	**101.53**	**336**	Pdiff	**Pdif**	**16 56 24.2**	**+1.0**
	baz=128						
U33K	**Whale Pass**	**101.53**	**328**	Pdiff	**Pdif**	**16 56 24.8**	**+1.5**
	baz=121						
MANZ	**Manzenberg**	**101.53**	**40**	*e*P	**Pdif**	**16 56 24.5**	**+0.9**
	comp=Z,8.1nm,1.0s,baz=242,slow=4.4						
S34M	**Telegraph Cree**	**101.56**	**330**	Pdiff	**Pdif**	**16 56 25.6**	**+2.2**
	baz=123						
MOX	**Moxa**	**101.56**	**39**	*e*P	**Pdif**	**16 56 24.8**	**+1.1**
	comp=Z,31nm,1.0s,baz=242,slow=4.4						
WET	**Wettzell**	**101.58**	**41**	*e*P	**Pdif**	**16 56 24.5**	**+0.6**
	comp=Z,50nm,1.5s,baz=242,slow=4.4						
SOKA	**Soboth**	**101.74**	**44**	*i* Pdiff	**Pdif**	**16 56 25.7**	**+1.0**
	comp=Z,24nm,1.4s,SNR=10.0						
SOKA				*i* PKiKP	**PKiKP**	**17 00 41.6**	**-2.7**
	comp=Z,68nm,1.4s,SNR=6.4						
SOKA				*i* SKS	**SKSac**	**17 06 11.6**	**+2.6**
	comp=Z,8.0nm,1.4s						
ASSE	**Asse, Remlinge**	**101.75**	**37**	*e*P	**Pdif**	**16 56 25.3**	**+0.9**
	comp=Z,57nm,1.2s,baz=242,slow=4.4						
WTLY	**Watson Lake, Y**	**101.75**	**332**	Pdiff	**Pdif**	**16 56 25.9**	**+1.5**
	baz=124						
PERS	**Pernice**	**101.77**	**44**	*e*PP	**PKiKP**	**17 00 41.5**	**-2.8**
PLN	**Plauen**	**101.79**	**39**	*e*P	**Pdif**	**16 56 25.7**	**+0.9**
	comp=Z,10.0nm,1.1s,baz=242,slow=4.4						
MOA	**Molln**	**101.80**	**42**	*i* Pdiff	**Pdif**	**16 56 25.5**	**+0.7**
	comp=Z,35nm,1.1s,SNR=12						
MOA				*i* PKiKP	PKiKP	17 00 36.1	-8.2
	comp=Z,54nm,1.3s						
MOA				*i* SKS	**SKSac**	**17 06 11.5**	**+2.4**
	comp=Z,12nm,1.3s						
T33K	**Petersburg**	**101.81**	**328**	Pdiff	**Pdif**	**16 56 26.3**	**+1.7**
	baz=121						
NEUB	**Neuenburg**	**101.92**	**38**	*e*P	**Pdif**	**16 56 26.2**	**+1.0**
	comp=Z,77nm,1.2s,baz=242,slow=4.4						
GEC2	**GERESS Array S**	**101.92**	**41**	*e*P	**Pdif**	**16 56 26.1**	**+0.7**
	comp=Z,112nm,2.0s,baz=242,slow=4.4						
GERES	**GERESS Array B**	**101.92**	**41**	P	**Pdif**	**16 56 25.8**	**+0.3**
	comp=Z,7.2nm,0.8s,baz=227,slow=2.9,SNR=25						
GERES				PKiKP	**PKiKP**	**17 00 45.1**	**+0.6**
	comp=Z,6.3nm,0.7s,baz=291,slow=0.6,SNR=15						
GERES				PKKPbc	**PKKPbc**	**17 12 29.3**	**+0.6**
	comp=Z,4.3nm,0.8s,baz=42,slow=2.2,SNR=9.0						
GERES				PKPPKP	**P'P'df**	**17 20 41.7**	**-3.1**
	comp=Z,0.4nm,0.5s,baz=169,slow=1.5,SNR=3.5						
TANN	**Tannenbergstha**	**101.93**	**39**	*e*P	**Pdif**	**16 56 26.9**	**+1.5**
	comp=Z,42nm,1.2s,baz=242,slow=4.4						
KHC	**Kasperske Hory**	**101.98**	**41**	*e*P	**Pdif**	**16 56 26.7**	**+1.0**
KHC				*e*		17 00 42.9	
KHC				*e*		17 07 19.1	
KHC	**Kasperske Hory**	**101.98**	**41**	*e*PDIFF	**Pdif**	**16 56 26.7**	**+1.0**
KHC				*e*PKP	**PKiKP**	**17 00 42.9**	**-1.7**
KHC				*e*SDIF		17 07 19.1	
KHC				*e*x	x	17 08 50.7	
KHC				*e*PKKP	**PKKPbc**	**17 12 29.0**	**+0.5**
FLTG	**Flechtingen**	**102.16**	**37**	*e*P	**Pdif**	**16 56 27.2**	**+0.9**
	comp=Z,35nm,0.8s,baz=242,slow=4.4						
CKRC	**Cesky Krumlov**	**102.27**	**41**	*e*P	**Pdif**	**16 56 27.8**	**+0.9**
CKRC	**Cesky Krumlov**	**102.27**	**41**	*e*PDIFF	**Pdif**	**16 56 27.8**	**+0.9**
CKRC				*e*PKKP	**PKKPbc**	**17 12 27.9**	**+0.3**
R33M	**Jennings River**	**102.28**	**331**	Pdiff	**Pdif**	**16 56 28.5**	**+1.7**
	baz=122						
ARSA	**Arzberg**	**102.30**	**43**	*i* Pdiff	**Pdif**	**16 56 27.9**	**+0.8**
	comp=Z,16nm,1.1s,SNR=9.3						
ARSA				*i* PKiKP	**PKiKP**	**17 00 44.5**	**-0.7**
	comp=Z,24nm,1.2s						
ARSA				*i* SKS	**SKSac**	**17 06 14.3**	**+2.8**
	comp=Z,8.3nm,1.3s						
KOGS	**Kog**	**102.39**	**44**	*i* PP	**PKiKP**	**17 00 45.9**	**+0.5**
BSEG	**Bad Segeberg**	**102.43**	**36**	*e*P	**Pdif**	**16 56 28.3**	**+0.9**
	comp=Z,18nm,0.9s,baz=242,slow=4.4						
ZVC	**Zvikov**	**102.48**	**41**	*e*PDIFF	**Pdif**	**16 56 28.7**	**+0.9**
ZVC				*e*SDIF		17 07 26.7	
HSKC	**Hora Svate Kat**	**102.57**	**39**	*e*PDIFF	**Pdif**	**16 56 29.7**	**+1.5**
HSKC				*e*PP	**PKiKP**	**17 00 44.7**	**-0.9**
Q32M	**Nakina River**	**102.62**	**330**	Pdiff	**Pdif**	**16 56 30.2**	**+1.8**
	baz=122						
CLL	**Collm**	**102.65**	**39**	⇓*i*P	**Pdif**	**16 56 29.5**	**+1.0**
CLL				pmax	pmax		
	comp=Z,60nm,1.3s						
CLL	**Collm**	**102.65**	**39**	*e*P	**Pdif**	**16 56 29.2**	**+0.7**
	comp=Z,58nm,1.3s,baz=242,slow=4.4						
KMY	**Karmoy**	**102.66**	**29**	*e*Pdif	**Pdif**	**16 56 29.1**	**+0.8**
CONA	**Conrad Observa**	**102.80**	**43**	*i* Pdiff	**Pdif**	**16 56 30.2**	**+0.8**
	comp=Z,16nm,1.2s,SNR=9.1						
CONA				*i* PKiKP	**PKiKP**	**17 00 46.6**	**+0.4**
	comp=Z,45nm,1.1s,SNR=6.2						
CONA				*e*PKKP	**PKKPbc**	**17 12 27.7**	**+1.5**
	comp=Z,8.5nm,1.5s						
S32K	**Killisnoo**	**102.91**	**328**	Pdiff	**Pdif**	**16 56 31.5**	**+2.0**
	baz=120						
RICC	**Richard**	**102.92**	**40**	*e*PDIFF	**Pdif**	**16 56 31.6**	**+1.9**
PRU	**Pruhonice**	**102.93**	**40**	*e*P	**Pdif**	**16 56 31.4**	**+1.6**
PRU	**Pruhonice**	**102.93**	**40**	*e*PDIFF	**Pdif**	**16 56 31.4**	**+1.6**
PRU				*e*PP	**PKiKP**	**17 00 49.6**	**+3.4**
PRU				*e*PKKP	**PKKPbc**	**17 12 26.0**	**+0.3**
RONA	**Rosalia, Austr**	**102.96**	**43**	*i* Pdiff	**Pdif**	**16 56 31.2**	**+1.1**
	comp=Z,16nm,1.2s,SNR=9.8						
RONA				*i* PKiKP	**PKiKP**	**17 00 46.5**	**+0.1**
	comp=Z,80nm,1.3s,SNR=9.9						
BRG	**Berggiesshubel**	**102.98**	**39**	*e*P	**Pdif**	**16 56 30.9**	**+0.9**
	comp=Z,21nm,1.1s,baz=242,slow=4.4						
SIT	**Sitka**	**103.06**	**328**	Pdiff	**Pdif**	**16 56 31.4**	**+1.3**
	baz=120						
TREC	**Trest**	**103.17**	**41**	*e*P	**Pdif**	**16 56 32.4**	**+1.5**
TREC	**Trest**	**103.17**	**41**	*e*PDIFF	**Pdif**	**16 56 32.4**	**+1.5**
PVCC	**Panska Ves**	**103.18**	**40**	*e*P	**Pdif**	**16 56 32.3**	**+1.4**
PVCC	**Panska Ves**	**103.18**	**40**	*e*PDIFF	**Pdif**	**16 56 32.3**	**+1.4**
PVCC				*e*PKP	**PKiKP**	**17 00 48.0**	**+1.3**
R32K	**Eaglecrest**	**103.28**	**329**	Pdiff	**Pdif**	**16 56 32.9**	**+1.7**
	baz=120						
BLS5	**Blasjo**	**103.30**	**30**	*e*Pdif	**Pdif**	**16 56 30.9**	**-0.4**
ASK	**Askoy**	**103.30**	**28**	*e*Pdif	**Pdif**	**16 56 32.3**	**+1.2**
ASK				IVmB_BB		16 56 33.4	
	comp=Z,510nm,1.4s						
BER	**Bergen**	**103.31**	**28**	*e*Pdif	**Pdif**	**16 56 32.4**	**+1.2**
RES	**Resolute Bay**	**103.41**	**352**	Pdiff	**Pdif**	**16 56 32.5**	**+1.1**
	comp=Z,14nm,0.9s,baz=169,slow=7.0,SNR=44						
SUE	**Sulen**	**103.42**	**28**	*e*Pdif	**Pdif**	**16 56 33.1**	**+1.4**
P33M	**Teslin, Yukon**	**103.51**	**331**	Pdiff	**Pdif**	**16 56 33.9**	**+1.6**
	baz=121						
P32M	**Atlin**	**103.58**	**330**	Pdiff	**Pdif**	**16 56 34.1**	**+1.6**
	baz=120						
RUE	**Ruedersdorf**	**103.61**	**38**	*e*P	**Pdif**	**16 56 33.6**	**+0.9**
	comp=Z,75nm,0.8s,baz=242,slow=4.4						
KRUC	**Moravsky**	**103.61**	**42**	*e*PDIFF	**Pdif**	**16 56 33.6**	**+0.8**
KRUC				*e*PP	**PP**	**17 00 54.7**	**-3.8**
ODD1	**Odda**	**103.62**	**29**	*e*Pdif	**Pdif**	**16 56 34.6**	**+2.0**
IDI	**Anoyia**	**103.73**	**57**	Pdiff	**Pdif**	**16 56 35.5**	**+1.6**
	comp=Z,17nm,1.0s,baz=198,slow=16,SNR=2.1						
MORH	**Mrgy, Hungar**	**103.79**	**45**	⇓P	**PKiKP**	**17 00 48.5**	**+0.5**
FOO	**Floro**	**103.82**	**27**	*e*Pdif	**Pdif**	**16 56 34.2**	**+0.8**
VRAC	**Vranov**	**103.83**	**42**	Pdiff	**Pdif**	**16 56 35.3**	**+1.4**
	comp=Z,10nm,0.9s,baz=219,slow=4.1,SNR=22						
VRAC				PKiKP	**PKiKP**	**17 00 48.2**	**+0.3**
	comp=Z,11nm,0.9s,baz=134,slow=5.0,SNR=6.0						
VRAC				PKKPbc	**PKKPbc**	**17 12 23.3**	**+0.2**
	comp=Z,3.0nm,0.7s,baz=225,slow=1.4,SNR=3.6						
VRAC	**Vranov**	**103.83**	**42**	⇑P	**PKiKP**	**17 00 49.0**	**+1.1**
VRAC	**Vranov**	**103.83**	**42**	*e*PDIFF	**Pdif**	**16 56 34.4**	**+0.5**
VRAC				*e*PP	**PP**	**17 00 57.0**	**-3.1**
MODS	**Modra-Piesok**	**103.85**	**43**	*i* P	**Pdif**	**16 56 35.0**	**+1.1**
MODS	**Modra-Piesok**	**103.85**	**43**	*e*PDIFF	**Pdif**	**16 56 35.0**	**+1.1**
MODS				*e*		17 00 49.0	
R31K	**City Hall, Gus**	**103.91**	**329**	Pdiff	**Pdif**	**16 56 34.8**	**+0.9**
	baz=119						
S31K	**Pelican**	**103.92**	**328**	Pdiff	**Pdif**	**16 56 34.7**	**+0.7**
	baz=119						
UPC	**Upice**	**104.00**	**40**	*e*P	**Pdif**	**16 56 36.4**	**+1.8**
UPC	**Upice**	**104.00**	**40**	*e*PDIFF	**Pdif**	**16 56 36.4**	**+1.8**
CHVC	**Chvalec**	**104.06**	**40**	*e*P	**Pdif**	**16 56 36.5**	**+1.6**
CHVC	**Chvalec**	**104.06**	**40**	*e*PDIFF	**Pdif**	**16 56 36.5**	**+1.6**
CHVC				*e*PKP	**PKiKP**	**17 00 49.4**	**+1.1**
CHVC				*e*PKKP	**PKKPbc**	**17 12 23.1**	**+0.7**
HYA	**Hoyanger**	**104.07**	**28**	*e*P	**Pdif**	**16 56 36.1**	**+1.6**
N32M	**Quiet Lake**	**104.10**	**332**	Pdiff	**Pdif**	**16 56 36.0**	**+1.2**
	baz=120						
DPC	**Dobruska-Polom**	**104.12**	**41**	*e*P	**Pdif**	**16 56 36.9**	**+1.8**
DPC				*e*		17 07 39.8	
DPC	**Dobruska-Polom**	**104.12**	**41**	*e*PDIFF	**Pdif**	**16 56 36.9**	**+1.8**
DPC				*e*PKP	**PKiKP**	**17 00 49.6**	**+1.1**
DPC				*e*SDIF		17 07 39.8	
DPC				*e*PKKP	**PKKPbc**	**17 12 22.8**	**+0.5**
OSTC	**Ostas**	**104.14**	**40**	*e*P	**Pdif**	**16 56 37.2**	**+2.0**
OSTC	**Ostas**	**104.14**	**40**	*e*PDIFF	**Pdif**	**16 56 37.2**	**+2.0**
OSTC				*e*PP	**PKiKP**	**17 00 50.0**	**+1.5**
SKAG	**Skagway**	**104.23**	**330**	Pdiff	**Pdif**	**16 56 37.4**	**+2.1**
	baz=119						
KRLC	**Kraliky**	**104.27**	**41**	*e*P	**Pdif**	**16 56 37.8**	**+2.0**
KRLC	**Kraliky**	**104.27**	**41**	*e*PDIFF	**Pdif**	**16 56 37.8**	**+2.0**
KRLC				*e*PKKP	**PKKPbc**	**17 12 22.4**	**+0.6**
JAVC	**Velka Javorina**	**104.29**	**42**	*e*PDIFF	**Pdif**	**16 56 37.0**	**+1.1**
MAUC	**Maruska**	**104.59**	**42**	*e*PDIFF	**Pdif**	**16 56 39.2**	**+2.0**
MAUC				*e*PP	**PKiKP**	**17 00 51.0**	**+1.6**
MORC	**Moravsky Berou**	**104.59**	**41**	*e*PDIFF	**Pdif**	**16 56 38.5**	**+1.2**
MORC				*e*PP	**PP**	**17 01 01.4**	**-4.3**
WHY	**Whitehorse**	**104.62**	**331**	Pdiff	**Pdif**	**16 56 39.1**	**+1.9**
	baz=119						
PLBC	**Pleasant Camp**	**104.70**	**330**	Pdiff	**Pdif**	**16 56 39.4**	**+2.0**
	baz=118						
SKAR	**Skarslia**	**104.73**	**29**	*e*Pdif	**Pdif**	**16 56 39.0**	**+1.4**
STEB	**Steborice**	**104.79**	**41**	*e*PDIFF	**Pdif**	**16 56 39.6**	**+1.5**
STEB				*e*PP	**PKiKP**	**17 00 50.7**	**+1.0**
STEB				*e*PKKP	**PKKPbc**	**17 12 20.5**	**+0.3**
JMI	**Jan Mayen**	**104.82**	**16**	*e*Pdif	**Pdif**	**16 56 37.2**	**-0.5**
AKN	**Aaknes**	**104.91**	**27**	*e*Pdif	**Pdif**	**16 56 40.0**	**+1.7**
AKN				*i*		17 09 31.3	
M31M	**Drury Creek, Y**	**105.16**	**333**	PKiKP	**PKiKP**	**17 00 51.5**	**+1.4**
	baz=119						
O30N	**Mendenhall**	**105.19**	**331**	PKiKP	**PKiKP**	**17 00 51.4**	**+1.3**
	baz=118						
MDVR	**Moldovita**	**105.19**	**47**	⇑P	**PKiKP**	**17 00 51.6**	**+0.9**
P30M	**Million Dollar**	**105.27**	**330**	PKiKP	**PKiKP**	**17 00 51.9**	**+1.5**
	baz=118						
MOL	**Molde**	**105.33**	**27**	*e*Pdif	**Pdif**	**16 56 42.7**	**+2.6**
P29M	**Windy Craggy**	**105.40**	**330**	PKiKP	**PKiKP**	**17 00 52.5**	**+2.0**
	baz=117						
N31M	**Braeburn, Yuko**	**105.40**	**332**	PKiKP	**PKiKP**	**17 00 52.2**	**+1.7**
	baz=118						
C36M	**Paulatuk**	**105.43**	**341**	PKiKP	**PKiKP**	**17 00 52.3**	**+2.1**
	baz=126						
BZS	**Buzias**	**105.46**	**47**	⇑P	**PKiKP**	**17 00 52.2**	**+1.2**
LANS	**Liptovska Anna**	**105.49**	**43**	*i* P	**Pdif**	**16 56 43.3**	**+2.0**
LANS	**Liptovska Anna**	**105.49**	**43**	*e*PDIFF	**Pdif**	**16 56 43.3**	**+2.0**
LANS				*e*		17 00 52.8	
HERR	**Herculane**	**105.70**	**47**	⇓P	**PKiKP**	**17 00 52.3**	**+0.8**
DOMB	**Dombas**	**105.70**	**28**	*e*Pdif	**Pdif**	**16 56 43.7**	**+1.9**
HYT	**Haines Junctio**	**105.83**	**331**	PKiKP	**PKiKP**	**17 00 52.9**	**+1.4**
	baz=117						
N30M	**Aishikik Lake**	**105.94**	**331**	PKiKP	**PKiKP**	**17 00 53.1**	**+1.5**
	baz=117						
O29M	**Mount Kennedy**	**106.07**	**330**	PKiKP	**PKiKP**	**17 00 53.2**	**+1.3**
	baz=116						
NB2	**NORSAR Subarra**	**106.16**	**29**	P	**Pdif**	**16 56 44.2**	**+0.3**
	comp=Z,65nm,2.0s,baz=246,slow=4.8						
NB2				PKPdf	**PKiKP**	**17 00 52.9**	**+1.0**
	comp=Z,3.5nm,0.8s,baz=228,slow=1.8						
NB2				PKKP	**PKKPbc**	**17 12 14.3**	**-2.1**
	comp=Z,9.3nm,1.1s,baz=64,slow=1.9						
NB2				P'P'	**P'P'df**	**17 20 32.9**	**-2.9**
	comp=Z,13nm,1.2s,baz=62,slow=2.2						
NOA	**NORSAR Array B**	**106.16**	**29**	Pdiff	**Pdif**	**16 56 45.2**	**+1.3**
	comp=Z,1.9nm,0.8s,baz=236,slow=4.9,SNR=13						
NOA				PKiKP	**PKiKP**	**17 00 52.4**	**+0.4**
	comp=Z,4.2nm,0.7s,baz=249,slow=2.2,SNR=20						
NOA				PKKPbc	**PKKPbc**	**17 12 14.8**	**-1.6**
	comp=Z,1.7nm,0.6s,baz=261,slow=2.8,SNR=7.0						
NOA				PKKPab	**PKKPab**	**17 12 33.0**	**+1.1**
	comp=Z,6.8nm,0.8s,baz=65,slow=4.5,SNR=19						
NOA				PKPPKP	**P'P'df**	**17 20 31.8**	**-4.1**
	comp=Z,4.0nm,1.0s,baz=77,slow=2.0,SNR=6.9						
NC602	**NORSAR Array S**	**106.17**	**30**	*e*Pdif	**Pdif**	**16 56 45.2**	**+1.3**
YUK6	**Outpost Mounta**	**106.26**	**331**	PKiKP	**PKiKP**	**17 00 53.6**	**+1.2**
	baz=116						
M30M	**Minto, Yukon**	**106.33**	**332**	PKiKP	**PKiKP**	**17 00 53.4**	**+1.2**
	baz=117						
DEV	**Deva**	**106.39**	**47**	⇓P	**PKiKP**	**17 00 54.2**	**+1.4**
YUK4	**Talbot Arm**	**106.56**	**331**	PKiKP	**PKiKP**	**17 00 54.0**	**+1.2**
	baz=116						
PINM	**Pinnacle**	**106.74**	**329**	PKiKP	**PKiKP**	**17 00 54.3**	**+1.2**
	baz=115						
MARR	**Marisel-Cluj**	**106.82**	**46**	⇑P	**PKiKP**	**17 00 54.8**	**+1.2**
HFS	**Hagfors**	**106.87**	**31**	Pdiff	**Pdif**	**16 56 47.5**	**+0.5**
	comp=Z,5.4nm,0.8s,baz=194,slow=3.1,SNR=12						
HFS				PKiKP	**PKiKP**	**17 00 53.0**	**-0.2**
	comp=Z,12nm,0.7s,baz=186,slow=3.0,SNR=17						
HFS				PKKPbc	**PKKPbc**	**17 12 12.9**	**-1.3**
	comp=Z,8.6nm,0.8s,baz=93,slow=4.8,SNR=9.3						
HFS				PKKPab	**PKKPab**	**17 12 29.5**	**+0.7**
	comp=Z,8.1nm,0.5s,baz=98,slow=4.5,SNR=22						
H31M	**Peel River**	**106.87**	**336**	PKiKP	**PKiKP**	**17 00 53.5**	**+0.4**
	baz=118						
M29M	**Somme Creek**	**106.96**	**332**	PKiKP	**PKiKP**	**17 00 54.8**	**+1.3**
	baz=116						
O28M	**Mount Upton**	**107.00**	**330**	PKiKP	**PKiKP**	**17 00 55.2**	**+1.4**
	baz=115						
YUK8	**Steele Glacier**	**107.03**	**331**	PKiKP	**PKiKP**	**17 00 55.0**	**+1.2**
	baz=115						
J30M	**Hart River**	**107.05**	**334**	PKiKP	**PKiKP**	**17 00 54.4**	**+0.8**
	baz=117						
L29M	**L29M**	**107.11**	**333**	PKiKP	**PKiKP**	**17 00 54.6**	**+0.9**
	baz=116						
K29M	**Barlow Dome**	**107.19**	**333**	PKiKP	**PKiKP**	**17 00 54.3**	**+0.4**
	baz=116						
TNR	**Turnu Rosu**	**107.20**	**47**	⇑P	**PKiKP**	**17 00 55.1**	**+0.8**
HUMR	**Humele**	**107.27**	**48**	⇑P	**PKiKP**	**17 00 55.0**	**+0.5**
A36M	**Sachs Harbour**	**107.28**	**343**	PKiKP	**PKiKP**	**17 00 54.1**	**+0.4**
	baz=124						
I30M	**Mount Dempster**	**107.36**	**335**	PKiKP	**PKiKP**	**17 00 54.5**	**+0.4**
	baz=117						
G31M	**Satah River**	**107.38**	**337**	PKiKP	**PKiKP**	**17 00 54.3**	**+0.4**
	baz=118						
F31M	**Tsiigehtchic**	**107.44**	**338**	PKiKP	**PKiKP**	**17 00 54.7**	**+0.7**
	baz=118						
YUK3	**Moose Creek**	**107.53**	**331**	PKiKP	**PKiKP**	**17 00 55.1**	**+0.4**
	baz=114						
CTG	**Chitna Glacier**	**107.59**	**330**	PKiKP	**PKiKP**	**17 00 55.4**	**+0.7**
	baz=114						
R9F13	**Warsaw-Wawer**	**107.63**	**40**	*e*P	**Pdif**	**16 56 50.4**	**-0.2**
J29N	**Klondike Camp**	**107.73**	**334**	PKiKP	**PKiKP**	**17 00 55.4**	**+0.6**
	baz=115						
INK	**Inuvik**	**107.78**	**338**	PKKPbc	PKKPbc	17 12 10.9	-0.6
	comp=Z,31nm,0.6s,baz=317,slow=3.0,SNR=56						
INK				PKKPab	**PKKPab**	**17 12 26.4**	**+1.9**
	comp=Z,18nm,0.8s,baz=256,slow=5.6,SNR=6.3						
INK				SKKPbc	SKKPbc	17 15 00.5	-2.7
	comp=Z,5.5nm,0.8s,baz=328,slow=1.2,SNR=4.6						
INK				PKPPKP	**P'P'df**	**17 20 32.4**	**+0.2**
	comp=Z,4.4nm,1.1s,baz=274,slow=3.8,SNR=4.9						
INK	**Inuvik**	**107.78**	**338**	PKiKP	**PKiKP**	**17 00 55.1**	**+0.4**
	baz=118						
BVCY	**Beaver Creek**	**107.96**	**331**	PKiKP	**PKiKP**	**17 00 55.7**	**+0.5**
	baz=114						
NSS	**Namsos**	**107.98**	**26**	*e*		17 12 09.5	
EPYK	**Eagle Plains**	**108.00**	**336**	PKiKP	**PKiKP**	**17 00 55.8**	**+0.6**
	baz=116						
DAWY	**Dawson**	**108.03**	**333**	PKiKP	**PKiKP**	**17 00 56.0**	**+0.6**
	baz=114						
DOPR	**Dopca**	**108.04**	**47**	⇑P	**PKiKP**	**17 00 56.5**	**+0.6**
G30M	**tAoh Zraii Nji**	**108.09**	**337**	PKiKP	**PKiKP**	**17 00 56.0**	**+0.6**
	baz=116						
I29M	**Ogilvie Camp,**	**108.15**	**335**	PKiKP	**PKiKP**	**17 00 55.8**	**+0.3**
	baz=115						
F30M	**Barrier River**	**108.22**	**337**	PKiKP	**PKiKP**	**17 00 55.9**	**+0.3**
	baz=116						
MLR	**Muntele Rosu**	**108.24**	**48**	Pdiff	**Pdif**	**16 56 56.3**	**+2.6**
	comp=Z,4.2nm,0.7s,baz=164,slow=13,SNR=7.5						
MLR				PKiKP	**PKiKP**	**17 00 56.8**	**+0.4**
	comp=Z,32nm,0.9s,baz=192,slow=3.7,SNR=13						
MLR	**Muntele Rosu**	**108.24**	**48**	⇓P	**PKiKP**	**17 00 57.4**	**+1.0**
CRQE	**Cirque**	**108.30**	**329**	PKiKP	**PKiKP**	**17 00 56.7**	**+0.7**
	baz=112						
M27K	**Edge Creek, AK**	**108.38**	**331**	PKiKP	**PKiKP**	**17 00 56.3**	**+0.2**
	baz=113						
BURAR	**Bucovina Array**	**108.49**	**45**	⇑P	**PKiKP**	**17 00 58.0**	**+1.3**
MCARA	**McCarthy VSAT**	**108.50**	**330**	PKiKP	**PKiKP**	**17 00 56.9**	**+0.7**
	baz=112						
H29M	**Whitestone**	**108.53**	**336**	PKiKP	**PKiKP**	**17 00 57.0**	**+0.8**
	baz=115						
COVR	**Voineasa-Covas**	**108.53**	**47**	⇑P	**PKiKP**	**17 00 57.6**	**+0.8**
KAIM	**Kayak Island**	**108.60**	**328**	PKiKP	**PKiKP**	**17 00 57.6**	**+1.2**
	baz=112						
L27K	**Beaver Creek,**	**108.63**	**332**	PKiKP	**PKiKP**	**17 00 57.6**	**+1.1**
	baz=113						
G29M	**Pine Creek**	**108.70**	**336**	PKiKP	**PKiKP**	**17 00 56.8**	**+0.3**
	baz=115						
I28M	**Miner Creek**	**108.81**	**335**	PKiKP	**PKiKP**	**17 00 57.4**	**+0.6**
	baz=114						
PLOR	**Plostina**	**108.83**	**48**	⇑P	**PKiKP**	**17 00 57.5**	**+0.2**
M26K	**Nabesna, AK**	**108.88**	**331**	PKiKP	**PKiKP**	**17 00 58.0**	**+1.0**
	baz=112						
VRI	**Vrincioaia**	**108.89**	**48**	⇑P	**PKiKP**	**17 00 57.6**	**+0.2**
TESR	**Tescani**	**109.05**	**47**	⇓P	**PKiKP**	**17 00 58.3**	**+0.5**
BMRM	**Bremner River**	**109.06**	**329**	PKiKP	**PKiKP**	**17 00 58.7**	**+1.3**
	baz=111						
ODBI	**Odobesti**	**109.07**	**48**	⇑P	**PKiKP**	**17 00 58.8**	**+1.0**
L26K	**Log Cabin Wild**	**109.26**	**332**	PKiKP	**PKiKP**	**17 00 59.1**	**+1.4**
	baz=111						
E29M	**Blow River**	**109.27**	**338**	PKiKP	**PKiKP**	**17 00 58.0**	**+0.5**
	baz=114						
N25K	**Chitina, Valde**	**109.29**	**330**	PKiKP	**PKiKP**	**17 00 58.9**	**+1.1**
	baz=111						

Q23K	Middleton Isla	109.34	327	PKiKP	PKiKP	17 00 58.4	+0.6
	baz=110						
GHRR		109.40	48	⇑P	PKiKP	17 00 59.2	+0.8
EYAK	Cordova Ski Ar	109.44	329	PKiKP	PKiKP	17 00 58.2	+0.2
	baz=110						
MANR	Mangalia	109.47	50	⇑P	PKiKP	17 00 59.5	+1.0
I27K	Kandik River	109.51	334	PKiKP	PKiKP	17 00 59.1	+1.0
	baz=112						
ATD	Arta Tunnel	109.53	87	P	PKiKP	17 01 00.4	+0.7
TIRR	Tirgusor	109.55	49	⇓P	PKiKP	17 00 59.4	+0.7
EIL	Elat	109.56	66	PKiKP	PKiKP	17 01 00.6	+1.4
	comp=Z,24nm,0.9s,baz=288,slow=3.2,SNR=4.6						
CFR	Carcaliu	109.60	49	⇓P	PKiKP	17 00 59.5	+0.7
BIR	Birlad	109.61	47	⇓P	PKiKP	17 00 59.5	+0.7
F28M	Old Crow	109.64	337	PKiKP	PKiKP	17 00 59.0	+0.7
	baz=113						
SCTR	Scanteiesti	109.66	48	⇑P	PKiKP	17 00 60.0	+1.1
TPGR	Topolog	109.69	49	⇑P	PKiKP	17 00 59.8	+0.8
H27K	Steamboat Moun	109.71	335	PKiKP	PKiKP	17 00 59.4	+1.0
	baz=112						
VLDR	Vladesti	109.77	48	⇑P	PKiKP	17 00 58.5	-0.6
HARP	HAARP	109.81	331	PKiKP	PKiKP	17 01 00.3	+1.6
	baz=110						
KLU	Klutina	109.84	330	PKiKP	PKiKP	17 01 00.3	+1.4
	baz=110						
SCRK	Sand Creek	109.87	332	PKiKP	PKiKP	17 01 00.0	+1.1
	baz=111						
J26L	Joseph Creek	109.88	333	PKiKP	PKiKP	17 01 00.0	+1.1
	baz=111						
E28M	Babbage River	109.91	338	PKiKP	PKiKP	17 00 59.1	+0.3
	baz=113						
D28M	Stokes Point	109.93	339	PKiKP	PKiKP	17 00 59.4	+0.8
	baz=113						
G27K	Doyon Strip	109.98	336	PKiKP	PKiKP	17 00 59.8	+0.9
	baz=112						
I26K	Coal Creek Min	110.00	334	PKiKP	PKiKP	17 00 59.8	+0.9
	baz=111						
LOF	Lofoten	110.01	23	e		17 12 03.2	
P23K	Montague Islan	110.03	328	PKiKP	PKiKP	17 01 00.1	+1.0
	baz=109						
TLCR		110.06	49	⇓P	PKiKP	17 00 59.2	-0.4
TLCR		110.06	49	⇓PKIKP	PKiKP	17 00 59.2	-0.4
RIDG	Independent Ri	110.14	332	PKiKP	PKiKP	17 01 00.8	+1.4
	baz=110						
PAX	Paxson	110.14	331	PKiKP	PKiKP	17 01 00.4	+1.0
	baz=110						
M24K	Tolsona, Glenn	110.16	330	PKiKP	PKiKP	17 01 01.0	+1.5
	baz=109						
GLI	Glacier Island	110.18	329	PKiKP	PKiKP	17 01 00.2	+0.8
	baz=109						
FAUS	Fauske	110.35	24	e		17 12 02.0	
E27K	Coleen River	110.46	337	PKiKP	PKiKP	17 01 00.9	+1.1
	baz=111						
STEI	Steigen	110.53	23	e		17 12 01.7	
K24K	Donnelly Dome	110.55	332	PKiKP	PKiKP	17 01 01.2	+1.1
	baz=109						
MILM	Milestii Mici	110.59	47	⇓P	PKiKP	17 00 59.4	-1.2
MILM	Milestii Mici	110.59	47	⇓PKIKP	PKiKP	17 00 59.4	-1.2
SCM	Sheep Creek Mo	110.59	330	PKiKP	PKiKP	17 01 01.4	+1.2
	baz=108						
D27M	Malcolm River	110.63	338	PKiKP	PKiKP	17 01 01.2	+1.0
	baz=111						
J25K	Salcha River,	110.65	333	PKiKP	PKiKP	17 01 01.0	+0.7
	baz=109						
SORM	Soroca	110.66	46	⇓P	PKiKP	17 01 00.5	-0.2
SORM	Soroca	110.66	46	⇓PKIKP	PKiKP	17 01 00.5	-0.2
PWL	Port Wells	110.75	329	PKiKP	PKiKP	17 01 01.3	+0.8
	baz=108						
M23K	Glacier View	110.76	330	PKiKP	PKiKP	17 01 01.2	+0.7
	baz=108						
G26K	Porcupine Rive	110.81	335	PKiKP	PKiKP	17 01 01.4	+0.9
	baz=110						
LUBAR	Lubar, Ukraine	110.82	44	P	Pdif	16 57 05.1	+0.2
KNK	Knik Glacier	110.97	329	PKiKP	PKiKP	17 01 01.7	+0.8
	baz=108						
DHY	Denali Highway	111.00	331	PKiKP	PKiKP	17 01 02.2	+1.1
	baz=108						
WAT6	Susitna Watana	111.01	330	PKiKP	PKiKP	17 01 01.9	+0.7
	baz=108						
SML	Sawmill	111.03	330	PKiKP	PKiKP	17 01 02.0	+0.9
	baz=108						
SEW	Seward	111.04	328	PKiKP	PKiKP	17 01 01.9	+0.9
	baz=107						
MMAI	Mount Meron Ar	111.05	63	PKiKP	PKiKP	17 01 02.9	+0.9
	comp=Z,8.0nm,0.5s,baz=90,slow=1.1,SNR=14						
MMAI				PKKPbc	PKKPbc	17 12 02.3	+2.0
	comp=Z,8.7nm,0.7s,baz=144,slow=1.6,SNR=5.9						
PURM	Purcari	111.17	48	⇑P	PKiKP	17 01 02.4	+0.7
F26K	Sheenjek River	111.19	336	PKiKP	PKiKP	17 01 02.7	+1.5
	baz=109						
ANTO	Ankara	111.21	55	P	PKiKP	17 01 02.9	+0.7
ANTO	Ankara	111.21	55	⇓P	PKiKP	17 01 02.8	+0.7
ANTO	Ankara	111.21	55	⇓PKIKP	PKiKP	17 01 02.8	+0.7
HDA	Harding Lake	111.23	332	PKiKP	PKiKP	17 01 02.0	+0.7
	baz=108						
O22K	Cooper Landing	111.28	328	PKiKP	PKiKP	17 01 02.5	+1.0
	baz=107						
ILAR	Eielson Array	111.32	333	Pdiff	Pdif	16 57 07.6	+0.8
	comp=Z,1.9nm,0.8s,baz=141,slow=3.3,SNR=20						
ILAR				pPdiff	pPdif	16 59 12.2	+0.3
	comp=Z,3.3nm,0.8s,baz=80,slow=5.0,SNR=6.1						
ILAR				PKiKP	PKiKP	17 01 02.1	+0.7
	comp=Z,19nm,0.8s,baz=185,slow=0.6,SNR=67						
ILAR				PP	PP	17 01 44.9	-8.5
	comp=Z,12nm,0.8s,baz=102,slow=7.2,SNR=6.7						
ILAR				PKKPbc	PKKPbc	17 11 55.2	-4.9
	comp=Z,6.7nm,0.8s,baz=308,slow=3.7,SNR=9.6						
PMR	Palmer	111.33	329	PKiKP	PKiKP	17 01 02.8	+1.2
	baz=107						
WAT1	Susitna Watana	111.44	331	PKiKP	PKiKP	17 01 02.4	+0.6
	baz=107						
DZM	Mont Dzumac	111.45	230	eSP	SP	17 10 29.0	-1.6
	comp=Z,2µm,27.8s						
DZM				eSS	SS	17 16 42.8	-3.4
	comp=Z,1µm,26.8s						
DZM	Mont Dzumac	111.45	230	eLR	LR	17 35 09.9	
	comp=Z,581nm,27.8s						
RC01	Rabbit Creek A	111.47	329	PKiKP	PKiKP	17 01 02.8	+1.0
	baz=107						
BRSE	Bradley Lake S	111.56	327	PKiKP	PKiKP	17 01 02.9	+0.8
	baz=106						
G25K	Bearman Lake	111.62	335	PKiKP	PKiKP	17 01 03.4	+1.4
	baz=108						
POKR	Poker Plat Res	111.65	333	PKiKP	PKiKP	17 01 02.7	+0.6
	baz=107						
C27K	Jago River	111.67	338	PKiKP	PKiKP	17 01 03.3	+1.3
	baz=109						
F25K	Christian Rive	111.70	336	PKiKP	PKiKP	17 01 03.6	+1.4
	baz=108						
COLA	College	111.74	333	d i PKIKP	PKiKP	17 01 02.5	+0.3
COLA	College	111.74	333	PKiKP	PKiKP	17 01 02.7	+0.5
	baz=107						
COLA	College	111.74	333	P	Pdif	16 57 09.9	+1.3
BR131	Keskin Array S	111.79	56	P	PKiKP	17 01 04.3	+0.9
	SNR=7.5						
BR131	Keskin Array S	111.79	56	d i PKIKP	PKiKP	17 01 03.5	+0.2
BRTR	Keskin Array B	111.79	56	Pdiff	Pdif	16 57 12.0	+2.4
	comp=Z,0.6nm,0.8s,baz=250,slow=4.2,SNR=2.4						
BRTR				PKiKP	PKiKP	17 01 03.8	+0.5
	comp=Z,22nm,0.8s,baz=184,slow=3.1,SNR=51						
BRTR				PP	PP	17 01 48.3	-9.3
	comp=Z,9.0nm,0.8s,baz=221,slow=5.2,SNR=4.5						
KIRS	Kirsehir-Merke	111.82	56	⇓P	PKiKP	17 01 04.7	+1.4
AK20	Malin Array Si	111.82	43	P	Pdif	16 57 08.7	-0.6
M22K	Willow	111.83	329	PKiKP	PKiKP	17 01 03.7	+1.3
	baz=106						
AK17	Malin Array Si	111.84	43	P	Pdif	16 57 08.7	-0.7
E25K	Arctic Village	111.84	336	PKiKP	PKiKP	17 01 03.6	+1.2
	baz=108						
AK18	Malin Array Si	111.85	43	P	Pdif	16 57 11.0	+1.6
AK16	Malin Array Si	111.86	43	P	Pdif	16 57 10.6	+1.1
AK22	Malin Array Si	111.87	43	P	Pdif	16 57 11.0	+1.5
MCK	McKinley	111.87	331	PKiKP	PKiKP	17 01 03.6	+1.0
	baz=106						
AK12	Malin Array Si	111.89	43	P	Pdif	16 57 09.1	-0.5
AK07	Malin Array Si	111.89	43	P	Pdif	16 57 10.0	+0.4
AK11	Malin Array Si	111.90	43	P	Pdif	16 57 09.6	-0.1
AK05	Malin Array Si	111.91	43	P	Pdif	16 57 09.6	-0.1
AK04	Malin Array Si	111.91	43	P	Pdif	16 57 10.1	+0.4
CIDE	Kastamonu/Cide	111.92	53	⇑P	PKiKP	17 01 03.3	+0.1
KIEV	Kiev	111.93	43	⇓P	PKiKP	17 01 03.0	0.0
KIEV	Kiev	111.93	43	i PKiKP	PKiKP	17 01 02.9	-0.1
	SNR=40						
KIEV	Kiev	111.93	43	⇓PKIKP	PKiKP	17 01 03.0	0.0
KDAK	Kodiak Island	111.93	325	PKiKP	PKiKP	17 01 03.6	+0.8
	baz=106						
AKASG	Malin Array Be	111.94	43	Pdiff	Pdif	16 57 11.4	+1.6
	comp=Z,1.6nm,0.6s,baz=266,slow=3.9,SNR=6.0						
AKASG				PKiKP	PKiKP	17 01 02.9	-0.1
	comp=Z,38nm,0.6s,baz=265,slow=2.8,SNR=99						
AKASG				SKP	SKPdf	17 03 45.4	+0.5
	comp=Z,3.6nm,0.6s,baz=262,slow=2.7,SNR=5.2						
AKASG				PKKPbc	PKKPbc	17 11 57.5	-0.3
	comp=Z,3.8nm,0.6s,baz=64,slow=4.1,SNR=8.1						
AKASG				PKKPab	PKKPab	17 12 06.8	+0.3
	comp=Z,5.8nm,0.9s,baz=61,slow=4.2,SNR=6.2						
AKBB	Malin Array Si	111.94	43	d i PKIKP	PKiKP	17 01 02.9	-0.1
ASF	Jabal al Asfar	111.97	64	PKiKP	PKiKP	17 01 04.7	+0.9
	comp=Z,22nm,1.0s,baz=190,slow=2.8,SNR=13						
HOM	Homer	111.97	327	PKiKP	PKiKP	17 01 03.9	+1.1
	baz=106						
H24K	Noodor Dome	112.03	334	PKiKP	PKiKP	17 01 03.7	+0.8
	baz=106						
SUA	Susitna One	112.04	329	PKiKP	PKiKP	17 01 04.2	+1.1
	baz=106						
CAPN	Captain Cook N	112.04	328	PKiKP	PKiKP	17 01 03.9	+1.0
	baz=106						
Q20K	Shuyak Island	112.06	326	PKiKP	PKiKP	17 01 04.2	+1.2
	baz=106						
CUT	Chulitna	112.08	330	PKiKP	PKiKP	17 01 04.2	+1.3
	baz=106						
G24K	Hadweenzic Riv	112.12	335	PKiKP	PKiKP	17 01 04.4	+1.4
	baz=107						
OHAK	Old Harbor	112.15	324	PKiKP	PKiKP	17 01 04.3	+1.1
	baz=106						
C26K	Camden Bay	112.16	338	PKiKP	PKiKP	17 01 04.3	+1.4
	baz=108						
NEA2	Nenana	112.17	332	PKiKP	PKiKP	17 01 03.6	+0.5
	baz=106						
MNK	Minsk	112.19	39	i PKIKP	PKiKP	17 01 03.7	+0.3
MNK				i		17 01 59.1	
MNK				i		17 03 13.3	
MNK				i PPP	PPP	17 04 27.3	
MNK				i		17 07 23.7	
MNK				i SS	SS	17 16 58.9	+2.7
MNK				i SSS	SSS	17 21 19.9	
MNK				pmax	pmax		
	comp=N,21nm,0.8s						
MNK				pmax	pmax		
	comp=Z,220nm,0.9s						
MNK				pmax	pmax		
	comp=E,41nm,0.9s						
MNK				MLR	MLR		
	comp=E,173nm,19.0s						
MNK				MLR	MLR		
	comp=N,167nm,19.0s						
MNK				MLR	MLR		
	comp=Z,131nm,18.0s						
TRO	Tromso	112.35	22	e		17 11 54.8	
TRF	Thorofare Moun	112.37	331	PKiKP	PKiKP	17 01 04.8	+1.0
	baz=105						
I23K	Minto, Yukon-K	112.44	333	PKiKP	PKiKP	17 01 04.0	+0.5
	baz=106						
SII	Sitkinak Islan	112.45	323	PKiKP	PKiKP	17 01 04.8	+0.9
	baz=105						
D25K	Kavik River	112.48	338	PKiKP	PKiKP	17 01 04.3	+0.7
	baz=106						
F24K	Squaw Lake	112.51	336	PKiKP	PKiKP	17 01 05.2	+1.5
	baz=106						
SKT	Skwentna	112.54	329	PKiKP	PKiKP	17 01 04.8	+0.9
	baz=105						
O20K	Slope Mountain	112.56	327	PKiKP	PKiKP	17 01 04.6	+0.6
	baz=105						
VSU	Vasula	112.60	35	⇓i PKIKP	PKiKP	17 01 02.4	-1.6
VSU				pmax	pmax		
	comp=Z,177nm,0.8s						
SPCR	Spurr Chakacha	112.65	328	PKiKP	PKiKP	17 01 04.7	+0.5
	baz=105						
P19K	Oil Pt	112.75	327	PKiKP	PKiKP	17 01 05.0	+0.6
	baz=104						
Q19K	Cape Douglas,	112.77	326	PKiKP	PKiKP	17 01 05.2	+0.7
	baz=104						
JETT	Jettan, Norway	112.83	22	i	PKiKP	17 01 04.8	+0.5
JETT				e		17 11 54.3	
BPAW	Bear Paw Mtn.	112.84	332	PKiKP	PKiKP	17 01 05.3	+0.8
	baz=105						
R18K	Karluk	112.85	324	PKiKP	PKiKP	17 01 05.3	+0.8
	baz=104						
E24K	Your Creek	112.88	336	PKiKP	PKiKP	17 01 05.8	+1.4
	baz=105						
FINES	FINESS Array B	113.03	31	Pdiff	Pdif	16 57 16.4	+2.1
	comp=Z,1.9nm,0.8s,baz=297,slow=0.4,SNR=8.9						
FINES				PKiKP	PKiKP	17 01 05.4	+0.6
	comp=Z,18nm,0.7s,baz=301,slow=0.2,SNR=46						
FINES				PKKPbc	PKKPbc	17 11 53.9	-0.6
	comp=Z,9.4nm,0.4s,baz=72,slow=4.1,SNR=36						
FINES				PKKPab	PKKPab	17 12 02.3	+0.9
	comp=Z,11nm,0.8s,baz=79,slow=4.5,SNR=3.6						
FINES				SKKPbc	SKKPbc	17 14 44.0	-3.3
	comp=Z,1.8nm,0.6s,baz=66,slow=5.0,SNR=4.8						
FINES				PKPPKP	P'P'df	17 20 16.9	-5.9
	comp=Z,2.2nm,0.8s,baz=68,slow=5.9,SNR=6.6						
CHIR	Chirikof Islan	113.04	322	PKiKP	PKiKP	17 01 06.2	+1.2
	baz=104						
PPLA	Purkeypile	113.06	330	PKiKP	PKiKP	17 01 05.8	+0.8
	baz=104						
G23K	Bananza Creek	113.10	334	PKiKP	PKiKP	17 01 06.5	+1.6
	baz=104						
MSEY	Mahe Island	113.16	108	PKiKP	PKiKP	17 01 08.1	+1.5
M20K	Styx River	113.25	329	PKiKP	PKiKP	17 01 05.9	+0.6
	baz=104						
D24K	Happy Valley	113.27	337	PKiKP	PKiKP	17 01 06.0	+1.0
	baz=104						
E23K	Chandalar	113.28	336	PKiKP	PKiKP	17 01 06.3	+1.1
	baz=104						
COLD	Coldfoot	113.30	335	PKiKP	PKiKP	17 01 06.8	+1.7
	baz=104						
CHUM	Lake Minchumin	113.36	331	PKiKP	PKiKP	17 01 06.2	+0.9
	baz=104						
C24K	Franklin Bluff	113.37	338	PKiKP	PKiKP	17 01 06.4	+1.1
	baz=104						
Q18K	Katmai Hardscr	113.39	325	PKiKP	PKiKP	17 01 06.4	+0.6
	baz=104						
TOLK	Toolik Lake Re	113.41	337	PKiKP	PKiKP	17 01 06.8	+1.4
	baz=104						
O19K	Port Alsworth	113.41	327	PKiKP	PKiKP	17 01 05.9	+0.3
	baz=103						
H22K	Ishtalitna Cre	113.44	333	PKiKP	PKiKP	17 01 06.7	+1.2
	baz=104						
I21K	Tanana	113.52	333	PKiKP	PKiKP	17 01 06.4	+0.8
	baz=103						
SIM	Simferopol'	113.59	50	i PKIKP	PKiKP	17 01 07.2	+0.8
SIM				PPP	PPP	17 04 49.0	
SIM				SP	SP	17 10 51.0	+1.4
SIM				pmax	pmax		
	comp=Z,121nm,1.0s						
SIM				pmax	pmax		
	comp=Z,150nm,18.0s						
SIM				pmax	pmax		
	comp=E,270nm,1.5s						
SIM				pmax	pmax		
	comp=Z,300nm,18.9s						
N19K	Bonanza Creek	113.63	328	PKiKP	PKiKP	17 01 06.3	+0.2
	baz=103						
KTK1	Kautokeino	113.66	23	e		17 11 50.2	
P18K	Big Mountain,	113.68	326	PKiKP	PKiKP	17 01 06.4	+0.3
	baz=103						
Q17K	Contact Creek	113.76	325	PKiKP	PKiKP	17 01 07.1	+0.6
	baz=103						
O18K	Koktuh Hills	113.77	327	PKiKP	PKiKP	17 01 06.7	+0.4
	baz=103						
R17L	Mt. Peulik Vol	113.86	324	PKiKP	PKiKP	17 01 07.6	+1.0
	baz=103						
D23K	Nanushuk River	113.88	337	PKiKP	PKiKP	17 01 07.7	+1.5
	baz=103						
H21K	Melozitna Rive	113.96	333	PKiKP	PKiKP	17 01 07.8	+1.3
	baz=102						
K20K	Telida	114.00	330	PKiKP	PKiKP	17 01 07.4	+0.8
	baz=102						
C23K	Itkillik River	114.05	338	PKiKP	PKiKP	17 01 07.8	+1.3
	baz=102						
SPITS	Spitsbergen Ar	114.09	13	PKP	PKiKP	17 01 07.1	+0.6
	comp=Z,14nm,0.5s,baz=121,slow=3.2,SNR=33						
SPITS				PKKPbc	PKKPbc	17 11 50.5	-0.8
	comp=Z,18nm,0.6s,baz=110,slow=6.4,SNR=24						
SPITS				PKKPab	PKKPab	17 11 57.9	+1.4
	comp=Z,10nm,0.6s,baz=89,slow=7.6,SNR=9.1						
E22K	Anaktuvuk Pass	114.10	336	PKiKP	PKiKP	17 01 08.0	+1.2
	baz=102						
L19K	White Mountain	114.11	329	PKiKP	PKiKP	17 01 07.5	+0.6
	baz=102						
F22K	John River	114.11	335	PKiKP	PKiKP	17 01 08.0	+1.2
	baz=102						
HAMF	Hammerfest	114.18	21	e		17 11 50.0	
J20K	Nowinta River	114.21	331	PKiKP	PKiKP	17 01 08.2	+1.2
	baz=102						
P17K	Kvichak River	114.24	326	PKiKP	PKiKP	17 01 07.8	+0.6
	baz=102						
Q16K	King Salmon	114.24	325	PKiKP	PKiKP	17 01 07.9	+0.8
	baz=102						
N18K	Kilae Creek	114.28	327	PKiKP	PKiKP	17 01 07.9	+0.6
	baz=102						
M18K	Stony River	114.41	328	PKiKP	PKiKP	17 01 08.5	+1.0
	baz=102						
G21K	Allakaket	114.42	334	PKiKP	PKiKP	17 01 08.6	+1.2
	baz=101						
I20K	Naaghedeneel	114.47	332	PKiKP	PKiKP	17 01 09.0	+1.6
	baz=101						
R16K	Pilot Point	114.48	324	PKiKP	PKiKP	17 01 09.3	+1.6
	baz=102						
F21K	Alatna River	114.55	335	PKiKP	PKiKP	17 01 09.0	+1.4
	baz=101						
ARA0	ARCESS Array S	114.56	23	e		17 11 48.5	
ARCES	ARCESS Array B	114.56	23	PKP	PKiKP	17 01 08.0	+0.4
	comp=Z,28nm,0.8s,baz=243,slow=4.2,SNR=53						
ARCES				PKKPbc	PKKPbc	17 11 48.9	-0.6
	comp=Z,20nm,0.4s,baz=69,slow=2.0,SNR=100						
ARCES				PKKPab	PKKPab	17 11 56.1	+1.6
	comp=Z,29nm,0.8s,baz=76,slow=5.1,SNR=13						
ARCES				SKKPbc	SKKPbc	17 14 37.4	-5.7
	comp=Z,6.1nm,0.6s,baz=90,slow=3.6,SNR=12						
ARCES	ARCESS Array B	114.56	23	PKIKP	PKiKP	17 01 08.0	+0.4
D22K	Ayikyak River	114.57	337	PKiKP	PKiKP	17 01 09.3	+1.7
	baz=101						
O17K	Koliganek Bris	114.69	326	PKiKP	PKiKP	17 01 08.7	+0.7
	baz=101						
PUL	Pulkovo	114.70	34	d i PKIKP	PKiKP	17 01 08.8	+0.8
H20K	Anotleneega Mo	114.77	333	PKiKP	PKiKP	17 01 09.7	+1.7
	baz=101						
J19K	Poorman	114.81	331	PKiKP	PKiKP	17 01 09.7	+1.5
	baz=101						
N17K	Nushagak Hills	114.88	327	PKiKP	PKiKP	17 01 09.9	+1.5
	baz=101						
E21K	Killik River	114.95	336	PKiKP	PKiKP	17 01 09.7	+1.3
	baz=100						
L18K	Granite Mounta	114.96	329	PKiKP	PKiKP	17 01 10.3	+1.8
	baz=101						
P16K	Nushagak River	114.99	325	PKiKP	PKiKP	17 01 09.6	+1.0
	baz=101						
CHNA	Chernabura Isl	115.03	321	PKiKP	PKiKP	17 01 09.5	+0.7
	baz=102						
B22K	Teshekpuk Lake	115.09	338	PKiKP	PKiKP	17 01 09.8	+1.3
	baz=100						
O16K	Kokwok River B	115.15	326	PKiKP	PKiKP	17 01 09.3	+0.4
	baz=101						
M17K	Holitna River	115.16	328	PKiKP	PKiKP	17 01 10.7	+1.8
	baz=100						
J18K	Innoko River	115.19	330	PKiKP	PKiKP	17 01 10.7	+1.7
	baz=100						
S14K	Fog Glacier	115.29	322	PKiKP	PKiKP	17 01 10.5	+1.1
	baz=101						
C21K	Knifeblade Rid	115.36	337	PKiKP	PKiKP	17 01 10.7	+1.6
	baz=99						
B21K	Ikpikpuk River	115.37	337	PKiKP	PKiKP	17 01 10.7	+1.6
	baz=99						
F20K	Avaraart Lake	115.38	334	PKiKP	PKiKP	17 01 10.4	+1.3
	baz=99						
H19K	Roundabout Mou	115.42	333	PKiKP	PKiKP	17 01 10.9	+1.6
	baz=99						
GCSA	Galena City Sc	115.48	332	PKiKP	PKiKP	17 01 11.2	+1.8
	baz=99						
SDPT	Sand Point	115.63	321	PKiKP	PKiKP	17 01 10.5	+0.5
	baz=101						
N16K	Nishlik Lake	115.64	327	PKiKP	PKiKP	17 01 11.7	+1.8
	baz=100						
L17K	Donlin	115.69	329	PKiKP	PKiKP	17 01 11.6	+1.7
	baz=99						
A22K	Sinclair Lake	115.70	339	PKiKP	PKiKP	17 01 11.0	+1.4
	baz=98						
E20K	Nigu River	115.73	336	PKiKP	PKiKP	17 01 11.7	+1.7
	baz=98						
G19K	Purcell Mounta	115.78	333	PKiKP	PKiKP	17 01 11.7	+1.7
	baz=98						
K17K	Iditarod	115.78	329	PKiKP	PKiKP	17 01 11.7	+1.6
	baz=99						
M16K	Timber Creek	115.82	327	PKiKP	PKiKP	17 01 12.1	+1.9
	baz=99						
ANN	Anapa	115.84	51	i PKIKP	PKiKP	17 01 11.2	+0.5
ANN				e		17 02 26.9	
ANN				e		17 03 19.8	
ANN				e		17 07 09.4	
ANN				pmax	pmax		
	comp=Z,154nm,1.0s						
E19K	Redstone River	116.02	335	PKiKP	PKiKP	17 01 11.5	+1.1
	baz=98						
F19K	Shaleruckik Mo	116.14	334	PKiKP	PKiKP	17 01 11.9	+1.3
	baz=97						
H18K	Honhosa River	116.16	332	PKiKP	PKiKP	17 01 12.4	+1.7
	baz=98						
L16K	Owhat River	116.17	328	PKiKP	PKiKP	17 01 12.5	+1.7
	baz=98						
J17K	VABM Dome	116.23	330	PKiKP	PKiKP	17 01 12.8	+1.9
	baz=98						
N15K	Kwethluk River	116.24	326	PKiKP	PKiKP	17 01 12.7	+1.6
	baz=99						
A21K	Barrow	116.27	339	PKiKP	PKiKP	17 01 12.1	+1.4
	baz=96						
B20K	Meade River	116.30	337	PKiKP	PKiKP	17 01 12.4	+1.5
	baz=96						
G18K	Tagagawik	116.38	333	PKiKP	PKiKP	17 01 12.4	+1.3
	baz=97						
RAYN	Ar Rayn	116.38	76	P	PKiKP	17 01 13.8	+1.3
RAYN	Ar Rayn	116.38	76	i PKiKP	PKiKP	17 01 13.7	+1.2
	SNR=46						
RAYN	Ar Rayn	116.38	76	⇓PKIKP	PKiKP	17 01 13.7	+1.2
D19K	Kuna River	116.47	336	PKiKP	PKiKP	17 01 12.7	+1.4
	baz=96						
S12K	Black Hills	116.58	321	PKiKP	PKiKP	17 01 12.7	+0.9
	baz=99						
M15K	Kasigluk River	116.61	327	PKiKP	PKiKP	17 01 13.1	+1.4
	baz=98						
O14K	Tigyukauivet M	116.69	325	PKiKP	PKiKP	17 01 13.4	+1.5
	baz=98						
H17K	Granite Mounta	116.79	332	PKiKP	PKiKP	17 01 13.3	+1.3
	baz=96						
STKA	Stephens Creek	116.85	204	PKP	PKiKP	17 01 13.6	+0.3
	comp=Z,25nm,0.7s,baz=121,slow=2.5,SNR=44						
STKA				SKP	SKPdf	17 03 54.4	-0.8
	comp=Z,4.7nm,0.6s,baz=71,slow=4.9,SNR=3.7						
STKA				PKKPbc	PKKPbc	17 11 41.1	-0.7
	comp=Z,26nm,0.7s,baz=331,slow=5.4,SNR=31						
STKA				PKKPab	PKKPab	17 11 46.2	-3.2
	comp=Z,35nm,0.9s,baz=336,slow=6.3,SNR=17						
STKA				SKKPbc	SKKPbc	17 14 29.2	-1.4
	comp=Z,7.3nm,0.9s,baz=34,slow=5.3,SNR=3.5						
F18K	Selawik	116.86	334	PKiKP	PKiKP	17 01 13.4	+1.4
	baz=96						
J16K	Anvik River	116.90	330	PKiKP	PKiKP	17 01 13.8	+1.6
	baz=97						
N14K	Kuskokwak Cree	117.00	326	PKiKP	PKiKP	17 01 13.7	+1.2
	baz=98						
I17K	Unalakleet	117.01	330	PKiKP	PKiKP	17 01 13.9	+1.5
	baz=96						
C19K	Lookout Ridge	117.06	336	PKiKP	PKiKP	17 01 14.2	+1.7
	baz=95						
L15K	Ungalak Mounta	117.12	328	PKiKP	PKiKP	17 01 14.1	+1.4
	baz=97						
G17K	Kiwalik Mounta	117.16	332	PKiKP	PKiKP	17 01 14.2	+1.5
	baz=96						
APA	Apatity	117.17	25	i PKIKP	PKPdf	17 01 12.3	-0.3
APA				e		17 03 21.9	
APA				pmax	pmax		
	comp=Z,77nm,0.8s						
SOC	Sochi	117.18	53	i PKIKP	PKiKP	17 01 14.0	+0.6
SOC				e		17 02 32.5	
SOC				ePPP	PPP	17 05 08.6	
SOC				pmax	pmax		
	comp=Z,182nm,0.7s						
K15K	Wolf Creek Mou	117.21	329	PKiKP	PKiKP	17 01 14.8	+1.9
	baz=96						
FALS	False Pass	117.21	320	PKiKP	PKiKP	17 01 13.5	+0.4
	baz=99						
OBN	Obninsk	117.23	40	⇓P	PKiKP	17 01 13.7	+0.6
OBN	Obninsk	117.23	40	d i PKIKP	PKiKP	17 01 13.5	+0.5
OBN				e		17 02 34.0	
OBN				pmax	pmax		
	comp=Z,516nm,1.7s						
M14K	Bethel	117.23	327	PKiKP	PKiKP	17 01 14.0	+1.1
	baz=97						
E18K	Tukpahlearik C	117.31	334	PKiKP	PKiKP	17 01 14.3	+1.4

	baz=95						
VSLR	Vesyoloye	117.38	53d	iPKIKP	PKiKP	17 01 14.4	+0.6
F17K	Baldwin Pennin	117.48	333	PKiKP	PKiKP	17 01 14.6	+1.3
	baz=94						
C18K	Utukok River	117.61	336	PKiKP	PKiKP	17 01 14.8	+1.2
	baz=93						
L14K	Kuka Creek	117.65	328	PKiKP	PKiKP	17 01 14.7	+1.0
	baz=96						
A19K	Wainwright	117.65	338	PKiKP	PKiKP	17 01 15.0	+1.5
	baz=93						
LVZ	Lovozero	117.67	25d	iPKIKP	PKiKP	17 01 14.1	+0.4
H16K	Elim	117.75	331	PKiKP	PKiKP	17 01 15.2	+1.4
	baz=95						
E17K	Hotham Inlet	117.76	334	PKiKP	PKiKP	17 01 14.8	+1.1
	baz=94						
G16K	Koyuk River	117.86	332	PKiKP	PKiKP	17 01 15.7	+1.7
	baz=94						
B18K	Kokolik River	117.87	337	PKiKP	PKiKP	17 01 15.6	+1.6
	baz=92						
M13K	Dall Lake	117.88	326	PKiKP	PKiKP	17 01 15.8	+1.6
	baz=96						
MOS	Moscow	117.91	39	i PKIKP	PKPdf	17 01 13.9	-0.4
MOS				e		17 03 22.5	
MOS				pmax	pmax		
	comp=Z,298nm,0.9s						
MOS				pmax	pmax		
	comp=N,90nm,0.9s						
MOS				pmax	pmax		
	comp=E,53nm,0.7s						
MOS				pmax	pmax		
	comp=Z,300nm,0.9s						
MOS				pmax	pmax		
	comp=N,100nm,0.9s						
LABN	Labinsk	118.10	52	i PKIKP	PKiKP	17 01 15.5	+0.4
LABN				e		17 03 25.2	
LABN				e		17 07 17.1	
LABN				pmax	pmax		
	comp=Z,201nm,0.8s						
ERBR	Yeremizino-Bor	118.14	50	i PKIKP	PKiKP	17 01 15.7	+0.5
ERBR				pmax	pmax		
	comp=Z,201nm,0.7s						
J14K	Nanvaranak Lak	118.19	329	PKiKP	PKiKP	17 01 16.3	+1.6
	baz=94						
VSR	Storozhevoye	118.19	44	ePKIKP	PKPdf	17 01 13.7	-1.3
VSR				pmax	pmax		
	comp=Z,160nm,1.0s						
RDOG	Red Dog Mine	118.22	335	PKiKP	PKiKP	17 01 15.8	+1.1
	baz=92						
VORD	Divnogorie	118.23	44	ePKIKP	PKPdf	17 01 13.3	-1.8
VORD				pmax	pmax		
	comp=Z,150nm,1.0s						
LPSR	Galich'ya Gora	118.25	43d	iPKIKP	PKiKP	17 01 15.6	+0.5
LPSR				pmax	pmax		
	comp=Z,512nm,0.8s						
D17K	Noatak River	118.27	335	PKiKP	PKiKP	17 01 15.9	+1.2
	baz=92						
VORR	Voronezh	118.28	44	ePKIKP	PKiKP	17 01 15.3	+0.1
VORR				pmax	pmax		
	comp=Z,270nm,0.5s						
C17K	DeLong Mountai	118.33	336	PKiKP	PKiKP	17 01 16.1	+1.2
	baz=92						
G15K	Niukluk	118.54	332	PKiKP	PKiKP	17 01 16.7	+1.3
	baz=93						
K13K	Kusilvak Mount	118.64	328	PKiKP	PKiKP	17 01 17.2	+1.5
	baz=94						
F15K	North Star Dit	118.83	332	PKiKP	PKiKP	17 01 17.4	+1.5
	baz=92						
UNV	Unalaska Valle	118.87	319	PKiKP	PKiKP	17 01 16.4	+0.1
	baz=97						
ADZR	Andozero	118.95	30d	iPKIKP	PKiKP	17 01 17.0	+0.8
ADZR				e		17 07 18.5	
ANM	Nome	119.09	331	PKiKP	PKiKP	17 01 17.5	+1.0
	baz=92						
C16K	Lisburne Hills	119.13	335	PKiKP	PKiKP	17 01 17.2	+0.8
	baz=90						
M11K	Mekoryuk	119.29	326	PKiKP	PKiKP	17 01 18.6	+1.7
	baz=94						
SHA1	Shidzhatmaz	119.30	53d	iPKIKP	PKiKP	17 01 18.4	+0.6
KIV	Kislovodsk	119.36	53	P	PKiKP	17 01 18.7	+0.9
KIV	Kislovodsk	119.36	53	⇑P	PKiKP	17 01 18.7	+0.9
KIV	Kislovodsk	119.36	53	i PKPdf	PKiKP	17 01 18.3	+0.5
	SNR=50						
KIV	Kislovodsk	119.36	53	i PKIKP	PKiKP	17 01 17.9	+0.1
KIV				e		17 02 48.9	
KIV				ePPP	PPP	17 05 28.8	
KIV				ePS	PS	17 12 47.8	+0.2
KIV				eSS	SS	17 18 30.6	+1.2
KIV				pmax	pmax		
	comp=Z,256nm,1.1s						
KLMR	Klimovskoe	119.38	33	ePKIKP	PKPdf	17 01 16.5	-0.5
KLMR				e		17 03 26.5	
KLMR				PPP	PPP	17 05 25.7	
KLMR				pmax	pmax		
	comp=Z,536nm,1.2s						
KBZ	Khabaz	119.47	53	PKP	PKiKP	17 01 18.6	+0.8
	comp=Z,93nm,0.8s,baz=224,slow=2.3,SNR=84						
KBZ	Khabaz	119.47	53d	iPKIKP	PKiKP	17 01 18.4	+0.6
F14K	Arctic Creek	119.52	332	PKiKP	PKiKP	17 01 18.7	+1.4
	baz=90						
VRH	Novokhopyorsk	119.78	44d	iPKIKP	PKiKP	17 01 18.4	+0.2
VRH				pmax	pmax		
	comp=Z,280nm,0.8s						
NCK	Nalchik	119.93	53d	iPKIKP	PKiKP	17 01 19.7	+0.9
NIKH	Nikolski High	120.17	318	PKiKP	PKiKP	17 01 19.5	+0.6
	baz=96						
TNA	Tin City	120.18	332	PKiKP	PKiKP	17 01 19.7	+1.2
	baz=89						
NWAO	Narrogin (SRO)	120.47	181	SKP	SKPdf	17 04 03.6	+1.5
	comp=Z,33nm,0.7s,baz=173,slow=4.9,SNR=9.4						
NWAO				PKKPbc	PKKPbc	17 11 26.3	-2.8
	comp=Z,12nm,0.9s,baz=325,slow=2.8,SNR=9.4						
NWAO	Narrogin (SRO)	120.47	181	P	PKiKP	17 01 20.6	+0.3
P08K	Saint George I	120.84	322	PKiKP	PKiKP	17 01 21.6	+1.5
	baz=93						
ABTO	Aybut	121.11	85	P	PKiKP	17 01 22.6	+0.7
	SNR=7.1						
SPIA	Saint Paul Isl	121.25	322	PKiKP	PKiKP	17 01 22.2	+1.3
	baz=92						
SMRA	Abu-Samra	121.38	76	P	PKiKP	17 01 22.4	+0.2
	SNR=6.3						
SAKB	Bahrain	121.49	75	P	PKiKP	17 01 22.7	+0.3
TRNA	Turayna	121.71	76	P	PKiKP	17 01 23.4	+0.6
	SNR=6.9						
WHFO	Wadi Hawf	121.73	85	P	PKiKP	17 01 23.2	+0.1
SHMA	Al-Shehemyia	121.82	75	P	PKiKP	17 01 23.3	+0.3
GAMB	Gambell	121.88	330	PKiKP	PKiKP	17 01 23.2	+1.3
	baz=87						
SLWR	Sila	121.92	77	P	PKiKP	17 01 23.5	+0.3
RBK	Rabkut	121.97	85	P	PKiKP	17 01 23.7	+0.1
DOK	Doka	122.30	84	P	PKiKP	17 01 24.2	0.0
	SNR=18						
AKT	Akhty	122.62	56d	iPKIKP	PKiKP	17 01 25.2	+0.9
AKT				e		17 03 13.3	
AKT				pmax	pmax		
	comp=Z,267nm,1.0s						
MAK	Makhachkala	122.67	55d	iPKIKP	PKiKP	17 01 25.6	+1.5
MAK				e		17 03 11.6	
MAK				e		17 03 34.5	
MAK				e		17 07 34.7	
MAK				eSSS	SSS	17 23 55.2	
MAK				pmax	pmax		
	comp=Z,565nm,1.8s						
DMTO	DMTO	122.71	85	P	PKiKP	17 01 25.1	+0.1
	SNR=12						
GHWR	Ruwais	122.92	78	P	PKiKP	17 01 25.5	+0.2
MZR	Muzera	123.16	79	P	PKiKP	17 01 26.9	+1.1
	SNR=18						
MZR	Muzera	123.16	79	i PKiKP	PKiKP	17 01 26.5	+0.7
	SNR=64						
JRN	Qarnain Island	123.19	77	P	PKiKP	17 01 26.0	+0.3
SHAO	Shalim	123.42	85	P	PKiKP	17 01 27.0	+0.6
SHAO	Shalim	123.42	85	i PKiKP	PKiKP	17 01 26.4	+0.1
	SNR=31						
BELG	Belogornoye	123.53	43d	iPKIKP	PKiKP	17 01 25.6	+0.1
MZWR	Madinat Zayed	123.74	78	P	PKiKP	17 01 27.4	+0.5
KIRV	Kirov	124.41	36c	iPKIKP	PKiKP	17 01 27.0	-0.1
UMZA	Um Al Zommool	124.55	80	P	PKiKP	17 01 29.3	+0.8
CTA	Charters Tower	125.13	215	PKhKP	PKPpre	17 01 18.0	
	comp=Z,2.2nm,0.6s,baz=120,slow=5.6,SNR=4.2						
CTA				PKP	PKiKP	17 01 30.2	+0.3
	comp=Z,156nm,0.9s,baz=137,slow=2.4,SNR=173						
CTA				PKKPab	PKKPbc	17 11 10.9	-0.2
	comp=Z,33nm,1.0s,baz=355,slow=3.1,SNR=16						
CTA				SKKPbc	SKKPbc	17 13 50.0	-14
	comp=Z,3.0nm,0.8s,baz=342,slow=7.6,SNR=3.7						
CTAO	Charters Tower	125.13	215		PKPpre	17 01 22.7	
CTAO	Charters Tower	125.13	215	PKIKP	PKPdf	17 01 22.7	-6.7
H08S1	Diego Carcia H	125.15	122	PKP	PKiKP	17 01 30.9	+1.2
	baz=332,slow=6.2,SNR=16						
H08S2	Diego Garcia H	125.17	122	PKP	PKiKP	17 01 31.0	+1.3
	baz=332,slow=6.2,SNR=9.4						
H08S3	Diego Garcia H	125.17	122	PKP	PKiKP	17 01 30.9	+1.2
	baz=332,slow=6.2,SNR=13						
ASUD	Al Ashush, Dub	125.26	78	P	PKiKP	17 01 31.0	+1.1
	SNR=18						
ASUD	Al Ashush, Dub	125.26	78	i PKiKP	PKiKP	17 01 30.5	+0.6
	SNR=10						
DGAR	Diego Garcia	125.28	122	P	PKiKP	17 01 31.2	+1.0
ALNE	Al Ain	125.47	79	P	PKiKP	17 01 30.9	+0.6
	SNR=36						
ALNE	Al Ain	125.47	79	i PKiKP	PKiKP	17 01 30.7	+0.4
	SNR=16						
FAQ	Al Faqa, Dubai	125.52	78	P	PKiKP	17 01 31.0	+0.6
	SNR=25						
FAQ	Al Faqa, Dubai	125.52	78	i PKiKP	PKiKP	17 01 30.5	+0.1
	SNR=33						
NAZ	Nazwa, Dubai	125.65	77	P	PKiKP	17 01 31.0	+0.3
	SNR=18						
NAZ	Nazwa, Dubai	125.65	77	i PKiKP	PKiKP	17 01 30.7	0.0
	SNR=17						
DQM	DQM	125.77	84	P	PKiKP	17 01 31.4	+0.4
	SNR=9.8						
UMQ	Umm Al-Quwin	125.80	77	P	PKiKP	17 01 31.8	+0.9
	SNR=5.2						
ASHO	Ashiyiah	125.91	78	P	PKiKP	17 01 31.1	-0.1
	SNR=17						
ASHO	Ashiyiah	125.91	78	i PKPdf	PKPdf	17 01 30.8	+0.1
	SNR=21						
ARQ	Araqi	125.93	80	P	PKiKP	17 01 31.3	0.0
	SNR=17						
HATD	Hatta, Dubai	126.02	78	P	PKPdf	17 01 31.0	+0.1
	SNR=22						
HATD	Hatta, Dubai	126.02	78	i PKPdf	PKPdf	17 01 31.1	+0.1
	SNR=27						
UOSS	Minazif	126.11	78	P	PKPdf	17 01 30.9	-0.1
UOSS	Minazif	126.11	78	PKPdf	PKPdf	17 01 30.7	-0.4
UOSS				i PKPdf	PKiKP	17 01 30.8	-0.8
	SNR=25						
UOSS	Minazif	126.11	78	PKP	PKPdf	17 01 30.5	-0.6
SOHO	SOHO	126.17	79	P	PKiKP	17 01 31.7	0.0
SOHO	SOHO	126.17	79	i PKPdf	PKPdf	17 01 31.1	-0.1
	SNR=99						
MSFE	Esma-Masafi	126.19	77	i PKPdf	PKiKP	17 01 31.5	-0.2
	SNR=27						
MASF	Masafi	126.19	77	P	PKiKP	17 01 31.7	0.0
	SNR=12						
MDH	Madha	126.29	77	P	PKPdf	17 01 31.3	-0.1
	SNR=9.4						
MDH	Madha	126.29	77	i PKPdf	PKPdf	17 01 30.9	-0.5
	SNR=20						
BSY	Bisya	126.35	81	P	PKiKP	17 01 32.1	0.0
	SNR=20						
SHME	Shamm	126.36	76	P	PKiKP	17 01 32.2	+0.2
	SNR=35						
SHME	Shamm	126.36	76	i PKiKP	PKiKP	17 01 32.0	0.0
	SNR=58						
BANOM	Banah	126.46	77	P	PKiKP	17 01 32.2	-0.1
BANOM	Banah	126.46	77	i PKPdf	PKiKP	17 01 32.0	-0.3
	SNR=9.4						
MHTO	MHTO	126.49	83	P	PKiKP	17 01 32.3	-0.2
	SNR=24						
HOQ	Hoqain	126.70	80	P	PKPdf	17 01 32.0	-0.3
	SNR=16						
ASAR	Alice Springs	126.99	200	PKhKP	PKPpre	17 01 24.4	
	comp=Z,4.2nm,0.5s,baz=151,slow=3.5,SNR=10						
ASAR				PKP	PKPdf	17 01 33.0	0.0
	comp=Z,227nm,0.8s,baz=139,slow=1.7,SNR=304						
ASAR				pPKP	pPKPdf	17 03 44.0	-1.2
	comp=Z,20nm,1.0s,baz=148,slow=2.2,SNR=4.4						
ASAR				SKPab	SKiKP	17 03 57.7	-18
	comp=Z,26nm,0.6s,baz=154,slow=4.2,SNR=12						
ASAR				SKP	SKPdf	17 04 16.2	+1.4
	comp=Z,21nm,0.7s,baz=150,slow=2.3,SNR=4.6						
ASAR				PKKPab	PKKPbc	17 11 04.0	0.0
	comp=Z,15nm,0.6s,baz=340,slow=3.6,SNR=36						
ASAR				PKKP	PKKPdf	17 11 45.9	0.0
	comp=Z,5.4nm,0.4s,baz=351,slow=1.8,SNR=20						
ASAR				SKKPbc	SKKPbc	17 13 54.1	-3.8
	comp=Z,6.2nm,1.1s,baz=39,slow=3.3,SNR=4.2						
ASAR				SKKP	SKKPdf	17 14 25.9	-1.4
	comp=Z,5.1nm,0.8s,baz=1.4,slow=3.7,SNR=5.0						
ASAR				PKPPKP	P'P'df	17 19 49.0	-10
	comp=Z,1.8nm,0.9s,baz=336,slow=1.6,SNR=4.3						
JMDO	Jabal Madar	127.04	81	P	PKPdf	17 01 33.0	+0.1
	SNR=11						
SMDO	Samad	127.19	81	P	PKiKP	17 01 34.0	0.0
	SNR=45						
BIDO	Bidbid	127.40	80	P	PKiKP	17 01 34.2	0.0
	SNR=19						
WSAR	Wadi Sarin	127.76	80	P	PKiKP	17 01 35.2	+0.3
	SNR=31						
WBK	Wadi Bani Khal	127.87	81	P	PKiKP	17 01 36.0	+0.8
	SNR=26						
JLN	Jalan Bani Buh	128.13	82	P	PKiKP	17 01 36.0	+0.3
	SNR=27						
BILL	Bilibino	129.40	338d	iPKIKP	PKiKP	17 01 37.2	+0.3
ARTI	Arti	129.49	38	pPKP	pPKPdf	17 03 47.7	-1.3
	comp=Z,37nm,1.0s,baz=124,slow=1.9,SNR=3.8						
ARTI				SKPab	SKPbc	17 04 07.7	+2.0
	comp=Z,102nm,0.6s,baz=275,slow=3.7,SNR=17						
ARTI	Arti	129.49	38	i PKIKP	PKiKP	17 01 37.7	+0.3
ARTI						17 03 54.0	
ARTI				PPP	PPP	17 06 46.9	
AKTO	Aktyubinsk	130.09	46	PKP	PKiKP	17 01 38.6	-0.1
	comp=Z,176nm,0.9s,baz=344,slow=2.6,SNR=68						
AKTO				pPKP	pPKPdf	17 03 48.7	-1.6
	comp=Z,13nm,0.8s,baz=316,slow=5.2,SNR=2.2						
AKTO				SKPbc	SKPab	17 04 08.6	+0.1
	comp=Z,52nm,0.5s,baz=214,slow=1.0,SNR=19						
WRA	Warramunga Arr	130.33	202	PKhKP	PKPpre	17 01 18.4	
	comp=Z,1.6nm,0.4s,baz=173,slow=2.5,SNR=19						
WRA				PKP	PKPdf	17 01 39.8	+0.5
	comp=Z,228nm,1.0s,baz=164,slow=1.7,SNR=115						
WRA				pPKP	pPKPdf	17 03 50.9	-0.8
	comp=Z,22nm,1.0s,baz=171,slow=1.7,SNR=5.8						
WRA				SKPbc	SKPab	17 04 10.5	0.0
	comp=Z,339nm,0.7s,baz=159,slow=3.9,SNR=106						
WRA				PKKP	PKKPdf	17 11 39.6	+0.1
	comp=Z,2.9nm,0.7s,baz=322,slow=2.6,SNR=6.6						
WRA				SKKPbc	SKKPbc	17 13 36.1	-10
	comp=Z,3.7nm,0.7s,baz=306,slow=6.4,SNR=4.5						
WRA				SKKP	SKKPdf	17 14 20.6	-0.3
	comp=Z,12nm,0.9s,baz=357,slow=5.3,SNR=6.9						
SHEM	Shemya Is, Ala	130.49	318	PKP	PKiKP	17 01 39.6	+0.1
	comp=Z,281nm,0.8s,baz=360,slow=4.1,SNR=9.5						
SHEM				SKPbc	SKPbc	17 04 09.5	0.0
	comp=Z,400nm,1.0s,baz=355,slow=5.9,SNR=9.2						
NGCH	Negor - Chabah	130.53	79	P	PKiKP	17 01 42.3	+1.9
	SNR=9.9						
KAAM	Kaadhehdhoo	130.57	115	PKP	PKiKP	17 01 41.5	+0.6
KAAM				PKP	PKPdf	17 01 42.1	+2.2
SVE	Sverdlovsk	130.62	37c	iPKIKP	PKiKP	17 01 40.1	+0.5
SVE				pmax	pmax		
	comp=Z,241nm,1.5s						
AB31	Akbulak array	131.44	47	i PKIKP	PKiKP	17 01 41.2	-0.3
PSA00	Pilbara Seismi	131.68	184		PKPpre	17 01 31.6	
COEN	Coen	131.85	216		PKPpre	17 01 29.9	
MBWA	Marble Bar	132.10	184	P	PKPdf	17 01 42.9	+0.3
MBWA	Marble Bar	132.10	184		PKPpre	17 01 34.8	
MBWA	Marble Bar	132.10	184	PKP	PKPdf	17 01 43.0	+0.3
HRA	Herat	133.12	67		PKPpre	17 01 31.1	
PMG	Port Moresby	133.27	224		PKPpre	17 01 33.6	
PMG	Port Moresby	133.27	224	PKP	PKPpre	17 01 35.1	
PMG				PKP	PKPpre	17 01 35.1	
PMG	Port Moresby	133.27	224d	iPKIKP	PKiKP	17 01 46.2	-0.1
HMDM	Hanimaadhoo	134.17	108	PKP	PKPdf	17 01 46.3	-0.4
HMDM				PKP	PKiKP	17 01 49.2	+1.1
NRIK	Noril'sk	134.28	14	PKhKP	PKPpre	17 01 33.3	
	comp=Z,22nm,0.8s,baz=28,slow=1.5,SNR=21						
NRIK				PKP	PKiKP	17 01 46.7	0.0
	comp=Z,47nm,0.8s,baz=46,slow=1.4,SNR=38						
NRIK				SKPbc	SKPbc	17 04 22.2	+0.3
	comp=Z,40nm,0.9s,baz=320,slow=3.1,SNR=5.1						
NRIK				SKKPbc	SKKPbc	17 13 33.5	-3.1
	comp=Z,24nm,0.9s,baz=114,slow=3.6,SNR=17						
NRIK	Noril'sk	134.28	14d	iPKIKP	PKiKP	17 01 46.5	-0.2
FITZ	Fitzroy Crossi	134.39	192	PKhKP	PKPpre	17 01 32.0	
	comp=Z,10nm,0.6s,baz=307,slow=2.3,SNR=18						
FITZ				PKP	PKPdf	17 01 47.7	+0.7
	comp=Z,146nm,0.7s,baz=216,slow=2.4,SNR=66						
FITZ				pPKP	pPKPdf	17 03 58.7	-0.6
	comp=Z,9.7nm,0.8s,baz=100,slow=1.9,SNR=1.9						
FITZ				SKPbc	SKPbc	17 04 25.4	+1.4
	comp=Z,298nm,0.7s,baz=200,slow=5.0,SNR=63						
FITZ	Fitzroy Crossi	134.39	192		PKPpre	17 01 32.1	
TIXI	Tiksi	134.72	355	PKhKP	PKPpre	17 01 29.4	
	comp=Z,12nm,0.5s,baz=54,slow=5.3,SNR=24						
TIXI				PKP	PKPdf	17 01 46.7	+0.8
	comp=Z,48nm,0.4s,baz=42,slow=2.1,SNR=36						
TIXI				SKPbc	SKPbc	17 04 23.7	+0.5
	comp=Z,53nm,0.8s,baz=57,slow=4.1,SNR=8.1						
TIXI				PKKP	PKKPdf	17 11 30.2	-2.4
	comp=Z,1.7nm,0.4s,baz=282,slow=1.0,SNR=3.9						
TIXI				SKKPbc	SKKPbc	17 13 33.1	-1.9
	comp=Z,21nm,0.9s,baz=267,slow=2.1,SNR=4.8						
TIXI	Tiksi	134.72	355d	iPKIKP	PKPdf	17 01 46.4	+0.5
KNRA	Kununurra	136.03	197		PKPpre	17 01 38.2	
COCO	West Island	136.64	151	P	PKiKP	17 01 52.7	-0.4
COCO	West Island	136.64	151	PKP	PKPdf	17 01 51.3	+0.1
COCO				PKP	PKiKP	17 01 53.0	-0.1
BORK	Borovoye	137.03	40		PKPpre	17 01 39.7	
BORK	Borovoye	137.03	40d	iPKIKP	PKiKP	17 01 52.5	-0.3
SEY	Seymchan	137.04	337	PKhKP	PKPpre	17 01 40.2	
	comp=Z,44nm,0.7s,baz=75,slow=3.8,SNR=129						
SEY				PKP	PKiKP	17 01 52.7	+0.2
	comp=Z,471nm,1.0s,baz=84,slow=4.5,SNR=54						
SEY				SKP	SKPdf	17 04 33.2	+1.3
	comp=Z,120nm,0.8s,baz=84,slow=3.1,SNR=15						
SEY				SKKPbc	SKKPbc	17 13 23.4	-2.7
	comp=Z,18nm,0.9s,baz=177,slow=1.8,SNR=6.8						
SEY	Seymchan	137.04	337	i PKIKP	PKPdf	17 01 51.4	+0.9
SEY				pmax	pmax		
	comp=Z,493nm,1.1s						
BVA0	Borovoye Array	137.07	40	PKIKP	PKiKP	17 01 52.1	-0.8
BVAR	Borovoye Array	137.07	40	PKhKP	PKPpre	17 01 43.8	
	comp=Z,8.2nm,0.4s,baz=301,slow=2.1,SNR=16						
BVAR				PKP	PKiKP	17 01 52.7	-0.1
	comp=Z,216nm,0.7s,baz=298,slow=3.2,SNR=65						
BVAR				SKP	SKPdf	17 04 33.8	+1.5
	comp=Z,48nm,0.6s,baz=284,slow=3.9,SNR=8.5						
BVAR				SKKPbc	SKKPbc	17 13 21.7	-3.7
	comp=Z,16nm,0.9s,baz=128,slow=2.8,SNR=9.4						
MTN	Manton Dam	138.02	201		PKPpre	17 01 42.5	
KBL	Kabul	138.73	67	P	PKPpre	17 01 46.0	
	SNR=32						
KBL	Kabul	138.73	67		PKPpre	17 01 46.3	
KBL	Kabul	138.73	67	PKHKP	PKPpre	17 01 46.3	
CHGR	Chuyangaron	138.85	61d	iPKIKP	PKiKP	17 01 56.1	-1.0
CHM	Chimkent	138.92	56	ePKP	PKiKP	17 01 55.9	-1.2
CHM	Chimkent	138.92	56	ePKIKP	PKiKP	17 01 55.8	-1.2
BRLS	Borolday	139.00	55	ePKP	PKPdf	17 01 55.7	+0.9
BRLS				ePP	PP	17 04 56.7	+1.1
BRLS	Borolday	139.00	55	ePKIKP	PKPdf	17 01 55.6	+0.8
BRLS				e		17 04 56.7	
PET	Petropavlovsk	139.41	322		PKPpre	17 01 48.2	
PET	Petropavlovsk	139.41	322	ePKHKP	PKPpre	17 01 48.1	
PET				i		17 01 56.3	
PET				e		17 04 59.3	
PET				eSS	SS	17 22 36.3	+4.7
KK31	Karatay Array	139.49	54	i PKHKP	PKPpre	17 01 46.9	
KKAR	Karatay Array	139.49	54		PKPpre	17 01 46.6	
KKAR	Karatay Array	139.49	54	PKHKP	PKPpre	17 01 46.6	
MA2	Magadan	139.79	334	PKhKP	PKPpre	17 01 49.6	
	comp=Z,162nm,0.8s,baz=78,slow=4.4,SNR=75						
MA2				PKP	PKiKP	17 01 57.4	-0.8
	comp=Z,125nm,0.9s,baz=112,slow=4.0,SNR=16						
MA2				SKPbc	SKiKP	17 04 40.2	-0.5
	comp=Z,95nm,0.9s,baz=80,slow=3.2,SNR=9.4						
MA2				SKKPbc	SKKPbc	17 13 14.1	-1.2
	comp=Z,33nm,0.8s,baz=160,slow=3.6,SNR=10						
MA2	Magadan	139.79	334		PKPpre	17 01 49.1	
PEA0B	Petropavlovsk-	139.91	322		PKPpre	17 01 49.3	
PEA0B	Petropavlovsk-	139.91	322d	iPKIKP	PKPdf	17 01 57.3	+1.3
PETK	Petropavlovsk-	139.91	322	PKhKP	PKPpre	17 01 48.6	
	comp=Z,48nm,0.7s,baz=64,slow=6.2,SNR=86						
PETK				PKP	PKPdf	17 01 57.2	+1.2
	comp=Z,130nm,0.7s,baz=70,slow=2.4,SNR=29						
PETK				SKPbc	SKiKP	17 04 40.6	-0.5
	comp=Z,168nm,1.0s,baz=79,slow=7.7,SNR=16						
PETK	Petropavlovsk-	139.91	322		PKPpre	17 01 48.9	
DZA	Taraz	140.11	54	ePKP	PKPdf	17 01 58.0	+1.2
DZA	Taraz	140.11	54	ePKIKP	PKPdf	17 01 58.0	+1.2
PALK	Pallekele	140.73	113	PKhKP	PKPpre	17 01 53.3	
	comp=Z,28nm,0.7s,baz=264,slow=3.2,SNR=11						
PALK				PKP	PKPdf	17 01 59.3	+0.6
	comp=Z,134nm,0.7s,baz=284,slow=3.5,SNR=31						
PALK				pPKP	pPKPdf	17 04 10.3	-1.0
	comp=Z,30nm,1.0s,baz=75,slow=1.6,SNR=4.8						
PALK				SKKPbc	SKKPbc	17 13 10.9	+2.4
	comp=Z,6.8nm,1.0s,baz=207,slow=2.3,SNR=3.7						
PALK	Pallekele	140.73	113	P	PKPpre	17 01 54.7	
PALK	Pallekele	140.73	113	PKP	PKPpre	17 01 54.1	
PALK				PKP	PKPpre	17 01 54.4	
PALK	Pallekele	140.73	113	i PKPdf	PKPdf	17 01 58.9	+0.2
	SNR=9.9						
PALK				i PKPdf	PKiKP	17 01 59.2	-2.4
	SNR=9.7						
PALK	Pallekele	140.73	113	PKP	PKPdf	17 01 58.8	0.0
DRK	Karamyk	140.86	60		PKPpre	17 01 53.4	
DRK	Karamyk	140.86	60	PKHKP	PKPpre	17 01 53.4	
MANEM	Manem	140.88	63		PKPpre	17 01 54.4	
MALK	Mahakanadarawa	141.22	112	PKP	PKPdf	17 01 55.6	-3.9
UDPR	Udaipur	141.44	84	IAmb	IAmb	17 02 02.5	
	comp=Z,186nm,1.0s						
BTLS	Baital	141.63	51	ePKHKP	PKPpre	17 01 54.1	
SKR	Severo-Kuril's	141.78	319	i PKHKP	PKPpre	17 01 55.0	
SKR				pmax	pmax		
	comp=Z,785nm,0.7s						
EKS2	Erkin-Say	141.93	54	P	PKPpre	17 01 56.7	
	SNR=210						
USP	Ospenovka	142.33	53	P	PKPpre	17 01 58.0	
	SNR=223						
AAK	Ala-Archa	142.45	54	P	PKPdf	17 01 57.0	-4.1
	SNR=384						
AAK	Ala-Archa	142.45	54	PKP	PKPdf	17 01 59.0	-2.2
	comp=Z,403nm,0.8s,baz=223,slow=2.8,SNR=802						
AAK				SKPbc	SKiKP	17 04 46.4	-0.6
	comp=Z,76nm,0.7s,baz=216,slow=4.3,SNR=5.7						
AAK				SKKPbc	SKKPab	17 13 02.7	-1.2
	comp=Z,61nm,0.8s,baz=134,slow=4.2,SNR=38						
AAK	Ala-Archa	142.45	54	P	PKPdf	17 02 00.1	-1.1
AAK	Ala-Archa	142.45	54	i PKPdf	PKPdf	17 01 59.3	-1.9
	SNR=62						
AAK	Ala-Archa	142.45	54c	ePKIKP	PKPdf	17 02 01.0	-0.1
AAK	Ala-Archa	142.45	54	PKP	PKPdf	17 01 59.2	-1.9
BATI	Baumata	142.45	191	PKP	PKPdf	17 02 00.1	-1.7
	comp=Z,215nm,0.4s,baz=243,slow=0.5,SNR=62						
BATI				SKPbc	SKiKP	17 04 49.6	+1.9
	comp=Z,190nm,0.7s,baz=286,slow=2.5,SNR=7.7						
BATI				SKKPbc	SKKPbc	17 13 01.5	+0.3
	comp=Z,16nm,0.8s,baz=207,slow=4.5,SNR=2.3						
BATI	Baumata	142.45	191	PKP	PKPdf	17 01 59.7	-2.1
BATI				PKP	PKPpre	17 02 00.0	
SAUI	Saumlaki	142.48	204	PKP	PKPdf	17 02 01.2	-0.7
UCH	Uchtor	142.54	55	P	PKPdf	17 01 59.7	-2.0
	SNR=574						
CHMS	Chumysh	142.57	54	P	PKPdf	17 01 59.1	-2.0
	SNR=253						
JAY	Jayapura	142.61	222	PKP	PKPdf	17 02 00.6	-1.6
	comp=Z,159nm,0.7s,baz=260,slow=2.3,SNR=40						
JAY				SKPbc	SKiKP	17 04 48.3	+0.2
	comp=Z,54nm,0.9s,baz=176,slow=2.9,SNR=7.9						
JAY	Jayapura	142.61	222	PKP	PKPdf	17 02 00.2	-1.9
JAY				PKP	PKiKP	17 02 00.4	-5.1
KURBB	Kurchatov Arra	142.65	40	PKP	PKPdf	17 01 59.2	-1.8
	comp=Z,532nm,0.9s,baz=297,slow=3.7,SNR=1182						
KURBB				pPKP	pPKPdf	17 04 13.7	+0.1
	comp=Z,27nm,0.8s,baz=300,slow=3.7,SNR=2.7						
KURBB				SKPbc	SKiKP	17 04 47.3	+0.4
	comp=Z,49nm,0.7s,baz=295,slow=3.0,SNR=5.1						
KURBB				SKKPbc	SKKPab	17 13 00.8	-1.9
	comp=Z,7.3nm,0.8s,baz=120,slow=3.6,SNR=9.7						
KURK	Kurchatov	142.67	40	P	PKPdf	17 01 59.9	-1.1
KURK	Kurchatov	142.67	40	PKIKP	PKPdf	17 01 59.2	-1.8
KBK	Karagaybulak	142.78	54	P	PKPdf	17 02 00.5	-1.2
	SNR=676						
SOEI	Soe	142.78	193	PKP	PKPdf	17 02 01.7	-0.8
SOEI	Soe	142.78	193	PKP	PKPdf	17 02 01.1	-1.4
GENI	Genyem	142.87	221	PKP	PKPdf	17 02 00.9	-1.6
GENI				PKP	PKiKP	17 02 01.1	-4.8
BASI	Baing, Sumba	142.87	187	PKP	PKPdf	17 02 01.4	-1.1
BASI				PKP	PKPdf	17 02 01.4	-1.1
TKM2	Tokmak 2	143.19	54	P	PKPbc	17 02 01.5	+0.6
	SNR=1710						
WSI	Waingapu	143.44	186	PKP	PKPdf	17 02 03.1	-0.4
WSI				PKP	PKPbc	17 02 03.3	+1.1
WBSI	Waikabubak, Su	143.55	185	PKP	PKPbc	17 02 03.0	+0.5
WBSI				PKP	PKPbc	17 02 03.0	+0.5

HYB	**Hyderabad**	143.64	97	ePKPab	PKPab	17 02 02.1	-0.7
HYB				epPKPdf	pPKPdf	17 04 15.6	-0.7
HYB				eSKSdf	SKSdf	17 08 18.4	-1.6
ULHL	**Ulahol**	143.79	54	P	PKPdf	17 02 04.4	+0.8
	SNR=365						
YAK	**Yakutsk**	143.83	350	PKP	PKPdf	17 02 03.0	+0.3
	comp=Z,5µm,0.8s,baz=26,slow=0.5,SNR=1130						
YAK				SKKPbc	SKKPbc	17 12 57.5	-1.8
	comp=Z,74nm,0.8s,baz=106,slow=0.5,SNR=22						
YAK	**Yakutsk**	143.83	350	d iPKIKP	PKPdf	17 02 03.0	+0.3
YAK				e		17 04 12.5	
YAK				e		17 05 20.1	
YAK				eSS	SS	17 23 22.5	+1.7
YAK				pmax	pmax		
	comp=Z,6µm,0.9s						
YAK				pmax	pmax		
	comp=N,747nm,1.3s						
YAK				pmax	pmax		
	comp=E,207nm,1.1s						
YAK				pmax	pmax		
	comp=Z,682nm,1.7s						
YAK				pmax	pmax		
	comp=E,261nm,1.9s						
YAK				pmax	pmax		
	comp=N,542nm,1.9s						
KSH	**Kashi**	144.06	59	PKP	PKPab	17 02 03.8	-0.1
KSH				pPKP	pPKPdf	17 04 17.1	+0.4
KSH				PP	PP	17 05 23.4	-2.7
KSH				SKKS		17 11 17.5	
AAA	**Alma-Ata**	144.07	53	ePKP	PKPdf	17 02 04.9	+1.1
AAA	**Alma-Ata**	144.07	53	ePKIKP	PKPdf	17 02 05.2	+1.4
TNSS	**Tian-Shan**	144.13	53	ePKP	PKPab	17 02 05.0	+0.6
TNSS	**Tian-Shan**	144.13	53	ePKIKP	PKPab	17 02 05.0	+0.6
MDOK	**Medeo**	144.17	53	ePKP	PKPab	17 02 05.1	+0.8
MDOK				ePP	PP	17 05 28.1	+1.5
MDOK	**Medeo**	144.17	53	ePKIKP	PKPab	17 02 05.0	+0.8
MDOK				e		17 05 28.1	
EDFI	**Ende, Flores**	144.19	189	PKP	PKPbc	17 02 04.5	-0.1
EDFI				PKP	PKPdf	17 02 05.0	0.0
SMPI	**Sarmi**	144.20	220	PKP	PKPdf	17 02 05.1	+0.2
SMPI				PKP	PKPab	17 02 05.4	+0.5
MMRI	**Maumere**	144.23	190	PKP	PKPbc	17 02 04.6	0.0
MMRI				PKP	PKPdf	17 02 05.2	+0.3
ZAA0	**Zalesovo Array**	144.29	32		PKPab	17 02 04.3	+0.3
ZALV	**Zalesovo Beam**	144.29	32	PKP	PKPab	17 02 04.7	+0.6
	comp=N,676nm,0.4s,baz=296,slow=4.1,SNR=2391						
ZALV				pPKP	pPKPdf	17 04 15.9	-0.5
	comp=N,162nm,0.9s,baz=259,slow=2.4,SNR=8.8						
ZALV				SKPbc	SKiKP	17 04 51.4	+1.2
	comp=N,81nm,0.6s,baz=309,slow=3.5,SNR=9.6						
ZALV				SKKPbc	SKKPab	17 12 51.8	-3.6
	comp=N,22nm,0.8s,baz=57,slow=3.3,SNR=11						
ZALV	**Zalesovo Beam**	144.29	32		PKPab	17 02 04.5	+0.4
BHPL	**Bhopal**	144.43	87	eP	PKPdf	17 02 04.1	-0.9
IGBI	**Denpasar**	144.44	178	PKP	PKPab	17 02 05.9	+0.2
PLAI	**Plampang**	144.44	182	PKP	PKPdf	17 02 05.3	0.0
PLAI				PKP	PKPab	17 02 05.8	+0.1
ARXS	**Arharly**	144.45	51	ePKIKP	PKPab	17 02 05.4	+0.3
KUDL	**Kundal**	144.53	79	eP	PKPdf	17 02 04.2	-0.7
KUDL				IAmb	IAmb	17 02 06.9	
	comp=Z,2µm,0.7s						
TWSI	**Taliwang, Sumb**	144.54	180	PKP	PKPdf	17 02 05.5	+0.1
TWSI				PKP	PKPbc	17 02 05.8	+0.2
RTK	**Rohtak**	144.57	77	eP	PKPdf	17 02 04.2	-0.8
RTK				IAmb	IAmb	17 02 07.3	
	comp=Z,3µm,1.0s						
DNP	**Denpasar**	144.58	178	PKP	PKPab	17 02 06.7	+0.5
DNP				PKP	PKPbc	17 02 06.8	+1.1
TDK	**Taldyqorghan**	144.62	49	ePKP	PKPab	17 02 05.8	+0.1
TDK				ePP	PP	17 05 30.7	+1.8
TDK	**Taldyqorghan**	144.62	49	ePKIKP	PKPab	17 02 05.8	+0.1
TDK				e		17 05 30.6	
LBFI	**Labuhan Bajo,**	144.66	186	PKP	PKPbc	17 02 05.8	-0.1
PCJI	**Pacitan**	144.69	171	PKP	PKPab	17 02 06.4	-0.2
PCJI				PKP	PKPbc	17 02 06.7	+0.7
JHJR	**Jhajjar**	144.72	78	eP	PKPdf	17 02 05.1	-0.2
JHJR				IAmb	IAmb	17 02 07.9	
	comp=Z,2µm,0.7s						
BBJI	**Bungbulang**	144.73	165	PKP	PKPbc	17 02 06.1	-0.1
BBJI				PKP	PKPdf	17 02 06.2	+0.3
JAGI	**Jajag, Banyuwa**	144.73	176	PKPdf	PKPdf	17 02 05.8	0.0
JAGI	**Jajag, Banyuwa**	144.73	176	PKP	PKPdf	17 02 05.7	0.0
JAGI				PKP	PKPbc	17 02 05.8	-0.4
BHK	**Bhakra**	144.74	73	eP	PKPdf	17 02 05.2	-0.1
DBNI	**Kabupaten Domp**	144.74	183	PKP	PKPbc	17 02 06.2	0.0
DBNI				PKP	PKPab	17 02 06.5	-0.3
CNJI	**Cibinong**	144.75	164	PKP	PKPbc	17 02 06.0	-0.2
CNJI				PKP	PKPdf	17 02 06.1	+0.3
RTBI	**Rangdo, Negare**	144.79	177	PKP	PKPdf	17 02 06.0	+0.1
RTBI				PKP	PKPbc	17 02 06.2	-0.2
KLNI	**Mataram**	144.86	179	PKP	PKPdf	17 02 05.3	-0.7
KLNI				PKP	PKPbc	17 02 05.7	-0.8
UGM	**Wanagama**	144.87	170	PKP	PKPab	17 02 07.1	-0.3
GMJI	**Gumukmas**	144.87	175	PKP	PKPbc	17 02 06.6	0.0
KHKI	**Kahang-Kahang**	144.90	178	PKP	PKPbc	17 02 06.7	0.0
KHKI				PKP	PKPab	17 02 06.8	-0.6
YOGI	**Yogyakarta**	144.93	169	PKP	PKPab	17 02 07.2	-0.4
YOGI				PKP	PKPab	17 02 07.2	-0.4
CGRH	**CHANDIGARH**	145.04	74	eP	PKPdf	17 02 05.2	-0.7
CGRH				IAmb	IAmb	17 02 09.2	
	comp=Z,6µm,0.8s						
EGSI	**Enggano, Bengk**	145.04	155	PKP	PKPbc	17 02 07.0	-0.1
EGSI				PKP	PKPab	17 02 07.7	-0.3
AYAN	**Aya Nagar**	145.13	78	eP	PKPdf	17 02 05.2	-0.9
AYAN				IAmb	IAmb	17 02 08.0	
	comp=Z,1µm,1.0s						
KPJI	**Karang Pucung**	145.14	167	PKP	PKPbc	17 02 07.0	-0.3
KPJI				PKP	PKPbc	17 02 07.1	-0.3
SATY	**Saty**	145.16	52	ePKP	PKPbc	17 02 06.7	-0.1
SATY				ePP	PP	17 05 33.9	+1.5
SATY	**Saty**	145.16	52	ePKIKP	PKPbc	17 02 06.7	-0.1
SATY				e		17 05 33.8	
SNJI	**Sawahan-Nganju**	145.18	172	PKP	PKPab	17 02 08.3	-0.4
SNJI				PKP	PKPbc	17 02 08.4	+0.7
NPLP	**NPLP New Delhi**	145.18	78	eP	PKPdf	17 02 05.6	-0.5
NPLP				IAmb	IAmb	17 02 08.8	
	comp=Z,2µm,1.0s						
LDR	**Lodi Road**	145.22	78	eP	PKPdf	17 02 05.8	-0.4
LDR				IAmb	IAmb	17 02 11.7	
	comp=Z,1µm,0.6s						
SJI	**Sawahan**	145.23	172	PKP	PKPbc	17 02 07.4	-0.3
SJI				PKP	PKPdf	17 02 07.6	+0.9
NDI	**New Delhi**	145.23	78	eP	PKPdf	17 02 05.5	-0.7
NDI				IAmb	IAmb	17 02 08.9	
	comp=Z,1µm,0.7s						
DBJI	**Dramaga**	145.38	163	PKP	PKPbc	17 02 07.6	-0.5
DBJI				PKP	PKPdf	17 02 07.7	+0.8
KMPI	**Kaimana, Papua**	145.38	211	PKP	PKPbc	17 02 07.7	-0.4
KMPI				PKP	PKPab	17 02 09.2	-0.2
SMLA	**Simla**	145.40	74	⇑eP	PKPdf	17 02 05.3	-1.0
SMLA				IAmb	IAmb	17 02 11.2	
	comp=Z,3µm,0.8s						
ABJI	**Asem Bagus**	145.41	176	PKP	PKPdf	17 02 07.5	+0.6
ABJI				PKP	PKPbc	17 02 08.1	0.0
BLJI	**Banyuglugur**	145.41	175	PKP	PKPbc	17 02 07.9	-0.3
BLJI				PKP	PKPbc	17 02 07.9	-0.3
CTJI	**Waduk Cacaban**	145.51	167	PKP	PKPbc	17 02 08.0	-0.4
CTJI				PKP	PKPbc	17 02 08.1	-0.4
NGJI	**Ngawi**	145.55	171	PKP	PKPbc	17 02 09.0	+0.4
NGJI				PKP	PKPab	17 02 09.8	-0.2
UZB	**Uzynbulak**	145.57	52	ePKP	PKPbc	17 02 07.5	-0.5
UZB	**Uzynbulak**	145.57	52	ePKIKP	PKPbc	17 02 07.5	-0.5
SBJI	**Serang**	145.62	161	PKP	PKPbc	17 02 08.1	-0.7
SBJI				PKP	PKPdf	17 02 08.4	+1.1
KASI	**Kota Agung**	145.68	158	PKP	PKPdf	17 02 08.1	+0.7
KASI				PKP	PKPbc	17 02 08.7	-0.2
SMRI	**Semarang**	145.70	169	PKP	PKPbc	17 02 09.1	+0.1
TNG	**Tangerang**	145.71	162	PKP	PKiKP	17 02 13.0	+1.2
TNG				PKP	PKiKP	17 02 12.9	+1.2
PDGK	**Podgornoye**	145.85	52	PKIKP	PKPbc	17 02 08.2	-0.6
SHLS	**Shalkode**	145.88	52	ePKP	PKPbc	17 02 08.5	-0.4
SHLS	**Shalkode**	145.88	52	ePKIKP	PKPbc	17 02 08.5	-0.4
LWLI	**Liwa**	146.00	157	PKP	PKPdf	17 02 08.6	+0.5
BLSI	**Bandar Lampung**	146.07	159	PKP	PKPdf	17 02 08.5	+0.4
BLSI				PKP	PKPbc	17 02 08.8	-1.3
DDI	**Dehra Dun**	146.11	75	eP	PKPdf	17 02 06.9	-0.8
KMMI	**Kalianget**	146.13	175	PKP	PKPbc	17 02 09.4	-0.8
KMMI				PKP	PKPdf	17 02 09.7	+1.6
TBJI	**Tambak Boyo**	146.14	172	PKP	PKPab	17 02 11.6	-0.7
BNDI	**Bandanaira**	146.19	204	PKP	PKPdf	17 02 08.4	+0.2
MNAI	**Manna**	146.21	155		PKPdf	17 02 08.5	+0.2
MNAI	**Manna**	146.21	155	PKP	PKPbc	17 02 11.4	+0.9
MNAI				PKP	PKPbc	17 02 11.4	+0.9
BAKI	**Biak**	146.31	217	PKP	PKPbc	17 02 10.6	-0.1
BAKI				PKP	PKiKP	17 02 12.9	-0.1
MAKZ	**Makanchi**	146.31	45	PKIKP	PKPdf	17 02 08.5	+1.0
KLP	**Kalpa**	146.34	73	eP	PKPdf	17 02 07.0	-1.4
KLI	**Kotabumi**	146.42	158	PKP	PKPdf	17 02 09.5	+0.9
KLI				PKP	PKPbc	17 02 09.7	-1.3
PPSI	**Pulau Pagai**	146.42	149	PKP	PKPbc	17 02 10.6	-0.4
PPSI				PKP	PKPdf	17 02 10.9	+2.3
UBSI	**University, Be**	146.50	153	PKP	PKPbc	17 02 10.7	-0.5
UBSI				PKP	PKiKP	17 02 12.0	-1.4
MK31	**Makanchi Array**	146.51	45	d iPKIKP	PKPdf	17 02 08.9	+1.1
MKAR	**Makanchi Array**	146.51	45	PKPbc	PKPdf	17 02 09.0	+1.2
	comp=Z,1µm,0.8s,baz=305,slow=1.4,SNR=1789						
MKAR				pPKPbc	pPKPab	17 04 20.5	0.0
	comp=Z,52nm,0.9s,baz=270,slow=1.4,SNR=2.8						
MKAR				SKPbc	SKiKP	17 04 56.1	+1.1
	comp=Z,58nm,0.7s,baz=327,slow=1.8,SNR=4.5						
MKAR				SKKPbc	SKKPab	17 12 41.6	-4.1
	comp=Z,11nm,0.7s,baz=105,slow=5.6,SNR=15						
KLSI		146.54	158	PKP	PKPdf	17 02 08.6	-0.2
KLSI				PKP	PKPbc	17 02 09.1	-2.2
MDSI	**Maura Dua**	146.54	157	PKP	PKPdf	17 02 08.3	-0.5
MDSI				PKP	PKPbc	17 02 08.6	-2.7
FAKI	**Fak Fak**	146.70	209	PKP	PKPdf	17 02 10.0	+0.9
FAKI				PKP	PKPbc	17 02 10.2	-1.6
KSI	**Kapahiang**	146.72	154	PKP	PKPdf	17 02 09.6	+0.4
KSI				PKP	PKPbc	17 02 09.7	-2.2
BSSI	**Bau Bau, Buton**	146.91	187	PKP	PKPdf	17 02 09.9	+0.4
BSSI				PKP	PKPbc	17 02 10.2	-2.1
RKPI	**Ransiki, Papua**	147.03	214	PKP	PKPdf	17 02 10.6	+0.9
RKPI				PKP	PKPbc	17 02 11.4	-1.3
MASI	**Maura Aman, Be**	147.05	153	PKP	PKPdf	17 02 10.5	+0.8
SISI	**Saibi**	147.23	146	PKP	PKPbc	17 02 11.6	-1.6
SISI				PKP	PKPdf	17 02 11.9	+1.9
JOSI	**Joshimath**	147.42	75	eP	PKPdf	17 02 08.9	-1.2
JOSI				IAmb	IAmb	17 02 15.9	
	comp=Z,3µm,0.6s						
AAI	**Ambon**	147.56	202	PKP	PKPdf	17 02 10.4	-0.1
AAI				PKP	PKPbc	17 02 10.8	-3.3
MWPI	**Manokwari, Pap**	147.60	214	PKP	PKPbc	17 02 12.8	-1.4
MWPI				PKP	PKiKP	17 02 16.0	+0.3
MSAI	**Masohi**	147.63	203	PKP	PKPdf	17 02 10.6	0.0
MSAI				PKP	PKPdf	17 02 10.6	0.0
KRJI	**Kerinci**	147.66	151	PKP	PKPdf	17 02 11.6	+0.8
KRJI				PKP	PKPbc	17 02 11.9	-2.6
BKSI	**Bulukumba**	147.76	187	PKP	PKPdf	17 02 11.7	+0.9
BKSI				PKP	PKPbc	17 02 12.1	-2.4
LGTI	**Lohaghat**	147.80	77	eP	PKPdf	17 02 09.3	-1.4
LGTI				IAmb	IAmb	17 02 16.7	
	comp=Z,1µm,0.9s						
ZSN	**Zaisan**	147.80	42	ePKP	PKPdf	17 02 11.2	+1.3
ZSN	**Zaisan**	147.80	42	ePKHKP	PKPpre	17 02 11.1	
KRAI	**Karang Ratu**	147.84	203	PKP	PKPdf	17 02 11.1	+0.1
KRAI				PKP	PKPbc	17 02 11.3	-3.5
PBSI	**Pulau Batu**	147.90	144	PKP	PKPdf	17 02 12.5	+1.4
PBSI				PKP	PKPbc	17 02 13.1	-1.8
PTH	**Pithoragarh**	147.92	77	eP	PKPdf	17 02 09.8	-1.0
PTH				IAmb	IAmb	17 02 17.2	
	comp=Z,2µm,1.0s						
DGZ	**Jazzator, Alta**	148.08	37	d iPKHKP	PKPpre	17 02 11.6	
KAPI	**Kappang**	148.10	186	P	PKPdf	17 02 13.3	+1.9
KAPI	**Kappang**	148.10	186	PKP	PKPdf	17 02 12.3	+0.9
KAPI				PKP	PKPdf	17 02 12.3	+0.9
KAPI	**Kappang**	148.10	186	PKP	PKPdf	17 02 12.6	+1.2
LKN	**LUCKNOW**	148.20	82	eP	PKPdf	17 02 10.6	-0.5
LKN				IAmb	IAmb	17 02 16.9	
	comp=Z,4µm,0.7s						
PDSI	**Padang**	148.25	148	PKP	PKPdf	17 02 12.1	+0.4
PDSI				PKP	PKPdf	17 02 12.1	+0.4
NKL	**Nikolayevsk**	148.27	332	i PKIKP	PKPdf	17 02 10.6	+0.2
NLAI	**Namlea**	148.34	200	PKP	PKPdf	17 02 13.0	+1.3
NLAI				PKP	PKPdf	17 02 13.1	+1.3
PPI	**Padang Panjang**	148.62	148	PKP	PKPdf	17 02 12.7	+0.5
PPI				PKP	PKPdf	17 02 12.7	+0.5
GSI	**Gunungsitoli**	148.65	141	PKP	PKPdf	17 02 13.6	+1.3
KKSI	**Kolaka, Sulawe**	148.70	190	PKP	PKPdf	17 02 13.8	+1.4
KKSI				PKP	PKPbc	17 02 13.9	-3.0
ALBI	**Allahabad**	148.78	85	eP	PKPdf	17 02 12.5	+0.4
ALBI				IAmb	IAmb	17 02 18.5	
	comp=Z,4µm,1.5s						
SNSI	**Sinabang, Aceh**	148.82	138	PKP	PKPdf	17 02 13.9	+1.4
SNSI				PKP	PKPdf	17 02 14.0	+1.4
BRCI	**Bahraich**	148.94	81	eP	PKPdf	17 02 11.3	-1.0
BRCI				IAmb	IAmb	17 02 19.6	
	comp=Z,4µm,1.2s						
TYV	**Tymovskoe**	148.95	327	ePKHKP	PKPpre	17 02 13.3	
TYV				pmax	pmax		
	comp=Z,3µm,2.3s						
TYV				pmax	pmax		
	comp=Z,970nm,1.0s						
SIJI	**Sorong**	148.96	209	PKP	PKPdf	17 02 13.3	+0.5
SIJI				PKP	PKPbc	17 02 13.5	-4.1
SWI	**Sorong**	148.97	209	PKP	PKPdf	17 02 13.2	+0.4
SWI				PKP	PKPbc	17 02 13.6	-4.0
JMBI	**JAMBI**	148.98	154	PKP	PKPdf	17 02 13.5	+0.7
JMBI				PKP	PKPbc	17 02 17.9	+0.3
BOD	**Bodaibo**	149.07	3	ePKIKP	PKPdf	17 02 12.1	+0.5
BOD				pmax	pmax		
	comp=Z,2µm,1.0s						
KUR	**Kuril'sk**	149.09	314	c iPKIKP	PKPdf	17 02 12.5	+0.5
SPSI	**Sidrap Palu**	149.13	186	PKP	PKPdf	17 02 13.8	+0.7
SPSI				PKP	PKPbc	17 02 13.9	-4.1
TPI	**Tanjungpandan**	149.25	162	PKP	PKPdf	17 02 13.9	+0.7
TPI				PKP	PKPbc	17 02 14.5	-3.7
MNSI	**Mandailing Nat**	149.30	145	PKP	PKPdf	17 02 13.5	+0.2
MNSI				PKP	PKPbc	17 02 13.7	-4.7
PPBI	**Pangkal Pinang**	149.37	159	PKP	PKPbc	17 02 18.9	+0.4
SBSI	**Sibolga**	149.57	143	PKP	PKPdf	17 02 14.5	+0.7
SBSI				PKP	PKPdf	17 02 14.5	+0.7
PMSI	**Majene**	149.67	185	PKP	PKPdf	17 02 15.8	+1.9
BBKI	**Banjar Baru**	149.74	177	PKP	PKPdf	17 02 15.0	+1.0
BBKI				PKP	PKPbc	17 02 15.4	-4.0
SANI	**Sanana**	149.80	199	PKP	PKPdf	17 02 15.0	+0.9
SANI	**Sanana**	149.80	199	PKP	PKPdf	17 02 14.7	+0.6
SANI				PKP	PKPbc	17 02 15.2	-4.4
TTSI	**Tana Toraja**	150.04	186	PKP	PKPdf	17 02 15.2	+0.7
TTSI				PKP	PKPbc	17 02 15.6	-4.5
MLSI	**Meulaboh, Aceh**	150.33	136	PKP	PKPdf	17 02 15.5	+0.6
MLSI				PKP	PKPdf	17 02 15.5	+0.6
UGL	**Uglegorsk**	150.39	325	⇓iPKIKP	PKPdf	17 02 15.3	+1.4
UGL				pmax	pmax		
	comp=N,100nm,0.8s						
UGL				pmax	pmax		
	comp=Z,200nm,1.2s						
UGL				pmax	pmax		
	comp=E,100nm,1.1s						
DSRI	**Dabo**	150.40	155	PKP	PKPdf	17 02 15.3	+0.3
DSRI				PKP	PKPbc	17 02 16.3	-4.6
GUMO	**Guam**	150.43	249	PKP	PKPdf	17 02 15.7	+0.8
	comp=E,235nm,0.9s,baz=157,slow=3.5,SNR=5.3						
GUMO				PKPbc	PKiKP	17 02 21.3	-0.1
	comp=E,1µm,0.8s,baz=156,slow=6.2,SNR=26						
MMSI	**Mamuju**	150.47	185	PKP	PKPdf	17 02 16.2	+1.0
MMSI				PKP	PKPbc	17 02 16.4	-4.7
RPSI	**Rantau Prapat**	150.55	142		PKiKP	17 02 21.9	+0.1
KCSI	**Kotacane, Aceh**	150.57	139	PKP	PKPdf	17 02 15.3	0.0
KCSI				PKP	PKPbc	17 02 15.7	-5.7
PSI	**Prapat**	150.64	142	PKP	PKPdf	17 02 15.8	+0.2
	comp=E,84nm,0.9s,baz=345,slow=4.9,SNR=97						
PSI				PKPbc	PKiKP	17 02 21.9	-0.2
	comp=E,590nm,0.8s,baz=216,slow=8.7,SNR=109						
PSI				PKPab	PKPab	17 02 31.8	+0.8
	comp=E,158nm,0.6s,baz=99,slow=9.2,SNR=10						
PSI				pPKPbc	pPKPbc	17 04 32.0	-1.0
	comp=E,197nm,1.2s,baz=207,slow=7.7,SNR=12						
PSI	**Prapat**	150.64	142	PKP	PKPdf	17 02 15.5	-0.1
PSI				PKP	PKPbc	17 02 16.0	-5.7
YUK	**Yuzh-Kuril'sk**	150.90	314	ePKIKP	PKPbc	17 02 19.2	-1.9
YUK				e		17 06 12.6	
YUK				eSS	SS	17 24 38.7	-2.4
YUK				pmax	pmax		
	comp=Z,2µm,1.1s						
YUK				pmax	pmax		
	comp=E,284nm,0.9s						
TSI	**Tuntungan**	151.01	140	PKP	PKPdf	17 02 16.2	+0.3
TSI				PKP	PKPbc	17 02 17.0	-5.3
BWNR	**Bhubaneshwar**	151.07	97	eP	PKPdf	17 02 15.2	-0.6
BWNR				IAmb	IAmb	17 02 24.2	
	comp=Z,2µm,1.1s						
WMQ	**Urumqi**	151.23	47	PKPbc	PKPdf	17 02 16.9	+1.4
WMQ				PKPab	PKPab	17 02 34.8	+2.0
WMQ				pPKP	pPKPdf	17 04 29.8	+1.4
WMQ				PP	PP	17 06 08.0	+1.1
WMQ				SKKS		17 12 01.4	
WMQ				SS	SS	17 24 41.3	-3.7
WMQ				AMB	AMB		
	comp=Z,680nm,3.7s						
YSS	**Yuzhno-Sakhali**	151.30	321	i PKIKP	PKPdf	17 02 16.7	+1.4
YSS				e		17 02 33.7	
YSS				e		17 05 25.6	
YSS				e		17 06 08.8	
YSS				eSS	SS	17 24 50.5	+5.5
YSS				pmax	pmax		
	comp=Z,1µm,3.4s						
YSS				pmax	pmax		
	comp=Z,210nm,1.0s						
LHMI	**Lhok Sumawe**	151.42	136	PKP	PKPdf	17 02 17.4	+0.9
LHMI				PKP	PKPbc	17 02 17.6	-5.6
LUWI	**Luwuk**	151.56	193	PKP	PKiKP	17 02 25.1	+1.2
LUWI	**Luwuk**	151.56	193	PKP	PKPdf	17 02 17.9	+1.1
LUWI				PKP	PKPbc	17 02 18.5	-5.1
TPRI	**Tanjung Pinang**	151.66	154	PKP	PKPdf	17 02 18.1	+1.2
TPRI				PKP	PKPbc	17 02 18.3	-5.5
GAYA	**Gaya**	151.73	87	eP	PKPdf	17 02 15.8	-0.9
GRNR	**Gornyy**	151.80	333	⇓iPKIKP	PKPdf	17 02 17.4	+1.4
GRNR				pmax	pmax		
	comp=Z,110nm,1.1s						
APSI	**Ampana**	151.90	191	PKP	PKPdf	17 02 18.2	+0.9
APSI				PKP	PKPbc	17 02 19.3	-5.0
BKB	**Balikpapan**	151.97	181	PKP	PKPdf	17 02 19.8	+2.4
BKB				PKP	PKPbc	17 02 20.3	-4.2
TNTI	**Ternate**	152.01	203	PKP	PKPdf	17 02 17.4	-0.1
TNTI				PKP	PKPbc	17 02 17.6	-7.0
ZEA	**Zeya**	152.08	346	ePKIKP	PKPdf	17 02 17.4	+1.1
ZEA				e		17 02 37.0	
ZEA				e		17 06 09.4	
ZEA				pmax	pmax		
	comp=Z,500nm,6.0s						
ZEA				pmax	pmax		
	comp=N,20nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,110nm,1.3s						
BOK	**Bokaro**	152.11	90	eP	PKPdf	17 02 16.7	-0.6
PCI	**Palu**	152.15	187	PKP	PKPdf	17 02 18.6	+0.9
PCI				PKP	PKPbc	17 02 18.7	-6.2
MYKOM	**Kota Tinggi**	152.17	152	PKP	PKPdf	17 02 18.5	+0.8
MYKOM				PKP	PKPbc	17 02 18.9	-6.0
MTKI	**Muara Teweh, K**	152.24	176	PKP	PKPdf	17 02 19.2	+1.4
MTKI				PKP	PKPdf	17 02 19.3	+1.4
MOY	**Mondy**	152.62	21	ePKIKP	PKPdf	17 02 19.9	+2.6
MOY				pmax	pmax		
	comp=Z,678nm,1.5s						
JMUI	**Jamui**	152.64	87	eP	PKPdf	17 02 20.2	+2.1
JMUI				IAML		17 02 27.5	
	comp=Z,1µm,1.0s						
PBA	**Port Blair**	152.92	120	P	PKPdf	17 02 20.6	+2.0
	SNR=9.2						
JKA	**Kamikawa-asahi**	152.93	316		PKiKP	17 02 27.2	+1.5
ASAJ	**Asahikawa**	152.93	316	PKP	PKPdf	17 02 19.9	+2.1
	comp=Z,168nm,0.8s,baz=243,slow=3.7,SNR=43						
ASAJ				PKPbc	PKiKP	17 02 27.2	+1.5
	comp=Z,290nm,0.8s,baz=269,slow=6.5,SNR=25						
ASAJ				PKPab	PKPab	17 02 41.8	+1.9
	comp=Z,276nm,1.0s,baz=264,slow=29,SNR=8.0						
IRK	**Irkutsk**	153.07	17	ePKIKP	PKPdf	17 02 18.2	+0.4
IRK				e		17 02 40.0	
IRK				e		17 06 19.3	
IRK				pmax	pmax		
	comp=Z,992nm,2.3s						
IPM	**Ipoh**	153.17	144	PKP	PKPdf	17 02 19.5	+0.4
IPM				PKP	PKPdf	17 02 19.6	+0.4
MRSI	**Marisa**	153.20	192	PKP	PKPdf	17 02 18.2	-1.0
MRSI				PKP	PKPbc	17 02 23.8	-3.4
MPSI	**Mapaga**	153.37	187	PKP	PKPdf	17 02 19.8	+0.4
TLY	**Talaya**	153.41	18	P	PKPdf	17 02 20.9	+2.6
KULM	**Kulim**	153.65	142	PKP	PKPdf	17 02 20.3	+0.5
KULM				PKP	PKPbc	17 02 20.4	-7.7
ZAK	**Zakamensk**	154.46	20	ePKIKP	PKPdf	17 02 20.8	+0.9
ZAK				pmax	pmax		
	comp=Z,114nm,1.3s						
CIT	**Chita**	154.84	4	ePKP2	PKPab	17 02 49.4	+1.6
CIT				pmax	pmax		
	comp=Z,1µm,1.4s						
GTK	**Tadong**	155.10	83	eP	PKPdf	17 02 20.5	-1.1
GTK				IAML		17 02 23.6	
	comp=Z,112nm,0.7s						
HEH	**HeiHe**	155.28	343	PKP	PKPdf	17 02 20.8	-0.1
HEH				PKPab	PKPab	17 02 49.8	+0.2
HEH				SS	SS	17 25 25.6	-1.1
HEH				AMB	AMB		
	comp=Z,1µm,5.6s						
SBUM	**Sibu**	155.30	169	PKP	PKPdf	17 02 21.2	-0.9
SBUM				PKP	PKPdf	17 02 23.3	+1.2
TEY	**Ternei**	155.85	324	⇓ePKIKP	PKPdf	17 02 22.6	+0.8
TEY				e		17 02 53.6	
TEY				pmax	pmax		
	comp=Z,200nm,3.7s						
TEY				pmax	pmax		
	comp=Z,50nm,1.4s						
TEY				pmax	pmax		
	comp=N,10.0nm,1.2s						
TEY				pmax	pmax		
	comp=E,20nm,1.0s						
TEY				pmax	pmax		
	comp=Z,150nm,0.9s						
TEY				pmax	pmax		
	comp=N,30nm,0.9s						
DHUB	**DHUBRI**	156.18	86	IAmb	IAmb	17 02 56.0	
	comp=Z,299nm,0.8s						
TARAI	**Tarakan**	156.51	182	PKP	PKPdf	17 02 24.1	+0.5
TARAI				PKP	PKPab	17 02 25.8	-30
AGT	**Agartala**	156.91	92	eP	PKPdf	17 02 23.0	-0.8
AGT				IAmb	IAmb	17 02 28.0	
	comp=Z,519nm,1.0s						
AGT				IAMs_20	IAMs_20	17 12 02.5	
	comp=N,822nm,8.4s						
BELO	**BELONIA**	156.94	94	eP	PKPdf	17 02 22.7	-1.2
BRDH	**Bariadhala**	156.97	95	PKP	PKPdf	17 02 26.9	+3.0
	comp=N,268nm,0.6s,baz=80,slow=6.1,SNR=1.9						
HILR	**Hailar Array B**	157.28	355	PKP	PKPdf	17 02 24.7	+1.1
	comp=N,176nm,0.7s,baz=100,slow=1.7,SNR=242						
HILR				PKPab	PKPab	17 03 00.1	+1.8
	comp=N,375nm,0.7s,baz=33,slow=3.5,SNR=42						
HILR				pPKP	pPKPdf	17 04 36.6	-0.3
	comp=N,52nm,1.0s,baz=134,slow=4.3,SNR=5.2						
HILR				PP	PP	17 06 37.9	-1.3
	comp=N,30nm,0.8s,baz=74,slow=5.3,SNR=4.5						
LSA	**Lhasa**	157.44	77	PKP	PKPdf	17 02 22.3	-2.6
SONM	**Songino Array**	157.65	18	PKP	PKPdf	17 02 25.4	+1.2
	comp=N,118nm,1.0s,baz=264,slow=1.0,SNR=417						
SONM				PKPab	PKPab	17 03 01.7	+1.5
	comp=N,113nm,0.8s,baz=330,slow=4.8,SNR=18						
SONM				pPKP	pPKPdf	17 04 38.0	+0.5
	comp=N,21nm,0.8s,baz=270,slow=1.5,SNR=4.7						
SONM				PP	PP	17 06 37.6	-3.9
	comp=N,15nm,1.0s,baz=318,slow=3.9,SNR=3.2						
GUWA	**GUWAHATI**	157.72	86	eP	PKPdf	17 02 23.8	-1.0
GUWA				IAML		17 02 26.0	
	comp=Z,101nm,0.9s						
SHL	**Shillong**	157.80	88	P	PKPdf	17 02 26.2	+1.1
	SNR=117						
SHL	**Shillong**	157.80	88	eP	PKPdf	17 02 23.8	-1.3
ULN	**Ulaanbaatar**	157.80	17	PKP	PKPdf	17 02 25.4	+1.0
TAWA	**Tawang**	158.01	83	eP	PKPdf	17 02 24.4	-1.1
SAIH	**SAIHA**	158.11	96	eP	PKPdf	17 02 27.6	+2.1
SAIH				IAmb	IAmb	17 02 28.2	
	comp=Z,454nm,0.6s						
DAV	**Davao City (W)**	158.48	205	PKP	PKPdf	17 02 27.3	+1.2
	comp=Z,41nm,0.3s,baz=242,slow=4.8,SNR=4.3						
TEZP	**TEZPUR**	158.75	85	eP	PKPdf	17 02 25.2	-0.8
TEZP				IAmb	IAmb	17 02 26.9	
	comp=Z,107nm,0.9s						
USRK	**Ussuriysk Ar.**	158.76	328	PKP	PKPdf	17 02 25.8	+0.4
	comp=Z,40nm,1.0s,baz=228,slow=1.2,SNR=46						
USRK				PKPab	PKPab	17 03 06.2	+1.3
	comp=Z,57nm,0.9s,baz=29,slow=4.3,SNR=13						
USRK				pPKP	pPKPdf	17 04 38.9	+0.1
	comp=Z,13nm,1.0s,baz=329,slow=1.7,SNR=2.6						
USRK				PP	PP	17 06 45.5	-2.1
	comp=Z,16nm,0.9s,baz=45,slow=2.2,SNR=4.6						
KKM	**Kota Kinabalu**	159.23	179	PKP	PKPdf	17 02 27.5	+0.5
KKM				PKP	PKPdf	17 02 28.0	+1.0
GOMU	**GeErMu**	159.30	58	PKP	PKPdf	17 02 26.1	-0.7
GOMU				SS	SS	17 26 11.5	-0.8
MJAR	**Matsushiro Arr**	159.31	303	PKP	PKPdf	17 02 26.5	+0.2

	comp=Z,28nm,0.9s,baz=72,slow=0.8,SNR=65						
MJAR				PKPab	PKPab	17 03 08.6	+0.8
	comp=Z,124nm,0.9s,baz=70,slow=2.0,SNR=14						
MAJO	Matsushiro	159.31	303	PKP	PKPdf	17 02 25.5	-0.9
BNX	BinXian	159.34	338	⇓PKP	PKPdf	17 02 23.9	-2.1
BNX				pPKP	pPKPdf	17 04 39.3	-0.2
BNX				PP	PP	17 06 49.6	-0.9
BNX				AMB	AMB		
	comp=Z,690nm,6.6s						
MDJ	Mudanjiang	159.49	333	PKP	PKPdf	17 02 26.3	0.0
MDJ				PP	PP	17 06 51.8	+0.4
MDJ				AMB	AMB		
	comp=Z,450nm,3.8s						
ZIRO	ZIRO	159.76	83	eP	PKPdf	17 02 26.4	-0.9
ZIRO				IAmb	IAmb	17 02 30.3	
	comp=Z,482nm,1.8s						
KOHI	KOHIMA	159.81	88	eP	PKPdf	17 02 26.4	-1.0
KOHI				IAmb	IAmb	17 02 30.6	
	comp=Z,317nm,1.0s						
MOKO	MOKOCHONG	160.25	87	eP	PKPdf	17 02 27.1	-0.8
MOKO				IAmb	IAmb	17 02 31.4	
	comp=Z,386nm,1.0s						
PASG	PASIGHAT	161.09	82	eP	PKPdf	17 02 28.2	-0.3
PASG				IAmb	IAmb	17 02 32.0	
	comp=Z,409nm,0.9s						
GTA	Gaotai	161.27	44	PKP	PKPdf	17 02 29.6	+1.1
GTA				PKPab	PKPab	17 03 17.6	+1.2
GTA				pPKP	pPKPdf	17 04 43.3	+1.3
GTA				SKKS		17 12 51.3	
GTA				AMB	AMB		
	comp=Z,350nm,9.2s						
CM31	Chiang Mai Arr	161.67	114	P	PKPdf	17 02 30.9	+1.5
	SNR=80						
CMAR	Chiang Mai Arr	161.67	114	PKP	PKPdf	17 02 30.6	+1.2
	comp=Z,47nm,0.9s,baz=257,slow=2.5,SNR=299						
CMAR				PKPab	PKPab	17 03 18.7	+0.2
	comp=Z,62nm,1.1s,baz=252,slow=4.9,SNR=14						
CMAR				PP	PP	17 07 01.1	-3.1
	comp=Z,19nm,1.0s,baz=282,slow=7.5,SNR=7.8						
CN2	Changchun	161.70	339	ePKP	PKPdf	17 02 28.0	-0.6
CN2				PKPab	PKPab	17 03 17.4	-0.4
CN2				AMB	AMB		
	comp=Z,800nm,6.5s						
CHTO	Chiang Mai	161.85	113	PKP	PKPdf	17 02 30.1	+0.5
CHTO				PKP	PKPdf	17 02 30.3	+0.8
CHTO	Chiang Mai	161.85	113	PKP	PKPdf	17 02 30.4	+0.8
XLT	XiLinHaoTe	163.06	1	ePKP	PKPdf	17 02 30.6	+0.5
XLT				PKPab	PKPab	17 03 24.8	+0.9
XLT				PP	PP	17 07 11.3	+1.4
XLT				SS	SS	17 26 51.3	+3.6
TNCH	TengChong	163.63	93	⇓PKP	PKPdf	17 02 32.8	+1.5
TNCH				PKPab	PKPab	17 03 28.3	+1.0
TNCH				pPKP	pPKPdf	17 04 45.0	+0.1
TNCH				PP	PP	17 07 14.8	-0.2
SNY	Shenyang	164.07	341	⇓PKP	PKPdf	17 02 31.8	+0.9
BTO	Baotou	165.31	20	ePKP	PKPdf	17 02 33.8	+1.6
BTO				PKPab	PKPab	17 03 34.6	+0.6
HHC	Hu-ho-hao-te	165.50	15	⇓iPKP	PKPdf	17 02 34.1	+1.7
HHC				AMB	AMB		
	comp=Z,510nm,11.8s						
LZDM	Lanzhou Array	165.79	48	PKP	PKPdf	17 02 34.5	+1.4
	comp=Z,69nm,0.9s,baz=318,slow=2.0,SNR=30						
LZDM				PKPab	PKPab	17 03 38.1	+1.5
	comp=Z,179nm,0.9s,baz=297,slow=4.6,SNR=20						
LZDM				pPKP	pPKPdf	17 04 45.6	-1.2
	comp=Z,6.9nm,0.4s,baz=3.7,slow=4.6,SNR=2.3						
KSRS	Korea Array	165.80	320	PKP	PKPdf	17 02 33.3	+0.8
	comp=Z,40nm,0.9s,baz=306,slow=0.6,SNR=117						
KSRS				PKPab	PKPab	17 03 37.8	+1.7
	comp=Z,70nm,1.0s,baz=49,slow=4.7,SNR=27						
LZH	Lanzhou	165.81	47	⇓PKP	PKPdf	17 02 34.5	+1.7
LZH				pPKP	pPKPdf	17 04 47.8	+1.3
LZH				sPKP	sPKPdf	17 05 42.8	+1.7
LZH				SKKS		17 13 18.6	
LZH				AMB	AMB		
	comp=Z,720nm,5.2s						
JNU	Nakatsue	166.18	300	PKP	PKPdf	17 02 33.3	+0.3
	comp=Z,36nm,0.9s,baz=328,slow=1.6,SNR=19						
JNU				PKPab	PKPab	17 03 39.0	+0.8
	comp=Z,63nm,0.9s,baz=62,slow=3.9,SNR=9.7						
INCN	Inchon	166.49	324	P	PKPdf	17 02 33.8	+0.7
TGY	Tagaytay City	166.61	198	PKP	PKPdf	17 02 35.2	+1.4
	comp=Z,139nm,0.5s,baz=95,slow=7.6,SNR=4.3						
PZH	PanZhiHua	166.72	88	PKP	PKPdf	17 02 34.1	+0.3
PZH				PP	PP	17 07 31.0	+0.3
PZH				AMB	AMB		
	comp=Z,480nm,4.0s						
BJI	Beijing	166.92	1	⇓PKP	PKPdf	17 02 34.5	+1.2
BJI				pPKP	pPKPdf	17 04 48.5	+1.5
BJI				sPKP	sPKPdf	17 05 44.3	+2.7
BJI				PP	PP	17 07 29.4	-0.1
BJI				SS	SS	17 27 24.9	-1.3
DL2	Dalian	167.33	342	PKP	PKPdf	17 02 34.1	+0.5
DL2				PKPab	PKPab	17 03 43.8	+1.0
DL2				pPKP	pPKPdf	17 04 47.3	-0.1
DL2				AMB	AMB		
	comp=Z,1µm,5.7s						
KMI	Kunming	167.41	95	⇓PKP	PKPdf	17 02 35.3	+0.9
CD2	Chengdu	168.08	68	PKP	PKPdf	17 02 33.9	-0.6
CD2				pPKP	pPKPdf	17 04 48.1	-0.2
CD2				PP	PP	17 07 36.6	-0.6
CD2				SKKS		17 13 26.9	
CD2				AMB	AMB		
	comp=Z,570nm,6.6s						
TIY	Taiyuan	168.69	17	ePKP	PKPdf	17 02 36.0	+1.3
TIY				PKPab	PKPab	17 03 49.8	+0.9
TIY				pPKP	pPKPdf	17 04 49.5	+1.0
TIY				AMB	AMB		
	comp=Z,850nm,3.9s						
HNS	HongShan	169.44	8	⇓PKP	PKPdf	17 02 36.5	+1.4
HNS				PKPab	PKPab	17 03 53.3	+1.2
HNS				pPKP	pPKPdf	17 04 48.8	-0.1
HNS				PP	PP	17 07 42.1	0.0
HNS				SS	SS	17 27 49.0	-2.2
HNS				AMB	AMB		
	comp=Z,2µm,5.4s						
JOW	Kunigami	169.57	272	PKP	PKPdf	17 02 37.7	+2.2
	comp=Z,298nm,0.9s,baz=208,slow=2.4,SNR=33						
QIZ	Qiongzhong	169.98	140	PKP	PKPdf	17 02 37.1	+1.2
QIZ				PKPab	PKPab	17 03 55.1	+0.1
QIZ				SS	SS	17 27 56.8	-1.0
QIZ				AMB	AMB		
	comp=Z,430nm,9.9s						
XAN	Xi'an	170.31	41	⇓PKP	PKPdf	17 02 36.9	+1.1
XAN				PKPab	PKPab	17 03 56.8	+0.5
XAN				pPKP	pPKPdf	17 04 49.0	-0.6
XAN				PP	PP	17 07 45.0	-2.4
XAN				SKKS		17 13 38.6	
XAN				SS	SS	17 27 59.1	-2.3
XAN				AMB	AMB		
	comp=Z,750nm,11.0s						
TIA	Tai'an	170.74	357	PKP	PKPdf	17 02 37.1	+1.2
TIA				pPKP	pPKPdf	17 04 49.8	+0.1
TIA				AMB	AMB		
	comp=Z,1µm,8.0s						
GYA	Guiyang	171.10	91	⇓PKP	PKPdf	17 02 37.0	+0.5
GYA				PP	PP	17 07 53.9	+1.3
GYA				AMB	AMB		
	comp=Z,700nm,9.1s						
LYN	LuoYang	171.61	24	⇓iPKP	PKPdf	17 02 37.5	+1.2
LYN				PKPab	PKPab	17 04 02.8	+0.9
LYN				pPKP	pPKPdf	17 04 49.8	-0.4
LYN				SS	SS	17 28 09.9	-3.0
LYN				AMB	AMB		
	comp=Z,2µm,5.5s						
GULI	GuiLin	174.17	105	⇓PKP	PKPdf	17 02 39.1	+1.5
GULI				pPKP	pPKPdf	17 04 52.5	+1.0
GULI				PP	PP	17 08 10.0	+3.0
SSE	Sheshan	174.22	317	PKP	PKPdf	17 02 38.4	+1.0
SSE				PP	PP	17 08 07.8	+1.5
SSE				SS	SS	17 28 40.8	+1.8
SSE				AMB	AMB		
	comp=Z,170nm,3.1s						
NJ2	Nanjing	174.53	339	i PKP	PKPdf	17 02 38.6	+1.1
NJ2				PKPab	PKPab	17 04 14.9	0.0
NJ2				AMB	AMB		
	comp=Z,940nm,4.3s						
WHN	Wuhan	175.89	28	⇓PKP	PKPdf	17 02 39.0	+1.1
WHN				PKPab	PKPab	17 04 20.8	-0.2
WHN				pPKP	pPKPdf	17 04 51.6	-0.3
WHN				PP	PP	17 08 13.6	0.0
CNSH	ChangSha	176.51	68	PKP	PKPdf	17 02 39.0	+0.9
CNSH				PP	PP	17 08 19.0	+1.0
CNSH				SKKS		17 14 04.3	
CNSH				SS	SS	17 28 53.9	-8.2
CNSH				AMB	AMB		
	comp=Z,870nm,4.6s						
QZH	Quanzhou	177.33	223	i PKP	PKPdf	17 02 39.6	+1.2
QZH				PKPab	PKPab	17 04 29.3	+1.7

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*IDC **24** 16:48:41.2±2.9, 18°.96N×121°.50E, h80^{km}±30^{km}, mb3.3/6, mbtmp3.7/8, MS3.1/1, Error ellipse: s-maj=39.4km s-min=15.3km az=80.0*

ISC 24 16:48:39.1±0.8**, 19°.04N**±0°.08×**121°.3E**±0°.2**, h50^{km}, n24, σ1^s.54**/17**, mb3.5**/7**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPUB	Ta-pu	4.27	352	P	Pn	16 49 39.6	-2.1
YULB	Yu-li	4.33	1	P	Pn	16 49 40.8	-1.6
SSLB	Suanglung	4.73	357	P	Pn	16 49 46.4	-1.5
TGY	Tagaytay City	4.92	184	P	Pn	16 49 52.6	+1.9
	49nm,0.3s,baz=202,slow=4.6,SNR=3.7						
NACB	Ninganchiao	5.12	4	P	Pn	16 49 52.1	-1.1
YHNB	Yeheng	5.60	1	P	Pn	16 50 00.0	+0.1
YOJ	Yonaguni jima	5.63	17	P	Pn	16 50 05.4	+5.1
TATO	Taipei	5.91	2	P	Pn	16 50 05.0	+0.9
JOW	Kunigami	10.10	39	P	Pn	16 51 02.2	+0.7
	20nm,0.6s,baz=125,slow=18,SNR=5.7						
DAV	Davao City (W)	12.63	160	LR	LR	16 57 20.8	
	comp=Z,72nm,18.2s,baz=332,slow=42						
KSRS	Korea Array	19.25	16	P	P	16 52 59.1	-0.2
	0.8nm,0.4s,baz=197,slow=11,SNR=8.2						
LZH	Lanzhou	22.88	321	eP	P	16 53 40.8	+2.2
LZH				pP	pP	16 53 49.1	-0.3
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
SONM	Songino Array	31.16	341	P	P	16 54 53.8	+0.5
	comp=Z,0.5nm,0.6s,baz=149,slow=6.5,SNR=3.6						
	comp=Z,0.5nm,0.6s						
WRA	Warramunga Arr	40.82	161	P	P	16 56 13.7	-2.3
	comp=Z,0.3nm,0.6s,baz=333,slow=11,SNR=4.6						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	42.18	320	P	P	16 56 27.3	+0.4
	comp=Z,0.4nm,0.6s,baz=121,slow=7.7,SNR=5.1						
MKAR				PcP	PcP	16 58 20.5	0.0
	comp=Z,0.3nm,0.7s,baz=106,slow=3.6,SNR=3.1						
	comp=Z,0.4nm,0.6s						
H11S3	WAKE ISLAND Hy	42.93	83	T	T	17 42 20.7	
	baz=279,slow=75,SNR=5.3						
H11S1	WAKE ISLAND Hy	42.94	83	T	T	17 42 13.2	
	baz=279,slow=75,SNR=5.8						
H11S2	WAKE ISLAND Hy	42.95	83	T	T	17 42 11.0	
	baz=279,slow=75,SNR=5.3						
H11N1	WAKE ISLAND Hy	42.96	81	T	T	17 42 11.3	
	baz=278,slow=75,SNR=18						
H11N2	WAKE ISLAND Hy	42.97	81	T	T	17 42 13.0	
	baz=278,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	42.98	81	T	T	17 42 13.0	
	baz=278,slow=75,SNR=12						
ASAR	Alice Springs	44.21	163	P	P	16 56 40.8	-2.7
	comp=Z,0.1nm,0.4s,baz=354,slow=8.8,SNR=3.0						
	comp=Z,0.1nm,0.4s						
KURBB	Kurchatov Arra	46.15	323	P	P	16 56 59.0	+0.3
	comp=Z,0.6nm,0.6s,baz=120,slow=7.7,SNR=6.6						
	comp=Z,0.6nm,0.6s						
NRIK	Noril'sk	54.37	346	P	P	16 58 00.6	+0.1
	comp=Z,2.9nm,0.7s,baz=127,slow=7.9,SNR=12						
	comp=Z,2.9nm,0.7s						

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*NEIC **24** 16:52:14.3±1.4, 21°.9S±0°.2×173°.5E±0°.1, h10^{km}±2^{km}, mb4.4/13, Error ellipse: s-maj=40.8km s-min=13.1km az=163.0*

*IDC **24** 16:52:40.9±8.2, 21°.55S×171°.57E, h128^{km}±47^{km}, mb3.7/4, mbtmp4.0/5, MS3.8/1, Error ellipse: s-maj=152.2km s-min=37.6km az=146.0*

ISC 24 16:52:16.6±0.8**, 21°.8S**±0°.1×**173°.55E**±0°.09**, h35^{km}, n25, σ0^s.71**/21**, mb4.4**/10**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	5.15	273	Pn	Pn	16 53 31.5	+0.3
PINNC	Pines Island,	5.71	261	Pn	Pn	16 53 38.7	-0.2
MSVF	Nonsavu	5.88	47		Pn	16 53 42.0	+0.6
DZM	Mont Dzumac	6.60	267	P	Pn	16 53 51.2	-0.1
	5.4nm,0.7s,baz=75,slow=16,SNR=2.6						
SANVU	Saraoutou	8.75	316	Pn	Pn	16 54 20.2	-0.5
NIUE	Niue	15.73	83		P	16 55 59.9	+0.7
TOZ	Tahuroa Road	15.93	174	Pn	Pn	16 55 57.5	-0.6
TOZ				IAmb	IAmb	16 55 59.9	
	comp=Z,39nm,1.3s						
AFI	Afiamalu	16.03	63	Pn	Pn	16 55 58.4	-1.2
ARMA	Armidale	21.43	242	P	P	16 57 01.5	-0.4
ARMA				IAmb	IAmb	16 57 10.1	
	comp=Z,28nm,1.5s						
CAN	Canberra	25.32	233	P	P	16 57 41.0	+0.8
CTA	Charters Tower	25.54	269	P	P	16 57 42.9	+0.6
	comp=Z,1.7nm,0.8s,baz=100,slow=12,SNR=3.1						
CTA				LR	LR	17 06 54.2	
	comp=Z,260nm,20.5s,baz=76,slow=36						
	comp=Z,1.7nm,0.8s						
CTAO	Charters Tower	25.54	269	P	P	16 57 42.4	+0.1
WR8	Warramunga Arr	36.47	266	P	P	16 59 17.7	-0.9
WR8				IAmb	IAmb	16 59 24.4	
	comp=Z,5.2nm,0.9s						
AS31	Alice Springs	36.53	259	P	P	16 59 18.8	-0.3
ASAR	Alice Springs	36.53	259	P	P	16 59 18.1	-1.1
	comp=Z,1.0nm,0.7s,baz=78,slow=9.2,SNR=16						
	comp=Z,1.0nm,0.7s						
WRAB	Tennant Creek	36.61	266	P	P	16 59 18.5	-1.3
WRAB				IAmb	IAmb	16 59 19.9	
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	36.62	266	P	P	16 59 19.1	-0.8
	comp=Z,1.4nm,0.7s,baz=103,slow=8.7,SNR=6.9						
	comp=Z,1.4nm,0.7s						
WRA	Warramunga Arr	36.62	266	IAmb	IAmb	16 59 25.2	
	comp=Z,0.3nm,0.8s						
MTN	Manton Dam	41.35	275	P	P	16 59 59.9	+0.3
MTN				IAmb	IAmb	17 00 33.0	
	comp=Z,16nm,1.4s						
FORT	Forrest	41.51	248	P	P	17 00 00.5	-0.1
FORT				IAmb	IAmb	17 00 31.2	
	comp=Z,5.2nm,0.9s						
FITZ	Fitzroy Crossi	45.05	266	P	P	17 00 30.1	+0.7
	comp=Z,9.0nm,0.8s,baz=102,slow=13,SNR=11						
	comp=Z,9.0nm,0.8s						
FITZ	Fitzroy Crossi	45.05	266	P	P	17 00 29.7	+0.4
FITZ				IAmb	IAmb	17 00 31.9	
	comp=Z,6.7nm,1.4s						
YAK	Yakutsk	90.59	341	P	P	17 05 23.5	+8.8
	comp=Z,178nm,0.9s,baz=166,slow=8.7,SNR=6.4						
FINES	FINESS Array B	134.48	339	PKP	PKiKP	17 11 41.9	+10
	comp=Z,1.9nm,0.8s,baz=50,slow=4.4,SNR=1.5						
EKA	Eskdalemuir Ar	146.46	357	PKPbc	PKiKP	17 12 04.7	+8.0
	comp=Z,1.4nm,0.7s,baz=0.2,slow=2.9,SNR=4.4						

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*KRNET **24** 17:06:05.7±0.1, 39°.84N×77°.68E, mb3.8*

*SOME **24** 17:06:07.2, 40°.00N×77°.33E, h10^{km}*

ISC 24 17:06:03.9±2.0**, 39°.93N**±0°.07×**77°.39E**±0°.04**, h4^{km}**±17^{km}**, n26, σ1^s.42**/52**, 18C-10D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.82	10	⇓eP	Pg	17 06 40.1	+1.2
TARG				⇓eS	Sg	17 07 05.1	+2.6
KDJ	Kajisay	2.20	356	⇓eP	Pg	17 06 45.8	-0.3
KDJ				⇓eS	Sg	17 07 15.2	+0.5
ULHL	Ulahol	2.47	340	⇑eP	Pg	17 06 50.4	-0.8
ULHL				⇑eS	Sg	17 07 23.0	-0.2
PRZ	Przheval'sk	2.66	16	⇓eP	Pb	17 06 51.3	-0.9
PRZ				⇓eS	Sb	17 07 24.5	-0.8
BOOM	Boomskoye usch	2.78	337	⇓eP	Pb	17 06 54.8	+0.6
BOOM				⇓eS	Sb	17 07 30.7	+2.0
SALK	Salom-Alik	2.88	290	⇑eP	Pb	17 06 57.2	+1.2
SALK				⇑eS	Sg	17 07 34.8	-1.7
SFK	Sufi-Kurgan	2.99	273	⇑eP	Pb	17 06 58.4	+0.7
SFK				⇑eS	Sb	17 07 36.7	+2.1
ARLS	Aral	3.02	311	⇑eP	Pb	17 06 58.7	+0.4
ARLS				⇑eS	Sb	17 07 37.3	+1.8
TNSS	Tian-Shan	3.12	354	eP	Pg	17 07 04.4	+0.7
	13nm,0.1s						
TNSS				eS	Sg	17 07 45.7	+1.6
	37nm,0.8s						
UCH	Uchtor	3.16	318	⇑eP	Pb	17 07 00.8	0.0
UCH				⇑eS	Sb	17 07 41.1	+1.2
MTBS	Maitube	3.28	348	eP	Pg	17 07 06.8	+0.2
	11nm,0.8s						
MTBS				eS	Sg	17 07 49.8	+0.7
	19nm,0.2s						
TKM2	Tokmak 2	3.28	336	⇑eP	Pb	17 07 01.7	-1.0
TKM2				⇑eS	Sb	17 07 42.6	-0.4
KBK	Karagaybulak	3.29	327	⇓eP	Pb	17 07 02.1	-0.7
KBK				⇓eS	Sb	17 07 43.4	+0.2
KST	Kastek	3.29	341	eP	Pg	17 07 07.4	+0.5
	19nm,1.4s						
KST				eS	Sg	17 07 50.9	+1.4
	42nm,1.2s						
KOTS	Kotyrbulak	3.31	357	eP	Pg	17 07 07.7	+0.5
	31nm,0.6s						
KOTS				eS	Sg	17 07 51.5	+1.3
	128nm,0.5s						
UZB	Uzynbulak	3.44	20	eP	Pg	17 07 09.8	0.0
	19nm,0.9s						
UZB				eS	Sg	17 07 54.7	+0.4
	28nm,0.7s						
AAK	Ala-Archa	3.47	322	⇑eP	Pb	17 07 04.9	-1.1
AAK				⇑eS	Sb	17 07 48.1	-0.5
FRU1	Bishkek	3.55	325	⇑eP	Pb	17 07 05.9	-1.3
FRU1				⇑eS	Sb	17 07 50.2	-0.4
SHLS	Shalkode	3.58	25	eP	Pg	17 07 14.8	+2.4
	16nm,0.8s						
SHLS				eS	Sg	17 08 03.2	+4.3
	25nm,0.9s						
ARSB	Arslanbob	3.63	294	⇑eP	Pb	17 07 07.1	-1.6
ARSB				⇑eS	Sb	17 07 52.7	-0.4
KPKS	Kokpek	3.66	15	eP	Pg	17 07 14.0	-0.1
	0.4nm,0.2s						
KPKS				eS	Sg	17 08 02.1	+0.5
	29nm,0.9s						
CHKK	Chushkaly	3.93	356	eP	Pg	17 07 18.9	-0.3
	27nm,0.7s						
CHKK				eS	Sg	17 08 10.5	+0.3
	64nm,1.2s						
KUU	Kurty	4.04	349	eP	Pg	17 07 20.5	-0.7
	6.5nm,0.2s						
KUU				eS	Sg	17 08 13.0	-0.5
	16nm,0.7s						
KTMS	Ketmen	4.16	31	eP	Pg	17 07 21.1	-2.4
	3.2nm,0.6s						
KTMS				eS	Sg	17 08 14.2	-3.1
	8.1nm,0.7s						
MRKS	Merke	4.21	313	eP	Pg	17 07 23.6	-1.0
	9.4nm,1.0s						
MRKS				eS	Sg	17 08 18.5	-0.5
	18nm,0.9s						
ARXS	Arharly	4.29	4	eP	Pg	17 07 24.0	-2.1
	15nm,0.8s						
ARXS				eS	Sg	17 08 19.3	-2.4
	27nm,0.9s						

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*JMA **24** 17:10:43.6±0.2, 24°N±2°×122°.8E±0°.6, h93^{km}±1^{km}, MV1.9/12, NW OFF ISHIGAKIJIMA IS*

*TAP **24** 17:10:43.2, 24°.50N×122°.85E, h96^{km}, ML2.9, C*

ISC 24 17:10:43.9±1.4**, 24°.45N**±0°.04×**122°.84E**±0°.03**, h91^{km}**±8^{km}**, n89, σ0^s.78**/149**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.10	90	eP	Pn	17 10 56.8	+0.1
JYNG				eS	Sn	17 11 06.4	+0.2
YOJ	Yonaguni jima	0.16	86	i P	Pn	17 10 56.9	+0.1
YOJ				i S	Sn	17 11 06.7	+0.2
YOJ	Yonaguni jima	0.16	86	eP	Pn	17 10 57.0	+0.1
YOJ				eS	Sn	17 11 06.7	+0.2
EOS3	EOS3	0.50	251	eP	Pn	17 10 59.0	+0.4
EOS3				eS	Sn	17 11 10.0	+0.5
EOS2	EOS2	0.55	267	eP	Pn	17 10 59.3	+0.4
EOS2				eS	Sn	17 11 11.1	+0.9
EOS4	EOS4	0.58	235	eP	Pn	17 10 59.4	+0.4
EOS4				eS	Sn	17 11 11.3	+1.1
IRIF	Iriomote-Funau	0.82	98	P	Pn	17 11 01.8	+0.1
IRIF				eS	Sn	17 11 15.0	0.0
ESAO	Su ao	0.91	278	P	Pn	17 11 02.5	-0.2
ESAO				S	Sn	17 11 15.9	-0.8
TWC	Suao	0.91	280	P	Pn	17 11 02.2	-0.5
TWC				S	Sn	17 11 15.3	-1.4
EWUT	Wuta	0.96	270	eP	Pn	17 11 02.9	-0.4
HATJ	Hateruma jima	0.97	114	eS	Sn	17 11 18.3	+0.5
ENA	Nanau	1.00	269	i P	Pn	17 11 03.8	+0.1
ENA				S	Sn	17 11 18.6	+0.2
EAHA	Aohua	1.01	263	S	Sn	17 11 19.1	+0.5
NDS	Dongshan	1.04	280	eP	Pn	17 11 03.9	-0.2
NDS				eS	Sn	17 11 20.2	+0.9
TIPB	Shuangxi	1.05	300	i P	Pn	17 11 03.9	-0.5
TIPB				eS	Sn	17 11 19.1	-0.5
SXI1	Grass Mountain	1.08	306	i P	Pn	17 11 04.4	-0.3
SXI1				eS	Sn	17 11 21.4	+1.1
JKRS	Kuro-shima	1.09	101	eP	Pn	17 11 05.1	+0.4
JKRS				eS	Sn	17 11 20.7	+0.4
TWE	Neicheng	1.10	284	i P	Pn	17 11 04.6	-0.1
TWE				eS	Sn	17 11 19.1	-1.4
NWF	Wu-fen Shan	1.14	303	P	Pn	17 11 05.3	-0.1
WFSB	Wu-fen Shan	1.14	303	P	Pn	17 11 05.3	0.0
ETL	Fush Village	1.14	256	P	Pn	17 11 05.0	-0.4
ETL				S	Sn	17 11 20.9	-0.7
NACB	Ninganchiao	1.17	257	P	Pn	17 11 05.0	-0.6
NACB				eS	Sn	17 11 21.0	-0.9
ENTT	Nioudou	1.17	280	P	Pn	17 11 06.0	+0.3
ENTT				eS	Sn	17 11 21.9	-0.2
FUSB	Fushanzhiwuyua	1.18	285	P	Pn	17 11 05.8	0.0
FUSB				eS	Sn	17 11 21.6	-0.6
TWD	Chiawan	1.19	252	P	Pn	17 11 05.5	-0.4
TWD				S	Sn	17 11 21.6	-0.8
JIJ	Ishigaki jima	1.20	94	eP	Pn	17 11 05.9	-0.1
JIJ				eS	Sn	17 11 21.6	-0.9
LATG	Datong	1.20	274	i P	Pn	17 11 06.1	0.0
LATG				S	Sn	17 11 22.6	-0.1
TWA	Mucha	1.25	295	P	Pn	17 11 06.5	-0.2
NWLT	Wulai	1.26	285	P	Pn	17 11 06.7	0.0
NWLT				S	Sn	17 11 23.1	-0.8
ETLH	Xiulin Townshi	1.26	259	i P	Pn	17 11 06.3	-0.5
ETLH				i S	Sn	17 11 23.2	-0.9
TEYL	Yanliau Villag	1.27	243	eP	Pn	17 11 06.2	-0.6
TEYL				eS	Sn	17 11 23.8	-0.4
NHDH	Xindian Distri	1.30	293	i P	Pn	17 11 07.2	0.0
ETM	Tongmen	1.32	249	i P	Pn	17 11 07.0	-0.5
ETM				S	Sn	17 11 23.9	-1.3
NNSB	Datong	1.32	269	eP	Pn	17 11 07.3	-0.3
NNSB				S	Sn	17 11 24.7	-0.9
NNS	Nan Shan	1.33	270	P	Pn	17 11 07.7	0.0
NNS				eS	Sn	17 11 24.9	-0.9
SHUL	Shoufeng	1.34	241	eS	Sn	17 11 25.2	-0.4
YM01	YM01	1.34	301	P	Pn	17 11 07.7	0.0
YM01				eS	Sn	17 11 25.2	-0.6
YHNB	Yeheng	1.35	280	i P	Pn	17 11 08.0	+0.1
YHNB				S	Sn	17 11 25.5	-0.4
YM08	YM08	1.35	303	eP	Pn	17 11 07.9	0.0
JISG	Ishigakijimahi	1.35	84	eP	Pn	17 11 07.7	-0.1
JISG				eS	Sn	17 11 25.0	-0.9
PCYT	Pengchaiyu	1.36	330	eP	Pn	17 11 08.2	+0.2
NSK	Sanguang	1.36	280	eP	Pn	17 11 08.2	+0.1
NSK				S	Sn	17 11 25.9	-0.5
LXIB	Xiulin Townshi	1.37	252	P	Pn	17 11 07.6	-0.6
LXIB				S	Sn	17 11 25.6	-1.0
ZUZH	Zhuzihu	1.37	301	P	Pn	17 11 08.0	-0.2
ANP	Anpu	1.40	302	P	Pn	17 11 08.3	-0.2
ESL	Shilin	1.43	244	eP	Pn	17 11 08.4	-0.4
ESL				eS	Sn	17 11 26.2	-1.5
TWS1	Kuangyinshan	1.44	297	P	Pn	17 11 08.9	-0.1
TWS1				S	Sn	17 11 27.9	0.0
NTST	Danshui	1.45	300	P	Pn	17 11 09.1	+0.1
WHF	Hehuan Shan	1.47	258	eP	Pn	17 11 09.4	-0.3
WHF				eS	Sn	17 11 28.5	-0.6
FUSS	Fushou	1.47	262	eP	Pn	17 11 09.8	+0.3
FUSS				eS	Sn	17 11 28.1	-0.8
EGFH	Guangfu	1.50	239	eS	Sn	17 11 28.4	-0.9
WARBT	Fenglin Townsh	1.51	241	P	Pn	17 11 09.4	-0.5
WARBT				eS	Sn	17 11 28.1	-1.5
TWT	Tachien	1.53	263	P	Pn	17 11 10.9	+0.7
TWT				eS	Sn	17 11 30.0	-0.2
TDCB	Techi	1.54	263	i P	Pn	17 11 10.8	+0.4
TDCB				S	Sn	17 11 29.9	-0.6
KSHI	Guanxi Townshi	1.54	282	P	Pn	17 11 10.7	+0.4
KSHI				S	Sn	17 11 30.6	+0.4
NFF	Wufeng Townshi	1.57	277	i P	Pn	17 11 10.9	+0.2
NFF				S	Sn	17 11 30.7	-0.3

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OWD   Renai           1.59 252 i P    Pn     17 11 10.9 -0.2
OWD                            S      Sn     17 11 30.7 -0.9
HGSD  Ruisui          1.61 234 i P    Pn     17 11 10.7 -0.4
HGSD                           S      Sn     17 11 30.7 -0.9
WUSB  Renai           1.63 254   P    Pn     17 11 11.9 +0.4
WUSB                           eS     Sn     17 11 32.2 -0.2
EHYH  Wanrong         1.66 235 eP     Pn     17 11 11.6 -0.2
EHYH                           eS     Sn     17 11 32.1 -0.8
LIOB  Emei            1.67 277   P    Pn     17 11 12.2 +0.4
LIOB                           eS     Sn     17 11 32.8 -0.3
NSTT  Nanjuang        1.68 276   P    Pn     17 11 12.0  0.0
NSTT                           eS     Sn     17 11 32.9 -0.4
VWDT  VWDT            1.70 246 eP     Pn     17 11 12.7 +0.5
VWDT                           S      Sn     17 11 33.5 -0.2
ECBN  Changbin        1.70 229 eS     Sn     17 11 32.9 -0.8
WHP   Taichung City   1.73 265 i P    Pn     17 11 14.0 +1.2
WHP                            eS     Sn     17 11 34.9 +0.3
YULB  Yu-li           1.76 233   P    Pn     17 11 12.7 -0.4
YULB                           eS     Sn     17 11 33.6 -1.6
TWF1  Yuli            1.78 232 i P    Pn     17 11 13.2 -0.2
CHKH  Chenggong       1.82 227 eP     Pn     17 11 12.8 -1.0
SSLB  Suanglung       1.84 249 eP     Pn     17 11 15.0 +0.9
SSLB                           eS     Sn     17 11 36.0 -1.1
SMLT  Sun Moon Lake   1.86 253 eP     Pn     17 11 15.7 +1.3
SMLT                           eS     Sn     17 11 38.0 +0.4
FULB  Fuli            1.88 229 eP     Pn     17 11 14.3 -0.4
FULB                           eS     Sn     17 11 37.1 -1.0
WHYT  Xinyi Township  1.96 248 eS     Sn     17 11 41.2 +1.3
EHD   Haiduan         1.98 229   P    Pn     17 11 15.6 -0.3
EHD                            S      Sn     17 11 38.9 -1.3
ECS   Chishang        2.00 228 eS     Sn     17 11 41.5 +0.6
WJS   Zhushan         2.02 252   P    Pn     17 11 17.9 +1.5
WJS                            eS     Sn     17 11 43.5 +2.2
ALS   Alishan         2.08 244 eP     Pn     17 11 18.9 +1.4
ELDTW Lidau           2.09 233 eP     Pn     17 11 17.0 -0.4
CHN5  Tsauling        2.15 247   P    Pn     17 11 19.9 +1.7
CHN5                           eS     Sn     17 11 45.6 +1.3
STYH  Taoyuan         2.28 236   P    Pn     17 11 20.8 +1.0
STYH                           eS     Sn     17 11 47.7 +0.5
WCKO  Fanlu           2.28 244 eS     Sn     17 11 48.8 +1.5
TWGBT Beinan          2.29 225 eP     Pn     17 11 19.9 -0.1
TWGBT                          eS     Sn     17 11 47.0 -0.6
TWG   Pinlang         2.29 225 eS     Sn     17 11 47.0 -0.7
TPUB  Ta-pu           2.32 241 eP     Pn     17 11 22.1 +1.6
TPUB                           eS     Sn     17 11 50.1 +1.8
TWK   Hsinying        2.45 242 eS     Sn     17 11 53.6 +2.1
SGST  Jiashian        2.47 237 eS     Sn     17 11 53.7 +1.7
SSD   Sandimen        2.64 230   P    Pn     17 11 26.6 +1.9
LYUB  Lan-yu          2.70 206 eP     Pn     17 11 24.1 -1.3
EAST  Anshuo          2.75 222 eP     Pn     17 11 26.3 +0.1
PTMZ  Houxiangcun     3.43 281   P    Pn     17 11 34.4 -0.8
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IDC ***24*** *17:16:56.0±3.0, 21°.35S×68°.61W, h90^{km}±23^{km}, mb3.6/2, mbtmp3.9/5, Error ellipse: s-maj=46.6km s-min=29.4km az=102.0*

NEIC ***24*** *17:16:56.6±1.6, 21°.20S±0°.04×68°.89W±0°.07, h124^{km}±5^{km}, mb4.2/2, ML3.9(GUC), Error ellipse: s-maj=9.4km s-min=5.3km az=68.0*

SJA ***24*** *17:16:56.2±1.2, 21°.18S×69°.00W, h129^{km}±6^{km}, ML3.5, MW3.7*

GUC ***24*** *17:16:58.1±0.6, 21°.21S×68°.88W, h118^{km}±2^{km}, ML3.9*

ISC 24 17:16:55.6±0.8**, 21°.20S**±0°.03×**68°.95W**±0°.05**, h134**^{km}±7^{km}**, n71, σ1^{s}56**/102**, 6C, Chile-Bolivia border region**

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Code  Station Name      Δ°   AZ°   Phase ID         Time      Res
                               Op     ISC      h  m  s     ISC
PB01  IPOC Station P  0.53 287  Pn    Pn     17 17 15.7 +0.3
PB01                            Sn    Sn     17 17 29.0 -1.4
PB01  IPOC Station P  0.53 287 i P    Pn     17 17 15.8 +0.4
PB01                           i S    Sn     17 17 29.4 -1.0
PB01                            IAML         17 17 30.3
      comp=E,10µm,0.2s
PB01  IPOC Station P  0.53 287 i P    Pn     17 17 15.2 -0.3
PB01                           eS     Sn     17 17 29.6 -0.9
PB01                            IAML         17 17 30.1
      comp=Z,3µm,0.2s
PB09  IPOC Station P  0.65 205  Pn    Pn     17 17 17.2 +0.8
PB09                            Sn    Sn     17 17 31.1 -1.0
PB09  IPOC Station P  0.65 205⇑eP     Pn     17 17 17.0 +0.6
PB09                           eS     Sn     17 17 31.8 -0.3
PB09  IPOC Station P  0.65 205 i P    Pn     17 17 16.7 +0.4
PB09                           eS     Sn     17 17 31.9 -0.3
PB09                            IAML         17 17 32.5
      comp=Z,2µm,0.5s
PB02  IPOC Station P  0.89 262  Pn    Pn     17 17 19.1 +1.0
PB02                            Sn    Sn     17 17 35.1  0.0
PB02  IPOC Station P  0.89 262⇑iP     Pn     17 17 19.2 +1.1
PB02                           i S    Sn     17 17 35.6 +0.4
PB02                            IAML         17 17 36.4
      comp=E,5µm,0.3s
PB02  IPOC Station P  0.89 262 i P    Pn     17 17 18.7 +0.6
PB02                           eS     Sn     17 17 35.4 +0.3
PB02                            IAML         17 17 41.1
      comp=Z,3µm,0.5s
PB07  IPOC Station P  1.02 239  Pn    Pn     17 17 20.3 +1.0
PB07                            Sn    Sn     17 17 37.2 -0.1
PB07  IPOC Station P  1.02 239⇑iP     Pn     17 17 20.5 +1.2
PB07                           i S    Sn     17 17 37.4 +0.1
PB07                            IAML         17 17 38.5
      comp=N,2µm,0.3s
PB07  IPOC Station P  1.02 239 i P    Pn     17 17 19.9 +0.6
PB07                           eS     Sn     17 17 37.9 +0.6
PB07                            IAML         17 17 39.5
      comp=Z,1µm,0.3s
PB03  IPOC Station P  1.13 222  Pn    Pn     17 17 21.4 +1.2
PB03                            Sn    Sn     17 17 38.7 -0.4
PB03  IPOC Station P  1.13 222 i P    Pn     17 17 21.5 +1.2
PB03                           eS     Sn     17 17 39.2  0.0
PB03                            IAML         17 17 41.9
      comp=E,2µm,0.2s
PB03  IPOC Station P  1.13 222 i P    Pn     17 17 21.1 +0.8
PB03                           eS     Sn     17 17 39.0 -0.2
PB03                            IAML         17 17 41.7
      comp=Z,2µm,0.2s
PATCX Punta Patache   1.19 288        Pn     17 17 22.1 +1.3
PATCX                           Sn    Sn     17 17 40.2 +0.2
PATCX Punta Patache   1.19 288 i P    Pn     17 17 22.3 +1.5
PATCX                          eS     Sn     17 17 40.9 +0.9
PATCX                           IAML         17 17 44.2
      comp=E,3µm,0.1s
PATCX Punta Patache   1.19 288 i P    Pn     17 17 21.7 +0.9
PATCX                           IAML         17 17 42.0
      comp=Z,2µm,0.8s
HMBC  Humberstone     1.27 316  Pn    Pn     17 17 22.5 +0.7
HMBC                            Sn    Sn     17 17 41.5 -0.2
HMBC  Humberstone     1.27 316 i P    Pn     17 17 22.6 +0.9
HMBC                           eS     Sn     17 17 41.8 +0.2
HMBC                            IAML         17 17 43.1
      comp=N,3µm,0.2s
TA01  Diego Aracena   1.31 299  Pn    Pn     17 17 23.1 +1.1
TA01                            Sn    Sn     17 17 42.4 +0.3
TA01  Diego Aracena   1.31 299⇑eP     Pn     17 17 23.2 +1.2
TA01                           eS     Sn     17 17 42.4 +0.3
TA01                            IAML         17 17 44.0
      comp=E,3µm,0.2s
TA01  Diego Aracena   1.31 299 i P    Pn     17 17 22.5 +0.5
TA01                            IAML         17 17 43.4
      comp=Z,752nm,0.7s
TA02  Huaiquique      1.44 310 eP     Pn     17 17 24.5 +1.1
TA02                           eS     Sn     17 17 44.9 +0.3
TA02                            IAML         17 17 49.7
      comp=N,2µm,0.1s
TA02  Huaiquique      1.44 310 i P    Pn     17 17 24.0 +0.6
TA02                            IAML         17 17 47.6
      comp=Z,870nm,0.2s
GO01  Chusmiza        1.54 351  Pn    Pn     17 17 26.4 +1.3
GO01  Chusmiza        1.54 351⇑eP     Pn     17 17 26.2 +1.1
GO01                           eS     Sn     17 17 48.3 +0.9
GO01  Chusmiza        1.54 351 i P    Pn     17 17 25.8 +0.7
GO01                            IAML         17 17 50.8
      comp=Z,385nm,0.2s
PB11  IPOC Station P  1.58 335        Pn     17 17 26.1 +1.0
PB11                            Sn    Sn     17 17 47.5 -0.1
PB11  IPOC Station P  1.58 335 i P    Pn     17 17 26.2 +1.0
PB11                           eS     Sn     17 17 48.0 +0.4
PB11                            IAML         17 17 49.6
      comp=N,1µm,0.4s
PB11  IPOC Station P  1.58 335 i P    Pn     17 17 25.5 +0.4
PB11                            IAML         17 17 49.1
      comp=Z,696nm,0.5s
PB06  IPOC Station P  1.60 201        Pn     17 17 26.8 +1.4
PB06  IPOC Station P  1.60 201 i P    Pn     17 17 26.8 +1.4
PB06                           eS     Sn     17 17 48.8 +0.7
PB06                            IAML         17 17 50.1
      comp=E,986nm,0.5s
PB06  IPOC Station P  1.60 201 i P    Pn     17 17 26.7 +1.3
PB06                           eS     Sn     17 17 48.9 +0.8
PB06                            IAML         17 17 49.6
      comp=Z,607nm,0.6s
AF01  San Pedro de A  1.88 158  Pn    Pn     17 17 29.4 +0.7
PB05  IPOC Station P  2.01 215  Pn    Pn     17 17 31.5 +1.4
PB05  IPOC Station P  2.01 215 i P    Pn     17 17 31.3 +1.2
PB05                          ⇑eS     Sn     17 17 56.8 +0.2
PB10  IPOC Station P  2.74 213        Pn     17 17 40.0 +1.0
PB10  IPOC Station P  2.74 213 i P    Pn     17 17 40.3 +1.2
PB10                           eS     Sn     17 18 09.2 -3.4
PB10  IPOC Station P  2.74 213 i P    Pn     17 17 40.2 +1.1
PB10                            IAML         17 18 29.5
      comp=Z,71nm,0.3s
PB12  IPOC Station P  2.88 333        Pn     17 17 41.3 +0.3
PB12  IPOC Station P  2.88 333 i P    Pn     17 17 41.4 +0.4
PB12                            IAML         17 18 22.6
      comp=E,216nm,0.5s
PB12  IPOC Station P  2.88 333 i P    Pn     17 17 41.0 -0.1
PB12                            IAML         17 18 38.4
      comp=Z,117nm,0.5s
AP01  Chacalluta      3.11 335  Pn    Pn     17 17 42.9 -0.9
YJA   Yavi            3.34 108 eP     Pn     17 17 49.4 +2.2
YJA   Yavi            3.34 108 i P    Pn     17 17 50.2 +3.0
YJA                             IAML         17 18 32.0
      comp=Z,6.3nm,0.9s
PB18  Visviri         3.63 352        Pn     17 17 56.1 +5.0
PB14  IPOC Station P  3.66 201        Pn     17 17 51.0 -0.4
PB14  IPOC Station P  3.66 201 i P    Pn     17 17 52.8 +1.5
PB14                            IAML         17 18 48.6
      comp=Z,46nm,0.3s
HJA   Humahuaca       3.84 122 i P    Pn     17 17 57.0 +3.3
HJA                             IAML         17 19 05.2
      comp=Z,6.1nm,0.9s
SALTA                 3.85 142 i P    Pn     17 17 57.4 +3.4
SALTA                           IAML         17 18 50.7
      comp=Z,16nm,0.5s
GO02  Mina Guanaco    3.99 188  Pn    Pn     17 17 56.3 +0.7
GO02  Mina Guanaco    3.99 188 i P    Pn     17 17 56.5 +0.9
GO02                            IAML         17 19 12.8
      comp=Z,98nm,0.7s
AZAP  Zapla           4.68 131 i P    Pn     17 18 06.8 +2.0
AZAP                            IAML         17 19 05.1
      comp=Z,15nm,3.5s
LPAZ  La Paz          4.95   9  P     Pn     17 18 10.0 +1.2
      comp=Z,1.4nm,0.4s,baz=210,slow=8.8,SNR=4.5
LPAZ                            S     Sn     17 18 58.2 -7.3
      comp=Z,2.1nm,0.4s,baz=210,slow=13,SNR=1.7
LPAZ  La Paz          4.95   9        Pn     17 18 08.9 +0.2
AC01  Pan de Azucar   5.15 197  Pn    Pn     17 18 10.8  0.0
AC02  Maricunga       5.61 182  Pn    Pn     17 18 15.2 -2.3
AC06  Mina Casimiro   6.26 192  Pn    Pn     17 18 24.6 -1.1
GO03  Copiapo         6.47 190  Pn    Pn     17 18 27.2 -1.4
AC05  El Transito     7.70 189  Pn    Pn     17 18 43.5 -1.6
CO01  Juntas del Tor  8.80 187  Pn    Pn     17 18 58.4 -1.6
SIV   San Ignacio     9.09  57  P     Pn     17 19 01.9 -1.9
      comp=Z,14nm,0.3s,baz=242,slow=13,SNR=113
CFA   Coronel Fontan 10.38 177  P     Pn     17 19 19.6 -1.4
      comp=Z,0.4nm,0.3s,baz=349,slow=16,SNR=1.3
CFA                             S     Sn     17 21 09.2 -6.4
      comp=Z,0.3nm,0.4s,baz=2.9,slow=13,SNR=1.0
PTLB  Pontes e Lacer 10.93  60        Pn     17 19 27.1 -1.2
VILB  Vilhena        11.71  47        Pn     17 19 37.5 -1.2
ITAB  Concordia      16.47 115  P     Pn     17 20 38.9  0.0
ITAB                            IAmb  IAmb   17 20 42.7
      comp=Z,11nm,1.1s
BDFB  Brasilia       20.61  78  P     P      17 21 25.8 +1.3
      comp=Z,5.3nm,0.5s,baz=240,slow=9.0,SNR=9.2
      comp=Z,5.3nm,0.5s
BDFB  Brasilia       20.61  78        P      17 21 24.9 +0.4
BDFB                            IAmb  IAmb   17 21 29.9
      comp=Z,6.4nm,0.5s
TORD  Torodi Ar. Bea 77.29  70  P     P      17 28 39.2 +3.5
      comp=Z,0.3nm,0.3s,baz=262,slow=4.5,SNR=7.7
      comp=Z,0.3nm,0.3s
MKAR  Makanchi Array 145.41 36  PKPbc PKiKP  17 36 23.0 +1.3
      comp=Z,0.8nm,0.8s,baz=336,slow=2.7,SNR=8.3
MKAR                            pPKPbc pPKPdf 17 36 54.6 -0.3
      comp=Z,0.6nm,0.8s,baz=340,slow=4.2,SNR=4.3
```

IDC ***24*** *17:18:48.9±1.7, 60°.12N×152°.63W, h113^{km}±28^{km}, mb3.4/6, mbtmp3.7/10, Error ellipse: s-maj=39.0km s-min=16.1km az=116.0*

NEIC ***24*** *17:18:49.3±1.2, 60°.22N±0°.03×152°.70W±0°.05, h115^{km}±3^{km}, Error ellipse: s-maj=4.9km s-min=3.3km az=216.0*

AEIC ***24*** *17:18:50.8±1.3, 60°.21N±0°.03×152°.68W±0°.07, h109^{km}±3^{km}, ML3.0, ML3.4/208(NEIC), Error ellipse: s-maj=4.8km s-min=4.5km az=72.0*

ISC 24 17:18:49.3±0.7**, 60°.20N**±0°.04×**152°.67W**±0°.03**, h116**^{km}±6^{km}**, n236, σ0^{s}79**/259**, mb3.9**/6**, Southern Alaska**

```
Code  Station Name      Δ°   AZ°   Phase ID         Time      Res
                               Op     ISC      h  m  s     ISC
RED   Redoubt Volcan  0.22 346        Pn     17 19 05.4 -0.3
RED                             Sn    Sn     17 19 16.8 -1.1
RED                             IAML         17 19 17.6
      comp=E,675nm,0.6s
RDSO  Redoubt South   0.26 351        Pn     17 19 05.6 -0.2
IVE   Iliamna Volcan  0.26 223        Pn     17 19 05.5 -0.2
IVE                                   Sn     17 19 17.8 -0.3
RDWB  Redoubt West    0.30 343        Pn     17 19 05.7 -0.3
ILS   Iliamna Low So  0.32 219        Pn     17 19 05.7 -0.3
ILSW  Iliamna Southw  0.33 227        Pn     17 19 05.5 -0.6
ILSW                            Sn    Sn     17 19 17.5 -1.1
NCT   North Crescent  0.38 340        Pn     17 19 06.0 -0.3
NCT                                   Sn     17 19 18.3 -0.8
DFR   Drift River     0.39 359        Pn     17 19 06.1 -0.2
DFR                                   Sn     17 19 18.2 -0.9
RDJH  Redoubt Jeurge  0.40 350        Pn     17 19 06.1 -0.3
P19K  Oil Pt          0.62 208        Pn     17 19 07.8 +0.2
P19K                            Sn    Sn     17 19 21.4 -0.2
HOM   Homer           0.75 136        Pn     17 19 09.1 +0.4
HOM                             Sn    Sn     17 19 24.1 +0.9
O19K  Port Alsworth   0.83 270        Pn     17 19 09.2 -0.1
O19K                            Sn    Sn     17 19 23.2 -1.1
O19K                            IAML         17 19 24.2
      comp=E,791nm,0.5s
O19K                            IAML         17 19 24.7
      comp=N,436nm,0.4s
AU22  Augustine Moun  0.91 203        Pn     17 19 10.2 +0.2
AU22                                  Sn     17 19 25.5 -0.1
AUF   Augustine Flow  0.91 206        Pn     17 19 10.2 +0.2
AUW   Augustine West  0.93 206        Pn     17 19 10.6 +0.4
AUW   Augustine West  0.93 206        Pn     17 19 10.7 +0.4
AUCH  Augustine Cone  0.93 205        Pn     17 19 10.7 +0.3
AUJK  Augustine Jueg  0.94 204        Sn     17 19 25.6 -0.7
CAPN  Captain Cook N  0.94  52        Pn     17 19 12.4 +2.1
AUI   Augustine Isla  0.95 204        Sn     17 19 25.8 -0.7
CNPM  China Poot      0.99 133        Pn     17 19 11.2 +0.3
CNPM                            Sn    Sn     17 19 27.0 -0.2
CNPM                            IAML         17 19 28.2
      comp=E,870nm,0.5s
BRLK  Bradley Lake    1.00 115        Pn     17 19 11.1 +0.1
BRLK                            Sn    Sn     17 19 26.5 -0.8
BRLK                            IAML         17 19 27.7
      comp=N,929nm,0.6s
BRLK                            IAML         17 19 28.0
      comp=E,790nm,0.6s
SPCR  Spurr Chakacha  1.02  12        Sn     17 19 28.6 +0.7
SPU   Mount Spurr     1.03  17        Pn     17 19 11.5 +0.2
N19K  Bonanza Creek   1.09 305        Pn     17 19 11.8 -0.2
N19K                            Sn    Sn     17 19 28.1 -1.0
SPCP  Crater Peak Br  1.10  13        Pn     17 19 12.6 +0.5
SLKM  Skilak Lake     1.25  75        Pn     17 19 14.0 +0.4
SLKM                            Sn    Sn     17 19 31.6 -0.5
O18K  Koktuh Hills    1.32 256        Pn     17 19 14.3 -0.1
O18K                            Sn    Sn     17 19 31.9 -1.6
STLK  Strandline Lak  1.36  17        Pn     17 19 15.3 +0.4
Q19K  Cape Douglas,   1.37 202        Pn     17 19 15.4 +0.4
Q19K                            Sn    Sn     17 19 33.7 -0.8
Q19K                            IAML         17 19 39.2
      comp=N,405nm,0.7s
Q19K                            IAML         17 19 40.7
      comp=E,359nm,0.9s
O22K  Cooper Landing  1.49  78        Pn     17 19 16.3  0.0
O22K                            Sn    Sn     17 19 35.6 -1.2
P18K  Big Mountain,   1.53 239        Pn     17 19 16.3 -0.5
P18K                            Sn    Sn     17 19 36.1 -1.7
SUA   Susitna One     1.58  36        Pn     17 19 17.9 +0.5
SUA                             Sn    Sn     17 19 39.4 +0.5
SUA                             IAML         17 19 41.6
      comp=E,182nm,0.5s
SYI   Shuyak Island   1.60 175        Pn     17 19 17.9 +0.3
SYI                             Sn    Sn     17 19 38.3 -0.9
SYI                             IAML         17 19 41.9
      comp=N,437nm,0.6s
SEW   Seward          1.61  92        Pn     17 19 17.6  0.0
SEW                             Sn    Sn     17 19 37.8 -1.5
SEW                             IAML         17 19 44.5
      comp=N,291nm,0.6s
SEW                             IAML         17 19 44.6
      comp=E,419nm,0.3s
N18K  Kilae Creek     1.67 288        Pn     17 19 18.1 -0.3
N18K                            Sn    Sn     17 19 38.0 -2.7
RC01  Rabbit Creek A  1.69  57        Pn     17 19 19.1 +0.4
RC01                            IAML         17 19 43.4
      comp=N,433nm,0.3s
RC01                            IAML         17 19 43.5
      comp=E,381nm,0.3s
M20K  Styx River      1.70 353        Pn     17 19 19.6 +0.7
KAPH  Katmai Pasha    1.83 209        Pn     17 19 21.0 +0.6
SKT   Skwentna        1.87  17        Pn     17 19 21.2 +0.4
M22K  Willow          1.99  37        Pn     17 19 22.9 +0.6
M22K                            IAML         17 19 50.1
      comp=N,376nm,0.8s
M22K                            IAML         17 19 54.0
      comp=E,315nm,0.5s
M18K  Stony River     2.02 311        Pn     17 19 22.6  0.0
KAWH  Katmai          2.13 212        Pn     17 19 24.3 +0.2
P17K  Kvichak River   2.16 244        Pn     17 19 24.9 +0.4
P17K                            IAML         17 19 53.3
      comp=N,216nm,1.1s
P17K                            IAML         17 20 08.1
      comp=E,159nm,1.2s
PMR   Palmer          2.22  50        Pn     17 19 24.8 -0.4
PWL   Port Wells      2.24  71        Pn     17 19 24.9 -0.6
PWL                             IAML         17 19 54.3
      comp=E,248nm,0.6s
L19K  White Mountain  2.25 333        Pn     17 19 25.8 +0.1
N17K  Nushagak Hills  2.27 280        Pn     17 19 25.7 -0.2
KNK   Knik Glacier    2.39  58        Pn     17 19 27.3 -0.2
KNK                             IAML         17 20 03.3
      comp=E,177nm,0.6s
KNK                             IAML         17 20 04.3
      comp=N,180nm,0.6s
GHO   Glory Hole Cre  2.41  48        Pn     17 19 27.5 -0.3
GHO                             IAML         17 20 03.0
      comp=N,96nm,0.4s
GHO                             IAML         17 20 28.1
      comp=E,107nm,0.6s
ACHA  Angle Creek He  2.42 216        Pn     17 19 27.8 -0.2
KDAK  Kodiak Island   2.43 179  P     Pn     17 19 26.9 -1.0
      comp=E,7.3nm,0.3s,baz=28,slow=4.2,SNR=245
KDAK                            S     Sn     17 19 55.4 -2.2
      comp=E,65nm,0.3s,baz=201,slow=20,SNR=37
KDAK  Kodiak Island   2.43 179        Pn     17 19 27.3 -0.7
KDAK                            IAML         17 19 57.1
      comp=E,230nm,0.4s
KDAK                            IAML         17 19 57.2
      comp=E,185nm,0.4s
MGLS  Mageik Landsli  2.44 213        Pn     17 19 28.5 +0.4
ANCK  Angle Creek     2.48 217        Pn     17 19 29.2 +0.5
CUT   Chulitna        2.49  27        Pn     17 19 29.1 +0.4
L22K  Petersville     2.50  21        Pn     17 19 29.3 +0.4
L22K                            IAML         17 20 01.1
      comp=E,94nm,0.2s
L22K                            IAML         17 20 03.9
      comp=N,90nm,0.6s
CNTC  Contact Creek   2.55 222        Pn     17 19 30.0 +0.3
M17K  Holitna River   2.63 299        Pn     17 19 30.6  0.0
P23K  Montague Islan  2.64  92        Pn     17 19 30.8 +0.1
SML   Sawmill         2.65  51        Pn     17 19 30.5 -0.4
SML                             IAML         17 20 04.5
      comp=N,69nm,1.2s
PPLA  Purkeypile      2.71   5        Pn     17 19 31.9 +0.2
PPLA                            IAML         17 20 08.5
      comp=E,74nm,1.0s
O16K  Kokwok River B  2.80 260  Pn    Pn     17 19 32.9 +0.1
R18K  Karluk          2.80 200        Pn     17 19 32.1 -0.7
L18K  Granite Mounta  2.81 318        Pn     17 19 32.7 -0.1
GLI   Glacier Island  2.83  74        Pn     17 19 32.4 -0.9
GLI                             IAML         17 20 05.8
      comp=N,134nm,0.9s
GLI                             IAML         17 20 15.2
      comp=E,132nm,0.4s
M23K  Glacier View    2.89  54        Pn     17 19 33.5 -0.4
P16K  Nushagak River  2.95 249  Pn    Pn     17 19 35.5 +0.8
P16K                            IAML         17 20 39.4
      comp=N,137nm,3.3s
P16K                            IAML         17 21 26.3
      comp=E,100nm,2.6s
OHAK  Old Harbor      3.01 186        Pn     17 19 34.7 -0.8
OHAK                            IAML         17 20 09.4
      comp=N,92nm,0.6s
OHAK                            IAML         17 20 10.5
      comp=E,100nm,0.7s
N16K  Nishlik Lake    3.05 278        Pn     17 19 36.5 +0.5
SCM   Sheep Creek Mo  3.07  56        Pn     17 19 36.0 -0.3
SCM                             IAML         17 20 12.3
      comp=E,100nm,0.8s
SCM                             IAML         17 20 13.4
      comp=N,82nm,0.7s
HIN   Hinchinbrook I  3.07  84        Pn     17 19 36.0 -0.4
HIN                             IAML         17 20 15.9
      comp=N,104nm,2.0s
HIN                             IAML         17 20 17.6
      comp=E,145nm,2.0s
PLK2  Peulik 2        3.09 219        Pn     17 19 37.3 +0.7
PLK5  Peulik 5        3.10 226        Pn     17 19 37.6 +0.9
FID   Port Fidalgo    3.11  77        Pn     17 19 35.0 -1.9
FID                             IAML         17 20 16.4
      comp=N,111nm,0.4s
FID                             IAML         17 20 17.9
      comp=E,95nm,0.4s
PLK3  Peulik 3        3.14 218        Pn     17 19 37.7 +0.5
PLK1  Peulik 1        3.16 222        Pn     17 19 38.0 +0.6
M16K  Timber Creek    3.21 288  Pn    Pn     17 19 38.4 +0.3
PLK4  Peulik 4        3.21 218  Pn    Pn     17 19 38.2 -0.1
PLK4                            IAML         17 20 44.0
      comp=E,65nm,3.0s
PLK4                            IAML         17 21 49.2
      comp=N,77nm,2.8s
K20K  Telida          3.23 349        Pn     17 19 38.1 -0.4
MID   Middleton Isla  3.29 101  Pn    Pn     17 19 38.2 -0.9
L17K  Donlin          3.35 308        Pn     17 19 40.0 +0.1
TRF   Thorofare Moun  3.45  18        Pn     17 19 41.3 -0.2
TRF                             IAML         17 20 23.2
      comp=E,49nm,0.5s
TRF                             IAML         17 20 24.4
      comp=N,109nm,0.5s
EYAK  Cordova Ski Ar  3.45  81  Pn    Pn     17 19 41.4 +0.1
EYAK                            IAML         17 20 35.0
      comp=N,44nm,1.4s
KTH   Kantishna Hill  3.46  13        Pn     17 19 41.6 +0.1
KTH                             IAML         17 20 23.9
      comp=N,51nm,0.5s
KTH                             IAML         17 20 25.9
      comp=E,50nm,0.7s
DIV   Divide          3.52  72        Pn     17 19 41.6 -0.7
DIV                             IAML         17 20 23.8
      comp=N,64nm,0.8s
DIV                             IAML         17 20 25.9
      comp=E,55nm,0.8s
KLU   Klutina         3.54  66        Pn     17 19 42.1 -0.5
KLU                             IAML         17 20 24.7
      comp=E,89nm,0.4s
L16K  Owhat River     3.65 297        Pn     17 19 43.9 -0.1
R16K  Pilot Point     3.67 226  Pn    Pn     17 19 44.6 +0.4
M24K  Tolsona, Glenn  3.68  56        Pn     17 19 44.6 +0.2
M24K                            IAML         17 20 29.2
      comp=N,79nm,0.6s
RND   Reindeer        3.69  28        Pn     17 19 44.3 -0.2
RND                             IAML         17 20 27.1
      comp=E,34nm,0.4s
CHUM  Lake Minchumin  3.70   2        Pn     17 19 45.0 +0.4
K17K  Iditarod        3.70 315        Pn     17 19 44.8 +0.2
K17K                            IAML         17 21 01.2
      comp=E,38nm,3.9s
K17K                            IAML         17 21 08.2
      comp=N,31nm,4.6s
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N15K  Kwethluk River      3.71 273  Pn      Pn      17 19 45.4 +0.6
N15K                                IAML            17 21 25.6
      comp=E,41nm,4.2s
SII   Sitkinak Islan      3.74 193  Pn      Pn      17 19 43.9 -1.3
O15K  Ungalikthiuk R      3.77 257  Pn      Pn      17 19 46.4 +0.8
O15K                                IAML            17 20 23.1
      comp=E,34nm,3.9s
O15K                                IAML            17 20 54.7
      comp=N,37nm,4.1s
J18K  Innoko River        3.79 331          Pn      17 19 45.8 -0.1
DHY   Denali Highway      3.83  39          Pn      17 19 46.6 +0.1
DHY                                 IAML            17 20 32.0
      comp=E,33nm,0.5s
DHY                                 IAML            17 20 32.0
      comp=N,42nm,0.5s
MCK   McKinley            3.96  25          Pn      17 19 48.0 -0.1
MCK                                 IAML            17 20 33.3
      comp=N,34nm,0.4s
MCK                                 IAML            17 20 33.8
      comp=E,33nm,0.4s
GOAT  Goat Mountain       3.96  81          Pn      17 19 47.2 -0.9
RAGM  Ragged Mountai      3.98  84  Pn      Pn      17 19 49.0 +0.6
BPAW  Bear Paw Mtn.       3.99  11  Pn      Pn      17 19 48.8 +0.3
BPAW                                IAML            17 20 32.7
      comp=N,36nm,0.6s
BPAW                                IAML            17 20 34.1
      comp=E,29nm,0.4s
J20K  Nowinta River       4.05 351          Pn      17 19 50.1 +0.8
BMRM  Bremner River       4.05  76  Pn      Pn      17 19 48.0 -1.3
BMRM                                IAML            17 20 35.3
      comp=E,47nm,0.4s
BMRM                                IAML            17 20 54.8
      comp=N,58nm,2.0s
J19K  Poorman             4.05 341          Pn      17 19 49.8 +0.5
KAIM  Kayak Island        4.14  90  Pn      Pn      17 19 51.0 +0.4
N25K  Chitina, Valde      4.18  67          Pn      17 19 50.8 -0.4
N25K                                IAML            17 20 40.5
      comp=N,40nm,0.5s
N25K                                IAML            17 20 41.1
      comp=E,42nm,0.6s
J17K  VABM Dome           4.42 319          Pn      17 19 53.6 -0.6
J17K                                IAML            17 20 33.6
      comp=E,21nm,4.7s
J17K                                IAML            17 22 36.4
      comp=N,19nm,3.6s
PAX   Paxson              4.42  48          Pn      17 19 54.4 +0.1
PAX                                 IAML            17 20 45.9
      comp=N,20nm,0.6s
WACK  Wrangell Chich      4.42  63          Pn      17 19 54.3 -0.2
O14K  Tigyukauivet M      4.46 261  Pn      Pn      17 19 55.7 +1.0
O14K                                IAML            17 21 34.8
      comp=N,43nm,4.1s
O14K                                IAML            17 22 39.3
      comp=E,46nm,3.1s
BERG  Berg Lake           4.46  84  Pn      Pn      17 19 55.0 +0.1
WASW  Wrangell South      4.47  64          Pn      17 19 55.0 -0.2
GLB   Gilahina Butte      4.51  70  Pn      Pn      17 19 54.9 -0.6
GLB                                 IAML            17 20 48.2
      comp=E,21nm,0.4s
GLB                                 IAML            17 21 00.7
      comp=N,26nm,0.9s
N14K  Kuskokwak Cree      4.53 270  Pn      Pn      17 19 55.8 +0.1
L15K  Ungalak Mounta      4.55 293          Pn      17 19 56.3 +0.3
M14K  Bethel              4.63 281  Pn      Pn      17 19 57.9 +0.8
VRDI  Verde Repeater      4.64  73          Pn      17 19 56.9 -0.5
VRDI                                IAML            17 20 50.0
      comp=N,26nm,0.7s
VRDI                                IAML            17 21 12.7
      comp=E,20nm,3.8s
CHIR  Chirikof Islan      4.67 201  Pn      Pn      17 19 56.1 -1.5
I20K  Naaghedeneel        4.69 350  Pn      Pn      17 19 54.7 -3.1
NEA2  Nenana              4.71  19          Pn      17 19 57.7 -0.5
NEA2                                IAML            17 22 52.5
      comp=E,14nm,5.0s
CRQM  Cirque              4.75  79  Pn      Pn      17 19 59.3 +0.5
CRQM                                IAML            17 20 52.7
      comp=E,39nm,0.6s
K15K  Wolf Creek Mou      4.77 300  Pn      Pn      17 19 59.0 +0.1
K15K                                IAML            17 20 39.2
      comp=N,27nm,3.1s
K15K                                IAML            17 21 29.8
      comp=E,23nm,3.6s
WRH   Wood River Hil      4.78  24          Pn      17 19 59.1  0.0
WRH                                 IAML            17 20 49.8
      comp=E,21nm,0.4s
WRH                                 IAML            17 22 02.5
      comp=N,17nm,5.0s
K24K  Donnelly Dome       4.86  39          Pn      17 20 01.6 +1.5
MCARA McCarthy VSAT       4.87  72          Pn      17 20 00.3  0.0
J16K  Anvik River         4.88 313          Pn      17 19 60.0 -0.4
J16K                                IAML            17 21 46.3
      comp=N,17nm,4.0s
TGL   Tana Glacier        4.90  79          Pn      17 20 01.3 +0.5
TGL                                 IAML            17 20 41.9
      comp=E,30nm,3.2s
TGL                                 IAML            17 21 13.1
      comp=N,37nm,1.9s
SNH   Sunshine Point      4.91  86  Pn      Pn      17 20 00.7 -0.2
HDA   Harding Lake        4.99  30          Pn      17 20 01.9 -0.1
CCB   Clear Creek Bu      5.00  25          Pn      17 20 01.7 -0.3
CCB                                 IAML            17 20 52.0
      comp=N,12nm,4.4s
CCB                                 IAML            17 21 40.4
      comp=E,17nm,4.5s
I21K  Tanana              5.01   3  Pn      Pn      17 20 02.3 +0.2
I21K                                IAML            17 21 11.4
      comp=E,26nm,3.7s
I21K                                IAML            17 21 44.0
      comp=N,21nm,4.3s
L14K  Kuka Creek          5.04 287  Pn      Pn      17 20 02.7 +0.1
L14K                                IAML            17 21 10.4
      comp=E,35nm,3.7s
L14K                                IAML            17 21 20.6
      comp=N,26nm,4.2s
MENT  Mentasta            5.08  53          Pn      17 20 02.5 -0.6
MENT                                IAML            17 21 20.9
      comp=E,22nm,0.6s
MENT                                IAML            17 21 33.1
      comp=N,26nm,0.9s
PTPK  Patty Peak          5.11  74          Pn      17 20 04.0 +0.3
RIDG  Independent Ri      5.12  43          Pn      17 20 03.8 +0.2
RIDG                                IAML            17 21 11.2
      comp=E,33nm,3.4s
RIDG                                IAML            17 21 18.0
      comp=N,23nm,1.1s
KIAG  Kiagna River        5.14  77          Pn      17 20 04.5 +0.4
M26K  Nabesna, AK         5.16  61          Pn      17 20 03.8 -0.3
M26K                                IAML            17 21 02.1
      comp=N,16nm,0.6s
M26K                                IAML            17 21 33.7
      comp=E,13nm,2.2s
COLA  College             5.19  23          Pn      17 20 04.6 +0.1
I23K  Minto, Yukon-K      5.19  16          Pn      17 20 05.3 +0.8
I23K                                IAML            17 21 08.3
      comp=N,20nm,4.7s
I23K                                IAML            17 21 33.4
      comp=E,14nm,4.1s
MDM   Murphy Dome         5.19  21          Pn      17 20 04.9 +0.3
I17K  Unalakleet          5.28 318  Pn      Pn      17 20 06.3 +0.6
I17K                                IAML            17 21 47.1
      comp=N,15nm,3.9s
I17K                                IAML            17 22 04.2
      comp=E,19nm,4.3s
IL31                      5.31  28          Pn      17 20 05.9 -0.2
ILAR  Eielson Array       5.31  28  P       Pn      17 20 06.2  0.0
      comp=E,14nm,0.4s,baz=214,slow=14,SNR=285
ILAR                                S       Sn      17 21 01.8 -4.3
      comp=E,4.8nm,0.6s,baz=218,slow=25,SNR=9.5
DOT   Dot Lake            5.33  46          Pn      17 20 07.0 +0.4
DOT                                 IAML            17 21 21.7
      comp=N,20nm,1.2s
DOT                                 IAML            17 21 25.3
      comp=E,20nm,0.7s
GRNC  Granite Creek       5.43  80  Pn      Pn      17 20 08.7 +0.8
YAH   Yahtse              5.44  84  Pn      Pn      17 20 09.2 +1.1
H21K  Melozitna Rive      5.48 359  Pn      Pn      17 20 08.6 +0.2
BARN  Barnard Glacie      5.49  76  Pn      Pn      17 20 09.4 +0.7
POKR  Poker Plat Res      5.49  24  Pn      Pn      17 20 09.0 +0.4
SCRK  Sand Creek          5.56  43          Pn      17 20 09.0 -0.7
J25K  Salcha River,       5.57  34          Pn      17 20 10.0 +0.2
H18K  Honhosa River       5.62 335  Pn      Pn      17 20 10.3  0.0
M27K  Edge Creek, AK      5.63  63  Pn      Pn      17 20 11.3 +0.6
CTGM  Chitina Glacie      5.64  77  Pn      Pn      17 20 11.6 +0.8
H22K  Ishtalitna Cre      5.74   5  Pn      Pn      17 20 12.8 +0.7
LOGN  Logan Glacier       5.80  79  Pn      Pn      17 20 13.6 +0.7
J14K  Nanvaranak Lak      5.81 301  Pn      Pn      17 20 13.3 +0.4
H17K  Granite Mounta      5.81 328          Pn      17 20 13.3 +0.3
L27K  Beaver Creek,       5.91  56  Pn      Pn      17 20 14.4 +0.1
BCAR  Beaver Creek A      5.93  56  Pn      Pn      17 20 14.4 -0.2
YUK2  White River         5.97  69          Pn      17 20 15.3 +0.2
J26L  Joseph Creek        6.04  41          Pn      17 20 16.3 +0.1
H24K  Noodor Dome         6.06  19          Pn      17 20 16.3 -0.1
K13K  Kusilvak Mount      6.07 292  Pn      Pn      17 20 17.4 +0.9
BVCY  Beaver Creek        6.10  64          Pn      17 20 17.4 +0.5
YUK3  Moose Creek         6.14  70          Pn      17 20 18.0 +0.3
O28M  Mount Upton         6.19  79          Pn      17 20 19.6 +1.2
PCA   Pinnacle            6.20  86  Pn      Pn      17 20 17.6 -0.7
H16K  Elim                6.29 319          Pn      17 20 19.6 +0.2
G18K  Tagagawik           6.33 337  Pn      Pn      17 20 18.7 -1.2
G21K  Allakaket           6.35 357  Pn      Pn      17 20 18.2 -2.0
G23K  Bananza Creek       6.64   9  Pn      Pn      17 20 24.1 -0.1
S12K  Black Hills         6.73 232  Pn      Pn      17 20 25.7 +0.3
G16K  Koyuk River         6.84 324  Pn      Pn      17 20 27.6 +0.8
G24K  Hadweenzic Riv      6.92  17  Pn      Pn      17 20 28.0  0.0
O29M  Mount Kennedy       7.01  83  Pn      Pn      17 20 29.7 +0.4
F19K  Shaleruckik Mo      7.03 343  Pn      Pn      17 20 31.1 +1.7
COLD  Coldfoot            7.14   8  Pn      Pn      17 20 31.3 +0.5
M29M  Somme Creek         7.19  66          Pn      17 20 32.1 +0.3
DT1   Dutton Round H      7.25 229          Pn      17 20 32.6 +0.1
DAWY  Dawson              7.32  52  Pn      Pn      17 20 33.7 +0.2
ANM   Nome                7.34 312  Pn      Pn      17 20 33.3 -0.3
I27K  Kandik River        7.40  38  Pn      Pn      17 20 33.7 -0.8
L29M  L29M                7.50  61  Pn      Pn      17 20 35.8 -0.1
HYT   Haines Junctio      7.51  79  Pn      Pn      17 20 35.9 -0.1
E19K  Redstone River      7.55 346  Pn      Pn      17 20 35.3 -1.2
F24K  Squaw Lake          7.64  14  Pn      Pn      17 20 37.2 -0.5
N30M  Aishikik Lake       7.71  74  Pn      Pn      17 20 38.2 -0.5
F15K  North Star Dit      7.76 320  Pn      Pn      17 20 39.8 +0.6
G26K  Porcupine Rive      7.84  26  Pn      Pn      17 20 39.8 -0.4
I28M  Miner Creek         7.84  42          Pn      17 20 40.1 -0.4
H27K  Steamboat Moun      7.86  35  Pn      Pn      17 20 39.9 -0.7
J29N  Klondike Camp       7.95  51          Pn      17 20 41.5 -0.4
E22K  Anaktuvuk Pass      7.97   2  Pn      Pn      17 20 43.0 +0.8
M30M  Minto, Yukon        7.98  66  Pn      Pn      17 20 42.6 +0.3
K29M  Barlow Dome         8.00  56  Pn      Pn      17 20 43.0 +0.4
F25K  Christian Rive      8.03  20  Pn      Pn      17 20 42.2 -0.8
E18K  Tukpahlearik C      8.04 338  Pn      Pn      17 20 42.9 -0.2
BMAR  Burnt Mountain      8.08  23  Pn      Pn      17 20 43.2 -0.4
G27K  Doyon Strip         8.24  32  Pn      Pn      17 20 43.4 -2.5
N31M  Braeburn, Yuko      8.34  74  Pn      Pn      17 20 45.7 -1.5
I29M  Ogilvie Camp,       8.36  46  Pn      Pn      17 20 46.6 -0.7
F26K  Sheenjek River      8.39  23  Pn      Pn      17 20 46.7 -1.2
E25K  Arctic Village      8.52  18  Pn      Pn      17 20 48.2 -1.4
TOLK  Toolik Lake Re      8.58   8  Pn      Pn      17 20 49.4 -0.9
D19K  Kuna River          8.65 347  Pn      Pn      17 20 50.8 -0.5
D22K  Ayikyak River       8.71 360  Pn      Pn      17 20 52.7 +0.5
J30M  Hart River          8.75  53  Pn      Pn      17 20 52.7 -0.1
TNA   Tin City            8.78 314  Pn      Pn      17 20 54.2 +1.2
WHY   Whitehorse          8.81  79  Pn      Pn      17 20 52.7 -0.8
H29M  Whitestone          8.82  41  Pn      Pn      17 20 52.9 -0.7
I30M  Mount Dempster      9.00  49  Pn      Pn      17 20 56.8 +0.7
M31M  Drury Creek, Y      9.04  69  Pn      Pn      17 20 57.3 +0.7
F28M  Old Crow            9.31  32  Pn      Pn      17 20 59.8 -0.5
E27K  Coleen River        9.34  26  Pn      Pn      17 20 60.0 -0.6
G29M  Pine Creek          9.36  38  Pn      Pn      17 21 00.8 -0.1
UNV   Unalaska Valle      9.86 236  Pn      Pn      17 21 07.5 -0.2
Q32M  Nakina River       10.41  88  Pn      Pn      17 21 15.9 +0.6
F30M  Barrier River      10.47  38  Pn      Pn      17 21 15.7 -0.2
G31M  Satah River        10.57  43  Pn      Pn      17 21 15.7 -1.6
F31M  Tsiigehtchic       11.02  41  Pn      Pn      17 21 22.0 -1.2
U33K  Whale Pass         11.09 103  Pn      Pn      17 21 24.8 +0.5
INK   Inuvik             11.57  37  P       Pn      17 21 31.6 +1.1
      comp=E,0.8nm,0.7s,baz=246,slow=14,SNR=1.6
INK   Inuvik             11.57  37  Pn      Pn      17 21 31.2 +0.6
YKA   Yellowknife Ar     18.22  66  P       Pn      17 22 54.9 +0.7
      comp=E,0.3nm,0.6s,baz=280,slow=11,SNR=5.7
SONM  Songino Array      54.81 306  P       P       17 28 08.7 +1.9
      comp=E,0.8nm,0.6s,baz=46,slow=8.5,SNR=5.1
      comp=E,0.8nm,0.6s
SONM  Songino Array      54.81 306  P       P       17 28 08.2 +1.3
ZALV  Zalesovo Beam      57.31 324  P       P       17 28 25.1 +0.8
      comp=E,1.0nm,0.5s,baz=26,slow=6.8,SNR=5.4
      comp=E,1.0nm,0.5s
ZALV  Zalesovo Beam      57.31 324  P       P       17 28 24.6 +0.2
HFS   Hagfors            59.53   8  P       P       17 28 38.6 -1.1
      comp=E,0.6nm,0.6s,baz=5.7,slow=2.9,SNR=1.4
      comp=E,0.6nm,0.6s
KURK  Kurchatov          61.95 326  P       P       17 28 56.1 -0.1
BVAR  Borovoye Array     61.97 332  P       P       17 28 56.7 +0.4
      comp=E,0.9nm,0.5s,baz=27,slow=5.9,SNR=5.3
      comp=E,0.9nm,0.5s
KURBB Kurchatov Arra     62.06 326  P       P       17 28 57.5 +0.6
      comp=E,0.7nm,0.7s,baz=29,slow=6.8,SNR=3.1
      comp=E,0.7nm,0.7s
MKAR  Makanchi Array     64.38 321  P       P       17 29 11.8 -0.6
      comp=E,0.2nm,0.5s,baz=36,slow=7.7,SNR=5.1
      comp=E,0.2nm,0.5s
MKAR  Makanchi Array     64.38 321  P       P       17 29 12.6 +0.3
```

IDC 24 17:35:26.9±3.1**, 22°.94S**×**173°.89E, h0^{km}, mb3.9**/3**, mbtmp3.9**/4**, ML3.1**/1**, MS3.6**/1**, Error ellipse: s-maj=165.0km s-min=47.1km az=169.0, Southeast of Loyalty Islands**

```
Code  Station Name          Δ°  AZ°   Phase ID          Time      Res
                                    Op      ISC      h  m  s    ISC
DZM   Mont Dzumac         6.94 276  Pn      Pn      17 37 08.6 -1.3
      0.3nm,0.3s,baz=75,slow=17,SNR=3.2
DZM                                 LR      LR      17 39 26.1
      comp=Z,529nm,19.8s,baz=104,slow=34
      3.9nm,0.6s
CTA   Charters Tower     25.85 271  P       P       17 41 00.9 +0.6
      3.6nm,1.1s,baz=95,slow=12,SNR=4.4
      3.6nm,1.1s
ASAR  Alice Springs      36.65 261  P       P       17 42 36.0 +0.5
      1.7nm,1.0s,baz=95,slow=8.3,SNR=14
      1.7nm,1.0s
WRA   Warramunga Arr     36.86 267  P       P       17 42 36.3 -1.0
      1.4nm,0.9s,baz=105,slow=7.8,SNR=5.6
      1.4nm,0.9s
ARCES ARCESS Array B    129.71 346  PKP     PKPdf   17 54 36.9 -0.5
      6.7nm,1.1s,baz=56,slow=2.0,SNR=4.1
```

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*IDC **24** 17:35:26.0±1.8, 28°.34S×177°.32W, h0^{km}, mb3.9/2, mbtmp3.9/2, Error ellipse: s-maj=53.8km s-min=26.4km az=118.0*

*NEIC **24** 17:35:34.2±0.4, 28°.6S±0°.1×177°.4W±0°.1, h57^{km}±7^{km}, mb4.3/9, Error ellipse: s-maj=22.7km s-min=9.8km az=139.0*

ISC 24 17:35:31.1±0.9**, 28°.5S**±0°.1×**177°.3W**±0°.2**, h54^{km}, n30, σ2^{s}.44**/30**, mb3.8**/5**, Kermadec Islands region**

```
Code  Station Name          Δ°  AZ°   Phase ID          Time      Res
                                    Op      ISC      h  m  s    ISC
RAO   Raoul Island        0.93 216  Pn      Pn      17 35 49.1 +1.0
      732nm,0.3s,baz=74,slow=7.9,SNR=27
RAO                                 Sn      Sn      17 36 00.3 -0.2
      3µm,0.3s,baz=7.6,slow=23,SNR=55
TOZ   Tahuroa Road       11.01 211  Pn      Pn      17 38 03.2 -2.6
RTZ   Ruatahuna          11.16 204  Pn      Pn      17 38 05.7 -2.3
TUWZ  Tuamarina          14.76 207  Pn      Pn      17 38 54.1 -2.4
THZ   Tophouse           15.46 209  Pn      Pn      17 39 02.6 -3.1
THZ                                 IAmb    IAmb    17 39 14.4
      comp=Z,29nm,1.5s
GVZ   Greta Valley S     16.42 206  Pn      Pn      17 39 15.6 -2.3
GVZ                                 IAmb    IAmb    17 39 29.6
      comp=Z,40nm,1.1s
AS31  Alice Springs      43.86 265  P       P       17 43 33.5 +1.1
ASAR  Alice Springs      43.86 265  P       P       17 43 33.6 +1.2
      comp=Z,0.9nm,0.5s,baz=104,slow=6.7,SNR=27
      comp=Z,0.9nm,0.5s
ASAR  Alice Springs      43.86 265  P       P       17 43 33.0 +0.6
WRA   Warramunga Arr     44.68 270  P       P       17 43 40.5 +1.6
      comp=Z,1.0nm,0.6s,baz=109,slow=8.0,SNR=8.8
      comp=Z,1.0nm,0.6s
WRA   Warramunga Arr     44.68 270  P       P       17 43 40.0 +1.1
WB0   Warramunga Arr     44.69 270  P       P       17 43 40.3 +1.2
WB0                                 IAmb    IAmb    17 43 41.6
      comp=Z,6.1nm,1.2s
FORT  Forrest            47.16 253  P       P       17 43 58.8 +0.4
SBA   Scott Base         49.98 184  P       P       17 44 22.1 +2.8
FITZ  Fitzroy Crossi     53.01 268  P       P       17 44 43.9 +1.2
FITZ                                IAmb    IAmb    17 44 57.8
      comp=Z,0.8nm,1.1s
QSPA  South Pole Qui     61.61 180  P       P       17 45 44.8 +1.9
QSPA                                IAmb    IAmb    17 46 07.8
      comp=Z,6.3nm,1.4s
FINES FINESS Array B    143.56 341  PKhKP   PKPpre  17 54 58.0
      comp=Z,0.3nm,0.4s,baz=90,slow=4.0,SNR=5.3
FINES FINESS Array B    143.56 341          PKPdf   17 54 58.5 -0.5
NOA   NORSAR Array B    146.96 352  PKPbc   PKPab   17 55 09.2 +0.6
      comp=Z,0.5nm,1.0s,baz=38,slow=1.3,SNR=3.8
HFS   Hagfors           147.49 350  PKPbc   PKiKP   17 55 10.1 -0.5
      comp=Z,1.8nm,0.8s,baz=31,slow=3.5,SNR=5.8
AKASG Malin Array Be    150.13 325  PKPbc   PKiKP   17 55 17.2 +0.8
      comp=Z,0.5nm,0.4s,baz=47,slow=3.1,SNR=4.6
CONA  Conrad Observa    158.07 336  ePKiKP  PKPdf   17 55 18.0 -3.9
      comp=Z,4.2nm,1.6s
MOA   Molln             158.69 338  ePKiKP  PKPdf   17 55 22.2 -0.3
      comp=Z,4.9nm,1.3s
ARSA  Arzberg           158.77 335  ePKP    PKPdf   17 55 18.8 -3.8
      comp=Z,3.4nm,1.3s
SOKA  Soboth            159.43 335  i PKiKP PKPdf   17 55 20.0 -3.5
      comp=Z,4.8nm,1.2s
LESA  Schwarzleotal     159.56 340  ePKP    PKPdf   17 55 19.6 -4.0
      comp=Z,3.7nm,1.3s
WATA  Walderalm         159.96 342  ePKP    PKPdf   17 55 17.9 -6.2
      comp=Z,5.2nm,1.6s
MYKA  Terra Mystica     159.96 338  ePKiKP  PKPdf   17 55 21.5 -2.6
      comp=Z,1.9nm,0.6s
RETA  Reutte            160.03 344  ePKiKP  PKPdf   17 55 24.2  0.0
      comp=Z,7.4nm,1.4s
FETA  Feichten          160.47 343  ePKiKP  PKPdf   17 55 24.2 -0.6
      comp=Z,4.3nm,1.1s
```

IDC 24 17:36:34.6±1.3**, 6°.69N**×**124°.70E, h0^{km}, mb3.7**/4**, mbtmp3.7**/4**, Error ellipse: s-maj=24.6km s-min=18.0km az=136.0, Mindanao**

```
Code  Station Name          Δ°  AZ°   Phase ID          Time      Res
                                    Op      ISC      h  m  s    ISC
DAV   Davao City (W)      0.95  66  Pg      Pg      17 36 53.0 +0.1
      127nm,0.3s,baz=108,slow=1.5,SNR=18
DAV                                 LR      LR      17 37 23.4
      comp=Z,485nm,18.6s,baz=288,slow=51
FITZ  Fitzroy Crossi     24.65 178  P       P       17 41 58.2 +1.1
      1.3nm,0.4s,baz=10,slow=5.9,SNR=2.6
      1.3nm,0.4s
WRA   Warramunga Arr     28.11 160  P       P       17 42 27.8 -0.6
      0.5nm,0.8s,baz=342,slow=9.4,SNR=9.1
      0.5nm,0.8s
ASAR  Alice Springs      31.48 164  P       P       17 42 58.1 -0.2
      0.2nm,0.4s,baz=342,slow=7.4,SNR=7.6
      0.2nm,0.4s
MKAR  Makanchi Array     53.99 325  P       P       17 46 00.3 -0.2
      1.2nm,0.8s,baz=104,slow=5.6,SNR=10
      1.2nm,0.8s
```

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*IDC **24** 17:38:09.3±4.9, 4°.20S×150°.93E, h160^{km}±46^{km}, mb3.5/10, mbtmp3.9/11, MS4.1/1, Error ellipse: s-maj=51.1km s-min=26.0km az=116.0*

ISC 24 17:38:08.3±1.7**, 4°.2S**±0°.2×**150°.9E**±0°.4**, h150^{km}, n12, σ0^{s}.96**/11**, mb3.7**/10**, New Britain region**

```
Code  Station Name          Δ°  AZ°   Phase ID          Time      Res
                                    Op      ISC      h  m  s    ISC
PMG   Port Moresby        6.41 216  P       Pn      17 39 41.0 +0.5
      9.5nm,0.8s,baz=52,slow=9.6,SNR=3.9
WRA   Warramunga Arr     22.53 225  P       P       17 42 56.5 +0.6
      3.9nm,1.1s,baz=51,slow=9.9,SNR=6.8
      3.9nm,1.1s
ASAR  Alice Springs      25.42 219  P       P       17 43 22.7 +0.5
      0.9nm,0.9s,baz=42,slow=10.0,SNR=5.4
      0.9nm,0.9s
FITZ  Fitzroy Crossi     28.36 239  P       P       17 43 46.8 -1.7
      9.0nm,1.0s,baz=105,slow=8.9,SNR=7.5
      9.0nm,1.0s
CMAR  Chiang Mai Arr     55.92 295  P       P       17 47 31.9 +0.7
      0.3nm,0.4s,baz=121,slow=6.1,SNR=5.2
      0.3nm,0.4s
HILR  Hailar Array B     59.94 337  LR      LR      18 12 29.6
      comp=Z,147nm,21.0s,baz=85,slow=34
SONM  Songino Array      64.81 329  P       P       17 48 31.6 +0.5
      1.2nm,1.1s,baz=142,slow=5.4,SNR=4.2
      1.2nm,1.1s
MKAR  Makanchi Array     78.63 319  P       P       17 49 54.4 +0.8
      0.4nm,0.9s,baz=106,slow=5.1,SNR=2.6
      0.4nm,0.9s
ZALV  Zalesovo Beam      79.60 327  P       P       17 49 58.5 -0.2
      0.5nm,0.5s,baz=134,slow=4.3,SNR=3.7
      0.5nm,0.5s
ILAR  Eielson Array      82.28  22  P       P       17 50 13.1 +0.4
      0.7nm,0.9s,baz=250,slow=5.6,SNR=4.4
      0.7nm,0.9s
NRIK  Noril'sk           84.77 341  P       P       17 50 23.8 -1.4
      1.5nm,0.5s,baz=154,slow=5.9,SNR=4.4
      1.5nm,0.5s
BVAR  Borovoye Array     87.62 323  P       P       17 50 39.4 -0.2
      2.3nm,0.9s,baz=88,slow=4.9,SNR=8.5
      2.3nm,0.9s
```

IDC 24 17:41:35.0±1.5**, 3°.52N**×**127°.90E, h0^{km}, mb3.5**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=84.0km s-min=32.6km az=76.0, Talaud Islands**

```
Code  Station Name          Δ°  AZ°   Phase ID          Time      Res
                                    Op      ISC      h  m  s    ISC
ASAR  Alice Springs      27.65 168  P       P       17 47 24.6  0.0
      0.5nm,0.9s,baz=345,slow=8.3,SNR=4.2
      0.5nm,0.9s
MKAR  Makanchi Array     58.40 325  P       P       17 51 32.3 -0.1
      0.3nm,0.6s,baz=108,slow=7.4,SNR=3.8
      0.3nm,0.6s
ILAR  Eielson Array      84.79  25  P       P       17 54 11.1  0.0
      0.4nm,0.6s,baz=270,slow=3.2,SNR=6.8
      0.4nm,0.6s
```

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*IDC **24** 17:44:30.4±0.9, 38°.75N×29°.24W, h0^{km}, mb3.8/14, mbtmp3.8/15, ML4.0/1, MS3.9/16, Error ellipse: s-maj=27.4km s-min=17.6km az=164.0*

*SVSA **24** 17:44:31.1±0.9, 38°.58N×29°.20W, h6^{km}±3^{km}, ML4.2(INMG), Error ellipse: s-maj=4.3km s-min=3.9km az=29.0, #DIST_RANGE: LOCAL #IPMA_REGION: W Faial #FELT: IV (MM56) at Faial: Conceio (Horta)*

*NEIC **24** 17:44:31.5±1.7, 38°.63N±0°.07×29°.2W±0°.1, h10^{km}±1^{km}, mb4.4/23, Error ellipse: s-maj=15.2km s-min=11.6km az=115.0*

ISC 24 17:44:33.1±0.8**, 38°.61N**±0°.06×**28°.97W**±0°.04**, h23^{km}**±5^{km}**, n82, σ1^{s}.57**/82**, mb4.2**/21**, MS3.9**/16**, 7D, Azores Islands**

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Code  Station Name          Δ°  AZ°   Phase ID          Time      Res
                                    Op      ISC      h  m  s    ISC
PCAPE Capelo, Faial       0.11  96⇓ eP      Pb      17 44 36.8 -0.8
PCAPE                               eS      Sb      17 44 40.9 +0.3
PCAPE                               i IAML          17 44 41.5
PCAPE                               i IAML          17 44 41.5
PCAPE                               i IAML          17 44 42.4
PCED  Cedros              0.21  85⇓ eP      Pb      17 44 38.1 -0.6
PCED                                eS      Sb      17 44 43.1 +0.6
PCED                                i IAML          17 44 43.2
PCED                                i IAML          17 44 43.5
PCED                                i IAML          17 44 45.4
CALA  Caldeira            0.21  97  eP      Pb      17 44 37.8 -1.0
CALA                                eS      Sb      17 44 43.1 +0.4
CALA                                i IAML          17 44 45.1
CALA                                i IAML          17 44 45.5
CALA                                i IAML          17 44 46.8
PFCBR Castelo Branco      0.22 114⇓ eP      Pb      17 44 37.8 -1.0
PFCBR                               eS      Sb      17 44 42.7 +0.1
PFCBR                               i IAML          17 44 43.1
PFCBR                               i IAML          17 44 44.2
PFCBR                               i IAML          17 44 46.3
HOR   Horta               0.28 107⇓ eP      Pb      17 44 38.8 -0.8
HOR                                 eS      Sb      17 44 44.4 +0.3
HOR                                 i IAML          17 44 45.7
HOR                                 i IAML          17 44 46.0
HOR                                 i IAML          17 44 46.5
PCAN  Candelaria          0.41 111⇓ eP      Pb      17 44 40.7 -1.0
PCAN                                eS      Sb      17 44 48.0 +0.5
PCAN                                i IAML          17 44 48.5
PCAN                                i IAML          17 44 53.0
PCAN                                i IAML          17 44 56.0
PICO  Pico                0.44 104⇓ eP      Pb      17 44 41.5 -0.8
PICO                                eS      Sb      17 44 49.2 +0.7
PICO                                i IAML          17 44 49.7
PICO                                i IAML          17 44 54.6
PICO                                i IAML          17 44 59.4
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PPNO	Prainha do Nor	0.57	104⇓	*e*P	Pb	17 44 43.3	-1.2
PPNO				*e*S	Sb	17 44 52.7	+0.5
PPNO				*i* IAML		17 44 59.6	
PPNO				*i* IAML		17 44 59.6	
PPNO				*i* IAML		17 45 03.7	
ROSA	Rosais	0.58	79	*e*P	Pb	17 44 43.6	-1.0
ROSA				*e*S	Sb	17 44 52.7	+0.3
ROSA				*i* IAML		17 44 59.8	
ROSA				*i* IAML		17 45 00.1	
ROSA				*i* IAML		17 45 00.7	
PID	Ribeirinha	0.69	104	*e*P	Pb	17 44 44.8	-1.6
PID				*e*S	Sb	17 44 55.5	0.0
PID				*i* IAML		17 45 00.7	
PID				*i* IAML		17 45 01.8	
PID				*i* IAML		17 45 02.0	
PMAN	Manadas	0.69	88	*e*P	Pb	17 44 45.0	-1.4
PMAN				*e*S	Sb	17 44 55.5	0.0
PMAN				*i* IAML		17 45 02.2	
PMAN				*i* IAML		17 45 03.0	
PMAN				*i* IAML		17 45 09.4	
SRBC	Serra Branca	0.84	59	*e*P	Pb	17 44 47.2	-1.8
SRBC				*e*S	Sb	17 44 58.5	-1.4
SRBC				*i* IAML		17 45 09.3	
SRBC				*i* IAML		17 45 09.4	
SRBC				*i* IAML		17 45 09.8	
ADH	Angra Heroismo	1.36	88	*e*P	Pn	17 44 54.3	-2.2
ADH				*e*S	Sn	17 45 11.6	-2.2
ADH				*i* IAML		17 45 12.6	
ADH				*i* IAML		17 45 12.9	
ADH				*i* IAML		17 45 13.2	
PAGU	Agualva, Azore	1.41	83	*e*P	Pn	17 44 55.0	-2.2
PAGU				*e*S	Sn	17 45 12.8	-2.2
PAGU				*i* IAML		17 45 14.7	
PAGU				*i* IAML		17 45 15.1	
PAGU				*i* IAML		17 45 15.4	
PSCM	Serra do Cume	1.45	86	*e*P	Pn	17 44 55.5	-2.4
PSCM				*e*S	Sn	17 45 13.9	-2.3
PSCM				*i* IAML		17 45 15.5	
PSCM				*i* IAML		17 45 15.7	
PSCM				*i* IAML		17 45 17.0	
CMLA	Cha da Macela	2.84	106	Pn	Pn	17 45 15.2	-1.8
BART	Pico Bartolome	3.11	104	*e*S	Sn	17 45 54.1	-3.0
BART				*i* IAML		17 46 01.7	
BART				*i* IAML		17 46 03.6	
BART				*i* IAML		17 46 04.7	
PSMN	Pico do Norte,	3.48	116	*e*P	Pn	17 45 23.2	-2.6
PSMN				*e*S	Sn	17 46 00.8	-5.5
PSMN				*i* IAML		17 46 04.2	
PSMN				*i* IAML		17 46 05.4	
PSMN				*i* IAML		17 46 06.2	
MACI	Morro de la Ar	14.65	131	Pn	Pn	17 48 00.1	+1.1
ESDC	Sonseca Array	19.41	79	P	Pn	17 49 02.1	+3.3
	0.1nm,0.3s,baz=279,slow=12,SNR=9.3						
	0.6nm,0.8s						
ESDC	Sonseca Array	19.41	79	P	Pn	17 48 59.4	+0.6
MD01	Midelt array s	20.44	99	P	P	17 49 09.8	+0.9
MDT	Midelt	20.58	99	LR	LR	17 54 55.5	
	comp=Z,150nm,21.6s,baz=331,slow=30						
EKA	Eskdalemuir Ar	24.07	38	P	P	17 49 48.0	+1.5
	1.6nm,0.8s,baz=241,slow=7.0,SNR=3.6						
EKA				LR	LR	17 57 21.0	
	comp=Z,422nm,18.3s,baz=270,slow=32						
	1.6nm,0.8s						
GBN	Guysborough	25.00	296	P	P	17 49 55.4	+0.5
BORG	Borgarnes	26.56	7	LR	LR	17 57 38.8	
	comp=Z,282nm,21.0s,baz=182,slow=30						
BBSR	BB Station	29.62	269	P	P	17 50 36.6	+0.1
KEST	Kesra	30.52	83	LR	LR	18 01 41.0	
	comp=Z,134nm,19.5s,baz=304,slow=34						
FDMO	Fiordimonte	31.89	68	P	P	17 50 57.5	+1.1
NB2	NORSAR Subarra	33.47	35	P	P	17 51 11.8	+1.7
	comp=Z,4.9nm,1.2s,baz=248,slow=9.3						
NOA	NORSAR Array B	33.47	35	P	P	17 51 11.2	+1.1
	comp=Z,1.6nm,0.9s,baz=248,slow=8.8,SNR=4.1						
NOA				LR	LR	18 03 08.9	
	comp=Z,173nm,20.2s,baz=250,slow=33						
	comp=Z,1.6nm,0.9s						
HFS	Hagfors	34.27	37	LR	LR	18 03 34.6	
	comp=Z,273nm,18.9s,baz=310,slow=33						
OJC	Ojcow	36.10	55	P	P	17 51 34.0	+1.0
TORD	Torodi Ar. Bea	37.16	125	P	P	17 51 45.9	+3.6
	comp=Z,0.5nm,0.8s,baz=342,slow=6.4,SNR=2.5						
	comp=Z,0.5nm,0.8s						
SJG	San Juan	38.22	248	LR	LR	18 03 15.7	
	comp=Z,116nm,21.6s,baz=114,slow=30						
MDP	Montagnes des	39.68	219	LR	LR	18 05 12.0	
	comp=Z,113nm,19.1s,baz=307,slow=31						
BURAR	Bucovina Array	39.84	59	P	P	17 52 05.5	+0.9
FINES	FINESS Array B	40.48	37	LR	LR	18 07 27.0	
	comp=Z,170nm,19.3s,baz=222,slow=34						
FINES	FINESS Array B	40.48	37	P	P	17 52 10.8	+1.3
KIEV	Kiev	42.07	54	P	P	17 52 23.2	+0.4
AKASG	Malin Array Be	42.08	54	P	P	17 52 23.6	+0.7
	comp=Z,2.4nm,0.7s,baz=280,slow=8.1,SNR=5.8						
AKASG				LR	LR	18 09 13.3	
	comp=Z,136nm,18.6s,baz=326,slow=35						
	comp=Z,2.4nm,0.7s						
AKBB	Malin Array Si	42.08	54	P	P	17 52 22.3	-0.5
AKBB				IAmb	IAmb	17 52 30.3	
	comp=Z,7.8nm,1.1s						
ARCES	ARCESS Array B	42.11	25	P	P	17 52 23.5	+0.6
	comp=Z,1.7nm,0.6s,baz=251,slow=7.6,SNR=12						
ARCES				LR	LR	18 06 54.3	
	comp=Z,101nm,20.1s,baz=264,slow=32						
	comp=Z,1.7nm,0.6s						
ARCES	ARCESS Array B	42.11	25	P	P	17 52 23.6	+0.6
FCC	Fort Churchill	45.40	318	P	P	17 52 48.9	-0.5
FCC				IAmb	IAmb	17 52 57.1	
	comp=Z,7.8nm,1.3s						
H10N2	ASCENSION HYDR	48.12	161	T	T	18 44 07.0	
	baz=345,slow=75,SNR=23						
H10N3	ASCENSION HYDR	48.13	161	T	T	18 44 07.7	
	baz=345,slow=75,SNR=24						
H10N1	ASCENSION HYDR	48.14	161	T	T	18 44 08.6	
	baz=345,slow=75,SNR=30						
H10S3	ASCENSION HYDR	49.16	161	T	T	18 45 35.2	
	baz=344,slow=74,SNR=10						
H10S2	ASCENSION HYDR	49.17	161	T	T	18 45 37.5	
	baz=236,slow=74,SNR=12						
KIRV	Kirov	52.27	40	LR	LR	18 14 28.8	
	comp=Z,158nm,20.2s,baz=210,slow=34						
KBZ	Khabaz	52.78	60	P	P	17 53 49.2	+3.0
	comp=Z,4.2nm,0.9s,baz=299,slow=3.5,SNR=5.8						
	comp=Z,4.2nm,0.9s						
YKA	Yellowknife Ar	54.69	325	P	P	17 54 00.7	+0.9
	comp=Z,0.2nm,0.8s,baz=92,slow=5.2,SNR=4.3						
	comp=Z,0.2nm,0.8s						
YKA	Yellowknife Ar	54.69	325	P	P	17 54 00.1	+0.3
WHTX	Lake Whitney,	55.13	286	P	P	17 54 03.3	-0.2
PLPT	Palo Pinto	55.40	287	P	P	17 54 04.7	-0.7
PLPT				IAmb	IAmb	17 54 14.3	
	comp=Z,4.2nm,1.1s						
BRDY	Brady	56.62	286	P	P	17 54 13.1	-1.1
JCT	Junction City	57.61	285	P	P	17 54 20.1	-1.2
JCT				IAmb	IAmb	17 54 21.6	
	comp=Z,3.4nm,0.8s						
PD31	Pinedale Array	59.02	302	P	P	17 54 28.9	-2.3
PD31				IAmb	IAmb	17 54 39.4	
	comp=Z,2.9nm,1.1s						
PDAR	Pinedale Array	59.02	302	P	P	17 54 29.6	-1.6
	comp=Z,0.9nm,0.9s,baz=48,slow=4.1,SNR=3.9						
	comp=Z,0.9nm,0.9s						
PDAR	Pinedale Array	59.02	302	P	P	17 54 29.2	-2.0
AKTO	Aktyubinsk	59.73	48	LR	LR	18 20 22.7	
	comp=Z,195nm,19.0s,baz=236,slow=36						
F30M	Barrier River	60.84	335	P	P	17 54 41.0	-2.0
TX31	Lajitas Ar. Si	61.09	286	P	P	17 54 42.8	-2.7
TX31				IAmb	IAmb	17 54 49.0	
	comp=Z,5.1nm,1.3s						
TXAR	Lajitas Array	61.09	286	P	P	17 54 45.4	-0.1
	comp=Z,1.6nm,0.8s,baz=81,slow=8.1,SNR=14						
TXAR				LR	LR	18 21 59.6	
	comp=Z,82nm,18.0s,baz=358,slow=37						
	comp=Z,1.6nm,0.8s						
TXAR	Lajitas Array	61.09	286	P	P	17 54 43.7	-1.7
NEW	Newport	61.37	310	LR	LR	18 20 18.7	
	comp=Z,180nm,18.5s,baz=306,slow=35						
F28M	Old Crow	62.16	336	P	P	17 54 50.6	-1.3
F28M				IAmb	IAmb	17 55 25.5	
	comp=Z,4.2nm,1.5s						
H29M	Whitestone	62.45	334	P	P	17 54 53.2	-0.6
LPAZ	La Paz	65.78	222	P	P	17 55 17.2	+0.1
	comp=Z,0.6nm,0.4s,baz=345,slow=4.3,SNR=3.9						
	comp=Z,0.6nm,0.4s						
LPAZ	La Paz	65.78	222	P	P	17 55 16.7	-0.4
LPAZ				IAmb	IAmb	17 55 24.9	
	comp=Z,2.9nm,1.0s						
C19K	Lookout Ridge	66.60	343	P	P	17 55 20.6	-0.4
C19K				IAmb	IAmb	17 55 50.5	
	comp=Z,4.6nm,1.2s						
FURI	Furi	67.05	97	LR	LR	18 25 30.3	
	comp=Z,89nm,18.4s,baz=166,slow=37						
YBH	Yreka Blue Hor	68.05	306	P	P	17 55 28.2	-2.5
YBH				IAmb	IAmb	17 55 31.4	
	comp=Z,2.8nm,0.8s						
KURK	Kurchatov	70.78	40	P	P	17 55 47.8	+0.6
KURBB	Kurchatov Arra	70.79	40	P	P	17 55 48.1	+0.8
	comp=Z,0.8nm,0.8s,baz=314,slow=6.3,SNR=7.7						
	comp=Z,0.8nm,0.8s						
ZALV	Zalesovo Beam	71.67	35	P	P	17 55 52.6	0.0
	comp=Z,0.8nm,0.7s,baz=316,slow=6.2,SNR=5.4						
	comp=Z,0.8nm,0.7s						
ZALV	Zalesovo Beam	71.67	35	P	P	17 55 52.4	-0.2
MKAR	Makanchi Array	75.15	41	P	P	17 56 12.9	-0.4
	comp=Z,0.5nm,0.7s,baz=325,slow=4.9,SNR=5.6						
	comp=Z,0.5nm,0.7s						
MKAR	Makanchi Array	75.15	41	P	P	17 56 14.0	+0.7
SONM	Songino Array	85.20	28	P	P	17 57 09.1	+1.5
	comp=Z,0.5nm,0.7s,baz=324,slow=2.0,SNR=3.6						
	comp=Z,0.5nm,0.7s						
SONM	Songino Array	85.20	28	P	P	17 57 08.3	+0.7

JMA 24 17:51:41.6±0.2**,37°.6N**±0°.9×**145°.2E**±1°.0**,h2**^{km}**,MV3.7**/21**,**
FAR E OFF NORTH HONSHU,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	3.05	284	*e*P	Pn	17 52 32.0	+1.2
JIKH				*e*S	Sn	17 53 09.4	+1.6
OFUJ	Ofunato	3.15	298	*e*P	Pn	17 52 33.7	+1.5
JIO	Ouri	3.17	286	*e*P	Pn	17 52 33.8	+1.3
JIO				*e*S	Sn	17 53 12.4	+1.5
JKMT	Kesennumamotoy	3.18	293	*e*P	Pn	17 52 34.0	+1.4
JMK	Ichinoseki	3.42	294	*e*P	Pn	17 52 37.5	+1.7
JOM	Ohasama	3.59	302	*e*P	Pn	17 52 40.2	+1.9
JOTO	OTAMA OYAMA	3.89	270	*e*P	Pn	17 52 44.3	+1.9
JANG	Nango	3.98	315	*e*P	Pn	17 52 45.0	+1.4
JANG				*e*S	Sn	17 53 32.6	+1.7
JCH	Churui	5.18	345	*e*P	Pn	17 52 59.1	-1.0

IDC 24 18:01:15.8±7.0**,6°.77S**×**146°.40E,h81**^{km}±52^{km}**,mb2.9**/2**,**
mbtmp3.3/4**,ML3.2**/1**,Error ellipse: s-maj=73.4km**
s-min=48.5km az=54.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	2.73	164	P	Pn	18 01 58.7	+1.1
	9.7nm,0.3s,baz=326,slow=5.9,SNR=19						
PMG				S	Sn	18 02 30.1	+0.5
	26nm,0.5s,baz=165,slow=21,SNR=28						
WRA	Warramunga Arr	17.57	221	P	Pn	18 05 15.9	+0.3
	0.1nm,0.3s,baz=44,slow=12,SNR=6.9						
	0.7nm,0.6s						
ASAR	Alice Springs	20.65	214	P	P	18 05 49.4	+0.2
	0.5nm,0.8s,baz=52,slow=9.1,SNR=18						
	0.5nm,0.8s						
STKA	Stephens Creek	25.38	190	P	P	18 06 35.0	-0.6
	0.5nm,0.6s,baz=11,slow=15,SNR=1.5						
	0.5nm,0.6s						

KRSC 24 18:09:48.5±1.6**,48°.93N**×**158°.04E,h39**^{km}±25^{km}**,Ml3.7,**
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.16	325	*e*P	Pn	18 10 23.5	+1.7
SKR				*e*S	Sn	18 10 49.4	+2.1
PAU	Pauzhetka	2.66	343	*e*S	Sn	18 11 04.5	+4.7
KDTR	Khodutka, Kamc	2.88	0	*e*P	Pn	18 10 34.8	+2.9
KDTR				*e*S	Sn	18 11 09.2	+3.9
ASAK	Asacha	3.46	359	*e*P	Pn	18 10 43.4	+3.5
RUS	Russkaya	3.52	5	*e*P	Pn	18 10 44.3	+3.7
RUS				*e*S	Sn	18 11 25.9	+4.8
MTVR	Mutnovka	3.56	1	*e*P	Pn	18 10 45.1	+3.8
GRL	Gorelyy	3.63	0	*e*P	Pn	18 10 46.2	+4.0
KRMR	Karymshinskiy	3.91	1	*e*P	Pn	18 10 50.2	+4.3
KRMR				*e*S	Sn	18 11 37.4	+6.9
PET	Petropavlovsk	4.12	5	*e*P	Pn	18 10 52.8	+3.9
PET				*e*S	Sn	18 11 41.3	+5.6
DALK	Dalny	4.13	6	*e*P	Pn	18 10 53.1	+4.0
UGLR	Uglovaya	4.32	6	*e*P	Pn	18 10 57.1	+5.4
SPN	Mys Shipunski	4.36	16	*e*P	Pn	18 10 57.9	+5.7
SPN				*e*S	Sn	18 11 45.0	+3.3
KOK	Koryaka	4.39	5	*e*P	Pn	18 10 57.3	+4.6
SDLR	Sedlovina	4.39	7	*e*P	Pn	18 10 56.9	+4.2
KRX	Arik	4.45	5	*e*P	Pn	18 10 58.1	+4.5

IDC ***24*** *18:17:14.4±3.6,7°.32S×116°.00E,h0*^{km}*,mb3.1/3,*
mbtmp3.1/3,Error ellipse: s-maj=295.5km s-min=26.6km
az=51.0
DJA ***24*** *18:17:21.9±0.2,9°S±5°×11°5E±°,h96*^{km}*±4*^{km}*,M3.7/22,*
mb3.7/11,MLv3.6/22
ISC 24 18:17:21.5±1.0**,9°.0S**±0°.1×**115°.07E**±0°.05**,h113**^{km}±7^{km}**,**
n31,σ**1**^{s}**.39**/35**,mb3.2**/3**,Bali region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGBI	Denpasar	0.19	23	P	Pn	18 17 37.6	+0.4
IGBI				S	Sn	18 17 48.6	-0.3
DNP	Denpasar	0.34	24	P	Pn	18 17 38.7	+1.0
DNP				S	Sn	18 17 51.1	+1.2
RTBI	Rangdo, Negare	0.54	346	P	Pn	18 17 38.9	-0.1
RTBI				S	Sn	18 17 51.1	-1.0
KHKI	Kahang-Kahang	0.82	40	P	Pn	18 17 41.4	+0.3
KHKI				S	Sn	18 17 54.6	-1.3
JAGI	Jajag, Banyuwa	1.05	300	P	Pn	18 17 43.4	0.0
JAGI				S	Sn	18 17 58.6	-1.3
KLNI	Mataram	1.16	61	P	Pn	18 17 44.0	-0.5
ABJI	Asem Bagus	1.45	325	P	Pn	18 17 48.6	+0.8
GMJI	Gumukmas	1.76	294	P	Pn	18 17 52.2	+0.6
TWSI	Taliwang, Sumb	1.81	82	P	Pn	18 17 52.9	+0.8
BLJI	Banyuglugur	1.92	310	P	Pn	18 17 54.1	+0.6
KMMI	Kalianget	2.22	330	P	Pn	18 17 59.1	+1.7
PLAI	Plampang	2.68	87	P	Pn	18 18 05.1	+1.8
DBNI	Kabupaten Domp	3.24	82	P	Pn	18 18 11.8	+1.1
SNJI	Sawahan-Nganju	3.49	290	P	Pn	18 18 15.5	+1.3
SJI	Sawahan	3.50	291	P	Pn	18 18 15.1	+0.8
PCJI	Pacitan	3.93	281	P	Pn	18 18 21.1	+1.1
WBSI	Waikabubak, Su	4.31	99	P	Pn	18 18 23.3	-1.8
UGM	Wanagama	4.63	283	P	Pn	18 18 30.7	+1.4
LBFI	Labuhan Bajo,	4.79	84	P	Pn	18 18 32.0	+0.5
WSI	Waingapu	5.20	98	P	Pn	18 18 37.9	+0.8
BSSI	Bau Bau, Buton	6.07	63	P	Pn	18 18 50.2	+1.4
	24nm,1.2s						
KAPI	Kappang	6.10	50	P	Pn	18 18 50.2	+1.0
BKSI	Bulukumba	6.20	54	P	Pn	18 18 51.2	+0.7
	0.0nm9.8nm,1.3s						
EDFI	Ende, Flores	6.54	88	P	Pn	18 18 54.9	-0.5
	0.0nm8.2nm,1.1s						
BBJI	Bungbulang	7.50	281	P	Pn	18 19 10.3	+2.0
	0.0nm7.0nm,1.8s						
TTSI	Tana Toraja	7.56	39	P	Pn	18 19 08.9	-0.1
CNJI	Cibinong	8.04	281	P	Pn	18 19 14.2	-1.3
	7.5nm,1.3s						
EGSI	Enggano, Bengk	13.20	285	P	Pn	18 20 21.7	-2.9
WRA	Warramunga Arr	21.57	122	P	P	18 22 06.2	+3.9
	1.2nm,1.0s,baz=300,slow=12,SNR=4.6						
	1.2nm,1.0s						
ASAR	Alice Springs	23.18	131	P	P	18 22 29.1	+11
	0.1nm,0.5s,baz=298,slow=8.8,SNR=3.5						
	0.1nm,0.5s						
MKAR	Makanchi Array	62.75	335	P	P	18 27 34.0	-0.7
	0.2nm,0.4s,baz=151,slow=6.6,SNR=5.4						
	0.2nm,0.4s						

IDC ***24*** *18:37:49.6±0.5,11°.68N×142°.69E,h0*^{km}*,mb4.3/22,*
mbtmp4.3/23,ML4.5/1,MS3.9/20,Error ellipse:
s-maj=18.9km s-min=12.5km az=82.0
NEIC ***24*** *18:37:50.9±1.3,11°.65N±0°.08×142°.74E±0°.09,h10*^{km}*±1*^{km}*,*
mb5.0/154,Error ellipse: s-maj=15.9km s-min=12.7km
az=117.0
ISC 24 18:37:52.7±0.4**,11°.64N**±0°.05×**142°.73E**±0°.06**,h25**^{km}**,n420,**
σ**0**^{s}**.77**/363**,mb4.9**/96**,MS3.8**/19**,South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	2.85	47	Pn	Pn	18 38 38.4	+1.7
	78nm,0.3s,baz=196,slow=2.9,SNR=21						
GUMO				Sn	Sn	18 39 11.2	+0.9
	125nm,0.3s,baz=29,slow=23,SNR=8.9						
	250nm,0.4s						
GUMO	Guam	2.85	47		Pn	18 38 37.4	+0.7
GUMO				Sn	Sn	18 39 10.1	-0.2
DPSS	Saipan	4.66	39	Pn	Pn	18 38 59.1	-2.5
DPSS				Sn	Sn	18 39 53.7	-1.2
JAY	Jayapura	14.20	188	LR	LR	18 45 32.5	
	comp=Z,619nm,21.0s,baz=356,slow=32						
JCJ	Chichijima	15.39	358	LR	LR	18 47 10.4	
	comp=Z,272nm,18.1s,baz=166,slow=36						
JCJ	Chichijima	15.39	358	Pn	Pn	18 41 28.1	-0.2
PATS	Pohnpei	16.10	106	Pn	Pn	18 41 37.4	-0.2
PATS				IAmb	IAmb	18 41 39.2	
	comp=Z,87nm,1.0s						
FAKI	Fak Fak	17.82	216	P	P	18 42 01.5	+1.7
RABL	Rabaul	18.31	149	P	Pn	18 42 05.2	0.0
JOW	Kunigami	20.33	320	P	Pn	18 42 28.0	-1.4
	comp=Z,40nm,0.8s,baz=146,slow=4.8,SNR=7.3						
JOW				LR	LR	18 48 41.2	
	comp=Z,350nm,21.8s,baz=122,slow=32						
	comp=Z,40nm,0.8s						
JOW	Kunigami	20.33	320		Pn	18 42 27.5	-1.9
JOW				IAmb	IAmb	18 42 32.7	
	comp=Z,47nm,0.9s						
PMG	Port Moresby	21.36	168	P	P	18 42 38.0	-0.4
	comp=Z,16nm,0.8s,baz=348,slow=11,SNR=10.0						
PMG				LR	LR	18 50 50.9	
	comp=Z,270nm,18.1s,baz=326,slow=36						
	comp=Z,16nm,0.8s						
PMG	Port Moresby	21.36	168		P	18 42 37.4	-1.0
JHJ	Hachijo jima 2	21.55	353	LR	LR	18 49 46.0	
	comp=Z,531nm,18.9s,baz=176,slow=33						
JSU	Suzuyama	22.79	332	P	P	18 42 53.3	-0.3
JSU				IAmb	IAmb	18 43 01.1	
	comp=Z,47nm,1.3s						
LUWI	Luwuk	23.49	239	P	P	18 43 01.2	+0.4
LUWI				IAmb	IAmb	18 43 04.3	
	comp=Z,42nm,0.9s						
YULB	Yu-li	23.51	303	P	P	18 43 01.5	+0.5
NACB	Ninganchiao	23.62	305	P	P	18 43 01.4	-0.6
SSLB	Suanglung	23.96	303	P	P	18 43 05.0	-0.3
SSLB				IAmb	IAmb	18 43 22.2	
	comp=Z,40nm,1.1s						
JNU	Nakatsue	23.99	335	LR	LR	18 51 06.6	
	comp=Z,192nm,19.5s,baz=164,slow=33						
JNU	Nakatsue	23.99	335	P	P	18 43 04.9	-0.6
TPUB	Ta-pu	24.02	302	P	P	18 43 04.3	-1.6
JGF	Kuroka	24.35	349	P	P	18 43 08.4	-0.4
JGF				IAmb	IAmb	18 43 15.3	
	comp=Z,57nm,1.8s						
MJAR	Matsushiro Arr	25.13	351	P	P	18 43 14.9	-0.9
	comp=Z,0.7nm,0.6s,baz=201,slow=6.2,SNR=3.2						
MJAR				LR	LR	18 52 15.6	
	comp=Z,300nm,19.2s,baz=138,slow=34						
	comp=Z,0.7nm,0.6s						
MJAR	Matsushiro Arr	25.13	351	IAmb	IAmb	18 43 22.0	
	comp=Z,2.9nm,0.9s						
COEN	Coen	25.43	179	P	P	18 43 17.7	-1.0
KNMB	Chin-men Tao	26.37	302	P	P	18 43 27.0	-0.1
MTN	Manton Dam	26.90	206	P	P	18 43 31.5	-0.5
BKB	Balikpapan	28.69	245	P	P	18 43 47.1	-0.9
BATI	Baumata	28.81	222	LR	LR	18 55 06.4	
	comp=Z,184nm,20.1s,baz=32,slow=36						
KSRS	Korea Array	28.94	335	LR	LR	18 54 51.9	
	comp=Z,140nm,18.9s,baz=145,slow=35						
KSAR	Wonju Array Be	28.95	335	P	P	18 43 50.5	+0.5
KS19	Wonju Array Si	29.00	335	P	P	18 43 50.5	-0.1
CTA	Charters Tower	31.71	174	LR	LR	18 57 53.8	
	comp=Z,146nm,18.4s,baz=348,slow=38						
CTAO	Charters Tower	31.71	174		P	18 44 14.3	-0.4
WB0	Warramunga Arr	32.27	195	P	P	18 44 18.7	-0.9
ASAJ	Asahikawa	32.37	360	LR	LR	18 59 49.7	
	comp=Z,139nm,19.2s,baz=262,slow=41						
WR8	Warramunga Arr	32.42	195	P	P	18 44 19.8	-1.1
WR8				IAmb	IAmb	18 44 23.5	
	comp=Z,29nm,1.9s						
WRAB	Tennant Creek	32.44	195	P	P	18 44 20.1	-1.0
WRA	Warramunga Arr	32.45	195	P	P	18 44 21.4	+0.2
	comp=Z,3.2nm,0.7s,baz=16,slow=9.4,SNR=8.7						
	comp=Z,3.2nm,0.7s						
WRA	Warramunga Arr	32.45	195	P	P	18 44 17.0	-4.1
ENH	Enshi	35.96	306	P	P	18 44 51.5	-0.1
ENH				IAmb	IAmb	18 45 10.3	
	comp=Z,31nm,1.6s						
AS31	Alice Springs	36.13	194		P	18 44 52.2	-0.9
ASAR	Alice Springs	36.13	194	P	P	18 44 53.8	+0.7
	comp=Z,1.4nm,0.6s,baz=20,slow=12,SNR=44						
ASAR				PcP	PcP	18 47 19.8	+1.0
	comp=Z,0.7nm,0.7s,baz=44,slow=2.4,SNR=6.1						
ASAR				LR	LR	18 59 42.2	
	comp=Z,118nm,18.6s,baz=16,slow=36						
	comp=Z,1.4nm,0.6s						
ASAR	Alice Springs	36.13	194		P	18 44 51.3	-1.8
BJT	Baijiatuau	36.74	325		P	18 44 57.0	-1.1
HEH	HeiHe	40.52	345	*e*P	P	18 45 29.3	-0.3
HEH				pmax	pmax		
	comp=Z,6.0nm,0.6s						
DZM	Mont Dzumac	40.78	145	*e*LR	LR	18 56 51.1	
	comp=Z,244nm,23.1s						
LZDM	Lanzhou Array	42.73	311	LR	LR	19 04 31.7	
	comp=Z,206nm,18.7s,baz=155,slow=38						
CMAR	Chiang Mai Arr	42.74	285	P	P	18 45 49.9	+1.5
	comp=Z,2.5nm,0.8s,baz=85,slow=6.5,SNR=23						
CMAR				LR	LR	19 02 20.3	
	comp=Z,135nm,20.6s,baz=80,slow=34						
	comp=Z,2.5nm,0.8s						
CMAR	Chiang Mai Arr	42.74	285		P	18 45 49.3	+0.9
PETK	Petropavlovsk-	43.07	13	LR	LR	19 01 08.1	
	comp=Z,201nm,21.5s,baz=189,slow=32						
STKA	Stephens Creek	43.28	181	P	P	18 45 52.7	+0.3
	comp=Z,4.4nm,0.9s,baz=349,slow=8.8,SNR=9.6						
STKA				LR	LR	19 04 49.6	
	comp=Z,109nm,19.3s,baz=23,slow=37						
	comp=Z,4.4nm,0.9s						
STKA	Stephens Creek	43.28	181	P	P	18 45 52.1	-0.3
STKA				IAmb	IAmb	18 45 54.1	
	comp=Z,25nm,0.9s						
BBOO	Buckleboo	44.65	188		P	18 46 03.1	-0.4
BBOO				IAmb	IAmb	18 46 05.6	
	comp=Z,14nm,0.8s						
GTA	Gaotai	46.95	314	*e*P	P	18 46 22.8	+1.0
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				LR	LR		
	comp=N,110nm,17.1s						
GTA				LR	LR		
	comp=E,220nm,17.1s						
GTA				LR	LR		
	comp=Z,300nm,19.5s						
SONM	Songino Array	47.17	327	P	P	18 46 24.2	+0.8
	comp=Z,1.0nm,0.6s,baz=146,slow=6.2,SNR=7.6						
SONM				PcP	PcP	18 47 55.7	+1.0
	comp=Z,0.7nm,0.8s,baz=158,slow=5.5,SNR=3.5						
SONM				LR	LR	19 07 10.5	
	comp=Z,130nm,18.1s,baz=126,slow=37						
	comp=Z,1.0nm,0.6s						
SONM	Songino Array	47.17	327	P	P	18 46 23.3	-0.1
SHEM	Shemya Is, Ala	48.10	25	LR	LR	19 03 36.4	
	comp=Z,131nm,21.9s,baz=272,slow=32						
YAK	Yakutsk	51.20	352	LR	LR	19 08 36.9	
	comp=Z,188nm,19.0s,baz=111,slow=36						
YAK	Yakutsk	51.20	352		P	18 46 54.1	+0.4
SEY	Seymchan	51.68	6	LR	LR	19 07 26.5	
	comp=Z,78nm,21.4s,baz=198,slow=34						
SPIA	Saint Paul Isl	57.87	28	P	P	18 47 42.8	+0.5
	baz=238						
UNV	Unalaska Valle	58.09	33	P	P	18 47 44.5	+0.6
	baz=243						
BILL	Bilibino	58.43	10		P	18 47 46.4	+0.3
BILL				IAmb	IAmb	18 47 52.0	
	comp=Z,38nm,1.9s						
FALS	False Pass	60.16	33	P	P	18 47 58.9	+0.7
	baz=246						
MKAR	Makanchi Array	61.46	317	P	P	18 48 08.2	+0.8
	comp=Z,1.9nm,0.8s,baz=97,slow=7.9,SNR=16						
	comp=Z,1.9nm,0.8s						
MKAR	Makanchi Array	61.46	317		P	18 48 07.0	-0.3
MAKZ	Makanchi	61.68	317		P	18 48 08.6	-0.2
SDPT	Sand Point	61.91	33	P	P	18 48 10.9	+0.9
	baz=248						
ZALV	Zalesovo Beam	62.01	325	P	P	18 48 10.8	0.0

	comp=Z,1.8nm,0.6s,baz=97,slow=7.5,SNR=7.2						
	comp=Z,1.8nm,0.6s						
ZALV	Zalesovo Beam	62.01	325		P	18 48 10.3	-0.5
HYB	Hyderabad	62.15	284	*e*P	P	18 48 12.6	+0.2
CHNA	Chernabura Isl	62.20	34	P	P	18 48 11.9	-0.1
	baz=249						
M13K	Dall Lake	62.60	27	P	P	18 48 14.2	-0.4
	baz=243						
S14K	Fog Glacier	62.73	32	P	P	18 48 15.5	-0.2
	baz=249						
K13K	Kusilvak Mount	62.75	25	P	P	18 48 16.6	+1.0
	baz=241						
O14K	Tigyukauivet M	63.04	29	P	P	18 48 18.6	+1.0
	baz=246						
N14K	Kuskokwak Cree	63.13	28	P	P	18 48 18.2	+0.1
	baz=245						
L14K	Kuka Creek	63.31	26	P	P	18 48 20.1	+0.9
	baz=243						
M14K	Bethel	63.36	27	P	P	18 48 20.3	+0.6
	baz=244						
TNA	Tin City	63.40	21	P	P	18 48 19.9	+0.1
	baz=236						
J14K	Nanvaranak Lak	63.59	24	P	P	18 48 20.7	-0.5
	baz=242						
O15K	Ungalikthiuk R	63.69	29	P	P	18 48 22.4	+0.5
	baz=247						
ANM	Nome	63.78	22	P	P	18 48 23.1	+0.7
	baz=239						
M15K	Kasigluk River	63.90	27	P	P	18 48 24.1	+0.8
	baz=246						
F14K	Arctic Creek	63.91	21	P	P	18 48 22.8	-0.4
	baz=238						
N15K	Kwethluk River	63.96	28	P	P	18 48 23.5	-0.2
N15K	Kwethluk River	63.96	28	P	P	18 48 23.6	0.0
	baz=246						
L15K	Ungalak Mounta	63.97	26	P	P	18 48 24.0	+0.4
	baz=244						
R16K	Pilot Point	64.20	31	P	P	18 48 25.2	-0.1
	baz=250						
K15K	Wolf Creek Mou	64.22	25	P	P	18 48 26.2	+0.8
K15K	Wolf Creek Mou	64.22	25	P	P	18 48 26.1	+0.8
	baz=244						
G15K	Niukluk	64.49	22	P	P	18 48 27.1	+0.1
	baz=240						
P16K	Nushagak River	64.51	30	P	P	18 48 27.3	+0.1
	baz=249						
F15K	North Star Dit	64.63	21	P	P	18 48 27.9	0.0
	baz=240						
CHIR	Chirikof Islan	64.66	33	P	P	18 48 28.3	0.0
	baz=252						
O16K	Kokwok River B	64.67	29	P	P	18 48 28.5	+0.2
	baz=248						
N16K	Nishlik Lake	64.69	28	P	P	18 48 28.9	+0.5
	baz=248						
KURK	Kurchatov	64.74	321		P	18 48 28.8	-0.2
KURBB	Kurchatov Arra	64.78	321	P	P	18 48 29.1	-0.1
	comp=Z,3.9nm,0.8s,baz=104,slow=6.6,SNR=38						
	comp=Z,3.9nm,0.8s						
R17L	Mt. Peulik Vol	64.84	31	P	P	18 48 29.6	+0.1
	baz=251						
L16K	Owhat River	64.86	26	P	P	18 48 29.5	0.0
	baz=246						
H16K	Elim	65.00	23	P	P	18 48 30.5	+0.2
	baz=242						
J16K	Anvik River	65.04	25	P	P	18 48 30.8	+0.1
	baz=244						
Q16K	King Salmon	65.04	30	P	P	18 48 30.2	-0.5
	baz=250						
O17K	Koliganek Bris	65.21	29	P	P	18 48 31.8	+0.1
	baz=249						
I17K	Unalakleet	65.26	24	P	P	18 48 31.9	-0.2
	baz=244						
Q17K	Contact Creek	65.29	31	P	P	18 48 31.6	-0.8
	baz=251						
G16K	Koyuk River	65.31	22	P	P	18 48 32.2	-0.2
	baz=242						
P17K	Kvichak River	65.32	30	P	P	18 48 32.4	-0.1
	baz=250						
N17K	Nushagak Hills	65.43	28	P	P	18 48 33.3	0.0
	baz=249						
L17K	Donlin	65.53	26	P	P	18 48 34.4	+0.5
	baz=247						
M17K	Holitna River	65.64	27	P	P	18 48 34.8	+0.3
	baz=248						
SII	Sitkinak Islan	65.65	33	P	P	18 48 34.9	+0.1
	baz=254						
J17K	VABM Dome	65.71	25	P	P	18 48 34.6	-0.4
	baz=246						
C16K	Lisburne Hills	65.74	19	P	P	18 48 35.6	+0.6
	baz=238						
K17K	Iditarod	65.76	26	P	P	18 48 36.3	+1.0
K17K	Iditarod	65.76	26	P	P	18 48 36.3	+1.0
	baz=247						
Q18K	Katmai Hardscr	65.85	30	P	P	18 48 36.5	+0.4
	baz=252						
P18K	Big Mountain,	65.97	30	P	P	18 48 37.0	+0.2
	baz=251						
G17K	Kiwalik Mounta	65.99	22	P	P	18 48 37.5	+0.7
	baz=244						
H17K	Granite Mounta	66.02	23	P	P	18 48 37.9	+0.9
	baz=244						
N18K	Kilae Creek	66.08	28	P	P	18 48 38.1	+0.7
	baz=250						
O18K	Koktuh Hills	66.13	29	P	P	18 48 38.4	+0.6
	baz=251						
D17K	Noatak River	66.17	20	P	P	18 48 38.9	+1.0
	baz=240,SNR=6.4						
F17K	Baldwin Pennin	66.20	21	P	P	18 48 38.4	+0.3
F17K				IAmb	IAmb	18 48 44.7	
	comp=Z,8.7nm,0.7s						
F17K	Baldwin Pennin	66.20	21	P	P	18 48 38.7	+0.6
	baz=243						
AAK	Ala-Archa	66.21	312	P	P	18 48 39.6	+0.7
	comp=Z,1.0nm,0.7s,baz=3.3,slow=3.7,SNR=3.8						
	comp=Z,1.0nm,0.7s						
AAK	Ala-Archa	66.21	312	P	P	18 48 38.9	0.0
L18K	Granite Mounta	66.27	26	P	P	18 48 39.1	+0.5
	baz=249						
E17K	Hotham Inlet	66.30	21	P	P	18 48 39.1	+0.4
	baz=242						
OHAK	Old Harbor	66.31	32	P	P	18 48 39.0	+0.1
	baz=254						
M18K	Stony River	66.39	27	P	P	18 48 40.2	+0.8
	baz=250						
RDOG	Red Dog Mine	66.41	19	P	P	18 48 40.1	+0.7
	baz=240						
C17K	DeLong Mountai	66.53	19	P	P	18 48 41.1	+0.9
	baz=240						
NIL	Nilore	66.61	302		P	18 48 41.1	-0.3
NIL				IAmb	IAmb	18 48 47.1	
	comp=Z,9.7nm,0.8s						
H18K	Honhosa River	66.71	23	P	P	18 48 41.4	-0.1
	baz=246						
J18K	Innoko River	66.71	25	P	P	18 48 42.3	+0.8
	baz=248						
N19K	Bonanza Creek	66.78	28	P	P	18 48 42.4	+0.4
N19K	Bonanza Creek	66.78	28	P	P	18 48 42.5	+0.4
	baz=251						
KDAK	Kodiak Island	66.82	32	P	P	18 48 42.8	+0.6
	baz=254						
F18K	Selawik	66.84	22	P	P	18 48 42.9	+0.7
	baz=244						
E18K	Tukpahlearik C	66.88	21		P	18 48 42.3	-0.1
E18K				IAmb	IAmb	18 48 48.9	
	comp=Z,6.8nm,0.8s						
E18K	Tukpahlearik C	66.88	21	P	P	18 48 43.1	+0.7
	baz=243						
G18K	Tagagawik	66.91	22		P	18 48 42.7	+0.1
G18K				IAmb	IAmb	18 48 48.9	
	comp=Z,9.3nm,1.1s						
G18K	Tagagawik	66.91	22	P	P	18 48 43.6	+1.0
	baz=245						
P19K	Oil Pt	67.02	30	P	P	18 48 43.9	+0.3
	baz=253						
L19K	White Mountain	67.06	27		P	18 48 44.4	+0.7
L19K				IAmb	IAmb	18 48 49.4	
	comp=Z,14nm,1.2s						
L19K	White Mountain	67.06	27	P	P	18 48 44.3	+0.7
	baz=250						
GCSA	Galena City Sc	67.13	24	P	P	18 48 44.8	+0.8
	baz=248						
Q20K	Shuyak Island	67.14	31	P	P	18 48 44.8	+0.6
	baz=254						
C18K	Utukok River	67.25	19	P	P	18 48 45.1	+0.3
C18K				IAmb	IAmb	18 50 26.0	
	comp=Z,26nm,1.9s						
C18K	Utukok River	67.25	19	P	P	18 48 45.5	+0.6
	baz=242						
NRIK	Noril'sk	67.30	342	P	P	18 48 45.2	+0.1
	comp=Z,1.7nm,0.5s,baz=106,slow=9.2,SNR=3.9						
	comp=Z,1.7nm,0.5s						
NRIK	Noril'sk	67.30	342	IAmb	IAmb	18 49 06.7	
	comp=Z,13nm,1.5s						
J19K	Poorman	67.36	25	P	P	18 48 46.0	+0.4
J19K	Poorman	67.36	25	P	P	18 48 46.4	+0.8
	baz=249						
B18K	Kokolik River	67.40	18	P	P	18 48 46.8	+1.1
	baz=241						
O20K	Slope Mountain	67.44	29	P	P	18 48 46.5	+0.3
	baz=253						
G19K	Purcell Mounta	67.59	22		P	18 48 47.1	+0.1
G19K	Purcell Mounta	67.59	22	P	P	18 48 48.2	+1.2
	baz=247						
H19K	Roundabout Mou	67.60	23	P	P	18 48 48.1	+1.1
	baz=248						
M20K	Styx River	67.73	27	P	P	18 48 48.1	0.0
M20K	Styx River	67.73	27	P	P	18 48 48.7	+0.6
	baz=252						
K20K	Telida	67.79	26	P	P	18 48 48.6	+0.3
	baz=251						
HOM	Homer	67.80	30	P	P	18 48 48.9	+0.6
	baz=254						
SPCR	Spurr Chakacha	67.95	28	P	P	18 48 50.3	+0.9
	baz=253						
CNPM	China Poot	67.96	30	P	P	18 48 49.5	0.0
C19K	Lookout Ridge	67.98	19		P	18 48 49.9	+0.4
C19K				IAmb	IAmb	18 48 56.5	
	comp=Z,14nm,1.0s						
C19K	Lookout Ridge	67.98	19	P	P	18 48 50.0	+0.6
	baz=243,SNR=11						
MANEM	Manem	68.01	306		P	18 48 49.8	-0.6
MANEM				IAmb	IAmb	18 48 57.4	
	comp=Z,11nm,0.8s						
J20K	Nowinta River	68.03	25		P	18 48 50.3	+0.6
J20K				IAmb	IAmb	18 48 52.9	
	comp=Z,6.6nm,0.8s						
J20K	Nowinta River	68.03	25	P	P	18 48 50.3	+0.6
	baz=250						
A19K	Wainwright	68.03	18	P	P	18 48 50.0	+0.4
	baz=241						
E19K	Redstone River	68.07	21	P	P	18 48 50.4	+0.5
E19K				IAmb	IAmb	18 48 56.0	
	comp=Z,22nm,1.5s						
E19K	Redstone River	68.07	21	P	P	18 48 50.5	+0.5
	baz=246						
I20K	Naaghedeneel	68.11	24	P	P	18 48 50.7	+0.5
	baz=250						
H20K	Anotleneega Mo	68.19	23	P	P	18 48 51.3	+0.6
	baz=249						
D19K	Kuna River	68.19	20	P	P	18 48 51.2	+0.4
D19K				IAmb	IAmb	18 48 56.8	
	comp=Z,8.8nm,1.0s						
D19K	Kuna River	68.19	20	P	P	18 48 51.6	+0.9
	baz=245,SNR=7.1						
BRSE	Bradley Lake S	68.26	30	P	P	18 48 51.5	+0.2
	baz=255						
CAPN	Captain Cook N	68.33	29	P	P	18 48 52.2	+0.5
	baz=255						
F20K	Avaraart Lake	68.45	22	P	P	18 48 52.3	0.0
F20K				IAmb	IAmb	18 48 58.6	
	comp=Z,8.5nm,1.2s						
F20K	Avaraart Lake	68.45	22	P	P	18 48 52.8	+0.5
	baz=248						
PPLA	Purkeypile	68.46	27	P	P	18 48 52.9	+0.2
	baz=253						
SKT	Skwentna	68.49	28	P	P	18 48 53.2	+0.5
	baz=254						
CHUM	Lake Minchumin	68.70	25	P	P	18 48 53.9	0.0
	baz=252						
SUA	Susitna One	68.71	28	P	P	18 48 54.2	0.0
	baz=255						
SLKM	Skilak Lake	68.71	29	P	P	18 48 53.9	-0.2
E20K	Nigu River	68.75	20	P	P	18 48 54.6	+0.3
	baz=247,SNR=11						
O22K	Cooper Landing	68.94	29	P	P	18 48 55.8	+0.3
O22K	Cooper Landing	68.94	29	P	P	18 48 56.1	+0.6
	baz=256						
L22K	Petersville	68.98	27	P	P	18 48 56.2	+0.4
L22K				IAmb	IAmb	18 49 01.3	
	comp=Z,19nm,1.3s						
SEW	Seward	68.98	30	P	P	18 48 56.5	+0.8
	baz=256						
H21K	Melozitna Rive	69.06	24	P	P	18 48 56.6	+0.4
H21K	Melozitna Rive	69.06	24	P	P	18 48 56.6	+0.4
	baz=251						
M22K	Willow	69.07	28	P	P	18 48 56.8	+0.5
	baz=255						
G21K	Allakaket	69.08	23		P	18 48 56.7	+0.4
G21K				IAmb	IAmb	18 49 11.1	
	comp=Z,31nm,2.0s						
G21K	Allakaket	69.08	23	P	P	18 48 57.5	+1.2
	baz=250						
RC01	Rabbit Creek A	69.08	29	P	P	18 48 57.5	+1.1
	baz=256						
GAR	Garm	69.13	307		P	18 48 56.6	-0.7
GAR				IAmb	IAmb	18 49 09.3	
	comp=Z,23nm,1.6s						
B20K	Meade River	69.14	19	P	P	18 48 56.2	-0.3
B20K				IAmb	IAmb	18 49 03.3	
	comp=Z,13nm,0.9s						
B20K	Meade River	69.14	19	P	P	18 48 57.2	+0.7
	baz=245						
CUT	Chulitna	69.17	27	P	P	18 48 57.5	+0.6
	baz=255						
I21K	Tanana	69.24	24	IAmb	IAmb	18 49 03.7	
	comp=Z,7.1nm,1.0s						
I21K	Tanana	69.24	24	P	P	18 48 57.7	+0.4
	baz=252						
BPAW	Bear Paw Mtn.	69.33	25	P	P	18 48 58.2	+0.4
	baz=254						
F21K	Alatna River	69.33	22	P	P	18 48 58.1	+0.3
	baz=250						
TRF	Thorofare Moun	69.44	26	P	P	18 48 58.5	-0.3
	baz=254						
PMR	Palmer	69.49	28	IAmb	IAmb	18 49 04.4	
	comp=Z,10nm,0.9s						
PMR	Palmer	69.49	28	P	P	18 48 59.3	+0.5
	baz=256						
C21K	Knifeblade Rid	69.57	20	P	P	18 48 59.5	+0.3
	baz=248						
E21K	Killik River	69.58	21	P	P	18 49 00.1	+0.7
	baz=249						
PWL	Port Wells	69.69	29	P	P	18 49 00.8	+0.6
	baz=257						
H22K	Ishtalitna Cre	69.69	24	IAmb	IAmb	18 49 42.0	
	comp=Z,25nm,2.0s						
H22K	Ishtalitna Cre	69.69	24	P	P	18 48 59.8	-0.3
	baz=252						
KNK	Knik Glacier	69.76	29	P	P	18 49 00.8	+0.2
	baz=257						
F22K	John River	69.90	22	P	P	18 49 01.6	+0.3
	baz=251						
SML	Sawmill	69.91	28	P	P	18 49 02.0	+0.5
	baz=257						
P23K	Montague Islan	69.96	30	P	P	18 49 02.0	+0.2
	baz=258						
CHGR	Chuyangaron	70.02	307	IAmb	IAmb	18 49 11.6	
	comp=Z,6.6nm,0.7s						
WAT1	Susitna Watana	70.05	27	P	P	18 49 02.5	+0.2
	baz=256						
RND	Reindeer	70.06	26	P	P	18 49 02.4	0.0
RND				IAmb	IAmb	18 49 48.4	
	comp=Z,23nm,1.6s						
MCK	McKinley	70.10	26	P	P	18 49 03.0	+0.3
	baz=256						
BVAR	Borovoye Array	70.17	322	P	P	18 49 03.5	+0.3
	comp=Z,4.0nm,0.6s,baz=103,slow=7.6,SNR=24						
	comp=Z,4.0nm,0.6s						
D22K	Ayikyak River	70.18	20	IAmb	IAmb	18 49 10.2	
	comp=Z,12nm,0.9s						
D22K	Ayikyak River	70.18	20	P	P	18 49 04.5	+1.5
	baz=250,SNR=9.2						
M23K	Glacier View	70.19	28	P	P	18 49 04.2	+1.0
	baz=257						
BORK	Borovoye	70.21	322		P	18 49 03.4	-0.2
A22K	Sinclair Lake	70.22	18	P	P	18 49 03.8	+0.7
	baz=247						
E22K	Anaktuvuk Pass	70.23	21	IAmb	IAmb	18 49 10.4	
	comp=Z,7.7nm,0.8s						
E22K	Anaktuvuk Pass	70.23	21	P	P	18 49 04.9	+1.5
	baz=251,SNR=6.9						
NEA2	Nenana	70.26	25	P	P	18 49 04.0	+0.4
	baz=255						
I23K	Minto, Yukon-K	70.29	25	P	P	18 49 04.8	+1.1
	baz=255						
GLI	Glacier Island	70.29	29	P	P	18 49 04.6	+0.7
	baz=258						
WAT6	Susitna Watana	70.35	27	P	P	18 49 05.2	+0.8
	baz=257						
Q23K	Middleton Isla	70.37	31	P	P	18 49 05.3	+1.0
	baz=259						
SCM	Sheep Creek Mo	70.38	28	P	P	18 49 05.2	+0.8
	baz=258						
B22K	Teshekpuk Lake	70.45	19	IAmb	IAmb	18 49 11.1	
	comp=Z,11nm,0.8s						
B22K	Teshekpuk Lake	70.45	19	P	P	18 49 05.6	+1.0
	baz=249						
G23K	Bananza Creek	70.46	23	P	P	18 49 04.7	-0.1
	baz=254						
COLD	Coldfoot	70.54	22	IAmb	IAmb	18 49 11.7	
	comp=Z,28nm,1.6s						
COLD	Coldfoot	70.54	22	P	P	18 49 05.4	+0.2
	baz=253,SNR=7.1						
DHY	Denali Highway	70.63	27	P	P	18 49 05.3	-0.8
	baz=257						
WRH	Wood River Hil	70.64	25	IAmb	IAmb	18 49 11.5	
	comp=Z,23nm,1.4s						
CCB	Clear Creek Bu	70.80	25	IAmb	IAmb	18 49 12.9	
	comp=Z,29nm,1.8s						
SHAA	Shahritus	70.83	306	IAmb	IAmb	18 49 43.0	
	comp=Z,57nm,1.8s						
COLA	College	70.84	25	P	P	18 49 07.5	+0.5
	baz=256						
EYAK	Cordova Ski Ar	70.87	30	P	P	18 49 07.9	+0.5
	baz=260						
D23K	Nanushuk River	70.89	21	P	P	18 49 07.8	+0.4
	baz=252,SNR=8.7						
KLU	Klutina	70.97	29	P	P	18 49 08.3	+0.3
	baz=259						
M24K	Tolsona, Glenn	70.97	28	P	P	18 49 08.1	+0.1
	baz=259						
E23K	Chandalar	70.99	22	P	P	18 49 08.7	+0.6
	baz=253,SNR=21						
H24K	Noodor Dome	71.06	24	P	P	18 49 09.3	+0.7
	baz=256						
POKR	Poker Plat Res	71.07	25	P	P	18 49 08.5	0.0
	baz=256						
HDA	Harding Lake	71.11	26	P	P	18 49 07.9	-0.9
HDA				IAmb	IAmb	18 49 13.8	
	comp=Z,7.6nm,0.9s						
HDA	Harding Lake	71.11	26	P	P	18 49 08.8	0.0
	baz=257						
TOLK	Toolik Lake Re	71.18	21	P	P	18 49 09.6	+0.5
	baz=253,SNR=5.4						
C23K	Itkillik River	71.18	20	P	P	18 49 09.6	+0.5
	baz=252						
ILAR	Eielson Array	71.22	25	P	P	18 49 08.6	-0.9
	comp=Z,3.3nm,0.6s,baz=249,slow=5.9,SNR=62						
	comp=Z,3.3nm,0.6s						
ILAR	Eielson Array	71.22	25		P	18 49 08.2	-1.2
E24K	Your Creek	71.41	22	P	P	18 49 10.9	+0.3
	baz=254						
KAIM	Kayak Island	71.42	31	P	P	18 49 11.1	+0.3
	baz=261						
G24K	Hadweenzic Riv	71.43	23	P	P	18 49 10.9	+0.2
	baz=256						
PAX	Paxson	71.46	27	IAmb	IAmb	18 49 16.7	
	comp=Z,11nm,1.0s						
PAX	Paxson	71.46	27	P	P	18 49 10.9	-0.1
	baz=259						
F24K	Squaw Lake	71.48	22	P	P	18 49 11.1	+0.1
	baz=255						
K24K	Donnelly Dome	71.48	26	P	P	18 49 11.1	0.0
	baz=258						
HARP	HAARP	71.49	28	P	P	18 49 11.5	+0.3
	baz=260						
BMRM	Bremner River	71.50	29	P	P	18 49 12.3	+1.1
	baz=260						
D24K	Happy Valley	71.58	21	P	P	18 49 13.0	+1.4
	baz=254						
N25K	Chitina, Valde	71.61	29	P	P	18 49 12.1	+0.1
	baz=260						
C24K	Franklin Bluff	71.78	20	P	P	18 49 13.7	+1.0
	baz=254						
J25K	Salcha River,	71.82	26	P	P	18 49 13.5	+0.3
	baz=259						
RIDG	Independent Ri	71.88	27	IAmb	IAmb	18 49 19.7	
	comp=Z,21nm,1.1s						
RIDG	Independent Ri	71.88	27	P	P	18 49 14.1	+0.7
	baz=259						
GLB	Gilahina Butte	71.96	29	IAmb	IAmb	18 49 20.6	
	comp=Z,18nm,1.1s						
G25K	Bearman Lake	71.98	23	P	P	18 49 13.8	-0.1
	baz=257						
CRQE	Cirque	72.20	30	P	P	18 49 15.0	-0.5
	baz=262						
DOT	Dot Lake	72.20	27	IAmb	IAmb	18 49 21.5	
	comp=Z,9.3nm,0.9s						
SCRK	Sand Creek	72.30	26	IAmb	IAmb	18 49 17.3	
	comp=Z,36nm,1.9s						
SCRK	Sand Creek	72.30	26	P	P	18 49 15.8	-0.2
	baz=260						
MCARA	McCarthy VSAT	72.32	29	P	P	18 49 16.1	0.0
	baz=262						
F25K	Christian Rive	72.34	22	IAmb	IAmb	18 49 23.4	
	comp=Z,9.5nm,0.9s						
F25K	Christian Rive	72.34	22	P	P	18 49 16.3	+0.1
	baz=257						
L26K	Log Cabin Wild	72.42	27	IAmb	IAmb	18 49 22.8	
	comp=Z,6.5nm,0.7s						
L26K	Log Cabin Wild	72.42	27	P	P	18 49 18.0	+1.3
	baz=261						
D25K	Kavik River	72.47	21	P	P	18 49 17.5	+0.5
	baz=256						
E25K	Arctic Village	72.48	22	P	P	18 49 17.4	+0.4
	baz=257,SNR=7.8						
M26K	Nabesna, AK	72.48	28	P	P	18 49 17.6	+0.5
	baz=261						
J26L	Joseph Creek	72.57	26	P	P	18 49 18.2	+0.6
	baz=260						
BMAR	Burnt Mountain	72.70	23		P	18 49 19.4	+1.1
I26K	Coal Creek Min	72.88	25	P	P	18 49 19.7	+0.4
	baz=260						
PPT2	Papeete2	72.88	113	*e*LR	LR	19 11 43.1	
	comp=Z,91nm,21.2s						
G26K	Porcupine Rive	72.91	23	IAmb	IAmb	18 49 26.8	
	comp=Z,12nm,1.1s						
G26K	Porcupine Rive	72.91	23	P	P	18 49 19.6	+0.1
	baz=259						
F26K	Sheenjek River	72.92	22	IAmb	IAmb	18 49 26.9	
	comp=Z,13nm,1.0s						
F26K	Sheenjek River	72.92	22	P	P	18 49 19.7	+0.1
	baz=259,SNR=17						
M27K	Edge Creek, AK	72.99	28	P	P	18 49 20.0	-0.3
	baz=262						
CTG	Chitna Glacier	73.08	30	P	P	18 49 20.7	-0.1
	baz=263						
C26K	Camden Bay	73.11	20	P	P	18 49 21.5	+0.9
	baz=257,SNR=14						
L27K	Beaver Creek,	73.11	27	P	P	18 49 21.4	+0.6
	baz=262						
C27K	Jago River	73.45	21	IAmb	IAmb	18 49 29.8	
	comp=Z,14nm,1.1s						
C27K	Jago River	73.45	21	P	P	18 49 23.8	+1.1
	baz=259						
BVCY	Beaver Creek	73.47	28	P	P	18 49 23.0	0.0
	baz=263						
PINM	Pinnacle	73.52	31	P	P	18 49 23.9	+0.6
	baz=265						
I27K	Kandik River	73.56	25	P	P	18 49 23.8	+0.4
	baz=262						
YUK3	Moose Creek	73.59	29	P	P	18 49 24.5	+0.6
	baz=264						
O28M	Mount Upton	73.62	30	P	P	18 49 24.8	+0.7
	baz=264						
H27K	Steamboat Moun	73.68	24	IAmb	IAmb	18 49 31.2	
	comp=Z,16nm,1.1s						
H27K	Steamboat Moun	73.68	24	P	P	18 49 24.5	+0.3
	baz=262						
G27K	Doyon Strip	73.72	24	P	P	18 49 24.2	-0.1
	baz=261						
YUK8	Steele Glacier	73.87	29	P	P	18 49 25.5	-0.1
	baz=265						
E27K	Coleen River	73.95	22	IAmb	IAmb	18 50 21.8	
	comp=Z,22nm,1.9s						
E27K	Coleen River	73.95	22	P	P	18 49 26.4	+0.7
	baz=261						
I28M	Miner Creek	74.23	25	P	P	18 49 27.6	+0.2
	baz=263,SNR=5.9						
DAWY	Dawson	74.31	27	IAmb	IAmb	18 49 34.8	
	comp=Z,12nm,1.1s						
DAWY	Dawson	74.31	27	P	P	18 49 28.3	+0.5
	baz=264						

D27M	Malcolm River	74.34	21	P	P	18 49 28.2	+0.2
	baz=261						
O29M	Mount Kennedy	74.37	30	P	P	18 49 28.6	+0.2
	baz=266						
YUK4	Talbot Arm	74.41	29	P	P	18 49 29.3	+0.6
	baz=266						
F28M	Old Crow	74.52	23	P	P	18 49 29.6	+0.7
	baz=263,SNR=9.8						
M29M	Somme Creek	74.58	28	P	P	18 49 30.1	+0.6
	baz=266						
P29M	Windy Craggy	74.75	31	P	P	18 49 30.3	-0.2
	baz=267						
E28M	Babbage River	74.77	22	IAmb	IAmb	18 49 37.8	
	comp=Z,12nm,0.9s						
E28M	Babbage River	74.77	22	P	P	18 49 29.6	-0.8
	baz=263,SNR=13						
L29M	L29M	74.79	28	IAmb	IAmb	18 49 38.2	
	comp=Z,18nm,1.1s						
L29M	L29M	74.79	28	P	P	18 49 30.6	0.0
	baz=266						
J29N	Klondike Camp	74.86	26	IAmb	IAmb	18 49 38.4	
	comp=Z,16nm,1.3s						
J29N	Klondike Camp	74.86	26	P	P	18 49 31.3	+0.2
	baz=265						
I29M	Ogilvie Camp,	74.90	25	IAmb	IAmb	18 49 38.0	
	comp=Z,14nm,1.2s						
I29M	Ogilvie Camp,	74.90	25	P	P	18 49 32.3	+1.1
	baz=265						
HYT	Haines Junctio	74.93	30	P	P	18 49 32.5	+0.8
	baz=267						
H29M	Whitestone	74.95	24	P	P	18 49 32.6	+1.1
	baz=265						
K29M	Barlow Dome	75.12	27	IAmb	IAmb	18 49 39.9	
	comp=Z,13nm,1.1s						
K29M	Barlow Dome	75.12	27	P	P	18 49 32.7	+0.1
	baz=266						
D28M	Stokes Point	75.14	21	P	P	18 49 33.7	+1.2
	baz=263						
G29M	Pine Creek	75.16	24	P	P	18 49 33.8	+1.1
	baz=265						
P30M	Million Dollar	75.17	31	P	P	18 49 34.0	+1.1
	baz=268						
N30M	Aishikik Lake	75.17	29	P	P	18 49 34.2	+1.3
	baz=267						
E29M	Blow River	75.34	22	P	P	18 49 34.9	+1.3
	baz=264						
M30M	Minto, Yukon	75.37	28		P	18 49 34.9	+0.9
M30M	Minto, Yukon	75.37	28	P	P	18 49 35.1	+1.1
	baz=267						
PLBC	Pleasant Camp	75.44	31	P	P	18 49 35.7	+1.3
	baz=268						
S31K	Pelican	75.47	33	P	P	18 49 35.8	+1.2
	baz=269						
O30N	Mendenhall	75.62	30	P	P	18 49 36.5	+1.0
	baz=268						
EPYK	Eagle Plains	75.63	24	P	P	18 49 36.7	+1.3
	baz=266						
J30M	Hart River	75.68	26	IAmb	IAmb	18 49 40.9	
	comp=Z,28nm,1.8s						
J30M	Hart River	75.68	26	P	P	18 49 37.4	+1.6
	baz=267						
I30M	Mount Dempster	75.70	25	P	P	18 49 37.3	+1.4
	baz=267						
R31K	City Hall, Gus	75.74	32	P	P	18 49 37.5	+1.4
	baz=269						
N31M	Braeburn, Yuko	75.80	29	P	P	18 49 37.6	+1.2
	baz=268						
MAYO	Mayo, Yukon	75.83	27	P	P	18 49 37.5	+0.9
	baz=268						
G30M	tAoh Zraii Nji	75.87	24	IAmb	IAmb	18 49 43.3	
	comp=Z,19nm,1.1s						
G30M	tAoh Zraii Nji	75.87	24	P	P	18 49 37.4	+0.6
	baz=266						
SIT	Sitka	75.95	34	P	P	18 49 38.1	+0.8
	baz=270						
SKAG	Skagway	75.97	31	P	P	18 49 37.9	+0.5
	baz=269						
F30M	Barrier River	76.08	23	IAmb	IAmb	18 49 44.8	
	comp=Z,16nm,0.9s						
F30M	Barrier River	76.08	23	P	P	18 49 38.1	+0.2
	baz=267,SNR=10						
WHY	Whitehorse	76.22	30		P	18 49 39.5	+0.5
WHY	Whitehorse	76.22	30	P	P	18 49 39.9	+0.9
	baz=269						
S32K	Killisnoo	76.36	33	P	P	18 49 40.3	+0.7
	baz=270						
R32K	Eaglecrest	76.39	33	P	P	18 49 39.8	0.0
	baz=270						
M31M	Drury Creek, Y	76.47	29	P	P	18 49 41.5	+1.2
	baz=269						
H31M	Peel River	76.57	25	IAmb	IAmb	18 49 47.6	
	comp=Z,13nm,1.1s						
H31M	Peel River	76.57	25	P	P	18 49 42.1	+1.3
	baz=268						
AB31	Akbulak array	76.58	318		P	18 49 40.6	-0.6
ABKAR	Akbulak array	76.58	318		P	18 49 40.0	-1.2
G31M	Satah River	76.63	24	IAmb	IAmb	18 49 47.5	
	comp=Z,18nm,0.9s						
G31M	Satah River	76.63	24	P	P	18 49 42.1	+1.1
	baz=268,SNR=12						
P32M	Atlin	76.80	31	P	P	18 49 42.9	+0.7
	baz=270						
F31M	Tsiigehtchic	76.85	23	P	P	18 49 43.2	+1.0
	baz=269						
INK	Inuvik	76.96	22	IAmb	IAmb	18 49 48.9	
	comp=Z,10nm,1.0s						
INK	Inuvik	76.96	22	P	P	18 49 42.9	+0.1
	baz=269						
N32M	Quiet Lake	77.10	30	P	P	18 49 44.5	+0.6
	baz=271						
U33K	Whale Pass	77.18	35	P	P	18 49 45.5	+1.2
	baz=272						
CRAG	Craig	77.20	36	P	P	18 49 45.1	+0.6
	baz=272						
P33M	Teslin, Yukon	77.24	31	P	P	18 49 45.5	+0.8
	baz=271						
Q32M	Nakina River	77.55	32	P	P	18 49 47.1	+0.5
	baz=272						
WRAK	Wrangell Islan	77.60	35	P	P	18 49 46.8	+0.2
	baz=272						
AKTO	Aktyubinsk	77.77	319	P	P	18 49 48.2	+0.4
	comp=Z,1.9nm,0.6s,baz=79,slow=7.5,SNR=6.8						
	comp=Z,1.9nm,0.6s						
V35K	Ketchikan	78.06	36	P	P	18 49 49.1	-0.2
	baz=273						
S34M	Telegraph Cree	78.19	33	P	P	18 49 49.4	-0.5
	baz=273						
R33M	Jennings River	78.20	31	P	P	18 49 49.7	-0.5
	baz=273						
T35M	Bob Quinn	78.72	34	P	P	18 49 52.9	0.0
	baz=274						
A36M	Sachs Harbour	79.65	18		P	18 49 57.7	0.0
A36M				IAmb	IAmb	18 49 59.4	
	comp=Z,9.4nm,0.7s						
A36M	Sachs Harbour	79.65	18	P	P	18 49 58.3	+0.6
	baz=276						
C36M	Paulatuk	80.33	21	IAmb	IAmb	18 50 07.4	
	comp=Z,14nm,1.1s						
C36M	Paulatuk	80.33	21	P	P	18 50 01.9	+0.5
	baz=277						
LIRD	Liard River Hi	80.68	31	P	P	18 50 03.6	+0.1
	baz=277						
TOAD	Toad River Com	81.20	32	P	P	18 50 06.4	+0.1
	baz=278						
KOTAN	Kotaneelee Air	81.61	30	P	P	18 50 08.3	-0.1
	baz=279						
YKAW3	Yellowknife Wh	85.52	27	IAmb	IAmb	18 50 35.1	
	comp=Z,11nm,1.2s						
YKA	Yellowknife Ar	85.54	27	P	P	18 50 29.2	+0.6
	comp=Z,2.4nm,0.9s,baz=288,slow=5.6,SNR=14						
	comp=Z,2.4nm,0.9s						
YKA	Yellowknife Ar	85.54	27	P	P	18 50 28.0	-0.5
YKAW1	Yellowknife Wh	85.60	27	IAmb	IAmb	18 50 35.1	
	comp=Z,7.8nm,0.9s						
PINE	Pine Mountain	86.56	46	IAmb	IAmb	18 50 46.8	
	comp=Z,8.2nm,1.0s						
EPH	Ephrata	86.68	42		P	18 50 34.9	+0.4
EPH				IAmb	IAmb	18 50 39.1	
	comp=Z,6.0nm,0.8s						
WAH2	Wahluke Slope	86.84	43	P	P	18 50 35.5	+0.2
WAH2				IAmb	IAmb	18 50 39.8	
	comp=Z,9.6nm,1.1s						
RES	Resolute Bay	86.92	13	P	P	18 50 36.1	+1.0
E09A	Wood Farm, Sta	87.85	43	P	P	18 50 41.1	+1.0
NEW	Newport	88.07	41		P	18 50 41.6	+0.4
NEW				IAmb	IAmb	18 51 42.2	
	comp=Z,15nm,1.6s						
ARCES	ARCESS Array B	88.28	342	P	P	18 50 41.6	-0.1
	comp=Z,2.6nm,0.8s,baz=66,slow=5.1,SNR=11						
	comp=Z,2.6nm,0.8s						
BMO	Blue Mountains	88.84	44	IAmb	IAmb	18 50 51.4	
	comp=Z,16nm,1.6s						
VNDA	Vanda	89.67	176	P	P	18 50 49.7	+1.7
	comp=Z,1.7nm,0.9s,baz=308,slow=7.7,SNR=2.7						
	comp=Z,1.7nm,0.9s						
NVAR	Mina Array Bea	89.77	51	P	P	18 50 52.2	+2.5
	comp=Z,1.5nm,0.6s,baz=268,slow=6.0,SNR=8.9						
	comp=Z,1.5nm,0.6s						
NVAR	Mina Array Bea	89.77	51	P	P	18 50 48.0	-1.7
MFID	Camas Ranch	90.25	46		P	18 50 50.7	-1.0
MFID				IAmb	IAmb	18 50 59.1	
	comp=Z,12nm,1.4s						
WCT	Wildcat Mounta	91.48	52	IAmb	IAmb	18 51 04.5	
	comp=Z,12nm,1.6s						
BCYI	Bear Canyon	91.67	44	IAmb	IAmb	18 51 14.6	
	comp=Z,9.6nm,1.8s						
POIN	Pond Inlet	91.78	11		P	18 50 58.3	+0.3
POIN				IAmb	IAmb	18 51 04.7	
	comp=Z,8.1nm,1.2s						
FINES	FINESS Array B	92.03	335	P	P	18 50 57.8	-1.6
	comp=Z,2.6nm,0.7s,baz=59,slow=4.0,SNR=13						
ILON	Igloolik, Nuna	93.44	14		P	18 51 04.6	-1.2
HFS	Hagfors	97.78	337	P	Pdif	18 51 26.9	+1.1
	comp=Z,1.5nm,0.9s,baz=79,slow=3.2,SNR=4.3						
	comp=Z,1.5nm,0.9s						
NOA	NORSAR Array B	98.11	338	P	P	18 51 26.0	-1.2
	comp=Z,0.4nm,0.7s,baz=48,slow=4.8,SNR=3.4						
	comp=Z,0.4nm,0.7s						
CLL	Collm	103.71	330	*e*Pdif	Pdif	18 51 51.0	-1.3
CFA	Coronel Fontan	145.22	130	PKPbc	PKiKP	18 57 30.5	-2.3
	comp=Z,2.0nm,0.7s,baz=235,slow=2.6,SNR=4.2						
LPAZ	La Paz	149.72	102	PKPbc	PKiKP	18 57 44.9	+1.7
	comp=Z,4.8nm,0.6s,baz=235,slow=1.0,SNR=5.8						
LPAZ	La Paz	149.72	102		PKPab	18 57 45.0	-2.4

IDC 24 18:43:05.7±18.0**, 24°.39S×174°.84W, h0^{km}, mb4.1**/5**, mbtmp4.1**/5**, Error ellipse: s-maj=341.6km s-min=135.1km az=83.0, South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	36.18	269	P	P	18 50 11.5	+1.2
	1.2nm,0.4s,baz=96,slow=11,SNR=12						
	1.2nm,0.4s						
STKA	Stephens Creek	38.93	249	P	P	18 50 32.1	-1.3
	0.6nm,0.4s,baz=85,slow=13,SNR=6.8						
	0.6nm,0.4s						
ASAR	Alice Springs	46.59	260	P	P	18 51 35.1	-0.8
	1.1nm,0.5s,baz=89,slow=7.8,SNR=50						
	1.1nm,0.5s						
WRA	Warramunga Arr	47.06	265	P	P	18 51 39.1	-0.4
	1.4nm,0.4s,baz=103,slow=7.7,SNR=27						
	1.4nm,0.4s						
FITZ	Fitzroy Crossi	55.48	264	P	P	18 52 44.0	+1.2
	3.1nm,1.0s,baz=135,slow=2.9,SNR=2.3						
	3.1nm,1.0s						

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*VAO **24** 18:48:05.3±0.3, 18°.79S×69°.95W, h10^{km}, mb5.0, Presumed earthquake*

*IDC **24** 18:48:24.7±1.9, 18°.52S×68°.91W, h122^{km}±15^{km}, mb4.3/17, mbtmp4.7/19, Error ellipse: s-maj=15.0km s-min=12.1km az=71.0*

*NEIC **24** 18:48:24.5, 18°.66S×69°.10W, h140^{km}, Moment Tensor Solution. Duration: 1^{s}3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.06; M$_{\theta\theta}$-0.13; M$_{\phi\phi}$1.18; M$_{r\theta}$0.94; M$_{\theta\phi}$-0.85; M$_{\phi r}$-1.73; Fault plane solution: M$_0$2.42000×10^{16} NP1: φ$_s$158.30000°, δ17.10000°, λ-83.52000°. NP2: φ$_s$331.53000°, δ73.01000°, λ-91.99000°. Principal axes: T 2.6439, Plg28.0000°, Azm63.0000°; N -0.5391, Plg2.0000°, Azm332.0000°; P -2.1048, Plg62.0000°, Azm239.0000°;*

*SJA **24** 18:48:24.2±2.0, 18°.72S×69°.36W, h138^{km}±17^{km}, ML4.4, MW4.4*

*NEIC **24** 18:48:24.5±2.0, 18°.66S±0°.04×69°.21W±0°.06, h135^{km}±1^{km}, mb4.8/152, Mww4.9/19, Mwr4.8(GUC), Error ellipse: s-maj=8.8km s-min=5.5km az=82.0*

*NEIC **24** 18:48:24.5, 18°.66S×69°.21W, h140^{km}*

*GUC **24** 18:48:26.4±0.8, 18°.71S×69°.25W, h126^{km}±2^{km}, ML4.6*

ISC 24 18:48:23.7±0.4**, 18°.65S**±0°.03×**69°.13W**±0°.04**, h128**^{km}±3km**, h128**^{km}**:pP-P, n301, σ2^{s}00**/292**, mb4.8**/84**, 10C-5D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.47	311		Pn	18 48 44.3	+1.2
PB16				Sn	Sn	18 48 58.8	+1.2
GO01	Chusmiza	1.02	183		Pn	18 48 48.8	+1.7
GO01				Sn	Sn	18 49 06.4	+1.5
GO01	Chusmiza	1.02	183	⇓*e*P	Pn	18 48 48.9	+1.8
GO01				*e*S	Sn	18 49 06.6	+1.7
GO01				IAML		18 49 08.5	
	comp=N,13μm,0.2s						
GO01	Chusmiza	1.02	183	*i* P	Pn	18 48 48.2	+1.1
GO01				IAML		18 49 08.4	
	comp=Z,4μm,0.3s						
PB18	Visviri	1.10	343		Pn	18 48 50.3	+2.3
PB18				Sn	Sn	18 49 07.2	+0.9
PB18	Visviri	1.10	343	⇑*e*P	Pn	18 48 50.7	+2.8
PB18				*e*S	Sn	18 49 10.0	+3.7
PB12	IPOC Station P	1.13	271		Pn	18 48 48.3	+0.6
PB12				Sn	Sn	18 49 05.6	-0.4
PB12	IPOC Station P	1.13	271	⇑*e*P	Pn	18 48 48.4	+0.6
PB12				*i* S	Sn	18 49 05.9	-0.1
PB12				IAML		18 49 08.8	
	comp=N,9μm,0.3s						
AP01	Chacalluta	1.18	283		Pn	18 48 49.0	+0.9
AP01				Sn	Sn	18 49 07.0	+0.3
AP01	Chacalluta	1.18	283	⇑*e*P	Pn	18 48 49.1	+1.0
AP01				*e*S	Sn	18 49 07.1	+0.5
AP01				IAML		18 49 09.3	
	comp=E,68μm,0.4s						
AP01	Chacalluta	1.18	283	*i* P	Pn	18 48 48.5	+0.4
AP01				IAML		18 49 12.3	
	comp=Z,17μm,0.2s						
PB11	IPOC Station P	1.21	204		Pn	18 48 49.7	+1.0
PB11				Sn	Sn	18 49 08.2	+0.5
PB11	IPOC Station P	1.21	204	⇓*e*P	Pn	18 48 49.9	+1.2
PB11				*e*S	Sn	18 49 08.1	+0.4
PB11				IAML		18 49 10.7	
	comp=E,17μm,0.4s						
PB11	IPOC Station P	1.21	204	*i* P	Pn	18 48 49.1	+0.5
PB11				IAML		18 49 10.3	
	comp=Z,5μm,0.1s						
PB08	IPOC Station P	1.49	181		Pn	18 48 53.4	+1.5
HMBC	Humberstone	1.77	204	Pn	Pn	18 48 55.4	+0.5
HMBC				Sn	Sn	18 49 18.2	-0.6
HMBC	Humberstone	1.77	204	⇑*e*P	Pn	18 48 55.7	+0.8
HMBC				*i* S	Sn	18 49 18.1	-0.7
HMBC				IAML		18 49 21.7	
	comp=N,4μm,0.3s						
HMBC				IAML		18 49 24.6	
	comp=E,4μm,0.5s						
PX03	IPOC Station P	1.81	195	*e*P	Pn	18 48 56.0	+0.7
PX03				*e*S	Sn	18 49 19.6	+0.1
PX03				IAML		18 49 26.2	
	comp=N,3μm,0.2s						
TA02	Huaiquique	1.87	210	⇑*e*P	Pn	18 48 56.8	+0.8
TA02				*e*S	Sn	18 49 19.3	-1.3
TA02				IAML		18 49 22.9	
	comp=N,14μm,0.1s						
TA02	Huaiquique	1.87	210	*i* P	Pn	18 48 56.7	+0.8
TA02				*e*S	Sn	18 49 19.7	-0.9
TA02				IAML		18 49 28.1	
	comp=Z,3μm,0.3s						
TA01	Diego Aracena	2.15	207	Pn	Pn	18 48 59.4	+0.1
TA01				Sn	Sn	18 49 24.9	-1.8
TA01	Diego Aracena	2.15	207	*e*P	Pn	18 49 00.1	+0.7
TA01				*e*S	Sn	18 49 25.6	-1.2
TA01				IAML		18 49 34.5	
	comp=E,2μm,0.2s						
TA01	Diego Aracena	2.15	207	*i* P	Pn	18 48 59.4	+0.1
TA01				*e*S	Sn	18 49 25.2	-1.5
TA01				IAML		18 49 31.0	
	comp=Z,923nm,1.2s						
PATCX	Punta Patache	2.37	204		Pn	18 49 02.0	-0.2
PB01	IPOC Station P	2.41	188		Pn	18 49 03.6	+0.9
PB01				Sn	Sn	18 49 31.5	-1.2
PB01	IPOC Station P	2.41	188	⇑*i*P	Pn	18 49 03.6	+0.9
PB01				*i* S	Sn	18 49 32.1	-0.6
PB01				IAML		18 49 34.8	
	comp=E,5μm,0.6s						
PB01	IPOC Station P	2.41	188	*i* P	Pn	18 49 03.7	+0.9
PB01				*e*S	Sn	18 49 31.5	-1.2
PB01				IAML		18 49 37.5	
	comp=Z,1μm,0.2s						
LPAZ	La Paz	2.53	22	P	Pn	18 49 07.8	+3.0
	comp=Z,535nm,0.3s,baz=181,slow=2.9,SNR=2348						
LPAZ				S	Sn	18 49 38.4	+2.0
	comp=Z,79nm,0.4s,baz=227,slow=4.0,SNR=4.3						
LPAZ	La Paz	2.53	22		Pn	18 49 07.2	+2.4
LPAZ				Sn	Sn	18 49 37.1	+0.7
LPAZ	La Paz	2.53	22	*i* P	Pn	18 49 07.6	+2.7
LPAZ	La Paz	2.53	22	*e*P	Pn	18 48 54.2	-11
PB02	IPOC Station P	2.75	195	Pn	Pn	18 49 07.5	+0.4
PB02				Sn	Sn	18 49 38.9	-1.7
PB02	IPOC Station P	2.75	195	*i* P	Pn	18 49 07.9	+0.7
PB02				*i* S	Sn	18 49 40.3	-0.3
PB02				IAML		18 49 52.8	
	comp=E,4μm,0.3s						
PB02	IPOC Station P	2.75	195	*i* P	Pn	18 49 08.2	+1.0
PB02				IAML		18 49 52.0	
	comp=Z,3μm,0.4s						
PB09	IPOC Station P	3.13	182		Pn	18 49 12.9	+0.8
PB09	IPOC Station P	3.13	182	*e*P	Pn	18 49 13.8	+1.6
PB09				*e*S	Sn	18 49 48.2	-1.4
PB09				IAML		18 49 54.1	
	comp=E,1μm,0.5s						
PB09	IPOC Station P	3.13	182	*i* P	Pn	18 49 13.8	+1.6
PB09				IAML		18 49 56.9	
	comp=Z,2μm,0.8s						
PB07	IPOC Station P	3.14	193	Pn	Pn	18 49 13.0	+0.8
PB07	IPOC Station P	3.14	193	*e*P	Pn	18 49 13.3	+1.1
PB07				⇓*e*S	Sn	18 49 48.9	-0.9
PB07	IPOC Station P	3.14	193	*i* P	Pn	18 49 13.6	+1.3
PB07				IAML		18 49 54.6	
	comp=Z,1μm,1.4s						
PB03	IPOC Station P	3.43	190		Pn	18 49 16.0	-0.1
PB03	IPOC Station P	3.43	190	*e*P	Pn	18 49 17.0	+0.9
PB03				*e*S	Sn	18 49 54.7	-1.9
PB03				IAML		18 49 56.3	
	comp=N,719nm,0.2s						
PB03				IAML		18 49 59.9	
	comp=E,765nm,0.2s						
PB03	IPOC Station P	3.43	190	*i* P	Pn	18 49 17.0	+0.9
PB03				*e*S	Sn	18 49 53.2	-3.4
PB03				IAML		18 49 59.9	
	comp=Z,673nm,0.3s						
PB06	IPOC Station P	4.06	186		Pn	18 49 24.2	-0.1
PB06	IPOC Station P	4.06	186	*e*P	Pn	18 49 24.9	+0.6
PB06				*e*S	Sn	18 50 10.1	-1.2
PB06	IPOC Station P	4.06	186	*i* P	Pn	18 49 24.9	+0.6
PB06				*e*S	Sn	18 50 06.5	-4.9
PB06				IAML		18 50 22.9	
	comp=Z,727nm,1.1s						
PB05	IPOC Station P	4.30	193		Pn	18 49 27.1	-0.4
PB05	IPOC Station P	4.30	193	*i* P	Pn	18 49 27.2	-0.4
PB05				IAML		18 50 36.0	
	comp=Z,443nm,0.8s						
AF01	San Pedro de A	4.38	168		Pn	18 49 29.6	+1.0
YJA	Yavi	4.88	137	⇑*e*P	Pn	18 49 38.2	+2.7
YJA	Yavi	4.88	137	*i* P	Pn	18 49 39.8	+4.3
YJA				*e*S	Sn	18 50 35.9	+4.5
YJA				IAML		18 50 46.1	
	comp=Z,31nm,1.0s						
PB10	IPOC Station P	5.02	195		Pn	18 49 36.0	-1.0
PB10	IPOC Station P	5.02	195	*i* P	Pn	18 49 35.8	-1.2
PB10				IAML		18 51 00.3	
	comp=Z,154nm,1.6s						
PB14	IPOC Station P	6.07	191		Pn	18 49 49.7	-1.7
GO02	Mina Guanaco	6.50	184		Pn	18 49 56.0	-1.1
AC01	Pan de Azucar	7.59	190		Pn	18 50 08.9	-2.6
SIV	San Ignacio	8.14	72	P	Pn	18 50 17.7	-1.4
	comp=Z,96nm,0.3s,baz=262,slow=10,SNR=637						
SIV				S	Sn	18 51 45.9	-3.7
	comp=Z,24nm,0.5s,baz=128,slow=22,SNR=3.6						
AC02	Maricunga	8.15	180		Pn	18 50 18.1	-1.4
AC06	Mina Casimiro	8.74	187		Pn	18 50 23.5	-3.6
GO03	Copiapo	8.96	186		Pn	18 50 26.8	-3.3
AC04	Llanos de Chal	9.68	190	Pn	Pn	18 50 35.0	-4.7
NNA	Nana	9.96	311	P	Pn	18 50 42.6	-0.9
	comp=Z,30nm,0.3s,baz=126,slow=10,SNR=16						
NNA				S	Sn	18 52 28.4	-5.2
	comp=Z,25nm,0.6s,baz=245,slow=22,SNR=4.9						
NNA	Nana	9.96	311		Pn	18 50 40.6	-2.9
PTLB	Pontes e Lacer	10.07	73		Pn	18 50 44.5	-0.6
PTLB	Pontes e Lacer	10.07	73	*e*P	Pn	18 50 42.1	-3.0
PTLB				*e*S	Sn	18 52 44.0	+7.7
AC05	El Transito	10.20	186		Pn	18 50 43.5	-3.2
VILB	Vilhena	10.29	58		Pn	18 50 46.4	-1.7
VILB	Vilhena	10.29	58	*e*P	Pn	18 50 43.7	-4.3
LCO	Las Campanas	10.42	188		Pn	18 50 45.7	-4.1
CO01	Juntas del Tor	11.31	184		Pn	18 50 59.6	-2.2
CO05	La Serena	11.38	189	Pn	Pn	18 50 57.2	-5.3
GO04	Tololo Observa	11.57	187	Pn	Pn	18 51 01.1	-4.2
CO06	Fray Jorge	12.19	190	Pn	Pn	18 51 07.8	-5.3
CO03	El Pedregal	12.22	186		Pn	18 51 09.4	-4.1
CO02	Combarbal	12.62	187	P	Pn	18 51 14.5	-4.3
AQDB	Aquidauana	12.79	100		Pn	18 51 19.2	-1.8
CFA	Coronel Fontan	12.93	177	P	Pn	18 51 20.1	-2.6
	comp=Z,2.0nm,0.3s,baz=23,slow=17,SNR=29						
SALV	Santo Antonio	13.12	80	*e*P	Pn	18 51 22.6	-2.7
CPUP	Villa Florida	13.32	127	P	Pn	18 51 26.4	-1.3
	comp=Z,2.3nm,0.5s,baz=300,slow=13,SNR=11						
CPUP	Villa Florida	13.32	127	P	Pn	18 51 25.6	-2.1
PP1B	Ponte de Pedra	13.59	88	*e*P	Pn	18 51 28.9	-2.4
PDRB	Porto dos Gac	13.86	61	*e*P	Pn	18 51 31.9	-3.0
AMBA	Amambai (Brazi	13.89	110	*e*P	Pn	18 51 32.7	-2.5
VA06	Catapilco	13.99	188	P	Pn	18 51 33.6	-2.7
VA03	San Esteban	14.12	185	P	Pn	18 51 35.8	-2.2
PEL	Peldehue	14.50	185	P	Pn	18 51 40.7	-2.2
MT05	Renca	14.76	185	P	Pn	18 51 44.2	-1.9
MT08	Bocatoma Ro	14.76	183	P	Pn	18 51 44.0	-2.2
MT16	CCHEN	14.77	185	P	Pn	18 51 44.4	-1.9
MT03	Universidad Ad	14.84	184	P	Pn	18 51 45.6	-1.5
CLDB	Colider	15.03	61	*e*P	Pn	18 51 48.4	-1.2
MT09	Talagante	15.16	186	P	Pn	18 51 52.2	+1.1
LMEL	Las Melosas	15.17	183	P	Pn	18 51 51.3	0.0
MT01	Popeta	15.27	187	P	Pn	18 51 52.0	-0.5
C2SB	Chapadao do Su	15.44	93	*e*P	Pn	18 51 53.7	-1.0
TEFE	Tefe	15.68	17	*e*P	Pn	18 51 51.7	-5.9
BO01	Tunca	15.78	186	P	Pn	18 51 56.7	-2.1
BO02	Sierra Bellavi	16.15	185	P	Pn	18 52 00.8	-2.6
PSAL	Palomas, Salto	16.19	142	*e*P	Pn	18 51 58.6	-5.2
ARAG	Araguaiana, MT	16.81	83	*e*P	Pn	18 52 10.8	-0.7
PTGB	Pitanga	16.97	114	*e*P	P	18 52 12.0	-1.3
H03N1	Juan Fernandez	17.14	209	P	Pn	18 52 21.5	+6.4
	baz=108,slow=14,SNR=53						
H03N2	Juan Fernandez	17.15	209	P	Pn	18 52 21.6	+6.5
	baz=108,slow=14,SNR=34						
H03N3	Juan Fernandez	17.16	209	P	Pn	18 52 21.4	+6.1
	baz=108,slow=14,SNR=57						
ML02	Panimavida	17.17	186	P	P	18 52 14.8	-0.5
H03S3	Juan Fernandez	17.46	208	P	Pn	18 52 25.2	+6.2
	baz=86,slow=20,SNR=48						
H03S1	Juan Fernandez	17.47	208	P	Pn	18 52 25.3	+6.2
	baz=86,slow=20,SNR=25						
MACA	Manacapuru-AM	17.47	29	P	P	18 52 18.0	-0.9
MACA	Manacapuru-AM	17.47	29	*e*P	P	18 52 16.1	-2.7
H03S2	Juan Fernandez	17.48	208	P	Pn	18 52 25.0	+5.8
	baz=86,slow=20,SNR=51						
NPGB	Novo Progresso	17.68	51	*e*P	P	18 52 20.4	-0.8
ITRB	Iturama	17.77	96	*e*P	P	18 52 21.2	-0.9
ITAB	Concordia	17.82	122	P	P	18 52 22.3	-0.3
ITAB	Concordia	17.82	122	*e*P	P	18 52 21.4	-1.2
BI02	San Fabin de	18.05	186	P	Pn	18 52 26.7	+0.3
SNDB	Serra Nova Dou	18.43	71	*e*P	P	18 52 30.1	+0.7
CPSB	Cacapava Do Su	18.44	132	*e*P	P	18 52 27.9	-1.4
ITTB	Itaituba	19.31	44	*e*P	P	18 52 38.3	-0.6
BB19B	Bebedouro	19.53	101	*e*P	P	18 52 41.2	-0.1
CNLB	Canela	19.77	126	*e*P	P	18 52 42.3	-1.6
IPMB	Ipameri, GO	19.88	91	*e*P	P	18 52 44.8	-0.3
SLOR	San Lorenzo -	20.04	332	P	Pn	18 52 49.3	-1.0
TRQA	Tornquist	20.32	164	P	P	18 52 50.8	+1.1
BDFB	Brasilia	20.40	85	P	P	18 52 50.7	-0.1
	comp=Z,60nm,0.4s,baz=247,slow=8.1,SNR=46						
	comp=Z,60nm,0.4s						
BDFB	Brasilia	20.40	85	P	P	18 52 50.5	-0.3
PPLP	Puerto Lpez	20.48	325	P	Pn	18 53 08.1	+13
RCLB	Rio Claro- Sao	20.57	104	*e*P	P	18 52 51.5	-1.0
OTAV	Otavalo	20.88	333	P	P	18 52 55.3	-1.0

OTAV	**Otavalo**	20.88	333	*e*P	P	18 52 45.6	-11
OTAV	**Otavalo**	20.88	333	P	Pn	18 52 59.2	-1.0
PET01	**Itanhaem-SP**	21.09	109	*e*P	P	18 52 57.4	-0.6
GCUF	**Volcan Galeras**	21.34	337	P	P	18 53 03.5	+2.3
PMNB	**Patos De Minas**	21.51	93	*e*P	P	18 53 01.7	-1.0
PLCA	**Paso Flores**	22.05	183	P	P	18 53 09.8	+1.8
	comp=Z,52nm,1.1s,baz=356,slow=12,SNR=26						
	comp=Z,52nm,1.1s						
PLCA	**Paso Flores**	22.05	183	P	P	18 53 08.3	+0.2
PLCA				IAmb	IAmb	18 53 11.8	
	comp=Z,79nm,1.2s						
PLCA	**Paso Flores**	22.05	183	*e*P	P	18 52 59.0	-9.1
POPC	**Popayan, Colom**	22.32	340	P	P	18 53 11.0	-0.3
PARB	**Paraibuna**	22.43	106	*e*P	P	18 53 11.0	-1.1
PRPB	**Parauapebas**	22.54	59	*e*P	P	18 53 12.0	-1.2
BOAV	**Boa Vista**	22.56	23	P	P	18 53 12.6	-0.7
BOAV				IAmb	IAmb	18 53 14.9	
	comp=Z,14nm,0.5s						
BOAV	**Boa Vista**	22.56	23	*e*P	P	18 53 10.2	-3.2
JAMC	**Jamundi, Valle**	22.96	340	P	P	18 53 17.3	-0.1
BSCB	**Bom Sucesso**	23.03	100	*e*P	P	18 53 16.9	-1.0
SMTB	**Santa Maria do**	23.05	68	*e*P	P	18 53 17.7	-0.4
YOTC	**Yotoco, Valle**	23.58	342	P	P	18 53 22.0	-1.0
LL01	**San Ignacio de**	23.82	186	P	P	18 53 24.4	-0.3
LL01				IAmb	IAmb	18 53 29.3	
	comp=Z,48nm,1.1s						
JANB	**Januaria**	24.02	85	*e*P	P	18 53 25.8	-1.1
SDBA	**SAO DESIDERIO**	24.14	79	*e*P	P	18 53 27.6	-0.5
DIAM	**Diamantina, MG**	24.15	93	*e*P	P	18 53 28.3	+0.1
VAS01	**Vassouras-RJ**	24.33	103	*e*P	P	18 53 30.5	+0.8
PLMC	**San Jos del P**	24.44	343	P	P	18 53 30.5	-0.3
LL02	**Futaleuf**	24.57	185	P	P	18 53 30.1	-1.5
LL02				IAmb	IAmb	18 53 35.7	
	comp=Z,25nm,1.1s						
CBOC	**Ciudad Bolivar**	25.28	344	P	P	18 53 38.0	-0.5
	comp=Z,0.0nmcomp=Z,9.5nm,0.4s						
DUB01	**Friburgo-RJ**	25.30	102	*e*P	P	18 53 39.8	+1.2
CAM01	**Campos-RJ**	25.96	102	*e*P	P	18 53 45.4	+1.0
TMAB	**Tom-Au,PA,Br**	26.20	54	*e*P	P	18 53 47.3	+0.7
SJMB	**Sao Joao De Ma**	26.47	95	*e*P	P	18 53 49.0	-0.1
ALF01	**Guarapari-ES**	26.82	99	*e*P	P	18 53 53.3	+1.2
RIB01	**Linhares ES**	27.17	96	*e*P	P	18 53 56.5	+1.2
SDV	**Santo Domingo**	27.40	357		P	18 53 56.1	-1.4
SDV				IAmb	IAmb	18 54 08.4	
	comp=Z,15nm,1.2s						
SDV	**Santo Domingo**	27.40	357	*e*P	P	18 53 53.0	-4.5
GUA01	**Guaratinga, BA**	28.02	90	*e*P	P	18 54 02.2	-0.7
CMC01	**Camacan, BA**	28.49	88	*e*P	P	18 54 07.5	+0.4
MDP	**Montagnes des**	28.66	36	P	P	18 54 07.9	-0.6
	comp=Z,9.4nm,0.4s,baz=214,slow=11,SNR=11						
	comp=Z,9.4nm,0.4s						
NBIT	**Itapeh - BA**	28.66	87	*e*P	P	18 54 09.4	+0.9
NBPS	**Pedro II - PI**	30.53	66	*e*P	P	18 54 25.4	+0.1
NBPV	**Pedro Velho**	35.12	74	*e*P	P	18 55 06.3	+1.1
OBIP	**Obispado Ponce**	36.55	4		P	18 55 16.2	-0.9
AOPR	**Arecibo Observ**	36.84	4	P	P	18 55 18.3	-1.3
HBVL	**Hebbronville**	53.72	327		P	18 57 33.0	+0.4
HBVL				IAmb	IAmb	18 57 36.1	
	comp=Z,7.7nm,0.6s						
833A	**Chaparral WMA,**	55.11	327		P	18 57 41.9	-0.8
833A				IAmb	IAmb	18 57 46.4	
	comp=Z,16nm,0.7s						
X48A	**Hartselle**	55.49	342	P	P	18 57 44.3	-1.0
X48A				IAmb	IAmb	18 57 46.8	
	comp=Z,8.6nm,0.8s						
SWET	**Sewanee**	55.89	343	P	P	18 57 46.9	-1.3
SWET				IAmb	IAmb	18 57 49.2	
	comp=Z,11nm,0.8s						
HNDO	**Hondo**	56.03	328	P	P	18 57 49.3	0.0
V48A	**Smith Brothers**	56.63	343		P	18 57 52.8	-0.6
V48A				IAmb	IAmb	18 57 56.7	
	comp=Z,9.7nm,0.7s						
CLTN	**Cedars of Leba**	56.82	343	IAmb	IAmb	18 58 26.2	
	comp=Z,21nm,1.8s						
JCT	**Junction City**	57.07	328	P	P	18 57 56.5	-0.1
JCT				IAmb	IAmb	18 57 59.9	
	comp=Z,7.2nm,0.8s						
WHTX	**Lake Whitney,**	57.20	331		P	18 57 57.2	-0.3
WHTX				IAmb	IAmb	18 58 00.5	
	comp=Z,13nm,0.8s						
WVT	**Waverly**	57.28	342	P	P	18 57 57.0	-1.0
WVT				IAmb	IAmb	18 57 58.6	
	comp=Z,9.6nm,0.8s						
WVT	**Waverly**	57.28	342	P	P	18 57 57.8	-0.1
WVT				pP	pP	18 58 29.6	-0.2
WVT				PcP	PcP	18 58 50.5	-0.2
MIAR	**Mount Ida**	57.78	336	IAmb	IAmb	18 58 03.7	
	comp=Z,6.2nm,0.8s						
T47A	**Sharon Grove**	57.88	343		P	18 58 01.0	-1.1
T47A				IAmb	IAmb	18 58 03.6	
	comp=Z,12nm,0.7s						
TX31	**Lajitas Ar. Si**	58.19	324		P	18 58 03.8	-0.8
TX31				IAmb	IAmb	18 58 54.4	
	comp=Z,13nm,1.6s						
TXAR	**Lajitas Array**	58.19	324	P	P	18 58 05.9	+1.4
	comp=Z,1.6nm,0.5s,baz=150,slow=8.6,SNR=26						
	comp=Z,1.6nm,0.5s						
TXAR	**Lajitas Array**	58.19	324	P	P	18 58 05.4	+0.8
PLPT	**Palo Pinto**	58.28	331	P	P	18 58 04.4	-0.7
PLPT				IAmb	IAmb	18 58 07.3	
	comp=Z,22nm,1.5s						
PBMO	**Poplar Bluff**	58.68	340	IAmb	IAmb	18 58 09.5	
	comp=Z,15nm,0.8s						
T42A	**Van Buren**	59.13	340		P	18 58 10.1	-0.6
T42A				IAmb	IAmb	18 58 12.2	
	comp=Z,6.6nm,0.6s						
SIUC	**Southern Illin**	59.16	342	P	P	18 58 10.9	-0.1
SIUC					pP	18 58 41.0	-2.0
MNHN	**Monahans**	59.27	327	IAmb	IAmb	18 58 15.4	
	comp=Z,11nm,0.7s						
APMT	**Aspermont**	59.55	330	IAmb	IAmb	18 58 16.9	
	comp=Z,12nm,0.7s						
SN07	**Snyder 07**	59.73	329	IAmb	IAmb	18 58 17.6	
	comp=Z,7.8nm,0.6s						
POST	**Post**	60.01	329	IAmb	IAmb	18 58 20.9	
	comp=Z,7.9nm,0.7s						
CCM	**Cathedral Cave**	60.11	340		P	18 58 17.0	-0.5
CCM				IAmb	IAmb	18 58 19.9	
	comp=Z,11nm,0.8s						
CCM	**Cathedral Cave**	60.11	340	P	P	18 58 17.9	+0.4
CCM				pP	pP	18 58 49.1	-0.5
CCM				sP	sP	18 59 03.8	-0.3
R40A	**Maddies Statio**	60.66	339	IAmb	IAmb	18 58 23.0	
	comp=Z,6.8nm,0.7s						
N49A	**Columbus Grove**	60.89	347	IAmb	IAmb	18 58 24.6	
	comp=Z,13nm,1.0s						
MNTX	**Cornudas Mount**	60.95	325		P	18 58 22.9	-0.5
SMWD	**Samnorwood**	61.08	331	IAmb	IAmb	18 58 27.2	
	comp=Z,12nm,0.8s						
P38A	**Dawn**	62.29	339	IAmb	IAmb	18 58 34.0	
	comp=Z,8.6nm,0.7s						
VNA3	**Neumayer Olymp**	62.83	162	⇓P	P	18 58 37.4	+2.0
	comp=Z,12nm,0.9s						
121A	**Cookes Peak, D**	62.91	324	IAmb	IAmb	18 58 40.5	
	comp=Z,9.4nm,0.6s						
319A	**Douglas**	62.92	322	IAmb	IAmb	18 59 47.2	
	comp=Z,20nm,1.2s						
VNA1	**Neumayer--Stat**	63.03	161	⇑P	P	18 58 39.5	+2.8
	comp=Z,17nm,1.0s						
R32A	**Long Quarter,**	63.19	334	IAmb	IAmb	18 58 40.9	
	comp=Z,13nm,0.7s						
VNA2	**Neumayer--Watz**	63.40	161	⇑P	P	18 58 41.5	+2.3
	comp=Z,18nm,1.0s,baz=296,slow=7.2						
Y22A	**Socorro**	63.51	325		P	18 58 41.3	+0.7
ANMO	**Albuquerque**	64.01	326	P	P	18 58 44.6	+0.7
ANMO	**Albuquerque**	64.01	326	P	P	18 58 45.8	+1.9
TASM	**ASL Pad, Albuq**	64.01	326	IAmb	IAmb	18 58 47.2	
	comp=Z,3.6nm,0.8s						
TASM	**ASL Pad, Albuq**	64.01	326	IAmb	IAmb	18 58 47.2	
	comp=Z,3.9nm,0.8s						
SNAA	**Sanae**	65.03	161	⇑P	P	18 58 51.8	+1.9
	comp=Z,273nm,0.9s						
SNAA	**Sanae**	65.03	161	P	P	18 58 52.1	+2.2
	comp=Z,7.3nm,0.6s,baz=300,slow=5.0,SNR=19						
	comp=Z,7.3nm,0.6s						
SNAA	**Sanae**	65.03	161		P	18 58 50.3	+0.4
SNAA				IAmb	IAmb	18 58 53.0	
	comp=Z,17nm,1.0s						
SDCO	**Great Sand Dun**	65.70	329	IAmb	IAmb	18 58 58.3	
	comp=Z,4.7nm,0.6s						
I37A	**Lemond, Waseca**	66.20	341		P	18 58 57.9	+0.3
TROLL	**Troll, Antarti**	66.75	161	⇓P	P	18 59 03.2	+2.2
	comp=Z,365nm,0.6s						
ECSD	**EROS Data Cent**	67.00	339	IAmb	IAmb	18 59 39.5	
	comp=Z,24nm,1.7s						
SPMN	**Marine on St.**	67.12	342	IAmb	IAmb	18 59 04.7	
	comp=Z,9.7nm,0.8s						
PV02	**Paradox Valley**	67.68	327	IAmb	IAmb	18 59 10.4	
	comp=Z,36nm,1.6s						
PV13	**Radium Mtn., P**	67.69	327	IAmb	IAmb	18 59 10.9	
	comp=Z,25nm,1.7s						
PV03	**Paradox Valley**	67.78	327	IAmb	IAmb	18 59 28.5	
	comp=Z,17nm,1.8s						
PV18	**Skein Mesa, Pa**	67.80	327	IAmb	IAmb	18 59 19.6	
	comp=Z,50nm,2.0s						
PV19	**Morning Glory**	67.89	327	IAmb	IAmb	19 01 12.4	
	comp=Z,32nm,1.8s						
DBIC	**Dimbokro**	68.16	75	P	P	18 59 10.7	+0.1
	comp=Z,15nm,0.5s,baz=260,slow=6.0,SNR=46						
	comp=Z,15nm,0.5s						
DBIC	**Dimbokro**	68.16	75		P	18 59 09.7	-0.8
DBIC	**Dimbokro**	68.16	75	P	P	18 59 10.5	-0.1
F33A	**5 Mile Ranch,**	68.75	340	IAmb	IAmb	18 59 15.2	
	comp=Z,9.2nm,0.5s						
O20A	**White River Ci**	68.90	329	IAmb	IAmb	18 59 19.0	
	comp=Z,40nm,2.0s						
SRU	**San Rafael Swe**	69.28	327	IAmb	IAmb	18 59 20.8	
	comp=Z,5.9nm,0.7s						
P18A	**Preston Nutter**	69.52	327	IAmb	IAmb	18 59 22.7	
	comp=Z,7.1nm,0.7s						
RDMU	**Red Mountain**	69.89	328	IAmb	IAmb	18 59 24.7	
	comp=Z,42nm,2.0s						
RSSD	**Black Hills**	70.15	334	P	P	18 59 23.3	+0.7
BSUT	**Blindstream Ca**	70.46	328		P	18 59 26.1	+1.4
AGMN	**Agassiz Nation**	70.80	341		P	18 59 25.5	-0.6
AGMN				IAmb	IAmb	18 59 27.6	
	comp=Z,6.5nm,0.7s						
TCUT	**Toone Canyon**	71.22	328	IAmb	IAmb	18 59 30.8	
	comp=Z,9.8nm,0.7s						
EPLO	**Experimental L**	71.43	343	IAmb	IAmb	18 59 31.2	
	comp=Z,8.7nm,0.6s						
QSPA	**South Pole Qui**	71.53	180		P	18 59 31.9	+1.3
QSPA				IAmb	IAmb	18 59 34.2	
	comp=Z,13nm,0.7s						
QSPA	**South Pole Qui**	71.53	180	P	P	18 59 33.3	+2.8
QSPA				pP	pP	19 00 06.5	+3.0
PDAR	**Pinedale Array**	71.55	330	P	P	18 59 32.5	+1.5
	comp=Z,0.9nm,0.4s,baz=122,slow=8.3,SNR=24						
	comp=Z,0.9nm,0.4s						
PDAR	**Pinedale Array**	71.55	330	P	P	18 59 31.9	+0.9
DSP	**Deep Springs**	72.23	321	IAmb	IAmb	18 59 38.7	
	comp=Z,15nm,1.6s						
HVU	**Hansel Valley**	72.41	327	IAmb	IAmb	18 59 39.4	
	comp=Z,5.4nm,0.5s						
ULM	**Lac du Bonnet**	72.55	342	P	P	18 59 37.3	+0.8
	comp=Z,8.2nm,0.5s,baz=154,slow=6.1,SNR=11						
	comp=Z,8.2nm,0.5s						
ULM	**Lac du Bonnet**	72.55	342	IAmb	IAmb	18 59 41.5	
	comp=Z,30nm,1.5s						
ELK	**Elko**	72.97	325		P	18 59 40.2	+0.6
NVAR	**Mina Array Bea**	73.13	322	P	P	18 59 43.3	+2.8
	comp=Z,1.1nm,0.6s,baz=153,slow=6.3,SNR=7.9						
	comp=Z,1.1nm,0.6s						
NVAR	**Mina Array Bea**	73.13	322	P	P	18 59 41.5	+1.0
SCHQ	**Schefferville**	73.21	1	P	P	18 59 40.8	+0.5
	comp=Z,3.7nm,0.7s,baz=195,slow=6.8,SNR=6.6						
	comp=Z,3.7nm,0.7s						
YNE	**Yellowstone No**	73.47	331	IAmb	IAmb	18 59 46.0	
	comp=Z,10nm,0.7s						
DLMT	**Dillon**	74.94	330	IAmb	IAmb	18 59 55.3	
	comp=Z,42nm,1.9s						
ORV	**Oroville**	75.76	321	IAmb	IAmb	18 59 59.7	
	comp=Z,35nm,1.9s						
PLID	**Pearl Lake**	76.41	328		P	19 00 00.0	+0.7
TORD	**Torodi Ar. Bea**	76.61	71	P	P	19 00 00.6	-0.2
	comp=Z,15nm,0.4s,baz=262,slow=4.2,SNR=116						
TORD				S	S	19 09 34.4	-2.8
	comp=Z,1.1nm,0.9s,baz=258,slow=13,SNR=5.6						
	comp=Z,15nm,0.4s						
TORD	**Torodi Ar. Bea**	76.61	71	P	P	19 00 00.1	-0.7
TORD				IAmb	IAmb	19 00 03.3	
	comp=Z,13nm,0.6s						
BMO	**Blue Mountains**	76.92	327	IAmb	IAmb	19 00 05.7	
	comp=Z,6.8nm,0.7s						
F10A	**Beach Ranch, E**	77.65	328	IAmb	IAmb	19 00 15.0	
	comp=Z,30nm,1.8s						
LNOR	**Lincton Mounta**	78.12	327	IAmb	IAmb	19 00 34.3	
	comp=Z,19nm,1.8s						
HAWA	**Hanford**	79.11	327	IAmb	IAmb	19 00 19.1	
	comp=Z,30nm,1.9s						
H04A	**Detroit Lake**	79.41	325	IAmb	IAmb	19 01 37.6	
	comp=Z,15nm,1.3s						
C09A	**Chrisman Ranch**	79.43	329	IAmb	IAmb	19 00 19.4	
	comp=Z,7.1nm,0.8s						
VNDA	**Vanda**	79.61	190	P	P	19 00 19.8	+3.6
	comp=Z,3.6nm,1.1s,baz=156,slow=5.1,SNR=7.5						
	comp=Z,3.6nm,1.1s						
VNDA	**Vanda**	79.61	190		P	19 00 18.7	+2.5
VNDA	**Vanda**	79.61	190	P	P	19 00 19.4	+3.2
FCC	**Fort Churchill**	79.82	347	IAmb	IAmb	19 00 24.1	
	comp=Z,31nm,1.9s						
MD31	**MD31**	80.01	50		P	19 00 19.6	+0.4
EDM	**Edmonton**	81.10	335	IAmb	IAmb	19 00 26.7	
	comp=Z,16nm,0.9s						
ESDC	**Sonseca Array**	83.96	45	P	P	19 00 39.8	+0.1
	comp=Z,1.0nm,0.4s,baz=256,slow=5.5,SNR=19						
	comp=Z,1.0nm,0.4s						
ESDC	**Sonseca Array**	83.96	45	P	P	19 00 40.2	+0.5
BOSA	**Boshof**	84.97	118	P	P	19 00 46.2	+1.0
	comp=Z,2.2nm,0.5s,baz=251,slow=4.9,SNR=8.9						
	comp=Z,2.2nm,0.5s						
BOSA	**Boshof**	84.97	118	IAmb	IAmb	19 00 58.2	
	comp=Z,44nm,1.8s						
CCD	**Concordia, Ant**	86.13	183	P	P	19 00 53.1	+2.7
CCD				pP	pP	19 01 27.3	+2.7
MAW	**Mawson**	87.11	163	P	P	19 00 56.8	+2.0
	comp=Z,7.4nm,1.1s,baz=238,slow=3.4,SNR=6.7						
	comp=Z,7.4nm,1.1s						
ILON	**Igloolik, Nuna**	88.25	356	IAmb	IAmb	19 01 10.8	
	comp=Z,22nm,1.7s						
YKAW1	**Yellowknife Wh**	88.39	341	IAmb	IAmb	19 01 02.8	
	comp=Z,5.2nm,0.7s						
YKA	**Yellowknife Ar**	88.44	341	P	P	19 01 01.7	+0.8
	comp=Z,3.6nm,0.5s,baz=91,slow=8.9,SNR=125						
	comp=Z,3.6nm,0.5s						
YKA	**Yellowknife Ar**	88.44	341	P	P	19 01 01.4	+0.5
YKA				pP	pP	19 01 35.0	-0.2
YKAW3	**Yellowknife Wh**	88.49	341	IAmb	IAmb	19 01 03.6	
	comp=Z,8.4nm,0.5s						
EKA	**Eskdalemuir Ar**	92.31	31	P	P	19 01 19.1	0.0
	comp=Z,0.7nm,0.6s,baz=243,slow=4.2,SNR=5.0						
	comp=Z,0.7nm,0.6s						
STKA	**Stephens Creek**	121.76	211	PKP	PKiKP	19 07 04.7	+1.5
	comp=Z,1.0nm,0.6s,baz=134,slow=4.8,SNR=3.7						
PETK	**Petropavlovsk-**	130.14	325	PKP	PKiKP	19 07 20.2	+1.1
	comp=Z,2.5nm,0.9s,baz=85,slow=3.2,SNR=5.1						
ASAR	**Alice Springs**	132.31	209	PKhKP	PKPpre	19 07 07.5	
	comp=Z,0.1nm,0.4s,baz=137,slow=2.9,SNR=5.0						
ASAR				PKP	PKiKP	19 07 24.8	+0.2
	comp=Z,1.1nm,0.5s,baz=135,slow=1.7,SNR=25						
ASAR				SKPbc	SKPbc	19 10 38.9	+0.4
	comp=Z,0.9nm,1.0s,baz=162,slow=3.9,SNR=4.8						
ASAR	**Alice Springs**	132.31	209		PKPdf	19 07 23.8	+0.3
BVAR	**Borovoye Array**	133.54	33	PKP	PKPdf	19 07 24.6	-0.2
	comp=Z,0.7nm,0.6s,baz=288,slow=2.2,SNR=4.9						
WRA	**Warramunga Arr**	135.27	212	PKhKP	PKPpre	19 07 19.4	
	comp=Z,0.3nm,0.5s,baz=135,slow=2.9,SNR=6.5						
WRA				PKP	PKiKP	19 07 30.6	0.0
	comp=Z,0.6nm,0.5s,baz=148,slow=1.8,SNR=5.7						
WRA	**Warramunga Arr**	135.27	212		PKiKP	19 07 31.6	+1.0
KURK	**Kurchatov**	139.04	31		PKiKP	19 07 37.0	-0.3
KURBB	**Kurchatov Arra**	139.05	31	PKP	PKiKP	19 07 37.0	-0.3
	comp=Z,0.5nm,0.5s,baz=305,slow=2.6,SNR=9.7						
ZALV	**Zalesovo Beam**	139.45	24	PKP	PKiKP	19 07 37.6	-0.4
	comp=Z,3.4nm,0.5s,baz=289,slow=1.8,SNR=15						
ZALV				SKPbc	SKiKP	19 11 01.1	-1.3
	comp=Z,0.3nm,0.4s,baz=307,slow=2.9,SNR=3.6						
ZALV	**Zalesovo Beam**	139.45	24		PKPdf	19 07 34.8	-0.9
MKAR	**Makanchi Array**	143.42	33	PKhKP	PKPpre	19 07 41.0	
	comp=Z,0.7nm,0.5s,baz=334,slow=1.9,SNR=12						
MKAR				SKPbc	SKiKP	19 11 11.4	+0.5
	comp=Z,0.4nm,0.6s,baz=300,slow=2.3,SNR=4.4						
HEH	**HeiHe**	145.81	341	*e*P	PKPab	19 07 48.8	+0.5
HEH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WMQ	**Urumqi**	148.24	33	*e*PKPbc	PKPdf	19 07 51.4	0.0
WMQ				LR	LR		
	comp=N,2μm,24.1s						
WMQ				LR	LR		
	comp=E,1μm,22.1s						
WMQ				LR	LR		
	comp=Z,2μm,24.1s						
HILR	**Hailar Array B**	148.35	349	PKP	PKPbc	19 07 53.3	-1.6
	comp=Z,5.9nm,0.4s,baz=20,slow=1.6,SNR=13						
HILR				PKPbc	PKiKP	19 07 57.0	+0.5
	comp=Z,5.9nm,0.4s,baz=12,slow=2.2,SNR=14						
USRK	**Ussuriysk Ar.**	148.97	330	PKPbc	PKiKP	19 07 58.3	+0.4
	comp=Z,3.5nm,0.6s,baz=287,slow=0.5,SNR=11						
MJAR	**Matsushiro Arr**	150.07	312	PKPbc	PKiKP	19 08 01.8	+1.3
	comp=Z,6.8nm,0.7s,baz=105,slow=1.4,SNR=28						
SONM	**Songino Array**	150.66	6	PKPbc	PKiKP	19 08 02.8	+1.4
	comp=Z,7.4nm,0.5s,baz=283,slow=1.3,SNR=56						
SONM	**Songino Array**	150.66	6		PKiKP	19 08 02.6	+1.1
HHC	**Hu-ho-hao-te**	157.86	359	*e*P	PKPdf	19 08 00.9	-4.6
NJ2	**Nanjing**	164.84	333	*e*P	PKPdf	19 08 11.8	-1.1
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
PZH	**PanZhiHua**	168.51	45	PKP	PKPdf	19 08 14.3	-1.7

IDC ***24*** *18:52:44.9±10.0, 7°.03S×129°.97E, h155^{km}±103^{km}, mb3.4/2, mbtmp3.8/6, Error ellipse: s-maj=108.2km s-min=29.8km az=47.0*

DJA ***24*** *18:53:36.0±0.8, 8°S±10°×12°6E±°, h144^{km}±7^{km}, M4.2/10, mB4.9/2, mb4.2/7, MLv4.3/10, Mw(mB)4.2/2*

ISC 24 18:52:43.6±1.6**, 7°.2S**±0°.1×**130°.1E**±0°.2**, h150^{km}, n16, σ2^{s}.02**/18**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	6.31	246	P	Pn	18 54 15.9	+1.3
BATI	**Baumata**	7.04	244	P	Pn	18 54 25.8	+1.6
	26nm,0.3s,baz=192,slow=0.2,SNR=57						
BATI	**Baumata**	7.04	244	P	Pn	18 54 25.4	+1.2
EDFI	**Ende, Flores**	8.48	259	P	Pn	18 54 43.9	+0.4
BASI	**Baing, Sumba**	9.88	252	P	Pn	18 55 01.7	-0.5
	0.3nm71nm,0.7s						
WSI	**Waingapu**	10.01	255	P	Pn	18 55 02.4	-1.4
	0.5nm1μm72nm,0.8s						
LBFI	**Labuhan Bajo,**	10.20	262	P	Pn	18 55 06.1	-0.3
	0.1nm24nm,0.8s						
WBSI	**Waikabubak, Su**	10.87	256	P	Pn	18 55 14.2	-1.1
	0.1nm13nm,0.8s						
FITZ	**Fitzroy Crossi**	11.67	201	P	Pn	18 55 26.6	+0.9
	0.7nm,0.3s,baz=26,slow=7.2,SNR=10						
DBNI	**Kabupaten Domp**	11.76	263	P	Pn	18 55 25.3	-1.5
	0.0nm6.9nm,0.6s						
PLAI	**Plampang**	12.32	262	P	Pn	18 55 31.5	-2.6
	12nm,0.5s						
WRA	**Warramunga Arr**	13.31	162	P	Pn	18 55 48.9	+1.9
	0.6nm,0.4s,baz=343,slow=13,SNR=17						
WRA				S	Sn	18 58 12.4	-2.0
	0.9nm,0.3s,baz=332,slow=23,SNR=6.9						
KLNI	**Mataram**	13.94	264	P	Pn	18 55 55.5	+0.7
ASAR	**Alice Springs**	16.77	168	P	Pn	18 56 34.6	+4.7
	0.3nm,0.6s,baz=348,slow=8.7,SNR=16						
ASAR				S	S	18 59 33.2	-3.2
	0.4nm,0.5s,baz=346,slow=26,SNR=4.9						
MKAR	**Makanchi Array**	68.45	327	P	P	19 03 29.1	-0.4
	1.8nm,0.5s,baz=123,slow=8.1,SNR=29						
	1.8nm,0.5s						
KURBB	**Kurchatov Arra**	72.73	328	P	P	19 03 54.4	-0.8
	0.2nm,0.6s,baz=129,slow=5.1,SNR=6.0						
	0.2nm,0.6s						

IDC ***24*** *18:54:07.5±1.8, 8°.48S×124°.69E, h0^{km}, mb3.6/1, mbtmp3.8/4, ML3.8/3, MS3.6/1, Error ellipse: s-maj=51.2km s-min=25.3km az=77.0*

NEIC ***24*** *18:54:18.3±1.7, 9°.12S±0°.07×124°.19E±0°.05, h113^{km}±7^{km}, mb4.0/4, Error ellipse: s-maj=10.9km s-min=7.1km az=192.0*

DJA ***24*** *18:54:19.8±0.2, 9°S±2°×12°4E±°, h86^{km}±3^{km}, M3.7/13, mb3.8/12, MLv3.7/13*

ISC 24 18:54:17.6±0.8**, 9°.23S**±0°.06×**124°.23E**±0°.06**, h116^{km}**±8^{km}**, n38, σ2^{s}.24**/47**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	0.53	176	Pn	Pn	18 54 36.8	+1.3
SOEI				Sn	Sn	18 54 49.0	+0.2
SOEI	**Soe**	0.53	176	P	Pn	18 54 36.8	+1.3
SOEI				S	Sn	18 54 49.5	+0.6
BATI	**Baumata**	1.12	210	Pn	Pn	18 54 43.3	+2.7
	30nm,0.3s,baz=89,slow=4.9,SNR=22						
BATI				Sn	Sn	18 54 56.7	-1.3
	63nm,0.3s,baz=70,slow=0.9,SNR=13						
BATI	**Baumata**	1.12	210	P	Pn	18 54 43.0	+2.4
BATI				S	Sn	18 54 58.6	+0.6
MMRI	**Maumere**	2.05	286		Pn	18 54 51.3	-0.2
MMRI				Sn	Sn	18 55 13.2	-4.4
MMRI	**Maumere**	2.05	286	P	Pn	18 54 51.6	0.0
EDFI	**Ende, Flores**	2.55	281	P	Pn	18 54 58.9	+0.8
WSI	**Waingapu**	3.90	263	P	Pn	18 55 18.5	+2.7
LBFI	**Labuhan Bajo,**	4.35	279	P	Pn	18 55 24.0	+2.2
WBSI	**Waikabubak, Su**	4.79	265	P	Pn	18 55 30.4	+2.6
BSSI	**Bau Bau, Buton**	4.81	309	P	Pn	18 55 30.3	+2.3
BKSI	**Bulukumba**	5.62	313	P	Pn	18 55 39.7	+0.7
DBNI	**Kabupaten Domp**	5.89	277	P	Pn	18 55 43.7	+1.1
	0.0nm6.8nm,0.6s						
KAPI	**Kappang**	6.10	313	Pn	Pn	18 55 44.7	-0.8
PLAI	**Plampang**	6.39	273	P	Pn	18 55 50.8	+1.5
SAUI	**Saumlaki**	7.10	81	Pn	Pn	18 55 58.5	-0.5
KRAI	**Karang Ratu**	7.18	35	P	Pn	18 56 01.7	+1.6
TWSI	**Taliwang, Sumb**	7.27	273	P	Pn	18 56 02.1	+0.8
	0.1nm6.9nm,0.5s						
SANI	**Sanana**	7.34	14	P	Pn	18 56 04.8	+2.5
	0.0nm8.4nm,0.6s						
MTN	**Manton Dam**	7.67	119	Pn	Pn	18 56 08.2	+1.5
MTN				Sn	Sn	18 57 31.3	-0.7
KNRA	**Kununurra**	7.79	146		Pn	18 56 10.4	+2.1
KNRA				Sn	Sn	18 57 34.6	-0.3
KLNI	**Mataram**	8.08	275	P	Pn	18 56 12.6	+0.4
	5.3nm,0.7s						
LUWI	**Luwuk**	8.26	350	Pn	Pn	18 56 13.8	-0.9
LUWI	**Luwuk**	8.26	350	P	Pn	18 56 17.8	+3.1
FITZ	**Fitzroy Crossi**	8.93	171	Pn	Pn	18 56 25.5	+1.8
	1.4nm,0.3s,baz=4.9,slow=12,SNR=11						
FITZ				Sn	Sn	18 58 00.4	-2.1
	5.1nm,0.3s,baz=151,slow=7.5,SNR=15						
	2.6nm,0.3s						
JAGI	**Jajag, Banyuwa**	9.99	274	Pn	Pn	18 56 35.5	-2.5
WRA	**Warramunga Arr**	14.46	139	Pn	Pn	18 57 38.5	+1.6
	0.3nm,0.3s,baz=324,slow=13,SNR=4.8						
WRA				Sn	Sn	19 00 10.1	-6.5
	1.1nm,0.3s,baz=319,slow=24,SNR=6.3						
	0.6nm,0.3s						
WR8	**Warramunga Arr**	14.57	138	Pn	Pn	18 57 40.1	+1.8
AS31	**Alice Springs**	17.08	148	P	P	18 58 08.6	-0.9
ASAR	**Alice Springs**	17.08	148	P	Pn	18 58 12.8	+3.3
	0.2nm,0.3s,baz=318,slow=11,SNR=14						
ASAR				S	Sn	19 01 13.6	-6.2
	1.5nm,0.6s,baz=311,slow=20,SNR=8.3						
	1.2nm,0.6s						
ASAR	**Alice Springs**	17.08	148	P	P	18 58 10.2	+0.8
COEN	**Coen**	19.14	106	P	P	18 58 32.0	0.0
COEN				IAmb	IAmb	18 58 40.5	
	comp=Z,4.4nm,0.8s						
NWAO	**Narrogin (SRO)**	24.45	194	LR	LR	19 11 14.9	
	comp=Z,129nm,20.4s,baz=234,slow=41						
BBOO	**Buckleboo**	25.89	157	P	P	18 59 41.3	+2.5
KULM	**Kulim**	27.57	301	P	P	18 59 53.8	-0.3
KULM				IAmb	IAmb	18 59 58.8	
	comp=Z,8.2nm,1.2s						
MKAR	**Makanchi Array**	67.12	330	P	P	19 05 00.3	+1.5
	comp=Z,0.6nm,0.8s,baz=137,slow=6.7,SNR=5.3						
	comp=Z,0.6nm,0.8s						
MKAR	**Makanchi Array**	67.12	330	P	P	19 04 59.4	+0.5
ABKAR	**Akbulak array**	80.78	323	P	P	19 06 18.2	0.0

TRN 24 18:55:43.6, 15°.00N×61°.08W, h150^{km}, MD3.9, North of Martinique., Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVN	**Savane Anatole**	0.17	209	*e*P	Pn	18 56 05.3	+1.5
SVN				*e*S	Sn	18 56 21.0	+1.7
ILAM	**Ilet Lapin Mar**	0.30	138	*e*P	Pn	18 56 05.3	+1.2
ILAM				*e*S	Sn	18 56 20.4	+0.8
DLPL	**La Plaine**	0.37	334	*e*P	Pn	18 56 05.7	+1.3
DLPL				*e*S	Sn	18 56 21.6	+1.4
BIM	**Bigot**	0.48	179	*e*P	Pn	18 56 06.2	+1.3
BIM				*e*S	Sn	18 56 22.5	+1.5
DSLB	**Salisbury**	0.55	323	*e*P	Pn	18 56 06.5	+1.3
DSLB				*e*S	Sn	18 56 22.9	+1.3
DWS	**Wesley**	0.61	339	*e*P	Pn	18 56 06.7	+1.2

DWS				*e*S	Sn	18 56 23.4	+1.2
SLBI	**Saint Lucia, B**	**0.97**	**174**	*e*P	Pn	18 56 09.0	+0.9
SLBI				*e*S	Sn	18 56 27.1	+0.3
SLCP	**Castries, St.**	**0.98**	**175**	*e*P	Pn	18 56 09.4	+1.2
SLCP				*e*S	Sn	18 56 27.8	+0.8
TBG	**Guadaloupe-3**	**1.01**	**327**	*e*P	Pn	18 56 09.3	+1.0
TBG				*e*S	Sn	18 56 28.1	+0.7
SLAC	**Saint Lucia, A**	**1.11**	**171**	*e*P	Pn	18 56 10.5	+1.2
SLAC				*e*S	Sn	18 56 29.6	+0.7
MMLZ	**Guadeloupe Bro**	**1.19**	**332**	*e*P	Pn	18 56 11.2	+1.3
MMLZ				*e*S	Sn	18 56 30.9	+0.7
ATGZ	**Broadband at L**	**1.26**	**330**	*e*P	Pn	18 56 12.1	+1.5
ATGZ				*e*S	Sn	18 56 31.9	+0.5
MCLT	**Moule a Chique**	**1.29**	**174**	*e*P	Pn	18 56 11.9	+0.9
MCLT				*e*S	Sn	18 56 32.3	+0.4
DSDZ	**La Diserade, G**	**1.31**	**1**	*e*P	Pn	18 56 12.0	+0.8
DSDZ				*e*S	Sn	18 56 32.6	+0.3
DHSZ	**Broadband at M**	**1.43**	**333**	*e*P	Pn	18 56 13.7	+1.3
DHSZ				*e*S	Sn	18 56 35.9	+1.4
SVB	**Belmont**	**1.72**	**186**	*e*P	Pn	18 56 16.5	+1.0
SVB				*e*S	Sn	18 56 41.1	+1.0
MLYT	**Lee's Yard**	**2.02**	**328**	*e*P	Pn	18 56 19.8	+0.8
MBWH	**Windy Hill**	**2.04**	**329**	*e*P	Pn	18 56 19.7	+0.5
MBWH				*e*S	Sn	18 56 47.5	+1.0
BBGH	**Gun Hill**	**2.36**	**141**	*e*P	Pn	18 56 25.2	+2.2
BBGH				*e*S	Sn	18 56 53.8	+0.4
GCMP	**Grenada, Carri**	**2.52**	**188**	*e*P	Pn	18 56 25.7	+0.8
GRSS	**Sisters**	**2.73**	**191**	*e*P	Pn	18 56 28.2	+0.7
ANWB	**Willy Bob**	**2.74**	**346**	*e*P	Pn	18 56 27.7	+0.1
ANWB				*e*S	Sn	18 57 01.6	-0.1
GRHS	**Sauteurs**	**2.81**	**191**	*e*P	Pn	18 56 29.6	+1.0
SKI	**Saint Kitts**	**2.82**	**326**	*e*P	Pn	18 56 29.6	+1.0
SKI				*e*S	Sn	18 57 03.9	+0.4
GRW	**Mount Saint Ca**	**2.88**	**191**	*e*P	Pn	18 56 30.5	+1.0
GRGR	**Grenville**	**2.90**	**191**	*e*P	Pn	18 56 30.7	+1.0
GRFF	**Grenada Fort F**	**3.00**	**192**	*e*P	Pn	18 56 31.8	+0.9
DMDM	**Guralp CMG5TDE**	**4.30**	**186**	*e*P	Pn	18 56 49.5	+1.7
DMDM				*e*S	Sn	18 57 36.2	-1.5
PSQC	**Port of Spain**	**4.32**	**186**	*e*P	Pn	18 56 49.9	+1.8
PSQC				*e*S	Sn	18 57 37.1	-1.2
PSGH	**Port of Spain**	**4.33**	**186**	*e*P	Pn	18 56 49.1	+0.9
PSGH				*e*S	Sn	18 57 36.6	-1.8
TRN	**Trinidad (W)**	**4.33**	**184**	*e*P	Pn	18 56 49.8	+1.6
TRN				*e*S	Sn	18 57 36.9	-1.6
AOPR	**Arecibo Observ**	**6.38**	**302**	*e*P	Pn	18 57 16.8	+1.4

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*NEIC **24** 19:02:44.1±1.1, 19.°17N±0.°03×67.°28W±0.°04, h10^{km}±1^{km}, ML2.3/16, Md3.2/10(RSPR), Error ellipse: s-maj=6.0km s-min=5.0km az=67.0*

*SDD **24** 19:02:44.6±1.7, 19.°27N×67.°26W, h15^{km}±28^{km}, MD3.2, ML2.9, MW3.0, Presumed earthquake*

*RSPR **24** 19:02:44.9, 19.°34N×67.°44W, h49^{km}±13^{km}, MD3.2/10*

ISC 24 19:02:43.3±1.7, **19.°32N**±0.°07×**67.°26W**±0.°04, **h21**^{km}±4^{km}, **n44**, σ**1^{s}06**/53, **19C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.86**	**171**	Pn	**Pn**	**19 02 59.7**	**-0.5**
AGPR				IAML		19 03 10.9	
	163nm,2.1s						
AGPR				IAML		19 03 12.8	
	150nm,1.0s						
AGPR	**Aguadilla, PR**	**0.86**	**171**	⇓*e*P	**Pn**	**19 02 59.9**	**-0.3**
AGPR	**Aguadilla, PR**	**0.86**	**171**	*e*S	**Sb**	**19 03 11.7**	**+1.1**
AGPR	**Aguadilla, PR**	**0.86**	**171**	⇑*i*P	**Pb**	**19 02 58.6**	**-0.9**
AGPR				⇓*i*Sg	**Sb**	**19 03 08.6**	**-2.1**
AGPR				IAML		19 03 13.8	
	comp=N,1μm,0.3s						
IDE	**Isla Desecheo**	**0.95**	**193**		**Pb**	**19 03 01.6**	**+0.5**
IDE					**Sb**	**19 03 13.9**	**+0.6**
IDE	**Isla Desecheo**	**0.95**	**193**	⇑*e*P	**Pb**	**19 03 01.6**	**+0.5**
IDE	**Isla Desecheo**	**0.95**	**193**	*e*S	**Sb**	**19 03 13.9**	**+0.6**
AOPR	**Arecibo Observ**	**1.08**	**154**		**Pb**	**19 03 03.1**	**-0.2**
AOPR					**Sb**	**19 03 16.8**	**-0.2**
AOPR				IAML		19 03 21.2	
	comp=N,99nm,0.3s						
AOPR	**Arecibo Observ**	**1.08**	**154**	⇑*e*P	**Pb**	**19 03 03.2**	**-0.2**
AOPR	**Arecibo Observ**	**1.08**	**154**	*e*S	**Sn**	**19 03 19.5**	**+1.9**
AOPR	**Arecibo Observ**	**1.08**	**154**	⇑*e*Pg	**Pb**	**19 03 03.1**	**-0.2**
AOPR				⇑*e*Sg	**Sn**	**19 03 17.8**	**+0.2**
AOPR				IAML		19 03 32.8	
	comp=N,780nm,0.3s						
EMPR	**Esperanza - Ma**	**1.09**	**141**		**Pb**	**19 03 05.0**	**+1.7**
EMPR					**Sn**	**19 03 20.3**	**+2.7**
EMPR	**Esperanza - Ma**	**1.09**	**141**	⇓*e*P	**Pb**	**19 03 05.0**	**+1.7**
EMPR	**Esperanza - Ma**	**1.09**	**141**	*e*S	**Sn**	**19 03 20.3**	**+2.7**
PRSN	**Puerto Rico Se**	**1.10**	**174**	⇑*e*P	**Pb**	**19 03 05.6**	**+1.9**
PRSN	**Puerto Rico Se**	**1.10**	**174**	*e*S	**Sb**	**19 03 17.8**	**+0.2**
LSP	**Las Mesas**	**1.15**	**172**		**Pb**	**19 03 04.2**	**-0.3**
LSP					**Sn**	**19 03 19.1**	**-0.2**
LSP	**Las Mesas**	**1.15**	**172**	⇑*e*P	**Pb**	**19 03 04.2**	**-0.3**
LSP	**Las Mesas**	**1.15**	**172**	*e*S	**Sn**	**19 03 19.1**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.32**	**174**		**Pn**	**19 03 06.3**	**-0.2**
CRPR					**Sn**	**19 03 22.7**	**-0.6**
CRPR	**Cabo Rojo, PR**	**1.32**	**174**	IAML		19 03 25.1	
	comp=N,67nm,0.9s						
CRPR	**Cabo Rojo, PR**	**1.32**	**174**	⇑*e*P	**Pb**	**19 03 06.7**	**-0.6**
CRPR	**Cabo Rojo, PR**	**1.32**	**174**	*e*S	**Sn**	**19 03 23.9**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.32**	**174**	⇑*e*Pg	**Pn**	**19 03 06.0**	**-0.4**
CRPR				⇑*e*Sg	**Sn**	**19 03 23.0**	**-0.3**
CRPR				IAML		19 03 33.7	
	comp=N,240nm,0.3s						
PCDR	**Punta Cana, DR**	**1.33**	**233**	⇑*e*Sg	**Sn**	**19 03 24.5**	**+0.8**
PCDR				IAML		19 04 04.6	
	comp=N,148nm,1.9s						
MLPR	**Magueyes Islan**	**1.36**	**171**	⇑*e*P	**Pb**	**19 03 07.3**	**-0.7**
MLPR	**Magueyes Islan**	**1.36**	**171**	*e*S	**Sn**	**19 03 24.6**	**+0.2**
MLPR	**Magueyes Islan**	**1.36**	**171**	⇑*e*Pg	**Pb**	**19 03 07.2**	**-0.8**
MLPR				⇑*e*Sg	**Sn**	**19 03 24.0**	**-0.4**
MLPR				IAML		19 03 34.0	
	comp=N,181nm,0.3s						
OBIP	**Obispado Ponce**	**1.41**	**154**		**Pb**	**19 03 07.7**	**-1.3**
OBIP					**Sn**	**19 03 24.9**	**-0.9**
OBIP	**Obispado Ponce**	**1.41**	**154**	⇑*e*P	**Pb**	**19 03 09.1**	**+0.1**
OBIP	**Obispado Ponce**	**1.41**	**154**	*e*S	**Sb**	**19 03 26.5**	**-0.1**
GCPR	**Guaynabo City**	**1.50**	**132**		**Pb**	**19 03 09.8**	**-0.7**
GCPR	**Guaynabo City**	**1.50**	**132**		**Sn**	**19 03 26.3**	**-1.6**
GCPR	**Guaynabo City**	**1.50**	**132**	⇑*e*P	**Pb**	**19 03 09.8**	**-0.7**
GCPR	**Guaynabo City**	**1.50**	**132**	*e*S	**Sb**	**19 03 30.1**	**+1.1**
SJG	**San Juan**	**1.60**	**139**	Pn	**Pb**	**19 03 11.1**	**-0.9**
SJG				IAML		19 04 03.9	
	comp=N,59nm,0.2s						
SJG				IAML		19 04 04.9	
	comp=N,38nm,0.2s						
MIDR	**Miches**	**1.73**	**259**	⇑*e*Pg	**Pb**	**19 03 14.5**	**+0.2**
MIDR				IAML		19 03 43.0	
	comp=N,17nm,1.7s						
HUMP	**Col San Antoni**	**1.78**	**131**		**Pb**	**19 03 13.8**	**-1.4**
HUMP					**Sn**	**19 03 33.5**	**-1.2**
HUMP	**Col San Antoni**	**1.78**	**131**	IAML		19 03 47.0	
	comp=N,24nm,1.0s						
HUMP				IAML		19 03 55.2	
	comp=N,24nm,2.0s						
HUMP	**Col San Antoni**	**1.78**	**131**	⇑*e*P	**Pb**	**19 03 14.4**	**-0.7**
HUMP	**Col San Antoni**	**1.78**	**131**	*e*S	**Sb**	**19 03 38.0**	**+1.0**
DR12	**Loma Pena Alta**	**2.08**	**256**	Pn	**Pb**	**19 03 18.6**	**-1.7**
HATOM	**Hato Mayor del**	**2.08**	**256**	⇑*e*Pg	**Pb**	**19 03 19.7**	**-0.6**
HATOM				IAML		19 03 57.2	
	comp=N,83nm,0.3s						
SDD	**Santo Domingo**	**2.66**	**252**	Pn	**Pn**	**19 03 25.8**	**+1.0**

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*MOS **24** 19:03:50.9±1.2, 3.°45N×74.°15W, h12^{km}, mb6.0/41, MS5.6/45, Error ellipse: s-maj=7.6km s-min=5.2km az=93.2*

*IPGP **24** 19:03:51.0, 3.°49N×74.°00W, h13^{km}, Mw5.9, Fault plane solution: NP1:ϕ_s316.00000°, δ51.00000°, λ39.00000°. NP2:ϕ_s199.00000°, δ61.00000°, λ134.00000°.*

*NEIC **24** 19:03:52.4, 3.°50N×74.°05W, h20^{km}*

*ISC-PP **24** 19:03:52, 3.°54N×74.°02W, h9^{km}, Mwppsm6.2, Moment Tensor Solution. s35 Moment tensor: Scale 10^{18}Nm; M_{rr}0.50±.12; $M_{\theta\theta}$0.13±.13; $M_{\phi\phi}$-0.62±.10; $M_{r\theta}$-0.19±.12; $M_{\theta\phi}$-0.22±.19; $M_{\phi r}$0.30±.13; Fault plane solution: $M_0$2.32000×10^{18} NP1:ϕ_s187.20000°, δ58.70000°, λ125.80000°. NP2:ϕ_s312.90000°, δ46.20000°, λ46.10000°.*

*IDC **24** 19:03:52.8±1.8, 3.°47N×74.°09W, h15^{km}±10^{km}, mb5.3/28, mbtmp5.4/32, ML4.8/5, MS5.5/54 Error ellipse: s-maj=12.5km s-min=8.9km az=69.0*

*VAO **24** 19:03:52.8±0.2, 3.°39N×74.°00W, h10^{km}, mb5.9, Presumed earthquake*

*RSNC **24** 19:03:52.8±0.0, 3°N±1°×7°4W±°, h13^{km}±3^{km}, M5.9, mb6.6, mB6.5, ML5.7, Mw6.0, Mw(mB)6.3, MwMwp6.2, Mwp6.2*

*NEIC **24** 19:03:52.4, 3.°40N×73.°95W, h20^{km}, Moment Tensor Solution. Duration: 4^{s}4 Moment tensor: Scale 10^{18}Nm; M_{rr}0.27; $M_{\theta\theta}$0.59; $M_{\phi\phi}$-0.87; $M_{r\theta}$-0.51; $M_{\theta\phi}$0.17; $M_{\phi r}$-0.59; Fault plane solution: $M_0$1.10000×10^{18} NP1: ϕ_s313.40000°, δ43.15000°, λ14.27000°. NP2: ϕ_s212.89000°, δ80.30000°, λ132.25000°. Principal axes: T 1.0930, Plg39.0000°, Azm161.0000°; N 0.0219, Plg42.0000°, Azm24.0000°; P -1.1148, Plg23.0000°, Azm272.0000°;*

*NEIC **24** 19:03:52.5±1.4, 3.°54N±0.°05×74.°02W±0.°06, h11^{km}±1^{km}, mb6.0/1016, Ms_20 5.7/646, Mwb5.8/135, Mww6.0/58 Error ellipse: s-maj=10.8km s-min=9.0km az=84.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}4.23; $M_{\theta\theta}$2.07; $M_{\phi\phi}$-6.30; $M_{r\theta}$-3.05; $M_{\theta\phi}$3.19; $M_{\phi r}$-2.26; Fault plane solution: $M_0$7.45000×10^{17} NP1: ϕ_s308.17000°, δ52.01000°, λ35.68000°. NP2: ϕ_s194.32000°, δ62.63000°, λ136.13000°. Principal axes: T 7.3931, Plg49.0000°, Azm156.0000°; N 0.1130, Plg40.0000°, Azm349.0000°; P -7.5061, Plg6.0000°, Azm253.0000°;*

*NEIC **24** 19:03:52.3, 3.°55N×73.°98W, h10^{km}*

*GFZ **24** 19:03:53.4, 3.°42N×74.°10W, h15^{km}, MW5.9, Moment Tensor Solution. s67 Moment tensor: M_{rr}2.48; $M_{\theta\theta}$4.93; $M_{\phi\phi}$-7.41; $M_{r\theta}$-2.91; $M_{\theta\phi}$2.82; $M_{\phi r}$-0.78; Fault plane solution: NP1:ϕ_s307.00000°, δ68.00000°, λ23.00000°. NP2:ϕ_s208.00000°, δ69.00000°, λ156.00000°. Principal axes: T 7.3800, Plg31.0000°, Azm167.0000°; N 0.6400, Plg59.0000°, Azm349.0000°; P -8.0200, Plg1.0000°, Azm258.0000°;*

*CATAC **24** 19:03:56.5±0.3, 4°N±2°×7°4W±°, h77^{km}±4^{km}, M5.8/12, mb5.7/12, mB6.0/12, MLv6.4/12, Mw(mB)5.7/12, MwMwp5.7/8, Mwp5.8/8 Error ellipse: s-maj=5.8km s-min=3.5km az=117.2, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}3.29; $M_{\theta\theta}$6.73; $M_{\phi\phi}$-10.02; $M_{r\theta}$-2.87; $M_{\theta\phi}$2.61; $M_{\phi r}$-2.30; Fault plane solution: $M_0$9.93325×10^{17} NP1:ϕ_s309.64673°, δ63.23557°, λ16.76674°. NP2:ϕ_s211.92028°, δ75.07406°, λ152.22193°. Principal axes: T 8.9721, Plg30.0368°, Azm168.1958°; N 1.7022, Plg58.7495°, Azm5.8626°; P -10.6744, Plg7.8336°, Azm262.7585°; confirmed*

*GCMT **24** 19:03:56.5±0.1, 3.°45N×74.°11W, h19^{km}, MW6.0/163, Moment Tensor Solution. s143,c299; s163,c510; Duration: 2^{s}3 Moment tensor: Scale 10^{18}Nm; M_{rr}0.34±.01; $M_{\theta\theta}$0.66±.01; $M_{\phi\phi}$-1.00±.01; $M_{r\theta}$-0.49±.02; $M_{\theta\phi}$0.36±.01; $M_{\phi r}$-0.12±.01; Best double couple: $M_0$1.08100×10^{18} NP1:ϕ_s309.00000°, δ66.00000°, λ25.00000°. NP2:ϕ_s208.00000°, δ67.00000°, λ154.00000°. Principal axes: T 1.0850, Plg34.0000°, Azm168.0000°; N -0.0070, Plg56.0000°, Azm350.0000°; P -1.0760, Plg1.0000°, Azm258.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*BGR **24** 19:04:07.2, 3.°91N×71.°27W, h22^{km}, mb5.1, Ms5.5*

ISC 24 19:03:50.7±0.3, **3.°43N**±0.°02×**74.°17W**±0.°02, **h8**^{km}±1^{km}, **h8**^{km}**:pP-P, n1793,** σ**1^{s}76**/1384, **mb5.9**/566, **MS5.7**/435, **34C-42D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URMC	**La Uribe, Meta**	**0.28**	**229**	P	**Pb**	**19 03 58.1**	**0.0**
URMC				S	**Sb**	**19 04 02.7**	**-0.3**
PRAC	**Prado**	**0.77**	**292**	P	**Pb**	**19 04 06.2**	**-0.2**
PRAC				S	**Sg**	**19 04 16.2**	**+0.6**
PRAC	**Prado**	**0.77**	**292**	P	**Pg**	**19 04 06.0**	**+0.4**
PRAC				S	**Sg**	**19 04 16.3**	**+0.7**
VILC	**Villavicencio,**	**0.83**	**35**	P	**Pb**	**19 04 07.8**	**+0.3**
VILC				S	**Sn**	**19 04 21.2**	**-0.1**
CVER	**Cruz Verde, Cu**	**1.09**	**5**	P	**Pg**	**19 04 11.7**	**0.0**
CVER				S	**Sn**	**19 04 28.0**	**-0.3**
ORTC	**Ortega, Tolima**	**1.18**	**294**	P	**Pb**	**19 04 13.1**	**-0.3**
ORTC				S	**Sn**	**19 04 29.6**	**-0.3**
BOG	**Bogota**	**1.19**	**5**	P	**Pn**	**19 04 15.4**	**+1.4**
BOG				S	**Sn**	**19 04 32.7**	**+2.1**
CHIC	**Chingaza**	**1.27**	**20**	P	**Pb**	**19 04 14.9**	**-0.3**
CHIC				S	**Sn**	**19 04 34.1**	**+1.5**
MACC	**Macarena, Meta**	**1.31**	**166**	P	**Pg**	**19 04 16.7**	**+0.7**
MACC				S	**Sg**	**19 04 35.3**	**+2.2**
ROSC	**El Rosal**	**1.41**	**354**	Pg	**Pg**	**19 04 18.2**	**+0.4**
	19μm,0.3s,baz=170,slow=6.9,SNR=3630						
ROSC				Lg	Lg	19 04 37.4	
	7μm,0.3s,baz=278,slow=23,SNR=7.9						
ROSC	**El Rosal**	**1.41**	**354**		**Pg**	**19 04 18.1**	**+0.3**
ROSC				Sn	**Sg**	**19 04 36.9**	**+0.8**
ROSC	**El Rosal**	**1.41**	**354**	P	**Pg**	**19 04 18.1**	**+0.3**
ROSC						19 04 36.9	
BETC	**Betania**	**1.47**	**240**	P	**Pg**	**19 04 19.1**	**+0.1**
BETC				S	**Sg**	**19 04 39.1**	**+1.0**
ANIL	**Santa Ana**	**1.62**	**311**	P	**Pn**	**19 04 20.4**	**+0.5**
ANIL				S	**Sb**	**19 04 42.5**	**+0.6**
GUVC	**San Jose del G**	**1.77**	**120**	P	**Pg**	**19 04 24.3**	**-0.4**
GUVC				S	**Sg**	**19 04 49.1**	**+1.4**
GARC	**Garzon, Huila**	**1.81**	**227**	P	**Pb**	**19 04 24.8**	**+0.5**
GARC				S	**Sg**	**19 04 48.7**	**-0.3**
RECRC	**Villamaria, Ca**	**1.93**	**322**	P	**Pb**	**19 04 26.2**	**-0.3**
RECRC				S	**Sb**	**19 04 50.5**	**-0.4**
NIZA	**Niza - Manizal**	**2.08**	**321**	P	**Pb**	**19 04 28.8**	**0.0**
NIZA				S	**Sb**	**19 04 56.1**	**+1.2**
CMAN1	**Manizales, Cal**	**2.12**	**320**	P	**Pb**	**19 04 30.5**	**+0.9**
CMAN1				S	**Sg**	**19 04 58.2**	**-0.7**
PTGC	**Puerto Gaitan,**	**2.17**	**69**	P	**Pb**	**19 04 29.6**	**-0.7**
PTGC				S	**Sg**	**19 05 01.2**	**+0.7**
SPBC	**San Pablo de B**	**2.21**	**2**	P	**Pb**	**19 04 30.5**	**-0.5**
SPBC				S	**Sg**	**19 05 02.5**	**+0.7**
NORC	**Norcasia**	**2.23**	**342**	P	**Pn**	**19 04 29.6**	**+1.5**
NORC				S	**Sn**	**19 04 57.3**	**+1.3**
YOTC	**Yotoco, Valle**	**2.24**	**284**	P	**Pn**	**19 04 29.7**	**+1.4**
YOTC				S	**Sb**	**19 05 00.2**	**+0.6**
FLOC	**Florencia**	**2.36**	**219**	P	**Pb**	**19 04 33.7**	**+0.1**
FLOC				S	**Sb**	**19 05 03.7**	**+0.8**
FLOC	**Florencia**	**2.36**	**219**	P	**Pb**	**19 04 33.7**	**+0.1**
FLOC				S	**Sb**	**19 05 04.5**	**+1.6**
JAMC	**Jamundi, Valle**	**2.51**	**265**	P	**Pb**	**19 04 35.3**	**-0.9**
JAMC				S	**Sb**	**19 05 09.1**	**+1.7**
PLMC	**San Jos del P**	**2.57**	**305**	P	**Pn**	**19 04 34.6**	**+1.8**
PLMC				S	**Sb**	**19 05 09.9**	**+0.9**
POPC	**Popayan, Colom**	**2.66**	**251**	P	**Pb**	**19 04 37.6**	**-1.1**
POPC				S	**Sg**	**19 05 14.7**	**-1.5**
RUSC	**La Rusia**	**2.67**	**24**	P	**Pb**	**19 04 37.4**	**-1.8**
RUSC				S	**Sb**	**19 05 12.8**	**+0.4**
RUSC	**La Rusia**	**2.67**	**24**	P	**Pb**	**19 04 38.0**	**-1.2**
RUSC				S	**Sg**	**19 05 18.2**	**+1.4**
CBOC	**Ciudad Bolivar**	**3.04**	**323**	P	**Pn**	**19 04 42.1**	**+2.8**
HELC	**Santa Helena**	**3.06**	**334**	P	**Pn**	**19 04 41.3**	**+1.5**
HELC				S	**Sb**	**19 05 22.1**	**-1.3**
HELC	**Santa Helena**	**3.06**	**334**	P	**Pn**	**19 04 41.8**	**+2.0**
HELC				S	**Sb**	**19 05 22.8**	**-0.6**
PTBC	**PUERTO BERRIO,**	**3.10**	**355**	P	**Pn**	**19 04 40.6**	**+0.5**
PTBC				S	**Sb**	**19 05 24.0**	**-0.3**
BARC	**Barichara**	**3.29**	**17**	P	**Pn**	**19 04 46.1**	**+3.2**
PTLC	**Puerto Leguiza**	**3.30**	**191**	P	**Pb**	**19 04 49.7**	**+0.2**
CRUC	**La Cruz**	**3.34**	**236**	P	**Pb**	**19 04 48.6**	**-1.9**
CRUC				S	**Sg**	**19 05 35.7**	**-2.4**
BBAC	**Balboa, Cauca**	**3.38**	**246**	P	**Pn**	**19 04 47.1**	**+3.1**
BBAC				S	**Sg**	**19 05 37.1**	**-2.3**
BRJC	**Barrancabermej**	**3.55**	**7**	P	**Pn**	**19 04 48.2**	**+2.0**
GCUF	**Volcan Galeras**	**3.86**	**235**	P	**Pn**	**19 04 54.7**	**+3.8**
GCUF				S	**Sg**	**19 05 53.8**	**-0.9**
GR1C	**Gorgona, Isla**	**4.01**	**264**	P	**Pn**	**19 04 54.1**	**+1.5**
DBBC	**Dabeiba**	**4.10**	**330**	P	**Pn**	**19 04 57.0**	**+3.1**
PAMC	**Pamplona, Colo**	**4.15**	**21**	P	**Pn**	**19 04 59.0**	**+4.1**
SOLC	**Bahia Solano**	**4.26**	**311**	P	**Pn**	**19 04 59.9**	**+3.9**
CMBC	**Cumbal**	**4.41**	**236**	P	**Pb**	**19 05 04.9**	**-3.9**
BONI	**La Bonita**	**4.47**	**229**	P	**Pn**	**19 05 02.0**	**+2.8**
UREC	**San Jos de Ur**	**4.50**	**343**	P	**Pn**	**19 05 02.2**	**+2.9**
TUMC	**Tumaco**	**4.83**	**251**	P	**Pn**	**19 05 06.2**	**+2.4**
TUMC				S	**Sn**	**19 05 59.7**	**-0.2**
TUMC	**Tumaco**	**4.83**	**251**	P	**Pn**	**19 05 07.3**	**+3.5**
OCAC	**Ocana**	**4.85**	**10**	P	**Pn**	**19 05 07.9**	**+3.6**
OCAC				S	**Sn**	**19 06 04.9**	**+4.1**
APAC	**Apartado, Choc**	**5.05**	**332**	P	**Pn**	**19 05 11.0**	**+4.2**
	88μm66μm12μm,1.1s						
PTAC	**Punta Ardita,**	**5.17**	**316**	P	**Pn**	**19 05 11.3**	**+2.7**
	14μm2μm,1.1s						
PTAC				S	**Sn**	**19 06 14.8**	**+6.3**
	14μm2μm,1.1s						
CUSE	**Cuicocha Este**	**5.25**	**234**	P	**Pn**	**19 05 14.5**	**+4.6**
OTAV	**Otavalo**	**5.33**	**234**		**Pn**	**19 05 15.1**	**+4.1**
OTAV	**Otavalo**	**5.33**	**234**	P	**Pn**	**19 05 15.1**	**+4.1**
OTAV	**Otavalo**	**5.33**	**234**	P	**Pn**	**19 05 15.0**	**+4.0**
OTAV				S	**Sn**	**19 06 16.1**	**+3.1**
OTAV	**Otavalo**	**5.33**	**234**	*e*P	**Pn**	**19 05 14.6**	**+3.5**
SLOR	**San Lorenzo -**	**5.98**	**226**		**Pn**	**19 05 24.0**	**+3.9**
CAP2	**Capurgana**	**6.08**	**329**	P	**Pn**	**19 05 23.2**	**+2.1**
CAP2				S	**Sn**	**19 06 25.9**	**-5.0**
SDV	**Santo Domingo**	**6.46**	**33**	Pn	**Pn**	**19 05 28.5**	**+2.1**
	200nm,0.3s,baz=187,slow=9.2,SNR=337						
SDV				Sn	**Sn**	**19 06 41.8**	**+1.3**
	567nm,0.3s,baz=345,slow=12,SNR=5.0						
SDV				Lg	Lg	19 07 18.0	
	126nm,0.3s,baz=24,slow=5.7,SNR=3.6						
SDV				LR	LR	19 08 31.7	
	comp=Z,130μm,19.0s,baz=224,slow=44						
	680nm,0.3s						
SDV	**Santo Domingo**	**6.46**	**33**		**Pn**	**19 05 27.5**	**+1.1**
SDV	**Santo Domingo**	**6.46**	**33**	*e*P	**Pn**	**19 05 27.3**	**+0.9**
SJCC	**San Jacinto, C**	**6.50**	**351**	P	**Pn**	**19 05 26.8**	**-0.1**
SJCC				S	**Sn**	**19 06 37.8**	**-3.6**
COHC	**Cochancay**	**7.75**	**221**		Pn	19 05 49.1	+5.1
BCIP	**Isla Barro Col**	**8.01**	**316**		**Pn**	**19 05 50.1**	**+2.5**
BCIP	**Isla Barro Col**	**8.01**	**316**	P	**Pn**	**19 05 50.1**	**+2.5**
URI	**Uribia**	**8.50**	**15**	P	**Pn**	**19 05 54.6**	**+0.4**
URI				S	**Sn**	**19 07 29.9**	**-0.4**
BRU2	**Volcan**	**10.01**	**303**		**Pn**	**19 06 17.4**	**+2.2**
DRK0	**Durika**	**10.72**	**303**	P	**Pn**	**19 06 26.9**	**+2.0**
ATAH	**Atahualpa**	**11.31**	**202**	Pn	**Pn**	**19 06 35.9**	**+2.7**
	11nm,0.3s,baz=26,slow=8.6,SNR=110						
ATAH				Sn	Sn	19 08 59.4	+19
	23nm,0.3s,baz=108,slow=19,SNR=1.9						
ATAH				LR	LR	19 11 50.0	
	comp=Z,85μm,21.0s,baz=28,slow=42						
	208nm,0.8s						
EGUB	**Earth Gu¡pi**	**11.53**	**306**		**Pn**	**19 06 37.3**	**+1.5**
RAFA	**San Farael, Vo**	**11.56**	**305**		**Pn**	**19 06 38.7**	**+2.1**
TEFE	**Tefe**	**11.76**	**126**	*e*P	**Pn**	**19 06 38.1**	**-0.8**
HDC	**Heredia**	**11.84**	**304**		**Pn**	**19 06 42.5**	**+2.3**
HDC	**Heredia**	**11.84**	**304**	*e*P	Pn	19 06 45.9	+5.7
JTS	**Las Juntas de**	**12.69**	**303**	Pn	**Pn**	**19 06 52.5**	**+0.8**
	0.6nm,0.3s,baz=104,slow=9.2,SNR=9.6						
JTS				LR	LR	19 11 30.6	
	comp=Z,20μm,19.6s,baz=115,slow=36						
JTS	**Las Juntas de**	**12.69**	**303**		**Pn**	**19 06 53.1**	**+1.4**
JTS	**Las Juntas de**	**12.69**	**303**	⇑*e*P	**Pn**	**19 06 53.9**	**+2.2**
JUD3	**Juan Diaz 3**	**13.12**	**301**		**Pn**	**19 06 57.8**	**+0.2**
BOAV	**Boa Vista**	**13.67**	**94**		**Pn**	**19 07 01.8**	**-3.2**
BOAV	**Boa Vista**	**13.67**	**94**	*e*P	**Pn**	**19 07 02.0**	**-3.1**
BILN	**Bilwi Airport**	**13.93**	**320**	Pn	**Pn**	**19 07 09.5**	**+0.9**
DMDM	**Guralp CMG5TDE**	**14.45**	**59**	*e*P	**Pn**	**19 07 16.4**	**+0.7**
PSGH	**Port of Spain**	**14.47**	**60**	*e*P	**Pn**	**19 07 17.4**	**+1.4**
BOAB	**BOACO BROADBAN**	**14.48**	**309**		**Pn**	**19 07 16.7**	**+0.5**
TRN	**Trinidad (W)**	**14.55**	**60**	*e*P	**Pn**	**19 07 18.4**	**+1.3**
SIUN	**Universidad Ur**	**14.63**	**315**		**Pn**	**19 07 18.9**	**+0.6**
MGAN	**Managua**	**14.77**	**307**		**Pn**	**19 07 20.1**	**+0.1**
STH	**Stony Hill**	**14.79**	**350**	*i* P	**P**	**19 07 23.9**	**-2.5**
MACA	**Manacapuru-AM**	**14.98**	**116**		**Pn**	**19 07 19.5**	**-3.5**
MACA	**Manacapuru-AM**	**14.98**	**116**	*e*P	**Pn**	**19 07 19.6**	**-3.5**
GRFF	**Grenada Fort F**	**14.99**	**54**	*e*P	**P**	**19 07 26.1**	**-2.7**
MTDJ	**Mount Denham**	**15.07**	**348**		**Pn**	**19 07 23.0**	**-1.3**
MTDJ				IAmb	IAmb	19 07 32.6	
	comp=Z,678nm,1.6s						
MTDJ	**Mount Denham**	**15.07**	**348**	*i* P	**Pn**	**19 07 26.2**	**+1.9**
MTDJ	**Mount Denham**	**15.07**	**348**	*e*P	**P**	**19 07 29.3**	**-0.3**
GRGR	**Grenville**	**15.11**	**54**	*e*P	**P**	**19 07 27.5**	**-2.5**
PAPH	**Port-au-Prince**	**15.11**	**7**	*e*P	**Pn**	**19 07 25.3**	**+0.6**
GRW	**Mount Saint Ca**	**15.12**	**54**	*e*P	**P**	**19 07 29.7**	**-0.5**
GRHS	**Sauteurs**	**15.17**	**54**	*e*P	**Pn**	**19 07 24.9**	**-0.6**
GRSS	**Sisters**	**15.23**	**54**	*e*P	**P**	**19 07 30.3**	**-1.1**
CNGN	**Cerro Negro**	**15.33**	**307**		**Pn**	**19 07 27.7**	**0.0**
GCMP	**Grenada, Carri**	**15.49**	**54**	*e*P	**Pn**	**19 07 31.3**	**+1.6**
HERN	**Volcan Telica**	**15.50**	**307**		**Pn**	**19 07 30.3**	**+0.4**
HERN				IAmb	IAmb	19 07 39.2	
	comp=Z,640nm,1.3s						
SDD	**Santo Domingo**	**15.51**	**15**		**Pn**	**19 07 27.6**	**-2.3**
NNA	**Nana**	**15.54**	**190**	Pn	**Pn**	**19 07 31.5**	**+1.0**
	comp=Z,4.6nm,0.3s,baz=14,slow=12,SNR=16						
NNA				Sn	**Sn**	**19 10 29.8**	**+6.7**
	comp=Z,6.6nm,0.3s,baz=49,slow=20,SNR=1.8						
NNA				LR	LR	19 14 50.6	
	comp=Z,78μm,18.9s,baz=329,slow=42						
	comp=Z,37nm,0.6s						
NNA	**Nana**	**15.54**	**190**		**Pn**	**19 07 31.4**	**+0.9**
NNA	**Nana**	**15.54**	**190**	P	**Pn**	**19 07 31.4**	**+0.9**
NNA						19 10 29.8	
NNA				pmax	pmax		
	comp=Z,333nm,1.1s						
NNA	**Nana**	**15.54**	**190**	P	**Pn**	**19 07 29.2**	**-1.3**
SDDR	**Presa de Saban**	**15.71**	**10**		**Pn**	**19 07 31.6**	**-1.0**
SDDR				IAmb	IAmb	19 07 39.8	
	comp=Z,735nm,0.9s						
SDDR	**Presa de Saban**	**15.71**	**10**	*e*P	**Pn**	**19 07 34.5**	**+1.9**
CRIN	**San Cristobal**	**15.72**	**307**		**Pn**	**19 07 32.2**	**-0.6**
DR12	**Loma Pena Alta**	**15.97**	**17**		**Pn**	**19 07 33.0**	**-3.0**
CRPR	**Cabo Rojo, PR**	**16.05**	**25**		**Pn**	**19 07 34.7**	**-2.3**
SVB	**Belmont**	**16.08**	**52**	*e*P	**P**	**19 07 42.0**	**+1.2**
SC01	**Santiago de lo**	**16.25**	**12**		**Pn**	**19 07 39.2**	**-0.3**
OBIP	**Obispado Ponce**	**16.30**	**26**		**Pn**	**19 07 38.4**	**-1.8**
GTBY	**Guantanamo Bay**	**16.42**	**357**		**Pn**	**19 07 40.3**	**-1.4**
GTBY	**Guantanamo Bay**	**16.42**	**357**	*e*P	**P**	**19 07 45.8**	**+1.2**
AGPR	**Aguadilla, PR**	**16.46**	**24**		**Pn**	**19 07 39.1**	**-3.1**
AOPR	**Arecibo Observ**	**16.51**	**26**		**Pn**	**19 07 40.0**	**-2.9**
AOPR	**Arecibo Observ**	**16.51**	**26**	*e*P	**Pn**	**19 07 44.1**	**+1.2**
MARVS	**Santiago de Cu**	**16.56**	**354**	*e*P	**Pn**	**19 07 44.3**	**+0.8**
SJG	**San Juan**	**16.57**	**28**	Pn	**Pn**	**19 07 42.4**	**-1.2**
	comp=Z,15nm,0.3s,baz=201,slow=13,SNR=24						
SJG				Sn	Sn	19 10 37.0	-11
	comp=Z,4.5nm,0.3s,baz=209,slow=22,SNR=3.4						
SJG				LR	LR	19 14 47.6	
	comp=Z,40μm,21.2s,baz=194,slow=40						
	comp=Z,86nm,0.5s						
SJG	**San Juan**	**16.57**	**28**		**Pn**	**19 07 40.8**	**-2.9**
SJG	**San Juan**	**16.57**	**28**	P	**Pn**	**19 07 40.8**	**-2.9**
SJG				pmax	pmax		
	comp=Z,592nm,1.3s						
SJG	**San Juan**	**16.57**	**28**	P	**Pn**	**19 07 41.9**	**-1.7**
SJG				S	**S**	**19 10 54.7**	**-5.0**
SJG	**San Juan**	**16.57**	**28**	*e*P	**Pn**	**19 07 44.3**	**+0.7**
MCLT	**Moule a Chique**	**16.58**	**51**	*e*P	**P**	**19 07 46.7**	**+0.3**
CHIV	**Chivirico**	**16.59**	**353**		**Pn**	**19 07 42.1**	**-1.8**
CHIV				IAmb	IAmb	19 07 53.6	
	comp=Z,640nm,1.3s						
CHIV	**Chivirico**	**16.59**	**353**	*e*P	**Pn**	**19 07 44.7**	**+0.8**
PAYG	**Puerto Ayora**	**16.62**	**256**		**P**	**19 07 45.8**	**-0.9**
PAYG				IAmb	IAmb	19 07 57.6	
	comp=Z,1μm,1.9s						
MASC	**Masc**	**16.64**	**360**	*e*P	**P**	**19 07 47.9**	**+0.9**
QMBU	**Quimbuelo**	**16.68**	**358**	*e*P	**P**	**19 07 48.1**	**+0.7**
I20EC	**Galapagos**	**16.68**	**256**	I	I	20 40 20.0	
	baz=76,slow=310,SNR=0.8						
TGUH	**Tegucigalpa,Un**	**16.70**	**310**		**Pn**	**19 07 45.7**	**+0.3**
TGUH				IAmb	IAmb	19 07 56.0	
	comp=Z,1μm,1.5s						
SLAC	**Saint Lucia, A**	**16.73**	**51**	*e*P	**P**	**19 07 49.9**	**+1.9**
HUMP	**Col San Antoni**	**16.74**	**29**		**Pn**	**19 07 43.1**	**-2.7**
SLBI	**Saint Lucia, B**	**16.75**	**50**	*e*P	**P**	**19 07 48.3**	**+0.1**
GCPR	**Guaynabo City**	**16.77**	**28**		**Pn**	**19 07 44.6**	**-1.6**
YAR	**Yar**	**16.97**	**353**	*e*P	**P**	**19 07 50.9**	**+0.3**
BIM	**Bigot**	**16.98**	**49**		**Pn**	**19 07 46.2**	**-2.6**
BIM	**Bigot**	**16.98**	**49**	*e*P	**P**	**19 07 56.8**	**+6.0**
NMDO	**Nuevo Mundo**	**17.05**	**357**	P	**Pn**	**19 07 50.1**	**+0.5**
NMDO	**Nuevo Mundo**	**17.05**	**357**	*e*P	**P**	**19 07 53.4**	**+1.9**
CXM	**Morne La Croix**	**17.09**	**48**		**Pn**	**19 07 46.4**	**-4.0**
CXM				IAmb	IAmb	19 07 56.5	
	comp=Z,237nm,0.7s						
MPOM	**Morne Pois Mar**	**17.09**	**49**		**Pn**	**19 07 46.9**	**-3.4**
SVN	**Savane Anatole**	**17.11**	**48**		**Pn**	**19 07 47.1**	**-3.4**
SVN	**Savane Anatole**	**17.11**	**48**	*e*P	**P**	**19 07 53.2**	**+0.9**
MOAC	**Moa**	**17.14**	**357**	*e*P	**P**	**19 07 54.8**	**+2.3**
ILAM	**Ilet Lapin Mar**	**17.29**	**48**		**Pn**	**19 07 50.1**	**-2.6**
ILAM				IAmb	IAmb	19 08 00.5	
	comp=Z,1μm,1.1s						
ILAM	**Ilet Lapin Mar**	**17.29**	**48**	*e*P	**P**	**19 07 59.1**	**+5.0**
DSLB	**Salisbury**	**17.32**	**46**	*e*P	**P**	**19 07 54.7**	**+0.1**
BBGH	**Gun Hill**	**17.37**	**55**		**Pn**	**19 07 52.2**	**-1.5**
BBGH				IAmb	IAmb	19 07 59.7	

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      comp=Z,1µm,1.5s
BBGH  Gun Hill          17.37  55 eP        P         19 07 59.6 +4.5
DLPL  La Plaine         17.37  46 eP        P         19 07 55.8 +0.6
TBG   Guadaloupe-3      17.44  44 eP        P         19 07 59.3 +3.4
TDBA  Terre de Bas,     17.45  44           Pn        19 07 51.4 -3.3
HLGC  Holguin           17.45 354 eP        Pn        19 07 49.4 -5.3
DWS   Wesley            17.48  46 eP        P         19 07 59.8 +3.4
ATGZ  Broadband at L    17.55  43 eP        P         19 07 56.7 -0.4
MMLZ  Guadeloupe Bro    17.56  44 eP        P         19 08 02.1 +5.0
CBE   Ff, Capester      17.62  44           Pn        19 07 53.3 -3.5
DHSZ  Broadband at M    17.65  43 eP        P         19 08 00.2 +2.1
GDHS  Morne Mazeau,     17.65  43           Pn        19 07 53.3 -4.0
MLYT  Lee's Yard        17.69  41 eP        P         19 08 00.8 +2.2
MBWH  Windy Hill        17.70  41 eP        P         19 08 00.3 +1.5
SABA  Saba              17.71  36           Pn        19 07 53.8 -4.2
MAGL  Barre de l'ile    17.76  45 IAmb      IAmb      19 08 06.1
      comp=Z,1µm,1.2s
SEUS  St. Eustatius     17.77  37           Pn        19 07 55.1 -3.6
SKI   Saint Kitts       17.80  38 eP        P         19 08 00.9 +1.1
ABD   La Joyeuse, An    17.98  43 P         Pn        19 08 00.9 -0.4
CCCC  Cccc              18.01 349 eP        P         19 08 02.9 +0.8
DSDZ  La Diserade, G    18.16  44 eP        P         19 08 07.3 +3.5
GRTK  Grand Turk        18.21   9 eP        P         19 08 05.4 +1.1
ANWB  Willy Bob         18.64  40 eP        Pn        19 08 11.5 +2.1
MGV   Manicaragua       19.41 344 eP        Pn        19 08 19.4 +0.9
CAIB  Caibarien         19.64 345 P         P         19 08 18.4 -1.5
CAIB                              IAmb      IAmb      19 08 32.9
      comp=Z,545nm,1.3s
CAIB  Caibarien         19.64 345 eP        P         19 08 18.1 -1.9
APG   El Apazote        19.75 307 P         P         19 08 21.9 +0.3
      comp=Z,5.5nm,0.9s,baz=139,slow=10,SNR=18
APG                               LR        LR        19 17 17.1
      comp=Z,1µm,19.3s,baz=123,slow=41
ITTB  Itaituba          19.98 113 eP        P         19 08 20.7 -3.1
LPAZ  La Paz            20.48 163 P         P         19 08 30.1 +0.3
      comp=Z,62nm,0.8s,baz=342,slow=9.9,SNR=56
LPAZ                              Lg        Lg        19 14 37.7
      comp=Z,6.6nm,0.3s,baz=203,slow=1.7,SNR=5.3
LPAZ                              LR        LR        19 17 44.9
      comp=Z,11µm,20.9s,baz=324,slow=41
      comp=Z,62nm,0.8s
LPAZ  La Paz            20.48 163 P         P         19 08 29.1 -0.8
LPAZ  La Paz            20.48 163 P         P         19 08 29.1 -0.8
LPAZ                              pmax      pmax
      comp=Z,275nm,1.0s
LPAZ  La Paz            20.48 163 eP        P         19 08 30.2 +0.3
RTAL  Retalhuleu        20.50 304 P         P         19 08 29.6 +0.1
RTAL                              IAmb      IAmb      19 08 36.9
      comp=Z,1µm,1.5s
CAMR  Camarioca         20.72 341 IAmb      IAmb      19 08 42.1
      comp=Z,6µm,1.7s
SOR   Soroa             21.07 337 P         P         19 08 36.6 +1.1
SOR   Soroa             21.07 337 P         P         19 08 36.6 +1.1
SOR                               pmax      pmax
      comp=Z,263nm,1.2s
SOR   Soroa             21.07 337 eP        P         19 08 37.8 +2.2
VILB  Vilhena           21.39 140 P         P         19 08 39.8 +0.7
VILB  Vilhena           21.39 140 eP        P         19 08 41.0 +2.0
NPGB  Novo Progresso    21.46 119 eP        P         19 08 39.7 -0.2
MDP   Montagnes des     21.53  85 P         P         19 08 41.9 +1.3
      comp=Z,473nm,0.6s,baz=263,slow=9.3,SNR=94
MDP                               S         S         19 12 35.1 -4.6
      comp=Z,173nm,0.9s,baz=109,slow=12,SNR=4.6
MDP                               Lg        Lg        19 14 59.3
      comp=Z,13nm,0.3s,baz=165,slow=19,SNR=4.8
MDP                               LR        LR        19 17 04.2
      comp=Z,27µm,19.5s,baz=267,slow=37
      comp=Z,473nm,0.6s
TEIG  Tepich            21.63 322 P         P         19 08 43.3 +1.7
      comp=Z,0.1nm,0.6s,baz=131,slow=24,SNR=11
TEIG                              S         Sn        19 12 48.2 -2.0
      baz=127,slow=20,SNR=1.4
TEIG  Tepich            21.63 322 P         P         19 08 41.9 +0.3
AP01  Chacalluta        21.99 170 P         P         19 08 44.0 -1.4
AP01                              IAMs_20   IAMs_20   19 17 49.2
      comp=Z,31µm,20.0s
PB12  IPOC Station P    22.23 170 P         P         19 08 47.1 -1.1
PDRB  Porto dos Gac     22.89 131 eP        P         19 08 55.7 +0.5
CLDB  Colider           23.16 128 eP        P         19 08 58.2 +0.3
SIV   San Ignacio       23.24 146 P         P         19 09 00.4 +1.6
      comp=Z,708nm,0.8s,baz=318,slow=10,SNR=420
SIV                               Lg        Lg        19 16 00.5
      comp=Z,1.3nm,0.3s,baz=200,slow=16,SNR=9.2
SIV                               LR        LR        19 18 31.0
      comp=Z,32µm,18.1s,baz=334,slow=38
      comp=Z,708nm,0.8s
PB11  IPOC Station P    23.47 169 IAmb      IAmb      19 09 07.8
      comp=Z,287nm,0.9s
PB11                              IAMs_20   IAMs_20   19 18 46.4
      comp=Z,29µm,20.0s
PB08  IPOC Station P    23.93 168 P         P         19 09 07.4 +1.5
PTLB  Pontes e Lacer    23.94 142 P         P         19 09 06.0 +0.3
PTLB                              IAmb      IAmb      19 09 09.5
      comp=Z,678nm,1.2s
PTLB  Pontes e Lacer    23.94 142 eP        P         19 09 05.9 +0.3
TA01  Diego Aracena     24.16 171 P         P         19 09 06.3 -1.3
TA01                              IAmb      IAmb      19 09 21.7
      comp=Z,301nm,1.1s
TA01                              IAMs_20   IAMs_20   19 20 23.0
      comp=Z,27µm,19.0s
PATCX Punta Patache     24.42 171 IAmb      IAmb      19 09 24.2
      comp=Z,429nm,1.5s
PATCX                             IAMs_20   IAMs_20   19 20 28.7
      comp=Z,24µm,20.0s
CMIG  Matias Romero     24.45 305 LR        LR        19 20 18.7
      comp=Z,11µm,20.3s,baz=122,slow=40
PB01  IPOC Station P    24.75 170 IAMs_20   IAMs_20   19 19 48.4
      comp=Z,20µm,20.0s
PB02  IPOC Station P    24.95 171 IAmb      IAmb      19 09 24.4
      comp=Z,250nm,0.8s
PB02                              IAMs_20   IAMs_20   19 20 44.9
      comp=Z,21µm,20.0s
PB07  IPOC Station P    25.35 171 IAmb      IAmb      19 09 32.6
      comp=Z,323nm,1.1s
DWPF  Disney Wildern    25.50 345 P         P         19 09 20.0 +0.3
PB09  IPOC Station P    25.53 169 IAmb      IAmb      19 09 23.8
      comp=Z,270nm,1.2s
PB09                              IAMs_20   IAMs_20   19 21 06.9
      comp=Z,27µm,21.0s
PRPB  Parauapebas       26.12 111 eP        P         19 09 26.7 +1.2
SALV  Santo Antonio     26.51 137 eP        P         19 09 30.3 +1.3
TMAB  Tom-Au,PA,Br      26.69 102 eP        P         19 09 31.9 +1.2
AF01  San Pedro de A    26.86 168 P         P         19 09 34.0 +1.5
AF01                              IAmb      IAmb      19 09 54.6
      comp=Z,273nm,0.8s
AF01                              IAMs_20   IAMs_20   19 21 44.1
      comp=Z,16µm,22.0s
656A  Willston          26.99 344 P         P         19 09 33.8 +0.6
656A                              IAmb      IAmb      19 09 47.8
      comp=Z,526nm,1.3s
PB10  IPOC Station P    27.01 173 P         P         19 09 34.3 +0.9
PB10                              IAmb      IAmb      19 09 47.2
      comp=Z,216nm,1.0s
PB14  IPOC Station P    28.13 173 P         P         19 09 45.5 +1.7
PB14  IPOC Station P    28.13 173 IAmb      IAmb      19 09 58.1
      comp=Z,359nm,1.2s
PP1B  Ponte de Pedra    28.26 138 eP        P         19 09 46.4 +1.7
GO02  Mina Guanaco      28.77 171 P         P         19 09 50.7 +1.2
GO02                              IAmb      IAmb      19 10 03.2
      comp=Z,184nm,1.1s
GO02                              IAMs_20   IAMs_20   19 22 47.9
      comp=Z,11µm,18.0s
257A  Skidaway Islan    29.12 348 IAMs_20   IAMs_20   19 23 40.7
      comp=Z,14µm,18.0s
ARAG  Araguaiana, MT    29.17 131 eP        P         19 09 53.5 +0.6
BDQN  Bodoquena, MS     29.25 145 eP        P         19 09 53.0 -0.5
352A  Blakely           29.69 341 IAmb      IAmb      19 10 03.9
      comp=Z,185nm,0.9s
AQDB  Aquidauana        29.88 143 P         P         19 10 00.5 +1.4
AQDB  Aquidauana        29.88 143 eP        P         19 10 00.5 +1.4
NHSC  New Hope          30.06 350 IAmb      IAmb      19 10 12.7
      comp=Z,402nm,1.2s
NHSC                              IAMs_20   IAMs_20   19 22 36.3
      comp=Z,20µm,21.0s
154A  Montrose          30.22 345 IAmb      IAmb      19 10 09.0
      comp=Z,301nm,0.8s
154A                              IAMs_20   IAMs_20   19 22 32.1
      comp=Z,12µm,20.0s
AC02  Maricunga         30.48 171 IAmb      IAmb      19 10 19.8
      comp=Z,226nm,1.3s
AC02                              IAMs_20   IAMs_20   19 24 22.2
      comp=Z,19µm,19.0s
250A  Grady             30.59 340 P         P         19 10 06.1 +0.8
250A                              IAmb      IAmb      19 10 19.1
      comp=Z,351nm,1.2s
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250A                              IAMs_20   IAMs_20   19 22 52.6
      comp=Z,12µm,21.0s
545A  Edgard            30.65 331 IAMs_20   IAMs_20   19 23 39.0
      comp=Z,13µm,21.0s
Y60A  Bolivia           30.65 353 IAMs_20   IAMs_20   19 22 29.8
      comp=Z,14µm,21.0s
152A  Waverly Hall      30.72 342 IAmb      IAmb      19 10 14.6
      comp=Z,414nm,1.6s
Y58A  Scranton          30.75 351 IAMs_20   IAMs_20   19 23 18.7
      comp=Z,18µm,20.0s
AC06  Mina Casimiro     30.83 173 P         P         19 10 08.9 +1.5
AC06                              IAmb      IAmb      19 10 11.2
      comp=Z,197nm,1.2s
AC06                              IAMs_20   IAMs_20   19 22 41.6
      comp=Z,15µm,21.0s
Y57A  Sumter            30.98 350 IAmb      IAmb      19 10 16.3
      comp=Z,370nm,1.4s
Y57A                              IAMs_20   IAMs_20   19 23 13.8
      comp=Z,17µm,21.0s
GOGA  Godfrey           31.07 345 IAMs_20   IAMs_20   19 22 56.7
      comp=Z,11µm,20.0s
GO03  Copiapo           31.07 173 IAmb      IAmb      19 10 13.6
      comp=Z,184nm,1.2s
GO03                              IAMs_20   IAMs_20   19 22 50.2
      comp=Z,13µm,21.0s
X58A  Rowland           31.34 352 IAmb      IAmb      19 10 22.7
      comp=Z,221nm,1.4s
X58A                              IAMs_20   IAMs_20   19 23 38.2
      comp=Z,12µm,20.0s
JSC   Jenkinsville      31.40 349 P         P         19 10 13.2 +0.9
JSC                               IAmb      IAmb      19 10 19.6
      comp=Z,199nm,1.0s
JSC   Jenkinsville      31.40 349 P         P         19 10 13.3 +0.9
JSC                               pmax      pmax
      comp=Z,199nm,1.0s
HODGE Hodges            31.56 347 IAmb      IAmb      19 10 21.9
      comp=Z,256nm,1.4s
AC04  Llanos de Chal    31.59 175 IAmb      IAmb      19 10 18.3
      comp=Z,123nm,1.0s
AC04                              IAMs_20   IAMs_20   19 23 08.0
      comp=Z,14µm,21.0s
BIRD  Birdtown, Kers    31.61 350 IAmb      IAmb      19 10 25.2
      comp=Z,247nm,1.3s
LRAL  Lakeview Retre    31.81 339 IAmb      IAmb      19 10 24.0
      comp=Z,263nm,1.2s
W59A  Clinton           31.83 353 IAmb      IAmb      19 10 28.9
      comp=Z,136nm,1.0s
W59A                              IAMs_20   IAMs_20   19 23 26.0
      comp=Z,13µm,21.0s
BDFB  Brasilia          32.08 127 P         P         19 10 20.6 +1.9
      comp=Z,133nm,0.9s,baz=293,slow=10,SNR=138
BDFB                              Lg        Lg        19 20 31.1
      comp=Z,1.1nm,0.3s,baz=291,slow=17,SNR=2.2
BDFB                              LR        LR        19 23 55.1
      comp=Z,76µm,18.3s,baz=300,slow=38
      comp=Z,133nm,0.9s
BDFB  Brasilia          32.08 127 P         P         19 10 18.9 +0.2
BDFB                              IAmb      IAmb      19 10 22.5
      comp=Z,195nm,1.0s
AMBA  Amambai (Brazi    32.20 145 eP        P         19 10 19.8 +0.3
KMSC  Kings Mountain    32.25 349 IAmb      IAmb      19 10 27.0
      comp=Z,128nm,1.0s
KMSC                              IAMs_20   IAMs_20   19 23 18.5
      comp=Z,18µm,22.0s
V61A  Roper             32.28 356 IAmb      IAmb      19 10 33.5
      comp=Z,212nm,0.9s
AC05  El Transito       32.30 174 IAmb      IAmb      19 10 24.5
      comp=Z,223nm,0.9s
AC05                              IAMs_20   IAMs_20   19 23 34.6
      comp=Z,17µm,20.0s
Y49A  Blount Mountai    32.36 341 IAmb      IAmb      19 10 28.6
      comp=Z,274nm,1.3s
Y49A                              IAMs_20   IAMs_20   19 24 19.2
      comp=Z,10µm,20.0s
LCO   Las Campanas      32.43 174 P         P         19 10 23.4 +1.7
LCO   Las Campanas      32.43 174 IAMs_20   IAMs_20   19 23 34.0
      comp=Z,13µm,21.0s
LCO   Las Campanas      32.43 174 P         P         19 10 23.4 +1.7
LCO                               pmax      pmax
      comp=Z,329nm,1.1s
LCO                               MLR       MLR
      comp=Z,13µm,21.0s
BG3   Lake Jocassee     32.44 347 IAmb      IAmb      19 10 30.1
      comp=Z,292nm,1.3s
V58A  Windy Hill, Pi    32.53 353 P         P         19 10 21.8 -0.5
V58A                              IAmb      IAmb      19 10 32.2
      comp=Z,163nm,1.1s
441A  DeRidder          32.58 329 IAmb      IAmb      19 10 35.6
      comp=Z,421nm,1.6s
FPAL  Fort Paine        32.73 342 IAmb      IAmb      19 10 32.0
      comp=Z,404nm,1.7s
W52A  Murphy            32.78 345 IAmb      IAmb      19 10 31.6
      comp=Z,120nm,0.8s
W52A                              IAMs_20   IAMs_20   19 23 39.0
      comp=Z,13µm,21.0s
ITRB  Iturama           32.80 135 eP        P         19 10 25.7 +0.8
V55A  Taylorsville      32.91 349 IAmb      IAmb      19 10 33.3
      comp=Z,138nm,0.9s
V55A                              IAMs_20   IAMs_20   19 24 12.1
      comp=Z,15µm,22.0s
SDBA  SAO DESIDERIO     33.06 119 eP        P         19 10 28.5 +1.2
V53A  Saluda            33.06 347 IAmb      IAmb      19 10 35.2
      comp=Z,231nm,1.4s
X48A  Hartselle         33.11 340 IAmb      IAmb      19 10 33.5
      comp=Z,187nm,1.0s
X48A                              IAMs_20   IAMs_20   19 24 21.2
      comp=Z,11µm,21.0s
HBVL  Hebbronville      33.19 317 P         P         19 10 28.9 +0.7
W50A  Signal Mountai    33.26 343 IAmb      IAmb      19 10 36.9
      comp=Z,245nm,1.2s
CPCT  Cooper Cave       33.27 344 IAmb      IAmb      19 10 36.9
      comp=Z,290nm,1.6s
CO05  La Serena         33.28 175 IAmb      IAmb      19 10 43.6
      comp=Z,368nm,1.3s
CO05                              IAMs_20   IAMs_20   19 24 28.7
      comp=Z,14µm,19.0s
IPMB  Ipameri, GO       33.28 131 eP        P         19 10 28.8 -0.3
TKL   Tuckaleechee C    33.28 346 LR        LR        19 24 26.3
      comp=Z,12µm,21.5s,baz=159,slow=37
143A  Socs Landing,     33.30 333 IAmb      IAmb      19 10 34.7
      comp=Z,107nm,0.9s
HKT   Hockley           33.42 324 P         P         19 10 30.2 +0.1
HKT                               IAmb      IAmb      19 10 37.1
      comp=Z,221nm,1.3s
HKT   Hockley           33.42 324d iP       P         19 10 30.8 +0.8
HKT                               pmax      pmax
      comp=Z,231nm,1.5s
HKT                               MLR       MLR
      comp=Z,8µm,21.0s
CO01  Juntas del Tor    33.45 174 IAmb      IAmb      19 10 45.1
      comp=Z,278nm,1.4s
CO01                              IAMs_20   IAMs_20   19 24 10.0
      comp=Z,15µm,22.0s
GO04  Tololo Observa    33.57 175 IAmb      IAmb      19 10 50.6
      comp=Z,123nm,0.9s
NBPS  Pedro II - PI     33.61 103 eP        P         19 10 32.7 +0.6
U54A  Nelsons Funny     33.68 349 IAmb      IAmb      19 10 39.9
      comp=Z,251nm,0.9s
U54A                              IAMs_20   IAMs_20   19 24 36.4
      comp=Z,11µm,22.0s
SNAG  San Augustine     33.70 328 IAmb      IAmb      19 10 39.6
      comp=Z,212nm,1.2s
T57A  Hurt              33.73 353 IAmb      IAmb      19 10 42.3
      comp=Z,155nm,1.0s
T57A                              IAMs_20   IAMs_20   19 24 42.5
      comp=Z,10µm,20.0s
CPUP  Villa Florida     33.78 152 P         P         19 10 32.7 -0.6
      comp=Z,83nm,1.0s,baz=335,slow=9.7,SNR=113
CPUP                              LR        LR        19 24 26.2
      comp=Z,7µm,20.9s,baz=335,slow=36
      comp=Z,83nm,1.0s
CPUP  Villa Florida     33.78 152 IAmb      IAmb      19 10 34.8
      comp=Z,286nm,1.5s
HNVL  Huntsville, TX    33.81 326 IAmb      IAmb      19 10 40.9
      comp=Z,344nm,1.1s
735A  Kenedy            33.83 321 IAmb      IAmb      19 10 43.2
      comp=Z,284nm,1.3s
CO06  Fray Jorge        34.00 176 P         P         19 10 36.4 +1.2
CO06                              IAMs_20   IAMs_20   19 24 46.8
      comp=Z,16µm,19.0s
OXF   Oxford            34.02 337 IAmb      IAmb      19 10 43.4
      comp=Z,228nm,0.8s
TZTN  Tazewell          34.07 346 IAmb      IAmb      19 10 48.1
      comp=Z,178nm,1.3s
TZTN                              IAMs_20   IAMs_20   19 25 10.0
      comp=Z,11µm,19.0s
BLA   Blacksburg        34.11 351 IAMs_20   IAMs_20   19 25 19.5
      comp=Z,15µm,20.0s
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EF02  Christine         34.23 320 IAmb      IAmb      19 10 43.5
      comp=Z,676nm,1.4s
CO03  El Pedregal       34.24 175 IAMs_20   IAMs_20   19 24 43.1
      comp=Z,14µm,20.0s
CLTN  Cedars of Leba    34.39 342 IAmb      IAmb      19 10 46.3
      comp=Z,167nm,1.3s
Z41A  Richland Creek    34.41 332 P         P         19 10 38.6 -0.1
S57A  Dark Hollow, R    34.45 353 IAmb      IAmb      19 10 48.7
      comp=Z,251nm,1.0s
CO02  Combarbal         34.57 175 IAMs_20   IAMs_20   19 25 17.0
      comp=Z,12µm,18.0s
CBN   Corbin Frederi    34.73 356 IAmb      IAmb      19 10 50.7
      comp=Z,237nm,0.8s
NBMO  Morrinhos-CE      34.76 101 eP        P         19 10 42.3 +0.3
JANB  Januaria          34.81 123 eP        P         19 10 43.5 +1.0
S54A  Dingess, Beckl    34.83 350 IAmb      IAmb      19 10 49.7
      comp=Z,136nm,0.8s
S54A                              IAMs_20   IAMs_20   19 25 20.7
      comp=Z,18µm,22.0s
T50A  Nancy             34.84 345 IAmb      IAmb      19 10 50.2
      comp=Z,319nm,1.7s
T50A                              IAMs_20   IAMs_20   19 25 03.5
      comp=Z,13µm,21.0s
WVT   Waverly           34.90 340 P         P         19 10 43.3 +0.4
WVT                               IAmb      IAmb      19 10 49.7
      comp=Z,195nm,0.8s
WVT   Waverly           34.90 340 IAMs_20   IAMs_20   19 25 45.6
      comp=Z,10µm,20.0s
WVT   Waverly           34.90 340 P         P         19 10 43.3 +0.4
WVT                               pmax      pmax
      comp=Z,195nm,0.8s
WVT                               MLR       MLR
      comp=Z,10µm,20.0s
WLAR  White Oak Lake    34.91 332 IAmb      IAmb      19 10 50.0
      comp=Z,424nm,1.3s
237A  Washetta, Mont    34.95 327 IAmb      IAmb      19 10 50.7
      comp=Z,414nm,1.4s
PMNB  Patos De Minas    34.96 130 eP        P         19 10 43.8  0.0
BB19B Bebedouro         34.99 135 eP        P         19 10 44.6 +0.7
435B  Jarrell           35.05 323 IAmb      IAmb      19 10 51.0
      comp=Z,449nm,1.4s
R55A  Marlinton         35.11 352 IAmb      IAmb      19 10 56.5
      comp=Z,327nm,1.2s
R55A                              IAMs_20   IAMs_20   19 25 44.1
      comp=Z,9µm,20.0s
S51A  Beattyville       35.13 347 IAmb      IAmb      19 10 58.6
      comp=Z,143nm,1.1s
S51A                              IAMs_20   IAMs_20   19 26 33.9
      comp=Z,11µm,20.0s
HNDO  Hondo             35.23 320 IAmb      IAmb      19 10 52.2
      comp=Z,385nm,1.2s
PTGB  Pitanga           35.27 144 eP        P         19 10 46.5 +0.1
CFA   Coronel Fontan    35.29 171 LR        LR        19 27 29.4
      comp=Z,6µm,18.3s,baz=11,slow=40
X40A  Basin Creek Fa    35.45 333 IAmb      IAmb      19 10 53.8
      comp=Z,593nm,1.9s
T47A  Sharon Grove      35.45 342 IAMs_20   IAMs_20   19 27 46.1
      comp=Z,10µm,18.0s
UALR  University of     35.47 334 IAmb      IAmb      19 10 54.3
      comp=Z,157nm,1.1s
Z38A  Mt. Pleasant      35.49 329 IAmb      IAmb      19 10 55.0
      comp=Z,382nm,1.2s
PEBM  Pemiscott Bayo    35.61 338 P         P         19 10 49.1 +0.1
Q56A  Snyder Ridge,     35.74 353 IAmb      IAmb      19 11 00.8
      comp=Z,221nm,1.0s
WHTX  Lake Whitney,     35.86 325 IAmb      IAmb      19 10 58.1
      comp=Z,318nm,1.2s
WHAR  Wooly Hollow      35.88 334 IAmb      IAmb      19 10 57.8
      comp=Z,594nm,2.0s
VA06  Catapilco         35.90 176 IAmb      IAmb      19 10 56.0
      comp=Z,395nm,1.2s
VA06                              IAMs_20   IAMs_20   19 25 52.1
      comp=Z,13µm,20.0s
Q54A  Coxs Mills        35.91 351 IAmb      IAmb      19 10 59.0
      comp=Z,172nm,0.9s
Q54A                              IAMs_20   IAMs_20   19 26 26.1
      comp=Z,12µm,20.0s
R50A  Paris             35.91 346 IAmb      IAmb      19 10 58.0
      comp=Z,111nm,0.8s
T45A  Paducah           35.98 340 IAMs_20   IAMs_20   19 28 22.1
      comp=Z,9µm,20.0s
DRIO  Del Rio           36.03 319 IAmb      IAmb      19 10 59.2
      comp=Z,293nm,1.4s
P57A  Homestead Farm    36.06 355 IAmb      IAmb      19 11 02.9
      comp=Z,306nm,1.1s
LCAR  Lake Charles      36.07 336 IAmb      IAmb      19 10 59.6
      comp=Z,360nm,1.1s
R49A  Shelbyville       36.13 345 IAmb      IAmb      19 11 01.0
      comp=Z,216nm,1.3s
R49A                              IAMs_20   IAMs_20   19 26 25.5
      comp=Z,13µm,20.0s
Q52A  Bidwell           36.13 349 IAmb      IAmb      19 11 00.8
      comp=Z,271nm,0.9s
Q52A                              IAMs_20   IAMs_20   19 26 13.2
      comp=Z,14µm,22.0s
VA03  San Esteban       36.16 175 P         P         19 10 56.2 +2.3
VA03                              IAMs_20   IAMs_20   19 28 02.9
      comp=Z,13µm,19.0s
BRDY  Brady             36.26 323 IAmb      IAmb      19 11 01.0
      comp=Z,429nm,1.3s
FCAR  Ozark Folk Cen    36.31 335 IAmb      IAmb      19 11 01.2
      comp=Z,153nm,0.9s
VA01  Torpederas        36.33 176 IAMs_20   IAMs_20   19 28 04.7
      comp=Z,10µm,18.0s
WCI   Wyandotte Cave    36.37 344 P         P         19 10 55.3 -0.2
WCI                               IAmb      IAmb      19 10 59.1
      comp=Z,156nm,0.9s
WCI   Wyandotte Cave    36.37 344 IAMs_20   IAMs_20   19 25 41.0
      comp=Z,11µm,22.0s
WCI   Wyandotte Cave    36.37 344 P         P         19 10 55.3 -0.2
WCI                               pmax      pmax
      comp=Z,156nm,0.9s
WCI                               MLR       MLR
      comp=Z,11µm,22.0s
Q51A  Peebles           36.40 348 IAmb      IAmb      19 11 02.6
      comp=Z,250nm,0.8s
Q51A                              IAMs_20   IAMs_20   19 25 48.6
      comp=Z,11µm,22.0s
MCWV  Mont Chateau      36.43 353 IAmb      IAmb      19 11 07.8
      comp=Z,218nm,1.2s
MCWV                              IAMs_20   IAMs_20   19 26 35.8
      comp=Z,13µm,19.0s
MVL   Millersville      36.46 357 IAmb      IAmb      19 11 05.7
      comp=Z,207nm,1.0s
P53A  Whipple           36.49 351 IAMs_20   IAMs_20   19 26 33.5
      comp=Z,13µm,20.0s
PEL   Peldehue          36.52 175 IAmb      IAmb      19 11 01.4
      comp=Z,320nm,1.1s
PEL                               IAMs_20   IAMs_20   19 26 32.6
      comp=Z,12µm,20.0s
CGM3  Cape Girardeau    36.58 339 IAmb      IAmb      19 11 02.8
      comp=Z,269nm,0.7s
FW06  Azle              36.65 326 IAmb      IAmb      19 11 05.0
      comp=Z,361nm,1.2s
PAGS  Pennsylvania G    36.70 357 IAmb      IAmb      19 11 07.8
      comp=Z,245nm,1.1s
Z35A  Perchaven, San    36.75 327 P         P         19 10 59.3 +0.5
Z35A                              IAmb      IAmb      19 11 05.8
      comp=Z,357nm,1.1s
MT05  Renca             36.77 175 IAMs_20   IAMs_20   19 26 39.0
      comp=Z,13µm,19.0s
P51A  Williamsport      36.78 348 IAmb      IAmb      19 11 05.7
      comp=Z,289nm,0.8s
S44A  Carbondale        36.80 340 IAmb      IAmb      19 11 04.8
      comp=Z,367nm,0.9s
S44A                              IAMs_20   IAMs_20   19 26 32.9
      comp=Z,9µm,21.0s
MT16  CCHEN             36.82 175 IAmb      IAmb      19 11 04.1
      comp=Z,382nm,1.1s
MT16                              IAMs_20   IAMs_20   19 27 18.5
      comp=Z,11µm,21.0s
T42A  Van Buren         36.88 337 IAmb      IAmb      19 11 06.3
      comp=Z,456nm,1.3s
T42A                              IAMs_20   IAMs_20   19 28 44.4
      comp=Z,9µm,19.0s
MT08  Bocatoma Ro       36.88 174 IAmb      IAmb      19 11 05.6
      comp=Z,403nm,1.0s
MT08                              IAMs_20   IAMs_20   19 27 11.8
      comp=Z,11µm,20.0s
MT03  Universidad Ad    36.89 175 IAMs_20   IAMs_20   19 27 20.2
      comp=Z,12µm,21.0s
PLPT  Palo Pinto        36.96 325 IAmb      IAmb      19 11 07.5
      comp=Z,353nm,1.0s
VA05  Santo Domingo     36.97 176 IAmb      IAmb      19 11 05.0
      comp=Z,573nm,1.4s
O54A  Avella            37.02 352 IAmb      IAmb      19 11 13.1
      comp=Z,325nm,1.6s
O54A                              IAMs_20   IAMs_20   19 27 04.4
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	comp=Z,14µm,20.0s						
BRNJ	Basking Ridge	37.09	359	IAmb	IAmb	19 11 11.4	
	comp=Z,232nm,1.0s						
MT13	San Alfonso	37.15	175	IAmb	IAmb	19 11 07.2	
	comp=Z,352nm,1.1s						
MT13				IAMs_20	IAMs_20	19 27 05.3	
	comp=Z,11µm,20.0s						
ITAB	Concordia	37.17	146	eP	P	19 11 01.0	-1.4
O52A	Adamsville	37.17	350	IAMs_20	IAMs_20	19 27 04.8	
	comp=Z,13µm,20.0s						
SSPA	Standing Stone	37.19	355	P	P	19 11 03.0	+0.6
SSPA				IAmb	IAmb	19 11 12.2	
	comp=Z,318nm,1.1s						
SSPA	Standing Stone	37.19	355	IAMs_20	IAMs_20	19 27 04.7	
	comp=Z,8µm,20.0s						
MT01	Popeta	37.20	176	IAMs_20	IAMs_20	19 26 39.5	
	comp=Z,12µm,20.0s						
LOOK	Love County	37.21	328	IAmb	IAmb	19 11 13.6	
	comp=Z,324nm,1.1s						
LMEL	Las Melosas	37.27	175	IAmb	IAmb	19 11 08.2	
	comp=Z,277nm,1.1s						
LMEL				IAMs_20	IAMs_20	19 26 33.2	
	comp=Z,14µm,19.0s						
P48A	Milroy	37.30	346	IAmb	IAmb	19 11 10.1	
	comp=Z,631nm,1.6s						
P48A				IAMs_20	IAMs_20	19 27 02.4	
	comp=Z,12µm,20.0s						
BLO	Bloomington	37.31	344	IAmb	IAmb	19 11 09.3	
	comp=Z,220nm,0.8s						
N58A	Sunbury	37.31	357	IAmb	IAmb	19 11 13.0	
	comp=Z,293nm,1.1s						
N62A	Caumsett State	37.34	1	IAMs_20	IAMs_20	19 26 08.2	
	comp=Z,13µm,21.0s						
OLIL	Olney	37.37	342	IAmb	IAmb	19 11 10.8	
	comp=Z,380nm,1.1s						
BO04	La Punta	37.37	175	IAmb	IAmb	19 11 08.4	
	comp=Z,474nm,1.2s						
BO04				IAMs_20	IAMs_20	19 26 58.0	
	comp=Z,11µm,18.0s						
SAND	Sanderson	37.37	318	IAmb	IAmb	19 11 12.8	
	comp=Z,229nm,1.2s						
PAL	Palisades	37.41	0	IAmb	IAmb	19 11 13.3	
	comp=Z,259nm,1.0s						
PAL				IAMs_20	IAMs_20	19 26 22.0	
	comp=Z,13µm,20.0s						
SPB	Sao Paulo	37.42	137	P	P	19 11 04.6	0.0
SPB	Sao Paulo	37.42	137	P	P	19 11 03.7	-0.9
SPB				S	S	19 16 44.1	-9.2
SPB	Sao Paulo	37.42	137	eP	P	19 11 04.9	+0.3
MGMO	Mountain Grove	37.46	336	IAmb	IAmb	19 11 12.3	
	comp=Z,518nm,1.4s						
ACSO	Alum Creek Sta	37.49	349	IAmb	IAmb	19 11 12.3	
	comp=Z,387nm,0.9s						
ACSO				IAMs_20	IAMs_20	19 26 43.4	
	comp=Z,14µm,22.0s						
WSPT	Westport, CT	37.58	1	IAMs_20	IAMs_20	19 26 14.5	
	comp=Z,13µm,21.0s						
BSCB	Bom Sucesso	37.67	131	eP	P	19 11 07.8	+0.8
N53A	Lisbon	37.69	352	IAmb	IAmb	19 11 14.7	
	comp=Z,430nm,1.6s						
N53A				IAMs_20	IAMs_20	19 27 34.4	
	comp=Z,12µm,19.0s						
PAMR	Moraine State	37.72	353	IAmb	IAmb	19 11 13.7	
	comp=Z,206nm,0.8s						
BO01	Tunca	37.73	176	IAmb	IAmb	19 11 11.5	
	comp=Z,562nm,1.4s						
BO01				IAMs_20	IAMs_20	19 29 05.9	
	comp=Z,11µm,19.0s						
O49A	Covington	37.73	347	IAmb	IAmb	19 11 14.4	
	comp=Z,589nm,1.9s						
O49A				IAMs_20	IAMs_20	19 28 31.8	
	comp=Z,11µm,18.0s						
WTFS	Witchita Falls	37.74	326	IAmb	IAmb	19 11 14.0	
	comp=Z,465nm,1.2s						
U38A	Gravette	37.77	333	IAmb	IAmb	19 11 13.8	
	comp=Z,212nm,0.8s						
PSAL	Palomas, Salto	37.78	156	eP	P	19 11 07.2	-0.3
M57A	Sunshine Farm,	37.83	356	IAmb	IAmb	19 11 18.3	
	comp=Z,358nm,0.9s						
RLO	Rose Lookout	37.84	332	IAmb	IAmb	19 11 14.1	
	comp=Z,234nm,1.1s						
CCM	Cathedral Cave	37.84	338	P	P	19 11 07.8	-0.2
CCM	Cathedral Cave	37.84	338	P	P	19 11 07.8	-0.2
CCM				pmax	pmax		
	comp=Z,310nm,0.7s						
CCM				MLR	MLR		
	comp=Z,6µm,20.0s						
M63A	Gales Ferry	37.85	3	P	P	19 11 07.4	-0.7
M63A				IAMs_20	IAMs_20	19 27 05.5	
	comp=Z,11µm,19.0s						
P46A	Rosedale	37.92	344	IAMs_20	IAMs_20	19 26 29.0	
	comp=Z,12µm,22.0s						
W35A	Tecumseh	37.94	329	IAmb	IAmb	19 11 15.7	
	comp=Z,321nm,1.1s						
O48B	Farmland	37.98	346	IAmb	IAmb	19 11 14.6	
	comp=Z,210nm,0.7s						
O48B				IAMs_20	IAMs_20	19 27 32.5	
	comp=Z,8µm,20.0s						
KSPA	Keystone Colle	37.99	358	IAmb	IAmb	19 11 18.6	
	comp=Z,303nm,1.0s						
PET01	Itanhaem-SP	37.99	138	eP	P	19 11 09.9	+0.4
TUL3	Leonard	38.00	331	IAmb	IAmb	19 11 16.1	
	comp=Z,355nm,0.9s						
SGCY	Sterling City	38.01	321	IAmb	IAmb	19 11 16.0	
	comp=Z,185nm,1.1s						
X34A	Smith Ranch, M	38.02	327	IAmb	IAmb	19 11 16.3	
	comp=Z,388nm,1.3s						
TXAR	Lajitas Array	38.04	316	P	P	19 11 11.3	+1.4
	comp=Z,49nm,1.1s,baz=135,slow=8.3,SNR=122						
TXAR				PcP	PcP	19 13 27.3	+1.8
	comp=Z,24nm,0.8s,baz=142,slow=6.4,SNR=6.8						
	comp=Z,49nm,1.1s						
TXAR	Lajitas Array	38.04	316	P	P	19 11 10.7	+0.7
N51A	Ashland	38.05	350	IAmb	IAmb	19 11 16.2	
	comp=Z,310nm,0.8s						
N51A				IAMs_20	IAMs_20	19 27 31.8	
	comp=Z,14µm,21.0s						
NBTA	Tacaratu-PE	38.09	109	eP	P	19 11 11.1	+0.6
M65A	Busby, Falmout	38.10	4	IAMs_20	IAMs_20	19 27 18.8	
	comp=Z,8µm,19.0s						
M65A	Busby, Falmout	38.10	4	P	P	19 11 10.3	+0.2
	baz=185						
NBPA	Parau_RN	38.12	104	eP	P	19 11 11.0	+0.3
HPIG		38.13	311	IAmb	IAmb	19 11 18.8	
	comp=Z,245nm,1.2s						
KSCT	Kent School, K	38.13	1	IAmb	IAmb	19 11 19.5	
	comp=Z,349nm,1.1s						
UCCT	U. Connecticut	38.24	2	IAmb	IAmb	19 11 21.2	
	comp=Z,155nm,0.9s						
PAOC	Oil Creek Stat	38.24	353	IAmb	IAmb	19 11 18.7	
	comp=Z,236nm,0.9s						
FNO	Franklin	38.29	329	IAmb	IAmb	19 11 18.0	
	comp=Z,420nm,1.3s						
S39A	Bolivar	38.35	335	IAMs_20	IAMs_20	19 30 51.1	
	comp=Z,8µm,19.0s						
APMT	Aspermont	38.37	324	IAmb	IAmb	19 11 19.3	
	comp=Z,314nm,1.6s						
N49A	Columbus Grove	38.40	348	IAmb	IAmb	19 11 19.2	
	comp=Z,328nm,1.0s						
N49A				IAMs_20	IAMs_20	19 27 00.4	
	comp=Z,13µm,22.0s						
OKCSW	OKLAHOMA CITY	38.43	329	IAmb	IAmb	19 11 17.3	
	comp=Z,240nm,0.8s						
R40A	Maddies Statio	38.44	337	IAmb	IAmb	19 11 19.5	
	comp=Z,216nm,0.7s						
R40A				IAMs_20	IAMs_20	19 29 42.5	
	comp=Z,8µm,19.0s						
L64A	Middleborough	38.45	4	IAMs_20	IAMs_20	19 27 30.3	
	comp=Z,9µm,20.0s						
M52A	Chesterland	38.49	351	IAmb	IAmb	19 11 21.2	
	comp=Z,210nm,1.1s						
M52A				IAMs_20	IAMs_20	19 28 08.4	
	comp=Z,10µm,20.0s						
PARB	Paraibuna	38.50	135	eP	P	19 11 13.8	-0.1
SFIN	Lafayette	38.59	344	IAmb	IAmb	19 11 19.2	
	comp=Z,138nm,0.7s						
SFIN				IAMs_20	IAMs_20	19 26 59.9	
	comp=Z,10µm,21.0s						
L59A	Walton	38.60	359	IAmb	IAmb	19 11 23.7	
	comp=Z,309nm,1.2s						
BINY	Binghamton	38.64	358	IAmb	IAmb	19 11 24.3	
	comp=Z,312nm,1.1s						
WMOK	Wichita Mounta	38.64	327	IAmb	IAmb	19 11 20.9	
	comp=Z,313nm,1.4s						
M50A	Fremont	38.64	349	IAmb	IAmb	19 11 22.2	
	comp=Z,381nm,1.1s						
M50A				IAMs_20	IAMs_20	19 27 39.6	
	comp=Z,12µm,21.0s						
P43A	Skaggs, Pawnee	38.64	341	P	P	19 11 15.1	+0.4
QUOK	Quay	38.66	330	IAmb	IAmb	19 11 21.1	
	comp=Z,421nm,1.3s						
L56A	Greenwood	38.66	356	IAmb	IAmb	19 11 24.3	
	comp=Z,282nm,1.1s						
L56A				IAMs_20	IAMs_20	19 26 11.4	
	comp=Z,9µm,22.0s						
SN07	Snyder 07	38.67	323	IAmb	IAmb	19 11 21.8	
	comp=Z,888nm,1.9s						
MNHN	Monahans	38.67	319	IAmb	IAmb	19 11 21.9	
	comp=Z,334nm,1.5s						
N47A	Urbana	38.70	346	IAmb	IAmb	19 11 20.5	
	comp=Z,163nm,0.8s						
N47A				IAMs_20	IAMs_20	19 27 54.6	
	comp=Z,11µm,21.0s						
OK029	Liberty Lake	38.74	329	IAmb	IAmb	19 11 21.7	
	comp=Z,527nm,1.2s						
BCX	Boston College	38.83	4	IAmb	IAmb	19 11 25.5	
	comp=Z,272nm,1.0s						
BCX				IAMs_20	IAMs_20	19 28 03.3	
	comp=Z,9µm,20.0s						
WES	Weston	38.87	3	IAMs_20	IAMs_20	19 27 34.3	
	comp=Z,10µm,20.0s						
ERPA	Erie	38.87	353	IAmb	IAmb	19 11 24.7	
	comp=Z,160nm,0.8s						
ERPA				IAMs_20	IAMs_20	19 27 42.3	
	comp=Z,11µm,20.0s						
L61B	Northampton	38.88	2	IAmb	IAmb	19 11 25.6	
	comp=Z,203nm,1.0s						
L61B				IAMs_20	IAMs_20	19 27 49.6	
	comp=Z,10µm,20.0s						
NBIT	Itapeh - BA	38.94	119	eP	P	19 11 19.4	+1.9
OK048	Pawnee Station	38.97	330	P	P	19 11 17.4	-0.1
OK048				IAmb	IAmb	19 11 23.8	
	comp=Z,476nm,1.3s						
HRV	Adam Dziewonsk	38.98	3	P	P	19 11 17.7	+0.2
HRV				IAmb	IAmb	19 11 27.0	
	comp=Z,345nm,1.1s						
HRV				IAMs_20	IAMs_20	19 27 57.2	
	comp=Z,12µm,20.0s						
HRV	Adam Dziewonsk	38.98	3	P	P	19 11 17.7	+0.2
HRV				pmax	pmax		
	comp=Z,345nm,1.1s						
HRV				MLR	MLR		
	comp=Z,12µm,20.0s						
OK051	E0350 and S346	38.98	330	IAmb	IAmb	19 11 24.0	
	comp=Z,715nm,1.4s						
CPSB	Cacapava Do Su	39.04	151	eP	P	19 11 17.4	-0.9
CMC01	Camacan, BA	39.05	119	eP	P	19 11 18.4	-0.1
ML02	Panimavida	39.07	176	IAmb	IAmb	19 11 50.9	
	comp=Z,273nm,1.1s						
ML02				IAMs_20	IAMs_20	19 27 55.4	
	comp=Z,8µm,18.0s						
K62A	Royalston	39.10	2	IAmb	IAmb	19 11 28.0	
	comp=Z,432nm,1.1s						
K62A				IAMs_20	IAMs_20	19 28 04.7	
	comp=Z,9µm,20.0s						
TRY	Troy	39.14	1	P	P	19 11 18.8	0.0
TRY				IAmb	IAmb	19 11 28.5	
	comp=Z,258nm,1.1s						
TRY				IAMs_20	IAMs_20	19 27 22.6	
	comp=Z,12µm,21.0s						
T35A	Sooner Cattle	39.15	331	IAmb	IAmb	19 11 25.3	
	comp=Z,760nm,1.4s						
SJMB	Sao Joao De Ma	39.22	125	eP	P	19 11 20.2	+0.4
MMNY	Mt. Morris Dam	39.28	356	IAmb	IAmb	19 11 29.1	
	comp=Z,498nm,1.6s						
RCBR	Riachuelo	39.31	103	P	P	19 11 20.2	-0.6
RCBR	Riachuelo	39.31	103	P	P	19 11 20.2	-0.6
RCBR				pmax	pmax		
	comp=Z,42nm,1.0s						
RCBR				MLR	MLR		
	comp=Z,19µm,21.0s						
RCBR	Riachuelo	39.31	103	P	P	19 11 20.9	+0.1
RCBR				S	S	19 17 16.1	-6.2
RCBR	Riachuelo	39.31	103	eP	P	19 11 21.4	+0.7
GUA01	Guaratinga, BA	39.35	121	eP	P	19 11 21.2	+0.2
BLOK	Blackwell	39.37	330	IAmb	IAmb	19 11 27.2	
	comp=Z,461nm,1.4s						
HDIL	Hopedale	39.40	342	IAMs_20	IAMs_20	19 30 23.5	
	comp=Z,7µm,18.0s						
VAS01	Vassouras-RJ	39.43	132	eP	P	19 11 22.6	+1.0
P40A	Paris	39.43	338	IAMs_20	IAMs_20	19 29 01.7	
	comp=Z,8µm,20.0s						
CNLB	Canela	39.50	147	eP	P	19 11 20.6	-1.5
CROK	Carrier	39.56	329	IAmb	IAmb	19 11 28.5	
	comp=Z,341nm,1.1s						
AAM	Ann Arbor	39.62	349	IAmb	IAmb	19 11 31.8	
	comp=Z,386nm,1.6s						
SMWD	Samnorwood	39.72	326	IAmb	IAmb	19 11 30.6	
	comp=Z,266nm,1.0s						
MEDO	Medina	39.75	355	IAmb	IAmb	19 11 30.9	
	comp=Z,278nm,0.9s						
J61A	Chester	39.77	2	P	P	19 11 24.7	+0.5
J61A				IAMs_20	IAMs_20	19 28 36.4	
	comp=Z,8µm,20.0s						
M44A	Midewin, Midew	39.80	344	IAMs_20	IAMs_20	19 27 47.7	
	comp=Z,12µm,22.0s						
J55A	Hilton	39.80	356	IAmb	IAmb	19 11 31.1	
	comp=Z,209nm,0.8s						
VHRN	Van Horn	39.82	316	P	P	19 11 24.9	0.0
VHRN				IAmb	IAmb	19 11 32.2	
	comp=Z,280nm,1.2s						
J57A	Williamstown	39.84	358	IAMs_20	IAMs_20	19 27 46.6	
	comp=Z,9µm,21.0s						
J59A	Piesco	39.87	360	IAmb	IAmb	19 11 34.3	
	comp=Z,322nm,1.3s						
J59A				IAMs_20	IAMs_20	19 27 38.1	
	comp=Z,10µm,20.0s						
K50A	Casco	39.90	350	IAmb	IAmb	19 11 32.4	
	comp=Z,557nm,1.1s						
K50A				IAMs_20	IAMs_20	19 28 38.7	
	comp=Z,11µm,21.0s						
L46A	Eue Claire	39.92	346	IAmb	IAmb	19 11 37.1	
	comp=Z,354nm,1.1s						
L46A				IAMs_20	IAMs_20	19 28 41.8	
	comp=Z,10µm,21.0s						
OK038	West end E0370	39.93	329	IAmb	IAmb	19 11 31.6	
	comp=Z,861nm,1.9s						
ELIS	Ellis County	39.97	327	IAmb	IAmb	19 11 32.6	
	comp=Z,603nm,1.3s						
BI02	San Fabin de	39.98	176	P	P	19 11 27.3	+1.3
BI02				IAmb	IAmb	19 11 30.4	
	comp=Z,698nm,1.9s						
BI02				IAMs_20	IAMs_20	19 30 39.4	
	comp=Z,12µm,21.0s						
BI05	Punta Hualpn	39.98	179	P	P	19 11 26.6	+0.6
BI05				IAmb	IAmb	19 11 30.2	
	comp=Z,560nm,1.8s						
BI05				IAMs_20	IAMs_20	19 26 35.7	
	comp=Z,8µm,20.0s						
SLBS	Sierra La Lagu	39.99	303	P	P	19 11 27.0	+0.6
SLBS				IAmb	IAmb	19 11 35.4	
	comp=Z,323nm,1.3s						
N41A	Harden Midland	40.05	340	P	P	19 11 26.2	-0.3
N41A				IAmb	IAmb	19 11 31.1	
	comp=Z,326nm,0.9s						
N41A				IAMs_20	IAMs_20	19 31 03.8	
	comp=Z,7µm,18.0s						
P38A	Dawn	40.08	337	P	P	19 11 26.2	-0.6
KAN08	Anthony NE Sta	40.11	330	IAmb	IAmb	19 11 33.4	
	comp=Z,308nm,1.2s						
DUB01	Friburgo-RJ	40.12	131	eP	P	19 11 28.4	+1.0
HNH	Hanover	40.14	2	P	P	19 11 26.6	-0.6
HNH				IAMs_20	IAMs_20	19 28 36.1	
	comp=Z,9µm,20.0s						
NOKA	Waynoka	40.15	328	P	P	19 11 27.3	-0.1
RIB01	Linhares ES	40.17	126	eP	P	19 11 28.6	+0.8
GDL2	Guadalupe Moun	40.27	319	P	P	19 11 29.1	+0.5
I62A	Tamworth	40.35	3	IAMs_20	IAMs_20	19 28 38.6	
	comp=Z,9µm,20.0s						
NCB	Newcomb	40.37	360	IAmb	IAmb	19 11 38.5	
	comp=Z,438nm,1.2s						
AMTX	Amarillo	40.39	324	IAmb	IAmb	19 11 36.2	
	comp=Z,260nm,0.7s						
LPIG	La Paz	40.46	304	LR	LR	19 31 15.6	
	comp=Z,5µm,18.0s,baz=112,slow=41						
CPRX	Cap Rock	40.48	320	P	P	19 11 30.9	+0.6
L44A	Lake County Fo	40.49	344	IAMs_20	IAMs_20	19 28 40.1	
	comp=Z,8µm,21.0s						
CAM01	Campos-RJ	40.52	130	eP	P	19 11 31.1	+0.4
I63A	Otisfield	40.58	4	P	P	19 11 30.5	-0.3
I63A				IAmb	IAmb	19 11 40.0	
	comp=Z,248nm,0.9s						
I63A				IAMs_20	IAMs_20	19 28 23.4	
	comp=Z,8µm,20.0s						
ALF01	Guarapari-ES	40.58	127	eP	P	19 11 31.6	+0.4
MNTX	Cornudas Mount	40.64	317	IAmb	IAmb	19 11 39.0	
	comp=Z,453nm,1.2s						
LBNH	Lisbon	40.69	2	IAmb	IAmb	19 11 41.2	
	comp=Z,274nm,1.0s						
LBNH				IAMs_20	IAMs_20	19 29 00.6	
	comp=Z,10µm,19.0s						
VT1	Waterbury	40.75	2	IAMs_20	IAMs_20	19 29 16.0	
	comp=Z,9µm,20.0s						
L42A	Oliver, Polo	40.84	342	IAmb	IAmb	19 11 39.8	
	comp=Z,588nm,1.7s						
L42A				IAMs_20	IAMs_20	19 31 17.5	
	comp=Z,10µm,18.0s						
ABR01	Abrolhos, BA	40.92	123	eP	P	19 11 33.5	-0.6
KSU1	Kansas State U	40.95	333	IAmb	IAmb	19 11 39.8	
	comp=Z,364nm,0.9s						
N38A	Joes South For	40.98	338	IAMs_20	IAMs_20	19 30 09.6	
	comp=Z,8µm,20.0s						
LONY	Lake Ozonia	41.02	360	IAmb	IAmb	19 11 42.0	
	comp=Z,441nm,1.4s						
LONY				IAMs_20	IAMs_20	19 28 22.6	
	comp=Z,10µm,20.0s						
H62A	Milan	41.06	3	IAMs_20	IAMs_20	19 29 01.3	
	comp=Z,10µm,20.0s						
I49A	Point Hope	41.06	350	IAmb	IAmb	19 11 41.9	
	comp=Z,435nm,1.2s						
I49A				IAMs_20	IAMs_20	19 29 45.6	
	comp=Z,10µm,19.0s						
K43A	Burlington	41.10	344	P	P	19 11 35.1	-0.1
K43A				IAmb	IAmb	19 11 45.9	
	comp=Z,230nm,1.2s						
K43A				IAMs_20	IAMs_20	19 28 59.1	
	comp=Z,9µm,22.0s						
WVL	Waterville	41.16	5	IAmb	IAmb	19 11 45.0	
	comp=Z,232nm,1.2s						
WVL				IAMs_20	IAMs_20	19 28 37.8	
	comp=Z,7µm,20.0s						
L40A	Anamosa	41.38	341	IAmb	IAmb	19 11 42.1	
	comp=Z,199nm,0.9s						
L40A				IAMs_20	IAMs_20	19 32 03.1	
	comp=Z,8µm,18.0s						
SADO	Sadowa	41.40	355	IAmb	IAmb	19 11 45.1	
	comp=Z,758nm,1.8s						
R32A	Long Quarter,	41.41	330	IAmb	IAmb	19 11 44.0	
	comp=Z,422nm,1.3s						
EPT	El Paso	41.45	317	IAmb	IAmb	19 11 44.9	
	comp=Z,347nm,1.8s						
EMMW	East Machias	41.53	7	IAmb	IAmb	19 11 47.6	
	comp=Z,195nm,0.9s						
EMMW				IAMs_20	IAMs_20	19 27 40.4	
	comp=Z,12µm,22.0s						
G62A	West of Eustis	41.74	4	IAmb	IAmb	19 11 50.0	
	comp=Z,402nm,1.0s						
G62A				IAMs_20	IAMs_20	19 28 59.3	
	comp=Z,8µm,20.0s						
I45A	Fountain	41.82	347	IAmb	IAmb	19 11 46.8	
	comp=Z,184nm,0.7s						
I45A				IAMs_20	IAMs_20	19 31 06.1	
	comp=Z,9µm,18.0s						
JFWS	Jewell Farm	41.84	342	IAMs_20	IAMs_20	19 29 14.1	
	comp=Z,12µm,22.0s						
JFWS	Jewell Farm	41.84	342	IAmb	IAmb	19 11 45.7	
	comp=Z,244nm,0.7s						
PKME	Peaks-Kenny Pk	41.88	5	IAMs_20	IAMs_20	19 28 58.0	
	comp=Z,9µm,20.0s						
SCIA	State Center	41.94	339	IAMs_20	IAMs_20	19 31 47.9	
	comp=Z,8µm,20.0s						
N35A	Tabor	41.99	335	IAmb	IAmb	19 11 47.9	
	comp=Z,414nm,1.0s						
N35A				IAMs_20	IAMs_20	19 31 46.6	
	comp=Z,9µm,20.0s						
G65A	Princeton	42.00	7	IAmb	IAmb	19 11 52.7	
	comp=Z,351nm,1.1s						
GGN	Saint George	42.02	8	IAmb	IAmb	19 11 51.8	
	comp=Z,275nm,1.1s						
HAL	Halifax	42.08	11	IAmb	IAmb	19 11 49.7	
	comp=Z,602nm,1.9s						
RTBA	Rita Blanca	42.09	325	IAmb	IAmb	19 11 50.5	
	comp=Z,198nm,1.1s						
BUKO	Buck Lake	42.09	355	IAmb	IAmb	19 11 50.8	
	comp=Z,423nm,1.5s						
CBKS	Cedar Bluff	42.22	330	P	P	19 11 44.5	0.0
CBKS	Cedar Bluff	42.22	330	P	P	19 11 44.5	0.0
CBKS				pmax	pmax		
	comp=Z,731nm,1.4s						
CBKS				MLR	MLR		
	comp=Z,4µm,22.0s						
GLMI	Grayling	42.24	349	IAmb	IAmb	19 11 54.0	
	comp=Z,249nm,0.8s						
I42A	Draeger Farm,	42.35	344	IAMs_20	IAMs_20	19 29 47.4	
	comp=Z,9µm,21.0s						
F64A	Sherman	42.57	6	IAMs_20	IAMs_20	19 28 57.0	
	comp=Z,10µm,20.0s						
H43A	Windswept, Lux	42.60	346	IAMs_20	IAMs_20	19 30 11.7	
	comp=Z,10µm,20.0s						
TRQA	Tornquist	42.80	166	P	P	19 11 49.3	+0.2
TRQA	Tornquist	42.80	166	P	P	19 11 49.3	+0.2
TRQA				pmax	pmax		
	comp=Z,120nm,1.2s						
TRQA				MLR	MLR		
	comp=Z,16µm,20.0s						
I40A	Norwalk	42.84	342	IAmb	IAmb	19 11 55.4	
	comp=Z,700nm,1.8s						
I40A				IAMs_20	IAMs_20	19 30 05.5	
	comp=Z,11µm,21.0s						
LR03	Panguipulli	42.88	178	IAMs_20	IAMs_20	19 31 08.4	
	comp=Z,9µm,18.0s						
LMN	Caledonia Moun	43.04	10	IAmb	IAmb	19 11 59.6	
	comp=Z,173nm,0.9s						
Y22A	Socorro	43.06	319	IAmb	IAmb	19 11 59.5	
	comp=Z,298nm,1.3s						
LR04	Corral	43.10	179	IAmb	IAmb	19 11 56.1	
	comp=Z,874nm,2.0s						
LR04				IAMs_20	IAMs_20	19 30 51.4	
	comp=Z,7µm,19.0s						
319A	Douglas	43.18	314	IAmb	IAmb	19 12 01.0	
	comp=Z,505nm,1.3s						
E62A	Clayton Lake	43.21	5	IAmb	IAmb	19 12 01.7	
	comp=Z,305nm,1.0s						
E62A				IAMs_20	IAMs_20	19 29 19.1	
	comp=Z,7µm,20.0s						
L34A	Svendsen Farm,	43.21	336	IAMs_20	IAMs_20	19 32 34.1	
	comp=Z,7µm,20.0s						
GBN	Guysborough	43.26	13	IAmb	IAmb	19 11 58.6	
	comp=Z,338nm,1.4s						
ABQ	Albuquerque	43.35	320	IAmb	IAmb	19 12 01.0	
	comp=Z,169nm,1.0s						
ANMO	Albuquerque	43.35	320	LR	LR	19 35 46.3	
	comp=Z,3µm,18.2s,baz=133,slow=44						
ANMO	Albuquerque	43.35	320	P	P	19 11 55.4	+1.4
ANMO				IAmb	IAmb	19 12 01.0	
	comp=Z,158nm,0.9s						
ANMO	Albuquerque	43.35	320	c iP	P	19 11 55.1	+1.2
ANMO				pmax	pmax		
	comp=Z,195nm,1.0s						
TASM	ASL Pad, Albuq	43.36	320	IAmb	IAmb	19 12 01.0	
	comp=Z,167nm,0.9s						
TASM	ASL Pad, Albuq	43.36	320	IAmb	IAmb	19 12 01.0	
	comp=Z,168nm,0.9s						
TASM	ASL Pad, Albuq	43.36	320	IAmb	IAmb	19 12 01.0	
	comp=Z,169nm,0.9s						
TASM	ASL Pad, Albuq	43.36	320	IAmb	IAmb	19 12 01.0	
	comp=Z,173nm,0.9s						
T25A	Trinidad	43.54	324	IAmb	IAmb	19 12 05.0	
	comp=Z,214nm,1.1s						
T25A				IAMs_20	IAMs_20	19 30 40.0	
	comp=Z,7µm,22.0s						
E46A	Sault Ste Mari	43.67	350	IAMs_20	IAMs_20	19 30 44.7	
	comp=Z,10µm,21.0s						
D62A	Allapoint, All	43.71	5	IAmb	IAmb	19 12 05.6	
	comp=Z,288nm,0.9s						
D62A				IAMs_20	IAMs_20	19 30 15.2	
	comp=Z,8µm,20.0s						
I37A	Lemond, Waseca	43.85	340	IAMs_20	IAMs_20	19 33 40.4	
	comp=Z,6µm,19.0s						
F42A	Maple Grove Fa	43.90	346	IAMs_20	IAMs_20	19 31 11.0	
	comp=Z,9µm,20.0s						
G40A	Rib Lake	43.98	344	IAmb	IAmb	19 12 05.1	
	comp=Z,248nm,1.1s						
G40A				IAMs_20	IAMs_20	19 30 49.5	
	comp=Z,9µm,21.0s						
PLCA	Paso Flores	44.07	176	P	P	19 12 01.1	+1.7
	comp=Z,45nm,0.8s,baz=351,slow=9.0,SNR=68						
PLCA				LR	LR	19 30 44.0	
	comp=Z,7µm,19.8s,baz=5.5,slow=36						
PLCA				PKP2ab	P'P'ab	19 44 46.9	-3.3
	comp=Z,1.2nm,0.7s,baz=280,slow=4.9,SNR=3.1						
	comp=Z,45nm,0.8s						
PLCA	Paso Flores	44.07	176	eP	P	19 11 59.0	-0.5

LMQ	**La Malbaie**	**44.08**	**4**	IAmb	IAmb	19 12 08.4	
	comp=Z,197nm,0.9s						
BATG	**Bathurst New B**	**44.24**	**8**	IAmb	IAmb	19 12 09.5	
	comp=Z,262nm,1.0s						
LDAQ	**Lac Daran**	**44.44**	**3**	P	**P**	**19 12 03.1**	**+0.9**
LDAQ				IAmb	IAmb	19 12 11.2	
	comp=Z,216nm,0.9s						
SDCO	**Great Sand Dun**	**44.59**	**324**	IAmb	IAmb	19 12 11.8	
	comp=Z,136nm,1.0s						
LL05	**Los Muermos**	**44.62**	**179**	IAMs_20	IAMs_20	19 30 08.7	
	comp=Z,6µm,18.0s						
TUC	**Tucson**	**44.76**	**314**	P	**P**	**19 12 06.3**	**+1.2**
TUC				IAmb	IAmb	19 12 13.1	
	comp=Z,411nm,1.5s						
TUC	**Tucson**	**44.76**	**314**	P	**P**	**19 12 06.4**	**+1.2**
TUC				pmax	pmax		
	comp=Z,411nm,1.5s						
TUC				MLR	MLR		
	comp=Z,6µm,21.0s						
ECSD	**EROS Data Cent**	**44.79**	**337**	IAMs_20	IAMs_20	19 32 11.6	
	comp=Z,7µm,20.0s						
ECSD	**EROS Data Cent**	**44.79**	**337**	IAmb	IAmb	19 12 10.6	
	comp=Z,318nm,1.1s						
K30B	**Basset**	**45.18**	**333**	IAMs_20	IAMs_20	19 33 44.3	
	comp=Z,7µm,21.0s						
RPN	**Rapa Nui**	**45.55**	**226**	LR	LR	19 27 04.3	
	comp=Z,5µm,20.2s,baz=55,slow=30						
E38A	**The Farm, Brul**	**45.59**	**343**	IAmb	IAmb	19 12 17.6	
	comp=Z,288nm,1.2s						
LL01	**San Ignacio de**	**45.62**	**178**	P	**P**	**19 12 12.7**	**+1.1**
LL07	**Hotel Espejo d**	**46.05**	**179**	IAMs_20	IAMs_20	19 32 56.4	
	comp=Z,6µm,18.0s						
ICQ	**Pointe Anglais**	**46.30**	**6**	IAmb	IAmb	19 12 25.4	
	comp=Z,232nm,1.1s						
SUSD	**Miller**	**46.32**	**335**	IAMs_20	IAMs_20	19 34 20.3	
	comp=Z,8µm,21.0s						
GO07	**Milladeo Hill,**	**46.33**	**179**	IAMs_20	IAMs_20	19 32 53.8	
	comp=Z,8µm,18.0s						
X16A	**Lo Mia Camp, P**	**46.36**	**316**	IAmb	IAmb	19 12 25.5	
	comp=Z,182nm,0.9s						
LL02	**Futaleuf**	**46.45**	**178**	IAmb	IAmb	19 12 21.7	
	comp=Z,190nm,1.4s						
LL02				IAMs_20	IAMs_20	19 31 43.9	
	comp=Z,7µm,18.0s						
F33A	**5 Mile Ranch,**	**46.45**	**339**	IAmb	IAmb	19 12 22.7	
	comp=Z,190nm,0.9s						
F33A				IAMs_20	IAMs_20	19 34 53.5	
	comp=Z,7µm,19.0s						
EYMN	**Ely**	**46.79**	**344**	IAMs_20	IAMs_20	19 32 55.8	
	comp=Z,7µm,20.0s						
PV02	**Paradox Valley**	**46.83**	**322**	P	**P**	**19 12 22.9**	**+1.3**
PV13	**Radium Mtn., P**	**46.85**	**322**	IAmb	IAmb	19 12 29.5	
	comp=Z,190nm,1.1s						
PV07	**Paradox Valley**	**46.92**	**323**	IAmb	IAmb	19 12 31.4	
	comp=Z,239nm,1.4s						
PV20	**West Nyswonger**	**47.06**	**322**	P	**P**	**19 12 24.2**	**+0.9**
PV22	**Blue Mesa, Par**	**47.07**	**323**	IAmb	IAmb	19 12 32.3	
	comp=Z,248nm,1.4s						
PV14	**Lion Creek, Pa**	**47.11**	**322**	IAmb	IAmb	19 12 33.9	
	comp=Z,203nm,1.7s						
PV23	**Carpenter Ridg**	**47.15**	**322**	IAmb	IAmb	19 12 32.2	
	comp=Z,152nm,1.0s						
113A	**Mohawk Valley,**	**47.15**	**313**	IAmb	IAmb	19 12 31.9	
	comp=Z,288nm,1.5s						
PV21	**Cone Mtn., Par**	**47.20**	**322**	IAmb	IAmb	19 12 31.1	
	comp=Z,272nm,1.7s						
Y14A	**Wickenburg**	**47.20**	**315**	IAmb	IAmb	19 12 32.4	
	comp=Z,132nm,1.0s						
HAYD	**Hayden**	**47.47**	**326**	IAmb	IAmb	19 12 48.5	
	comp=Z,296nm,1.8s						
AY01	**Puyuhuapi**	**47.65**	**179**	IAMs_20	IAMs_20	19 35 15.8	
	comp=Z,8µm,19.0s						
DRLN	**Deer Lake**	**47.82**	**15**	IAmb	IAmb	19 12 37.2	
	comp=Z,184nm,0.9s						
VTX	**Valle De La Tr**	**48.01**	**310**	IAmb	IAmb	19 12 38.6	
	comp=Z,163nm,1.2s						
RSSD	**Black Hills**	**48.34**	**331**	P	**P**	**19 12 33.6**	**+0.4**
RSSD	**Black Hills**	**48.34**	**331**	P	**P**	**19 12 33.6**	**+0.4**
RSSD				pmax	pmax		
	comp=Z,1µm,1.5s						
RSSD				MLR	MLR		
	comp=Z,2µm,19.0s						
ESJX	**Sierra Juarez**	**48.41**	**311**	IAmb	IAmb	19 12 42.1	
	comp=Z,163nm,1.4s						
W13A	**Hualapai Mount**	**48.42**	**316**	IAmb	IAmb	19 12 42.5	
	comp=Z,212nm,1.5s						
K22A	**Casper**	**48.53**	**328**	IAmb	IAmb	19 12 41.8	
	comp=Z,178nm,1.1s						
P18A	**Preston Nutter**	**48.64**	**323**	IAmb	IAmb	19 12 43.4	
	comp=Z,119nm,1.0s						
E28A	**Huff**	**48.77**	**336**	IAMs_20	IAMs_20	19 35 03.9	
	comp=Z,7µm,21.0s						
NEE2	**Needles Airpor**	**48.77**	**315**	IAmb	IAmb	19 12 44.4	
	comp=Z,174nm,1.3s						
Q16A	**Castle Valley**	**48.77**	**321**	IAmb	IAmb	19 12 46.7	
	comp=Z,185nm,1.4s						
BC3	**Big Chuckawall**	**48.82**	**313**	IAmb	IAmb	19 12 44.9	
	comp=Z,304nm,1.3s						
BC3				IAMs_20	IAMs_20	19 35 13.9	
	comp=Z,6µm,22.0s						
COYC	**Coyhaique**	**48.82**	**178**	IAmb	IAmb	19 12 39.6	
	comp=Z,98nm,0.8s						
IRM	**Iron Mountain**	**48.84**	**314**	IAMs_20	IAMs_20	19 35 41.4	
	comp=Z,7µm,21.0s						
P17A	**Butcher Ranch,**	**48.84**	**322**	P	**P**	**19 12 37.6**	**+0.5**
P17A				IAmb	IAmb	19 12 43.9	
	comp=Z,228nm,1.0s						
CCX	**Cicese**	**48.89**	**310**	IAmb	IAmb	19 12 45.5	
	comp=Z,216nm,1.2s						
MTPU	**Mount Pierson**	**48.90**	**320**	IAmb	IAmb	19 12 45.7	
	comp=Z,241nm,1.4s						
TMUT	**Trail Mountain**	**49.02**	**322**	IAmb	IAmb	19 12 45.3	
	comp=Z,122nm,1.2s						
CBX	**Cerro Bola**	**49.09**	**311**	IAmb	IAmb	19 12 47.4	
	comp=Z,174nm,1.2s						
SZCU	**Shurtz Canyon**	**49.23**	**319**	IAmb	IAmb	19 12 47.8	
	comp=Z,333nm,1.4s						
DANC	**Danby, Needles**	**49.25**	**314**	P	**P**	**19 12 41.5**	**+1.4**
DANC				IAmb	IAmb	19 12 48.2	
	comp=Z,287nm,1.2s						
DANC				IAMs_20	IAMs_20	19 36 06.1	
	comp=Z,7µm,21.0s						
BORC	**Borrego Spring**	**49.34**	**312**	IAmb	IAmb	19 12 49.0	
	comp=Z,257nm,1.5s						
MDND	**Maddock**	**49.37**	**338**	IAMs_20	IAMs_20	19 35 45.8	
	comp=Z,5µm,20.0s						
CCUT	**Cedar City**	**49.39**	**319**	IAmb	IAmb	19 12 48.8	
	comp=Z,140nm,1.2s						
PMD	**Palm Desert**	**49.49**	**313**	IAmb	IAmb	19 12 49.9	
	comp=Z,164nm,1.2s						
PFO	**Pinyon Flats O**	**49.54**	**312**	LR	LR	19 36 56.4	
	comp=Z,3µm,18.6s,baz=121,slow=40						
PFO	**Pinyon Flats O**	**49.54**	**312**	P	**P**	**19 12 43.6**	**+1.1**
PFO				IAmb	IAmb	19 12 50.5	
	comp=Z,146nm,1.2s						
PFO	**Pinyon Flats O**	**49.54**	**312**	*d i*P	**P**	**19 12 44.2**	**+1.7**
PFO				pmax	pmax		
	comp=Z,233nm,1.3s						
DPP	**Dos Picos Cty**	**49.61**	**311**	IAmb	IAmb	19 12 50.7	
	comp=Z,177nm,1.2s						
DNR	**Dunn Ranch,Anz**	**49.64**	**312**	IAmb	IAmb	19 12 51.5	
	comp=Z,273nm,1.2s						
CPE	**Camp Elliot**	**49.68**	**311**	IAmb	IAmb	19 12 51.3	
	comp=Z,204nm,1.2s						
MTPC	**Mountain Pass**	**49.79**	**315**	IAmb	IAmb	19 12 52.2	
	comp=Z,190nm,1.7s						
ULM	**Lac du Bonnet**	**50.14**	**342**	P	**P**	**19 12 46.5**	**0.0**
	comp=Z,111nm,0.9s,baz=149,slow=8.1,SNR=27						
ULM				LR	LR	19 34 40.2	
	comp=Z,8µm,21.6s,baz=148,slow=37						
	comp=Z,111nm,0.9s						
ULM	**Lac du Bonnet**	**50.14**	**342**	P	**P**	**19 12 45.6**	**-1.0**
ULM	**Lac du Bonnet**	**50.14**	**342**	*d i*P	**P**	**19 12 46.1**	**-0.5**
CTU	**Camp Tracy**	**50.20**	**323**	IAmb	IAmb	19 12 54.9	
	comp=Z,189nm,1.3s						
BW06	**Boulder Array**	**50.25**	**326**	IAmb	IAmb	19 12 54.6	
	comp=Z,161nm,1.1s						
PD31	**Pinedale Array**	**50.25**	**326**	IAmb	IAmb	19 12 54.6	
	comp=Z,177nm,1.1s						
PDAR	**Pinedale Array**	**50.25**	**326**	P	**P**	**19 12 48.8**	**+0.9**
	comp=Z,28nm,0.8s,baz=132,slow=9.5,SNR=101						
PDAR				LR	LR	19 37 16.1	
	comp=Z,2µm,21.6s,baz=119,slow=40						
	comp=Z,28nm,0.8s						
AY03	**Cochrane**	**50.49**	**179**	P	**P**	**19 12 50.9**	**+1.7**
AY03				IAmb	IAmb	19 12 53.7	
	comp=Z,294nm,1.8s						
SHOC	**Shoshone, Teco**	**50.51**	**315**	IAmb	IAmb	19 12 57.6	
	comp=Z,282nm,1.3s						
DUG	**Dugway, Tooele**	**50.55**	**322**	IAmb	IAmb	19 12 57.8	
	comp=Z,363nm,1.4s						
GSC	**Goldstone, Bar**	**50.59**	**314**	IAmb	IAmb	19 12 58.5	
	comp=Z,212nm,1.2s						
HWUT	**Hardware Ranch**	**50.65**	**324**	IAmb	IAmb	19 12 59.0	
	comp=Z,277nm,1.4s						
SPR3	**Spring Creek 3**	**50.83**	**320**	IAmb	IAmb	19 12 60.0	
	comp=Z,264nm,1.4s						
QSM	**Queen of Sheba**	**50.96**	**315**	IAmb	IAmb	19 13 00.9	
	comp=Z,171nm,1.2s						
MWC	**Mount Wilson**	**51.00**	**312**	IAmb	IAmb	19 13 01.7	
	comp=Z,329nm,1.6s						
PASC	**Pasadena Art C**	**51.07**	**312**	IAmb	IAmb	19 13 02.1	
	comp=Z,348nm,1.4s						
SACV	**Santiago Islan**	**51.09**	**74**	P	**P**	**19 12 53.3**	**-1.0**
SACV				IAmb	IAmb	19 13 02.0	
	comp=Z,145nm,1.1s						
SACV	**Santiago Islan**	**51.09**	**74**	IAMs_20	IAMs_20	19 32 38.9	
	comp=Z,5µm,19.0s						
BGU	**Big Grassy Mou**	**51.12**	**322**	IAmb	IAmb	19 13 00.9	
	comp=Z,214nm,1.0s						
WCT	**Wildcat Mounta**	**51.20**	**316**	IAmb	IAmb	19 13 03.4	
	comp=Z,228nm,1.5s						
WSHM	**Spangler Hills**	**51.23**	**314**	IAmb	IAmb	19 13 03.0	
	comp=Z,233nm,1.3s						
WSHM				IAMs_20	IAMs_20	19 36 52.5	
	comp=Z,5µm,21.0s						
LAO	**LASA Array**	**51.28**	**332**	IAmb	IAmb	19 13 01.9	
	comp=Z,195nm,1.1s						
LAO				IAMs_20	IAMs_20	19 38 50.9	
	comp=Z,5µm,18.0s						
LRMC	**Laurel Mtn Rad**	**51.31**	**314**	P	**P**	**19 12 56.9**	**+1.1**
LRMC				IAmb	IAmb	19 13 03.8	
	comp=Z,259nm,1.4s						
CLC	**China Lake**	**51.41**	**314**	IAmb	IAmb	19 13 04.1	
	comp=Z,190nm,1.5s						
TPO	**Tropico Hills**	**51.42**	**313**	IAmb	IAmb	19 13 04.5	
	comp=Z,257nm,1.5s						
HVU	**Hansel Valley**	**51.47**	**323**	IAmb	IAmb	19 13 03.8	
	comp=Z,156nm,1.1s						
SCHQ	**Schefferville**	**51.59**	**5**	P	**P**	**19 12 59.1**	**+1.6**
	comp=Z,99nm,0.7s,baz=188,slow=6.8,SNR=124						
SCHQ				LR	LR	19 34 04.0	
	comp=Z,9µm,21.6s,baz=192,slow=35						
	comp=Z,99nm,0.7s						
FXWY	**Fox Creek**	**51.63**	**326**	P	**P**	**19 12 58.1**	**-0.1**
FXWY				IAmb	IAmb	19 13 05.1	
	comp=Z,332nm,1.6s						
OSI	**Osito Audit: C**	**51.66**	**312**	P	**P**	**19 12 59.3**	**+0.8**
RLMT	**Red Lodge**	**51.67**	**329**	IAmb	IAmb	19 13 05.3	
	comp=Z,181nm,1.1s						
DGMT	**Dagmar**	**51.72**	**335**	IAMs_20	IAMs_20	19 36 20.2	
	comp=Z,6µm,21.0s						
LKWY	**Lake**	**51.89**	**328**	IAMs_20	IAMs_20	19 37 52.7	
	comp=Z,8µm,19.0s						
YNE	**Yellowstone No**	**51.98**	**328**	IAmb	IAmb	19 13 07.4	
	comp=Z,444nm,1.8s						
CWC	**Cottonwood Cre**	**52.05**	**315**	IAMs_20	IAMs_20	19 37 33.2	
	comp=Z,7µm,22.0s						
YFT	**Old Faithful**	**52.05**	**327**	IAmb	IAmb	19 13 12.2	
	comp=Z,216nm,1.2s						
ELK	**Elko**	**52.38**	**321**	LR	LR	19 39 50.9	
	comp=Z,2µm,18.1s,baz=126,slow=41						
TIN	**Tinemaha, Big**	**52.45**	**315**	IAmb	IAmb	19 13 12.6	
	comp=Z,362nm,1.2s						
YHL	**Hebgen Lake**	**52.50**	**327**	P	**P**	**19 13 06.4**	**+1.6**
NVAR	**Mina Array Bea**	**53.17**	**317**	P	**P**	**19 13 11.5**	**+1.7**
	comp=Z,96nm,0.9s,baz=132,slow=6.7,SNR=136						
NVAR				PcP	**PcP**	**19 14 19.3**	**+1.4**
	comp=Z,31nm,0.8s,baz=94,slow=3.6,SNR=4.8						
NVAR				LR	LR	19 38 30.0	
	comp=Z,4µm,22.0s,baz=124,slow=39						
	comp=Z,96nm,0.9s						
NVAR	**Mina Array Bea**	**53.17**	**317**	P	**P**	**19 13 10.9**	**+1.1**
BOZ	**Bozeman (W)**	**53.23**	**328**	IAmb	IAmb	19 13 17.2	
	comp=Z,150nm,0.9s						
MDPB	**Devils Postpil**	**53.32**	**316**	IAmb	IAmb	19 13 18.9	
	comp=Z,350nm,1.7s						
BCYI	**Bear Canyon**	**53.39**	**326**	IAmb	IAmb	19 13 19.9	
	comp=Z,359nm,1.6s						
RYN	**Ryan**	**53.42**	**317**	IAmb	IAmb	19 13 19.4	
	comp=Z,324nm,1.3s						
PKD	**Bear Valley Ra**	**53.59**	**313**	IAmb	IAmb	19 13 20.0	
	comp=Z,124nm,1.2s						
PMPB	**Monarch Peak**	**53.90**	**313**	IAmb	IAmb	19 13 22.6	
	comp=Z,263nm,1.4s						
EGMT	**Eagleton**	**53.91**	**331**	IAmb	IAmb	19 13 21.6	
	comp=Z,189nm,1.1s						
EGMT				IAMs_20	IAMs_20	19 39 03.7	
	comp=Z,5µm,20.0s						
HULI	**Fort Hunter Li**	**54.13**	**313**	IAMs_20	IAMs_20	19 40 28.5	
	comp=Z,4µm,18.0s						
PNTR	**Pine Nut**	**54.38**	**317**	IAmb	IAmb	19 13 31.8	
	comp=Z,162nm,1.2s						
GO09	**Cerro Castillo**	**54.51**	**179**	P	**P**	**19 13 20.7**	**+1.7**
GO09				IAmb	IAmb	19 13 23.5	
	comp=Z,379nm,1.8s						
SAO	**San Andreas Ge**	**54.60**	**314**	IAmb	IAmb	19 13 27.8	
	comp=Z,464nm,1.9s						
SAO				IAMs_20	IAMs_20	19 38 57.0	
	comp=Z,4µm,20.0s						
KUQ	**Kuujjuuaa**	**54.72**	**4**	P	**P**	**19 13 20.8**	**+0.4**
KUQ				IAmb	IAmb	19 13 30.6	
	comp=Z,102nm,1.0s						
MG05	**Puerto Natales**	**54.92**	**179**	P	**P**	**19 13 23.1**	**+1.2**
MG05				IAmb	IAmb	19 13 25.5	
	comp=Z,192nm,1.6s						
MHC	**Mount Hamilton**	**55.00**	**314**	P	**P**	**19 13 24.1**	**+1.1**
MHC				IAmb	IAmb	19 13 31.2	
	comp=Z,382nm,1.9s						
MHC	**Mount Hamilton**	**55.00**	**314**	P	**P**	**19 13 24.1**	**+1.1**
MHC				pmax	pmax		
	comp=Z,382nm,1.9s						
MHC				MLR	MLR		
	comp=Z,4µm,20.0s						
MSO	**Missoula**	**55.25**	**328**	IAmb	IAmb	19 13 31.6	
	comp=Z,168nm,1.4s						
MSO				IAMs_20	IAMs_20	19 41 41.5	
	comp=Z,4µm,18.0s						
JRSC	**Jasper Ridge**	**55.45**	**314**	IAmb	IAmb	19 13 34.2	
	comp=Z,293nm,1.7s						
FFC	**Flin Flon**	**55.90**	**341**	P	**P**	**19 13 28.9**	**-0.1**
FFC				IAmb	IAmb	19 13 35.1	
	comp=Z,234nm,1.2s						
FFC	**Flin Flon**	**55.90**	**341**	P	**P**	**19 13 28.9**	**-0.1**
FFC				pmax	pmax		
	comp=Z,234nm,1.3s						
FFC				MLR	MLR		
	comp=Z,9µm,22.0s						
SUTB	**Sutter Butte**	**55.94**	**316**	IAmb	IAmb	19 13 37.5	
	comp=Z,150nm,1.1s						
BMO	**Blue Mountains**	**55.95**	**324**	IAmb	IAmb	19 13 35.9	
	comp=Z,179nm,1.6s						
CVS	**Carmenet Viney**	**56.02**	**315**	IAmb	IAmb	19 13 38.0	
	comp=Z,306nm,1.4s						
MG02	**Cerro Sombrero**	**56.16**	**176**	IAMs_20	IAMs_20	19 39 51.5	
	comp=Z,7µm,18.0s						
MCCM	**Marconi Confer**	**56.23**	**315**	IAmb	IAmb	19 13 39.5	
	comp=Z,232nm,1.2s						
O03E	**Paynes Creek**	**56.44**	**317**	IAmb	IAmb	19 13 40.0	
	comp=Z,297nm,1.4s						
O03E				IAMs_20	IAMs_20	19 40 50.2	
	comp=Z,5µm,21.0s						
HATC	**Hat Creek Radi**	**56.46**	**318**	IAMs_20	IAMs_20	19 39 14.6	
	comp=Z,5µm,22.0s						
F10A	**Beach Ranch, E**	**56.55**	**325**	IAmb	IAmb	19 13 44.3	
	comp=Z,111nm,0.8s						
EFI	**East Falkland**	**56.59**	**168**	P	**P**	**19 13 35.2**	**+1.3**
EFI				IAmb	IAmb	19 13 37.0	
	comp=Z,118nm,0.8s						
EFI	**East Falkland**	**56.59**	**168**	*d i*P	**P**	**19 13 35.5**	**+1.6**
EFI				pmax	pmax		
	comp=Z,276nm,1.5s						
HOPS	**Hopland Field**	**56.73**	**315**	IAmb	IAmb	19 13 43.5	
	comp=Z,226nm,1.4s						
K05A	**Summer Lake**	**57.02**	**320**	IAmb	IAmb	19 13 45.5	
	comp=Z,235nm,1.4s						
O02D	**Mt. Diablo Mer**	**57.06**	**317**	IAmb	IAmb	19 13 43.7	
	comp=Z,150nm,1.4s						
LNOR	**Lincton Mounta**	**57.10**	**325**	IAmb	IAmb	19 13 47.3	
	comp=Z,173nm,1.0s						
DCMP	**DeCamp, Califo**	**57.12**	**316**	IAmb	IAmb	19 13 46.5	
	comp=Z,216nm,1.4s						
N02D	**Trinity Center**	**57.37**	**318**	IAmb	IAmb	19 13 45.4	
	comp=Z,124nm,1.1s						
N02D				IAMs_20	IAMs_20	19 41 08.6	
	comp=Z,4µm,21.0s						
MBO	**M'Bour**	**57.42**	**75**	IAMs_20	IAMs_20	19 36 15.8	
	comp=Z,6µm,20.0s						
PINE	**Pine Mountain**	**57.58**	**321**	P	**P**	**19 13 42.9**	**+1.4**
YPT	**Yellepit**	**57.59**	**324**	IAmb	IAmb	19 13 48.8	
	comp=Z,104nm,1.0s						
KMRM	**Mail Ridge**	**57.71**	**316**	IAMs_20	IAMs_20	19 42 53.6	
	comp=Z,4µm,20.0s						
YBH	**Yreka Blue Hor**	**57.72**	**318**	LR	LR	19 43 19.6	
	comp=Z,247nm,18.2s,baz=114,slow=41						
YBH	**Yreka Blue Hor**	**57.72**	**318**	IAmb	IAmb	19 13 48.2	
	comp=Z,151nm,1.2s						
NEW	**Newport**	**57.83**	**327**	P	**P**	**19 13 42.8**	**-0.1**
NEW				IAmb	IAmb	19 13 49.4	
	comp=Z,150nm,1.4s						
NEW	**Newport**	**57.83**	**327**	P	**P**	**19 13 42.8**	**-0.1**
NEW				pmax	pmax		
	comp=Z,150nm,1.5s						
NEW				MLR	MLR		
	comp=Z,3µm,18.0s						
KHMM	**Horse Mountain**	**58.01**	**317**	IAMs_20	IAMs_20	19 41 12.9	
	comp=Z,5µm,21.0s						
F07A	**Phinny Hill Vi**	**58.07**	**324**	IAmb	IAmb	19 13 51.2	
	comp=Z,86nm,0.9s						
HAWA	**Hanford**	**58.11**	**325**	P	**P**	**19 13 44.9**	**+0.1**
HAWA				IAmb	IAmb	19 13 51.7	
	comp=Z,116nm,1.1s						
C09A	**Chrisman Ranch**	**58.19**	**326**	IAmb	IAmb	19 13 52.6	
	comp=Z,298nm,1.4s						
BBOR	**Butler Butte**	**58.24**	**320**	IAmb	IAmb	19 13 52.3	
	comp=Z,131nm,1.2s						
WAH2	**Wahluke Slope**	**58.33**	**325**	IAmb	IAmb	19 13 55.5	
	comp=Z,78nm,0.9s						
L02F	**Cave Junction**	**58.47**	**318**	IAmb	IAmb	19 13 54.3	
	comp=Z,161nm,1.3s						
KSXB	**Camp Six Broad**	**58.54**	**318**	IAMs_20	IAMs_20	19 41 59.7	
	comp=Z,5µm,20.0s						
MXC	**Moxie City**	**58.65**	**324**	P	**P**	**19 13 49.9**	**+1.3**
MXC				IAmb	IAmb	19 13 56.5	
	comp=Z,335nm,1.7s						
EPH	**Ephrata**	**58.67**	**325**	IAmb	IAmb	19 13 57.2	
	comp=Z,783nm,1.5s						
KBO	**Bosley Butte**	**58.94**	**318**	IAMs_20	IAMs_20	19 42 04.3	
	comp=Z,5µm,20.0s						
H04D	**Lebanon**	**59.07**	**321**	IAmb	IAmb	19 14 22.6	
	comp=Z,114nm,1.0s						
KEBM	**Edson Butte**	**59.31**	**319**	IAMs_20	IAMs_20	19 42 56.0	
	comp=Z,6µm,21.0s						
COR	**Corvallis**	**59.45**	**321**	P	**P**	**19 13 55.4**	**+1.2**
COR	**Corvallis**	**59.45**	**321**	P	**P**	**19 13 55.4**	**+1.2**
COR				pmax	pmax		
	comp=Z,718nm,1.4s						
COR				MLR	MLR		
	comp=Z,2µm,18.0s						
LON	**Longmire**	**59.63**	**324**	IAmb	IAmb	19 14 02.6	
	comp=Z,273nm,1.5s						
D05A	**Enumclaw**	**59.96**	**324**	P	**P**	**19 13 57.3**	**-0.4**
MACI	**Morro de la Ar**	**60.06**	**59**	P	**P**	**19 13 56.1**	**-2.8**
FRB	**Frobisher Bay**	**60.33**	**3**	LR	LR	19 39 46.7	
	comp=Z,8µm,20.7s,baz=180,slow=36						
GNW	**Green Mountain**	**60.64**	**324**	P	**P**	**19 14 02.2**	**-0.1**
GNW				IAmb	IAmb	19 14 08.9	
	comp=Z,242nm,1.3s						
ASCN	**Ascension**	**60.72**	**101**	IAMs_20	IAMs_20	19 37 31.0	
	comp=Z,6µm,20.0s						
EOSO	**Osorio**	**60.84**	**60**	P	**P**	**19 14 04.4**	**+0.2**
IVI	**Ivigtut**	**60.90**	**14**	P	**P**	**19 14 02.9**	**-0.8**
IVI				IAmb	IAmb	19 14 09.4	
	comp=Z,153nm,1.1s						
IVI				IAMs_20	IAMs_20	19 42 39.1	
	comp=Z,6µm,19.0s						
NLWA	**Neilton Lookou**	**61.17**	**324**	IAMs_20	IAMs_20	19 45 39.4	
	comp=Z,4µm,20.0s						
PMPS	**Porto Santo**	**61.41**	**54**	*e*P	**P**	**19 14 07.4**	**-0.4**
NRS	**Narsarsuaq**	**61.55**	**15**	P	**P**	**19 14 07.7**	**-0.5**
NRS				IAMs_20	IAMs_20	19 37 50.5	
	comp=Z,5µm,20.0s						
NRS	**Narsarsuaq**	**61.55**	**15**	P	**P**	**19 14 07.7**	**-0.5**
NRS				pmax	pmax		
	comp=Z,156nm,0.8s						
NRS				MLR	MLR		
	comp=Z,5µm,20.0s						
PGC	**Sidney**	**61.56**	**325**	P	**P**	**19 14 08.2**	**-0.3**
CLRS	**Cowichan Lake**	**62.03**	**325**	IAmb	IAmb	19 14 29.6	
	comp=Z,85nm,1.2s						
CBB	**Campbell River**	**63.33**	**326**	P	**P**	**19 14 19.6**	**-0.7**
RKT	**Rikitea**	**64.84**	**243**	*e*P	**P**	**19 14 34.0**	**+3.2**
	comp=Z,210nm,1.0s						
RKT				*e*S	**S**	**19 23 09.3**	**-3.3**
	comp=Z,5µm,35.2s						
RKT				*e*SS	**SS**	**19 27 27.9**	**+3.7**
	comp=Z,7µm,30.0s						
RKT				*e*LQ	LQ	19 31 08.0	
	comp=Z,49µm,29.8s						
RKT				*e*LR	LR	19 33 59.3	
	comp=Z,21µm,39.2s						
HOPE	**Hope Point**	**65.47**	**157**	P	**P**	**19 14 33.8**	**-0.4**
HOPE				IAmb	IAmb	19 14 36.7	
	comp=Z,97nm,0.8s						
HOPE	**Hope Point**	**65.47**	**157**	P	**P**	**19 14 33.8**	**-0.4**
HOPE				pmax	pmax		
	comp=Z,97nm,0.8s						
HOPE				MLR	MLR		
	comp=Z,13µm,22.0s						
SFJD	**Kangerlussuaq**	**65.53**	**10**	LR	LR	19 41 03.6	
	comp=Z,9µm,21.5s,baz=202,slow=34						
SFJD	**Kangerlussuaq**	**65.53**	**10**	P	**P**	**19 14 32.8**	**-1.6**
SFJD	**Kangerlussuaq**	**65.53**	**10**	P	**P**	**19 14 32.8**	**-1.6**
SFJD				pmax	pmax		
	comp=Z,62nm,1.2s						
SFJD				MLR	MLR		
	comp=Z,9µm,21.0s						
YKAW1	**Yellowknife Wh**	**66.04**	**341**	IAmb	IAmb	19 14 44.0	
	comp=Z,108nm,1.3s						
YKA	**Yellowknife Ar**	**66.08**	**341**	P	**P**	**19 14 37.9**	**-0.2**
	comp=Z,9.2nm,0.8s,baz=138,slow=5.7,SNR=57						
	comp=Z,9.2nm,0.8s						
YKA	**Yellowknife Ar**	**66.08**	**341**	P	**P**	**19 14 37.5**	**-0.6**
YKA	**Yellowknife Ar**	**66.08**	**341**	P	**P**	**19 14 37.5**	**-0.6**
YKAW3	**Yellowknife Wh**	**66.14**	**341**	IAmb	IAmb	19 14 44.7	
	comp=Z,123nm,1.3s						
TAOE	**Nuku Hiva Isla**	**66.89**	**259**	*e*P	**P**	**19 14 41.8**	**-2.5**
	comp=Z,619nm,1.6s						
TAOE	**Nuku Hiva Isla**	**66.89**	**259**	*e*PP	**PP**	**19 17 10.0**	**-1.8**
	comp=Z,257nm,23.7s						
TAOE				*e*S	**S**	**19 23 30.4**	**-7.7**
	comp=Z,2µm,24.4s						
TAOE				*e*SS	**SS**	**19 27 51.9**	**-4.7**
	comp=Z,1µm,30.1s						
TAOE				*e*LR	LR	19 34 52.4	
	comp=Z,5µm,28.8s						
TAOE	**Nuku Hiva Isla**	**66.89**	**259**	P	**P**	**19 14 47.9**	**+3.6**
ANGG	**Ammassalik, Gr**	**67.23**	**16**	IAmb	IAmb	19 14 51.2	
	comp=Z,95nm,0.8s						
ANGG				IAMs_20	IAMs_20	19 42 25.4	
	comp=Z,5µm,21.0s						
ILULI	**Ilulissat**	**67.46**	**9**	IAmb	IAmb	19 14 55.7	
	comp=Z,122nm,1.0s						
TOAD	**Toad River Com**	**67.86**	**334**	P	**P**	**19 14 50.1**	**+0.6**
	baz=123,SNR=9.4						
ESPZ	**Base Esperanza**	**67.89**	**172**	IAmb	IAmb	19 14 53.6	
	comp=Z,63nm,0.8s						
KOTAN	**Kotaneelee Air**	**68.08**	**336**	P	**P**	**19 14 51.5**	**+0.7**
	baz=124						
PFVI	**Vila Bisbo**	**68.37**	**51**	*e*P	**P**	**19 14 54.3**	**+1.2**
PMSA	**Palmer Station**	**68.44**	**175**	LR	LR	19 46 55.6	
	comp=Z,2µm,18.7s,baz=347,slow=38						
PMSA	**Palmer Station**	**68.44**	**175**	IAMs_20	IAMs_20	19 44 00.2	
	comp=Z,4µm,20.0s						
TIO	**Tiouine**	**68.48**	**58**	P	**P**	**19 14 56.5**	**+2.3**
LIS	**Lisbon**	**68.48**	**50**	*e*S	**S**	**19 23 55.9**	**-0.3**
LIS				IAMs_20	IAMs_20	19 38 44.3	
	comp=N,5µm,26.8s						
LIRD	**Liard River Hi**	**68.54**	**334**	P	**P**	**19 14 54.5**	**+0.7**
	baz=122,SNR=6.3						
PTEO	**Sao Teotonio**	**68.54**	**51**	*e*P	**P**	**19 14 55.5**	**+1.3**
PTEO				*i* IAmb	IAmb	19 15 11.7	
	comp=N,102nm,1.6s						
MORF	**Marmelete**	**68.55**	**51**	*e*P	**P**	**19 14 54.6**	**+0.3**
MORF				IAmb	IAmb	19 14 56.8	
	comp=Z,143nm,1.3s						
MORF				*e*S	**S**	**19 23 57.0**	**-0.1**
MORF	**Marmelete**	**68.55**	**51**	IAmb	IAmb	19 15 31.1	
	comp=Z,87nm,1.0s						
MORF	**Marmelete**	**68.55**	**51**	*e*P	**P**	**19 14 55.2**	**+1.0**
MORF				*i* IAmb	IAmb	19 15 04.9	
	comp=Z,126nm,1.9s						
MORF	**Marmelete**	**68.55**	**51**	*e*P	**P**	**19 14 54.6**	**+0.3**

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MORF                              eS        S         19 23 57.0  -0.1
AVE   Averroes         68.75  56   P        P         19 14 57.1  +1.5
AVE   Averroes         68.75  56   IAMs_20  IAMs_20   19 47 29.7
      comp=Z,4µm,18.0s
PSBE  So Bento         68.93  49  eP        P         19 14 57.3  +0.6
PSBE                              i IAmb    IAmb      19 15 39.1
      comp=Z,82nm,1.8s
MESJ  Messejana        69.00  51  eP        P         19 14 57.3  +0.3
MESJ                               IAmb     IAmb      19 14 59.8
      comp=Z,40nm,1.2s
MESJ                              eS        S         19 24 02.3  -0.1
MESJ  Messejana        69.00  51  eP        P         19 14 56.8  -0.3
MESJ                              i IAmb    IAmb      19 15 05.8
      comp=Z,59nm,2.2s
MESJ  Messejana        69.00  51  eP        P         19 14 57.3  +0.3
MESJ                              eS        S         19 24 02.3  -0.1
MOE   Montemor         69.05  50  eP        P         19 14 57.6  +0.3
MOE                               i IAmb    IAmb      19 14 58.6
      comp=Z,55nm,1.1s
DBIC  Dimbokro         69.07  84   P        P         19 14 57.7  -0.2
      comp=Z,73nm,1.0s,baz=294,slow=6.3,SNR=68
DBIC                               PKP2ab   P'P'ab    19 43 06.3  -5.8
      comp=Z,10nm,1.1s,baz=92,slow=4.5,SNR=4.8
DBIC                               LR       LR        19 43 24.6
      comp=Z,2µm,18.1s,baz=274,slow=34
      comp=Z,73nm,1.0s
DBIC  Dimbokro         69.07  84   IAmb     IAmb      19 15 06.4
      comp=Z,168nm,1.1s
PCVE  Castro Verde     69.09  51  eP        P         19 14 58.4  +0.7
PCVE                              i IAmb    IAmb      19 15 09.2
      comp=Z,58nm,1.7s
PBDV  Barranco-do-Ve   69.09  51   P        P         19 14 59.8  +2.1
PBDV  Barranco-do-Ve   69.09  51  eP        P         19 14 58.8  +1.1
PBDV                              i IAmb    IAmb      19 15 02.3
      comp=Z,72nm,2.3s
V35K  Ketchikan        69.16 329   P        P         19 14 57.7   0.0
      baz=116
T35M  Bob Quinn        69.23 331   P        P         19 14 58.1   0.0
      baz=118,SNR=6.2
PMTG  Montargil        69.26  49  eP        P         19 14 59.2  +0.5
PMTG                              i IAmb    IAmb      19 15 14.7
      comp=Z,56nm,1.5s
PCAS  Casmilo, Conde   69.28  48  eP        P         19 14 59.4  +0.6
PCAS                              i IAmb    IAmb      19 15 34.5
      comp=Z,87nm,1.1s
PVAQ  Vaqueiros        69.30  51  eP        P         19 14 59.9  +1.0
PVAQ                              i IAmb    IAmb      19 15 35.7
      comp=Z,49nm,1.4s
EVO   Evora            69.31  50   P        P         19 14 59.2  +0.3
EVO   Evora            69.31  50  eP        P         19 14 59.2  +0.3
EVO                               i IAmb    IAmb      19 15 01.9
      comp=Z,40nm,1.5s
PBEJ  Beja             69.31  51  eP        P         19 14 59.8  +0.8
PBEJ                              i IAmb    IAmb      19 15 09.7
      comp=Z,50nm,1.6s
RTC   Rabat Centre     69.33  55   P        P         19 14 59.0  -0.2
PARRA Arraiolos        69.35  50  eP        P         19 14 59.4  +0.2
PARRA                             i IAmb    IAmb      19 15 09.6
      comp=Z,58nm,1.7s
PSARD Sardoal          69.43  49  eP        P         19 14 59.9  +0.2
PSARD                             i IAmb    IAmb      19 15 09.3
      comp=Z,55nm,2.0s
PTO   Porto            69.46  47  eP        P         19 15 00.2  +0.4
PTO                               i IAmb    IAmb      19 15 36.0
      comp=Z,85nm,1.3s
EGRO  El Granado       69.50  51   P        P         19 15 02.2  +2.0
WRGLY Wrigley          69.65 339   P        P         19 15 00.8  +0.3
      baz=126
PESTR Estremoz         69.70  50   P        P         19 15 02.2  +0.8
PESTR Estremoz         69.70  50  eP        P         19 15 01.8  +0.4
PESTR                             i IAmb    IAmb      19 15 03.8
      comp=Z,99nm,1.1s
PVIS  Viseu            69.88  48  eP        P         19 15 02.5  -0.1
PGAV  Gavieira, Arco   69.90  46  eP        P         19 15 03.0  +0.3
PGAV                              i IAmb    IAmb      19 15 48.3
      comp=Z,69nm,1.8s
PMRV  Marv??o          69.97  49  eP        P         19 15 02.6  -0.4
PMRV                              i IAmb    IAmb      19 15 20.3
      comp=Z,42nm,1.4s
PBAR  Barrancos        69.98  51   P        P         19 15 04.6  +1.5
PBAR  Barrancos        69.98  51  eP        P         19 15 03.4  +0.3
PBAR                              i IAmb    IAmb      19 15 13.6
      comp=Z,41nm,1.4s
PCBR  Castelo Branco   70.00  49  eP        P         19 15 03.6  +0.4
PCBR                              i IAmb    IAmb      19 15 10.9
      comp=Z,61nm,1.5s
CRAG  Craig            70.00 329   P        P         19 15 02.3  -0.6
      baz=114
WRAK  Wrangell Islan   70.01 330   P        P         19 15 02.4  -0.4
      baz=115
MTE   Manteigas        70.07  48   IAMs_20  IAMs_20   19 40 28.0
      comp=Z,4µm,22.0s
MTE   Manteigas        70.07  48  eP        P         19 15 03.8   0.0
MTE                               i IAmb    IAmb      19 15 07.8
      comp=Z,56nm,1.1s
WTLY  Watson Lake, Y   70.07 334   IAmb     IAmb      19 15 11.4
      comp=Z,98nm,1.2s
WTLY  Watson Lake, Y   70.07 334   P        P         19 15 03.4  +0.2
      baz=120,SNR=30
S34M  Telegraph Cree   70.08 332   P        P         19 15 03.3   0.0
      baz=117,SNR=8.8
POLO  Lamas de Olo     70.11  47  eP        P         19 15 04.1  +0.1
POLO                              i IAmb    IAmb      19 15 05.8
      comp=Z,45nm,1.2s
EBAD  Badajoz          70.12  50   P        P         19 15 04.6  +0.7
PVRL  Vila Real        70.14  47  eP        P         19 15 04.4  +0.3
PVRL                              i IAmb    IAmb      19 15 42.6
      comp=Z,48nm,1.0s
EMIN  Mina Concepcio   70.18  51   P        P         19 15 05.4  +1.1
U33K  Whale Pass       70.27 329   P        P         19 15 03.9  -0.6
      baz=114
T33K  Petersburg       70.48 330   P        P         19 15 04.9  -0.8
      baz=115
MVO   Moncorvo         70.62  48  eP        P         19 15 07.6  +0.5
MVO                               i IAmb    IAmb      19 15 16.9
      comp=Z,81nm,2.2s
ESPR  Espera           70.65  52   P        P         19 15 08.7  +1.5
IFR   Ifrane           70.67  56   P        P         19 15 09.0  +1.3
R33M  Jennings River   70.69 333   P        P         19 15 06.4  -0.8
      baz=118
MD01  Midelt array s   70.88  56   P        P         19 15 08.7  -0.2
PBRG  Braganca         70.98  47  eP        P         19 15 09.6  +0.4
PBRG                              i IAmb    IAmb      19 15 18.4
      comp=Z,44nm,2.2s
MDT   Midelt           71.00  57   LR       LR        19 46 21.3
      comp=Z,3µm,18.4s,baz=262,slow=36
Q32M  Nakina River     71.09 332   P        P         19 15 09.0  -0.6
      baz=116
ECAB  El Cabril        71.21  51   P        P         19 15 11.7  +1.0
EMIJ  Mijas            71.45  53   P        P         19 15 13.3  +1.2
S32K  Killisnoo        71.56 330   P        P         19 15 11.7  -0.6
      baz=114
SIT   Sitka            71.77 330   P        P         19 15 12.9  -0.6
      baz=113
JIS   Juneau Island    71.79 331   P        P         19 15 18.2  +4.5
BORG  Borgarnes        71.80  21   LR       LR        19 45 47.0
      comp=Z,2µm,20.1s,baz=241,slow=35
BORG  Borgarnes        71.80  21   IAMs_20  IAMs_20   19 41 59.0
      comp=Z,4µm,18.0s
R32K  Eaglecrest       71.86 331   P        P         19 15 13.7  -0.4
      baz=114
EADA  Adamuz           71.88  51   P        P         19 15 15.3  +0.6
P33M  Teslin, Yukon    71.89 333   IAMs_20  IAMs_20   19 50 11.8
      comp=Z,4µm,18.0s
P33M  Teslin, Yukon    71.89 333   P        P         19 15 14.0  -0.4
      baz=116
P32M  Atlin            72.03 333   P        P         19 15 14.7  -0.5
      baz=115
EGOR  Sierra Gorda,    72.07  52   P        P         19 15 17.3  +1.3
PAB   San Pablo        72.31  50   P        P         19 15 16.7  -0.6
PAB   San Pablo        72.31  50   P        P         19 15 16.7  -0.6
PAB                                pmax     pmax
      comp=Z,55nm,1.1s
ELGU  Los Guajares,    72.41  52   P        P         19 15 19.3  +1.3
N32M  Quiet Lake       72.43 334   P        P         19 15 17.2  -0.4
      baz=116
SUMG  Summit           72.49  11   P        P         19 15 19.8  +1.6
R31K  City Hall, Gus   72.50 331   P        P         19 15 18.1  +0.2
      baz=113
S31K  Pelican          72.57 330   P        P         19 15 18.4  +0.1
      baz=112
EQTA  Presa de Quent   72.61  52   P        P         19 15 20.4  +1.2
ESDC  Sonseca Array    72.62  50   P        P         19 15 19.3  +0.2
      comp=Z,16nm,0.9s,baz=256,slow=6.2,SNR=83
ESDC                               PKPPKP   P'P'df    19 42 51.4  -13
      comp=Z,0.9nm,1.0s,baz=54,slow=3.1,SNR=4.7
ESDC                               LR       LR        19 46 60.0
      comp=Z,1µm,18.1s,baz=246,slow=36
      comp=Z,16nm,0.9s
ESDC  Sonseca Array    72.62  50   P        P         19 15 18.1  -1.0
SKAG  Skagway          72.72 332   P        P         19 15 18.4  -0.8
      baz=114
WHY   Whitehorse       73.01 333   IAmb     IAmb      19 16 06.8
      comp=Z,159nm,1.8s
WHY   Whitehorse       73.01 333   P        P         19 15 21.0  -0.1
      baz=114
PLBC  Pleasant Camp    73.21 332   P        P         19 15 22.0  -0.1
      baz=113
M31M  Drury Creek, Y   73.45 335   P        P         19 15 23.1  -0.5
      baz=115,SNR=8.1
C36M  Paulatuk         73.52 344   P        P         19 15 23.4  -0.4
      baz=127
ENIJ  Nijar            73.55  53   P        P         19 15 24.8  +0.1
O30N  Mendenhall       73.60 333   IAMs_20  IAMs_20   19 51 11.0
      comp=Z,4µm,20.0s
O30N  Mendenhall       73.60 333   P        P         19 15 24.0  -0.5
      baz=113,SNR=9.3
IWEX  Carrickbyrne,    73.61  36   P        P         19 15 26.2  +1.6
ACRG  Accra            73.72  85   IAmb     IAmb      19 15 36.2
      comp=Z,146nm,1.0s
P30M  Million Dollar   73.74 332   P        P         19 15 25.3  -0.1
      baz=112
N31M  Braeburn, Yuko   73.75 334   IAmb     IAmb      19 15 32.4
      comp=Z,171nm,1.4s
N31M                               IAMs_20  IAMs_20   19 49 42.8
      comp=Z,5µm,22.0s
N31M  Braeburn, Yuko   73.75 334   P        P         19 15 25.1  -0.3
      baz=114,SNR=8.8
P29M  Windy Craggy     73.92 332   P        P         19 15 26.0  -0.4
      baz=111
IDGL  Inch Island, C   73.97  33   P        P         19 15 27.5  +0.8
DSB   Dublin           74.08  35   P        P         19 15 26.9  -0.5
HYT   Haines Junctio   74.26 333   P        P         19 15 27.5  -1.0
      baz=112
ETOB  Tobarra          74.31  51   P        P         19 15 30.7  +1.6
N30M  Aishikik Lake    74.31 334   IAMs_20  IAMs_20   19 48 54.9
      comp=Z,5µm,21.0s
N30M  Aishikik Lake    74.31 334   P        P         19 15 28.9  +0.2
      baz=112,SNR=18
ILTH  Belurgan, Co L   74.32  35   P        P         19 15 28.8  +0.1
EMUR  La Murta         74.44  52   P        P         19 15 29.7  -0.1
O29M  Mount Kennedy    74.56 332   IAMs_20  IAMs_20   19 51 36.7
      comp=Z,4µm,20.0s
O29M  Mount Kennedy    74.56 332   P        P         19 15 29.3  -0.9
      baz=111
M30M  Minto, Yukon     74.62 335   IAMs_20  IAMs_20   19 51 07.0
      comp=Z,4µm,21.0s
M30M  Minto, Yukon     74.62 335   P        P         19 15 30.7  +0.3
      baz=113,SNR=27
MAYO  Mayo, Yukon      74.66 336   P        P         19 15 31.0  +0.4
      baz=114
YUK6  Outpost Mounta   74.69 333   P        P         19 15 31.1   0.0
      baz=111,SNR=13
SCO   Scoresbysund     74.84  16   IAMs_20  IAMs_20   19 44 12.6
      comp=Z,3µm,21.0s
ECHE  Chera            74.89  50   P        P         19 15 33.2  +0.7
YUK4  Talbot Arm       74.97 333   P        P         19 15 32.5  -0.1
      baz=111,SNR=5.5
VAH   Vaihoa           75.00 253  eP        P         19 15 35.1  +1.7
      comp=Z,14nm,1.2s
H31M  Peel River       75.00 338   IAmb     IAmb      19 15 40.8
      comp=Z,202nm,1.5s
H31M                               IAMs_20  IAMs_20   19 53 59.5
      comp=Z,3µm,18.0s
H31M  Peel River       75.00 338   P        P         19 15 33.0  +0.4
      baz=116
PMOR  Pomariorio Ree   75.22 254  eP        P         19 15 36.2  +1.5
      comp=Z,491nm,1.3s
PMOR  Pomariorio Ree   75.22 254  eLR       LR        19 38 39.5
      comp=Z,4µm,23.7s
J30M  Hart River       75.24 337   P        P         19 15 34.0  -0.1
      baz=114
PINM  Pinnacle         75.28 332   P        P         19 15 33.5  -0.8
      baz=109
M29M  Somme Creek      75.29 334   IAMs_20  IAMs_20   19 50 12.5
      comp=Z,5µm,20.0s
M29M  Somme Creek      75.29 334   P        P         19 15 34.0  -0.4
      baz=111,SNR=8.2
L29M  L29M             75.39 335   IAMs_20  IAMs_20   19 50 59.2
      comp=Z,4µm,20.0s
L29M  L29M             75.39 335   P        P         19 15 35.0  +0.1
      baz=112
K29M  Barlow Dome      75.42 336   IAMs_20  IAMs_20   19 51 10.0
      comp=Z,4µm,20.0s
K29M  Barlow Dome      75.42 336   P        P         19 15 35.2  +0.1
      baz=113
A36M  Sachs Harbour    75.43 346   P        P         19 15 34.5  -0.3
      baz=126,SNR=103
YUK8  Steele Glacier   75.45 333   P        P         19 15 35.6  +0.1
      baz=110,SNR=7.0
TORD  Torodi Ar. Bea   75.47  77   P        P         19 15 36.0  -0.2
      comp=Z,22nm,0.8s,baz=304,slow=4.2,SNR=93
TORD                               PKPPKP   P'P'df    19 42 59.6  -0.9
      comp=Z,2.0nm,0.9s,baz=73,slow=2.3,SNR=4.0
      comp=Z,22nm,0.8s
TORD  Torodi Ar. Bea   75.47  77   P        P         19 15 34.9  -1.3
TORD                               IAmb     IAmb      19 16 09.6
      comp=Z,114nm,0.8s
O28M  Mount Upton      75.47 332   IAMs_20  IAMs_20   19 53 03.7
      comp=Z,4µm,19.0s
O28M  Mount Upton      75.47 332   P        P         19 15 35.6  -0.1
      baz=109
G31M  Satah River      75.48 339   IAmb     IAmb      19 15 43.2
      comp=Z,102nm,1.1s
G31M                               IAMs_20  IAMs_20   19 51 59.8
      comp=Z,3µm,19.0s
G31M  Satah River      75.48 339   P        P         19 15 35.6  +0.4
      baz=116,SNR=20
I30M  Mount Dempster   75.52 337   IAMs_20  IAMs_20   19 55 29.4
      comp=Z,4µm,19.0s
I30M  Mount Dempster   75.52 337   P        P         19 15 35.8  +0.2
      baz=114
F31M  Tsiigehtchic     75.53 340   P        P         19 15 35.7  +0.3
      baz=117,SNR=24
INK   Inuvik           75.86 341   LR       LR        19 50 37.8
      comp=Z,8µm,20.9s,baz=116,slow=37
INK   Inuvik           75.86 341   IAmb     IAmb      19 15 44.1
      comp=Z,298nm,1.6s
INK   Inuvik           75.86 341   P        P         19 15 37.7  +0.4
      baz=118,SNR=40
YUK3  Moose Creek      75.93 333   P        P         19 15 38.8  +0.6
      baz=109,SNR=26
J29N  Klondike Camp    75.94 336   IAmb     IAmb      19 15 46.8
      comp=Z,274nm,1.9s
J29N  Klondike Camp    75.94 336   P        P         19 15 38.7  +0.7
      baz=112
CTGM  Chitina Glacie   76.06 332   IAMs_20  IAMs_20   19 53 46.3
      comp=Z,5µm,20.0s
CTG   Chitna Glacier   76.07 332   P        P         19 15 39.3  +0.4
      baz=108
EPYK  Eagle Plains     76.12 338   IAmb     IAmb      19 15 47.0
      comp=Z,88nm,1.1s
EPYK  Eagle Plains     76.12 338   P        P         19 15 39.1  +0.1
      baz=114,SNR=19
G30M  tAoh Zraii Nji   76.20 339   IAmb     IAmb      19 15 47.4
      comp=Z,214nm,2.0s
G30M                               IAMs_20  IAMs_20   19 46 59.9
      comp=Z,3µm,20.0s
G30M  tAoh Zraii Nji   76.20 339   P        P         19 15 39.6  +0.3
      baz=115
DAWY  Dawson           76.27 336   P        P         19 15 40.5  +0.6
      baz=111,SNR=10.0
F30M  Barrier River    76.31 340   IAmb     IAmb      19 15 46.8
      comp=Z,288nm,1.6s
F30M                               IAMs_20  IAMs_20   19 52 22.9
      comp=Z,4µm,19.0s
F30M  Barrier River    76.31 340   P        P         19 15 41.0  +1.0
      baz=115
I29M  Ogilvie Camp,    76.32 337   IAMs_20  IAMs_20   19 52 12.4
      comp=Z,4µm,20.0s
I29M  Ogilvie Camp,    76.32 337   P        P         19 15 41.4  +1.3
      baz=112
BVCY  Beaver Creek     76.32 334   P        P         19 15 41.2  +1.0
      baz=109,SNR=25
ESK   Eskdalemuir      76.42  34   IAMs_20  IAMs_20   19 43 22.4
      comp=Z,5µm,22.0s
EKA   Eskdalemuir Ar   76.44  34   P        P         19 15 40.5  -0.5
      comp=Z,13nm,0.9s,baz=241,slow=6.4,SNR=12
EKA                                LR       LR        19 45 07.7
      comp=Z,2µm,21.9s,baz=264,slow=32
      comp=Z,13nm,0.9s
EIBI  Ibiza            76.60  51   P        P         19 15 43.6  +1.5
H29M  Whitestone       76.67 338   P        P         19 15 42.6  +0.5
      baz=112
M27K  Edge Creek, AK   76.75 334   IAmb     IAmb      19 15 50.1
      comp=Z,101nm,1.2s
M27K                               IAMs_20  IAMs_20   19 52 28.5
      comp=Z,4µm,20.0s
M27K  Edge Creek, AK   76.75 334   P        P         19 15 43.5  +0.8
      baz=108,SNR=24
G29M  Pine Creek       76.82 339   IAmb     IAmb      19 15 50.9
      comp=Z,115nm,0.9s
G29M                               IAMs_20  IAMs_20   19 52 44.3
      comp=Z,3µm,18.0s
G29M  Pine Creek       76.82 339   P        P         19 15 43.7  +0.8
      baz=113
CRQE  Cirque           76.82 332   P        P         19 15 44.0  +0.9
      baz=107
CRQM  Cirque           76.84 332   IAMs_20  IAMs_20   19 54 09.3
      comp=Z,4µm,20.0s
TVO   Taravao          76.89 251  eP        P         19 15 42.8  -1.5
      comp=Z,94nm,1.2s
BCAR  Beaver Creek A   76.94 334   P        P         19 15 44.0  +0.3
TIAR  Tiarei           76.95 251  eP        P         19 15 46.2  +1.6
      comp=Z,306nm,1.2s
TIAR  Tiarei           76.95 251  eLR       LR        19 39 33.2
      comp=Z,15µm,35.9s
L27K  Beaver Creek,    76.95 334   IAMs_20  IAMs_20   19 53 36.6
      comp=Z,4µm,20.0s
L27K  Beaver Creek,    76.95 334   P        P         19 15 44.7  +0.9
      baz=108,SNR=47
MCARA McCarthy VSAT    76.97 333   IAMs_20  IAMs_20   19 51 57.2
      comp=Z,4µm,22.0s
MCARA McCarthy VSAT    76.97 333   P        P         19 15 44.4  +0.6
      baz=107,SNR=6.8
I28M  Miner Creek      76.99 337   IAmb     IAmb      19 15 52.2
      comp=Z,155nm,1.2s
I28M                               IAMs_20  IAMs_20   19 52 42.2
      comp=Z,4µm,19.0s
I28M  Miner Creek      76.99 337   P        P         19 15 44.9  +0.9
      baz=111
PPTF  Pamatai, Papee   77.16 251   P        P         19 15 49.4  +3.6
PPT   Papeete          77.17 251   P        P         19 15 48.3  +2.5
      comp=Z,90nm,1.0s,baz=84,slow=13,SNR=3.5
PPT                                LR       LR        19 42 34.0
      comp=Z,3µm,19.4s,baz=74,slow=30
      comp=Z,90nm,1.0s
PPT2  Papeete2         77.17 251  eP        P         19 15 45.2  -0.7
      comp=Z,188nm,1.3s
PPT2  Papeete2         77.17 251  ePP       PP        19 18 38.9  -0.9
      comp=Z,219nm,26.0s
PPT2                              eS        S         19 25 32.2  -3.9
      comp=Z,1µm,26.2s
PPT2                              eSS       SS        19 30 35.4  +1.4
      comp=Z,1µm,25.5s
PPT2                              eLQ       LQ        19 36 27.3
      comp=Z,2µm,25.5s
PPT2                              eLR       LR        19 39 41.7
      comp=Z,3µm,29.8s
PPT2                              eLR       LR        19 39 44.1
      comp=Z,3µm,25.0s
PAE   Paea             77.19 251  eP        P         19 15 48.4  +2.6
      comp=Z,100nm,1.1s
PAE   Paea             77.19 251  eLR       LR        19 39 39.6
      comp=Z,466nm,21.8s
KAIM  Kayak Island     77.22 331   P        P         19 15 45.9  +0.7
      baz=105
M26K  Nabesna, AK      77.26 334   IAMs_20  IAMs_20   19 53 49.9
      comp=Z,3µm,20.0s
M26K  Nabesna, AK      77.26 334   P        P         19 15 46.2  +0.6
      baz=107,SNR=14
E29M  Blow River       77.36 340   P        P         19 15 45.9  +0.1
      baz=113
K27K  Chicken          77.37 335   IAMs_20  IAMs_20   19 53 03.4
      comp=Z,4µm,20.0s
BMRM  Bremner River    77.59 332   IAmb     IAmb      19 15 59.0
      comp=Z,156nm,1.3s
BMRM  Bremner River    77.59 332   P        P         19 15 48.0  +0.6
      baz=106
L26K  Log Cabin Wild   77.60 334   IAmb     IAmb      19 15 55.9
      comp=Z,140nm,1.4s
L26K                               IAMs_20  IAMs_20   19 52 20.7
      comp=Z,4µm,20.0s
L26K  Log Cabin Wild   77.60 334   P        P         19 15 48.0  +0.7
      baz=107,SNR=32
I27K  Kandik River     77.70 337   IAmb     IAmb      19 15 54.6
      comp=Z,102nm,1.0s
I27K  Kandik River     77.70 337   P        P         19 15 48.9  +1.0
      baz=109
MENT  Mentasta         77.74 334   P        P         19 15 49.4  +1.3
F28M  Old Crow         77.75 339   IAmb     IAmb      19 15 55.7
      comp=Z,156nm,1.5s
F28M                               IAMs_20  IAMs_20   19 51 44.9
      comp=Z,3µm,20.0s
F28M  Old Crow         77.75 339   P        P         19 15 48.4  +0.4
      baz=111
N25K  Chitina, Valde   77.76 333   IAMs_20  IAMs_20   19 49 40.1
      comp=Z,5µm,21.0s
N25K  Chitina, Valde   77.76 333   P        P         19 15 49.3  +0.9
      baz=106
ETOS  Mallorca         77.81  50   P        P         19 15 50.3  +1.3
H27K  Steamboat Moun   77.87 338   IAmb     IAmb      19 15 55.4
      comp=Z,243nm,1.9s
H27K                               IAMs_20  IAMs_20   19 52 58.4
      comp=Z,3µm,20.0s
H27K  Steamboat Moun   77.87 338   P        P         19 15 49.1  +0.3
      baz=109
TBI   Tubuai           77.91 245  eP        P         19 15 47.1  -2.7
      comp=Z,1µm,28.2s
TBI                               eS        S         19 25 45.5  +1.8
      comp=Z,4µm,30.0s
TBI                               eSS       SS        19 30 43.9  -0.8
      comp=Z,4µm,36.2s
TBI                               eLQ       LQ        19 36 43.5
      comp=Z,9µm,31.5s
TBI                               eLR       LR        19 39 57.7
      comp=Z,5µm,33.2s
TBI                               eLR       LR        19 40 01.7
      comp=Z,22µm,26.8s
E28M  Babbage River    78.00 340   IAmb     IAmb      19 15 58.2
      comp=Z,149nm,1.4s
E28M  Babbage River    78.00 340   P        P         19 15 49.7  +0.2
      baz=112
D28M  Stokes Point     78.01 341   P        P         19 15 50.4  +1.0
      baz=113
EYAK  Cordova Ski Ar   78.02 331   P        P         19 15 50.6  +1.0
      baz=104
Q23K  Middleton Isla   78.04 330   P        P         19 15 50.4  +0.6
      baz=104
DOT   Dot Lake         78.09 335   IAmb     IAmb      19 15 57.0
      comp=Z,192nm,1.2s
G27K  Doyon Strip      78.12 338   IAMs_20  IAMs_20   19 52 07.7
      comp=Z,3µm,21.0s
G27K  Doyon Strip      78.12 338   P        P         19 15 50.6  +0.4
      baz=109
J26L  Joseph Creek     78.13 336   IAmb     IAmb      19 15 57.5
      comp=Z,194nm,1.6s
J26L                               IAMs_20  IAMs_20   19 54 39.6
      comp=Z,4µm,20.0s
J26L  Joseph Creek     78.13 336   P        P         19 15 51.8  +1.4
      baz=107
EJON  La Jonquera      78.14  47   P        P         19 15 52.8  +2.0
SCRK  Sand Creek       78.16 335   IAMs_20  IAMs_20   19 53 45.3
      comp=Z,3µm,19.0s
SCRK  Sand Creek       78.16 335   P        P         19 15 51.8  +1.2
      baz=107,SNR=37
DIV   Divide           78.18 332   IAMs_20  IAMs_20   19 52 48.3
      comp=Z,4µm,22.0s
I26K  Coal Creek Min   78.21 336   IAMs_20  IAMs_20   19 53 42.6
      comp=Z,3µm,19.0s
I26K  Coal Creek Min   78.21 336   P        P         19 15 51.5  +0.8
      baz=108
HARP  HAARP            78.23 333   P        P         19 15 51.6  +0.8
      baz=105
KLU   Klutina          78.34 332   P        P         19 15 52.5  +0.9
      baz=104
CLF   Chambon-Foret    78.39  42   P        P         19 15 51.9  -0.1
CLF                                IAmb     IAmb      19 15 55.0
      comp=Z,140nm,1.2s
RIDG  Independent Ri   78.45 335   IAmb     IAmb      19 15 59.1
      comp=Z,157nm,1.1s
RIDG                               IAMs_20  IAMs_20   19 54 23.1
      comp=Z,4µm,20.0s
RIDG  Independent Ri   78.45 335   P        P         19 15 53.3  +1.2
      baz=106,SNR=61
PAX   Paxson           78.52 334   IAMs_20  IAMs_20   19 54 39.9
      comp=Z,3µm,19.0s
PAX   Paxson           78.52 334   P        P         19 15 53.2  +0.7
      baz=105,SNR=40
E27K  Coleen River     78.56 339   IAmb     IAmb      19 16 00.5
      comp=Z,172nm,1.4s
E27K                               IAMs_20  IAMs_20   19 54 03.3
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	comp=Z,3µm,19.0s						
E27K	**Coleen River**	**78.56**	**339**	P	**P**	**19 15 53.6**	**+1.0**
	baz=110						
M24K	**Tolsona, Glenn**	**78.61**	**333**	IAmb	IAmb	19 15 59.4	
	comp=Z,158nm,1.1s						
M24K	**Tolsona, Glenn**	**78.61**	**333**	P	**P**	**19 15 54.4**	**+1.3**
	baz=104,SNR=7.3						
P23K	**Montague Islan**	**78.69**	**331**	P	**P**	**19 15 54.7**	**+1.2**
	baz=103						
D27M	**Malcolm River**	**78.71**	**340**	IAmb	IAmb	19 16 00.2	
	comp=Z,248nm,1.8s						
D27M	**Malcolm River**	**78.71**	**340**	P	**P**	**19 15 54.1**	**+0.6**
	baz=110						
GLI	**Glacier Island**	**78.75**	**332**	P	**P**	**19 15 54.7**	**+1.0**
	baz=103						
K24K	**Donnelly Dome**	**78.87**	**335**	IAmb	IAmb	19 16 01.2	
	comp=Z,186nm,1.2s						
K24K				IAMs_20	IAMs_20	19 57 09.2	
	comp=Z,3µm,21.0s						
K24K	**Donnelly Dome**	**78.87**	**335**	P	**P**	**19 15 55.5**	**+1.1**
	baz=105,SNR=25						
JMI	**Jan Mayen**	**78.90**	**18**	*e*P	**P**	**19 15 55.2**	**+0.9**
JMI				IVmB_BB		19 16 03.4	
	comp=Z,3µm,2.9s						
JMI				*e*S	**S**	**19 25 54.8**	**+2.1**
J25K	**Salcha River,**	**78.91**	**335**	IAMs_20	IAMs_20	19 53 17.2	
	comp=Z,4µm,19.0s						
J25K	**Salcha River,**	**78.91**	**335**	P	**P**	**19 15 55.6**	**+0.9**
	baz=106						
MAHO	**Mahon**	**78.93**	**50**	P	**P**	**19 15 56.4**	**+1.2**
MAHO	**Mahon**	**78.93**	**50**	P	**P**	**19 15 54.3**	**-0.9**
MAHO				IAMs_20	IAMs_20	19 50 02.6	
	comp=Z,3µm,20.0s						
G26K	**Porcupine Rive**	**78.96**	**338**	P	**P**	**19 15 56.0**	**+1.3**
	baz=107						
JMIC	**Jan Mayen**	**78.99**	**18**	LR	LR	19 48 05.5	
	comp=Z,2µm,19.8s,baz=246,slow=34						
JMIC	**Jan Mayen**	**78.99**	**18**	*e*P	**P**	**19 15 57.7**	**+2.9**
JNW	**Jan Mayen West**	**79.03**	**18**	*e*	P	19 16 00.5	+5.5
SCM	**Sheep Creek Mo**	**79.08**	**332**	P	**P**	**19 15 56.6**	**+1.0**
	baz=103,SNR=11						
TAM	**Tamanrasset**	**79.18**	**68**	P	**P**	**19 15 56.0**	**-1.1**
TAM				IAMs_20	IAMs_20	19 51 04.2	
	comp=Z,3µm,20.0s						
TAM	**Tamanrasset**	**79.18**	**68**	P	**P**	**19 15 56.0**	**-1.1**
TAM				pmax	pmax		
	comp=Z,44nm,0.6s						
TAM				MLR	MLR		
	comp=Z,3µm,20.0s						
M23K	**Glacier View**	**79.25**	**332**	P	**P**	**19 15 57.4**	**+1.0**
	baz=103,SNR=5.5						
F26K	**Sheenjek River**	**79.32**	**339**	P	**P**	**19 15 57.8**	**+1.1**
	baz=107						
PWL	**Port Wells**	**79.33**	**331**	P	**P**	**19 15 57.6**	**+0.6**
	baz=102						
DHY	**Denali Highway**	**79.39**	**334**	IAMs_20	IAMs_20	19 55 05.9	
	comp=Z,3µm,19.0s						
DHY	**Denali Highway**	**79.39**	**334**	P	**P**	**19 15 57.8**	**+0.4**
	baz=103,SNR=13						
BMAR	**Burnt Mountain**	**79.40**	**338**	P	**P**	**19 15 57.7**	**+0.4**
WAT6	**Susitna Watana**	**79.44**	**333**	P	**P**	**19 15 58.1**	**+0.5**
	baz=103,SNR=35						
KNK	**Knik Glacier**	**79.51**	**332**	P	**P**	**19 15 59.0**	**+1.1**
	baz=102						
HDA	**Harding Lake**	**79.52**	**335**	IAmb	IAmb	19 16 04.1	
	comp=Z,153nm,1.1s						
HDA	**Harding Lake**	**79.52**	**335**	P	**P**	**19 15 58.3**	**+0.4**
	baz=104,SNR=64						
SML	**Sawmill**	**79.53**	**332**	IAmb	IAmb	19 16 04.5	
	comp=Z,189nm,1.6s						
SML	**Sawmill**	**79.53**	**332**	P	**P**	**19 15 58.6**	**+0.6**
	baz=102						
ILAR	**Eielson Array**	**79.58**	**335**	P	**P**	**19 15 58.4**	**+0.1**
	comp=Z,24nm,1.0s,baz=112,slow=4.1,SNR=82						
ILAR				PP	**PP**	**19 18 57.5**	**-1.2**
	comp=Z,5.8nm,0.9s,baz=109,slow=7.2,SNR=4.9						
ILAR				LR	LR	19 54 50.5	
	comp=Z,4µm,18.8s,baz=92,slow=38						
	comp=Z,24nm,1.0s						
ILAR	**Eielson Array**	**79.58**	**335**	P	**P**	**19 15 57.9**	**-0.3**
ILAR	**Eielson Array**	**79.58**	**335**	P	**P**	**19 15 57.9**	**-0.3**
ILAR						19 18 57.5	
SEW	**Seward**	**79.72**	**331**	P	**P**	**19 15 59.4**	**+0.4**
	baz=101						
C27K	**Jago River**	**79.76**	**341**	P	**P**	**19 16 00.3**	**+1.2**
	baz=108						
G25K	**Bearman Lake**	**79.78**	**337**	P	**P**	**19 16 00.7**	**+1.5**
	baz=105						
F25K	**Christian Rive**	**79.84**	**338**	IAMs_20	IAMs_20	19 58 26.2	
	comp=Z,3µm,18.0s						
F25K	**Christian Rive**	**79.84**	**338**	P	**P**	**19 16 00.8**	**+1.1**
	baz=106						
WAT1	**Susitna Watana**	**79.85**	**333**	P	**P**	**19 16 00.2**	**+0.5**
	baz=102						
PMR	**Palmer**	**79.86**	**332**	P	**P**	**19 16 02.5**	**+2.8**
PMR	**Palmer**	**79.86**	**332**	P	**P**	**19 15 60.0**	**+0.2**
	baz=102						
POKR	**Poker Plat Res**	**79.89**	**336**	IAmb	IAmb	19 16 06.8	
	comp=Z,226nm,1.4s						
POKR				IAMs_20	IAMs_20	19 54 39.1	
	comp=Z,4µm,19.0s						
POKR	**Poker Plat Res**	**79.89**	**336**	P	**P**	**19 16 00.9**	**+1.0**
	baz=104,SNR=21						
O22K	**Cooper Landing**	**79.93**	**331**	P	**P**	**19 16 00.3**	**+0.2**
	baz=101						
E25K	**Arctic Village**	**79.95**	**339**	IAMs_20	IAMs_20	19 55 00.2	
	comp=Z,3µm,19.0s						
E25K	**Arctic Village**	**79.95**	**339**	P	**P**	**19 16 01.5**	**+1.3**
	baz=106						
COLA	**College**	**80.01**	**335**	P	**P**	**19 16 00.8**	**+0.3**
COLA	**College**	**80.01**	**335**	P	**P**	**19 16 02.1**	**+1.6**
COLA	**College**	**80.01**	**335**	*c i*P	**P**	**19 16 01.0**	**+0.5**
COLA				pmax	pmax		
	comp=Z,89nm,1.4s						
COLA	**College**	**80.01**	**335**	P	**P**	**19 16 01.2**	**+0.7**
	baz=103						
WRH	**Wood River Hil**	**80.02**	**335**	IAMs_20	IAMs_20	19 55 50.5	
	comp=Z,4µm,20.0s						
RC01	**Rabbit Creek A**	**80.05**	**331**	P	**P**	**19 16 01.4**	**+0.6**
	baz=101						
UCC	**Uccle**	**80.10**	**39**	*d*P	**P**	**19 16 01.6**	**+0.3**
RND	**Reindeer**	**80.11**	**334**	IAmb	IAmb	19 16 07.5	
	comp=Z,145nm,1.0s						
RND				IAMs_20	IAMs_20	19 54 53.2	
	comp=Z,4µm,20.0s						
DOU	**Dourbes**	**80.17**	**40**	*d*P	**P**	**19 16 00.7**	**-1.0**
	comp=Z,21nm,1.3s						
MCK	**McKinley**	**80.22**	**334**	IAmb	IAmb	19 16 07.6	
	comp=Z,118nm,1.2s						
MCK				IAMs_20	IAMs_20	19 55 39.8	
	comp=Z,4µm,19.0s						
MCK	**McKinley**	**80.22**	**334**	P	**P**	**19 16 02.5**	**+0.8**
	baz=102,SNR=47						
C26K	**Camden Bay**	**80.24**	**341**	P	**P**	**19 16 02.8**	**+1.1**
	baz=107						
H24K	**Noodor Dome**	**80.25**	**336**	IAMs_20	IAMs_20	19 53 36.3	
	comp=Z,4µm,19.0s						
H24K	**Noodor Dome**	**80.25**	**336**	P	**P**	**19 16 02.6**	**+0.8**
	baz=103						
BRSE	**Bradley Lake S**	**80.29**	**330**	P	**P**	**19 16 02.8**	**+0.6**
	baz=100						
G24K	**Hadweenzic Riv**	**80.30**	**337**	IAmb	IAmb	19 16 09.3	
	comp=Z,152nm,1.2s						
G24K				IAMs_20	IAMs_20	19 58 05.5	
	comp=Z,2µm,19.0s						
G24K	**Hadweenzic Riv**	**80.30**	**337**	P	**P**	**19 16 03.1**	**+1.1**
	baz=104						
BMRD	**Maredsous**	**80.30**	**40**	*d*P	**P**	**19 16 03.6**	**+1.2**
	comp=Z,17nm,1.2s						
STCH	**Steam Cracks**	**80.34**	**289**	P	**P**	**19 16 02.4**	**-0.9**
M22K	**Willow**	**80.36**	**332**	IAmb	IAmb	19 16 08.5	
	comp=Z,116nm,1.0s						
M22K				IAMs_20	IAMs_20	19 57 15.8	
	comp=Z,4µm,19.0s						
M22K	**Willow**	**80.36**	**332**	P	**P**	**19 16 03.3**	**+0.9**
	baz=101						
BRLK	**Bradley Lake**	**80.37**	**330**	IAMs_20	IAMs_20	19 53 52.6	
	comp=Z,2µm,19.0s						
KNHH	**Kane Nui o Ham**	**80.39**	**289**	P	**P**	**19 16 02.9**	**-0.7**
NEA2	**Nenana**	**80.46**	**335**	IAmb	IAmb	19 16 09.4	
	comp=Z,253nm,1.2s						
NEA2				IAMs_20	IAMs_20	19 56 22.1	
	comp=Z,4µm,20.0s						
NEA2	**Nenana**	**80.46**	**335**	P	**P**	**19 16 03.5**	**+0.6**
	baz=102,SNR=77						
BGES	**Gesves**	**80.52**	**40**	*d*P	**P**	**19 16 04.7**	**+1.1**
	comp=Z,19nm,1.1s						
CUT	**Chulitna**	**80.55**	**333**	IAmb	IAmb	19 16 09.6	
	comp=Z,133nm,1.1s						
CUT				IAMs_20	IAMs_20	19 57 09.7	
	comp=Z,4µm,20.0s						
CUT	**Chulitna**	**80.55**	**333**	P	**P**	**19 16 04.1**	**+0.6**
	baz=101,SNR=5.5						
D25K	**Kavik River**	**80.57**	**340**	IAmb	IAmb	19 16 09.7	
	comp=Z,120nm,1.1s						
D25K	**Kavik River**	**80.57**	**340**	P	**P**	**19 16 04.5**	**+1.0**
	baz=105						
RCHB	**Rochefort**	**80.58**	**40**	*d*P	**P**	**19 16 04.7**	**+0.8**
	comp=Z,30nm,1.1s						
SUA	**Susitna One**	**80.60**	**332**	IAMs_20	IAMs_20	19 56 14.2	
	comp=Z,4µm,19.0s						
SUA	**Susitna One**	**80.60**	**332**	P	**P**	**19 16 04.6**	**+0.7**
	baz=100						
F24K	**Squaw Lake**	**80.65**	**338**	IAMs_20	IAMs_20	19 59 00.7	
	comp=Z,2µm,19.0s						
F24K	**Squaw Lake**	**80.65**	**338**	P	**P**	**19 16 04.9**	**+0.9**
	baz=104						
CAPN	**Captain Cook N**	**80.67**	**331**	P	**P**	**19 16 05.7**	**+1.6**
	baz=100						
I23K	**Minto, Yukon-K**	**80.70**	**336**	IAMs_20	IAMs_20	19 55 12.3	
	comp=Z,4µm,20.0s						
I23K	**Minto, Yukon-K**	**80.70**	**336**	P	**P**	**19 16 05.1**	**+0.9**
	baz=102,SNR=28						
POHA	**Pohakuloa**	**80.73**	**289**	P	P	19 16 12.3	+6.7
HOM	**Homer**	**80.73**	**330**	P	**P**	**19 16 04.9**	**+0.4**
	baz=99						
TRF	**Thorofare Moun**	**80.75**	**334**	IAmb	IAmb	19 16 11.5	
	comp=Z,436nm,2.0s						
TRF				IAMs_20	IAMs_20	19 56 08.1	
	comp=Z,4µm,20.0s						
TRF	**Thorofare Moun**	**80.75**	**334**	P	**P**	**19 16 05.6**	**+0.8**
	baz=101,SNR=19						
L22K	**Petersville**	**80.80**	**333**	IAMs_20	IAMs_20	19 57 28.4	
	comp=Z,4µm,20.0s						
BSTI	**Sart Tilman**	**80.84**	**39**	*d*P	**P**	**19 16 06.4**	**+1.1**
	comp=Z,7.3nm,1.0s						
BEBN	**Eben Emael**	**80.93**	**39**	*d*P	**P**	**19 16 06.9**	**+1.2**
KDAK	**Kodiak Island**	**80.94**	**328**	LR	LR	19 56 23.3	
	comp=Z,3µm,19.0s,baz=81,slow=39						
KDAK	**Kodiak Island**	**80.94**	**328**	P	**P**	**19 16 05.7**	**+0.1**
	baz=98						
SYI	**Shuyak Island**	**80.95**	**329**	IAMs_20	IAMs_20	19 55 55.1	
	comp=Z,3µm,20.0s						
Q20K	**Shuyak Island**	**80.95**	**329**	P	**P**	**19 16 06.2**	**+0.5**
	baz=98						
E24K	**Your Creek**	**81.00**	**339**	IAmb	IAmb	19 16 13.2	
	comp=Z,179nm,1.6s						
E24K				IAMs_20	IAMs_20	19 55 49.0	
	comp=Z,3µm,19.0s						
E24K	**Your Creek**	**81.00**	**339**	P	**P**	**19 16 06.8**	**+0.9**
	baz=103						
SKT	**Skwentna**	**81.05**	**332**	P	**P**	**19 16 06.4**	**+0.2**
	baz=99						
MEM	**Membach**	**81.12**	**39**	*d*P	**P**	**19 16 08.5**	**+1.7**
	comp=Z,26nm,1.1s						
WLF	**Walferdange**	**81.13**	**40**	P	**P**	**19 16 08.7**	**+1.8**
WLF	**Walferdange**	**81.13**	**40**	*e*P	**P**	**19 16 08.4**	**+1.6**
	comp=Z,50nm,1.0s,baz=267,slow=5.2						
WLF	**Walferdange**	**81.13**	**40**	*d*P	**P**	**19 16 08.1**	**+1.2**
	comp=Z,44nm,1.0s						
BPAW	**Bear Paw Mtn.**	**81.18**	**334**	IAmb	IAmb	19 16 13.1	
	comp=Z,258nm,1.4s						
BPAW				IAMs_20	IAMs_20	19 55 03.2	
	comp=Z,4µm,20.0s						
BPAW	**Bear Paw Mtn.**	**81.18**	**334**	P	**P**	**19 16 07.4**	**+0.6**
	baz=100,SNR=14						
BTNL	**Ternell**	**81.20**	**39**	*d*P	**P**	**19 16 09.0**	**+1.8**
	comp=Z,18nm,1.4s						
OHAK	**Old Harbor**	**81.24**	**327**	P	**P**	**19 16 07.7**	**+0.5**
	baz=97						
SPCR	**Spurr Chakacha**	**81.25**	**331**	P	**P**	**19 16 07.6**	**+0.2**
	baz=99						
O20K	**Slope Mountain**	**81.28**	**330**	P	**P**	**19 16 08.2**	**+0.7**
	baz=98						
G23K	**Bananza Creek**	**81.29**	**337**	IAMs_20	IAMs_20	19 58 18.8	
	comp=Z,3µm,19.0s						
G23K	**Bananza Creek**	**81.29**	**337**	P	**P**	**19 16 08.7**	**+1.3**
	baz=102						
D24K	**Happy Valley**	**81.37**	**340**	IAmb	IAmb	19 16 13.8	
	comp=Z,104nm,1.1s						
D24K	**Happy Valley**	**81.37**	**340**	P	**P**	**19 16 08.7**	**+1.0**
	baz=103						
RED	**Redoubt Volcan**	**81.41**	**331**	IAmb	IAmb	19 16 14.0	
	comp=Z,171nm,1.1s						
E23K	**Chandalar**	**81.41**	**338**	IAmb	IAmb	19 16 15.2	
	comp=Z,123nm,1.4s						
E23K				IAMs_20	IAMs_20	19 56 01.9	
	comp=Z,3µm,20.0s						
E23K	**Chandalar**	**81.41**	**338**	P	**P**	**19 16 09.0**	**+0.9**
	baz=102						
COLD	**Coldfoot**	**81.46**	**338**	IAmb	IAmb	19 16 17.2	
	comp=Z,131nm,1.4s						
COLD				IAMs_20	IAMs_20	19 56 07.2	
	comp=Z,3µm,21.0s						
COLD	**Coldfoot**	**81.46**	**338**	P	**P**	**19 16 10.0**	**+1.7**
	baz=101						
C24K	**Franklin Bluff**	**81.46**	**340**	P	**P**	**19 16 09.6**	**+1.4**
	baz=103						
PPLA	**Purkeypile**	**81.51**	**333**	IAmb	IAmb	19 16 14.9	
	comp=Z,399nm,1.9s						
PPLA	**Purkeypile**	**81.51**	**333**	P	**P**	**19 16 09.0**	**+0.3**
	baz=99,SNR=20						
TOLK	**Toolik Lake Re**	**81.52**	**339**	IAMs_20	IAMs_20	19 53 30.6	
	comp=Z,3µm,21.0s						
TOLK	**Toolik Lake Re**	**81.52**	**339**	P	**P**	**19 16 09.7**	**+1.1**
	baz=102						
ILSW	**Iliamna Southw**	**81.53**	**330**	IAmb	IAmb	19 16 14.6	
	comp=Z,120nm,1.2s						
P19K	**Oil Pt**	**81.53**	**330**	P	**P**	**19 16 09.4**	**+0.6**
	baz=98						
Q19K	**Cape Douglas,**	**81.64**	**329**	P	**P**	**19 16 09.5**	**0.0**
	baz=97						
KMY	**Karmoy**	**81.65**	**31**	*e*P	**P**	**19 16 10.0**	**+0.7**
SII	**Sitkinak Islan**	**81.65**	**327**	P	**P**	**19 16 10.0**	**+0.5**
	baz=96						
SUE	**Sulen**	**81.65**	**29**	*e*P	**P**	**19 16 10.0**	**+0.7**
SUE				IVmB_BB		19 16 14.9	
	comp=Z,1µm,4.8s						
SUE				*e*S	**S**	**19 26 22.9**	**+0.9**
H22K	**Ishtalitna Cre**	**81.67**	**336**	IAMs_20	IAMs_20	19 55 33.9	
	comp=Z,4µm,20.0s						
H22K	**Ishtalitna Cre**	**81.67**	**336**	P	**P**	**19 16 09.5**	**+0.1**
	baz=100,SNR=22						
CHUM	**Lake Minchumin**	**81.72**	**334**	P	**P**	**19 16 09.9**	**+0.3**
	baz=99,SNR=40						
ASK	**Askoy**	**81.79**	**29**	*e*P	**P**	**19 16 11.1**	**+1.0**
M20K	**Styx River**	**81.79**	**332**	IAMs_20	IAMs_20	19 55 24.6	
	comp=Z,4µm,21.0s						
M20K	**Styx River**	**81.79**	**332**	P	**P**	**19 16 10.6**	**+0.4**
	baz=98						
I21K	**Tanana**	**81.79**	**335**	P	**P**	**19 16 10.1**	**+0.1**
	baz=100,SNR=15						
BER	**Bergen**	**81.84**	**30**	*e*P	**P**	**19 16 11.4**	**+1.1**
BER				*e*S	**S**	**19 26 23.7**	**-0.2**
FOO	**Floro**	**81.86**	**28**	*e*P	**P**	**19 16 11.4**	**+1.0**
FOO				IVmB_BB		19 16 18.6	
	comp=Z,1µm,3.6s						
FOO				*e*S	**S**	**19 26 25.1**	**+1.0**
D23K	**Nanushuk River**	**81.98**	**339**	P	**P**	**19 16 12.5**	**+1.5**
	baz=101						
BUG	**Bochum--Univer**	**81.99**	**39**	*e*P	**P**	**19 16 13.0**	**+1.7**
	comp=Z,21nm,0.9s,baz=267,slow=5.2						
C23K	**Itkillik River**	**82.13**	**340**	P	**P**	**19 16 13.1**	**+1.4**
	baz=101						
O19K	**Port Alsworth**	**82.14**	**330**	IAMs_20	IAMs_20	19 53 37.2	
	comp=Z,3µm,22.0s						
O19K	**Port Alsworth**	**82.14**	**330**	P	**P**	**19 16 13.0**	**+1.0**
	baz=97						
H21K	**Melozitna Rive**	**82.21**	**336**	IAMs_20	IAMs_20	19 54 50.2	
	comp=Z,3µm,19.0s						
H21K	**Melozitna Rive**	**82.21**	**336**	P	**P**	**19 16 12.5**	**+0.3**
	baz=99						
E22K	**Anaktuvuk Pass**	**82.24**	**338**	IAmb	IAmb	19 16 19.1	
	comp=Z,201nm,1.8s						
E22K				IAMs_20	IAMs_20	19 59 35.6	
	comp=Z,3µm,20.0s						
E22K	**Anaktuvuk Pass**	**82.24**	**338**	P	**P**	**19 16 13.2**	**+0.8**
	baz=100						
F22K	**John River**	**82.26**	**338**	P	**P**	**19 16 13.6**	**+1.1**
	baz=100						
BLS5	**Blasjo**	**82.29**	**31**	*e*P	**P**	**19 16 14.0**	**+1.2**
BLS5				IVmB_BB		19 16 21.2	
	comp=Z,1µm,3.7s						
BLS5				*e*S	**S**	**19 26 28.6**	**-0.1**
N19K	**Bonanza Creek**	**82.29**	**331**	IAmb	IAmb	19 16 18.5	
	comp=Z,129nm,1.5s						
N19K	**Bonanza Creek**	**82.29**	**331**	P	**P**	**19 16 13.3**	**+0.4**
	baz=97						
Q18K	**Katmai Hardscr**	**82.31**	**329**	P	**P**	**19 16 13.4**	**+0.4**
	baz=96						
HYA	**Hoyanger**	**82.35**	**29**	*e*P	**P**	**19 16 14.2**	**+1.2**
HYA				IVmB_BB		19 16 19.2	
	comp=Z,847nm,3.0s						
HYA				*e*S	**S**	**19 26 24.2**	**-4.9**
IBBN	**Ibbenburen**	**82.36**	**38**	*e*P	**P**	**19 16 14.7**	**+1.4**
	comp=Z,43nm,1.3s,baz=267,slow=5.2						
CHIR	**Chirikof Islan**	**82.37**	**326**	P	**P**	**19 16 13.8**	**+0.5**
	baz=95						
K20K	**Telida**	**82.42**	**333**	P	**P**	**19 16 13.5**	**+0.1**
	baz=97						
ODD1	**Odda**	**82.43**	**30**	*e*P	**P**	**19 16 15.1**	**+1.6**
ODD1				IVmB_BB		19 16 22.1	
	comp=Z,1µm,7.2s						
ODD1				*e*S	**S**	**19 26 29.7**	**-0.4**
ODD1				IVMs_BB	IVMs_BB	19 47 01.4	
	comp=Z,2µm,22.7s						
BFO	**Black Forest**	**82.46**	**42**	P	**P**	**19 16 13.2**	**-0.7**
BFO	**Black Forest**	**82.46**	**42**	P	**P**	**19 16 13.3**	**-0.7**
BFO				pmax	pmax		
	comp=Z,25nm,1.1s						
BFO	**Black Forest**	**82.46**	**42**	*e*P	**P**	**19 16 14.6**	**+0.7**
	comp=Z,16nm,1.1s,baz=267,slow=5.2						
P18K	**Big Mountain,**	**82.51**	**329**	IAMs_20	IAMs_20	19 52 42.1	
	comp=Z,3µm,22.0s						
P18K	**Big Mountain,**	**82.51**	**329**	P	**P**	**19 16 13.7**	**-0.2**
	baz=96						
O18K	**Koktuh Hills**	**82.54**	**330**	IAmb	IAmb	19 16 19.8	
	comp=Z,93nm,1.2s						
O18K				IAMs_20	IAMs_20	19 52 29.0	
	comp=Z,3µm,21.0s						
O18K	**Koktuh Hills**	**82.54**	**330**	P	**P**	**19 16 14.3**	**+0.1**
	baz=96						
J20K	**Nowinta River**	**82.56**	**334**	IAmb	IAmb	19 16 20.2	
	comp=Z,263nm,1.9s						
J20K				IAMs_20	IAMs_20	19 57 02.8	
	comp=Z,4µm,19.0s						
J20K	**Nowinta River**	**82.56**	**334**	P	**P**	**19 16 14.3**	**+0.2**
	baz=97,SNR=26						
G21K	**Allakaket**	**82.62**	**337**	IAmb	IAmb	19 16 21.3	
	comp=Z,155nm,1.6s						
G21K				IAMs_20	IAMs_20	19 59 12.0	
	comp=Z,3µm,18.0s						
G21K	**Allakaket**	**82.62**	**337**	P	**P**	**19 16 15.2**	**+0.9**
	baz=98						
L19K	**White Mountain**	**82.63**	**332**	IAMs_20	IAMs_20	19 55 07.0	
	comp=Z,4µm,20.0s						
L19K	**White Mountain**	**82.63**	**332**	P	**P**	**19 16 15.1**	**+0.6**
	baz=96						
TNS	**Taunus Mts**	**82.65**	**40**	*e*P	**P**	**19 16 16.3**	**+1.4**
	comp=Z,23nm,1.1s,baz=267,slow=5.2						
D22K	**Ayikyak River**	**82.68**	**339**	IAmb	IAmb	19 16 21.7	
	comp=Z,178nm,1.6s						
D22K	**Ayikyak River**	**82.68**	**339**	P	**P**	**19 16 16.1**	**+1.4**
	baz=99						
KASTN	**Kahler Asten**	**82.69**	**39**	*e*P	**P**	**19 16 16.7**	**+1.6**
	comp=Z,12nm,1.0s,baz=267,slow=5.2						
F21K	**Alatna River**	**82.72**	**337**	IAmb	IAmb	19 16 21.9	
	comp=Z,100nm,1.2s						
F21K				IAMs_20	IAMs_20	19 56 36.4	
	comp=Z,2µm,20.0s						
F21K	**Alatna River**	**82.72**	**337**	P	**P**	**19 16 16.0**	**+1.1**
	baz=98						
Q17K	**Contact Creek**	**82.74**	**328**	P	**P**	**19 16 15.4**	**+0.1**
	baz=95						
KEST	**Kesra**	**82.75**	**55**	P	**P**	**19 16 16.5**	**+0.7**
	comp=Z,27nm,1.0s,baz=311,slow=4.8,SNR=10						
KEST				LR	LR	19 50 49.5	
	comp=Z,967nm,20.0s,baz=268,slow=34						
	comp=Z,27nm,1.0s						
KEST	**Kesra**	**82.75**	**55**	P	**P**	**19 16 15.2**	**-0.6**
I20K	**Naaghedeneel**	**82.78**	**335**	IAmb	IAmb	19 16 22.5	
	comp=Z,98nm,1.4s						
I20K				IAMs_20	IAMs_20	19 58 25.5	
	comp=Z,3µm,19.0s						
I20K	**Naaghedeneel**	**82.78**	**335**	P	**P**	**19 16 15.7**	**+0.5**
	baz=97						
AKN	**Aaknes**	**82.85**	**28**	*e*P	**P**	**19 16 16.6**	**+0.9**
AKN				IVmB_BB		19 16 23.9	
	comp=Z,1µm,3.0s						
R17L	**Mt. Peulik Vol**	**82.93**	**328**	P	**P**	**19 16 16.1**	**-0.1**
	baz=95						
N18K	**Kilae Creek**	**82.97**	**331**	IAmb	IAmb	19 16 22.0	
	comp=Z,152nm,1.4s						
N18K				IAMs_20	IAMs_20	19 54 36.0	
	comp=Z,4µm,22.0s						
N18K	**Kilae Creek**	**82.97**	**331**	P	**P**	**19 16 16.4**	**+0.1**
	baz=95						
M18K	**Stony River**	**83.01**	**331**	P	**P**	**19 16 16.6**	**+0.1**
	baz=96						
H20K	**Anotleneega Mo**	**83.04**	**335**	P	**P**	**19 16 17.1**	**+0.5**
	baz=97						
STU	**Stuttgart**	**83.06**	**41**	*e*P	**P**	**19 16 18.0**	**+1.0**
	comp=Z,67nm,1.0s,baz=267,slow=5.2						
TUE	**Stuetta**	**83.06**	**44**	P	**P**	**19 16 16.4**	**-0.9**
	comp=Z,126nm,1.2s						
E21K	**Killik River**	**83.08**	**339**	IAmb	IAmb	19 16 23.3	
	comp=Z,121nm,1.4s						
E21K	**Killik River**	**83.08**	**339**	P	**P**	**19 16 17.6**	**+0.8**
	baz=98						
P17K	**Kvichak River**	**83.11**	**329**	IAmb	IAmb	19 16 22.8	
	comp=Z,100nm,1.1s						
P17K	**Kvichak River**	**83.11**	**329**	P	**P**	**19 16 17.3**	**+0.3**
	baz=95						
MOL	**Molde**	**83.15**	**27**	*e*P	**P**	**19 16 18.8**	**+1.6**
MOL				IVmB_BB		19 16 25.5	
	comp=Z,1µm,3.1s						
B22K	**Teshekpuk Lake**	**83.17**	**340**	P	**P**	**19 16 17.9**	**+0.8**
	baz=99						
XMAS	**Kiritimati**	**83.17**	**272**	P	P	19 16 24.8	+6.5
Q16K	**King Salmon**	**83.17**	**329**	P	**P**	**19 16 17.4**	**+0.1**
	baz=94						
J19K	**Poorman**	**83.18**	**334**	IAMs_20	IAMs_20	19 59 20.2	
	comp=Z,3µm,22.0s						
J19K	**Poorman**	**83.18**	**334**	P	**P**	**19 16 17.6**	**+0.3**
	baz=96						
HOMB	**Homborsund**	**83.24**	**32**	*e*P	**P**	**19 16 18.0**	**+0.3**
HOMB				*e*S	**SKSac**	**19 26 38.8**	**-1.3**
SKAR	**Skarslia**	**83.33**	**29**	*e*P	**P**	**19 16 19.2**	**+0.9**
SKAR				IVmB_BB		19 16 27.0	
	comp=Z,1µm,2.5s						
SKAR				*i*		19 26 41.5	
SKAR				IVMs_BB	IVMs_BB	19 47 52.1	
	comp=Z,2µm,12.2s						
DAVOX	**Davos/Dischmat**	**83.44**	**43**	LR	LR	19 48 46.1	
	comp=Z,1µm,21.8s,baz=260,slow=32						
DAVA	**Damuels**	**83.45**	**43**	*i* P	**P**	**19 16 20.4**	**+1.1**
	comp=Z,62nm,1.1s,SNR=17						
C21K	**Knifeblade Rid**	**83.47**	**339**	P	**P**	**19 16 20.1**	**+1.4**
	baz=97						
B21K	**Ikpikpuk River**	**83.47**	**340**	IAmb	IAmb	19 16 25.4	
	comp=Z,178nm,1.1s						
B21K	**Ikpikpuk River**	**83.47**	**340**	P	**P**	**19 16 19.7**	**+1.0**
	baz=98						
O17K	**Koliganek Bris**	**83.49**	**330**	P	**P**	**19 16 19.0**	**+0.1**
	baz=94						
F20K	**Avaraart Lake**	**83.56**	**337**	IAMs_20	IAMs_20	19 59 42.8	
	comp=Z,3µm,19.0s						
F20K	**Avaraart Lake**	**83.56**	**337**	P	**P**	**19 16 20.0**	**+0.8**
	baz=96						
R16K	**Pilot Point**	**83.58**	**327**	P	**P**	**19 16 19.7**	**+0.3**
	baz=94						
N17K	**Nushagak Hills**	**83.59**	**330**	IAMs_20	IAMs_20	19 56 25.6	
	comp=Z,3µm,20.0s						
N17K	**Nushagak Hills**	**83.59**	**330**	P	**P**	**19 16 19.5**	**0.0**
	baz=94						
J18K	**Innoko River**	**83.61**	**333**	P	**P**	**19 16 19.6**	**0.0**
	baz=95						
UBR	**Ueberruh**	**83.62**	**43**	*e*P	**P**	**19 16 21.2**	**+1.1**
	comp=Z,46nm,1.2s,baz=267,slow=5.2						
UBBA	**Unterbreizbach**	**83.67**	**39**	*e*P	**P**	**19 16 21.7**	**+1.8**
	baz=267,slow=5.2						
GTTG	**Gottingen**	**83.68**	**39**	*e*P	**P**	**19 16 21.9**	**+1.8**
	comp=Z,4.3nm,0.8s,baz=267,slow=5.2						
H19K	**Roundabout Mou**	**83.69**	**335**	IAmb	IAmb	19 16 26.7	
	comp=Z,168nm,1.4s						
H19K				IAMs_20	IAMs_20	19 57 24.5	
	comp=Z,4µm,19.0s						
H19K	**Roundabout Mou**	**83.69**	**335**	P	**P**	**19 16 20.9**	**+1.0**
	baz=95						
VLC	**Villacollemand**	**83.72**	**46**	P	**P**	**19 16 21.0**	**+0.5**
M17K	**Holitna River**	**83.78**	**331**	P	**P**	**19 16 20.4**	**-0.1**
	baz=94						
A22K	**Sinclair Lake**	**83.78**	**341**	P	**P**	**19 16 21.6**	**+1.4**

	baz=97						
GCSA	**Galena City Sc**	**83.80**	**335**	P	**P**	**19 16 21.5**	**+1.1**
	baz=95,SNR=10						
DOMB	**Dombas**	**83.81**	**28**	*e*P	**P**	**19 16 21.4**	**+0.8**
DOMB				IVmB_BB		19 16 28.9	
	comp=Z,1µm,3.2s						
DOMB				*e*		19 26 45.4	
E20K	**Nigu River**	**83.87**	**338**	P	**P**	**19 16 22.2**	**+1.3**
	baz=96						
P16K	**Nushagak River**	**83.89**	**329**	IAMs_20	IAMs_20	19 58 06.8	
	comp=Z,3µm,20.0s						
P16K	**Nushagak River**	**83.89**	**329**	P	**P**	**19 16 21.0**	**-0.1**
	baz=93						
KONO	**Kongsberg**	**83.90**	**31**	*e*P	**P**	**19 16 23.0**	**+1.9**
KONO				IVmB_BB		19 16 29.6	
	comp=Z,1µm,4.8s						
KONO				*e*S	**SKSac**	**19 26 45.0**	**+0.6**
CLZ	**Clausthal**	**83.94**	**38**	*e*P	**P**	**19 16 23.4**	**+1.8**
	comp=Z,15nm,1.0s,baz=267,slow=5.2						
O16K	**Kokwok River B**	**83.98**	**329**	P	**P**	**19 16 21.2**	**-0.3**
	baz=93						
BSEG	**Bad Segeberg**	**83.99**	**36**	*e*P	**P**	**19 16 23.6**	**+1.9**
	baz=267,slow=5.2						
BSEG				*e*pP	**sP**	**19 16 29.9**	**+4.4**
G19K	**Purcell Mounta**	**84.01**	**336**	IAMs_20	IAMs_20	19 57 05.8	
	comp=Z,4µm,19.0s						
G19K	**Purcell Mounta**	**84.01**	**336**	P	**P**	**19 16 22.5**	**+0.9**
	baz=95						
FETA	**Feichten**	**84.03**	**43**	*i* pP	**P**	**19 16 23.7**	**+1.5**
	comp=Z,61nm,1.3s,SNR=18						
RETA	**Reutte**	**84.06**	**43**	*i* pP	pP	19 16 23.9	-1.3
	comp=Z,15nm,1.3s,SNR=10						
EDA	**Edea**	**84.12**	**87**	P	**P**	**19 16 22.7**	**-0.5**
EDA				IAmb	IAmb	19 16 26.4	
	comp=Z,119nm,1.4s						
EDA				IAMs_20	IAMs_20	20 00 20.9	
	comp=Z,3µm,20.0s						
ASSE	**Asse, Remlinge**	**84.14**	**38**	*e*P	**P**	**19 16 24.3**	**+2.0**
	comp=Z,22nm,1.2s,baz=267,slow=5.2						
ZCCA	**Zocca**	**84.14**	**46**	IAmb	IAmb	19 16 42.5	
	comp=Z,156nm,1.2s						
E19K	**Redstone River**	**84.19**	**337**	IAMs_20	IAMs_20	19 56 32.3	
	comp=Z,3µm,22.0s						
E19K	**Redstone River**	**84.19**	**337**	P	**P**	**19 16 23.0**	**+0.6**
	baz=95,SNR=29						
L17K	**Donlin**	**84.24**	**332**	P	**P**	**19 16 23.7**	**+0.9**
	baz=93						
K17K	**Iditarod**	**84.28**	**333**	IAmb	IAmb	19 16 29.4	
	comp=Z,101nm,1.4s						
K17K	**Iditarod**	**84.28**	**333**	P	**P**	**19 16 23.5**	**+0.6**
	baz=94						
OSSC	**Osservatorio P**	**84.33**	**47**	IAmb	IAmb	19 16 53.6	
	comp=Z,112nm,1.8s						
F19K	**Shaleruckik Mo**	**84.34**	**337**	IAmb	IAmb	19 16 29.6	
	comp=Z,126nm,1.9s						
F19K				IAMs_20	IAMs_20	20 00 06.5	
	comp=Z,3µm,19.0s						
F19K	**Shaleruckik Mo**	**84.34**	**337**	P	**P**	**19 16 23.5**	**+0.3**
	baz=94,SNR=15						
A21K	**Barrow**	**84.35**	**341**	P	**P**	**19 16 23.4**	**+0.3**
	baz=96						
SQTA	**Sankt Quirin**	**84.36**	**43**	*i* P	**P**	**19 16 24.9**	**+1.1**
	comp=Z,34nm,1.4s,SNR=17						
N16K	**Nishlik Lake**	**84.37**	**330**	P	**P**	**19 16 24.0**	**+0.5**
	baz=93						
B20K	**Meade River**	**84.39**	**340**	IAmb	IAmb	19 16 31.9	
	comp=Z,89nm,1.1s						
B20K	**Meade River**	**84.39**	**340**	P	**P**	**19 16 24.9**	**+1.6**
	baz=95						
GRA1	**Grafenberg Arr**	**84.42**	**41**	IAMs_20	IAMs_20	19 51 05.3	
	comp=Z,3µm,21.0s						
GRF	**Grafenberg Arr**	**84.42**	**41**	*e*P	**P**	**19 16 25.4**	**+1.4**
	baz=267,slow=5.2						
GRF				*e*L	L	19 51 06.0	
	comp=Z,3µm,20.4s						
H18K	**Honhosa River**	**84.46**	**335**	IAmb	IAmb	19 16 31.3	
	comp=Z,143nm,1.4s						
H18K				IAMs_20	IAMs_20	19 57 15.0	
	comp=Z,3µm,20.0s						
H18K	**Honhosa River**	**84.46**	**335**	P	**P**	**19 16 25.7**	**+1.8**
	baz=94						
OSL	**Oslo**	**84.48**	**30**	*e*P	**P**	**19 16 25.1**	**+1.1**
OSL				IVmB_BB		19 16 32.2	
	comp=Z,1µm,3.5s						
OSL				*e*		19 26 44.5	
M16K	**Timber Creek**	**84.49**	**331**	IAmb	IAmb	19 16 29.0	
	comp=Z,119nm,1.8s						
M16K	**Timber Creek**	**84.49**	**331**	P	**P**	**19 16 25.5**	**+1.5**
	baz=93						
FLTG	**Flechtingen**	**84.49**	**38**	*e*P	**P**	**19 16 25.9**	**+1.6**
	comp=Z,13nm,1.0s,baz=267,slow=5.2						
FLTG				*e*pP	**sP**	**19 16 31.9**	**+3.8**
NBO00	**NORSAR Array S**	**84.56**	**29**	P	**P**	**19 16 25.0**	**+0.6**
NBO00				IAmb	IAmb	19 16 27.4	
	comp=Z,75nm,1.1s						
NC204	**NORSAR Array S**	**84.57**	**29**	P	**P**	**19 16 24.7**	**+0.1**
NC204				IAmb	IAmb	19 16 31.2	
	comp=Z,58nm,0.9s						
CHNA	**Chernabura Isl**	**84.57**	**325**	P	**P**	**19 16 25.6**	**+1.0**
	baz=92						
S14K	**Fog Glacier**	**84.60**	**326**	P	**P**	**19 16 26.3**	**+1.4**
	baz=92						
D19K	**Kuna River**	**84.60**	**338**	P	**P**	**19 16 25.8**	**+1.2**
	baz=94						
NAO01	**NORSAR Array S**	**84.61**	**29**	P	**P**	**19 16 24.9**	**+0.2**
NAO01				IAmb	IAmb	19 17 30.7	
	comp=Z,134nm,1.4s						
WATA	**Walderalm**	**84.61**	**43**	*i* pP	**P**	**19 16 26.4**	**+1.3**
	comp=Z,15nm,1.0s,SNR=5.9						
G18K	**Tagagawik**	**84.63**	**336**	IAmb	IAmb	19 16 31.6	
	comp=Z,86nm,1.3s						
G18K				IAMs_20	IAMs_20	19 57 42.4	
	comp=Z,3µm,19.0s						
G18K	**Tagagawik**	**84.63**	**336**	P	**P**	**19 16 26.2**	**+1.5**
	baz=94						
CTI	**Castel Tesino**	**84.64**	**44**	P	**P**	**19 16 24.7**	**-0.6**
CTI	**Castel Tesino**	**84.64**	**44**	P	**P**	**19 16 24.7**	**-0.6**
CTI				pmax	pmax		
	comp=Z,48nm,1.1s						
WTTA	**Wattenberg**	**84.65**	**43**	*i* pP	pP	19 16 27.2	-1.1
	comp=Z,39nm,1.4s,SNR=11						
TEOL	**Teolo**	**84.65**	**45**	IAmb	IAmb	19 16 35.6	
	comp=Z,69nm,0.8s						
J17K	**VABM Dome**	**84.67**	**333**	IAmb	IAmb	19 16 31.3	
	comp=Z,112nm,1.7s						
J17K	**VABM Dome**	**84.67**	**333**	P	**P**	**19 16 26.4**	**+1.5**
	baz=93						
MOX	**Moxa**	**84.69**	**40**	*e*P	**P**	**19 16 26.8**	**+1.4**
	comp=Z,7.5nm,1.1s,baz=267,slow=5.2						
MOX				*e*L	L	19 54 20.1	
	comp=Z,2µm,20.2s						
L16K	**Owhat River**	**84.77**	**332**	IAMs_20	IAMs_20	19 56 59.6	
	comp=Z,3µm,22.0s						
L16K	**Owhat River**	**84.77**	**332**	P	**P**	**19 16 26.7**	**+1.3**
	baz=92						
NB2	**NORSAR Subarra**	**84.78**	**29**	P	**P**	**19 16 26.3**	**+0.7**
	comp=Z,135nm,1.4s,baz=268,slow=5.3						
NB2	**NORSAR Subarra**	**84.78**	**29**	P	**P**	**19 16 26.3**	**+0.7**
	baz=268,slow=5.3						
NOA	**NORSAR Array B**	**84.78**	**29**	P	**P**	**19 16 26.7**	**+1.1**
	comp=Z,39nm,1.0s,baz=268,slow=4.9,SNR=51						
NOA				LR	LR	19 49 34.6	
	comp=Z,2µm,21.5s,baz=265,slow=32						
	comp=Z,39nm,1.0s						
NB201	**NORSAR Array S**	**84.82**	**29**	IAmb	IAmb	19 17 31.8	
	comp=Z,74nm,1.2s						
O15K	**Ungalikthiuk R**	**84.84**	**329**	IAMs_20	IAMs_20	19 54 04.0	
	comp=Z,3µm,20.0s						
O15K	**Ungalikthiuk R**	**84.84**	**329**	P	**P**	**19 16 27.1**	**+1.2**
	baz=92						
NC602	**NORSAR Array S**	**84.93**	**29**	*e*P	**P**	**19 16 27.3**	**+1.0**
MANZ	**Manzenberg**	**85.00**	**40**	*e*P	**P**	**19 16 28.6**	**+1.7**
	comp=Z,1.7nm,0.9s,baz=267,slow=5.2						
MANZ				*e*pP	**sP**	**19 16 34.9**	**+4.1**
N15K	**Kwethluk River**	**85.01**	**330**	IAMs_20	IAMs_20	20 01 53.2	
	comp=Z,2µm,19.0s						
N15K	**Kwethluk River**	**85.01**	**330**	P	**P**	**19 16 27.6**	**+0.9**
	baz=92						
ROTZ	**Rotzenmuhle**	**85.06**	**41**	*e*P	**P**	**19 16 28.8**	**+1.7**
	comp=Z,16nm,1.7s,baz=267,slow=5.2						
F18K	**Selawik**	**85.07**	**336**	P	**P**	**19 16 27.5**	**+0.6**
	baz=93,SNR=16						
SDPT	**Sand Point**	**85.10**	**325**	P	**P**	**19 16 27.4**	**+0.2**
	baz=91						
H17K	**Granite Mounta**	**85.11**	**335**	IAmb	IAmb	19 16 34.2	
	comp=Z,84nm,1.4s						
H17K				IAMs_20	IAMs_20	20 00 38.0	
	comp=Z,3µm,21.0s						
H17K	**Granite Mounta**	**85.11**	**335**	P	**P**	**19 16 28.3**	**+1.2**
	baz=92						
C19K	**Lookout Ridge**	**85.18**	**339**	IAmb	IAmb	19 16 34.9	
	comp=Z,160nm,1.4s						
C19K	**Lookout Ridge**	**85.18**	**339**	P	**P**	**19 16 29.1**	**+1.6**
	baz=93						
CIMO	**Cimolais**	**85.19**	**44**	IAmb	IAmb	19 16 37.9	
	comp=Z,48nm,0.7s						
TANN	**Tannenbergstha**	**85.23**	**40**	*e*P	**P**	**19 16 29.7**	**+1.6**
	comp=Z,12nm,1.1s,baz=267,slow=5.2						
ABTA	**Abfaltersbach**	**85.25**	**44**	*i* P	**P**	**19 16 29.1**	**+0.8**
	comp=Z,46nm,1.2s,SNR=17						
VNA3	**Neumayer Olymp**	**85.25**	**163**	⇑S	**S**	**19 26 59.8**	**+1.8**
	comp=N,304nm,4.0s						
VNA3				⇑pPdiff	**P**	**19 16 28.6**	**+0.9**
	comp=Z,865nm,5.9s						
NSS	**Namsos**	**85.26**	**26**	*e*P	**P**	**19 16 28.6**	**+0.8**
NSS				*e*		19 26 56.9	
M15K	**Kasigluk River**	**85.32**	**330**	P	**P**	**19 16 29.1**	**+0.9**
	baz=91						
J16K	**Anvik River**	**85.35**	**333**	P	**P**	**19 16 29.7**	**+1.3**
	baz=92						
LESA	**Schwarzleotal**	**85.36**	**43**	*i* PcP	**P**	**19 16 30.1**	**+1.2**
	comp=Z,32nm,1.2s,SNR=10						
STAL	**STALIGIAL**	**85.38**	**44**	IAmb	IAmb	19 16 31.8	
	comp=Z,101nm,1.4s						
I17K	**Unalakleet**	**85.41**	**334**	P	**P**	**19 16 30.7**	**+2.1**
	baz=91						
VNA1	**Neumayer--Stat**	**85.42**	**162**	⇑pPdiff	**P**	**19 16 31.0**	**+2.5**
	comp=Z,1µm,1.8s						
G17K	**Kiwalik Mounta**	**85.44**	**335**	P	**P**	**19 16 30.0**	**+1.2**
	baz=92,SNR=18						
E18K	**Tukpahlearik C**	**85.48**	**337**	IAMs_20	IAMs_20	19 59 11.6	
	comp=Z,4µm,20.0s						
E18K	**Tukpahlearik C**	**85.48**	**337**	P	**P**	**19 16 29.8**	**+0.9**
	baz=92,SNR=13						
WET	**Wettzell**	**85.49**	**41**	*e*P	**P**	**19 16 31.1**	**+1.7**
	comp=Z,36nm,1.2s,baz=267,slow=5.2						
CLL	**Collm**	**85.57**	**39**	IAMs_20	IAMs_20	19 52 05.9	
	comp=Z,3µm,21.0s						
CLL	**Collm**	**85.57**	**39**	*i* P	**P**	**19 16 31.5**	**+1.8**
CLL				*e*		19 26 56.0	
CLL				*e*S	**SKKSac**	**19 27 05.0**	**+2.7**
CLL				pmax	pmax		
	comp=Z,63nm,1.6s						
CLL				MLR	MLR		
	comp=Z,4µm,25.3s						
CLL	**Collm**	**85.57**	**39**	*e*P	**P**	**19 16 31.7**	**+2.0**
	comp=Z,11nm,1.1s,baz=267,slow=5.2						
CLL	**Collm**	**85.57**	**39**	P	**P**	**19 16 30.2**	**+0.5**
	comp=Z,925nmcomp=Z,17nm,1.4s						
CLL	**Collm**	**85.57**	**39**	*i* P	**P**	**19 16 31.5**	**+1.8**
	comp=Z,63nm,1.6s						
CLL				*e*Plp		19 16 34.0	
CLL				*e*SKSac	**SKSac**	**19 26 56.0**	**+0.5**
CLL				*e*S	**SKKSac**	**19 27 05.0**	**+2.7**
CLL				*e*SS	**SS**	**19 32 30.0**	**-7.5**
O14K	**Tigyukauivet M**	**85.59**	**329**	IAMs_20	IAMs_20	19 54 16.5	
	comp=Z,3µm,21.0s						
O14K	**Tigyukauivet M**	**85.59**	**329**	P	**P**	**19 16 31.0**	**+1.5**
	baz=91						
F17K	**Baldwin Pennin**	**85.71**	**336**	IAMs_20	IAMs_20	19 58 17.7	
	comp=Z,3µm,20.0s						
F17K	**Baldwin Pennin**	**85.71**	**336**	P	**P**	**19 16 31.3**	**+1.3**
	baz=91						
L15K	**Ungalak Mounta**	**85.73**	**331**	P	**P**	**19 16 31.5**	**+1.2**
	baz=91						
C18K	**Utukok River**	**85.74**	**338**	P	**P**	**19 16 31.8**	**+1.5**
	baz=91						
A19K	**Wainwright**	**85.74**	**340**	P	**P**	**19 16 31.9**	**+1.7**
	baz=92						
STOK	**Stokkvaagen**	**85.75**	**24**	*e*P	**P**	**19 16 31.7**	**+1.4**
STOK				IVmB_BB		19 16 38.6	
	comp=Z,2µm,3.4s						
STOK				*i*		19 27 01.4	
K15K	**Wolf Creek Mou**	**85.76**	**332**	P	**P**	**19 16 31.8**	**+1.4**
	baz=91						
LEIR	**Leirfjorden**	**85.78**	**24**	*e*P	**P**	**19 16 31.8**	**+1.4**
LEIR				IVmB_BB		19 16 38.8	
	comp=Z,1µm,3.6s						
LEIR				*e*S	**SKSac**	**19 26 56.7**	**+0.6**
KONS	**Konsvik**	**85.79**	**24**	*e*P	**P**	**19 16 31.8**	**+1.4**
VNA2	**Neumayer--Watz**	**85.80**	**162**	⇑pPdiff	**P**	**19 16 31.3**	**+0.9**
	comp=Z,612nm,2.0s,baz=311,slow=5.0						
N14K	**Kuskokwak Cree**	**85.81**	**330**	IAMs_20	IAMs_20	19 59 30.3	
	comp=Z,3µm,20.0s						
N14K	**Kuskokwak Cree**	**85.81**	**330**	P	**P**	**19 16 31.8**	**+1.1**
	baz=90						
KBA	**Koelnbreinsper**	**85.81**	**43**	*i* PcP	**PcP**	**19 16 33.0**	**-1.0**
	comp=Z,47nm,1.2s,SNR=5.6						
HSKC	**Hora Svate Kat**	**85.85**	**40**	AMS	AMS	19 48 10.0	
	comp=Z,4µm,23.8s						
VAGH	**Vaagaholmen**	**85.86**	**23**	*e*P	**P**	**19 16 32.0**	**+1.2**
VAGH				IVmB_BB		19 16 39.4	
	comp=Z,2µm,3.3s						
VAGH				*e*		19 26 59.0	
KBS	**Kingsbay**	**85.91**	**11**	P	**P**	**19 16 31.9**	**+1.1**
KBS				IAmb	IAmb	19 16 39.8	
	comp=Z,72nm,0.9s						
KBS	**Kingsbay**	**85.91**	**11**	*e*P	**P**	**19 16 33.3**	**+2.5**
KBS				IVmB_BB		19 16 40.1	
	comp=Z,2µm,3.3s						
KBS				*e*S	**S**	**19 27 00.5**	**-3.8**
KBS	**Kingsbay**	**85.91**	**11***c*	*i*P	**P**	**19 16 32.7**	**+1.9**
KBS				pmax	pmax		
	comp=Z,161nm,1.7s						
E17K	**Hotham Inlet**	**85.95**	**337**	P	**P**	**19 16 32.0**	**+0.8**
	baz=91,SNR=42						
M14K	**Bethel**	**85.95**	**331**	IAMs_20	IAMs_20	19 57 25.9	
	comp=Z,4µm,22.0s						
M14K	**Bethel**	**85.95**	**331**	P	**P**	**19 16 32.8**	**+1.5**
	baz=90						
KHC	**Kasperske Hory**	**85.95**	**41**	IAMs_20	IAMs_20	19 56 31.0	
	comp=Z,2µm,19.0s						
KHC	**Kasperske Hory**	**85.95**	**41***c*	*i*P	**P**	**19 16 32.3**	**+0.6**
KHC				pmax	pmax		
	comp=Z,53nm,1.4s						
KHC	**Kasperske Hory**	**85.95**	**41**	*e*P	**P**	**19 16 32.4**	**+0.7**
KHC				*e*SKS	**SKSac**	**19 27 01.3**	**+3.2**
KHC				AMS	AMS	19 48 20.0	
	comp=Z,3µm,21.5s						
B18K	**Kokolik River**	**85.98**	**339**	P	**P**	**19 16 32.9**	**+1.5**
	baz=91						
HFS	**Hagfors**	**85.98**	**30**	P	**P**	**19 16 32.2**	**+0.7**
	comp=Z,16nm,0.7s,baz=232,slow=1.7,SNR=50						
HFS				LR	LR	19 50 20.7	
	comp=Z,5µm,22.0s,baz=270,slow=32						
	comp=Z,16nm,0.7s						
LOF	**Lofoten**	**85.98**	**22**	*e*P	**P**	**19 16 32.9**	**+1.6**
LOF				IVmB_BB		19 16 39.4	
	comp=Z,2µm,4.3s						
LOF				*e*		19 26 58.9	
SABO	**M.te Sabotino**	**86.00**	**44**	IAmb	IAmb	19 16 49.3	
	comp=Z,173nm,1.4s						
BIOA	**Bad Ischl, Aus**	**86.01**	**43**	*e*PcP	**P**	**19 16 33.0**	**+1.0**
	comp=Z,78nm,1.5s,SNR=26						
MYKA	**Terra Mystica**	**86.02**	**44**	*i* P	**P**	**19 16 32.7**	**+0.6**
	comp=Z,57nm,1.5s,SNR=21						
GEC2	**GERESS Array S**	**86.04**	**41**	*e*P	**P**	**19 16 33.6**	**+1.4**
	comp=Z,12nm,1.0s,baz=267,slow=5.2						
GERES	**GERESS Array B**	**86.04**	**41**	P	**P**	**19 16 33.0**	**+0.8**
	comp=Z,5.6nm,0.8s,baz=270,slow=2.7,SNR=31						
GERES				LR	LR	19 52 54.7	
	comp=Z,1µm,19.5s,baz=270,slow=34						
	comp=Z,5.6nm,0.8s						
RUE	**Ruedersdorf**	**86.05**	**38**	*e*P	**P**	**19 16 34.0**	**+2.0**
	comp=Z,12nm,0.8s,baz=267,slow=5.2						
RUE				*e*pP	**sP**	**19 16 40.4**	**+4.5**
H16K	**Elim**	**86.10**	**334**	P	**P**	**19 16 33.4**	**+1.4**
	baz=90,SNR=24						
TRI	**Trieste**	**86.12**	**45**	IAmb	IAmb	19 16 34.9	
	comp=Z,115nm,1.7s						
G16K	**Koyuk River**	**86.15**	**335**	P	**P**	**19 16 34.2**	**+1.9**
	baz=90						
RAUS	**Rausandaksla**	**86.16**	**24**	*e*P	**P**	**19 16 33.5**	**+1.2**
RAUS				IVmB_BB		19 16 40.8	
	comp=Z,1µm,3.1s						
RAUS				*e*		19 26 59.9	
BRG	**Berggiesshubel**	**86.17**	**39**	*e*P	**P**	**19 16 34.6**	**+1.9**
	comp=Z,18nm,1.3s,baz=267,slow=5.2						
RICC	**Richard**	**86.27**	**40**	AMS	AMS	19 48 30.0	
	comp=Z,3µm,23.4s						
L14K	**Kuka Creek**	**86.30**	**331**	IAMs_20	IAMs_20	19 56 14.2	
	comp=Z,3µm,22.0s						
L14K	**Kuka Creek**	**86.30**	**331**	P	**P**	**19 16 34.3**	**+1.2**
	baz=90						
MOR8	**Moi Rana**	**86.32**	**24**	*e*P	**P**	**19 16 34.4**	**+1.2**
MOR8				IVmB_BB		19 16 41.8	
	comp=Z,2µm,2.8s						
MOR8				*e*S	**SKSac**	**19 27 02.7**	**+3.1**
ZVC	**Zvikov**	**86.35**	**41**	AMS	AMS	19 48 40.0	
	comp=Z,4µm,24.3s						
RDOG	**Red Dog Mine**	**86.37**	**338**	P	**P**	**19 16 35.1**	**+1.8**
	baz=90						
MOA	**Molln**	**86.43**	**42**	*i* PcP	**P**	**19 16 35.3**	**+1.2**
	comp=Z,63nm,1.5s,SNR=20						
CKRC	**Cesky Krumlov**	**86.44**	**41**	*e*P	**P**	**19 16 34.0**	**-0.1**
CKRC				*e*		19 16 38.5	
CKRC				*e*		19 27 01.8	
CKRC				MLR	MLR		
	comp=Z,3µm,24.4s						
CKRC	**Cesky Krumlov**	**86.44**	**41**	*e*P	**P**	**19 16 34.0**	**-0.1**
CKRC				*e*x	x	19 16 38.5	
CKRC				*e*SKS	**SKSac**	**19 27 01.8**	**+0.7**
CKRC				AMS	AMS	19 49 00.0	
	comp=Z,3µm,24.4s						
D17K	**Noatak River**	**86.44**	**338**	P	**P**	**19 16 34.9**	**+1.2**
	baz=90,SNR=15						
C17K	**DeLong Mountai**	**86.47**	**338**	P	**P**	**19 16 35.1**	**+1.3**
	baz=90						
PRA	**Prague**	**86.50**	**40**	AMS	AMS	19 48 50.0	
	comp=Z,4µm,23.7s						
PRU	**Pruhonice**	**86.57**	**40**	*e*P	**P**	**19 16 36.1**	**+1.4**
PRU				*e*		19 27 01.5	
PRU				MLR	MLR		
	comp=Z,4µm,25.5s						
PRU	**Pruhonice**	**86.57**	**40**	*e*P	**P**	**19 16 36.1**	**+1.4**
PRU				*e*SKS	**SKSac**	**19 27 01.5**	**-0.3**
PRU				AMS	AMS	19 48 40.0	
	comp=Z,4µm,25.5s						
PVCC	**Panska Ves**	**86.57**	**40**	*e*P	**P**	**19 16 36.0**	**+1.3**
PVCC				*e*		19 16 39.6	
PVCC				MLR	MLR		
	comp=Z,4µm,24.5s						
PVCC	**Panska Ves**	**86.57**	**40**	*e*P	**P**	**19 16 36.0**	**+1.3**
PVCC				*e*x	x	19 16 39.6	
PVCC				AMS	AMS	19 48 20.0	
	comp=Z,4µm,24.5s						
CEY	**Cerknica**	**86.58**	**45**	*i* P	**P**	**19 16 35.9**	**+1.0**
CEY				*e*S	**S**	**19 27 11.5**	**-0.6**
STEI	**Steigen**	**86.62**	**22**	*e*P	**P**	**19 16 36.0**	**+1.5**
STEI				IVmB_BB		19 16 42.7	
	comp=Z,1µm,3.2s						
STEI				*e*		19 27 00.9	
M13K	**Dall Lake**	**86.64**	**330**	P	**P**	**19 16 35.7**	**+1.0**
	baz=89						
FAUS	**Fauske**	**86.65**	**23**	*e*P	**P**	**19 16 35.8**	**+1.2**
FAUS				IVmB_BB		19 16 43.1	
	comp=Z,2µm,3.1s						
FAUS				*i*		19 27 01.8	
FAUS				*e*		19 32 58.0	
LJU	**Ljubljana**	**86.65**	**44**	*i* P	**P**	**19 16 35.9**	**+0.7**
OBKA	**Obir**	**86.65**	**44**	*e*PcP	**P**	**19 16 36.2**	**+0.9**
	comp=Z,32nm,1.7s,SNR=5.4						
J14K	**Nanvaranak Lak**	**86.69**	**333**	IAmb	IAmb	19 16 42.8	
	comp=Z,159nm,1.4s						
J14K				IAMs_20	IAMs_20	19 57 53.3	
	comp=Z,3µm,22.0s						
J14K	**Nanvaranak Lak**	**86.69**	**333**	P	**P**	**19 16 36.5**	**+1.6**
	baz=89						
SPA0	**Spitsbergen Ar**	**86.78**	**12**	*e*P	**P**	**19 16 36.8**	**+1.7**
SPITS	**Spitsbergen Ar**	**86.78**	**12**	P	**P**	**19 16 37.1**	**+1.9**
	comp=Z,44nm,0.9s,baz=186,slow=2.3,SNR=14						
SPITS				LR	LR	19 54 14.4	
	comp=Z,4µm,20.8s,baz=269,slow=35						
	comp=Z,44nm,0.9s						
SPITS	**Spitsbergen Ar**	**86.78**	**12**	P	**P**	**19 16 35.6**	**+0.4**
SPITS				pmax	pmax		
	comp=Z,210nm,1.3s						
SPB2	**Spitsbergen Ar**	**86.78**	**12**	P	**P**	**19 16 35.2**	**+0.1**
FALS	**False Pass**	**86.79**	**325**	P	**P**	**19 16 36.8**	**+1.2**
	baz=88						
VAE	**Valguarnera**	**86.81**	**53**	LR	LR	19 52 03.9	
	comp=Z,6µm,21.1s,baz=287,slow=33						
G15K	**Niukluk**	**86.86**	**335**	P	**P**	**19 16 37.8**	**+2.0**
	baz=88						
WDD	**Wied Dalam**	**86.95**	**54**	IAMs_20	IAMs_20	19 54 11.1	
	comp=Z,2µm,20.0s						
SOKA	**Soboth**	**86.98**	**44**	*i* P	**P**	**19 16 36.7**	**-0.2**
	comp=Z,13nm,1.3s						
F15K	**North Star Dit**	**87.10**	**336**	IAmb	IAmb	19 16 45.8	
	comp=Z,107nm,1.4s						
F15K	**North Star Dit**	**87.10**	**336**	P	**P**	**19 16 38.5**	**+1.6**
	baz=88,SNR=10.0						
RAR	**Rarotonga**	**87.13**	**249**	LR	LR	19 46 52.1	
	comp=Z,3µm,21.0s,baz=80,slow=30						
TREC	**Trest**	**87.20**	**41**	*e*P	**P**	**19 16 39.6**	**+1.8**
TREC				*e*		19 16 43.6	
TREC				MLR	MLR		
	comp=Z,3µm,22.5s						
TREC	**Trest**	**87.20**	**41**	*e*P	**P**	**19 16 39.6**	**+1.8**
TREC				*e*pP	**sP**	**19 16 43.6**	**+1.9**
TREC				AMS	AMS	19 49 10.0	
	comp=Z,3µm,22.5s						
K13K	**Kusilvak Mount**	**87.23**	**332**	IAmb	IAmb	19 16 44.9	
	comp=Z,109nm,1.4s						
K13K				IAMs_20	IAMs_20	19 58 42.6	
	comp=Z,3µm,20.0s						
K13K	**Kusilvak Mount**	**87.23**	**332**	P	**P**	**19 16 38.8**	**+1.2**
	baz=88						
C16K	**Lisburne Hills**	**87.28**	**338**	IAmb	IAmb	19 16 44.9	
	comp=Z,219nm,1.7s						
C16K	**Lisburne Hills**	**87.28**	**338**	P	**P**	**19 16 38.8**	**+1.1**
	baz=88,SNR=34						
ARSA	**Arzberg**	**87.30**	**43**	*i* PcP	**PcP**	**19 16 39.4**	**-1.0**
	comp=Z,42nm,2.1s,SNR=12						
SNAA	**Sanae**	**87.44**	**163**	⇓S	**S**	**19 27 25.1**	**+5.7**
	comp=N,20µm,9.2s						
SNAA				⇓pPdiff	**P**	**19 16 39.4**	**+0.9**
	comp=Z,8µm,1.3s						
SNAA	**Sanae**	**87.44**	**163**	P	**P**	**19 16 39.6**	**+1.1**
	comp=Z,86nm,0.9s,baz=280,slow=3.9,SNR=85						
SNAA				PP	**PP**	**19 20 04.7**	**+1.7**
	comp=Z,23nm,1.1s,baz=312,slow=8.8,SNR=3.9						
SNAA				LR	LR	19 54 02.1	
	comp=Z,2µm,21.8s,baz=305,slow=34						
	comp=Z,86nm,0.9s						
SNAA	**Sanae**	**87.44**	**163**	P	**P**	**19 16 38.9**	**+0.4**
SNAA				IAMs_20	IAMs_20	20 00 09.2	
	comp=Z,3µm,18.0s						
SNAA	**Sanae**	**87.44**	**163***c*	*i*P	**P**	**19 16 39.3**	**+0.8**
SNAA				pmax	pmax		
	comp=Z,342nm,1.7s						
ANM	**Nome**	**87.45**	**334**	IAmb	IAmb	19 16 45.9	
	comp=Z,107nm,1.8s						
ANM				IAMs_20	IAMs_20	20 01 14.9	
	comp=Z,3µm,19.0s						
ANM	**Nome**	**87.45**	**334**	P	**P**	**19 16 39.2**	**+0.6**
	baz=87						
UPC	**Upice**	**87.49**	**40**	*e*P	**P**	**19 16 41.0**	**+1.8**
UPC				MLR	MLR		
	comp=Z,4µm,20.0s						
UPC	**Upice**	**87.49**	**40**	*e*P	**P**	**19 16 41.0**	**+1.8**
UPC				AMS	AMS	19 50 20.0	
	comp=Z,4µm,20.0s						
CONA	**Conrad Observa**	**87.50**	**42**	*i* PcP	**PcP**	**19 16 41.3**	**0.0**
	comp=Z,55nm,1.6s,SNR=17						
CHVC	**Chvalec**	**87.52**	**40**	*e*P	**P**	**19 16 41.0**	**+1.7**
CHVC				MLR	MLR		
	comp=Z,3µm,20.3s						
CHVC	**Chvalec**	**87.52**	**40**	*e*P	**P**	**19 16 41.0**	**+1.7**
CHVC				AMS	AMS	19 50 30.0	
	comp=Z,3µm,20.3s						
BJO1	**Bjornoya**	**87.57**	**16**	*e*P	**P**	**19 16 41.5**	**+2.5**
BJO1				IVmB_BB		19 16 49.8	
	comp=Z,4µm,2.7s						
BJO1				*i*		19 27 26.9	
OSTC	**Ostas**	**87.62**	**40**	*e*P	**P**	**19 16 40.9**	**+1.1**
OSTC				*e*		19 27 09.4	
OSTC				MLR	MLR		
	comp=Z,4µm,21.4s						
OSTC	**Ostas**	**87.62**	**40**	*e*P	**P**	**19 16 40.9**	**+1.1**
OSTC				*e*SKS	**SKSac**	**19 27 09.4**	**+1.1**
OSTC				AMS	AMS	19 50 40.0	
	comp=Z,4µm,21.4s						
DPC	**Dobruska-Polom**	**87.70**	**40**	*e*P	**P**	**19 16 40.9**	**+0.7**
DPC				*e*		19 27 10.9	
DPC				MLR	MLR		
	comp=Z,4µm,21.7s						
DPC	**Dobruska-Polom**	**87.70**	**40**	*e*P	**P**	**19 16 40.9**	**+0.7**
DPC				*e*SKS	**SKSac**	**19 27 10.9**	**+2.1**
DPC				AMS	AMS	19 50 30.0	
	comp=Z,4µm,21.7s						

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RONA   Rosalia, Austr    87.80  43 i PcP    PcP      19 16 42.2 -0.4
       comp=Z,35nm,1.8s,SNR=16
KRUC   Moravsky          87.81  41 eP       P        19 16 40.9 +0.2
F14K   Arctic Creek      87.81 335  P       P        19 16 41.8 +1.5
       baz=86
CUC    Castrocucco       87.81  50  IAMs_20 IAMs_20  19 54 21.4
       comp=Z,2µm,20.0s
TRO    Tromso            87.89  20 eP       P        19 16 41.9 +1.3
TRO                                 IVmB_BB          19 16 48.6
       comp=Z,2µm,3.0s
TRO                                i                 19 27 07.8
VRAC   Vranov            87.92  41  LR      LR       19 53 23.1
       comp=Z,1µm,19.7s,baz=268,slow=34
VRAC   Vranov            87.92  41 ⇓P       P        19 16 43.3 +2.0
VRAC   Vranov            87.92  41 eP       P        19 16 41.7 +0.4
VRAC   Vranov            87.92  41  P       P        19 16 43.3 +2.0
KRLC   Kraliky           88.01  40 eP       P        19 16 43.9 +2.2
KRLC                                MLR     MLR
       comp=Z,4µm,26.5s
KRLC   Kraliky           88.01  40 eP       P        19 16 43.9 +2.2
KRLC                                AMS     AMS      19 49 20.0
       comp=Z,4µm,26.5s
M11K   Mekoryuk          88.05 330  IAMs_20 IAMs_20  20 00 13.5
       comp=Z,3µm,20.0s
M11K   Mekoryuk          88.05 330  P       P        19 16 42.0 +0.5
       baz=86
JETT   Jettan, Norway    88.42  21 eP       P        19 16 44.5 +1.3
MODS   Modra-Piesok      88.42  42 eP       P        19 16 45.6 +1.9
MODS                                pmax    pmax
       comp=Z,140nm,1.5s
MODS   Modra-Piesok      88.42  42 eP       P        19 16 45.6 +1.9
TNA    Tin City          88.46 335  IAMs_20 IAMs_20  19 59 03.6
       comp=Z,3µm,21.0s
TNA    Tin City          88.46 335  P       P        19 16 43.4  0.0
       baz=85
MORC   Moravsky Berou    88.51  40 ⇓P       P        19 16 46.5 +2.4
MORC   Moravsky Berou    88.51  40 eP       P        19 16 44.8 +0.7
MORC   Moravsky Berou    88.51  40  P       P        19 16 46.5 +2.4
SMOL   Smolenice         88.52  42 eP       P        19 16 45.9 +1.8
SMOL                                pmax    pmax
       comp=Z,13nm,1.5s
TIP    Timpagrande       88.58  51  IAMs_20 IAMs_20  19 51 34.8
       comp=Z,3µm,21.0s
UNV    Unalaska Valle    88.64 324  IAmb    IAmb     19 16 51.4
       comp=Z,130nm,1.2s
UNV    Unalaska Valle    88.64 324  P       P        19 16 44.0 -0.5
       baz=86
STEB   Steborice         88.65  40 eP       P        19 16 47.0 +2.3
STEB                               ex       x        19 16 50.2
JAVC   Velka Javorina    88.66  41 eP       P        19 16 45.4 +0.6
MAUC   Maruska           88.73  41 eP       P        19 16 47.8 +2.7
HOPEN  Hopen             88.83  13 eP       P        19 16 45.9 +0.9
HOPEN                              e                 19 27 19.7
OKC    Ostrava-Krasne    88.90  40  AMS     AMS      19 50 20.0
       comp=Z,3µm,22.5s
TROLL  Troll, Antarti    89.15 162 ⇑pPdiff  P        19 16 48.0 +1.3
       comp=Z,54µm,1.6s
SRO    Srobarova         89.15  42 eP       P        19 16 48.8 +1.7
HAMF   Hammerfest        89.40  19 eP       P        19 16 48.3 +0.6
HAMF                                IVmB_BB          19 16 55.8
       comp=Z,3µm,2.8s
HAMF                               i                 19 27 15.8
KTK1   Kautokeino        89.48  21 eP       P        19 16 49.0 +0.8
KTK1                                IVmB_BB          19 16 56.1
       comp=Z,2µm,3.6s
KTK1                               i                 19 27 18.1
KTK1                               e                 19 28 47.2
MORH   Mrgy, Hungar      89.50  44 ⇑P       P        19 16 50.0 +1.3
LANS   Liptovska Anna    89.81  41 eP       P        19 16 53.1 +2.9
LANS                                pmax    pmax
       comp=Z,13nm,1.5s
LANS   Liptovska Anna    89.81  41 eP       P        19 16 53.1 +2.9
P08K   Saint George I    90.13 327  P       P        19 16 50.3 -1.1
       baz=84
ARA0   ARCESS Array S    90.19  20 eP       P        19 16 52.1 +0.6
ARA0                               eP       pP       19 16 53.9 -0.5
ARCES  ARCESS Array B    90.19  20  P       P        19 16 51.5 +0.1
       comp=Z,11nm,0.8s,baz=285,slow=4.8,SNR=21
ARCES                               LR      LR       19 54 33.9
       comp=Z,953nm,20.2s,baz=284,slow=34
       comp=Z,11nm,0.8s
ARCES  ARCESS Array B    90.19  20  P       P        19 16 51.6 +0.1
ARCES  ARCESS Array B    90.19  20  P       P        19 16 51.6 +0.1
ARCES                               pmax    pmax
       comp=Z,85nm,1.5s
PSZ    Piszkesteto       90.21  42 ⇑P       P        19 16 54.3 +2.1
PSZ    Piszkesteto       90.21  42  P       P        19 16 54.2 +2.1
GAMB   Gambell           90.28 334  IAMs_20 IAMs_20  20 00 35.9
       comp=Z,3µm,20.0s
GAMB   Gambell           90.28 334  P       P        19 16 50.9 -1.1
       baz=82
SPIA   Saint Paul Isl    90.44 327  P       P        19 16 52.6 -0.3
       baz=83
KECS   Kecovo            90.55  42 eP       P        19 16 56.9 +3.3
KECS                                pmax    pmax
       comp=Z,23nm,1.3s
KECS   Kecovo            90.55  42 eP       P        19 16 56.9 +3.3
R9F13  Warsaw-Wawer      90.57  38 eP       P        19 16 52.7 -0.9
R9F13                              i S      S        19 26 27.9  -82
R9F13                              e                 19 32 09.7
KEV    Kevo              90.67  20  IAMs_20 IAMs_20  19 54 25.6
       comp=Z,2µm,20.0s
STHS   Stebnicka Huta    90.94  41 eP       P        19 16 58.0 +2.5
STHS                                pmax    pmax
       comp=Z,8.0nm,1.1s
STHS   Stebnicka Huta    90.94  41 eP       P        19 16 58.0 +2.5
VADS   Vadso             91.38  19 eP       P        19 16 59.4 +2.4
VADS                               i                 19 27 30.8
SUW    Suwalki           91.57  36  P       P        19 16 58.4 +0.2
SUW                                 IAMs_20 IAMs_20  19 54 07.4
       comp=Z,3µm,21.0s
SUW    Suwalki           91.57  36  P       P        19 16 58.4 +0.2
SUW                                 MLR     MLR
       comp=Z,3µm,21.0s
SIRR   Siria             91.58  44 ⇑P       P        19 16 60.0 +1.5
BZS    Buzias            91.62  44 ⇓P       P        19 16 59.7 +1.1
BZS    Buzias            91.62  44  P       P        19 16 59.7 +1.1
MDVR   Moldovita         91.78  45 ⇑P       P        19 17 00.5 +1.1
PABE   Paberze           91.81  34  P       P        19 16 58.8 -0.4
PABE                                IAmb    IAmb     19 18 06.6
       comp=Z,113nm,1.8s
PABE                                IAMs_20 IAMs_20  20 03 36.7
       comp=Z,2µm,19.0s
NVL    N'lazarevskaya    91.89 161 eP       P        19 17 00.5 +1.2
NVL                                e                 19 20 39.7
NVL                                ePPP     PPP      19 22 38.4
NVL                                eS       SKSac    19 27 31.6 -0.7
NVL                                eSS      SS       19 34 10.7 +2.1
NVL                                eSSS     SSS      19 37 49.1
NVL                                 pmax    pmax
       comp=Z,145nm,1.6s
NVL                                 MLR     MLR
       comp=Z,4µm,19.0s
FIA1   FINESS Array S    91.90  28  IAmb    IAmb     19 17 07.3
       comp=Z,50nm,0.9s
FINES  FINESS Array B    91.90  28  P       P        19 16 59.9 +0.3
       comp=Z,6.6nm,0.9s,baz=276,slow=3.5,SNR=11
FINES                               LR      LR       19 54 10.6
       comp=Z,2µm,21.6s,baz=280,slow=33
       comp=Z,6.6nm,0.9s
FINES  FINESS Array B    91.90  28  P       P        19 16 59.3 -0.3
BOVS   Bovan             91.91  46 ⇑P       P        19 17 00.6 +0.6
DRGR                     92.23  43 ⇑P       P        19 17 02.7 +1.1
DRGR                     92.23  43  P       P        19 17 02.6 +1.1
GZR    Gura Zlata        92.46  44 ⇑P       P        19 17 04.0 +1.3
GZR    Gura Zlata        92.46  44  P       P        19 17 03.9 +1.3
WIN    Windhoek          92.47 112  P       P        19 17 03.1 -0.2
WIN    Windhoek          92.47 112  P       P        19 17 03.1 -0.2
WIN                                 pmax    pmax
       comp=Z,69nm,1.8s
WIN                                 MLR     MLR
       comp=Z,5µm,20.0s
MARR   Marisel-Cluj      92.53  43 ⇑P       P        19 17 04.4 +1.5
TSUM   Tsumeb            92.77 109  P       P        19 17 05.8 +1.1
       comp=Z,4.4nm,0.9s,baz=271,slow=5.5,SNR=9.2
TSUM                                LR      LR       19 55 26.8
       comp=Z,8µm,20.7s,baz=270,slow=33
       comp=Z,4.4nm,0.9s
TSUM   Tsumeb            92.77 109  P       P        19 17 04.4 -0.3
TSUM                                IAmb    IAmb     19 17 07.4
       comp=Z,76nm,1.8s
VSU    Vasula            92.79  31c iP      P        19 17 03.2 -0.5
VSU                                 pmax    pmax
       comp=Z,46nm,0.9s
CJR    Cluj-Napoca       92.85  43 ⇑P       P        19 17 05.9 +1.5
CJR    Cluj-Napoca       92.85  43  P       P        19 17 05.8 +1.5
QSPA   South Pole Qui    93.46 180  P       P        19 17 08.1 +1.2
APA    Apatity           93.48  22⇓iP       P        19 17 11.5 +4.7
APA                                i                 19 20 57.1
APA                                i S      S        19 28 18.0 +2.9
APA                                i PS     PS       19 29 34.1 +5.1
APA                                i SS     SS       19 34 29.5 -1.8
APA                                 pmax    pmax
       comp=Z,17nm,1.0s
APA                                 MLR     MLR
       comp=Z,2µm,28.5s
RNPP8  Varash            93.59  38  P       P        19 17 08.4 +0.8
RNPP9  Sopachiv          93.60  38  P       P        19 17 08.5 +0.9
ARR    Arges             93.76  44 ⇓P       P        19 17 09.8 +1.2
BURAR  Bucovina Array    93.81  42  P       P        19 17 09.0 +0.1
BURAR  Bucovina Array    93.81  42 ⇑P       P        19 17 10.4 +1.5
BURAR  Bucovina Array    93.81  42  P       P        19 17 10.3 +1.5
DOPR   Dopca             94.19  44 ⇑P       P        19 17 11.7 +1.2
MNK    Minsk             94.20  35 i P      P        19 17 09.9 -0.4
MNK                                i                 19 20 56.8
MNK                                i PPP    PPP      19 22 56.6
MNK                                i S      SKSac    19 27 44.7 -1.1
MNK                                i SS     SS       19 34 44.5 +2.3
MNK                                i SSS    SSS      19 38 24.6
MNK                                 pmax    pmax
       comp=N,10.0nm,1.0s
MNK                                 pmax    pmax
       comp=Z,13nm,1.0s
MNK                                 pmax    pmax
       comp=E,5.0nm,0.9s
MNK                                 MLR     MLR
       comp=Z,3µm,19.0s
MNK                                 MLR     MLR
       comp=N,2µm,18.0s
MLR    Muntele Rosu      94.65  44  LR      LR       19 56 28.8
       comp=N,1µm,20.9s,baz=270,slow=33
MLR    Muntele Rosu      94.65  44 ⇓P       P        19 17 13.8 +1.0
MLR    Muntele Rosu      94.65  44  P       P        19 17 13.8 +1.0
COVR   Voineasa-Covas    94.77  44 ⇓P       P        19 17 13.6 +0.4
MI28   Mi28,Pidlybu      94.79  38  P       P        19 17 13.3 +0.2
LUBAR  Lubar, Ukraine    95.05  39  P       P        19 17 14.7 +0.4
VRI    Vrincioaia        95.12  44 ⇓P       P        19 17 15.2 +0.4
VRI    Vrincioaia        95.12  44  P       P        19 17 15.2 +0.4
KOOLE  Kule              95.34 113  P       P        19 17 16.0 -0.4
KOOLE                               IAmb    IAmb     19 17 19.0
       comp=Z,115nm,1.6s
IDI    Anoyia            95.42  54  LR      LR       20 03 40.6
       comp=Z,602nm,18.1s,baz=298,slow=38
ELIB   Princess Elisa    95.58 162 dP       P        19 17 16.8 +0.3
       comp=Z,18nm,1.0s
AK20   Malin Array Si    95.66  38  P       P        19 17 16.9 -0.2
AK19   Malin Array Si    95.67  38  P       P        19 17 16.9 -0.2
AK21   Malin Array Si    95.68  38  P       P        19 17 17.2  0.0
AK17   Malin Array Si    95.71  38  P       P        19 17 17.5 +0.2
AK13   Malin Array Si    95.72  39  P       P        19 17 17.6 +0.2
AK16   Malin Array Si    95.74  38  P       P        19 17 17.3 -0.2
SORM   Soroca            95.79  41 ⇑P       P        19 17 19.2 +1.4
SORM   Soroca            95.79  41  P       P        19 17 19.1 +1.4
KIEV   Kiev              95.80  38  IAMs_20 IAMs_20  19 57 17.6
       comp=Z,3µm,22.0s
AKASG  Malin Array Be    95.81  38  P       P        19 17 18.6 +0.9
       comp=Z,2.5nm,0.8s,baz=277,slow=4.0,SNR=7.5
       comp=Z,2.5nm,0.8s
AKASG  Malin Array Be    95.81  38 i P      P        19 17 18.7 +0.9
AKASG                               pmax    pmax
       comp=Z,2.0nm,0.6s
AKBB   Malin Array Si    95.81  38⇓iP       P        19 17 18.5 +0.7
AKBB                                pmax    pmax
       comp=Z,12nm,1.6s
SUR    Sutherland        96.03 122  P       P        19 17 25.0 +5.6
       comp=Z,11nm,0.8s,baz=235,slow=8.4,SNR=3.7
SUR                                 LR      LR       19 56 59.3
       comp=Z,6µm,20.2s,baz=266,slow=33
SUR    Sutherland        96.03 122  P       P        19 17 18.2 -1.3
SUR                                 IAmb    IAmb     19 17 28.0
       comp=Z,160nm,1.9s
QNGWA  Qangwa            96.17 109  P       P        19 17 19.4 -0.9
GRTLG  Ghanzi            96.25 111  P       P        19 17 20.1 -0.5
GRTLG                               IAmb    IAmb     19 17 23.0
       comp=Z,53nm,1.5s
XAUDM  Khaudum           96.30 108  P       P        19 17 20.5 -0.3
ADZR   Andozero          96.61  24 eP       P        19 17 20.6 -0.5
ADZR                                pmax    pmax
       comp=Z,22nm,0.8s
KGCAE  Kacgae            97.19 112  IAmb    IAmb     19 17 27.2
       comp=Z,42nm,1.2s
BILL   Bilibino          97.48 341  P       P        19 17 24.7 -0.3
BILL                                IAmb    IAmb     19 17 35.5
       comp=Z,66nm,2.0s
BILL   Bilibino          97.48 341  IAMs_20 IAMs_20  20 07 42.2
       comp=Z,2µm,19.0s
BILL   Bilibino          97.48 341⇓iP       Pdif     19 17 26.4 +1.3
BILL                                pmax    pmax
       comp=Z,40nm,2.3s
KLMR   Klimovskoe        98.31  27 eP       P        19 17 27.5 -1.3
KLMR                               e                 19 21 28.8
KLMR                                S       SKSac    19 28 04.8 -2.2
KLMR                                pmax    pmax
       comp=Z,21nm,1.1s
OBN    Obninsk           98.88  33  LR      LR       19 58 39.8
       comp=Z,4µm,21.8s,baz=234,slow=33
OBN    Obninsk           98.88  33 eP       Pdif     19 17 32.5 +1.0
OBN                                e                 19 21 31.3
OBN                                 pmax    pmax
       comp=Z,29nm,1.8s
OBN                                 MLR     MLR
       comp=Z,1µm,21.0s
MOS    Moscow            99.24  32 eP       Pdif     19 17 45.1  +12
SBA    Scott Base        99.25 191  P       Pdif     19 17 33.7 +1.0
SBA                                 IAmb    IAmb     19 17 37.2
       comp=Z,48nm,1.6s
SBA    Scott Base        99.25 191  P       Pdif     19 17 33.7 +1.0
SBA                                 pmax    pmax
       comp=Z,48nm,1.7s
SBA                                 MLR     MLR
       comp=Z,3µm,21.0s
BOSA   Boshof            99.91 118  LR      LR       19 58 43.0
       comp=Z,3µm,19.9s,baz=270,slow=33
VNDA   Vanda            100.33 191  P       Pdif     19 17 39.4 +1.8
       comp=Z,5.6nm,1.2s,baz=111,slow=2.9,SNR=11
VNDA   Vanda            100.33 191          Pdif     19 17 40.4 +2.9
VNDA   Vanda            100.33 191  P       Pdif     19 17 40.4 +2.9
SIM    Simferopol'      100.40  43 i P      Pdif     19 17 38.4 -0.2
SIM                                                  19 21 45.0
SIM                                 S       Sdif     19 29 09.0 -6.4
SIM                                 pmax    pmax
       comp=Z,130nm,10.0s
SIM                                 pmax    pmax
       comp=Z,180nm,11.0s
SIM                                 pmax    pmax
       comp=Z,160nm,12.0s
SIM                                 smax    smax
       comp=N,170nm,14.0s
SIM                                 pmax    pmax
       comp=N,2µm,21.0s
BRTR   Keskin Array B   101.40  49  P       Pdif     19 17 47.0 +3.7
       comp=N,0.7nm,0.8s,baz=300,slow=11,SNR=3.6
BRTR                                PKKPbc  PKKPbc   19 33 53.5 +0.3
       comp=N,1.1nm,0.8s,baz=138,slow=5.8,SNR=4.8
BRTR   Keskin Array B   101.40  49          Pdif     19 17 42.3 -1.0
BRTR   Keskin Array B   101.40  49  P       Pdif     19 17 42.3 -1.0
VORR   Voronezh         101.55  36 eP       Pdif     19 17 46.6 +3.1
VORR                                pmax    pmax
       comp=Z,7.0nm,0.8s
SYO    Syowa Base       101.56 160⇓ePdiff   Pdif     19 17 45.0 +1.9
SYO    Syowa Base       101.56 160⇓ePKiKP   PKiKP    19 22 07.4 +0.6
SYO    Syowa Base       101.56 160⇑ipPKiKP  PKiKP    19 22 11.3 +4.5
VSR    Storozhevoye     101.68  36 eP       Pdif     19 17 47.2 +3.1
VSR                                 pmax    pmax
       comp=Z,3.0nm,1.0s
VORD   Divnogorie       101.84  36 eP       Pdif     19 17 45.6 +0.8
VORD                                pmax    pmax
       comp=Z,8.0nm,0.8s
ANN    Anapa            102.70  43 i P      Pdif     19 17 47.4 -1.4
ANN                                i                 19 22 07.7
ANN                                e                 19 28 25.5
ANN                                 pmax    pmax
       comp=Z,73nm,1.7s
ANN                                 pmax    pmax
       comp=Z,68nm,1.5s
NRIK   Noril'sk         106.31   7  PKKPab  PKKPab   19 33 53.2 -0.7
       comp=Z,6.3nm,1.0s,baz=133,slow=3.6,SNR=6.2
KBZ    Khabaz           106.76  42  PKKP             19 33 50.6
       comp=Z,4.6nm,0.9s,baz=78,slow=3.1,SNR=7.8
PET    Petropavlovsk    108.48 330  IAMs_20 IAMs_20  20 17 45.0
       comp=Z,2µm,21.0s
MAK    Makhachkala      110.15  42 eP       Pdif     19 18 14.7 -7.2
MAK                                e                 19 28 58.4
MAK                                ePS      PS       19 32 23.3 -3.2
MAK                                eSS      SS       19 38 22.6 -0.6
MAK                                eSSS     SSS      19 42 27.5
MAK                                 pmax    pmax
       comp=Z,505nm,1.5s
MAK                                 MLR     MLR
       comp=Z,1µm,15.0s
YAK    Yakutsk          112.21 348 i PKIKP  PKiKP    19 22 29.3 +2.5
YAK                                e                 19 23 13.7
YAK                                eSS      SS       19 38 56.8 +7.7
YAK                                 pmax    pmax
       comp=Z,5.0nm,0.9s
YAK                                 pmax    pmax
       comp=N,3.0nm,1.3s
YAK                                 pmax    pmax
       comp=Z,266nm,2.2s
YAK                                 pmax    pmax
       comp=N,230nm,2.3s
YAK                                 pmax    pmax
       comp=E,124nm,2.4s
YAK                                 MLR     MLR
       comp=Z,5µm,21.0s
YAK                                 MLR     MLR
       comp=N,4µm,23.0s
YAK                                 MLR     MLR
       comp=E,2µm,21.0s
RAYN   Ar Rayn          115.47  62  IAMs_20 IAMs_20  20 11 45.9
       comp=Z,2µm,21.0s
BORK   Borovoye         116.31  23  IAMs_20 IAMs_20  20 10 48.8
       comp=Z,2µm,21.0s
BORK   Borovoye         116.31  23⇓iPKIKP   PKPdf    19 22 35.6 +0.6
BVAR   Borovoye Array   116.35  23  PKP     PKiKP    19 22 35.0 -0.1
       comp=Z,0.9nm,0.6s,baz=318,slow=2.0,SNR=5.9
BVAR                                PP      PP       19 23 45.0 +4.7
       comp=Z,5.1nm,0.8s,baz=299,slow=6.4,SNR=6.4
BVAR                                PKKPbc  PKKPbc   19 33 04.7 -1.1
       comp=Z,5.4nm,0.9s,baz=134,slow=4.3,SNR=16
BVAR   Borovoye Array   116.35  23  PKIKP   PKiKP    19 22 35.0 -0.1
DZM    Mont Dzumac      118.46 247 ePP      PP       19 23 57.6 +0.8
       comp=Z,269nm,26.1s
DZM    Mont Dzumac      118.46 247 eSS      SS       19 40 12.7 -2.1
       comp=Z,1µm,31.4s
DZM    Mont Dzumac      118.46 247 eLR      LR       19 58 50.3
       comp=Z,2µm,25.8s
ZALV   Zalesovo Beam    120.19  14  PKP     PKPdf    19 22 42.5  0.0
       comp=Z,13nm,0.8s,baz=300,slow=2.9,SNR=40
ZALV                                PKKPbc  PKKPbc   19 32 49.2 -2.7
       comp=Z,2.9nm,0.6s,baz=173,slow=3.2,SNR=8.4
ZALV   Zalesovo Beam    120.19  14          PKPdf    19 22 41.5 -0.9
YSS    Yuzhno-Sakhali   120.22 332  IAMs_20 IAMs_20  20 23 34.0
       comp=Z,2µm,20.0s
KURK   Kurchatov        121.23  20          PKPdf    19 22 44.1 -0.4
KURK   Kurchatov        121.23  20c iPKIKP  PKiKP    19 22 44.9 +0.3
KURK                                pmax    pmax
       comp=Z,13nm,1.0s
KURBB  Kurchatov Arra   121.28  20  PKP     PKiKP    19 22 45.0 +0.2
       comp=Z,7.9nm,1.0s,baz=320,slow=2.3,SNR=32
KURBB                               PKKPbc  PKKPbc   19 32 46.5 -1.2
       comp=Z,4.1nm,0.9s,baz=156,slow=3.3,SNR=20
HEH    HeiHe            123.39 344  PKP     PKPdf    19 22 47.3 -1.4
HEH                                 SS      SS       19 41 18.9 +4.5
HEH                                 AMB     AMB
       comp=Z,820nm,3.8s
HEH                                 LR      LR
       comp=Z,2µm,22.1s
HEH                                 LR      LR
       comp=Z,2µm,19.8s
HEH                                 LR      LR
       comp=Z,4µm,22.7s
BRLS   Borolday         123.49  31 ePKP     PKPdf    19 22 49.1 -0.1
BRLS                               ePP      PP       19 24 31.3 +1.6
BRLS   Borolday         123.49  31 ePKIKP   PKPdf    19 22 49.1 -0.1
BRLS                               e                 19 24 31.3
KKAR   Karatay Array    123.78  31          PKPdf    19 22 48.9 -0.8
KKAR   Karatay Array    123.78  31  PKIKP   PKPdf    19 22 48.9 -0.8
CHM    Chimkent         123.87  32 ePKP     PKPdf    19 22 49.7 -0.2
CHM    Chimkent         123.87  32 ePKIKP   PKPdf    19 22 49.7 -0.2
UOSS   Minazif          124.20  57          PKPdf    19 22 48.9 -2.1
UOSS   Minazif          124.20  57  IAMs_20 IAMs_20  20 20 53.7
       comp=Z,2µm,19.0s
DZA    Taraz            124.35  30 ePKP     PKPdf    19 22 50.6 -0.2
DZA    Taraz            124.35  30 ePKIKP   PKPdf    19 22 50.6 -0.2
CIT    Chita            124.37 354 ePKIKP   PKiKP    19 22 51.6 +0.7
CIT                                e                 19 22 56.6
CIT                                 pmax    pmax
       comp=Z,49nm,3.0s
DGZ    Jazzator, Alta   124.74  14c iPKIKP  PKiKP    19 22 52.0 +0.2
MOY    Mondy            124.96   4 ePKIKP   PKiKP    19 22 52.8 +0.6
MOY                                 pmax    pmax
       comp=Z,29nm,2.0s
TLY    Talaya           125.07   2c iPKIKP  PKiKP    19 22 52.8 +0.5
TLY                                 pmax    pmax
       comp=Z,23nm,2.5s
USP    Ospenovka        125.61  28  P       PKiKP    19 22 54.0 +0.3
       SNR=9.8
KNGR   Kungurtug, Tuv   125.70   7⇓iPKIKP   PKiKP    19 22 54.9 +1.2
MAKZ   Makanchi         125.73  20          PKPdf    19 22 52.1 -1.2
MAKZ   Makanchi         125.73  20  PKIKP   PKPdf    19 22 52.1 -1.2
MAKZ                                MLR     MLR
       comp=Z,3µm,20.0s
EKS2   Erkin-Say        125.73  29  P       PKiKP    19 22 55.5 +1.5
       SNR=18
MK31   Makanchi Array   125.84  20c iPKIKP  PKPdf    19 22 53.1 -0.5
MKAR   Makanchi Array   125.84  20  PKP     PKPdf    19 22 53.4 -0.2
       comp=Z,14nm,1.1s,baz=323,slow=1.8,SNR=40
MKAR                                PKKPab  PKKPab   19 32 28.4  0.0
       comp=Z,2.3nm,0.9s,baz=126,slow=6.2,SNR=6.8
MKAR   Makanchi Array   125.84  20          PKPdf    19 22 52.0 -1.6
HILR   Hailar Array B   125.87 349  PKP     PKiKP    19 22 53.8 -0.1
       comp=Z,15nm,0.8s,baz=104,slow=3.1,SNR=18
HILR                                PP      PP       19 24 44.8 -0.3
       comp=Z,13nm,0.9s,baz=34,slow=6.1,SNR=4.8
TDK    Taldyqorghan     125.92  24 ePKP     PKPdf    19 22 53.6 -0.2
TDK                                ePP      PP       19 24 46.9 +1.1
TDK    Taldyqorghan     125.92  24 ePKIKP   PKPdf    19 22 53.6 -0.2
TDK                                e                 19 24 46.8
CHMS   Chumysh          125.93  28  P       PKiKP    19 22 55.5 +1.2
       SNR=6.7
ZSN    Zaisan           126.09  17 ePKP     PKPdf    19 22 53.9 -0.2
ZSN    Zaisan           126.09  17 ePKIKP   PKPdf    19 22 53.8 -0.2
AAK    Ala-Archa        126.09  28  P       PKiKP    19 22 55.7 +0.9
       SNR=17
AAK    Ala-Archa        126.09  28          PKPdf    19 22 52.6 -1.8
AAK    Ala-Archa        126.09  28c iPKIKP  PKiKP    19 22 55.4 +0.6
AAK                                 pmax    pmax
       comp=Z,28nm,1.3s
TAU    Tasmania Unive   126.14 217  IAMs_20 IAMs_20  20 11 20.6
       comp=Z,2µm,19.0s
CHGR   Chuyangaron      126.15  35⇑iPKIKP   PKiKP    19 22 55.1 +0.2
KBK    Karagaybulak     126.29  28  P       PKiKP    19 22 56.4 +1.2
       SNR=10
ZAK    Zakamensk        126.36   2 ePKIKP   PKiKP    19 22 55.0  0.0
ZAK                                 pmax    pmax
       comp=Z,16nm,1.7s
TKM2   Tokmak 2         126.39  27  P       PKiKP    19 22 55.6 +0.1
       SNR=15
UCH    Uchtor           126.41  29  P       PKiKP    19 22 56.6 +0.8
       SNR=24
AAA    Alma-Ata         126.75  26 ePKP     PKPdf    19 22 55.1 -0.3
AAA    Alma-Ata         126.75  26 ePKIKP   PKPdf    19 22 55.1 -0.3
MDOK   Medeo            126.84  26 ePKP     PKPdf    19 22 55.5 -0.3
MDOK                               ePP      PP       19 24 53.1 +1.0
MDOK   Medeo            126.84  26 ePKIKP   PKPdf    19 22 55.4 -0.3
MDOK                               e                 19 24 53.0
TNSS   Tian-Shan        126.90  26 ePKP     PKPdf    19 22 55.5 -0.8
TNSS   Tian-Shan        126.90  26 ePKIKP   PKPdf    19 22 55.4 -0.8
USRK   Ussuriysk Ar.    127.10 337  PKP     PKiKP    19 22 56.2 -0.2
       comp=Z,17nm,0.9s,baz=32,slow=2.2,SNR=17
USRK                                PP      PP       19 25 00.8 +7.3
       comp=Z,8.8nm,1.0s,baz=25,slow=11,SNR=4.5
BNX    BinXian          127.42 341 ⇓PKP     PKPdf    19 22 56.6  0.0
BNX                                 AMB     AMB
       comp=Z,250nm,7.7s
BNX                                 LR      LR
       comp=Z,2µm,23.1s
BNX                                 LR      LR
       comp=Z,1µm,21.0s
BNX                                 LR      LR
       comp=Z,3µm,25.0s
SATY   Saty             127.52  25 ePKP     PKPdf    19 22 56.6 -0.4
SATY                               ePP      PP       19 24 57.6 +1.1
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SATY	**Saty**	**127.52**	**25**	*e*PKIKP	**PKPdf**	**19 22 56.6**	**-0.4**
SATY				*e*		19 24 57.5	
MDJ	**Mudanjiang**	**127.66**	**339**	PKP	**PKiKP**	**19 22 57.4**	**-0.2**
UZB	**Uzynbulak**	**127.70**	**25**	*e*PKP	**PKPdf**	**19 22 57.0**	**-0.5**
UZB				*e*PP	**PP**	**19 24 58.8**	**+1.1**
UZB	**Uzynbulak**	**127.70**	**25**	*e*PKIKP	**PKPdf**	**19 22 56.9**	**-0.5**
UZB				*e*		19 24 58.7	
SHLS	**Shalkode**	**127.88**	**24**	*e*PKP	**PKPdf**	**19 22 57.7**	**-0.1**
SHLS				*e*PP	**PP**	**19 25 01.0**	**+2.2**
SHLS	**Shalkode**	**127.88**	**24**	*e*PKIKP	**PKPdf**	**19 22 57.6**	**-0.1**
SHLS				*e*		19 25 00.9	
VLA	**Vladivostok**	**128.04**	**336**	*d i*PKIKP	**PKiKP**	**19 22 58.2**	**-0.2**
KBL	**Kabul**	**128.78**	**39**		**PKPdf**	**19 22 57.3**	**-2.5**
KBL	**Kabul**	**128.78**	**39**	PKIKP	**PKPdf**	**19 22 57.3**	**-2.5**
PSTR	**Posyet**	**128.87**	**336**	*d i*PKIKP	**PKiKP**	**19 23 00.3**	**+0.3**
ULN	**Ulaanbaatar**	**128.91**	**359**		**PKPdf**	**19 22 57.9**	**-1.6**
ULN	**Ulaanbaatar**	**128.91**	**359**	PKP	**PKiKP**	**19 23 00.0**	**-0.2**
ULN				PKP	**PKPdf**	**19 23 00.2**	**+0.6**
ULN	**Ulaanbaatar**	**128.91**	**359**	*de*PKIKP	**PKPdf**	**19 22 59.8**	**+0.2**
SONM	**Songino Array**	**128.95**	**360**	PKhKP	PKPpre	19 22 53.9	
	comp=Z,0.4nm,0.6s,baz=24,slow=0.8,SNR=3.8						
SONM				PKP	**PKiKP**	**19 23 00.3**	**0.0**
	comp=Z,11nm,1.0s,baz=280,slow=0.4,SNR=45						
SONM				PP	**PP**	**19 25 09.8**	**+4.4**
	comp=Z,12nm,1.1s,baz=354,slow=4.3,SNR=7.5						
SONM	**Songino Array**	**128.95**	**360**		**PKPdf**	**19 22 58.0**	**-1.6**
CAN	**Canberra**	**129.02**	**226**	IAMs_20	IAMs_20	20 08 54.4	
	comp=Z,2µm,22.0s						
KSH	**Kashi**	**129.20**	**30**	PKP	**PKiKP**	**19 23 02.0**	**+1.0**
KSH				PP	**PP**	**19 25 11.3**	**+3.6**
KSH				LR	LR		
	comp=Z,2µm,21.3s						
KSH				LR	LR		
	comp=Z,2µm,22.3s						
KSH				LR	LR		
	comp=Z,3µm,24.0s						
AUPHS	**Peel High Scho**	**129.45**	**232**	P	**PKiKP**	**19 23 03.2**	**+1.6**
AUPHS	**Peel High Scho**	**129.45**	**232**	P	**PKiKP**	**19 23 02.5**	**+0.9**
CN2	**Changchun**	**129.78**	**342**	PKP	**PKPdf**	**19 22 59.8**	**-1.3**
CN2				SKKS		19 32 11.4	
CN2				SS	**SS**	**19 42 34.1**	**-0.3**
CN2				AMB	AMB		
	comp=Z,300nm,5.5s						
CN2				LR	LR		
	comp=Z,3µm,23.0s						
CN2				LR	LR		
	comp=Z,2µm,23.0s						
CN2				LR	LR		
	comp=Z,3µm,22.1s						
MJAR	**Matsushiro Arr**	**130.07**	**326**	PKP	**PKPdf**	**19 23 02.3**	**+0.4**
	comp=Z,21nm,1.0s,baz=63,slow=0.6,SNR=37						
MJAR				SKPbc	**SKPab**	**19 26 24.9**	**0.0**
	comp=Z,2.7nm,0.9s,baz=41,slow=3.2,SNR=4.1						
MJAR	**Matsushiro Arr**	**130.07**	**326**		**PKPdf**	**19 23 00.5**	**-1.5**
MAJO	**Matsushiro**	**130.07**	**326**		**PKPdf**	**19 23 00.6**	**-1.3**
MAJO	**Matsushiro**	**130.07**	**326**	P	**PKiKP**	**19 23 02.8**	**+0.1**
MAJO	**Matsushiro**	**130.07**	**326**	*de*PKIKP	**PKPdf**	**19 23 01.7**	**-0.2**
WMQ	**Urumqi**	**130.21**	**17**	PKP	**PKiKP**	**19 23 03.0**	**+0.1**
WMQ				sPKP	sPKPdf	19 23 10.4	+3.7
WMQ				PP	**PP**	**19 25 18.3**	**+4.5**
WMQ				AMB	AMB		
	comp=Z,730nm,7.7s						
WMQ				LR	LR		
	comp=Z,1µm,24.3s						
WMQ				LR	LR		
	comp=Z,2µm,24.3s						
WMQ				LR	LR		
	comp=Z,2µm,21.3s						
INU	**Inuyama**	**131.60**	**326**	P	**PKiKP**	**19 23 06.8**	**+1.0**
INU	**Inuyama**	**131.60**	**326**	P	**PKiKP**	**19 23 06.3**	**+0.5**
NIL	**Nilore**	**131.98**	**37**		**PKPdf**	**19 23 03.8**	**-1.9**
NIL	**Nilore**	**131.98**	**37**	IAMs_20	IAMs_20	20 29 02.1	
	comp=Z,1µm,19.0s						
NIL	**Nilore**	**131.98**	**37**	PKIKP	**PKPdf**	**19 23 03.8**	**-1.9**
NIL				MLR	MLR		
	comp=Z,1µm,19.0s						
XLT	**XiLinHaoTe**	**131.99**	**350**	*e*PKP	**PKiKP**	**19 23 06.6**	**+0.1**
XLT				PP	**PP**	**19 25 26.6**	**+1.4**
XLT				PKS	**PKSdf**	**19 26 36.6**	**-5.3**
XLT				SKKS		19 32 20.8	
XLT				LR	LR		
	comp=Z,1µm,18.8s						
XLT				LR	LR		
	comp=Z,860nm,20.6s						
SNY	**Shenyang**	**132.15**	**342**	⇓PKP	**PKiKP**	**19 23 07.8**	**+1.1**
SNY				AMB	AMB		
	comp=Z,1µm,9.0s						
SNY				LR	LR		
	comp=Z,2µm,21.4s						
SNY				LR	LR		
	comp=Z,2µm,21.6s						
SNY				LR	LR		
	comp=Z,3µm,23.9s						
JMU	**Jammu**	**133.53**	**37**	*e*P	**PKiKP**	**19 23 10.2**	**+0.4**
JMU				IAmb	IAmb	19 23 11.8	
	comp=Z,14nm,0.7s						
KSRS	**Korea Array**	**134.44**	**335**	PKhKP	PKPpre	19 23 00.8	
	comp=Z,1.6nm,0.7s,baz=29,slow=1.8,SNR=6.8						
KSRS				PKP	**PKPdf**	**19 23 10.6**	**+0.5**
	comp=Z,9.8nm,0.9s,baz=27,slow=2.0,SNR=20						
KSAR	**Wonju Array Be**	**134.46**	**335**		**PKPdf**	**19 23 08.1**	**-2.0**
KSAR	**Wonju Array Be**	**134.46**	**335**	PKIKP	**PKPdf**	**19 23 08.1**	**-2.0**
DHRM	**DHARAMSHALA**	**134.78**	**36**	*e*P	**PKiKP**	**19 23 12.5**	**-0.1**
DHRM				IAmb	IAmb	19 23 22.9	
	comp=Z,6.4nm,0.7s						
DL2	**Dalian**	**135.42**	**342**	PKP	**PKPdf**	**19 23 12.0**	**+0.1**
DL2				PP	**PP**	**19 25 54.0**	**+7.0**
DL2				AMB	AMB		
	comp=Z,970nm,11.9s						
DL2				LR	LR		
	comp=Z,2µm,24.5s						
DL2				LR	LR		
	comp=Z,2µm,23.2s						
DL2				LR	LR		
	comp=Z,3µm,21.8s						
HHC	**Hu-ho-hao-te**	**135.62**	**354**	⇓*i*PKP	**PKiKP**	**19 23 14.5**	**+0.6**
HHC				PP	**PP**	**19 25 49.8**	**+1.5**
HHC				AMB	AMB		
	comp=Z,610nm,9.5s						
HHC				LR	LR		
	comp=Z,1µm,23.7s						
HHC				LR	LR		
	comp=Z,1µm,21.8s						
HHC				LR	LR		
	comp=Z,2µm,20.8s						
BJI	**Beijing**	**135.71**	**349**	PKP	**PKiKP**	**19 23 13.3**	**-0.7**
BJI				sPKP	**sPKPdf**	**19 23 23.3**	**+6.3**
BJI				PKS	**PKSdf**	**19 26 47.1**	**-1.5**
BJI				SKKS		19 32 48.3	
BJI				LR	LR		
	comp=Z,630nm,19.2s						
BJI				LR	LR		
	comp=Z,540nm,20.2s						
BJI				LR	LR		
	comp=Z,1µm,21.9s						
BKNR	**BIKANER**	**135.73**	**43**	IAmb	IAmb	19 23 12.6	
	comp=Z,89nm,0.2s						
BKNR				*e*P	**PKiKP**	**19 23 14.9**	**+0.5**
BTO	**Baotou**	**136.01**	**355**	*e*PKP	**PKPdf**	**19 23 07.3**	**-5.8**
BTO				PP	**PP**	**19 25 46.0**	**-4.7**
BTO	**Baotou**	**136.01**	**355**	SS	SS	19 43 40.8	-9.0
BTO				pmax	pmax		
	comp=Z,11nm,0.6s						
BTO				pmax	pmax		
	comp=Z,970nm,4.4s						
BTO				LR	LR		
	comp=N,4µm,20.4s						
BTO				LR	LR		
	comp=E,2µm,18.2s						
BTO				LR	LR		
	comp=Z,5µm,20.6s						
STKA	**Stephens Creek**	**136.08**	**226**	PKhKP	PKPpre	19 23 04.7	
	comp=Z,1.8nm,1.0s,baz=198,slow=8.3,SNR=3.7						
STKA				PKP	**PKiKP**	**19 23 14.3**	**-0.7**
	comp=Z,14nm,1.0s,baz=28,slow=0.8,SNR=17						
SMLA	**Simla**	**136.10**	**36**	*e*P	**PKiKP**	**19 23 15.4**	**+0.4**
GTA	**Gaotai**	**137.01**	**7**	PKP	**PKPdf**	**19 23 15.3**	**+0.3**
GTA				PP	**PP**	**19 25 59.9**	**+2.8**
GTA				PKS	**PKSdf**	**19 26 49.3**	**-2.1**
GTA				SKKS		19 32 53.4	
GTA				AMB	AMB		
	comp=Z,750nm,9.6s						
GTA				LR	LR		
	comp=Z,1µm,23.5s						
GTA				LR	LR		
	comp=Z,2µm,23.5s						
GTA				LR	LR		
	comp=Z,2µm,23.9s						
CTAO	**Charters Tower**	**137.27**	**244**		PKPpre	19 23 06.5	
CTAO	**Charters Tower**	**137.27**	**244**	IAMs_20	IAMs_20	20 37 02.0	
	comp=Z,1µm,19.0s						
CTAO	**Charters Tower**	**137.27**	**244**	P	**PKiKP**	**19 23 17.3**	**-0.4**
CTAO	**Charters Tower**	**137.27**	**244**	P	**PKPdf**	**19 23 16.1**	**+0.3**
CTAO	**Charters Tower**	**137.27**	**244**	PKHKP	PKPpre	19 23 06.5	
CTAO				MLR	MLR		
	comp=Z,1µm,19.0s						
AJM	**Ajmer**	**137.68**	**44**	*e*P	**PKiKP**	**19 23 17.8**	**-0.6**
AJM				IAmb	IAmb	19 23 20.4	
	comp=Z,3.7nm,0.5s						
NDI	**New Delhi**	**137.86**	**39**	*e*P	**PKiKP**	**19 23 18.1**	**-0.6**
JOSI	**Joshimath**	**137.91**	**35**	*e*P	**PKiKP**	**19 23 18.3**	**-0.8**
JOSI				IAmb	IAmb	19 23 25.1	
	comp=Z,16nm,1.2s						
AYAN	**Aya Nagar**	**137.95**	**39**	*e*P	**PKiKP**	**19 23 18.3**	**-0.6**
AYAN				IAmb	IAmb	19 23 19.8	
	comp=Z,14nm,0.8s						
PMG	**Port Moresby**	**138.53**	**260**	PKhKP	PKPpre	19 23 13.2	
	comp=Z,22nm,1.1s,baz=21,slow=3.0,SNR=6.1						
PMG	**Port Moresby**	**138.53**	**260**		**PKPdf**	**19 23 14.1**	**-4.2**
PMG	**Port Moresby**	**138.53**	**260**	PKP	**PKPdf**	**19 23 13.7**	**-4.6**
PMG	**Port Moresby**	**138.53**	**260**	PKIKP	**PKPdf**	**19 23 14.1**	**-4.2**
PMG				MLR	MLR		
	comp=Z,900nm,20.0s						
HNS	**HongShan**	**138.55**	**349**	⇑PKP	**PKiKP**	**19 23 18.9**	**-0.9**
HNS				PP	**PP**	**19 26 09.6**	**+3.1**
HNS				PKS		19 26 54.4	
HNS				LR	LR		
	comp=Z,1µm,20.8s						
HNS				LR	LR		
	comp=Z,2µm,21.6s						
HNS				LR	LR		
	comp=Z,2µm,22.8s						
TIY	**Taiyuan**	**138.61**	**352**	*e*PKP	**PKiKP**	**19 23 24.1**	**+4.0**
TIY				AMB	AMB		
	comp=Z,510nm,6.8s						
TIY				LR	LR		
	comp=Z,1µm,19.1s						
TIY				LR	LR		
	comp=Z,1µm,21.1s						
TIY				LR	LR		
	comp=Z,2µm,20.2s						
LGTI	**Lohaghat**	**139.08**	**35**	*e*P	**PKPdf**	**19 23 19.5**	**+0.4**
TIA	**Tai'an**	**139.18**	**346**	PKP	**PKPdf**	**19 23 16.8**	**-2.1**
TIA				SKKS		19 33 06.3	
TIA				AMB	AMB		
	comp=Z,490nm,7.7s						
TIA				LR	LR		
	comp=Z,2µm,24.5s						
TIA				LR	LR		
	comp=Z,1µm,18.6s						
TIA				LR	LR		
	comp=Z,3µm,25.0s						
GOMU	**GeErMu**	**139.25**	**14**	PKP	**PKPdf**	**19 23 17.8**	**-1.8**
GOMU				SS	SS	19 44 28.4	-0.6
GOMU				LR	LR		
	comp=Z,1µm,23.3s						
GOMU				LR	LR		
	comp=Z,1µm,24.3s						
BBOO	**Buckleboo**	**139.32**	**221**		PKPpre	19 23 10.6	
BBOO				PKPdf	**PKPdf**	**19 23 18.4**	**-0.9**
LZH	**Lanzhou**	**140.65**	**3**	*e*PKP	**PKPdf**	**19 23 15.8**	**-6.0**
LZH				sPKP	sPKPdf	19 23 29.8	+3.4
LZH				SKKS		19 33 14.8	
LZH				AMB	AMB		
	comp=Z,1µm,5.8s						
LZH				LR	LR		
	comp=Z,3µm,21.0s						
LZH				LR	LR		
	comp=Z,2µm,21.6s						
LZH				LR	LR		
	comp=Z,4µm,21.3s						
JHNI	**Jhansi**	**141.00**	**41**	*e*P	**PKiKP**	**19 23 24.2**	**-1.0**
LYN	**LuoYang**	**141.71**	**351**	PKP	**PKPdf**	**19 23 19.3**	**-4.2**
LYN				SKKS		19 33 23.9	
LYN				AMB	AMB		
	comp=Z,910nm,8.1s						
LYN				LR	LR		
	comp=Z,4µm,20.0s						
LYN				LR	LR		
	comp=Z,2µm,20.4s						
LYN				LR	LR		
	comp=Z,5µm,20.0s						
NJ2	**Nanjing**	**142.61**	**342**	⇓P	**PKPdf**	**19 23 20.5**	**-4.7**
NJ2				pmax	pmax		
	comp=Z,40nm,0.8s						
NJ2				LR	LR		
	comp=N,1µm,21.8s						
NJ2				LR	LR		
	comp=E,1µm,21.8s						
NJ2				LR	LR		
	comp=Z,2µm,22.1s						
XAN	**Xi'an**	**142.62**	**356**	⇓PKP	**PKPdf**	**19 23 21.4**	**-3.9**
XAN				pPKP	sPKPdf	19 23 32.3	+2.4
XAN				SKKS		19 33 24.8	
XAN				AMB	AMB		
	comp=Z,1µm,7.6s						
XAN				LR	LR		
	comp=Z,2µm,23.4s						
XAN				LR	LR		
	comp=Z,1µm,17.9s						
XAN				LR	LR		
	comp=Z,3µm,23.7s						
SSE	**Sheshan**	**142.68**	**338**	PKP	**PKPdf**	**19 23 24.1**	**-1.2**
SSE				PP	**PP**	**19 26 34.0**	**+2.0**
SSE				SS	SS	19 45 10.3	+1.7
SSE				LR	LR		
	comp=Z,740nm,18.6s						
SSE				LR	LR		
	comp=Z,490nm,18.6s						
SSE				LR	LR		
	comp=Z,1µm,18.1s						
AKL	**Akola**	**142.93**	**48**	*e*P	**PKPdf**	**19 23 26.9**	**+0.8**
LSA	**Lhasa**	**144.18**	**22**		PKPbc	19 23 26.7	0.0
LSA				IAMs_20	IAMs_20	20 31 19.8	
	comp=Z,2µm,22.0s						
LSA	**Lhasa**	**144.18**	**22**	PKP	**PKPab**	**19 23 22.5**	**-3.8**
LSA				LR	LR		
	comp=Z,1µm,23.0s						
LSA				LR	LR		
	comp=Z,530nm,20.8s						
LSA				LR	LR		
	comp=Z,2µm,24.1s						
LSA	**Lhasa**	**144.18**	**22**	PKIKP	PKPbc	19 23 26.7	0.0
LSA				MLR	MLR		
	comp=Z,2µm,22.0s						
JAY	**Jayapura**	**145.16**	**271**	PKPbc	**PKPab**	**19 23 30.1**	**+0.2**
	comp=Z,43nm,1.0s,baz=176,slow=1.7,SNR=17						
JAY	**Jayapura**	**145.16**	**271**	PKP	**PKPab**	**19 23 30.1**	**+0.2**
JAY				PKP	**PKPab**	**19 23 30.5**	**+0.7**
GTK	**Tadong**	**145.20**	**28**	*e*P	**PKPdf**	**19 23 31.4**	**+1.3**
GTK				IAmb	IAmb	19 23 33.8	
	comp=Z,215nm,1.3s						
WHN	**Wuhan**	**145.25**	**347**	⇑PKPbc	**PKPdf**	**19 23 30.1**	**+0.2**
WHN				sPKP	sPKPbc	19 23 35.0	+1.0
WHN				LR	LR		
	comp=Z,5µm,24.2s						
WHN				LR	LR		
	comp=Z,9µm,23.2s						
WHN				LR	LR		
	comp=Z,5µm,20.5s						
MMPI	**Merauke**	**145.29**	**260**	PKP	**PKPbc**	**19 23 29.3**	**-0.8**
MMPI				PKP	**PKPdf**	**19 23 30.5**	**+0.2**
BLSP	**Bilaspur**	**145.67**	**41**	*e*P	**PKPab**	**19 23 32.0**	**+0.7**
BLSP				IAmb	IAmb	19 23 32.9	
	comp=Z,66nm,0.8s						
GENI	**Genyem**	**145.70**	**270**	P	**PKiKP**	**19 23 33.5**	**-1.7**
GENI	**Genyem**	**145.70**	**270**	P	**PKiKP**	**19 23 33.8**	**-1.4**
GENI	**Genyem**	**145.70**	**270**	PKP	**PKPab**	**19 23 32.0**	**+0.2**
CD2	**Chengdu**	**145.80**	**3**	PKPbc	**PKPdf**	**19 23 29.6**	**-1.3**
CD2				PP	**PP**	**19 26 52.6**	**+2.1**
CD2				AMB	AMB		
	comp=Z,920nm,6.5s						
CD2				LR	LR		
	comp=Z,3µm,21.6s						
CD2				LR	LR		
	comp=Z,2µm,23.5s						
CD2				LR	LR		
	comp=Z,3µm,22.0s						
HMDM	**Hanimaadhoo**	**145.87**	**73**	PKP	**PKPdf**	**19 23 30.5**	**-0.9**
HYB	**Hyderabad**	**146.03**	**52**	*e*PKPab	**PKPdf**	**19 23 31.4**	**-0.2**
HYB				*e*PP	**PP**	**19 26 54.8**	**+1.3**
HYB				*e*SKSdf	**SKSdf**	**19 30 39.8**	**-1.8**
ASAR	**Alice Springs**	**146.23**	**231**	PKPbc	**PKPdf**	**19 23 32.0**	**+0.2**
	comp=Z,169nm,1.0s,baz=125,slow=3.2,SNR=291						
ASAR	**Alice Springs**	**146.23**	**231**		**PKPdf**	**19 23 31.6**	**-0.2**
TAWA	**Tawang**	**146.34**	**23**	*e*P	**PKPbc**	**19 23 33.4**	**0.0**
BOK	**Bokaro**	**146.69**	**35**	*e*P	**PKPbc**	**19 23 33.7**	**-0.4**
BOK				IAmb	IAmb	19 23 35.8	
	comp=Z,112nm,1.1s						
JHSG	**JHARSUGUGA**	**146.94**	**40**	*e*P	**PKPbc**	**19 23 34.4**	**-0.5**
DHUB	**DHUBRI**	**146.95**	**27**	*e*P	**PKPbc**	**19 23 33.9**	**-0.8**
DHUB				IAmb	IAmb	19 23 41.8	
	comp=Z,43nm,1.0s						
KAAM	**Kaadhehdhoo**	**146.95**	**84**	PKP	**PKPbc**	**19 23 34.3**	**-0.8**
PASG	**PASIGHAT**	**147.10**	**17**	*e*P	**PKPdf**	**19 23 33.0**	**-0.1**
ZIRO	**ZIRO**	**147.13**	**20**	*e*P	**PKPdf**	**19 23 34.4**	**+1.0**
SMPI	**Sarmi**	**147.13**	**272**	PKP	**PKPbc**	**19 23 35.1**	**-0.6**
GUWA	**GUWAHATI**	**147.53**	**24**	*e*P	**PKPdf**	**19 23 34.8**	**+1.0**
GUWA				IAmb	IAmb	19 23 38.7	
	comp=Z,22nm,0.5s						
WR8	**Warramunga Arr**	**147.57**	**237**		**PKPdf**	**19 23 33.1**	**-1.0**
TEZP	**TEZPUR**	**147.58**	**22**	*e*P	**PKPdf**	**19 23 34.3**	**+0.4**
YOJ	**Yonaguni jima**	**147.63**	**330**	P	**PKPbc**	**19 23 37.5**	**+0.8**
YOJ	**Yonaguni jima**	**147.63**	**330**	P	**PKPdf**	**19 23 32.9**	**-1.1**
WRA	**Warramunga Arr**	**147.71**	**237**	PKP	**PKPdf**	**19 23 34.9**	**+0.6**
	comp=Z,147nm,1.0s,baz=118,slow=2.7,SNR=46						
WRA				PKPbc	**pPKPdf**	**19 23 37.7**	**-0.1**
	comp=Z,145nm,1.0s,baz=118,slow=3.0,SNR=120						
WRA	**Warramunga Arr**	**147.71**	**237**		**PKPdf**	**19 23 33.6**	**-0.7**
CNSH	**ChangSha**	**147.84**	**348**	PKPbc	**PKPdf**	**19 23 34.6**	**+0.3**
CNSH				PP	**PP**	**19 27 08.3**	**+5.8**
CNSH				SKKS		19 33 52.8	
CNSH				SS	**SS**	**19 46 05.3**	**-1.8**
CNSH				AMB	AMB		
	comp=Z,460nm,5.8s						
CNSH				LR	LR		
	comp=Z,980nm,22.0s						
CNSH				LR	LR		
	comp=Z,1µm,21.6s						
CNSH				LR	LR		
	comp=Z,2µm,21.1s						
SHL	**Shillong**	**148.16**	**24**	*e*P	**PKPbc**	**19 23 37.1**	**-1.2**
MOKO	**MOKOCHONG**	**148.46**	**20**	*e*P	**PKPdf**	**19 23 37.1**	**+1.6**
NACB	**Ninganchiao**	**148.56**	**332**		**PKPdf**	**19 23 32.9**	**-2.7**
NWAO	**Narrogin (SRO)**	**148.77**	**199**		**PKPdf**	**19 23 34.2**	**-1.5**
NWAO	**Narrogin (SRO)**	**148.77**	**199**	P	**PKPbc**	**19 23 39.9**	**+0.4**
NWAO	**Narrogin (SRO)**	**148.77**	**199**	PKHKP	PKPpre	19 23 34.3	
NWAO				MLR	MLR		
	comp=Z,2µm,18.0s						
TRD	**Trivandrum**	**148.86**	**67**	*e*P	**PKPdf**	**19 23 37.1**	**+0.8**
KOHI	**KOHIMA**	**148.87**	**21**	*e*P	**PKPdf**	**19 23 37.2**	**+1.0**
KOHI				IAmb	IAmb	19 23 50.5	
	comp=Z,123nm,0.9s						
QZH	**Quanzhou**	**149.19**	**337**	PKPbc	**PKPbc**	**19 23 41.3**	**+0.5**
QZH				*e*PP	**PP**	**19 27 12.4**	**+1.7**
QZH				LR	LR		
	comp=Z,2µm,22.7s						
QZH				LR	LR		
	comp=Z,1µm,19.9s						
QZH				LR	LR		
	comp=Z,2µm,27.1s						
AGT	**Agartala**	**149.35**	**27**	*e*P	**PKPdf**	**19 23 38.0**	**+1.2**
AGT				IAmb	IAmb	19 23 45.6	
	comp=Z,198nm,1.1s						
IMP	**Imphal**	**149.63**	**22**	*e*P	**PKPdf**	**19 23 38.5**	**+1.1**
IMP				IAmb	IAmb	19 23 44.2	
	comp=Z,97nm,1.3s						
BAKI	**Biak**	**149.67**	**273**	PKP	**PKPdf**	**19 23 38.9**	**+1.2**
BAKI				PKP	**pPKPdf**	**19 23 40.7**	**-0.4**
BAKI				PKP	**PKPbc**	**19 23 42.7**	**+0.4**
KNMB	**Chin-men Tao**	**149.70**	**337**		**PKPdf**	**19 23 35.0**	**-2.4**
TWG	**Pinlang**	**149.97**	**331**	IAMs_20	IAMs_20	20 37 53.6	
	comp=Z,1µm,21.0s						
PZH	**PanZhiHua**	**149.98**	**7**	PKPbc	**PKPdf**	**19 23 38.6**	**+0.6**
PZH				PP	**PP**	**19 27 16.1**	**+1.0**
PZH				SKS	**SKSdf**	**19 30 43.4**	**-3.5**
PZH				AMB	AMB		
	comp=Z,530nm,6.5s						
PZH				LR	LR		
	comp=Z,710nm,22.9s						
PZH				LR	LR		
	comp=Z,910nm,21.2s						
PZH				LR	LR		
	comp=Z,2µm,22.3s						
TNCH	**TengChong**	**150.83**	**14**	PKPbc	**PKPdf**	**19 23 40.0**	**+0.6**
TNCH				pPKP	PKiKP	19 23 46.1	+0.4
TNCH				PP	**PP**	**19 27 22.1**	**+1.9**
TNCH				SKKS		19 34 12.5	
TNCH				AMB	AMB		
	comp=Z,620nm,4.0s						
TNCH				LR	LR		
	comp=Z,1µm,19.1s						
TNCH				LR	LR		
	comp=Z,780nm,20.6s						
TNCH				LR	LR		
	comp=Z,4µm,21.0s						
GULI	**GuiLin**	**151.11**	**351**	⇓PKPbc	**PKPdf**	**19 23 42.0**	**+2.4**
GULI				SS	SS	19 46 46.8	+3.2
GULI				LR	LR		
	comp=Z,1µm,21.3s						
GULI				LR	LR		
	comp=Z,2µm,21.2s						
GULI				LR	LR		
	comp=Z,2µm,21.4s						
SAIH	**SAIHA**	**151.34**	**25**	*e*P	**PKPdf**	**19 23 41.8**	**+1.6**
KMI	**Kunming**	**151.46**	**6**	⇑PKPbc	**PKPdf**	**19 23 41.4**	**+0.9**
KMI				SKKS		19 34 12.3	
KMI				SS	**SS**	**19 46 52.8**	**+4.9**
KMI				AMB	AMB		
	comp=Z,760nm,7.1s						
KMI				LR	LR		
	comp=Z,2µm,21.4s						
KMI				LR	LR		
	comp=Z,670nm,23.8s						
KMI				LR	LR		
	comp=Z,3µm,21.9s						
RKPI	**Ransiki, Papua**	**151.62**	**273**	PKP	**PKPdf**	**19 23 41.3**	**+0.6**
RKPI				PKP	**sPKPdf**	**19 23 45.7**	**+0.4**
GZH	**Guangzhou**	**152.65**	**345**	⇓PKPbc	**PKPdf**	**19 23 43.1**	**+1.2**
GZH				PP	**PP**	**19 27 36.5**	**+6.2**
GZH				SKKS		19 34 20.8	
GZH				LR	LR		
	comp=Z,2µm,19.0s						
GZH				LR	LR		
	comp=Z,1µm,20.6s						
GZH				LR	LR		
	comp=Z,3µm,20.2s						
MORW	**Morawa**	**152.72**	**200**		**PKPdf**	**19 23 40.0**	**-1.9**
PALK	**Pallekele**	**152.76**	**67**		**PKPdf**	**19 23 39.7**	**-2.7**
PALK	**Pallekele**	**152.76**	**67**	PKIKP	**PKPdf**	**19 23 39.7**	**-2.7**
PALK				MLR	MLR		
	comp=Z,2µm,21.0s						
KNRA	**Kununurra**	**154.36**	**240**		**PKPdf**	**19 23 42.4**	**-2.1**
SIJI	**Sorong**	**154.46**	**275**	PKP	**PKPdf**	**19 23 44.6**	**-0.3**
SIJI				PKP	**PKPab**	**19 24 03.0**	**-4.5**
SWI	**Sorong**	**154.47**	**275**	PKP	**PKPab**	**19 24 01.1**	**-6.4**
FITZ	**Fitzroy Crossi**	**155.73**	**232**	P	**PKPdf**	**19 23 47.7**	**+1.4**
FITZ	**Fitzroy Crossi**	**155.73**	**232**	P	**PKPdf**	**19 23 47.8**	**+1.4**
CHTO	**Chiang Mai**	**156.88**	**17**	PKP	**PKPdf**	**19 23 47.5**	**-0.4**
CHTO				PKP	**pPKPdf**	**19 23 48.5**	**-2.4**
CMAR	**Chiang Mai Arr**	**157.22**	**17**	PKP	**PKPdf**	**19 23 48.9**	**+0.6**
	comp=Z,8.9nm,1.1s,baz=305,slow=2.2,SNR=54						
CMAR				PKPab	**PKPab**	**19 24 17.9**	**-1.0**
	comp=Z,13nm,0.8s,baz=331,slow=5.0,SNR=12						
CMAR	**Chiang Mai Arr**	**157.22**	**17**		**PKPdf**	**19 23 49.0**	**+0.6**
CMAR					**PKPab**	**19 24 17.0**	**-1.9**
QIZ	**Qiongzhong**	**157.34**	**350**	PKP	**PKPdf**	**19 23 47.9**	**-0.6**
QIZ				PKPab	**pPKPab**	**19 24 21.3**	**-1.4**
QIZ				PP	**PP**	**19 27 56.4**	**-0.1**
QIZ				SKKS		19 34 43.3	
QIZ				SS	**SS**	**19 47 55.3**	**+3.8**
QIZ				LR	LR		
	comp=Z,1µm,23.2s						
QIZ				LR	LR		
	comp=Z,1µm,22.5s						
QIZ				LR	LR		
	comp=Z,2µm,20.1s						
PSA00	**Pilbara Seismi**	**157.40**	**216**		**PKPdf**	**19 23 46.8**	**-1.7**
AAI	**Ambon**	**157.68**	**269**	PKP	**PKPdf**	**19 23 48.9**	**-0.2**
AAI				PKP	**pPKPdf**	**19 23 49.6**	**-2.9**
DAV	**Davao City (W)**	**157.70**	**298**	PKPab	**PKPab**	**19 24 23.7**	**+2.4**
	comp=Z,33nm,0.3s,baz=59,slow=5.5,SNR=13						
MBWA	**Marble Bar**	**157.79**	**216**		**PKPdf**	**19 23 46.8**	**-2.2**
MBWA					**PKPab**	**19 24 21.6**	**+0.3**

SANI	Sanana	159.82	273	PKP	PKPdf	19 23 52.4	+0.8
SANI	Sanana	159.82	273	P	PKPdf	19 23 53.8	+2.2
SANI	Sanana	159.82	273	P	PKPdf	19 23 53.0	+1.4
SANI	Sanana	159.82	273	PKP	PKPdf	19 23 51.4	-0.2
SANI				PKP	pPKPdf	19 23 52.6	-2.5
SOEI	Soe	160.65	250	PKP	PKPdf	19 23 54.5	+1.8
SOEI	Soe	160.65	250	P	PKPdf	19 23 56.4	+3.7
SOEI	Soe	160.65	250	P	PKPdf	19 23 55.6	+2.9
SOEI	Soe	160.65	250	PKP	PKPdf	19 23 53.3	+0.6
SOEI				PKP	sPKPdf	19 24 04.0	+6.7
UBPT	Khong Chiam	161.41	1	P	PKPdf	19 23 54.7	+1.4
UBPT	Khong Chiam	161.41	1	P	PKPdf	19 23 54.3	+1.0
LUWI	Luwuk	162.91	278	PKP	PKPdf	19 23 56.2	+1.4
LUWI	Luwuk	162.91	278	P	PKPdf	19 23 56.9	+2.0
LUWI	Luwuk	162.91	278	P	PKPdf	19 23 57.2	+2.3
LUWI	Luwuk	162.91	278	PKP	PKPdf	19 23 53.9	-1.0
LUWI				PKP	pPKPdf	19 23 56.4	-1.9
EDFI	Ende, Flores	163.37	251	PKP	PKPdf	19 23 54.5	-0.9
EDFI				PKP	pPKPdf	19 23 55.0	-3.9
APSI	Ampana	164.00	279	PKP	PKPdf	19 23 55.5	-0.4
APSI				PKP	sPKPdf	19 24 12.9	+12
KKSI	Kolaka, Sulawe	164.20	267	PKP	PKPdf	19 23 55.2	-0.9
KKSI				PKP	pPKPdf	19 23 55.8	-3.7
TOLI2	Tolitoli	164.39	287		PKPab	19 24 50.1	-0.5
TOLI2	Tolitoli	164.39	287	P	PKPdf	19 23 57.7	+1.4
TOLI2	Tolitoli	164.39	287	P	PKPdf	19 23 56.0	-0.3
WBSI	Waikabubak, Su	165.19	245	PKP	PKPdf	19 23 57.4	+0.4
WBSI				PKP	pPKPdf	19 23 58.0	-2.4
MPSI	Mapaga	165.45	285	PKP	PKPdf	19 23 56.2	-1.0
MPSI				PKP	pPKPdf	19 23 56.7	-3.9
MPSI				PKP	sPKPdf	19 23 57.4	-4.4
KAPI	Kappang	166.03	263	PKP	PKPdf	19 23 57.7	+0.1
KAPI				PKP	pPKPdf	19 23 59.1	-2.0
SPSI	Sidrap Palu	166.08	267	PKP	PKPdf	19 23 57.2	-0.5
SPSI				PKP	pPKPdf	19 23 58.6	-2.5
DBNI	Kabupaten Domp	166.61	247	PKP	PKPdf	19 23 57.7	-0.4
DBNI				PKP	pPKPdf	19 23 58.2	-3.3
MMSI	Mamuju	166.92	273	PKP	PKPdf	19 23 58.0	-0.4
MMSI				PKP	pPKPdf	19 23 59.2	-2.6
TWSI	Taliwang, Sumb	167.81	244	PKP	PKPdf	19 23 57.8	-1.1
TWSI				PKP	pPKPdf	19 23 58.4	-4.0
KCSI	Kotacane, Aceh	169.39	49	PKP	PKPdf	19 23 59.6	-0.4
KCSI				PKP	pPKPdf	19 23 59.7	-3.3
KULM	Kulim	169.91	31	PKP	PKPdf	19 24 00.3	0.0
KULM				PKP	pPKPdf	19 24 00.4	-3.4
KULM				PKP	sPKPdf	19 24 00.9	-4.1
JAGI	Jajag, Banyuwa	170.33	238	PKPdf	PKPdf	19 23 57.1	-3.5
JAGI					PKPab	19 25 16.4	-0.4
GSI	Gunungsitoli	170.50	60	P	PKPdf	19 24 02.0	+1.3
GSI	Gunungsitoli	170.50	60	PKP	PKPdf	19 24 01.0	+0.3
GSI				PKP	pPKPdf	19 24 01.6	-2.1
PSI	Prapat	170.73	48	PKP	PKPdf	19 24 00.4	-0.5
PSI				PKP	pPKPdf	19 24 00.7	-3.2
IPM	Ipoh	170.79	31	PKP	PKPdf	19 23 59.4	-1.4
IPM				PKP	pPKPdf	19 24 00.2	-4.1
IPM				PKP	sPKPdf	19 24 01.3	-4.2
SBUM	Sibu	171.35	312	PKP	PKPdf	19 24 00.3	-0.8
SBUM				PKP	pPKPdf	19 24 02.3	-2.3
SNJI	Sawahan-Nganju	172.69	234	PKP	PKPdf	19 23 59.5	-2.4
SNJI				PKP	sPKPdf	19 24 09.7	+3.2
SISI	Saibi	172.95	73	PKP	PKPdf	19 24 02.1	+0.3
SISI				PKP	pPKPdf	19 24 03.6	-1.2
KPJI	Karang Pucung	175.04	218	PKP	PKPdf	19 24 01.8	-0.7
KPJI				PKP	pPKPdf	19 24 02.7	-3.3
CTJI	Waduk Cacaban	175.12	223	PKP	PKPdf	19 24 02.4	-0.2
CTJI				PKP	pPKPdf	19 24 03.0	-3.0
CNJI	Cibinong	175.94	198	PKP	PKPdf	19 24 00.6	-2.1
CNJI				PKP	pPKPdf	19 24 03.7	-2.5
MDSI	Maura Dua	178.04	123	PKP	PKPdf	19 24 01.7	-1.4
MDSI				PKP	PKPdf	19 24 01.7	-1.4
MDSI				PKP	PKPdf	19 24 01.7	-1.4
MDSI				PKP	PKPdf	19 24 01.8	-1.4

IDC ***24*** *19:10:58.0±0.8, 3°.36N×73°.97W, h0^{km}, mb4.3/9, mbtmp4.3/9, Error ellipse: s-maj=30.0km s-min=15.1km az=72.0*

RSNC ***24*** *19:11:00.3±0.0, 3°N±1°×7°4W±°, h0^{km}±2^{km}, M4.5, mb5.4, ML4.3, MLv5.0*

NEIC ***24*** *19:11:01.7±1.9, 3°.54N±0°.06×73°.93W±0°.09, h10^{km}±1^{km}, mb5.1/55, Error ellipse: s-maj=15.5km s-min=9.8km az=97.0*

ISC 24 19:11:00.5±1.0**, 3°.47N**±0°.02×**74°.16W**±0°.02**, h10**^{km}±6^{km}**, n117, **σ1^{s}.**47**/139**, mb5.0**/31**, 1C, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	La Uribe, Meta	0.31	225	P	Pg	19 11 07.1	+0.4
URMC				S	Sg	19 11 11.2	+0.3
PRAC	Prado	0.77	289	P	Pg	19 11 14.6	-0.7
PRAC				S	Sg	19 11 24.6	-0.8
VILC	Villavicencio,	0.79	36	P	Pb	19 11 16.3	-0.1
VILC				S	Sb	19 11 27.5	+0.3
CVER	Cruz Verde, Cu	1.05	5	P	Pg	19 11 20.4	-0.4
CVER				S	Sg	19 11 34.8	+0.3
ORTC	Ortega, Tolima	1.17	292	P	Pb	19 11 21.9	-0.9
ORTC				S	Sb	19 11 37.3	-0.8
CHIC	Chingaza	1.23	20	P	Pb	19 11 24.2	+0.1
CHIC				S	Sg	19 11 38.9	-1.3
MACC	Macarena, Meta	1.35	167	P	Pg	19 11 25.8	-0.6
MACC				S	Sg	19 11 43.6	-0.3
ROSC	El Rosal	1.37	353	Pg	Pg	19 11 27.4	+0.5
	657nm,0.3s,baz=150,slow=19,SNR=9.2						
ROSC				Lg	Lg	19 11 46.2	
	926nm,0.3s,baz=83,slow=23,SNR=6.8						
ROSC	El Rosal	1.37	353		Pb	19 11 26.8	+0.3
BETC	Betania	1.50	239	P	Pn	19 11 28.0	+0.5
BETC				S	Sn	19 11 47.2	0.0
ANIL	Santa Ana	1.61	309	P	Pn	19 11 29.5	+0.3
ANIL				S	Sn	19 11 50.3	+0.2
GUVC	San Jose del G	1.78	121	P	Pb	19 11 33.0	-0.2
GUVC				S	Sg	19 11 57.4	-0.4
GARC	Garzon, Huila	1.84	226	P	Pb	19 11 33.8	-0.6
GARC				S	Sb	19 11 57.2	-0.4
RECRC	Villamaria, Ca	1.90	321	P	Pn	19 11 34.7	+1.2
RECRC				S	Sn	19 11 58.8	+1.0
NIZA	Niza - Manizal	2.05	320	P	Pb	19 11 37.2	-0.8
NIZA				S	Sn	19 12 03.0	+1.9
PTGC	Puerto Gaitan,	2.15	70	P	Pb	19 11 39.2	-0.3
PTGC				S	Sg	19 12 08.2	-1.3
SPBC	San Pablo de B	2.17	2	P	Pg	19 11 41.7	-0.5
SPBC				S	Sg	19 12 10.1	-0.3
NORC	Norcasia	2.20	341	P	Pn	19 11 38.7	+1.5
NORC				S	Sn	19 12 06.3	+1.8
YOTC	Yotoco, Valle	2.24	283	P	Pn	19 11 38.9	+1.1
YOTC				S	Sn	19 12 07.5	+1.9
FLOC	Florencia	2.39	219	P	Pb	19 11 43.3	-0.4
FLOC				S	Sb	19 12 13.4	+0.1
JAMC	Jamundi, Valle	2.52	264	P	Pn	19 11 43.8	+2.1
JAMC				S	Sb	19 12 19.0	+1.8
PLMC	San Jos del P	2.56	304	P	Pn	19 11 44.2	+2.1
PLMC				S	Sb	19 12 17.7	-0.3
RUSC	La Rusia	2.64	24	P	Pb	19 11 46.4	-1.7
RUSC				S	Sb	19 12 20.6	-0.2
POPC	Popayan, Colom	2.68	250	P	Pb	19 11 47.1	-1.6
POPC				S	Sb	19 12 22.7	+1.0
HELC	Santa Helena	3.03	333	P	Pb	19 11 54.3	-0.5
HELC				S	Sb	19 12 30.4	-1.6
PTBC	PUERTO BERRIO,	3.07	354	P	Pn	19 11 52.3	+3.3
PTBC				S	Sb	19 12 30.3	-2.4
BARC	Barichara	3.25	17	P	Pb	19 11 55.6	-2.9
CRUC	La Cruz	3.37	236	P	Pn	19 11 57.1	+3.6
CRUC				S	Sg	19 12 45.8	-3.0
BBAC	Balboa, Cauca	3.40	245	P	Pn	19 11 57.3	+3.5
BRJC	Barrancabermej	3.51	7	P	Pn	19 11 58.5	+3.4
PIZC	Pizarro, Choco	3.52	295	P	Pn	19 11 58.0	+2.7
GR1C	Gorgona, Isla	4.03	264	P	Pn	19 12 02.8	+0.5
DBBC	Dabeiba	4.08	330	P	Pb	19 12 08.5	-3.9
PAMC	Pamplona, Colo	4.11	21	P	Pn	19 12 08.3	+4.5
UREC	San Jos de Ur	4.47	342	P	Pn	19 12 12.5	+4.1
OCAC	Ocana	4.81	10	P	Pn	19 12 16.4	+3.2
TUMC	Tumaco	4.85	250	P	Pn	19 12 15.3	+1.8
OTAV	Otavalo	5.36	233	Pn	Pn	19 12 27.3	+6.4
SLOR	San Lorenzo -	6.01	226	Pn	Pn	19 12 37.8	+7.8
SDV	Santo Domingo	6.42	33	Pn	Pn	19 12 37.6	+2.2
	18nm,0.3s,baz=246,slow=20,SNR=1.2						
SDV				Sn	Sn	19 13 48.5	-0.4
	30nm,0.3s,baz=36,slow=19,SNR=1.1						
SDV	Santo Domingo	6.42	33	Pn	Pn	19 12 36.0	+0.6
JTS	Las Juntas de	12.68	303	Pn	Pn	19 14 05.2	+4.2
ECPR	Experimental S	16.62	27	Pn	Pn	19 14 52.5	-1.2
PB01	IPOC Station P	24.78	170	P	P	19 16 22.0	-0.8
PB05	IPOC Station P	26.44	172	P	P	19 16 37.0	-0.8
AQDB	Aquidauana	29.90	143	P	P	19 17 09.5	+0.8
GOGA	Godfrey	31.04	345	P	P	19 17 19.5	+1.0
GOGA				IAmb	IAmb	19 17 48.1	
	comp=Z,73nm,1.8s						
LRAL	Lakeview Retre	31.78	339	P	P	19 17 26.2	+1.2
LRAL				IAmb	IAmb	19 17 33.0	
	comp=Z,27nm,1.3s						
BDFB	Brasilia	32.09	127	P	P	19 17 27.1	-1.1
Y49A	Blount Mountai	32.33	341	P	P	19 17 30.6	+0.7
V53A	Saluda	33.03	347	P	P	19 17 37.4	+1.3
CPCT	Cooper Cave	33.24	344	P	P	19 17 38.6	+0.7
T59A	Double "B" Far	33.49	355	P	P	19 17 40.3	+0.3
T59A				IAmb	IAmb	19 17 41.6	
	comp=Z,12nm,0.7s						
CO06	Fray Jorge	34.03	176	P	P	19 17 45.6	+0.8
V48A	Smith Brothers	34.19	341	P	P	19 17 46.8	+0.7
V48A				IAmb	IAmb	19 17 48.5	
	comp=Z,26nm,1.1s						
CO03	El Pedregal	34.27	175	P	P	19 17 47.8	+0.7
CO03				IAmb	IAmb	19 18 25.8	
	comp=Z,48nm,1.4s						
CO02	Combarbal	34.61	175	P	P	19 17 51.2	+1.3
WVT	Waverly	34.87	340	P	P	19 17 52.8	+0.8
WVT				IAmb	IAmb	19 17 57.8	
	comp=Z,24nm,1.2s						
T47A	Sharon Grove	35.42	342	P	P	19 17 57.6	+0.8
T47A				IAmb	IAmb	19 18 19.8	
	comp=Z,25nm,1.1s						
VA03	San Esteban	36.19	175	P	P	19 18 04.4	+0.9
VA03				IAmb	IAmb	19 18 05.5	
	comp=Z,33nm,1.0s						
FCAR	Ozark Folk Cen	36.29	335	P	P	19 18 04.0	-0.2
FCAR				IAmb	IAmb	19 18 14.9	
	comp=Z,62nm,2.0s						
MT09	Talagante	37.16	176	P	P	19 18 12.5	+0.7
ITAB	Concordia	37.20	146	P	P	19 18 11.1	-1.0
BO04	La Punta	37.40	175	P	P	19 18 14.8	+1.0
BO04				IAmb	IAmb	19 18 15.7	
	comp=Z,29nm,1.2s						
FVM	French Village	37.44	339	P	P	19 18 14.6	+0.6
TXAR	Lajitas Array	38.02	316	PcP	PcP	19 20 35.8	+1.1
	comp=Z,2.3nm,0.9s,baz=143,slow=4.9,SNR=3.6						
PAOC	Oil Creek Stat	38.21	353	P	P	19 18 21.7	+1.2
PAOC				IAmb	IAmb	19 18 34.4	
	comp=Z,41nm,1.4s						
R40A	Maddies Statio	38.41	337	P	P	19 18 21.2	-1.0
R40A				IAmb	IAmb	19 18 41.2	
	comp=Z,29nm,1.3s						
BI02	San Fabin de	40.01	176	P	P	19 18 35.8	+0.1
BI02				IAmb	IAmb	19 18 38.4	
	comp=Z,89nm,1.9s						
I63A	Otisfield	40.54	4	P	P	19 18 40.6	+0.7
I63A				IAmb	IAmb	19 18 41.5	
	comp=Z,127nm,2.0s						
GBN	Guysborough	43.22	13	P	P	19 19 01.1	-0.7
ANMO	Albuquerque	43.33	320	P	P	19 19 05.2	+2.1
PLCA	Paso Flores	44.11	176	P	P	19 19 09.2	+0.1
PLCA				IAmb	IAmb	19 19 36.7	
	comp=Z,52nm,1.8s						
LDAQ	Lac Daran	44.40	3	P	P	19 19 11.7	+0.4
LL02	Futaleuf	46.49	178	P	P	19 19 29.4	+1.5
LL02				IAmb	IAmb	19 19 55.4	
	comp=Z,15nm,1.2s						
CCUT	Cedar City	49.37	319	P	P	19 19 51.1	+0.5
ULM	Lac du Bonnet	50.10	342	P	P	19 19 54.9	-0.8
	comp=Z,2.8nm,0.4s,baz=144,slow=8.7,SNR=1.6						
	comp=Z,2.8nm,0.4s						
ULM	Lac du Bonnet	50.10	342	IAmb	IAmb	19 20 11.7	
	comp=Z,49nm,1.6s						
PDAR	Pinedale Array	50.22	326	P	P	19 19 56.9	-0.2
	comp=Z,2.3nm,0.8s,baz=117,slow=4.7,SNR=3.2						
	comp=Z,2.3nm,0.8s						
SCHQ	Schefferville	51.55	5	P	P	19 20 06.8	+0.2
	comp=Z,11nm,0.9s,baz=160,slow=8.5,SNR=4.2						
	comp=Z,11nm,0.9s						
DSP	Deep Springs	52.40	316	P	P	19 20 14.4	+1.3
NVAR	Mina Array Bea	53.15	317	P	P	19 20 20.4	+1.4
	comp=Z,4.5nm,1.0s,baz=74,slow=6.5,SNR=2.6						
	comp=Z,4.5nm,1.0s						
WVOR	Wild Horse Val	55.41	321	P	P	19 20 35.5	+0.2
WVOR				IAmb	IAmb	19 20 41.3	
	comp=Z,19nm,1.1s						
EFI	East Falkland	56.62	168	P	P	19 20 42.7	-0.8
G08A	Pilot Rock	57.15	324	P	P	19 20 47.5	-0.2
G08A				IAmb	IAmb	19 20 52.9	
	comp=Z,15nm,1.0s						
KHMM	Horse Mountain	57.99	317	P	P	19 20 53.3	-0.4
KHMM				IAmb	IAmb	19 21 00.1	
	comp=Z,23nm,1.1s						
I02E	Swisshome, OR	59.55	320	P	P	19 21 05.0	+0.8
NRS	Narsarsuaq	61.52	15	P	P	19 21 16.5	-0.8
MD01	Midelt array s	70.85	57	P	P	19 22 17.5	-0.6
PAB	San Pablo	72.27	50	P	P	19 22 25.3	-1.1
SUMG	Summit	72.45	11	P	P	19 22 26.4	-0.8
SUMG				IAmb	IAmb	19 22 35.1	
	comp=Z,37nm,1.4s						
ESDC	Sonseca Array	72.59	50	P	P	19 22 27.1	-1.2
	comp=Z,1.8nm,0.8s,baz=274,slow=5.9,SNR=4.9						
	comp=Z,1.8nm,0.8s						
TULEG	Thule	73.07	1	P	P	19 22 31.4	+1.0
TULEG				IAmb	IAmb	19 22 35.7	
	comp=Z,12nm,1.0s						
TORD	Torodi Ar. Bea	75.45	77	P	P	19 22 43.2	-2.2
	comp=Z,1.0nm,0.6s,baz=276,slow=7.3,SNR=7.4						
	comp=Z,1.0nm,0.6s						
TORD	Torodi Ar. Bea	75.45	77	P	P	19 22 42.4	-3.1
ILAR	Eielson Array	79.56	335	P	P	19 23 06.8	-0.6
	comp=Z,1.2nm,0.9s,baz=105,slow=6.0,SNR=3.2						
	comp=Z,1.2nm,0.9s						
FUORN	Ofenpass-Fuorn	83.66	44	P	P	19 23 29.9	0.0
NBO00	NORSAR Array S	84.53	29	P	P	19 23 32.8	-0.9
NC204	NORSAR Array S	84.53	29	P	P	19 23 33.8	0.0
NB2	NORSAR Subarra	84.74	29	P	P	19 23 34.5	-0.2
	comp=Z,8.2nm,1.1s,baz=268,slow=5.3						
NOA	NORSAR Array B	84.74	29	P	P	19 23 35.1	+0.4
	comp=Z,2.4nm,0.8s,baz=268,slow=5.1,SNR=5.2						
	comp=Z,2.4nm,0.8s						
STAL	STALIGIAL	85.35	44	P	P	19 23 36.1	-2.0
STAL				IAmb	IAmb	19 23 37.5	
	comp=Z,18nm,1.5s						
HFS	Hagfors	85.94	30	P	P	19 23 40.5	-0.2
	comp=Z,2.6nm,0.9s,baz=216,slow=1.3,SNR=6.2						
	comp=Z,2.6nm,0.9s						
ARSA	Arzberg	87.26	43	P	P	19 23 48.0	+0.5
QSPA	South Pole Qui	93.50	180	P	P	19 24 17.2	+0.9
QSPA				IAmb	IAmb	19 24 26.5	
	comp=Z,20nm,1.6s						
VNDA	Vanda	100.37	191	Pdif	Pdif	19 24 48.0	+0.9
SYO	Syowa Base	101.59	160⇑	*e*Pdiff	Pdif	19 24 51.2	-1.4
JTM	Tenmabayashi	125.46	327		PKPpre	19 29 51.4	
MKAR	Makanchi Array	125.81	20	PKP	PKPdf	19 30 01.4	-1.5
	comp=Z,0.5nm,0.5s,baz=303,slow=2.1,SNR=6.4						
SONM	Songino Array	128.91	360	PKP	PKPdf	19 30 08.4	-0.5
	comp=Z,0.8nm,0.7s,baz=357,slow=2.9,SNR=2.1						
AS31	Alice Springs	146.26	231	PKPdf	PKPdf	19 30 40.5	-0.7
ASAR	Alice Springs	146.26	231	PKPbc	PKPdf	19 30 41.6	+0.4
	comp=Z,5.9nm,0.6s,baz=117,slow=3.7,SNR=15						
ASAR	Alice Springs	146.26	231		PKPdf	19 30 39.8	-1.4
WRAB	Tennant Creek	147.74	237		PKPdf	19 30 44.8	+1.1
WRA	Warramunga Arr	147.74	237	PKPbc	PKPbc	19 30 45.5	-1.0
	comp=Z,4.5nm,0.9s,baz=106,slow=7.0,SNR=17						
MTN	Manton Dam	153.32	248	PKPbc	PKPbc	19 30 58.0	-2.0
KNRA	Kununurra	154.39	240	PKPab	PKPab	19 31 16.7	+0.3

RSNC ***24*** *19:15:43.5±0.0, 3°N±1°×7°4W±°, h6^{km}±2^{km}, M4.4, ML4.3*

NEIC ***24*** *19:15:43.6±1.8, 3°.49N±0°.05×74°.13W±0°.08, h10^{km}±1^{km}, mb5.0/58, Error ellipse: s-maj=14.1km s-min=8.4km az=91.0*

IDC ***24*** *19:15:45.3±2.8, 3°.53N×74°.10W, h25^{km}±16^{km}, mb4.0/17, mbtmp4.2/19, ML3.7/2, Error ellipse: s-maj=21.0km s-min=16.0km az=93.0*

ISC 24 19:15:43.3±1.0**, 3°.50N**±0°.02×**74°.17W**±0°.02**, h14**^{km}±6^{km}**, n131, **σ1^{s}.**29**/162**, mb4.8**/40**, 1C-1D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	La Uribe, Meta	0.32	220	P	Pg	19 15 50.2	+0.2
URMC				S	Sg	19 15 54.4	-0.1
PRAC	Prado	0.75	287	P	Pg	19 15 57.7	-0.1
PRAC				S	Sg	19 16 07.6	-0.1
VILC	Villavicencio,	0.78	38	P	Pb	19 15 59.2	+0.5
VILC				S	Sb	19 16 09.6	+0.4
CVER	Cruz Verde, Cu	1.02	5	P	Pb	19 16 03.0	-0.1
CVER				S	Sn	19 16 17.7	-0.4
ORTC	Ortega, Tolima	1.15	291	P	Pb	19 16 04.8	-0.2
ORTC				S	Sb	19 16 20.2	+0.4
CHIC	Chingaza	1.21	21	P	Pg	19 16 06.6	-0.1
CHIC				S	Sb	19 16 22.1	+0.2
ROSC	El Rosal	1.34	354	Pg	Pg	19 16 10.1	+0.8
	437nm,0.3s,baz=167,slow=5.7,SNR=13						
ROSC				Lg	Lg	19 16 28.0	
	1µm,0.3s,baz=75,slow=24,SNR=11						
ROSC	El Rosal	1.34	354		Pg	19 16 09.4	+0.2
ROSC				Sn	Sg	19 16 27.2	+0.4
MACC	Macarena, Meta	1.38	166	P	Pb	19 16 08.7	-0.2
MACC				S	Sb	19 16 26.9	+0.4
BETC	Betania	1.50	238	P	Pb	19 16 11.0	-0.1
BETC				S	Sb	19 16 30.6	+0.5
ANIL	Santa Ana	1.58	309	P	Pb	19 16 12.0	-0.5
ANIL				S	Sb	19 16 32.3	-0.1
GUVC	San Jose del G	1.81	121	P	Pb	19 16 15.8	-0.4
GUVC				S	Sg	19 16 40.2	-1.3
GARC	Garzon, Huila	1.85	225	P	Pb	19 16 16.7	-0.4
GARC				S	Sb	19 16 40.4	+0.1
RECRC	Villamaria, Ca	1.87	321	P	Pb	19 16 17.7	0.0
RECRC				S	Sb	19 16 41.7	+0.5
NIZA	Niza - Manizal	2.02	320	P	Pb	19 16 19.7	-0.4
NIZA				S	Sb	19 16 45.0	-0.2
SPBC	San Pablo de B	2.15	3	P	Pb	19 16 22.9	+0.9
SPBC				S	Sg	19 16 51.7	-0.7
PTGC	Puerto Gaitan,	2.15	71	P	Pb	19 16 22.4	+0.3
PTGC				S	Sg	19 16 50.4	-2.1
NORC	Norcasia	2.17	341	P	Pb	19 16 21.4	-1.0
NORC				S	Sb	19 16 49.1	-0.1
YOTC	Yotoco, Valle	2.22	283	P	Pn	19 16 21.5	+1.6
YOTC				S	Sb	19 16 52.3	+1.4
FLOC	Florencia	2.41	218	P	Pb	19 16 25.6	-0.9
FLOC				S	Sb	19 16 56.8	+0.7
JAMC	Jamundi, Valle	2.51	264	P	Pb	19 16 26.8	-1.6
JAMC				S	Sb	19 16 59.4	+0.1
PLMC	San Jos del P	2.53	304	P	Pb	19 16 26.7	-1.9
PLMC				S	Sb	19 17 01.1	+1.5
RUSC	La Rusia	2.62	24	P	Pb	19 16 29.4	-0.9
RUSC				S	Sb	19 17 02.4	-0.1
POPC	Popayan, Colom	2.67	249	P	Pb	19 16 29.3	-1.9
POPC				S	Sb	19 17 06.4	+2.4
CBOC	Ciudad Bolivar	2.98	322	P	Pb	19 16 34.1	-2.3
CBOC				S	Sb	19 17 11.5	-1.3
HELC	Santa Helena	3.00	333	P	Pb	19 16 35.1	-1.7
HELC				S	Sb	19 17 12.6	-0.9
PTBC	PUERTO BERRIO,	3.04	355	P	Pn	19 16 33.5	+2.5
PTBC				S	Sb	19 17 11.0	-3.2
CRUC	La Cruz	3.37	235	P	Pb	19 16 39.9	-3.2
CRUC				S	Sg	19 17 28.9	-2.9
BBAC	Balboa, Cauca	3.40	245	P	Pn	19 16 39.4	+3.2
BRJC	Barrancabermej	3.48	7	P	Pn	19 16 40.3	+3.2
BRJC				S	Sb	19 17 24.6	-2.4
PIZC	Pizarro, Choco	3.50	295	P	Pn	19 16 40.8	+3.4
GR1C	Gorgona, Isla	4.02	263	P	Pn	19 16 45.8	+1.3
OTAV	Otavalo	5.36	233	Pn	Pn	19 17 04.5	+1.1
SLOR	San Lorenzo -	6.03	226	Pn	Pn	19 17 12.3	-0.2
SDV	Santo Domingo	6.41	33	Pn	Pn	19 17 18.1	+0.5
	17nm,0.3s,baz=256,slow=19,SNR=1.8						
SDV				Sn	Sn	19 18 29.8	-0.8
	23nm,0.3s,baz=54,slow=19,SNR=1.3						
	110nm,0.5s						
SDV	Santo Domingo	6.41	33		Pn	19 17 15.7	-1.8
SDV				Sn	Sn	19 18 31.0	+0.3
COHC	Cochancay	7.80	221	Pn	Pn	19 17 37.2	+0.7
BCIP	Isla Barro Col	7.96	315	Pn	Pn	19 17 38.7	-0.1
ATAH	Atahualpa	11.37	202	Pn	Pn	19 18 27.1	+1.3
	0.5nm,0.3s,baz=324,slow=18,SNR=1.1						
	23nm,0.7s						
MTDJ	Mount Denham	15.01	348	Pn	Pn	19 19 17.1	+1.9
SDDR	Presa de Saban	15.65	10	Pn	Pn	19 19 24.7	+1.0
DR12	Loma Pena Alta	15.90	17	Pn	Pn	19 19 26.4	-0.6
AOPR	Arecibo Observ	16.45	26	Pn	Pn	19 19 32.3	-1.6
PB11	IPOC Station P	23.53	169	P	P	19 20 55.1	+1.6
PB02	IPOC Station P	25.02	171	P	P	19 21 06.8	-0.4
PB02				IAmb	IAmb	19 21 25.3	
	comp=Z,60nm,1.5s						
PB07	IPOC Station P	25.41	171	P	P	19 21 10.8	-0.1
PB03	IPOC Station P	25.75	171	P	P	19 21 13.3	-0.6
PB03				IAmb	IAmb	19 21 31.4	
	comp=Z,58nm,1.6s						
GOGA	Godfrey	31.00	345	P	P	19 22 00.8	+0.3
GOGA				IAmb	IAmb	19 23 06.2	
	comp=Z,26nm,1.3s						
Y49A	Blount Mountai	32.29	341	P	P	19 22 13.9	+2.0
Y49A				IAmb	IAmb	19 22 22.5	
	comp=Z,39nm,1.5s						
CPCT	Cooper Cave	33.21	344	P	P	19 22 21.4	+1.5
T59A	Double "B" Far	33.46	355	P	P	19 22 23.4	+1.4
T59A				IAmb	IAmb	19 23 19.4	
	comp=Z,25nm,1.2s						
CPUP	Villa Florida	33.84	152	P	P	19 22 25.6	+0.2
V48A	Smith Brothers	34.15	341	P	P	19 22 30.0	+1.9
V48A				IAmb	IAmb	19 22 31.4	
	comp=Z,23nm,1.2s						
CO03	El Pedregal	34.30	175	P	P	19 22 30.6	+1.0
U49A	Red Boiling Sp	34.55	343	P	P	19 22 32.3	+0.7
WVT	Waverly	34.84	340	P	P	19 22 34.9	+0.9
T47A	Sharon Grove	35.39	342	P	P	19 22 39.6	+0.8
T47A				IAmb	IAmb	19 22 41.0	
	comp=Z,10nm,0.7s						
WHAR	Wooly Hollow	35.81	334	P	P	19 22 42.7	+0.2
WHAR				IAmb	IAmb	19 23 23.5	
	comp=Z,42nm,1.5s						
VA03	San Esteban	36.22	175	P	P	19 22 46.5	+0.5
VA03				IAmb	IAmb	19 23 00.2	
	comp=Z,25nm,1.1s						
WCI	Wyandotte Cave	36.30	344	P	P	19 22 48.0	+1.4
WCI				IAmb	IAmb	19 23 47.6	
	comp=Z,28nm,1.4s						
MT09	Talagante	37.19	176	P	P	19 22 55.0	+0.7
MT09				IAmb	IAmb	19 23 55.3	
	comp=Z,50nm,1.8s						
FVM	French Village	37.41	339	P	P	19 22 57.1	+1.1
TXAR	Lajitas Array	37.99	316	P	P	19 23 01.6	+0.4
	comp=Z,1.4nm,0.9s,baz=119,slow=8.7,SNR=2.9						
TXAR				PcP	PcP	19 25 18.1	+1.2
	comp=Z,1.1nm,0.6s,baz=135,slow=5.6,SNR=6.3						
	comp=Z,1.4nm,0.9s						
KSCT	Kent School, K	38.07	1		P	19 23 02.4	+0.9
KSCT				IAmb	IAmb	19 24 02.6	
	comp=Z,46nm,1.5s						
MNTX	Cornudas Mount	40.59	317	P	P	19 23 22.2	-0.6
121A	Cookes Peak, D	42.73	316	P	P	19 23 41.6	+1.1
E62A	Clayton Lake	43.15	5	P	P	19 23 45.0	+1.6
GBN	Guysborough	43.19	13	P	P	19 23 43.8	-0.1
TASM	ASL Pad, Albuq	43.30	320	P	P	19 23 48.8	+3.6
TASM				IAmb	IAmb	19 23 52.9	
	comp=Z,9.8nm,1.5s						
PLCA	Paso Flores	44.14	176	P	P	19 23 52.6	+1.0
	comp=Z,2.9nm,0.9s,baz=15,slow=10,SNR=4.0						
	comp=Z,2.9nm,0.9s						
PLCA	Paso Flores	44.14	176	IAmb	IAmb	19 25 09.8	
	comp=Z,42nm,1.9s						
LDAQ	Lac Daran	44.37	3	P	P	19 23 54.4	+1.0
LDAQ				IAmb	IAmb	19 24 59.7	
	comp=Z,45nm,1.5s						
ECSD	EROS Data Cent	44.73	337	P	P	19 23 55.8	-0.5
ECSD				IAmb	IAmb	19 24 01.2	
	comp=Z,17nm,1.4s						
K30B	Basset	45.12	333	P	P	19 23 59.4	0.0
DRLN	Deer Lake	47.76	15	P	P	19 24 20.1	+0.2
RSSD	Black Hills	48.28	331		P	19 24 24.6	+0.2
RSSD				IAmb	IAmb	19 24 31.0	
	comp=Z,21nm,1.3s						
ULM	Lac du Bonnet	50.07	342	P	P	19 24 37.9	+0.2
	comp=Z,3.2nm,0.8s,baz=155,slow=11,SNR=1.5						
	comp=Z,3.2nm,0.8s						
ULM	Lac du Bonnet	50.07	342	IAmb	IAmb	19 25 04.5	
	comp=Z,33nm,1.7s						
PDAR	Pinedale Array	50.19	326	P	P	19 24 39.5	+0.4
	comp=Z,1.2nm,0.8s,baz=140,slow=6.9,SNR=3.8						
PDAR				PcP	PcP	19 25 58.2	0.0
	comp=Z,0.9nm,0.9s,baz=132,slow=4.5,SNR=2.6						
	comp=Z,1.2nm,0.8s						
SCHQ	Schefferville	51.52	5	P	P	19 24 49.6	+1.0
	comp=Z,7.7nm,0.6s,baz=194,slow=6.6,SNR=13						
	comp=Z,7.7nm,0.6s						

DSP	Deep Springs	52.37	316	P	P	19 24 56.4	+1.2
NVAR	Mina Array Bea	53.12	317	P	P	19 25 05.5	+4.4
	comp=Z,1.7nm,0.8s,baz=128,slow=5.4,SNR=5.9						
NVAR	Mina Array Bea	53.12	317	P	P	19 25 01.4	+0.4
WVOR	Wild Horse Val	55.38	321	P	P	19 25 18.3	+1.0
WVOR				IAmb	IAmb	19 25 23.7	
	comp=Z,9.6nm,1.1s						
EFI	East Falkland	56.65	168	P	P	19 25 25.5	-0.5
G08A	Pilot Rock	57.11	324	P	P	19 25 30.0	+0.4
G08A				IAmb	IAmb	19 25 36.6	
	comp=Z,34nm,1.8s						
EPH	Ephrata	58.62	325	P	P	19 25 41.3	+1.2
EPH				IAmb	IAmb	19 25 48.3	
	comp=Z,24nm,1.4s						
HOOD	Mount Hood Mea	58.74	323	P	P	19 25 41.5	+0.3
HOOD				IAmb	IAmb	19 25 48.7	
	comp=Z,14nm,0.9s						
SFJD	Kangerlussuaq	65.46	10	P	P	19 26 26.1	+0.5
YKA	Yellowknife Ar	66.02	341	P	P	19 26 28.8	-0.5
	comp=Z,0.8nm,0.8s,baz=138,slow=5.8,SNR=5.4						
	comp=Z,0.8nm,0.8s						
DBIC	Dimbokro	69.07	84	P	P	19 26 49.1	-0.4
	comp=Z,2.6nm,0.7s,baz=310,slow=6.0,SNR=2.8						
	comp=Z,2.6nm,0.7s						
DBIC	Dimbokro	69.07	84	P	P	19 26 48.3	-1.3
MD01	Midelt array s	70.85	57	P	P	19 27 00.3	0.0
PAB	San Pablo	72.27	50	P	P	19 27 08.2	-0.5
PAB				IAmb	IAmb	19 29 31.7	
	comp=Z,17nm,1.5s						
SUMG	Summit	72.43	11	P	P	19 27 10.1	+0.7
SUMG				IAmb	IAmb	19 27 19.9	
	comp=Z,10nm,0.8s						
ESDC	Sonseca Array	72.58	50	P	P	19 27 10.2	-0.4
	comp=Z,1.0nm,0.7s,baz=270,slow=5.8,SNR=7.8						
	comp=Z,1.0nm,0.7s						
TULEG	Thule	73.04	1	P	P	19 27 14.0	+1.6
A36M	Sachs Harbour	75.36	346	P	P	19 27 25.3	-0.7
A36M				IAmb	IAmb	19 27 27.6	
	comp=Z,8.1nm,0.8s						
TORD	Torodi Ar. Bea	75.46	77	P	P	19 27 27.1	-0.6
	comp=Z,1.2nm,0.5s,baz=296,slow=5.7,SNR=11						
	comp=Z,1.2nm,0.5s						
EKA	Eskdalemuir Ar	76.39	34	P	P	19 27 31.6	-0.6
	comp=Z,0.3nm,0.4s,baz=247,slow=6.8,SNR=3.5						
	comp=Z,0.3nm,0.4s						
ILAR	Eielson Array	79.52	335	P	P	19 27 49.0	-0.5
	comp=Z,0.5nm,0.7s,baz=118,slow=4.1,SNR=5.8						
	comp=Z,0.5nm,0.7s						
NC204	NORSAR Array S	84.51	29	P	P	19 28 16.0	+0.2
NB2	NORSAR Subarra	84.72	29	P	P	19 28 17.4	+0.5
	comp=Z,5.0nm,0.9s,baz=267,slow=5.3						
NOA	NORSAR Array B	84.72	29	P	P	19 28 17.2	+0.4
	comp=Z,1.4nm,0.8s,baz=267,slow=5.0,SNR=5.8						
	comp=Z,1.4nm,0.8s						
NC405	NORSAR Array S	84.97	29	P	P	19 28 18.2	+0.1
CIMO	Cimolais	85.15	44	P	P	19 28 19.5	+0.2
CIMO				IAmb	IAmb	19 31 21.6	
	comp=Z,27nm,2.0s						
HFS	Hagfors	85.93	30	P	P	19 28 23.2	+0.4
	comp=Z,1.3nm,0.6s,baz=204,slow=3.3,SNR=9.5						
	comp=Z,1.3nm,0.6s						
GEC2	GERESS Array S	85.99	41	P	P	19 28 23.0	-0.6
GERES	GERESS Array B	85.99	41	P	P	19 28 23.9	+0.3
	comp=Z,0.3nm,0.6s,baz=301,slow=0.6,SNR=2.7						
	comp=Z,0.3nm,0.6s						
SNAA	Sanae	87.50	163	P	P	19 28 30.6	+0.2
	comp=Z,1.3nm,0.7s,baz=282,slow=9.7,SNR=5.2						
	comp=Z,1.3nm,0.7s						
ARCES	ARCESS Array B	90.13	20	P	P	19 28 43.2	+0.4
	comp=Z,5.2nm,1.0s,baz=267,slow=3.5,SNR=5.2						
	comp=Z,5.2nm,1.0s						
ARCES	ARCESS Array B	90.13	20	P	P	19 28 42.6	-0.2
FINES	FINESS Array B	91.85	28	P	P	19 28 51.0	+0.1
	comp=Z,1.0nm,0.7s,baz=207,slow=5.8,SNR=1.8						
	comp=Z,1.0nm,0.7s						
FIA1	FINESS Array S	91.85	28	P	P	19 28 50.5	-0.4
QSPA	South Pole Qui	93.53	180	P	P	19 29 00.0	+1.3
SYO	Syowa Base	101.62	160⇊	epPdiff	pPdif	19 29 38.0	-1.8
SYO	Syowa Base	101.62	160⇈	ePP	PP	19 33 42.1	-2.8
ZALV	Zalesovo Beam	120.13	14	PKP	PKPdf	19 34 33.5	-0.4
	comp=Z,0.5nm,0.3s,baz=42,slow=2.3,SNR=2.8						
KURK	Kurchatov	121.17	20		PKiKP	19 34 36.3	+0.2
KURBB	Kurchatov Arra	121.22	20	PKP	PKiKP	19 34 36.3	+0.1
	comp=Z,0.4nm,0.6s,baz=318,slow=1.2,SNR=2.4						
MKAR	Makanchi Array	125.78	20	PKP	PKPdf	19 34 44.4	-0.6
	comp=Z,0.4nm,0.5s,baz=312,slow=1.9,SNR=8.0						
SONM	Songino Array	128.88	360	PKP	PKPdf	19 34 50.5	-0.5
	comp=Z,0.6nm,0.7s,baz=19,slow=0.7,SNR=2.7						
HYB	Hyderabad	146.00	51	ePKPab	PKPdf	19 35 23.4	+0.3
AS31	Alice Springs	146.27	231		PKPdf	19 35 22.4	-1.0
ASAR	Alice Springs	146.27	231	PKPbc	PKPdf	19 35 23.9	+0.5
	comp=Z,4.3nm,0.5s,baz=118,slow=3.7,SNR=44						
ASAR	Alice Springs	146.27	231		PKPdf	19 35 22.7	-0.7
WRA	Warramunga Arr	147.75	237	PKPbc	PKPbc	19 35 28.2	-0.5
	comp=Z,3.4nm,0.8s,baz=107,slow=3.4,SNR=18						
WRA	Warramunga Arr	147.75	237	PKPdf	PKPdf	19 35 23.2	-2.8
WRA					PKPbc	19 35 26.0	-2.7
WB0	Warramunga Arr	147.78	238	PKPbc	PKPbc	19 35 27.7	-1.2
CMAR	Chiang Mai Arr	157.16	17	PKPab	PKPab	19 36 08.7	-1.5
	comp=Z,1.2nm,0.8s,baz=330,slow=5.1,SNR=4.5						
CMAR	Chiang Mai Arr	157.16	17	PKPdf	PKPdf	19 35 37.0	-2.8
CMAR					PKPab	19 36 07.4	-2.8

*NEIC **24** 19:19:03.5, 3°.46N×74°.19W, h18^{km}*

*MOS **24** 19:19:03.1±1.6, 3°.47N×74°.17W, h13^{km}, mb6.1/38, MS5.5/8, Error ellipse: s-maj=8.2km s-min=5.1km az=90.4*

*NEIC **24** 19:19:03.5, 3°.46N×74°.09W, h18^{km}, Moment Tensor Solution. Duration: 3^s.4 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.42; M$_{\theta\theta}$2.17; M$_{\phi\phi}$-2.59; M$_{r\theta}$-0.79; M$_{\theta\phi}$3.08; M$_{\phi r}$-1.91; Fault plane solution: M$_0$4.42000×10^{17} NP1: φ$_s$289.75000°, δ61.81000°, λ4.83000°. NP2: φ$_s$197.47000°, δ85.74000°, λ151.72000°. Principal axes: T 4.3338, Plg23.0000°, Azm150.0000°; N 0.1709, Plg61.0000°, Azm10.0000°; P -4.5047, Plg16.0000°, Azm247.0000°;*

*NEIC **24** 19:19:03.3±1.4, 3°.45N±0°.06×74°.10W±0°.07, h10^{km}±1^{km}, mb5.9/779, Ms_20 5.5/69, Mww5.7/46 Error ellipse: s-maj=12.4km s-min=9.4km az=265.0*

*RSNC **24** 19:19:04.4±0.0, 3°N±1°×7°4W±°, h12^{km}±2^{km}, M5.8, mB6.9, mb6.9, ML5.5, Mw5.8, Mw(mB)6.8*

*IDC **24** 19:19:05.0±2.0, 3°.49N×73°.98W, h14^{km}±12^{km}, mb5.2/24, mbtmp5.3/27, ML5.1/3, MS5.4/29, Error ellipse: s-maj=14.8km s-min=10.4km az=69.0*

*VAO **24** 19:19:05.0±0.2, 3°.41N×73°.86W, h10^{km}, mb5.9, Presumed earthquake*

*GFZ **24** 19:19:05.4, 3°.41N×74°.06W, h15^{km}, MW5.7, Moment Tensor Solution. s28 Moment tensor: M$_{rr}$1.19; M$_{\theta\theta}$1.47; M$_{\phi\phi}$-2.66; M$_{r\theta}$-0.73; M$_{\theta\phi}$2.71; M$_{\phi r}$-1.29; Fault plane solution: NP1: φ$_s$292.00000°, δ63.00000°, λ15.00000°. NP2: φ$_s$195.00000°, δ77.00000°, λ152.00000°. Principal axes: T 3.4900, Plg29.0000°, Azm150.0000°; N 0.6400, Plg59.0000°, Azm351.0000°; P -4.1400, Plg9.0000°, Azm245.0000°;*

*GCMT **24** 19:19:08.5±0.1, 3°.43N±0°.01×74°.12W±0°.01, h18^{km}, MW5.8/152, Moment Tensor Solution. s85,c131; s152,c321; Duration: 1^s.9 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.01±.07; M$_{\theta\theta}$2.42±.06; M$_{\phi\phi}$-3.44±.07; M$_{r\theta}$-2.50±.19; M$_{\theta\phi}$3.84±.05; M$_{\phi r}$-1.21±.17; Best double couple: M$_0$5.61900×10^{17} NP1: φ$_s$195.00000°, δ69.00000°, λ158.00000°. NP2: φ$_s$293.00000°, δ70.00000°, λ22.00000°. Principal axes: T 5.8980, Plg30.0000°, Azm154.0000°; N -0.5680, Plg60.0000°, Azm333.0000°; P -5.3400, Plg0.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*CATAC **24** 19:19:08.9±0.4, 4°N±3°×7°4W±°, h10^{km}, M5.8/12, mB5.9/6, mb5.6/8, MLv6.1/12, Mw(mB)5.5/6, MwMwp6.0/1, Mwp6.0/1 Error ellipse: s-maj=6.9km s-min=4.1km az=135.8, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.16; M$_{\theta\theta}$1.67; M$_{\phi\phi}$-1.83; M$_{r\theta}$0.31; M$_{\theta\phi}$1.96; M$_{\phi r}$-2.74; Fault plane solution: M$_0$3.81303×10^{17} NP1: φ$_s$284.65984°, δ46.82190°, λ-3.57727°. NP2: φ$_s$17.10935°, δ87.39214°, λ-136.76614°. Principal axes: T 2.9778, Plg26.8514°, Azm142.3793°; N 1.3198, Plg46.7031°, Azm19.8800°; P -4.2976, Plg31.0659°, Azm250.1367°; confirmed*

*UCR **24** 19:20:26.1±2.4, 7°.45N×78°.66W, h10^{km}, MW4.4*

ISC 24 19:19:03.1±0.7, 3°.45N±0°.02×74°.18W±0°.02, h9^{km}±4^{km}, n1302, σ1^s.84/1021, mb5.9/447, MS5.5/80, 32C-38D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URMC	La Uribe, Meta	0.29	224	P	Pg	19 19 09.6	+0.7
URMC				S	Sg	19 19 14.1	+1.4
PRAC	Prado	0.75	290	P	Pg	19 19 17.4	-0.2
PRAC				S	Sg	19 19 27.8	+0.3
PRAC	Prado	0.75	290	P	Pg	19 19 17.6	0.0
PRAC				S	Sb	19 19 28.7	0.0
VILC	Villavicencio,	0.81	37	P	Pb	19 19 20.0	+0.5
VILC				S	Sn	19 19 32.6	-0.5
CVER	Cruz Verde, Cu	1.07	6	P	Pb	19 19 24.0	0.0
CVER				S	Sn	19 19 39.7	-0.1
ORTC	Ortega, Tolima	1.16	293	P	Pb	19 19 24.8	-0.5
ORTC				S	Sn	19 19 41.2	-0.2
BOG	Bogota	1.17	6	P	Pn	19 19 27.6	+1.7
BOG				S	Sn	19 19 44.5	+2.4
CHIC	Chingaza	1.25	21	P	Pg	19 19 27.3	+0.1
CHIC				S	Sn	19 19 43.9	-0.4
MACC	Macarena, Meta	1.34	166	P	Pb	19 19 28.5	+0.1
MACC				S	Sg	19 19 46.9	+0.6
ROSC	El Rosal	1.38	354	Pg	Pg	19 19 30.6	+0.8
	11µm,0.3s,baz=179,slow=7.2,SNR=130						
ROSC				Lg	Lg	19 19 49.8	
	6µm,0.3s,baz=179,slow=21,SNR=7.1						
ROSC				LR	LR	19 20 21.3	
	comp=Z,239µm,20.0s,baz=165,slow=55						
ROSC	El Rosal	1.38	354	Pn	Pg	19 19 30.0	+0.3
ROSC				Sn	Sg	19 19 49.2	+1.4
BETC	Betania	1.48	239	P	Pb	19 19 30.5	-0.2
BETC				S	Sb	19 19 50.3	+0.7
ANIL	Santa Ana	1.60	310	P	Pb	19 19 32.6	-0.4
ANIL				S	Sg	19 19 54.5	-0.1
GUVC	San Jose del G	1.79	120	P	Pb	19 19 36.2	+0.1
GUVC				S	Sg	19 20 01.5	+0.7
GARC	Garzon, Huila	1.82	226	P	Pb	19 19 36.4	-0.3
GARC				S	Sb	19 20 00.4	+0.7
RECRC	Villamaria, Ca	1.90	322	P	Pb	19 19 38.1	-0.2
RECRC				S	Sb	19 20 02.7	+0.4
NIZA	Niza - Manizal	2.05	321	P	Pb	19 19 41.0	+0.4
NIZA				S	Sb	19 20 07.8	+1.5
PTGC	Puerto Gaitan,	2.17	70	P	Pb	19 19 43.2	+0.6
PTGC				S	Sg	19 20 12.5	-0.4
SPBC	San Pablo de B	2.19	3	P	Pb	19 19 43.9	+1.0
SPBC				S	Sg	19 20 13.2	-0.2
NORC	Norcasia	2.21	342	P	Pb	19 19 41.8	-1.4
NORC				S	Sb	19 20 10.8	+0.1
YOTC	Yotoco, Valle	2.22	284	P	Pn	19 19 41.5	+1.2
YOTC				S	Sb	19 20 12.3	+1.1
FLOC	Florencia	2.37	218	P	Pb	19 19 45.8	-0.2
FLOC				S	Sb	19 20 16.2	+0.8
JAMC	Jamundi, Valle	2.50	265	P	Pb	19 19 46.7	-1.6
JAMC				S	Sb	19 20 20.0	+0.7
PLMC	San Jos del P	2.54	305	P	Pn	19 19 46.9	+2.3
PLMC				S	Sb	19 20 22.3	+1.8
POPC	Popayan, Colom	2.65	250	P	Pb	19 19 49.2	-1.7
POPC				S	Sb	19 20 24.4	+0.7
RUSC	La Rusia	2.66	24	P	Pb	19 19 50.4	-0.8
RUSC				S	Sg	19 20 26.9	-1.7
RUSC	La Rusia	2.66	24	P	Pb	19 19 50.1	-1.1
RUSC				S	Sg	19 20 28.2	-0.4
CBOC	Ciudad Bolivar	3.01	323	P	Pb	19 19 55.8	-1.2
CBOC				S	Sb	19 20 36.3	+2.3
HELC	Santa Helena	3.03	334	P	Pn	19 19 54.4	+2.8
HELC				S	Sb	19 20 34.1	-0.7
HELC	Santa Helena	3.03	334	P	Pb	19 19 55.2	-2.3
HELC				S	Sb	19 20 34.4	-0.4
PTBC	PUERTO BERRIO,	3.08	355	P	Pn	19 19 54.5	+2.6
PTBC				S	Sb	19 20 35.2	-0.5
MEDEC	Medelln, Ant	3.14	333	P	Pb	19 19 57.8	-1.3
MEDEC				S	Sb	19 20 37.9	+0.3
BARC	Barichara	3.27	18	P	Pb	19 19 58.9	-2.6
BARC				S	Sg	19 20 47.7	-0.6
CRUC	La Cruz	3.34	236	P	Pb	19 20 00.4	-2.4
CRUC				S	Sg	19 20 48.6	-2.0
BBAC	Balboa, Cauca	3.38	245	P	Pn	19 19 59.1	+2.9
BBAC				S	Sb	19 20 46.6	+2.0
PIZC	Pizarro, Choco	3.51	295	P	Pb	19 20 01.8	-3.6
PIZC				S	Sb	19 20 51.8	+3.7
BRJC	Barrancabermej	3.52	7	P	Pn	19 20 01.1	+3.1
GCUF	Volcan Galeras	3.86	235	P	Pn	19 20 07.5	+4.4
GCUF				S	Sg	19 21 04.6	-2.6
GR1C	Gorgona, Isla	4.01	264	P	Pn	19 20 06.1	+1.4
GR1C				S	Sn	19 20 52.3	+0.5
DBBC	Dabeiba	4.08	330	P	Pn	19 20 10.2	+4.5
DBBC				S	Sb	19 21 03.2	-1.4
PAMC	Pamplona, Colo	4.13	21	P	Pn	19 20 11.5	+4.7
SOLC	Bahia Solano	4.24	311	P	Pn	19 20 11.6	+3.8
UREC	San Jos de Ur	4.48	343	P	Pn	19 20 16.1	+4.9
BONI	La Bonita	4.48	228	P	Pn	19 20 14.2	+2.7
TULM	Tulcn-Chalpat	4.51	233	P	Pn	19 20 16.9	+4.8
TUMC	Tumaco	4.82	250	P	Pn	19 20 19.6	+3.7
TUMC	Tumaco	4.82	250	P	Pn	19 20 20.5	+4.6
OCAC	Ocana	4.83	10	P	Pn	19 20 20.6	+4.5
APAC	Apartado, Choc	5.02	332	P	Pn	19 20 24.9	+6.3
OTAV	Otavalo	5.33	233	Pn	Pn	19 20 26.0	+2.7
OTAV	Otavalo	5.33	233	P	Pn	19 20 26.0	+2.7
OTAV	Otavalo	5.33	233	P	Pb	19 20 31.9	-4.9
OTAV				S	Sn	19 21 32.8	+7.7
OTAV	Otavalo	5.33	233	eP	Pn	19 20 27.4	+4.1
SLOR	San Lorenzo -	5.99	226		Pn	19 20 35.9	+3.5
CAP2	Capurgana	6.05	329	P	Pn	19 20 35.6	+2.7
CAP2				S	Sn	19 21 42.3	0.0
SDV	Santo Domingo	6.45	33	Pn	Pn	19 20 41.2	+2.8
	280nm,0.3s,baz=166,slow=6.0,SNR=38						
SDV				Sn	Sn	19 21 56.6	+4.3
	796nm,0.3s,baz=33,slow=14,SNR=7.1						
SDV				Lg	Lg	19 22 29.8	
	334nm,0.3s,baz=68,slow=19,SNR=1.7						
SDV				LR	LR	19 23 23.5	
	comp=Z,28µm,21.1s,baz=236,slow=41						
SDV	Santo Domingo	6.45	33	Pn	Pn	19 20 40.5	+2.1
SDV				Sn	Sn	19 21 51.4	-0.8
SDV	Santo Domingo	6.45	33	eP	Pn	19 20 39.3	+0.9
SJCC	San Jacinto, C	6.48	351	P	Pn	19 20 41.1	+2.4
SJCC				S	Sn	19 21 52.2	-0.6
AZU	Azuero	7.44	306	eP	Pn	19 20 53.0	+1.2
CAZU	Cerro Azul, Pa	7.75	318	eP	Pn	19 20 59.0	+2.8
BCIP	Isla Barro Col	7.99	316		Pn	19 21 02.9	+3.5
BCIP	Isla Barro Col	7.99	316	P	Pn	19 21 02.9	+3.5
BCIP	Isla Barro Col	7.99	316	eP	Pn	19 21 00.7	+1.3
GMAL	Guarumal, Vera	8.22	302	eP	Pn	19 21 04.5	+1.9
RBALA	Bur	9.58	305	eP	Pn	19 21 24.0	+2.7
PBNVO	Pueblo Nuevo,	9.62	305	eP	Pn	19 21 24.4	+2.5
BQTLY	Boquete Panama	9.77	303	eP	Pn	19 21 28.7	+4.7
PTPA	Petro Terminal	9.85	299	eP	Pn	19 21 31.5	+6.6
BRU2	Volcan	9.99	302		Pn	19 21 27.3	+0.3
BRU2	Volcan	9.99	302	eP	Pn	19 21 31.2	+4.2
PIRO	Carate, Puerto	10.35	299		Pn	19 21 31.8	0.0
BUS1	Rivas	11.27	303	eP	Pn	19 21 46.7	+1.8
ATAH	Atahualpa	11.33	202	Pn	Pn	19 21 47.8	+2.2
	15nm,0.3s,baz=48,slow=5.0,SNR=16						
ATAH				Sn	Sn	19 24 08.1	+15
	12nm,0.3s,baz=31,slow=23,SNR=4.6						
ATAH				LR	LR	19 27 01.2	
	comp=Z,51µm,19.6s,baz=32,slow=42						
	208nm,0.7s						
EGUB	Earth Gu¡pi	11.50	306	Pn	Pn	19 21 44.8	-2.8
RAFA	San Farael, Vo	11.54	305	Pn	Pn	19 21 50.2	+1.8
HDC	Heredia	11.81	304	Pn	Pn	19 21 53.0	+0.9
HDC	Heredia	11.81	304	eP	Pn	19 21 59.3	+7.3
JTS	Las Juntas de	12.66	303	Pn	Pn	19 22 12.1	+8.5
	0.8nm,0.3s,baz=113,slow=7.7,SNR=9.7						
JTS				LR	LR	19 28 06.0	
	comp=Z,7µm,18.6s,baz=126,slow=42						
JTS	Las Juntas de	12.66	303		Pn	19 22 04.0	+0.4
JTS	Las Juntas de	12.66	303	deP	Pn	19 22 09.0	+5.4
JUD3	Juan Diaz 3	13.10	301		Pn	19 22 08.5	-1.0
BOAV	Boa Vista	13.68	94	Pn	Pn	19 22 14.1	-3.3
BILN	Bilwi Airport	13.90	320	Pn	Pn	19 22 18.5	-1.8
DMDM	Guralp CMG5TDE	14.45	59	eP	Pn	19 22 30.3	+2.4
PSQC	Port of Spain	14.46	60	eP	Pn	19 22 29.5	+1.5
BOAB	BOACO BROADBAN	14.46	309		Pn	19 22 28.2	+0.2
PSGH	Port of Spain	14.46	60	eP	Pn	19 22 29.2	+1.1
TRN	Trinidad (W)	14.55	60	eP	Pn	19 22 30.5	+1.2
SIUN	Universidad Ur	14.61	315		Pn	19 22 31.2	+1.1
HOJ	Hope	14.68	350	i P	P	19 22 38.4	+1.0
MGAN	Managua	14.74	307	P	Pn	19 22 32.8	+0.9
STH	Stony Hill	14.76	350	i P	P	19 22 38.2	-0.1
GRFF	Grenada Fort F	14.99	55	eP	P	19 22 38.0	-2.8
MACA	Manacapuru-AM	15.00	116	Pn	Pn	19 22 36.9	+1.4
MTDJ	Mount Denham	15.04	348		Pn	19 22 36.2	+0.1
MTDJ	Mount Denham	15.04	348	i P	P	19 22 41.4	-0.2
MTDJ	Mount Denham	15.04	348	eP	P	19 22 41.8	+0.3
PAPH	Port-au-Prince	15.09	7	eP	Pn	19 22 35.9	-0.7
GRGR	Grenville	15.10	54	eP	P	19 22 39.8	-2.2
GRW	Mount Saint Ca	15.11	54	eP	P	19 22 41.0	-1.2
GRHS	Sauteurs	15.16	54	eP	P	19 22 40.7	-2.0
GRSS	Sisters	15.23	54	eP	P	19 22 42.3	-1.2
CNGN	Cerro Negro	15.30	307		Pn	19 22 38.4	-1.1
HERN	Volcan Telica	15.47	307		Pn	19 22 41.1	-0.7
HERN				IAmb	IAmb	19 22 49.6	
	comp=Z,310nm,1.4s						
GCMP	Grenada, Carri	15.48	54	eP	P	19 22 44.6	-1.7
SDD	Santo Domingo	15.49	15	Pn	Pn	19 22 41.9	+0.1
NNA	Nana	15.57	190	Pn	P	19 22 46.5	-0.8
	comp=Z,3.9nm,0.3s,baz=15,slow=12,SNR=7.2						
NNA				Sn	Sn	19 25 38.9	+3.2
	comp=Z,4.2nm,0.3s,baz=302,slow=19,SNR=2.6						
NNA				LR	LR	19 29 40.1	
	comp=Z,35µm,19.1s,baz=346,slow=41						
	comp=Z,49nm,0.7s						
NNA	Nana	15.57	190		Pn	19 22 41.8	-1.2
NNA	Nana	15.57	190	c iP	Pn	19 22 44.6	+1.6
SDDR	Presa de Saban	15.69	10		Pn	19 22 44.3	-0.3
SDDR	Presa de Saban	15.69	10	eP	Pn	19 22 44.7	+0.1
CRIN	San Cristobal	15.70	307		Pn	19 22 43.9	-0.8
DR12	Loma Pena Alta	15.95	17		Pn	19 22 47.8	-0.1
CRPR	Cabo Rojo, PR	16.04	25		Pn	19 22 47.5	-1.4
SVB	Belmont	16.07	52	eP	P	19 22 52.5	-0.3
SC01	Santiago de lo	16.23	12		Pn	19 22 49.1	-2.4
OBIP	Obispado Ponce	16.29	27		Pn	19 22 50.3	-1.8
GTBY	Guantanamo Bay	16.40	357	eP	Pn	19 22 54.9	+1.3
AGPR	Aguadilla, PR	16.45	24		Pn	19 22 51.7	-2.5
AOPR	Arecibo Observ	16.49	26		Pn	19 22 51.8	-3.0
AOPR	Arecibo Observ	16.49	26	eP	P	19 22 56.5	-1.0
MARVS	Santiago de Cu	16.53	354	eP	Pn	19 22 50.4	-4.9
SJG	San Juan	16.55	28	Pn	Pn	19 22 54.3	-1.3
	comp=Z,11nm,0.3s,baz=210,slow=12,SNR=23						
SJG				LR	LR	19 29 58.6	
	comp=Z,16µm,21.1s,baz=206,slow=40						
	comp=Z,101nm,0.6s						
SJG	San Juan	16.55	28		Pn	19 22 52.6	-3.0
SJG	San Juan	16.55	28	eP	Pn	19 22 56.0	+0.4
CHIV	Chivirico	16.57	353		Pn	19 22 52.1	-3.7
CHIV				IAmb	IAmb	19 22 58.6	
	comp=Z,120nm,1.2s						
CHIV	Chivirico	16.57	353	eP	Pn	19 22 48.0	-7.8
MCLT	Moule a Chique	16.58	51	eP	P	19 22 58.6	+0.2
PAYG	Puerto Ayora	16.61	256		Pn	19 22 52.1	-4.3
MASC	Masc	16.62	360	eP	Pn	19 22 55.6	-0.8
QMBU	Quimbuelo	16.66	358	eP	Pn	19 22 58.0	+1.1
TGUH	Tegucigalpa,Un	16.67	310		Pn	19 22 54.0	-3.2
HUMP	Col San Antoni	16.72	29		Pn	19 22 55.2	-2.6
SLAC	Saint Lucia, A	16.72	51	eP	P	19 23 01.9	+1.8
SLBI	Saint Lucia, B	16.74	50	eP	P	19 23 00.5	+0.3
GCPR	Guaynabo City	16.76	28		Pn	19 22 56.1	-2.1
YAR	Yar	16.95	353	eP	Pn	19 23 01.0	+0.5
BIM	Bigot	16.97	49		Pn	19 22 58.5	-2.4
BIM	Bigot	16.97	49	eP	P	19 23 02.1	-0.8
NMDO	Nuevo Mundo	17.02	357	Pn	Pn	19 22 59.2	-2.2
NMDO	Nuevo Mundo	17.02	357	eP	P	19 23 04.6	+1.3
CXM	Morne La Croix	17.08	48		Pn	19 23 00.0	-2.5
CXM				IAmb	IAmb	19 23 07.5	
	comp=Z,196nm,0.9s						
MPOM	Morne Pois Mar	17.09	49		Pn	19 23 00.7	-1.6
SVN	Savane Anatole	17.10	48	P	Pn	19 23 01.0	-1.6
SVN	Savane Anatole	17.10	48	eP	P	19 23 04.2	-0.1
MOAC	Moa	17.12	358	eP	P	19 23 04.4	0.0
ILAM	Ilet Lapin Mar	17.28	49	P	Pn	19 23 03.5	-1.3
ILAM	Ilet Lapin Mar	17.28	49	eP	P	19 23 09.9	+3.7
DSLB	Salisbury	17.31	46	eP	Pn	19 23 05.2	+0.1
BBGH	Gun Hill	17.36	55	eP	P	19 23 13.2	+6.1
DLPL	La Plaine	17.36	46	eP	P	19 23 14.7	+7.5
HLGC	Holguin	17.43	354	eP	P	19 23 10.6	+2.8
TBG	Guadaloupe-3	17.43	44	eP	P	19 23 08.1	+0.1
TDBA	Terre de Bas,	17.44	44	P	Pn	19 23 04.9	-1.8
DWS	Wesley	17.48	46	eP	P	19 23 16.7	+8.3
ATGZ	Broadband at L	17.55	43	eP	P	19 23 11.3	+2.2
MMLZ	Guadeloupe Bro	17.55	44	eP	P	19 23 10.5	+1.3
CBE	Ff, Capester	17.61	44	P	Pn	19 23 06.5	-2.4
DHSZ	Broadband at M	17.64	43	eP	P	19 23 11.8	+1.6
GDHS	Morne Mazeau,	17.64	43	P	Pn	19 23 06.9	-2.5
MLYT	Lee's Yard	17.68	41	eP	P	19 23 12.1	+1.4
MBWH	Windy Hill	17.69	41	eP	P	19 23 12.1	+1.2
SABA	Saba	17.70	37	P	Pn	19 23 07.1	-2.9
MAGL	Barre de l'ile	17.75	45	P	Pn	19 23 09.0	-1.7
SEUS	St. Eustatius	17.76	37	P	Pn	19 23 09.4	-1.3
SKI	Saint Kitts	17.78	38	eP	Pn	19 23 01.4	-10
ABD	La Joyeuse, An	17.97	43	IAmb	IAmb	19 23 23.2	
	comp=Z,3µm,1.5s						
CCCC	Cccc	17.98	349	eP	P	19 23 15.7	+1.8
DSDZ	La Diserade, G	18.15	44	eP	P	19 23 16.4	+0.5
GRTK	Grand Turk	18.19	9	P	P	19 23 17.7	+1.4
GRTK	Grand Turk	18.19	9	eP	P	19 23 23.0	+6.7
MTO3	Montecristo	18.51	307	P	P	19 23 17.2	-2.9
ESQI	Esquipulas	18.58	307	P	P	19 23 19.2	-1.6
ANWB	Willy Bob	18.63	40	P	P	19 23 18.5	-2.7
ANWB	Willy Bob	18.63	40	P	Pn	19 23 22.7	+1.3
ANWB	Willy Bob	18.63	40	eP	P	19 23 19.6	-1.6
MGV	Manicaragua	19.38	344	eP	Pn	19 23 33.2	+2.8
CAIB	Caibarien	19.61	345	P	P	19 23 29.8	-2.0
CAIB				IAmb	IAmb	19 23 42.5	
	comp=Z,589nm,1.6s						
CAIB	Caibarien	19.61	345	eP	Pn	19 23 35.3	+2.1
APG	El Apazote	19.73	307	P	Pn	19 23 36.0	+1.1
	comp=Z,4.5nm,1.0s,baz=154,slow=9.8,SNR=12						
PETF	Flores	20.40	312	IAmb	IAmb	19 23 48.1	
	comp=Z,699nm,1.1s						
RTAL	Retalhuleu	20.48	304	IAmb	IAmb	19 23 49.0	
	comp=Z,629nm,1.2s						
LPAZ	La Paz	20.51	163	P	Pn	19 23 45.0	+0.5
	comp=Z,219nm,1.0s,baz=341,slow=9.7,SNR=9.8						
LPAZ				Lg	Lg	19 29 41.5	
	comp=Z,4.6nm,0.3s,baz=192,slow=10,SNR=4.9						
LPAZ				LR	LR	19 32 06.1	
	comp=Z,27µm,20.1s,baz=326,slow=38						
	comp=Z,219nm,1.0s						
LPAZ	La Paz	20.51	163	P	Pn	19 23 45.0	+0.6
SOR	Soroa	21.04	337	P	P	19 23 47.4	0.0
SOR	Soroa	21.04	337	P	P	19 23 47.4	0.0
SOR				pmax	pmax		
	comp=Z,244nm,1.0s						
SOR	Soroa	21.04	337	eP	P	19 23 46.4	-1.0
VILB	Vilhena	21.41	140	P	P	19 23 51.8	+0.3
PB18	Visviri	21.42	168	IAMs_20	IAMs_20	19 32 48.6	
	comp=Z,27µm,19.0s						
MDP	Montagnes des	21.54	85	P	P	19 23 53.6	+0.7
	comp=Z,363nm,0.8s,baz=254,slow=9.1,SNR=15						
MDP				Lg	Lg	19 30 11.5	
	comp=Z,9.1nm,0.3s,baz=9.6,slow=13,SNR=9.7						
MDP				LR	LR	19 32 16.3	
	comp=Z,18µm,19.4s,baz=272,slow=37						
	comp=Z,363nm,0.8s						
TEIG	Tepich	21.61	322	P	P	19 23 56.5	+3.0
	comp=Z,0.1nm,0.4s,baz=131,slow=24,SNR=15						
TEIG	Tepich	21.61	322	P	P	19 23 52.5	-1.0
AP01	Chacalluta	22.01	170	IAMs_20	IAMs_20	19 33 00.4	
	comp=Z,19µm,20.0s						
PB12	IPOC Station P	22.25	170	P	P	19 23 59.9	-0.7
PB12				IAMs_20	IAMs_20	19 33 08.8	
	comp=Z,16µm,20.0s						
GO01	Chusmiza	23.49	168	IAMs_20	IAMs_20	19 34 02.6	
	comp=Z,24µm,19.0s						
PB11	IPOC Station P	23.49	169	IAMs_20	IAMs_20	19 33 23.6	
	comp=Z,13µm,19.0s						
PB08	IPOC Station P	23.96	168	IAMs_20	IAMs_20	19 34 15.7	
	comp=Z,25µm,19.0s						
TA01	Diego Aracena	24.19	171	IAmb	IAmb	19 24 31.4	
	comp=Z,415nm,1.4s						
CMIG	Matias Romero	24.43	305	LR	LR	19 35 40.5	
	comp=Z,7µm,20.1s,baz=120,slow=40						
PATCX	Punta Patache	24.45	171	IAmb	IAmb	19 24 36.9	
	comp=Z,449nm,1.4s						
PB01	IPOC Station P	24.78	169	IAmb	IAmb	19 24 36.4	
	comp=Z,434nm,1.5s						
DWPF	Disney Wildern	25.48	345	P	P	19 24 30.8	-0.8
DWPF				IAmb	IAmb	19 24 40.3	
	comp=Z,238nm,0.9s						
PB09	IPOC Station P	25.56	169	P	P	19 24 32.5	-0.1
PB09				IAMs_20	IAMs_20	19 35 13.1	

	comp=Z,13µm,19.0s							
PB03	IPOC Station P	25.71	171		IAmb	IAmb	19 24 46.2	
	comp=Z,296nm,1.2s							
PB03					IAMs_20	IAMs_20	19 34 23.4	
	comp=Z,13µm,21.0s							
PB06	IPOC Station P	26.39	170		IAMs_20	IAMs_20	19 36 08.3	
	comp=Z,20µm,18.0s							
PB05	IPOC Station P	26.43	172		IAMs_20	IAMs_20	19 36 22.6	
	comp=Z,17µm,18.0s							
AF01	San Pedro de A	26.89	168		P	P	19 24 43.8	-1.0
AF01					IAmb	IAmb	19 25 17.6	
	comp=Z,252nm,1.1s							
656A	Willston	26.97	344		P	P	19 24 44.3	-0.8
656A					IAmb	IAmb	19 24 53.2	
	comp=Z,403nm,1.3s							
PB10	IPOC Station P	27.04	173		P	P	19 24 45.3	-0.5
PB10					IAMs_20	IAMs_20	19 34 57.5	
	comp=Z,12µm,22.0s							
GO02	Mina Guanaco	28.79	171		IAMs_20	IAMs_20	19 36 43.9	
	comp=Z,13µm,22.0s							
AQDB	Aquidauana	29.91	143		P	P	19 25 11.2	-0.2
AQDB					IAmb	IAmb	19 25 18.1	
	comp=Z,243nm,1.0s							
AC02	Maricunga	30.50	171		IAMs_20	IAMs_20	19 38 04.3	
	comp=Z,8µm,22.0s							
152A	Waverly Hall	30.70	342		IAmb	IAmb	19 25 26.7	
	comp=Z,161nm,0.9s							
AC06	Mina Casimiro	30.85	173		P	P	19 25 19.5	-0.3
GO03	Copiapo	31.10	173		IAMs_20	IAMs_20	19 38 01.1	
	comp=Z,7µm,19.0s							
346A	Big Creek Wild	31.30	334		P	P	19 25 23.5	-0.1
BIRD	Birdtown, Kers	31.58	350		IAmb	IAmb	19 25 33.8	
	comp=Z,168nm,1.1s							
Y52A	Lilburn	31.63	344		IAmb	IAmb	19 25 34.3	
	comp=Z,156nm,1.2s							
LRAL	Lakeview Retre	31.78	339		P	P	19 25 28.1	+0.3
LRAL					IAmb	IAmb	19 25 35.6	
	comp=Z,302nm,1.1s							
TINO	Tinogasta	31.98	169	*i*	P	P	19 25 32.3	+2.6
BDFB	Brasilia	32.10	127		Lg	Lg	19 35 54.0	
	comp=Z,1.3nm,0.3s,baz=30,slow=24,SNR=3.5							
BDFB					LR	LR	19 39 06.8	
	comp=Z,39µm,18.3s,baz=300,slow=38							
AC05	El Transito	32.32	174		IAmb	IAmb	19 25 46.5	
	comp=Z,378nm,1.4s							
Y49A	Blount Mountai	32.33	341		IAmb	IAmb	19 25 40.3	
	comp=Z,242nm,1.2s							
LCO	Las Campanas	32.45	174		P	P	19 25 34.1	0.0
LCO	Las Campanas	32.45	174		P	P	19 25 34.1	0.0
LCO					pmax	pmax		
	comp=Z,757nm,1.8s							
VCA	Vinchina	32.52	170	*i*	P	P	19 25 36.7	+2.2
FPAL	Fort Paine	32.71	342		IAmb	IAmb	19 25 44.2	
	comp=Z,121nm,0.9s							
W52A	Murphy	32.76	345		IAmb	IAmb	19 25 48.0	
	comp=Z,172nm,1.0s							
V53A	Saluda	33.04	347		IAMs_20	IAMs_20	19 39 38.5	
	comp=Z,7µm,20.0s							
X48A	Hartselle	33.08	340		P	P	19 25 38.5	-0.8
X48A					IAmb	IAmb	19 25 47.3	
	comp=Z,267nm,1.0s							
HBVL	Hebbronville	33.16	317		P	P	19 25 39.4	-0.6
HBVL					IAmb	IAmb	19 25 46.7	
	comp=Z,274nm,1.3s							
W50A	Signal Mountai	33.23	343		IAmb	IAmb	19 25 48.5	
	comp=Z,290nm,1.2s							
CPCT	Cooper Cave	33.25	344		P	P	19 25 40.1	-0.6
CPCT					IAmb	IAmb	19 25 48.6	
	comp=Z,176nm,1.2s							
TKL	Tuckaleechee C	33.25	346		LR	LR	19 40 27.9	
	comp=Z,6µm,19.5s,baz=176,slow=39							
TKL	Tuckaleechee C	33.25	346		P	P	19 25 40.1	-0.6
TKL	Tuckaleechee C	33.25	346		P	P	19 25 40.1	-0.6
TKL					pmax	pmax		
	comp=Z,111nm,1.2s							
HKT	Hockley	33.39	324		P	P	19 25 42.3	+0.3
HKT					IAmb	IAmb	19 25 48.6	
	comp=Z,239nm,1.4s							
HKT	Hockley	33.39	324	*ce*	P	P	19 25 43.1	+1.2
HKT					pmax	pmax		
	comp=Z,195nm,1.4s							
ACLC	CERRO LA CRUZ	33.42	169	*i*	P	P	19 25 42.7	+0.3
SWET	Sewanee	33.43	342		IAmb	IAmb	19 25 49.9	
	comp=Z,220nm,1.2s							
CO01	Juntas del Tor	33.47	174		IAmb	IAmb	19 25 57.5	
	comp=Z,235nm,1.4s							
CO01					IAMs_20	IAMs_20	19 41 23.9	
	comp=Z,10µm,20.0s							
T59A	Double "B" Far	33.50	355		P	P	19 25 42.2	-0.6
T59A					IAmb	IAmb	19 25 52.9	
	comp=Z,233nm,0.9s							
T57A	Hurt	33.71	353		IAmb	IAmb	19 25 54.8	
	comp=Z,132nm,0.9s							
AROD	Rodeo	33.73	173	*i*	P	P	19 25 47.2	+1.9
CPUP	Villa Florida	33.80	152		P	P	19 25 44.3	-1.3
	comp=Z,49nm,1.0s,baz=330,slow=14,SNR=4.9							
CPUP					Lg	Lg	19 36 56.0	
	comp=Z,0.2nm,0.3s,baz=330,slow=12,SNR=4.6							
CPUP					LR	LR	19 39 47.3	
	comp=Z,5µm,19.4s,baz=345,slow=37							
	comp=Z,49nm,1.0s							
CPUP	Villa Florida	33.80	152		IAmb	IAmb	19 25 46.7	
	comp=Z,189nm,1.4s							
OXF	Oxford	33.99	337		IAmb	IAmb	19 25 53.5	
	comp=Z,296nm,1.1s							
EF04	Eagle Ford 04	34.04	321		P	P	19 25 47.6	0.0
BLA	Blacksburg	34.08	351		IAmb	IAmb	19 25 56.7	
	comp=Z,186nm,1.0s							
ACCO	Cerro Coronel	34.20	172	*i*	P	P	19 25 51.7	+2.2
EF02	Christine	34.21	320		IAmb	IAmb	19 25 55.0	
	comp=Z,345nm,1.0s							
CO03	El Pedregal	34.26	175		P	P	19 25 49.8	+0.1
CO03					IAmb	IAmb	19 26 01.2	
	comp=Z,341nm,1.2s							
CLTN	Cedars of Leba	34.36	342		IAmb	IAmb	19 25 58.0	
	comp=Z,151nm,1.1s							
Z41A	Richland Creek	34.38	332		IAmb	IAmb	19 25 57.0	
	comp=Z,436nm,1.5s							
S57A	Dark Hollow, R	34.42	353		IAmb	IAmb	19 26 00.2	
	comp=Z,106nm,0.8s							
833A	Chaparral WMA,	34.47	318		P	P	19 25 50.2	-1.2
U49A	Red Boiling Sp	34.59	343		IAmb	IAmb	19 25 59.8	
	comp=Z,168nm,1.1s							
T50A	Nancy	34.81	345		IAmb	IAmb	19 26 01.9	
	comp=Z,184nm,1.2s							
WVT	Waverly	34.87	340		P	P	19 25 54.3	-0.5
WVT					IAmb	IAmb	19 26 02.0	
	comp=Z,377nm,1.0s							
WVT	Waverly	34.87	340		IAMs_20	IAMs_20	19 40 57.5	
	comp=Z,7µm,21.0s							
WVT	Waverly	34.87	340		P	P	19 25 54.3	-0.5
WVT					pmax	pmax		
	comp=Z,377nm,1.0s							
WVT					MLR	MLR		
	comp=Z,7µm,21.0s							
237A	Washetta, Mont	34.92	327		IAmb	IAmb	19 26 02.1	
	comp=Z,296nm,1.1s							
435B	Jarrell	35.03	323		IAmb	IAmb	19 26 02.5	
	comp=Z,278nm,1.1s							
S51A	Beattyville	35.10	347		IAmb	IAmb	19 26 08.5	
	comp=Z,148nm,0.9s							
HNDO	Hondo	35.20	320		IAmb	IAmb	19 26 03.7	
	comp=Z,264nm,1.0s							
CFA	Coronel Fontan	35.32	171		LR	LR	19 41 15.0	
	comp=Z,6µm,18.2s,baz=354,slow=38							
RTLS	Leoncito	35.36	173	*i*	P	P	19 26 00.9	+1.5
X40A	Basin Creek Fa	35.42	333		IAmb	IAmb	19 26 05.4	
	comp=Z,167nm,1.0s							
UALR	University of	35.44	334		IAmb	IAmb	19 26 06.0	
	comp=Z,503nm,1.7s							
AUSP	Uspallata	35.77	173	*i*	P	P	19 26 05.6	+2.7
WHTX	Lake Whitney,	35.83	325		IAmb	IAmb	19 26 09.5	
	comp=Z,313nm,1.2s							
R50A	Paris	35.88	346		IAmb	IAmb	19 26 11.3	
	comp=Z,211nm,1.1s							
VA06	Catapilco	35.92	176		IAmb	IAmb	19 26 15.4	
	comp=Z,353nm,1.3s							
T45A	Paducah	35.95	340		IAMs_20	IAMs_20	19 41 31.1	
	comp=Z,6µm,19.0s							
DRIO	Del Rio	36.00	319		P	P	19 26 04.4	-0.3
DRIO					IAmb	IAmb	19 26 11.3	
	comp=Z,146nm,1.0s							
R49A	Shelbyville	36.10	345		IAmb	IAmb	19 26 12.6	
	comp=Z,197nm,1.2s							
R49A					IAMs_20	IAMs_20	19 41 16.1	
	comp=Z,7µm,21.0s							
Q52A	Bidwell	36.10	349		IAmb	IAmb	19 26 13.8	
	comp=Z,310nm,1.0s							
VA03	San Esteban	36.18	175	*i*	P	P	19 26 08.9	+2.7
ASAL	Salagasta	36.20	172	*i*	P	P	19 26 08.0	+1.6
BRDY	Brady	36.24	323		IAmb	IAmb	19 26 13.1	
	comp=Z,267nm,1.1s							
FCAR	Ozark Folk Cen	36.29	335		IAmb	IAmb	19 26 12.7	
	comp=Z,164nm,0.9s							
WCI	Wyandotte Cave	36.34	344		P	P	19 26 07.2	-0.2
WCI					IAmb	IAmb	19 26 17.0	
	comp=Z,252nm,0.9s							
WCI	Wyandotte Cave	36.34	344		P	P	19 26 07.2	-0.2
WCI					pmax	pmax		
	comp=Z,252nm,1.0s							
ROC1	El Roble	36.35	176	*i*	P	P	19 26 10.1	+2.2
Q51A	Peebles	36.38	348		IAmb	IAmb	19 26 16.0	
	comp=Z,252nm,0.9s							
MCWV	Mont Chateau	36.40	353		IAmb	IAmb	19 26 16.3	
	comp=Z,171nm,1.1s							
ARCO	CERRO ARCO	36.44	173	*i*	P	P	19 26 10.7	+2.2
P53A	Whipple	36.46	351		IAmb	IAmb	19 26 17.0	
	comp=Z,332nm,1.0s							
PEL	Peldehue	36.55	175		IAmb	IAmb	19 26 13.3	
	comp=Z,260nm,1.2s							
FW06	Azle	36.62	326		IAmb	IAmb	19 26 16.5	
	comp=Z,312nm,1.1s							
AAGR	Agrelo	36.69	172	*i*	P	P	19 26 12.9	+2.3
Z35A	Perchaven, San	36.72	327		IAmb	IAmb	19 26 17.3	
	comp=Z,435nm,1.2s							
P52A	Corning	36.73	350		IAmb	IAmb	19 26 18.4	
	comp=Z,293nm,1.1s							
MT05	Renca	36.79	175		IAmb	IAmb	19 26 15.4	
	comp=Z,438nm,1.2s							
MT16	CCHEN	36.84	175		IAmb	IAmb	19 26 15.9	
	comp=Z,278nm,1.2s							
T42A	Van Buren	36.85	337		IAmb	IAmb	19 26 17.7	
	comp=Z,275nm,1.0s							
MT08	Bocatoma Ro	36.91	174		IAmb	IAmb	19 26 17.4	
	comp=Z,320nm,1.2s							
MT08					IAMs_20	IAMs_20	19 41 44.3	
	comp=Z,9µm,18.0s							
MT03	Universidad Ad	36.91	175		P	P	19 26 12.7	+0.2
VA05	Santo Domingo	36.99	176		IAmb	IAmb	19 26 16.9	
	comp=Z,299nm,1.2s							
O52A	Adamsville	37.15	350		IAmb	IAmb	19 26 22.1	
	comp=Z,242nm,1.0s							
MT09	Talagante	37.15	176		IAmb	IAmb	19 26 18.4	
	comp=Z,316nm,1.1s							
SSPA	Standing Stone	37.17	355		P	P	19 26 14.8	+0.4
SSPA					IAmb	IAmb	19 26 22.6	
	comp=Z,142nm,0.9s							
O53A	New Philadelph	37.18	351		IAmb	IAmb	19 26 22.5	
	comp=Z,307nm,1.1s							
P48A	Milroy	37.27	346		IAmb	IAmb	19 26 22.4	
	comp=Z,209nm,0.9s							
BLO	Bloomington	37.28	344		IAmb	IAmb	19 26 22.6	
	comp=Z,411nm,1.1s							
LMEL	Las Melosas	37.29	175		IAmb	IAmb	19 26 27.8	
	comp=Z,232nm,1.2s							
N62A	Caumsett State	37.32	1		IAMs_20	IAMs_20	19 41 40.7	
	comp=Z,7µm,19.0s							
SAND	Sanderson	37.34	318		IAmb	IAmb	19 26 24.2	
	comp=Z,189nm,1.2s							
PAL	Palisades	37.38	0		IAMs_20	IAMs_20	19 41 32.6	
	comp=Z,6µm,19.0s							
BO04	La Punta	37.39	175		IAmb	IAmb	19 26 20.3	
	comp=Z,280nm,1.1s							
HHAR	Hobbs	37.41	333		IAmb	IAmb	19 26 22.1	
	comp=Z,314nm,0.9s							
WSPT	Westport, CT	37.56	1		P	P	19 26 17.2	-0.4
WSPT					IAmb	IAmb	19 26 25.1	
	comp=Z,107nm,1.0s							
WSPT					IAMs_20	IAMs_20	19 41 26.1	
	comp=Z,8µm,21.0s							
ABTX	Abilene, Hawle	37.57	323		P	P	19 26 17.5	-0.5
PAMR	Moraine State	37.70	353		IAmb	IAmb	19 26 27.1	
	comp=Z,290nm,1.0s							
O49A	Covington	37.70	347		IAmb	IAmb	19 26 26.0	
	comp=Z,172nm,1.1s							
O49A					IAMs_20	IAMs_20	19 43 43.5	
	comp=Z,7µm,18.0s							
U38A	Gravette	37.74	333		P	P	19 26 19.4	+0.1
U38A					IAmb	IAmb	19 26 24.7	
	comp=Z,278nm,0.9s							
BO01	Tunca	37.76	176		IAmb	IAmb	19 26 23.4	
	comp=Z,298nm,1.2s							
M57A	Sunshine Farm,	37.81	356		IAmb	IAmb	19 26 28.1	
	comp=Z,226nm,0.8s							
RLO	Rose Lookout	37.81	332		IAmb	IAmb	19 26 25.5	
	comp=Z,200nm,1.0s							
CCM	Cathedral Cave	37.81	338		P	P	19 26 19.2	-0.7
CCM					IAmb	IAmb	19 26 25.8	
	comp=Z,313nm,0.9s							
CCM	Cathedral Cave	37.81	338		P	P	19 26 19.2	-0.7
CCM					pmax	pmax		
	comp=Z,313nm,0.9s							
M63A	Gales Ferry	37.83	3		IAmb	IAmb	19 26 27.9	
	comp=Z,241nm,0.9s							
W35A	Tecumseh	37.91	329		IAmb	IAmb	19 26 27.1	
	comp=Z,292nm,1.0s							
SLM	Saint Louis	37.96	339		IAmb	IAmb	19 26 27.3	
	comp=Z,358nm,1.0s							
O48B	Farmland	37.96	346		IAmb	IAmb	19 26 28.4	
	comp=Z,295nm,0.9s							
KSPA	Keystone Colle	37.96	358		IAmb	IAmb	19 26 28.9	
	comp=Z,157nm,0.8s							
TUL3	Leonard	37.97	331		P	P	19 26 21.1	-0.2
SGCY	Sterling City	37.98	321		P	P	19 26 20.8	-0.7
X34A	Smith Ranch, M	37.99	327		IAmb	IAmb	19 26 27.9	
	comp=Z,307nm,1.0s							
TXAR	Lajitas Array	38.01	316		P	P	19 26 23.3	+1.4
	comp=Z,20nm,0.9s,baz=138,slow=8.9,SNR=36							
TXAR					PcP	PcP	19 28 39.5	+2.0
	comp=Z,17nm,0.8s,baz=134,slow=5.4,SNR=5.8							
	comp=Z,20nm,0.9s							
TXAR	Lajitas Array	38.01	316		P	P	19 26 21.9	+0.1
HPIG		38.10	311		IAmb	IAmb	19 26 30.3	
	comp=Z,203nm,1.0s							
BO02	Sierra Bellavi	38.18	175		IAmb	IAmb	19 26 27.2	
	comp=Z,498nm,1.2s							
PAOC	Oil Creek Stat	38.22	353		IAmb	IAmb	19 26 31.3	
	comp=Z,248nm,1.0s							
FNO	Franklin	38.27	329		P	P	19 26 23.3	-0.5
FNO					IAmb	IAmb	19 26 29.6	
	comp=Z,304nm,0.9s							
N49A	Columbus Grove	38.38	348		IAmb	IAmb	19 26 32.6	
	comp=Z,268nm,0.9s							
N49A					IAMs_20	IAMs_20	19 43 04.2	
	comp=Z,5µm,20.0s							
OKCSW	OKLAHOMA CITY	38.40	329		P	P	19 26 24.1	-0.9
R40A	Maddies Statio	38.41	337		IAmb	IAmb	19 26 30.4	
	comp=Z,182nm,0.9s							
M52A	Chesterland	38.46	351		IAmb	IAmb	19 26 33.1	
	comp=Z,192nm,1.0s							
OK052	Battle Ridge R	38.53	330		IAmb	IAmb	19 26 31.7	
	comp=Z,318nm,0.9s							
SFIN	Lafayette	38.57	344		IAmb	IAmb	19 26 32.5	
	comp=Z,237nm,1.0s							
L59A	Walton	38.58	359		P	P	19 26 25.6	-0.7
WMOK	Wichita Mounta	38.61	327		IAmb	IAmb	19 26 32.4	
	comp=Z,218nm,1.1s							
QUOK	Quay	38.63	330		IAmb	IAmb	19 26 32.5	
	comp=Z,268nm,1.0s							
SN07	Snyder 07	38.64	323		IAmb	IAmb	19 26 33.2	
	comp=Z,255nm,0.9s							
N47A	Urbana	38.68	346		IAmb	IAmb	19 26 33.8	
	comp=Z,249nm,1.0s							
OK029	Liberty Lake	38.71	329		IAmb	IAmb	19 26 33.1	
	comp=Z,469nm,1.1s							
ERPA	Erie	38.84	353		IAmb	IAmb	19 26 38.1	
	comp=Z,187nm,0.8s							
WES	Weston	38.85	3		P	P	19 26 27.7	-0.8
WES					IAmb	IAmb	19 26 38.3	
	comp=Z,592nm,1.8s							
WES					IAMs_20	IAMs_20	19 43 05.2	
	comp=Z,6µm,18.0s							
WES	Weston	38.85	3		P	P	19 26 27.7	-0.8
WES					pmax	pmax		
	comp=Z,592nm,1.8s							
WES					MLR	MLR		
	comp=Z,6µm,18.0s							
L61B	Northampton	38.85	2		P	P	19 26 27.7	-0.8
OK048	Pawnee Station	38.94	330		IAmb	IAmb	19 26 35.3	
	comp=Z,351nm,1.1s							
HRV	Adam Dziewonsk	38.95	3		P	P	19 26 28.6	-0.8
HRV					IAmb	IAmb	19 26 39.2	
	comp=Z,569nm,1.9s							
HRV	Adam Dziewonsk	38.95	3		IAMs_20	IAMs_20	19 43 08.0	
	comp=Z,6µm,18.0s							
HRV	Adam Dziewonsk	38.95	3		P	P	19 26 28.6	-0.8
HRV					pmax	pmax		
	comp=Z,569nm,1.9s							
HRV					MLR	MLR		
	comp=Z,6µm,18.0s							
POST	Post	39.00	322		P	P	19 26 29.3	-0.7
TRY	Troy	39.11	1		IAMs_20	IAMs_20	19 42 14.3	
	comp=Z,7µm,19.0s							
T35A	Sooner Cattle	39.12	331		IAmb	IAmb	19 26 36.7	
	comp=Z,409nm,1.0s							
RCBR	Riachuelo	39.32	103		IAMs_20	IAMs_20	19 42 21.2	
	comp=Z,12µm,21.0s							
BLOK	Blackwell	39.34	330		IAmb	IAmb	19 26 38.7	
	comp=Z,320nm,1.1s							
P40A	Paris	39.40	338		P	P	19 26 32.4	-0.9
P40A					IAmb	IAmb	19 26 38.9	
	comp=Z,390nm,1.1s							
CROK	Carrier	39.53	329		IAmb	IAmb	19 26 40.0	
	comp=Z,379nm,1.0s							
SMWD	Samnorwood	39.69	326		IAmb	IAmb	19 26 42.0	
	comp=Z,311nm,0.9s							
J61A	Chester	39.75	2		IAmb	IAmb	19 26 45.9	
	comp=Z,963nm,2.0s							
J55A	Hilton	39.77	356		IAmb	IAmb	19 26 46.5	
	comp=Z,174nm,0.9s							
VHRN	Van Horn	39.80	316		IAmb	IAmb	19 26 45.3	
	comp=Z,334nm,1.3s							
J57A	Williamstown	39.82	358		IAmb	IAmb	19 26 44.5	
	comp=Z,267nm,0.8s							
OK038	West end E0370	39.90	329		IAmb	IAmb	19 26 43.1	
	comp=Z,221nm,1.2s							
ELIS	Ellis County	39.95	327		IAmb	IAmb	19 26 44.1	
	comp=Z,482nm,1.0s							
SLBS	Sierra La Lagu	39.96	303		P	P	19 26 38.8	+0.5
SLBS					IAmb	IAmb	19 26 46.8	
	comp=Z,209nm,1.1s							
CLNB	Carlsbad	39.97	319		P	P	19 26 37.7	-0.6
N41A	Harden Midland	40.02	340		IAmb	IAmb	19 26 43.8	
	comp=Z,412nm,1.0s							
N41A					IAMs_20	IAMs_20	19 45 28.0	
	comp=Z,4µm,19.0s							
P38A	Dawn	40.06	337		IAmb	IAmb	19 26 44.1	
	comp=Z,288nm,1.0s							
KAN08	Anthony NE Sta	40.08	330		IAmb	IAmb	19 26 44.9	
	comp=Z,487nm,1.5s							
AMTX	Amarillo	40.36	324		IAmb	IAmb	19 26 47.7	
	comp=Z,364nm,0.9s							
LPIG	La Paz	40.44	304		LR	LR	19 43 55.4	
	comp=Z,3µm,19.8s,baz=109,slow=37							
MNTX	Cornudas Mount	40.62	317		IAmb	IAmb	19 26 50.5	
	comp=Z,384nm,1.1s							
L42A	Oliver, Polo	40.81	342		IAmb	IAmb	19 26 50.4	
	comp=Z,245nm,1.1s							
KSU1	Kansas State U	40.93	333		IAmb	IAmb	19 26 52.4	
	comp=Z,288nm,0.8s							
N38A	Joes South For	40.95	338		IAmb	IAmb	19 26 51.6	
	comp=Z,592nm,1.3s							
LONY	Lake Ozonia	41.00	360		P	P	19 26 46.8	+0.4
LONY					IAMs_20	IAMs_20	19 43 25.2	
	comp=Z,6µm,19.0s							
K43A	Burlington	41.07	344		P	P	19 26 47.3	+0.3
K43A					IAmb	IAmb	19 26 52.5	
	comp=Z,235nm,1.1s							
L40A	Anamosa	41.36	341		IAmb	IAmb	19 26 55.0	
	comp=Z,294nm,0.9s							
SADO	Sadowa	41.38	355		LR	LR	19 46 52.4	
	comp=Z,2µm,18.3s,baz=204,slow=40							
SADO	Sadowa	41.38	355		IAmb	IAmb	19 26 58.2	
	comp=Z,169nm,0.8s							
R32A	Long Quarter,	41.38	330		IAmb	IAmb	19 26 55.4	
	comp=Z,312nm,1.2s							
G62A	West of Eustis	41.72	4		IAmb	IAmb	19 27 01.6	
	comp=Z,139nm,0.8s							
JFWS	Jewell Farm	41.82	342		P	P	19 26 52.7	-0.5
JFWS					IAmb	IAmb	19 26 59.6	
	comp=Z,372nm,0.9s							
JFWS	Jewell Farm	41.82	342		P	P	19 26 52.7	-0.5
JFWS					pmax	pmax		
	comp=Z,372nm,1.0s							
MNTQ	Montreal, Queb	41.88	1		IAmb	IAmb	19 27 01.3	
	comp=Z,246nm,0.9s							
N35A	Tabor	41.96	335		IAmb	IAmb	19 26 59.5	
	comp=Z,469nm,1.1s							
RTBA	Rita Blanca	42.06	325		IAmb	IAmb	19 27 01.9	
	comp=Z,196nm,0.9s							
CBKS	Cedar Bluff	42.19	330		P	P	19 26 56.3	-0.1
CBKS					IAmb	IAmb	19 27 02.4	
	comp=Z,386nm,1.1s							
CBKS	Cedar Bluff	42.19	330		P	P	19 26 56.3	-0.1
CBKS					pmax	pmax		
	comp=Z,386nm,1.1s							
I42A	Draeger Farm,	42.33	344		IAmb	IAmb	19 27 03.4	
	comp=Z,195nm,1.1s							
I40A	Norwalk	42.82	342		IAmb	IAmb	19 27 07.1	
	comp=Z,230nm,1.0s							
I40A					IAMs_20	IAMs_20	19 43 30.9	
	comp=Z,6µm,20.0s							
TRQA	Tornquist	42.82	166		P	P	19 27 00.6	-0.8
TRQA	Tornquist	42.82	166		P	P	19 27 00.6	-0.8
TRQA					pmax	pmax		
	comp=Z,103nm,1.4s							
Y22A	Socorro	43.03	319		IAmb	IAmb	19 27 11.0	
	comp=Z,214nm,1.1s							
LR04	Corral	43.13	179		IAmb	IAmb	19 27 13.3	
	comp=Z,226nm,1.2s							
319A	Douglas	43.15	314		IAmb	IAmb	19 27 12.5	
	comp=Z,329nm,1.1s							
L34A	Svendsen Farm,	43.19	336		IAmb	IAmb	19 27 10.8	
	comp=Z,359nm,0.9s							
E62A	Clayton Lake	43.19	5		P	P	19 27 03.9	-0.4
ABQ	Albuquerque	43.33	320		IAmb	IAmb	19 27 13.1	
	comp=Z,233nm,1.0s							
ANMO	Albuquerque	43.33	320		P	P	19 27 07.0	+1.1
ANMO					IAmb	IAmb	19 27 13.1	
	comp=Z,217nm,1.0s							
ANMO	Albuquerque	43.33	320	*d i*	P	P	19 27 07.2	+1.3
ANMO					pmax	pmax		
	comp=Z,251nm,0.9s							
TASM	ASL Pad, Albuq	43.33	320		IAmb	IAmb	19 27 13.2	
	comp=Z,228nm,0.9s							
TASM	ASL Pad, Albuq	43.33	320		IAmb	IAmb	19 27 13.2	
	comp=Z,239nm,1.0s							
TASM	ASL Pad, Albuq	43.33	320		IAmb	IAmb	19 27 13.2	
	comp=Z,238nm,1.0s							
TASM	ASL Pad, Albuq	43.33	320		IAmb	IAmb	19 27 13.2	
	comp=Z,240nm,0.9s							
T25A	Trinidad	43.52	324		IAmb	IAmb	19 27 15.0	
	comp=Z,228nm,1.1s							
E46A	Sault Ste Mari	43.65	350		IAmb	IAmb	19 27 14.5	
	comp=Z,167nm,1.0s							
D62A	Allapoint, All	43.69	5		IAmb	IAmb	19 27 16.0	
	comp=Z,129nm,0.8s							
F42A	Maple Grove Fa	43.87	346		P	P	19 27 09.7	-0.1
F42A					IAmb	IAmb	19 27 15.9	
	comp=Z,149nm,1.0s							
G40A	Rib Lake	43.95	344		IAmb	IAmb	19 27 16.8	
	comp=Z,367nm,1.2s							
LMQ	La Malbaie	44.05	4		IAmb	IAmb	19 27 20.0	
	comp=Z,117nm,0.7s							
PLCA	Paso Flores	44.10	176		P	P	19 27 12.9	+1.1
	comp=Z,19nm,0.9s,baz=353,slow=9.4,SNR=16							
	comp=Z,19nm,0.9s							
PLCA	Paso Flores	44.10	176	*e*	P	P	19 27 13.4	+1.7
LDAQ	Lac Daran	44.41	3		P	P	19 27 14.9	+0.7
SDCO	Great Sand Dun	44.56	324		IAmb	IAmb	19 27 23.3	
	comp=Z,214nm,1.2s							
TUC	Tucson	44.73	314		P	P	19 27 17.1	+0.1
TUC					IAmb	IAmb	19 27 24.5	
	comp=Z,188nm,1.1s							
TUC	Tucson	44.73	314		P	P	19 27 17.1	+0.1
TUC					pmax	pmax		
	comp=Z,188nm,1.1s							
RPN	Rapa Nui	45.55	226		LR	LR	19 42 16.8	
	comp=Z,3µm,21.1s,baz=60,slow=30							
ISCO	Idaho Springs	46.03	326		IAmb	IAmb	19 27 34.6	
	comp=Z,283nm,1.4s							
ICQ	Pointe Anglais	46.28	6		P	P	19 27 28.1	-0.7
ICQ					IAmb	IAmb	19 27 37.9	
	comp=Z,166nm,1.1s							
LL02	Futaleuf	46.48	178		P	P	19 27 30.6	+0.1
LL02					IAmb	IAmb	19 27 38.5	
	comp=Z,136nm,1.1s							
PV01	Paradox Valley	46.66	322		IAmb	IAmb	19 27 39.9	
	comp=Z,164nm,1.0s							
PV07	Paradox Valley	46.90	323		IAmb	IAmb	19 27 40.9	
	comp=Z,89nm,1.0s							

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PV03  Paradox Valley   46.90 322  IAmb    IAmb    19 27 44.4
      comp=Z,160nm,1.2s
PV12  Saucer Basin,    46.91 322  P       P       19 27 33.1  -1.3
PV11  David Mesa, Pa   46.95 322  IAmb    IAmb    19 27 47.8
      comp=Z,136nm,1.0s
PV20  West Nyswonger   47.03 322  IAmb    IAmb    19 27 41.6
      comp=Z,116nm,1.2s
PV22  Blue Mesa, Par   47.04 323  IAmb    IAmb    19 27 42.3
      comp=Z,76nm,0.9s
PV14  Lion Creek, Pa   47.08 322  IAmb    IAmb    19 27 54.8
      comp=Z,144nm,1.7s
PV23  Carpenter Ridg   47.13 322  IAmb    IAmb    19 27 43.6
      comp=Z,221nm,1.4s
113A  Mohawk Valley,   47.13 313  IAmb    IAmb    19 27 43.3
      comp=Z,152nm,1.2s
Y14A  Wickenburg       47.17 315  IAmb    IAmb    19 27 43.7
      comp=Z,113nm,0.9s
HAYD  Hayden           47.44 326  IAmb    IAmb    19 28 00.0
      comp=Z,96nm,1.3s
AY01  Puyuhuapi        47.68 179  P       P       19 27 39.4  -0.4
AY01                              IAmb    IAmb    19 27 50.4
      comp=Z,293nm,1.8s
O20A  White River Ci   47.75 325  IAmb    IAmb    19 27 49.3
      comp=Z,161nm,1.1s
RSSD  Black Hills      48.32 331  P       P       19 27 44.3  -0.9
RSSD  Black Hills      48.32 331  P       P       19 27 44.3  -0.9
RSSD                              pmax    pmax
      comp=Z,673nm,1.1s
ESJX  Sierra Juarez    48.39 311  IAmb    IAmb    19 27 53.5
      comp=Z,90nm,1.1s
K22A  Casper           48.50 328  IAmb    IAmb    19 27 53.2
      comp=Z,217nm,1.1s
P18A  Preston Nutter   48.61 323  IAmb    IAmb    19 27 54.7
      comp=Z,121nm,1.0s
YUH   Yuha Desert      48.66 312  IAmb    IAmb    19 27 55.4
      comp=Z,101nm,1.2s
NEE2  Needles Airpor   48.74 315  IAmb    IAmb    19 27 55.8
      comp=Z,107nm,1.1s
Q16A  Castle Valley    48.74 321  IAmb    IAmb    19 28 07.4
      comp=Z,192nm,1.6s
BC3   Big Chuckawall   48.79 313  P       P       19 27 48.7  -0.1
BC3                               IAmb    IAmb    19 27 56.4
      comp=Z,212nm,1.1s
COYC  Coyhaique        48.85 178  IAmb    IAmb    19 28 06.5
      comp=Z,85nm,1.0s
MTPU  Mount Pierson    48.87 320  IAmb    IAmb    19 27 57.1
      comp=Z,250nm,1.5s
LCMT  Little Creek M   48.98 318  IAmb    IAmb    19 27 58.0
      comp=Z,223nm,1.0s
TMUT  Trail Mountain   49.00 322  IAmb    IAmb    19 27 57.5
      comp=Z,135nm,1.2s
CBX   Cerro Bola       49.07 311  IAmb    IAmb    19 27 58.8
      comp=Z,172nm,1.2s
SZCU  Shurtz Canyon    49.21 319  IAmb    IAmb    19 27 59.2
      comp=Z,170nm,1.0s
DANC  Danby, Needles   49.22 314  IAmb    IAmb    19 27 59.7
      comp=Z,232nm,1.1s
BORC  Borrego Spring   49.32 312  IAmb    IAmb    19 28 00.4
      comp=Z,133nm,1.0s
PMD   Palm Desert      49.47 313  P       P       19 27 54.5  +0.6
PMD                               IAmb    IAmb    19 28 01.3
      comp=Z,148nm,1.1s
PFO   Pinyon Flats O   49.51 312  LR      LR      19 50 33.1
      comp=Z,2µm,21.7s,baz=124,slow=38
PFO   Pinyon Flats O   49.51 312  P       P       19 27 54.4   0.0
PFO                               IAmb    IAmb    19 28 01.9
      comp=Z,131nm,1.2s
PFO   Pinyon Flats O   49.51 312deP       P       19 27 57.2  +2.8
PFO                               pmax    pmax
      comp=Z,219nm,1.3s
DPP   Dos Picos Cty    49.59 311  IAmb    IAmb    19 28 02.1
      comp=Z,130nm,1.0s
DNR   Dunn Ranch,Anz   49.62 312  IAmb    IAmb    19 28 03.0
      comp=Z,204nm,1.0s
MPU   Maple Canyon     49.69 322  IAmb    IAmb    19 28 02.7
      comp=Z,208nm,1.0s
ULM   Lac du Bonnet    50.11 342  P       P       19 27 59.7  +1.2
      comp=Z,182nm,0.9s,baz=150,slow=8.0,SNR=55
ULM                               LR      LR      19 50 02.9
      comp=Z,4µm,20.9s,baz=152,slow=37
      comp=Z,182nm,0.9s
ULM   Lac du Bonnet    50.11 342d iP      P       19 27 59.0  +0.5
CTU   Camp Tracy       50.17 323  IAmb    IAmb    19 28 08.1
      comp=Z,145nm,1.1s
BW06  Boulder Array    50.22 326  IAmb    IAmb    19 28 06.1
      comp=Z,302nm,1.4s
PD31  Pinedale Array   50.22 326  IAmb    IAmb    19 28 06.2
      comp=Z,303nm,1.4s
PDAR  Pinedale Array   50.22 326  P       P       19 28 01.1  +1.3
      comp=Z,142nm,1.2s,baz=129,slow=6.7,SNR=59
PDAR                              ScP     ScP     19 33 15.8  +0.6
      comp=Z,3.6nm,1.0s,baz=154,slow=5.4,SNR=3.3
      comp=Z,142nm,1.2s
PDAR  Pinedale Array   50.22 326  P       P       19 28 00.3  +0.6
PSUT  Pine Spring      50.23 319  IAmb    IAmb    19 28 07.4
      comp=Z,104nm,1.0s
ELS   Elsinore Mount   50.24 312  IAmb    IAmb    19 28 07.3
      comp=Z,115nm,1.0s
SHOC  Shoshone, Teco   50.48 315  IAmb    IAmb    19 28 09.1
      comp=Z,234nm,1.0s
AY03  Cochrane         50.51 179  P       P       19 28 01.9  +0.4
DUG   Dugway, Tooele   50.52 322  IAmb    IAmb    19 28 09.3
      comp=Z,197nm,1.1s
GSC   Goldstone, Bar   50.57 314  IAmb    IAmb    19 28 09.9
      comp=Z,167nm,1.0s
HWUT  Hardware Ranch   50.63 324  IAmb    IAmb    19 28 10.6
      comp=Z,172nm,1.0s
SPR3  Spring Creek 3   50.80 320  IAmb    IAmb    19 28 11.4
      comp=Z,159nm,1.1s
QSM   Queen of Sheba   50.93 315  IAmb    IAmb    19 28 12.3
      comp=Z,145nm,1.2s
MWC   Mount Wilson     50.97 312  IAmb    IAmb    19 28 13.1
      comp=Z,161nm,1.4s
BGU   Big Grassy Mou   51.09 322  IAmb    IAmb    19 28 13.1
      comp=Z,265nm,1.0s
SACV  Santiago Islan   51.09  74  P       P       19 28 06.9  +0.4
SACV                              IAmb    IAmb    19 28 13.6
      comp=Z,135nm,1.1s
WSHM  Spangler Hills   51.20 314  IAmb    IAmb    19 28 14.4
      comp=Z,181nm,1.1s
LAO   LASA Array       51.25 332  IAmb    IAmb    19 28 13.3
      comp=Z,177nm,0.9s
LRMC  Laurel Mtn Rad   51.28 314  IAmb    IAmb    19 28 15.2
      comp=Z,138nm,1.1s
TPO   Tropico Hills    51.40 313  IAmb    IAmb    19 28 15.8
      comp=Z,171nm,1.2s
HVU   Hansel Valley    51.45 323  IAmb    IAmb    19 28 17.0
      comp=Z,164nm,1.0s
MOOW  Moose Ponds      51.52 327  IAmb    IAmb    19 28 16.0
      comp=Z,212nm,0.9s
SCHQ  Schefferville    51.57   5  P       P       19 28 10.5  +1.1
      comp=Z,76nm,0.8s,baz=191,slow=6.6,SNR=36
SCHQ                              LR      LR      19 49 15.5
      comp=Z,4µm,21.4s,baz=192,slow=35
      comp=Z,76nm,0.8s
FXWY  Fox Creek        51.60 326  IAmb    IAmb    19 28 16.6
      comp=Z,175nm,1.0s
RLMT  Red Lodge        51.64 329  IAmb    IAmb    19 28 16.7
      comp=Z,200nm,1.1s
GMN   Gold Mountain    51.87 316  IAmb    IAmb    19 28 19.7
      comp=Z,139nm,1.0s
YNE   Yellowstone No   51.95 328  IAmb    IAmb    19 28 18.8
      comp=Z,148nm,1.0s
ELK   Elko             52.35 321  LR      LR      19 54 26.9
      comp=Z,1µm,18.0s,baz=126,slow=40
ELK   Elko             52.35 321  IAmb    IAmb    19 28 22.6
      comp=Z,269nm,1.9s
DSP   Deep Springs     52.39 316  IAmb    IAmb    19 28 23.2
      comp=Z,124nm,1.0s
NV11  Mina Array Sit   53.04 317  IAmb    IAmb    19 28 28.6
      comp=Z,324nm,1.2s
NVAR  Mina Array Bea   53.14 317  P       P       19 28 23.6  +1.9
      comp=Z,74nm,1.0s,baz=122,slow=4.9,SNR=31
NVAR                              PcP     PcP     19 29 32.0  +2.1
      comp=Z,23nm,0.9s,baz=103,slow=3.9,SNR=1.5
      comp=Z,74nm,1.0s
NVAR  Mina Array Bea   53.14 317  P       P       19 28 22.7  +1.0
BOZ   Bozeman (W)      53.20 328  IAmb    IAmb    19 28 28.6
      comp=Z,242nm,1.0s
MDPB  Devils Postpil   53.29 316  IAmb    IAmb    19 28 30.3
      comp=Z,128nm,1.0s
BCYI  Bear Canyon      53.36 326  IAmb    IAmb    19 28 30.4
      comp=Z,116nm,1.1s
RYN   Ryan             53.39 317  IAmb    IAmb    19 28 30.8
      comp=Z,235nm,1.2s
HLID  Hailey           53.48 324  IAmb    IAmb    19 28 31.0
      comp=Z,223nm,1.1s
PKD   Bear Valley Ra   53.56 313  IAmb    IAmb    19 28 31.6
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      comp=Z,212nm,1.8s
EGMT  Eagleton         53.89 331  IAmb    IAmb    19 28 33.1
      comp=Z,198nm,1.1s
PNTR  Pine Nut         54.35 317          pP      19 28 33.9  -0.1
PAHR  Pah Rah Range    54.51 318  IAmb    IAmb    19 28 38.7
      comp=Z,212nm,1.2s
GO09  Cerro Castillo   54.54 179  P       P       19 28 31.8  +0.4
GO09                              IAmb    IAmb    19 28 42.8
      comp=Z,218nm,1.5s
KUQ   Kuujjuuaa        54.69   4  P       P       19 28 31.7  -0.6
MSO   Missoula         55.22 328  IAmb    IAmb    19 28 43.0
      comp=Z,111nm,1.1s
JRSC  Jasper Ridge     55.42 314  IAmb    IAmb    19 28 45.5
      comp=Z,87nm,0.9s
FFC   Flin Flon        55.88 341  P       P       19 28 41.0   0.0
FFC                               IAmb    IAmb    19 28 46.7
      comp=Z,276nm,1.2s
FFC   Flin Flon        55.88 341  P       P       19 28 41.0   0.0
FFC                               pmax    pmax
      comp=Z,276nm,1.3s
SUTB  Sutter Butte     55.91 316  IAmb    IAmb    19 28 49.8
      comp=Z,109nm,0.9s
BMO   Blue Mountains   55.93 324  IAmb    IAmb    19 28 47.4
      comp=Z,93nm,1.1s
MNRC  McLaughlin Min   56.22 316          pP      19 28 47.2  -0.1
O03E  Paynes Creek     56.42 317  IAmb    IAmb    19 28 51.4
      comp=Z,222nm,1.3s
F10A  Beach Ranch, E   56.52 325  IAmb    IAmb    19 28 52.1
      comp=Z,181nm,1.0s
EFI   East Falkland    56.61 168  P       P       19 28 47.3  +1.0
EFI                               IAmb    IAmb    19 28 49.0
      comp=Z,114nm,1.1s
EFI   East Falkland    56.61 168ceP       P       19 28 47.2  +1.0
EFI                               pmax    pmax
      comp=Z,150nm,1.3s
K05A  Summer Lake      56.99 320          pP      19 28 52.8  -0.2
DCMP  DeCamp, Califo   57.10 316  IAmb    IAmb    19 28 57.9
      comp=Z,191nm,1.4s
N02D  Trinity Center   57.34 318  IAmb    IAmb    19 28 57.0
      comp=Z,109nm,1.1s
YBH   Yreka Blue Hor   57.69 318  IAmb    IAmb    19 28 59.7
      comp=Z,120nm,1.1s
NEW   Newport          57.81 327  P       P       19 28 55.3  +0.4
NEW                               IAmb    IAmb    19 29 00.8
      comp=Z,109nm,1.1s
NEW   Newport          57.81 327  P       P       19 28 55.3  +0.4
NEW                               pmax    pmax
      comp=Z,109nm,1.1s
F07A  Phinny Hill Vi   58.04 324  IAmb    IAmb    19 29 03.5
      comp=Z,167nm,1.0s
HAWA  Hanford          58.08 325  IAmb    IAmb    19 29 03.2
      comp=Z,132nm,1.1s
C09A  Chrisman Ranch   58.16 326  IAmb    IAmb    19 29 04.0
      comp=Z,219nm,1.1s
BBOR  Butler Butte     58.22 320          pP      19 29 01.4  -0.1
WAH2  Wahluke Slope    58.30 325  IAmb    IAmb    19 29 06.8
      comp=Z,100nm,1.0s
E07A  Sunnyside        58.36 325  IAmb    IAmb    19 29 05.5
      comp=Z,126nm,1.0s
MXC   Moxie City       58.62 324          pP      19 29 04.1  -0.1
K02D  Willamette Mer   58.77 319  P       P       19 29 01.1  -0.7
EDM   Edmonton         59.13 334  IAmb    IAmb    19 29 10.1
      comp=Z,169nm,1.0s
MACI  Morro de la Ar   60.06  59  P       P       19 29 08.5  -2.6
GNW   Green Mountain   60.62 324  P       P       19 29 13.6  -0.7
PMOZ  Porto Moniz, M   60.64  54 eP       P       19 29 20.6  +5.8
PMOZ                             i IAmb   IAmb    19 29 24.4
      comp=Z,157nm,1.9s
IVI   Ivigtut          60.88  14  P       P       19 29 15.3  -0.4
NRS   Narsarsuaq       61.53  15  P       P       19 29 19.7  -0.5
NRS                               IAmb    IAmb    19 29 28.6
      comp=Z,147nm,0.9s
NRS   Narsarsuaq       61.53  15  P       P       19 29 19.7  -0.5
NRS                               pmax    pmax
      comp=Z,147nm,0.9s
RKT   Rikitea          64.85 243 eP       P       19 29 47.8  +4.9
      comp=Z,105nm,0.9s
RKT   Rikitea          64.85 243 eLR      LR      19 49 08.0
      comp=Z,14µm,30.2s
HOPE  Hope Point       65.50 157  P       P       19 29 46.1  -0.4
HOPE                              IAmb    IAmb    19 30 10.9
      comp=Z,142nm,1.4s
HOPE  Hope Point       65.50 157  P       P       19 29 46.1  -0.4
HOPE                              pmax    pmax
      comp=Z,142nm,1.4s
SFJD  Kangerlussuaq    65.50  10  LR      LR      19 56 17.0
      comp=Z,4µm,21.7s,baz=206,slow=34
SFJD  Kangerlussuaq    65.50  10  P       P       19 29 45.6  -0.8
SFJD                              IAmb    IAmb    19 29 55.4
      comp=Z,147nm,1.5s
SFJD  Kangerlussuaq    65.50  10  P       P       19 29 45.6  -0.8
SFJD                              pmax    pmax
      comp=Z,147nm,1.5s
YKAW1 Yellowknife Wh   66.01 341  IAmb    IAmb    19 29 56.8
      comp=Z,196nm,2.0s
YKA   Yellowknife Ar   66.06 341  P       P       19 29 50.4  +0.3
      comp=Z,7.2nm,0.9s,baz=142,slow=5.6,SNR=24
YKA                               PP      PP      19 32 05.4  -10
      comp=Z,9.8nm,0.9s,baz=137,slow=9.2,SNR=3.8
      comp=Z,7.2nm,0.9s
YKA   Yellowknife Ar   66.06 341  P       P       19 29 49.8  -0.2
YKAW3 Yellowknife Wh   66.11 341  IAmb    IAmb    19 29 57.4
      comp=Z,279nm,1.9s
TAOE  Nuku Hiva Isla   66.89 259 eP       P       19 29 57.5  +1.1
      comp=Z,417nm,1.1s
TAOE  Nuku Hiva Isla   66.89 259 eLR      LR      19 50 02.2
      comp=Z,2µm,27.5s
TAOE  Nuku Hiva Isla   66.89 259  P       P       19 30 03.4  +7.0
ANGG  Ammassalik, Gr   67.21  16  IAmb    IAmb    19 30 04.7
      comp=Z,104nm,1.0s
ILULI Ilulissat        67.43   9  IAmb    IAmb    19 30 07.8
      comp=Z,159nm,1.1s
TOAD  Toad River Com   67.83 334  P       P       19 30 01.4   0.0
      baz=123,SNR=17
ESPZ  Base Esperanza   67.92 172  IAmb    IAmb    19 30 31.2
      comp=Z,240nm,1.9s
KOTAN Kotaneelee Air   68.05 336  P       P       19 30 02.9  +0.1
      baz=124,SNR=23
PFVI  Vila Bisbo       68.37  51 eP       P       19 30 07.6  +2.4
LIRD  Liard River Hi   68.51 334  P       P       19 30 06.1  +0.4
      baz=122
PTEO  Sao Teotonio     68.54  51 eP       P       19 30 08.7  +2.4
PTEO                             i IAmb   IAmb    19 30 17.9
      comp=Z,118nm,1.8s
MORF  Marmelete        68.54  51 eP       P       19 30 05.7  -0.7
MORF                              IAmb    IAmb    19 30 09.0
      comp=Z,61nm,0.9s
MORF  Marmelete        68.54  51  IAmb    IAmb    19 30 15.2
      comp=Z,110nm,1.0s
MORF  Marmelete        68.54  51 eP       P       19 30 07.4  +1.0
MORF                             i IAmb   IAmb    19 30 16.7
      comp=Z,204nm,1.5s
MORF  Marmelete        68.54  51 eP       P       19 30 05.7  -0.7
U35K  Hyder            68.59 330  P       P       19 30 07.1  +0.9
      baz=117
PSBE  So Bento         68.93  49 eP       P       19 30 09.2  +0.5
PSBE                             i IAmb   IAmb    19 30 52.1
      comp=Z,64nm,2.0s
MESJ  Messejana        68.99  51 eP       P       19 30 08.6  -0.5
MESJ                              IAmb    IAmb    19 30 11.9
      comp=Z,18nm,0.9s
MESJ  Messejana        68.99  51 eP       P       19 30 10.2  +1.1
MESJ                             i IAmb   IAmb    19 30 18.3
      comp=Z,77nm,1.7s
MESJ  Messejana        68.99  51 eP       P       19 30 08.6  -0.5
MOE   Montemor         69.04  50 eP       P       19 30 09.3  -0.1
MOE                              i IAmb   IAmb    19 30 15.9
      comp=Z,78nm,1.1s
DBIC  Dimbokro         69.08  84  P       P       19 30 09.8  -0.3
      comp=Z,88nm,1.2s,baz=292,slow=7.0,SNR=33
DBIC                              LR      LR      19 58 45.3
      comp=Z,2µm,19.3s,baz=275,slow=35
      comp=Z,88nm,1.2s
DBIC  Dimbokro         69.08  84  IAmb    IAmb    19 30 16.8
      comp=Z,133nm,1.0s
PCVE  Castro Verde     69.09  51 eP       P       19 30 09.7   0.0
PCVE                             i IAmb   IAmb    19 30 19.0
      comp=Z,63nm,1.8s
PBDV  Barranco-do-Ve   69.09  51 eP       P       19 30 11.8  +2.0
PBDV                             i IAmb   IAmb    19 30 41.6
      comp=Z,91nm,1.8s
V35K  Ketchikan        69.14 329  P       P       19 30 09.8  +0.2
      baz=116
T35M  Bob Quinn        69.20 331  P       P       19 30 10.5  +0.5
      baz=118,SNR=13
POIN  Pond Inlet       69.20 359  IAmb    IAmb    19 30 16.4
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      comp=Z,137nm,1.0s
PMTG  Montargil        69.26  49 eP       P       19 30 10.9  +0.2
PMTG                             i IAmb   IAmb    19 30 12.9
      comp=Z,45nm,1.1s
PCAS  Casmilo, Conde   69.28  48 eP       P       19 30 11.3  +0.4
PCAS                             i IAmb   IAmb    19 30 19.7
      comp=Z,123nm,1.6s
PVAQ  Vaqueiros        69.29  51 eP       P       19 30 12.8  +1.8
PVAQ                             i IAmb   IAmb    19 30 24.1
      comp=Z,46nm,1.5s
EVO   Evora            69.30  50 eP       P       19 30 11.2  +0.2
EVO                              i IAmb   IAmb    19 30 19.8
      comp=Z,63nm,1.5s
PBEJ  Beja             69.30  51 eP       P       19 30 11.8  +0.7
PBEJ                             i IAmb   IAmb    19 30 20.3
      comp=Z,57nm,1.4s
PARRA Arraiolos        69.34  50 eP       P       19 30 11.1  -0.1
PARRA                            i IAmb   IAmb    19 30 20.1
      comp=Z,50nm,1.4s
PSARD Sardoal          69.42  49 eP       P       19 30 11.7  -0.1
PSARD                            i IAmb   IAmb    19 30 17.2
      comp=Z,66nm,1.1s
PTO   Porto            69.45  47 eP       P       19 30 12.7  +0.8
PTO                              i IAmb   IAmb    19 30 19.8
      comp=Z,113nm,1.2s
WRGLY Wrigley          69.62 339  P       P       19 30 14.1  +1.6
      baz=126
PESTR Estremoz         69.69  50  IAmb    IAmb    19 30 19.8
      comp=Z,79nm,1.0s
PESTR Estremoz         69.69  50 eP       P       19 30 13.7  +0.2
PESTR                            i IAmb   IAmb    19 30 22.3
      comp=Z,135nm,1.6s
PVIS  Viseu            69.88  48 eP       P       19 30 14.9  +0.3
PGAV  Gavieira, Arco   69.90  46 eP       P       19 30 14.5  -0.2
PGAV                             i IAmb   IAmb    19 30 23.2
      comp=Z,75nm,1.9s
PMRV  Marv??o          69.97  49 eP       P       19 30 14.9  -0.3
PMRV                             i IAmb   IAmb    19 30 23.4
      comp=Z,80nm,1.5s
PBAR  Barrancos        69.97  51 eP       P       19 30 15.5  +0.4
PBAR                             i IAmb   IAmb    19 30 24.2
      comp=Z,65nm,1.4s
CRAG  Craig            69.97 329  P       P       19 30 15.7  +1.0
      baz=114
WRAK  Wrangell Islan   69.98 330  P       P       19 30 16.3  +1.5
      baz=115
PCBR  Castelo Branco   69.99  49 eP       P       19 30 15.2   0.0
PCBR                             i IAmb   IAmb    19 30 23.7
      comp=Z,105nm,1.5s
WTLY  Watson Lake, Y   70.05 334  IAmb    IAmb    19 30 22.0
      comp=Z,93nm,0.9s
WTLY  Watson Lake, Y   70.05 334  P       P       19 30 16.3  +1.0
      baz=120,SNR=37
S34M  Telegraph Cree   70.05 332  P       P       19 30 16.3  +1.1
      baz=117,SNR=12
MTE   Manteigas        70.06  48 eP       P       19 30 15.7  -0.1
MTE                              i IAmb   IAmb    19 30 23.5
      comp=Z,75nm,1.1s
POLO  Lamas de Olo     70.10  47 eP       P       19 30 15.8  -0.2
POLO                             i IAmb   IAmb    19 30 25.1
      comp=Z,40nm,1.9s
PVRL  Vila Real        70.14  47 eP       P       19 30 16.2   0.0
PVRL                             i IAmb   IAmb    19 30 33.3
      comp=Z,71nm,1.7s
U33K  Whale Pass       70.24 329  P       P       19 30 17.1  +0.7
      baz=115
T33K  Petersburg       70.45 330  P       P       19 30 18.5  +0.9
      baz=115
MVO   Moncorvo         70.62  48 eP       P       19 30 20.9  +1.7
MVO                              i IAmb   IAmb    19 30 26.9
      comp=Z,94nm,1.2s
R33M  Jennings River   70.66 333  P       P       19 30 19.9  +0.8
      baz=118,SNR=19
MD01  Midelt array s   70.88  57  P       P       19 30 19.6  -1.4
PBRG  Braganca         70.97  47 eP       P       19 30 21.3  +0.1
PBRG                             i IAmb   IAmb    19 30 30.0
      comp=Z,43nm,1.5s
MDT   Midelt           71.00  57  LR      LR      20 01 32.9
      comp=Z,2µm,18.4s,baz=278,slow=36
Q32M  Nakina River     71.06 332  P       P       19 30 22.1  +0.4
      baz=116,SNR=8.5
S32K  Killisnoo        71.53 330  P       P       19 30 25.0  +0.8
      baz=114,SNR=7.9
SIT   Sitka            71.74 330  P       P       19 30 26.0  +0.5
      baz=113
JIS   Juneau Island    71.77 331  P       P       19 30 31.2  +5.6
R32K  Eaglecrest       71.83 331  P       P       19 30 26.4  +0.3
      baz=114,SNR=8.1
P33M  Teslin, Yukon    71.87 333  P       P       19 30 26.2  -0.1
      baz=116,SNR=21
P32M  Atlin            72.00 333  P       P       19 30 28.8  +1.6
      baz=115,SNR=9.2
RES   Resolute Bay     72.19 354  IAmb    IAmb    19 30 34.4
      comp=Z,180nm,1.1s
PAB   San Pablo        72.30  50  P       P       19 30 28.1  -1.3
PAB                               IAmb    IAmb    19 30 37.5
      comp=Z,96nm,1.1s
PAB   San Pablo        72.30  50  P       P       19 30 28.1  -1.3
PAB                               pmax    pmax
      comp=Z,96nm,1.2s
N32M  Quiet Lake       72.40 334  IAmb    IAmb    19 30 37.0
      comp=Z,101nm,0.9s
N32M  Quiet Lake       72.40 334  P       P       19 30 30.8  +1.3
      baz=116
IGLA  Glengowla, Co    72.41  35  P       P       19 30 31.8  +2.3
S31K  Pelican          72.54 330  P       P       19 30 32.0  +1.7
      baz=112
ESDC  Sonseca Array    72.61  50  P       P       19 30 31.0  -0.2
      comp=Z,14nm,0.9s,baz=263,slow=5.2,SNR=39
ESDC                              PKPPKP  P'P'df  19 58 15.2  -1.6
      comp=Z,0.9nm,1.1s,baz=64,slow=3.4,SNR=4.6
ESDC                              LR      LR      20 00 26.1
      comp=Z,1µm,18.1s,baz=240,slow=34
      comp=Z,14nm,0.9s
ESDC  Sonseca Array    72.61  50  P       P       19 30 30.3  -0.9
SKAG  Skagway          72.70 332  P       P       19 30 32.9  +1.7
      baz=114
WHY   Whitehorse       72.98 333  P       P       19 30 34.4  +1.3
      baz=114,SNR=7.4
TULEG Thule            73.08   1  IAmb    IAmb    19 30 42.1
      comp=Z,142nm,0.9s
PLBC  Pleasant Camp    73.18 332  P       P       19 30 35.2  +1.1
      baz=113
M31M  Drury Creek, Y   73.42 335  P       P       19 30 36.9  +1.4
      baz=115,SNR=25
C36M  Paulatuk         73.50 344  P       P       19 30 37.3  +1.6
      baz=127
O30N  Mendenhall       73.57 333  IAmb    IAmb    19 30 43.2
      comp=Z,84nm,0.9s
O30N  Mendenhall       73.57 333  P       P       19 30 36.7  +0.2
      baz=113,SNR=23
IWEX  Carrickbyrne,    73.60  36  P       P       19 30 39.2  +2.6
P30M  Million Dollar   73.72 332  P       P       19 30 38.2  +0.9
      baz=112
N31M  Braeburn, Yuko   73.72 334  IAmb    IAmb    19 30 44.0
      comp=Z,106nm,1.0s
N31M  Braeburn, Yuko   73.72 334  P       P       19 30 38.7  +1.4
      baz=114,SNR=18
ACRG  Accra            73.73  85  IAmb    IAmb    19 30 45.0
      comp=Z,137nm,0.9s
P29M  Windy Craggy     73.90 332  P       P       19 30 39.2  +0.9
      baz=111
DSB   Dublin           74.07  35  P       P       19 30 42.9  +3.5
HYT   Haines Junctio   74.23 333  P       P       19 30 41.4  +1.0
      baz=112,SNR=7.0
N30M  Aishikik Lake    74.29 334  P       P       19 30 42.0  +1.3
      baz=112
ILTH  Belurgan, Co L   74.31  35  P       P       19 30 40.5  -0.3
O29M  Mount Kennedy    74.53 332  P       P       19 30 42.7  +0.6
      baz=111
M30M  Minto, Yukon     74.59 335  IAmb    IAmb    19 30 48.8
      comp=Z,140nm,1.0s
M30M  Minto, Yukon     74.59 335  P       P       19 30 43.7  +1.4
      baz=113,SNR=39
MAYO  Mayo, Yukon      74.63 336  P       P       19 30 43.7  +1.2
      baz=114
YUK6  Outpost Mounta   74.67 333  P       P       19 30 44.2  +1.1
      baz=111,SNR=9.3
YUK4  Talbot Arm       74.94 333  P       P       19 30 45.0  +0.4
      baz=111,SNR=12
H31M  Peel River       74.98 338  IAmb    IAmb    19 30 51.0
      comp=Z,120nm,1.1s
H31M                              IAMs_20 IAMs_20 19 55 44.8
      comp=Z,3µm,18.0s
H31M  Peel River       74.98 338  P       P       19 30 45.8  +1.3
      baz=116
VAH   Vaihoa           75.00 253 eP       P       19 30 51.7  +6.2
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	comp=Z,17nm,1.3s						
J30M	Hart River	75.21	337	P	P	19 30 46.5	+0.5
	baz=114						
PMOR	Pomariorio Ree	75.22	254	*e*P	P	19 30 49.8	+3.0
	comp=Z,442nm,1.5s						
PINM	Pinnacle	75.25	332	P	P	19 30 46.8	+0.6
	baz=109						
M29M	Somme Creek	75.26	334	P	P	19 30 46.9	+0.6
	baz=112						
L29M	L29M	75.37	335	P	P	19 30 47.9	+1.1
	baz=112						
K29M	Barlow Dome	75.39	336	IAmb	IAmb	19 30 54.0	
	comp=Z,100nm,0.9s						
K29M	Barlow Dome	75.39	336	P	P	19 30 48.1	+1.0
	baz=113						
A36M	Sachs Harbour	75.40	346	P	P	19 30 47.9	+1.1
	baz=126,SNR=81						
YUK8	Steele Glacier	75.42	333	P	P	19 30 48.5	+1.1
	baz=110,SNR=16						
O28M	Mount Upton	75.44	332	P	P	19 30 48.1	+0.4
	baz=110,SNR=5.3						
G31M	Satah River	75.45	339	P	P	19 30 48.5	+1.4
	baz=116,SNR=23						
TORD	Torodi Ar. Bea	75.47	77	P	P	19 30 47.5	-0.8
	comp=Z,27nm,1.0s,baz=299,slow=3.9,SNR=45						
TORD				PKPPKP	P'P'df	19 58 08.9	-3.7
	comp=Z,1.1nm,1.0s,baz=120,slow=2.8,SNR=4.5						
	comp=Z,27nm,1.0s						
TORD	Torodi Ar. Bea	75.47	77	P	P	19 30 46.1	-2.2
I30M	Mount Dempster	75.49	337	IAmb	IAmb	19 30 54.1	
	comp=Z,99nm,1.1s						
I30M	Mount Dempster	75.49	337	P	P	19 30 48.7	+1.0
	baz=114						
F31M	Tsiigehtchic	75.50	340	IAmb	IAmb	19 30 53.6	
	comp=Z,101nm,1.1s						
F31M	Tsiigehtchic	75.50	340	P	P	19 30 48.7	+1.3
	baz=117,SNR=16						
INK	Inuvik	75.83	341	IAmb	IAmb	19 30 55.5	
	comp=Z,110nm,1.2s						
INK	Inuvik	75.83	341	P	P	19 30 50.1	+0.8
	baz=118,SNR=38						
YUK3	Moose Creek	75.90	333	P	P	19 30 51.2	+1.1
	baz=110,SNR=43						
J29N	Klondike Camp	75.91	336	P	P	19 30 51.6	+1.7
	baz=112,SNR=24						
CTG	Chitna Glacier	76.04	332	P	P	19 30 52.0	+1.2
	baz=108,SNR=14						
EPYK	Eagle Plains	76.09	338	IAmb	IAmb	19 30 57.2	
	comp=Z,116nm,1.1s						
EPYK	Eagle Plains	76.09	338	P	P	19 30 52.6	+1.7
	baz=114,SNR=36						
G30M	tAoh Zraii Nji	76.17	339	P	P	19 30 52.6	+1.3
	baz=115						
DAWY	Dawson	76.25	336	P	P	19 30 53.3	+1.4
	baz=111,SNR=20						
F30M	Barrier River	76.28	340	IAmb	IAmb	19 30 58.3	
	comp=Z,154nm,1.0s						
F30M	Barrier River	76.28	340	P	P	19 30 53.1	+1.2
	baz=115,SNR=46						
I29M	Ogilvie Camp,	76.29	337	P	P	19 30 52.0	-0.1
I29M	Ogilvie Camp,	76.29	337	P	P	19 30 53.7	+1.6
	baz=112,SNR=23						
BVCY	Beaver Creek	76.30	334	P	P	19 30 53.1	+1.0
	baz=109,SNR=22						
EKA	Eskdalemuir Ar	76.43	34	P	P	19 30 53.0	0.0
	comp=Z,8.3nm,0.9s,baz=248,slow=4.8,SNR=9.0						
EKA				LR	LR	20 02 44.8	
	comp=Z,854nm,18.9s,baz=266,slow=34						
	comp=Z,8.3nm,0.9s						
H29M	Whitestone	76.65	338	IAmb	IAmb	19 31 00.4	
	comp=Z,153nm,1.1s						
H29M	Whitestone	76.65	338	P	P	19 30 55.4	+1.4
	baz=112						
M27K	Edge Creek, AK	76.73	334	P	P	19 30 55.9	+1.2
	baz=108						
G29M	Pine Creek	76.79	339	IAmb	IAmb	19 31 02.5	
	comp=Z,141nm,1.0s						
G29M	Pine Creek	76.79	339	P	P	19 30 56.0	+1.2
	baz=113						
CRQE	Cirque	76.79	332	P	P	19 30 56.6	+1.5
	baz=107,SNR=9.5						
TVO	Taravao	76.89	251	*e*P	P	19 30 57.1	+0.7
	comp=Z,65nm,1.3s						
BCAR	Beaver Creek A	76.91	334	P	P	19 30 55.9	+0.3
L27K	Beaver Creek,	76.93	334	IAmb	IAmb	19 31 02.7	
	comp=Z,171nm,1.1s						
L27K	Beaver Creek,	76.93	334	P	P	19 30 57.4	+1.6
	baz=108						
MCARA	McCarthy VSAT	76.94	333	P	P	19 30 57.7	+1.9
	baz=107,SNR=14						
TIAR	Tiarei	76.95	251	*e*P	P	19 30 59.9	+3.2
	comp=Z,243nm,1.2s						
I28M	Miner Creek	76.96	337	P	P	19 30 57.5	+1.6
	baz=111						
PPTF	Pamatai, Papee	77.16	251	P	P	19 31 08.3	+10
PPT	Papeete	77.17	251	LR	LR	19 57 54.9	
	comp=Z,987nm,18.3s,baz=63,slow=30						
PPT2	Papeete2	77.17	251	*e*P	P	19 31 01.7	+3.7
	comp=Z,217nm,1.5s						
PPT2	Papeete2	77.17	251	*e*LR	LR	19 54 48.4	
	comp=Z,1µm,30.2s						
PPT2				*e*LR	LR	19 54 50.9	
	comp=Z,2µm,27.8s						
PAE	Paea	77.18	251	*e*P	P	19 31 03.5	+5.6
	comp=Z,178nm,1.4s						
PAE	Paea	77.18	251	*e*LR	LR	19 54 44.8	
	comp=Z,449nm,26.6s						
KAIM	Kayak Island	77.19	331	P	P	19 30 57.4	+0.2
	baz=106						
M26K	Nabesna, AK	77.24	334	P	P	19 30 58.6	+1.2
	baz=107						
E29M	Blow River	77.33	340	IAmb	IAmb	19 31 04.0	
	comp=Z,194nm,1.1s						
E29M	Blow River	77.33	340	P	P	19 30 59.2	+1.4
	baz=113						
CORI	Orista	77.46	48	P	P	19 30 57.6	-1.5
BMRM	Bremner River	77.56	332	IAmb	IAmb	19 31 06.0	
	comp=Z,159nm,1.1s						
BMRM	Bremner River	77.56	332	P	P	19 31 01.2	+1.9
	baz=106,SNR=17						
L26K	Log Cabin Wild	77.58	334	P	P	19 31 01.0	+1.6
	baz=107,SNR=24						
I27K	Kandik River	77.67	337	P	P	19 31 01.6	+1.7
	baz=109,SNR=102						
MENT	Mentasta	77.71	334	P	P	19 31 04.3	+4.2
F28M	Old Crow	77.72	339	P	P	19 31 01.4	+1.4
	baz=111,SNR=38						
N25K	Chitina, Valde	77.73	333	P	P	19 31 01.7	+1.4
	baz=106,SNR=9.8						
H27K	Steamboat Moun	77.85	338	P	P	19 31 02.4	+1.6
	baz=110						
TBI	Tubuai	77.91	245	*e*LR	LR	19 55 10.9	
	comp=Z,2µm,30.2s						
TBI				*e*LR	LR	19 55 12.6	
	comp=Z,11µm,32.0s						
E28M	Babbage River	77.97	340	IAmb	IAmb	19 31 07.0	
	comp=Z,104nm,1.1s						
E28M	Babbage River	77.97	340	P	P	19 31 02.2	+0.8
	baz=112						
D28M	Stokes Point	77.98	341	P	P	19 31 02.3	+0.9
	baz=113						
EYAK	Cordova Ski Ar	78.00	331	P	P	19 31 02.7	+1.1
	baz=104						
Q23K	Middleton Isla	78.02	330	P	P	19 31 03.1	+1.3
	baz=104						
G27K	Doyon Strip	78.09	338	P	P	19 31 03.8	+1.7
	baz=110						
J26L	Joseph Creek	78.11	336	P	P	19 31 03.7	+1.3
	baz=107						
SCRK	Sand Creek	78.13	335	IAmb	IAmb	19 31 09.1	
	comp=Z,102nm,1.0s						
SCRK	Sand Creek	78.13	335	P	P	19 31 03.9	+1.4
	baz=107,SNR=53						
I26K	Coal Creek Min	78.19	336	P	P	19 31 04.1	+1.5
	baz=108						
HARP	HAARP	78.20	333	P	P	19 31 03.5	+0.7
	baz=105						
KLU	Klutina	78.31	332	P	P	19 31 04.5	+1.0
	baz=104,SNR=8.5						
CLF	Chambon-Foret	78.38	42	P	P	19 31 04.0	-0.1
CLF				IAmb	IAmb	19 31 12.3	
	comp=Z,133nm,1.0s						
RIDG	Independent Ri	78.43	335	P	P	19 31 05.1	+1.0
	baz=106,SNR=109						
PAX	Paxson	78.49	334	P	P	19 31 05.5	+1.0
	baz=105,SNR=64						
E27K	Coleen River	78.53	339	IAmb	IAmb	19 31 10.7	
	comp=Z,113nm,1.1s						
E27K	Coleen River	78.53	339	P	P	19 31 05.2	+0.6
	baz=110						
M24K	Tolsona, Glenn	78.58	333	P	P	19 31 05.2	+0.2
	baz=104,SNR=15						
D27M	Malcolm River	78.69	340		P	19 31 05.8	+0.4
D27M	Malcolm River	78.69	340	P	P	19 31 06.4	+0.9
	baz=111						
GLI	Glacier Island	78.72	332	P	P	19 31 05.7	0.0
	baz=103						
K24K	Donnelly Dome	78.84	335	P	P	19 31 07.3	+0.9
	baz=105,SNR=50						
J25K	Salcha River,	78.89	335	P	P	19 31 06.8	+0.2
	baz=106						
MAHO	Mahon	78.93	50	P	P	19 31 05.6	-1.6
MAHO				IAmb	IAmb	19 31 15.4	
	comp=Z,163nm,1.4s						
G26K	Porcupine Rive	78.93	338	P	P	19 31 07.8	+1.1
	baz=108						
SCM	Sheep Creek Mo	79.05	332	IAmb	IAmb	19 31 13.7	
	comp=Z,172nm,1.0s						
SCM	Sheep Creek Mo	79.05	332	P	P	19 31 08.8	+1.3
	baz=103,SNR=19						
TAM	Tamanrasset	79.18	68	P	P	19 31 08.0	-1.2
TAM	Tamanrasset	79.18	68	P	P	19 31 08.0	-1.2
TAM				pmax	pmax		
	comp=Z,45nm,0.8s						
M23K	Glacier View	79.22	332	P	P	19 31 10.4	+1.9
	baz=103,SNR=17						
F26K	Sheenjek River	79.29	339	P	P	19 31 10.3	+1.6
	baz=107,SNR=53						
PWL	Port Wells	79.31	331	P	P	19 31 10.1	+1.2
	baz=102,SNR=10						
DHY	Denali Highway	79.36	334	P	P	19 31 10.5	+1.2
	baz=103,SNR=19						
BMAR	Burnt Mountain	79.37	338	P	P	19 31 08.8	-0.4
WAT6	Susitna Watana	79.41	333	P	P	19 31 10.7	+1.1
	baz=103,SNR=61						
KNK	Knik Glacier	79.48	332	P	P	19 31 10.9	+1.0
	baz=102,SNR=11						
HDA	Harding Lake	79.50	335	P	P	19 31 11.1	+1.3
	baz=104,SNR=109						
SML	Sawmill	79.51	332	P	P	19 31 11.3	+1.3
	baz=102,SNR=15						
ILAR	Eielson Array	79.56	335	P	P	19 31 10.7	+0.5
	comp=Z,35nm,0.9s,baz=111,slow=3.4,SNR=29						
ILAR				PP	PP	19 34 12.3	+1.7
	comp=Z,29nm,1.2s,baz=106,slow=6.1,SNR=10						
	comp=Z,35nm,0.9s						
ILAR	Eielson Array	79.56	335	P	P	19 31 10.3	+0.1
SEW	Seward	79.69	330	P	P	19 31 12.2	+1.3
	baz=101						
C27K	Jago River	79.73	341	P	P	19 31 12.4	+1.3
	baz=108						
G25K	Bearman Lake	79.76	337	P	P	19 31 12.9	+1.7
	baz=105						
GHO	Glory Hole Cre	79.78	332	IAmb	IAmb	19 31 17.9	
	comp=Z,111nm,0.9s						
F25K	Christian Rive	79.81	338	IAmb	IAmb	19 31 18.6	
	comp=Z,105nm,1.1s						
F25K	Christian Rive	79.81	338	P	P	19 31 12.6	+1.0
	baz=106						
WAT1	Susitna Watana	79.83	333	P	P	19 31 12.9	+1.2
	baz=102						
PMR	Palmer	79.83	332	P	P	19 31 16.2	+4.5
PMR	Palmer	79.83	332	P	P	19 31 12.9	+1.2
	baz=102,SNR=12						
POKR	Poker Plat Res	79.87	336	P	P	19 31 13.0	+1.1
	baz=104,SNR=17						
O22K	Cooper Landing	79.90	331	P	P	19 31 13.5	+1.4
	baz=101						
E25K	Arctic Village	79.93	339	IAmb	IAmb	19 31 18.9	
	comp=Z,109nm,1.1s						
E25K	Arctic Village	79.93	339	P	P	19 31 13.7	+1.5
	baz=106,SNR=71						
COLA	College	79.98	335	P	P	19 31 12.4	-0.1
COLA	College	79.98	335	P	P	19 31 17.2	+4.8
COLA	College	79.98	335	*d i*P	P	19 31 13.6	+1.2
COLA				pmax	pmax		
	comp=Z,85nm,1.1s						
COLA	College	79.98	335	P	P	19 31 13.4	+1.0
	baz=103						
RC01	Rabbit Creek A	80.02	331	P	P	19 31 13.9	+1.1
	baz=101,SNR=12						
RND	Reindeer	80.08	334	IAmb	IAmb	19 31 19.6	
	comp=Z,216nm,1.0s						
UCC	Uccle	80.09	39	*d*P	P	19 31 13.2	-0.1
DOU	Dourbes	80.16	40	*d*P	P	19 31 13.9	+0.2
	comp=Z,32nm,1.2s						
MCK	McKinley	80.19	334	P	P	19 31 15.0	+1.3
	baz=102,SNR=58						
C26K	Camden Bay	80.22	341	P	P	19 31 14.7	+1.1
	baz=107						
H24K	Noodor Dome	80.22	336	P	P	19 31 14.8	+1.0
	baz=103,SNR=44						
BRSE	Bradley Lake S	80.27	330	P	P	19 31 15.1	+0.9
	baz=100,SNR=8.3						
G24K	Hadweenzic Riv	80.27	337	IAmb	IAmb	19 31 20.8	
	comp=Z,139nm,1.1s						
G24K	Hadweenzic Riv	80.27	337	P	P	19 31 15.2	+1.1
	baz=104						
BMRD	Maredsous	80.29	40	*d*P	P	19 31 14.8	+0.3
	comp=Z,22nm,1.2s						
M22K	Willow	80.33	332	P	P	19 31 15.4	+1.0
	baz=101,SNR=11						
NEA2	Nenana	80.43	335	IAmb	IAmb	19 31 20.9	
	comp=Z,210nm,1.1s						
NEA2	Nenana	80.43	335	P	P	19 31 16.0	+1.1
	baz=102,SNR=125						
BGES	Gesves	80.50	40	*d*P	P	19 31 16.2	+0.6
	comp=Z,26nm,1.3s						
CUT	Chulitna	80.52	333	P	P	19 31 16.6	+1.2
	baz=101,SNR=16						
D25K	Kavik River	80.54	340	IAmb	IAmb	19 31 21.9	
	comp=Z,171nm,1.1s						
D25K	Kavik River	80.54	340	P	P	19 31 17.2	+1.7
	baz=105						
RCHB	Rochefort	80.57	40	*d*P	P	19 31 15.8	-0.2
	comp=Z,35nm,1.0s						
SUA	Susitna One	80.57	332	P	P	19 31 15.4	-0.4
SUA	Susitna One	80.57	332	P	P	19 31 17.5	+1.6
	baz=100,SNR=19						
F24K	Squaw Lake	80.62	338	IAmb	IAmb	19 31 22.8	
	comp=Z,104nm,1.1s						
F24K	Squaw Lake	80.62	338	P	P	19 31 17.7	+1.8
	baz=104						
CAPN	Captain Cook N	80.64	331	P	P	19 31 18.1	+2.0
	baz=100						
I23K	Minto, Yukon-K	80.67	336	IAmb	IAmb	19 31 22.4	
	comp=Z,112nm,1.2s						
I23K	Minto, Yukon-K	80.67	336	P	P	19 31 17.5	+1.4
	baz=102,SNR=44						
HOM	Homer	80.70	330	P	P	19 31 17.8	+1.3
	baz=99						
POHA	Pohakuloa	80.71	289	P	P	19 31 24.4	+6.8
TRF	Thorofare Moun	80.73	334	P	P	19 31 18.0	+1.2
	baz=101,SNR=17						
BSTI	Sart Tilman	80.83	39	*d*P	P	19 31 16.9	-0.4
	comp=Z,8.7nm,1.0s						
KDAK	Kodiak Island	80.91	328	P	P	19 31 19.0	+1.4
	baz=98						
BEBN	Eben Emael	80.92	39	*d*P	P	19 31 18.9	+1.2
	comp=Z,48nm,0.0s						
Q20K	Shuyak Island	80.93	329	P	P	19 31 19.4	+1.8
	baz=98						
E24K	Your Creek	80.97	339	P	P	19 31 19.4	+1.5
	baz=103						
KTH	Kantishna Hill	81.03	334	IAmb	IAmb	19 31 24.0	
	comp=Z,87nm,1.0s						
SKT	Skwentna	81.03	332	IAmb	IAmb	19 31 24.0	
	comp=Z,115nm,1.0s						
SKT	Skwentna	81.03	332	P	P	19 31 19.5	+1.3
	baz=100,SNR=40						
BHOU	Houvegnez	81.09	40	*d*P	P	19 31 19.8	+1.1
	comp=Z,38nm,1.0s						
MEM	Membach	81.11	39	*d*P	P	19 31 19.4	+0.6
	comp=Z,38nm,1.1s						
WLF	Walferdange	81.12	40	P	P	19 31 18.2	-0.6
WLF				IAmb	IAmb	19 31 27.2	
	comp=Z,159nm,1.2s						
WLF	Walferdange	81.12	40	P	P	19 31 18.3	-0.6
WLF				pmax	pmax		
	comp=Z,159nm,1.2s						
WLF	Walferdange	81.12	40	*d*P	P	19 31 19.7	+0.8
	comp=Z,64nm,1.0s						
BPAW	Bear Paw Mtn.	81.15	334	IAmb	IAmb	19 31 24.7	
	comp=Z,200nm,1.0s						
BPAW	Bear Paw Mtn.	81.15	334	P	P	19 31 20.0	+1.2
	baz=100,SNR=15						
BTNL	Ternell	81.19	39	*d*P	P	19 31 19.5	+0.2
	comp=Z,18nm,1.4s						
OHAK	Old Harbor	81.21	327	P	P	19 31 24.2	+5.0
OHAK	Old Harbor	81.21	327	P	P	19 31 20.9	+1.7
	baz=97						
SPCR	Spurr Chakacha	81.22	331	P	P	19 31 20.7	+1.4
	baz=99,SNR=16						
O20K	Slope Mountain	81.26	330	P	P	19 31 20.7	+1.2
	baz=98,SNR=8.4						
G23K	Bananza Creek	81.26	337	IAmb	IAmb	19 31 26.2	
	comp=Z,84nm,1.1s						
G23K	Bananza Creek	81.26	337	P	P	19 31 21.0	+1.6
	baz=102						
D24K	Happy Valley	81.34	340	IAmb	IAmb	19 31 26.1	
	comp=Z,113nm,1.1s						
D24K	Happy Valley	81.34	340	P	P	19 31 21.0	+1.3
	baz=103						
RED	Redoubt Volcan	81.38	331	IAmb	IAmb	19 31 26.1	
	comp=Z,149nm,0.9s						
E23K	Chandalar	81.39	338	IAmb	IAmb	19 31 26.8	
	comp=Z,110nm,1.2s						
E23K	Chandalar	81.39	338	P	P	19 31 21.2	+1.1
	baz=102						
COLD	Coldfoot	81.43	338	IAmb	IAmb	19 31 27.2	
	comp=Z,86nm,1.1s						
COLD	Coldfoot	81.43	338	P	P	19 31 21.8	+1.6
	baz=102,SNR=48						
C24K	Franklin Bluff	81.43	340	P	P	19 31 21.4	+1.3
	baz=103						
PPLA	Purkeypile	81.48	333	IAmb	IAmb	19 31 26.4	
	comp=Z,144nm,1.1s						
PPLA	Purkeypile	81.48	333	P	P	19 31 21.3	+0.5
	baz=99,SNR=16						
TOLK	Toolik Lake Re	81.50	339	P	P	19 31 21.0	+0.4
	baz=102,SNR=27						
ILSW	Iliamna Southw	81.50	330	IAmb	IAmb	19 31 26.3	
	comp=Z,94nm,1.0s						
P19K	Oil Pt	81.50	330	P	P	19 31 21.9	+1.1
	baz=98						
Q19K	Cape Douglas,	81.61	329	P	P	19 31 22.6	+1.2
	baz=97						
SII	Sitkinak Islan	81.62	327	P	P	19 31 22.6	+1.2
	baz=96						
SUE	Sulen	81.64	29	*e*P	P	19 31 22.1	+0.8
H22K	Ishtalitna Cre	81.64	336	P	P	19 31 22.8	+1.4
	baz=100						
ECH	Echery	81.66	42	IAmb	IAmb	19 31 29.9	
	comp=Z,94nm,1.1s						
CHUM	Lake Minchumin	81.69	334	P	P	19 31 23.0	+1.3
	baz=99,SNR=61						
M20K	Styx River	81.76	332	P	P	19 31 22.8	+0.6
	baz=98						
I21K	Tanana	81.76	335	P	P	19 31 23.5	+1.6
	baz=100,SNR=20						
ASK	Askoy	81.77	29	*e*P	P	19 31 24.2	+2.1
BER	Bergen	81.83	30	*e*P	P	19 31 24.0	+1.6
FOO	Floro	81.85	28	*e*P	P	19 31 22.9	+0.4
D23K	Nanushuk River	81.96	339	P	P	19 31 23.2	+0.2
	baz=101,SNR=116						
C23K	Itkillik River	82.11	340	P	P	19 31 25.2	+1.5
	baz=102						
O19K	Port Alsworth	82.11	330	P	P	19 31 25.1	+1.2
	baz=97						
H21K	Melozitna Rive	82.18	336	P	P	19 31 23.9	-0.3
H21K	Melozitna Rive	82.18	336	P	P	19 31 25.7	+1.5
	baz=99,SNR=11						
E22K	Anaktuvuk Pass	82.21	338	IAmb	IAmb	19 31 30.6	
	comp=Z,90nm,1.3s						
E22K	Anaktuvuk Pass	82.21	338	P	P	19 31 25.7	+1.4
	baz=100,SNR=21						
F22K	John River	82.24	338	P	P	19 31 25.9	+1.4
	baz=100						
N19K	Bonanza Creek	82.27	331	P	P	19 31 26.1	+1.2
	baz=97						
BLS5	Blasjo	82.27	31	*e*P	P	19 31 25.9	+1.1
Q18K	Katmai Hardscr	82.29	329	P	P	19 31 25.5	+0.5
	baz=96,SNR=5.6						
CHIR	Chirikof Islan	82.34	326	P	P	19 31 25.7	+0.5
	baz=95						
K20K	Telida	82.39	333	P	P	19 31 25.8	+0.5
	baz=97						
ODD1	Odda	82.41	30	*e*P	P	19 31 26.4	+0.9
BFO	Black Forest	82.45	42	P	P	19 31 24.8	-1.2
BFO	Black Forest	82.45	42	P	P	19 31 24.8	-1.2
BFO				pmax	pmax		
	comp=Z,34nm,1.0s						
P18K	Big Mountain,	82.48	329	P	P	19 31 26.5	+0.6
	baz=96						
O18K	Koktuh Hills	82.52	330	P	P	19 31 27.3	+1.2
	baz=96,SNR=14						
J20K	Nowinta River	82.53	334	IAmb	IAmb	19 31 31.7	
	comp=Z,100nm,1.1s						
J20K	Nowinta River	82.53	334	P	P	19 31 27.6	+1.5
	baz=97						
G21K	Allakaket	82.59	337	P	P	19 31 27.6	+1.3
	baz=98,SNR=45						
L19K	White Mountain	82.60	332	P	P	19 31 27.5	+1.0
	baz=96						
D22K	Ayikyak River	82.65	339	IAmb	IAmb	19 31 33.3	
	comp=Z,120nm,1.2s						
D22K	Ayikyak River	82.65	339	P	P	19 31 27.5	+0.8
	baz=99						
F21K	Alatna River	82.69	337	IAmb	IAmb	19 31 33.5	
	comp=Z,76nm,1.1s						
F21K	Alatna River	82.69	337	P	P	19 31 27.9	+1.0
	baz=98						
Q17K	Contact Creek	82.71	328	P	P	19 31 28.0	+0.7
	baz=95						
KEST	Kesra	82.74	55	P	P	19 31 28.8	+0.9
	comp=Z,17nm,0.9s,baz=349,slow=2.4,SNR=6.5						
KEST				LR	LR	20 06 10.4	
	comp=Z,1µm,19.5s,baz=251,slow=34						
	comp=Z,17nm,0.9s						
KEST	Kesra	82.74	55	P	P	19 31 26.4	-1.4
I20K	Naaghedeneel	82.76	335	P	P	19 31 28.4	+1.2
	baz=97						
AKN	Aaknes	82.84	28	*e*P	P	19 31 28.5	+0.8
R17L	Mt. Peulik Vol	82.91	328	P	P	19 31 29.1	+0.9
	baz=95						
N18K	Kilae Creek	82.94	331	IAmb	IAmb	19 31 33.6	
	comp=Z,112nm,1.0s						
N18K	Kilae Creek	82.94	331	P	P	19 31 29.6	+1.3
	baz=95,SNR=16						
M18K	Stony River	82.99	331	P	P	19 31 29.2	+0.8
	baz=96						
H20K	Anotleneega Mo	83.01	335	P	P	19 31 29.6	+1.0
	baz=97,SNR=20						
STU	Stuttgart	83.05	41	IAmb	IAmb	19 31 36.9	
	comp=Z,84nm,1.2s						
E21K	Killik River	83.05	339	IAmb	IAmb	19 31 34.9	
	comp=Z,93nm,1.3s						
E21K	Killik River	83.05	339	P	P	19 31 29.9	+1.1
	baz=98						
P17K	Kvichak River	83.08	329	P	P	19 31 29.7	+0.8
	baz=95,SNR=5.7						
MOL	Molde	83.13	27	*e*P	P	19 31 36.5	+7.3
B22K	Teshekpuk Lake	83.14	340	P	P	19 31 30.1	+1.0
	baz=99						
Q16K	King Salmon	83.15	329	P	P	19 31 30.1	+0.8
	baz=94						
J19K	Poorman	83.15	334	P	P	19 31 30.3	+1.0
	baz=96						
SKAR	Skarslia	83.32	29	*e*P	P	19 31 30.7	+0.4
C21K	Knifeblade Rid	83.44	339	P	P	19 31 31.2	+0.5
	baz=98						
B21K	Ikpikpuk River	83.44	340	P	P	19 31 31.6	+1.0
	baz=98						
DAVA	Damuels	83.44	43	*i* P	P	19 31 32.0	+0.6
	comp=Z,111nm,0.8s,SNR=23						
O17K	Koliganek Bris	83.46	330	P	P	19 31 32.2	+1.3
	baz=94,SNR=12						
L18K	Granite Mounta	83.46	332	P	P	19 31 31.7	+0.8
	baz=95						
F20K	Avaraart Lake	83.53	337	P	P	19 31 32.1	+1.0
	baz=96						
R16K	Pilot Point	83.55	327	P	P	19 31 32.4	+1.0
	baz=94						
N17K	Nushagak Hills	83.56	330	P	P	19 31 32.7	+1.2
	baz=94,SNR=8.1						
J18K	Innoko River	83.59	333	P	P	19 31 32.7	+1.2
	baz=95,SNR=12						
H19K	Roundabout Mou	83.67	335	P	P	19 31 33.2	+1.4
	baz=96						
FUORN	Ofenpass-Fuorn	83.69	44	IAmb	IAmb	19 31 41.3	
	comp=Z,85nm,1.2s						
M17K	Holitna River	83.75	331	P	P	19 31 33.5	+1.1
	baz=94,SNR=8.3						
A22K	Sinclair Lake	83.75	341	P	P	19 31 33.5	+1.3

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        baz=98
GCSA  Galena City Sc    83.77 335   P       P        19 31 33.2 +0.8
        baz=95,SNR=13
DOMB  Dombas            83.79  28  eP       P        19 31 35.1 +2.5
E20K  Nigu River        83.84 338   P       P        19 31 33.2 +0.4
        baz=96,SNR=75
P16K  Nushagak River    83.86 329   P       P        19 31 33.5 +0.5
        baz=93,SNR=7.6
O16K  Kokwok River B    83.95 329   P       P        19 31 34.0 +0.5
        baz=93
G19K  Purcell Mounta    83.98 336   P       P        19 31 35.2 +1.7
        baz=95
FETA  Feichten          84.02  43  i pP     P        19 31 35.9 +1.6
        comp=Z,90nm,1.1s,SNR=21
BELA  Belgrano 2        84.02 172   P       P        19 31 33.6 +0.1
BELA                                IAmb    IAmb     19 31 35.6
        comp=Z,109nm,1.6s
CASP  Castiglione de    84.03  48   P       P        19 31 32.9  -1.4
CASP                                IAmb    IAmb     19 31 42.4
        comp=Z,106nm,1.2s
RETA  Reutte            84.05  43  i P      P        19 31 35.3 +1.0
        comp=Z,42nm,1.2s,SNR=12
EDA   Edea              84.13  87   P       P        19 31 34.2  -1.2
EDA                                 IAmb    IAmb     19 31 38.4
        comp=Z,89nm,1.4s
E19K  Redstone River    84.16 337   IAmb    IAmb     19 31 40.5
        comp=Z,61nm,1.1s
E19K  Redstone River    84.16 337   P       P        19 31 35.5 +1.1
        baz=95
L17K  Donlin            84.21 332   P       P        19 31 35.5 +0.7
        baz=94
K17K  Iditarod          84.25 333   IAmb    IAmb     19 31 41.0
        comp=Z,80nm,1.1s
K17K  Iditarod          84.25 333   P       P        19 31 35.8 +0.9
        baz=94
F19K  Shaleruckik Mo    84.32 337   P       P        19 31 36.9 +1.7
        baz=94
A21K  Barrow            84.32 341   P       P        19 31 36.3 +1.2
        baz=96,SNR=14
OSSC  Osservatorio P    84.32  47   IAmb    IAmb     19 31 42.4
        comp=Z,85nm,1.5s
N16K  Nishlik Lake      84.34 330   P       P        19 31 36.1 +0.7
        baz=93
SQTA  Sankt Quirin      84.35  43  i pP     P        19 31 37.2 +1.3
        comp=Z,68nm,1.0s,SNR=19
B20K  Meade River       84.37 340   IAmb    IAmb     19 31 42.1
        comp=Z,116nm,1.2s
B20K  Meade River       84.37 340   P       P        19 31 36.9 +1.5
        baz=95
H18K  Honhosa River     84.44 335   IAmb    IAmb     19 31 42.8
        comp=Z,131nm,1.2s
H18K  Honhosa River     84.44 335   P       P        19 31 37.4 +1.5
        baz=94
M16K  Timber Creek      84.46 331   P       P        19 31 37.1 +1.0
        baz=93,SNR=8.2
OSL   Oslo              84.47  30  eP       P        19 31 37.6 +1.5
NBO00 NORSAR Array S    84.55  29   IAmb    IAmb     19 31 44.7
        comp=Z,125nm,1.1s
NC204 NORSAR Array S    84.55  29   IAmb    IAmb     19 31 44.6
        comp=Z,113nm,1.1s
D19K  Kuna River        84.58 338   IAmb    IAmb     19 31 43.2
        comp=Z,102nm,1.2s
D19K  Kuna River        84.58 338   P       P        19 31 38.3 +1.7
        baz=94
NAO01 NORSAR Array S    84.59  29   IAmb    IAmb     19 31 44.9
        comp=Z,129nm,1.2s
WATA  Walderalm         84.60  43  i P      P        19 31 38.4 +1.1
        comp=Z,26nm,1.4s,SNR=8.6
G18K  Tagagawik         84.60 336   IAmb    IAmb     19 31 43.8
        comp=Z,74nm,1.1s
G18K  Tagagawik         84.60 336   P       P        19 31 38.7 +2.0
        baz=94
CTI   Castel Tesino     84.64  44   IAmb    IAmb     19 31 45.4
        comp=Z,91nm,1.2s
WTTA  Wattenberg        84.64  43  i pP     P        19 31 38.6 +1.2
        comp=Z,60nm,0.9s,SNR=13
J17K  VABM Dome         84.64 333   P       P        19 31 38.9 +2.0
        baz=93
TEOL  Teolo             84.64  45   IAmb    IAmb     19 31 45.7
        comp=Z,97nm,0.8s
L16K  Owhat River       84.74 332   P       P        19 31 36.8  -0.7
L16K                                IAmb    IAmb     19 31 44.1
        comp=Z,78nm,1.1s
L16K  Owhat River       84.74 332   P       P        19 31 38.9 +1.5
        baz=92,SNR=16
NB2   NORSAR Subarra    84.76  29   P       P        19 31 38.3 +0.7
        comp=Z,176nm,1.2s,baz=269,slow=5.3
NB2   NORSAR Subarra    84.76  29   P       P        19 31 38.3 +0.7
        baz=269,slow=5.3
NOA   NORSAR Array B    84.76  29   P       P        19 31 38.9 +1.3
        comp=Z,12nm,1.0s,baz=267,slow=5.0,SNR=37
        comp=Z,12nm,1.0s
O15K  Ungalikthiuk R    84.82 329   P       P        19 31 38.9 +1.0
        baz=92
NC303 NORSAR Array S    84.84  29   P       P        19 31 36.2  -1.8
NC303                               IAmb    IAmb     19 31 46.0
        comp=Z,86nm,1.1s
NC602 NORSAR Array S    84.91  29   IAmb    IAmb     19 31 46.4
        comp=Z,81nm,1.2s
NC602 NORSAR Array S    84.91  29  eP       P        19 31 44.7 +6.4
N15K  Kwethluk River    84.99 330   P       P        19 31 40.3 +1.6
        baz=92
NC405 NORSAR Array S    85.01  29   IAmb    IAmb     19 31 46.9
        comp=Z,112nm,1.1s
F18K  Selawik           85.05 336   P       P        19 31 40.2 +1.4
        baz=93,SNR=19
SDPT  Sand Point        85.07 325   P       P        19 31 40.7 +1.6
        baz=91
H17K  Granite Mounta    85.08 335   P       P        19 31 40.4 +1.3
        baz=92
C19K  Lookout Ridge     85.15 339   IAmb    IAmb     19 31 46.5
        comp=Z,170nm,1.4s
C19K  Lookout Ridge     85.15 339   P       P        19 31 40.7 +1.3
        baz=93,SNR=43
CIMO  Cimolais          85.19  44   IAmb    IAmb     19 31 48.1
        comp=Z,59nm,0.9s
ABTA  Abfaltersbach     85.24  44  i P      P        19 31 41.4 +1.0
        comp=Z,44nm,1.3s,SNR=19
NSS   Namsos            85.24  26  eP       P        19 31 41.1 +1.3
VNA3  Neumayer Olymp    85.28 163  ⇑P       P        19 31 40.2 +0.3
        comp=Z,41nm,0.8s
M15K  Kasigluk River    85.30 330   P       P        19 31 41.3 +1.0
        baz=91
J16K  Anvik River       85.32 333   P       P        19 31 41.9 +1.6
        baz=92
LESA  Schwarzleotal     85.35  43  i P      P        19 31 41.8 +0.9
        comp=Z,54nm,1.6s,SNR=16
STAL  STALIGIAL         85.37  44   IAmb    IAmb     19 31 49.1
        comp=Z,97nm,1.2s
I17K  Unalakleet        85.38 334   IAmb    IAmb     19 31 47.6
        comp=Z,60nm,1.1s
I17K  Unalakleet        85.38 334   P       P        19 31 41.6 +1.1
        baz=92,SNR=15
G17K  Kiwalik Mounta    85.41 335   P       P        19 31 41.8 +1.1
        baz=92
VNA1  Neumayer--Stat    85.45 162  ⇑P       P        19 31 41.5 +0.8
        comp=Z,56nm,1.1s
E18K  Tukpahlearik C    85.45 337   P       P        19 31 42.2 +1.3
        baz=92
O14K  Tigyukauivet M    85.56 329   P       P        19 31 42.5 +0.9
        baz=91
CLL   Collm             85.56  39  i P      P        19 31 43.2 +1.4
CLL                                 pmax    pmax
        comp=Z,41nm,1.5s
CLL                                 MLR     MLR
        comp=Z,3µm,21.9s
CLL   Collm             85.56  39  i P      P        19 31 42.3 +0.6
        comp=Z,41nm,1.5s
CLL                                i x      x        19 31 48.7
        comp=Z,63nm,1.5s
CLL                                i x      x        19 32 47.3
CLL                                 AMS     AMS      20 03 00.0
        comp=Z,3µm,21.9s
FDMO  Fiordimonte       85.67  47   P       P        19 31 40.9  -1.6
F17K  Baldwin Pennin    85.68 336   P       P        19 31 43.1 +1.1
        baz=91
L15K  Ungalak Mounta    85.70 331   P       P        19 31 43.1 +0.9
        baz=91
C18K  Utukok River      85.72 338   P       P        19 31 43.1 +0.9
        baz=91
A19K  Wainwright        85.72 340   P       P        19 31 43.6 +1.5
        baz=92
K15K  Wolf Creek Mou    85.73 332   P       P        19 31 43.7 +1.4
        baz=91
RGN   Rugen             85.76  36   IAMs_20 IAMs_20  20 05 43.8
        comp=Z,2µm,19.0s
N14K  Kuskokwak Cree    85.78 330   P       P        19 31 43.3 +0.7
        baz=90,SNR=12
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KBA   Koelnbreinsper    85.81  43  i PcP    PcP      19 31 45.3  -0.8
        comp=Z,101nm,1.1s,SNR=7.3
VNA2  Neumayer--Watz    85.82 162  ⇑P       P        19 31 43.7 +1.1
        comp=Z,26nm,0.8s,baz=289,slow=3.7
KBS   Kingsbay          85.89  11  eP       P        19 31 47.4 +4.6
KBS   Kingsbay          85.89  11 deP       P        19 31 45.9 +3.1
KBS                                 pmax    pmax
        comp=Z,77nm,1.0s
E17K  Hotham Inlet      85.92 337   P       P        19 31 44.3 +1.1
        baz=91,SNR=54
M14K  Bethel            85.92 331   P       P        19 31 44.8 +1.5
        baz=90,SNR=5.8
KHC   Kasperske Hory    85.94  41c iP       P        19 31 44.8 +1.0
KHC                                 pmax    pmax
        comp=Z,67nm,1.2s
KHC   Kasperske Hory    85.94  41  eP       P        19 31 45.4 +1.6
KHC                                ex       x        19 31 51.5
B18K  Kokolik River     85.95 339   P       P        19 31 44.9 +1.5
        baz=91
HFS   Hagfors           85.97  30   P       P        19 31 43.8 +0.3
        comp=Z,8.6nm,0.9s,baz=270,slow=1.5,SNR=21
HFS                                 LR      LR       20 06 05.8
        comp=Z,2µm,21.9s,baz=264,slow=33
        comp=Z,8.6nm,0.9s
S12K  Black Hills       85.97 325   P       P        19 31 44.9 +1.1
        baz=90
SABO  M.te Sabotino     85.99  44   P       P        19 31 43.4  -0.7
SABO                                IAmb    IAmb     19 31 52.8
        comp=Z,146nm,1.1s
BIOA  Bad Ischl, Aus    86.00  43  i P      P        19 31 44.9 +0.9
        comp=Z,68nm,1.4s,SNR=30
MYKA  Terra Mystica     86.01  44  i P      P        19 31 44.3 +0.1
        comp=Z,56nm,1.4s,SNR=16
GERES GERESS Array B    86.03  41   P       P        19 31 45.0 +0.7
        comp=Z,9.8nm,1.0s,baz=253,slow=4.1,SNR=26
        comp=Z,9.8nm,1.0s
GERES GERESS Array B    86.03  41   P       P        19 31 45.0 +0.7
H16K  Elim              86.07 334   P       P        19 31 45.4 +1.4
        baz=90,SNR=17
TRI   Trieste           86.11  45   IAmb    IAmb     19 31 52.9
        comp=Z,100nm,1.3s
G16K  Koyuk River       86.12 335   P       P        19 31 45.3 +1.1
        baz=90
RAUS  Rausandaksla      86.14  24  eP       P        19 31 47.4 +3.1
RICC  Richard           86.26  40  eP       P        19 31 47.4 +2.2
L14K  Kuka Creek        86.27 331   P       P        19 31 45.8 +0.8
        baz=90
INTR  Introdacqua       86.29  48   P       P        19 31 43.1  -2.6
INTR                                IAmb    IAmb     19 31 53.7
        comp=Z,82nm,1.4s
MOR8  Moi Rana          86.31  24  eP       P        19 31 46.3 +1.1
ZVC   Zvikov            86.34  41  eP       P        19 31 46.9 +1.2
RDOG  Red Dog Mine      86.34 338   P       P        19 31 46.3 +1.0
        baz=90
D17K  Noatak River      86.41 338   P       P        19 31 46.4 +0.8
        baz=90,SNR=18
MOA   Molln             86.42  42  i P      P        19 31 46.7 +0.6
        comp=Z,74nm,1.6s,SNR=19
CKRC  Cesky Krumlov     86.43  41  eP       P        19 31 46.7 +0.5
CKRC  Cesky Krumlov     86.43  41  eP       P        19 31 46.7 +0.5
C17K  DeLong Mountai    86.44 338   P       P        19 31 46.5 +0.7
        baz=90
PRU   Pruhonice         86.56  40  eP       P        19 31 48.0 +1.3
PRU                                e                 19 31 54.2
PRU   Pruhonice         86.56  40  eP       P        19 31 48.0 +1.3
PRU                                ex       x        19 31 54.2
PVCC  Panska Ves        86.56  40  eP       P        19 31 48.9 +2.2
PVCC  Panska Ves        86.56  40  eP       P        19 31 48.9 +2.2
HSPB  Hornsund (broa    86.59  13  eP       P        19 31 50.1 +3.8
M13K  Dall Lake         86.61 330   P       P        19 31 47.1 +0.4
        baz=89,SNR=5.4
FAUS  Fauske            86.63  23  eP       P        19 31 47.3 +0.7
LJU   Ljubljana         86.64  44  i P      P        19 31 48.8 +1.6
OBKA  Obir              86.64  44  i PcP    PcP      19 31 48.6  -1.1
        comp=Z,26nm,1.4s
J14K  Nanvaranak Lak    86.67 333   P       P        19 31 47.9 +0.9
        baz=89
SPA0  Spitsbergen Ar    86.76  12  eP       P        19 31 49.0 +1.9
SPITS Spitsbergen Ar    86.76  12   P       P        19 31 49.3 +2.2
        comp=Z,37nm,1.1s,baz=177,slow=1.7,SNR=16
        comp=Z,37nm,1.1s
FALS  False Pass        86.76 325   P       P        19 31 47.9 +0.4
        baz=88
G15K  Niukluk           86.83 335   P       P        19 31 48.3 +0.6
        baz=88
SOKA  Soboth            86.97  44  i P      P        19 31 49.3 +0.4
        comp=Z,22nm,1.1s,SNR=12
PERS  Pernice           87.03  44  i P      P        19 31 52.0 +2.8
F15K  North Star Dit    87.07 336   IAmb    IAmb     19 31 56.2
        comp=Z,95nm,1.4s
F15K  North Star Dit    87.07 336   P       P        19 31 49.3 +0.4
        baz=88
RAR   Rarotonga         87.13 249   LR      LR       20 01 51.5
        comp=Z,1µm,21.1s,baz=86,slow=29
TREC  Trest             87.19  41  eP       P        19 31 51.2 +1.3
TREC  Trest             87.19  41  eP       P        19 31 51.2 +1.3
K13K  Kusilvak Mount    87.20 332   IAmb    IAmb     19 31 56.4
        comp=Z,76nm,1.1s
K13K  Kusilvak Mount    87.20 332   P       P        19 31 50.3 +0.8
        baz=88
C16K  Lisburne Hills    87.25 338   IAmb    IAmb     19 31 56.4
        comp=Z,172nm,1.6s
C16K  Lisburne Hills    87.25 338   P       P        19 31 50.0 +0.4
        baz=88
ARSA  Arzberg           87.29  43  i PcP    P        19 31 51.4 +1.0
        comp=Z,39nm,1.4s,SNR=15
ANM   Nome              87.42 334   P       P        19 31 51.2 +0.6
        baz=87,SNR=8.9
SNAA  Sanae             87.46 163  ⇓P       P        19 31 50.9 +0.1
        comp=Z,636nm,0.8s
SNAA  Sanae             87.46 163   P       P        19 31 51.2 +0.5
        comp=Z,48nm,1.1s,baz=294,slow=4.2,SNR=51
        comp=Z,48nm,1.1s
SNAA  Sanae             87.46 163   P       P        19 31 50.5  -0.3
SNAA                                IAmb    IAmb     19 31 53.7
        comp=Z,163nm,1.3s
SNAA  Sanae             87.46 163c iP       P        19 31 51.0 +0.3
SNAA                                pmax    pmax
        comp=Z,162nm,1.4s
UPC   Upice             87.48  40  eP       P        19 31 52.6 +1.4
UPC   Upice             87.48  40  eP       P        19 31 52.6 +1.4
CONA  Conrad Observa    87.49  42  i PcP    PcP      19 31 52.7  -0.7
        comp=Z,52nm,1.5s,SNR=17
OSTC  Ostas             87.61  40  eP       P        19 31 53.5 +1.6
OSTC  Ostas             87.61  40  eP       P        19 31 53.5 +1.6
DPC   Dobruska-Polom    87.69  40  eP       P        19 31 53.9 +1.6
DPC                                e                 19 32 00.1
DPC   Dobruska-Polom    87.69  40  eP       P        19 31 53.9 +1.6
DPC                                ex       x        19 32 00.1
F14K  Arctic Creek      87.78 335   P       P        19 31 53.0 +0.7
        baz=86
RONA  Rosalia, Austr    87.79  43  i PcP    P        19 31 53.4 +0.6
        comp=Z,34nm,1.0s,SNR=15
KRUC  Moravsky          87.79  41  eP       P        19 31 52.5  -0.2
KOGS  Kog               87.82  44  i P      P        19 31 54.1 +1.2
TRO   Tromso            87.87  20  eP       P        19 31 53.8 +1.2
VRAC  Vranov            87.91  41  ⇓P       P        19 31 55.2 +1.8
VRAC  Vranov            87.91  41  eP       P        19 31 53.1  -0.2
VRAC  Vranov            87.91  41   P       P        19 31 55.1 +1.8
KRLC  Kraliky           88.00  40  eP       P        19 31 55.5 +1.7
KRLC  Kraliky           88.00  40  eP       P        19 31 55.5 +1.7
M11K  Mekoryuk          88.03 330   P       P        19 31 53.1  -0.4
        baz=86
JETT  Jettan, Norway    88.40  21  eP       P        19 31 55.1  -0.1
MODS  Modra-Piesok      88.41  42  eP       P        19 31 57.1 +1.4
MODS                               e                 19 32 03.3
MODS                                pmax    pmax
        comp=Z,89nm,1.4s
MODS  Modra-Piesok      88.41  42  eP       P        19 31 57.1 +1.4
MODS                               e                 19 32 03.3
MODS                               e                 20 10 25.3
TNA   Tin City          88.44 335   IAmb    IAmb     19 32 02.4
        comp=Z,94nm,1.4s
TNA   Tin City          88.44 335   P       P        19 31 55.1  -0.3
        baz=85,SNR=6.0
MORC  Moravsky Berou    88.50  40  ⇓P       P        19 31 58.0 +1.8
MORC  Moravsky Berou    88.50  40  eP       P        19 31 57.0 +0.8
MORC  Moravsky Berou    88.50  40   P       P        19 31 57.9 +1.8
SMOL  Smolenice         88.51  42  eP       P        19 31 58.8 +2.6
SMOL                               e                 19 32 03.9
SMOL                                pmax    pmax
        comp=Z,13nm,1.5s
TIP   Timpagrande       88.57  51  ⇑P       P        19 32 01.0 +4.2
UNV   Unalaska Valle    88.61 324   P       P        19 31 56.5  0.0
        baz=86
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STEB  Steborice         88.64  40  eP       P        19 31 58.7 +1.9
JAVC  Velka Javorina    88.64  41  eP       P        19 31 59.0 +2.1
MAUC  Maruska           88.72  41  eP       P        19 31 59.5 +2.3
SRO   Srobarova         89.14  42  eP       P        19 32 00.9 +1.8
SRO                                e                 19 32 06.9
TROLL Troll, Antarti    89.17 162  ⇑P       P        19 31 59.7 +0.8
        comp=Z,3µm,0.9s
KTK1  Kautokeino        89.46  21  eP       P        19 32 00.8 +0.7
MORH  Mrgy, Hungar      89.49  44  ⇓P       P        19 32 02.9 +2.1
LANS  Liptovska Anna    89.80  41  eP       P        19 32 05.0 +2.7
LANS                                pmax    pmax
        comp=Z,13nm,1.4s
LANS  Liptovska Anna    89.80  41  eP       P        19 32 05.0 +2.7
P08K  Saint George I    90.10 327   P       P        19 32 03.2  -0.2
        baz=84
ARA0  ARCESS Array S    90.17  20  eP       P        19 32 06.7 +3.2
ARCES ARCESS Array B    90.17  20   P       P        19 32 03.7 +0.1
        comp=Z,4.9nm,0.7s,baz=21,slow=4.4,SNR=6.6
        comp=Z,4.9nm,0.7s
ARCES ARCESS Array B    90.17  20   P       P        19 32 08.0 +4.4
ARCES                               IAmb    IAmb     19 32 11.0
        comp=Z,78nm,1.5s
ARCES ARCESS Array B    90.17  20   P       P        19 32 08.0 +4.4
ARCES                               pmax    pmax
        comp=Z,78nm,1.5s
PSZ   Piszkesteto       90.20  42  ⇑P       P        19 32 06.4 +2.2
PSZ   Piszkesteto       90.20  42   P       P        19 32 06.4 +2.2
PDG   Podgorica         90.23  48  ⇓P       P        19 32 06.4 +2.1
GAMB  Gambell           90.25 334   P       P        19 32 03.5  -0.5
        baz=82
SPIA  Saint Paul Isl    90.42 327   P       P        19 32 03.5  -1.3
        baz=83
KECS  Kecovo            90.53  42  eP       P        19 32 08.2 +2.6
KECS  Kecovo            90.53  42  eP       P        19 32 08.2 +2.6
STHS  Stebnicka Huta    90.93  41  eP       P        19 32 09.8 +2.3
STHS                               e                 19 32 15.3
STHS                                pmax    pmax
        comp=Z,9.0nm,1.3s
STHS  Stebnicka Huta    90.93  41  eP       P        19 32 09.8 +2.3
STHS                               e                 19 32 15.3
SIRR  Siria             91.57  44  ⇑P       P        19 32 11.7 +1.2
BZS   Buzias            91.61  44  ⇑P       P        19 32 12.1 +1.4
BZS   Buzias            91.61  44   P       P        19 32 12.1 +1.4
MDVR  Moldovita         91.78  45  ⇑P       P        19 32 13.5 +2.0
PABE  Paberze           91.79  34   IAmb    IAmb     19 32 19.9
        comp=Z,56nm,1.2s
FINES FINESS Array B    91.89  28   P       P        19 32 11.7 +0.1
        comp=Z,9.9nm,1.1s,baz=268,slow=7.1,SNR=8.7
FINES                               LR      LR       20 09 22.2
        comp=Z,1µm,21.2s,baz=278,slow=33
        comp=Z,9.9nm,1.1s
FINES FINESS Array B    91.89  28   P       P        19 32 10.9  -0.7
FIA1  FINESS Array S    91.89  28   IAmb    IAmb     19 32 19.0
        comp=Z,107nm,1.1s
BOVS  Bovan             91.90  46  ⇓P       P        19 32 13.5 +1.4
NVL   N'lazarevskaya    91.92 161  eP       P        19 32 11.9 +0.4
NVL                                e                 19 35 51.2
NVL                                ePPP     PPP      19 37 49.8
NVL                                eS       SKSac    19 42 43.4  -0.9
NVL                                eSS      SS       19 49 22.7 +1.8
NVL                                eSSS     SSS      19 53 01.1
NVL                                 pmax    pmax
        comp=Z,49nm,1.1s
NVL                                 MLR     MLR
        comp=Z,2µm,17.0s
DRGR                    92.22  43  ⇑P       P        19 32 15.7 +2.0
DRGR                    92.22  43   P       P        19 32 15.6 +2.0
MESR  Meseseni          92.34  43  ⇑P       P        19 32 17.0 +2.9
GZR   Gura Zlata        92.45  44  ⇑P       P        19 32 17.1 +2.4
GZR   Gura Zlata        92.45  44   P       P        19 32 17.1 +2.4
MARR  Marisel-Cluj      92.52  43  ⇑P       P        19 32 17.3 +2.3
VSU   Vasula            92.78  31 deP       P        19 32 16.2 +0.4
VSU                                 pmax    pmax
        comp=Z,87nm,1.1s
TSUM  Tsumeb            92.78 109   P       P        19 32 14.7  -2.2
TSUM                                IAmb    IAmb     19 32 19.4
        comp=Z,72nm,1.9s
CJR   Cluj-Napoca       92.84  43  ⇓P       P        19 32 18.9 +2.4
CJR   Cluj-Napoca       92.84  43   P       P        19 32 18.8 +2.4
MDB   Medias            93.46  44  ⇓P       P        19 32 21.3 +2.1
MDB   Medias            93.46  44   P       P        19 32 21.3 +2.1
NACGM Naroch            93.48  35  eP       P        19 32 21.2 +2.1
        comp=Z,29nm,1.0s,baz=281
QSPA  South Pole Qui    93.49 180   P       P        19 32 19.5 +0.5
RNPP8 Varash            93.58  38   P       P        19 32 19.5  -0.2
RNPP9 Sopachiv          93.59  38   P       P        19 32 19.2  -0.5
RNPP5 Staryi Chortor    93.62  38   P       P        19 32 20.1 +0.3
ARR   Arges             93.75  44  ⇑P       P        19 32 22.8 +2.1
BURAR Bucovina Array    93.80  42   P       P        19 32 20.3  -0.6
BURAR Bucovina Array    93.80  42  ⇑P       P        19 32 23.4 +2.5
BURAR Bucovina Array    93.80  42   P       P        19 32 23.4 +2.5
DOPR  Dopca             94.18  44  ⇑P       P        19 32 24.8 +2.2
MNK   Minsk             94.19  35  i P      P        19 32 23.6 +1.2
MNK                                i                 19 36 10.5
MNK                                i PPP    PPP      19 38 10.5
MNK                                i S      SKSac    19 42 58.3 +0.7
MNK                                i SS     SS       19 49 57.4 +3.4
MNK                                i SSS    SSS      19 53 39.4
MNK                                 pmax    pmax
        comp=E,9.0nm,1.1s
MNK                                 pmax    pmax
        comp=N,8.0nm,1.0s
MNK                                 pmax    pmax
        comp=Z,25nm,0.9s
MNK                                 MLR     MLR
        comp=E,335nm,18.0s
MNK                                 MLR     MLR
        comp=N,814nm,18.0s
MNK                                 MLR     MLR
        comp=Z,880nm,17.0s
MLR   Muntele Rosu      94.64  44  ⇑P       P        19 32 27.1 +2.2
MLR   Muntele Rosu      94.64  44   P       P        19 32 27.1 +2.2
COVR  Voineasa-Covas    94.76  44  ⇓P       P        19 32 27.4 +2.1
MI28  Mi28,Pidlybu      94.78  38   P       P        19 32 24.5  -0.7
LUBAR Lubar, Ukraine    95.04  39   P       P        19 32 27.3 +0.9
MI30  MI30,Zelenitsa    95.14  39   P       P        19 32 25.6  -1.2
KOOLE Kule              95.36 113   P       P        19 32 26.6  -2.0
KOOLE                               IAmb    IAmb     19 32 31.0
        comp=Z,52nm,1.3s
ELIB  Princess Elisa    95.60 162  dP       P        19 32 29.4 +0.7
        comp=Z,10nm,1.1s
AK19  Malin Array Si    95.66  38   P       P        19 32 29.5 +0.3
AK16  Malin Array Si    95.73  38   P       P        19 32 30.5 +1.0
AK12  Malin Array Si    95.76  39   P       P        19 32 29.6  -0.1
AK03  Malin Array Si    95.79  38   P       P        19 32 29.9 +0.1
AKASG Malin Array Be    95.80  38   P       P        19 32 30.7 +0.9
        comp=Z,2.0nm,0.8s,baz=278,slow=3.3,SNR=2.0
        comp=Z,2.0nm,0.8s
AKASG Malin Array Be    95.80  38   P       P        19 32 28.9  -0.9
AKBB  Malin Array Si    95.80  38⇑eP       P        19 32 32.2 +2.4
AKBB                                pmax    pmax
        comp=Z,13nm,1.6s
GRTLG Ghanzi            96.27 111   P       P        19 32 30.8  -2.0
GRTLG                               IAmb    IAmb     19 36 24.9
        comp=Z,112nm,1.9s
XAUDM Khaudum           96.31 108   P       P        19 32 30.4  -2.7
ADZR  Andozero          96.59  24  eP       P        19 32 32.1  -1.0
ADZR                                pmax    pmax
        comp=Z,32nm,1.2s
KGCAE Kacgae            97.21 112   IAmb    IAmb     19 32 39.2
        comp=Z,40nm,1.3s
BILL  Bilibino          97.45 341   P       P        19 32 34.8  -2.1
BILL                                IAmb    IAmb     19 32 43.2
        comp=Z,33nm,1.5s
BILL  Bilibino          97.45 341⇓eP       P        19 32 36.2  -0.8
BILL                                pmax    pmax
        comp=Z,21nm,1.4s
BILL                                MLR     MLR
        comp=Z,2µm,20.0s
KLMR  Klimovskoe        98.29  27  eP       P        19 32 40.0  -0.9
KLMR                               e                 19 36 38.4
KLMR                                pmax    pmax
        comp=Z,39nm,1.2s
OBN   Obninsk           98.87  33  eP       Pdif     19 32 43.7 +0.1
OBN                                e                 19 36 46.4
OBN                                ePPP     PPP      19 38 54.7
OBN                                 pmax    pmax
        comp=Z,14nm,1.1s
OBN                                 MLR     MLR
        comp=Z,1µm,18.0s
SBA   Scott Base        99.28 191   P       Pdif     19 32 43.8  -1.1
SBA                                 IAmb    IAmb     19 36 11.4
        comp=Z,49nm,1.9s
SBA   Scott Base        99.28 191   P       Pdif     19 32 43.8  -1.1
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SBA                                  pmax      pmax
          comp=Z,49nm,1.9s
VNDA  Vanda              100.35 191  P         Pdif      19 32 52.6 +2.9
          comp=Z,1.3nm,1.0s,baz=120,slow=4.4,SNR=4.3
VNDA  Vanda              100.35 191            Pdif      19 32 50.5 +0.7
SYO   Syowa Base         101.58 160⥣iPP        PP        19 37 02.2 -2.9
SYO   Syowa Base         101.58 160⥣ePKiKP     PKiKP     19 37 16.6 -2.4
GHAJ  Ghor Haditha       104.94  56  IAMs_20   IAMs_20   20 21 30.4
          comp=Z,2µm,19.0s
NRIK  Noril'sk           106.29   7  PKKPab    PKKPab    19 49 04.6 -1.6
          comp=Z,0.9nm,0.3s,baz=180,slow=5.4,SNR=3.6
ARTI  Arti               109.01  26  PP        PP        19 38 04.7 +4.5
          comp=Z,8.9nm,0.9s,baz=296,slow=7.0,SNR=7.2
ARTI  Arti               109.01  26  P         Pdif      19 33 28.5 -0.2
LODK  Lodwar             109.25  85  IAMs_20   IAMs_20   20 11 59.6
          comp=Z,3µm,19.0s
MAK   Makhachkala        110.14  42 eP         Pdif      19 33 30.0 -4.0
MAK                                 e                    19 44 08.7
MAK                                 ePS        PS        19 47 29.2 -9.3
MAK                                 eSS        SS        19 53 34.1 -0.9
MAK                                  pmax      pmax
          comp=Z,279nm,1.3s
AKT   Akhty              110.91  43 ePKIKP     PKiKP     19 37 33.4 -3.9
YAK   Yakutsk            112.19 348  IAMs_20   IAMs_20   20 12 20.4
          comp=Z,5µm,21.0s
YAK   Yakutsk            112.19 348 i PKIKP    PKiKP     19 37 40.5 +1.6
YAK                                 e                    19 38 24.9
YAK                                 eSS        SS        19 54 02.5 +1.8
YAK                                  pmax      pmax
          comp=Z,4.0nm,1.5s
YAK                                  pmax      pmax
          comp=N,3.0nm,1.3s
YAK                                  pmax      pmax
          comp=Z,366nm,2.5s
YAK                                  pmax      pmax
          comp=N,254nm,2.6s
YAK                                  pmax      pmax
          comp=E,167nm,2.8s
YAK                                  MLR       MLR
          comp=Z,2µm,20.0s
YAK                                  MLR       MLR
          comp=N,1µm,21.0s
YAK                                  MLR       MLR
          comp=E,677nm,21.0s
AKTO  Aktyubinsk         112.50  31  PKKPbc    PKKPbc    19 48 26.4 -4.6
          comp=E,0.9nm,0.5s,baz=0.0,slow=2.0,SNR=2.5
BVAR  Borovoye Array     116.33  23  PP        PP        19 38 46.1 -6.2
          comp=E,3.5nm,1.0s,baz=320,slow=5.8,SNR=4.2
BVAR                                 PKKPbc    PKKPbc    19 48 16.4 -1.5
          comp=E,2.3nm,0.7s,baz=143,slow=3.2,SNR=7.0
DZM   Mont Dzumac        118.46 247 eLR        LR        20 13 58.0
          comp=E,920nm,26.1s
ZALV  Zalesovo Beam      120.17  14  PKP       PKPdf     19 37 53.8 -0.7
          comp=E,3.3nm,0.7s,baz=317,slow=1.9,SNR=8.5
ZALV                                 PKKPbc    PKKPbc    19 48 02.2 -1.9
          comp=E,1.4nm,0.6s,baz=172,slow=4.5,SNR=4.8
ZALV  Zalesovo Beam      120.17  14            PKPdf     19 37 52.6 -1.9
KURK  Kurchatov          121.21  20            PKPdf     19 37 55.2 -1.3
KURK  Kurchatov          121.21  20c iPKIKP    PKiKP     19 37 58.7 +2.0
KURBB Kurchatov Arra     121.26  20  PKP       PKPdf     19 37 56.4 -0.3
          comp=E,3.0nm,1.0s,baz=316,slow=3.1,SNR=10
KURBB                                PKKPbc    PKKPbc    19 47 58.0 -1.9
          comp=E,1.1nm,0.6s,baz=154,slow=2.9,SNR=7.7
HEH   HeiHe              123.36 344  Pdif      Pdif      19 34 34.6 +1.9
HEH                                  PKP       pPKPdf    19 38 04.6  0.0
HEH                                  LR        LR
          comp=E,1µm,19.5s
BRLS  Borolday           123.48  31 ePKP       PKiKP     19 38 02.3 +0.8
BRLS  Borolday           123.48  31 ePKIKP     PKiKP     19 38 02.2 +0.8
CHM   Chimkent           123.86  32 ePKP       PKiKP     19 38 02.9 +0.7
CHM   Chimkent           123.86  32 ePKIKP     PKiKP     19 38 02.9 +0.7
DZA   Taraz              124.34  30 ePKP       PKiKP     19 38 03.8 +0.5
DZA   Taraz              124.34  30 ePKIKP     PKiKP     19 38 03.7 +0.5
DGZ   Jazzator, Alta     124.72  14⥣iPKIKP     PKPdf     19 38 03.6  0.0
MOY   Mondy              124.94   4 ePKIKP     PKiKP     19 38 08.2 +4.0
MOY                                  pmax      pmax
          comp=Z,18nm,1.2s
KNGR  Kungurtug, Tuv     125.68   7⥥ePKIKP     PKPdf     19 38 05.1 -0.3
MAKZ  Makanchi           125.71  20            PKPdf     19 38 02.9 -2.5
MAKZ  Makanchi           125.71  20  PKIKP     PKPdf     19 38 02.9 -2.5
MK31  Makanchi Array     125.83  20⥥ePKIKP     PKPdf     19 38 05.7 +0.1
MKAR  Makanchi Array     125.83  20  PKP       PKPdf     19 38 05.3 -0.3
          comp=Z,1.5nm,0.6s,baz=307,slow=2.4,SNR=16
MKAR                                 PP        PP        19 39 59.7 +2.6
          comp=Z,2.6nm,0.9s,baz=344,slow=4.8,SNR=2.2
MKAR                                 PKKPab    PKKPab    19 47 39.6 -0.9
          comp=Z,0.7nm,0.8s,baz=122,slow=4.6,SNR=3.6
MKAR  Makanchi Array     125.83  20            PKPdf     19 38 03.4 -2.2
HILR  Hailar Array B     125.84 349  PKP       PKiKP     19 38 06.0  0.0
          comp=Z,2.2nm,0.6s,baz=101,slow=1.5,SNR=5.7
HILR                                 PP        PP        19 39 59.6 +2.6
          comp=Z,10nm,0.8s,baz=36,slow=5.8,SNR=6.5
TDK   Taldyqorghan       125.91  24 ePKP       PKiKP     19 38 06.8 +0.6
TDK                                 ePP        PP        19 39 59.1 +1.4
TDK   Taldyqorghan       125.91  24 ePKIKP     PKiKP     19 38 06.8 +0.6
TDK                                 e                    19 39 59.9
AAK   Ala-Archa          126.07  28c iPKIKP    PKiKP     19 38 07.3 +0.5
HIA   Hailar             126.12 349  IAMs_20   IAMs_20   20 21 43.9
          comp=Z,3µm,20.0s
HIA   Hailar             126.12 349⥥iPKIKP     PKiKP     19 38 06.8 +0.3
CHGR  Chuyangaron        126.14  35⥥iPKIKP     PKiKP     19 38 07.2 +0.2
ZAK   Zakamensk          126.33   2 ePKIKP     PKPdf     19 38 03.5 -3.1
ZAK                                  pmax      pmax
          comp=Z,11nm,1.7s
AAA   Alma-Ata           126.73  26 ePKP       PKiKP     19 38 08.3 +0.3
AAA   Alma-Ata           126.73  26 ePKIKP     PKiKP     19 38 08.3 +0.3
MDOK  Medeo              126.83  26 ePKP       PKiKP     19 38 08.6 +0.2
MDOK                                ePP        PP        19 40 06.2 +2.1
MDOK  Medeo              126.83  26 ePKIKP     PKiKP     19 38 08.5 +0.2
MDOK                                e                    19 40 06.1
TNSS  Tian-Shan          126.89  26 ePKP       PKiKP     19 38 08.7 -0.1
TNSS  Tian-Shan          126.89  26 ePKIKP     PKiKP     19 38 08.6 -0.1
USRK  Ussuriysk Ar.      127.07 337  PKP       PKiKP     19 38 10.1 +1.6
          comp=Z,12nm,1.0s,baz=68,slow=3.1,SNR=8.2
BNX   BinXian            127.40 341 ⥣PKP       PKiKP     19 38 09.3 +0.2
SATY  Saty               127.50  25 ePKP       PKiKP     19 38 09.8 +0.1
SATY                                ePP        PP        19 40 10.6 +2.1
SATY  Saty               127.50  25 ePKIKP     PKiKP     19 38 09.7 +0.1
SATY                                e                    19 40 10.5
UZB   Uzynbulak          127.69  25 ePKP       PKiKP     19 38 10.2 +0.1
UZB                                 ePP        PP        19 40 11.8 +2.1
UZB   Uzynbulak          127.69  25 ePKIKP     PKiKP     19 38 10.1 +0.1
UZB                                 e                    19 40 11.8
SHLS  Shalkode           127.86  24 ePKP       PKiKP     19 38 10.8 +0.4
SHLS                                ePP        PP        19 40 14.0 +3.2
SHLS  Shalkode           127.86  24 ePKIKP     PKiKP     19 38 10.7 +0.4
SHLS                                e                    19 40 14.0
ULN   Ulaanbaatar        128.88 359            PKPdf     19 38 09.8 -1.8
ULN   Ulaanbaatar        128.88 359  PKP       PKPdf     19 38 11.1 -0.5
ULN   Ulaanbaatar        128.88 359⥥ePKIKP     PKPdf     19 38 11.9 +0.3
SONM  Songino Array      128.92 360  PKP       PKiKP     19 38 12.8 +0.5
          comp=Z,10nm,1.0s,baz=169,slow=0.6,SNR=14
SONM                                 PP        PP        19 40 19.4 +2.0
          comp=Z,8.8nm,1.1s,baz=353,slow=6.8,SNR=6.6
SONM  Songino Array      128.92 360            PKiKP     19 38 13.0 +0.7
SONM  Songino Array      128.92 360  PKIKP     PKiKP     19 38 13.0 +0.7
KSH   Kashi              129.18  30  PKP       PKiKP     19 38 14.3 +1.2
KSH                                  PP        PP        19 40 24.3 +4.6
KSH                                  SKKS                19 47 17.6
CN2   Changchun          129.75 342  PKP       PKPdf     19 38 13.3 +0.1
CN2                                  PP        PP        19 40 32.9  +10
CN2                                  SS        SS        19 57 45.8 -0.2
CN2                                  AMB       AMB
          comp=Z,300nm,7.5s
CN2                                  LR        LR
          comp=Z,900nm,22.1s
CN2                                  LR        LR
          comp=Z,1µm,23.6s
MAJO  Matsushiro         130.04 326dePKIKP     PKPdf     19 38 14.1 +0.1
MJAR  Matsushiro Arr     130.04 326  PKP       PKPdf     19 38 14.3 +0.4
          comp=Z,5.3nm,0.8s,baz=169,slow=1.5,SNR=7.3
MJAR                                 SKP       SKPdf     19 41 45.0 -4.7
          comp=Z,12nm,1.2s,baz=348,slow=2.2,SNR=5.7
MJAR  Matsushiro Arr     130.04 326            PKPdf     19 38 11.7 -2.2
WMQ   Urumqi             130.19  17  PKP       PKiKP     19 38 15.5 +0.6
WMQ                                  PP        PP        19 40 30.8 +5.0
WMQ                                  AMB       AMB
          comp=Z,670nm,4.1s
WMQ                                  LR        LR
          comp=Z,1µm,20.5s
XLT   XiLinHaoTe         131.97 350 ePKP       PKiKP     19 38 18.8 +0.3
XLT                                  PP        PP        19 40 39.9 +2.8
XLT                                  LR        LR
          comp=Z,890nm,17.6s
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XLT                                  LR        LR
          comp=Z,440nm,17.1s
SNY   Shenyang           132.12 342 ⥥PKP       PKiKP     19 38 19.8 +1.1
SNY                                  AMB       AMB
          comp=Z,61nm,5.0s
SNY                                  LR        LR
          comp=Z,1µm,22.5s
CMSA  Cobar Meteorol     133.26 229  P         PKiKP     19 38 27.3 +6.0
CMSA  Cobar Meteorol     133.26 229  P         PKiKP     19 38 26.3 +5.0
KSRS  Korea Array        134.41 335  PKP       PKiKP     19 38 23.9 +0.5
          comp=Z,6.6nm,0.8s,baz=1.4,slow=2.1,SNR=9.0
KSRS  Korea Array        134.41 335  PKIKP     PKiKP     19 38 24.0 +0.5
KSAR  Wonju Array Be     134.44 335            PKPdf     19 38 20.0 -2.2
KSAR  Wonju Array Be     134.44 335  PKIKP     PKPdf     19 38 20.0 -2.2
DL2   Dalian             135.39 342  PKP       PKiKP     19 38 25.4  0.0
DL2                                  PP        PP        19 41 05.5 +6.5
DL2                                  AMB       AMB
          comp=Z,320nm,4.9s
DL2                                  LR        LR
          comp=Z,920nm,20.2s
DL2                                  LR        LR
          comp=Z,2µm,20.3s
HHC   Hu-ho-hao-te       135.60 354 eP         PKPdf     19 38 19.8 -4.6
HHC                                  sP        PKiKP     19 38 26.4 +0.4
BJI   Beijing            135.69 349  PKP       PKiKP     19 38 25.8 -0.2
BJI                                  PP        PP        19 41 02.4 +1.7
BJI                                  PKS       PKSdf     19 42 02.6 +1.9
BJI                                  SKS       SKSdf     19 45 32.8 -3.1
BJI                                  LR        LR
          comp=Z,400nm,17.1s
BJI                                  LR        LR
          comp=Z,300nm,15.6s
BJI                                  LR        LR
          comp=Z,690nm,17.9s
BTO   Baotou             135.99 355 ePKP       PKPdf     19 38 23.3 -1.8
BTO                                  LR        LR
          comp=Z,4µm,20.4s
STKA  Stephens Creek     136.09 226  PKP       PKiKP     19 38 28.1 +1.0
          comp=Z,13nm,0.9s,baz=121,slow=2.4,SNR=16
STKA  Stephens Creek     136.09 226            PKiKP     19 38 28.4 +1.3
STKA  Stephens Creek     136.09 226⥣ePKIKP     PKPdf     19 38 26.0 +0.6
QLP   Quilpie            136.64 234  P         PKiKP     19 38 32.6 +4.3
QLP   Quilpie            136.64 234  P         PKiKP     19 38 33.3 +5.0
GTA   Gaotai             136.99   7  PKP       PKiKP     19 38 28.1 -0.8
GTA                                  PP        PP        19 41 14.3 +5.3
GTA                                  PKS       PKSdf     19 42 01.6 -1.8
HTT   Hallett            137.06 222  P         PKiKP     19 38 32.9 +3.8
HTT   Hallett            137.06 222  P         PKiKP     19 38 33.7 +4.6
WHYH  Whyalla            138.20 222  P         PKiKP     19 38 36.7 +5.4
WHYH  Whyalla            138.20 222  P         PKiKP     19 38 36.3 +5.0
HNS   HongShan           138.52 349 ⥥PKP       PKPdf     19 38 27.8 -2.0
HNS                                  PP        PP        19 41 21.9 +3.5
PMG   Port Moresby       138.53 260  PKP       PKPdf     19 38 23.7 -6.7
PMG                                  PKP       PKiKP     19 38 25.0 -7.5
PMG   Port Moresby       138.53 260 ePKIKP     PKPdf     19 38 28.0 -2.4
TIY   Taiyuan            138.58 352 ePKP       PKiKP     19 38 32.8 +0.7
TIY                                  PP        PP        19 41 25.8 +6.9
TIY                                  AMB       AMB
          comp=Z,250nm,10.8s
TIY                                  LR        LR
          comp=Z,420nm,22.6s
TIY                                  LR        LR
          comp=Z,2µm,19.8s
TIA   Tai'an             139.15 346  PKP       PKPdf     19 38 29.8 -1.2
TIA                                  AMB       AMB
          comp=Z,350nm,8.2s
TIA                                  LR        LR
          comp=Z,2µm,21.2s
GOMU  GeErMu             139.23  14  PKP       PKPdf     19 38 29.0 -2.6
GOMU                                 SS        SS        19 59 40.3 -0.4
BBOO  Buckleboo          139.33 221  P         PKiKP     19 38 37.3 +3.6
LZH   Lanzhou            140.62   3 ePKP       PKiKP     19 38 35.4 -1.1
LZH                                  sPKP      sPKPdf    19 38 47.5 +8.4
LZH                                  SKKS                19 48 23.3
LZH                                  LR        LR
          comp=Z,780nm,21.3s
LYN   LuoYang            141.68 351  PKP       PKPdf     19 38 32.0 -3.6
LYN                                  PP        PP        19 41 39.8 +2.0
LYN                                  SKKS                19 48 30.4
LYN                                  AMB       AMB
          comp=Z,760nm,3.6s
NJ2   Nanjing            142.58 342  PKP       PKPdf     19 38 33.6 -3.6
XAN   Xi'an              142.59 356 ⥣PKP       PKPdf     19 38 32.8 -4.5
XAN                                  sPKP      sPKPdf    19 38 48.8 +6.3
XAN                                  PP        PP        19 41 45.9 +2.5
XAN                                  SS        SS        20 00 22.6 +3.5
XAN                                  AMB       AMB
          comp=Z,460nm,6.5s
XAN                                  LR        LR
          comp=Z,1µm,17.9s
SSE   Sheshan            142.65 338  PKP       PKPdf     19 38 37.3 -0.1
SSE                                  PP        PP        19 41 45.1 +1.1
SSE                                  SS        SS        20 00 21.4 +1.2
SSE                                  LR        LR
          comp=Z,740nm,18.6s
SSE                                  LR        LR
          comp=Z,490nm,20.6s
SSE                                  LR        LR
          comp=Z,1µm,18.7s
LSA   Lhasa              144.16  22            PKPab     19 38 37.5 -0.8
LSA   Lhasa              144.16  22  PKP       PKPab     19 38 33.8 -4.5
LSA                                  PP        PP        19 40 13.1 -101
LSA                                  LR        LR
          comp=N,1µm,23.0s
LSA                                  LR        LR
          comp=E,530nm,21.5s
LSA                                  LR        LR
          comp=Z,2µm,24.4s
LSA   Lhasa              144.16  22  PKIKP     PKPab     19 38 37.5 -0.8
JAY   Jayapura           145.15 271  PKP       PKPbc     19 38 41.5 -0.3
WHN   Wuhan              145.22 347 ⥣PKPbc     PKPdf     19 38 42.0 +0.1
WHN                                  sPKP      sPKPab    19 38 46.9 +0.2
GENI  Genyem             145.69 270  P         PKiKP     19 38 49.6 +2.4
GENI  Genyem             145.69 270  PKP       PKPdf     19 38 42.2 -1.0
CD2   Chengdu            145.77   3  PKPbc     PKPdf     19 38 42.0 -0.9
HYB   Hyderabad          146.03  52 ePKPbc     PKPdf     19 38 42.1 -1.5
HYB                                 ePP        PP        19 42 04.7 -0.8
HYB                                 eSKSdf     SKSdf     19 45 51.5 -1.9
ASAR  Alice Springs      146.24 231  PKPbc     PKPbc     19 38 44.7 -0.3
          comp=Z,24nm,0.7s,baz=118,slow=3.6,SNR=76
ASAR  Alice Springs      146.24 231            PKPdf     19 38 42.1 -1.8
ASAR  Alice Springs      146.24 231  PKIKP     PKPdf     19 38 42.1 -1.8
ENH   Enshi              146.28 354  IAMs_20   IAMs_20   20 34 10.9
          comp=Z,2µm,21.0s
SMPI  Sarmi              147.12 272  PKP       PKPdf     19 38 45.3 -0.3
WRA   Warramunga Arr     147.72 237  PKP       PKPdf     19 38 47.4 +1.0
          comp=Z,23nm,1.1s,baz=108,slow=2.7,SNR=32
WRA                                  PKPbc     PKPbc     19 38 49.4 +0.1
          comp=Z,64nm,0.9s,baz=108,slow=3.1,SNR=28
WRA   Warramunga Arr     147.72 237            PKPdf     19 38 44.0 -2.5
CNSH  ChangSha           147.81 348  PKPbc     PKPdf     19 38 39.3 -7.1
CNSH                                 PP        PP        19 42 06.3 -8.2
NACB  Ninganchiao        148.54 332            PKPdf     19 38 44.9 -2.8
TNCH  TengChong          150.81  14  PKPbc     PKPdf     19 38 52.6 +1.1
TNCH                                 pPKP      PKiKP     19 38 57.8 +0.1
GULI  GuiLin             151.09 351 ⥥PKPbc     PKPbc     19 38 57.6 +0.1
GULI                                 PP        PP        19 42 36.1 +2.7
KMI   Kunming            151.44   6  PKPbc     PKPdf     19 38 52.4 -0.1
KMI                                  LR        LR
          comp=Z,960nm,20.7s
KMI                                  LR        LR
          comp=Z,1µm,23.4s
MORW  Morawa             152.74 200            PKPdf     19 38 52.1 -2.0
PALK  Pallekele          152.76  67  IAMs_20   IAMs_20   20 44 41.1
          comp=Z,2µm,21.0s
MTN   Manton Dam         153.29 248            PKPdf     19 38 52.0 -3.2
FAKI  Fak Fak            153.61 270  PKP       PKPdf     19 38 54.8 -0.9
SAUI  Saumlaki           154.26 259  PKP       PKPdf     19 38 56.5 -0.1
SIJI  Sorong             154.44 275  PKP       PKPdf     19 38 56.5 -0.4
CHTO  Chiang Mai         156.86  17  PKP       PKPdf     19 38 55.9 -4.1
CMAR  Chiang Mai Arr     157.20  17  PKP       PKPdf     19 39 00.8 +0.4
          comp=Z,5.8nm,1.1s,baz=297,slow=1.4,SNR=7.1
CMAR                                 PKPab     PKPab     19 39 31.5 +0.6
          comp=Z,19nm,0.8s,baz=331,slow=5.6,SNR=9.3
CMAR  Chiang Mai Arr     157.20  17            PKPdf     19 39 00.8 +0.4
CMAR                                           PKPab     19 39 29.1 -1.8
QIZ   Qiongzhong         157.31 350  IAMs_20   IAMs_20   20 44 24.5
          comp=Z,2µm,21.0s
KRAI  Karang Ratu        157.47 270  PKP       PKPdf     19 38 55.5 -5.4
KRAI                                 PKP       pPKPdf    19 39 00.9 -3.9
DAV   Davao City (W)     157.68 298  PKPab     PKPab     19 39 37.0 +3.6
          comp=Z,278nm,1.1s,baz=78,slow=3.5,SNR=20
DAV   Davao City (W)     157.68 298            PKPab     19 39 40.7 +7.4
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SBUM  Sibu               171.32 312            PKPdf     19 39 09.4 -3.8
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JMA 24 19:22:28.0±0.2**, 36°.8N**±0°.3×**138°.6E**±0°.3**, h1**^{km}±2^{km}**,**
MV0.9/26**, NORTHERN NAGANO PREF, Eastern Honshu**

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Code  Station Name         Δ°  AZ°     Phase ID             Time      Res
                                     Op        ISC       h  m  s    ISC
JGK   Kuni                0.27 174  eP         Pg        19 22 34.0 +0.8
JGK                                 eS         Sg        19 22 37.9 +1.4
MAT   Matsushiro          0.43 229   P         Pg        19 22 36.3 +0.1
MAT                                 eS         Sg        19 22 41.8  0.0
JKT   Katashina           0.52  97  eS         Sg        19 22 45.1 +0.5
JNG   Nsakai              0.59 224  eS         Sg        19 22 47.0 +0.1
JRY   Ryogami san         0.84 164  eP         Pb        19 22 45.0 -0.5
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RSNC 24 19:25:22.1±0.0**, 3°N**±1°×**7°4W**±°**, h6**^{km}±2^{km}**, M4.0, mb5.6,**
ML3.7, MLv4.4, Colombia

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Code  Station Name         Δ°  AZ°     Phase ID             Time      Res
                                     Op        ISC       h  m  s    ISC
URMC  La Uribe, Meta      0.27 219   P         Pg        19 25 27.9 +0.5
URMC                                 S         Sg        19 25 31.5 +0.4
PRAC  Prado               0.72 291   P         Pg        19 25 35.6 -0.4
PRAC                                 S         Sg        19 25 45.6 +0.2
VILC  Villavicencio,      0.83  38   P         Pg        19 25 38.2 +0.2
VILC                                 S         Sb        19 25 49.8 -0.7
CVER  Cruz Verde, Cu      1.06   7   P         Pg        19 25 41.9 -0.7
CVER                                 S         Sg        19 25 55.1 -1.3
ORTC  Ortega, Tolima      1.13 293   P         Pg        19 25 42.8 -0.9
ORTC                                 S         Sg        19 25 58.1 -0.3
CHIC  Chingaza            1.26  22   P         Pg        19 25 45.4 -0.9
CHIC                                 S         Sn        19 26 03.7 -0.3
MACC  Macarena, Meta      1.35 164   P         Pn        19 25 46.6 -1.0
MACC                                 S         Sb        19 26 04.7 -0.9
BETC  Betania             1.45 238   P         Pn        19 25 48.8 -0.2
BETC                                 S         Sb        19 26 07.3 -1.1
ANIL  Santa Ana           1.57 311   P         Pn        19 25 50.5 -0.3
ANIL                                 S         Sn        19 26 11.3 -0.3
GARC  Garzon, Huila       1.80 225   P         Pn        19 25 54.8 +0.9
GARC                                 S         Sn        19 26 17.8 +0.5
RECRC Villamaria, Ca      1.88 323   P         Pn        19 25 56.1 +0.9
RECRC                                S         Sn        19 26 20.2 +0.7
SPBC  San Pablo de B      2.18   4   P         Pb        19 26 02.3 +0.2
SPBC                                 S         Sg        19 26 31.8 -0.5
NORC  Norcasia            2.19 343   P         Pn        19 26 00.1 +1.0
NORC                                 S         Sb        19 26 28.5 -1.2
YOTC  Yotoco, Valle       2.19 284   P         Pn        19 25 59.9 +0.7
YOTC                                 S         Sb        19 26 30.3 +0.5
FLOC  Florencia           2.36 218   P         Pb        19 26 04.1 -0.9
FLOC                                 S         Sb        19 26 34.7 +0.3
JAMC  Jamundi, Valle      2.47 264   P         Pn        19 26 05.1 +1.9
JAMC                                 S         Sb        19 26 39.5 +1.6
PLMC  San Jos del P       2.52 305   P         Pn        19 26 05.4 +1.8
PLMC                                 S         Sb        19 26 39.4 +0.3
POPC  Popayan, Colom      2.63 250   P         Pb        19 26 09.6 -0.1
POPC                                 S         Sb        19 26 43.8 +1.4
RUSC  La Rusia            2.67  25   P         Pb        19 26 08.9 -1.6
RUSC                                 S         Sb        19 26 42.9 -0.8
CBOC  Ciudad Bolivar      2.99 323   P         Pb        19 26 15.0 -0.9
HELC  Santa Helena        3.01 334   P         Pn        19 26 12.7 +1.9
HELC                                 S         Sb        19 26 51.8 -1.9
PTBC  PUERTO BERRIO,      3.07 355   P         Pn        19 26 12.6 +1.4
PTBC                                 S         Sb        19 26 52.0 -2.9
CRUC  La Cruz             3.32 236   P         Pb        19 26 19.2 -2.5
BRJC  Barrancabermej      3.52   8   P         Pn        19 26 19.5 +2.1
OCAC  Ocana               4.83  11   P         Pn        19 26 37.9 +2.4
SDV   Santo Domingo       6.46  33   P         Pn        19 26 58.8 +0.8
          856nm,1.1s
SJCC  San Jacinto, C      6.47 351   P         Pn        19 26 58.7 +0.7
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*SOF **24** 19:35:02.7, 40°.80N±0°.01×27°.47E±0°.01, h9^{km}±3^{km},*
MD3.5/6
*AFAD **24** 19:35:03.2, 40°.77N×27°.52E, h18^{km}, ML3.3*
*ISK **24** 19:35:03.0, 40°.80N×27°.54E, h16^{km}, ML3.5/30*
*THE **24** 19:35:05.3, 41°N±3°×2°7E±°, h17^{km}±16^{km}, M3.0/10,*
MLh3.0/10

ISC 24 19:35:03.4±0.8**, 40°.80N**±0°.01×**27°.52E**±0°.01**, h17**^{km}±6^{km}**,**
n99, σ0^s.78/151**, 5C-5D, Turkey**

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Code  Station Name         Δ°  AZ°     Phase ID             Time      Res
                                     Op        ISC       h  m  s    ISC
TKR   Tekirdag            0.19   3   Pg        Pb        19 35 08.3 -0.1
TKR                                  Sg        Sg        19 35 11.4 +0.3
MRMT  Marmara Adasi       0.21 165   Pg        Pg        19 35 08.2 -0.2
MRMT                                 Sg        Sg        19 35 11.6 -0.2
MADA  Marmara adas        0.22 174   P         Pb        19 35 08.5 -0.4
MADA                                i IAML               19 35 11.0
          comp=N,8µm,0.2s
MADA                                i IAML               19 35 11.0
          comp=E,1µm,0.2s
MADA                                 S         Sg        19 35 11.7 -0.2
SART  Tekirdag            0.28 246   P         Pb        19 35 09.7 -0.4
SART                                 S         Sb        19 35 14.5 -0.1
RKY   Sarkoy-Tekirda      0.29 246   Pg        Pb        19 35 09.8 -0.3
RKY                                  Sg        Sb        19 35 14.9 +0.3
MURA  Muratl, TEK         0.35 355   P         Pb        19 35 11.3 +0.2
BOTS  Marmara Eregli      0.39  62   Pg        Pb        19 35 11.6 -0.3
BOTS                                 Sg        Sb        19 35 17.7  0.0
KRBG  Karabiga-Canak      0.45 203   Pg        Pb        19 35 12.7  0.0
BIGA  Biga-Canakkale      0.59 209   Pg        Pb        19 35 15.2 -0.1
BIGA                                 Sg        Sb        19 35 24.1 +0.7
BAND  Balkesir-Ban        0.63 135   P         Pg        19 35 15.4 -0.3
BAND                                 S         Sg        19 35 23.7 -0.4
BAND                                i IAML               19 35 27.0
          comp=N,1µm,0.2s
KESN  Edirne-Kesan        0.64 272   P         Pb        19 35 16.3  0.0
KESN                                 S         Sg        19 35 24.7  0.0
KESN                                i IAML               19 35 26.0
          comp=E,1µm,0.3s
SLVT  Silivri             0.67  50   Pg        Pg        19 35 16.4 -0.2
SLVT                                 Sg        Sb        19 35 26.2 +0.5
GOKT  Kean, EDRN          0.70 259   P         Pb        19 35 17.1  0.0
GOKT                                 S         Sb        19 35 26.7 +0.4
GOKT                                i IAML               19 35 30.0
          comp=E,1µm,0.3s
LPK   Lapseki             0.72 234   Pg        Pg        19 35 17.7 +0.2
UKOP  Uzunkopru-Edir      0.75 296   Pg        Pn        19 35 18.6 -0.6
UKOP                                 Sg        Sn        19 35 29.3 -0.8
LAPS  Lapseki, ANA        0.76 224   P         Pg        19 35 18.0 -0.2
GONE  Gonen-Balikesi      0.77 171   Pg        Pg        19 35 18.6 +0.3
ELBA  Catalca             0.77  63   P         Pb        19 35 17.9 -0.4
ELBA                                 S         Sb        19 35 28.3 -0.2
ERIK  Erikli-Kesan        0.78 260   Pg        Pg        19 35 18.6  0.0
SINB  Sinanoba-Istan      0.80  75   Pg        Pg        19 35 18.9  0.0
SINB                                 Sg        Sg        19 35 29.9 +0.5
VIZE  Kirklareli, Vi      0.81  17   P         Pb        19 35 18.9 -0.2
VIZE                                 S         Sb        19 35 29.5 -0.2
VIZE                                i IAML               19 35 32.0
          comp=E,604nm,0.1s
PHSR  Pinarhisar          0.83   0   Pg        Pg        19 35 19.5  0.0
CATL  atalca, ST          0.83  49   P         Pb        19 35 19.1 -0.2
CATL                                 S         Sb        19 35 30.2  0.0
CATL                                i IAML               19 35 32.0
          comp=N,1µm,0.6s
CATL                                i IAML               19 35 33.0
          comp=E,831nm,0.3s
KCTX  Karacabey (Bur      0.83 130   Pg        Pb        19 35 18.9 -0.5
CTKS  Kestanelik-??a      0.86  60   Pg        Pb        19 35 19.4 -0.4
CANM  Can-anakkale        0.87 205   Pg        Pg        19 35 19.9 -0.4
CTYL  Yalikoy Yolu        0.89  41   Pg        Pg        19 35 20.5 -0.1
YKBL  Yakuplu-Istanb      0.89  77   Pg        Pb        19 35 20.3  0.0
YENI  Yenice-Canakka      0.89 194   Pg        Pg        19 35 20.5 -0.2
GELI  Tayfur-Gelibol      0.90 243   Pg        Pb        19 35 20.2 -0.2
GELI                                 Sg        Sn        19 35 33.9 +0.2
AVCI  Avcilar-stanb       0.93  78   Pg        Pg        19 35 21.1 -0.3
AVCI                                 Sg        Sn        19 35 34.3 -0.3
SUSR  Susurluk-Balik      0.94 153   Pg        Pg        19 35 21.4 -0.3
BLKS  Balkesir-Sus        0.99 160   P         Pg        19 35 22.8 +0.3
BLKS                                 P         Pg        19 35 22.9 +0.3
BLKS                                 S         Sg        19 35 35.1 -0.4
BGKT  Bogazkoy            1.02  68   Pg        Pb        19 35 21.9 -0.6
KIRK  Kırklareli          1.03 342   P         Pn        19 35 22.9 -0.1
KIRK                                 S         Sb        19 35 35.9  0.0
KIRK                                i IAML               19 35 37.0
          comp=E,454nm,0.3s
KIRK                                i IAML               19 35 47.0
          comp=N,1µm,0.9s
CAVK  Edirne/Enez-Ca      1.04 264   P         Pg        19 35 23.4 -0.1
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CAVK				S	Sn	19 35 37.4	+0.2
CAVK				*i* IAML		19 35 39.0	
	comp=E,949nm,0.6s						
CAVK				*i* IAML		19 35 40.0	
	comp=N,1µm,0.4s						
CAVK	Edirne/Enez-Ca	1.04	264	⇑P	Pn	19 35 23.0	-0.1
ENEZ	Enez	1.04	267	P	Pg	19 35 23.3	-0.3
ENEZ				S	Sn	19 35 37.2	-0.1
ENEZ	Enez	1.04	267	Pg	Pg	19 35 23.5	-0.1
ARMT	Armutlu	1.04	103	Pg	Pn	19 35 23.2	-0.1
ARMN	Kirklareli, Me	1.06	356	P	Pb	19 35 23.3	0.0
ARMN				S	Sg	19 35 37.6	-0.2
BALY	Balya	1.06	176	P	Pg	19 35 24.0	+0.1
BALY				S	Sn	19 35 38.3	+0.3
YYLC	Yaylacik	1.10	116	P	Pn	19 35 24.2	+0.1
BKES	Balkesir-Mer	1.11	164	S	Sg	19 35 39.4	-0.1
ESNK	Esenk¶y	1.12	99	P	Pn	19 35 24.1	-0.1
ESNK				S	Sg	19 35 39.8	+0.1
MDNY	Mudanya-Bursa	1.12	112	Pn	Pb	19 35 24.4	+0.1
ALN	Alexandroupoli	1.12	275	P	Pb	19 35 24.4	+0.1
ALN				S	Sn	19 35 39.4	0.0
ALN	Alexandroupoli	1.12	275	Pn	Pb	19 35 24.5	+0.1
CNKL	anakkale-Mer	1.14	230	P	Pb	19 35 24.3	-0.2
CNKL				P	Pb	19 35 24.4	-0.2
CNKL				S	Sg	19 35 40.3	+0.1
CNKL				S	Sn	19 35 40.6	+0.9
BRGA	Burgazada-Ista	1.17	86	Pn	Pn	19 35 24.9	-0.1
HYBA	Heybeliada-Ist	1.19	86	Pn	Pn	19 35 25.1	-0.1
HYBA				Sn	Sg	19 35 41.3	-0.5
KAVV	Kandilli-Istan	1.19	77	Pn	Pn	19 35 24.1	-1.2
EDRB	Edirne	1.20	331	Pn	Pb	19 35 25.6	0.0
BUYA	Buyukada-Istan	1.22	86	Pn	Pn	19 35 25.2	-0.4
KLYT	Kilyos	1.23	68	Pn	Pb	19 35 25.9	-0.3
ECEA	Canakkale, Ece	1.28	234	P	Pb	19 35 27.1	+0.1
ECEA				S	Sg	19 35 45.2	+0.5
ECEA				*i* IAML		19 35 46.0	
	comp=N,606nm,0.5s						
ECEA				*i* IAML		19 35 49.0	
	comp=E,495nm,0.5s						
BAYC	CANAKKALE_Bayr	1.30	215	P	Pb	19 35 26.8	-0.5
BAYC				S	Sg	19 35 44.4	-1.0
BAYC				*i* IAML		19 35 46.0	
	comp=E,287nm,0.2s						
KURT	Yalova, Merkez	1.30	99	P	Pn	19 35 26.1	-0.7
KURT				P	Pb	19 35 26.3	-1.0
KURT				S	Sn	19 35 43.2	-0.5
TUZL	Tuzla-Istanbul	1.32	89	Pn	Pn	19 35 26.7	-0.3
EZN	Ezine	1.34	224	P	Pb	19 35 27.8	-0.2
EZN				S	Sb	19 35 44.6	-0.2
BUHA	Balikesir, Bur	1.34	195	P	Pb	19 35 28.4	+0.3
AVDN	Avdancik/Bursa	1.35	112	P	Pn	19 35 27.6	+0.1
SATE	Sancaktepe,	1.35	81	P	Pn	19 35 27.2	-0.2
SATE				S	Sn	19 35 44.7	-0.3
KRSK	Karsak	1.38	106	P	Pn	19 35 27.6	-0.2
GADA	Gvkgeada	1.38	244	P	Pb	19 35 28.5	-0.2
GADA				S	Sg	19 35 46.9	-1.1
GOAD	anakkale-G¶	1.39	243	P	Pb	19 35 28.7	-0.2
ULDT	Uludag	1.40	118	P	Pb	19 35 29.0	-0.1
DURS	Dursunbey	1.41	148	P	Pg	19 35 29.8	-0.6
DURS				S	Sg	19 35 47.7	-1.1
DURS				*i* IAML		19 35 49.0	
	comp=N,656nm,0.7s						
STEP	BALIKESIR_Sava	1.43	174	P	Pg	19 35 31.2	+0.2
STEP				S	Sb	19 35 47.5	-0.1
BOZC	Bozcaada	1.48	230	P	Pb	19 35 29.7	-0.7
RDO	Rodhopi	1.54	283	P	Pb	19 35 30.7	-0.8
RDO				S	Sn	19 35 49.7	0.0
SMTH	Samothraki Isl	1.55	258	P	Pn	19 35 30.2	0.0
SMTH				S	Sn	19 35 49.9	-0.1
AYVA	Ayvalik	1.62	203	P	Pg	19 35 33.6	-1.0
AYVA				S	Sg	19 35 55.2	-0.5
AYVA				*i* IAML		19 35 56.0	
	comp=N,527nm,0.5s						
AYVA				*i* IAML		19 35 57.0	
	comp=E,315nm,0.5s						
KOCA	Canakkale, Ayv	1.68	220	P	Pb	19 35 33.9	+0.1
SEMS	Kocaeli-K¶rfe	1.68	87	P	Pn	19 35 31.9	-0.1
PRK	Paraskevi	1.83	212	P	Pn	19 35 34.5	+0.5
PRK				S	Sn	19 35 57.3	+0.6
KDZ	Kurdzhali	1.84	297	P	Pn	19 35 34.5	+0.3
KDZ				S	Sb	19 35 59.3	0.0
KDZ	Kurdzhali	1.84	297	P	Pn	19 35 34.6	+0.4
JMB	Yambol	1.84	336	P	Pb	19 35 35.6	-1.0
JMB				Pg	Pg	19 35 37.9	-0.9
BILE	Bilecik/Merkez	1.91	109	P	Pn	19 35 35.8	+0.6
DIM	Dimitrovgrad	1.92	311	P	Pn	19 35 35.9	+0.7
DIM				S	Sb	19 36 00.6	-0.9
DIM	Dimitrovgrad	1.92	311	P	Pn	19 35 35.9	+0.7
DIM				Pg	Pg	19 35 39.3	-0.9
DIM				S	Sg	19 36 04.2	-0.9
DOMA	Ktahya-Doman	1.95	121	P	Pb	19 35 39.2	+0.7
LIA	Limnos Island	2.00	244	P	Pn	19 35 36.6	+0.2
LIA				S	Sn	19 36 01.6	+0.6
SIGR	SIGRI	2.04	219	P	Pn	19 35 37.4	+0.4
SIGR				S	Sn	19 36 02.9	+0.8
THAS	Thassos island	2.14	266	P	Pn	19 35 37.9	-0.4
RZN	Rozhen	2.28	294	P	Pn	19 35 41.1	+0.7
RZN				S	Sg	19 36 15.4	-1.3
KAVA	Kavala	2.29	276	P	Pn	19 35 41.3	+0.9
SAHE	Sakarya_HENDEK	2.53	88	⇓P	Pn	19 35 43.7	+0.1
SZH	Strazhitsa	2.72	335	S	Sg	19 36 28.6	-2.1
MMB	Musomishta	2.94	286	P	Pg	19 35 58.5	-1.3
ICOR	Ion Corvin	3.32	3	⇑P	Pn	19 35 56.9	+2.4
MLR	Muntele Rosu	4.83	347	⇑P	Pn	19 36 19.7	+4.3
SRE	Strehaia	5.00	322	⇓P	Pn	19 36 20.5	+3.0
PLOR	Plostina	5.08	353	⇓P	Pn	19 36 21.5	+2.7
VRI	Vrincioaia	5.09	354	⇓P	Pn	19 36 21.3	+2.4
TNR	Turnu Rosu	5.40	335	⇓P	Pn	19 36 25.5	+2.5
TESR	Tescani	5.74	354	⇑P	Pn	19 36 29.1	+1.3
MDVR	Moldovita	5.84	315	⇑P	Pn	19 36 29.5	+0.3

IDC 24 19:39:34.7±1.6, 1°.89N×124°.44E, h0^{km}, mb3.4/4, mbtmp3.5/4, Error ellipse: s-maj=196.6km s-min=22.4km az=64.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.77	156	P	P	19 44 48.2	-0.9
	1.7nm,1.1s,baz=334,slow=11,SNR=4.9						
	1.7nm,1.1s						
ASAR	Alice Springs	27.02	161	P	P	19 45 19.7	+1.0
	0.5nm,0.8s,baz=347,slow=12,SNR=3.6						
	0.5nm,0.8s						
MKAR	Makanchi Array	57.80	327	P	P	19 49 27.7	-0.2
	0.1nm,0.3s,baz=122,slow=7.1,SNR=5.7						
	0.1nm,0.3s						
KURBB	Kurchatov Arra	62.08	329	P	P	19 49 57.0	-0.2
	0.3nm,0.6s,baz=134,slow=4.3,SNR=2.0						
	0.3nm,0.6s						

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*HEL **24** 19:46:14.2±0.3, 67°.79N×20°.20E, h0^{km}, ML1.6, Suspected explosion*

*IDC **24** 19:46:16.6±1.2, 67°.87N×20°.64E, h0^{km}, mbtmp2.9/4, ML1.8/4, Error ellipse: s-maj=18.5km s-min=7.1km az=120.0*

UPP 24 19:46:14.7±0.0, 67°.84N×20°.20E, h0^{km}, ML2.3, Confirmed Induced event, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.12	25	P	Pg	19 46 17.4	+0.3
KUA				S	Sg	19 46 18.9	+0.2
RATU	Laukkuluspa	0.23	266	P	Pg	19 46 19.5	+0.4
NIKU	Nikkaluokta	0.44	274	P	Pg	19 46 22.6	-0.5
LANU	Lannavaara	0.71	72	P	Pg	19 46 28.0	-0.3
LANU	Lannavaara	0.71	72	PG	Pg	19 46 27.6	-0.7
LANU				SG	Sg	19 46 36.8	-0.7
MASU	Masugnsbyn	0.79	118	P	Pg	19 46 29.6	-0.2
SALU	Saltoluokta	0.80	235	P	Pg	19 46 29.7	-0.2
SALU	Saltoluokta	0.80	235	*e*P	Pg	19 46 29.4	-0.5
KIF	Kilpisjarvi	1.19	11	*e*P	Pg	19 46 36.9	-0.5
KIF	Kilpisjarvi	1.19	11	PG	Pg	19 46 37.1	-0.4
	baz=190						
KIF				MSG		19 46 52.8	
	comp=Z,7.8nm,0.2s						
KIF				SG	Sb	19 46 54.0	0.0
PAJU	Pajala	1.39	125	P	Pg	19 46 39.9	-1.5
PAJU	Pajala	1.39	125	PN	Pg	19 46 39.6	-1.7
PAJU				SN	Sb	19 46 59.8	-0.1
HEF	Hetta	1.42	65	PN	Pn	19 46 40.9	-0.8
HEF				MSG		19 46 57.5	
	comp=Z,3.8nm,0.2s						
HEF				SN	Sb	19 47 00.5	0.0
ERTU	Ertsjaerv	1.51	148	P	Pn	19 46 41.8	-1.1
ERTU	Ertsjaerv	1.51	148	PN	Pn	19 46 42.0	-1.0
KLF	Kolari	1.57	111	PN	Pn	19 46 43.5	-0.3
KLF				MSG		19 47 00.6	
	comp=Z,3.4nm,0.2s						
KTK1	Kautokeino	1.63	42	PN	Pn	19 46 44.6	0.0
KTK1				SN	Sg	19 47 08.5	+1.6
HARU	Harads	1.71	169	P	Pn	19 46 45.6	-0.2
TRO	Tromso	1.86	346	PG	Pb	19 46 48.7	-0.7
TRO				SG	Sb	19 47 13.6	+0.5
KALU	Kalix	2.35	146	PG	Pn	19 46 55.3	+0.8
TOF	Tornio	2.40	136	PG	Pn	19 46 55.9	+0.7
TOF				MSG		19 47 24.2	
	comp=Z,3.2nm,0.2s						
ARA0	ARCESS Array S	2.58	46	PB	Pn	19 46 59.2	+1.5
	baz=229						
ARA0				SG	Sb	19 47 33.9	-0.1
ARCES	ARCESS Array B	2.58	46	Pn	Pn	19 46 59.1	+1.4
	comp=Z,0.3nm,0.3s,baz=229,slow=14,SNR=28						
ARCES				Lg	Lg	19 47 31.9	
	comp=Z,1.1nm,0.3s,baz=228,slow=25,SNR=16						
	comp=Z,1.8nm,0.6s						
RNF	Rovaniemi	2.58	116	PG	Pn	19 46 59.3	+1.7
RNF				SG	Sb	19 47 34.0	0.0
RAJF	Raja-Jooseppi	3.10	74	PB	Pn	19 47 06.2	+1.5
RAJF				SB	Sn	19 47 44.2	+1.7
KEV	Kevo	3.13	49	SB	Sn	19 47 44.8	+1.6
BURU	Burvik	3.31	171	PG	Pn	19 47 10.2	+2.5
VRF	Varrio	3.58	87	PG	Pb	19 47 17.3	-1.4
VRF				SG	Sb	19 48 05.0	+2.4
OLKF	Oulanka, Finla	3.91	109	PB	Pn	19 47 18.2	+2.2
UMAU	Umeaa	3.98	177	PB	Pn	19 47 19.7	+2.9
FINES	FINESS Array B	6.90	156	Pn	Pn	19 47 59.6	+2.7
	baz=338,slow=11,SNR=1.3						
FINES				Pg	Pb	19 48 17.9	+2.6
	comp=Z,0.1nm,0.3s,baz=345,slow=15,SNR=4.5						
FINES				Sn	Sn	19 49 15.9	-0.1
	comp=Z,0.1nm,0.3s,baz=342,slow=22,SNR=2.1						
FINES				Lg	Lg	19 49 50.2	
	comp=Z,0.2nm,0.3s,baz=340,slow=26,SNR=6.6						
	comp=Z,0.6nm,0.7s						
NOA	NORSAR Array B	7.85	214	Pn	Pn	19 48 12.4	+2.4
	baz=24,slow=12,SNR=1.6						
NOA				Lg	Lg	19 50 24.1	
	baz=21,slow=20,SNR=1.7						
	comp=Z,0.2nm,0.7s						
HFS	Hagfors	8.24	203	Pn	Pn	19 48 15.6	+0.2
	comp=Z,0.1nm,0.3s,baz=2.9,slow=8.9,SNR=4.0						
	comp=Z,6.1nm,1.3s						

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*NEIC **24** 19:51:04.5±1.3, 18°.3S±0°.1×177°.8W±0°.2, h614^{km}±7^{km}, mb4.1/24, Error ellipse: s-maj=25.6km s-min=14.3km az=105.0*

*IDC **24** 19:51:07.6±22.0, 18°.15S×178°.10W, h637^{km}±206^{km}, mb3.2/3, mbtmp4.2/3, Error ellipse: s-maj=188.0km s-min=91.8km az=84.0*

ISC 24 19:51:05.4±1.7, 18°.3S±0°.1×178°.0W±0°.2, h622^{km}±15^{km}, n33, σ0^{s}.64/38, mb4.1/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.84	277		P	19 52 31.8	+0.2
MARNC	Mare, Loyalty	13.57	254	P	P	19 53 58.4	-0.9
QRZ	Quartz Range	23.93	198	P	P	19 55 32.9	0.0
DSZ	Denniston Nort	24.99	198	P	P	19 55 41.1	-1.1
FOZ	Fox Glacier	27.23	200	P	P	19 56 01.0	-0.7
WHZ	Wether Hill Ro	29.93	200	P	P	19 56 24.8	-0.3
CTAO	Charters Tower	33.81	261	P	P	19 56 58.5	+0.2
CTAO				IAmb	IAmb	19 57 17.6	
	comp=Z,5.4nm,1.1s						
CAN	Canberra	33.83	233	P	P	19 56 58.8	+0.5
TOO	Toolangi	37.28	231	P	P	19 57 27.9	+1.3
TOO				IAmb	IAmb	19 57 28.6	
	comp=Z,2.8nm,1.0s						
COEN	Coen	37.54	271	P	P	19 57 30.2	+1.2
COEN				IAmb	IAmb	19 57 36.5	
	comp=Z,6.5nm,1.2s						
STKA	Stephens Creek	38.84	242	P	P	19 57 40.4	+1.1
	comp=Z,1.7nm,0.5s,baz=96,slow=9.3,SNR=10.0						
	comp=Z,1.7nm,0.5s						
STKA	Stephens Creek	38.84	242	P	P	19 57 39.9	+0.7
BBOO	Buckleboo	43.61	241	P	P	19 58 17.1	+0.3
BBOO				IAmb	IAmb	19 58 18.4	
	comp=Z,6.6nm,0.9s						
BBOO				PcP	PcP	19 59 49.4	-0.4
WR8	Warramunga Arr	44.84	260	P	P	19 58 26.0	-0.3
WR8				IAmb	IAmb	19 58 27.1	
	comp=Z,5.8nm,1.4s						
WRA	Warramunga Arr	44.99	260	P	P	19 58 27.7	+0.2
	comp=Z,1.0nm,0.3s,baz=96,slow=7.5,SNR=40						
WRA				PcP	PcP	19 59 55.0	+0.1
	comp=Z,0.3nm,0.5s,baz=86,slow=3.3,SNR=1.8						
	comp=Z,1.0nm,0.3s						
WRA	Warramunga Arr	44.99	260	P	P	19 58 26.9	-0.6
AS31	Alice Springs	45.11	255	P	P	19 58 28.8	+0.4
AS31				PcP	PcP	19 59 55.4	+0.1
ASAR	Alice Springs	45.11	255	P	P	19 58 28.8	+0.4
	comp=Z,4.1nm,0.6s,baz=93,slow=7.5,SNR=141						
ASAR				PcP	PcP	19 59 55.4	+0.1
	comp=Z,0.6nm,0.5s,baz=105,slow=3.9,SNR=9.6						
	comp=Z,4.1nm,0.6s						
ASAR	Alice Springs	45.11	255	P	P	19 58 28.2	-0.2
ASAR					PcP	19 59 55.0	-0.3
MTN	Manton Dam	49.22	269	P	P	19 58 58.3	-0.8
MTN				IAmb	IAmb	19 59 16.6	
	comp=Z,6.9nm,1.1s						
FORT	Forrest	50.25	245	P	P	19 59 05.8	-0.6
FORT				IAmb	IAmb	19 59 11.9	
	comp=Z,11nm,1.2s						
KNRA	Kununurra	50.88	264	P	P	19 59 11.5	+0.3
KNRA				IAmb	IAmb	19 59 34.1	
	comp=Z,16nm,1.2s						
FITZ	Fitzroy Crossi	53.40	261	P	P	19 59 28.8	-0.2
MBWA	Marble Bar	58.41	256	P	P	20 00 03.2	-0.3
MBWA				IAmb	IAmb	20 00 15.3	
	comp=Z,18nm,1.3s						
JGF	Kuroka	68.28	322	P	P	20 01 05.8	-0.2
INU	Inuyama	68.31	322	P	P	20 01 07.5	+1.4
INU				IAmb	IAmb	20 01 20.0	
	comp=Z,17nm,1.4s						
QSPA	South Pole Qui	71.79	180	P	P	20 01 26.9	+0.6
YULB	Yu-li	72.32	303	P	P	20 01 29.0	-0.9
M16K	Timber Creek	80.48	9	P	P	20 02 13.3	-0.2
L18K	Granite Mounta	81.97	10	P	P	20 02 20.9	-0.3
L18K				IAmb	IAmb	20 02 21.9	
	comp=Z,7.2nm,1.2s						
BPAW	Bear Paw Mtn.	84.72	12	P	P	20 02 34.8	0.0
BRTR	Keskin Array B	145.34	315	PKPbc	PKPbc	20 09 35.3	-0.1
	comp=Z,0.4nm,0.6s,baz=57,slow=5.3,SNR=2.3						
BRTR	Keskin Array B	145.34	315		PKPdf	20 09 34.1	0.0

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*IDC **24** 19:55:59.6±4.4, 0°.16N×98°.19E, h0^{km}, mb3.4/5, mbtmp3.4/5, Error ellipse: s-maj=187.5km s-min=24.5km az=57.0*

*DJA **24** 19:56:09.5±0.3, 1°N±2°×9°9E±°, h60^{km}±8^{km}, M4.2/20, mb4.2/8, MLv4.2/20*

ISC 24 19:56:09.2±0.9, 0°.69N±0°.06×98°.57E±0°.06, h43^{km}, n36, σ1^{s}.30/29, mb3.5/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBSI	Pulau Batu	0.80	201	P	Pn	19 56 25.0	+1.0
PBSI				S	Sn	19 56 36.7	+2.0
MNSI	Mandailing Nat	1.01	84	P	Pn	19 56 28.1	+1.2
GSI	Gunungsitoli	1.17	301	P	Pn	19 56 30.1	+1.0
SISI	Saibi	2.07	166	P	Pn	19 56 41.8	+0.3
PSI	Prapat	2.12	10	P	Pn	19 56 42.0	-0.3
PPI	Padang Panjang	2.15	122	P	Pn	19 56 44.6	+2.0
PDSI	Padang	2.47	130	P	Pn	19 56 48.1	+1.1
TSI	Tuntungan	2.79	360	P	Pn	19 56 52.4	+1.0
SNSI	Sinabang, Aceh	2.82	307	P	Pn	19 56 52.4	+0.7
TPTI		2.91	331	P	Pn	19 56 53.0	+0.1
KCSI	Kotacane, Aceh	2.92	344	P	Pn	19 56 53.5	+0.3
PPSI	Pulau Pagai	3.72	157	P	Pn	19 57 03.2	-0.9
KRJI	Kerinci	4.00	134	P	Pn	19 57 08.4	+0.3
MLSI	Meulaboh, Aceh	4.16	329	P	Pn	19 57 10.9	+0.7
IPM	Ipoh	4.49	33	P	Pn	19 57 15.8	+1.0
LHMI	Lhok Sumawe	4.79	340	P	Pn	19 57 19.5	+0.7
KULM	Kulim	5.02	24	P	Pn	19 57 23.4	+1.4
MASI	Maura Aman, Be	5.29	136	P	Pn	19 57 28.3	+2.6
	0.4nm79nm,1.1s						
DSRI	Dabo	6.12	101	P	Pn	19 57 37.7	+0.6
	0.1nm24nm,0.8s						
MNAI	Manna	6.66	139	P	Pn	19 57 45.4	+0.8
EGSI	Enggano, Bengk	7.05	148	P	Pn	19 57 50.3	+0.4
	39nm,1.2s						
MDSI	Maura Dua	7.61	133	P	Pn	19 57 58.6	+1.1
	0.1nm11nm,0.9s						
KLSI		8.15	131	P	Pn	19 58 06.0	+1.0
	6.9nm,0.7s						
KASI	Kota Agung	8.55	136	P	Pn	19 58 10.3	-0.2
	16nm,0.9s						
BBJI	Bungbulang	12.15	132	P	Pn	19 58 56.0	-3.8
H08S2	Diego Garcia H	27.29	252	T	T	20 29 21.0	
	baz=73,slow=76,SNR=20						
H08S3	Diego Garcia H	27.30	252	T	T	20 29 19.9	
	baz=73,slow=76,SNR=35						
H08S1	Diego Carcia H	27.31	252	T	T	20 29 20.8	
	baz=73,slow=76,SNR=15						
WRA	Warramunga Arr	40.60	122	P	P	20 03 41.0	-4.2
	0.5nm,0.8s,baz=299,slow=7.7,SNR=1.9						
	0.5nm,0.8s						
ASAR	Alice Springs	42.00	128	P	P	20 03 53.3	-3.3
	0.3nm,0.8s,baz=311,slow=8.4,SNR=4.8						
	0.3nm,0.8s						
SONM	Songino Array	47.45	7	P	P	20 04 41.2	+1.5
	0.3nm,0.6s,baz=195,slow=7.1,SNR=2.2						
	0.3nm,0.6s						
MKAR	Makanchi Array	48.07	345	P	P	20 04 43.5	-0.9
	0.2nm,0.4s,baz=148,slow=8.7,SNR=5.3						
	0.2nm,0.4s						
ZALV	Zalesovo Beam	54.28	350	P	P	20 05 30.8	-0.1
	0.4nm,0.4s,baz=176,slow=7.3,SNR=2.3						
	0.4nm,0.4s						
H04N2	CROZET ISLANDS	62.13	215	T	T	21 13 32.1	
	baz=55,slow=75,SNR=16						
H04N1	CROZET ISLANDS	62.15	215	T	T	21 13 33.9	
	baz=55,slow=75,SNR=13						
H04N3	CROZET ISLANDS	62.15	215	T	T	21 13 26.7	
	baz=55,slow=75,SNR=15						

RSNC 24 19:56:36.4±0.0, 3°N±1°×7°4W±°, h5^{km}±2^{km}, M3.2, mb3.9, ML3.0, Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URMC	La Uribe, Meta	0.28	229	P	Pg	19 56 40.4	-1.4
URMC				S	Sg	19 56 44.3	-1.2
PRAC	Prado	0.77	292	P	Pg	19 56 48.5	-2.7
PRAC				S	Sg	19 56 58.4	-2.8
VILC	Villavicencio,	0.83	35	P	Pg	19 56 50.2	-2.1
VILC				S	Sg	19 57 01.7	-1.4
CVER	Cruz Verde, Cu	1.09	5	P	Pg	19 56 54.2	-3.1
CVER				S	Sg	19 57 09.5	-2.0
ORTC	Ortega, Tolima	1.18	294	P	Pg	19 56 55.7	-3.3
ORTC				S	Sg	19 57 12.0	-2.2
CHIC	Chingaza	1.27	20	P	Pg	19 56 57.6	-3.2
CHIC				S	Sg	19 57 15.5	-1.8
MACC	Macarena, Meta	1.32	166	P	Pn	19 56 59.0	-2.5
MACC				S	Sg	19 57 16.3	-2.5
BETC	Betania	1.47	240	P	Pn	19 57 01.5	-2.2
BETC				S	Sn	19 57 21.0	-2.3
ANIL	Santa Ana	1.62	311	P	Pn	19 57 03.6	-2.3
ANIL				S	Sn	19 57 24.8	-2.5
GARC	Garzon, Huila	1.81	227	P	Pn	19 57 07.4	-1.1
GARC				S	Sn	19 57 30.3	-1.6
RECRC	Villamaria, Ca	1.92	322	P	Pn	19 57 08.8	-1.5
RECRC				S	Sn	19 57 33.1	-2.1
NIZA	Niza - Manizal	2.07	321	P	Pn	19 57 11.6	-0.5
NIZA				S	Sn	19 57 37.7	-0.8
PTGC	Puerto Gaitan,	2.17	69	P	Pn	19 57 13.1	-0.1
PTGC				S	Sb	19 57 42.9	-0.6
SPBC	San Pablo de B	2.21	3	P	Pn	19 57 13.9	0.0
SPBC				S	Sb	19 57 43.7	-1.0
NORC	Norcasia	2.23	342	P	Pn	19 57 12.3	-1.8
NORC				S	Sn	19 57 40.8	-1.3
YOTC	Yotoco, Valle	2.24	284	P	Pn	19 57 12.5	-1.8
YOTC				S	Sn	19 57 43.4	+1.0
FLOC	Florencia	2.36	219	P	Pn	19 57 16.2	+0.4
FLOC				S	Sn	19 57 46.6	+1.4
JAMC	Jamundi, Valle	2.51	265	P	Pn	19 57 18.0	-0.1
JAMC				S	Sb	19 57 52.5	-0.9
PLMC	San Jos del P	2.57	305	P	Pn	19 57 18.0	-0.8
PLMC				S	Sn	19 57 51.8	+1.4
POPC	Popayan, Colom	2.65	251	P	Pn	19 57 22.1	+2.0
POPC				S	Sb	19 57 56.8	-0.8
RUSC	La Rusia	2.67	24	P	Pn	19 57 20.4	-0.2
RUSC				S	Sn	19 57 54.2	+0.5
CBOC	Ciudad Bolivar	3.04	323	P	Pn	19 57 27.0	+1.7
CBOC				S	Sn	19 58 04.5	+2.3
HELC	Santa Helena	3.06	334	P	Pn	19 57 25.3	-0.5
HELC				S	Sn	19 58 04.1	+1.1
PTBC	PUERTO BERRIO,	3.10	355	P	Pn	19 57 24.9	-1.2
PTBC				S	Sn	19 58 04.0	+0.4
PTLC	Puerto Leguiza	3.30	191	P	Pg	19 57 39.6	-0.1
PTLC				S	Sg	19 58 25.0	+2.6
PAMC	Pamplona, Colo	4.15	21	P	Pn	19 57 41.0	+0.1
PAMC				S	Sn	19 58 33.7	+3.6
OCAC	Ocana	4.85	10	P	Pn	19 57 50.5	+0.2
OCAC				S	Sn	19 58 47.5	+0.5
SDV	Santo Domingo	6.46	33	P	Pn	19 58 11.8	-0.6
	12nm,1.9s						
SDV				S	Sn	19 59 20.0	-6.7
	12nm,1.9s						
SJCC	San Jacinto, C	6.50	351	P	Pn	19 58 10.7	-2.2
SJCC				S	Sn	19 59 11.5	-16

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*NEIC **24** 20:03:11.9±2.1, 39°.27N±0°.04×30°.11W±0°.05, h10^{km}±1^{km}, mb4.5/21, Error ellipse: s-maj=8.2km s-min=5.1km az=229.0*

*IDC **24** 20:03:11.4±0.7, 39°.35N×30°.12W, h0^{km}, mb3.8/19, mbtmp3.8/19, Error ellipse: s-maj=21.1km s-min=12.9km az=171.0*

*SVSA **24** 20:03:13.4±1.0, 39°.35N×29°.95W, h10^{km}, ML3.9(INMG), Error ellipse: s-maj=7.0km s-min=4.9km az=46.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia Atlntico N*

ISC 24 20:03:11.1±0.5, 39°.14N±0°.08×29°.95W±0°.05, h10^{km}, n66, σ2^{s}.02/78, mb4.3/25, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H07S1	FLORES T-PHASE	1.00	284	Pn	Pg	20 03 28.9	-1.4
H07S1				Sn	Sg	20 03 38.1	-5.2
H07S1				T	T	20 04 34.0	
	SNR=98						
PCED	Cedros	1.10	117	*e*P	Pn	20 03 31.4	-1.2
PCED				*e*S	Sg	20 03 44.9	-1.8
PCED				*i* IAML		20 03 46.1	
PCED				*i* IAML		20 03 46.7	
PCED				*i* IAML		20 03 47.1	
CALA	Caldeira	1.13	120	*e*P	Pn	20 03 32.4	-0.6
CALA				*e*S	Sb	20 03 46.4	-1.1
CALA				*i* IAML		20 03 47.2	
CALA				*i* IAML		20 03 47.4	
CALA				*i* IAML		20 03 47.5	
PFCBR	Castelo Branco	1.15	122	*e*P	Pg	20 03 32.6	-0.5
PFCBR				*e*S	Sb	20 03 46.5	-1.4
PFCBR				*i* IAML		20 03 48.0	
PFCBR				*i* IAML		20 03 48.2	
PFCBR				*i* IAML		20 03 48.9	
HOR	Horta	1.20	120	*e*P	Pg	20 03 33.1	-1.1
HOR				*e*S	Sb	20 03 48.4	-1.2
HOR				*i* IAML		20 03 49.6	
HOR				*i* IAML		20 03 50.0	
HOR				*i* IAML		20 03 50.0	
PCAN	Candelaria	1.33	120	*e*P	Pb	20 03 35.2	-1.0
PCAN				*e*S	Sb	20 03 51.5	-1.8
PCAN				*i* IAML		20 03 53.8	
PCAN				*i* IAML		20 03 54.0	
PCAN				*i* IAML		20 03 54.1	
PICO	Pico	1.35	118	*e*P	Pb	20 03 35.3	-1.3
PICO				*e*S	Sb	20 03 51.9	-2.0
PICO				*i* IAML		20 03 53.7	
PICO				*i* IAML		20 03 54.1	
PICO				*i* IAML		20 03 54.4	
ROSA	Rosais	1.40	107	*e*P	Pn	20 03 35.0	-1.7
ROSA				*e*S	Sn	20 03 51.3	-3.9

ROSA				i IAML		20 03 52.6	
ROSA				i IAML		20 03 53.3	
ROSA				i IAML		20 03 56.4	
PPNO	Prainha do Nor	1.48	116	eP	Pn	20 03 37.1	-0.7
PPNO				eS	Sn	20 03 54.6	-2.7
PPNO				i IAML		20 04 00.9	
PPNO				i IAML		20 04 01.4	
SRBC	Serra Branca	1.49	94	eS	Sn	20 03 53.1	-4.4
SRBC				i IAML		20 03 54.3	
SRBC				i IAML		20 03 54.6	
SRBC				i IAML		20 03 55.0	
PMAN	Manadas	1.54	109	eP	Pn	20 03 37.0	-1.6
PMAN				eS	Sn	20 03 54.9	-3.8
PMAN				i IAML		20 03 56.0	
PMAN				i IAML		20 03 59.3	
PMAN				i IAML		20 04 02.0	
PID	Ribeirinha	1.59	115	eP	Pn	20 03 38.3	-1.1
PID				eS	Sn	20 03 57.1	-2.9
PID				i IAML		20 04 02.4	
PID				i IAML		20 04 03.9	
PID				i IAML		20 04 04.6	
ADH	Angra Heroismo	2.18	102	eP	Pn	20 03 45.8	-1.5
ADH				eS	Sn	20 04 10.1	-4.2
ADH				i IAML		20 04 11.2	
ADH				i IAML		20 04 11.4	
ADH				i IAML		20 04 11.4	
PAGU	Agualva, Azore	2.19	99	eP	Pn	20 03 45.9	-1.7
PAGU				eS	Sn	20 04 10.3	-4.4
PAGU				i IAML		20 04 11.0	
PAGU				i IAML		20 04 11.9	
PAGU				i IAML		20 04 12.4	
PSCM	Serra do Cume	2.26	100	eP	Pn	20 03 47.0	-1.4
PSCM				eS	Sn	20 04 12.4	-4.0
PSCM				i IAML		20 04 15.8	
PSCM				i IAML		20 04 16.4	
PSCM				i IAML		20 04 16.8	
CMLA	Cha da Macela	3.74	110		Pn	20 04 08.6	-0.3
CMLA				Sn	Sn	20 04 51.3	-1.7
ESDC	Sonseca Array	20.07	80	P	Pn	20 07 45.7	-0.7
	0.7nm,0.8s,baz=288,slow=9.4,SNR=6.7						
	0.7nm,0.8s						
MD01	Midelt array s	21.29	99		P	20 07 59.4	+1.5
MD31	MD31	21.29	99		P	20 07 59.2	+1.3
MD31				IAmb	IAmb	20 08 10.3	
	comp=Z,25nm,1.5s						
MDT	Midelt	21.43	99	P	P	20 08 03.1	+3.8
	comp=Z,0.9nm,0.3s,baz=290,slow=18,SNR=4.1						
	comp=Z,0.9nm,0.3s						
DRLN	Deer Lake	22.07	306	P	P	20 08 02.8	-3.2
DRLN				IAmb	IAmb	20 08 39.7	
	comp=Z,32nm,1.2s						
EKA	Eskdalemuir Ar	24.13	39	P	P	20 08 28.2	+1.2
	comp=Z,1.5nm,0.9s,baz=236,slow=13,SNR=3.4						
	comp=Z,1.5nm,0.9s						
BORG	Borgarnes	26.14	8	P	P	20 08 41.5	-3.5
LMN	Caledonia Moun	26.41	296	P	P	20 08 44.3	-3.4
BFO	Black Forest	28.89	59	P	P	20 09 09.8	0.0
BFO				IAmb	IAmb	20 09 15.3	
	comp=Z,15nm,1.5s						
FDMO	Fiordimonte	32.41	69	P	P	20 09 40.9	-0.1
GERES	GERESS Array B	32.47	58	P	P	20 09 42.4	+0.8
	comp=Z,0.3nm,0.6s,baz=298,slow=2.9,SNR=3.8						
	comp=Z,0.3nm,0.6s						
NB2	NORSAR Subarra	33.47	36	P	P	20 09 51.3	+1.2
	comp=Z,9.3nm,1.2s,baz=248,slow=9.3						
NOA	NORSAR Array B	33.47	36	P	P	20 09 51.6	+1.5
	comp=Z,1.8nm,0.9s,baz=249,slow=9.1,SNR=7.4						
	comp=Z,1.8nm,0.9s						
NC303	NORSAR Array S	33.61	35	P	P	20 09 52.5	+1.2
HFS	Hagfors	34.32	38	P	P	20 09 60.0	+2.5
	comp=Z,1.2nm,0.8s,baz=205,slow=6.4,SNR=2.1						
	comp=Z,1.2nm,0.8s						
OJC	Ojcow	36.43	56	P	P	20 10 15.6	-0.1
TORD	Torodi Ar. Bea	38.10	124	P	P	20 10 33.2	+3.0
	comp=Z,1.4nm,1.0s,baz=324,slow=11,SNR=5.4						
	comp=Z,1.4nm,1.0s						
DBIC	Dimbokro	39.46	138	P	P	20 10 46.1	+4.5
	comp=Z,6.1nm,1.0s,baz=354,slow=7.8,SNR=3.9						
	comp=Z,6.1nm,1.0s						
DBIC	Dimbokro	39.46	138	P	P	20 10 43.8	+2.2
DBIC				IAmb	IAmb	20 10 48.5	
	comp=Z,11nm,1.2s						
FINES	FINESS Array B	40.52	38	P	P	20 10 51.2	+1.2
	comp=Z,3.0nm,0.8s,baz=250,slow=5.5,SNR=9.5						
	comp=Z,3.0nm,0.8s						
FINES	FINESS Array B	40.52	38	P	P	20 10 50.0	+0.1
FIA1	FINESS Array S	40.52	38	P	P	20 10 50.3	+0.3
KIEV	Kiev	42.38	54	P	P	20 11 05.5	+0.2
AKASG	Malin Array Be	42.39	54	P	P	20 11 06.3	+0.9
	comp=Z,0.4nm,0.4s,baz=275,slow=8.6,SNR=2.8						
	comp=Z,0.4nm,0.4s						
AKASG	Malin Array Be	42.39	54	P	P	20 11 05.3	-0.1
AKBB	Malin Array Si	42.39	54	P	P	20 11 05.5	+0.2
BRTR	Keskin Array B	48.17	68	P	P	20 11 53.1	+1.5
	comp=Z,0.5nm,0.7s,baz=280,slow=8.1,SNR=2.5						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	58.08	301	P	P	20 13 04.3	-0.4
	comp=Z,0.5nm,0.9s,baz=64,slow=6.8,SNR=4.3						
	comp=Z,0.5nm,0.9s						
PDAR	Pinedale Array	58.08	301	P	P	20 13 03.8	-1.0
PV21	Cone Mtn., Par	59.58	297	P	P	20 13 14.3	-0.9
F30M	Barrier River	60.03	335	P	P	20 13 17.6	0.0
F30M				IAmb	IAmb	20 13 36.3	
	comp=Z,8.0nm,1.5s						
TXAR	Lajitas Array	60.21	285	P	P	20 13 20.8	+1.2
	comp=Z,0.3nm,0.7s,baz=77,slow=5.6,SNR=4.8						
	comp=Z,0.3nm,0.7s						
TXAR	Lajitas Array	60.21	285	P	P	20 13 19.5	0.0
H29M	Whitestone	61.63	334	P	P	20 13 29.1	+0.6
H29M				IAmb	IAmb	20 13 39.0	
	comp=Z,3.6nm,1.2s						
ELK	Elko	62.78	302	P	P	20 13 38.5	+1.5
	comp=Z,0.6nm,0.4s,baz=55,slow=3.5,SNR=5.1						
	comp=Z,0.6nm,0.4s						
ELK	Elko	62.78	302	P	P	20 13 37.1	+0.2
ELK				IAmb	IAmb	20 13 44.2	
	comp=Z,5.3nm,1.4s						
D22K	Ayikyak River	64.30	340	P	P	20 13 46.7	+0.5
LPAZ	La Paz	65.68	221	P	P	20 14 00.1	+3.6
	comp=Z,1.3nm,0.9s,baz=359,slow=4.3,SNR=3.7						
	comp=Z,1.3nm,0.9s						
LPAZ	La Paz	65.68	221	P	P	20 13 56.8	+0.3
LPAZ				IAmb	IAmb	20 14 09.4	
	comp=Z,2.5nm,0.9s						
KURK	Kurchatov	70.86	40	P	P	20 14 28.3	+0.4
KURK				IAmb	IAmb	20 14 30.1	
	comp=Z,2.0nm,0.7s						
KURBB	Kurchatov Arra	70.88	40	P	P	20 14 29.6	+1.6
	comp=Z,2.4nm,1.0s,baz=311,slow=6.4,SNR=15						
	comp=Z,2.4nm,1.0s						
ZAA0	Zalesovo Array	71.67	34		P	20 14 33.5	+0.8
ZAA0				IAmb	IAmb	20 14 35.5	
	comp=Z,4.5nm,1.1s						
ZALV	Zalesovo Beam	71.67	34	P	P	20 14 34.8	+2.1
	comp=Z,2.5nm,0.9s,baz=303,slow=8.7,SNR=13						
	comp=Z,2.5nm,0.9s						
ZALV	Zalesovo Beam	71.67	34		P	20 14 33.0	+0.3
MKAR	Makanchi Array	75.25	41	P	P	20 14 55.6	+1.6
	comp=Z,3.4nm,0.8s,baz=320,slow=5.5,SNR=30						
	comp=Z,3.4nm,0.8s						
MKAR	Makanchi Array	75.25	41		P	20 14 54.8	+0.8
KSH	Kashi	76.50	50	P	P	20 15 04.6	+3.2
KSH				pP	PcP	20 15 09.3	-3.8
KSH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SONM	Songino Array	85.09	28	P	P	20 15 49.0	+1.8
	comp=Z,0.9nm,0.7s,baz=315,slow=5.8,SNR=6.7						
	comp=Z,0.9nm,0.7s						
SONM	Songino Array	85.09	28	P	P	20 15 48.7	+1.5
ASAR	Alice Springs	159.37	46	PKPab	PKPab	20 23 48.3	+0.7
	comp=Z,0.3nm,0.8s,baz=319,slow=3.6,SNR=4.9						

IDC 24 20:05:40.1±2.7**, 50°.57N×129°.48W, h0^{km}, mbtmp3.2**/3**, ML3.5**/2**, Error ellipse: s-maj=34.2km s-min=21.1km az=85.0, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBB	Bella Bella	1.83	27	Pn	Pn	20 06 11.2	-1.7
	3.4nm,0.3s,baz=235,slow=6.2,SNR=58						
BBB				Sn	Sn	20 06 34.5	-2.2
	18nm,0.3s,baz=70,slow=18,SNR=5.7						
YKA	Yellowknife Ar	14.45	29	Pn	Pn	20 09 03.1	-2.5
	0.1nm,0.3s,baz=228,slow=12,SNR=3.6						
YKA				Sn	Sn	20 11 37.1	-9.3
	0.1nm,0.3s,baz=209,slow=21,SNR=3.5						
	0.1nm,0.5s						
PDAR	Pinedale Array	15.71	112	Pn	P	20 09 25.0	-2.1
	0.1nm,0.3s,baz=304,slow=16,SNR=4.1						
	0.6nm,0.9s						
ILAR	Eielson Array	16.92	334	Pn	Pn	20 09 38.6	+0.7
	1.0nm,1.0s,baz=142,slow=10,SNR=6.7						
H11N2	WAKE ISLAND Hy	58.31	263	T	T	21 18 05.5	
	baz=42,slow=75,SNR=76						
H11N3	WAKE ISLAND Hy	58.31	263	T	T	21 18 11.8	
	baz=42,slow=75,SNR=68						
H11N1	WAKE ISLAND Hy	58.32	263	T	T	21 18 07.1	
	baz=42,slow=75,SNR=44						
H11S1	WAKE ISLAND Hy	59.34	262	T	T	21 19 19.1	
	baz=46,slow=75,SNR=6.7						
H11S2	WAKE ISLAND Hy	59.35	262	T	T	21 19 22.8	
	baz=46,slow=75,SNR=6.7						
H11S3	WAKE ISLAND Hy	59.35	262	T	T	21 19 18.9	
	baz=46,slow=75,SNR=6.8						

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*IDC **24** 20:11:12.9±0.6, 3°.44N×74°.24W, h0^{km}, mb3.9/17, mbtmp3.9/18, ML3.5/1, MS3.8/1, Error ellipse: s-maj=18.7km s-min=11.6km az=77.0*

*RSNC **24** 20:11:14.5±0.0, 3°N±1°×7°4W±°, h14^{km}±2^{km}, M4.2, mB5.3, mb4.8, ML4.0, Mw4.2, Mw(mB)4.7*

*NEIC **24** 20:11:15.9±1.7, 3°.64N±0°.05×74°.05W±0°.08, h10^{km}±1^{km}, mb4.5/61, Error ellipse: s-maj=13.5km s-min=8.4km az=83.0*

ISC 24 20:11:13.4±1.1**, 3°.50N**±0°.02×**74°.19W**±0°.02**, h3^{km}**±7^{km}**, n123, σ1^{s}.33**/136**, mb4.4**/40**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	La Uribe, Meta	0.31	218	P	Pg	20 11 19.4	-0.1
URMC				S	Sg	20 11 23.2	-0.4
PRAC	Prado	0.73	287	P	Pg	20 11 27.6	+0.1
PRAC				S	Sg	20 11 37.6	+0.6
VILC	Villavicencio,	0.79	39	P	Pb	20 11 29.8	0.0
VILC				S	Sb	20 11 41.2	+0.3
CVER	Cruz Verde, Cu	1.02	6	P	Pb	20 11 33.6	-0.5
CVER				S	Sn	20 11 49.4	-0.9
ORTC	Ortega, Tolima	1.14	291	P	Pg	20 11 34.8	-0.4
ORTC				S	Sg	20 11 49.9	0.0
CHIC	Chingaza	1.21	22	P	Pb	20 11 36.9	-0.4
CHIC				S	Sn	20 11 54.6	-0.2
ROSC	El Rosal	1.34	354	Pg	Pn	20 11 40.1	+0.6
	363nm,0.3s,baz=171,slow=8.1,SNR=509						
ROSC				Lg	Lg	20 11 59.1	
	257nm,0.3s,baz=174,slow=23,SNR=12						
ROSC	El Rosal	1.34	354		Pn	20 11 39.9	+0.5
ROSC				Sn	Sn	20 11 57.9	-0.1
MACC	Macarena, Meta	1.38	166	P	Pn	20 11 38.6	-1.1
MACC				S	Sg	20 11 57.1	-0.8
BETC	Betania	1.49	237	P	Pn	20 11 40.7	-0.5
BETC				S	Sb	20 11 59.8	-1.4
ANIL	Santa Ana	1.57	309	P	Pn	20 11 42.2	-0.2
ANIL				S	Sn	20 12 03.2	-0.2
GUVC	San Jose del G	1.82	121	P	Pb	20 11 46.8	-0.6
GUVC				S	Sb	20 12 11.1	+0.4
GARC	Garzon, Huila	1.84	225	P	Pn	20 11 46.5	+0.3
GARC				S	Sn	20 12 10.1	-0.1
RECRC	Villamaria, Ca	1.86	321	P	Pb	20 11 48.1	-0.3
RECRC				S	Sb	20 12 12.1	-0.3
NIZA	Niza - Manizal	2.01	320	P	Pb	20 11 50.9	+0.1
NIZA				S	Sb	20 12 16.9	+0.5
SPBC	San Pablo de B	2.15	3	P	Pb	20 11 53.2	+0.2
SPBC				S	Sg	20 12 24.0	+1.6
PTGC	Puerto Gaitan,	2.16	71	P	Pb	20 11 53.1	-0.2
PTGC				S	Sg	20 12 23.5	+0.5
NORC	Norcasia	2.16	342	P	Pn	20 11 51.6	+1.2
NORC				S	Sb	20 12 20.9	+0.3
YOTC	Yotoco, Valle	2.21	283	P	Pn	20 11 52.0	+0.9
YOTC				S	Sn	20 12 20.6	+1.6
FLOC	Florencia	2.40	218	P	Pn	20 11 55.4	+1.7
FLOC				S	Sb	20 12 26.3	-1.1
JAMC	Jamundi, Valle	2.50	264	P	Pn	20 11 57.0	+1.8
PLMC	San Jos del P	2.52	304	P	Pn	20 11 56.8	+1.5
RUSC	La Rusia	2.62	25	P	Pb	20 12 00.1	-1.3
POPC	Popayan, Colom	2.66	249	P	Pn	20 11 59.2	+1.7
POPC				S	Sb	20 12 35.6	+0.5
CBOC	Ciudad Bolivar	2.97	322	P	Pb	20 12 04.9	-2.3
HELC	Santa Helena	2.99	333	P	Pn	20 12 04.4	+2.3
HELC				S	Sb	20 12 43.6	-1.2
PTBC	PUERTO BERRIO,	3.04	355	P	Pn	20 12 04.7	+2.3
BARC	Barichara	3.23	18	P	Pn	20 12 08.2	+2.9
PTLC	Puerto Leguiza	3.36	190	P	Pb	20 12 12.8	-0.9
CRUC	La Cruz	3.36	235	P	Pn	20 12 10.3	+3.1
CRUC				S	Sb	20 12 57.9	+2.5
BBAC	Balboa, Cauca	3.39	244	P	Pn	20 12 09.8	+2.3
BRJC	Barrancabermej	3.48	7	P	Pn	20 12 10.9	+2.4
GCUF	Volcan Galeras	3.88	235	P	Pn	20 12 18.0	+3.6
GR1C	Gorgona, Isla	4.00	263	P	Pn	20 12 15.9	+0.2
DBBC	Dabeiba	4.04	330	P	Pn	20 12 19.3	+3.0
PAMC	Pamplona, Colo	4.09	21	P	Pn	20 12 20.7	+3.3
UREC	San Jos de Ur	4.43	342	P	Pn	20 12 24.3	+2.6
BONI	La Bonita	4.50	228	P	Pn	20 12 26.1	+3.2
OCAC	Ocana	4.79	10	P	Pn	20 12 29.4	+2.7
APAC	Apartado, Choc	4.98	332	P	Pn	20 12 34.1	+4.9
	119nm,0.9s						
OTAV	Otavalo	5.35	233		Pn	20 12 39.7	+5.0
SLOR	San Lorenzo -	6.01	226		Pn	20 12 50.0	+6.2
SDV	Santo Domingo	6.41	33	Pn	Pn	20 12 50.6	+1.5
	10nm,0.3s,baz=187,slow=5.3,SNR=29						
SDV				Sn	Sn	20 14 02.3	-0.6
	16nm,0.3s,baz=221,slow=21,SNR=4.7						
SDV				Lg	Lg	20 14 40.7	
	16nm,0.3s,baz=61,slow=23,SNR=4.0						
SDV				LR	LR	20 16 01.0	
	comp=Z,668nm,18.3s,baz=260,slow=44						
	47nm,0.4s						
SDV	Santo Domingo	6.41	33		Pn	20 12 50.0	+0.9
SJCC	San Jacinto, C	6.43	351	P	Pn	20 12 49.7	+0.5
	29nm,0.8s						
SGC2	Sao Gabriel da	8.06	117	P	Pn	20 13 10.9	-0.6
URIC	Uribia, Colomb	8.44	15	P	Pn	20 13 17.3	+0.6
ATAH	Atahualpa	11.37	202	Pn	Pn	20 14 01.6	+4.4
	0.8nm,0.3s,baz=7.6,slow=7.3,SNR=12						
BOAV	Boa Vista	13.69	94		Pn	20 14 25.0	-3.7
MTDJ	Mount Denham	15.00	348		Pn	20 14 45.7	-0.9
SDDR	Presa de Saban	15.65	10		Pn	20 14 52.2	-3.0
SDDR				IAmb	IAmb	20 15 06.1	
	comp=Z,13nm,0.8s						
DR12	Loma Pena Alta	15.91	17		Pn	20 14 55.5	-3.0
LPAZ	La Paz	20.55	163	P	P	20 15 53.9	-0.1
	comp=Z,1.3nm,0.8s,baz=309,slow=4.7,SNR=2.5						
	comp=Z,1.3nm,0.8s						
LPAZ	La Paz	20.55	163		P	20 15 54.8	+0.8
SOR	Soroa	21.00	337		P	20 15 57.6	-0.6
SOR				IAmb	IAmb	20 16 07.5	
	comp=Z,33nm,1.3s						
VILB	Vilhena	21.45	140		P	20 16 03.8	+0.7
VILB				IAmb	IAmb	20 16 08.1	
	comp=Z,35nm,1.4s						
MDP	Montagnes des	21.54	85	P	P	20 16 04.6	+0.4
	comp=Z,13nm,0.9s,baz=268,slow=13,SNR=6.2						
	comp=Z,13nm,0.9s						
PB16	IPOC Station P	22.18	168	P	P	20 16 12.7	+1.2
SIV	San Ignacio	23.31	147	P	P	20 16 24.3	+1.5
	comp=Z,6.2nm,0.8s,baz=315,slow=9.8,SNR=15						
	comp=Z,6.2nm,0.8s						
PTLB	Pontes e Lacer	24.00	142	P	P	20 16 30.5	+0.9
V53A	Saluda	32.99	347	P	P	20 17 49.5	-0.4
V53A				IAmb	IAmb	20 18 10.9	
	comp=Z,10nm,1.2s						
X48A	Hartselle	33.04	340	P	P	20 17 49.3	-0.9
X48A				IAmb	IAmb	20 17 58.2	
	comp=Z,6.1nm,0.9s						
T59A	Double "B" Far	33.46	355	P	P	20 17 53.8	+0.1
V48A	Smith Brothers	34.15	342		P	20 18 00.8	+1.0
WVT	Waverly	34.83	340	P	P	20 18 05.5	-0.2
WVT				IAmb	IAmb	20 18 15.5	
	comp=Z,4.7nm,0.9s						
R55A	Marlinton	35.05	352	P	P	20 18 06.8	-0.9
T47A	Sharon Grove	35.38	342		P	20 18 10.5	0.0
FCAR	Ozark Folk Cen	36.25	335	P	P	20 18 17.7	-0.2
WCI	Wyandotte Cave	36.30	344	P	P	20 18 17.5	-0.8
WCI				IAmb	IAmb	20 18 25.2	
	comp=Z,7.9nm,0.9s						
Q51A	Peebles	36.34	348	P	P	20 18 18.7	+0.1
Q51A				IAmb	IAmb	20 18 26.5	
	comp=Z,7.2nm,0.7s						
PBMO	Poplar Bluff	36.34	338	P	P	20 18 18.7	0.0
VA01	Torpederas	36.40	176	P	P	20 18 21.1	+1.9
USIN	University of	36.46	342	P	P	20 18 19.3	-0.4
CGM3	Cape Girardeau	36.52	339	P	P	20 18 19.9	-0.3
CGM3				IAmb	IAmb	20 18 25.9	
	comp=Z,7.6nm,0.7s						
P52A	Corning	36.69	350	P	P	20 18 22.0	+0.4
P52A				IAmb	IAmb	20 18 51.2	
	comp=Z,15nm,1.2s						
P51A	Williamsport	36.72	348	P	P	20 18 20.9	-1.0
P51A				IAmb	IAmb	20 18 29.6	
	comp=Z,7.5nm,0.8s						
S44A	Carbondale	36.73	340	P	P	20 18 21.5	-0.5
S44A				IAmb	IAmb	20 18 26.3	
	comp=Z,6.8nm,0.7s						
SIUC	Southern Illin	36.74	340	P	P	20 18 21.8	-0.3
T42A	Van Buren	36.81	337	P	P	20 18 22.7	-0.1
T42A				IAmb	IAmb	20 18 26.0	
	comp=Z,4.5nm,0.8s						
O53A	New Philadelph	37.13	351	P	P	20 18 25.9	+0.5
O53A				IAmb	IAmb	20 19 04.8	
	comp=Z,8.0nm,1.0s						
FVM	French Village	37.40	339	P	P	20 18 27.5	-0.3
CCM	Cathedral Cave	37.77	338		P	20 18 30.1	-0.7
CCM				IAmb	IAmb	20 18 34.4	
	comp=Z,7.6nm,0.9s						
TXAR	Lajitas Array	37.98	316	P	P	20 18 33.2	+0.4
	comp=Z,0.6nm,0.7s,baz=148,slow=5.0,SNR=4.3						
TXAR				PcP	PcP	20 20 49.1	+0.4
	comp=Z,1.1nm,0.9s,baz=134,slow=5.4,SNR=6.4						
	comp=Z,0.6nm,0.7s						
KAN08	Anthony NE Sta	40.04	330	P	P	20 18 50.0	+0.1
ABQ	Albuquerque	43.29	320		P	20 19 17.4	+0.5
ANMO	Albuquerque	43.29	320	P	P	20 19 17.1	+0.2
I37A	Lemond, Waseca	43.78	340		P	20 19 19.4	-1.1
ECSD	EROS Data Cent	44.72	337	P	P	20 19 26.8	-1.2
ECSD				IAmb	IAmb	20 20 03.2	
	comp=Z,9.2nm,1.3s						
K30B	Basset	45.11	333		P	20 19 29.7	-1.5
HMU	Henry Mountain	47.85	321		P	20 19 54.0	+0.9
HMU				IAmb	IAmb	20 20 01.7	
	comp=Z,5.6nm,0.9s						
ULM	Lac du Bonnet	50.07	342	P	P	20 20 09.2	-0.3
	comp=Z,1.8nm,0.4s,baz=122,slow=4.3,SNR=3.1						
	comp=Z,1.8nm,0.4s						
ULM	Lac du Bonnet	50.07	342	IAmb	IAmb	20 20 30.5	
	comp=Z,8.0nm,1.3s						
PDAR	Pinedale Array	50.18	326	P	P	20 20 11.1	+0.2
	comp=Z,0.6nm,0.6s,baz=117,slow=6.2,SNR=6.1						
	comp=Z,0.6nm,0.6s						
DUG	Dugway, Tooele	50.49	322		P	20 20 14.1	+1.1
BGU	Big Grassy Mou	51.05	322		P	20 20 18.4	+1.1
BGU				IAmb	IAmb	20 20 22.8	
	comp=Z,4.1nm,1.0s						
LOHW	Long Hollow	51.31	326	P	P	20 20 20.0	+0.7
LOHW				IAmb	IAmb	20 20 23.7	
	comp=Z,4.9nm,1.1s						
SCHQ	Schefferville	51.53	5	P	P	20 20 20.9	+0.5
	comp=Z,5.1nm,0.8s,baz=185,slow=6.9,SNR=5.7						
	comp=Z,5.1nm,0.8s						
SCHQ	Schefferville	51.53	5	IAmb	IAmb	20 20 22.6	
	comp=Z,128nm,1.1s						
NVAR	Mina Array Bea	53.11	317	P	P	20 20 33.7	+1.0
	comp=Z,0.7nm,0.6s,baz=131,slow=6.8,SNR=5.7						
NVAR				PcP	PcP	20 21 39.5	-1.6
	comp=Z,0.6nm,0.7s,baz=116,slow=5.2,SNR=3.6						
	comp=Z,0.7nm,0.6s						
BOZ	Bozeman (W)	53.16	328	P	P	20 20 33.7	+0.8
BOZ				IAmb	IAmb	20 20 37.3	
	comp=Z,4.1nm,1.1s						
HLID	Hailey	53.45	324	IAmb	IAmb	20 20 40.1	
	comp=Z,3.5nm,1.1s						
MFID	Camas Ranch	54.19	323	IAmb	IAmb	20 20 47.0	
	comp=Z,2.8nm,0.8s						
PLID	Pearl Lake	55.27	325	IAmb	IAmb	20 20 52.7	
	comp=Z,3.7nm,1.1s						
WVOR	Wild Horse Val	55.37	321	P	P	20 20 49.7	+0.6
WVOR				IAmb	IAmb	20 20 53.8	
	comp=Z,8.0nm,1.1s						
G08A	Pilot Rock	57.10	324	IAmb	IAmb	20 21 06.0	
	comp=Z,9.2nm,1.2s						
E09A	Wood Farm, Sta	57.31	325	P	P	20 21 03.4	+0.7
E09A				IAmb	IAmb	20 21 06.9	
	comp=Z,5.9nm,1.0s						
PINE	Pine Mountain	57.52	321	IAmb	IAmb	20 21 12.8	
	comp=Z,6.2nm,1.0s						
YKA	Yellowknife Ar	66.02	341	P	P	20 22 00.8	-0.4
	comp=Z,0.2nm,0.7s,baz=140,slow=5.6,SNR=7.0						
	comp=Z,0.2nm,0.7s						
DBIC	Dimbokro	69.08	84	P	P	20 22 22.5	+1.1
	comp=Z,1.8nm,0.6s,baz=292,slow=5.4,SNR=3.5						
	comp=Z,1.8nm,0.6s						
SUMG	Summit	72.43	11	P	P	20 22 40.8	-0.4
ESDC	Sonseca Array	72.59	50	P	P	20 22 41.9	-0.5
	comp=Z,0.7nm,0.9s,baz=248,slow=5.6,SNR=3.3						
	comp=Z,0.7nm,0.9s						
TORD	Torodi Ar. Bea	75.47	77	P	P	20 22 59.4	-0.3
	comp=Z,0.6nm,0.6s,baz=300,slow=5.7,SNR=7.4						
	comp=Z,0.6nm,0.6s						
TORD	Torodi Ar. Bea	75.47	77	IAmb	IAmb	20 23 06.0	
	comp=Z,0.6nm,1.1s						
ILAR	Eielson Array	79.52	335	P	P	20 23 20.5	-0.8
	comp=Z,0.3nm,0.5s,baz=131,slow=3.7,SNR=4.7						
	comp=Z,0.3nm,0.5s						
NOA	NORSAR Array B	84.73	29	P	P	20 23 49.6	+0.8
	comp=Z,0.8nm,0.9s,baz=268,slow=5.0,SNR=3.9						
	comp=Z,0.8nm,0.9s						
HFS	Hagfors	85.93	30	P	P	20 23 54.3	-0.5
	comp=Z,1.8nm,1.0s,baz=237,slow=8.1,SNR=5.1						
	comp=Z,1.8nm,1.0s						
GERES	GERESS Array B	86.00	41	P	P	20 23 55.3	-0.2
	comp=Z,0.5nm,0.9s,baz=259,slow=9.9,SNR=2.0						
	comp=Z,0.5nm,0.9s						
SNAA	Sanae	87.50	163	P	P	20 24 02.5	+0.2
	comp=Z,1.5nm,0.9s,baz=339,slow=8.7,SNR=3.6						
	comp=Z,1.5nm,0.9s						
SNAA	Sanae	87.50	163	IAmb	IAmb	20 24 05.1	
	comp=Z,4.2nm,1.2s						
MKAR	Makanchi Array	125.79	20	PKP	PKPdf	20 30 15.5	-1.5
	comp=Z,0.1nm,0.4s,baz=330,slow=1.2,SNR=4.0						
ASAR	Alice Springs	146.26	231	PKPbc	PKPdf	20 30 55.1	-0.3
	comp=Z,1.9nm,0.5s,baz=117,slow=3.8,SNR=47						
ASAR	Alice Springs	146.26	231		PKPdf	20 30 55.0	-0.4
WRA	Warramunga Arr	147.74	237	PKPbc	PKPbc	20 31 00.2	-0.4
	comp=Z,2.7nm,0.9s,baz=107,slow=3.4,SNR=5.9						

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*IDC **24** 20:23:25.6±1.2, 3°.37N×74°.02W, h0^{km}, mb3.6/4, mbtmp3.6/4, MS3.5/1, Error ellipse: s-maj=36.4km s-min=16.3km az=77.0*

*RSNC **24** 20:23:25.4±0.0, 3°N±1°×7°4W±°, h0^{km}±3^{km}, M4.1, mB5.1, mb4.7, ML3.9, MLv4.6, Mw(mB)4.4*

ISC 24 20:23:26.8±0.6**, 3°.46N**±0°.02×**74°.15W**±0°.03**, h10^{km}, n41, σ1^{s}.75**/65**, mb3.4**/4**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	La Uribe, Meta	0.31	228	P	Pg	20 23 31.3	-1.7
URMC				S	Sg	20 23 35.2	-2.0
PRAC	Prado	0.78	289	P	Pg	20 23 40.0	-1.9
PRAC				S	Sg	20 23 50.3	-1.8
VILC	Villavicencio,	0.79	35	P	Pg	20 23 41.7	-0.4
VILC				S	Sg	20 23 53.1	+0.6
CVER	Cruz Verde, Cu	1.06	4	P	Pg	20 23 45.7	-1.6
CVER				S	Sg	20 24 00.6	-0.5
ORTC	Ortega, Tolima	1.18	292	P	Pb	20 23 47.2	-2.2
ORTC				S	Sb	20 24 02.9	-1.9
CHIC	Chingaza	1.24	20	P	Pn	20 23 49.1	-1.4
CHIC				S	Sb	20 24 07.1	+0.4
MACC	Macarena, Meta	1.34	167	P	Pn	20 23 49.6	-1.9
MACC				S	Sb	20 24 07.1	-2.1
ROSC	El Rosal	1.39	353	Pg	Pn	20 23 52.4	-0.1
	596nm,0.3s,baz=148,slow=3.5,SNR=407						
ROSC				Lg	Lg	20 24 12.3	
	364nm,0.3s,baz=14,slow=23,SNR=9.8						
BETC	Betania	1.50	239	P	Pn	20 23 52.6	-1.3
BETC				S	Sn	20 24 11.9	-1.7
ANIL	Santa Ana	1.62	309	P	Pn	20 23 55.2	-0.5
ANIL				S	Sn	20 24 16.3	-0.5
GARC	Garzon, Huila	1.84	227	P	Pn	20 23 58.2	-0.5
GARC				S	Sn	20 24 21.1	-1.1
RECRC	Villamaria, Ca	1.92	321	P	Pn	20 24 00.5	+0.5
RECRC				S	Sn	20 24 24.9	+0.4
NIZA	Niza - Manizal	2.07	320	P	Pb	20 24 03.3	-1.3
NIZA				S	Sb	20 24 30.0	-0.5
PTGC	Puerto Gaitan,	2.14	70	P	Pb	20 24 04.3	-1.4
PTGC				S	Sg	20 24 34.1	-1.6

SPBC	San Pablo de B	2.18	2	P	Pb	20 24 05.7	-0.8
SPBC				S	Sb	20 24 35.7	+2.1
NORC	Norcasia	2.21	341	P	Pn	20 24 04.2	+0.6
NORC				S	Sn	20 24 32.9	+1.8
FLOC	Florencia	2.39	219	P	Pn	20 24 06.9	+0.8
FLOC				S	Sb	20 24 37.4	-2.2
JAMC	Jamundi, Valle	2.53	265	P	Pn	20 24 09.6	+1.4
JAMC				S	Sb	20 24 44.2	+0.4
PLMC	San Jos del P	2.57	304	P	Pn	20 24 09.6	+1.0
PLMC				S	Sb	20 24 44.4	-0.4
RUSC	La Rusia	2.64	24	P	Pn	20 24 11.9	+2.0
POPC	Popayan, Colom	2.68	250	P	Pn	20 24 11.3	+1.0
POPC				S	Sb	20 24 48.0	-0.2
CBOC	Ciudad Bolivar	3.03	322	P	Pb	20 24 18.0	-2.9
HELC	Santa Helena	3.04	333	P	Pn	20 24 17.2	+1.8
HELC				S	Sb	20 24 55.9	-2.8
PTBC	PUERTO BERRIO,	3.08	354	P	Pn	20 24 16.2	+0.7
PTBC				S	Sb	20 24 57.8	-1.6
PTLC	Puerto Leguiza	3.33	191	P	Pb	20 24 23.3	-2.6
PTLC				S	Sg	20 25 17.7	+3.9
CRUC	La Cruz	3.37	236	P	Pn	20 24 22.0	+2.2
CRUC				S	Sb	20 25 09.1	+1.0
BBAC	Balboa, Cauca	3.41	245	P	Pn	20 24 22.3	+2.1
BBAC				S	Sb	20 25 10.3	+1.3
BRJC	Barrancabermej	3.52	7	P	Pn	20 24 22.6	+1.1
PAMC	Pamplona, Colo	4.12	20	P	Pn	20 24 32.4	+2.2
PAMC				S	Sg	20 25 36.2	-3.0
TULM	Tulcn-Chalpat	4.54	233	P	Pb	20 24 48.9	+2.0
TULM				S	Sb	20 25 45.9	+3.9
OCAC	Ocana	4.82	10	P	Pn	20 24 41.9	+2.3
ARGC	Ariguani, Magd	6.36	359	P	Pn	20 25 06.3	+5.6
SDV	Santo Domingo	6.43	33	P	Pn	20 25 02.8	+1.1
	1µm50nm,0.6s						
SJCC	San Jacinto, C	6.48	351	P	Pn	20 25 01.9	-0.5
JTS	Las Juntas de	12.69	303	LR	LR	20 30 29.3	
	comp=Z,251nm,21.1s,baz=96,slow=33						
MDP	Montagnes des	21.51	85	P	P	20 28 15.4	-0.8
	16nm,0.8s,baz=261,slow=11,SNR=6.0						
	16nm,0.8s						
PDAR	Pinedale Array	50.24	326	P	P	20 32 25.8	+2.3
	0.2nm,0.6s,baz=127,slow=5.0,SNR=2.6						
	0.2nm,0.6s						
NVAR	Mina Array Bea	53.16	317	P	P	20 32 48.3	+2.9
	0.4nm,0.7s,baz=101,slow=6.4,SNR=2.0						
	0.4nm,0.7s						
YKA	Yellowknife Ar	66.07	341	P	P	20 34 15.8	+2.2
	0.2nm,0.7s,baz=139,slow=5.8,SNR=4.2						
	0.2nm,0.7s						
ASAR	Alice Springs	146.27	231	PKPbc	PKPdf	20 43 06.8	-0.7
	0.7nm,0.5s,baz=119,slow=3.9,SNR=22						
WRA	Warramunga Arr	147.75	237	PKPbc	PKPbc	20 43 12.2	-0.7
	0.8nm,0.8s,baz=116,slow=2.7,SNR=2.7						

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*IDC **24** 20:42:59.1±1.2, 15.°12N×147.°27E, h0km, mb3.8/11, mbtmp3.8/12, ML3.7/1, Error ellipse: s-maj=32.6km s-min=18.6km az=102.0*

*NEIC **24** 20:43:01.3±1.5, 15.°05N±0.°09×147.°25E±0.°09, h10km±1km, mb4.5/19, Error ellipse: s-maj=15.4km s-min=13.8km az=133.0*

ISC 24 20:43:01.4±0.6, **15.°05N**±0.°08×**147.°32E**±0.°08, **h18km, n37,** σ1.s03/36, **mb4.3**/18, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DPSS	Saipan	1.49	278		Pb	20 43 27.1	-1.4
GUMO	Guam	2.78	239	Pn	Pn	20 43 45.3	+0.3
	12nm,0.3s,baz=339,slow=12,SNR=4.1						
GUMO				Sn	Sn	20 44 18.2	0.0
	16nm,0.3s,baz=41,slow=23,SNR=5.8						
	24nm,0.3s						
GUMO	Guam	2.78	239		Pn	20 43 44.8	-0.3
PATS	Pohnpei	13.53	126	Pn	Pn	20 46 11.1	-1.4
FAKI	Fak Fak	23.27	221	P	P	20 48 08.5	+0.3
YHNB	Yeheng	26.17	296	P	P	20 48 35.0	0.0
KSRS	Korea Array	28.18	326	P	P	20 48 53.9	+1.0
	0.9nm,0.8s,baz=143,slow=9.6,SNR=3.3						
	0.9nm,0.8s						
WB0	Warramunga Arr	36.86	201	P	P	20 50 09.4	+0.5
WB0				IAmb	IAmb	20 50 22.4	
	comp=Z,6.8nm,1.5s						
WR8	Warramunga Arr	37.00	200	P	P	20 50 10.5	+0.4
WRA	Warramunga Arr	37.04	201	P	P	20 50 11.6	+1.1
	comp=Z,1.5nm,0.8s,baz=21,slow=8.7,SNR=4.7						
	comp=Z,1.5nm,0.8s						
ASAR	Alice Springs	40.65	199	P	P	20 50 41.8	+1.0
	comp=Z,0.3nm,0.7s,baz=15,slow=10,SNR=6.0						
	comp=Z,0.3nm,0.7s						
CMAR	Chiang Mai Arr	46.34	281	P	P	20 51 27.0	+0.2
	comp=Z,0.6nm,0.6s,baz=76,slow=6.9,SNR=6.1						
	comp=Z,0.6nm,0.6s						
SONM	Songino Array	46.96	323	P	P	20 51 31.2	-0.1
	comp=Z,0.4nm,0.6s,baz=129,slow=6.7,SNR=3.4						
	comp=Z,0.4nm,0.6s						
SONM	Songino Array	46.96	323	IAmb	IAmb	20 51 36.3	
	comp=Z,2.1nm,1.4s						
FORT	Forrest	49.19	202	P	P	20 51 49.3	+0.8
TOO	Toolangi	52.37	182	P	P	20 52 13.4	+1.0
TOO				IAmb	IAmb	20 52 46.9	
	comp=Z,7.5nm,1.5s						
AKUT	Akutan	53.34	32	P	P	20 52 20.3	+0.9
LSA	Lhasa	53.47	296	P	P	20 52 22.6	+1.2
LSA				IAmb	IAmb	20 52 23.6	
	comp=Z,2.6nm,0.5s						
N15K	Kwethluk River	58.87	28	P	P	20 53 00.0	+1.1
C16K	Lisburne Hills	61.10	18	P	P	20 53 16.0	+2.0
ZALV	Zalesovo Beam	61.85	324	P	P	20 53 19.4	+0.1
	comp=Z,0.5nm,0.5s,baz=113,slow=15,SNR=3.5						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	62.11	315	P	P	20 53 21.8	+0.4
	comp=Z,0.9nm,0.4s,baz=90,slow=8.4,SNR=46						
	comp=Z,0.9nm,0.4s						
MKAR	Makanchi Array	62.11	315	P	P	20 53 21.5	+0.2
MAKZ	Makanchi	62.33	315	P	P	20 53 23.2	+0.4
MAKZ				IAmb	IAmb	20 53 24.0	
	comp=Z,5.3nm,1.2s						
KURK	Kurchatov	65.02	319	P	P	20 53 39.7	-0.7
KURK				IAmb	IAmb	20 53 43.0	
	comp=Z,3.1nm,1.1s						
KURBB	Kurchatov Arra	65.06	319	P	P	20 53 40.5	-0.3
	comp=Z,1.7nm,0.6s,baz=96,slow=7.2,SNR=23						
	comp=Z,1.7nm,0.6s						
D22K	Ayikyak River	65.44	20	P	P	20 53 45.0	+2.1
D22K				IAmb	IAmb	20 54 11.7	
	comp=Z,4.3nm,1.2s						
ILAR	Eielson Array	66.24	25	P	P	20 53 48.9	+0.8
	comp=Z,0.3nm,0.6s,baz=252,slow=6.9,SNR=5.1						
	comp=Z,0.3nm,0.6s						
BOOM	Boomskoye usch	66.31	310	P	P	20 53 48.1	-1.0
BVAR	Borovoye Array	70.27	321	P	P	20 54 13.4	-0.1
	comp=Z,0.7nm,0.5s,baz=110,slow=6.6,SNR=6.2						
	comp=Z,0.7nm,0.5s						
F30M	Barrier River	71.20	23	P	P	20 54 19.2	+0.3
F30M				IAmb	IAmb	20 54 37.6	
	comp=Z,3.3nm,1.1s						
AB31	Akbulak array	77.06	318	P	P	20 54 52.4	-1.1
ABKAR	Akbulak array	77.06	318	P	P	20 54 52.5	-1.0
K04D	Chiloquin, OR	80.64	48	P	P	20 55 11.7	-1.8
FINES	FINESS Array B	90.83	336	P	P	20 56 02.2	-1.3
	comp=Z,2.4nm,1.1s,baz=90,slow=5.9,SNR=4.7						
	comp=Z,2.4nm,1.1s						
DBIC	Dimbokro	144.98	306	PKP	PKPbc	21 02 38.0	+0.1
	comp=Z,1.5nm,0.4s,baz=75,slow=5.0,SNR=5.8						
DBIC	Dimbokro	144.98	306		PKPab	21 02 35.7	-2.1

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*SOME **24** 20:51:54.9, 39.°62N×74.°42E, h15km*

*IDC **24** 20:51:54.8±1.6, 39.°64N×74.°43E, h0km, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=61.7km s-min=32.2km az=54.0*

*KRNET **24** 20:51:58.7±0.1, 39.°77N×74.°44E, h21km, mb3.6*

ISC 24 20:51:57.6±1.5, **39.°70N**±0.°05×**74.°45E**±0.°03, **h8km**±9km, **n44,** σ1.s80/76, **mb3.6**/5, **34C-16D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.79	294	⇑iP	Pg	20 52 13.3	+0.4
SFK				⇑iS	Sg	20 52 24.0	+0.7
SALK	Salom-Alik	1.28	338	⇑eP	Pn	20 52 21.2	-0.7
SALK				⇑eS	Sg	20 52 37.4	-1.4
OHH	Osh	1.52	303	⇑iP	Pn	20 52 25.4	+0.3
OHH				⇑iS	Sn	20 52 45.5	+0.4
JNKS	Jany-Kuch	1.64	34	⇑iP	Pn	20 52 28.2	+1.2
JNKS				⇑iS	Sn	20 52 49.4	+1.0
ARSB	Arslanbob	1.97	326	⇑iP	Pn	20 52 33.2	+1.8
ARSB				⇑iS	Sn	20 52 58.3	+1.9
DRK	Karamyk	2.06	265	⇑iP	Pb	20 52 35.2	-0.2
DRK				⇑iS	Sb	20 53 01.9	+0.7
ARLS	Aral	2.16	357	⇑eP	Pn	20 52 35.5	+1.4
ARLS				⇑iS	Sn	20 53 02.4	+1.3
UCH	Uchtor	2.53	1	P	Pb	20 52 43.9	+0.4
	SNR=18						
UCH	Uchtor	2.53	1	⇑eP	Pn	20 52 40.8	+1.5
UCH				⇑eS	Sn	20 53 11.7	+1.2
ARK	Arkit	2.82	319	⇑iP	Pn	20 52 45.1	+2.0
ARK				⇑iS	Sn	20 53 19.0	+1.7
ULHL	Ulahol	2.88	27	P	Pg	20 52 52.2	-0.7
	SNR=8.0						
ULHL	Ulahol	2.88	27	⇓iP	Pn	20 52 45.9	+1.9
ULHL				⇓iS	Sn	20 53 20.1	+1.1
AAK	Ala-Archa	2.94	1	P	Pb	20 52 50.0	-0.3
	SNR=23						
AAK	Ala-Archa	2.94	1	⇓iP	Pn	20 52 46.5	+1.8
AAK				⇓iS	Sn	20 53 21.2	+1.0
AAK	Ala-Archa	2.94	1	⇓Pn	Pb	20 52 49.7	-0.6
	4.2nm,0.5s						
AAK				⇑Sn	Sb	20 53 29.6	+3.2
	13nm,0.7s						
KBK	Karagaybulak	2.98	7	P	Pb	20 52 50.6	-0.4
	SNR=15						
KBK	Karagaybulak	2.98	7	⇑iP	Pn	20 52 47.2	+1.9
KBK				⇑iS	Sn	20 53 22.4	+1.1
EKS2	Erkin-Say	3.00	350	P	Pb	20 52 50.7	-0.7
	SNR=6.0						
EKS2	Erkin-Say	3.00	350	⇑iP	Pn	20 52 47.3	+1.7
EKS2				⇑iS	Sn	20 53 22.9	+1.1
BOOM	Boomskoye usch	3.01	22	⇑iP	Pn	20 52 47.4	+1.7
BOOM				⇑iS	Sn	20 53 23.2	+1.2
FRU1	Bishkek	3.11	2	⇓iP	Pn	20 52 49.1	+2.1
FRU1				⇓iS	Sn	20 53 25.9	+1.5
MNAS	Manas	3.15	333	⇓iP	Pn	20 52 49.5	+1.9
MNAS				⇓iS	Sn	20 53 26.4	+0.9
MRKS	Merke	3.18	344	eP	Pb	20 52 52.7	-1.7
	7.5nm,0.3s						
MRKS				eS	Sb	20 53 34.3	+1.0
	31nm,0.3s						
KDJ	Kajisay	3.19	40	⇓iP	Pn	20 52 50.3	+2.1
KDJ				⇓iS	Sn	20 53 28.0	+1.5
TARG	Taragay, Kyrgy	3.26	50	⇑eP	Pn	20 52 51.4	+2.0
TARG				⇑iS	Sn	20 53 29.6	+1.1
GAR	Garm	3.28	259	⇓iP	Pn	20 52 51.9	+2.5
GAR				⇓iS	Sn	20 53 31.0	+2.4
CHMS	Chumysh	3.31	4	P	Pb	20 52 54.5	-2.0
	SNR=8.2						
CHMS	Chumysh	3.31	4	⇑iP	Pn	20 52 51.3	+1.6
CHMS				⇑iS	Sn	20 53 29.8	+0.7
TKM2	Tokmak 2	3.33	15	P	Pb	20 52 55.4	-1.7
	SNR=14						
TKM2	Tokmak 2	3.33	15	⇓iP	Pn	20 52 52.0	+1.8
TKM2				⇓iS	Sn	20 53 31.0	+0.9
KST	Kastek	3.53	18	eP	Pb	20 52 58.1	-2.3
	4.8nm,0.3s						
KST				eS	Sb	20 53 43.4	-0.1
	63nm,0.7s						
USP	Ospenovka	3.57	1	⇑iP	Pn	20 52 55.0	+1.8
USP				⇑iS	Sn	20 53 36.2	+0.6
TNSS	Tian-Shan	3.83	29	eP	Pb	20 53 08.2	+2.6
	2.2nm,0.3s						
TNSS				eS	Sg	20 54 00.7	+0.1
	4.1nm,0.6s						
KOTS	Kotyrbulak	4.06	29	eP	Pb	20 53 12.5	+3.1
KOTS				eS	Sg	20 54 08.3	+0.3
KK31	Karatay Array	4.51	320	⇑Pn	Pn	20 53 09.2	+3.0
	0.9nm,0.2s,baz=127,slow=12,SNR=36						
KK31				⇑Pg	Pb	20 53 20.3	+3.3
	0.8nm,0.2s,baz=142,slow=15,SNR=6.8						
KK31				⇓Sn	Sn	20 54 03.2	+4.4
	5.0nm,0.5s,baz=147,slow=25,SNR=4.0						
KK31				⇑Lg	Lg	20 54 21.2	
	3.4nm,0.3s,baz=122,slow=28,SNR=4.0						
BRLS	Borolday	4.81	315	eP	Pb	20 53 19.7	-2.4
	6.0nm,0.4s						
BRLS				eS	Sb	20 54 20.9	+0.8
	12nm,0.4s						
KPKS	Kokpek	4.92	39	eP	Pb	20 53 26.0	+1.9
	0.4nm,0.2s						
KPKS				eS	Sg	20 54 31.9	-3.8
	25nm,0.5s						
ARXS	Arharly	5.17	28	eP	Pb	20 53 32.1	+3.9
	3.0nm,0.4s						
ARXS				eS	Sg	20 54 42.2	-1.2
	7.5nm,0.4s						
FINES	FINESS Array B	36.47	323	P	P	20 59 00.3	-2.4
	1.3nm,0.9s,baz=95,slow=9.6,SNR=4.6						
	1.3nm,0.9s						
ARCES	ARCESS Array B	39.30	335	P	P	20 59 25.4	-1.2
	2.7nm,0.8s,baz=106,slow=6.9,SNR=5.8						
	2.7nm,0.8s						
HFS	Hagfors	42.32	320	P	P	20 59 51.3	-0.2
	0.9nm,0.7s,baz=108,slow=12,SNR=2.2						
	0.9nm,0.7s						
NOA	NORSAR Array B	43.54	321	P	P	21 00 00.3	-1.2
	0.2nm,0.6s,baz=89,slow=8.1,SNR=1.6						
	0.2nm,0.6s						
TORD	Torodi Ar. Bea	68.49	269	P	P	21 02 59.0	-1.6
	0.3nm,0.4s,baz=42,slow=8.4,SNR=5.0						
	0.3nm,0.4s						
ASAR	Alice Springs	83.94	127	P	P	21 04 26.7	-1.6
	0.3nm,0.8s,baz=320,slow=5.9,SNR=2.1						
	0.3nm,0.8s						

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*ISK **24** 20:58:08.4, 38.°41N×44.°60E, h3km, ML3.3/7*

*NSSP **24** 20:58:08.7, 38.°43N×44.°50E, h17km, Ms3.0*

*TEH **24** 20:58:09.9, 38.°52N×44.°48E, h10km±142km*

*AFAD **24** 20:58:10.0, 38.°40N×44.°36E, h8km±2km, ML3.1*

*AZER **24** 20:58:20.9, 38.°80N×45.°24E, h10km, ml2.9*

ISC 24 20:58:09.2±1.0, **38.°43N**±0.°02×**44.°54E**±0.°02, **h13km**±9km, **n70,** σ2.s08/108, **2D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.49	298	P	Pg	20 58 18.2	-0.7
OZAP				S	Sg	20 58 23.8	-1.6
OZAP				i IAML		20 58 28.0	
	comp=E,2µm,0.8s						
OZAP				i IAML		20 58 31.0	
	comp=N,2µm,0.9s						
ISHB	Shabestar	0.86	100	Pg	Pg	20 58 26.1	+0.2
YOVA	Hakkari_Yksek	0.87	193	P	Pg	20 58 25.8	-0.3
TVAN	Van	0.90	277	P	Pg	20 58 24.6	-1.9
TVAN				i IAML		20 58 52.0	
	comp=N,802nm,0.6s						
TVAN				i IAML		20 58 54.0	
	comp=E,802nm,0.7s						
VANB	Van	0.92	281	Pg	Pb	20 58 27.4	+0.3
VANB				Sg	Sn	20 58 41.2	+0.1
VMUR	Van-Muradiye	0.94	307	P	Pg	20 58 26.3	-1.1
VMUR				S	Sg	20 58 39.7	0.0
VMUR				i IAML		20 58 43.0	
	comp=N,560nm,0.4s						
VMUR				i IAML		20 58 44.0	
	comp=E,631nm,0.3s						
IMRD	Marand	0.95	73	Sg	Sb	20 58 42.6	+2.2
NAX	Nakhchivan	1.05	45	P	Pg	20 58 30.0	+0.5
NAX				S	Sg	20 58 38.5	-4.8
HAKT	HAKKARI	1.09	217	P	Pg	20 58 29.1	-1.2
HAKT				i IAML		20 58 52.0	
	comp=N,395nm,0.7s						
ERCV	ERCIS-VAN	1.11	302	Pn	Pn	20 58 31.3	+0.6
ORD	Ordubad	1.24	66	P	Pn	20 58 33.8	+1.4
ORD				S	Sb	20 58 42.5	-6.0
SBZ	Shahbuz	1.25	39	P	Pb	20 58 33.9	+1.2
SBZ				S	Sb	20 58 42.6	-6.1
ITBZ	Tabriz	1.28	98	Pg	Pn	20 58 33.8	+0.8
DYDN	Diyadin	1.29	329	P	Pn	20 58 33.8	+0.6
DYDN				i IAML		20 58 55.0	
	comp=E,453nm,0.5s						
DYDN				i IAML		20 58 56.0	
	comp=N,381nm,0.7s						
HYR	Heyderabad	1.31	11	P	Pg	20 58 36.7	+2.3
HYR				S	Sb	20 58 49.7	-0.8
IAZR	Azarshahr	1.36	123	Pg	Pg	20 58 37.4	+1.9
CUKT	Cukurca	1.39	212	P	Pg	20 58 36.4	+0.3
CUKT	Cukurca	1.39	212	Pn	Pb	20 58 35.9	+0.7
CUKT				Sn	Sg	20 58 55.5	+1.3
VAYK	Vayk	1.44	28	⇓eP	Pn	20 58 36.6	+1.5
VAYK				⇓eS	Sg	20 58 56.8	+1.2
ADCV	BITLIS_Adilcev	1.47	285	P	Pn	20 58 36.4	+0.7
ADCV				S	Sg	20 58 55.9	-0.8
ADCV				i IAML		20 59 01.0	
	comp=N,295nm,0.5s						
IGDI	IGDIR	1.48	346	P	Pn	20 58 36.4	+0.7
IGDI				S	Sb	20 58 56.2	+0.8
TASB	TASBURUN-IGDIR	1.57	351	Pn	Pn	20 58 38.3	+1.4
TASB				Sn	Sg	20 59 00.4	+0.7
PERV	Siirt/Pervari-	1.65	254	P	Pg	20 58 40.5	-0.3
AGRB	Hanur-Agry	1.66	314	Pn	Pb	20 58 39.8	0.0
MLAZ	Malazgirt-MUS	1.71	295	Pn	Pb	20 58 41.0	+0.4
MLAZ				Sn	Sg	20 59 04.6	+0.3
KOTA	Agri, Merkez-K	1.72	323	P	Pn	20 58 40.3	+1.2
EGVZ	Egvard	1.75	62	eP	Pb	20 58 42.1	+0.8
EGVZ				eS	Sg	20 59 06.7	+1.1
METS	Metsamor	1.75	348	eP	Pb	20 58 41.6	+0.3
METS				eS	Sg	20 59 05.8	+0.2
VNNZ	Vanand	1.76	342	eP	Pb	20 58 42.1	+0.7
VNNZ				eS	Sg	20 59 06.6	+0.7
ARUZ	Aruch	1.88	349	eP	Pb	20 58 43.5	-0.1
ARUZ				eS	Sg	20 59 09.1	-0.6
KAPZ	Kaputan	1.89	4	eP	Pb	20 58 43.9	+0.1
KAPZ				eS	Sg	20 59 09.7	-0.4
MAHB	Mahabad	1.90	151	Pn	Pg	20 58 45.9	+0.2
BLIS	Bitlis-Merkez	1.91	270	P	Pn	20 58 43.1	+1.5
SIRN	Sırnak	1.92	242	P	Pb	20 58 44.5	+0.2
SIRN				i IAML		20 59 21.0	
	comp=E,202nm,0.8s						
SIRN				i IAML		20 59 30.0	
	comp=N,154nm,0.6s						
AYRK	Ayrk	1.94	30	eP	Pb	20 58 45.4	+0.7
AYRK				eS	Sg	20 59 12.3	+0.6
AMBZ	Amberd	1.97	354	eP	Pn	20 58 44.6	+2.1
AMBZ				eS	Sb	20 59 11.2	+1.6
IHRS	Heris	1.97	93	Pn	Pb	20 58 46.2	+1.1
GURO	Guroymak-BITLI	1.97	274	Pn	Pn	20 58 44.2	+1.7
SRTM	Siirt_Merkez	2.11	259	P	Pn	20 58 46.1	+1.8
SRTM				i IAML		20 59 29.0	
	comp=E,216nm,0.8s						
SRTM				i IAML		20 59 31.0	
	comp=N,362nm,0.8s						
EAK	Akyaka	2.36	343	P	Pb	20 58 52.0	+0.2
EAK				i IAML		20 59 35.0	
	comp=N,86nm,0.7s						
QRD	Qoradiz	2.40	64	P	Pb	20 58 52.0	-0.2
QRD				S	Sn	20 59 14.4	-3.1
GDB	GEDABAY	2.47	22	P	Pb	20 58 54.8	+1.1
GDB				S	Sn	20 59 20.9	+1.3
BOZK	Kars-Merkez-Bo	2.47	331	P	Pb	20 58 53.7	0.0
VRTB	Varto-Mus	2.52	288	Pn	Pn	20 58 52.4	+2.4
LSVT	Lusahovit	2.53	11	eP	Pb	20 58 55.4	+0.8
LSVT				eS	Sg	20 59 29.9	-0.7
ISRB	Sarab	2.54	103	Pn	Pb	20 58 54.4	-0.4
AGDM	Agdam	2.60	49	P	Pb	20 58 55.1	-0.6
KOPR	Koprukoy-ERZUR	2.60	308	Pn	Pn	20 58 53.8	+2.6
GANJ	Ganja	2.60	31	P	Pb	20 58 55.2	-0.6
GANJ				S	Sn	20 59 23.0	+0.4
BTMN	Batman	2.63	259	P	Pn	20 58 53.4	+1.9
BTMN				i IAML		20 59 37.0	
	comp=E,113nm,0.8s						
BTMN				i IAML		20 59 42.0	
	comp=N,118nm,1.0s						
SRTK	Saratovka	2.64	356	eP	Pb	20 58 56.7	+0.3
SRTK				eS	Sg	20 59 32.3	-1.7
SVAN	Silvan-Diyarba	2.64	265	P	Pn	20 58 54.5	+2.9
SVAN	Silvan-Diyarba	2.64	265	Pn	Pn	20 58 53.7	+2.1
GRMI	Germi	2.65	81	Pn	Pn	20 58 55.4	+3.5
BLQ	Beylaqan	2.68	60	P	Pn	20 58 55.9	+3.8
BLQ				S	Sn	20 59 21.2	-3.2
QZX	Qazax, Azerbai	2.70	13	P	Pb	20 58 58.4	+0.9
QZX				S	Sn	20 59 27.2	+2.2
BRDA	Brd	2.74	47	P	Pn	20 58 55.1	+2.2
BRDA				S	Sn	20 59 22.7	-3.2
YRD	Yardimli	2.94	79	P	Pb	20 59 00.5	-1.0
YRD				S	Sn	20 59 28.9	-2.1
LRK	Lerik	2.99	85	P	Pb	20 59 01.1	-1.3
LRK				S	Sn	20 59 30.8	-1.4
MNGR	Mingechevir, A	3.06	39	P	Pn	20 59 01.3	+4.0
MNGR				S	Sn	20 59 30.8	-2.9
ZRD	Zardab	3.06	52	S	Sn	20 59 30.4	-3.3
BNGB	Bingl	3.07	282	Pn	Pn	20 59 00.2	+2.6
GLBA	Clilabad	3.12	74	P	Pn	20 59 02.1	+4.0
GLBA				S	Sn	20 59 32.8	-2.4
LKRN	Lenkeran, Azer	3.33	84	P	Pn	20 59 06.0	+5.0
LKRN				S	Sn	20 59 40.6	+0.1
ASTR	Astara	3.34	86	P	Pb	20 59 06.4	-1.9
ASTR				S	Sn	20 59 39.7	-1.0
SEKA	Sheki	3.45	36	P	Pb	20 59 07.7	-2.5
SEKA				S	Sn	20 59 41.7	-1.7
QBL	Gabala	3.57	44	P	Pn	20 59 08.3	+3.8
QBL				S	Sn	20 59 43.3	-3.2
ZKTA	Zakatala	3.58	26	P	Pn	20 59 09.2	+4.8
ZKTA				S	Sn	20 59 44.9	-1.7
IML	Ismayilli	3.67	49	P	Pn	20 59 09.4	+3.6
IML				S	Sn	20 59 45.6	-3.4
XNQ	Khinaliq	3.90	44	P	Pn	20 59 12.5	+3.5
XNQ				S	Sn	20 59 51.4	-3.3

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*IDC **24** 21:01:18.8±2.1, 1.°32N×91.°77E, h0km, mb3.3/6, mbtmp3.4/8, ML3.7/2, Error ellipse: s-maj=58.4km s-min=24.0km az=55.0*

ISC 24 21:01:20.6±1.9, **1.°3N**±0.°2×**91.°9E**±0.°2, **h10km, n20,** σ0.s70/8, **mb3.5**/6, **North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	7.20	78	Pn	Pn	21 03 05.6	-0.5
	1.9nm,0.3s,baz=312,slow=10,SNR=10						
	3.2nm,0.3s						
CMAR	Chiang Mai Arr	18.37	22	P	Pn	21 05 36.6	+1.0
	0.1nm,0.3s,baz=216,slow=12,SNR=5.4						
	0.5nm,0.8s						
H08S2	Diego Garcia H	21.29	245	T	T	21 27 45.4	
	baz=65,slow=75,SNR=34						
H08S3	Diego Garcia H	21.29	245	T	T	21 27 43.6	
	baz=65,slow=75,SNR=65						
H08S1	Diego Carcia H	21.30	245	T	T	21 27 46.1	
	baz=65,slow=75,SNR=26						
H01W3	Cape Leeuwin H	41.64	152	T	T	21 53 31.7	
	baz=326,slow=77,SNR=12						
H01W2	Cape Leeuwin H	41.65	152	T	T	21 53 30.7	
	baz=326,slow=77,SNR=14						
H01W1	Cape Leeuwin H	41.66	152	T	T	21 53 33.2	
	baz=326,slow=77,SNR=11						
MKAR	Makanchi Array	46.03	351	P	P	21 09 43.9	-0.6
	0.2nm,0.7s,baz=167,slow=7.2,SNR=2.2						
	0.2nm,0.7s						
WRA	Warramunga Arr	46.70	119	P	P	21 09 50.2	+0.1
	0.3nm,0.7s,baz=295,slow=8.6,SNR=0.5						
	0.3nm,0.7s						
ASAR	Alice Springs	47.82	124	P	P	21 09 59.3	+0.5
	0.1nm,0.7s,baz=305,slow=8.4,SNR=1.7						
	0.1nm,0.7s						
SONM	Songino Array	47.99	13	P	P	21 10 00.1	+0.2
	0.3nm,0.6s,baz=202,slow=6.7,SNR=4.4						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	50.39	349	P	P	21 10 17.5	-0.5
	0.2nm,0.3s,baz=169,slow=10,SNR=1.9						
	0.2nm,0.3s						
ZALV	Zalesovo Beam	52.75	355	P	P	21 10 35.0	-0.6
	0.5nm,0.4s,baz=156,slow=9.0,SNR=2.5						
	0.5nm,0.4s						
H04N2	CROZET ISLANDS	59.00	211	T	T	22 15 03.4	
	baz=48,slow=74,SNR=17						
H04N1	CROZET ISLANDS	59.01	211	T	T	22 15 04.1	
	baz=48,slow=74,SNR=16						
H04N3	CROZET ISLANDS	59.02	211	T	T	22 15 02.8	
	baz=48,slow=74,SNR=19						
H04S1	CROZET ISLANDS	59.39	211	T	T	22 15 32.5	
	baz=56						
H04S3	CROZET ISLANDS	59.40	211	T	T	22 15 32.5	
	baz=56,SNR=4.6						
H04S2	CROZET ISLANDS	59.41	211	T	T	22 15 34.8	
	baz=56						

DJA 24 21:12:08.5±0.3, **3°S**±2°×**11°9E**±°, **h10km, M3.7**/13, **mb3.9**/4, **MLv3.6**/13, **Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	Tana Toraja	0.39	118	P	Pg	21 12 15.9	-0.4
MMSI	Mamuju	0.58	287	P	Pg	21 12 19.8	-0.1

PMSI	Majene	0.84	221	P	Pg	21 12 24.9	+0.1
SPSI	Sidrap Palu	1.14	165	P	Pb	21 12 29.0	-1.3
SPSI				S	Sb	21 12 44.0	-1.1
PCI	Palu	1.98	11	P	Pn	21 12 42.7	+0.6
KAPI	Kappang	2.16	173	P	Pn	21 12 45.2	+0.6
KAPI				S	Sn	21 13 12.2	+0.8
BKSI	Bulukumba	2.53	165	P	Pn	21 12 50.7	+1.0
MPSI	Mapaga	3.21	8	P	Pn	21 13 00.0	+1.0
BSSI	Bau Bau, Buton	3.42	163	P	Pn	21 13 02.5	+0.6
GTOI	Gorontalo	4.96	46	P	Pn	21 13 24.2	+1.1
DBNI	Kabupaten Domp	5.72	192	P	Pn	21 13 33.2	-0.4
	0.0nm5.8nm,0.9s						
PLAI	Plampang	6.16	196	P	Pn	21 13 39.6	-0.1
	11nm,1.6s						
TWSI	Taliwang, Sumb	6.38	204	P	Pn	21 13 42.7	0.0
	0.0nm9.8nm,0.9s						
WBSI	Waikabubak, Su	6.74	181	P	Pn	21 13 48.5	+0.9

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*NEIC **24** 21:13:51.8±1.4, 43.°75N±0.°06×105.°34W±0.°05, h0^{km}±1^{km}, ML3.4/64, Error ellipse: s-maj=10.6km s-min=5.6km az=6.0*

*IDC **24** 21:13:53.5±1.4, 43.°92N×105.°64W, h0^{km}, mb3.7/1, mbtmp3.4/6, ML3.4/5, Error ellipse: s-maj=41.6km s-min=8.7km az=147.0*

ISC 24 21:13:52.2±0.9, **43.°81N**±0.°07×**105.°25W**±0.°07, **h0**^{km}, **n89**, σ**0.^{s}87**/89, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.93	70		Pb	21 14 11.5	+0.1
K22A	Casper	1.49	219		Pn	21 14 18.7	-1.6
K22A				IAML		21 14 42.4	
	535nm,0.3s						
K22A				IAML		21 14 43.5	
	598nm,0.3s						
LAO	LASA Array	2.96	347	Pn	Pn	21 14 41.1	+0.6
RLMT	Red Lodge	3.16	296	Pn	Pn	21 14 43.5	+0.1
RLMT				IAML		21 15 36.3	
	92nm,0.4s						
RLMT				IAML		21 15 56.6	
	83nm,0.9s						
BW06	Boulder Array	3.31	253	Pn	Pn	21 14 45.4	-0.1
BW06				IAML		21 15 39.3	
	98nm,0.8s						
BW06				IAML		21 15 45.0	
	65nm,1.0s						
PD31	Pinedale Array	3.31	253	Pn	Pn	21 14 45.5	0.0
PDAR	Pinedale Array	3.31	253	Pn	Pn	21 14 45.5	0.0
	3.7nm,0.3s,baz=72,slow=17,SNR=92						
PDAR				Lg	Lg	21 15 31.7	
	5.7nm,0.3s,baz=66,slow=33,SNR=6.3						
	4.0nm,0.4s						
HAYD	Hayden	3.61	205	Pn	Pn	21 14 50.5	+0.9
HAYD				IAML		21 15 59.6	
	comp=N,69nm,0.9s						
HAYD				IAML		21 16 00.6	
	comp=E,72nm,1.3s						
YNE	Yellowstone No	3.61	291	Pn	Pn	21 14 50.2	+0.6
YNE				IAML		21 15 49.9	
	comp=E,78nm,0.7s						
YNE				IAML		21 15 50.5	
	comp=N,89nm,0.7s						
YMP	Mirror Lake Pl	3.64	286	Pn	Pn	21 14 51.9	+1.8
OGNE	Ogallala	3.73	139	Pn	Pn	21 14 51.7	+0.7
LKWY	Lake	3.78	283	Pn	Pn	21 14 53.3	+1.4
LKWY				IAML		21 15 17.7	
	comp=N,72nm,0.9s						
LKWY				IAML		21 16 23.0	
	comp=N,45nm,1.1s						
H17A	Grant Village	3.88	281	Pn	Pn	21 14 54.1	+0.8
H17A				IAML		21 15 59.4	
	comp=E,45nm,1.4s						
LOHW	Long Hollow	3.88	269	Pn	Pn	21 14 53.6	+0.3
LOHW				IAML		21 15 53.8	
	comp=E,36nm,0.9s						
MOOW	Moose Ponds	3.98	271	Pn	Pn	21 14 55.1	+0.5
SNOW	Snow King Moun	4.01	267	Pn	Pn	21 14 56.3	+1.2
SNOW				IAML		21 16 03.0	
	comp=E,56nm,1.0s						
SNOW				IAML		21 16 20.9	
	comp=E,79nm,1.3s						
ISCO	Idaho Springs	4.02	184	Pn	Pn	21 14 54.8	-0.4
ISCO				IAML		21 16 03.4	
	comp=E,32nm,2.3s						
YPP	Pitchstone Pla	4.03	278	Pn	Pn	21 14 56.0	+0.6
YHH	Holmes Hill	4.14	286	Pn	Pn	21 14 56.7	-0.2
FXWY	Fox Creek	4.19	270	Pn	Pn	21 14 56.2	-1.3
O20A	White River Ci	4.29	212	Pn	Pn	21 14 59.7	+0.8
O20A				IAML		21 16 13.5	
	comp=E,57nm,0.7s						
YHB	Horse Butte	4.37	284	Pn	Pn	21 15 00.8	+0.8
YHB				IAML		21 16 13.3	
	comp=E,38nm,1.3s						
YHB				IAML		21 16 34.6	
	comp=N,27nm,0.9s						
YHL	Hebgen Lake	4.38	286	Pn	Pn	21 15 02.9	+2.7
YHL				IAML		21 16 17.5	
	comp=E,54nm,1.1s						
YHL				IAML		21 16 34.4	
	comp=N,56nm,1.1s						
RDMU	Red Mountain	4.56	226	Pn	Pn	21 15 02.3	-0.3
RDMU				IAML		21 16 19.6	
	comp=N,40nm,1.0s						
DGMT	Dagmar	4.72	9	Pn	Pn	21 15 06.1	+1.5
Q24A	Divide	4.84	179	Pn	Pn	21 15 07.0	+0.4
BOZ	Bozeman (W)	4.88	294	Pn	Pn	21 15 07.4	+0.4
BOZ				IAML		21 16 26.0	
	comp=N,24nm,1.3s						
BOZ				IAML		21 16 26.0	
	comp=N,27nm,1.1s						
HWUT	Hardware Ranch	5.15	247	Pn	Pn	21 15 10.7	0.0
KSCO	Kaye Shedlock'	5.18	157	Pn	Pn	21 15 11.4	+0.3
BSUT	Blindstream Ca	5.24	233	Pn	Pn	21 15 12.7	+0.6
BSUT				IAML		21 16 50.8	
	comp=N,20nm,2.5s						
BSUT				IAML		21 16 56.6	
	comp=E,22nm,1.4s						
EGMT	Eagleton	5.25	325	Pn	Pn	21 15 11.6	-0.4
TCUT	Toone Canyon	5.29	242	Pn	Pn	21 15 12.5	-0.2
DLMT	Dillon	5.47	289	Pn	Pn	21 15 16.4	+1.4
HRY	Holter Researc	5.47	304	Pn	Pn	21 15 14.5	-0.6
LRM	Limekiln Ridge	5.50	294	Pn	Pn	21 15 15.2	-0.3
P18A	Preston Nutter	5.61	223	Pn	Pn	21 15 17.2	+0.2
MDND	Maddock	5.65	42	Pn	Pn	21 15 17.8	+0.4
CTU	Camp Tracy	5.74	239	Pn	Pn	21 15 17.6	-1.2
SPUT	South Promonto	5.87	247	Pn	Pn	21 15 21.2	+0.6
LYMT	Lyon Mountain	5.88	305	Pn	Pn	21 15 20.4	-0.4
HVU	Hansel Valley	5.89	252	Pn	Pn	21 15 21.7	+0.8
BCYI	Bear Canyon	5.90	278	Pn	Pn	21 15 23.4	+2.4
PV22	Blue Mesa, Par	5.91	208	Pn	Pn	21 15 21.8	+0.7
PV07	Paradox Valley	5.95	207	Pn	Pn	21 15 22.2	+0.5
PV21	Cone Mtn., Par	5.95	209	Pn	Pn	21 15 21.6	-0.1
P17A	Butcher Ranch,	5.97	225	Pn	Pn	21 15 22.2	+0.2
PV15	Paradox Valley	5.98	205	Pn	Pn	21 15 23.3	+1.1
PV23	Carpenter Ridg	6.06	209	Pn	Pn	21 15 24.1	+0.9
SDCO	Great Sand Dun	6.06	182	Pn	Pn	21 15 24.0	+0.7
PV04	Paradox Valley	6.07	208	Pn	Pn	21 15 23.8	+0.4
PV12	Saucer Basin,	6.11	207	Pn	Pn	21 15 24.9	+1.0
PV14	Lion Creek, Pa	6.13	209	Pn	Pn	21 15 24.4	+0.1
PV10	Paradox Valley	6.13	209	Pn	Pn	21 15 25.1	+0.8
PV20	West Nyswonger	6.14	208	Pn	Pn	21 15 24.5	+0.2
SRU	San Rafael Swe	6.14	222	Pn	Pn	21 15 24.1	-0.2
PV11	David Mesa, Pa	6.15	208	Pn	Pn	21 15 25.1	+0.7
PV16	Nyswonger Mesa	6.15	208	Pn	Pn	21 15 24.9	+0.5
PV19	Morning Glory	6.17	208	Pn	Pn	21 15 25.9	+1.1
PV03	Paradox Valley	6.18	207	Pn	Pn	21 15 25.3	+0.5
PV02	Paradox Valley	6.19	206	Pn	Pn	21 15 25.6	+0.7
PV01	Paradox Valley	6.20	205	Pn	Pn	21 15 25.7	+0.5
PV18	Skein Mesa, Pa	6.21	208	Pn	Pn	21 15 25.7	+0.5
ECSD	EROS Data Cent	6.26	88	Pn	Pn	21 15 26.1	+0.4
PV13	Radium Mtn., P	6.26	207	Pn	Pn	21 15 25.9	0.0
TMUT	Trail Mountain	6.35	227	Pn	Pn	21 15 27.0	-0.2
BPMT	Black Pine Rid	6.36	297	Pn	Pn	21 15 27.2	-0.2
NLU	North Lily Min	6.38	235	Pn	Pn	21 15 27.8	+0.1
BGU	Big Grassy Mou	6.44	246	Pn	Pn	21 15 28.9	+0.5
CBKS	Cedar Bluff	6.49	138	Pn	Pn	21 15 29.5	+0.5
Q16A	Castle Valley	6.61	224	Pn	Pn	21 15 30.1	-0.6
HLID	Hailey	6.65	271	Pn	Pn	21 15 33.9	+2.7
F33A	5 Mile Ranch,	6.69	69	Pn	Pn	21 15 32.1	+0.5
DUG	Dugway, Tooele	6.69	240	Pn	Pn	21 15 31.4	-0.4
T25A	Trinidad	6.70	174	Pn	Pn	21 15 30.6	-1.4
MSO	Missoula	6.83	299	Pn	Pn	21 15 33.5	-0.1
HMU	Henry Mountain	7.19	217	Pn	Pn	21 15 38.6	-0.2
JTMT	Jette	7.44	305	Pn	Pn	21 15 42.6	+0.6
RTBA	Rita Blanca	7.61	165	Pn	Pn	21 15 44.3	-0.1
MTPU	Mount Pierson	7.79	225	Pn	Pn	21 15 46.9	-0.2
ELK	Elko	8.01	251	Pn	Pn	21 15 50.6	+0.5
	comp=E,0.4nm,0.3s,baz=53,slow=8.2,SNR=7.2						
	comp=E,0.6nm,0.3s						
I37A	Lemond, Waseca	8.56	85	Pn	Pn	21 15 56.5	-0.9
CCUT	Cedar City	8.78	227	Pn	Pn	21 16 00.5	0.0
ULM	Lac du Bonnet	9.08	42	Pn	Pn	21 16 05.5	+1.1
	comp=E,2.0nm,0.3s,baz=225,slow=11,SNR=12						
	comp=E,3.7nm,0.3s						
ULM	Lac du Bonnet	9.08	42	Pn	Pn	21 16 04.7	+0.3
EPLO	Experimental L	9.84	49	Pn	Pn	21 16 13.3	-1.6
FFC	Flin Flon	11.13	10	Pn	Pn	21 16 31.8	-0.6
NVAR	Mina Array Bea	11.21	246	Pn	Pn	21 16 35.5	+1.7
	comp=E,0.1nm,0.3s,baz=49,slow=11,SNR=5.2						
	comp=E,0.6nm,0.6s						
YKA	Yellowknife Ar	19.50	347	P	P	21 18 20.5	-0.1
	comp=E,0.1nm,0.3s,baz=163,slow=8.6,SNR=6.8						
	comp=E,0.1nm,0.3s						
MKAR	Makanchi Array	89.53	355	P	P	21 26 51.3	+0.1
	comp=E,0.3nm,0.6s,baz=19,slow=5.1,SNR=3.6						
	comp=E,0.3nm,0.6s						

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*IDC **24** 21:31:10.8±6.8, 38.°17N×74.°04E, h87^{km}±49^{km}, mb3.3/6, mbtmp3.7/12, ML3.3/6, MS3.9/1, Error ellipse: s-maj=53.5km s-min=26.0km az=15.0*

*SOME **24** 21:31:11.8, 38.°95N×73.°37E, h15^{km}*

*NNC **24** 21:31:17.6±4.4, 38.°67N×73.°92E, h171^{km}±70^{km}, mb2.4, mpv3.3, Error ellipse: s-maj=54.3km s-min=26.4km az=1.0*

ISC 24 21:31:15.6±1.8, **38.°5N**±0.°1×**74.°0E**±0.°1, **h124**^{km}, **n26**, σ**1.^{s}07**/28, **mb3.8**/5, **1C-5D**, **Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UCH	Uchtor	3.79	5	P	Pn	21 32 13.1	+0.2
	SNR=32						
ULHL	Ulahol	4.15	23	P	Pn	21 32 17.2	-0.2
	SNR=13						
AAK	Ala-Archa	4.20	5	P	Pn	21 32 18.5	+0.5
	SNR=5.9						
AAK	Ala-Archa	4.20	5	P	Pn	21 32 17.4	-0.6
	1.8nm,0.3s,baz=158,slow=7.6,SNR=24						
AAK				S	Sn	21 33 08.2	+1.8
	7.5nm,0.4s,baz=75,slow=13,SNR=7.4						
	4.1nm,0.4s						
AAK	Ala-Archa	4.20	5	⇓P	Pn	21 32 18.2	+0.3
	2.5nm,0.6s						
AAK				⇓S	Sn	21 33 06.7	+0.3
	4.0nm,0.5s						
EKS2	Erkin-Say	4.21	357	P	Pn	21 32 19.4	+1.3
	SNR=18						
KBK	Karagaybulak	4.26	9	P	Pn	21 32 19.2	+0.4
	SNR=9.7						
MRKS	Merke	4.34	352	eP	Pn	21 32 20.3	+0.6
	32nm,0.2s						
MRKS				eS	Sn	21 33 08.9	-0.7
	94nm,0.3s						
CHMS	Chumysh	4.58	7	P	Pn	21 32 23.4	+0.5
	SNR=10.0						
TKM2	Tokmak 2	4.62	14	P	Pn	21 32 23.8	+0.1
	SNR=12						
KOTS	Kotyrbulak	5.32	25	eP	Pn	21 32 43.6	+11
	1.2nm,0.4s						
KOTS				eS	Sn	21 33 49.7	+16
	19nm,0.7s						
KK31	Karatay Array	5.36	331	⇓P	Pn	21 32 33.3	-0.1
	2.0nm,0.2s,baz=136,slow=12,SNR=66						
KK31				⇓S	Sn	21 33 31.4	-2.6
	3.9nm,0.3s,baz=134,slow=22,SNR=6.7						
MK31	Makanchi Array	10.32	33	⇓P	Pn	21 33 38.4	-1.8
	0.3nm,0.5s,baz=214,slow=11,SNR=9.4						
MKAR	Makanchi Array	10.32	33	P	Pn	21 33 38.0	-2.1
	0.1nm,0.3s,baz=211,slow=12,SNR=9.5						
	1.0nm,0.8s						
KURBB	Kurchatov Arra	12.59	13	P	Pn	21 34 10.4	+0.3
	0.1nm,0.3s,baz=206,slow=10.0,SNR=12						
	0.2nm,0.4s						
BVAR	Borovoye Array	14.80	351	P	Pn	21 34 39.3	+0.9
	0.1nm,0.3s,baz=155,slow=8.9,SNR=22						
	1.4nm,0.4s						
AB31	Akbulak array	14.81	321	⇑P	Pn	21 34 37.2	-1.3
	0.3nm,0.5s,baz=127,slow=13,SNR=10						
AKTO	Aktyubinsk	16.52	322	P	Pn	21 34 59.5	-0.3
	0.3nm,0.3s,baz=100,slow=12,SNR=3.6						
	1.2nm,0.3s						
ZALV	Zalesovo Beam	17.18	22	P	P	21 35 06.3	-1.1
	0.6nm,0.3s,baz=205,slow=9.9,SNR=11						
	1.4nm,0.3s						
ARTI	Arti	20.75	335	P	P	21 35 46.0	-0.1
	1.2nm,0.5s,baz=138,slow=6.7,SNR=3.1						
	1.2nm,0.5s						
SONM	Songino Array	25.25	58	P	P	21 36 30.5	+0.4
	0.6nm,0.8s,baz=255,slow=8.6,SNR=5.6						
	0.6nm,0.8s						
HILR	Hailar Array B	34.21	56	LR	LR	21 54 44.7	
	comp=Z,186nm,18.0s,baz=60,slow=41						
FINES	FINESS Array B	37.27	324	P	P	21 38 16.0	+1.0
	1.3nm,0.8s,baz=117,slow=10,SNR=8.4						
	1.3nm,0.8s						
ARCES	ARCESS Array B	40.31	336	P	P	21 38 41.3	+1.1
	1.7nm,0.7s,baz=116,slow=7.4,SNR=12						
	1.7nm,0.7s						
HFS	Hagfors	43.06	320	P	P	21 39 03.3	+0.6
	1.2nm,0.6s,baz=110,slow=13,SNR=10						
	1.2nm,0.6s						
NOA	NORSAR Array B	44.31	322	P	P	21 39 13.3	+0.5
	0.2nm,0.6s,baz=91,slow=7.8,SNR=2.3						
	0.2nm,0.6s						

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*JSO **24** 22:30:59.8±0.0, 30°N±2°×3°5E±°, h0^{km}±4^{km}, M3.1/15, Md3.2/14, ML2.9/15, MLv3.1/15, MLv3.1/15*

*GII **24** 22:30:59.6±0.0, 29.°791N±0.°002×34.°615E±0.°001, h1^{km}, Mws2.5, confirmed*

*SGS **24** 22:30:59.0, 29.°64N×34.°47E, h11^{km}, Ml2.0*

*HLW **24** 22:31:00.1, 29.°64N×34.°60E, h23^{km}±2^{km}, Md2.7, Ml2.8*

ISC 24 22:30:57.7±0.8, **29.°66N**±0.°02×**34.°53E**±0.°04, **h7**^{km}, **n67**, σ**0.^{s}84**/69, **Egypt**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBRI	Mt Berech	0.36	68	P	Pb	22 31 06.2	-0.3
MBRI	Mt Berech	0.36	68	P	Pb	22 31 05.9	-0.6
MBRI	Mt Berech	0.36	68	S	Sg	22 31 10.3	+0.7
EIL	Elat	0.37	88	P	Pb	22 31 06.2	-0.3
EIL	Elat	0.37	88	S	Sb	22 31 12.3	-0.3
AQBJ	Aqaba	0.46	81	P	Pb	22 31 08.1	0.0
HBST	Basata	0.47	158	P	Pb	22 31 09.0	+0.7
KRMI	Paran Flat	0.49	21	P	Pg	22 31 07.9	+0.7
KRMI	Paran Flat	0.49	21	P	Pg	22 31 07.5	+0.3
KRMI	Paran Flat	0.49	21	S	Sg	22 31 13.0	-0.6
HRFI	Mount Harif	0.58	49	P	Pg	22 31 09.4	+0.5
HRFI				S	Sg	22 31 17.4	+0.8
HRFI	Mount Harif	0.58	49	P	Pg	22 31 09.1	+0.2
HRFI	Mount Harif	0.58	49	S	Sg	22 31 16.6	+0.1
HQLS		0.59	127	S	Sb	22 31 19.3	+0.5
HQLS		0.59	127	P	Pb	22 31 10.6	+0.4
NUB	Nuweibaa	0.64	170	S	Sb	22 31 21.9	+1.8
HAQS	Haql	0.69	150	P	Sn	22 31 28.1	+3.1
JMOS	Jabal al Moall	0.70	134	P	Pb	22 31 12.6	+0.4
JMOS	Jabal al Moall	0.70	134	S	Sb	22 31 23.0	+0.9
PRNI	Paran	0.81	31	P	Pg	22 31 13.4	+0.2
PRNI	Paran	0.81	31	P	Pg	22 31 13.2	0.0
PRNI	Paran	0.81	31	S	Sg	22 31 23.5	-0.2
HDHB	Dhahab	0.94	175	P	Pb	22 31 16.8	+0.7
ZFRI	Zfri	1.06	32	P	Pn	22 31 19.0	+0.1
ZFRI	Zfri	1.06	32	P	Pg	22 31 17.2	-0.8
ZFRI	Zfri	1.06	32	S	Sg	22 31 31.3	-0.4
HSNJ	Maan	1.17	59	P	Pg	22 31 19.8	-0.4
HKAT	Jabal Katrina	1.22	203	P	Pg	22 31 21.2	+0.1
JLOS		1.25	137	S	Sg	22 31 37.7	-0.1
JLOS		1.25	137	P	Pg	22 31 21.1	-0.5
KZIT	Kziot	1.25	355	P	Pb	22 31 20.6	-1.0
KZIT	Kziot	1.25	355	S	Sg	22 31 37.5	-0.4
BDAS	Al Bad`	1.32	158	P	Pn	22 31 21.9	-0.7
BDAS	Al Bad`	1.32	158	S	Sb	22 31 39.5	-0.5
RSHS		1.37	170	S	Sb	22 31 40.3	-1.2
RSHS				P	Pn	22 31 22.5	-0.8
HRDS	Abu Rudays	1.43	229	P	Pb	22 31 24.6	0.0
TR2	Tor 2	1.45	209	P	Pn	22 31 24.2	0.0
AYUS	`Aynunah	1.60	156	P	Pn	22 31 25.8	-0.6
AYUS	`Aynunah	1.60	156	S	Sn	22 31 45.1	-2.1
KRABS	KRABS	1.68	157	P	Pn	22 31 26.7	-0.7
KRABS	KRABS	1.68	157	S	Sn	22 31 47.5	-1.7
TR1	Tor 1	1.72	197	P	Pn	22 31 28.0	0.0
YTIR	Yattir	1.77	17	P	Pn	22 31 29.3	+0.4
YTIR	Yattir	1.77	17	P	Pn	22 31 28.8	-0.1
YTIR	Yattir	1.77	17	S	Sn	22 31 51.8	+0.1
LISJ	El Lisan	1.78	27	P	Pb	22 31 30.1	-0.5
MZDA	Masada	1.80	23	P	Pn	22 31 29.3	+0.2
MSBI	Mazada	1.80	23	P	Pb	22 31 30.5	-0.4
MSBI	Mazada	1.80	23	P	Pn	22 31 29.8	+0.7
MSBI	Mazada	1.80	23	S	Sn	22 31 51.7	-0.5
GHAJ	Ghor Haditha	1.87	28	P	Pb	22 31 31.5	-0.7
GHAJ	Ghor Haditha	1.87	28	P	Pn	22 31 30.7	+0.6
GHAJ	Ghor Haditha	1.87	28	S	Sn	22 31 53.6	-0.4
AMAZ	Amatzia	1.90	10	P	Pb	22 31 31.8	-0.9
AMAZ	Amatzia	1.90	10	S	Sn	22 31 54.9	+0.1
WTBKS	WTBKS	1.98	142	P	Pn	22 31 31.5	-0.3
DSI	Dead Sea	2.04	21	P	Pb	22 31 34.2	-0.9
DSI	Dead Sea	2.04	21	P	Pn	22 31 33.8	+1.3
DSI	Dead Sea	2.04	21	S	Sn	22 31 58.5	+0.2
MWLHS	Almuwaylih	2.09	155	P	Pn	22 31 32.6	-0.5
SALP	Salfit	2.47	13	P	Pn	22 31 40.1	+1.7
DESA	DESA	2.58	146	P	Pn	22 31 39.7	-0.3
HMDT	Nahal Hemdat	2.73	18	P	Pn	22 31 42.9	+1.0
HMDT	Nahal Hemdat	2.73	18	S	Sn	22 32 14.8	-0.3
MMLI	Mount Malkishu	2.88	15	P	Pn	22 31 45.9	+1.9
MMLI	Mount Malkishu	2.88	15	P	Pn	22 31 44.9	+1.0
MMLI	Mount Malkishu	2.88	15	S	Sn	22 32 19.1	+0.2

IDC 24 22:34:58.2±1.9, **6.°39S**×**143.°37E**, **h0**^{km}, **mb3.3**/1, **mbtmp3.7**/5, **ML3.7**/3, **Error ellipse: s-maj=47.8km s-min=27.7km az=71.0**, **New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	4.68	325	Pn	Pn	22 36 12.3	+2.1
	1.6nm,0.3s,baz=170,slow=12,SNR=6.4						
	9.0nm,0.5s						
PMG	Port Moresby	4.80	129	Pn	Pn	22 36 12.3	+0.5
	3.6nm,0.4s,baz=333,slow=6.8,SNR=2.2						
WRA	Warramunga Arr	16.07	212	Pn	Pn	22 38 43.9	-1.9
	0.3nm,0.3s,baz=37,slow=14,SNR=8.0						
	1.2nm,0.7s						
ASAR	Alice Springs	19.44	207	P	Pn	22 39 27.4	-0.1
	0.3nm,0.3s,baz=36,slow=9.4,SNR=56						
	4.4nm,0.7s						
MKAR	Makanchi Array	75.53	322	P	P	22 46 43.8	-0.9
	0.2nm,0.6s,baz=103,slow=6.2,SNR=2.3						
	0.2nm,0.6s						

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*CATAC **24** 22:41:26.1±0.4, 13°N±2°×9°2W±°, h2^{km}, M4.2/20, MLv4.2/20, Error ellipse: s-maj=5.6km s-min=2.8km az=37.3, confirmed*

*GCG **24** 22:41:27.0±3.7, 13.°51N×91.°67W, h13^{km}±30^{km}, MD4.1, ML4.0*

*NEIC **24** 22:41:32.7±2.0, 13.°72N±0.°06×91.°42W±0.°03, h35^{km}±2^{km}, mb4.3/85, Error ellipse: s-maj=10.7km s-min=4.7km az=160.0*

*IDC **24** 22:41:34.0±2.8, 13.°83N×91.°54W, h56^{km}±19^{km}, mb3.8/6, mbtmp4.0/9, ML3.8/3, MS3.9/13, Error ellipse: s-maj=24.9km s-min=13.0km az=4.0*

ISC 24 22:41:31.0±0.8, **13.°53N**±0.°08×**91.°57W**±0.°06, **h39**^{km}±7^{km}, **n163**, σ**1.^{s}51**/142, **mb4.3**/37, **MS3.8**/13, **6C**, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG5	El Palmar, Qui	0.89	14	i P	Pn	22 41 48.2	+1.1
STG2	El Palmar, Qui	0.92	12	i P	Pn	22 41 49.3	+1.8
STG8	El Palmar, Qui	0.94	13	i P	Pn	22 41 49.3	+1.4
STG8				IAML		22 42 16.1	
	comp=N,6µm,0.3s						
RTAL	Retalhuleu	0.99	353		Pn	22 41 46.1	-2.4
RTAL					Sn	22 41 57.2	-4.0
RTAL	Retalhuleu	0.99	353	S	Sn	22 42 02.7	+1.4
RTAL	Retalhuleu	0.99	353	P	Pn	22 41 46.8	-1.6
ESSJ	San Jos, E	1.04	88	i P	Pn	22 41 45.5	-3.6
ESSG	Sabana Grande	1.11	40	i P	Pn	22 41 47.8	-2.3
ESSG				IAML		22 42 18.3	
	comp=E,2µm,0.8s						
FG16	Alotenango, Sa	1.26	54	i P	Pn	22 41 49.0	-3.3
FG16				i S	Sn	22 42 09.3	+1.1
FG16				IAML		22 42 18.4	
	comp=N,14µm,0.2s						
SOKI	Kika Raxquin	1.29	7	i P	Pn	22 41 51.4	-1.5
SOKI				i S	Sn	22 42 06.9	-2.3
SOKI				IAML		22 42 37.4	
	comp=N,5µm,0.8s						
PCG5	San Vicente Pa	1.34	59	i P	Pn	22 41 49.8	-3.6
FAME	Alcaldia de Sa	1.54	78	S	Sn	22 42 14.6	-0.2
FAME	Alcaldia de Sa	1.54	78	⇑P	Pn	22 41 53.0	-2.9
HUEH	Huehuetenango	1.77	2		Pn	22 41 58.5	-0.9
HUEH	Huehuetenango	1.77	2	i P	Pn	22 42 00.6	+1.2
HUEH	Huehuetenango	1.77	2	P	Pn	22 42 00.2	+0.7
HUEH	Huehuetenango	1.77	2	S	Sn	22 42 24.4	+3.5
NUBE	Las Nubes	1.78	78	i P	Pn	22 41 57.0	-2.3
NUBE	Las Nubes	1.78	78	S	Sn	22 42 21.0	+0.2
NUBE	Las Nubes	1.78	78	⇑P	Pn	22 41 56.7	-2.7
LOAL	Lomas de Alarc	1.80	75	S	Sn	22 42 22.0	+0.9
LOAL	Lomas de Alarc	1.80	75	⇑P	Pn	22 41 57.9	-1.6
QUIS	Sacapulas	1.81	15	i P	Pn	22 42 00.5	+0.7
QUIS				IAML		22 42 32.1	
	comp=E,2µm,0.5s						
APG	El Apazote	1.81	36	P	Pn	22 41 59.2	-0.7
	comp=E,25nm,0.6s,baz=186,slow=12,SNR=190						
APG				S	Sn	22 42 19.2	-2.5
	comp=E,40nm,0.7s,baz=223,slow=18,SNR=6.2						
APG				LR	LR	22 42 46.0	
	comp=E,73nm,21.1s,baz=300,slow=46						
APG	El Apazote	1.81	36	i P	Pn	22 41 59.9	0.0
CEVE	Cerro Verde	1.91	81	S	Sn	22 42 25.0	+0.7
CEVE	Cerro Verde	1.91	81	⇑P	Pn	22 41 59.7	-1.6
JUAM	Asuncion Mita	1.98	66	i P	Pn	22 42 01.0	-1.0
JUAM				i S	Sn	22 42 27.8	+2.3
JUAM				IAML		22 42 31.1	
	comp=E,2µm,1.0s						
UNIC	Universidad Ca	2.01	77	S	Sn	22 42 27.6	+1.1
UNIC	Universidad Ca	2.01	77	P	Pn	22 42 01.3	-1.2
JAYA	Jayaque - finc	2.06	86	i P	Pn	22 42 00.7	-2.6
JAYA	Jayaque - finc	2.06	86	S	Sn	22 42 28.1	+0.2
CEDA	San Andres	2.13	83	P	Pn	22 42 02.9	-1.2
CEDA	San Andres	2.13	83	S	Sn	22 42 30.6	+1.2
LALI	Alcalda de L	2.19	91	S	Sn	22 42 31.8	+1.1
LALI	Alcalda de L	2.19	91	P	Pn	22 42 03.3	-1.5
PMON	Piamonte	2.20	85	S	Sn	22 42 32.2	+1.1
PMON	Piamonte	2.20	85	⇑P	Pn	22 42 03.8	-1.4
UEES	Universidad Ev	2.27	85	P	Pn	22 42 04.9	-1.2
UEES	Universidad Ev	2.27	85	S	Sn	22 42 33.2	+0.3
MTO3	Montecristo	2.31	68	Pn	Pn	22 42 05.1	-1.6
MTO3	Montecristo	2.31	68	i P	Pn	22 42 05.4	-1.4
MTO3	Montecristo	2.31	68	P	Pn	22 42 05.3	-1.5
LOMA	Loma Larga	2.33	87	P	Pn	22 42 04.4	-2.5
LOMA	Loma Larga	2.33	87	S	Sn	22 42 35.7	+1.2
ESQI	Esquipulas	2.39	64	Pn	Pn	22 42 05.9	-1.8
ESQI	Esquipulas	2.39	64	P	Pn	22 42 06.8	-1.0
ESQI	Esquipulas	2.39	64	S	Sn	22 42 38.0	+2.1
PAVA	Las Pavas	2.56	86	P	Pn	22 42 08.7	-1.4
LLGN	La Laguna	2.62	76	P	Pn	22 42 10.5	-0.5
TECO	Alcaldia de Te	2.71	90	P	Pn	22 42 11.2	-0.9
SCLA	Alcaldia de Sa	2.77	86	P	Pn	22 42 11.7	-1.1
SARH	Santa Rosa de	2.99	65	S	Sn	22 42 53.4	+2.8
SARH	Santa Rosa de	2.99	65	⇑P	Pn	22 42 14.9	-1.1
PACA	Pacayal	3.16	91	P	Pn	22 42 17.3	-1.0
PACA	Pacayal	3.16	91	S	Sn	22 42 56.4	+1.6
PETF	Flores	3.74	26	Pn	Pn	22 42 26.2	-0.1
TGUH	Tegucigalpa,Un	4.21	82	Pn	Pn	22 42 32.9	+0.1
CRIN	San Cristobal	4.48	100	Pn	Pn	22 42 36.7	+0.2
HERN	Volcan Telica	4.71	101	Pn	Pn	22 42 40.2	+0.6
CMIG	Matias Romero	4.77	318	P	Pn	22 42 40.3	-0.1
	comp=E,2.3nm,0.3s,baz=137,slow=11,SNR=22						
CMIG				S	Sn	22 43 33.0	-1.4
	comp=E,68nm,0.8s,baz=117,slow=8.1,SNR=5.7						
	comp=E,11nm,0.5s						
CNGN	Cerro Negro	4.86	102	Pn	Pn	22 42 43.4	+1.7
BOAB	BOACO BROADBAN	5.85	100	Pn	Pn	22 42 52.1	-3.1
JUD3	Juan Diaz 3	6.79	119	Pn	Pn	22 43 06.5	-1.7
JTS	Las Juntas de	7.23	116	P	Pn	22 43 18.1	+3.8
	comp=E,1.2nm,0.3s,baz=308,slow=19,SNR=1.6						

	comp=E,4.3nm,0.3s						
TEIG	Tepich	7.36	25	P	Pn	22 43 15.5	-0.5
	comp=E,0.1nm,0.5s,baz=131,slow=24,SNR=19						
TEIG	Tepich	7.36	25	Pn	Pn	22 43 16.4	+0.4
PIRO	Carate, Puerto	9.55	121	Pn	Pn	22 43 46.7	+0.7
MTDJ	Mount Denham	14.28	69	Pn	Pn	22 44 51.2	+0.4
HBVL	Hebbronville	15.01	335		P	22 45 06.0	+0.8
833A	Chaparral WMA,	16.42	335	Pn	Pn	22 45 19.5	+0.9
EF04	Eagle Ford 04	16.63	341		Pn	22 45 22.1	+0.9
441A	DeRidder	17.20	355	P	P	22 45 30.5	+1.0
441A				IAmb	IAmb	22 45 34.9	
	comp=Z,28nm,1.0s						
HNDO	Hondo	17.45	337		P	22 45 32.5	+0.2
435B	Jarrell	18.04	343	Pn	P	22 45 40.7	+1.9
JCT	Junction City	18.50	337	P	Pn	22 45 45.4	+1.0
JCT				IAmb	IAmb	22 46 14.8	
	comp=Z,6.0nm,0.3s						
BRDY	Brady	18.94	340	P	P	22 45 49.1	+0.4
SAND	Sanderson	19.04	331	P	Pn	22 45 50.6	-0.2
H06E1	SOCORRO T-PHAS	19.30	288	T	T	23 05 45.3	
	SNR=16						
TXAR	Lajitas Array	19.31	326	P	Pn	22 45 54.2	0.0
	comp=Z,0.2nm,0.3s,baz=156,slow=13,SNR=44						
	comp=Z,3.7nm,0.8s						
TX31	Lajitas Ar. Si	19.32	326	P	Pn	22 45 54.1	-0.1
OZNA	Ozona	19.42	335	P	P	22 45 54.6	+0.6
OZNA				IAmb	IAmb	22 45 56.7	
	comp=Z,8.1nm,0.7s						
PLPT	Palo Pinto	20.16	343	P	P	22 46 01.1	-0.8
PLPT				IAmb	IAmb	22 46 10.3	
	comp=Z,14nm,1.0s						
SGCY	Sterling City	20.29	336	P	P	22 46 03.5	0.0
SGCY				IAmb	IAmb	22 46 05.0	
	comp=Z,16nm,0.8s						
ABTX	Abilene, Hawle	20.39	340	P	P	22 46 04.8	+0.3
ABTX				IAmb	IAmb	22 46 11.9	
	comp=Z,10nm,0.9s						
ODSA	Odessa	21.06	333	IAmb	IAmb	22 46 13.0	
	comp=Z,21nm,1.1s						
VHRN	Van Horn	21.16	326	P	P	22 46 13.6	+0.6
VHRN				IAmb	IAmb	22 46 15.2	
	comp=Z,12nm,1.1s						
UALR	University of	21.16	358	IAmb	IAmb	22 46 15.1	
	comp=Z,13nm,0.8s						
APMT	Aspermont	21.19	340	IAmb	IAmb	22 46 13.9	
	comp=Z,11nm,0.7s						
POST	Post	21.45	337	IAmb	IAmb	22 46 19.6	
	comp=Z,10nm,0.8s						
MNTX	Cornudas Mount	22.08	327	IAmb	IAmb	22 46 26.9	
	comp=Z,8.0nm,0.8s						
FNO	Franklin	22.26	347	P	P	22 46 24.3	-0.3
FCAR	Ozark Folk Cen	22.27	359	IAmb	IAmb	22 46 24.6	
	comp=Z,11nm,1.0s						
MSTX	Muleshoe	22.75	335	IAmb	IAmb	22 46 30.9	
	comp=Z,8.5nm,0.8s						
SMWD	Samnorwood	22.86	341	IAmb	IAmb	22 46 32.4	
	comp=Z,15nm,0.9s						
TKL	Tuckaleechee C	23.12	16	P	P	22 46 32.5	-1.1
	comp=Z,7.9nm,0.7s,baz=182,slow=12,SNR=16						
TKL				LR	LR	22 56 09.4	
	comp=Z,244nm,19.9s,baz=191,slow=38						
	comp=Z,7.9nm,0.7s						
TKL	Tuckaleechee C	23.12	16	P	P	22 46 31.9	-1.8
PBMO	Poplar Bluff	23.17	2	P	P	22 46 32.4	-1.6
PBMO				IAmb	IAmb	22 46 33.4	
	comp=Z,7.9nm,1.0s						
MGMO	Mountain Grove	23.53	359	IAmb	IAmb	22 46 36.6	
	comp=Z,16nm,1.4s						
319A	Douglas	24.09	320	P	P	22 46 44.5	+1.5
319A				IAmb	IAmb	22 46 48.6	
	comp=Z,12nm,1.0s						
T50A	Nancy	24.15	13	P	P	22 46 41.1	-2.3
CCM	Cathedral Cave	24.42	1	P	P	22 46 43.8	-2.1
CRNM	Carthage	24.55	328	P	P	22 46 48.7	+1.3
SJG	San Juan	24.86	76	LR	LR	22 57 23.0	
	comp=Z,209nm,18.6s,baz=266,slow=38						
ANMO	Albuquerque	25.21	330	P	P	22 46 53.7	+0.4
TASM	ASL Pad, Albuq	25.21	330	IAmb	IAmb	22 46 55.9	
	comp=Z,1.5nm,0.8s						
TASM	ASL Pad, Albuq	25.21	330	IAmb	IAmb	22 46 59.6	
	comp=Z,1.7nm,0.8s						
TASM	ASL Pad, Albuq	25.21	330	IAmb	IAmb	22 47 15.4	
	comp=Z,2.3nm,1.0s						
PV18	Skein Mesa, Pa	29.03	331	P	P	22 47 29.1	+1.5
PV18				IAmb	IAmb	22 47 29.8	
	comp=Z,7.2nm,0.9s						
PV12	Saucer Basin,	29.04	331	IAmb	IAmb	22 47 30.1	
	comp=Z,6.5nm,0.8s						
PV23	Carpenter Ridg	29.25	331	IAmb	IAmb	22 47 37.3	
	comp=Z,6.1nm,0.9s						
KNB	Kanab	30.13	325	P	P	22 47 38.9	+1.6
KNB				IAmb	IAmb	22 48 07.3	
	comp=Z,9.4nm,1.5s						
LCMT	Little Creek M	30.36	324	P	P	22 47 41.1	+1.8
LCMT				IAmb	IAmb	22 47 43.9	
	comp=Z,3.0nm,0.8s						
RDMU	Red Mountain	31.21	333	P	P	22 47 48.1	+1.2
BSUT	Blindstream Ca	31.72	332	P	P	22 47 52.1	+0.5
BSUT				IAmb	IAmb	22 48 32.2	
	comp=Z,5.4nm,1.4s						
PSUT	Pine Spring	31.78	326	IAmb	IAmb	22 47 55.4	
	comp=Z,3.4nm,0.9s						
SADO	Sadowa	32.88	16	LR	LR	23 02 05.3	
	comp=Z,165nm,19.2s,baz=194,slow=38						
HWUT	Hardware Ranch	32.94	332	IAmb	IAmb	22 48 03.9	
	comp=Z,10nm,1.5s						
PDAR	Pinedale Array	33.02	335	P	P	22 48 00.7	-2.0
	comp=Z,0.3nm,0.7s,baz=159,slow=6.1,SNR=5.0						
	comp=Z,0.3nm,0.7s						
BGU	Big Grassy Mou	33.11	330	P	P	22 48 04.3	+0.8
SNOW	Snow King Moun	34.08	335	P	P	22 48 12.1	0.0
LOHW	Long Hollow	34.14	335	P	P	22 48 13.5	+1.0
LOHW				IAmb	IAmb	22 48 13.9	
	comp=Z,3.2nm,1.0s						
NVAR	Mina Array Bea	34.30	321	P	P	22 48 13.9	+0.1
	comp=Z,3.1nm,0.8s,baz=134,slow=7.9,SNR=13						
NVAR				LR	LR	23 03 45.9	
	comp=Z,145nm,19.1s,baz=128,slow=39						
	comp=Z,3.1nm,0.8s						
NVAR	Mina Array Bea	34.30	321	P	P	22 48 14.5	+0.6
MOOW	Moose Ponds	34.31	335	P	P	22 48 14.6	+0.6
MOOW				IAmb	IAmb	22 48 49.6	
	comp=Z,5.3nm,1.5s						
BCYI	Bear Canyon	35.90	333	P	P	22 48 28.9	+1.2
BCYI				IAmb	IAmb	22 48 51.1	
	comp=Z,3.6nm,1.3s						
PLID	Pearl Lake	37.68	331	P	P	22 48 43.8	+1.0
PLID				IAmb	IAmb	22 48 44.1	
	comp=Z,5.7nm,1.1s						
F10A	Beach Ranch, E	38.92	331	P	P	22 48 53.9	+0.9
F10A				IAmb	IAmb	22 48 54.6	
	comp=Z,7.3nm,0.9s						
H04A	Detroit Lake	40.53	326	P	P	22 49 08.2	+1.8
HOOD	Mount Hood Mea	40.66	327	P	P	22 49 09.0	+1.4
H04D	Lebanon	40.73	325	P	P	22 49 08.8	+0.8
RPN	Rapa Nui	43.95	203	LR	LR	23 01 54.8	
	comp=Z,196nm,21.8s,baz=40,slow=28						
SCHQ	Schefferville	45.51	20	LR	LR	23 09 53.5	
	comp=Z,253nm,18.0s,baz=224,slow=38						
YKAW1	Yellowknife Wh	51.54	347	P	P	22 50 31.2	-1.5
YKAW1				IAmb	IAmb	22 50 31.8	
	comp=Z,2.2nm,0.8s						
YKA	Yellowknife Ar	51.57	347	P	P	22 50 31.8	-1.2
	comp=Z,1.2nm,0.8s,baz=156,slow=7.1,SNR=20						
YKA				PcP	PcP	22 51 46.1	-0.3
	comp=Z,0.7nm,0.8s,baz=157,slow=3.6,SNR=9.1						
	comp=Z,1.2nm,0.8s						
YKA	Yellowknife Ar	51.57	347	P	P	22 50 31.2	-1.8
YKAW3	Yellowknife Wh	51.63	347	P	P	22 50 32.0	-1.4
YKAW3				IAmb	IAmb	22 50 32.6	
	comp=Z,3.7nm,1.0s						
FRB	Frobisher Bay	52.67	13	LR	LR	23 13 35.6	
	comp=Z,76nm,18.1s,baz=275,slow=37						
Q32M	Nakina River	54.48	335	P	P	22 50 57.0	+2.3
M29M	Somme Creek	59.01	337	P	P	22 51 27.3	+0.6
SFJD	Kangerlussuaq	59.83	17	LR	LR	23 18 04.6	
	comp=Z,191nm,19.0s,baz=222,slow=37						
I30M	Mount Dempster	59.89	340	P	P	22 51 31.4	-1.4
I30M				IAmb	IAmb	22 51 32.6	
	comp=Z,1.8nm,0.9s						
G31M	Satah River	60.30	342	P	P	22 51 33.5	-1.7
L27K	Beaver Creek,	60.65	336	P	P	22 51 38.1	+0.3
L27K				IAmb	IAmb	22 51 39.0	
	comp=Z,2.8nm,0.8s						
INK	Inuvik	61.00	343	P	P	22 51 38.7	-1.4
	comp=Z,1.6nm,0.7s,baz=95,slow=5.8,SNR=9.0						
	comp=Z,1.6nm,0.7s						
F30M	Barrier River	61.20	342	P	P	22 51 40.9	-0.5
F28M	Old Crow	62.44	341	P	P	22 51 49.4	-0.5
ILAR	Eielson Array	63.43	337	P	P	22 51 55.9	-0.6
	comp=Z,2.5nm,0.9s,baz=139,slow=4.1,SNR=20						
	comp=Z,2.5nm,0.9s						
ILAR	Eielson Array	63.43	337	P	P	22 51 56.0	-0.4
BMAR	Burnt Mountain	63.87	340	P	P	22 51 58.9	-0.4
TRF	Thorofare Moun	64.24	335	P	P	22 52 02.1	+0.2
PPT	Papeete	65.05	243	LR	LR	23 12 37.9	
	comp=Z,66nm,18.8s,baz=81,slow=29						
K20K	Telida	65.79	334	P	P	22 52 10.9	-1.0
J19K	Poorman	66.65	334	P	P	22 52 16.8	-0.6
D22K	Ayikyak River	67.23	340	P	P	22 52 21.5	+0.5
D22K				IAmb	IAmb	22 52 25.4	
	comp=Z,1.8nm,1.0s						
D20K	Etivluk River	68.51	339	P	P	22 52 29.0	0.0
D20K				IAmb	IAmb	22 52 29.5	
	comp=Z,2.6nm,0.8s						
BORG	Borgarnes	69.45	26	LR	LR	23 22 10.0	
	comp=Z,51nm,19.6s,baz=302,slow=35						
F15K	North Star Dit	70.80	335	P	P	22 52 43.1	-0.1
HFS	Hagfors	85.80	29	LR	LR	23 32 25.8	
	comp=Z,62nm,18.3s,baz=260,slow=36						
ARCES	ARCESS Array B	86.45	18	LR	LR	23 31 56.5	
	comp=Z,41nm,21.1s,baz=288,slow=35						
NRIK	Noril'sk	97.34	0	LR	LR	23 43 14.2	
	comp=Z,45nm,19.3s,baz=358,slow=38						
ASAR	Alice Springs	135.90	250	PKP	PKiKP	23 00 50.1	0.0
	comp=Z,0.2nm,0.9s,baz=306,slow=48,SNR=1.7						
CMAR	Chiang Mai Arr	146.56	342	PKPbc	PKPbc	23 01 09.3	+0.2
	comp=Z,3.0nm,0.8s,baz=347,slow=4.8,SNR=23						

IDC 24 23:12:08.0±1.9**, 12°.18N**×**144°.89E, h0**^{km}**, mb3.8**/3**,**
mbtmp3.8/3**, MS3.7**/1**, Error ellipse: s-maj=156.2km**
s-min=16.9km az=94.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GUMO	Guam	1.40	359	Pn	Pb	23 12 35.6	+0.6
	138nm,0.3s,baz=326,slow=1.8,SNR=55						
GUMO				Sn	Sg	23 12 53.0	0.0
	154nm,0.3s,baz=357,slow=23,SNR=49						
WRA	Warramunga Arr	33.57	198	P	P	23 18 50.0	+0.1
	1.7nm,0.7s,baz=20,slow=9.0,SNR=12						
	1.7nm,0.7s						
ASAR	Alice Springs	37.21	197	P	P	23 19 21.6	+0.3
	0.2nm,0.4s,baz=17,slow=13,SNR=12						
	0.2nm,0.4s						
STKA	Stephens Creek	43.92	184	P	P	23 20 15.8	-0.8
	1.5nm,0.5s,baz=5.8,slow=7.0,SNR=9.5						
	1.5nm,0.5s						
YAK	Yakutsk	50.97	351	LR	LR	23 41 40.9	
	comp=Z,69nm,18.5s,baz=16,slow=35						

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*GCG **24** 23:13:09.3±1.6, 14°.41N×93°.00W, h0^{km}±30^{km}, MD3.5, ML3.6*

*MEX **24** 23:13:11.4±1.2, 14°.50N×93°.19W, h10^{km}, MD3.9*

ISC 24 23:13:03.9±2.5**, 14°.38N**±0°.10×**93°.31W**±0°.06**, h3**^{km}±13^{km}**,**
n18, σ1^{s}61/18**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
THIG		1.14	63	*e*P	Pg	23 13 27.3	+1.7
THIG				*e*S	Sg	23 13 40.6	+0.2
PATR	El Naranjo	1.27	55	*e*P	Pg	23 13 28.7	+0.5
PATR				*e*S	Sg	23 13 42.7	-2.0
SMCA	Catarina	1.28	68	*i* P	Pg	23 13 29.4	+1.0
SMCA				*i* S	Sg	23 13 43.8	-1.3
PCIG		1.32	4	*i* P	Pg	23 13 30.2	+1.0
PCIG				*i* S	Sg	23 13 45.5	-0.7
CHUJ	Union Juarez	1.36	59	*e*P	Pg	23 13 30.2	+0.3
CHUJ				*e*S	Sg	23 13 45.4	-2.2
PAVE	Pavencul	1.36	53	*e*P	Pg	23 13 29.8	-0.1
PAVE				*e*S	Sg	23 13 44.8	-2.8
RTAL	Retalhuleu	1.57	85	*e*P	Pn	23 13 33.9	+1.3
RTAL				*e*S	Sn	23 13 52.0	-1.5
STG2	El Palmar, Qui	1.87	88	*i* P	Pn	23 13 34.6	-2.4
STG8	El Palmar, Qui	1.90	88	*i* P	Pn	23 13 35.2	-2.1
STG8				IAML		23 13 57.1	
	comp=E,839nm,0.2s						
STG5	El Palmar, Qui	1.90	89	*i* P	Pn	23 13 35.2	-2.0
CCIG	Comitan	2.20	31	*e*P	Pn	23 13 44.8	+3.3
CCIG				*e*S	Sn	23 14 09.4	+0.2
QUIS	Sacapulas	2.32	67	*i* P	Pn	23 13 46.0	+2.9
TGIG		2.39	4	*e*P	Pn	23 13 46.7	+2.8
TGIG				*e*S	Sn	23 14 14.3	+0.5
APG	El Apazote	2.82	77	*i* P	Pn	23 13 52.2	+2.2
HUIG	Huatulco	3.04	297	*e*P	Pn	23 13 55.7	+2.9
HUIG				*e*S	Sn	23 14 26.9	-2.8
CMIG	Matias Romero	3.09	331	*e*P	Pn	23 13 56.9	+3.3
CMIG				*e*S	Sn	23 14 31.4	+0.4
PEIG	Puerto Escondi	4.04	294	*e*P	Pn	23 14 11.0	+4.3
PEIG				*e*S	Sn	23 14 55.3	+0.8
NEUV	Arroyo Zacate	4.09	324	*e*P	Pn	23 14 09.9	+2.7
NEUV				*e*S	Sn	23 14 55.3	-0.4

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*IDC **24** 23:32:08.0±2.1, 51°.42N×177°.31E, h0^{km}, mb3.4/8, mbtmp3.4/9, ML3.9/1, MS3.3/1, Error ellipse: s-maj=61.9km s-min=18.3km az=7.0*

*NEIC **24** 23:32:12.2±1.5, 51°.59N±0°.07×177°.35E±0°.04, h21^{km}±7^{km}, mb3.8/11, ML3.5/10, ML3.3(AEIC), Error ellipse: s-maj=10.4km s-min=3.6km az=179.0*

*AEIC **24** 23:32:12.9±1.7, 51°.66N±0°.08×177°.38E±0°.06, h29^{km}±5^{km}, Error ellipse: s-maj=12.3km s-min=4.8km az=194.0*

ISC 24 23:32:14.8±0.9**, 51°.6N**±0°.1×**177°.37E**±0°.05**, h43**^{km}**, n54,**
σ**1^{s}25**/50**, mb3.7**/15**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LSSA	Little Sitkin	0.77	66		Pn	23 32 27.5	-1.8
LSNW	Little Sitkin	0.78	64		Pn	23 32 27.5	-1.9
LSSE	Little Sitkin	0.80	68		Pn	23 32 27.8	-1.8
LSPA	Little Sitkin	0.81	66		Pn	23 32 28.0	-1.7
LSPA					Sn	23 32 39.0	-1.7
AMKA	Amchitka	1.23	101		Pn	23 32 33.4	-2.1
AMKA	Amchitka	1.23	101		Sn	23 32 50.5	-0.4
CESW	Semis' Southwe	1.39	78		Pn	23 32 36.5	-1.1
CESW					Sn	23 32 54.6	-0.1
CERB	Semis' Cerberu	1.43	77		Pn	23 32 37.2	-1.0
CEPE	Semis' Perret	1.45	76		Pn	23 32 37.6	-0.9
SHEM	Shemya Is, Ala	2.29	300	Pn	Pn	23 32 48.8	-1.2
	27nm,0.3s,baz=152,slow=0.7,SNR=16						
SHEM				Sn	Sn	23 33 17.1	+0.1
	29nm,0.3s,baz=300,slow=19,SNR=16						
	75nm,0.3s						
SHEM	Shemya Is, Ala	2.29	300	Pn	Pn	23 32 48.9	-1.2
SHEM				IAML		23 33 19.3	
	comp=N,119nm,0.9s						
SHEM				IAML		23 33 20.9	
	comp=E,160nm,0.8s						
SMY	Shemya	2.29	300	Pn	Pn	23 32 48.6	-1.4
SMY				IAML		23 33 19.4	
	comp=N,336nm,1.2s						
SMY				IAML		23 33 21.5	
	comp=E,276nm,0.8s						
SMY	Shemya	2.29	300		Sn	23 33 16.5	-0.5
GAKI	Gareloi-Kavalg	2.38	91		Pn	23 32 50.6	-0.6
GAKI					Sn	23 33 19.7	+0.5
GANO	Gareloi North	2.38	84		Pn	23 32 50.5	-0.8
TASE	Tanaga Southea	2.86	84		Pn	23 32 57.7	-0.2
TAFL	Tanaga Flats	2.94	86		Pn	23 32 58.0	-0.9
TAPA	Tanaga Point A	3.00	85		Pn	23 32 59.3	-0.5
KIMD	Kanaga Island	3.36	86		Pn	23 33 04.0	-0.6
KIKV	Kanaga Island	3.40	84		Pn	23 33 04.0	-1.2
KIWB	Kanaga Island	3.41	84	Pn	Pn	23 33 04.3	-1.1
KIWB				IAML		23 34 21.7	
	comp=E,162nm,3.5s						
KIWB				IAML		23 35 09.3	
	comp=N,137nm,3.7s						
ADK	Adak	3.70	84	Pn	Pn	23 33 09.0	-0.3
ETKA	Kagalaska Isla	3.87	84		Pn	23 33 10.5	-1.2
CLES	Cleveland East	7.91	76	Pn	Pn	23 34 07.0	0.0
M13K	Dall Lake	13.86	43	Pn	Pn	23 35 23.6	-4.6
H17K	Granite Mounta	17.74	33		P	23 36 18.9	+0.2
SLKM	Skilak Lake	19.95	51	P	Pn	23 36 44.4	-0.5
E22K	Anaktuvuk Pass	22.24	30	P	P	23 37 10.2	+2.7
E22K				IAmb	IAmb	23 37 37.2	
	comp=Z,6.0nm,1.4s						
H24K	Noodor Dome	22.55	38	P	P	23 37 14.1	+3.2
H24K				IAmb	IAmb	23 37 19.2	
	comp=Z,4.1nm,1.2s						
ILAR	Eielson Array	22.57	41	P	P	23 37 11.5	+0.5
	comp=Z,0.3nm,0.6s,baz=249,slow=11,SNR=2.0						
	comp=Z,0.3nm,0.6s						
F24K	Squaw Lake	23.24	34	P	P	23 37 21.1	+3.2
F24K				IAmb	IAmb	23 38 00.5	
	comp=Z,3.4nm,1.4s						
SCRK	Sand Creek	23.57	44	P	P	23 37 21.4	+0.3
SCRK				IAmb	IAmb	23 37 41.3	
	comp=Z,4.0nm,1.4s						
J26L	Joseph Creek	23.87	42	P	P	23 37 23.6	-0.3
J26L				IAmb	IAmb	23 37 38.6	
	comp=Z,4.2nm,1.5s						
BCAR	Beaver Creek A	24.36	46	P	P	23 37 30.5	+2.1
G31M	Satah River	28.12	39	P	P	23 38 02.1	0.0
G31M				IAmb	IAmb	23 38 38.8	
	comp=Z,5.5nm,1.5s						
H11N2	WAKE ISLAND Hy	32.89	198	T	T	00 13 34.1	
	baz=11,slow=76,SNR=27						
H11N3	WAKE ISLAND Hy	32.90	198	T	T	00 13 34.1	
	baz=11,slow=76,SNR=24						
H11N1	WAKE ISLAND Hy	32.91	198	T	T	00 13 34.1	
	baz=11,slow=76,SNR=29						
H11S1	WAKE ISLAND Hy	34.12	198	T	T	00 15 07.6	
	baz=11,slow=76,SNR=10						
H11S2	WAKE ISLAND Hy	34.13	198	T	T	00 15 06.9	
	baz=11,slow=76,SNR=7.3						
H11S3	WAKE ISLAND Hy	34.13	198	T	T	00 15 07.6	
	baz=11,slow=76,SNR=8.9						
HILR	Hailar Array B	35.82	290	LR	LR	23 56 28.0	
	comp=Z,41nm,18.1s,baz=20,slow=41						
YKA	Yellowknife Ar	36.78	46	P	P	23 39 19.0	+1.3
	comp=Z,0.3nm,0.7s,baz=288,slow=9.2,SNR=4.1						
	comp=Z,0.3nm,0.7s						
SONM	Songino Array	44.38	294	P	P	23 40 21.0	+0.2
	comp=Z,0.5nm,0.7s,baz=68,slow=7.2,SNR=4.0						
	comp=Z,0.5nm,0.7s						
SONM	Songino Array	44.38	294	P	P	23 40 21.3	+0.5
PDAR	Pinedale Array	48.49	70	P	P	23 40 52.5	-0.7
	comp=Z,0.2nm,0.8s,baz=313,slow=7.9,SNR=2.0						
	comp=Z,0.2nm,0.8s						
KURK	Kurchatov	57.08	312	P	P	23 41 56.0	-0.2
KURK				IAmb	IAmb	23 42 17.9	
	comp=Z,1.4nm,0.9s						
KURBB	Kurchatov Arra	57.19	312	P	P	23 41 57.3	+0.3
	comp=Z,0.4nm,0.4s,baz=42,slow=6.8,SNR=5.7						
	comp=Z,0.4nm,0.4s						
MKAR	Makanchi Array	57.97	306	P	P	23 42 02.1	-0.5
	comp=Z,0.2nm,0.4s,baz=50,slow=5.2,SNR=5.6						
	comp=Z,0.2nm,0.4s						
MKAR	Makanchi Array	57.97	306	P	P	23 42 02.2	-0.4
BVAR	Borovoye Array	59.12	318	P	P	23 42 10.6	+0.2
	comp=Z,0.7nm,0.3s,baz=50,slow=6.3,SNR=6.8						
	comp=Z,0.7nm,0.3s						
BORK	Borovoye	59.13	318	P	P	23 42 10.8	+0.3
TXAR	Lajitas Array	60.96	79	P	P	23 42 23.6	0.0
	comp=Z,0.2nm,0.8s,baz=319,slow=8.3,SNR=1.8						
	comp=Z,0.2nm,0.8s						
TXAR	Lajitas Array	60.96	79	P	P	23 42 24.3	+0.8

IDC 24 23:50:49.8±6.4**, 18°.99S**×**126°.55E, h0**^{km}**, mbtmp3.1**/3**,**
ML3.2/3**, Error ellipse: s-maj=64.6km s-min=47.8km**
az=155.0, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	7.41	99	Pn	Pn	23 52 37.8	-1.6
	0.2nm,0.3s,baz=283,slow=15,SNR=5.6						
WRA				Sn	Sn	23 53 59.0	-5.3
	0.7nm,0.3s,baz=281,slow=19,SNR=8.2						
WRA				Lg	Lg	23 54 44.8	
	0.9nm,0.3s,baz=272,slow=28,SNR=8.9						
	0.4nm,0.4s						
ASAR	Alice Springs	8.29	125	Pn	Pn	23 52 52.0	+0.6
	0.2nm,0.3s,baz=300,slow=12,SNR=14						
ASAR				Sn	Sn	23 54 29.6	+3.9
	0.4nm,0.3s,baz=303,slow=21,SNR=7.7						
	0.4nm,0.5s						
STKA	Stephens Creek	18.66	136	P	Pn	23 55 09.7	0.0
	0.1nm,0.3s,baz=308,slow=17,SNR=4.7						
	0.8nm,0.8s						

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*MEX **24** 23:55:16.7±1.0, 13°.66N×93°.09W, h7^{km}±25^{km}, MD4.3*

*NEIC **24** 23:55:17.4±2.4, 13°.75N±0°.06×92°.90W±0°.06, h10^{km}±1^{km}, mb4.6/157, Md4.3/63(MEX), Error ellipse: s-maj=11.0km s-min=9.5km az=193.0*

*CATAC **24** 23:55:20.7±0.5, 14°N±4°×9°3W±°, h77^{km}±9^{km}, M4.5/18, mb4.7/2, mB5.0/1, MLv4.3/18, Mw(mB)4.3/1, Error ellipse: s-maj=8.7km s-min=4.4km az=33.2, confirmed*

*GCG **24** 23:55:22.4±1.7, 13°.83N×92°.37W, h0^{km}±128^{km}, MD4.3, ML3.7*

*IDC **24** 23:55:22.8±2.4, 14°.13N×92°.77W, h47^{km}±16^{km}, mb3.8/13, mbtmp4.0/17, ML3.6/4, MS3.6/20, Error ellipse: s-maj=28.4km s-min=9.5km az=23.0*

*UCR **24** 23:55:29.1±0.7, 14°.34N×91°.76W, h10^{km}, MW4.0*

ISC 24 23:55:16.0±0.5**, 13°.72N**±0°.05×**92°.97W**±0°.03**, h10**^{km}**, n243,**
σ**2^{s}06**/211**, mb4.5**/69**, MS3.7**/18**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SMCA	Catarina	1.42	38	*i* P	Pn	23 55 41.9	0.0
RTAL	Retalhuleu	1.47	57	Pn	Pn	23 55 42.1	-0.6
RTAL	Retalhuleu	1.47	57	*e*P	Pn	23 55 41.8	-0.8
RTAL				*e*S	Sb	23 56 01.7	-0.6
RTAL	Retalhuleu	1.47	57	P	Pn	23 55 42.4	-0.3
RTAL	Retalhuleu	1.47	57	S	Sn	23 56 00.3	-1.7
PATR	El Naranjo	1.56	27		Pn	23 55 42.5	-1.6
PATR					Sn	23 56 02.9	-1.5
PATR	El Naranjo	1.56	27	*e*P	Pn	23 55 42.5	-1.6
PATR				*e*S	Sn	23 56 02.9	-1.5
CHUJ	Union Juarez	1.60	31	*i* P	Pn	23 55 43.7	-0.9
CHUJ				*e*S	Sn	23 56 04.5	-0.9
PAVE	Pavencul	1.65	28		Pn	23 55 44.3	-1.0
PAVE					Sn	23 56 06.6	-0.2
PAVE	Pavencul	1.65	28	*e*P	Pn	23 55 44.3	-1.0
PAVE				*e*S	Sn	23 56 06.6	-0.2
STG2	El Palmar, Qui	1.70	65	*i* P	Pn	23 55 44.3	-1.6
STG5	El Palmar, Qui	1.71	67	*i* P	Pn	23 55 44.3	-1.8
STG8	El Palmar, Qui	1.73	65	*i* P	Pn	23 55 44.9	-1.5
STG8				IAML		23 56 09.4	
	comp=E,1μm,0.2s						
SOKI	Kika Raxquin	1.87	54	*i* P	Pn	23 55 48.4	-0.1
PCIG		1.98	353	*i* P	Pn	23 55 48.3	-1.4
PCIG				*e*S	Sn	23 56 12.0	-2.6
HUEH	Huehuetenango	2.13	42		Pn	23 55 52.6	+0.7
HUEH	Huehuetenango	2.13	42	*e*P	Pn	23 55 52.9	+1.0
HUEH				*e*S	Sn	23 56 15.5	-3.1
HUEH	Huehuetenango	2.13	42	P	Pn	23 55 53.0	+1.0
QUIS	Sacapulas	2.40	49	*i* P	Pn	23 55 57.3	+1.8
QUIS				IAML		23 56 31.1	
	comp=N,937nm,0.7s						
FG16	Alotenango, Sa	2.45	77	*i* P	Pn	23 55 52.4	-3.9
CCIG	Comitan	2.67	17		Sb	23 56 35.3	-1.7
CCIG	Comitan	2.67	17	*e*P	Pn	23 56 01.8	+2.5
CCIG				*e*S	Sb	23 56 35.3	-1.7
APG	El Apazote	2.74	62	P	Pn	23 56 00.6	+0.2
	comp=N,1.4nm,0.3s,baz=212,slow=15,SNR=110						
APG				S	Sn	23 56 28.8	-4.9
	comp=N,12nm,0.8s,baz=218,slow=17,SNR=3.8						
APG				LR	LR	23 56 42.1	
	comp=N,16nm,19.1s,baz=290,slow=33						
	comp=N,18nm,0.7s						
APG	El Apazote	2.74	62	*i* P	Pn	23 56 01.1	+0.8
FAME	Alcaldia de Sa	2.88	87	P	Pn	23 56 00.9	-1.0
FAME	Alcaldia de Sa	2.88	87	S	Sn	23 56 32.6	-4.1
TGIG		3.04	357		Pn	23 56 04.5	+0.2
TGIG					Sn	23 56 40.6	-0.2
TGIG		3.04	357	*e*P	Pn	23 56 04.5	+0.2
TGIG				*e*S	Sn	23 56 40.6	-0.2
NUBE	Las Nubes	3.11	86	*i* P	Pn	23 56 05.4	+0.1
NUBE	Las Nubes	3.11	86	P	Pn	23 56 04.2	-1.1
NUBE	Las Nubes	3.11	86	S	Sn	23 56 39.1	-3.4
LOAL	Lomas de Alarc	3.11	85	S	Sn	23 56 41.2	-1.3
LOAL	Lomas de Alarc	3.11	85	P	Pn	23 56 05.9	+0.6
SLOZ	Alcaldia de Sa	3.11	84	S	Sn	23 56 38.2	-4.3
CEVE	Cerro Verde	3.25	88	P	Pn	23 56 07.3	-0.1
CEVE	Cerro Verde	3.25	88	S	Sn	23 56 42.2	-4.2
UNIC	Universidad Ca	3.33	85	S	Sn	23 56 46.6	-1.5
UNIC	Universidad Ca	3.33	85	P	Pn	23 56 09.1	+0.8
JAYA	Jayaque - finc	3.42	91	*i* P	Pn	23 56 08.6	-1.1
JAYA	Jayaque - finc	3.42	91	S	Sn	23 56 45.8	-4.7

JAYA	Jayaque - finc	3.42	91	P	Pn	23 56 09.0	-0.7
PMON	Piamonte	3.55	90	P	Pn	23 56 11.0	-0.4
PMON	Piamonte	3.55	90	S	Sn	23 56 51.1	-2.5
LALI	Alcalda de L	3.56	93	S	Sn	23 56 49.8	-3.7
LALI	Alcalda de L	3.56	93	P	Pn	23 56 09.9	-1.4
MTO3	Montecristo	3.57	79	Pn	Pn	23 56 10.3	-1.4
MTO3	Montecristo	3.57	79	*i* P	Pn	23 56 11.1	-0.6
MTO3	Montecristo	3.57	79	P	Pn	23 56 11.1	-0.6
MTO3	Montecristo	3.57	79	S	Sn	23 56 53.5	-0.6
ESQI	Esquipulas	3.62	76	Pn	Pn	23 56 10.7	-1.6
ESQI	Esquipulas	3.62	76	P	Pn	23 56 12.3	0.0
UEES	Universidad Ev	3.63	90	S	Sn	23 56 52.8	-2.5
HUIG	Huatulco	3.65	304	*e*P	Pn	23 56 10.1	-2.6
HUIG				*e*S	Sn	23 56 46.9	-8.9
LOMA	Loma Larga	3.69	91	S	Sn	23 56 54.0	-3.0
LOMA	Loma Larga	3.69	91	P	Pn	23 56 15.0	+1.6
CMIG	Matias Romero	3.82	331	P	Pn	23 56 14.5	-0.4
	comp=N,6.3nm,0.3s,baz=179,slow=12,SNR=57						
CMIG				S	Sn	23 56 56.6	-3.4
	comp=N,68nm,0.5s,baz=126,slow=12,SNR=11						
	comp=N,13nm,0.2s						
CMIG	Matias Romero	3.82	331		Pn	23 56 14.2	-0.8
CMIG	Matias Romero	3.82	331	*e*P	Pn	23 56 14.2	-0.8
CMIG				*e*S	Sn	23 56 56.6	-3.4
SCLA	Alcaldia de Sa	4.12	90	P	Pn	23 56 19.5	+0.3
PETF	Flores	4.36	43	Pn	Pn	23 56 23.1	+0.7
PETF	Flores	4.36	43	*e*P	Pn	23 56 22.5	+0.1
PETF				*e*S	Sn	23 57 10.3	-3.0
PETF	Flores	4.36	43	*i* P	Pn	23 56 24.2	+1.7
PETF	Flores	4.36	43	P	Pn	23 56 23.9	+1.4
PETF	Flores	4.36	43	S	Sn	23 57 08.0	-5.4
PACA	Pacayal	4.53	93	P	Pn	23 56 25.8	+1.0
PACA	Pacayal	4.53	93	S	Sn	23 57 15.4	-2.2
PEIG	Puerto Escondi	4.63	300	*e*P	Pn	23 56 23.3	-2.8
PEIG				*e*S	Sn	23 57 10.2	-10
NEUV	Arroyo Zacate	4.81	326	*e*P	Pn	23 56 26.5	-2.1
NEUV				*e*S	Sn	23 57 17.5	-6.9
VHO	Vista Hermosa	4.92	313	*e*P	Pn	23 56 26.7	-3.6
VHO				*e*S	Sn	23 57 21.3	-6.2
YOIG	Yosondua	5.40	306	*e*P	Pn	23 56 35.6	-1.3
YOIG				*e*S	Sn	23 57 33.6	-5.8
SCIG	Sabancuy	5.49	18		Pn	23 56 39.9	+2.0
SCIG					Sn	23 57 39.7	-1.4
SCIG	Sabancuy	5.49	18	*e*P	Pn	23 56 39.9	+2.0
SCIG				*e*S	Sn	23 57 39.7	-1.4
SCIG	Sabancuy	5.49	18	P	Pn	23 56 38.0	+0.2
SCIG	Sabancuy	5.49	18	S	Sn	23 57 38.6	-2.5
TGUH	Tegucigalpa,Un	5.54	86	Pn	Pn	23 56 37.4	-1.4
PNIG	Pinotepa	5.64	299	*e*P	Pn	23 56 38.1	-1.9
PNIG				*e*S	Sn	23 57 34.9	-10
TXIG	Tlaxiaco	5.80	308		Pn	23 56 42.7	+0.2
TXIG	Tlaxiaco	5.80	308	*e*P	Pn	23 56 42.7	+0.2
TXIG				*e*S	Sn	23 57 41.9	-7.4
CRIN	San Cristobal	5.86	99	Pn	Pn	23 56 43.5	+0.5
TOIG	Toxpalan	5.87	318		Pn	23 56 43.9	+0.8
TOIG	Toxpalan	5.87	318	*e*P	Pn	23 56 43.9	+0.8
TOIG				*e*S	Sn	23 57 49.1	-1.4
HLIG	Huajuapan de L	6.19	312		Pn	23 56 47.2	-0.5
HLIG					Sn	23 57 58.9	+0.1
HLIG	Huajuapan de L	6.19	312	*e*P	Pn	23 56 47.2	-0.5
HLIG				*e*S	Sn	23 57 58.9	+0.1
CNGN	Cerro Negro	6.23	101	Pn	Pn	23 56 48.6	+0.4
MGIG	Malinaltepec	6.48	303		Pn	23 56 51.9	+0.2
MGIG	Malinaltepec	6.48	303	*e*P	Pn	23 56 51.9	+0.2
MGIG				*e*S	Sn	23 57 59.4	-6.4
FTIG	Fresnillo de T	6.48	311		Pn	23 56 52.7	+1.1
FTIG	Fresnillo de T	6.48	311	*e*P	Pn	23 56 52.7	+1.1
FTIG				*e*S	Sn	23 57 59.9	-5.9
TLIG	Tlapa	6.60	306		Pn	23 56 53.9	+0.5
TLIG	Tlapa	6.60	306	*e*P	Pn	23 56 53.9	+0.5
TLIG				*e*S	Sn	23 58 05.0	-3.9
TLIG	Tlapa	6.60	306	P	Pn	23 56 55.1	+1.8
TLIG	Tlapa	6.60	306	S	Sn	23 58 07.5	-1.3
CRIG	Cruz Grande	6.66	298	*e*P	Pn	23 56 52.7	-1.3
CRIG				*e*S	Sn	23 57 57.6	-12
JAUV	Jalcomulco	6.71	327	*e*P	Pn	23 56 51.1	-3.5
JAUV				*e*S	Sn	23 58 03.2	-8.1
BOAB	BOACO BROADBAN	7.23	99	Pn	Pn	23 57 00.2	-1.6
PPM	Popocatepetl	7.59	315	*e*P	Pn	23 57 10.7	+3.4
PPIG	Popocatepetl	7.59	315		Pn	23 57 10.7	+3.4
CXUV	Coxquihui	7.79	326	*e*P	Pn	23 57 06.1	-3.4
CXUV				*e*S	Sn	23 58 32.4	-5.5
TEIG	Tepich	7.87	34	P	Pn	23 57 09.5	-1.2
	comp=N,0.1nm,0.7s,baz=130,slow=24,SNR=12						
TEIG	Tepich	7.87	34		Pn	23 57 10.7	0.0
JUD3	Juan Diaz 3	8.09	115	Pn	Pn	23 57 15.2	+1.5
JTS	Las Juntas de	8.55	113	P	Pn	23 57 22.7	+2.6
	comp=N,1.3nm,0.3s,baz=264,slow=5.5,SNR=4.9						
JTS				LR	LR	00 00 04.5	
	comp=N,132nm,21.6s,baz=291,slow=33						
	comp=N,3.5nm,0.4s						
JTS	Las Juntas de	8.55	113	Pn	Pn	23 57 22.9	+2.8
PICV	PH. Pirrs	9.51	114	*e*P	Pn	23 57 37.7	+4.5
PIEC	Cerro El Cedra	9.72	114	*e*P	Pn	23 57 39.4	+3.1
BUS1	Rivas	9.94	114	*e*P	Pn	23 57 43.0	+3.5
BUS1				*e*S	Sn	23 59 26.8	-4.7
DRK0	Durika	10.51	114	*e*P	Pn	23 57 51.0	+3.9
PIRO	Carate, Puerto	10.83	118	*e*P	Pn	23 57 56.1	+4.9
HBVL	Hebbronville	14.30	339		Pn	23 58 42.4	+3.7
HNDO	Hondo	16.78	341	P	Pn	23 59 12.9	+1.7
JCT	Junction City	17.83	340		Pn	23 59 25.8	+1.4
553A	Crawfordville	18.19	24		P	23 59 29.7	+0.7
SAND	Sanderson	18.23	334	P	P	23 59 32.1	+2.5
BRDY	Brady	18.34	343	P	P	23 59 33.4	+2.7
TXAR	Lajitas Array	18.43	329	P	Pn	23 59 33.8	+2.0
	comp=N,0.1nm,0.3s,baz=153,slow=12,SNR=12						
TXAR				LR	LR	00 06 59.3	
	comp=N,58nm,21.1s,baz=286,slow=38						
	comp=N,1.2nm,0.7s						
TXAR	Lajitas Array	18.43	329	P	Pn	23 59 34.5	+2.7
OZNA	Ozona	18.69	338	P	P	23 59 36.0	+1.4
SGCY	Sterling City	19.59	339	P	P	23 59 45.8	+1.4
SGCY				IAmb	IAmb	23 59 56.7	
	comp=Z,19nm,0.8s						
ABTX	Abilene, Hawle	19.78	343	IAmb	IAmb	23 59 57.8	
	comp=Z,19nm,0.8s						
ODSA	Odessa	20.30	336	P	P	23 59 53.5	+1.2
ODSA				IAmb	IAmb	23 59 55.4	
	comp=Z,28nm,1.2s						
ROSC	El Rosal	20.40	114	P	Pn	23 59 57.6	+1.8
	comp=Z,4.7nm,0.4s,baz=33,slow=13,SNR=3.5						
	comp=Z,4.7nm,0.4s						
ROSC	El Rosal	20.40	114	P	P	23 59 54.3	+0.5
ROSC				IAmb	IAmb	00 00 17.4	
	comp=Z,44nm,1.3s						
WTFS	Witchita Falls	20.57	347	P	P	23 59 56.0	+0.9
WTFS				IAmb	IAmb	00 00 00.8	
	comp=Z,22nm,1.2s						
APMT	Aspermont	20.57	343	IAmb	IAmb	00 00 10.9	
	comp=Z,20nm,0.8s						
SN07	Snyder 07	20.59	341	IAmb	IAmb	00 00 05.3	
	comp=Z,18nm,1.1s						
POST	Post	20.77	339	P	P	23 59 57.7	+0.4
POST				IAmb	IAmb	00 00 06.9	
	comp=Z,20nm,1.0s						
CLNB	Carlsbad	20.98	333	P	P	00 00 00.9	+1.3
DKNS	Dickens	21.13	341	IAmb	IAmb	00 00 25.2	
	comp=Z,19nm,1.0s						
X48A	Hartselle	21.32	14	P	P	00 00 02.4	-0.8
Y52A	Lilburn	21.62	20	P	P	00 00 06.4	0.0
Y52A				IAmb	IAmb	00 00 06.5	
	comp=Z,19nm,1.0s						
W35A	Tecumseh	21.62	351	P	P	00 00 07.8	+1.4
W35A				IAmb	IAmb	00 00 23.9	
	comp=Z,28nm,1.0s						
CPRX	Cap Rock	21.64	334	P	P	00 00 08.4	+1.7
FNO	Franklin	21.81	350	IAmb	IAmb	00 00 13.4	
	comp=Z,11nm,0.7s						
MSTX	Muleshoe	22.03	338	P	P	00 00 11.3	+0.3
FCAR	Ozark Folk Cen	22.09	2	P	P	00 00 12.8	+1.4
SWET	Sewanee	22.32	15	IAmb	IAmb	00 00 14.6	
	comp=Z,10nm,0.7s						
SDV	Santo Domingo	22.42	100	P	P	00 00 16.5	+1.2
SDV				IAmb	IAmb	00 00 26.3	
	comp=Z,20nm,1.0s						
OK052	Battle Ridge R	22.44	352	IAmb	IAmb	00 00 16.9	
	comp=Z,19nm,0.6s						
HHAR	Hobbs	22.48	358	IAmb	IAmb	00 00 18.3	
	comp=Z,10nm,0.8s						
QUOK	Quay	22.60	352	IAmb	IAmb	00 00 40.0	
	comp=Z,15nm,0.7s						
U38A	Gravette	22.66	357	IAmb	IAmb	00 00 27.5	
	comp=Z,17nm,1.3s						
OK048	Pawnee Station	22.88	352	IAmb	IAmb	00 00 34.7	
	comp=Z,25nm,1.0s						
PH02	Texas Public H	23.04	341	IAmb	IAmb	00 00 27.5	
	comp=Z,21nm,1.0s						
319A	Douglas	23.09	322	P	P	00 00 23.6	+1.4
319A				IAmb	IAmb	00 00 56.1	
	comp=Z,21nm,1.4s						
121A	Cookes Peak, D	23.10	327	P	P	00 00 24.1	+1.7
CROK	Carrier	23.13	350	IAmb	IAmb	00 00 31.6	
	comp=Z,23nm,0.8s						
T35A	Sooner Cattle	23.31	353	IAmb	IAmb	00 00 31.9	
	comp=Z,10nm,0.8s						
TKL	Tuckaleechee C	23.36	19	P	P	00 00 22.6	-2.1
	comp=Z,8.7nm,0.7s,baz=187,slow=12,SNR=14						
TKL				LR	LR	00 10 57.2	
	comp=Z,149nm,18.1s,baz=212,slow=41						
	comp=Z,8.7nm,0.7s						
NOKA	Waynoka	23.43	348	IAmb	IAmb	00 00 35.4	
	comp=Z,25nm,0.8s						
U49A	Red Boiling Sp	23.59	15	IAmb	IAmb	00 00 49.8	
	comp=Z,27nm,1.5s						
T47A	Sharon Grove	23.75	12	IAmb	IAmb	00 00 29.1	
	comp=Z,11nm,0.8s						
KMSC	Kings Mountain	23.77	24	IAmb	IAmb	00 00 36.8	
	comp=Z,11nm,0.7s						
KAN08	Anthony NE Sta	23.83	350	P	P	00 00 30.0	+0.7
LENM	Lemitar	23.99	330	P	P	00 00 31.3	+0.2
S44A	Carbondale	24.10	7	IAmb	IAmb	00 00 40.2	
	comp=Z,12nm,0.7s						
V55A	Taylorsville	24.44	24	IAmb	IAmb	00 00 42.8	
	comp=Z,24nm,1.0s						
R40A	Maddies Statio	24.48	1	P	P	00 00 35.8	+0.4
R40A				IAmb	IAmb	00 00 47.1	
	comp=Z,7.0nm,0.8s						
TUC	Tucson	24.65	322	P	P	00 00 39.0	+1.9
WCI	Wyandotte Cave	25.12	12	P	P	00 00 41.1	0.0
R32A	Long Quarter,	25.12	349	P	P	00 00 42.8	+1.6
T25A	Trinidad	25.46	338	P	P	00 00 46.5	+2.0
T25A				IAmb	IAmb	00 00 55.6	
	comp=Z,14nm,1.1s						
P40A	Paris	25.72	2	IAmb	IAmb	00 00 47.6	
	comp=Z,5.4nm,0.6s						
SJG	San Juan	26.15	77	LR	LR	00 11 02.3	
	comp=Z,102nm,18.9s,baz=236,slow=36						
P46A	Rosedale	26.29	10	IAmb	IAmb	00 00 54.5	
	comp=Z,13nm,0.7s						
Q51A	Peebles	26.60	17	P	P	00 00 53.7	-0.9
Q51A				IAmb	IAmb	00 00 56.0	
	comp=Z,16nm,0.9s						
PV01	Paradox Valley	27.98	333	P	P	00 01 09.0	+1.7
PV01				IAmb	IAmb	00 01 40.8	
	comp=Z,12nm,1.4s						
PV02	Paradox Valley	28.12	333	IAmb	IAmb	00 01 45.9	
	comp=Z,22nm,1.5s						
PV18	Skein Mesa, Pa	28.22	333	IAmb	IAmb	00 01 41.8	
	comp=Z,21nm,1.3s						
PV12	Saucer Basin,	28.24	333	P	P	00 01 10.9	+1.4
PV04	Paradox Valley	28.34	333	IAmb	IAmb	00 01 43.0	
	comp=Z,10nm,1.2s						
BC3	Big Chuckawall	28.48	318	P	P	00 01 13.7	+2.1
BC3				IAmb	IAmb	00 01 15.1	
	comp=Z,17nm,1.4s						
HMU	Henry Mountain	28.83	330	P	P	00 01 17.1	+2.2
HMU				IAmb	IAmb	00 01 18.8	
	comp=Z,13nm,1.4s						
PFO	Pinyon Flats O	29.11	317	LR	LR	00 14 24.5	
	comp=Z,67nm,19.5s,baz=96,slow=39						
Q16A	Castle Valley	29.81	331	P	P	00 01 25.4	+1.9
Q16A				IAmb	IAmb	00 01 27.2	
	comp=Z,9.7nm,1.4s						
P17A	Butcher Ranch,	30.05	332	P	P	00 01 26.8	+1.2
TCUT	Toone Canyon	31.68	333	P	P	00 01 41.3	+1.2
VES	Vestal, Richgr	32.17	318	P	P	00 01 46.5	+2.4
VES				IAmb	IAmb	00 01 50.4	
	comp=Z,8.1nm,0.9s						
PDAR	Pinedale Array	32.29	337	P	P	00 01 44.6	-0.7
	comp=Z,0.9nm,0.9s,baz=142,slow=9.8,SNR=6.5						
	comp=Z,0.9nm,0.9s						
PDAR	Pinedale Array	32.29	337	P	P	00 01 45.4	0.0
HVU	Hansel Valley	32.82	332	IAmb	IAmb	00 01 53.5	
	comp=Z,7.5nm,1.1s						
SADO	Sadowa	33.11	18	LR	LR	00 17 43.6	
	comp=Z,182nm,18.3s,baz=239,slow=41						
NV11	Mina Array Sit	33.22	322	IAmb	IAmb	00 01 56.8	
	comp=Z,14nm,1.4s						
ELK	Elko	33.22	328	P	P	00 01 54.4	+0.9
	comp=Z,1.2nm,0.8s,baz=134,slow=5.2,SNR=5.6						
	comp=Z,1.2nm,0.8s						
ELK	Elko	33.22	328	IAmb	IAmb	00 01 56.6	
	comp=Z,7.7nm,1.4s						
NVAR	Mina Array Bea	33.30	322	P	P	00 01 55.8	+1.6
	comp=Z,2.6nm,0.8s,baz=141,slow=8.8,SNR=17						
	comp=Z,2.6nm,0.8s						
NVAR	Mina Array Bea	33.30	322	P	P	00 01 56.0	+1.8
SNOW	Snow King Moun	33.34	336	P	P	00 01 56.6	+2.0
LOHW	Long Hollow	33.41	336	IAmb	IAmb	00 01 58.4	
	comp=Z,9.5nm,1.4s						
YMR	Madison River	34.44	337	P	P	00 02 06.1	+2.0
YMR				IAmb	IAmb	00 02 18.1	
	comp=Z,7.4nm,1.1s						
MCMT	McKenzie Canyo	35.32	335	P	P	00 02 12.2	+0.5
DLMT	Dillon	35.66	336	IAmb	IAmb	00 02 18.2	
	comp=Z,16nm,1.3s						
WVOR	Wild Horse Val	36.20	327	P	P	00 02 20.3	+1.2
WVOR				IAmb	IAmb	00 02 55.1	
	comp=Z,12nm,1.5s						
HRY	Holter Researc	36.50	338	P	P	00 02 23.2	+1.6
ULM	Lac du Bonnet	36.50	357	LR	LR	00 19 42.9	
	comp=Z,85nm,18.5s,baz=202,slow=40						
PLID	Pearl Lake	36.87	332	IAmb	IAmb	00 02 27.7	
	comp=Z,7.8nm,1.1s						
YBH	Yreka Blue Hor	38.01	323	LR	LR	00 19 14.4	
	comp=Z,9.8nm,20.9s,baz=324,slow=38						
F10A	Beach Ranch, E	38.11	332	IAmb	IAmb	00 03 13.5	
	comp=Z,9.0nm,1.2s						
J04A	Umpqua Nationa	38.63	325	P	P	00 02 40.8	+1.0
PTLB	Pontes e Lacer	44.27	130	P	P	00 03 25.2	-1.0
PTLB				IAmb	IAmb	00 03 44.3	
	comp=Z,10nm,1.5s						
SCHQ	Schefferville	45.81	21	P	P	00 03 35.6	-2.3
	comp=Z,3.4nm,0.8s,baz=211,slow=9.2,SNR=3.9						
SCHQ				LR	LR	00 24 10.9	
	comp=Z,154nm,18.2s,baz=220,slow=38						
	comp=Z,3.4nm,0.8s						
SCHQ	Schefferville	45.81	21	P	P	00 03 36.4	-1.6
YKA	Yellowknife Ar	51.08	347	P	P	00 04 18.4	-0.1
	comp=Z,2.3nm,0.8s,baz=156,slow=7.0,SNR=31						
	comp=Z,2.3nm,0.8s						
YKA	Yellowknife Ar	51.08	347	P	P	00 04 19.6	+1.2
YKAW3	Yellowknife Wh	51.14	347	P	P	00 04 19.8	+0.9
YKAW3				IAmb	IAmb	00 04 35.4	
	comp=Z,9.9nm,1.1s						
FRB	Frobisher Bay	52.80	13	LR	LR	00 29 03.2	
	comp=Z,89nm,18.4s,baz=260,slow=39						
WTLY	Watson Lake, Y	53.23	339	P	P	00 04 35.3	+0.8
WTLY				IAmb	IAmb	00 04 38.3	
	comp=Z,8.0nm,1.1s						
M29M	Somme Creek	58.30	337	IAmb	IAmb	00 05 24.8	
	comp=Z,6.2nm,0.8s						
BCAR	Beaver Creek A	59.91	337	P	P	00 05 22.9	+0.8
SFJD	Kangerlussuaq	60.06	18	LR	LR	00 32 02.4	
	comp=Z,75nm,18.5s,baz=196,slow=37						
INK	Inuvik	60.44	344		P	00 05 25.7	+0.2
INK				IAmb	IAmb	00 05 27.7	
	comp=Z,4.4nm,0.8s						
RES	Resolute Bay	60.96	359	LR	LR	00 32 15.6	
	comp=Z,25nm,21.7s,baz=339,slow=36						
J26L	Joseph Creek	61.34	338	IAmb	IAmb	00 05 40.1	
	comp=Z,4.4nm,1.0s						
E29M	Blow River	61.71	343	P	P	00 05 35.1	+0.9
E29M				IAmb	IAmb	00 05 40.6	
	comp=Z,8.7nm,1.3s						
E28M	Babbage River	62.32	342	IAmb	IAmb	00 05 56.1	
	comp=Z,6.1nm,1.3s						
E27K	Coleen River	62.69	342	IAmb	IAmb	00 05 50.3	
	comp=Z,4.4nm,1.0s						
IL31		62.72	337	P	P	00 05 41.3	+0.4
ILAR	Eielson Array	62.72	337	P	P	00 05 40.1	-0.9
	comp=Z,4.4nm,1.2s,baz=128,slow=4.5,SNR=16						
	comp=Z,4.4nm,1.2s						
ILAR	Eielson Array	62.72	337	P	P	00 05 41.6	+0.6
BMAR	Burnt Mountain	63.23	340	P	P	00 05 45.2	+0.8
PPT	Papeete	63.92	242	LR	LR	00 26 39.1	
	comp=Z,50nm,20.7s,baz=262,slow=29						
C27K	Jago River	64.14	342	IAmb	IAmb	00 05 53.2	
	comp=Z,7.0nm,1.1s						
E22K	Anaktuvuk Pass	65.99	339	P	P	00 06 03.2	+0.8
E22K				IAmb	IAmb	00 06 28.2	
	comp=Z,7.9nm,1.4s						
F20K	Avaraart Lake	66.96	338	IAmb	IAmb	00 06 10.2	
	comp=Z,3.5nm,0.8s						
D20K	Etivluk River	67.85	339	P	P	00 06 15.1	+0.9
B20K	Meade River	68.48	341	P	P	00 06 19.0	+1.0
B20K				IAmb	IAmb	00 06 20.8	
	comp=Z,5.9nm,0.9s						
C19K	Lookout Ridge	69.00	339	IAmb	IAmb	00 06 27.6	
	comp=Z,7.1nm,1.2s						
BORG	Borgarnes	69.86	26	LR	LR	00 35 46.0	
	comp=Z,28nm,19.5s,baz=296,slow=35						
EKA	Eskdalemuir Ar	78.74	36	P	P	00 07 16.4	-2.3
	comp=Z,1.1nm,0.7s,baz=272,slow=5.8,SNR=4.9						
	comp=Z,1.1nm,0.7s						
SPITS	Spitsbergen Ar	80.54	11	LR	LR	00 46 41.4	
	comp=Z,108nm,18.2s,baz=287,slow=38						
ESDC	Sonseca Array	80.63	51	P	P	00 07 28.1	-1.2
	comp=Z,0.9nm,1.1s,baz=277,slow=4.8,SNR=4.7						
	comp=Z,0.9nm,1.1s						
BILL	Bilibino	81.36	338	P	P	00 07 32.7	+0.1
BILL				IAmb	IAmb	00 07 34.9	
	comp=Z,5.9nm,1.0s						
NB2	NORSAR Subarra	84.83	28	P	P	00 07 51.9	+1.1
	comp=Z,8.6nm,1.1s,baz=290,slow=4.8						
NOA	NORSAR Array B	84.83	28	P	P	00 07 50.2	-0.6
	comp=Z,1.8nm,0.9s,baz=291,slow=4.7,SNR=9.2						
NOA				LR	LR	00 45 52.1	
	comp=Z,28nm,18.3s,baz=245,slow=36						
	comp=Z,1.8nm,0.9s						
ARCES	ARCESS Array B	86.69	18	P	P	00 07 59.3	-0.5
	comp=Z,1.7nm,0.8s,baz=319,slow=5.3,SNR=4.4						
	comp=Z,1.7nm,0.8s						
DAVOX	Davos/Dischmat	88.70	42	LR	LR	00 49 25.1	
	comp=Z,42nm,18.1s,baz=264,slow=37						
TIXI	Tiksi	90.33	348	LR	LR	00 56 22.5	
	comp=Z,35nm,18.8s,baz=14,slow=41						
TIXI	Tiksi	90.33	348	P	P	00 08 16.6	-0.3
TIXI				IAmb	IAmb	00 08 17.9	
	comp=Z,3.1nm,0.8s						
PETK	Petropavlovsk-	90.33	325	LR	LR	00 51 31.3	
	comp=Z,26nm,18.1s,baz=97,slow=37						
FINES	FINESS Array B	91.14	25	LR	LR	00 49 36.3	
	comp=Z,45nm,18.8s,baz=312,slow=36						
TORD	Torodi Ar. Bea	91.36	76	P	P	00 08 22.1	-0.9
	comp=Z,0.2nm,0.4s,baz=301,slow=4.3,SNR=1.8						
	comp=Z,0.2nm,0.4s						
ASAR	Alice Springs	134.68	250	PKP	PKPdf	00 14 35.0	-0.7
	comp=Z,0.6nm,1.0s,baz=127,slow=1.9,SNR=4.9						
CMAR	Chiang Mai Arr	145.93	340	PKPbc	PKPdf	00 14 56.9	+0.7
	comp=Z,1.3nm,0.3s,baz=350,slow=4.8,SNR=19						
CMAR	Chiang Mai Arr	145.93	340		PKPdf	00 14 56.5	+0.3

MEX ***25*** *00:07:08.0±0.7, 13°.67N×93°.17W, h2km±29km, MD4.0*

GCG ***25*** *00:07:09.9±1.2, 13°.73N×92°.69W, h0km±20km, MD4.2, ML3.9*

ISC 25 00:07:03.7±2.1**, 13°.62N**±0°.08×**93°.04W**±0°.04**, h11**km±11km**, n24, σ1ˢ.89**/38**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMCA	Catarina	1.55	37	*i* P	Pg	00 07 33.9	+0.4
SMCA				*e*S	Sg	00 07 53.0	-0.6
RTAL	Retalhuleu	1.59	55	*e*P	Pg	00 07 34.4	+0.2
RTAL				*e*S	Sg	00 07 55.2	+0.3
PATR	El Naranjo	1.69	28	*e*P	Pb	00 07 35.0	+0.1
PATR				*e*S	Sg	00 07 56.4	-1.6
CHUJ	Union Juarez	1.73	32	*e*P	Pb	00 07 35.7	+0.1
CHUJ				*e*S	Sg	00 07 58.0	-1.3
PAVE	Pavencul	1.78	28	*e*P	Pb	00 07 36.4	-0.1
PAVE				*e*S	Sg	00 07 59.4	-1.6
STG2	El Palmar, Qui	1.81	63	*i* P	Pn	00 07 36.4	+1.4
STG2				IAML		00 07 59.3	
	comp=E,2µm,0.5s						
STG5	El Palmar, Qui	1.82	64	*i* P	Pn	00 07 36.2	+1.1
STG5				*i* S	Sb	00 07 58.5	-1.6
STG8	El Palmar, Qui	1.84	63	*i* P	Pn	00 07 37.0	+1.5
STG8				*i* S	Sb	00 07 59.0	-1.7
PCIG		2.08	355	*e*P	Pn	00 07 40.5	+1.9
PCIG				*e*S	Sn	00 08 04.0	-0.5
ESSG	Sabana Grande	2.28	70	*e*S	Sn	00 08 10.0	+0.5
QUIS	Sacapulas	2.52	48	*i* P	Pb	00 07 49.2	+0.2
FG16	Alotenango, Sa	2.54	75	*i* P	Pn	00 07 44.1	-1.0
PCG5	San Vicente Pa	2.66	77	*e*S	Sn	00 08 16.4	-2.5
CCIG	Comitan	2.79	18	*e*P	Pb	00 07 54.2	+0.4
CCIG				*e*S	Sb	00 08 28.2	+0.1
APG	El Apazote	2.86	61	*i* P	Pb	00 07 53.5	-1.3
TGIG		3.14	359	*e*P	Pn	00 07 56.9	+3.6
TGIG				*e*S	Sn	00 08 32.8	+1.9
NUBE	Las Nubes	3.19	84	*e*P	Pn	00 07 57.8	+3.9
JAYA	Jayaque - finc	3.50	89	*i* S	Sn	00 08 39.8	+0.1
JAYA				IAML		00 08 42.4	
	comp=N,291nm,0.3s						
MTO3	Montecristo	3.66	77	*e*P	Pn	00 08 03.3	+2.8
CMIG	Matias Romero	3.88	333	*e*P	Pn	00 08 05.5	+2.1
CMIG				*e*S	Sn	00 08 48.3	-0.7
PEIG	Puerto Escondi	4.62	301	*e*P	Pn	00 08 16.7	+3.2
PEIG				*e*S	Sn	00 09 00.5	-6.7
YOIG	Yosondua	5.41	307	*e*P	Pn	00 08 23.8	-0.8
YOIG				*e*S	Sn	00 09 23.2	-3.9
TXIG	Tlaxiaco	5.81	309	*e*P	Pn	00 08 33.5	+3.3
TXIG				*e*S	Sn	00 09 34.7	-2.4
TOIG	Toxpalan	5.90	320	*e*P	Pn	00 08 31.8	+0.6
TOIG				*e*S	Sn	00 09 37.5	-1.4

IDC ***25*** *00:12:03.6±0.9, 3°.36N×74°.09W, h0km, mb3.5/7, mbtmp3.7/9, ML3.6/2, MS3.1/2, Error ellipse: s-maj=22.8km s-min=12.8km az=87.0*

CATAC ***25*** *00:12:06.7±0.6, 3°N±3°×7°4W±°, h1km, M4.5/5, MLv4.5/5, Error ellipse: s-maj=8.5km s-min=5.6km az=137.7, confirmed*

RSNC ***25*** *00:12:06.8±0.0, 3°N±1°×7°4W±°, h16km±3km, M4.0, mB4.9, mb4.7, ML3.8, Mw3.9, Mw(mB)4.2*

ISC 25 00:12:03.8±1.2**, 3°.43N**±0°.02×**74°.18W**±0°.03**, h3**km±8km**, n54, σ1ˢ.36**/75**, mb3.5**/5**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URMC	La Uribe, Meta	0.27	228	P	Pg	00 12 10.0	+1.0
URMC				S	Sg	00 12 13.7	+1.2
PRAC	Prado	0.76	292	P	Pg	00 12 18.5	+0.1
PRAC				S	Sg	00 12 28.7	+0.4
PRAC	Prado	0.76	292	P	Pg	00 12 18.7	+0.3
PRAC				S	Sg	00 12 28.8	+0.5
VILC	Villavicencio,	0.84	35	P	Pb	00 12 20.9	-0.3
VILC				S	Sb	00 12 32.5	-0.4
CVER	Cruz Verde, Cu	1.09	6	P	Pb	00 12 24.8	-0.9
CVER				S	Sb	00 12 40.0	-0.6
ORTC	Ortega, Tolima	1.17	294	P	Pg	00 12 25.9	-0.3
ORTC				S	Sg	00 12 41.3	-0.1
CHIC	Chingaza	1.28	21	P	Pb	00 12 28.0	-0.8
CHIC				S	Sn	00 12 45.9	-1.0
MACC	Macarena, Meta	1.31	165	P	Pg	00 12 28.7	-0.4
MACC				S	Sb	00 12 46.5	0.0
ROSC	El Rosal	1.41	354	Pg	Pb	00 12 31.3	+0.2
	820nm,0.3s,baz=169,slow=3.8,SNR=845						
ROSC				Lg	Lg	00 12 51.3	
	289nm,0.3s,baz=17,slow=21,SNR=10						
BETC	Betania	1.46	240	P	Pn	00 12 31.3	+0.1
BETC				S	Sb	00 12 50.6	-0.2
ANIL	Santa Ana	1.61	311	P	Pb	00 12 34.1	-0.4
ANIL				S	Sn	00 12 54.9	-0.2
GARC	Garzon, Huila	1.80	227	P	Pn	00 12 36.9	+0.9
GARC				S	Sn	00 12 59.9	+0.3
RECRC	Villamaria, Ca	1.92	323	P	Pb	00 12 39.2	-0.7
RECRC				S	Sn	00 13 03.3	+0.3
NIZA	Niza - Manizal	2.07	322	P	Pb	00 12 41.7	-0.6
NIZA				S	Sb	00 13 08.6	0.0
SPBC	San Pablo de B	2.21	3	P	Pb	00 12 44.6	0.0
SPBC				S	Sg	00 13 15.8	+0.7
YOTC	Yotoco, Valle	2.23	284	P	Pn	00 12 43.1	+1.2
YOTC				S	Sb	00 13 12.0	-1.0
NORC	Norcasia	2.23	342	P	Pb	00 12 42.9	-2.0
NORC				S	Sb	00 13 12.4	-0.6
FLOC	Florencia	2.35	219	S	Sb	00 13 16.4	+0.1
FLOC	Florencia	2.35	219	P	Pb	00 12 45.6	-1.3
FLOC				S	Sb	00 13 15.9	-0.4
JAMC	Jamundi, Valle	2.50	265	P	Pb	00 12 48.0	-1.5
JAMC				S	Sb	00 13 21.9	+1.1

PLMC	San Jos del P	2.56	305	P	Pb	00 12 48.4	-2.1
PLMC				S	Sb	00 13 22.2	-0.3
POPC	Popayan, Colom	2.64	251	P	Pb	00 12 50.1	-1.9
POPC				S	Sb	00 13 26.0	+1.0
RUSC	La Rusia	2.68	24	S	Sb	00 13 25.8	-0.6
RUSC	La Rusia	2.68	24	P	Pb	00 12 50.7	-2.2
RUSC				S	Sb	00 13 26.1	-0.4
CBOC	Ciudad Bolivar	3.03	323	P	Pb	00 12 55.7	-3.0
HELC	Santa Helena	3.06	334	P	Pn	00 12 55.0	+1.5
HELC				S	Sb	00 13 35.5	-1.6
PTBC	PUERTO BERRIO,	3.11	355	P	Pn	00 12 55.3	+1.4
PTLC	Puerto Leguiza	3.29	191	P	Pb	00 13 02.1	-0.9
BARC	Barichara	3.30	18	P	Pn	00 12 58.8	+2.1
CRUC	La Cruz	3.33	236	P	Pb	00 13 00.7	-3.1
BBAC	Balboa, Cauca	3.37	246	P	Pn	00 13 00.5	+2.9
BRJC	Barrancabermej	3.55	7	P	Pn	00 13 01.5	+1.5
PAMC	Pamplona, Colo	4.16	21	P	Pn	00 13 11.8	+3.0
BONI	La Bonita	4.46	229	P	Pn	00 13 14.7	+2.0
UREC	San Jos de Ur	4.50	343	P	Pn	00 13 14.9	+1.8
OCAC	Ocana	4.86	10	P	Pn	00 13 20.0	+1.9
APAC	Apartado, Choc	5.05	332	P	Pn	00 13 24.1	+3.6
OTAV	Otavalo	5.31	234	P	Pn	00 13 30.0	+5.4
SDV	Santo Domingo	6.47	33	Pn	Pn	00 13 42.1	+1.8
	12nm,0.3s,baz=153,slow=6.8,SNR=43						
SDV				Sn	Sn	00 14 57.3	+2.4
	21nm,0.3s,baz=255,slow=22,SNR=9.6						
SDV				Lg	Lg	00 15 30.4	
	14nm,0.3s,baz=236,slow=22,SNR=3.5						
SDV				LR	LR	00 16 41.7	
	comp=Z,131nm,20.6s,baz=228,slow=43						
	27nm,0.4s						
SDV	Santo Domingo	6.47	33	P	Pn	00 13 40.7	+0.4
	679nm37nm,0.4s						
SJCC	San Jacinto, C	6.51	351	P	Pn	00 13 40.8	+0.1
	22nm,1.0s						
SGC2	Sao Gabriel da	8.03	116	P	Pn	00 13 59.9	-1.6
URIC	Uribia, Colomb	8.50	15	P	Pn	00 14 07.1	-1.0
ATAH	Atahualpa	11.30	202	Pn	Pn	00 14 47.8	+1.0
	0.4nm,0.3s,baz=54,slow=7.5,SNR=2.6						
	1.6nm,0.3s						
SJG	San Juan	16.58	28	LR	LR	00 22 56.7	
	comp=Z,94nm,18.2s,baz=212,slow=39						
LPAZ	La Paz	20.48	163	P	P	00 16 44.2	+0.5
	1.4nm,0.8s,baz=353,slow=9.6,SNR=4.3						
	1.4nm,0.8s						
MDP	Montagnes des	21.54	85	P	P	00 16 54.4	-0.3
	11nm,0.8s,baz=269,slow=11,SNR=7.1						
	11nm,0.8s						
PDAR	Pinedale Array	50.24	326	P	P	00 21 03.4	+1.6
	0.2nm,0.7s,baz=161,slow=3.9,SNR=2.9						
	0.2nm,0.7s						
SCHQ	Schefferville	51.60	5	P	P	00 21 11.5	0.0
	2.1nm,0.8s,baz=194,slow=12,SNR=1.1						
	2.1nm,0.8s						
NVAR	Mina Array Bea	53.16	317	P	P	00 21 25.1	+1.4
	0.3nm,0.6s,baz=141,slow=3.9,SNR=1.8						
	0.3nm,0.6s						
YKA	Yellowknife Ar	66.08	341	P	P	00 22 52.0	0.0
	0.2nm,0.8s,baz=123,slow=8.2,SNR=2.3						
	0.2nm,0.8s						
TORD	Torodi Ar. Bea	75.48	77	P	P	00 23 48.9	-1.4
	0.3nm,0.8s,baz=301,slow=5.5,SNR=5.2						
	0.3nm,0.8s						
ASAR	Alice Springs	146.22	231	PKPbc	PKPdf	00 31 45.5	-0.2
	0.4nm,0.5s,baz=122,slow=3.9,SNR=12						
WRA	Warramunga Arr	147.70	237	PKPbc	PKPbc	00 31 51.0	0.0
	0.8nm,0.8s,baz=121,slow=2.7,SNR=4.0						

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*IDC **25** 00:20:42.9±1.8, 3°.38N×74°.38W, h0^{km}, mbtmp4.3/1, ML3.1/1, Error ellipse: s-maj=56.2km s-min=16.2km az=103.0*

*RSNC **25** 00:20:45.3±0.0, 3°N±1°×7°4W±°, h4^{km}±2^{km}, M3.2, ML3.0*

ISC 25 00:20:43.8±0.7**, 3°.46N**±0°.02×**74°.25W**±0°.03**, h10^{km}, n32, σ1^{s}.32**/60**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	La Uribe, Meta	0.25	212	P	Pg	00 20 49.8	+0.9
URMC				S	Sg	00 20 53.7	+1.4
PRAC	Prado	0.69	292	P	Pb	00 20 57.7	-0.2
PRAC				S	Sb	00 21 07.5	0.0
VILC	Villavicencio,	0.85	40	P	Pg	00 20 59.7	-0.6
VILC				S	Sg	00 21 10.7	-0.8
CVER	Cruz Verde, Cu	1.07	9	P	Pg	00 21 03.7	-0.8
CVER				S	Sg	00 21 18.0	-0.5
ORTC	Ortega, Tolima	1.09	294	P	Pn	00 21 04.8	-0.5
ORTC				S	Sn	00 21 20.2	-0.3
CHIC	Chingaza	1.27	24	P	Pn	00 21 06.7	-1.4
CHIC				S	Sb	00 21 22.9	-1.9
MACC	Macarena, Meta	1.36	163	P	Pn	00 21 08.8	-0.2
MACC				S	Sb	00 21 27.0	0.0
ROSC	El Rosal	1.38	357	Pg	Pg	00 21 10.4	+0.1
	161nm,0.3s,baz=143,slow=1.5,SNR=83						
ROSC				Lg	Lg	00 21 29.6	
	61nm,0.3s,baz=178,slow=22,SNR=12						
BETC	Betania	1.42	237	P	Pg	00 21 11.0	-0.1
BETC				S	Sg	00 21 30.3	+0.8
ANIL	Santa Ana	1.54	312	P	Pg	00 21 12.9	-0.6
ANIL				S	Sg	00 21 34.0	+0.4
GARC	Garzon, Huila	1.77	225	P	Pb	00 21 16.7	+0.1
GARC				S	Sg	00 21 39.7	-1.2
RECRC	Villamaria, Ca	1.86	324	P	Pb	00 21 18.0	-0.2
RECRC				S	Sb	00 21 41.8	+0.1
YOTC	Yotoco, Valle	2.16	284	P	Pb	00 21 22.1	-1.0
YOTC				S	Sg	00 21 51.4	-1.9
NORC	Norcasia	2.18	344	P	Pb	00 21 22.0	-1.5
NORC				S	Sb	00 21 50.4	-0.2
SPBC	San Pablo de B	2.19	5	P	Pb	00 21 23.5	-0.1
SPBC				S	Sg	00 21 54.3	+0.1
FLOC	Florencia	2.33	217	P	Pb	00 21 25.5	-0.5
FLOC				S	Sg	00 21 56.8	-2.0
JAMC	Jamundi, Valle	2.43	264	P	Pb	00 21 27.8	-0.1
JAMC				S	Sg	00 22 01.5	-0.6
PLMC	San Jos del P	2.49	305	P	Pb	00 21 27.2	-1.5
PLMC				S	Sb	00 22 00.4	+1.0
POPC	Popayan, Colom	2.59	249	P	Pb	00 21 30.0	-0.5
POPC				S	Sg	00 22 05.6	-1.6
RUSC	La Rusia	2.68	26	P	Pn	00 21 27.2	-0.4
RUSC				S	Pg	00 21 35.7	+0.3
CBOC	Ciudad Bolivar	2.97	324	P	Pb	00 21 34.4	-2.6
CBOC				S	Sb	00 22 14.9	+1.5
HELC	Santa Helena	3.00	335	P	Pn	00 21 34.1	+2.3
HELC				S	Sb	00 22 14.3	-0.2
PTBC	PUERTO BERRIO,	3.07	356	P	Pn	00 21 34.2	+1.7
PTBC				S	Sb	00 22 14.9	-1.3
BARC	Barichara	3.29	19	P	Pn	00 21 34.3	-1.4
BARC				S	Pg	00 21 48.0	+1.0
BBAC	Balboa, Cauca	3.32	245	P	Pb	00 21 41.9	-1.0
BBAC				S	Sg	00 22 29.0	-1.5
BRJC	Barrancabermej	3.53	8	P	Pn	00 21 41.1	+2.3
BRJC				S	Sb	00 22 29.9	+0.5
BRJC	Barrancabermej	3.53	8	P	Pn	00 21 41.0	+2.3
BRJC				S	Pg	00 21 56.3	+4.8
OCAC	Ocana	4.84	11	P	Pn	00 21 59.1	+2.2
OCAC				S	Sn	00 22 58.0	+4.8
SDV	Santo Domingo	6.48	34	Pn	Pn	00 22 21.0	+1.5
	3.7nm,0.3s,baz=166,slow=4.2,SNR=10						
SDV				Sn	Sn	00 23 34.8	+1.1
	4.6nm,0.3s,baz=270,slow=21,SNR=9.5						
SDV				Lg	Lg	00 24 13.5	
	2.8nm,0.3s,baz=13,slow=9.7,SNR=3.6						
	9.2nm,0.3s						
SDV	Santo Domingo	6.48	34	P	Pn	00 22 20.6	+1.1
SDV				S	Sn	00 23 33.3	-0.4
ASAR	Alice Springs	146.19	231	PKPbc	PKPbc	00 40 24.9	-0.6
	0.1nm,0.5s,baz=112,slow=3.2,SNR=4.9						
WRA	Warramunga Arr	147.66	237	PKPbc	PKPbc	00 40 29.2	-0.5
	0.4nm,0.7s,baz=98,slow=4.0,SNR=2.5						

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*IDC **25** 00:24:59.2±0.5, 3°.35N×74°.25W, h0^{km}, mb4.1/20, mbtmp4.1/22, ML3.8/2, MS3.6/13, Error ellipse: s-maj=17.9km s-min=10.0km az=82.0*

*RSNC **25** 00:25:00.4±0.0, 3°N±1°×7°4W±°, h17^{km}±2^{km}, M4.5, mB5.3, mb5.1, ML4.2, Mw4.4, Mw(mB)4.7*

*NEIC **25** 00:25:01.2±1.9, 3°.44N±0°.05×74°.10W±0°.06, h10^{km}±1^{km}, mb4.6/141, Error ellipse: s-maj=10.8km s-min=7.9km az=243.0*

*CATAC **25** 00:25:01.1±0.5, 3°N±4°×7°4W±°, h1^{km}, M5.0/7, mb4.8/2, mB4.9/2, MLv5.1/7, Mw(mB)4.2/2, Error ellipse: s-maj=8.5km s-min=6.1km az=139.5, confirmed*

*VAO **25** 00:25:02.2±0.5, 3°.33N×73°.86W, h10^{km}, mb4.7, Presumed earthquake*

ISC 25 00:24:58.8±1.3**, 3°.42N**±0°.02×**74°.15W**±0°.03**, h2^{km}**±8^{km}**, n227, σ1^{s}.50**/209**, mb4.5**/82**, MS3.6**/10**, 4C, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	La Uribe, Meta	0.28	233	P	Pg	00 25 04.9	+0.6
URMC				S	Sg	00 25 08.6	+0.7
PRAC	Prado	0.79	292	P	Pb	00 25 13.7	-1.6
PRAC				S	Sb	00 25 24.1	-2.4
VILC	Villavicencio,	0.83	34	P	Pb	00 25 15.5	-0.6
VILC				S	Sb	00 25 27.0	-0.8
CVER	Cruz Verde, Cu	1.10	4	P	Pb	00 25 19.6	-1.3
CVER				S	Sb	00 25 34.6	-1.3
ORTC	Ortega, Tolima	1.20	294	P	Pn	00 25 20.9	-1.7
ORTC				S	Sg	00 25 39.6	+2.3
CHIC	Chingaza	1.28	19	P	Pn	00 25 22.6	-1.5
CHIC				S	Sb	00 25 39.1	-1.8
MACC	Macarena, Meta	1.30	166	P	Pn	00 25 23.5	-0.6
MACC				S	Sn	00 25 41.4	-0.6
ROSC	El Rosal	1.42	353	Pg	Pb	00 25 26.2	-0.2
	2µm,0.3s,baz=149,slow=5.1,SNR=496						
ROSC				Lg	Lg	00 25 46.0	
	585nm,0.3s,baz=179,slow=21,SNR=7.0						
ROSC	El Rosal	1.42	353		Pb	00 25 26.1	-0.2
ROSC				Sn	Sg	00 25 46.5	+1.8
BETC	Betania	1.48	240	P	Pn	00 25 26.5	-0.1
BETC				S	Sn	00 25 45.6	-0.9
ANIL	Santa Ana	1.64	311	P	Pn	00 25 28.6	-0.4
GARC	Garzon, Huila	1.81	228	P	Pn	00 25 32.0	+0.7
GARC				S	Sb	00 25 55.2	-1.0
RECRC	Villamaria, Ca	1.94	322	P	Pb	00 25 34.3	-1.0
RECRC				S	Sb	00 25 58.9	-1.4
SPBC	San Pablo de B	2.22	2	P	Pb	00 25 39.6	-0.2
SPBC				S	Sg	00 26 09.6	-0.7
NORC	Norcasia	2.25	342	P	Pn	00 25 38.3	+1.1
NORC				S	Sb	00 26 06.3	-2.3
YOTC	Yotoco, Valle	2.26	285	P	Pn	00 25 37.8	+0.5
YOTC				S	Sb	00 26 08.7	-0.2
FLOC	Florencia	2.36	219	P	Pb	00 25 40.8	-1.3
FLOC				S	Sb	00 26 11.1	-0.6
JAMC	Jamundi, Valle	2.52	266	P	Pb	00 25 43.4	-1.6
JAMC				S	Sb	00 26 17.2	+0.5
PLMC	San Jos del P	2.59	305	P	Pn	00 25 43.2	+1.4
PLMC				S	Sb	00 26 17.8	-0.6
POPC	Popayan, Colom	2.67	251	P	Pb	00 25 45.7	-1.8
POPC				S	Sb	00 26 20.7	0.0
RUSC	La Rusia	2.68	23	P	Pb	00 25 46.2	-1.7
RUSC	La Rusia	2.68	23	P	Pb	00 25 46.1	-1.8
RUSC				S	Sb	00 26 21.5	+0.1
CBOC	Ciudad Bolivar	3.06	323	P	Pn	00 25 50.4	+2.0
HELC	Santa Helena	3.08	334	S	Sb	00 26 30.0	-2.7
HELC	Santa Helena	3.08	334	P	Pn	00 25 51.2	+2.4
PTBC	PUERTO BERRIO,	3.12	354	P	Pn	00 25 50.8	+1.7
PTLC	Puerto Leguiza	3.29	191	P	Pb	00 25 57.3	-0.6
BARC	Barichara	3.30	17	P	Pb	00 25 55.5	-2.8
CRUC	La Cruz	3.34	237	P	Pn	00 25 55.9	+3.4
BBAC	Balboa, Cauca	3.39	246	P	Pn	00 25 56.0	+3.0
PIZC	Pizarro, Choco	3.55	296	P	Pb	00 25 58.6	-3.8
BRJC	Barrancabermej	3.56	7	P	Pn	00 25 56.7	+1.6
GCUF	Volcan Galeras	3.86	236	P	Pn	00 26 02.8	+3.1
GR1C	Gorgona, Isla	4.03	264	P	Pn	00 26 02.1	+0.5
PAMC	Pamplona, Colo	4.16	20	P	Pn	00 26 06.8	+3.0
CMBC	Cumbal	4.42	236	P	Pn	00 26 12.0	+4.7
BONI	La Bonita	4.48	229	P	Pn	00 26 09.8	+1.8
TULM	Tulcn-Chalpat	4.51	234	P	Pn	00 26 12.6	+3.9
UREC	San Jos de Ur	4.52	342	P	Pn	00 26 10.3	+1.9
TUMC	Tumaco	4.83	251	P	Pn	00 26 13.7	+1.0
OCAC	Ocana	4.86	10	P	Pn	00 26 14.6	+1.4
APAC	Apartado, Choc	5.07	332	P	Pn	00 26 19.8	+3.9
	2µm198nm,0.8s						
OTAV	Otavalo	5.33	234		Pn	00 26 22.2	+2.3
OTAV	Otavalo	5.33	234	*e*P	Pn	00 26 24.8	+4.9
OTAV	Otavalo	5.33	234	P	Pn	00 26 25.3	+5.4
	1µm84nm,0.8s						
PAC1	Pacto, Paraso	5.59	236	P	Pn	00 26 27.4	+4.1
	2µm124nm,0.4s						
CAPC	Capurgana	6.08	329	P	Pn	00 26 33.1	+3.2
	69nm,0.9s						
ARGC	Ariguani, Magd	6.40	359	P	Pn	00 26 36.8	+2.6
	2µm112nm,0.5s						
SDV	Santo Domingo	6.46	33	Pn	Pn	00 26 36.9	+1.7
	11nm,0.3s,baz=190,slow=12,SNR=18						
SDV				Sn	Sn	00 27 49.0	-0.8
	66nm,0.3s,baz=83,slow=23,SNR=9.5						
SDV				Lg	Lg	00 28 26.2	
	42nm,0.3s,baz=16,slow=11,SNR=6.5						
SDV				LR	LR	00 29 48.3	
	comp=Z,685nm,19.9s,baz=225,slow=44						
	44nm,0.3s						
SDV	Santo Domingo	6.46	33		Pn	00 26 36.4	+1.1
SDV	Santo Domingo	6.46	33	*e*P	Pn	00 26 36.3	+1.0
SDV	Santo Domingo	6.46	33	P	Pn	00 26 36.3	+1.0
	2µm125nm,0.8s						
SJCC	San Jacinto, C	6.52	351	P	Pn	00 26 38.5	+2.6
SJCC	San Jacinto, C	6.52	351	P	Pn	00 26 35.0	-0.9
	1µm71nm,0.9s						
SMRC	Santa Marta, M	7.70	359	P	Pn	00 26 53.8	+1.7
	83nm,0.9s						
SGC2	Sao Gabriel da	8.00	116	P	Pn	00 26 55.7	-0.5
URI	Uribia	8.51	14	P	Pn	00 27 03.3	+0.2
ATAH	Atahualpa	11.30	202	Pn	Pn	00 27 43.0	+1.1
	1.2nm,0.3s,baz=8.6,slow=8.6,SNR=6.3						
	12nm,0.7s						
JTS	Las Juntas de	12.71	303	LR	LR	00 32 37.6	
	comp=Z,215nm,21.0s,baz=107,slow=36						
BOAV	Boa Vista	13.65	94		Pn	00 28 09.6	-4.0
BOAV	Boa Vista	13.65	94	*e*P	Pn	00 28 10.2	-3.5
MACA	Manacapuru-AM	14.96	116		Pn	00 28 28.5	-3.1
MTDJ	Mount Denham	15.09	348	Pn	Pn	00 28 33.0	-0.3
NNA	Nana	15.53	190	Pn	Pn	00 28 35.9	-3.3
	0.6nm,0.3s,baz=304,slow=7.3,SNR=1.5						
NNA	Nana	15.53	190	Pn	Pn	00 28 38.8	-0.4
NNA				IAmb	IAmb	00 29 16.9	
	comp=Z,27nm,1.1s						
DR12	Loma Pena Alta	15.97	17		Pn	00 28 44.1	-0.8
CELP	Cerrillos	16.35	26	Pn	Pn	00 28 48.0	-1.6
SJG	San Juan	16.58	28	Pn	Pn	00 28 51.1	-1.5
	comp=Z,1.2nm,0.3s,baz=201,slow=14,SNR=6.1						
SJG				LR	LR	00 35 43.0	
	comp=Z,263nm,21.1s,baz=164,slow=39						
SJG	San Juan	16.58	28	Pn	Pn	00 28 50.7	-1.9
SJG				IAmb	IAmb	00 29 12.9	
	comp=Z,40nm,1.3s						
HUMP	Col San Antoni	16.74	28	Pn	Pn	00 28 54.6	-0.1
ITTB	Itaituba	19.96	113	*e*P	P	00 29 32.2	-0.3
LPAZ	La Paz	20.46	163	P	Pn	00 29 40.1	-0.6
	comp=Z,3.3nm,0.7s,baz=351,slow=15,SNR=7.8						
LPAZ				Lg	Lg	00 35 40.6	
	comp=Z,0.2nm,0.3s,baz=167,slow=25,SNR=3.9						
LPAZ				LR	LR	00 38 08.9	
	comp=Z,158nm,19.5s,baz=316,slow=39						
	comp=Z,3.3nm,0.7s						
LPAZ	La Paz	20.46	163		P	00 29 39.2	+0.6
LPAZ	La Paz	20.46	163	*e*P	P	00 29 39.2	+0.6
NPGB	Novo Progresso	21.45	119	*e*P	P	00 29 48.5	-0.2
MDP	Montagnes des	21.52	85	P	P	00 29 49.3	-0.1
	comp=Z,19nm,0.6s,baz=262,slow=10,SNR=11						
MDP				Lg	Lg	00 36 06.7	
	comp=Z,0.6nm,0.3s,baz=209,slow=22,SNR=3.6						
	comp=Z,19nm,0.6s						
TEIG	Tepich	21.65	322	P	P	00 29 51.6	+0.8
TEIG				IAmb	IAmb	00 29 59.4	
	comp=Z,37nm,1.3s						
PB16	IPOC Station P	22.09	168	P	P	00 29 58.1	+2.0
PDRB	Porto dos Gac	22.87	131	*e*P	P	00 30 03.8	-0.1
SIV	San Ignacio	23.22	146	P	P	00 30 07.9	+0.4
	comp=Z,5.7nm,0.7s,baz=314,slow=8.7,SNR=17						
SIV				Lg	Lg	00 37 06.8	
	baz=58,slow=23,SNR=5.4						
SIV				LR	LR	00 39 19.6	
	comp=Z,170nm,19.7s,baz=286,slow=37						
	comp=Z,5.7nm,0.7s						
PB11	IPOC Station P	23.45	169	P	P	00 30 10.4	+0.5
PB11				IAmb	IAmb	00 30 13.1	
	comp=Z,11nm,0.9s						
PTLB	Pontes e Lacer	23.92	142		P	00 30 14.6	+0.2
CMIG	Matias Romero	24.47	305	LR	LR	00 41 14.7	
	comp=Z,62nm,18.6s,baz=124,slow=40						
PB02	IPOC Station P	24.93	171	P	P	00 30 24.2	+0.4
PB07	IPOC Station P	25.34	171	P	P	00 30 28.4	+0.9
PB07				IAmb	IAmb	00 30 44.3	
	comp=Z,19nm,1.5s						
AQDB	Aquidauana	29.86	143	P	P	00 31 07.8	-0.1
AQDB				IAmb	IAmb	00 31 09.0	
	comp=Z,4.7nm,0.7s						
GOGA	Godfrey	31.09	345	P	P	00 31 19.1	+0.5
LRAL	Lakeview Retre	31.82	339	P	P	00 31 26.0	+0.9
LRAL				IAmb	IAmb	00 31 35.0	
	comp=Z,8.5nm,1.1s						
BDFB	Brasilia	32.06	127	LR	LR	00 45 01.1	
	comp=Z,243nm,18.5s,baz=317,slow=38						
Y49A	Blount Mountai	32.37	341	P	P	00 31 30.7	+0.7
X48A	Hartselle	33.13	340	P	P	00 31 36.0	-0.5
X48A				IAmb	IAmb	00 31 42.7	
	comp=Z,9.0nm,1.0s						
TKL	Tuckaleechee C	33.30	346	LR	LR	00 44 47.7	
	comp=Z,73nm,18.7s,baz=208,slow=36						
T59A	Double "B" Far	33.54	355	P	P	00 31 39.7	-0.4
CPUP	Villa Florida	33.76	152	P	P	00 31 42.5	+0.4
	comp=Z,1.2nm,0.9s,baz=339,slow=13,SNR=3.0						
	comp=Z,1.2nm,0.9s						
CPUP	Villa Florida	33.76	152	P	P	00 31 40.6	-1.5
V48A	Smith Brothers	34.23	342		P	00 31 47.5	+1.3
U49A	Red Boiling Sp	34.64	343	P	P	00 31 49.9	+0.3
U49A				IAmb	IAmb	00 31 56.2	
	comp=Z,5.1nm,0.8s						
WVT	Waverly	34.92	340	P	P	00 31 52.2	+0.1
HNDO	Hondo	35.24	320	P	P	00 31 55.1	+0.1
HNDO				IAmb	IAmb	00 31 57.6	
	comp=Z,9.2nm,1.3s						
T47A	Sharon Grove	35.47	342	P	P	00 31 57.9	+1.1
PARMO	Parma	36.07	338	P	P	00 32 02.2	+0.3
VA03	San Esteban	36.14	175	P	P	00 32 03.8	+1.0
BRDY	Brady	36.28	323	P	P	00 32 03.5	-0.5
FCAR	Ozark Folk Cen	36.33	335	P	P	00 32 03.3	-0.9
WCI	Wyandotte Cave	36.38	344	P	P	00 32 05.6	+1.0
WCI				IAmb	IAmb	00 32 09.5	
	comp=Z,18nm,1.1s						
PBMO	Poplar Bluff	36.42	338	IAmb	IAmb	00 32 10.8	
	comp=Z,14nm,1.1s						
CGM3	Cape Girardeau	36.60	339	IAmb	IAmb	00 32 09.5	
	comp=Z,9.9nm,0.8s						
P52A	Corning	36.77	350	P	P	00 32 08.5	+0.6
T42A	Van Buren	36.90	337	IAmb	IAmb	00 32 13.4	
	comp=Z,12nm,1.2s						
PLPT	Palo Pinto	36.98	325	IAmb	IAmb	00 32 12.8	
	comp=Z,9.4nm,1.0s						
MT09	Talagante	37.11	176	P	P	00 32 11.8	+0.8
MT01	Popeta	37.18	176	P	P	00 32 11.4	-0.1
MT01				IAmb	IAmb	00 32 16.0	
	comp=Z,18nm,1.2s						
ABTX	Abilene, Hawle	37.61	323	IAmb	IAmb	00 32 18.6	
	comp=Z,6.8nm,0.7s						
U38A	Gravette	37.79	333	IAmb	IAmb	00 32 18.7	
	comp=Z,6.2nm,0.9s						
M57A	Sunshine Farm,	37.85	356	P	P	00 32 18.7	+1.7
M57A				IAmb	IAmb	00 32 21.9	
	comp=Z,15nm,0.9s						
CCM	Cathedral Cave	37.85	338	P	P	00 32 16.7	-0.4
CCM				IAmb	IAmb	00 32 19.7	
	comp=Z,12nm,0.8s						
P46A	Rosedale	37.93	344	P	P	00 32 17.4	-0.4
P46A				IAmb	IAmb	00 32 20.9	
	comp=Z,15nm,0.9s						
TXAR	Lajitas Array	38.06	316	P	P	00 32 19.5	+0.4
	comp=Z,0.4nm,0.5s,baz=124,slow=9.0,SNR=6.3						
TXAR				PcP	PcP	00 34 34.6	0.0
	comp=Z,0.7nm,0.8s,baz=134,slow=6.4,SNR=5.6						
	comp=Z,0.4nm,0.5s						
TXAR	Lajitas Array	38.06	316	P	P	00 32 18.8	-0.3
DEOK	Depew	38.31	330	IAmb	IAmb	00 32 26.1	
	comp=Z,9.6nm,0.7s						
FNO	Franklin	38.31	329	IAmb	IAmb	00 32 24.4	
	comp=Z,8.2nm,0.8s						
R40A	Maddies Statio	38.45	337	P	P	00 32 21.7	-0.5
R40A				IAmb	IAmb	00 32 25.1	
	comp=Z,8.3nm,0.9s						
POST	Post	39.04	322	IAmb	IAmb	00 32 30.9	
	comp=Z,9.9nm,0.8s						
T35A	Sooner Cattle	39.17	331	P	P	00 32 27.9	-0.4
T35A				IAmb	IAmb	00 32 31.1	
	comp=Z,11nm,1.1s						
P40A	Paris	39.45	338	IAmb	IAmb	00 32 34.5	
	comp=Z,11nm,1.1s						
VHRN	Van Horn	39.84	316	P	P	00 32 34.4	+0.3
BI02	San Fabin de	39.96	176	P	P	00 32 35.6	+0.6
N41A	Harden Midland	40.06	340	P	P	00 32 35.8	+0.1
N41A				IAmb	IAmb	00 32 38.9	
	comp=Z,12nm,0.8s						
P38A	Dawn	40.10	337	IAmb	IAmb	00 32 38.5	
	comp=Z,12nm,0.9s						
MSTX	Muleshoe	40.43	322	IAmb	IAmb	00 32 42.8	
	comp=Z,11nm,1.0s						
MNTX	Cornudas Mount	40.66	317	P	P	00 32 40.7	-0.1
SADO	Sadowa	41.42	355	LR	LR	00 53 25.4	
	comp=Z,32nm,18.8s,baz=302,slow=41						
G65A	Princeton	42.02	7	P	P	00 32 51.8	+0.2
E62A	Clayton Lake	43.22	5	P	P	00 33 03.0	+1.5
ANMO	Albuquerque	43.37	320	P	P	00 33 04.3	+1.2
TASM	ASL Pad, Albuq	43.38	320	IAmb	IAmb	00 33 08.0	
	comp=Z,3.4nm,0.8s						
TASM	ASL Pad, Albuq	43.38	320	IAmb	IAmb	00 33 08.0	
	comp=Z,3.8nm,0.8s						
D62A	Allapoint, All	43.72	5	P	P	00 33 06.0	+0.6
D62A				IAmb	IAmb	00 33 34.6	
	comp=Z,17nm,1.4s						
PLCA	Paso Flores	44.06	176	P	P	00 33 07.9	-0.4
	comp=Z,2.3nm,0.7s,baz=351,slow=9.9,SNR=7.7						
	comp=Z,2.3nm,0.7s						
PLCA	Paso Flores	44.06	176	P	P	00 33 07.6	-0.7
PLCA				IAmb	IAmb	00 33 09.1	
	comp=Z,12nm,1.3s						
SPMN	Marine on St.	44.74	341	P	P	00 33 13.4	-0.2
SPMN				IAmb	IAmb	00 33 17.9	
	comp=Z,6.5nm,0.5s						
ECSD	EROS Data Cent	44.81	337	IAmb	IAmb	00 33 16.0	
	comp=Z,9.0nm,0.9s						
X16A	Lo Mia Camp, P	46.38	316	IAmb	IAmb	00 33 32.5	
	comp=Z,3.1nm,0.8s						
F33A	5 Mile Ranch,	46.47	339	IAmb	IAmb	00 33 29.4	
	comp=Z,8.2nm,0.9s						
PV02	Paradox Valley	46.85	322	IAmb	IAmb	00 33 35.6	
	comp=Z,4.6nm,0.8s						
PV13	Radium Mtn., P	46.87	322	P	P	00 33 31.9	+1.0
PV13				IAmb	IAmb	00 33 34.9	
	comp=Z,4.3nm,1.1s						
WUAZ	Wupatki	46.94	318	IAmb	IAmb	00 33 36.7	
	comp=Z,4.1nm,0.8s						
RSSD	Black Hills	48.36	331	P	P	00 33 43.1	+0.7
P18A	Preston Nutter	48.66	323	P	P	00 33 44.9	+0.1
P18A				IAmb	IAmb	00 33 54.9	
	comp=Z,3.4nm,0.8s						
RDMU	Red Mountain	48.85	324	IAmb	IAmb	00 33 50.0	
	comp=Z,4.8nm,1.0s						
IRM	Iron Mountain	48.86	314	IAmb	IAmb	00 33 50.6	
	comp=Z,3.7nm,1.0s						
EPLO	Experimental L	49.00	343	P	P	00 33 46.0	-0.9
SZCU	Shurtz Canyon	49.25	319	IAmb	IAmb	00 33 53.6	
	comp=Z,4.0nm,0.9s						
MPU	Maple Canyon	49.74	322	P	P	00 33 53.9	+0.9
ULM	Lac du Bonnet	50.15	342	P	P	00 33 55.6	-0.1
	comp=Z,3.1nm,0.7s,baz=145,slow=7.6,SNR=4.4						
	comp=Z,3.1nm,0.7s						
ULM	Lac du Bonnet	50.15	342	IAmb	IAmb	00 33 57.1	
	comp=Z,8.0nm,0.9s						
PD31	Pinedale Array	50.27	326	P	P	00 33 58.3	+1.3
PDAR	Pinedale Array	50.27	326	P	P	00 33 57.8	+0.7
	comp=Z,1.1nm,0.7s,baz=102,slow=9.6,SNR=13						
	comp=Z,1.1nm,0.7s						
PDAR	Pinedale Array	50.27	326	P	P	00 33 58.3	+1.3
HWUT	Hardware Ranch	50.67	324	IAmb	IAmb	00 34 04.3	
	comp=Z,5.7nm,1.1s						
SPR3	Spring Creek 3	50.85	320	P	P	00 34 03.6	+2.0
BGU	Big Grassy Mou	51.13	322	P	P	00 34 03.7	+0.2
BGU				IAmb	IAmb	00 34 07.5	
	comp=Z,6.6nm,0.9s						
LAO	LASA Array	51.30	332	IAmb	IAmb	00 34 34.2	
	comp=Z,9.3nm,1.1s						
LOHW	Long Hollow	51.40	326	IAmb	IAmb	00 34 08.7	
	comp=Z,7.7nm,1.1s						
MOOW	Moose Ponds	51.56	327	IAmb	IAmb	00 34 09.8	
	comp=Z,4.7nm,0.9s						
SCHQ	Schefferville	51.60	5	P	P	00 34 08.7	+2.1
	comp=Z,6.5nm,0.8s,baz=190,slow=7.1,SNR=16						
SCHQ				LR	LR	00 55 32.2	
	comp=Z,74nm,19.9s,baz=291,slow=36						
	comp=Z,6.5nm,0.8s						
CWC	Cottonwood Cre	52.06	315	P	P	00 34 11.3	+0.7

NVAR	Mina Array Bea	53.19	317	P	P	00 34 20.6	+1.6
	comp=Z,2.4nm,0.9s,baz=128,slow=5.7,SNR=13						
	comp=Z,2.4nm,0.9s						
NVAR	Mina Array Bea	53.19	317	P	P	00 34 19.7	+0.8
MFID	Camas Ranch	54.28	323	IAmb	IAmb	00 34 30.3	
	comp=Z,5.3nm,0.8s						
BPMT	Black Pine Rid	54.76	328	P	P	00 34 31.3	+1.0
PLID	Pearl Lake	55.35	325	IAmb	IAmb	00 34 37.2	
	comp=Z,4.5nm,0.9s						
FFC	Flin Flon	55.92	341	P	P	00 34 37.6	-0.6
EFI	East Falkland	56.57	168	P	P	00 34 42.7	-0.1
LNOR	Lincton Mounta	57.12	325	P	P	00 34 47.3	+0.3
LNOR				IAmb	IAmb	00 34 51.6	
	comp=Z,4.8nm,0.9s						
G08A	Pilot Rock	57.19	324	P	P	00 34 48.3	+0.7
G08A				IAmb	IAmb	00 34 51.1	
	comp=Z,8.5nm,0.9s						
J05D	Fort Rock, OR	57.53	321	P	P	00 34 51.2	+1.1
J05D				IAmb	IAmb	00 34 53.8	
	comp=Z,9.3nm,1.0s						
PINE	Pine Mountain	57.60	321	P	P	00 34 51.8	+1.2
PINE				IAmb	IAmb	00 34 54.8	
	comp=Z,7.9nm,0.9s						
FRB	Frobisher Bay	60.34	3	LR	LR	01 01 53.9	
	comp=Z,57nm,19.1s,baz=300,slow=37						
BLKN	Baker Lake	62.81	349	P	P	00 35 26.3	+0.7
ILON	Igloolik, Nuna	66.05	357	P	P	00 35 46.5	-0.3
ILON				IAmb	IAmb	00 35 52.8	
	comp=Z,6.0nm,1.2s						
YKA	Yellowknife Ar	66.10	341	P	P	00 35 48.2	+0.9
	comp=Z,0.3nm,0.6s,baz=142,slow=5.6,SNR=7.9						
YKA				LR	LR	01 05 23.0	
	comp=Z,104nm,18.2s,baz=327,slow=37						
	comp=Z,0.3nm,0.6s						
YKA	Yellowknife Ar	66.10	341	P	P	00 35 46.3	-1.0
DBIC	Dimbokro	69.06	84	P	P	00 36 08.3	+1.4
	comp=Z,3.0nm,0.7s,baz=311,slow=4.7,SNR=6.5						
	comp=Z,3.0nm,0.7s						
DBIC	Dimbokro	69.06	84	P	P	00 36 06.5	-0.4
POIN	Pond Inlet	69.24	359	P	P	00 36 07.0	+0.1
POIN				IAmb	IAmb	00 36 15.4	
	comp=Z,9.0nm,1.5s						
SUMG	Summit	72.50	11	P	P	00 36 26.9	-0.4
SUMG				IAmb	IAmb	00 36 33.3	
	comp=Z,8.3nm,1.0s						
ESDC	Sonseca Array	72.62	50	P	P	00 36 30.2	+2.1
	comp=Z,0.5nm,0.8s,baz=272,slow=5.5,SNR=6.4						
	comp=Z,0.5nm,0.8s						
M30M	Minto, Yukon	74.64	335	P	P	00 36 39.9	+0.3
M30M				IAmb	IAmb	00 36 48.0	
	comp=Z,5.0nm,1.1s						
A36M	Sachs Harbour	75.44	346	P	P	00 36 43.2	-0.7
A36M				IAmb	IAmb	00 36 47.2	
	comp=Z,6.5nm,0.8s						
TORD	Torodi Ar. Bea	75.46	77	P	P	00 36 43.7	-1.5
	comp=Z,0.5nm,0.5s,baz=302,slow=5.9,SNR=7.6						
G31M	Satah River	75.50	339	P	P	00 36 43.8	-0.5
G31M				IAmb	IAmb	00 36 50.5	
	comp=Z,6.5nm,1.2s						
F30M	Barrier River	76.33	340	P	P	00 36 48.8	-0.4
BCAR	Beaver Creek A	76.96	334	P	P	00 36 53.0	+0.1
PPT	Papeete	77.18	251	LR	LR	01 02 07.3	
	comp=Z,38nm,20.6s,baz=188,slow=29						
E29M	Blow River	77.38	340	P	P	00 36 54.2	-0.8
E29M				IAmb	IAmb	00 37 06.0	
	comp=Z,6.7nm,1.4s						
E28M	Babbage River	78.02	340	IAmb	IAmb	00 37 30.1	
	comp=Z,7.0nm,1.4s						
ILAR	Eielson Array	79.60	335	P	P	00 37 06.8	-0.6
	comp=Z,0.4nm,0.6s,baz=110,slow=3.5,SNR=6.6						
ILAR				PP	PP	00 40 06.7	-1.2
	comp=Z,0.4nm,0.9s,baz=104,slow=8.2,SNR=4.3						
	comp=Z,0.4nm,0.6s						
ILAR	Eielson Array	79.60	335	P	P	00 37 07.6	+0.2
D25K	Kavik River	80.58	340	P	P	00 37 13.4	+0.7
D25K				IAmb	IAmb	00 37 45.6	
	comp=Z,5.5nm,1.2s						
PPLA	Purkeypile	81.52	333	P	P	00 37 17.2	-0.8
J20K	Nowinta River	82.58	334	P	P	00 37 23.5	+0.2
NB2	NORSAR Subarra	84.78	29	P	P	00 37 37.8	+3.1
	comp=Z,0.5nm,0.8s,baz=264,slow=5.1						
NOA	NORSAR Array B	84.78	29	P	P	00 37 37.1	+2.4
	comp=Z,1.0nm,0.8s,baz=268,slow=5.1,SNR=4.5						
	comp=Z,1.0nm,0.8s						
VNA3	Neumayer Olymp	85.23	163	⥣P	P	00 37 37.3	+0.7
	comp=Z,2.3nm,1.1s						
VNA1	Neumayer--Stat	85.41	162	⥣P	P	00 37 37.1	-0.3
	comp=Z,12nm,0.9s						
VNA2	Neumayer--Watz	85.78	162	⥣P	P	00 37 40.3	+0.9
	comp=Z,2.0nm,0.6s,baz=338,slow=13						
HFS	Hagfors	85.99	30	P	P	00 37 42.9	+2.3
	comp=Z,1.3nm,0.9s,baz=106,slow=3.2,SNR=4.0						
	comp=Z,1.3nm,0.9s						
GERES	GERESS Array B	86.04	41	P	P	00 37 42.9	+1.6
	comp=Z,0.7nm,1.0s,baz=284,slow=5.8,SNR=1.9						
	comp=Z,0.7nm,1.0s						
SNAA	Sanae	87.42	163	P	P	00 37 47.1	-0.4
SNAA	Sanae	87.42	163	P	P	00 37 46.9	-0.6
	comp=Z,1.6nm,0.8s,baz=291,slow=7.5,SNR=5.8						
	comp=Z,1.6nm,0.8s						
SNAA	Sanae	87.42	163	P	P	00 37 46.9	-0.6
SNAA				IAmb	IAmb	00 38 05.5	
	comp=Z,7.2nm,1.4s						
TROLL	Troll, Antarti	89.13	162	⥣P	P	00 37 56.1	+0.4
	comp=Z,161nm,0.8s						
ARCES	ARCESS Array B	90.20	20	P	P	00 38 03.0	+2.3
	comp=Z,2.4nm,0.9s,baz=261,slow=1.4,SNR=4.2						
	comp=Z,2.4nm,0.9s						
FINES	FINESS Array B	91.91	28	P	P	00 38 11.1	+2.4
	comp=Z,1.4nm,0.9s,baz=279,slow=9.7,SNR=2.3						
	comp=Z,1.4nm,0.9s						
QSPA	South Pole Qui	93.45	180	P	P	00 38 16.3	+0.5
MKAR	Makanchi Array	125.85	20	PKP	PKPdf	00 44 01.5	-1.2
	comp=Z,0.3nm,0.8s,baz=336,slow=3.2,SNR=2.0						
HHC	Hu-ho-hao-te	135.64	354	*e*P	PKPdf	00 44 16.8	-4.7
NJ2	Nanjing	142.62	342	*e*P	PKPdf	00 44 34.0	-0.3
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
AS31	Alice Springs	146.24	231	PKPdf	PKPdf	00 44 40.2	-0.7
ASAR	Alice Springs	146.24	231	PKPbc	PKPbc	00 44 40.8	-1.2
	comp=Z,2.9nm,0.6s,baz=121,slow=4.0,SNR=59						
ASAR	Alice Springs	146.24	231	PKPdf	PKPbc	00 44 40.5	-1.4
WR8	Warramunga Arr	147.58	237	PKPdf	PKPdf	00 44 42.3	-0.9
WRA	Warramunga Arr	147.72	237	PKPbc	PKPbc	00 44 45.1	-1.1
	comp=Z,3.2nm,0.9s,baz=120,slow=3.1,SNR=14						
WB0	Warramunga Arr	147.75	238	PKPdf	PKPdf	00 44 42.7	-0.8
PZH	PanZhiHua	149.99	7	PKPbc	PKPdf	00 44 46.8	-0.3
CMAR	Chiang Mai Arr	157.22	17	PKPab	PKPab	00 45 29.7	+1.7
	comp=Z,0.9nm,0.4s,baz=322,slow=4.9,SNR=5.0						

IDC ***25*** *00:42:02.9±9.5, 17°.26S×179°.17W, h553^{km}±118^{km}, mb3.0/7, mbtmp3.9/7, Error ellipse: s-maj=85.0km s-min=33.8km az=158.0*

ISC 25 00:42:02.5±1.5**, 17°.2S**±0°.6×**179°.2W**±0°.4**, h550**^{km}**, n9, σ0^{s}.40**/8**, mb3.3**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	38.31	240	P	P	00 48 36.5	0.0
	1.9nm,0.5s,baz=83,slow=6.6,SNR=19						
	1.9nm,0.5s						
WRA	Warramunga Arr	44.02	259	P	P	00 49 22.1	+0.1
	0.7nm,0.7s,baz=90,slow=9.6,SNR=5.7						
	0.7nm,0.7s						
ASAR	Alice Springs	44.26	254	P	P	00 49 23.9	+0.1
	5.4nm,0.4s,baz=89,slow=8.2,SNR=154						
	5.4nm,0.4s						
NVAR	Mina Array Bea	79.45	44	P	P	00 53 12.7	+0.3
	0.5nm,0.7s,baz=224,slow=8.2,SNR=4.0						
	0.5nm,0.7s						
ILAR	Eielson Array	85.39	13	P	P	00 53 41.8	+0.2
	0.3nm,0.4s,baz=226,slow=5.0,SNR=11						
	0.3nm,0.4s						
TXAR	Lajitas Array	86.26	58	P	P	00 53 46.7	+0.1
	0.5nm,0.8s,baz=211,slow=6.9,SNR=6.3						
	0.5nm,0.8s						
PDAR	Pinedale Array	87.37	44	P	P	00 53 51.5	-0.3
	0.3nm,0.5s,baz=222,slow=3.6,SNR=4.4						
	0.3nm,0.5s						
BRTR	Keskin Array B	143.77	315	PKP	PKPab	01 00 35.5	+0.7
	0.7nm,0.9s,baz=134,slow=0.8,SNR=2.2						
GERES	GERESS Array B	146.76	344	PKPbc	PKPbc	01 00 42.4	-0.8
	0.5nm,0.4s,baz=9.7,slow=4.4,SNR=3.2						

IDC ***25*** *00:49:45.6±3.8, 25°.23S×116°.44W, h0^{km}, mb3.7/6, mbtmp3.7/6, MS3.1/1, Error ellipse: s-maj=132.1km s-min=27.7km az=50.0*

ISC 25 00:49:47.1±3.2**, 25°.3S**±0°.5×**116°.5W**±0°.6**, h10**^{km}**, n13, σ1^{s}.05**/6**, mb3.8**/6**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	6.65	108	LR	LR	00 53 06.2	
	comp=Z,156nm,18.2s,baz=28,slow=30						
H03N2	Juan Fernandez	33.55	113	T	T	01 31 37.9	
	baz=278,slow=75,SNR=8.9						
H03N3	Juan Fernandez	33.56	113	T	T	01 31 39.1	
	baz=278,slow=75,SNR=8.5						
H03N1	Juan Fernandez	33.57	113	T	T	01 31 34.1	
	baz=278,slow=75,SNR=10						
PLCA	Paso Flores	40.99	124	P	P	00 57 30.2	-0.1
	1.9nm,0.9s,baz=267,slow=7.2,SNR=3.7						
	1.9nm,0.9s						
LPAZ	La Paz	45.85	88	P	P	00 58 11.1	+0.6
	0.5nm,0.5s,baz=258,slow=4.3,SNR=2.0						
	0.5nm,0.5s						
CPUP	Villa Florida	52.82	105	P	P	00 59 02.5	-0.5
	1.6nm,1.0s,baz=14,slow=7.6,SNR=2.8						
	1.6nm,1.0s						
NVAR	Mina Array Bea	63.40	358	P	P	01 00 16.3	-0.7
	0.7nm,0.7s,baz=184,slow=7.2,SNR=4.7						
	0.7nm,0.7s						
PDAR	Pinedale Array	68.00	5	P	P	01 00 45.7	-1.0
	0.2nm,0.6s,baz=215,slow=3.7,SNR=1.9						
	0.2nm,0.6s						
H11S2	WAKE ISLAND Hy	86.47	292	T	T	02 38 18.0	
	baz=118,slow=76,SNR=5.8						
H11S1	WAKE ISLAND Hy	86.48	292	T	T	02 38 20.7	
	baz=118,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	86.48	292	T	T	02 38 15.2	
	baz=118,slow=76,SNR=10						
YKA	Yellowknife Ar	87.48	1	P	P	01 02 35.5	+1.1
	0.3nm,0.8s,baz=182,slow=4.7,SNR=5.6						
	0.3nm,0.8s						

IDC ***25*** *00:56:43.4±0.7, 1°.21S×120°.72E, h0^{km}, mb4.3/11, mbtmp4.3/13, ML3.8/2, MS3.7/35, Error ellipse: s-maj=74.5km s-min=12.6km az=62.0*

NEIC ***25*** *00:56:45.2±1.8, 1°.53S±0°.06×120°.14E±0°.06, h10^{km}±1^{km}, mb4.6/37, Error ellipse: s-maj=10.0km s-min=9.2km az=56.0*

DJA ***25*** *00:56:45.0±0.2, 1°S±2°×12°0E±°, h10^{km}, M4.8/24, mB5.4/6, mb4.7/22, MLv4.8/24, Mw(mB)4.9/6*

ISC 25 00:56:45.0±0.4**, 1°.52S**±0°.05×**120°.09E**±0°.06**, h10**^{km}**, n137, σ1^{s}.26**/114**, mb4.6**/35**, MS3.7**/31**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCI	Palu	0.67	337	P	Pg	00 56 56.8	-1.1
TTSI	Tana Toraja	1.54	190	P	Pn	00 57 11.3	-1.1
TTSI				S	Sn	00 57 32.0	-0.5
MMSI	Mamuju	1.66	226	P	Pn	00 57 13.5	-0.6
MMSI				S	Sn	00 57 36.1	+0.7
APSI	Ampana	1.67	69	P	Pn	00 57 14.1	-0.2
MPSI	Mapaga	1.86	354	P	Pn	00 57 15.7	-1.2
PMSI	Majene	2.29	211	P	Pn	00 57 23.5	+0.7
SPSI	Sidrap Palu	2.44	188	P	Pn	00 57 25.9	+0.9
TOLI2	Tolitoli	2.71	15		Pn	00 57 28.5	-0.1
MRSI	Marisa	2.71	43	P	Pn	00 57 28.3	-0.4
LUWI	Luwuk	2.72	80		Pn	00 57 27.8	-0.9
LUWI	Luwuk	2.72	80	P	Pn	00 57 28.2	-0.5
KKSI	Kolaka, Sulawe	3.06	149	P	Pn	00 57 32.9	-0.5
BKB	Balikpapan	3.21	275		Pn	00 57 35.0	-0.5
BKB	Balikpapan	3.21	275	P	Pn	00 57 36.0	+0.6
KAPI	Kappang	3.48	186		Pn	00 57 40.9	+1.7
KAPI	Kappang	3.48	186	P	Pn	00 57 40.2	+0.9
KDI	Kendari	3.49	134	P	Pn	00 57 39.4	0.0
GTOI	Gorontalo	3.62	54	P	Pn	00 57 41.5	+0.4
MKS	Makassar	3.72	190	P	Pn	00 57 44.2	+1.7
BSSI	Bau Bau, Buton	4.61	175	P	Pn	00 57 56.1	+1.4
MTKI	Muara Teweh, K	5.23	276	P	Pn	00 58 02.5	-0.8
	0.9nm129nm,0.9s						
BBKI	Banjar Baru	5.59	250	P	Pn	00 58 08.3	+0.1
SANI	Sanana	5.92	95	P	Pn	00 58 11.4	-1.3
	0.4nm39nm,0.7s						
DBNI	Kabupaten Domp	7.16	194	P	Pn	00 58 30.4	+0.6
NLAI	Namlea	7.20	104	P	Pn	00 58 31.6	+1.2
	0.2nm50nm,0.5s						
EDFI	Ende, Flores	7.35	168	P	Pn	00 58 33.1	+0.5
MMRI	Maumere	7.38	163	Pn	Pn	00 58 32.5	-0.4
MMRI	Maumere	7.38	163	P	Pn	00 58 32.9	0.0
	0.2nm49nm,1.7s						
PLAI	Plampang	7.61	198	P	Pn	00 58 37.0	+1.0
	0.1nm35nm,0.8s						
TNTI	Ternate	7.62	73	Pn	Pn	00 58 36.3	+0.1
TNTI	Ternate	7.62	73	P	Pn	00 58 36.6	+0.4
	0.2nm47nm,0.8s						
TWSI	Taliwang, Sumb	7.85	204	P	Pn	00 58 39.6	+0.3
KLNI	Mataram	7.92	210	P	Pn	00 58 41.2	+0.9
	0.2nm22nm,1.1s						
KMMI	Kalianget	8.21	228	P	Pn	00 58 46.6	+2.3
	2µm30nm,1.0s						
AAI	Ambon	8.37	105	P	Pn	00 58 47.2	+0.7
	63nm,1.2s						
GAMI	Galela, Maluku	8.39	67	P	Pn	00 58 45.9	-0.8
KKM	Kota Kinabalu	8.46	333	Pn	Pn	00 58 49.8	+2.1
KKM	Kota Kinabalu	8.46	333	P	Pn	00 58 45.4	-2.3
	17nm,0.9s						
KRAI	Karang Ratu	8.48	102	P	Pn	00 58 51.7	+3.7
DNP	Denpasar	8.61	214	P	Pn	00 58 51.3	+1.6
BASI	Baing, Sumba	8.65	177	P	Pn	00 58 51.6	+1.3
	102nm,1.5s						
MSAI	Masohi	9.01	102	P	Pn	00 58 57.6	+2.4
JAGI	Jajag, Banyuwa	9.09	220	P	Pn	00 58 57.0	+0.7
	25nm,1.1s						
SOEI	Soe	9.17	153	Pn	Pn	00 58 57.7	+0.1
SOEI	Soe	9.17	153	P	Pn	00 58 58.7	+1.2
	61nm,0.9s						
BATI	Baumata	9.33	158	Pn	Pn	00 58 59.5	-0.2
	2.1nm,0.3s,baz=353,slow=15,SNR=7.1						
BATI				LR	LR	01 03 18.2	
	comp=Z,541nm,19.5s,baz=330,slow=42						
	5.9nm,0.4s						
BATI	Baumata	9.33	158	P	Pn	00 59 01.0	+1.4
	691nm39nm,1.2s						
GMJI	Gumukmas	9.42	224	P	Pn	00 59 02.2	+1.3
DAV	Davao City (W)	10.14	33	LR	LR	01 03 13.2	
	comp=Z,578nm,21.0s,baz=174,slow=41						
FAKI	Fak Fak	12.22	97	Pn	Pn	00 59 38.1	-1.2
TGY	Tagaytay City	15.55	3	LR	LR	01 06 03.0	
	comp=Z,306nm,21.6s,baz=104,slow=37						
MTN	Manton Dam	15.69	136	P	P	01 00 29.4	-0.9
KNRA	Kununurra	16.46	149	P	P	01 00 39.7	+0.9
FITZ	Fitzroy Crossi	17.35	162	P	Pn	01 00 46.9	-0.5
	0.1nm,0.3s,baz=6.7,slow=5.5,SNR=5.6						
FITZ				LR	LR	01 08 37.5	
	comp=Z,188nm,20.5s,baz=352,slow=41						
	4.2nm,1.0s						
FITZ	Fitzroy Crossi	17.35	162		Pn	01 00 46.8	-0.5
PSI	Prapat	21.59	281	LR	LR	01 11 07.2	
	comp=Z,218nm,18.1s,baz=101,slow=39						
WB0	Warramunga Arr	22.90	143	P	P	01 01 47.6	-1.6
WB0				IAmb	IAmb	01 01 52.1	
	comp=Z,19nm,0.8s						
WRAB	Tennant Creek	23.00	144	P	P	01 01 48.4	-1.9
WRAB				IAmb	IAmb	01 01 53.8	
	comp=Z,34nm,1.2s						
WRA	Warramunga Arr	23.00	144	P	P	01 01 49.1	-1.2
	comp=Z,19nm,0.9s,baz=324,slow=9.6,SNR=30						
	comp=Z,19nm,0.9s						
WRA	Warramunga Arr	23.00	144	P	P	01 01 47.7	-2.5
WR8	Warramunga Arr	23.11	143	P	P	01 01 50.1	-1.2
WR8				IAmb	IAmb	01 01 54.7	
	comp=Z,35nm,1.0s						
AS31	Alice Springs	25.76	150		P	01 02 14.7	-1.4
ASAR	Alice Springs	25.76	150	P	P	01 02 15.6	-0.6
	comp=Z,2.9nm,0.7s,baz=320,slow=7.2,SNR=36						
ASAR				PcP	PcP	01 05 44.5	-1.6
	comp=Z,0.4nm,0.6s,baz=339,slow=2.0,SNR=5.7						
ASAR				LR	LR	01 12 12.0	
	comp=Z,163nm,21.8s,baz=308,slow=36						
	comp=Z,2.9nm,0.7s						
ASAR	Alice Springs	25.76	150	P	P	01 02 16.0	-0.2
PMG	Port Moresby	28.04	107	P	P	01 02 36.2	-0.5
PMG				IAmb	IAmb	01 02 38.5	
	comp=Z,13nm,1.0s						
CMAR	Chiang Mai Arr	28.76	315	P	P	01 02 44.8	+1.7
	comp=Z,3.3nm,0.3s,baz=140,slow=6.6,SNR=6.6						
CMAR				LR	LR	01 16 46.6	
	comp=Z,58nm,18.9s,baz=140,slow=42						
	comp=Z,3.3nm,0.3s						
CMAR	Chiang Mai Arr	28.76	315	P	P	01 02 44.0	+0.9
CHTO	Chiang Mai	29.00	315	P	P	01 02 44.3	-0.8
JOW	Kunigami	29.27	15	LR	LR	01 13 44.0	
	comp=Z,136nm,21.5s,baz=68,slow=35						
FORT	Forrest	30.06	166	P	P	01 02 55.0	+0.5
FORT				IAmb	IAmb	01 02 57.5	
	comp=Z,7.4nm,0.7s						
NWAO	Narrogin (SRO)	31.35	185	LR	LR	01 16 12.9	
	comp=Z,167nm,19.1s,baz=2.0,slow=37						
CTA	Charters Tower	31.53	128	LR	LR	01 17 06.0	
	comp=Z,121nm,18.8s,baz=356,slow=39						
INKA	Innaminka	32.72	145	P	P	01 03 17.6	-0.3
PZH	PanZhiHua	33.02	329	P	P	01 03 23.9	+3.2
NJ2	Nanjing	33.41	358	*e*P	P	01 03 27.4	+3.5
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BBOO	Buckleboo	34.55	156	P	P	01 03 32.5	-1.4
BBOO				IAmb	IAmb	01 03 35.4	
	comp=Z,17nm,1.1s						
JNU	Nakatsue	35.93	16	LR	LR	01 18 54.2	
	comp=Z,51nm,20.5s,baz=188,slow=38						
STKA	Stephens Creek	36.37	148	P	P	01 03 49.1	-0.4
	comp=Z,12nm,0.9s,baz=315,slow=8.7,SNR=25						
STKA				LR	LR	01 20 34.2	
	comp=Z,105nm,18.1s,baz=348,slow=39						
	comp=Z,12nm,0.9s						
STKA	Stephens Creek	36.37	148	P	P	01 03 49.1	-0.4
EIDS	Eidsvold	38.14	131	P	P	01 04 03.6	-1.0
EIDS				IAmb	IAmb	01 04 47.8	
	comp=Z,7.2nm,1.1s						
JHJ	Hachijo jima 2	39.15	27	LR	LR	01 19 18.1	
	comp=Z,40nm,19.2s,baz=348,slow=35						
KSRS	Korea Array	39.46	10	LR	LR	01 20 00.0	
	comp=Z,91nm,21.9s,baz=190,slow=36						
PALK	Pallekele	40.26	283	LR	LR	01 21 00.4	
	comp=Z,56nm,21.3s,baz=100,slow=36						
MJAR	Matsushiro Arr	41.45	22	LR	LR	01 19 21.9	
	comp=Z,95nm,20.0s,baz=208,slow=33						
HHC	Hu-ho-hao-te	42.88	350	*e*P	P	01 04 45.6	+1.8
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,80nm,4.9s						
CAN	Canberra	43.04	145	P	P	01 04 43.4	-1.7
GTA	Gaotai	44.79	338	*e*P	P	01 05 01.8	+2.7
GTA				sP	sP	01 05 13.3	+9.3
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DGAR	Diego Garcia	47.83	261	P	P	01 05 22.0	-1.3
ASAJ	Asahikawa	49.70	21	LR	LR	01 26 11.6	
	comp=Z,39nm,20.5s,baz=122,slow=36						
SONM	Songino Array	50.59	348	P	P	01 05 43.9	-0.2
	comp=Z,1.1nm,0.8s,baz=166,slow=8.3,SNR=5.5						
SONM				LR	LR	01 28 23.3	
	comp=Z,111nm,19.1s,baz=20,slow=38						
	comp=Z,1.1nm,0.8s						
SONM	Songino Array	50.59	348	P	P	01 05 43.5	-0.6
HEH	HeiHe	51.96	6	*e*P	P	01 05 53.0	-1.1
HEH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WMQ	Urumqi	53.65	331	*e*P	P	01 06 07.0	+0.1
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NIL	Nilore	56.23	313	P	P	01 06 25.9	+0.2
NIL				IAmb	IAmb	01 06 41.9	
	comp=Z,7.3nm,1.1s						
WUS	Wushi	56.42	324	P	P	01 06 27.5	+0.5
WUS				IAmb	IAmb	01 06 30.5	
	comp=Z,14nm,1.5s						
KSH	Kashi	57.43	320	P	P	01 06 36.3	+2.1
KSH				sP	sP	01 06 43.4	+4.3
KSH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MKAR	Makanchi Array	58.43	330	P	P	01 06 41.5	+0.5
	comp=Z,2.5nm,0.7s,baz=133,slow=7.1,SNR=22						
MKAR				LR	LR	01 33 52.4	
	comp=Z,60nm,19.2s,baz=84,slow=38						
	comp=Z,2.5nm,0.7s						
MKAR	Makanchi Array	58.43	330	P	P	01 06 40.8	-0.2
MAKZ	Makanchi	58.60	330	P	P	01 06 42.2	+0.1
MAKZ				IAmb	IAmb	01 06 46.3	
	comp=Z,6.7nm,1.1s						
MANEM	Manem	59.24	316	P	P	01 06 47.4	+0.3
MANEM				IAmb	IAmb	01 06 51.8	
	comp=Z,28nm,1.2s						
KBL	Kabul	59.74	312	P	P	01 06 49.6	-1.0
AAK	Ala-Archa	60.11	323	LR	LR	01 34 39.3	
	comp=Z,67nm,22.0s,baz=92,slow=38						
AAK	Ala-Archa	60.11	323	P	P	01 06 52.6	-0.3
AAK				IAmb	IAmb	01 06 56.1	
	comp=Z,4.7nm,1.1s						
DRK	Karamyk	60.13	318	P	P	01 06 51.3	-2.0
DRK				IAmb	IAmb	01 07 08.7	
	comp=Z,4.3nm,0.8s						
ARSB	Arslanbob	60.33	321	P	P	01 06 54.3	0.0
GAR	Garm	60.89	317	P	P	01 06 58.2	0.0
CHGR	Chuyangaron	61.52	316	P	P	01 07 02.0	-0.5
ZAA0	Zalesovo Array	62.54	337	P	P	01 07 07.8	-1.1
ZAA0				IAmb	IAmb	01 07 29.6	
	comp=Z,8.7nm,1.2s						
ZALV	Zalesovo Beam	62.54	337	P	P	01 07 07.8	-1.1
	comp=Z,1.0nm,0.3s,baz=137,slow=5.0,SNR=14						
ZALV				LR	LR	01 37 29.8	
	comp=Z,48nm,18.3s,baz=50,slow=39						
	comp=Z,1.0nm,0.3s						
ZALV	Zalesovo Beam	62.54	337	P	P	01 07 08.0	-0.9
KK31	Karatay Array	62.83	321	P	P	01 07 11.7	+0.6
KK31				IAmb	IAmb	01 07 14.4	
	comp=Z,5.8nm,1.1s						
KKAR	Karatay Array	62.83	321	P	P	01 07 11.4	+0.4
KURBB	Kurchatov Arra	62.87	332	P	P	01 07 11.1	-0.1
	comp=Z,4.4nm,1.0s,baz=140,slow=6.0,SNR=25						
	comp=Z,4.4nm,1.0s						
KURK	Kurchatov	62.89	332	P	P	01 07 11.2	-0.1
YAK	Yakutsk	63.81	5	LR	LR	01 34 08.8	
	comp=Z,51nm,21.8s,baz=119,slow=35						
MA2	Magadan	65.49	17	LR	LR	01 34 39.4	
	comp=Z,32nm,21.2s,baz=258,slow=35						
BVAR	Borovoye Array	68.32	330	P	P	01 07 46.8	+0.5
	comp=Z,1.6nm,0.8s,baz=139,slow=9.8,SNR=8.9						
	comp=Z,1.6nm,0.8s						
BORK	Borovoye	68.36	330	P	P	01 07 46.5	-0.1
BORK				IAmb	IAmb	01 07 49.1	
	comp=Z,5.1nm,1.1s						
AB31	Akbulak array	72.18	323	P	P	01 08 09.3	-0.8
ABKAR	Akbulak array	72.18	323	P	P	01 08 09.1	-1.0
TIXI	Tiksi	73.27	3	LR	LR	01 43 57.1	
	comp=Z,100nm,18.6s,baz=216,slow=39						
AKTO	Aktyubinsk	73.80	324	LR	LR	01 42 53.0	
	comp=Z,48nm,18.7s,baz=331,slow=38						
NRIK	Noril'sk	74.07	349	LR	LR	01 43 00.7	
	comp=Z,70nm,20.4s,baz=120,slow=38						
RAYN	Ar Rayn	76.51	294	P	P	01 08 33.8	-2.1
RAYN				IAmb	IAmb	01 08 37.9	
	comp=Z,3.2nm,1.1s						
MAW	Mawson	76.60	199	LR	LR	01 41 32.5	
	comp=Z,70nm,19.0s,baz=268,slow=35						
VNDA	Vanda	79.16	172	P	P	01 08 52.6	+3.1
	comp=Z,1.2nm,0.9s,baz=314,slow=5.8,SNR=3.7						
VNDA				LR	LR	01 44 33.2	
	comp=Z,33nm,18.6s,baz=234,slow=36						
	comp=Z,1.2nm,0.9s						
VNDA	Vanda	79.16	172	P	P	01 08 50.4	+0.8
VNDA				IAmb	IAmb	01 09 17.7	
	comp=Z,5.0nm,1.4s						
GURO	Guroymak-BITLI	81.62	309	P	P	01 09 03.6	-0.2
GURO				IAmb	IAmb	01 09 05.9	
	comp=Z,11nm,1.2s						
FURI	Furi	81.76	279	LR	LR	01 44 46.6	
	comp=Z,22nm,19.3s,baz=124,slow=35						
BRTR	Keskin Array B	88.23	310	P	P	01 09 39.1	+2.2
	comp=Z,0.7nm,0.9s,baz=106,slow=3.1,SNR=4.0						
	comp=Z,0.7nm,0.9s						
QSPA	South Pole Qui	88.42	180	P	P	01 09 37.8	+0.6
QSPA				IAmb	IAmb	01 09 43.5	
	comp=Z,3.8nm,1.1s						
LSZ	Lusaka	91.44	255	LR	LR	01 45 43.5	
	comp=Z,44nm,20.3s,baz=126,slow=32						
AKASG	Malin Array Be	91.72	320	LR	LR	01 58 47.8	
	comp=Z,34nm,19.2s,baz=253,slow=40						
BOSA	Boshof	93.53	241	LR	LR	01 46 53.3	
	comp=Z,56nm,19.1s,baz=166,slow=32						
SPITS	Spitsbergen Ar	94.29	348	LR	LR	01 58 10.7	
	comp=Z,40nm,18.3s,baz=7.5,slow=39						
SUR	Sutherland	97.03	237	LR	LR	01 53 14.8	

	comp=Z,41nm,18.5s,baz=154,slow=35						
HFS	**Hagfors**	**99.45**	**331**	LR	LR	01 59 47.9	
	comp=Z,52nm,18.5s,baz=42,slow=38						

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*CATAC **25** 01:29:38.1±0.7, 7°N±3°×7°3W±°, h154^{km}±7^{km}, M4.1/6, MLv4.1/6, Error ellipse: s-maj=10.3km s-min=6.0km az=95.5, confirmed*

*IDC **25** 01:29:41.3±4.0, 6°.70N×73°.20W, h170^{km}±31^{km}, mb3.0/3, mbtmp3.5/4, MS3.2/2, Error ellipse: s-maj=72.9km s-min=32.0km az=82.0*

*RSNC **25** 01:29:41.1±0.0, 7°N±1°×7°3W±°, h144^{km}±2^{km}, M3.5, ML3.2*

ISC 25 01:29:39.9±0.9**, 6°.87N**±0°.04×**73°.13W**±0°.06**, h150**^{km}±6^{km}**, n27,** σ1^{s}.**34**/42**, mb3.3**/3**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.28**	**190**	P	**Pn**	**01 30 00.6**	**-0.1**
BARC				S	**Sn**	**01 30 15.6**	**-1.0**
BRJC	**Barrancabermej**	**0.61**	**279**	P	**Pn**	**01 30 02.3**	**+0.5**
BRJC				S	**Sn**	**01 30 18.9**	**+0.4**
PAMC	**Pamplona, Colo**	**0.63**	**43**	P	**Pn**	**01 30 03.4**	**+0.8**
PAMC				S	**Sn**	**01 30 20.2**	**+0.4**
RUSC	**La Rusia**	**0.98**	**177**	P	**Pn**	**01 30 04.6**	**-0.4**
RUSC				S	**Sn**	**01 30 23.9**	**-0.3**
RUSC	**La Rusia**	**0.98**	**177**	P	**Pn**	**01 30 04.4**	**-0.7**
RUSC				S	**Sn**	**01 30 22.3**	**-1.9**
PTBC	**PUERTO BERRIO,**	**1.35**	**256**	P	**Pn**	**01 30 07.1**	**-0.9**
PTBC				S	**Sn**	**01 30 27.9**	**-1.5**
OCAC	**Ocana**	**1.37**	**352**	P	**Pn**	**01 30 08.7**	**+0.4**
OCAC				S	**Sn**	**01 30 30.4**	**+0.3**
SPBC	**San Pablo de B**	**1.53**	**218**	P	**Pn**	**01 30 09.5**	**-0.4**
SPBC				S	**Sn**	**01 30 31.8**	**-1.1**
NORC	**Norcasia**	**2.16**	**233**	P	**Pn**	**01 30 16.7**	**-0.3**
NORC				S	**Sn**	**01 30 43.8**	**-1.7**
CHIC	**Chingaza**	**2.31**	**195**	P	**Pn**	**01 30 18.5**	**-0.6**
CHIC				S	**Sn**	**01 30 47.9**	**-1.4**
ROSC	**El Rosal**	**2.34**	**210**	P	**Pn**	**01 30 21.2**	**+1.8**
	109nm,0.3s,baz=268,slow=0.3,SNR=124						
ROSC				S	**Sn**	**01 30 49.9**	**-0.1**
	310nm,0.4s,baz=13,slow=23,SNR=30						
HELC	**Santa Helena**	**2.47**	**254**	P	**Pn**	**01 30 22.0**	**+1.0**
HELC				S	**Sn**	**01 30 53.2**	**+0.5**
HELC	**Santa Helena**	**2.47**	**254**	P	**Pn**	**01 30 21.7**	**+0.7**
HELC				S	**Sn**	**01 30 52.6**	**-0.1**
CVER	**Cruz Verde, Cu**	**2.52**	**202**	P	**Pn**	**01 30 22.0**	**+0.3**
CVER				S	**Sn**	**01 30 53.4**	**-0.5**
VILC	**Villavicencio,**	**2.80**	**191**	P	**Pn**	**01 30 23.9**	**-1.0**
VILC				S	**Sn**	**01 30 58.0**	**-1.7**
PRAC	**Prado**	**3.59**	**209**	P	**Pn**	**01 30 35.0**	**0.0**
PRAC				S	**Sn**	**01 31 16.7**	**-0.9**
PRAC	**Prado**	**3.59**	**209**	P	**Pn**	**01 30 34.5**	**-0.4**
PRAC				S	**Sn**	**01 31 15.9**	**-1.7**
SJCC	**San Jacinto, C**	**3.62**	**326**	P	Pn	01 30 25.1	-10
SJCC				S	**Sn**	**01 31 15.8**	**-2.5**
CAP2	**Capurgana**	**4.54**	**293**	S	**Sn**	**01 31 36.8**	**-3.0**
URI	**Uribia**	**4.93**	**13**	S	**Sn**	**01 31 44.8**	**-4.1**
POPC	**Popayan, Colom**	**5.57**	**220**	P	**Pn**	**01 31 01.2**	**+0.1**
BDFB	**Brasilia**	**33.46**	**132**	LR	LR	01 51 39.3	
	comp=Z,42nm,18.0s,baz=218,slow=40						
CPUP	**Villa Florida**	**36.40**	**156**	LR	LR	01 52 19.8	
	comp=Z,33nm,18.1s,baz=94,slow=38						
TXAR	**Lajitas Array**	**36.42**	**312**	P	**P**	**01 36 30.8**	**+0.5**
	0.4nm,0.6s,baz=122,slow=8.8,SNR=8.2 0.4nm,0.6s						
PDAR	**Pinedale Array**	**48.03**	**324**	P	**P**	**01 38 04.4**	**+0.2**
	0.2nm,0.6s,baz=128,slow=8.9,SNR=5.3 0.2nm,0.6s						
YKA	**Yellowknife Ar**	**63.21**	**340**	P	**P**	**01 39 51.4**	**-0.4**
	0.5nm,0.7s,baz=138,slow=6.0,SNR=16 0.5nm,0.7s						
ASAR	**Alice Springs**	**149.13**	**234**	PKPbc	**PKPdf**	**01 49 09.8**	**+2.6**
	0.3nm,0.6s,baz=114,slow=3.9,SNR=7.3						

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*IDC **25** 01:43:51.0±2.4, 2°.84N×126°.90E, h0^{km}, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=225.3km s-min=27.6km az=65.0*

*DJA **25** 01:43:57.5±1.4, 3°N±3°×12°7E±°, h14^{km}±14^{km}, M3.7/8, mB5.1/1, mb4.1/3, MLv3.5/8, Mw(mB)4.4/1*

ISC 25 01:43:56.4±1.4**, 3°.0N**±0°.1×**126°.94E**±0°.10**, h35**^{km}**, n9,** σ1^{s}.**74**/10**, mb3.5**/4**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**1.43**	**143**	P	**Pn**	**01 44 21.8**	**+2.0**
GAMI				S	**Sn**	**01 44 37.0**	**-0.3**
GTOI	**Gorontalo**	**4.57**	**239**	P	**Pn**	**01 45 03.7**	**+0.7**
MRSI	**Marisa**	**5.58**	**244**	P	**Pn**	**01 45 19.0**	**+2.0**
	0.1nm13nm,0.5s						
LUWI	**Luwuk**	**5.78**	**226**	P	**Pn**	**01 45 20.6**	**+0.9**
NLAI	**Namlea**	**6.19**	**178**	P	**Pn**	**01 45 27.3**	**+2.0**
WRA	**Warramunga Arr**	**23.92**	**163**	P	**P**	**01 49 05.0**	**-2.3**
	0.7nm,0.5s,baz=342,slow=10,SNR=4.5 0.7nm,0.5s						
ASAR	**Alice Springs**	**27.35**	**166**	P	**P**	**01 49 37.4**	**-1.0**
	0.1nm,0.4s,baz=347,slow=8.1,SNR=4.5 0.1nm,0.4s						
STKA	**Stephens Creek**	**37.37**	**159**	P	**P**	**01 51 04.7**	**-1.2**
	0.6nm,0.8s,baz=336,slow=10.0,SNR=3.0 0.6nm,0.8s						
MKAR	**Makanchi Array**	**58.28**	**325**	P	**P**	**01 53 48.1**	**+0.4**
	0.3nm,0.5s,baz=120,slow=6.5,SNR=1.9 0.3nm,0.5s						

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*SOME **25** 01:49:04.4, 41°.85N×82°.05E, h10^{km}*

*NNC **25** 01:49:06.5±1.5, 41°.88N×81°.99E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=10.9km s-min=6.7km az=158.0*

ISC 25 01:49:09.2±2.2**, 42°.0N**±0°.1×**81°.80E**±0°.07**, h10**^{km}**, n25,** σ1^{s}.**85**/35**, 7C-5D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.82**	**325**	Pg	**Pb**	**01 49 42.0**	**-0.7**
	17nm,0.5s						
KTMS				Lg	Lg	01 50 09.1	
	58nm,0.4s						
KTMS	**Ketmen**	**1.82**	**325**	*e*P	**Pb**	**01 49 42.0**	**-0.7**
	7.5nm,0.2s						
KTMS				*e*S	**Sg**	**01 50 09.5**	**+1.7**
	78nm,0.3s						
SHLS	**Shalkode**	**2.10**	**305**	Pg	**Pn**	**01 49 43.7**	**-0.8**
	36nm,0.3s						
SHLS				Lg	Lg	01 50 10.9	
	334nm,0.3s						
SHLS	**Shalkode**	**2.10**	**305**	*e*P	**Pn**	**01 49 43.3**	**-1.2**
	19nm,0.3s						
SHLS				*e*S	**Sn**	**01 50 11.5**	**+0.8**
	334nm,0.3s						
PDGK	**Podgornoye**	**2.18**	**309**	⇓Pn	**Pn**	**01 49 46.5**	**+0.9**
	8.5nm,0.5s						
PDGK				⇓Sn	**Sg**	**01 50 19.3**	**0.0**
	64nm,0.6s						
UZB	**Uzynbulak**	**2.37**	**301**	Pg	**Pg**	**01 49 53.2**	**-1.3**
	10nm,0.3s						
UZB				Lg	Lg	01 50 27.3	
	193nm,0.4s						
UZB	**Uzynbulak**	**2.37**	**301**	*e*P	**Pb**	**01 49 52.1**	**+0.1**
	7.4nm,0.2s						
UZB				*e*S	**Sg**	**01 50 26.7**	**+1.5**
	193nm,0.4s						
SATY	**Saty**	**2.74**	**295**	Pg	**Pb**	**01 49 59.6**	**+1.3**
	5.0nm,0.2s						
SATY				Lg	Lg	01 50 38.2	
	104nm,0.5s						
KPKS	**Kokpek**	**2.74**	**304**	Pg	**Pb**	**01 49 59.1**	**+0.8**
	0.5nm,0.1s						
KPKS				Lg	Lg	01 50 37.8	
	44nm,0.4s						
KPKS	**Kokpek**	**2.74**	**304**	*e*P	**Pb**	**01 49 58.9**	**+0.6**
	0.2nm,0.1s						
KPKS				*e*S	**Sg**	**01 50 38.1**	**+0.8**
	44nm,0.4s						
KNOS	**Konyrlen**	**3.06**	**322**	Pg	**Pb**	**01 50 05.2**	**+1.4**
	6.6nm,0.2s						
KNOS				Lg	Lg	01 50 48.2	
	25nm,0.4s						
KURS	**Kuram**	**3.08**	**301**	Pg	**Pg**	**01 50 06.1**	**-2.0**
	3.4nm,0.5s						
KURS				Lg	Lg	01 50 49.5	
	20nm,0.6s						
BLB	**Baldybastay**	**3.23**	**312**	Pg	**Pb**	**01 50 07.4**	**+0.7**
	19nm,0.3s						
BLB				Lg	Lg	01 50 52.4	
	40nm,0.3s						
MDOK	**Medeo**	**3.71**	**290**	Pg	**Pb**	**01 50 16.4**	**+1.5**
	3.6nm,0.5s						
MDOK				Lg	Lg	01 51 07.1	
	8.4nm,0.6s						
TNSS	**Tian-Shan**	**3.75**	**288**	Pg	**Pg**	**01 50 17.9**	**-3.0**
	1.3nm,0.3s						
TNSS				Lg	Lg	01 51 09.6	
	3.5nm,0.4s						
KAPS	**Kapalarasan**	**3.76**	**333**	Pg	**Pg**	**01 50 18.6**	**-2.6**
	7.9nm,0.2s						
KAPS				Lg	Lg	01 51 11.7	
	26nm,0.2s						
MTBS	**Maitube**	**4.14**	**288**	Pg	**Pb**	**01 50 22.5**	**+0.4**
	1.8nm,0.3s						
MTBS				Lg	Lg	01 51 17.6	
	15nm,0.3s						
KST	**Kastek**	**4.45**	**286**	Pg	**Pb**	**01 50 30.0**	**+2.5**
	3.0nm,0.4s						
KST				Lg	Lg	01 51 30.5	
	14nm,0.5s						
KUU	**Kurty**	**4.45**	**297**	Pg	**Pb**	**01 50 30.5**	**+3.2**
	2.8nm,0.1s						
KUU				Lg	Lg	01 51 31.4	
	23nm,0.6s						
KUU	**Kurty**	**4.45**	**297**	*e*P	**Pg**	**01 50 30.7**	**-3.7**
	0.6nm,0.0s						
KUU				*e*S	**Sg**	**01 51 32.6**	**+0.6**
	3.8nm,0.1s						
DGS	**Degeres**	**4.63**	**288**	Pg	**Pb**	**01 50 32.7**	**+2.2**
	2.3nm,0.5s						
DGS				Lg	Lg	01 51 35.6	
	14nm,0.4s						
KRBS	**Karabastau**	**4.83**	**293**	Pg	**Pb**	**01 50 36.8**	**+3.0**
	0.9nm,0.4s						
KRBS				Lg	Lg	01 51 42.3	
	2.3nm,0.5s						
MK31	**Makanchi Array**	**4.84**	**4**	⇓Pn	**Pn**	**01 50 21.6**	**-0.4**
	0.3nm,0.3s,baz=193,slow=13,SNR=42						
MK31				⇑Pg	**Pb**	**01 50 36.9**	**+3.0**
	1.3nm,0.5s,baz=192,slow=15,SNR=11						
MK31				⇑Sn	**Sn**	**01 51 19.5**	**+1.4**
	1.8nm,0.5s,baz=188,slow=25,SNR=7.8						
MK31				⇑Lg	Lg	01 51 40.8	
	6.9nm,0.8s,baz=173,slow=29,SNR=4.9						
MAKZ	**Makanchi**	**4.84**	**1**	⇑Pn	**Pn**	**01 50 21.2**	**-0.9**
	1.5nm,0.5s						
MAKZ				⇓Pg	**Pg**	**01 50 39.0**	**-2.8**
	4.0nm,0.6s						
MAKZ				⇑Sn	**Sn**	**01 51 19.7**	**+1.6**
	3.5nm,0.4s						
MAKZ				⇓Lg	Lg	01 51 39.4	
	6.8nm,0.8s						
AAK	**Ala-Archa**	**5.46**	**279**	⇑Pg	**Pg**	**01 50 51.6**	**-2.1**
	0.6nm,0.5s						
AAK				⇑Lg	Lg	01 52 09.2	
	6.2nm,0.9s						

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*KRSC **25** 01:50:38.5±0.7, 55°.67N×162°.64E, h23^{km}±21^{km}, Ml3.6*

*IDC **25** 01:50:47.7±3.4, 55°.83N×162°.22E, h70^{km}±37^{km}, mb3.1/5, mbtmp3.3/6, ML2.1/1, Error ellipse: s-maj=41.1km s-min=23.0km az=135.0*

ISC 25 01:50:38.6±1.7**, 55°.72N**±0°.04×**162°.49E**±0°.04**, h1**^{km}±11^{km}**, n40,** σ1^{s}.**55**/43**, mb3.7**/5**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.52**	**20**	*e*P	**Pg**	**01 50 49.6**	**+0.9**
KBTR				*e*S	**Sb**	**01 50 58.5**	**-0.1**
KBG	**Krutoberegovo**	**0.55**	**13**	*e*P	**Pg**	**01 50 50.2**	**+1.0**
ZLN	**Zelenaya**	**1.00**	**288**	*e*P	**Pg**	**01 50 58.6**	**+0.9**
BZGR	**Bezymyannyi-Gr**	**1.04**	**283**	*e*P	**Pg**	**01 50 59.0**	**+0.6**
BZGR				*e*S	**Sn**	**01 51 14.7**	**-0.8**
SMKR	**Semkarok**	**1.04**	**327**	*e*P	**Pg**	**01 50 59.1**	**+0.6**
BZWR	**Bezymyannyi-We**	**1.15**	**283**	*e*P	**Pb**	**01 51 00.8**	**-0.5**
KLY	**Klyuchi**	**1.19**	**301**	*e*P	**Pb**	**01 50 59.9**	**-2.0**
KLY				*e*S	**Sb**	**01 51 16.0**	**-1.8**
KIRR	**Kirishev**	**1.23**	**282**	*e*P	**Pn**	**01 51 02.4**	**-0.7**
KMNR	**Kamenistaya**	**1.27**	**273**	*e*P	**Pn**	**01 51 03.6**	**0.0**
KMNR				*e*S	**Sn**	**01 51 22.5**	**+1.1**
TUMD	**Tumrok D**	**1.30**	**247**	*e*P	**Pn**	**01 51 02.7**	**-1.2**
TUMD				*e*S	**Sb**	**01 51 20.6**	**-0.3**
KZV	**Kizimen**	**1.39**	**245**	*e*P	**Pn**	**01 51 04.6**	**-0.6**
TUMR	**Tumrok**	**1.40**	**253**	*e*P	**Pn**	**01 51 04.7**	**-0.7**
KOZ	**Kozyrevsk**	**1.51**	**284**	*e*P	**Pn**	**01 51 07.0**	**+0.3**
SRDR	**Sredinnyy**	**1.67**	**292**	*e*P	**Pn**	**01 51 09.3**	**+0.3**
BKI	**Bering**	**2.05**	**103**	*e*S	**Sn**	**01 51 37.6**	**-2.6**
ESO	**Esso**	**2.15**	**277**	*e*P	**Pn**	**01 51 15.9**	**+0.4**
KII	**Karymskiy**	**2.44**	**227**	*e*P	**Pn**	**01 51 20.1**	**+0.6**
SPN	**Mys Shipunski**	**3.00**	**210**	*e*P	**Pn**	**01 51 25.8**	**-1.3**
NLC	**Nalytchevo**	**3.15**	**217**	*e*S	**Sn**	**01 52 05.9**	**-1.3**
SDLR	**Sedlovina**	**3.23**	**222**	*e*P	**Pn**	**01 51 30.2**	**-0.2**
KRX	**Arik**	**3.26**	**225**	*e*P	**Pn**	**01 51 33.4**	**+2.5**
KRER	**Koryakskii**	**3.26**	**224**	*e*P	**Pn**	**01 51 31.9**	**+1.0**
SMAR	**Somma**	**3.27**	**223**	*e*P	**Pn**	**01 51 30.8**	**-0.3**
AVH	**Avacha**	**3.29**	**223**	*e*P	**Pn**	**01 51 33.5**	**+2.3**
UGLR	**Uglovaya**	**3.30**	**222**	*e*P	**Pn**	**01 51 33.0**	**+1.5**
KOK	**Koryaka**	**3.31**	**224**	*e*P	**Pn**	**01 51 32.5**	**+0.9**
DALK	**Dalny**	**3.47**	**221**	*e*P	**Pn**	**01 51 35.8**	**+2.2**
PETK	**Petropavlovsk-**	**3.83**	**229**	P	**Pb**	**01 51 43.8**	**-3.1**
	0.7nm,0.3s,baz=67,slow=17,SNR=11						
PETK				S	**Sn**	**01 52 27.6**	**+3.4**
	2.3nm,0.5s,baz=29,slow=18,SNR=1.5 1.8nm,0.5s						
KRMR	**Karymshinskiy**	**3.86**	**223**	*e*P	**Pn**	**01 51 41.5**	**+2.5**
GRL	**Gorelyy**	**4.10**	**221**	*e*P	**Pn**	**01 51 45.6**	**+3.2**
MTVR	**Mutnovka**	**4.12**	**220**	*e*P	**Pn**	**01 51 43.1**	**+0.5**
ASAK	**Asacha**	**4.30**	**221**	*e*P	**Pn**	**01 51 46.3**	**+1.2**
ILAR	**Eielson Array**	**26.00**	**49**	P	**P**	**01 56 12.8**	**+0.3**
	0.3nm,0.8s,baz=279,slow=8.9,SNR=1.8 0.3nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**36.08**	**173**	T	T	02 35 52.6	
	baz=356,slow=76,SNR=111						
H11N3	**WAKE ISLAND Hy**	**36.10**	**173**	T	T	02 35 53.4	
	baz=356,slow=76,SNR=87						
H11N1	**WAKE ISLAND Hy**	**36.10**	**173**	T	T	02 35 52.8	
	baz=356,slow=76,SNR=79						
YKA	**Yellowknife Ar**	**40.30**	**45**	P	**P**	**01 58 17.3**	**+0.6**
	0.1nm,0.7s,baz=299,slow=8.8,SNR=3.2 0.1nm,0.7s						
FINES	**FINESS Array B**	**58.25**	**337**	P	**P**	**02 00 33.2**	**-0.8**
	0.8nm,0.6s,baz=40,slow=9.9,SNR=8.2 0.8nm,0.6s						
TXAR	**Lajitas Array**	**68.36**	**70**	P	**P**	**02 01 43.7**	**+2.1**
	0.5nm,1.1s,baz=303,slow=5.6,SNR=2.1 0.5nm,1.1s						
ASAR	**Alice Springs**	**82.74**	**206**	P	**P**	**02 03 03.1**	**-0.7**
	0.5nm,0.9s,baz=17,slow=6.0,SNR=4.1 0.5nm,0.9s						

IDC 25 02:01:30.0±12.0**, 24°.04S**×**179°.63E, h427**^{km}±123^{km}**, mb3.1**/3**, mbtmp4.1**/4**, Error ellipse: s-maj=89.7km s-min=46.7km az=33.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.34**	**188**	P	P	02 04 34.0	-0.3
	6.5nm,0.8s,baz=104,slow=22,SNR=1.7						
URZ				S	S	02 07 07.1	+0.3
	5.8nm,0.9s,baz=338,slow=22,SNR=1.4						
STKA	**Stephens Creek**	**34.35**	**248**	P	P	02 07 39.7	+0.4
	1.4nm,0.7s,baz=84,slow=8.1,SNR=12 1.4nm,0.7s						
ASAR	**Alice Springs**	**41.67**	**261**	P	P	02 08 39.5	-0.2
	0.9nm,0.5s,baz=96,slow=7.3,SNR=36 0.9nm,0.5s						
WRA	**Warramunga Arr**	**42.05**	**266**	P	P	02 08 42.2	-0.5
	1.5nm,0.4s,baz=105,slow=8.1,SNR=13 1.5nm,0.4s						
BRTR	**Keskin Array B**	**147.39**	**307**	PKPbc	PKPbc	02 20 24.4	-0.6
	0.3nm,0.5s,baz=99,slow=1.1,SNR=1.6						

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*IDC **25** 02:06:50.0±0.7, 54°.62N×118°.26W, h0^{km}, mb3.5/4, mbtmp3.6/12, ML3.3/7, MS2.7/1, Error ellipse: s-maj=14.2km s-min=7.6km az=87.0*

*NEIC **25** 02:06:51.1, 54°.51N×118°.50W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.03; $M_{\theta\theta}$0.28; $M_{\phi\phi}$-0.25; $M_{r\theta}$-0.11; $M_{\theta\phi}$1.04; $M_{\phi r}$-0.54; Fault plane solution: $M_0$1.20000×10^{15} NP1:ϕ_s277.00000°, δ63.00000°, λ1.00000°. NP2:ϕ_s187.00000°, δ90.00000°, λ153.00000°. Principal axes: T 1.2277, Plg19.0000°, Azm139.0000°; N -0.0518, Plg63.0000°, Azm6.0000°; P -1.1758, Plg18.0000°, Azm236.0000°;*

*NEIC **25** 02:06:52.9±1.6, 54°.65N±0°.06×118°.24W±0°.09, h15^{km}±7^{km}, mb3.6/23, Mwr4.0(OTT) Error ellipse: s-maj=10.2km s-min=4.8km az=216.0*

ISC 25 02:06:50.6±0.6**, 54°.71N**±0°.05×**118°.07W**±0°.07**, h10**^{km}**, n90,** σ1^{s}.**37**/91**, mb3.5**/5**, Alberta**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDM	**Edmonton**	**3.16**	**116**		**Pn**	**02 07 43.0**	**+2.6**
NEW	**Newport**	**6.49**	**174**	Pn	**Pn**	**02 08 24.6**	**-1.5**
	0.4nm,0.3s,baz=14,slow=11,SNR=7.3						
NEW				Pg	**Pb**	**02 08 44.0**	**+0.5**
	2.5nm,0.3s,baz=5.1,slow=16,SNR=32						
NEW				Lg	Lg	02 10 02.4	
	2.8nm,0.3s,baz=74,slow=19,SNR=4.4 1.1nm,0.3s						
NEW	**Newport**	**6.49**	**174**		**Pn**	**02 08 24.7**	**-1.5**
BBB	**Bella Bella**	**6.51**	**251**	Pn	**Pn**	**02 08 24.4**	**-2.0**
	0.3nm,0.3s,baz=86,slow=15,SNR=2.4						
BBB				Lg	Lg	02 10 01.1	
	5.1nm,0.3s,baz=342,slow=22,SNR=6.4 24nm,1.1s						
BBB	**Bella Bella**	**6.51**	**251**	Pn	**Pn**	**02 08 25.2**	**-1.3**
C09A	**Chrisman Ranch**	**6.92**	**181**		**Pn**	**02 08 32.2**	**+0.1**
U35K	**Hyder**	**6.93**	**285**	Pn	**Pn**	**02 08 31.1**	**-1.0**
CLRS	**Cowichan Lake**	**7.00**	**215**	Pn	**Pn**	**02 08 32.6**	**-0.4**
T35M	**Bob Quinn**	**7.23**	**293**	Pn	**Pn**	**02 08 35.7**	**-0.5**
JTMT	**Jette**	**7.37**	**160**		**Pn**	**02 08 37.3**	**-1.0**
EPH	**Ephrata**	**7.43**	**188**	Pn	**Pn**	**02 08 37.3**	**-1.8**
D08A	**Wollman Farm,**	**7.69**	**184**		**Pn**	**02 08 41.7**	**-0.8**
WTLY	**Watson Lake, Y**	**7.92**	**317**		**Pn**	**02 08 45.3**	**-0.5**
S34M	**Telegraph Cree**	**7.94**	**299**	Pn	**Pn**	**02 08 45.6**	**-0.4**
YKA	**Yellowknife Ar**	**8.01**	**12**	Pn	**Pn**	**02 08 46.3**	**-0.6**
	0.5nm,0.3s,baz=199,slow=13,SNR=49						
YKA				Sn	**Sn**	**02 10 15.7**	**-1.7**
	4.9nm,0.3s,baz=219,slow=23,SNR=9.9						
YKA				Lg	Lg	02 11 01.9	
	4.1nm,0.3s,baz=195,slow=30,SNR=9.3 0.5nm,0.3s						
YKAW1	**Yellowknife Wh**	**8.01**	**12**		**Pn**	**02 08 46.9**	**0.0**
WAH2	**Wahluke Slope**	**8.02**	**187**	Pn	**Pn**	**02 08 47.3**	**+0.1**
YKAW3	**Yellowknife Wh**	**8.07**	**11**		**Pn**	**02 08 48.5**	**+0.7**
EGMT	**Eagleton**	**8.47**	**139**		**Pn**	**02 08 53.6**	**+0.2**
LYMT	**Lyon Mountain**	**8.57**	**152**		**Pn**	**02 08 54.1**	**-0.7**
F10A	**Beach Ranch, E**	**8.77**	**176**		**Pn**	**02 08 57.5**	**0.0**
LNOR	**Lincton Mounta**	**8.85**	**181**	Pn	**Pn**	**02 08 58.5**	**-0.1**
HRY	**Holter Researc**	**8.93**	**151**		**Pn**	**02 08 58.8**	**-1.0**
WRGLY	**Wrigley**	**8.98**	**344**		**Pn**	**02 09 00.6**	**+0.4**
FFC	**Flin Flon**	**9.31**	**83**		**Pn**	**02 09 06.0**	**+1.2**
LRM	**Limekiln Ridge**	**9.60**	**156**		**Pn**	**02 09 07.4**	**-1.5**
PLID	**Pearl Lake**	**9.73**	**171**		**Pn**	**02 09 09.4**	**-1.3**
R32K	**Eaglecrest**	**9.77**	**298**	Pn	**Pn**	**02 09 11.2**	**+0.2**
BMO	**Blue Mountains**	**9.88**	**177**	Pn	**Pn**	**02 09 11.8**	**-0.9**
DLMT	**Dillon**	**10.00**	**157**		**Pn**	**02 09 12.5**	**-1.9**
BOZ	**Bozeman (W)**	**10.01**	**153**		**Pn**	**02 09 12.6**	**-1.9**
N32M	**Quiet Lake**	**10.25**	**315**	Pn	**Pn**	**02 09 17.1**	**-0.5**
MCMT	**McKenzie Canyo**	**10.45**	**159**		**Pn**	**02 09 19.1**	**-1.6**
DGMT	**Dagmar**	**10.64**	**120**		**Pn**	**02 09 23.5**	**+0.5**
YHL	**Hebgen Lake**	**10.82**	**153**		**Pn**	**02 09 24.7**	**-1.0**
BCYI	**Bear Canyon**	**10.84**	**162**		**Pn**	**02 09 24.3**	**-1.7**
YHB	**Horse Butte**	**10.91**	**153**		**Pn**	**02 09 25.7**	**-1.3**
YHH	**Holmes Hill**	**10.97**	**152**		**Pn**	**02 09 26.6**	**-1.2**
LAO	**LASA Array**	**10.98**	**132**	Pn	**Pn**	**02 09 27.3**	**-0.5**
RLMT	**Red Lodge**	**11.14**	**146**		**Pn**	**02 09 29.8**	**-0.3**
M31M	**Drury Creek, Y**	**11.35**	**318**	Pn	**Pn**	**02 09 31.6**	**-1.0**
MOOW	**Moose Ponds**	**11.96**	**154**		**Pn**	**02 09 41.1**	**-0.2**
M30M	**Minto, Yukon**	**12.49**	**317**	Pn	**Pn**	**02 09 46.1**	**-2.2**
PD31	**Pinedale Array**	**13.19**	**151**		**Pn**	**02 09 57.2**	**-0.9**
PDAR	**Pinedale Array**	**13.19**	**151**	Pn	**Pn**	**02 09 57.9**	**-0.3**
	0.1nm,0.3s,baz=358,slow=14,SNR=8.9						
PDAR				Lg	Lg	02 13 38.0	
	0.1nm,0.3s,baz=2.9,slow=33,SNR=2.1						
PDAR				LR	LR	02 14 37.2	
	comp=Z,30nm,19.5s,baz=312,slow=36 0.5nm,0.7s						
PDAR	**Pinedale Array**	**13.19**	**151**	Pn	**Pn**	**02 09 59.3**	**+1.2**
L29M	**L29M**	**13.29**	**317**	Pn	**Pn**	**02 09 58.9**	**-0.3**
J30M	**Hart River**	**13.47**	**324**	Pn	**Pn**	**02 10 02.3**	**+0.7**
FCC	**Fort Churchill**	**13.74**	**63**		**Pn**	**02 10 04.3**	**-0.9**
I30M	**Mount Dempster**	**13.90**	**327**		**Pn**	**02 10 08.4**	**+0.9**
RSSD	**Black Hills**	**13.96**	**134**	Pn	**Pn**	**02 10 06.7**	**-1.9**
ELK	**Elko**	**14.10**	**171**	Pn	**Pn**	**02 10 11.9**	**+1.3**
	0.1nm,0.3s,baz=359,slow=15,SNR=5.7						
ELK				Lg	Lg	02 14 09.4	
	baz=77,slow=18,SNR=1.6						
ULM	**Lac du Bonnet**	**14.22**	**99**	Pn	Pn	02 10 10.1	-1.8
	0.3nm,0.3s,baz=198,slow=15,SNR=1.4						
ULM				Sn	Sn	02 12 40.4	-9.1
	0.9nm,0.3s,baz=1.1,slow=20,SNR=4.5						
ULM				Lg	Lg	02 14 15.6	
	0.6nm,0.3s,baz=21,slow=23,SNR=4.4 1.3nm,0.5s						
K22A	**Casper**	**14.25**	**143**	Pn	**Pn**	**02 10 11.9**	**-0.6**
G31M	**Satah River**	**14.50**	**334**		**Pn**	**02 10 14.0**	**-1.6**
BCAR	**Beaver Creek A**	**14.76**	**314**	Pn	**Pn**	**02 10 17.1**	**-2.1**
EPYK	**Eagle Plains**	**14.77**	**330**	Pn	**Pn**	**02 10 19.0**	**-0.4**
F31M	**Tsiigehtchic**	**14.78**	**336**		Pn	02 10 16.2	-3.2
C36M	**Paulatuk**	**14.94**	**352**		**Pn**	**02 10 18.1**	**-3.5**
H29M	**Whitestone**	**15.17**	**327**	Pn	**Pn**	**02 10 24.4**	**-0.3**
H29M				IAmb	IAmb	02 10 52.2	
	comp=Z,4.1nm,1.1s						
I28M	**Miner Creek**	**15.22**	**324**		**Pn**	**02 10 26.2**	**+0.8**
I28M				IAmb	IAmb	02 10 52.1	
	comp=Z,3.9nm,1.1s						
F30M	**Barrier River**	**15.41**	**334**		**Pn**	**02 10 25.7**	**-2.2**
INK	**Inuvik**	**15.43**	**338**	Pn	**Pn**	**02 10 25.2**	**-2.7**
	comp=Z,6.9nm,0.6s,baz=143,slow=7.6,SNR=60						
INK				Sn	Sn	02 13 09.2	-9.4
	comp=Z,0.3nm,0.3s,baz=139,slow=20,SNR=4.1						
INK	**Inuvik**	**15.43**	**338**		**Pn**	**02 10 25.4**	**-2.6**
G29M	**Pine Creek**	**15.52**	**330**	Pn	**Pn**	**02 10 29.3**	**0.0**
EPLO	**Experimental L**	**15.72**	**99**	Pn	**Pn**	**02 10 30.4**	**-1.6**
EPLO				IAmb	IAmb	02 11 11.5	
	comp=Z,4.0nm,0.9s						
SCRK	**Sand Creek**	**16.03**	**316**	Pn	**Pn**	**02 10 35.3**	**-0.7**
SCRK				IAmb	IAmb	02 10 40.2	
	comp=Z,8.0nm,1.5s						
J26L	**Joseph Creek**	**16.08**	**318**	Pn	**Pn**	**02 10 36.9**	**+0.3**
J26L				IAmb	IAmb	02 10 44.5	
	comp=Z,3.0nm,0.7s						
RYN	**Ryan**	**16.09**	**181**		**Pn**	**02 10 36.5**	**-0.5**
RYN				IAmb	IAmb	02 10 41.6	
	comp=Z,3.3nm,0.9s						
NVAR	**Mina Array Bea**	**16.29**	**181**	Pn	**Pn**	**02 10 39.0**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=1.6,slow=10,SNR=6.0 comp=Z,0.7nm,0.8s						
E29M	**Blow River**	**16.52**	**334**		**Pn**	**02 10 41.5**	**-0.6**
E28M	**Babbage River**	**17.11**	**333**		**Pn**	**02 10 48.9**	**-0.7**
E27K	**Coleen River**	**17.40**	**330**		**Pn**	**02 10 54.4**	**+1.2**
ILAR	**Eielson Array**	**17.50**	**317**	P	**Pn**	**02 10 54.6**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=122,slow=11,SNR=10						
ILAR				Lg	Lg	02 16 00.3	
	baz=105,slow=24,SNR=4.1 comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	**17.50**	**317**		**Pn**	**02 10 55.1**	**+0.7**
A36M	**Sachs Harbour**	**17.61**	**353**		**Pn**	**02 10 54.8**	**-1.0**
A36M				IAmb	IAmb	02 11 07.4	
	comp=Z,3.9nm,0.7s						
ECSD	**EROS Data Cent**	**17.73**	**119**	Pn	**Pn**	**02 10 56.6**	**-0.8**
F26K	**Sheenjek River**	**17.88**	**327**	P	**Pn**	**02 10 59.3**	**+0.1**
MCK	**McKinley**	**18.01**	**312**	Pn	**Pn**	**02 10 59.1**	**-1.7**
MCK				IAmb	IAmb	02 11 15.3	
	comp=Z,9.3nm,1.3s						
H24K	**Noodor Dome**	**18.29**	**319**		**Pn**	**02 11 04.5**	**+0.2**
H24K				IAmb	IAmb	02 11 06.6	
	comp=Z,8.0nm,1.5s						
F24K	**Squaw Lake**	**19.02**	**324**	P	**P**	**02 11 13.3**	**+0.9**
F24K				IAmb	IAmb	02 11 18.3	
	comp=Z,2.8nm,0.8s						
ANMO	**Albuquerque**	**21.36**	**153**	P	**P**	**02 11 37.7**	**-0.4**
	comp=Z,1.5nm,0.9s,baz=331,slow=12,SNR=6.4 comp=Z,1.5nm,0.9s						
ANMO	**Albuquerque**	**21.36**	**153**	P	**P**	**02 11 37.0**	**-1.1**
ANMO				IAmb	IAmb	02 11 40.4	
	comp=Z,3.6nm,1.2s						
ILON	**Igloolik, Nuna**	**21.96**	**34**	P	**P**	**02 11 44.5**	**+0.4**
ILON				IAmb	IAmb	02 11 54.7	
	comp=Z,5.3nm,1.4s						
RES	**Resolute Bay**	**22.04**	**16**	P	**P**	**02 11 47.5**	**+2.6**
	comp=Z,0.9nm,0.6s,baz=211,slow=9.9,SNR=4.1						

RES				S	**S**	**02 15 43.3**	**-4.3**
	comp=Z,0.9nm,0.4s,baz=281,slow=15,SNR=4.2						
RES				Lg	Lg	02 18 17.1	
	comp=Z,0.1nm,0.3s,baz=204,slow=12,SNR=4.3						
	comp=Z,0.9nm,0.6s						
RES	**Resolute Bay**	**22.04**	**16**	P	**P**	**02 11 47.6**	**+2.6**
RES				IAmb	IAmb	02 12 07.5	
	comp=Z,5.0nm,1.5s						
P38A	**Dawn**	**22.33**	**122**	P	**P**	**02 11 49.0**	**+0.7**
E19K	**Redstone River**	**22.34**	**320**	P	**P**	**02 11 48.5**	**+0.2**
TXAR	**Lajitas Array**	**27.41**	**152**	P	**P**	**02 12 36.3**	**0.0**
	comp=Z,0.6nm,0.8s,baz=6.4,slow=7.8,SNR=6.4						
	comp=Z,0.6nm,0.8s						
FINES	**FINESS Array B**	**60.77**	**19**	P	**P**	**02 17 05.4**	**+3.4**
	comp=Z,1.3nm,0.9s,baz=304,slow=15,SNR=1.8						
	comp=Z,1.3nm,0.9s						

*IDC **25** 02:11:20.3±0.4, 3°.38N×74°.03W, h0^{km}, mb4.6/29, mbtmp4.6/34, ML4.4/5, MS3.9/37, Error ellipse: s-maj=13.3km s-min=7.8km az=75.0*

*RSNC **25** 02:11:22.1±0.0, 3°N±1°×7°4W±°, h10^{km}±2^{km}, M4.9, mB5.5, mb5.6, ML4.6, Mw4.7, Mw(mB)4.9*

*NEIC **25** 02:11:23.2±1.6, 3°.42N±0°.05×73°.99W±0°.07, h10^{km}±1^{km}, mb5.0/142, Error ellipse: s-maj=12.1km s-min=7.8km az=250.0*

*CATAC **25** 02:11:24.3±1.1, 4°N±4°×7°4W±°, h3^{km}±5^{km}, M5.5/7, MLv5.5/7, Error ellipse: s-maj=16.7km s-min=6.3km az=114.6, confirmed*

*VAO **25** 02:11:24.0±0.3, 3°.34N×73°.94W, h10^{km}, mb4.9, Presumed earthquake*

*GCMT **25** 02:11:25.2±0.3, 3°.43N±0°.02×74°.11W±0°.03, h19^{km}±1^{km}, MW4.8/84, Moment Tensor Solution. s16,c17; s84,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.32±.14; $M_{\theta\theta}$0.40±.08; $M_{\phi\phi}$-1.72±.11; $M_{r\theta}$-0.81±.21; $M_{\theta\phi}$-1.29±.06; $M_{\phi r}$0.65±.20; Best double couple: $M_0$2.27000×10^{16} NP1:ϕ_s239.00000°,δ54.00000°,λ143.00000°. NP2: ϕ_s352.00000°,δ61.00000°,λ42.00000°. Principal axes: T 2.1930, Plg49.0000°, Azm209.0000°; N 0.1560, Plg40.0000°, Azm21.0000°; P -2.3470, Plg4.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 02:11:21.5±0.7**, 3°.43N**±0°.02×**74°.07W**±0°.03**, h6**^{km}±4^{km}**, n360,** σ1^{s}**44**/383**, mb5.0**/103**, MS3.9**/33**, 4C, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URMC	**La Uribe, Meta**	**0.35**	**239**	P	**Pg**	**02 11 27.4**	**-1.0**
URMC				S	**Sg**	**02 11 30.9**	**-2.3**
VILC	**Villavicencio,**	**0.78**	**29**	P	**Pb**	**02 11 37.6**	**+0.1**
VILC				S	**Sn**	**02 11 49.7**	**-1.5**
PRAC	**Prado**	**0.86**	**289**	P	**Pg**	**02 11 36.4**	**-1.6**
PRAC				S	**Sg**	**02 11 46.9**	**-2.3**
PRAC	**Prado**	**0.86**	**289**	P	**Pg**	**02 11 36.3**	**-1.7**
PRAC				S	**Sg**	**02 11 46.4**	**-2.8**
CVER	**Cruz Verde, Cu**	**1.08**	**360**	P	**Pg**	**02 11 42.3**	**-0.1**
CVER				S	**Sb**	**02 11 56.8**	**-0.7**
CHIC	**Chingaza**	**1.24**	**16**	P	**Pn**	**02 11 45.4**	**-0.3**
CHIC				S	**Sn**	**02 12 01.1**	**-1.9**
ORTC	**Ortega, Tolima**	**1.26**	**292**	P	**Pn**	**02 11 43.5**	**-2.2**
ORTC				S	**Sb**	**02 11 59.8**	**-2.5**
MACC	**Macarena, Meta**	**1.30**	**170**	P	**Pn**	**02 11 45.8**	**-0.4**
MACC				S	**Sb**	**02 12 03.0**	**-0.2**
ROSC	**El Rosal**	**1.42**	**350**	Pg	**Pg**	**02 11 48.8**	**-0.1**
	4µm,0.3s,baz=143,slow=3.8,SNR=2810						
ROSC				Lg	Lg	02 12 08.8	
	3µm,0.3s,baz=186,slow=23,SNR=15						
BETC	**Betania**	**1.56**	**241**	P	**Pn**	**02 11 48.9**	**-0.9**
BETC				S	**Sn**	**02 12 08.6**	**-1.7**
ANIL	**Santa Ana**	**1.69**	**309**	P	**Pn**	**02 11 51.2**	**-0.7**
ANIL				S	**Sn**	**02 12 12.3**	**-1.8**
GARC	**Garzon, Huila**	**1.88**	**229**	P	**Pn**	**02 11 54.4**	**0.0**
GARC				S	**Sn**	**02 12 17.1**	**-1.5**
NIZA	**Niza - Manizal**	**2.13**	**319**	P	**Pn**	**02 11 59.4**	**+1.4**
NIZA				S	**Sn**	**02 12 25.2**	**+0.3**
SPBC	**San Pablo de B**	**2.21**	**0**	P	**Pb**	**02 12 02.2**	**+0.3**
SPBC				S	**Sg**	**02 12 32.5**	**0.0**
NORC	**Norcasia**	**2.26**	**340**	P	**Pn**	**02 12 00.3**	**+0.8**
NORC				S	**Sb**	**02 12 28.9**	**-2.2**
YOTC	**Yotoco, Valle**	**2.33**	**284**	P	**Pn**	**02 12 00.7**	**+0.2**
YOTC				S	**Sn**	**02 12 31.0**	**+1.4**
FLOC	**Florencia**	**2.42**	**221**	P	**Pn**	**02 12 03.0**	**+1.3**
FLOC				S	**Sn**	**02 12 34.7**	**+3.1**
FLOC	**Florencia**	**2.42**	**221**	P	**Pn**	**02 12 03.3**	**+1.6**
FLOC				S	**Sn**	**02 12 33.5**	**+1.8**
JAMC	**Jamundi, Valle**	**2.60**	**265**	P	**Pn**	**02 12 05.5**	**+1.1**
JAMC				S	**Sn**	**02 12 38.8**	**+2.3**
RUSC	**La Rusia**	**2.64**	**22**	P	**Pb**	**02 12 08.2**	**-1.3**
RUSC				S	**Sg**	**02 12 47.7**	**+1.4**
RUSC	**La Rusia**	**2.64**	**22**	P	**Pb**	**02 12 09.0**	**-0.5**
RUSC				S	**Sg**	**02 12 45.0**	**-1.4**
PLMC	**San Jos del P**	**2.65**	**304**	P	**Pn**	**02 12 05.2**	**+0.4**
PLMC				S	**Sn**	**02 12 39.6**	**+2.3**
POPC	**Popayan, Colom**	**2.75**	**251**	P	**Pn**	**02 12 09.6**	**+3.3**
POPC				S	**Sn**	**02 12 43.2**	**+3.2**
CBOC	**Ciudad Bolivar**	**3.10**	**321**	P	**Pn**	**02 12 13.5**	**+2.4**
HELC	**Santa Helena**	**3.10**	**332**	P	**Pn**	**02 12 12.1**	**+0.7**
HELC				S	**Sb**	**02 12 53.3**	**-2.3**
HELC	**Santa Helena**	**3.10**	**332**	P	**Pn**	**02 12 12.2**	**+0.8**
HELC				S	**Sn**	**02 12 50.3**	**+1.3**
BARC	**Barichara**	**3.26**	**16**	P	**Pb**	**02 12 17.2**	**-2.8**
PTLC	**Puerto Leguiza**	**3.32**	**193**	P	**Pb**	**02 12 19.4**	**-1.4**
CRUC	**La Cruz**	**3.42**	**237**	P	**Pn**	**02 12 18.4**	**+2.7**
CRUC				S	**Sb**	**02 13 04.9**	**+0.2**
BRJC	**Barrancabermej**	**3.54**	**5**	P	**Pn**	**02 12 18.6**	**+1.6**
GCUF	**Volcan Galeras**	**3.93**	**236**	P	**Pn**	**02 12 25.9**	**+3.0**
GR1C	**Gorgona, Isla**	**4.11**	**264**	P	**Pn**	**02 12 24.7**	**-0.2**
PAMC	**Pamplona, Colo**	**4.12**	**19**	P	**Pn**	**02 12 28.5**	**+3.1**
DBBC	**Dabeiba**	**4.15**	**329**	P	**Pn**	**02 12 28.4**	**+2.9**
UREC	**San Jos de Ur**	**4.53**	**341**	P	**Pn**	**02 12 32.3**	**+1.6**
OCAC	**Ocana**	**4.84**	**9**	P	**Pn**	**02 12 36.8**	**+1.8**
OCAC				S	**Sn**	**02 13 36.2**	**+4.7**
TUMC	**Tumaco**	**4.92**	**251**	P	**Pn**	**02 12 38.1**	**+2.1**
TUMC				S	**Sn**	**02 13 39.1**	**+5.9**
TUMC	**Tumaco**	**4.92**	**251**	P	**Pn**	**02 12 37.1**	**+1.1**
APAC	**Apartado, Choc**	**5.09**	**331**	P	**Pn**	**02 12 41.2**	**+2.8**
	3µm1µm,1.1s						
PTAC	**Punta Ardita,**	**5.24**	**315**	P	**Pn**	**02 12 42.7**	**+2.3**
	2µm229nm,0.9s						
CUSE	**Cuicocha Este**	**5.32**	**234**	P	**Pn**	**02 12 43.7**	**+1.7**
	4µm474nm,0.7s						
OTAV	**Otavalo**	**5.40**	**234**		**Pn**	**02 12 45.6**	**+2.5**
OTAV	**Otavalo**	**5.40**	**234**	*e*P	**Pn**	**02 12 45.9**	**+2.8**
OTAV	**Otavalo**	**5.40**	**234**	P	**Pn**	**02 12 46.9**	**+3.8**
	1µm316nm,0.9s						
PAC1	**Pacto, Paraso**	**5.67**	**236**	P	**Pn**	**02 12 50.8**	**+4.3**
	3µm345nm,0.7s						
LCBC	**Los crdobas,**	**5.85**	**337**	P	**Pn**	**02 12 52.9**	**+4.0**
	5µm255nm,0.8s						
SDV	**Santo Domingo**	**6.41**	**32**	Pn	**Pn**	**02 12 58.4**	**+1.7**
	44nm,0.3s,baz=198,slow=13,SNR=122						
SDV				Sn	**Sn**	**02 14 11.6**	**+1.3**
	125nm,0.3s,baz=274,slow=22,SNR=7.4						
SDV				Lg	Lg	02 14 44.0	
	161nm,0.3s,baz=253,slow=19,SNR=4.0						
SDV				LR	LR	02 16 11.3	
	comp=Z,3µm,19.0s,baz=220,slow=45						
	124nm,0.4s						
SDV	**Santo Domingo**	**6.41**	**32**		**Pn**	**02 12 58.0**	**+1.4**
SDV	**Santo Domingo**	**6.41**	**32**	*e*P	**Pn**	**02 12 58.2**	**+1.5**
BRU2	**Volcan**	**10.09**	**302**		**Pn**	**02 13 50.1**	**+2.9**
ATAH	**Atahualpa**	**11.35**	**202**	Pn	**Pn**	**02 14 05.5**	**+0.8**
	4.1nm,0.3s,baz=21,slow=9.3,SNR=15						
ATAH				Sn	**Sn**	**02 16 15.2**	**+3.1**
	1.3nm,0.3s,baz=79,slow=16,SNR=1.0						
ATAH				Lg	Lg	02 17 13.3	
	1.3nm,0.3s,baz=66,slow=18,SNR=3.5						
ATAH				LR	LR	02 19 18.1	
	comp=Z,1µm,21.2s,baz=43,slow=42						
	23nm,0.5s						
TEFE	**Tefe**	**11.68**	**126**	*e*P	**Pn**	**02 14 09.9**	**+1.0**
HDC	**Heredia**	**11.91**	**304**	*e*P	**Pn**	**02 14 16.5**	**+4.3**
JTS	**Las Juntas de**	**12.77**	**303**	Pn	**Pn**	**02 14 26.0**	**+2.3**
	0.3nm,0.3s,baz=107,slow=11,SNR=1.5						
JTS				LR	LR	02 19 11.7	
	comp=Z,467nm,20.5s,baz=127,slow=37						
	5.2nm,1.1s						
JTS	**Las Juntas de**	**12.77**	**303**	Pn	**Pn**	**02 14 26.6**	**+2.8**
BOAV	**Boa Vista**	**13.57**	**94**		**Pn**	**02 14 32.3**	**-2.4**
BOAV	**Boa Vista**	**13.57**	**94**	*e*P	**Pn**	**02 14 31.7**	**-3.1**
BOAB	**BOACO BROADBAN**	**14.56**	**309**	Pn	**Pn**	**02 14 51.1**	**+2.9**
MACA	**Manacapuru-AM**	**14.90**	**116**		**Pn**	**02 14 49.5**	**-3.4**
MACA	**Manacapuru-AM**	**14.90**	**116**	*e*P	**Pn**	**02 14 49.7**	**-3.2**
MTDJ	**Mount Denham**	**15.09**	**347**	Pn	**Pn**	**02 14 56.8**	**+1.3**
CNGN	**Cerro Negro**	**15.40**	**307**	Pn	**Pn**	**02 15 01.5**	**+1.9**
NNA	**Nana**	**15.56**	**190**	Pn	**Pn**	**02 15 02.6**	**+0.9**
	1.8nm,0.3s,baz=37,slow=12,SNR=5.9						
NNA				Sn	**Sn**	**02 17 55.9**	**+1.3**
	0.8nm,0.3s,baz=318,slow=12,SNR=1.9						
	5.9nm,0.4s						
NNA	**Nana**	**15.56**	**190**		**Pn**	**02 15 03.0**	**+1.3**
SDDR	**Presa de Saban**	**15.70**	**10**		**Pn**	**02 15 04.2**	**+0.8**
SDDR				IAmb	IAmb	02 15 10.1	
	comp=Z,85nm,0.8s						
DR12	**Loma Pena Alta**	**15.94**	**16**		**Pn**	**02 15 06.0**	**-0.6**
CRPR	**Cabo Rojo, PR**	**16.01**	**25**		**Pn**	**02 15 06.8**	**-0.6**
SC01	**Santiago de lo**	**16.23**	**11**		**Pn**	**02 15 10.5**	**+0.2**
SC01				IAmb	IAmb	02 15 19.7	
	comp=Z,128nm,0.9s						
OBIP	**Obispado Ponce**	**16.26**	**26**		**Pn**	**02 15 10.0**	**-0.7**
AOPR	**Arecibo Observ**	**16.47**	**25**		**Pn**	**02 15 12.4**	**-1.0**
SJG	**San Juan**	**16.53**	**27**	Pn	**Pn**	**02 15 13.3**	**-0.8**
	comp=Z,5.8nm,0.3s,baz=205,slow=12,SNR=23						
SJG				LR	LR	02 22 16.6	
	comp=Z,1µm,21.1s,baz=197,slow=40						
	comp=Z,27nm,0.5s						
SJG	**San Juan**	**16.53**	**27**	Pn	**Pn**	**02 15 12.7**	**-1.4**
HUMP	**Col San Antoni**	**16.69**	**28**		**Pn**	**02 15 15.8**	**-0.4**
GCPR	**Guaynabo City**	**16.73**	**27**		**Pn**	**02 15 16.7**	**+0.1**
TGUH	**Tegucigalpa,Un**	**16.77**	**310**		**Pn**	**02 15 18.8**	**+1.5**
BIM	**Bigot**	**16.91**	**49**	Pn	**Pn**	**02 15 18.2**	**-0.8**
BIM				IAmb	IAmb	02 15 24.0	
	comp=Z,84nm,1.0s						
MPOM	**Morne Pois Mar**	**17.02**	**49**	Pn	**Pn**	**02 15 19.8**	**-0.5**
MPOM				IAmb	IAmb	02 15 29.3	
	comp=Z,87nm,0.9s						
NMDO	**Nuevo Mundo**	**17.05**	**357**	Pn	**P**	**02 15 21.6**	**-0.9**
CBE	**Ff, Capester**	**17.55**	**43**	Pn	**Pn**	**02 15 26.4**	**-0.6**
CBE				IAmb	IAmb	02 15 33.1	
	comp=Z,122nm,1.4s						
GDHS	**Morne Mazeau,**	**17.59**	**43**	Pn	**Pn**	**02 15 26.8**	**-0.7**
GDSD	**La Dsirade Is**	**18.09**	**44**	P	**Pn**	**02 15 33.0**	**-0.7**
GDSD				IAmb	IAmb	02 15 39.4	
	comp=Z,119nm,1.1s						
MTO3	**Montecristo**	**18.61**	**307**	P	**P**	**02 15 39.2**	**-0.8**
APG	**El Apazote**	**19.83**	**306**	P	**P**	**02 15 52.0**	**-1.4**
	comp=Z,0.7nm,0.8s,baz=134,slow=11,SNR=5.6						
APG				LR	LR	02 24 36.9	
	comp=Z,16nm,18.2s,baz=94,slow=40						
ITTB	**Itaituba**	**19.89**	**113**	*e*P	**P**	**02 15 53.9**	**0.0**
LPAZ	**La Paz**	**20.45**	**163**	P	**P**	**02 16 00.8**	**+0.3**
	comp=Z,7.5nm,0.8s,baz=353,slow=9.8,SNR=21						
LPAZ				S	**S**	**02 19 50.3**	**-0.1**
	comp=Z,5.5nm,0.8s,baz=328,slow=15,SNR=1.5						
LPAZ				Lg	Lg	02 22 03.1	
	comp=Z,0.9nm,0.3s,baz=295,slow=19,SNR=5.0						
	comp=Z,7.5nm,0.8s						
LPAZ	**La Paz**	**20.45**	**163**	P	**P**	**02 15 59.8**	**-0.8**
LPAZ	**La Paz**	**20.45**	**163**	*e*P	**P**	**02 16 00.9**	**+0.3**
PETF	**Flores**	**20.50**	**312**	P	**P**	**02 16 01.6**	**+1.2**
CAMR	**Camarioca**	**20.75**	**341**	P	Pn	02 16 05.1	-0.4
CAMR				IAmb	IAmb	02 16 09.2	
	comp=Z,245nm,0.7s						
SOR	**Soroa**	**21.10**	**337**	P	**P**	**02 16 07.0**	**0.0**
VILB	**Vilhena**	**21.32**	**140**	P	**P**	**02 16 10.5**	**+1.0**
VILB	**Vilhena**	**21.32**	**140**	*e*P	**P**	**02 16 11.0**	**+1.6**
NPGB	**Novo Progresso**	**21.38**	**119**	*e*P	**P**	**02 16 10.5**	**+0.4**
MDP	**Montagnes des**	**21.44**	**85**	P	**P**	**02 16 11.8**	**+1.1**
	comp=Z,42nm,0.5s,baz=262,slow=9.9,SNR=34						
MDP				S	**S**	**02 20 06.7**	**-2.3**
	comp=Z,13nm,0.6s,baz=315,slow=17,SNR=1.9						
MDP				Lg	Lg	02 22 29.6	
	comp=Z,2.9nm,0.3s,baz=5.0,slow=16,SNR=5.9						
MDP				LR	LR	02 23 26.3	
	comp=Z,324nm,21.6s,baz=290,slow=34						
	comp=Z,42nm,0.5s						
TEIG	**Tepich**	**21.69**	**321**	P	**P**	**02 16 14.0**	**+0.7**
PDRB	**Porto dos Gac**	**22.82**	**131**	*e*P	**P**	**02 16 26.2**	**+0.7**
CLDB	**Colider**	**23.08**	**128**	*e*P	**P**	**02 16 29.2**	**+1.0**
SIV	**San Ignacio**	**23.19**	**147**	LR	LR	02 24 38.3	
	comp=Z,174nm,21.7s,baz=315,slow=34						
PTLB	**Pontes e Lacer**	**23.89**	**142**	P	**P**	**02 16 36.4**	**+0.3**
PTLB	**Pontes e Lacer**	**23.89**	**142**	*e*P	**P**	**02 16 36.7**	**+0.6**
PRPB	**Parauapebas**	**26.03**	**111**	*e*P	**P**	**02 16 57.1**	**+1.2**
SALV	**Santo Antonio**	**26.45**	**137**	*e*P	**P**	**02 17 00.2**	**+0.7**
SNDB	**Serra Nova Dou**	**27.33**	**124**	*e*P	**P**	**02 17 08.7**	**+1.1**
PB14	**IPOC Station P**	**28.11**	**173**	P	**P**	**02 17 14.8**	**+0.1**
PB14				IAmb	IAmb	02 17 17.7	
	comp=Z,25nm,1.0s						
PP1B	**Ponte de Pedra**	**28.20**	**138**	*e*P	**P**	**02 17 17.1**	**+1.8**
SMTB	**Santa Maria do**	**29.09**	**115**	*e*P	**P**	**02 17 24.9**	**+1.7**
ARAG	**Araguaiana, MT**	**29.10**	**131**	*e*P	**P**	**02 17 23.7**	**+0.5**
BDQN	**Bodoquena, MS**	**29.19**	**145**	*e*P	**P**	**02 17 24.6**	**+0.6**
451A	**Vernon**	**29.20**	**339**	P	**P**	**02 17 24.5**	**+0.5**
AQDB	**Aquidauana**	**29.82**	**144**	P	**P**	**02 17 30.5**	**+0.9**
AQDB				IAmb	IAmb	02 17 37.5	
	comp=Z,19nm,0.8s						
AQDB	**Aquidauana**	**29.82**	**144**	*e*P	**P**	**02 17 30.7**	**+1.1**
AC06	**Mina Casimiro**	**30.82**	**174**	P	**P**	**02 17 38.5**	**+0.2**
JRQG	**Juriquilla Cam**	**30.89**	**306**	P	**P**	**02 17 40.6**	**+1.2**
GOGA	**Godfrey**	**31.09**	**345**	P	**P**	**02 17 42.0**	**+1.4**
GOGA				IAmb	IAmb	02 18 47.8	
	comp=Z,48nm,1.8s						
346A	**Big Creek Wild**	**31.36**	**334**	P	**P**	**02 17 43.6**	**+0.5**
HODGE	**Hodges**	**31.58**	**347**	P	**P**	**02 17 46.0**	**+1.1**
HODGE				IAmb	IAmb	02 17 51.7	
	comp=Z,15nm,1.0s						
Y52A	**Lilburn**	**31.68**	**344**	P	**P**	**02 17 46.8**	**+1.0**
LRAL	**Lakeview Retre**	**31.84**	**339**	P	**P**	**02 17 48.4**	**+1.1**
LRAL				IAmb	IAmb	02 17 51.9	
	comp=Z,25nm,1.0s						
BDFB	**Brasilia**	**32.00**	**127**	P	**P**	**02 17 49.1**	**0.0**
	comp=Z,3.5nm,0.8s,baz=267,slow=8.1,SNR=4.7						
BDFB				LR	LR	02 31 06.8	
	comp=Z,844nm,19.8s,baz=313,slow=37						
	comp=Z,3.5nm,0.8s						
BDFB	**Brasilia**	**32.00**	**127**	P	**P**	**02 17 49.4**	**+0.3**
AMBA	**Amambai (Brazi**	**32.14**	**145**	*e*P	**P**	**02 17 50.2**	**+0.1**
AC05	**El Transito**	**32.29**	**174**	P	**P**	**02 17 52.1**	**+0.6**
AC05				IAmb	IAmb	02 17 58.8	
	comp=Z,12nm,0.7s						
LCO	**Las Campanas**	**32.42**	**174**	P	**P**	**02 17 53.1**	**+0.4**
LCO				IAmb	IAmb	02 17 54.8	
	comp=Z,33nm,1.1s						
VBMS	**Vicksburg**	**32.54**	**334**	P	**P**	**02 17 54.0**	**+0.6**
ITRB	**Iturama**	**32.74**	**136**	*e*P	**P**	**02 17 56.8**	**+1.4**
SDBA	**SAO DESIDERIO**	**32.98**	**119**	*e*P	**P**	**02 17 58.5**	**+0.9**
IPMB	**Ipameri, GO**	**33.21**	**131**	*e*P	**P**	**02 17 59.9**	**+0.4**
HBVL	**Hebbronville**	**33.25**	**317**	P	**P**	**02 18 00.1**	**+0.3**
HBVL				IAmb	IAmb	02 18 04.2	
	comp=Z,14nm,0.9s						
TKL	**Tuckaleechee C**	**33.30**	**346**	LR	LR	02 31 46.4	
	comp=Z,186nm,20.2s,baz=172,slow=37						
TKL	**Tuckaleechee C**	**33.30**	**346**	P	**P**	**02 18 00.5**	**+0.4**
HKT	**Hockley**	**33.47**	**324**	P	**P**	**02 18 01.6**	**0.0**
SWET	**Sewanee**	**33.48**	**342**	P	**P**	**02 18 01.9**	**+0.1**
SWET				IAmb	IAmb	02 18 07.6	
	comp=Z,14nm,0.7s						
CPUP	**Villa Florida**	**33.73**	**152**	P	**P**	**02 18 02.2**	**-1.7**
	comp=Z,2.8nm,0.9s,baz=330,slow=12,SNR=8.6						
CPUP				LR	LR	02 32 41.2	
	comp=Z,310nm,18.6s,baz=290,slow=38						
	comp=Z,2.8nm,0.9s						
CPUP	**Villa Florida**	**33.73**	**152**	P	**P**	**02 18 02.2**	**-1.7**
CPUP	**Villa Florida**	**33.73**	**152**	*e*P	**P**	**02 18 02.7**	**-1.2**
CO06	**Fray Jorge**	**33.99**	**176**	P	**P**	**02 18 06.7**	**+0.6**
OXF	**Oxford**	**34.06**	**337**	P	**P**	**02 18 06.7**	**0.0**
TZTN	**Tazewell**	**34.09**	**346**	P	**P**	**02 18 08.1**	**+1.1**
TZTN				IAmb	IAmb	02 18 11.2	
	comp=Z,34nm,1.2s						
BLA	**Blacksburg**	**34.12**	**351**	P	**P**	**02 18 07.8**	**+0.5**
BLA				IAmb	IAmb	02 18 12.3	
	comp=Z,36nm,0.9s						
NATX	**Nacogdoches**	**34.19**	**328**	P	**P**	**02 18 07.7**	**-0.2**
NATX				IAmb	IAmb	02 18 16.0	
	comp=Z,13nm,0.8s						
CO03	**El Pedregal**	**34.23**	**175**	P	**P**	**02 18 08.6**	**+0.3**
CO03				IAmb	IAmb	02 18 23.8	
	comp=Z,32nm,1.2s						
CO02	**Combarbal**	**34.56**	**175**	P	**P**	**02 18 12.0**	**+0.8**
WVT	**Waverly**	**34.93**	**340**	P	**P**	**02 18 14.5**	**+0.3**
WLAR	**White Oak Lake**	**34.95**	**332**	P	**P**	**02 18 15.2**	**+0.8**
WLAR				IAmb	IAmb	02 18 17.9	
	comp=Z,29nm,1.0s						
WHAR	**Wooly Hollow**	**35.92**	**334**	P	**P**	**02 18 22.7**	**0.0**
WHAR				IAmb	IAmb	02 18 25.6	
	comp=Z,14nm,0.7s						
VA03	**San Esteban**	**36.15**	**175**	P	**P**	**02 18 26.1**	**+1.2**
JCT	**Junction City**	**36.26**	**321**	P	**P**	**02 18 25.1**	**-0.7**
VA01	**Torpederas**	**36.33**	**177**	P	**P**	**02 18 26.9**	**+0.8**
WCI	**Wyandotte Cave**	**36.39**	**344**	P	**P**	**02 18 27.2**	**+0.5**
WCI				IAmb	IAmb	02 18 34.2	
	comp=Z,32nm,0.7s						
MVL	**Millersville**	**36.46**	**357**	P	**P**	**02 18 28.7**	**+1.5**
MVL				IAmb	IAmb	02 18 32.1	
	comp=Z,21nm,0.8s						
P52A	**Corning**	**36.77**	**350**	P	**P**	**02 18 31.0**	**+1.0**
P52A				IAmb	IAmb	02 18 34.6	
	comp=Z,27nm,0.7s						
MT08	**Bocatoma Ro**	**36.88**	**174**	P	**P**	**02 18 31.9**	**+0.8**
MT08				IAmb	IAmb	02 18 34.9	
	comp=Z,32nm,0.9s						
MT03	**Universidad Ad**	**36.88**	**175**	P	**P**	**02 18 31.4**	**+0.3**
MT03				IAmb	IAmb	02 18 34.1	
	comp=Z,48nm,1.0s						
ITAB	**Concordia**	**37.12**	**147**	P	**P**	**02 18 32.1**	**-1.0**
ITAB	**Concordia**	**37.12**	**147**	*e*P	**P**	**02 18 32.2**	**-0.9**
MT09	**Talagante**	**37.12**	**176**	P	**P**	**02 18 33.9**	**+0.8**
MT09				IAmb	IAmb	02 18 35.2	
	comp=Z,49nm,0.9s						
SSPA	**Standing Stone**	**37.20**	**355**	P	**P**	**02 18 34.7**	**+1.1**
SSPA				IAmb	IAmb	02 18 38.6	
	comp=Z,30nm,0.8s						
LOOK	**Love County**	**37.26**	**327**	P	**P**	**02 18 34.3**	**+0.1**
LOOK				IAmb	IAmb	02 18 37.7	
	comp=Z,65nm,1.3s						
SPB	**Sao Paulo**	**37.35**	**137**	*e*P	**P**	**02 18 36.7**	**+1.6**
BO04	**La Punta**	**37.36**	**175**	P	**P**	**02 18 35.8**	**+0.7**
BO04				IAmb	IAmb	02 18 37.1	
	comp=Z,36nm,1.0s						
ACSO	**Alum Creek Sta**	**37.51**	**349**	P	**P**	**02 18 37.1**	**+0.9**
ACSO				IAmb	IAmb	02 18 40.9	
	comp=Z,44nm,0.8s						
BO01	**Tunca**	**37.73**	**176**	P	**P**	**02 18 38.7**	**+0.6**
BO01				IAmb	IAmb	02 18 40.2	
	comp=Z,36nm,1.0s						
PSAL	**Palomas, Salto**	**37.74**	**157**	*e*P	**P**	**02 18 37.3**	**-0.9**
CCM	**Cathedral Cave**	**37.87**	**338**	P	**P**	**02 18 38.8**	**-0.5**
TXAR	**Lajitas Array**	**38.10**	**316**	P	**P**	**02 18 41.7**	**+0.1**
	comp=Z,3.6nm,0.9s,baz=129,slow=8.7,SNR=30						
TXAR				PcP	**PcP**	**02 20 57.2**	**+0.4**
	comp=Z,4.2nm,0.8s,baz=141,slow=6.0,SNR=11						
TXAR				LR	LR	02 37 29.8	
	comp=Z,44nm,18.0s,baz=120,slow=41						
	comp=Z,3.6nm,0.9s						
TXAR	**Lajitas Array**	**38.10**	**316**	P	**P**	**02 18 42.0**	**+0.5**
BO02	**Sierra Bellavi**	**38.15**	**176**	P	**P**	**02 18 42.6**	**+0.8**
BO02				IAmb	IAmb	02 18 44.2	
	comp=Z,52nm,1.0s						
HPIG		**38.20**	**311**	P	**P**	**02 18 43.3**	**+0.8**
HPIG				IAmb	IAmb	02 18 44.7	
	comp=Z,17nm,0.7s						
BINY	**Binghamton**	**38.64**	**358**	P	**P**	**02 18 47.2**	**+1.5**
BINY				IAmb	IAmb	02 18 50.6	
	comp=Z,40nm,0.9s						
WMOK	**Wichita Mounta**	**38.69**	**327**	P	**P**	**02 18 45.2**	**-1.1**
NBIT	**Itapeh - BA**	**38.86**	**119**	*e*P	**P**	**02 18 50.0**	**+2.1**
ERPA	**Erie**	**38.88**	**353**	P	**P**	**02 18 48.2**	**+0.4**
ERPA				IAmb	IAmb	02 18 52.4	
	comp=Z,31nm,0.7s						
CMC01	**Camacan, BA**	**38.97**	**120**	*e*P	**P**	**02 18 49.0**	**+0.2**
CPSB	**Cacapava Do Su**	**39.00**	**151**	*e*P	**P**	**02 18 47.2**	**-1.7**
SJMB	**Sao Joao De Ma**	**39.14**	**125**	*e*P	**P**	**02 18 51.2**	**+1.0**
HDIL	**Hopedale**	**39.43**	**342**	P	**P**	**02 18 51.9**	**-0.5**
BI02	**San Fabin de**	**39.97**	**176**	P	**P**	**02 18 57.7**	**+0.6**
SLBS	**Sierra La Lagu**	**40.07**	**303**	P	**P**	**02 18 59.8**	**+1.8**
LPIG	**La Paz**	**40.54**	**304**	LR	LR	02 35 11.1	
	comp=Z,96nm,19.8s,baz=116,slow=35						
LBNH	**Lisbon**	**40.69**	**2**	P	**P**	**02 19 03.7**	**+1.0**
LBNH				IAmb	IAmb	02 19 07.2	
	comp=Z,29nm,0.8s						
SADO	**Sadowa**	**41.41**	**355**	P	**P**	**02 19 10.2**	**+1.5**
	comp=Z,22nm,0.6s,baz=203,slow=8.6,SNR=26						
SADO				LR	LR	02 37 25.6	
	comp=Z,218nm,20.7s,baz=176,slow=38						
	comp=Z,22nm,0.6s						
SADO	**Sadowa**	**41.41**	**355**	P	**P**	**02 19 09.7**	**+0.9**
SADO				IAmb	IAmb	02 19 12.9	
	comp=Z,29nm,0.8s						
MNTQ	**Montreal, Queb**	**41.90**	**0**	P	**P**	**02 19 13.6**	**+0.9**
BUKO	**Buck Lake**	**42.10**	**354**	P	**P**	**02 19 15.2**	**+0.8**
BUKO				IAmb	IAmb	02 19 18.5	
	comp=Z,22nm,0.6s						
TRQA	**Tornquist**	**42.77**	**166**	P	**P**	**02 19 19.7**	**-0.3**
ANMO	**Albuquerque**	**43.41**	**320**	P	**P**	**02 19 26.2**	**+0.7**
	comp=Z,14nm,0.8s,baz=154,slow=8.9,SNR=31						
	comp=Z,14nm,0.8s						
ANMO	**Albuquerque**	**43.41**	**320**	P	**P**	**02 19 26.2**	**+0.7**
T25A	**Trinidad**	**43.60**	**324**	P	**P**	**02 19 27.4**	**+0.5**
T25A				IAmb	IAmb	02 19 31.3	
	comp=Z,47nm,1.9s						
PLCA	**Paso Flores**	**44.07**	**176**	P	**P**	**02 19 30.6**	**+0.2**
	comp=Z,9.6nm,0.8s,baz=349,slow=8.7,SNR=28						
	comp=Z,9.6nm,0.8s						
PLCA	**Paso Flores**	**44.07**	**176**	P	**P**	**02 19 30.6**	**+0.2**
PLCA	**Paso Flores**	**44.07**	**176**	*e*P	**P**	**02 19 31.4**	**+0.9**
TUC	**Tucson**	**44.83**	**314**	P	**P**	**02 19 37.4**	**+0.7**
TUC				IAmb	IAmb	02 19 41.5	
	comp=Z,11nm,0.8s						
X18A	**Snowflake**	**45.47**	**317**	P	**P**	**02 19 42.6**	**+0.8**
X18A				IAmb	IAmb	02 19 47.0	
	comp=Z,20nm,0.7s						
RPN	**Rapa Nui**	**45.61**	**226**	LR	LR	02 35 21.9	
	comp=Z,28nm,21.4s,baz=93,slow=32						
LL01	**San Ignacio de**	**45.62**	**178**	P	**P**	**02 19 43.1**	**+0.5**
LL01				IAmb	IAmb	02 19 44.4	
	comp=Z,13nm,0.7s						
ISCO	**Idaho Springs**	**46.11**	**326**	P	**P**	**02 19 47.6**	**+0.6**
ISCO				IAmb	IAmb	02 19 51.0	
	comp=Z,15nm,0.8s						
EYMN	**Ely**	**46.82**	**344**	P	**P**	**02 19 51.9**	**-0.2**
WUAZ	**Wupatki**	**46.99**	**317**	P	**P**	**02 19 54.8**	**+1.0**
113A	**Mohawk Valley,**	**47.22**	**313**	P	**P**	**02 19 56.0**	**+0.6**
AY01	**Puyuhuapi**	**47.65**	**179**	P	**P**	**02 19 58.6**	**0.0**
AY01				IAmb	IAmb	02 19 59.6	
	comp=Z,15nm,0.8s						
HMU	**Henry Mountain**	**47.97**	**321**	P	**P**	**02 20 02.5**	**+0.9**
RSSD	**Black Hills**	**48.39**	**331**	P	**P**	**02 20 05.5**	**+0.9**
RSSD				IAmb	IAmb	02 20 08.7	
	comp=Z,25nm,1.1s						
COYC	**Coyhaique**	**48.82**	**178**	P	**P**	**02 20 07.7**	**+0.1**
COYC				IAmb	IAmb	02 20 09.0	
	comp=Z,17nm,0.8s						
EPLO	**Experimental L**	**49.01**	**343**	P	**P**	**02 20 08.6**	**-0.4**
PFO	**Pinyon Flats O**	**49.61**	**312**	P	**P**	**02 20 14.6**	**+0.6**
	comp=Z,8.6nm,1.1s,baz=84,slow=5.3,SNR=3.7						
PFO				PcP	**PcP**	**02 21 36.0**	**+0.3**
	comp=Z,5.1nm,0.8s,baz=142,slow=5.0,SNR=4.4						
	comp=Z,8.6nm,1.1s						
ULM	**Lac du Bonnet**	**50.16**	**342**	P	**P**	**02 20 17.4**	**-0.4**
	comp=Z,17nm,0.6s,baz=144,slow=8.1,SNR=18						
ULM				LR	LR	02 42 16.4	
	comp=Z,147nm,18.3s,baz=174,slow=37						
	comp=Z,17nm,0.6s						
PD31	**Pinedale Array**	**50.30**	**326**	P	**P**	**02 20 19.7**	**+0.4**
PDAR	**Pinedale Array**	**50.30**	**326**	P	**P**	**02 20 19.4**	**+0.1**
	comp=Z,6.1nm,0.7s,baz=137,slow=8.3,SNR=49						
PDAR				LR	LR	02 45 48.6	
	comp=Z,30nm,18.9s,baz=146,slow=41						
	comp=Z,6.1nm,0.7s						
DUG	**Dugway, Tooele**	**50.61**	**322**	P	**P**	**02 20 22.1**	**+0.5**
DUG				IAmb	IAmb	02 20 25.7	
	comp=Z,18nm,0.8s						
HWUT	**Hardware Ranch**	**50.71**	**324**	P	**P**	**02 20 22.6**	**+0.2**
HWUT				IAmb	IAmb	02 20 25.5	
	comp=Z,15nm,0.8s						
FURC	**Furnace Creek,**	**51.27**	**315**	P	**P**	**02 20 27.7**	**+1.4**
FURC				IAmb	IAmb	02 20 31.1	
	comp=Z,16nm,0.9s						
SCHQ	**Schefferville**	**51.58**	**5**	P	**P**	**02 20 28.9**	**+0.5**
	comp=Z,44nm,1.0s,baz=186,slow=7.0,SNR=18						
SCHQ				LR	LR	02 41 55.2	
	comp=Z,100nm,21.8s,baz=206,slow=36						
	comp=Z,44nm,1.0s						
MOOW	**Moose Ponds**	**51.60**	**326**	P	**P**	**02 20 30.2**	**+1.2**
MOOW				IAmb	IAmb	02 20 32.3	
	comp=Z,18nm,0.8s						
ELK	**Elko**	**52.44**	**321**	P	**P**	**02 20 35.9**	**+0.5**
	comp=Z,4.7nm,0.8s,baz=104,slow=4.7,SNR=19						

	comp=Z,4.7nm,0.8s						
NVAR	Mina Array Bea	53.23	317	P	P	02 20 42.0	+0.7
	comp=Z,13nm,0.8s,baz=132,slow=6.5,SNR=36						
NVAR				PcP	PcP	02 21 49.3	+0.1
	comp=Z,4.4nm,0.7s,baz=136,slow=4.6,SNR=6.1						
	comp=Z,13nm,0.8s						
NVAR	Mina Array Bea	53.23	317	P	P	02 20 41.9	+0.6
BOZ	Bozeman (W)	53.28	328	P	P	02 20 41.6	+0.2
BOZ				IAmb	IAmb	02 20 44.9	
	comp=Z,12nm,0.9s						
HLID	Hailey	53.56	324	P	P	02 20 44.2	+0.6
HLID				IAmb	IAmb	02 20 47.3	
	comp=Z,15nm,0.9s						
LRM	Limekiln Ridge	53.86	327	P	P	02 20 46.1	+0.3
FFC	Flin Flon	55.93	341	P	P	02 21 00.1	-0.2
HATC	Hat Creek Radi	56.52	318	P	P	02 21 06.2	+1.3
HATC				IAmb	IAmb	02 21 08.7	
	comp=Z,21nm,0.9s						
EFI	East Falkland	56.57	168	P	P	02 21 04.5	-0.3
E09A	Wood Farm, Sta	57.43	325	P	P	02 21 11.9	+0.7
E09A				IAmb	IAmb	02 21 14.4	
	comp=Z,25nm,1.0s						
PINE	Pine Mountain	57.64	321	P	P	02 21 14.6	+1.6
EDM	Edmonton	59.19	334	P	P	02 21 22.9	-0.5
FRB	Frobisher Bay	60.32	3	P	P	02 21 30.4	-0.4
	comp=Z,14nm,1.0s,baz=204,slow=7.6,SNR=7.6						
FRB				LR	LR	02 47 26.8	
	comp=Z,157nm,20.3s,baz=146,slow=36						
	comp=Z,14nm,1.0s						
PMOZ	Porto Moniz, M	60.57	54	eP	P	02 21 31.9	-1.4
PMOZ				i IAmb	IAmb	02 21 50.9	
	comp=Z,252nm,1.9s						
NRS	Narsarsuaq	61.53	15	P	P	02 21 39.9	+0.8
RKT	Rikitea	64.93	243	eLR	LR	02 41 32.7	
	comp=Z,3µm,33.0s						
HOPE	Hope Point	65.44	157	P	P	02 22 05.2	+0.1
SFJD	Kangerlussuaq	65.51	10	LR	LR	02 49 11.6	
	comp=Z,191nm,20.8s,baz=188,slow=35						
YKA	Yellowknife Ar	66.11	341	P	P	02 22 08.6	-0.8
	comp=Z,2.0nm,0.7s,baz=87,slow=16,SNR=24						
YKA				LR	LR	02 50 23.6	
	comp=Z,145nm,19.9s,baz=266,slow=35						
	comp=Z,2.0nm,0.7s						
AVE	Averroes	68.67	56	P	P	02 22 27.0	+0.8
AVE				IAmb	IAmb	02 22 38.2	
	comp=Z,21nm,1.1s						
MOE	Montemor	68.97	50	eP	P	02 22 28.1	+0.1
MOE				epP	pP	02 22 31.1	+1.0
DBIC	Dimbokro	68.98	84	P	P	02 22 27.8	-0.6
	comp=Z,7.9nm,0.9s,baz=293,slow=6.4,SNR=9.3						
	comp=Z,7.9nm,0.9s						
DBIC	Dimbokro	68.98	84	P	P	02 22 28.0	-0.4
DBIC				IAmb	IAmb	02 22 31.9	
	comp=Z,10nm,0.9s						
PMTG	Montargil	69.19	49	epP	pP	02 22 32.9	+1.4
PCAS	Casmilo, Conde	69.21	48	eP	P	02 22 30.3	+0.9
PCAS				epP	pP	02 22 32.6	+1.0
EVO	Evora	69.23	50	eP	P	02 22 29.8	+0.3
PARRA	Arraiolos	69.28	50	i IAmb	IAmb	02 23 02.0	
	comp=Z,17nm,1.8s						
PSARD	Sardoal	69.36	49	eP	P	02 22 30.3	0.0
PSARD				epP	pP	02 22 33.0	+0.4
PESTR	Estremoz	69.63	50	P	P	02 22 31.7	-0.3
PESTR				IAmb	IAmb	02 22 36.0	
	comp=Z,12nm,0.9s						
PESTR	Estremoz	69.63	50	eP	P	02 22 32.2	+0.2
PESTR				epP	pP	02 22 35.5	+1.3
PVIS	Viseu	69.81	48	eP	P	02 22 32.8	-0.4
PVIS				epP	pP	02 22 36.5	+1.1
PGAV	Gavieira, Arco	69.83	46	epP	P	02 22 36.3	+2.9
PBAR	Barrancos	69.91	51	epP	P	02 22 37.0	+3.3
POLO	Lamas de Olo	70.04	47	eP	P	02 22 37.3	+2.7
MD01	Midelt array s	70.80	56	P	P	02 22 39.5	0.0
MDT	Midelt	70.92	57	LR	LR	02 52 12.2	
	comp=Z,40nm,19.4s,baz=270,slow=35						
BORG	Borgarnes	71.77	21	LR	LR	02 52 35.2	
	comp=Z,57nm,20.2s,baz=238,slow=34						
RES	Resolute Bay	72.23	354	P	P	02 22 46.2	-0.8
	comp=Z,7.9nm,1.1s,baz=116,slow=10,SNR=5.6						
RES				LR	LR	02 56 03.3	
	comp=Z,97nm,19.5s,baz=329,slow=37						
	comp=Z,7.9nm,1.1s						
PAB	San Pablo	72.23	50	P	P	02 22 48.5	+0.6
PAB				IAmb	IAmb	02 23 28.6	
	comp=Z,27nm,1.7s						
SUMG	Summit	72.47	11	P	P	02 22 49.4	+0.3
ESDC	Sonseca Array	72.55	50	P	P	02 22 48.7	-1.0
	comp=Z,2.0nm,0.8s,baz=270,slow=5.3,SNR=14						
ESDC				LR	LR	02 52 59.6	
	comp=Z,69nm,18.6s,baz=264,slow=34						
	comp=Z,2.0nm,0.8s						
ESDC	Sonseca Array	72.55	50	P	P	02 22 49.2	-0.6
TULEG	Thule	73.10	1	P	P	02 22 52.5	+0.3
TORD	Torodi Ar. Bea	75.38	77	P	P	02 23 05.8	-0.9
	comp=Z,1.8nm,0.5s,baz=296,slow=5.4,SNR=37						
	comp=Z,1.8nm,0.5s						
TORD	Torodi Ar. Bea	75.38	77	P	P	02 23 05.2	-1.5
A36M	Sachs Harbour	75.45	345	P	P	02 23 05.5	-0.5
INK	Inuvik	75.89	341	LR	LR	02 56 46.4	
	comp=Z,123nm,21.8s,baz=338,slow=36						
INK	Inuvik	75.89	341	P	P	02 23 08.4	-0.2
INK				IAmb	IAmb	02 23 11.0	
	comp=Z,22nm,1.8s						
EKA	Eskdalemuir Ar	76.39	34	P	P	02 23 12.5	+0.8
	comp=Z,2.5nm,0.9s,baz=273,slow=6.4,SNR=3.3						
	comp=Z,2.5nm,0.9s						
CEST	Esterri de Car	76.89	47	P	P	02 23 15.4	+0.4
CEST				IAmb	IAmb	02 23 50.7	
	comp=Z,35nm,1.7s						
BCAR	Beaver Creek A	76.98	334	P	P	02 23 15.8	+0.8
PPT2	Papeete2	77.26	251	eLR	LR	02 47 14.0	
	comp=Z,80nm,24.8s						
TBI	Tubuai	77.99	245	eLR	LR	02 47 33.0	
	comp=Z,986nm,31.5s						
J26L	Joseph Creek	78.17	336	P	P	02 23 22.3	+0.7
TAM	Tamanrasset	79.09	68	P	P	02 23 27.4	-0.3
TAM				IAmb	IAmb	02 23 32.5	
	comp=Z,7.6nm,0.7s						
BMAR	Burnt Mountain	79.43	338	P	P	02 23 28.6	+0.1
ILAR	Eielson Array	79.62	335	P	P	02 23 28.8	-0.7
	comp=Z,2.7nm,0.7s,baz=109,slow=4.1,SNR=29						
ILAR				PP	PP	02 26 28.7	-1.4
	comp=Z,1.7nm,0.8s,baz=99,slow=6.8,SNR=9.1						
ILAR				LR	LR	03 01 06.0	
	comp=Z,40nm,19.8s,baz=148,slow=38						
	comp=Z,2.7nm,0.7s						
ILAR	Eielson Array	79.62	335	P	P	02 23 28.9	-0.6
KDAK	Kodiak Island	80.98	328	LR	LR	03 02 59.2	
	comp=Z,136nm,19.1s,baz=139,slow=38						
BPAW	Bear Paw Mtn.	81.22	334	P	P	02 23 37.4	-0.7
BPAW				IAmb	IAmb	02 23 42.0	
	comp=Z,9.6nm,0.8s						
TUE	Stuetta	82.99	44	P	P	02 23 48.1	+0.1
DAVA	Damuels	83.39	43	eP	P	02 23 50.7	+0.7
	comp=Z,4.5nm,0.9s						
FUORN	Ofenpass-Fuorn	83.63	44	P	P	02 23 51.9	+0.5
FUORN				IAmb	IAmb	02 24 11.8	
	comp=Z,16nm,1.4s						
FETA	Feichten	83.96	43	eP	P	02 23 53.3	+0.4
	comp=Z,5.4nm,1.1s						
BELA	Belgrano 2	83.98	172	P	P	02 23 52.3	+0.1
BELA				IAmb	IAmb	02 23 53.2	
	comp=Z,7.4nm,0.8s						
RETA	Reutte	84.00	43	eP	P	02 23 53.1	+0.1
	comp=Z,7.4nm,1.6s						
ZCCA	Zocca	84.08	46	P	P	02 23 53.3	-0.2
SQTA	Sankt Quirin	84.29	43	eP	P	02 23 53.1	-1.5
	comp=Z,10nm,1.9s						
NC204	NORSAR Array S	84.52	29	P	P	02 23 56.6	+1.2
NC204				IAmb	IAmb	02 24 00.4	
	comp=Z,10nm,1.1s						
WATA	Walderalm	84.54	43	eP	P	02 23 54.0	-1.9
	comp=Z,7.0nm,1.6s						
NB2	NORSAR Subarra	84.73	29	P	P	02 23 56.5	+0.1
	comp=Z,14nm,1.2s,baz=267,slow=5.3						
NOA	NORSAR Array B	84.73	29	P	P	02 23 56.6	+0.2
	comp=Z,3.6nm,0.8s,baz=269,slow=4.9,SNR=13						
NOA				LR	LR	02 56 50.1	
	comp=Z,48nm,21.6s,baz=255,slow=32						
	comp=Z,3.6nm,0.8s						
CIMO	Cimolais	85.13	44	P	P	02 23 59.1	+0.4
CIMO				IAmb	IAmb	02 24 05.0	
	comp=Z,6.3nm,0.8s						
ABTA	Abfaltersbach	85.18	44	eP	P	02 23 59.6	+0.6
	comp=Z,7.8nm,1.1s						
VNA3	Neumayer Olymp	85.22	163	⇑P	P	02 23 55.7	-2.9
	comp=Z,8.2nm,0.9s						
LESA	Schwarzleotal	85.29	43	eP	P	02 24 00.1	+0.5
	comp=Z,1.9nm,0.6s						
CLL	Collm	85.51	39	ePx	Px	02 24 04.0	
KHC	Kasperske Hory	85.89	41	eP	P	02 24 02.9	+0.4
HFS	Hagfors	85.93	30	P	P	02 24 01.7	-0.6
	comp=Z,1.7nm,0.6s,baz=228,slow=1.8,SNR=11						
HFS				LR	LR	02 57 14.1	
	comp=Z,101nm,21.7s,baz=260,slow=32						
	comp=Z,1.7nm,0.6s						
BIOA	Bad Ischl, Aus	85.94	43	eP	P	02 24 02.8	0.0
	comp=Z,6.0nm,1.1s						
MYKA	Terra Mystica	85.96	44	eP	P	02 24 02.5	-0.4
	comp=Z,6.2nm,1.0s						
GERES	GERESS Array B	85.97	41	P	P	02 24 03.3	+0.4
	comp=Z,0.8nm,0.7s,baz=270,slow=4.0,SNR=3.6						
GERES				LR	LR	02 59 05.4	
	comp=Z,42nm,21.0s,baz=286,slow=33						
	comp=Z,0.8nm,0.7s						
MOA	Molln	86.36	42	eP	P	02 24 03.3	-1.5
	comp=Z,3.1nm,1.2s						
PRU	Pruhonice	86.50	40	eP	P	02 24 09.8	+4.4
PVCC	Panska Ves	86.51	40	eP	P	02 24 06.6	+1.2
SPITS	Spitsbergen Ar	86.76	12	P	P	02 24 05.7	-0.4
	comp=Z,9.7nm,0.9s,baz=235,slow=10,SNR=4.7						
	comp=Z,9.7nm,0.9s						
RAR	Rarotonga	87.22	249	LR	LR	02 53 40.9	
	comp=Z,47nm,20.4s,baz=238,slow=29						
ARSA	Arzberg	87.23	43	epP	pP	02 24 12.7	+1.4
	comp=Z,3.6nm,1.1s						
SNAA	Sanae	87.41	163	⇑P	P	02 24 09.5	+0.1
	comp=Z,253nm,1.2s						
SNAA	Sanae	87.41	163	P	P	02 24 09.1	-0.4
	comp=Z,11nm,0.9s,baz=272,slow=7.7,SNR=21						
SNAA				LR	LR	03 03 06.8	
	comp=Z,72nm,20.4s,baz=3.5,slow=36						
	comp=Z,11nm,0.9s						
SNAA	Sanae	87.41	163	P	P	02 24 09.5	+0.1
SNAA				IAmb	IAmb	02 24 13.9	
	comp=Z,12nm,0.9s						
UPC	Upice	87.43	40	eP	P	02 24 11.1	+1.2
CONA	Conrad Observa	87.44	42	eP	P	02 24 09.9	-0.2
	comp=Z,3.6nm,1.1s						
OSTC	Ostas	87.56	40	eP	P	02 24 09.2	-1.4
DPC	Dobruska-Polom	87.64	40	eP	P	02 24 11.8	+0.8
DPC	Dobruska-Polom	87.64	40	P	P	02 24 11.9	+0.9
RONA	Rosalia, Austr	87.74	43	ePcP	P	02 24 13.4	+1.9
	comp=Z,6.7nm,1.3s						
VRAC	Vranov	87.86	41	LR	LR	03 00 22.0	
	comp=Z,41nm,20.5s,baz=274,slow=34						
MODS	Modra-Piesok	88.36	42	eP	P	02 24 18.6	+4.2
MAUC	Maruska	88.66	41	eP	P	02 24 18.3	+2.4
TROLL	Troll, Antarti	89.12	162	⇑P	P	02 24 18.1	+0.4
	comp=Z,526nm,0.7s						
LANS	Liptovska Anna	89.75	41	eP	P	02 24 24.1	+3.1
ARCES	ARCESS Array B	90.16	20	P	P	02 24 23.6	+1.2
	comp=Z,5.0nm,0.9s,baz=275,slow=6.7,SNR=6.2						
ARCES				LR	LR	03 01 23.9	
	comp=Z,23nm,21.9s,baz=281,slow=33						
	comp=Z,5.0nm,0.9s						
ARCES	ARCESS Array B	90.16	20	P	P	02 24 23.4	+1.0
FINES	FINESS Array B	91.86	28	P	P	02 24 31.9	+1.5
	comp=Z,1.5nm,0.8s,baz=339,slow=11,SNR=5.4						
FINES				LR	LR	03 01 02.8	
	comp=Z,61nm,21.7s,baz=277,slow=32						
	comp=Z,1.5nm,0.8s						
FINES	FINESS Array B	91.86	28	P	P	02 24 31.5	+1.1
TSUM	Tsumeb	92.68	109	LR	LR	03 01 54.5	
	comp=Z,91nm,21.7s,baz=224,slow=33						
QSPA	South Pole Qui	93.46	180	P	P	02 24 38.2	+0.3
QSPA				IAmb	IAmb	02 24 43.5	
	comp=Z,8.5nm,0.9s						
BURAR	Bucovina Array	93.74	42	P	P	02 24 40.0	+0.4
AKASG	Malin Array Be	95.75	38	LR	LR	03 07 30.5	
	comp=Z,42nm,19.2s,baz=309,slow=35						
OBN	Obninsk	98.83	33	LR	LR	03 06 59.3	
	comp=Z,69nm,19.9s,baz=196,slow=34						
SYO	Syowa Base	101.53	160	⇑epPdiff	Pdif	02 25 15.8	+1.8
BVAR	Borovoye Array	116.31	23	PP	PP	02 31 13.4	+2.3
	comp=Z,0.4nm,0.5s,baz=335,slow=6.6,SNR=3.8						
ZALV	Zalesovo Beam	120.17	14	PKP	PKPdf	02 30 12.5	-0.9
	comp=Z,0.8nm,0.3s,baz=290,slow=2.3,SNR=5.2						
ZALV	Zalesovo Beam	120.17	14		PKPdf	02 30 12.1	-1.4
KURBB	Kurchatov Arra	121.25	20	PKP	PKPdf	02 30 15.5	-0.1
	comp=Z,0.5nm,0.2s,baz=330,slow=2.7,SNR=4.9						
MKAR	Makanchi Array	125.81	20	PKP	PKPdf	02 30 23.9	-0.7
	comp=Z,0.7nm,0.7s,baz=304,slow=1.7,SNR=6.8						
MKAR				PP	PP	02 32 17.8	+1.9
	comp=Z,0.7nm,0.9s,baz=324,slow=3.3,SNR=3.9						
MKAR	Makanchi Array	125.81	20		PKPdf	02 30 23.5	-1.1
USRK	Ussuriysk Ar.	127.13	337	PKP	PKPdf	02 30 26.3	-0.8
	comp=Z,1.9nm,0.6s,baz=74,slow=8.2,SNR=4.3						
SONM	Songino Array	128.95	360	PKP	PKPdf	02 30 30.1	-0.6
	comp=Z,0.4nm,0.3s,baz=347,slow=1.7,SNR=5.2						
SONM				PP	PP	02 32 37.4	+0.9
	comp=Z,0.3nm,0.3s,baz=357,slow=4.2,SNR=5.3						
SONM	Songino Array	128.95	360		PKPdf	02 30 29.6	-1.1
MJAR	Matsushiro Arr	130.12	326	PKP	PKPdf	02 30 30.4	-2.6
	comp=Z,1.0nm,0.4s,baz=52,slow=1.6,SNR=4.7						
WMQ	Urumqi	130.19	17	ePKP	PKPdf	02 30 33.6	+0.5
KSRS	Korea Array	134.47	335	PKP	PKPdf	02 30 40.2	-1.0
	comp=Z,0.6nm,0.5s,baz=20,slow=2.6,SNR=4.2						
HHC	Hu-ho-hao-te	135.63	354	ePKP	PKPdf	02 30 39.8	-3.7
STKA	Stephens Creek	136.15	226	PKP	PKPdf	02 30 44.0	-0.5
	comp=Z,1.4nm,1.0s,baz=76,slow=4.2,SNR=3.1						
GTA	Gaotai	137.00	7	PKP	PKPdf	02 30 46.4	+0.3
GTA				sPKP	sPKPdf	02 30 55.3	+6.1
GOMU	GeErMu	139.23	14	PKP	PKPdf	02 30 48.9	-1.7
XAN	Xi'an	142.62	356	PKP	PKPdf	02 30 51.0	-5.3
NJ2	Nanjing	142.64	342	ePKP	PKPdf	02 30 56.6	+0.3
WHN	Wuhan	145.27	347	PKPbc	PKPbc	02 31 00.3	-0.3
CD2	Chengdu	145.79	3	PKPbc	PKPdf	02 31 01.0	-0.9
HYB	Hyderabad	145.96	52	ePKPab	PKPdf	02 31 02.5	0.0
AS31	Alice Springs	146.31	231		PKPdf	02 31 02.7	-0.3
ASAR	Alice Springs	146.31	231	PKPbc	PKPdf	02 31 03.2	+0.2
	comp=Z,9.9nm,0.5s,baz=120,slow=3.9,SNR=163						
ASAR	Alice Springs	146.31	231		PKPdf	02 31 02.5	-0.4
WR8	Warramunga Arr	147.65	237		PKPdf	02 31 06.9	+1.6
WRA	Warramunga Arr	147.79	237	PKP	PKPdf	02 31 04.7	-0.8
	comp=Z,14nm,0.9s,baz=111,slow=2.3,SNR=36						
WRA				PKPbc	PKPbc	02 31 07.7	-0.7
	comp=Z,12nm,0.8s,baz=117,slow=3.0,SNR=42						
WRA	Warramunga Arr	147.79	237		PKPdf	02 31 04.0	-1.6
WB0	Warramunga Arr	147.83	237		PKPdf	02 31 04.8	-0.8
SHL	Shillong	148.12	25	PKPdf	PKPdf	02 31 05.3	-0.9
NWAO	Narrogin (SRO)	148.80	199	PKPbc	PKPbc	02 31 09.3	-1.3
	comp=Z,6.5nm,0.9s,baz=131,slow=9.3,SNR=3.7						
PZH	PanZhiHua	149.97	8	PKPbc	PKPdf	02 31 08.5	-0.6
MORE	Moreh	150.26	22	PKPbc	PKPbc	02 31 13.3	-1.2
FITZ	Fitzroy Crossi	155.81	232	PKPab	PKPab	02 31 43.2	-0.8
	comp=Z,4.8nm,0.8s,baz=161,slow=10,SNR=8.2						
CMAR	Chiang Mai Arr	157.19	17	PKPab	PKPab	02 31 48.7	-1.1
	comp=Z,1.3nm,0.3s,baz=328,slow=6.1,SNR=7.5						
CMAR	Chiang Mai Arr	157.19	17	PKPdf	PKPdf	02 31 18.0	-1.4
CMAR					PKPab	02 31 49.0	-0.8

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*IDC **25** 02:21:31.7±2.9, 27°.43N×53°.18E, h0^{km}, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=65.3km s-min=30.0km az=149.0*

*TEH **25** 02:21:33.5, 27°.63N×53°.29E, h6^{km}±26^{km}*

ISC 25 02:21:34.0±1.3**, 27°.61N**±0°.05×**53°.30E**±0°.08**, h4**^{km}±8^{km}**, n22,** σ1^{s}.**50**/22**, mb3.6**/5**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHL1	Khalili_Fars	0.03	4	Pg	Pg	02 21 34.6	-0.4
LMD1	Lamerd	0.29	204	Pg	Pg	02 21 40.9	+1.3
QIR1	Qir	0.90	346	Pg	Pg	02 21 51.4	+0.1
JHRM	Jahrom	0.93	15	Pg	Pg	02 21 52.5	+0.7
LAR1	LAR	0.96	86	Pg	Pn	02 21 53.6	-0.8
NGRK	Negar Kerman	3.64	55	Pn	Pn	02 22 32.8	+1.2
KHGB	Koh Gabri	3.92	44	Pn	Pn	02 22 36.8	+1.6
IMEH	Mehriz	3.94	17	Pn	Pn	02 22 37.8	+2.2
IRAM	Ramesheh	4.26	349	Pn	Pn	02 22 41.5	+1.5
IBAF	Bafgh	4.43	26	Pn	Pn	02 22 44.0	+1.7
KRM1	Kerman Provinc	4.52	49	Pn	Pn	02 22 44.6	+1.1
KBAM	BAM	4.79	70	Pn	Pn	02 22 49.0	+1.9
ANAR	Anarak	5.58	4	Pn	Pn	02 22 59.1	+1.1
TPRV	Parvadeh(Tabas	6.15	28	Pn	Pn	02 23 07.5	+1.8
TKDS	Koohdasht(Taba	6.83	28	Pn	Pn	02 23 16.1	+0.9
TNSJ	Nastanj	6.95	23	Pn	Pn	02 23 17.9	+1.2
BVAR	Borovoye Array	28.39	22	P	P	02 27 30.1	+0.8
	0.7nm,0.6s,baz=215,slow=7.2,SNR=4.3						
	0.7nm,0.6s						
MKAR	Makanchi Array	29.75	42	P	P	02 27 41.2	-0.4
	0.3nm,0.5s,baz=229,slow=8.8,SNR=5.0						
	0.3nm,0.5s						
FINES	FINESS Array B	38.42	339	P	P	02 28 54.5	-2.0
	1.2nm,0.8s,baz=134,slow=8.2,SNR=9.6						
	1.2nm,0.8s						
HFS	Hagfors	42.16	332	P	P	02 29 27.5	0.0
	0.4nm,0.4s,baz=116,slow=8.2,SNR=1.7						
	0.4nm,0.4s						
ARCES	ARCESS Array B	44.96	347	P	P	02 29 49.7	-0.2
	4.4nm,1.1s,baz=142,slow=8.2,SNR=2.0						
	4.4nm,1.1s						
TORD	Torodi Ar. Bea	50.13	264	P	P	02 30 28.1	-2.8
	0.3nm,0.6s,baz=55,slow=8.8,SNR=6.0						
	0.3nm,0.6s						

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*IDC **25** 02:23:10.3±1.4, 3°.34N×74°.27W, h0^{km}, mb3.6/7, mbtmp3.7/7, MS3.2/1, Error ellipse: s-maj=30.1km s-min=18.5km az=75.0*

*RSNC **25** 02:23:12.9±0.0, 3°N±1°×7°4W±°, h0^{km}±2^{km}, M3.9, ML3.6*

*CATAC **25** 02:23:14.0±0.4, 3°N±3°×7°4W±°, h1^{km}, M4.4/9, MLv4.4/9, Error ellipse: s-maj=7.5km s-min=4.4km az=129.9, confirmed*

ISC 25 02:23:11.3±1.2**, 3°.41N**±0°.02×**74°.23W**±0°.03**, h2**^{km}±8^{km}**, n39,** σ1^{s}.**39**/67**, mb3.4**/6**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	La Uribe, Meta	0.22	223	P	Pg	02 23 17.1	+1.5
URMC				S	Sg	02 23 20.7	+2.2
PRAC	Prado	0.72	295	P	Pg	02 23 25.4	+0.3
PRAC				S	Sg	02 23 35.6	+1.0
PRAC	Prado	0.72	295	P	Pg	02 23 25.6	+0.5
PRAC				S	Sg	02 23 35.0	+0.5
VILC	Villavicencio,	0.88	37	P	Pg	02 23 27.9	-0.2
VILC				S	Sg	02 23 39.6	+0.1
CVER	Cruz Verde, Cu	1.11	8	P	Pg	02 23 31.9	-0.8
CVER				S	Sg	02 23 46.4	-0.7
ORTC	Ortega, Tolima	1.13	296	P	Pb	02 23 32.8	-0.8
ORTC				S	Sb	02 23 47.7	-1.0
MACC	Macarena, Meta	1.31	163	P	Pn	02 23 35.9	-0.7
MACC				S	Sg	02 23 53.8	+0.2
BETC	Betania	1.41	239	P	Pb	02 23 38.2	-0.2
BETC				S	Sg	02 23 57.4	+0.7
ROSC	El Rosal	1.42	356	Pg	Pn	02 23 38.7	+0.3
	221nm,0.3s,baz=136,slow=18,SNR=120						
ROSC				Lg	Lg	02 23 58.0	
	183nm,0.3s,baz=108,slow=20,SNR=8.5						
ANIL	Santa Ana	1.59	312	P	Pn	02 23 40.3	-0.4
ANIL				S	Sn	02 24 01.9	0.0
GARC	Garzon, Huila	1.75	226	P	Pb	02 23 44.0	-0.3
GARC				S	Sg	02 24 07.2	-0.5
RECRC	Villamaria, Ca	1.90	324	P	Pn	02 23 46.1	+0.9
RECRC				S	Sn	02 24 10.7	+0.6
NIZA	Niza - Manizal	2.05	323	P	Pb	02 23 48.9	-0.5
NIZA				S	Sb	02 24 14.8	-0.7
YOTC	Yotoco, Valle	2.19	285	P	Pb	02 23 50.1	-1.6
YOTC				S	Sb	02 24 18.7	-0.6
NORC	Norcasia	2.23	343	P	Pn	02 23 49.9	+0.6
NORC				S	Sn	02 24 18.8	+1.3
SPBC	San Pablo de B	2.23	4	P	Pb	02 23 51.6	-0.8
SPBC				S	Sb	02 24 20.4	-0.1
FLOC	Florencia	2.31	218	P	Pb	02 23 54.2	+0.5
FLOC				S	Sg	02 24 23.4	-2.1
FLOC	Florencia	2.31	218	P	Pb	02 23 52.9	-0.8
FLOC				S	Sb	02 24 22.3	-0.4
JAMC	Jamundi, Valle	2.45	265	P	Pb	02 23 55.4	-0.8
JAMC				S	Sb	02 24 26.4	-0.5
PLMC	San Jos del P	2.53	306	P	Pn	02 23 55.0	+1.6
PLMC				S	Sb	02 24 29.3	+0.2
POPC	Popayan, Colom	2.59	251	P	Pb	02 23 56.8	-1.8
POPC				S	Sg	02 24 33.2	-1.5
RUSC	La Rusia	2.72	25	P	Pn	02 23 58.4	+2.0
RUSC				S	Sn	02 24 31.3	+1.3
RUSC	La Rusia	2.72	25	P	Pn	02 23 58.0	+1.6
RUSC				S	Sn	02 24 31.4	+1.3
CBOC	Ciudad Bolivar	3.02	324	P	Pn	02 24 03.0	+2.8
CBOC				S	Sn	02 24 38.6	+1.6
HELC	Santa Helena	3.05	335	P	Pn	02 24 01.8	+0.9
HELC				S	Sn	02 24 41.1	+3.0
HELC	Santa Helena	3.05	335	P	Pn	02 24 02.5	+1.7
HELC				S	Sb	02 24 41.5	-2.8
PTBC	PUERTO BERRIO,	3.12	356	P	Pn	02 24 02.4	+1.0
PTBC				S	Sn	02 24 41.1	+1.8
BBAC	Balboa, Cauca	3.32	245	P	Pn	02 24 06.7	+2.3
BBAC				S	Sb	02 24 48.3	-3.6
BRJC	Barrancabermej	3.57	8	P	Pn	02 24 09.0	+1.3
BRJC				S	Sn	02 24 52.8	+2.3
PAMC	Pamplona, Colo	4.19	21	P	Pn	02 24 18.5	+1.9
PAMC				S	Sn	02 25 09.5	+3.1
UREC	San Jos de Ur	4.50	343	P	Pn	02 24 21.2	+0.7
ATAH	Atahualpa	11.27	202	LR	LR	02 31 07.8	
	comp=Z,127nm,19.6s,baz=36,slow=43						
MDP	Montagnes des	21.59	85	P	P	02 28 01.7	-0.9
	20nm,1.0s,baz=272,slow=15,SNR=1.2						
	20nm,1.0s						
TXAR	Lajitas Array	38.01	316	P	P	02 30 30.9	-0.2
	0.2nm,0.7s,baz=121,slow=8.1,SNR=2.1						
	0.2nm,0.7s						
PDAR	Pinedale Array	50.23	326	P	P	02 32 08.4	-0.7
	0.3nm,0.7s,baz=115,slow=6.2,SNR=2.8						
	0.3nm,0.7s						
SCHQ	Schefferville	51.61	5	P	P	02 32 18.6	-0.5
	4.6nm,0.8s,baz=192,slow=6.1,SNR=5.8						
	4.6nm,0.8s						
NVAR	Mina Array Bea	53.14	317	P	P	02 32 30.5	-0.5
	0.5nm,0.8s,baz=131,slow=6.8,SNR=3.7						
	0.5nm,0.8s						
YKA	Yellowknife Ar	66.08	341	P	P	02 33 59.1	-0.4
	0.1nm,0.6s,baz=141,slow=5.8,SNR=5.9						
	0.1nm,0.6s						
TORD	Torodi Ar. Bea	75.53	77	P	P	02 34 58.5	+0.5
	0.5nm,0.8s,baz=298,slow=5.8,SNR=3.0						
	0.5nm,0.8s						

GCG 25 02:28:04.2±1.7**, 14°.10N×91°.46W, h68**^{km}±12^{km}**, MD3.6, ML3.1, MW2.8, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG5	El Palmar, Qui	0.32	19	i P	Pn	02 28 18.2	+2.7
STG5				i S	Sn	02 28 28.9	+5.2
STG2	El Palmar, Qui	0.35	13	i P	Pn	02 28 18.9	+3.2
STG2				i S	Sn	02 28 30.1	+6.1
STG8	El Palmar, Qui	0.36	16	i P	Pn	02 28 18.9	+3.0
STG8				i S	Sn	02 28 30.7	+6.2
STG8				IAML		02 28 32.1	
	comp=E,1µm,0.2s						
ESSG	Sabana Grande	0.67	65	i P	Pn	02 28 19.0	+0.3
ESSG				i S	Sn	02 28 30.3	+0.9
SOKI	Kika Raxquin	0.72	4	i P	Pn	02 28 19.2	-0.4
SOKI				i S	Sn	02 28 33.8	+2.8
FG16	Alotenango, Sa	0.94	79	i P	Pn	02 28 19.2	-2.8
FG16				i S	Sn	02 28 30.8	-4.3
FG16				IAML		02 28 36.9	
	comp=E,4µm,0.2s						
PCG5	San Vicente Pa	1.06	83	i P	Pn	02 28 21.7	-1.8
PCG5				i S	Sn	02 28 34.6	-3.2
APG	El Apazote	1.32	47	i P	Pn	02 28 26.9	0.0
APG				i S	Sn	02 28 47.4	+3.5
NUBE	Las Nubes	1.64	97	i P	Pn	02 28 32.3	+1.2
NUBE				i S	Sn	02 28 52.8	+1.3

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*IDC **25** 02:30:08.6±0.7, 49°.59S×125°.97E, h0^{km}, mb4.3/7, mbtmp4.3/8, ML2.7/1, MS3.8/14, Error ellipse: s-maj=35.3km s-min=18.3km az=100.0*

*NEIC **25** 02:30:09.6±1.4, 49°.64S±0°.08×126°.1E±0°.2, h10^{km}±1^{km}, mb4.4/17, Error ellipse: s-maj=21.4km s-min=10.5km az=66.0*

*GCMT **25** 02:30:12.6±0.3, 49°.51S±0°.02×126°.08E±0°.04, h24^{km}±2^{km}, MW4.9/66, Moment Tensor Solution. s15,c17; s66,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.62±.19; $M_{\theta\theta}$1.43±.16; $M_{\phi\phi}$-0.81±.17; $M_{r\theta}$0.22±.17; $M_{\theta\phi}$2.12±.10; $M_{\phi r}$0.26±.20; Best double couple: $M_0$2.41800×10^{16} NP1:ϕ_s104.00000°, δ83.00000°, λ1.00000°. NP2: ϕ_s14.00000°, δ89.00000°, λ173.00000°. Principal axes: T 2.7380, Plg6.0000°, Azm329.0000°; N -0.6450, Plg83.0000°, Azm187.0000°; P -2.0990, Plg4.0000°,* *Azm59.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 02:30:09.8±0.5**, 49°.63S**±0°.07×**126°.0E**±0°.1**, h10^{km}, n68, σ1^{s}.59**/48**, mb4.4**/12**, MS3.7**/13**, 2C, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MGBR	**Mount Gambier**	**15.88**	**47**	Pn	**Pn**	**02 33 51.5**	**-1.8**
MGBR				IAmb	IAmb	02 33 59.5	
	comp=Z,35nm,0.8s						
H01W1	**Cape Leeuwin H**	**17.09**	**325**	T	T	02 51 46.6	
	baz=153,slow=76,SNR=174						
H01W2	**Cape Leeuwin H**	**17.09**	**325**	T	T	02 51 31.3	
	baz=153,slow=76,SNR=145						
H01W3	**Cape Leeuwin H**	**17.11**	**325**	T	T	02 51 48.1	
	baz=153,slow=76,SNR=238						
AUMBR	**Murray Bridge**	**17.47**	**39**	P	**P**	**02 34 14.7**	**+0.1**
AUMTC	**Mt Clear Colle**	**17.62**	**54**	P	**P**	**02 34 19.9**	**+3.6**
BRAT	**Ballarat**	**17.70**	**54**	P	**P**	**02 34 21.0**	**+3.9**
NWAO	**Narrogin (SRO)**	**17.91**	**335**	P	**P**	**02 34 20.4**	**+1.0**
	comp=Z,1.1nm,0.3s,baz=142,slow=13,SNR=13						
NWAO				LR	LR	02 39 34.5	
	comp=Z,546nm,18.6s,baz=132,slow=32						
	comp=Z,9.6nm,0.6s						
NWAO	**Narrogin (SRO)**	**17.91**	**335**		**Pn**	**02 34 18.9**	**+0.1**
NWAO				IAmb	IAmb	02 34 31.5	
	comp=Z,15nm,0.9s						
BBOO	**Buckleboo**	**18.41**	**28**	P	**Pn**	**02 34 24.5**	**-0.5**
CASY	**Casey**	**18.50**	**200**	P	**P**	**02 34 25.7**	**-0.1**
CASY				IAmb	IAmb	02 34 37.3	
	comp=Z,23nm,1.3s						
TOO	**Toolangi**	**18.51**	**57**		**P**	**02 34 24.1**	**-2.1**
FORT	**Forrest**	**18.89**	**6**	P	**Pn**	**02 34 30.5**	**-0.4**
KLBR	**Kellerberrin**	**19.04**	**338**	P	**P**	**02 34 32.4**	**+0.4**
MUN	**Mundaring**	**19.09**	**334**	P	**P**	**02 34 32.6**	**+0.2**
AUSMG	**Snowy Mountain**	**21.07**	**60**	P	**P**	**02 34 59.1**	**+5.0**
STKA	**Stephens Creek**	**21.25**	**39**	P	**P**	**02 34 55.2**	**-0.7**
	comp=Z,8.4nm,1.0s,baz=198,slow=12,SNR=11						
STKA				LR	LR	02 41 29.1	
	comp=Z,156nm,21.9s,baz=206,slow=32						
	comp=Z,8.4nm,1.0s						
STKA	**Stephens Creek**	**21.25**	**39**		**P**	**02 34 55.4**	**-0.5**
STKA	**Stephens Creek**	**21.25**	**39**	P	**P**	**02 34 56.8**	**+0.9**
MORW	**Morawa**	**21.88**	**336**		**P**	**02 35 02.2**	**-0.6**
MORW				IAmb	IAmb	02 35 04.4	
	comp=Z,37nm,1.1s						
MORW	**Morawa**	**21.88**	**336**	P	**P**	**02 35 04.0**	**+1.2**
CMSA	**Cobar Meteorol**	**23.35**	**47**	P	**P**	**02 35 19.7**	**+1.5**
MEEK	**Meekatharra**	**23.64**	**343**	P	**P**	**02 35 21.7**	**+0.5**
INKA	**Innaminka**	**24.62**	**33**		**P**	**02 35 28.9**	**-1.4**
ASAR	**Alice Springs**	**26.65**	**16**	P	**P**	**02 35 48.0**	**-0.8**
	comp=Z,11nm,0.9s,baz=194,slow=8.6,SNR=45						
ASAR				LR	LR	02 45 20.6	
	comp=Z,149nm,20.4s,baz=207,slow=34						
	comp=Z,11nm,0.9s						
ASAR	**Alice Springs**	**26.65**	**16**		**P**	**02 35 48.2**	**-0.5**
AS31	**Alice Springs**	**26.65**	**16**		**P**	**02 35 47.7**	**-1.0**
AS31				IAmb	IAmb	02 36 00.9	
	comp=Z,2.7nm,0.8s						
ARMA	**Armidale**	**27.25**	**55**	P	**P**	**02 35 52.7**	**-1.4**
PSA00	**Pilbara Seismi**	**28.41**	**348**	P	**P**	**02 36 01.9**	**-2.6**
VNDA	**Vanda**	**31.12**	**166**	P	**P**	**02 36 28.5**	**+0.6**
	comp=Z,3.2nm,0.8s,baz=314,slow=12,SNR=15						
VNDA				LR	LR	02 47 50.6	
	comp=Z,352nm,20.5s,baz=326,slow=34						
	comp=Z,3.2nm,0.8s						
VNDA	**Vanda**	**31.12**	**166**	P	**P**	**02 36 25.0**	**-2.9**
VNDA				IAmb	IAmb	02 36 39.0	
	comp=Z,5.1nm,0.9s						
FITZ	**Fitzroy Crossi**	**31.45**	**359**	LR	LR	02 48 02.1	
	comp=Z,185nm,21.1s,baz=175,slow=34						
CTA	**Charters Tower**	**33.62**	**36**	LR	LR	02 50 13.1	
	comp=Z,61nm,18.5s,baz=232,slow=36						
MAW	**Mawson**	**35.47**	**216**	LR	LR	02 49 08.1	
	comp=Z,107nm,18.8s,baz=68,slow=32						
BATI	**Baumata**	**39.34**	**356**	LR	LR	02 52 53.6	
	comp=Z,205nm,21.9s,baz=194,slow=35						
QSPA	**South Pole Qui**	**40.50**	**180**	P	**P**	**02 37 48.6**	**0.0**
QSPA				IAmb	IAmb	02 38 31.4	
	comp=Z,13nm,1.5s						
DZM	**Mont Dzumac**	**42.04**	**64**	*e*LR	LR	02 49 36.2	
	comp=Z,202nm,22.1s						
PMG	**Port Moresby**	**43.81**	**31**	LR	LR	02 58 41.9	
	comp=Z,87nm,18.2s,baz=181,slow=39						
BELA	**Belgrano 2**	**52.20**	**185**	P	**P**	**02 39 20.2**	**+0.1**
BELA				IAmb	IAmb	02 39 29.3	
	comp=Z,10nm,1.3s						
TROLL	**Troll, Antarti**	**52.36**	**199**	⇑P	**P**	**02 39 21.4**	**-0.2**
	comp=Z,112nm,0.5s						
SNAA	**Sanae**	**53.72**	**198**	⇑P	**P**	**02 39 31.4**	**0.0**
	comp=Z,186nm,1.0s						
SNAA	**Sanae**	**53.72**	**198**	P	**P**	**02 39 32.2**	**+0.8**
	comp=Z,5.0nm,0.9s,baz=156,slow=7.3,SNR=9.8						
	comp=Z,5.0nm,0.9s						
SNAA	**Sanae**	**53.72**	**198**	P	**P**	**02 39 31.6**	**+0.1**
GSI	**Gunungsitoli**	**56.30**	**325**	P	**P**	**02 39 51.5**	**+0.8**
DAV	**Davao City (W)**	**56.46**	**360**	LR	LR	03 03 03.5	
	comp=Z,44nm,21.3s,baz=338,slow=35						
PSI	**Prapat**	**57.20**	**327**	LR	LR	02 59 58.8	
	comp=Z,92nm,22.0s,baz=142,slow=31						
H08S2	**Diego Garcia H**	**61.05**	**294**	T	T	03 46 34.0	
	baz=144,slow=76,SNR=7.3						
H08S1	**Diego Carcia H**	**61.06**	**294**	T	T	03 46 35.8	
	baz=144,slow=76,SNR=5.1						
H08S3	**Diego Garcia H**	**61.07**	**294**	T	T	03 46 28.6	
	baz=144,slow=76,SNR=12						
PMSA	**Palmer Station**	**65.67**	**175**	LR	LR	03 11 35.8	
	comp=Z,70nm,18.1s,baz=194,slow=38						
PALK	**Pallekele**	**68.99**	**311**	LR	LR	03 06 05.4	
	comp=Z,59nm,19.9s,baz=159,slow=31						
CMAR	**Chiang Mai Arr**	**71.89**	**333**	P	**P**	**02 41 34.2**	**+1.3**
	comp=Z,0.7nm,0.3s,baz=179,slow=6.5,SNR=5.1						
CMAR				LR	LR	03 12 09.3	
	comp=Z,50nm,20.0s,baz=225,slow=35						
	comp=Z,0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**71.89**	**333**	P	**P**	**02 41 32.8**	**-0.2**
PPT2	**Papeete2**	**73.26**	**98**	*e*LR	LR	03 03 58.9	
	comp=Z,51nm,23.0s						
PPT2				*e*LR	LR	03 04 00.9	
	comp=Z,110nm,24.5s						
BOSA	**Boshof**	**75.19**	**243**	P	**P**	**02 41 52.2**	**-0.4**
	comp=Z,2.9nm,1.1s,baz=109,slow=7.0,SNR=4.3						
	comp=Z,2.9nm,1.1s						
BOSA	**Boshof**	**75.19**	**243**	P	**P**	**02 41 51.7**	**-0.9**
BOSA				IAmb	IAmb	02 42 00.5	
	comp=Z,11nm,1.4s						
PZH	**PanZhiHua**	**78.80**	**338**	P	**P**	**02 42 16.3**	**+3.6**
KSRS	**Korea Array**	**86.72**	**2**	P	**P**	**02 42 51.9**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=186,slow=3.9,SNR=1.7						
	comp=Z,0.4nm,0.3s						
HHC	**Hu-ho-hao-te**	**90.98**	**349**	*e*P	**P**	**02 43 15.3**	**+1.7**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,5.0s						
H10S2	**ASCENSION HYDR**	**112.27**	**223**	T	T	04 51 44.9	
	baz=152,slow=74,SNR=9.8						
H10S3	**ASCENSION HYDR**	**112.28**	**223**	T	T	04 51 51.4	
	baz=68,slow=74,SNR=12						
ILAR	**Eielson Array**	**132.26**	**35**	PKP	**PKiKP**	**02 49 23.5**	**-0.2**
	comp=Z,0.3nm,1.0s,baz=239,slow=4.9,SNR=1.5						
NVAR	**Mina Array Bea**	**133.79**	**79**	PKP	**PKiKP**	**02 49 27.7**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=263,slow=2.8,SNR=1.8						
FINES	**FINESS Array B**	**136.05**	**317**	PKP	**PKPdf**	**02 49 30.5**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=101,slow=2.1,SNR=1.5						
PDAR	**Pinedale Array**	**141.72**	**79**	PKP	**PKPdf**	**02 49 42.2**	**+1.1**
	comp=Z,0.3nm,1.0s,baz=272,slow=5.0,SNR=1.9						
ESDC	**Sonseca Array**	**143.63**	**274**	PKP	PKPbc	02 49 42.5	+0.7
	comp=Z,0.6nm,0.7s,baz=113,slow=2.3,SNR=5.0						
YKA	**Yellowknife Ar**	**145.20**	**45**	PKPbc	**PKPdf**	**02 49 46.8**	**+0.5**
	comp=Z,1.7nm,0.8s,baz=269,slow=4.1,SNR=24						
EKA	**Eskdalemuir Ar**	**149.08**	**300**	PKPbc	**PKPbc**	**02 49 56.7**	**-0.4**
	comp=Z,2.7nm,0.8s,baz=60,slow=4.9,SNR=4.9						

RSNC 25 02:31:00.2±0.0**, 3°N**±1°×**7°4W**±°**, h4^{km}**±2^{km}**, M2.2, ML2.1, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URMC	**La Uribe, Meta**	**0.26**	**223**	P	Pg	02 31 03.7	-1.6
URMC				S	Sg	02 31 06.9	-1.9
PRAC	**Prado**	**0.74**	**292**	S	Sg	02 31 22.9	-1.1
VILC	**Villavicencio,**	**0.84**	**37**	S	Sg	02 31 26.3	-0.9
CVER	**Cruz Verde, Cu**	**1.08**	**7**	P	Pg	02 31 18.6	-2.4
CVER				S	Sg	02 31 33.0	-2.1
ORTC	**Ortega, Tolima**	**1.14**	**294**	P	Pg	02 31 19.6	-2.6
ORTC				S	Sn	02 31 39.2	0.0
CHIC	**Chingaza**	**1.27**	**22**	P	Pg	02 31 23.4	-1.2
CHIC				S	Sg	02 31 41.1	0.0
MACC	**Macarena, Meta**	**1.33**	**165**	P	Pn	02 31 23.2	-2.4
MACC				S	Sg	02 31 41.3	-1.8
ANIL	**Santa Ana**	**1.59**	**311**	P	Pn	02 31 27.7	-1.7
ANIL				S	Sn	02 31 49.2	-1.4
GARC	**Garzon, Huila**	**1.79**	**226**	P	Pn	02 31 30.6	-1.6
GARC				S	Sn	02 31 53.6	-2.0
RECRC	**Villamaria, Ca**	**1.90**	**323**	P	Pn	02 31 32.4	-1.5
RECRC				S	Sn	02 31 57.8	-0.7
YOTC	**Yotoco, Valle**	**2.21**	**284**	P	Pn	02 31 36.8	-1.0
YOTC				S	Sn	02 32 05.8	+0.2
NORC	**Norcasia**	**2.21**	**342**	P	Pn	02 31 37.1	-0.7
NORC				S	Sn	02 32 05.9	+0.3
FLOC	**Florencia**	**2.35**	**218**	P	Pn	02 31 39.3	-0.3
FLOC				S	Sn	02 32 08.6	-0.3
JAMC	**Jamundi, Valle**	**2.48**	**265**	P	Pn	02 31 42.4	+0.8
PLMC	**San Jos del P**	**2.54**	**305**	P	Pn	02 31 41.9	-0.4
PLMC				S	Sn	02 32 14.6	+0.9
POPC	**Popayan, Colom**	**2.63**	**250**	P	Pb	02 31 46.2	-1.9
POPC				S	Sb	02 32 19.9	-0.9

IDC ***25*** *02:32:49.2±0.7, 8°.61S×124°.50E, h0^{km}, mb4.0/12, mbtmp4.1/14, ML4.9/3, MS3.4/2, Error ellipse: s-maj=24.8km s-min=11.8km az=86.0*

NEIC ***25*** *02:32:59.2±1.3, 8°.87S±0°.06×124°.17E±0°.07, h83^{km}±8^{km}, mb4.4/14, Error ellipse: s-maj=12.1km s-min=5.7km az=48.0*

DJA ***25*** *02:33:00.4±0.2, 9°S±2°×12°4E±°, h65^{km}±5^{km}, M4.6/18, mb4.8/18, mB5.1/7, MLv4.6/18, Mw(mB)4.5/7, MwMwp4.7/1, Mwp5.1/1*

ISC 25 02:33:00.4±0.4**, 9°.09S**±0°.05×**124°.15E**±0°.05**, h100^{km}, n95, σ1^{s}.98**/96**, mb4.1**/15**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**0.67**	**170**		**Pn**	**02 33 17.2**	**-0.5**
SOEI				Sn	**Sn**	**02 33 30.6**	**-0.1**
SOEI	**Soe**	**0.67**	**170**	P	**Pn**	**02 33 16.3**	**-1.4**
SOEI	**Soe**	**0.67**	**170**	S	**Sn**	**02 33 30.7**	**0.0**
SOEI	**Soe**	**0.67**	**170**	P	**Pn**	**02 33 16.9**	**-0.8**
BATI	**Baumata**	**1.21**	**203**	Pg	**Pn**	**02 33 23.5**	**+0.3**
	200nm,0.3s,baz=30,slow=3.2,SNR=129						
BATI				Lg	Lg	02 33 41.6	
	1µm,0.3s,baz=343,slow=19,SNR=16						
BATI				LR	LR	02 34 19.4	
	comp=Z,280nm,18.1s,baz=64,slow=50						
BATI	**Baumata**	**1.21**	**203**	P	**Pn**	**02 33 23.0**	**-0.2**
MMRI	**Maumere**	**1.94**	**283**		**Pn**	**02 33 30.4**	**-1.7**
MMRI				Sn	**Sn**	**02 33 53.6**	**-2.8**
MMRI	**Maumere**	**1.94**	**283**	P	**Pn**	**02 33 31.3**	**-0.9**
MMRI	**Maumere**	**1.94**	**283**	P	**Pn**	**02 33 31.2**	**-0.9**
EDFI	**Ende, Flores**	**2.45**	**278**	P	**Pn**	**02 33 38.5**	**-0.4**
BASI	**Baing, Sumba**	**3.69**	**252**	P	**Pn**	**02 33 56.0**	**+0.6**
WSI	**Waingapu**	**3.84**	**261**	P	**Pn**	**02 33 57.3**	**-0.1**
BSSI	**Bau Bau, Buton**	**4.66**	**309**	P	**Pn**	**02 34 09.4**	**+0.9**
WBSI	**Waikabubak, Su**	**4.72**	**263**	P	**Pn**	**02 34 08.0**	**-1.4**
BKSI	**Bulukumba**	**5.47**	**313**	P	**Pn**	**02 34 18.4**	**-1.1**
	0.2nm53nm,0.6s						
DBNI	**Kabupaten Domp**	**5.79**	**275**	P	**Pn**	**02 34 24.5**	**+0.6**
KAPI	**Kappang**	**5.95**	**313**		**Pn**	**02 34 22.2**	**-3.9**
KAPI	**Kappang**	**5.95**	**313**	P	**Pn**	**02 34 25.2**	**-0.8**
PLAI	**Plampang**	**6.30**	**272**	P	**Pn**	**02 34 30.4**	**-0.3**
PLAI	**Plampang**	**6.30**	**272**	P	**Pn**	**02 34 30.6**	**-0.1**
NLAI	**Namlea**	**6.51**	**27**	P	**Pn**	**02 34 34.9**	**+1.2**
	0.4nm56nm,0.5s						
SPSI	**Sidrap Palu**	**6.70**	**319**	P	**Pn**	**02 34 37.8**	**+1.6**
AAI	**Ambon**	**6.71**	**37**	P	**Pn**	**02 34 36.7**	**+0.4**
	0.3nm90nm,1.0s						
KRAI	**Karang Ratu**	**7.12**	**37**	P	**Pn**	**02 34 42.5**	**+0.5**
SAUI	**Saumlaki**	**7.16**	**82**		**Pn**	**02 34 39.4**	**-3.1**
SAUI	**Saumlaki**	**7.16**	**82**	P	**Pn**	**02 34 42.6**	**+0.1**
SAUI	**Saumlaki**	**7.16**	**82**	S	**Sn**	**02 36 00.9**	**-1.5**
TWSI	**Taliwang, Sumb**	**7.18**	**272**	P	**Pn**	**02 34 42.8**	**0.0**
	2µm96nm,0.6s						
SANI	**Sanana**	**7.23**	**15**	P	**Pn**	**02 34 44.0**	**+0.5**
SANI	**Sanana**	**7.23**	**15**	P	**Pn**	**02 34 44.3**	**+0.8**
	0.3nm798nm78nm,0.8s						
TTSI	**Tana Toraja**	**7.39**	**324**	P	**Pn**	**02 34 47.6**	**+2.0**
	0.1nm41nm,0.9s						
DRS	**Darwin Rock St**	**7.42**	**117**	P	**Pn**	**02 34 43.6**	**-2.4**
MTN	**Manton Dam**	**7.81**	**119**		**Pn**	**02 34 49.8**	**-1.5**
MTNI	**Mataram**	**7.89**	**273**	P	**Pn**	**02 34 50.4**	**-2.1**
	1µm65nm,0.6s						
KNRA	**Kununurra**	**7.95**	**146**		**Pn**	**02 34 50.9**	**-2.3**
KLNI	**Mataram**	**7.99**	**274**	P	**Pn**	**02 34 52.4**	**-1.3**
	36nm,0.5s						
LUWI	**Luwuk**	**8.11**	**350**		**Pn**	**02 34 55.7**	**+0.2**
LUWI	**Luwuk**	**8.11**	**350**	P	**Pn**	**02 34 56.6**	**+1.2**
	83nm,0.9s						
FITZ	**Fitzroy Crossi**	**9.07**	**171**	Pn	**Pn**	**02 35 05.8**	**-2.6**
	14nm,0.3s,baz=358,slow=11,SNR=175						
FITZ				Sn	**Sn**	**02 36 41.6**	**-7.3**
	26nm,0.3s,baz=328,slow=19,SNR=20						
FITZ	**Fitzroy Crossi**	**9.07**	**171**	Pn	**Pn**	**02 35 05.7**	**-2.8**
GTOI	**Gorontalo**	**9.73**	**353**	P	**Pn**	**02 35 20.0**	**+2.6**
	36nm,0.9s						
JAGI	**Jajag, Banyuwa**	**9.90**	**273**		**Pn**	**02 35 15.2**	**-4.6**
FAKI	**Fak Fak**	**10.12**	**53**		**Pn**	**02 35 20.7**	**-2.1**
FAKI	**Fak Fak**	**10.12**	**53**	P	**Pn**	**02 35 21.4**	**-1.4**
MPSI	**Mapaga**	**10.28**	**335**	P	**Pn**	**02 35 26.1**	**+1.2**
	25nm,0.9s						
TOLI2	**Tolitoli**	**10.67**	**342**	P	**Pn**	**02 35 32.3**	**+2.0**
SNJI	**Sawahan-Nganju**	**12.32**	**275**	P	**Pn**	**02 35 52.8**	**+0.2**
	32nm,0.9s						
MBWA	**Marble Bar**	**12.73**	**199**	P	**Pn**	**02 35 58.8**	**+1.0**
UGM	**Wanagama**	**13.52**	**274**	P	**Pn**	**02 36 10.6**	**+2.3**
WRA	**Warramunga Arr**	**14.61**	**139**	Pn	**Pn**	**02 36 18.2**	**-4.1**
	3.2nm,0.3s,baz=310,slow=10,SNR=46						
WRA				Sn	Sn	02 38 50.2	-13
	6.1nm,0.3s,baz=322,slow=24,SNR=12						
	6.4nm,0.5s						
DAV	**Davao City (W)**	**16.12**	**5**	LR	LR	02 42 56.0	
	comp=Z,52nm,19.7s,baz=164,slow=39						
BBJI	**Bungbulang**	**16.40**	**274**	P	**P**	**02 36 46.4**	**+0.5**
AS31	**Alice Springs**	**17.24**	**148**		**P**	**02 36 53.1**	**-1.9**
AS31				IAmb	IAmb	02 36 56.2	
	comp=Z,8.7nm,0.4s						
ASAR	**Alice Springs**	**17.24**	**148**	P	**P**	**02 36 53.1**	**-1.9**
	comp=Z,4.2nm,0.3s,baz=319,slow=11,SNR=72						
ASAR				S	Sn	02 39 55.5	-11
	comp=Z,3.9nm,0.7s,baz=311,slow=20,SNR=4.5						
	comp=Z,13nm,0.5s						
ASAR	**Alice Springs**	**17.24**	**148**	P	**P**	**02 36 53.0**	**-2.0**
MEEK	**Meekatharra**	**18.22**	**196**	P	**Pn**	**02 37 06.9**	**0.0**
QIS	**Mount Isa**	**18.78**	**129**	P	**Pn**	**02 37 13.6**	**+0.1**
COEN	**Coen**	**19.26**	**106**		**P**	**02 37 15.8**	**-1.4**
COEN				IAmb	IAmb	02 37 19.3	
	comp=Z,14nm,0.5s						
COEN	**Coen**	**19.26**	**106**	P	**Pn**	**02 37 18.2**	**-1.0**
MNAI	**Manna**	**21.56**	**281**	P	**P**	**02 37 43.6**	**+1.6**
FORT	**Forrest**	**21.89**	**171**	P	**P**	**02 37 45.9**	**+0.6**
FORT				IAmb	IAmb	02 37 52.8	
	comp=Z,14nm,1.1s						
BLDU	**Ballidu**	**22.51**	**197**	P	**P**	**02 37 52.6**	**+0.7**
PMG	**Port Moresby**	**22.72**	**93**	P	**P**	**02 37 54.6**	**+0.5**
PMG	**Port Moresby**	**22.72**	**93**	P	**P**	**02 37 57.4**	**+3.4**
PMG	**Port Moresby**	**22.72**	**93**	P	**P**	**02 37 57.5**	**+3.4**
KLBR	**Kellerberrin**	**23.16**	**194**	P	**P**	**02 37 59.1**	**+0.8**
CTA	**Charters Tower**	**23.99**	**120**	P	**P**	**02 38 06.2**	**+0.2**
	comp=Z,2.9nm,0.8s,baz=285,slow=7.6,SNR=3.9						
	comp=Z,2.9nm,0.8s						
CTAO	**Charters Tower**	**23.99**	**120**		**P**	**02 38 06.4**	**+0.4**
CTAO				IAmb	IAmb	02 38 26.7	
	comp=Z,17nm,1.4s						
TV1H	**Townsville Har**	**24.15**	**117**	P	**P**	**02 38 10.4**	**+3.1**
INKA	**Innaminka**	**24.28**	**142**	P	**P**	**02 38 10.3**	**+1.9**
NWAO	**Narrogin (SRO)**	**24.57**	**194**	P	**P**	**02 38 17.5**	**+6.5**
	comp=Z,8.9nm,1.3s,baz=284,slow=13,SNR=2.5						
NWAO				S	S	02 42 42.8	+18
	comp=Z,5.6nm,0.9s,baz=74,slow=20,SNR=1.7						
	comp=Z,8.9nm,1.3s						
NWAO	**Narrogin (SRO)**	**24.57**	**194**	P	**P**	**02 38 12.4**	**+1.5**
NWAO				IAmb	IAmb	02 38 13.4	
	comp=Z,9.4nm,0.9s						
BBOO	**Buckleboo**	**26.05**	**157**	P	**P**	**02 38 26.2**	**+1.8**
BBOO				IAmb	IAmb	02 38 26.9	
	comp=Z,10nm,0.6s						
BBOO	**Buckleboo**	**26.05**	**157**	P	**P**	**02 38 25.9**	**+1.5**
STKA	**Stephens Creek**	**27.87**	**147**	P	**P**	**02 38 42.6**	**+1.8**
	comp=Z,0.7nm,0.3s,baz=322,slow=9.1,SNR=5.4						
	comp=Z,0.7nm,0.3s						
STKA	**Stephens Creek**	**27.87**	**147**	P	**P**	**02 38 42.4**	**+1.7**
STKA				IAmb	IAmb	02 39 09.9	
	comp=Z,18nm,0.8s						
CMAR	**Chiang Mai Arr**	**36.98**	**318**	P	**P**	**02 39 59.0**	**-1.4**
	comp=Z,1.1nm,0.3s,baz=145,slow=8.6,SNR=1.6						
	comp=Z,1.1nm,0.3s						
PZH	**PanZhiHua**	**41.54**	**329**	P	**P**	**02 40 40.8**	**+2.5**
HHC	**Hu-ho-hao-te**	**51.03**	**348**	*e*P	**P**	**02 41 54.6**	**+2.2**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,89nm,5.2s						
USRK	**Ussuriysk Ar.**	**53.51**	**7**	P	**P**	**02 42 07.6**	**-2.9**
	comp=Z,1.3nm,0.7s,baz=192,slow=7.1,SNR=2.4						
	comp=Z,1.3nm,0.7s						
HILR	**Hailar Array B**	**58.52**	**357**	P	**P**	**02 42 44.4**	**-1.8**
	comp=Z,1.0nm,0.4s,baz=167,slow=7.3,SNR=3.8						
	comp=Z,1.0nm,0.4s						
SONM	**Songino Array**	**58.82**	**346**	P	**P**	**02 42 47.7**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=163,slow=11,SNR=3.2						
	comp=Z,0.5nm,0.6s						
MKAR	**Makanchi Array**	**66.96**	**330**	P	**P**	**02 43 41.3**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=130,slow=6.8,SNR=7.6						
	comp=Z,0.6nm,0.5s						
MKAR	**Makanchi Array**	**66.96**	**330**	P	**P**	**02 43 41.9**	**-0.4**
PETK	**Petropavlovsk-**	**68.22**	**21**	P	**P**	**02 43 49.8**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=230,slow=4.3,SNR=1.8						
	comp=Z,2.5nm,0.8s						
ZALV	**Zalesovo Beam**	**71.04**	**337**	P	**P**	**02 44 07.2**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=83,slow=12,SNR=1.7						
	comp=Z,0.6nm,0.3s						
VNDA	**Vanda**	**71.15**	**172**	P	**P**	**02 44 09.9**	**+2.2**
	comp=Z,0.5nm,0.5s,baz=249,slow=2.0,SNR=2.0						
	comp=Z,0.5nm,0.5s						
VNDA	**Vanda**	**71.15**	**172**	P	**P**	**02 44 09.6**	**+1.9**
VNDA				IAmb	IAmb	02 44 30.7	
	comp=Z,3.3nm,1.2s						
KURBB	**Kurchatov Arra**	**71.40**	**331**	P	**P**	**02 44 09.2**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=143,slow=5.3,SNR=2.3						
	comp=Z,0.1nm,0.3s						
KURK	**Kurchatov**	**71.42**	**331**	P	**P**	**02 44 08.8**	**-0.8**
SEY	**Seymchan**	**75.02**	**13**	LR	LR	03 21 07.3	
	comp=Z,58nm,18.4s,baz=28,slow=39						
AB31	**Akbulak array**	**80.62**	**323**	P	**P**	**02 45 01.0**	**-1.0**
ABKAR	**Akbulak array**	**80.62**	**323**	P	**P**	**02 45 01.0**	**-1.0**
SNAA	**Sanae**	**92.24**	**195**	P	**P**	**02 46 00.7**	**+1.9**
BELA	**Belgrano 2**	**92.36**	**184**	P	**P**	**02 46 01.0**	**+1.8**

CATAC ***25*** *02:35:36.3±0.4, 4°N±3°×7°4W±°, h1^{km}, M4.0/10, mb4.1/1, MLv4.0/10, Error ellipse: s-maj=7.3km s-min=4.2km az=127.4, confirmed*

RSNC ***25*** *02:35:36.5±0.0, 3°N±1°×7°4W±°, h5^{km}±3^{km}, M3.4, ML3.1*

ISC 25 02:35:34.2±0.8**, 3°.48N**±0°.02×**74°.22W**±0°.03**, h10^{km}, n33, σ1^{s}.85**/65**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URMC	**La Uribe, Meta**	**0.28**	**215**	P	**Pb**	**02 35 40.5**	**-0.8**
URMC				S	**Sg**	**02 35 44.4**	**+0.8**
PRAC	**Prado**	**0.71**	**290**	P	**Pb**	**02 35 48.3**	**-0.3**
PRAC				S	**Sb**	**02 35 58.3**	**-0.2**
PRAC	**Prado**	**0.71**	**290**	P	**Pb**	**02 35 48.3**	**-0.3**
PRAC				S	**Sb**	**02 35 58.3**	**-0.2**
VILC	**Villavicencio,**	**0.82**	**40**	P	**Pg**	**02 35 50.1**	**+0.1**
VILC				S	**Sg**	**02 36 01.2**	**+0.4**
ORTC	**Ortega, Tolima**	**1.11**	**293**	P	**Pg**	**02 35 55.4**	**-0.2**
ORTC				S	**Sn**	**02 36 11.3**	**0.0**
CHIC	**Chingaza**	**1.25**	**23**	P	**Pn**	**02 35 57.3**	**-0.7**
CHIC				S	**Sb**	**02 36 13.6**	**-0.7**
MACC	**Macarena, Meta**	**1.37**	**164**	P	**Pn**	**02 35 59.3**	**-0.1**
MACC				S	**Sn**	**02 36 17.7**	**0.0**
BETC	**Betania**	**1.46**	**237**	P	**Pg**	**02 36 01.6**	**-0.5**
BETC				S	**Sg**	**02 36 20.6**	**-0.4**
ANIL	**Santa Ana**	**1.55**	**311**	P	**Pb**	**02 36 03.3**	**+0.1**
ANIL				S	**Sg**	**02 36 24.0**	**-0.3**
GARC	**Garzon, Huila**	**1.81**	**225**	P	**Pb**	**02 36 07.4**	**-0.1**
GARC				S	**Sb**	**02 36 30.9**	**+0.6**
RECRC	**Villamaria, Ca**	**1.86**	**323**	P	**Pb**	**02 36 08.6**	**0.0**
RECRC				S	**Sb**	**02 36 32.5**	**+0.4**
SPBC	**San Pablo de B**	**2.17**	**4**	P	**Pb**	**02 36 13.5**	**-0.1**
SPBC				S	**Sg**	**02 36 43.4**	**-0.5**
YOTC	**Yotoco, Valle**	**2.18**	**283**	P	**Pb**	**02 36 12.2**	**-1.7**
YOTC				S	**Sb**	**02 36 40.9**	**-0.1**
FLOC	**Florencia**	**2.36**	**217**	P	**Pb**	**02 36 17.1**	**+0.2**
FLOC				S	**Sb**	**02 36 46.8**	**+0.6**
FLOC	**Florencia**	**2.36**	**217**	P	**Pb**	**02 36 16.0**	**-0.9**
FLOC				S	**Sb**	**02 36 47.0**	**+0.8**
JAMC	**Jamundi, Valle**	**2.46**	**264**	P	**Pb**	**02 36 17.8**	**-0.9**
JAMC				S	**Sb**	**02 36 51.0**	**+1.7**
PLMC	**San Jos del P**	**2.50**	**305**	P	**Pb**	**02 36 17.7**	**-1.6**
PLMC				S	**Sb**	**02 36 50.5**	**+0.3**
POPC	**Popayan, Colom**	**2.62**	**249**	P	**Pb**	**02 36 19.8**	**-1.7**
POPC				S	**Sg**	**02 36 56.5**	**-2.1**
RUSC	**La Rusia**	**2.65**	**25**	P	**Pb**	**02 36 20.3**	**-1.9**
RUSC				S	**Sb**	**02 36 53.5**	**-1.5**
RUSC	**La Rusia**	**2.65**	**25**	P	**Pb**	**02 36 20.6**	**-1.5**
RUSC				S	**Sb**	**02 36 55.2**	**+0.2**
CBOC	**Ciudad Bolivar**	**2.97**	**323**	P	**Pb**	**02 36 25.4**	**-1.9**
CBOC				S	**Sb**	**02 37 05.3**	**+1.5**
HELC	**Santa Helena**	**3.00**	**334**	P	**Pb**	**02 36 25.2**	**-2.7**
HELC				S	**Sb**	**02 37 02.4**	**-2.3**
HELC	**Santa Helena**	**3.00**	**334**	P	**Pb**	**02 36 24.9**	**-3.0**
HELC				S	**Sb**	**02 37 04.7**	**0.0**
PTBC	**PUERTO BERRIO,**	**3.05**	**356**	P	**Pn**	**02 36 24.2**	**+1.6**
PTBC				S	**Sn**	**02 36 59.1**	**-0.1**
BARC	**Barichara**	**3.26**	**18**	P	**Pb**	**02 36 30.0**	**-2.4**
BARC				S	**Sg**	**02 37 16.0**	**-3.1**
CRUC	**La Cruz**	**3.32**	**235**	P	**Pb**	**02 36 31.1**	**-2.4**
CRUC				S	**Sb**	**02 37 16.6**	**+2.5**
PTLC	**Puerto Leguiza**	**3.33**	**190**	P	**Pg**	**02 36 36.4**	**-1.7**
PTLC				S	**Sg**	**02 37 25.7**	**+4.4**
BBAC	**Balboa, Cauca**	**3.35**	**245**	P	**Pb**	**02 36 30.5**	**-3.4**
BBAC				S	**Sg**	**02 37 19.7**	**-2.3**
BRJC	**Barrancabermej**	**3.51**	**8**	P	**Pn**	**02 36 31.5**	**+2.7**
BRJC				S	**Sb**	**02 37 18.4**	**-0.7**
GCUF	**Volcan Galeras**	**3.84**	**235**	P	**Pb**	**02 36 38.0**	**-4.4**
GCUF				S	**Sg**	**02 37 35.6**	**-2.1**
PAMC	**Pamplona, Colo**	**4.12**	**21**	P	**Pn**	**02 36 40.9**	**+3.2**
PAMC				S	**Sn**	**02 37 29.4**	**+3.1**
UREC	**San Jos de Ur**	**4.45**	**343**	P	**Pn**	**02 36 45.5**	**+3.8**
SJCC	**San Jacinto, C**	**6.45**	**352**	P	**Pn**	**02 37 10.2**	**+0.9**
SJCC				S	**Sn**	**02 38 27.5**	**+4.4**

IDC ***25*** *02:42:19.7±1.3, 3°.39N×73°.89W, h0^{km}, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=46.8km s-min=16.5km az=73.0*

RSNC ***25*** *02:42:22.4±0.0, 3°N±2°×7°4W±°, h4^{km}±3^{km}, M3.6, mb4.3, ML3.3*

CATAC ***25*** *02:42:23.3±0.4, 3°N±3°×7°4W±°, h1^{km}, M4.0/8, MLv4.0/8, Error ellipse: s-maj=7.4km s-min=4.8km az=130.5, confirmed*

ISC 25 02:42:21.3±0.6**, 3°.43N**±0°.02×**74°.18W**±0°.03**, h10^{km}, n47, σ2^{s}.06**/83**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URMC	**La Uribe, Meta**	**0.27**	**228**	P	**Pg**	**02 42 26.1**	**-0.7**
URMC				S	**Sg**	**02 42 29.7**	**-0.7**
PRAC	**Prado**	**0.76**	**292**	P	**Pg**	**02 42 35.0**	**-1.0**
PRAC				S	**Sg**	**02 42 44.7**	**-1.3**
PRAC	**Prado**	**0.76**	**292**	P	**Pg**	**02 42 34.9**	**-1.1**
PRAC				S	**Sg**	**02 42 45.4**	**-0.6**
VILC	**Villavicencio,**	**0.84**	**35**	P	**Pg**	**02 42 36.8**	**-0.7**
VILC				S	**Sg**	**02 42 47.6**	**-0.9**
CVER	**Cruz Verde, Cu**	**1.09**	**6**	P	**Pg**	**02 42 40.8**	**-1.6**
CVER				S	**Sg**	**02 42 55.9**	**-0.8**
ORTC	**Ortega, Tolima**	**1.17**	**294**	P	**Pb**	**02 42 42.2**	**-1.4**
ORTC				S	**Sb**	**02 42 58.4**	**-0.4**
CHIC	**Chingaza**	**1.28**	**21**	P	**Pn**	**02 42 43.9**	**-1.7**
CHIC				S	**Sb**	**02 43 00.4**	**-2.0**
MACC	**Macarena, Meta**	**1.31**	**165**	P	**Pn**	**02 42 44.6**	**-1.2**
MACC				S	**Sb**	**02 43 01.1**	**-2.0**
ROSC	**El Rosal**	**1.41**	**354**	Pg	**Pb**	**02 42 47.8**	**-0.2**
	88nm,0.3s,baz=164,slow=6.8,SNR=53						
ROSC				Lg	Lg	02 43 07.4	
	88nm,0.3s,baz=152,slow=17,SNR=5.6						
BETC	**Betania**	**1.46**	**240**	P	**Pb**	**02 42 47.9**	**-0.7**

BETC				S	**Sg**	**02 43 07.4**	**-1.0**
ANIL	**Santa Ana**	**1.61**	**311**	P	**Pn**	**02 42 49.8**	**-0.4**
ANIL				S	**Sb**	**02 43 11.8**	**-0.2**
GARC	**Garzon, Huila**	**1.80**	**227**	P	**Pb**	**02 42 53.1**	**-1.4**
GARC				S	**Sb**	**02 43 16.2**	**-1.0**
RECRC	**Villamaria, Ca**	**1.92**	**323**	P	**Pb**	**02 42 55.5**	**-1.3**
RECRC				S	**Sb**	**02 43 20.4**	**-0.7**
NIZA	**Niza - Manizal**	**2.07**	**322**	P	**Pb**	**02 42 58.2**	**-1.0**
NIZA				S	**Sb**	**02 43 24.4**	**-0.7**
SPBC	**San Pablo de B**	**2.21**	**3**	P	**Pb**	**02 43 00.9**	**-0.6**
SPBC				S	**Sg**	**02 43 34.2**	**+1.6**
YOTC	**Yotoco, Valle**	**2.23**	**284**	P	**Pn**	**02 42 59.6**	**+1.1**
YOTC				S	**Sb**	**02 43 29.0**	**-0.6**
FLOC	**Florencia**	**2.35**	**219**	P	**Pb**	**02 43 02.0**	**-1.8**
FLOC				S	**Sb**	**02 43 32.9**	**0.0**
FLOC	**Florencia**	**2.35**	**219**	P	**Pb**	**02 43 01.9**	**-1.8**
FLOC				S	**Sb**	**02 43 32.5**	**-0.4**
JAMC	**Jamundi, Valle**	**2.50**	**265**	P	**Pb**	**02 43 05.0**	**-1.4**
JAMC				S	**Sb**	**02 43 36.7**	**-0.7**
PLMC	**San Jos del P**	**2.56**	**305**	P	**Pn**	**02 43 04.7**	**+1.7**
PLMC				S	**Sn**	**02 43 36.1**	**+1.8**
POPC	**Popayan, Colom**	**2.64**	**251**	P	**Pb**	**02 43 06.6**	**-2.3**
POPC				S	**Sb**	**02 43 42.6**	**+1.0**
RUSC	**La Rusia**	**2.68**	**24**	P	**Pb**	**02 43 07.6**	**-2.2**
RUSC				S	**Sb**	**02 43 42.9**	**0.0**
RUSC	**La Rusia**	**2.68**	**24**	P	**Pb**	**02 43 07.2**	**-2.6**
RUSC				S	**Sb**	**02 43 41.6**	**-1.4**
CBOC	**Ciudad Bolivar**	**3.03**	**323**	P	**Pn**	**02 43 12.2**	**+2.6**
CBOC				S	**Sb**	**02 43 52.2**	**-0.5**
HELC	**Santa Helena**	**3.06**	**334**	P	**Pb**	**02 43 13.5**	**-2.6**
HELC				S	**Sb**	**02 43 50.6**	**-3.1**
HELC	**Santa Helena**	**3.06**	**334**	P	**Pn**	**02 43 12.5**	**+2.4**
HELC				S	**Sb**	**02 43 52.6**	**-1.0**
PTBC	**PUERTO BERRIO,**	**3.10**	**355**	P	**Pn**	**02 43 13.1**	**+2.7**
PTBC				S	**Sb**	**02 43 53.7**	**-1.0**
PTLC	**Puerto Leguiza**	**3.29**	**191**	P	**Pg**	**02 43 25.7**	**+1.3**
PTLC				S	**Sg**	**02 44 09.5**	**+2.4**
BARC	**Barichara**	**3.30**	**18**	P	**Pb**	**02 43 17.3**	**-2.8**
BARC				S	**Sb**	**02 44 01.7**	**+1.2**
CRUC	**La Cruz**	**3.33**	**236**	P	**Pb**	**02 43 17.2**	**-3.5**
CRUC				S	**Sb**	**02 44 03.1**	**+1.7**
BBAC	**Balboa, Cauca**	**3.37**	**246**	P	**Pb**	**02 43 22.9**	**+1.6**
BBAC				S	**Sg**	**02 44 06.2**	**-3.4**
BRJC	**Barrancabermej**	**3.55**	**7**	P	**Pn**	**02 43 18.8**	**+2.3**
BRJC				S	**Sb**	**02 44 03.8**	**-3.7**
GCUF	**Volcan Galeras**	**3.84**	**235**	P	**Pb**	**02 43 26.4**	**-3.2**
GCUF				S	**Sg**	**02 44 21.4**	**-3.5**
DBBC	**Dabeiba**	**4.10**	**331**	P	**Pb**	**02 43 29.7**	**-4.0**
PAMC	**Pamplona, Colo**	**4.16**	**21**	P	**Pn**	**02 43 28.5**	**+3.2**
PAMC				S	**Sb**	**02 44 28.9**	**+3.5**
BONI	**La Bonita**	**4.46**	**229**	P	**Pb**	**02 43 41.3**	**+1.3**
BONI				S	**Sb**	**02 44 38.2**	**+4.2**
OCAC	**Ocana**	**4.86**	**10**	P	**Pn**	**02 43 38.2**	**+3.5**
OCAC				S	**Sn**	**02 44 36.0**	**+4.9**
APAC	**Apartado, Choc**	**5.04**	**332**	P	**Pn**	**02 43 40.6**	**+3.5**
	20nm,0.5s						
OTAV	**Otavalo**	**5.31**	**234**	P	Pn	02 43 46.6	+5.4
	12nm,0.9s						
OTAV				S	**Sg**	**02 45 08.7**	**-3.5**
	12nm,0.9s						
ARGC	**Ariguani, Magd**	**6.39**	**359**	P	Pn	02 44 00.1	+4.5
	16nm,0.5s						
ARGC				S	Sb	02 45 19.1	-10
	16nm,0.5s						
SDV	**Santo Domingo**	**6.47**	**33**	P	**Pn**	**02 43 58.3**	**+1.4**
SDV				S	**Sn**	**02 45 11.3**	**+0.4**
SJCC	**San Jacinto, C**	**6.50**	**351**	P	**Pn**	**02 43 58.0**	**+0.8**
SJCC				S	**Sn**	**02 45 14.4**	**+2.8**
TXAR	**Lajitas Array**	**38.03**	**316**	P	**P**	**02 49 41.3**	**+1.1**
	0.2nm,0.6s,baz=169,slow=2.4,SNR=2.2						
	0.2nm,0.6s						
PDAR	**Pinedale Array**	**50.24**	**326**	P	**P**	**02 51 20.5**	**+2.4**
	0.3nm,0.7s,baz=131,slow=6.1,SNR=2.5						
	0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**75.48**	**77**	P	**P**	**02 54 04.8**	**-1.6**
	0.2nm,0.6s,baz=278,slow=5.5,SNR=1.7						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**146.22**	**231**	PKPbc	**PKPbc**	**03 02 02.0**	**-1.0**
	0.4nm,0.6s,baz=120,slow=4.1,SNR=11						
WRA	**Warramunga Arr**	**147.70**	**237**	PKPbc	**PKiKP**	**03 02 07.9**	**-1.5**
	0.4nm,0.6s,baz=144,slow=2.9,SNR=1.7						

*IDC **25** 02:51:22.6±2.6, 13°.64N×143°.82E, h115^{km}±44^{km}, mb3.4/7, mbtmp3.8/7, Error ellipse: s-maj=83.5km s-min=16.5km az=86.0*

*NEIC **25** 02:51:24.4±1.4, 13°.90N±0°.10×144°.6E±0°.2, h148^{km}±6^{km}, mb4.1/5, Error ellipse: s-maj=35.4km s-min=9.1km az=107.0*

ISC 25 02:51:23.9±0.9, 13°.8N±0°.1×144°.7E±0°.3, h154^{km}±9^{km}, n19, σ1^{s}.20/18, mb3.9/10, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.27**	**141**	P	**Pn**	**02 51 45.6**	**+0.8**
	908nm,0.3s,baz=211,slow=1.0,SNR=207						
GUMO				S	**Sn**	**02 52 00.7**	**-0.1**
	349nm,0.2s,baz=180,slow=23,SNR=6.5						
DPSS	**Saipan**	**1.78**	**36**	Pn	**Pn**	**02 51 57.0**	**+0.2**
DPSS				Sn	**Sn**	**02 52 20.6**	**-1.5**
H11N1	**WAKE ISLAND Hy**	**22.04**	**72**	T	T	03 19 42.2	
	baz=257						
H11N2	**WAKE ISLAND Hy**	**22.05**	**71**	T	T	03 19 27.9	
	baz=257						
H11N3	**WAKE ISLAND Hy**	**22.06**	**72**	T	T	03 19 14.8	
	baz=257						
WB0	**Warramunga Arr**	**34.87**	**197**	P	**P**	**02 58 00.8**	**+0.2**
WB0				IAmb	IAmb	02 58 18.4	
	comp=Z,4.6nm,1.2s						
WRA	**Warramunga Arr**	**35.05**	**197**	P	**P**	**02 58 02.2**	**0.0**
	comp=Z,0.9nm,0.6s,baz=22,slow=8.7,SNR=5.5						
	comp=Z,0.9nm,0.6s						
FITZ	**Fitzroy Crossi**	**36.85**	**211**	P	**P**	**02 58 13.7**	**-3.8**
	comp=Z,0.9nm,0.4s,baz=21,slow=12,SNR=14						
	comp=Z,0.9nm,0.4s						
AS31	**Alice Springs**	**38.70**	**196**	P	**P**	**02 58 32.6**	**-0.4**
ASAR	**Alice Springs**	**38.71**	**196**	P	**P**	**02 58 33.2**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=18,slow=6.5,SNR=12						
	comp=Z,0.2nm,0.4s						
ASAR	**Alice Springs**	**38.71**	**196**	P	**P**	**02 58 32.4**	**-0.6**
STKA	**Stephens Creek**	**45.52**	**184**	P	**P**	**02 59 28.0**	**0.0**
	comp=Z,0.4nm,0.5s,baz=356,slow=8.6,SNR=2.8						
	comp=Z,0.4nm,0.5s						
STKA	**Stephens Creek**	**45.52**	**184**	P	**P**	**02 59 27.8**	**-0.3**
BBOO	**Buckleboo**	**47.08**	**190**	P	**P**	**02 59 40.8**	**+0.6**
BBOO				IAmb	IAmb	02 59 46.4	
	comp=Z,10nm,1.2s						
MKAR	**Makanchi Array**	**61.22**	**316**	P	**P**	**03 01 22.6**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=91,slow=7.2,SNR=6.0						
	comp=Z,0.3nm,0.5s						
KURK	**Kurchatov**	**64.31**	**320**	P	**P**	**03 01 42.6**	**-0.2**
KURK				IAmb	IAmb	03 01 43.8	
	comp=Z,1.1nm,0.8s						
KURBB	**Kurchatov Arra**	**64.35**	**320**	P	**P**	**03 01 43.2**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=102,slow=6.5,SNR=9.3						
	comp=Z,0.9nm,0.4s						
BVAR	**Borovoye Array**	**69.65**	**322**	P	**P**	**03 02 16.7**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=97,slow=7.4,SNR=5.0						
	comp=Z,0.9nm,0.4s						
BMAR	**Burnt Mountain**	**69.97**	**23**	P	**P**	**03 02 19.7**	**+1.4**

IDC 25 03:01:11.4±5.5, 6°.96S×129°.57E, h195^{km}±53^{km}, mb2.9/1, mbtmp3.6/4, Error ellipse: s-maj=76.9km s-min=26.1km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.71**	**199**	P	Pn	03 03 53.7	+0.9
	1.7nm,0.3s,baz=24,slow=11,SNR=19						
WRA	**Warramunga Arr**	**13.71**	**161**	P	Pn	03 04 16.1	-1.9
	0.4nm,0.4s,baz=341,slow=13,SNR=9.9						
WRA				S	Sn	03 06 41.5	-10
	0.6nm,0.3s,baz=342,slow=21,SNR=7.5						
ASAR	**Alice Springs**	**17.12**	**166**	P	Pn	03 04 59.2	-0.2
	0.3nm,0.5s,baz=340,slow=10,SNR=9.3						
ASAR				S	S	03 08 06.3	-0.1
	0.3nm,0.5s,baz=340,slow=24,SNR=5.3						
MKAR	**Makanchi Array**	**67.96**	**327**	P	P	03 11 49.1	-0.1
	0.2nm,0.4s,baz=111,slow=7.9,SNR=2.4						
	0.2nm,0.4s						

DJA 25 03:03:32.6±0.3, 9°S±9°×11°1E±°, h99^{km}±8^{km}, M3.3/12, mb3.9/4, MLv3.1/12, Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCJI	**Pacitan**	**0.47**	**320**	P	Pn	03 03 49.4	+1.3
PCJI				S	Sn	03 04 02.2	+2.6
SNJI	**Sawahan-Nganju**	**0.82**	**20**	P	Pn	03 03 52.6	+1.3
SNJI				S	Sn	03 04 07.0	+1.7
SJI	**Sawahan**	**0.87**	**19**	P	Pn	03 03 51.4	-0.3
SJI				S	Sn	03 04 06.8	+0.8
UGM	**Wanagama**	**1.15**	**304**	P	Pn	03 03 54.9	+0.3
YOGI	**Yogyakarta**	**1.39**	**302**	P	Pn	03 03 58.6	+1.2
GMJI	**Gumukmas**	**1.96**	**82**	P	Pn	03 04 04.7	0.0
JAGI	**Jajag, Banyuwa**	**2.65**	**88**	P	Pn	03 04 13.4	-0.2
KPJI	**Karang Pucung**	**2.80**	**296**	P	Pn	03 04 15.6	-0.1
CMJI	**Cimerak**	**3.10**	**284**	P	Pn	03 04 19.1	-0.6
RTBI	**Rangdo, Negare**	**3.43**	**89**	P	Pn	03 04 24.5	+0.4
BBJI	**Bungbulang**	**3.95**	**286**	P	Pn	03 04 31.0	-0.1
TWSI	**Taliwang, Sumb**	**5.34**	**92**	P	Pn	03 04 49.7	-0.3
	0.0nm7.2nm,1.0s						
PLAI	**Plampang**	**6.23**	**93**	P	Pn	03 05 01.9	-0.2
	12nm,0.9s						

*ATH **25** 03:04:07.6, 35°.14N×26°.29E, h39^{km}±2^{km}, ML2.6/3, Manual Solution by A.Moschou First location: 2019/12/25 03:05:22, This location: 2019/12/25 04:09:39 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 4 km; Longitude uncertainty: 1 km*

*THE **25** 03:04:09.0, 35°N±6°×2°6E±°, h22^{km}±5^{km}, M2.4/5, MLh2.4/5*

ISC 25 03:04:08.3±1.0, 35°.27N±0°.05×26°.26E±0°.03, h30^{km}±9^{km}, n11, σ0^{s}.51/22, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIT2	**Siteia**	**0.14**	**241**	P	**Pb**	**03 04 14.2**	**+0.2**
SIT2				S	**Sn**	**03 04 19.3**	**+1.2**
ZKR	**Zakros**	**0.16**	**191**	P	**Pn**	**03 04 14.3**	**-0.5**
ZKR				S	**Sn**	**03 04 19.5**	**+0.8**
ZKR	**Zakros**	**0.16**	**191**	P	**Pb**	**03 04 14.1**	**-0.1**
ZKR				S	**Sn**	**03 04 18.5**	**-0.2**
NPS	**Neapolis**	**0.53**	**269**	P	**Pb**	**03 04 19.5**	**+0.2**
NPS				S	**Sn**	**03 04 27.8**	**+0.1**
NPS	**Neapolis**	**0.53**	**269**	P	**Pb**	**03 04 19.2**	**0.0**
NPS				S	**Sn**	**03 04 27.7**	**-0.1**
KARP	**Karpathos**	**0.79**	**69**	P	**Pn**	**03 04 23.3**	**-0.2**
KARP				S	**Sn**	**03 04 34.0**	**-0.2**
KARP	**Karpathos**	**0.79**	**69**	P	**Pn**	**03 04 23.2**	**-0.2**
KARP				S	**Sb**	**03 04 33.7**	**-0.3**
IDI	**Anoyia**	**1.12**	**271**	P	**Pb**	**03 04 28.8**	**-0.3**
IDI				S	**Sn**	**03 04 43.0**	**+0.6**
IDI	**Anoyia**	**1.12**	**271**	P	**Pn**	**03 04 28.2**	**+0.2**
IDI				S	**Sn**	**03 04 42.0**	**-0.5**
THERA	**Ancient Thera,**	**1.26**	**330**	P	**Pn**	**03 04 29.4**	**-0.6**
THERA				S	**Sn**	**03 04 46.4**	**+0.5**
ARG	**Arkhangelos**	**1.79**	**58**	P	**Pn**	**03 04 37.5**	**+0.3**
ARG				S	**Sn**	**03 04 59.6**	**+0.8**

*OSPL **25** 03:05:20.4±1.9, 18°.93N×70°.31W, h105^{km}±20^{km}, ML2.2, Presumed earthquake*

*SDD **25** 03:05:23.3±0.7, 18°.94N×70°.36W, h75^{km}±16^{km}, MD3.2, ML2.7, MW2.6, Presumed earthquake*

ISC 25 03:05:20.5±2.5, 18°.97N±0°.07×70°.39W±0°.05, h100^{km}±21^{km}, n15, σ0^{s}.73/21, 2C-2D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SC01	**Santiago de lo**	**0.56**	**325**	⇓*e*Pg	**Pn**	**03 05 37.0**	**+0.2**
SC01				⇑*e*Pg		03 05 37.0	
SC01	**Santiago de lo**	**0.56**	**325**	*i* P	**Pn**	**03 05 36.9**	**+0.2**
SC01				*e*S	**Sn**	**03 05 49.5**	**+0.6**
SC01				IAML		03 05 49.7	
	comp=Z,59nm,0.7s						
NAG1	**Nagua**	**0.63**	**52**	*e*Pg	**Pn**	**03 05 37.0**	**-0.3**
NADR	**Nagua**	**0.64**	**53**	*e*Pg	**Pn**	**03 05 37.0**	**-0.3**
NADR				IAML		03 05 50.5	
	comp=N,168nm,0.5s						
NADR				IAML		03 05 54.3	
	comp=N,2μm,0.3s						
SDD	**Santo Domingo**	**0.68**	**138**	⇓*e*Pg	**Pn**	**03 05 37.4**	**-0.3**
SDD				IAML		03 06 24.7	
	comp=N,32nm,1.2s						
SDDR	**Presa de Saban**	**0.85**	**271**	*i* P	**Pn**	**03 05 39.9**	**+0.5**
SDDR				*e*S	**Sn**	**03 05 53.9**	**+0.3**
SDDR				IAML		03 05 57.1	
	comp=Z,37nm,0.3s						
HATOM	**Hato Mayor del**	**0.97**	**100**	*e*Pg	**Pn**	**03 05 40.2**	**-0.5**
HATOM				IAML		03 05 56.9	
	comp=N,423nm,0.3s						
HATOM				IAML		03 05 57.0	
	comp=N,34nm,0.5s						
LONE3	**El Aguacate, B**	**1.07**	**250**	*i* P	**Pn**	**03 05 41.5**	**-0.4**
LONE3				*e*S	**Sn**	**03 05 57.3**	**-0.6**
LONE3				IAML		03 06 00.2	
	comp=Z,20nm,1.6s						
PODR	**Polo**	**1.16**	**227**	⇑*e*Pg	**Pn**	**03 05 43.1**	**+0.3**
PODR				IAML		03 06 03.9	
	comp=N,56nm,1.2s						
PODR				IAML		03 06 05.0	
	comp=N,338nm,0.2s						
PODR	**Polo**	**1.16**	**227**	*i* P	**Pn**	**03 05 43.2**	**+0.3**
PODR				*e*S	**Sn**	**03 06 01.1**	**+1.4**
LOPP1	**Punta Rusia, P**	**1.16**	**319**	*i* P	**Pn**	**03 05 42.2**	**-0.5**
LOPP1				IAML		03 05 59.2	
	comp=Z,44nm,2.0s						
LOPP1				*e*S	**Sn**	**03 05 59.6**	**+0.1**
LODU1	**El Espartillar**	**1.19**	**239**	*i* P	**Pn**	**03 05 43.4**	**+0.3**
LODU1				*e*S	**Sn**	**03 05 58.1**	**-2.0**
MIDR	**Miches**	**1.27**	**89**	*e*Pg	**Pn**	**03 05 43.9**	**0.0**
MIDR				IAML		03 06 03.2	
	comp=N,93nm,0.3s						
LOVI	**El Cajuil, Ovi**	**1.49**	**219**	*i* P	**Pn**	**03 05 46.4**	**-0.1**
HIDR	**Higuey Centro**	**1.63**	**103**	*e*Pg	**Pn**	**03 05 49.1**	**+0.8**
HIDR				IAML		03 06 11.5	
	comp=N,51nm,0.2s						
HIDR				IAML		03 06 12.4	
	comp=N,146nm,0.2s						

*NEIC **25** 03:08:57.0±2.0, 51°.33N±0°.05×176°.63W±0°.06, h35^{km}±1^{km}, mb4.2/47, ML4.3/10, ML3.9(AEIC), Error ellipse: s-maj=8.2km s-min=6.1km az=9.0*

*AEIC **25** 03:08:57.8±2.1, 51°.43N±0°.06×176°.64W±0°.06, h38^{km}±3^{km}, Error ellipse: s-maj=8.6km s-min=5.6km az=195.0*

*IDC **25** 03:08:58.1±2.9, 51°.61N×176°.76W, h48^{km}±25^{km}, mb3.5/18, mbtmp3.9/21, ML3.7/4, MS3.2/1, Error ellipse: s-maj=23.9km s-min=12.1km az=176.0*

ISC 25 03:08:58.0±1.2, 51°.5N±0°.1×176°.67W±0°.03, h52^{km}±9^{km}, n134, σ0^{s}.95/148, mb4.1/29, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**0.43**	**359**		**Pn**	**03 09 08.0**	**-0.5**
ADK					**Sn**	**03 09 16.1**	**0.0**
ETKA	**Kagalaska Isla**	**0.44**	**22**		**Pn**	**03 09 07.9**	**-0.8**
ETKA					**Sn**	**03 09 16.2**	**-0.2**
KIMD	**Kanaga Island**	**0.47**	**311**		**Pn**	**03 09 08.5**	**-0.5**
KIMD					**Sn**	**03 09 16.9**	**0.0**
KIWB	**Kanaga Island**	**0.50**	**323**		**Pn**	**03 09 09.2**	**-0.2**
KIWB					**Sn**	**03 09 17.8**	**+0.3**
KIWB				IAML		03 09 18.6	
	comp=E,15μm,0.6s						
KIWB				IAML		03 09 18.7	
	comp=N,12μm,0.5s						
KIRH	**Kanaga Island**	**0.52**	**330**		**Pn**	**03 09 09.8**	**+0.2**
KIRH					**Sn**	**03 09 18.9**	**+0.9**
KIKV	**Kanaga Island**	**0.53**	**324**		**Pn**	**03 09 09.7**	**0.0**
ADAG	**Mount Adagdak**	**0.53**	**5**		**Pn**	**03 09 09.9**	**+0.2**
ADAG					**Sn**	**03 09 19.2**	**+1.0**
KINC	**Kanaga Island**	**0.56**	**329**		**Pn**	**03 09 10.4**	**+0.4**
GSCK	**Great Sitkin C**	**0.64**	**29**		**Pn**	**03 09 10.9**	**-0.2**
GSCK					**Sn**	**03 09 20.9**	**+0.4**
GSTD	**Great Sitkin T**	**0.69**	**28**		**Pn**	**03 09 11.7**	**-0.1**
GSTD					**Sn**	**03 09 21.7**	**0.0**
GSMY	**Great Sitkin M**	**0.70**	**33**		**Sn**	**03 09 21.7**	**-0.3**
GSTR	**Great Sitkin T**	**0.74**	**30**		**Pn**	**03 09 12.5**	**+0.1**
GSTR					**Sn**	**03 09 23.7**	**+0.8**
GSTR				IAML		03 09 27.0	
	comp=N,10μm,0.8s						
GSTR				IAML		03 09 27.9	
	comp=E,9μm,0.4s						
TAPA	**Tanaga Point A**	**0.80**	**297**		**Sn**	**03 09 25.2**	**+1.1**
TAFL	**Tanaga Flats**	**0.82**	**292**		**Pn**	**03 09 13.4**	**0.0**
TAFL					**Sn**	**03 09 25.7**	**+1.0**
TASE	**Tanaga Southea**	**0.93**	**295**		**Pn**	**03 09 15.4**	**+0.5**
TASE					**Sn**	**03 09 28.6**	**+1.3**
GAKI	**Gareloi-Kavalg**	**1.34**	**275**		**Pn**	**03 09 20.4**	**+0.1**
GAKI					**Sn**	**03 09 38.1**	**+1.1**
GALAA	**Gareloi Lava P**	**1.34**	**284**		**Sn**	**03 09 39.8**	**+2.5**
GANE	**Gareloi Northe**	**1.36**	**286**		**Sn**	**03 09 39.7**	**+2.1**
ATKA	**Atka Island**	**1.71**	**63**		**Pn**	**03 09 24.9**	**-0.5**
ATKA				Sn	**Sn**	**03 09 46.1**	**+0.1**
ATKA				IAML		03 09 51.4	
	comp=N,3μm,0.8s						
ATKA				IAML		03 09 53.3	
	comp=E,3μm,0.5s						
KOWE	**Korovin West**	**1.75**	**58**		**Pn**	**03 09 26.8**	**+0.8**
KOWE					**Sn**	**03 09 48.5**	**+1.2**
KOKL	**Mount Kliuchef**	**1.76**	**59**		**Pn**	**03 09 26.7**	**+0.6**
KOKL					**Sn**	**03 09 49.1**	**+1.6**
KOFP	**Korovin Flat P**	**1.79**	**62**		**Pn**	**03 09 27.4**	**+0.8**
KOFP					**Sn**	**03 09 50.2**	**+1.9**
AMKA	**Amchitka**	**2.52**	**270**		**Pn**	**03 09 36.6**	**+0.2**
LSPA	**Little Sitkin**	**3.00**	**281**		**Pn**	**03 09 44.1**	**+1.1**
LSSE	**Little Sitkin**	**3.00**	**281**		**Pn**	**03 09 44.1**	**+1.1**
LSNW	**Little Sitkin**	**3.04**	**282**		**Pn**	**03 09 44.4**	**+0.8**
SHEM	**Shemya Is, Ala**	**5.83**	**286**	P	**Pn**	**03 10 22.1**	**+0.3**
	comp=E,6.9nm,0.3s,baz=98,slow=14,SNR=4.1						
SMY	**Shemya**	**5.83**	**286**	Pn	**Pn**	**03 10 22.4**	**+0.6**
MSW	**Makushin Switc**	**6.50**	**64**		**Pn**	**03 10 32.3**	**+1.4**
UNV	**Unalaska Valle**	**6.63**	**65**	Pn	**Pn**	**03 10 33.6**	**+0.8**
SPIA	**Saint Paul Isl**	**6.85**	**31**	Pn	**Pn**	**03 10 38.0**	**+2.3**
M11K	**Mekoryuk**	**10.69**	**29**	Pn	**Pn**	**03 11 30.3**	**+2.1**
P16K	**Nushagak River**	**13.05**	**47**	Pn	**Pn**	**03 12 00.9**	**+0.6**
O16K	**Kokwok River B**	**13.27**	**45**	Pn	**Pn**	**03 12 04.4**	**+0.9**
P17K	**Kvichak River**	**13.84**	**48**		**Pn**	**03 12 13.1**	**+2.0**
L16K	**Owhat River**	**13.92**	**36**		**Pn**	**03 12 14.2**	**+1.9**
ACHA	**Angle Creek He**	**14.00**	**53**	Pn	**Pn**	**03 12 13.3**	**-0.1**
M17K	**Holitna River**	**14.51**	**39**		**Pn**	**03 12 22.2**	**+2.1**
O18K	**Koktuh Hills**	**14.69**	**47**	Pn	**Pn**	**03 12 24.4**	**+2.0**
KDAK	**Kodiak Island**	**15.27**	**56**	P	**Pn**	**03 12 27.8**	**-2.2**
	comp=E,0.9nm,0.3s,baz=297,slow=9.0,SNR=27						
KDAK				S	**Sn**	**03 15 19.6**	**+1.8**
	comp=E,8.9nm,1.0s,baz=288,slow=19,SNR=1.6						
	comp=E,16nm,0.9s						
KDAK	**Kodiak Island**	**15.27**	**56**	Pn	**Pn**	**03 12 28.3**	**-1.7**
PETK	**Petropavlovsk-**	**15.75**	**286**	P	**Pn**	**03 12 33.8**	**-2.4**
	comp=E,0.2nm,0.3s,baz=60,slow=21,SNR=3.6						
PETK				LR	LR	03 17 29.5	
	comp=E,82nm,18.9s,baz=43,slow=33						
	comp=E,4.0nm,1.0s						
PETK	**Petropavlovsk-**	**15.75**	**286**	Pn	**Pn**	**03 12 36.8**	**+0.6**
H17K	**Granite Mounta**	**16.06**	**26**		**P**	**03 12 42.1**	**-0.6**
STLK	**Strandline Lak**	**16.90**	**44**	P	**P**	**03 12 52.3**	**+0.3**
SLKM	**Skilak Lake**	**17.24**	**48**		**Pn**	**03 12 54.4**	**-0.4**
SLKM				IAmb	IAmb	03 12 57.8	
	comp=Z,16nm,1.1s						
PPLA	**Purkeypile**	**17.40**	**39**	P	**P**	**03 12 58.7**	**+1.1**
PPLA				IAmb	IAmb	03 13 08.8	
	comp=Z,14nm,0.7s						
C16K	**Lisburne Hills**	**17.75**	**14**		**P**	**03 13 02.4**	**+1.1**
L22K	**Petersville**	**17.80**	**42**	P	**Pn**	**03 13 01.7**	**0.0**
L22K				IAmb	IAmb	03 13 08.3	
	comp=Z,9.1nm,0.6s						
KTH	**Kantishna Hill**	**18.22**	**38**		**Pn**	**03 13 08.2**	**+1.3**
KTH				IAmb	IAmb	03 13 12.9	
	comp=Z,16nm,0.7s						
TRF	**Thorofare Moun**	**18.42**	**39**	P	**Pn**	**03 13 10.1**	**+0.7**
TRF				IAmb	IAmb	03 13 25.7	
	comp=Z,12nm,1.0s						
BPAW	**Bear Paw Mtn.**	**18.48**	**37**		**Pn**	**03 13 11.2**	**+1.2**
BPAW				IAmb	IAmb	03 13 18.8	
	comp=Z,11nm,0.6s						
C18K	**Utukok River**	**18.79**	**18**	P	**Pn**	**03 13 14.4**	**+0.7**
RND	**Reindeer**	**18.98**	**40**	P	**P**	**03 13 15.1**	**+0.2**
MCK	**McKinley**	**19.09**	**39**		**P**	**03 13 16.2**	**+0.2**
MCK				IAmb	IAmb	03 13 22.1	
	comp=Z,8.7nm,0.6s						
C19K	**Lookout Ridge**	**19.49**	**18**		**Pn**	**03 13 22.2**	**+0.2**
D20K	**Etivluk River**	**19.81**	**22**	P	**Pn**	**03 13 25.4**	**-0.4**
D20K				IAmb	IAmb	03 13 28.4	
	comp=Z,8.9nm,1.0s						
CCB	**Clear Creek Bu**	**19.95**	**38**	P	**P**	**03 13 25.9**	**+0.5**
CCB				IAmb	IAmb	03 13 31.7	
	comp=Z,6.4nm,0.7s						
SEY	**Seymchan**	**20.09**	**317**	P	**P**	**03 13 25.9**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=152,slow=12,SNR=5.3						
	comp=Z,2.4nm,0.2s						
HDA	**Harding Lake**	**20.17**	**39**	P	**P**	**03 13 27.5**	**-0.3**
HDA				IAmb	IAmb	03 13 34.1	
	comp=Z,10nm,0.6s						
N25K	**Chitina, Valde**	**20.18**	**47**	P	**P**	**03 13 28.9**	**+0.8**
N25K				IAmb	IAmb	03 13 41.6	
	comp=Z,9.5nm,1.1s						
IL31		**20.36**	**38**	P	Pn	03 13 30.8	-1.4
ILAR	**Eielson Array**	**20.36**	**38**	P	**P**	**03 13 29.0**	**-0.9**
	comp=Z,1.8nm,0.6s,baz=230,slow=9.1,SNR=18						
ILAR				PcP	**PcP**	**03 17 40.3**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=290,slow=3.3,SNR=1.4						
	comp=Z,1.8nm,0.6s						
K24K	**Donnelly Dome**	**20.39**	**41**	P	**P**	**03 13 30.1**	**-0.2**
E22K	**Anaktuvuk Pass**	**20.62**	**27**	P	Pn	03 13 33.9	-1.5
L26K	**Log Cabin Wild**	**21.15**	**44**	P	**P**	**03 13 38.2**	**-0.2**
L26K				IAmb	IAmb	03 13 42.9	
	comp=Z,8.9nm,0.8s						
J26L	**Joseph Creek**	**21.55**	**40**	P	**P**	**03 13 42.1**	**-0.7**
J26L				IAmb	IAmb	03 14 00.7	
	comp=Z,6.4nm,0.6s						
BCAR	**Beaver Creek A**	**21.84**	**44**	P	**P**	**03 13 46.1**	**+0.3**
BMAR	**Burnt Mountain**	**22.45**	**32**	P	**P**	**03 13 53.3**	**+1.0**
J30M	**Hart River**	**24.56**	**42**		**P**	**03 14 13.1**	**+0.4**
INK	**Inuvik**	**26.64**	**35**	P	**P**	**03 14 30.4**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=223,slow=6.3,SNR=8.9						
INK				PcP	**PcP**	**03 17 54.1**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=300,slow=2.5,SNR=9.2						
	comp=Z,0.6nm,0.3s						
INK	**Inuvik**	**26.64**	**35**	P	**P**	**03 14 30.9**	**-0.4**
INK				IAmb	IAmb	03 14 59.6	
	comp=Z,5.1nm,1.5s						
INK					**PcP**	**03 17 54.6**	**+0.9**
A36M	**Sachs Harbour**	**30.37**	**29**	P	**P**	**03 15 04.8**	**+0.3**
A36M				IAmb	IAmb	03 15 10.5	
	comp=Z,3.3nm,0.9s						
CLRS	**Cowichan Lake**	**33.18**	**73**	P	**P**	**03 15 29.6**	**+0.2**
H11N2	**WAKE ISLAND Hy**	**34.20**	**208**	T	T	03 52 06.2	
	baz=18,slow=76,SNR=730						
H11N3	**WAKE ISLAND Hy**	**34.20**	**208**	T	T	03 52 14.5	
	baz=18,slow=76,SNR=654						
YKA	**Yellowknife Ar**	**34.21**	**47**	P	**P**	**03 15 37.3**	**-0.9**
	comp=Z,0.1nm,0.5s,baz=281,slow=13,SNR=9.0						
YKA				PcP	**PcP**	**03 18 14.6**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=292,slow=3.5,SNR=11						
	comp=Z,0.1nm,0.5s						
YKA	**Yellowknife Ar**	**34.21**	**47**	P	**P**	**03 15 37.6**	**-0.5**
YKA					**PcP**	**03 18 14.4**	**+0.8**
H11N1	**WAKE ISLAND Hy**	**34.21**	**208**	T	T	03 52 15.4	
	baz=18,slow=76,SNR=682						
USRK	**Ussuriysk Ar.**	**34.60**	**279**	P	**P**	**03 15 40.7**	**-1.0**
	comp=Z,1.1nm,0.5s,baz=42,slow=9.8,SNR=2.3						
	comp=Z,1.1nm,0.5s						
H11S1	**WAKE ISLAND Hy**	**35.41**	**208**	T	T	03 53 39.8	
	baz=17,slow=76,SNR=260						
H11S2	**WAKE ISLAND Hy**	**35.42**	**208**	T	T	03 53 34.9	
	baz=17,slow=76,SNR=152						
H11S3	**WAKE ISLAND Hy**	**35.43**	**208**	T	T	03 53 29.8	
	baz=17,slow=76,SNR=128						
JTMT	**Jette**	**39.52**	**70**	P	**P**	**03 16 24.5**	**+0.8**
WVOR	**Wild Horse Val**	**39.68**	**80**	P	**P**	**03 16 26.3**	**+1.3**
WVOR				IAmb	IAmb	03 16 27.7	
	comp=Z,4.2nm,0.9s						
BPMT	**Black Pine Rid**	**40.68**	**71**	P	**P**	**03 16 34.1**	**+0.7**
HLID	**Hailey**	**41.63**	**76**	P	**P**	**03 16 41.9**	**+0.8**
BCYI	**Bear Canyon**	**41.83**	**74**	P	**P**	**03 16 43.9**	**+1.1**
BCYI				IAmb	IAmb	03 16 44.9	
	comp=Z,2.8nm,0.9s						
BOZ	**Bozeman (W)**	**42.20**	**71**	P	**P**	**03 16 46.5**	**+0.8**
BOZ				IAmb	IAmb	03 16 48.4	
	comp=Z,2.9nm,0.8s						
NVAR	**Mina Array Bea**	**42.22**	**84**	P	**P**	**03 16 47.2**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=289,slow=7.3,SNR=6.8						
	comp=Z,0.7nm,0.7s						
NVAR	**Mina Array Bea**	**42.22**	**84**	P	**P**	**03 16 47.0**	**+1.0**

PD31	Pinedale Array	45.01	74	P	P	03 17 09.2	+0.8
PD31				IAmb	IAmb	03 17 26.7	
	comp=Z,2.3nm,0.7s						
PDAR	Pinedale Array	45.01	74	P	P	03 17 09.3	+0.9
	comp=Z,2.3nm,0.7s,baz=322,slow=2.3,SNR=29						
	comp=Z,2.3nm,0.7s						
U15A	North Rim	47.20	82	P	P	03 17 27.3	+1.6
U15A				IAmb	IAmb	03 17 28.3	
	comp=Z,3.3nm,0.8s						
HMU	Henry Mountain	47.21	80	P	P	03 17 27.3	+1.5
O20A	White River Ci	47.37	76	P	P	03 17 27.6	+0.7
RSSD	Black Hills	47.49	69	P	P	03 17 28.2	+0.3
RSSD				IAmb	IAmb	03 17 29.6	
	comp=Z,3.8nm,1.1s						
SONM	Songino Array	47.80	298	P	P	03 17 29.9	-0.2
	comp=Z,0.3nm,0.6s,baz=58,slow=8.7,SNR=1.8						
	comp=Z,0.3nm,0.6s						
SONM	Songino Array	47.80	298	P	P	03 17 30.0	0.0
WUAZ	Wupatki	48.36	83	P	P	03 17 35.7	+1.1
ZALV	Zalesovo Beam	54.94	314	PcP	PcP	03 19 24.6	+0.2
	comp=Z,0.9nm,0.4s,baz=60,slow=3.2,SNR=4.6						
ZALV	Zalesovo Beam	54.94	314		PcP	03 19 24.5	0.0
TXAR	Lajitas Array	57.32	83	P	P	03 18 41.4	+0.7
	comp=Z,1.1nm,0.6s,baz=305,slow=6.0,SNR=20						
	comp=Z,1.1nm,0.6s						
KURK	Kurchatov	59.92	315	P	P	03 18 57.5	-0.9
KURK	Kurchatov	59.92	315		PcP	03 19 44.3	+0.2
KURBB	Kurchatov Arra	60.03	315	P	P	03 18 58.4	-0.7
	comp=Z,1.2nm,0.5s,baz=42,slow=6.5,SNR=28						
KURBB				PcP	PcP	03 19 44.3	-0.3
	comp=Z,0.3nm,0.6s,baz=34,slow=3.4,SNR=4.4						
	comp=Z,1.2nm,0.5s						
LCAR	Lake Charles	60.20	69	P	P	03 18 59.7	-0.8
LCAR				IAmb	IAmb	03 19 26.9	
	comp=Z,2.8nm,1.3s						
O48B	Farmland	60.70	61	P	P	03 19 03.0	-0.8
N49A	Columbus Grove	60.76	60	P	P	03 19 04.3	+0.1
MKAR	Makanchi Array	61.02	310	P	P	03 19 04.8	-1.2
	comp=Z,0.1nm,0.3s,baz=58,slow=4.6,SNR=1.8						
MKAR				PcP	PcP	03 19 48.8	+0.1
	comp=Z,0.4nm,0.5s,baz=48,slow=4.8,SNR=4.6						
	comp=Z,0.1nm,0.3s						
MKAR	Makanchi Array	61.02	310	P	P	03 19 05.1	-0.9
MKAR					PcP	03 19 48.9	+0.1
BVAR	Borovoye Array	61.68	321	P	P	03 19 10.4	+0.2
	comp=Z,1.3nm,0.5s,baz=59,slow=6.6,SNR=6.9						
	comp=Z,1.3nm,0.5s						
FINES	FINESS Array B	65.99	348	P	P	03 19 37.3	-1.1
	comp=Z,0.7nm,0.7s,baz=11,slow=9.2,SNR=1.5						
	comp=Z,0.7nm,0.7s						
FINES	FINESS Array B	65.99	348	P	P	03 19 39.2	+0.8
NOA	NORSAR Array B	67.68	356	P	P	03 19 49.4	+0.2
	comp=Z,0.2nm,0.4s,baz=350,slow=5.3,SNR=3.8						
	comp=Z,0.2nm,0.4s						
HFS	Hagfors	68.45	354	P	P	03 19 53.4	-0.6
	comp=Z,0.6nm,0.4s,baz=0.0,slow=1.8,SNR=14						
	comp=Z,0.6nm,0.4s						
AB31	Akbulak array	68.67	324	P	P	03 19 55.3	-0.3
AB31				IAmb	IAmb	03 20 19.4	
	comp=Z,3.9nm,1.4s						
ABKAR	Akbulak array	68.67	324	P	P	03 19 55.1	-0.5
KK31	Karatay Array	69.30	314	P	P	03 19 59.2	-0.4
KK31				IAmb	IAmb	03 20 00.2	
	comp=Z,1.5nm,0.6s						
KKAR	Karatay Array	69.30	314	P	P	03 19 59.3	-0.4
CMAR	Chiang Mai Arr	72.33	278	P	P	03 20 19.1	+0.9
	comp=Z,1.0nm,0.3s,baz=26,slow=6.9,SNR=5.8						
	comp=Z,1.0nm,0.3s						
CMAR	Chiang Mai Arr	72.33	278	P	P	03 20 17.4	-0.9
GAR	Garm	72.64	311	P	P	03 20 19.9	-0.1
WR8	Warramunga Arr	82.95	226	P	P	03 21 17.1	-0.1
WR8				IAmb	IAmb	03 21 36.1	
	comp=Z,4.1nm,1.3s						
WRA	Warramunga Arr	83.01	226	P	P	03 21 17.6	0.0
	comp=Z,0.5nm,0.7s,baz=21,slow=4.9,SNR=2.1						
	comp=Z,0.5nm,0.7s						
BRTR	Keskin Array B	85.41	337	P	P	03 21 29.9	0.0
	comp=Z,1.0nm,0.6s,baz=28,slow=2.2,SNR=7.3						
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	86.46	224	P	P	03 21 35.6	+0.7
	comp=Z,0.4nm,0.8s,baz=15,slow=5.2,SNR=4.1						
	comp=Z,0.4nm,0.8s						
ASAR	Alice Springs	86.46	224	P	P	03 21 35.2	+0.3
TORD	Torodi Ar. Bea	115.65	2	PKP	PKiKP	03 27 33.7	-0.9
	comp=Z,0.1nm,0.4s,baz=359,slow=3.8,SNR=4.7						
TORD	Torodi Ar. Bea	115.65	2		PKiKP	03 27 32.6	-2.0
H03N2	Juan Fernandez	119.89	107	T	T	05 39 06.5	
	baz=317,slow=77,SNR=32						
H03N1	Juan Fernandez	119.90	107	T	T	05 39 07.5	
	baz=317,slow=77,SNR=21						
H03N3	Juan Fernandez	119.90	107	T	T	05 39 21.3	
	baz=317,slow=77,SNR=34						
BOSA	Boshof	151.88	316	PKPbc	PKiKP	03 28 46.8	-0.5
	comp=Z,1.9nm,0.5s,baz=12,slow=2.7,SNR=13						

IDC ***25*** *03:12:13.4±1.1, 3°.31N×74°.13W, h0^{km}, mb3.7/3, mbtmp3.9/5, ML3.5/2, MS3.1/3, Error ellipse: s-maj=26.1km s-min=14.0km az=90.0*

RSNC ***25*** *03:12:15.8±0.0, 3°N±1°×7°4W±°, h4^{km}±3^{km}, M3.7, mB4.8, mb4.4, ML3.6, Mw(mB)4.0*

CATAC ***25*** *03:12:16.9±0.4, 3°N±3°×7°4W±°, h1^{km}, M4.3/6, mb4.3/1, MLv4.3/6, Error ellipse: s-maj=7.8km s-min=4.5km az=130.5, confirmed*

ISC 25 03:12:13.7±1.2**, 3°.41N**±0°.03×**74°.15W**±0°.03**, h3**^{km}±9^{km}**, n37, σ1^{s}24**/55**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URMC	La Uribe, Meta	0.28	235	P	Pg	03 12 20.0	+0.8
URMC				S	Sg	03 12 23.5	+0.6
PRAC	Prado	0.80	292	P	Pg	03 12 29.1	0.0
PRAC				S	Sg	03 12 39.1	-0.3
PRAC	Prado	0.80	292	P	Pg	03 12 28.8	-0.2
PRAC				S	Sg	03 12 39.0	-0.4
VILC	Villavicencio,	0.83	33	P	Pg	03 12 30.4	+0.7
VILC				S	Sb	03 12 42.5	0.0
CVER	Cruz Verde, Cu	1.11	4	P	Pg	03 12 35.0	0.0
CVER				S	Sg	03 12 50.2	+0.8
ORTC	Ortega, Tolima	1.20	294	P	Pb	03 12 35.6	-1.6
ORTC				S	Sb	03 12 51.9	-1.3
CHIC	Chingaza	1.28	19	P	Pn	03 12 38.0	-0.9
CHIC				S	Sb	03 12 55.0	-0.7
MACC	Macarena, Meta	1.29	167	P	Pn	03 12 38.8	+0.1
MACC				S	Sb	03 12 55.8	+0.1
ROSC	El Rosal	1.43	353	Pg	Pg	03 12 41.8	+0.6
	294nm,0.3s,baz=187,slow=17,SNR=227						
ROSC				Lg	Lg	03 13 01.7	
	416nm,0.3s,baz=242,slow=23,SNR=7.0						
BETC	Betania	1.48	241	P	Pn	03 12 41.4	+0.1
BETC				S	Sn	03 13 00.6	-0.6
GARC	Garzon, Huila	1.81	228	P	Pb	03 12 47.0	-0.7
GARC				S	Sb	03 13 10.2	-0.7
SPBC	San Pablo de B	2.23	2	P	Pb	03 12 54.4	-0.3
SPBC				S	Sg	03 13 25.8	+0.4
YOTC	Yotoco, Valle	2.27	285	P	Pn	03 12 53.3	+1.1
YOTC				S	Sb	03 13 23.6	-0.3
FLOC	Florencia	2.36	220	P	Pb	03 12 56.3	-0.6
FLOC				S	Sb	03 13 26.2	-0.2
FLOC	Florencia	2.36	220	P	Pb	03 12 55.9	-1.0
FLOC				S	Sb	03 13 26.6	+0.2
JAMC	Jamundi, Valle	2.53	266	P	Pb	03 12 59.2	-0.7
JAMC				S	Sb	03 13 31.6	0.0
POPC	Popayan, Colom	2.67	251	P	Pb	03 13 00.5	-1.8
POPC				S	Sb	03 13 36.7	+1.1
RUSC	La Rusia	2.68	23	P	Pb	03 13 01.9	-0.8
RUSC				S	Sb	03 13 35.5	-0.7
RUSC	La Rusia	2.68	23	P	Pb	03 13 01.3	-1.4
PTBC	PUERTO BERRIO,	3.12	354	P	Pn	03 13 05.9	+2.0
BARC	Barichara	3.30	17	P	Pb	03 13 10.9	-2.3
CRUC	La Cruz	3.35	237	P	Pb	03 13 10.7	-3.2
CRUC				S	Sb	03 13 55.6	+0.4
BBAC	Balboa, Cauca	3.39	246	P	Pn	03 13 09.9	+2.2
BBAC				S	Sb	03 13 58.9	+2.6
APAC	Apartado, Choc	5.08	332	P	Pn	03 13 36.0	+5.3
ARGC	Ariguani, Magd	6.41	359	P	Pn	03 13 55.1	+6.0
SDV	Santo Domingo	6.46	33	Pn	Pn	03 13 51.8	+1.8
	9.5nm,0.3s,baz=225,slow=5.7,SNR=29						
SDV				Sn	Sn	03 15 03.4	-1.0
	19nm,0.3s,baz=215,slow=12,SNR=8.5						
SDV				Lg	Lg	03 15 41.6	
	7.1nm,0.3s,baz=246,slow=19,SNR=5.5						
SDV				LR	LR	03 17 04.9	
	comp=Z,130nm,19.0s,baz=252,slow=45						
	16nm,0.3s						
SDV	Santo Domingo	6.46	33	P	Pn	03 13 51.6	+1.6
	649nm25nm,0.6s						
SJCC	San Jacinto, C	6.53	351	P	Pn	03 13 51.9	+1.1
SJCC				S	Sn	03 15 08.0	+2.2
SJCC	San Jacinto, C	6.53	351	P	Pn	03 13 52.0	+1.3
SGC2	Sao Gabriel da	7.99	116	P	Pn	03 14 11.5	+0.7
ATAH	Atahualpa	11.30	202	Pn	Pn	03 14 55.3	-1.3
	0.3nm,0.3s,baz=85,slow=4.2,SNR=1.9						
ATAH				LR	LR	03 19 06.4	
	comp=Z,43nm,20.6s,baz=18,slow=37						
	2.0nm,0.5s						
MDP	Montagnes des	21.51	85	P	P	03 17 04.9	+0.8
	13nm,0.9s,baz=262,slow=11,SNR=6.2						
	13nm,0.9s						
BDFB	Brasilia	32.05	127	LR	LR	03 31 06.3	
	comp=Z,91nm,18.9s,baz=303,slow=35						
PDAR	Pinedale Array	50.27	326	P	P	03 21 14.2	+2.4
	0.3nm,0.8s,baz=107,slow=4.2,SNR=2.0						
	0.3nm,0.8s						
TORD	Torodi Ar. Bea	75.45	77	P	P	03 23 59.1	-0.7
	0.4nm,0.9s,baz=280,slow=5.5,SNR=1.8						
	0.4nm,0.9s						
ASAR	Alice Springs	146.24	231	PKPbc	PKPbc	03 31 55.9	-0.7
	0.5nm,0.5s,baz=119,slow=3.9,SNR=16						
WRA	Warramunga Arr	147.72	237	PKPbc	PKPbc	03 31 59.4	-1.5
	0.4nm,0.6s,baz=117,slow=3.2,SNR=1.3						

IDC ***25*** *03:32:01.5±1.1, 51°.31N×176°.62W, h0^{km}, mb3.5/4, mbtmp3.8/6, ML3.8/2, Error ellipse: s-maj=48.0km s-min=21.0km az=144.0*

NEIC ***25*** *03:32:08.3±1.3, 51°.38N±0°.04×176°.63W±0°.04, h35^{km}±1^{km}, mb3.7/18, ML3.9/10, ML3.6(AEIC), Error ellipse: s-maj=7.8km s-min=4.2km az=345.0*

AEIC ***25*** *03:32:08.5±1.4, 51°.45N±0°.05×176°.64W±0°.05, h40^{km}±5^{km}, Error ellipse: s-maj=7.6km s-min=3.8km az=166.0*

ISC 25 03:32:08.4±1.4**, 51°.4N**±0°.1×**176°.63W**±0°.04**, h47**^{km}±12^{km}**, n82, σ1^{s}10**/93**, mb3.7**/3**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETKA	Kagalaska Isla	0.48	17		Pn	03 32 18.6	-0.7
ETKA					Sn	03 32 26.3	-0.6
ADK	Adak	0.48	356		Pn	03 32 18.6	-0.6
ADK	Adak	0.48	356		Sn	03 32 26.7	-0.3
KIMD	Kanaga Island	0.52	314		Pn	03 32 19.0	-0.7
KIMD					Sn	03 32 27.2	-0.6
KIWB	Kanaga Island	0.56	325		Pn	03 32 19.7	-0.4
KIWB					Sn	03 32 28.1	-0.4
KIWB				IAML		03 32 29.1	
	comp=E,8μm,0.6s						
KIWB				IAML		03 32 29.1	
	comp=N,9μm,0.5s						
KIRH	Kanaga Island	0.58	330		Pn	03 32 20.2	-0.2
KIRH					Sn	03 32 28.7	-0.3
ADAG	Mount Adagdak	0.58	2		Pn	03 32 20.4	-0.1
ADAG					Sn	03 32 28.9	-0.2
KIKV	Kanaga Island	0.59	325		Pn	03 32 20.2	-0.4
KIKV					Sn	03 32 29.2	0.0
KINC	Kanaga Island	0.62	330		Pn	03 32 20.7	-0.2
KICM	Kanaga Island	0.63	326		Pn	03 32 20.9	-0.2
KICM					Sn	03 32 30.5	+0.3
GSCK	Great Sitkin C	0.68	25		Pn	03 32 21.2	-0.5
GSCK					Sn	03 32 31.7	+0.3
GSTD	Great Sitkin T	0.72	24		Pn	03 32 22.2	-0.2
GSTD					Sn	03 32 32.1	-0.3
GSMY	Great Sitkin M	0.74	29		Pn	03 32 22.2	-0.3
GSSP	Great Sitkin S	0.75	22		Pn	03 32 22.6	0.0
GSSP					Sn	03 32 32.8	-0.2
GSTR	Great Sitkin T	0.78	27		Pn	03 32 23.4	+0.3
GSTR				IAML		03 32 41.0	
	comp=E,3μm,0.3s						
GSTR				IAML		03 32 44.5	
	comp=N,4μm,0.7s						
TAPA	Tanaga Point A	0.85	300		Pn	03 32 23.6	-0.4
TAPA					Sn	03 32 35.6	+0.2
TAFL	Tanaga Flats	0.87	295		Pn	03 32 23.9	-0.3
TAFL					Sn	03 32 36.0	+0.2
TASE	Tanaga Southea	0.98	297		Pn	03 32 25.9	+0.1
TASE					Sn	03 32 39.0	+0.4
TANO	Tanaga North	1.06	300		Pn	03 32 27.3	+0.4
GAKI	Gareloi-Kavalg	1.37	277		Pn	03 32 30.8	-0.3
GAKI					Sn	03 32 48.0	-0.1
GALAA	Gareloi Lava P	1.39	286		Pn	03 32 31.8	+0.6
GALAA					Sn	03 32 50.1	+1.7
GANE	Gareloi Northe	1.40	288		Pn	03 32 32.1	+0.6
GANE					Sn	03 32 51.0	+2.2
GANO	Gareloi North	1.42	288		Pn	03 32 32.6	+0.8
ATKA	Atka Island	1.71	61		Pn	03 32 35.2	-0.5
ATKA				IAML		03 33 03.7	
	comp=N,999nm,0.5s						
ATKA				IAML		03 33 03.8	
	comp=E,850nm,0.5s						
ATKA	Atka Island	1.71	61		Sn	03 32 56.9	+0.6
KOWE	Korovin West	1.76	56		Pn	03 32 37.5	+1.1
KOWE					Sn	03 32 59.4	+1.8
KOKL	Mount Kliuchef	1.77	58		Pn	03 32 37.3	+0.8
KOKL					Sn	03 32 59.6	+1.7
KOFP	Korovin Flat P	1.80	60		Pn	03 32 37.3	+0.4
KOFP					Sn	03 33 00.7	+2.1
CEPE	Semis' Perret	2.38	285		Pn	03 32 45.7	+0.7
CERB	Semis' Cerberu	2.39	284		Pn	03 32 45.9	+0.9
CESW	Semis' Southwe	2.42	283		Pn	03 32 46.1	+0.6
AMKA	Amchitka	2.55	271		Pn	03 32 47.1	-0.1
LSPA	Little Sitkin	3.04	282		Pn	03 32 54.9	+1.0
LSSE	Little Sitkin	3.04	282		Pn	03 32 54.5	+0.6
LSNW	Little Sitkin	3.08	283		Pn	03 32 55.1	+0.7
SHEM	Shemya Is, Ala	5.87	287	Pn	Pn	03 33 32.1	-0.7
	comp=E,2.4nm,0.3s,baz=78,slow=10,SNR=4.1						
	comp=E,104nm,0.9s						
UNV	Unalaska Valle	6.63	64	Pn	Pn	03 33 45.2	+2.0
SDPT	Sand Point	10.43	61	Pn	Pn	03 34 35.5	+0.5
M11K	Mekoryuk	10.72	29	Pn	Pn	03 34 41.6	+2.5
O14K	Tigyukauivet M	11.74	42	Pn	Pn	03 34 56.3	+3.3
N15K	Kwethluk River	12.76	40	Pn	Pn	03 35 09.3	+2.3
P16K	Nushagak River	13.06	47	Pn	Pn	03 35 14.2	+3.2
CHIR	Chirikof Islan	13.21	62	Pn	Pn	03 35 10.9	-2.2
O16K	Kokwok River B	13.29	45	Pn	Pn	03 35 16.3	+2.2
ACHA	Angle Creek He	14.01	53	Pn	Pn	03 35 22.9	-1.1
M17K	Holitna River	14.54	39	Pn	Pn	03 35 32.9	+1.9
J16K	Anvik River	14.66	30	Pn	Pn	03 35 34.8	+2.2
KDAK	Kodiak Island	15.28	56	Pn	Pn	03 35 37.8	-2.9
	comp=E,0.4nm,0.3s,baz=282,slow=19,SNR=14						
KDAK				Sn	Sn	03 38 27.9	-0.6
	comp=E,0.1nm,0.3s,baz=328,slow=15,SNR=1.7						
	comp=E,5.5nm,0.7s						
L18K	Granite Mounta	15.30	37	Pn	Pn	03 35 42.9	+1.9
L19K	White Mountain	15.99	39		P	03 35 52.2	-0.5
L19K				IAmb	IAmb	03 35 54.8	
	comp=Z,11nm,1.3s						
J18K	Innoko River	16.06	34		P	03 35 53.4	-0.1
BRLK	Bradley Lake	16.70	50	Pn	Pn	03 35 58.3	-0.4
G18K	Tagagawik	17.17	25	Pn	Pn	03 36 04.4	-0.2
C16K	Lisburne Hills	17.80	14		P	03 36 12.8	+0.3
KTH	Kantishna Hill	18.25	38	P	Pn	03 36 18.2	+0.3
KTH				IAmb	IAmb	03 36 20.5	
	comp=Z,4.6nm,0.8s						
TRF	Thorofare Moun	18.45	39	P	P	03 36 20.1	+0.2
TRF				IAmb	IAmb	03 36 35.4	
	comp=Z,7.2nm,1.2s						
BPAW	Bear Paw Mtn.	18.50	37	P	Pn	03 36 21.6	+0.6
BPAW				IAmb	IAmb	03 36 26.9	
	comp=Z,6.7nm,1.2s						
H21K	Melozitna Rive	18.76	31	P	Pn	03 36 24.2	+0.3
C18K	Utukok River	18.83	18	P	Pn	03 36 25.0	+0.1
C18K				IAmb	IAmb	03 36 26.2	
	comp=Z,6.0nm,1.4s						
SCM	Sheep Creek Mo	19.03	45	P	P	03 36 26.1	-0.1
D19K	Kuna River	19.34	21	P	Pn	03 36 30.4	-0.5
D19K				IAmb	IAmb	03 36 35.3	
	comp=Z,3.7nm,0.8s						
C19K	Lookout Ridge	19.53	18	P	P	03 36 32.4	+0.7
C19K				IAmb	IAmb	03 36 52.5	
	comp=Z,5.4nm,1.2s						
I23K	Minto, Yukon-K	19.65	35	P	P	03 36 33.4	+0.6
I23K				IAmb	IAmb	03 36 53.1	
	comp=Z,4.2nm,0.9s						
CCB	Clear Creek Bu	19.98	37	P	Pn	03 36 37.6	-0.9
CCB				IAmb	IAmb	03 36 42.0	
	comp=Z,2.6nm,0.8s						
ILAR	Eielson Array	20.39	38	P	P	03 36 41.3	+0.4
	comp=Z,0.6nm,0.5s,baz=227,slow=8.9,SNR=17						
	comp=Z,0.6nm,0.5s						
GLB	Gilahina Butte	20.52	48	P	P	03 36 43.6	+1.2
J25K	Salcha River,	20.91	39	P	P	03 36 46.3	-0.2
J25K				IAmb	IAmb	03 37 04.2	
	comp=Z,3.6nm,1.0s						
BMAR	Burnt Mountain	22.48	32	P	P	03 37 03.4	0.0
H11N2	WAKE ISLAND Hy	34.16	208	T	T	04 15 16.3	
	baz=18,slow=76,SNR=203						
H11N3	WAKE ISLAND Hy	34.17	208	T	T	04 15 17.1	
	baz=18,slow=76,SNR=191						
H11N1	WAKE ISLAND Hy	34.18	208	T	T	04 15 16.6	
	baz=18,slow=76,SNR=170						
H11S1	WAKE ISLAND Hy	35.37	208	T	T	04 16 39.1	
	baz=18,slow=76,SNR=108						
H11S2	WAKE ISLAND Hy	35.39	208	T	T	04 16 40.3	
	baz=18,slow=76,SNR=50						
H11S3	WAKE ISLAND Hy	35.39	208	T	T	04 16 40.3	
	baz=18,slow=76,SNR=48						
WRA	Warramunga Arr	82.99	226	P	P	03 44 27.7	-0.7
	comp=Z,0.3nm,0.5s,baz=25,slow=5.2,SNR=1.0						
	comp=Z,0.3nm,0.5s						
BRTR	Keskin Array B	85.47	337	P	P	03 44 40.2	-0.9
	comp=Z,0.4nm,0.6s,baz=14,slow=3.8,SNR=2.1						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	86.44	224	P	P	03 44 45.5	-0.2
	comp=Z,0.4nm,0.9s,baz=63,slow=5.8,SNR=4.6						
	comp=Z,0.4nm,0.9s						
H03N2	Juan Fernandez	119.85	107	T	T	06 02 17.2	
	baz=317,slow=77,SNR=7.1						
H03N1	Juan Fernandez	119.86	107	T	T	06 02 22.1	
	baz=317,slow=77,SNR=6.8						
H03N3	Juan Fernandez	119.86	107	T	T	06 02 36.8	
	baz=317,slow=77,SNR=7.8						
MAW	Mawson	147.33	218	PKPbc	PKPab	03 51 45.7	-1.6
	comp=Z,3.6nm,0.7s,baz=83,slow=17,SNR=7.7						
BOSA	Boshof	151.94	316	PKPbc	PKPbc	03 51 57.4	-0.6
	comp=Z,0.8nm,0.4s,baz=310,slow=3.6,SNR=4.7						

NEIC ***25*** *03:35:59.9, 50°.49N×130°.10W, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.96; $M_{\theta\theta}$-0.97; $M_{\phi\phi}$1.05; $M_{r\theta}$-1.86; $M_{\theta\phi}$1.45; $M_{\phi r}$-0.47; Fault plane solution: $M_0$2.70000×10^{18} NP1:ϕ_s168.00000°, δ42.00000°, λ-166.00000°. NP2:ϕ_s67.00000°, δ80.00000°, λ-49.00000°. Principal axes: T 2.6738, Plg24.0000°, Azm126.0000°; N -0.0040, Plg40.0000°, Azm239.0000°; P -2.6698, Plg40.0000°, Azm15.0000°;*

NEIC ***25*** *03:36:00.7, 50°.54N×130°.06W, h12^{km}*

NEIC ***25*** *03:36:00.7, 50°.54N×130°.10W, h3^{km}*

IDC ***25*** *03:36:00.4±0.3, 50°.53N×130°.05W, h0^{km}, mb5.2/44, mbtmp5.2/54, ML4.8/9, MS6.1/91, Error ellipse: s-maj=8.6km s-min=6.1km az=39.0*

NEIC ***25*** *03:36:00.7, 50°.44N×130°.22W, h12^{km}, Moment Tensor Solution. Duration: 6^{s}1.0 Moment tensor: Scale 10^{18} Nm; M_{rr}-0.25; $M_{\theta\theta}$-1.90; $M_{\phi\phi}$2.15; $M_{r\theta}$0.47; $M_{\theta\phi}$2.14; $M_{\phi r}$0.77; Fault plane solution: $M_0$3.09000×10^{18} NP1: ϕ_s337.38000°, δ77.86000°, λ172.08000°. NP2: ϕ_s69.06000°, δ82.26000°, λ12.26000°. Principal axes: T 3.2917, Plg14.0000°, Azm294.0000°; N -0.4656, Plg76.0000°, Azm101.0000°; P -2.8261, Plg3.0000°, Azm203.0000°;*

BJI ***25*** *03:36:00.4, 50°.60N×130°.05W, h10^{km}, mB6.2/60, mb5.5/83, Ms6.6/89, Ms7 6.4/87*

ISC-PP ***25*** *03:36:01, 50°.61N×129°.96W, h3^{km}, Mwppsm6.2, Moment Tensor Solution. s50 Moment tensor: Scale 10^{18}Nm; M_{rr}0.13±.19; $M_{\theta\theta}$-0.22±.17; $M_{\phi\phi}$0.14±.13; $M_{r\theta}$0.18±.15; $M_{\theta\phi}$-0.55±.11; $M_{\phi r}$0.35±.16; Fault plane solution: $M_0$2.85000×10^{18} NP1:ϕ_s160.60000°, δ84.40000°, λ122.80000°. NP2:ϕ_s259.10000°, δ33.30000°, λ10.20000°.*

NEIC ***25*** *03:36:01.6±1.4, 50°.61N±0°.07×130°.0W±0°.1, h7^{km}±1^{km}, mb5.8/462, Ms_20 6.2/539, Mwb6.2/160, Mww6.3/95, Mwr6.2(OTT) Error ellipse: s-maj=11.7km s-min=7.5km az=47.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.03; $M_{\theta\theta}$-1.43; $M_{\phi\phi}$1.46; $M_{r\theta}$-0.47; $M_{\theta\phi}$1.42; $M_{\phi r}$-0.35; Fault plane solution: $M_0$2.11000×10^{18} NP1: ϕ_s247.65000°, δ86.99000°, λ15.62000°. NP2: ϕ_s156.81000°, δ74.40000°, λ176.87000°. Principal axes: T 2.1586, Plg13.0000°, Azm113.0000°; N -0.1011, Plg74.0000°, Azm258.0000°; P -2.0575, Plg9.0000°, Azm21.0000°;*

IPGP ***25*** *03:36:02.0, 50°.58N×130°.00W, h9^{km}, Mw6.3, Fault plane solution: NP1:ϕ_s160.00000°, δ84.00000°, λ-168.00000°. NP2:ϕ_s68.00000°, δ78.00000°, λ-6.00000°.*

GFZ ***25*** *03:36:03.3, 50°.53N×130°.05W, h19^{km}, MW6.3, Moment Tensor Solution. s102 Moment tensor: M_{rr}-0.26; $M_{\theta\theta}$-1.74; $M_{\phi\phi}$2.01; $M_{r\theta}$-0.14; $M_{\theta\phi}$2.06; $M_{\phi r}$-1.38; Fault plane solution: NP1:ϕ_s158.00000°, δ84.00000°, λ158.00000°. NP2:ϕ_s251.00000°, δ68.00000°, λ6.00000°. Principal axes: T 3.4000, Plg20.0000°, Azm112.0000°; N -0.6600, Plg67.0000°, Azm324.0000°; P -2.7500, Plg11.0000°, Azm207.0000°;*

RSNC ***25*** *03:36:03.4±0.6, 52°N±16°×12°9W±1°0, h5^{km}±5^{km}, M6.1, mB6.5, mb5.7, Mw(mB)6.3, MwMwp6.0, Mwp6.0*

MOS ***25*** *03:36:03.2±1.2, 50°.45N×130°.07W, h29^{km}, mb5.9/102, MS6.3/72, Error ellipse: s-maj=8.5km s-min=3.8km az=101.6*

GCMT ***25*** *03:36:04.6±0.0, 50°.41N×130°.22W, h15^{km}, MW6.3/163, Moment Tensor Solution. s158,c366; s163,c663; Duration: 3^{s}4 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.14±.01; $M_{\theta\theta}$-2.11±.01; $M_{\phi\phi}$2.24±.01; $M_{r\theta}$-0.01±.03; $M_{\theta\phi}$2.41±.01; $M_{\phi r}$-0.35±.03; Best double couple: $M_0$3.26500×10^{18} NP1:ϕ_s249.00000°, δ84.00000°, λ2.00000°. NP2:ϕ_s159.00000°, δ88.00000°, λ174.00000°. Principal axes: T 3.3420, Plg5.0000°, Azm114.0000°; N -0.1610, Plg84.0000°, Azm320.0000°; P -3.1880, Plg3.0000°, Azm204.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

BGR ***25*** *03:36:11.9, 52°.10N×133°.11W, h33^{km}, mb5.4, mB_BB6.4, Ms6.3*

ISC 25 03:36:01.8±0.4**, 50°.40N**±0°.03×**130°.04W**±0°.03**, h10**^{km}±1^{km}**, h9^{km}:pP-P, n1736, σ2^{s}31**/1770**, mb5.8**/375**, MS6.2**/447**, 119C-79D, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HG4B	Hotspring	2.03	340		Pn	03 36 31.2	-4.9
BBB	Bella Bella	2.16	33	Pn	Pn	03 36 34.6	-3.2
	784nm,0.3s,baz=239,slow=6.7,SNR=889						
BBB				Sn	Sn	03 37 00.9	-3.7
	2μm,0.3s,baz=238,slow=21,SNR=5.8						
BBB				LR	LR	03 37 33.6	
	comp=Z,548μm,20.3s,baz=235,slow=45						
	3μm,0.4s						
BBB	Bella Bella	2.16	33		Pn	03 36 34.4	-3.4
BBB					Sn	03 36 59.7	-5.0
BBB	Bella Bella	2.16	33	⇓P	Pn	03 36 34.4	-3.4
MOBC	Moresby Island	3.00	337		Pn	03 36 45.8	-3.6
CBB	Campbell River	3.03	95		Pn	03 36 47.5	-2.2
H02S2	DAWSON INLET T	3.19	333	Pn	Pn	03 36 48.9	-3.1
H02S2				Sn	Sn	03 37 23.1	-7.0
DIB	Dawson Inlet,	3.19	333		Pn	03 36 47.5	-4.4
OZB	Mount Ozzard	3.29	114		Pn	03 36 51.6	-1.8
OZB	Mount Ozzard	3.29	114	⇑P	Pn	03 36 50.8	-2.5
RUBB	Prince Rupert	3.94	358		Pn	03 36 58.9	-3.4
CLRS	Cowichan Lake	4.16	110		Pn	03 37 03.4	-1.8
C03A	Quillayute Air	4.35	122		Pn	03 37 07.1	-0.8
PGC	Sidney	4.63	110		Pn	03 37 10.7	-1.1
B04A	Port Angeles	4.88	116		Pn	03 37 13.8	-1.4
V35K	Ketchikan	5.03	350		Pn	03 37 13.4	-3.8
V35K	Ketchikan	5.03	350	P	Pn	03 37 14.2	-3.0
	baz=168,SNR=54						
V35K				S	Sn	03 38 10.1	-5.2
	baz=168						
V35K				S	Sn	03 38 10.1	-5.2
	baz=168						
A04D	Lummi Island	5.06	107		Pn	03 37 17.0	-0.7
NLWA	Neilton Lookou	5.06	124		Pn	03 37 16.5	-1.2
NLWA	Neilton Lookou	5.06	124	⇑P	Pn	03 37 16.6	-1.1
LLLB	Lillooet	5.21	85		Pn	03 37 18.0	-1.8
WISH	Wishkah	5.29	126		Pn	03 37 20.5	-0.3
CRAG	Craig	5.41	341		Pn	03 37 18.7	-3.8
CRAG	Craig	5.41	341	P	Pn	03 37 21.2	-1.3
CRAG	Craig	5.41	341	⇑P	Pn	03 37 18.8	-3.7
CRAG	Craig	5.41	341	P	Pn	03 37 19.7	-2.8

	baz=158,SNR=37						
CRAG				S	Sn	03 38 19.0	-5.7
	baz=158						
U35K	Hyder	5.53	0		Pn	03 37 21.5	-2.6
U35K	Hyder	5.53	0	P	Pn	03 37 22.2	-1.9
	baz=180,SNR=56						
U35K				S	Sn	03 38 25.4	-2.2
	baz=180						
GNW	Green Mountain	5.53	118		Pn	03 37 23.3	-0.9
RADR	Rader Ridge	5.75	131		Pn	03 37 27.8	+0.5
U33K	Whale Pass	6.02	343		Pn	03 37 27.5	-3.3
U33K	Whale Pass	6.02	343	P	Pn	03 37 29.0	-1.8
	baz=160,SNR=17						
U33K				S	Sn	03 38 33.8	-5.8
	baz=160						
U33K				S	Sn	03 38 33.8	-5.8
	baz=160						
WRAK	Wrangell Islan	6.19	348		Pn	03 37 29.8	-3.3
WRAK	Wrangell Islan	6.19	348	⇑P	Pn	03 37 30.8	-2.4
WRAK	Wrangell Islan	6.19	348	P	Pn	03 37 31.2	-1.9
	baz=166,SNR=32						
WRAK				S	Sn	03 38 39.6	-4.3
	baz=166						
F04D	Rainier, OR	6.38	130		Pn	03 37 36.5	+0.8
T35M	Bob Quinn	6.60	359		Pn	03 37 36.8	-2.1
T35M	Bob Quinn	6.60	359	P	Pn	03 37 37.4	-1.4
	baz=179,SNR=97						
T35M				S	Sn	03 38 49.1	-4.9
	baz=179						
T33K	Petersburg	6.66	346	P	Pn	03 37 34.7	-4.8
	baz=163						
T33K				S	Sn	03 38 51.6	-3.8
	baz=163						
SIT	Sitka	7.37	337		Pn	03 37 46.1	-3.2
SIT	Sitka	7.37	337	P	Pn	03 37 50.2	+0.9
SIT	Sitka	7.37	337	P	Pn	03 37 46.1	-3.2
SIT	Sitka	7.37	337	P	Pn	03 37 46.8	-2.6
	baz=152						
SIT				S	Sn	03 39 05.0	-7.9
	baz=152						
COR	Corvallis	7.39	139		Pn	03 37 52.3	+2.7
COR	Corvallis	7.39	139	P	Pn	03 37 52.3	+2.7
COR	Corvallis	7.39	139	⇑P	Pn	03 37 52.1	+2.5
S34M	Telegraph Cree	7.56	356	P	Pn	03 37 50.9	-1.0
	baz=174,SNR=67						
S34M				S	Sn	03 39 12.9	-4.8
	baz=174						
I02E	Swisshome, OR	7.57	144		Pn	03 37 54.2	+2.1
S32K	Killisnoo	7.57	341	P	Pn	03 37 51.4	-0.7
	baz=157,SNR=8.8						
S32K				S	Sn	03 39 15.8	-2.1
	baz=157						
S32K				S	Sn	03 39 15.8	-2.1
	baz=157						
BUCK	Buck Mountain	7.84	140		Pn	03 37 58.5	+2.6
HAWA	Hanford	8.06	116	⇑P	Pn	03 37 59.2	+0.4
I03D	Drain, OR	8.11	143		Pn	03 38 02.5	+2.9
G06A	Carlson Farm,	8.17	126		Pn	03 38 02.0	+1.6
R32K	Eaglecrest	8.31	343		Pn	03 37 59.7	-2.6
R32K	Eaglecrest	8.31	343	P	Pn	03 37 58.0	-4.3
	baz=159						
R32K				S	Sn	03 39 34.9	-1.3
	baz=159						
R32K				S	Sn	03 39 34.9	-1.3
	baz=159						
S31K	Pelican	8.40	337	Pn	Pn	03 38 02.0	-1.4
S31K	Pelican	8.40	337	P	Pn	03 38 03.1	-0.3
	baz=151						
S31K				S	Sn	03 39 32.7	-5.5
	baz=151						
S31K				S	Sn	03 39 32.7	-5.5
	baz=151						
I04A	Tendick Farm,	8.41	139		Pn	03 38 05.8	+2.2
KEBM	Edson Butte	8.49	150		Pn	03 38 07.6	+2.8
BESE	Bessie Mountai	8.66	343		Pn	03 38 04.9	-2.2
Q32M	Nakina River	8.68	352	P	Pn	03 38 05.8	-1.7
	baz=170,SNR=28						
Q32M				S	Sn	03 39 41.8	-3.6
	baz=170						
R31K	City Hall, Gus	8.69	340	P	Pn	03 38 06.2	-1.2
	baz=155						
R31K				S	Sn	03 39 41.6	-3.7
	baz=155						
NEW	Newport	8.71	99	Pn	Pn	03 38 07.6	-0.1
	17nm,0.3s,baz=298,slow=12,SNR=115						
NEW				Sn	Sn	03 39 43.9	-2.0
	baz=314,slow=21						
NEW				Lg	Lg	03 40 24.9	
	1.8nm,0.3s,baz=204,slow=20,SNR=1.5						
NEW				LR	LR	03 41 30.9	
	comp=Z,387µm,18.2s,baz=288,slow=38						
	82nm,0.5s						
NEW	Newport	8.71	99	⇑P	Pn	03 38 07.2	-0.6
TOAD	Toad River Com	8.91	16	P	Pn	03 38 09.6	-0.9
	baz=200,SNR=129						
TOAD				S	Sn	03 39 50.0	-1.0
	baz=200						
R33M	Jennings River	9.03	357	P	Pn	03 38 13.3	+1.0
	baz=176,SNR=168						
R33M				S	Sn	03 39 51.1	-2.9
	baz=176						
KBO	Bosley Butte	9.12	152		Pn	03 38 16.4	+2.9
LIRD	Liard River Hi	9.31	13	P	Pn	03 38 15.6	-0.4
	baz=196,SNR=48						
LIRD				S	Sn	03 39 55.9	-4.8
	baz=196						
J05D	Fort Rock, OR	9.32	136		Pn	03 38 19.6	+3.2
P32M	Atlin	9.45	349		Pn	03 38 16.0	-1.9
P32M	Atlin	9.45	349	P	Pn	03 38 16.5	-1.4
	baz=165,SNR=24						
P32M				S	Sn	03 40 00.4	-3.7
	baz=165						
SKAG	Skagway	9.57	344	P	Pn	03 38 20.1	+0.6
SKAG	Skagway	9.57	344	⇓P	Pn	03 38 21.0	+1.5
SKAG	Skagway	9.57	344	P	Pn	03 38 19.0	-0.6
	baz=159,SNR=11						
SKAG				S	Sn	03 40 05.2	-1.9
	baz=159						
WTLY	Watson Lake, Y	9.77	4		Pn	03 38 21.4	-0.8
WTLY	Watson Lake, Y	9.77	4	P	Pn	03 38 21.0	-1.2
	baz=185,SNR=80						
WTLY				S	Sn	03 40 06.6	-5.2
	baz=185						
PLBC	Pleasant Camp	9.78	341	P	Pn	03 38 21.3	-1.0
	baz=155,SNR=31						
PLBC				S	Sn	03 40 10.0	-2.0
	baz=155						
P33M	Teslin, Yukon	9.96	352		Pn	03 38 23.6	-1.4
P33M	Teslin, Yukon	9.96	352	P	Pn	03 38 24.6	-0.3
	baz=169,SNR=37						
P33M				S	Sn	03 40 13.4	-3.3
	baz=169						
YBH	Yreka Blue Hor	10.05	147	Pn	Pn	03 38 30.0	+3.8
	13nm,1.1s,baz=348,slow=12,SNR=159						
YBH				LR	LR	03 41 54.9	
	comp=Z,14µm,19.6s,baz=313,slow=35						
YBH	Yreka Blue Hor	10.05	147		Pn	03 38 29.9	+3.7
YBH	Yreka Blue Hor	10.05	147	P	Pn	03 38 30.0	+3.8
KRPM	Rodgers	10.15	153		Pn	03 38 31.3	+3.8
BMO	Blue Mountains	10.23	118		Pn	03 38 28.9	+0.3
BMO	Blue Mountains	10.23	118	P	Pn	03 38 28.9	+0.3
BMO	Blue Mountains	10.23	118	⇓P	Pn	03 38 28.9	+0.3
P29M	Windy Craggy	10.25	338	P	Pn	03 38 26.4	-2.4
	baz=151						
P29M				S	Sn	03 40 19.5	-4.1
	baz=151						
P30M	Million Dollar	10.51	341	P	Pn	03 38 29.4	-3.0
	baz=154						
P30M				S	Sn	03 40 25.1	-5.0
	baz=154						
WHY	Whitehorse	10.64	347		Pn	03 38 32.6	-1.6
WHY	Whitehorse	10.64	347	P	Pn	03 38 32.9	-1.3
	baz=163,SNR=63						
WHY				S	Sn	03 40 29.3	-4.1
	baz=163						
JTMT	Jette	10.68	98		Pn	03 38 34.6	-0.2
EDM	Edmonton	10.71	68		Pn	03 38 34.3	-0.9
EDM	Edmonton	10.71	68	P	Pn	03 38 34.3	-0.9
KMPM	Mount Pierce	10.81	155		Pn	03 38 40.0	+3.4
N32M	Quiet Lake	10.91	352	P	Pn	03 38 35.5	-2.5
	baz=169						
N32M				S	Sn	03 40 32.9	-7.1
	baz=169						
O30N	Mendenhall	10.94	344	P	Pn	03 38 37.1	-1.1
	baz=159,SNR=24						
O30N				S	Sn	03 40 32.4	-8.3
	baz=159						
O29M	Mount Kennedy	11.04	337	P	Pn	03 38 39.1	-0.6
	baz=150,SNR=14						
O29M				S	Sn	03 40 35.9	-7.3
	baz=150						
WVOR	Wild Horse Val	11.19	131	⇑P	Pn	03 38 44.2	+2.4
MSO	Missoula	11.24	102		Pn	03 38 41.9	-0.6
MSO	Missoula	11.24	102	⇓P	Pn	03 38 42.2	-0.3
HYT	Haines Junctio	11.26	341		Pn	03 38 40.7	-2.0
HYT	Haines Junctio	11.26	341	P	Pn	03 38 41.5	-1.3
	baz=154,SNR=14						
HYT				S	Sn	03 40 41.4	-7.2
	baz=154						
PINM	Pinnacle	11.32	333	P	Pn	03 38 42.7	-0.7
	baz=144,SNR=15						
PINM				S	Sn	03 40 43.3	-6.6
	baz=144						
PCA	Pinnacle	11.32	333		Pn	03 38 42.8	-0.6
O02D	Mt. Diablo Mer	11.42	151		Pn	03 38 48.5	+3.5
YUK6	Outpost Mounta	11.55	339	P	Pn	03 38 44.6	-2.3
	baz=152,SNR=16						
YUK6				S	Sn	03 40 53.4	-2.5
	baz=152						
N31M	Braeburn, Yuko	11.56	346	P	Pn	03 38 45.1	-1.7
	baz=161,SNR=21						
N31M				S	Sn	03 40 47.4	-8.6
	baz=161						
N30M	Aishikik Lake	11.76	343	P	Pn	03 38 48.2	-1.3
	baz=157,SNR=21						
N30M				S	Sn	03 40 56.2	-4.6
	baz=157						
O28M	Mount Upton	11.86	335	P	Pn	03 38 47.8	-3.3
	baz=146,SNR=14						
O28M				S	Sn	03 40 59.2	-4.3
	baz=146						
MFID	Camas Ranch	11.96	120		Pn	03 38 53.5	+1.1
YUK4	Talbot Arm	11.97	340	P	Pn	03 38 50.5	-2.0
	baz=153,SNR=13						
M31M	Drury Creek, Y	12.07	350	P	Pn	03 38 52.0	-1.7
	baz=166,SNR=46						
M31M				S	Sn	03 41 05.9	-2.5
	baz=166						
LOGN	Logan Glacier	12.13	334		Pn	03 38 53.3	-1.3
YUK8	Steele Glacier	12.19	337	P	Pn	03 38 53.0	-2.5
	baz=149,SNR=14						
YUK8				S	Sn	03 41 08.6	-2.8
	baz=149						
CTGM	Chitina Glacie	12.34	333		Pn	03 38 56.7	-0.7
CTG	Chitna Glacier	12.34	333	P	Pn	03 38 55.2	-2.3
	baz=144,SNR=31						
CTG				S	Sn	03 41 11.8	-3.2
	baz=144						
BARN	Barnard Glacie	12.51	333		Pn	03 38 58.9	-0.9
KAIM	Kayak Island	12.57	325	P	Pn	03 38 59.2	-1.2
	baz=132						
KAIM				S	Sn	03 41 15.1	-5.3
	baz=132						
HLID	Hailey	12.66	117	⇑P	Pn	03 39 03.0	+1.0
CRQE	Cirque	12.71	330	P	Pn	03 39 01.1	-1.3
	baz=138,SNR=43						
CRQE				S	Sn	03 41 18.4	-5.6
	baz=138						
M30M	Minto, Yukon	12.76	346	P	Pn	03 39 01.2	-1.9
	baz=160,SNR=17						
M30M				S	Sn	03 41 19.7	-5.3
	baz=160						
YUK3	Moose Creek	12.78	337	P	Pn	03 39 00.4	-3.2
	baz=148,SNR=16						
YUK3				S	Sn	03 41 21.7	-4.1
	baz=148						
BCYI	Bear Canyon	12.81	112		Pn	03 39 03.6	-0.4
M29M	Somme Creek	12.93	342	P	Pn	03 39 03.2	-2.3
	baz=155,SNR=50						
M29M				S	Sn	03 41 27.2	-2.1
	baz=155						
Q23K	Middleton Isla	13.00	320	P	Pn	03 39 03.7	-2.6
	baz=126						
Q23K				S	Sn	03 41 30.1	-0.8
	baz=126						
Q23K				S	Sn	03 41 30.1	-0.8
	baz=126						
MCARA	McCarthy VSAT	13.17	332	P	Pn	03 39 06.3	-2.3
	baz=140,SNR=24						
MCARA				S	Sn	03 41 33.7	-1.4
	baz=140						
BOZ	Bozeman (W)	13.22	104	⇓P	Pn	03 39 09.4	-0.2
MCCM	Marconi Confer	13.27	155	⇑P	Pn	03 39 14.1	+4.0
WRGLY	Wrigley	13.35	13	P	Pn	03 39 09.0	-2.0
	baz=199,SNR=175						
WRGLY				S	Sn	03 41 37.7	-1.7
	baz=199						
BMRM	Bremner River	13.37	328	P	Pn	03 39 09.5	-1.9
	baz=135,SNR=15						
BMRM				S	Sn	03 41 38.4	-1.5
	baz=135						
BVCY	Beaver Creek	13.43	338	P	Pn	03 39 10.2	-2.0
	baz=148						
BVCY				S	Sn	03 41 41.0	-0.3
	baz=148						
EGMT	Eagleton	13.47	92	⇑P	Pn	03 39 13.3	+0.4
L29M	L29M	13.48	344	P	Pn	03 39 11.7	-1.2
	baz=157,SNR=39						
L29M				S	Sn	03 41 40.1	-2.5
	baz=157						
EYAK	Cordova Ski Ar	13.48	325	P	Pn	03 39 10.2	-2.7
	baz=132						
EYAK				S	Sn	03 41 38.0	-4.5
	baz=132						
MAYO	Mayo, Yukon	13.60	349	P	Pn	03 39 11.6	-3.0
	baz=164						
MAYO				S	Sn	03 41 45.8	+0.2
	baz=164						
M27K	Edge Creek, AK	13.63	336	P	Pn	03 39 13.3	-1.8
	baz=146,SNR=30						
M27K				S	Sn	03 41 44.9	-1.6
	baz=146						
M27K				S	Sn	03 41 44.9	-1.6
	baz=146						
HIN	Hinchinbrook I	13.66	323		Pn	03 39 12.9	-2.5
P23K	Montague Islan	13.77	321		Pn	03 39 15.3	-1.5
P23K	Montague Islan	13.77	321	P	Pn	03 39 15.4	-1.4
	baz=126						
P23K				S	Sn	03 41 49.6	0.0
	baz=126						
P23K				S	Sn	03 41 49.6	0.0
	baz=126						
N25K	Chitina, Valde	13.83	330		Pn	03 39 16.1	-1.7
N25K	Chitina, Valde	13.83	330	P	Pn	03 39 16.1	-1.7
	baz=137,SNR=40						
N25K				S	Sn	03 41 51.3	-0.1
	baz=137						
N25K				S	Sn	03 41 51.3	-0.1
	baz=137						
FID	Port Fidalgo	13.88	325		Pn	03 39 16.8	-1.6
M26K	Nabesna, AK	13.97	334	P	Pn	03 39 18.7	-0.9
	baz=143,SNR=17						
M26K				S	Sn	03 41 54.5	-0.1
	baz=143						
M26K				S	Sn	03 41 54.5	-0.1
	baz=143						
K29M	Barlow Dome	14.06	346	P	Pn	03 39 19.1	-1.8
	baz=160						
K29M				S	Sn	03 41 55.1	-1.9
	baz=160						
ELK	Elko	14.14	127	Pn	Pn	03 39 25.1	+2.8
	14nm,1.0s,baz=319,slow=14,SNR=54						
ELK				LR	LR	03 44 56.2	
	comp=Z,93µm,18.4s,baz=324,slow=38						
ELK	Elko	14.14	127	⇓P	Pn	03 39 24.6	+2.3
KLU	Klutina	14.19	328	P	Pn	03 39 21.5	-1.1
	baz=134,SNR=34						
KLU				S	Sn	03 41 57.7	-2.3
	baz=134						
GLI	Glacier Island	14.20	324		Pn	03 39 20.1	-2.5
GLI	Glacier Island	14.20	324	P	Pn	03 39 20.3	-2.4
	baz=130						
GLI				S	Sn	03 41 59.9	-0.2
	baz=130						
L27K	Beaver Creek,	14.21	338	P	Pn	03 39 22.2	-0.8
	baz=148,SNR=35						
L27K				S	Sn	03 41 58.8	-1.7
	baz=148						
YFT	Old Faithful	14.28	107		Pn	03 39 23.5	-0.7
LKWY	Lake	14.49	106	⇑P	Pn	03 39 28.9	+1.9
L26K	Log Cabin Wild	14.57	335	P	Pn	03 39 26.4	-1.5
	baz=144,SNR=67						
L26K				S	Sn	03 42 08.7	-0.5
	baz=144						
L26K				S	Sn	03 42 08.7	-0.5
	baz=144						
DAWY	Dawson	14.58	344		Pn	03 39 27.1	-0.9
DAWY	Dawson	14.58	344	P	Pn	03 39 27.1	-0.9
	baz=155,SNR=28						
DAWY				S	Sn	03 42 08.8	-0.8
	baz=155						
NVAR	Mina Array Bea	14.59	141	Pn	P	03 39 32.3	-2.6
	0.4nm,0.3s,baz=318,slow=9.7,SNR=133						
	189nm,1.3s						
HARP	HAARP	14.60	331	P	Pn	03 39 28.1	-0.1
	baz=138,SNR=26						
HARP				S	Sn	03 42 11.7	+1.8
	baz=138						
HARP				S	Sn	03 42 11.7	+1.8
	baz=138						
MENT	Mentasta	14.60	335		Pn	03 39 25.2	-3.0
MENT	Mentasta	14.60	335	P	Pn	03 39 28.8	+0.6
J30M	Hart River	14.60	349	P	Pn	03 39 27.7	-0.6
	baz=164,SNR=25						
J30M				S	Sn	03 42 09.4	-0.7
	baz=164						
PWL	Port Wells	14.66	323	P	Pn	03 39 27.8	-1.2
	baz=127,SNR=8.3						
PWL				S	Sn	03 42 11.2	-0.1
	baz=127						
SEW	Seward	14.67	319	P	Pn	03 39 27.5	-1.7
	baz=122						
SEW				S	Sn	03 42 12.0	+0.4
	baz=122						
M24K	Tolsona, Glenn	14.71	329	P	Pn	03 39 28.5	-1.3
	baz=135,SNR=11						
M24K				S	Sn	03 42 12.8	+0.1
	baz=135						
J29N	Klondike Camp	14.74	346		Pn	03 39 27.8	-2.4
J29N	Klondike Camp	14.74	346	P	Pn	03 39 29.1	-1.1
	baz=159,SNR=17						
J29N				S	Sn	03 42 11.9	-1.6
	baz=159						
YKA	Yellowknife Ar	14.77	29	Pn	Pn	03 39 27.0	-3.5
	4.2nm,0.3s,baz=224,slow=12,SNR=208						
YKA				Sn	Sn	03 42 01.1	-13
	0.6nm,0.3s,baz=290,slow=13,SNR=1.7						
YKA				Lg	Lg	03 43 37.4	
	baz=246,slow=40						
	42nm,0.8s						
SCM	Sheep Creek Mo	14.91	327	P	Pn	03 39 31.5	-1.0
	baz=132,SNR=32						
SCM				S	Sn	03 42 13.5	-4.1
	baz=132						
RLMT	Red Lodge	14.92	103	⇑P	Pn	03 39 33.3	+0.5
SAO	San Andreas Ge	14.97	152	IAmb	IAmb	03 39 38.3	
	comp=Z,689nm,1.9s						
SAO	San Andreas Ge	14.97	152	⇑P	Pn	03 39 35.7	+2.3
MDPB	Devils Postpil	14.98	144	IAmb	IAmb	03 39 40.9	
	comp=Z,652nm,1.8s						
O22K	Cooper Landing	14.99	320	P	Pn	03 39 31.6	-1.9
	baz=123						
O22K				S	Sn	03 42 19.4	-0.1
	baz=123						
M23K	Glacier View	15.02	326	P	Pn	03 39 33.0	-1.0
	baz=131,SNR=46						
M23K				S	Sn	03 42 21.6	+1.4
	baz=131						
M23K				S	Sn	03 42 21.6	+1.4
	baz=131						
BRSE	Bradley Lake S	15.04	316	P	Pn	03 39 32.3	-1.8
	baz=119,SNR=17						
BRSE				S	Sn	03 42 21.6	+0.9
	baz=119						
KNK	Knik Glacier	15.05	324	P	Pn	03 39 33.4	-0.8
	baz=128,SNR=26						
KNK				S	Sn	03 42 23.0	+2.2
	baz=128						
KDAK	Kodiak Island	15.10	308	Pn	Pn	03 39 32.2	-2.7
	comp=Z,1.2nm,0.3s,baz=94,slow=5.2,SNR=14						
KDAK				Sn	Sn	03 42 14.1	-7.9
	comp=Z,0.2nm,0.3s,baz=127,slow=20,SNR=0.9						
KDAK				LR	LR	03 43 55.2	
	comp=Z,208µm,20.5s,baz=140,slow=32						
	comp=Z,48nm,1.0s						
KDAK	Kodiak Island	15.10	308	IAmb	IAmb	03 39 38.3	
	comp=Z,830nm,1.4s						
KDAK	Kodiak Island	15.10	308	⇑P	Pn	03 39 32.9	-2.0
KDAK	Kodiak Island	15.10	308	P	Pn	03 39 33.8	-1.2
	baz=109						
KDAK				S	Sn	03 42 24.2	+2.1
	baz=109						
PAX	Paxson	15.13	332	P	Pn	03 39 34.3	-1.1
	baz=139,SNR=46						
PAX				S	Sn	03 42 23.4	+0.5
	baz=139						
SLKM	Skilak Lake	15.21	319	IAmb	IAmb	03 39 39.9	
	comp=Z,710nm,1.6s						
I30M	Mount Dempster	15.23	350	P	Pn	03 39 36.5	-0.3
	baz=164,SNR=55						
I30M				S	Sn	03 42 28.0	+2.6
	baz=164						
SML	Sawmill	15.25	325	IAmb	IAmb	03 39 39.4	
	comp=Z,668nm,1.8s						
SML	Sawmill	15.25	325	P	Pn	03 39 35.9	-1.1
	baz=130,SNR=26						
SML				S	Sn	03 42 27.8	+1.9
	baz=130						
OHAK	Old Harbor	15.29	305	P	Pn	03 39 36.2	-1.2
OHAK	Old Harbor	15.29	305	P	Pn	03 39 35.7	-1.7
	baz=106,SNR=21						
OHAK				S	Sn	03 42 30.3	+3.7
	baz=106						
SYI	Shuyak Island	15.30	311	IAmb	IAmb	03 39 41.3	
	comp=Z,1µm,1.7s						
Q20K	Shuyak Island	15.31	311	P	Pn	03 39 37.1	-0.5
	baz=112						
Q20K				S	Sn	03 42 33.4	+6.3
	baz=112						
Q20K				S	Sn	03 42 33.4	+6.3
	baz=112						
RC01	Rabbit Creek A	15.34	322	IAmb	IAmb	03 39 41.3	
	comp=Z,578nm,1.9s						
RC01	Rabbit Creek A	15.34	322	P	Pn	03 39 36.3	-1.8
	baz=125,SNR=16						
RC01				S	Sn	03 42 33.1	+5.1
	baz=125						
HOM	Homer	15.40	315		Pn	03 39 36.1	-2.8
HOM				IAmb	IAmb	03 39 42.3	
	comp=Z,937nm,1.7s						
HOM	Homer	15.40	315	P	Pn	03 39 38.1	-0.8
	baz=117						
HOM				S	Sn	03 42 30.1	+0.6
	baz=117						
PMR	Palmer	15.41	324	IAmb	IAmb	03 39 42.9	
	comp=Z,626nm,1.7s						
PMR	Palmer	15.41	324	P	Pn	03 39 38.9	-0.1
PMR	Palmer	15.41	324	P	Pn	03 39 37.8	-1.2
	baz=128,SNR=37						
PMR				S	Sn	03 42 30.9	+1.3
	baz=128						
SCRK	Sand Creek	15.51	337		Pn	03 39 38.8	-1.7
SCRK	Sand Creek	15.51	337	P	Pn	03 39 39.8	-0.7
	baz=144,SNR=57						
SCRK				S	Sn	03 42 33.0	+0.7
	baz=144						
HWUT	Hardware Ranch	15.53	117	⇑P	Pn	03 39 42.4	+1.6
RIDG	Independent Ri	15.55	335	P	Pn	03 39 40.4	-0.5
	baz=142,SNR=122						
RIDG				S	Sn	03 42 33.9	+0.9
	baz=142						
WAT6	Susitna Watana	15.56	328	P	Pn	03 39 39.3	-1.9
	baz=133,SNR=68						
WAT6				S	Sn	03 42 34.8	+1.2
	baz=133						
SII	Sitkinak Islan	15.59	303	P	Pn	03 39 39.6	-1.9
	baz=102,SNR=11						
SII				S	Sn	03 42 40.4	+6.3
	baz=102						
H31M	Peel River	15.61	353	P	Pn	03 39 39.6	-2.1
	baz=170						
H31M				S	Sn	03 42 37.5	+3.0
	baz=170						
I29M	Ogilvie Camp,	15.61	347	P	Pn	03 39 39.8	-1.9
	baz=160,SNR=90						
I29M				S	Sn	03 42 37.1	+2.6
	baz=160						
CAPN	Captain Cook N	15.74	319	P	Pn	03 39 42.8	-0.6
	baz=121						
CAPN				S	Sn	03 42 42.9	+5.2
	baz=121						

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DHY  Denali Highway     15.79 330  P     Pn    03 39 42.8 -1.4
      baz=135,SNR=90
DHY                                S     Sn    03 42 43.3 +4.1
      baz=135
DUG  Dugway, Tooele     15.80 124 ⇑P     Pn    03 39 45.9 +1.4
TIN  Tinemaha, Big      15.81 143  IAmb  IAmb  03 39 52.3
      comp=Z,906nm,1.6s
J26L Joseph Creek       15.84 338  P     Pn    03 39 44.0 -0.7
      baz=146,SNR=200
J26L                               S     Sn    03 42 45.3 +5.0
      baz=146
J26L                               S     Sn    03 42 45.3 +5.0
      baz=146
K24K Donnelly Dome      15.86 334  P     Pn    03 39 43.6 -1.2
      baz=140,SNR=80
K24K                               S     Sn    03 42 46.0 +5.5
      baz=140
K24K                               S     Sn    03 42 46.0 +5.5
      baz=140
M22K Willow             15.88 323  P     Pn    03 39 43.2 -1.9
      baz=126,SNR=28
M22K                               S     Sn    03 42 47.1 +6.0
      baz=126
I28M Miner Creek        15.95 345  P     Pn    03 39 45.4 -0.7
      baz=156
I28M                               S     Sn    03 42 48.0 +5.2
      baz=156
SUA  Susitna One        15.96 322  P     Pn    03 39 44.6 -1.7
      baz=124,SNR=78
SUA                                S     Sn    03 42 47.1 +4.0
      baz=124
BW06 Boulder Array      15.98 111  IAmb  IAmb  03 39 52.6
      comp=Z,1µm,1.4s
BW06 Boulder Array      15.98 111 ⇑P     Pn    03 39 48.7 +1.9
PD31 Pinedale Array     15.98 111  IAmb  IAmb  03 39 52.6
      comp=Z,1µm,1.4s
PDAR Pinedale Array     15.98 111  Pn    P     03 39 49.0 -1.4
      comp=Z,2.1nm,0.3s,baz=314,slow=11,SNR=395
PDAR                               Lg    Lg    03 44 26.3
      baz=317,slow=28,SNR=1.8
WAT1 Susitna Watana     16.01 328  P     Pn    03 39 44.9 -1.9
      baz=132
WAT1                               S     Sn    03 42 46.1 +1.9
      baz=132
Q19K Cape Douglas,      16.03 311  IAmb  IAmb  03 39 50.5
      comp=Z,722nm,1.3s
Q19K Cape Douglas,      16.03 311  P     Pn    03 39 45.7 -1.5
      baz=111
Q19K                               S     Sn    03 42 47.9 +3.1
      baz=111
Q19K                               S     Sn    03 42 47.9 +3.1
      baz=111
O20K Slope Mountain     16.04 316  P     Pn    03 39 44.6 -2.7
      baz=117
O20K                               S     Sn    03 42 48.3 +3.3
      baz=117
O20K                               S     Sn    03 42 48.3 +3.3
      baz=117
P19K Oil Pt             16.12 314  IAmb  IAmb  03 39 53.2
      comp=Z,978nm,1.5s
P19K Oil Pt             16.12 314  P     Pn    03 39 46.8 -1.5
      baz=114
P19K                               S     S     03 42 53.5 -7.0
      baz=114
P19K                               S     S     03 42 53.5 -7.0
      baz=114
LAO  LASA Array         16.18  94 ⇓P     Pn    03 39 48.5 -0.7
CHIR Chirikof Islan     16.24 299  IAmb  IAmb  03 39 55.2
      comp=Z,2µm,1.6s
CHIR Chirikof Islan     16.24 299  P     Pn    03 39 47.2 -2.6
      baz=98
CHIR                               S     Sn    03 42 55.5 +5.7
      baz=98
RED  Redoubt Volcan     16.26 317  IAmb  IAmb  03 39 55.5
      comp=Z,1µm,1.7s
CUT  Chulitna           16.34 325  P     Pn    03 39 50.0 -1.0
      baz=128,SNR=76
CUT                                S     Sn    03 42 53.4 +1.3
      baz=128
S11A Rachel             16.34 136  IAmb  IAmb  03 40 00.1
      comp=Z,1µm,1.4s
EPYK Eagle Plains       16.38 350  P     Pn    03 39 51.5 -0.1
      baz=164,SNR=119
EPYK                               S     Sn    03 42 53.5 +0.3
      baz=164
EPYK                               S     S     03 42 56.5 -9.1
      baz=164
J25K Salcha River,      16.38 336  P     Pn    03 39 51.1 -0.6
      baz=143,SNR=243
J25K                               S     Sn    03 42 58.3 +5.0
      baz=143
J25K                               S     Sn    03 42 58.3 +5.0
      baz=143
I27K Kandik River       16.39 343  P     Pn    03 39 51.5 -0.2
      baz=153,SNR=47
I27K                               S     Sn    03 42 57.7 +4.3
      baz=153
I27K                               S     Sn    03 42 57.7 +4.3
      baz=153
CWC  Cottonwood Cre     16.40 144  IAmb  IAmb  03 40 00.6
      comp=Z,2µm,1.9s
SPCR Spurr Chakacha     16.41 320  P     Pn    03 39 50.3 -1.7
      baz=121,SNR=64
SPCR                               S     Sn    03 42 59.0 +5.0
      baz=121
H29M Whitestone         16.43 348  P     Pn    03 39 51.5 -0.7
      baz=161,SNR=180
H29M                               S     Sn    03 42 58.7 +4.3
      baz=161
I26K Coal Creek Min     16.44 340  P     Pn    03 39 52.3 +0.1
      baz=149
I26K                               S     S     03 43 01.9 -4.8
      baz=149
I26K                               S     S     03 43 01.9 -4.8
      baz=149
SKT  Skwentna           16.56 323  IAmb  IAmb  03 39 59.0
      comp=Z,1µm,2.0s
SKT  Skwentna           16.56 323  P     Pn    03 39 53.1 -0.8
      baz=124,SNR=50
SKT                                S     Sn    03 43 01.8 +4.3
      baz=124
VES  Vestal, Richgr     16.57 147  IAmb  IAmb  03 40 05.0
      comp=Z,2µm,1.6s
L22K Petersville        16.59 325  IAmb  IAmb  03 39 59.9
      comp=Z,1µm,1.7s
Q18K Katmai Hardscr     16.60 309  P     Pn    03 39 53.4 -1.0
      baz=108,SNR=26
Q18K                               S     Sn    03 43 02.2 +3.5
      baz=108
Q18K                               S     Sn    03 43 02.2 +3.5
      baz=108
HDA  Harding Lake       16.65 334  P     Pn    03 39 55.3 +0.3
      baz=139,SNR=132
HDA                                S     Sn    03 43 02.8 +3.0
      baz=139
G31M Satah River        16.71 354  P     Pn    03 39 55.7  0.0
      baz=170,SNR=142
G31M                               S     Sn    03 43 04.8 +3.6
      baz=170
MCK  McKinley           16.75 330  P     Pn    03 39 56.1 -0.2
      baz=134,SNR=141
MCK                                S     Sn    03 43 05.2 +2.9
      baz=134
O19K Port Alsworth      16.85 315  P     Pn    03 39 56.0 -1.5
      baz=114,SNR=32
O19K                               S     Sn    03 43 09.2 +4.7
      baz=114
O19K                               S     Sn    03 43 09.2 +4.7
      baz=114
DGMT Dagmar             16.90  87 ⇑P     Pn    03 39 58.1 -0.1
ILAR Eielson Array      16.91 335  Pn    Pn    03 39 58.6 +0.4
      comp=Z,0.4nm,0.3s,baz=148,slow=10.0,SNR=70
ILAR                               PcP   PcP   03 44 42.4 -2.1
      comp=Z,5.5nm,0.8s,baz=191,slow=0.9,SNR=7.9
ILAR                               Lg    Lg    03 44 57.1
      comp=Z,0.1nm,0.3s,baz=118,slow=31,SNR=2.6
ILAR                               LR    LR    03 45 59.4
      comp=Z,49µm,18.8s,baz=130,slow=36
      comp=Z,37nm,0.9s
Q17K Contact Creek      16.92 308  P     Pn    03 39 57.5 -1.1
      baz=106
Q17K                               S     Sn    03 43 10.8 +4.4
      baz=106
Q17K                               S     Sn    03 43 10.8 +4.4
      baz=106
G30M tAoh Zraii Nji     16.93 352  P     Pn    03 39 58.3 -0.1
      baz=166
G30M                               S     Sn    03 43 09.0 +2.6
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      baz=166
H27K Steamboat Moun     16.93 344  P     P     03 39 59.5 -1.1
      baz=154,SNR=66
H27K                               S     S     03 43 11.7 -5.3
      baz=154
P18K Big Mountain,      16.96 312  IAmb  IAmb  03 40 03.8
      comp=Z,2µm,1.9s
P18K Big Mountain,      16.96 312  P     Pn    03 39 57.5 -1.5
      baz=110,SNR=9.0
P18K                               S     Sn    03 43 11.7 +4.4
      baz=110
P18K                               S     Sn    03 43 11.7 +4.4
      baz=110
PLK4 Peulik 4           17.00 305  IAmb  IAmb  03 40 04.7
      comp=Z,982nm,1.1s
R17L Mt. Peulik Vol     17.00 305  P     Pn    03 39 58.5 -0.9
      baz=103,SNR=35
R17L                               S     Sn    03 43 08.9 +0.7
      baz=103
R17L                               S     Sn    03 43 08.9 +0.7
      baz=103
TRF  Thorofare Moun     17.01 328  IAmb  IAmb  03 40 03.3
      comp=Z,1µm,1.7s
TRF  Thorofare Moun     17.01 328  P     Pn    03 39 59.5 -0.2
      baz=130,SNR=91
TRF                                S     S     03 43 13.9 -4.8
      baz=130
WRH  Wood River Hil     17.03 333  IAmb  IAmb  03 40 04.8
      comp=Z,982nm,1.7s
G29M Pine Creek         17.05 349  P     Pn    03 39 59.4 -0.6
      baz=162,SNR=81
G29M                               S     Sn    03 43 09.0 -0.3
      baz=162
O18K Koktuh Hills       17.12 313  P     Pn    03 39 59.6 -1.4
      baz=112,SNR=40
O18K                               S     S     03 43 16.7 -4.1
      baz=112
O18K                               S     S     03 43 16.7 -4.1
      baz=112
CLC  China Lake         17.14 144  IAmb  IAmb  03 40 12.2
      comp=Z,1µm,1.9s
M20K Styx River         17.14 321  IAmb  IAmb  03 40 06.6
      comp=Z,2µm,1.7s
M20K Styx River         17.14 321  P     Pn    03 39 59.9 -1.3
      baz=121,SNR=99
M20K                               S     Sn    03 43 13.7 +2.0
      baz=121
M20K                               S     Sn    03 43 13.7 +2.0
      baz=121
TCRU Three Creeks R     17.16 127  IAmb  IAmb  03 40 10.9
      comp=Z,2µm,1.8s
N19K Bonanza Creek      17.19 317  IAmb  IAmb  03 40 08.3
      comp=Z,1µm,1.8s
N19K Bonanza Creek      17.19 317  P     Pn    03 40 01.0 -0.9
      baz=116,SNR=57
N19K                               S     Sn    03 43 16.5 +3.5
      baz=116
N19K                               S     Sn    03 43 16.5 +3.5
      baz=116
F31M Tsiigehtchic       17.20 355  IAmb  IAmb  03 40 04.4
      comp=Z,767nm,1.3s
F31M Tsiigehtchic       17.20 355  P     Pn    03 40 01.9 +0.1
      baz=172,SNR=274
F31M                               S     Sn    03 43 16.4 +3.5
      baz=172
COLA College            17.26 334  P     P     03 40 03.6 -0.5
COLA College            17.26 334c iP    Pn    03 40 01.3 -1.3
COLA                               pmax  pmax
      comp=Z,597nm,1.5s
COLA College            17.26 334 ⇑P     Pn    03 40 02.6  0.0
COLA College            17.26 334  P     Pn    03 40 02.3 -0.3
      baz=138
COLA                               S     S     03 43 19.0 -4.5
      baz=138
QSM  Queen of Sheba     17.29 142  IAmb  IAmb  03 40 13.6
      comp=Z,1µm,1.7s
KTH  Kantishna Hill     17.29 328  IAmb  IAmb  03 40 05.9
      comp=Z,2µm,1.9s
POKR Poker Plat Res     17.33 335  P     Pn    03 40 02.1 -1.4
POKR Poker Plat Res     17.33 335  P     Pn    03 40 03.7 +0.2
      baz=140,SNR=30
POKR                               S     S     03 43 20.3 -4.7
      baz=140
POKR                               S     S     03 43 20.3 -4.7
      baz=140
PPLA Purkeypile         17.34 325  P     Pn    03 40 02.8 -1.0
      baz=126,SNR=66
PPLA                               S     Sn    03 43 20.7 +4.0
      baz=126
NEA2 Nenana             17.41 332  P     Pn    03 40 04.2 -0.3
      baz=135,SNR=85
NEA2                               S     S     03 43 22.8 -3.7
      baz=135
Q16K King Salmon        17.43 309  P     Pn    03 40 03.7 -1.0
      baz=106,SNR=48
Q16K                               S     S     03 43 23.7 -3.2
      baz=106
P17K Kvichak River      17.48 310  IAmb  IAmb  03 40 10.8
      comp=Z,916nm,1.3s
P17K Kvichak River      17.48 310  P     Pn    03 40 04.9 -0.4
      baz=108,SNR=32
P17K                               S     Sn    03 43 22.8 +3.0
      baz=108
P17K                               S     Sn    03 43 22.8 +3.0
      baz=108
G27K Doyon Strip        17.48 345  IAmb  IAmb  03 40 10.9
      comp=Z,2µm,1.9s
G27K Doyon Strip        17.48 345  P     Pn    03 40 05.7 +0.2
      baz=154,SNR=319
G27K                               S     S     03 43 23.5 -4.5
      baz=154
G27K                               S     S     03 43 23.5 -4.5
      baz=154
CCCA Chr Cany lake      17.48 143  IAmb  IAmb  03 40 13.1
      comp=Z,736nm,1.2s
F30M Barrier River      17.50 353  IAmb  IAmb  03 40 12.0
      comp=Z,1µm,1.6s
F30M Barrier River      17.50 353  P     Pn    03 40 05.2 -0.4
      baz=168,SNR=116
F30M                               S     Sn    03 43 21.7 +1.4
      baz=168
CCUT Cedar City         17.53 131  IAmb  IAmb  03 40 14.9
      comp=Z,2µm,1.8s
FFC  Flin Flon          17.54  65 ⇓P     Pn    03 40 03.3 -3.0
P18A Preston Nutter     17.60 120  IAmb  IAmb  03 40 16.1
      comp=Z,1µm,1.8s
Q16A Castle Valley      17.60 123  IAmb  IAmb  03 40 16.1
      comp=Z,2µm,1.9s
R16K Pilot Point        17.62 305  P     P     03 40 08.6 +0.5
      baz=102
BPAW Bear Paw Mtn.      17.67 329  IAmb  IAmb  03 40 10.2
      comp=Z,1µm,1.8s
BPAW Bear Paw Mtn.      17.67 329  P     Pn    03 40 07.2 -0.6
      baz=131,SNR=127
BPAW                               S     Sn    03 43 26.7 +2.2
      baz=131
MTPU Mount Pierson      17.73 127  IAmb  IAmb  03 40 18.0
      comp=Z,2µm,2.0s
N18K Kilae Creek        17.76 315  IAmb  IAmb  03 40 10.6
      comp=Z,2µm,1.8s
N18K Kilae Creek        17.76 315  P     Pn    03 40 08.8 -0.1
      baz=113,SNR=57
N18K                               S     S     03 43 30.1 -3.7
      baz=113
N18K                               S     S     03 43 30.1 -3.7
      baz=113
K22A Casper             17.89 107  IAmb  IAmb  03 40 16.2
      comp=Z,765nm,1.2s
I23K Minto, Yukon-K     17.89 333  P     P     03 40 11.2 +0.1
      baz=136,SNR=79
I23K                               S     S     03 43 34.4 -2.0
      baz=136
I23K                               S     S     03 43 34.4 -2.0
      baz=136
F28M Old Crow           17.95 348  P     P     03 40 12.1 +0.4
      baz=159,SNR=144
F28M                               S     S     03 43 34.9 -2.7
      baz=159
O17K Koliganek Bris     17.98 312  P     Pn    03 40 10.5 -1.1
      baz=109,SNR=32
O17K                               S     S     03 43 35.0 -3.3
      baz=109
CHUM Lake Minchumin     17.98 327  P     Pn    03 40 11.5 -0.1
      baz=128,SNR=144
CHUM                               S     S     03 43 36.6 -1.6
      baz=128
L19K White Mountain     17.99 320  IAmb  IAmb  03 40 17.1
      comp=Z,2µm,1.6s
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L19K White Mountain     17.99 320  P     Pn    03 40 11.5 -0.2
      baz=119,SNR=104
L19K                               S     S     03 43 36.9 -1.6
      baz=119
L19K                               S     S     03 43 36.9 -1.6
      baz=119
G26K Porcupine Rive     17.99 342  IAmb  IAmb  03 40 16.4
      comp=Z,2µm,1.7s
G26K Porcupine Rive     17.99 342  P     P     03 40 13.7 +1.5
      baz=150
G26K                               S     Sn    03 43 33.9 +1.8
      baz=150
H24K Noodor Dome        18.00 336  P     P     03 40 13.1 +0.7
      baz=140,SNR=169
H24K                               S     S     03 43 37.2 -1.5
      baz=140
H24K                               S     S     03 43 37.2 -1.5
      baz=140
LCMT Little Creek M     18.01 132  P     P     03 40 13.6 +0.8
INK  Inuvik             18.05 356  P     Pn    03 40 11.4 -0.9
      comp=Z,0.4nm,0.3s,baz=173,slow=12,SNR=132
INK                                Lg    Lg    03 45 22.7
      comp=Z,0.1nm,0.3s,baz=264,slow=10,SNR=1.4
INK                                LR    LR    03 46 38.5
      comp=Z,54µm,18.4s,baz=178,slow=36
      comp=Z,156nm,1.1s
INK  Inuvik             18.05 356  IAmb  IAmb  03 40 16.6
      comp=Z,975nm,1.7s
INK  Inuvik             18.05 356  P     P     03 40 12.8  0.0
      baz=173,SNR=178
INK                                S     Sn    03 43 33.5  0.0
      baz=173
M18K Stony River        18.07 318  P     P     03 40 12.9 -0.2
      baz=116
M18K                               S     S     03 43 37.5 -2.6
      baz=116
P16K Nushagak River     18.19 309  IAmb  IAmb  03 40 21.0
      comp=Z,895nm,1.1s
P16K Nushagak River     18.19 309  P     Pn    03 40 13.9 -0.3
      baz=106,SNR=30
P16K                               S     S     03 43 42.2 -0.3
      baz=106
P16K                               S     S     03 43 42.2 -0.3
      baz=106
KNB  Kanab              18.21 131  IAmb  IAmb  03 40 24.2
      comp=Z,1µm,1.6s
MTPC Mountain Pass      18.24 139  IAmb  IAmb  03 40 20.2
      comp=Z,988nm,1.5s
N17K Nushagak Hills     18.29 314  P     P     03 40 15.7 +0.2
      baz=111,SNR=96
N17K                               S     S     03 43 42.7 -1.8
      baz=111
K20K Telida             18.31 324  IAmb  IAmb  03 40 22.4
      comp=Z,765nm,1.3s
K20K Telida             18.31 324  P     Pn    03 40 15.4 -0.2
      baz=124
K20K                               S     S     03 43 43.7 -1.2
      baz=124
K20K                               S     S     03 43 43.7 -1.2
      baz=124
G25K Bearman Lake       18.32 340  P     P     03 40 17.9 +2.1
      baz=145
G25K                               S     S     03 43 46.5 +1.6
      baz=145
CNBA Chernabura Isl     18.41 295  IAmb  IAmb  03 40 24.4
      comp=Z,813nm,1.5s
O16K Kokwok River B     18.41 311  IAmb  IAmb  03 40 21.3
      comp=Z,2µm,1.9s
O16K Kokwok River B     18.41 311  P     Pn    03 40 16.3 -0.5
      baz=107,SNR=58
O16K                               S     S     03 43 46.7 -0.1
      baz=107
CHNA Chernabura Isl     18.41 295  P     Pn    03 40 15.6 -1.2
      baz=91
E29M Blow River         18.46 351  IAmb  IAmb  03 40 24.4
      comp=Z,1µm,1.8s
E29M Blow River         18.46 351  P     Pn    03 40 18.0 +0.7
      baz=164
E29M                               S     S     03 43 45.0 -2.7
      baz=164
S14K Fog Glacier        18.49 300  P     P     03 40 16.9 -0.9
      baz=96
S14K                               S     S     03 43 49.1 +0.4
      baz=96
S14K                               S     S     03 43 49.1 +0.4
      baz=96
G24K Hadweenzic Riv     18.59 338  P     Pn    03 40 19.3 +0.4
      baz=143,SNR=45
G24K                               S     S     03 43 54.8 +4.4
      baz=143
G24K                               S     S     03 43 54.8 +4.4
      baz=143
I21K Tanana             18.71 331  IAmb  IAmb  03 40 26.2
      comp=Z,2µm,1.5s
I21K Tanana             18.71 331  P     Pn    03 40 21.7 +1.2
      baz=132,SNR=240
I21K                               S     S     03 43 54.4 +1.4
      baz=132
I21K                               S     S     03 43 54.4 +1.4
      baz=132
F26K Sheenjek River     18.71 343  P     Pn    03 40 22.7 +2.2
      baz=151,SNR=516
F26K                               S     S     03 43 54.2 +1.1
      baz=151
E27K Coleen River       18.73 347  P     Pn    03 40 20.6 -0.2
      baz=156
E27K                               S     S     03 43 52.8 -0.5
      baz=156
E27K                               S     S     03 43 52.8 -0.5
      baz=156
M17K Holitna River      18.74 316  IAmb  IAmb  03 40 25.5
      comp=Z,1µm,1.4s
M17K Holitna River      18.74 316  P     Pn    03 40 21.0 +0.2
      baz=113,SNR=88
M17K                               S     S     03 43 54.5 +0.9
      baz=113
L18K Granite Mounta     18.77 319  P     Pn    03 40 21.5 +0.3
      baz=116,SNR=105
L18K                               S     S     03 43 53.7 -0.4
      baz=116
L18K                               S     S     03 43 53.7 -0.4
      baz=116
J20K Nowinta River      18.81 326  P     Pn    03 40 21.7  0.0
      baz=126,SNR=217
J20K                               S     S     03 43 55.0 +0.1
      baz=126
J20K                               S     S     03 43 55.0 +0.1
      baz=126
E28M Babbage River      18.84 349  P     Pn    03 40 22.1  0.0
      baz=161,SNR=178
E28M                               S     S     03 43 54.0 -1.6
      baz=161
F25K Christian Rive     18.92 341  P     Pn    03 40 25.9 +2.9
      baz=148,SNR=412
F25K                               S     S     03 44 01.0 +3.8
      baz=148
SDPT Sand Point         18.94 297  P     P     03 40 21.0 -1.6
SDPT Sand Point         18.94 297  P     Pn    03 40 23.6 +0.4
SDPT Sand Point         18.94 297  P     Pn    03 40 23.1 -0.2
      baz=92,SNR=16
SDPT                               S     S     03 44 02.2 +4.7
      baz=92
N16K Nishlik Lake       19.01 313  P     Pn    03 40 24.8 +0.7
      baz=109,SNR=123
N16K                               S     S     03 44 03.0 +4.0
      baz=109
H22K Ishtalitna Cre     19.02 333  IAmb  IAmb  03 40 31.0
      comp=Z,2µm,1.8s
H22K Ishtalitna Cre     19.02 333  P     Pn    03 40 24.8 +0.6
      baz=134,SNR=126
H22K                               S     S     03 44 03.7 +4.5
      baz=134
H22K                               S     S     03 44 03.7 +4.5
      baz=134
O15K Ungalikthiuk R     19.14 309  P     Pn    03 40 26.0 +0.3
      baz=104,SNR=61
O15K                               S     S     03 44 03.1 +1.4
      baz=104
PV14 Lion Creek, Pa     19.16 121  IAmb  IAmb  03 40 34.9
      comp=Z,1µm,1.4s
PV04 Paradox Valley     19.21 121  IAmb  IAmb  03 40 35.6
      comp=Z,2µm,1.5s
C36M Paulatuk           19.23   6  P     Pn    03 40 26.1 -0.6
      baz=192,SNR=561
C36M                               S     Sn    03 43 59.1 -2.7
      baz=192
G23K Bananza Creek      19.23 336  P     Pn    03 40 27.1 +0.2
      baz=138,SNR=113
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G23K				S	**S**	**03 44 09.0**	**+5.5**
	baz=138						
G23K				S	**S**	**03 44 09.0**	**+5.5**
	baz=138						
J19K	**Poorman**	**19.24**	**325**	P	**Pn**	**03 40 27.1**	**+0.2**
	baz=123,SNR=224						
J19K				S	**S**	**03 44 04.7**	**+1.2**
	baz=123						
J19K				S	**S**	**03 44 04.7**	**+1.2**
	baz=123						
PV17	**East Wray Mesa**	**19.26**	**121**	IAmb	IAmb	03 40 36.0	
	comp=Z,1µm,1.4s						
M16K	**Timber Creek**	**19.28**	**315**	P	**Pn**	**03 40 28.5**	**+1.1**
	baz=110,SNR=147						
M16K				S	**S**	**03 44 07.5**	**+3.0**
	baz=110						
M16K				S	**S**	**03 44 07.5**	**+3.0**
	baz=110						
H21K	**Melozitna Rive**	**19.29**	**331**	P	**Pn**	**03 40 27.6**	**+0.2**
	baz=131,SNR=138						
H21K				S	**S**	**03 44 08.7**	**+4.1**
	baz=131						
H21K				S	**S**	**03 44 08.7**	**+4.1**
	baz=131						
I20K	**Naaghedeneel**	**19.29**	**328**	P	**Pn**	**03 40 27.0**	**-0.5**
	baz=126						
I20K				S	**S**	**03 44 08.3**	**+3.7**
	baz=126						
F24K	**Squaw Lake**	**19.34**	**339**	IAmb	IAmb	03 40 32.8	
	comp=Z,1µm,1.8s						
F24K	**Squaw Lake**	**19.34**	**339**	P	**Pn**	**03 40 29.3**	**+1.2**
	baz=143						
F24K				S	**S**	**03 44 11.2**	**+5.5**
	baz=143						
E25K	**Arctic Village**	**19.36**	**342**	P	**Pn**	**03 40 28.2**	**-0.1**
	baz=149,SNR=232						
E25K				S	**S**	**03 44 08.2**	**+2.3**
	baz=149						
E25K				S	**S**	**03 44 08.2**	**+2.3**
	baz=149						
J18K	**Innoko River**	**19.37**	**323**	P	**Pn**	**03 40 28.4**	**-0.1**
	baz=120,SNR=151						
J18K				S	**S**	**03 44 09.3**	**+3.0**
	baz=120						
L17K	**Donlin**	**19.41**	**318**	P	**Pn**	**03 40 29.7**	**+0.8**
	baz=114,SNR=108						
L17K				S	**S**	**03 44 09.8**	**+2.7**
	baz=114						
L17K				S	**S**	**03 44 09.8**	**+2.7**
	baz=114						
D28M	**Stokes Point**	**19.45**	**351**	P	**Pn**	**03 40 28.5**	**-0.7**
	baz=163,SNR=267						
D28M				S	**S**	**03 44 08.7**	**+1.0**
	baz=163						
PV15	**Paradox Valley**	**19.48**	**120**	IAmb	IAmb	03 40 37.7	
	comp=Z,616nm,1.3s						
PMD	**Palm Desert**	**19.52**	**144**	IAmb	IAmb	03 40 44.0	
	comp=Z,1µm,1.9s						
PFO	**Pinyon Flats O**	**19.52**	**144**	P	**Pn**	**03 40 31.1**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=328,slow=11,SNR=32						
PFO				S	**S**	**03 44 11.9**	**+2.0**
	comp=Z,3.2nm,0.9s,baz=336,slow=20,SNR=1.4						
PFO				LR	LR	03 48 41.5	
	comp=Z,36µm,19.2s,baz=320,slow=39						
	comp=Z,261nm,1.3s						
PFO	**Pinyon Flats O**	**19.52**	**144**	*c i*P	**Pn**	**03 40 32.3**	**+1.7**
PFO				pmax	pmax		
	comp=Z,950nm,1.6s						
N15K	**Kwethluk River**	**19.54**	**312**	P	**Pn**	**03 40 31.1**	**+0.6**
	baz=106,SNR=30						
N15K				S	**S**	**03 44 15.4**	**+5.7**
	baz=106						
N15K				S	**S**	**03 44 15.4**	**+5.7**
	baz=106						
PV01	**Paradox Valley**	**19.58**	**121**	IAmb	IAmb	03 40 38.9	
	comp=Z,1µm,1.6s						
D27M	**Malcolm River**	**19.62**	**348**	P	**Pn**	**03 40 32.0**	**+0.5**
	baz=159,SNR=242						
D27M				S	**Sn**	**03 44 12.1**	**+0.5**
	baz=159						
K17K	**Iditarod**	**19.66**	**320**	P	**Pn**	**03 40 31.9**	**0.0**
	baz=115,SNR=138						
K17K				S	**Sn**	**03 44 16.5**	**+4.1**
	baz=115						
COLD	**Coldfoot**	**19.67**	**337**	P	**Pn**	**03 40 32.2**	**+0.2**
	baz=139,SNR=193						
COLD				S	**Sn**	**03 44 19.3**	**+6.7**
	baz=139						
L16K	**Owhat River**	**19.76**	**316**	P	**Pn**	**03 40 33.0**	**-0.1**
	baz=111,SNR=100						
L16K				S	**Sn**	**03 44 17.7**	**+2.8**
	baz=111						
L16K				S	**Sn**	**03 44 17.7**	**+2.8**
	baz=111						
H20K	**Anotleneega Mo**	**19.85**	**329**	P	**P**	**03 40 33.0**	**+0.4**
	baz=127,SNR=70						
H20K				S	**Sn**	**03 44 18.4**	**+1.4**
	baz=127						
H20K				S	**Sn**	**03 44 18.4**	**+1.4**
	baz=127						
S12K	**Black Hills**	**19.85**	**298**	P	**Pn**	**03 40 33.7**	**-0.5**
	baz=92,SNR=24						
S12K				S	**Sn**	**03 44 21.2**	**+4.1**
	baz=92						
S12K				S	**Sn**	**03 44 21.2**	**+4.1**
	baz=92						
O14K	**Tigyukauivet M**	**19.88**	**308**	P	**Pn**	**03 40 33.7**	**-0.8**
	baz=102,SNR=39						
O14K				S	**Sn**	**03 44 21.2**	**+3.4**
	baz=102						
O14K				S	**Sn**	**03 44 21.2**	**+3.4**
	baz=102						
DPP	**Dos Picos Cty**	**19.89**	**146**	P	**Pn**	**03 40 35.5**	**+0.6**
DPP				IAmb	IAmb	03 40 47.6	
	comp=Z,1µm,1.7s						
E24K	**Your Creek**	**19.93**	**340**	IAmb	IAmb	03 40 43.1	
	comp=Z,983nm,1.4s						
E24K	**Your Creek**	**19.93**	**340**	P	**Pn**	**03 40 35.6**	**+0.5**
	baz=143						
E24K				S	**Sn**	**03 44 23.1**	**+4.2**
	baz=143						
E24K				S	**Sn**	**03 44 23.1**	**+4.2**
	baz=143						
M15K	**Kasigluk River**	**19.98**	**313**	P	**Pn**	**03 40 35.0**	**-0.7**
	baz=107						
M15K				S	**Sn**	**03 44 25.6**	**+5.6**
	baz=107						
G21K	**Allakaket**	**20.07**	**332**	IAmb	IAmb	03 40 47.6	
	comp=Z,418nm,1.1s						
G21K	**Allakaket**	**20.07**	**332**	P	Pn	03 40 36.7	-0.1
	baz=132						
G21K				S	Sn	03 44 26.8	+4.4
	baz=132						
GCSA	**Galena City Sc**	**20.11**	**326**	P	Pn	03 40 36.1	-1.1
	baz=122,SNR=64						
GCSA				S	Sn	03 44 24.2	+1.1
	baz=122						
WUAZ	**Wupatki**	**20.11**	**131**	IAmb	IAmb	03 40 49.0	
	comp=Z,771nm,1.4s						
WUAZ				IAMs_20	IAMs_20	03 48 29.4	
	comp=Z,70µm,19.0s						
WUAZ	**Wupatki**	**20.11**	**131**	⇑P	Pn	03 40 37.5	-0.1
ISCO	**Idaho Springs**	**20.15**	**112**	P	**P**	**03 40 36.8**	**+0.5**
ISCO				IAmb	IAmb	03 40 48.4	
	comp=Z,1µm,2.0s						
ISCO				IAMs_20	IAMs_20	03 48 35.8	
	comp=Z,152µm,18.0s						
ISCO	**Idaho Springs**	**20.15**	**112**	P	**P**	**03 40 36.8**	**+0.5**
ISCO				pmax	pmax		
	comp=Z,1µm,2.0s						
ISCO				MLR	MLR		
	comp=Z,152µm,18.0s						
ISCO	**Idaho Springs**	**20.15**	**112**	⇑P	Pn	03 40 38.2	0.0
E23K	**Chandalar**	**20.17**	**339**	P	Pn	03 40 38.0	-0.1
	baz=141						
E23K				S	Sn	03 44 29.7	+4.9
	baz=141						
N14K	**Kuskokwak Cree**	**20.25**	**310**	IAMs_20	IAMs_20	03 47 00.4	
	comp=Z,130µm,20.0s						
N14K	**Kuskokwak Cree**	**20.25**	**310**	P	Pn	03 40 38.4	-0.4
	baz=104,SNR=41						
N14K				S	Sn	03 44 29.6	+3.1
	baz=104						
BAR	**Barrett**	**20.28**	**146**	IAmb	IAmb	03 40 52.4	
	comp=Z,1µm,1.7s						
J17K	**VABM Dome**	**20.28**	**321**	IAMs_20	IAMs_20	03 47 31.8	
	comp=Z,69µm,18.0s						
J17K	**VABM Dome**	**20.28**	**321**	P	Pn	03 40 38.2	-1.0
	baz=116,SNR=161						
J17K				S	Sn	03 44 28.2	+0.9
	baz=116						
J17K				S	Sn	03 44 28.2	+0.9
	baz=116						
C27K	**Jago River**	**20.36**	**346**	IAmb	IAmb	03 40 45.3	
	comp=Z,2µm,1.9s						
C27K	**Jago River**	**20.36**	**346**	P	Pn	03 40 40.8	+0.7
	baz=154						
C27K				S	Sn	03 44 30.7	+1.4
	baz=154						
C27K				S	Sn	03 44 30.7	+1.4
	baz=154						
F22K	**John River**	**20.39**	**335**	P	Pn	03 40 40.6	0.0
	baz=136						
F22K				S	Sn	03 44 34.2	+4.1
	baz=136						
H19K	**Roundabout Mou**	**20.39**	**328**	IAmb	IAmb	03 40 48.8	
	comp=Z,881nm,1.6s						
H19K	**Roundabout Mou**	**20.39**	**328**	P	**P**	**03 40 39.3**	**+0.8**
	baz=125,SNR=81						
H19K				S	Sn	03 44 32.4	+2.3
	baz=125						
D25K	**Kavik River**	**20.54**	**343**	IAmb	IAmb	03 40 52.2	
	comp=Z,472nm,1.3s						
D25K				IAMs_20	IAMs_20	03 47 19.9	
	comp=Z,82µm,19.0s						
D25K	**Kavik River**	**20.54**	**343**	P	**P**	**03 40 40.7**	**+0.6**
	baz=149						
D25K				S	Sn	03 44 36.2	+2.6
	baz=149						
D25K				S	Sn	03 44 36.2	+2.6
	baz=149						
F21K	**Alatna River**	**20.55**	**334**	IAMs_20	IAMs_20	03 47 42.2	
	comp=Z,80µm,20.0s						
F21K	**Alatna River**	**20.55**	**334**	P	Pn	03 40 42.4	0.0
	baz=133,SNR=104						
F21K				S	Sn	03 44 36.4	+2.6
	baz=133						
F21K				S	Sn	03 44 36.4	+2.6
	baz=133						
M14K	**Bethel**	**20.59**	**312**	IAMs_20	IAMs_20	03 47 01.0	
	comp=Z,89µm,21.0s						
M14K	**Bethel**	**20.59**	**312**	P	Pn	03 40 42.8	-0.1
	baz=105,SNR=63						
M14K				S	Sn	03 44 38.9	+4.0
	baz=105						
M14K				S	Sn	03 44 38.9	+4.0
	baz=105						
FALS	**False Pass**	**20.62**	**295**	P	**P**	**03 40 39.9**	**-1.0**
FALS				IAMs_20	IAMs_20	03 46 43.9	
	comp=Z,92µm,20.0s						
FALS	**False Pass**	**20.62**	**295**	P	**P**	**03 40 41.8**	**+0.8**
	baz=88						
FALS				S	Sn	03 44 36.2	+0.5
	baz=88						
TOLK	**Toolik Lake Re**	**20.62**	**340**	IAMs_20	IAMs_20	03 48 20.4	
	comp=Z,95µm,18.0s						
TOLK	**Toolik Lake Re**	**20.62**	**340**	P	Pn	03 40 43.7	+0.5
	baz=142,SNR=55						
TOLK				S	Sn	03 44 40.2	+4.6
	baz=142						
TOLK				S	Sn	03 44 40.2	+4.6
	baz=142						
L15K	**Ungalak Mounta**	**20.65**	**315**	P	Pn	03 40 42.9	-0.7
	baz=108						
L15K				S	Sn	03 44 38.9	+2.7
	baz=108						
Y14A	**Wickenburg**	**20.65**	**136**	IAmb	IAmb	03 40 46.9	
	comp=Z,734nm,1.4s						
E22K	**Anaktuvuk Pass**	**20.76**	**337**	IAMs_20	IAMs_20	03 48 12.2	
	comp=Z,81µm,19.0s						
E22K	**Anaktuvuk Pass**	**20.76**	**337**	P	Pn	03 40 44.4	-0.5
	baz=138,SNR=193						
E22K				S	Sn	03 44 40.2	+1.2
	baz=138						
E22K				S	Sn	03 44 40.2	+1.2
	baz=138						
C26K	**Camden Bay**	**20.81**	**346**	P	Pn	03 40 45.7	+0.3
	baz=152,SNR=353						
C26K				S	Sn	03 44 41.1	+1.1
	baz=152						
C26K				S	Sn	03 44 41.1	+1.1
	baz=152						
J16K	**Anvik River**	**20.85**	**320**	P	Pn	03 40 44.6	-1.3
	baz=114						
J16K				S	Sn	03 44 41.0	-0.1
	baz=114						
H18K	**Honhosa River**	**20.86**	**326**	IAmb	IAmb	03 40 46.7	
	comp=Z,1µm,1.6s						
H18K	**Honhosa River**	**20.86**	**326**	P	Pn	03 40 44.9	-1.1
	baz=121						
H18K				S	Sn	03 44 41.4	+0.2
	baz=121						
K15K	**Wolf Creek Mou**	**20.88**	**317**	P	Pn	03 40 45.5	-0.7
	baz=110,SNR=129						
K15K				S	Sn	03 44 43.8	+2.1
	baz=110						
K15K				S	Sn	03 44 43.8	+2.1
	baz=110						
D24K	**Happy Valley**	**20.88**	**341**	IAMs_20	IAMs_20	03 48 27.5	
	comp=Z,74µm,19.0s						
D24K	**Happy Valley**	**20.88**	**341**	P	Pn	03 40 46.1	-0.1
	baz=144,SNR=176						
D24K				S	Sn	03 44 43.9	+2.3
	baz=144						
D24K				S	Sn	03 44 43.9	+2.3
	baz=144						
Q24A	**Divide**	**20.96**	**113**	IAmb	IAmb	03 40 54.8	
	comp=Z,579nm,1.5s						
G19K	**Purcell Mounta**	**20.97**	**329**	IAMs_20	IAMs_20	03 48 10.8	
	comp=Z,74µm,18.0s						
G19K	**Purcell Mounta**	**20.97**	**329**	P	**P**	**03 40 45.7**	**+1.0**
	baz=125,SNR=120						
G19K				S	Sn	03 44 41.5	-2.3
	baz=125						
G19K				S	Sn	03 44 41.5	-2.3
	baz=125						
X16A	**Lo Mia Camp, P**	**20.97**	**133**	IAmb	IAmb	03 40 57.1	
	comp=Z,1µm,1.4s						
F20K	**Avaraart Lake**	**21.09**	**332**	IAMs_20	IAMs_20	03 48 37.5	
	comp=Z,90µm,19.0s						
F20K	**Avaraart Lake**	**21.09**	**332**	P	**P**	**03 40 47.3**	**+1.3**
	baz=129,SNR=186						
F20K				S	Sn	03 44 45.8	-0.9
	baz=129						
F20K				S	Sn	03 44 45.8	-0.9
	baz=129						
L14K	**Kuka Creek**	**21.09**	**314**	IAMs_20	IAMs_20	03 47 27.2	
	comp=Z,78µm,20.0s						
L14K	**Kuka Creek**	**21.09**	**314**	P	**P**	**03 40 47.5**	**+1.5**
	baz=106						
L14K				S	Sn	03 44 48.3	+1.4
	baz=106						
L14K				S	Sn	03 44 48.3	+1.4
	baz=106						
D23K	**Nanushuk River**	**21.13**	**339**	P	**P**	**03 40 46.9**	**+0.5**
D23K				IAMs_20	IAMs_20	03 48 46.1	
	comp=Z,62µm,18.0s						
D23K	**Nanushuk River**	**21.13**	**339**	P	**P**	**03 40 48.6**	**+2.2**
	baz=141,SNR=277						
D23K				S	Sn	03 44 46.6	-1.1
	baz=141						
I17K	**Unalakleet**	**21.14**	**321**	P	**P**	**03 40 47.7**	**+1.2**
	baz=115,SNR=121						
I17K				S	Sn	03 44 47.6	-0.4
	baz=115						
ESJX	**Sierra Juarez**	**21.15**	**145**	IAmb	IAmb	03 40 52.5	
	comp=Z,914nm,1.2s						
M13K	**Dall Lake**	**21.17**	**311**	IAMs_20	IAMs_20	03 47 30.2	
	comp=Z,122µm,20.0s						
M13K	**Dall Lake**	**21.17**	**311**	P	**P**	**03 40 48.3**	**+1.4**
	baz=103,SNR=66						
M13K				S	Sn	03 44 45.6	-3.1
	baz=103						
H17K	**Granite Mounta**	**21.32**	**324**	IAmb	IAmb	03 41 01.1	
	comp=Z,968nm,1.4s						
H17K	**Granite Mounta**	**21.32**	**324**	P	**P**	**03 40 49.7**	**+1.3**
	baz=118,SNR=164						
H17K				S	Sn	03 44 49.9	-2.4
	baz=118						
H17K				S	Sn	03 44 49.9	-2.4
	baz=118						
C24K	**Franklin Bluff**	**21.32**	**342**	P	**P**	**03 40 50.7**	**+2.3**
	baz=146,SNR=214						
C24K				S	Sn	03 44 49.1	-3.1
	baz=146						
113A	**Mohawk Valley,**	**21.33**	**140**	IAmb	IAmb	03 41 04.7	
	comp=Z,553nm,1.5s						
G18K	**Tagagawik**	**21.36**	**327**	IAmb	IAmb	03 40 56.7	
	comp=Z,1µm,1.6s						
G18K	**Tagagawik**	**21.36**	**327**	P	**P**	**03 40 50.0**	**+1.1**
	baz=122,SNR=188						
G18K				S	Sn	03 44 50.8	-2.4
	baz=122						
D22K	**Ayikyak River**	**21.53**	**338**	P	**P**	**03 40 52.1**	**+1.4**
	baz=138						
D22K				S	Sn	03 44 56.0	-1.4
	baz=138						
D22K				S	Sn	03 44 56.0	-1.4
	baz=138						
E21K	**Killik River**	**21.54**	**336**	IAmb	IAmb	03 41 06.1	
	comp=Z,746nm,1.6s						
E21K	**Killik River**	**21.54**	**336**	P	**P**	**03 40 51.9**	**+1.0**
	baz=135						
E21K				S	Sn	03 44 55.6	-2.0
	baz=135						
E21K				S	Sn	03 44 55.6	-2.0
	baz=135						
SDCO	**Great Sand Dun**	**21.58**	**116**	IAmb	IAmb	03 41 03.0	
	comp=Z,784nm,1.4s						
SDCO	**Great Sand Dun**	**21.58**	**116**	⇑P	**P**	**03 40 52.7**	**+0.9**
F19K	**Shaleruckik Mo**	**21.60**	**330**	IAmb	IAmb	03 40 58.2	
	comp=Z,964nm,1.7s						
F19K				IAMs_20	IAMs_20	03 48 40.9	
	comp=Z,59µm,18.0s						
F19K	**Shaleruckik Mo**	**21.60**	**330**	P	**P**	**03 40 52.2**	**+0.8**
	baz=126						
F19K				S	Sn	03 44 56.8	-2.1
	baz=126						
OGNE	**Ogallala**	**21.62**	**105**	IAMs_20	IAMs_20	03 49 33.2	
	comp=Z,84µm,18.0s						
OGNE	**Ogallala**	**21.62**	**105**	⇑P	**P**	**03 40 52.8**	**+0.8**
ULM	**Lac du Bonnet**	**21.71**	**77**	P	**P**	**03 40 51.6**	**-1.1**
	comp=Z,50nm,0.5s,baz=283,slow=10,SNR=34						
ULM				S	**S**	**03 44 51.1**	**-1.7**
	comp=Z,26nm,1.0s,baz=288,slow=20,SNR=3.8						
ULM				Lg	Lg	03 47 17.1	
	comp=Z,0.2nm,0.3s,baz=349,slow=12,SNR=5.0						
ULM				LR	LR	03 48 17.7	
	comp=Z,55µm,19.4s,baz=280,slow=34						
	comp=Z,50nm,0.5s						
ULM	**Lac du Bonnet**	**21.71**	**77**	IAmb	IAmb	03 41 04.8	
	comp=Z,659nm,1.3s						
ULM	**Lac du Bonnet**	**21.71**	**77**	*ce*P	**P**	**03 40 50.8**	**-2.0**
SUSD	**Miller**	**21.76**	**94**	IAmb	IAmb	03 41 01.6	
	comp=Z,814nm,1.4s						
VTX	**Valle De La Tr**	**21.76**	**145**	IAmb	IAmb	03 41 00.9	
	comp=Z,897nm,1.6s						
A36M	**Sachs Harbour**	**21.77**	**4**	IAMs_20	IAMs_20	03 49 23.5	
	comp=Z,101µm,20.0s						
A36M	**Sachs Harbour**	**21.77**	**4**	P	**P**	**03 40 53.4**	**+0.1**
	baz=188,SNR=358						
A36M				S	**S**	**03 44 56.3**	**+2.6**
	baz=188						
C23K	**Itkillik River**	**21.80**	**341**	IAmb	IAmb	03 41 06.9	
	comp=Z,920nm,1.3s						
C23K				IAMs_20	IAMs_20	03 49 30.4	
	comp=Z,79µm,20.0s						
C23K	**Itkillik River**	**21.80**	**341**	P	**P**	**03 40 55.6**	**+2.0**
	baz=142,SNR=238						
C23K				S	Sn	03 45 01.4	-2.4
	baz=142						
C23K				S	Sn	03 45 01.4	-2.4
	baz=142						
E19K	**Redstone River**	**21.80**	**332**	IAMs_20	IAMs_20	03 48 59.6	
	comp=Z,78µm,19.0s						
E19K	**Redstone River**	**21.80**	**332**	P	**P**	**03 40 55.7**	**+2.0**
	baz=128						
E19K				S	Sn	03 45 01.0	-2.9
	baz=128						
E19K				S	Sn	03 45 01.0	-2.9
	baz=128						
G17K	**Kiwalik Mounta**	**21.86**	**325**	P	**P**	**03 40 55.5**	**+1.1**
	baz=119,SNR=169						
G17K				S	Sn	03 45 00.8	-4.6
	baz=119						
G17K				S	Sn	03 45 00.8	-4.6
	baz=119						
J14K	**Nanvaranak Lak**	**21.91**	**317**	P	**P**	**03 40 56.3**	**+1.5**
	baz=108,SNR=40						
J14K				S	Sn	03 45 03.5	-3.0
	baz=108						
E20K	**Nigu River**	**22.01**	**334**	P	**P**	**03 40 57.5**	**+1.5**
	baz=131						
E20K				S	Sn	03 45 04.2	-4.8
	baz=131						
AKUT	**Akutan**	**22.03**	**294**	P	**P**	**03 40 57.8**	**+1.6**
H16K	**Elim**	**22.07**	**322**	P	**P**	**03 40 57.9**	**+1.3**
	baz=114,SNR=139						
H16K				S	Sn	03 45 05.1	-5.3
	baz=114						
H16K				S	Sn	03 45 05.1	-5.3
	baz=114						
F18K	**Selawik**	**22.08**	**328**	P	**P**	**03 40 57.8**	**+1.2**
	baz=122,SNR=142						
F18K				S	Sn	03 45 05.0	-5.4
	baz=122						
F18K				S	Sn	03 45 05.0	-5.4
	baz=122						
K13K	**Kusilvak Mount**	**22.16**	**315**	IAMs_20	IAMs_20	03 48 19.8	
	comp=Z,75µm,18.0s						
K13K	**Kusilvak Mount**	**22.16**	**315**	P	**P**	**03 40 58.0**	**+0.4**
	baz=105,SNR=27						
K13K				S	**S**	**03 45 06.2**	**+4.8**
	baz=105						
K13K				S	**S**	**03 45 06.2**	**+4.8**
	baz=105						
LVA	**Lava Point**	**22.18**	**294**	P	**P**	**03 40 56.2**	**-1.6**
FCC	**Fort Churchill**	**22.21**	**54**	IAmb	IAmb	03 41 13.3	
	comp=Z,398nm,1.1s						
AGMN	**Agassiz Nation**	**22.25**	**82**	IAmb	IAmb	03 41 09.7	
	comp=Z,921nm,1.4s						
AGMN				IAMs_20	IAMs_20	03 49 40.8	
	comp=Z,94µm,19.0s						
AGMN	**Agassiz Nation**	**22.25**	**82**	⇓P	**P**	**03 40 58.1**	**-0.6**
C21K	**Knifeblade Rid**	**22.25**	**337**	P	**P**	**03 40 59.9**	**+1.4**
	baz=135						
C21K				S	Sn	03 45 09.3	-5.4
	baz=135						
C21K				S	Sn	03 45 09.3	-5.4
	baz=135						
D20K	**Etivluk River**	**22.43**	**335**	IAmb	IAmb	03 41 18.9	
	comp=Z,661nm,1.8s						
D20K				IAMs_20	IAMs_20	03 48 42.1	
	comp=Z,95µm,22.0s						
D20K	**Etivluk River**	**22.43**	**335**	P	**P**	**03 41 00.9**	**+0.5**
	baz=131						
D20K				S	Sn	03 45 12.7	-6.3
	baz=131						
D20K				S	Sn	03 45 12.7	-6.3
	baz=131						
KSCO	**Kaye Shedlock’**	**22.43**	**110**	IAMs_20	IAMs_20	03 50 40.1	
	comp=Z,65µm,18.0s						
G16K	**Koyuk River**	**22.45**	**324**	IAmb	IAmb	03 41 09.8	
	comp=Z,811nm,1.8s						
G16K				IAMs_20	IAMs_20	03 48 45.8	
	comp=Z,53µm,18.0s						
G16K	**Koyuk River**	**22.45**	**324**	P	**P**	**03 41 00.9**	**+0.3**
	baz=116						
G16K				S	Sn	03 45 13.0	-6.2
	baz=116						
UNV	**Unalaska Valle**	**22.49**	**293**	IAMs_20	IAMs_20	03 47 15.4	
	comp=Z,67µm,22.0s						
UNV	**Unalaska Valle**	**22.49**	**293**	P	**P**	**03 41 03.4**	**+2.3**
UNV	**Unalaska Valle**	**22.49**	**293**	P	**P**	**03 41 01.2**	**+0.1**
	baz=83						
UNV				S	**S**	**03 45 12.9**	**+5.2**
	baz=83						
F17K	**Baldwin Pennin**	**22.54**	**327**	P	**P**	**03 41 02.9**	**+1.3**
	baz=120,SNR=78						
F17K				S	Sn	03 45 15.0	-6.6
	baz=120						
B21K	**Ikpikpuk River**	**22.55**	**338**	IAmb	IAmb	03 41 12.3	
	comp=Z,569nm,1.1s						
B21K				IAMs_20	IAMs_20	03 49 22.0	
	comp=Z,70µm,18.0s						
B21K	**Ikpikpuk River**	**22.55**	**338**	P	**P**	**03 41 02.6**	**+1.0**
	baz=136						
B21K				S	**S**	**03 45 13.3**	**+4.9**
	baz=136						
M11K	**Mekoryuk**	**22.55**	**310**	P	**P**	**03 40 59.7**	**-2.0**
M11K				IAmb	IAmb	03 41 19.4	
	comp=Z,1µm,1.8s						
M11K				IAMs_20	IAMs_20	03 48 33.8	
	comp=Z,123µm,19.0s						

M11K	**Mekoryuk**	22.55	310	P	P	03 41 02.3	+0.7
	baz=100,SNR=10						
M11K				S	S	03 45 13.5	+4.8
	baz=100						
M11K				S	S	03 45 13.5	+4.8
	baz=100						
T25A	**Trinidad**	22.63	116	IAMs_20	IAMs_20	03 50 09.7	
	comp=Z,126µm,19.0s						
D19K	**Kuna River**	22.71	333	IAmb	IAmb	03 41 09.9	
	comp=Z,748nm,1.6s						
D19K	**Kuna River**	22.71	333	P	P	03 41 03.9	+0.5
	baz=128						
D19K				S	S	03 45 16.7	+5.1
	baz=128						
B22K	**Teshekpuk Lake**	22.80	340	IAMs_20	IAMs_20	03 49 49.7	
	comp=Z,92µm,19.0s						
B22K	**Teshekpuk Lake**	22.80	340	P	P	03 41 05.6	+1.4
	baz=139						
B22K				S	S	03 45 19.5	+6.5
	baz=139						
B22K				S	S	03 45 19.5	+6.5
	baz=139						
E18K	**Tukpahlearik C**	22.84	330	IAmb	IAmb	03 41 25.1	
	comp=Z,549nm,1.5s						
E18K				IAMs_20	IAMs_20	03 49 30.8	
	comp=Z,59µm,19.0s						
E18K	**Tukpahlearik C**	22.84	330	P	P	03 41 05.5	+0.8
	baz=123						
E18K				S	S	03 45 19.1	+5.3
	baz=123						
E18K				S	S	03 45 19.1	+5.3
	baz=123						
G15K	**Niukluk**	22.92	322	P	P	03 41 06.4	+0.8
	baz=113,SNR=57						
G15K				S	Sn	03 45 23.1	-7.5
	baz=113						
TUC	**Tucson**	23.02	134	⇓P	P	03 41 08.5	+1.5
E17K	**Hotham Inlet**	23.07	328	P	P	03 41 07.7	+0.6
	baz=120,SNR=74						
E17K				S	S	03 45 25.0	+7.3
	baz=120						
TASM	**ASL Pad, Albuq**	23.07	123	IAmb	IAmb	03 41 13.8	
	comp=Z,1µm,1.8s						
TASM	**ASL Pad, Albuq**	23.07	123	IAmb	IAmb	03 41 13.8	
	comp=Z,1µm,1.9s						
ANMO	**Albuquerque**	23.08	123	LR	LR	03 50 16.2	
	comp=Z,32µm,20.0s,baz=312,slow=37						
ANMO	**Albuquerque**	23.08	123*c*	*i*P	P	03 41 09.5	+1.8
ANMO				pmax	pmax		
	comp=Z,638nm,1.5s						
ANMO				MLR	MLR		
	comp=Z,52µm,11.0s						
ANMO	**Albuquerque**	23.08	123	⇑P	P	03 41 08.2	+0.5
EPLO	**Experimental L**	23.20	78	IAmb	IAmb	03 41 21.2	
	comp=Z,412nm,1.1s						
ANM	**Nome**	23.29	321	IAmb	IAmb	03 41 26.6	
	comp=Z,634nm,1.5s						
ANM				IAMs_20	IAMs_20	03 49 45.3	
	comp=Z,66µm,18.0s						
ANM	**Nome**	23.29	321	P	P	03 41 09.6	+0.3
	baz=110,SNR=30						
ANM				S	S	03 45 30.1	+8.5
	baz=110						
F15K	**North Star Dit**	23.44	324	IAmb	IAmb	03 41 18.6	
	comp=Z,661nm,1.4s						
F15K				IAMs_20	IAMs_20	03 49 27.0	
	comp=Z,55µm,18.0s						
F15K	**North Star Dit**	23.44	324	P	P	03 41 11.7	+0.8
	baz=114,SNR=98						
F15K				S	Sn	03 45 35.1	-8.0
	baz=114						
F15K				S	Sn	03 45 35.1	-8.0
	baz=114						
B20K	**Meade River**	23.45	337	IAMs_20	IAMs_20	03 50 02.0	
	comp=Z,79µm,21.0s						
B20K	**Meade River**	23.45	337	P	P	03 41 11.7	+0.8
	baz=133,SNR=140						
B20K				S	S	03 45 30.9	+7.0
	baz=133						
B20K				S	S	03 45 30.9	+7.0
	baz=133						
C19K	**Lookout Ridge**	23.51	334	IAmb	IAmb	03 41 18.2	
	comp=Z,379nm,1.4s						
C19K				IAMs_20	IAMs_20	03 49 27.6	
	comp=Z,92µm,20.0s						
C19K	**Lookout Ridge**	23.51	334	P	P	03 41 11.9	+0.3
	baz=128,SNR=98						
C19K				S	S	03 45 30.6	+5.5
	baz=128						
C19K				S	S	03 45 30.6	+5.5
	baz=128						
ECSD	**EROS Data Cent**	23.58	93	P	P	03 41 11.7	-0.7
ECSD				IAmb	IAmb	03 41 19.8	
	comp=Z,598nm,1.2s						
ECSD	**EROS Data Cent**	23.58	93	IAMs_20	IAMs_20	03 50 21.4	
	comp=Z,140µm,21.0s						
ECSD	**EROS Data Cent**	23.58	93	⇑P	P	03 41 11.8	-0.6
Y22A	**Socorro**	23.58	125	IAmb	IAmb	03 41 16.6	
	comp=Z,504nm,1.4s						
A22K	**Sinclair Lake**	23.64	340	P	P	03 41 14.5	+1.7
	baz=138,SNR=193						
A22K				S	S	03 45 32.9	+5.9
	baz=138						
A22K				S	S	03 45 32.9	+5.9
	baz=138						
C18K	**Utukok River**	23.71	332	IAmb	IAmb	03 41 24.7	
	comp=Z,354nm,1.2s						
C18K				IAMs_20	IAMs_20	03 50 51.0	
	comp=Z,76µm,18.0s						
C18K	**Utukok River**	23.71	332	P	P	03 41 14.4	+0.8
	baz=124						
C18K				S	S	03 45 33.3	+4.9
	baz=124						
C18K				S	S	03 45 33.3	+4.9
	baz=124						
D17K	**Noatak River**	23.80	329	P	P	03 41 15.0	+0.7
	baz=120,SNR=44						
D17K				S	S	03 45 32.7	+3.1
	baz=120						
D17K				S	S	03 45 32.7	+3.1
	baz=120						
RDOG	**Red Dog Mine**	23.92	330	IAMs_20	IAMs_20	03 50 07.9	
	comp=Z,68µm,18.0s						
RDOG	**Red Dog Mine**	23.92	330	P	P	03 41 16.7	+1.1
	baz=121,SNR=62						
RDOG				S	S	03 45 34.8	+3.1
	baz=121						
F14K	**Arctic Creek**	24.00	323	P	P	03 41 17.4	+1.2
	baz=111						
F14K				S	S	03 45 38.1	+5.3
	baz=111						
NIKH	**Nikolski High**	24.00	291	P	P	03 41 15.8	-0.6
	baz=80						
NIKH				S	S	03 45 36.9	+3.8
	baz=80						
P08K	**Saint George I**	24.04	300	IAMs_20	IAMs_20	03 48 48.0	
	comp=Z,63µm,22.0s						
P08K	**Saint George I**	24.04	300	P	P	03 41 16.2	-0.5
	baz=88						
P08K				S	S	03 45 41.5	+7.9
	baz=88						
P08K				S	S	03 45 41.5	+7.9
	baz=88						
C17K	**DeLong Mountai**	24.23	331	P	P	03 41 19.3	+0.9
	baz=121,SNR=50						
C17K				S	S	03 45 41.1	+4.5
	baz=121						
A21K	**Barrow**	24.24	339	P	P	03 41 20.5	+2.0
	baz=136,SNR=133						
A21K				S	S	03 45 42.1	+5.5
	baz=136						
A21K				S	S	03 45 42.1	+5.5
	baz=136						
CBKS	**Cedar Bluff**	24.31	107	IAMs_20	IAMs_20	03 51 09.9	
	comp=Z,84µm,19.0s						
CBKS	**Cedar Bluff**	24.31	107	⇓P	P	03 41 20.7	+1.2
SPIA	**Saint Paul Isl**	24.41	302	IAMs_20	IAMs_20	03 49 11.2	
	comp=Z,74µm,20.0s						
SPIA	**Saint Paul Isl**	24.41	302	P	P	03 41 22.8	+2.7
SPIA	**Saint Paul Isl**	24.41	302	P	P	03 41 20.6	+0.5
	baz=88						
SPIA				S	S	03 45 45.3	+5.8
	baz=88						
A19K	**Wainwright**	24.60	335	P	P	03 41 22.9	+1.2
	baz=127						
A19K				S	S	03 45 50.4	+8.0
	baz=127						
A19K				S	S	03 45 50.4	+8.0
	baz=127						
TNA	**Tin City**	24.65	322	IAMs_20	IAMs_20	03 50 02.6	
	comp=Z,54µm,19.0s						
TNA	**Tin City**	24.65	322	⇑P	P	03 41 23.5	+1.3
TNA	**Tin City**	24.65	322	P	P	03 41 23.5	+1.3
	baz=109,SNR=21						
TNA				S	S	03 45 51.1	+7.8
	baz=109						
C16K	**Lisburne Hills**	24.82	329	IAMs_20	IAMs_20	03 50 38.4	
	comp=Z,47µm,19.0s						
C16K	**Lisburne Hills**	24.82	329	P	P	03 41 25.2	+1.4
	baz=118,SNR=82						
C16K				S	S	03 45 53.6	+7.5
	baz=118						
C16K				S	S	03 45 53.6	+7.5
	baz=118						
EYMN	**Ely**	25.13	81	P	P	03 41 26.4	-0.3
EYMN				IAmb	IAmb	03 41 32.8	
	comp=Z,386nm,1.1s						
EYMN	**Ely**	25.13	81	⇑P	P	03 41 26.6	-0.2
R32A	**Long Quarter,**	25.18	106	IAMs_20	IAMs_20	03 51 36.9	
	comp=Z,56µm,22.0s						
SPMN	**Marine on St.**	25.35	87	IAMs_20	IAMs_20	03 51 28.6	
	comp=Z,127µm,22.0s						
EPT	**El Paso**	25.53	128	IAMs_20	IAMs_20	03 51 55.9	
	comp=Z,71µm,20.0s						
E38A	**The Farm, Brul**	25.59	83	IAMs_20	IAMs_20	03 50 50.5	
	comp=Z,53µm,18.0s						
GAMB	**Gambell**	25.74	317	P	P	03 41 31.6	-0.4
GAMB				IAmb	IAmb	03 41 37.8	
	comp=Z,436nm,1.5s						
GAMB				IAMs_20	IAMs_20	03 50 53.6	
	comp=Z,60µm,19.0s						
GAMB	**Gambell**	25.74	317	P	P	03 41 35.1	+3.0
	baz=101						
GAMB				S	S	03 46 09.6	+9.0
	baz=101						
HSIG		25.77	139	⇓P	P	03 41 34.2	+1.5
AMTX	**Amarillo**	25.78	116	⇓P	P	03 41 34.0	+1.2
MSTX	**Muleshoe**	25.83	119	IAMs_20	IAMs_20	03 52 11.3	
	comp=Z,99µm,21.0s						
KSU1	**Kansas State U**	26.07	103	IAMs_20	IAMs_20	03 52 05.2	
	comp=Z,108µm,22.0s						
KSU1	**Kansas State U**	26.07	103	⇓P	P	03 41 36.3	+0.9
MNTX	**Cornudas Mount**	26.16	126	IAMs_20	IAMs_20	03 52 25.6	
	comp=Z,60µm,19.0s						
MNTX	**Cornudas Mount**	26.16	126	⇑P	P	03 41 37.1	+0.9
TBO	**Thunder Bay**	26.21	78	P	P	03 41 35.5	-1.0
TBO				IAmb	IAmb	03 41 43.3	
	comp=Z,334nm,1.1s						
OK038	**West end E0370**	26.42	110	IAMs_20	IAMs_20	03 53 12.8	
	comp=Z,57µm,18.0s						
SCIA	**State Center**	26.66	94	⇑P	P	03 41 42.8	+2.2
SRIG	**Santa Rosalia**	26.75	143	⇑P	P	03 41 44.6	+3.0
I40A	**Norwalk**	27.34	88	IAMs_20	IAMs_20	03 52 27.0	
	comp=Z,62µm,19.0s						
WMOK	**Wichita Mounta**	27.57	113	P	P	03 41 49.0	+0.1
WMOK				IAmb	IAmb	03 41 52.7	
	comp=Z,270nm,1.1s						
WMOK	**Wichita Mounta**	27.57	113	IAMs_20	IAMs_20	03 53 14.8	
	comp=Z,92µm,20.0s						
WMOK	**Wichita Mounta**	27.57	113	P	P	03 41 49.0	+0.1
WMOK				pmax	pmax		
	comp=Z,270nm,1.1s						
WMOK				MLR	MLR		
	comp=Z,92µm,20.0s						
WMOK	**Wichita Mounta**	27.57	113	⇓P	P	03 41 49.9	+0.9
OK029	**Liberty Lake**	27.65	109	IAMs_20	IAMs_20	03 53 51.3	
	comp=Z,41µm,19.0s						
OK052	**Battle Ridge R**	27.91	108	IAMs_20	IAMs_20	03 54 03.2	
	comp=Z,56µm,19.0s						
JFWS	**Jewell Farm**	28.05	90	⇑P	P	03 41 54.5	+1.5
RES	**Resolute Bay**	28.38	19	P	P	03 41 54.8	-0.9
	comp=Z,16nm,1.1s,baz=241,slow=12,SNR=30						
RES				S	S	03 46 45.8	+3.7
	comp=Z,7.4nm,1.0s,baz=242,slow=19,SNR=1.2						
RES				Lg	Lg	03 50 49.7	
	comp=Z,0.1nm,0.3s,baz=268,slow=22,SNR=1.6						
RES				LR	LR	03 53 08.2	
	comp=Z,69µm,20.8s,baz=231,slow=36						
	comp=Z,16nm,1.1s						
RES	**Resolute Bay**	28.38	19	P	P	03 41 54.2	-1.5
RES	**Resolute Bay**	28.38	19	⇓P	P	03 41 55.2	-0.4
I42A	**Draeger Farm,**	28.43	87	IAMs_20	IAMs_20	03 52 59.8	
	comp=Z,57µm,22.0s						
TUL3	**Leonard**	28.58	107	IAMs_20	IAMs_20	03 54 14.8	
	comp=Z,66µm,21.0s						
L42A	**Oliver, Polo**	28.88	91	IAMs_20	IAMs_20	03 53 34.9	
	comp=Z,93µm,20.0s						
ADK	**Adak**	28.92	291	P	P	03 41 59.1	-1.6
ADK	**Adak**	28.92	291	IAMs_20	IAMs_20	03 51 03.0	
	comp=Z,38µm,20.0s						
ADK	**Adak**	28.92	291	P	P	03 42 01.9	+1.2
ADK	**Adak**	28.92	291	P	P	03 41 59.1	-1.6
ADK				pmax	pmax		
	comp=Z,741nm,1.8s						
TXAR	**Lajitas Array**	28.93	127	P	P	03 42 02.4	+1.2
	comp=Z,119nm,1.1s,baz=328,slow=4.4,SNR=192						
TXAR				PcP	PcP	03 45 11.5	+1.5
	comp=Z,5.6nm,0.9s,baz=144,slow=0.3,SNR=6.1						
TXAR				LR	LR	03 54 27.1	
	comp=Z,76µm,18.5s,baz=320,slow=38						
TXAR				P3KPbc		04 14 10.3	
	comp=Z,0.5nm,0.9s,baz=158,slow=3.6,SNR=4.2						
TXAR	**Lajitas Array**	28.93	127	P	P	03 42 02.1	+0.9
U38A	**Gravette**	29.10	105	IAMs_20	IAMs_20	03 53 23.4	
	comp=Z,38µm,20.0s						
K43A	**Burlington**	29.38	89	IAMs_20	IAMs_20	03 53 39.9	
	comp=Z,66µm,20.0s						
Z35A	**Perchaven, San**	29.46	113	IAMs_20	IAMs_20	03 54 24.8	
	comp=Z,62µm,20.0s						
ILON	**Igloolik, Nuna**	29.59	32	P	P	03 42 05.1	-1.3
ILON				IAmb	IAmb	03 42 26.1	
	comp=Z,381nm,1.9s						
HDIL	**Hopedale**	29.88	93	P	P	03 42 09.3	0.0
HDIL				IAmb	IAmb	03 42 30.7	
	comp=Z,265nm,1.4s						
HDIL				IAMs_20	IAMs_20	03 54 06.7	
	comp=Z,85µm,20.0s						
HDIL	**Hopedale**	29.88	93	⇑P	P	03 42 09.8	+0.5
L44A	**Lake County Fo**	29.91	89	IAMs_20	IAMs_20	03 53 57.1	
	comp=Z,67µm,21.0s						
HPIG		29.93	132	P	P	03 42 10.7	+0.6
HPIG				IAmb	IAmb	03 42 20.0	
	comp=Z,252nm,1.6s						
HPIG		29.93	132	⇑P	P	03 42 12.6	+2.5
CCM	**Cathedral Cave**	30.07	99	⇑P	P	03 42 11.2	+0.2
JCT	**Junction City**	30.10	120	P	P	03 42 11.0	-0.5
JCT				IAmb	IAmb	03 42 14.5	
	comp=Z,145nm,0.9s						
JCT				IAMs_20	IAMs_20	03 54 56.4	
	comp=Z,71µm,18.0s						
JCT	**Junction City**	30.10	120	P	P	03 42 11.0	-0.5
JCT				pmax	pmax		
	comp=Z,145nm,1.0s						
JCT				MLR	MLR		
	comp=Z,72µm,18.0s						
JCT	**Junction City**	30.10	120	⇓P	P	03 42 11.8	+0.4
E46A	**Sault Ste Mari**	30.27	80	IAMs_20	IAMs_20	03 52 41.5	
	comp=Z,42µm,22.0s						
LPIG	**La Paz**	30.40	142	LR	LR	03 53 28.8	
	comp=Z,20µm,19.1s,baz=332,slow=34						
GLMI	**Grayling**	30.74	83	P	P	03 42 17.1	+0.2
GLMI				IAMs_20	IAMs_20	03 53 48.1	
	comp=Z,50µm,19.0s						
T42A	**Van Buren**	30.79	101	IAMs_20	IAMs_20	03 54 34.3	
	comp=Z,50µm,20.0s						
MIAR	**Mount Ida**	30.84	107	⇓P	P	03 42 18.9	+1.0
Z38A	**Mt. Pleasant**	30.86	110	IAMs_20	IAMs_20	03 55 35.4	
	comp=Z,70µm,19.0s						
SLBS	**Sierra La Lagu**	30.91	142	P	P	03 42 19.2	+0.5
SLBS				IAmb	IAmb	03 42 25.4	
	comp=Z,233nm,1.4s						
SLBS	**Sierra La Lagu**	30.91	142	⇑P	P	03 42 21.6	+2.9
L46A	**Eue Claire**	31.03	89	IAMs_20	IAMs_20	03 54 39.4	
	comp=Z,76µm,19.0s						
POIN	**Pond Inlet**	31.70	27	P	P	03 42 24.2	-0.8
833A	**Chaparral WMA,**	32.00	122	P	P	03 42 28.4	+0.3
N47A	**Urbana**	32.01	90	IAMs_20	IAMs_20	03 55 12.4	
	comp=Z,65µm,21.0s						
NATX	**Nacogdoches**	32.12	112	IAMs_20	IAMs_20	03 56 17.7	
	comp=Z,49µm,19.0s						
Z41A	**Richland Creek**	32.19	108	P	P	03 42 30.2	+0.5
EF04	**Eagle Ford 04**	32.20	119	P	P	03 42 30.3	+0.5
EF04				IAmb	IAmb	03 42 34.3	
	comp=Z,160nm,1.2s						
HICK	**Hickman**	32.26	100	P	P	03 42 30.7	+0.3
I49A	**Point Hope**	32.29	83	IAMs_20	IAMs_20	03 54 21.2	
	comp=Z,49µm,18.0s						
HNVL	**Huntsville, TX**	32.37	114	P	P	03 42 32.6	+1.3
735A	**Kenedy**	32.46	119	IAMs_20	IAMs_20	03 56 21.5	
	comp=Z,64µm,18.0s						
AAM	**Ann Arbor**	32.57	86	IAMs_20	IAMs_20	03 54 17.6	
	comp=Z,33µm,19.0s						
HKT	**Hockley**	32.75	116	P	P	03 42 35.2	+0.5
HKT	**Hockley**	32.75	116*c*	*i*P	P	03 42 37.3	+2.7
HKT				pmax	pmax		
	comp=Z,282nm,1.5s						
HKT				MLR	MLR		
	comp=Z,177µm,15.0s						
HKT	**Hockley**	32.75	116	⇓P	P	03 42 36.2	+1.6
N49A	**Columbus Grove**	32.95	89	IAMs_20	IAMs_20	03 55 48.3	
	comp=Z,79µm,21.0s						
K50A	**Casco**	32.99	85	IAMs_20	IAMs_20	03 56 03.8	
	comp=Z,66µm,20.0s						
WCI	**Wyandotte Cave**	33.11	94	P	P	03 42 36.9	-0.9
WCI				IAmb	IAmb	03 42 50.7	
	comp=Z,256nm,1.9s						
WCI	**Wyandotte Cave**	33.11	94	P	P	03 42 36.9	-0.9
WCI				pmax	pmax		
	comp=Z,256nm,1.9s						
WCI				MLR	MLR		
	comp=Z,94µm,21.0s						
WCI	**Wyandotte Cave**	33.11	94	⇑P	P	03 42 37.9	+0.1
O49A	**Covington**	33.25	90	IAMs_20	IAMs_20	03 56 00.4	
	comp=Z,74µm,21.0s						
WVT	**Waverly**	33.40	99	P	P	03 42 40.1	-0.3
WVT				IAmb	IAmb	03 42 45.6	
	comp=Z,151nm,1.2s						
WVT	**Waverly**	33.40	99	P	P	03 42 40.1	-0.3
WVT				pmax	pmax		
	comp=Z,151nm,1.3s						
WVT				MLR	MLR		
	comp=Z,96µm,22.0s						
WVT	**Waverly**	33.40	99	⇑P	P	03 42 40.3	-0.1
143A	**Socs Landing,**	33.42	107	IAMs_20	IAMs_20	03 56 11.7	
	comp=Z,33µm,18.0s						
M50A	**Fremont**	33.42	87	IAMs_20	IAMs_20	03 55 21.6	
	comp=Z,42µm,22.0s						
OXF	**Oxford**	33.44	103	⇓P	P	03 42 40.9	+0.2
441A	**DeRidder**	33.72	112	IAMs_20	IAMs_20	03 57 27.0	
	comp=Z,33µm,18.0s						
BUKO	**Buck Lake**	33.76	78	P	P	03 42 42.3	-1.0
BUKO				IAmb	IAmb	03 42 48.8	
	comp=Z,219nm,1.3s						
VLDQ	**Val d'Or**	33.81	73	P	P	03 42 41.2	-2.5
PLAL	**Pickwick Lake**	33.97	101	IAMs_20	IAMs_20	03 56 32.7	
	comp=Z,37µm,18.0s						
SHEM	**Shemya Is, Ala**	34.07	296	P	P	03 42 44.2	-1.7
	comp=Z,121nm,1.1s,baz=35,slow=12,SNR=4.7						
SHEM				LR	LR	03 54 01.8	
	comp=Z,31µm,21.2s,baz=83,slow=32						
	comp=Z,121nm,1.1s						
SMY	**Shemya**	34.07	296	P	P	03 42 44.6	-1.3
SMY	**Shemya**	34.07	296	P	P	03 42 44.6	-1.3
SMY				pmax	pmax		
	comp=Z,958nm,1.7s						
ACSO	**Alum Creek Sta**	34.09	89	P	P	03 42 46.2	-0.2
ACSO				IAmb	IAmb	03 42 54.3	
	comp=Z,109nm,1.1s						
ACSO				IAMs_20	IAMs_20	03 56 24.5	
	comp=Z,73µm,21.0s						
ACSO	**Alum Creek Sta**	34.09	89	⇑P	P	03 42 47.3	+0.9
N51A	**Ashland**	34.11	87	IAMs_20	IAMs_20	03 55 43.8	
	comp=Z,51µm,22.0s						
SADO	**Sadowa**	34.23	79	LR	LR	03 57 15.6	
	comp=Z,53µm,19.0s,baz=324,slow=37						
SADO	**Sadowa**	34.23	79	P	P	03 42 47.1	-0.4
VBMS	**Vicksburg**	34.30	107	IAMs_20	IAMs_20	03 58 26.9	
	comp=Z,38µm,19.0s						
FRB	**Frobisher Bay**	34.51	44	LR	LR	03 57 29.3	
	comp=Z,50µm,18.9s,baz=276,slow=37						
Q51A	**Peebles**	34.53	91	IAMs_20	IAMs_20	03 57 17.4	
	comp=Z,60µm,20.0s						
O52A	**Adamsville**	34.89	88	IAMs_20	IAMs_20	03 56 19.0	
	comp=Z,50µm,19.0s						
146A	**Union**	34.91	105	IAMs_20	IAMs_20	03 57 14.9	
	comp=Z,31µm,20.0s						
ZAIG	**Zacatecas**	34.94	132	⇑P	P	03 42 55.7	+1.5
TULEG	**Thule**	35.00	21	P	P	03 42 53.1	-0.6
TULEG				IAmb	IAmb	03 43 07.9	
	comp=Z,196nm,1.5s						
TULEG	**Thule**	35.00	21	⇑P	P	03 42 54.3	+0.6
BILL	**Bilibino**	35.05	324	P	P	03 42 53.6	-0.7
BILL				IAmb	IAmb	03 43 03.9	
	comp=Z,293nm,1.3s						
BILL	**Bilibino**	35.05	324*d*	*i*P	P	03 42 54.7	+0.4
BILL				pmax	pmax		
	comp=Z,366nm,1.6s						
BILL				MLR	MLR		
	comp=Z,23µm,14.0s						
N53A	**Lisbon**	35.15	86	IAMs_20	IAMs_20	03 56 40.3	
	comp=Z,49µm,22.0s						
Q52A	**Bidwell**	35.26	90	IAMs_20	IAMs_20	03 57 10.6	
	comp=Z,67µm,20.0s						
346A	**Big Creek Wild**	35.52	107	IAMs_20	IAMs_20	03 59 32.2	
	comp=Z,33µm,18.0s						
P53A	**Whipple**	35.53	89	IAMs_20	IAMs_20	03 57 18.4	
	comp=Z,67µm,22.0s						
KUQ	**Kuujjuuaa**	35.65	53	P	P	03 42 58.6	-0.9
Y49A	**Blount Mountai**	35.75	101	IAMs_20	IAMs_20	03 57 27.6	
	comp=Z,32µm,19.0s						
O54A	**Avella**	35.79	87	IAMs_20	IAMs_20	03 56 46.1	
	comp=Z,63µm,20.0s						
TZTN	**Tazewell**	35.87	95	P	P	03 43 02.1	+0.4
TZTN				IAmb	IAmb	03 43 09.0	
	comp=Z,165nm,1.1s						
TZTN	**Tazewell**	35.87	95	⇑P	P	03 43 03.0	+1.3
LRAL	**Lakeview Retre**	35.92	102	P	P	03 43 02.1	-0.1
LRAL				IAmb	IAmb	03 43 14.2	
	comp=Z,382nm,1.8s						
LRAL	**Lakeview Retre**	35.92	102	⇑P	P	03 43 01.9	-0.2
PECO	**Prince Edward**	35.98	79	IAmb	IAmb	03 43 15.4	
	comp=Z,268nm,1.6s						
GAC	**Glen Almond**	36.08	76	⇑P	P	03 43 03.9	+0.5
TKL	**Tuckaleechee C**	36.27	96	LR	LR	03 58 28.0	
	comp=Z,130µm,18.4s,baz=314,slow=37						
TKL	**Tuckaleechee C**	36.27	96	P	P	03 43 05.1	0.0
TKL	**Tuckaleechee C**	36.27	96	P	P	03 43 05.1	0.0
TKL				pmax	pmax		
	comp=Z,116nm,1.3s						
TKL	**Tuckaleechee C**	36.27	96	⇑P	P	03 43 05.9	+0.7
TRQ	**Mont Tremblant**	36.41	75	P	P	03 43 05.6	-0.7
TRQ				IAmb	IAmb	03 43 21.9	
	comp=Z,225nm,1.3s						
MCWV	**Mont Chateau**	36.42	87	P	P	03 43 05.6	-0.8
MCWV				IAmb	IAmb	03 43 16.8	
	comp=Z,226nm,1.8s						
POHA	**Pohakuloa**	36.65	223	IAMs_20	IAMs_20	03 53 50.3	
	comp=Z,26µm,19.0s						
J57A	**Williamstown**	36.87	79	IAMs_20	IAMs_20	03 58 51.9	
	comp=Z,43µm,20.0s						
K57A	**Scipio Center**	36.89	81	P	P	03 43 09.7	-0.6
R55A	**Marlinton**	37.03	89	IAMs_20	IAMs_20	03 57 37.2	
	comp=Z,48µm,19.0s						
SSPA	**Standing Stone**	37.13	85	P	P	03 43 10.8	-1.6
SSPA	**Standing Stone**	37.13	85	IAMs_20	IAMs_20	03 57 13.3	
	comp=Z,43µm,18.0s						
LONY	**Lake Ozonia**	37.15	77	IAMs_20	IAMs_20	03 56 23.1	
	comp=Z,43µm,20.0s						
LONY	**Lake Ozonia**	37.15	77	⇑P	P	03 43 15.6	+3.0
BRAL	**Brewton**	37.16	105	P	P	03 43 13.2	+0.5
BRAL				IAMs_20	IAMs_20	04 00 02.5	
	comp=Z,36µm,19.0s						
BRAL	**Brewton**	37.16	105	⇑P	P	03 43 14.9	+2.2
Q56A	**Snyder Ridge,**	37.19	88	IAMs_20	IAMs_20	03 57 40.3	
	comp=Z,57µm,21.0s						
M57A	**Sunshine Farm,**	37.23	83	IAMs_20	IAMs_20	03 57 24.9	
	comp=Z,50µm,21.0s						
MNTQ	**Montreal, Queb**	37.33	75	P	P	03 43 13.4	-0.6
BLA	**Blacksburg**	37.47	91	IAMs_20	IAMs_20	03 58 31.7	
	comp=Z,58µm,21.0s						
SCHQ	**Schefferville**	37.48	58	P	P	03 43 15.0	-0.2
	comp=Z,16nm,1.1s,baz=282,slow=8.7,SNR=6.3						
SCHQ				S	S	03 49 03.5	-0.1
	comp=Z,8.3nm,1.1s,baz=18,slow=8.8,SNR=2.0						
SCHQ				LR	LR	03 57 11.3	
	comp=Z,37µm,18.1s,baz=291,slow=34						
	comp=Z,16nm,1.1s						
BINY	**Binghamton**	37.50	81	P	P	03 43 15.2	-0.4
BINY				IAmb	IAmb	03 43 27.4	
	comp=Z,387nm,2.0s						

BINY	Binghamton	37.50	81	⇓P	P	03 43 16.5	+0.9
LDAQ	Lac Daran	37.65	70	P	P	03 43 15.4	-1.4
LDAQ				IAmb	IAmb	03 43 29.3	
	comp=Z,289nm,1.6s						
JRQG	Juriquilla Cam	37.72	131	P	P	03 43 18.8	+1.0
JRQG				IAmb	IAmb	03 43 22.2	
	comp=Z,171nm,1.2s						
KULLO	Kullorsuaq	37.73	25	⇓P	P	03 43 18.3	+1.2
J59A	Piesco	37.78	79	IAMs_20	IAMs_20	03 56 47.7	
	comp=Z,27µm,21.0s						
GOGA	Godfrey	37.90	99	⇑P	P	03 43 18.8	-0.2
HODGE	Hodges	38.13	96	P	P	03 43 20.3	-0.6
HODGE				IAmb	IAmb	03 43 25.4	
	comp=Z,389nm,2.0s						
352A	Blakely	38.27	102	IAMs_20	IAMs_20	03 59 06.5	
	comp=Z,35µm,19.0s						
T57A	Hurt	38.34	90	IAMs_20	IAMs_20	03 58 59.7	
	comp=Z,53µm,20.0s						
VT1	Waterbury	38.44	76	IAMs_20	IAMs_20	03 58 23.9	
	comp=Z,38µm,19.0s						
R58B	Mineral	38.65	88	IAMs_20	IAMs_20	04 00 06.7	
	comp=Z,32µm,19.0s						
CBN	Corbin Frederi	38.83	88	IAMs_20	IAMs_20	03 58 31.4	
	comp=Z,48µm,18.0s						
LBNH	Lisbon	38.99	76	IAMs_20	IAMs_20	03 58 03.5	
	comp=Z,56µm,19.0s						
HNH	Hanover	39.04	77	IAMs_20	IAMs_20	03 59 20.9	
	comp=Z,40µm,20.0s						
NEEM	North Greenlan	39.06	20	⇓P	P	03 43 28.6	0.0
J61A	Chester	39.06	77	IAMs_20	IAMs_20	03 59 22.4	
	comp=Z,48µm,20.0s						
TIGA	Tifton	39.13	101	IAMs_20	IAMs_20	04 00 27.7	
	comp=Z,41µm,20.0s						
V58A	Windy Hill, Pi	39.16	92	IAMs_20	IAMs_20	03 59 34.6	
	comp=Z,61µm,22.0s						
BRNJ	Basking Ridge	39.21	82	P	P	03 43 28.8	-1.1
H62A	Milan	39.30	75	IAMs_20	IAMs_20	03 58 21.6	
	comp=Z,49µm,20.0s						
D62A	Allapoint, All	39.37	70	IAMs_20	IAMs_20	03 58 29.9	
	comp=Z,47µm,21.0s						
L61B	Northampton	39.45	79	IAMs_20	IAMs_20	04 00 11.9	
	comp=Z,50µm,20.0s						
UNM	Universidad Na	39.50	130	IAMs_20	IAMs_20	04 01 02.1	
	comp=Z,45µm,19.0s						
K62A	Royalston	39.62	78	IAMs_20	IAMs_20	03 59 39.2	
	comp=Z,28µm,18.0s						
P61A	Hammonton	39.63	84	IAMs_20	IAMs_20	03 58 50.3	
	comp=Z,55µm,22.0s						
WSPT	Westport, CT	39.73	81	IAMs_20	IAMs_20	03 59 07.6	
	comp=Z,56µm,21.0s						
I63A	Otisfield	39.93	75	IAMs_20	IAMs_20	03 59 54.1	
	comp=Z,40µm,20.0s						
R61A	Willards	40.06	86	IAMs_20	IAMs_20	03 59 30.7	
	comp=Z,52µm,21.0s						
HRV	Adam Dziewonsk	40.12	78	IAMs_20	IAMs_20	04 00 01.6	
	comp=Z,35µm,19.0s						
NHSC	New Hope	40.18	96	P	P	03 43 37.5	-0.6
NHSC				IAmb	IAmb	03 43 46.2	
	comp=Z,345nm,1.2s						
NHSC	New Hope	40.18	96	⇓P	P	03 43 39.9	+1.8
WES	Weston	40.34	78	IAMs_20	IAMs_20	04 00 09.2	
	comp=Z,38µm,19.0s						
F64A	Sherman	40.38	72	IAMs_20	IAMs_20	03 59 40.8	
	comp=Z,48µm,21.0s						
ILULI	Ilulissat	40.40	33	P	P	03 43 38.9	-0.5
ILULI	Ilulissat	40.40	33	P	P	03 43 38.9	-0.5
ILULI				pmax	pmax		
	comp=Z,93nm,1.4s						
ILULI				MLR	MLR		
	comp=Z,90µm,18.0s						
M63A	Gales Ferry	40.41	80	IAMs_20	IAMs_20	03 59 34.4	
	comp=Z,26µm,20.0s						
BCX	Boston College	40.46	78	IAMs_20	IAMs_20	04 00 14.4	
	comp=Z,31µm,19.0s						
L64A	Middleborough	40.88	78	IAMs_20	IAMs_20	04 00 08.7	
	comp=Z,31µm,19.0s						
BATG	Bathurst New B	41.07	69	P	P	03 43 44.5	-0.8
SFJD	Kangerlussuaq	41.17	36	LR	LR	04 01 14.2	
	comp=Z,63µm,18.9s,baz=294,slow=37						
SFJD	Kangerlussuaq	41.17	36	⇓P	P	03 43 47.5	+1.7
G65A	Princeton	41.19	72	IAMs_20	IAMs_20	03 59 40.3	
	comp=Z,33µm,19.0s						
M65A	Busby, Falmout	41.20	79	IAMs_20	IAMs_20	04 01 26.3	
	comp=Z,44µm,18.0s						
M65A	Busby, Falmout	41.20	79	P	P	03 43 49.3	+2.9
	baz=304						
M65A				S	S	03 49 58.1	-1.7
	baz=304						
656A	Willston	41.21	102	IAMs_20	IAMs_20	04 03 31.9	
	comp=Z,20µm,18.0s						
TLIG	Tlapa	41.31	131	⇑P	P	03 43 48.9	+1.2
EMMW	East Machias	41.51	73	IAMs_20	IAMs_20	04 00 26.7	
	comp=Z,45µm,19.0s						
NUUK	Nuuk	41.62	40	⇓P	P	03 43 51.6	+2.0
SEY	Seymchan	41.73	318	P	P	03 43 50.1	-0.4
	comp=Z,63nm,0.8s,baz=92,slow=8.0,SNR=71						
SEY				S	S	03 50 09.9	+2.7
	comp=Z,2.0nm,0.2s,baz=357,slow=19,SNR=1.2						
SEY				LR	LR	04 01 42.0	
	comp=Z,48µm,18.4s,baz=66,slow=37						
	comp=Z,63nm,0.8s						
SEY	Seymchan	41.73	318	*e*P	P	03 43 49.2	-1.3
SEY				*e*		03 45 28.0	
SEY				*e*S	S	03 50 08.3	+1.1
SEY				pmax	pmax		
	comp=Z,244nm,1.5s						
SEY				smax	smax		
	comp=E,4µm,14.3s						
SEY				smax	smax		
	comp=N,7µm,11.8s						
SEY				MLR	MLR		
	comp=E,14µm,14.0s						
SEY				MLR	MLR		
	comp=N,25µm,16.0s						
SEY				MLR	MLR		
	comp=Z,39µm,15.0s						
MIDW	Midway	41.91	256	IAMs_20	IAMs_20	03 56 08.3	
	comp=Z,25µm,19.0s						
PET	Petropavlovsk	42.59	302	P	P	03 43 56.8	-0.7
PET				IAmb	IAmb	03 44 05.7	
	comp=Z,310nm,1.2s						
PET				IAMs_20	IAMs_20	03 58 45.9	
	comp=Z,28µm,21.0s						
PET	Petropavlovsk	42.59	302	P	P	03 43 58.2	+0.6
PET	Petropavlovsk	42.59	302	*e*P	P	03 43 56.9	-0.7
PET				*e*		03 45 37.1	
PET				*e*S	S	03 50 16.2	-3.8
PET				pmax	pmax		
	comp=Z,2µm,10.4s						
PET				pmax	pmax		
	comp=Z,213nm,1.3s						
PET				pmax	pmax		
	comp=Z,3µm,11.5s						
PET				pmax	pmax		
	comp=Z,6µm,14.9s						
PET				pmax	pmax		
	comp=Z,8µm,17.0s						
PET				MLR	MLR		
	comp=Z,9µm,20.0s						
PET				MLR	MLR		
	comp=Z,8µm,18.0s						
PET	Petropavlovsk	42.59	302	⇑P	P	03 43 57.8	+0.2
DWPF	Disney Wildern	42.78	103	IAMs_20	IAMs_20	04 01 57.5	
	comp=Z,35µm,20.0s						
PEA0B	Petropavlovsk-	43.06	303	P	P	03 44 00.5	-1.0
PEA0B				IAmb	IAmb	03 44 03.4	
	comp=Z,253nm,1.1s						
PEA0B	Petropavlovsk-	43.06	303	*c i*P	P	03 44 01.5	0.0
PETK	Petropavlovsk-	43.06	303	P	P	03 44 01.5	0.0
	comp=Z,53nm,0.8s,baz=78,slow=9.6,SNR=34						
PETK				S	S	03 50 30.1	+3.0
	comp=Z,2.0nm,1.0s,baz=111,slow=19,SNR=2.0						
PETK				LR	LR	03 59 15.1	
	comp=Z,20µm,21.4s,baz=46,slow=32						
	comp=Z,53nm,0.8s						
PETK	Petropavlovsk-	43.06	303	P	P	03 44 00.8	-0.7
PETK	Petropavlovsk-	43.06	303	P	P	03 44 00.8	-0.7
SUMG	Summit	43.34	26	P	P	03 44 05.3	+1.3
SUMG	Summit	43.34	26	P	P	03 44 02.9	-1.0
SUMG				IAMs_20	IAMs_20	04 02 10.4	
	comp=Z,34µm,18.0s						
SUMG	Summit	43.34	26	P	P	03 44 02.9	-1.0
SUMG				pmax	pmax		
	comp=Z,157nm,1.3s						
SUMG				MLR	MLR		
	comp=Z,34µm,18.0s						
SUMG	Summit	43.34	26	⇑P	P	03 44 04.3	+0.4
CMIG	Matias Romero	43.54	127	LR	LR	04 04 21.6	
	comp=Z,8µm,18.1s,baz=314,slow=39						
NOR	Nord	43.72	11	⇓P	P	03 44 07.4	+0.9
MA2	Magadan	43.74	314	LR	LR	04 01 17.4	
	comp=Z,33µm,21.2s,baz=65,slow=35						
MA2	Magadan	43.74	314	P	P	03 44 06.5	-0.4
MA2				IAmb	IAmb	03 44 15.8	
	comp=Z,362nm,1.4s						
MA2				IAMs_20	IAMs_20	04 02 54.3	
	comp=Z,34µm,18.0s						
MA2	Magadan	43.74	314	P	P	03 44 07.7	+0.9
MA2	Magadan	43.74	314	*ce*P	P	03 44 07.4	+0.6
MA2				pmax	pmax		
	comp=Z,298nm,1.4s						
MA2				MLR	MLR		
	comp=Z,33µm,15.0s						
MA2	Magadan	43.74	314	⇑P	P	03 44 07.9	+1.0
MA2	Magadan	43.74	314	P	P	03 44 07.2	+0.4
	comp=Z,4µmcomp=Z,216nm,1.5s						
060A	Indiantown	44.21	103	IAMs_20	IAMs_20	04 02 17.0	
	comp=Z,18µm,19.0s						
IVI	Ivigtut	44.26	43	P	P	03 44 10.6	-0.4
IVI				IAMs_20	IAMs_20	04 02 44.9	
	comp=Z,36µm,19.0s						
IVI	Ivigtut	44.26	43	⇓P	P	03 44 12.2	+1.3
TEIG	Tepich	44.57	117	P	P	03 44 14.0	+0.1
TEIG				IAmb	IAmb	03 44 17.1	
	comp=Z,191nm,1.1s						
TEIG	Tepich	44.57	117	⇑P	P	03 44 14.5	+0.5
TEIG	Tepich	44.57	117	P	P	03 44 15.5	+1.6
	comp=Z,34µmcomp=Z,16µmcomp=Z,484nm,1.2s						
SKR	Severo-Kuril’s	45.08	300	⇑*e*P	P	03 44 19.3	+1.7
NRS	Narsarsuaq	45.49	43	IAMs_20	IAMs_20	04 02 11.1	
	comp=Z,25µm,18.0s						
SOR	Soroa	45.69	109	P	P	03 44 22.5	-0.3
SOR				IAmb	IAmb	03 44 28.1	
	comp=Z,330nm,1.8s						
SOR	Soroa	45.69	109	P	P	03 44 22.5	-0.3
SOR				pmax	pmax		
	comp=Z,330nm,1.8s						
SOR	Soroa	45.69	109	*e*P	P	03 44 23.2	+0.4
DAG	Danmarks Havn	46.05	17	⇑P	P	03 44 24.6	-0.4
JOHN	Johnston Islan	46.12	238	IAMs_20	IAMs_20	03 57 42.8	
	comp=Z,20µm,21.0s						
PETF	Flores	46.34	121	P	P	03 44 28.6	+0.6
PETF				IAmb	IAmb	03 44 34.1	
	comp=Z,148nm,1.1s						
TIXI	Tiksi	46.38	335	LR	LR	04 07 20.6	
	comp=Z,20µm,18.7s,baz=70,slow=41						
TIXI	Tiksi	46.38	335	P	P	03 44 26.4	-1.2
TIXI				IAmb	IAmb	03 44 41.0	
	comp=Z,351nm,1.9s						
TIXI				IAMs_20	IAMs_20	04 05 01.1	
	comp=Z,18µm,19.0s						
TIXI	Tiksi	46.38	335	⇑*i*P	P	03 44 27.7	0.0
TIXI				pmax	pmax		
	comp=Z,185nm,1.8s						
TIXI				MLR	MLR		
	comp=Z,16µm,16.0s						
CAMR	Camarioca	46.49	108	P	P	03 44 29.4	+0.3
CAMR				IAmb	IAmb	03 44 31.9	
	comp=Z,674nm,1.4s						
CAMR	Camarioca	46.49	108	*e*P	P	03 44 22.5	-6.5
ANGG	Ammassalik, Gr	46.54	35	P	P	03 44 28.0	-0.9
ANGG				IAMs_20	IAMs_20	04 03 25.4	
	comp=Z,40µm,21.0s						
ANGG	Ammassalik, Gr	46.54	35	⇓P	P	03 44 29.4	+0.5
HUEH	Huehuetenango	46.78	124	P	P	03 44 32.7	+1.0
DBG	Daneborg	47.13	20	⇓P	P	03 44 33.2	-0.3
APG	El Apazote	47.59	124	LR	LR	04 06 38.7	
	comp=Z,882nm,19.7s,baz=236,slow=39						
MGV	Manicaragua	48.05	107	*e*P	P	03 44 41.2	0.0
ESQI	Esquipulas	48.56	123	P	P	03 44 46.5	+1.1
MTO3	Montecristo	48.69	123	P	P	03 44 47.0	+0.5
MTO3				IAmb	IAmb	03 44 56.7	
	comp=Z,205nm,1.5s						
KBS	Kingsbay	48.98	9	P	P	03 44 46.9	-0.8
KBS				IAMs_20	IAMs_20	04 06 08.7	
	comp=Z,39µm,21.0s						
KBS	Kingsbay	48.98	9	P	P	03 44 46.9	-0.8
KBS				pmax	pmax		
	comp=Z,365nm,1.7s						
KBS				MLR	MLR		
	comp=Z,39µm,21.0s						
SPITS	Spitsbergen Ar	50.06	9	P	P	03 44 56.1	0.0
	comp=Z,136nm,1.2s,baz=346,slow=14,SNR=15						
SPITS				LR	LR	04 07 12.5	
	comp=Z,43µm,18.3s,baz=331,slow=38						
	comp=Z,136nm,1.2s						
CCCC	Cccc	50.09	106	*e*P	P	03 44 57.2	+0.3
TGUH	Tegucigalpa,Un	50.10	121	IAMs_20	IAMs_20	04 07 14.0	
	comp=Z,22µm,22.0s						
TGUH	Tegucigalpa,Un	50.10	121	⇑P	P	03 44 60.0	+2.8
TGUH	Tegucigalpa,Un	50.10	121	P	P	03 44 58.5	+1.3
	comp=Z,16µmcomp=Z,8µmcomp=Z,239nm,1.6s						
BBSR	BB Station	50.55	85	IAMs_20	IAMs_20	04 04 10.6	
	comp=Z,32µm,22.0s						
HLGC	Holguin	51.37	105	*e*P	P	03 45 01.9	-4.8
LMGC	Las Mercedes	51.41	106	*e*P	P	03 44 57.2	-10
YAK	Yakutsk	51.41	324	LR	LR	04 07 37.0	
	comp=Z,30µm,18.3s,baz=54,slow=37						
YAK	Yakutsk	51.41	324	P	P	03 45 05.5	-0.8
YAK	Yakutsk	51.41	324	IAMs_20	IAMs_20	04 07 20.3	
	comp=Z,31µm,18.0s						
YAK	Yakutsk	51.41	324	*e*P	P	03 45 05.5	-0.8
YAK				*e*		03 46 21.4	
YAK				*e*		03 47 02.8	
YAK				*e*PPP	PPP	03 48 05.1	
YAK				*e*S	S	03 52 26.1	+0.5
YAK				*e*		03 54 56.7	
YAK				*e*SS	SS	03 56 02.5	+1.9
YAK				*e*SSS	SSS	03 57 39.9	
YAK				pmax	pmax		
	comp=Z,225nm,1.6s						
YAK				pmax	pmax		
	comp=N,83nm,2.0s						
YAK				pmax	pmax		
	comp=E,63nm,1.4s						
YAK				pmax	pmax		
	comp=Z,3µm,11.1s						
YAK				pmax	pmax		
	comp=N,548nm,4.0s						
YAK				pmax	pmax		
	comp=E,524nm,4.8s						
YAK				smax	smax		
	comp=E,18µm,18.0s						
YAK				smax	smax		
	comp=N,5µm,13.7s						
YAK				MLR	MLR		
	comp=Z,40µm,30.0s						
YAK				MLR	MLR		
	comp=N,30µm,27.0s						
YAK				MLR	MLR		
	comp=E,17µm,15.0s						
YAK	Yakutsk	51.41	324	⇑P	P	03 45 06.5	+0.2
HERN	Volcan Telica	51.54	121	P	P	03 45 07.3	-0.7
HERN				IAmb	IAmb	03 46 51.4	
	comp=Z,177nm,0.8s						
CNGN	Cerro Negro	51.70	121	P	P	03 45 10.2	+1.0
SIUN	Universidad Ur	51.77	118	P	P	03 45 10.3	+0.7
SIUN				IAmb	IAmb	03 45 18.8	
	comp=Z,126nm,1.3s						
NKL	Nikolayevsk	51.81	310	*e*P	P	03 45 07.6	-1.9
NKL				*e*S	S	03 52 30.3	-1.1
NKL				pmax	pmax		
	comp=E,92nm,1.3s						
NKL				pmax	pmax		
	comp=N,228nm,1.5s						
NKL				pmax	pmax		
	comp=Z,836nm,1.4s						
NKL				smax	smax		
	comp=N,1µm,4.7s						
NKL				smax	smax		
	comp=E,609nm,4.7s						
NKL				MLR	MLR		
	comp=N,3µm,14.0s						
NKL				MLR	MLR		
	comp=E,1µm,14.0s						
NKL				MLR	MLR		
	comp=Z,3µm,14.0s						
CHIV	Chivirico	51.83	106	*e*P	P	03 45 03.9	-6.2
PINC	Pinares de May	51.84	105	*e*P	P	03 45 07.9	-2.2
JMIC	Jan Mayen	51.96	21	LR	LR	04 07 59.3	
	comp=Z,30µm,18.7s,baz=323,slow=37						
MARVS	Santiago de Cu	52.13	105	*e*P	P	03 45 09.9	-2.4
TYV	Tymovskoe	52.16	307	*e*P	P	03 45 12.1	0.0
TYV				*e*S	S	03 52 36.5	+0.3
TYV				pmax	pmax		
	comp=Z,114nm,1.3s						
TYV				pmax	pmax		
	comp=Z,2µm,7.5s						
TYV				smax	smax		
	comp=N,4µm,11.2s						
TYV				smax	smax		
	comp=E,17µm,11.2s						
TYV				MLR	MLR		
	comp=Z,20µm,19.0s						
TYV				MLR	MLR		
	comp=E,16µm,19.0s						
MOAC	Moa	52.22	104	*e*P	P	03 45 11.2	-1.7
RCC	Rio Carpintero	52.27	105	*e*P	P	03 45 11.2	-2.1
NMDO	Nuevo Mundo	52.28	104	*e*P	P	03 45 09.9	-3.5
BOAB	BOACO BROADBA	52.31	120	P	P	03 45 13.7	+0.1
BOAB	BOACO BROADBA	52.31	120	⇑P	P	03 45 15.1	+1.5
MTDJ	Mount Denham	52.47	108	*e*P	P	03 45 06.5	-8.4
QMBU	Quimbuelo	52.66	104	*e*P	P	03 45 12.5	-3.7
GTBY	Guantanamo Bay	52.68	104	*e*P	P	03 45 15.2	-1.1
BORG	Borgarnes	52.70	31	LR	LR	04 08 00.6	
	comp=E,31µm,18.4s,baz=315,slow=36						
BORG	Borgarnes	52.70	31	IAMs_20	IAMs_20	04 07 50.1	
	comp=Z,30µm,19.0s						
KUR	Kuril'sk	52.70	298	*e*P	P	03 45 10.3	-5.9
KUR				*e*		03 47 19.1	
KUR				*e*S	S	03 52 39.2	-4.6
KUR				pmax	pmax		
	comp=Z,3µm,6.4s						
KUR				MLR	MLR		
	comp=N,5µm,10.0s						
KUR				MLR	MLR		
	comp=Z,5µm,10.0s						
KUR				MLR	MLR		
	comp=E,4µm,11.0s						
XMAS	Kiritimati	53.48	215	IAMs_20	IAMs_20	04 03 13.7	
	comp=Z,21µm,19.0s						
UGL	Uglegorsk	53.53	305	*e*P	P	03 45 22.5	+0.2
UGL				*e*		03 47 28.5	
UGL				*e*S	S	03 52 59.9	+5.0
UGL				pmax	pmax		
	comp=Z,120nm,1.5s						
UGL				pmax	pmax		
	comp=Z,3µm,6.2s						
UGL				smax	smax		
	comp=E,16µm,12.0s						
UGL				smax	smax		
	comp=N,6µm,14.0s						
UGL				smax	smax		
	comp=Z,9µm,12.0s						
UGL				MLR	MLR		
	comp=E,8µm,14.0s						
UGL				MLR	MLR		
	comp=N,13µm,16.0s						
UGL				MLR	MLR		
	comp=Z,11µm,16.0s						
PRVC	Isla de Provid	53.99	115	P	P	03 45 28.7	+2.7
	comp=Z,12µmcomp=Z,111nm,1.0s						
GRTK	Grand Turk	53.99	100	*e*P	P	03 45 16.5	-9.5
GRTK	Grand Turk	53.99	100	P	P	03 45 23.8	-2.2
	comp=Z,253nm,2.0s						
JUD3	Juan Diaz 3	54.26	122	P	P	03 45 27.6	-0.4
YSS	Yuzhno-Sakhali	54.47	303	P	P	03 45 28.2	-1.0
YSS				IAmb	IAmb	03 45 36.7	
	comp=Z,183nm,1.2s						
YSS	Yuzhno-Sakhali	54.47	303	P	P	03 45 29.2	+0.1
YSS	Yuzhno-Sakhali	54.47	303	α*e*P	P	03 45 28.7	-0.4
YSS				*e**SP	sP	03 45 32.7	+0.5
YSS				*e*		03 47 29.4	
YSS				*e*PPP	PPP	03 48 44.7	
YSS				*e*S	S	03 53 01.9	-5.8
YSS				*e**SS	sS	03 53 12.0	+0.4
YSS				*e*SS	SS	03 56 54.3	+4.9
YSS				pmax	pmax		
	comp=Z,80nm,1.2s						
YSS				pmax	pmax		
	comp=N,30nm,1.3s						
YSS				pmax	pmax		
	comp=E,80nm,1.0s						
YSS				pmax	pmax		
	comp=Z,1µm,4.2s						
YSS				MLR	MLR		
	comp=N,12µm,15.0s						
YSS				MLR	MLR		
	comp=Z,10µm,15.0s						
YSS				MLR	MLR		
	comp=E,9µm,16.0s						
JTS	Las Juntas de	54.48	121	P	P	03 45 29.1	-0.4
JTS	Las Juntas de	54.48	121	*c i*P	P	03 45 28.8	-0.8
JTS				pmax	pmax		
	comp=Z,28nm,1.0s						
JTS				MLR	MLR		
	comp=Z,10µm,18.0s						
YUK	Yuzh-Kuril'sk	54.57	298	*e*P	P	03 45 28.6	-1.3
YUK				*e*		03 46 34.0	
YUK				*e*		03 47 28.4	
YUK				*e*PPP	PPP	03 48 42.5	
YUK				*e*S	S	03 53 09.1	0.0
YUK				MLR	MLR		
	comp=Z,7µm,14.0s						
YUK				MLR	MLR		
	comp=E,7µm,12.0s						
GRNR	Gornyy	55.35	310	⇑*i*P	P	03 45 35.4	-0.1
GRNR				pmax	pmax		
	comp=Z,110nm,1.3s						
SDDR	Presa de Saban	55.77	102	P	P	03 45 38.4	-0.5
SDDR				IAmb	IAmb	03 45 47.0	
	comp=Z,143nm,1.4s						
SDDR				IAMs_20	IAMs_20	04 09 31.1	
	comp=Z,20µm,20.0s						
SDDR	Presa de Saban	55.77	102	*e*P	P	03 45 39.9	+0.9
SDDR	Presa de Saban	55.77	102	P	P	03 45 41.5	+2.6
SC01	Santiago de lo	55.79	101	P	P	03 45 39.1	+0.1
JKA	Kamikawa-asahi	56.34	300	P	P	03 45 41.7	-1.0
JKA				IAmb	IAmb	03 45 50.2	
	comp=Z,201nm,1.3s						
ASAJ	Asahikawa	56.34	300	P	P	03 45 43.0	+0.3
	comp=Z,49nm,1.1s,baz=111,slow=16,SNR=6.7						
ASAJ				LR	LR	04 06 34.8	
	comp=Z,11µm,21.9s,baz=48,slow=33						
	comp=Z,49nm,1.1s						
ASAJ	Asahikawa	56.34	300	P	P	03 45 41.7	-1.0
ASAJ				pmax	pmax		
	comp=Z,201nm,1.3s						
PIRO	Carate, Puerto	56.92	121	P	P	03 45 48.5	+1.4
PIRO				IAmb	IAmb	03 45 54.6	
	comp=Z,94nm,1.2s						
BRU2	Volcan	56.96	120	P	P	03 45 48.4	+0.9
JEM	Erimo	57.38	298	P	P	03 45 51.0	+0.9
ERM	Erimo	57.38	298	P	P	03 45 49.8	-0.3
ERM				IAmb	IAmb	03 46 00.5	
	comp=Z,88nm,1.0s						
ERM	Erimo	57.38	298	IAMs_20	IAMs_20	04 07 02.9	
	comp=Z,20µm,22.0s						
ERM	Erimo	57.38	298	P	P	03 45 51.0	+0.9
ERM	Erimo	57.38	298	P	P	03 45 49.8	-0.3
ERM				pmax	pmax		
	comp=Z,88nm,1.0s						
NRIK	Noril'sk	57.43	345	P	P	03 45 50.3	+0.3
	comp=Z,25nm,0.9s,baz=38,slow=6.6,SNR=23						
NRIK				S	S	03 53 45.8	-0.7
	comp=Z,0.6nm,0.3s,baz=338,slow=7.0,SNR=1.3						
NRIK				LR	LR	04 12 59.1	
	comp=Z,9µm,18.6s,baz=44,slow=39						
	comp=Z,25nm,0.9s						
NRIK	Noril'sk	57.43	345	P	P	03 45 49.0	-1.0
NRIK				IAmb	IAmb	03 45 58.5	
	comp=Z,79nm,0.9s						
NRIK	Noril'sk	57.43	345	*d i*P	P	03 45 50.2	+0.2
NRIK				pmax	pmax		
	comp=Z,149nm,1.4s						
NRIK				MLR	MLR		
	comp=Z,12µm,16.0s						
ZEA	Zeya	57.69	317	*e*P	P	03 45 51.9	-0.2
ZEA				*e*		03 48 01.6	
ZEA				*e*		03 49 29.2	
ZEA				*e*S	S	03 53 49.0	-1.4
ZEA				pmax	pmax		
	comp=Z,80nm,1.6s						
ZEA				pmax	pmax		
	comp=E,400nm,9.1s						
ZEA				pmax	pmax		
	comp=N,400nm,6.2s						
ZEA				pmax	pmax		
	comp=Z,1µm,7.3s						

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ZEA                                    pmax     pmax
      comp=E,300nm,7.2s
ZEA                                    pmax     pmax
      comp=N,300nm,5.8s
ZEA                                    pmax     pmax
      comp=Z,1µm,5.9s
ZEA                                    smax     smax
      comp=N,2µm,13.2s
ZEA                                    smax     smax
      comp=E,2µm,14.3s
H11N2 WAKE ISLAND Hy 57.93 262         T        T        04 48 36.0
      baz=42,slow=75
H11N3 WAKE ISLAND Hy 57.93 262         T        T        04 48 23.6
      baz=42,slow=75
H11N1 WAKE ISLAND Hy 57.94 262         T        T        04 48 25.3
      baz=42,slow=75
BCIP  Isla Barro Col 58.26 117         P        P        03 45 53.4 -3.1
H11S1 WAKE ISLAND Hy 58.95 262         T        T        04 49 41.9
      baz=41,slow=75,SNR=1034
H11S2 WAKE ISLAND Hy 58.97 262         T        T        04 49 39.6
      baz=41,slow=75,SNR=713
H11S3 WAKE ISLAND Hy 58.97 262         T        T        04 49 41.2
      baz=41,slow=75,SNR=537
TEY   Ternei         58.98 304⇑eP      P        03 45 59.8 -1.4
TEY                                    pmax     pmax
      comp=Z,10.0nm,2.5s
TEY                                    MLR      MLR
      comp=E,100nm,17.0s
TEY                                    MLR      MLR
      comp=N,200nm,12.0s
TEY                                    MLR      MLR
      comp=Z,300nm,16.0s
KEV   Kevo           58.99   9         P        P        03 46 00.5 -0.4
KEV                                    IAmb     IAmb     03 46 09.6
      comp=Z,73nm,1.1s
KEV   Kevo           58.99   9         P        P        03 46 00.5 -0.4
KEV                                    pmax     pmax
      comp=Z,73nm,1.1s
KEV                                    MLR      MLR
      comp=Z,31µm,18.0s
ARCES ARCESS Array B 59.04  10         P        P        03 46 01.3  0.0
      comp=Z,14nm,1.0s,baz=26,slow=1.9,SNR=8.2
ARCES                                  LR       LR       04 11 16.1
      comp=Z,21µm,22.0s,baz=331,slow=36
      comp=Z,14nm,1.0s
ARCES ARCESS Array B 59.04  10         P        P        03 45 59.5 -1.8
ARCES                                  IAmb     IAmb     03 46 09.2
      comp=Z,195nm,1.9s
ARCES ARCESS Array B 59.04  10         P        P        03 45 59.5 -1.8
ARCES                                  pmax     pmax
      comp=Z,195nm,2.0s
AOPR  Arecibo Observ 59.09  99         P        P        03 46 02.2 -0.1
AOPR                                   IAmb     IAmb     03 46 15.6
      comp=Z,87nm,1.1s
SJG   San Juan       59.65  98         LR       LR       04 13 05.0
      comp=Z,12µm,19.7s,baz=320,slow=37
SJG   San Juan       59.65  98         IAMs_20  IAMs_20  04 14 13.2
      comp=Z,17µm,20.0s
SJG   San Juan       59.65  98         P        P        03 46 09.9 +3.7
TAOE  Nuku Hiva Isla 59.66 192        eP        P        03 46 08.2 +1.9
      comp=Z,439nm,1.3s
TAOE                                  eS        S        03 54 15.5 -1.3
      comp=Z,5µm,28.0s
TAOE                                  eSS       SS       03 58 09.3 -3.5
      comp=Z,3µm,28.3s
TAOE                                  eLQ       LQ       04 01 10.4
      comp=Z,11µm,25.2s
TAOE                                  eLR       LR       04 03 42.7
      comp=Z,46µm,26.2s
TAOE  Nuku Hiva Isla 59.66 192         P        P        03 46 07.0 +0.8
TAOE  Nuku Hiva Isla 59.66 192         P        P        03 46 11.6 +5.3
HUMP  Col San Antoni 59.82  98         P        P        03 46 06.6 -0.8
HUMP                                   IAmb     IAmb     03 46 14.4
      comp=Z,117nm,1.1s
SMRC  Santa Marta, M 59.96 110         P        P        03 46 08.2 -0.1
      comp=Z,11µmcomp=Z,4µmcomp=Z,97nm,1.2s
HEH   HeiHe          60.01 314        eP        P        03 46 07.0 -1.2
HEH                                    PP       PP       03 48 21.5 +1.4
HEH                                    S        S        03 54 18.4 -2.1
HEH                                    SS       SS       03 58 15.8 -0.5
HEH                                    pmax     pmax
      comp=Z,270nm,1.2s
HEH                                    pmax     pmax
      comp=Z,3µm,5.6s
HEH                                    LR       LR
      comp=Z,12µm,18.0s
HEH                                    LR       LR
      comp=Z,10µm,16.6s
HEH                                    LR       LR
      comp=Z,26µm,19.8s
BOD   Bodaibo        60.05 326        eP        P        03 46 06.4 -2.0
BOD                                    pmax     pmax
      comp=Z,205nm,1.5s
CAPC  Capurgana      60.12 115         P        P        03 46 07.0 -2.4
SJCC  San Jacinto, C 60.39 112         P        P        03 46 12.8 +1.5
      comp=Z,11µmcomp=Z,4µmcomp=Z,88nm,1.6s
LCBC  Los crdobas,   60.52 114         P        P        03 46 14.2 +2.1
      comp=Z,14µmcomp=Z,6µmcomp=Z,203nm,1.2s
URIC  Uribia, Colomb 60.88 108         P        P        03 46 15.0 +0.3
      comp=Z,9µmcomp=Z,4µmcomp=Z,89nm,1.3s
ARGC  Ariguani, Magd 60.97 111         P        P        03 46 16.3 +1.0
      comp=Z,9µmcomp=Z,4µmcomp=Z,58nm,2.6s
PTAC  Punta Ardita,  61.06 116         P        P        03 46 16.6 +0.8
      comp=Z,3µmcomp=Z,52nm,1.8s
PAYG  Puerto Ayora   61.12 133         P        P        03 46 17.4 +1.2
APAC  Apartado, Choc 61.16 115         P        P        03 46 18.3 +1.8
      comp=Z,10µmcomp=Z,5µmcomp=Z,166nm,1.1s
LVZ   Lovozero       61.47   7         P        P        03 46 16.9 -1.1
LVZ                                    IAmb     IAmb     03 46 19.8
      comp=Z,124nm,1.2s
LVZ                                    IAMs_20  IAMs_20  04 12 48.7
      comp=Z,17µm,20.0s
LVZ   Lovozero       61.47   7d iP      P        03 46 18.2 +0.2
LVZ                                    pmax     pmax
      comp=Z,135nm,1.2s
LVZ                                    MLR      MLR
      comp=Z,17µm,14.0s
LVZ   Lovozero       61.47   7         P        P        03 46 17.8 -0.2
      comp=Z,105nm,1.8s
APA   Apatity        61.70   7⇓iP      P        03 46 17.6 -1.9
APA                                   i S       S        03 54 40.3 -1.3
APA                                   i                  03 56 07.8
APA                                   i SS      SS       03 58 41.5 -0.5
APA                                    pmax     pmax
      comp=Z,17nm,1.3s
APA                                    MLR      MLR
      comp=Z,23µm,20.6s
SABA  Saba           61.86  96         IAMs_20  IAMs_20  04 12 38.4
      comp=Z,28µm,21.0s
UREC  San Jos de Ur  61.89 114         P        P        03 46 22.2 +0.7
USRK  Ussuriysk Ar.  61.97 306         P        P        03 46 20.6 -1.1
      comp=Z,29nm,0.9s,baz=46,slow=6.9,SNR=37
      comp=Z,29nm,0.9s
DBBC  Dabeiba        62.09 115         P        P        03 46 24.4 +1.5
LRW   Lerwick        62.34  26        eP        P        03 46 23.5 -0.4
LRW                                    IAMs_20  IAMs_20  04 13 15.7
      comp=Z,32µm,16.4s
ANWB  Willy Bob      62.75  95         IAMs_20  IAMs_20  04 15 35.9
      comp=Z,20µm,19.0s
VLA   Vladivostok    62.77 305d iP      P        03 46 26.7 -0.3
VLA                                    pmax     pmax
      comp=Z,226nm,1.6s
VLA                                    MLR      MLR
      comp=Z,6µm,13.0s
OCAC  Ocana          62.81 112         P        P        03 46 28.4 +0.6
      comp=Z,8µmcomp=Z,3µmcomp=Z,51nm,1.4s
JSD   Sado           62.84 297         P        P        03 46 26.1 -1.5
JSD                                    IAmb     IAmb     03 46 34.4
      comp=Z,67nm,1.1s
MDJ   Mudanjiang     62.90 308         IAMs_20  IAMs_20  04 11 01.9
      comp=Z,27µm,22.0s
MDJ   Mudanjiang     62.90 308         P        P        03 46 26.8 -1.1
MDJ                                    sP       pwP      03 46 33.4 +0.4
MDJ                                    S        S        03 55 01.8 +4.4
MDJ                                    sS       sS       03 55 07.0 +5.6
MDJ                                    pmax     pmax
      comp=Z,18nm,1.4s
MDJ                                    LR       LR
      comp=Z,13µm,23.5s
MDJ                                    LR       LR
      comp=Z,16µm,22.8s
MDJ                                    LR       LR
      comp=Z,35µm,22.2s
PIZC  Pizarro, Choco 63.09 117         P        P        03 46 31.6 +2.1
      comp=Z,12µmcomp=Z,6µmcomp=Z,200nm,0.9s
CBOC  Ciudad Bolivar 63.13 116         P        P        03 46 30.0  0.0
      comp=Z,10µmcomp=Z,4µmcomp=Z,72nm,1.4s
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BNX   BinXian        63.19 310 ⇑P      P        03 46 28.8 -1.0
BNX                                    PP       PP       03 48 53.5 +5.3
BNX                                    S        S        03 55 04.3 +3.3
BNX                                    pmax     pmax
      comp=Z,59nm,1.6s
BNX                                    pmax     pmax
      comp=Z,2µm,5.7s
BNX                                    LR       LR
      comp=Z,9µm,19.3s
BNX                                    LR       LR
      comp=Z,9µm,24.4s
BNX                                    LR       LR
      comp=Z,16µm,18.0s
PTBC  PUERTO BERRIO, 63.49 114         P        P        03 46 32.8 +0.6
      comp=Z,8µmcomp=Z,4µmcomp=Z,126nm,1.1s
BRJC  Barrancabermej 63.56 113         P        P        03 46 33.3 +0.7
      comp=Z,7µmcomp=Z,4µmcomp=Z,160nm,1.6s
PSTR  Posyet         63.67 306⇓eP      P        03 46 32.8 -0.2
PLMC  San Jos del P  63.75 116         P        P        03 46 34.8 +0.8
      comp=Z,9µmcomp=Z,3µmcomp=Z,80nm,1.1s
ABD   La Joyeuse, An 63.83  96         IAMs_20  IAMs_20  04 13 00.3
      comp=Z,21µm,22.0s
MCD   Coleburn Disti 63.84  29        eP        P        03 46 33.9  0.0
MCD                                    IAMs_20  IAMs_20  04 15 28.6
      comp=Z,37µm,13.8s
PAMC  Pamplona, Colo 63.89 112         P        P        03 46 34.8 -0.6
      comp=Z,470nmcomp=Z,60nm,1.0s
MAJO  Matsushiro     63.91 296         P        P        03 46 33.5 -1.2
MAJO                                   IAmb     IAmb     03 46 41.6
      comp=Z,68nm,0.9s
MAJO  Matsushiro     63.91 296         IAMs_20  IAMs_20  04 09 03.7
      comp=Z,15µm,22.0s
MAJO  Matsushiro     63.91 296c iP      P        03 46 33.8 -0.9
MAJO                                   pmax     pmax
      comp=Z,66nm,0.9s
MAJO                                   MLR      MLR
      comp=Z,4µm,17.0s
MJAR  Matsushiro Arr 63.91 296         P        P        03 46 33.2 -1.5
      comp=Z,12nm,0.9s,baz=32,slow=5.8,SNR=26
MJAR                                   LR       LR       04 10 12.4
      comp=Z,10µm,21.8s,baz=32,slow=32
      comp=Z,12nm,0.9s
MJAR  Matsushiro Arr 63.91 296         P        P        03 46 33.0 -1.7
MJAR  Matsushiro Arr 63.91 296         P        P        03 46 33.0 -1.7
MJAR                                   pmax     pmax
      comp=Z,32nm,1.2s
MJB9  Matsu-Tunnel   63.91 296         IAmb     IAmb     03 46 42.5
      comp=Z,66nm,0.9s
SDV   Santo Domingo  63.91 109         LR       LR       04 17 15.2
      comp=Z,10µm,19.6s,baz=318,slow=39
SDV   Santo Domingo  63.91 109         P        P        03 46 35.3 +0.2
SDV                                    IAmb     IAmb     03 46 53.9
      comp=Z,206nm,1.9s
SDV                                    IAMs_20  IAMs_20  04 17 03.7
      comp=Z,12µm,20.0s
SDV   Santo Domingo  63.91 109        eP        P        03 46 36.1 +1.0
SDV   Santo Domingo  63.91 109         P        P        03 46 35.6 +0.4
      comp=Z,9µmcomp=Z,3µmcomp=Z,73nm,2.4s
HILR  Hailar Array B 63.95 317         P        P        03 46 33.6 -1.2
      comp=Z,30nm,0.9s,baz=77,slow=6.4,SNR=40
HILR                                   S        S        03 55 08.0 -2.5
      comp=Z,0.4nm,0.3s,baz=340,slow=13,SNR=1.4
HILR                                   LR       LR       04 14 54.1
      comp=Z,19µm,19.0s,baz=65,slow=37
      comp=Z,30nm,0.9s
HIA   Hailar         64.17 317         IAmb     IAmb     03 46 43.6
      comp=Z,76nm,1.2s
HIA   Hailar         64.17 317         IAMs_20  IAMs_20  04 14 48.8
      comp=Z,23µm,18.0s
BARC  Barichara      64.20 112         P        P        03 46 37.7 +0.6
      comp=Z,1µmcomp=Z,130nm,1.2s
GDSD  La Dsirade Is  64.22  95         P        P        03 46 36.0 -0.9
GDSD                                   IAmb     IAmb     03 46 42.3
      comp=Z,147nm,1.3s
GDSD                                   IAMs_20  IAMs_20  04 13 33.6
      comp=Z,20µm,22.0s
NC204 NORSAR Array S 64.33  20         P        P        03 46 36.1 -1.0
NC204                                  IAmb     IAmb     03 46 39.4
      comp=Z,79nm,1.2s
SPBC  San Pablo de B 64.43 114         P        P        03 46 38.8 +0.4
      comp=Z,7µmcomp=Z,3µmcomp=Z,79nm,1.6s
YOTC  Yotoco, Valle  64.47 117         P        P        03 46 38.5 -0.2
      comp=Z,9µmcomp=Z,4µmcomp=Z,85nm,1.3s
IDGL  Inch Island, C 64.49  32         P        P        03 46 38.9 +0.7
NC303 NORSAR Array S 64.51  20         P        P        03 46 37.2 -1.0
NC303                                  IAmb     IAmb     03 46 40.5
      comp=Z,90nm,1.2s
INVG  Invergeldie, C 64.54  30        eP        P        03 46 38.1 -0.4
INVG                                   IAmb     IAmb     03 46 39.7
      comp=Z,147nm,1.3s
INVG                                   IAMs_20  IAMs_20  04 14 15.0
      comp=Z,29µm,17.1s
ANIL  Santa Ana      64.59 116         P        P        03 46 41.7 +1.9
      comp=Z,4µmcomp=Z,156nm,1.3s
DRUM  Mains of Drumt 64.63  29        eP        P        03 46 38.7 -0.3
DRUM                                   IAmb     IAmb     03 46 41.3
      comp=Z,197nm,1.4s
DRUM                                   IAMs_20  IAMs_20  04 16 00.5
      comp=Z,39µm,14.4s
NB2   NORSAR Subarra 64.64  20         P        P        03 46 38.3 -0.9
      comp=Z,615nm,3.3s,baz=332,slow=6.5
NB2   NORSAR Subarra 64.64  20         P        P        03 46 38.3 -0.9
      baz=332,slow=6.5
NOA   NORSAR Array B 64.64  20         P        P        03 46 38.8 -0.4
      comp=Z,34nm,1.1s,baz=333,slow=6.6,SNR=43
NOA                                    S        S        03 55 15.9 -2.7
      comp=Z,0.3nm,0.9s,baz=314,slow=21,SNR=1.3
NOA                                    LR       LR       04 16 08.7
      comp=Z,20µm,18.3s,baz=340,slow=37
      comp=Z,34nm,1.1s
CIT   Chita          64.64 322        eP        P        03 46 39.6 +0.3
CIT                                   e                  03 49 03.4
CIT                                   e                  03 50 35.4
CIT                                   e                  03 55 36.8
CIT                                    pmax     pmax
      comp=Z,385nm,1.8s
RUSC  La Rusia       64.82 113         P        P        03 46 42.1 +0.7
      comp=Z,9µmcomp=Z,4µmcomp=Z,215nm,1.4s
PGBU  Glenifferbraes 64.90  30        eP        P        03 46 40.7 -0.1
PGBU                                   IAmb     IAmb     03 46 42.7
      comp=Z,412nm,1.3s
PGBU                                   IAMs_20  IAMs_20  04 14 14.3
      comp=Z,53µm,16.5s
JAMC  Jamundi, Valle 64.91 118         P        P        03 46 43.0 +1.3
      comp=Z,10µmcomp=Z,4µmcomp=Z,103nm,2.0s
ROSC  El Rosal       64.94 115         P        P        03 46 43.6 +1.5
      comp=Z,113nm,1.2s,baz=20,slow=3.7,SNR=48
ROSC                                   S        S        03 55 23.9 -0.3
      comp=Z,2.5nm,0.4s,baz=330,slow=20,SNR=1.1
ROSC                                   LR       LR       04 19 29.5
      comp=Z,8µm,18.1s,baz=336,slow=40
      comp=Z,113nm,1.2s
ROSC  El Rosal       64.94 115         P        P        03 46 43.1 +1.0
ROSC  El Rosal       64.94 115         P        P        03 46 43.1 +1.0
ROSC                                   pmax     pmax
      comp=Z,225nm,1.4s
JGF   Kuroka         65.06 296         P        P        03 46 41.1 -1.2
IGLA  Glengowla, Co  65.16  35         P        P        03 46 42.0 -0.5
ORTC  Ortega, Tolima 65.16 116         P        P        03 46 44.1 +1.0
      comp=Z,9µmcomp=Z,4µmcomp=Z,127nm,1.3s
EDI   Edinburgh      65.23  30        eP        P        03 46 43.2 +0.2
EDI                                    IAmb     IAmb     03 46 44.9
      comp=Z,175nm,1.6s
EDI                                    IAMs_20  IAMs_20  04 14 35.5
      comp=Z,25µm,18.0s
CVER  Cruz Verde, Cu 65.34 115         P        P        03 46 46.6 +1.8
      comp=Z,7µmcomp=Z,174nm,1.6s
JHJ   Hachijo jima 2 65.41 293         LR       LR       04 12 17.0
      comp=Z,2µm,20.1s,baz=63,slow=33
CHIC  Chingaza       65.45 114         P        P        03 46 45.9 +0.4
      comp=Z,9µmcomp=Z,4µmcomp=Z,65nm,1.1s
PRAC  Prado          65.52 116         P        P        03 46 46.5 +1.0
      comp=Z,9µmcomp=Z,5µmcomp=Z,105nm,2.7s
KONO  Kongsberg      65.53  21         P        P        03 46 44.7 -0.1
KONO                                   IAmb     IAmb     03 46 57.5
      comp=Z,112nm,1.6s
KONO  Kongsberg      65.53  21         IAMs_20  IAMs_20  04 19 27.1
      comp=Z,13µm,20.0s
KONO  Kongsberg      65.53  21deP       P        03 46 43.5 -1.4
KONO                                   pmax     pmax
      comp=Z,64nm,1.4s
KONO                                   MLR      MLR
      comp=Z,11µm,14.0s
CN2   Changchun      65.55 310         P        P        03 46 44.3 -1.0
CN2                                    sP       pwP      03 46 51.3 +0.8
CN2                                    PP       PP       03 49 09.5 +0.5
CN2                                    S        S        03 55 25.8 -4.5
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CN2                                    SS       SS       03 59 39.8 -3.3
CN2                                    pmax     pmax
      comp=Z,60nm,1.0s
CN2                                    pmax     pmax
      comp=Z,2µm,5.0s
CN2                                    LR       LR
      comp=Z,12µm,18.0s
CN2                                    LR       LR
      comp=Z,13µm,18.0s
CN2                                    LR       LR
      comp=Z,17µm,18.0s
NEWG  New Galloway   65.56  31        eP        P        03 46 44.7 -0.4
NEWG                                   IAmb     IAmb     03 46 46.2
      comp=Z,190nm,1.4s
NEWG                                   IAMs_20  IAMs_20  04 14 32.1
      comp=Z,25µm,18.3s
GAL1  Galloway       65.61  31        eP        P        03 46 43.9 -1.5
GAL1                                   IAMs_20  IAMs_20  04 15 06.9
      comp=Z,25µm,15.5s
ESK   Eskdalemuir    65.72  30         P        P        03 46 45.2 -1.0
ESK                                    IAmb     IAmb     03 47 03.7
      comp=Z,205nm,1.9s
ESK   Eskdalemuir    65.72  30        eP        P        03 46 45.1 -1.0
ESK                                    IAMs_20  IAMs_20  04 14 50.0
      comp=Z,32µm,19.3s
ESK   Eskdalemuir    65.72  30         P        P        03 46 45.2 -1.0
ESK                                    pmax     pmax
      comp=Z,205nm,1.9s
EKA   Eskdalemuir Ar 65.73  30         P        P        03 46 45.9 -0.3
      comp=Z,3.3nm,0.6s,baz=319,slow=5.3,SNR=19
EKA                                    LR       LR       04 15 15.4
      comp=Z,32µm,18.0s,baz=336,slow=36
      comp=Z,3.3nm,0.6s
ILTH  Belurgan, Co L 65.74  33         P        P        03 46 46.1 -0.2
ILTH  Belurgan, Co L 65.74  33        eP        P        03 46 45.2 -1.1
ILTH                                   IAmb     IAmb     03 46 47.1
      comp=Z,166nm,1.4s
ILTH                                   IAMs_20  IAMs_20  04 14 41.8
      comp=Z,35µm,17.7s
HFS   Hagfors        65.99  19         P        P        03 46 46.9 -0.9
      comp=Z,45nm,1.1s,baz=347,slow=6.1,SNR=36
HFS                                    S        S        03 55 31.0 -4.1
      comp=Z,1.1nm,0.9s,baz=353,slow=22,SNR=1.6
HFS                                    LR       LR       04 16 01.3
      comp=Z,36µm,19.7s,baz=336,slow=36
      comp=Z,45nm,1.1s
DSB   Dublin         66.36  33         P        P        03 46 51.5 +1.1
OTAV  Otavalo        66.37 121                  P        03 46 52.9 +1.4
OTAV  Otavalo        66.37 121         P        P        03 46 52.9 +1.4
OTAV                                   pmax     pmax
      comp=Z,264nm,1.5s
OTAV                                   MLR      MLR
      comp=Z,7µm,20.0s
OTAV  Otavalo        66.37 121        eP        P        03 46 51.2 -0.2
EDMD  Edmundbyers    66.53  30        eP        P        03 46 51.4  0.0
EDMD                                   IAmb     IAmb     03 46 52.6
      comp=Z,140nm,1.4s
EDMD                                   IAMs_20  IAMs_20  04 15 34.4
      comp=Z,33µm,19.2s
FIA1  FINESS Array S 66.88  12         P        P        03 46 52.0 -1.5
FINES FINESS Array B 66.88  12         P        P        03 46 52.6 -0.9
      comp=Z,49nm,1.1s,baz=348,slow=6.4,SNR=44
FINES                                  S        S        03 55 49.7 +3.9
      comp=Z,1.8nm,1.1s,baz=336,slow=17,SNR=1.8
FINES                                  LR       LR       04 17 19.9
      comp=Z,18µm,18.7s,baz=346,slow=37
      comp=Z,49nm,1.1s
FINES FINESS Array B 66.88  12         P        P        03 46 52.2 -1.3
IWEX  Carrickbyrne,  66.93  34         P        P        03 46 54.9 +0.9
PMOR  Pomariorio Ree 66.98 199        eP        P        03 46 59.0 +4.4
      comp=Z,344nm,1.5s
PMOR                                  eS        S        03 55 43.7 -4.2
      comp=Z,5µm,22.8s
PMOR  Pomariorio Ree 66.98 199        eLR       LR       04 07 01.6
      comp=Z,18µm,21.8s
GRGR  Grenville      66.98  99         IAMs_20  IAMs_20  04 19 48.6
      comp=Z,12µm,19.0s
SLOR  San Lorenzo -  67.15 122         IAmb     IAmb     03 47 30.8
      comp=Z,92nm,1.3s
VAH   Vaihoa         67.15 198        eP        P        03 46 59.6 +3.9
      comp=Z,15nm,1.2s
HHU   Hamhung        67.34 306         P        P        03 46 55.7 -1.1
HHU                                    S        S        03 55 48.0 -4.0
HHU                                    AmB
      comp=Z,1µm,2.9s
HHU                                    AMS      AMS
      comp=Z,13µm,21.5s
HPK   Haverah Park   67.37  30        eP        P        03 46 55.9 -0.8
HPK                                    IAmb     IAmb     03 46 58.1
      comp=Z,267nm,1.5s
HPK                                    IAMs_20  IAMs_20  04 15 48.7
      comp=Z,27µm,19.0s
FOEL  Foel Wylfa     67.75  32        eP        P        03 46 59.2 +0.1
FOEL                                   IAmb     IAmb     03 47 01.7
      comp=Z,104nm,1.2s
FOEL                                   IAMs_20  IAMs_20  04 16 12.6
      comp=Z,29µm,17.1s
CALA  Caldeira       67.75  56        eLR       LR       04 09 00.2
CALA                                  i IAMs_20 IAMs_20  04 09 07.7
      comp=Z,682nm,8.9s
LBWR  Ladybower, Pea 67.80  30        eP        P        03 46 59.7 +0.2
LBWR                                   IAmb     IAmb     03 47 01.4
      comp=Z,130nm,1.2s
LBWR                                   IAMs_20  IAMs_20  04 16 00.9
      comp=Z,26µm,16.7s
HOR   Horta          67.83  56        eLR       LR       04 08 32.6
HOR                                   i IAMs_20 IAMs_20  04 09 38.1
      comp=Z,1µm,18.5s
IRK   Irkutsk        67.89 327        eP        P        03 46 59.7 -0.4
IRK                                    pmax     pmax
      comp=Z,364nm,2.1s
ROSA  Rosais         67.90  56        eLR       LR       04 08 32.6
ROSA                                  i IAMs_20 IAMs_20  04 08 37.2
      comp=Z,692nm,16.6s
SNY   Shenyang       67.94 309 ⇑P      P        03 47 00.1 -0.4
SNY                                    S        S        03 55 56.3 -2.8
SNY                                    pmax     pmax
      comp=Z,60nm,1.2s
SNY                                    LR       LR
      comp=Z,7µm,19.2s
SNY                                    LR       LR
      comp=Z,17µm,19.9s
SNY                                    LR       LR
      comp=Z,22µm,21.1s
PICO  Pico           67.96  56        eLR       LR       04 08 25.7
PICO                                  i IAMs_20 IAMs_20  04 09 42.8
      comp=Z,2µm,13.3s
JCJ   Chichijima     68.27 286         LR       LR       04 09 56.2
      comp=Z,10µm,21.7s,baz=37,slow=30
JMN   Monobe         68.40 297         P        P        03 47 03.5 -0.1
JMN                                    IAmb     IAmb     03 47 14.4
      comp=Z,209nm,1.9s
JMN   Monobe         68.40 297         P        P        03 47 07.1 +3.5
PAGU  Agualva, Azore 68.42  55        eLR       LR       04 08 45.3
PAGU                                  i IAMs_20 IAMs_20  04 09 49.6
      comp=Z,1µm,19.3s
ADH   Angra Heroismo 68.47  55        eLR       LR       04 08 45.3
ADH                                   i IAMs_20 IAMs_20  04 09 31.3
      comp=Z,719nm,17.4s
CWF   Charnwood Fore 68.50  31        eP        P        03 47 04.1 +0.2
CWF                                    IAmb     IAmb     03 47 06.0
      comp=Z,201nm,1.3s
CWF                                    IAMs_20  IAMs_20  04 16 11.9
      comp=Z,26µm,17.8s
MCH1  Michaelchurch  68.56  32        eP        P        03 47 03.7 -0.6
MCH1                                   IAMs_20  IAMs_20  04 16 36.3
      comp=Z,32µm,18.3s
TLY   Talaya         68.57 327         P        P        03 46 57.6 -6.8
TLY                                    P        P        03 46 57.6 -6.8
TLY                                    S        S        03 56 03.6 -2.9
TLY                                    S        S        03 56 03.6 -2.9
TLY   Talaya         68.57 327         P        P        03 47 04.0 -0.4
TLY                                    IAmb     IAmb     03 47 13.6
      comp=Z,105nm,1.1s
TLY   Talaya         68.57 327c iP      P        03 47 04.9 +0.5
TLY                                    pmax     pmax
      comp=Z,140nm,1.1s
TLY                                    MLR      MLR
      comp=Z,23µm,19.0s
KLMR  Klimovskoe     68.78   5        eP        P        03 47 03.4 -2.1
KLMR                                  e                  03 49 34.4
KLMR                                   S        S        03 56 05.6 -3.0
KLMR                                   SSS      SSS      04 00 30.1
KLMR                                   pmax     pmax
      comp=Z,212nm,1.3s
KLMR                                   MLR      MLR
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	comp=Z,16µm,16.0s						
PYAG	Pyongyang	68.91	306	P	P	03 47 06.1	-0.5
PYAG				S	S	03 56 06.8	-3.9
PYAG				AmB			
	comp=Z,2µm,3.1s						
PYAG				AMS	AMS		
	comp=Z,15µm,20.0s						
KS19	Wonju Array Si	68.95	304	P	P	03 47 07.1	+0.2
KS19				IAmb	IAmb	03 47 14.7	
	comp=Z,57nm,1.1s						
KSRS	Korea Array	68.96	303	P	P	03 47 06.7	-0.3
	comp=Z,9.2nm,0.9s,baz=53,slow=6.7,SNR=26						
KSRS				S	S	03 56 14.5	+3.1
	comp=Z,0.6nm,0.8s,baz=52,slow=6.0,SNR=0.9						
KSRS				LR	LR	04 13 57.0	
	comp=Z,5µm,21.6s,baz=60,slow=33						
	comp=Z,9.2nm,0.9s						
KSAR	Wonju Array Be	68.98	304	P	P	03 47 05.4	-1.7
KSAR	Wonju Array Be	68.98	304	P	P	03 47 05.4	-1.7
STRD	Stroud	69.03	32	eP	P	03 47 06.7	-0.5
STRD				IAmb	IAmb	03 47 09.2	
	comp=Z,205nm,1.3s						
STRD				IAMs_20	IAMs_20	04 17 00.8	
	comp=Z,32µm,18.6s						
PUL	Pulkovo	69.04	10	⇓iP	P	03 47 08.1	+1.0
PUL				pmax	pmax		
	comp=Z,90nm,0.4s						
PUL				MLR	MLR		
	comp=Z,13µm,16.0s						
MOY	Mondy	69.48	329	eP	P	03 47 10.2	0.0
MOY				pmax	pmax		
	comp=Z,312nm,1.8s						
INCN	Inchon	69.62	304	P	P	03 47 05.3	-5.8
INCN				S	S	03 56 13.5	-5.9
HJU	Haeju	69.68	305	P	P	03 47 11.2	-0.2
HJU				S	S	03 56 15.6	-4.3
HJU				AmB			
	comp=Z,1µm,2.7s						
HJU				AMS	AMS		
	comp=Z,15µm,15.9s						
TIAR	Tiarei	69.77	200	eLR	LR	04 08 18.8	
	comp=Z,12µm,21.9s						
ZAK	Zakamensk	69.79	327	eP	P	03 47 10.3	-1.7
ZAK				e		03 49 48.8	
ZAK				pmax	pmax		
	comp=Z,58nm,2.0s						
ZAK				pmax	pmax		
	comp=Z,33nm,1.9s						
PPT	Papeete	69.83	200	P	P	03 47 15.2	+2.8
	comp=Z,70nm,1.0s,baz=84,slow=22,SNR=3.5						
PPT				LR	LR	04 11 21.2	
	comp=Z,9µm,19.9s,baz=348,slow=30						
	comp=Z,70nm,1.0s						
PPTF	Pamatai, Papee	69.84	200	IAMs_20	IAMs_20	04 11 00.5	
	comp=Z,10µm,18.0s						
PPT2	Papeete2	69.85	200	eP	P	03 47 15.3	+2.7
	comp=Z,110nm,1.3s						
PPT2	Papeete2	69.85	200	ePP	PP	03 49 40.4	-7.0
	comp=Z,427nm,26.8s						
PPT2				eS	S	03 56 21.0	-1.1
	comp=Z,4µm,28.0s						
PPT2				eSS	SS	04 00 44.5	-7.0
	comp=Z,5µm,30.5s						
PPT2				eLQ	LQ	04 05 17.3	
	comp=Z,3µm,29.5s						
PPT2				eLR	LR	04 08 17.5	
	comp=Z,33µm,27.5s						
PPT2				eLR	LR	04 08 26.2	
	comp=Z,25µm,30.0s						
VSU	Vasula	69.85	13	d iP	P	03 47 11.0	-1.1
VSU				pmax	pmax		
	comp=Z,170nm,1.7s						
VSU				MLR	MLR		
	comp=Z,31µm,17.0s						
XLT	XiLinHaoTe	69.90	315	eP	P	03 47 12.8	0.0
XLT				pP	sP	03 47 16.6	+0.4
XLT				sP	pwP	03 47 19.9	+1.9
XLT				S	S	03 56 18.5	-4.1
XLT				SS	SS	04 00 50.1	-0.4
XLT				pmax	pmax		
	comp=Z,43nm,1.5s						
XLT				LR	LR		
	comp=Z,2µm,17.5s						
XLT				LR	LR		
	comp=Z,12µm,17.2s						
XLT				LR	LR		
	comp=Z,20µm,19.9s						
PAE	Paea	69.92	200	eP	P	03 47 15.2	+2.3
	comp=Z,91nm,1.3s						
PAE				eS	S	03 56 25.3	+2.5
	comp=Z,738nm,24.9s						
PAE				eSS	SS	04 00 49.3	-3.1
	comp=Z,435nm,22.9s						
PAE				eLR	LR	04 08 22.5	
	comp=Z,3µm,21.4s						
TVO	Taravao	69.96	199	eS	S	03 56 24.1	+0.6
	comp=Z,810nm,24.1s						
TVO				eSS	SS	04 00 52.4	-0.9
	comp=Z,1µm,29.3s						
TVO				eLR	LR	04 08 24.6	
	comp=Z,3µm,21.9s						
PDA	Ponta Delgada	69.98	55	eLR	LR	04 10 35.8	
PDA				i IAMs_20	IAMs_20	04 10 53.1	
	comp=Z,2µm,11.7s						
CMLA	Cha da Macela	70.04	55	eLR	LR	04 10 47.3	
CMLA				i IAMs_20	IAMs_20	04 11 01.8	
	comp=Z,394nm,8.6s						
TJN	Taejon	70.06	303	P	P	03 47 11.4	-2.3
TJN	Taejon	70.06	303	c iP	P	03 47 12.8	-1.0
ULN	Ulaanbaatar	70.49	323	P	P	03 47 09.6	-6.8
ULN				P	P	03 47 09.6	-6.8
ULN				S	S	03 56 27.4	-2.2
ULN				S	S	03 56 27.4	-2.2
ULN	Ulaanbaatar	70.49	323	P	P	03 47 14.7	-1.7
ULN	Ulaanbaatar	70.49	323	P	P	03 47 14.6	-1.9
	comp=Z,11µmcomp=Z,131nm,1.5s						
ULN	Ulaanbaatar	70.49	323	c iP	P	03 47 16.4	-0.1
ULN				pmax	pmax		
	comp=Z,83nm,2.1s						
ULN				MLR	MLR		
	comp=Z,15µm,16.0s						
JNU	Nakatsue	70.54	298	P	P	03 47 16.3	-0.6
	comp=Z,29nm,1.0s,baz=55,slow=5.2,SNR=7.1						
JNU				LR	LR	04 14 39.0	
	comp=Z,11µm,21.9s,baz=46,slow=33						
	comp=Z,29nm,1.0s						
JNU	Nakatsue	70.54	298	P	P	03 47 15.8	-1.1
JNU				IAmb	IAmb	03 47 23.3	
	comp=Z,75nm,1.0s						
SONM	Songino Array	70.77	324	P	P	03 47 18.1	0.0
	comp=Z,22nm,1.2s,baz=43,slow=3.7,SNR=61						
SONM				PP	PP	03 49 51.4	-2.9
	comp=Z,1.3nm,0.8s,baz=46,slow=6.2,SNR=2.6						
SONM				S	S	03 56 31.3	-1.3
	comp=Z,0.3nm,0.4s,baz=38,slow=13,SNR=1.5						
SONM				PKPPKP	P'P'df	04 15 19.5	-3.4
	comp=Z,0.4nm,0.5s,baz=101,slow=1.5,SNR=4.3						
SONM				LR	LR	04 18 41.4	
	comp=Z,24µm,19.9s,baz=28,slow=36						
	comp=Z,22nm,1.2s						
SONM	Songino Array	70.77	324	P	P	03 47 17.0	-1.1
SONM				IAmb	IAmb	03 47 27.2	
	comp=Z,148nm,1.6s						
SONM					PP	03 49 51.8	-2.4
SONM	Songino Array	70.77	324	P	P	03 47 17.0	-1.1
SONM						03 49 51.8	
SONM				pmax	pmax		
	comp=Z,148nm,1.6s						
BSEG	Bad Segeberg	70.84	24	eP	P	03 47 19.0	+0.8
	comp=Z,20nm,1.2s,baz=338,slow=5.9						
PSMN	Pico do Norte,	70.85	55	eLR	LR	04 11 30.0	
PSMN				i IAMs_20	IAMs_20	04 11 43.0	
	comp=Z,3µm,9.9s						
RGN	Rugen	71.02	22	P	P	03 47 18.7	-0.6
RGN				IAmb	IAmb	03 47 22.5	
	comp=Z,140nm,1.3s						
RGN				IAMs_20	IAMs_20	04 19 04.9	
	comp=Z,18µm,19.0s						
RGN	Rugen	71.02	22	eP	P	03 47 19.7	+0.4
	comp=Z,74nm,1.2s,baz=338,slow=5.9						
DL2	Dalian	71.12	308	P	P	03 47 08.5	-12
DL2				S	S	03 56 17.4	-19
DL2				pmax	pmax		
	comp=Z,40nm,1.1s						
DL2				pmax	pmax		
	comp=Z,2µm,6.1s						
DL2				LR	LR		
	comp=N,17µm,17.7s						
DL2				LR	LR		
	comp=E,22µm,19.6s						
DL2				LR	LR		
	comp=Z,28µm,19.0s						
KIRV	Kirov	71.38	0	P	P	03 47 20.9	-0.6
	comp=Z,14nm,1.0s,baz=356,slow=6.7,SNR=14						
KIRV				LR	LR	04 21 42.2	
	comp=Z,12µm,20.1s,baz=358,slow=38						
	comp=Z,14nm,1.0s						
KIRV	Kirov	71.38	0	d iP	P	03 47 21.4	0.0
KNGR	Kungurtug, Tuv	71.52	330	⇑eP	P	03 47 23.6	+1.0
KNGR				pmax	pmax		
	comp=Z,124nm,1.3s						
KNGR				MLR	MLR		
	comp=Z,14µm,18.0s						
IBBN	Ibbenburen	71.62	26	eP	P	03 47 24.2	+1.2
	comp=Z,106nm,1.3s,baz=338,slow=5.9						
UCC	Uccle	71.96	28	P	P	03 47 23.8	-1.3
UCC				IAmb	IAmb	03 47 27.6	
	comp=Z,81nm,1.4s						
UCC	Uccle	71.96	28	P	P	03 47 23.8	-1.3
UCC				pmax	pmax		
	comp=Z,81nm,1.4s						
UCC	Uccle	71.96	28	dP	P	03 47 25.7	+0.6
	comp=Z,19nm,1.5s						
ZAA0	Zalesovo Array	71.98	339	P	P	03 47 24.3	-0.9
ZAA0				IAmb	IAmb	03 47 34.6	
	comp=Z,183nm,1.4s						
ZALV	Zalesovo Beam	71.98	339	P	P	03 47 24.9	-0.3
	comp=Z,7.2nm,0.8s,baz=28,slow=6.3,SNR=16						
ZALV				PP	PP	03 50 00.8	-3.4
	comp=Z,1.0nm,0.3s,baz=29,slow=7.2,SNR=1.7						
ZALV				S	S	03 56 45.9	-0.3
	comp=Z,1.0nm,0.3s,baz=60,slow=18,SNR=1.7						
ZALV				LR	LR	04 22 27.0	
	comp=Z,10µm,18.8s,baz=14,slow=39						
	comp=Z,7.2nm,0.8s						
ZALV	Zalesovo Beam	71.98	339	P	P	03 47 24.5	-0.6
ZALV					PP	03 50 00.3	-4.0
ZALV	Zalesovo Beam	71.98	339	i P	P	03 47 24.8	-0.4
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.8s						
JSU	Suzuyama	71.98	298	P	P	03 47 24.8	-0.8
JSU				IAmb	IAmb	03 47 34.3	
	comp=Z,89nm,1.1s						
BUG	Bochum--Univer	72.25	26	eP	P	03 47 28.3	+1.5
	comp=Z,71nm,1.3s,baz=338,slow=5.9						
PABE	Paberze	72.27	15	P	P	03 47 26.1	-0.7
PABE				IAMs_20	IAMs_20	04 21 36.7	
	comp=Z,19µm,19.0s						
BEBN	Eben Emael	72.36	28	dP	P	03 47 28.5	+1.1
	comp=Z,40nm,1.3s						
BSTI	Sart Tilman	72.52	28	dP	P	03 47 29.9	+1.5
	comp=Z,6.2nm,1.2s						
BMRD	Maredsous	72.52	28	dP	P	03 47 29.4	+0.9
	comp=Z,39nm,1.3s						
FLTG	Flechtingen	72.53	24	eP	P	03 47 28.7	+0.3
	comp=Z,14nm,0.9s,baz=338,slow=5.9						
BGES	Gesves	72.55	28	dP	P	03 47 29.2	+0.6
	comp=Z,43nm,1.2s						
ASSE	Asse, Remlinge	72.56	24	eP	P	03 47 29.3	+0.7
	comp=Z,35nm,1.1s,baz=338,slow=5.9						
BCLA	Clavier	72.58	28	dP	P	03 47 29.3	+0.5
	comp=Z,36nm,1.2s						
ATAH	Atahualpa	72.59	125	LR	LR	04 21 02.3	
	comp=Z,8µm,18.2s,baz=341,slow=37						
MEM	Membach	72.62	28	dP	P	03 47 30.1	+1.1
	comp=Z,46nm,1.3s						
DOU	Dourbes	72.65	29	dP	P	03 47 29.6	+0.3
	comp=Z,30nm,1.3s						
BTNL	Ternell	72.68	28	dP	P	03 47 30.6	+1.1
	comp=Z,32nm,1.4s						
CLZ	Clausthal	72.75	24	eP	P	03 47 30.3	+0.5
	comp=Z,32nm,1.1s,baz=338,slow=5.9						
SVE	Sverdlovsk	72.78	354	ceP	P	03 47 30.1	+0.2
SVE				eS	S	03 56 56.3	+1.1
SVE				e		03 57 35.5	
SVE				pmax	pmax		
	comp=Z,101nm,1.8s						
KASTN	Kahler Asten	72.79	26	eP	P	03 47 31.1	+1.0
	baz=338,slow=5.9						
RCHB	Rochefort	72.79	28	dP	P	03 47 30.4	+0.3
	comp=Z,36nm,1.3s						
BHOU	Houvegnez	72.85	28	dP	P	03 47 31.1	+0.6
	comp=Z,14nm,1.5s						
BJI	Beijing	72.89	313	P	P	03 47 30.3	-0.5
BJI				PP	PP	03 50 10.3	-2.1
BJI				S	S	03 56 55.8	-1.2
BJI				ScS	SKKSac	03 57 36.9	+0.5
BJI				pmax	pmax		
	comp=Z,1µm,6.1s						
BJI				LR	LR		
	comp=Z,8µm,16.8s						
BJI				LR	LR		
	comp=Z,5µm,15.7s						
BJI				LR	LR		
	comp=Z,9µm,19.1s						
GTTG	Gottingen	72.91	25	eP	P	03 47 31.4	+0.6
	baz=338,slow=5.9						
BJT	Baijiatuau	72.91	313	IAmb	IAmb	03 47 41.5	
	comp=Z,126nm,1.9s						
BJT	Baijiatuau	72.91	313	IAMs_20	IAMs_20	04 20 30.5	
	comp=Z,15µm,18.0s						
PATS	Pohnpei	73.08	260	IAMs_20	IAMs_20	04 23 31.8	
	comp=Z,14µm,18.0s						
RKT	Rikitea	73.32	185	eP	P	03 47 38.9	+5.6
	comp=Z,103nm,1.0s						
RKT				eS	S	03 57 01.8	-0.1
	comp=Z,8µm,26.8s						
RKT				eSS	SS	04 01 43.7	-0.8
	comp=Z,8µm,30.0s						
RKT				eLQ	LQ	04 06 55.0	
	comp=Z,46µm,29.0s						
RKT				eLR	LR	04 10 02.1	
	comp=Z,110µm,28.0s						
ARTI	Arti	73.35	355	P	P	03 47 32.2	-1.0
	comp=Z,24nm,1.1s,baz=9.5,slow=3.7,SNR=24						
ARTI				LR	LR	04 20 52.5	
	comp=Z,10µm,21.1s,baz=11,slow=37						
	comp=Z,24nm,1.1s						
ARTI	Arti	73.35	355	P	P	03 47 31.9	-1.4
ARTI				IAmb	IAmb	03 47 44.1	
	comp=Z,170nm,1.6s						
ARTI				IAMs_20	IAMs_20	04 24 54.6	
	comp=Z,12µm,18.0s						
ARTI	Arti	73.35	355	c iP	P	03 47 32.5	-0.8
ARTI				PPP	PPP	03 52 01.6	
ARTI				S	S	03 57 01.9	+0.1
ARTI				SS	SS	04 01 39.2	-3.2
ARTI				SSS	SSS	04 04 52.0	
ARTI				pmax	pmax		
	comp=Z,57nm,1.3s						
ARTI				MLR	MLR		
	comp=Z,11µm,20.0s						
WLF	Walferdange	73.50	28	P	P	03 47 36.7	+2.4
WLF	Walferdange	73.50	28	dP	P	03 47 35.7	+1.4
SUW	Suwalki	73.56	16	P	P	03 47 33.5	-1.0
SUW				IAMs_20	IAMs_20	04 19 47.9	
	comp=Z,20µm,21.0s						
SUW	Suwalki	73.56	16	P	P	03 47 33.5	-1.0
SUW				MLR	MLR		
	comp=Z,20µm,21.0s						
UBBA	Unterbreizbach	73.57	25	eP	P	03 47 35.2	+0.7
	baz=338,slow=5.9						
TNS	Taunus Mts	73.68	26	eP	P	03 47 36.3	+0.9
	baz=338,slow=5.9						
CLF	Chambon-Foret	73.72	31	P	P	03 47 35.0	-0.5
CLF				IAmb	IAmb	03 47 38.6	
	comp=Z,199nm,1.3s						
MOS	Moscow	73.73	7	eP	P	03 47 34.7	-0.8
MOS				e		03 47 50.7	
MOS				ePPP	PPP	03 52 04.5	
MOS				eS	S	03 57 06.4	+0.3
MOS				eSS	SS	04 01 49.7	+1.5
MOS				pmax	pmax		
	comp=Z,137nm,1.4s						
MOS				pmax	pmax		
	comp=N,85nm,1.3s						
MOS				pmax	pmax		
	comp=Z,700nm,2.9s						
MOS				pmax	pmax		
	comp=N,700nm,3.2s						
MOS				smax	smax		
	comp=N,4µm,8.4s						
MOS				smax	smax		
	comp=E,2µm,4.7s						
MOS				MLR	MLR		
	comp=Z,18µm,19.0s						
MOS				MLR	MLR		
	comp=N,16µm,20.0s						
MNK	Minsk	73.85	13	i P	P	03 47 36.8	+0.6
MNK				i		03 47 52.4	
MNK				i		03 50 20.6	
MNK				i PPP	PPP	03 52 05.4	
MNK				i S	S	03 57 09.4	+2.0
MNK				i PS	PnS	03 57 41.0	+1.6
MNK				i SS	SS	04 01 51.6	+1.7
MNK				pmax	pmax		
	comp=Z,88nm,1.0s						
MNK				pmax	pmax		
	comp=N,26nm,1.0s						
MNK				pmax	pmax		
	comp=E,47nm,0.8s						
MNK				MLR	MLR		
	comp=N,12µm,18.0s						
MNK				MLR	MLR		
	comp=E,17µm,17.0s						
MNK				MLR	MLR		
	comp=Z,30µm,18.0s						
CLL	Collm	73.91	23	P	P	03 47 35.8	-0.9
CLL				IAMs_20	IAMs_20	04 19 46.9	
	comp=Z,15µm,20.0s						
CLL	Collm	73.91	23	⇓iP	P	03 47 37.4	+0.8
CLL				e		03 57 44.0	
CLL				pmax	pmax		
	comp=Z,59nm,1.5s						
CLL	Collm	73.91	23	eP	P	03 47 36.2	-0.4
	baz=338,slow=5.9						
CLL	Collm	73.91	23	P	P	03 47 36.8	+0.1
	comp=Z,1µmcomp=Z,26nm,1.6s						
CLL	Collm	73.91	23	AMS	AMS	04 22 00.0	
CLL	Collm	73.91	23	i P	P	03 47 36.7	+0.1
	comp=Z,59nm,1.5s						
CLL	Collm	73.91	23	ePlp		03 47 38.0	
CLL	Collm	73.91	23	i Pmax		03 47 38.1	
CLL	Collm	73.91	23	i x	x	03 47 48.3	
	comp=Z,33nm,1.3s						
CLL	Collm	73.91	23	ePP	PP	03 50 25.0	+4.2
	comp=Z,165nm,2.6s						
CLL	Collm	73.91	23	ePPlp		03 50 27.0	
CLL	Collm	73.91	23	ePPP	PPP	03 52 13.0	
CLL	Collm	73.91	23	eS	S	03 57 12.0	+3.8
CLL	Collm	73.91	23	eS	S	03 57 12.0	+3.8
CLL	Collm	73.91	23	e(SPP)		03 57 44.0	
CLL	Collm	73.91	23	eSS	SS	04 01 54.0	+2.9
CLL	Collm	73.91	23	eSSS	SSS	04 05 19.0	
CLL	Collm	73.91	23	AMS	AMS	04 19 00.0	
	comp=Z,16µm,21.7s						
MOX	Moxa	74.16	24	eP	P	03 47 38.4	+0.3
	baz=338,slow=5.9						
MOX				eL	L	04 21 53.9	
	comp=Z,16µm,18.4s						
OBN	Obninsk	74.27	8	P	P	03 47 37.9	-0.7
	comp=Z,51nm,0.7s,baz=52,slow=1.4,SNR=33						
OBN				LR	LR	04 21 56.9	
	comp=Z,12µm,18.4s,baz=303,slow=37						
	comp=Z,51nm,0.7s						
OBN	Obninsk	74.27	8	P	P	03 47 37.7	-0.9
OBN				IAMs_20	IAMs_20	04 23 06.5	
	comp=Z,14µm,18.0s						
OBN	Obninsk	74.27	8	⇑P	P	03 47 38.5	-0.1
OBN	Obninsk	74.27	8	c iP	P	03 47 38.3	-0.4
OBN				e		03 50 29.5	
OBN				ePPP	PPP	03 52 07.9	
OBN				i S	S	03 57 16.2	+4.2
OBN				eSSS	SSS	04 05 03.4	
OBN				pmax	pmax		
	comp=Z,272nm,1.7s						
OBN				MLR	MLR		
	comp=Z,14µm,16.0s						
OBN	Obninsk	74.27	8	P	P	03 47 38.2	-0.4
	comp=Z,3µmcomp=Z,151nm,1.4s						
HHC	Hu-ho-hao-te	74.35	316	⇑iP	P	03 47 39.3	-0.3
HHC				sP	pwP	03 47 46.4	+1.6
HHC				S	S	03 57 11.6	-2.2
HHC				sS	sS	03 57 26.8	+9.0
HHC				SS	SS	04 01 56.8	-1.8
HHC				pmax	pmax		
	comp=Z,49nm,1.3s						
HHC				pmax	pmax		
	comp=Z,2µm,5.9s						
HHC				LR	LR		
	comp=Z,11µm,15.3s						
HHC				LR	LR		
	comp=Z,18µm,17.3s						
HHC				LR	LR		
	comp=Z,7µm,23.7s						
BRG	Berggiesshubel	74.55	23	eP	P	03 47 40.3	-0.1
	baz=338,slow=5.9						
TANN	Tannenbergstha	74.59	24	eP	P	03 47 41.1	+0.4
	baz=338,slow=5.9						
HSKC	Hora Svate Kat	74.66	23	eP	P	03 47 41.4	+0.3
HSKC				AMS	AMS	04 21 30.0	
	comp=Z,22µm,17.2s						
R9F13	Warsaw-Wawer	74.88	18	eP	P	03 47 43.2	+0.9
	comp=Z,1.9nm,0.8s						
R9F13				eS	S	03 57 19.3	+0.2
RICC	Richard	74.89	23	eP	P	03 47 44.2	+1.9
RICC				eS	S	03 57 27.8	+8.6
RICC				AMS	AMS	04 24 50.0	
	comp=Z,19µm,17.8s						
MANZ	Manzenberg	74.89	24	eP	P	03 47 42.7	+0.3
	baz=338,slow=5.9						
PGAV	Gavieira, Arco	74.90	41	eP	P	03 47 43.7	+1.0
PGAV				i IAmb	IAmb	03 48 05.9	
	comp=Z,169nm,1.7s						
PGAV				ePP	PP	03 50 30.4	+0.9
PGAV				eS	S	03 57 24.7	+4.9
PGAV				eSS	SS	04 02 04.4	-2.4
PGAV				eLQ	LQ	04 08 25.4	
PGAV				eLR	LR	04 11 43.6	
PGAV				i IAMs_20	IAMs_20	04 19 53.4	
	comp=Z,16µm,18.0s						
GRA1	Grafenberg Arr	74.92	25	IAMs_20	IAMs_20	04 21 19.9	
	comp=Z,16µm,19.0s						
GRF	Grafenberg Arr	74.92	25	eP	P	03 47 43.5	+0.9
	baz=338,slow=5.9						
GRF				eL	L	04 21 21.1	
	comp=Z,16µm,19.5s						
PVCC	Panska Ves	75.02	22	eP	P	03 47 45.0	+1.9
PVCC				MLR	MLR		
	comp=Z,21µm,16.3s						
PVCC	Panska Ves	75.02	22	eP	P	03 47 45.0	+1.9
PVCC				AMS	AMS	04 22 50.0	
	comp=Z,21µm,16.3s						
ECH	Echery	75.10	28	P	P	03 47 43.6	-0.1
ECH				IAMs_20	IAMs_20	04 22 27.6	
	comp=Z,18µm,18.0s						
ECH	Echery	75.10	28	P	P	03 47 43.6	-0.1
ECH				pmax	pmax		
	comp=Z,98nm,1.5s						
ECH				MLR	MLR		
	comp=Z,18µm,18.0s						
ROTZ	Rotzenmuhle	75.12	24	eP	P	03 47 44.5	+0.8
	baz=338,slow=5.9						
PTCN	Pitcairn Islan	75.13	180	IAMs_20	IAMs_20	04 11 50.4	
	comp=Z,11µm,22.0s						
KSP	Ksiaz	75.14	21	P	P	03 47 44.1	+0.3
	comp=Z,2µmcomp=Z,45nm,1.7s						
BOAV	Boa Vista	75.19	104	P	P	03 47 44.8	+0.2
BOAV				IAmb	IAmb	03 47 54.7	
	comp=Z,169nm,1.6s						
BOAV	Boa Vista	75.19	104	eP	P	03 47 45.3	+0.7
STU	Stuttgart	75.20	27	P	P	03 47 44.1	-0.1
STU	Stuttgart	75.20	27	P	P	03 47 44.1	-0.1
STU				pmax	pmax		
	comp=Z,93nm,1.7s						
STU				MLR	MLR		
	comp=Z,20µm,18.0s						
STU	Stuttgart	75.20	27	eP	P	03 47 45.3	+1.1
	baz=338,slow=5.9						
PCAB	Cabril	75.21	41	eP	P	03 47 45.2	+0.8
PCAB				i IAmb	IAmb	03 48 07.3	
	comp=Z,143nm,1.9s						
BTO	Baotou	75.23	317	eP	P	03 47 43.4	-1.2
BTO				pP	sP	03 47 48.1	+0.1
BTO				sP	pwP	03 47 50.4	+0.5
BTO				PP	PP	03 50 32.9	+0.5
BTO				S	S	03 57 19.5	-4.1
BTO				sS	sS	03 57 29.3	+1.7

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BTO                                 SS        SS        04 02 10.3  -1.6
BTO                                 pmax      pmax
       comp=Z,74nm,1.3s
BTO                                 pmax      pmax
       comp=Z,1µm,6.4s
BTO                                 LR        LR
       comp=Z,56µm,17.8s
BTO                                 LR        LR
       comp=Z,33µm,18.0s
BTO                                 LR        LR
       comp=Z,81µm,17.8s
DGZ    Jazzator, Alta    75.25 336ceP         P         03 47 45.9  +1.2
DGZ                                 pmax      pmax
       comp=Z,227nm,1.1s
DGZ                                 MLR       MLR
       comp=Z,29µm,19.0s
CHVC   Chvalec           75.32  22  AMS       AMS       04 22 00.0
       comp=Z,15µm,18.3s
BFO    Black Forest      75.34  27  P         P         03 47 44.4  -0.7
BFO    Black Forest      75.34  27  P         P         03 47 44.4  -0.7
BFO                                 pmax      pmax
       comp=Z,80nm,1.2s
BFO                                 MLR       MLR
       comp=Z,27µm,20.0s
BFO    Black Forest      75.34  27 eP         P         03 47 46.2  +1.1
       baz=338,slow=5.9
UPC    Upice             75.38  22 eP         P         03 47 46.0  +0.8
UPC                                 MLR       MLR
       comp=Z,16µm,18.1s
UPC    Upice             75.38  22 eP         P         03 47 46.0  +0.8
UPC                                 AMS       AMS       04 21 50.0
       comp=Z,16µm,18.1s
OSTC   Ostas             75.39  21 eP         P         03 47 45.4  +0.1
OSTC   Ostas             75.39  21 eP         P         03 47 45.4  +0.1
TBI    Tubuai            75.41 198 eP         P         03 47 48.7  +3.2
       comp=Z,2µm,38.2s
TBI    Tubuai            75.41 198 ePP        PP        03 50 30.9  -3.9
       comp=Z,1µm,27.8s
TBI                                eS         S         03 57 23.7  -1.6
       comp=Z,20µm,35.2s
TBI                                eSS        SS        04 02 16.7  +0.4
       comp=Z,25µm,43.0s
TBI                                eLQ        LQ        04 07 35.2
       comp=Z,11µm,25.8s
TBI                                eLR        LR        04 10 51.1
       comp=Z,12µm,22.1s
TBI                                eLR        LR        04 11 00.6
       comp=Z,85µm,27.8s
TBI                                eLR        LR        04 11 04.0
       comp=Z,23µm,30.0s
PRA    Prague            75.41  23 ePP        PP        03 50 32.4  -1.1
PRA                                eS         S         03 57 33.0  +8.0
PRA                                 AMS       AMS       04 23 20.0
       comp=Z,25µm,16.3s
PTO    Porto             75.44  42 eP         P         03 47 46.3  +0.7
PTO                                i IAmb     IAmb      03 47 52.8
       comp=Z,109nm,1.5s
TIA    Tai'an            75.46 310  P         P         03 47 45.3  -0.6
TIA                                 S         S         03 57 27.6  +1.5
TIA                                 pmax      pmax
       comp=Z,63nm,1.3s
TIA                                 LR        LR
       comp=Z,6µm,23.7s
TIA                                 LR        LR
       comp=Z,11µm,24.1s
TIA                                 LR        LR
       comp=Z,19µm,20.3s
BORK   Borovoye          75.51 347  P         P         03 47 44.5  -1.4
BORK                                IAmb      IAmb      03 47 57.8
       comp=Z,134nm,1.5s
BORK   Borovoye          75.51 347  IAMs_20   IAMs_20   04 26 54.3
       comp=Z,14µm,19.0s
BORK   Borovoye          75.51 347deP         P         03 47 46.0  +0.1
BORK                                pmax      pmax
       comp=Z,123nm,1.5s
PRU    Pruhonice         75.51  23 eP         P         03 47 46.8  +0.9
PRU                                 MLR       MLR
       comp=Z,24µm,16.0s
PRU    Pruhonice         75.51  23 eP         P         03 47 46.8  +0.9
PRU                                eS         S         03 57 35.2  +9.0
PRU                                 AMS       AMS       04 23 10.0
       comp=Z,24µm,16.0s
BVAR   Borovoye Array    75.52 347  P         P         03 47 46.3  +0.3
       comp=Z,5.7nm,0.8s,baz=36,slow=5.5,SNR=13
BVAR                                PP        PP        03 50 34.7  +0.4
       comp=Z,2.9nm,0.9s,baz=18,slow=5.2,SNR=2.3
BVAR                                S         S         03 57 25.3  -0.8
       comp=Z,0.3nm,0.4s,baz=47,slow=24,SNR=1.2
       comp=Z,5.7nm,0.8s
POLO   Lamas de Olo      75.58  41 eP         P         03 47 47.3  +0.6
POLO                               i IAmb     IAmb      03 48 09.8
       comp=Z,79nm,1.9s
DPC    Dobruska-Polom    75.60  21 eP         P         03 47 45.9  -0.6
DPC                                 MLR       MLR
       comp=Z,16µm,18.5s
DPC    Dobruska-Polom    75.60  21 eP         P         03 47 45.9  -0.6
DPC                                eS         S         03 57 34.7  +7.4
DPC                                 AMS       AMS       04 22 20.0
       comp=Z,16µm,18.5s
DPC    Dobruska-Polom    75.60  21  pP        pP        03 47 51.2  +2.2
       comp=Z,1µmcomp=Z,44nm,1.4s
DPC    Dobruska-Polom    75.60  21  P         P         03 47 47.2  +0.7
       comp=Z,1µmcomp=Z,44nm,1.4s
PBRG   Braganca          75.67  40 eP         P         03 47 47.4  +0.4
PBRG                               i IAmb     IAmb      03 48 11.4
       comp=Z,121nm,2.1s
HNS    HongShan          75.68 312 ⇑P         P         03 47 47.3  +0.2
HNS                                 S         S         03 57 28.9  +0.5
HNS                                 SS        SS        04 02 16.4  -2.4
HNS                                 pmax      pmax
       comp=Z,80nm,1.3s
HNS                                 pmax      pmax
       comp=Z,2µm,7.0s
HNS                                 LR        LR
       comp=Z,20µm,20.6s
HNS                                 LR        LR
       comp=Z,5µm,19.0s
HNS                                 LR        LR
       comp=Z,22µm,20.0s
PVRL   Vila Real         75.70  41 eP         P         03 47 48.0  +0.8
PVRL                               i IAmb     IAmb      03 48 10.4
       comp=Z,192nm,1.9s
WET    Wettzell          75.87  24 eP         P         03 47 48.1  +0.1
       baz=338,slow=5.9
ZVC    Zvikov            75.93  23 eP         P         03 47 49.6  +1.2
ZVC                                 AMS       AMS       04 22 30.0
       comp=Z,17µm,17.4s
KRLC   Kraliky           75.97  21 eP         P         03 47 49.0  +0.4
KRLC                                MLR       MLR
       comp=Z,22µm,16.3s
KRLC   Kraliky           75.97  21 eP         P         03 47 49.0  +0.4
KRLC                               eS         S         03 57 38.7  +7.4
KRLC                                AMS       AMS       04 23 20.0
       comp=Z,22µm,16.3s
RAR    Rarotonga         75.99 208  LR        LR        04 14 16.5
       comp=Z,8µm,20.0s,baz=348,slow=30
RAR    Rarotonga         75.99 208  IAMs_20   IAMs_20   04 14 06.9
       comp=Z,12µm,18.0s
KHC    Kasperske Hory    76.06  24  P         P         03 47 48.3  -0.9
KHC                                 IAmb      IAmb      03 48 09.9
       comp=Z,170nm,2.0s
KHC                                 IAMs_20   IAMs_20   04 22 29.8
       comp=Z,12µm,19.0s
KHC    Kasperske Hory    76.06  24 eP         P         03 47 50.8  +1.6
KHC                                e                    03 50 39.9
KHC                                 MLR       MLR
       comp=Z,14µm,15.1s
KHC    Kasperske Hory    76.06  24 eP         P         03 47 50.8  +1.6
KHC                                ePP        PP        03 50 39.9  +0.8
KHC                                eS         S         03 57 41.0  +8.6
KHC                                 AMS       AMS       04 24 00.0
       comp=Z,14µm,15.1s
KHC    Kasperske Hory    76.06  24  P         P         03 47 49.8  +0.6
MVO    Moncorvo          76.08  41 eP         P         03 47 50.0  +0.6
MVO                                i IAmb     IAmb      03 48 12.8
       comp=Z,149nm,1.8s
MVO                                ePP        PP        03 50 39.9  +0.3
MVO                                eS         S         03 57 37.0  +4.1
MVO                                eSS        SS        04 02 38.6   +14
MVO                                eLQ        LQ        04 08 51.8
MVO                                eLR        LR        04 12 35.3
MVO                                i IAMs_20  IAMs_20   04 20 48.0
       comp=Z,13µm,18.0s
PVIS   Viseu             76.09  42 eP         P         03 47 50.2  +0.7
STEB   Steborice         76.33  21 eP         P         03 47 50.8  +0.2
KURK   Kurchatov         76.34 342  P         P         03 47 43.4  -7.3
KURK                                P         P         03 47 43.4  -7.3
KURK                                S         S         03 57 31.4  -3.9
KURK                                S         S         03 57 31.4  -3.9
KURK   Kurchatov         76.34 342  P         P         03 47 49.5  -1.1
KURK                                IAmb      IAmb      03 48 02.2
       comp=Z,106nm,1.3s
KURK   Kurchatov         76.34 342  IAMs_20   IAMs_20   04 27 52.6
       comp=Z,10µm,18.0s
KURK   Kurchatov         76.34 342c iP        P         03 47 50.9  +0.2
KURK                                pmax      pmax
       comp=Z,128nm,1.5s
GEC2   GERESS Array S    76.35  24  P         P         03 47 50.0  -0.9
GEC2   GERESS Array S    76.35  24 eP         P         03 47 51.6  +0.7
       baz=338,slow=5.9
GERES  GERESS Array B    76.35  24  P         P         03 47 51.0  +0.1
       comp=Z,3.7nm,0.8s,baz=343,slow=4.2,SNR=23
GERES                               LR        LR        04 23 28.5
       comp=Z,16µm,18.6s,baz=342,slow=37
       comp=Z,3.7nm,0.8s
GERES  GERESS Array B    76.35  24  P         P         03 47 51.0  +0.1
PCAS   Casmilo, Conde    76.38  42 eP         P         03 47 51.3  +0.2
PCAS                               i IAmb     IAmb      03 48 04.1
       comp=Z,218nm,1.6s
TREC   Trest             76.39  22 eP         P         03 47 52.2  +1.2
TREC                                MLR       MLR
       comp=Z,28µm,16.5s
TREC   Trest             76.39  22 eP         P         03 47 52.2  +1.2
TREC                                AMS       AMS       04 23 40.0
       comp=Z,28µm,16.5s
MORC   Moravsky Berou    76.42  21  P         P         03 47 50.5  -0.7
MORC   Moravsky Berou    76.42  21 ⇓P         P         03 47 51.0  -0.2
MORC   Moravsky Berou    76.42  21 eP         P         03 47 51.3  +0.1
MORC                               eS         S         03 57 42.4  +6.1
MORC   Moravsky Berou    76.42  21  P         P         03 47 50.5  -0.7
MORC                                pmax      pmax
       comp=Z,56nm,1.5s
UBR    Ueberruh          76.44  26 eP         P         03 47 52.5  +1.1
       baz=338,slow=5.9
KURBB  Kurchatov Arra    76.45 342  P         P         03 47 51.7  +0.4
       comp=Z,25nm,1.0s,baz=20,slow=4.8,SNR=40
KURBB                               S         S         03 57 33.4  -3.1
       comp=Z,0.1nm,0.4s,baz=75,slow=4.9,SNR=0.8
KURBB                               LR        LR        04 26 49.7
       comp=Z,10µm,18.1s,baz=20,slow=40
       comp=Z,25nm,1.0s
KURBB  Kurchatov Arra    76.45 342  P         P         03 47 50.5  -0.8
TIY    Taiyuan           76.50 314  P         P         03 47 52.3  +0.4
TIY                                 S         S         03 57 38.3  +0.7
TIY                                 pmax      pmax
       comp=Z,23nm,0.5s
TIY                                 pmax      pmax
       comp=Z,2µm,5.9s
TIY                                 LR        LR
       comp=Z,15µm,17.2s
TIY                                 LR        LR
       comp=Z,6µm,15.8s
TIY                                 LR        LR
       comp=Z,15µm,17.9s
MTE    Manteigas         76.50  41  P         P         03 47 51.2  -0.7
MTE                                 IAMs_20   IAMs_20   04 20 27.8
       comp=Z,13µm,18.0s
MTE    Manteigas         76.50  41 eP         P         03 47 52.5  +0.7
MTE                                i IAmb     IAmb      03 48 18.1
       comp=Z,157nm,1.8s
MTE                                ePP        PP        03 50 48.7  +5.6
MTE                                eS         S         03 57 41.8  +4.2
MTE                                eSS        SS        04 02 40.6   +10
MTE                                eLQ        LQ        04 07 51.0
MTE                                eLR        LR        04 12 26.4
MTE                                i IAMs_20  IAMs_20   04 21 09.4
       comp=Z,12µm,18.0s
OKC    Ostrava-Krasne    76.50  21 ePP        PP        03 50 43.8  +1.1
OKC                                eS         S         03 57 44.0  +6.9
OKC                                 AMS       AMS       04 23 30.0
       comp=Z,19µm,17.2s
OJC    Ojcow             76.50  19  P         P         03 47 50.9  -0.7
OJC    Ojcow             76.50  19  P         P         03 47 50.9  -0.7
OJC    Ojcow             76.50  19  P         P         03 47 51.7  +0.1
       comp=Z,2µmcomp=Z,39nm,1.3s
RNPP9  Sopachiv          76.52  15  P         P         03 47 51.4  -0.3
CKRC   Cesky Krumlov     76.53  23 eP         P         03 47 51.1  -0.7
CKRC                                MLR       MLR
       comp=Z,15µm,15.9s
CKRC   Cesky Krumlov     76.53  23 eP         P         03 47 51.1  -0.7
CKRC                               eS         S         03 57 45.2  +7.7
CKRC                                AMS       AMS       04 23 10.0
       comp=Z,15µm,15.9s
GUMO   Guam              76.55 275  LR        LR        04 14 30.0
       comp=Z,9µm,21.5s,baz=37,slow=30
GUMO   Guam              76.55 275  IAMs_20   IAMs_20   04 14 17.6
       comp=Z,9µm,20.0s
RNPP8  Varash            76.59  15  P         P         03 47 52.1   0.0
VRAC   Vranov            76.64  22  P         P         03 47 52.0  -0.4
       comp=Z,26nm,1.1s,baz=343,slow=7.0,SNR=29
VRAC                                LR        LR        04 23 18.4
       comp=Z,22µm,18.6s,baz=332,slow=37
       comp=Z,26nm,1.1s
VRAC   Vranov            76.64  22 ⇓P         P         03 47 53.0  +0.6
VRAC   Vranov            76.64  22 eP         P         03 47 52.0  -0.4
VRAC                               eS         S         03 57 44.2  +5.5
VRAC   Vranov            76.64  22  P         P         03 47 52.0  -0.4
PSBE   So Bento          76.69  43 eP         P         03 47 53.9  +0.9
PSBE                               i IAmb     IAmb      03 48 15.3
       comp=Z,137nm,1.7s
RNPP5  Staryi Chortor    76.70  15  P         P         03 47 52.7   0.0
DAVA   Damuels           76.74  27 i pP       P         03 47 55.6  +2.4
       comp=Z,920nm,4.0s,SNR=12
JOW    Kunigami          76.75 296  P         P         03 47 52.8  -0.6
       comp=Z,23nm,0.8s,baz=314,slow=7.8,SNR=4.3
JOW                                 LR        LR        04 16 04.5
       comp=Z,4µm,21.9s,baz=70,slow=31
       comp=Z,23nm,0.8s
JOW    Kunigami          76.75 296  IAmb      IAmb      03 48 13.6
       comp=Z,147nm,1.5s
SENIN  Lac Senin/Sane    76.80  29  P         P         03 47 52.6  -1.1
SENIN                               IAmb      IAmb      03 48 01.1
       comp=Z,148nm,1.8s
RETA   Reutte            76.81  26 i pP       P         03 47 55.3  +1.8
       comp=Z,600nm,3.4s,SNR=7.5
KRUC   Moravsky          76.82  22 eP         P         03 47 53.3  -0.1
KRUC                               eS         S         03 57 44.9  +4.3
MAUC   Maruska           76.87  21 eP         P         03 47 54.4  +0.6
SSB    Saint Sauveur     76.88  31  P         P         03 47 53.5  -0.4
SSB                                 IAmb      IAmb      03 48 21.1
       comp=Z,125nm,2.0s
SSB    Saint Sauveur     76.88  31  P         P         03 47 53.5  -0.4
SSB                                 pmax      pmax
       comp=Z,125nm,2.0s
SSB                                 MLR       MLR
       comp=Z,26µm,19.0s
PSARD  Sardoal           76.90  42 eP         P         03 47 54.5  +0.5
PSARD                              i IAmb     IAmb      03 48 06.6
       comp=Z,151nm,1.5s
PMAFR  Mafra             76.94  43 eP         P         03 47 55.6  +1.3
PMAFR                              i IAmb     IAmb      03 48 24.0
       comp=Z,243nm,1.9s
LPSR   Galich'ya Gora    76.95   7 eP         P         03 47 53.3  -0.8
LPSR                               eS         S         03 57 44.7  +2.8
LPSR                                pmax      pmax
       comp=Z,112nm,1.1s
PCBR   Castelo Branco    76.99  42 eP         P         03 47 54.6  +0.1
PCBR                               i IAmb     IAmb      03 48 17.1
       comp=Z,94nm,1.8s
WATA   Walderalm         77.17  26 i pP       P         03 47 56.7  +1.1
       comp=Z,887nm,4.1s,SNR=14
SQTA   Sankt Quirin      77.17  26 i pP       P         03 47 57.0  +1.4
       comp=Z,862nm,4.7s,SNR=12
DAVOX  Davos/Dischmat    77.19  27  P         P         03 47 56.5  +0.7
       comp=Z,12nm,1.0s,baz=327,slow=5.1,SNR=17
DAVOX                               LR        LR        04 22 44.3
       comp=Z,24µm,20.3s,baz=325,slow=36
       comp=Z,12nm,1.0s
LIS    Lisbon            77.20  44 eP         P         03 47 55.9  +0.2
LIS                                eS         S         03 57 44.8  -0.2
LIS                                 IAMs_20   IAMs_20   04 19 07.8
       comp=E,22µm,18.4s
LIS    Lisbon            77.20  44 eP         P         03 47 56.5  +0.8
LIS                                i IAmb     IAmb      03 48 20.2
       comp=E,256nm,1.6s
LIS    Lisbon            77.20  44 eP         P         03 47 55.9  +0.2
LIS                                eS         S         03 57 44.8  -0.2
FETA   Feichten          77.22  26 i pP       P         03 47 57.5  +1.6
       comp=E,818nm,3.4s,SNR=12
WTTA   Wattenberg        77.25  26 i pP       P         03 47 57.5  +1.3
       comp=E,728nm,3.3s,SNR=14
MI28   Mi28,Pidlybu      77.28  14  P         P         03 47 55.7  -0.2
JAVC   Velka Javorina    77.31  21 eP         P         03 47 57.2  +0.9
PMTG   Montargil         77.31  43 eP         P         03 47 56.2  -0.2
PMTG                               i IAmb     IAmb      03 48 19.1
       comp=E,94nm,2.0s
TUE    Stuetta           77.32  27  P         P         03 47 56.1  -0.4
TUE                                 IAmb      IAmb      03 48 19.1
       comp=Z,192nm,1.9s
TUE    Stuetta           77.32  27  P         P         03 47 57.6  +1.1
       comp=Z,9µmcomp=Z,204nm,1.9s
TEFE   Tefe              77.34 112 eP         P         03 47 56.9  +0.1
NIE    Niedzica          77.37  19  P         P         03 47 57.2  +0.7
       comp=Z,612nmcomp=Z,20nm,1.6s
PMRV   Marv??o           77.37  42 eP         P         03 47 57.2  +0.5
PMRV                               i IAmb     IAmb      03 48 19.5
       comp=Z,106nm,2.0s
PMRV                               ePP        PP        03 50 41.9  -8.4
PMRV                               eS         S         03 57 50.6  +3.6
PMRV                               eSS        SS        04 02 51.3  +7.0
PMRV                               eLQ        LQ        04 08 23.3
PMRV                               eLR        LR        04 12 52.0
PMRV                               i IAMs_20  IAMs_20   04 19 48.4
       comp=Z,12µm,18.0s
LESA   Schwarzleotal     77.39  25 i pP       P         03 47 57.8  +1.0
       comp=Z,429nm,2.8s,SNR=10.0
SSE    Sheshan           77.40 304  P         P         03 47 57.0  +0.1
SSE                                 S         S         03 57 45.9  -1.5
SSE                                 pmax      pmax
       comp=Z,55nm,1.0s
SSE                                 pmax      pmax
       comp=Z,570nm,4.8s
SSE                                 LR        LR
       comp=Z,2µm,17.5s
SSE                                 LR        LR
       comp=Z,3µm,18.6s
BIOA   Bad Ischl, Aus    77.40  24 i pP       P         03 47 57.5  +0.8
       comp=Z,559nm,4.2s,SNR=7.5
MOA    Molln             77.42  24 i pP       P         03 47 57.5  +0.7
       comp=Z,950nm,4.4s,SNR=7.4
LANS   Liptovska Anna    77.44  20 eP         P         03 47 58.1  +1.1
LANS                                pmax      pmax
       comp=Z,22nm,1.3s
LANS   Liptovska Anna    77.44  20 ePP        PP        03 50 51.6  +1.0
LANS   Liptovska Anna    77.44  20 eP         P         03 47 58.1  +1.1
FUORN  Ofenpass-Fuorn    77.45  27  P         P         03 47 56.7  -0.6
FUORN                               IAmb      IAmb      03 48 15.2
       comp=Z,97nm,1.3s
FUORN                               IAMs_20   IAMs_20   04 23 22.8
       comp=Z,18µm,20.0s
NNA    Nana              77.49 127  LR        LR        04 19 50.4
       comp=Z,4µm,20.7s,baz=338,slow=34
NNA    Nana              77.49 127  P         P         03 47 58.0  +0.4
NNA                                 IAmb      IAmb      03 48 03.6
       comp=Z,126nm,1.2s
NNA    Nana              77.49 127c iP        P         03 47 58.3  +0.7
NNA                                 pmax      pmax
       comp=Z,196nm,1.2s
BELG   Belogornoye       77.57   1  P         P         03 47 56.9  -0.6
       comp=Z,77nm,1.1s,baz=15,slow=6.0,SNR=31
BELG                                LR        LR        04 26 34.9
       comp=Z,8µm,19.7s,baz=358,slow=39
       comp=Z,77nm,1.1s
BELG   Belogornoye       77.57   1d iP        P         03 47 56.2  -1.3
BELG                                pmax      pmax
       comp=Z,26nm,1.0s
STHS   Stebnicka Huta    77.57  19 eP         P         03 47 58.3  +0.6
STHS                                pmax      pmax
       comp=Z,21nm,1.2s
STHS   Stebnicka Huta    77.57  19 eP         P         03 47 58.2  +0.6
PARRA  Arraiolos         77.60  43 eP         P         03 47 57.6  -0.4
PARRA                              i IAmb     IAmb      03 48 10.6
       comp=Z,149nm,1.6s
AK21   Malin Array Si    77.64  13  P         P         03 47 57.3  -0.7
KWP    Kalwaria Pacla    77.66  18  P         P         03 47 58.5  +0.4
       comp=Z,2µmcomp=Z,56nm,2.0s
AK22   Malin Array Si    77.66  13  P         P         03 47 57.4  -0.7
AK23   Malin Array Si    77.66  13  P         P         03 47 57.7  -0.4
AK20   Malin Array Si    77.67  13  P         P         03 47 57.7  -0.4
MODS   Modra-Piesok      77.67  22 eP         P         03 47 59.5  +1.2
MODS                                pmax      pmax
       comp=Z,136nm,1.3s
MODS   Modra-Piesok      77.67  22 eP         P         03 47 59.5  +1.2
MODS                               ePP        PP        03 50 58.8  +6.2
MOE    Montemor          77.71  43 eP         P         03 47 59.2  +0.6
MOE                                i IAmb     IAmb      03 48 21.6
       comp=Z,173nm,1.9s
AK17   Malin Array Si    77.73  13  P         P         03 47 57.8  -0.7
AKASG  Malin Array Be    77.74  13  P         P         03 47 57.5  -1.0
       comp=Z,45nm,1.1s,baz=347,slow=5.3,SNR=89
AKASG                               PP        PP        03 50 52.8  -0.2
       comp=Z,0.4nm,0.4s,baz=348,slow=7.0,SNR=4.1
AKASG                               S         S         03 57 52.1  +1.6
       comp=Z,0.2nm,0.3s,baz=298,slow=2.6,SNR=1.5
AKASG                               LR        LR        04 22 59.2
       comp=Z,26µm,19.4s,baz=352,slow=36
       comp=Z,45nm,1.1s
AKASG  Malin Array Be    77.74  13  P         P         03 47 57.4  -1.1
AKASG                               IAmb      IAmb      03 48 11.1
       comp=Z,104nm,1.7s
AKBB   Malin Array Si    77.74  13  P         P         03 47 57.5  -1.1
AKBB                                IAmb      IAmb      03 48 10.9
       comp=Z,197nm,1.5s
AKBB   Malin Array Si    77.74  13c iP        P         03 47 57.8  -0.7
AKBB                                pmax      pmax
       comp=Z,145nm,1.5s
AKBB                                MLR       MLR
       comp=Z,29µm,18.0s
AKBB   Malin Array Si    77.74  13  P         P         03 47 57.8  -0.7
KIEV   Kiev              77.74  13  P         P         03 47 57.5  -1.0
KIEV                                IAmb      IAmb      03 48 10.9
       comp=Z,162nm,1.4s
KIEV   Kiev              77.74  13 ⇓P         P         03 47 58.6  +0.1
KIEV   Kiev              77.74  13  P         P         03 47 57.3  -1.2
KIEV   Kiev              77.74  13  P         P         03 47 57.5  -1.0
KIEV                                pmax      pmax
       comp=Z,162nm,1.5s
KIEV                                MLR       MLR
       comp=Z,27µm,20.0s
KIEV   Kiev              77.74  13  P         P         03 47 57.5  -1.0
       comp=Z,6µmcomp=Z,317nm,1.4s
CONA   Conrad Observa    77.75  23 i pP       P         03 47 59.9  +1.1
       comp=Z,1µm,5.8s,SNR=13
PESTR  Estremoz          77.75  42  P         P         03 47 59.5  +0.7
PESTR  Estremoz          77.75  42  P         P         03 47 57.6  -1.3
PESTR                               IAmb      IAmb      03 48 05.2
       comp=Z,140nm,1.6s
PESTR  Estremoz          77.75  42 eP         P         03 47 59.1  +0.2
PESTR                              i IAmb     IAmb      03 48 11.4
       comp=Z,131nm,1.6s
AK08   Malin Array Si    77.81  13  P         P         03 47 58.1  -0.8
EVO    Evora             77.85  43  P         P         03 48 00.3  +0.9
EVO    Evora             77.85  43 eP         P         03 48 00.2  +0.9
EVO                                i IAmb     IAmb      03 48 22.6
       comp=Z,157nm,1.8s
NJ2    Nanjing           77.87 306 ⇑P         P         03 47 58.8  -0.8
NJ2                                 pP        sP        03 48 02.4  -0.5
NJ2                                 sP        pwP       03 48 05.8  +1.0
NJ2                                 PP        PP        03 51 00.8  +6.1
NJ2                                 S         S         03 57 50.9  -1.6
NJ2                                 SS        SS        04 02 58.1  +6.0
NJ2                                 pmax      pmax
       comp=Z,63nm,1.4s
NJ2                                 pmax      pmax
       comp=Z,710nm,3.6s
NJ2                                 LR        LR
       comp=Z,8µm,23.7s
NJ2                                 LR        LR
       comp=Z,8µm,22.7s
NJ2                                 LR        LR
       comp=Z,7µm,24.9s
KBA    Koelnbreinsper    77.89  25 epP        P         03 48 00.2  +0.6
       comp=Z,873nm,3.4s
VORR   Voronezh          77.90   7 eP         P         03 47 58.4  -1.0
VORR                                pmax      pmax
       comp=Z,71nm,1.1s
ABTA   Abfaltersbach     77.97  25 i pP       P         03 48 00.9  +0.9
       comp=Z,291nm,3.0s,SNR=10
ZSN    Zaisan            77.99 337 eP         P         03 48 00.8  +0.8
       comp=Z,56nm,1.0s
ZSN                                eS         S         03 57 54.5  +1.0
ZSN    Zaisan            77.99 337 eP         P         03 48 00.8  +0.8
ZSN                                eS         S         03 57 54.4  +1.0
ZSN                                 pmax      pmax
       comp=Z,57nm,1.0s
MDP    Montagnes des     78.06  96  LR        LR        04 21 05.2
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              comp=Z,11µm,21.9s,baz=331,slow=35
RONA  Rosalia, Austr    78.07  22 eP        P         03 47 58.9 -1.6
              comp=Z,707nm,3.8s
CEST  Esterri de Car    78.09  35  P        P         03 48 00.5 -0.4
EBAD  Badajoz           78.09  42  P        P         03 48 01.4 +0.7
PMOZ  Porto Moniz, M    78.15  52 eS        SKSac     03 58 09.2 -6.5
PMOZ                              eLR       LR        04 13 12.9
PMOZ                              i IAMs_20 IAMs_20   04 18 21.2
              comp=Z,11µm,18.0s
LUBAR Lubar, Ukraine    78.27  14  P        P         03 48 01.3 -0.2
KECS  Kecovo            78.29  20 eP        P         03 48 03.7 +2.0
KECS                               pmax     pmax
              comp=Z,41nm,1.4s
KECS  Kecovo            78.29  20 eP        P         03 48 03.7 +2.0
ARSA  Arzberg           78.29  23  P        P         03 48 01.1 -0.6
ARSA  Arzberg           78.29  23 i pP      P         03 48 02.8 +1.1
              comp=Z,766nm,3.7s,SNR=17
MESJ  Messejana         78.33  43 eP        P         03 48 02.3 +0.2
MESJ                              eS        S         03 57 57.3 -0.1
MESJ                               IAMs_20  IAMs_20   04 22 47.2
              comp=Z,15µm,17.7s
MESJ  Messejana         78.33  43  P        P         03 48 00.4 -1.7
MESJ                               IAmb     IAmb      03 48 08.7
              comp=Z,148nm,1.8s
MESJ  Messejana         78.33  43 eP        P         03 48 02.6 +0.5
MESJ                              i IAmb    IAmb      03 48 24.9
              comp=Z,87nm,2.0s
MESJ  Messejana         78.33  43 eP        P         03 48 02.3 +0.2
MESJ                              eS        S         03 57 57.3 -0.1
PBEJ  Beja              78.33  43 eP        P         03 48 02.7 +0.6
PBEJ                              i IAmb    IAmb      03 48 32.4
              comp=Z,106nm,1.7s
VSR   Storozhevoye      78.35   7 eP        P         03 47 59.3 -2.6
VSR                                pmax     pmax
              comp=Z,40nm,1.2s
VSR                                MLR      MLR
              comp=Z,14µm,15.0s
CIMO  Cimolais          78.35  26  P        P         03 48 00.8 -1.2
PTEO  Sao Teotonio      78.36  44 eP        P         03 48 03.2 +1.1
PTEO                              i IAmb    IAmb      03 48 15.0
              comp=Z,148nm,1.6s
MORS  Morshin           78.36  17  P        P         03 48 02.5 +0.5
CTI   Castel Tesino     78.37  26  P        P         03 48 01.6 -0.7
CTI                                IAmb     IAmb      03 48 26.9
              comp=Z,171nm,2.0s
CTI   Castel Tesino     78.37  26  P        P         03 48 01.6 -0.7
CTI                                pmax     pmax
              comp=Z,171nm,2.0s
MYKA  Terra Mystica     78.38  25 i pP      P         03 48 02.7 +0.4
              comp=Z,546nm,4.4s,SNR=6.9
PMPST Porto Santo, M    78.39  52 eP        P         03 48 03.0 +0.6
PMPST                             i IAmb    IAmb      03 48 15.7
              comp=Z,229nm,1.7s
PMPS  Porto Santo       78.40  52 eP        P         03 48 02.9 +0.4
SRO   Srobarova         78.44  21 eP        P         03 48 03.9 +1.4
SRO                                pmax     pmax
              comp=Z,38nm,1.5s
SRO   Srobarova         78.44  21 eP        P         03 48 03.9 +1.4
STAL  STALIGIAL         78.47  25  P        P         03 48 02.0 -0.7
VRH   Novokhopyorsk     78.53   5 eP        P         03 48 01.9 -1.0
VRH                               eS        S         03 57 56.8 -2.2
VRH                                pmax     pmax
              comp=Z,68nm,1.2s
PAB   San Pablo         78.55  40  P        P         03 48 02.7 -0.6
PAB   San Pablo         78.55  40  IAMs_20  IAMs_20   04 20 14.9
              comp=Z,13µm,18.0s
PAB   San Pablo         78.55  40  P        P         03 48 02.7 -0.6
PAB                                pmax     pmax
              comp=Z,83nm,1.5s
PBAR  Barrancos         78.57  42  P        P         03 48 04.4 +1.0
PBAR  Barrancos         78.57  42 eP        P         03 48 04.1 +0.7
PBAR                              i IAmb    IAmb      03 48 15.3
              comp=Z,113nm,1.8s
PCVE  Castro Verde      78.59  43  P        P         03 48 05.0 +1.6
PCVE  Castro Verde      78.59  43 eP        P         03 48 04.1 +0.6
PCVE                              i IAmb    IAmb      03 48 26.6
              comp=Z,97nm,1.9s
MORF  Marmelete         78.59  44 eP        P         03 48 03.8 +0.3
MORF                              eS        S         03 57 60.0 -0.2
MORF                               IAMs_20  IAMs_20   04 22 13.1
              comp=Z,20µm,19.5s
MORF  Marmelete         78.59  44  P        P         03 48 02.7 -0.8
MORF                               IAmb     IAmb      03 48 17.1
              comp=Z,137nm,1.3s
MORF  Marmelete         78.59  44 eP        P         03 48 04.1 +0.6
MORF                              i IAmb    IAmb      03 48 16.4
              comp=Z,206nm,1.6s
MORF  Marmelete         78.59  44 eP        P         03 48 03.8 +0.3
MORF                              eS        S         03 58 00.0 -0.2
ESBB  Sonseca Array     78.60  40  P        P         03 48 02.5 -1.0
ESBB                               IAmb     IAmb      03 48 25.0
              comp=Z,143nm,1.8s
ESDC  Sonseca Array     78.60  40  P        P         03 48 03.3 -0.3
              comp=Z,29nm,1.2s,baz=324,slow=4.8,SNR=68
ESDC                               LR       LR        04 21 42.2
              comp=Z,12µm,18.7s,baz=325,slow=35
              comp=Z,29nm,1.2s
ESDC  Sonseca Array     78.60  40  P        P         03 48 03.2 -0.3
ESDC                               IAmb     IAmb      03 48 25.0
              comp=Z,128nm,1.7s
PFVI  Vila Bisbo        78.65  44  P        P         03 48 04.9 +1.1
PFVI  Vila Bisbo        78.65  44  P        P         03 48 03.4 -0.5
PFVI  Vila Bisbo        78.65  44 eP        P         03 48 04.6 +0.7
PFVI                              i IAmb    IAmb      03 48 27.0
              comp=Z,260nm,2.0s
PSZ   Piszkesteto       78.70  20  P        P         03 48 03.6 -0.4
PSZ                                IAmb     IAmb      03 48 17.9
              comp=Z,88nm,1.3s
PSZ                                IAMs_20  IAMs_20   04 24 17.4
              comp=Z,16µm,19.0s
PSZ   Piszkesteto       78.70  20 ⇓P        P         03 48 05.2 +1.1
PSZ   Piszkesteto       78.70  20  P        P         03 48 03.6 -0.4
PSZ                                pmax     pmax
              comp=Z,88nm,1.3s
PSZ                                MLR      MLR
              comp=Z,16µm,19.0s
SOKA  Soboth            78.70  24 i pP      P         03 48 04.9 +0.8
              comp=Z,794nm,3.9s,SNR=17
OBKA  Obir              78.73  24 i pP      P         03 48 05.0 +0.7
              comp=Z,814nm,3.8s,SNR=8.2
HORU  Horodok           78.74  15  P        P         03 48 03.3 -0.8
PERS  Pernice           78.76  24 i P       P         03 48 04.8 +0.4
PERS                              ePP       PP        03 51 04.1 +2.3
PERS                              eS        S         03 58 07.8 +6.0
MUKU  Mukachevo         78.78  18  P        P         03 48 04.6 +0.3
STNU  Starunia          78.88  17  P        P         03 48 05.2 +0.3
MEZ   Mezhgor'ye        78.88  18  P        P         03 48 05.6 +0.7
EGRO  El Granado        78.91  43  P        P         03 48 06.0 +0.7
PVAQ  Vaqueiros         78.92  43  P        P         03 48 05.1 -0.2
PVAQ                               IAmb     IAmb      03 48 26.8
              comp=Z,181nm,1.5s
PVAQ  Vaqueiros         78.92  43 eP        P         03 48 06.2 +0.9
PVAQ                              i IAmb    IAmb      03 48 18.3
              comp=Z,152nm,1.6s
PVAQ                              ePP       PP        03 51 05.2 +1.9
PVAQ                              eS        S         03 58 07.9 +4.3
PVAQ                              eSS       SS        04 03 18.7  +11
PVAQ                              eLQ       LQ        04 08 28.8
PVAQ                              eLR       LR        04 13 28.9
PVAQ                              i IAMs_20 IAMs_20   04 19 54.2
              comp=Z,12µm,18.0s
BRIU  Brid              78.95  18  P        P         03 48 06.2 +0.9
PBDV  Barranco-do-Ve    78.96  44  P        P         03 48 06.9 +1.3
PBDV  Barranco-do-Ve    78.96  44 eP        P         03 48 06.7 +1.2
PBDV                              i IAmb    IAmb      03 48 30.1
              comp=Z,131nm,1.9s
SABO  M.te Sabotino     78.97  25  P        P         03 48 05.1 -0.4
SABO                               IAmb     IAmb      03 48 25.2
              comp=Z,244nm,1.9s
BERU  Beregovo          78.98  18  P        P         03 48 06.2 +0.8
LYN   LuoYang           79.05 312 ⇑P        P         03 48 05.8 -0.3
LYN                                sP       PcP       03 48 13.1 -1.5
LYN                                S        S         03 58 05.3 +0.2
LYN                                sS       sS        03 58 13.1 +3.9
LYN                                pmax     pmax
              comp=Z,150nm,1.3s
LYN                                pmax     pmax
              comp=Z,3µm,5.6s
LYN                                LR       LR
              comp=Z,16µm,18.2s
LYN                                LR       LR
              comp=Z,10µm,19.5s
LYN                                LR       LR
              comp=Z,25µm,20.6s

EMIN  Mina Concepcio    79.07  42  P        P         03 48 07.2 +1.1
KORU  Korolevo          79.15  18  P        P         03 48 07.4 +1.1
LJU   Ljubljana         79.16  24 eP        P         03 48 06.7 +0.2
LJU                               i PP      PP        03 51 08.4 +3.4
LJU                               eS        S         03 58 11.6 +5.7
LJU                               eSS       SS        04 03 17.1 +6.5
MK31  Makanchi Array    79.24 338d iP       P         03 48 07.4 +0.5
MKAR  Makanchi Array    79.24 338  P        P         03 48 06.0 -0.9
              comp=Z,12nm,0.9s,baz=33,slow=4.7,SNR=61
MKAR                               S        S         03 58 05.8 -1.0
              comp=Z,0.1nm,0.4s,baz=31,slow=6.7,SNR=1.5
MKAR                               LR       LR        04 27 31.0
              comp=Z,18µm,19.1s,baz=5.5,slow=39
              comp=Z,12nm,0.9s
MAKZ  Makanchi          79.30 338  P        P         03 48 06.0 -1.3
MAKZ  Makanchi          79.30 338  P        P         03 48 06.0 -1.3
MAKZ                               pmax     pmax
              comp=Z,204nm,1.0s
MAKZ                               MLR      MLR
              comp=Z,19µm,20.0s
AKTO  Aktyubinsk        79.31 355  P        P         03 48 06.5 -0.8
              comp=Z,11nm,0.9s,baz=7.8,slow=6.2,SNR=19
AKTO                               LR       LR        04 28 02.1
              comp=Z,8µm,18.2s,baz=6.5,slow=39
              comp=Z,11nm,0.9s
BEHE  Becsehely         79.33  23  P        P         03 48 07.2 -0.3
BEHE  Becsehely         79.33  23 eP        P         03 48 07.3 -0.1
RPN   Rapa Nui          79.33 161  LR       LR        04 15 20.6
              comp=Z,4µm,18.9s,baz=348,slow=30
ECAB  El Cabril         79.34  41  P        P         03 48 08.5 +0.8
KSV   Kosov             79.36  17  P        P         03 48 07.9 +0.3
NSLU  Nyzhne Selyshc    79.36  17  P        P         03 48 07.2 -0.3
KMPD  K-Podol'skiy      79.37  16  P        pP        03 48 07.3 -2.7
KMPD                               P        P         03 48 07.0 -0.5
MACA  Manacapuru-AM     79.44 108  P        P         03 48 07.4 -1.0
MACA  Manacapuru-AM     79.44 108 eP        P         03 48 08.2 -0.2
RAKU  Rahkiv            79.47  17  P        P         03 48 08.2  0.0
EADA  Adamuz            79.62  41  P        P         03 48 10.4 +1.2
BOJS  Bojanci           79.85  24 i P       P         03 48 10.4 +0.2
ECHE  Chera             79.86  38  P        P         03 48 11.5 +1.0
MORH  Mrgy, Hungar      80.02  21 eP        P         03 48 09.9 -1.2
MORH  Mrgy, Hungar      80.02  21  P        P         03 48 11.6 +0.5
              comp=Z,1µmcomp=Z,29nm,1.2s
BUR08 Bucovina Ar. S    80.03  17  P        P         03 48 10.4 -1.0
BURAR Bucovina Array    80.06  17  P        P         03 48 10.6 -0.9
BURAR Bucovina Array    80.06  17 ⇓P        P         03 48 13.2 +1.7
MESR  Meseseni          80.07  18 ⇑P        P         03 48 13.8 +2.4
SORM  Soroca            80.10  15 ⇓P        P         03 48 11.4 -0.1
ESPR  Espera            80.17  42  P        P         03 48 13.4 +1.2
AB31  Akbulak array     80.36 353  P        P         03 48 11.9 -1.0
AB31                               IAmb     IAmb      03 48 25.1
              comp=Z,194nm,1.9s
AB31  Akbulak array     80.36 353 i P       P         03 48 10.8 -2.1
ABKAR Akbulak array     80.36 353  P        P         03 48 11.8 -1.1
SFS   San Fernando      80.36  43  IAMs_20  IAMs_20   04 19 46.2
              comp=Z,12µm,20.0s
DRGR                    80.37  19 ⇑P        P         03 48 14.0 +0.9
GTA   Gaotai            80.43 323  P        P         03 48 12.6 -1.1
GTA                                pP       sP        03 48 16.8 -0.2
GTA                                S        S         03 58 16.5 -3.4
GTA                                SS       SS        04 03 32.1 +1.8
GTA                                pmax     pmax
              comp=Z,31nm,1.4s
GTA                                pmax     pmax
              comp=Z,2µm,5.6s
GTA                                LR       LR
              comp=Z,14µm,20.7s
GTA                                LR       LR
              comp=Z,13µm,22.7s
GTA                                LR       LR
              comp=Z,25µm,21.9s
ETOB  Tobarra           80.45  38  P        P         03 48 15.2 +1.5
BAL3X Bal3x, Balta      80.49  14  P        P         03 48 13.4 -0.2
CNIL  Conil             80.51  43  P        P         03 48 15.7 +1.7
MARR  Marisel-Cluj      80.56  18 ⇓P        P         03 48 14.8 +0.6
WMQ   Urumqi            80.57 333  P        P         03 48 15.3 +1.0
WMQ                                pP       pwP       03 48 18.9 -0.6
WMQ                                sP       PcP       03 48 23.8 +2.7
WMQ                                S        S         03 58 22.1 +1.0
WMQ                                SS       SS        04 03 32.0 +0.1
WMQ                                pmax     pmax
              comp=Z,36nm,1.7s
WMQ                                LR       LR
              comp=Z,9µm,15.3s
WMQ                                LR       LR
              comp=Z,11µm,17.9s
WMQ                                LR       LR
              comp=Z,10µm,16.7s
SIRR  Siria             80.65  19 ⇓P        P         03 48 15.2 +0.7
KNYS  Krupa na Uni      80.69  24 eP        P         03 48 14.1 -0.7
EGOR  Sierra Gorda,     80.71  41  P        P         03 48 16.4 +1.1
EMIJ  Mijas             80.90  42  P        P         03 48 16.9 +0.8
EQTA  Presa de Quent    80.91  40  P        P         03 48 17.2 +1.0
BLY   Banja Luka        81.05  23 eP        P         03 48 13.7 -3.0
BLY   Banja Luka        81.05  23 ⇑P        P         03 48 17.9 +1.3
ELGU  Los Guajares,     81.12  41  P        P         03 48 17.7 +0.4
XAN   Xi'an             81.14 314 ⇑P        P         03 48 16.4 -1.0
XAN                                pP       sP        03 48 20.6 -0.2
XAN                                sP       PcP       03 48 23.8 +0.1
XAN                                PP       PP        03 51 28.1 +6.2
XAN                                S        S         03 58 24.4 -2.8
XAN                                SS       SS        04 03 39.8 -1.1
XAN                                pmax     pmax
              comp=Z,66nm,1.5s
XAN                                pmax     pmax
              comp=Z,2µm,6.2s
XAN                                LR       LR
              comp=Z,16µm,18.0s
XAN                                LR       LR
              comp=Z,10µm,23.7s
XAN                                LR       LR
              comp=Z,17µm,20.6s
ETOS  Mallorca          81.14  35  P        P         03 48 18.5 +1.2
ECEU  Ceuta             81.20  43  P        P         03 48 18.7 +1.0
EIBI  Ibiza             81.24  36  P        P         03 48 19.4 +1.6
TLOR  Lorca, Murcia     81.24  39  P        P         03 48 19.1 +1.2
BZS   Buzias            81.26  20 ⇓P        P         03 48 18.3 +0.6
EMUR  La Murta          81.26  39  P        P         03 48 19.5 +1.5
MDB   Medias            81.32  18 ⇑P        P         03 48 19.5 +1.4
MILM  Milestii Mici     81.36  14 ⇑P        P         03 48 16.9 -1.4
WHN   Wuhan             81.38 308  P        P         03 48 17.6 -1.1
WHN                                PP       PP        03 51 26.6 +2.7
WHN                                S        S         03 58 29.1 -0.6
WHN                                pmax     pmax
              comp=Z,300nm,1.7s
WHN                                pmax     pmax
              comp=Z,4µm,6.9s
WHN                                LR       LR
              comp=Z,16µm,15.3s
WHN                                LR       LR
              comp=Z,32µm,22.4s
WHN                                LR       LR
              comp=Z,26µm,19.0s
TESR  Tescani           81.39  16 ⇑P        P         03 48 19.2 +0.7
MAHO  Mahon             81.55  34  P        P         03 48 21.2 +1.8
MAHO  Mahon             81.55  34  IAMs_20  IAMs_20   04 22 22.5
              comp=Z,18µm,21.0s
CART  Cartagena         81.58  39  P        P         03 48 21.0 +1.4
CART  Cartagena         81.58  39  P        P         03 48 18.9 -0.7
CART                               IAmb     IAmb      03 48 40.8
              comp=Z,171nm,1.6s
CART                               IAMs_20  IAMs_20   04 23 16.7
              comp=Z,14µm,19.0s
LZH   Lanzhou           81.66 319 eP        P         03 48 19.8 -0.5
LZH                                sP       PcP       03 48 27.8 +1.6
LZH                                PP       PP        03 51 27.8 +1.5
LZH                                S        S         03 58 30.3 -2.5
LZH                                SS       SS        04 03 51.8 +3.0
LZH                                pmax     pmax
              comp=Z,54nm,1.3s
LZH                                pmax     pmax
              comp=Z,2µm,5.1s
LZH                                LR       LR
              comp=Z,21µm,17.5s
LZH                                LR       LR
              comp=Z,17µm,16.5s
LZH                                LR       LR
              comp=Z,24µm,16.8s
DOPR  Dopca             81.68  17 ⇑P        P         03 48 21.3 +1.2
TURR  Turia             81.72  17 ⇑P        P         03 48 22.0 +1.7
MSVF  Nonsavu           81.74 229  IAMs_20  IAMs_20   04 19 46.4
              comp=Z,8µm,18.0s
TNR   Turnu Rosu        81.77  18 ⇓P        P         03 48 21.9 +1.3
TDK   Taldyqorghan      81.82 340 eP        P         03 48 21.7 +0.8

              comp=Z,77nm,1.0s
TDK                                LR       LR        04 26 29.6
              comp=Z,11µm,18.1s
TDK   Taldyqorghan      81.82 340 eP        P         03 48 21.6 +0.8
TDK                                pmax     pmax
              comp=Z,77nm,1.0s
TDK                                MLR      MLR
              comp=Z,11µm,18.0s
LZDM  Lanzhou Array     81.83 319  P        P         03 48 19.5 -1.9
              comp=Z,4.6nm,0.6s,baz=46,slow=4.3,SNR=9.2
LZDM                               LR       LR        04 26 39.9
              comp=Z,17µm,18.3s,baz=40,slow=37
              comp=Z,4.6nm,0.6s
COVR  Voineasa-Covas    81.95  17 ⇑P        P         03 48 22.9 +1.4
PLOR  Plostina          82.03  16 ⇑P        P         03 48 23.1 +1.2
VRI   Vrincioaia        82.03  16 ⇓P        P         03 48 22.3 +0.5
TATO  Taipei            82.03 300  IAMs_20  IAMs_20   04 20 56.5
              comp=Z,8µm,21.0s
ARR   Arges             82.12  18 ⇓P        P         03 48 23.8 +1.3
HERR  Herculane         82.13  19 ⇑P        P         03 48 22.1 -0.3
MLR   Muntele Rosu      82.25  17  LR       LR        04 25 48.0
              comp=Z,34µm,19.8s,baz=1.0,slow=36
AQU   L'Aquila          82.26  26 eP        P         03 48 21.8 -1.4
YHNB  Yeheng            82.33 300  IAMs_20  IAMs_20   04 21 16.6
              comp=Z,10µm,22.0s
AVE   Averroes          82.48  45  P        P         03 48 25.4 +1.0
AVE   Averroes          82.48  45  IAMs_20  IAMs_20   04 23 29.3
              comp=Z,12µm,18.0s
NACB  Ninganchiao       82.60 299  IAMs_20  IAMs_20   04 20 52.7
              comp=Z,8µm,22.0s
RUDO  Rudo              82.64  22 eP        P         03 48 23.8 -1.3
BTLS  Baital            82.67 343 eP        P         03 48 24.1 -1.1
CFR   Carcaliu          82.94  15 ⇑P        P         03 48 27.4 +0.8
BOVS  Bovan             83.16  20 ⇑P        P         03 48 30.3 +2.5
PDGK  Podgornoye        83.17 339  P        P         03 48 28.3 +0.3
TREB  Trebinje          83.24  23 eP        P         03 48 37.0 +8.8
SSLB  Suanglung         83.27 299  IAMs_20  IAMs_20   04 21 57.3
              comp=Z,8µm,22.0s
TPGR  Topolog           83.30  15 ⇑P        P         03 48 29.4 +0.9
IFR   Ifrane            83.32  44  P        P         03 48 29.9 +0.8
SHLS  Shalkode          83.33 339 eP        P         03 48 29.0 +0.1
              comp=Z,82nm,0.9s
SHLS  Shalkode          83.33 339 eP        P         03 48 28.9 +0.1
SHLS                               pmax     pmax
              comp=Z,82nm,0.9s
LEHL  Lehliu            83.39  16 ⇓P        P         03 48 30.2 +1.2
ITTB  Itaituba          83.43 105 eP        P         03 48 28.0 -1.5
UZB   Uzynbulak         83.44 339 eP        P         03 48 30.1 +0.5
UZB                               eS        SKSac     03 58 51.0 -1.1
UZB   Uzynbulak         83.44 339 eP        P         03 48 30.0 +0.5
UZB                               eS        SKSac     03 58 50.9 -1.1
QZH   Quanzhou          83.65 302⇑iP        P         03 48 29.4 -1.2
QZH                                PP       PP        03 51 47.1 +4.4
QZH                                S        S         03 58 51.6 -1.5
QZH                                pmax     pmax
              comp=Z,2µm,6.6s
QZH                                LR       LR
              comp=Z,3µm,17.5s
QZH                                LR       LR
              comp=Z,10µm,16.1s
QZH                                LR       LR
              comp=Z,7µm,18.2s
SATY  Saty              83.67 339 eP        P         03 48 31.2 +0.6
              comp=Z,55nm,1.0s
SATY                              eS        SKSac     03 58 52.6 -0.8
SATY  Saty              83.67 339 eP        P         03 48 31.2 +0.6
SATY                              eS        SKSac     03 58 52.6 -0.8
SATY                               pmax     pmax
              comp=Z,55nm,1.0s
PDG   Podgorica         83.74  22  P        P         03 48 30.2 -0.6
PDG                                IAmb     IAmb      03 48 49.4
              comp=Z,141nm,1.7s
PDG   Podgorica         83.74  22 ⇓P        P         03 48 30.2 -0.6
AAA   Alma-Ata          83.85 341 eP        P         03 48 32.1 +0.7
              comp=Z,117nm,1.3s
AAA                                LR       LR        04 27 29.6
              comp=Z,13µm,16.6s
AAA   Alma-Ata          83.85 341 eP        P         03 48 32.1 +0.7
AAA                                pmax     pmax
              comp=Z,117nm,1.3s
AAA                                MLR      MLR
              comp=Z,13µm,17.0s
MDOK  Medeo             83.87 340 eP        P         03 48 32.3 +0.6
MDOK                              eS        S         03 58 53.1 -2.0
MDOK                               LR       LR        04 27 27.6
MDOK  Medeo             83.87 340 eP        P         03 48 32.2 +0.6
MDOK                              eS        S         03 58 53.9 -1.2
ERBR  Yeremizino-Bor    83.92   7 eP        P         03 48 31.5 -0.1
ERBR                              e                   03 51 43.5
ERBR                              eS        S         03 58 53.6 -1.6
ERBR                              eSS       SS        04 04 18.1 -3.1
ERBR                              eSSS      SSS       04 07 50.1
ERBR                               pmax     pmax
              comp=Z,79nm,1.0s
ERBR                               MLR      MLR
              comp=Z,14µm,18.0s
ENH   Enshi             84.00 311  IAmb     IAmb      03 48 40.2
              comp=Z,157nm,1.4s
ENH                                IAMs_20  IAMs_20   04 25 39.8
              comp=Z,15µm,21.0s
TNSS  Tian-Shan         84.01 340 eP        P         03 48 33.0 +0.2
TNSS  Tian-Shan         84.01 340 eP        P         03 48 32.9 +0.2
CNSH  ChangSha          84.02 308  P        P         03 48 29.3 -3.1
CNSH                               PP       PP        03 51 50.0 +4.4
CNSH                               S        SKSac     03 58 52.8 -3.0
CNSH                               pmax     pmax
              comp=Z,43nm,1.4s
CNSH                               LR       LR
              comp=Z,7µm,18.4s
CNSH                               LR       LR
              comp=Z,7µm,22.8s
CNSH                               LR       LR
              comp=Z,7µm,19.1s
MD01  Midelt array s    84.03  44  P        P         03 48 32.2 -0.5
MD31  MD31              84.04  44  P        P         03 48 32.1 -0.5
SIM   Simferopol'       84.04  11 eP        P         03 48 32.9 +0.6
SIM                               eS        SKSac     03 58 51.6 -3.9
SIM                                pmax     pmax
              comp=Z,72nm,1.4s
SIM                                smax     smax
              comp=N,1µm,13.8s
SIM                                MLR      MLR
              comp=Z,21µm,21.4s
MDT   Midelt            84.15  44  LR       LR        04 24 44.2
              comp=Z,6µm,18.1s,baz=339,slow=35
PRZ   Przheval'sk       84.22 339  P        P         03 48 33.7 +0.2
PRZ   Przheval'sk       84.22 339  P        P         03 48 33.7 +0.2
PRZ                                pmax     pmax
              comp=Z,110nm,0.9s
USP   Ospenovka         84.29 342  P        P         03 48 34.9 +1.2
              SNR=12
TKM2  Tokmak 2          84.40 341  P        P         03 48 36.4 +1.9
              SNR=22
CHMS  Chumysh           84.50 342  P        P         03 48 35.7 +1.0
              SNR=10
TIO   Tiouine           84.54  47  P        P         03 48 35.9 +0.6
ANN   Anapa             84.56   9 eP        P         03 48 33.7 -1.2
ANN                               e                   03 51 45.7
ANN                               e                   03 59 00.5
ANN                               eSS       SS        04 04 26.3 -4.4
ANN                                pmax     pmax
              comp=Z,62nm,1.3s
ANN                                MLR      MLR
              comp=Z,11µm,14.0s
GOF   Gofitskoye        84.74   5ceP        P         03 48 36.3 +0.5
GOF                               eS        S         03 59 02.7 -0.7
KBK   Karagaybulak      84.79 342  P        P         03 48 37.7 +1.3
              SNR=10
AAK   Ala-Archa         84.90 342  P        P         03 48 38.8 +1.9
              SNR=12
AAK   Ala-Archa         84.90 342  LR       LR        04 32 13.2
              comp=Z,11µm,18.3s,baz=22,slow=40
AAK   Ala-Archa         84.90 342  P        P         03 48 29.8 -7.1
AAK   Ala-Archa         84.90 342  P        P         03 48 36.8 -0.1
AAK                                IAmb     IAmb      03 48 45.9
              comp=Z,99nm,1.4s
AAK   Ala-Archa         84.90 342  IAMs_20  IAMs_20   04 32 02.0
              comp=Z,11µm,18.0s
AAK   Ala-Archa         84.90 342  P        P         03 48 36.8 -0.1
AAK   Ala-Archa         84.90 342d iP       P         03 48 37.9 +1.0
AAK                                pmax     pmax
              comp=Z,77nm,1.3s
LABN  Labinsk           85.00   7 eP        P         03 48 34.9 -2.3
LABN                              e                   03 59 05.1
LABN                               pmax     pmax
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      comp=Z,31nm,0.8s
LABN                                 MLR      MLR
      comp=Z,15µm,14.0s
EKS2  Erkin-Say          85.01 343   P        P        03 48 38.6 +1.2
      SNR=12
CUC   Castrocucco        85.13  26   IAMs_20  IAMs_20  04 26 51.6
      comp=Z,12µm,20.0s
GOMU  GeErMu             85.13 325   P        P        03 48 37.3 -1.2
GOMU                                 S        SKSac    03 59 02.3 -1.3
GOMU                                 pmax     pmax
      comp=Z,38nm,1.3s
GOMU                                 LR       LR
      comp=Z,17µm,18.2s
GOMU                                 LR       LR
      comp=Z,13µm,17.8s
KK31  Karatay Array      85.17 345   P        P        03 48 37.4 -0.7
KK31                                 IAmb     IAmb     03 48 50.0
      comp=Z,66nm,1.4s
KK31  Karatay Array      85.17 345   P        P        03 48 37.4 -0.7
KK31                                 pmax     pmax
      comp=Z,66nm,1.5s
KKAR  Karatay Array      85.17 345   P        P        03 48 37.5 -0.6
KKAR  Karatay Array      85.17 345   P        P        03 48 37.5 -0.6
DZA   Taraz              85.23 344  eP        P        03 48 39.2 +0.8
DZA   Taraz              85.23 344  eP        P        03 48 39.2 +0.8
WUS   Wushi              85.25 338   IAMs_20  IAMs_20  04 28 53.3
      comp=Z,9µm,21.0s
BRLS  Borolday           85.35 346  eP        P        03 48 40.9 +1.9
BRLS  Borolday           85.35 346  eP        P        03 48 40.9 +1.9
OHR   Ohrid              85.36  22 i P        P        03 48 39.3 +0.2
VAY   Valandovo          85.56  20 i P        P        03 48 40.2 +0.2
LPAZ  La Paz             85.69 122   P        P        03 48 41.1 -0.5
      comp=Z,21nm,1.0s,baz=354,slow=6.0,SNR=35
LPAZ                                 S        S        03 59 12.4 -2.1
      comp=Z,0.3nm,0.5s,baz=333,slow=7.0,SNR=1.2
LPAZ                                 LR       LR       04 30 51.5
      comp=Z,4µm,19.2s,baz=326,slow=38
      comp=Z,21nm,1.0s
LPAZ  La Paz             85.69 122   P        P        03 48 40.8 -0.8
LPAZ  La Paz             85.69 122   P        P        03 48 40.8 -0.8
LPAZ                                 pmax     pmax
      comp=Z,61nm,1.3s
LPAZ  La Paz             85.69 122  eP        P        03 48 39.8 -1.8
NPGB  Novo Progresso     85.75 106  eP        P        03 48 41.5 +0.3
KIV   Kislovodsk         85.82   5   P        P        03 48 34.6 -6.8
KIV                                  P        P        03 48 34.6 -6.8
KIV   Kislovodsk         85.82   5   P        P        03 48 40.6 -0.8
KIV                                  IAmb     IAmb     03 48 49.8
      comp=Z,66nm,1.1s
KIV                                  IAMs_20  IAMs_20  04 28 28.3
      comp=Z,10µm,19.0s
KIV   Kislovodsk         85.82   5  ⇑P        P        03 48 42.4 +1.0
KIV   Kislovodsk         85.82   5   P        P        03 48 39.7 -1.7
KIV   Kislovodsk         85.82   5  eP        P        03 48 39.8 -1.6
KIV                                 e                  03 51 59.6
KIV                                 eSS       SS       04 04 52.2 +2.8
KIV                                  pmax     pmax
      comp=Z,45nm,1.1s
KIV                                  pmax     pmax
      comp=Z,72nm,3.8s
KIV                                  MLR      MLR
      comp=Z,7µm,20.0s
KVAR  Kislovodsk Arr     85.82   5   LR       LR       04 30 40.8
      comp=Z,8µm,18.1s,baz=264,slow=38
SOC   Sochi              85.98   7  eP        P        03 48 42.4 +0.4
SOC                                 e*PP      pwP      03 48 46.7 -0.6
SOC                                 ePPP      PPP      03 53 55.7
SOC                                 eS        SKSac    03 59 08.6 +0.8
SOC                                 eSS       SS       04 04 52.6 +1.1
SOC                                 eSSS      SSS      04 08 24.0
SOC                                  pmax     pmax
      comp=Z,48nm,1.2s
SOC                                  MLR      MLR
      comp=Z,9µm,14.0s
PB18  Visviri            86.03 124   P        P        03 48 43.7 +0.6
SHA1  Shidzhatmaz        86.03   5d iP        P        03 48 43.2 +0.6
KBZ   Khabaz             86.05   5   P        P        03 48 42.2 -0.2
      comp=Z,14nm,1.0s,baz=347,slow=3.2,SNR=16
KBZ                                  LR       LR       04 30 36.9
      comp=Z,9µm,18.2s,baz=350,slow=38
      comp=Z,14nm,1.0s
KBZ   Khabaz             86.05   5d iP        P        03 48 43.1 +0.7
KBZ                                  pmax     pmax
      comp=Z,60nm,1.1s
KBZ                                  MLR      MLR
      comp=Z,12µm,16.0s
CHM   Chimkent           86.08 346  eP        P        03 48 43.2 +0.6
CHM                                  LR       LR       04 28 31.7
      comp=Z,6µm,18.0s
CHM   Chimkent           86.08 346  eP        P        03 48 43.2 +0.6
CD2   Chengdu            86.11 316   P        P        03 48 41.3 -1.7
CD2                                  S        SKSac    03 59 08.5 -0.7
CD2                                  SS       SS       04 04 56.3 +1.8
CD2                                  pmax     pmax
      comp=Z,60nm,1.2s
CD2                                  pmax     pmax
      comp=Z,2µm,7.0s
CD2                                  LR       LR
      comp=Z,14µm,14.2s
CD2                                  LR       LR
      comp=Z,19µm,19.2s
CD2                                  LR       LR
      comp=Z,20µm,17.0s
VSLR  Vesyoloye          86.12   7c iP        P        03 48 44.1 +1.3
VSLR                                 pmax     pmax
      comp=Z,64nm,1.0s
VSLR                                 MLR      MLR
      comp=Z,4µm,13.0s
NCK   Nalchik            86.32   5⇑ iP        P        03 48 45.4 +1.6
NCK                                  pmax     pmax
      comp=Z,99nm,1.6s
NCK                                  MLR      MLR
      comp=Z,7µm,16.0s
RDO   Rodhopi            86.36  18   P        P        03 48 43.8 -0.1
RDO                                  IAmb     IAmb     03 48 45.4
      comp=Z,85nm,1.4s
PB12  IPOC Station P     86.43 125   P        P        03 48 44.2 -0.4
PB12                                 IAmb     IAmb     03 48 49.4
      comp=Z,84nm,1.1s
ARSB  Arslanbob          86.46 343   P        P        03 48 44.2 -0.5
ARSB                                 IAmb     IAmb     03 48 57.4
      comp=Z,79nm,1.3s
ARSB  Arslanbob          86.46 343   P        P        03 48 44.2 -0.5
ARSB                                 pmax     pmax
      comp=Z,79nm,1.3s
NEUR  Neytrino           86.51   5d iP        P        03 48 46.0 +1.1
NEUR                                 pmax     pmax
      comp=Z,52nm,1.3s
PB16  IPOC Station P     86.63 124   P        P        03 48 46.2 +0.1
PB16                                 IAmb     IAmb     03 49 04.7
      comp=Z,79nm,1.5s
MAK   Makhachkala        87.00   2  eP        P        03 48 43.5 -3.5
MAK                                 e                  03 52 06.3
MAK                                 ePPP      PPP      03 54 02.1
MAK                                 e                  03 59 06.7
MAK                                 eSS       SS       04 05 05.6 -0.9
MAK                                 eSSS      SSS      04 08 32.1
MAK                                  pmax     pmax
      comp=Z,412nm,1.8s
MAK                                  pmax     pmax
      comp=Z,1µm,2.2s
KEST  Kesra              87.05  32   P        P        03 48 47.7 +0.1
      comp=Z,26nm,1.1s,baz=6.3,slow=9.2,SNR=6.9
KEST                                 LR       LR       04 28 45.3
      comp=Z,16µm,18.9s,baz=337,slow=36
      comp=Z,26nm,1.1s
KEST  Kesra              87.05  32   P        P        03 48 41.7 -5.8
KEST                                 P        P        03 48 41.7 -5.8
KEST  Kesra              87.05  32   P        P        03 48 47.1 -0.5
VAE   Valguarnera        87.06  28   LR       LR       04 29 09.5
      comp=Z,22µm,18.2s,baz=334,slow=37
VILB  Vilhena            87.48 114   P        P        03 48 50.0 +0.3
VILB  Vilhena            87.48 114  eP        P        03 48 49.6 -0.1
KSH   Kashi              87.59 340   P        P        03 48 53.5 +3.3
KSH                                  S        S        03 59 30.0 -1.7
KSH                                  pmax     pmax
      comp=Z,26nm,1.2s
KSH                                  LR       LR
      comp=Z,12µm,18.2s
KSH                                  LR       LR
      comp=Z,17µm,17.5s
KSH                                  LR       LR
      comp=Z,19µm,17.2s
GULI  GuiLin             87.69 308   P        P        03 48 50.4 -0.3
GULI                                 pP       pwP      03 48 59.1 +3.2
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GULI                                 S        S        03 59 35.8 +3.0
GULI                                 pmax     pmax
      comp=Z,27nm,1.4s
GULI                                 LR       LR
      comp=Z,4µm,16.8s
GULI                                 LR       LR
      comp=Z,6µm,19.0s
GULI                                 LR       LR
      comp=Z,10µm,30.4s
PB11  IPOC Station P     87.73 125   IAmb     IAmb     03 48 59.1
      comp=Z,64nm,1.0s
ILGA  Ilgaz              87.82  12   P        P        03 48 50.7 -0.7
GZH   Guangzhou          87.96 305   P        P        03 48 42.9 -9.1
GZH                                  PP       PP       03 52 04.5  -13
MDUB  Mudurnu            88.02  14   IAmb     IAmb     03 49 17.0
      comp=Z,130nm,1.3s
HMBC  Humberstone        88.03 125   IAmb     IAmb     03 49 12.7
      comp=Z,71nm,1.6s
HKPS  Hong Kong Po S     88.20 303   IAMs_20  IAMs_20  04 29 39.4
      comp=Z,9µm,20.0s
BALB  Balikesir          88.27  17   IAmb     IAmb     03 49 14.5
      comp=Z,140nm,1.6s
PB08  IPOC Station P     88.31 125   P        P        03 48 54.6 +0.7
CLDB  Colider            88.47 109  eP        P        03 48 54.7 +0.2
AKT   Akhty              88.48   2  eP        P        03 48 52.3 -2.1
AKT                                 e                  03 52 19.2
AKT                                 eS        SKSac    03 59 21.3 -2.2
AKT                                  pmax     pmax
      comp=Z,74nm,1.6s
AKT                                  MLR      MLR
      comp=Z,15µm,19.0s
GYA   Guiyang            88.53 311  ⇓P        P        03 48 54.9  0.0
GYA                                  SKS      SKSac    03 59 19.4 -4.9
GYA                                  S        SKKSac   03 59 33.9 -1.2
GYA                                  pmax     pmax
      comp=Z,44nm,1.4s
GYA                                  pmax     pmax
      comp=Z,420nm,3.2s
GYA                                  LR       LR
      comp=Z,8µm,24.8s
GYA                                  LR       LR
      comp=Z,6µm,26.5s
GYA                                  LR       LR
      comp=Z,15µm,26.2s
SACV  Santiago Islan     88.72  68   IAMs_20  IAMs_20  04 26 28.6
      comp=Z,11µm,20.0s
ANTO  Ankara             88.86  13   P        P        03 48 50.1 -6.0
ANTO                                 P        P        03 48 50.1 -6.0
ANTO  Ankara             88.86  13   P        P        03 48 55.1 -1.0
ANTO                                 IAmb     IAmb     03 49 18.3
      comp=Z,132nm,1.6s
ANTO  Ankara             88.86  13   IAMs_20  IAMs_20  04 31 06.9
      comp=Z,7µm,21.0s
ANTO  Ankara             88.86  13   P        P        03 48 55.1 -1.0
ANTO                                 pmax     pmax
      comp=Z,132nm,1.6s
ANTO                                 MLR      MLR
      comp=Z,8µm,21.0s
BR131 Keskin Array S     89.12  13   IAmb     IAmb     03 49 18.3
      comp=Z,87nm,1.9s
BR131 Keskin Array S     89.12  13d iP        P        03 48 57.8 +0.4
BRTR  Keskin Array B     89.12  13   P        P        03 48 56.6 -0.8
      comp=Z,6.6nm,1.1s,baz=318,slow=1.7,SNR=17
BRTR                                 PKPPKP   P'P'df   04 14 45.1 -4.7
      comp=Z,1.2nm,1.0s,baz=229,slow=1.3,SNR=4.2
BRTR                                 LR       LR       04 31 39.8
      comp=Z,7µm,20.1s,baz=337,slow=38
      comp=Z,6.6nm,1.1s
BRTR  Keskin Array B     89.12  13   P        P        03 48 56.8 -0.6
BRTR  Keskin Array B     89.12  13   P        P        03 48 56.8 -0.6
SIV   San Ignacio        89.40 116   LR       LR       04 34 07.5
      comp=Z,8µm,18.0s,baz=2.5,slow=39
MANT  Manisa             89.50  17   IAmb     IAmb     03 49 20.7
      comp=Z,114nm,1.9s
PB03  IPOC Station P     89.57 126   IAmb     IAmb     03 49 18.6
      comp=Z,93nm,1.9s
CHGR  Chuyangaron        89.73 345 ceP        P        03 49 01.4 +1.2
CHGR                                 pmax     pmax
      comp=Z,328nm,1.3s
KIRS  Kirsehir-Merke     89.74  12  ⇑P        P        03 49 00.5 +0.2
RAO   Raoul Island       89.91 220   LR       LR       04 21 12.5
      comp=Z,3µm,21.8s,baz=112,slow=30
PB05  IPOC Station P     90.00 127   IAmb     IAmb     03 49 20.6
      comp=Z,118nm,2.0s
PTLB  Pontes e Lacer     90.09 114   IAmb     IAmb     03 49 07.2
      comp=Z,67nm,1.1s
PTLB  Pontes e Lacer     90.09 114  eP        P        03 49 02.3 +0.4
BNN   Bunyan             90.26  11   IAmb     IAmb     03 49 27.5
      comp=Z,85nm,1.5s
MANEM Manem              90.36 343   P        P        03 49 03.3 -0.2
MANEM                                IAmb     IAmb     03 49 17.2
      comp=Z,304nm,1.4s
ISP   Isparta            90.50  15   P        P        03 49 02.9 -1.0
ISP                                  IAmb     IAmb     03 49 27.8
      comp=Z,131nm,1.6s
ISP   Isparta            90.50  15d iP        P        03 49 03.7 -0.2
ISP                                  pmax     pmax
      comp=Z,54nm,1.2s
PZH   PanZhiHua          90.79 315   P        P        03 49 05.1 -0.3
PZH                                  SKS      SKSac    03 59 34.1 -3.4
PZH                                  SS       SS       04 06 05.0 +2.1
PZH                                  pmax     pmax
      comp=Z,50nm,1.3s
PZH                                  pmax     pmax
      comp=Z,1µm,5.9s
PZH                                  LR       LR
      comp=Z,5µm,20.4s
PZH                                  LR       LR
      comp=Z,8µm,18.8s
PZH                                  LR       LR
      comp=Z,6µm,18.0s
TGY   Tagaytay City      90.94 293   LR       LR       04 29 27.2
      comp=Z,3µm,18.5s,baz=80,slow=35
SHAA  Shahritus          90.96 346   IAmb     IAmb     03 49 19.1
      comp=Z,598nm,1.5s
GURO  Guroymak-BITLI     91.15   6   P        P        03 49 06.5 -0.5
DZM   Mont Dzumac        91.28 236  eP        P        03 49 07.8 +0.4
      comp=Z,9µm,23.7s
DZM   Mont Dzumac        91.28 236  eSKSac    SKSac    03 59 39.4 -0.4
      comp=Z,919nm,41.2s
DZM                                 eSS       SS       04 06 17.5 +5.8
      comp=Z,6µm,28.6s
DZM                                 eLQ       LQ       04 13 53.2
      comp=Z,12µm,42.2s
DZM                                 eLR       LR       04 18 22.0
      comp=Z,6µm,24.0s
JAY   Jayapura           91.44 268   LR       LR       04 21 53.1
      comp=Z,15µm,21.7s,baz=30,slow=30
KMI   Kunming            91.52 314  ⇑P        P        03 49 08.6 -0.3
KMI                                  PP       PP       03 52 50.9 +4.8
KMI                                  pmax     pmax
      comp=Z,28nm,1.8s
KMI                                  pmax     pmax
      comp=Z,870nm,5.3s
KMI                                  LR       LR
      comp=Z,8µm,18.7s
KMI                                  LR       LR
      comp=Z,10µm,20.7s
KMI                                  LR       LR
      comp=Z,13µm,20.3s
IDI   Anoyia             91.86  20   LR       LR       04 33 13.1
      comp=Z,8µm,20.0s,baz=335,slow=37
SNDB  Serra Nova Dou     92.07 106  eP        P        03 49 12.3 +1.1
KARP  Karpathos          92.09  18   IAMs_20  IAMs_20  04 33 07.3
      comp=Z,14µm,21.0s
PASG  PASIGHAT           92.17 321  eP        P        03 49 12.2 +0.5
MARD  Mardin             92.29   7   P        P        03 49 11.7 -0.5
MARD                                 IAmb     IAmb     03 49 33.8
      comp=Z,94nm,1.5s
LSA   Lhasa              92.31 325   IAMs_20  IAMs_20  04 32 26.2
      comp=Z,14µm,22.0s
LSA   Lhasa              92.31 325   P        P        03 49 09.3 -3.5
LSA                                  pmax     pmax
      comp=Z,12nm,1.0s
LSA                                  LR       LR
      comp=Z,6µm,17.9s
LSA                                  LR       LR
      comp=Z,6µm,17.6s
LSA                                  LR       LR
      comp=Z,8µm,17.6s
LSA   Lhasa              92.31 325   P        P        03 49 12.6 -0.2
SMPI  Sarmi              92.32 270   P        P        03 49 15.4 +3.0
      comp=Z,45nm,2.0s
ALCI  Alchi Leh          92.38 338  eP        P        03 49 13.0  0.0
ALCI                                 IAmb     IAmb     03 49 23.0
      comp=Z,47nm,0.8s
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NBPS  Pedro II - PI      92.45  94  eP        P        03 49 14.5 +1.3
SALV  Santo Antonio      92.47 112  eP        P        03 49 13.5 +0.5
PMG   Port Moresby       92.61 259   LR       LR       04 25 14.7
      comp=Z,5µm,20.2s,baz=40,slow=32
BBTS  Babate             93.08  63   LR       LR       04 29 53.4
      comp=Z,10µm,18.3s,baz=260,slow=35
SRNI  Srinagar           93.09 340  eP        P        03 49 15.4 -0.6
QIZ   Qiongzhong         93.14 305   IAMs_20  IAMs_20  04 32 42.4
      comp=Z,8µm,21.0s
QIZ   Qiongzhong         93.14 305   P        P        03 49 15.8 -0.4
QIZ                                  PP       PP       03 52 56.5 -2.3
QIZ                                  S        S        04 00 21.4 -1.7
QIZ                                  SS       SS       04 06 35.4 -1.5
QIZ                                  pmax     pmax
      comp=Z,840nm,9.2s
QIZ                                  LR       LR
      comp=Z,5µm,20.9s
QIZ                                  LR       LR
      comp=Z,6µm,18.8s
QIZ                                  LR       LR
      comp=Z,7µm,20.8s
HNLY  HANLEY             93.30 336  eP        P        03 49 17.1 -0.4
HNLY                                 IAmb     IAmb     03 49 25.2
      comp=Z,141nm,2.5s
TNCH  TengChong          93.50 317   P        P        03 49 18.8 +0.8
TNCH                                 PP       PP       03 53 06.5 +4.9
TNCH                                 SKS      SKSac    03 59 53.3 +0.5
TNCH                                 S        S        04 00 27.3 +0.8
TNCH                                 pmax     pmax
      comp=Z,43nm,0.5s
TNCH                                 pmax     pmax
      comp=Z,730nm,2.7s
TNCH                                 LR       LR
      comp=Z,7µm,19.1s
TNCH                                 LR       LR
      comp=Z,10µm,18.3s
TNCH                                 LR       LR
      comp=Z,15µm,18.0s
DAV   Davao City (W)     93.66 286   LR       LR       04 23 28.9
      comp=Z,12µm,22.0s,baz=54,slow=30
DAV   Davao City (W)     93.66 286   IAMs_20  IAMs_20  04 22 43.9
      comp=Z,13µm,22.0s
CSS   Mathiatis          93.75  14   IAMs_20  IAMs_20  04 33 20.2
      comp=Z,12µm,22.0s
KBL   Kabul              93.76 344   P        P        03 49 13.6 -5.6
      SNR=22
KBL                                  P        P        03 49 13.6 -5.6
      SNR=22
KBL   Kabul              93.76 344   P        P        03 49 18.7 -0.5
KBL                                  IAmb     IAmb     03 49 27.4
      comp=Z,47nm,1.1s
KBL   Kabul              93.76 344   P        P        03 49 18.7 -0.5
KBL                                  pmax     pmax
      comp=Z,47nm,1.1s
NIL   Nilore             93.82 341   P        P        03 49 16.6 -2.6
NIL                                  P        P        03 49 16.6 -2.6
NIL   Nilore             93.82 341   P        P        03 49 17.9 -1.3
NIL   Nilore             93.82 341   IAMs_20  IAMs_20  04 37 14.0
      comp=Z,10µm,19.0s
NIL   Nilore             93.82 341   P        P        03 49 17.9 -1.3
NIL                                  pmax     pmax
      comp=Z,123nm,1.0s
TAWA  Tawang             93.94 324  eP        P        03 49 16.8 -3.4
MOKO  MOKOCHONG          94.04 321  eP        P        03 49 20.9 +0.4
PP1B  Ponte de Pedra     94.28 112  eP        P        03 49 21.9 +0.6
JMU   Jammu              94.31 339  eP        P        03 49 21.4 -0.1
TEZP  TEZPUR             94.46 322  eP        P        03 49 22.6 +0.4
DHRM  DHARAMSHALA        94.47 338  eP        P        03 49 22.8 +0.3
DHRM                                 IAmb     IAmb     03 49 36.7
      comp=Z,40nm,1.1s
ARAG  Araguaiana, MT     94.64 109  eP        P        03 49 24.4 +1.5
KLP   Kalpa              94.67 336  eP        P        03 49 23.4 -0.1
LCO   Las Campanas       94.87 131   P        P        03 49 22.9 -1.2
LCO                                  IAmb     IAmb     03 49 30.0
      comp=Z,40nm,1.2s
LCO   Las Campanas       94.87 131   P        P        03 49 22.9 -1.2
LCO                                  pmax     pmax
      comp=Z,40nm,1.3s
AC05  El Transito        94.93 130   IAmb     IAmb     03 49 29.1
      comp=Z,36nm,1.0s
JOSI  Joshimath          95.24 335  eP        P        03 49 26.2 +0.3
BHK   Bhakra             95.27 338  eP        P        03 49 25.0 -0.8
BHK                                  IAmb     IAmb     03 49 37.2
      comp=Z,40nm,1.0s
SMLA  Simla              95.33 337  eP        P        03 49 26.4 +0.4
GTK   Tadong             95.39 326  eP        P        03 49 26.6  0.0
GTK                                  IAmb     IAmb     03 49 39.1
      comp=Z,43nm,1.0s
BDQN  Bodoquena, MS      95.41 116  eP        P        03 49 27.0 +0.6
IMP   Imphal             95.59 321  eP        P        03 49 28.3 +0.8
SHL   Shillong           95.76 323   P        P        03 49 24.1 -4.3
      SNR=7.5
DDI   Dehra Dun          95.86 336  eP        P        03 49 29.1 +0.5
DDI                                  IAmb     IAmb     03 49 36.6
      comp=Z,200nm,0.1s
MMAI  Mount Meron Ar     95.96  12   LR       LR       04 37 35.5
      comp=Z,5µm,18.2s,baz=345,slow=39
PTH   Pithoragarh        95.98 334  eP        P        03 49 29.6 +0.3
COBR  COOCHBEHAR         96.01 325  eP        P        03 49 30.8 +1.5
SDBA  SAO DESIDERIO      96.38 102  eP        P        03 49 30.7 -0.3
KKR   Kurukshetra        96.53 337  eP        P        03 49 31.8 +0.2
TKRD  Thakurdwara        96.77 335  eP        P        03 49 33.2 +0.5
BDFB  Brasilia           96.91 106   LR       LR       04 36 09.5
      comp=Z,7µm,21.5s,baz=329,slow=37
ASF   Jabal al Asfar     96.98  11   LR       LR       04 35 34.9
      comp=Z,9µm,22.0s,baz=347,slow=37
RCBR  Riachuelo          97.09  91   IAMs_20  IAMs_20  04 30 17.3
      comp=Z,12µm,20.0s
FAKI  Fak Fak            97.16 274   IAMs_20  IAMs_20  04 27 45.3
      comp=Z,8µm,19.0s
TAM   Tamanrasset        97.23  41   IAMs_20  IAMs_20  04 38 25.6
      comp=Z,9µm,18.0s
SRGN  SRI GANGA NAGA     97.27 339  eP        Pdif     03 49 35.0  0.0
TNTI  Ternate            97.42 280   IAMs_20  IAMs_20  04 24 29.5
      comp=Z,9µm,22.0s
RTK   Rohtak             97.52 337  eP        Pdif     03 49 37.3 +1.2
NDI   New Delhi          97.64 336  eP        Pdif     03 49 37.3 +0.6
SHBG  Sahibganj          97.64 326  eP        Pdif     03 49 36.9 +0.1
GHAJ  Ghor Haditha       97.66  12   IAMs_20  IAMs_20  04 36 55.1
      comp=Z,5µm,20.0s
NPLP  NPLP New Delhi     97.70 336  eP        Pdif     03 49 37.8 +0.9
SAIH  SAIHA              98.08 320  eP        Pdif     03 49 39.5 +0.6
BRDH  Bariadhala         98.45 322   LR       LR       04 38 05.0
      comp=Z,13µm,19.3s,baz=34,slow=38
OUZ   Omahuta            98.68 224   IAMs_20  IAMs_20  04 25 02.4
      comp=Z,8µm,20.0s
MXZ   Matakaoa Point     98.68 219   IAMs_20  IAMs_20  04 24 36.6
      comp=Z,6µm,20.0s
CHTO  Chiang Mai         98.72 314   IAMs_20  IAMs_20  04 35 25.8
      comp=Z,7µm,21.0s
CHTO  Chiang Mai         98.72 314   P        Pdif     03 49 44.1 +2.5
GAYA  Gaya               98.88 328  eP        Pdif     03 49 42.4 +0.1
GAYA                                 IAmb     IAmb     03 49 49.1
      comp=Z,22nm,1.1s
CMAR  Chiang Mai Arr     99.03 314   P        Pdif     03 49 42.2 -0.8
      comp=Z,2.4nm,0.3s,baz=9.6,slow=4.7,SNR=18
      comp=Z,2.4nm,0.3s
CMAR  Chiang Mai Arr     99.03 314   P        Pdif     03 49 41.6 -1.4
CMAR  Chiang Mai Arr     99.03 314 i P        Pdif     03 49 43.5 +0.5
CMAR                                 pmax     pmax
      comp=Z,2.0nm,0.3s
EIL   Elat               99.18  13   LR       LR       04 36 48.6
      comp=Z,6µm,21.8s,baz=338,slow=37
BOK   Bokaro             99.58 327  eP        Pdif     03 49 45.8 +0.4
BOK                                  IAmb     IAmb     03 49 53.8
      comp=Z,28nm,1.2s
CPUP  Villa Florida      99.69 120   P        Pdif     03 49 45.7 +0.1
      comp=Z,4.3nm,1.1s,baz=328,slow=7.6,SNR=6.1
CPUP                                 LR       LR       04 38 56.7
      comp=Z,3µm,21.9s,baz=346,slow=38
      comp=Z,4.3nm,1.1s
URZ   Urewera            99.76 220   LR       LR       04 29 07.6
      comp=Z,7µm,19.3s,baz=40,slow=32
TOZ   Tahuroa Road       99.98 221   IAMs_20  IAMs_20  04 27 03.9
      comp=Z,8µm,20.0s
RTZ   Ruatahuna         100.12 219   IAMs_20  IAMs_20  04 27 28.7
      comp=Z,7µm,21.0s
BI05  Punta Hualpn      100.17 137   IAMs_20  IAMs_20  04 29 04.4
      comp=Z,5µm,20.0s
JHNI  Jhansi            100.33 334  eP        Pdif     03 49 48.9 +0.2
JHNI                                 IAmb     IAmb     03 49 55.5
      comp=Z,24nm,0.3s
AJM   Ajmer             100.45 338  eP        Pdif     03 49 49.3  0.0
AJM                                  IAmb     IAmb     03 50 00.0
      comp=Z,21nm,0.3s
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BKZ	Black Stump Fm	100.78	219	IAMs_20	IAMs_20	04 27 52.4	
	comp=Z,6µm,21.0s						
HIZ	Hauiti	100.91	221	IAMs_20	IAMs_20	04 29 30.6	
	comp=Z,5µm,20.0s						
CTAO	Charters Tower	101.33	252	IAMs_20	IAMs_20	04 28 00.2	
	comp=Z,6µm,20.0s						
LR04	Corral	102.69	139	IAMs_20	IAMs_20	04 33 31.1	
	comp=Z,5µm,18.0s						
BHPL	Bhopal	102.76	334	*e*P	Pdif	03 50 00.5	+0.9
BHPL				IAmb	IAmb	03 50 06.7	
	comp=Z,13nm,1.1s						
LR03	Panguipulli	102.95	138	IAMs_20	IAMs_20	04 33 59.8	
	comp=Z,6µm,19.0s						
SPB	Sao Paulo	103.31	111	IAMs_20	IAMs_20	04 40 22.4	
	comp=Z,11µm,20.0s						
NRDN	NARMADA NAGAR	103.33	334	*e*P	Pdif	03 49 59.8	-2.3
SNZO	South Karori	103.33	220	IAMs_20	IAMs_20	04 29 01.6	
	comp=Z,7µm,20.0s						
NNZ	Nelson	103.79	220	IAMs_20	IAMs_20	04 38 12.0	
	comp=Z,5µm,18.0s						
QRZ	Quartz Range	103.82	221	IAMs_20	IAMs_20	04 27 49.7	
	comp=Z,7µm,20.0s						
LL05	Los Muermos	103.95	140	IAMs_20	IAMs_20	04 34 10.3	
	comp=Z,5µm,20.0s						
TORD	Torodi Ar. Bea	103.97	49	PKiKP	PKiKP	03 54 21.4	-1.1
	comp=Z,1.2nm,1.0s,baz=339,slow=1.6,SNR=4.1						
THZ	Tophouse	104.44	220	IAMs_20	IAMs_20	04 30 14.2	
	comp=Z,7µm,22.0s						
UOSS	Minazif	104.79	354	IAMs_20	IAMs_20	04 45 22.4	
	comp=Z,5µm,20.0s						
DSZ	Denniston Nort	104.89	221	IAMs_20	IAMs_20	04 28 51.0	
	comp=Z,6µm,20.0s						
LL07	Hotel Espejo d	105.13	141	IAMs_20	IAMs_20	04 31 29.7	
	comp=Z,5µm,20.0s						
GO07	Milladeo Hill,	105.29	141	IAMs_20	IAMs_20	04 34 42.0	
	comp=Z,6µm,20.0s						
BKB	Balikpapan	105.51	287	IAMs_20	IAMs_20	04 31 43.5	
	comp=Z,5µm,22.0s						
INZ	Inchbonnie	105.85	221	IAMs_20	IAMs_20	04 29 37.4	
	comp=Z,7µm,20.0s						
RAYN	Ar Rayn	106.30	4	IAMs_20	IAMs_20	04 43 49.6	
	comp=Z,7µm,22.0s						
SOEI	Soe	107.46	276	IAMs_20	IAMs_20	04 31 11.9	
	comp=Z,6µm,21.0s						
HYB	Hyderabad	107.93	331	*e*PKiKP	PKiKP	03 54 29.6	-0.2
HYB				*e*sPKiKP	sPKiKP	03 54 32.7	-0.6
HYB				*e*PP	PP	03 54 50.2	-0.4
HYB				*e*SKSac	SKSac	04 01 02.5	-0.5
HYB				*e*SP	SP	04 04 12.7	0.0
HYB				IVMs_BB	IVMs_BB	04 43 51.2	
	comp=Z,3µm,17.3s						
WRAB	Tennant Creek	108.62	261	IAMs_20	IAMs_20	04 32 40.3	
	comp=Z,9µm,21.0s						
KULM	Kulim	109.47	305	IAMs_20	IAMs_20	04 45 42.5	
	comp=Z,4µm,20.0s						
IPM	Ipoh	109.96	304	IAMs_20	IAMs_20	04 42 45.5	
	comp=Z,6µm,20.0s						
PYZ	Puysegur Point	110.64	222	IAMs_20	IAMs_20	04 37 52.0	
	comp=Z,6µm,20.0s						
LHMI	Lhok Sumawe	111.42	309	IAMs_20	IAMs_20	04 50 11.0	
	comp=Z,5µm,20.0s						
ASAR	Alice Springs	111.63	259	PKiKP	PKiKP	03 54 37.7	+1.3
	comp=Z,2.0nm,0.9s,baz=46,slow=1.8,SNR=4.1						
ASAR				PKKPbc	PKKPbc	04 05 28.2	-0.4
	comp=Z,0.3nm,0.8s,baz=236,slow=1.9,SNR=4.3						
ASAR				PKKPab	PKKPab	04 05 39.3	+1.1
	comp=Z,1.2nm,0.8s,baz=208,slow=3.1,SNR=6.3						
ASCN	Ascension	112.34	75	IAMs_20	IAMs_20	04 36 58.4	
	comp=Z,8µm,21.0s						
STKA	Stephens Creek	112.85	247	PKKPab	PKKPab	04 05 33.0	+1.0
	comp=Z,3.2nm,0.9s,baz=260,slow=7.4,SNR=5.8						
MNSI	Mandailing Nat	113.83	304	P	Pdif	03 50 48.5	-0.3
GSI	Gunungsitoli	114.45	306	IAMs_20	IAMs_20	04 46 49.3	
	comp=Z,6µm,20.0s						
EDA	Edea	116.12	45	IAMs_20	IAMs_20	04 49 01.8	
	comp=Z,9µm,20.0s						
PALK	Pallekele	116.68	325	IAMs_20	IAMs_20	04 45 29.8	
	comp=Z,5µm,22.0s						
EFI	East Falkland	118.55	138	IAMs_20	IAMs_20	04 54 23.7	
	comp=Z,5µm,19.0s						
MBWA	Marble Bar	118.83	271	IAMs_20	IAMs_20	04 41 16.0	
	comp=Z,5µm,20.0s						
HMDM	Hanimaadhoo	119.61	333	IAMs_20	IAMs_20	04 53 17.8	
	comp=Z,6µm,21.0s						
FURI	Furi	120.14	13	IAMs_20	IAMs_20	04 54 17.4	
	comp=Z,7µm,18.0s						
SHEL	Horse Pasture	123.84	73	IAMs_20	IAMs_20	04 40 44.9	
	comp=Z,6µm,21.0s						
LODK	Lodwar	124.94	18	IAMs_20	IAMs_20	04 55 34.6	
	comp=Z,8µm,19.0s						
KAAM	Kaadhehdhoo	125.62	331	IAMs_20	IAMs_20	04 59 40.2	
	comp=Z,5µm,22.0s						
MBAR	Mbarara	127.76	25	IAMs_20	IAMs_20	04 52 58.1	
	comp=Z,6µm,21.0s						
NWAO	Narrogin (SRO)	128.58	263	IAMs_20	IAMs_20	04 49 17.0	
	comp=Z,5µm,19.0s						
KIBK	Kibwezi	131.06	16	P	Pdif	03 51 57.4	-8.2
KIBK	Kibwezi	131.06	16	IAMs_20	IAMs_20	04 57 33.3	
	comp=Z,6µm,19.0s						
SBA	Scott Base	133.62	195	IAMs_20	IAMs_20	04 45 34.4	
	comp=Z,5µm,18.0s						
MSEY	Mahe Island	134.20	352	IAMs_20	IAMs_20	05 01 48.7	
	comp=Z,5µm,19.0s						
TSUM	Tsumeb	139.64	51	PKPdf	PKPdf	03 55 29.9	0.0
QSPA	South Pole Qui	140.20	180		PKPdf	03 55 29.7	+0.3
LSZ	Lusaka	140.79	34	P	Pdif	03 52 42.4	-6.4
LSZ	Lusaka	140.79	34		PKPdf	03 55 31.1	-1.0
LSZ	Lusaka	140.79	34	PKIKP	PKPdf	03 55 31.1	-1.0
LSZ				MLR	MLR		
	comp=Z,13µm,20.0s						
GRTLG	Ghanzi	143.26	49	*i* P	PKPbc	03 55 33.6	+0.2
KOOLE	Kule	144.13	51	*i* P	PKPab	03 55 35.3	-0.2
KGCAE	Kacgae	145.00	48	*i* P	PKPab	03 55 38.5	-0.2
LKGWB	Lokgwabe	145.58	51	*i* P	PKPdf	03 55 38.8	-1.5
KHWEE	KHWEE	145.71	43	*i* P	PKPbc	03 55 41.0	0.0
BROLN	Tlhalogang	145.75	40	*i* P	PKPdf	03 55 39.8	-0.9
CASY	Casey	146.09	219	PKPdf	PKPbc	03 55 40.4	-0.3
CASY	Casey	146.09	219	IAMs_20	IAMs_20	04 54 13.4	
	comp=Z,4µm,19.0s						
VNA3	Neumayer Olymp	146.28	150	⇑P	PKiKP	03 55 44.3	+0.1
	comp=Z,65nm,0.9s						
VNA1	Neumayer--Stat	146.80	149	⇑P	PKiKP	03 55 45.7	+0.5
	comp=Z,62nm,0.9s						
VNA2	Neumayer--Watz	147.05	149	⇑P	PKiKP	03 55 46.5	+0.7
	comp=Z,30nm,0.7s,baz=284,slow=4.5						
MREMI	Moremi	147.11	41	*i* P	PKPdf	03 55 43.2	+0.3
LPHEP	Lephephe	147.13	44	*i* P	PKPdf	03 55 42.4	-0.6
SKOMA	Sekoma	147.24	48	*i* P	PKPdf	03 55 42.5	-0.6
SNAA	Sanae	148.36	151	⇑P	PKPab	03 55 49.9	-0.3
	comp=Z,784nm,0.9s						
SNAA	Sanae	148.36	151	PKPbc	PKiKP	03 55 48.7	+0.2
	comp=Z,13nm,1.0s,baz=241,slow=5.1,SNR=8.8						
SNAA	Sanae	148.36	151		PKPdf	03 55 43.4	-0.1
SNAA				IAMs_20	IAMs_20	05 07 39.4	
	comp=Z,6µm,19.0s						
SNAA	Sanae	148.36	151	PKIKP	PKPdf	03 55 43.4	-0.1
LBTB	Lobatse	148.44	46		PKPdf	03 55 45.9	+0.9
LBTB	Lobatse	148.44	46	PKIKP	PKPdf	03 55 45.9	+0.9
TROLL	Troll, Antarti	149.87	153	⇑P	PKiKP	03 55 52.6	+0.9
	comp=Z,2µm,1.4s						
RER	Riviere de l'E	150.47	349	IAMs_20	IAMs_20	05 11 26.2	
	comp=Z,5µm,22.0s						
BOSA	Boshof	151.32	50	PKPbc	PKPbc	03 55 54.9	-0.6
	comp=Z,32nm,1.1s,baz=330,slow=2.6,SNR=18						
VOI	Vohitsoka	151.46	6	P	PKPdf	03 55 43.9	-6.1
VOI	Vohitsoka	151.46	6	IAMs_20	IAMs_20	05 06 10.1	
	comp=Z,5µm,21.0s						
SUR	Sutherland	151.94	61	P	PKPdf	03 55 44.5	-6.0
SUR	Sutherland	151.94	61		PKPbc	03 55 55.6	-1.3
NVL	N'lazarevskaya	153.10	153	*e*PKIKP	PKPdf	03 55 52.0	+1.3
NVL				*e*		03 59 45.5	
NVL				*e*PPP	PPP	04 03 12.7	
NVL				*e*SS	SS	04 19 20.7	+4.2
NVL				*e*SSS	SSS	04 25 10.0	
NVL				pmax	pmax		
	comp=Z,24nm,0.9s						
ELIB	Princess Elisa	155.29	160	*d*PKPdf	PKPdf	03 55 54.8	+0.9
AIS	Amsterdam Isla	156.66	292	IAMs_20	IAMs_20	05 22 40.3	
	comp=Z,5µm,20.0s						
SYO	Syowa Base	160.67	169	⇑*e*PKPdf	PKPdf	03 56 01.6	+1.2
SYO	Syowa Base	160.67	169	⇓*e*PKPab	PKPab	03 56 44.0	+1.7

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*IDC **25** 03:38:43.4±4.3, 36°.28N×70°.95E, h168^{km}±38^{km}, mb3.4/9, mbtmp3.9/14, Error ellipse: s-maj=28.9km s-min=17.1km az=24.0*

*NNC **25** 03:38:52.1±2.6, 36°.93N×70°.86E, h189^{km}±29^{km}, mb2.8, mpv3.7, Error ellipse: s-maj=25.0km s-min=17.8km az=47.0*

ISC 25 03:38:46.4±1.0**, 36°.55N**±0°.09×**70°.93E**±0°.10**, h188^{km}, n26, σ1^s.54**/31**, mb3.4**/7**, 6C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UCH	Uchtor	6.31	25	P	Pn	03 40 19.3	+1.5
	SNR=34						
EKS2	Erkin-Say	6.48	19	P	Pn	03 40 21.5	+1.7
	SNR=8.0						
KK31	Karatay Array	6.55	357	P	Pn	03 40 22.3	+1.7
	2.4nm,0.4s,baz=174,slow=11,SNR=55						
KK31				⇑S	Sn	03 41 32.1	-3.0
	3.9nm,0.3s,baz=178,slow=22,SNR=10						
AAK	Ala-Archa	6.67	23	P	Pn	03 40 23.8	+1.6
	SNR=16						
AAK	Ala-Archa	6.67	23	P	Pn	03 40 23.4	+1.1
	9.0nm,0.3s,baz=169,slow=5.2,SNR=49						
AAK				S	Sn	03 41 36.1	-2.0
	4.5nm,0.4s,baz=248,slow=4.2,SNR=4.8						
AAK	Ala-Archa	6.67	23	⇑P	Pn	03 40 23.6	+1.4
	4.5nm,0.6s						
AAK				⇑S	Sn	03 41 37.0	-1.1
	3.9nm,0.5s						
KBK	Karagaybulak	6.84	26	P	Pn	03 40 27.0	+2.5
	SNR=11						
ULHL	Ulahol	7.01	34	P	Pn	03 40 28.3	+1.5
	SNR=14						
CHMS	Chumysh	7.08	23	P	Pn	03 40 29.5	+2.0
	SNR=7.2						
USP	Ospenovka	7.24	21	P	Pn	03 40 31.3	+1.7
	SNR=6.3						
TKM2	Tokmak 2	7.30	28	P	Pn	03 40 32.2	+1.6
	SNR=8.0						
MKAR	Makanchi Array	13.28	36	P	Pn	03 41 47.3	-0.3
	1.8nm,0.6s,baz=217,slow=9.9,SNR=14						
AB31	Akbulak array	15.01	331	⇑P	Pn	03 42 08.9	-0.1
	1.4nm,0.7s,baz=148,slow=12,SNR=31						
AB31				⇓S	S	03 44 54.6	-2.2
	3.0nm,1.1s						
KURBB	Kurchatov Arra	15.09	19	P	Pn	03 42 09.9	-0.1
	0.4nm,0.4s,baz=204,slow=11,SNR=2.0						
BVAR	Borovoye Array	16.47	359	P	P	03 42 26.2	+0.1
	1.0nm,0.4s,baz=171,slow=11,SNR=6.3						
AKTO	Aktyubinsk	16.71	330	P	P	03 42 30.2	+1.6
	3.5nm,0.4s,baz=144,slow=9.0,SNR=16						
AKTO	Aktyubinsk	16.71	330	⇑P	P	03 42 30.1	+1.5
	1.9nm,0.6s						
AKTO				⇑S	S	03 45 32.9	-0.3
	1.5nm,1.2s						
ZALV	Zalesovo Beam	19.89	25	P	P	03 43 02.6	-0.5
	1.3nm,0.5s,baz=229,slow=11,SNR=3.9						
	1.3nm,0.5s						
SONM	Songino Array	28.35	55	P	P	03 44 23.6	+0.8
	0.4nm,0.8s,baz=246,slow=11,SNR=2.0						
	0.4nm,0.8s						
FINES	FINESS Array B	37.41	326	P	P	03 45 41.8	+0.9
	1.2nm,0.4s,baz=117,slow=9.5,SNR=22						
	1.2nm,0.4s						
ARCES	ARCESS Array B	41.07	338	P	P	03 46 12.4	+1.3
	12nm,0.9s,baz=118,slow=7.8,SNR=13						
	12nm,0.9s						
HFS	Hagfors	42.99	322	P	P	03 46 27.7	+0.9
	1.4nm,0.6s,baz=94,slow=12,SNR=13						
	1.4nm,0.6s						
TORD	Torodi Ar. Bea	65.67	269	P	P	03 49 09.4	-1.4
	0.6nm,0.5s,baz=47,slow=7.5,SNR=12						
	0.6nm,0.5s						
YKA	Yellowknife Ar	81.19	3	P	P	03 50 40.9	+0.3
	0.4nm,0.6s,baz=23,slow=8.3,SNR=6.4						
	0.4nm,0.6s						
WRA	Warramunga Arr	82.06	122	P	P	03 50 44.3	-1.6
	0.5nm,0.9s,baz=318,slow=5.2,SNR=1.5						
	0.5nm,0.9s						
ASAR	Alice Springs	84.33	125	P	P	03 50 56.0	-1.4
	0.3nm,0.5s,baz=310,slow=4.8,SNR=10						
	0.3nm,0.5s						

CATAC 25 03:45:10.3±0.3**, 12°N**±1°×**8°7W**±°**, h4^{km}**±1^{km}**, M2.7**/17**, MLv2.7**/17**, Error ellipse: s-maj=2.7km s-min=2.5km az=48.6, confirmed, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOM2	El Cardon	0.08	143	P	Pg	03 45 13.1	+1.0
MOM2				S	Sg	03 45 15.0	+1.8
MOMN	Momotombo	0.09	185	P	Pg	03 45 12.8	+0.5
CNGN	Cerro Negro	0.16	271	P	Pg	03 45 14.1	+0.5
CNGN				S	Sg	03 45 16.6	+0.8
CNGN	Cerro Negro	0.16	271	P	Pg	03 45 13.8	+0.2
CNGA	Al SSO del Vol	0.17	269	P	Pg	03 45 14.0	+0.4
CNGA				S	Sg	03 45 16.7	+0.9
AMTN	Mateare	0.28	159	S	Sg	03 45 19.9	+0.5
POLN	Al Sur del Vol	0.31	299	P	Pg	03 45 17.1	+0.6
TEL3	Telica 3	0.31	284	P	Pg	03 45 16.5	0.0
APYN	Apoyeque	0.32	146	P	Pg	03 45 16.9	+0.4
COPN	Copaltepe	0.32	190	P	Pg	03 45 16.8	+0.2
QUEN	Al S del Volca	0.33	287	P	Pg	03 45 16.4	-0.2
ALEN	Leon	0.33	263	P	Pg	03 45 17.8	+0.9
ALEN	Leon	0.33	263	S	Sb	03 45 23.1	-1.5
TISN	Laguna Tiscapa	0.44	144	P	Pg	03 45 19.4	+0.6
UNAN	Cigeo UNAN	0.46	146	P	Pg	03 45 20.0	+0.7
UNAN				S	Sg	03 45 26.4	+1.1
PKGN	Cerro Pekin	0.47	291	P	Pb	03 45 20.3	-0.8
LIMN	Finca el Limon	0.58	16	P	Pg	03 45 22.2	+0.6
LIMN				S	Sb	03 45 30.6	-1.3
NANN	Nandasmo	0.69	144	P	Pb	03 45 24.7	-0.2
MATN	Matagalpa	0.73	54	P	Pg	03 45 23.7	-0.8
MATN	Matagalpa	0.73	54	S	Sg	03 45 34.6	+0.7
RCON	San Juan de Ri	1.05	20	P	Pg	03 45 30.2	-0.2
RCON	San Juan de Ri	1.05	20	S	Sb	03 45 44.7	-0.5
RCPN	Sur Rio San Ju	1.11	23	P	Pg	03 45 31.1	-0.5
RCPN	Sur Rio San Ju	1.11	23	S	Sb	03 45 46.5	-0.4

ROM 25 03:45:27.2±0.1**, 42°.552N**±0°.004×**13°.102E**±0°.006**, h14^{km}, ML1.2**/10**, 1C-1D, Error ellipse: s-maj=0.5km s-min=0.1km az=333.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNSS	Leonessa	0.07	318	⇓P	Pg	03 45 30.6	+0.3
LNSS				S	Sg	03 45 32.4	+0.2
LNSS				AML	AML		
	comp=E,144µm,1.5s						
LNSS				AML	AML		
	comp=N,184µm,0.4s						
LNSS				AML	AML		
	comp=E,122µm,0.1s						
LNSS				AML	AML		
	comp=N,105µm,0.1s						
LNSS				AML	AML		
	comp=E,112µm,0.2s						
RM33	Pellescritta (	0.09	117	P	Pg	03 45 30.8	+0.4
RM33				S	Sg	03 45 32.9	+0.3
RM33				AML	AML		
	comp=E,146µm,0.1s						
RM33				AML	AML		
	comp=N,245µm,0.2s						
RM33				AML	AML		
	comp=E,146µm,0.1s						
RM33				AML	AML		
	comp=N,196µm,0.1s						
SMA1	SAN MARTINO	0.19	66	⇑P	Pb	03 45 32.3	-0.2
SMA1				S	Sb	03 45 35.4	-0.6
SMA1				AML	AML		
	comp=E,112µm,0.5s						
SMA1				AML	AML		
	comp=N,196µm,0.5s						
SMA1				AML	AML		
	comp=E,92µm,0.2s						
SMA1				AML	AML		
	comp=N,168µm,0.2s						
CAMP	Campotosto	0.23	94	P	Pg	03 45 32.5	+0.2
CAMP				S	Sg	03 45 36.3	+0.5
ARRO	Arrone	0.25	276	P	Pb	03 45 33.3	-0.1
ARRO				S	Sg	03 45 36.7	+0.5
ARRO				AML	AML		
	comp=E,27µm,0.6s						
ARRO				AML	AML		
	comp=N,49µm,1.4s						
ARRO				AML	AML		
	comp=E,24µm,0.2s						
NRCA	Norcia	0.28	2	P	Pg	03 45 33.5	+0.3
NRCA				S	Sg	03 45 37.7	+0.4
NRCA				AML	AML		
	comp=E,89µm,0.1s						
NRCA				AML	AML		
	comp=N,104µm,0.1s						
FIAM	Fiamignano	0.28	178	P	Pg	03 45 33.2	0.0
FIAM				S	Sb	03 45 38.3	-0.4
GIGS	Gran Sasso	0.36	106	P	Pg	03 45 34.8	+0.2
GIGS				S	Sg	03 45 40.1	+0.5
GIGS				AML	AML		
	comp=E,3µm,0.4s						
GIGS				AML	AML		
	comp=N,8µm,0.3s						
MMO1	Montemonaco	0.38	25	P	Pg	03 45 35.4	+0.3
MMO1				S	Sb	03 45 41.1	-0.5

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*IDC **25** 03:45:43.8±0.6, 22°.00S×173°.56E, h0^{km}, mb4.5/19, mbtmp4.5/20, ML3.9/1, MS4.9/7, Error ellipse: s-maj=20.2km s-min=16.5km az=138.0*

*BGR **25** 03:45:44.0, 23°.31S×175°.08E, h33^{km}*

*NEIC **25** 03:45:46.8±2.0, 21°.98S±0°.07×173°.50E±0°.09, h10^{km}±1^{km}, mb5.1/67, Error ellipse: s-maj=14.6km s-min=11.2km az=117.0*

*GCMT **25** 03:45:48.8±0.4, 21°.88S±0°.03×173°.58E±0°.02, h18^{km}±2^{km}, MW5.3/79, Moment Tensor Solution. s11,c13; s79,c109; Duration: 1^s.1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.94±.14; $M_{\theta\theta}$-0.10±.08; $M_{\phi\phi}$1.04±.09; $M_{r\theta}$0.08±.19; $M_{\theta\phi}$0.74±.04; $M_{\phi r}$-0.05±.14; Best double couple: $M_0$1.18200×10^{17} NP1:ϕ_s217.00000°, δ46.00000°, λ-74.00000°. NP2:ϕ_s15.00000°, δ46.00000°, λ-105.00000°. Principal axes: T 1.4060, Plg0.0000°, Azm116.0000°; N -0.4430, Plg11.0000°, Azm26.0000°; P -0.9580, Plg79.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **25** 03:45:49.0, 22°.00S×173°.50E, h40^{km}, mb4.9/37*

*NOU **25** 03:45:52.0, 22°.41S×173°.53E, h34^{km}, mb5.0/83, Southeast of Loyalty Islands*

ISC 25 03:45:49.8±0.4**, 22°.10S**±0°.06×**173°.62E**±0°.07**, h35^{km}, n298, σ1^s.43**/280**, mb4.9**/102**, MS4.7**/6**, 1C-11D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INH	Isangel	4.79	301	P	Pn	03 46 59.7	+0.3
MARNC	Mare, Loyalty	5.23	276		Pn	03 47 05.0	-0.5
MARNC	Mare, Loyalty	5.23	276	P	Pn	03 47 09.4	+3.9
	0.8nm,1.3s						
PINNC	Pines Island,	5.73	264		Pn	03 47 10.9	-1.6
PINNC	Pines Island,	5.73	264	P	Pn	03 47 12.5	+0.1
	201nm,1.3s						
MSVF	Nonsavu	6.02	45		Pn	03 47 16.7	+0.3
MSVF	Nonsavu	6.02	45	P	Pn	03 47 22.0	+5.5
	138nm,1.6s						
YATNC	Mamie plateau,	6.24	269	P	Pn	03 47 18.6	-0.8
	98nm,1.0s						
OUENC	Ouen Island, N	6.28	266	P	Pn	03 47 19.7	-0.3
	97nm,1.2s						
DZM	Mont Dzumac	6.65	269	Pn	Pn	03 47 23.6	-1.5
	2.6nm,0.3s,baz=76,slow=18,SNR=10						
	16nm,0.8s						
DZM	Mont Dzumac	6.65	269		Pn	03 47 24.2	-0.9
DZM	Mont Dzumac	6.65	269	P	Pn	03 47 25.2	+0.1
	126nm,1.1s						
DVP	Devils Point	6.71	309	P	Pn	03 47 32.1	+6.3
	2µm,1.4s						
KOUNC	Koumac, New Ca	8.83	278	P	Pn	03 47 58.6	+3.6
	117nm,1.0s						
SANVU	Saraoutou	8.98	316	P	Pn	03 48 04.1	+7.1
	134nm,1.3s						
RAO	Raoul Island	10.44	135	LR	LR	03 51 35.4	
	comp=Z,7µm,19.0s,baz=348,slow=33						
OUZ	Omahuta	13.08	180	P	Pn	03 48 51.6	-1.4
HURO	Huro Makira	16.11	314	P	P	03 49 36.9	+0.2
	144nm,2.0s						
URZ	Urewera	16.39	170	Pn	Pn	03 49 40.1	+3.0
	0.5nm,0.3s,baz=326,slow=7.3,SNR=3.1						
URZ				LR	LR	03 54 31.4	
	comp=Z,2µm,21.1s,baz=351,slow=32						
NGOA	Tingoa Renbel	16.66	307	P	P	03 49 45.2	+2.4
	428nm,1.3s						
RTZ	Ruatahuna	16.72	171	P	P	03 49 46.8	+3.4
BKZ	Black Stump Fm	17.19	172	P	P	03 49 52.1	+3.5
SAVO	Savo Central	18.48	312	P	Pn	03 50 07.6	+4.4
	113nm,1.3s						
MRZ	Mangatainoka R	18.58	175		Pn	03 50 06.2	+1.9
TATA	Tatamba Isabel	19.04	314	P	Pn	03 50 14.2	+4.3
	91nm,0.9s						
AUWSH	Wavell State H	19.41	250	P	Pn	03 50 13.8	-0.5
	87nm,1.8s						
TW1H	Toowoomba 1 Ha	20.37	250	P	P	03 50 24.0	+0.5
	80nm,1.0s						
LTZ	Lake Taylor	20.66	183	P	P	03 50 28.3	+1.8
LTZ				IAmb	IAmb	03 50 34.9	
	comp=Z,79nm,1.4s						
GD1S	Gladstone Soft	20.74	261	P	Pn	03 50 28.7	-1.3
EIDS	Eidsvold	20.88	257		P	03 50 28.0	-1.0
EIDS				IAmb	IAmb	03 50 41.9	
	comp=Z,108nm,1.4s						
EIDS	Eidsvold	20.88	257	P	Pn	03 50 32.8	+1.1
	comp=Z,64nm,1.5s						
AUNRC	North Rockhamp	21.33	262	P	P	03 50 35.7	+1.9
	comp=Z,58nm,1.5s						
ARMA	Armidale	21.36	243		P	03 50 32.8	-1.5
ARMA	Armidale	21.36	243	P	P	03 50 34.2	-0.1
	comp=Z,53nm,2.3s						
AUPHS	Peel High Scho	22.18	241	P	P	03 50 42.9	0.0
	comp=Z,64nm,1.4s						
JCZ	Jackson Bay	22.28	189	P	P	03 50 43.0	-1.0
	comp=Z,68nm,1.3s						
RIV	Riverview	22.97	235	P	P	03 50 51.5	+0.3
	comp=Z,148nm,1.5s						
SYDH	Sydney Hard Ro	23.26	235	P	P	03 50 54.3	+0.2
	comp=Z,61nm,1.3s						
MLZ	Mavora Lakes	23.65	190		P	03 50 59.7	+1.9
MLZ				IAmb	IAmb	03 51 14.6	
	comp=Z,81nm,1.6s						
AUUHS	Ulladulla High	24.15	232	P	P	03 51 02.6	0.0
	comp=Z,75nm,1.4s						
AULRC	Lightning Ridg	24.18	247	P	P	03 51 03.5	+0.5
	comp=Z,141nm,1.4s						
AUDCS	Dubbo College	24.36	240	P	P	03 51 05.1	+0.5
	comp=Z,35nm,0.9s						
RAR	Rarotonga	24.74	93	LR	LR	03 58 46.9	
	comp=Z,2µm,21.9s,baz=285,slow=32						
CNB	Canberra Magne	24.94	233	P	P	03 51 10.1	+0.2
	comp=Z,43nm,1.3s						
AUDAR	Daramalan Coll	25.08	233	P	P	03 51 11.1	0.0
	comp=Z,47nm,1.5s						
AUMHS	Melrose High S	25.16	233	P	P	03 51 11.5	-0.4
	comp=Z,38nm,1.3s						
AUMTS	Mt Stromlo	25.21	233	P	P	03 51 12.3	0.0
	comp=Z,33nm,1.8s						
CAN	Canberra	25.21	233	P	P	03 51 10.2	-2.2
CAN				IAmb	IAmb	03 51 17.0	
	comp=Z,39nm,1.2s						
CAN	Canberra	25.21	233	P	P	03 51 12.3	-0.1
	comp=Z,42nm,2.1s						
TV1H	Townsville Har	25.24	272	P	P	03 51 14.1	+1.4
	comp=Z,24nm,1.2s						
CTA	Charters Tower	25.59	269	P	P	03 51 15.3	-0.7
	comp=Z,12nm,1.0s,baz=93,slow=11,SNR=9.8						
CTA				LR	LR	04 00 58.5	
	comp=Z,2µm,19.2s,baz=78,slow=36						
	comp=Z,12nm,1.0s						
CTA	Charters Tower	25.59	269	P	P	03 51 17.3	+1.4
	comp=Z,0.9nm,2.4s						
CTAO	Charters Tower	25.59	269		P	03 51 15.2	-0.7
CTAO				IAmb	IAmb	03 51 16.6	
	comp=Z,40nm,1.2s						
CTAO	Charters Tower	25.59	269	P	P	03 51 17.1	+1.2
	comp=Z,12nm,2.5s						
AUSMG	Snowy Mountain	25.97	231	P	P	03 51 20.1	+0.8
	comp=Z,78nm,1.4s						
CMSA	Cobar Meteorol	26.57	243	P	P	03 51 24.5	-0.2
	comp=Z,24nm,1.4s						
QLP	Quilpie	27.11	255	P	P	03 51 30.1	+0.6
	comp=Z,40nm,1.3s						
MTSU	Mount Surprise	27.77	273	P	P	03 51 37.0	+1.4
	comp=Z,36nm,1.2s						
PMG	Port Moresby	28.36	292	P	P	03 51 38.7	-2.1

	comp=Z,4.3nm,0.5s,baz=161,slow=4.1,SNR=3.2						
PMG				LR	LR	04 01 57.6	
	comp=Z,2µm,19.4s,baz=10.0,slow=34						
	comp=Z,4.3nm,0.5s						
PMG	Port Moresby	28.36	292	P	P	03 51 39.5	-1.2
PMG				IAmb	IAmb	03 51 57.9	
	comp=Z,29nm,1.1s						
PMG	Port Moresby	28.36	292	P	P	03 51 43.6	+2.8
	comp=Z,29nm,1.1s						
PMG	Port Moresby	28.36	292	P	P	03 51 44.0	+3.2
	comp=Z,29nm,1.1s						
PMG	Port Moresby	28.36	292	P	P	03 51 41.2	+0.4
	comp=Z,951nmcomp=Z,28nm,1.1s						
GLAD	Gladstone	28.66	223	P	P	03 51 43.0	-0.2
	comp=Z,35nm,0.9s						
TOO	Toolangi	28.72	231	P	P	03 51 43.5	-0.4
BRAT	Ballarat	29.85	232	P	P	03 51 53.7	-0.1
	comp=Z,15nm,1.1s						
AUMTC	Mt Clear Colle	29.91	232	P	P	03 51 56.2	+1.9
	comp=Z,22nm,1.3s						
COEN	Coen	30.01	280	P	P	03 51 57.5	+2.0
	comp=Z,17nm,2.5s						
STKA	Stephens Creek	30.06	244	P	P	03 51 55.1	-0.6
	comp=Z,6.7nm,1.0s,baz=73,slow=8.7,SNR=14						
	comp=Z,6.7nm,1.0s						
STKA	Stephens Creek	30.06	244	P	P	03 51 54.8	-1.0
STKA	Stephens Creek	30.06	244	P	P	03 51 56.0	+0.3
	comp=Z,4.3nm,2.1s						
INKA	Innaminka	30.28	253	P	P	03 51 57.1	-0.6
QIS	Mount Isa	31.68	266	P	P	03 52 11.4	+1.2
	comp=Z,9.4nm,1.4s						
HTT	Hallett	32.57	242	P	P	03 52 18.4	+0.5
	comp=Z,25nm,1.5s						
AUMBR	Murray Bridge	32.65	239	P	P	03 52 19.3	+0.8
	comp=Z,37nm,1.6s						
AUJCS	Jamestown Cent	32.78	243	P	P	03 52 20.0	+0.3
	comp=Z,16nm,1.3s						
WHYH	Whyalla	33.61	243	P	P	03 52 27.6	+0.7
	comp=Z,31nm,0.8s						
BBOO	Buckleboo	34.83	244	P	P	03 52 37.7	+0.1
BBOO				IAmb	IAmb	03 52 38.3	
	comp=Z,55nm,1.4s						
BBOO	Buckleboo	34.83	244	P	P	03 52 37.9	+0.3
	comp=Z,24nm,0.9s						
WR8	Warramunga Arr	36.51	266	P	P	03 52 50.2	-1.9
AS31	Alice Springs	36.54	260	P	P	03 52 51.1	-1.2
ASAR	Alice Springs	36.54	260	P	P	03 52 51.0	-1.4
	comp=Z,10nm,0.9s,baz=84,slow=8.7,SNR=59						
ASAR				LR	LR	04 07 45.9	
	comp=Z,1µm,19.7s,baz=90,slow=36						
	comp=Z,10nm,0.9s						
ASAR	Alice Springs	36.54	260	P	P	03 52 50.8	-1.6
WB0	Warramunga Arr	36.64	266	P	P	03 52 51.6	-1.6
WB0				IAmb	IAmb	03 52 53.8	
	comp=Z,19nm,1.0s						
WRAB	Tennant Creek	36.65	266	P	P	03 52 50.8	-2.5
WRAB				IAmb	IAmb	03 52 52.9	
	comp=Z,89nm,2.0s						
WRA	Warramunga Arr	36.66	266	P	P	03 52 51.4	-2.0
	comp=Z,7.9nm,1.0s,baz=100,slow=8.8,SNR=20						
	comp=Z,7.9nm,1.0s						
WRA	Warramunga Arr	36.66	266	P	P	03 52 51.6	-1.8
GENI	Genyem	37.83	296	P	P	03 53 07.9	+4.6
	comp=Z,58nm,1.2s						
H11S2	WAKE ISLAND Hy	40.90	350	T	T	04 36 44.7	
	baz=171,slow=76,SNR=19						
H11S3	WAKE ISLAND Hy	40.91	350	T	T	04 36 46.8	
	baz=171,slow=76,SNR=14						
H11S1	WAKE ISLAND Hy	40.92	350	T	T	04 36 45.0	
	baz=171,slow=76,SNR=19						
MTN	Manton Dam	41.44	276	P	P	03 53 32.2	-1.2
MTN				IAmb	IAmb	03 53 33.3	
	comp=Z,39nm,1.1s						
FORT	Forrest	41.47	248	P	P	03 53 33.1	-0.4
FORT				IAmb	IAmb	03 53 33.6	
	comp=Z,50nm,1.6s						
DRS	Darwin Rock St	41.79	276	P	P	03 53 38.3	+2.1
	comp=Z,44nm,1.2s						
KNRA	Kununurra	42.80	271	P	P	03 53 43.8	-0.7
KNRA				IAmb	IAmb	03 53 44.7	
	comp=Z,72nm,1.1s						
FITZ	Fitzroy Crossi	45.09	266	P	P	03 54 02.8	0.0
FITZ				IAmb	IAmb	03 54 04.1	
	comp=Z,26nm,1.2s						
FITZ	Fitzroy Crossi	45.09	266	P	P	03 54 04.5	+1.7
	comp=Z,209nm,1.3s						
SOEI	Soe	48.81	276	P	P	03 54 29.6	-2.5
SOEI	Soe	48.81	276	P	P	03 54 34.7	+2.6
	comp=Z,70nm,1.2s						
SOEI	Soe	48.81	276	P	P	03 54 32.1	0.0
	comp=Z,2µmcomp=Z,70nm,1.3s						
PSA00	Pilbara Seismi	49.69	260	P	P	03 54 37.4	-1.2
PSA00	Pilbara Seismi	49.69	260	P	P	03 54 37.6	-1.1
PSA00				IAmb	IAmb	03 54 39.6	
	comp=Z,77nm,1.6s						
PSA00	Pilbara Seismi	49.69	260	P	P	03 54 39.1	+0.5
	comp=Z,43nm,1.7s						
MBWA	Marble Bar	49.88	260	P	P	03 54 39.1	-0.9
MBWA	Marble Bar	49.88	260	P	P	03 54 39.9	-0.1
	comp=Z,23nm,1.0s						
MEEK	Meekatharra	49.99	253	P	P	03 54 41.4	+0.5
	comp=Z,27nm,1.7s						
KLBR	Kellerberrin	50.27	247	P	P	03 54 43.2	+0.3
	comp=Z,44nm,1.0s						
SANI	Sanana	50.36	287	P	P	03 54 46.1	+2.3
	comp=Z,18nm,1.1s						
SANI	Sanana	50.36	287	P	P	03 54 42.5	-1.3
	comp=Z,18nm,1.1s						
MORW	Morawa	51.97	250	P	P	03 54 54.8	-0.9
MORW				IAmb	IAmb	03 54 59.3	
	comp=Z,86nm,1.8s						
MORW	Morawa	51.97	250	P	P	03 54 56.5	+0.8
	comp=Z,26nm,1.5s						
BASI	Baing, Sumba	52.06	274	P	P	03 54 57.4	+0.9
WSI	Waingapu	52.51	275	P	P	03 54 59.5	-0.3
WBSI	Waikabubak, Su	53.35	274	P	P	03 55 05.5	-0.7
	comp=Z,1µmcomp=Z,70nm,1.3s						
PLAI	Plampang	55.13	275	P	P	03 55 20.4	+1.3
	comp=Z,53nm,1.6s						
PLAI	Plampang	55.13	275	P	P	03 55 17.9	-1.2
VNDA	Vanda	55.77	183	P	P	03 55 22.7	0.0
	comp=Z,2.7nm,0.9s,baz=345,slow=5.5,SNR=7.2						
	comp=Z,2.7nm,0.9s						
VNDA	Vanda	55.77	183	P	P	03 55 23.2	+0.5
VNDA	Vanda	55.77	183	PKIKP	P	03 55 23.2	+0.5
VNDA	Vanda	55.77	183	pmax	pmax		
	comp=Z,11nm,1.3s						
SBA	Scott Base	55.91	182	P	P	03 55 25.1	+1.4
SBA				IAmb	IAmb	03 55 44.0	
	comp=Z,20nm,1.1s						
JAGI	Jajag, Banyuwa	58.61	274	P	P	03 55 41.8	-1.9
JAGI	Jajag, Banyuwa	58.61	274	P	P	03 55 45.4	+1.6
	comp=Z,46nm,1.7s						
KKM	Kota Kinabalu	62.75	290	P	P	03 56 09.8	-2.3
MJAR	Matsushiro Arr	67.23	330	P	P	03 56 38.5	-2.1
	comp=Z,6.4nm,1.1s,baz=165,slow=6.3,SNR=7.7						
	comp=Z,6.4nm,1.1s						
MJAR	Matsushiro Arr	67.23	330	P	P	03 56 39.0	-1.6
MJAR				IAmb	IAmb	03 56 40.6	
	comp=Z,12nm,1.3s						
MAJO	Matsushiro	67.23	330	P	P	03 56 44.0	+3.4
	comp=Z,13nm,1.4s						
TJN	Taejon	72.74	322	P	P	03 57 13.8	-0.6
TJN	Taejon	72.74	322	P	P	03 57 17.0	+2.6
	comp=Z,126nm,1.6s						
SSE	Sheshan	72.97	315	P	P	03 57 11.8	-4.1
SSE				S	S	04 06 42.0	+1.6
SSE				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SSE				pmax	pmax		
	comp=Z,480nm,8.8s						
SSE				LR	LR		
	comp=N,2µm,18.2s						
SSE				LR	LR		
	comp=E,3µm,19.6s						
KSRS	Korea Array	73.20	323	P	P	03 57 16.1	-1.0
	comp=E,4.5nm,1.0s,baz=138,slow=5.7,SNR=13						
	comp=E,4.5nm,1.0s						
KSAR	Wonju Array Be	73.21	323	P	P	03 57 16.1	-1.1
INCN	Inchon	73.94	323	P	P	03 57 25.4	+3.9
	comp=E,42nm,1.6s						
NJ2	Nanjing	75.11	314	*e*P	P	03 57 30.5	+2.1
NJ2				pmax	pmax		
	comp=E,10.0nm,0.5s						
IPM	Ipoh	75.66	281	P	P	03 57 30.3	-1.8
IPM	Ipoh	75.66	281	P	P	03 57 32.8	+0.8
	comp=E,42nm,1.2s						
PET	Petropavlovsk	75.92	351	P	P	03 57 31.8	-0.7
	comp=E,52nm,2.2s						
PETK	Petropavlovsk-	76.15	350	P	P	03 57 32.7	-1.2
	comp=E,16nm,1.1s,baz=99,slow=6.3,SNR=7.1						
	comp=E,16nm,1.1s						
PETK	Petropavlovsk-	76.15	350	P	P	03 57 33.6	-0.3
USRK	Ussuriysk Ar.	76.19	331	P	P	03 57 33.3	-0.9
	comp=E,6.9nm,0.8s,baz=114,slow=4.6,SNR=12						
	comp=E,6.9nm,0.8s						
KULM	Kulim	76.33	282	P	P	03 57 34.8	-1.0
KULM				IAmb	IAmb	03 57 36.4	
	comp=Z,32nm,1.3s						
WHN	Wuhan	77.30	311	P	P	03 57 40.6	-0.3
MAW	Mawson	77.32	202	P	P	03 57 40.7	+0.3
	comp=Z,9.0nm,1.0s,baz=93,slow=5.8,SNR=4.0						
	comp=Z,9.0nm,1.0s						
MDJ	Mudanjiang	77.61	329	P	P	03 57 42.0	-0.3
MDJ				S	S	04 07 27.8	-3.6
MDJ				pmax	pmax		
	comp=Z,19nm,1.5s						
MDJ	Mudanjiang	77.61	329	P	P	03 57 45.7	+3.4
	comp=Z,18nm,1.3s						
TIA	Tai'an	78.81	317	P	P	03 57 48.8	-0.3
TIA				pmax	pmax		
	comp=Z,15nm,1.0s						
SURA	Surathani	78.85	285	P	P	03 57 52.8	+3.0
	comp=Z,40nm,1.5s						
ENH	Enshi	80.65	308	P	P	03 58 02.0	+2.7
	comp=Z,28nm,1.3s						
LYN	LuoYang	80.89	313	P	P	03 58 00.9	+0.4
LYN				pmax	pmax		
	comp=Z,26nm,0.8s						
BJT	Baijiatuau	81.74	319	P	P	03 58 08.4	+3.6
	comp=Z,9.9nm,0.9s						
XAN	Xi'an	83.06	311	⇑P	P	03 58 10.9	-1.0
XAN				pP	pP	03 58 20.4	-1.9
XAN				pmax	pmax		
	comp=Z,12nm,1.7s						
KMI	Kunming	83.25	300	P	P	03 58 14.3	+1.0
KMI				pmax	pmax		
	comp=Z,17nm,1.7s						
SYO	Syowa Base	83.30	195	⇓*e*P	P	03 58 14.2	+1.6
CMAR	Chiang Mai Arr	83.40	293	P	P	03 58 14.1	+0.2
	comp=Z,3.3nm,0.4s,baz=125,slow=3.8,SNR=38						
CMAR				LR	LR	04 34 20.9	
	comp=Z,2µm,21.8s,baz=25,slow=35						
	comp=Z,3.3nm,0.4s						
CMAR	Chiang Mai Arr	83.40	293	P	P	03 58 14.8	+0.8
CHTO	Chiang Mai	83.55	293	P	P	03 58 15.1	+0.4
CHTO	Chiang Mai	83.55	293	P	P	03 58 16.0	+1.3
	comp=Z,19nm,1.6s						
ELIB	Princess Elisa	84.02	189	*d*P	P	03 58 15.1	-1.3
	comp=Z,5.5nm,1.5s						
PZH	PanZhiHua	84.69	301	P	P	03 58 21.6	+1.1
HHC	Hu-ho-hao-te	85.06	318	*e*P	P	03 58 22.4	+0.4
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HILR	Hailar Array B	85.85	328	P	P	03 58 24.8	-0.9
	comp=Z,0.4nm,0.3s,baz=137,slow=13,SNR=1.9						
	comp=Z,0.4nm,0.3s						
BTO	Baotou	85.90	317	*e*P	P	03 58 27.1	+0.9
BTO				pP	sP	03 58 40.8	+0.4
BTO				sP	pwP	03 58 45.8	+6.5
BTO				S	S	04 08 56.3	-1.0
BTO				pmax	pmax		
	comp=Z,17nm,1.5s						
CMB	Columbia Colle	86.08	46	P	P	03 58 27.2	+0.1
ISA	Isabella, Lake	86.16	49	P	P	03 58 27.9	+0.3
ISA				IAmb	IAmb	03 58 38.7	
	comp=Z,10nm,1.0s						
O03E	Paynes Creek	86.36	44	P	P	03 58 28.9	+0.5
SNAA	Sanae	86.45	181	P	P	03 58 27.1	-1.4
	comp=Z,1.7nm,0.8s,baz=167,slow=19,SNR=1.0						
	comp=Z,1.7nm,0.8s						
SNAA	Sanae	86.45	181	P	P	03 58 28.9	+0.4
SNAA				IAmb	IAmb	03 59 44.5	
	comp=Z,42nm,1.7s						
M03C	McCloud	86.69	43	IAmb	IAmb	03 58 34.0	
	comp=Z,20nm,1.0s						
MDPB	Devils Postpil	86.75	47	IAmb	IAmb	03 58 39.4	
	comp=Z,31nm,1.8s						
CWC	Cottonwood Cre	86.83	49	IAmb	IAmb	03 59 39.1	
	comp=Z,15nm,1.9s						
CLC	China Lake	86.86	49	IAmb	IAmb	03 58 45.2	
	comp=Z,15nm,1.5s						
DSP	Deep Springs	87.38	48	IAmb	IAmb	03 58 41.7	
	comp=Z,8.0nm,1.3s						
PAHR	Pah Rah Range	87.62	45	P	P	03 58 34.9	+0.2
PAHR				IAmb	IAmb	03 58 48.9	
	comp=Z,7.4nm,1.2s						
LZH	Lanzhou	87.68	310	*e*P	P	03 58 39.5	+4.4
LZH				sP	sP	03 58 53.3	+4.0
LZH				pmax	pmax		
	comp=Z,32nm,1.2s						
NVAR	Mina Array Bea	87.68	47	P	P	03 58 35.3	+0.2
	comp=Z,3.2nm,1.0s,baz=230,slow=8.2,SNR=12						
	comp=Z,3.2nm,1.0s						
NVAR	Mina Array Bea	87.68	47	P	P	03 58 34.5	-0.7
LZDM	Lanzhou Array	87.72	310	P	P	03 58 34.8	-0.7
	comp=Z,0.5nm,0.3s,baz=142,slow=5.1,SNR=4.3						
	comp=Z,0.5nm,0.3s						
WVOR	Wild Horse Val	89.51	43	IAmb	IAmb	03 59 38.8	
	comp=Z,31nm,1.7s						
G08A	Pilot Rock	90.78	41	P	P	03 58 52.6	+3.2
SZCU	Shurtz Canyon	90.89	50	IAmb	IAmb	03 59 12.1	
	comp=Z,22nm,2.0s						
H03S2	Juan Fernandez	91.39	127	T	T	05 40 17.8	
	baz=241,slow=74,SNR=9.0						
H03S1	Juan Fernandez	91.41	127	T	T	05 40 19.1	
	baz=241,slow=74,SNR=6.9						
H03S3	Juan Fernandez	91.41	127	T	T	05 40 17.0	
	baz=241,slow=74,SNR=7.4						
ULN	Ulaanbaatar	91.61	322	P	P	03 58 50.2	-3.1
ULN				IAmb	IAmb	03 58 53.3	
	comp=Z,8.4nm,1.2s						
COLA	College	91.63	15	P	P	03 58 55.7	+3.1
ILAR	Eielson Array	91.79	16	P	P	03 58 51.1	-2.3
	comp=Z,2.6nm,1.1s,baz=234,slow=5.0,SNR=8.5						
	comp=Z,2.6nm,1.1s						
ILAR	Eielson Array	91.79	16	P	P	03 58 52.8	-0.7
SONM	Songino Array	91.97	322	P	P	03 58 53.4	-1.4
	comp=Z,3.2nm,1.1s,baz=137,slow=4.0,SNR=10						
	comp=Z,3.2nm,1.1s						
SONM	Songino Array	91.97	322	P	P	03 58 54.2	-0.7
SONM				IAmb	IAmb	03 59 03.4	
	comp=Z,15nm,1.6s						
GTA	Gaotai	92.06	312	P	P	03 58 56.3	+0.8
GTA				pP	pP	03 59 04.9	-1.1
GTA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
J26L	Joseph Creek	92.45	17	P	P	03 58 56.5	-0.1
J26L				IAmb	IAmb	03 59 14.8	
	comp=Z,15nm,1.3s						
I26K	Coal Creek Min	93.18	17	P	P	03 59 00.3	+0.5
I26K				IAmb	IAmb	03 59 31.6	
	comp=Z,20nm,1.5s						
TXAR	Lajitas Array	94.57	60	P	P	03 59 08.0	+0.8
	comp=Z,1.3nm,1.1s,baz=313,slow=5.8,SNR=3.7						
	comp=Z,1.3nm,1.1s						
TXAR	Lajitas Array	94.57	60	P	P	03 59 07.3	+0.1
YKA	Yellowknife Ar	101.34	27	P	Pdif	03 59 36.8	+0.1
	comp=Z,0.2nm,0.9s,baz=255,slow=5.4,SNR=1.5						
WMQ	Urumqi	102.14	312	*e*P	Pdif	03 59 40.8	-0.1
WMQ				pmax	pmax		
	comp=Z,12nm,1.1s						
MKAR	Makanchi Array	106.65	314	Pdiff	Pdif	04 00 00.9	0.0
	comp=Z,0.5nm,0.8s,baz=108,slow=4.7,SNR=4.1						
BVAR	Borovoye Array	115.23	319	PKP	PKiKP	04 04 25.4	-1.8
	comp=Z,0.8nm,0.7s,baz=48,slow=2.2,SNR=4.8						
FRB	Frobisher Bay	121.84	28	PKP	PKiKP	04 04 39.8	+0.1
	comp=Z,5.1nm,1.1s,baz=246,slow=5.3,SNR=3.4						
ARTI	Arti	122.05	324		PKiKP	04 04 40.4	0.0
ARCES	ARCESS Array B	128.83	346	PKP	PKPdf	04 04 52.4	-0.5
	comp=Z,5.1nm,1.1s,baz=53,slow=4.6,SNR=1.9						
ARCES	ARCESS Array B	128.83	346		PKiKP	04 04 52.9	-0.6
FINES	FINESS Array B	134.75	339	PKP	PKPdf	04 05 02.1	-2.1
	comp=Z,3.1nm,1.1s,baz=109,slow=4.6,SNR=2.9						
FINES	FINESS Array B	134.75	339		PKPdf	04 05 03.9	-0.3
NACGM	Naroch	138.91	331	*e*PKP	PKiKP	04 05 13.6	-0.7
	comp=Z,8.0nm,1.0s,baz=50						
NB2	NORSAR Subarra	139.20	347	PKP	PKPdf	04 05 11.2	-1.4
	comp=Z,6.1nm,1.4s,baz=26,slow=2.2						
NOA	NORSAR Array B	139.20	347	PKP	PKPdf	04 05 11.2	-1.4
	comp=Z,1.2nm,0.9s,baz=31,slow=2.0,SNR=4.1						
HFS	Hagfors	139.44	345	PKP	PKPdf	04 05 11.6	-1.3
	comp=Z,2.1nm,0.9s,baz=61,slow=12,SNR=2.9						
AKASG	Malin Array Be	140.19	325	PKP	PKPdf	04 05 11.8	-2.8
	comp=Z,0.8nm,0.6s,baz=55,slow=2.3,SNR=4.0						
AK20	Malin Array Si	140.28	325	PKP	PKPdf	04 05 14.1	-0.7
LUBAR	Lubar, Ukraine	141.40	324	PKP	PKPdf	04 05 15.8	-1.0
RNPP9	Sopachiv	141.50	328	PKP	PKPdf	04 05 16.6	-0.3
BRTR	Keskin Array B	141.79	307	PKP	PKPdf	04 05 15.1	-3.0
	comp=Z,0.6nm,0.8s,baz=62,slow=2.3,SNR=2.5						
BRTR	Keskin Array B	141.79	307		PKPdf	04 05 15.8	-2.2
BURAR	Bucovina Array	144.08	323		PKPdf	04 05 22.4	+0.6
MLR	Muntele Rosu	144.79	319		PKPdf	04 05 23.0	-0.2
STHS	Stebnicka Huta	145.07	328	*e*PKP	PKiKP	04 05 26.0	-1.2
BSEG	Bad Segeberg	145.78	342	*e*PKPbc	PKPab	04 05 24.6	-0.7
	baz=32,slow=2.5						
MANT	Manisa	145.93	307		PKPdf	04 05 23.4	-2.1
LANS	Liptovska Anna	146.11	329	*e*PKP	PKiKP	04 05 27.6	-1.8
STEB	Steborice	146.33	332	*e*PKP	PKPbc	04 05 26.0	-0.7
OSTC	Ostas	146.53	334	*e*PKP	PKPab	04 05 27.5	-0.8
MORC	Moravsky Berou	146.55	332	*e*PKP	PKPbc	04 05 26.5	-0.9
CHVC	Chvalec	146.57	334	*e*PKP	PKPbc	04 05 26.9	-0.5
DPC	Dobruska-Polom	146.64	333	*e*PKP	PKPbc	04 05 27.3	-0.4
UPC	Upice	146.65	334	*e*PKP	PKPbc	04 05 27.4	-0.2
MAUC	Maruska	146.72	331	*e*PKP	PKPbc	04 05 27.7	-0.2
EKA	Eskdalemuir Ar	146.72	357	PKPbc	PKPbc	04 05 26.8	-0.8
	comp=Z,5.5nm,1.0s,baz=318,slow=2.4,SNR=6.8						
PSZ	Piszkesteto	146.73	327		PKPbc	04 05 27.0	-1.1
FLTG	Flechtingen	146.90	340	*e*PKPbc	PKPbc	04 05 27.9	-0.3
	baz=32,slow=2.5						
JAVC	Velka Javorina	147.15	330	*e*PKP	PKPab	04 05 29.7	-1.1
CLL	Collm	147.17	337	*e*PKPbc	PKPbc	04 05 28.6	-0.5
	baz=32,slow=2.5						
CLL	Collm	147.17	337	*i* PKPdf	PKPbc	04 05 28.2	-0.8
	comp=Z,42nm,1.5s						
CLL				*i* PKPbc	PKPab	04 05 30.0	-0.7
	comp=Z,45nm,1.2s						
CLL				*i* x	x	04 05 41.1	
	comp=Z,16nm,1.2s						
BRG	Berggiesshubel	147.18	336	*e*PKPbc	PKPbc	04 05 28.6	-0.4
	baz=32,slow=2.5						
ASSE	Asse, Remlinge	147.25	340	*e*PKPbc	PKPbc	04 05 28.7	-0.4
	baz=32,slow=2.5						
VRAC	Vranov	147.31	332	*e*PKP	PKPbc	04 05 28.9	-0.6
KRUC	Moravsky	147.58	332	*e*PKP	PKPbc	04 05 29.5	-0.8
SRO	Srobarova	147.59	328	*e*PKP	PKPbc	04 05 30.4	+0.1
CLZ	Clausthal	147.59	341	*e*PKPbc	PKPbc	04 05 29.7	-0.5
	baz=32,slow=2.5						
PRA	Prague	147.63	335	*e*PKP	PKPbc	04 05 30.4	+0.1
PRU	Pruhonice	147.65	334	*e*PKP	PKPbc	04 05 29.9	-0.5
MODS	Modra-Piesok	147.68	330	*e*PKP	PKPbc	04 05 30.9	+0.3
MODS				*e*		04 40 16.6	
MODS				*e*		05 14 48.6	
IBBN	Ibbenburen	147.93	344	*e*PKPbc	PKPbc	04 05 30.4	-0.6
	baz=32,slow=2.5						
GTTG	Gottingen	147.98	341	*e*PKPbc	PKPbc	04 05 30.7	-0.5
	baz=32,slow=2.5						
TANN	Tannenbergstha	148.10	337	*e*PKPbc	PKPbc	04 05 31.0	-0.7
	baz=32,slow=2.5						
MOX	Moxa	148.21	338	*e*PKPbc	PKPbc	04 05 31.2	-0.7
	baz=32,slow=2.5						
ZVC	Zvikov	148.22	334	*e*PKP	PKPbc	04 05 31.1	-0.9
MANZ	Manzenberg	148.58	337	*e*PKPbc	PKPbc	04 05 32.4	-0.5
	baz=32,slow=2.5						
UBBA	Unterbreizbach	148.60	340	*e*PKPbc	PKPbc	04 05 31.9	-0.8
	baz=32,slow=2.5						
RONA	Rosalia, Austr	148.63	330	*i* PKP	PKPbc	04 05 32.7	-0.5
	comp=Z,155nm,2.6s,SNR=7.8						
CKRC	Cesky Krumlov	148.66	333	*e*PKP	PKPbc	04 05 32.3	-0.8
CONA	Conrad Observa	148.66	331	*i* PKP	PKPbc	04 05 32.8	-0.5
	comp=Z,165nm,2.6s,SNR=8.9						
KHC	Kasperske Hory	148.71	334	*e*PKP	PKPbc	04 05 32.7	-0.6
ROTZ	Rotzenmuhle	148.73	337	*e*PKPbc	PKPbc	04 05 32.5	-0.8
	baz=32,slow=2.5						
KASTN	Kahler Asten	148.74	342	*e*PKPbc	PKPbc	04 05 32.5	-0.8
	baz=32,slow=2.5						
BUG	Bochum--Univer	148.84	343	*e*PKPbc	PKPbc	04 05 32.8	-0.7
	baz=32,slow=2.5						
GEC2	GERESS Array S	148.89	334	*e*PKPbc	PKPbc	04 05 32.9	-0.9
	baz=32,slow=2.5						
GERES	GERESS Array B	148.89	334	PKPbc	PKPbc	04 05 33.3	-0.5
	comp=Z,6.8nm,0.9s,baz=39,slow=2.6,SNR=34						
WET	Wettzell	148.98	335	*e*PKPbc	PKPbc	04 05 33.4	-0.6
	baz=32,slow=2.5						
VAY	Valandovo	149.01	315	*i* P	PKPbc	04 05 32.3	-1.9
ARSA	Arzberg	149.31	330	*e*PKP	PKPbc	04 05 34.2	-0.6
	comp=Z,146nm,3.0s						
MOA	Molln	149.43	332	*i* PKP	PKPbc	04 05 34.6	-0.5
	comp=Z,230nm,4.2s,SNR=5.4						
TNS	Taunus Mts	149.60	341	*e*PKPbc	PKPbc	04 05 34.8	-0.7
	baz=32,slow=2.5						
BIOA	Bad Ischl, Aus	149.82	333	*i* PKP	PKPbc	04 05 34.8	-1.3
	comp=Z,26nm,1.6s,SNR=7.6						
BTNL	Ternell	149.92	344	*d*PKP	PKPbc	04 05 35.6	-0.6
MEM	Membach	149.93	344	*d*PKP	PKPbc	04 05 35.7	-0.5
SOKA	Soboth	149.96	330	*i* PKP	PKPbc	04 05 35.4	-1.1
	comp=Z,3.9nm,0.5s,SNR=9.2						
BSTI	Sart Tilman	150.06	345	*d*PKP	PKPbc	04 05 36.2	-0.4
UCC	Uccle	150.14	346	*d*PKP	PKPbc	04 05 36.2	-0.5
BHOU	Houvegnez	150.16	344	*d*PKP	PKPbc	04 05 36.7	-0.2
OHR	Ohrid	150.27	316	*i* P	PKPbc	04 05 36.7	-0.7
OBKA	Obir	150.31	330	*e*PKP	PKPbc	04 05 35.0	-2.4
	comp=Z,12nm,1.7s						
LESA	Schwarzleotal	150.43	333	*i* PKP	PKPbc	04 05 36.8	-0.8
	comp=Z,68nm,1.7s,SNR=8.6						
BMRD	Maredsous	150.51	345	*d*PKP	PKPbc	04 05 37.3	-0.4
RCHB	Rochefort	150.54	345	*d*PKP	PKPbc	04 05 37.0	-0.6
STU	Stuttgart	150.63	339	*e*PKPbc	PKPbc	04 05 36.9	-1.0
	baz=32,slow=2.5						
MYKA	Terra Mystica	150.63	331	*i* PKP	PKPbc	04 05 36.4	-1.8
	comp=Z,453nm,5.1s,SNR=5.1						
LJU	Ljubljana	150.66	330	*i* PKPbc	PKPbc	04 05 37.2	-1.0
BOJS	Bojanci	150.71	328	*i* PKPbc	PKPbc	04 05 37.6	-0.7
DOU	Dourbes	150.75	345	*d*PKP	PKPbc	04 05 37.8	-0.4
WLF	Walferdange	150.75	343	*e*PKPbc	PKPbc	04 05 37.8	-0.5
	baz=32,slow=2.5						
WLF	Walferdange	150.75	343	*d*PKP	PKPbc	04 05 37.3	-0.9
WATA	Walderalm	150.95	334	*i* PKP	PKPbc	04 05 37.8	-1.2
	comp=Z,0.1nm,0.2s,SNR=8.1						
WTTA	Wattenberg	150.99	334	*i* PKP	PKPbc	04 05 38.1	-1.0
	comp=Z,83nm,2.1s,SNR=11						
ABTA	Abfaltersbach	151.03	333	*i* PKP	PKPbc	04 05 36.7	-2.4
	comp=Z,66nm,1.5s,SNR=8.0						
RETA	Reutte	151.15	336	*e*PKP	PKPbc	04 05 38.4	-0.9
	comp=Z,928nm,5.8s						
SQTA	Sankt Quirin	151.19	335	*i* PKP	PKPbc	04 05 38.4	-1.1
	comp=Z,0.1nm,0.1s,SNR=5.9						
UBR	Ueberruh	151.23	337	*e*PKPbc	PKPbc	04 05 38.5	-1.0
	baz=32,slow=2.5						
BFO	Black Forest	151.30	339		PKPbc	04 05 39.1	-0.5
BFO	Black Forest	151.30	339	*e*PKPbc	PKPbc	04 05 38.5	-1.1
	baz=32,slow=2.5						
FETA	Feichten	151.54	335	*i* PKP	PKPbc	04 05 38.6	-1.8
	comp=Z,13nm,0.9s,SNR=8.9						
DAVA	Damuels	151.65	336	*e*PKP	PKPbc	04 05 38.6	-2.0
	comp=Z,11nm,1.1s						
TUE	Stuetta	152.53	336		PKPbc	04 05 42.0	-0.7
ESDC	Sonseca Array	162.35	354	PKPab	PKPab	04 06 34.2	-1.1
	comp=Z,1.7nm,1.1s,baz=353,slow=5.7,SNR=7.0						
DBIC	Dimbokro	164.59	186	PKP	PKPdf	04 05 50.6	-0.2
	comp=Z,2.1nm,0.7s,baz=150,slow=8.1,SNR=3.5						
TORD	Torodi Ar. Bea	168.24	222	PKP	PKPdf	04 05 52.3	-1.3
	comp=Z,3.1nm,1.2s,baz=148,slow=0.5,SNR=8.4						
TORD				PKPab	PKPab	04 07 01.0	-0.9
	comp=Z,1.3nm,0.8s,baz=101,slow=4.7,SNR=4.1						
TORD				PP	PP	04 10 47.5	-2.5
	comp=Z,1.3nm,1.2s,baz=94,slow=1.6,SNR=3.6						
TORD	Torodi Ar. Bea	168.24	222		PKPdf	04 05 52.5	-1.0
TAM	Tamanrasset	168.96	276		PKPdf	04 05 53.4	-0.6

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*IDC **25** 03:57:31.4±1.4, 2°.82S×102°.91W, h0km, mb4.0/9, mbtmp4.0/9, Error ellipse: s-maj=53.4km s-min=17.6km az=55.0*

*NEIC **25** 03:57:33.6±1.1, 2°.9S±0°.1×103°.0W±0°.2, h10km±1km, mb4.5/32, Error ellipse: s-maj=32.1km s-min=12.5km az=233.0*

ISC 25 03:57:32.7±1.0**, 2°.9S**±0°.1×**103°.0W**±0°.2**, h10**km**, n58, σ0s.63**/48**, mb4.4**/23**, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APG	El Apazote	21.66	34	P	P	04 02 23.3	-0.5
	0.5nm,0.8s,baz=136,slow=9.5,SNR=3.5						
MTO3	Montecristo	21.84	38	P	P	04 02 25.4	-0.3
MTO3				IAmb	IAmb	04 02 42.8	
	comp=Z,20nm,1.2s						
ESQI	Esquipulas	21.97	38	P	P	04 02 28.2	+1.2
PIRO	Carate, Puerto	22.56	60	P	P	04 02 34.1	+0.8

PIRO				IAmb	IAmb	04 02 40.9	
	comp=Z,35nm,1.2s						
H06E1	SOCORRO T-PHAS	22.92	340	T	T	04 25 00.0	
	SNR=4.1						
JRQG	Juriquilla Cam	23.58	6	P	P	04 02 44.5	+0.6
SLOR	San Lorenzo -	24.54	85	P	P	04 02 52.4	-1.1
OTAV	Otavalo	24.69	83	P	P	04 02 53.9	-0.9
OTAV				IAmb	IAmb	04 03 31.8	
	comp=Z,12nm,1.4s						
NNA	Nana	27.40	111	P	P	04 03 19.4	+0.6
EF02	Christine	31.77	7	P	P	04 03 56.8	-0.5
EF02				IAmb	IAmb	04 03 58.7	
	comp=Z,26nm,0.9s						
HNDO	Hondo	32.43	6	P	P	04 04 03.6	+0.5
HNDO				IAmb	IAmb	04 04 05.9	
	comp=Z,9.6nm,1.1s						
HTMS	Hat Mesa	35.18	359	P	P	04 04 25.8	-1.3
PB18	Visviri	35.94	116	P	P	04 04 34.7	+0.3
PB18				IAmb	IAmb	04 04 39.6	
	comp=Z,10nm,1.0s						
LPAZ	La Paz	36.74	114	P	P	04 04 41.2	-0.1
	comp=Z,1.3nm,0.7s,baz=280,slow=5.6,SNR=4.8						
	comp=Z,1.3nm,0.7s						
LPAZ	La Paz	36.74	114	P	P	04 04 41.0	-0.3
Y22A	Socorro	36.83	354	P	P	04 04 41.2	-0.1
WMOK	Wichita Mounta	37.64	6	P	P	04 04 48.0	0.0
H03N2	Juan Fernandez	37.79	146	T	T	04 45 03.7	
	baz=322,slow=77,SNR=32						
H03N1	Juan Fernandez	37.80	146	T	T	04 45 08.4	
	baz=322,slow=77,SNR=28						
H03N3	Juan Fernandez	37.81	146	T	T	04 45 05.0	
	baz=322,slow=77,SNR=28						
MIAR	Mount Ida	38.27	13	P	P	04 04 53.5	+0.2
MIAR				IAmb	IAmb	04 05 27.6	
	comp=Z,7.5nm,1.2s						
W35A	Tecumseh	38.27	8	P	P	04 04 53.7	+0.4
W35A				IAmb	IAmb	04 05 14.1	
	comp=Z,16nm,1.1s						
TUL3	Leonard	39.18	9	P	P	04 05 01.0	+0.1
TUL3				IAmb	IAmb	04 05 07.0	
	comp=Z,8.8nm,0.7s						
WHAR	Wooly Hollow	39.28	14	P	P	04 05 02.1	+0.4
WHAR				IAmb	IAmb	04 05 46.5	
	comp=Z,14nm,1.5s						
Y49A	Blount Mountai	39.75	22	P	P	04 05 05.5	-0.2
LCAR	Lake Charles	40.30	15	P	P	04 05 10.9	+0.7
MGMO	Mountain Grove	41.06	13	P	P	04 05 16.7	+0.1
MGMO				IAmb	IAmb	04 05 35.0	
	comp=Z,13nm,1.5s						
PBMO	Poplar Bluff	41.16	15	P	P	04 05 17.5	+0.2
WVT	Waverly	41.31	19	P	P	04 05 18.5	-0.1
WVT				IAmb	IAmb	04 05 19.5	
	comp=Z,8.8nm,0.8s						
WCT	Wildcat Mounta	41.49	343	P	P	04 05 19.9	-0.2
CGM3	Cape Girardeau	41.85	16	P	P	04 05 22.8	-0.2
CGM3				IAmb	IAmb	04 05 35.1	
	comp=Z,21nm,1.3s						
P40A	Paris	43.39	12	P	P	04 05 35.5	0.0
NVAR	Mina Array Bea	43.50	342	P	P	04 05 35.9	-0.8
	comp=Z,0.2nm,0.6s,baz=200,slow=7.9,SNR=2.1						
	comp=Z,0.2nm,0.6s						
NVAR	Mina Array Bea	43.50	342	P	P	04 05 36.1	-0.6
Q44A	Meyer Farm, Va	43.53	16	P	P	04 05 36.8	+0.2
PTLB	Pontes e Lacer	44.91	109	P	P	04 05 47.5	-0.6
PTLB				IAmb	IAmb	04 05 48.8	
	comp=Z,10nm,1.2s						
PD31	Pinedale Array	45.84	353	P	P	04 05 55.2	-0.1
PD31				IAmb	IAmb	04 05 58.5	
	comp=Z,2.7nm,0.9s						
PDAR	Pinedale Array	45.84	353	P	P	04 05 55.2	-0.1
	comp=Z,3.2nm,1.1s,baz=177,slow=5.8,SNR=10						
	comp=Z,3.2nm,1.1s						
PDAR	Pinedale Array	45.84	353	P	P	04 05 55.0	-0.3
PLCA	Paso Flores	47.67	147	P	P	04 06 10.3	+0.8
	comp=Z,2.7nm,1.1s,baz=323,slow=11,SNR=3.3						
	comp=Z,2.7nm,1.1s						
PLCA	Paso Flores	47.67	147	P	P	04 06 09.2	-0.4
PLCA				IAmb	IAmb	04 06 41.9	
	comp=Z,3.8nm,1.2s						
CPUP	Villa Florida	49.54	123	P	P	04 06 24.7	+0.6
	comp=Z,3.1nm,1.0s,baz=282,slow=9.3,SNR=5.2						
	comp=Z,3.1nm,1.0s						
CPUP	Villa Florida	49.54	123	P	P	04 06 24.2	+0.2
CPUP				IAmb	IAmb	04 06 27.7	
	comp=Z,6.1nm,1.1s						
BDFB	Brasilia	55.52	107	P	P	04 07 08.3	-0.4
	comp=Z,6.0nm,1.0s,baz=297,slow=5.3,SNR=5.2						
	comp=Z,6.0nm,1.0s						
BDFB	Brasilia	55.52	107	P	P	04 07 08.5	-0.2
YKA	Yellowknife Ar	65.81	354	P	P	04 08 18.0	+0.1
	comp=Z,0.7nm,0.9s,baz=169,slow=6.1,SNR=10.0						
	comp=Z,0.7nm,0.9s						
YKA	Yellowknife Ar	65.81	354	P	P	04 08 17.8	-0.1
INK	Inuvik	74.15	349	P	P	04 09 08.6	-0.4
	comp=Z,1.5nm,1.0s,baz=143,slow=3.6,SNR=7.7						
	comp=Z,1.5nm,1.0s						
INK	Inuvik	74.15	349	P	P	04 09 11.4	+2.4
ILAR	Eielson Array	74.75	342	P	P	04 09 13.1	+0.4
	comp=Z,1.9nm,1.2s,baz=153,slow=4.6,SNR=7.0						
	comp=Z,1.9nm,1.2s						
ILAR	Eielson Array	74.75	342	P	P	04 09 12.8	+0.1
H11N3	WAKE ISLAND Hy	91.09	290	T	T	05 51 49.7	
	baz=93,slow=74,SNR=8.8						
H11N2	WAKE ISLAND Hy	91.10	290	T	T	05 51 47.0	
	baz=93,slow=74,SNR=11						
H11N1	WAKE ISLAND Hy	91.11	290	T	T	05 51 46.0	
	baz=93,slow=74,SNR=8.3						
H11S2	WAKE ISLAND Hy	91.23	288	T	T	05 51 53.4	
	baz=94,slow=75,SNR=8.4						
H11S1	WAKE ISLAND Hy	91.23	288	T	T	05 51 56.1	
	baz=94,slow=75,SNR=5.1						
H11S3	WAKE ISLAND Hy	91.24	288	T	T	05 51 59.1	
	baz=94,slow=75,SNR=8.2						
MKAR	Makanchi Array	136.03	355	PKP	PKPdf	04 16 53.7	-0.7
	comp=Z,0.3nm,0.7s,baz=46,slow=4.2,SNR=2.4						

DJA 25 04:00:35.8±2.0, 3°N±4°×12°6E±°, h17km±21km, M3.7/8, mb4.2/3, MLv3.5/8, MwMwp5.3/1, Mwp5.5/1, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.05	309	P	Pb	04 00 55.0	-0.5
SGSI				S	Sg	04 01 09.4	-0.4
GAMI	Galela, Maluku	1.86	129	P	Pn	04 01 06.5	-0.5
GTOI	Gorontalo	4.08	235	P	Pn	04 01 37.8	+0.3
MRSI	Marisa	5.07	240	P	Pn	04 01 52.8	+1.7
	0.1nm28nm,0.5s						

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*NEIC **25** 04:04:01.8±1.7, 22°.04S±0°.08×174°.0E±0°.1, h10km±1km, mb4.5/14, Error ellipse: s-maj=20.6km s-min=8.4km az=56.0*

*IDC **25** 04:04:15.9±4.8, 22°.15S×173°.20E, h119km±38km, mb3.7/7, mbtmp4.1/9, Error ellipse: s-maj=35.2km s-min=26.1km az=54.0*

ISC 25 04:04:05.6±0.8, 22°.0S±0°.1×173°.8E±0°.1, h35km, n33, $\sigma 1^{s}.59$/33, mb4.4/11, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	6.78	268	P	Pn	04 05 45.9	+3.2
	8.9nm,0.9s,baz=86,slow=19,SNR=4.1						
DZM	Mont Dzumac	6.78	268		Pn	04 05 44.6	+1.9
SANVU	Saraoutou	9.00	315	Pn	Pn	04 06 13.8	+0.7
URZ	Urewera	16.46	171	P	P	04 08 00.2	+4.0
	4.7nm,0.6s,baz=1.8,slow=22,SNR=1.5						
MRZ	Mangatainoka R	18.66	176		P	04 08 20.6	+0.1
MRZ				IAmb	IAmb	04 08 59.8	
	comp=Z,30nm,1.4s						
MSWZ	Moikau Station	19.40	177	Pn	P	04 08 28.3	-0.3
LTZ	Lake Taylor	20.76	183	Pn	P	04 08 43.9	+0.5
ARMA	Armidale	21.52	242	P	P	04 08 52.0	+0.3
ARMA				IAmb	IAmb	04 09 23.6	
	comp=Z,25nm,1.4s						
ODZ	Otahua Downs	23.12	186	P	P	04 09 07.0	-1.5
WHZ	Wether Hill Ro	24.30	190	P	P	04 09 20.0	+0.3
STKA	Stephens Creek	30.21	244	P	P	04 10 11.1	-1.8
	comp=Z,1.4nm,1.0s,baz=106,slow=8.9,SNR=3.6						
	comp=Z,1.4nm,1.0s						
STKA	Stephens Creek	30.21	244	P	P	04 10 13.0	0.0
STKA				IAmb	IAmb	04 10 18.2	
	comp=Z,14nm,1.1s						
ASAR	Alice Springs	36.68	260	P	P	04 11 06.3	-3.0
	comp=Z,2.4nm,1.0s,baz=85,slow=8.9,SNR=15						
	comp=Z,2.4nm,1.0s						
ASAR	Alice Springs	36.68	260	P	P	04 11 07.8	-1.6
WRA	Warramunga Arr	36.79	266	P	P	04 11 07.4	-3.0
	comp=Z,1.7nm,0.8s,baz=102,slow=8.9,SNR=4.5						
	comp=Z,1.7nm,0.8s						
WRA	Warramunga Arr	36.79	266	P	P	04 11 11.5	+1.1
FITZ	Fitzroy Crossi	45.22	266	P	P	04 12 18.6	-1.1
MBWA	Marble Bar	50.01	260	P	P	04 12 57.1	+0.1
NWAO	Narrogin (SRO)	50.79	245	P	P	04 13 02.7	0.0
NWAO				IAmb	IAmb	04 13 33.8	
	comp=Z,12nm,1.1s						
VNDA	Vanda	55.87	183	P	P	04 13 39.8	+0.5
	comp=Z,1.4nm,0.9s,baz=346,slow=4.5,SNR=3.0						
	comp=Z,1.4nm,0.9s						
VNDA	Vanda	55.87	183	P	P	04 13 39.6	+0.3
VNDA				IAmb	IAmb	04 13 51.8	
	comp=Z,4.3nm,1.4s						
SBA	Scott Base	56.00	182	P	P	04 13 40.6	+0.4
QSPA	South Pole Qui	68.07	180	P	P	04 15 01.6	0.0
QSPA				IAmb	IAmb	04 15 02.2	
	comp=Z,3.7nm,0.8s						
BELA	Belgrano 2	78.96	174	P	P	04 16 04.1	-1.1
BELA				IAmb	IAmb	04 16 38.2	
	comp=Z,7.6nm,1.4s						
CMAR	Chiang Mai Arr	83.47	293	P	P	04 16 30.3	+0.1
	comp=Z,0.9nm,0.3s,baz=109,slow=4.9,SNR=8.5						
	comp=Z,0.9nm,0.3s						
CMAR	Chiang Mai Arr	83.47	293	P	P	04 16 29.9	-0.3
SNAA	Sanae	86.54	181	P	P	04 16 43.4	-1.4
	comp=Z,1.3nm,0.8s,baz=246,slow=6.4,SNR=1.8						
	comp=Z,1.3nm,0.8s						
SNAA	Sanae	86.54	181	IAmb	IAmb	04 16 43.5	
	comp=Z,5.4nm,1.3s						
SNAA				P	P	04 16 44.0	-0.8
ILAR	Eielson Array	91.67	16	P	P	04 17 10.3	+1.6
	comp=Z,0.8nm,1.1s,baz=206,slow=6.3,SNR=4.1						
	comp=Z,0.8nm,1.1s						
ILAR	Eielson Array	91.67	16	P	P	04 17 09.3	+0.6
GERES	GERESS Array B	148.86	334	PKPbc	PKPdf	04 23 48.0	+2.3
	comp=Z,1.1nm,0.8s,baz=52,slow=2.2,SNR=7.3						
TORD	Torodi Ar. Bea	168.39	222	PKPab	PKPab	04 25 16.7	-1.7
	comp=Z,0.8nm,0.9s,baz=187,slow=2.8,SNR=4.1						
TORD	Torodi Ar. Bea	168.39	222		PKPab	04 25 17.3	-1.0

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*NEIC **25** 04:05:32.7±1.8, 22°.3S±0°.1×173°.37E±0°.07, h10km±1km, mb4.4/9, Error ellipse: s-maj=22.6km s-min=3.1km az=152.0*

*IDC **25** 04:05:48.1±4.4, 22°.49S×172°.89E, h107km±37km, mb3.7/8, mbtmp4.1/10, Error ellipse: s-maj=33.7km s-min=27.0km az=166.0*

ISC 25 04:05:39.0±0.8, 22°.6S±0°.1×172°.97E±0°.09, h32km, n27, $\sigma 1^{s}.56$/25, mb4.2/13, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	4.71	282	Pn	Pn	04 06 48.7	+0.9
PINNC	Pines Island,	5.11	268	Pn	Pn	04 06 52.5	-0.8
DZM	Mont Dzumac	6.06	273	P	Pn	04 07 14.3	+7.7
	7.2nm,0.7s,baz=83,slow=19,SNR=2.8						
DZM				S	Sn	04 08 18.3	+3.3
	4.2nm,0.7s,baz=137,slow=17,SNR=1.4						
DZM	Mont Dzumac	6.06	273		Pn	04 07 07.8	+1.3
MSVF	Nonsavu	6.77	46	Pn	Pn	04 07 05.2	-11
SANVU	Saraoutou	8.94	321	Pn	Pn	04 07 41.1	-4.8
URZ	Urewera	16.04	168	P	P	04 09 28.0	+2.7
	22nm,1.2s,baz=3.4,slow=17,SNR=2.9						
STKA	Stephens Creek	29.32	245	P	P	04 11 40.2	+1.4
	0.9nm,0.7s,baz=18,slow=3.2,SNR=2.8						
	0.9nm,0.7s						
STKA	Stephens Creek	29.32	245	P	P	04 11 38.9	+0.1
COEN	Coen	29.52	282	P	P	04 11 37.3	-3.4
COEN				IAmb	IAmb	04 11 52.5	
	comp=Z,12nm,1.4s						
AS31	Alice Springs	35.87	260	P	P	04 12 35.6	-0.7
ASAR	Alice Springs	35.87	260	P	P	04 12 37.9	+1.6
	comp=Z,2.5nm,0.9s,baz=93,slow=8.4,SNR=9.7						
	comp=Z,2.5nm,0.9s						
ASAR	Alice Springs	35.87	260	P	P	04 12 35.8	-0.4
WR8	Warramunga Arr	35.88	267	P	P	04 12 35.3	-1.0
WR8				IAmb	IAmb	04 12 40.8	
	comp=Z,7.7nm,1.1s						
WB0	Warramunga Arr	36.02	267	P	P	04 12 36.3	-1.2
WB0				IAmb	IAmb	04 12 39.1	
	comp=Z,5.3nm,1.1s						
WRA	Warramunga Arr	36.03	267	P	P	04 12 38.2	+0.6
	comp=Z,1.5nm,0.8s,baz=100,slow=8.5,SNR=4.3						
	comp=Z,1.5nm,0.8s						
WRA	Warramunga Arr	36.03	267	P	P	04 12 38.1	+0.4
FITZ	Fitzroy Crossi	44.47	267	P	P	04 13 46.4	-1.0
FITZ				IAmb	IAmb	04 13 50.6	
	comp=Z,2.1nm,0.9s						
NWAO	Narrogin (SRO)	49.90	245	P	P	04 14 27.2	-2.6
MJAR	Matsushiro Arr	67.33	330	P	P	04 16 30.8	0.0
	comp=Z,2.2nm,0.9s,baz=149,slow=5.4,SNR=2.0						
	comp=Z,2.2nm,0.9s						
QSPA	South Pole Qui	67.51	180	P	P	04 16 30.7	-1.2
QSPA				IAmb	IAmb	04 16 50.2	
	comp=Z,5.4nm,1.3s						
CMAR	Chiang Mai Arr	83.03	293	P	P	04 18 01.2	-0.5
	comp=Z,1.1nm,0.3s,baz=131,slow=3.5,SNR=4.9						
	comp=Z,1.1nm,0.3s						
NVAR	Mina Array Bea	88.44	47	P	P	04 18 28.8	+0.4
	comp=Z,1.4nm,1.1s,baz=265,slow=4.6,SNR=4.5						
	comp=Z,1.4nm,1.1s						
SONM	Songino Array	91.97	322	P	P	04 18 45.7	+1.2
	comp=Z,0.4nm,0.6s,baz=97,slow=6.0,SNR=1.6						
	comp=Z,0.4nm,0.6s						
TXAR	Lajitas Array	95.32	61	P	P	04 19 01.1	+0.8
	comp=Z,0.4nm,1.0s,baz=287,slow=5.2,SNR=2.7						
	comp=Z,0.4nm,1.0s						
GERES	GERESS Array B	149.04	333	PKPbc	PKPdf	04 25 20.5	+0.7
	comp=Z,0.7nm,0.9s,baz=352,slow=3.0,SNR=2.6						
TORD	Torodi Ar. Bea	167.49	223	PKPab	PKPab	04 26 48.5	+0.3
	comp=Z,1.0nm,0.9s,baz=105,slow=6.3,SNR=5.0						

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*NEIC **25** 04:20:32.6±1.9, 22°.07S±0°.10×173°.47E±0°.10, h10km±1km, mb4.6/29, Error ellipse: s-maj=17.5km s-min=14.0km az=152.0*

*IDC **25** 04:20:36.9±4.0, 22°.03S×173°.47E, h46km±35km, mb3.9/15, mbtmp4.2/17, ML3.7/2, Error ellipse: s-maj=23.8km s-min=21.0km az=58.0*

ISC 25 04:20:36.0±0.5, 22°.05S±0°.08×173°.48E±0°.07, h40km, n81, $\sigma 0^{s}.84$/81, mb4.4/23, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINNC	Pines Island,	5.61	263	Pn	Pn	04 21 57.3	+0.3
MSVF	Nonsavu	6.08	46	Pn	Pn	04 22 05.5	+2.1
DZM	Mont Dzumac	6.52	268	P	Pn	04 22 09.7	+0.1
	0.8nm,0.3s,baz=101,slow=15,SNR=7.1						
DZM				S	Sn	04 23 24.1	+1.2
	3.5nm,0.7s,baz=40,slow=21,SNR=1.0						
	4.4nm,0.7s						
DZM	Mont Dzumac	6.52	268		Pn	04 22 10.1	+0.5
URZ	Urewera	16.46	170	P	P	04 24 25.9	-0.3
	0.6nm,0.3s,baz=8.4,slow=7.8,SNR=3.9						
	12nm,0.9s						
MRZ	Mangatainoka R	18.64	175	P	Pn	04 24 50.9	-0.1
MRZ				IAmb	IAmb	04 25 27.0	
	comp=Z,46nm,1.4s						
BFZ	Birch Farm	18.73	173		Pn	04 24 53.2	+1.2
BFZ				IAmb	IAmb	04 25 14.2	
	comp=Z,51nm,1.3s						
MSWZ	Moikau Station	19.37	176	P	Pn	04 24 59.1	-0.6
LTZ	Lake Taylor	20.70	183	P	P	04 25 13.4	+0.6
LTZ				IAmb	IAmb	04 25 28.1	
	comp=Z,35nm,1.3s						
ARMA	Armidale	21.27	242	P	P	04 25 18.8	-0.4
ARMA				IAmb	IAmb	04 25 53.9	
	comp=Z,37nm,1.2s						
CTA	Charters Tower	25.47	269	P	P	04 26 01.0	+0.4
	comp=Z,2.0nm,0.8s,baz=25,slow=1.4,SNR=3.2						
	comp=Z,2.0nm,0.8s						
CTAO	Charters Tower	25.47	269	P	P	04 26 01.2	+0.6
CTAO				IAmb	IAmb	04 26 18.8	
	comp=Z,17nm,1.4s						
PMG	Port Moresby	28.22	292	P	P	04 26 24.6	-0.7
	comp=Z,2.7nm,0.3s,baz=58,slow=9.5,SNR=1.9						
	comp=Z,2.7nm,0.3s						
PMG	Port Moresby	28.22	292	IAmb	IAmb	04 27 08.9	
	comp=Z,6.7nm,0.8s						
STKA	Stephens Creek	29.96	244	P	P	04 26 41.0	+0.3
	comp=Z,1.9nm,0.8s,baz=73,slow=8.4,SNR=5.4						
	comp=Z,1.9nm,0.8s						
STKA	Stephens Creek	29.96	244	P	P	04 26 40.6	-0.1
WR8	Warramunga Arr	36.38	266	P	P	04 27 35.9	-0.9
AS31	Alice Springs	36.42	260	P	P	04 27 37.0	-0.1
ASAR	Alice Springs	36.42	260	P	P	04 27 36.5	-0.6
	comp=Z,4.8nm,0.9s,baz=86,slow=8.5,SNR=29						
	comp=Z,4.8nm,0.9s						
ASAR	Alice Springs	36.42	260	P	P	04 27 36.7	-0.4
WB0	Warramunga Arr	36.52	266	P	P	04 27 37.1	-0.9
WB0				IAmb	IAmb	04 27 48.7	
	comp=Z,15nm,1.5s						
WRAB	Tennant Creek	36.53	266	P	P	04 27 37.9	-0.2
WRA	Warramunga Arr	36.53	266	P	P	04 27 37.2	-0.8
	comp=Z,1.4nm,0.8s,baz=104,slow=8.6,SNR=4.7						
	comp=Z,1.4nm,0.8s						
WRA	Warramunga Arr	36.53	266	P	P	04 27 37.3	-0.8
MTN	Manton Dam	41.30	276	P	P	04 28 17.3	-0.8
MTN				IAmb	IAmb	04 28 20.6	
	comp=Z,14nm,1.2s						
KNRA	Kununurra	42.67	271	P	P	04 28 29.3	+0.2
KNRA				IAmb	IAmb	04 28 31.2	
	comp=Z,19nm,1.2s						
FITZ	Fitzroy Crossi	44.96	266	P	P	04 28 48.1	+0.5
	comp=Z,19nm,1.0s,baz=105,slow=8.9,SNR=20						
	comp=Z,19nm,1.0s						
FITZ	Fitzroy Crossi	44.96	266	P	P	04 28 48.1	+0.5
VNDA	Vanda	55.81	183	P	P	04 30 09.2	+0.5
	comp=Z,1.1nm,0.7s,baz=19,slow=5.0,SNR=5.0						
	comp=Z,1.1nm,0.7s						
VNDA	Vanda	55.81	183	P	P	04 30 09.2	+0.5
SBA	Scott Base	55.95	182	P	P	04 30 11.8	+2.0
SBA				IAmb	IAmb	04 30 13.2	
	comp=Z,6.4nm,0.8s						
MJAR	Matsushiro Arr	67.12	330	P	P	04 31 27.2	+1.5
	comp=Z,1.1nm,0.4s,baz=162,slow=5.5,SNR=4.3						
	comp=Z,1.1nm,0.4s						
MJAR	Matsushiro Arr	67.12	330	P	P	04 31 27.0	+1.4
QSPA	South Pole Qui	68.02	180	P	P	04 31 31.8	+0.7
JSD	Sado	68.31	331	P	P	04 31 33.5	+0.4
KSRS	Korea Array	73.08	324	P	P	04 32 02.5	+0.4
	comp=Z,0.5nm,0.4s,baz=153,slow=7.6,SNR=2.6						
	comp=Z,0.5nm,0.4s						
PEA0B	Petropavlovsk-	76.08	350	P	P	04 32 18.6	-0.5
BELA	Belgrano 2	78.94	174	P	P	04 32 34.4	-0.6
BELA				IAmb	IAmb	04 32 35.0	
	comp=Z,4.4nm,0.9s						
CMAR	Chiang Mai Arr	83.26	293	P	P	04 33 00.1	+1.2
	comp=Z,1.0nm,0.3s,baz=128,slow=3.8,SNR=11						
	comp=Z,1.0nm,0.3s						
CMAR	Chiang Mai Arr	83.26	293	P	P	04 32 59.3	+0.4
CHTO	Chiang Mai	83.41	293	P	P	04 32 59.8	+0.1
CHTO				IAmb	IAmb	04 33 03.3	
	comp=Z,5.3nm,0.9s						
M13K	Dall Lake	84.30	11	P	P	04 33 05.2	+2.0
SNAA	Sanae	86.50	181	P	P	04 33 14.0	-0.4
	comp=Z,2.4nm,0.8s,baz=275,slow=11,SNR=4.6						
	comp=Z,2.4nm,0.8s						
SNAA	Sanae	86.50	181	P	P	04 33 13.7	-0.7
SNAA				IAmb	IAmb	04 33 14.7	
	comp=Z,5.9nm,1.1s						
NVAR	Mina Array Bea	87.74	47	P	P	04 33 21.4	+0.3
	comp=Z,0.8nm,1.0s,baz=254,slow=4.7,SNR=3.3						
	comp=Z,0.8nm,1.0s						
NVAR	Mina Array Bea	87.74	47	P	P	04 33 21.0	-0.1
ELK	Elko	90.94	46	P	P	04 33 35.8	-0.3
	comp=Z,0.9nm,0.8s,baz=216,slow=6.9,SNR=4.6						
	comp=Z,0.9nm,0.8s						
ELK	Elko	90.94	46	P	P	04 33 35.1	-1.0
ELK				IAmb	IAmb	04 34 05.3	
	comp=Z,6.4nm,1.5s						
F20K	Avaraart Lake	91.76	12	P	P	04 33 39.3	+0.4
F20K				IAmb	IAmb	04 33 46.0	
	comp=Z,2.3nm,0.7s						
ILAR	Eielson Array	91.78	16	P	P	04 33 38.3	-0.7
	comp=Z,0.6nm,0.9s,baz=238,slow=4.6,SNR=5.0						
	comp=Z,0.6nm,0.9s						
ILAR	Eielson Array	91.78	16	P	P	04 33 37.8	-1.3
SONM	Songino Array	91.85	322	P	P	04 33 39.0	-1.0
	comp=Z,0.2nm,0.3s,baz=111,slow=3.6,SNR=2.0						
	comp=Z,0.2nm,0.3s						
SONM	Songino Array	91.85	322	P	P	04 33 40.2	+0.2
PV19	Morning Glory	94.18	50	P	P	04 33 49.8	-1.3
ARTI	Arti	121.94	324	PKP	PKPdf	04 39 23.8	-1.8
	comp=Z,1.7nm,0.6s,baz=132,slow=2.3,SNR=4.2						
ARTI	Arti	121.94	324		PKPdf	04 39 24.4	-1.2
ARCES	ARCESS Array B	128.75	346	PKP	PKPdf	04 39 37.0	-1.3
	comp=Z,3.3nm,1.0s,baz=349,slow=2.8,SNR=3.8						
NOA	NORSAR Array B	139.12	347	PKP	PKPdf	04 39 57.4	-0.7
	comp=Z,1.0nm,1.0s,baz=31,slow=2.0,SNR=3.1						
STEB	Steborice	146.22	331	*e*PKP	PKPbc	04 40 12.2	+0.2
OSTC	Ostas	146.43	334	*e*PKP	PKPab	04 40 13.2	-0.4
DPC	Dobruska-Polom	146.54	333	*e*PKP	PKPbc	04 40 12.3	-0.7
MAUC	Maruska	146.61	331	*e*PKP	PKPbc	04 40 13.5	+0.3
EKA	Eskdalemuir Ar	146.66	357	PKPbc	PKPbc	04 40 12.3	-0.8
	comp=Z,1.1nm,0.7s,baz=337,slow=1.9,SNR=4.2						
VRAC	Vranov	147.21	332	PKPbc	PKPbc	04 40 14.5	-0.4
	comp=Z,2.2nm,0.7s,baz=140,slow=2.4,SNR=7.2						
PRU	Pruhonice	147.55	334	*e*PKP	PKPbc	04 40 15.4	-0.4
ZVC	Zvikov	148.12	334	*e*PKP	PKPbc	04 40 16.9	-0.5
CONA	Conrad Observa	148.55	331	*e*PKP	PKPbc	04 40 18.4	-0.2
	comp=Z,3.8nm,0.9s						
CKRC	Cesky Krumlov	148.56	333	*e*PKP	PKPbc	04 40 18.4	-0.1
KHC	Kasperske Hory	148.61	334	*e*PKP	PKPbc	04 40 18.4	-0.3
GERES	GERESS Array B	148.79	334	PKPbc	PKPbc	04 40 18.9	-0.3
	comp=Z,2.6nm,0.9s,baz=46,slow=3.9,SNR=16						
ARSA	Arzberg	149.21	330	*e*PKP	PKPbc	04 40 19.7	-0.5
	comp=Z,1.7nm,0.8s						
SOKA	Soboth	149.85	330	*e*PKP	PKPbc	04 40 21.3	-0.6
	comp=Z,4.6nm,1.1s						
LESA	Schwarzleotal	150.33	333	*e*PKP	PKPbc	04 40 22.3	-0.8
	comp=Z,2.8nm,0.6s						
MYKA	Terra Mystica	150.53	331	*e*PKP	PKPbc	04 40 22.6	-1.0
	comp=Z,3.5nm,1.0s						
WATA	Walderalm	150.85	334	*e*PKP	PKPbc	04 40 23.7	-0.7
	comp=Z,4.9nm,0.7s						
WTTA	Wattenberg	150.89	334	*e*PKP	PKPbc	04 40 24.0	-0.5
	comp=Z,12nm,1.3s						
ABTA	Abfaltersbach	150.93	333	*e*PKP	PKPbc	04 40 23.6	-0.9
	comp=Z,3.3nm,0.7s						
RETA	Reutte	151.05	335	*e*PKP	PKPbc	04 40 24.3	-0.5
	comp=Z,1.3nm,0.7s						
SQTA	Sankt Quirin	151.09	335	*e*PKP	PKPbc	04 40 22.9	-2.0
	comp=Z,4.8nm,0.7s						
FETA	Feichten	151.45	335	*e*PKP	PKPbc	04 40 25.3	-0.5
	comp=Z,3.4nm,0.9s						
TORD	Torodi Ar. Bea	168.19	223	PKPab	PKPab	04 41 48.0	+0.7
	comp=Z,1.4nm,0.9s,baz=83,slow=3.7,SNR=6.1						

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*IDC **25** 04:28:43.6±0.8, 6°.74N×72°.87W, h164km±9km, mb3.3/10, mbtmp3.9/13, Error ellipse: s-maj=30.9km s-min=7.7km az=131.0*

*NEIC **25** 04:28:44.1±1.9, 6°.81N±0°.09×72°.96W±0°.10, h156km±9km, mb4.5/21, Error ellipse: s-maj=17.1km s-min=8.7km az=127.0*

*RSNC **25** 04:28:45.2±0.0, 7°N±2°×7°3W±°, h144km±2km, M4.0, mb4.5, mB5.8, ML3.7, Mw(mB)5.3*

ISC 25 04:28:43.4±0.6, 6°.84N±0°.04×73°.04W±0°.05, h152km±5km, n89, $\sigma 1^{s}.31$/98, mb4.3/18, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.29	210	P	Pn	04 29 04.5	0.0
BARC				S	Sn	04 29 19.7	-0.8
PAMC	Pamplona, Colo	0.60	34	P	Pn	04 29 07.4	+1.3
PAMC				S	Sn	04 29 24.6	+1.2
BRJC	Barrancabermej	0.71	281	P	Pn	04 29 06.2	0.0
BRJC				S	Sn	04 29 23.2	-0.4
RUSC	La Rusia	0.94	183	P	Pn	04 29 08.5	0.0
RUSC				S	Sn	04 29 26.6	-1.1
OCAC	Ocana	1.42	349	P	Pn	04 29 12.8	+0.4
OCAC				S	Sn	04 29 34.6	-0.1
PTBC	PUERTO BERRIO,	1.44	258	P	Pn	04 29 10.9	-1.6
PTBC				S	Sn	04 29 32.3	-2.5
SPBC	San Pablo de B	1.57	221	P	Pn	04 29 13.4	-0.5
SPBC				S	Sn	04 29 35.2	-2.2
CHIC	Chingaza	2.30	197	P	Pn	04 29 23.8	+1.1
ROSC	El Rosal	2.36	213	P	Pn	04 29 24.8	+1.4
	736nm,0.4s,baz=90,slow=20,SNR=241						
ROSC				S	Sn	04 29 56.1	+1.9
	315nm,0.3s,baz=0.0,slow=20,SNR=6.0						
ROSC	El Rosal	2.36	213		Pn	04 29 24.5	+1.1
ROSC					Sn	04 29 55.4	+1.3
CVER	Cruz Verde, Cu	2.52	204	P	Pn	04 29 26.5	+1.1
VILC	Villavicencio,	2.79	194	P	Pn	04 29 29.0	+0.6

CBOC	Ciudad Bolivar	3.11	252	P	Pn	04 29 32.5	+0.1
SDV	Santo Domingo	3.13	49	P	Pn	04 29 34.2	+1.6
	126nm,0.4s,baz=198,slow=4.0,SNR=231						
SDV				S	Sn	04 30 10.7	-0.1
	204nm,0.5s,baz=255,slow=20,SNR=32						
SDV	Santo Domingo	3.13	49		Pn	04 29 33.7	+1.0
SDV	Santo Domingo	3.13	49	P	Pn	04 29 34.3	+1.6
DBBC	Dabeiba	3.15	273	P	Pn	04 29 32.2	-0.7
ARGC	Ariguani, Magd	3.23	338	P	Pn	04 29 35.5	+1.8
PRAC	Prado	3.61	211	P	Pn	04 29 38.6	-0.1
ORTC	Ortega, Tolima	3.65	217	P	Pn	04 29 39.2	0.0
APAC	Apartado, Choc	3.67	287	P	Pn	04 29 38.8	-0.6
SJCC	San Jacinto, C	3.70	325	P	Pn	04 29 38.4	-1.5
PLMC	San Jos del P	3.76	239	P	Pn	04 29 40.6	0.0
YOTC	Yotoco, Valle	4.35	229	P	Pn	04 29 48.9	+0.5
MACC	Macarena, Meta	4.74	190	P	Pn	04 29 52.0	-1.4
PTAC	Punta Ardita,	4.75	274	P	Pn	04 29 52.2	-1.3
JAMC	Jamundi, Valle	5.11	225	P	Pn	04 30 00.1	+1.6
	3µm84nm,0.8s						
GARC	Garzon, Huila	5.23	208	P	Pn	04 29 59.3	-0.9
POPC	Popayan, Colom	5.60	220	P	Pn	04 30 04.8	-0.3
	36nm,0.7s						
BBAC	Balboa, Cauca	6.37	221	P	Pn	04 30 16.8	+1.6
PTLC	Puerto Leguiza	6.86	195	P	Pn	04 30 33.4	+12
PTLC				S	Sn	04 31 18.5	-20
GCUF	Volcan Galeras	7.04	218	P	Pn	04 30 24.9	+0.4
GCUF				S	Sn	04 31 28.9	-15
OTAV	Otavalo	8.50	220		Pn	04 30 43.2	-0.7
STH	Stony Hill	11.76	342	i P	Pn	04 31 28.2	+1.7
MTDJ	Mount Denham	12.13	339	Pn	Pn	04 31 33.1	+1.6
MTDJ	Mount Denham	12.13	339	eP	Pn	04 31 34.1	+2.6
JTS	Las Juntas de	12.27	287	P	P	04 31 38.4	-0.8
	8.7nm,0.5s,baz=73,slow=6.3,SNR=7.0						
JTS	Las Juntas de	12.27	287		Pn	04 31 34.3	+1.1
DR12	Loma Pena Alta	12.40	16	Pn	Pn	04 31 32.5	-2.3
CRPR	Cabo Rojo, PR	12.51	27	Pn	Pn	04 31 36.3	+0.1
CELP	Cerrillos	12.82	29	Pn	Pn	04 31 39.1	-1.2
SJG	San Juan	13.06	30	P	Pn	04 31 42.7	-0.6
	7.8nm,0.5s,baz=213,slow=7.9,SNR=6.2						
SJG	San Juan	13.06	30	P	Pn	04 31 42.5	-0.8
ECPR	Experimental S	13.13	29	Pn	Pn	04 31 42.3	-1.9
GTBY	Guantanamo Bay	13.16	351	eP	Pn	04 31 46.7	+2.1
BOAV	Boa Vista	13.23	109	Pn	Pn	04 31 44.6	-0.9
MASC	Masc	13.30	355	eP	Pn	04 31 48.5	+2.1
RCC	Rio Carpintero	13.33	349	eP	Pn	04 31 48.5	+1.8
MARVS	Santiago de Cu	13.37	348	eP	P	04 31 49.8	-1.6
QMBU	Quimbuelo	13.39	353	eP	Pn	04 31 48.8	+1.3
LMGC	Las Mercedes	13.70	344	eP	P	04 31 53.7	-1.3
CCCC	Cccc	14.99	343	eP	P	04 32 11.5	+2.2
MGV	Manicaragua	16.59	337	eP	Pn	04 32 33.4	+6.2
NNA	Nana	19.09	191	P	P	04 32 54.7	+0.2
NNA				IAmb	IAmb	04 33 10.2	
	comp=Z,29nm,1.4s						
HODGE	Hodges	28.56	344	P	P	04 34 26.1	+1.2
V61A	Roper	28.99	354	P	P	04 34 29.0	+0.2
Y49A	Blount Mountai	29.60	337	P	P	04 34 33.4	-0.8
Y49A				IAmb	IAmb	04 34 42.4	
	comp=Z,9.8nm,1.3s						
V48A	Smith Brothers	31.42	338	P	P	04 34 51.7	+1.5
V48A				IAmb	IAmb	04 35 14.5	
	comp=Z,15nm,1.5s						
WVT	Waverly	32.14	337	P	P	04 34 57.4	+0.9
T47A	Sharon Grove	32.63	339	P	P	04 35 01.6	+0.8
T47A				IAmb	IAmb	04 35 05.9	
	comp=Z,14nm,1.4s						
R49A	Shelbyville	33.18	342	P	P	04 35 05.9	+0.3
R49A				IAmb	IAmb	04 35 47.1	
	comp=Z,14nm,1.5s						
WHAR	Wooly Hollow	33.39	331	P	P	04 35 07.7	+0.4
P52A	Corning	33.66	347	P	P	04 35 11.0	+1.3
P52A				IAmb	IAmb	04 35 25.4	
	comp=Z,14nm,1.2s						
FCAR	Ozark Folk Cen	33.79	331	P	P	04 35 10.8	0.0
CGM3	Cape Girardeau	33.88	336	P	P	04 35 12.0	+0.4
CGM3				IAmb	IAmb	04 35 16.8	
	comp=Z,9.1nm,1.5s						
KSPA	Keystone Colle	34.65	356	P	P	04 35 19.4	+1.2
KSPA				IAmb	IAmb	04 35 53.5	
	comp=Z,18nm,1.3s						
BINY	Binghamton	35.31	356	P	P	04 35 23.8	-0.1
SFIN	Lafayette	35.69	341	P	P	04 35 27.3	+0.2
SFIN				IAmb	IAmb	04 36 03.4	
	comp=Z,18nm,1.3s						
TXAR	Lajitas Array	36.51	312	P	P	04 35 34.5	+0.2
	comp=Z,0.2nm,0.6s,baz=113,slow=8.8,SNR=4.8						
	comp=Z,0.2nm,0.6s						
TXAR	Lajitas Array	36.51	312	P	P	04 35 33.9	-0.5
SADO	Sadowa	38.15	353	P	P	04 35 48.5	+0.7
	comp=Z,1.8nm,0.5s,baz=178,slow=10.0,SNR=1.4						
	comp=Z,1.8nm,0.5s						
SADO	Sadowa	38.15	353	P	P	04 35 47.7	-0.2
SADO				IAmb	IAmb	04 36 12.4	
	comp=Z,19nm,1.4s						
ULM	Lac du Bonnet	47.29	340	P	P	04 37 00.8	-0.6
	comp=Z,2.0nm,0.4s,baz=129,slow=5.6,SNR=2.2						
	comp=Z,2.0nm,0.4s						
ULM	Lac du Bonnet	47.29	340	P	P	04 37 01.3	-0.1
PDAR	Pinedale Array	48.11	324	P	P	04 37 08.4	+0.2
	comp=Z,0.2nm,0.5s,baz=139,slow=8.1,SNR=2.5						
	comp=Z,0.2nm,0.5s						
SCHQ	Schefferville	48.11	5	P	P	04 37 07.9	+0.3
	comp=Z,4.4nm,0.6s,baz=184,slow=7.7,SNR=7.7						
	comp=Z,4.4nm,0.6s						
SCHQ	Schefferville	48.11	5	P	P	04 37 07.7	0.0
NVAR	Mina Array Bea	51.53	315	P	P	04 37 36.3	+2.3
	comp=Z,0.2nm,0.7s,baz=69,slow=4.8,SNR=2.7						
	comp=Z,0.2nm,0.7s						
FRB	Frobisher Bay	56.89	2	P	P	04 38 11.1	-0.9
	comp=Z,1.9nm,0.5s,baz=205,slow=7.5,SNR=13						
	comp=Z,1.9nm,0.5s						
YKA	Yellowknife Ar	63.27	340	P	P	04 38 55.1	-0.4
	comp=Z,0.7nm,0.6s,baz=137,slow=6.0,SNR=31						
	comp=Z,0.7nm,0.6s						
YKA	Yellowknife Ar	63.27	340	P	P	04 38 55.0	-0.5
A36M	Sachs Harbour	72.44	345	P	P	04 39 52.6	-0.1
INK	Inuvik	73.04	340	P	P	04 39 56.1	-0.1
	comp=Z,0.4nm,0.4s,baz=45,slow=5.8,SNR=5.5						
	comp=Z,0.4nm,0.4s						
INK	Inuvik	73.04	340	P	P	04 39 56.0	-0.2
ILAR	Eielson Array	76.98	335	P	P	04 40 19.2	+0.2
	comp=Z,0.1nm,0.6s,baz=94,slow=5.5,SNR=2.2						
	comp=Z,0.1nm,0.6s						
ILAR	Eielson Array	76.98	335	P	P	04 40 19.0	0.0
ASAR	Alice Springs	149.19	234	PKPbc	PKPbc	04 48 13.3	-1.5
	comp=Z,0.3nm,0.5s,baz=118,slow=3.3,SNR=11						
ASAR	Alice Springs	149.19	234		PKPdf	04 48 10.5	+0.1
WRA	Warramunga Arr	150.42	241	PKPbc	PKPbc	04 48 16.7	-1.2
	comp=Z,0.4nm,0.3s,baz=108,slow=3.1,SNR=7.6						

RSNC 25 04:40:15.1±0.0, 3°N±1°×7°4W±°, h5km±2km, M3.1, mb3.9, ML3.0, Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URMC	La Uribe, Meta	0.26	232	P	Pg	04 40 18.7	-1.6
URMC				S	Sg	04 40 22.2	-1.6
PRAC	Prado	0.78	293	P	Pg	04 40 27.3	-2.7
PRAC				S	Sg	04 40 37.2	-2.9
VILC	Villavicencio,	0.84	34	P	Pg	04 40 29.3	-2.0
VILC				S	Sg	04 40 41.3	-1.0
CVER	Cruz Verde, Cu	1.11	5	P	Pg	04 40 33.3	-3.1
CVER				S	Sg	04 40 47.7	-3.1
ORTC	Ortega, Tolima	1.18	295	P	Pg	04 40 34.3	-3.5
ORTC				S	Sg	04 40 49.8	-3.4
CHIC	Chingaza	1.29	20	P	Pg	04 40 36.5	-3.4
CHIC				S	Sg	04 40 54.7	-1.9
MACC	Macarena, Meta	1.30	166	P	Pn	04 40 37.4	-2.5
MACC				S	Sg	04 40 54.9	-2.0
BETC	Betania	1.46	240	P	Pn	04 40 39.7	-2.5
BETC				S	Sb	04 40 59.2	-2.6
ANIL	Santa Ana	1.63	311	P	Pn	04 40 42.5	-2.3
ANIL				S	Sn	04 41 03.4	-3.0
GARC	Garzon, Huila	1.79	227	P	Pn	04 40 45.6	-1.4
GARC				S	Sn	04 41 08.4	-1.9
RECRC	Villamaria, Ca	1.94	323	P	Pn	04 40 47.9	-1.3
RECRC				S	Sn	04 41 12.6	-1.7
SPBC	San Pablo de B	2.23	3	P	Pn	04 40 52.9	+0.1
SPBC				S	Sb	04 41 23.7	-0.2
YOTC	Yotoco, Valle	2.24	285	P	Pn	04 40 51.8	-1.3
YOTC				S	Sn	04 41 22.1	+0.9
FLOC	Florencia	2.34	219	P	Pn	04 40 54.6	+0.3
FLOC				S	Sn	04 41 24.2	+0.7
JAMC	Jamundi, Valle	2.51	266	P	Pn	04 40 57.3	+0.5
JAMC				S	Sn	04 41 29.4	+1.6
PLMC	San Jos del P	2.58	305	P	Pn	04 40 56.8	-0.8
PLMC				S	Sn	04 41 30.0	+0.6
POPC	Popayan, Colom	2.65	251	P	Pn	04 40 58.8	+0.1
POPC				S	Sb	04 41 35.3	-0.8
RUSC	La Rusia	2.69	24	P	Pn	04 40 59.8	+0.2
RUSC				S	Sn	04 41 35.0	+2.2
CBOC	Ciudad Bolivar	3.05	323	P	Pn	04 41 04.9	+0.7
CBOC				S	Sn	04 41 43.6	+2.4
PTBC	PUERTO BERRIO,	3.12	355	P	Pn	04 41 04.2	-0.8
PTBC				S	Sn	04 41 42.4	-0.4
PTLC	Puerto Leguiza	3.28	191	P	Pb	04 41 13.0	-0.8
PTLC				S	Sg	04 42 01.1	+0.6
CRUC	La Cruz	3.33	237	P	Pn	04 41 09.9	+1.7
CRUC				S	Sb	04 41 54.3	-1.5
BBAC	Balboa, Cauca	3.37	246	P	Pn	04 41 09.2	+0.6
BBAC				S	Sb	04 41 56.2	-0.7
BRJC	Barrancabermej	3.56	7	P	Pn	04 41 12.0	+0.9
BRJC				S	Sn	04 41 55.0	+1.3
GCUF	Volcan Galeras	3.84	236	P	Pn	04 41 18.1	+2.7
GCUF				S	Sb	04 42 10.0	-0.8
PAMC	Pamplona, Colo	4.17	20	P	Pn	04 41 20.4	+0.5
PAMC				S	Sn	04 42 13.1	+3.8
OCAC	Ocana	4.87	10	P	Pn	04 41 28.8	-0.4
OCAC				S	Sn	04 42 28.1	+2.0
SDV	Santo Domingo	6.48	33	P	Pn	04 41 50.7	-0.7
	7.3nm,0.9s						
SDV				S	Sn	04 43 00.7	-5.1
	7.3nm,0.9s						
SJCC	San Jacinto, C	6.52	351	P	Pn	04 41 51.2	-0.7
SJCC				S	Sn	04 43 02.2	-4.5

IDC 25 04:43:33.2±3.5, 22°94S×173°72E, h0km, mb4.0/2, mbtmp3.9/3, ML2.8/1, Error ellipse: s-maj=159.3km s-min=48.6km az=163.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	6.78	276	Pn	Pn	04 45 13.7	-0.4
	0.2nm,0.3s,baz=105,slow=20,SNR=1.5						
	3.3nm,0.8s						
ASAR	Alice Springs	36.49	261	P	P	04 50 40.4	-0.1
	0.7nm,0.9s,baz=91,slow=8.9,SNR=6.1						
	0.7nm,0.9s						
CMAR	Chiang Mai Arr	83.81	293	P	P	04 56 05.3	+0.3
	1.2nm,0.3s,baz=146,slow=4.7,SNR=4.6						
	1.2nm,0.3s						
GERES	GERESS Array B	149.68	333	PKPbc	PKPbc	05 03 24.2	-0.7
	1.5nm,0.8s,baz=39,slow=1.9,SNR=8.4						

BGR 25 04:55:07.4, 18°12S×177°20W, h33km

IDC 25 04:56:00.7±2.2, 18°00S×178°21W, h493km±24km, mb3.5/20, mbtmp4.3/20, Error ellipse: s-maj=17.6km s-min=13.5km az=151.0

NEIC 25 04:56:05.4±2.0, 17°99S±0°06×178°4W±0°1, h533km±6km, mb4.0/18, Error ellipse: s-maj=20.5km s-min=7.6km az=81.0

ISC 25 04:56:05.7±0.4, 18°02S±0°10×178°39W±0°10, h550km, n164, σ0s77/167, mb3.9/26, 17C-9D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.40	274	P	P	04 57 21.3	-2.2
URZ	Urewera	20.55	190	P	P	05 00 03.5	-3.0
	5.6nm,0.4s,baz=9.5,slow=12,SNR=10						
	5.6nm,0.4s						
CTA	Charters Tower	33.45	261	P	P	05 01 59.8	+0.1
	3.1nm,0.5s,baz=93,slow=9.6,SNR=14						
	3.1nm,0.5s						
STKA	Stephens Creek	38.59	241	P	P	05 02 42.9	+0.9
	3.8nm,0.5s,baz=97,slow=9.1,SNR=15						
	3.8nm,0.5s						
STKA	Stephens Creek	38.59	241	P	P	05 02 42.9	+0.9
WB0	Warramunga Arr	44.59	260	P	P	05 03 28.8	-0.9
WB0				IAmb	IAmb	05 03 30.1	
	comp=Z,3.7nm,0.6s						
WRA	Warramunga Arr	44.63	260	P	P	05 03 29.4	-0.5
	comp=Z,3.6nm,0.5s,baz=91,slow=6.7,SNR=39						
WRA				PcP	PcP	05 05 01.5	+0.8
	comp=Z,0.8nm,0.4s,baz=91,slow=3.9,SNR=5.4						
	comp=Z,3.6nm,0.5s						
WRA	Warramunga Arr	44.63	260	P	P	05 03 29.3	-0.5
WRA					PcP	05 05 01.2	+0.4
AS31	Alice Springs	44.78	254		P	05 03 31.3	+0.3
AS31				IAmb	IAmb	05 03 31.8	
	comp=Z,8.3nm,0.7s						
ASAR	Alice Springs	44.78	254	P	P	05 03 31.1	+0.2
	comp=Z,28nm,0.6s,baz=88,slow=8.3,SNR=448						
ASAR				PcP	PcP	05 05 01.9	+0.6
	comp=Z,1.8nm,0.6s,baz=102,slow=3.9,SNR=7.4						
ASAR				S	S	05 09 29.1	+0.7
	comp=Z,0.6nm,0.8s,baz=90,slow=16,SNR=6.7						
	comp=Z,28nm,0.6s						
FITZ	Fitzroy Crossi	53.03	261	P	P	05 04 32.6	+0.6
	comp=Z,1.2nm,0.3s,baz=76,slow=5.3,SNR=17						
	comp=Z,1.2nm,0.3s						
FITZ	Fitzroy Crossi	53.03	261	P	P	05 04 32.7	+0.7
VNDA	Vanda	60.34	185	P	P	05 05 22.1	+1.0
	comp=Z,0.4nm,0.5s,baz=350,slow=6.7,SNR=1.3						
	comp=Z,0.4nm,0.5s						
VNDA	Vanda	60.34	185	P	P	05 05 22.1	+1.0
MJAR	Matsushiro Arr	68.01	323	P	P	05 06 10.3	-0.2
	comp=Z,2.5nm,0.6s,baz=149,slow=6.2,SNR=6.2						
	comp=Z,2.5nm,0.6s						
MJAR	Matsushiro Arr	68.01	323	P	P	05 06 10.3	-0.2
MJAR				IAmb	IAmb	05 06 11.0	
	comp=Z,3.1nm,0.8s						
QSPA	South Pole Qui	72.03	180	P	P	05 06 35.0	+0.9
QSPA				IAmb	IAmb	05 06 35.6	
	comp=Z,3.1nm,0.9s						
PETK	Petropavlovsk-	73.79	345	P	P	05 06 43.9	-0.1
	comp=Z,3.4nm,0.8s,baz=162,slow=5.2,SNR=2.0						
	comp=Z,3.4nm,0.8s						
PETK	Petropavlovsk-	73.79	345	P	P	05 06 44.8	+0.7
USRK	Ussuriysk Ar.	76.72	326	P	P	05 07 02.3	+1.8
	comp=Z,1.6nm,0.5s,baz=101,slow=7.5,SNR=1.6						
	comp=Z,1.6nm,0.5s						
NVAR	Mina Array Bea	79.49	44	P	P	05 07 15.8	-0.1
	comp=Z,2.0nm,0.8s,baz=224,slow=8.9,SNR=16						
	comp=Z,2.0nm,0.8s						
NVAR	Mina Array Bea	79.49	44	P	P	05 07 16.3	+0.4
WVOR	Wild Horse Val	81.48	40	P	P	05 07 25.6	-0.4
WVOR				IAmb	IAmb	05 07 26.5	
	comp=Z,4.8nm,1.1s						
LCMT	Little Creek M	82.19	47	P	P	05 07 30.2	+0.5
U15A	North Rim	82.58	48	P	P	05 07 32.1	+0.2
U15A				IAmb	IAmb	05 07 33.3	
	comp=Z,3.8nm,0.7s						
ELK	Elko	82.73	43	P	P	05 07 32.2	-0.3
ELK				IAmb	IAmb	05 07 33.8	
	comp=Z,2.1nm,0.9s						
ILAR	Eielson Array	85.99	13	P	P	05 07 46.1	-1.4
	comp=Z,0.5nm,0.4s,baz=225,slow=5.2,SNR=21						
	comp=Z,0.5nm,0.4s						
ILAR	Eielson Array	85.99	13	P	P	05 07 46.4	-1.2
TX31	Lajitas Ar. Si	86.04	58	P	P	05 07 49.7	+0.9
TX31				IAmb	IAmb	05 07 50.3	
	comp=Z,2.3nm,0.8s						
TXAR	Lajitas Array	86.04	58	P	P	05 07 49.5	+0.8
	comp=Z,2.1nm,0.8s,baz=224,slow=6.2,SNR=27						
	comp=Z,2.1nm,0.8s						
TXAR	Lajitas Array	86.04	58	P	P	05 07 49.2	+0.4
HILR	Hailar Array B	86.62	325	P	P	05 07 52.2	+1.2
	comp=Z,0.5nm,0.3s,baz=125,slow=8.9,SNR=2.8						
	comp=Z,0.5nm,0.3s						
PDAR	Pinedale Array	87.42	43	P	P	05 07 54.5	-0.6
	comp=Z,0.8nm,0.7s,baz=211,slow=3.0,SNR=9.6						
	comp=Z,0.8nm,0.7s						
PDAR	Pinedale Array	87.42	43	P	P	05 07 55.1	0.0
CMAR	Chiang Mai Arr	88.94	290	P	P	05 08 03.8	+1.3
	comp=Z,0.8nm,0.3s,baz=99,slow=5.5,SNR=1.9						
	comp=Z,0.8nm,0.3s						
CMAR	Chiang Mai Arr	88.94	290	P	P	05 08 01.4	-1.1
TROLL	Troll, Antarti	90.19	180	⇑P	P	05 08 07.5	+0.1
	comp=Z,164nm,0.8s						
VNA3	Neumayer Olymp	90.63	176	P	P	05 08 09.3	0.0
LZDM	Lanzhou Array	91.04	307	P	P	05 08 12.7	+0.5
	comp=Z,0.8nm,0.3s,baz=126,slow=7.3,SNR=2.0						
	comp=Z,0.8nm,0.3s						
PLCA	Paso Flores	91.24	134	P	P	05 08 12.8	-0.1
	comp=Z,1.0nm,0.6s,baz=180,slow=2.0,SNR=4.5						
	comp=Z,1.0nm,0.6s						
PLCA	Paso Flores	91.24	134	P	P	05 08 13.7	+0.8
SONM	Songino Array	93.65	319	P	P	05 08 24.6	+0.9
	comp=Z,0.6nm,0.7s,baz=115,slow=5.1,SNR=2.8						
	comp=Z,0.6nm,0.7s						
SONM	Songino Array	93.65	319	P	P	05 08 24.9	+1.3
SONM				IAmb	IAmb	05 08 31.9	
	comp=Z,2.0nm,1.5s						
OK051	E0350 and S346	93.99	53	P	P	05 08 26.5	+1.2
YKA	Yellowknife Ar	94.43	25	P	P	05 08 25.7	-1.0
	comp=Z,0.4nm,0.8s,baz=254,slow=5.0,SNR=9.2						
	comp=Z,0.4nm,0.8s						
YKA	Yellowknife Ar	94.43	25	P	P	05 08 25.1	-1.5
SUSD	Miller	95.14	45	P	P	05 08 32.0	+1.6
MKAR	Makanchi Array	109.22	314	PKiKP	PKiKP	05 13 33.0	-0.5
	comp=Z,0.6nm,0.5s,baz=104,slow=0.9,SNR=6.5						
KURBB	Kurchatov Arra	111.97	318	PKiKP	PKiKP	05 13 38.3	-0.2
	comp=Z,0.6nm,0.3s,baz=79,slow=2.0,SNR=5.9						
BVAR	Borovoye Array	116.94	321	PKP	PKPdf	05 13 47.5	-0.5
	comp=Z,1.8nm,0.4s,baz=118,slow=1.0,SNR=9.3						
ARTI	Arti	123.06	326	PKP	PKiKP	05 13 59.6	-0.3
	comp=Z,3.8nm,0.6s,baz=214,slow=3.6,SNR=7.6						
ARTI	Arti	123.06	326		PKPdf	05 13 59.1	-0.4
AKTO	Aktyubinsk	124.97	319	PKP	PKiKP	05 14 03.5	-0.4
	comp=Z,0.8nm,0.3s,baz=65,slow=4.1,SNR=1.5						
ARCES	ARCESS Array B	126.43	350	PKP	PKPdf	05 14 05.5	-0.2
	comp=Z,0.9nm,0.5s,baz=69,slow=0.6,SNR=16						
ARCES	ARCESS Array B	126.43	350		PKiKP	05 14 05.8	-0.4
BELG	Belogornoye	130.39	325	PKP	PKPdf	05 14 13.4	-0.3
	comp=Z,6.9nm,0.8s,baz=68,slow=5.4,SNR=4.6						
FINES	FINESS Array B	133.30	344	PKP	PKiKP	05 14 19.4	-0.8
	comp=Z,1.7nm,0.5s,baz=44,slow=4.4,SNR=7.0						
FINES				SKPbc	SKPab	05 17 00.6	+1.8
	comp=Z,0.8nm,0.7s,baz=76,slow=1.7,SNR=1.6						
FINES	FINESS Array B	133.30	344		PKiKP	05 14 20.0	-0.2
NB2	NORSAR Subarra	136.49	353	PKP	PKPpre	05 14 18.2	
	comp=Z,0.4nm,0.5s,baz=39,slow=2.6						
NOA	NORSAR Array B	136.49	353	PKP	PKiKP	05 14 26.4	-0.5
	comp=Z,0.7nm,0.6s,baz=14,slow=4.0,SNR=4.8						
HFS	Hagfors	137.05	351	PKhKP	PKPpre	05 14 17.0	
	comp=Z,0.7nm,0.4s,baz=64,slow=3.7,SNR=6.5						
AKASG	Malin Array Be	140.67	332	PKhKP	PKPpre	05 14 26.4	
	comp=Z,0.5nm,0.3s,baz=45,slow=4.1,SNR=4.9						
AKASG				PKP	PKiKP	05 14 34.7	-0.9
	comp=Z,1.0nm,0.4s,baz=42,slow=3.1,SNR=5.5						
EKA	Eskdalemuir Ar	142.58	4	PKP	PKPdf	05 14 36.1	+0.1
	comp=Z,0.7nm,0.7s,baz=304,slow=1.3,SNR=1.5						
SORM	Soroca	142.90	330	⇓P	PKPdf	05 14 34.7	-2.1
BSEG	Bad Segeberg	143.53	351	ePKPbc	PKPdf	05 14 37.0	-0.8
	baz=15,slow=2.8						
BNN	Bunyan	143.74	312		PKPdf	05 14 38.2	-0.6
GIRR	Girov	144.62	330	⇑P	PKPab	05 14 40.9	+0.2
VLDR	Vladesti	144.62	327	⇑P	PKPab	05 14 41.1	+0.4
BUR08	Bucovina Ar. S	144.71	332		PKPab	05 14 41.4	+0.2
BURAR	Bucovina Array	144.72	332	⇑P	PKPab	05 14 41.7	+0.4
GHRR		144.81	328	⇑P	PKPab	05 14 42.3	+0.8
TESR	Tescani	144.86	329	⇑P	PKPab	05 14 42.4	+0.6
BRTR	Keskin Array B	144.87	315	PKP	PKPab	05 14 41.5	-0.7
	comp=Z,5.3nm,0.9s,baz=109,slow=2.2,SNR=20						
BRTR	Keskin Array B	144.87	315		PKPab	05 14 41.6	-0.6
FLTG	Flechtingen	144.94	350	ePKPbc	PKPab	05 14 40.9	-0.8
	baz=15,slow=2.8						
KIRS	Kirsehir-Merke	144.96	314	⇑P	PKPab	05 14 42.3	-0.2
TPGR	Topolog	145.10	326	⇑P	PKPab	05 14 43.0	+0.3
ONER	Baraj Valea Uz	145.11	329	⇓P	PKPab	05 14 43.0	+0.3
TURR	Turia	145.50	329	⇑P	PKiKP	05 14 46.2	+0.5
OSTC	Ostas	145.50	344	ePKP	PKPab	05 14 43.5	-0.6
CHVC	Chvalec	145.52	344	ePKP	PKPab	05 14 43.4	-0.7
CLZ	Clausthal	145.55	350	ePKPbc	PKPbc	05 14 42.9	0.0
	baz=15,slow=2.8						
CLL	Collm	145.58	347		PKPbc	05 14 41.9	-0.9
CLL	Collm	145.58	347	ePKPbc	PKPbc	05 14 43.1	+0.3
	baz=15,slow=2.8						
CLL	Collm	145.58	347	i PKPbc	PKPab	05 14 43.2	-1.1
	comp=Z,16nm,0.9s						
UPC	Upice	145.60	344	ePKP	PKPab	05 14 43.7	-0.8
DPC	Dobruska-Polom	145.66	343	ePKP	PKPab	05 14 44.1	-0.6
BRG	Berggiesshubel	145.78	346	ePKPbc	PKPbc	05 14 43.7	+0.2
	baz=15,slow=2.8						
KRLC	Kraliky	145.78	343	ePKP	PKPab	05 14 44.4	-0.8
MORC	Moravsky Berou	145.82	342		PKPbc	05 14 42.6	-1.1
MORC	Moravsky Berou	145.82	342	⇓P	PKPbc	05 14 43.1	-0.6
MORC	Moravsky Berou	145.82	342	ePKP	PKPbc	05 14 44.1	+0.4
DOPR	Dopca	145.86	330	⇑P	PKiKP	05 14 45.7	-0.8
GTTG	Gottingen	145.90	351	ePKPbc	PKPbc	05 14 44.0	+0.2
	baz=15,slow=2.8						
MLR	Muntele Rosu	145.94	329	PKPbc	PKPbc	05 14 43.7	-0.5
	comp=Z,3.2nm,0.5s,baz=346,slow=4.2,SNR=8.1						
MLR	Muntele Rosu	145.94	329		PKPdf	05 14 42.7	+0.3
MLR	Muntele Rosu	145.94	329	⇓P	PKPab	05 14 45.2	-0.9
PVCC	Panska Ves	145.95	345	ePKP	PKPab	05 14 44.8	-1.0
MAUC	Maruska	146.10	341	ePKP	PKPab	05 14 45.3	-1.2
CJR	Cluj-Napoca	146.12	332	⇑P	PKPab	05 14 45.7	-1.0
MMAI	Mount Meron Ar	146.22	303	PKPbc	PKPbc	05 14 45.8	+0.5
	comp=Z,6.6nm,0.7s,baz=103,slow=3.1,SNR=3.0						
MARR	Marisel-Cluj	146.36	333	⇓P	PKPbc	05 14 45.9	+0.6
DRGR		146.45	333	⇑P	PKPbc	05 14 46.2	+0.7
PRU	Pruhonice	146.46	345	ePKP	PKPbc	05 14 45.8	+0.5
VRAC	Vranov	146.52	342	PKPbc	PKPbc	05 14 45.9	+0.3
	comp=Z,3.5nm,0.7s,baz=359,slow=2.1,SNR=8.0						
VRAC	Vranov	146.52	342	⇑P	PKiKP	05 14 46.4	-1.3
VRAC	Vranov	146.52	342	ePKP	PKPbc	05 14 46.0	+0.4
TANN	Tannenbergstha	146.53	347	ePKPbc	PKPbc	05 14 45.9	+0.3
	baz=15,slow=2.8						
JAVC	Velka Javorina	146.59	341	ePKP	PKiKP	05 14 47.5	-0.4
PSZ	Piszkesteto	146.65	337		PKPbc	05 14 44.8	-1.3
PSZ	Piszkesteto	146.65	337	⇓P	PKiKP	05 14 47.3	-0.9
ARR	Arges	146.66	330	⇑P	PKPbc	05 14 46.4	+0.3
KRUC	Moravsky	146.80	342	ePKP	PKPbc	05 14 46.8	+0.5
BORA	Eskisehir	146.90	317		PKPbc	05 14 47.3	+0.3
MANZ	Manzenberg	147.01	348	ePKPbc	PKPbc	05 14 47.1	+0.2
	baz=15,slow=2.8						
ZVC	Zvikov	147.05	345	ePKP	PKiKP	05 14 48.1	-0.7
ROTZ	Rotzenmuhle	147.20	347	ePKPbc	PKPbc	05 14 47.8	+0.4
	baz=15,slow=2.8						
SIRR	Siria	147.31	334	⇑P	PKiKP	05 14 49.3	-0.2
TNS	Taunus Mts	147.41	352	ePKPbc	PKPbc	05 14 48.3	+0.4
	baz=15,slow=2.8						
GRF	Grafenberg Arr	147.47	348	ePKPbc	PKPbc	05 14 48.2	+0.2
	baz=15,slow=2.8						
KHC	Kasperske Hory	147.49	345		PKiKP	05 14 48.8	-1.0
KHC	Kasperske Hory	147.49	345	ePKP	PKiKP	05 14 48.9	-0.9
KHC				AMS	AMS	06 12 30.0	
	comp=Z,900nm,19.5s						
CKRC	Cesky Krumlov	147.59	344	ePKP	PKiKP	05 14 49.0	-1.0
WET	Wettzell	147.64	346	ePKPbc	PKPbc	05 14 48.7	+0.2
	baz=15,slow=2.8						
GEC2	GERESS Array S	147.72	345		PKiKP	05 14 49.5	-0.8
GEC2	GERESS Array S	147.72	345	ePKPbc	PKPbc	05 14 49.1	+0.3
	baz=15,slow=2.8						
GERES	GERESS Array B	147.72	345	PKPbc	PKiKP	05 14 49.3	-1.1
	comp=Z,5.1nm,0.5s,baz=29,slow=3.1,SNR=66						
BZS	Buzias	147.84	333	⇑P	PKiKP	05 14 49.7	-0.8
CONA	Conrad Observa	147.97	342	i PKP	PKiKP	05 14 50.2	-0.6
	comp=Z,0.2nm,0.4s,SNR=8.5						
RONA	Rosalia, Austr	148.05	341	i PKP	PKiKP	05 14 50.3	-0.6
	comp=Z,8.8nm,0.6s,SNR=6.6						
RONA	Rosalia, Austr	148.05	341	eP	PKiKP	05 14 50.3	-0.6
	comp=Z,8.8nm,0.6s,SNR=6.6						
HERR	Herculane	148.06	331	⇓P	PKiKP	05 14 50.1	-0.9
WLF	Walferdange	148.22	354	ePKPbc	PKiKP	05 14 50.4	-0.8
	baz=15,slow=2.8						
MDVR	Moldovita	148.46	332	⇓P	PKiKP	05 14 51.1	-0.8
MOA	Molln	148.50	344	ePKP	PKiKP	05 14 51.3	-0.6
	comp=Z,0.3nm,0.3s						
MORH	Mrgy, Hungar	148.54	337	⇑P	PKiKP	05 14 51.3	-0.6
ARSA	Arzberg	148.68	342	ePKP	PKPbc	05 14 50.2	-1.0
	comp=Z,4.2nm,1.1s						
BIOA	Bad Ischl, Aus	148.81	344	ePKP	PKPbc	05 14 51.4	-0.1
	comp=Z,0.9nm,0.4s						
BFO	Black Forest	149.28	351	ePKPbc	PKiKP	05 14 53.3	-0.2
	baz=15,slow=2.8						
LESA	Schwarzleotal	149.30	345	i PKP	PKiKP	05 14 53.0	-0.6
	comp=Z,2.0nm,0.4s,SNR=10						
BOVS	Bovan	149.34	331	⇓P	PKPbc	05 14 52.8	-0.1
SOKA	Soboth	149.35	342	ePKP	PKPbc	05 14 52.0	-1.0
	comp=Z,9.9nm,1.4s						
UBR	Ueberruh	149.61	349	ePKPbc	PKiKP	05 14 54.1	-0.1
	baz=15,slow=2.8						
WATA	Walderalm	149.64	347	i PKP	PKiKP	05 14 53.7	-0.7
	comp=Z,3.6nm,0.5s,SNR=6.5						
WATA	Walderalm	149.64	347	eP	PKiKP	05 14 53.7	-0.7
	comp=Z,3.6nm,0.5s,SNR=6.5						
RETA	Reutte	149.67	348	i PKP	PKiKP	05 14 53.8	-0.5
	comp=Z,2.0nm,0.4s,SNR=4.3						
WTTA	Wattenberg	149.69	346	i PKP	PKiKP	05 14 54.1	-0.5
	comp=Z,12nm,0.6s,SNR=14						
WTTA	Wattenberg	149.69	346	eP	PKiKP	05 14 54.1	-0.5

	comp=Z,12nm,0.6s,SNR=14						
MYKA	Terra Mystica	149.79	343	*i* PKP	PKPbc	05 14 53.5	-0.5
	comp=Z,4.6nm,0.6s,SNR=6.5						
MYKA	Terra Mystica	149.79	343	*e*P	PKPbc	05 14 53.5	-0.5
	comp=Z,4.6nm,0.6s,SNR=6.5						
SQTA	Sankt Quirin	149.83	347	*e*PKP	PKiKP	05 14 54.5	-0.3
	comp=Z,4.9nm,0.6s						
ABTA	Abfaltersbach	149.97	345	*i* PKP	PKPbc	05 14 54.1	-0.3
	comp=Z,9.9nm,0.6s,SNR=14						
ABTA	Abfaltersbach	149.97	345	*e*P	PKPbc	05 14 54.1	-0.3
	comp=Z,9.9nm,0.6s,SNR=14						
DAVA	Damuels	150.03	349	*e*PKP	PKPbc	05 14 54.5	-0.2
	comp=Z,9.5nm,1.2s						
FETA	Feichten	150.12	347	*i* PKP	PKiKP	05 14 55.5	+0.1
	comp=Z,8.2nm,1.0s,SNR=4.0						
STAL	STALIGIAL	150.38	344		PKPbc	05 14 55.0	-0.2
CIMO	Cimolais	150.40	345		PKPbc	05 14 55.1	-0.3
DAVOX	Davos/Dischmat	150.52	348	PKPbc	PKiKP	05 14 56.4	+0.1
	comp=Z,13nm,0.5s,baz=293,slow=1.5,SNR=28						
FUORN	Ofenpass-Fuorn	150.60	348		PKiKP	05 14 56.5	0.0
TUE	Stuetta	150.91	349		PKiKP	05 14 57.3	+0.2
TEOL	Teolo	151.48	345		PKiKP	05 14 58.1	0.0
ESDC	Sonseca Array	157.89	11	PKPab	PKPab	05 15 35.8	-0.7
	comp=Z,0.2nm,0.6s,baz=345,slow=5.2,SNR=2.4						
ESDC	Sonseca Array	157.89	11		PKPab	05 15 36.3	-0.2
MDT	Midelt	164.24	20	PKP	PKPdf	05 15 08.0	+1.1
	comp=Z,1.5nm,1.1s,baz=290,slow=1.6,SNR=5.1						

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*SIGU **25** 05:05:54.8±0.1, 46°.8N±0°.4×27°.5E±0°.5, h2^{km}, mb2.6/10, MD3.1/19*

*IDC **25** 05:05:55.1±0.9, 46°.82N×27°.29E, h0^{km}, mb3.7/1, mbtmp3.3/5, ML2.8/5, MS4.3/2, Error ellipse: s-maj=17.7km s-min=6.8km az=109.0*

*BUC **25** 05:05:55.3±0.2, 46°.82N×27°.45E, h2^{km}±1^{km}, ml3.1/57, Error ellipse: s-maj=1.2km s-min=0.9km az=53.0*

ISC 25 05:05:55.5±1.0**, 46°.80N**±0°.01×**27°.48E**±0°.02**, h9**^{km}±8^{km}**, n92, σ1^{s}.56**/143**, 55C-41D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VASR	Vaslui	0.27	127	⇓P	Pg	05 06 01.2	+0.3
VASR				⇑S	Sg	05 06 05.2	+0.7
IASR	Iasi	0.38	10	⇑P	Pg	05 06 03.1	+0.1
IASR				⇓S	Sg	05 06 08.7	+0.7
BIR	Birlad	0.55	169	⇑P	Pg	05 06 06.6	+0.5
BIR				⇑S	Sb	05 06 14.8	-0.4
LEOM	Leova	0.62	122	P	Pg	05 06 07.5	0.0
TESR	Tescani	0.64	243	⇓P	Pg	05 06 07.0	-1.0
TESR				⇑S	Sg	05 06 15.3	-1.0
GIRR	Girov	0.69	283	⇑P	Pg	05 06 08.4	-0.4
GIRR				⇑S	Sg	05 06 17.4	-0.4
GHRR		0.74	184	⇑P	Pg	05 06 09.9	+0.1
GHRR				⇓S	Sb	05 06 21.0	+0.2
ONER	Baraj Valea Uz	0.88	238	⇓P	Pg	05 06 12.0	-0.5
ONER				⇓S	Sb	05 06 24.6	-0.3
KIS	Kishinev	0.94	77	⇓P	Pg	05 06 13.6	0.0
KIS				⇑S	Sb	05 06 26.6	+0.1
KIS	Kishinev	0.94	77	P	Pg	05 06 13.5	0.0
KIS				S	Sb	05 06 26.5	+0.1
VARL	Varlezi	0.94	164	⇓P	Pg	05 06 13.3	-0.3
VARL				⇑S	Sb	05 06 27.4	+1.0
BIZ	Bicaz	0.95	279	⇓S	Sg	05 06 25.2	-1.0
COSR	Cosmesti PH	0.95	187	⇓P	Pg	05 06 13.9	+0.1
COSR				⇓S	Sb	05 06 28.0	+1.1
PANC	Panciu	0.96	194	⇑P	Pg	05 06 14.0	+0.1
PANC				⇑S	Sb	05 06 27.7	+0.7
PRAR	RASCA	1.02	304	⇑P	Pg	05 06 14.4	-0.7
PRAR				⇓S	Sg	05 06 28.3	-0.1
VLDR	Vladesti	1.04	156	⇑P	Pg	05 06 15.1	-0.5
VLDR				⇓S	Sn	05 06 31.2	+0.2
VRI	Vrincioaia	1.07	209	⇓P	Pg	05 06 15.5	-0.6
VRI				⇓S	Sb	05 06 30.5	+0.1
ODBI	Odobesti	1.08	196	⇑P	Pb	05 06 16.7	+0.4
ODBI				⇓S	Sn	05 06 32.0	+0.1
PLOR	Plostina	1.11	211	⇑P	Pg	05 06 16.3	-0.5
PLOR				⇓S	Sb	05 06 32.1	+0.6
SCTR	Scanteiesti	1.18	162	⇑P	Pb	05 06 17.7	-0.4
SCTR				⇑S	Sn	05 06 35.9	+1.5
TUDR		1.22	174	⇑P	Pb	05 06 18.3	-0.3
TUDR				⇓S	Sn	05 06 36.9	+1.7
TURR	Turia	1.26	234	⇓P	Pg	05 06 19.9	+0.3
TURR				⇑S	Sn	05 06 36.6	+0.3
TATR	Tatarca	1.27	162	⇑P	Pn	05 06 19.2	-0.2
IZVR	Izvoarele	1.28	171	⇑P	Pn	05 06 19.4	-0.1
IZVR				⇑S	Sn	05 06 38.3	+1.6
NEGRR	Negrea	1.30	168	⇓S	Sn	05 06 37.9	+0.7
COVR	Voineasa-Covas	1.30	223	⇑P	Pb	05 06 20.3	+0.2
COVR				⇑S	Sn	05 06 38.1	+0.7
SCHL	Schela	1.32	169	⇓P	Pn	05 06 20.2	0.0
SCHL				⇑S	Sg	05 06 39.7	+1.6
JOSR	Joseni	1.35	267	⇓P	Pg	05 06 21.4	-0.1
JOSR				⇑S	Sg	05 06 39.9	+0.8
BISRR	Bisoca	1.36	203	⇑P	Pg	05 06 21.7	0.0
BISRR				⇓S	Sg	05 06 41.6	+2.3
OZUR		1.37	239	⇑P	Pn	05 06 20.8	0.0
GIUM	Giurgiulesti	1.41	159	⇑P	Pn	05 06 21.7	+0.4
GIUM	Giurgiulesti	1.41	159	P	Pn	05 06 21.4	+0.1
GISR	Galati	1.42	163	⇓P	Pb	05 06 22.4	+0.3
BOSR	Bodos	1.45	241	⇓P	Pb	05 06 22.9	+0.1
SORM	Soroca	1.46	24	⇓P	Pg	05 06 23.4	0.0
SORM				⇓S	Sg	05 06 42.1	-0.3
DRBR	Darabani	1.52	338	⇑S	Sb	05 06 43.5	+0.2
PURM	Purcari	1.67	99	⇑S	Sb	05 06 48.1	+0.6
DOPR	Dopca	1.67	241	⇓P	Pn	05 06 25.3	+0.3
CFR	Carcaliu	1.69	164	⇓P	Pn	05 06 25.7	+0.5
MLR	Muntele Rosu	1.69	220	⇑P	Pn	05 06 25.4	0.0
MLR				⇑S	Sb	05 06 48.8	+0.6
MLR	Muntele Rosu	1.69	220	Pg	Pn	05 06 25.3	0.0
	2.3nm,0.3s,baz=19,slow=17,SNR=27						
MLR				Lg	Lg	05 06 46.2	
	6.9nm,0.3s,baz=60,slow=20,SNR=10						
BURAR	Bucovina Array	1.74	299	⇑P	Pn	05 06 26.7	+0.7
BURAR				⇑S	Sb	05 06 49.3	-0.4
NDNU	Novodnistrovsk	1.79	358	*i* P	Pn	05 06 27.5	+0.9
NDNU				pmax	pmax	05 06 29.2	
NDNU				*i* S	Sb	05 06 51.1	0.0
NDNU				smax	smax	05 06 52.9	
ISR	Istrita	1.81	202	⇑S	Sg	05 06 53.0	-0.5
TLCR		1.87	150	⇑P	Pn	05 06 28.5	+0.9
TLCR				⇑S	Sb	05 06 53.8	+0.7
KMPD	K-Podol'skiy	1.89	339	⇓*i*P	Pn	05 06 27.7	-0.2
KMPD				⇓*i*S	Sb	05 06 54.0	+0.1
PGOR	Pogoanele	1.93	191	⇑S	Sb	05 06 56.0	+1.1
TPGR	Topolog	2.05	161	⇑P	Pb	05 06 32.1	-0.9
TPGR				⇑S	Sb	05 06 58.7	+0.1
AMRR	Amara	2.19	183	⇓S	Sb	05 07 02.2	-0.4
KSV	Kosov	2.23	314	*i* P	Pn	05 06 33.8	+1.2
KSV				pmax	pmax	05 06 35.9	
KSV				*i* S	Sb	05 07 02.4	-1.2
KSV				smax	smax	05 07 09.0	
MDB	Medias	2.24	254	⇑P	Pn	05 06 33.7	+1.0
MDB				⇑S	Sb	05 07 02.7	-1.3
SULR		2.29	202	⇑S	Sn	05 07 03.7	+2.0
TLBR	Topalu	2.29	170	⇓S	Sb	05 07 05.1	-0.3
TIRR	Tirgusor	2.44	164	⇓P	Pn	05 06 37.0	+1.6
TIRR				⇓S	Sb	05 07 08.0	-1.5
ARR	Arges	2.45	235	⇑P	Pn	05 06 35.9	+0.3
NSLU	Nyzhne Selyshc	2.48	305	*e*P	Pg	05 06 44.9	+1.9
NSLU				pmax	pmax	05 06 54.9	
NSLU				*i* S	Sg	05 07 22.7	+7.6
NSLU				smax	smax	05 07 38.7	
CVDA	Cernavoda	2.50	171	⇓S	Sb	05 07 10.6	-0.7
HORU	Horodok	2.51	344	*e*P	Pn	05 06 38.1	+1.6
HORU				pmax	pmax	05 06 42.6	
HORU				*i* S	Sb	05 07 09.9	-1.9
HORU				smax	smax	05 07 17.4	
RAKU	Rahkiv	2.56	300	*e*P	Pn	05 06 38.6	+1.4
RAKU				pmax	pmax	05 06 45.0	
RAKU				*i* S	Sn	05 07 10.1	+1.7
RAKU				smax	smax	05 07 21.0	
CICN	Ciocanesti	2.62	187	⇑S	Sn	05 07 11.6	+1.7
CJR	Cluj-Napoca	2.67	269	⇑P	Pn	05 06 40.0	+1.3
CJR				⇑S	Sn	05 07 12.7	+1.6
ICOR	Ion Corvin	2.70	175	⇓S	Sb	05 07 15.3	-1.8
MFTR	Murfatlar	2.71	165	⇓P	Pn	05 06 40.9	+1.8
STNU	Starunia	2.77	315	*i* P	Pn	05 06 41.2	+1.1
STNU				*i* S	Sn	05 07 15.4	+1.8
EFOR	EFORIE	2.84	163	⇑P	Pn	05 06 42.9	+2.0
MARR	Marisel-Cluj	3.00	269	⇑P	Pn	05 06 44.2	+0.9
MARR				⇓S	Sn	05 07 20.2	+0.8
MESR	Meseseni	3.12	278	⇓S	Sn	05 07 23.2	+1.0
KORU	Korolevo	3.24	296	*e*P	Pn	05 06 48.2	+1.7
KORU				pmax	pmax	05 07 03.9	
KORU				*i* S	Sn	05 07 27.6	+2.4
KORU				smax	smax	05 07 55.3	
DRGR		3.28	272	⇑P	Pn	05 06 48.3	+1.2
TRSU	Trosnyk	3.33	294	*e*P	Pn	05 06 49.1	+1.4
TRSU				pmax	pmax	05 06 54.4	
TRSU				*i* S	Sn	05 07 29.6	+2.3
TRSU				smax	smax	05 07 45.6	
MORS	Morshin	3.35	315	*e*P	Pn	05 06 50.1	+2.1
MORS				*i* S	Sn	05 07 30.5	+2.6
BRIU	Brid	3.39	299	*e*P	Pn	05 06 49.9	+1.4
BRIU				*i* S	Sn	05 07 31.2	+2.4
BERU	Beregovo	3.57	295	*e*P	Pn	05 06 52.5	+1.4
BERU				pmax	pmax	05 06 53.7	
BERU				*i* S	Sn	05 07 35.5	+2.1
BERU				smax	smax	05 07 58.6	
PNT5	Drohobych	3.66	315	*e*P	Pn	05 06 53.6	+1.4
PNT5				*i* S	Sn	05 07 37.8	+2.3
SHIU	Shidnytsya	3.67	313	*e*P	Pn	05 06 54.2	+1.7
SHIU				pmax	pmax	05 06 56.5	
SHIU				*i* S	Sn	05 07 38.5	+2.6
SHIU				smax	smax	05 07 54.9	
STZU	Stuzhytsa	3.95	306	*i* P	Pn	05 06 57.8	+1.6
STZU				*i* S	Sn	05 07 45.3	+2.7
UZH	Uzhgorod	3.95	299	*e*P	Pn	05 06 57.9	+1.7
UZH				*i* S	Sn	05 07 45.0	+2.4
SIRR	Siria	4.05	265	⇑P	Pn	05 06 57.5	-0.1
KIEV	Kiev	4.06	16	⇑P	Pn	05 06 59.1	+1.3
AKASG	Malin Array Be	4.07	16	Pn	Pn	05 06 58.0	+0.1
	0.7nm,0.3s,baz=203,slow=12,SNR=1.6						
AKASG				Pg	Pb	05 07 07.5	+0.2
	4.3nm,0.3s,baz=200,slow=16,SNR=11						
AKASG				Sn	Sn	05 07 44.5	-1.0
	5.2nm,0.3s,baz=201,slow=21,SNR=5.2						
AKASG				Lg	Lg	05 08 01.7	
	10.0nm,0.3s,baz=198,slow=30,SNR=5.6						
BZS	Buzias	4.24	256	⇑P	Pn	05 07 00.2	0.0
KECS	Kecovo	5.02	292	*e*PN	Pn	05 07 15.2	+4.3
KECS				*e*SN	Sn	05 08 09.0	0.0
BOVS	Bovan	5.16	234	⇓P	Pn	05 07 12.9	0.0
SUDU	Sudak	5.59	107	*e*P	Pn	05 07 20.6	+1.8
SUDU				pmax	pmax	05 07 21.0	
SUDU				*e*S	Sn	05 08 24.5	+1.4
SUDU				smax	smax	05 08 26.7	
NACGM	Naroch	8.12	357	*e*P	Pn	05 07 53.3	-0.2
	comp=Z,4.0nm,0.7s,baz=177						
BRTR	Keskin Array B	8.38	145	Pn	Pn	05 08 01.2	+4.0
	comp=Z,0.1nm,0.3s,baz=325,slow=14,SNR=2.1						
	comp=Z,0.4nm,0.6s						
FINES	FINESS Array B	14.69	357	Pn	Pn	05 09 16.6	-6.7
	comp=Z,0.2nm,0.3s,baz=178,slow=11,SNR=9.5						
FINES				Sn	Sn	05 11 51.5	-15
	comp=Z,0.2nm,0.3s,baz=174,slow=22,SNR=5.6						
	comp=Z,0.4nm,0.3s						
HFS	Hagfors	15.62	334	Pn	Pn	05 09 29.2	-6.4
	comp=Z,0.1nm,0.3s,baz=139,slow=13,SNR=7.6						
HFS				Sn	Sn	05 12 14.5	-14
	comp=Z,0.1nm,0.3s,baz=140,slow=23,SNR=1.1						
	comp=Z,0.6nm,0.6s						
NOA	NORSAR Array B	17.10	332	Pn	Pn	05 09 49.3	-5.2
	baz=143,slow=13,SNR=1.2						
	comp=Z,0.1nm,0.6s						
KIRV	Kirov	17.67	40	LR	LR	05 17 26.0	
	comp=Z,1µm,18.1s,baz=143,slow=39						
ARCES	ARCESS Array B	22.82	358	P	P	05 10 57.0	-1.3
	comp=Z,2.9nm,1.0s,baz=175,slow=11,SNR=2.0						
	comp=Z,2.9nm,1.0s						
GUMO	Guam	97.91	61	LR	LR	06 07 50.6	
	comp=Z,100nm,18.1s,baz=184,slow=38						

RSNC 25 05:16:43.5±0.0**, 3°N**±1°×**7°4W**±°**, h5**^{km}±3^{km}**, M3.1, mb3.6, ML3.0, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URMC	La Uribe, Meta	0.29	234	P	Pg	05 16 47.0	-2.3
URMC				S	Sg	05 16 50.4	-2.8
PRAC	Prado	0.80	291	P	Pg	05 16 55.9	-3.0
PRAC				S	Sg	05 17 06.1	-3.2
VILC	Villavicencio,	0.82	33	P	Pg	05 16 57.6	-1.7
VILC				S	Sg	05 17 09.3	-0.6
CVER	Cruz Verde, Cu	1.10	3	P	Pg	05 17 01.6	-3.0
CVER				S	Sg	05 17 16.9	-2.0
ORTC	Ortega, Tolima	1.21	294	P	Pg	05 17 03.1	-3.6
ORTC				S	Sb	05 17 22.7	-0.1
CHIC	Chingaza	1.27	19	P	Pg	05 17 04.9	-3.0
CHIC				S	Sg	05 17 21.8	-2.6
MACC	Macarena, Meta	1.30	167	P	Pn	05 17 05.4	-3.0
MACC				S	Sg	05 17 23.8	-1.5
BETC	Betania	1.49	241	P	Pn	05 17 08.4	-2.6
BETC				S	Sn	05 17 27.7	-3.3
ANIL	Santa Ana	1.65	310	P	Pn	05 17 10.4	-3.0
ANIL				S	Sn	05 17 32.8	-2.4
GARC	Garzon, Huila	1.82	228	P	Pn	05 17 13.9	-1.9
GARC				S	Sn	05 17 36.9	-2.5
RECRC	Villamaria, Ca	1.95	322	P	Pn	05 17 16.4	-1.4
RECRC				S	Sn	05 17 41.2	-1.7
SPBC	San Pablo de B	2.22	2	P	Pn	05 17 22.0	+0.9
SPBC				S	Sb	05 17 52.2	+0.2
YOTC	Yotoco, Valle	2.27	284	P	Pn	05 17 20.0	-1.8
YOTC				S	Sn	05 17 50.3	0.0
FLOC	Florencia	2.37	220	P	Pn	05 17 22.6	-0.5
FLOC				S	Sn	05 17 53.0	+0.4
JAMC	Jamundi, Valle	2.54	265	P	Pn	05 17 25.8	+0.2
JAMC				S	Sn	05 17 57.5	+0.5
PLMC	San Jos del P	2.60	305	P	Pn	05 17 25.2	-1.1
PLMC				S	Sb	05 18 00.7	-2.2
RUSC	La Rusia	2.67	23	P	Pn	05 17 28.3	+0.6
RUSC				S	Sb	05 18 05.6	+0.1
POPC	Popayan, Colom	2.68	251	P	Pn	05 17 29.2	+1.7
POPC				S	Sb	05 18 03.4	-2.0
CBOC	Ciudad Bolivar	3.06	323	P	Pn	05 17 33.1	+0.3
CBOC				S	Sn	05 18 11.2	+1.3
PTBC	PUERTO BERRIO,	3.12	354	P	Pn	05 17 32.5	-0.9
PTBC				S	Sn	05 18 12.7	+1.7
BARC	Barichara	3.29	17	P	Pn	05 17 37.2	+1.2
BARC				S	Sb	05 18 22.1	-1.0
PTLC	Puerto Leguiza	3.29	192	P	Pb	05 17 39.8	-2.7
PTLC				S	Sg	05 18 30.9	+1.5
BBAC	Balboa, Cauca	3.40	246	P	Pn	05 17 38.8	+1.4
BBAC				S	Sb	05 18 25.1	-1.1
PAMC	Pamplona, Colo	4.15	20	P	Pn	05 17 49.5	+1.5
PAMC				S	Sb	05 18 47.0	-1.0
OCAC	Ocana	4.86	10	P	Pn	05 17 58.9	+1.5
OCAC				S	Sn	05 18 55.9	+1.7
SJCC	San Jacinto, C	6.52	351	P	Pn	05 18 19.6	-0.6
SJCC				S	Sn	05 19 34.4	-0.6

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*RSNC **25** 05:22:25.0±0.0, 3°N±1°×7°4W±°, h6^{km}±2^{km}, M3.8, mB4.9, ML3.4, MLv4.1, Mw(mB)4.2*

*IDC **25** 05:22:26.1±1.0, 3°.50N×74°.06W, h0^{km}, mb3.6/5, mbtmp3.8/7, ML3.5/2, Error ellipse: s-maj=25.2km s-min=12.7km az=90.0*

ISC 25 05:22:26.3±0.6**, 3°.45N**±0°.02×**74°.23W**±0°.03**, h10**^{km}**, n35, σ2^{s}.05**/55**, mb3.8**/4**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URMC	La Uribe, Meta	0.25	215	P	Pg	05 22 30.3	-1.2
URMC				S	Sg	05 22 33.9	-1.0
PRAC	Prado	0.70	292	P	Pg	05 22 39.0	-0.9
PRAC				S	Sb	05 22 48.7	-1.7
VILC	Villavicencio,	0.85	39	P	Pg	05 22 41.1	-1.6
VILC				S	Sg	05 22 52.7	-1.1
CVER	Cruz Verde, Cu	1.07	9	P	Pg	05 22 45.1	-1.9
CVER				S	Sg	05 23 00.6	-0.5
ORTC	Ortega, Tolima	1.11	294	P	Pg	05 22 46.2	-1.4
ORTC				S	Sb	05 23 01.4	-0.7
CHIC	Chingaza	1.27	23	P	Pn	05 22 48.4	-2.1
CHIC				S	Sb	05 23 04.4	-2.8
MACC	Macarena, Meta	1.35	163	P	Pn	05 22 49.2	-2.1
MACC				S	Sb	05 23 07.0	-2.2
ROSC	El Rosal	1.38	356	Pg	Pn	05 22 51.9	-0.1
	292nm,0.3s,baz=226,slow=1.1,SNR=438						
ROSC				Lg	Lg	05 23 10.8	
	282nm,0.3s,baz=180,slow=22,SNR=28						
BETC	Betania	1.43	238	P	Pb	05 22 51.7	-1.4
BETC				S	Sg	05 23 10.6	-1.8
GARC	Garzon, Huila	1.78	225	P	Pb	05 22 57.3	-1.9
GARC				S	Sb	05 23 20.2	-1.5
YOTC	Yotoco, Valle	2.17	284	P	Pb	05 23 03.5	-2.3
YOTC				S	Sb	05 23 32.4	-0.5
FLOC	Florencia	2.34	217	P	Pb	05 23 06.4	-2.2
FLOC				S	Sb	05 23 36.6	-0.9
JAMC	Jamundi, Valle	2.45	265	P	Pb	05 23 09.9	-0.7
JAMC				S	Sg	05 23 43.0	-2.1
JAMC				S	Sg	05 23 43.0	-2.1
POPC	Popayan, Colom	2.60	250	P	Pb	05 23 10.8	-2.4
POPC				S	Sg	05 23 46.9	-3.1
RUSC	La Rusia	2.68	25	P	Pn	05 23 11.3	+1.3
RUSC				S	Sb	05 23 47.7	-0.2
CBOC	Ciudad Bolivar	2.98	324	P	Pb	05 23 16.5	-3.1
CBOC				S	Sg	05 23 58.7	-3.5
PTBC	PUERTO BERRIO,	3.07	356	P	Pn	05 23 16.2	+1.2
PTBC				S	Sb	05 23 58.7	-0.1
BARC	Barichara	3.29	19	P	Pn	05 23 19.9	+1.7
CRUC	La Cruz	3.30	235	P	Pb	05 23 22.8	-2.4
PTLC	Puerto Leguiza	3.31	190	P	Pb	05 23 24.1	-1.0
BBAC	Balboa, Cauca	3.33	245	P	Pn	05 23 20.1	+1.4
GCUF	Volcan Galeras	3.81	235	P	Pb	05 23 30.2	-3.9
PAMC	Pamplona, Colo	4.15	22	P	Pn	05 23 32.4	+2.2
UREC	San Jos de Ur	4.46	343	P	Pn	05 23 37.0	+2.9
OCAC	Ocana	4.84	11	P	Pn	05 23 40.1	+0.7
OCAC				S	Sn	05 24 38.3	+2.6
SDV	Santo Domingo	6.48	33	Pn	Pn	05 24 02.3	+0.3
	14nm,0.3s,baz=238,slow=1.0,SNR=42						
SDV				Sn	Sn	05 25 14.2	-1.9
	5.3nm,0.3s,baz=252,slow=20,SNR=3.6						
SDV				Lg	Lg	05 25 45.7	
	8.0nm,0.3s,baz=259,slow=19,SNR=4.5						
	28nm,0.3s						
SDV	Santo Domingo	6.48	33	P	Pn	05 24 02.3	+0.3
SDV				S	Sn	05 25 14.0	-2.1
ATAH	Atahualpa	11.31	202	Pn	Pn	05 25 12.2	+3.7
	0.3nm,0.3s,baz=43,slow=8.0,SNR=7.7						
ATAH				Sn	Sn	05 27 20.4	+5.2
	0.1nm,0.3s,baz=0.5,slow=14,SNR=1.1						
	1.7nm,0.8s						
LPAZ	La Paz	20.52	163	P	Pn	05 27 08.0	+0.3
	0.7nm,0.7s,baz=120,slow=4.5,SNR=2.5						
	0.7nm,0.7s						
MDP	Montagnes des	21.59	85	P	P	05 27 16.3	-0.3
	17nm,0.9s,baz=258,slow=12,SNR=2.3						
	17nm,0.9s						
ULM	Lac du Bonnet	50.09	342	P	P	05 31 23.3	+1.8
	1.8nm,0.5s,baz=170,slow=12,SNR=2.3						
	1.8nm,0.5s						
PDAR	Pinedale Array	50.19	326	P	P	05 31 24.2	+1.6
	0.2nm,0.6s,baz=141,slow=7.4,SNR=2.4						
	0.2nm,0.6s						
NVAR	Mina Array Bea	53.11	317	P	P	05 31 46.8	+2.3
	0.3nm,0.8s,baz=125,slow=7.4,SNR=1.7						
	0.3nm,0.8s						
ASAR	Alice Springs	146.20	231	PKPbc	PKPbc	05 42 07.7	-0.3
	0.4nm,0.5s,baz=116,slow=3.8,SNR=10						
WRA	Warramunga Arr	147.67	237	PKPbc	PKiKP	05 42 13.3	-1.0
	0.4nm,0.6s,baz=108,slow=3.1,SNR=2.6						

RSNC 25 05:43:54.5±0.0**, 3°N**±1°×**7°5W**±°**, h10**^{km}±2^{km}**, M1.2, ML1.2, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URMC	La Uribe, Meta	0.14	87	P	Pg	05 43 57.0	-0.8
URMC				S	Sg	05 44 00.9	+0.8
PRAC	Prado	0.60	322	P	Pg	05 44 05.8	-0.3
PRAC				S	Sg	05 44 13.6	-0.4
ORTC	Ortega, Tolima	0.98	313	P	Pg	05 44 11.9	-1.6
ORTC				S	Sg	05 44 24.9	-1.4
MACC	Macarena, Meta	1.28	148	P	Pn	05 44 16.4	-2.1
MACC				S	Sb	05 44 34.0	-1.2
ANIL	Santa Ana	1.52	325	P	Pn	05 44 21.3	-0.8
ANIL				S	Sn	05 44 41.0	-1.1
CHIC	Chingaza	1.59	30	P	Pn	05 44 22.2	-0.9

RSNC 25 05:44:01.3±0.0**, 3°N**±1°×**7°4W**±°**, h4**^{km}±2^{km}**, M1.4, ML1.3, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URMC	La Uribe, Meta	0.23	217	P	Pg	05 44 05.4	-0.4
URMC				S	Sg	05 44 09.1	+0.3
PRAC	Prado	0.70	294	S	Sg	05 44 23.3	-0.7
VILC	Villavicencio,	0.87	39	P	Pg	05 44 16.6	-1.4
VILC				S	Sg	05 44 29.4	+0.1
CVER	Cruz Verde, Cu	1.10	9	P	Pg	05 44 20.4	-2.0
CVER				S	Sg	05 44 35.6	-1.1
ORTC	Ortega, Tolima	1.11	295	P	Pg	05 44 20.8	-1.8
ORTC				S	Sb	05 44 38.7	+0.7
BOG	Bogota	1.20	8	P	Pg	05 44 24.1	-0.2
BOG				S	Sg	05 44 39.2	-0.7
CHIC	Chingaza	1.29	23	P	Pg	05 44 23.2	-3.0
CHIC				S	Sg	05 44 42.6	-0.4
MACC	Macarena, Meta	1.33	163	P	Pn	05 44 25.0	-1.8
MACC				S	Sg	05 44 41.9	-2.4
ANIL	Santa Ana	1.57	312	P	Pn	05 44 27.5	-2.7
ANIL				S	Sn	05 44 49.4	-1.7
GARC	Garzon, Huila	1.76	225	P	Pn	05 44 31.9	-0.9
GARC				S	Sn	05 44 55.4	-0.4

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*NOU **25** 05:44:20.1, 18°.00S×170°.78E, h407^{km}, ML4.4/12, Vanuatu Islands*

ISC 25 05:44:42.9±2.5**, 18°.7S**±0°.1×**169°.7E**±0°.3**, h250**^{km}**, n12, σ1^{s}.99**/11**, mb3.8**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INH	Isangel	0.89	204	P	Pn	05 45 16.4	-0.9
RTV	Rentapao	1.50	308	P	Pn	05 45 19.4	-1.8
DVP	Devils Point	1.72	305	P	Pn	05 45 21.1	-1.8
MARNC	Mare, Loyalty	3.13	209	P	Pn	05 45 34.7	-2.1
SANVU	Saraoutou	4.02	324	P	Pn	05 45 34.1	-13
YATNC	Mamie plateau,	4.21	218	P	Pn	05 45 46.3	-2.8
PINNC	Pines Island,	4.38	208	P	Pn	05 45 49.3	-1.9
DZM	Mont Dzumac	4.49	222	P	Pn	05 45 51.2	-1.4
OUENC	Ouen Island, N	4.52	215	P	Pn	05 45 52.2	-0.6
STKA	Stephens Creek	28.45	237	P	P	05 50 17.2	+2.2
	1.4nm,0.6s,baz=53,slow=10,SNR=5.8						
	1.4nm,0.6s						
WRA	Warramunga Arr	33.31	262	P	P	05 50 57.8	+0.1
	0.6nm,0.6s,baz=99,slow=8.3,SNR=7.2						
	0.6nm,0.6s						
ASAR	Alice Springs	33.64	255	P	P	05 51 01.2	+0.8
	3.8nm,0.5s,baz=88,slow=8.2,SNR=152						
	3.8nm,0.5s						

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*SOME **25** 05:45:16.1, 41°.85N×79°.42E, h10^{km}*

*NNC **25** 05:45:16.1±0.8, 41°.87N×79°.43E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=5.2km s-min=3.6km az=154.0*

*KRNET **25** 05:45:17.4±0.1, 41°.86N×79°.26E, h14^{km}, mb2.7*

ISC 25 05:45:16.2±1.6**, 41°.86N**±0°.07×**79°.52E**±0°.05**, h10**^{km}**, n32, σ1^{s}.28**/57**, 14C-6D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	Przheval'sk	1.04	307	⇑*i*P	Pg	05 45 35.1	-1.2
PRZ				⇑*i*S	Sg	05 45 48.0	-1.8
TARG	Taragay, Kyrgy	1.29	265	⇑*i*P	Pn	05 45 38.9	-1.8
TARG				⇑*i*S	Sb	05 45 54.2	-3.4
SHLS	Shalkode	1.30	358	P	Pg	05 45 41.1	0.0
	11nm,0.2s						
SHLS				S	Sn	05 45 59.5	+1.5
	22nm,0.2s						
SHLS	Shalkode	1.30	358	*e*P	Pg	05 45 41.1	0.0
	8.7nm,0.1s						
SHLS				*e*S	Sn	05 45 59.5	+1.5
	22nm,0.2s						
UZB	Uzynbulak	1.34	344	P	Pn	05 45 40.3	-0.9
	4.8nm,0.4s						
UZB				S	Sg	05 45 58.0	-1.4
	6.2nm,0.4s						
UZB	Uzynbulak	1.34	344	*e*P	Pn	05 45 40.0	-1.1
	1.8nm,0.1s						
UZB				*e*S	Sb	05 45 57.5	-1.2
	3.6nm,0.1s						
SATY	Saty	1.45	326	P	Pb	05 45 42.9	-0.6
	1.0nm,0.1s						

SATY				S	Sg	05 46 02.6	-0.5
	17nm,0.1s						
KTMS	**Ketmen**	1.70	21	P	Pb	05 45 47.4	-0.3
	1.0nm,0.2s						
KTMS				S	Sg	05 46 10.5	-0.4
	4.8nm,0.2s						
KTMS	**Ketmen**	1.70	21	eP	Pb	05 45 47.6	-0.1
	0.6nm,0.1s						
KTMS				eS	Sg	05 46 10.4	-0.4
	3.7nm,0.1s						
KPKS	**Kokpek**	1.72	339	P	Pb	05 45 46.7	-1.2
	0.3nm,0.2s						
KPKS				S	Sb	05 46 09.3	-0.3
	12nm,0.4s						
KPKS	**Kokpek**	1.72	339	eP	Pb	05 45 47.1	-0.9
KPKS				eS	Sg	05 46 09.7	-1.9
	14nm,0.3s						
KDJ	**Kajisay**	1.77	280	⇑iP	Pn	05 45 47.2	+0.2
KDJ				⇑iS	Sn	05 46 08.7	-1.0
KURS	**Kuram**	1.91	329	Pg	Pb	05 45 50.8	-0.4
	1.6nm,0.2s						
KURS				Lg	Lg	05 46 16.1	
	6.8nm,0.5s						
TNSS	**Tian-Shan**	2.24	303	eP	Pb	05 45 57.0	0.0
	0.7nm,0.2s						
TNSS				eS	Sg	05 46 26.6	-1.6
	1.2nm,0.2s						
MDOK	**Medeo**	2.24	306	Pg	Pb	05 45 56.6	-0.4
	5.2nm,0.4s						
MDOK				Lg	Lg	05 46 26.1	
	15nm,0.5s						
BLB	**Baldybastay**	2.36	341	Pg	Pb	05 45 58.5	-0.5
	28nm,0.7s						
BLB				Lg	Lg	05 46 29.5	
	36nm,0.4s						
ULHL	**Ulahol**	2.47	280	⇑iP	Pn	05 45 58.6	+1.8
ULHL				⇑iS	Sn	05 46 28.5	+1.3
MTBS	**Maitube**	2.62	300	Pg	Pb	05 46 02.6	-0.6
	2.6nm,0.2s						
MTBS				Lg	Lg	05 46 36.3	
	8.1nm,0.3s						
MTBS	**Maitube**	2.62	300	eP	Pb	05 46 02.6	-0.6
	2.6nm,0.2s						
MTBS				eS	Sb	05 46 36.3	+0.8
	8.1nm,0.3s						
CHKK	**Chushkaly**	2.73	318	eP	Pb	05 46 05.0	-0.1
	3.0nm,0.1s						
CHKK				eS	Sb	05 46 40.1	+1.5
	22nm,0.3s						
BOOM	**Boomskoye usch**	2.73	284	⇑iP	Pn	05 46 02.2	+1.8
BOOM				⇑iS	Sn	05 46 34.8	+1.2
KST	**Kastek**	2.89	295	Pg	Pb	05 46 07.2	-0.6
	3.1nm,0.4s						
KST				Lg	Lg	05 46 44.6	
	12nm,0.6s						
KST	**Kastek**	2.89	295	eP	Pb	05 46 07.6	-0.3
	1.0nm,0.1s						
KST				eS	Sb	05 46 44.8	+1.5
	4.8nm,0.3s						
TKM2	**Tokmak 2**	3.09	291	⇑iP	Pn	05 46 07.5	+2.2
TKM2				⇑iS	Sn	05 46 43.8	+1.3
DGS	**Degeres**	3.10	298	Pg	Pb	05 46 11.4	-0.1
	2.0nm,0.4s						
DGS				Lg	Lg	05 46 51.5	
	4.2nm,0.5s						
DGS	**Degeres**	3.10	298	eP	Pb	05 46 11.4	-0.1
	0.1nm,0.1s						
DGS				eS	Sb	05 46 51.5	+2.2
	3.9nm,0.4s						
KRBS	**Karabastau**	3.37	304	Pg	Pb	05 46 15.6	-0.5
	0.5nm,0.2s						
KRBS				Lg	Lg	05 46 58.7	
	3.0nm,0.3s						
KRBS	**Karabastau**	3.37	304	eP	Pb	05 46 15.9	-0.3
	0.6nm,0.3s						
KRBS				eS	Sb	05 46 58.9	+1.7
	1.1nm,0.1s						
KBK	**Karagaybulak**	3.49	285	⇑iP	Pn	05 46 12.6	+1.9
KBK				⇑iS	Sn	05 46 52.8	+0.7
UCH	**Uchtor**	3.75	277	⇓iP	Pn	05 46 16.4	+1.9
UCH				⇓iS	Sn	05 46 59.4	+0.5
AAK	**Ala-Archa**	3.81	283	⇓iP	Pn	05 46 17.2	+2.0
AAK				⇓iS	Sn	05 47 00.9	+0.8
ARLS	**Aral**	3.88	272	⇓iP	Pn	05 46 18.1	+2.0
ARLS				⇓iS	Sn	05 47 02.2	+0.3

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*NEIC **25** 06:11:55.0±1.4, 16°.37N±0°.08×145°.8E±0°.1, h526^{km}±6^{km}, mb4.1/23, Error ellipse: s-maj=20.7km s-min=9.9km az=106.0*

*IDC **25** 06:11:55.0±1.3, 16°.34N×145°.74E, h528^{km}±15^{km}, mb3.3/17, mbtmp4.2/18, Error ellipse: s-maj=17.0km s-min=11.1km az=83.0*

ISC 25 06:11:55.9±0.5, **16°.23N**±0°.08×**145°.8E**±0°.1, **h550**^{km}, **n44**, σ**1^{s}.74**/41, **mb4.0**/29, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DPSS	**Saipan**	0.98	179	P	P	06 12 59.3	-2.9
GUMO	**Guam**	2.77	199	P	P	06 13 06.9	-2.7
	41nm,0.3s,baz=39,slow=14,SNR=12						
GUMO				S	S	06 14 02.5	-6.9
	62nm,0.3s,baz=165,slow=20,SNR=10						
MANU	**Manus Island**	18.22	175	P	P	06 15 37.8	+1.8
JMN	**Monobe**	20.46	331	P	P	06 15 54.8	-1.3
PMG	**Port Moresby**	25.51	177	P	P	06 16 41.3	0.0
PMG				IAmb	IAmb	06 17 15.3	
	comp=Z,13nm,1.2s						
MTN	**Manton Dam**	32.31	207	P	P	06 17 41.0	+0.7
MTN				IAmb	IAmb	06 17 42.1	
	comp=Z,5.5nm,0.8s						
KNRA	**Kununurra**	35.87	209	P	P	06 18 11.5	+1.4
CTAO	**Charters Tower**	36.09	179	P	P	06 18 13.4	+1.6
CTAO				IAmb	IAmb	06 18 27.5	
	comp=Z,5.8nm,1.2s						
WB0	**Warramunga Arr**	37.48	198	P	P	06 18 24.6	+1.4
WB0				IAmb	IAmb	06 18 34.8	
	comp=Z,9.1nm,1.2s						
WR8	**Warramunga Arr**	37.62	198	P	P	06 18 25.8	+1.3
WR8				IAmb	IAmb	06 18 53.2	
	comp=Z,4.3nm,1.1s						
WRA	**Warramunga Arr**	37.66	198	P	P	06 18 26.0	+1.3
	comp=Z,2.9nm,0.6s,baz=20,slow=8.3,SNR=22						
	comp=Z,2.9nm,0.6s						
WRA	**Warramunga Arr**	37.66	198	IAmb	IAmb	06 18 30.6	
	comp=Z,0.2nm,0.9s						
FITZ	**Fitzroy Crossi**	39.45	211	P	P	06 18 40.5	+1.3
AS31	**Alice Springs**	41.31	197	P	P	06 18 55.3	+1.3
ASAR	**Alice Springs**	41.31	197	P	P	06 18 55.1	+1.1
	comp=Z,3.1nm,1.1s,baz=21,slow=6.5,SNR=35						
ASAR				ScP	ScP	06 23 39.8	+2.5
	comp=Z,0.4nm,0.7s,baz=22,slow=3.3,SNR=5.5						
	comp=Z,3.1nm,1.1s						
LZDM	**Lanzhou Array**	42.19	306	P	P	06 19 01.7	+0.4
	comp=Z,2.0nm,0.3s,baz=104,slow=6.3,SNR=4.0						
	comp=Z,2.0nm,0.3s						
CMAR	**Chiang Mai Arr**	44.66	280	P	P	06 19 21.2	+0.9
	comp=Z,0.8nm,0.3s,baz=66,slow=8.0,SNR=4.5						
	comp=Z,0.8nm,0.3s						
SONM	**Songino Array**	45.13	323	P	P	06 19 24.1	+0.5
	comp=Z,0.8nm,0.4s,baz=138,slow=6.9,SNR=11						
	comp=Z,0.8nm,0.4s						
SONM	**Songino Array**	45.13	323	IAmb	IAmb	06 19 26.5	
	comp=Z,1.7nm,1.2s						
STKA	**Stephens Creek**	48.00	185	P	P	06 19 46.2	+1.0
	comp=Z,0.6nm,0.4s,baz=12,slow=7.6,SNR=6.1						
	comp=Z,0.6nm,0.4s						
BBOO	**Buckleboo**	49.64	191	P	P	06 19 58.2	+0.9
BBOO				IAmb	IAmb	06 20 04.8	
	comp=Z,22nm,1.5s						
ZALV	**Zalesovo Beam**	60.02	323	P	P	06 21 09.2	-0.4
	comp=Z,0.7nm,0.3s,baz=72,slow=9.3,SNR=1.9						
	comp=Z,0.7nm,0.3s						
MKAR	**Makanchi Array**	60.23	315	P	P	06 21 11.8	+0.5
	comp=Z,1.7nm,0.3s,baz=91,slow=8.6,SNR=22						
	comp=Z,1.7nm,0.3s						
KURK	**Kurchatov**	63.16	319	P	P	06 21 30.1	0.0
KURBB	**Kurchatov Arra**	63.20	319	P	P	06 21 30.6	+0.2
	comp=Z,3.9nm,0.7s,baz=97,slow=6.7,SNR=33						
	comp=Z,3.9nm,0.7s						
COLD	**Coldfoot**	65.19	23	P	P	06 21 41.9	-0.9
COLD				IAmb	IAmb	06 22 09.3	
	comp=Z,6.6nm,1.5s						
IL31		65.82	26	P	P	06 21 46.9	+0.2
IL31				IAmb	IAmb	06 22 30.5	
	comp=Z,6.9nm,1.5s						
ILAR	**Eielson Array**	65.82	26	P	P	06 21 46.7	-0.1
	comp=Z,1.4nm,0.4s,baz=252,slow=5.8,SNR=40						
	comp=Z,1.4nm,0.4s						
ILAR	**Eielson Array**	65.82	26	P	P	06 21 46.1	-0.7
D24K	**Happy Valley**	66.27	21	IAmb	IAmb	06 21 52.3	
	comp=Z,5.4nm,0.8s						
BVAR	**Borovoye Array**	68.42	321	P	P	06 22 03.1	+0.2
	comp=Z,2.3nm,0.5s,baz=98,slow=7.1,SNR=11						
	comp=Z,2.3nm,0.5s						
BORK	**Borovoye**	68.47	321	P	P	06 22 03.2	0.0
BORK				IAmb	IAmb	06 22 04.7	
	comp=Z,3.7nm,1.0s						
I28M	**Miner Creek**	68.84	26	P	P	06 22 06.6	+1.3
I28M				IAmb	IAmb	06 22 27.1	
	comp=Z,7.8nm,1.5s						
YKA	**Yellowknife Ar**	80.13	28	P	P	06 23 09.9	+1.2
	comp=Z,0.6nm,0.7s,baz=289,slow=5.7,SNR=13						
	comp=Z,0.6nm,0.7s						
NVAR	**Mina Array Bea**	84.60	52	P	P	06 23 33.5	+1.4
	comp=Z,0.8nm,0.6s,baz=268,slow=5.3,SNR=9.0						
	comp=Z,0.8nm,0.6s						
ARCES	**ARCESS Array B**	84.85	342	P	P	06 23 32.6	+0.2
	comp=Z,1.6nm,0.6s,baz=75,slow=5.5,SNR=8.6						
	comp=Z,1.6nm,0.6s						
ARCES	**ARCESS Array B**	84.85	342	IAmb	IAmb	06 23 54.7	
	comp=Z,15nm,1.3s						
MFID	**Camas Ranch**	84.95	46	IAmb	IAmb	06 23 36.6	
	comp=Z,3.1nm,0.8s						
CBX	**Cerro Bola**	87.67	57	P	P	06 23 43.8	-2.9
FINES	**FINESS Array B**	89.15	335	P	P	06 23 52.0	-0.8
	comp=Z,1.5nm,0.4s,baz=64,slow=4.8,SNR=31						
	comp=Z,1.5nm,0.4s						
PDAR	**Pinedale Array**	89.50	45	P	P	06 23 56.5	+1.4
	comp=Z,0.2nm,0.6s,baz=214,slow=1.4,SNR=4.9						
	comp=Z,0.2nm,0.6s						
HFS	**Hagfors**	94.69	338	P	P	06 24 17.4	-0.9
	comp=Z,0.5nm,0.5s,baz=108,slow=3.3,SNR=4.9						
	comp=Z,0.5nm,0.5s						
DBIC	**Dimbokro**	143.09	306	PKP	PKPdf	06 30 27.0	-1.4
	comp=Z,1.4nm,0.4s,baz=55,slow=2.7,SNR=4.2						
LPAZ	**La Paz**	147.47	95	PKPbc	PKPab	06 30 42.6	-1.4
	comp=Z,0.7nm,0.5s,baz=236,slow=5.8,SNR=5.4						

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*SOME **25** 06:23:51.6, 39°.92N×77°.13E, h10^{km}*

*KRNET **25** 06:23:52.4±0.1, 40°.00N×77°.07E, mb3.2*

*NNC **25** 06:23:53.0±0.9, 39°.96N×77°.14E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=6.0km s-min=4.8km az=175.0*

ISC 25 06:23:54.4±1.6, **39°.90N**±0°.08×**77°.14E**±0°.05, **h10**^{km}, **n42**, σ**1^{s}.41**/70, **34C-4D**, **Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNKS	**Jany-Kuch**	1.62	316	⇑iP	Pn	06 24 20.8	-2.4
JNKS				⇑iS	Sn	06 24 42.0	-2.3
TARG	**Taragay, Kyrgy**	1.89	15	⇑iP	Pn	06 24 26.3	-0.8
TARG				⇑iS	Sn	06 24 51.1	-0.1
KDJ	**Kajisay**	2.22	1	⇑iP	Pn	06 24 31.1	-0.4
KDJ				⇑eS	Sn	06 24 59.7	+0.6
ULHL	**Ulahol**	2.44	344	⇑iP	Pn	06 24 34.0	-0.4
ULHL				⇑iS	Sn	06 25 04.5	+0.1
SALK	**Salom-Alik**	2.72	292	⇑eP	Pn	06 24 38.2	-0.1
SALK				⇑eS	Sn	06 25 11.8	+0.5
BOOM	**Boomskoye usch**	2.74	341	⇓iP	Pn	06 24 38.2	-0.3
BOOM				⇓iS	Sn	06 25 11.7	-0.1
PRZ	**Przheval'sk**	2.75	20	⇑eP	Pn	06 24 39.3	+0.6
PRZ				⇑eS	Sn	06 25 13.3	+1.3
SFK	**Sufi-Kurgan**	2.80	273	⇑iP	Pn	06 24 39.8	+0.4
SFK				⇑iS	Sn	06 25 14.6	+1.2
ARLS	**Aral**	2.90	313	⇑iP	Pn	06 24 40.2	-0.5
ARLS				⇑iS	Sn	06 25 15.2	-0.5
UCH	**Uchtor**	3.06	320	⇑eP	Pn	06 24 42.8	-0.4
UCH				⇑iS	Sn	06 25 19.6	-0.4
TNSS	**Tian-Shan**	3.13	357	Pg	Pb	06 24 49.8	-0.6
	1.9nm,0.4s						
TNSS				Lg	Lg	06 25 31.6	
	12nm,0.5s						
TNSS	**Tian-Shan**	3.13	357	eP	Pb	06 24 49.8	-0.6
	0.7nm,0.1s						
TNSS				eS	Sb	06 25 31.6	+2.8
	12nm,0.2s						
KBK	**Karagaybulak**	3.21	330	⇑iP	Pn	06 24 44.8	-0.2
KBK				⇑iS	Sn	06 25 23.1	-0.3
TKM2	**Tokmak 2**	3.23	339	⇑iP	Pn	06 24 45.2	-0.1
TKM2				⇑iS	Sn	06 25 23.4	-0.6
MDOK	**Medeo**	3.26	359	Pg	Pb	06 24 51.7	-0.7
	2.7nm,0.2s						
MDOK				Lg	Lg	06 25 35.5	
	35nm,0.5s						
KST	**Kastek**	3.26	345	Pg	Pb	06 24 52.0	-0.4
	3.1nm,0.5s						
KST				Lg	Lg	06 25 35.5	
	19nm,0.5s						
KST	**Kastek**	3.26	345	eP	Pb	06 24 51.8	-0.5
	2.0nm,0.2s						
KST				eS	Sb	06 25 35.2	+3.0
	19nm,0.5s						
MTBS	**Maitube**	3.27	351	Pg	Pb	06 24 52.1	-0.4
	2.5nm,0.3s						
MTBS				Lg	Lg	06 25 35.5	
	33nm,0.5s						
MTBS	**Maitube**	3.27	351	eP	Pb	06 24 52.1	-0.4
	0.2nm,0.1s						
MTBS				eS	Sb	06 25 35.5	+3.2
	33nm,0.5s						
KOTS	**Kotyrbulak**	3.33	360	Pg	Pb	06 24 53.6	+0.1
	2.7nm,0.3s						
KOTS				Lg	Lg	06 25 38.5	
	125nm,0.4s						
KOTS	**Kotyrbulak**	3.33	360	eP	Pb	06 24 53.6	+0.1
	2.7nm,0.3s						
KOTS				eS	Sg	06 25 38.5	-2.8
	125nm,0.4s						
AAK	**Ala-Archa**	3.38	325	⇑iP	Pn	06 24 47.1	-0.3
AAK				⇑iS	Sn	06 25 27.2	-0.5
OHH	**Osh**	3.39	282	⇑eP	Pn	06 24 47.6	+0.1
OHH				⇑iS	Sn	06 25 28.0	+0.2
ARSB	**Arslanbob**	3.47	295	⇑eP	Pn	06 24 48.9	+0.3
ARSB				⇑eS	Sn	06 25 29.7	-0.1
DGS	**Degeres**	3.49	343	Pg	Pb	06 24 55.4	-0.9
	3.9nm,0.5s						
DGS				Lg	Lg	06 25 42.0	
	20nm,0.4s						
UZB	**Uzynbulak**	3.53	23	Pg	Pb	06 24 56.3	-0.8
	8.9nm,0.4s						
UZB				Lg	Lg	06 25 43.1	
	8.8nm,0.5s						
UZB	**Uzynbulak**	3.53	23	eP	Pb	06 24 56.3	-0.8
	2.0nm,0.1s						
UZB				eS	Sb	06 25 42.9	+2.8
	9.6nm,0.4s						
CHMS	**Chumysh**	3.58	331	⇓iP	Pn	06 24 49.7	-0.2
CHMS				⇓iS	Sn	06 25 31.5	-0.8
KURS	**Kuram**	3.66	12	Pg	Pb	06 24 59.2	0.0
	6.4nm,0.5s						
KURS				Lg	Lg	06 25 47.8	
	12nm,0.7s						
SHLS	**Shalkode**	3.69	27	Pg	Pg	06 25 02.6	-2.4
	16nm,0.5s						
SHLS				Lg	Lg	06 25 53.8	
	12nm,0.6s						
SHLS	**Shalkode**	3.69	27	eP	Pg	06 25 02.6	-2.4
	16nm,0.5s						
SHLS				eS	Sg	06 25 53.8	+1.0
	12nm,0.6s						
KPKS	**Kokpek**	3.74	17	Pg	Pb	06 25 00.4	-0.2
	0.4nm,0.1s						
KPKS				Lg	Lg	06 25 50.0	
	10nm,0.4s						
KPKS	**Kokpek**	3.74	17	eP	Pb	06 25 00.4	-0.2
	0.4nm,0.1s						
KPKS				eS	Sb	06 25 50.0	+4.0
	10nm,0.4s						
EKS2	**Erkin-Say**	3.74	318	⇑iP	Pn	06 24 52.3	0.0
EKS2				⇑iS	Sn	06 25 35.8	-0.7
USP	**Ospenovka**	3.90	330	⇑eP	Pn	06 24 54.2	-0.2
USP				⇑iS	Sn	06 25 39.4	-0.9
KRBS	**Karabastau**	3.94	344	Pg	Pb	06 25 03.5	-0.6
	3.3nm,0.5s						
KRBS				Lg	Lg	06 25 55.3	
	17nm,0.4s						
KUU	**Kurty**	4.03	352	Pg	Pb	06 25 05.7	+0.3
	3.3nm,0.1s						
KUU				Lg	Lg	06 25 58.9	
	12nm,0.4s						
KUU	**Kurty**	4.03	352	eP	Pb	06 25 05.7	+0.3
	2.6nm,0.0s						
KUU				eS	Sb	06 25 58.9	+4.6
	3.4nm,0.1s						
MRKS	**Merke**	4.09	315	Pg	Pb	06 25 06.3	-0.3
	3.5nm,0.5s						
MRKS				Lg	Lg	06 25 59.8	
	6.4nm,0.4s						
MRKS	**Merke**	4.09	315	eP	Pb	06 25 06.3	-0.3
	0.5nm,0.2s						
MRKS				eS	Sb	06 26 00.1	+4.0
	6.4nm,0.4s						
BLB	**Baldybastay**	4.31	13	Pg	Pb	06 25 10.1	-0.1
	20nm,0.8s						
BLB				Lg	Lg	06 26 07.0	
	26nm,0.5s						
MNAS	**Manas**	4.35	308	⇑iP	Pn	06 25 00.6	0.0
MNAS				⇑iS	Sn	06 25 50.6	-0.8

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*MEX **25** 06:25:39.7±0.9, 15°.01N×93°.14W, h72^{km}±13^{km}, MD3.8*

*GCG **25** 06:25:39.6±0.6, 15°.48N×92°.74W, h88^{km}±130^{km}, MD3.9, ML3.3*

ISC 25 06:25:36.4±1.5, **14°.79N**±0°.07×**93°.25W**±0°.05, **h56**^{km}±33^{km}, **n15**, σ**2^{s}.25**/25, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.91	2	eP	Pn	06 25 53.3	+0.2
PCIG				eS	Sn	06 26 03.9	-1.5
THIG		0.96	83	eP	Pn	06 25 55.2	+1.5
THIG				eS	Sn	06 26 07.7	+1.2
PATR	**El Naranjo**	1.03	71	eP	Pn	06 25 55.1	+0.1
PATR				eS	Sn	06 26 07.9	-0.8
PAVE	**Pavencul**	1.11	69	eP	Pn	06 25 56.5	+0.5
PAVE				eS	Sn	06 26 09.5	-1.0
CHUJ	**Union Juarez**	1.15	74	eP	Pn	06 25 56.8	+0.4
CHUJ				eS	Sn	06 26 10.5	-0.8
RTAL	**Retalhuleu**	1.53	100	eP	Pn	06 26 03.7	+2.3
RTAL				eS	Sn	06 26 22.8	+2.6
HUEH	**Huehuetenango**	1.77	72	eS	Sn	06 26 28.0	+1.6
CCIG	**Comitan**	1.83	36	eP	Pn	06 26 06.9	+1.2
CCIG				eS	Sn	06 26 28.1	+0.2
STG2	**El Palmar, Qui**	1.85	101	i P	Pn	06 26 03.7	-2.1
STG2				i S	Sn	06 26 22.0	-6.2
STG8	**El Palmar, Qui**	1.87	100	i P	Pn	06 26 04.0	-2.3
STG8				i S	Sn	06 26 23.0	-5.9
STG8				IAML		06 26 24.2	
	comp=E,343nm,0.1s						
STG5	**El Palmar, Qui**	1.88	101	i P	Pn	06 26 04.3	-2.0
STG5				i S	Sn	06 26 23.3	-5.6
TGIG		1.98	4	eP	Pn	06 26 07.7	+0.1
TGIG				eS	Sn	06 26 29.1	-2.2
CMIG	**Matias Romero**	2.78	326	eP	Pn	06 26 19.3	+0.9
CMIG				eS	Sn	06 26 50.5	-0.3
HUIG	**Huatulco**	2.92	290	eP	Pn	06 26 21.8	+1.4
HUIG				eS	Sn	06 26 51.9	-2.5
NEUV	**Arroyo Zacate**	3.80	320	eP	Pn	06 26 33.5	+1.0
NEUV				eS	Sn	06 27 16.7	+0.7

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*CATAC **25** 06:26:17.0±0.5, 11°N±3°×8°6W±°, h146^{km}±3^{km}, M3.1/18, MLv3.1/18, Error ellipse: s-maj=7.8km s-min=4.8km az=47.1, confirmed*

*UCR **25** 06:26:16.4±1.2, 11°.35N×85°.88W, h148^{km}±4^{km}, MW3.7*

ISC 25 06:26:17.1±1.5, **11°.33N**±0°.05×**85°.86W**±0°.06, **h151**^{km}±9^{km}, **n73**, σ**0^{s}.56**/106, **14C-3D**, **Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MORN	**Al O del Volca**	0.30	44	P	Pn	06 26 37.9	+0.1
MORN				S	Sn	06 26 53.1	-0.5
LCRUZ	**La Cruz**	0.34	138	⇑iP	Pn	06 26 37.5	-0.4
LCRUZ				eS	Sn	06 26 53.9	+0.2
NADN	**Granada**	0.45	338	P	Pn	06 26 38.3	-0.1
NADN				S	Sn	06 26 55.4	+0.9
NADN	**Granada**	0.45	338	eP	Pn	06 26 38.2	-0.1
NANN	**Nandasmo**	0.66	337	P	Pn	06 26 40.4	+0.9
NANN	**Nandasmo**	0.66	337	S	Sn	06 26 58.6	+2.0
BUAI	**Buenos Aires**	0.69	131	⇑iP	Pn	06 26 39.7	+0.1
BUAI				eS	Sn	06 26 57.3	+0.5
PEJA	**Penjamo Buenos**	0.69	129	⇑iP	Pn	06 26 39.6	-0.1
SABN	**Sabanita**	0.69	335	P	Pn	06 26 39.1	-0.6
LAPC	**Finca la Perla**	0.70	143	⇑iP	Pn	06 26 39.3	-0.5
LAPC				eS	Sn	06 26 56.6	-0.4
VRLE	**La Escondida,**	0.72	138	eP	Pn	06 26 39.5	-0.5
ELI1	**Hacienda Flor**	0.74	156	S	Sn	06 26 58.3	+0.9
ELI1	**Hacienda Flor**	0.74	156	P	Pn	06 26 40.4	+0.4
GPS3	**Bodega del ICE**	0.75	140	eP	Pn	06 26 39.7	-0.4
GPS3				eS	Sn	06 26 58.4	+0.7
MAS3	**Al N del Volca**	0.76	336	P	Pn	06 26 40.6	+0.5
MAS3				S	Sn	06 26 58.3	+0.5
CRUN	**El Crucero**	0.78	326	P	Pn	06 26 35.7	-4.7
ALIBA	**Liberia Airpor**	0.79	157	eP	Pn	06 26 40.7	+0.3
ALIBA				eS	Sn	06 26 58.7	+0.6
UNAN	**Cigeo UNAN**	0.88	333	P	Pn	06 26 40.4	-0.6
UNAN				S	Sn	06 26 59.5	+0.3
MESS	**Mesas**	0.88	132	⇑iP	Pn	06 26 41.0	-0.1
VMAR	**Armenia, Volca**	0.89	125	⇑iP	Pn	06 26 40.9	-0.3
VMAR				eS	Sn	06 26 59.3	-0.2
MGAN	**Managua**	0.90	335	⇓iP	Pn	06 26 41.0	-0.1
TISN	**Laguna Tiscapa**	0.90	334	P	Pn	06 26 41.0	-0.2
HORNC	**Hornillas**	0.91	132	⇑iP	Pn	06 26 41.2	-0.1
HORNC				eS	Sn	06 27 00.4	+0.6
COLC	**Colonia**	0.92	136	eP	Pn	06 26 41.2	-0.2
UPAL	**Upala**	0.94	117	eP	Pn	06 26 41.1	-0.3
UPAL				eS	Sn	06 26 59.6	-0.4
CUI	**Cuipilapa**	0.95	134	⇑iP	Pn	06 26 41.7	0.0
CUI				eS	Sn	06 27 00.7	+0.3
MOTZ	**Rio Naranjo**	1.00	130	eP	Pn	06 26 41.8	-0.2
ELVJ	**El Viejo (Barb**	1.02	149	eP	Pn	06 26 42.1	-0.1
ELVJ				eS	Sn	06 27 00.2	-0.9
PLVR	**Palo Verde**	1.09	153	eP	Pn	06 26 42.1	-1.0
PLVR				eS	Sn	06 27 02.0	-0.8
COPN	**Copaltepe**	1.11	320	P	Pn	06 26 42.4	-0.5
COPN	**Copaltepe**	1.11	320	eP	Pn	06 26 42.5	-0.4
TIMP	**Tierras Morena**	1.11	132	⇑iP	Pn	06 26 42.9	-0.2
TIMP				eS	Sn	06 27 02.3	-0.5
BOAB	**BOACO BROADBAN**	1.13	10	P	Pn	06 26 42.5	-0.6
BOAB	**BOACO BROADBAN**	1.13	10	S	Sn	06 27 01.8	-1.3
INVE	**Universidad In**	1.15	137	eP	Pn	06 26 43.1	-0.3
INVE				eS	Sn	06 27 02.6	-0.8
CNAS	**Canas**	1.17	140	eP	Pn	06 26 43.2	-0.2
QUEB	**Quebradon, Cot**	1.18	126	eP	Pn	06 26 43.4	-0.3
QUEB				eS	Sn	06 27 03.2	-0.7
JUD3	**Juan Diaz 3**	1.20	165	⇑iP	Pn	06 26 43.9	0.0
JUD3				eS	Sn	06 27 03.6	-0.7
TILA	**Tilaran**	1.22	134	eP	Pn	06 26 44.1	0.0
TILA				eS	Sn	06 27 03.8	-0.8
NICO	**Nicoya**	1.25	161	eP	Pn	06 26 44.4	+0.1
NICO				eS	Sn	06 27 04.5	-0.6
MOM2	**El Cardon**	1.26	331	P	Pn	06 26 44.7	+0.3
MOM2				S	Sn	06 27 05.9	+0.7
MOMN	**Momotombo**	1.26	328	P	Pn	06 26 44.1	-0.3
MOMN				S	Sn	06 27 05.2	-0.1
SAJU	**San Juanillo,**	1.26	173	⇑iP	Pn	06 26 44.2	-0.2
JTS	**Las Juntas de**	1.36	139	eP	Pn	06 26 44.6	-0.8
JTS				eS	Sn	06 27 07.0	0.0
CMARA	**Lajas Hojancha**	1.37	162	⇑iP	Pn	06 26 45.6	+0.1
ARE1	**Arenal 1**	1.41	128	⇑iP	Pn	06 26 46.2	+0.3
ARE1				eS	Sn	06 27 08.2	+0.3
VARE2	**V. Arenal**	1.41	128	eP	Pn	06 26 45.9	0.0
CASO	**Castillo**	1.42	129	⇑iP	Pn	06 26 46.1	+0.1
CASO				eS	Sn	06 27 08.1	0.0
CNGA	**Al SSO del Vol**	1.42	325	P	Pn	06 26 45.9	-0.2
CNGA				S	Sn	06 27 08.6	+0.5
CNGN	**Cerro Negro**	1.42	325	P	Pn	06 26 45.8	-0.2
CNGN	**Cerro Negro**	1.42	325	⇓iP	Pn	06 26 45.4	-0.7
CNGN				eS	Sn	06 27 08.2	0.0
VACR	**Volcan Arenal**	1.44	126	eP	Pn	06 26 46.3	+0.1
FORC	**Fortuna**	1.45	126	eP	Pn	06 26 46.5	+0.3
FORC				eS	Sn	06 27 09.2	+0.6
POLN	**Al Sur del Vol**	1.61	325	P	Pn	06 26 47.9	-0.1
POLN				S	Sn	06 27 12.0	+0.3
PKGN	**Cerro Pekin**	1.72	321	P	Pn	06 26 48.9	-0.3
PKGN				S	Sn	06 27 14.4	+0.6
LIMN	**Finca el Limon**	1.79	344	P	Pn	06 26 49.7	-0.3
CRIN	**San Cristobal**	1.79	320	P	Pn	06 26 49.8	-0.3
CRIN	**San Cristobal**	1.79	320	S	Sn	06 27 15.3	+0.1
CRIN	**San Cristobal**	1.79	320	eP	Pn	06 26 49.6	-0.4
RCON	**San Juan de Ri**	2.16	352	P	Pn	06 26 54.3	-0.1

RCVN	Varillal2	2.26	352	P	Pn	06 26 55.5	-0.1
POTN	Potosi Cosigui	2.31	316	P	Pn	06 26 55.8	-0.2
POTN				S	Sn	06 27 26.6	+0.6
POTN	Potosi Cosigui	2.31	316	*e*P	Pn	06 26 55.0	-1.0
CSGN	Cosiguina Volc	2.33	315	P	Pn	06 26 56.1	-0.3
CSGN				S	Sn	06 27 27.0	+0.4
CSGN	Cosiguina Volc	2.33	315	⇓*e*P	Pn	06 26 56.1	-0.3
CSGN				*e*S	Sn	06 27 26.0	-0.5
PICV	PH. Pirrs	2.35	136	*e*P	Pn	06 26 58.0	+1.4
ABRB	Las Abras (San	2.48	122	*e*P	Pn	06 26 58.6	+0.3
PIEC	Cerro El Cedra	2.52	132	*e*P	Pn	06 26 59.6	+0.7
BUS1	Rivas	2.73	130	*e*P	Pn	06 27 02.3	+0.7
SAJE	San Jernim	3.04	130	*e*P	Pn	06 27 05.8	+0.5
EDPE	Pejibaye, P	3.12	134	*e*P	Pn	06 27 07.7	+1.6
DRK0	Durika	3.29	128	*e*P	Pn	06 27 08.5	0.0
JEFFS	S de V. Baru	4.21	129	*e*P	Pn	06 27 19.3	-1.0

RSNC 25 06:36:17.6±0.0**,3°N**±2°×**7°4W**±°**,h-1**^{km}±4^{km}**,M1.3,ML1.3, MLv2.0,Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	La Uribe, Meta	0.29	220	P	Pg	06 36 23.5	+0.3
URMC				S	Sg	06 36 27.1	+0.1
PRAC	Prado	0.74	289	P	Pg	06 36 31.9	+0.2
PRAC				S	Sg	06 36 41.6	+0.3
ORTC	Ortega, Tolima	1.14	293	P	Pn	06 36 41.3	+0.4
ORTC				S	Sn	06 36 58.4	+1.1
MACC	Macarena, Meta	1.36	165	P	Pg	06 36 43.3	-0.4
MACC				S	Sg	06 37 00.5	-0.9
YOTC	Yotoco, Valle	2.21	283	S	Sb	06 37 26.6	+0.1
FLOC	Florencia	2.38	218	P	Pn	06 36 54.0	-3.9
FLOC				S	Sn	06 37 29.5	+1.7
POPC	Popayan, Colom	2.65	250	P	Pb	06 37 04.9	-1.2

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*CATAC **25** 06:38:26.8±0.4, 13°N±2°×8°9W±°, h30^{km}±3^{km}, M4.5/42, MLv4.5/42, Error ellipse: s-maj=4.5km s-min=1.6km az=31.1, confirmed*

*GCG **25** 06:38:27.4±3.0, 12°.80N×88°.77W, h14^{km}±17^{km}, MD4.2, ML4.1*

*IDC **25** 06:38:29.0±1.3, 13°.07N×88°.25W, h72^{km}±12^{km}, mb3.7/10, mbtmp4.0/13, Error ellipse: s-maj=33.8km s-min=8.3km az=45.0*

*NEIC **25** 06:38:29.6±2.1, 12°.87N±0°.07×88°.49W±0°.07, h71^{km}±7^{km}, mb4.4/83, Error ellipse: s-maj=12.6km s-min=6.5km az=217.0*

*SNET **25** 06:38:29.1±1.5, 12°.98N×88°.63W, h58^{km}, ML4.2*

ISC 25 06:38:26.5±1.0**,12°.75N**±0°.05×**88°.64W**±0°.03**,h53**^{km}±9^{km}**, n186,**σ1^{s}.**33**/174**,mb4.3**/46**,5C-25D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PACA	Pacayal	0.78	23	S	Sn	06 38 52.7	+0.4
PACA	Pacayal	0.78	23	P	Pn	06 38 41.7	+0.2
BLLM	Bellamira	0.79	29	*i* P	Pn	06 38 41.8	+0.2
TECO	Alcaldia de Te	0.79	350	S	Sn	06 38 52.5	-0.1
TECO	Alcaldia de Te	0.79	350	P	Pn	06 38 41.7	+0.1
CNRM	Centro Naciona	0.85	32	S	Sn	06 38 54.8	+1.0
CNRM	Centro Naciona	0.85	32	⇓P	Pn	06 38 42.6	+0.3
PQSS	Presa 15 de Se	0.87	5	⇑P	Pn	06 38 40.6	-2.0
PQSS	Presa 15 de Se	0.87	5	S	Sn	06 38 52.6	-1.7
UESV	Universidad de	0.89	351	S	Sn	06 38 55.4	+0.4
UESV	Universidad de	0.89	351	⇓P	Pn	06 38 43.1	+0.2
LCND	La Caada	0.91	53	⇓P	Pn	06 38 43.1	-0.1
CNCH	Conchagua	0.94	56	*e*P	Pn	06 38 46.6	+3.0
CNCH				*e*S	Sn	06 38 57.8	+1.6
CNCH	Conchagua	0.94	56	P	Pn	06 38 43.7	+0.1
CNCH	Conchagua	0.94	56	S	Sn	06 38 58.0	+1.8
SCLA	Alcaldia de Sa	0.95	355	S	Sn	06 38 57.4	+1.1
SCLA	Alcaldia de Sa	0.95	355	⇓P	Pn	06 38 44.2	+0.6
LALI	Alcalda de L	0.99	318	*i* P	Pn	06 38 44.1	-0.1
LALI				*i* S	Sn	06 38 56.3	-0.9
LALI	Alcalda de L	0.99	318	P	Pn	06 38 44.1	-0.1
PAVA	Las Pavas	1.00	343	S	Sn	06 38 58.2	+0.6
PAVA	Las Pavas	1.00	343	⇓P	Pn	06 38 44.8	+0.4
PANCS	Alcalda de	1.00	328	P	Pn	06 38 45.4	+1.0
PANCS	Alcalda de	1.00	328	S	Sn	06 38 57.4	-0.2
CSGN	Cosiguina Volc	1.07	78	⇓P	Pn	06 38 45.2	-0.1
IGN	Direccin Gen	1.09	332	S	Sn	06 38 60.0	+0.3
IGN	Direccin Gen	1.09	332	P	Pn	06 38 45.9	+0.3
UTEC	Universidad Te	1.09	330	P	Pn	06 38 45.8	+0.2
UTEC	Universidad Te	1.09	330	S	Sn	06 38 59.9	+0.1
CAHU	Cacacuatique	1.09	22	*e*P	Pn	06 38 46.6	+0.9
UEES	Universidad Ev	1.12	329	S	Sn	06 39 01.1	+0.6
UEES	Universidad Ev	1.12	329	⇓P	Pn	06 38 46.3	+0.2
POTN	Potosi Cosigui	1.13	77	⇓P	Pn	06 38 46.1	+0.1
POTN				S	Sn	06 39 00.7	+0.2
BOQS	Boqueron	1.16	327	*e*P	Pn	06 38 46.6	-0.1
BOQS				*e*S	Sn	06 39 01.4	-0.2
PMON	Piamonte	1.16	325	S	Sn	06 39 01.1	-0.4
PMON	Piamonte	1.16	325	⇓P	Pn	06 38 46.9	+0.3
JAYA	Jayaque - finc	1.20	319	*e*P	Pn	06 38 48.2	+1.1
JAYA	Jayaque - finc	1.20	319	*i* P	Pn	06 38 47.1	0.0
JAYA				*i* S	Sn	06 39 01.6	-0.7
JAYA	Jayaque - finc	1.20	319	P	Pn	06 38 46.9	-0.2
CEDA	San Andres	1.28	325	P	Pn	06 38 48.4	+0.3
CEDA	San Andres	1.28	325	S	Sn	06 39 04.3	+0.1
LLGN	La Laguna	1.43	348	S	Sn	06 39 09.2	+1.2
LLGN	La Laguna	1.43	348	⇓P	Pn	06 38 50.7	+0.5
CEVE	Cerro Verde	1.44	318	*e*P	Pn	06 38 51.5	+1.1
CEVE				*e*S	Sn	06 39 09.7	+1.3
CEVE	Cerro Verde	1.44	318	P	Pn	06 38 51.1	+0.7
UNIC	Universidad Ca	1.51	324	P	Pn	06 38 51.9	+0.6
UNIC	Universidad Ca	1.51	324	S	Sn	06 39 10.5	+0.6
CRIN	San Cristobal	1.55	92		Pn	06 38 52.6	+0.9
CRIN				Sn	Sn	06 39 12.0	+1.2
CRIN	San Cristobal	1.55	92	S	Sn	06 39 12.2	+1.3
CRIN	San Cristobal	1.55	92	⇓P	Pn	06 38 52.8	+1.0
NUBE	Las Nubes	1.59	316	*i* P	Pn	06 38 52.9	+0.4
NUBE				*i* S	Sn	06 39 12.3	+0.2
NUBE	Las Nubes	1.59	316	⇓P	Pn	06 38 52.9	+0.4
PKGN	Cerro Pekin	1.62	93	⇓P	Pn	06 38 53.1	+0.4
PKGN				S	Sn	06 39 12.6	+0.1
LOAL	Lomas de Alarc	1.67	318	S	Sn	06 39 15.3	+1.6
LOAL	Lomas de Alarc	1.67	318	⇓P	Pn	06 38 54.9	+1.5
FAME	Alcaldia de Sa	1.73	309	P	Pn	06 38 54.4	+0.3
HERN	Volcan Telica	1.77	94		Pn	06 38 55.0	+0.2
MTO3	Montecristo	1.78	337	*i* P	Pn	06 38 55.7	+0.6
MTO3	Montecristo	1.78	337	⇓P	Pn	06 38 55.7	+0.6
MTO3	Montecristo	1.78	337	S	Sn	06 39 20.3	+3.6
POLN	Al Sur del Vol	1.78	93	⇓P	Pn	06 38 55.3	+0.4
POLN				S	Sn	06 39 16.5	0.0
TGUH	Tegucigalpa,Un	1.85	46		Pn	06 38 56.6	+0.6
CNGA	Al SSO del Vol	1.91	98	P	Pn	06 38 57.0	+0.3
CNGA				S	Sn	06 39 20.0	+0.5
CNGN	Cerro Negro	1.91	97	Pn	Pn	06 38 56.8	+0.2
CNGN	Cerro Negro	1.91	97	⇓P	Pn	06 38 56.9	+0.2
CNGN	Cerro Negro	1.91	97	S	Sn	06 39 20.1	+0.6
ESQI	Esquipulas	1.92	339	⇓P	Pn	06 38 58.0	+1.0
ESQI	Esquipulas	1.92	339	S	Sn	06 39 24.9	+4.9
ZAFR2	Estanzuela, Za	1.94	339	*i* P	Pn	06 39 04.3	+7.2
SARH	Santa Rosa de	2.02	357	*i* P	Pn	06 38 59.3	+1.2
MOMN	Momotombo	2.08	99	⇓P	Pn	06 38 59.3	+0.3
COPN	Copaltepe	2.08	106	⇓P	Pn	06 38 58.9	0.0
YUSH	Yuscaran	2.12	55	S	Sn	06 39 25.4	+0.7
YUSH	Yuscaran	2.12	55	⇓P	Pn	06 39 00.2	+0.6
MOM2	El Cardon	2.12	98	⇑P	Pn	06 39 00.3	+0.8
MOM2				S	Sn	06 39 25.0	+0.2
LIMN	Finca el Limon	2.23	82	⇑P	Pn	06 39 01.6	+0.4
LIMN				S	Sn	06 39 28.3	+0.7
OCON	Estacion meteo	2.28	67	⇓P	Pn	06 39 02.0	+0.3
OCON				S	Sn	06 39 28.5	-0.1
APYN	Apoyeque	2.29	103	P	Pn	06 39 02.4	+0.5
TISN	Laguna Tiscapa	2.39	104	P	Pn	06 39 03.8	+0.6
UNAN	Cigeo UNAN	2.40	105	P	Pn	06 39 04.0	+0.6
UNAN				S	Sn	06 39 31.0	-0.5
CRUN	El Crucero	2.41	108	P	Pn	06 39 01.0	-2.6
MGAN	Managua	2.41	104	P	Pn	06 39 04.1	+0.6
MGAN	Managua	2.41	104	S	Sn	06 39 31.3	-0.5
MAS3	Al N del Volca	2.51	106	P	Pn	06 39 05.8	+0.9
RCVN	Varillal2	2.52	71	S	Sn	06 39 35.8	+1.1
RCVN	Varillal2	2.52	71	⇑P	Pn	06 39 05.6	+0.5
RCON	San Juan de Ri	2.52	73	S	Sn	06 39 36.5	+1.6
RCON	San Juan de Ri	2.52	73	⇑P	Pn	06 39 05.8	+0.7
SABN	Sabanita	2.54	108	P	Pn	06 39 06.6	+1.2
NANN	Nandasmo	2.59	108	S	Sn	06 39 37.2	+1.0
NANN	Nandasmo	2.59	108	⇓P	Pn	06 39 07.6	+1.6
RCPN	Sur Rio San Ju	2.59	72	P	Pn	06 39 07.0	+0.9
MATN	Matagalpa	2.65	86	P	Pn	06 39 06.1	-0.7
NADN	Granada	2.73	111	P	Pn	06 39 08.7	+0.8
NADN				S	Sn	06 39 38.2	-1.6
APG	El Apazote	2.86	322	P	Pn	06 39 11.1	+1.3
	1.0nm,0.6s,baz=139,slow=9.3,SNR=9.0						
APG				S	Sn	06 39 48.0	+4.8
	4.3nm,0.6s,baz=63,slow=23,SNR=3.6						
APG	El Apazote	2.86	322	*i* P	Pn	06 39 11.1	+1.3
BOAB	BOACO BROADBAN	2.92	96	⇓P	Pn	06 39 10.4	0.0
STG8	El Palmar, Qui	3.13	303	*i* P	Pn	06 39 21.6	+8.0
STG8				*i* S	Sn	06 39 59.7	+10
STG8				IAML		06 40 07.1	
	comp=E,695nm,0.2s						
STG2	El Palmar, Qui	3.15	302	*i* P	Pn	06 39 21.8	+8.1
JUD3	Juan Diaz 3	3.98	130	Pn	Pn	06 39 27.7	+2.6
PETF	Flores	4.31	344		Pn	06 39 31.6	+2.1
PETF	Flores	4.31	344	⇓P	Pn	06 39 31.8	+2.3
JTS	Las Juntas de	4.36	124	P	Pn	06 39 33.1	+2.9
	comp=E,6.0nm,0.3s,baz=287,slow=13,SNR=14						
JTS				S	Sn	06 40 19.7	-0.2
	comp=E,22nm,0.4s,baz=90,slow=20,SNR=3.7						
JTS	Las Juntas de	4.36	124		Pn	06 39 34.0	+3.8
BILN	Bilwi Airport	5.28	75	Pn	Pn	06 39 44.0	+1.1
PIRO	Carate, Puerto	6.77	129	Pn	Pn	06 40 06.9	+3.6
BRU2	Volcan	7.04	123	Pn	Pn	06 40 10.1	+2.9
CMIG	Matias Romero	7.42	306	P	Pn	06 40 14.8	+2.6
	comp=E,4.1nm,0.6s,baz=152,slow=7.0,SNR=8.1						
CMIG				S	Sn	06 41 29.4	-5.6
	comp=E,4.1nm,0.3s,baz=116,slow=23,SNR=10						
TEIG	Tepich	7.44	3	P	Pn	06 40 15.1	+2.6
	comp=E,0.1nm,0.5s,baz=128,slow=20,SNR=11						
TEIG	Tepich	7.44	3	Pn	Pn	06 40 14.7	+2.3
SDV	Santo Domingo	18.09	100	P	P	06 42 33.4	-0.8
	comp=E,7.2nm,0.7s,baz=285,slow=7.1,SNR=11						
SDV	Santo Domingo	18.09	100		P	06 42 34.0	-0.3
SDV				IAmb	IAmb	06 42 37.4	
	comp=Z,7.2nm,0.8s						
833A	Chaparral WMA,	18.46	329		Pn	06 42 39.6	+1.0
HNDO	Hondo	19.40	331		Pn	06 42 49.6	-0.2
DRIO	Del Rio	19.98	328		P	06 42 55.3	+0.7
237A	Washetta, Mont	20.26	342	IAmb	IAmb	06 43 04.1	
	comp=Z,13nm,0.5s						
TXAR	Lajitas Array	21.62	322	P	P	06 43 13.8	+1.5
	comp=Z,2.6nm,0.7s,baz=145,slow=9.4,SNR=39						
TXAR				PcP	PcP	06 47 13.4	+0.8
	comp=Z,0.6nm,0.9s,baz=115,slow=2.5,SNR=5.3						
	comp=Z,2.6nm,0.7s						
TXAR	Lajitas Array	21.62	322		P	06 43 14.1	+1.7
PLPT	Palo Pinto	21.85	338	P	P	06 43 15.4	+0.8
MIAR	Mount Ida	22.16	349		P	06 43 18.8	+0.8
MIAR				IAmb	IAmb	06 43 43.6	
	comp=Z,11nm,1.1s						
SGCY	Sterling City	22.26	331	IAmb	IAmb	06 43 22.3	
	comp=Z,10nm,0.7s						
MNHN	Monahans	22.62	327	IAmb	IAmb	06 43 25.4	
	comp=Z,9.4nm,0.6s						
APMT	Aspermont	23.01	335		P	06 43 28.1	+1.1
TKL	Tuckaleechee C	23.23	10		P	06 43 29.0	-0.1
TKL				IAmb	IAmb	06 43 46.4	
	comp=Z,11nm,1.1s						
FCAR	Ozark Folk Cen	23.25	353	IAmb	IAmb	06 43 53.5	
	comp=Z,8.0nm,0.8s						
X58A	Rowland	23.29	20		P	06 43 30.0	+0.3
LCAR	Lake Charles	23.33	355	IAmb	IAmb	06 43 52.8	
	comp=Z,15nm,1.5s						
CLTN	Cedars of Leba	23.33	5		P	06 43 30.8	+0.7
POST	Post	23.39	332	IAmb	IAmb	06 43 32.7	
	comp=Z,8.6nm,0.7s						
V53A	Saluda	23.42	12		P	06 43 31.6	+0.6
V53A				IAmb	IAmb	06 43 50.4	
	comp=Z,28nm,1.4s						
DKNS	Dickens	23.64	334	IAmb	IAmb	06 43 35.5	
	comp=Z,16nm,0.8s						
FNO	Franklin	23.77	342	IAmb	IAmb	06 43 35.4	
	comp=Z,4.9nm,0.6s						
PBMO	Poplar Bluff	23.98	356	IAmb	IAmb	06 43 39.6	
	comp=Z,8.3nm,0.8s						
T47A	Sharon Grove	24.17	3		P	06 43 37.1	-0.7
T47A				IAmb	IAmb	06 43 38.6	
	comp=Z,7.9nm,0.9s						
MGMO	Mountain Grove	24.52	353	IAmb	IAmb	06 44 00.6	
	comp=Z,18nm,1.5s						
SMWD	Samnorwood	24.61	337	IAmb	IAmb	06 43 43.7	
	comp=Z,9.0nm,0.6s						
MSTX	Muleshoe	24.73	331	IAmb	IAmb	06 43 43.8	
	comp=Z,9.0nm,0.7s						
ELIS	Ellis County	25.16	339	P	P	06 43 45.9	-1.1
CCM	Cathedral Cave	25.31	355		P	06 43 48.1	-0.1
NOKA	Waynoka	25.52	341	IAmb	IAmb	06 43 52.8	
	comp=Z,14nm,0.8s						
O20A	White River Ci	32.28	331	IAmb	IAmb	06 44 53.5	
	comp=Z,7.9nm,0.8s						
P17A	Butcher Ranch,	33.01	328	IAmb	IAmb	06 44 58.9	
	comp=Z,2.4nm,0.7s						
TCUT	Toone Canyon	34.58	329	IAmb	IAmb	06 45 15.6	
	comp=Z,3.2nm,0.6s						
PD31	Pinedale Array	34.97	333	P	P	06 45 14.3	+0.4
PD31				IAmb	IAmb	06 45 39.6	
	comp=Z,4.8nm,1.4s						
PDAR	Pinedale Array	34.97	333	P	P	06 45 13.9	+0.1
	comp=Z,1.0nm,0.6s,baz=125,slow=9.0,SNR=12						
PDAR				PcP	PcP	06 47 44.8	-0.6
	comp=Z,0.3nm,0.6s,baz=123,slow=4.8,SNR=5.8						
	comp=Z,1.0nm,0.6s						
PDAR	Pinedale Array	34.97	333	P	P	06 45 14.5	+0.7
HWUT	Hardware Ranch	35.02	329	IAmb	IAmb	06 45 20.7	
	comp=Z,3.4nm,0.6s						
LPAZ	La Paz	35.27	144	P	P	06 45 18.3	+1.2
	comp=Z,0.6nm,0.6s,baz=304,slow=8.0,SNR=5.6						
	comp=Z,0.6nm,0.6s						
LPAZ	La Paz	35.27	144	P	P	06 45 18.6	+1.5
LOHW	Long Hollow	36.10	333	IAmb	IAmb	06 45 42.4	
	comp=Z,5.7nm,1.5s						
PB16	IPOC Station P	36.20	148	P	P	06 45 26.8	+1.8
PB16				IAmb	IAmb	06 45 36.1	
	comp=Z,4.0nm,1.1s						
MOOW	Moose Ponds	36.27	333	IAmb	IAmb	06 45 26.6	
	comp=Z,1.7nm,0.6s						
NVAR	Mina Array Bea	36.72	319	P	P	06 45 30.1	+1.2
	comp=Z,0.4nm,0.3s,baz=136,slow=7.2,SNR=5.3						
NVAR				PcP	PcP	06 47 52.1	+1.5
	comp=Z,1.4nm,0.7s,baz=129,slow=4.9,SNR=8.0						
	comp=Z,0.4nm,0.3s						
RLMT	Red Lodge	36.74	335	IAmb	IAmb	06 45 30.0	
	comp=Z,5.2nm,0.8s						
YMP	Mirror Lake Pl	36.80	334	IAmb	IAmb	06 45 38.8	
	comp=Z,5.3nm,1.0s						
YNE	Yellowstone No	36.95	335	IAmb	IAmb	06 45 31.8	
	comp=Z,4.0nm,0.6s						
YMR	Madison River	37.09	333	IAmb	IAmb	06 45 34.5	
	comp=Z,4.2nm,0.9s						
YHB	Horse Butte	37.26	333	IAmb	IAmb	06 45 37.9	
	comp=Z,5.6nm,0.8s						
YHL	Hebgen Lake	37.33	333	IAmb	IAmb	06 45 39.3	
	comp=Z,3.1nm,0.7s						
ULM	Lac du Bonnet	37.86	352	P	P	06 45 35.9	-2.2
	comp=Z,3.2nm,0.5s,baz=165,slow=9.9,SNR=4.5						
	comp=Z,3.2nm,0.5s						
ULM	Lac du Bonnet	37.86	352	IAmb	IAmb	06 45 36.8	
	comp=Z,5.1nm,0.7s						
VILB	Vilhena	38.04	131		P	06 45 40.4	+0.2
BOZ	Bozeman (W)	38.12	334	IAmb	IAmb	06 45 44.8	
	comp=Z,2.9nm,0.7s						
EDM	Edmonton	44.91	339		P	06 46 35.7	-0.3
SCHQ	Schefferville	45.33	18	P	P	06 46 36.9	-2.3
	comp=Z,3.0nm,0.7s,baz=211,slow=6.0,SNR=6.7						
	comp=Z,3.0nm,0.7s						
BDFB	Brasilia	49.10	124	P	P	06 47 08.5	-0.8
	comp=Z,1.6nm,0.6s,baz=296,slow=10,SNR=7.1						
	comp=Z,1.6nm,0.6s						
BDFB	Brasilia	49.10	124	P	P	06 47 09.1	-0.2
BDFB				IAmb	IAmb	06 47 52.0	
	comp=Z,8.3nm,1.4s						
CPUP	Villa Florida	49.36	142	P	P	06 47 10.6	-0.3
	comp=Z,0.8nm,0.8s,baz=338,slow=16,SNR=3.6						
	comp=Z,0.8nm,0.8s						
CPUP	Villa Florida	49.36	142	IAmb	IAmb	06 47 40.2	
	comp=Z,2.9nm,1.3s						
YKAW1	Yellowknife Wh	52.98	345	P	P	06 47 36.7	-0.8
YKAW1				IAmb	IAmb	06 47 37.4	
	comp=Z,3.9nm,0.7s						
YKA	Yellowknife Ar	53.02	345	P	P	06 47 36.3	-1.5
	comp=Z,2.3nm,0.7s,baz=118,slow=5.6,SNR=56						
	comp=Z,2.3nm,0.7s						
ILON	Igloolik, Nuna	56.74	3		P	06 48 03.0	-1.6
G31M	Satah River	61.93	341		P	06 48 39.7	-0.7
BCAR	Beaver Creek A	62.50	336	P	P	06 48 44.4	-0.1
INK	Inuvik	62.57	343	IAmb	IAmb	06 48 44.6	
	comp=Z,3.7nm,0.8s						
F30M	Barrier River	62.82	342		P	06 48 46.2	-0.2
J26L	Joseph Creek	63.87	337	P	P	06 48 53.7	+0.2
J26L				IAmb	IAmb	06 48 54.0	
	comp=Z,2.2nm,0.8s						
H27K	Steamboat Moun	63.95	339		P	06 48 53.9	0.0
H27K				IAmb	IAmb	06 48 54.5	
	comp=Z,3.5nm,0.7s						
F28M	Old Crow	64.11	341		P	06 48 54.9	-0.1
G27K	Doyon Strip	64.29	339	IAmb	IAmb	06 48 55.8	
	comp=Z,2.0nm,0.7s						
E28M	Babbage River	64.54	342		P	06 48 57.0	-0.8
E28M				IAmb	IAmb	06 48 57.8	
	comp=Z,3.5nm,0.8s						
ILAR	Eielson Array	65.28	336	P	P	06 49 01.2	-1.4
	comp=Z,1.1nm,0.8s,baz=166,slow=5.1,SNR=25						
	comp=Z,1.1nm,0.8s						
ILAR	Eielson Array	65.28	336	P	P	06 49 01.8	-0.8
KSRS	Korea Array	119.40	327	PKP	PKiKP	06 57 10.5	0.0
	comp=Z,0.6nm,0.5s,baz=12,slow=1.1,SNR=2.1						
WRA	Warramunga Arr	138.24	254	PKP	PKPdf	06 57 47.7	+1.0
	comp=Z,0.6nm,0.6s,baz=90,slow=2.3,SNR=2.2						
ASAR	Alice Springs	138.30	249	PKhKP	PKPpre	06 57 43.4	
	comp=Z,0.3nm,0.7s,baz=97,slow=2.6,SNR=4.4						
CMAR	Chiang Mai Arr	148.10	346	PKPbc	PKPdf	06 58 05.0	+0.9
	comp=Z,1.2nm,0.3s,baz=5.1,slow=2.9,SNR=4.4						

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*IDC **25** 06:49:50.7±1.8, 40°.08N×48°.82E, h0^{km}, mb3.8/11, mbtmp3.8/17, ML3.7/6, Error ellipse: s-maj=34.7km s-min=13.9km az=4.0*

*MOS **25** 06:49:52.7±1.4, 40°.19N×49°.21E, h17^{km}, mb4.1/2, Error ellipse: s-maj=11.9km s-min=5.6km az=117.3*

*AZER **25** 06:49:53.7, 40°.23N×48°.83E, h5^{km}, ml3.5*

*TEH **25** 06:49:56.3, 40°.32N×48°.88E, h20^{km}±78^{km}*

ISC 25 06:49:56.8±0.8**,40°.29N**±0°.02×**48°.85E**±0°.02**,h32**^{km}±6^{km}**, n94,**σ2^{s}.**66**/138**,mb3.7**/13**,4C-1D,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBS	Qobustan	0.25	16	P	Pb	06 50 02.2	-1.8
GBS				S	Sb	06 50 09.4	+0.6
GBS	Qobustan	0.25	16	Pg	Pb	06 50 02.1	-1.9
ALIB	&Aumlli-Bayram	0.35	160	P	Pb	06 50 04.4	-0.7
ALIB				S	Sb	06 50 11.4	+0.6
ALIB	&Aumlli-Bayram	0.35	160	Pg	Pb	06 50 04.4	-0.7
KDMR	Kurdemir	0.52	280	P	Pb	06 50 06.8	-0.8
KDMR				S	Sb	06 50 17.1	+2.1
KDMR	Kurdemir	0.52	280	Pg	Pb	06 50 06.8	-0.8
PQL	Pirkuli	0.54	339	P	Pb	06 50 06.9	-1.1
PQL				S	Sb	06 50 17.5	+1.7
SAAT	Saatly	0.54	218	P	Pb	06 50 08.4	+0.5
SAAT				S	Sn	06 50 18.7	+2.6
SAAT	Saatly	0.54	218	Pg	Pb	06 50 08.4	+0.5
ATGJ	Altiaghaj	0.57	7	P	Pb	06 50 08.1	-0.5
ATGJ				S	Sn	06 50 21.0	+3.8
GOBA	Gobu	0.68	80	P	Pn	06 50 12.2	+2.0
GOBA				S	Sn	06 50 23.4	+3.7
IML	Ismayilli	0.72	315	P	Pn	06 50 09.7	-1.0
IML				S	Sn	06 50 23.3	+2.7
IML	Ismayilli	0.72	315	Pg	Pn	06 50 09.7	-1.0
SIZA	Siyzn	0.79	3	P	Pn	06 50 12.0	+0.3
SIZA				S	Sb	06 50 27.1	+4.6
SIZA	Siyzn	0.79	3	Pg	Pn	06 50 11.9	+0.3
ZRD	Zardab	0.89	270	P	Pn	06 50 14.6	+1.5
ZRD				S	Sb	06 50 28.9	+3.5
ZRD	Zardab	0.89	270	Pg	Pn	06 50 14.5	+1.5
NDR	Nardaran	0.91	71	P	Pb	06 50 15.3	+1.1
NDR				S	Sb	06 50 32.3	+6.3
GALA	Gala	1.00	83	P	Pb	06 50 17.3	+1.7
GALA				S	Sb	06 50 33.1	+4.6
QBL	Gabala	1.01	311	P	Pn	06 50 14.3	-0.4
QBL				S	Sb	06 50 33.8	+5.0
XNQ	Khinaliq	1.03	329	P	Pn	06 50 16.7	+1.5
XNQ				S	Sb	06 50 34.1	+4.5
QUBA	Quba, Azerbaij	1.10	346	P	Pn	06 50 17.6	+1.6
QUBA				S	Sb	06 50 35.7	+4.4
GLBA	Clilabad	1.10	199	P	Pn	06 50 17.0	+1.0
GLBA				S	Sb	06 50 34.9	+3.5
BLQ	Beylaqan	1.14	241	P	Pn	06 50 16.4	-0.2
BLQ				S	Sn	06 50 33.8	+2.7
BRDA	Brd	1.28	269	P	Pn	06 50 19.5	+1.2
BRDA				S	Sb	06 50 38.9	+2.5
QSAR	Qusar	1.30	340	Pn	Pn	06 50 20.9	+2.2
QSAR				Sn	Sb	06 50 41.3	+4.2
AGDM	Agdam	1.35	263	P	Pn	06 50 19.9	+0.6
AGDM				S	Sb	06 50 41.0	+2.7
MNGR	Mingechevir, A	1.43	290	Pn	Pn	06 50 22.7	+2.3
MNGR				Sn	Sb	06 50 45.0	+4.3
QRD	Qoradiz	1.44	235	Pn	Pn	06 50 21.3	+0.7
QRD				Sn	Sn	06 50 40.9	+2.5
YRD	Yardimli	1.45	199	Pn	Pn	06 50 21.2	+0.3
YRD				Sn	Sb	06 50 42.6	+1.2
SEKA	Sheki	1.56	307	Pn	Pn	06 50 22.9	+0.6
SEKA				Sn	Sb	06 50 45.5	+1.2
LKRN	Lenkeran, Azer	1.58	182	Pn	Pn	06 50 23.6	+1.1
LKRN				Sn	Sb	06 50 46.6	+1.7
LRK	Lerik	1.69	194	Pn	Pn	06 50 24.4	+0.2
LRK				Sn	Sb	06 50 49.1	+0.7
ASTR	Astara	1.73	182	Pn	Pn	06 50 24.2	-0.3
ASTR				Sn	Sn	06 50 47.7	+2.2
DRN	Derbent	1.78	347	*e*PN	Pn	06 50 27.0	+1.8
DRN				pmax	pmax		
	comp=Z,114nm,0.4s						
GAS1	Astara - Iran	1.90	180	Pn	Pn	06 50 28.9	+2.0
GANJ	Ganja	1.96	281	Pn	Pn	06 50 29.1	+1.4
GANJ				Sn	Sb	06 50 56.1	+0.1
VSHL	Vashlovani	2.08	298	P	Pn	06 50 31.9	+2.4
VSHL				S	Sb	06 51 02.2	+2.8
ZKTA	Zakatala	2.16	309	Pn	Pn	06 50 33.7	+3.2
ZKTA				Sn	Sb	06 51 03.3	+1.7
GDB	GEDABAY	2.40	281	Pn	Pn	06 50 36.1	+2.1
GDB				Sn	Sb	06 51 07.9	-0.7
IHRS	Heris	2.42	216	Pn	Pn	06 50 37.0	+2.7
LGD	Lagodekhi	2.50	309	P	Pn	06 50 38.3	+3.1
LGD	Lagodekhi	2.50	309	*e*PN	Pn	06 50 38.3	+3.1
ORD	Ordubad	2.59	239	Pn	Pn	06 50 38.3	+1.8
ORD				Sn	Sn	06 51 11.5	+4.5
SBZ	Shahbuz	2.69	252	Pg	Pn	06 50 40.7	+2.8
SBZ				Sg	Sb	06 51 17.8	+0.8
ARKR	Arakani	2.70	329	*e*PN	Pn	06 50 41.2	+3.3
QZX	Qazax, Azerbai	2.75	287	Pn	Pn	06 50 40.9	+2.2
QZX				Sn	Sn	06 51 16.6	+5.8
NAX	Nakhchivan	2.82	248	Pg	Pn	06 50 43.0	+3.4
NAX				Sg	Sb	06 51 23.4	+2.9
MAK	Makhachkala	2.85	340	⇑*i*PN	Pn	06 50 40.0	0.0
MAK				*e*S	Sn	06 51 15.6	+2.4
MAK				pmax	pmax		
	comp=Z,136nm,0.2s						
MAK				smax	smax		
	comp=E,231nm,0.4s						
MAK				smax	smax		
	comp=E,189nm,0.4s						
MAK				MLR	MLR		
	comp=Z,157nm,13.0s						
UNCR	Uncukul	2.87	328	*e*PN	Pn	06 50 43.9	+3.6
DGRG	David-gareji	2.88	295	P	Pn	06 50 43.4	+2.9
DGRG				S	Sb	06 51 21.2	-1.1
DGRG	David-gareji	2.88	295	*e*PN	Pn	06 50 43.3	+2.9
DGRG				*e*S	Sb	06 51 21.2	-1.1
IMRD	Marand	2.90	238	Pn	Pn	06 50 43.2	+2.4
KRNR	Karanay	2.92	331	*e*PN	Pn	06 50 44.1	+3.0
ITBZ	Tabriz	2.94	226	Pn	Pn	06 50 43.2	+1.9
HYR	Heyderabad	3.12	261	Pn	Pn	06 50 46.5	+2.7
HYR				Sg	Sb	06 51 30.9	+1.6
ISHB	Shabestar	3.21	232	Pn	Pn	06 50 47.1	+2.0
DVE	Vedeno	3.36	323	*i* PN	Pn	06 50 49.4	+2.4
DVE				*i* S	Sn	06 51 32.6	+6.8
DVE				pmax	pmax		
	comp=Z,34nm,0.5s						
CHRG	Chargali	3.59	306	P	Pn	06 50 52.2	+2.0
CHRG				S	Sn	06 51 35.3	+3.7
TRLG	Trialeti	3.81	291	P	Pn	06 50 54.6	+1.3
TRLG	Trialeti	3.81	291	*e*PN	Pn	06 50 54.6	+1.3
GARIG	Gari	4.66	301	P	Pn	06 51 07.5	+2.6
IDMV	Damavand	5.33	151	Pn	Pn	06 51 15.6	+1.2
KBZ	Khabaz	5.61	310	Pn	Pn	06 51 20.9	+3.0
	comp=Z,0.3nm,0.3s,baz=152,slow=9.1,SNR=7.4						

KBZ				Sn	Sn	06 52 21.9	+0.8
	comp=Z,0.2nm,0.3s,baz=311,slow=20,SNR=1.6						
	comp=Z,1.7nm,0.6s						
PYA1	Pyatigorsk	5.70	313	i P	Pn	06 51 22.9	+3.8
SHA1	Shidzhatmaz	5.76	309	i P	Pn	06 51 24.2	+4.1
KIV	Kislovodsk	5.87	311	eP	Pn	06 51 27.0	+5.5
KIV				eS	Sn	06 52 38.0	+10
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
DOMR	Dombai	6.18	301	i P	Pn	06 51 30.1	+4.3
AB31	Akbulak array	11.92	38	P	Pn	06 52 41.0	-3.4
	comp=Z,0.7nm,0.6s,baz=209,slow=12,SNR=13						
AB31				⇑S	Sn	06 54 49.3	-6.8
	comp=Z,1.5nm,0.5s,baz=216,slow=22,SNR=6.2						
AKTO	Aktyubinsk	12.01	29	Pn	Pn	06 52 45.4	-0.1
	comp=Z,0.5nm,0.3s,baz=209,slow=11,SNR=4.4						
AKTO				Sn	Sn	06 54 50.6	-7.6
	comp=Z,0.5nm,0.3s,baz=328,slow=19,SNR=13						
	comp=Z,1.1nm,0.3s						
AKTO	Aktyubinsk	12.01	29	⇑P	Pn	06 52 44.1	-1.4
	comp=Z,0.7nm,0.5s						
AKTO				⇓S	Sn	06 54 49.9	-8.3
	comp=Z,2.5nm,0.5s						
BELG	Belogornoye	12.14	356	Pn	Pn	06 52 46.7	-0.5
	comp=Z,1.0nm,0.3s,baz=182,slow=3.2,SNR=5.0						
BELG				Sn	Sn	06 54 53.8	-7.5
	comp=Z,0.3nm,0.3s,baz=268,slow=22,SNR=1.6						
	comp=Z,5.1nm,0.7s						
OBN	Obninsk	16.94	335	⇑eP	P	06 53 53.8	+1.1
OBN				eS	Sn	06 56 54.8	-3.3
OBN				pmax	pmax		
	comp=Z,11nm,0.4s						
OBN				MLR	MLR		
	comp=Z,109nm,17.0s						
AKASG	Malin Array Be	17.20	314	Pn	Pn	06 53 51.0	-3.3
	comp=Z,0.6nm,0.3s,baz=119,slow=13,SNR=4.2						
	comp=Z,0.8nm,0.5s						
AKASG	Malin Array Be	17.20	314	i P	P	06 53 59.5	+3.8
AKBB	Malin Array Si	17.20	314	i P	P	06 53 59.1	+3.4
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARTI	Arti	17.28	18	P	Pn	06 53 55.7	+0.4
	comp=Z,0.9nm,0.3s,baz=188,slow=8.0,SNR=7.3						
	comp=Z,2.9nm,0.3s						
ARTI	Arti	17.28	18	P	Pn	06 53 50.2	-5.1
ARTI				S	Sn	06 56 59.8	-6.7
BORK	Borovoye	19.39	42	i P	P	06 54 19.3	-0.5
BORK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BVAR	Borovoye Array	19.42	42	P	P	06 54 19.7	-0.4
	comp=Z,0.1nm,0.3s,baz=234,slow=9.9,SNR=4.1						
	comp=Z,1.1nm,0.3s						
KLMR	Klimovskoe	21.38	347	eP	P	06 54 41.1	-0.1
KLMR				pmax	pmax		
	comp=Z,13nm,1.1s						
KURBB	Kurchatov Arra	23.09	54	P	P	06 54 59.6	0.0
	comp=Z,1.1nm,0.6s,baz=256,slow=11,SNR=1.8						
	comp=Z,1.1nm,0.6s						
KURK	Kurchatov	23.17	53	i P	P	06 54 59.5	-0.8
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MKAR	Makanchi Array	24.96	64	P	P	06 55 17.6	+0.4
	comp=Z,1.1nm,0.5s,baz=255,slow=7.1,SNR=5.6						
	comp=Z,1.1nm,0.5s						
FINES	FINESS Array B	25.34	334	P	P	06 55 19.2	-1.1
	comp=Z,0.8nm,0.4s,baz=139,slow=8.5,SNR=18						
	comp=Z,0.8nm,0.4s						
ZALV	Zalesovo Beam	27.69	48	P	P	06 55 40.5	-1.1
	comp=Z,0.8nm,0.4s,baz=258,slow=9.8,SNR=2.8						
	comp=Z,0.8nm,0.4s						
HFS	Hagfors	29.47	324	P	P	06 55 56.9	-0.4
	comp=Z,0.8nm,0.3s,baz=118,slow=10,SNR=16						
	comp=Z,0.8nm,0.3s						
NB2	NORSAR Subarra	30.96	325	P	P	06 56 09.7	-0.9
	comp=Z,0.4nm,0.4s,baz=118,slow=8.6						
NOA	NORSAR Array B	30.96	325	P	P	06 56 09.7	-0.9
	comp=Z,0.3nm,0.6s,baz=120,slow=8.5,SNR=8.4						
	comp=Z,0.3nm,0.6s						
ARCES	ARCESS Array B	31.79	345	P	P	06 56 19.4	+1.6
	comp=Z,5.6nm,1.2s,baz=144,slow=8.8,SNR=1.6						
	comp=Z,5.6nm,1.2s						
EKA	Eskdalemuir Ar	37.09	312	P	P	06 57 03.9	+0.1
	comp=Z,0.6nm,0.6s,baz=88,slow=8.5,SNR=1.5						
	comp=Z,0.6nm,0.6s						
ESDC	Sonseca Array	39.97	287	P	P	06 57 27.4	-0.8
	comp=Z,0.7nm,0.7s,baz=72,slow=7.9,SNR=6.6						
	comp=Z,0.7nm,0.7s						
SONM	Songino Array	41.19	60	P	P	06 57 38.1	-0.2
	comp=Z,0.2nm,0.5s,baz=286,slow=8.5,SNR=1.9						
	comp=Z,0.2nm,0.5s						
KSRS	Korea Array	59.64	65	P	P	06 59 56.9	-0.7
	comp=Z,0.7nm,0.3s,baz=292,slow=6.6,SNR=3.6						
	comp=Z,0.7nm,0.3s						

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*NNC **25** 06:50:34.7±0.9, 51°.99N×74°.26E, h0^{km}, mb3.0, mpv2.7, Error ellipse: s-maj=23.8km s-min=6.5km az=25.0, Suspected Mining explosion.*

*IDC **25** 06:50:35.6±0.9, 51°.91N×74°.24E, h0^{km}, mbtmp2.8/4, ML2.4/4, Error ellipse: s-maj=33.3km s-min=8.0km az=27.0*

ISC 25 06:50:33.7±1.2**, 51°.9N**±0°.1×**74°.09E**±0°.07**, h0^{km}, n10, σ0^{s}66**/9**, 4C-3D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BVA0	Borovoye Array	2.52	298	⇓Pg	Pg	06 51 21.9	0.0
	3.1nm,0.4s,baz=113,slow=15,SNR=38						
BVA0				⇑Lg	Lg	06 51 56.2	
	9.9nm,0.3s,baz=113,slow=24,SNR=12						
BVAR	Borovoye Array	2.52	298	Pn	Pb	06 51 19.5	-0.3
	0.6nm,0.3s,baz=122,slow=16,SNR=29						
BVAR				Pg	Pg	06 51 22.1	+0.2
	0.6nm,0.3s,baz=120,slow=16,SNR=23						
BVAR				Lg	Lg	06 51 56.5	
	1.4nm,0.3s,baz=114,slow=28,SNR=24						
	4.3nm,0.3s						
KURBB	Kurchatov Arra	3.08	113	Pn	Pn	06 51 23.8	+0.3
	0.3nm,0.3s,baz=301,slow=14,SNR=9.2						
KURBB				Lg	Lg	06 52 06.4	
	0.7nm,0.3s,baz=301,slow=33,SNR=10.0						
	0.9nm,0.4s						
KURBB	Kurchatov Arra	3.08	113	⇑Pn	Pn	06 51 24.4	+0.9
	2.3nm,0.4s,baz=301,slow=18						
KURBB				⇓Lg	Lg	06 52 08.3	
	24nm,0.5s,baz=297,slow=29						
KURK	Kurchatov	3.09	111	⇓Pn	Pn	06 51 23.4	-0.2
	0.4nm,0.4s						
KURK				⇑Lg	Lg	06 52 10.5	
	4.7nm,0.7s						
I46RU	ZALESOVO INFRA	6.80	68	I	I	07 30 50.0	
	0.1nm,1.2s,baz=252,slow=299,SNR=3.7						
ZALV	Zalesovo Beam	6.80	68	Pn	Pn	06 52 15.4	+0.8
	0.5nm,0.3s,baz=257,slow=14,SNR=5.8						
ZALV				Sn	Sn	06 53 31.7	-0.9
	0.3nm,0.3s,baz=255,slow=22,SNR=2.0						
	1.3nm,0.4s						
MK31	Makanchi Array	7.41	131	⇑Lg	Lg	06 54 28.1	
	2.4nm,0.6s						
MKAR	Makanchi Array	7.41	131	Pn	Pn	06 52 23.2	+0.2
	0.1nm,0.3s,baz=325,slow=11,SNR=5.9						
MKAR				Lg	Lg	06 54 19.1	
	0.3nm,0.3s,baz=321,slow=23,SNR=5.9						
	0.1nm,0.3s						
AAK	Ala-Archa	9.28	178	Sn	Sn	06 54 21.6	-12
	0.2nm,0.3s,baz=248,slow=15,SNR=3.6						
AAK				Lg	Lg	06 55 24.2	
	0.2nm,0.3s,baz=43,slow=21,SNR=7.3						

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*IDC **25** 06:53:18.4±0.6, 22°.11S×173°.54E, h0^{km}, mb4.2/16, mbtmp4.2/17, ML3.4/1, MS4.4/9, Error ellipse: s-maj=22.2km s-min=18.1km az=146.0*

*NEIC **25** 06:53:20.7±1.9, 22°.2S±0°.1×173°.66E±0°.09, h10^{km}±1^{km}, mb4.7/27, Error ellipse: s-maj=20.5km s-min=12.7km az=162.0*

*GCMT **25** 06:53:21.8±0.2, 21°.92S±0°.01×173°.53E±0°.01, h13^{km}±1^{km}, MW5.1/108, Moment Tensor Solution. s32,c38; s108,c159; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.78±.25; $M_{\theta\theta}$-0.73±.18; $M_{\phi\phi}$3.51±.19; $M_{r\theta}$-0.46±.46; $M_{\theta\phi}$4.55±.13; $M_{\phi r}$0.58±.37; Best double couple: $M_0$5.22100×10^{16} NP1:ϕ_s74.00000°, δ69.00000°, λ-21.00000°. NP2:ϕ_s172.00000°, δ71.00000°, λ-157.00000°. Principal axes: T 6.4160, Plg1.0000°, Azm302.0000°; N -2.3910, Plg61.0000°, Azm210.0000°; P -4.0260, Plg29.0000°, Azm33.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 06:53:24.6±0.4**, 22°.18S**±0°.10×**173°.57E**±0°.06**, h40^{km}, n135, σ1^{s}38**/118**, mb4.6**/32**, MS4.4**/7**, 15C-5D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	5.19	277	Pn	Pn	06 54 40.9	+1.1
PINNC	Pines Island,	5.68	264	Pn	Pn	06 54 46.0	-0.5
MSVF	Nonsavu	6.11	44	Pn	Pn	06 54 51.0	-1.4
DZM	Mont Dzumac	6.61	270	Pn	Pn	06 54 58.5	-0.8
	0.8nm,0.3s,baz=94,slow=15,SNR=9.5						
DZM				Sn	Sn	06 56 12.1	-1.4
	baz=18,slow=20						
DZM				LR	LR	06 56 52.1	
	comp=Z,738nm,21.8s,baz=93,slow=32						
	8.8nm,0.8s						
DZM	Mont Dzumac	6.61	270	ePn	Pn	06 55 01.0	+1.7
	49nm,0.9s						
DZM				eLR	LR	06 56 24.5	
	6μm,23.6s						
DZM	Mont Dzumac	6.61	270	Pn	Pn	06 54 59.1	-0.2
RAO	Raoul Island	10.41	134	LR	LR	06 59 09.6	
	comp=Z,4μm,19.0s,baz=306,slow=34						
URZ	Urewera	16.32	170	LR	LR	07 02 05.8	
	comp=Z,1μm,20.5s,baz=351,slow=32						
RAR	Rarotonga	24.78	93	LR	LR	07 06 23.9	
	comp=Z,646nm,21.4s,baz=275,slow=32						
CTA	Charters Tower	25.55	270	LR	LR	07 08 59.7	
	comp=Z,3μm,18.1s,baz=88,slow=37						
CTAO	Charters Tower	25.55	270	P	P	06 58 50.7	+0.8
CTAO				IAmb	IAmb	06 58 58.2	
	comp=Z,11nm,1.2s						
TOO	Toolangi	28.64	231		P	06 59 17.9	+0.4
STKA	Stephens Creek	29.98	244	P	P	06 59 29.0	-0.4
	comp=Z,1.1nm,0.3s,baz=101,slow=8.1,SNR=5.0						
STKA				LR	LR	07 09 49.1	
	comp=Z,602nm,21.9s,baz=73,slow=33						
	comp=Z,1.1nm,0.3s						
INKA	Innaminka	30.21	253	P	P	06 59 31.3	-0.2
TBI	Tubuai	34.05	99	eS	S	07 05 27.1	-1.1
	comp=Z,526nm,24.2s						
TBI				eLQ	LQ	07 07 34.0	
	comp=Z,4μm,31.0s						
TBI				eLR	LR	07 08 56.5	
	comp=Z,2μm,28.8s						
TBI				eLR	LR	07 09 11.0	
	comp=Z,9μm,29.5s						
PPT2	Papeete2	34.90	89	eP	P	07 00 05.7	-7.0
	comp=Z,126nm,25.2s						
PPT2				eS	S	07 05 41.2	-0.4
	comp=Z,166nm,24.0s						
PPT2				eLQ	LQ	07 07 52.1	
	comp=Z,1μm,28.8s						
PPT2				eLR	LR	07 09 25.4	
	comp=Z,2μm,28.0s						
PPT2				eLR	LR	07 09 33.4	
	comp=Z,2μm,26.0s						
PPT	Papeete	34.91	89	LR	LR	07 10 39.9	
	comp=Z,775nm,19.4s,baz=268,slow=30						
AS31	Alice Springs	36.48	260		P	07 00 25.5	-0.7
ASAR	Alice Springs	36.48	260	P	P	07 00 24.6	-1.6
	comp=Z,4.0nm,0.9s,baz=85,slow=8.8,SNR=32						
	comp=Z,4.0nm,0.9s						
ASAR	Alice Springs	36.48	260	P	P	07 00 25.5	-0.7
WB0	Warramunga Arr	36.59	266	P	P	07 00 26.4	-0.7
WB0				IAmb	IAmb	07 00 29.8	
	comp=Z,18nm,1.4s						
WRAB	Tennant Creek	36.60	266	P	P	07 00 27.2	0.0
WRAB				IAmb	IAmb	07 00 31.9	
	comp=Z,12nm,1.5s						
WRA	Warramunga Arr	36.61	266	P	P	07 00 26.0	-1.3
	comp=Z,2.2nm,0.8s,baz=102,slow=8.6,SNR=6.6						
	comp=Z,2.2nm,0.8s						
WRA	Warramunga Arr	36.61	266	P	P	07 00 26.4	-0.9
H11S2	WAKE ISLAND Hy	40.97	350	T	T	07 44 21.9	
	baz=171,slow=76,SNR=9.6						
H11S3	WAKE ISLAND Hy	40.98	350	T	T	07 44 16.7	
	baz=171,slow=76,SNR=9.0						
H11S1	WAKE ISLAND Hy	40.99	350	T	T	07 44 22.1	
	baz=171,slow=76,SNR=8.7						
MTN	Manton Dam	41.40	276	P	P	07 01 07.4	0.0
MTN				IAmb	IAmb	07 01 09.9	
	comp=Z,18nm,1.3s						
FITZ	Fitzroy Crossi	45.04	266		P	07 01 37.2	+0.5
TAOE	Nuku Hiva Isla	46.33	81	eS	S	07 08 36.1	+4.1
	comp=Z,618nm,27.0s						
TAOE				eLR	LR	07 14 49.2	
	comp=Z,1μm,26.3s						
RKT	Rikitea	47.29	102	eLR	LR	07 15 04.3	
	comp=Z,3μm,27.8s						
PSA00	Pilbara Seismi	49.63	260	P	P	07 02 12.0	-0.5
PSA00	Pilbara Seismi	49.63	260	P	P	07 02 12.1	-0.4
PSA00				IAmb	IAmb	07 02 19.6	
	comp=Z,15nm,1.5s						
MBWA	Marble Bar	49.82	261	P	P	07 02 13.7	-0.2
VNDA	Vanda	55.69	183	P	P	07 02 57.9	+1.5
	comp=Z,0.9nm,0.7s,baz=8.7,slow=7.9,SNR=6.2						
	comp=Z,0.9nm,0.7s						
VNDA	Vanda	55.69	183	P	P	07 02 57.0	+0.6
SBA	Scott Base	55.83	182	P	P	07 02 57.8	+0.4
SBA				IAmb	IAmb	07 03 13.0	
	comp=Z,9.2nm,0.9s						
TOLI2	Tolitoli	56.41	287	P	P	07 03 03.5	+1.0
TOLI2				IAmb	IAmb	07 03 11.4	
	comp=Z,6.3nm,0.9s						
MJAR	Matsushiro Arr	67.28	330	P	P	07 04 14.8	-0.4
	comp=Z,0.7nm,0.3s,baz=160,slow=6.5,SNR=6.3						
	comp=Z,0.7nm,0.3s						
MJAR	Matsushiro Arr	67.28	330	IAmb	IAmb	07 04 24.1	
	comp=Z,7.0nm,1.3s						
QSPA	South Pole Qui	67.89	180		P	07 04 19.1	+0.3
KSRS	Korea Array	73.24	324	P	P	07 04 51.4	-0.2
	comp=Z,1.4nm,1.0s,baz=139,slow=6.3,SNR=5.0						
	comp=Z,1.4nm,1.0s						
KSAR	Wonju Array Be	73.25	324	P	P	07 04 54.4	+2.7
NJ2	Nanjing	75.14	314	eP	P	07 05 06.0	+3.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
USRK	Ussuriysk Ar.	76.23	331	P	P	07 05 07.8	-0.9
	comp=Z,2.6nm,0.7s,baz=178,slow=6.6,SNR=3.2						
	comp=Z,2.6nm,0.7s						
BELA	Belgrano 2	78.81	174	P	P	07 05 22.8	0.0
BELA				IAmb	IAmb	07 05 23.5	
	comp=Z,5.7nm,0.8s						
TIA	Tai'an	78.84	317	P	P	07 05 25.0	+1.5
TIA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BNX	BinXian	79.53	329	⇑P	P	07 05 26.5	-0.6
BNX				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ELIB	Princess Elisa	83.93	189	dP	P	07 05 50.2	+0.1
	comp=Z,2.7nm,1.1s						
HHC	Hu-ho-hao-te	85.09	318	eP	P	07 05 59.3	+2.9
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,5.4s						
TROLL	Troll, Antarti	85.86	183	⇑P	P	07 06 00.1	+0.2
	comp=Z,623nm,1.2s						
CMB	Columbia Colle	86.16	46	P	P	07 06 02.5	+0.8
CMB				IAmb	IAmb	07 06 10.5	
	comp=Z,6.6nm,1.2s						
SNAA	Sanae	86.37	181	⇑P	P	07 06 00.9	-1.4
	comp=Z,45nm,0.8s						
SNAA	Sanae	86.37	181	P	P	07 06 00.9	-1.4
	comp=Z,2.8nm,0.8s,baz=246,slow=5.7,SNR=5.0						
SNAA				LR	LR	07 43 50.3	
	comp=Z,93nm,18.2s,baz=128,slow=35						
	comp=Z,2.8nm,0.8s						
SNAA	Sanae	86.37	181	IAmb	IAmb	07 06 37.0	
	comp=Z,9.2nm,1.5s						
SEY	Seymchan	86.47	350	P	P	07 06 02.2	-0.3
	comp=Z,2.8nm,0.9s,baz=73,slow=5.0,SNR=3.9						
	comp=Z,2.8nm,0.9s						
VNA3	Neumayer Olymp	86.81	179	⇑P	P	07 06 03.6	-0.8
	comp=Z,6.8nm,0.8s						
MDPB	Devils Postpil	86.84	47	IAmb	IAmb	07 06 14.9	
	comp=Z,5.0nm,1.0s						
NVAR	Mina Array Bea	87.77	47	P	P	07 06 10.0	+0.3
	comp=Z,1.1nm,1.1s,baz=227,slow=7.6,SNR=4.1						
	comp=Z,1.1nm,1.1s						
NVAR	Mina Array Bea	87.77	47	P	P	07 06 10.2	+0.4
SPR3	Spring Creek 3	90.76	48	P	P	07 06 23.6	-0.3
YAK	Yakutsk	90.92	341	LR	LR	07 40 47.3	
	comp=Z,164nm,21.1s,baz=118,slow=31						
ELK	Elko	90.97	46	P	P	07 06 25.0	+0.3
	comp=Z,1.0nm,0.6s,baz=234,slow=4.8,SNR=4.3						
	comp=Z,1.0nm,0.6s						
ELK	Elko	90.97	46	IAmb	IAmb	07 06 34.2	
	comp=Z,5.5nm,1.1s						
H03S2	Juan Fernandez	91.38	127	T	T	08 47 59.4	
	baz=241,slow=74,SNR=4.6						
H03S1	Juan Fernandez	91.39	127	T	T	08 47 48.0	
	baz=241,slow=74,SNR=4.3						
H03S3	Juan Fernandez	91.39	127	T	T	08 47 46.6	
	baz=241,slow=74,SNR=4.4						
ILAR	Eielson Array	91.88	16	P	P	07 06 25.9	-2.1
	comp=Z,0.8nm,0.9s,baz=229,slow=6.0,SNR=5.2						
	comp=Z,0.8nm,0.9s						
SONM	Songino Array	92.01	322	P	P	07 06 28.8	-0.5
	comp=Z,0.2nm,0.4s,baz=123,slow=5.3,SNR=1.5						
	comp=Z,0.2nm,0.4s						
SONM	Songino Array	92.01	322	P	P	07 06 30.8	+1.5
SONM				IAmb	IAmb	07 06 41.2	
	comp=Z,2.5nm,1.2s						
GTA	Gaotai	92.09	312	eP	P	07 06 37.5	+7.7
GTA				sP	sP	07 06 46.0	0.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PLCA	Paso Flores	93.64	137	P	P	07 06 38.1	+1.0
	comp=Z,2.1nm,1.0s,baz=303,slow=4.7,SNR=3.2						
	comp=Z,2.1nm,1.0s						
PLCA	Paso Flores	93.64	137	IAmb	IAmb	07 06 39.8	
	comp=Z,2.5nm,1.0s						
TXAR	Lajitas Array	94.64	60	P	P	07 06 40.9	-0.9
	comp=Z,0.6nm,1.1s,baz=260,slow=1.4,SNR=3.6						
	comp=Z,0.6nm,1.1s						
TIXI	Tiksi	98.47	347	P	Pdif	07 06 58.7	+0.7
	comp=Z,0.8nm,0.3s,baz=157,slow=2.3,SNR=1.7						
	comp=Z,0.8nm,0.3s						
WMQ	Urumqi	102.16	312	eP	Pdif	07 07 18.5	+3.3
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ				LR	LR		
	comp=Z,200nm,24.0s						
MKAR	Makanchi Array	106.67	314	Pdiff	Pdif	07 07 36.0	+0.9
	comp=Z,0.5nm,0.8s,baz=83,slow=2.3,SNR=2.8						
BVAR	Borovoye Array	115.26	319	PKP	PKiKP	07 12 00.6	-0.9
	comp=Z,0.7nm,0.5s,baz=48,slow=2.1,SNR=2.2						
SPITS	Spitsbergen Ar	122.92	355	PKP	PKPdf	07 12 14.7	-0.8
	comp=Z,12nm,1.1s,baz=26,slow=7.0,SNR=1.7						
ARCES	ARCESS Array B	128.90	346	PKP	PKPdf	07 12 26.7	-0.5
	comp=Z,2.7nm,0.8s,baz=355,slow=1.1,SNR=5.7						
BELG	Belogornoye	129.05	320	PKP	PKPdf	07 12 27.6	-0.3
	comp=Z,3.7nm,0.6s,baz=53,slow=3.0,SNR=4.1						
TESR	Tescani	143.88	320	⇓P	PKPdf	07 12 56.2	+0.7
BURAR	Bucovina Array	144.12	323	⇑P	PKPdf	07 12 56.1	0.0
VRI	Vrincioaia	144.16	319	⇑P	PKPab	07 12 53.7	-0.1
PLOR	Plostina	144.22	319	⇑P	PKPdf	07 12 56.8	+0.6
COVR	Voineasa-Covas	144.49	320	⇑P	PKPdf	07 12 57.4	+0.8
MLR	Muntele Rosu	144.83	319	⇑P	PKPdf	07 12 57.8	+0.4
STHS	Stebnicka Huta	145.12	328	ePKP	PKPbc	07 12 57.1	-0.1
ARR	Arges	145.68	320	⇓P	PKPab	07 12 59.6	0.0
TNR	Turnu Rosu	145.74	320	⇑P	PKPdf	07 12 51.5	-7.4
MARR	Marisel-Cluj	145.83	323	⇑P	PKPdf	07 12 55.1	-3.9
DRGR		145.99	323	⇓P	PKPdf	07 12 58.2	-1.1
LANS	Liptovska Anna	146.15	329	ePKP	PKPab	07 13 02.0	+0.9
STEB	Steborice	146.38	331	ePKP	PKPdf	07 12 59.6	-0.1
OSTC	Ostas	146.58	334	ePKP	PKPbc	07 13 01.8	+0.2
MORC	Moravsky Berou	146.60	331	⇓P	PKPbc	07 13 01.7	-0.1
MORC	Moravsky Berou	146.60	331	ePKP	PKPdf	07 13 00.8	+0.6
DPC	Dobruska-Polom	146.70	333	ePKP	PKPbc	07 13 02.0	0.0
MAUC	Maruska	146.77	331	ePKP	PKPbc	07 13 02.5	+0.3
EKA	Eskdalemuir Ar	146.80	357	PKPbc	PKPdf	07 13 01.0	+0.8
	comp=Z,2.0nm,0.7s,baz=333,slow=2.0,SNR=7.3						
SIRR	Siria	146.88	323	⇑P	PKPbc	07 13 02.3	-0.3
JAVC	Velka Javorina	147.20	330	ePKP	PKPbc	07 13 03.5	0.0
CLL	Collm	147.23	337	i PKPdf	PKPbc	07 13 02.7	-0.7
	comp=Z,4.0nm,0.7s						
CLL				i PKPbc	PKPab	07 13 03.9	-1.2
CLL				i PKPbcmax		07 13 04.7	
	comp=Z,7.0nm,0.8s						
HERR	Herculane	147.26	321	⇑P	PKPbc	07 13 02.7	-1.0
PVCC	Panska Ves	147.27	335	ePKP	PKPab	07 13 05.6	+0.3
KRUC	Moravsky	147.63	332	ePKP	PKPbc	07 13 04.0	-0.6
PRU	Pruhonice	147.71	334	ePKP	PKPbc	07 13 04.7	-0.1
MODS	Modra-Piesok	147.73	330	ePKP	PKPbc	07 13 05.5	+0.6
BOVS	Bovan	148.38	319	⇑P	PKPbc	07 13 06.2	-0.5
MORH	Mrgy, Hungar	148.54	326	⇑P	PKPbc	07 13 07.0	-0.1
RONA	Rosalia, Austr	148.68	330	ePKP	PKPbc	07 13 07.4	-0.1
	comp=Z,2.5nm,0.7s						
CONA	Conrad Observa	148.71	331	i PKP	PKPbc	07 13 07.6	0.0
	comp=Z,0.8nm,0.5s,SNR=4.7						
CONA	Conrad Observa	148.71	331	eP	PKPbc	07 13 07.6	0.0
	comp=Z,0.8nm,0.5s,SNR=4.7						
CKRC	Cesky Krumlov	148.71	333	ePKP	PKPbc	07 13 07.5	0.0
KHC	Kasperske Hory	148.77	334	ePKP	PKPbc	07 13 06.5	-1.1
GERES	GERESS Array B	148.94	334	PKPbc	PKPbc	07 13 07.7	-0.4
	comp=Z,2.9nm,0.8s,baz=27,slow=3.3,SNR=14						
ARSA	Arzberg	149.36	330	ePKP	PKPbc	07 13 07.8	-1.4
	comp=Z,1.3nm,0.7s						
MOA	Molln	149.48	332	ePKP	PKPbc	07 13 08.6	-0.9
	comp=Z,7.0nm,1.5s						
IDI	Anoyia	149.72	302	PKPbc	PKiKP	07 13 11.4	-0.1
	comp=Z,12nm,0.9s,baz=0.0,slow=7.1,SNR=3.7						
BIOA	Bad Ischl, Aus	149.87	332	ePKP	PKPbc	07 13 09.8	-0.6
	comp=Z,0.5nm,0.4s						
SOKA	Soboth	150.01	330	ePKP	PKPbc	07 13 09.5	-1.4
	comp=Z,6.4nm,1.3s						
OBKA	Obir	150.36	330	ePKP	PKPbc	07 13 09.8	-1.9
	comp=Z,3.8nm,1.3s						
KBA	Koelnbreinsper	150.47	332	ePKP	PKPbc	07 13 09.9	-2.2
	comp=Z,8.0nm,0.9s						
LESA	Schwarzleotal	150.49	333	i PKP	PKPbc	07 13 11.2	-0.7
	comp=Z,1.0nm,0.5s,SNR=6.8						
MYKA	Terra Mystica	150.68	331	ePKP	PKPdf	07 13 09.7	+2.8
	comp=Z,3.1nm,0.9s						
WATA	Walderalm	151.01	334	ePKP	PKPbc	07 13 12.7	-0.6
	comp=Z,7.3nm,1.1s						
WTTA	Wattenberg	151.04	334	ePKP	PKPbc	07 13 12.6	-0.8
	comp=Z,6.0nm,0.9s						
ABTA	Abfaltersbach	151.09	333	i PKP	PKPbc	07 13 10.6	-2.9
	comp=Z,7.0nm,1.1s,SNR=5.4						
ABTA	Abfaltersbach	151.09	333	eP	PKPbc	07 13 10.6	-2.9
	comp=Z,7.0nm,1.1s,SNR=5.4						
RETA	Reutte	151.20	335	ePKP	PKPbc	07 13 13.3	-0.3
	comp=Z,8.7nm,1.2s						
SQTA	Sankt Quirin	151.25	335	i PKP	PKPbc	07 13 13.0	-0.9
	comp=Z,6.5nm,0.7s,SNR=6.1						
SQTA	Sankt Quirin	151.25	335	eP	PKPbc	07 13 13.0	-0.9
	comp=Z,6.5nm,0.7s,SNR=6.1						
FETA	Feichten	151.60	335	ePKP	PKPbc	07 13 14.1	-0.6
	comp=Z,10nm,1.0s						
ESDC	Sonseca Array	162.43	354	PKPab	PKPab	07 14 09.8	-0.1
	comp=Z,0.7nm,1.0s,baz=27,slow=4.2,SNR=4.2						
TORD	Torodi Ar. Bea	168.15	222	PKP	PKPdf	07 13 27.3	-0.4
	comp=Z,0.9nm,1.0s,baz=130,slow=1.3,SNR=3.2						
TORD				PKPab	PKPab	07 14 34.9	-0.8
	comp=Z,1.6nm,0.9s,baz=102,slow=4.7,SNR=6.7						

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*UPP **25** 06:53:36.0±0.0, 67°.86N×20°.20E, h0^{km}, ML2.5, Confirmed Induced event*

*HEL **25** 06:53:36.6±0.2, 67°.84N×20°.21E, h0^{km}, ML1.0, Suspected explosion*

ISC 25 06:53:35.1±0.9**, 67°.83N**±0°.03×**20°.26E**±0°.04**, h0^{km}, n20, σ1^{s}05**/29**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.13	13	P	Pg	06 53 38.3	+0.7
KUA				S	Sg	06 53 39.9	+0.7
RATU	Laukkuluspa	0.25	269	P	Pg	06 53 40.6	+0.7
NIKU	Nikkaluokta	0.47	275	P	Pg	06 53 44.5	+0.5
LANU	Lannavaara	0.69	71	P	Pb	06 53 49.6	-0.5
LANU	Lannavaara	0.69	71	PB	Pb	06 53 50.0	-0.1
LANU				SG	Sb	06 53 58.5	-1.7
MASU	Masugnsbyn	0.76	118	P	Pb	06 53 50.8	-0.5
SALU	Saltoluokta	0.81	237	P	Pg	06 53 51.0	+0.4
KIF	Kilpisjarvi	1.20	9	PG	Pn	06 53 58.7	-0.4
KIF				MSG		06 54 13.9	
	comp=Z,1.8nm,0.2s						
KIF				SB	Sn	06 54 14.9	-1.1
PAJU	Pajala	1.37	125	P	Pn	06 54 01.2	-0.1
PAJU	Pajala	1.37	125	PG	Pn	06 54 01.3	-0.1
PAJU				SB	Sn	06 54 20.0	-0.2
HEF	Hetta	1.40	64	PG	Pb	06 54 01.9	-0.2
HEF				MSG		06 54 19.1	
	comp=Z,0.7nm,0.2s						

HEF				SG	Sb	06 54 20.4	-0.1
ERTU	Ertsjaerv	1.49	149	P	Pg	06 54 04.0	+0.5
ERTU	Ertsjaerv	1.49	149	PN	Pg	06 54 04.6	+1.1
ERTU				SN	Sn	06 54 24.7	+1.6
KLF	Kolari	1.54	111	MSG		06 54 23.5	
	comp=Z,0.7nm,0.2s						
KLF				SN	Sg	06 54 26.1	+1.5
KTK1	Kautokeino	1.62	41	PN	Pg	06 54 06.4	+0.2
KTK1				SN	Sg	06 54 29.0	+1.9
TOF	Tornio	2.38	136	MSG		06 54 47.6	
	comp=Z,0.7nm,0.2s						
TOF				SG	Sg	06 54 50.8	-0.5
RNF	Rovaniemi	2.55	116	PG	Pb	06 54 21.6	-0.1
RNF				SG	Sb	06 54 55.2	+1.6
ARA0	ARCESS Array S	2.57	46	PB	Pb	06 54 21.0	-1.0
ARA0				SB	Sb	06 54 54.8	+0.6
OBF8	Ulkokalla	3.75	158	SB	Sb	06 55 26.4	-1.4
KU6	Riekki	4.20	111	SG	Sg	06 55 47.4	-2.5

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*IDC **25** 06:55:01.9±0.6, 22°.03S×173°.44E, h0^{km}, mb4.2/16, mbtmp4.1/17, ML3.2/1, Error ellipse: s-maj=24.1km s-min=18.3km az=133.0*

*NEIC **25** 06:55:05.3±2.2, 21°.7S±0°.1×173°.33E±0°.09, h10^{km}±1^{km}, mb4.8/37, Error ellipse: s-maj=19.2km s-min=12.2km az=158.0*

ISC 25 06:55:08.2±0.4**, 21°.87S**±0°.07×**173°.38E**±0°.07**, h40^{km}, n131, σ1°.08**/114**, mb4.6**/32**, 1C-1D, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	4.99	273	Pn	Pn	06 56 19.8	-0.8
PINNC	Pines Island,	5.54	261		Pn	06 56 29.5	+1.3
MSVF	Nonsavu	6.02	48	Pn	Pn	06 56 36.1	+1.2
DZM	Mont Dzumac	6.44	267	Pn	Pn	06 56 40.9	+0.3
	0.5nm,0.3s,baz=71,slow=19,SNR=2.2						
DZM				Sn	Sn	06 57 52.4	-0.6
	0.2nm,0.3s,baz=90,slow=20,SNR=1.0						
	10nm,0.8s						
URZ	Urewera	16.65	170	Pn	Pn	06 58 58.6	+0.1
	0.6nm,0.3s,baz=10,slow=6.7,SNR=5.2						
RTZ	Ruatahuna	16.98	170	P	P	06 59 05.5	+1.2
RTZ				IAmb	IAmb	06 59 11.0	
	comp=Z,102nm,1.4s						
BKZ	Black Stump Fm	17.45	172		P	06 59 11.0	+1.6
BKZ				IAmb	IAmb	06 59 16.9	
	comp=Z,83nm,1.5s						
BFZ	Birch Farm	18.91	173	P	Pn	06 59 26.5	+0.1
BFZ				IAmb	IAmb	06 59 34.6	
	comp=Z,48nm,0.9s						
MRNZ	Matariki Terra	19.48	181	P	Pn	06 59 34.4	+1.3
THZ	Tophouse	19.84	181	P	Pn	06 59 39.0	+1.5
INZ	Inchbonnie	20.86	184	P	Pn	06 59 49.5	+0.2
INZ				IAmb	IAmb	06 59 58.8	
	comp=Z,30nm,1.0s						
LTZ	Lake Taylor	20.88	182	P	P	06 59 47.1	+0.2
LTZ				IAmb	IAmb	06 59 59.4	
	comp=Z,31nm,1.0s						
ARMA	Armidale	21.27	242	P	P	06 59 53.5	+2.1
ARMA				IAmb	IAmb	07 00 00.7	
	comp=Z,112nm,2.0s						
OXZ	Oxford	21.43	183	P	P	06 59 55.3	+2.5
OXZ				IAmb	IAmb	07 00 01.1	
	comp=Z,49nm,1.0s						
MLZ	Mavora Lakes	23.83	189	P	P	07 00 19.5	+1.9
MLZ				IAmb	IAmb	07 00 20.4	
	comp=Z,47nm,1.4s						
CTAO	Charters Tower	25.38	269	P	P	07 00 33.8	+1.8
TOO	Toolangi	28.69	231	P	P	07 01 02.8	+1.2
STKA	Stephens Creek	29.96	244	P	P	07 01 13.3	+0.5
	comp=Z,2.9nm,0.8s,baz=96,slow=11,SNR=4.4						
	comp=Z,2.9nm,0.8s						
STKA	Stephens Creek	29.96	244	IAmb	IAmb	07 01 19.2	
	comp=Z,150nm,1.9s						
WR8	Warramunga Arr	36.30	266	P	P	07 02 08.1	-0.2
AS31	Alice Springs	36.37	259	P	P	07 02 08.8	0.0
ASAR	Alice Springs	36.37	259	P	P	07 02 08.2	-0.6
	comp=Z,2.4nm,1.0s,baz=76,slow=9.3,SNR=8.8						
	comp=Z,2.4nm,1.0s						
WB0	Warramunga Arr	36.44	266	P	P	07 02 09.9	+0.5
WB0				IAmb	IAmb	07 02 16.6	
	comp=Z,25nm,1.5s						
WRA	Warramunga Arr	36.46	266	P	P	07 02 08.0	-1.6
	comp=Z,0.5nm,0.5s,baz=88,slow=3.8,SNR=4.7						
	comp=Z,0.5nm,0.5s						
WRA	Warramunga Arr	36.46	266	IAmb	IAmb	07 02 16.0	
	comp=Z,2.8nm,2.0s						
H11S2	WAKE ISLAND Hy	40.64	350	T	T	07 46 22.8	
	baz=171						
H11S3	WAKE ISLAND Hy	40.65	350	T	T	07 46 22.7	
	baz=171						
H11S1	WAKE ISLAND Hy	40.66	350	T	T	07 46 25.3	
	baz=171						
MTN	Manton Dam	41.20	275	P	P	07 02 49.5	+0.2
MTN				IAmb	IAmb	07 02 55.4	
	comp=Z,14nm,1.1s						
FORT	Forrest	41.35	248	P	P	07 02 50.0	-0.3
KNRA	Kununurra	42.58	270	P	P	07 03 00.7	+0.1
FITZ	Fitzroy Crossi	44.88	266	P	P	07 03 20.0	+0.9
MBWA	Marble Bar	49.70	260	P	P	07 03 57.4	+0.8
MORW	Morawa	51.84	250	P	P	07 04 12.9	+0.3
MORW				IAmb	IAmb	07 04 24.9	
	comp=Z,13nm,1.1s						
VNDA	Vanda	55.98	183	P	P	07 04 39.0	-3.1
	comp=Z,0.6nm,0.5s,baz=270,slow=5.3,SNR=3.9						
	comp=Z,0.6nm,0.5s						
SBA	Scott Base	56.13	182	P	P	07 04 43.0	-0.1
SBA				IAmb	IAmb	07 04 44.8	
	comp=Z,10nm,0.9s						
MJAR	Matsushiro Arr	66.92	330	P	P	07 05 56.6	0.0
	comp=Z,0.9nm,0.3s,baz=158,slow=7.0,SNR=4.2						
	comp=Z,0.9nm,0.3s						
JNU	Nakatsue	68.08	322		P	07 06 02.9	-1.0
QSPA	South Pole Qui	68.20	180	P	P	07 06 02.4	-2.0
KSRS	Korea Array	72.89	324	P	P	07 06 33.8	+0.7
	comp=Z,1.4nm,0.7s,baz=125,slow=7.2,SNR=4.5						
	comp=Z,1.4nm,0.7s						
KSAR	Wonju Array Be	72.90	324	P	P	07 06 33.5	+0.4
USRK	Ussuriysk Ar.	75.88	331	P	P	07 06 51.5	+1.2
	comp=Z,3.2nm,0.7s,baz=150,slow=4.2,SNR=6.1						
	comp=Z,3.2nm,0.7s						
RPSI	Rantau Prapat	76.62	278	P	P	07 06 55.3	0.0
PSI	Prapat	76.66	279	P	P	07 06 55.3	-0.4
	comp=Z,2.0nm,0.3s,baz=180,slow=3.0,SNR=3.8						
	comp=Z,2.0nm,0.3s						
MAW	Mawson	77.45	202	P	P	07 06 59.0	+0.1
	comp=Z,6.5nm,1.0s,baz=123,slow=7.3,SNR=3.8						
	comp=Z,6.5nm,1.0s						
CN2	Changchun	78.74	327	P	P	07 07 06.5	+0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BNX	BinXian	79.18	329	⇑P	P	07 07 09.0	+0.2
BNX				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HEH	HeiHe	82.50	332	*e*P	P	07 07 26.8	+0.4
HEH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
XAN	Xi'an	82.75	311	⇓P	P	07 07 30.5	+2.4
XAN				sP	sP	07 07 59.5	+16
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XAN				LR	LR		
	comp=N,210nm,21.3s						
XAN				LR	LR		
	comp=E,220nm,20.6s						
XAN				LR	LR		
	comp=Z,350nm,23.4s						
CM31	Chiang Mai Arr	83.11	293	P	P	07 07 26.6	-3.6
CMAR	Chiang Mai Arr	83.11	293	P	P	07 07 25.6	-4.7
CMB	Columbia Colle	86.08	46	IAmb	IAmb	07 07 53.0	
	comp=Z,11nm,1.3s						
SEY	Seymchan	86.13	351	P	P	07 07 44.5	0.0
	comp=Z,2.0nm,0.8s,baz=166,slow=11,SNR=2.8						
	comp=Z,2.0nm,0.8s						
ORV	Oroville	86.14	45	IAmb	IAmb	07 07 51.8	
	comp=Z,6.8nm,1.2s						
ISA	Isabella, Lake	86.18	49	IAmb	IAmb	07 08 01.5	
	comp=Z,9.4nm,1.2s						
SNAA	Sanae	86.67	181	P	P	07 07 45.6	-1.8
	comp=Z,2.6nm,0.8s,baz=220,slow=15,SNR=3.6						
	comp=Z,2.6nm,0.8s						
SNAA	Sanae	86.67	181	IAmb	IAmb	07 08 26.9	
	comp=Z,9.0nm,1.3s						
CLC	China Lake	86.88	49	IAmb	IAmb	07 07 56.7	
	comp=Z,14nm,1.5s						
NVAR	Mina Array Bea	87.69	47	P	P	07 07 53.9	+0.9
	comp=Z,0.2nm,0.3s,baz=223,slow=8.1,SNR=7.3						
	comp=Z,0.2nm,0.3s						
NVAR	Mina Array Bea	87.69	47		P	07 07 52.7	-0.3
ELK	Elko	90.89	46	P	P	07 08 09.1	+1.1
	comp=Z,0.7nm,0.8s,baz=280,slow=4.7,SNR=5.4						
	comp=Z,0.7nm,0.8s						
ELK	Elko	90.89	46	IAmb	IAmb	07 08 15.2	
	comp=Z,3.8nm,1.1s						
U15A	North Rim	90.95	51	IAmb	IAmb	07 08 19.1	
	comp=Z,7.2nm,1.2s						
DOT	Dot Lake	91.49	18	P	P	07 08 08.2	-1.8
ILAR	Eielson Array	91.63	16	P	P	07 08 11.4	+0.9
	comp=Z,0.9nm,0.9s,baz=203,slow=5.5,SNR=4.6						
	comp=Z,0.9nm,0.9s						
SONM	Songino Array	91.66	322	P	P	07 08 11.8	+0.6
	comp=Z,0.9nm,0.9s,baz=114,slow=3.6,SNR=5.2						
	comp=Z,0.9nm,0.9s						
SONM	Songino Array	91.66	322	IAmb	IAmb	07 08 19.1	
	comp=Z,3.7nm,1.2s						
H03S2	Juan Fernandez	91.70	128	T	T	08 49 28.6	
	baz=240,slow=74,SNR=5.0						
H03S1	Juan Fernandez	91.72	128	T	T	08 49 27.7	
	baz=240,slow=74,SNR=5.7						
H03S3	Juan Fernandez	91.72	128	T	T	08 49 27.2	
	baz=240,slow=74,SNR=5.9						
TXAR	Lajitas Array	94.65	60	P	P	07 08 25.4	-0.1
	comp=Z,0.6nm,1.0s,baz=245,slow=5.9,SNR=2.7						
	comp=Z,0.6nm,1.0s						
YKA	Yellowknife Ar	101.23	27	P	Pdif	07 08 55.1	+1.0
	comp=Z,0.7nm,1.2s,baz=256,slow=4.3,SNR=3.9						
MKAR	Makanchi Array	106.33	314	Pdiff	Pdif	07 09 18.9	+1.7
	comp=Z,0.6nm,0.8s,baz=102,slow=6.0,SNR=3.9						
ARTI	Arti	121.74	324	PKP	PKiKP	07 13 57.8	+0.2
	comp=Z,3.2nm,0.7s,baz=111,slow=3.5,SNR=4.5						
AKTO	Aktyubinsk	122.63	317	PKP	PKPdf	07 13 58.9	-0.5
	comp=Z,1.0nm,0.3s,baz=324,slow=1.6,SNR=4.0						
NACGM	Naroch	138.60	331	*e*PKP	PKiKP	07 14 31.3	-0.2
	comp=Z,5.0nm,0.8s,baz=50						
NOA	NORSAR Array B	138.93	347	PKhKP	PKPpre	07 14 25.7	
	comp=Z,0.6nm,0.8s,baz=31,slow=2.0,SNR=4.0						
AKASG	Malin Array Be	139.87	325	PKhKP	PKPpre	07 14 26.3	
	comp=Z,0.4nm,0.4s,baz=81,slow=5.7,SNR=4.5						
LANS	Liptovska Anna	145.80	329	*e*PKP	PKPab	07 14 43.7	+0.3
STEB	Steborice	146.03	331	*e*PKP	PKPbc	07 14 43.4	-0.2
MORC	Moravsky Berou	146.24	331	*e*PKP	PKPdf	07 14 42.6	-0.6
CHVC	Chvalec	146.27	334	*e*PKP	PKiKP	07 14 46.4	-1.1
DPC	Dobruska-Polom	146.34	333	*e*PKP	PKPbc	07 14 44.6	0.0
DPC				AMS	AMS	07 14 50.0	
MAUC	Maruska	146.41	331	*e*PKP	PKPbc	07 14 44.8	0.0
EKA	Eskdalemuir Ar	146.48	356	PKPbc	PKPdf	07 14 43.8	+0.5
	comp=Z,1.7nm,0.6s,baz=360,slow=2.9,SNR=7.4						
FLTG	Flechtingen	146.61	340	*e*PKPbc	PKPbc	07 14 44.8	-0.4
	baz=25,slow=2.6						
JAVC	Velka Javorina	146.85	330	*e*PKP	PKPbc	07 14 46.1	0.0
CLL	Collm	146.88	337	*e*PKPbc	PKPab	07 14 46.8	-0.6
	baz=25,slow=2.6						
CLL	Collm	146.88	337	*i* PKPdf	PKPdf	07 14 43.7	-0.4
	comp=Z,4.0nm,0.7s						
CLL				*i* PKPbc	PKPbc	07 14 45.3	-0.7
	comp=Z,7.0nm,0.8s						
CLL				*i* PKPmax		07 14 47.4	
	comp=Z,15nm,1.1s						
CLL				*e*x	x	07 15 02.0	
BRG	Berggiesshubel	146.88	336	*e*PKPbc	PKPbc	07 14 45.9	-0.1
	baz=25,slow=2.6						
PVCC	Panska Ves	146.92	335	*e*PKP	PKPab	07 14 48.1	+0.5
VRAC	Vranov	147.01	332	*e*PKP		07 13 02.6	
VRAC	Vranov	147.01	332	*e*PKP	PKPdf	07 14 45.3	+0.9
CLZ	Clausthal	147.31	340	*e*PKPbc	PKPbc	07 14 47.1	-0.2
	baz=25,slow=2.6						
PRU	Pruhonice	147.35	334	*e*PKP	PKiKP	07 14 49.5	-0.1
MODS	Modra-Piesok	147.38	330	*e*PKP	PKPbc	07 14 47.8	+0.2
TREC	Trest	147.50	333	*e*PKP	PKPab	07 14 49.6	-0.3
IBBN	Ibbenburen	147.65	343	*e*PKPbc	PKPbc	07 14 47.9	-0.2
	baz=25,slow=2.6						
GTTG	Gottingen	147.69	341	*e*PKPbc	PKPbc	07 14 48.3	+0.1
	baz=25,slow=2.6						
TANN	Tannenbergstha	147.81	337	*e*PKPbc	PKPbc	07 14 48.8	+0.1
	baz=25,slow=2.6						
MOX	Moxa	147.92	338	*e*PKPbc	PKPbc	07 14 48.4	-0.6
	baz=25,slow=2.6						
ZVC	Zvikov	147.92	334	*e*PKP	PKPbc	07 14 48.9	-0.1
MANZ	Manzenberg	148.29	337	*e*PKPbc	PKPbc	07 14 50.0	0.0
	baz=25,slow=2.6						
RONA	Rosalia, Austr	148.32	330	*e*PKP	PKPbc	07 14 50.2	0.0
	comp=Z,0.3nm,0.4s						
CONA	Conrad Observa	148.35	331	*e*PKP	PKPbc	07 14 50.2	0.0
	comp=Z,8.3nm,0.9s						
CKRC	Cesky Krumlov	148.36	333	*e*PKP	PKPbc	07 14 50.2	0.0
KHC	Kasperske Hory	148.41	334	*e*PKP	PKiKP	07 14 52.4	+0.5
ROTZ	Rotzenmuhle	148.43	336	*e*PKPbc	PKPbc	07 14 50.2	-0.2
	baz=25,slow=2.6						
KASTN	Kahler Asten	148.46	342	*e*PKPbc	PKPbc	07 14 50.4	0.0
	baz=25,slow=2.6						
GEC2	GERESS Array S	148.59	334	*e*PKPbc	PKPbc	07 14 50.3	-0.6
	baz=25,slow=2.6						
GERES	GERESS Array B	148.59	334	PKPbc	PKPbc	07 14 49.9	-1.0
	comp=Z,5.1nm,0.8s,baz=27,slow=3.3,SNR=17						
WET	Wettzell	148.68	335	*e*PKPbc	PKPbc	07 14 50.5	-0.5
	baz=25,slow=2.6						
ARSA	Arzberg	149.01	330	*e*PKP	PKPbc	07 14 51.4	-0.5
	comp=Z,5.8nm,1.2s						
MOA	Molln	149.12	332	*e*PKP	PKPbc	07 14 51.5	-0.7
	comp=Z,12nm,2.0s						
BIOA	Bad Ischl, Aus	149.52	333	*e*PKP	PKPbc	07 14 52.2	-0.9
	comp=Z,3.3nm,0.9s						
SOKA	Soboth	149.66	330	*e*PKP	PKPbc	07 14 52.8	-0.8
	comp=Z,7.8nm,1.3s						
KBA	Koelnbreinsper	150.12	332	*e*PKP	PKPbc	07 14 53.4	-1.4
	comp=Z,7.9nm,1.1s						
LESA	Schwarzleotal	150.13	333	*e*PKP	PKPbc	07 14 53.8	-0.9
	comp=Z,0.1nm,0.3s						
MYKA	Terra Mystica	150.33	331	*i* PKP	PKPbc	07 14 54.0	-1.2
	comp=Z,1.7nm,0.5s,SNR=4.2						
STU	Stuttgart	150.34	339	*e*PKPbc	PKPbc	07 14 54.5	-0.6
	baz=25,slow=2.6						
WLF	Walferdange	150.47	343	*e*PKPbc	PKPbc	07 14 55.1	-0.3
	baz=25,slow=2.6						
WATA	Walderalm	150.65	334	*e*PKP	PKPbc	07 14 55.2	-0.9
	comp=Z,4.1nm,0.8s						
WTTA	Wattenberg	150.69	334	*i* PKP	PKPbc	07 14 55.4	-0.8
	comp=Z,2.9nm,0.8s,SNR=12						
ABTA	Abfaltersbach	150.73	333	*i* PKP	PKPbc	07 14 54.9	-1.3
	comp=Z,7.8nm,1.2s,SNR=4.1						
RETA	Reutte	150.85	335	*i* PKP	PKPbc	07 14 55.6	-0.9
	comp=Z,0.6nm,0.5s,SNR=5.9						
SQTA	Sankt Quirin	150.89	335	*i* PKP	PKPbc	07 14 55.4	-1.2
	comp=Z,8.3nm,0.7s,SNR=6.4						
UBR	Ueberruh	150.94	336	*e*PKPbc	PKPbc	07 14 55.5	-1.2
	baz=25,slow=2.6						
BFO	Black Forest	151.01	339	*e*PKPbc	PKPbc	07 14 55.8	-0.9
	baz=25,slow=2.6						
FETA	Feichten	151.25	335	*i* PKP	PKPbc	07 14 56.6	-0.9
	comp=Z,4.9nm,0.9s						
ESDC	Sonseca Array	162.11	353	PKPab	PKPab	07 15 51.7	-0.4
	comp=Z,0.5nm,0.8s,baz=11,slow=3.2,SNR=4.4						
TORD	Torodi Ar. Bea	168.25	224	PKP	PKPdf	07 15 11.2	-0.2
	comp=Z,1.2nm,0.9s,baz=60,slow=1.6,SNR=3.9						
TORD				PKPab	PKPab	07 16 20.2	+0.5
	comp=Z,2.1nm,0.8s,baz=103,slow=4.9,SNR=8.3						

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*BJI **25** 07:04:15.2, 23°.48N×95°.92E, h10^{km}, mB4.5/5, mb4.2/30, ML4.2/1, Ms4.3/16, Ms7 4.0/11*

*IDC **25** 07:04:16.2±0.6, 23°.70N×96°.04E, h0^{km}, mb4.2/16, mbtmp4.2/19, ML4.5/3, MS3.8/4, Error ellipse: s-maj=23.5km s-min=12.0km az=63.0*

*BKK **25** 07:04:18.1±0.5, 24°N±7°×9°6E±°, h10^{km}, M4.7/6, MLv4.7/6*

*NEIC **25** 07:04:18.8±1.2, 23°.66N±0°.07×96°.03E±0°.08, h10^{km}±1^{km}, mb4.6/32, Error ellipse: s-maj=14.1km s-min=8.6km az=44.0*

*NDI **25** 07:04:20.5±0.3, 23°.66N×96°.04E, h10^{km}, ML4.4, MW4.3, mb4.6(NEIC)*

ISC 25 07:04:18.1±0.4**, 23°.68N**±0°.03×**95°.94E**±0°.03**, h10^{km}, n85, σ1°.56**/93**, mb4.4**/32**, MS4.0**/4**, 1C, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORE	Moreh	1.60	291		Pb	07 04 48.2	+0.5
IMP	Imphal	2.15	303	*e*P	Pb	07 04 57.9	+0.7
IMP				*e*S	Sb	07 05 25.3	+1.4
IMP				IAML		07 05 29.7	
	comp=N,2µm,1.0s						
IMP				IAML		07 05 33.1	
	comp=E,2µm,0.7s						
KOHI	KOHIMA	2.63	321	*e*P	Pb	07 05 04.2	-1.3
KOHI				*e*S	Sb	07 05 36.5	-1.3
KOHI				IAML		07 05 46.2	
	comp=N,2µm,0.8s						
KOHI				IAML		07 05 50.8	
	comp=E,2µm,1.2s						
TNCH	TengChong	2.71	60	Pn	Pn	07 05 01.0	-1.0
TNCH				Pg	Pb	07 05 08.0	+1.1
TNCH				Sg	Sg	07 05 45.8	+0.5
TNCH				smax	smax		
	comp=E,1µm,1.0s						
TNCH				smax	smax		
	comp=E,950nm,1.1s						
MOKO	MOKOCHONG	2.93	334	*e*P	Pb	07 05 08.4	-2.2
MOKO				*e*S	Sn	07 05 43.1	+2.8
MOKO				IAML		07 05 55.2	
	comp=E,2µm,1.1s						
MOKO				IAML		07 06 01.1	
	comp=N,2µm,1.0s						
SAIH	SAIHA	2.96	247	*e*P	Pb	07 05 08.8	-2.2
SAIH				*e*S	Sb	07 05 44.5	-2.9
SAIH				IAML		07 05 55.7	
	comp=E,2µm,0.1s						
SAIH				IAML		07 05 56.9	
	comp=N,2µm,0.8s						
BRDH	Bariadhala	4.08	257	Pn	Pn	07 05 22.0	+1.5
	comp=N,37nm,0.3s,baz=84,slow=15,SNR=3.7						
BRDH				Sn	Sn	07 06 11.7	+3.4
	comp=N,46nm,0.3s,baz=235,slow=20,SNR=4.1						
	comp=N,87nm,0.3s						
TEZP	TEZPUR	4.08	316	*e*P	Pn	07 05 24.1	+3.5
SHL	Shillong	4.14	298		Pn	07 05 22.6	+1.0
SHL	Shillong	4.14	298	*e*P	Pn	07 05 24.0	+2.4
SHL				*e*S	Sn	07 06 10.2	0.0
SHL				IAML		07 06 17.0	
	comp=N,2µm,0.8s						
SHL				IAML		07 06 19.5	
	comp=E,2µm,1.6s						
GUWA	GUWAHATI	4.60	304	*e*S	Sn	07 06 22.8	+1.7
GUWA				IAML		07 06 24.3	
	comp=N,2µm,0.5s						
GUWA				IAML		07 06 24.3	
	comp=E,2µm,0.5s						
CHTO	Chiang Mai	5.59	149		Pn	07 05 41.0	-0.5
MHMT	Maesarieng	5.78	161	P	Pn	07 05 42.7	-1.3
CM31	Chiang Mai Arr	5.90	151		Pn	07 05 45.1	-0.6
CMAR	Chiang Mai Arr	5.90	151	Pn	Pn	07 05 44.6	-1.0
	comp=E,4.6nm,0.3s,baz=328,slow=14,SNR=14						
CMAR				Pg	Pb	07 06 04.5	+3.3
	comp=E,4.0nm,0.3s,baz=328,slow=15,SNR=7.7						
CMAR				Lg	Lg	07 07 18.4	
	comp=E,4.4nm,0.3s,baz=326,slow=29,SNR=5.7						
CMAR				LR	LR	07 08 24.4	
	comp=E,572nm,19.8s,baz=345,slow=42						
	comp=E,7.1nm,0.3s						
CMAR	Chiang Mai Arr	5.90	151		Pn	07 05 46.1	+0.5
CM09	Chiang Mai Arr	5.94	151	P	Pn	07 05 45.2	-0.9
LAMP	Lampang	6.18	145	P	Pn	07 05 46.1	-3.4
LSA	Lhasa	7.37	326		Pn	07 06 06.5	+0.3
GOMU	GeErMu	12.52	356	P	Pn	07 07 16.5	-0.2
GOMU				S	Sn	07 09 39.8	+3.4
GOMU				LR	LR		
	comp=E,270nm,8.2s						
GOMU				LR	LR		
	comp=E,260nm,8.8s						
QIZ	Qiongzhong	13.75	107	P	Pn	07 07 33.0	-0.3
QIZ				S	Sn	07 10 05.5	-0.7
QIZ				LR	LR		
	comp=E,1µm,15.7s						
QIZ				LR	LR		
	comp=E,860nm,14.3s						
QIZ				LR	LR		
	comp=E,490nm,11.4s						
LZDM	Lanzhou Array	13.96	27	Pn	Pn	07 07 36.4	+0.1
	baz=220,slow=13						
	comp=E,1.3nm,0.4s						
XAN	Xi'an	15.35	45	⇑P	P	07 07 57.8	-1.8
XAN				pmax	pmax		
	comp=E,6.0nm,1.1s						
XAN				LR	LR		
	comp=E,2µm,11.3s						
XAN				LR	LR		
	comp=E,770nm,10.0s						
GTA	Gaotai	16.03	11	*e*P	P	07 08 07.5	+0.3
GTA				pP	sP	07 08 13.5	+2.0
GTA				pmax	pmax		
	comp=E,3.0nm,1.1s						
GTA				LR	LR		
	comp=E,470nm,11.1s						
GTA				LR	LR		
	comp=E,820nm,15.1s						
GTA				LR	LR		
	comp=E,500nm,12.0s						
HYB	Hyderabad	17.42	252	*e*P	P	07 08 23.9	+1.2
KULM	Kulim	18.84	165	P	P	07 08 38.2	-0.1
KULM				IAmb	IAmb	07 08 42.7	
	comp=Z,28nm,1.4s						
PSI	Prapat	20.95	172	P	Pn	07 09 03.6	-0.4
	comp=Z,1.8nm,0.4s,baz=301,slow=5.3,SNR=4.1						
	comp=Z,1.8nm,0.4s						
RPSI	Rantau Prapat	21.06	172	P	P	07 09 03.6	+1.1
WMQ	Urumqi	21.21	343	*e*P	P	07 09 05.5	+1.5
WMQ				PP	PnPn	07 09 28.5	+5.1
WMQ				S	S	07 12 54.0	-5.8
WMQ				pmax	pmax		
	comp=Z,22nm,0.9s						
HHC	Hu-ho-hao-te	21.57	34	*e*P	P	07 09 09.5	+1.5
HHC				pmax	pmax		
	comp=Z,12nm,0.5s						
HHC				pmax	pmax		
	comp=Z,120nm,6.2s						
HHC				LR	LR		
	comp=Z,390nm,11.6s						
HHC				LR	LR		
	comp=Z,280nm,10.4s						
HHC				LR	LR		
	comp=Z,240nm,12.8s						
NJ2	Nanjing	21.88	63	*e*P	P	07 09 10.3	-0.9
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PALK	Pallekele	21.91	224	LR	LR	07 18 02.0	
	comp=Z,94nm,19.9s,baz=21,slow=38						
NIL	Nilore	22.21	302	P	P	07 09 16.4	+1.6
NIL				IAmb	IAmb	07 09 18.1	
	comp=Z,24nm,0.7s						
WUS	Wushi	22.39	325		P	07 09 16.7	-0.1
WUS				IAmb	IAmb	07 09 22.3	
	comp=Z,19nm,0.9s						
KSH	Kashi	23.13	318	P	P	07 09 25.5	+0.9
KSH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TARG	Taragay, Kyrgy	23.51	324		P	07 09 30.8	+2.1
TARG				IAmb	IAmb	07 09 37.9	
	comp=Z,11nm,1.0s						
KDJ	Kajisay	24.13	324	P	P	07 09 35.9	+1.5
KDJ				IAmb	IAmb	07 09 38.3	
	comp=Z,28nm,1.2s						
MANEM	Manem	24.95	309		P	07 09 42.7	+0.7
MANEM				IAmb	IAmb	07 09 50.1	
	comp=Z,43nm,0.7s						
BOOM	Boomskoye usch	25.05	323	P	P	07 09 44.6	+1.9
BOOM				IAmb	IAmb	07 09 48.6	
	comp=Z,12nm,1.1s						
SONM	Songino Array	25.51	16	P	P	07 09 46.7	-0.1
	comp=Z,1.0nm,0.6s,baz=206,slow=9.0,SNR=4.5						
	comp=Z,1.0nm,0.6s						
SONM	Songino Array	25.51	16	P	P	07 09 46.8	-0.1
MK31	Makanchi Array	25.54	338	P	P	07 09 47.6	+0.7
MKAR	Makanchi Array	25.54	338	P	P	07 09 47.5	+0.6
	comp=Z,2.4nm,0.5s,baz=147,slow=10,SNR=24						
	comp=Z,2.4nm,0.5s						
MKAR	Makanchi Array	25.54	338		P	07 09 47.9	+0.9
MAKZ	Makanchi	25.66	338		P	07 09 49.1	+1.0
MAKZ				IAmb	IAmb	07 09 51.8	
	comp=Z,7.4nm,0.8s						
DRK	Karamyk	25.79	313	P	P	07 09 50.4	+0.7
DRK				IAmb	IAmb	07 09 52.8	
	comp=Z,15nm,0.8s						
KBL	Kabul	25.80	301		P	07 09 50.4	+0.7
KBL				IAmb	IAmb	07 10 04.1	
	comp=Z,16nm,1.1s						
AAK	Ala-Archa	25.95	322	P	P	07 09 52.2	+1.3
	comp=Z,4.5nm,0.8s,baz=140,slow=5.8,SNR=12						
	comp=Z,4.5nm,0.8s						
AAK	Ala-Archa	25.95	322		P	07 09 52.1	+1.3
AAK				IAmb	IAmb	07 10 14.6	

	comp=Z,10nm,1.1s						
GAR	**Garm**	**26.57**	**311**		**P**	**07 09 57.2**	**+0.7**
SHAA	**Shahritus**	**27.53**	**307**		**P**	**07 10 05.7**	**+0.6**
SHAA				IAmb	IAmb	07 10 31.6	
	comp=Z,18nm,0.9s						
KK31	**Karatay Array**	**28.56**	**319**	P	**P**	**07 10 14.7**	**+0.5**
KKAR	**Karatay Array**	**28.56**	**319**	P	**P**	**07 10 14.7**	**+0.5**
KURBB	**Kurchatov Arra**	**30.11**	**338**	P	**P**	**07 10 27.6**	**-0.2**
	comp=Z,0.4nm,0.2s,baz=146,slow=9.2,SNR=3.7						
	comp=Z,0.4nm,0.2s						
KURK	**Kurchatov**	**30.16**	**338**	P	**P**	**07 10 27.6**	**-0.6**
ZALV	**Zalesovo Beam**	**31.37**	**347**	P	**P**	**07 10 39.1**	**+0.3**
	comp=Z,1.3nm,0.2s,baz=138,slow=6.7,SNR=1.2						
	comp=Z,1.3nm,0.2s						
BVAR	**Borovoye Array**	**35.13**	**333**	P	**P**	**07 11 11.3**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=137,slow=9.1,SNR=4.9						
	comp=Z,1.0nm,0.7s						
BORK	**Borovoye**	**35.17**	**333**		**P**	**07 11 12.5**	**+0.5**
ABKAR	**Akbulak array**	**38.03**	**321**	P	**P**	**07 11 36.8**	**+0.3**
TNTI	**Ternate**	**38.04**	**122**	P	**P**	**07 11 36.5**	**-0.5**
MJAR	**Matsushiro Arr**	**38.46**	**61**	P	**P**	**07 11 40.2**	**-0.1**
MJAR				IAmb	IAmb	07 12 04.6	
	comp=Z,7.5nm,1.5s						
AKTO	**Aktyubinsk**	**39.69**	**322**	P	**P**	**07 11 50.0**	**-0.4**
	comp=Z,1.1nm,0.3s,baz=131,slow=6.1,SNR=5.2						
	comp=Z,1.1nm,0.3s						
ARTI	**Arti**	**42.60**	**330**	P	**P**	**07 12 13.4**	**-0.8**
	comp=Z,4.3nm,0.7s,baz=150,slow=4.4,SNR=6.3						
	comp=Z,4.3nm,0.7s						
ARTI	**Arti**	**42.60**	**330**		**P**	**07 12 12.7**	**-1.6**
ARTI				IAmb	IAmb	07 12 14.7	
	comp=Z,7.5nm,0.5s						
SOEI	**Soe**	**43.26**	**137**	P	**P**	**07 12 19.6**	**-0.6**
SOEI				IAmb	IAmb	07 12 33.1	
	comp=Z,12nm,0.7s						
BELG	**Belogornoye**	**46.43**	**321**	P	**P**	**07 12 44.5**	**-0.3**
	comp=Z,9.9nm,0.9s,baz=146,slow=3.1,SNR=4.4						
	comp=Z,9.9nm,0.9s						
KNRA	**Kununurra**	**50.59**	**137**	P	**P**	**07 13 17.1**	**-0.2**
TIXI	**Tiksi**	**51.50**	**13**	P	**P**	**07 13 22.2**	**-1.2**
	comp=Z,1.7nm,0.4s,baz=268,slow=3.4,SNR=7.5						
	comp=Z,1.7nm,0.4s						
MA2	**Magadan**	**52.23**	**32**	LR	LR	07 37 31.4	
	comp=Z,158nm,18.6s,baz=138,slow=38						
WRA	**Warramunga Arr**	**57.28**	**136**	P	**P**	**07 14 05.5**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=319,slow=7.2,SNR=5.1						
	comp=Z,1.4nm,0.7s						
WR8	**Warramunga Arr**	**57.39**	**136**	P	**P**	**07 14 06.9**	**-0.1**
WR8				IAmb	IAmb	07 14 09.5	
	comp=Z,6.5nm,1.0s						
AS31	**Alice Springs**	**59.78**	**139**	P	**P**	**07 14 22.9**	**-0.8**
ASAR	**Alice Springs**	**59.78**	**139**	P	**P**	**07 14 23.4**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=320,slow=6.3,SNR=21						
	comp=Z,1.4nm,0.6s						
ASAR	**Alice Springs**	**59.78**	**139**	P	**P**	**07 14 23.1**	**-0.6**
FINES	**FINESS Array B**	**59.88**	**329**	P	**P**	**07 14 23.9**	**+0.1**
HFS	**Hagfors**	**65.94**	**327**	P	**P**	**07 15 02.2**	**-2.0**
	comp=Z,2.0nm,0.9s,baz=79,slow=9.2,SNR=2.3						
	comp=Z,2.0nm,0.9s						
STKA	**Stephens Creek**	**70.41**	**140**	P	**P**	**07 15 30.9**	**-1.6**
	comp=Z,1.8nm,0.7s,baz=344,slow=11,SNR=4.6						
	comp=Z,1.8nm,0.7s						
STKA	**Stephens Creek**	**70.41**	**140**	IAmb	IAmb	07 15 39.2	
	comp=Z,28nm,1.1s						
L22K	**Petersville**	**79.30**	**26**	P	**P**	**07 16 24.4**	**+0.7**
A36M	**Sachs Harbour**	**80.51**	**12**	P	**P**	**07 16 29.9**	**-0.1**
A36M				IAmb	IAmb	07 16 51.6	
	comp=Z,4.5nm,0.9s						
BCAR	**Beaver Creek A**	**82.38**	**23**	P	**P**	**07 16 40.7**	**+0.5**
LBTB	**Lobatse**	**83.57**	**239**	P	**P**	**07 16 46.1**	**-0.9**
LBTB				IAmb	IAmb	07 17 08.7	
	comp=Z,5.9nm,1.2s						
BOSA	**Boshof**	**85.62**	**236**	P	**P**	**07 16 57.4**	**+0.1**
	comp=Z,2.3nm,0.9s,baz=82,slow=7.7,SNR=3.8						
	comp=Z,2.3nm,0.9s						
BOSA	**Boshof**	**85.62**	**236**	P	**P**	**07 16 57.3**	**+0.1**
SFJD	**Kangerlussuaq**	**86.19**	**347**	LR	LR	07 59 11.2	
	comp=Z,123nm,19.8s,baz=340,slow=38						

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*IDC **25** 07:04:56.6±1.4, 73°.00N×7°.12E, h0^{km}, mb3.7/1, mbtmp3.4/6, ML2.6/5, MS4.2/2, Error ellipse: s-maj=24.3km s-min=15.6km az=58.0*

*BER **25** 07:04:59.2±2.4, 73°.07N×6°.62E, h10^{km}, Mw3.8, Confirmed Earthquake*

*KOLA **25** 07:05:00.6, 72°.57N×6°.60E, h0^{km}, ML1.6, Error ellipse: s-maj=56.6km s-min=27.5km az=120.0, Norwegian sea*

ISC 25 07:04:58.0±1.3**, 73°.0N**±0°.1×**7°.18E**±0°.10**, h10^{km}, n24, σ1ˢ.33**/26**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRO	**Tromso**	**5.07**	**126**	*e*P	**Pn**	**07 06 15.1**	**+1.2**
LOF	**Lofoten**	**5.34**	**154**	*e*P	**Pn**	**07 06 18.1**	**+0.5**
JETT	**Jettan, Norway**	**5.49**	**123**	*e*P	**Pn**	**07 06 21.8**	**+2.1**
JETT				*e*S	**Sn**	**07 07 21.4**	**-1.3**
JETT				IAML		07 07 30.1	
	comp=Z,2.9nm,0.4s						
SPA0	**Spitsbergen Ar**	**5.67**	**19**	*e*P	**Pn**	**07 06 20.1**	**-1.9**
SPITS	**Spitsbergen Ar**	**5.67**	**19**	Pn	**Pn**	**07 06 19.7**	**-2.3**
	baz=208,slow=18						
	comp=Z,1.1nm,0.3s						
HAMF	**Hammerfest**	**5.68**	**107**	*e*P	**Pn**	**07 06 21.8**	**-0.4**
STEI	**Steigen**	**5.77**	**148**	*e*P	**Pn**	**07 06 24.1**	**+0.6**
KIF	**Kilpisjarvi**	**5.99**	**126**	*e*P	**Pn**	**07 06 27.9**	**+1.5**
FAUS	**Fauske**	**6.29**	**150**	P	**Pn**	**07 06 31.1**	**+0.6**
FAUS				S	Sn	07 07 34.7	-7.6
VAGH	**Vaagaholmen**	**6.65**	**159**	*e*P	**Pn**	**07 06 35.1**	**-0.5**
ARA0	**ARCESS Array S**	**6.83**	**112**	*e*P	**Pn**	**07 06 40.8**	**+2.7**
ARA0				*e*		07 07 54.7	
ARCES	**ARCESS Array B**	**6.83**	**112**	Pn	**Pn**	**07 06 38.5**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=312,slow=12,SNR=13						
ARCES				Sn	**Sn**	**07 07 54.3**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=316,slow=23,SNR=1.2						
	comp=Z,5.5nm,1.0s						
ARCES	**ARCESS Array B**	**6.83**	**112**	P	**Pn**	**07 06 39.4**	**+1.3**
ARCES				S	**Sn**	**07 07 55.5**	**-0.4**
RAUS	**Rausandaksla**	**7.02**	**157**	*e*P	**Pn**	**07 06 41.6**	**+0.9**
LEIR	**Leirfjorden**	**7.24**	**160**	*e*P	**Pn**	**07 06 44.0**	**+0.4**
MOR8	**Moi Rana**	**7.32**	**156**	*e*P	**Pn**	**07 06 45.1**	**+0.4**
VADS	**Vadso**	**7.58**	**102**	P	**Pn**	**07 06 50.5**	**+2.2**
VADS				S	**Sn**	**07 08 13.8**	**-0.2**
VADS	**Vadso**	**7.58**	**102**	*e*P	**Pn**	**07 06 49.5**	**+1.3**
NOA	**NORSAR Array B**	**12.13**	**171**	Pn	**Pn**	**07 07 50.6**	**+0.1**
	baz=352,slow=13,SNR=1.7						
	comp=Z,0.1nm,0.5s						
HFS	**Hagfors**	**13.18**	**166**	Pn	**Pn**	**07 08 04.3**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=353,slow=11,SNR=8.9						
	comp=Z,0.7nm,0.4s						
FINES	**FINESS Array B**	**13.62**	**139**	Pn	**Pn**	**07 08 10.8**	**0.0**
	comp=Z,0.1nm,0.3s,baz=332,slow=15,SNR=4.1						
	comp=Z,1.2nm,0.9s						
SFJD	**Kangerlussuaq**	**19.87**	**282**	LR	LR	07 17 00.2	
	comp=Z,422nm,19.6s,baz=288,slow=36						
PDAR	**Pinedale Array**	**56.68**	**308**	P	**P**	**07 14 42.3**	**+1.0**
	comp=Z,1.0nm,1.1s,baz=46,slow=6.3,SNR=4.2						
	comp=Z,1.0nm,1.1s						
LSZ	**Lusaka**	**89.17**	**160**	LR	LR	08 01 22.1	
	comp=Z,165nm,19.2s,baz=132,slow=38						

RSNC 25 07:05:01.7±0.0**, 3°N**±1°×**7°4W**±°**, h5^{km}**±3^{km}**, M3.3, mb3.8, ML3.0, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	**La Uribe, Meta**	**0.28**	**227**	P	Pg	07 05 05.4	-1.9
URMC				S	Sg	07 05 09.2	-1.8
PRAC	**Prado**	**0.77**	**291**	P	Pg	07 05 13.5	-2.9
PRAC				S	Sg	07 05 23.5	-2.9
VILC	**Villavicencio,**	**0.82**	**35**	P	Pg	07 05 15.8	-1.7
VILC				S	Sg	07 05 26.8	-1.3
CVER	**Cruz Verde, Cu**	**1.08**	**5**	P	Pg	07 05 19.6	-2.9
CVER				S	Sg	07 05 34.2	-2.3
ORTC	**Ortega, Tolima**	**1.17**	**293**	P	Pg	07 05 20.7	-3.5
ORTC				S	Sg	07 05 35.9	-3.5
CHIC	**Chingaza**	**1.26**	**20**	P	Pg	07 05 23.0	-2.9
CHIC				S	Sg	07 05 39.8	-2.5
MACC	**Macarena, Meta**	**1.33**	**166**	P	Pn	07 05 24.3	-2.6
MACC				S	Sg	07 05 42.5	-1.9
BETC	**Betania**	**1.48**	**239**	P	Pn	07 05 26.7	-2.3
BETC				S	Sn	07 05 45.9	-2.9
ANIL	**Santa Ana**	**1.61**	**310**	P	Pn	07 05 28.5	-2.6
ANIL				S	Sn	07 05 49.9	-2.6
GARC	**Garzon, Huila**	**1.81**	**227**	P	Pn	07 05 32.5	-1.4
GARC				S	Sn	07 05 55.4	-2.0
RECRC	**Villamaria, Ca**	**1.92**	**322**	P	Pn	07 05 34.3	-1.2
RECRC				S	Sn	07 05 58.5	-1.8
SPBC	**San Pablo de B**	**2.20**	**3**	P	Pn	07 05 39.8	+0.8
SPBC				S	Sb	07 06 09.8	+0.1
YOTC	**Yotoco, Valle**	**2.24**	**284**	P	Pn	07 05 38.3	-1.3
YOTC				S	Sn	07 06 08.1	+0.5
FLOC	**Florencia**	**2.37**	**219**	P	Pn	07 05 41.2	-0.1
FLOC				S	Sn	07 06 11.9	+1.2
JAMC	**Jamundi, Valle**	**2.51**	**265**	P	Pn	07 05 44.8	+1.4
JAMC				S	Sb	07 06 16.7	-2.0
PLMC	**San Jos del P**	**2.56**	**305**	P	Pn	07 05 44.4	+0.4
PLMC				S	Sn	07 06 17.8	+2.2
POPC	**Popayan, Colom**	**2.66**	**250**	P	Pn	07 05 45.7	+0.3
POPC				S	Sb	07 06 21.8	-1.2
RUSC	**La Rusia**	**2.67**	**24**	P	Pn	07 05 46.3	+0.5
RUSC				S	Sg	07 06 25.8	-1.7
PTBC	**PUERTO BERRIO,**	**3.09**	**355**	P	Pn	07 05 51.8	+0.6
PTBC				S	Sn	07 06 29.2	+0.6
BARC	**Barichara**	**3.28**	**17**	P	Pn	07 05 54.0	-0.1
BARC				S	Sn	07 06 36.1	+2.5
PTLC	**Puerto Leguiza**	**3.31**	**191**	P	Pg	07 06 05.1	0.0
PTLC				S	Sg	07 06 49.0	+1.0
CRUC	**La Cruz**	**3.34**	**236**	P	Pb	07 05 59.3	-2.4
CRUC				S	Sb	07 06 42.1	-0.8
BBAC	**Balboa, Cauca**	**3.38**	**245**	P	Pn	07 05 56.2	+0.8
BBAC				S	Sb	07 06 42.5	-1.3
BRJC	**Barrancabermej**	**3.54**	**7**	P	Pn	07 05 57.8	+0.5
BRJC				S	Sn	07 06 39.4	-0.2
PAMC	**Pamplona, Colo**	**4.14**	**21**	P	Pn	07 06 06.7	+0.6
PAMC				S	Sn	07 06 58.3	+3.1
OCAC	**Ocana**	**4.84**	**10**	P	Pn	07 06 17.2	+1.8
OCAC				S	Sn	07 07 12.6	+0.6
SDV	**Santo Domingo**	**6.45**	**33**	P	Pn	07 06 36.9	-0.7
SDV				S	Sn	07 07 47.8	-4.0
SJCC	**San Jacinto, C**	**6.49**	**351**	P	Pn	07 06 36.8	-1.3
SJCC				S	Sn	07 07 52.1	-0.5

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*NEIC **25** 07:22:39.5±1.2, 18°.2N±0°.2×68°.9W±0°.1, h107^{km}±17^{km}, ML2.4/13, Md3.6/5(RSPR), Error ellipse: s-maj=37.7km s-min=10.5km az=201.0*

*RSPR **25** 07:22:40.0, 18°.24N×68°.85W, h109^{km}±2^{km}, MD3.6/5*

*SDD **25** 07:22:42.5±0.3, 18°.29N×68°.88W, h90^{km}±17^{km}, MD3.1, ML2.7, MW2.8, Presumed earthquake*

ISC 25 07:22:39.3±2.0**, 18°.2N**±0°.2×**68°.8W**±0°.1**, h110^{km}, n29, σ0ˢ.76**/29**, 6C-1D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HIDR	**Higuey Centro**	**0.37**	**18**	*e*Pg	**Pn**	**07 22 55.3**	**-0.1**
HIDR				IAML		07 23 07.6	
	comp=N,161nm,0.3s						
HIDR				IAML		07 23 07.9	
	comp=N,676nm,0.3s						
HGY1	**Higuey**	**0.37**	**18**	*e*Pg	**Pn**	**07 22 55.3**	**-0.1**
HGY1				IAML		07 23 07.9	
	comp=N,8.6nm,0.3s						
DR12	**Loma Pena Alta**	**0.75**	**317**	Pn	**Pn**	**07 22 58.0**	**-0.2**
HATOM	**Hato Mayor del**	**0.75**	**317**	⇓*e*Pg	**Pn**	**07 22 58.1**	**-0.1**
HATOM				IAML		07 23 15.5	
	comp=N,189nm,0.3s						
HATOM				IAML		07 23 24.4	
	comp=N,29nm,2.5s						
SMDR	**Samana, DR**	**1.10**	**342**	⇑*e*P	**Pn**	**07 23 01.6**	**+0.1**
SMDR	**Samana, DR**	**1.10**	**342**	*e*S	**Sn**	**07 23 18.7**	**+0.4**
SMDR	**Samana, DR**	**1.10**	**342**	*e*Pg	**Pn**	**07 23 01.6**	**+0.1**
SMDR				IAML		07 23 22.1	
	comp=N,1µm,0.2s						
SMDR				IAML		07 23 51.1	
	comp=N,60nm,0.7s						
NADR	**Nagua**	**1.47**	**319**	*e*Pg	**Pn**	**07 23 05.9**	**+0.2**
NADR				IAML		07 23 31.4	
	comp=N,2µm,0.3s						
NADR				IAML		07 23 31.6	
	comp=N,215nm,0.2s						
NAG1	**Nagua**	**1.48**	**319**	⇑*e*Pg	**Pn**	**07 23 06.0**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.66**	**98**		**Pn**	**07 23 08.4**	**+0.3**
CRPR					**Sn**	**07 23 30.7**	**+0.7**
CRPR	**Cabo Rojo, PR**	**1.66**	**98**	IAML		07 23 49.7	
	comp=N,14nm,1.1s						
CRPR	**Cabo Rojo, PR**	**1.66**	**98**	⇑*i*P	**Pn**	**07 23 08.4**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.66**	**98**	*e*S	**Sn**	**07 23 30.7**	**+0.7**
MLPR	**Magueyes Islan**	**1.73**	**99**	⇑*e*P	**Pn**	**07 23 09.0**	**+0.1**
MLPR	**Magueyes Islan**	**1.73**	**99**	*e*S	**Sn**	**07 23 32.2**	**+0.8**
AOPR	**Arecibo Observ**	**1.98**	**87**		**Pn**	**07 23 12.7**	**+0.6**
AOPR					**Sn**	**07 23 37.7**	**+0.5**
AOPR	**Arecibo Observ**	**1.98**	**87**	IAML		07 23 46.0	
	comp=N,30nm,1.1s						
AOPR	**Arecibo Observ**	**1.98**	**87**	⇑*e*P	**Pn**	**07 23 12.7**	**+0.6**
AOPR	**Arecibo Observ**	**1.98**	**87**	*e*S	**Sn**	**07 23 37.7**	**+0.5**
UUPR	**Utuado, UPR, P**	**2.01**	**89**	Pn	**Pn**	**07 23 13.1**	**+0.6**
UUPR				IAML		07 23 49.7	
	comp=N,81nm,0.3s						
CELP	**Cerrillos**	**2.15**	**94**	Pn	**Pn**	**07 23 14.0**	**-0.3**
EMPR	**Esperanza - Ma**	**2.21**	**83**	Pn	**Pn**	**07 23 15.1**	**+0.2**
ECPR	**Experimental S**	**2.35**	**88**	Pn	**Pn**	**07 23 16.9**	**0.0**
ECPR				IAML		07 23 51.2	
	comp=N,20nm,0.2s						
ECPR				IAML		07 23 54.3	
	comp=N,16nm,0.7s						
ECPR	**Experimental S**	**2.35**	**88**	⇑*e*P	**Pn**	**07 23 17.2**	**+0.3**
ECPR	**Experimental S**	**2.35**	**88**	*e*S	**Sn**	**07 23 45.5**	**-0.2**
HUMP	**Col San Antoni**	**2.84**	**91**		**Pn**	**07 23 22.9**	**-0.3**
HUMP				IAML		07 24 02.6	
	comp=N,5.9nm,0.8s						
HUMP				IAML		07 24 03.8	
	comp=N,7.9nm,0.9s						
HUMP	**Col San Antoni**	**2.84**	**91**		**Sn**	**07 23 54.8**	**-2.3**
HUMP	**Col San Antoni**	**2.84**	**91**	⇑*e*P	**Pn**	**07 23 24.2**	**+1.0**
HUMP	**Col San Antoni**	**2.84**	**91**	*e*S	**Sn**	**07 23 54.8**	**-2.3**

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*UPP **25** 07:28:35.2±0.0, 67°.85N×20°.23E, h0^{km}, ML2.5, Confirmed Induced event*

*HEL **25** 07:28:35.4±0.1, 67°.82N×20°.14E, h0^{km}, ML1.4, Suspected explosion*

ISC 25 07:28:34.2±0.8**, 67°.81N**±0°.03×**20°.18E**±0°.03**, h0^{km}, n28, σ1ˢ.15**/42**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.16**	**22**	P	**Pg**	**07 28 37.5**	**+0.3**
KUA				S	**Sg**	**07 28 39.5**	**+0.1**
RATU	**Laukkuluspa**	**0.22**	**275**	P	**Pg**	**07 28 40.1**	**+1.6**
NIKU	**Nikkaluokta**	**0.44**	**278**	P	**Pb**	**07 28 43.9**	**-0.9**
NIKU				S	**Sb**	**07 28 50.0**	**-1.9**
DUNU	**Dundret**	**0.70**	**168**	P	**Pb**	**07 28 48.8**	**-0.6**
LANU	**Lannavaara**	**0.73**	**70**	P	**Pg**	**07 28 48.7**	**+0.5**
LANU	**Lannavaara**	**0.73**	**70**	PG	**Pg**	**07 28 48.6**	**+0.4**
LANU				SG	**Sg**	**07 28 58.6**	**+1.1**
SALU	**Saltoluokta**	**0.77**	**237**	P	**Pb**	**07 28 50.3**	**-0.2**
SALU	**Saltoluokta**	**0.77**	**237**	*e*P	**Pb**	**07 28 49.6**	**-0.9**
MASU	**Masugnsbyn**	**0.78**	**116**	P	**Pb**	**07 28 50.1**	**-0.6**
KIF	**Kilpisjarvi**	**1.23**	**11**	PG	**Pb**	**07 28 58.0**	**-0.2**
KIF				MSG		07 29 13.5	
	comp=Z,3.3nm,0.2s						
KIF				SG	**Sg**	**07 29 14.0**	**+0.4**
PAJU	**Pajala**	**1.38**	**123**	P	**Pb**	**07 29 00.6**	**-0.2**
PAJU	**Pajala**	**1.38**	**123**	PG	**Pb**	**07 29 00.4**	**-0.4**
PAJU				SG	**Sn**	**07 29 19.2**	**-0.5**
HEF	**Hetta**	**1.44**	**64**	*e*P	**Pn**	**07 29 01.5**	**0.0**
HEF	**Hetta**	**1.44**	**64**	PG	**Pn**	**07 29 01.2**	**-0.3**
	baz=247						
HEF				MSG		07 29 18.9	
	comp=Z,2.1nm,0.2s						
HEF				SB	**Sg**	**07 29 20.3**	**-0.1**
ERTU	**Ertsjaerv**	**1.48**	**147**	P	**Pb**	**07 29 02.6**	**0.0**
ERTU	**Ertsjaerv**	**1.48**	**147**	PG	**Pb**	**07 29 02.5**	**0.0**
	baz=330						
ERTU				SN	**Sn**	**07 29 23.6**	**+1.4**
KLF	**Kolari**	**1.56**	**110**	PG	**Pg**	**07 29 03.9**	**-0.3**
KLF				MSG		07 29 22.8	
	comp=Z,1.9nm,0.2s						
KLF				SN	**Sg**	**07 29 25.7**	**+1.3**
KTK1	**Kautokeino**	**1.66**	**42**	PN	**Pg**	**07 29 05.9**	**-0.1**
KTK1				SN	**Sg**	**07 29 28.4**	**+1.0**
TRO	**Tromso**	**1.89**	**347**	PG	**Pb**	**07 29 09.1**	**-0.4**
TRO				SG	**Sb**	**07 29 33.8**	**+0.1**
KALU	**Kalix**	**2.33**	**146**	PG	**Pb**	**07 29 16.1**	**-0.9**
TOF	**Tornio**	**2.38**	**135**	PG	**Pb**	**07 29 17.0**	**-0.9**
TOF				MSG		07 29 46.4	
	comp=Z,1.6nm,0.2s						
TOF				SG	**Sg**	**07 29 49.7**	**-0.9**
RNF	**Rovaniemi**	**2.57**	**115**	PB	**Pb**	**07 29 19.8**	**-1.4**
RNF				SG	**Sb**	**07 29 54.5**	**+1.2**
ARA0	**ARCESS Array S**	**2.61**	**46**	PB	**Pb**	**07 29 20.1**	**-1.6**
	baz=230						
ARA0				SB	**Sb**	**07 29 53.2**	**-1.2**
RAJF	**Raja-Jooseppi**	**3.12**	**74**	PB	**Pb**	**07 29 28.3**	**-2.1**
RAJF				SG	**Sb**	**07 30 10.6**	**+1.7**
KEV	**Kevo**	**3.16**	**49**	SN	**Sn**	**07 30 05.1**	**+1.6**
BURU	**Burvik**	**3.27**	**171**	PB	**Pb**	**07 29 31.2**	**-1.9**
VRF	**Varrio**	**3.58**	**87**	SG	**Sg**	**07 30 26.3**	**-2.9**
KU6	**Riekki**	**4.22**	**111**	PG	**Pb**	**07 29 51.3**	**+2.0**
	baz=298						

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*IDC **25** 07:31:08.6±1.4, 50°.41N×130°.18W, h0^{km}, mb3.8/2, mbtmp3.3/9, ML3.4/6, MS3.9/5, Error ellipse: s-maj=20.9km s-min=14.2km az=81.0*

ISC 25 07:31:10.1±1.2**, 50°.52N**±0°.09×**130°.1W**±0°.1**, h10^{km}, n18, σ0ˢ.73**/11**, MS4.0**/5**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBB	**Bella Bella**	**2.09**	**36**	Pn	**Pn**	**07 31 45.1**	**+0.1**
	13nm,0.3s,baz=228,slow=14,SNR=121						
BBB				Sn	**Sn**	**07 32 10.9**	**-0.2**
	14nm,0.3s,baz=250,slow=20,SNR=8.7						
	43nm,0.4s						
NEW	**Newport**	**8.78**	**100**	Pn	**Pn**	**07 33 16.9**	**-0.1**
	0.1nm,0.3s,baz=278,slow=15,SNR=2.0						
	0.6nm,0.6s						
YBH	**Yreka Blue Hor**	**10.18**	**147**	Pn	**Pn**	**07 33 35.5**	**-0.8**
	0.3nm,1.0s,baz=344,slow=7.4,SNR=4.1						
YKA	**Yellowknife Ar**	**14.68**	**29**	Pn	**Pn**	**07 34 37.0**	**-0.6**
	0.1nm,0.3s,baz=223,slow=12,SNR=17						
	0.4nm,0.7s						
NVAR	**Mina Array Bea**	**14.72**	**141**	Pn	**Pn**	**07 34 39.3**	**+0.8**
	0.3nm,0.3s,baz=320,slow=12,SNR=13						
	0.3nm,0.4s						
PDAR	**Pinedale Array**	**16.08**	**111**	Pn	**P**	**07 34 59.0**	**-0.7**
	baz=317,slow=9.8,SNR=3.5						
	0.6nm,1.0s						
ILAR	**Eielson Array**	**16.77**	**335**	Pn	**P**	**07 35 08.0**	**+1.0**
	baz=151,slow=11,SNR=7.5						
	0.5nm,0.7s						
ULM	**Lac du Bonnet**	**21.73**	**77**	P	**P**	**07 36 01.9**	**+0.6**
	2.6nm,0.7s,baz=277,slow=8.3,SNR=4.0						
	2.6nm,0.7s						
TKL	**Tuckaleechee C**	**36.34**	**96**	LR	LR	07 54 26.9	
	comp=Z,117nm,19.7s,baz=277,slow=38						
H11N2	**WAKE ISLAND Hy**	**57.89**	**262**	T	T	08 43 30.7	
	baz=42,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy**	**57.89**	**262**	T	T	08 43 30.8	
	baz=42,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	**57.91**	**262**	T	T	08 43 36.3	
	baz=42,slow=75,SNR=13						
NOA	**NORSAR Array B**	**64.54**	**20**	LR	LR	08 10 42.3	
	comp=Z,51nm,19.2s,baz=35,slow=37						
HFS	**Hagfors**	**65.89**	**19**	LR	LR	08 10 16.3	
	comp=Z,131nm,20.2s,baz=40,slow=36						
GERES	**GERESS Array B**	**76.26**	**24**	LR	LR	08 19 21.2	
	comp=Z,74nm,18.8s,baz=57,slow=38						
VRAC	**Vranov**	**76.54**	**22**	LR	LR	08 19 34.8	
	comp=Z,88nm,18.5s,baz=26,slow=38						
MKAR	**Makanchi Array**	**79.10**	**338**	P	**P**	**07 43 14.7**	**+0.2**
	0.7nm,0.6s,baz=25,slow=3.8,SNR=7.1						
	0.7nm,0.6s						
BOSA	**Boshof**	**151.28**	**50**	PKPbc	**PKPbc**	**07 51 02.9**	**-0.8**
	2.6nm,1.0s,baz=333,slow=6.8,SNR=3.9						

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*IDC **25** 07:35:45.1±1.4, 22°.91S×173°.86E, h0^{km}, mb3.9/5, mbtmp3.9/5, MS3.5/8, Error ellipse: s-maj=42.6km s-min=39.4km az=143.0*

ISC 25 07:35:50.8±1.4**, 23°.0S**±0°.3×**173°.8E**±0°.3**, h35^{km}, n14, σ1ˢ.08**/7**, mb3.8**/5**, MS3.4**/7**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**15.52**	**170**	LR	LR	07 44 55.0	
	comp=Z,140nm,18.5s,baz=2.0,slow=35						
RAR	**Rarotonga**	**24.58**	**91**	LR	LR	07 48 53.6	
	comp=Z,40nm,21.7s,baz=306,slow=32						
CTA	**Charters Tower**	**25.73**	**271**	LR	LR	07 51 10.1	
	comp=Z,197nm,18.2s,baz=62,slow=36						
STKA	**Stephens Creek**	**29.81**	**246**	LR	LR	07 52 52.7	
	comp=Z,80nm,19.4s,baz=27,slow=34						
PPT	**Papeete**	**34.76**	**88**	LR	LR	07 53 54.2	
	comp=Z,39nm,20.1s,baz=276,slow=31						
ASAR	**Alice Springs**	**36.52**	**261**	P	**P**	**07 42 52.6**	**-0.7**
	0.9nm,0.8s,baz=88,slow=9.0,SNR=11						
ASAR				LR	LR	07 57 17.5	
	comp=Z,117nm,19.7s,baz=98,slow=35						
	0.9nm,0.8s						
WRA	**Warramunga Arr**	**36.73**	**267**	P	**P**	**07 42 55.1**	**0.0**
	1.1nm,1.0s,baz=97,slow=8.2,SNR=4.7						
	1.1nm,1.0s						
JAY	**Jayapura**	**37.93**	**298**	LR	LR	07 58 06.6	
	comp=Z,157nm,19.2s,baz=124,slow=35						
GUMO	**Guam**	**46.04**	**319**	LR	LR	08 01 11.1	
	comp=Z,42nm,20.6s,baz=146,slow=33						
VNDA	**Vanda**	**54.92**	**183**	P	**P**	**07 45 17.6**	**0.0**
	0.5nm,0.5s,baz=342,slow=6.4,SNR=2.1						
	0.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**83.85**	**293**	P	**P**	**07 48 18.9**	**+1.6**
	1.1nm,0.3s,baz=114,slow=5.4,SNR=12						
	1.1nm,0.3s						
SONM	**Songino Array**	**92.72**	**322**	P	**P**	**07 48 58.1**	**-1.3**
	0.4nm,0.5s,baz=123,slow=5.3,SNR=2.1						
	0.4nm,0.5s						
EKA	**Eskdalemuir Ar**	**147.59**	**357**	PKPbc	**PKPdf**	**07 55 28.5**	**+0.1**
	0.8nm,0.7s,baz=32,slow=3.4,SNR=3.5						
GERES	**GERESS Array B**	**149.72**	**333**	PKPbc	**PKPbc**	**07 55 37.1**	**+0.2**
	3.4nm,0.9s,baz=26,slow=3.4,SNR=12						

IDC 25 07:58:32.2±6.1**, 22°.14S**×**173°.60E, h0^{km}, mb3.9**/3**, mbtmp3.9**/3**, Error ellipse: s-maj=256.5km s-min=52.0km az=152.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**36.52**	**260**	P	P	08 05 39.9	+0.1
	0.8nm,0.9s,baz=99,slow=8.0,SNR=5.1						
	0.8nm,0.9s						
WRA	**Warramunga Arr**	**36.65**	**266**	P	P	08 05 40.5	-0.3
	1.9nm,0.8s,baz=101,slow=8.8,SNR=6.0						
	1.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**83.40**	**293**	P	P	08 11 02.1	+0.2
	0.6nm,0.3s,baz=110,slow=4.8,SNR=6.3						
	0.6nm,0.3s						
GERES	**GERESS Array B**	**148.92**	**334**	PKPbc	PKPbc	08 18 21.4	-0.7
	1.2nm,0.8s,baz=22,slow=3.4,SNR=5.8						

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*IDC **25** 08:02:27.5±1.4, 22°.13S×173°.48E, h0^{km}, mb4.1/6, mbtmp4.1/6, Error ellipse: s-maj=46.1km s-min=34.1km az=137.0*

*NEIC **25** 08:02:29.8±1.8, 22°.03S±0°.08×173°.5E±0°.2, h10^{km}±1^{km}, mb4.4/13, Error ellipse: s-maj=26.8km s-min=6.9km az=118.0*

ISC 25 08:02:32.9±0.6**, 22°.0S**±0°.1×**173°.5E**±0°.1**, h40^{km}, n62, σ0ˢ.75**/57**, mb4.3**/9**, 8C-4D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.03**	**46**	Pn	**Pn**	**08 03 58.5**	**-1.1**
MRZ	**Mangatainoka R**	**18.65**	**175**		**Pn**	**08 06 48.5**	**+0.6**
MRZ				IAmb	IAmb	08 06 54.9	
	comp=Z,30nm,1.2s						
LTZ	**Lake Taylor**	**20.71**	**183**	P	**P**	**08 07 09.8**	**0.0**
LTZ				IAmb	IAmb	08 07 12.4	
	comp=Z,12nm,0.8s						
EIDS	**Eidsvold**	**20.82**	**256**	P	**P**	**08 07 11.3**	**+0.2**
CTAO	**Charters Tower**	**25.52**	**269**	P	**P**	**08 07 58.5**	**+0.6**
CTAO				IAmb	IAmb	08 08 36.0	
	comp=Z,13nm,1.4s						
STKA	**Stephens Creek**	**30.02**	**244**	P	**P**	**08 08 35.7**	**-2.3**
	comp=Z,1.1nm,0.6s,baz=62,slow=9.5,SNR=3.3						
	comp=Z,1.1nm,0.6s						
STKA	**Stephens Creek**	**30.02**	**244**	IAmb	IAmb	08 08 42.3	
	comp=Z,37nm,1.4s						
WR8	**Warramunga Arr**	**36.44**	**266**	P	**P**	**08 09 32.5**	**-1.6**
WR8				IAmb	IAmb	08 09 49.9	
	comp=Z,11nm,1.4s						

ASAR	Alice Springs	36.48	260	P	P	08 09 34.1	-0.3
	comp=Z,1.9nm,0.9s,baz=84,slow=8.9,SNR=11						
	comp=Z,1.9nm,0.9s						
WB0	Warramunga Arr	36.57	266	P	P	08 09 34.1	-1.1
WB0				IAmb	IAmb	08 09 49.8	
	comp=Z,14nm,1.4s						
WB2	Warramunga Arr	36.58	266	P	P	08 09 35.3	0.0
WRA	Warramunga Arr	36.59	266	P	P	08 09 34.9	-0.5
	comp=Z,0.9nm,0.7s,baz=99,slow=8.9,SNR=1.2						
	comp=Z,0.9nm,0.7s						
FITZ	Fitzroy Crossi	45.02	266	P	P	08 10 45.2	+0.3
QSPA	South Pole Qui	68.03	180	P	P	08 13 27.7	-0.3
MAW	Mawson	77.34	202	P	P	08 14 23.7	+0.6
	comp=Z,4.8nm,1.1s,baz=93,slow=10,SNR=4.3						
	comp=Z,4.8nm,1.1s						
CMAR	Chiang Mai Arr	83.31	293	P	P	08 14 57.8	+1.8
	comp=Z,1.7nm,0.7s,baz=130,slow=3.8,SNR=12						
	comp=Z,1.7nm,0.7s						
CHTO	Chiang Mai	83.46	293	P	P	08 14 57.6	+0.8
SONM	Songino Array	91.88	322	P	P	08 15 37.5	+0.6
	comp=Z,0.3nm,0.5s,baz=131,slow=6.1,SNR=2.0						
	comp=Z,0.3nm,0.5s						
SONM	Songino Array	91.88	322	IAmb	IAmb	08 15 44.2	
	comp=Z,2.9nm,1.4s						
PLOR	Plostina	144.09	319	⇑P	PKPdf	08 22 04.2	-0.1
COVR	Voineasa-Covas	144.36	320	⇓P	PKPbc	08 22 03.7	+0.5
TURR	Turia	144.37	320	⇑P	PKPdf	08 22 04.7	-0.1
DOPR	Dopca	144.79	320	⇓P	PKPdf	08 22 06.5	+1.1
ARR	Arges	145.55	320	⇑P	PKPab	08 22 08.4	+1.1
TNR	Turnu Rosu	145.61	321	⇑P	PKiKP	08 22 10.6	-0.3
MARR	Marisel-Cluj	145.70	323	⇓P	PKPab	08 22 08.2	+0.3
DRGR		145.86	323	⇑P	PKPab	08 22 09.1	+0.6
STEB	Steborice	146.24	331	*e*PKP	PKPab	08 22 10.2	+0.5
OSTC	Ostas	146.44	334	*e*PKP	PKPab	08 22 11.1	+0.6
DPC	Dobruska-Polom	146.56	333	*e*PKP	PKPab	08 22 11.2	+0.3
UPC	Upice	146.57	334	*e*PKP	PKPab	08 22 11.0	+0.1
MAUC	Maruska	146.63	331	*e*PKP	PKPab	08 22 11.7	+0.5
PSZ	Piszkesteto	146.64	327	⇑P	PKPab	08 22 11.4	0.0
EKA	Eskdalemuir Ar	146.66	357	PKPbc	PKPbc	08 22 09.3	-0.6
	comp=Z,0.8nm,0.6s,baz=13,slow=1.8,SNR=3.5						
SIRR	Siria	146.75	323	⇑P	PKPab	08 22 11.4	-0.4
JAVC	Velka Javorina	147.07	330	*e*PKP	PKPab	08 22 13.5	+0.5
JAVC	Velka Javorina	147.07	330	*e*PKP		08 29 18.4	
CLL	Collm	147.09	337	*i* PKP	PKPbc	08 22 12.2	+0.9
	comp=Z,6.0nm,0.9s						
HERR	Herculane	147.13	321	⇓P	PKPdf	08 22 07.8	-1.6
VRAC	Vranov	147.22	332	*e*PKP	PKPbc	08 22 12.8	+1.0
KRUC	Moravsky	147.49	332	*e*PKP	PKPbc	08 22 13.4	+0.9
KRUC	Moravsky	147.49	332	*e*PKP		08 29 18.0	
KRUC	Moravsky	147.49	332	*e*PKP		08 33 05.3	
PRU	Pruhonice	147.57	334	*e*PKP	PKPbc	08 22 12.8	+0.1
ZVC	Zvikov	148.14	334	*e*PKP	PKPbc	08 22 14.8	+0.6
MORH	Mrgy, Hungar	148.41	326	⇑P	PKPbc	08 22 14.5	-0.5
RONA	Rosalia, Austr	148.54	330	*e*PKP	PKiKP	08 22 16.4	-0.5
	comp=Z,3.6nm,0.7s						
CONA	Conrad Observa	148.57	331	*e*PKP	PKiKP	08 22 16.6	-0.4
	comp=Z,5.5nm,1.1s						
CKRC	Cesky Krumlov	148.57	333	*e*PKP	PKPbc	08 22 16.1	+0.7
KHC	Kasperske Hory	148.63	334	*e*PKP	PKPbc	08 22 16.4	+0.8
GERES	GERESS Array B	148.80	334	PKPbc	PKPbc	08 22 16.2	+0.1
	comp=Z,3.7nm,0.9s,baz=41,slow=2.6,SNR=13						
ARSA	Arzberg	149.23	330	*e*PKP	PKPbc	08 22 17.5	+0.4
	comp=Z,2.8nm,1.0s						
SOKA	Soboth	149.88	330	*e*PKP	PKPbc	08 22 18.8	0.0
	comp=Z,5.8nm,1.1s						
LESA	Schwarzleotal	150.35	333	*e*PKP	PKPbc	08 22 20.0	+0.1
	comp=Z,0.2nm,0.3s						
MYKA	Terra Mystica	150.55	331	*e*PKP	PKPbc	08 22 20.4	0.0
	comp=Z,4.1nm,0.9s						
WATA	Walderalm	150.87	334	*e*PKP	PKPbc	08 22 20.9	-0.3
	comp=Z,1.3nm,0.6s						
WTTA	Wattenberg	150.90	334	*e*PKP	PKPbc	08 22 21.6	+0.2
	comp=Z,8.0nm,1.1s						
ABTA	Abfaltersbach	150.95	333	*e*PKP	PKPbc	08 22 21.6	+0.2
	comp=Z,7.3nm,1.0s						
SQTA	Sankt Quirin	151.11	335	*e*PKP	PKPbc	08 22 22.1	+0.3
	comp=Z,3.7nm,0.8s						
FETA	Feichten	151.46	335	*e*PKP	PKiKP	08 22 23.2	+0.1
	comp=Z,6.6nm,0.9s						
DAVA	Damuels	151.57	336	*e*PKP	PKiKP	08 22 24.1	+0.8
	comp=Z,14nm,1.4s						
TORD	Torodi Ar. Bea	168.23	223	PKP	PKPdf	08 22 36.5	+0.5
	comp=Z,0.8nm,1.1s,baz=54,slow=0.5,SNR=3.7						
TORD				PKPab	PKPab	08 23 44.5	+0.2
	comp=Z,0.8nm,0.8s,baz=100,slow=4.5,SNR=5.4						

IDC ***25*** *08:09:33.0±1.6, 22°.39S×173°.51E, h0^{km}, mb4.0/5, mbtmp3.9/6, ML2.8/1, Error ellipse: s-maj=71.7km s-min=29.3km az=160.0*

ISC 25 08:09:39.7±1.3**, 22°.4S**±0°.4×**173°.4E**±0°.2**, h44**^{km}**, n18,** σ**1**^{s}**.82**/19**, mb3.9**/5**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.44	271	Pn	Pn	08 11 11.9	-0.2
	0.2nm,0.3s,baz=88,slow=16,SNR=2.2						
	4.8nm,0.7s						
CTA	Charters Tower	25.39	270	P	P	08 15 04.2	+1.0
	3.3nm,1.0s,baz=113,slow=14,SNR=3.5						
	3.3nm,1.0s						
ASAR	Alice Springs	36.29	260	P	P	08 16 38.9	-0.4
	2.1nm,0.9s,baz=86,slow=8.9,SNR=13						
	2.1nm,0.9s						
WRA	Warramunga Arr	36.43	266	P	P	08 16 39.5	-1.0
	1.2nm,0.9s,baz=94,slow=9.3,SNR=4.1						
	1.2nm,0.9s						
CMAR	Chiang Mai Arr	83.31	293	P	P	08 22 03.2	+0.8
	1.2nm,0.3s,baz=127,slow=3.6,SNR=12						
	1.2nm,0.3s						
ILAR	Eielson Array	92.11	16	P	P	08 22 44.0	+0.2
	0.3nm,0.9s,baz=238,slow=5.2,SNR=1.8						
	0.3nm,0.9s						
EKA	Eskdalemuir Ar	146.99	356	PKPbc	PKPbc	08 29 16.8	-0.4
	1.3nm,0.8s,baz=357,slow=2.4,SNR=2.2						
CONA	Conrad Observa	148.80	330	*e*SKS	PKPbc	08 29 26.3	+3.9
	1.1nm,0.7s						
GERES	GERESS Array B	149.05	334	PKPbc	PKPbc	08 29 21.4	-1.7
	2.2nm,0.9s,baz=103,slow=1.8,SNR=7.1						
ARSA	Arzberg	149.45	330	*e*SKS	PKPbc	08 29 27.3	+3.3
	0.9nm,1.1s						
SOKA	Soboth	150.10	329	*e*SKS	PKPbc	08 29 24.0	-1.7
	1.8nm,1.3s						
LESA	Schwarzleotal	150.59	333	*e*SKS	PKPbc	08 29 25.3	-1.6
	1.6nm,0.8s						
MYKA	Terra Mystica	150.78	331	*i* SKS	PKPbc	08 29 25.2	-2.1
	3.2nm,1.0s						
WTTA	Wattenberg	151.15	334	*e*SKS	PKPbc	08 29 26.8	-1.5
	3.5nm,0.9s						
ABTA	Abfaltersbach	151.19	332	*e*SKS	PKPbc	08 29 26.2	-2.1
	0.1nm,0.4s						
SQTA	Sankt Quirin	151.36	334	*e*SKS	PKPbc	08 29 27.1	-1.6
	0.8nm,0.7s						
FETA	Feichten	151.71	335	*e*SKS	PKPbc	08 29 28.3	-1.3
	2.7nm,1.0s						
TORD	Torodi Ar. Bea	167.89	222	PKP	PKPdf	08 29 42.8	+0.7
	0.5nm,0.8s,baz=135,slow=1.7,SNR=2.4						
TORD				PKPab	PKPab	08 30 49.4	+0.2
	0.2nm,0.4s,baz=80,slow=4.7,SNR=2.2						

IDC 25 08:10:51.3±3.7**, 22°.84S**×**174°.01E, h0**^{km}**, mb3.4**/2**, mbtmp3.5**/3**, ML2.9**/1**, Error ellipse: s-maj=181.2km s-min=50.4km az=164.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.04	275	Pn	Pn	08 12 36.3	+0.5
	0.2nm,0.3s,baz=75,slow=13,SNR=1.9						
	9.1nm,1.0s						
ASAR	Alice Springs	36.77	261	P	P	08 18 00.1	-0.8
	0.2nm,0.5s,baz=84,slow=9.1,SNR=4.6						
	0.2nm,0.5s						
WRA	Warramunga Arr	36.98	267	P	P	08 18 03.1	+0.4
	0.8nm,0.8s,baz=100,slow=8.9,SNR=3.4						
	0.8nm,0.8s						
GERES	GERESS Array B	149.72	334	PKPbc	PKPbc	08 30 42.7	-0.4
	0.6nm,0.7s,baz=20,slow=3.3,SNR=3.9						

IDC ***25*** *08:13:20.0±0.7, 22°.10S×173°.57E, h0^{km}, mb4.2/15, mbtmp4.1/16, ML3.0/1, MS4.1/23, Error ellipse: s-maj=25.8km s-min=17.2km az=158.0*

BGR ***25*** *08:13:20.1, 22°.92S×176°.50E, h33^{km}*

NEIC ***25*** *08:13:22.5±2.3, 22°.1S±0°.1×173°.6E±0°.1, h10^{km}±1^{km}, mb4.5/23, Error ellipse: s-maj=19.8km s-min=15.7km az=186.0*

GCMT ***25*** *08:13:23.5±0.4, 21°.93S±0°.04×173°.56E±0°.03, h14^{km}±1^{km}, MW4.8/63, Moment Tensor Solution. s16,c16; s63,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.11±.21; M$_{\theta\theta}$0.23±.13; M$_{\phi\phi}$1.88±.13; M$_{r\theta}$0.45±.35; M$_{\theta\phi}$0.76±.07; M$_{\phi r}$0.26±.23; Best double couple: M$_0$2.20500×10^{16} NP1:φ$_s$13.00000°, δ40.00000°, λ-103.00000°. NP2: φ$_s$210.00000°, δ51.00000°, λ-79.00000°. Principal axes: T 2.2140, Plg5.0000°, Azm292.0000°; N -0.0210, Plg9.0000°, Azm23.0000°; P -2.1970, Plg80.0000°, Azm170.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 08:13:21.4±0.5**, 22°.1S**±0°.1×**173°.60E**±0°.08**, h10**^{km}**, n137,** σ**1**^{s}**.34**/114**, mb4.4**/22**, MS4.1**/21**, 6C-4D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINNC	Pines Island,	5.72	264	Pn	Pn	08 14 45.6	-0.8
DZM	Mont Dzumac	6.64	269	Pn	Pn	08 14 57.9	-1.3
	0.3nm,0.3s,baz=89,slow=14,SNR=1.9						
DZM				Sn	Sn	08 16 17.0	+2.0
	0.4nm,0.3s,baz=162,slow=20,SNR=3.1						
	4.5nm,0.7s						
RAO	Raoul Island	10.43	135	LR	LR	08 19 09.3	
	comp=Z,1μm,19.6s,baz=332,slow=33						
URZ	Urewera	16.36	170	LR	LR	08 22 05.1	
	comp=Z,408nm,21.3s,baz=345,slow=32						
MRZ	Mangatainoka R	18.55	175	P	P	08 17 38.1	-0.3
MRZ				IAmb	IAmb	08 18 05.7	
	comp=Z,20nm,1.0s						
INZ	Inchbonnie	20.62	185	P	P	08 18 02.4	+1.5
INZ				IAmb	IAmb	08 18 38.3	
	comp=Z,42nm,1.4s						
ARMA	Armidale	21.34	243	P	P	08 18 10.7	+1.8
ARMA				IAmb	IAmb	08 18 51.5	
	comp=Z,34nm,1.4s						
MLZ	Mavora Lakes	23.61	190	P	P	08 18 34.2	+1.6
MLZ				IAmb	IAmb	08 18 54.7	
	comp=Z,21nm,1.3s						
RAR	Rarotonga	24.75	93	LR	LR	08 26 24.6	
	comp=Z,224nm,21.4s,baz=289,slow=32						
CTA	Charters Tower	25.58	269	P	P	08 18 51.9	+1.0
	comp=Z,3.0nm,0.8s,baz=86,slow=12,SNR=6.3						
CTA				LR	LR	08 28 34.2	
	comp=Z,775nm,18.5s,baz=77,slow=36						
	comp=Z,3.0nm,0.8s						
CTAO	Charters Tower	25.58	269	P	P	08 18 51.6	+0.7
CTAO				IAmb	IAmb	08 19 15.4	
	comp=Z,9.4nm,1.2s						
PMG	Port Moresby	28.36	292	LR	LR	08 29 50.2	
	comp=Z,573nm,18.5s,baz=154,slow=35						
TOO	Toolangi	28.69	231	P	P	08 19 20.1	+1.3
STKA	Stephens Creek	30.03	244	P	P	08 19 31.2	+0.5
	comp=Z,1.1nm,0.5s,baz=76,slow=13,SNR=4.2						
STKA				LR	LR	08 30 56.1	
	comp=Z,248nm,18.4s,baz=68,slow=35						
	comp=Z,1.1nm,0.5s						
STKA	Stephens Creek	30.03	244	IAmb	IAmb	08 19 38.5	
	comp=Z,26nm,1.3s						
PPT	Papeete	34.87	89	LR	LR	08 31 01.3	
	comp=Z,217nm,21.8s,baz=254,slow=30						
AS31	Alice Springs	36.52	260	P	P	08 20 26.2	-1.2
ASAR	Alice Springs	36.52	260	P	P	08 20 26.4	-1.0
	comp=Z,2.1nm,0.8s,baz=76,slow=9.8,SNR=23						
ASAR				LR	LR	08 35 30.2	
	comp=Z,452nm,18.6s,baz=100,slow=36						
	comp=Z,2.1nm,0.8s						
ASAR	Alice Springs	36.52	260	P	P	08 20 25.6	-1.9
WB0	Warramunga Arr	36.63	266	P	P	08 20 27.1	-1.2
WB0				IAmb	IAmb	08 20 34.3	
	comp=Z,7.0nm,1.1s						
WRA	Warramunga Arr	36.65	266	P	P	08 20 26.9	-1.6
	comp=Z,1.0nm,0.7s,baz=97,slow=8.6,SNR=5.8						
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	36.65	266	IAmb	IAmb	08 20 30.5	
	comp=Z,0.8nm,1.5s						
JAY	Jayapura	37.43	297	LR	LR	08 34 42.7	
	comp=Z,192nm,21.7s,baz=178,slow=34						
H11S2	WAKE ISLAND Hy	40.93	350	T	T	09 04 27.8	
	baz=172						
H11S3	WAKE ISLAND Hy	40.94	350	T	T	09 04 39.5	
	baz=172						
H11S1	WAKE ISLAND Hy	40.95	350	T	T	09 04 27.2	
	baz=172						
FORT	Forrest	41.45	248	P	P	08 21 07.7	-0.8
FORT				IAmb	IAmb	08 21 26.2	
	comp=Z,8.5nm,0.9s						
KNRA	Kununurra	42.79	271	P	P	08 21 16.9	-2.8
FITZ	Fitzroy Crossi	45.08	266	LR	LR	08 40 33.9	
	comp=Z,525nm,18.0s,baz=104,slow=36						
FITZ	Fitzroy Crossi	45.08	266	P	P	08 21 38.2	+0.2
GUMO	Guam	45.32	319	LR	LR	08 38 32.3	
	comp=Z,165nm,21.0s,baz=145,slow=33						
BATI	Baumata	49.20	276	LR	LR	08 42 01.2	
	comp=Z,606nm,21.4s,baz=142,slow=35						
MBWA	Marble Bar	49.86	260	P	P	08 22 14.1	-1.1
MBWA				IAmb	IAmb	08 22 20.6	
	comp=Z,7.0nm,0.8s						
MORW	Morawa	51.95	250	P	P	08 22 31.0	+0.1
MORW				IAmb	IAmb	08 22 32.1	
	comp=Z,9.0nm,0.9s						
VNDA	Vanda	55.74	183	P	P	08 22 58.5	+0.7
	comp=Z,1.0nm,0.8s,baz=358,slow=7.2,SNR=2.2						
	comp=Z,1.0nm,0.8s						
VNDA	Vanda	55.74	183	IAmb	IAmb	08 23 03.5	
	comp=Z,1.8nm,1.0s						
JOW	Kunigami	65.52	316	LR	LR	08 49 02.0	
	comp=Z,78nm,21.4s,baz=290,slow=33						
MJAR	Matsushiro Arr	67.25	330	P	P	08 24 15.2	-0.9
	comp=Z,2.4nm,0.9s,baz=158,slow=7.8,SNR=4.8						
	comp=Z,2.4nm,0.9s						
MJAR	Matsushiro Arr	67.25	330	IAmb	IAmb	08 24 45.2	
	comp=Z,3.8nm,1.3s						
QSPA	South Pole Qui	67.94	180	P	P	08 24 20.9	+0.6
RPN	Rapa Nui	69.22	112	LR	LR	08 47 04.2	
	comp=Z,144nm,19.9s,baz=239,slow=29						
KSRS	Korea Array	73.22	324	P	P	08 24 53.1	+0.5
	comp=Z,2.2nm,0.9s,baz=128,slow=6.1,SNR=5.6						
	comp=Z,2.2nm,0.9s						
KSAR	Wonju Array Be	73.23	323	P	P	08 24 53.6	+0.8
USRK	Ussuriysk Ar.	76.21	331	P	P	08 25 10.4	+0.6
	comp=Z,3.9nm,0.8s,baz=193,slow=7.4,SNR=4.1						
	comp=Z,3.9nm,0.8s						
PSI	Prapat	76.91	278	LR	LR	09 01 12.1	
	comp=Z,102nm,19.9s,baz=116,slow=37						
BELA	Belgrano 2	78.85	174	P	P	08 25 23.5	-0.8
BELA				IAmb	IAmb	08 25 26.3	
	comp=Z,11nm,1.5s						
CMAR	Chiang Mai Arr	83.40	293	P	P	08 25 51.2	+1.8
	comp=Z,1.4nm,0.2s,baz=134,slow=3.9,SNR=18						
	comp=Z,1.4nm,0.2s						
CMAR	Chiang Mai Arr	83.40	293		P	08 25 49.5	+0.1
CHTO	Chiang Mai	83.55	293		P	08 25 50.2	-0.1
K13K	Kusilvak Mount	85.56	10	P	P	08 26 01.1	+1.7
SNAA	Sanae	86.42	181	LR	LR	09 03 54.2	
	comp=Z,110nm,18.4s,baz=130,slow=35						
PFO	Pinyon Flats O	86.61	52	LR	LR	08 56 40.2	
	comp=Z,82nm,19.8s,baz=296,slow=30						
LPIG	La Paz	87.04	63	LR	LR	08 57 44.3	
	comp=Z,71nm,18.2s,baz=262,slow=31						
NVAR	Mina Array Bea	87.71	47	P	P	08 26 12.0	+1.2
	comp=Z,0.9nm,0.9s,baz=235,slow=5.0,SNR=4.6						
NVAR				LR	LR	09 03 47.3	
	comp=Z,43nm,18.3s,baz=320,slow=34						
	comp=Z,0.9nm,0.9s						
ELK	Elko	90.91	46	P	P	08 26 26.2	+0.4
	comp=Z,1.8nm,1.0s,baz=253,slow=2.8,SNR=7.4						
	comp=Z,1.8nm,1.0s						
H03S2	Juan Fernandez	91.38	127	T	T	10 07 49.0	
	baz=242						
H03S1	Juan Fernandez	91.39	127	T	T	10 07 50.1	
	baz=242						
H03S3	Juan Fernandez	91.40	127	T	T	10 07 48.1	
	baz=242						
ILAR	Eielson Array	91.82	16	P	P	08 26 27.8	-1.3
	comp=Z,1.5nm,1.0s,baz=239,slow=5.4,SNR=6.6						
	comp=Z,1.5nm,1.0s						
SONM	Songino Array	91.99	322	P	P	08 26 30.4	-0.1
	comp=Z,0.8nm,0.8s,baz=110,slow=3.5,SNR=3.9						
	comp=Z,0.8nm,0.8s						
SONM	Songino Array	91.99	322	IAmb	IAmb	08 26 32.0	
	comp=Z,1.8nm,1.2s						
PLCA	Paso Flores	93.66	137	P	P	08 26 39.0	+0.6
	comp=Z,1.0nm,0.8s,baz=274,slow=14,SNR=2.9						
PLCA				LR	LR	08 59 21.1	
	comp=Z,46nm,20.5s,baz=256,slow=30						
	comp=Z,1.0nm,0.8s						
PLCA	Paso Flores	93.66	137	IAmb	IAmb	08 26 54.3	
	comp=Z,3.7nm,1.3s						
TXAR	Lajitas Array	94.59	60	P	P	08 26 43.4	+0.5
	comp=Z,0.3nm,0.9s,baz=252,slow=2.0,SNR=2.9						
	comp=Z,0.3nm,0.9s						
PALK	Pallekele	95.37	276	LR	LR	09 12 13.8	
	comp=Z,66nm,18.8s,baz=122,slow=37						
PDAR	Pinedale Array	95.62	46	LR	LR	09 07 03.8	
	comp=Z,54nm,18.5s,baz=290,slow=34						
CMIG	Matias Romero	97.63	75	LR	LR	09 01 21.5	
	comp=Z,53nm,21.2s,baz=253,slow=30						
YKA	Yellowknife Ar	101.37	27	P	Pdif	08 27 12.4	-0.1
	comp=Z,0.2nm,0.8s,baz=253,slow=4.8,SNR=3.1						
MKAR	Makanchi Array	106.66	314	Pdiff	Pdif	08 27 36.8	+0.3
	comp=Z,0.3nm,0.7s,baz=117,slow=5.5,SNR=3.9						
ARCES	ARCESS Array B	128.86	346	PKP	PKPdf	08 32 28.1	-0.5
	comp=Z,6.8nm,1.2s,baz=42,slow=2.5,SNR=4.7						
FINES	FINESS Array B	134.77	339	PKP	PKPdf	08 32 40.2	+0.3
	comp=Z,1.2nm,0.8s,baz=26,slow=3.5,SNR=2.1						
NB2	NORSAR Subarra	139.22	347	PKP	PKPdf	08 32 48.5	+0.2
	comp=Z,0.2nm,0.6s,baz=30,slow=2.3						
NOA	NORSAR Array B	139.22	347	PKP	PKPdf	08 32 48.1	-0.1
	comp=Z,0.7nm,0.8s,baz=29,slow=2.0,SNR=4.8						
PLOR	Plostina	144.20	319	⇓P	PKPab	08 32 55.3	-0.1
COVR	Voineasa-Covas	144.47	320	⇑P	PKPab	08 32 54.7	-1.7
DOPR	Dopca	144.89	320	⇑P	PKPab	08 32 58.5	+0.6
ARR	Arges	145.66	320	⇑P	PKPdf	08 32 59.8	-0.4
TNR	Turnu Rosu	145.72	321	⇑P	PKPdf	08 33 01.1	+0.8
BSEG	Bad Segeberg	145.80	342	*e*PKPbc	PKPdf	08 33 00.6	+0.5
	baz=29,slow=2.5						
MARR	Marisel-Cluj	145.81	323	⇓P	PKPdf	08 33 01.1	+0.6
DRGR		145.97	323	⇑P	PKPdf	08 33 01.2	+0.5
STEB	Steborice	146.35	331	*e*PKP	PKPdf	08 33 02.1	+0.9
OSTC	Ostas	146.55	334	*e*PKP	PKPdf	08 33 03.2	+1.7
DPC	Dobruska-Polom	146.66	333	*e*PKP	PKPdf	08 33 02.6	+0.9
UPC	Upice	146.67	334	*e*PKP	PKPbc	08 33 03.6	+0.3
MAUC	Maruska	146.74	331	*e*PKP	PKPdf	08 33 02.6	+0.7
EKA	Eskdalemuir Ar	146.75	357	PKPbc	PKPdf	08 33 02.6	+1.0
	comp=Z,2.6nm,0.7s,baz=7.9,slow=2.1,SNR=7.3						
PSZ	Piszkesteto	146.75	327	⇓P	PKPbc	08 33 03.9	+0.2
SIRR	Siria	146.86	323	⇓P	PKPdf	08 33 03.4	+1.2
FLTG	Flechtingen	146.93	340	*e*PKPbc	PKPdf	08 33 03.5	+1.5
	baz=29,slow=2.5						
JAVC	Velka Javorina	147.18	330	*e*PKP	PKPbc	08 33 05.7	+0.8
CLL	Collm	147.19	337	*e*PKPbc	PKPdf	08 33 04.6	+2.1
	baz=29,slow=2.5						
CLL	Collm	147.19	337	*i* PKPbc	PKPdf	08 33 04.6	+2.1
	comp=Z,14nm,1.1s						
BRG	Berggiesshubel	147.20	336	*e*PKPbc	PKPbc	08 33 04.8	0.0
	baz=29,slow=2.5						
ASSE	Asse, Remlinge	147.28	340	*e*PKPbc	PKPdf	08 33 04.6	+2.0
	baz=29,slow=2.5						
CLZ	Clausthal	147.62	340	*e*PKPbc	PKPdf	08 33 05.6	+2.3
	baz=29,slow=2.5						
PRU	Pruhonice	147.67	334	*e*PKP	PKPbc	08 33 06.1	0.0
NEUB	Neuenburg	147.70	338	*e*PKPbc	PKPbc	08 33 05.8	-0.3
	baz=29,slow=2.5						
IBBN	Ibbenburen	147.95	344	*e*PKPbc	PKPdf	08 33 06.2	+2.5
	baz=29,slow=2.5						
GTTG	Gottingen	148.00	341	*e*PKPbc	PKPdf	08 33 06.4	+2.5
	baz=29,slow=2.5						
TANN	Tannenbergstha	148.12	337	*e*PKPbc	PKPbc	08 33 07.1	-0.3
	baz=29,slow=2.5						
MOX	Moxa	148.23	338	*e*PKPbc	PKPbc	08 33 07.0	-0.6
	baz=29,slow=2.5						
ZVC	Zvikov	148.25	334	*e*PKP	PKPbc	08 33 07.5	-0.2
MORH	Mrgy, Hungar	148.52	326	⇑P	PKPbc	08 33 08.0	-0.4
MANZ	Manzenberg	148.61	337	*e*PKPbc	PKPbc	08 33 08.6	0.0
	baz=29,slow=2.5						
RONA	Rosalia, Austr	148.65	330	*i* PKP	PKPbc	08 33 08.5	-0.3
	comp=Z,12nm,1.0s,SNR=4.5						
CONA	Conrad Observa	148.68	331	*e*PKP	PKPbc	08 33 08.5	-0.5
	comp=Z,0.6nm,0.5s						
CONA				*e*SKKP	SKKPdf	08 45 30.4	-4.5
	comp=Z,0.4nm,0.5s						
CKRC	Cesky Krumlov	148.68	333	*e*PKP	PKPbc	08 33 08.3	-0.6
KHC	Kasperske Hory	148.74	334	*e*PKP	PKPdf	08 33 07.9	+2.7
ROTZ	Rotzenmuhle	148.75	336	*e*PKPbc	PKPbc	08 33 09.1	+0.2
	baz=29,slow=2.5						
KASTN	Kahler Asten	148.76	342	*e*PKPbc	PKPdf	08 33 08.1	+2.9
	baz=29,slow=2.5						
GEC2	GERESS Array S	148.91	334	*e*PKPbc	PKPbc	08 33 09.2	-0.3
	baz=29,slow=2.5						
GERES	GERESS Array B	148.91	334	PKPbc	PKPbc	08 33 08.7	-0.9
	comp=Z,6.2nm,0.8s,baz=38,slow=6.8,SNR=9.5						
WET	Wettzell	149.00	335	*e*PKPbc	PKPbc	08 33 09.6	-0.1
	baz=29,slow=2.5						
ARSA	Arzberg	149.33	330	*e*SKKP	SKKPdf	08 45 29.5	-4.0
	comp=Z,2.3nm,0.8s						
MOA	Molln	149.45	332	*e*PKP	PKPbc	08 33 09.9	-1.0
	comp=Z,3.1nm,0.9s						
TNS	Taunus Mts	149.62	341	*e*PKPbc	PKPbc	08 33 10.7	-0.5
	baz=29,slow=2.5						
BIOA	Bad Ischl, Aus	149.84	333	*e*PKP	PKPbc	08 33 10.8	-1.0
	comp=Z,1.1nm,0.6s						
SOKA	Soboth	149.98	330	*i* PKP	PKPbc	08 33 11.4	-0.8
	comp=Z,5.1nm,0.9s,SNR=6.7						
SOKA				*e*SKKP	SKKPdf	08 45 28.9	-3.5
	comp=Z,5.2nm,1.5s						
SOKA	Soboth	149.98	330	*e*P	PKPbc	08 33 11.4	-0.8
	comp=Z,5.1nm,0.9s,SNR=6.7						
OBKA	Obir	150.33	330	*e*PKP	PKPbc	08 33 12.2	-0.9
	comp=Z,2.9nm,0.8s						
OBKA				*e*SKKP	SKKPdf	08 45 28.9	-2.8
	comp=Z,6.9nm,1.3s						
LESA	Schwarzleotal	150.45	333	*i* PKP	PKPbc	08 33 12.6	-0.8
	comp=Z,12nm,1.1s						
LESA				*e*SKKP	SKKPdf	08 45 29.3	-2.1
	comp=Z,2.8nm,0.8s						
STU	Stuttgart	150.65	339	*e*PKPbc	PKPbc	08 33 13.2	-0.5
	baz=29,slow=2.5						
MYKA	Terra Mystica	150.65	331	*i* PKP	PKPbc	08 33 12.7	-1.2
	comp=Z,5.9nm,0.9s,SNR=4.2						
WLF	Walferdange	150.78	343	*e*PKPbc	PKPbc	08 33 13.8	-0.2
	baz=29,slow=2.5						
WATA	Walderalm	150.98	334	*i* PKP	PKPbc	08 33 13.6	-1.1
	comp=Z,5.5nm,0.8s,SNR=6.8						
WATA	Walderalm	150.98	334	*e*P	PKPbc	08 33 13.6	-1.1
	comp=Z,5.5nm,0.8s,SNR=6.8						
WTTA	Wattenberg	151.01	334	*i* PKP	PKPbc	08 33 13.8	-1.0
	comp=Z,7.2nm,0.7s,SNR=11						
WTTA	Wattenberg	151.01	334	*e*P	PKPbc	08 33 13.8	-1.0
	comp=Z,7.2nm,0.7s,SNR=11						
ABTA	Abfaltersbach	151.06	333	*i* PKP	PKPbc	08 33 13.6	-1.2
	comp=Z,6.3nm,0.7s,SNR=6.7						
RETA	Reutte	151.17	335	*i* PKP	PKPbc	08 33 14.4	-0.6
	comp=Z,3.6nm,0.8s,SNR=4.1						
SQTA	Sankt Quirin	151.22	335	*i* PKP	PKPbc	08 33 14.3	-0.9
	comp=Z,6.5nm,0.9s,SNR=6.3						
UBR	Ueberruh	151.26	336	*e*PKPbc	PKPbc	08 33 14.7	-0.5
	baz=29,slow=2.5						
BFO	Black Forest	151.32	339	*e*PKPbc	PKPbc	08 33 14.8	-0.5
	baz=29,slow=2.5						
FETA	Feichten	151.57	335	*i* PKP	PKPbc	08 33 15.4	-0.7
	comp=Z,7.5nm,0.9s,SNR=6.4						
FETA				*e*SKKP	SKKPdf	08 45 26.6	-2.8
	comp=Z,4.2nm,1.1s						
ESDC	Sonseca Array	162.38	354	PKPab	PKPab	08 34 10.5	-0.5
	comp=Z,1.5nm,1.0s,baz=347,slow=4.9,SNR=6.0						
TORD	Torodi Ar. Bea	168.21	222	PKP	PKPdf	08 33 28.9	-0.3
	comp=Z,0.8nm,1.0s,baz=98,slow=0.2,SNR=2.9						
TORD				PKPab	PKPab	08 34 36.1	-1.1
	comp=Z,0.7nm,0.7s,baz=106,slow=5.3,SNR=4.8						

IDC ***25*** *08:17:46.3±1.9, 22°.15S×173°.46E, h0^{km}, mb3.8/4, mbtmp3.8/5, ML3.1/1, Error ellipse: s-maj=75.5km s-min=35.2km az=153.0*

ISC 25 08:17:53.0±1.6**, 22°.2S**±0°.4×**173°.3E**±0°.2**, h40**^{km}**, n8,** σ**0**^{s}**.84**/8**, mb3.6**/4**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.34	270	Pn	Pn	08 19 24.0	0.0
	0.4nm,0.3s,baz=118,slow=20,SNR=1.8						
	4.4nm,0.6s						
STKA	Stephens Creek	29.75	244	P	P	08 23 55.8	0.0
	1.4nm,0.8s,baz=51,slow=6.5,SNR=2.6						
	1.4nm,0.8s						
ASAR	Alice Springs	36.22	260	P	P	08 24 52.2	-0.2
	0.7nm,0.9s,baz=78,slow=9.1,SNR=9.5						
	0.7nm,0.9s						
WRA	Warramunga Arr	36.34	266	P	P	08 24 52.9	-0.6
	0.4nm,0.6s,baz=102,slow=8.2,SNR=2.0						

	0.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**83.14**	**293**	P	**P**	**08 30 16.4**	**+1.1**
	0.9nm,0.3s,baz=132,slow=3.7,SNR=8.0						
	0.9nm,0.3s						
EKA	**Eskdalemuir Ar**	**146.77**	**356**	PKPbc	**PKPdf**	**08 37 28.7**	**+0.1**
	2.1nm,1.0s,baz=33,slow=2.0,SNR=2.0						
GERES	**GERESS Array B**	**148.81**	**334**	PKPbc	**PKPbc**	**08 37 35.0**	**-1.3**
	1.3nm,0.8s,baz=35,slow=4.9,SNR=6.6						
TORD	**Torodi Ar. Bea**	**167.98**	**223**	PKPab	**PKPab**	**08 39 03.7**	**+0.4**
	0.2nm,0.5s,baz=117,slow=5.0,SNR=2.0						

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*UCR **25** 08:22:33.0±0.7, 11°.03N×86°.42W, h1km±15km, MW3.5*
*CATAC **25** 08:22:34.0±0.6, 11°N±3°×8°6W±°, h19km±3km, M3.1/19, MLv3.1/19, Error ellipse: s-maj=7.7km s-min=4.1km az=47.6, confirmed*
ISC 25 08:22:33.2±2.0, 11°.03N±0°.07×86°.43W±0°.09, h8km±11km, n38, σ0s.46/45, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCRUZ	**La Cruz**	**0.78**	**87**	*e*P	**Pb**	**08 22 49.2**	**+0.2**
LCRUZ				*e*S	**Sn**	**08 23 01.9**	**-0.5**
ELI1	**Hacienda Flor**	**0.94**	**114**	S	**Sn**	**08 23 07.2**	**+0.9**
NANN	**Nandasmo**	**0.95**	**18**	P	**Pn**	**08 22 53.3**	**+0.5**
SABN	**Sabanita**	**0.95**	**16**	P	**Pg**	**08 22 51.7**	**+0.1**
LAPC	**Finca la Perla**	**1.01**	**105**	*e*P	**Pg**	**08 22 52.2**	**-0.4**
MAS3	**Al N del Volca**	**1.01**	**14**	P	**Pg**	**08 22 53.1**	**+0.4**
VRLE	**La Escondida,**	**1.07**	**103**	*e*P	**Pg**	**08 22 53.7**	**0.0**
UNAN	**Cigeo UNAN**	**1.08**	**8**	P	**Pb**	**08 22 54.2**	**0.0**
UNAN				S	**Sn**	**08 23 10.5**	**+0.7**
TISN	**Laguna Tiscapa**	**1.11**	**8**	P	**Pb**	**08 22 54.7**	**0.0**
MGAN	**Managua**	**1.12**	**9**	P	**Pb**	**08 22 54.9**	**+0.1**
MGAN	**Managua**	**1.12**	**9**	S	**Sn**	**08 23 10.8**	**0.0**
MGAN	**Managua**	**1.12**	**9**	*e*P	**Pb**	**08 22 54.6**	**-0.2**
COPN	**Copaltepe**	**1.15**	**352**	P	**Pb**	**08 22 55.0**	**-0.3**
COPN	**Copaltepe**	**1.15**	**352**	*e*P	**Pb**	**08 22 54.8**	**-0.5**
APQ2	**Apoyeque**	**1.16**	**5**	P	**Pb**	**08 22 55.1**	**-0.4**
APQ2				S	**Sb**	**08 23 10.9**	**+0.2**
AMTN	**Mateare**	**1.20**	**360**	S	**Sn**	**08 23 13.2**	**+0.6**
APYN	**Apoyeque**	**1.20**	**4**	P	**Pn**	**08 22 55.9**	**-0.3**
CLARA	**Aguas Claras**	**1.25**	**101**	*e*P	**Pn**	**08 22 56.6**	**-0.4**
CUI	**Cuipilapa**	**1.29**	**107**	*e*P	**Pn**	**08 22 56.9**	**-0.7**
VMAR	**Armenia, Volca**	**1.31**	**100**	*e*P	**Pn**	**08 22 57.6**	**-0.1**
MOMN	**Momotombo**	**1.37**	**355**	P	**Pn**	**08 22 58.2**	**-0.4**
UPAL	**Upala**	**1.39**	**95**	P	**Pn**	**08 22 58.6**	**-0.3**
UPAL	**Upala**	**1.39**	**95**	S	**Sg**	**08 23 18.3**	**+0.3**
MOM2	**El Cardon**	**1.40**	**358**	P	**Pn**	**08 22 58.8**	**-0.1**
MOM2				S	**Sb**	**08 23 18.1**	**+0.6**
CNGA	**Al SSO del Vol**	**1.48**	**349**	P	**Pn**	**08 22 59.9**	**-0.2**
CNGA				S	**Sn**	**08 23 19.6**	**-0.1**
CNGN	**Cerro Negro**	**1.48**	**350**	P	**Pn**	**08 22 59.9**	**-0.4**
CNGN	**Cerro Negro**	**1.48**	**350**	S	**Sn**	**08 23 19.6**	**-0.2**
CNGN	**Cerro Negro**	**1.48**	**350**	*e*P	**Pn**	**08 22 59.8**	**-0.4**
BOAB	**BOACO BROADBAN**	**1.59**	**28**	P	**Pn**	**08 23 01.1**	**-0.6**
JTS	**Las Juntas de**	**1.62**	**117**	P	**Pn**	**08 23 02.8**	**+0.7**
JTS	**Las Juntas de**	**1.62**	**117**	*e*P	**Pb**	**08 23 03.1**	**-0.3**
POLN	**Al Sur del Vol**	**1.65**	**347**	P	**Pn**	**08 23 03.0**	**+0.6**
POLN				S	**Sn**	**08 23 24.0**	**+0.1**
ARE1	**Arenal 1**	**1.77**	**109**	*e*P	**Pb**	**08 23 05.2**	**-0.7**
VARE2	**V. Arenal**	**1.77**	**109**	*e*P	**Pb**	**08 23 05.7**	**-0.2**
CEDE	**Laguna Cedeo**	**1.78**	**108**	*e*P	**Pn**	**08 23 04.7**	**+0.5**
MATN	**Matagalpa**	**1.95**	**14**	P	**Pn**	**08 23 05.5**	**-1.2**
MATN	**Matagalpa**	**1.95**	**14**	S	**Sn**	**08 23 30.9**	**-0.4**
LIMN	**Finca el Limon**	**2.02**	**2**	P	**Pn**	**08 23 07.5**	**-0.1**
LIMN				S	**Sn**	**08 23 32.8**	**-0.3**

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*IDC **25** 08:22:35.5±1.4, 22°.28S×173°.61E, h0km, mb3.9/5, mbtmp3.8/6, ML2.8/1, Error ellipse: s-maj=80.8km s-min=26.2km az=163.0*
ISC 25 08:22:41.6±1.2, 22°.2S±0°.5×173°.5E±0°.2, h40km, n31, σ0s.58/31, mb3.9/5, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.54**	**270**	Pn	**Pn**	**08 24 15.0**	**-0.4**
	0.2nm,0.3s,baz=135,slow=9.5,SNR=1.2						
	2.6nm,0.6s						
ASAR	**Alice Springs**	**36.41**	**260**	P	**P**	**08 29 42.5**	**-0.1**
	0.7nm,0.9s,baz=71,slow=9.2,SNR=6.1						
	0.7nm,0.9s						
WRA	**Warramunga Arr**	**36.54**	**266**	P	**P**	**08 29 43.4**	**-0.3**
	0.8nm,0.9s,baz=98,slow=7.9,SNR=2.4						
	0.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**83.34**	**293**	P	**P**	**08 35 06.2**	**+1.2**
	0.7nm,0.3s,baz=118,slow=4.5,SNR=7.1						
	0.7nm,0.3s						
ELK	**Elko**	**91.05**	**46**	P	**P**	**08 35 42.5**	**+0.4**
	1.2nm,1.0s,baz=254,slow=5.9,SNR=4.8						
	1.2nm,1.0s						
TXAR	**Lajitas Array**	**94.73**	**60**	P	**P**	**08 35 58.4**	**-0.9**
	0.5nm,1.0s,baz=277,slow=4.1,SNR=2.7						
	0.5nm,1.0s						
STEB	**Steborice**	**146.39**	**331**	*e*PKP	**PKPbc**	**08 42 18.5**	**+0.4**
OSTC	**Ostas**	**146.59**	**333**	*e*PKP	**PKPab**	**08 42 19.4**	**-0.4**
MAUC	**Maruska**	**146.77**	**331**	*e*PKP	**PKPdf**	**08 42 17.6**	**+0.1**
EKA	**Eskdalemuir Ar**	**146.84**	**357**	PKPbc	**PKPdf**	**08 42 18.2**	**+0.8**
	1.2nm,0.8s,baz=341,slow=1.5,SNR=2.0						
JAVC	**Velka Javorina**	**147.21**	**330**	*e*PKP	**PKPab**	**08 42 21.8**	**-0.5**
CLL	**Collm**	**147.24**	**337**	*i* PKPbc	**PKPbc**	**08 42 20.4**	**0.0**
	comp=Z,5.0nm,0.8s						
VRAC	**Vranov**	**147.37**	**332**	*e*PKP	**PKPbc**	**08 42 21.1**	**+0.2**
KRUC	**Moravsky**	**147.64**	**331**	*e*PKP	**PKPbc**	**08 42 21.7**	**+0.1**
PRU	**Pruhonice**	**147.72**	**334**	*e*PKP	**PKPbc**	**08 42 22.1**	**+0.3**
ZVC	**Zvikov**	**148.29**	**334**	*e*PKP	**PKPbc**	**08 42 23.7**	**+0.3**
RONA	**Rosalia, Austr**	**148.68**	**330**	*e*P	**PKPbc**	**08 42 24.7**	**+0.3**
	comp=Z,3.7nm,0.6s						
CONA	**Conrad Observa**	**148.71**	**330**	*e*P	**PKPbc**	**08 42 24.4**	**-0.2**
	comp=Z,3.2nm,0.8s						
CKRC	**Cesky Krumlov**	**148.72**	**333**	*e*PKP	**PKPbc**	**08 42 24.9**	**+0.4**
KHC	**Kasperske Hory**	**148.78**	**334**	*e*PKP	**PKPbc**	**08 42 25.1**	**+0.4**
GERES	**GERESS Array B**	**148.95**	**334**	PKPbc	**PKPbc**	**08 42 25.0**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=54,slow=3.4,SNR=8.8						
ARSA	**Arzberg**	**149.37**	**330**	*e*P	**PKPab**	**08 42 30.0**	**-0.9**
	comp=Z,2.5nm,1.0s						
SOKA	**Soboth**	**150.01**	**330**	*e*P	**PKPbc**	**08 42 26.3**	**-1.6**
	comp=Z,5.9nm,1.2s						
OBKA	**Obir**	**150.36**	**330**	*e*P	**PKPbc**	**08 42 28.7**	**0.0**
	comp=Z,4.8nm,1.4s						
KBA	**Koelnbreinsper**	**150.48**	**332**	*e*P	**PKPbc**	**08 42 28.7**	**-0.4**
	comp=Z,11nm,0.6s						
LESA	**Schwarzleotal**	**150.49**	**333**	*e*P	**PKPbc**	**08 42 28.5**	**-0.5**
	comp=Z,6.2nm,1.1s						
WATA	**Walderalm**	**151.02**	**334**	*e*P	**PKPbc**	**08 42 29.8**	**-0.5**
	comp=Z,4.9nm,1.0s						
WTTA	**Wattenberg**	**151.05**	**334**	*e*P	**PKPbc**	**08 42 30.0**	**-0.4**
	comp=Z,8.2nm,1.1s						
SQTA	**Sankt Quirin**	**151.26**	**334**	*e*P	**PKPbc**	**08 42 30.8**	**0.0**
	comp=Z,9.0nm,1.1s						
FETA	**Feichten**	**151.61**	**335**	*e*P	**PKPbc**	**08 42 31.2**	**-0.6**
	comp=Z,4.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**168.07**	**222**	PKPab	**PKPab**	**08 43 52.6**	**+0.3**
	comp=Z,0.7nm,0.9s,baz=130,slow=5.0,SNR=3.3						

IDC 25 08:25:34.9±6.5, 22°.69S×173°.83E, h0km, mb4.0/2, mbtmp4.0/2, Error ellipse: s-maj=313.3km s-min=49.7km az=153.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**36.63**	**260**	P	P	08 32 42.8	-0.5
	0.4nm,0.9s,baz=82,slow=8.2,SNR=7.3						
	0.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**83.81**	**293**	P	P	08 38 07.6	+1.0
	1.6nm,0.3s,baz=113,slow=4.8,SNR=1.3						
	1.6nm,0.3s						
EKA	**Eskdalemuir Ar**	**147.32**	**357**	PKPbc	PKPdf	08 45 18.5	+0.8
	1.8nm,0.8s,baz=16,slow=1.8,SNR=2.7						
GERES	**GERESS Array B**	**149.50**	**334**	PKPbc	PKPbc	08 45 25.9	-0.3
	0.9nm,0.7s,baz=26,slow=3.4,SNR=6.0						

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*IDC **25** 08:26:28.5±1.7, 22°.12S×173°.52E, h0km, mb4.0/6, mbtmp4.0/7, ML3.0/1, MS3.8/9, Error ellipse: s-maj=75.2km s-min=26.9km az=156.0*
*NEIC **25** 08:26:32.0±1.3, 21°.7S±0°.2×173°.4E±0°.1, h10km±1km, mb4.4/9, Error ellipse: s-maj=30.1km s-min=16.0km az=325.0*
ISC 25 08:26:34.9±1.3, 21°.9S±0°.3×173°.4E±0°.2, h40km, n38, σ0s.78/30, mb4.2/9, MS3.9/6, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.99**	**274**	Pn	**Pn**	**08 27 46.5**	**-0.8**
PINNC	**Pines Island,**	**5.54**	**261**	Pn	**Pn**	**08 27 55.4**	**+0.6**
DZM	**Mont Dzumac**	**6.43**	**267**	Pn	**Pn**	**08 28 06.8**	**-0.5**
	0.3nm,0.3s,baz=75,slow=22,SNR=0.8						
DZM				LR	LR	08 29 31.7	
	comp=Z,362nm,18.2s,baz=106,slow=28						
	3.6nm,0.7s						
RAO	**Raoul Island**	**10.74**	**135**	LR	LR	08 32 19.1	
	comp=Z,1µm,18.8s,baz=328,slow=33						
URZ	**Urewera**	**16.63**	**170**	LR	LR	08 35 15.2	
	comp=Z,431nm,20.7s,baz=350,slow=32						
RAR	**Rarotonga**	**24.98**	**93**	LR	LR	08 39 33.3	
	comp=Z,170nm,21.9s,baz=284,slow=32						
PMG	**Port Moresby**	**28.07**	**292**	LR	LR	08 42 48.6	
	comp=Z,233nm,18.7s,baz=149,slow=35						
WR0	**Warramunga Arr**	**36.26**	**266**	P	**P**	**08 33 35.3**	**+0.7**
WR8	**Warramunga Arr**	**36.30**	**266**	P	**P**	**08 33 34.0**	**-1.0**
WR8				IAmb	IAmb	08 33 44.0	
	comp=Z,10nm,1.3s						
AS31	**Alice Springs**	**36.36**	**259**		**P**	**08 33 35.3**	**-0.2**
AS31				IAmb	IAmb	08 33 36.8	
	comp=Z,1.6nm,1.1s						
ASAR	**Alice Springs**	**36.36**	**259**	P	**P**	**08 33 35.1**	**-0.3**
	comp=Z,2.9nm,1.0s,baz=82,slow=8.8,SNR=12						
	comp=Z,2.9nm,1.0s						
ASAR	**Alice Springs**	**36.36**	**259**		**P**	**08 33 34.5**	**-1.0**
WRA	**Warramunga Arr**	**36.45**	**266**	P	**P**	**08 33 35.8**	**-0.5**
	comp=Z,1.8nm,0.8s,baz=100,slow=8.8,SNR=6.5						
	comp=Z,1.8nm,0.8s						
WRA	**Warramunga Arr**	**36.45**	**266**	IAmb	IAmb	08 33 41.8	
	comp=Z,0.6nm,1.1s						
JAY	**Jayapura**	**37.13**	**297**	LR	LR	08 48 45.3	
	comp=Z,239nm,19.8s,baz=352,slow=36						
FITZ	**Fitzroy Crossi**	**44.88**	**266**	P	**P**	**08 34 46.5**	**+0.7**
FITZ				IAmb	IAmb	08 34 48.1	
	comp=Z,6.7nm,1.1s						
PSA00	**Pilbara Seismi**	**49.51**	**260**	P	**P**	**08 35 22.5**	**+0.6**
KSRS	**Korea Array**	**72.90**	**324**	LR	LR	09 05 54.1	
	comp=Z,28nm,19.7s,baz=115,slow=32						
CMAR	**Chiang Mai Arr**	**83.11**	**293**	P	**P**	**08 38 58.6**	**+1.6**
	comp=Z,0.8nm,0.3s,baz=110,slow=5.6,SNR=7.2						
	comp=Z,0.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**83.11**	**293**	P	**P**	**08 38 57.7**	**+0.7**
CHTO	**Chiang Mai**	**83.26**	**293**	P	**P**	**08 38 59.1**	**+1.3**
ELK	**Elko**	**90.90**	**46**	P	**P**	**08 39 34.5**	**-0.3**
	comp=Z,0.9nm,1.0s,baz=222,slow=2.4,SNR=3.8						
	comp=Z,0.9nm,1.0s						
BRDH	**Bariadhala**	**91.07**	**294**	LR	LR	09 22 51.1	
	comp=Z,46nm,19.0s,baz=38,slow=37						
ILAR	**Eielson Array**	**91.65**	**16**	P	**P**	**08 39 38.3**	**+0.9**
	comp=Z,0.4nm,0.9s,baz=203,slow=5.5,SNR=4.2						
ILAR				LR	LR	09 23 28.1	
	comp=Z,70nm,18.4s,baz=176,slow=37						
	comp=Z,0.4nm,0.9s						
SONM	**Songino Array**	**91.67**	**322**	P	**P**	**08 39 38.1**	**0.0**
	comp=Z,0.2nm,0.4s,baz=130,slow=5.8,SNR=3.5						
	comp=Z,0.2nm,0.4s						
SONM	**Songino Array**	**91.67**	**322**	IAmb	IAmb	08 39 38.6	
	comp=Z,3.2nm,1.5s						
CLL	**Collm**	**146.89**	**337**	*e*PKPdf	**PKPbc**	**08 46 12.0**	**-0.8**
CLL				*i* PKPbc	**PKPab**	**08 46 13.3**	**-0.9**
	comp=Z,7.0nm,1.1s						
RONA	**Rosalia, Austr**	**148.34**	**330**	*i* PKP	**PKPbc**	**08 46 16.7**	**-0.2**
	comp=Z,4.2nm,1.5s						
CONA	**Conrad Observa**	**148.37**	**331**	*e*PKP	**PKPbc**	**08 46 17.1**	**0.0**
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	**148.60**	**334**	PKPbc	**PKPbc**	**08 46 17.3**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=20,slow=4.3,SNR=6.9						
ARSA	**Arzberg**	**149.02**	**330**	*e*PKP	**PKPbc**	**08 46 18.0**	**-0.7**
	comp=Z,0.8nm,0.6s						
SOKA	**Soboth**	**149.67**	**330**	*e*PKP	**PKPbc**	**08 46 19.5**	**-0.9**
	comp=Z,4.6nm,1.1s						
LESA	**Schwarzleotal**	**150.15**	**333**	*e*PKP	**PKPbc**	**08 46 20.6**	**-1.0**
	comp=Z,6.0nm,1.3s						
WATA	**Walderalm**	**150.67**	**334**	*e*PKP	**PKPbc**	**08 46 21.9**	**-0.9**
	comp=Z,6.5nm,1.1s						
WTTA	**Wattenberg**	**150.70**	**334**	*e*PKP	**PKPbc**	**08 46 22.3**	**-0.6**
	comp=Z,3.4nm,0.8s						
ABTA	**Abfaltersbach**	**150.75**	**333**	*e*PKP	**PKPbc**	**08 46 22.5**	**-0.5**
	comp=Z,7.0nm,1.2s						
SQTA	**Sankt Quirin**	**150.91**	**335**	*e*PKP	**PKPbc**	**08 46 22.8**	**-0.6**
	comp=Z,5.9nm,1.3s						
TORD	**Torodi Ar. Bea**	**168.24**	**224**	PKPab	**PKPab**	**08 47 45.6**	**-0.8**
	comp=Z,0.6nm,1.0s,baz=115,slow=4.3,SNR=2.3						

GCG 25 08:36:20.0±0.7, 13°.77N×91°.15W, h0km±22km, MD3.8, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NUBE	**Las Nubes**	**1.34**	**84**	*i* P	Pg	08 36 45.6	-0.1
NUBE				*i* S	Sn	08 37 05.0	+0.3
JAYA	**Jayaque - finc**	**1.66**	**94**	*i* P	Pn	08 36 49.8	-0.8
JAYA				*i* S	Sg	08 37 13.9	+0.6
MTO3	**Montecristo**	**1.85**	**70**	*i* P	Pn	08 36 53.8	+0.6

IDC 25 08:41:25.7±4.0, 22°.39S×173°.63E, h0km, mb3.8/3, mbtmp3.8/4, ML2.8/1, MS3.6/4, Error ellipse: s-maj=172.8km s-min=46.0km az=158.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.66**	**271**	Pn	Pn	08 43 05.7	+0.8
	0.2nm,0.3s,baz=160,slow=15,SNR=1.5						
DZM				LR	LR	08 45 21.7	
	comp=Z,198nm,20.7s,baz=15,slow=35						
	12nm,1.2s						
RAO	**Raoul Island**	**10.23**	**134**	LR	LR	08 47 04.3	
	comp=Z,233nm,19.8s,baz=64,slow=33						
ASAR	**Alice Springs**	**36.50**	**260**	P	P	08 48 33.0	0.0
	1.3nm,0.9s,baz=84,slow=8.8,SNR=11						
	1.3nm,0.9s						
WRA	**Warramunga Arr**	**36.65**	**266**	P	P	08 48 33.2	-1.1
	0.7nm,0.9s,baz=98,slow=9.0,SNR=2.3						
	0.7nm,0.9s						
CMAR	**Chiang Mai Arr**	**83.52**	**293**	P	P	08 53 56.6	+0.6
	0.7nm,0.3s,baz=136,slow=4.5,SNR=6.7						
	0.7nm,0.3s						
KDAK	**Kodiak Island**	**84.70**	**17**	LR	LR	09 31 46.8	
	comp=Z,70nm,18.2s,baz=113,slow=36						
INK	**Inuvik**	**98.26**	**17**	LR	LR	09 34 19.0	
	comp=Z,49nm,20.0s,baz=330,slow=32						
GERES	**GERESS Array B**	**149.15**	**334**	PKPbc	PKPbc	09 01 15.3	-0.8
	1.3nm,0.9s,baz=29,slow=2.4,SNR=4.8						

IDC 25 08:44:44.6±4.8, 18°.36N×121°.22E, h0km, mb3.4/4, mbtmp3.4/4, MS3.7/2, Error ellipse: s-maj=474.6km s-min=23.5km az=62.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**40.19**	**161**	P	P	08 52 22.4	-0.5
	0.3nm,0.5s,baz=341,slow=8.2,SNR=1.7						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**42.68**	**320**	P	P	08 52 43.2	0.0
	0.6nm,0.8s,baz=121,slow=8.9,SNR=4.4						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**43.57**	**163**	P	P	08 52 50.7	+0.1
	0.1nm,0.3s,baz=343,slow=8.2,SNR=9.2						
	0.1nm,0.3s						
KURBB	**Kurchatov Arra**	**46.68**	**324**	P	P	08 53 14.8	-0.2
	0.4nm,0.4s,baz=122,slow=6.7,SNR=1.8						
KURBB				LR	LR	09 14 50.8	
	comp=Z,54nm,19.2s,baz=164,slow=39						
	0.4nm,0.4s						
BVAR	**Borovoye Array**	**52.27**	**324**	LR	LR	09 16 22.6	
	comp=Z,125nm,21.1s,baz=107,slow=36						

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*UPP **25** 08:52:06.9±0.0, 67°.84N×20°.22E, h0km, ML2.5, Confirmed Induced event*
*IDC **25** 08:52:08.0±1.2, 67°.78N×20°.44E, h0km, mbtmp2.7/3, ML1.7/3, Error ellipse: s-maj=18.4km s-min=8.6km az=117.0*
ISC 25 08:52:06.6±0.8, 67°.80N±0°.03×20°.25E±0°.04, h0km, n15, σ1s.51/20, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.16**	**12**	P	**Pg**	**08 52 09.5**	**-0.2**
KUA				S	**Sg**	**08 52 11.1**	**-0.6**
RATU	**Laukkuluspa**	**0.25**	**277**	P	**Pg**	**08 52 11.7**	**+0.3**
RATU				S	**Sg**	**08 52 15.0**	**+0.4**
NIKU	**Nikkaluokta**	**0.47**	**279**	P	**Pg**	**08 52 15.6**	**+0.1**
DUNU	**Dundret**	**0.69**	**170**	P	**Pb**	**08 52 20.7**	**-0.7**
LANU	**Lannavaara**	**0.71**	**68**	P	**Pg**	**08 52 20.1**	**+0.1**
MASU	**Masugnsbyn**	**0.75**	**116**	P	**Pb**	**08 52 21.8**	**-0.7**
SALU	**Saltoluokta**	**0.79**	**239**	P	**Pg**	**08 52 22.1**	**+0.5**
SALU	**Saltoluokta**	**0.79**	**239**	*e*P	**Pg**	**08 52 22.2**	**+0.5**
KIF	**Kilpisjarvi**	**1.23**	**9**	*e*P	**Pg**	**08 52 29.6**	**-0.5**
PAJU	**Pajala**	**1.35**	**124**	P	**Pb**	**08 52 32.5**	**-0.3**
ERTU	**Ertsjaerv**	**1.46**	**148**	P	**Pb**	**08 52 34.5**	**-0.1**
HARU	**Harads**	**1.67**	**170**	P	**Pg**	**08 52 38.1**	**-0.3**
ARCES	**ARCESS Array B**	**2.60**	**45**	Pn	**Pn**	**08 52 51.1**	**+1.4**
	0.2nm,0.3s,baz=227,slow=16,SNR=18						
ARCES				Sn	**Sn**	**08 53 22.9**	**+0.9**
	0.7nm,0.3s,baz=231,slow=24,SNR=15						
	1.2nm,0.5s						
FINES	**FINESS Array B**	**6.85**	**156**	Pn	**Pn**	**08 53 50.1**	**+2.0**
	baz=339,slow=13,SNR=1.4						
FINES				Sn	**Sn**	**08 55 06.5**	**-0.1**
	0.1nm,0.3s,baz=353,slow=22,SNR=1.6						
FINES				Lg	Lg	08 55 39.0	
	0.2nm,0.3s,baz=346,slow=27,SNR=6.5						
	2.0nm,1.1s						
NOA	**NORSAR Array B**	**7.82**	**214**	Pn	**Pn**	**08 54 02.7**	**+1.2**
	baz=24,slow=11,SNR=1.5						
NOA				Sn	**Sn**	**08 55 25.3**	**-5.3**
	baz=25,slow=21,SNR=1.5						
NOA				Lg	Lg	08 56 13.4	
	baz=33,slow=22,SNR=4.7						
	0.2nm,0.6s						

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*IDC **25** 08:52:47.9±1.4, 3°.39N×74°.49W, h0km, mb3.2/1, mbtmp3.4/1, MS3.6/2, Error ellipse: s-maj=85.8km s-min=15.0km az=96.0*
*RSNC **25** 08:52:49.4±0.0, 3°N±1°×7°4W±°, h4km±3km, M3.8, ML3.8*
ISC 25 08:52:47.6±1.2, 3°.43N±0°.02×74°.22W±0°.03, h2km±10km, n26, σ1s.77/52, Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URMC	**La Uribe, Meta**	**0.23**	**221**	P	**Pg**	**08 52 53.6**	**+1.4**
URMC				S	**Sg**	**08 52 57.1**	**+1.9**
PRAC	**Prado**	**0.72**	**294**	P	**Pg**	**08 53 02.2**	**+0.7**
PRAC				S	**Sg**	**08 53 12.3**	**+1.5**
VILC	**Villavicencio,**	**0.86**	**38**	P	**Pg**	**08 53 04.1**	**-0.1**
VILC				S	**Sg**	**08 53 15.8**	**+0.4**
CVER	**Cruz Verde, Cu**	**1.10**	**8**	P	**Pg**	**08 53 08.1**	**-0.7**
CVER				S	**Sb**	**08 53 24.0**	**-0.7**
ORTC	**Ortega, Tolima**	**1.13**	**295**	P	**Pg**	**08 53 09.4**	**+0.1**
ORTC				S	**Sb**	**08 53 25.0**	**-0.1**
CHIC	**Chingaza**	**1.29**	**22**	P	**Pg**	**08 53 11.3**	**-1.2**
CHIC				S	**Sg**	**08 53 27.9**	**-1.4**
MACC	**Macarena, Meta**	**1.32**	**164**	P	**Pn**	**08 53 12.3**	**-0.9**
MACC				S	**Sb**	**08 53 29.9**	**-0.9**
ROSC	**El Rosal**	**1.41**	**356**	Pg	**Pg**	**08 53 14.9**	**+0.2**
	288nm,0.3s,baz=152,slow=17,SNR=574						
ROSC				Lg	Lg	08 53 34.6	
	314nm,0.3s,baz=18,slow=20,SNR=11						
BETC	**Betania**	**1.42**	**239**	P	**Pn**	**08 53 14.8**	**+0.2**
BETC				S	**Sn**	**08 53 33.9**	**-0.1**
ANIL	**Santa Ana**	**1.58**	**312**	P	**Pn**	**08 53 17.3**	**+0.3**
ANIL				S	**Sg**	**08 53 39.2**	**+0.6**
GARC	**Garzon, Huila**	**1.77**	**226**	P	**Pb**	**08 53 20.8**	**-0.1**
GARC				P	**Pg**	**08 53 20.9**	**-0.6**
GARC				P	**Pg**	**08 53 20.9**	**-0.6**
GARC				S	**Sb**	**08 53 44.5**	**+0.8**
YOTC	**Yotoco, Valle**	**2.19**	**285**	P	**Pb**	**08 53 26.8**	**-1.3**
YOTC				P	**Pn**	**08 53 26.9**	**+1.7**
YOTC				P	**Pn**	**08 53 26.9**	**+1.7**
YOTC				S	**Sg**	**08 53 57.9**	**-0.1**
SPBC	**San Pablo de B**	**2.22**	**4**	P	**Pb**	**08 53 28.4**	**-0.2**
SPBC				P	**Pg**	**08 53 29.4**	**-0.8**
SPBC				S	**Sg**	**08 54 01.8**	**+2.8**
PLMC	**San Jos del P**	**2.53**	**306**	P	**Pb**	**08 53 32.0**	**-1.7**
PLMC				P	**Pb**	**08 53 32.1**	**-1.7**
PLMC				P	**Pg**	**08 53 32.2**	**-3.9**
RUSC	**La Rusia**	**2.70**	**25**	P	**Pb**	**08 53 34.9**	**-2.1**
RUSC				P	**Pn**	**08 53 35.2**	**+2.7**
RUSC				P	**Pn**	**08 53 35.3**	**+2.7**
RUSC				S	Sn	08 53 38.0	-28
RUSC				S	Sb	08 53 39.3	-32
CBOC	**Ciudad Bolivar**	**3.01**	**324**	P	**Pb**	**08 53 40.7**	**-1.4**
CBOC				P	**Pb**	**08 53 40.7**	**-1.4**
CBOC				P	**Pb**	**08 53 40.8**	**-1.4**
CBOC				S	**Sg**	**08 54 22.9**	**-1.5**
PTBC	**PUERTO BERRIO,**	**3.10**	**356**	P	**Pn**	**08 53 39.0**	**+1.3**
PTBC				P	**Pn**	**08 53 40.3**	**+2.6**
PTBC				S	**Sb**	**08 54 22.0**	**0.0**
BARC	**Barichara**	**3.31**	**18**	P	**Pn**	**08 53 43.2**	**+2.4**
BBAC	**Balboa, Cauca**	**3.33**	**245**	P	**Pn**	**08 53 43.9**	**+3.0**
BBAC				P	**Pb**	**08 53 45.1**	**-2.4**
BBAC				P	Pg	08 53 45.2	-6.2
BBAC				S	Sn	08 53 49.8	-31
PAMC	**Pamplona, Colo**	**4.17**	**21**	P	**Pn**	**08 53 55.4**	**+2.5**
PAMC				P	Pb	08 53 55.7	-6.5
PAMC				S	Sn	08 54 03.0	-40
UREC	**San Jos de Ur**	**4.49**	**343**	P	**Pn**	**08 53 59.5**	**+2.7**
UREC				P	**Pn**	**08 53 59.7**	**+2.9**
OCAC	**Ocana**	**4.87**	**11**	P	**Pn**	**08 54 06.4**	**+4.3**
OCAC				P	Pb	08 54 06.7	-7.1
OCAC				P	Pg	08 54 06.8	-14
OCAC				S	Sn	08 54 11.3	-48
LPAZ	**La Paz**	**20.49**	**163**	P	Pn	08 57 28.7	-1.1
	0.8nm,0.7s,baz=350,slow=12,SNR=2.9						
LPAZ				Lg	Lg	09 03 33.9	
	baz=216,slow=18,SNR=4.0						
LPAZ				LR	LR	09 06 38.0	
	comp=Z,92nm,18.3s,baz=254,slow=40						
	0.8nm,0.7s						
ULM	**Lac du Bonnet**	**50.12**	**342**	LR	LR	09 25 33.4	
	comp=Z,106nm,18.5s,baz=292,slow=39						
ASAR	**Alice Springs**	**146.19**	**231**	PKPbc	**PKPdf**	**09 12 29.6**	**0.0**
	1.1nm,0.6s,baz=122,slow=3.9,SNR=13						
WRA	**Warramunga Arr**	**147.66**	**237**	PKPbc	**PKPbc**	**09 12 33.9**	**-1.0**
	0.7nm,0.7s,baz=113,slow=3.0,SNR=3.0						

IDC 25 08:54:16.1±2.5, 22°.27S×173°.61E, h0km, mb4.1/3, mbtmp4.1/3, MS3.5/3, Error ellipse: s-maj=91.5km s-min=51.6km az=155.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**16.22**	**170**	LR	LR	09 03 32.9	
	comp=Z,70nm,19.8s,baz=354,slow=34						
CTA	**Charters Tower**	**25.59**	**270**	LR	LR	09 08 59.7	
	comp=Z,178nm,19.0s,baz=61,slow=34						
ASAR	**Alice Springs**	**36.50**	**260**	P	P	09 01 23.4	0.0
	1.9nm,1.0s,baz=86,slow=8.3,SNR=13						
	1.9nm,1.0s						
WRA	**Warramunga Arr**	**36.64**	**266**	P	P	09 01 23.6	-1.1
	1.5nm,0.9s,baz=104,slow=7.9,SNR=2.9						
	1.5nm,0.9s						
GUMO	**Guam**	**45.43**	**319**	LR	LR	09 19 58.4	
	comp=Z,64nm,18.8s,baz=127,slow=34						
CMAR	**Chiang Mai Arr**	**83.46**	**293**	P	P	09 06 47.5	+1.4
	1.6nm,0.3s,baz=119,slow=5.1,SNR=1.6						
	1.6nm,0.3s						
GERES	**GERESS Array B**	**149.04**	**334**	PKPbc	PKPbc	09 14 05.0	-1.2
	1.4nm,0.9s,baz=20,slow=3.3,SNR=5.8						
TORD	**Torodi Ar. Bea**	**168.10**	**222**	PKPab	PKPab	09 15 33.0	-0.2
	0.5nm,0.8s,baz=112,slow=3.5,SNR=2.2						

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*DNK **25** 08:56:10.1±1.2, 51°.48N×16°.28E, h0km±54km, ML1.8, Presumed earthquake*
*PRU **25** 08:56:13.5, 51°.38N×16°.23E, h0km*
*IDC **25** 08:56:13.3±1.4, 51°.46N×15°.84E, h0km, mbtmp2.8/3, ML1.5/3, Error ellipse: s-maj=37.5km s-min=10.3km az=109.0*
*VIE **25** 08:56:13.6±0.5, 51°.31N×16°.43E, h0km, mb2.7/2, ml2.4/4, Error ellipse: s-maj=4.1km s-min=2.2km az=139.0 47 km WNW of Wroclaw Suspected Mining induced.*
ISC 25 08:56:10.4±0.8, 51°.50N±0°.03×16°.32E±0°.03, h0km, n28, σ1s.02/53, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.66**	**181**	*e*Pg	**Pg**	**08 56 23.3**	**+0.4**
KSP				*e*Sg	**Sg**	**08 56 31.0**	**-0.4**
CHVC	**Chvalec**	**0.93**	**190**	*e*PG	**Pg**	**08 56 28.4**	**+0.3**

CHVC				eSG	Sg	08 56 39.4	-0.7
OSTC	Ostas	0.95	184	ePG	Pg	08 56 28.9	+0.4
OSTC				eSG	Sg	08 56 41.1	+0.4
	comp=Z,14nm,0.4s						
UPC	Upice	1.01	191	ePG	Pg	08 56 29.8	+0.1
UPC				eSG	Sg	08 56 42.6	-0.2
	comp=Z,43nm,0.4s						
DPC	Dobruska-Polom	1.15	180	ePG	Pg	08 56 32.4	0.0
DPC				eSG	Sg	08 56 46.8	-0.5
	comp=Z,15nm,0.6s						
KRLC	Kraliky	1.46	168	ePG	Pn	08 56 38.0	0.0
KRLC				eSG	Sg	08 56 55.2	-1.9
	comp=Z,9.7nm,0.4s						
PVCC	Panska Ves	1.47	229	ePG	Pg	08 56 38.6	0.0
PVCC				eSG	Sg	08 56 57.3	-0.3
	comp=Z,59nm,0.4s						
STEB	Steborice	1.82	149	ePG	Pb	08 56 44.7	+0.2
STEB				eSG	Sb	08 57 08.1	+0.3
	comp=Z,14nm,0.3s						
PRU	Pruhonice	1.89	217	ePG	Pb	08 56 45.3	-0.4
PRU				eSG	Sb	08 57 09.3	-0.5
MORC	Moravsky Berou	1.89	155	ePN	Pn	08 56 43.1	-0.9
MORC				eSG	Sn	08 57 07.8	-0.7
HSKC	Hora Svate Kat	2.03	245	ePG	Pn	08 56 46.7	+0.9
HSKC				eSG	Sb	08 57 13.5	-0.4
	comp=Z,15nm,0.3s						
CLL	Collm	2.09	266	i Pn	Pb	08 56 49.5	+0.4
CLL				i Pg	Pg	08 56 51.1	+0.8
CLL				i x	x	08 56 53.3	
CLL				i Sg	Sg	08 57 17.4	+0.1
	comp=Z,8.0nm,0.4s						
VRAC	Vranov	2.20	175	ePN	Pn	08 56 48.4	+0.2
VRAC				eSG	Sb	08 57 18.6	-0.2
KRUC	Moravsky	2.44	179	ePN	Pn	08 56 52.5	+1.0
KRUC				eSG	Sb	08 57 26.4	+0.7
ZVC	Zvikov	2.47	214	eSG	Sb	08 57 27.9	+1.3
OJC	Ojcow	2.55	119	ePg	Pg	08 56 59.8	+0.6
OJC				eSg	Sg	08 57 33.7	+1.5
KHC	Kasperske Hory	2.95	218	ePN	Pn	08 56 58.0	-0.5
KHC				ePG	Pb	08 57 04.8	+1.0
KHC				eSN	Sn	08 57 32.0	-2.6
KHC				eSG	Sb	08 57 42.3	+1.9
	comp=Z,5.4nm,0.5s						
CKRC	Cesky Krumlov	2.98	206	ePG	Pb	08 57 05.4	+1.1
CKRC				eSG	Sb	08 57 42.9	+1.7
GERES	GERESS Array B	3.15	213	Pn	Pn	08 57 02.2	+1.0
	baz=29,slow=14,SNR=1.3						
GERES				Pg	Pb	08 57 07.0	-0.2
	comp=Z,0.1nm,0.3s,baz=23,slow=18,SNR=14						
GERES				Lg	Lg	08 57 46.0	
	comp=Z,0.2nm,0.3s,baz=31,slow=29,SNR=12						
	comp=Z,0.2nm,0.4s						
MODS	Modra-Piesok	3.19	168	eSG	Sg	08 57 51.9	-0.9
CONA	Conrad Observa	3.59	185	i Pn	Pn	08 57 08.5	+1.2
	comp=Z,0.1nm,0.2s						
CONA				eSg	Sg	08 58 04.7	-0.9
	comp=Z,0.6nm,0.2s						
BSD	Bornholm Skovb	3.72	347	i P	Pn	08 57 09.4	+0.4
BSD				i S	Sn	08 57 51.5	-1.9
BSD				IAML		08 57 55.7	
	comp=Z,0.7nm,0.4s						
MOA	Molln	3.89	201	i Pn	Pn	08 57 12.3	+0.9
	comp=Z,0.4nm,0.3s						
MOA				i Sn	Sn	08 57 58.4	+0.6
	comp=Z,0.4nm,0.2s						
ARSA	Arzberg	4.28	187	eSg	Sg	08 58 24.9	-3.1
	comp=Z,0.7nm,0.6s						
LUNU	Lund	4.48	339	i P	Pn	08 57 19.6	+0.1
DEL	Delary	5.19	345	i P	Pn	08 57 29.0	-0.1
DEL				i S	Sn	08 58 27.9	-1.7
DEL				IAML		08 58 30.7	
	comp=Z,0.5nm,0.3s						
NOA	NORSAR Array B	9.97	346	Pn	Pn	08 58 34.5	-0.3
	baz=156,slow=12,SNR=1.3						
	comp=Z,0.3nm,0.8s						
FINES	FINESS Array B	11.32	25	Pn	Pn	08 58 53.5	+0.4
	baz=213,slow=13,SNR=3.3						
	comp=Z,1.0nm,0.8s						

JMA 25 08:57:12.8±0.1**,41˚.5N**±0˚.3×**141˚.2E**±0˚.4**,h16**km±1km**,**
MV0.5/10**,TSUGARU STRAIT REGION,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOT	Ohata	0.15	227	P	Pg	08 57 16.6	-0.1
JOT				eS	Sg	08 57 19.2	-0.1
JAHD	Aomorihigashid	0.24	153	eP	Pg	08 57 18.1	-0.1
JAHD				eS	Sg	08 57 21.9	0.0
JKB	Kayabe	0.42	344	eS	Sg	08 57 27.1	0.0

MOS ***25*** *08:58:02.5±1.2,31˚.60N×139˚.81E,h131km,mb4.8/52, Error ellipse: s-maj=8.2km s-min=3.9km az=111.2*

NIED ***25*** *08:58:03.8,31˚.64N×140˚.14E,h137km,MW4.8,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}1.08; $M_{\theta\theta}$-0.52; $M_{\phi\phi}$-0.56; $M_{r\theta}$0.46; $M_{\theta\phi}$-0.72; $M_{\phi r}$-1.41; Fault plane solution: $M_0$1.83000×10^{16} NP1:ϕ_s65.00000°, δ33.00000°,λ145.00000°. NP2:ϕ_s186.00000°,δ72.00000°, λ62.00000°.*

BJI ***25*** *08:58:03.0,31˚.60N×140˚.00E,h133km,mB4.8/16, mb4.6/59*

IDC ***25*** *08:58:03.6±0.6,31˚.57N×139˚.79E,h129km±4km,mb4.4/28, mbtmp4.8/31,MS3.6/13,Error ellipse: s-maj=11.0km s-min=7.3km az=84.0*

NEIC ***25*** *08:58:03.1±2.4,31˚.49N±0˚.06×139˚.9E±0˚.1,h119km±4km, mb5.0/471,Error ellipse: s-maj=12.6km s-min=7.8km az=76.0*

JMA ***25*** *08:58:03.8±0.2,31˚.6N±0˚.8×14˚0E±˚,h137km±1km, MD4.6/62,MW4.8/62,NEAR TORISHIMA IS*

GCMT ***25*** *08:58:07.1±0.4,31˚.68N±0˚.03×140˚.09E±0˚.03, h146km±4km,MW4.9/77,Moment Tensor Solution. s17,c17; s77,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.12±.14; $M_{\theta\theta}$-2.02±.16; $M_{\phi\phi}$0.89±.17; $M_{r\theta}$0.03±.10; $M_{\theta\phi}$-1.51±.16; $M_{\phi r}$-2.12±.11; Best double couple: $M_0$3.10900×10^{16} NP1:ϕ_s102.00000°,δ49.00000°, λ156.00000°. NP2:ϕ_s208.00000°,δ72.00000°,λ43.00000°. Principal axes: T 3.3500, Plg43.0000°, Azm74.0000°; N -0.4860, Plg44.0000°, Azm226.0000°; P -2.8690, Plg14.0000°, Azm330.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 08:58:03.5±0.4**,31˚.58N**±0˚.03×**139˚.99E**±0˚.04**,h130**km±2km**,**
h129km:pP-P,n949,σ**1^{s}54**/790**,mb5.0**/307**,32C-36D,**
Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	0.90	348	i P	Pn	08 58 26.5	+1.0
JAOM				eS	Sn	08 58 44.0	+1.8
JAOM	Aogashimamukai	0.90	348	A	A	08 58 26.5	
	comp=N,52nm,3.1s,comp=E,69nm,3.3s						
JHCJ	Hachijojimakas	1.50	354	i P	Pn	08 58 32.4	+0.9
JHCJ				S	Sn	08 58 53.0	+0.1
JHCJ	Hachijojimakas	1.50	354	A	A	08 58 32.4	
	comp=N,17nm,1.3s,comp=E,13nm,1.4s						
JHJ2	Mitsune	1.53	354		Pn	08 58 32.9	+1.0
JHJ2	Mitsune	1.53	354	P	Pn	08 58 33.1	+1.2
JHJ2	Mitsune	1.53	354	S	Sn	08 58 54.3	+0.7
JHJ2	Mitsune	1.53	354	i P	Pn	08 58 32.9	+1.0
JHJ2	Mitsune	1.53	354	A	A	08 58 32.9	
	comp=N,13nm,2.4s,comp=E,14nm,1.9s						
JHJ	Hachijo jima 2	1.54	353	P	Pn	08 58 32.9	+0.9
	comp=E,4µm,0.4s,baz=194,slow=10,SNR=447						
JHJ				S	Sn	08 58 53.1	-0.7
	comp=E,2µm,0.3s,baz=79,slow=23,SNR=11						
JMKN	Mikurajimanish	2.33	352	i P	Pn	08 58 42.1	+0.7
JMKN				S	Sn	08 59 11.8	+1.1
JMYK	Miyake Tsubota	2.50	352	i P	Pn	08 58 44.4	+0.8
JMYK				S	Sn	08 59 16.0	+1.5
JMYK	Miyake Tsubota	2.50	352	A	A	08 58 44.4	
	comp=N,7.0nm,4.2s,comp=E,7.0nm,3.0s						
JSKK	Shikinejimakit	2.82	347	P	Pn	08 58 48.9	+1.2
JIM2	Oshima 3	3.16	352	A	A	08 58 52.8	
	comp=N,7.0nm,1.8s,comp=E,6.0nm,2.7s						
BSO1	Boso 1	3.17	15	i P	Pn	08 58 51.1	-0.7
TTO4	TONANKAI O.B.S	3.18	320	A	A	08 58 54.0	
	comp=N,9.0nm,3.2s,comp=E,7.0nm,2.1s						
BSO3	Boso 3	3.24	8	i P	Pn	08 58 52.6	-0.3
TTO1	TONANKAI O.B.S	3.39	308	P	Pn	08 58 57.0	+2.1
BSO4	Boso 4	3.41	5	P	Pn	08 58 55.2	-0.1
JSG	Sagara	3.44	334	Pn	Pn	08 58 58.0	+2.2
JSG	Sagara	3.44	334	P	Pn	08 58 57.8	+2.1
JHMK	Hamakita	3.73	330	P	Pn	08 59 01.1	+1.5
JOD2	Odawara 2	3.75	349	i P	Pn	08 59 00.6	+0.7
JOD2				eS	Sn	08 59 45.0	+1.3
HMMJ	Hamamatsu 2	3.78	330	P	Pn	08 59 01.9	+1.6
HMMJ				S	Sn	08 59 46.4	+2.1
JIE	Ise	3.93	316	P	Pn	08 59 04.0	+1.7
JIE				S	Sn	08 59 49.6	+1.6
JKN2	Miekihoku	4.10	311	P	Pn	08 59 06.2	+1.7
JKN2				S	Sn	08 59 54.5	+2.7
JNY	Yasuok	4.17	335	i P	Pn	08 59 07.1	+1.6
JTNC	Tanabenakahech	4.32	302	P	Pn	08 59 09.3	+1.9
JTNC				S	Sn	08 59 59.5	+2.5
JAO	Obara	4.33	329	P	Pn	08 59 09.6	+2.0
INU	Inuyama	4.51	327	P	Pn	08 59 11.8	+1.9
JGF	Kuroka	4.57	332	Pn	Pn	08 59 11.5	+0.6
JGF	Kuroka	4.57	332	P	Pn	08 59 12.5	+1.7
CBIJ	Chichi jima	4.86	156	P	Pn	08 59 12.6	-2.2
CBIJ				S	Sn	09 00 09.6	-0.5
JCJ	Chichijima	4.86	156	P	Pn	08 59 01.0	-14
	comp=E,701nm,0.5s,baz=338,slow=5.7,SNR=97						
JCJ				S	Sn	08 59 54.0	-16
	comp=E,714nm,0.4s,baz=289,slow=22,SNR=9.2						
JCJ	Chichijima	4.86	156	Pn	Pn	08 59 12.5	-2.2
JCJ	Chichijima	4.86	156	P	Pn	08 59 12.7	-2.0
MJAR	Matsushiro Arr	5.17	344	P	Pn	08 59 18.6	-0.1
	comp=E,13nm,0.3s,baz=159,slow=11,SNR=70						
MJAR				S	Sn	09 00 16.2	-1.2
	comp=E,24nm,0.6s,baz=171,slow=21,SNR=4.2						
MJAR	Matsushiro Arr	5.17	344	Pn	Pn	08 59 19.0	+0.2
MAJO	Matsushiro	5.17	344	Pn	Pn	08 59 19.4	+0.6
MAJO	Matsushiro	5.17	344	P	Pn	08 59 19.8	+1.0
MAJO	Matsushiro	5.17	344	⇑iP	Pn	08 59 19.2	+0.4
MAJO				pmax	pmax		
	comp=Z,53nm,0.3s						
MJB9	Matsu-Tunnel	5.17	344	Pn	Pn	08 59 20.1	+1.3
JMN	Monobe	5.58	294	Pn	Pn	08 59 26.4	+2.0
JMN	Monobe	5.58	294	P	Pn	08 59 26.7	+2.3
JSD	Sado	6.60	348	P	Pn	08 59 36.4	-1.5
JNU	Nakatsue	7.86	284	P	Pn	08 59 58.1	+3.1
	comp=Z,163nm,0.9s,baz=98,slow=6.9,SNR=73						
JNU				LR	LR	09 02 42.5	
	comp=Z,187nm,21.8s,baz=115,slow=36						
JNU	Nakatsue	7.86	284	Pn	Pn	08 59 57.7	+2.6
JNU	Nakatsue	7.86	284	P	Pn	08 59 58.7	+3.6
JTU	Tsushima	9.36	291	P	Pn	09 00 18.0	+2.8
ERM	Erimo	10.72	13	Pn	Pn	09 00 32.0	-1.3
ERM	Erimo	10.72	13	P	Pn	09 00 31.0	-2.3
ERM	Erimo	10.72	13	P	Pn	09 00 32.0	-1.3
JEM	Erimo	10.72	13	P	Pn	09 00 30.7	-2.6
JOW	Kunigami	11.28	248	P	Pn	09 00 42.8	+1.9
TJN	Taejon	11.52	298	d iP	Pn	09 00 46.1	+2.1
KSRS	Korea Array	11.55	304	P	Pn	09 00 47.6	+3.3
	comp=Z,75nm,0.9s,baz=116,slow=14,SNR=196						
KSRS				ScP	ScP	09 09 44.2	-0.5
	comp=Z,1.9nm,0.9s,baz=100,slow=4.1,SNR=5.7						
KSAR	Wonju Array Be	11.57	304	Pn	Pn	09 00 47.3	+2.7
KSAR	Wonju Array Be	11.57	304	P	Pn	09 00 47.3	+2.7
KS19	Wonju Array Si	11.61	304	Pn	Pn	09 00 47.1	+1.9
INCN	Inchon	12.48	302	Pn	Pn	09 00 58.4	+1.8
INCN	Inchon	12.48	302	P	Pn	09 00 58.4	+1.8
NMR	Nemuro--Hokkai	12.61	19	⇓iP	Pn	09 00 53.5	-4.7
ASAJ	Asahikawa	12.68	9	P	Pn	09 00 55.5	-3.6
	comp=Z,21nm,0.3s,baz=210,slow=12,SNR=34						
ASAJ				S	Sn	09 03 05.6	-13
	comp=Z,9.3nm,0.5s,baz=198,slow=29,SNR=1.9						
ASAJ				LR	LR	09 06 30.3	
	comp=Z,100nm,18.6s,baz=182,slow=40						
ASAJ	Asahikawa	12.68	9	P	Pn	09 00 55.8	-3.3
JKA	Kamikawa-asahi	12.68	9	Pn	Pn	09 00 55.8	-3.4
GLVR	Golovnino	12.90	18	eP	Pn	09 01 00.0	-1.9
GLVR				pmax	pmax		
	comp=Z,30nm,0.2s						
RUSJ	Misakicho	13.17	17	⇓iP	Pn	09 01 04.0	-1.4
VLA	Vladivostok	13.19	333	⇓iP	Pn	09 01 06.5	+0.8
VLA				pmax	pmax		
	comp=Z,19nm,0.7s						
PSTR	Posyet	13.25	329	⇓iP	Pn	09 01 06.6	+0.2
YUK	Yuzh-Kuril'sk	13.26	19	eP	Pn	09 01 03.4	-3.2
YUK				pmax	pmax		
	comp=N,13nm,0.3s						
YUK				pmax	pmax		
	comp=Z,86nm,0.3s						
TEY	Ternei	13.69	350	eP	Pn	09 01 09.4	-2.7
USRK	Ussuriysk Ar.	14.08	336	P	Pn	09 01 16.4	-0.8
	comp=Z,23nm,0.8s,baz=151,slow=11,SNR=21						
MDJ	Mudanjiang	15.36	331		Pn	09 01 32.3	-0.8
MDJ	Mudanjiang	15.36	331	P	Pn	09 01 32.5	-0.6
MDJ				pmax	pmax		
	comp=Z,41nm,0.9s						
MDJ	Mudanjiang	15.36	331	P	Pn	09 01 32.7	-0.4
YSS	Yuzhno-Sakhali	15.50	7	Pn	Pn	09 01 33.5	-1.3
YSS	Yuzhno-Sakhali	15.50	7	P	Pn	09 01 33.6	-1.3
YSS	Yuzhno-Sakhali	15.50	7	eP	Pn	09 01 33.4	-1.5
YSS				eS	Sn	09 04 19.7	-7.0
YSS				pmax	pmax		
	comp=Z,110nm,0.6s						
DL2	Dalian	16.67	301	P	P	09 01 51.5	+2.0
DL2				sP	sP	09 02 23.5	-4.0
DL2				S	S	09 04 56.8	+0.5
DL2				pmax	pmax		
	comp=Z,89nm,0.8s						
DL2				pmax	pmax		
	comp=Z,280nm,4.5s						
CN2	Changchun	16.74	321	P	P	09 01 50.5	+0.3
CN2				sP	sP	09 02 25.3	-3.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BNX	BinXian	17.19	329	⇑P	P	09 01 54.3	-0.8
BNX				pmax	pmax		
	comp=Z,55nm,0.9s						
UGL	Uglegorsk	17.55	5	eP	Pn	09 02 01.5	+1.7
UGL				eS	S	09 05 06.7	-8.1
UGL				pmax	pmax		
	comp=Z,140nm,0.8s						
YHNB	Yeheng	17.79	252		P	09 02 01.8	-0.2
YHNB	Yeheng	17.79	252	P	Pn	09 02 03.7	+0.6
NJ2	Nanjing	17.97	277	eP	Pn	09 02 05.3	+0.2
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
GUMO	Guam	18.46	165	P	Pn	09 02 10.8	-0.1
	comp=Z,118nm,0.5s,baz=311,slow=19,SNR=7.7						
YULB	Yu-li	18.47	248		P	09 02 09.9	+0.6
YULB	Yu-li	18.47	248	P	Pn	09 02 10.8	-0.2
SSLB	Suanglung	18.55	250		P	09 02 10.7	+0.5
SSLB	Suanglung	18.55	250	P	Pn	09 02 12.0	0.0
GRNR	Gornyy	19.35	353	d iP	P	09 02 19.7	+1.0
GRNR				pmax	pmax		
	comp=Z,40nm,0.8s						
TYV	Tymovskoe	19.37	5	eP	Pn	09 02 20.5	-0.8
TYV				eS	S	09 05 50.2	-0.6
TYV				pmax	pmax		
	comp=Z,300nm,3.7s						
TYV				pmax	pmax		
	comp=Z,88nm,0.8s						
TYV				smax	smax		
	comp=N,300nm,6.0s						
TYV				smax	smax		
	comp=E,700nm,6.0s						
TIA	Tai'an	19.52	290	P	Pn	09 02 22.8	-0.5
TIA				pmax	pmax		
	comp=E,12nm,0.6s						
HEH	HeiHe	20.88	337	eP	P	09 02 33.5	-1.7
HEH				S	S	09 06 21.3	+0.6
HEH				pmax	pmax		
	comp=E,100nm,0.7s						
HEH				pmax	pmax		
	comp=E,120nm,5.2s						
BJT	Baijiatuau	21.03	300	P	P	09 02 36.6	-0.3
BJI	Beijing	21.03	300	P	P	09 02 35.8	-1.1
BJI				pmax	pmax		
	comp=E,10.0nm,0.8s						
HNS	HongShan	21.60	292	⇓P	P	09 02 44.8	+1.8
HNS				pmax	pmax		
	comp=E,7.0nm,0.7s						
WHN	Wuhan	21.98	274	P	P	09 02 47.0	0.0
XLT	XiLinHaoTe	22.47	310	eP	P	09 02 51.5	-0.4
XLT				SS	SnSn	09 07 39.0	+6.4
XLT				pmax	pmax		
	comp=E,14nm,0.8s						
XLT				pmax	pmax		
	comp=E,130nm,5.4s						
LYN	LuoYang	23.23	285	P	P	09 02 58.5	-0.7
LYN				pP	pwP	09 03 26.8	-0.9
LYN				pmax	pmax		
	comp=E,24nm,1.0s						
HIA	Hailar	23.32	325	P	P	09 02 59.5	-0.4
HIA	Hailar	23.32	325	c iP	P	09 03 00.1	+0.2
HIA				pmax	pmax		
	comp=Z,44nm,1.3s						
HILR	Hailar Array B	23.51	326	P	P	09 03 00.7	-1.0
	comp=Z,26nm,0.5s,baz=131,slow=9.4,SNR=58						
	comp=Z,26nm,0.5s						
ZEA	Zeya	23.97	341	eP	P	09 03 06.3	+0.6
ZEA				pmax	pmax		
	comp=E,20nm,0.9s						
ZEA				pmax	pmax		
	comp=N,80nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,150nm,0.7s						
HHC	Hu-ho-hao-te	24.64	300	eP	P	09 03 12.5	+0.4
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,93nm,5.1s						
PETK	Petropavlovsk-	25.05	26	P	P	09 03 17.4	+1.9
	comp=Z,8.0nm,1.0s,baz=234,slow=5.0,SNR=4.0						
	comp=Z,8.0nm,1.0s						
PET	Petropavlovsk	25.34	27	⇑iP	P	09 03 16.6	-1.5
PET				pmax	pmax		
	comp=Z,50nm,1.1s						
XAN	Xi'an	26.18	284	⇑P	P	09 03 25.3	-0.7
XAN				pP	pP	09 03 53.8	+0.8
XAN				pmax	pmax		
	comp=Z,23nm,1.0s						
H11N2	WAKE ISLAND Hy	26.89	110	T	T	09 33 05.4	
	baz=305						
H11N1	WAKE ISLAND Hy	26.90	110	T	T	09 32 53.9	
	baz=305,slow=74						
H11N3	WAKE ISLAND Hy	26.91	110	T	T	09 33 04.5	
	baz=305,slow=74						
H11S3	WAKE ISLAND Hy	27.39	112	T	T	09 32 28.2	
	baz=304,slow=75,SNR=40						
H11S1	WAKE ISLAND Hy	27.39	112	T	T	09 32 28.6	
	baz=304,slow=75,SNR=37						
H11S2	WAKE ISLAND Hy	27.40	112	T	T	09 32 29.5	
	baz=304,slow=75,SNR=24						
DAV	Davao City (W)	27.86	212	LR	LR	09 15 09.2	
	comp=Z,68nm,19.8s,baz=90,slow=37						
MA2	Magadan	28.92	11	⇓iP	P	09 03 51.0	+1.0
MA2				pmax	pmax		
	comp=Z,12nm,0.9s						
ULN	Ulaanbaatar	29.82	313		P	09 03 58.7	+0.4
ULN				IAmb	IAmb	09 03 59.3	
	comp=Z,19nm,0.6s						
ULN	Ulaanbaatar	29.82	313	P	P	09 03 58.1	-0.2
ULN	Ulaanbaatar	29.82	313	d iP	P	09 03 58.4	+0.1
ULN				pmax	pmax		
	comp=Z,14nm,0.9s						
SONM	Songino Array	30.22	312	P	P	09 04 01.7	-0.1
	comp=Z,12nm,0.7s,baz=109,slow=8.4,SNR=67						
SONM				PcP	PcP	09 06 60.0	+0.5
	comp=Z,0.6nm,0.4s,baz=115,slow=2.0,SNR=2.6						
SONM				ScP	ScP	09 10 28.4	-1.3
	comp=Z,2.8nm,0.9s,baz=129,slow=3.3,SNR=10						
	comp=Z,12nm,0.7s						
SONM	Songino Array	30.22	312		P	09 04 01.8	-0.1
LZDM	Lanzhou Array	30.37	288	P	P	09 04 02.5	-1.0
	comp=Z,3.2nm,0.5s,baz=123,slow=5.5,SNR=5.5						
LZDM				pP	pP	09 04 29.5	-1.5
	comp=Z,5.7nm,0.7s,baz=116,slow=6.8,SNR=2.6						
	comp=Z,3.2nm,0.5s						
CD2	Chengdu	30.90	278	eP	P	09 04 09.0	+1.1
YAK	Yakutsk	31.19	351	eP	P	09 04 09.4	-0.5
YAK				e*PP	pP	09 04 37.2	-0.5
YAK				e		09 05 15.0	
YAK				e		09 06 58.2	
YAK				eS	S	09 09 07.0	+0.8
YAK				e*SS	sS	09 09 55.7	+0.7
YAK				eSS	SnSn	09 11 06.8	+3.2
YAK				pmax	pmax		
	comp=Z,38nm,0.9s						
YAK				pmax	pmax		
	comp=N,15nm,1.5s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.8s						
YAK				pmax	pmax		
	comp=Z,301nm,8.3s						
YAK				pmax	pmax		
	comp=N,290nm,8.1s						
YAK				pmax	pmax		
	comp=E,159nm,6.3s						
YAK				smax	smax		
	comp=E,224nm,4.5s						
YAK				smax	smax		
	comp=N,183nm,3.2s						
BOD	Bodaibo	31.70	333	eP	P	09 04 14.0	-0.5
BOD				pmax	pmax		
	comp=Z,30nm,1.2s						
SEY	Seymchan	32.35	11	⇑iP	P	09 04 22.1	+1.9
SEY				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ZAK	Zakamensk	33.03	315	eP	P	09 04 25.0	-1.4
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
TLY	Talaya	33.30	318		P	09 04 29.2	+0.6
TLY	Talaya	33.30	318	ceP	P	09 04 29.8	+1.2
TLY				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TLY	Talaya	33.30	318	P	P	09 04 28.8	+0.2
GTA	Gaotai	33.41	295	P	P	09 04 29.3	-0.6
GTA				ScP	ScP	09 10 40.3	-0.5
GTA				ScS	ScS	09 14 40.5	-1.6
GTA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
PZH	PanZhiHua	33.70	271	P	P	09 04 34.5	+2.0
JAY	Jayapura	33.91	179	LR	LR	09 16 44.0	
	comp=Z,101nm,20.9s,baz=343,slow=33						
MOY	Mondy	34.83	317	eP	P	09 04 41.7	-0.2
MOY				pmax	pmax		
	comp=Z,12nm,1.3s						
SANI	Sanana	36.00	204	P	P	09 04 51.1	-1.0
SANI	Sanana	36.00	204	P	P	09 04 50.1	-2.0
	comp=Z,46nm,0.6s						
KRAI	Karang Ratu	36.42	200	P	P	09 04 56.3	+0.6
	comp=Z,14nm,0.7s						
KNGR	Kungurtug, Tuv	36.60	314	⇑iP	P	09 04 58.1	+1.0
KNGR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ADK	Adak	37.46	44	P	P	09 05 05.1	+1.0
GOMU	GeErMu	37.53	290	P	P	09 05 04.0	-1.4
GOMU				PcP	PcP	09 07 21.8	+1.0
GOMU				pmax	pmax		
	comp=Z,17nm,0.8s						
CHTO	Chiang Mai	39.04	261		P	09 05 17.3	-0.5
CHTO	Chiang Mai	39.04	261	P	P	09 05 17.1	-0.7
	comp=Z,10.0nm,0.8s						
CHTO	Chiang Mai	39.04	261	P	P	09 05 17.3	-0.5
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CMAR	Chiang Mai Arr	39.20	260	P	P	09 05 19.0	-0.1
	comp=Z,4.7nm,0.8s,baz=48,slow=7.7,SNR=25						
CMAR				ScP	ScP	09 11 03.1	+0.8
	comp=Z,1.5nm,0.3s,baz=59,slow=3.4,SNR=15						
CMAR				LR	LR	09 22 27.9	
	comp=Z,35nm,19.8s,baz=60,slow=38						
	comp=Z,4.7nm,0.8s						
CMAR	Chiang Mai Arr	39.20	260	i P	P	09 05 19.5	+0.4
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BILL	Bilibino	39.58	15		P	09 05 22.6	+1.0
BILL	Bilibino	39.58	15	⇓iP	P	09 05 22.8	+1.2
BILL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TIXI	Tiksi	40.57	355	P	P	09 05 30.2	+0.4
TIXI	Tiksi	40.57	355	⇓iP	P	09 05 29.7	0.0
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NIKH	Nikolski High	42.37	44	P	P	09 05 45.7	+1.1
	baz=260						
WMQ	Urumqi	42.49	302	eP	P	09 05 46.5	+0.6
WMQ				PP	PP	09 07 30.3	+3.5
WMQ				pmax	pmax		
	comp=Z,16nm,1.1s						
SPIA	Saint Paul Isl	42.49	38	P	P	09 05 46.9	+1.3
	baz=254						
P08K	Saint George I	42.72	39	P	P	09 05 48.7	+1.3

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      baz=256
DGZ   Jazzator, Alta   42.84 311d iP    P      09 05 48.6 -0.1
DGZ                              pmax   pmax
      comp=Z,26nm,0.8s
EDFI  Ende, Flores     43.76 207    P      P      09 05 55.2 -1.1
      comp=Z,14nm,0.7s
SOEI  Soe              43.77 203    P      P      09 05 56.1 -0.4
SOEI                                IAmb   IAmb   09 06 13.1
      comp=Z,21nm,0.7s
MISM  Misima Island    43.79 162    P      P      09 05 55.8 -0.6
GAMB  Gambell          44.02  29    P      P      09 05 59.0 +1.3
      baz=246
TATA  Tatamba Isabel   44.03 151    P      P      09 05 58.9 +0.5
ZSN   Zaisan           44.44 307   eP      P      09 06 01.1 -0.4
      comp=Z,12nm,1.0s
ZSN   Zaisan           44.44 307   eP      P      09 06 01.0 -0.4
ZSN                                 pmax   pmax
      comp=Z,12nm,1.0s
ZALV  Zalesovo Beam    44.89 317    P      P      09 06 03.6 -1.2
      comp=Z,2.6nm,0.3s,baz=111,slow=8.4,SNR=9.7
ZALV                                PcP    PcP    09 07 43.9 -0.2
      comp=Z,1.6nm,0.5s,baz=96,slow=4.5,SNR=2.2
ZALV                                ScP    ScP    09 11 22.5 -1.9
      comp=Z,3.8nm,0.8s,baz=108,slow=4.3,SNR=12
ZALV                                LR     LR     09 25 39.2
      comp=Z,99nm,18.2s,baz=61,slow=37
      comp=Z,2.6nm,0.3s
M11K  Mekoryuk         45.36  34    P      P      09 06 09.5 +1.1
      baz=255
COEN  Coen             45.38 176           P      09 06 08.8 -0.2
COEN                                IAmb   IAmb   09 06 41.1
      comp=Z,33nm,1.7s
COEN  Coen             45.38 176    P      P      09 06 09.3 +0.3
PLAI  Plampang         45.46 212    P      P      09 06 09.1 -0.6
FALS  False Pass       45.82  42    P      P      09 06 13.0 +0.9
      baz=263
TNA   Tin City         46.20  27    P      P      09 06 16.5 +1.5
      baz=249
MK31  Makanchi Array   46.21 306  i P      P      09 06 14.5 -0.9
MK31                                pmax   pmax
      comp=Z,14nm,0.5s
MKAR  Makanchi Array   46.21 306    P      P      09 06 14.5 -0.9
      comp=Z,25nm,0.6s,baz=86,slow=9.8,SNR=208
MKAR                                ScP    ScP    09 11 28.3 -1.9
      comp=Z,3.5nm,0.6s,baz=84,slow=5.4,SNR=19
MKAR                                LR     LR     09 24 54.8
      comp=Z,48nm,20.9s,baz=105,slow=35
      comp=Z,25nm,0.6s
MAKZ  Makanchi         46.43 306    P      P      09 06 16.2 -0.8
MAKZ                                IAmb   IAmb   09 06 17.0
      comp=Z,24nm,0.5s
MAKZ  Makanchi         46.43 306    P      P      09 06 16.2 -0.8
MAKZ                                pmax   pmax
      comp=Z,24nm,0.5s
MAKZ  Makanchi         46.43 306    P      P      09 06 16.3 -0.8
K13K  Kusilvak Mount   46.48  32    P      P      09 06 18.7 +1.6
      baz=255
S12K  Black Hills      46.69  41    P      P      09 06 20.3 +1.4
      baz=264
M13K  Dall Lake        46.74  35    P      P      09 06 21.1 +1.9
      baz=258
F14K  Arctic Creek     46.80  27    P      P      09 06 21.8 +2.2
      baz=250,SNR=7.9
ANM   Nome             46.89  29           P      09 06 21.9 +1.6
ANM   Nome             46.89  29    P      P      09 06 22.0 +1.6
ANM                                 pmax   pmax
      comp=Z,22nm,1.2s
ANM   Nome             46.89  29    P      P      09 06 22.3 +1.9
      baz=252
J14K  Nanvaranak Lak   47.18  32    P      P      09 06 24.3 +1.7
      baz=256
L14K  Kuka Creek       47.26  34    IAmb   IAmb   09 06 26.6
      comp=Z,44nm,1.4s
L14K  Kuka Creek       47.26  34    P      P      09 06 25.1 +1.9
      baz=258
N14K  Kuskokwak Cree   47.47  36    P      P      09 06 26.6 +1.7
      baz=260
M14K  Bethel           47.48  34    IAmb   IAmb   09 06 28.6
      comp=Z,32nm,0.8s
M14K  Bethel           47.48  34    P      P      09 06 26.8 +1.9
      baz=259
F15K  North Star Dit   47.53  27    IAmb   IAmb   09 06 28.6
      comp=Z,23nm,0.8s
F15K  North Star Dit   47.53  27    P      P      09 06 27.3 +2.0
      baz=252,SNR=8.5
SDPT  Sand Point       47.55  42    P      P      09 06 25.8 +0.3
G15K  Niukluk          47.57  29    P      P      09 06 27.4 +1.9
      baz=253
O14K  Tigyukauivet M   47.58  37    P      P      09 06 27.4 +1.7
      baz=261
NRIK  Noril'sk         47.79 338    P      P      09 06 27.4 +0.2
      comp=Z,38nm,0.8s,baz=110,slow=9.1,SNR=63
NRIK                                ScP    ScP    09 11 35.2 -1.1
      comp=Z,5.5nm,0.8s,baz=113,slow=4.0,SNR=6.4
NRIK                                LR     LR     09 27 53.1
      comp=Z,143nm,18.1s,baz=112,slow=38
      comp=Z,38nm,0.8s
NRIK  Noril'sk         47.79 338           P      09 06 27.9 +0.7
NRIK  Noril'sk         47.79 338d iP    P      09 06 27.5 +0.3
NRIK                                pmax   pmax
      comp=Z,52nm,1.0s
L15K  Ungalak Mounta   47.89  33    P      P      09 06 29.8 +1.7
      baz=259
K15K  Wolf Creek Mou   47.99  32    IAmb   IAmb   09 06 32.0
      comp=Z,23nm,0.9s
K15K  Wolf Creek Mou   47.99  32    P      P      09 06 30.9 +2.0
      baz=258
CHNA  Chernabura Isl   48.02  43    P      P      09 06 29.3 +0.1
CHNA  Chernabura Isl   48.02  43    P      P      09 06 31.0 +1.8
      baz=267
M15K  Kasigluk River   48.09  35    P      P      09 06 31.3 +1.6
      baz=260
C16K  Lisburne Hills   48.13  24    IAmb   IAmb   09 06 32.3
      comp=Z,31nm,0.8s
C16K  Lisburne Hills   48.13  24    P      P      09 06 31.5 +1.6
      baz=249
S14K  Fog Glacier      48.14  41    P      P      09 06 31.6 +1.4
      baz=265
H16K  Elim             48.21  29    P      P      09 06 32.1 +1.6
      baz=255,SNR=7.4
O15K  Ungalikthiuk R   48.30  37    IAmb   IAmb   09 06 33.5
      comp=Z,25nm,0.7s
O15K  Ungalikthiuk R   48.30  37    P      P      09 06 32.9 +1.6
      baz=262
N15K  Kwethluk River   48.30  35    IAmb   IAmb   09 06 34.0
      comp=Z,36nm,0.9s
N15K  Kwethluk River   48.30  35    P      P      09 06 33.0 +1.7
      baz=261
G16K  Koyuk River      48.36  28    P      P      09 06 33.6 +2.0
      baz=255
PDGK  Podgornoye       48.47 302    P      P      09 06 31.4 -1.6
SHLS  Shalkode         48.51 302   eP      P      09 06 30.0 -3.4
SHLS  Shalkode         48.51 302   eP      P      09 06 29.9 -3.4
KURK  Kurchatov        48.53 312           P      09 06 32.5 -0.7
KURK  Kurchatov        48.53 312d iP    P      09 06 32.0 -1.2
KURK                                pmax   pmax
      comp=Z,40nm,0.8s
KURK  Kurchatov        48.53 312    P      P      09 06 31.9 -1.2
KURBB Kurchatov Arra   48.59 312    P      P      09 06 32.5 -1.1
      comp=Z,28nm,0.6s,baz=91,slow=7.5,SNR=222
KURBB                               LR     LR     09 28 00.7
      comp=Z,88nm,18.5s,baz=170,slow=37
      comp=Z,28nm,0.6s
KURBB Kurchatov Arra   48.59 312    P      P      09 06 31.8 -1.8
J16K  Anvik River      48.61  31    P      P      09 06 35.4 +1.8
      baz=258
I17K  Unalakleet       48.69  30    IAmb   IAmb   09 06 37.2
      comp=Z,24nm,0.9s
I17K  Unalakleet       48.69  30    P      P      09 06 36.1 +1.9
      baz=258,SNR=11
D17K  Noatak River     48.74  25    P      P      09 06 36.5 +1.9
      baz=252,SNR=41
UZB   Uzynbulak        48.83 302   eP      P      09 06 34.9 -1.0
UZB   Uzynbulak        48.83 302   eP      P      09 06 34.8 -1.0
L16K  Owhat River      48.84  33    IAmb   IAmb   09 06 37.9
      comp=Z,48nm,1.4s
L16K  Owhat River      48.84  33    P      P      09 06 37.1 +1.8
      baz=261
RDOG  Red Dog Mine     48.91  25           P      09 06 37.4 +1.5
RDOG                                IAmb   IAmb   09 06 38.8
      comp=Z,27nm,0.9s
RDOG  Red Dog Mine     48.91  25    P      P      09 06 37.8 +1.9
      baz=252,SNR=20
C17K  DeLong Mountai   48.95  24    P      P      09 06 38.1 +1.9
      baz=251,SNR=20
M16K  Timber Creek     48.98  34    IAmb   IAmb   09 06 39.1
      comp=Z,29nm,1.1s
M16K  Timber Creek     48.98  34    P      P      09 06 38.2 +1.8
      baz=262
N16K  Nishlik Lake     48.99  35    P      P      09 06 38.5 +1.9
      baz=262,SNR=8.0
E17K  Hotham Inlet     49.02  26    P      P      09 06 38.7 +2.0
      baz=254,SNR=12
F17K  Baldwin Pennin   49.07  27    IAmb   IAmb   09 06 40.0
      comp=Z,28nm,0.8s
F17K  Baldwin Pennin   49.07  27    P      P      09 06 39.1 +2.0
      baz=255
G17K  Kiwalik Mounta   49.08  28    P      P      09 06 39.0 +1.9
      baz=256,SNR=6.7
P16K  Nushagak River   49.22  37    P      P      09 06 40.2 +1.9
      baz=264
O16K  Kokwok River B   49.23  36    P      P      09 06 40.0 +1.6
      baz=264
H17K  Granite Mounta   49.25  29    IAmb   IAmb   09 06 41.5
      comp=Z,50nm,1.8s
H17K  Granite Mounta   49.25  29    P      P      09 06 40.5 +2.0
      baz=258,SNR=7.2
SATY  Saty             49.29 302   eP      P      09 06 38.6 -0.7
SATY  Saty             49.29 302   eP      P      09 06 38.6 -0.7
J17K  VABM Dome        49.30  31    IAmb   IAmb   09 06 42.0
      comp=Z,31nm,0.8s
J17K  VABM Dome        49.30  31    P      P      09 06 40.9 +2.0
      baz=260,SNR=14
R16K  Pilot Point      49.32  39    P      P      09 06 40.7 +1.7
      baz=266
L17K  Donlin           49.45  33    P      P      09 06 42.2 +2.2
      baz=261
K17K  Iditarod         49.54  32    P      P      09 06 42.9 +2.2
      baz=261
E18K  Tukpahlearik C   49.57  26    IAmb   IAmb   09 06 44.0
      comp=Z,20nm,0.9s
E18K  Tukpahlearik C   49.57  26    P      P      09 06 43.1 +2.2
      baz=255,SNR=18
C18K  Utukok River     49.70  24    IAmb   IAmb   09 06 44.5
      comp=Z,29nm,0.9s
C18K  Utukok River     49.70  24    P      P      09 06 43.5 +1.6
      baz=253,SNR=22
O17K  Koliganek Bris   49.75  36    P      P      09 06 44.1 +1.8
      baz=264
M17K  Holitna River    49.76  34    P      P      09 06 44.6 +2.2
      baz=263,SNR=10
N17K  Nushagak Hills   49.78  35    IAmb   IAmb   09 06 45.3
      comp=Z,18nm,0.6s
N17K  Nushagak Hills   49.78  35    P      P      09 06 44.6 +2.1
      baz=264,SNR=5.7
Q16K  King Salmon      49.88  38    P      P      09 06 45.0 +1.7
      baz=266
TARG  Taragay, Kyrgy   49.94 300           P      09 06 43.6 -1.0
TARG  Taragay, Kyrgy   49.94 300    P      P      09 06 43.6 -1.0
TARG                                pmax   pmax
      comp=Z,9.0nm,0.8s
H18K  Honhosa River    49.94  29    IAmb   IAmb   09 06 45.7
      comp=Z,15nm,0.7s
H18K  Honhosa River    49.94  29    P      P      09 06 45.4 +1.7
      baz=259
G18K  Tagagawik        49.97  28    IAmb   IAmb   09 06 46.5
      comp=Z,24nm,0.8s
G18K  Tagagawik        49.97  28    P      P      09 06 45.5 +1.6
      baz=258
R17L  Mt. Peulik Vol   49.98  39    P      P      09 06 45.3 +1.2
      baz=267
P17K  Kvichak River    50.03  37           P      09 06 44.9 +0.5
P17K  Kvichak River    50.03  37    P      P      09 06 46.0 +1.6
      baz=266
A19K  Wainwright       50.21  22    P      P      09 06 47.8 +2.2
      baz=252
L18K  Granite Mounta   50.21  33    IAmb   IAmb   09 06 49.1
      comp=Z,30nm,1.0s
L18K  Granite Mounta   50.21  33    P      P      09 06 47.7 +1.9
      baz=263,SNR=9.5
Q17K  Contact Creek    50.26  38    P      P      09 06 47.6 +1.3
      baz=267
MDOK  Medeo            50.26 302   eP      P      09 06 46.0 -0.7
MDOK  Medeo            50.26 302   eP      P      09 06 45.9 -0.7
CHIR  Chirikof Islan   50.32  41    P      P      09 06 47.8 +1.1
      baz=269
AAA   Alma-Ata         50.35 302   eP      P      09 06 46.7 -0.5
AAA   Alma-Ata         50.35 302   eP      P      09 06 46.7 -0.5
TNSS  Tian-Shan        50.35 302   eP      P      09 06 46.7 -1.0
TNSS  Tian-Shan        50.35 302   eP      P      09 06 46.6 -1.0
J18K  Innoko River     50.36  31    P      P      09 06 48.1 +1.1
      baz=262
C19K  Lookout Ridge    50.39  24    P      P      09 06 49.1 +2.0
      baz=254
N18K  Kilae Creek      50.43  35    P      P      09 06 49.2 +1.7
      baz=265
GCSA  Galena City Sc   50.49  30    P      P      09 06 48.7 +0.9
      baz=261,SNR=5.1
F19K  Shaleruckik Mo   50.51  27    P      P      09 06 49.2 +1.2
      baz=258
M18K  Stony River      50.54  34    P      P      09 06 50.1 +1.9
      baz=264
G19K  Purcell Mounta   50.65  28    IAmb   IAmb   09 08 07.5
      comp=Z,10nm,0.8s
G19K  Purcell Mounta   50.65  28    P      P      09 06 50.3 +1.3
      baz=259,SNR=8.6
P18K  Big Mountain,    50.67  37    P      P      09 06 50.6 +1.3
      baz=266,SNR=5.1
O18K  Koktuh Hills     50.70  36    IAmb   IAmb   09 06 53.2
      comp=Z,20nm,0.6s
O18K  Koktuh Hills     50.70  36    P      P      09 06 51.0 +1.4
      baz=266
Q18K  Katmai Hardscr   50.74  38    P      P      09 06 50.7 +0.8
      baz=267
D19K  Kuna River       50.75  25    IAmb   IAmb   09 06 52.3
      comp=Z,23nm,1.0s
D19K  Kuna River       50.75  25    P      P      09 06 51.5 +1.7
      baz=256,SNR=14
H19K  Roundabout Mou   50.80  29    IAmb   IAmb   09 06 52.8
      comp=Z,27nm,0.9s
H19K  Roundabout Mou   50.80  29    P      P      09 06 51.7 +1.6
      baz=260
E19K  Redstone River   50.85  26    P      P      09 06 52.4 +1.9
      baz=258,SNR=44
J19K  Poorman          50.92  31    IAmb   IAmb   09 06 53.5
      comp=Z,19nm,0.9s
J19K  Poorman          50.92  31    P      P      09 06 52.5 +1.5
      baz=262,SNR=11
R18K  Karluk           51.00  39    P      P      09 06 53.0 +1.2
      baz=269
L19K  White Mountain   51.06  33    IAmb   IAmb   09 06 55.1
      comp=Z,40nm,1.4s
L19K  White Mountain   51.06  33    P      P      09 06 53.8 +1.6
      baz=265,SNR=8.6
N19K  Bonanza Creek    51.13  35    IAmb   IAmb   09 06 55.1
      comp=Z,13nm,0.8s
N19K  Bonanza Creek    51.13  35    P      P      09 06 54.1 +1.3
      baz=266
SII   Sitkinak Islan   51.13  40    P      P      09 06 53.6 +0.8
      baz=270
O19K  Port Alsworth    51.17  36    P      P      09 06 54.7 +1.7
      baz=267,SNR=5.1
WB0   Warramunga Arr   51.34 187    IAmb   IAmb   09 07 26.6
      comp=Z,11nm,0.7s
D20K  Etivluk River    51.34  25    P      P      09 06 55.9 +1.7
      baz=258
F20K  Avaraart Lake    51.34  27    P      P      09 06 55.8 +1.7
      baz=260
E20K  Nigu River       51.40  25    P      P      09 06 56.2 +1.6
      baz=258
H20K  Anotleneega Mo   51.44  29    P      P      09 06 56.8 +1.8
      baz=262,SNR=12
B20K  Meade River      51.44  23    IAmb   IAmb   09 06 57.5
      comp=Z,30nm,0.8s
B20K  Meade River      51.44  23    P      P      09 06 56.7 +1.9
      baz=256,SNR=10
Q19K  Cape Douglas,    51.46  37    P      P      09 06 56.9 +1.6
      baz=268
WR8   Warramunga Arr   51.51 187           P      09 06 54.6 -1.3
WR8                                 IAmb   IAmb   09 07 27.9
      comp=Z,12nm,0.6s
I20K  Naaghedeneel     51.51  30    P      P      09 06 57.5 +2.0
      baz=263
WRA   Warramunga Arr   51.52 187    P      P      09 06 54.3 -1.7
      comp=Z,5.6nm,0.6s,baz=3.0,slow=7.3,SNR=32
WRA                                 pP     pP     09 07 26.1 +0.6
      comp=Z,7.7nm,0.6s,baz=6.0,slow=7.5,SNR=5.4
WRA                                 PcP    PcP    09 08 09.2 +0.8
      comp=Z,2.8nm,0.5s,baz=2.4,slow=3.9,SNR=2.6
WRA                                 ScP    ScP    09 11 51.9 -1.0
      comp=Z,3.2nm,1.0s,baz=2.5,slow=4.6,SNR=7.9
      comp=Z,5.6nm,0.6s
WRA   Warramunga Arr   51.52 187  i P      P      09 06 54.7 -1.3
WRA                                 pmax   pmax
      comp=Z,6.0nm,0.6s
K20K  Telida           51.53  32    P      P      09 06 57.8 +2.1
      baz=264
J20K  Nowinta River    51.58  31    P      P      09 06 57.9 +1.9
      baz=264
OHAK  Old Harbor       51.63  40    P      P      09 06 56.3 -0.1
OHAK  Old Harbor       51.63  40    P      P      09 06 57.4 +1.0
      baz=270
P19K  Oil Pt           51.69  36    P      P      09 06 58.0 +1.0
      baz=268
KSH   Kashi            51.72 298    P      P      09 07 00.3 +2.7
KSH                                 pmax   pmax
      comp=Z,9.0nm,0.7s
QIS   Mount Isa        51.84 180    P      P      09 06 58.0 -0.4
M20K  Styx River       51.85  34    IAmb   IAmb   09 07 01.1
      comp=Z,14nm,0.8s
M20K  Styx River       51.85  34    P      P      09 06 59.7 +1.6
      baz=266,SNR=5.5
A21K  Barrow           51.94  21    P      P      09 07 00.3 +1.8
      baz=256,SNR=28
RED   Redoubt Volcan   51.95  36    IAmb   IAmb   09 07 00.6
      comp=Z,29nm,0.9s
KDAK  Kodiak Island    52.01  39           P      09 07 00.0 +0.8
KDAK  Kodiak Island    52.01  39c iP    P      09 06 59.9 +0.7
KDAK                                pmax   pmax
      comp=Z,62nm,0.9s
KDAK  Kodiak Island    52.01  39    P      P      09 07 00.0 +0.8
      baz=270
KDAK  Kodiak Island    52.01  39    P      P      09 07 00.1 +0.8
O20K  Slope Mountain   52.01  36    P      P      09 07 00.2 +0.9
      baz=268
C21K  Knifeblade Rid   52.08  24    P      P      09 07 01.4 +1.8
      baz=259
Q20K  Shuyak Island    52.11  38    P      P      09 07 00.8 +0.8
      baz=270
G21K  Allakaket        52.13  28    IAmb   IAmb   09 07 02.7
      comp=Z,20nm,0.8s
G21K  Allakaket        52.13  28    P      P      09 07 01.7 +1.6
      baz=262
AAK   Ala-Archa        52.20 302           P      09 07 00.6 -0.5
AAK   Ala-Archa        52.20 302c iP    P      09 07 00.4 -0.7
AAK                                 pmax   pmax
      comp=Z,4.0nm,0.8s
B21K  Ikpikpuk River   52.22  24    P      P      09 07 02.4 +1.8
      baz=259
F21K  Alatna River     52.24  27    IAmb   IAmb   09 07 03.4
      comp=Z,12nm,0.8s
F21K  Alatna River     52.24  27    P      P      09 07 02.3 +1.4
      baz=262,SNR=7.7
E21K  Killik River     52.24  25    IAmb   IAmb   09 07 03.2
      comp=Z,28nm,0.8s
E21K  Killik River     52.24  25    P      P      09 07 02.4 +1.6
      baz=260
SPCR  Spurr Chakacha   52.26  35    P      P      09 07 02.9 +1.7
      baz=268,SNR=12
H21K  Melozitna Rive   52.31  29    IAmb   IAmb   09 07 04.2
      comp=Z,24nm,0.7s
H21K  Melozitna Rive   52.31  29    P      P      09 07 03.4 +2.0
      baz=264,SNR=26
SPU   Mount Spurr      52.33  35    IAmb   IAmb   09 07 04.1
      comp=Z,25nm,1.0s
PPLA  Purkeypile       52.35  32    IAmb   IAmb   09 07 04.8
      comp=Z,26nm,0.8s
PPLA  Purkeypile       52.35  32    P      P      09 07 03.8 +1.9
      baz=266,SNR=7.1
CHUM  Lake Minchumin   52.36  31    P      P      09 07 03.8 +2.1
      baz=266
A22K  Sinclair Lake    52.38  22    P      P      09 07 03.9 +2.1
      baz=258,SNR=20
STLK  Strandline Lak   52.45  34    IAmb   IAmb   09 07 04.8
      comp=Z,9.8nm,0.7s
I21K  Tanana           52.61  30    IAmb   IAmb   09 07 06.6
      comp=Z,36nm,1.4s
I21K  Tanana           52.61  30    P      P      09 07 05.6 +2.0
      baz=265,SNR=10
SKT   Skwentna         52.61  34    IAmb   IAmb   09 07 05.6
      comp=Z,23nm,0.9s
SKT   Skwentna         52.61  34    P      P      09 07 04.9 +1.2
      baz=268,SNR=10
B22K  Teshekpuk Lake   52.76  23    P      P      09 07 06.2 +1.7
      baz=260
D22K  Ayikyak River    52.77  25    P      P      09 07 06.5 +1.8
      baz=261
H22K  Ishtalitna Cre   52.92  29    IAmb   IAmb   09 07 08.6
      comp=Z,19nm,0.7s
H22K  Ishtalitna Cre   52.92  29    P      P      09 07 08.0 +2.1
      baz=265,SNR=18
BPAW  Bear Paw Mtn.    52.96  31    P      P      09 07 07.7 +1.5
      baz=267,SNR=5.3
BRSE  Bradley Lake S   52.96  36    P      P      09 07 07.3 +1.0
      baz=270
KTH   Kantishna Hill   52.96  32    IAmb   IAmb   09 07 08.9
      comp=Z,47nm,1.6s
SUA   Susitna One      52.97  34    P      P      09 07 07.2 +0.7
      baz=269,SNR=12
E22K  Anaktuvuk Pass   52.99  26    P      P      09 07 08.1 +1.7
      baz=263,SNR=33
CUT   Chulitna         53.21  33    P      P      09 07 08.7 +0.7
      baz=269
TRF   Thorofare Moun   53.24  32    IAmb   IAmb   09 07 12.1
      comp=Z,12nm,0.8s
TRF   Thorofare Moun   53.24  32    P      P      09 07 09.7 +1.3
      baz=268,SNR=6.0
M22K  Willow           53.27  34    P      P      09 07 09.5 +1.0
      baz=269,SNR=6.4
RC01  Rabbit Creek A   53.45  35    IAmb   IAmb   09 07 11.4
      comp=Z,32nm,1.0s
RC01  Rabbit Creek A   53.45  35    P      P      09 07 10.6 +0.8
      baz=270,SNR=6.1
O22K  Cooper Landing   53.46  35    P      P      09 07 10.8 +1.0
      baz=270
BVA0  Borovoye Array   53.49 315  i P      P      09 07 08.6 -1.6
BVAR  Borovoye Array   53.49 315    P      P      09 07 09.3 -0.9
      comp=Z,12nm,0.7s,baz=94,slow=8.9,SNR=37
      comp=Z,12nm,0.7s
D23K  Nanushuk River   53.50  25    IAmb   IAmb   09 07 13.2
      comp=Z,25nm,0.9s
D23K  Nanushuk River   53.50  25    P      P      09 07 11.9 +1.8
      baz=263
COLD  Coldfoot         53.51  27    P      P      09 07 11.7 +1.6
      baz=265,SNR=5.9
BORK  Borovoye         53.53 315d iP    P      09 07 09.5 -1.0
BORK                                pmax   pmax
      comp=Z,14nm,0.9s
BORK  Borovoye         53.53 315    P      P      09 07 09.4 -1.0
G23K  Bananza Creek    53.53  28    IAmb   IAmb   09 07 13.2
      comp=Z,22nm,0.8s
G23K  Bananza Creek    53.53  28    P      P      09 07 12.1 +1.7
      baz=266
SANVU Saraoutou        53.56 147    P      P      09 07 12.0 +0.9
SEW   Seward           53.60  36    P      P      09 07 11.5 +0.6
      baz=271
C23K  Itkillik River   53.63  24    P      P      09 07 12.8 +1.9
      baz=263,SNR=24
I23K  Minto, Yukon-K   53.71  30    IAmb   IAmb   09 08 18.7
      comp=Z,17nm,1.2s
I23K  Minto, Yukon-K   53.71  30    P      P      09 07 13.5 +1.8
      baz=267,SNR=6.6
PMR   Palmer           53.74  34    IAmb   IAmb   09 07 13.5
      comp=Z,28nm,0.8s
PMR   Palmer           53.74  34    P      P      09 07 12.6 +0.7
PMR   Palmer           53.74  34    P      P      09 07 12.7 +0.8
      baz=270,SNR=10
E23K  Chandalar        53.80  26    P      P      09 07 14.1 +1.7
      baz=265,SNR=35
NEA2  Nenana           53.81  30    P      P      09 07 13.9 +1.5
      baz=268,SNR=18
MCK   McKinley         53.85  31    IAmb   IAmb   09 07 16.0
      comp=Z,30nm,1.0s
MCK   McKinley         53.85  31    P      P      09 07 13.7 +1.0
      baz=269,SNR=16
TOLK  Toolik Lake Re   53.87  25    IAmb   IAmb   09 07 16.0
      comp=Z,23nm,0.8s
TOLK  Toolik Lake Re   53.87  25    P      P      09 07 14.5 +1.6
      baz=265,SNR=18
WAT1  Susitna Watana   54.01  33    P      P      09 07 14.6 +0.7
      baz=270
KNK   Knik Glacier     54.07  34    P      P      09 07 15.3 +1.0
      baz=271,SNR=14
SML   Sawmill          54.12  34    P      P      09 07 15.7 +0.9
      baz=271,SNR=14
PWL   Port Wells       54.14  35    P      P      09 07 15.7 +0.8
      baz=271,SNR=5.6
D24K  Happy Valley     54.19  25    P      P      09 07 16.8 +1.8
      baz=265,SNR=79
E24K  Your Creek       54.23  26    IAmb   IAmb   09 07 19.1
      comp=Z,20nm,0.9s
E24K  Your Creek       54.23  26    P      P      09 07 17.3 +1.9
      baz=266,SNR=21
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WRH	Wood River Hil	54.23	31	IAmb	IAmb	09 07 18.5	
	comp=Z,13nm,0.6s						
C24K	Franklin Bluff	54.28	24	P	P	09 07 17.3	+1.6
	baz=265,SNR=26						
COLA	College	54.34	30	P	P	09 07 17.6	+1.3
COLA				IAmb	IAmb	09 07 19.2	
	comp=Z,26nm,0.8s						
COLA	College	54.34	30	P	P	09 07 17.9	+1.7
COLA	College	54.34	30	⇓iP	P	09 07 17.5	+1.3
COLA				pmax	pmax		
	comp=Z,14nm,0.8s						
COLA	College	54.34	30	P	P	09 07 17.9	+1.7
	baz=269						
COLA	College	54.34	30	P	P	09 07 17.3	+1.1
H24K	Noodor Dome	54.35	29	IAmb	IAmb	09 07 19.3	
	comp=Z,16nm,0.9s						
H24K	Noodor Dome	54.35	29	P	P	09 07 18.2	+1.8
	baz=268,SNR=15						
CCB	Clear Creek Bu	54.36	30	IAmb	IAmb	09 07 19.4	
	comp=Z,9.9nm,0.8s						
WAT6	Susitna Watana	54.39	33	P	P	09 07 17.7	+0.9
	baz=271,SNR=9.6						
M23K	Glacier View	54.41	34	P	P	09 07 17.8	+1.0
	baz=271,SNR=6.7						
F24K	Squaw Lake	54.42	27	P	P	09 07 18.6	+1.8
	baz=267						
DZA	Taraz	54.43	303	eP	P	09 07 16.8	-0.6
DZA	Taraz	54.43	303	eP	P	09 07 16.7	-0.6
POKR	Poker Plat Res	54.52	30	P	P	09 07 19.1	+1.6
	baz=269,SNR=12						
G24K	Hadweenzic Riv	54.55	28	IAmb	IAmb	09 07 20.9	
	comp=Z,18nm,0.8s						
G24K	Hadweenzic Riv	54.55	28	P	P	09 07 19.7	+2.0
	baz=268,SNR=9.6						
DHY	Denali Highway	54.55	32	IAmb	IAmb	09 07 26.6	
	comp=Z,35nm,1.7s						
DHY	Denali Highway	54.55	32	P	P	09 07 19.5	+1.5
	baz=271						
SCM	Sheep Creek Mo	54.60	34	P	P	09 07 19.5	+1.3
	baz=272,SNR=7.1						
P23K	Montague Islan	54.63	36	P	P	09 07 19.9	+1.5
	baz=273						
HDA	Harding Lake	54.73	31	IAmb	IAmb	09 07 20.3	
	comp=Z,33nm,1.0s						
HDA	Harding Lake	54.73	31	P	P	09 07 19.6	+0.5
	baz=270,SNR=22						
GLI	Glacier Island	54.74	35	P	P	09 07 20.3	+1.1
	baz=272						
IL31		54.76	30	IAmb	IAmb	09 07 20.6	
	comp=Z,16nm,0.8s						
ILAR	Eielson Array	54.76	30	P	P	09 07 19.5	+0.3
	comp=Z,10nm,0.7s,baz=267,slow=6.1,SNR=118						
ILAR				PcP	PcP	09 08 19.8	-0.3
	comp=Z,1.6nm,0.5s,baz=266,slow=3.3,SNR=5.2						
	comp=Z,10nm,0.7s						
KK31	Karatay Array	54.98	303	IAmb	IAmb	09 07 21.2	
	comp=Z,14nm,0.8s						
KK31	Karatay Array	54.98	303	i P	P	09 07 19.7	-1.5
KKAR	Karatay Array	54.98	303		P	09 07 20.2	-1.0
KKAR	Karatay Array	54.98	303	P	P	09 07 20.2	-1.0
D25K	Kavik River	55.07	25	IAmb	IAmb	09 07 24.0	
	comp=Z,16nm,0.7s						
D25K	Kavik River	55.07	25	P	P	09 07 23.2	+1.7
	baz=267						
G25K	Bearman Lake	55.09	28	P	P	09 07 23.4	+1.8
	baz=269						
M24K	Tolsona, Glenn	55.13	33	P	P	09 07 23.7	+1.7
	baz=272						
Q23K	Middleton Isla	55.20	37	P	P	09 07 23.9	+1.4
	baz=274						
AS31	Alice Springs	55.24	187		P	09 07 22.6	-0.6
ASAR	Alice Springs	55.24	187	P	P	09 07 21.9	-1.2
	comp=Z,1.6nm,0.5s,baz=15,slow=13,SNR=69						
ASAR				PcP	PcP	09 08 22.6	+0.1
	comp=Z,1.5nm,0.5s,baz=6.5,slow=5.5,SNR=5.6						
ASAR				ScP	ScP	09 12 08.3	-0.8
	comp=Z,1.1nm,0.9s,baz=5.7,slow=2.8,SNR=7.2						
ASAR				S	S	09 14 51.2	-5.6
	comp=Z,0.8nm,0.9s,baz=15,slow=19,SNR=4.4						
	comp=Z,1.6nm,0.5s						
ASAR	Alice Springs	55.24	187	P	P	09 07 22.0	-1.2
K24K	Donnelly Dome	55.25	31	IAmb	IAmb	09 07 24.9	
	comp=Z,19nm,0.6s						
K24K	Donnelly Dome	55.25	31	P	P	09 07 24.2	+1.4
	baz=272,SNR=6.8						
KLU	Klutina	55.28	34	P	P	09 07 24.6	+1.4
	baz=273,SNR=6.0						
F25K	Christian Rive	55.28	27	P	P	09 07 25.1	+2.0
	baz=269						
E25K	Arctic Village	55.32	26	IAmb	IAmb	09 07 26.5	
	comp=Z,28nm,0.8s						
E25K	Arctic Village	55.32	26	P	P	09 07 25.4	+2.2
	baz=269,SNR=29						
NIL	Nilore	55.35	291	P	P	09 07 23.1	-1.0
NIL				IAmb	IAmb	09 07 24.8	
	comp=Z,20nm,0.7s						
NIL	Nilore	55.35	291	P	P	09 07 23.1	-1.0
NIL				pmax	pmax		
	comp=Z,20nm,0.7s						
J25K	Salcha River,	55.41	30	P	P	09 07 25.2	+1.2
	baz=271,SNR=5.6						
PAX	Paxson	55.42	32	IAmb	IAmb	09 07 26.4	
	comp=Z,13nm,0.9s						
PAX	Paxson	55.42	32	P	P	09 07 25.5	+1.3
	baz=272,SNR=8.2						
EYAK	Cordova Ski Ar	55.42	35	P	P	09 07 24.8	+0.8
EYAK	Cordova Ski Ar	55.42	35	P	P	09 07 25.7	+1.7
	baz=274						
MANEM	Manem	55.46	296	IAmb	IAmb	09 07 25.8	
	comp=Z,18nm,0.8s						
BRLS	Borolday	55.47	303	eP	P	09 07 25.4	+0.6
BRLS	Borolday	55.47	303	eP	P	09 07 25.4	+0.6
HARP	HAARP	55.59	33	P	P	09 07 26.9	+1.6
	baz=273,SNR=6.2						
C26K	Camden Bay	55.60	24	P	P	09 07 27.2	+2.0
	baz=268						
RIDG	Independent Ri	55.67	31	IAmb	IAmb	09 07 29.1	
	comp=Z,12nm,0.5s						
RIDG	Independent Ri	55.67	31	P	P	09 07 26.5	+0.7
	baz=272,SNR=8.7						
BMAR	Burnt Mountain	55.69	27		P	09 07 27.6	+1.7
CHM	Chimkent	55.80	302	eP	P	09 07 26.2	-1.0
	comp=Z,9.1nm,0.6s						
CHM	Chimkent	55.80	302	eP	P	09 07 26.1	-1.0
CHM				pmax	pmax		
	comp=Z,9.0nm,0.6s						
F26K	Sheenjek River	55.86	27	P	P	09 07 29.4	+2.3
	baz=270						
N25K	Chitina, Valde	55.91	34	P	P	09 07 29.2	+1.6
	baz=274						
MBWA	Marble Bar	55.92	203	P	P	09 07 27.6	-0.4
BMRM	Bremner River	55.95	35	P	P	09 07 29.6	+1.6
	baz=274,SNR=9.4						
G26K	Porcupine Rive	56.01	27	IAmb	IAmb	09 07 31.5	
	comp=Z,23nm,0.9s						
G26K	Porcupine Rive	56.01	27	P	P	09 07 30.2	+2.1
	baz=271,SNR=16						
C27K	Jago River	56.02	24	P	P	09 07 30.2	+2.0
	baz=269						
DOT	Dot Lake	56.02	31	IAmb	IAmb	09 07 30.0	
	comp=Z,23nm,0.7s						
SCRK	Sand Creek	56.04	31	P	P	09 07 29.4	+0.9
	baz=273,SNR=22						
GAR	Garm	56.11	298	IAmb	IAmb	09 07 29.4	
	comp=Z,15nm,0.9s						
KAIM	Kayak Island	56.14	36	P	P	09 07 30.3	+1.2
	baz=275						
J26L	Joseph Creek	56.19	30	P	P	09 07 30.2	+0.6
	baz=273,SNR=27						
PSA00	Pilbara Seismi	56.27	203	P	P	09 07 30.0	-0.5
I26K	Coal Creek Min	56.33	29	P	P	09 07 31.1	+0.7
	baz=273						
L26K	Log Cabin Wild	56.38	32	P	P	09 07 32.8	+1.9
	baz=274,SNR=25						
M26K	Nabesna, AK	56.60	33	IAmb	IAmb	09 07 35.2	
	comp=Z,21nm,1.0s						
M26K	Nabesna, AK	56.60	33	P	P	09 07 34.3	+1.8
	baz=275,SNR=8.4						
MCARA	McCarthy VSAT	56.68	34	P	P	09 07 34.8	+1.8
	baz=276,SNR=14						
CRQE	Cirque	56.71	35	P	P	09 07 35.0	+1.6
	baz=276,SNR=12						
E27K	Coleen River	56.81	26	IAmb	IAmb	09 07 36.9	
	comp=Z,22nm,0.8s						
E27K	Coleen River	56.81	26	P	P	09 07 35.9	+2.1
	baz=272						
G27K	Doyon Strip	56.85	28	P	P	09 07 36.0	+1.8
	baz=273						
H27K	Steamboat Moun	56.94	28	P	P	09 07 36.8	+2.0
	baz=274						
I27K	Kandik River	56.95	29	IAmb	IAmb	09 07 37.7	
	comp=Z,19nm,0.7s						
I27K	Kandik River	56.95	29	P	P	09 07 37.1	+2.2
	baz=274,SNR=12						
D27M	Malcolm River	56.99	25	IAmb	IAmb	09 07 38.1	
	comp=Z,22nm,1.1s						
D27M	Malcolm River	56.99	25	P	P	09 07 37.1	+1.9
	baz=272,SNR=24						
HYB	Hyderabad	57.00	271	eP	P	09 07 36.1	+0.2
L27K	Beaver Creek,	57.07	32	IAmb	IAmb	09 07 38.6	
	comp=Z,24nm,0.9s						
L27K	Beaver Creek,	57.07	32	P	P	09 07 37.7	+1.9
	baz=276,SNR=14						
BCAR	Beaver Creek A	57.09	32		P	09 07 37.3	+1.4
M27K	Edge Creek, AK	57.12	33	IAmb	IAmb	09 07 38.9	
	comp=Z,29nm,0.9s						
M27K	Edge Creek, AK	57.12	33	P	P	09 07 38.0	+1.7
	baz=276,SNR=13						
F28M	Old Crow	57.49	27	IAmb	IAmb	09 07 41.7	
	comp=Z,26nm,1.1s						
F28M	Old Crow	57.49	27	P	P	09 07 40.6	+2.0
	baz=274,SNR=20						
CTG	Chitna Glacier	57.54	35	P	P	09 07 40.9	+1.6
	baz=277,SNR=7.0						
E28M	Babbage River	57.55	25	IAmb	IAmb	09 07 42.0	
	comp=Z,20nm,0.8s						
E28M	Babbage River	57.55	25	P	P	09 07 41.1	+2.2
	baz=274						
BVCY	Beaver Creek	57.59	33	P	P	09 07 41.0	+1.6
	baz=277,SNR=7.1						
I28M	Miner Creek	57.66	29	P	P	09 07 41.6	+1.7
	baz=276						
D28M	Stokes Point	57.78	25	P	P	09 07 42.5	+1.9
	baz=274						
YUK3	Moose Creek	57.85	34	P	P	09 07 43.0	+1.5
	baz=278,SNR=10						
DAWY	Dawson	58.05	31	P	P	09 07 44.6	+2.0
	baz=277,SNR=6.5						
O28M	Mount Upton	58.12	35	IAmb	IAmb	09 07 46.0	
	comp=Z,21nm,0.9s						
O28M	Mount Upton	58.12	35	P	P	09 07 45.2	+1.7
	baz=278,SNR=5.2						
E29M	Blow River	58.17	26	IAmb	IAmb	09 07 46.2	
	comp=Z,19nm,0.9s						
E29M	Blow River	58.17	26	P	P	09 07 45.5	+2.2
	baz=276						
PINM	Pinnacle	58.19	35	P	P	09 07 45.6	+1.9
	baz=279						
H29M	Whitestone	58.22	28	IAmb	IAmb	09 07 46.6	
	comp=Z,16nm,1.0s						
H29M	Whitestone	58.22	28	P	P	09 07 45.9	+2.2
	baz=276,SNR=9.8						
YUK8	Steele Glacier	58.25	34	P	P	09 07 46.3	+1.9
	baz=278						
G29M	Pine Creek	58.27	27	P	P	09 07 46.3	+2.2
	baz=276						
I29M	Ogilvie Camp,	58.35	29	P	P	09 07 46.4	+1.7
	baz=277,SNR=13						
KBL	Kabul	58.39	294	P	P	09 07 44.2	-1.5
KBL				IAmb	IAmb	09 07 45.3	
	comp=Z,7.8nm,0.8s						
KBL	Kabul	58.39	294	P	P	09 07 44.2	-1.5
KBL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
J29N	Klondike Camp	58.50	30	IAmb	IAmb	09 07 48.5	
	comp=Z,21nm,0.8s						
J29N	Klondike Camp	58.50	30	P	P	09 07 47.7	+1.9
	baz=278,SNR=11						
M29M	Somme Creek	58.69	33	P	P	09 07 49.5	+2.3
	baz=279						
L29M	L29M	58.74	32	P	P	09 07 49.8	+2.4
	baz=279						
YUK4	Talbot Arm	58.77	34	P	P	09 07 50.0	+2.1
	baz=279,SNR=10.0						
EPYK	Eagle Plains	58.86	28	P	P	09 07 50.0	+1.9
	baz=278,SNR=39						
K29M	Barlow Dome	58.89	31	IAmb	IAmb	09 07 51.4	
	comp=Z,23nm,0.8s						
K29M	Barlow Dome	58.89	31	P	P	09 07 50.6	+2.0
	baz=279						
G30M	tAoh Zraii Nji	58.97	27	P	P	09 07 50.4	+1.4
	baz=278						
YUK6	Outpost Mounta	58.98	34	P	P	09 07 51.5	+2.2
	baz=280,SNR=6.6						
O29M	Mount Kennedy	58.98	35	P	P	09 07 51.7	+2.4
	baz=280,SNR=12						
F30M	Barrier River	59.05	26	P	P	09 07 51.4	+2.0
	baz=278,SNR=20						
DZM	Mont Dzumac	59.06	151	P	P	09 07 50.2	0.0
I30M	Mount Dempster	59.17	29	P	P	09 07 52.1	+1.7
	baz=279,SNR=28						
J30M	Hart River	59.29	30	IAmb	IAmb	09 07 53.9	
	comp=Z,17nm,1.1s						
J30M	Hart River	59.29	30	P	P	09 07 53.1	+1.8
	baz=279,SNR=9.1						
HYT	Haines Junctio	59.41	34	IAmb	IAmb	09 07 58.2	
	comp=Z,16nm,0.8s						
HYT	Haines Junctio	59.41	34	P	P	09 07 54.2	+2.0
	baz=280,SNR=6.9						
M30M	Minto, Yukon	59.43	32	IAmb	IAmb	09 07 54.7	
	comp=Z,13nm,0.6s						
M30M	Minto, Yukon	59.43	32	P	P	09 07 54.4	+2.2
	baz=280,SNR=13						
N30M	Aishikik Lake	59.49	34	P	P	09 07 54.7	+2.0
	baz=280						
P29M	Windy Craggy	59.52	36	IAmb	IAmb	09 07 57.4	
	comp=Z,16nm,0.7s						
P29M	Windy Craggy	59.52	36	P	P	09 07 54.9	+2.1
	baz=281						
MAYO	Mayo, Yukon	59.65	31	P	P	09 07 55.0	+1.3
	baz=280,SNR=5.0						
G31M	Satah River	59.74	27	P	P	09 07 55.3	+1.1
	baz=280,SNR=17						
INK	Inuvik	59.78	25	IAmb	IAmb	09 07 55.8	
	comp=Z,14nm,0.6s						
INK	Inuvik	59.78	25	P	P	09 07 55.3	+0.9
	baz=280,SNR=16						
P30M	Million Dollar	59.81	35	P	P	09 07 56.3	+1.4
	baz=281						
ARTI	Arti	59.84	320		P	09 07 54.2	-0.8
ARTI	Arti	59.84	320	d iP	P	09 07 54.2	-0.8
ARTI				*PP	pP	09 08 23.7	-1.9
ARTI						09 08 42.4	
ARTI						09 10 04.4	
ARTI				S	S	09 15 56.0	-0.2
ARTI				SS	SS	09 19 47.3	-6.6
ARTI				pmax	pmax		
	comp=Z,25nm,0.6s						
ARTI	Arti	59.84	320	P	P	09 07 53.8	-1.2
F31M	Tsiigehtchic	59.85	26	P	P	09 07 55.9	+1.0
	baz=280,SNR=11						
H31M	Peel River	59.91	28	P	P	09 07 57.0	+1.6
	baz=280,SNR=21						
O30N	Mendenhall	60.10	34	P	P	09 07 58.4	+1.5
O30N	Mendenhall	60.10	34	P	P	09 07 58.3	+1.5
	baz=282						
N31M	Braeburn, Yuko	60.10	33	P	P	09 07 58.6	+1.8
	baz=282,SNR=7.6						
PLBC	Pleasant Camp	60.24	36	P	P	09 07 59.5	+1.7
	baz=282,SNR=5.8						
M31M	Drury Creek, Y	60.60	32	P	P	09 08 01.6	+1.4
M31M	Drury Creek, Y	60.60	32	P	P	09 08 01.7	+1.5
	baz=282,SNR=18						
AB31	Akbulak array	60.64	312		P	09 07 59.8	-0.8
AB31	Akbulak array	60.64	312	i P	P	09 07 59.4	-1.2
ABKAR	Akbulak array	60.64	312		P	09 07 59.8	-0.8
S31K	Pelican	60.64	37	P	P	09 08 01.4	+1.0
	baz=283						
WHY	Whitehorse	60.71	34	P	P	09 08 01.9	+0.9
	baz=283,SNR=7.6						
SKAG	Skagway	60.76	36	P	P	09 08 02.4	+1.2
	baz=283						
SIT	Sitka	61.34	38	P	P	09 08 06.1	+1.0
	baz=284						
MEEK	Meekatharra	61.38	202	P	P	09 08 04.6	-1.2
N32M	Quiet Lake	61.45	33	IAmb	IAmb	09 08 49.2	
	comp=Z,13nm,0.8s						
N32M	Quiet Lake	61.45	33	P	P	09 08 07.0	+1.1
	baz=284						
R32K	Eaglecrest	61.45	37	P	P	09 08 07.0	+1.1
	baz=284						
AKTO	Aktyubinsk	61.52	314	LR	LR	09 33 47.3	
	comp=Z,63nm,20.2s,baz=187,slow=35						
AKTO	Aktyubinsk	61.52	314	P	P	09 08 04.8	-1.7
P32M	Atlin	61.53	35	P	P	09 08 08.0	+1.5
	baz=284						
S32K	Killisnoo	61.62	38	P	P	09 08 08.3	+1.3
	baz=285						
A36M	Sachs Harbour	61.76	21	IAmb	IAmb	09 08 10.0	
	comp=Z,23nm,0.8s						
A36M	Sachs Harbour	61.76	21	P	P	09 08 09.2	+1.5
	baz=285,SNR=19						
P33M	Teslin, Yukon	61.81	34	P	P	09 08 09.6	+1.2
	baz=285,SNR=5.8						
Q32M	Nakina River	62.41	36	P	P	09 08 13.3	+0.7
	baz=286						
ARMA	Armidale	62.64	169	P	P	09 08 15.1	+0.9
U33K	Whale Pass	62.76	39	P	P	09 08 15.8	+1.1
	baz=286						
C36M	Paulatuk	62.88	23	IAmb	IAmb	09 08 16.8	
	comp=Z,20nm,0.7s						
C36M	Paulatuk	62.88	23	P	P	09 08 16.1	+0.9
	baz=287,SNR=22						
R33M	Jennings River	62.93	35	P	P	09 08 17.0	+1.1
	baz=286						
CRAG	Craig	62.95	40	P	P	09 08 16.9	+1.0
	baz=287						
CMSA	Cobar Meteorol	63.01	175	P	P	09 08 17.4	+0.9
WRAK	Wrangell Islan	63.09	39	P	P	09 08 17.8	+1.0
	baz=287						
STKA	Stephens Creek	63.13	178	P	P	09 08 16.4	-0.9
	comp=Z,1.6nm,0.5s,baz=354,slow=6.0,SNR=9.8						
	comp=Z,1.6nm,0.5s						
STKA	Stephens Creek	63.13	178	P	P	09 08 16.8	-0.5
STKA	Stephens Creek	63.13	178	P	P	09 08 16.4	-0.9
STKA				pmax	pmax		
	comp=Z,69nm,1.8s						
S34M	Telegraph Cree	63.28	37	P	P	09 08 19.3	+1.2
	baz=287						
WTLY	Watson Lake, Y	63.77	34	IAmb	IAmb	09 08 24.1	
	comp=Z,24nm,1.1s						
WTLY	Watson Lake, Y	63.77	34	P	P	09 08 22.4	+1.1
	baz=288,SNR=9.6						
V35K	Ketchikan	63.81	40	P	P	09 08 22.3	+0.8
	baz=288						
KIRV	Kirov	63.93	324	d iP	P	09 08 22.1	-0.2
T35M	Bob Quinn	64.02	38	IAmb	IAmb	09 08 26.5	
	comp=Z,35nm,1.2s						
T35M	Bob Quinn	64.02	38	P	P	09 08 24.5	+1.5
	baz=288,SNR=6.0						
BBOO	Buckleboo	64.15	184	P	P	09 08 26.1	+2.1
WRGLY	Wrigley	65.13	30	P	P	09 08 31.8	+1.8
	baz=291,SNR=19						
LIRD	Liard River Hi	65.29	34	P	P	09 08 32.7	+1.5
	baz=290,SNR=36						
SPITS	Spitsbergen Ar	65.64	349	P	P	09 08 33.4	+0.3
	comp=Z,1.7nm,0.4s,baz=91,slow=7.0,SNR=13						
	comp=Z,1.7nm,0.4s						
BLDU	Ballidu	65.68	202	P	P	09 08 32.9	-1.1
TOAD	Toad River Com	65.90	35	P	P	09 08 36.8	+1.6
	baz=291,SNR=9.8						
BELG	Belogornoye	67.03	318	d iP	P	09 08 41.8	-0.5
BELG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VADS	Vadso	67.24	340	eP	P	09 08 44.2	+0.8
NWAO	Narrogin (SRO)	67.67	201	P	P	09 08 46.4	-0.1
KLMR	Klimovskoe	67.76	329	eP	P	09 08 45.6	-1.2
KLMR				e		09 11 16.3	
KLMR				S	S	09 17 33.1	-0.8
KLMR				pmax	pmax		
	comp=Z,15nm,0.7s						
RES	Resolute Bay	68.16	14	IAmb	IAmb	09 08 50.9	
	comp=Z,14nm,0.8s						
ARCES	ARCESS Array B	68.69	340	P	P	09 08 52.5	+0.1
	comp=Z,15nm,0.7s,baz=70,slow=8.3,SNR=30						
	comp=Z,15nm,0.7s						
YKA	Yellowknife Ar	69.12	29	P	P	09 08 55.7	+0.5
	comp=Z,7.5nm,0.8s,baz=295,slow=6.8,SNR=89						
	comp=Z,7.5nm,0.8s						
YKA	Yellowknife Ar	69.12	29		P	09 08 55.6	+0.3
YKAW1	Yellowknife Wh	69.18	29	IAmb	IAmb	09 08 57.2	
	comp=Z,18nm,0.9s						
TULEG	Thule	70.64	7	IAmb	IAmb	09 09 06.0	
	comp=Z,12nm,0.8s						
VRH	Novokhopyorsk	70.86	319	eP	P	09 09 03.5	-2.6
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
MOS	Moscow	70.95	324	eP	P	09 09 05.7	-0.8
MOS				e		09 09 25.6	
MOS				e		09 09 33.8	
MOS				pmax	pmax		
	comp=Z,57nm,0.6s						
NLWA	Neilton Lookou	71.31	45	P	P	09 09 11.7	+2.8
AKT	Akhty	71.42	308	eP	P	09 09 09.1	-0.7
AKT				e		09 09 27.0	
AKT				eS	S	09 18 15.5	-2.3
AKT				pmax	pmax		
	comp=Z,37nm,0.6s						
LPSR	Galich'ya Gora	71.75	321	eP	P	09 09 09.3	-2.1
LPSR				pmax	pmax		
	comp=Z,30nm,0.9s						
OBN	Obninsk	71.78	324	⇑eP	P	09 09 11.4	-0.1
OBN				e*PP	pP	09 09 41.2	-1.8
OBN				e		09 11 52.5	
OBN				ePPP	PPP	09 13 40.6	
OBN				pmax	pmax		
	comp=Z,24nm,0.9s						
GNW	Green Mountain	71.87	45		P	09 09 14.0	+1.8
GNW				IAmb	IAmb	09 09 15.4	
	comp=Z,26nm,1.2s						
VSR	Storozhevoye	72.28	320	eP	P	09 09 12.1	-2.5
VSR				pmax	pmax		
	comp=Z,30nm,0.9s						
VORD	Divnogorie	72.33	319	eP	P	09 09 12.4	-2.5
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
STEI	Steigen	72.62	341	eP	P	09 09 17.9	+1.6
FAUS	Fauske	72.98	341	eP	P	09 09 19.0	+0.6
FIA1	FINESS Array S	73.09	333		P	09 09 19.1	-0.1
FINES	FINESS Array B	73.09	333	P	P	09 09 19.1	-0.1
	comp=Z,11nm,0.6s,baz=63,slow=5.3,SNR=109						
FINES				pP	pP	09 09 51.5	+0.6
	comp=Z,5.8nm,0.8s,baz=64,slow=8.7,SNR=3.3						
	comp=Z,11nm,0.6s						
FINES	FINESS Array B	73.09	333	P	P	09 09 18.9	-0.3
G04A	Mulino	73.17	47	IAmb	IAmb	09 09 22.9	
	comp=Z,39nm,0.9s						
I03D	Drain, OR	73.32	49	IAmb	IAmb	09 09 24.1	
	comp=Z,26nm,0.9s						
B08A	Colville Reser	73.57	43	IAmb	IAmb	09 09 24.6	
	comp=Z,16nm,0.8s						
OUZ	Omahuta	73.57	152	P	P	09 09 25.3	+3.1
KBZ	Khabaz	73.59	311	P	P	09 09 22.3	-0.1
	comp=Z,29nm,0.8s,baz=88,slow=4.2,SNR=55						
KBZ				LR	LR	09 42 25.4	
	comp=Z,66nm,21.0s,baz=72,slow=36						
	comp=Z,29nm,0.8s						
H04A	Detroit Lake	73.60	47	IAmb	IAmb	09 09 25.2	
	comp=Z,28nm,0.9s						
KIV	Kislovodsk	73.61	312	⇓P	P	09 09 23.6	+0.9
KIV	Kislovodsk	73.61	312	eP	P	09 09 22.2	-0.5
KIV				pmax	pmax		
	comp=Z,43nm,1.0s						
KIV	Kislovodsk	73.61	312	P	P	09 09 22.3	-0.5
	comp=Z,43nm,0.7s						
HOOD	Mount Hood Mea	73.63	47	IAmb	IAmb	09 09 25.6	
	comp=Z,30nm,0.8s						
SHA1	Shidzhatmaz	73.74	312	⇑iP	P	09 09 24.9	+1.3
MXC	Moxie City	73.86	45	IAmb	IAmb	09 09 26.7	
	comp=Z,19nm,0.8s						
I04A	Tendick Farm,	73.88	48	IAmb	IAmb	09 09 26.8	
	comp=Z,18nm,0.8s						
EPH	Ephrata	73.90	44	IAmb	IAmb	09 09 25.9	
	comp=Z,12nm,0.7s						
NEUR	Neytrino	73.93	311	⇓iP	P	09 09 26.0	+1.3
NEUR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
RAUS	Rausandaksla	73.99	340	eP	P	09 09 24.7	+0.3
MOR8	Moi Rana	74.06	340	eP	P	09 09 24.0	-0.8
WIFE	Three Sisters-	74.13	48	IAmb	IAmb	09 09 28.8	
	comp=Z,25nm,0.9s						
E07A	Sunnyside	74.14	45	IAmb	IAmb	09 09 28.3	
	comp=Z,15nm,0.9s						
WAH2	Wahluke Slope	74.21	45	IAmb	IAmb	09 09 28.4	
	comp=Z,16nm,0.7s						
I05D	Terrebonne, OR	74.30	47	IAmb	IAmb	09 09 29.2	
	comp=Z,15nm,0.7s						
J04A	Umpqua Nationa	74.33	49	IAmb	IAmb	09 09 29.9	
	comp=Z,34nm,0.7s						
EDM	Edmonton	74.38	37	IAmb	IAmb	09 09 28.7	

	comp=Z,18nm,0.9s						
HAWA	Hanford	74.41	45	IAmb	IAmb	09 09 29.7	
	comp=Z,26nm,1.4s						
F07A	Phinny Hill Vi	74.41	46	IAmb	IAmb	09 09 29.9	
	comp=Z,26nm,0.8s						
TAU	Tasmania Unive	74.43	174	P	P	09 09 27.9	+0.9
D08A	Wollman Farm,	74.45	44	IAmb	IAmb	09 09 29.7	
	comp=Z,22nm,0.8s						
C09A	Chrisman Ranch	74.46	43	IAmb	IAmb	09 09 29.3	
	comp=Z,16nm,0.8s						
LEIR	Leirfjorden	74.49	340	eP	P	09 09 28.1	+0.9
VSU	Vasula	74.56	330	⇑iP	P	09 09 27.1	-0.7
VSU				pmax	pmax		
	comp=Z,22nm,0.9s						
ILON	Igloolik, Nuna	74.82	14	IAmb	IAmb	09 09 30.4	
	comp=Z,15nm,0.7s						
K04D	Chiloquin, OR	74.86	49	IAmb	IAmb	09 09 32.9	
	comp=Z,32nm,1.1s						
BLKN	Baker Lake	74.86	22	IAmb	IAmb	09 09 30.9	
	comp=Z,22nm,0.9s						
J05D	Fort Rock, OR	74.87	48	IAmb	IAmb	09 09 33.2	
	comp=Z,25nm,1.0s						
E09A	Wood Farm, Sta	75.18	44	IAmb	IAmb	09 09 34.2	
	comp=Z,21nm,0.8s						
GUZR	Guzeripl'	75.22	313	c iP	P	09 09 32.0	0.0
GUZR				pmax	pmax		
	comp=Z,235nm,0.9s						
M03C	McCloud	75.27	51	IAmb	IAmb	09 09 34.9	
	comp=Z,24nm,0.7s						
G08A	Pilot Rock	75.30	46		P	09 09 33.6	+1.1
O02D	Mt. Diablo Mer	75.36	52	IAmb	IAmb	09 09 35.4	
	comp=Z,76nm,1.9s						
K05A	Summer Lake	75.36	49	IAmb	IAmb	09 09 36.1	
	comp=Z,28nm,0.9s						
NSS	Namsos	75.96	339	eP	P	09 09 36.8	+1.1
SUMG	Summit	76.12	360		P	09 09 38.9	+1.9
SUMG	Summit	76.12	360	P	P	09 09 38.9	+1.9
SUMG				pmax	pmax		
	comp=Z,11nm,1.1s						
MNRC	McLaughlin Min	76.23	53	IAmb	IAmb	09 09 40.9	
	comp=Z,26nm,1.0s						
MNK	Minsk	76.35	326	i P	P	09 09 38.3	+0.2
MNK				i *PP	pP	09 10 07.9	-2.1
MNK				i *SP	sP	09 10 22.0	-1.8
MNK				i		09 12 31.8	
MNK				i PPP	PPP	09 14 19.1	
MNK				i S	S	09 19 13.6	+1.3
MNK				i *SS	sS	09 20 12.1	+4.9
MNK				i SS	SS	09 24 16.0	+7.8
MNK				i SSS	SSS	09 27 29.1	
MNK				pmax	pmax		
	comp=E,16nm,0.9s						
MNK				pmax	pmax		
	comp=Z,21nm,0.8s						
MNK				pmax	pmax		
	comp=N,11nm,1.0s						
ANN	Anapa	76.48	314	eP	P	09 09 37.7	-1.3
ANN				pmax	pmax		
	comp=Z,53nm,1.0s						
BMO	Blue Mountains	76.54	46	IAmb	IAmb	09 09 41.5	
	comp=Z,12nm,0.7s						
J08A	Circle Bar Ran	76.58	47	IAmb	IAmb	09 09 42.5	
	comp=Z,39nm,1.2s						
HIZ	Hauiti	76.93	153	P	P	09 09 43.0	+1.6
HIZ	Hauiti	76.93	153	P	P	09 09 44.0	+2.6
HAZ	Te Kaha	77.48	150	P	P	09 09 46.1	+1.7
PABE	Paberze	77.55	328	IAmb	IAmb	09 09 46.4	
	comp=Z,20nm,0.8s						
PKVZ	Pokaka	77.79	153	P	P	09 09 48.0	+1.7
OTVZ	Oturere	77.81	152	P	P	09 09 48.1	+1.6
RTZ	Ruatahuna	77.87	151		P	09 09 47.2	+0.5
RTZ				IAmb	IAmb	09 09 48.4	
	comp=Z,43nm,1.0s						
AK03	Malin Array Si	77.88	323	P	P	09 09 45.7	-1.0
AKASG	Malin Array Be	77.89	323	P	P	09 09 46.1	-0.7
	comp=Z,13nm,0.7s,baz=50,slow=5.9,SNR=43						
AKASG				pP	pP	09 10 20.1	+1.2
	comp=Z,3.4nm,0.7s,baz=51,slow=6.2,SNR=2.3						
	comp=Z,13nm,0.7s						
AKASG	Malin Array Be	77.89	323	P	P	09 09 46.6	-0.1
AKASG	Malin Array Be	77.89	323	i P	P	09 09 46.2	-0.6
AKASG				pmax	pmax		
	comp=Z,13nm,0.7s						
AKBB	Malin Array Si	77.89	323	IAmb	IAmb	09 09 47.2	
	comp=Z,25nm,0.8s						
AKBB	Malin Array Si	77.89	323	d iP	P	09 09 46.2	-0.6
AKBB				pmax	pmax		
	comp=Z,28nm,0.9s						
AKBB	Malin Array Si	77.89	323	P	P	09 09 45.6	-1.2
AK01	Malin Array Si	77.90	323	P	P	09 09 46.2	-0.6
KIEV	Kiev	77.90	323		P	09 09 46.5	-0.3
KIEV				IAmb	IAmb	09 09 47.2	
	comp=Z,24nm,0.9s						
KIEV	Kiev	77.90	323	⇓P	P	09 09 46.6	-0.3
KIEV	Kiev	77.90	323	P	P	09 09 46.5	-0.3
KIEV				pmax	pmax		
	comp=Z,24nm,0.9s						
KIEV	Kiev	77.90	323	P	P	09 09 45.6	-1.2
	comp=Z,109nm,0.8s						
KIEV	Kiev	77.90	323	P	P	09 09 46.2	-0.7
AK23	Malin Array Si	77.91	323	P	P	09 09 45.8	-1.0
AK04	Malin Array Si	77.91	323	P	P	09 09 45.9	-1.0
AK09	Malin Array Si	77.91	322	P	P	09 09 46.2	-0.7
AK08	Malin Array Si	77.92	322	P	P	09 09 46.0	-0.9
AK02	Malin Array Si	77.93	323	P	P	09 09 46.0	-1.0
AK11	Malin Array Si	77.93	323	P	P	09 09 46.1	-0.9
AK22	Malin Array Si	77.94	323	P	P	09 09 46.1	-0.9
AK10	Malin Array Si	77.94	322	P	P	09 09 46.1	-0.9
AK21	Malin Array Si	77.94	323	P	P	09 09 46.1	-0.9
AK15	Malin Array Si	77.95	323	P	P	09 09 46.2	-0.9
AK05	Malin Array Si	77.95	322	P	P	09 09 46.2	-0.9
AK12	Malin Array Si	77.96	323	P	P	09 09 46.2	-0.9
AK18	Malin Array Si	77.96	323	P	P	09 09 46.2	-0.9
AK16	Malin Array Si	77.97	323	P	P	09 09 46.3	-0.9
AK06	Malin Array Si	77.97	322	P	P	09 09 46.3	-0.9
AK20	Malin Array Si	77.98	323	P	P	09 09 46.3	-0.9
AK17	Malin Array Si	77.99	323	P	P	09 09 46.4	-0.9
AK07	Malin Array Si	77.99	322	P	P	09 09 46.4	-0.9
AK19	Malin Array Si	77.99	323	P	P	09 09 46.4	-0.9
AK14	Malin Array Si	77.99	323	P	P	09 09 46.4	-0.9
MTHZ	Maungataniwha	78.01	151	P	P	09 09 48.4	+1.0
AK13	Malin Array Si	78.03	323	P	P	09 09 46.4	-1.1
PNTR	Pine Nut	78.04	51	IAmb	IAmb	09 09 50.7	
	comp=Z,18nm,0.8s						
QRZ	Quartz Range	78.08	155	P	P	09 09 47.7	0.0
QRZ	Quartz Range	78.08	155	P	P	09 09 49.1	+1.4
BKZ	Black Stump Fm	78.14	152	P	P	09 09 49.0	+0.8
BKZ				IAmb	IAmb	09 09 51.0	
	comp=Z,17nm,0.9s						
BKZ	Black Stump Fm	78.14	152	P	P	09 09 48.9	+0.8
BKZ	Black Stump Fm	78.14	152	P	P	09 09 48.9	+0.8
RAHZ	Arahi	78.17	151	P	P	09 09 49.5	+1.2
MFID	Camas Ranch	78.20	46	IAmb	IAmb	09 09 50.9	
	comp=Z,12nm,0.7s						
NMHZ	Naumai	78.21	152	P	P	09 09 50.4	+1.9
RIGZ	Rimuhau	78.27	151	P	P	09 09 49.6	+0.7
KWHZ	Kaweka Forest	78.33	152	P	P	09 09 50.3	+1.1
TKNZ	Takaka Hill	78.41	155	P	P	09 09 50.4	+0.8
KRHZ	Kereru	78.50	152	P	P	09 09 50.8	+0.7
NC405	NORSAR Array S	78.53	337	IAmb	IAmb	09 09 51.1	
	comp=Z,17nm,0.8s						
DUWZ	D'Urville Isla	78.56	154	P	P	09 09 51.3	+0.9
NC303	NORSAR Array S	78.56	337	IAmb	IAmb	09 11 47.9	
	comp=Z,67nm,2.0s						
HFS	Hagfors	78.56	336	P	P	09 09 50.0	-0.3
	comp=Z,11nm,0.7s,baz=103,slow=3.2,SNR=29						
	comp=Z,11nm,0.7s						
MRNZ	Matariki Terra	78.66	155	P	P	09 09 51.4	+0.4
PNHZ	Pukenui	78.66	152	P	P	09 09 51.8	+0.8
DOMB	Dombas	78.69	339	eP	P	09 09 51.2	+0.2
NB201	NORSAR Array S	78.72	337	IAmb	IAmb	09 09 52.1	
	comp=Z,22nm,1.1s						
NC204	NORSAR Array S	78.72	338	IAmb	IAmb	09 09 52.3	
	comp=Z,17nm,0.8s						
NNZ	Nelson	78.72	155	P	P	09 09 51.7	+0.5
MOL	Molde	78.75	340	eP	P	09 09 52.8	+1.5
NB2	NORSAR Subarra	78.75	337	P	P	09 09 51.1	-0.3
	comp=Z,7.1nm,0.6s,baz=44,slow=5.9						
NB2				PP	PP	09 12 47.0	-3.6
	comp=Z,0.8nm,0.7s,baz=43,slow=7.9						
NB2	NORSAR Subarra	78.75	337	P	P	09 09 51.1	-0.3
	baz=44,slow=5.9						
NOA	NORSAR Array B	78.75	337	P	P	09 09 51.2	-0.2
	comp=Z,8.4nm,0.8s,baz=43,slow=5.5,SNR=51						
NOA				PP	PP	09 12 48.6	-2.0
	comp=Z,0.7nm,0.6s,baz=43,slow=7.9,SNR=4.6						
	comp=Z,8.4nm,0.8s						
KAHZ	Kahuranaki	78.83	152	P	P	09 09 53.4	+1.5
NC602	NORSAR Array S	78.86	337	eP	P	09 09 51.4	-0.5
WPHZ	Waipukurau	78.89	152	P	P	09 09 52.3	+0.2
FFC	Flin Flon	78.94	31	P	P	09 09 53.0	+0.6
FFC	Flin Flon	78.94	31	P	P	09 09 53.0	+0.6
FFC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FFC	Flin Flon	78.94	31	P	P	09 09 52.9	+0.4
FFC				PcP	PcP	09 10 01.6	+1.0
DVHZ	Dannevirke	78.98	153	P	P	09 09 53.3	+0.6
PKD	Bear Valley Ra	79.01	55	IAmb	IAmb	09 09 55.2	
	comp=Z,11nm,0.7s						
PXZ	Pawanui	79.03	152	P	P	09 09 53.7	+0.8
THZ	Tophouse	79.03	156	P	P	09 09 53.7	+0.7
THZ	Tophouse	79.03	156	P	P	09 09 53.8	+0.8
TCW	Tory Channel	79.05	154	P	P	09 09 53.5	+0.5
MRZ	Mangatainoka R	79.06	153	P	P	09 09 53.9	+0.8
DLMT	Dillon	79.07	43	IAmb	IAmb	09 09 56.0	
	comp=Z,32nm,1.2s						
LUBAR	Lubar, Ukraine	79.11	322	P	P	09 09 52.8	-0.7
TUWZ	Tuamarina	79.11	155	P	P	09 09 54.4	+1.0
PRWZ	Pori Road	79.12	153	P	P	09 09 54.6	+1.2
PRHZ	Porangahau	79.14	152	P	P	09 09 54.6	+1.1
RNPP9	Sopachiv	79.16	324	P	P	09 09 53.0	-0.7
EGMT	Eagleton	79.17	40	IAmb	IAmb	09 09 56.1	
	comp=Z,23nm,1.1s						
AKN	Aaknes	79.21	340	eP	P	09 09 54.4	+0.5
RNPP8	Varash	79.23	324	P	P	09 09 53.9	-0.2
HOWZ	Holdsworth Sta	79.24	153	P	P	09 09 54.5	+0.3
NVAR	Mina Array Bea	79.25	52	P	P	09 09 56.2	+1.4
	comp=Z,10nm,0.7s,baz=282,slow=5.9,SNR=57						
	comp=Z,10nm,0.7s						
CAW	Cannon Point	79.25	154	P	P	09 09 54.8	+0.7
RNPP5	Staryi Chortor	79.28	324	P	P	09 09 53.2	-1.1
SNZO	South Karori	79.29	154	P	P	09 09 54.0	-0.3
BFZ	Birch Farm	79.34	153	P	P	09 09 55.5	+0.9
BFZ	Birch Farm	79.34	153	P	P	09 09 55.4	+0.8
FCC	Fort Churchill	79.41	25	IAmb	IAmb	09 09 56.1	
	comp=Z,49nm,1.9s						
MTW	Mount Morrison	79.46	154	P	P	09 09 55.6	+0.3
TMWZ	Te Maipa	79.57	153	P	P	09 09 56.5	+0.7
MSWZ	Moikau Station	79.59	154	P	P	09 09 56.1	+0.2
OSL	Oslo	79.73	337	eP	P	09 09 56.9	+0.3
JCZ	Jackson Bay	79.75	159	P	P	09 09 58.0	+1.1
JCZ	Jackson Bay	79.75	159	P	P	09 09 58.8	+1.9
SORM	Soroca	79.86	321	⇓P	P	09 09 57.4	-0.1
SORM	Soroca	79.86	321	⇓P	P	09 09 57.4	-0.1
SKAR	Skarslia	79.96	338	eP	P	09 09 58.1	+0.2
TIN	Tinemaha, Big	80.02	53	IAmb	IAmb	09 10 02.6	
	comp=Z,28nm,0.8s						
VES	Vestal, Richgr	80.07	54	IAmb	IAmb	09 10 00.6	
	comp=Z,24nm,0.9s						
GVZ	Greta Valley S	80.14	156	P	P	09 09 59.9	+0.9
FOO	Floro	80.25	340	eP	P	09 09 60.0	+0.6
HYA	Hoyanger	80.25	339	eP	P	09 09 59.4	0.0
KONO	Kongsberg	80.32	337	eP	P	09 09 58.9	-0.9
LBZ	Lake Benmore	80.47	159	P	P	09 10 01.5	+0.9
KMPD	K-Podol'skiy	80.61	322	P	PcP	09 10 00.9	-7.1
KMPD				P	P	09 10 00.8	-0.8
YPP	Pitchstone Pla	80.74	43	IAmb	IAmb	09 10 06.8	
	comp=Z,39nm,1.9s						
H17A	Grant Village	80.81	43	IAmb	IAmb	09 10 07.3	
	comp=Z,18nm,1.0s						
YMP	Mirror Lake Pl	80.85	43	IAmb	IAmb	09 10 06.6	
	comp=Z,24nm,1.4s						
TPO	Tropico Hills	81.17	55	IAmb	IAmb	09 10 07.5	
	comp=Z,26nm,0.8s						
FURC	Furnace Creek,	81.26	53	IAmb	IAmb	09 10 07.7	
	comp=Z,25nm,0.9s						
S11A	Rachel	81.37	51	IAmb	IAmb	09 10 08.6	
	comp=Z,30nm,1.4s						
CCCA	Chr Cany lake	81.43	54	IAmb	IAmb	09 10 08.6	
	comp=Z,14nm,0.8s						
QSM	Queen of Sheba	81.53	53	IAmb	IAmb	09 10 08.9	
	comp=Z,28nm,0.8s						
GWY	Greenwater Val	81.54	53	IAmb	IAmb	09 10 09.1	
	comp=Z,28nm,1.0s						
BR131	Keskin Array S	81.58	312	c iP	P	09 10 07.0	-0.1
BRTR	Keskin Array B	81.58	312	P	P	09 10 07.2	+0.1
	comp=Z,7.2nm,0.8s,baz=103,slow=4.4,SNR=36						
	comp=Z,7.2nm,0.8s						
BR104	Keskin Array S	81.59	312	P	P	09 10 07.2	+0.1
	comp=Z,10.0nm,0.8s						
BR106	Keskin Array S	81.59	312	P	P	09 10 07.3	+0.2
	comp=Z,8.3nm,0.9s						
BR105	Keskin Array S	81.60	312	P	P	09 10 07.2	0.0
	comp=Z,12nm,0.8s						
RAYN	Ar Rayn	81.63	292	P	P	09 10 07.4	-0.1
RAYN	Ar Rayn	81.63	292	P	P	09 10 07.4	-0.1
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TESR	Tescani	81.76	320	⇑P	P	09 10 07.9	+0.2
TPGR	Topolog	81.77	318	⇑P	P	09 10 07.9	+0.1
HWUT	Hardware Ranch	81.82	46	IAmb	IAmb	09 10 11.2	
	comp=Z,25nm,1.0s						
BURAR	Bucovina Array	81.85	322	⇓P	P	09 10 08.2	-0.1
BURAR	Bucovina Array	81.85	322	⇓P	P	09 10 08.2	-0.1
DUG	Dugway, Tooele	81.85	48	IAmb	IAmb	09 10 11.1	
	comp=Z,16nm,0.8s						
PANC	Panciu	81.87	319	⇑P	P	09 10 09.1	+0.8
SHOC	Shoshone, Teco	81.97	53	IAmb	IAmb	09 10 11.1	
	comp=Z,18nm,0.9s						
VRI	Vrincioaia	82.11	320	⇑P	P	09 10 10.3	+0.7
VRI	Vrincioaia	82.11	320	⇑P	P	09 10 10.3	+0.7
PLOR	Plostina	82.16	320	⇓P	P	09 10 10.4	+0.5
PLOR	Plostina	82.16	320	⇓P	P	09 10 10.4	+0.5
TCUT	Toone Canyon	82.20	46	IAmb	IAmb	09 10 13.0	
	comp=Z,17nm,0.8s						
PDAR	Pinedale Array	82.36	44	P	P	09 10 11.9	+0.7
	comp=Z,2.9nm,0.8s,baz=282,slow=2.6,SNR=32						
PDAR				pP	pwP	09 10 45.2	-0.8
	comp=Z,0.9nm,0.7s,baz=250,slow=2.5,SNR=2.5						
	comp=Z,2.9nm,0.8s						
MPU	Maple Canyon	82.69	47	IAmb	IAmb	09 10 15.4	
	comp=Z,11nm,0.7s						
STHS	Stebnicka Huta	82.73	325	eP	P	09 10 14.2	+1.5
STHS	Stebnicka Huta	82.73	325	eP	P	09 10 14.2	+1.5
MLR	Muntele Rosu	82.77	320	⇓P	P	09 10 13.1	-0.1
MLR	Muntele Rosu	82.77	320	⇓P	P	09 10 13.1	-0.1
DOPR	Dopca	82.78	320	⇓P	P	09 10 13.0	-0.1
TCRU	Three Creeks R	82.98	49	IAmb	IAmb	09 10 18.2	
	comp=Z,22nm,1.6s						
DNR	Dunn Ranch,Anz	83.00	55	IAmb	IAmb	09 10 16.8	
	comp=Z,25nm,0.7s						
PFO	Pinyon Flats O	83.09	55	P	P	09 10 16.1	+1.1
PFO				IAmb	IAmb	09 10 17.1	
	comp=Z,18nm,0.9s						
PFO	Pinyon Flats O	83.09	55	P	P	09 10 16.1	+1.1
PFO				pmax	pmax		
	comp=Z,17nm,0.9s						
PFO	Pinyon Flats O	83.09	55	P	P	09 10 16.2	+1.1
PMD	Palm Desert	83.13	55	IAmb	IAmb	09 10 17.0	
	comp=Z,16nm,0.7s						
DANC	Danby, Needles	83.27	53	IAmb	IAmb	09 10 18.4	
	comp=Z,28nm,1.0s						
CJR	Cluj-Napoca	83.28	322	⇑P	P	09 10 16.0	+0.4
CJR	Cluj-Napoca	83.28	322	⇑P	P	09 10 16.0	+0.4
MARR	Marisel-Cluj	83.55	322	⇓P	P	09 10 17.5	+0.4
P17A	Butcher Ranch,	83.57	47	IAmb	IAmb	09 10 20.0	
	comp=Z,30nm,0.9s						
ARR	Arges	83.57	320	⇓P	P	09 10 17.3	+0.1
TNR	Turnu Rosu	83.59	321	⇑P	P	09 10 17.7	+0.5
TNR	Turnu Rosu	83.59	321	⇑P	P	09 10 17.7	+0.5
Q16A	Castle Valley	83.62	48	IAmb	IAmb	09 10 20.5	
	comp=Z,36nm,1.4s						
RDMU	Red Mountain	83.65	46	IAmb	IAmb	09 10 20.4	
	comp=Z,32nm,0.8s						
KNB	Kanab	83.65	50	IAmb	IAmb	09 10 21.4	
	comp=Z,34nm,1.2s						
DRGR		83.69	322	⇑P	P	09 10 18.0	+0.2
DRGR		83.69	322	⇑P	P	09 10 18.0	+0.2
BC3	Big Chuckawall	83.77	54	IAmb	IAmb	09 10 20.6	
	comp=Z,16nm,0.8s						
P18A	Preston Nutter	83.79	47	IAmb	IAmb	09 10 22.1	
	comp=Z,20nm,0.7s						
SRU	San Rafael Swe	83.92	48	IAmb	IAmb	09 10 21.4	
	comp=Z,29nm,0.8s						
LOT	Lotru	83.99	321	⇓P	P	09 10 20.5	+1.1
STEB	Steborice	84.05	327	eP	P	09 10 19.8	+0.3
MORC	Moravsky Berou	84.27	327	⇑P	P	09 10 20.7	+0.1
MORC	Moravsky Berou	84.27	327	eP	P	09 10 20.5	-0.1
MORC	Moravsky Berou	84.27	327	⇑P	P	09 10 20.7	+0.1
ESJX	Sierra Juarez	84.33	56	IAmb	IAmb	09 10 23.9	
	comp=Z,20nm,0.9s						
OSTC	Ostas	84.33	328	eP	P	09 10 23.2	+2.3
OSTC	Ostas	84.33	328	eP	P	09 10 23.2	+2.3
U15A	North Rim	84.34	51	IAmb	IAmb	09 10 25.2	
	comp=Z,12nm,0.9s						
BLYC	Blythe	84.36	54	IAmb	IAmb	09 10 23.7	
	comp=Z,16nm,0.9s						
CHVC	Chvalec	84.39	328	eP	P	09 10 21.4	+0.2
CHVC	Chvalec	84.39	328	eP	P	09 10 21.4	+0.2
PSZ	Piszkesteto	84.39	324	⇑P	P	09 10 21.7	+0.4
PSZ	Piszkesteto	84.39	324	⇑P	P	09 10 21.7	+0.4
DPC	Dobruska-Polom	84.43	328	eP	P	09 10 21.7	+0.3
DPC	Dobruska-Polom	84.43	328	eP	P	09 10 21.7	+0.3
UPC	Upice	84.46	328	eP	P	09 10 22.2	+0.7
UPC	Upice	84.46	328	eP	P	09 10 22.2	+0.7
HMU	Henry Mountain	84.47	49	IAmb	IAmb	09 10 24.1	
	comp=Z,25nm,0.8s						
GLA	Glamis	84.54	55	IAmb	IAmb	09 10 24.7	
	comp=Z,23nm,0.8s						
SIRR	Siria	84.58	322	⇑P	P	09 10 21.7	-0.5
RSSD	Black Hills	84.70	41	P	P	09 10 24.0	+0.9
RSSD				IAmb	IAmb	09 10 24.7	
	comp=Z,32nm,1.9s						
RSSD	Black Hills	84.70	41	P	P	09 10 24.0	+0.9
RSSD				pmax	pmax		
	comp=Z,32nm,2.0s						
O20A	White River Ci	84.72	46	IAmb	IAmb	09 10 25.4	
	comp=Z,24nm,0.9s						
JAVC	Velka Javorina	84.84	326	eP	P	09 10 24.6	+1.1
VRAC	Vranov	85.04	327	eP	P	09 10 24.7	+0.3
HAYD	Hayden	85.08	45	IAmb	IAmb	09 10 27.7	
	comp=Z,16nm,1.0s						
CLL	Collm	85.22	330	IAmb	IAmb	09 10 26.0	
	comp=Z,30nm,1.7s						
CLL	Collm	85.22	330	i P	P	09 10 25.1	-0.2
CLL				pmax	pmax		
	comp=Z,32nm,1.8s						
CLL	Collm	85.22	330	i P	P	09 10 25.1	-0.2
	comp=Z,32nm,1.8s						
CLL				i pP	pP	09 10 57.6	-0.2
Y14A	Wickenburg	85.29	53	IAmb	IAmb	09 10 28.2	
	comp=Z,14nm,0.9s						
KRUC	Moravsky	85.30	327	eP	P	09 10 25.7	0.0
PV22	Blue Mesa, Par	85.35	47	IAmb	IAmb	09 10 28.8	
	comp=Z,14nm,1.0s						
PV04	Paradox Valley	85.36	47	IAmb	IAmb	09 13 29.7	
	comp=Z,37nm,1.1s						
MODS	Modra-Piesok	85.36	326	eP	P	09 10 26.8	+0.7
MODS				e		09 50 13.3	
MODS				e		09 52 15.7	
PV16	Nyswonger Mesa	85.40	47	IAmb	IAmb	09 10 29.1	
	comp=Z,22nm,0.8s						
113A	Mohawk Valley,	85.43	54	IAmb	IAmb	09 10 28.8	
	comp=Z,12nm,0.9s						
PV11	David Mesa, Pa	85.44	47	IAmb	IAmb	09 10 29.3	
	comp=Z,25nm,0.8s						
WUAZ	Wupatki	85.47	51	IAmb	IAmb	09 10 29.5	
	comp=Z,16nm,0.8s						
PV03	Paradox Valley	85.48	47	IAmb	IAmb	09 10 29.4	
	comp=Z,20nm,0.9s						
MDVR	Moldovita	85.53	321	⇑P	P	09 10 27.4	+0.3
PV13	Radium Mtn., P	85.56	47	IAmb	IAmb	09 10 29.6	
	comp=Z,18nm,0.7s						
PV01	Paradox Valley	85.73	47	IAmb	IAmb	09 10 30.5	
	comp=Z,13nm,0.8s						
ZVC	Zvikov	86.05	328	eP	P	09 10 29.3	-0.1
PIX	Pinacate	86.33	55	IAmb	IAmb	09 10 33.2	
	comp=Z,25nm,0.9s						
CKRC	Cesky Krumlov	86.44	327	eP	P	09 10 31.7	+0.3
CKRC	Cesky Krumlov	86.44	327	eP	P	09 10 31.7	+0.3
KHC	Kasperske Hory	86.55	328	eP	P	09 10 31.7	-0.3
KHC	Kasperske Hory	86.55	328	eP	P	09 10 31.7	-0.3
214A	Organ Pipe Nat	86.56	54	IAmb	IAmb	09 10 34.7	
	comp=Z,12nm,1.0s						
GERES	GERESS Array B	86.70	328	P	P	09 10 31.7	-1.0
	comp=Z,1.0nm,0.7s,baz=43,slow=2.7,SNR=7.5						
GERES				PP	PP	09 13 53.9	-2.1
	comp=Z,0.5nm,0.8s,baz=96,slow=9.0,SNR=3.9						
GERES				LR	LR	09 52 44.7	
	comp=Z,80nm,19.0s,baz=64,slow=38						
	comp=Z,1.0nm,0.7s						
KUQ	Kuujjuuaa	87.53	15	IAmb	IAmb	09 10 37.9	
	comp=Z,15nm,0.8s						
F33A	5 Mile Ranch,	87.62	36	IAmb	IAmb	09 10 38.8	
	comp=Z,20nm,0.9s						
EKA	Eskdalemuir Ar	87.85	340	P	P	09 10 38.8	+0.8
	comp=Z,0.4nm,0.4s,baz=31,slow=4.3,SNR=6.5						
EKA				PP	PP	09 14 02.0	-2.9
	comp=Z,0.7nm,0.7s,baz=30,slow=6.8,SNR=3.9						
EKA				LR	LR	09 54 13.7	
	comp=Z,51nm,18.8s,baz=16,slow=38						
	comp=Z,0.4nm,0.4s						
K30B	Basset	88.08	40	IAmb	IAmb	09 10 41.2	
	comp=Z,26nm,1.2s						
T25A	Trinidad	88.93	46	IAmb	IAmb	09 10 46.4	
	comp=Z,7.9nm,0.8s						
ECSD	EROS Data Cent	88.94	37	IAmb	IAmb	09 10 44.9	
	comp=Z,17nm,1.1s						
TASM	ASL Pad, Albuq	89.02	49	IAmb	IAmb	09 10 47.1	
	comp=Z,4.0nm,1.1s						
TASM	ASL Pad, Albuq	89.02	49	IAmb	IAmb	09 10 46.4	
	comp=Z,2.8nm,0.9s						
ANMO	Albuquerque	89.02	49	P	P	09 10 45.5	+1.3
ANMO	Albuquerque	89.02	49	P	P	09 10 45.5	+1.3
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
FUORN	Ofenpass-Fuorn	89.91	328	IAmb	IAmb	09 10 48.9	
	comp=Z,7.6nm,0.8s						
I37A	Lemond, Waseca	90.36	35	IAmb	IAmb	09 10 52.0	
	comp=Z,15nm,0.9s						
TUE	Stuetta	90.43	328	IAmb	IAmb	09 14 19.1	
	comp=Z,26nm,1.8s						
SCHQ	Schefferville	90.89	15	P	P	09 10 52.7	+0.4
	comp=Z,4.9nm,0.8s,baz=18,slow=6.2,SNR=4.5						
	comp=Z,4.9nm,0.8s						
G40A	Rib Lake	90.97	33	IAmb	IAmb	09 10 54.0	
	comp=Z,9.7nm,0.9s						
MNTX	Cornudas Mount	91.75	51	IAmb	IAmb	09 10 59.0	
	comp=Z,6.1nm,1.0s						
VHRN	Van Horn	92.59	51	IAmb	IAmb	09 11 03.1	
	comp=Z,9.6nm,0.8s						
PECS	Pecos	92.96	50	IAmb	IAmb	09 11 04.5	
	comp=Z,11nm,0.8s						
SLBS	Sierra La Lagu	93.45	60	P	P	09 11 06.7	+1.9
MNHN	Monahans	93.70	50	IAmb	IAmb	09 11 07.3	
	comp=Z,6.4nm,0.7s						
WMOK	Wichita Mounta	93.94	45	IAmb	IAmb	09 11 08.5	
	comp=Z,8.2nm,0.8s						
P40A	Paris	94.34	38	IAmb	IAmb	09 11 09.9	
	comp=Z,12nm,1.0s						
TXAR	Lajitas Array	94.40	52	P	P	09 11 10.4	+1.4
	comp=Z,17nm,0.7s,baz=297,slow=3.1,SNR=215						
TXAR	Lajitas Array	94.40	52	P	P	09 11 10.6	+1.5
TXAR	Lajitas Array	94.40	52	P	P	09 11 10.6	+1.5
FNO	Franklin	94.41	44	IAmb	IAmb	09 11 10.6	
	comp=Z,4.2nm,0.7s						
TUL3	Leonard	94.89	42	IAmb	IAmb	09 11 12.4	
	comp=Z,6.7nm,0.7s						
SAND	Sanderson	95.02	50	IAmb	IAmb	09 11 13.8	
	comp=Z,8.2nm,1.3s						
OZNA	Ozona	95.03	49	IAmb	IAmb	09 11 15.3	
	comp=Z,11nm,1.4s						
CCM	Cathedral Cave	95.85	38	P	P	09 11 15.8	+0.4
CCM	Cathedral Cave	95.85	38	P	P	09 11 15.8	+0.4
CCM				pmax	pmax		
	comp=Z,12nm,1.1s						
BRDY	Brady	96.15	48	IAmb	IAmb	09 11 18.7	
	comp=Z,7.9nm,1.2s						
JCT	Junction City	96.18	49	IAmb	IAmb	09 11 18.6	
	comp=Z,6.1nm,0.8s						
DRIO	Del Rio	96.35	50	IAmb	IAmb	09 11 20.5	
	comp=Z,5.2nm,1.0s						
WHTX	Lake Whitney,	96.63	46	IAmb	IAmb	09 11 20.9	
	comp=Z,6.0nm,0.9s						
MIAR	Mount Ida	97.13	42	IAmb	IAmb	09 11 22.7	
	comp=Z,9.3nm,0.9s						
ESDC	Sonseca Array	101.61	332	PP	PP	09 15 48.7	-3.2
	comp=Z,1.4nm,1.0s,baz=26,slow=6.9,SNR=4.3						
TORD	Torodi Ar. Bea	120.19	311	PKP	PKPdf	09 16 38.7	-1.0
	comp=Z,0.7nm,0.5s,baz=32,slow=4.0,SNR=7.6						
TORD				PP	PP	09 18 03.5	-2.5
	comp=Z,0.9nm,0.9s,baz=38,slow=7.7,SNR=4.0						
QSPA	South Pole Qui	121.34	180		PKPdf	09 16 40.4	-0.1
SYO	Syowa Base	122.80	205	⇓ePdiff	Pdif	09 13 17.4	+3.0

BOSA	**Boshof**	**124.21**	**255**	PKP	**PKiKP**	**09 16 47.8**	**+0.2**
	comp=Z,2.6nm,1.0s,baz=41,slow=3.8,SNR=4.2						
DBIC	**Dimbokro**	**129.27**	**312**	SKPbc	SKPab	09 20 04.3	-1.6
	comp=Z,2.8nm,0.7s,baz=56,slow=4.8,SNR=4.4						
SDV	**Santo Domingo**	**130.22**	**41**		**PKPdf**	**09 16 59.4**	**+0.1**
NVL	**N'lazarevskaya**	**131.79**	**200**	*e*PKIKP	**PKiKP**	**09 17 01.2**	**0.0**
NVL				*e*		09 19 24.1	
NVL				*e*PPP	PPP	09 22 15.5	
NVL				*e*SS	SS	09 36 49.4	+2.3
NVL				*e*SSS	SSS	09 41 43.4	
NVL				pmax	pmax		
	comp=Z,14nm,1.4s						
H03N2	**Juan Fernandez**	**147.25**	**104**	T	T	12 03 37.4	
	baz=279,slow=75,SNR=27						
H03N3	**Juan Fernandez**	**147.26**	**104**	T	T	12 03 37.6	
	baz=279,slow=75,SNR=22						
H03N1	**Juan Fernandez**	**147.27**	**104**	T	T	12 03 35.0	
	baz=279,slow=75,SNR=23						
LPAZ	**La Paz**	**150.24**	**66**	PKP	**PKPdf**	**09 17 36.5**	**+1.1**
	comp=Z,9.4nm,1.1s,baz=41,slow=2.6,SNR=3.5						
LPAZ				PKPbc	**PKiKP**	**09 17 41.8**	**+0.4**
	comp=Z,16nm,0.8s,baz=322,slow=2.2,SNR=55						
LPAZ	**La Paz**	**150.24**	**66**		**PKPbc**	**09 17 40.0**	**-0.6**
LL02	**Futaleuf**	**152.34**	**124**		**PKiKP**	**09 17 44.4**	**+0.2**
PLCA	**Paso Flores**	**153.81**	**119**	PKPbc	**PKiKP**	**09 17 48.4**	**+1.0**
	comp=Z,2.7nm,0.5s,baz=269,slow=3.4,SNR=16						
PLCA				PKPab	**PKPab**	**09 18 02.3**	**+1.4**
	comp=Z,5.1nm,0.8s,baz=249,slow=4.4,SNR=10						
BDFB	**Brasilia**	**162.53**	**27**	PKPab	**PKPab**	**09 18 39.8**	**+0.8**
	comp=Z,4.9nm,0.8s,baz=242,slow=1.5,SNR=7.8						
CPUP	**Villa Florida**	**163.97**	**75**	PKP	**PKPdf**	**09 17 52.4**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=51,slow=7.7,SNR=3.4						
CPUP				PKPab	**PKPab**	**09 18 45.9**	**+0.6**
	comp=Z,2.7nm,0.8s,baz=300,slow=7.4,SNR=7.4						

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*IDG **25** 09:00:30.0, 52°.30N×35°.42E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*IDC **25** 09:00:39.5±3.4, 52°.33N×35°.26E, h0^{km}, mbtmp3.2/4, ML2.6/4, Error ellipse: s-maj=38.2km s-min=12.7km az=117.0*

ISC 25 09:00:41.0±3.2**, 52°.7N**±0°.1×**34°.7E**±0°.3**, h0**^{km}**, n5,** σ**1^{s}.92**/7**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKASG	**Malin Array Be**	**3.92**	**242**	Pn	**Pn**	**09 01 40.9**	**-1.6**
	0.8nm,0.3s,baz=57,slow=11,SNR=2.4						
AKASG				Pg	**Pb**	**09 01 52.0**	**+1.0**
	1.3nm,0.3s,baz=58,slow=16,SNR=3.5						
AKASG				Sn	**Sn**	**09 02 30.6**	**+1.5**
	1.0nm,0.3s,baz=64,slow=27,SNR=1.5						
AKASG				Lg	Lg	09 02 47.8	
	2.3nm,0.3s,baz=63,slow=28,SNR=4.1						
	0.3nm,0.3s						
FINES	**FINESS Array B**	**9.93**	**335**	Pn	**Pn**	**09 03 05.5**	**+0.7**
	0.1nm,0.3s,baz=150,slow=13,SNR=8.1						
FINES				Sn	**Sn**	**09 04 57.0**	**+0.2**
	0.2nm,0.3s,baz=155,slow=23,SNR=2.0						
	0.4nm,0.7s						
I31KZ	**AKTYUBINSK INF**	**14.71**	**90**	I	I	10 20 30.0	
	baz=283,slow=297,SNR=1.7						
NOA	**NORSAR Array B**	**15.22**	**312**	Pn	**Pn**	**09 04 14.2**	**-2.8**
	baz=120,slow=9.7,SNR=1.3						
	0.4nm,0.9s						
ARCES	**ARCESS Array B**	**17.43**	**349**	P	**P**	**09 04 47.1**	**+0.5**
	0.1nm,0.3s,baz=159,slow=13,SNR=4.2						
	2.7nm,1.0s						

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*IDC **25** 09:20:00.3±1.6, 22°.65S×173°.76E, h0^{km}, mb4.4/9, mbtmp4.4/10, ML3.3/1, MS4.0/2, Error ellipse: s-maj=42.8km s-min=25.4km az=144.0*

*GCMT **25** 09:20:04.5±0.3, 21°.93S±0°.02×173°.57E±0°.02, h18^{km}±1^{km}, MW4.9/86, Moment Tensor Solution. s24,c31; s86,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.29±.14; M$_{\theta\theta}$0.11±.11; M$_{\phi\phi}$1.18±.11; M$_{r\theta}$-0.20±.23; M$_{\theta\phi}$2.32±.08; M$_{\phi r}$0.77±.23; Best double couple: M$_0$2.63900×10^{16} NP1:φ$_s$79.00000°, δ60.00000°, λ-23.00000°. NP2: φ$_s$180.00000°, δ70.00000°, λ-148.00000°. Principal axes: T 3.0790, Plg6.0000°, Azm308.0000°; N -0.8820, Plg53.0000°, Azm209.0000°; P -2.1980, Plg36.0000°, Azm42.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **25** 09:20:05.5±2.2, 21°.8S±0°.1×173°.16E±0°.03, h10^{km}±1^{km}, mb4.5/13 Error ellipse: s-maj=19.4km s-min=3.9km az=177.0*

ISC 25 09:20:05.5±0.6**, 21°.8S**±0°.1×**173°.10E**±0°.07**, h10**^{km}**, n34,** σ**2^{s}.25**/34**, mb4.5**/15**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.73**	**273**	Pn	**Pn**	**09 21 16.4**	**-0.4**
PINNC	**Pines Island,**	**5.29**	**260**	Pn	**Pn**	**09 21 26.8**	**+2.1**
DZM	**Mont Dzumac**	**6.18**	**266**	Pn	**Pn**	**09 21 41.6**	**+4.6**
	0.6nm,0.3s,baz=85,slow=18,SNR=3.6						
DZM				Sn	**Sb**	**09 23 01.5**	**-6.0**
	0.5nm,0.3s,baz=41,slow=12,SNR=1.7						
DZM				LR	LR	09 23 58.4	
	comp=Z,903nm,20.7s,baz=110,slow=35						
	8.5nm,0.8s						
DZM	**Mont Dzumac**	**6.18**	**266**		**Pn**	**09 21 37.5**	**+0.5**
MSVF	**Nonsavu**	**6.19**	**50**	Pn	**Pn**	**09 21 36.5**	**-0.6**
SANVU	**Saraoutou**	**8.45**	**318**	Pn	**Pn**	**09 22 06.1**	**-2.0**
TOZ	**Tahuroa Road**	**15.99**	**173**	P	**P**	**09 23 54.9**	**+0.9**
NIUE	**Niue**	**16.14**	**83**		**Pn**	**09 23 51.1**	**-1.5**
URZ	**Urewera**	**16.74**	**169**	LR	LR	09 28 47.0	
	comp=Z,673nm,18.9s,baz=350,slow=33						
THZ	**Tophouse**	**19.88**	**180**	P	**P**	**09 24 35.5**	**-1.5**
THZ				IAmb	IAmb	09 25 05.9	
	comp=Z,29nm,1.4s						
ARMA	**Armidale**	**21.07**	**242**		**P**	**09 24 49.7**	**-0.3**
ARMA				IAmb	IAmb	09 24 59.7	
	comp=Z,52nm,1.4s						
CTA	**Charters Tower**	**25.12**	**269**	P	**P**	**09 25 32.2**	**+1.4**
	comp=Z,4.9nm,0.9s,baz=115,slow=7.2,SNR=3.2						
	comp=Z,4.9nm,0.9s						
PMG	**Port Moresby**	**27.81**	**292**	P	**P**	**09 26 01.0**	**+5.9**
	comp=Z,2.6nm,0.3s,baz=40,slow=5.9,SNR=3.6						
	comp=Z,2.6nm,0.3s						
STKA	**Stephens Creek**	**29.74**	**244**	P	**P**	**09 26 11.3**	**-0.9**
	comp=Z,1.9nm,0.8s,baz=85,slow=11,SNR=3.6						
	comp=Z,1.9nm,0.8s						
WR8	**Warramunga Arr**	**36.05**	**266**	P	**P**	**09 27 06.2**	**-1.2**
WR8				IAmb	IAmb	09 27 15.3	
	comp=Z,8.4nm,1.1s						
AS31	**Alice Springs**	**36.12**	**259**		**P**	**09 27 08.0**	**-0.1**
ASAR	**Alice Springs**	**36.12**	**259**	P	**P**	**09 27 07.8**	**-0.3**
	comp=Z,3.2nm,0.9s,baz=82,slow=8.8,SNR=24						
	comp=Z,3.2nm,0.9s						
ASAR	**Alice Springs**	**36.12**	**259**	P	**P**	**09 27 07.9**	**-0.1**
WB0	**Warramunga Arr**	**36.18**	**266**	P	**P**	**09 27 08.2**	**-0.3**
WB0				IAmb	IAmb	09 27 08.8	
	comp=Z,8.1nm,1.1s						
WRA	**Warramunga Arr**	**36.20**	**266**	P	**P**	**09 27 08.2**	**-0.5**
	comp=Z,2.3nm,0.8s,baz=96,slow=8.4,SNR=7.5						
	comp=Z,2.3nm,0.8s						
WRA	**Warramunga Arr**	**36.20**	**266**	P	**P**	**09 27 07.9**	**-0.8**
MTN	**Manton Dam**	**40.93**	**276**	P	**P**	**09 27 49.0**	**+0.5**
MTN				IAmb	IAmb	09 27 56.5	
	comp=Z,9.6nm,0.9s						
FORT	**Forrest**	**41.12**	**248**	P	**P**	**09 27 49.5**	**-0.4**
FORT				IAmb	IAmb	09 27 50.7	
	comp=Z,11nm,1.2s						
KNRA	**Kununurra**	**42.31**	**270**	P	**P**	**09 27 58.8**	**-1.1**
FITZ	**Fitzroy Crossi**	**44.63**	**266**	P	**P**	**09 28 19.0**	**+0.5**
FITZ				IAmb	IAmb	09 28 26.6	
	comp=Z,8.0nm,1.2s						
NWAO	**Narrogin (SRO)**	**50.32**	**245**	P	**P**	**09 29 00.9**	**-1.7**
MJAR	**Matsushiro Arr**	**66.75**	**330**	P	**P**	**09 31 01.0**	**+3.9**
	comp=Z,8.8nm,1.2s,baz=165,slow=6.3,SNR=7.0						
	comp=Z,8.8nm,1.2s						
KSRS	**Korea Array**	**72.69**	**324**	P	**P**	**09 31 35.8**	**+2.2**
	comp=Z,5.9nm,1.2s,baz=138,slow=6.2,SNR=7.8						
	comp=Z,5.9nm,1.2s						
USRK	**Ussuriysk Ar.**	**75.71**	**331**	P	**P**	**09 31 52.9**	**+1.8**
	comp=Z,3.4nm,0.8s,baz=145,slow=7.0,SNR=5.1						
	comp=Z,3.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**82.85**	**293**	P	**P**	**09 32 31.9**	**+1.2**
	comp=Z,2.3nm,0.3s,baz=134,slow=3.6,SNR=5.2						
	comp=Z,2.3nm,0.3s						
RCWM	**Renegade Canyo**	**87.08**	**49**	P	**P**	**09 32 50.1**	**-1.6**
EKA	**Eskdalemuir Ar**	**146.42**	**356**	PKPbc	**PKPbc**	**09 39 45.5**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=354,slow=2.1,SNR=1.5						
GERES	**GERESS Array B**	**148.43**	**334**	PKPbc	**PKPdf**	**09 39 48.8**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=20,slow=5.1,SNR=3.8						
TORD	**Torodi Ar. Bea**	**168.10**	**225**	PKPab	**PKPab**	**09 41 17.4**	**-3.5**
	comp=Z,0.7nm,0.9s,baz=105,slow=7.5,SNR=4.1						

IDC 25 09:24:45.1±6.3**, 5°.03N**×**94°.42E, h0**^{km}**, mb3.7**/5**, mbtmp3.7**/5**, MS4.1**/1**, Error ellipse: s-maj=343.5km s-min=27.7km az=58.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**42.90**	**348**	P	P	09 32 45.4	-0.1
	0.3nm,0.4s,baz=160,slow=8.3,SNR=6.0						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**47.35**	**346**	P	P	09 33 21.0	+0.3
	0.5nm,0.5s,baz=169,slow=7.2,SNR=7.6						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**47.92**	**128**	P	P	09 33 25.6	-0.1
	0.3nm,0.5s,baz=300,slow=8.0,SNR=5.0						
ASAR				LR	LR	09 54 31.2	
	comp=Z,192nm,19.7s,baz=98,slow=37						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**49.39**	**353**	P	P	09 33 35.7	-0.6
	1.5nm,0.5s,baz=184,slow=7.1,SNR=5.0						
	1.5nm,0.5s						
BVAR	**Borovoye Array**	**51.75**	**342**	P	P	09 33 54.1	-0.2
	0.3nm,0.4s,baz=164,slow=7.5,SNR=2.4						
	0.3nm,0.4s						

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*BGR **25** 09:30:24.8, 24°.35S×175°.08E, h33^{km}*

*NEIC **25** 09:30:24.1±2.5, 22°.3S±0°.1×173°.4E±0°.1, h10^{km}±1^{km}, mb4.5/12, Error ellipse: s-maj=21.3km s-min=19.5km az=38.0*

*GCMT **25** 09:30:26.1±0.3, 21°.86S±0°.01×173°.57E±0°.02, h14^{km}±1^{km}, MW5.0/96, Moment Tensor Solution. s28,c33; s96,c134; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.59±.18; M$_{\theta\theta}$0.58±.14; M$_{\phi\phi}$1.01±.13; M$_{r\theta}$0.78±.30; M$_{\theta\phi}$3.17±.10; M$_{\phi r}$-0.37±.26; Best double couple: M$_0$3.44300×10^{16} NP1:φ$_s$2.00000°, δ66.00000°, λ-158.00000°. NP2: φ$_s$263.00000°, δ70.00000°, λ-26.00000°. Principal axes: T 3.9830, Plg3.0000°, Azm313.0000°; N -1.0830, Plg58.0000°, Azm48.0000°; P -2.9030, Plg32.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **25** 09:30:30.2±6.3, 22°.35S×173°.20E, h58^{km}±49^{km}, mb4.0/12, mbtmp4.3/13, ML3.4/1, MS4.1/22 Error ellipse: s-maj=45.3km s-min=25.1km az=128.0*

ISC 25 09:30:28.3±0.7**, 22°.3S**±0°.1×**173°.3E**±0°.1**, h44**^{km}**, n77,** σ**1^{s}.41**/57**, mb4.4**/16**, MS4.1**/20**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.95**	**279**	Pn	**Pn**	**09 31 39.9**	**-0.3**
PINNC	**Pines Island,**	**5.41**	**266**		**Pn**	**09 31 46.9**	**+0.4**
DZM	**Mont Dzumac**	**6.35**	**271**	P	**Pn**	**09 32 00.3**	**+0.8**
	0.9nm,0.3s,baz=93,slow=18,SNR=7.5						
	4.5nm,0.4s						
DZM	**Mont Dzumac**	**6.35**	**271**		**Pn**	**09 32 00.0**	**+0.6**
SANVU	**Saraoutou**	**8.93**	**319**	Pn	**Pn**	**09 32 34.1**	**-0.6**
RAO	**Raoul Island**	**10.51**	**133**	LR	LR	09 36 10.3	
	comp=Z,2μm,18.8s,baz=312,slow=32						
URZ	**Urewera**	**16.23**	**169**	LR	LR	09 39 07.2	
	comp=Z,960nm,21.6s,baz=350,slow=32						
BKZ	**Black Stump Fm**	**17.03**	**171**	P	**P**	**09 34 23.8**	**-0.8**
LTZ	**Lake Taylor**	**20.43**	**182**	P	**P**	**09 35 01.7**	**-0.2**
LTZ				IAmb	IAmb	09 35 30.0	
	comp=Z,17nm,1.1s						
ARMA	**Armidale**	**21.00**	**243**	P	**P**	**09 35 08.3**	**+0.1**
ARMA				IAmb	IAmb	09 35 17.1	
	comp=Z,19nm,1.1s						
RAR	**Rarotonga**	**25.03**	**93**	LR	LR	09 43 24.7	
	comp=Z,273nm,21.6s,baz=275,slow=31						
CTA	**Charters Tower**	**25.29**	**270**	P	**P**	**09 35 52.4**	**+1.6**
	comp=Z,3.4nm,0.8s,baz=90,slow=13,SNR=3.5						
	comp=Z,3.4nm,0.8s						
PMG	**Port Moresby**	**28.16**	**293**	LR	LR	09 45 09.2	
	comp=Z,395nm,19.4s,baz=130,slow=31						
STKA	**Stephens Creek**	**29.69**	**244**	P	**P**	**09 36 31.6**	**+1.4**
	comp=Z,1.7nm,0.7s,baz=88,slow=13,SNR=4.7						
STKA				LR	LR	09 48 10.4	
	comp=Z,313nm,18.0s,baz=68,slow=36						
	comp=Z,1.7nm,0.7s						
PPT	**Papeete**	**35.16**	**89**	LR	LR	09 50 25.1	
	comp=Z,152nm,19.2s,baz=251,slow=34						
WR8	**Warramunga Arr**	**36.19**	**266**	P	**P**	**09 37 25.7**	**-1.3**
WR8				IAmb	IAmb	09 37 35.9	
	comp=Z,7.5nm,1.0s						
AS31	**Alice Springs**	**36.21**	**260**		**P**	**09 37 25.7**	**-1.4**
ASAR	**Alice Springs**	**36.21**	**260**	P	**P**	**09 37 26.6**	**-0.5**
	comp=Z,4.4nm,0.9s,baz=86,slow=8.4,SNR=27						
	comp=Z,4.4nm,0.9s						
ASAR	**Alice Springs**	**36.21**	**260**	P	**P**	**09 37 25.9**	**-1.3**
WB0	**Warramunga Arr**	**36.33**	**267**		**P**	**09 37 26.6**	**-1.6**
WB0				IAmb	IAmb	09 37 27.4	
	comp=Z,8.9nm,1.1s						
WRA	**Warramunga Arr**	**36.34**	**266**	P	**P**	**09 37 26.6**	**-1.7**
	comp=Z,2.5nm,0.8s,baz=102,slow=8.7,SNR=9.8						
	comp=Z,2.5nm,0.8s						
WRA	**Warramunga Arr**	**36.34**	**266**	P	**P**	**09 37 25.7**	**-2.6**
FORT	**Forrest**	**41.11**	**248**	P	**P**	**09 38 07.8**	**-0.4**
FORT				IAmb	IAmb	09 38 22.0	
	comp=Z,9.0nm,0.8s						
MTN	**Manton Dam**	**41.16**	**276**		**P**	**09 38 08.6**	**-0.1**
MTN				IAmb	IAmb	09 38 15.6	
	comp=Z,13nm,1.1s						
KNRA	**Kununurra**	**42.50**	**271**	P	**P**	**09 38 18.7**	**-0.9**
FITZ	**Fitzroy Crossi**	**44.77**	**266**		**P**	**09 38 37.6**	**-0.3**
GUMO	**Guam**	**45.27**	**319**	LR	LR	09 57 29.5	
	comp=Z,223nm,18.7s,baz=149,slow=36						
MBWA	**Marble Bar**	**49.55**	**261**	P	**P**	**09 39 13.8**	**-1.3**
NWAO	**Narrogin (SRO)**	**50.28**	**245**	LR	LR	09 59 41.3	
	comp=Z,251nm,19.2s,baz=68,slow=35						
VNDA	**Vanda**	**55.54**	**183**	LR	LR	10 01 02.8	
	comp=Z,124nm,20.4s,baz=14,slow=33						
JCJ	**Chichijima**	**57.60**	**327**	LR	LR	10 02 41.0	
	comp=Z,49nm,21.8s,baz=153,slow=34						
JHJ	**Hachijo jima 2**	**63.72**	**329**	LR	LR	10 07 03.9	
	comp=Z,30nm,19.5s,baz=106,slow=34						
JOW	**Kunigami**	**65.45**	**316**	LR	LR	10 06 52.8	
	comp=Z,121nm,20.9s,baz=133,slow=33						
MJAR	**Matsushiro Arr**	**67.26**	**330**	P	**P**	**09 41 16.8**	**-1.5**
	comp=Z,4.9nm,1.0s,baz=162,slow=5.7,SNR=6.9						
MJAR				LR	LR	10 07 26.7	
	comp=Z,124nm,21.8s,baz=148,slow=33						
	comp=Z,4.9nm,1.0s						
JNU	**Nakatsue**	**68.38**	**322**	LR	LR	10 06 29.2	
	comp=Z,66nm,21.5s,baz=137,slow=32						
RPN	**Rapa Nui**	**69.42**	**112**	LR	LR	10 03 31.8	
	comp=Z,194nm,21.0s,baz=246,slow=28						
ASAJ	**Asahikawa**	**71.83**	**337**	LR	LR	10 08 34.5	
	comp=Z,221nm,21.6s,baz=169,slow=32						
KSRS	**Korea Array**	**73.19**	**324**	P	**P**	**09 41 55.0**	**+0.5**
	comp=Z,11nm,1.2s,baz=143,slow=6.1,SNR=11						
KSRS				LR	LR	10 12 43.9	
	comp=Z,50nm,18.8s,baz=135,slow=35						
	comp=Z,11nm,1.2s						
USRK	**Ussuriysk Ar.**	**76.22**	**331**	P	**P**	**09 42 13.9**	**+1.9**
	comp=Z,3.7nm,0.8s,baz=151,slow=4.4,SNR=7.5						
	comp=Z,3.7nm,0.8s						
PETK	**Petropavlovsk-**	**76.31**	**350**	P	**P**	**09 42 13.6**	**+1.4**
	comp=Z,11nm,1.0s,baz=134,slow=8.6,SNR=4.2						
PETK				LR	LR	10 14 09.4	
	comp=Z,118nm,19.1s,baz=149,slow=34						
	comp=Z,11nm,1.0s						
PSI	**Prapat**	**76.65**	**279**	LR	LR	10 18 10.6	
	comp=Z,104nm,19.1s,baz=120,slow=37						
CMAR	**Chiang Mai Arr**	**83.20**	**293**	P	**P**	**09 42 49.9**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=130,slow=3.8,SNR=5.1						
	comp=Z,0.9nm,0.3s						
MA2	**Magadan**	**83.66**	**349**	LR	LR	10 14 31.8	
	comp=Z,183nm,21.0s,baz=166,slow=32						
SEY	**Seymchan**	**86.55**	**351**	LR	LR	10 16 41.5	
	comp=Z,190nm,19.4s,baz=142,slow=32						
NVAR	**Mina Array Bea**	**88.05**	**47**	P	**P**	**09 43 14.8**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=236,slow=7.3,SNR=3.6						
	comp=Z,0.2nm,0.6s						
H03S2	**Juan Fernandez**	**91.50**	**128**	T	T	11 24 42.0	
	baz=240,slow=74,SNR=4.1						
H03S1	**Juan Fernandez**	**91.52**	**128**	T	T	11 24 48.0	
	baz=240,slow=74,SNR=3.5						
H03S3	**Juan Fernandez**	**91.52**	**128**	T	T	11 24 49.2	
	baz=240,slow=74,SNR=4.1						
SONM	**Songino Array**	**91.95**	**322**	P	**P**	**09 43 32.5**	**+0.3**
	comp=Z,1.5nm,0.9s,baz=140,slow=4.4,SNR=8.4						
	comp=Z,1.5nm,0.9s						
ILAR	**Eielson Array**	**92.07**	**16**	P	**P**	**09 43 32.6**	**+0.4**
	comp=Z,1.0nm,1.0s,baz=236,slow=5.2,SNR=4.8						
	comp=Z,1.0nm,1.0s						
NEW	**Newport**	**93.72**	**39**	LR	LR	10 23 51.8	
	comp=Z,122nm,18.6s,baz=262,slow=34						
STEB	**Steborice**	**146.37**	**331**	*e*PKP	**PKPdf**	**09 50 02.4**	**-0.5**
OSTC	**Ostas**	**146.58**	**333**	*e*PKP	**PKiKP**	**09 50 10.4**	**+2.7**
DPC	**Dobruska-Polom**	**146.69**	**333**	*e*PKP	**PKPbc**	**09 50 05.1**	**-0.1**
MAUC	**Maruska**	**146.75**	**330**	*e*PKP	**PKPbc**	**09 50 04.5**	**-0.9**
EKA	**Eskdalemuir Ar**	**146.91**	**356**	PKPbc	**PKPab**	**09 50 07.0**	**0.0**
	comp=Z,1.4nm,0.8s,baz=1.9,slow=2.5,SNR=3.6						
PRU	**Pruhonice**	**147.71**	**334**	*e*PKP	**PKPbc**	**09 50 08.5**	**+0.5**
ZVC	**Zvikov**	**148.28**	**334**	*e*PKP	**PKPbc**	**09 50 07.6**	**-1.9**
CONA	**Conrad Observa**	**148.69**	**330**	*e*PKP	**PKPdf**	**09 50 08.6**	**+1.6**
	comp=Z,9.6nm,1.7s						
CKRC	**Cesky Krumlov**	**148.71**	**333**	*e*PKP	**PKPdf**	**09 50 08.4**	**+1.5**
KHC	**Kasperske Hory**	**148.77**	**334**	*e*PKP	**PKiKP**	**09 50 12.0**	**-0.3**
GERES	**GERESS Array B**	**148.94**	**333**	PKPbc	**PKPbc**	**09 50 09.3**	**-2.1**
	comp=Z,3.0nm,0.9s,baz=64,slow=3.1,SNR=8.1						
GRF	**Grafenberg Arr**	**149.22**	**337**	*e*PKPbc	**PKPab**	**09 50 16.1**	**-0.4**
	baz=40,slow=1.8						
ARSA	**Arzberg**	**149.34**	**330**	*e*PKP	**PKPab**	**09 50 16.9**	**-0.2**
	comp=Z,0.6nm,0.4s						
MOA	**Molln**	**149.47**	**332**	*e*PKP	**PKPab**	**09 50 16.2**	**-1.3**
	comp=Z,8.4nm,1.8s						
BIOA	**Bad Ischl, Aus**	**149.86**	**332**	*e*PKP	**PKPbc**	**09 50 11.8**	**-1.8**
	comp=Z,9.5nm,1.6s						
SOKA	**Soboth**	**149.99**	**329**	*e*PKP	**PKPdf**	**09 50 10.9**	**+1.8**
	comp=Z,9.5nm,1.4s						
KBA	**Koelnbreinsper**	**150.46**	**332**	*e*PKP	**PKPdf**	**09 50 11.4**	**+1.4**
	comp=Z,6.0nm,0.6s						
LESA	**Schwarzleotal**	**150.48**	**333**	*e*PKP	**PKPbc**	**09 50 15.1**	**-0.1**
	comp=Z,7.2nm,1.1s						
MYKA	**Terra Mystica**	**150.67**	**331**	*e*PKP	**PKiKP**	**09 50 16.0**	**-0.3**
	comp=Z,0.9nm,0.5s						
WATA	**Walderalm**	**151.01**	**334**	*e*PKP	**PKiKP**	**09 50 16.6**	**-0.4**
	comp=Z,4.7nm,1.5s						
WTTA	**Wattenberg**	**151.04**	**334**	*e*PKP	**PKPdf**	**09 50 12.6**	**+1.8**
	comp=Z,0.1nm,0.2s						
ABTA	**Abfaltersbach**	**151.08**	**332**	*e*PKP	**PKPbc**	**09 50 13.6**	**-3.0**
	comp=Z,6.0nm,1.1s						
RETA	**Reutte**	**151.21**	**335**	*e*PKP	**PKPbc**	**09 50 14.3**	**-2.6**
	comp=Z,6.0nm,1.4s						
SQTA	**Sankt Quirin**	**151.25**	**334**	*e*PKP	**PKPbc**	**09 50 14.5**	**-2.5**
	comp=Z,3.3nm,0.8s						
FETA	**Feichten**	**151.61**	**334**	*e*PKP	**PKPbc**	**09 50 14.6**	**-3.3**
	comp=Z,5.7nm,1.0s						
TORD	**Torodi Ar. Bea**	**167.88**	**223**	PKP	**PKPdf**	**09 50 30.7**	**0.0**
	comp=Z,0.2nm,0.7s,baz=228,slow=1.7,SNR=3.7						
TORD				PKPab	**PKPab**	**09 51 36.5**	**-1.2**
	comp=Z,0.6nm,0.8s,baz=139,slow=4.9,SNR=4.2						

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*RSNC **25** 09:31:13.9±0.0, 3°N±1°×7°4W±°, h5^{km}±3^{km}, M3.2, mb3.8, ML3.0*

*CATAC **25** 09:31:14.7±0.8, 4°N±4°×7°4W±°, h4^{km}±5^{km}, M3.7/6, mb3.7/1, MLv3.6/6, Error ellipse: s-maj=14.0km s-min=5.1km az=116.9, confirmed*

ISC 25 09:31:12.7±0.8**, 3°.45N**±0°.02×**74°.20W**±0°.03**, h10**^{km}**, n34,** σ**1^{s}.78**/67**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	**La Uribe, Meta**	**0.27**	**222**	P	**Pg**	**09 31 18.0**	**-0.1**
URMC				S	**Sg**	**09 31 21.9**	**+0.1**
PRAC	**Prado**	**0.74**	**291**	P	**Pg**	**09 31 25.7**	**-1.2**
PRAC				S	**Sg**	**09 31 36.0**	**-0.5**
PRAC	**Prado**	**0.74**	**291**	P	**Pg**	**09 31 25.9**	**-1.0**
PRAC				S	**Sg**	**09 31 35.9**	**-0.7**
VILC	**Villavicencio,**	**0.83**	**37**	P	**Pg**	**09 31 27.5**	**-1.3**
VILC				S	**Sg**	**09 31 39.5**	**-0.2**
CVER	**Cruz Verde, Cu**	**1.08**	**7**	P	**Pg**	**09 31 31.7**	**-1.8**
CVER				S	**Sg**	**09 31 46.3**	**-1.2**
ORTC	**Ortega, Tolima**	**1.14**	**294**	P	**Pb**	**09 31 33.0**	**-1.6**
ORTC				S	**Sb**	**09 31 48.1**	**-1.4**
CHIC	**Chingaza**	**1.27**	**22**	P	**Pn**	**09 31 35.1**	**-1.7**
CHIC				S	**Sb**	**09 31 51.5**	**-1.9**
MACC	**Macarena, Meta**	**1.34**	**165**	P	**Pn**	**09 31 36.5**	**-1.0**
MACC				S	**Sb**	**09 31 54.4**	**-0.7**
BETC	**Betania**	**1.45**	**239**	P	**Pn**	**09 31 38.9**	**-0.2**
BETC				S	**Sb**	**09 31 58.1**	**-0.4**
ANIL	**Santa Ana**	**1.59**	**311**	P	**Pn**	**09 31 40.8**	**-0.4**
ANIL				S	**Sn**	**09 32 01.3**	**-0.6**
GARC	**Garzon, Huila**	**1.80**	**226**	P	**Pb**	**09 31 44.7**	**-1.2**
GARC				S	**Sb**	**09 32 08.2**	**-0.4**
RECRC	**Villamaria, Ca**	**1.90**	**323**	P	**Pn**	**09 31 46.1**	**+0.5**
RECRC				S	**Sn**	**09 32 10.1**	**+0.3**
SPBC	**San Pablo de B**	**2.20**	**3**	P	**Pb**	**09 31 51.5**	**-1.1**
SPBC				S	**Sb**	**09 32 20.2**	**+0.3**
YOTC	**Yotoco, Valle**	**2.21**	**284**	P	**Pn**	**09 31 50.3**	**+0.8**
YOTC				S	**Sb**	**09 32 20.0**	**-0.3**
FLOC	**Florencia**	**2.35**	**218**	P	**Pb**	**09 31 54.1**	**-1.1**
FLOC				S	**Sb**	**09 32 24.9**	**+0.6**
FLOC	**Florencia**	**2.35**	**218**	P	**Pb**	**09 31 53.9**	**-1.3**
FLOC				S	**Sb**	**09 32 24.4**	**+0.1**
JAMC	**Jamundi, Valle**	**2.48**	**265**	P	**Pb**	**09 31 55.3**	**-2.2**
JAMC				S	**Sb**	**09 32 29.1**	**+0.9**
PLMC	**San Jos del P**	**2.53**	**305**	P	**Pn**	**09 31 55.3**	**+1.3**
PLMC				S	**Sb**	**09 32 29.7**	**+0.1**
POPC	**Popayan, Colom**	**2.63**	**250**	P	**Pb**	**09 31 59.0**	**-1.1**
POPC				S	**Sb**	**09 32 33.7**	**+1.1**
RUSC	**La Rusia**	**2.67**	**25**	P	**Pn**	**09 31 57.8**	**+1.6**
RUSC				S	**Sn**	**09 32 31.7**	**+2.7**
RUSC	**La Rusia**	**2.67**	**25**	P	**Pn**	**09 31 57.8**	**+1.6**
RUSC				S	**Sn**	**09 32 32.1**	**+3.1**
CBOC	**Ciudad Bolivar**	**3.01**	**323**	P	**Pn**	**09 32 02.4**	**+1.8**
CBOC				S	**Sb**	**09 32 42.8**	**-0.5**
PTBC	**PUERTO BERRIO,**	**3.08**	**355**	P	**Pn**	**09 32 02.1**	**+0.6**
PTBC				S	**Sn**	**09 32 41.3**	**+2.8**
BARC	**Barichara**	**3.29**	**18**	P	**Pn**	**09 32 07.8**	**+3.3**
BARC				S	**Sb**	**09 32 52.4**	**+0.9**
PTLC	**Puerto Leguiza**	**3.31**	**190**	P	**Pg**	**09 32 15.9**	**-0.2**
PTLC				S	**Sg**	**09 32 59.1**	**+0.1**
CRUC	**La Cruz**	**3.32**	**236**	P	**Pb**	**09 32 12.3**	**+0.4**
CRUC				S	**Sb**	**09 32 53.5**	**+0.9**
BBAC	**Balboa, Cauca**	**3.36**	**245**	P	**Pb**	**09 32 12.4**	**-0.1**
BBAC				S	**Sg**	**09 32 56.5**	**-4.1**
BRJC	**Barrancabermej**	**3.53**	**7**	P	**Pn**	**09 32 09.1**	**+1.4**
BRJC				S	**Sb**	**09 32 55.2**	**-3.2**
PAMC	**Pamplona, Colo**	**4.15**	**21**	P	**Pn**	**09 32 19.3**	**+2.8**
PAMC				S	**Sb**	**09 33 12.1**	**-4.4**
UREC	**San Jos de Ur**	**4.48**	**343**	P	**Pn**	**09 32 22.3**	**+1.6**
UREC				S	**Sn**	**09 33 18.4**	**+5.5**
OCAC	**Ocana**	**4.84**	**10**	P	**Pn**	**09 32 27.8**	**+2.0**
OCAC				S	**Sn**	**09 33 25.5**	**+3.4**
CAP2	**Capurgana**	**6.05**	**329**	S	**Sg**	**09 34 30.1**	**+3.0**
SJCC	**San Jacinto, C**	**6.48**	**351**	P	**Pn**	**09 32 48.3**	**0.0**
SJCC				S	**Sn**	**09 34 04.0**	**+1.5**
SJCC	**San Jacinto, C**	**6.48**	**351**	P	**Pn**	**09 32 48.3**	**0.0**
SJCC				S	**Sn**	**09 34 03.5**	**+1.1**

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*IDC **25** 09:32:31.1±1.7, 21°.82S×173°.46E, h0^{km}, mb4.0/6, mbtmp4.0/7, ML2.3/1, MS4.3/1, Error ellipse: s-maj=76.7km s-min=24.1km az=155.0*

ISC 25 09:32:32.8±1.5**, 21°.8S**±0°.5×**173°.4E**±0°.2**, h10**^{km}**, n12,** σ**0^{s}.78**/11**, mb4.0**/6**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.46**	**266**	Pn	**Pn**	**09 34 07.3**	**-0.7**
	0.1nm,0.3s,baz=66,slow=20,SNR=1.2						
	5.1nm,0.8s						
CTA	**Charters Tower**	**25.39**	**269**	LR	LR	09 45 51.8	
	comp=Z,646nm,19.2s,baz=84,slow=32						
ASAR	**Alice Springs**	**36.40**	**259**	P	**P**	**09 39 37.5**	**-0.2**
	1.4nm,0.9s,baz=81,slow=9.8,SNR=6.6						
	1.4nm,0.9s						
WRA	**Warramunga Arr**	**36.47**	**266**	P	**P**	**09 39 38.1**	**-0.2**
	1.4nm,0.8s,baz=100,slow=8.5,SNR=4.7						
	1.4nm,0.8s						
FITZ	**Fitzroy Crossi**	**44.90**	**266**	P	**P**	**09 40 49.0**	**+1.0**
	7.0nm,0.9s,baz=90,slow=9.6,SNR=5.5						
	7.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**83.07**	**293**	P	**P**	**09 45 00.2**	**+1.1**
	1.6nm,0.8s,baz=113,slow=4.7,SNR=9.1						
	1.6nm,0.8s						

NVAR	Mina Array Bea	87.61	47	P	P	09 45 22.1	+0.4
	0.7nm,1.0s,baz=273,slow=2.7,SNR=3.7						
	0.7nm,1.0s						
ILAR	Eielson Array	91.53	16	P	P	09 45 38.0	-1.1
	0.9nm,1.1s,baz=236,slow=5.5,SNR=4.5						
	0.9nm,1.1s						
EKA	Eskdalemuir Ar	146.38	356	PKPbc	PKPdf	09 52 11.8	-0.6
	1.3nm,0.9s,baz=343,slow=2.5,SNR=3.5						
GERES	GERESS Array B	148.50	334	PKPbc	PKPbc	09 52 19.9	+0.1
	2.1nm,0.9s,baz=29,slow=3.0,SNR=6.5						
ESDC	Sonseca Array	162.00	353	PKPab	PKPab	09 53 21.0	+0.3
	0.5nm,0.9s,baz=8.3,slow=1.1,SNR=4.1						
TORD	Torodi Ar. Bea	168.33	224	PKPab	PKPab	09 53 48.7	-0.5
	0.4nm,0.8s,baz=113,slow=5.2,SNR=3.7						

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*LVSN **25** 09:33:51.9±6.5, 57.°58N×24.°34E, h0^{km}±506^{km}, ML1.7*

HEL 25 09:33:51.4±0.7**, 60.°62N×28.°99E, h0**^{km}**, ML1.4, Suspected explosion, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VJF	Virojoki	0.71	264	PG	Pg	09 34 04.4	-0.6
VJF				MSG		09 34 13.7	
	comp=Z,4.3nm,0.2s						
VJF				SG	Sg	09 34 14.8	+0.5
RUF	Ruokolahti	0.81	358	PB	Pg	09 34 07.0	+0.1
RUF				MSG		09 34 16.6	
	comp=Z,3.0nm,0.2s						
RUF				SB	Sg	09 34 17.4	0.0
PVF	Pernaja	1.55	269	PG	Pn	09 34 18.9	-1.3
	baz=81						
PVF				MSG		09 34 37.8	
	comp=Z,3.0nm,0.2s						
PVF				SN	Sg	09 34 43.5	+2.4
FIA0	FINESS Array S	1.64	302	PG	Pn	09 34 20.9	-0.6
FIA0				MSG		09 34 40.6	
	comp=Z,3.3nm,0.2s						
ARBE	Arbavere	1.92	233	*e*P	Pn	09 34 25.5	+0.2
ARBE				AML	AML	09 34 26.9	
	comp=Z,25nm,0.6s						
ARBE				*e*S	Sb	09 34 52.0	+0.4
ARBE				AML	AML	09 34 54.3	
	comp=E,41nm,0.1s						
ARBE				AML	AML	09 34 54.5	
	comp=N,57nm,0.1s						
ARBE	Arbavere	1.92	233	PG	Pn	09 34 25.7	+0.4
NUR	Nurmijarvi	2.15	269	PG	Pn	09 34 29.4	+1.0
NUR				MSG		09 34 55.1	
	comp=Z,1.0nm,0.2s						
HEL5	Espoo, Suvisaa	2.17	259	PG	Pb	09 34 30.3	-1.2
HEL5				MSG		09 34 55.7	
	comp=Z,1.5nm,0.2s						
MEF	Metsahovi	2.32	262	*e*P	Pn	09 34 31.1	+0.4
MEF	Metsahovi	2.32	262	*e*P	Pn	09 34 31.1	+0.4
MEF				*e*S	Sb	09 35 03.6	+0.5
MEF				AML	AML	09 35 05.6	
	comp=N,7.9nm,0.6s						
MEF				AML	AML	09 35 19.6	
	comp=Z,5.8nm,0.9s						
MEF				AML	AML	09 35 19.9	
	comp=E,4.3nm,0.9s						
MEF	Metsahovi	2.32	262	PB	Pn	09 34 31.3	+0.5
	baz=75						
MEF				MSG		09 34 59.8	
	comp=Z,1.5nm,0.2s						
MEF				SG	Sb	09 35 03.9	+0.8
VSU	Vasula	2.45	209	*e*P	Pn	09 34 28.0	-4.5
VSU	Vasula	2.45	209	SG	Sb	09 35 06.0	-0.9
SUF	Sumiainen	2.51	329	PG	Pb	09 34 36.2	-1.1
SUF				MSG		09 35 05.5	
	comp=Z,0.6nm,0.2s						
SUF				SG	Sg	09 35 10.3	-1.6
KEF	Keuruu	2.52	310	*e*P	Pb	09 34 35.9	-1.6
KEF	Keuruu	2.52	310	PG	Pb	09 34 36.1	-1.4
	baz=127						
KEF				MSG		09 35 05.8	
	comp=Z,0.8nm,0.2s						
KEF				SG	Sb	09 35 07.7	-1.3
JOF	Joensuu	2.56	24	*e*P	Pb	09 34 36.4	-1.8
JOF	Joensuu	2.56	24	PG	Pb	09 34 36.4	-1.7
JOF				SG	Sb	09 35 09.3	-0.8
NIF	Nilsia	2.84	349	MSG		09 35 14.8	
	comp=Z,0.9nm,0.2s						
NIF				SG	Sb	09 35 18.8	+0.6
KPF	Kankaanpaa	3.56	293	PB	Pn	09 34 50.8	+3.0
RAF	Rauma	3.56	280	*e*P	Pn	09 34 49.0	+1.1
RAF	Rauma	3.56	280	*e*P	Pn	09 34 50.6	+2.7
RAF				*e*S	Sn	09 35 30.3	-0.3
RAF				AML	AML	09 35 50.2	
	comp=Z,2.5nm,0.6s						
RAF				AML	AML	09 35 50.5	
	comp=N,2.0nm,0.5s						
RAF				AML	AML	09 36 05.8	
	comp=E,1.8nm,0.8s						
RAF	Rauma	3.56	280	SB	Sn	09 35 33.6	+3.0
OUL	Oulu	4.70	344	SG	Sg	09 36 17.9	-4.4

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*CATAC **25** 09:35:20.8±0.5, 13°N±3°×9°1W±°, h10^{km}, M3.7/16, MLv3.7/16, Error ellipse: s-maj=7.6km s-min=4.0km az=42.0, confirmed*

*GCG **25** 09:35:22.0±1.7, 13.°32N×91.°45W, h50^{km}±11^{km}, MD4.6*

*SNET **25** 09:35:28.1±6.2, 13.°66N×91.°09W, h22^{km}, ML3.4, ML3.4*

ISC 25 09:35:18.1±2.2**, 13.°23N**±0.°08×**91.°35W**±0.°06**, h3**^{km}±11^{km}**, n67,** σ**1**^{s}**42**/73**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESSJ	San Jos, E	0.89	68	*i* P	Pn	09 35 38.4	+0.9
ESSJ				*e*S	Sn	09 35 50.3	-0.5
STG5	El Palmar, Qui	1.17	360	*e*P	Pn	09 35 44.5	+3.1
STG2	El Palmar, Qui	1.20	359	*e*P	Pn	09 35 45.9	+4.1
STG8	El Palmar, Qui	1.22	360	*i* P	Pn	09 35 45.6	+3.4
STG8				*e*S	Sn	09 36 00.4	+1.1
ESSG	Sabana Grande	1.25	24	*i* P	Pg	09 35 41.9	-0.2
FG16	Alotenango, Sa	1.32	38	*i* P	Pb	09 35 43.2	-0.3
RTAL	Retalhuleu	1.33	345	P	Pn	09 35 43.5	-0.1
RTAL	Retalhuleu	1.33	345	S	Sb	09 35 58.0	-3.1
PCG5	San Vicente Pa	1.36	44	*i* P	Pg	09 35 44.3	+0.1
FAME	Alcaldia de Sa	1.43	65	S	Sg	09 36 05.2	+1.1
FAME	Alcaldia de Sa	1.43	65	P	Pb	09 35 45.5	+0.1
GCG4	OSOP	1.57	30	*e*P	Pb	09 35 47.7	-0.1
SOKI	Kika Raxquin	1.58	358	*e*P	Pn	09 35 47.7	+0.3
NUBE	Las Nubes	1.67	66	*e*P	Pb	09 35 49.4	0.0
NUBE				*i* S	Sn	09 36 09.0	-1.2
NUBE	Las Nubes	1.67	66	P	Pb	09 35 49.5	0.0
NUBE	Las Nubes	1.67	66	S	Sg	09 36 11.8	+0.1
LOAL	Lomas de Alarc	1.71	63	P	Pb	09 35 50.2	+0.2
LOAL	Lomas de Alarc	1.71	63	S	Sg	09 36 13.1	+0.2
SLOZ	Alcaldia de Sa	1.71	62	P	Pn	09 35 46.1	-2.8
SLOZ	Alcaldia de Sa	1.71	62	S	Sn	09 36 09.7	-1.6
SMCA	Catarina	1.77	337	*e*P	Pn	09 35 49.3	-0.2
CEVE	Cerro Verde	1.78	70	*e*P	Pg	09 35 52.6	+0.4
CEVE	Cerro Verde	1.78	70	P	Pb	09 35 51.2	-0.2
CEVE	Cerro Verde	1.78	70	S	Sg	09 36 15.7	+0.4
JAYA	Jayaque - finc	1.90	77	*e*P	Pn	09 35 52.4	+1.0
JAYA				IAML		09 36 20.6	
	comp=Z,403nm,0.2s						
JAYA	Jayaque - finc	1.90	77	*i* P	Pb	09 35 52.9	-0.4
JAYA				*i* S	Sb	09 36 16.3	-1.2
JAYA	Jayaque - finc	1.90	77	P	Pb	09 35 53.0	-0.4
JAYA	Jayaque - finc	1.90	77	S	Sg	09 36 18.6	-0.4
UNIC	Universidad Ca	1.90	67	P	Pb	09 35 53.8	+0.3
APG	El Apazote	1.96	26	*i* P	Pb	09 35 54.0	-0.6
APG				*i* S	Sb	09 36 18.5	-1.0
CEDA	San Andres	1.98	73	*e*P	Pn	09 35 53.3	+0.7
CEDA	San Andres	1.98	73	P	Pb	09 35 54.5	-0.3
CEDA	San Andres	1.98	73	S	Sg	09 36 22.2	+0.3
LALI	Alcalda de L	1.99	82	*e*P	Pn	09 35 53.9	+1.3
LALI	Alcalda de L	1.99	82	S	Sg	09 36 21.6	-0.5
PMON	Piamonte	2.04	76	P	Pb	09 35 55.7	0.0
PMON	Piamonte	2.04	76	S	Sg	09 36 23.5	0.0
BOQS	Boqueron	2.07	76	*e*P	Pb	09 35 56.9	+0.4
HUEH	Huehuetenango	2.08	356	*e*P	Pb	09 35 56.7	+0.1
HUEH	Huehuetenango	2.08	356	*e*P	Pn	09 35 55.6	+1.5
HUEH	Huehuetenango	2.08	356	P	Pb	09 35 55.9	-0.7
UEES	Universidad Ev	2.11	76	P	Pb	09 35 57.4	+0.5
UEES	Universidad Ev	2.11	76	S	Sg	09 36 24.4	-1.4
LOMA	Loma Larga	2.16	79	P	Pb	09 35 57.2	-0.7
LOMA	Loma Larga	2.16	79	S	Sg	09 36 26.7	-0.8
UDBS	Universidad Do	2.19	77	P	Pb	09 35 58.2	-0.1
UDBS	Universidad Do	2.19	77	S	Sb	09 36 26.5	+0.6
MTO3	Montecristo	2.25	59	*i* P	Pb	09 35 58.3	-1.3
MTO3	Montecristo	2.25	59	P	Pb	09 35 58.3	-1.3
MTO3	Montecristo	2.25	59	S	Sb	09 36 26.8	-1.1
ESQI	Esquipulas	2.35	56	*e*P	Pb	09 35 59.9	-1.3
ESQI				*e*S	Sb	09 36 31.1	+0.4
ESQI	Esquipulas	2.35	56	P	Pb	09 36 00.1	-1.1
ZAFR2	Estanzuela, Za	2.36	55	*e*P	Pb	09 36 00.2	-1.0
PAVA	Las Pavas	2.39	78	P	Pb	09 36 01.4	-0.5
PAVA	Las Pavas	2.39	78	S	Sb	09 36 32.3	+0.4
LLGN	La Laguna	2.51	68	P	Pn	09 36 01.9	+2.0
LLGN	La Laguna	2.51	68	S	Sb	09 36 36.0	+0.7
SCLA	Alcaldia de Sa	2.59	79	P	Pb	09 36 03.6	-1.6
PQSS	Presa 15 de Se	2.74	81	P	Pn	09 36 03.7	+0.8
PQSS	Presa 15 de Se	2.74	81	S	Sn	09 36 37.7	+1.2
SARH	Santa Rosa de	2.94	58	*i* P	Pn	09 36 08.1	+2.3
SARH	Santa Rosa de	2.94	58	P	Pn	09 36 08.1	+2.3
PACA	Pacayal	2.95	85	P	Pb	09 36 10.4	-1.0
PACA	Pacayal	2.95	85	S	Sb	09 36 45.2	-2.8
LCND	La Caada	3.37	88	P	Pn	09 36 14.5	+2.9
CNCH	Conchagua	3.42	89	P	Pn	09 36 15.3	+2.9
CNCH	Conchagua	3.42	89	S	Sb	09 36 58.7	-2.8

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*NEIC **25** 09:43:09.4±1.3, 21.°90S±0.°05×68.°41W±0.°10, h133^{km}±8^{km}, mb4.1/6, Error ellipse: s-maj=12.9km s-min=7.6km az=84.0*

*GUC **25** 09:43:11.0±0.6, 21.°87S×68.°50W, h132^{km}±6^{km}, ML3.3*

*IDC **25** 09:43:20.9±6.6, 21.°06S×67.°79W, h196^{km}±46^{km}, mb3.5/3, mbtmp3.9/6, Error ellipse: s-maj=70.8km s-min=23.1km az=20.0*

ISC 25 09:43:09.1±0.8**, 21.°88S**±0.°04×**68.°42W**±0.°08**, h136**^{km}±9^{km}**, n48,** σ**1**^{s}**05**/58**, mb4.2**/3**, 6C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	0.77	276		Pn	09 43 31.3	+0.5
PB09	IPOC Station P	0.77	276	⇑*i*P	Pn	09 43 31.4	+0.6
AF01	San Pedro de A	1.09	168		Pn	09 43 34.4	+0.7
PB03	IPOC Station P	1.25	262		Pn	09 43 35.2	+0.1
PB03	IPOC Station P	1.25	262	⇑*i*P	Pn	09 43 35.3	+0.2
PB03				*e*S	Sn	09 43 54.2	-0.7
PB03				IAML		09 43 55.4	
	comp=E,470nm,0.5s						
PB01	IPOC Station P	1.30	310		Pn	09 43 35.7	+0.2
PB01	IPOC Station P	1.30	310	⇑*i*P	Pn	09 43 35.8	+0.3
PB01				*e*S	Sn	09 43 55.1	-0.6
PB01				IAML		09 43 56.9	
	comp=E,398nm,0.2s						
PB06	IPOC Station P	1.35	232		Pn	09 43 36.5	+0.4
PB06	IPOC Station P	1.35	232	*i* P	Pn	09 43 36.6	+0.5
PB06				*e*S	Sn	09 43 56.5	-0.2
PB06				IAML		09 43 57.6	
	comp=N,673nm,0.5s						
PB07	IPOC Station P	1.38	276		Pn	09 43 36.7	+0.3
PB07	IPOC Station P	1.38	276	⇑*i*P	Pn	09 43 36.8	+0.3
PB07				*e*S	Sn	09 43 56.7	-0.5
PB07				IAML		09 43 57.5	
	comp=E,408nm,0.4s						
PB02	IPOC Station P	1.49	292		Pn	09 43 37.8	+0.2
PB02	IPOC Station P	1.49	292	⇑*i*P	Pn	09 43 37.8	+0.2
PB02				*e*S	Sn	09 43 58.3	-0.9
PB02				IAML		09 44 00.3	
	comp=E,506nm,0.2s						
PB08	IPOC Station P	1.86	338		Pn	09 43 43.2	+1.1
PB05	IPOC Station P	1.92	239		Pn	09 43 42.5	+0.1
PB05	IPOC Station P	1.92	239	⇑*i*P	Pn	09 43 42.6	+0.1
PB05				*e*S	Sn	09 44 06.9	-1.1
PB05				IAML		09 44 07.8	
	comp=N,289nm,0.5s						
PATCX	Punta Patache	1.93	303		Pn	09 43 42.4	-0.2
PATCX	Punta Patache	1.93	303	*e*P	Pn	09 43 42.8	+0.2
PATCX				*e*S	Sn	09 44 07.4	-1.0
PATCX				IAML		09 44 12.2	
	comp=N,342nm,0.5s						
TA01	Diego Aracena	2.10	308		Pn	09 43 44.3	-0.3
TA01	Diego Aracena	2.10	308	*e*P	Pn	09 43 44.5	-0.1
TA01				*e*S	Sn	09 44 10.7	-1.2
TA01				IAML		09 44 12.3	
	comp=N,253nm,0.3s						
GO01	Chusmiza	2.32	342		Pn	09 43 48.0	+0.3
GO01	Chusmiza	2.32	342	*i* P	Pn	09 43 48.8	+1.0
PB11	IPOC Station P	2.41	331		Pn	09 43 48.7	+0.1
PB11	IPOC Station P	2.41	331	*e*P	Pn	09 43 48.7	+0.1
PB11				*e*S	Sn	09 44 18.3	-0.6
PB10	IPOC Station P	2.56	230		Pn	09 43 49.8	-0.4
PB14	IPOC Station P	3.29	213		Pn	09 43 59.7	-0.2
GO02	Mina Guanaco	3.44	198		Pn	09 44 01.4	-0.5
PB16	IPOC Station P	3.67	344		Pn	09 44 06.3	+1.1
PB12	IPOC Station P	3.71	331		Pn	09 44 04.8	-0.6
PB18	Visviri	4.39	347	Pn	Pn	09 44 14.6	0.0
AC01	Pan de Azucar	4.69	205	Pn	Pn	09 44 16.5	-1.6
AC02	Maricunga	4.97	187	Pn	Pn	09 44 21.3	-1.0
LPAZ	La Paz	5.57	3	P	Pn	09 44 33.3	+2.8
	comp=N,4.4nm,0.4s,baz=197,slow=6.4,SNR=31						
LPAZ				S	Sn	09 45 29.9	-3.9
	comp=N,3.0nm,1.1s,baz=352,slow=16,SNR=1.8						
LPAZ	La Paz	5.57	3		Pn	09 44 31.0	+0.5
AC06	Mina Casimiro	5.73	198	Pn	Pn	09 44 30.3	-1.7
GO03	Copiapo	5.92	196	Pn	Pn	09 44 34.3	-0.3
SIV	San Ignacio	9.09	51	P	Pn	09 45 15.0	-2.2
	comp=N,3.8nm,0.4s,baz=232,slow=7.9,SNR=19						
SIV				S	Sn	09 46 48.3	-10
	comp=N,1.0nm,0.5s,baz=291,slow=23,SNR=6.3						
TRQA	Tornquist	17.05	162	P	Pn	09 46 58.7	-0.5
TRQA				IAmb	IAmb	09 47 08.6	
	comp=Z,6.2nm,1.1s						
PLCA	Paso Flores	18.88	185	P	Pn	09 47 19.9	-1.1
VAO	Valinhos	19.86	97	P	P	09 47 29.3	-0.4
VAO				IAmb	IAmb	09 47 30.7	
	comp=Z,11nm,0.9s						
BDFB	Brasilia	20.28	76	P	P	09 47 33.8	-0.5
	comp=Z,1.6nm,0.5s,baz=260,slow=12,SNR=5.8						
BDFB	Brasilia	20.28	76	P	P	09 47 34.3	0.0
BDFB				IAmb	IAmb	09 47 47.2	
	comp=Z,8.6nm,1.5s						
DBIC	Dimbokro	68.40	73	P	P	09 53 57.5	+0.9
	comp=Z,1.5nm,0.4s,baz=268,slow=7.8,SNR=3.4						
	comp=Z,1.5nm,0.4s						
DBIC	Dimbokro	68.40	73	P	P	09 53 56.7	+0.1
TORD	Torodi Ar. Bea	77.05	70	P	P	09 54 48.4	+0.7
	comp=Z,0.9nm,0.7s,baz=250,slow=4.6,SNR=6.4						
	comp=Z,0.9nm,0.7s						
YKA	Yellowknife Ar	91.70	340	P	P	09 56 02.4	+1.9
	comp=Z,0.2nm,0.7s,baz=140,slow=3.8,SNR=6.0						
	comp=Z,0.2nm,0.7s						
YKA	Yellowknife Ar	91.70	340	P	P	09 56 02.0	+1.6
YKAW3	Yellowknife Wh	91.75	340	P	P	09 56 02.2	+1.4
YKAW3				IAmb	IAmb	09 56 41.4	
	comp=Z,3.7nm,1.4s						

IDC 25 09:52:08.9±5.9**, 23.°15S**×**174.°00E, h0**^{km}**, mb3.8**/3**, mbtmp3.8**/3**, MS3.7**/9**, Error ellipse: s-maj=276.7km s-min=47.6km az=155.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	7.06	277	LR	LR	09 56 09.7	
	comp=Z,861nm,20.2s,baz=69,slow=34						
URZ	Urewera	15.29	171	LR	LR	10 00 57.6	
	comp=Z,305nm,18.1s,baz=350,slow=35						
RAR	Rarotonga	24.35	91	LR	LR	10 05 05.5	
	comp=Z,103nm,21.9s,baz=283,slow=32						
CTA	Charters Tower	25.96	271	LR	LR	10 07 25.9	
	comp=Z,229nm,18.8s,baz=61,slow=35						
PMG	Port Moresby	29.09	294	LR	LR	10 08 38.5	
	comp=Z,150nm,18.0s,baz=152,slow=34						
STKA	Stephens Creek	29.94	246	LR	LR	10 08 57.9	
	comp=Z,101nm,20.2s,baz=48,slow=34						
PPT	Papeete	34.54	88	LR	LR	10 09 44.0	
	comp=Z,77nm,20.8s,baz=260,slow=31						
ASAR	Alice Springs	36.72	261	P	P	09 59 18.1	0.0
	0.8nm,0.8s,baz=87,slow=8.4,SNR=5.1						
ASAR				LR	LR	10 14 02.3	
	comp=Z,125nm,18.7s,baz=94,slow=36						
	0.8nm,0.8s						
WRA	Warramunga Arr	36.95	267	P	P	09 59 19.1	-1.0
	0.6nm,0.8s,baz=96,slow=8.2,SNR=2.4						
	0.6nm,0.8s						
JAY	Jayapura	38.22	298	LR	LR	10 13 47.1	
	comp=Z,121nm,20.8s,baz=12,slow=34						
CMAR	Chiang Mai Arr	84.13	293	P	P	10 04 43.6	+1.3
	1.0nm,0.3s,baz=130,slow=2.8,SNR=4.2						
	1.0nm,0.3s						
VRAC	Vranov	148.40	331	PKPbc	PKPbc	10 11 57.2	-0.1
	0.7nm,0.3s,baz=62,slow=3.2,SNR=3.6						
GERES	GERESS Array B	149.99	334	PKPbc	PKPbc	10 11 59.9	-1.6
	1.5nm,0.9s,baz=41,slow=3.3,SNR=4.3						

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*UCR **25** 09:55:26.7±1.1, 11.°02N×86.°38W, h0^{km}±3^{km}, MW4.0*

*CATAC **25** 09:55:27.1±0.7, 11°N±4°×8°6W±°, h21^{km}±3^{km}, M3.2/10, MLv3.2/10, Error ellipse: s-maj=9.1km s-min=6.3km az=25.3, confirmed*

ISC 25 09:55:25.6±1.5**, 10.°99N**±0.°03×**86.°45W**±0.°05**, h7**^{km}±10^{km}**, n63,** σ**0**^{s}**86**/83**, 2C-9D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCRUZ	La Cruz	0.81	83	*e*P	Pb	09 55 42.8	+0.6
LCRUZ				*e*S	Sn	09 55 54.7	-1.3
NADN	Granada	0.86	29	P	Pb	09 55 43.8	+0.8
NADN				S	Sn	09 55 57.3	+0.1
NADN	Granada	0.86	29	⇓*e*P	Pb	09 55 43.8	+0.8
MORN	Al O del Volca	0.97	55	P	Pn	09 55 46.1	+0.4
ALIBA	Liberia Airpor	0.97	113	*e*P	Pn	09 55 45.6	-0.2
ALIBA				*e*S	Sn	09 56 00.0	+0.1
NANN	Nandasmo	1.00	19	P	Pn	09 55 47.3	+1.1
CRUN	El Crucero	1.00	9	P	Pg	09 55 41.5	-3.4
LAPC	Finca la Perla	1.03	102	⇓*e*P	Pg	09 55 45.7	+0.4
LAPC				*e*S	Sn	09 56 00.6	-0.7
DELF	Filadelfia	1.03	121	⇓*i*P	Pn	09 55 46.7	+0.1
DELF				*e*S	Sn	09 56 01.8	+0.4
VRLE	La Escondida,	1.09	100	*e*P	Pb	09 55 47.2	+0.4
GPS3	Bodega del ICE	1.09	102	*e*P	Pn	09 55 49.7	+2.2
VORI	VORI	1.10	99	*e*P	Pn	09 55 47.7	0.0
BUAI	Buenos Aires	1.11	95	*i* P	Pn	09 55 48.1	+0.4
BUAI				*e*S	Sn	09 56 03.6	+0.4
GPS2	Hotel Rincn d	1.11	102	*e*P	Pg	09 55 47.4	+0.5
GPS2				*e*S	Sn	09 56 02.7	-0.6
PEJA	Penjamo Buenos	1.12	94	*e*P	Pg	09 55 47.8	+0.6
UNAN	Cigeo UNAN	1.13	9	P	Pb	09 55 48.3	+0.7
UNAN				S	Sn	09 56 03.9	0.0
TISN	Laguna Tiscapa	1.17	9	P	Pn	09 55 49.0	+0.6
SAJU	San Juanillo,	1.17	141	*e*P	Pb	09 55 46.8	-1.4
SAJU				*e*S	Sb	09 56 01.9	-1.7
MGAN	Managua	1.17	10	*e*P	Pb	09 55 48.2	-0.1
COPN	Copaltepe	1.20	354	P	Pn	09 55 48.9	0.0
COPN	Copaltepe	1.20	354	⇓*e*P	Pn	09 55 48.9	0.0
COPN				*e*S	Sb	09 56 05.3	+1.0
JUD3	Juan Diaz 3	1.21	132	*e*P	Pb	09 55 48.1	-0.9
ELVJ	El Viejo (Barb	1.23	115	⇓*e*P	Pb	09 55 48.2	-1.1
ELVJ				*e*S	Sb	09 56 04.3	-1.1
PLVR	Palo Verde	1.25	120	*e*P	Pg	09 55 50.3	+0.6
MESS	Mesas	1.26	101	⇑*e*P	Pn	09 55 49.6	-0.2
COLC	Colonia	1.27	104	⇓*e*P	Pn	09 55 50.1	+0.2
COLC				*e*S	Sn	09 56 06.8	-0.4
HORNC	Hornillas	1.28	102	*e*P	Pb	09 55 50.4	+0.2
NICO	Nicoya	1.30	130	*e*P	Pg	09 55 51.5	+0.9
CUI	Cuipilapa	1.31	104	⇓*e*P	Pn	09 55 50.7	+0.2
CUI				*e*S	Sg	09 56 08.0	+0.3
VMAR	Armenia, Volca	1.33	97	⇑*i*P	Pn	09 55 50.8	+0.1
VMAR				*e*S	Sg	09 56 09.8	+1.5
MOTZ	Rio Naranjo	1.39	102	*e*P	Pb	09 55 52.1	+0.1
UPAL	Upala	1.42	93	*e*P	Pn	09 55 51.7	-0.2
UPAL				*e*S	Sg	09 56 11.3	+0.1
CNAS	Canas	1.45	112	*e*P	Pb	09 55 53.1	+0.2
INDI	Punta indio, G	1.45	140	*e*P	Pb	09 55 53.5	+0.4
INVE	Universidad In	1.46	110	*e*P	Pb	09 55 53.1	0.0
TIMP	Tierras Morena	1.47	106	*e*P	Pn	09 55 53.1	+0.5
CNGA	Al SSO del Vol	1.52	351	P	Pn	09 55 53.6	+0.3
CNGA				S	Sn	09 56 13.5	+0.1
CNGN	Cerro Negro	1.52	351	P	Pn	09 55 53.7	+0.3
CNGN	Cerro Negro	1.52	351	S	Sn	09 56 13.3	-0.3
TILA	Tilaran	1.55	109	*e*P	Pb	09 55 54.8	+0.1
QUEB	Quebradon, Cot	1.57	103	*e*P	Pb	09 55 55.6	+0.5
JUNT	Juntas	1.63	115	*e*P	Pn	09 55 55.2	+0.5
JTS	Las Juntas de	1.63	115	*e*P	Pn	09 55 55.6	+0.8
BOAB	BOACO BROADBAN	1.65	28	P	Pn	09 55 55.2	+0.1
BOAB	BOACO BROADBAN	1.65	28	S	Sb	09 56 17.5	+0.1
TABAC	Tabacon	1.73	106	*e*P	Pb	09 55 58.2	+0.4
CASO	Castillo	1.78	108	*e*P	Pb	09 55 58.8	+0.2
ARE1	Arenal 1	1.78	107	⇓*i*P	Pb	09 55 58.6	-0.1
VARE2	V. Arenal	1.78	107	⇓*i*P	Pb	09 55 58.5	-0.2
VARE2				*e*S	Sg	09 56 23.1	+0.2
CEDE	Laguna Cedeo	1.79	106	*e*P	Pb	09 55 58.6	-0.2
CEDE				*e*S	Sg	09 56 23.3	+0.1
VACR	Volcan Arenal	1.82	106	*e*P	Pb	09 55 59.1	-0.2
FORC	Fortuna	1.83	106	*e*P	Pb	09 55 59.2	-0.2
PAQE	Paquera	1.89	128	*e*P	Pb	09 56 01.7	+1.1
MATN	Matagalpa	2.00	15	P	Pn	09 55 59.1	-0.9
MATN	Matagalpa	2.00	15	S	Sn	09 56 25.1	-0.4
COVE	Coope Vega, Sa	2.03	97	P	Pb	09 56 02.7	-0.2
LIMN	Finca el Limon	2.07	2	P	Pn	09 56 01.1	+0.2
LIMN				S	Sn	09 56 26.6	-0.4
PALD	Palmares	2.19	115	*e*P	Pn	09 56 04.3	+1.6
CSGN	Cosiguina Volc	2.25	331	P	Pn	09 56 05.8	+2.3
CSGN				S	Sn	09 56 32.6	+0.9
TCS1	Tacares	2.32	114	*e*P	Pb	09 56 07.0	-0.9
ACOS	Acosta	2.54	117	*e*P	Pn	09 56 06.5	-1.0
PIEC	Cerro El Cedra	2.81	119	*e*P	Pn	09 56 12.5	+1.3
SAJE	San Jernim	3.33	119	*e*P	Pb	09 56 23.1	-2.0

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*IDC **25** 10:02:08.0±1.0, 34.°68N×23.°99E, h0^{km}, mb3.9/14, mbtmp3.8/18, ML3.0/3, MS3.7/3, Error ellipse: s-maj=23.0km s-min=10.5km az=151.0*

*ISK **25** 10:02:12.8, 34.°74N×24.°21E, h18^{km}, ML3.3/19*

*ATH **25** 10:02:14.4, 34.°88N×24.°21E, h10^{km}±1^{km}, ML3.3/13, Manual Solution by I.Dede First location: 2019/12/25 10:02:42, This location: 2019/12/25 10:09:16 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

*THE **25** 10:02:15.6, 35°N±2°×2°4E±°, h2^{km}±1^{km}, M3.3/7, MLh3.3/7*

ISC 25 10:02:12.6±0.8**, 34.°75N**±0.°05×**24.°13E**±0.°04**, h26**^{km}±4^{km}**, n76,** σ**1**^{s}**73**/86**, mb3.9**/13**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	Gavdhos	0.09	339	P	Pb	10 02 17.1	-0.3
GVD				S	Sb	10 02 20.4	-0.3
GVD	Gavdhos	0.09	339	Pg	Pb	10 02 17.1	-0.3
GVD				Sg	Sb	10 02 20.6	0.0
GVD	Gavdhos	0.09	339	P	Pb	10 02 17.2	-0.2
GVD				S	Sb	10 02 19.7	-0.9
VAM	Vamos	0.66	5	P	Pb	10 02 25.4	-0.1
VAM				S	Sb	10 02 33.2	-1.1
IMMV	Iera Moni Meta	0.72	350	P	Pb	10 02 26.4	-0.2
IMMV				S	Sb	10 02 35.0	-1.0
IMMV	Iera Moni Meta	0.72	350	Pg	Pb	10 02 26.7	+0.1
IMMV				Sg	Sn	10 02 38.7	+1.4
IMMV	Iera Moni Meta	0.72	350	P	Pb	10 02 26.4	-0.2
IMMV				S	Sb	10 02 35.0	-1.0
CHAN	Chania	0.77	355	P	Pn	10 02 27.7	-0.1
CHAN	Chania	0.77	355	P	Pb	10 02 27.2	-0.2
CHAN				S	Sb	10 02 37.5	0.0
IDI	Anoyia	0.82	49	Pg	Pb	10 02 28.3	-0.1
	69nm,0.3s,baz=227,slow=16,SNR=95						
IDI				Lg	Lg	10 02 40.1	
	130nm,0.3s,baz=286,slow=22,SNR=11						
IDI				LR	LR	10 03 11.4	
	comp=Z,476nm,20.8s,baz=279,slow=66						
IDI	Anoyia	0.82	49	P	Pb	10 02 28.3	-0.1
IDI				S	Sb	10 02 37.8	-1.3
IDI	Anoyia	0.82	49	Pg	Pb	10 02 28.4	0.0
IDI	Anoyia	0.82	49	P	Pb	10 02 28.0	-0.4
IDI				S	Sb	10 02 37.4	-1.7
NPS	Neapolis	1.32	67	P	Pb	10 02 38.3	+1.5
NPS	Neapolis	1.32	67	P	Pb	10 02 37.7	+1.0
KTHA	Kythira Island	1.74	330	P	Pb	10 02 44.7	+0.9
KTHA	Kythira Island	1.74	330	Pn	Pb	10 02 43.3	-0.5
ZKR	Zakros	1.75	77	P	Pb	10 02 45.7	+1.5
ZKR	Zakros	1.75	77	Pn	Pn	10 02 42.3	+0.9
MHLO	Agia Marina, M	1.95	6	P	Pb	10 02 46.8	-0.6
MHLO				S	Sb	10 03 11.0	-0.3
MHLO	Agia Marina, M	1.95	6	P	Pb	10 02 46.6	-0.8
THERA	Ancient Thera,	1.95	34	P	Pb	10 02 46.4	-1.1
THERA				S	Sb	10 03 10.8	-0.6
THERA	Ancient Thera,	1.95	34	P	Pb	10 02 46.3	-1.2
VLI	Veliai	2.19	334	P	Pb	10 02 51.1	-0.5
KARP	Karpathos	2.61	71	Pn	Pn	10 02 54.6	+1.5
KARP	Karpathos	2.61	71	P	Pb	10 02 56.2	-2.5

ITM	**Ithomi**	**3.01**	**324**	Pn	**Pn**	**10 03 01.5**	**+2.9**
VLY	**Voula,Athens**	**3.11**	**355**	P	**Pn**	**10 03 01.8**	**+1.9**
ATHU	**Athens Univers**	**3.22**	**355**	P	**Pn**	**10 03 03.0**	**+1.5**
KARY	**Karystos**	**3.28**	**4**	P	**Pn**	**10 03 04.8**	**+2.4**
DION	**Dionisos Attik**	**3.32**	**357**	P	**Pn**	**10 03 04.7**	**+1.7**
LTK	**Loutraki**	**3.40**	**344**	P	**Pn**	**10 03 06.2**	**+2.3**
DAT	**Datca**	**3.43**	**54**	Pn	**Pn**	**10 03 06.4**	**+1.9**
GUR	**Goura**	**3.49**	**336**	P	**Pn**	**10 03 08.5**	**+3.2**
VIL2	**Platees**	**3.52**	**349**	P	**Pn**	**10 03 06.6**	**+0.9**
ARG	**Arkhangelos**	**3.58**	**65**	Pn	**Pn**	**10 03 08.4**	**+2.0**
ARG	**Arkhangelos**	**3.58**	**65**	P	**Pn**	**10 03 09.0**	**+2.6**
KLV	**Kalavryta, Ach**	**3.65**	**335**	P	**Pn**	**10 03 10.3**	**+2.8**
KYMI	**Kymi, Euboea I**	**3.88**	**360**	P	**Pn**	**10 03 13.5**	**+3.0**
CHOS	**Chios island**	**3.95**	**23**	Pn	**Pn**	**10 03 14.1**	**+2.5**
LKR	**Lokris**	**4.00**	**347**	Pg_0		10 03 14.3	
AXS	**Araxos**	**4.09**	**328**	P	**Pn**	**10 03 16.6**	**+3.2**
AXAR	**Agios Charalam**	**4.18**	**344**	P	**Pn**	**10 03 18.3**	**+3.6**
DALY	**Dalyan (Mula)**	**4.22**	**59**	Pn	**Pn**	**10 03 17.6**	**+2.4**
ANX	**Ano Chora**	**4.22**	**336**	P	**Pn**	**10 03 18.1**	**+2.7**
PVO	**Paravola**	**4.39**	**332**	P	**Pn**	**10 03 22.0**	**+4.4**
AYDB	**Zeytinkoy-Aydi**	**4.40**	**43**	Pn	**Pn**	**10 03 20.9**	**+3.0**
AKAS	**Kas**	**4.71**	**70**	Pn	**Pn**	**10 03 24.4**	**+2.3**
CAME	**Cameli-Denizli**	**4.74**	**61**	Pn	**Pn**	**10 03 25.2**	**+2.7**
APMY	**Acipayam-Deniz**	**4.99**	**56**	Pn	**Pn**	**10 03 28.4**	**+2.5**
ELL	**Elmali**	**5.11**	**65**	Pn	**Pn**	**10 03 29.9**	**+2.4**
KULA	**Kula-Manisa**	**5.23**	**43**	Pn	**Pn**	**10 03 32.3**	**+3.1**
GORD	**Gordes-Manisa**	**5.27**	**37**	Pn	**Pn**	**10 03 32.9**	**+3.2**
KORT	**Korkueli**	**5.53**	**64**	Pn	**Pn**	**10 03 36.4**	**+3.0**
BRTR	**Keskin Array B**	**9.06**	**54**	Pn	**Pn**	**10 04 24.1**	**+2.2**
	0.2nm,0.3s,baz=227,slow=13,SNR=9.8						
BRTR				LR	LR	10 08 45.6	
	comp=Z,68nm,18.0s,baz=280,slow=43						
	1.9nm,0.7s						
GERES	**GERESS Array B**	**16.06**	**334**	Pn	**Pn**	**10 05 57.7**	**+1.0**
	baz=154,slow=13,SNR=3.4						
	0.6nm,0.9s						
AKASG	**Malin Array Be**	**16.37**	**12**	Pn	**Pn**	**10 06 00.3**	**-0.1**
	0.3nm,0.3s,baz=203,slow=10,SNR=4.1						
KBZ	**Khabaz**	**17.05**	**53**	P	**Pn**	**10 06 08.4**	**-0.7**
	0.1nm,0.3s,baz=258,slow=16,SNR=4.9						
	2.3nm,0.8s						
NACGM	**Naroch**	**20.24**	**4**	*e*P	**P**	**10 06 45.2**	**-0.4**
	comp=Z,15nm,0.8s,baz=186						
ESDC	**Sonseca Array**	**22.86**	**291**	P	**P**	**10 07 13.7**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=88,slow=9.7,SNR=4.4						
	comp=Z,0.5nm,0.7s						
HFS	**Hagfors**	**26.29**	**348**	P	**P**	**10 07 44.8**	**-0.9**
	comp=Z,1.6nm,0.7s,baz=153,slow=10.0,SNR=7.8						
	comp=Z,1.6nm,0.7s						
FINES	**FINESS Array B**	**26.74**	**2**	P	**P**	**10 07 48.3**	**-1.4**
	comp=Z,0.9nm,0.7s,baz=166,slow=11,SNR=5.1						
	comp=Z,0.9nm,0.7s						
NB2	**NORSAR Subarra**	**27.59**	**346**	P	**P**	**10 07 56.7**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=153,slow=11						
NOA	**NORSAR Array B**	**27.59**	**346**	P	**P**	**10 07 56.9**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=156,slow=9.2,SNR=6.9						
	comp=Z,0.5nm,0.7s						
EKA	**Eskdalemuir Ar**	**27.89**	**326**	P	**P**	**10 08 00.6**	**+0.4**
	comp=Z,1.9nm,1.0s,baz=122,slow=9.8,SNR=2.1						
	comp=Z,1.9nm,1.0s						
TORD	**Torodi Ar. Bea**	**29.58**	**229**	P	**P**	**10 08 14.9**	**-0.6**
	comp=Z,1.5nm,0.5s,baz=35,slow=10,SNR=14						
	comp=Z,1.5nm,0.5s						
ARCES	**ARCESS Array B**	**34.85**	**1**	P	**P**	**10 08 59.5**	**-1.6**
	comp=Z,4.2nm,1.0s,baz=185,slow=8.7,SNR=2.0						
	comp=Z,4.2nm,1.0s						
BVAR	**Borovoye Array**	**37.24**	**46**	P	**P**	**10 09 21.8**	**0.0**
	comp=Z,1.9nm,0.9s,baz=248,slow=6.1,SNR=4.1						
	comp=Z,1.9nm,0.9s						
KURBB	**Kurchatov Arra**	**42.04**	**51**	P	**P**	**10 10 01.6**	**-0.2**
	comp=Z,2.3nm,0.7s,baz=278,slow=8.5,SNR=9.4						
KURBB				LR	LR	10 31 16.2	
	comp=Z,140nm,21.9s,baz=185,slow=42						
	comp=Z,2.3nm,0.7s						
MKAR	**Makanchi Array**	**44.71**	**56**	P	**P**	**10 10 24.1**	**+0.7**
	comp=Z,2.5nm,0.6s,baz=280,slow=6.5,SNR=20						
	comp=Z,2.5nm,0.6s						
ZALV	**Zalesovo Beam**	**45.90**	**46**	P	**P**	**10 10 32.7**	**0.0**
	comp=Z,3.4nm,0.4s,baz=266,slow=9.4,SNR=13						
	comp=Z,3.4nm,0.4s						
SONM	**Songino Array**	**60.40**	**50**	P	**P**	**10 12 20.4**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=284,slow=8.1,SNR=5.3						
	comp=Z,0.9nm,0.6s						
YKA	**Yellowknife Ar**	**77.57**	**342**	P	**P**	**10 14 05.1**	**-0.8**
	comp=Z,0.1nm,0.5s,baz=28,slow=5.3,SNR=2.2						
	comp=Z,0.1nm,0.5s						
KSRS	**Korea Array**	**79.20**	**52**	P	**P**	**10 14 14.7**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=305,slow=5.2,SNR=4.2						
	comp=Z,0.8nm,0.7s						
ELK	**Elko**	**96.08**	**330**	LR	LR	11 01 38.0	
	comp=Z,120nm,18.0s,baz=314,slow=37						
ASAR	**Alice Springs**	**118.81**	**100**	PKP	**PKPdf**	**10 20 57.4**	**-1.6**
	comp=Z,0.3nm,0.7s,baz=279,slow=2.3,SNR=1.7						

IDC 25 10:11:34.1±999.0**, 50°.84N×50°.36E, h0^{km}, Error ellipse: s-maj=1013.0km s-min=109.0km az=91.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**4.90**	**92**	I	I	10 43 20.0	
	0.4nm,0.7s,baz=278,slow=315,SNR=2.6						
I46RU	**ZALESOVO INFRA**	**21.13**	**68**	I	I	12 21 00.0	
	0.1nm,1.4s,baz=275,slow=305,SNR=0.4						
I34MN	**SONGINO INFRAS**	**35.92**	**72**	I	I	13 48 40.0	
	baz=299,slow=331,SNR=0.7						

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*NOU **25** 10:11:39.8, 21°.69S×173°.61E, h0^{km}, mb4.6/19, Vanuatu Islands Region*

*BJI **25** 10:11:39.2, 22°.06S×174°.09E, h20^{km}, mB5.2/2, mb4.8/38, Ms4.8/6, Ms7 4.6/8*

*IDC **25** 10:11:39.0±0.5, 21°.99S×173°.55E, h0^{km}, mb4.5/20, mbtmp4.4/22, ML3.8/2, MS4.2/27, Error ellipse: s-maj=20.2km s-min=15.5km az=135.0*

*NEIC **25** 10:11:41.4±1.2, 21°.98S±0°.09×173°.61E±0°.07, h10^{km}±3^{km}, mb5.0/110, Mww5.0/17, Error ellipse: s-maj=13.4km s-min=9.8km az=170.0*

*NEIC **25** 10:11:41.6, 22°.08S×173°.72E, h12^{km}, Moment Tensor Solution. Duration: 1^{s}.6 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.93; $M_{\theta\theta}$0.15; $M_{\phi\phi}$2.78; $M_{r\theta}$-0.24; $M_{\theta\phi}$1.63; $M_{\phi r}$1.50; Fault plane solution: $M_0$3.62000×10^{16} NP1:ϕ_s43.01000°, δ37.03000°, λ-62.31000°. NP2:ϕ_s189.69000°, δ57.78000°, λ-109.31000°. Principal axes: T 3.7979, Plg11.0000°, Azm293.0000°; N -0.3773, Plg16.0000°, Azm200.0000°; P -3.4206, Plg70.0000°, Azm56.0000°;*

*NEIC **25** 10:11:41.6, 21°.98S×173°.61E, h12^{km}*

*BGR **25** 10:11:42.4, 22°.42S×174°.93E, h33^{km}*

*GCMT **25** 10:11:43.6±0.2, 21°.97S±0°.02×173°.54E±0°.01, h12^{km}, MW5.0/109, Moment Tensor Solution. s44,c61; s109,c175; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.49±.07; $M_{\theta\theta}$0.42±.08; $M_{\phi\phi}$3.08±.06; $M_{r\theta}$0.66±.28; $M_{\theta\phi}$1.61±.05; $M_{\phi r}$1.12±.21; Best double couple: $M_0$3.88800×10^{16} NP1:ϕ_s23.00000°, δ35.00000°, λ-93.00000°. NP2:ϕ_s207.00000°, δ55.00000°, λ-88.00000°. Principal axes: T 4.0600, Plg10.0000°, Azm295.0000°; N -0.3360, Plg2.0000°, Azm26.0000°; P -3.7160, Plg80.0000°, Azm127.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 10:11:45.1±0.3**, 21°.95S**±0°.06×**173°.57E**±0°.06**, h40^{km}, n341, σ0^{s}.93**/309**, mb5.0**/83**, MS4.3**/33**, 20C-28D, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**5.17**	**274**	Pn	**Pn**	**10 12 59.6**	**-0.5**
PINNC	**Pines Island,**	**5.71**	**262**		**Pn**	**10 13 06.5**	**-0.9**
PINNC	**Pines Island,**	**5.71**	**262**	P	**Pn**	**10 13 06.8**	**-0.6**
MSVF	**Nonsavu**	**5.95**	**46**	Pn	**Pn**	**10 13 08.3**	**-2.5**
YATNC	**Mamie plateau,**	**6.20**	**268**	P	**Pn**	**10 13 14.3**	**+0.1**
OUENC	**Ouen Island, N**	**6.25**	**265**	P	**Pn**	**10 13 14.9**	**0.0**
DZM	**Mont Dzumac**	**6.61**	**268**	Pn	**Pn**	**10 13 18.8**	**-1.1**
	0.8nm,0.3s,baz=79,slow=20,SNR=7.6						
	7.4nm,0.6s						
DZM	**Mont Dzumac**	**6.61**	**268**	*e*Pn	**Pn**	**10 13 19.6**	**-0.3**
	55nm,0.8s						
DZM				*e*LR	LR	10 14 44.5	
	7µm,24.2s						
DZM	**Mont Dzumac**	**6.61**	**268**		**Pn**	**10 13 19.4**	**-0.6**
DZM	**Mont Dzumac**	**6.61**	**268**	P	**Pn**	**10 13 19.6**	**-0.3**
SANVU	**Saraoutou**	**8.85**	**316**	Pn	**Pn**	**10 13 49.1**	**-1.4**
OUZ	**Omahuta**	**13.22**	**180**	P	**Pn**	**10 14 52.2**	**+2.0**
URZ	**Urewera**	**16.54**	**170**	Pn	**Pn**	**10 15 32.6**	**-1.4**
	0.9nm,0.3s,baz=345,slow=7.5,SNR=3.8						
	20nm,1.1s						
URZ	**Urewera**	**16.54**	**170**	P	**P**	**10 15 37.2**	**+1.0**
BKZ	**Black Stump Fm**	**17.34**	**172**	P	**P**	**10 15 46.9**	**+1.7**
BFZ	**Birch Farm**	**18.81**	**174**	P	**Pn**	**10 16 02.0**	**0.0**
SNZO	**South Karori**	**19.32**	**177**	P	**Pn**	**10 16 10.1**	**+1.9**
KHZ	**Kahutara**	**20.40**	**180**	P	Pn	10 16 21.9	+1.0
EIDS	**Eidsvold**	**20.87**	**256**	P	Pn	10 16 25.5	-1.1
ARMA	**Armidale**	**21.39**	**242**		**P**	**10 16 30.1**	**+0.5**
ARMA				IAmb	IAmb	10 16 38.6	
	comp=Z,129nm,1.9s						
ARMA	**Armidale**	**21.39**	**242**	P	**P**	**10 16 31.1**	**+1.5**
JCZ	**Jackson Bay**	**22.41**	**189**	P	**P**	**10 16 43.1**	**+2.7**
WHZ	**Wether Hill Ro**	**24.32**	**190**	P	**P**	**10 16 59.5**	**+0.6**
WHZ				IAmb	IAmb	10 17 05.1	
	comp=Z,75nm,1.7s						
CNB	**Canberra Magne**	**24.99**	**233**	P	**P**	**10 17 06.2**	**+0.9**
CAN	**Canberra**	**25.26**	**233**	P	**P**	**10 17 08.7**	**+1.0**
CAN				IAmb	IAmb	10 17 11.9	
	comp=Z,92nm,1.6s						
CTA	**Charters Tower**	**25.55**	**269**	LR	LR	10 26 54.0	
	comp=Z,2µm,18.7s,baz=82,slow=36						
CTA	**Charters Tower**	**25.55**	**269**	P	**P**	**10 17 11.2**	**+0.8**
CTAO	**Charters Tower**	**25.55**	**269**	P	**P**	**10 17 11.3**	**+0.8**
CTAO	**Charters Tower**	**25.55**	**269**	P	**P**	**10 17 11.2**	**+0.8**
CMSA	**Cobar Meteorol**	**26.60**	**243**	P	**P**	**10 17 19.4**	**-0.4**
MTSU	**Mount Surprise**	**27.72**	**273**	P	**P**	**10 17 31.4**	**+1.4**
PMG	**Port Moresby**	**28.26**	**292**	LR	LR	10 27 50.9	
	comp=Z,624nm,18.5s,baz=140,slow=34						
PMG	**Port Moresby**	**28.26**	**292**	P	**P**	**10 17 34.0**	**-0.8**
PMG				IAmb	IAmb	10 17 55.1	
	comp=Z,36nm,1.4s						
TOO	**Toolangi**	**28.78**	**231**	P	**P**	**10 17 39.8**	**+0.6**
STKA	**Stephens Creek**	**30.08**	**244**	P	**P**	**10 17 50.3**	**-0.5**
	comp=Z,3.9nm,0.9s,baz=93,slow=9.5,SNR=6.4						
STKA				LR	LR	10 29 15.1	
	comp=Z,417nm,18.2s,baz=71,slow=35						
	comp=Z,3.9nm,0.9s						
STKA	**Stephens Creek**	**30.08**	**244**	P	**P**	**10 17 50.8**	**-0.1**
STKA				IAmb	IAmb	10 17 51.1	
	comp=Z,41nm,1.1s						
STKA	**Stephens Creek**	**30.08**	**244**	P	**P**	**10 17 50.3**	**-0.5**
INKA	**Innaminka**	**30.28**	**252**	P	**P**	**10 17 51.9**	**-0.7**
MANU	**Manus Island**	**32.27**	**304**	P	**P**	**10 18 09.7**	**-0.6**
MGBR	**Mount Gambier**	**32.45**	**234**	P	**P**	**10 18 11.5**	**-0.2**
HTT	**Hallett**	**32.60**	**242**	P	**P**	**10 18 12.7**	**-0.3**
TBI	**Tubuai**	**34.09**	**100**	*e*LQ	LQ	10 26 01.0	
	comp=Z,1µm,31.0s						
TBI				*e*LR	LR	10 27 20.4	
	comp=Z,2µm,26.5s						
TBI				*e*LR	LR	10 27 31.9	
	comp=Z,5µm,27.0s						
BBOO	**Buckleboo**	**34.85**	**244**	P	**P**	**10 18 31.7**	**-0.9**
BBOO				IAmb	IAmb	10 18 43.1	
	comp=Z,23nm,1.1s						
PPT2	**Papeete2**	**34.90**	**90**	*e*S	**S**	**10 24 02.2**	**+0.1**
	comp=Z,153nm,24.0s						
PPT2				*e*LQ	LQ	10 26 14.2	
	comp=Z,594nm,39.2s						
PPT2				*e*LR	LR	10 27 46.4	
	comp=Z,1µm,28.5s						
PPT2				*e*LR	LR	10 27 53.8	
	comp=Z,2µm,26.5s						
WR8	**Warramunga Arr**	**36.48**	**266**		**P**	**10 18 45.3**	**-1.4**
AS31	**Alice Springs**	**36.52**	**260**	P	**P**	**10 18 46.2**	**-0.9**
ASAR	**Alice Springs**	**36.52**	**260**	P	**P**	**10 18 46.2**	**-0.9**
	comp=Z,4.7nm,0.8s,baz=85,slow=9.0,SNR=40						
ASAR				LR	LR	10 33 50.5	
	comp=Z,779nm,19.0s,baz=101,slow=36						
	comp=Z,4.7nm,0.8s						
ASAR	**Alice Springs**	**36.52**	**260**	P	**P**	**10 18 46.0**	**-1.2**
WB0	**Warramunga Arr**	**36.61**	**266**	P	**P**	**10 18 45.6**	**-2.2**
WB0				IAmb	IAmb	10 18 48.8	
	comp=Z,33nm,1.8s						
WRA	**Warramunga Arr**	**36.63**	**266**	P	**P**	**10 18 46.3**	**-1.7**
	comp=Z,2.5nm,0.7s,baz=97,slow=8.5,SNR=13						
	comp=Z,2.5nm,0.7s						
WRA	**Warramunga Arr**	**36.63**	**266**	P	**P**	**10 18 46.1**	**-1.9**
JAY	**Jayapura**	**37.32**	**297**	LR	LR	10 32 52.8	
	comp=Z,344nm,22.0s,baz=172,slow=34						
H11S2	**WAKE ISLAND Hy**	**40.75**	**350**	T	T	11 02 54.4	
	baz=171,slow=76,SNR=7.6						
H11S3	**WAKE ISLAND Hy**	**40.76**	**350**	T	T	11 02 46.1	
	baz=171,slow=76,SNR=7.6						
H11S1	**WAKE ISLAND Hy**	**40.77**	**350**	T	T	11 02 46.7	
	baz=171,slow=76,SNR=7.3						
MTN	**Manton Dam**	**41.38**	**275**	P	**P**	**10 19 27.6**	**-0.2**
FORT	**Forrest**	**41.48**	**248**	P	**P**	**10 19 27.8**	**-0.6**
KNRA	**Kununurra**	**42.75**	**270**	P	**P**	**10 19 38.6**	**-0.4**
KNRA				IAmb	IAmb	10 19 39.4	
	comp=Z,29nm,1.2s						
FITZ	**Fitzroy Crossi**	**45.06**	**266**	LR	LR	10 39 03.6	
	comp=Z,998nm,18.2s,baz=100,slow=36						
FITZ	**Fitzroy Crossi**	**45.06**	**266**	P	**P**	**10 19 58.0**	**+0.6**
GUMO	**Guam**	**45.17**	**319**	LR	LR	10 36 41.2	
	comp=Z,350nm,21.9s,baz=150,slow=33						
TAOE	**Nuku Hiva Isla**	**46.30**	**81**	*e*LR	LR	10 33 08.2	
	comp=Z,1µm,26.9s						
RKT	**Rikitea**	**47.34**	**102**	*e*P	**P**	**10 20 18.3**	**+3.0**
	comp=Z,7µm,42.2s						
RKT	**Rikitea**	**47.34**	**102**	*e*SS	SS	10 30 34.8	+0.4
	comp=Z,8µm,42.5s						
RKT				*e*LR	LR	10 33 38.0	
	comp=Z,2µm,27.8s						
SOEI	**Soe**	**48.76**	**276**	P	**P**	**10 20 27.3**	**+0.8**
	comp=Z,847nmcomp=Z,37nm,1.0s						
BATI	**Baumata**	**49.16**	**275**	LR	LR	10 40 32.9	
	comp=Z,1µm,21.8s,baz=144,slow=35						
PSA00	**Pilbara Seismi**	**49.67**	**260**		**P**	**10 20 32.0**	**-1.3**
PSA00				IAmb	IAmb	10 20 34.2	
	comp=Z,31nm,1.8s						
MBWA	**Marble Bar**	**49.86**	**260**	P	**P**	**10 20 34.2**	**-0.5**
NWAO	**Narrogin (SRO)**	**50.66**	**245**	LR	LR	10 41 53.1	
	comp=Z,392nm,18.9s,baz=108,slow=36						
NWAO	**Narrogin (SRO)**	**50.66**	**245**	P	**P**	**10 20 40.7**	**0.0**
EDFI	**Ende, Flores**	**51.49**	**276**	P	**P**	**10 20 46.9**	**-0.3**
	comp=Z,503nmcomp=Z,29nm,1.6s						
MORW	**Morawa**	**51.98**	**250**	P	**P**	**10 20 50.0**	**-0.6**
MORW				IAmb	IAmb	10 20 56.3	
	comp=Z,14nm,0.9s						
WSI	**Waingapu**	**52.45**	**275**	P	**P**	**10 20 55.0**	**+0.7**
LUWI	**Luwuk**	**53.60**	**286**	P	**P**	**10 21 01.6**	**-1.1**
LUWI				IAmb	IAmb	10 21 28.3	
	comp=Z,25nm,0.9s						
PLAI	**Plampang**	**55.08**	**275**	P	**P**	**10 21 13.0**	**-0.5**
	comp=Z,536nmcomp=Z,47nm,1.1s						
VNDA	**Vanda**	**55.91**	**183**	P	**P**	**10 21 17.8**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=7.2,slow=6.8,SNR=10.0						
VNDA				LR	LR	10 41 10.9	
	comp=Z,98nm,21.6s,baz=14,slow=32						
	comp=Z,1.4nm,0.7s						
VNDA	**Vanda**	**55.91**	**183**	P	**P**	**10 21 18.0**	**-0.5**
SBA	**Scott Base**	**56.05**	**182**	P	**P**	**10 21 19.9**	**+0.4**
TOLI2	**Tolitoli**	**56.35**	**287**	P	**P**	**10 21 21.0**	**-1.6**
MPSI	**Mapaga**	**56.78**	**286**	P	**P**	**10 21 25.0**	**-0.7**
	comp=Z,970nmcomp=Z,7.2nm,0.9s						
JAGI	**Jajag, Banyuwa**	**58.56**	**273**	P	**P**	**10 21 38.0**	**-0.2**
JAGI				IAmb	IAmb	10 22 02.4	
	comp=Z,21nm,0.9s						
CASY	**Casey**	**59.32**	**205**	P	**P**	**10 21 42.0**	**-0.7**
SNJI	**Sawahan-Nganju**	**61.02**	**273**	P	**P**	**10 21 56.1**	**+0.8**
	comp=Z,28nm,1.4s						
JHJ	**Hachijo jima 2**	**63.55**	**329**	LR	LR	10 48 34.3	
	comp=Z,41nm,18.9s,baz=104,slow=35						
JOW	**Kunigami**	**65.38**	**316**	LR	LR	10 46 49.6	
	comp=Z,119nm,21.1s,baz=134,slow=32						
MJAR	**Matsushiro Arr**	**67.09**	**330**	P	**P**	**10 22 34.3**	**-0.2**
	comp=Z,2.9nm,0.9s,baz=160,slow=5.4,SNR=4.9						
	comp=Z,2.9nm,0.9s						
MJAR	**Matsushiro Arr**	**67.09**	**330**		**P**	**10 22 35.2**	**+0.8**
MJAR				IAmb	IAmb	10 22 45.7	
	comp=Z,13nm,1.4s						
QSPA	**South Pole Qui**	**68.11**	**180**		**P**	**10 22 39.4**	**-1.4**
JNU	**Nakatsue**	**68.25**	**322**	LR	LR	10 50 22.1	
	comp=Z,27nm,19.8s,baz=136,slow=34						
MDSI	**Maura Dua**	**69.23**	**274**	P	**P**	**10 22 46.8**	**-1.6**
	comp=Z,14nm,0.9s						
ASAJ	**Asahikawa**	**71.61**	**337**	LR	LR	10 50 07.2	
	comp=Z,200nm,21.3s,baz=168,slow=32						
KSRS	**Korea Array**	**73.06**	**323**	P	**P**	**10 23 11.2**	**+0.1**
	comp=Z,2.6nm,1.0s,baz=138,slow=5.4,SNR=6.2						
KSRS				LR	LR	10 51 26.3	
	comp=Z,62nm,21.8s,baz=115,slow=33						
	comp=Z,2.6nm,1.0s						
KSAR	**Wonju Array Be**	**73.07**	**323**		**P**	**10 23 11.7**	**+0.5**
INCN	**Inchon**	**73.80**	**323**	P	**P**	**10 23 15.5**	**0.0**
QIZ	**Qiongzhong**	**74.44**	**298**	P	**P**	**10 23 20.3**	**+0.7**
QIZ				S	**S**	**10 32 55.3**	**+3.5**
QIZ				pmax	pmax		
	comp=Z,27nm,1.7s						
QIZ				LR	LR		
	comp=Z,160nm,18.8s						
NJ2	**Nanjing**	**74.99**	**314**	*e*P	**P**	**10 23 24.8**	**+2.4**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
IPM	**Ipoh**	**75.59**	**281**		**P**	**10 23 26.1**	**-0.3**
IPM	**Ipoh**	**75.59**	**281**	P	**P**	**10 23 25.8**	**-0.6**
	comp=Z,28nm,0.8s						
PETK	**Petropavlovsk-**	**76.01**	**350**	P	**P**	**10 23 27.0**	**-0.9**
	comp=Z,11nm,1.0s,baz=85,slow=3.7,SNR=5.2						
PETK				LR	LR	10 53 22.4	
	comp=Z,112nm,18.6s,baz=152,slow=33						
	comp=Z,11nm,1.0s						
PETK	**Petropavlovsk-**	**76.01**	**350**	P	**P**	**10 23 28.5**	**+0.6**
USRK	**Ussuriysk Ar.**	**76.04**	**331**	P	**P**	**10 23 28.6**	**+0.4**
	comp=Z,7.2nm,0.8s,baz=113,slow=4.5,SNR=12						
	comp=Z,7.2nm,0.8s						
KULM	**Kulim**	**76.26**	**282**	P	**P**	**10 23 28.9**	**-1.3**
KULM				IAmb	IAmb	10 23 31.1	
	comp=Z,7.9nm,0.8s						
RPSI	**Rantau Prapat**	**76.81**	**278**	P	**P**	**10 23 32.5**	**-0.9**
PSI	**Prapat**	**76.85**	**278**	P	**P**	**10 23 32.5**	**-1.2**
	comp=Z,11nm,0.9s,baz=196,slow=7.4,SNR=7.3						
PSI				LR	LR	10 58 58.8	
	comp=Z,196nm,20.6s,baz=134,slow=37						
	comp=Z,11nm,0.9s						
PSI	**Prapat**	**76.85**	**278**	P	**P**	**10 23 32.1**	**-1.6**
	comp=Z,9.3nm,1.0s						
WHN	**Wuhan**	**77.18**	**311**	P	**P**	**10 23 35.5**	**+0.5**
MAW	**Mawson**	**77.43**	**202**	P	**P**	**10 23 35.7**	**-0.1**
	comp=Z,8.4nm,1.0s,baz=98,slow=8.4,SNR=8.9						
	comp=Z,8.4nm,1.0s						
MDJ	**Mudanjiang**	**77.47**	**329**		**P**	**10 23 36.3**	**0.0**
MDJ				IAmb	IAmb	10 23 40.9	
	comp=Z,14nm,1.1s						
MDJ	**Mudanjiang**	**77.47**	**329**	P	**P**	**10 23 37.8**	**+1.5**
MDJ				S	S	10 33 35.0	+11
MDJ				pmax	pmax		
	comp=Z,13nm,0.7s						
TIA	**Tai'an**	**78.68**	**317**	P	**P**	**10 23 44.5**	**+1.3**
TIA				pmax	pmax		
	comp=Z,12nm,0.9s						
BELA	**Belgrano 2**	**79.03**	**174**	P	**P**	**10 23 42.8**	**-1.8**
BELA				IAmb	IAmb	10 23 43.6	
	comp=Z,24nm,1.6s						
BNX	**BinXian**	**79.34**	**329**	⇑P	**P**	**10 23 47.0**	**+0.4**
BNX				pmax	pmax		
	comp=Z,14nm,0.9s						
ENH	**Enshi**	**80.53**	**308**		**P**	**10 23 52.9**	**-0.5**
LYN	**LuoYang**	**80.77**	**313**	P	**P**	**10 23 55.8**	**+1.2**
LYN				pmax	pmax		
	comp=Z,26nm,0.9s						
HNS	**HongShan**	**80.94**	**316**	⇓P	P	10 24 01.0	+5.6
HNS				pmax	pmax		
	comp=Z,7.0nm,1.2s						
HNS				LR	LR		
	comp=Z,160nm,16.3s						
HNS				LR	LR		
	comp=Z,170nm,17.4s						
HNS				LR	LR		
	comp=Z,310nm,22.6s						
HEH	**HeiHe**	**82.66**	**332**	*e*P	**P**	**10 24 04.5**	**+0.4**
HEH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN	**Xi'an**	**82.94**	**311**	⇑P	**P**	**10 24 07.0**	**+0.9**
XAN				pP	PcP	10 24 11.8	+1.1
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PMSA	**Palmer Station**	**82.95**	**159**	LR	LR	10 56 14.8	
	comp=Z,109nm,18.0s,baz=248,slow=32						
CMAR	**Chiang Mai Arr**	**83.30**	**293**	P	**P**	**10 24 10.1**	**+1.9**
	comp=Z,6.4nm,0.9s,baz=136,slow=4.1,SNR=34						
	comp=Z,6.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**83.30**	**293**		**P**	**10 24 08.4**	**+0.1**
MA2	**Magadan**	**83.36**	**349**	LR	LR	10 55 53.9	
	comp=Z,150nm,21.5s,baz=158,slow=32						
SYO	**Syowa Base**	**83.43**	**195**	⇑*e*P	**P**	**10 24 06.4**	**-1.6**
CHTO	**Chiang Mai**	**83.45**	**293**		**P**	**10 24 09.0**	**0.0**
CHTO				IAmb	IAmb	10 24 11.4	
	comp=Z,17nm,1.0s						
CHTO	**Chiang Mai**	**83.45**	**293**	P	**P**	**10 24 09.5**	**+0.5**
ELIB	**Princess Elisa**	**84.15**	**189**	*d*P	**P**	**10 24 09.4**	**-2.4**
	comp=Z,4.0nm,1.2s						
PZH	**PanZhiHua**	**84.58**	**301**	P	**P**	**10 24 16.5**	**+1.8**
HHC	**Hu-ho-hao-te**	**84.93**	**318**	*e*P	**P**	**10 24 17.8**	**+1.6**
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,5.0s						
HHC				LR	LR		
	comp=Z,120nm,21.8s						
HHC				LR	LR		
	comp=Z,160nm,18.0s						
HHC				LR	LR		
	comp=Z,240nm,22.7s						
CD2	**Chengdu**	**85.10**	**306**	*e*P	**P**	**10 24 18.0**	**+0.8**
CMB	**Columbia Colle**	**86.01**	**46**		**P**	**10 24 21.5**	**-0.1**
N02D	**Trinity Center**	**86.08**	**43**	P	**P**	**10 24 22.9**	**+1.1**
ORV	**Oroville**	**86.08**	**45**	P	**P**	**10 24 21.6**	**-0.2**
TROLL	**Troll, Antarti**	**86.08**	**183**	⇓P	**P**	**10 24 19.5**	**-2.0**
	comp=Z,203nm,0.5s						
ISA	**Isabella, Lake**	**86.10**	**49**	P	**P**	**10 24 23.1**	**+1.1**
ISA				IAmb	IAmb	10 24 24.3	
	comp=Z,9.0nm,0.8s						
SEY	**Seymchan**	**86.25**	**350**	P	**P**	**10 24 22.1**	**+0.1**
	comp=Z,5.5nm,0.8s,baz=151,slow=5.2,SNR=10.0						
SEY				LR	LR	10 56 17.8	
	comp=Z,166nm,20.4s,baz=142,slow=31						
	comp=Z,5.5nm,0.8s						
YBH	**Yreka Blue Hor**	**86.49**	**42**	LR	LR	10 56 24.2	
	comp=Z,8.2nm,18.4s,baz=321,slow=31						
PFO	**Pinyon Flats O**	**86.53**	**52**	LR	LR	10 59 14.7	
	comp=Z,114nm,18.2s,baz=248,slow=33						
SNAA	**Sanae**	**86.59**	**181**	LR	LR	11 04 13.5	
	comp=Z,52nm,18.2s,baz=144,slow=36						
M03C	**McCloud**	**86.61**	**43**	P	**P**	**10 24 25.6**	**+1.1**
M03C				IAmb	IAmb	10 24 26.8	
	comp=Z,13nm,0.8s						
MDPB	**Devils Postpil**	**86.69**	**47**	P	**P**	**10 24 26.1**	**+0.9**
CLC	**China Lake**	**86.80**	**49**	P	**P**	**10 24 26.1**	**+0.6**
DSP	**Deep Springs**	**87.31**	**48**	P	**P**	**10 24 28.4**	**+0.6**
DSP				IAmb	IAmb	10 24 45.4	
	comp=Z,19nm,1.7s						
PAHR	**Pah Rah Range**	**87.55**	**45**		**P**	**10 24 29.4**	**+0.3**
LZDM	**Lanzhou Array**	**87.60**	**310**	P	**P**	**10 24 30.7**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=137,slow=3.2,SNR=1.2						
LZDM				LR	LR	11 00 45.0	
	comp=Z,83nm,21.8s,baz=30,slow=34						
	comp=Z,0.7nm,0.3s						
NVAR	**Mina Array Bea**	**87.62**	**47**	P	**P**	**10 24 30.8**	**+1.2**
	comp=Z,2.3nm,1.0s,baz=232,slow=7.1,SNR=12						
NVAR				LR	LR	10 54 41.5	
	comp=Z,106nm,21.7s,baz=264,slow=29						
	comp=Z,2.3nm,1.0s						
NVAR	**Mina Array Bea**	**87.62**	**47**	P	**P**	**10 24 30.0**	**+0.4**
J05D	**Fort Rock, OR**	**88.25**	**42**	P	**P**	**10 24 33.0**	**+0.6**
J05D				IAmb	IAmb	10 24 34.2	
	comp=Z,12nm,1.1s						
M22K	**Willow**	**88.34**	**16**	P	**P**	**10 24 35.0**	**+2.9**
SHPR	**Sheep Range**	**88.85**	**50**	P	**P**	**10 24 36.3**	**+0.9**
J08A	**Circle Bar Ran**	**90.01**	**43**	P	**P**	**10 24 40.8**	**+0.2**
LCMT	**Little Creek M**	**90.45**	**50**	P	**P**	**10 24 42.4**	**-0.4**
X16A	**Lo Mia Camp, P**	**90.59**	**53**	P	**P**	**10 24 45.2**	**+1.6**
SPR3	**Spring Creek 3**	**90.61**	**48**		**P**	**10 24 44.0**	**+0.3**
SPR3				IAmb	IAmb	10 25 02.0	
	comp=Z,8.0nm,1.3s						
CCUT	**Cedar City**	**90.61**	**49**		**P**	**10 24 44.5**	**+0.8**
CCUT				IAmb	IAmb	10 25 06.2	
	comp=Z,7.7nm,1.3s						
G08A	**Pilot Rock**	**90.70**	**41**		**P**	**10 24 44.0**	**+0.3**
G08A				IAmb	IAmb	10 25 23.2	
	comp=Z,15nm,1.5s						
PSUT	**Pine Spring**	**90.72**	**48**	P	**P**	**10 24 44.0**	**-0.2**
PSUT				IAmb	IAmb	10 25 09.9	
	comp=Z,7.9nm,1.3s						
R32K	**Eaglecrest**	**90.74**	**25**	P	**P**	**10 24 43.4**	**-0.1**
KNB	**Kanab**	**90.75**	**50**		**P**	**10 24 44.7**	**+0.4**
ELK	**Elko**	**90.82**	**46**	P	**P**	**10 24 45.2**	**+0.7**
	comp=Z,3.0nm,0.9s,baz=253,slow=6.6,SNR=15						

	comp=Z,3.0nm,0.9s						
ELK	Elko	90.82	46		P	10 24 45.3	+0.7
E07A	Sunnyside	90.82	39	P	P	10 24 45.4	+1.2
BESE	Bessie Mountai	90.82	24	P	P	10 24 44.7	+0.7
SZCU	Shurtz Canyon	90.83	50	P	P	10 24 45.3	+0.6
SZCU				IAmb	IAmb	10 25 03.1	
	comp=Z,7.9nm,1.3s						
U15A	North Rim	90.87	51	P	P	10 24 44.8	-0.2
U15A				IAmb	IAmb	10 24 47.6	
	comp=Z,5.9nm,0.9s						
319A	Douglas	90.92	57	P	P	10 24 45.3	+0.1
319A				IAmb	IAmb	10 24 47.9	
	comp=Z,14nm,1.3s						
HAWA	Hanford	90.93	40	P	P	10 24 44.8	+0.2
NEA2	Nenana	90.97	15	P	P	10 24 45.5	+1.1
PKCU	Pink Cliffs	91.31	50		P	10 24 48.2	+1.1
ULN	Ulaanbaatar	91.47	322	P	P	10 24 47.8	+0.4
H03S2	Juan Fernandez	91.51	127	T	T	12 06 10.0	
	baz=240,slow=74,SNR=6.6						
H03S1	Juan Fernandez	91.52	127	T	T	12 06 06.9	
	baz=240,slow=74,SNR=8.0						
H03S3	Juan Fernandez	91.53	127	T	T	12 06 09.5	
	baz=240,slow=74,SNR=8.4						
D08A	Wollman Farm,	91.63	39		P	10 24 48.7	+0.8
IL31		91.66	16	P	P	10 24 48.9	+1.3
IL31				IAmb	IAmb	10 24 57.8	
	comp=Z,19nm,1.6s						
ILAR	Eielson Array	91.66	16	P	P	10 24 46.6	-1.0
	comp=Z,1.9nm,1.0s,baz=242,slow=6.0,SNR=10						
	comp=Z,1.9nm,1.0s						
ILAR	Eielson Array	91.66	16	P	P	10 24 46.4	-1.2
MTPU	Mount Pierson	91.67	49		P	10 24 48.5	-0.3
MFID	Camas Ranch	91.71	43		P	10 24 49.2	+0.6
MFID				IAmb	IAmb	10 26 55.2	
	comp=Z,17nm,2.0s						
E19K	Redstone River	91.75	11	P	P	10 24 49.4	+1.5
E19K				IAmb	IAmb	10 27 04.1	
	comp=Z,25nm,1.9s						
X18A	Snowflake	91.75	53	P	P	10 24 48.9	-0.1
X18A				IAmb	IAmb	10 25 16.2	
	comp=Z,18nm,1.8s						
SONM	Songino Array	91.84	322	P	P	10 24 48.1	-1.0
	comp=Z,1.7nm,1.0s,baz=170,slow=20,SNR=6.1						
SONM				LR	LR	11 04 05.4	
	comp=Z,67nm,21.0s,baz=144,slow=34						
	comp=Z,1.7nm,1.0s						
SONM	Songino Array	91.84	322	P	P	10 24 48.3	-0.7
GTA	Gaotai	91.94	312	P	P	10 24 51.5	+1.8
GTA				pP	PcP	10 24 55.5	+5.0
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GTA				LR	LR		
	comp=Z,130nm,20.3s						
GTA				LR	LR		
	comp=Z,120nm,21.1s						
GTA				LR	LR		
	comp=Z,220nm,24.3s						
SHL	Shillong	92.19	297		P	10 24 51.5	+0.2
SHL				IAmb	IAmb	10 24 52.2	
	comp=Z,6.6nm,0.9s						
J26L	Joseph Creek	92.33	17	P	P	10 24 51.1	+0.3
J26L				IAmb	IAmb	10 24 52.0	
	comp=Z,7.3nm,0.9s						
LR04	Corral	92.39	135	P	P	10 24 51.3	-0.5
PLID	Pearl Lake	92.41	42	P	P	10 24 52.3	+0.4
PLID				IAmb	IAmb	10 25 05.7	
	comp=Z,11nm,1.6s						
Q16A	Castle Valley	92.77	49		P	10 24 54.7	+1.1
Q16A				IAmb	IAmb	10 25 03.3	
	comp=Z,9.3nm,1.2s						
C19K	Lookout Ridge	92.86	9	P	P	10 24 53.7	+0.6
C19K				IAmb	IAmb	10 24 56.1	
	comp=Z,8.3nm,1.2s						
COLD	Coldfoot	92.92	13	P	P	10 24 54.2	+0.9
COLD				IAmb	IAmb	10 25 03.5	
	comp=Z,7.1nm,1.2s						
HVU	Hansel Valley	92.94	46	P	P	10 24 55.0	+0.7
HVU				IAmb	IAmb	10 25 07.5	
	comp=Z,7.1nm,1.3s						
I26K	Coal Creek Min	93.06	17	P	P	10 24 53.6	-0.5
SRU	San Rafael Swe	93.31	49	P	P	10 24 55.1	-0.9
SRU				IAmb	IAmb	10 24 57.3	
	comp=Z,20nm,1.9s						
F24K	Squaw Lake	93.66	14	P	P	10 24 57.8	+1.0
F24K				IAmb	IAmb	10 25 05.2	
	comp=Z,16nm,1.7s						
E23K	Chandalar	93.73	13	P	P	10 24 58.6	+1.3
E23K				IAmb	IAmb	10 24 60.0	
	comp=Z,19nm,1.6s						
Y22A	Socorro	93.75	55	P	P	10 24 58.4	+0.1
Y22A				IAmb	IAmb	10 25 09.9	
	comp=Z,16nm,1.8s						
BSUT	Blindstream Ca	93.76	48		P	10 24 58.9	+0.5
BSUT				IAmb	IAmb	10 25 17.2	
	comp=Z,17nm,1.9s						
LENM	Lemitar	93.84	55	P	P	10 24 58.1	-0.6
D23K	Nanushuk River	94.28	12	P	P	10 25 00.3	+0.6
BMAR	Burnt Mountain	94.36	15	P	P	10 24 59.5	-0.5
TX31	Lajitas Ar. Si	94.53	60	P	P	10 25 01.0	-0.9
TX31				IAmb	IAmb	10 25 10.4	
	comp=Z,10.0nm,1.6s						
TXAR	Lajitas Array	94.53	60	P	P	10 25 02.6	+0.7
	comp=Z,1.0nm,1.0s,baz=217,slow=3.9,SNR=7.7						
TXAR				LR	LR	10 59 01.6	
	comp=Z,154nm,21.4s,baz=268,slow=30						
	comp=Z,1.0nm,1.0s						
TXAR	Lajitas Array	94.53	60	P	P	10 25 02.1	+0.3
TASM	ASL Pad, Albuq	94.54	54	P	P	10 25 01.7	-0.2
TASM				IAmb	IAmb	10 25 25.5	
	comp=Z,8.5nm,1.7s						
TASM	ASL Pad, Albuq	94.54	54	P	P	10 25 02.2	+0.3
TASM				IAmb	IAmb	10 25 25.5	
	comp=Z,10nm,1.9s						
TASM	ASL Pad, Albuq	94.54	54	P	P	10 25 01.9	0.0
TASM				IAmb	IAmb	10 25 03.7	
	comp=Z,8.7nm,1.7s						
TASM	ASL Pad, Albuq	94.54	54	P	P	10 25 01.9	0.0
TASM				IAmb	IAmb	10 25 03.7	
	comp=Z,9.9nm,1.8s						
ABQ	Albuquerque	94.54	54	P	P	10 25 01.7	-0.2
ABQ				IAmb	IAmb	10 25 03.6	
	comp=Z,9.9nm,1.9s						
ANMO	Albuquerque	94.54	54	P	P	10 25 01.1	-0.8
	comp=Z,1.2nm,1.0s,baz=227,slow=2.7,SNR=4.5						
	comp=Z,1.2nm,1.0s						
ANMO	Albuquerque	94.54	54	P	P	10 25 02.2	+0.3
ANMO				IAmb	IAmb	10 25 25.5	
	comp=Z,8.9nm,1.8s						
C24K	Franklin Bluff	95.30	12	P	P	10 25 04.8	+0.6
PALK	Pallekele	95.33	276	LR	LR	11 10 43.0	
	comp=Z,152nm,18.8s,baz=121,slow=37						
PDAR	Pinedale Array	95.52	46	P	P	10 25 05.8	-0.4
	comp=Z,0.5nm,1.0s,baz=244,slow=4.7,SNR=2.6						
	comp=Z,0.5nm,1.0s						
YKA	Yellowknife Ar	101.23	27	P	Pdif	10 25 31.3	+0.3
	comp=Z,0.2nm,0.8s,baz=254,slow=4.9,SNR=4.0						
WMQ	Urumqi	102.01	312	*e*P	Pdif	10 25 38.0	+2.9
WMQ				pP	pPdif	10 25 43.3	-3.6
WMQ				LR	LR		
	comp=Z,130nm,23.9s						
MKAR	Makanchi Array	106.52	314	Pdiff	Pdif	10 25 55.7	+0.7
	comp=Z,0.6nm,0.7s,baz=93,slow=6.3,SNR=5.2						
BVAR	Borovoye Array	115.09	320	PKP	PKiKP	10 30 20.8	-0.9
	comp=Z,1.6nm,0.6s,baz=124,slow=1.3,SNR=7.7						
AB31	Akbulak array	121.64	315		PKPdf	10 30 34.0	-0.4
ARTI	Arti	121.91	324		PKiKP	10 30 34.7	-0.2
ARCES	ARCESS Array B	128.69	346	PKP	PKPdf	10 30 46.8	-0.5
	comp=Z,3.0nm,0.8s,baz=356,slow=4.9,SNR=7.0						
FINES	FINESS Array B	134.60	339	PKP	PKiKP	10 30 59.8	-0.3
	comp=Z,3.5nm,0.9s,baz=45,slow=5.7,SNR=7.5						
NB2	NORSAR Subarra	139.05	347	PKPdf	PKPpre	10 30 59.4	
	comp=Z,1.1nm,0.8s,baz=31,slow=1.9						
NOA	NORSAR Array B	139.05	347	PKP	PKiKP	10 31 08.1	-1.2
	comp=Z,1.5nm,0.8s,baz=35,slow=2.0,SNR=7.3						
HFS	Hagfors	139.29	345	PKP	PKPdf	10 31 07.1	-0.3
	comp=Z,3.0nm,0.8s,baz=198,slow=3.0,SNR=6.5						
AKASG	Malin Array Be	140.05	325	PKP	PKPdf	10 31 07.2	-1.9
	comp=Z,0.7nm,0.5s,baz=58,slow=2.6,SNR=5.2						
KIRS	Kirsehir-Merke	141.62	306	⇑P	PKPdf	10 31 09.1	-3.3
BRTR	Keskin Array B	141.68	307	PKP	PKPdf	10 31 13.1	+0.5
	comp=Z,0.6nm,0.8s,baz=80,slow=4.5,SNR=2.8						
GHRR		143.49	319	⇑P	PKPdf	10 31 14.9	-0.5
TESR	Tescani	143.71	320	⇓P	PKPbc	10 31 13.7	+0.3
ODBI	Odobesti	143.85	319	⇑P	PKPdf	10 31 15.2	-0.8
BURAR	Bucovina Array	143.94	323		PKPbc	10 31 15.0	+0.9
BURAR	Bucovina Array	143.94	323	⇓P	PKPdf	10 31 15.4	-0.9
ONER	Baraj Valea Uz	143.95	320	⇑P	PKPdf	10 31 16.0	-0.2
VRI	Vrincioaia	144.00	319	⇑P	PKPbc	10 31 14.8	+0.6
PLOR	Plostina	144.05	319	⇓P	PKPbc	10 31 14.5	0.0
GRER		144.09	319	⇑P	PKiKP	10 31 23.6	+3.6
COVR	Voineasa-Covas	144.32	320	⇓P	PKPbc	10 31 15.2	-0.1
MLR	Muntele Rosu	144.66	319		PKPbc	10 31 16.9	+0.4
MLR	Muntele Rosu	144.66	319	⇑P	PKPbc	10 31 16.7	+0.2
DOPR	Dopca	144.74	320	⇑P	PKPdf	10 31 17.7	+0.1
STHS	Stebnicka Huta	144.93	328	*e*PKP	PKPdf	10 31 17.6	-0.2
OJC	Ojcow	145.07	330		PKPbc	10 31 17.2	-0.3
CJR	Cluj-Napoca	145.36	323	⇓P	PKPab	10 31 19.6	+0.8
ARR	Arges	145.51	320	⇓P	PKPab	10 31 20.1	+0.6
TNR	Turnu Rosu	145.57	321	⇓P	PKPab	10 31 20.1	+0.5
BSEG	Bad Segeberg	145.63	342	*e*PKPbc	PKPab	10 31 19.7	+0.3
	baz=31,slow=2.6						
MARR	Marisel-Cluj	145.65	323	⇑P	PKPab	10 31 20.1	+0.1
HUMR	Humele	145.74	319	⇓P	PKPdf	10 31 19.4	+0.1
DRGR		145.81	323	⇓P	PKPab	10 31 20.3	-0.3
LANS	Liptovska Anna	145.96	329	*e*PKP	PKPab	10 31 21.6	+0.6
LANS				*e*		10 39 00.4	
OKC	Ostrava-Krasne	146.09	331	*e*PKP	PKPab	10 31 21.1	-0.2
STEB	Steborice	146.19	332	*e*PKP	PKPab	10 31 21.4	-0.3
DEV	Deva	146.24	322	⇓P	PKPab	10 31 21.6	-0.4
OSTC	Ostas	146.38	334	*e*PKP	PKPab	10 31 22.1	-0.4
MORC	Moravsky Berou	146.40	332	⇓P	PKPab	10 31 22.1	-0.5
MORC	Moravsky Berou	146.40	332	*e*PKP	PKPbc	10 31 21.1	-0.6
CHVC	Chvalec	146.43	334	*e*PKP	PKPab	10 31 22.3	-0.4
DPC	Dobruska-Polom	146.50	333	*e*PKP	PKPbc	10 31 22.0	0.0
UPC	Upice	146.51	334	*e*PKP	PKPbc	10 31 22.2	+0.2
EKA	Eskdalemuir Ar	146.58	357	PKPbc	PKPbc	10 31 21.5	-0.5
	comp=Z,8.8nm,0.9s,baz=348,slow=2.3,SNR=14						
GZR	Gura Zlata	146.59	321	⇓P	PKPbc	10 31 22.1	-0.3
PSZ	Piszkesteto	146.59	327	⇑P	PKPbc	10 31 22.3	-0.1
SIRR	Siria	146.71	323	⇑P	PKPab	10 31 23.3	-0.6
FLTG	Flechtingen	146.75	340	*e*PKPbc	PKPbc	10 31 22.9	+0.3
	baz=31,slow=2.6						
RDO	Rodhopi	146.97	313		PKPbc	10 31 23.4	-0.1
JAVC	Velka Javorina	147.01	330	*e*PKP	PKPab	10 31 24.8	-0.2
CLL	Collm	147.02	337	*e*PKPbc	PKPbc	10 31 23.8	+0.4
	baz=31,slow=2.6						
CLL	Collm	147.02	337	*i* PKPbc	PKPbc	10 31 23.2	-0.2
	comp=Z,20nm,0.8s						
CLL				*i* PKPab	PKiKP	10 31 25.7	-0.2
	comp=Z,9.0nm,0.9s						
CLL				*i* PKiKP	PKPab	10 31 26.9	+2.0
	comp=Z,14nm,1.0s						
CLL				*i* x	x	10 31 33.9	
	comp=Z,18nm,0.9s						
BRG	Berggiesshubel	147.03	336	*e*PKPbc	PKPbc	10 31 23.8	+0.4
	baz=31,slow=2.6						
PVCC	Panska Ves	147.07	335	*e*PKP	PKPbc	10 31 24.2	+0.7
HERR	Herculane	147.09	321	⇑P	PKPbc	10 31 23.6	-0.1
BZS	Buzias	147.12	323	⇑P	PKPbc	10 31 23.6	-0.2
VRAC	Vranov	147.17	332	⇓P	PKPbc	10 31 24.5	+0.6
VRAC	Vranov	147.17	332	*e*PKP	PKPbc	10 31 24.1	+0.2
KRUC	Moravsky	147.44	332	*e*PKP	PKPbc	10 31 24.7	+0.1
HSKC	Hora Svate Kat	147.44	336	*e*PKP	PKPbc	10 31 25.0	+0.4
CLZ	Clausthal	147.45	341	*e*PKPbc	PKPbc	10 31 25.0	+0.4
	baz=31,slow=2.6						
PRU	Pruhonice	147.50	335	*e*PKP	PKPbc	10 31 25.1	+0.3
NEUB	Neuenburg	147.53	339	*e*PKPbc	PKPbc	10 31 25.3	+0.5
	baz=31,slow=2.6						
MODS	Modra-Piesok	147.54	330	*e*PKP	PKPbc	10 31 25.8	+0.8
MODS				*e*		10 39 04.8	
MDVR	Moldovita	147.56	321	⇑P	PKPbc	10 31 25.2	0.0
IBBN	Ibbenburen	147.78	344	*e*PKPbc	PKPbc	10 31 25.6	+0.2
	baz=31,slow=2.6						
GTTG	Gottingen	147.83	341	*e*PKPbc	PKPbc	10 31 26.3	+0.7
	baz=31,slow=2.6						
TANN	Tannenbergstha	147.95	337	*e*PKPbc	PKPbc	10 31 26.2	+0.2
	baz=31,slow=2.6						
MOX	Moxa	148.06	338	*e*PKPbc	PKPbc	10 31 26.2	0.0
	baz=31,slow=2.6						
BOVS	Bovan	148.21	319	⇑P	PKPbc	10 31 26.8	0.0
MORH	Mrgy, Hungar	148.36	326	⇑P	PKPbc	10 31 27.2	0.0
MANZ	Manzenberg	148.44	337	*e*PKPbc	PKPbc	10 31 27.8	+0.5
	baz=31,slow=2.6						
RONA	Rosalia, Austr	148.48	330	*i* PKP	PKPbc	10 31 28.1	+0.6
	comp=Z,19nm,0.7s,SNR=8.4						
CKRC	Cesky Krumlov	148.51	333	*e*PKP	PKPbc	10 31 27.9	+0.4
CONA	Conrad Observa	148.51	331	*i* PKP	PKPbc	10 31 28.2	+0.6
	comp=Z,12nm,0.8s,SNR=6.7						
KHC	Kasperske Hory	148.57	334	*e*PKP	PKPbc	10 31 27.8	+0.1
ROTZ	Rotzenmuhle	148.58	337	*e*PKPbc	PKPbc	10 31 28.1	+0.5
	baz=31,slow=2.6						
KASTN	Kahler Asten	148.59	342	*e*PKPbc	PKPbc	10 31 27.8	+0.2
	baz=31,slow=2.6						
GEC2	GERESS Array S	148.74	334	*e*PKPbc	PKPbc	10 31 28.5	+0.3
	baz=31,slow=2.6						
GERES	GERESS Array B	148.74	334	PKPbc	PKPbc	10 31 28.4	+0.1
	comp=Z,12nm,0.8s,baz=28,slow=3.2,SNR=65						
WET	Wettzell	148.83	335	*e*PKPbc	PKPbc	10 31 28.7	+0.3
	baz=31,slow=2.6						
GRF	Grafenberg Arr	149.00	338	*e*PKPbc	PKPbc	10 31 29.0	+0.3
	baz=31,slow=2.6						
BEHE	Becsehely	149.13	328	PKPdf	PKPdf	10 31 26.7	+1.7
ARSA	Arzberg	149.17	330	*e*PKP	PKPbc	10 31 29.2	0.0
	comp=Z,7.2nm,1.4s						
MOA	Molln	149.28	332	*e*PKP	PKPbc	10 31 29.6	+0.1
	comp=Z,6.4nm,0.7s						
TNS	Taunus Mts	149.45	341	*e*PKPbc	PKPbc	10 31 30.0	+0.1
	baz=31,slow=2.6						
BIOA	Bad Ischl, Aus	149.67	333	*e*PKP	PKPbc	10 31 30.1	-0.4
	comp=Z,9.3nm,0.9s						
BTNL	Ternell	149.77	344	*d*PKP	PKPbc	10 31 30.1	-0.6
MEM	Membach	149.78	344	*d*PKP	PKPbc	10 31 30.4	-0.2
PERS	Pernice	149.81	330	*i* PKPbc	PKPbc	10 31 30.2	-0.6
SOKA	Soboth	149.82	330	*i* PKP	PKPbc	10 31 30.7	-0.3
	comp=Z,17nm,1.0s,SNR=8.7						
BSTI	Sart Tilman	149.91	345	*d*PKP	PKPbc	10 31 31.2	+0.3
UCC	Uccle	150.00	346		PKPdf	10 31 28.5	+2.4
UCC	Uccle	150.00	346	*d*PKP	PKPbc	10 31 31.2	+0.1
BHOU	Houvegnez	150.02	344	*d*PKP	PKiKP	10 31 31.6	-0.4
BLY	Banja Luka	150.10	325	⇓P	PKiKP	10 31 31.9	-0.5
BCLA	Clavier	150.13	345	*d*PKP	PKPbc	10 31 31.3	-0.2
OHR	Ohrid	150.14	316	*i* P	PKPbc	10 31 31.9	+0.1
OBKA	Obir	150.17	330	*e*PKP	PKPbc	10 31 31.4	-0.4
	comp=Z,12nm,1.0s						
BGES	Gesves	150.22	345	*d*PKP	PKPbc	10 31 31.8	+0.1
KBA	Koelnbreinsper	150.27	332	*e*PKP	PKPbc	10 31 31.6	-0.5
	comp=Z,15nm,0.7s						
LESA	Schwarzleotal	150.29	333	*i* PKP	PKPbc	10 31 31.6	-0.5
	comp=Z,17nm,0.7s,SNR=10						
BMRD	Maredsous	150.37	345	*d*PKP	PKPbc	10 31 32.3	+0.3
PDG	Podgorica	150.37	320		PKPbc	10 31 31.6	-0.7
PDG	Podgorica	150.37	320	⇑P	PKPbc	10 31 32.1	-0.2
RCHB	Rochefort	150.39	345	*d*PKP	PKPbc	10 31 32.2	+0.1
STU	Stuttgart	150.48	339	*e*PKPbc	PKPbc	10 31 32.5	+0.1
	baz=31,slow=2.6						
MYKA	Terra Mystica	150.49	331	*i* PKP	PKPbc	10 31 31.7	-0.9
	comp=Z,12nm,0.7s,SNR=5.6						
LJU	Ljubljana	150.52	330	*i* PKPbc	PKPbc	10 31 32.2	-0.3
BOJS	Bojanci	150.57	328	*i* PKPbc	PKPbc	10 31 32.6	-0.1
DOU	Dourbes	150.60	345	*d*PKP	PKPbc	10 31 32.4	-0.2
WLF	Walferdange	150.61	343		PKPbc	10 31 32.5	-0.1
WLF	Walferdange	150.61	343	*e*PKPbc	PKiKP	10 31 33.7	+0.3
	baz=31,slow=2.6						
WLF	Walferdange	150.61	343	*d*PKP	PKiKP	10 31 33.2	-0.1
WATA	Walderalm	150.81	334	*i* PKP	PKPbc	10 31 33.2	-0.2
	comp=Z,13nm,0.7s,SNR=7.7						
WTTA	Wattenberg	150.84	334	*i* PKP	PKPbc	10 31 33.2	-0.3
	comp=Z,24nm,0.8s,SNR=8.1						
ABTA	Abfaltersbach	150.89	333	*i* PKP	PKPbc	10 31 32.5	-1.0
	comp=Z,17nm,0.7s,SNR=7.6						
RETA	Reutte	151.00	336	*e*PKP	PKPbc	10 31 33.6	-0.1
	comp=Z,10nm,0.7s						
SQTA	Sankt Quirin	151.05	335	*i* PKP	PKPbc	10 31 33.9	-0.1
	comp=Z,22nm,0.7s,SNR=11						
UBR	Ueberruh	151.09	337	*e*PKPbc	PKPbc	10 31 34.0	+0.1
	baz=31,slow=2.6						
BFO	Black Forest	151.15	339		PKPbc	10 31 33.6	-0.4
BFO	Black Forest	151.15	339	*e*PKPbc	PKPbc	10 31 33.7	-0.3
	baz=31,slow=2.6						
FETA	Feichten	151.40	335	*i* PKP	PKPbc	10 31 34.5	-0.3
	comp=Z,7.8nm,0.7s,SNR=11						
ESDC	Sonseca Array	162.21	354	PKPab	PKPab	10 32 29.4	0.0
	comp=Z,1.7nm,0.9s,baz=6.5,slow=4.5,SNR=9.4						
ESDC	Sonseca Array	162.21	354	PKPdf	PKPdf	10 31 42.3	-0.3
ESDC					PKPab	10 32 29.5	0.0
TORD	Torodi Ar. Bea	168.31	223	PKP	PKPdf	10 31 47.4	-0.9
	comp=Z,1.3nm,0.8s,baz=350,slow=1.5,SNR=7.9						
TORD				PKPab	PKPab	10 32 55.8	-1.1
	comp=Z,2.1nm,0.8s,baz=97,slow=5.4,SNR=11						

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*IDC **25** 10:19:16.8±1.1, 22°.06S×173°.82E, h0^{km}, mb4.1/9, mbtmp4.0/10, ML2.9/1, Error ellipse: s-maj=44.8km s-min=22.3km az=153.0*

*NEIC **25** 10:19:22.2±0.8, 21°.74S±0°.09×173°.47E±0°.07, h10^{km}±1^{km}, mb4.5/3, Error ellipse: s-maj=17.0km s-min=7.8km az=32.0*

ISC 25 10:19:23.5±0.9**, 22°.0S**±0°.2×**173°.6E**±0°.1**, h40^{km}, n46, σ0^{s}.65**/45**, mb4.1**/11**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	5.24	275	Pn	Pn	10 20 37.9	-1.5
PINNC	Pines Island,	5.76	263	Pn	Pn	10 20 46.1	-0.4
MSVF	Nonsavu	5.95	45	Pn	Pn	10 20 49.5	+0.3
DZM	Mont Dzumac	6.67	268	Pn	Pn	10 20 59.1	-0.1
	0.2nm,0.3s,baz=68,slow=19,SNR=3.5						
	8.3nm,0.8s						
DZM	Mont Dzumac	6.67	268		Pn	10 20 59.2	+0.1
RAO	Raoul Island	10.48	135	Pn	Pn	10 21 56.4	+5.1
STKA	Stephens Creek	30.11	244	P	P	10 25 30.0	+0.5
	1.4nm,0.8s,baz=72,slow=13,SNR=3.1						
	1.4nm,0.8s						
STKA	Stephens Creek	30.11	244	P	P	10 25 29.6	+0.2
STKA				IAmb	IAmb	10 25 40.5	
	comp=Z,23nm,1.1s						
ASAR	Alice Springs	36.58	260	P	P	10 26 25.2	-0.7
	comp=Z,1.9nm,0.9s,baz=82,slow=8.7,SNR=12						
	comp=Z,1.9nm,0.9s						
WRA	Warramunga Arr	36.69	266	P	P	10 26 26.1	-0.7
	comp=Z,1.3nm,0.9s,baz=99,slow=8.7,SNR=4.6						
	comp=Z,1.3nm,0.9s						
MTN	Manton Dam	41.45	275	P	P	10 27 06.7	0.0
MTN				IAmb	IAmb	10 27 14.6	
	comp=Z,15nm,1.2s						
FITZ	Fitzroy Crossi	45.12	266	P	P	10 27 36.9	+0.7
FITZ				IAmb	IAmb	10 27 49.4	
	comp=Z,2.9nm,1.2s						
MJAR	Matsushiro Arr	67.17	330	P	P	10 30 12.8	-0.6
	comp=Z,2.5nm,0.9s,baz=162,slow=9.8,SNR=4.4						
	comp=Z,2.5nm,0.9s						
USRK	Ussuriysk Ar.	76.12	331	P	P	10 31 07.3	+0.3
	comp=Z,1.8nm,0.8s,baz=87,slow=7.8,SNR=4.5						
	comp=Z,1.8nm,0.8s						
CMAR	Chiang Mai Arr	83.38	293	P	P	10 31 49.0	+1.9
	comp=Z,3.5nm,1.1s,baz=136,slow=4.0,SNR=12						
	comp=Z,3.5nm,1.1s						
NVAR	Mina Array Bea	87.61	47	P	P	10 32 06.9	-1.0
	comp=Z,1.0nm,1.0s,baz=226,slow=9.5,SNR=6.0						
	comp=Z,1.0nm,1.0s						
ELK	Elko	90.81	46	P	P	10 32 22.1	-0.8
	comp=Z,1.5nm,1.0s,baz=210,slow=7.5,SNR=4.0						
	comp=Z,1.5nm,1.0s						
SONM	Songino Array	91.92	322	P	P	10 32 29.0	+1.3
	comp=Z,0.3nm,0.6s,baz=129,slow=5.9,SNR=3.8						
	comp=Z,0.3nm,0.6s						
BVAR	Borovoye Array	115.18	319	PKP	PKiKP	10 37 58.9	-1.4
	comp=Z,0.4nm,0.5s,baz=94,slow=2.0,SNR=2.2						
MLR	Muntele Rosu	144.74	319	PKP	PKPbc	10 38 55.4	+0.2
	comp=Z,6.6nm,1.0s,baz=152,slow=1.1,SNR=5.1						
STEB	Steborice	146.27	332	*e*PKP	PKPab	10 39 00.6	+0.2
OSTC	Ostas	146.46	334	*e*PKP	PKPab	10 39 01.5	+0.3
DPC	Dobruska-Polom	146.58	333	*e*PKP	PKPab	10 39 01.4	-0.3
EKA	Eskdalemuir Ar	146.64	357	PKPbc	PKPbc	10 38 59.9	-0.7
	comp=Z,3.6nm,1.0s,baz=12,slow=2.4,SNR=3.3						
MAUC	Maruska	146.66	331	*e*PKP	PKPab	10 39 02.0	0.0
VRAC	Vranov	147.25	332	*e*PKP	PKPbc	10 39 03.2	+0.7
KRUC	Moravsky	147.52	332	*e*PKP	PKPbc	10 39 03.6	+0.4
PRU	Pruhonice	147.58	335	*e*PKP	PKPbc	10 39 03.8	+0.4
PRU				*e*x	x	10 39 10.5	
ZVC	Zvikov	148.16	334	*e*PKP	PKPbc	10 39 05.5	+0.6
RONA	Rosalia, Austr	148.56	330	*e*PKP	PKPbc	10 39 06.6	+0.5
	comp=Z,4.1nm,0.8s						
CKRC	Cesky Krumlov	148.59	333	*e*PKP	PKiKP	10 39 07.1	-0.5
CONA	Conrad Observa	148.60	331	*e*PKP	PKiKP	10 39 07.5	-0.2
	comp=Z,6.6nm,1.2s						
KHC	Kasperske Hory	148.65	334	*e*PKP	PKPbc	10 39 06.6	+0.3
GERES	GERESS Array B	148.82	334	PKPbc	PKPdf	10 39 03.8	+0.9
	comp=Z,3.8nm,0.9s,baz=56,slow=2.5,SNR=5.5						
BIOA	Bad Ischl, Aus	149.75	333	*e*PKP	PKiKP	10 39 09.5	-0.6
	comp=Z,2.7nm,0.6s						
SOKA	Soboth	149.90	330	*i* PKP	PKPbc	10 39 09.3	-0.3
	comp=Z,6.6nm,1.1s,SNR=5.4						
SOKA	Soboth	149.90	330	*e*P	PKPbc	10 39 09.3	-0.3
	comp=Z,6.6nm,1.1s,SNR=5.4						
LESA	Schwarzleotal	150.37	333	*i* PKP	PKPbc	10 39 10.4	-0.2
	comp=Z,6.2nm,0.9s,SNR=5.5						
WATA	Walderalm	150.89	334	*e*PKP	PKPbc	10 39 11.4	-0.6
	comp=Z,7.9nm,1.0s						
WTTA	Wattenberg	150.92	334	*i* PKP	PKPbc	10 39 12.3	+0.2
	comp=Z,9.7nm,1.1s,SNR=5.4						
WTTA	Wattenberg	150.92	334	*e*P	PKPbc	10 39 12.3	+0.2
	comp=Z,9.7nm,1.1s,SNR=5.4						
ABTA	Abfaltersbach	150.97	333	*i* PKP	PKPbc	10 39 12.2	+0.1
	comp=Z,6.9nm,1.0s,SNR=4.8						
ABTA	Abfaltersbach	150.97	333	*e*P	PKPbc	10 39 12.2	+0.1
	comp=Z,6.9nm,1.0s,SNR=4.8						
SQTA	Sankt Quirin	151.13	335	*e*PKP	PKiKP	10 39 12.7	-0.3
	comp=Z,11nm,1.0s						
FETA	Feichten	151.48	335	*i* PKP	PKPbc	10 39 13.2	-0.2
	comp=Z,9.3nm,1.0s,SNR=9.4						
TORD	Torodi Ar. Bea	168.31	222	PKP	PKPdf	10 39 26.5	-0.2
	comp=Z,0.7nm,0.9s,baz=319,slow=1.4,SNR=2.4						
TORD				PKPab	PKPab	10 40 35.4	+0.1
	comp=Z,1.0nm,0.8s,baz=112,slow=4.7,SNR=5.4						

NOU 25 10:24:32.5, 22°.41S×173°.17E, h0^{km}, mb5.0/7**, Southeast of Loyalty Islands, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	4.86	280	P	Pn	10 25 46.1	-0.8
PINNC	Pines Island,	5.30	267	P	Pn	10 25 52.7	-0.2
YATNC	Mamie plateau,	5.83	272	P	Pn	10 25 59.9	-0.3
OUENC	Ouen Island, N	5.86	269	P	Pn	10 26 00.6	0.0
DZM	Mont Dzumac	6.24	272	P	Pn	10 26 06.2	+0.2

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*RSNC **25** 10:25:52.6±0.0, 3°N±1°×7°4W±°, h10^{km}±3^{km}, M4.2, mB4.9, mb4.8, ML3.9, Mw4.1, Mw(mB)4.2*

*CATAC **25** 10:25:54.7±0.9, 3°N±4°×7°4W±°, h3^{km}±5^{km}, M4.8/7, mb4.8/1, mB4.8/1, MLv4.8/7, Mw(mB)4.0/1, Error ellipse: s-maj=14.1km s-min=5.1km az=116.8, confirmed*

*IDC **25** 10:25:55.7±2.5, 3°.55N×74°.07W, h23^{km}±15^{km}, mb3.7/12, mbtmp3.9/14, ML3.7/3, MS3.4/3, Error ellipse: s-maj=19.0km s-min=13.7km az=74.0*

*NEIC **25** 10:25:55.0±1.5, 3°.60N±0°.05×74°.00W±0°.08, h10^{km}±1^{km}, mb4.5/54, Error ellipse: s-maj=13.6km s-min=9.2km az=95.0*

ISC 25 10:25:53.1±0.4**, 3°.43N**±0°.02×**74°.17W**±0°.02**, h10^{km}, n129, σ1^{s}.64**/153**, mb4.4**/33**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	La Uribe, Meta	0.28	229	P	Pg	10 25 57.6	-1.1
URMC				S	Sg	10 26 01.2	-1.3
PRAC	Prado	0.77	292	P	Pg	10 26 06.2	-1.8
PRAC				S	Sg	10 26 16.8	-1.2
PRAC	Prado	0.77	292	P	Pg	10 26 06.3	-1.7
PRAC				S	Sg	10 26 16.2	-1.8
VILC	Villavicencio,	0.83	35	P	Pg	10 26 08.4	-0.7
VILC				S	Sg	10 26 20.0	0.0
CVER	Cruz Verde, Cu	1.09	5	P	Pg	10 26 12.5	-1.7
CVER				S	Sg	10 26 26.9	-1.5
ORTC	Ortega, Tolima	1.17	294	P	Pb	10 26 13.5	-2.0
ORTC				S	Sb	10 26 29.4	-1.4
CHIC	Chingaza	1.27	20	P	Pn	10 26 15.7	-1.6
CHIC				S	Sb	10 26 31.4	-2.6
MACC	Macarena, Meta	1.31	166	P	Pn	10 26 16.4	-1.2
MACC				S	Sb	10 26 33.8	-1.1
ROSC	El Rosal	1.41	354	Pg	Pb	10 26 19.2	-0.6
	2µm,0.3s,baz=201,slow=4.0,SNR=2382						
ROSC				Lg	Lg	10 26 39.2	
	303nm,0.3s,baz=156,slow=23,SNR=8.9						
ROSC				LR	LR	10 27 09.9	
	comp=Z,652nm,21.8s,baz=86,slow=57						
ROSC	El Rosal	1.41	354		Pb	10 26 19.0	-0.8
BETC	Betania	1.47	240	P	Pn	10 26 18.9	-0.8
BETC				S	Sn	10 26 37.6	-1.5
ANIL	Santa Ana	1.62	311	P	Pn	10 26 21.0	-1.0
ANIL				S	Sn	10 26 41.8	-1.3
GARC	Garzon, Huila	1.81	227	P	Pn	10 26 24.5	0.0
GARC				S	Sn	10 26 47.8	+0.1

RECRC	Villamaria, Ca	1.93	322	P	Pb	10 26 26.9	-1.7
RECRC				S	Sb	10 26 51.1	-1.8
NIZA	Niza - Manizal	2.07	321	P	Pb	10 26 29.4	-1.6
NIZA				S	Sb	10 26 55.9	-1.1
SPBC	San Pablo de B	2.21	3	P	Pb	10 26 31.8	-1.5
SPBC				S	Sg	10 27 03.8	-0.5
YOTC	Yotoco, Valle	2.24	284	P	Pn	10 26 30.4	0.0
YOTC				S	Sb	10 27 00.2	-1.4
FLOC	Florencia	2.36	219	P	Pb	10 26 33.7	-2.0
FLOC				S	Sb	10 27 04.8	-0.1
FLOC	Florencia	2.36	219	P	Pb	10 26 33.4	-2.3
FLOC				S	Sb	10 27 03.6	-1.3
JAMC	Jamundi, Valle	2.51	265	P	Pb	10 26 35.6	-2.8
JAMC				S	Sb	10 27 09.4	0.0
POPC	Popayan, Colom	2.65	251	P	Pn	10 26 37.7	+1.5
POPC				S	Sb	10 27 14.2	+0.6
RUSC	La Rusia	2.68	24	P	Pb	10 26 38.8	-2.7
RUSC				S	Sb	10 27 13.5	-1.1
RUSC	La Rusia	2.68	24	P	Pn	10 26 38.4	+1.7
RUSC				S	Sb	10 27 13.3	-1.3
CBOC	Ciudad Bolivar	3.04	323	P	Pb	10 26 43.8	-3.6
PTBC	PUERTO BERRIO,	3.10	355	P	Pn	10 26 42.6	+0.4
PTBC				S	Sn	10 27 22.0	+2.6
BARC	Barichara	3.29	17	P	Pn	10 26 46.8	+1.8
PTLC	Puerto Leguiza	3.29	191	P	Pb	10 26 50.5	-1.2
CRUC	La Cruz	3.34	236	P	Pb	10 26 48.6	-4.0
CRUC				S	Sb	10 27 32.4	-1.0
BBAC	Balboa, Cauca	3.38	246	P	Pn	10 26 47.4	+1.3
BBAC				S	Sb	10 27 36.3	+1.9
GCUF	Volcan Galeras	3.85	235	P	Pn	10 26 55.6	+2.7
GCUF				S	Sg	10 27 53.0	-4.0
GR1C	Gorgona, Isla	4.01	264	P	Pn	10 26 54.8	+0.1
DBBC	Dabeiba	4.10	330	P	Pn	10 26 58.1	+2.1
DBBC				S	Sb	10 27 57.8	+2.5
PAMC	Pamplona, Colo	4.15	21	P	Pn	10 26 59.8	+2.8
UREC	San Jos de Ur	4.50	343	P	Pn	10 27 02.9	+1.4
UREC				S	Sb	10 28 01.8	-4.9
TULM	Tulcn-Chalpat	4.51	233	P	Pg	10 27 18.9	-0.6
OCAC	Ocana	4.85	10	P	Pn	10 27 07.5	+1.1
OCAC				S	Sn	10 28 06.1	+3.3
APAC	Apartado, Choc	5.05	332	P	Pn	10 27 12.7	+3.8
	1µm105nm,0.5s						
PTAC	Punta Ardita,	5.17	316	P	Pn	10 27 13.3	+2.7
	1µm25nm,0.5s						
OTAV	Otavalo	5.32	234		Pn	10 27 18.7	+5.5
OTAV	Otavalo	5.32	234	P	Pn	10 27 18.5	+5.4
	458nm49nm,0.8s						
PAC1	Pacto, Paraso	5.58	236	P	Pn	10 27 17.8	+1.4
	854nm51nm,0.9s						
SLOR	San Lorenzo -	5.98	226		Pn	10 27 26.9	+4.8
ARGC	Ariguani, Magd	6.39	359	P	Pn	10 27 30.3	+2.9
	1µm107nm,0.7s						
SDV	Santo Domingo	6.46	33	Pn	Pn	10 27 29.3	+0.7
	28nm,0.3s,baz=198,slow=9.3,SNR=89						
SDV				Sn	Sn	10 28 38.5	-4.0
	62nm,0.3s,baz=288,slow=14,SNR=10						
SDV				Lg	Lg	10 29 15.3	
	27nm,0.3s,baz=43,slow=17,SNR=3.2						
SDV	Santo Domingo	6.46	33		Pn	10 27 28.6	0.0
SDV	Santo Domingo	6.46	33	P	Pn	10 27 29.2	+0.7
SJCC	San Jacinto, C	6.50	351	P	Pn	10 27 28.5	-0.5
SJCC				S	Sn	10 28 47.4	+4.1
SJCC	San Jacinto, C	6.50	351	P	Pn	10 27 28.2	-0.8
URI	Uribia	8.50	15	P	Pn	10 27 55.8	-0.5
URI				S	Sn	10 29 30.1	-2.3
ATAH	Atahualpa	11.31	202	Pn	Pn	10 28 38.4	+3.1
	0.8nm,0.3s,baz=12,slow=11,SNR=9.2						
ATAH				Sn	Sn	10 30 45.1	+3.1
	0.2nm,0.3s,baz=287,slow=12,SNR=1.5						
ATAH				LR	LR	10 32 52.4	
	comp=Z,94nm,20.9s,baz=30,slow=36						
	2.5nm,0.7s						
BOAV	Boa Vista	13.67	94		Pn	10 29 03.2	-4.0
BOAB	BOACO BROADBAN	14.48	309	Pn	Pn	10 29 20.4	+2.1
MACA	Manacapuru-AM	14.98	116	Pn	Pn	10 29 23.2	-1.9
MTDJ	Mount Denham	15.07	348	Pn	Pn	10 29 26.7	+0.3
DR12	Loma Pena Alta	15.97	17	Pn	Pn	10 29 36.0	-2.1
SJG	San Juan	16.57	28	Pn	Pn	10 29 45.0	-0.7
	0.1nm,0.3s,baz=215,slow=12,SNR=1.5						
	7.8nm,0.6s						
SJG	San Juan	16.57	28	IAmb	IAmb	10 30 05.6	
	comp=Z,32nm,1.3s						
HUMP	Col San Antoni	16.74	29	Pn	Pn	10 29 45.7	-2.2
HUMP				IAmb	IAmb	10 30 16.7	
	comp=Z,22nm,1.1s						
LPAZ	La Paz	20.48	163	P	Pn	10 30 33.4	-0.6
	comp=Z,2.0nm,1.0s,baz=6.0,slow=15,SNR=5.1						
LPAZ				Lg	Lg	10 36 44.0	
	comp=Z,0.1nm,0.3s,baz=358,slow=8.3,SNR=3.9						
	comp=Z,2.0nm,1.0s						
LPAZ	La Paz	20.48	163	P	Pn	10 30 34.1	+0.1
MDP	Montagnes des	21.53	85	P	P	10 30 42.4	-0.3
	comp=Z,11nm,0.4s,baz=265,slow=9.7,SNR=23						
	comp=Z,11nm,0.4s						
TEIG	Tepich	21.63	322	P	P	10 30 44.5	+0.8
TEIG				IAmb	IAmb	10 30 47.0	
	comp=Z,19nm,1.1s						
SIV	San Ignacio	23.24	146	P	P	10 31 02.4	+1.6
	comp=Z,2.5nm,0.8s,baz=319,slow=12,SNR=8.1						
	comp=Z,2.5nm,0.8s						
AC06	Mina Casimiro	30.83	173	P	P	10 32 13.2	+3.8
GOGA	Godfrey	31.07	345	P	P	10 32 12.4	+0.9
LRAL	Lakeview Retre	31.81	339	P	P	10 32 18.5	+0.5
LRAL				IAmb	IAmb	10 32 21.9	
	comp=Z,10nm,1.4s						
Z47A	Carrollton	32.34	338	P	P	10 32 23.4	+0.6
Y49A	Blount Mountai	32.36	341	P	P	10 32 23.5	+0.6
X48A	Hartselle	33.11	340	P	P	10 32 30.0	+0.6
X48A				IAmb	IAmb	10 32 50.6	
	comp=Z,14nm,1.4s						
CPCT	Cooper Cave	33.27	344	P	P	10 32 31.9	+1.1
CPCT				IAmb	IAmb	10 33 07.3	
	comp=Z,12nm,1.4s						
TKL	Tuckaleechee C	33.28	346	LR	LR	10 48 16.8	
	comp=Z,82nm,18.1s,baz=328,slow=40						
T59A	Double "B" Far	33.53	355	P	P	10 32 32.8	-0.2
V48A	Smith Brothers	34.22	342	P	P	10 32 39.2	+0.1
V48A				IAmb	IAmb	10 32 40.7	
	comp=Z,7.6nm,0.8s						
U49A	Red Boiling Sp	34.62	343	P	P	10 32 43.0	+0.5
U49A				IAmb	IAmb	10 33 18.9	
	comp=Z,16nm,1.4s						
WVT	Waverly	34.90	340	P	P	10 32 45.2	+0.3
WVT				IAmb	IAmb	10 32 47.5	
	comp=Z,4.0nm,0.8s						
T47A	Sharon Grove	35.45	342	P	P	10 32 49.8	+0.1
T47A				IAmb	IAmb	10 32 51.2	
	comp=Z,5.9nm,0.8s						
MIAR	Mount Ida	35.84	332	P	P	10 32 53.9	+0.8
MIAR				IAmb	IAmb	10 32 58.7	
	comp=Z,5.6nm,1.2s						
LCAR	Lake Charles	36.07	336	P	P	10 32 55.0	0.0
LCAR				IAmb	IAmb	10 32 57.5	
	comp=Z,3.5nm,1.0s						
BRDY	Brady	36.26	323	P	P	10 32 56.6	-0.1
FCAR	Ozark Folk Cen	36.31	335	P	P	10 32 56.7	-0.4
FCAR				IAmb	IAmb	10 33 04.1	
	comp=Z,10nm,1.4s						
Q51A	Peebles	36.40	348	P	P	10 32 58.1	+0.3
Q51A				IAmb	IAmb	10 33 10.4	
	comp=Z,15nm,1.3s						
PBMO	Poplar Bluff	36.41	338	P	P	10 32 57.9	0.0
PBMO				IAmb	IAmb	10 33 01.9	
	comp=Z,16nm,1.4s						
USIN	University of	36.52	342	P	P	10 32 58.9	0.0
CGM3	Cape Girardeau	36.58	339	P	P	10 32 59.1	-0.3
CGM3				IAmb	IAmb	10 32 59.9	
	comp=Z,4.4nm,0.6s						
SIUC	Southern Illin	36.80	340	P	P	10 33 01.3	+0.1
SIUC				IAmb	IAmb	10 33 01.9	
	comp=Z,8.7nm,0.8s						
T42A	Van Buren	36.88	337	P	P	10 33 01.7	-0.2
T42A				IAmb	IAmb	10 33 29.2	
	comp=Z,5.3nm,1.2s						
FVM	French Village	37.47	339		P	10 33 07.1	+0.2
FVM				IAmb	IAmb	10 33 07.9	
	comp=Z,8.7nm,0.8s						
CCM	Cathedral Cave	37.84	338		P	10 33 10.1	+0.1
CCM				IAmb	IAmb	10 33 16.8	
	comp=Z,5.3nm,0.9s						
TXAR	Lajitas Array	38.04	316	P	P	10 33 11.7	-0.3
	comp=Z,0.6nm,1.0s,baz=128,slow=8.3,SNR=5.8						
	comp=Z,0.6nm,1.0s						
TXAR	Lajitas Array	38.04	316	P	P	10 33 12.5	+0.5
UCCT	U. Connecticut	38.24	2	P	P	10 33 14.5	+1.2
PAOC	Oil Creek Stat	38.24	353	P	P	10 33 13.3	-0.1
FNO	Franklin	38.29	329	P	P	10 33 13.7	-0.2
FNO				IAmb	IAmb	10 33 17.6	
	comp=Z,4.2nm,0.7s						
SADO	Sadowa	41.40	355	P	P	10 33 38.0	-1.7
	comp=Z,5.7nm,0.8s,baz=212,slow=3.8,SNR=3.5						
	comp=Z,5.7nm,0.8s						
SADO	Sadowa	41.40	355	P	P	10 33 39.6	-0.1
SADO				IAmb	IAmb	10 33 47.7	
	comp=Z,9.8nm,1.0s						
ABQ	Albuquerque	43.35	320		P	10 33 57.4	+1.4
ANMO	Albuquerque	43.35	320	P	P	10 33 57.2	+1.3
TASM	ASL Pad, Albuq	43.36	320	P	P	10 33 57.5	+1.5
TASM	ASL Pad, Albuq	43.36	320	P	P	10 33 57.5	+1.5
TASM				IAmb	IAmb	10 34 00.1	
	comp=Z,2.6nm,1.0s						
TASM	ASL Pad, Albuq	43.36	320	P	P	10 33 56.5	+0.5
TASM				IAmb	IAmb	10 34 00.1	
	comp=Z,2.9nm,1.0s						
TASM	ASL Pad, Albuq	43.36	320	P	P	10 33 57.4	+1.4
TASM				IAmb	IAmb	10 34 00.1	
	comp=Z,2.4nm,0.9s						
I37A	Lemond, Waseca	43.85	340		P	10 33 58.7	-0.9
K30B	Basset	45.18	333	P	P	10 34 11.4	+1.1
SUSD	Miller	46.32	335		P	10 34 19.3	0.0
HMU	Henry Mountain	47.91	321		P	10 34 33.1	+1.0
HMU				IAmb	IAmb	10 34 38.0	
	comp=Z,6.6nm,1.0s						
RSSD	Black Hills	48.34	331		P	10 34 36.4	+1.1
RSSD				IAmb	IAmb	10 34 45.1	
	comp=Z,9.1nm,1.3s						
AGMN	Agassiz Nation	48.43	341	P	P	10 34 35.7	+0.1
AGMN				IAmb	IAmb	10 35 04.5	
	comp=Z,8.2nm,1.4s						
PDAR	Pinedale Array	50.25	326	P	P	10 34 49.7	-0.2
	comp=Z,0.6nm,0.9s,baz=111,slow=12,SNR=4.0						
	comp=Z,0.6nm,0.9s						
PDAR	Pinedale Array	50.25	326	P	P	10 34 50.1	+0.3
SCHQ	Schefferville	51.59	5	P	P	10 34 59.0	-0.5
	comp=Z,3.7nm,0.7s,baz=196,slow=7.8,SNR=7.1						
	comp=Z,3.7nm,0.7s						
SCHQ	Schefferville	51.59	5	P	P	10 34 59.6	+0.1
NVAR	Mina Array Bea	53.17	317	P	P	10 35 13.9	+2.1
	comp=Z,0.7nm,0.9s,baz=105,slow=8.1,SNR=4.5						
	comp=Z,0.7nm,0.9s						
NVAR	Mina Array Bea	53.17	317	P	P	10 35 13.1	+1.3
BOZ	Bozeman (W)	53.23	328	P	P	10 35 13.8	+1.9
WVOR	Wild Horse Val	55.44	321		P	10 35 28.8	+0.6
WVOR				IAmb	IAmb	10 35 36.8	
	comp=Z,3.8nm,1.0s						
YKA	Yellowknife Ar	66.08	341	P	P	10 36 39.4	-0.7
	comp=Z,0.2nm,0.6s,baz=140,slow=5.6,SNR=7.3						
	comp=Z,0.2nm,0.6s						
YKA	Yellowknife Ar	66.08	341	P	P	10 36 39.5	-0.6
YKAW3	Yellowknife Wh	66.14	341	P	P	10 36 40.6	+0.2
MDT	Midelt	71.00	57	LR	LR	11 07 09.7	
	comp=Z,48nm,20.6s,baz=277,slow=35						
TORD	Torodi Ar. Bea	75.47	77	P	P	10 37 37.7	-0.5
	comp=Z,0.5nm,0.5s,baz=297,slow=5.8,SNR=5.1						
	comp=Z,0.5nm,0.5s						
ILAR	Eielson Array	79.58	335	P	P	10 37 60.0	-0.3
	comp=Z,0.4nm,0.7s,baz=111,slow=3.9,SNR=5.4						
	comp=Z,0.4nm,0.7s						
ILAR	Eielson Array	79.58	335	P	P	10 38 00.6	+0.4
NOA	NORSAR Array B	84.78	29	P	P	10 38 28.7	+1.1
	comp=Z,0.3nm,0.6s,baz=269,slow=4.9,SNR=2.5						
	comp=Z,0.3nm,0.6s						
KURK	Kurchatov	121.23	20		PKPdf	10 44 46.1	-0.4
KURBB	Kurchatov Arra	121.28	20	PKP	PKiKP	10 44 46.2	-0.5
	comp=Z,0.3nm,0.3s,baz=314,slow=3.6,SNR=4.3						
AS31	Alice Springs	146.23	231	PKPdf	PKPbc	10 45 34.5	-0.3
ASAR	Alice Springs	146.23	231	PKPbc	PKPab	10 45 34.8	-0.8
	comp=Z,1.0nm,0.6s,baz=119,slow=4.0,SNR=17						
WRA	Warramunga Arr	147.71	237	PKPbc	PKiKP	10 45 40.4	-0.7
	comp=Z,1.2nm,0.8s,baz=115,slow=3.1,SNR=5.4						
WB0	Warramunga Arr	147.74	238	PKPbc	PKPab	10 45 41.0	-0.5

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*IDC **25** 10:31:01.6±1.3, 3°.38N×74°.08W, h0km, mb3.4/2, mbtmp3.7/3, ML3.5/1, MS2.7/2, Error ellipse: s-maj=27.4km s-min=15.2km az=92.0*

*RSNC **25** 10:31:03.1±0.0, 3°N±1°×7°4W±°, h5km±3km, M3.8, ML3.6*

ISC 25 10:31:01.5±1.2**, 3°.46N**±0°.03×**74°.23W**±0°.03**, h6**km±9km**, n25,** σ1ˢ**47**/40**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	La Uribe, Meta	0.26	216	P	Pg	10 31 07.5	+0.9
URMC				S	Sg	10 31 11.1	+1.0
PRAC	Prado	0.71	291	P	Pb	10 31 16.2	-0.1
PRAC				S	Sb	10 31 26.3	-0.1
VILC	Villavicencio,	0.84	39	P	Pg	10 31 18.2	+0.5
VILC				S	Sb	10 31 30.0	-0.3
CVER	Cruz Verde, Cu	1.07	8	P	Pg	10 31 22.4	+0.3
CVER				S	Sg	10 31 36.8	+0.8
ORTC	Ortega, Tolima	1.11	294	P	Pn	10 31 23.5	-0.2
ORTC				S	Sn	10 31 38.7	-0.8
CHIC	Chingaza	1.27	23	P	Pn	10 31 25.8	-0.4
CHIC				S	Sb	10 31 41.9	-0.9
MACC	Macarena, Meta	1.36	164	P	Pn	10 31 26.2	-0.9
MACC				S	Sb	10 31 43.7	-1.3
ROSC	El Rosal	1.38	356	Pg	Pg	10 31 29.4	+1.4
	331nm,0.3s,baz=151,slow=19,SNR=132						
ROSC				Lg	Lg	10 31 48.4	
	266nm,0.3s,baz=172,slow=22,SNR=16						
GARC	Garzon, Huila	1.79	225	P	Pb	10 31 34.5	-0.4
GARC				S	Sb	10 31 57.0	-0.7
YOTC	Yotoco, Valle	2.18	284	P	Pb	10 31 40.3	-1.2
YOTC				S	Sg	10 32 10.5	-1.1
SPBC	San Pablo de B	2.19	4	P	Pb	10 31 42.1	+0.5
SPBC				S	Sg	10 32 10.7	-1.2
FLOC	Florencia	2.34	217	P	Pb	10 31 43.6	-0.7
FLOC				S	Sb	10 32 13.6	+0.1
JAMC	Jamundi, Valle	2.46	264	P	Pb	10 31 45.9	-0.4
JAMC				S	Sg	10 32 19.2	-1.3
POPC	Popayan, Colom	2.61	250	P	Pb	10 31 47.7	-1.2
POPC				S	Sg	10 32 24.0	-1.5
RUSC	La Rusia	2.67	25	P	Pb	10 31 48.8	-1.4
RUSC				S	Sb	10 32 23.1	-0.3
PTBC	PUERTO BERRIO,	3.07	356	P	Pb	10 31 53.8	-2.9
PTBC				S	Sb	10 32 33.6	-0.8
BARC	Barichara	3.28	18	P	Pb	10 31 57.3	-3.1
PAMC	Pamplona, Colo	4.15	21	P	Pn	10 32 09.6	+3.7
PAMC				S	Sb	10 33 02.3	-3.5
SDV	Santo Domingo	6.47	33	Pn	Pn	10 32 39.2	+1.6
	10nm,0.3s,baz=220,slow=5.5,SNR=4.0						
SDV				Sn	Sn	10 33 53.4	+1.5
	17nm,0.3s,baz=50,slow=21,SNR=5.9						
SDV				Lg	Lg	10 34 26.4	
	6.6nm,0.3s,baz=239,slow=22,SNR=1.9						
SDV				LR	LR	10 35 30.2	
	comp=Z,52nm,19.8s,baz=246,slow=42						
	24nm,0.4s						
PCRV	Puerto La Cruz	11.62	54	LR	LR	10 38 42.2	
	comp=Z,52nm,21.1s,slow=40						
LPAZ	La Paz	20.52	163	Lg	Lg	10 41 50.0	
	0.1nm,0.3s,baz=263,slow=23,SNR=1.3						
PDAR	Pinedale Array	50.19	326	P	P	10 40 00.8	+2.3
	0.3nm,0.7s,baz=103,slow=9.6,SNR=2.0						
	0.3nm,0.7s						
TORD	Torodi Ar. Bea	75.52	77	P	P	10 42 47.4	-0.2
	0.3nm,0.6s,baz=282,slow=4.7,SNR=1.7						
	0.3nm,0.6s						
ASAR	Alice Springs	146.21	231	PKPbc	PKPbc	10 50 43.9	0.0
	0.3nm,0.5s,baz=110,slow=3.7,SNR=8.6						
WRA	Warramunga Arr	147.68	237	PKPbc	PKiKP	10 50 49.1	-1.1
	0.6nm,0.7s,baz=112,slow=2.6,SNR=4.6						

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*CATAC **25** 10:31:26.2±0.9, 12°N±4°×8°9W±°, h2km±4km, M2.9/15, MLv2.9/15, Error ellipse: s-maj=9.7km s-min=3.9km az=16.6, confirmed*

*SNET **25** 10:31:27.6±0.6, 12°.49N×89°.32W, h15km, ML3.0*

*GCG **25** 10:31:29.1±1.9, 12°.65N×89°.73W, h4km±24km, MD3.9*

ISC 25 10:31:26.5±3.2**, 12°.49N**±0°.10×**89°.35W**±0°.06**, h11**km±16km**, n48,** σ1ˢ**27**/52**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	1.00	2	P	Pb	10 31 45.8	0.0
LALI	Alcalda de L	1.00	2	S	Sb	10 31 59.5	+0.6
JAYA	Jayaque - finc	1.17	355	*e*P	Pn	10 31 48.2	-0.6
JAYA				*e*S	Sb	10 32 03.9	0.0
JAYA	Jayaque - finc	1.17	355	*i* P	Pn	10 31 48.2	-0.6
JAYA				*i* S	Sb	10 32 03.2	-0.7
JAYA	Jayaque - finc	1.17	355	P	Pn	10 31 48.4	-0.5
LOMA	Loma Larga	1.17	9	S	Sb	10 32 03.6	-0.3
TECO	Alcaldia de Te	1.19	28	S	Sb	10 32 04.7	+0.3
TECO	Alcaldia de Te	1.19	28	P	Pn	10 31 48.3	-0.7
PMON	Piamonte	1.22	2	P	Pn	10 31 49.1	-0.5
PMON	Piamonte	1.22	2	S	Sb	10 32 05.3	-0.1
UEES	Universidad Ev	1.23	5	P	Pn	10 31 49.5	-0.2
UEES	Universidad Ev	1.23	5	S	Sb	10 32 05.9	+0.3
IGN	Direccin Gen	1.23	8	P	Pn	10 31 48.4	-1.4
UESV	Universidad de	1.27	26	P	Pn	10 31 49.9	-0.3
UESV	Universidad de	1.27	26	S	Sn	10 32 07.2	-0.1
PAVA	Las Pavas	1.29	18	S	Sn	10 32 07.7	0.0
PAVA	Las Pavas	1.29	18	P	Pn	10 31 50.3	-0.1
CEDA	San Andres	1.31	358	S	Sb	10 32 07.9	-0.1
SCLA	Alcaldia de Sa	1.35	27	P	Pn	10 31 51.2	-0.2
SCLA	Alcaldia de Sa	1.35	27	S	Sb	10 32 09.6	+0.3
CEVE	Cerro Verde	1.36	349	*e*P	Pn	10 31 52.6	+0.9
CEVE	Cerro Verde	1.36	349	P	Pn	10 31 51.7	+0.1
CEVE	Cerro Verde	1.36	349	S	Sb	10 32 10.9	+1.3
PQSS	Presa 15 de Se	1.37	34	P	Pn	10 31 49.2	-2.3
PQSS	Presa 15 de Se	1.37	34	S	Sn	10 32 04.0	-5.7
PACA	Pacayal	1.40	46	P	Pn	10 31 52.6	+0.5
PACA	Pacayal	1.40	46	S	Sg	10 32 11.4	-0.2
NUBE	Las Nubes	1.47	344	*i* P	Pn	10 31 52.6	-0.5
NUBE				*i* S	Sn	10 32 10.1	-2.2
NUBE	Las Nubes	1.47	344	P	Pn	10 31 52.5	-0.5
FAME	Alcaldia de Sa	1.50	335	P	Pn	10 31 53.1	-0.2
FAME	Alcaldia de Sa	1.50	335	S	Sn	10 32 13.8	+1.0
UNIC	Universidad Ca	1.50	353	P	Pn	10 31 46.1	-7.3
CNRM	Centro Naciona	1.51	49	S	Sn	10 32 12.6	-0.6
SLOZ	Alcaldia de Sa	1.59	345	P	Pn	10 31 51.8	-2.8
LCND	La Caada	1.64	60	*e*P	Pn	10 31 54.8	-0.5
LCND	La Caada	1.64	60	P	Pn	10 31 55.1	-0.2
CNCH	Conchagua	1.68	62	P	Pn	10 31 56.2	+0.4
CNCH	Conchagua	1.68	62	S	Sb	10 32 19.5	+0.9
LLGN	La Laguna	1.71	13	S	Sb	10 32 20.6	+0.9
LLGN	La Laguna	1.71	13	P	Pn	10 31 56.9	+0.6
CSGN	Cosiguina Volc	1.82	74	S	Sb	10 32 22.6	0.0
POTN	Potosi Cosigui	1.87	74	S	Sb	10 32 24.1	+0.1
MTO3	Montecristo	1.90	360	*i* P	Pn	10 31 59.9	+0.8
MTO3				*i* S	Sn	10 32 24.5	+1.4
MTO3	Montecristo	1.90	360	P	Pn	10 31 59.7	+0.6
ESQI	Esquipulas	2.06	0	P	Pn	10 32 02.5	+1.4
ESQI	Esquipulas	2.06	0	S	Sn	10 32 28.6	+1.7
SARH	Santa Rosa de	2.35	14	P	Pn	10 32 06.9	+1.9
TGUH	Tegucigalpa,Un	2.56	52	P	Pn	10 32 08.8	+0.8
TGUH				S	Sn	10 32 41.2	+2.1

GCG 25 10:37:23.1±0.7**, 14°.55N**×**89°.16W, h13**km±11km**, MD3.5, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTO3	Montecristo	0.25	233	*i* P	Pb	10 37 29.3	-0.2
SARH	Santa Rosa de	0.45	60	*i* P	Pb	10 37 32.5	-0.3
SARH				*i* S	Sb	10 37 38.8	-0.6

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*IDC **25** 10:39:54.0±0.8, 3°.42N×74°.10W, h0km, mb3.7/11, mbtmp3.8/13, ML3.5/2, MS3.5/2, Error ellipse: s-maj=20.7km s-min=13.0km az=82.0*

*NEIC **25** 10:39:56.7±2.2, 3°.49N±0°.06×74°.03W±0°.07, h10km±1km, mb4.4/74, Error ellipse: s-maj=12.3km s-min=9.4km az=267.0*

*RSNC **25** 10:39:57.0±0.0, 3°N±3°×7°4W±°, h18km±3km, M4.0, ML3.8, Mw3.9*

ISC 25 10:39:54.4±1.3**, 3°.45N**±0°.03×**74°.13W**±0°.04**, h1**km±8km**, n120,** σ1ˢ**11**/136**, mb4.3**/45**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	La Uribe, Meta	0.32	231	P	Pg	10 40 01.0	+0.3
URMC				S	Sg	10 40 04.8	-0.1
VILC	Villavicencio,	0.79	33	P	Pb	10 40 11.4	+0.4
VILC				S	Sb	10 40 22.6	+0.4
PRAC	Prado	0.80	289	P	Pg	10 40 09.2	-0.6
PRAC				S	Sg	10 40 19.1	-1.1
CVER	Cruz Verde, Cu	1.06	3	P	Pg	10 40 15.2	+0.4
CVER				S	Sb	10 40 30.7	+0.2
ORTC	Ortega, Tolima	1.21	292	P	Pg	10 40 16.5	-1.1
ORTC				S	Sg	10 40 31.8	-1.4
CHIC	Chingaza	1.23	19	P	Pg	10 40 18.5	+0.4
CHIC				S	Sg	10 40 33.1	-1.0
ROSC	El Rosal	1.39	352	Pg	Pb	10 40 21.8	+0.3
	470nm,0.3s,baz=180,slow=4.7,SNR=596						
ROSC				Lg	Lg	10 40 41.4	
	164nm,0.3s,baz=112,slow=17,SNR=5.2						
ROSC	El Rosal	1.39	352		Pg	10 40 22.2	+1.1
ROSC				Sn	Sn	10 40 41.5	+0.9
GARC	Garzon, Huila	1.85	227	P	Pn	10 40 28.1	+0.5
GARC				S	Sn	10 40 51.8	-0.1
SPBC	San Pablo de B	2.19	1	P	Pb	10 40 34.6	-0.3
SPBC				S	Sb	10 41 04.0	+1.5
YOTC	Yotoco, Valle	2.28	283	P	Pn	10 40 33.9	+0.6
YOTC				S	Sb	10 41 04.2	-0.9
FLOC	Florencia	2.40	219	P	Pb	10 40 37.7	-0.8
FLOC				S	Sb	10 41 08.0	-0.7
JAMC	Jamundi, Valle	2.55	265	P	Pn	10 40 38.8	+1.6
JAMC				S	Sb	10 41 14.1	+0.9
RUSC	La Rusia	2.64	23	P	Pb	10 40 41.9	-0.9
RUSC				S	Sb	10 41 16.6	+0.7
POPC	Popayan, Colom	2.70	250	P	Pn	10 40 41.2	+1.9
POPC				S	Sb	10 41 17.3	-0.2
PTBC	PUERTO BERRIO,	3.08	354	P	Pn	10 40 46.1	+1.8
BARC	Barichara	3.26	17	P	Pb	10 40 50.6	-2.6
CRUC	La Cruz	3.39	237	P	Pn	10 40 52.0	+3.2
CRUC				S	Sb	10 41 38.9	+1.5
BBAC	Balboa, Cauca	3.43	246	P	Pn	10 40 50.7	+1.5
BBAC				S	Sb	10 41 40.4	+2.0
PAMC	Pamplona, Colo	4.12	20	P	Pn	10 41 02.7	+3.8
OTAV	Otavalo	5.37	234		Pn	10 41 20.6	+4.4
SLOR	San Lorenzo -	6.03	227		Pn	10 41 29.4	+4.1
SDV	Santo Domingo	6.42	33	Pn	Pn	10 41 32.1	+1.8
	12nm,0.3s,baz=198,slow=10,SNR=37						
SDV				Sn	Sn	10 42 42.2	-2.3
	13nm,0.3s,baz=277,slow=18,SNR=8.2						
SDV				Lg	Lg	10 43 17.0	
	7.5nm,0.3s,baz=6.5,slow=13,SNR=3.4						
	28nm,0.4s						
SDV	Santo Domingo	6.42	33		Pn	10 41 31.7	+1.4
ATAH	Atahualpa	11.35	202	Pn	Pn	10 42 38.3	+0.1
	0.3nm,0.3s,baz=14,slow=17,SNR=1.5						
	2.7nm,0.6s						
BOAV	Boa Vista	13.63	94		Pn	10 43 07.8	-1.2
DR12	Loma Pena Alta	15.93	17	Pn	Pn	10 43 40.7	+0.6
LPAZ	La Paz	20.49	163	P	P	10 44 34.8	+0.1
	1.2nm,0.8s,baz=336,slow=12,SNR=1.9						
LPAZ				Lg	Lg	10 50 46.0	
	0.1nm,0.3s,baz=266,slow=19,SNR=3.6						
LPAZ				LR	LR	10 54 18.5	
	comp=Z,51nm,19.4s,baz=322,slow=42						
	1.2nm,0.8s						
MDP	Montagnes des	21.49	85	P	P	10 44 45.6	+0.8
	12nm,0.8s,baz=274,slow=12,SNR=5.3						
	12nm,0.8s						
TEIG	Tepich	21.64	322	P	P	10 44 45.8	-0.6
TEIG				IAmb	IAmb	10 44 52.4	
	comp=Z,8.9nm,0.9s						
LRAL	Lakeview Retre	31.80	339	P	P	10 46 21.4	+0.7
V48A	Smith Brothers	34.21	341	P	P	10 46 42.9	+1.2
PBMO	Poplar Bluff	36.40	338	P	P	10 47 00.6	+0.1
PBMO				IAmb	IAmb	10 47 01.4	
	comp=Z,6.2nm,0.7s						
USIN	University of	36.52	342	P	P	10 47 02.2	+0.7
CGM3	Cape Girardeau	36.58	339	P	P	10 47 02.3	+0.2
P52A	Corning	36.74	350	P	P	10 47 04.4	+1.0
P52A				IAmb	IAmb	10 47 08.3	
	comp=Z,3.9nm,0.9s						
S44A	Carbondale	36.79	340	P	P	10 47 04.3	+0.5
SIUC	Southern Illin	36.80	340	P	P	10 47 04.1	+0.2
T42A	Van Buren	36.88	337	P	P	10 47 04.3	-0.3
T42A				IAmb	IAmb	10 47 04.8	
	comp=Z,3.9nm,0.9s						
PLPT	Palo Pinto	36.96	325	P	P	10 47 05.8	+0.4
PLPT				IAmb	IAmb	10 47 06.1	
	comp=Z,4.2nm,0.6s						
O53A	New Philadelph	37.19	351	P	P	10 47 08.1	+0.9
O53A				IAmb	IAmb	10 47 21.3	
	comp=Z,11nm,1.1s						

FVM	French Village	37.47	339		P	10 47 10.3	+0.7
ACSO	Alum Creek Sta	37.48	349	P	P	10 47 11.4	+1.7
ACSO				IAmb	IAmb	10 47 15.1	
	comp=Z,9.4nm,1.0s						
CCM	Cathedral Cave	37.83	338		P	10 47 12.4	-0.3
CCM				IAmb	IAmb	10 47 13.0	
	comp=Z,6.9nm,0.7s						
P46A	Rosedale	37.91	343	P	P	10 47 13.2	-0.1
N51A	Ashland	38.03	350	P	P	10 47 15.7	+1.3
TXAR	Lajitas Array	38.05	316	P	P	10 47 15.1	+0.3
	comp=Z,0.3nm,0.5s,baz=128,slow=9.2,SNR=4.4						
	comp=Z,0.3nm,0.5s						
TX31	Lajitas Ar. Si	38.05	316	P	P	10 47 15.4	+0.6
FNO	Franklin	38.30	329	P	P	10 47 16.6	-0.1
FNO				IAmb	IAmb	10 47 16.8	
	comp=Z,3.4nm,0.6s						
R40A	Maddies Statio	38.43	337	P	P	10 47 17.1	-0.7
R40A				IAmb	IAmb	10 47 17.6	
	comp=Z,4.3nm,0.8s						
MNTX	Cornudas Mount	40.65	317		P	10 47 36.8	+0.3
JFWS	Jewell Farm	41.83	342	P	P	10 47 45.5	-0.4
G65A	Princeton	41.98	7	P	P	10 47 47.5	+0.5
G65A				IAmb	IAmb	10 47 48.6	
	comp=Z,14nm,1.2s						
BUKO	Buck Lake	42.08	354	P	P	10 47 48.7	+0.8
I42A	Draeger Farm,	42.34	344	P	P	10 47 49.5	-0.6
I42A				IAmb	IAmb	10 48 17.4	
	comp=Z,14nm,1.1s						
LMN	Caledonia Moun	43.01	10	P	P	10 47 56.0	+0.5
ABQ	Albuquerque	43.36	320		P	10 47 59.7	+1.0
ANMO	Albuquerque	43.36	320		P	10 47 59.7	+1.0
TASM	ASL Pad, Albuq	43.37	320	P	P	10 47 59.9	+1.1
TASM	ASL Pad, Albuq	43.37	320	P	P	10 47 58.7	-0.1
TASM				IAmb	IAmb	10 48 00.3	
	comp=Z,2.2nm,0.8s						
I37A	Lemond, Waseca	43.84	340		P	10 48 01.6	-0.6
G40A	Rib Lake	43.97	344	P	P	10 48 03.3	0.0
G40A				IAmb	IAmb	10 48 05.4	
	comp=Z,5.3nm,1.1s						
LMQ	La Malbaie	44.05	4		P	10 48 04.7	+0.8
LDAQ	Lac Daran	44.41	3	P	P	10 48 07.6	+0.8
SPMN	Marine on St.	44.72	341	P	P	10 48 09.1	-0.1
SPMN				IAmb	IAmb	10 48 13.7	
	comp=Z,4.0nm,0.5s						
ECSD	EROS Data Cent	44.78	337	P	P	10 48 08.3	-1.5
ECSD				IAmb	IAmb	10 48 17.9	
	comp=Z,4.3nm,1.1s						
X16A	Lo Mia Camp, P	46.37	316		P	10 48 24.2	+1.4
X16A				IAmb	IAmb	10 48 24.8	
	comp=Z,1.9nm,0.8s						
F33A	5 Mile Ranch,	46.45	339	P	P	10 48 22.1	-0.8
F33A				IAmb	IAmb	10 48 22.3	
	comp=Z,5.8nm,1.1s						
EYMN	Ely	46.78	344	P	P	10 48 24.5	-1.0
RSSD	Black Hills	48.34	331	P	P	10 48 38.7	+0.7
RSSD				IAmb	IAmb	10 48 39.1	
	comp=Z,4.1nm,0.8s						
SRU	San Rafael Swe	48.49	322	P	P	10 48 39.0	-0.2
SRU				IAmb	IAmb	10 48 40.5	
	comp=Z,2.7nm,0.9s						
P17A	Butcher Ranch,	48.85	322	P	P	10 48 42.2	+0.3
P17A				IAmb	IAmb	10 48 44.4	
	comp=Z,2.5nm,1.0s						
PD31	Pinedale Array	50.25	326	P	P	10 48 53.0	+0.4
PDAR	Pinedale Array	50.25	326	P	P	10 48 52.4	-0.3
	comp=Z,0.4nm,0.4s,baz=120,slow=9.0,SNR=4.7						
	comp=Z,0.4nm,0.4s						
PDAR	Pinedale Array	50.25	326	P	P	10 48 52.0	-0.7
TCUT	Toone Canyon	50.26	323	P	P	10 48 53.1	+0.3
TCUT				IAmb	IAmb	10 48 54.0	
	comp=Z,4.5nm,0.7s						
LOHW	Long Hollow	51.38	326	P	P	10 49 00.6	-0.6
MOOW	Moose Ponds	51.55	326	P	P	10 49 01.1	-1.3
SCHQ	Schefferville	51.56	5	P	P	10 49 02.3	+0.3
	comp=Z,2.9nm,0.6s,baz=190,slow=6.3,SNR=6.6						
	comp=Z,2.9nm,0.6s						
SCHQ	Schefferville	51.56	5	P	P	10 49 02.5	+0.5
RLMT	Red Lodge	51.67	329	P	P	10 49 02.5	-0.8
RLMT				IAmb	IAmb	10 49 23.6	
	comp=Z,3.7nm,1.2s						
YHL	Hebgen Lake	52.51	327	P	P	10 49 10.6	+0.9
NVAR	Mina Array Bea	53.18	317	P	P	10 49 15.3	+0.7
	comp=Z,0.9nm,0.7s,baz=119,slow=7.0,SNR=7.7						
	comp=Z,0.9nm,0.7s						
NVAR	Mina Array Bea	53.18	317	P	P	10 49 15.0	+0.4
BOZ	Bozeman (W)	53.23	328	P	P	10 49 15.3	+0.6
PLID	Pearl Lake	55.34	325	P	P	10 49 29.6	-0.6
PLID				IAmb	IAmb	10 49 31.0	
	comp=Z,2.9nm,1.1s						
WVOR	Wild Horse Val	55.45	321		P	10 49 31.1	+0.1
WVOR				IAmb	IAmb	10 49 32.7	
	comp=Z,5.7nm,1.1s						
G08A	Pilot Rock	57.17	324		P	10 49 43.4	+0.2
G08A				IAmb	IAmb	10 49 44.8	
	comp=Z,5.3nm,1.2s						
FCC	Fort Churchill	57.31	348	P	P	10 49 43.0	-0.8
FCC				IAmb	IAmb	10 49 43.8	
	comp=Z,2.6nm,1.0s						
J05D	Fort Rock, OR	57.52	321	P	P	10 49 46.0	+0.3
KHBM	Hayfork Bally	57.58	317	P	P	10 49 48.0	+1.7
YKA	Yellowknife Ar	66.08	341	P	P	10 50 41.6	-1.2
	comp=Z,0.2nm,0.6s,baz=141,slow=5.5,SNR=11						
	comp=Z,0.2nm,0.6s						
YKA	Yellowknife Ar	66.08	341	P	P	10 50 41.4	-1.4
YKAW3	Yellowknife Wh	66.13	341	P	P	10 50 42.5	-0.7
YKAW3				IAmb	IAmb	10 51 04.6	
	comp=Z,2.9nm,1.3s						
ESDC	Sonseca Array	72.57	50	P	P	10 51 22.4	-1.3
	comp=Z,0.9nm,1.0s,baz=279,slow=6.2,SNR=2.9						
	comp=Z,0.9nm,1.0s						
TORD	Torodi Ar. Bea	75.42	77	P	P	10 51 39.8	-1.0
	comp=Z,0.5nm,0.5s,baz=275,slow=5.0,SNR=4.2						
	comp=Z,0.5nm,0.5s						
G31M	Satah River	75.47	339	P	P	10 51 39.6	-0.4
G31M				IAmb	IAmb	10 51 44.6	
	comp=Z,3.9nm,1.4s						
INK	Inuvik	75.85	341	P	P	10 51 41.7	-0.4
G30M	tAoh Zraii Nji	76.19	339	P	P	10 51 44.2	0.0
G30M				IAmb	IAmb	10 52 11.9	
	comp=Z,8.3nm,1.5s						
F30M	Barrier River	76.30	340	P	P	10 51 44.6	-0.1
F30M				IAmb	IAmb	10 51 46.3	
	comp=Z,2.4nm,1.1s						
H29M	Whitestone	76.67	338	P	P	10 51 46.4	-0.4
H29M				IAmb	IAmb	10 52 03.6	
	comp=Z,6.2nm,1.4s						
G29M	Pine Creek	76.81	339	P	P	10 51 47.4	-0.3
G29M				IAmb	IAmb	10 51 49.1	
	comp=Z,5.3nm,1.2s						
BCAR	Beaver Creek A	76.94	334	P	P	10 51 48.8	+0.3
L27K	Beaver Creek,	76.95	334	P	P	10 51 48.8	+0.2
L27K				IAmb	IAmb	10 52 09.4	
	comp=Z,3.6nm,1.4s						
I28M	Miner Creek	76.98	337	P	P	10 51 48.5	-0.3
I28M				IAmb	IAmb	10 51 54.0	
	comp=Z,6.7nm,1.4s						
E29M	Blow River	77.35	340	P	P	10 51 50.2	-0.4
E29M				IAmb	IAmb	10 52 00.2	
	comp=Z,6.5nm,1.5s						
E28M	Babbage River	77.99	340	P	P	10 51 53.4	-0.8
J26L	Joseph Creek	78.13	336	P	P	10 51 55.0	-0.2
D27M	Malcolm River	78.70	340	P	P	10 51 58.2	0.0
J25K	Salcha River,	78.91	335	P	P	10 52 00.2	+0.8
J25K				IAmb	IAmb	10 52 25.2	
	comp=Z,6.3nm,1.5s						
ILAR	Eielson Array	79.58	335	P	P	10 52 01.7	-1.3
	comp=Z,0.2nm,0.6s,baz=104,slow=3.4,SNR=5.2						
	comp=Z,0.2nm,0.6s						
ILAR	Eielson Array	79.58	335	P	P	10 52 02.1	-0.9
C27K	Jago River	79.75	341		P	10 52 05.3	+1.5
NOA	NORSAR Array B	84.74	29	P	P	10 52 30.0	-0.2
	comp=Z,0.4nm,0.7s,baz=270,slow=5.1,SNR=3.1						
	comp=Z,0.4nm,0.7s						
AKASG	Malin Array Be	95.76	38	LR	LR	11 32 42.5	
	comp=Z,71nm,21.8s,baz=44,slow=33						
AS31	Alice Springs	146.28	231	PKPdf	PKPdf	10 59 36.9	+0.1
ASAR	Alice Springs	146.28	231	PKPbc	PKPdf	10 59 36.8	0.0
	comp=Z,1.4nm,0.6s,baz=117,slow=3.6,SNR=16						
WRA	Warramunga Arr	147.76	237	PKPbc	PKPbc	10 59 42.2	+0.1
	comp=Z,1.2nm,0.8s,baz=106,slow=2.8,SNR=2.9						
WRA	Warramunga Arr	147.76	237		PKPbc	10 59 41.3	-0.8
WB0	Warramunga Arr	147.79	238	PKPdf	PKPdf	10 59 38.9	-0.4

BGR ***25*** *10:50:36.8, 25°.00S×176°.20E, h33km*

IDC ***25*** *10:50:39.4±0.6, 22°.26S×173°.77E, h0km, mb4.1/15, mbtmp4.1/17, ML3.5/2, MS4.2/33, Error ellipse: s-maj=23.0km s-min=18.6km az=137.0*

NEIC ***25*** *10:50:43.3±2.2, 22°.0S±0°.1×173°.63E±0°.10, h10km±1km, mb4.6/31, Error ellipse: s-maj=19.1km s-min=13.7km az=154.0*

GCMT ***25*** *10:50:45.3±0.2, 21°.96S±0°.02×173°.57E±0°.02, h12km, MW4.9/108, Moment Tensor Solution. s38,c48; s108,c160; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.95±.06; $M_{\theta\theta}$0.90±.07; $M_{\phi\phi}$2.05±.06; $M_{r\theta}$-0.19±.25; $M_{\theta\phi}$1.27±.05; $M_{\phi r}$0.22±.21; Best double couple: $M_0$2.92300×10^{16} NP1:ϕ_s38.00000°,δ44.00000°, λ-82.00000°. NP2:ϕ_s207.00000°,δ46.00000°, λ-97.00000°. Principal axes: T 2.8690, Plg1.0000°, Azm303.0000°; N 0.1040, Plg5.0000°, Azm213.0000°; P -2.9770, Plg85.0000°, Azm41.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 10:50:42.6±0.4**, 22°.00S**±0°.08×**173°.71E**±0°.07**, h10km, n196, σ1s.36**/164**, mb4.6**/36**, MS4.2**/34**, 19C-9D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINNC	Pines Island,	5.83	263	Pn	Pn	10 52 08.5	-0.6
MSVF	Nonsavu	5.89	45	Pn	Pn	10 52 11.9	+1.8
DZM	Mont Dzumac	6.74	268	Pn	Pn	10 52 20.9	-0.8
	0.9nm,0.3s,baz=174,slow=24,SNR=7.2						
	2.7nm,0.5s						
DZM	Mont Dzumac	6.74	268	*e*Pn	Pn	10 52 24.5	+2.7
	75nm,1.3s						
DZM				*e*LR	LR	10 53 46.4	
	5μm,24.1s						
DZM	Mont Dzumac	6.74	268		Pn	10 52 21.7	-0.1
URZ	Urewera	16.47	171	Pn	Pn	10 54 30.1	-3.6
	0.2nm,0.3s,baz=96,slow=8.4,SNR=1.8						
URZ				LR	LR	10 59 27.2	
	comp=Z,1μm,20.6s,baz=350,slow=33						
	12nm,1.1s						
BKZ	Black Stump Fm	17.28	173		P	10 54 49.9	+4.4
MRZ	Mangatainoka R	18.67	176		Pn	10 55 03.5	+2.3
BFZ	Birch Farm	18.75	174	P	Pn	10 55 04.0	+1.9
BFZ				IAmb	IAmb	10 55 09.2	
	comp=Z,35nm,0.9s						
ARMA	Armidale	21.48	242	P	P	10 55 31.7	0.0
ARMA				IAmb	IAmb	10 56 00.7	
	comp=Z,23nm,1.1s						
RAR	Rarotonga	24.66	93	LR	LR	11 03 45.9	
	comp=Z,403nm,21.5s,baz=293,slow=32						
CAN	Canberra	25.34	233	P	P	10 56 10.2	+0.4
CAN				IAmb	IAmb	10 56 18.9	
	comp=Z,20nm,1.1s						
CTA	Charters Tower	25.68	269	LR	LR	11 05 55.6	
	comp=Z,1μm,19.0s,baz=86,slow=36						
CTAO	Charters Tower	25.68	269	P	P	10 56 13.8	+0.7
CTAO				IAmb	IAmb	10 56 41.1	
	comp=Z,14nm,1.1s						
PMG	Port Moresby	28.40	292	LR	LR	11 07 10.7	
	comp=Z,816nm,18.8s,baz=144,slow=35						
PMG	Port Moresby	28.40	292	P	P	10 56 37.4	-0.1
PMG				IAmb	IAmb	10 56 47.0	
	comp=Z,11nm,0.9s						
TOO	Toolangi	28.85	231	P	P	10 56 42.1	+0.8
STKA	Stephens Creek	30.18	244	P	P	10 56 50.0	-3.1
	comp=Z,1.9nm,0.9s,baz=52,slow=17,SNR=4.4						
STKA				LR	LR	11 08 17.0	
	comp=Z,369nm,18.2s,baz=67,slow=35						
	comp=Z,1.9nm,0.9s						
STKA	Stephens Creek	30.18	244	P	P	10 56 53.2	0.0
TBI	Tubuai	33.95	99	*e*S	S	11 02 49.7	-1.8
	comp=Z,459nm,24.2s						
TBI				*e*LR	LR	11 06 33.7	
	comp=Z,5μm,27.2s						
TBI				*e*LR	LR	11 06 37.1	
	comp=Z,932nm,30.5s						
PPT2	Papeete2	34.77	89	*e*S	S	11 02 55.7	-8.6
	comp=Z,136nm,25.8s						
PPT2				*e*LR	LR	11 06 55.2	
	comp=Z,1μm,26.2s						
PPT2				*e*LR	LR	11 07 03.8	
	comp=Z,992nm,28.0s						
WR8	Warramunga Arr	36.60	266	P	P	10 57 47.4	-1.9
AS31	Alice Springs	36.64	260		P	10 57 48.2	-1.4
ASAR	Alice Springs	36.64	260	P	P	10 57 48.2	-1.4
	comp=Z,3.5nm,0.9s,baz=76,slow=10.0,SNR=33						
ASAR				LR	LR	11 12 51.9	
	comp=Z,718nm,18.7s,baz=98,slow=36						
	comp=Z,3.5nm,0.9s						
ASAR	Alice Springs	36.64	260		P	10 57 49.6	0.0
WB0	Warramunga Arr	36.73	266	P	P	10 57 48.5	-1.9
WB0				IAmb	IAmb	10 57 54.2	
	comp=Z,7.1nm,1.0s						
WRA	Warramunga Arr	36.75	266	P	P	10 57 48.6	-2.0
	comp=Z,1.4nm,0.8s,baz=98,slow=8.7,SNR=9.0						
	comp=Z,1.4nm,0.8s						
WRA	Warramunga Arr	36.75	266	P	P	10 57 48.5	-2.0
JAY	Jayapura	37.46	297	LR	LR	11 12 26.8	
	comp=Z,541nm,22.0s,baz=180,slow=35						
H11S2	WAKE ISLAND Hy	40.82	350	T	T	11 41 42.8	
	baz=171,slow=76,SNR=5.2						
H11S3	WAKE ISLAND Hy	40.83	350	T	T	11 41 44.3	
	baz=171,slow=76,SNR=4.6						
H11S1	WAKE ISLAND Hy	40.84	350	T	T	11 41 43.7	
	baz=171,slow=76,SNR=4.7						
MTN	Manton Dam	41.51	275	P	P	10 58 29.6	-0.8
MTN				IAmb	IAmb	10 58 44.8	
	comp=Z,13nm,1.1s						
KNRA	Kununurra	42.88	270	P	P	10 58 40.9	-0.6
KNRA				IAmb	IAmb	10 58 51.2	
	comp=Z,14nm,1.1s						
FITZ	Fitzroy Crossi	45.18	266	LR	LR	11 18 04.9	
	comp=Z,950nm,18.3s,baz=102,slow=36						
FITZ	Fitzroy Crossi	45.18	266		P	10 58 59.5	-0.5
FITZ				IAmb	IAmb	10 59 00.9	
	comp=Z,5.4nm,1.1s						
GUMO	Guam	45.29	319	LR	LR	11 15 52.7	
	comp=Z,302nm,20.9s,baz=105,slow=33						
TAOE	Nuku Hiva Isla	46.18	81	*e*P	P	10 59 09.7	+1.6
	comp=Z,65nm,25.6s						
TAOE				*e*S	S	11 05 50.3	-4.4
	comp=Z,118nm,25.2s						
TAOE				*e*LR	LR	11 12 19.0	
	comp=Z,891nm,26.8s						
BATI	Baumata	49.29	275	LR	LR	11 19 22.6	
	comp=Z,968nm,21.9s,baz=148,slow=35						
NWAO	Narrogin (SRO)	50.76	245	LR	LR	11 20 45.6	
	comp=Z,371nm,19.1s,baz=33,slow=36						
DAV	Davao City (W)	55.30	296	LR	LR	11 22 04.4	
	comp=Z,91nm,21.5s,baz=107,slow=34						
VNDA	Vanda	55.87	183	P	P	11 00 15.3	-4.7
	comp=Z,0.7nm,0.8s,baz=23,slow=4.6,SNR=3.9						
VNDA				LR	LR	11 19 52.1	
	comp=Z,175nm,21.7s,baz=26,slow=32						
	comp=Z,0.7nm,0.8s						
VNDA	Vanda	55.87	183	P	P	11 00 19.4	-0.5
VNDA				IAmb	IAmb	11 00 23.8	
	comp=Z,5.4nm,1.4s						
SBA	Scott Base	56.00	182		P	11 00 22.6	+1.7
SBA				IAmb	IAmb	11 00 30.8	
	comp=Z,10nm,1.1s						
TOLI2	Tolitoli	56.48	287	P	P	11 00 24.0	-1.3
TOLI2				IAmb	IAmb	11 00 48.0	
	comp=Z,4.5nm,0.9s						
JCJ	Chichijima	57.55	326	LR	LR	11 23 33.8	
	comp=Z,80nm,20.4s,baz=120,slow=34						
JHJ	Hachijo jima 2	63.66	328	LR	LR	11 27 25.2	
	comp=Z,48nm,19.2s,baz=100,slow=34						
JOW	Kunigami	65.50	316	LR	LR	11 25 50.1	
	comp=Z,138nm,21.4s,baz=132,slow=32						
MJAR	Matsushiro Arr	67.19	330	P	P	11 01 35.9	-1.1
	comp=Z,2.3nm,0.9s,baz=131,slow=5.1,SNR=4.9						
MJAR				LR	LR	11 25 39.6	
	comp=Z,102nm,21.9s,baz=160,slow=31						
	comp=Z,2.3nm,0.9s						
MAJO	Matsushiro	67.19	330	P	P	11 01 38.0	+1.0
QSPA	South Pole Qui	68.07	180		P	11 01 42.4	0.0
QSPA				IAmb	IAmb	11 01 43.9	
	comp=Z,7.1nm,0.8s						
JNU	Nakatsue	68.37	322	LR	LR	11 29 11.9	
	comp=Z,60nm,20.2s,baz=136,slow=34						
ASAJ	Asahikawa	71.70	337	LR	LR	11 29 06.2	
	comp=Z,195nm,21.1s,baz=203,slow=32						
KSRS	Korea Array	73.17	323	P	P	11 02 13.2	-0.4
	comp=Z,1.5nm,0.9s,baz=140,slow=6.5,SNR=4.7						
KSRS				LR	LR	11 30 37.1	
	comp=Z,60nm,21.4s,baz=160,slow=33						
	comp=Z,1.5nm,0.9s						
KSAR	Wonju Array Be	73.19	323		P	11 02 13.6	-0.1
NJ2	Nanjing	75.11	314	*e*P	P	11 02 27.5	+2.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
IPM	Ipoh	75.73	281		P	11 02 27.9	-1.2
PETK	Petropavlovsk-	76.08	350	LR	LR	11 32 50.5	
	comp=Z,106nm,18.8s,baz=142,slow=33						
PETK	Petropavlovsk-	76.08	350	P	P	11 02 30.0	-0.1
USRK	Ussuriysk Ar.	76.14	330	P	P	11 02 30.8	+0.1
	comp=Z,2.9nm,0.7s,baz=101,slow=7.5,SNR=4.1						
	comp=Z,2.9nm,0.7s						
KULM	Kulim	76.40	281	P	P	11 02 31.8	-1.0
PSI	Prapat	76.98	278	LR	LR	11 38 32.0	
	comp=Z,165nm,19.9s,baz=131,slow=37						
TIA	Tai'an	78.80	317	P	P	11 02 44.8	-1.0
TIA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BNX	BinXian	79.45	329	⇑P	P	11 02 48.5	-0.6
BNX				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HNS	HongShan	81.06	316	⇓P	P	11 03 05.3	+7.4
HNS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PMSA	Palmer Station	82.86	159	LR	LR	11 33 04.1	
	comp=Z,82nm,18.2s,baz=218,slow=31						
XAN	Xi'an	83.06	311	⇑P	P	11 03 08.8	+0.1
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MA2	Magadan	83.43	348	LR	LR	11 34 42.7	
	comp=Z,183nm,20.6s,baz=156,slow=32						
CM31	Chiang Mai Arr	83.44	293	P	P	11 03 10.4	-0.4
CMAR	Chiang Mai Arr	83.44	293	P	P	11 03 11.2	+0.3
	comp=Z,5.5nm,1.0s,baz=126,slow=3.8,SNR=26						
	comp=Z,5.5nm,1.0s						
CMAR	Chiang Mai Arr	83.44	293		P	11 03 10.1	-0.8
CHTO	Chiang Mai	83.59	293		P	11 03 11.1	-0.6
ELIB	Princess Elisa	84.12	189	*d*P	P	11 03 12.2	-1.4
KDAK	Kodiak Island	84.31	17	LR	LR	11 38 20.1	
	comp=Z,75nm,18.2s,baz=166,slow=34						
HHC	Hu-ho-hao-te	85.05	318	*e*P	P	11 03 20.5	+1.8
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,150nm,6.1s						
HILR	Hailar Array B	85.82	328	LR	LR	11 38 34.3	
	comp=Z,72nm,21.6s,baz=340,slow=33						
TROLL	Troll, Antarti	86.04	183	⇑P	P	11 03 22.2	-1.1
	comp=Z,307nm,0.8s						
SEY	Seymchan	86.31	350	P	P	11 03 24.3	0.0
	comp=Z,3.9nm,1.1s,baz=158,slow=5.4,SNR=4.8						
SEY				LR	LR	11 37 53.3	
	comp=Z,219nm,19.9s,baz=138,slow=33						
	comp=Z,3.9nm,1.1s						
SNAA	Sanae	86.55	181	⇑P	P	11 03 23.6	-2.1
	comp=Z,62nm,0.9s						
SNAA	Sanae	86.55	181	P	P	11 03 23.1	-2.5
	comp=Z,2.4nm,1.0s,baz=188,slow=7.0,SNR=4.0						
	comp=Z,2.4nm,1.0s						
SNAA	Sanae	86.55	181	P	P	11 03 25.3	-0.4
SNAA				IAmb	IAmb	11 03 29.8	
	comp=Z,8.0nm,1.2s						
MDPB	Devils Postpil	86.62	47	P	P	11 03 26.5	-0.3
MDPB				IAmb	IAmb	11 03 30.8	
	comp=Z,8.9nm,1.5s						
CLC	China Lake	86.73	49	P	P	11 03 26.9	-0.2
CLC				IAmb	IAmb	11 03 31.2	
	comp=Z,5.9nm,1.1s						
CCCA	Chr Cany lake	86.75	50	P	P	11 03 27.0	-0.2
LPIG	La Paz	86.90	63	LR	LR	11 32 40.7	
	comp=Z,143nm,19.6s,baz=219,slow=29						
VNA3	Neumayer Olymp	86.98	179	P	P	11 03 30.4	+2.6
NVAR	Mina Array Bea	87.56	47	P	P	11 03 31.8	+0.5
	comp=Z,1.3nm,0.9s,baz=222,slow=7.2,SNR=7.3						
	comp=Z,1.3nm,0.9s						
NVAR	Mina Array Bea	87.56	47	P	P	11 03 32.4	+1.2
LZH	Lanzhou	87.69	310	*e*P	P	11 03 34.8	+2.9
LZH				pP	pwP	11 03 43.5	+6.2
LZH				pmax	pmax		
	comp=Z,11nm,1.3s						
YAK	Yakutsk	90.80	341	LR	LR	11 37 47.9	
	comp=Z,120nm,21.8s,baz=119,slow=31						
H03S2	Juan Fernandez	91.38	127	T	T	12 45 13.1	
	baz=241						
H03S1	Juan Fernandez	91.39	127	T	T	12 45 13.4	
	baz=241						
H03S3	Juan Fernandez	91.40	127	T	T	12 45 13.1	
	baz=241						
ILAR	Eielson Array	91.67	16	P	P	11 03 48.1	-1.5
	comp=Z,1.7nm,1.0s,baz=225,slow=6.9,SNR=9.3						
	comp=Z,1.7nm,1.0s						
ILAR	Eielson Array	91.67	16	P	P	11 03 47.9	-1.7
BCAR	Beaver Creek A	91.73	19		P	11 03 49.3	-0.7
J25K	Salcha River,	91.94	16	P	P	11 03 51.3	+0.4
SONM	Songino Array	91.95	322	P	P	11 03 50.8	-0.7
	comp=Z,0.9nm,1.1s,baz=157,slow=4.2,SNR=4.4						
SONM				LR	LR	11 43 27.6	
	comp=Z,58nm,21.4s,baz=93,slow=34						
	comp=Z,0.9nm,1.1s						
SONM	Songino Array	91.95	322	P	P	11 03 50.3	-1.2
SONM				IAmb	IAmb	11 03 58.9	
	comp=Z,3.2nm,1.2s						
GTA	Gaotai	92.07	312	*e*P	P	11 03 55.0	+2.7
GTA				pP	pwP	11 04 04.5	+6.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				LR	LR		
	comp=N,130nm,21.9s						
GTA				LR	LR		
	comp=E,100nm,22.7s						
GTA				LR	LR		
	comp=Z,190nm,22.7s						
TXAR	Lajitas Array	94.45	60	P	P	11 04 01.1	-2.4
	comp=Z,0.2nm,0.9s,baz=242,slow=2.7,SNR=4.3						
TXAR				LR	LR	11 38 12.4	
	comp=Z,141nm,20.0s,baz=275,slow=30						
	comp=Z,0.2nm,0.9s						
TXAR	Lajitas Array	94.45	60	P	P	11 04 02.9	-0.5
PALK	Pallekele	95.46	276	LR	LR	11 49 44.5	
	comp=Z,126nm,18.8s,baz=122,slow=37						
PDAR	Pinedale Array	95.46	46	P	P	11 04 05.3	-2.7
	comp=Z,0.2nm,0.6s,baz=235,slow=5.9,SNR=1.8						
	comp=Z,0.2nm,0.6s						
PDAR	Pinedale Array	95.46	46	P	P	11 04 07.7	-0.3
TIXI	Tiksi	98.33	347	LR	LR	11 46 18.2	
	comp=Z,66nm,19.1s,baz=212,slow=34						
WMQ	Urumqi	102.14	312	*e*P	Pdif	11 04 39.5	+1.9
WMQ				LR	LR		
	comp=Z,140nm,24.0s						
BVAR	Borovoye Array	115.21	319	PKP	PKiKP	11 09 22.4	-1.6
	comp=Z,1.0nm,0.7s,baz=90,slow=0.4,SNR=4.1						
ARCES	ARCESS Array B	128.76	346	PKP	PKPdf	11 09 48.2	-1.4
	comp=Z,5.2nm,0.9s,baz=42,slow=0.2,SNR=6.4						
FINES	FINESS Array B	134.69	339	PKP	PKPdf	11 10 00.6	-0.4
	comp=Z,2.4nm,0.9s,baz=4.8,slow=4.6,SNR=3.5						
NACGM	Naroch	138.87	331	*e*PKP	PKiKP	11 10 16.5	+5.4
	comp=Z,7.0nm,0.8s,baz=51						
NB2	NORSAR Subarra	139.12	347	PKPdf	PKPdf	11 10 10.6	+1.3
	comp=Z,6.0nm,1.2s,baz=25,slow=1.9						
NOA	NORSAR Array B	139.12	347	PKP	PKPdf	11 10 09.6	+0.3
	comp=Z,1.0nm,0.8s,baz=31,slow=2.0,SNR=5.4						
AKASG	Malin Array Be	140.16	325	PKP	PKPdf	11 10 10.3	-1.1
	comp=Z,0.2nm,0.3s,baz=46,slow=3.6,SNR=1.8						
AKASG	Malin Array Be	140.16	325	PKPdf	PKPdf	11 10 08.9	-2.5
TESR	Tescani	143.83	320	⇓P	PKPbc	11 10 16.9	+1.2
BURAR	Bucovina Array	144.06	323	⇓P	PKPab	11 10 16.5	+0.4
VRI	Vrincioaia	144.11	319	⇑P	PKPbc	11 10 17.8	+1.2
PLOR	Plostina	144.17	320	⇑P	PKPdf	11 10 18.6	-0.2
MLR	Muntele Rosu	144.78	319	⇑P	PKPab	11 10 18.6	-0.2
DOPR	Dopca	144.86	320	⇑P	PKPab	11 10 19.3	+0.3
STHS	Stebnicka Huta	145.03	328	*e*PKP	PKiKP	11 10 23.9	-0.1
CJR	Cluj-Napoca	145.48	323	⇑P	PKPbc	11 10 19.4	-1.6
ARR	Arges	145.63	320	⇓P	PKPdf	11 10 21.9	+0.5
TNR	Turnu Rosu	145.69	321	⇑P	PKPab	11 10 22.9	+0.8
BSEG	Bad Segeberg	145.71	343	*e*PKPbc	PKPab	11 10 22.5	+0.7
	baz=31,slow=2.3						
MARR	Marisel-Cluj	145.77	323	⇑P	PKPdf	11 10 21.6	0.0
HUMR	Humele	145.86	319	⇑P	PKPdf	11 10 21.3	-0.4
DRGR		145.93	324	⇑P	PKPdf	11 10 22.1	+0.2
LANS	Liptovska Anna	146.07	329	*e*PKP	PKPab	11 10 24.0	+0.6
STEB	Steborice	146.29	332	*e*PKP	PKPdf	11 10 23.1	+0.8
OSTC	Ostas	146.48	334	*e*PKP	PKPdf	11 10 23.9	+1.3
MORC	Moravsky Berou	146.50	332	*e*PKP	PKPdf	11 10 23.9	+1.2
DPC	Dobruska-Polom	146.60	333	*e*PKP	PKPdf	11 10 24.1	+1.3
UPC	Upice	146.60	334	*e*PKP	PKPdf	11 10 24.1	+1.3

EKA	**Eskdalemuir Ar**	**146.63**	**357**	PKPbc	**PKPdf**	**11 10 23.3**	**+0.7**
	comp=Z,1.5nm,0.6s,baz=329,slow=2.2,SNR=9.0						
PSZ	**Piszkesteto**	**146.70**	**327**	⇓P	**PKPdf**	**11 10 24.0**	**+0.9**
GZR	**Gura Zlata**	**146.70**	**321**	⇑P	**PKPdf**	**11 10 23.9**	**+0.7**
SIRR	**Siria**	**146.82**	**324**	⇑P	**PKPdf**	**11 10 24.6**	**+1.3**
FLTG	**Flechtingen**	**146.84**	**340**	*e*PKPbc	**PKPbc**	**11 10 25.1**	**+0.2**
	baz=31,slow=2.3						
JAVC	**Velka Javorina**	**147.11**	**330**	*e*PKP	**PKPbc**	**11 10 26.9**	**+1.0**
CLL	**Collm**	**147.11**	**338**	*e*PKPbc	**PKPbc**	**11 10 25.4**	**-0.3**
	baz=31,slow=2.3						
CLL	**Collm**	**147.11**	**338**	*i* PKPbc	**PKPdf**	**11 10 25.2**	**+1.6**
	comp=Z,19nm,1.1s						
CLL				*i* PKiKP	**sPKPbc**	**11 10 30.1**	**+0.8**
	comp=Z,19nm,1.1s						
CLL				*e*x	x	11 10 38.0	
BRG	**Berggiesshubel**	**147.13**	**336**	*e*PKPbc	**PKPbc**	**11 10 25.9**	**+0.1**
	baz=31,slow=2.3						
ASSE	**Asse, Remlinge**	**147.19**	**341**	*e*PKPbc	**PKPbc**	**11 10 25.9**	**+0.1**
	baz=31,slow=2.3						
BZS	**Buzias**	**147.24**	**323**	⇑P	**PKPbc**	**11 10 26.2**	**0.0**
VRAC	**Vranov**	**147.27**	**332**	⇑P	**PKPbc**	**11 10 25.9**	**-0.3**
VRAC	**Vranov**	**147.27**	**332**	*e*PKP	**PKPbc**	**11 10 26.0**	**-0.3**
CLZ	**Clausthal**	**147.53**	**341**	*e*PKPbc	**PKPbc**	**11 10 26.7**	**-0.3**
	baz=31,slow=2.3						
KRUC	**Moravsky**	**147.54**	**332**	*e*PKP	**PKPbc**	**11 10 26.6**	**-0.4**
PRU	**Pruhonice**	**147.60**	**335**	*e*PKP	**PKPbc**	**11 10 27.0**	**-0.1**
MODS	**Modra-Piesok**	**147.64**	**330**	*e*PKP	**PKPbc**	**11 10 28.5**	**+1.2**
MDVR	**Moldovita**	**147.67**	**321**	⇑P	**PKPbc**	**11 10 27.0**	**-0.6**
TREC	**Trest**	**147.75**	**333**	*e*PKP	**PKPbc**	**11 10 27.1**	**-0.5**
IBBN	**Ibbenburen**	**147.86**	**344**	*e*PKPbc	**PKPbc**	**11 10 27.6**	**-0.1**
	baz=31,slow=2.3						
GTTG	**Gottingen**	**147.91**	**341**	*e*PKPbc	**PKPbc**	**11 10 27.5**	**-0.4**
	baz=31,slow=2.3						
TANN	**Tannenbergstha**	**148.04**	**337**	*e*PKPbc	**PKPbc**	**11 10 28.1**	**-0.3**
	baz=31,slow=2.3						
MOX	**Moxa**	**148.15**	**338**	*e*PKPbc	**PKPbc**	**11 10 28.2**	**-0.4**
	baz=31,slow=2.3						
ZVC	**Zvikov**	**148.17**	**334**	*e*PKP	**PKPbc**	**11 10 28.5**	**-0.2**
BOVS	**Bovan**	**148.33**	**320**	⇑P	**PKPbc**	**11 10 28.2**	**-1.1**
MANZ	**Manzenberg**	**148.53**	**337**	*e*PKPbc	**PKPbc**	**11 10 29.4**	**-0.2**
	baz=31,slow=2.3						
RONA	**Rosalia, Austr**	**148.59**	**330**	*e*PKP	**PKPbc**	**11 10 29.8**	**-0.1**
	comp=Z,12nm,0.8s						
CKRC	**Cesky Krumlov**	**148.61**	**333**	*e*PKP	**PKPbc**	**11 10 29.7**	**-0.2**
CONA	**Conrad Observa**	**148.62**	**331**	*e*PKP	**PKPbc**	**11 10 30.1**	**+0.1**
	comp=Z,8.6nm,0.9s						
KHC	**Kasperske Hory**	**148.66**	**335**	*e*PKP	**PKPbc**	**11 10 29.5**	**-0.5**
ROTZ	**Rotzenmuhle**	**148.67**	**337**	*e*PKPbc	**PKPbc**	**11 10 29.8**	**-0.1**
	baz=31,slow=2.3						
KASTN	**Kahler Asten**	**148.68**	**342**	*e*PKPbc	**PKPbc**	**11 10 29.3**	**-0.7**
	baz=31,slow=2.3						
BUG	**Bochum--Univer**	**148.78**	**344**	*e*PKPbc	**PKPbc**	**11 10 29.8**	**-0.4**
	baz=31,slow=2.3						
GEC2	**GERESS Array S**	**148.84**	**334**	*e*PKPbc	**PKPbc**	**11 10 30.1**	**-0.5**
	baz=31,slow=2.3						
GERES	**GERESS Array B**	**148.84**	**334**	PKPbc	**PKPbc**	**11 10 30.0**	**-0.6**
	comp=Z,7.9nm,1.0s,baz=33,slow=3.2,SNR=24						
WET	**Wettzell**	**148.93**	**335**	*e*PKPbc	**PKPbc**	**11 10 30.3**	**-0.4**
	baz=31,slow=2.3						
ARSA	**Arzberg**	**149.27**	**330**	*e*PKP	**PKPbc**	**11 10 31.6**	**0.0**
	comp=Z,4.3nm,0.9s						
MOA	**Molln**	**149.38**	**332**	*e*PKP	**PKPbc**	**11 10 32.3**	**+0.5**
	comp=Z,6.5nm,1.4s						
BIOA	**Bad Ischl, Aus**	**149.77**	**333**	*e*PKP	**PKPdf**	**11 10 30.3**	**+2.2**
	comp=Z,9.8nm,1.4s						
MEM	**Membach**	**149.86**	**344**	*d*PKP	**PKPbc**	**11 10 33.1**	**+0.2**
SOKA	**Soboth**	**149.92**	**330**	*i* PKP	**PKPdf**	**11 10 31.1**	**+2.6**
	comp=Z,17nm,1.1s,SNR=7.0						
BSTI	**Sart Tilman**	**149.99**	**345**	*d*PKP	**PKiKP**	**11 10 34.6**	**+0.5**
OBKA	**Obir**	**150.27**	**330**	*e*PKP	**PKPbc**	**11 10 32.9**	**-1.2**
	comp=Z,8.0nm,1.3s						
KBA	**Koelnbreinsper**	**150.37**	**332**	*e*PKP	**PKPbc**	**11 10 34.3**	**-0.1**
	comp=Z,11nm,0.7s						
LESA	**Schwarzleotal**	**150.39**	**333**	*e*PKP	**PKPbc**	**11 10 33.5**	**-0.9**
	comp=Z,6.5nm,0.7s						
STU	**Stuttgart**	**150.57**	**339**	*e*PKPbc	**PKPbc**	**11 10 34.0**	**-0.6**
	baz=31,slow=2.3						
MYKA	**Terra Mystica**	**150.59**	**331**	*e*PKP	**PKPbc**	**11 10 33.6**	**-1.3**
	comp=Z,5.3nm,0.8s						
WLF	**Walferdange**	**150.69**	**343**	*e*PKPbc	**PKPbc**	**11 10 34.6**	**-0.3**
	baz=31,slow=2.3						
WLF	**Walferdange**	**150.69**	**343**	*d*PKP	**PKPbc**	**11 10 35.0**	**+0.1**
WATA	**Walderalm**	**150.90**	**335**	*i* PKP	**PKPbc**	**11 10 34.8**	**-0.9**
	comp=Z,13nm,1.0s,SNR=9.3						
WTTA	**Wattenberg**	**150.94**	**334**	*i* PKP	**PKPbc**	**11 10 35.2**	**-0.6**
	comp=Z,17nm,1.0s,SNR=10.0						
ABTA	**Abfaltersbach**	**150.99**	**333**	*e*PKP	**PKPbc**	**11 10 34.5**	**-1.3**
	comp=Z,12nm,1.0s						
RETA	**Reutte**	**151.10**	**336**	*e*PKP	**PKPbc**	**11 10 35.2**	**-0.8**
	comp=Z,1.6nm,0.7s						
SQTA	**Sankt Quirin**	**151.14**	**335**	*i* PKP	**PKPbc**	**11 10 35.6**	**-0.6**
	comp=Z,11nm,0.9s,SNR=9.2						
UBR	**Ueberruh**	**151.18**	**337**	*e*PKPbc	**PKPbc**	**11 10 35.6**	**-0.7**
	baz=31,slow=2.3						
BFO	**Black Forest**	**151.24**	**340**	*e*PKPbc	**PKPbc**	**11 10 35.0**	**-1.3**
	baz=31,slow=2.3						
FETA	**Feichten**	**151.50**	**335**	*e*PKP	**PKPbc**	**11 10 36.7**	**-0.4**
	comp=Z,14nm,1.0s						
DAVA	**Damuels**	**151.60**	**337**	*e*PKP	**PKPbc**	**11 10 37.7**	**+0.4**
	comp=Z,8.7nm,0.9s						
ESDC	**Sonseca Array**	**162.27**	**354**	PKPab	**PKPab**	**11 11 30.6**	**-1.0**
	comp=Z,2.0nm,1.2s,baz=359,slow=5.4,SNR=5.8						
ESDC	**Sonseca Array**	**162.27**	**354**		**PKPab**	**11 11 33.5**	**+1.8**
TORD	**Torodi Ar. Bea**	**168.36**	**222**	PKP	**PKPdf**	**11 10 50.0**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=117,slow=1.8,SNR=5.2						
TORD				PKPab	**PKPab**	**11 11 56.6**	**-2.6**
	comp=Z,1.6nm,0.9s,baz=111,slow=3.3,SNR=7.8						

RSNC 25 10:55:03.1±0.0,3°N±1°×7°4W±°,h5^{km}±3^{km},M3.0,mb3.8,ML2.8,Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URMC	**La Uribe, Meta**	**0.29**	**229**	P	Pg	10 55 06.8	-2.0
URMC				S	Sg	10 55 10.8	-1.9
PRAC	**Prado**	**0.77**	**291**	P	Pg	10 55 14.9	-3.1
PRAC				S	Sg	10 55 24.9	-3.2
VILC	**Villavicencio,**	**0.81**	**35**	P	Pg	10 55 16.7	-2.1
VILC				S	Sg	10 55 28.1	-1.3
CVER	**Cruz Verde, Cu**	**1.08**	**5**	P	Pg	10 55 20.6	-3.2
CVER				S	Sg	10 55 34.7	-3.2
ORTC	**Ortega, Tolima**	**1.18**	**293**	P	Pg	10 55 22.1	-3.7
ORTC				S	Sg	10 55 37.3	-3.8
CHIC	**Chingaza**	**1.26**	**20**	P	Pg	10 55 23.8	-3.5
CHIC				S	Sg	10 55 41.0	-2.6
MACC	**Macarena, Meta**	**1.32**	**166**	P	Pn	10 55 25.7	-2.6
MACC				S	Sg	10 55 43.7	-2.0
ANIL	**Santa Ana**	**1.62**	**310**	P	Pn	10 55 29.5	-3.1
ANIL				S	Sn	10 55 51.2	-2.9
GARC	**Garzon, Huila**	**1.82**	**227**	P	Pn	10 55 33.7	-1.7
GARC				S	Sn	10 55 57.4	-1.6
RECRC	**Villamaria, Ca**	**1.92**	**322**	P	Pn	10 55 35.2	-1.8
RECRC				S	Sn	10 55 59.9	-2.0
SPBC	**San Pablo de B**	**2.20**	**2**	P	Pn	10 55 40.3	-0.1
SPBC				S	Sb	10 56 10.3	-0.8
YOTC	**Yotoco, Valle**	**2.25**	**284**	P	Pn	10 55 39.4	-1.7
YOTC				S	Sn	10 56 08.2	-1.1
FLOC	**Florencia**	**2.37**	**219**	P	Pn	10 55 43.2	+0.5
FLOC				S	Sn	10 56 13.8	+1.5
JAMC	**Jamundi, Valle**	**2.52**	**265**	P	Pn	10 55 45.3	+0.4
JAMC				S	Sb	10 56 19.5	-0.9
PLMC	**San Jos del P**	**2.57**	**305**	P	Pn	10 55 45.5	0.0
PLMC				S	Sb	10 56 19.5	-2.2
RUSC	**La Rusia**	**2.66**	**24**	P	Pn	10 55 47.5	+0.4
RUSC				S	Sn	10 56 21.4	+1.4
POPC	**Popayan, Colom**	**2.67**	**250**	P	Pb	10 55 49.3	-2.2
POPC				S	Sb	10 56 23.6	-1.1
CBOC	**Ciudad Bolivar**	**3.03**	**323**	P	Pn	10 55 52.3	+0.3
CBOC				S	Sn	10 56 27.7	-1.1
PTBC	**PUERTO BERRIO,**	**3.09**	**355**	P	Pn	10 55 51.3	-1.4
PTBC				S	Sn	10 56 30.3	+0.2
BARC	**Barichara**	**3.28**	**17**	P	Pn	10 55 56.2	+0.8
BARC				S	Sb	10 56 40.0	-2.3
PTLC	**Puerto Leguiza**	**3.31**	**191**	P	Pg	10 56 05.8	-0.8
PTLC				S	Sg	10 56 53.1	+3.6
BBAC	**Balboa, Cauca**	**3.39**	**246**	P	Pb	10 56 02.2	-1.6
BBAC				S	Sb	10 56 44.6	-0.9
BRJC	**Barrancabermej**	**3.53**	**7**	P	Pn	10 55 59.4	+0.7
BRJC				S	Sn	10 56 44.8	+3.9
PAMC	**Pamplona, Colo**	**4.14**	**21**	P	Pn	10 56 08.8	+1.4
OCAC	**Ocana**	**4.84**	**10**	P	Pn	10 56 17.4	+0.6
OCAC				S	Sn	10 57 13.8	+0.4
SDV	**Santo Domingo**	**6.45**	**33**	P	Pn	10 56 38.5	-0.4
	8.6nm,0.9s						
SDV				S	Sn	10 57 49.8	-3.3
	8.6nm,0.9s						
SJCC	**San Jacinto, C**	**6.49**	**351**	P	Pn	10 56 37.3	-2.2
SJCC				S	Sn	10 57 52.2	-1.8

IDC ***25*** *11:03:19.2±0.9,25°.59S×115°.69W,h0^{km},mb4.1/8, mbtmp4.1/8,MS4.2/13,Error ellipse: s-maj=38.5km s-min=23.9km az=56.0*

NEIC ***25*** *11:03:23.8±1.5,25°.43S±0°.06×115°.4W±0°.1,h10^{km}±1^{km}, mb4.9/200,Error ellipse: s-maj=18.5km s-min=8.3km az=289.0*

GCMT ***25*** *11:03:25.8±0.2,25°.43S±0°.02×116°.07W±0°.01,h18^{km}±1^{km}, MW5.0/105,Moment Tensor Solution. s33,c40; s105,c150; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.23±.11; $M_{\theta\theta}$-2.40±.10; $M_{\phi\phi}$2.63±.12; $M_{r\theta}$0.11±.21; $M_{\theta\phi}$2.02±.08; $M_{\phi r}$-1.58±.28; Best double couple: $M_0$3.56000×10^{16} NP1:ϕ_s246.00000°,δ66.00000°, λ5.00000°. NP2:ϕ_s154.00000°,δ85.00000°,λ156.00000°. Principal axes: T 3.8640, Plg20.0000°, Azm108.0000°; N -0.6110, Plg66.0000°, Azm324.0000°; P -3.2560, Plg13.0000°, Azm202.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 11:03:22.8±0.5,25°.4S±0°.1×115°.4W±0°.1,h10^{km},n207,σ1^{s}05/147,mb4.9/97,MS4.2/14,1D,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA02	**Isla de Pascua**	**5.62**	**109**	Pn	**Pn**	**11 04 46.6**	**+0.1**
H03N2	**Juan Fernandez**	**32.62**	**113**	T	T	11 45 17.8	
	baz=278,slow=75,SNR=78						
H03N3	**Juan Fernandez**	**32.63**	**113**	T	T	11 45 24.6	
	baz=278,slow=75,SNR=76						
H03N1	**Juan Fernandez**	**32.63**	**113**	T	T	11 45 11.1	
	baz=278,slow=75,SNR=103						
PPT	**Papeete**	**32.68**	**277**	LR	LR	11 19 10.9	
	comp=Z,602nm,21.0s,baz=112,slow=29						
LR04	**Corral**	**37.81**	**123**	P	**P**	**11 10 41.5**	**+2.1**
MT05	**Renca**	**39.46**	**112**	P	**P**	**11 10 50.7**	**-2.8**
MT16	**CCHEN**	**39.64**	**112**	P	**P**	**11 10 54.7**	**-0.3**
MT08	**Bocatoma Ro**	**40.07**	**112**	P	**P**	**11 10 56.7**	**-2.1**
PLCA	**Paso Flores**	**40.11**	**124**	P	**P**	**11 10 57.7**	**-1.1**
	0.9nm,0.9s,baz=281,slow=8.1,SNR=12						
PLCA				LR	LR	11 23 38.1	
	comp=Z,350nm,20.0s,baz=276,slow=30						
	0.9nm,0.9s						
PLCA	**Paso Flores**	**40.11**	**124**	P	**P**	**11 10 58.2**	**-0.6**
AC06	**Mina Casimiro**	**40.23**	**103**	P	**P**	**11 10 59.8**	**-0.1**
OTAV	**Otavalo**	**43.87**	**60**	P	**P**	**11 11 29.9**	**-0.4**
LPAZ	**La Paz**	**44.90**	**88**	P	**P**	**11 11 39.4**	**+0.7**
	0.8nm,0.6s,baz=234,slow=4.8,SNR=3.7						
	0.8nm,0.6s						
LPAZ	**La Paz**	**44.90**	**88**	P	**P**	**11 11 37.8**	**-0.9**
JTS	**Las Juntas de**	**46.26**	**44**	LR	LR	11 26 14.7	
	comp=Z,187nm,20.7s,baz=123,slow=30						
CMIG	**Matias Romero**	**46.74**	**27**	LR	LR	11 25 59.8	
	comp=Z,39nm,18.5s,baz=192,slow=29						
TEIG	**Tepich**	**52.48**	**33**	LR	LR	11 30 44.6	
	comp=Z,18nm,21.4s,baz=202,slow=31						
TXAR	**Lajitas Array**	**55.60**	**12**	P	**P**	**11 12 58.3**	**-0.6**
	0.5nm,0.7s,baz=193,slow=7.5,SNR=6.5						
	0.5nm,0.7s						
833A	**Chaparral WMA,**	**55.61**	**17**		**P**	**11 12 59.7**	**+0.9**
DRIO	**Del Rio**	**56.35**	**16**	P	**P**	**11 13 04.3**	**+0.2**
SAND	**Sanderson**	**56.52**	**14**		**P**	**11 13 06.2**	**+0.8**
VHRN	**Van Horn**	**56.78**	**11**		**P**	**11 13 08.9**	**+1.6**
VHRN				IAmb	IAmb	11 13 18.6	
	comp=Z,21nm,1.8s						
319A	**Douglas**	**56.78**	**6**	P	**P**	**11 13 08.0**	**+0.7**
319A				IAmb	IAmb	11 13 11.0	
	comp=Z,7.8nm,0.8s						
HNDO	**Hondo**	**56.79**	**17**	P	**P**	**11 13 08.9**	**+1.7**
HNDO				IAmb	IAmb	11 13 15.4	
	comp=Z,10nm,1.1s						
JCT	**Junction City**	**57.56**	**16**	P	**P**	**11 13 12.0**	**-0.7**
JCT				IAmb	IAmb	11 13 16.8	
	comp=Z,13nm,0.8s						
TUC	**Tucson**	**57.58**	**5**	P	**P**	**11 13 14.2**	**+1.3**
URZ	**Urewera**	**57.60**	**239**	LR	LR	11 32 26.6	
	comp=Z,210nm,18.6s,baz=91,slow=30						
MNTX	**Cornudas Mount**	**57.60**	**10**		**P**	**11 13 13.0**	**0.0**
RTZ	**Ruatahuna**	**57.65**	**239**	P	**P**	**11 13 13.9**	**+0.4**
OZNA	**Ozona**	**57.67**	**15**	P	**P**	**11 13 14.6**	**+1.1**
OZNA				IAmb	IAmb	11 15 17.4	
	comp=Z,15nm,1.7s						
MNHN	**Monahans**	**57.73**	**13**	P	**P**	**11 13 15.2**	**+1.3**
YUH	**Yuha Desert**	**57.75**	**359**	P	**P**	**11 13 13.4**	**-0.5**
YUH				IAmb	IAmb	11 13 45.5	
	comp=Z,37nm,1.9s						
113A	**Mohawk Valley,**	**57.89**	**2**	P	**P**	**11 13 16.2**	**+1.2**
DUN6	**Lazy B Ranch**	**57.97**	**6**	P	**P**	**11 13 16.0**	**+0.3**
121A	**Cookes Peak, D**	**58.09**	**8**	P	**P**	**11 13 16.6**	**0.0**
HKT	**Hockley**	**58.17**	**20**	P	**P**	**11 13 18.2**	**+1.3**
HKT				IAmb	IAmb	11 13 29.2	
	comp=Z,22nm,1.9s						
BRDY	**Brady**	**58.53**	**16**		**P**	**11 13 20.6**	**+1.0**
Y14A	**Wickenburg**	**59.08**	**2**		**P**	**11 13 23.5**	**+0.2**
Y14A				IAmb	IAmb	11 13 27.2	
	comp=Z,6.9nm,0.9s						
Y22A	**Socorro**	**59.58**	**8**	IAmb	IAmb	11 13 34.9	
	comp=Z,6.9nm,0.9s						
SBM	**South Baldy**	**59.59**	**8**	P	**P**	**11 13 28.0**	**+0.8**
WHTX	**Lake Whitney,**	**59.61**	**18**	P	**P**	**11 13 27.6**	**+0.7**
WHTX				IAmb	IAmb	11 13 30.2	
	comp=Z,6.7nm,0.7s						
CRNM	**Carthage**	**59.62**	**8**	P	**P**	**11 13 28.1**	**+0.9**
X16A	**Lo Mia Camp, P**	**59.63**	**4**		**P**	**11 13 27.9**	**+0.6**
X16A				IAmb	IAmb	11 13 35.1	
	comp=Z,23nm,2.0s						
LENM	**Lemitar**	**59.80**	**8**	P	**P**	**11 13 27.6**	**-0.9**
X18A	**Snowflake**	**59.85**	**5**	P	**P**	**11 13 28.2**	**-0.6**
X18A				IAmb	IAmb	11 13 32.5	
	comp=Z,8.5nm,0.8s						
NEE2	**Needles Airpor**	**59.87**	**1**	P	**P**	**11 13 28.7**	**+0.1**
NEE2				IAmb	IAmb	11 13 39.7	
	comp=Z,19nm,1.5s						
237A	**Washetta, Mont**	**60.09**	**19**	P	**P**	**11 13 30.4**	**+0.2**
237A				IAmb	IAmb	11 13 34.2	
	comp=Z,11nm,0.7s						
PLPT	**Palo Pinto**	**60.16**	**17**		**P**	**11 13 31.3**	**+0.6**
PLPT				IAmb	IAmb	11 13 34.0	
	comp=Z,6.5nm,0.8s						
APMT	**Aspermont**	**60.21**	**15**	P	**P**	**11 13 31.6**	**+0.5**
APMT				IAmb	IAmb	11 13 43.0	
	comp=Z,16nm,1.4s						
W13A	**Hualapai Mount**	**60.21**	**1**		**P**	**11 13 30.8**	**-0.5**
NATX	**Nacogdoches**	**60.22**	**20**	P	**P**	**11 13 32.0**	**+0.9**
NATX				IAmb	IAmb	11 14 24.7	
	comp=Z,19nm,1.2s						
MSTX	**Muleshoe**	**60.27**	**12**	P	**P**	**11 13 31.1**	**-0.5**
MSTX				IAmb	IAmb	11 13 34.2	
	comp=Z,7.4nm,0.8s						
TKNZ	**Takaka Hill**	**60.35**	**236**	P	**P**	**11 13 31.2**	**-0.9**
GSC	**Goldstone, Bar**	**60.41**	**359**	P	**P**	**11 13 31.1**	**-1.4**
GSC				IAmb	IAmb	11 13 35.4	
	comp=Z,6.5nm,0.7s						
W18A	**Petrified Fore**	**60.45**	**5**	P	**P**	**11 13 33.5**	**+0.5**
W18A				IAmb	IAmb	11 13 45.0	
	comp=Z,20nm,1.7s						
ABQ	**Albuquerque**	**60.63**	**8**		**P**	**11 13 34.4**	**+0.2**
TASM	**ASL Pad, Albuq**	**60.64**	**8**	P	**P**	**11 13 34.4**	**+0.2**
TASM	**ASL Pad, Albuq**	**60.64**	**8**	P	**P**	**11 13 35.7**	**+1.5**
TASM				IAmb	IAmb	11 13 37.9	
	comp=Z,3.9nm,1.1s						
ANMO	**Albuquerque**	**60.64**	**8**	LR	LR	11 35 33.9	
	comp=Z,157nm,19.3s,baz=208,slow=32						
ANMO	**Albuquerque**	**60.64**	**8**		**P**	**11 13 34.7**	**+0.6**
WSHM	**Spangler Hills**	**60.73**	**358**	P	**P**	**11 13 34.8**	**+0.2**
WUAZ	**Wupatki**	**60.73**	**4**		**P**	**11 13 35.0**	**+0.2**
ISA	**Isabella, Lake**	**60.83**	**357**	P	**P**	**11 13 36.8**	**+1.5**
ISA				IAmb	IAmb	11 14 08.4	
	comp=Z,14nm,1.6s						
Z35A	**Perchaven, San**	**60.93**	**17**	P	**P**	**11 13 36.6**	**+0.7**
Z35A				IAmb	IAmb	11 13 39.1	
	comp=Z,7.4nm,0.8s						
QSM	**Queen of Sheba**	**61.08**	**359**	P	**P**	**11 13 36.6**	**-0.3**
GWY	**Greenwater Val**	**61.29**	**359**	P	**P**	**11 13 40.0**	**+1.4**
GWY				IAmb	IAmb	11 13 46.3	
	comp=Z,27nm,1.9s						
LOOK	**Love County**	**61.57**	**17**	P	**P**	**11 13 40.5**	**+0.2**
FURC	**Furnace Creek,**	**61.58**	**359**	P	**P**	**11 13 41.8**	**+1.5**
FURC				IAmb	IAmb	11 13 47.6	
	comp=Z,7.7nm,1.1s						
CWC	**Cottonwood Cre**	**61.59**	**358**		**P**	**11 13 41.2**	**+0.7**
U15A	**North Rim**	**61.59**	**3**	IAmb	IAmb	11 13 44.8	
	comp=Z,8.9nm,0.9s						
SHPR	**Sheep Range**	**61.60**	**0**	IAmb	IAmb	11 13 52.8	
	comp=Z,11nm,1.4s						
WCT	**Wildcat Mounta**	**61.90**	**359**	IAmb	IAmb	11 13 50.2	
	comp=Z,7.4nm,1.0s						
KNB	**Kanab**	**62.16**	**2**	IAmb	IAmb	11 13 52.0	
	comp=Z,9.6nm,1.1s						
143A	**Socs Landing,**	**62.16**	**23**	P	**P**	**11 13 46.1**	**+1.8**
FOZ	**Fox Glacier**	**62.25**	**232**	P	**P**	**11 13 45.8**	**+0.9**
WLAR	**White Oak Lake**	**62.49**	**21**	P	**P**	**11 13 47.1**	**+0.6**
DSP	**Deep Springs**	**62.51**	**358**	P	**P**	**11 13 46.2**	**-0.3**
PKCU	**Pink Cliffs**	**62.60**	**3**		**P**	**11 13 47.5**	**0.0**
CCUT	**Cedar City**	**62.67**	**2**	IAmb	IAmb	11 13 52.2	
	comp=Z,10nm,0.9s						
MHC	**Mount Hamilton**	**62.71**	**354**	P	**P**	**11 13 47.2**	**-0.9**
MHC				IAmb	IAmb	11 13 51.1	
	comp=Z,11nm,0.9s						
SZCU	**Shurtz Canyon**	**62.72**	**2**	IAmb	IAmb	11 14 00.4	
	comp=Z,19nm,1.4s						
S11A	**Rachel**	**62.74**	**360**	P	**P**	**11 13 49.2**	**+1.0**
T25A	**Trinidad**	**63.08**	**10**	P	**P**	**11 13 51.9**	**+1.3**
T25A				IAmb	IAmb	11 14 01.9	
	comp=Z,11nm,1.2s						
HMU	**Henry Mountain**	**63.18**	**4**	P	**P**	**11 13 51.5**	**+0.2**
HMU				IAmb	IAmb	11 14 02.5	
	comp=Z,14nm,1.0s						
MTPU	**Mount Pierson**	**63.20**	**3**	IAmb	IAmb	11 13 58.9	
	comp=Z,17nm,1.7s						
CMB	**Columbia Colle**	**63.30**	**356**	P	**P**	**11 13 52.4**	**+0.6**
CMB				IAmb	IAmb	11 13 55.2	
	comp=Z,23nm,1.9s						
S22A	**4UR Ranch, Cre**	**63.35**	**8**	P	**P**	**11 13 53.0**	**+0.5**
S22A				IAmb	IAmb	11 14 03.0	
	comp=Z,14nm,1.6s						
SDCO	**Great Sand Dun**	**63.52**	**9**	IAmb	IAmb	11 14 04.8	
	comp=Z,11nm,1.1s						
OK038	**West end E0370**	**63.55**	**15**	P	**P**	**11 13 54.1**	**+0.6**
PV01	**Paradox Valley**	**63.55**	**6**	P	**P**	**11 13 53.3**	**-0.4**
PV01				IAmb	IAmb	11 14 23.2	
	comp=Z,24nm,1.9s						
PV13	**Radium Mtn., P**	**63.55**	**6**	P	**P**	**11 13 54.5**	**+0.7**
PV13				IAmb	IAmb	11 13 56.8	
	comp=Z,4.4nm,0.7s						
NV11	**Mina Array Sit**	**63.57**	**358**	IAmb	IAmb	11 13 57.4	
	comp=Z,11nm,1.1s						
NVAR	**Mina Array Bea**	**63.58**	**357**	P	**P**	**11 13 53.1**	**-0.8**
	comp=Z,5.2nm,0.7s,baz=187,slow=8.5,SNR=20						
	comp=Z,5.2nm,0.7s						
PV02	**Paradox Valley**	**63.60**	**6**	P	**P**	**11 13 56.1**	**+2.0**
PV18	**Skein Mesa, Pa**	**63.63**	**6**		**P**	**11 13 54.8**	**+0.6**
PSUT	**Pine Spring**	**63.64**	**1**	IAmb	IAmb	11 13 60.0	
	comp=Z,6.6nm,0.8s						
PV03	**Paradox Valley**	**63.64**	**6**	P	**P**	**11 13 54.9**	**+0.6**
PV03				IAmb	IAmb	11 13 57.8	
	comp=Z,23nm,1.8s						
PV11	**David Mesa, Pa**	**63.68**	**6**	P	**P**	**11 13 55.9**	**+1.4**
PV20	**West Nyswonger**	**63.72**	**6**	P	**P**	**11 13 56.0**	**+1.2**
PV14	**Lion Creek, Pa**	**63.74**	**6**	P	**P**	**11 13 54.0**	**-1.0**
PV10	**Paradox Valley**	**63.74**	**6**	P	**P**	**11 13 55.5**	**+0.4**
CROK	**Carrier**	**63.75**	**16**	P	**P**	**11 13 55.5**	**+0.6**
TUL3	**Leonard**	**63.76**	**18**		**P**	**11 13 55.0**	**+0.1**
TUL3				IAmb	IAmb	11 13 58.0	
	comp=Z,6.7nm,0.7s						
TCRU	**Three Creeks R**	**63.76**	**3**	P	**P**	**11 13 55.0**	**-0.1**
PV15	**Paradox Valley**	**63.76**	**6**	P	**P**	**11 13 55.0**	**-0.1**
PV15				IAmb	IAmb	11 14 02.3	
	comp=Z,15nm,1.1s						
PV04	**Paradox Valley**	**63.77**	**6**	P	**P**	**11 13 55.9**	**+0.8**
VNDA	**Vanda**	**63.80**	**194**	LR	LR	11 35 32.2	
	comp=Z,156nm,18.5s,baz=76,slow=30						
PV23	**Carpenter Ridg**	**63.82**	**6**	P	**P**	**11 13 55.1**	**-0.5**
PV07	**Paradox Valley**	**63.84**	**6**	P	**P**	**11 13 55.0**	**-0.7**
PV07				IAmb	IAmb	11 13 58.4	
	comp=Z,5.8nm,0.8s						
PV22	**Blue Mesa, Par**	**63.92**	**6**		**P**	**11 13 56.4**	**+0.3**
PV22				IAmb	IAmb	11 13 59.5	
	comp=Z,7.0nm,0.8s						
OK051	**E0350 and S346**	**64.04**	**17**	P	**P**	**11 13 58.7**	**+2.0**
Q16A	**Castle Valley**	**64.13**	**4**	IAmb	IAmb	11 14 07.7	
	comp=Z,15nm,1.5s						
SRU	**San Rafael Swe**	**64.36**	**4**	IAmb	IAmb	11 14 02.1	
	comp=Z,8.6nm,1.0s						
QSPA	**South Pole Qui**	**64.74**	**180**	P	**P**	**11 14 03.2**	**+2.1**
QSPA				IAmb	IAmb	11 14 22.1	
	comp=Z,10nm,1.4s						
P18A	**Preston Nutter**	**64.89**	**4**	P	**P**	**11 14 02.1**	**-0.5**
P18A				IAmb	IAmb	11 14 05.8	
	comp=Z,16nm,1.5s						
MPU	**Maple Canyon**	**65.20**	**3**	IAmb	IAmb	11 14 08.2	
	comp=Z,12nm,1.2s						
KSCO	**Kaye Shedlock'**	**65.20**	**11**	P	**P**	**11 14 06.2**	**+1.7**
DUG	**Dugway, Tooele**	**65.33**	**2**	IAmb	IAmb	11 14 17.0	
	comp=Z,11nm,1.1s						
O20A	**White River Ci**	**65.56**	**6**	IAmb	IAmb	11 14 14.1	
	comp=Z,19nm,1.4s						
O02D	**Mt. Diablo Mer**	**65.63**	**354**	P	**P**	**11 14 08.5**	**+1.4**
BSUT	**Blindstream Ca**	**65.77**	**4**	IAmb	IAmb	11 14 19.1	
	comp=Z,9.7nm,1.0s						
ELK	**Elko**	**65.83**	**0**	IAmb	IAmb	11 14 12.2	
	comp=Z,8.1nm,1.2s						
CTU	**Camp Tracy**	**65.87**	**3**	IAmb	IAmb	11 14 16.1	
	comp=Z,15nm,1.3s						
RDMU	**Red Mountain**	**65.88**	**5**	P	**P**	**11 14 07.5**	**-1.4**
MGMO	**Mountain Grove**	**65.94**	**20**	IAmb	IAmb	11 14 13.0	
	comp=Z,8.3nm,0.9s						
HAYD	**Hayden**	**66.04**	**7**		**P**	**11 14 11.8**	**+1.8**
HAYD				IAmb	IAmb	11 14 21.3	
	comp=Z,12nm,1.2s						
BGU	**Big Grassy Mou**	**66.05**	**2**	P	**P**	**11 14 10.9**	**+1.1**
BGU				IAmb	IAmb	11 14 17.2	
	comp=Z,12nm,1.2s						
TCUT	**Toone Canyon**	**66.31**	**3**	IAmb	IAmb	11 14 18.8	
	comp=Z,13nm,1.0s						
KSU1	**Kansas State U**	**66.55**	**16**	IAmb	IAmb	11 14 16.9	
	comp=Z,11nm,0.8s						
HWUT	**Hardware Ranch**	**66.79**	**3**		**P**	**11 14 15.4**	**+0.8**
HWUT				IAmb	IAmb	11 14 21.2	
	comp=Z,6.6nm,1.0s						
HVU	**Hansel Valley**	**66.91**	**2**	P	**P**	**11 14 16.4**	**+1.0**
R40A	**Maddies Statio**	**66.99**	**20**	P	**P**	**11 14 15.8**	**+0.1**
R40A				IAmb	IAmb	11 14 19.5	
	comp=Z,6.2nm,0.9s						
CCM	**Cathedral Cave**	**67.09**	**21**	P	**P**	**11 14 18.0**	**+1.6**
CCM				IAmb	IAmb	11 14 19.6	
	comp=Z,6.7nm,0.7s						
T47A	**Sharon Grove**	**67.56**	**24**	P	**P**	**11 14 20.0**	**+0.6**
WVOR	**Wild Horse Val**	**67.58**	**357**	IAmb	IAmb	11 14 33.2	
	comp=Z,9.4nm,1.2s						
P38A	**Dawn**	**67.86**	**18**		**P**	**11 14 20.7**	**-0.5**
K04D	**Chiloquin, OR**	**67.96**	**355**	P	**P**	**11 14 21.7**	**-0.3**
AHID	**Auburn Hatcher**	**67.97**	**3**	P	**P**	**11 14 22.3**	**+0.2**
AHID				IAmb	IAmb	11 14 24.5	
	comp=Z,6.8nm,0.9s						
BW06	**Boulder Array**	**68.06**	**5**	IAmb	IAmb	11 14 28.9	
	comp=Z,13nm,1.4s						
PD31	**Pinedale Array**	**68.06**	**5**	IAmb	IAmb	11 14 28.9	
	comp=Z,14nm,1.4s						
PDAR	**Pinedale Array**	**68.06**	**5**	P	**P**	**11 14 21.1**	**-1.7**
	comp=Z,3.1nm,0.7s,baz=168,slow=7.3,SNR=22						
	comp=Z,3.1nm,0.7s						
PDAR	**Pinedale Array**	**68.06**	**5**		**P**	**11 14 20.7**	**-2.0**
J08A	**Circle Bar Ran**	**68.50**	**358**	IAmb	IAmb	11 14 32.8	
	comp=Z,12nm,1.2s						
MFID	**Camas Ranch**	**68.50**	**360**	IAmb	IAmb	11 14 35.9	
	comp=Z,14nm,1.3s						
J05D	**Fort Rock, OR**	**68.58**	**355**	P	**P**	**11 14 26.1**	**+0.2**
J05D				IAmb	IAmb	11 14 32.8	
	comp=Z,14nm,1.1s						
HLID	**Hailey**	**68.65**	**1**	IAmb	IAmb	11 14 30.0	
	comp=Z,9.9nm,0.9s						
SNOW	**Snow King Moun**	**68.68**	**4**	P	**P**	**11 14 27.5**	**+0.9**
SNOW				IAmb	IAmb	11 14 33.2	
	comp=Z,8.6nm,0.9s						
LOHW	**Long Hollow**	**68.84**	**4**	IAmb	IAmb	11 14 34.1	
	comp=Z,6.0nm,0.9s						
MOOW	**Moose Ponds**	**68.97**	**4**	IAmb	IAmb	11 14 31.1	
	comp=Z,5.8nm,0.9s						
PINE	**Pine Mountain**	**69.06**	**356**		**P**	**11 14 29.2**	**+0.2**
PINE				IAmb	IAmb	11 14 32.3	
	comp=Z,8.3nm,0.9s						
BCYI	**Bear Canyon**	**69.42**	**2**	IAmb	IAmb	11 14 38.4	

	comp=Z,20nm,2.0s						
YMR	Madison River	69.87	3	IAmb	IAmb	11 14 41.3	
	comp=Z,13nm,1.0s						
RSSD	Black Hills	69.98	9		P	11 14 34.9	+0.2
HDIL	Hopedale	69.99	21	P	P	11 14 35.3	+0.9
QLMT	Earthquake Lak	70.01	3	P	P	11 14 34.6	-0.2
YHL	Hebgen Lake	70.04	3	IAmb	IAmb	11 14 42.6	
	comp=Z,12nm,1.0s						
G08A	Pilot Rock	70.45	357	IAmb	IAmb	11 14 48.8	
	comp=Z,11nm,1.4s						
ECSD	EROS Data Cent	70.95	14	P	P	11 14 41.2	+0.9
LNOR	Lincton Mounta	71.00	358	P	P	11 14 41.6	+1.0
F10A	Beach Ranch, E	71.08	359	P	P	11 14 41.3	+0.2
F10A				IAmb	IAmb	11 14 51.1	
	comp=Z,10nm,1.4s						
SUSD	Miller	71.14	12	P	P	11 14 42.0	+0.6
SUSD				IAmb	IAmb	11 14 48.5	
	comp=Z,13nm,1.1s						
E09A	Wood Farm, Sta	71.64	358	IAmb	IAmb	11 14 54.4	
	comp=Z,15nm,1.3s						
I37A	Lemond, Waseca	71.98	17	P	P	11 14 48.0	+1.4
LYMT	Lyon Mountain	72.11	2	P	P	11 14 48.0	+0.5
LAO	LASA Array	72.25	7	IAmb	IAmb	11 14 51.2	
	comp=Z,12nm,0.9s						
N51A	Ashland	72.78	26	P	P	11 14 52.0	+0.7
SNAA	Sanae	72.82	162	P	P	11 14 52.5	+1.1
SNAA				IAmb	IAmb	11 16 21.6	
	comp=Z,33nm,1.9s						
C09A	Chrisman Ranch	72.93	358	P	P	11 14 52.8	+0.7
M50A	Fremont	72.94	25	P	P	11 14 53.2	+1.0
EGMT	Eagleton	73.28	4		P	11 14 56.0	+1.7
EGMT				IAmb	IAmb	11 15 01.9	
	comp=Z,19nm,1.2s						
NEW	Newport	73.37	359	LR	LR	11 42 29.3	
	comp=Z,272nm,20.0s,baz=248,slow=32						
NEW	Newport	73.37	359		P	11 14 56.0	+1.3
NEW				IAmb	IAmb	11 15 01.5	
	comp=Z,12nm,1.2s						
G40A	Rib Lake	74.01	18	P	P	11 15 00.1	+1.6
ULM	Lac du Bonnet	77.31	13	P	P	11 15 18.0	+0.8
	comp=Z,5.1nm,0.7s,baz=201,slow=5.6,SNR=5.0						
ULM				LR	LR	11 47 04.1	
	comp=Z,191nm,18.0s,baz=253,slow=34						
	comp=Z,5.1nm,0.7s						
ULM	Lac du Bonnet	77.31	13	IAmb	IAmb	11 17 45.3	
	comp=Z,31nm,1.9s						
SADO	Sadowa	77.31	26	LR	LR	11 47 19.3	
	comp=Z,133nm,18.5s,baz=310,slow=34						
FFC	Flin Flon	80.65	8	P	P	11 15 35.3	-0.2
SYO	Syowa Base	84.09	171	⇓*e*P	P	11 15 53.0	-0.4
FCC	Fort Churchill	85.72	11		P	11 16 02.4	+0.9
FCC				IAmb	IAmb	11 16 12.1	
	comp=Z,18nm,1.3s						
MAW	Mawson	87.25	179	LR	LR	11 51 18.8	
	comp=Z,173nm,18.3s,baz=178,slow=33						
H11S2	WAKE ISLAND Hy	87.40	292	T	T	12 51 55.1	
	baz=118,slow=75,SNR=331						
H11S1	WAKE ISLAND Hy	87.42	292	T	T	12 52 01.1	
	baz=118,slow=75,SNR=384						
H11S3	WAKE ISLAND Hy	87.42	292	T	T	12 51 56.8	
	baz=118,slow=75,SNR=197						
YKAW1	Yellowknife Wh	87.60	0	IAmb	IAmb	11 16 17.2	
	comp=Z,11nm,1.4s						
YKA	Yellowknife Ar	87.61	0	P	P	11 16 10.1	-0.6
	comp=Z,2.0nm,0.9s,baz=183,slow=4.8,SNR=22						
	comp=Z,2.0nm,0.9s						
YKA	Yellowknife Ar	87.61	0	P	P	11 16 10.5	-0.2
YKAW3	Yellowknife Wh	87.68	0	IAmb	IAmb	11 16 21.2	
	comp=Z,13nm,1.4s						
H11N3	WAKE ISLAND Hy	87.80	293	T	T	12 52 28.2	
	baz=114,slow=78,SNR=9.6						
H11N1	WAKE ISLAND Hy	87.82	293	T	T	12 52 28.0	
	baz=114,slow=78,SNR=7.9						
H11N2	WAKE ISLAND Hy	87.82	293	T	T	12 52 29.8	
	baz=114,slow=78,SNR=11						
SCHQ	Schefferville	90.12	26	LR	LR	11 54 56.7	
	comp=Z,88nm,19.7s,baz=272,slow=34						
ILAR	Eielson Array	93.17	347	P	P	11 16 36.3	-0.3
	comp=Z,0.5nm,0.9s,baz=176,slow=7.2,SNR=2.4						
	comp=Z,0.5nm,0.9s						
FRB	Frobisher Bay	96.17	19	LR	LR	11 56 25.9	
	comp=Z,123nm,18.4s,baz=276,slow=33						
TORD	Torodi Ar. Bea	119.84	89	PKP	PKPdf	11 22 13.6	-0.6
	comp=Z,0.7nm,0.9s,baz=266,slow=4.2,SNR=4.1						
SONM	Songino Array	140.33	315	PKP	PKPdf	11 22 51.2	-0.9
	comp=Z,0.2nm,0.5s,baz=46,slow=4.2,SNR=3.5						
LZDM	Lanzhou Array	144.99	297	PKP	PKPbc	11 22 59.9	-0.4
	comp=Z,0.8nm,0.3s,baz=50,slow=4.5,SNR=1.7						
CMAR	Chiang Mai Arr	147.47	265	PKPbc	PKPdf	11 23 05.0	-0.2
	comp=Z,2.6nm,1.0s,baz=99,slow=1.3,SNR=9.1						
CMAR	Chiang Mai Arr	147.47	265		PKPbc	11 23 07.0	-0.8
ZALV	Zalesovo Beam	147.78	337	PKPbc	PKPdf	11 23 04.8	+0.1
	comp=Z,1.7nm,0.6s,baz=19,slow=2.7,SNR=9.3						
ZALV	Zalesovo Beam	147.78	337		PKPbc	11 23 07.0	-0.6
BRTR	Keskin Array B	150.44	54	PKPbc	PKPdf	11 23 11.4	+1.7
	comp=Z,2.3nm,0.9s,baz=338,slow=2.7,SNR=4.9						
BVAR	Borovoye Array	152.09	353	PKPbc	PKPbc	11 23 16.0	-2.2
	comp=Z,2.5nm,0.7s,baz=29,slow=3.4,SNR=10						
BVAR	Borovoye Array	152.09	353		PKPbc	11 23 16.0	-2.2
KURK	Kurchatov	152.54	340		PKiKP	11 23 19.5	0.0
KURBB	Kurchatov Arra	152.65	341	PKPbc	PKPbc	11 23 16.9	-2.6
	comp=Z,0.9nm,0.3s,baz=28,slow=1.7,SNR=8.8						
MKAR	Makanchi Array	154.44	331	PKPbc	PKPbc	11 23 20.6	-3.0
	comp=Z,0.9nm,0.8s,baz=66,slow=3.0,SNR=5.8						

*NEIC **25** 11:11:01.3±0.7, 20°.9S±0°.1×177°.29W±0°.10, h361^{km}±13^{km}, mb4.0/13, Error ellipse: s-maj=20.1km s-min=10.7km az=154.0*

*IDC **25** 11:11:02.0±5.5, 20°.96S×177°.34W, h372^{km}±55^{km}, mb3.1/4, mbtmp4.0/5, Error ellipse: s-maj=28.4km s-min=19.4km az=99.0*

ISC 25 11:11:01.1±0.7, **20°.9S**±0°.1×**177°.32W**±0°.08, **h365**^{km}, **n26**, σ**0**^{s}**.70**/26, **mb3.8**/10, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	5.38	305		Pn	11 12 25.3	-0.5
NIUE	Niue	7.18	77	Pn	Pn	11 12 45.2	-0.8
FUNA	Funafuti	12.74	344	P	P	11 13 50.6	+0.1
MARNC	Mare, Loyalty	13.68	265		P	11 14 01.6	+0.9
PINNC	Pines Island,	14.26	260	P	P	11 14 08.0	+1.0
DZM	Mont Dzumac	15.16	263	P	P	11 14 17.2	+0.3
DZM				IAmb	IAmb	11 14 28.1	
	comp=Z,21nm,1.3s						
SANVU	Saraoutou	15.67	288	P	P	11 14 21.6	-0.8
RAR	Rarotonga	16.38	94	P	P	11 14 29.9	-0.2
URZ	Urewera	17.97	194	P	P	11 14 45.9	-0.9
	comp=Z,3.9nm,0.3s,baz=259,slow=4.3,SNR=9.8						
URZ				S	S	11 17 53.8	0.0
	comp=Z,5.5nm,0.6s,baz=292,slow=23,SNR=6.1						
CTAO	Charters Tower	34.09	265	P	P	11 17 13.4	+0.4
CTAO				IAmb	IAmb	11 17 15.1	
	comp=Z,10nm,1.1s						
COEN	Coen	38.24	274	IAmb	IAmb	11 17 45.7	
	comp=Z,5.1nm,1.1s						
COEN				P	P	11 17 47.5	-0.3
WR8	Warramunga Arr	45.03	262	P	P	11 18 41.9	-0.3
WR8				IAmb	IAmb	11 18 43.7	
	comp=Z,7.7nm,1.2s						
AS31	Alice Springs	45.05	257	P	P	11 18 43.0	+0.6
ASAR	Alice Springs	45.05	257	P	P	11 18 42.9	+0.5
	comp=Z,0.9nm,0.5s,baz=89,slow=8.3,SNR=36						
	comp=Z,0.9nm,0.5s						
ASAR	Alice Springs	45.05	257	P	P	11 18 42.0	-0.4
WB0	Warramunga Arr	45.16	263	P	P	11 18 43.3	0.0
WB0				IAmb	IAmb	11 19 08.4	
	comp=Z,13nm,1.4s						
WRAB	Tennant Creek	45.17	262	P	P	11 18 43.3	0.0
WRAB				IAmb	IAmb	11 19 07.8	
	comp=Z,6.8nm,1.2s						
WRA	Warramunga Arr	45.18	262	P	P	11 18 43.2	-0.3
	comp=Z,1.5nm,0.5s,baz=97,slow=9.6,SNR=12						
	comp=Z,1.5nm,0.5s						
WRA	Warramunga Arr	45.18	262	P	P	11 18 43.2	-0.3
KNRA	Kununurra	51.27	266	P	P	11 19 29.3	-0.2
KNRA				IAmb	IAmb	11 19 29.5	
	comp=Z,17nm,1.3s						
FAKI	Fak Fak	52.21	283	P	P	11 19 35.9	-0.5
FITZ	Fitzroy Crossi	53.61	262	P	P	11 19 46.1	-0.3
TXAR	Lajitas Array	86.73	57	P	P	11 23 07.4	+2.2
	comp=Z,0.2nm,0.7s,baz=241,slow=4.9,SNR=2.6						
	comp=Z,0.2nm,0.7s						
ILAR	Eielson Array	88.55	13	P	P	11 23 12.8	+0.1
	comp=Z,1.0nm,1.1s,baz=228,slow=5.2,SNR=6.1						
	comp=Z,1.0nm,1.1s						
AKASG	Malin Array Be	143.66	331	PKP	PKPab	11 29 51.0	+0.2
	comp=Z,0.7nm,0.4s,baz=41,slow=3.9,SNR=5.3						
GERES	GERESS Array B	150.74	345	PKPbc	PKPbc	11 30 10.1	-0.6
	comp=Z,0.2nm,0.6s,baz=353,slow=4.0,SNR=2.3						

IDC 25 11:11:36.1±18.0, **63°.51S**×**176°.20E**, **h0**^{km}, **mb3.6**/2, **mbtmp3.8**/3, **ML3.9**/1, **Error ellipse: s-maj=500.5km s-min=48.7km az=80.0, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	14.79	192	Pn	Pn	11 15 06.3	+0.2
	0.5nm,0.3s,baz=30,slow=16,SNR=36						
	1.9nm,0.4s						
H01W1	Cape Leeuwin H	47.02	277	T	T	12 09 51.9	
	baz=147,slow=76,SNR=48						
H01W2	Cape Leeuwin H	47.02	277	T	T	12 09 51.4	
	baz=147,slow=76,SNR=43						
H01W3	Cape Leeuwin H	47.03	277	T	T	12 09 52.3	
	baz=147,slow=76,SNR=65						
ASAR	Alice Springs	48.63	305	P	P	11 20 21.6	+0.2
	0.7nm,0.8s,baz=148,slow=6.3,SNR=7.3						
	0.7nm,0.8s						
WRA	Warramunga Arr	51.88	307	P	P	11 20 45.7	-0.4
	0.8nm,0.8s,baz=161,slow=7.0,SNR=5.0						
	0.8nm,0.8s						
H03S2	Juan Fernandez	66.45	119	T	T	12 36 20.6	
	baz=206,slow=74,SNR=30						
H03S1	Juan Fernandez	66.45	119	T	T	12 36 21.9	
	baz=206,slow=74,SNR=29						
H03S3	Juan Fernandez	66.47	119	T	T	12 36 20.6	
	baz=206,slow=74,SNR=39						
H08S2	Diego Garcia H	89.27	254	T	T	13 02 41.7	
	baz=153,slow=76,SNR=27						
H08S1	Diego Carcia H	89.28	254	T	T	13 02 47.9	
	baz=153,slow=76,SNR=31						
H08S3	Diego Garcia H	89.29	254	T	T	13 02 43.2	
	baz=153,slow=76,SNR=37						
H06E1	SOCORRO T-PHAS	99.26	67	T	T	13 17 06.2	
	SNR=4.8						

*IDC **25** 11:21:46.6±1.1, 25°.07S×115°.49W, h0^{km}, mb3.9/7, mbtmp3.9/7, MS3.9/25, Error ellipse: s-maj=47.1km s-min=24.5km az=54.0*

*GCMT **25** 11:21:49.1±0.3, 25°.38S±0°.02×116°.13W±0°.02, h17^{km}±1^{km}, MW4.8/84, Moment Tensor Solution. s14,c14; s84,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.44±.10; $M_{\theta\theta}$-1.61±.09; $M_{\phi\phi}$2.05±.11; $M_{r\theta}$-0.53±.23; $M_{\theta\phi}$1.37±.08; $M_{\phi r}$-0.22±.25; Best double couple: $M_0$2.36500×10^{16} NP1:ϕ_s154.00000°, δ75.00000°, λ-175.00000°. NP2: ϕ_s63.00000°, δ85.00000°, λ-15.00000°. Principal axes: T 2.5530, Plg7.0000°, Azm109.0000°; N -0.3750, Plg74.0000°, Azm225.0000°; P -2.1780, Plg14.0000°, Azm17.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **25** 11:21:50.1±1.7, 25°.35S±0°.05×115°.1W±0°.1, h10^{km}±1^{km}, mb4.8/61 Error ellipse: s-maj=20.1km s-min=8.5km az=269.0*

ISC 25 11:21:49.4±0.7, **25°.4S**±0°.1×**115°.1W**±0°.1, **h10**^{km}, **n103**, σ**1**^{s}**.27**/78, **mb4.8**/31, **MS4.0**/24, **Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA02	Isla de Pascua	5.38	110	Pn	Pn	11 23 09.4	-0.3
RPN	Rapa Nui	5.45	110	LR	LR	11 24 29.0	
	comp=Z,248nm,21.0s,baz=268,slow=28						
PPT	Papeete	32.94	277	LR	LR	11 37 30.4	
	comp=Z,539nm,18.4s,baz=110,slow=29						
PAYG	Puerto Ayora	34.31	48	P	P	11 28 35.3	-1.0
BI05	Punta Hualpn	37.37	118	P	P	11 29 02.0	-0.4
NNA	Nana	38.46	77	LR	LR	11 42 20.3	
	comp=Z,159nm,18.3s,baz=242,slow=32						
ATAH	Atahualpa	39.44	69	LR	LR	11 41 00.3	
	comp=Z,143nm,19.2s,baz=246,slow=29						
AC05	El Transito	39.87	105	P	P	11 29 23.2	-0.4
AC05				IAmb	IAmb	11 30 09.2	
	comp=Z,47nm,1.6s						
PLCA	Paso Flores	39.91	124	P	P	11 29 27.2	+3.4
	comp=Z,2.5nm,0.7s,baz=289,slow=6.7,SNR=9.4						
PLCA				LR	LR	11 42 04.7	
	comp=Z,232nm,21.7s,baz=253,slow=30						
	comp=Z,2.5nm,0.7s						
PLCA	Paso Flores	39.91	124	P	P	11 29 25.1	+1.4
RAR	Rarotonga	41.10	266	LR	LR	11 40 34.7	
	comp=Z,176nm,21.8s,baz=114,slow=28						
CFA	Coronel Fontan	41.40	110	LR	LR	11 43 06.3	
	comp=Z,138nm,18.0s,baz=106,slow=31						
LPAZ	La Paz	44.63	88	P	P	11 30 03.1	0.0
	comp=Z,0.6nm,0.5s,baz=293,slow=7.7,SNR=2.1						
LPAZ				LR	LR	11 46 01.6	
	comp=Z,132nm,19.7s,baz=244,slow=32						
	comp=Z,0.6nm,0.5s						
CMIG	Matias Romero	46.59	27	LR	LR	11 45 10.5	
	comp=Z,124nm,21.7s,baz=204,slow=30						
LPIG	La Paz	49.42	6	LR	LR	11 46 14.9	
	comp=Z,188nm,20.3s,baz=198,slow=30						
SIV	San Ignacio	51.11	90	LR	LR	11 48 15.8	
	comp=Z,174nm,21.9s,baz=290,slow=31						
CPUP	Villa Florida	51.60	104	LR	LR	11 49 34.1	
	comp=Z,118nm,18.2s,baz=255,slow=32						
TXAR	Lajitas Array	55.51	12	LR	LR	11 50 30.6	
	comp=Z,117nm,19.2s,baz=300,slow=31						
PFO	Pinyon Flats O	58.69	359	LR	LR	11 50 31.8	
	comp=Z,220nm,20.5s,baz=252,slow=30						
X18A	Snowflake	59.79	5	P	P	11 31 55.0	0.0
X18A				IAmb	IAmb	11 31 59.2	
	comp=Z,7.6nm,1.0s						
NEE2	Needles Airpor	59.83	0	P	P	11 31 55.9	+0.9
NEE2				IAmb	IAmb	11 32 05.5	
	comp=Z,17nm,1.6s						
W13A	Hualapai Mount	60.17	1	P	P	11 31 58.3	+0.7
GSC	Goldstone, Bar	60.38	358	P	P	11 31 59.8	+0.9
GSC				IAmb	IAmb	11 32 02.1	
	comp=Z,12nm,1.2s						
W18A	Petrified Fore	60.39	5	P	P	11 31 59.4	+0.3
W18A				IAmb	IAmb	11 32 07.7	
	comp=Z,8.6nm,0.9s						
MTPC	Mountain Pass	60.55	360	P	P	11 32 01.5	+1.4
ANMO	Albuquerque	60.56	8	LR	LR	11 53 34.2	
	comp=Z,87nm,18.6s,baz=218,slow=32						
LTZ	Lake Taylor	60.83	234		P	11 32 02.4	+0.4
GWY	Greenwater Val	61.26	359	P	P	11 32 05.2	+0.3
GWY				IAmb	IAmb	11 32 15.3	
	comp=Z,14nm,1.7s						
SHPR	Sheep Range	61.56	360	P	P	11 32 06.3	-0.7
WCT	Wildcat Mounta	61.87	359	P	P	11 32 09.1	+0.2
143A	Socs Landing,	62.03	23	P	P	11 32 11.1	+1.1
DSP	Deep Springs	62.48	357	P	P	11 32 12.4	-0.5
CCUT	Cedar City	62.63	2		P	11 32 14.7	+0.5
CCUT				IAmb	IAmb	11 32 18.5	
	comp=Z,9.1nm,1.0s						
WKZ	Wanaka	62.84	231	P	P	11 32 15.5	+0.1
BDFB	Brasilia	63.02	95	LR	LR	11 58 13.9	
	comp=Z,65nm,18.9s,baz=231,slow=34						
CMB	Columbia Colle	63.28	355	P	P	11 32 18.1	-0.2
CMB				IAmb	IAmb	11 32 27.8	
	comp=Z,13nm,1.4s						
NVAR	Mina Array Bea	63.55	357	P	P	11 32 17.3	-3.1
	comp=Z,1.0nm,0.8s,baz=193,slow=6.5,SNR=20						
NVAR				LR	LR	11 53 59.6	
	comp=Z,164nm,19.8s,baz=222,slow=31						
	comp=Z,1.0nm,0.8s						
NVAR	Mina Array Bea	63.55	357		P	11 32 19.4	-0.9
PSUT	Pine Spring	63.60	1	P	P	11 32 20.0	-0.6
PSUT				IAmb	IAmb	11 32 26.2	
	comp=Z,6.5nm,1.0s						
PV22	Blue Mesa, Par	63.86	6	P	P	11 32 22.3	0.0
PV22				IAmb	IAmb	11 32 25.8	
	comp=Z,7.9nm,1.0s						
PV21	Cone Mtn., Par	63.87	5	P	P	11 32 22.6	+0.1
PV21				IAmb	IAmb	11 32 26.0	
	comp=Z,7.0nm,0.9s						
VNDA	Vanda	63.90	194	LR	LR	11 53 39.8	
	comp=Z,102nm,18.0s,baz=108,slow=30						
SPR3	Spring Creek 3	64.06	1		P	11 32 24.7	+0.9
Q16A	Castle Valley	64.08	3	P	P	11 32 24.9	+1.1
Q16A				IAmb	IAmb	11 32 27.0	
	comp=Z,7.4nm,1.1s						
PNTR	Pine Nut	64.28	356	P	P	11 32 25.7	+0.6
SRU	San Rafael Swe	64.31	4	P	P	11 32 25.2	0.0
SRU				IAmb	IAmb	11 32 31.7	
	comp=Z,6.4nm,1.1s						
P17A	Butcher Ranch,	64.65	4	P	P	11 32 27.3	-0.1
MPU	Maple Canyon	65.15	3	P	P	11 32 30.5	-0.2
MPU				IAmb	IAmb	11 32 35.0	
	comp=Z,10nm,1.2s						
DUG	Dugway, Tooele	65.28	2		P	11 32 31.3	-0.2
DUG				IAmb	IAmb	11 32 35.4	
	comp=Z,8.2nm,1.1s						
ELK	Elko	65.80	360	P	P	11 32 32.5	-2.4
	comp=Z,1.8nm,0.9s,baz=109,slow=7.9,SNR=5.6						
ELK				LR	LR	11 57 26.3	
	comp=Z,164nm,18.7s,baz=278,slow=33						
	comp=Z,1.8nm,0.9s						
ELK	Elko	65.80	360	P	P	11 32 33.1	-1.8
ELK				IAmb	IAmb	11 32 43.0	
	comp=Z,9.3nm,1.6s						
CTU	Camp Tracy	65.82	3		P	11 32 35.7	+0.7
CTU				IAmb	IAmb	11 32 38.6	
	comp=Z,10nm,1.2s						
RDMU	Red Mountain	65.82	5	P	P	11 32 35.2	+0.1
FPAL	Fort Paine	65.84	26	P	P	11 32 35.9	+0.8
YBH	Yreka Blue Hor	67.15	354	LR	LR	11 57 31.9	
	comp=Z,17nm,18.2s,baz=349,slow=32						
MDP	Montagnes des	67.73	73	LR	LR	11 59 32.6	
	comp=Z,144nm,21.8s,baz=242,slow=33						
K05A	Summer Lake	67.99	355	P	P	11 32 48.6	-0.2
PD31	Pinedale Array	68.01	4	P	P	11 32 48.5	-0.5
PDAR	Pinedale Array	68.01	4	P	P	11 32 45.8	-3.2
	comp=Z,1.4nm,0.9s,baz=193,slow=6.1,SNR=4.5						
PDAR				LR	LR	11 59 22.9	
	comp=Z,68nm,18.8s,baz=295,slow=33						
	comp=Z,1.4nm,0.9s						
PDAR	Pinedale Array	68.01	4	P	P	11 32 47.7	-1.3
K22A	Casper	68.16	7	P	P	11 32 49.4	-0.5
TZTN	Tazewell	68.41	27	P	P	11 32 50.9	-0.5
MFID	Camas Ranch	68.47	359		P	11 32 51.0	-0.8
MFID				IAmb	IAmb	11 33 03.4	
	comp=Z,9.3nm,1.4s						
J08A	Circle Bar Ran	68.48	357	P	P	11 32 52.0	+0.3
J05D	Fort Rock, OR	68.57	355	P	P	11 32 52.6	+0.2
J05D				IAmb	IAmb	11 32 55.5	
	comp=Z,10nm,1.0s						
HLID	Hailey	68.61	1		P	11 32 52.0	-0.7
HLID				IAmb	IAmb	11 32 56.2	
	comp=Z,6.4nm,0.9s						
MOOW	Moose Ponds	68.91	3		P	11 32 54.6	0.0
BCYI	Bear Canyon	69.38	1	P	P	11 32 58.9	+1.4
BMO	Blue Mountains	69.93	358	P	P	11 33 01.1	+0.3
YHH	Holmes Hill	69.94	3	P	P	11 33 01.4	+0.4
QLMT	Earthquake Lak	69.96	3	P	P	11 33 00.1	-1.0
PLID	Pearl Lake	70.14	359	P	P	11 33 03.6	+1.4
PLID				IAmb	IAmb	11 33 08.6	
	comp=Z,11nm,1.5s						
G08A	Pilot Rock	70.43	357	P	P	11 33 03.4	-0.3
ECSD	EROS Data Cent	70.85	14	P	P	11 33 07.9	+1.6
ECSD				IAmb	IAmb	11 33 09.9	
	comp=Z,9.3nm,1.3s						
MSO	Missoula	71.89	1	P	P	11 33 12.7	+0.1
NEW	Newport	73.34	359	P	P	11 33 18.4	-2.7
	comp=Z,3.0nm,0.9s,baz=214,slow=6.7,SNR=6.7						
NEW				LR	LR	12 00 45.7	
	comp=Z,261nm,19.6s,baz=244,slow=32						
	comp=Z,3.0nm,0.9s						
NEW	Newport	73.34	359	P	P	11 33 21.9	+0.7
SADO	Sadowa	77.16	25	LR	LR	12 05 27.5	
	comp=Z,51nm,18.8s,baz=322,slow=34						
EDM	Edmonton	78.29	1	P	P	11 33 50.0	+0.6
EDM				IAmb	IAmb	11 33 52.4	
	comp=Z,13nm,1.1s						
FCC	Fort Churchill	85.64	11	P	P	11 34 28.4	+0.7
MAW	Mawson	87.28	179	LR	LR	12 10 36.8	
	comp=Z,106nm,18.1s,baz=148,slow=33						
YKAW1	Yellowknife Wh	87.57	0	P	P	11 34 37.6	+0.5
YKAW1				IAmb	IAmb	11 35 58.2	
	comp=Z,15nm,1.9s						
YKA	Yellowknife Ar	87.58	0	P	P	11 34 33.4	-3.8
	comp=Z,0.4nm,0.9s,baz=186,slow=4.6,SNR=19						
	comp=Z,0.4nm,0.9s						
YKA	Yellowknife Ar	87.58	0	P	P	11 34 35.7	-1.4
H11S2	WAKE ISLAND Hy	87.64	292	T	T	13 10 16.6	
	baz=120,slow=75						
YKAW3	Yellowknife Wh	87.65	0	P	P	11 34 38.1	+0.6
YKAW3				IAmb	IAmb	11 34 40.1	
	comp=Z,6.9nm,1.1s						
H11S1	WAKE ISLAND Hy	87.66	292	T	T	13 10 16.3	
	baz=120,slow=75						
H11S3	WAKE ISLAND Hy	87.66	292	T	T	13 10 21.4	
	baz=120,slow=75						
H11N3	WAKE ISLAND Hy	88.04	293	T	T	13 10 49.3	
	baz=114,slow=78,SNR=6.1						
H11N1	WAKE ISLAND Hy	88.05	293	T	T	13 10 56.9	
	baz=114,slow=78,SNR=7.0						
H11N2	WAKE ISLAND Hy	88.06	293	T	T	13 10 48.4	
	baz=114,slow=78,SNR=6.1						
C36M	Paulatuk	94.69	357	P	P	11 35 11.1	+1.0
CMAR	Chiang Mai Arr	147.74	265	PKPbc	PKPdf	11 41 32.3	0.0
	comp=Z,0.6nm,0.3s,baz=90,slow=1.4,SNR=5.3						
CMAR	Chiang Mai Arr	147.74	265		PKPdf	11 41 32.0	-0.4
ZAA0	Zalesovo Array	147.85	338	PKPdf	PKPdf	11 41 31.8	+0.3
ZALV	Zalesovo Beam	147.85	338	PKPbc	PKPdf	11 41 30.6	-0.8
	comp=Z,1.4nm,0.6s,baz=58,slow=3.8,SNR=6.4						
ZALV	Zalesovo Beam	147.85	338		PKPdf	11 41 32.5	+1.1
ARTI	Arti	148.67	7	PKPbc	PKPbc	11 41 34.6	-1.8
	comp=Z,4.2nm,0.7s,baz=296,slow=3.6,SNR=4.4						
BRTR	Keskin Array B	150.20	54	PKPbc	PKPbc	11 41 40.1	-0.9
	comp=Z,0.4nm,0.3s,baz=310,slow=5.4,SNR=5.1						
BVAR	Borovoye Array	152.09	353	PKPbc	PKPbc	11 41 41.4	-3.4
	comp=Z,2.0nm,0.8s,baz=349,slow=1.5,SNR=6.2						
KURK	Kurchatov	152.60	341		PKiKP	11 41 47.2	+1.1
KURBB	Kurchatov Arra	152.71	341	PKPbc	PKPbc	11 41 44.3	-1.8
	comp=Z,0.7nm,0.4s,baz=23,slow=2.1,SNR=4.1						
MKAR	Makanchi Array	154.54	331	PKP	PKPdf	11 41 39.6	-2.3
	comp=Z,0.4nm,0.8s,baz=58,slow=3.6,SNR=3.1						

*NEIC **25** 11:24:33, 35°.90N×98°.53W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.39; $M_{\theta\theta}$1.45; $M_{\phi\phi}$-1.84; $M_{r\theta}$0.76; $M_{\theta\phi}$0.49; $M_{\phi r}$0.40; Fault plane solution: $M_0$1.95000×10^{14} NP1:ϕ_s34.00000°, δ76.00000°, λ154.00000°. NP2:ϕ_s130.00000°, δ65.00000°, λ15.00000°. Principal axes: T 1.9477, Plg28.0000°, Azm350.0000°; N 0.0004, Plg61.0000°, Azm188.0000°; P -1.9482, Plg8.0000°, Azm84.0000°;*

*NEIC **25** 11:24:33.4±1.1, 35°.907N±0°.010×98°.52W±0°.01, h8^{km}±3^{km} Error ellipse: s-maj=1.6km s-min=1.4km az=65.0*

NEIC 25 11:24:33.0±1.1, **35°.899N**±0°.008×**98°.53W**±0°.01, **h5**^{km}±1^{km}, **mb_Lg3.5**/123, **ML3.4**/16, **ML3.6**/62, **Mwr3.5**/16(SLM), **Error ellipse: s-maj=2.4km s-min=1.6km az=71.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSTR	Hydro, Custer	0.28	207	Pg	Pg	11 24 38.7	+0.2
CSTR				Sg	Sb	11 24 44.1	-1.5
OK038	West end E0370	0.60	344		Pg	11 24 44.9	+0.3
OK038					Sg	11 24 53.5	+1.1
OK038				IAML		11 25 00.8	
	5μm,0.3s						
ELIS	Ellis County	0.74	283		Pg	11 24 47.6	+0.4
ELIS					Sb	11 24 58.0	-0.8
ELIS				IAML		11 25 11.8	
	comp=E,3μm,0.7s						
CROK	Carrier	0.75	36		Pg	11 24 47.5	+0.2
CROK					Sg	11 24 57.6	+0.5
CROK				IAML		11 25 03.8	
	comp=N,4μm,0.3s						
BCOK	Bluff Creek, N	0.79	108		Pg	11 24 48.2	+0.1
BCOK					Sg	11 24 59.1	+0.9
NOKA	Waynoka	0.80	336		Pg	11 24 48.5	+0.1
NOKA					Sg	11 24 59.5	+0.7
NOKA				IAML		11 25 07.8	
	comp=E,4μm,0.2s						
NOKA				IAML		11 25 08.0	
	comp=N,3μm,0.3s						
OK029	Liberty Lake	0.88	96		Pg	11 24 49.7	-0.1
OK029					Sg	11 25 01.8	+0.5
W34A	Bridge Creek,	0.91	137		Pb	11 24 50.8	-0.4
W34A					Sb	11 25 03.3	-0.2
OK004	Okla Sci Mus	0.94	113		Pg	11 24 51.0	0.0
OK004					Sb	11 25 03.9	-0.5
ADOK	Arcadia Dam	0.97	104		Pg	11 24 51.3	-0.4
OKCFA	Oklahoma City	1.00	118		Pg	11 24 52.0	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OKCFA					Sg	11 25 05.5	+0.3
OKCSW	**OKLAHOMA CITY**	**1.02**	**119**		Pg	11 24 52.2	-0.3
OKCSW				IAML		11 25 14.4	
	comp=N,2μm,0.4s						
OKCSW				IAML		11 25 18.3	
	comp=E,1μm,0.8s						
FNO	**Franklin**	**1.12**	**124**		Pg	11 24 54.0	-0.4
FNO					Sg	11 25 09.2	+0.1
FNO				IAML		11 25 10.4	
	comp=E,2μm,0.2s						
WMOK	**Wichita Mounta**	**1.18**	**190**		Pg	11 24 54.9	-0.7
BLOK	**Blackwell**	**1.37**	**51**		Pn	11 24 58.5	-0.2
OK048	**Pawnee Station**	**1.38**	**68**		Pn	11 24 58.5	-0.5
OK048	**Pawnee Station**	**1.38**	**68**		Pn	11 24 58.8	-0.2
OK048					Sn	11 25 18.1	+0.4
KAN01	**Argonia South**	**1.40**	**26**		Pn	11 24 59.0	-0.2
KAN01					Sb	11 25 17.6	-0.2
KAN13	**South Haven SW**	**1.40**	**37**		Pb	11 24 59.4	-0.2
KAN13					Sn	11 25 18.1	+0.1
KAN08	**Anthony NE Sta**	**1.40**	**19**		Pn	11 24 58.9	-0.3
OK052	**Battle Ridge R**	**1.41**	**86**		Pn	11 24 59.0	-0.3
X34A	**Smith Ranch, M**	**1.42**	**156**		Pn	11 24 59.5	+0.1
OK051	**E0350 and S346**	**1.50**	**66**		Pn	11 25 00.5	-0.1
QUOK	**Quay**	**1.50**	**79**		Pn	11 25 00.3	-0.3
DRZT	**Darrouzett**	**1.53**	**291**		Pb	11 25 01.5	-0.3
DRZT					Sg	11 25 22.3	+0.2
W35A	**Tecumseh**	**1.54**	**118**		Pn	11 25 01.0	-0.1
SMWD	**Samnorwood**	**1.61**	**241**		Pn	11 25 02.2	+0.2
DEOK	**Depew**	**1.65**	**91**		Pn	11 25 02.6	0.0
T35A	**Sooner Cattle**	**1.92**	**57**		Pn	11 25 07.1	+0.7
TUL3	**Leonard**	**2.22**	**89**	IAmb_Lg		11 25 46.5	
	comp=Z,124nm,0.8s						
R32A	**Long Quarter,**	**2.52**	**357**	IAmb_Lg		11 25 53.7	
	comp=Z,132nm,0.7s						
PH02	**Texas Public H**	**2.83**	**261**	IAmb_Lg		11 26 09.3	
	comp=Z,248nm,1.2s						
DKNS	**Dickens**	**2.97**	**222**	IAmb_Lg		11 26 05.6	
	comp=Z,116nm,0.7s						
U38A	**Gravette**	**3.40**	**80**	IAmb_Lg		11 26 24.4	
	comp=Z,101nm,0.8s						
SN07	**Snyder 07**	**3.41**	**216**	IAmb_Lg		11 26 29.1	
	comp=Z,143nm,1.0s						
KSU1	**Kansas State U**	**3.54**	**25**	IAmb_Lg		11 26 31.8	
	comp=Z,191nm,0.8s						
HHAR	**Hobbs**	**3.74**	**83**	IAmb_Lg		11 26 37.4	
	comp=Z,116nm,0.9s						
POST	**Post**	**3.74**	**222**	IAmb_Lg		11 26 39.4	
	comp=Z,124nm,0.7s						
Z38A	**Mt. Pleasant**	**3.94**	**131**	IAmb_Lg		11 26 44.7	
	comp=Z,96nm,0.7s						
MSTX	**Muleshoe**	**3.98**	**242**	IAmb_Lg		11 26 48.0	
	comp=Z,84nm,0.8s						
237A	**Washetta, Mont**	**4.50**	**149**	IAmb_Lg		11 27 02.4	
	comp=Z,91nm,1.1s						
KSCO	**Kaye Shedlock'**	**4.50**	**315**	IAmb_Lg		11 27 05.3	
	comp=Z,147nm,0.8s						
BRDY	**Brady**	**4.62**	**185**	IAmb_Lg		11 27 00.7	
	comp=Z,69nm,1.0s						
X40A	**Basin Creek Fa**	**4.87**	**105**	IAmb_Lg		11 27 12.7	
	comp=Z,87nm,0.8s						
WLAR	**White Oak Lake**	**4.97**	**115**	IAmb_Lg		11 27 15.1	
	comp=Z,100nm,0.8s						
WHAR	**Wooly Hollow**	**5.12**	**95**	IAmb_Lg		11 27 23.2	
	comp=Z,77nm,1.0s						
435B	**Jarrell**	**5.16**	**171**	IAmb_Lg		11 27 30.5	
	comp=Z,109nm,0.8s						
UALR	**University of**	**5.18**	**101**	IAmb_Lg		11 27 29.9	
	comp=Z,72nm,0.8s						
MGMO	**Mountain Grove**	**5.20**	**74**	IAmb_Lg		11 27 23.0	
	comp=Z,113nm,0.9s						
FCAR	**Ozark Folk Cen**	**5.20**	**88**	IAmb_Lg		11 27 21.4	
	comp=Z,95nm,0.9s						
OZNA	**Ozona**	**5.42**	**204**	IAmb_Lg		11 27 35.4	
	comp=Z,85nm,0.9s						
P38A	**Dawn**	**5.43**	**45**	IAmb_Lg		11 27 36.3	
	comp=Z,61nm,0.8s						
BGNE	**Belgrade**	**5.51**	**3**	IAmb_Lg		11 27 40.3	
	comp=Z,108nm,0.8s						
R40A	**Maddies Statio**	**5.55**	**63**	IAmb_Lg		11 27 30.4	
	comp=Z,83nm,0.8s						
OGNE	**Ogallala**	**5.74**	**332**	IAmb_Lg		11 27 50.0	
	comp=Z,89nm,0.8s						
SDCO	**Great Sand Dun**	**5.89**	**290**	IAmb_Lg		11 27 45.1	
	comp=Z,52nm,0.9s						
CCAR	**Cane Creek**	**5.89**	**108**	IAmb_Lg		11 27 56.5	
	comp=Z,100nm,1.0s						
Q24A	**Divide**	**6.09**	**302**	IAmb_Lg		11 27 55.9	
	comp=Z,56nm,0.7s						
T42A	**Van Buren**	**6.10**	**77**	IAmb_Lg		11 27 54.9	
	comp=Z,44nm,0.7s						
CCM	**Cathedral Cave**	**6.22**	**68**	IAmb_Lg		11 27 51.6	
	comp=Z,69nm,0.8s						
HBAR	**Harrisburg**	**6.41**	**91**	IAmb_Lg		11 28 07.1	
	comp=Z,100nm,0.9s						
TASM	**ASL Pad, Albuq**	**6.54**	**264**	IAmb_Lg		11 28 12.0	
	comp=Z,18nm,0.8s						
TASM	**ASL Pad, Albuq**	**6.54**	**264**	IAmb_Lg		11 28 03.6	
	comp=Z,17nm,0.8s						
TASM	**ASL Pad, Albuq**	**6.54**	**264**	IAmb_Lg		11 28 11.6	
	comp=Z,17nm,0.8s						
PBMO	**Poplar Bluff**	**6.60**	**80**	IAmb_Lg		11 28 15.5	
	comp=Z,90nm,1.0s						
EF04	**Eagle Ford 04**	**6.70**	**174**	IAmb_Lg		11 28 11.6	
	comp=Z,63nm,0.9s						
143A	**Socs Landing,**	**6.70**	**116**	IAmb_Lg		11 28 15.3	
	comp=Z,48nm,0.7s						
FVM	**French Village**	**6.82**	**70**	IAmb_Lg		11 28 11.0	
	comp=Z,67nm,0.9s						
ISCO	**Idaho Springs**	**6.82**	**307**	IAmb_Lg		11 28 13.6	
	comp=Z,54nm,0.9s						
S22A	**4UR Ranch, Cre**	**6.91**	**288**	IAmb_Lg		11 28 24.3	
	comp=Z,37nm,1.2s						
735A	**Kenedy**	**7.05**	**175**	IAmb_Lg		11 28 32.9	
	comp=Z,38nm,0.8s						
Y22A	**Socorro**	**7.20**	**257**	IAmb_Lg		11 28 33.0	
	comp=Z,30nm,0.8s						
CGM3	**Cape Girardeau**	**7.27**	**76**	IAmb_Lg		11 28 34.9	
	comp=Z,82nm,1.2s						
HALT	**Halls**	**7.46**	**87**	IAmb_Lg		11 28 35.4	
	comp=Z,68nm,1.0s						
GLAT	**Glass**	**7.49**	**84**	IAmb_Lg		11 28 50.6	
	comp=Z,77nm,0.8s						
833A	**Chaparral WMA,**	**7.59**	**186**	IAmb_Lg		11 28 36.9	
	comp=Z,30nm,0.9s						
OXF	**Oxford**	**7.59**	**98**	IAmb_Lg		11 28 51.1	
	comp=Z,48nm,1.0s						
Y45A	**Yeager Farm, C**	**7.66**	**103**	IAmb_Lg		11 28 55.4	
	comp=Z,30nm,0.7s						
EPT	**El Paso**	**7.81**	**240**	IAmb_Lg		11 29 00.8	
	comp=Z,37nm,1.1s						
HAYD	**Hayden**	**8.28**	**306**	IAmb_Lg		11 29 10.8	
	comp=Z,34nm,1.0s						
146A	**Union**	**8.49**	**110**	IAmb_Lg		11 29 24.6	
	comp=Z,45nm,1.2s						
SUSD	**Miller**	**8.54**	**358**	IAmb_Lg		11 29 21.2	
	comp=Z,54nm,0.9s						
O20A	**White River Ci**	**8.75**	**302**	IAmb_Lg		11 29 31.2	
	comp=Z,28nm,1.3s						
K22A	**Casper**	**9.15**	**320**	IAmb_Lg		11 29 32.5	
	comp=Z,44nm,0.9s						
RSSD	**Black Hills**	**9.23**	**334**	IAmb_Lg		11 29 41.1	
	comp=Z,27nm,0.9s						
JFWS	**Jewell Farm**	**9.49**	**40**	IAmb_Lg		11 29 40.7	
	comp=Z,58nm,0.7s						

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*IDC **25** 11:28:11.5±0.9, 14°.27N×146°.87E, h0^{km}, mb3.8/12, mbtmp3.8/13, ML3.8/1, Error ellipse: s-maj=24.3km s-min=18.7km az=118.0*

*NEIC **25** 11:28:13.1±1.3, 14°.24N±0°.06×147°.00E±0°.09, h10^{km}±1^{km}, mb4.4/6, Error ellipse: s-maj=15.2km s-min=9.3km az=65.0*

ISC 25 11:28:11.9±0.7**, 14°.22N**±0°.08×**147°.01E**±0°.08**, h10**^{km}**, n24, σ1^{s}27**/24**, mb3.9**/15**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DPSS	**Saipan**	**1.56**	**311**		**Pn**	**11 28 39.8**	**0.0**
DPSS					**Sb**	**11 29 00.8**	**0.0**
GUMO	**Guam**	**2.17**	**254**	Pn	**Pn**	**11 28 47.8**	**-0.3**
	34nm,0.3s,baz=70,slow=4.0,SNR=20						
GUMO				Sn	**Sn**	**11 29 14.5**	**-0.6**
	61nm,0.3s,baz=19,slow=20,SNR=8.7						
	86nm,0.3s						
GUMO	**Guam**	**2.17**	**254**		**Pn**	**11 28 48.6**	**+0.5**
PATS	**Pohnpei**	**13.31**	**122**	Pn	**Pn**	**11 31 19.7**	**-1.3**
JTM	**Tenmabayashi**	**26.98**	**350**	P	**P**	**11 33 49.9**	**-3.9**
KSRS	**Korea Array**	**28.71**	**327**	P	**P**	**11 34 09.5**	**+0.2**
	0.6nm,0.5s,baz=148,slow=10,SNR=2.3						
	0.6nm,0.5s						
WRA	**Warramunga Arr**	**36.16**	**200**	P	**P**	**11 35 15.7**	**+1.0**
	0.5nm,0.8s,baz=353,slow=9.8,SNR=1.4						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**36.16**	**200**	IAmb	IAmb	11 35 24.4	
	comp=Z,0.2nm,1.1s						
ASAR	**Alice Springs**	**39.77**	**199**	P	**P**	**11 35 45.5**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=21,slow=10,SNR=6.3						
	comp=Z,0.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**46.22**	**282**	P	**P**	**11 36 37.6**	**0.0**
	comp=Z,0.3nm,0.3s,baz=84,slow=5.5,SNR=4.9						
	comp=Z,0.3nm,0.3s						
SONM	**Songino Array**	**47.45**	**323**	P	**P**	**11 36 45.8**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=147,slow=8.4,SNR=3.5						
	comp=Z,0.4nm,0.4s						
SONM	**Songino Array**	**47.45**	**323**	IAmb	IAmb	11 37 05.2	
	comp=Z,1.0nm,1.0s						
ZALV	**Zalesovo Beam**	**62.34**	**324**	P	**P**	**11 38 35.8**	**+1.3**
	comp=Z,1.0nm,0.6s,baz=111,slow=6.5,SNR=4.6						
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**62.49**	**316**	P	**P**	**11 38 36.8**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=92,slow=8.3,SNR=6.9						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**62.49**	**316**	P	**P**	**11 38 36.0**	**+0.3**
TRF	**Thorofare Moun**	**65.30**	**26**	P	**P**	**11 38 56.5**	**+2.4**
TRF				IAmb	IAmb	11 39 28.9	
	comp=Z,5.7nm,1.1s						
KURK	**Kurchatov**	**65.46**	**319**		**P**	**11 38 55.4**	**+0.3**
KURK				IAmb	IAmb	11 39 07.9	
	comp=Z,2.3nm,0.8s						
KURBB	**Kurchatov Arra**	**65.50**	**319**	P	**P**	**11 38 55.7**	**+0.4**
	comp=Z,3.6nm,0.6s,baz=97,slow=7.2,SNR=10						
	comp=Z,3.6nm,0.6s						
RND	**Reindeer**	**65.90**	**26**	P	**P**	**11 38 58.7**	**+0.9**
RND				IAmb	IAmb	11 39 15.6	
	comp=Z,4.9nm,1.1s						
ILAR	**Eielson Array**	**67.12**	**25**	P	**P**	**11 39 06.3**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=251,slow=5.5,SNR=9.4						
	comp=Z,0.3nm,0.5s						
BVAR	**Borovoye Array**	**70.73**	**321**	P	**P**	**11 39 28.8**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=108,slow=8.0,SNR=6.5						
	comp=Z,1.1nm,0.7s						
YKA	**Yellowknife Ar**	**81.35**	**28**	P	**P**	**11 40 30.2**	**+1.7**
	comp=Z,0.1nm,0.5s,baz=283,slow=6.0,SNR=1.9						
	comp=Z,0.1nm,0.5s						
FINES	**FINESS Array B**	**91.46**	**336**	P	**P**	**11 41 17.9**	**-0.3**
	comp=Z,2.0nm,0.7s,baz=74,slow=6.8,SNR=8.1						
	comp=Z,2.0nm,0.7s						
LPAZ	**La Paz**	**146.06**	**98**	PKPbc	**PKiKP**	**11 47 56.5**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=0.0,slow=3.0,SNR=4.7						

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*IDC **25** 11:50:41.7±0.9, 39°.56N×30°.43W, h0^{km}, mb3.6/8, mbtmp3.7/8, MS3.4/3, Error ellipse: s-maj=33.0km s-min=13.0km az=172.0*

*SVSA **25** 11:50:44.3±1.1, 39°.37N×29°.83W, h10^{km}, ML3.7(INMG), Error ellipse: s-maj=17.2km s-min=7.4km az=54.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia Atlntico N*

ISC 25 11:50:42.1±1.4**, 39°.0N**±0°.2×**29°.8W**±0°.1**, h10**^{km}**, n22, σ1^{s}11**/22**, mb3.9**/6**, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCAPE	**Capelo, Faial**	**0.86**	**116**	*e*S	**Sn**	**11 51 13.9**	**+1.0**
PCAPE				*i* IAML		11 51 15.9	
PCAPE				*i* IAML		11 51 16.0	
PCAPE				*i* IAML		11 51 16.1	
PCED	**Cedros**	**0.94**	**112**	*e*S	**Sn**	**11 51 14.8**	**0.0**
PCED				*i* IAML		11 51 16.4	
PCED				*i* IAML		11 51 16.6	
PCED				*i* IAML		11 51 16.6	
CALA	**Caldeira**	**0.95**	**114**	*e*S	**Sn**	**11 51 16.2**	**+0.9**
CALA				*i* IAML		11 51 17.5	
CALA				*i* IAML		11 51 17.6	
CALA				*i* IAML		11 51 19.4	
PFCBR	**Castelo Branco**	**0.97**	**118**	*e*P	**Pn**	**11 51 02.6**	**+0.9**
PFCBR				*e*S	**Sn**	**11 51 15.7**	**+0.2**
PFCBR				*i* IAML		11 51 18.4	
PFCBR				*i* IAML		11 51 18.8	
PFCBR				*i* IAML		11 51 19.0	
HOR	**Horta**	**1.03**	**116**	*e*P	**Pn**	**11 51 03.2**	**+0.6**
HOR				*e*S	**Sn**	**11 51 17.3**	**+0.3**
HOR				*i* IAML		11 51 19.6	
HOR				*i* IAML		11 51 20.0	
HOR				*i* IAML		11 51 20.6	
H07S1	**FLORES T-PHASE**	**1.15**	**291**	Pn	Pn	11 50 57.9	-6.4
H07S1				T	T	11 52 02.9	
	SNR=45						
PCAN	**Candelaria**	**1.16**	**116**	*e*S	**Sn**	**11 51 21.0**	**+0.7**
PCAN				*i* IAML		11 51 23.3	
PCAN				*i* IAML		11 51 23.6	
PCAN				*i* IAML		11 51 23.6	
PICO	**Pico**	**1.19**	**113**	*e*P	**Pn**	**11 51 05.8**	**+1.0**
PICO				*e*S	**Sn**	**11 51 21.3**	**+0.3**
PICO				*i* IAML		11 51 23.5	
PICO				*i* IAML		11 51 23.6	
PICO				*i* IAML		11 51 23.8	
H07N1	**FLORES T-PHASE**	**1.24**	**305**	Pn	Pn	11 50 55.9	-10
H07N1				T	T	11 52 07.5	
	SNR=32						
ROSA	**Rosais**	**1.25**	**102**	*e*P	**Pb**	**11 51 05.2**	**-0.6**
ROSA				*e*S	**Sg**	**11 51 20.8**	**-1.6**
ROSA				*i* IAML		11 51 22.4	
ROSA				*i* IAML		11 51 22.6	
ROSA				*i* IAML		11 51 23.0	
PPNO	**Prainha do Nor**	**1.31**	**112**	*e*S	**Sn**	**11 51 24.2**	**+0.1**
PPNO				*i* IAML		11 51 25.4	
PPNO				*i* IAML		11 51 25.8	
PMAN	**Manadas**	**1.39**	**104**	*e*P	**Pn**	**11 51 07.1**	**-0.4**
PMAN				*e*S	**Sb**	**11 51 24.3**	**-1.6**
PMAN				*i* IAML		11 51 26.1	
PMAN				*i* IAML		11 51 26.2	
PMAN				*i* IAML		11 51 26.4	
ESDC	**Sonseca Array**	**19.99**	**80**	P	**Pn**	**11 55 19.0**	**+2.6**
	0.8nm,0.9s,baz=284,slow=9.7,SNR=5.3						
ESDC				LR	LR	12 02 18.1	
	comp=Z,63nm,19.0s,baz=278,slow=34						
	0.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**37.92**	**124**	P	P	11 58 06.8	+7.1
	0.6nm,0.8s,baz=317,slow=8.1,SNR=3.7						
	0.6nm,0.8s						
AKASG	**Malin Array Be**	**42.39**	**54**	P	**P**	**11 58 36.9**	**+0.5**
	0.2nm,0.3s,baz=276,slow=8.4,SNR=1.6						
	0.2nm,0.3s						
ULM	**Lac du Bonnet**	**46.89**	**307**	LR	LR	12 16 05.6	
	comp=Z,67nm,18.2s,baz=314,slow=33						
PDAR	**Pinedale Array**	**58.26**	**302**	P	**P**	**12 00 34.8**	**-2.2**
	0.7nm,1.0s,baz=46,slow=7.6,SNR=3.7						
	0.7nm,1.0s						
ATAH	**Atahualpa**	**64.25**	**236**	LR	LR	12 28 03.2	
	comp=Z,34nm,19.8s,baz=44,slow=35						
KURBB	**Kurchatov Arra**	**70.93**	**40**	P	**P**	**12 01 59.9**	**+0.6**
	0.4nm,0.3s,baz=300,slow=7.3,SNR=2.6						
	0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**71.74**	**34**	P	**P**	**12 02 04.6**	**+0.5**
	0.4nm,0.4s,baz=319,slow=6.3,SNR=4.5						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**75.30**	**41**	P	**P**	**12 02 25.9**	**+0.6**
	1.6nm,0.9s,baz=316,slow=5.1,SNR=9.6						
	1.6nm,0.9s						
SONM	**Songino Array**	**85.19**	**28**	P	**P**	**12 03 18.8**	**+0.1**
	1.1nm,1.0s,baz=326,slow=7.2,SNR=4.0						
	1.1nm,1.0s						

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*SOF **25** 11:56:59.2, 42°.23N±0°.01×21°.81E±0°.01, h2^{km}±3^{km}, MD2.8/4*

*SKO **25** 11:57:00.5, 42°.30N×21°.77E, h15^{km}, ML2.5*

*BEO **25** 11:57:01.8±0.3, 42°.36N×21°.81E, h9^{km}±2^{km}, ML2.4/17*

ISC 25 11:57:00.5±1.0**, 42°.30N**±0°.02×**21°.81E**±0°.02**, h9**^{km}±9^{km}**, n47, σ0^{s}92**/79**, 13C-5D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKO	**Skopje**	**0.43**	**220**	*i* Pg	**Pg**	**11 57 08.8**	**-0.1**
SKO				*i* Sg	**Sg**	**11 57 14.6**	**0.0**
BARS	**Barje**	**0.51**	**0**	⇑*i*Pg	**Pg**	**11 57 11.0**	**+0.5**
BARS				*i* Sg	**Sg**	**11 57 18.2**	**+1.0**
BARS	**Barje**	**0.51**	**0**	*e*Pg	**Pg**	**11 57 10.8**	**+0.3**
BARS				*e*Sg	**Sg**	**11 57 17.8**	**+0.6**
BOSS	**Bosilegrad**	**0.53**	**68**	*e*Pg	**Pg**	**11 57 11.0**	**+0.2**
BOSS				*e*Sg	**Sg**	**11 57 17.9**	**+0.1**
SELS	**Selova**	**1.05**	**331**	*e*Pg	**Pg**	**11 57 20.4**	**-0.2**
SELS				*e*Sg	**Sg**	**11 57 34.1**	**-0.2**
KKB	**Krupnik**	**1.08**	**115**	Pg	**Pg**	**11 57 20.1**	**-1.2**
KKB				Sg	**Sg**	**11 57 34.9**	**-0.4**
KKB	**Krupnik**	**1.08**	**115**	*i* Pg	**Pg**	**11 57 20.7**	**-0.6**
KKB				*i* Sg	**Sg**	**11 57 35.3**	**0.0**
VTS	**Vitosha**	**1.10**	**73**	*i* Pg	**Pg**	**11 57 21.5**	**-0.1**
VTS				*i* Sg	**Sg**	**11 57 35.8**	**-0.1**
VTS	**Vitosha**	**1.10**	**73**	*e*Pg	**Pg**	**11 57 21.4**	**-0.1**
VTS				*e*Sg	**Sg**	**11 57 35.4**	**-0.5**
VAY	**Valandovo**	**1.13**	**150**	*i* Pn	**Pn**	**11 57 23.0**	**+0.5**
VAY				*i* Sn	**Sg**	**11 57 36.7**	**-0.3**
VAY				*e*Lg	Lg	11 57 37.9	
	comp=N,67nm,0.5s						
VAY				*e*Lg	Lg	11 57 38.2	
	comp=E,40nm,0.5s						
ZAPS	**Zavoj**	**1.14**	**32**	*e*Pg	**Pb**	**11 57 22.4**	**0.0**
ZAPS				*e*Sg	**Sg**	**11 57 36.6**	**-0.7**
PLNA	**Plana**	**1.21**	**81**	Pg	**Pb**	**11 57 23.7**	**+0.1**
PLNA				Sg	**Sg**	**11 57 39.7**	**+0.4**
BLSH	**Balsha**	**1.22**	**62**	Pg	**Pg**	**11 57 24.5**	**+0.7**
BLSH				Sg	**Sn**	**11 57 41.7**	**+1.3**
BOVS	**Bovan**	**1.33**	**357**	⇑P	**Pn**	**11 57 25.4**	**+0.1**
BOVS				⇑S	**Sg**	**11 57 43.8**	**+0.4**
BOVS	**Bovan**	**1.33**	**357**	*e*Pg	**Pn**	**11 57 25.0**	**-0.3**
BOVS				*e*Sg	**Sg**	**11 57 43.8**	**+0.4**
PVY	**Plav**	**1.40**	**283**	*e*Pg	**Pn**	**11 57 26.2**	**-0.2**
OHR	**Ohrid**	**1.41**	**213**	*i* Pn	**Pb**	**11 57 27.0**	**-0.1**
OHR				*i* Sn	**Sg**	**11 57 46.5**	**+0.6**
OHR				*e*Lg	Lg	11 57 47.7	
	comp=N,43nm,0.4s						
OHR				*e*Lg	Lg	11 57 48.2	
	comp=E,86nm,0.8s						
GOCS	**Kraljevo Serbi**	**1.44**	**332**	*e*Pg	**Pb**	**11 57 27.3**	**-0.2**
GOCS				*e*Sg	**Sn**	**11 57 45.1**	**-0.7**
BEY	**Berane**	**1.53**	**292**	*e*Pg	**Pn**	**11 57 28.5**	**+0.4**
ZAGS	**Zajecar**	**1.54**	**11**	*e*Pg	**Pb**	**11 57 29.2**	**0.0**
ZAGS				*e*Sg	**Sn**	**11 57 48.5**	**+0.2**
MMB	**Musomishta**	**1.63**	**117**	Pg	**Pb**	**11 57 30.5**	**-0.3**
MMB				Sg	**Sb**	**11 57 52.0**	**+0.6**
MMB	**Musomishta**	**1.63**	**117**	*i* Pn	**Pn**	**11 57 30.0**	**+0.6**
SJES	**Sjenica**	**1.66**	**306**	*e*Pg	**Pn**	**11 57 30.4**	**+0.5**
SJES				*e*Sg	**Sg**	**11 57 53.4**	**-0.4**
IVAS	**Ivanjica**	**1.76**	**317**	*e*Pn	**Pn**	**11 57 30.9**	**-0.4**
IVAS				*e*Sn	**Sn**	**11 57 53.9**	**0.0**
MPEP	**Malo Peshtene**	**1.77**	**53**	Pg	**Pg**	**11 57 35.0**	**+0.7**
GRUS	**Gruza**	**1.78**	**333**	*e*Pn	**Pn**	**11 57 31.5**	**+0.1**
SRS	**Serrai**	**1.78**	**131**	*i* Pn	**Pb**	**11 57 34.0**	**+0.7**
SRS	**Serrai**	**1.78**	**131**	*e*Pn	**Pn**	**11 57 32.1**	**+0.6**
SRS				*e*Sn	**Sb**	**11 57 56.5**	**+0.7**
BORS2	**Bor- Borsko je**	**1.79**	**5**	*e*Pn	**Pn**	**11 57 31.9**	**+0.3**
BORS2				*e*Sn	**Sn**	**11 57 53.2**	**-1.3**
DRME	**Dracevica, Mon**	**1.96**	**267**	*e*Pn	**Pb**	**11 57 35.9**	**-0.4**
KUBS	**Kucevo**	**2.11**	**357**	*e*Pn	**Pn**	**11 57 35.4**	**-0.6**
KUBS				*e*Sn	**Sn**	**11 58 01.5**	**-0.9**
PUNG	**Punghina**	**2.14**	**22**	⇓S	**Sg**	**11 58 09.1**	**-0.1**
TRUS	**Trudelj**	**2.18**	**332**	*e*Pn	**Pn**	**11 57 37.4**	**+0.5**
PLD	**Plovdiv**	**2.19**	**93**	*i* Pn	**Pg**	**11 57 41.5**	**-0.9**
PLD	**Plovdiv**	**2.19**	**93**	*e*Pn	**Pb**	**11 57 38.7**	**-1.5**
PLD				*e*Sn	**Sb**	**11 58 06.1**	**-1.2**
DIVS	**Divibare**	**2.23**	**324**	*e*Pn	**Pn**	**11 57 37.7**	**-0.1**
DIVS				*e*Sn	**Sn**	**11 58 06.4**	**+0.9**
MDVR	**Moldovita**	**2.48**	**358**	⇑P	**Pn**	**11 57 43.1**	**+2.0**
MDVR				⇓S	**Sb**	**11 58 17.3**	**+1.5**
MDVR	**Moldovita**	**2.48**	**358**	*e*Pn	**Pn**	**11 57 41.5**	**+0.4**
SRE	**Strehaia**	**2.57**	**23**	⇑P	**Pb**	**11 57 45.4**	**-1.3**
SRE				⇑S	**Sg**	**11 58 21.1**	**-1.8**
AVAS	**Avala Beograd**	**2.57**	**339**	*e*Pn	**Pn**	**11 57 43.6**	**+1.3**
HERR	**Herculane**	**2.61**	**9**	⇑P	**Pb**	**11 57 46.0**	**-1.4**
HERR				⇑S	**Sb**	**11 58 19.5**	**-0.2**
VRSS	**Vrsac**	**2.84**	**353**	*e*Pn	**Pn**	**11 57 47.1**	**+1.1**
GZR	**Gura Zlata**	**3.17**	**12**	⇑P	**Pn**	**11 57 53.3**	**+2.8**
GZR				⇓S	**Sb**	**11 58 33.1**	**-2.5**
BZS	**Buzias**	**3.31**	**358**	⇓P	**Pn**	**11 57 52.5**	**-0.1**
BZS				⇑S	**Sn**	**11 58 34.6**	**+2.5**
SIRR	**Siria**	**3.96**	**358**	⇑P	**Pn**	**11 58 02.4**	**+1.0**
SIRR				⇓S	**Sn**	**11 58 46.9**	**-1.2**
MORH	**Mrgy, Hungar**	**4.53**	**331**	⇑P	**Pn**	**11 58 09.4**	**+0.2**
DRGR		**4.53**	**8**	⇑P	**Pn**	**11 58 11.3**	**+1.9**

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*IDC **25** 12:05:55.8±0.9, 21°.85S×173°.17E, h0^{km}, mb4.0/11, mbtmp4.0/13, ML3.3/2, MS4.0/5, Error ellipse: s-maj=27.0km s-min=22.7km az=145.0*

*NEIC **25** 12:05:55.5±1.6, 21°.9S±0°.1×173°.35E±0°.07, h10^{km}±1^{km}, mb4.6/18, Error ellipse: s-maj=21.4km s-min=7.2km az=157.0*

*GCMT **25** 12:05:57.5±0.3, 21°.89S±0°.02×173°.66E±0°.02, h12^{km}, MW4.9/82, Moment Tensor Solution. s26,c32; s82,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.89±.09; $M_{\theta\theta}$1.06±.10; $M_{\phi\phi}$-0.16±.10; $M_{r\theta}$-0.46±.24; $M_{\theta\phi}$2.35±.06; $M_{\phi r}$-0.06±.25; Best double couple: $M_0$2.47500×10^{16} NP1:ϕ_s187.00000°, δ77.00000°, λ-176.00000°. NP2: ϕ_s96.00000°, δ86.00000°, λ-13.00000°. Principal axes: T 2.9190, Plg6.0000°, Azm143.0000°; N -0.8830, Plg76.0000°, Azm258.0000°; P -2.0300, Plg12.0000°, Azm51.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 12:05:59.6±0.5**, 21°.96S**±0°.09×**173°.24E**±0°.07**, h35**^{km}**, n85, σ1^{s}78**/80**, mb4.4**/18**, 8C-3D, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINNC	**Pines Island,**	**5.40**	**262**	Pn	**Pn**	**12 07 17.3**	**-0.4**
MSVF	**Nonsavu**	**6.18**	**48**		**Pn**	**12 07 24.7**	**-3.9**
DZM	**Mont Dzumac**	**6.30**	**268**	Pn	**Pn**	**12 07 30.7**	**+0.5**
	0.2nm,0.3s,baz=290,slow=21,SNR=1.9						
DZM				Sn	**Sn**	**12 08 40.4**	**-0.6**
	baz=81,slow=17						
DZM				LR	LR	12 09 35.0	
	comp=Z,431nm,18.1s,baz=165,slow=35						
	6.3nm,0.8s						
DZM	**Mont Dzumac**	**6.30**	**268**		**Pn**	**12 07 29.6**	**-0.6**
RAO	**Raoul Island**	**10.79**	**134**	LR	LR	12 11 42.0	
	comp=Z,2μm,19.2s,baz=309,slow=32						
URZ	**Urewera**	**16.58**	**169**	Pn	**Pn**	**12 09 50.0**	**+0.5**
	0.4nm,0.3s,baz=330,slow=8.1,SNR=3.1						
URZ				LR	LR	12 14 48.6	
	comp=Z,799nm,18.2s,baz=346,slow=32						
	14nm,1.0s						
MRZ	**Mangatainoka R**	**18.75**	**174**	P	**P**	**12 10 13.8**	**-1.7**
MRZ				IAmb	IAmb	12 10 51.6	
	comp=Z,51nm,1.4s						
LTZ	**Lake Taylor**	**20.78**	**182**	P	**P**	**12 10 37.2**	**-0.4**
LTZ				IAmb	IAmb	12 11 07.9	
	comp=Z,36nm,1.5s						
ARMA	**Armidale**	**21.11**	**242**	P	**P**	**12 10 38.8**	**-2.7**
RAR	**Rarotonga**	**25.10**	**93**	LR	LR	12 18 45.1	
	comp=Z,242nm,21.9s,baz=284,slow=31						
CTAO	**Charters Tower**	**25.24**	**269**	P	**P**	**12 11 22.9**	**+0.3**
CTAO				IAmb	IAmb	12 11 31.5	
	comp=Z,31nm,1.4s						
TOO	**Toolangi**	**28.53**	**231**	P	**P**	**12 11 52.5**	**+0.4**
STKA	**Stephens Creek**	**29.80**	**244**	LR	LR	12 23 52.7	
	comp=Z,254nm,18.5s,baz=54,slow=36						
WR8	**Warramunga Arr**	**36.16**	**266**	P	**P**	**12 12 59.0**	**-0.1**
WR8				IAmb	IAmb	12 13 09.9	
	comp=Z,5.4nm,0.9s						
AS31	**Alice Springs**	**36.22**	**260**		**P**	**12 12 59.0**	**-0.5**
ASAR	**Alice Springs**	**36.22**	**260**	P	**P**	**12 13 00.5**	**+1.0**
	comp=Z,1.6nm,0.8s,baz=88,slow=8.5,SNR=18						
	comp=Z,1.6nm,0.8s						
ASAR	**Alice Springs**	**36.22**	**260**	P	**P**	**12 13 00.0**	**+0.6**
WB0	**Warramunga Arr**	**36.30**	**266**	P	**P**	**12 12 58.9**	**-1.2**
WB0				IAmb	IAmb	12 13 07.0	
	comp=Z,20nm,1.4s						
WRA	**Warramunga Arr**	**36.32**	**266**	P	**P**	**12 13 00.8**	**+0.5**
	comp=Z,1.8nm,0.9s,baz=102,slow=8.7,SNR=6.7						
	comp=Z,1.8nm,0.9s						
WRA	**Warramunga Arr**	**36.32**	**266**	P	**P**	**12 12 59.4**	**-0.9**
MTN	**Manton Dam**	**41.07**	**276**	P	**P**	**12 13 39.5**	**-0.8**
MTN				IAmb	IAmb	12 13 48.2	
	comp=Z,12nm,0.8s						
KNRA	**Kununurra**	**42.44**	**271**		**P**	**12 13 50.5**	**-0.9**
FITZ	**Fitzroy Crossi**	**44.75**	**266**	P	**P**	**12 14 09.0**	**-1.0**
FITZ				IAmb	IAmb	12 14 19.1	
	comp=Z,18nm,1.4s						
MBWA	**Marble Bar**	**49.55**	**260**	P	**P**	**12 14 46.3**	**-1.1**

NWAO	Narrogin (SRO)	50.38	245	P	P	12 14 53.2	-0.3
VNDA	Vanda	55.88	183	P	P	12 15 35.8	+2.4
	comp=Z,1.1nm,0.9s,baz=31,slow=2.2,SNR=3.8						
	comp=Z,1.1nm,0.9s						
VNDA	Vanda	55.88	183	P	P	12 15 34.7	+1.3
VNDA				IAmb	IAmb	12 15 40.2	
	comp=Z,5.2nm,1.4s						
TOLI2	Tolitoli	56.05	287	P	P	12 15 35.2	-0.3
TOLI2				IAmb	IAmb	12 15 42.8	
	comp=Z,4.9nm,0.8s						
MJAR	Matsushiro Arr	66.94	330	P	P	12 16 50.7	+2.1
	comp=Z,4.2nm,1.1s,baz=142,slow=4.5,SNR=4.4						
	comp=Z,4.2nm,1.1s						
QSPA	South Pole Qui	68.11	180		P	12 16 53.5	-2.4
QSPA				IAmb	IAmb	12 17 03.5	
	comp=Z,4.6nm,1.1s						
KSRS	Korea Array	72.88	324	P	P	12 17 25.4	+0.4
	comp=Z,2.0nm,1.0s,baz=125,slow=5.3,SNR=4.1						
	comp=Z,2.0nm,1.0s						
USRK	Ussuriysk Ar.	75.89	331	P	P	12 17 42.4	-0.1
	comp=Z,2.8nm,0.8s,baz=149,slow=4.4,SNR=5.2						
	comp=Z,2.8nm,0.8s						
CMAR	Chiang Mai Arr	83.02	293	P	P	12 18 23.6	+1.7
	comp=Z,0.5nm,0.4s,baz=119,slow=5.3,SNR=9.9						
	comp=Z,0.5nm,0.4s						
NVAR	Mina Array Bea	87.85	47	P	P	12 18 46.8	+1.0
	comp=Z,0.5nm,0.6s,baz=244,slow=6.9,SNR=4.3						
	comp=Z,0.5nm,0.6s						
NVAR	Mina Array Bea	87.85	47	P	P	12 18 44.6	-1.2
SONM	Songino Array	91.65	322	P	P	12 19 02.6	-0.6
	comp=Z,0.4nm,0.8s,baz=143,slow=5.2,SNR=3.6						
	comp=Z,0.4nm,0.8s						
H03S2	Juan Fernandez	91.75	128	T	T	14 00 16.9	
	baz=241,slow=74,SNR=7.3						
ILAR	Eielson Array	91.75	16	P	P	12 19 04.6	+1.5
	comp=Z,1.8nm,1.0s,baz=236,slow=5.3,SNR=4.9						
	comp=Z,1.8nm,1.0s						
ILAR	Eielson Array	91.75	16	P	P	12 19 01.8	-1.4
H03S1	Juan Fernandez	91.77	128	T	T	14 00 17.9	
	baz=241,slow=74,SNR=8.0						
H03S3	Juan Fernandez	91.77	128	T	T	14 00 16.4	
	baz=241,slow=74,SNR=7.8						
H03N1	Juan Fernandez	91.95	127	T	T	14 00 22.5	
	SNR=11						
J26L	Joseph Creek	92.42	17		P	12 19 05.6	-0.8
TXAR	Lajitas Array	94.81	60	P	P	12 19 21.1	+2.9
	comp=Z,0.4nm,0.9s,baz=233,slow=5.8,SNR=3.8						
	comp=Z,0.4nm,0.9s						
MKAR	Makanchi Array	106.30	314	Pdiff	Pdif	12 20 14.5	+5.4
	comp=Z,0.6nm,0.9s,baz=120,slow=5.2,SNR=4.7						
ULM	Lac du Bonnet	107.12	42	Pdiff	Pdif	12 20 19.6	+6.9
	comp=Z,2.3nm,0.5s,baz=148,slow=7.2,SNR=3.5						
BURAR	Bucovina Array	143.76	323	⇑P	PKPdf	12 25 30.6	-0.5
PLOR	Plostina	143.85	319	⇓P	PKPbc	12 25 29.7	+0.7
DOPR	Dopca	144.55	320	⇑P	PKPbc	12 25 31.4	+0.3
ARR	Arges	145.31	320	⇑P	PKPdf	12 25 34.6	+0.7
MARR	Marisel-Cluj	145.47	323	⇓P	PKPdf	12 25 33.4	-0.7
DRGR		145.63	323	⇑P	PKPbc	12 25 34.6	0.0
STEB	Steborice	146.04	331	*e*PKP	PKiKP	12 25 40.0	+1.0
OSTC	Ostas	146.25	333	*e*PKP	PKiKP	12 25 42.3	+2.8
DPC	Dobruska-Polom	146.36	333	*e*PKP	PKiKP	12 25 42.2	+2.5
GZR	Gura Zlata	146.40	321	⇑P	PKiKP	12 25 41.5	+1.5
PSZ	Piszkesteto	146.43	327	⇑P	PKPdf	12 25 35.3	-0.4
SIRR	Siria	146.53	323	⇑P	PKPdf	12 25 36.3	+0.5
EKA	Eskdalemuir Ar	146.57	356	PKPbc	PKPab	12 25 38.4	+0.3
	comp=Z,1.5nm,0.8s,baz=1.6,slow=2.9,SNR=4.4						
JAVC	Velka Javorina	146.86	330	*e*PKP	PKPbc	12 25 38.8	+0.6
CLL	Collm	146.91	337	*i* PKPbc	PKPbc	12 25 38.7	+0.5
CLL				*i* PKiKP	PKiKP	12 25 42.5	+1.8
	comp=Z,6.0nm,0.9s						
VRAC	Vranov	147.03	332	⇑P	PKiKP	12 25 44.0	+2.9
KRUC	Moravsky	147.29	331	*e*PKP	PKPbc	12 25 38.4	-0.9
ZVC	Zvikov	147.95	334	*e*PKP	PKiKP	12 25 42.6	-0.4
MORH	Mrgy, Hungar	148.19	326	⇓P	PKPbc	12 25 40.3	-1.5
RONA	Rosalia, Austr	148.33	330	*i* PKP	PKPbc	12 25 41.7	-0.6
	comp=Z,6.7nm,1.0s						
CONA	Conrad Observa	148.37	330	*i* PKP	PKPbc	12 25 41.7	-0.7
	comp=Z,3.3nm,1.4s						
CONA				*i* PKiKP	pPKPdf	12 25 47.7	-2.0
	comp=Z,4.6nm,1.0s						
CKRC	Cesky Krumlov	148.38	333	*e*PKP	PKPbc	12 25 41.9	-0.4
KHC	Kasperske Hory	148.44	334	*e*PKP	PKiKP	12 25 43.8	-0.2
GERES	GERESS Array B	148.61	334	PKPbc	PKPbc	12 25 42.5	-0.5
	comp=Z,0.3nm,0.5s,baz=48,slow=2.0,SNR=4.1						
DSB	Dublin	148.77	360		PKiKP	12 25 44.6	+0.1
MOA	Molln	149.14	332	*e*PKP	PKPbc	12 25 43.3	-1.0
	comp=Z,6.2nm,1.6s						
BIOA	Bad Ischl, Aus	149.54	332	*e*PKP	PKiKP	12 25 48.3	+1.9
	comp=Z,1.5nm,0.6s						
SOKA	Soboth	149.67	330	*e*PKP	PKiKP	12 25 48.3	+1.6
	comp=Z,4.9nm,1.3s						
OBKA	Obir	150.02	330	*e*PKiKP	PKPab	12 25 51.0	-1.3
	comp=Z,2.9nm,1.0s						
LESA	Schwarzleotal	150.15	333	*i* PKiKP	PKPab	12 25 51.1	-1.7
	comp=Z,3.8nm,0.7s						
MYKA	Terra Mystica	150.34	331	*e*PKiKP	PKPab	12 25 51.7	-2.0
	comp=Z,2.1nm,0.6s						
WATA	Walderalm	150.68	334	*e*PKP	PKiKP	12 25 51.8	+3.0
	comp=Z,3.5nm,0.7s						
WTTA	Wattenberg	150.71	334	*i* PKiKP	PKPab	12 25 53.3	-2.0
	comp=Z,4.7nm,0.8s						
ABTA	Abfaltersbach	150.75	332	*i* PKiKP	PKPab	12 25 52.5	-2.8
	comp=Z,4.7nm,0.8s						
RETA	Reutte	150.88	335	*e*PKiKP	PKPab	12 25 53.2	-2.6
	comp=Z,4.1nm,1.1s						
SQTA	Sankt Quirin	150.92	334	*i* PKiKP	PKPab	12 25 53.6	-2.5
	comp=Z,3.2nm,0.6s						
FETA	Feichten	151.27	335	*i* PKP	PKPbc	12 25 48.7	-0.9
	comp=Z,3.9nm,0.8s						
FETA				*e*PKiKP	pPKPdf	12 25 54.8	+0.3
	comp=Z,6.3nm,0.9s						
DAVA	Damuels	151.38	336	*e*PKP	PKPab	12 25 59.5	+1.5
	comp=Z,3.6nm,0.8s						
ESDC	Sonseca Array	162.18	353	PKPab	PKPab	12 26 46.2	+1.7
	comp=Z,1.0nm,1.0s,baz=22,slow=4.2,SNR=4.0						

IDC ***25*** *12:13:30.9±6.2, 22.°30S×172.°48E, h296^{km}±63^{km}, mb3.4/6, mbtmp4.1/6, Error ellipse: s-maj=46.2km s-min=19.6km az=174.0*

ISC 25 12:13:26.8±0.9**, 22.°2S**±0.°3×**172.°4E**±0.°2**, h250^{km}, n36, σ2.^{s}11**/35**, mb3.6**/6**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAR	Rarotonga	25.82	93	P	P	12 18 35.6	0.0
	11nm,0.5s,baz=323,slow=12,SNR=1.0						
	11nm,0.5s						
ASAR	Alice Springs	35.44	260	P	P	12 19 59.3	-0.5
	1.2nm,1.0s,baz=87,slow=8.0,SNR=7.8						
	1.2nm,1.0s						
WRA	Warramunga Arr	35.56	266	P	P	12 20 01.1	+0.3
	1.0nm,1.0s,baz=87,slow=3.1,SNR=3.0						
	1.0nm,1.0s						
MJAR	Matsushiro Arr	66.81	330	P	P	12 23 51.6	-0.2
	1.8nm,0.7s,baz=126,slow=6.2,SNR=2.2						
	1.8nm,0.7s						
CMAR	Chiang Mai Arr	82.45	293	P	P	12 25 22.5	+0.7
	0.9nm,0.7s,baz=114,slow=4.8,SNR=10						
	0.9nm,0.7s						
NVAR	Mina Array Bea	88.58	47	P	P	12 25 51.5	-0.3
	1.0nm,1.0s,baz=235,slow=11,SNR=4.9						
	1.0nm,1.0s						
STHS	Stebnicka Huta	144.60	327	*e*	PKPbc	12 32 29.7	-3.2
MORC	Moravsky Berou	146.14	330	*e*PKP	PKPdf	12 32 34.8	-1.3
MAUC	Maruska	146.30	330	*e*PKP	PKPdf	12 32 37.1	+0.7
JAVC	Velka Javorina	146.73	329	*e*PKP	PKPdf	12 32 38.3	+1.2
EKA	Eskdalemuir Ar	146.79	355	PKPbc	PKPdf	12 32 36.0	-0.9
	0.8nm,0.7s,baz=352,slow=3.8,SNR=3.4						
CLL	Collm	146.87	336	*i* PKPbc	PKPdf	12 32 36.4	-0.8
	comp=Z,17nm,1.7s						
CLL				*i* x	x	12 32 42.1	
	comp=Z,19nm,1.6s						
VRAC	Vranov	146.91	331	*e*PKP	PKPdf	12 32 37.3	-0.1
KRUC	Moravsky	147.18	330	*e*PKP	PKPdf	12 32 38.3	+0.5
MODS	Modra-Piesok	147.25	329	*e*	PKPdf	12 32 39.2	+1.2
ZVC	Zvikov	147.87	333	*e*PKP	PKPdf	12 32 40.2	+1.3
RONA	Rosalia, Austr	148.19	329	*e*SKS	PKPbc	12 32 41.5	-1.7
	comp=Z,4.3nm,0.9s						
CONA	Conrad Observa	148.24	329	*i* SKS	PKPbc	12 32 40.9	-2.5
	comp=Z,3.0nm,1.1s						
CKRC	Cesky Krumlov	148.28	332	*e*PKP	PKPdf	12 32 40.9	+1.2
KHC	Kasperske Hory	148.36	333	*e*PKP	PKPdf	12 32 41.0	+1.2
GERES	GERESS Array B	148.53	333	PKPbc	PKPdf	12 32 41.7	+1.5
	comp=Z,2.2nm,0.9s,baz=48,slow=4.0,SNR=12						
ARSA	Arzberg	148.88	329	*e*SKS	PKPbc	12 32 42.7	-2.3
	comp=Z,3.2nm,1.2s						
MOA	Molln	149.03	331	*e*SKS	PKPbc	12 32 45.4	+0.1
	comp=Z,6.5nm,1.4s						
BIOA	Bad Ischl, Aus	149.43	331	*e*SKS	PKPdf	12 32 45.5	+4.0
	comp=Z,1.8nm,0.7s						
SOKA	Soboth	149.53	329	*i* SKS	PKPdf	12 32 43.9	+2.1
	comp=Z,6.9nm,1.4s						
OBKA	Obir	149.88	329	*e*SKS	PKPdf	12 32 47.3	+4.9
	comp=Z,6.1nm,1.8s						
LESA	Schwarzleotal	150.06	332	*i* SKS	PKPdf	12 32 45.5	+2.8
	comp=Z,5.4nm,1.2s						
MYKA	Terra Mystica	150.22	330	*e*SKS	PKPdf	12 32 45.5	+2.6
	comp=Z,6.1nm,1.6s						
WATA	Walderalm	150.60	333	*e*SKS	PKPdf	12 32 46.7	+3.2
	comp=Z,5.7nm,1.2s						
WTTA	Wattenberg	150.63	333	*i* SKS	PKPdf	12 32 46.6	+3.0
	comp=Z,8.3nm,1.0s						
ABTA	Abfaltersbach	150.65	331	*i* SKS	PKPdf	12 32 45.7	+2.1
	comp=Z,6.9nm,1.1s						
RETA	Reutte	150.81	334	*e*SKS	PKPdf	12 32 46.6	+2.8
	comp=Z,3.4nm,1.1s						
SQTA	Sankt Quirin	150.84	333	*i* SKS	PKPdf	12 32 46.9	+3.0
	comp=Z,5.2nm,0.9s						
FETA	Feichten	151.20	334	*e*SKS	PKPdf	12 32 47.8	+3.3
	comp=Z,7.1nm,1.0s						
DAVA	Damuels	151.33	335	*e*SKS	PKPdf	12 32 46.4	+1.7
	comp=Z,7.0nm,1.1s						
TORD	Torodi Ar. Bea	167.37	226	PKPab	PKPab	12 34 09.4	-0.9
	comp=Z,0.8nm,1.0s,baz=112,slow=5.1,SNR=4.2						

GCMT ***25*** *12:23:13.9±0.1, 21.°88S±0.°01×173.°59E±0.°01, h14^{km}, MW5.3/136, Moment Tensor Solution. s95,c171; s136,c247; Duration: 1.^{s}1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.30±.01; M$_{θθ}$-0.20±.01; M$_{φφ}$0.49±.01; M$_{rθ}$-0.03±.03; M$_{θφ}$1.14±.01; M$_{φr}$-0.02±.03; Best double couple: M$_0$1.19200×10^{17} NP1:φ$_s$172.00000°, δ89.00000°, λ180.00000°. NP2:φ$_s$262.00000°, δ90.00000°, λ1.00000°. Principal axes: T 1.3410, Plg1.0000°, Azm127.0000°; N -0.2990, Plg89.0000°, Azm270.0000°; P -1.0420, Plg1.0000°, Azm37.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***25*** *12:23:13.9±1.6, 22.°11S±0.°09×173.°63E±0.°08, h10^{km}±1^{km}, mb5.3/279, Mww5.4/14 Error ellipse: s-maj=15.5km s-min=12.6km az=155.0*

NEIC ***25*** *12:23:13.9, 22.°11S×173.°63E, h12^{km}*

NEIC ***25*** *12:23:13.9, 22.°01S×174.°06E, h12^{km}, Moment Tensor Solution. Duration: 2.^{s}7 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.22; M$_{θθ}$0.03; M$_{φφ}$0.19; M$_{rθ}$-1.22; M$_{θφ}$0.78; M$_{φr}$-0.65; Fault plane solution: M$_0$1.60000×10^{17} NP1: φ$_s$175.10000°, δ24.28000°, λ-162.64000°. NP2: φ$_s$69.19000°, δ82.95000°, λ-66.71000°. Principal axes: T 1.7787, Plg34.0000°, Azm140.0000°; N -0.4577, Plg23.0000°, Azm246.0000°; P -1.3210, Plg47.0000°, Azm3.0000°;*

BGR ***25*** *12:23:15.7, 23.°63S×176.°78E, h33^{km}*

NOU ***25*** *12:23:16.7, 22.°14S×173.°45E, h0^{km}, ML5.4/94, Southeast of Loyalty Islands*

MOS ***25*** *12:23:17.3±1.8, 22.°04S×173.°56E, h37^{km}, mb5.4/47, MS5.1/11, Error ellipse: s-maj=10.7km s-min=9.1km az=76.8*

IDC ***25*** *12:23:19.9±4.0, 22.°37S×173.°49E, h55^{km}±34^{km}, mb4.5/23, mbtmp4.7/25, ML3.6/2, MS4.8/44, Error ellipse: s-maj=19.1km s-min=16.3km az=92.0*

ISC 25 12:23:16.7±0.4**, 22.°20S**±0.°05×**173.°72E**±0.°05**, h27^{km}**±2^{km}**, h27^{km}:pP-P, n704, σ1.^{s}82**/703**, mb5.3**/247**, MS4.9**/78**, 52C-30D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INH	Isangel	4.92	302	P	Pn	12 24 28.0	-0.9
MARNC	Mare, Loyalty	5.33	277		Pn	12 24 31.3	-3.2
MARNC	Mare, Loyalty	5.33	277	P	Pn	12 24 35.4	+0.8
	0.7nm,1.4s						
PINNC	Pines Island,	5.82	265		Pn	12 24 38.4	-2.9
PINNC	Pines Island,	5.82	265	P	Pn	12 24 39.6	-1.6
	206nm,1.4s						
MSVF	Nonsavu	6.03	43		Pn	12 24 41.9	-2.3
MSVF	Nonsavu	6.03	43	P	Pn	12 24 45.9	+1.7
	154nm,1.4s						
MSVF	Nonsavu	6.03	43	P	Pn	12 24 41.9	-2.3
YATNC	Mamie plateau,	6.33	270	P	Pn	12 24 46.7	-1.6
	88nm,1.0s						
OUENC	Ouen Island, N	6.37	267	P	Pn	12 24 47.1	-1.8
	73nm,1.3s						
DZM	Mont Dzumac	6.75	270	P	Pn	12 24 52.1	-2.0
	2.1nm,0.3s,baz=241,slow=22,SNR=12						
DZM				S	Sn	12 26 08.4	-1.8
	22nm,1.1s,baz=324,slow=23,SNR=0.9						
	28nm,0.9s						
DZM	Mont Dzumac	6.75	270	*e*Pn	Pn	12 24 52.4	-1.7
	145nm,0.9s						
DZM				*e*LR	LR	12 26 11.8	
	10µm,23.1s						
DZM	Mont Dzumac	6.75	270	P	Pn	12 24 52.8	-1.3
	66nm,0.8s						
DVP	Devils Point	6.84	310	P	Pn	12 24 56.1	+0.7
	4µm,1.4s						
NFK	Norfolk Island	8.58	216	P	Pn	12 25 20.2	+1.0
	comp=Z,492nm,0.8s						
KOUNC	Koumac, New Ca	8.94	279	P	Pn	12 25 24.3	+0.2
	comp=Z,118nm,1.3s						
SANVU	Saraoutou	9.12	316		Pn	12 25 23.2	-3.3
SANVU	Saraoutou	9.12	316	P	Pn	12 25 24.8	-1.8
	comp=Z,230nm,1.2s						
RAO	Raoul Island	10.30	135	LR	LR	12 29 01.2	
	comp=Z,11µm,18.7s,baz=354,slow=33						
TOZ	Tahuroa Road	15.56	175		P	12 26 58.0	-0.3
HURO	Huro Makira	16.26	314	P	Pn	12 27 03.7	+0.4
	comp=Z,231nm,1.2s						
URZ	Urewera	16.27	170	P	Pn	12 27 04.5	+1.2
	comp=Z,0.2nm,0.3s,baz=335,slow=6.8,SNR=2.5						
URZ				LR	LR	12 32 16.3	
	comp=Z,4µm,18.9s,baz=350,slow=33						
	comp=Z,11nm,0.9s						
NGOA	Tingoa Renbel	16.80	307	P	Pn	12 27 10.0	-0.2
	comp=Z,655nm,1.3s						
BKZ	Black Stump Fm	17.08	173	P	P	12 27 18.6	+3.4
	comp=Z,62nm,1.4s						
SAVO	Savo Central	18.62	312	P	Pn	12 27 34.3	+1.6
	comp=Z,177nm,1.0s						
TATA	Tatamba Isabel	19.18	314	P	Pn	12 27 40.7	+1.3
	comp=Z,238nm,1.1s						
GC1S	Gold Coast 1 S	19.22	248	P	Pn	12 27 40.6	+0.8
	comp=Z,58nm,1.2s						
TW1H	Toowoomba 1 Ha	20.43	250	P	Pn	12 27 53.6	-0.6
	comp=Z,156nm,1.1s						
GD1S	Gladstone Soft	20.82	261	P	Pn	12 27 58.3	-0.4
EIDS	Eidsvold	20.95	257	P	P	12 27 57.3	-0.3
	comp=Z,83nm,1.5s						
EIDS	Eidsvold	20.95	257		P	12 27 56.1	-1.6
EIDS				IAmb	IAmb	12 28 09.3	
	comp=Z,127nm,1.2s						
EIDS	Eidsvold	20.95	257	P	P	12 27 57.5	-0.1
	comp=Z,82nm,1.5s						
ARMA	Armidale	21.40	243	P	P	12 28 03.1	+0.5
	comp=Z,69nm,2.3s						
ARMA	Armidale	21.40	243		P	12 28 01.1	-1.5
ARMA	Armidale	21.40	243	P	P	12 28 03.9	+1.3
	comp=Z,69nm,2.3s						
AUNRC	North Rockhamp	21.41	262	P	P	12 28 04.2	+1.6
	comp=Z,80nm,1.8s						
JCZ	Jackson Bay	22.20	189	P	P	12 28 13.5	+2.6
	comp=Z,105nm,1.1s						
AUPHS	Peel High Scho	22.21	242	P	P	12 28 12.2	+1.0
	comp=Z,93nm,1.5s						
AUKHS	Kincumber High	22.67	236	P	P	12 28 18.1	+2.1
	comp=Z,280nm,1.7s						
MGCD	Mangrove Creek	22.78	236	P	P	12 28 17.5	+0.3
	comp=Z,65nm,1.2s						
RIV	Riverview	22.99	235	P	P	12 28 19.9	+0.6
	comp=Z,190nm,1.5s						
RIV	Riverview	22.99	235	P	P	12 28 20.0	+0.6
	comp=Z,190nm,1.5s						
SYDH	Sydney Hard Ro	23.28	235	P	P	12 28 23.5	+1.3
	comp=Z,113nm,1.2s						
WOLH	Wollongong Har	23.45	234	P	P	12 28 26.3	+2.4
	comp=Z,70nm,1.1s						
AUUHS	Ulladulla High	24.16	232	P	P	12 28 33.5	+2.8
	comp=Z,100nm,1.3s						
AULRC	Lightning Ridg	24.23	247	P	P	12 28 31.9	+0.5
	comp=Z,211nm,1.6s						
RAR	Rarotonga	24.64	93	LR	LR	12 36 02.6	
	comp=Z,2µm,20.8s,baz=264,slow=31						
CNB	Canberra Magne	24.95	233	P	P	12 28 37.6	-0.4
	comp=Z,80nm,1.5s						
CNB	Canberra Magne	24.95	233	P	P	12 28 38.8	+0.8
	comp=Z,80nm,1.5s						
AUDAR	Daramalan Coll	25.09	233	P	P	12 28 42.1	+2.9
	comp=Z,63nm,1.4s						
AUMHS	Melrose High S	25.18	233	P	P	12 28 43.0	+3.0
	comp=Z,46nm,1.3s						
AUMTS	Mt Stromlo	25.23	233	P	P	12 28 42.9	+2.5
	comp=Z,38nm,1.4s						
CAN	Canberra	25.23	233	P	P	12 28 40.1	-0.4
	comp=Z,35nm,1.4s						
CAN	Canberra	25.23	233	P	P	12 28 39.6	-0.9
CAN				IAmb	IAmb	12 28 44.8	
	comp=Z,105nm,1.6s						
CAN	Canberra	25.23	233	P	P	12 28 42.7	+2.3
	comp=Z,54nm,1.4s						
CAN	Canberra	25.23	233	P	P	12 28 39.6	-0.9
CAN				pmax	pmax		
	comp=Z,105nm,1.6s						
YNG	Young	25.28	236	P	P	12 28 40.0	-0.9
	comp=Z,21nm,1.4s						
TV1H	Townsville Har	25.34	272	P	P	12 28 42.6	+1.1
	comp=Z,40nm,1.4s						
CTA	Charters Tower	25.69	270	P	P	12 28 43.0	-1.8
	comp=Z,19nm,1.8s						
CTA	Charters Tower	25.69	270	P	P	12 28 43.3	-1.4
	comp=Z,8.3nm,0.8s,baz=106,slow=10,SNR=8.1						
CTA				LR	LR	12 38 36.3	
	comp=Z,4µm,18.0s,baz=86,slow=36						
	comp=Z,8.3nm,0.8s						
CTA	Charters Tower	25.69	270	P	P	12 28 46.7	+2.0
	comp=Z,1.4nm,1.8s						
CTAO	Charters Tower	25.69	270	P	P	12 28 43.1	-1.6
CTAO				IAmb	IAmb	12 28 52.1	
	comp=Z,90nm,1.4s						
CTAO	Charters Tower	25.69	270	P	P	12 28 46.7	+2.0
	comp=Z,17nm,1.8s						
CTAO	Charters Tower	25.69	270	P	P	12 28 43.2	-1.6
CTAO				pmax	pmax		
	comp=Z,90nm,1.4s						
MILA	Mila	25.88	230	P	P	12 28 47.8	+1.5
	comp=Z,18nm,1.5s						
AUSMG	Snowy Mountain	25.98	231	P	P	12 28 48.7	+1.4
	comp=Z,119nm,1.4s						
CMSA	Cobar Meteorol	26.61	244	P	P	12 28 51.6	-1.4
	comp=Z,37nm,1.3s						
CMSA	Cobar Meteorol	26.61	244	P	P	12 28 54.1	+1.1
	comp=Z,37nm,1.3s						
QLP	Quilpie	27.18	255	P	P	12 28 56.1	-2.0
	comp=Z,55nm,1.4s						
QLP	Quilpie	27.18	255	P	P	12 29 00.9	+2.8
	comp=Z,55nm,1.4s						
PMG	Port Moresby	28.48	292	LR	LR	12 39 41.9	
	comp=Z,2µm,18.9s,baz=118,slow=35						
TOO	Toolangi	28.73	231	P	P	12 29 11.2	-0.7
	comp=Z,11nm,1.6s						
TOO	Toolangi	28.73	231	P	P	12 29 12.0	+0.1
TOO	Toolangi	28.73	231	P	P	12 29 12.0	+0.1
TOO				pmax	pmax		
	comp=Z,13nm,1.3s						
BRAT	Ballarat	29.86	232	P	P	12 29 24.6	+2.7
	comp=Z,15nm,1.1s						
AUMTC	Mt Clear Colle	29.92	232	P	P	12 29 23.3	+0.9
	comp=Z,24nm,1.2s						
STKA	Stephens Creek	30.10	244	P	P	12 29 22.4	-1.6
	comp=Z,110nm,1.6s						
STKA	Stephens Creek	30.10	244	P	P	12 29 22.7	-1.4
	comp=Z,7.3nm,0.9s,baz=78,slow=11,SNR=12						
STKA				LR	LR	12 40 19.0	
	comp=Z,974nm,21.9s,baz=72,slow=34						
	comp=Z,7.3nm,0.9s						
STKA	Stephens Creek	30.10	244	P	P	12 29 23.0	-1.1
STKA	Stephens Creek	30.10	244	P	P	12 29 24.0	-0.1
	comp=Z,5.4nm,1.6s						
STKA	Stephens Creek	30.10	244	*i* P	P	12 29 23.0	-1.1
COEN	Coen	30.12	281	P	P	12 29 22.3	-2.1
COEN	Coen	30.12	281	P	P	12 29 27.7	+3.2
	comp=Z,615nm,0.9s						
INKA	Innaminka	30.34	253	P	P	12 29 24.2	-2.0
HTT	Hallett	32.61	242	P	P	12 29 44.7	-1.5
	comp=Z,11nm,1.4s						
HTT	Hallett	32.61	242	P	P	12 29 49.6	+3.4
	comp=Z,26nm,1.4s						
AUMBR	Murray Bridge	32.68	239	P	P	12 29 49.4	+2.7
	comp=Z,44nm,1.7s						
AUJCS	Jamestown Cent	32.82	243	P	P	12 29 50.4	+2.4
	comp=Z,25nm,1.0s						
WHYH	Whyalla	33.65	243	P	P	12 29 57.1	+1.9
	comp=Z,27nm,0.8s						
TBI	Tubuai	33.91	99	*e*S	S	12 35 19.7	-1.1
	comp=Z,2µm,25.0s						
TBI				*e*LQ	LQ	12 37 25.9	
	comp=Z,13µm,29.8s						
TBI				*e*LR	LR	12 38 50.1	
	comp=Z,4µm,30.2s						
TBI				*e*LR	LR	12 39 02.3	
	comp=Z,19µm,29.0s						
PPT2	Papeete2	34.76	89	*e*S	S	12 35 32.2	-1.9
	comp=Z,313nm,24.5s						
PPT2				*e*LQ	LQ	12 37 43.6	
	comp=Z,3µm,27.2s						
PPT2				*e*LR	LR	12 39 15.9	
	comp=Z,3µm,28.0s						
PPT2				*e*LR	LR	12 39 23.8	
	comp=Z,4µm,25.2s						
PPT	Papeete	34.77	89	LR	LR	12 40 41.4	
	comp=Z,2µm,19.9s,baz=258,slow=30						
BBOO	Buckleboo	34.87	244	P	P	12 30 03.7	-2.2
	comp=Z,41nm,1.3s						
BBOO	Buckleboo	34.87	244	P	P	12 30 04.0	-1.9
BBOO				IAmb	IAmb	12 30 08.1	
	comp=Z,74nm,1.4s						
BBOO	Buckleboo	34.87	244	P	P	12 30 09.7	+3.8
	comp=Z,40nm,1.3s						
WR8	Warramunga Arr	36.60	266	P	P	12 30 18.1	-2.7
WR8				IAmb	IAmb	12 30 24.3	
	comp=Z,130nm,1.8s						
ASAR	Alice Springs	36.62	260	P	P	12 30 18.6	-2.4
	comp=Z,12nm,0.9s,baz=100,slow=8.5,SNR=26						
ASAR				LR	LR	12 45 23.2	
	comp=Z,2µm,19.2s,baz=96,slow=36						
	comp=Z,12nm,0.9s						
WB0	Warramunga Arr	36.73	266	P	P	12 30 19.3	-2.7
WB0				IAmb	IAmb	12 30 25.3	
	comp=Z,58nm,1.1s						
WRA	Warramunga Arr	36.75	266	P	P	12 30 18.9	-3.2
	comp=Z,9.2nm,0.8s,baz=101,slow=8.2,SNR=17						
WRA				S	S	12 35 57.2	-7.3
	comp=Z,3.0nm,0.7s,baz=97,slow=10,SNR=0.9						
	comp=Z,9.2nm,0.8s						
WRA	Warramunga Arr	36.75	266	P	P	12 30 18.2	-3.9
WRA	Warramunga Arr	36.75	266	P	P	12 30 18.2	-3.9
WRA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
JAY	Jayapura	37.56	297	LR	LR	12 45 08.1	
	comp=Z,2µm,21.9s,baz=116,slow=35						
FORT	Forrest	41.52	248	P	P	12 30 59.1	-2.8
	comp=Z,20nm,1.2s						
FORT	Forrest	41.52	248	P	P	12 30 59.3	-2.6
MTN	Manton Dam	41.54	276	P	P	12 30 59.3	-3.0
MTN				IAmb	IAmb	12 31 05.8	
	comp=Z,37nm,0.8s						
WRKA	Warakurna	41.57	257	P	P	12 31 00.4	-2.1
	comp=Z,28nm,1.1s						
DRS	Darwin Rock St	41.89	276	P	P	12 31 08.3	+3.2
	comp=Z,70nm,1.4s						
KNRA	Kununurra	42.90	271	P	P	12 31 10.4	-2.8
	comp=Z,85nm,1.3s						
KNRA	Kununurra	42.90	271	P	P	12 31 10.8	-2.4
KNRA				IAmb	IAmb	12 31 18.0	
	comp=Z,130nm,1.2s						
SAUI	Saumlaki	43.16	282	P	P	12 31 12.4	-3.0
FITZ	Fitzroy Crossi	45.18	266	P	P	12 31 29.4	-2.1
	comp=Z,42nm,1.3s						
FITZ	Fitzroy Crossi	45.18	266	P	P	12 31 30.2	-1.3
	comp=Z,67nm,0.9s,baz=103,slow=8.4,SNR=15						
FITZ				LR	LR	12 50 36.8	
	comp=Z,3µm,18.0s,baz=104,slow=36						
	comp=Z,67nm,0.9s						
FITZ	Fitzroy Crossi	45.18	266	P	P	12 31 29.9	-1.6
FITZ				IAmb	IAmb	12 31 37.4	
	comp=Z,66nm,1.3s						
FITZ	Fitzroy Crossi	45.18	266	P	P	12 31 34.0	+2.5
	comp=Z,416nm,1.3s						
GUMO	Guam	45.44	319	LR	LR	12 48 33.0	

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       comp=Z,2µm,21.7s,baz=132,slow=33
TAOE  Nuku Hiva Isla   46.20  81 eS     S      12 38 24.2 -0.7
       comp=Z,185nm,22.9s
TAOE                             eLQ    LQ     12 42 26.3
       comp=Z,2µm,28.8s
TAOE                             eLR    LR     12 44 38.4
       comp=Z,2µm,23.7s
KMBL  Kambalda         46.81 247  P     P      12 31 41.8 -2.5
       comp=Z,16nm,1.4s
RKT   Rikitea          47.15 101 eLR    LR     12 45 02.4
       comp=Z,3µm,27.0s
SOEI  Soe              48.92 276  P     P      12 31 59.8 -1.1
SOEI  Soe              48.92 276  P     P      12 32 03.8 +2.8
       comp=Z,119nm,1.4s
BATI  Baumata          49.32 276  P     P      12 32 03.2 -0.7
       comp=Z,36nm,0.9s,baz=121,slow=9.8,SNR=4.1
BATI                              LR    LR     12 52 14.3
       comp=Z,4µm,21.4s,baz=138,slow=35
       comp=Z,36nm,0.9s
PSA00 Pilbara Seismi   49.77 260  P     P      12 32 05.5 -1.7
PSA00 Pilbara Seismi   49.77 260  P     P      12 32 05.1 -2.1
PSA00                             IAmb  IAmb   12 32 13.0
       comp=Z,83nm,1.4s
PSA00 Pilbara Seismi   49.77 260  P     P      12 32 06.7 -0.5
       comp=Z,76nm,1.4s
MBWA  Marble Bar       49.95 260  P     P      12 32 06.4 -2.2
MBWA  Marble Bar       49.95 260  P     P      12 32 08.4 -0.2
       comp=Z,71nm,1.3s
MEEK  Meekatharra      50.05 253  P     P      12 32 07.1 -2.3
       comp=Z,20nm,1.0s
MEEK  Meekatharra      50.05 253  P     P      12 32 11.1 +1.7
       comp=Z,20nm,1.0s
KLBR  Kellerberrin     50.32 247  P     P      12 32 09.9 -1.5
       comp=Z,68nm,1.1s
KLBR  Kellerberrin     50.32 247  P     P      12 32 12.6 +1.3
       comp=Z,68nm,1.1s
SANI  Sanana           50.48 287  P     P      12 32 16.2 +3.5
       comp=Z,54nm,1.1s
NWAO  Narrogin (SRO)   50.69 245  LR    LR     12 52 22.4
       comp=Z,2µm,19.3s,baz=99,slow=35
MMRI  Maumere          51.19 277  P     P      12 32 21.7 +3.6
       comp=Z,88nm,1.1s
BLDU  Ballidu          51.29 248  P     P      12 32 16.7 -2.0
       comp=Z,20nm,1.2s
BLDU  Ballidu          51.29 248  P     P      12 32 20.1 +1.5
       comp=Z,20nm,1.2s
MUN   Mundaring        51.61 246  P     P      12 32 19.4 -1.6
       comp=Z,32nm,1.4s
MORW  Morawa           52.02 250  P     P      12 32 22.1 -2.0
       comp=Z,34nm,1.1s
MORW  Morawa           52.02 250  P     P      12 32 21.9 -2.2
MORW  Morawa           52.02 250  P     P      12 32 27.6 +3.5
       comp=Z,34nm,1.0s
LUWI  Luwuk            53.80 286  P     P      12 32 34.2 -3.2
LUWI  Luwuk            53.80 286  P     P      12 32 39.8 +2.4
       comp=Z,83nm,1.1s
PLAI  Plampang         55.23 275  P     P      12 32 50.4 +2.6
       comp=Z,64nm,1.5s
DAV   Davao City (W)   55.40 296  LR    LR     12 57 23.0
       comp=Z,370nm,18.8s,baz=92,slow=37
VNDA  Vanda            55.67 183  P     P      12 32 49.9 -0.1
       comp=Z,1.1nm,0.6s,baz=22,slow=7.6,SNR=6.0
VNDA                              LR    LR     12 54 30.6
       comp=Z,574nm,18.7s,baz=14,slow=34
       comp=Z,1.1nm,0.6s
VNDA  Vanda            55.67 183  P     P      12 32 50.4 +0.4
VNDA  Vanda            55.67 183  P     P      12 32 50.4 +0.4
VNDA                              pmax  pmax
       comp=Z,13nm,1.4s
SBA   Scott Base       55.81 182  P     P      12 32 51.0  0.0
SBA                               IAmb  IAmb   12 33 03.7
       comp=Z,28nm,1.1s
SBA   Scott Base       55.81 182  P     P      12 32 51.0  0.0
SBA                               pmax  pmax
       comp=Z,28nm,1.1s
TOLI2 Tolitoli         56.55 287  P     P      12 32 53.8 -3.5
TOLI2                             IAmb  IAmb   12 33 00.5
       comp=Z,34nm,1.1s
TOLI2 Tolitoli         56.55 287  P     P      12 32 59.4 +2.2
       comp=Z,29nm,1.0s
JCJ   Chichijima       57.72 327  LR    LR     12 53 03.4
       comp=Z,438nm,20.5s,baz=148,slow=31
JAGI  Jajag, Banyuwa   58.71 274  P     P      12 33 15.3 +2.8
       comp=Z,55nm,1.4s
KKM   Kota Kinabalu    62.88 290  P     P      12 33 43.3 +2.4
       comp=Z,33nm,1.4s
SBUM  Sibu             64.79 284  P     P      12 33 50.1 -3.4
SBUM  Sibu             64.79 284  P     P      12 33 57.6 +4.1
       comp=Z,9.5nm,1.6s
BBJI  Bungbulang       65.09 272  P     P      12 33 57.7 +2.2
       comp=Z,16nm,1.4s
JOW   Kunigami         65.65 316  LR    LR     12 58 19.6
       comp=Z,831nm,22.0s,baz=123,slow=32
INU   Inuyama          66.98 328  P     P      12 34 09.7 +2.7
       comp=Z,26nm,1.4s
JMN   Monobe           67.33 325  P     P      12 34 12.8 +3.4
       comp=Z,39nm,1.2s
MJAR  Matsushiro Arr   67.36 330  P     P      12 34 10.2 +0.7
       comp=Z,19nm,1.0s,baz=162,slow=5.9,SNR=13
MJAR                              LR    LR     12 59 55.5
       comp=Z,572nm,22.0s,baz=140,slow=33
       comp=Z,19nm,1.0s
MJAR  Matsushiro Arr   67.36 330
       comp=Z,7.3nm,1.1s
MJAR  Matsushiro Arr   67.36 330  P     P      12 34 06.4 -3.1
MJAR                              IAmb  IAmb   12 34 13.2
       comp=Z,20nm,1.2s
MJAR  Matsushiro Arr   67.36 330  P     P      12 34 06.4 -3.1
MJAR                              pmax  pmax
       comp=Z,20nm,1.2s
MJAR  Matsushiro Arr   67.36 330  P     P      12 34 06.9 -2.6
       comp=Z,7.3nm,1.1s,baz=154,slow=7.6,SNR=6.5
MAJO  Matsushiro       67.37 330  P     P      12 34 07.0 -2.4
MAJO                              IAmb  IAmb   12 34 13.4
       comp=Z,44nm,1.2s
MAJO  Matsushiro       67.37 330  P     P      12 34 11.3 +1.8
       comp=Z,32nm,1.3s
MAJO  Matsushiro       67.37 330  P     P      12 34 07.1 -2.4
MAJO                              pmax  pmax
       comp=Z,44nm,1.3s
NACB  Ninganchiao      68.49 309  P     P      12 34 20.0 +3.2
       comp=Z,50nm,1.5s
JNU   Nakatsue         68.53 322  LR    LR     13 03 36.1
       comp=Z,101nm,18.9s,baz=122,slow=35
JNU   Nakatsue         68.53 322  P     P      12 34 20.7 +3.8
       comp=Z,50nm,1.4s
TPUB  Ta-pu            68.66 308  P     P      12 34 20.1 +2.2
       comp=Z,72nm,1.9s
SSLB  Suanglung        68.71 308  P     P      12 34 15.8 -2.4
SSLB                              IAmb  IAmb   12 34 23.9
       comp=Z,20nm,0.9s
YHNB  Yeheng           68.95 309  P     P      12 34 22.5 +2.7
       comp=Z,38nm,1.1s
RPN   Rapa Nui         69.09 112  LR    LR     12 56 45.5
       comp=Z,626nm,21.2s,baz=246,slow=29
ASAJ  Asahikawa        71.89 337  LR    LR     13 01 36.6
       comp=Z,1µm,21.2s,baz=160,slow=32
MYKOM Kota Tinggi      72.11 280  P     P      12 34 43.6 +4.3
       comp=Z,36nm,1.2s
TJN   Taejon           72.88 322  P     P      12 34 46.8 +3.5
       comp=Z,172nm,1.2s
KSRS  Korea Array      73.34 323  P     P      12 34 44.9 -1.0
       comp=Z,13nm,1.0s,baz=154,slow=7.9,SNR=8.6
KSRS                              LR    LR     13 02 26.6
       comp=Z,208nm,20.6s,baz=125,slow=32
       comp=Z,13nm,1.0s
KSAR  Wonju Array Be   73.35 323  P     P      12 34 43.4 -2.6
KSAR  Wonju Array Be   73.35 323  P     P      12 34 43.4 -2.6
KS19  Wonju Array Si   73.40 323  P     P      12 34 45.2 -1.2
KS19                              IAmb  IAmb   12 34 50.3
       comp=Z,32nm,1.1s
INCN  Inchon           74.08 323  P     P      12 34 54.3 +4.0
       comp=Z,68nm,1.2s
YSS   Yuzhno-Sakhali   74.29 339  P     P      12 34 54.8 +3.5
       comp=Z,28nm,1.1s
YSS   Yuzhno-Sakhali   74.29 339⇑eP     P      12 34 55.5 +4.2
YSS                              eS     S      12 44 23.4  0.0
YSS                              eSS    SS     12 49 05.8 -4.4
YSS                               pmax  pmax
       comp=Z,20nm,0.9s
SHEM  Shemya Is, Ala   74.61   0  LR    LR     13 04 46.2
       comp=Z,333nm,18.9s,baz=188,slow=33
QIZ   Qiongzhong       74.67 298  P     P      12 34 53.0 -1.2
QIZ                               S     S      12 44 30.5 +1.6
QIZ                               ScS   ScS    12 45 06.3 +1.9
QIZ                               SS    SS     12 49 18.8 +1.8
QIZ                               LR    LR
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       comp=Z,160nm,13.7s
QIZ                               LR    LR
       comp=Z,250nm,23.7s
QIZ                               LR    LR
       comp=Z,470nm,21.8s
NJ2   Nanjing          75.25 314 ⇑P     P      12 35 00.8 +3.5
NJ2                               pP    pP     12 35 02.5 -3.0
NJ2                               pmax  pmax
       comp=Z,15nm,0.8s
NJ2                               pmax  pmax
       comp=Z,220nm,5.7s
NJ2                               LR    LR
       comp=Z,290nm,21.8s
NJ2                               LR    LR
       comp=Z,400nm,20.8s
NJ2                               LR    LR
       comp=Z,850nm,20.8s
IPM   Ipoh             75.78 281  P     P      12 34 58.4 -2.4
IPM   Ipoh             75.78 281  P     P      12 35 04.0 +3.3
PETK  Petropavlovsk-   76.27 350  P     P      12 35 04.9 +2.3
       comp=Z,11nm,0.9s,baz=160,slow=5.5,SNR=5.3
PETK                              LR    LR     13 00 48.8
       comp=Z,608nm,21.8s,baz=157,slow=29
       comp=Z,11nm,0.9s
PETK  Petropavlovsk-   76.27 350  P     P      12 35 02.2 -0.4
PETK  Petropavlovsk-   76.27 350  P     P      12 35 02.2 -0.4
USRK  Ussuriysk Ar.    76.32 330  P     P      12 35 03.9 +0.8
       comp=Z,25nm,1.0s,baz=115,slow=3.2,SNR=5.8
       comp=Z,25nm,1.0s
NIKH  Nikolski High    76.37  11  P     P      12 35 01.5 -1.6
KULM  Kulim            76.45 282  P     P      12 35 02.0 -2.5
KULM                              IAmb  IAmb   12 35 09.5
       comp=Z,46nm,1.1s
KULM  Kulim            76.45 282  P     P      12 35 07.6 +3.1
       comp=Z,40nm,1.2s
PSI   Prapat           77.02 278  LR    LR     13 10 52.5
       comp=Z,563nm,20.7s,baz=126,slow=37
MAW   Mawson           77.26 202  P     P      12 35 07.4 -0.7
       comp=Z,9.3nm,1.1s,baz=107,slow=7.1,SNR=7.2
MAW                               LR    LR     13 06 14.0
       comp=Z,264nm,18.0s,baz=94,slow=33
       comp=Z,9.3nm,1.1s
WHN   Wuhan            77.44 310  P     P      12 35 13.0 +3.3
WHN                               pmax  pmax
       comp=Z,130nm,1.0s
GSI   Gunungsitoli     77.68 277        P      12 35 08.7 -2.8
GSI   Gunungsitoli     77.68 277  P     P      12 35 12.9 +1.4
       comp=Z,74nm,1.2s
TYV   Tymovskoe        77.73 340 eP     P      12 35 09.5 -1.3
TYV                               pmax  pmax
       comp=Z,500nm,4.5s
TYV                               pmax  pmax
       comp=Z,11nm,0.9s
MDJ   Mudanjiang       77.75 329  P     P      12 35 10.3 -0.8
MDJ                               IAmb  IAmb   12 35 16.1
       comp=Z,38nm,1.0s
MDJ   Mudanjiang       77.75 329  IAmb  IAmb   12 35 21.0
       comp=Z,7.6nm,0.8s
MDJ   Mudanjiang       77.75 329  P     P      12 35 14.8 +3.7
MDJ                               S     S      12 45 06.3 +4.6
MDJ                               pmax  pmax
       comp=Z,47nm,1.1s
MDJ                               LR    LR
       comp=Z,360nm,8.2s
MDJ                               LR    LR
       comp=Z,170nm,8.8s
MDJ                               LR    LR
       comp=Z,640nm,10.4s
MDJ   Mudanjiang       77.75 329  P     P      12 35 14.8 +3.7
       comp=Z,44nm,1.1s
MDJ   Mudanjiang       77.75 329  P     P      12 35 14.8 +3.7
DL2   Dalian           77.92 321  P     P      12 35 15.5 +3.3
DL2                               S     S      12 45 10.0 +6.3
DL2                               pmax  pmax
       comp=Z,85nm,1.1s
DL2                               pmax  pmax
       comp=Z,320nm,7.3s
DL2                               LR    LR
       comp=Z,600nm,22.9s
DL2                               LR    LR
       comp=Z,790nm,24.7s
DL2                               LR    LR
       comp=Z,770nm,23.1s
TIA   Tai'an           78.95 317  P     P      12 35 18.5 +0.5
TIA                               S     S      12 45 14.5 -0.4
TIA                               pmax  pmax
       comp=Z,44nm,0.8s
TIA                               LR    LR
       comp=Z,400nm,24.0s
TIA                               LR    LR
       comp=Z,610nm,24.4s
TIA                               LR    LR
       comp=Z,1µm,23.4s
CN2   Changchun        79.19 327  P     P      12 35 22.3 +3.2
CN2                               S     S      12 45 11.5 -5.6
CN2                               pmax  pmax
       comp=Z,50nm,1.0s
CN2                               LR    LR
       comp=Z,400nm,19.0s
CN2                               LR    LR
       comp=Z,300nm,19.0s
CN2                               LR    LR
       comp=Z,500nm,20.0s
BNX   BinXian          79.62 329 ⇑P     P      12 35 24.0 +2.6
BNX                               pmax  pmax
       comp=Z,47nm,0.9s
GRNR  Gornyy           79.75 337⇓iP     P      12 35 20.3 -1.7
GRNR                              pmax  pmax
       comp=Z,6.0nm,1.3s
ENH   Enshi            80.78 308  P     P      12 35 25.8 -2.3
ENH   Enshi            80.78 308  P     P      12 35 29.4 +1.3
       comp=Z,83nm,1.1s
LYN   LuoYang          81.03 313  P     P      12 35 33.3 +4.0
LYN                               S     S      12 45 39.5 +2.5
LYN                               pmax  pmax
       comp=Z,94nm,1.0s
LYN                               LR    LR
       comp=Z,590nm,22.3s
LYN                               LR    LR
       comp=Z,570nm,22.1s
LYN                               LR    LR
       comp=Z,1µm,24.3s
HNS   HongShan         81.21 316 ⇓P     P      12 35 27.8 -2.3
HNS                               pP    PcP    12 35 34.0 -2.3
HNS                               S     S      12 45 41.0 +2.4
HNS                               pmax  pmax
       comp=Z,8.0nm,1.7s
HNS                               LR    LR
       comp=Z,320nm,17.8s
HNS                               LR    LR
       comp=Z,550nm,21.0s
HNS                               LR    LR
       comp=Z,870nm,23.5s
AIS   Amsterdam Isla   81.34 233  P     P      12 35 29.3 -1.7
BJT   Baijiatuau       81.88 319  P     P      12 35 33.3 -0.3
BJT                               IAmb  IAmb   12 35 38.0
       comp=Z,21nm,1.0s
BJT   Baijiatuau       81.88 319  P     P      12 35 37.2 +3.6
       comp=Z,24nm,2.2s
BJT   Baijiatuau       81.88 319  P     P      12 35 33.3 -0.3
BJT                               pmax  pmax
       comp=Z,21nm,1.0s
PMSA  Palmer Station   82.67 159  LR    LR     13 07 29.8
       comp=Z,290nm,18.1s,baz=248,slow=32
TIY   Taiyuan          82.86 315  P     P      12 35 42.8 +3.9
TIY                               sP    sP     12 35 49.5 -0.1
TIY                               S     SKSac  12 45 59.0 +0.2
TIY                               pmax  pmax
       comp=Z,55nm,1.2s
TIY                               LR    LR
       comp=Z,410nm,21.3s
TIY                               LR    LR
       comp=Z,380nm,20.6s
TIY                               LR    LR
       comp=Z,640nm,24.7s
HEH   HeiHe            82.94 332 eP     P      12 35 41.0 +2.1
HEH                               pP    pP     12 35 45.3 -2.0
HEH                               S     SKSac  12 46 00.3 +1.8
HEH                               pmax  pmax
       comp=Z,23nm,1.5s
HEH                               pmax  pmax
       comp=Z,450nm,5.0s
HEH                               LR    LR
       comp=Z,350nm,17.8s
HEH                               LR    LR
       comp=Z,270nm,17.7s
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HEH                               LR    LR
       comp=Z,550nm,17.6s
XAN   Xi'an            83.20 311 ⇑P     P      12 35 39.0 -1.7
XAN                               pP    PcP    12 35 44.0 -1.2
XAN                               S     SKSac  12 46 01.3 +0.2
XAN                               pmax  pmax
       comp=Z,7.0nm,1.5s
XAN                               LR    LR
       comp=Z,470nm,23.1s
XAN                               LR    LR
       comp=Z,210nm,22.7s
XAN                               LR    LR
       comp=Z,530nm,23.7s
KMI   Kunming          83.39 300  P     P      12 35 41.5 -0.6
KMI                               S     SKSac  12 46 06.3 +3.2
KMI                               pmax  pmax
       comp=Z,290nm,4.9s
KMI                               LR    LR
       comp=Z,210nm,23.2s
KMI                               LR    LR
       comp=Z,340nm,19.2s
KMI                               LR    LR
       comp=Z,340nm,20.0s
CMAR  Chiang Mai Arr   83.52 293  P     P      12 35 41.7 -1.0
       comp=Z,4.4nm,1.0s,baz=116,slow=5.6,SNR=9.1
       comp=Z,4.4nm,1.0s
CMAR  Chiang Mai Arr   83.52 293  P     P      12 35 41.0 -1.7
CMAR  Chiang Mai Arr   83.52 293  P     P      12 35 41.0 -1.7
MA2   Magadan          83.63 348  LR    LR     13 07 23.3
       comp=Z,705nm,21.8s,baz=170,slow=32
CHTO  Chiang Mai       83.68 293  P     P      12 35 41.4 -2.1
CHTO  Chiang Mai       83.68 293  P     P      12 35 41.4 -2.1
CHTO                              pmax  pmax
       comp=Z,42nm,1.1s
OHAK  Old Harbor       83.82  17  P     P      12 35 43.0 -0.2
OHAK  Old Harbor       83.82  17  P     P      12 35 47.7 +4.5
       comp=Z,85nm,1.8s
ELIB  Princess Elisa   83.93 189 dP     P      12 35 41.7 -2.3
ACHA  Angle Creek He   84.14  16  P     P      12 35 44.1 -0.9
ACHA                              IAmb  IAmb   12 35 54.5
       comp=Z,46nm,1.4s
XLT   XiLinHaoTe       84.32 322 eP     P      12 35 50.0 +3.7
XLT                               pP    pP     12 35 52.5 -2.2
XLT                               S     S      12 46 11.8 +1.5
XLT                               pmax  pmax
       comp=Z,21nm,1.0s
XLT                               pmax  pmax
       comp=Z,330nm,6.8s
XLT                               LR    LR
       comp=Z,290nm,19.4s
XLT                               LR    LR
       comp=Z,240nm,21.7s
KDAK  Kodiak Island    84.50  17  P     P      12 35 47.7 +1.0
       comp=Z,8.0nm,0.7s,baz=186,slow=3.9,SNR=5.9
KDAK                              LR    LR     13 06 49.6
       comp=Z,463nm,20.7s,baz=210,slow=31
       comp=Z,8.0nm,0.7s
KDAK  Kodiak Island    84.50  17  P     P      12 35 46.6 -0.1
KDAK  Kodiak Island    84.50  17  P     P      12 35 46.6 -0.1
KDAK                              pmax  pmax
       comp=Z,74nm,1.2s
P17K  Kvichak River    84.74  15        P      12 35 47.4 -0.5
N15K  Kwethluk River   84.81  13        P      12 35 47.6 -0.7
PZH   PanZhiHua        84.82 301  P     P      12 35 48.8 -0.5
HHC   Hu-ho-hao-te     85.20 318⇑iP     P      12 35 55.3 +4.5
HHC                               S     S      12 46 21.5 +2.2
HHC                               pmax  pmax
       comp=Z,41nm,1.0s
HHC                               pmax  pmax
       comp=Z,270nm,4.5s
HHC                               LR    LR
       comp=Z,380nm,21.8s
HHC                               LR    LR
       comp=Z,350nm,18.9s
HHC                               LR    LR
       comp=Z,770nm,21.8s
P18K  Big Mountain,    85.21  15        P      12 35 49.0 -1.3
CD2   Chengdu          85.36 306  P     P      12 35 51.3 -0.5
CD2                               S     SKSac  12 46 17.5 +2.3
CD2                               pmax  pmax
       comp=Z,20nm,0.5s
CD2                               pmax  pmax
       comp=Z,330nm,5.3s
CD2                               LR    LR
       comp=Z,1µm,24.5s
CD2                               LR    LR
       comp=Z,800nm,18.6s
ZEA   Zeya             85.58 334 eP     P      12 35 50.7 -1.5
ZEA                               pmax  pmax
       comp=N,10.0nm,1.4s
ZEA                               pmax  pmax
       comp=Z,30nm,1.2s
O18K  Koktuh Hills     85.62  15        P      12 35 52.4 +0.1
O02D  Mt. Diablo Mer   85.67  43        P      12 35 51.7 -1.4
O02D                              IAmb  IAmb   12 36 00.6
       comp=Z,33nm,1.2s
MWC   Mount Wilson     85.72  50  P     P      12 35 52.2 -1.5
MWC                               IAmb  IAmb   12 35 59.9
       comp=Z,18nm,1.1s
MWC   Mount Wilson     85.72  50  P     P      12 35 52.2 -1.5
MWC                               pmax  pmax
       comp=Z,18nm,1.1s
SUTB  Sutter Butte     85.79  45  P     P      12 35 52.8 -0.9
SUTB                              IAmb  IAmb   12 36 00.7
       comp=Z,47nm,1.5s
HIA   Hailar           85.80 328  P     P      12 35 51.7 -1.8
HIA                               IAmb  IAmb   12 36 00.7
       comp=Z,17nm,1.0s
HIA   Hailar           85.80 328  P     P      12 35 57.3 +3.8
       comp=Z,16nm,1.4s
HIA   Hailar           85.80 328  P     P      12 35 51.7 -1.8
HIA                               pmax  pmax
       comp=Z,17nm,1.0s
M16K  Timber Creek     85.82  13  P     P      12 35 53.6 +0.3
VES   Vestal, Richgr   85.82  49  P     P      12 35 52.7 -1.2
TROLL Troll, Antarti   85.85 183 ⇑P     P      12 35 51.8 -1.9
       comp=Z,262nm,0.5s
HILR  Hailar Array B   85.99 328  P     P      12 35 55.6 +1.2
       comp=Z,4.8nm,0.8s,baz=147,slow=8.3,SNR=8.2
       comp=Z,4.8nm,0.8s
BTO   Baotou           86.04 317 eP     P      12 35 58.8 +3.8
BTO                               pP    pP     12 36 03.5 +0.1
BTO                               sP    sP     12 36 05.8 +0.1
BTO                               S     S      12 46 33.5 +6.0
BTO                               sS    sS     12 46 42.0 +0.7
BTO                               pmax  pmax
       comp=Z,19nm,1.0s
BTO                               pmax  pmax
       comp=Z,430nm,4.6s
BTO                               LR    LR
       comp=Z,1µm,21.1s
BTO                               LR    LR
       comp=Z,1µm,24.9s
BTO                               LR    LR
       comp=Z,2µm,23.5s
CMB   Columbia Colle   86.08  46        P      12 35 53.6 -1.6
CMB   Columbia Colle   86.08  46  P     P      12 35 53.6 -1.6
CMB                               pmax  pmax
       comp=Z,11nm,1.0s
O19K  Port Alsworth    86.14  15        P      12 35 53.9 -0.9
ISA   Isabella, Lake   86.16  49  P     P      12 35 55.4 -0.3
ISA                               IAmb  IAmb   12 36 05.6
       comp=Z,19nm,1.1s
ISA   Isabella, Lake   86.16  49  P     P      12 35 55.4 -0.3
ISA                               pmax  pmax
       comp=Z,19nm,1.1s
ORV   Oroville         86.16  45  P     P      12 35 55.4 -0.1
ORV                               IAmb  IAmb   12 36 02.7
       comp=Z,32nm,1.6s
ORV   Oroville         86.16  45  P     P      12 35 55.4 -0.1
ORV                               pmax  pmax
       comp=Z,32nm,1.6s
N02D  Trinity Center   86.16  43        P      12 35 55.3 -0.2
N02D                              IAmb  IAmb   12 36 06.3
       comp=Z,44nm,1.4s
ILSW  Iliamna Southw   86.25  16  P     P      12 35 55.2 -0.4
L16K  Owhat River      86.34  12  P     P      12 35 55.8  0.0
L16K                              IAmb  IAmb   12 36 05.1
       comp=Z,27nm,1.2s
SNAA  Sanae            86.35 181 ⇑P     P      12 35 54.2 -1.8
       comp=Z,106nm,0.9s
SNAA  Sanae            86.35 181  P     P      12 35 53.8 -2.3
       comp=Z,1.5nm,0.7s,baz=177,slow=8.8,SNR=6.7
SNAA                              LR    LR     13 13 53.2
       comp=Z,300nm,18.1s,baz=154,slow=35
       comp=Z,1.5nm,0.7s
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SNAA	Sanae	86.35	181		P	12 35 54.0	-2.1
SNAA	Sanae	86.35	181	iP	P	12 35 59.2	+3.1
SNAA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CNPM	China Poot	86.36	17	P	P	12 35 57.2	+1.2
O03E	Paynes Creek	86.36	44	P	P	12 35 57.3	+0.8
NVL	N'lazarevskaya	86.42	186	eP	P	12 35 57.4	+1.1
NVL				e		12 39 19.0	
NVL				ePPP	PPP	12 41 13.1	
NVL				eS	SKSac	12 46 23.3	+2.7
NVL				eSS	SS	12 52 16.4	+7.3
NVL				eSSS	SSS	12 55 48.8	
NVL				pmax	pmax		
	comp=Z,13nm,0.7s						
NVL				MLR	MLR		
	comp=Z,722nm,21.0s						
BORC	Borrego Spring	86.43	52	P	P	12 35 57.2	+0.2
BORC				IAmb	IAmb	12 36 03.7	
	comp=Z,17nm,1.1s						
M17K	Holitna River	86.48	13	P	P	12 35 57.2	+0.7
M17K				IAmb	IAmb	12 36 05.6	
	comp=Z,38nm,1.3s						
K15K	Wolf Creek Mou	86.49	11	P	P	12 35 57.2	+0.7
SEY	Seymchan	86.51	350	P	P	12 35 57.0	+0.4
	comp=Z,14nm,1.1s,baz=102,slow=3.9,SNR=3.5						
SEY				LR	LR	13 10 12.6	
	comp=Z,819nm,20.6s,baz=159,slow=32						
	comp=Z,14nm,1.1s						
SEY	Seymchan	86.51	350	ceP	P	12 35 57.0	+0.4
SEY				pmax	pmax		
	comp=Z,20nm,1.2s						
J14K	Nanvaranak Lak	86.56	10	P	P	12 35 57.8	+1.0
J14K				IAmb	IAmb	12 36 07.4	
	comp=Z,52nm,1.6s						
PFO	Pinyon Flats O	86.57	52	LR	LR	13 07 27.2	
	comp=Z,239nm,20.4s,baz=246,slow=30						
YBH	Yreka Blue Hor	86.58	42	LR	LR	13 05 54.2	
	comp=Z,26nm,21.2s,baz=260,slow=29						
LRMC	Laurel Mtn Rad	86.62	50	P	P	12 35 57.4	-0.7
LRMC				IAmb	IAmb	12 38 54.1	
	comp=Z,19nm,1.2s						
M03C	McCloud	86.70	43	P	P	12 35 58.2	0.0
MDPB	Devils Postpil	86.75	47		P	12 35 58.5	-0.2
MDPB				IAmb	IAmb	12 36 06.1	
	comp=Z,18nm,1.2s						
VNA3	Neumayer Olymp	86.78	179	⇑P	P	12 35 55.5	-2.6
	comp=Z,8.5nm,0.7s						
WSHM	Spangler Hills	86.81	50	P	P	12 35 55.5	-3.3
CWC	Cottonwood Cre	86.83	49		P	12 35 57.5	-1.6
CLC	China Lake	86.85	49	P	P	12 35 58.6	-0.4
CLC				IAmb	IAmb	12 36 08.9	
	comp=Z,21nm,1.3s						
CLC	China Lake	86.85	49	P	P	12 35 58.6	-0.4
CLC				pmax	pmax		
	comp=Z,21nm,1.3s						
CCCA	Chr Cany lake	86.87	50	P	P	12 35 55.9	-3.2
CCCA				IAmb	IAmb	12 36 03.0	
	comp=Z,14nm,0.9s						
LPIG	La Paz	86.98	63	LR	LR	13 06 06.6	
	comp=Z,263nm,21.0s,baz=268,slow=29						
GSC	Goldstone, Bar	87.15	50		P	12 35 59.4	-1.2
GSC	Goldstone, Bar	87.15	50	P	P	12 35 59.4	-1.2
GSC				pmax	pmax		
	comp=Z,16nm,1.4s						
PNTR	Pine Nut	87.16	46		P	12 35 59.6	-1.0
PNTR				IAmb	IAmb	12 36 10.6	
	comp=Z,19nm,1.1s						
BC3	Big Chuckawall	87.33	52	P	P	12 35 59.4	-2.1
BC3				IAmb	IAmb	12 36 06.9	
	comp=Z,25nm,1.6s						
DSP	Deep Springs	87.37	48	P	P	12 36 00.2	-1.2
DSP				IAmb	IAmb	12 36 15.1	
	comp=Z,18nm,1.4s						
GLA	Glamis	87.50	53	P	P	12 36 01.0	-1.2
GLA				IAmb	IAmb	12 36 10.1	
	comp=Z,15nm,1.2s						
GLA	Glamis	87.50	53	P	P	12 36 01.0	-1.2
GLA				pmax	pmax		
	comp=Z,15nm,1.2s						
O22K	Cooper Landing	87.58	17	P	P	12 36 00.2	-1.6
PAHR	Pah Rah Range	87.62	45	P	P	12 36 02.7	-0.1
RYN	Ryan	87.64	47	P	P	12 36 00.9	-2.0
NVAR	Mina Array Bea	87.68	47	P	P	12 36 03.8	+0.6
	comp=Z,4.3nm,1.0s,baz=238,slow=7.1,SNR=18						
NVAR				LR	LR	13 06 47.2	
	comp=Z,586nm,21.7s,baz=247,slow=30						
	comp=Z,4.3nm,1.0s						
NVAR	Mina Array Bea	87.68	47		P	12 36 02.6	-0.6
GWY	Greenwater Val	87.69	49	P	P	12 36 02.2	-1.0
FURC	Furnace Creek,	87.69	49	P	P	12 36 02.8	-0.1
L19K	White Mountain	87.75	14	P	P	12 36 01.5	-1.2
L19K				IAmb	IAmb	12 36 13.2	
	comp=Z,24nm,1.0s						
J04A	Umpqua Nationa	87.78	41	P	P	12 36 03.1	-0.5
NV11	Mina Array Sit	87.78	47		P	12 36 03.4	-0.2
NV11				IAmb	IAmb	12 36 13.6	
	comp=Z,16nm,1.4s						
IRM	Iron Mountain	87.79	52		P	12 36 03.2	-0.4
IRM				IAmb	IAmb	12 36 10.7	
	comp=Z,14nm,1.3s						
LZH	Lanzhou	87.82	310	eP	P	12 36 03.5	-0.4
LZH				pP	pP	12 36 12.5	+0.3
LZH				sP	sP	12 36 16.5	+1.9
LZH				S	S	12 46 50.3	+5.2
LZH				pmax	pmax		
	comp=Z,35nm,1.3s						
LZH				pmax	pmax		
	comp=Z,290nm,5.3s						
LZH				LR	LR		
	comp=Z,210nm,17.2s						
LZH				LR	LR		
	comp=Z,240nm,17.9s						
LZH				LR	LR		
	comp=Z,520nm,18.9s						
SHOC	Shoshone, Teco	87.82	50	P	P	12 36 03.6	-0.1
SHOC				IAmb	IAmb	12 36 13.3	
	comp=Z,13nm,1.2s						
GMN	Gold Mountain	87.83	48	P	P	12 36 03.0	-0.9
DANC	Danby, Needles	87.85	51	P	P	12 36 04.0	+0.2
DANC				IAmb	IAmb	12 36 35.0	
	comp=Z,20nm,1.4s						
LZDM	Lanzhou Array	87.86	310	P	P	12 36 04.0	-0.2
	comp=Z,1.7nm,0.3s,baz=92,slow=7.4,SNR=9.6						
LZDM				LR	LR	13 12 36.3	
	comp=Z,185nm,21.7s,baz=120,slow=34						
	comp=Z,1.7nm,0.3s						
I04A	Tendick Farm,	87.91	41	P	P	12 36 04.2	+0.3
WCT	Wildcat Mounta	88.02	49	P	P	12 36 05.4	+0.7
BLYC	Blythe	88.05	52	P	P	12 36 04.7	0.0
MTPC	Mountain Pass	88.13	50	P	P	12 36 05.6	+0.2
113A	Mohawk Valley,	88.15	54	P	P	12 36 04.9	-0.3
K05A	Summer Lake	88.25	42		P	12 36 05.3	-0.5
J05D	Fort Rock, OR	88.34	41	P	P	12 36 05.5	-0.7
J05D				IAmb	IAmb	12 36 13.7	
	comp=Z,19nm,1.0s						
H04A	Detroit Lake	88.53	40		P	12 36 06.3	-0.6
H04A				IAmb	IAmb	12 36 13.7	
	comp=Z,44nm,1.5s						
TNA	Tin City	88.60	8	P	P	12 36 06.1	-0.5
PINE	Pine Mountain	88.80	41		P	12 36 09.0	+0.7
PINE				IAmb	IAmb	12 36 15.9	
	comp=Z,36nm,1.3s						
SHPR	Sheep Range	88.90	50		P	12 36 09.3	+0.4
L22K	Petersville	89.02	16	P	P	12 36 08.1	-0.6
L22K				IAmb	IAmb	12 36 09.1	
	comp=Z,38nm,1.6s						
S11A	Rachel	89.04	48	P	P	12 36 08.7	-0.9
S11A				IAmb	IAmb	12 36 40.5	
	comp=Z,42nm,1.7s						
SML	Sawmill	89.06	17	P	P	12 36 09.1	+0.2
SML				IAmb	IAmb	12 36 19.3	
	comp=Z,37nm,1.4s						
W13A	Hualapai Mount	89.15	51		P	12 36 10.3	+0.1
HOOD	Mount Hood Mea	89.20	40	P	P	12 36 09.8	-0.4
HOOD				IAmb	IAmb	12 36 11.8	
	comp=Z,41nm,1.4s						
Y14A	Wickenburg	89.26	53	P	P	12 36 11.3	+0.7
WVOR	Wild Horse Val	89.52	43		P	12 36 10.9	-0.8
WVOR				IAmb	IAmb	12 36 13.9	
	comp=Z,22nm,1.4s						
WVOR	Wild Horse Val	89.52	43	P	P	12 36 10.9	-0.8
WVOR				pmax	pmax		
	comp=Z,22nm,1.4s						
D05A	Enumclaw	90.03	38	P	P	12 36 13.2	-0.6
J08A	Circle Bar Ran	90.09	42	P	P	12 36 13.3	-1.0
BILL	Bilibino	90.14	357	P	P	12 36 12.7	-1.1
BILL				IAmb	IAmb	12 36 21.4	
	comp=Z,34nm,1.4s						
BILL	Bilibino	90.14	357	ceP	P	12 36 15.8	+2.0
BILL				pmax	pmax		
	comp=Z,17nm,1.4s						
GRNC	Granite Creek	90.14	20	P	P	12 36 12.5	-1.7
GRNC				IAmb	IAmb	12 36 21.7	
	comp=Z,34nm,1.1s						
RND	Reindeer	90.24	16	P	P	12 36 11.2	-3.3
RND				IAmb	IAmb	12 36 25.4	
	comp=Z,18nm,1.1s						
RND	Reindeer	90.24	16	P	P	12 36 11.2	-3.3
RND				pmax	pmax		
	comp=Z,18nm,1.1s						
S32K	Killisnoo	90.33	25	P	P	12 36 15.5	+0.6
DHY	Denali Highway	90.35	17		P	12 36 15.9	+0.9
DHY				IAmb	IAmb	12 36 22.0	
	comp=Z,22nm,1.4s						
F17K	Baldwin Pennin	90.37	10		P	12 36 14.9	+0.1
F17K				IAmb	IAmb	12 38 50.8	
	comp=Z,42nm,1.9s						
H19K	Roundabout Mou	90.38	12	P	P	12 36 15.1	+0.2
LCMT	Little Creek M	90.50	50	P	P	12 36 16.0	-0.4
F07A	Phinny Hill Vi	90.53	40	P	P	12 36 17.1	+1.0
F07A				IAmb	IAmb	12 36 30.8	
	comp=Z,20nm,1.3s						
CIT	Chita	90.60	328	eP	P	12 36 20.2	+3.8
CIT				e		12 36 34.6	
CIT				pmax	pmax		
	comp=Z,129nm,2.3s						
CCUT	Cedar City	90.67	49		P	12 36 18.1	+0.8
SPR3	Spring Creek 3	90.67	48		P	12 36 17.2	-0.1
SPR3				IAmb	IAmb	12 36 24.4	
	comp=Z,27nm,1.6s						
PSUT	Pine Spring	90.78	48	P	P	12 36 17.6	-0.1
PAX	Paxson	90.78	17	P	P	12 36 16.1	-0.9
PAX				IAmb	IAmb	12 36 24.3	
	comp=Z,17nm,1.3s						
PAX	Paxson	90.78	17	P	P	12 36 16.1	-0.9
PAX				pmax	pmax		
	comp=Z,17nm,1.3s						
G08A	Pilot Rock	90.79	41		P	12 36 17.8	+0.2
G08A				IAmb	IAmb	12 36 31.5	
	comp=Z,16nm,1.1s						
KNB	Kanab	90.80	50		P	12 36 17.6	-0.3
KNB				IAmb	IAmb	12 36 33.3	
	comp=Z,29nm,1.5s						
KNB	Kanab	90.80	50	P	P	12 36 17.6	-0.3
KNB				pmax	pmax		
	comp=Z,29nm,1.5s						
O29M	Mount Kennedy	90.87	22	P	P	12 36 17.2	-0.3
O29M				IAmb	IAmb	12 37 52.0	
	comp=Z,16nm,1.1s						
SZCU	Shurtz Canyon	90.88	50	P	P	12 36 18.5	+0.2
SZCU				IAmb	IAmb	12 36 32.9	
	comp=Z,20nm,1.5s						
ELK	Elko	90.89	46	LR	LR	13 09 42.9	
	comp=Z,639nm,21.9s,baz=262,slow=30						
ELK	Elko	90.89	46		P	12 36 17.7	-0.5
ELK				IAmb	IAmb	12 36 20.4	
	comp=Z,13nm,1.1s						
ELK	Elko	90.89	46	P	P	12 36 17.7	-0.5
ELK				pmax	pmax		
	comp=Z,13nm,1.2s						
U15A	North Rim	90.91	51	P	P	12 36 18.3	-0.3
U15A				IAmb	IAmb	12 36 26.4	
	comp=Z,17nm,1.1s						
E07A	Sunnyside	90.92	39		P	12 36 18.9	+1.0
YAK	Yakutsk	90.98	341	LR	LR	13 11 00.6	
	comp=Z,638nm,22.0s,baz=121,slow=31						
YAK	Yakutsk	90.98	341	P	P	12 36 18.0	+0.3
YAK				IAmb	IAmb	12 36 21.3	
	comp=Z,24nm,1.0s						
YAK	Yakutsk	90.98	341	eP	P	12 36 20.4	+2.6
YAK				e*PP	sP	12 36 35.3	+6.0
YAK				ePPP	PPP	12 41 54.7	
YAK				eS	SKSac	12 46 47.3	-0.1
YAK				e*SS	ScS	12 47 18.2	+2.0
YAK				eSS	SS	12 53 11.1	-6.3
YAK				eSSS	SSS	12 56 46.8	
YAK				pmax	pmax		
	comp=Z,29nm,1.3s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,226nm,4.7s						
YAK				pmax	pmax		
	comp=N,141nm,4.1s						
YAK				pmax	pmax		
	comp=E,191nm,4.8s						
YAK				smax	smax		
	comp=N,136nm,4.9s						
YAK				smax	smax		
	comp=E,73nm,3.0s						
I21K	Tanana	91.00	14	P	P	12 36 17.6	-0.2
I21K				IAmb	IAmb	12 36 25.7	
	comp=Z,38nm,1.6s						
HAWA	Hanford	91.03	39		P	12 36 18.8	+0.4
HAWA				IAmb	IAmb	12 36 33.2	
	comp=Z,24nm,1.2s						
M26K	Nabesna, AK	91.04	19	P	P	12 36 18.4	+0.2
M26K				IAmb	IAmb	12 36 30.9	
	comp=Z,18nm,1.1s						
WUAZ	Wupatki	91.17	52		P	12 36 20.2	+0.6
WUAZ				IAmb	IAmb	12 36 27.3	
	comp=Z,18nm,1.2s						
NEA2	Nenana	91.17	15	P	P	12 36 17.7	-1.0
NEA2				IAmb	IAmb	12 36 34.3	
	comp=Z,47nm,2.0s						
WAH2	Wahluke Slope	91.20	39	P	P	12 36 18.7	-0.4
WAH2				IAmb	IAmb	12 36 36.9	
	comp=Z,41nm,1.8s						
H21K	Melozitna Rive	91.23	13	P	P	12 36 20.0	+1.1
MENT	Mentasta	91.25	18	P	P	12 36 18.5	-0.6
MENT				IAmb	IAmb	12 36 27.1	
	comp=Z,15nm,1.0s						
MENT	Mentasta	91.25	18	P	P	12 36 24.9	+5.8
	comp=Z,20nm,1.3s						
H03S2	Juan Fernandez	91.25	127	T	T	14 17 38.1	
	baz=241,slow=74,SNR=8.5						
H03S1	Juan Fernandez	91.27	127	T	T	14 17 46.2	
	baz=241,slow=74,SNR=8.1						
H03S3	Juan Fernandez	91.27	127	T	T	14 17 42.7	
	baz=241,slow=74,SNR=9.3						
F19K	Shaleruckik Mo	91.31	11	P	P	12 36 18.7	-0.5
F19K				IAmb	IAmb	12 36 26.5	
	comp=Z,41nm,2.0s						
WRH	Wood River Hil	91.31	16	P	P	12 36 18.2	-1.1
M27K	Edge Creek, AK	91.34	19	P	P	12 36 18.2	-1.5
PKCU	Pink Cliffs	91.36	50	P	P	12 36 21.1	+0.4
PKCU				IAmb	IAmb	12 36 28.5	
	comp=Z,25nm,1.1s						
K24K	Donnelly Dome	91.37	17	P	P	12 36 18.5	-1.2
E18K	Tukpahlearik C	91.37	10	P	P	12 36 19.7	+0.2
E18K				IAmb	IAmb	12 36 28.0	
	comp=Z,19nm,1.4s						
L26K	Log Cabin Wild	91.43	18	P	P	12 36 19.2	-0.7
L26K				IAmb	IAmb	12 36 27.8	
	comp=Z,26nm,1.4s						
H03N3	Juan Fernandez	91.43	127	T	T	14 17 49.2	
	baz=233						
H03N2	Juan Fernandez	91.44	127	T	T	14 18 09.8	
	baz=233						
H03N1	Juan Fernandez	91.45	127	T	T	14 18 01.2	
	baz=233						
EPH	Ephrata	91.49	39	P	P	12 36 20.1	-0.5
EPH				IAmb	IAmb	12 36 27.3	
	comp=Z,66nm,2.0s						
C16K	Lisburne Hills	91.51	8	P	P	12 36 19.9	-0.2
C16K				IAmb	IAmb	12 36 27.8	
	comp=Z,45nm,1.8s						
CCB	Clear Creek Bu	91.53	16		P	12 36 18.9	-1.4
CCB				IAmb	IAmb	12 36 27.2	
	comp=Z,16nm,1.1s						
HDA	Harding Lake	91.55	16	P	P	12 36 19.6	-0.8
I23K	Minto, Yukon-K	91.57	15	P	P	12 36 20.5	+0.1
I23K				IAmb	IAmb	12 36 31.6	
	comp=Z,16nm,1.3s						
RIDG	Independent Ri	91.57	17	P	P	12 36 19.8	-0.8
BMO	Blue Mountains	91.58	42		P	12 36 19.5	-1.6
BMO	Blue Mountains	91.58	42	P	P	12 36 19.5	-1.6
BMO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HYT	Haines Junctio	91.62	22	P	P	12 36 20.5	-0.4
HYT				IAmb	IAmb	12 39 15.4	
	comp=Z,20nm,1.3s						
RDOG	Red Dog Mine	91.62	9	P	P	12 36 20.6	-0.1
COLA	College	91.70	15	P	P	12 36 20.6	-0.5
COLA	College	91.70	15	iP	P	12 36 20.4	-0.7
COLA				pmax	pmax		
	comp=Z,18nm,1.3s						
DOT	Dot Lake	91.71	17	IAmb	IAmb	12 36 28.9	
	comp=Z,21nm,1.0s						
MTPU	Mount Pierson	91.72	49		P	12 36 22.3	0.0
MTPU				IAmb	IAmb	12 36 30.6	
	comp=Z,11nm,1.0s						
D08A	Wollman Farm,	91.73	39		P	12 36 22.7	+1.0
D08A				IAmb	IAmb	12 36 45.9	
	comp=Z,44nm,1.9s						
H22K	Ishtalitna Cre	91.74	14		P	12 36 21.3	0.0
ULN	Ulaanbaatar	91.75	322	ceP	P	12 36 21.6	-0.4
ULN				pmax	pmax		
	comp=Z,15nm,1.1s						
X18A	Snowflake	91.78	53	P	P	12 36 22.2	-0.3
TCRU	Three Creeks R	91.79	49	P	P	12 36 22.4	-0.1
MFID	Camas Ranch	91.79	43		P	12 36 21.4	-0.8
MFID				IAmb	IAmb	12 36 39.0	
	comp=Z,5.1nm,0.5s						
G21K	Allakaket	91.83	13	P	P	12 36 21.3	-0.4
G21K				IAmb	IAmb	12 36 33.3	
	comp=Z,18nm,1.6s						
IL31		91.86	16		P	12 36 20.4	-1.4
IL31				IAmb	IAmb	12 36 28.8	
	comp=Z,23nm,1.2s						
ILAR	Eielson Array	91.86	16	P	P	12 36 21.3	-0.5
	comp=Z,5.0nm,0.9s,baz=235,slow=6.1,SNR=15						
ILAR				LR	LR	13 11 40.3	
	comp=Z,393nm,20.2s,baz=216,slow=32						
	comp=Z,5.0nm,0.9s						
ILAR	Eielson Array	91.86	16		P	12 36 20.4	-1.4
F20K	Avaraart Lake	91.87	12	P	P	12 36 21.2	-0.6
F20K				IAmb	IAmb	12 36 33.5	
	comp=Z,15nm,1.4s						
L27K	Beaver Creek,	91.90	19	P	P	12 36 20.8	-1.3
L27K				IAmb	IAmb	12 36 30.7	
	comp=Z,20nm,1.4s						
E09A	Wood Farm, Sta	91.91	40	P	P	12 36 22.2	-0.3
BCAR	Beaver Creek A	91.91	19		P	12 36 21.5	-0.7
E19K	Redstone River	91.96	11	P	P	12 36 22.0	-0.2
E19K				IAmb	IAmb	12 36 34.2	
	comp=Z,18nm,1.4s						
HPIG		91.97	62	P	P	12 36 22.4	-1.1
SCRK	Sand Creek	91.99	17		P	12 36 21.9	-0.7
SCRK				IAmb	IAmb	12 36 30.5	
	comp=Z,26nm,1.4s						
S34M	Telegraph Cree	92.00	26		P	12 36 22.8	+0.1
O30N	Mendenhall	92.07	22	P	P	12 36 22.6	-0.3
SONM	Songino Array	92.11	322	P	P	12 36 24.5	+0.9
	comp=Z,10nm,1.1s,baz=144,slow=2.1,SNR=16						
SONM				LR	LR	13 16 07.7	
	comp=Z,250nm,20.9s,baz=116,slow=34						
	comp=Z,10nm,1.1s						
SONM	Songino Array	92.11	322		P	12 36 21.9	-1.7
SONM				IAmb	IAmb	12 36 27.7	
	comp=Z,16nm,1.2s						
SONM	Songino Array	92.11	322	P	P	12 36 21.9	-1.7
SONM				pmax	pmax		
	comp=Z,16nm,1.2s						
J25K	Salcha River,	92.12	16	P	P	12 36 22.5	-0.7
F10A	Beach Ranch, E	92.19	41	IAmb	IAmb	12 36 50.1	
	comp=Z,13nm,1.3s						
W18A	Petrified Fore	92.20	53	P	P	12 36 23.2	-1.2
W18A				IAmb	IAmb	12 36 31.8	
	comp=Z,10nm,1.1s						
GTA	Gaotai	92.20	312	P	P	12 36 28.5	+4.3
GTA				SKS	SKSac	12 47 01.3	+5.5
GTA				SS	SS	12 53 36.5	+0.2
GTA				pmax	pmax		
	comp=Z,34nm,1.2s						
GTA				LR	LR		
	comp=Z,370nm,19.5s						
GTA				LR	LR		
	comp=Z,320nm,20.7s						
GTA				LR	LR		
	comp=Z,620nm,22.7s						
DUG	Dugway, Tooele	92.26	47		P	12 36 24.6	+0.1
DUG				IAmb	IAmb	12 36 38.9	
	comp=Z,23nm,1.9s						
DUG	Dugway, Tooele	92.26	47	P	P	12 36 24.6	+0.1
DUG				pmax	pmax		
	comp=Z,23nm,1.9s						
C18K	Utukok River	92.42	9	P	P	12 36 24.0	-0.4
C18K				IAmb	IAmb	12 36 32.7	
	comp=Z,20nm,1.3s						
SHL	Shillong	92.43	297	P	P	12 36 25.4	-0.3
SHL	Shillong	92.43	297	P	P	12 36 25.4	-0.3
SHL				pmax	pmax		
	comp=Z,31nm,1.2s						
HMU	Henry Mountain	92.69	50	P	P	12 36 25.3	-1.4
HMU				IAmb	IAmb	12 38 47.8	
	comp=Z,9.2nm,0.8s						
G23K	Bananza Creek	92.72	14	P	P	12 36 26.5	+0.6
G23K				IAmb	IAmb	12 36 37.5	
	comp=Z,30nm,1.7s						
D19K	Kuna River	92.75	10	P	P	12 36 25.4	-0.5
HLID	Hailey	92.77	44		P	12 36 26.1	-0.7
Q16A	Castle Valley	92.82	49		P	12 36 26.2	-1.0
Q16A				IAmb	IAmb	12 36 35.3	
	comp=Z,31nm,1.6s						
LR03	Panguipulli	92.96	135		P	12 36 26.3	-1.5
MPU	Maple Canyon	92.99	48	P	P	12 36 27.6	-0.4
MPU				IAmb	IAmb	12 36 47.0	
	comp=Z,18nm,1.6s						
HVU	Hansel Valley	93.01	46	P	P	12 36 26.3	-1.6
HVU	Hansel Valley	93.01	46	P	P	12 36 26.3	-1.6
HVU				pmax	pmax		
	comp=Z,6.0nm,1.1s						
L29M	L29M	93.06	20	P	P	12 36 26.9	-0.6
C19K	Lookout Ridge	93.07	9	P	P	12 36 26.6	-0.8
C19K				IAmb	IAmb	12 36 35.3	
	comp=Z,29nm,1.4s						
M30M	Minto, Yukon	93.11	21		P	12 36 26.2	-1.5
COLD	Coldfoot	93.12	13		P	12 36 25.8	-1.8
COLD				IAmb	IAmb	12 36 36.2	
	comp=Z,14nm,1.3s						
D20K	Etivluk River	93.19	10	P	P	12 36 27.7	-0.2
CTU	Camp Tracy	93.21	47	P	P	12 36 27.6	-1.4
EPT	El Paso	93.25	57	P	P	12 36 28.4	-0.8
I26K	Coal Creek Min	93.25	17	P	P	12 36 27.2	-1.1
G24K	Hadweenzic Riv	93.29	14	P	P	12 36 28.8	+0.4
G24K				IAmb	IAmb	12 36 40.3	
	comp=Z,25nm,1.6s						
SRU	San Rafael Swe	93.36	49	P	P	12 36 29.9	+0.2
SRU	San Rafael Swe	93.36	49	P	P	12 36 29.9	+0.2
SRU				pmax	pmax		
	comp=Z,8.0nm,1.1s						
P17A	Butcher Ranch,	93.37	49	P	P	12 36 28.9	-0.8
P17A				IAmb	IAmb	12 36 49.0	
	comp=Z,26nm,2.0s						
DAWY	Dawson	93.38	19		P	12 36 28.1	-0.9
DAWY				IAmb	IAmb	12 36 36.9	
	comp=Z,14nm,1.1s						
NEW	Newport	93.39	39	LR	LR	13 13 38.6	
	comp=Z,442nm,18.4s,baz=166,slow=32						
N32M	Quiet Lake	93.40	23	P	P	12 36 29.5	+0.4
N32M				IAmb	IAmb	12 36 37.6	
	comp=Z,21nm,1.1s						
PLCA	Paso Flores	93.53	137	LR	LR	13 09 24.3	
	comp=Z,569nm,22.0s,baz=246,slow=30						
E22K	Anaktuvuk Pass	93.56	12		P	12 36 29.1	-0.6
E22K				IAmb	IAmb	12 36 38.0	
	comp=Z,23nm,1.4s						
TCUT	Toone Canyon	93.63	47	P	P	12 36 31.5	+0.6
K29M	Barlow Dome	93.78	20	P	P	12 36 30.4	-0.5
K29M				IAmb	IAmb	12 36 38.4	
	comp=Z,21nm,1.5s						
BSUT	Blindstream Ca	93.82	48		P	12 36 32.1	+0.1
BSUT				IAmb	IAmb	12 37 02.3	
	comp=Z,24nm,1.8s						
LENM	Lemitar	93.86	55	P	P	12 36 31.9	-0.1
F24K	Squaw Lake	93.86	14	P	P	12 36 30.3	-0.8
I27K	Kandik River	93.89	17	P	P	12 36 31.0	-0.3
I27K				IAmb	IAmb	12 36 39.3	
	comp=Z,13nm,1.2s						
PV05	Paradox Valley	93.92	50	P	P	12 36 33.8	+1.4
PV05				IAmb	IAmb	12 37 05.6	
	comp=Z,14nm,1.4s						

E23K	Chandalar	93.94	13	P	P	12 36 31.5	0.0
JRQG	Juriquilla Cam	93.96	69	P	P	12 36 32.2	-0.7
CRNM	Carthage	93.96	55	P	P	12 36 32.7	+0.1
J29N	Klondike Camp	94.01	19		P	12 36 32.6	+0.7
J29N				IAmb	IAmb	12 36 40.4	
	comp=Z,24nm,1.1s						
D22K	Ayikyak River	94.03	12	P	P	12 36 32.0	+0.2
D22K				IAmb	IAmb	12 36 43.9	
	comp=Z,28nm,1.4s						
VHRN	Van Horn	94.05	59	P	P	12 36 32.5	-0.4
PV10	Paradox Valley	94.09	50	P	P	12 36 32.5	-0.6
PV10				IAmb	IAmb	12 36 37.4	
	comp=Z,17nm,1.2s						
MNTX	Cornudas Mount	94.10	58	P	P	12 36 33.9	+0.9
MAYO	Mayo, Yukon	94.12	20		P	12 36 32.9	+0.6
PV20	West Nyswonger	94.13	50	P	P	12 36 32.2	-1.0
PV23	Carpenter Ridg	94.14	50	P	P	12 36 33.5	+0.1
PV13	Radium Mtn., P	94.16	50	P	P	12 36 31.2	-2.2
PV13				IAmb	IAmb	12 36 35.0	
	comp=Z,13nm,1.2s						
PV03	Paradox Valley	94.18	50	P	P	12 36 34.9	+1.5
PV03				IAmb	IAmb	12 36 50.9	
	comp=Z,21nm,1.9s						
PV21	Cone Mtn., Par	94.22	50	P	P	12 36 34.0	+0.3
PV21				IAmb	IAmb	12 36 40.3	
	comp=Z,19nm,1.4s						
I28M	Miner Creek	94.24	18	P	P	12 36 32.8	-0.2
I28M				IAmb	IAmb	12 36 44.9	
	comp=Z,25nm,1.6s						
B21K	Ikpikpuk River	94.33	11	P	P	12 36 31.1	-2.0
PV22	Blue Mesa, Par	94.34	50	P	P	12 36 33.1	-1.1
MCMT	McKenzie Canyo	94.35	43	P	P	12 36 34.2	+0.1
G26K	Porcupine Rive	94.37	15	P	P	12 36 33.6	+0.3
G26K				IAmb	IAmb	12 36 41.9	
	comp=Z,28nm,1.3s						
GOMU	GeErMu	94.39	307	Pdif	P	12 36 38.0	+3.3
GOMU				LR	LR		
	comp=Z,190nm,20.8s						
GOMU				LR	LR		
	comp=Z,350nm,20.6s						
H27K	Steamboat Moun	94.39	17		P	12 36 32.9	-0.7
H27K				IAmb	IAmb	12 36 41.8	
	comp=Z,24nm,1.4s						
PV07	Paradox Valley	94.40	50		P	12 36 33.1	-1.4
F25K	Christian Rive	94.44	15	P	P	12 36 33.6	-0.1
TOLK	Toolik Lake Re	94.44	13	P	P	12 36 33.9	+0.2
TOLK				IAmb	IAmb	12 36 42.1	
	comp=Z,40nm,1.9s						
PV15	Paradox Valley	94.48	50	P	P	12 36 33.4	-1.5
D23K	Nanushuk River	94.49	12	P	P	12 36 33.1	-0.8
TX31	Lajitas Ar. Si	94.53	60	P	P	12 36 33.4	-1.8
TXAR	Lajitas Array	94.53	60	P	P	12 36 37.4	+2.2
	comp=Z,1.5nm,1.0s,baz=255,slow=4.8,SNR=7.8						
	comp=Z,1.5nm,1.0s						
TXAR	Lajitas Array	94.53	60	P	P	12 36 35.1	0.0
TXAR	Lajitas Array	94.53	60	P	P	12 36 35.2	0.0
BMAR	Burnt Mountain	94.55	15	P	P	12 36 32.4	-1.9
TASM	ASL Pad, Albuq	94.57	54	P	P	12 36 36.2	+0.9
TASM				IAmb	IAmb	12 36 41.7	
	comp=Z,6.7nm,1.3s						
TASM	ASL Pad, Albuq	94.57	54	P	P	12 36 34.0	-1.3
TASM	ASL Pad, Albuq	94.57	54	P	P	12 36 35.0	-0.3
TASM				IAmb	IAmb	12 36 41.7	
	comp=Z,6.5nm,1.3s						
TASM	ASL Pad, Albuq	94.57	54	P	P	12 36 34.4	-0.9
TASM				IAmb	IAmb	12 36 41.7	
	comp=Z,6.2nm,1.2s						
ABQ	Albuquerque	94.57	54		P	12 36 35.3	0.0
ANMO	Albuquerque	94.57	54	P	P	12 36 35.5	+0.1
ANMO	Albuquerque	94.57	54	*i* P	P	12 36 35.2	-0.1
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
LSA	Lhasa	94.64	300	P	P	12 36 34.6	-1.4
LSA				IAmb	IAmb	12 36 43.8	
	comp=Z,9.2nm,1.0s						
LSA	Lhasa	94.64	300	P	P	12 36 34.7	-1.4
LSA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
I29M	Ogilvie Camp,	94.64	18		P	12 36 33.0	-1.7
I29M				IAmb	IAmb	12 36 42.5	
	comp=Z,22nm,1.4s						
J30M	Hart River	94.67	19	P	P	12 36 33.4	-1.5
J30M				IAmb	IAmb	12 36 43.1	
	comp=Z,15nm,1.6s						
BPMT	Black Pine Rid	94.71	42	P	P	12 36 35.3	-0.5
G27K	Doyon Strip	94.80	16	P	P	12 36 35.0	-0.4
G27K				IAmb	IAmb	12 37 21.6	
	comp=Z,24nm,1.9s						
F26K	Sheenjek River	94.87	15	P	P	12 36 34.9	-0.8
F26K				IAmb	IAmb	12 36 43.7	
	comp=Z,14nm,1.4s						
E25K	Arctic Village	94.87	14	pP	P	12 36 36.8	+1.1
D24K	Happy Valley	95.01	13	P	P	12 36 35.5	-0.8
I30M	Mount Dempster	95.11	19	P	P	12 36 36.6	-0.4
I30M				IAmb	IAmb	12 36 44.7	
	comp=Z,15nm,1.5s						
ZAK	Zakamensk	95.16	323	*e*P	P	12 36 38.6	+1.1
ZAK				pmax	pmax		
	comp=Z,14nm,1.8s						
BOZ	Bozeman (W)	95.47	43	P	P	12 36 38.1	-0.9
BOZ				IAmb	IAmb	12 36 42.5	
	comp=Z,15nm,1.8s						
BOZ	Bozeman (W)	95.47	43	P	P	12 36 38.2	-0.9
BOZ				pmax	pmax		
	comp=Z,15nm,1.8s						
PALK	Pallekele	95.49	276	LR	LR	13 22 17.7	
	comp=Z,416nm,18.9s,baz=119,slow=37						
C24K	Franklin Bluff	95.51	12	P	P	12 36 37.5	-1.0
PDAR	Pinedale Array	95.59	46	P	P	12 36 41.0	+1.2
	comp=Z,0.4nm,0.7s,baz=224,slow=4.1,SNR=5.2						
PDAR				LR	LR	13 13 54.5	
	comp=Z,226nm,19.2s,baz=258,slow=32						
	comp=Z,0.4nm,0.7s						
D25K	Kavik River	95.66	13	P	P	12 36 37.8	-1.5
EPYK	Eagle Plains	95.82	18	P	P	12 36 38.5	-1.6
E27K	Coleen River	95.86	15	P	P	12 36 39.8	-0.4
E27K				IAmb	IAmb	12 36 48.1	
	comp=Z,19nm,1.5s						
F28M	Old Crow	95.87	16	P	P	12 36 40.0	-0.2
F28M				IAmb	IAmb	12 36 50.9	
	comp=Z,36nm,1.9s						
G30M	tAoh Zraii Nji	96.39	18	IAmb	IAmb	12 36 51.1	
	comp=Z,16nm,1.2s						
C27K	Jago River	96.48	14	P	P	12 36 42.1	-0.9
E28M	Babbage River	96.69	16		P	12 36 43.3	-0.6
D27M	Malcolm River	96.81	15	P	P	12 36 43.3	-1.3
D27M				IAmb	IAmb	12 36 52.4	
	comp=Z,15nm,1.3s						
E29M	Blow River	96.94	16	P	P	12 36 45.0	-0.1
E29M				IAmb	IAmb	12 36 56.3	
	comp=Z,17nm,1.6s						
F30M	Barrier River	96.96	17	P	P	12 36 44.6	-0.6
MOY	Mondy	97.04	323	*e*P	P	12 36 48.3	+2.3
MOY				pmax	pmax		
	comp=Z,15nm,2.1s						
F31M	Tsiigehtchic	97.42	18		P	12 36 45.2	-2.0
TIXI	Tiksi	98.52	347	LR	LR	13 17 01.8	
	comp=Z,316nm,21.1s,baz=189,slow=33						
YKA	Yellowknife Ar	101.39	27	P	Pdif	12 37 04.3	-0.7
	comp=Z,0.3nm,0.8s,baz=258,slow=5.4,SNR=5.7						
YKA	Yellowknife Ar	101.39	27		Pdif	12 37 04.0	-1.1
YKA	Yellowknife Ar	101.39	27	P	Pdif	12 37 04.0	-1.1
WMQ	Urumqi	102.28	312	*e*P	Pdif	12 37 10.0	+0.4
WMQ				pmax	pmax		
	comp=Z,16nm,1.1s						
WMQ				LR	LR		
	comp=Z,310nm,24.3s						
BVAR	Borovoye Array	115.37	319	PKP	PKiKP	12 41 54.3	-1.3
	comp=Z,1.3nm,0.7s,baz=79,slow=0.7,SNR=4.5						
BORK	Borovoye	115.41	319*c*	*i*PKIKP	PKPdf	12 41 56.9	+1.2
BORK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
ARTI	Arti	122.19	324	*i* PKIKP	PKiKP	12 42 09.6	+0.8
ARTI						12 43 40.9	
ARTI						12 49 21.5	
SUMG	Summit	126.48	12		PKiKP	12 42 17.9	+0.5
SUMG	Summit	126.48	12	PKIKP	PKiKP	12 42 17.9	+0.5
ARCES	ARCESS Array B	128.95	346	PKP	PKPdf	12 42 20.1	-1.1
	comp=Z,11nm,1.1s,baz=36,slow=2.4,SNR=7.7						
BELG	Belogornoye	129.16	320	*i* PKIKP	PKiKP	12 42 22.8	+0.1
KLMR	Klimovskoe	130.08	333	*e*PKIKP	PKPdf	12 42 23.6	+0.1
KLMR				pmax	pmax		
	comp=Z,24nm,1.5s						
MAK	Makhachkala	131.07	308	*e*P	Pdif	12 39 11.2	-6.3
MAK				*i*		12 42 22.3	
MAK				*e*		12 44 39.9	
MAK				*e*PPP	PPP	12 47 33.5	
MAK				*e*		12 49 30.4	
MAK				*e*SS	SS	13 02 05.9	-7.5
MAK				*e*SSS	SSS	13 07 01.6	
MAK				pmax	pmax		
	comp=Z,131nm,1.3s						
VRH	Novokhopyorsk	133.01	320	*e*PKIKP	PKiKP	12 42 30.1	-0.5
VRH				pmax	pmax		
	comp=Z,23nm,1.9s						
LPSR	Galich'ya Gora	134.10	323	*e*PKIKP	PKiKP	12 42 34.6	+1.9
LPSR				pmax	pmax		
	comp=Z,39nm,2.2s						
OBN	Obninsk	134.25	327	⇑*e*PKIKP	PKiKP	12 42 33.2	+0.3
OBN				*e*		12 45 04.5	
OBN				*e*SS	SS	13 03 15.4	+25
OBN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
OBN				MLR	MLR		
	comp=Z,342nm,21.0s						
VORR	Voronezh	134.31	322	*e*PKIKP	PKiKP	12 42 32.2	-1.0
VORR				pmax	pmax		
	comp=Z,25nm,1.8s						
KIV	Kislovodsk	134.36	310	*i* PKIKP	PKPdf	12 42 31.4	-0.9
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,164nm,24.0s						
SHA1	Shidzhatmaz	134.43	310*c*	*i*PKIKP	PKiKP	12 42 33.7	-0.3
NEUR	Neytrino	134.49	309	*i* PKIKP	PKPdf	12 42 32.8	+0.1
FINES	FINESS Array B	134.88	339	PKP	PKPdf	12 42 30.8	-1.8
	comp=Z,3.9nm,0.9s,baz=46,slow=4.0,SNR=6.4						
VSU	Vasula	136.72	335	*i* PKIKP	PKiKP	12 42 38.9	+1.0
NOA	NORSAR Array B	139.32	347	PKhKP	PKPpre	12 42 37.6	
	comp=Z,2.2nm,1.0s,baz=30,slow=2.0,SNR=5.3						
HFS	Hagfors	139.56	345	PKhKP	PKPpre	12 42 41.3	
	comp=Z,2.8nm,0.9s,baz=318,slow=4.0,SNR=5.1						
AKASG	Malin Array Be	140.32	325	PKP	PKPdf	12 42 43.1	+0.1
	comp=Z,0.4nm,0.3s,baz=60,slow=2.1,SNR=4.9						
AKBB	Malin Array Si	140.32	325	*i* PKIKP	PKPdf	12 42 43.4	+0.4
KONO	Kongsberg	140.92	347	⇓PKIKP	PKPdf	12 42 41.3	-2.5
KIRS	Kirsehir-Merke	141.88	306	⇓P	PKPdf	12 42 46.0	-0.2
BRTR	Keskin Array B	141.93	307	PKP	PKPdf	12 42 46.6	+0.1
	comp=Z,1.3nm,0.8s,baz=68,slow=2.7,SNR=5.5						
CFR	Carcaliu	143.74	317	⇑P	PKPdf	12 42 49.9	+0.7
CFR	Carcaliu	143.74	317	⇑PKIKP	PKPdf	12 42 49.9	+0.7
GHRR		143.76	319	⇑P	PKPdf	12 42 50.3	+1.0
TESR	Tescani	143.99	320	⇑P	PKPbc	12 42 47.0	-0.5
PANC	Panciu	144.01	319	⇑P	PKPdf	12 42 51.1	+1.4
ODBI	Odobesti	144.12	319	⇓P	PKPdf	12 42 51.3	+1.4
BURAR	Bucovina Array	144.22	323		PKPdf	12 42 50.5	+0.3
BURAR	Bucovina Array	144.22	323	⇑P	PKPdf	12 42 49.1	-1.1
BURAR	Bucovina Array	144.22	323	⇑PKIKP	PKPdf	12 42 49.1	-1.1
ONER	Baraj Valea Uz	144.23	320	⇑P	PKPdf	12 42 50.8	+0.7
VRI	Vrincioaia	144.27	319	⇑P	PKPab	12 42 46.8	-1.3
VRI	Vrincioaia	144.27	319	⇑PKIKP	PKPab	12 42 46.8	-1.3
PLOR	Plostina	144.32	319	⇓P	PKPab	12 42 46.8	-1.5
PLOR	Plostina	144.32	319	⇓PKIKP	PKPab	12 42 46.8	-1.5
GRER		144.36	318	⇑P	PKPdf	12 42 50.8	+0.5
ICOR	Ion Corvin	144.43	316	⇓P	PKPdf	12 42 51.6	+1.1
COVR	Voineasa-Covas	144.59	320	⇑P	PKPab	12 42 47.4	-2.0
TURR	Turia	144.60	320	⇑P	PKPab	12 42 48.0	-1.4
ISR	Istrita	144.75	318	⇑P	PKPab	12 42 48.6	-1.4
ISR	Istrita	144.75	318	⇑PKIKP	PKPab	12 42 48.6	-1.4
BOSR	Bodos	144.80	320	⇓P	PKPdf	12 42 52.3	+1.2
LEHL	Lehliu	144.89	317	⇑P	PKPbc	12 42 50.2	-0.2
MLR	Muntele Rosu	144.93	319		PKPab	12 42 48.8	-2.0
MLR	Muntele Rosu	144.93	319	⇓P	PKPab	12 42 48.7	-2.0
MLR	Muntele Rosu	144.93	319	⇓PKIKP	PKPab	12 42 48.7	-2.0
DOPR	Dopca	145.02	320	⇑P	PKPab	12 42 49.8	-1.1
STHS	Stebnicka Huta	145.21	328	*e*PKIKP	PKPbc	12 42 50.0	-1.4
STHS	Stebnicka Huta	145.21	328	*e*PKP	PKPbc	12 42 50.0	-1.4
STHS				*e*		12 42 54.1	
ELL	Elmali	145.54	303	PKPbc	PKPab	12 42 52.8	-0.5
ELL	Elmali	145.54	303	PKIKP	PKPab	12 42 52.8	-0.5
CJR	Cluj-Napoca	145.64	323	⇑P	PKPdf	12 42 52.3	-0.3
CJR	Cluj-Napoca	145.64	323	⇑PKIKP	PKPdf	12 42 52.3	-0.3
ARR	Arges	145.78	320	⇑P	PKPdf	12 42 52.0	-0.9
TNR	Turnu Rosu	145.84	321	⇓P	PKPab	12 42 55.0	+1.0
TNR	Turnu Rosu	145.84	321	⇓PKP2	PKPab	12 42 55.0	+1.0
AKAS	Kas	145.91	302	PKPdf	PKPdf	12 42 52.7	-0.7
MARR	Marisel-Cluj	145.93	323	⇑P	PKPbc	12 42 53.2	-0.6
HUMR	Humele	146.01	318	⇓P	PKPdf	12 42 52.1	-1.1
MANT	Manisa	146.07	307	PKPdf	PKPdf	12 42 53.6	-0.2
DRGR		146.09	323	⇑P	PKPab	12 42 54.4	-0.5
DRGR		146.09	323	⇑PKP2	PKPab	12 42 54.4	-0.5
KECS	Kecovo	146.20	327	*e*PKP2	PKiKP	12 42 58.0	+0.4
KECS	Kecovo	146.20	327	*e*PKP	PKiKP	12 42 58.0	+0.4
LANS	Liptovska Anna	146.24	329	*e*PKP2	PKiKP	12 43 00.0	+2.2
LANS	Liptovska Anna	146.24	329	*e*PKP	PKiKP	12 43 00.0	+2.2
LOT	Lotru	146.25	321	⇑P	PKPdf	12 42 49.4	-4.3
BORR	Bors	146.41	324	⇑P	PKiKP	12 42 57.7	-0.4
STEB	Steborice	146.47	332	*e*PKP	PKPdf	12 42 52.6	-1.2
DEV	Deva	146.51	322	⇓P	PKPdf	12 42 54.3	+0.3
OSTC	Ostas	146.66	334	*e*PKIKP	PKPdf	12 42 53.7	-0.5
OSTC				MLR	MLR		
	comp=Z,600nm,21.7s						
OSTC	Ostas	146.66	334	*e*PKP	PKPdf	12 42 53.7	-0.5
OSTC				AMS	AMS	13 47 00.0	
	comp=Z,600nm,21.7s						
MORC	Moravsky Berou	146.68	332	⇑P	PKPdf	12 42 53.9	-0.3
MORC	Moravsky Berou	146.68	332	*e*PKP	PKPdf	12 42 53.3	-0.9
MORC	Moravsky Berou	146.68	332	⇑PKIKP	PKPdf	12 42 53.9	-0.3
DPC	Dobruska-Polom	146.78	333	*e*PKP2	PKPab	12 42 56.9	-0.5
DPC				MLR	MLR		
	comp=Z,500nm,18.6s						
DPC	Dobruska-Polom	146.78	333	*e*PKP	PKPab	12 42 56.9	-0.5
DPC				AMS	AMS	13 47 10.0	
	comp=Z,500nm,18.6s						
UPC	Upice	146.78	334	*e*PKP2	PKiKP	12 42 57.8	-1.0
UPC				MLR	MLR		
	comp=Z,700nm,21.1s						
UPC	Upice	146.78	334	*e*PKP	PKiKP	12 42 57.8	-1.0
UPC				AMS	AMS	13 47 10.0	
	comp=Z,700nm,21.1s						
KRLC	Kraliky	146.79	333	AMS	AMS	13 47 10.0	
	comp=Z,600nm,22.9s						
EKA	Eskdalemuir Ar	146.83	357	PKPbc	PKPbc	12 42 55.0	-1.1
	comp=Z,8.3nm,0.9s,baz=346,slow=3.0,SNR=8.0						
EKA	Eskdalemuir Ar	146.83	357	PKP2	PKPbc	12 42 55.0	-1.1
GZR	Gura Zlata	146.86	321	⇑P	PKPdf	12 42 54.3	-0.4
GZR	Gura Zlata	146.86	321	⇑PKIKP	PKPdf	12 42 54.3	-0.4
PSZ	Piszkesteto	146.87	327	⇑P	PKPab	12 42 57.2	-0.7
PSZ	Piszkesteto	146.87	327	⇑PKP2	PKPab	12 42 57.2	-0.7
SIRR	Siria	146.98	323	⇑P	PKPdf	12 42 55.0	+0.2
JAVC	Velka Javorina	147.29	330	*e*PKP	PKPbc	12 42 56.4	-1.3
CLL	Collm	147.30	337	*i* PKP2	PKPbc	12 42 56.8	-0.7
CLL				pmax	pmax		
	comp=Z,22nm,1.2s						
CLL				pmax	pmax		
	comp=Z,115nm,1.8s						
CLL				MLR	MLR		
	comp=Z,300nm,24.4s						
CLL	Collm	147.30	337	*e*PKPdf	PKPdf	12 42 55.0	-0.1
	comp=Z,10.0nm,1.3s						
CLL				*i* PKPbc	PKPbc	12 42 56.8	-0.7
	comp=Z,22nm,1.2s						
CLL				*i* PKiKP	PKiKP	12 43 00.5	+0.7
	comp=Z,115nm,1.8s						
PVCC	Panska Ves	147.35	335	AMS	AMS	13 47 20.0	
	comp=Z,400nm,21.8s						
HERR	Herculane	147.36	321	⇑P	PKPdf	12 42 55.3	-0.2
BZS	Buzias	147.40	322	⇓P	PKPdf	12 42 55.3	-0.2
BZS	Buzias	147.40	322	⇓PKIKP	PKPdf	12 42 55.3	-0.2
VRAC	Vranov	147.44	332	⇑P	PKPbc	12 42 56.5	-1.5
VRAC	Vranov	147.44	332	*e*PKP	PKPdf	12 42 56.1	+0.6
VRAC	Vranov	147.44	332	⇑PKP2	PKPbc	12 42 56.5	-1.5
SMOL	Smolenice	147.65	330	*e*PKP2	PKPab	12 43 02.8	+2.0
KRUC	Moravsky	147.72	332	*e*PKP	PKPdf	12 42 56.4	+0.5
HSKC	Hora Svate Kat	147.72	336	*e*PKP	PKiKP	12 42 59.4	-1.3
SRO	Srobarova	147.72	328	*e*PKP2	PKPab	12 43 01.2	+0.1
SRO	Srobarova	147.72	328	*e*PKP	PKPab	12 43 01.2	+0.1
PRA	Prague	147.76	335	AMS	AMS	13 47 30.0	
	comp=Z,500nm,21.0s						
PRU	Pruhonice	147.78	335	*e*PKP2	PKPdf	12 42 57.0	+1.0
PRU				MLR	MLR		
	comp=Z,400nm,19.1s						
PRU	Pruhonice	147.78	335	*e*PKP	PKPdf	12 42 57.0	+1.0
PRU				AMS	AMS	13 47 30.0	
	comp=Z,400nm,19.1s						
MODS	Modra-Piesok	147.82	330	*e*PKP2	PKPbc	12 42 57.8	-1.3
MODS	Modra-Piesok	147.82	330	*e*PKP	PKPbc	12 42 57.8	-1.3
MODS				*e*		12 43 02.3	
MDVR	Moldovita	147.83	321	⇑P	PKPbc	12 42 58.0	-1.3
TREC	Trest	147.93	333	AMS	AMS	13 48 20.0	
	comp=Z,700nm,21.9s						
ZVC	Zvikov	148.36	334	*e*PKP	PKPdf	12 42 58.2	+1.2
ZVC				AMS	AMS	13 47 40.0	
	comp=Z,700nm,26.0s						
BOVS	Bovan	148.48	319	⇑P	PKPdf	12 42 58.5	+1.1
MORH	Mrgy, Hungar	148.64	326	⇑P	PKPbc	12 42 59.1	-2.1
RONA	Rosalia, Austr	148.76	330	*i* PKP	PKiKP	12 43 02.5	-0.5
	comp=Z,31nm,1.2s						
CKRC	Cesky Krumlov	148.79	333	*e*PKIKP	PKPdf	12 42 59.3	+1.6
CKRC				MLR	MLR		
	comp=Z,600nm,23.0s						
CKRC	Cesky Krumlov	148.79	333	*e*PKP	PKPdf	12 42 59.3	+1.6
CKRC				AMS	AMS	13 48 10.0	
	comp=Z,600nm,23.0s						
CONA	Conrad Observa	148.79	331	*i* PKP	PKPbc	12 42 59.9	-1.8
	comp=Z,35nm,1.8s						
KHC	Kasperske Hory	148.85	334	*e*PKIKP	PKPdf	12 42 59.4	+1.6
KHC				MLR	MLR		
	comp=Z,600nm,20.0s						
KHC	Kasperske Hory	148.85	334	*e*PKP	PKPdf	12 42 59.4	+1.6
KHC				AMS	AMS	13 48 20.0	
	comp=Z,600nm,20.0s						
GERES	GERESS Array B	149.02	334	PKPbc	PKPdf	12 42 59.8	+1.6
	comp=Z,15nm,0.9s,baz=14,slow=2.8,SNR=15						
VAY	Valandovo	149.15	315	*i* P	PKPab	12 43 05.5	-1.5
GRF	Grafenberg Arr	149.28	338	*e*PKP	PKPab	12 43 06.7	-0.7
	baz=36,slow=1.8						
ARSA	Arzberg	149.45	330	*i* PKP	PKiKP	12 43 05.7	+1.3
	comp=Z,46nm,2.8s						
MOA	Molln	149.56	332	*i* PKP	PKPab	12 43 06.3	-2.3
	comp=Z,38nm,1.6s,SNR=5.7						
LIT	Litokhoron	149.78	313		PKPab	12 43 07.5	-2.2
LIT	Litokhoron	149.78	313	PKP2	PKPab	12 43 07.6	-2.2
BIOA	Bad Ischl, Aus	149.95	333	*i* PKP	PKPbc	12 43 02.0	-2.5
	comp=Z,13nm,1.1s						
BEBN	Eben Emael	149.96	345	*d*PKP	PKPbc	12 43 02.6	-1.7
BTNL	Ternell	150.04	344	*d*PKP	PKPdf	12 43 01.4	+1.7
MEM	Membach	150.05	344	*d*PKP	PKPbc	12 43 02.1	-2.5
PERS	Pernice	150.09	330	*i* PKPbc	PKPbc	12 43 04.6	-0.3
SOKA	Soboth	150.10	330	*i* PKP	PKPbc	12 43 02.3	-2.7
	comp=Z,40nm,1.2s,SNR=7.1						
SOKA				*e*PKP	pPKPdf	12 43 08.2	-0.1
	comp=Z,30nm,1.1s						
BSTI	Sart Tilman	150.19	345	*d*PKP	PKPbc	12 43 02.9	-2.0
UCC	Uccle	150.26	346	*d*PKP	PKPbc	12 43 03.0	-2.1
BHOU	Houvegnez	150.29	344	*d*PKPdf	PKPdf	12 42 59.1	-1.0
BLY	Banja Luka	150.38	325	⇓P	PKPbc	12 43 03.2	-2.4
BCLA	Clavier	150.40	345	*d*PKP	PKPab	12 43 09.1	-2.8
OHR	Ohrid	150.41	316	*i* P	PKPab	12 43 09.7	-2.6
OBKA	Obir	150.45	330	*i* PKP	PKPbc	12 43 03.0	-2.9
	comp=Z,16nm,1.0s						
OBKA				*i* pPKP	pPKPdf	12 43 08.7	-0.1
	comp=Z,16nm,1.0s						
KBA	Koelnbreinsper	150.55	332	*e*pPKP	pPKPdf	12 43 09.0	-0.1
	comp=Z,33nm,1.0s						
LESA	Schwarzleotal	150.57	333	*i* PKP	PKPbc	12 43 03.3	-2.8
	comp=Z,28nm,0.9s,SNR=13						
LESA				*i* pPKP	pPKPdf	12 43 09.2	+0.3
	comp=Z,28nm,0.9s						
BMRD	Maredsous	150.64	345	*d*PKP	PKPbc	12 43 03.5	-2.5
RCHB	Rochefort	150.66	345	*d*PKP	PKPbc	12 43 03.4	-2.7
MYKA	Terra Mystica	150.77	331	*e*pPKP	PKPbc	12 43 03.6	-3.0
	comp=Z,17nm,0.9s						
MYKA				*i* pPKP	pPKPdf	12 43 09.4	+0.1
	comp=Z,17nm,0.9s						
LJU	Ljubljana	150.80	330	*i* PKPbc	PKPdf	12 43 03.3	+2.3
LJU				*i*		12 43 09.6	
BOJS	Bojanci	150.85	328	*i* PKPbc	PKPbc	12 43 03.6	-3.1
DOU	Dourbes	150.87	346	*d*PKP	PKPbc	12 43 04.0	-2.5
WLF	Walferdange	150.88	343	*d*PKP	PKPdf	12 43 03.1	+2.1
WATA	Walderalm	151.09	334	*i* pPKP	PKPbc	12 43 04.6	-2.8
	comp=Z,40nm,1.6s,SNR=5.2						
WATA				*e*pPKP	pPKPdf	12 43 10.7	+0.8
	comp=Z,40nm,1.6s						
WTTA	Wattenberg	151.12	334	*i* pPKP	PKPbc	12 43 04.8	-2.7
	comp=Z,42nm,0.9s						
WTTA				*i* pPKP	pPKPdf	12 43 11.0	+1.0
	comp=Z,42nm,0.9s						
ABTA	Abfaltersbach	151.17	333	*i* pPKP	PKPdf	12 43 04.2	+2.6
	comp=Z,35nm,1.1s						
ABTA				*i* pPKP	pPKPdf	12 43 10.3	+0.4
	comp=Z,30nm,0.9s						
RETA	Reutte	151.28	336	*e*pPKP	PKPbc	12 43 05.4	-2.4
	comp=Z,20nm,1.0s						
RETA				*i* pPKP	pPKPdf	12 43 11.6	+1.5
	comp=Z,20nm,1.0s						
SQTA	Sankt Quirin	151.33	335	*i* pPKP	PKPbc	12 43 05.5	-2.5
	comp=Z,39nm,1.0s						
SQTA				*i* pPKP	pPKPdf	12 43 11.3	+1.1
	comp=Z,26nm,0.8s						
BFO	Black Forest	151.43	339		PKPbc	12 43 05.8	-2.2
BFO	Black Forest	151.43	339	PKIKP	PKPbc	12 43 05.8	-2.2
FETA	Feichten	151.68	335	*i* pPKP	PKPbc	12 43 05.6	-3.1
	comp=Z,34nm,1.0s,SNR=7.7						
FETA				*i* pPKP	pPKPdf	12 43 12.3	+1.5
	comp=Z,46nm,1.0s						
DAVA	Damuels	151.78	336	*e*PKiKP	PKPbc	12 43 07.9	-1.1
	comp=Z,34nm,1.8s						
DAVA				*i* pPKiKP	sPKPdf	12 43 13.4	-0.4
	comp=Z,34nm,1.8s						
EDA	Edea	155.73	223		PKPab	12 43 33.4	-1.9
ESDC	Sonseca Array	162.47	354	PKPab	PKPab	12 44 04.1	+0.2
	comp=Z,3.6nm,1.0s,baz=360,slow=4.1,SNR=6.9						
ESDC	Sonseca Array	162.47	354	PKPdf	PKPdf	12 43 18.4	+2.1
ESDC				PKPab	PKPab	12 44 03.5	-0.4
TORD	Torodi Ar. Bea	168.22	221	PKPab	PKPab	12 44 27.2	-2.7
	comp=Z,1.9nm,0.9s,baz=126,slow=3.7,SNR=3.9						
TORD	Torodi Ar. Bea	168.22	221	PKPdf	PKPdf	12 43 20.8	-0.9

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*IDC **25** 12:25:58.2±0.7, 7°.27S×144°.10E, h0^{km}, mb4.5/14, mbtmp4.5/18, ML3.9/2, Error ellipse: s-maj=22.9km s-min=15.1km az=92.0*

*NEIC **25** 12:26:01.8±1.9, 7°.32S±0°.07×143°.97E±0°.07, h20^{km}±4^{km}, mb4.6/28, Error ellipse: s-maj=11.3km s-min=8.3km az=51.0*

*DJA **25** 12:26:09.0±0.5, 9°S±6°×14°4E±°, h207^{km}±5^{km}, M4.4/14, mb4.5/14, mB4.8/10, MLv4.8/2, Mw(mB)4.1/10*

ISC 25 12:25:59.9±0.5, **7°.39S**±0°.05×**143°.94E**±0°.05, **h10**^{km}, **n73**, σ**1^s.90**/76, **mb4.5**/21, **Near south coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMPI	Merauke	3.69	253	P	Pg	12 27 11.9	+1.3
MMPI				S	Sg	12 28 00.7	+2.3
PMG	Port Moresby	3.76	122	Pn	Pn	12 26 57.7	-0.3
	46nm,0.5s,baz=359,slow=2.3,SNR=50						
PMG				Sn	Sn	12 27 40.3	-2.0
	12nm,0.3s,baz=200,slow=23,SNR=9.3						
PMG	Port Moresby	3.76	122		Pn	12 26 57.6	-0.3
PMG					Sn	12 27 40.7	-1.6
PMG	Port Moresby	3.76	122	P	Pn	12 26 57.5	-0.5
PMG	Port Moresby	3.76	122	P	Pn	12 26 57.0	-1.0
JAY	Jayapura	5.82	326	Pn	Pn	12 27 26.3	-0.1
	1.0nm,0.3s,baz=180,slow=11,SNR=4.5						
JAY				Sn	Sn	12 28 30.4	-2.9
	3.0nm,0.3s,baz=333,slow=9.7,SNR=3.7						
	16nm,1.1s						
COEN	Coen	6.57	187		Pn	12 27 38.9	+2.3
COEN	Coen	6.57	187	P	Pn	12 27 39.1	+2.5
FAKI	Fak Fak	12.46	290	Pn	Pn	12 28 55.4	-2.2
FAKI	Fak Fak	12.46	290	P	Pn	12 28 55.2	-2.3
SAUI	Saumlaki	12.55	266		Pn	12 28 58.8	+0.1
SAUI	Saumlaki	12.55	266	P	Pn	12 28 59.5	+0.9
MTN	Manton Dam	13.72	246		Pn	12 29 13.6	-1.1
QIS	Mount Isa	13.75	197	P	Pn	12 29 16.9	+1.9
DRS	Darwin Rock St	13.79	248	P	Pn	12 29 14.4	-1.2
WB0	Warramunga Arr	15.40	216		Pn	12 29 38.1	+0.7
WR8	Warramunga Arr	15.49	215		Pn	12 29 38.8	+0.2
WR8				IAmb	IAmb	12 29 53.4	
	comp=Z,20nm,0.7s						
WRAB	Tennant Creek	15.56	216		Pn	12 29 40.2	+0.7
WRAB				IAmb	IAmb	12 29 52.4	
	comp=Z,23nm,0.8s						
WRA	Warramunga Arr	15.57	216	Pn	Pn	12 29 40.3	+0.6
	comp=Z,0.9nm,0.3s,baz=30,slow=13,SNR=27						
WRA				Sn	Sn	12 32 26.4	-6.0
	comp=Z,1.1nm,0.3s,baz=27,slow=22,SNR=3.6						
WRA				Lg	Lg	12 34 10.6	
	comp=Z,1.1nm,0.3s,baz=48,slow=31,SNR=4.7						
	comp=Z,4.8nm,0.6s						

WRA	**Warramunga Arr**	**15.57**	**216**		**Pn**	**12 29 38.6**	**-1.0**
KRAI	**Karang Ratu**	**16.00**	**284**	P	**P**	**12 29 51.4**	**+2.6**
	comp=Z,16nm,1.1s						
KNRA	**Kununurra**	**16.99**	**240**		**Pn**	**12 29 56.2**	**-1.6**
KNRA				IAmb	IAmb	12 30 02.7	
	comp=Z,37nm,0.8s						
SANI	**Sanana**	**18.66**	**286**	P	**P**	**12 30 18.7**	**+0.5**
AS31	**Alice Springs**	**18.83**	**210**	P	**P**	**12 30 19.0**	**-1.1**
ASAR	**Alice Springs**	**18.84**	**210**	P	**P**	**12 30 22.2**	**+2.1**
	comp=Z,22nm,0.6s,baz=41,slow=8.5,SNR=72						
ASAR				S	**Sn**	**12 33 47.7**	**-3.9**
	comp=Z,3.1nm,0.7s,baz=21,slow=28,SNR=1.2						
ASAR				Lg	Lg	12 35 54.2	
	comp=Z,0.4nm,0.3s,baz=25,slow=28,SNR=4.4						
ASAR	**Alice Springs**	**18.84**	**210**	P	**P**	**12 30 19.3**	**-0.8**
QLP	**Quilpie**	**19.09**	**179**	P	**P**	**12 30 26.1**	**+3.3**
SOEI	**Soe**	**19.60**	**262**		**P**	**12 30 28.9**	**+0.2**
SOEI				IAmb	IAmb	12 30 36.9	
	comp=Z,38nm,0.7s						
SOEI	**Soe**	**19.60**	**262**	P	**P**	**12 30 28.4**	**-0.2**
	comp=Z,798nmcomp=Z,76nm,1.0s						
BATI	**Baumata**	**20.23**	**261**	P	**P**	**12 30 37.7**	**+2.2**
	comp=Z,30nm,0.7s,baz=110,slow=9.2,SNR=3.9						
	comp=Z,30nm,0.7s						
INKA	**Innaminka**	**20.47**	**188**	P	**P**	**12 30 39.2**	**+1.4**
FITZ	**Fitzroy Crossi**	**20.76**	**237**	P	**P**	**12 30 42.8**	**+1.6**
	comp=Z,23nm,0.4s,baz=61,slow=10,SNR=202						
FITZ				S	**S**	**12 34 25.0**	**-8.1**
	comp=Z,11nm,0.8s,baz=62,slow=19,SNR=2.9						
FITZ				Lg	Lg	12 37 00.5	
	comp=Z,0.5nm,0.3s,baz=142,slow=13,SNR=3.7						
	comp=Z,23nm,0.4s						
FITZ	**Fitzroy Crossi**	**20.76**	**237**	P	**P**	**12 30 42.5**	**+1.3**
FITZ	**Fitzroy Crossi**	**20.76**	**237**	P	**P**	**12 30 42.3**	**+1.2**
EDFI	**Ende, Flores**	**22.07**	**265**	P	**P**	**12 30 53.2**	**-2.2**
	comp=Z,298nmcomp=Z,15nm,0.7s						
APSI	**Ampana**	**23.14**	**285**	P	**P**	**12 31 06.6**	**0.0**
	comp=Z,30nm,1.0s						
MRSI	**Marisa**	**23.30**	**289**	P	**P**	**12 31 06.9**	**-1.3**
	comp=Z,1µmcomp=Z,25nm,0.5s						
KAPI	**Kappang**	**24.16**	**274**	P	**P**	**12 31 17.3**	**+0.7**
KAPI				IAmb	IAmb	12 31 18.1	
	comp=Z,15nm,0.8s						
STKA	**Stephens Creek**	**24.46**	**185**	P	**P**	**12 31 20.1**	**+1.0**
	comp=Z,2.5nm,0.6s,baz=19,slow=11,SNR=5.1						
	comp=Z,2.5nm,0.6s						
STKA	**Stephens Creek**	**24.46**	**185**	P	**P**	**12 31 19.5**	**+0.4**
STKA				IAmb	IAmb	12 31 32.6	
	comp=Z,19nm,0.8s						
TOLI2	**Tolitoli**	**24.60**	**289**		**P**	**12 31 19.9**	**-0.7**
TOLI2				IAmb	IAmb	12 31 30.6	
	comp=Z,6.1nm,0.7s						
MPSI	**Mapaga**	**25.18**	**287**	P	**P**	**12 31 24.5**	**-1.3**
BBOO	**Buckleboo**	**26.33**	**195**	P	**P**	**12 31 36.6**	**+0.6**
BBOO				IAmb	IAmb	12 31 39.5	
	comp=Z,9.2nm,0.8s						
MBWA	**Marble Bar**	**27.11**	**237**	P	**P**	**12 31 43.2**	**-0.1**
PSA00	**Pilbara Seismi**	**27.20**	**236**	P	**P**	**12 31 44.8**	**+0.7**
PSA00	**Pilbara Seismi**	**27.20**	**236**	P	**P**	**12 31 43.6**	**-0.5**
PSA00				IAmb	IAmb	12 31 48.3	
	comp=Z,7.5nm,0.7s						
CAN	**Canberra**	**28.18**	**171**	P	**P**	**12 31 52.3**	**-0.4**
IPM	**Ipoh**	**44.42**	**284**	P	**P**	**12 34 11.0**	**-0.4**
KULM	**Kulim**	**45.00**	**285**	P	**P**	**12 34 15.6**	**-0.4**
KULM				IAmb	IAmb	12 34 16.8	
	comp=Z,6.3nm,0.8s						
KSRS	**Korea Array**	**47.06**	**343**	P	**P**	**12 34 32.2**	**+0.4**
	comp=Z,3.8nm,0.9s,baz=158,slow=7.4,SNR=5.5						
	comp=Z,3.8nm,0.9s						
CM31	**Chiang Mai Arr**	**51.28**	**301**	P	**P**	**12 35 05.2**	**+0.6**
CMAR	**Chiang Mai Arr**	**51.28**	**301**	P	**P**	**12 35 05.8**	**+1.3**
	comp=Z,9.7nm,0.7s,baz=119,slow=5.8,SNR=73						
	comp=Z,9.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**51.28**	**301**	P	**P**	**12 35 05.0**	**+0.4**
CHTO	**Chiang Mai**	**51.44**	**301**		**P**	**12 35 06.1**	**+0.4**
PEA0B	**Petropavlovsk-**	**61.39**	**9**	P	**P**	**12 36 16.9**	**+0.8**
PETK	**Petropavlovsk-**	**61.39**	**9**	P	**P**	**12 36 15.4**	**-0.7**
	comp=Z,8.1nm,1.0s,baz=195,slow=7.0,SNR=5.5						
	comp=Z,8.1nm,1.0s						
PETK	**Petropavlovsk-**	**61.39**	**9**	P	**P**	**12 36 15.1**	**-0.9**
VNDA	**Vanda**	**70.73**	**176**	P	**P**	**12 37 16.5**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=332,slow=8.1,SNR=6.5						
	comp=Z,1.5nm,0.7s						
VNDA	**Vanda**	**70.73**	**176**	P	**P**	**12 37 16.7**	**+1.0**
MKAR	**Makanchi Array**	**76.66**	**322**	P	**P**	**12 37 51.2**	**0.0**
	comp=Z,3.3nm,0.8s,baz=108,slow=7.7,SNR=11						
	comp=Z,3.3nm,0.8s						
MAKZ	**Makanchi**	**76.86**	**321**	P	**P**	**12 37 52.3**	**0.0**
MAKZ				IAmb	IAmb	12 37 52.7	
	comp=Z,2.7nm,0.7s						
ZALV	**Zalesovo Beam**	**78.59**	**329**	P	**P**	**12 38 00.8**	**-0.9**
	comp=Z,3.2nm,0.7s,baz=110,slow=5.1,SNR=13						
	comp=Z,3.2nm,0.7s						
ZALV	**Zalesovo Beam**	**78.59**	**329**	P	**P**	**12 38 00.7**	**-1.0**
KURK	**Kurchatov**	**80.53**	**324**	P	**P**	**12 38 11.9**	**-0.4**
KURK	**Kurchatov**	**80.53**	**324**	IAmb	IAmb	12 38 12.8	
	comp=Z,1.6nm,0.8s						
KURBB	**Kurchatov Arra**	**80.54**	**324**	P	**P**	**12 38 11.9**	**-0.5**
	comp=Z,0.6nm,0.2s,baz=113,slow=4.6,SNR=6.8						
	comp=Z,0.6nm,0.2s						
QSPA	**South Pole Qui**	**82.58**	**180**	P	**P**	**12 38 23.4**	**+0.2**
QSPA				IAmb	IAmb	12 38 23.7	
	comp=Z,4.1nm,0.7s						
NRIK	**Noril'sk**	**85.68**	**343**	P	**P**	**12 38 37.8**	**-0.8**
	comp=Z,3.0nm,0.6s,baz=113,slow=5.7,SNR=5.7						
	comp=Z,3.0nm,0.6s						
NRIK	**Noril'sk**	**85.68**	**343**	P	**P**	**12 38 38.0**	**-0.6**
NRIK				IAmb	IAmb	12 38 44.0	
	comp=Z,5.3nm,0.8s						
BVAR	**Borovoye Array**	**86.12**	**325**	P	**P**	**12 38 40.5**	**-0.6**
	comp=Z,1.7nm,0.7s,baz=107,slow=7.7,SNR=8.0						
	comp=Z,1.7nm,0.7s						
ILAR	**Eielson Array**	**87.95**	**24**	P	P	12 38 47.9	-1.9
	comp=Z,1.6nm,1.0s,baz=247,slow=5.1,SNR=4.3						
	comp=Z,1.6nm,1.0s						
DBIC	**Dimbokro**	**149.03**	**271**	PKPbc	**PKPdf**	**12 45 49.8**	**+4.4**
	comp=Z,6.0nm,0.8s,baz=111,slow=2.9,SNR=8.6						
DBIC	**Dimbokro**	**149.03**	**271**		**PKPdf**	**12 45 49.9**	**+4.5**

*HEL **25** 12:28:53.3±0.4, 61°.22N×29°.83E, h0^{km}, ML1.7, Suspected explosion*

*IDC **25** 12:28:57.9±2.6, 61°.36N×29°.47E, h0^{km}, mbtmp3.3/2, ML2.1/2, Error ellipse: s-maj=22.5km s-min=10.8km az=148.0*

ISC 25 12:28:54.0±1.1**, 61°.35N**±0°.04×**29°.62E**±0°.05**, h0^{km}, n26, σ1^{s}.46**/36**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUF	**Ruokolahti**	**0.33**	**283**	PG	**Pb**	**12 29 02.3**	**-0.5**
RUF				SG	**Sb**	**12 29 07.7**	**-0.9**
RUF				MSG		12 29 08.6	
	comp=Z,17nm,0.2s						
VJF	**Virojoki**	**1.30**	**232**	PN	**Pg**	**12 29 18.0**	**-0.8**
	baz=61						
VJF				MSG		12 29 32.7	
	comp=Z,5.6nm,0.2s						
VJF				SN	**Sb**	**12 29 35.4**	**-1.0**
FIA0	**FINESS Array S**	**1.71**	**275**	PG	**Pg**	**12 29 26.4**	**-0.3**
	baz=96						
FIA0				MSG		12 29 47.7	
	comp=Z,3.9nm,0.2s						
FIA0				SG	**Sg**	**12 29 50.1**	**+1.4**
FINES	**FINESS Array B**	**1.71**	**275**	Pg	**Pg**	**12 29 26.6**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=93,slow=15,SNR=23						
FINES				Lg	Lg	12 29 49.2	
	comp=Z,1.6nm,0.3s,baz=91,slow=28,SNR=30						
JOF	**Joensuu**	**1.76**	**26**	*e*P	**Pb**	**12 29 26.6**	**-0.6**
JOF	**Joensuu**	**1.76**	**26**	PG	**Pb**	**12 29 26.4**	**-0.7**
	baz=202						
JOF				SG	**Sg**	**12 29 50.0**	**-0.6**
PVF	**Pernaja**	**2.00**	**248**	PG	**Pb**	**12 29 30.2**	**-1.0**
PVF				MSG		12 29 54.2	
	comp=Z,3.3nm,0.2s						
PVF				SG	**Sg**	**12 29 58.9**	**+0.6**
SUF	**Sumiainen**	**2.13**	**312**	PG	**Pg**	**12 29 34.4**	**-0.5**
SUF				MSG		12 30 01.4	
	comp=Z,2.4nm,0.2s						
SUF				SG	**Sg**	**12 30 03.7**	**+1.3**
NIF	**Nilsia**	**2.21**	**338**	PG	**Pb**	**12 29 34.7**	**-0.1**
	baz=154						
NIF				MSG		12 30 03.5	
	comp=Z,3.8nm,0.2s						
NIF				SB	**Sb**	**12 30 04.0**	**+1.3**
KEF	**Keuruu**	**2.40**	**292**	*e*P	**Pb**	**12 29 37.6**	**-0.4**
KEF	**Keuruu**	**2.40**	**292**	PG	**Pb**	**12 29 38.3**	**+0.2**
KEF				MSG		12 30 08.4	
	comp=Z,3.7nm,0.2s						
KEF				SB	**Sg**	**12 30 10.2**	**-0.8**
NUR	**Nurmijarvi**	**2.57**	**253**	PG	**Pb**	**12 29 40.3**	**-0.6**
NUR				MSG		12 30 10.8	
	comp=Z,1.6nm,0.2s						
MEF	**Metsahovi**	**2.80**	**248**	*e*P	**Pb**	**12 29 43.0**	**-1.8**
MEF	**Metsahovi**	**2.80**	**248**	PG	**Pb**	**12 29 43.7**	**-1.2**
MEF				MSG		12 30 17.2	
	comp=Z,1.8nm,0.2s						
MEF				SG	**Sb**	**12 30 19.5**	**-0.2**
RMF	**Romuvaara**	**2.88**	**3**	PB	**Pb**	**12 29 45.4**	**-0.8**
RMF				MSG		12 30 21.9	
	comp=Z,2.7nm,0.2s						
RMF				SB	**Sb**	**12 30 22.5**	**+0.5**
VAF	**Ylistaro**	**3.67**	**301**	*e*P	**Pb**	**12 29 56.6**	**-3.0**
VAF	**Ylistaro**	**3.67**	**301**	SG	**Sg**	**12 30 52.8**	**+1.1**
OUF	**Merijarvi**	**3.76**	**326**	SB	**Sg**	**12 30 52.0**	**-2.7**
RAF	**Rauma**	**3.82**	**268**	*e*P	**Pn**	**12 29 57.3**	**+3.4**
RAF	**Rauma**	**3.82**	**268**	SB	**Sb**	**12 30 48.6**	**-0.2**
OUL	**Oulu**	**4.11**	**337**	SG	**Sg**	**12 31 03.4**	**-2.4**
MSF	**Maaselka**	**4.58**	**357**	SN	**Sn**	**12 31 01.0**	**+2.6**
I43RU	**DUBNA INFRASON**	**6.08**	**136**	I	I	13 03 20.0	
	baz=327,slow=318,SNR=2.8						
HFS	**Hagfors**	**7.90**	**268**	Pn	**Pn**	**12 30 52.0**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=100,slow=14,SNR=1.5						
HFS				Sn	**Sn**	**12 32 18.4**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=67,slow=23,SNR=4.5						
HFS				Lg	Lg	12 32 59.0	
	comp=Z,0.1nm,0.3s,baz=82,slow=23,SNR=2.4						
	comp=Z,1.1nm,0.9s						
ARCES	**ARCESS Array B**	**8.39**	**350**	Pn	**Pn**	**12 30 57.7**	**+1.0**
	baz=166,slow=13,SNR=2.2						
ARCES				Sn	**Sn**	**12 32 30.3**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=344,slow=4.0,SNR=1.8						
ARCES				Lg	Lg	12 33 12.5	
	comp=Z,0.2nm,0.3s,baz=166,slow=30,SNR=5.5						
	comp=Z,3.9nm,1.1s						
NOA	**NORSAR Array B**	**8.89**	**276**	Lg	Lg	12 33 32.4	
	baz=130,slow=7.5,SNR=8.4						

*IDC **25** 12:31:56.1±2.8, 39°.30N×30°.48W, h0^{km}, mb3.8/8, mbtmp3.8/8, MS3.3/5, Error ellipse: s-maj=96.5km s-min=30.3km az=170.0*

*SVSA **25** 12:32:01.5±1.1, 39°.38N×29°.79W, h10^{km}, ML3.6(INMG), Error ellipse: s-maj=8.5km s-min=5.2km az=64.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia Atlntico N*

ISC 25 12:31:59.7±2.4**, 39°.20N**±0°.09×**29°.55W**±0°.10**, h6^{km}**±12^{km}**, n26, σ0^{s}.98**/31**, mb3.9**/7**, MS3.3**/4**, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCED	**Cedros**	**0.88**	**130**	*e*P	**Pn**	**12 32 19.1**	**+0.5**
PCED				*e*S	**Sn**	**12 32 31.4**	**-0.2**
PCED				*i* IAML		12 32 33.8	
PCED				*i* IAML		12 32 37.2	
PCED				*i* IAML		12 32 37.9	
CALA	**Caldeira**	**0.91**	**133**	*e*S	**Sn**	**12 32 32.3**	**-0.2**
CALA				*i* IAML		12 32 35.9	
CALA				*i* IAML		12 32 36.9	
CALA				*i* IAML		12 32 38.1	
PFCBR	**Castelo Branco**	**0.94**	**136**	*e*P	**Pn**	**12 32 19.4**	**0.0**
PFCBR				*e*S	**Sn**	**12 32 32.8**	**-0.4**
PFCBR				*i* IAML		12 32 34.8	
PFCBR				*i* IAML		12 32 35.2	
PFCBR				*i* IAML		12 32 35.4	
HOR	**Horta**	**0.98**	**133**	*e*P	**Pn**	**12 32 19.9**	**-0.1**
HOR				*e*S	**Sn**	**12 32 34.5**	**+0.2**
HOR				*i* IAML		12 32 36.1	
HOR				*i* IAML		12 32 36.5	
HOR				*i* IAML		12 32 37.9	
PCAN	**Candelaria**	**1.11**	**131**	*e*P	**Pn**	**12 32 22.2**	**+0.4**
PCAN				*e*S	**Sn**	**12 32 37.7**	**+0.3**
PCAN				*i* IAML		12 32 39.9	
PCAN				*i* IAML		12 32 40.7	
PCAN				*i* IAML		12 32 44.3	
PICO	**Pico**	**1.12**	**128**	*e*P	**Pn**	**12 32 22.4**	**+0.4**
PICO				*e*S	**Sn**	**12 32 38.2**	**+0.4**
PICO				*i* IAML		12 32 39.9	
PICO				*i* IAML		12 32 40.1	
PICO				*i* IAML		12 32 40.8	
ROSA	**Rosais**	**1.13**	**115**	*e*P	**Pb**	**12 32 21.7**	**+0.1**
ROSA				*e*S	**Sn**	**12 32 37.4**	**-0.5**
ROSA				*i* IAML		12 32 39.1	
ROSA				*i* IAML		12 32 42.8	
ROSA				*i* IAML		12 32 45.2	
PGRA	**Graciosa**	**1.23**	**97**	*e*P	**Pg**	**12 32 23.2**	**-0.1**
PGRA				*e*S	**Sg**	**12 32 38.9**	**-0.5**
PGRA				*i* IAML		12 32 40.5	
PGRA				*i* IAML		12 32 41.2	
PGRA				*i* IAML		12 32 41.2	
PPNO	**Prainha do Nor**	**1.24**	**125**	*e*S	**Sn**	**12 32 40.4**	**-0.4**
PPNO				*i* IAML		12 32 44.8	
PPNO				*i* IAML		12 32 46.0	
PMAN	**Manadas**	**1.27**	**116**	*e*P	**Pg**	**12 32 23.7**	**-0.4**
PMAN				*e*S	**Sn**	**12 32 41.3**	**-0.2**
PMAN				*i* IAML		12 32 42.8	
PMAN				*i* IAML		12 32 42.8	
PMAN				*i* IAML		12 32 54.2	
H07S1	**FLORES T-PHASE**	**1.29**	**278**	Pn	Pn	12 32 14.6	-10
H07S1				T	T	12 33 16.8	
H07N1	**FLORES T-PHASE**	**1.31**	**293**	Pn	Pn	12 32 15.2	-9.3
H07N1				T	T	12 33 22.2	
ADH	**Angra Heroismo**	**1.89**	**106**	*e*P	**Pn**	**12 32 32.5**	**0.0**
ADH				*e*S	**Sb**	**12 32 57.6**	**-0.8**
ADH				*i* IAML		12 32 58.8	
ADH				*i* IAML		12 32 59.0	
ADH				*i* IAML		12 32 59.0	
PAGU	**Agualva, Azore**	**1.90**	**102**	*e*P	**Pn**	**12 32 32.6**	**0.0**
PAGU				*e*S	**Sn**	**12 32 56.6**	**-0.2**
PAGU				*i* IAML		12 32 59.4	
PAGU				*i* IAML		12 32 59.5	
PAGU				*i* IAML		12 32 59.9	
PSCM	**Serra do Cume**	**1.96**	**104**	*e*P	**Pn**	**12 32 33.4**	**-0.1**
PSCM				*e*S	**Sn**	**12 32 57.7**	**-0.8**
PSCM				*i* IAML		12 33 00.0	
PSCM				*i* IAML		12 33 00.1	
PSCM				*i* IAML		12 33 01.1	
ESDC	**Sonseca Array**	**19.76**	**80**	P	**Pn**	**12 36 35.4**	**+3.6**
	1.5nm,1.1s,baz=276,slow=9.4,SNR=4.6						
ESDC				LR	LR	12 42 46.7	
	comp=Z,102nm,19.0s,baz=286,slow=32						
	1.5nm,1.1s						
MDT	**Midelt**	**21.13**	**100**	LR	LR	12 43 12.0	
	comp=Z,28nm,22.0s,baz=272,slow=31						
SCHQ	**Schefferville**	**29.41**	**314**	LR	LR	12 46 53.4	
	comp=Z,110nm,19.3s,baz=329,slow=31						
NOA	**NORSAR Array B**	**33.25**	**35**	P	**P**	**12 38 37.8**	**+0.4**
	0.8nm,0.9s,baz=249,slow=8.6,SNR=6.2						
NOA				LR	LR	12 49 29.2	
	comp=Z,33nm,20.4s,baz=310,slow=31						
	0.8nm,0.9s						
VAE	**Valguarnera**	**34.28**	**79**	LR	LR	12 52 46.5	
	comp=Z,95nm,18.1s,baz=251,slow=36						
AKASG	**Malin Array Be**	**42.10**	**54**	P	**P**	**12 39 53.1**	**+0.8**
	0.5nm,0.3s,baz=272,slow=8.6,SNR=2.0						
	0.5nm,0.3s						
TXAR	**Lajitas Array**	**60.49**	**285**	P	P	12 42 03.3	-7.4
	0.9nm,1.1s,baz=66,slow=8.4,SNR=3.4						
	0.9nm,1.1s						
KURBB	**Kurchatov Arra**	**70.63**	**40**	P	**P**	**12 43 16.0**	**+0.2**
	0.7nm,0.8s,baz=313,slow=6.7,SNR=4.9						
	0.7nm,0.8s						
ZALV	**Zalesovo Beam**	**71.45**	**35**	P	**P**	**12 43 20.8**	**+0.1**
	0.8nm,0.6s,baz=302,slow=8.2,SNR=4.9						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**75.01**	**41**	P	**P**	**12 43 41.7**	**-0.1**
	2.1nm,0.9s,baz=310,slow=5.7,SNR=9.9						
	2.1nm,0.9s						
SONM	**Songino Array**	**84.90**	**28**	P	**P**	**12 44 32.6**	**-2.9**
	1.0nm,0.9s,baz=338,slow=6.2,SNR=4.3						
	1.0nm,0.9s						

IDC 25 12:43:11.8±15.0**, 18°.95S**×**168°.92E, h0^{km}, mb3.9**/3**, mbtmp3.9**/3**, Error ellipse: s-maj=394.8km s-min=73.0km az=130.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.59**	**262**	P	P	12 49 45.8	+0.5
	0.9nm,0.7s,baz=100,slow=7.9,SNR=8.1						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**32.91**	**256**	P	P	12 49 47.6	-0.5
	1.0nm,0.8s,baz=75,slow=9.6,SNR=13						
	1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**78.11**	**294**	P	P	12 55 13.3	+0.1
	0.8nm,0.3s,baz=121,slow=3.4,SNR=6.8						
	0.8nm,0.3s						

*IDC **25** 13:00:17.2±0.5, 39°.42N×29°.98W, h0^{km}, mb4.3/30, mbtmp4.3/30, MS4.1/42, Error ellipse: s-maj=15.6km s-min=10.9km az=174.0*

*NEIC **25** 13:00:18.2±1.7, 39°.3N±0°.1×29°.8W±0°.1, h10^{km}±1^{km}, mb4.8/95, Error ellipse: s-maj=18.4km s-min=12.6km az=203.0*

*SVSA **25** 13:00:19.2±1.1, 39°.39N×29°.83W, h10^{km}, ML4.2(INMG), Error ellipse: s-maj=7.0km s-min=4.4km az=62.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia Atlntico N*

*GCMT **25** 13:00:20.2±0.2, 39°.33N±0°.04×30°.03W±0°.03, h12^{km}, MW4.9/99, Moment Tensor Solution. s12,c13; s99,c128; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.76±.08; $M_{\theta\theta}$0.32±.08; $M_{\phi\phi}$1.45±.06; $M_{r\theta}$-1.66±.35; $M_{\theta\phi}$0.68±.07; $M_{\phi r}$2.35±.25; Best double couple: $M_0$3.24300×10^{16} NP1:ϕ_s34.00000°, δ22.00000°, λ-37.00000°. NP2: ϕ_s159.00000°, δ77.00000°, λ-108.00000°. Principal axes: T 2.7080, Plg29.0000°, Azm264.0000°; N 1.0770, Plg18.0000°, Azm163.0000°; P -3.7790, Plg55.0000°, Azm46.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 13:00:18.6±0.7**, 39°.27N**±0°.05×**29°.71W**±0°.05**, h15^{km}**±4^{km}**, n251, σ1^{s}.37**/240**, mb4.7**/99**, MS4.2**/48**, 10D, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCAPE	**Capelo, Faial**	**0.96**	**134**	*e*S	**Sb**	**13 00 49.1**	**-0.3**
PCAPE				*i* IAML		13 00 49.4	
PCAPE				*i* IAML		13 00 49.5	
PCAPE				*i* IAML		13 00 49.7	
PCED	**Cedros**	**1.01**	**129**	*e*P	**Pb**	**13 00 36.7**	**-1.1**
PCED				*e*S	**Sb**	**13 00 49.7**	**-1.3**
PCED				*i* IAML		13 00 50.4	
PCED				*i* IAML		13 00 51.2	
PCED				*i* IAML		13 00 51.3	
CALA	**Caldeira**	**1.04**	**131**	*e*P	**Pb**	**13 00 37.4**	**-1.0**
CALA				*e*S	**Sb**	**13 00 50.4**	**-1.5**
CALA				*i* IAML		13 00 52.9	
CALA				*i* IAML		13 00 53.2	
CALA				*i* IAML		13 00 53.7	
PFCBR	**Castelo Branco**	**1.07**	**134**	*e*P	**Pb**	**13 00 37.4**	**-1.5**
PFCBR				*e*S	**Sb**	**13 00 51.4**	**-1.3**
PFCBR				*i* IAML		13 00 52.5	
PFCBR				*i* IAML		13 00 52.7	
PFCBR				*i* IAML		13 00 52.8	
HOR	**Horta**	**1.12**	**131**	*e*P	**Pb**	**13 00 38.2**	**-1.4**
HOR				*e*S	**Sb**	**13 00 52.8**	**-1.2**
HOR				*i* IAML		13 00 55.0	
HOR				*i* IAML		13 00 55.3	
HOR				*i* IAML		13 00 55.8	
H07S1	**FLORES T-PHASE**	**1.17**	**276**	Pn	Pn	13 00 35.2	-5.3
H07S1				T	T	13 01 42.8	
	SNR=763						
H07N1	**FLORES T-PHASE**	**1.17**	**292**	Pn	Pn	13 00 34.8	-5.7
H07N1				T	T	13 01 41.8	
PCAN	**Candelaria**	**1.25**	**130**	*e*P	**Pn**	**13 00 40.4**	**-1.1**
PCAN				*e*S	**Sb**	**13 00 56.0**	**-1.7**
PCAN				*i* IAML		13 00 56.9	
PCAN				*i* IAML		13 00 57.3	
PCAN				*i* IAML		13 00 58.0	
PICO	**Pico**	**1.26**	**127**	*e*P	**Pn**	**13 00 40.2**	**-1.6**
PICO				*e*S	**Sb**	**13 00 56.4**	**-1.8**
PICO				*i* IAML		13 00 58.1	
PICO				*i* IAML		13 00 58.3	
PICO				*i* IAML		13 00 59.0	
ROSA	**Rosais**	**1.27**	**115**	*e*P	**Pn**	**13 00 40.0**	**-1.8**
ROSA				*e*S	**Sb**	**13 00 55.6**	**-2.7**
ROSA				*i* IAML		13 00 57.8	
ROSA				*i* IAML		13 00 59.4	
ROSA				*i* IAML		13 00 59.8	
PSCRZ	**Santa Cruz da**	**1.33**	**97**	*e*P	**Pn**	**13 00 40.4**	**-2.3**
PSCRZ				*i* IAML		13 01 00.6	
PGRA	**Graciosa**	**1.36**	**99**	*e*P	**Pn**	**13 00 41.2**	**-1.9**
PGRA				*e*S	**Sn**	**13 00 57.2**	**-3.7**
PGRA				*i* IAML		13 00 58.0	
PGRA				*i* IAML		13 00 58.5	
PGRA				*i* IAML		13 00 58.8	
PPNO	**Prainha do Nor**	**1.38**	**125**	*e*P	**Pn**	**13 00 42.0**	**-1.4**
PPNO				*i* IAML		13 01 03.2	
PPNO				*i* IAML		13 01 11.6	
PMAN	**Manadas**	**1.41**	**116**	*e*P	**Pn**	**13 00 42.0**	**-1.7**
PMAN				*e*S	**Sn**	**13 00 59.6**	**-2.6**
PMAN				*i* IAML		13 01 01.1	
PMAN				*i* IAML		13 01 01.4	
PMAN				*i* IAML		13 01 01.8	
ADH	**Angra Heroismo**	**2.02**	**107**	*e*P	**Pn**	**13 00 50.4**	**-1.7**
ADH				*e*S	**Sn**	**13 01 14.0**	**-3.2**
ADH				*i* IAML		13 01 16.9	
ADH				*i* IAML		13 01 17.0	
ADH				*i* IAML		13 01 17.2	
PAGU	**Agualva, Azore**	**2.03**	**103**	*e*P	**Pn**	**13 00 50.8**	**-1.5**
PAGU				*e*S	**Sn**	**13 01 14.3**	**-3.0**
PAGU				*i* IAML		13 01 16.6	
PAGU				*i* IAML		13 01 16.8	
PAGU				*i* IAML		13 01 16.8	
PDA	**Ponta Delgada**	**3.52**	**114**	*e*P	**Pn**	**13 01 11.5**	**-1.2**
PDA				*e*S	**Sn**	**13 01 51.1**	**-3.0**
PDA				*i* IAML		13 01 55.2	
PDA				*i* IAML		13 01 55.8	
PDA				*i* IAML		13 01 56.2	
CMLA	**Cha da Macela**	**3.61**	**113**		**Pn**	**13 01 13.6**	**-0.5**
CMLA				Sn	**Sn**	**13 01 56.0**	**-0.3**
CMLA	**Cha da Macela**	**3.61**	**113**	*e*P	**Pn**	**13 01 12.8**	**-1.2**
PGRON	**Lagoa das Cont**	**3.71**	**112**	*e*P	**Pn**	**13 01 14.9**	**-0.6**
BART	**Pico Bartolome**	**3.86**	**111**	*e*P	**Pn**	**13 01 16.5**	**-1.0**
PSMN	**Pico do Norte,**	**4.30**	**120**	*e*P	**Pn**	**13 01 22.1**	**-1.4**
PMOZ	**Porto Moniz, M**	**11.99**	**119**	Pn	**Pn**	**13 03 08.4**	**-0.7**
PMOZ	**Porto Moniz, M**	**11.99**	**119**	*e*P	**Pn**	**13 03 11.3**	**+2.2**
PMOZ				*e*LR	LR	13 05 55.4	
PMOZ				IAMs_20	IAMs_20	13 06 59.9	
	comp=Z,845nm,20.0s						
PMAR	**Madeira**	**12.24**	**118**	*e*P	**Pn**	**13 03 13.9**	**+1.3**
MACI	**Morro de la Ar**	**15.51**	**131**	Pn	**Pn**	**13 03 57.6**	**+0.6**
MACI				IAmb	IAmb	13 04 16.8	
	comp=Z,57nm,1.1s						
PSARD	**Sardoal**	**16.65**	**82**	*e*P	**Pn**	**13 04 12.4**	**+1.0**
PSARD				IAmb	IAmb	13 04 31.1	
	comp=Z,62nm,1.4s						
PVIS	**Viseu**	**16.78**	**78**	*e*P	**P**	**13 04 15.6**	**+0.3**
PARRA	**Arraiolos**	**16.84**	**85**	*e*P	**P**	**13 04 15.5**	**-0.3**
PARRA				IAmb	IAmb	13 04 23.5	
	comp=Z,33nm,1.7s						
MTE	**Manteigas**	**17.06**	**79**		**Pn**	**13 04 17.2**	**+0.6**
AVE	**Averroes**	**18.92**	**101**	P	**P**	**13 04 38.2**	**-0.6**
AVE				IAmb	IAmb	13 04 49.5	
	comp=Z,60nm,1.2s						
PAB	**San Pablo**	**19.59**	**81**	P	**P**	**13 04 46.0**	**-0.2**
ESDC	**Sonseca Array**	**19.86**	**81**	P	**Pn**	**13 04 52.8**	**+2.0**
	comp=Z,4.6nm,1.2s,baz=284,slow=8.0,SNR=13						
ESDC				LR	LR	13 11 23.9	
	comp=Z,669nm,18.2s,baz=274,slow=33						
	comp=Z,4.6nm,1.2s						
ESDC	**Sonseca Array**	**19.86**	**81**		**P**	**13 04 49.2**	**0.0**
ESBB	**Sonseca Array**	**19.87**	**81**	P	**P**	**13 04 49.3**	**+0.2**
MD01	**Midelt array s**	**21.12**	**100**	P	**P**	**13 05 04.5**	**+1.5**
MD31	**MD31**	**21.12**	**100**	P	**P**	**13 05 05.2**	**+2.3**
MD31				IAmb	IAmb	13 05 14.7	
	comp=Z,48nm,1.4s						
MDT	**Midelt**	**21.26**	**100**	P	**P**	**13 05 09.2**	**+4.9**
	comp=Z,1.6nm,0.3s,baz=294,slow=12,SNR=11						
MDT				LR	LR	13 12 12.5	
	comp=Z,320nm,18.5s,baz=310,slow=33						
	comp=Z,1.6nm,0.3s						
DRLN	**Deer Lake**	**22.16**	**306**	P	**P**	**13 05 12.7**	**-1.0**
DRLN				IAmb	IAmb	13 05 17.6	
	comp=Z,68nm,1.3s						

CART	Cartagena	22.52	85	P	P	13 05 18.3	+0.6
EBR	Ebro Roquetas	23.12	76	P	P	13 05 23.9	-0.1
CEST	Esterri de Car	23.56	72		P	13 05 27.7	-0.9
CEST				IAmb	IAmb	13 05 33.6	
	comp=Z,32nm,1.4s						
ESK	Eskdalemuir	23.89	39	P	P	13 05 31.8	+0.4
EKB	Eskdalemuir	23.90	39	P	P	13 05 30.3	-1.3
EKB				IAmb	IAmb	13 05 58.0	
	comp=Z,41nm,1.4s						
EKA	Eskdalemuir Ar	23.92	39	P	P	13 05 32.6	+0.9
	comp=Z,4.2nm,0.8s,baz=238,slow=7.5,SNR=9.3						
EKA				LR	LR	13 12 47.0	
	comp=Z,298nm,19.4s,baz=236,slow=31						
	comp=Z,4.2nm,0.8s						
NRS	Narsarsuaq	23.98	341	P	P	13 05 31.4	-0.9
GBN	Guysborough	24.19	295	P	P	13 05 32.5	-1.9
CLF	Chambon-Foret	24.59	59		P	13 05 37.4	-0.6
HAL	Halifax	25.64	293	P	P	13 05 46.3	-1.2
BORG	Borgarnes	25.99	8	LR	LR	13 13 12.2	
	comp=Z,355nm,20.7s,baz=204,slow=30						
UCC	Uccle	26.46	53	P	P	13 05 54.7	-0.1
UCC				IAmb	IAmb	13 06 00.1	
	comp=Z,20nm,0.9s						
UCC	Uccle	26.46	53	*d*P	P	13 05 56.0	+1.1
DOU	Dourbes	26.46	55	*d*P	P	13 05 55.9	+1.0
DOU				*d*PP	PnPn	13 06 32.8	-1.9
BMRD	Maredsous	26.61	54	*d*P	P	13 06 00.3	+4.0
ANGG	Ammassalik, Gr	26.79	353	P	P	13 05 57.6	0.0
ANGG				IAmb	IAmb	13 06 17.3	
	comp=Z,28nm,1.1s						
BGES	Gesves	26.83	54	*d*P	P	13 05 59.4	+1.2
RCHB	Rochefort	26.87	55	*d*P	P	13 05 59.7	+1.1
BCLA	Clavier	26.97	54	*d*P	P	13 05 59.8	+0.3
	comp=Z,12nm,1.2s						
BSTI	Sart Tilman	27.17	54	*d*P	P	13 06 02.1	+0.8
WLF	Walferdange	27.38	56	P	P	13 06 03.5	+0.3
WLF				IAmb	IAmb	13 06 12.5	
	comp=Z,31nm,1.4s						
WLF	Walferdange	27.38	56	*d*P	P	13 06 04.6	+1.4
MEM	Membach	27.45	54	*d*P	P	13 06 03.9	+0.1
SENIN	Lac Senin/Sane	27.86	63	P	P	13 06 08.4	+0.6
ECH	Echery	27.87	59		P	13 06 07.9	+0.3
F64A	Sherman	29.00	296	P	P	13 06 15.1	-2.5
F64A				IAmb	IAmb	13 06 15.8	
	comp=Z,30nm,1.3s						
SCHQ	Schefferville	29.28	314	P	P	13 06 18.7	-1.4
TUE	Stuetta	29.28	63	P	P	13 06 19.5	-0.9
DAVOX	Davos/Dischmat	29.65	62	LR	LR	13 16 26.2	
	comp=Z,137nm,19.6s,baz=260,slow=33						
DAVA	Damuels	29.66	61	*e*P	P	13 06 22.1	-1.6
	comp=Z,8.4nm,0.9s						
PKME	Peaks-Kenny Pk	29.68	295	P	P	13 06 24.4	+0.7
PKME				IAmb	IAmb	13 06 45.2	
	comp=Z,14nm,1.2s						
FUORN	Ofenpass-Fuorn	29.91	63	P	P	13 06 26.9	+0.8
FUORN				IAmb	IAmb	13 06 43.5	
	comp=Z,16nm,1.5s						
PRMA	PARMA	30.02	66	P	P	13 06 27.8	+1.2
FETA	Feichten	30.23	62	*e*pP	P	13 06 32.7	+3.9
	comp=Z,8.8nm,1.6s						
RETA	Reutte	30.26	61	*i* P	P	13 06 31.0	+2.1
	comp=Z,4.9nm,1.0s						
ZCCA	Zocca	30.52	67	P	P	13 06 31.9	+0.7
SQTA	Sankt Quirin	30.56	61	*e*P	P	13 06 32.1	+0.5
	comp=Z,6.8nm,1.2s						
GRA1	Grafenberg Arr	30.66	57	P	P	13 06 31.7	-0.6
GRA1				IAmb	IAmb	13 06 38.0	
	comp=Z,18nm,1.2s						
OSSC	Osservatorio P	30.79	69	P	P	13 06 33.5	-0.1
OSSC				IAmb	IAmb	13 06 40.7	
	comp=Z,21nm,1.5s						
WATA	Walderalm	30.81	61	*e*pP	P	13 06 37.0	+3.1
	comp=Z,2.4nm,0.6s						
WTTA	Wattenberg	30.85	61	*i* pP	P	13 06 36.7	+2.5
	comp=Z,16nm,1.6s						
CTI	Castel Tesino	30.89	64		P	13 06 34.3	-0.2
CTI				IAmb	IAmb	13 06 39.7	
	comp=Z,10nm,1.2s						
TEOL	Teolo	30.94	65	P	P	13 06 35.6	+0.8
TEOL				IAmb	IAmb	13 06 42.3	
	comp=Z,10nm,1.2s						
KEST	Kesra	31.02	84	LR	LR	13 18 12.5	
	comp=Z,232nm,19.0s,baz=283,slow=34						
ABTA	Abfaltersbach	31.46	62	*e*P	P	13 06 41.7	+2.2
	comp=Z,5.1nm,1.2s						
LESA	Schwarzleotal	31.56	61	*i* P	P	13 06 41.8	+1.4
	comp=Z,7.8nm,1.5s						
HRV	Adam Dziewonsk	31.57	290	P	P	13 06 40.9	+0.5
HRV				IAmb	IAmb	13 06 46.9	
	comp=Z,27nm,1.4s						
CESX	Cesi	31.88	70		P	13 06 43.4	+0.2
CESX				IAmb	IAmb	13 06 50.1	
	comp=Z,23nm,1.4s						
CLL	Collm	31.92	54	P	P	13 06 42.9	-0.5
CLL				IAmb	IAmb	13 06 49.4	
	comp=Z,8.1nm,1.1s						
CLL	Collm	31.92	54	*i* P	P	13 06 45.0	+1.6
	comp=Z,9.0nm,1.0s						
CLL				AMS	AMS	13 17 00.0	
	comp=Z,300nm,20.9s						
KBA	Koelnbreinsper	32.02	62	*e*pP	P	13 06 47.6	+3.0
	comp=Z,33nm,1.6s						
ILULI	Ilulissat	32.13	346	P	P	13 06 44.2	-0.7
HSKC	Hora Svate Kat	32.14	55	AMS	AMS	13 18 10.0	
	comp=Z,500nm,16.0s						
KHC	Kasperske Hory	32.17	58		P	13 06 45.4	-0.3
FDMO	Fiordimonte	32.19	69	P	P	13 06 45.4	-0.5
FDMO				IAmb	IAmb	13 06 51.6	
	comp=Z,16nm,1.1s						
BIOA	Bad Ischl, Aus	32.20	60	*i* P	P	13 06 47.9	+1.9
	comp=Z,16nm,1.3s						
MYKA	Terra Mystica	32.24	62	*i* P	P	13 06 47.6	+1.2
	comp=Z,4.1nm,0.8s						
GEC2	GERESS Array S	32.24	58	P	P	13 06 46.0	-0.4
GEC2				IAmb	IAmb	13 06 54.1	
	comp=Z,9.8nm,1.3s						
GERES	GERESS Array B	32.24	58	P	P	13 06 48.8	+2.4
	comp=Z,0.8nm,0.6s,baz=267,slow=6.5,SNR=5.7						
GERES				LR	LR	13 17 28.1	
	comp=Z,164nm,21.0s,baz=272,slow=32						
	comp=Z,0.8nm,0.6s						
CAMP	Campotosto	32.50	70	P	P	13 06 48.8	0.0
CAMP				IAmb	IAmb	13 07 09.1	
	comp=Z,28nm,1.5s						
MOA	Molln	32.62	60	*i* P	P	13 06 51.0	+1.3
	comp=Z,16nm,1.8s						
PRA	Prague	32.75	56	AMS	AMS	13 19 10.0	
	comp=Z,400nm,20.5s						
PRU	Pruhonice	32.82	56	AMS	AMS	13 19 30.0	
	comp=Z,300nm,14.8s						
OBKA	Obir	32.87	63	*i* P	P	13 06 53.0	+1.0
	comp=Z,13nm,1.1s						
NBO00	NORSAR Array S	33.06	35	P	P	13 06 53.2	-0.1
SOKA	Soboth	33.20	62	*i* P	P	13 06 53.4	-1.3
	comp=Z,7.2nm,1.8s						
NB2	NORSAR Subarra	33.26	36	P	P	13 06 56.7	+1.6
	comp=Z,81nm,2.5s,baz=249,slow=9.3						
NOA	NORSAR Array B	33.26	36	P	P	13 06 56.0	+0.9
	comp=Z,7.6nm,1.0s,baz=249,slow=9.3,SNR=16						
NOA				LR	LR	13 18 11.5	
	comp=Z,195nm,21.2s,baz=25,slow=32						
	comp=Z,7.6nm,1.0s						
NC602	NORSAR Array S	33.30	36	P	P	13 06 55.4	0.0
NB201	NORSAR Array S	33.30	36	P	P	13 06 55.5	+0.1
NC303	NORSAR Array S	33.40	35	P	P	13 06 56.9	+0.6
ARSA	Arzberg	33.50	61	P	P	13 06 57.3	0.0
ARSA	Arzberg	33.50	61	*i* P	P	13 06 58.5	+1.2
	comp=Z,11nm,1.8s						
NC405	NORSAR Array S	33.52	36		P	13 06 57.0	-0.2
NC405				IAmb	IAmb	13 06 59.9	
	comp=Z,22nm,1.3s						
SUMG	Summit	33.67	355		P	13 06 58.2	-0.7
CONA	Conrad Observa	33.70	60	*e*pP	P	13 07 03.6	+4.5
	comp=Z,5.3nm,1.4s						
UPC	Upice	33.78	55	AMS	AMS	13 19 40.0	
	comp=Z,500nm,14.2s						
OSTC	Ostas	33.91	55	AMS	AMS	13 19 40.0	
	comp=Z,500nm,16.2s						
DPC	Dobruska-Polom	33.97	56	AMS	AMS	13 19 20.0	
	comp=Z,500nm,19.1s						
DPC	Dobruska-Polom	33.97	56	P	P	13 07 03.0	+1.6
	comp=Z,9.6nm,1.3s						
RONA	Rosalia, Austr	34.00	60	*e*P	P	13 07 03.0	+1.3
	comp=Z,3.3nm,0.8s						
KRUC	Moravsky	34.02	58	*e*P	P	13 07 03.2	+1.4
HFS	Hagfors	34.10	38	P	P	13 07 03.3	+0.9
	comp=Z,2.3nm,0.8s,baz=270,slow=1.4,SNR=5.8						
HFS				LR	LR	13 19 20.8	
	comp=Z,282nm,21.5s,baz=289,slow=34						
	comp=Z,2.3nm,0.8s						
VRAC	Vranov	34.15	57	LR	LR	13 20 24.9	
	comp=Z,105nm,20.9s,baz=19,slow=35						
VRAC	Vranov	34.15	57	*e*P	P	13 07 04.6	+1.7
VAE	Valguarnera	34.38	79	LR	LR	13 20 09.2	
	comp=Z,1µm,19.4s,baz=344,slow=34						
MODS	Modra-Piesok	34.62	59	*e*P	P	13 07 09.6	+2.5
MORC	Moravsky Berou	34.76	57		P	13 07 07.9	-0.3
MORC	Moravsky Berou	34.76	57	*e*P	P	13 07 09.9	+1.7
JAVC	Velka Javorina	34.87	58	*e*P	P	13 07 10.7	+1.5
MORH	Mrgy, Hungar	35.72	63	P	P	13 07 17.8	+1.3
	comp=Z,262nmcomp=Z,11nm,1.2s						
OJC	Ojcow	36.20	56	P	P	13 07 22.6	+2.0
	comp=Z,22nm,1.2s						
SADO	Sadowa	36.67	295	LR	LR	13 21 42.6	
	comp=Z,574nm,20.2s,baz=112,slow=35						
SJG	San Juan	37.93	247	LR	LR	13 19 19.3	
	comp=Z,188nm,21.6s,baz=134,slow=30						
TORD	Torodi Ar. Bea	38.01	124	P	P	13 07 38.1	+1.8
	comp=Z,5.2nm,1.3s,baz=325,slow=5.4,SNR=9.3						
TORD				LR	LR	13 22 49.4	
	comp=Z,408nm,18.5s,baz=341,slow=35						
	comp=Z,5.2nm,1.3s						
DBIC	Dimbokro	39.43	139	P	P	13 07 51.1	+3.0
	comp=Z,6.3nm,0.8s,baz=344,slow=8.9,SNR=11						
DBIC				LR	LR	13 22 28.4	
	comp=Z,400nm,20.8s,baz=359,slow=34						
	comp=Z,6.3nm,0.8s						
DBIC	Dimbokro	39.43	139		P	13 07 48.9	+0.7
RNPP8	Varash	39.98	54	P	P	13 07 53.5	+1.2
RNPP8				pP	pP	13 07 56.9	+0.4
RNPP9	Sopachiv	39.99	54	P	P	13 07 53.6	+1.1
BURAR	Bucovina Array	40.00	59	P	P	13 07 53.7	+0.9
RNPP5	Staryi Chortor	40.01	54	P	P	13 07 53.8	+1.2
FINES	FINESS Array B	40.31	38	P	P	13 07 56.2	+1.2
	comp=Z,9.1nm,0.8s,baz=259,slow=7.0,SNR=26						
	comp=Z,9.1nm,0.8s						
FINES	FINESS Array B	40.31	38	P	P	13 07 55.9	+0.9
FIA1	FINESS Array S	40.31	38	P	P	13 07 56.1	+1.2
NACGM	Naroch	40.35	48	*e*P	P	13 07 56.7	+1.4
	comp=Z,15nm,1.1s,baz=272						
POIN	Pond Inlet	40.87	340		P	13 07 58.2	-1.3
MNK	Minsk	41.00	49	*i* P	P	13 08 00.4	-0.4
	comp=E,18nm,0.8s						
MNK				*i* P	P	13 08 00.4	-0.4
	comp=N,9.0nm,0.8s						
MNK				*i* P	P	13 08 00.4	-0.4
	comp=Z,5.0nm,0.6s,baz=273						
MNK				*i* PP	PP	13 09 34.9	-0.3
MNK				*i* PPP	PPP	13 10 01.2	
MNK				*i* S	S	13 14 12.4	+0.2
MNK				*i* SS	SS	13 16 49.6	-24
MNK				*i* SSS	SSS	13 17 47.4	
MNK				*i* LQ	LQ	13 21 53.1	
AK20	Malin Array Si	42.02	54	P	P	13 08 09.7	+0.5
AK19	Malin Array Si	42.03	54	P	P	13 08 09.8	+0.6
AK21	Malin Array Si	42.04	54	P	P	13 08 09.9	+0.6
AK22	Malin Array Si	42.06	54	P	P	13 08 10.0	+0.5
AK17	Malin Array Si	42.06	54	P	P	13 08 10.0	+0.5
AK18	Malin Array Si	42.06	54	P	P	13 08 10.0	+0.5
AK13	Malin Array Si	42.07	54	P	P	13 08 10.1	+0.5
AK16	Malin Array Si	42.09	54	P	P	13 08 10.3	+0.5
AK23	Malin Array Si	42.09	54	P	P	13 08 10.3	+0.5
AK14	Malin Array Si	42.10	54	P	P	13 08 10.4	+0.6
KIEV	Kiev	42.15	54	P	P	13 08 11.3	+1.1
KIEV				IAmb	IAmb	13 08 17.0	
	comp=Z,13nm,1.1s						
AKASG	Malin Array Be	42.16	54	P	P	13 08 11.2	+0.9
	comp=Z,1.9nm,0.6s,baz=278,slow=8.3,SNR=9.7						
	comp=Z,1.9nm,0.6s						
AKBB	Malin Array Si	42.16	54		P	13 08 09.7	-0.6
AKBB				IAmb	IAmb	13 08 17.0	
	comp=Z,16nm,1.1s						
TKL	Tuckaleechee C	42.54	283	LR	LR	13 22 01.3	
	comp=Z,514nm,21.9s,baz=28,slow=31						
FCC	Fort Churchill	44.52	318	P	P	13 08 28.9	-0.4
FCC				IAmb	IAmb	13 08 33.4	
	comp=Z,11nm,1.2s						
OBN	Obninsk	45.94	47	P	P	13 08 40.3	-0.2
N41A	Harden Midland	46.03	292	P	P	13 08 39.9	-1.6
RES	Resolute Bay	46.03	340	P	P	13 08 40.3	-0.7
SPMN	Marine on St.	46.03	299		P	13 08 40.3	-1.2
SPMN				IAmb	IAmb	13 08 50.0	
	comp=Z,13nm,1.1s						
ULM	Lac du Bonnet	46.79	306	LR	LR	13 27 08.8	
	comp=Z,469nm,19.1s,baz=220,slow=35						
AGMN	Agassiz Nation	47.25	304	P	P	13 08 49.8	-1.2
AGMN				IAmb	IAmb	13 09 00.8	
	comp=Z,13nm,1.4s						
P40A	Paris	47.29	291	P	P	13 08 50.5	-0.9
T42A	Van Buren	47.50	288		P	13 08 51.2	-1.9
N38A	Joes South For	47.70	293	P	P	13 08 53.0	-1.5
BRTR	Keskin Array B	47.95	68	P	P	13 08 58.8	+2.1
	comp=Z,2.3nm,1.1s,baz=292,slow=6.5,SNR=5.9						
	comp=Z,2.3nm,1.1s						
FFC	Flin Flon	49.41	313	P	P	13 09 06.4	-1.2
L34A	Svendsen Farm,	49.51	296		P	13 09 07.1	-1.5
ROSC	El Rosal	52.88	241	LR	LR	13 29 04.1	
	comp=Z,300nm,21.5s,baz=90,slow=33						
KBZ	Khabaz	52.95	60	P	P	13 09 36.2	+1.9
	comp=Z,5.8nm,1.1s,baz=272,slow=3.9,SNR=7.4						
	comp=Z,5.8nm,1.1s						
YKA	Yellowknife Ar	53.82	325	P	P	13 09 39.1	-1.2
	comp=Z,0.9nm,0.9s,baz=68,slow=6.7,SNR=8.6						
YKA				PcP	PcP	13 10 45.5	-0.5
	comp=Z,0.9nm,1.0s,baz=64,slow=2.8,SNR=5.4						
	comp=Z,0.9nm,0.9s						
HKT	Hockley	54.14	282		P	13 09 43.1	0.0
JTS	Las Juntas de	56.81	255	LR	LR	13 30 30.4	
	comp=Z,169nm,20.6s,baz=353,slow=32						
BDFB	Brasilia	57.24	201	P	P	13 10 07.0	+1.4
	comp=Z,2.3nm,0.7s,baz=9.5,slow=6.1,SNR=3.3						
	comp=Z,2.3nm,0.7s						
ARTI	Arti	57.44	41		P	13 10 06.2	-0.2
ARTI				IAmb	IAmb	13 10 08.3	
	comp=Z,15nm,1.0s						
PDAR	Pinedale Array	58.18	301	P	P	13 10 10.8	-1.4
	comp=Z,4.1nm,1.0s,baz=69,slow=8.1,SNR=16						
PDAR				LR	LR	13 34 42.7	
	comp=Z,212nm,19.2s,baz=36,slow=36						
	comp=Z,4.1nm,1.0s						
PDAR	Pinedale Array	58.18	301		P	13 10 10.6	-1.7
VILB	Vilhena	59.22	215		P	13 10 19.1	-0.2
VILB				IAmb	IAmb	13 10 28.6	
	comp=Z,11nm,1.0s						
ANMO	Albuquerque	59.63	292	P	P	13 10 22.6	+0.3
	comp=Z,1.7nm,0.9s,baz=73,slow=5.7,SNR=5.9						
ANMO				LR	LR	13 34 53.8	
	comp=Z,316nm,19.9s,baz=52,slow=35						
	comp=Z,1.7nm,0.9s						
ANMO	Albuquerque	59.63	292	P	P	13 10 21.9	-0.4
CMIG	Matias Romero	60.27	268	LR	LR	13 33 14.8	
	comp=Z,221nm,21.5s,baz=38,slow=33						
TXAR	Lajitas Array	60.36	285	P	P	13 10 26.8	-0.5
	comp=Z,1.3nm,0.7s,baz=73,slow=6.6,SNR=14						
TXAR				LR	LR	13 35 55.0	
	comp=Z,204nm,19.1s,baz=33,slow=36						
	comp=Z,1.3nm,0.7s						
TXAR	Lajitas Array	60.36	285		P	13 10 25.6	-1.7
NEW	Newport	60.50	310	P	P	13 10 27.0	-0.9
	comp=Z,6.0nm,1.1s,baz=74,slow=6.1,SNR=8.4						
NEW				LR	LR	13 35 01.5	
	comp=Z,613nm,20.3s,baz=89,slow=35						
	comp=Z,6.0nm,1.1s						
VHRN	Van Horn	60.60	287		P	13 10 28.3	-0.7
VHRN				IAmb	IAmb	13 10 41.1	
	comp=Z,8.7nm,1.2s						
PTLB	Pontes e Lacer	60.98	213	P	P	13 10 31.6	+0.3
PTLB				IAmb	IAmb	13 10 33.6	
	comp=Z,18nm,1.4s						
C27K	Jago River	61.32	339	P	P	13 10 32.5	-0.6
C27K				IAmb	IAmb	13 10 38.1	
	comp=Z,6.5nm,1.1s						
F28M	Old Crow	61.33	336		P	13 10 32.3	-0.9
F28M				IAmb	IAmb	13 10 34.0	
	comp=Z,7.6nm,1.2s						
AB31	Akbulak array	61.36	48	P	P	13 10 35.1	+1.5
AB31				IAmb	IAmb	13 10 41.0	
	comp=Z,5.0nm,1.1s						
ABKAR	Akbulak array	61.36	48	P	P	13 10 34.4	+0.8
DUG	Dugway, Tooele	61.53	300	P	P	13 10 35.2	0.0
DUG				IAmb	IAmb	13 10 39.4	
	comp=Z,11nm,1.1s						
NRIK	Noril'sk	62.41	21	P	P	13 10 41.4	+1.0
	comp=Z,5.4nm,0.8s,baz=68,slow=6.6,SNR=8.9						
	comp=Z,5.4nm,0.8s						
E25K	Arctic Village	62.77	338		P	13 10 42.2	-0.7
E25K				IAmb	IAmb	13 10 44.6	
	comp=Z,8.4nm,1.2s						
ELK	Elko	62.88	302	P	P	13 10 43.5	-0.8
	comp=Z,3.3nm,0.9s,baz=53,slow=5.7,SNR=9.9						
	comp=Z,3.3nm,0.9s						
TUC	Tucson	64.07	292		P	13 10 50.6	-1.5
TUC				IAmb	IAmb	13 10 57.2	
	comp=Z,8.8nm,1.2s						
ATAH	Atahualpa	64.48	236	LR	LR	13 37 48.1	
	comp=Z,57nm,21.7s,baz=360,slow=35						
COLD	Coldfoot	64.70	338	P	P	13 10 55.3	-0.3
BBB	Bella Bella	64.73	318	LR	LR	13 37 21.0	
	comp=Z,269nm,19.6s,baz=310,slow=34						
BORK	Borovoye	65.11	41		P	13 10 58.6	+0.1
BVAR	Borovoye Array	65.16	41	P	P	13 11 00.2	+1.4
	comp=Z,1.1nm,0.8s,baz=284,slow=6.0,SNR=7.4						
	comp=Z,1.1nm,0.8s						
ILAR	Eielson Array	65.32	335	P	P	13 10 58.8	-0.8
	comp=Z,0.8nm,1.1s,baz=62,slow=4.7,SNR=4.8						
ILAR				LR	LR	13 36 56.8	
	comp=Z,153nm,18.3s,baz=144,slow=34						
	comp=Z,0.8nm,1.1s						
LPAZ	La Paz	65.90	221	P	P	13 11 05.7	+1.0
	comp=Z,7.4nm,1.3s,baz=23,slow=6.9,SNR=13						
LPAZ				LR	LR	13 37 13.6	
	comp=Z,80nm,18.1s,baz=20,slow=34						
	comp=Z,7.4nm,1.3s						
LPAZ	La Paz	65.90	221	P	P	13 11 05.1	+0.5
D19K	Kuna River	65.91	342	P	P	13 11 01.7	-1.7
D19K				IAmb	IAmb	13 11 26.3	
	comp=Z,15nm,1.5s						
NVAR	Mina Array Bea	66.10	301	P	P	13 11 05.1	-0.3
	comp=Z,2.1nm,1.0s,baz=64,slow=5.5,SNR=9.9						
NVAR				LR	LR	13 39 16.1	
	comp=Z,173nm,19.8s,baz=332,slow=36						
	comp=Z,2.1nm,1.0s						
NVAR	Mina Array Bea	66.10	301	P	P	13 11 04.2	-1.2
YBH	Yreka Blue Hor	67.19	306	LR	LR	13 40 51.7	
	comp=Z,26nm,18.3s,baz=48,slow=36						
NNA	Nana	67.25	231	LR	LR	13 38 29.9	
	comp=Z,61nm,21.0s,baz=2.0,slow=34						
PFO	Pinyon Flats O	67.42	296	P	P	13 11 13.7	-0.1
	comp=Z,4.8nm,0.9s,baz=40,slow=5.0,SNR=3.7						
PFO				LR	LR	13 40 45.7	
	comp=Z,292nm,18.1s,baz=68,slow=36						
	comp=Z,4.8nm,0.9s						
FURI	Furi	67.70	97	LR	LR	13 40 00.9	
	comp=Z,327nm,21.1s,baz=98,slow=35						
MBAR	Mbarara	67.90	110	LR	LR	13 39 19.2	
	comp=Z,340nm,20.2s,baz=80,slow=34						
LPIG	La Paz	68.17	284	LR	LR	13 39 03.9	
	comp=Z,195nm,21.5s,baz=359,slow=34						
TIXI	Tiksi	68.34	7	P	P	13 11 19.0	+0.3
TIXI				IAmb	IAmb	13 11 24.3	
	comp=Z,6.9nm,0.8s						
CPUP	Villa Florida	70.17	206	P	P	13 11 31.0	+0.4
CPUP				IAmb	IAmb	13 11 37.6	
	comp=Z,9.1nm,1.4s						
KURK	Kurchatov	70.65	40		P	13 11 33.5	+0.1
KURK				IAmb	IAmb	13 11 39.5	
	comp=Z,8.6nm,0.9s						
KURBB	Kurchatov Arra	70.66	40	P	P	13 11 34.2	+0.8
	comp=Z,7.7nm,1.0s,baz=312,slow=6.9,SNR=37						
	comp=Z,7.7nm,1.0s						
KKAR	Karatay Array	70.83	50		P	13 11 34.1	-0.5
ZAA0	Zalesovo Array	71.46	35	P	P	13 11 39.3	+1.1
ZAA0				IAmb	IAmb	13 11 43.7	
	comp=Z,13nm,1.1s						
ZALV	Zalesovo Beam	71.46	35	P	P	13 11 39.1	+0.9
	comp=Z,7.4nm,0.9s,baz=304,slow=8.0,SNR=19						
	comp=Z,7.4nm,0.9s						
ZALV	Zalesovo Beam	71.46	35	P	P	13 11 38.9	+0.6
AAK	Ala-Archa	73.45	48		P	13 11 51.3	+0.8
AAK				IAmb	IAmb	13 11 54.8	
	comp=Z,11nm,1.5s						
MAKZ	Makanchi	74.86	41	P	P	13 11 58.5	0.0
MAKZ				IAmb	IAmb	13 12 04.8	
	comp=Z,15nm,1.1s						
MANEM	Manem	74.89	54	P	P	13 12 00.2	+1.1
MANEM				IAmb	IAmb	13 12 09.5	
	comp=Z,29nm,1.1s						
MKAR	Makanchi Array	75.03	41	P	P	13 12 00.7	+1.2
	comp=Z,8.4nm,0.9s,baz=317,slow=5.6,SNR=60						
MKAR				LR	LR	13 45 09.1	
	comp=Z,184nm,20.1s,baz=14,slow=36						
	comp=Z,8.4nm,0.9s						
MKAR	Makanchi Array	75.03	41	P	P	13 12 00.2	+0.7
KSH	Kashi	76.28	50	P	P	13 12 09.5	+2.6
KSH				pmax	pmax		
	comp=Z,13nm,1.3s						
YAK	Yakutsk	77.68	10	LR	LR	13 43 43.1	
	comp=Z,78nm,18.7s,baz=311,slow=34						
SEY	Seymchan	78.13	359	LR	LR	13 42 19.8	
	comp=Z,59nm,21.8s,baz=320,slow=32						
KHWEE	KHWEE	79.77	129	P	P	13 12 26.5	+0.2
WMQ	Urumqi	79.84	41	*e*P	P	13 12 28.8	+2.3
WMQ				pmax	pmax		
	comp=Z,19nm,1.3s						
MA2	Magadan	81.51	360	LR	LR	13 46 58.0	
	comp=Z,62nm,18.5s,baz=332,slow=34						
LBTB	Lobatse	82.19	131	LR	LR	13 46 31.8	
	comp=Z,157nm,21.1s,baz=80,slow=34						
BOSA	Boshof	84.75	134	LR	LR	13 47 01.7	
	comp=Z,207nm,21.5s,baz=351,slow=33						
SONM	Songino Array	84.90	28	P	P	13 12 53.8	+0.9
	comp=Z,7.5nm,1.0s,baz=329,slow=5.7,SNR=25						
	comp=Z,7.5nm,1.0s						
SONM	Songino Array	84.90	28	P	P	13 12 54.0	+1.1
ULN	Ulaanbaatar	85.11	28	P	P	13 12 54.3	+0.2
PETK	Petropavlovsk-	87.78	356	LR	LR	13 51 24.9	
	comp=Z,86nm,19.0s,baz=128,slow=35						
GTA	Gaotai	89.09	37	P	P	13 13 14.0	+0.5
GTA				pP	pP	13 13 17.5	-0.5
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BTO	Baotou	92.42	30	*e*P	P	13 13 28.8	-0.1
BTO				pP	pP	13 13 33.5	+0.1
BTO				sP	sP	13 13 35.5	+0.4
BTO				pmax	pmax		
	comp=Z,20nm,1.6s						
BTO				pmax	pmax		
	comp=Z,340nm,6.0s						
HHC	Hu-ho-hao-te	92.79	28	*e*P	P	13 13 30.5	-0.1
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,240nm,5.7s						
LZH	Lanzhou	93.65	36	*e*P	P	13 13 36.5	+1.8
LZH				sP	sP	13 13 43.5	+2.6
LZH	Lanzhou	93.65	36	SS	SS	13 31 06.3	+6.8
LZH				pmax	pmax		
	comp=Z,12nm,1.2s						
USRK	Ussuriysk Ar.	95.29	13	P	P	13 13 41.5	-0.4
	comp=Z,2.7nm,1.0s,baz=8.1,slow=8.1,SNR=4.1						
	comp=Z,2.7nm,1.0s						
PZH	PanZhiHua	100.41	43	P	Pdif	13 14 05.5	+0.1
WRA	Warramunga Arr	156.34	40	PKPab	PKPab	13 20 41.6	+0.4
	comp=Z,1.5nm,0.9s,baz=338,slow=4.5,SNR=6.2						
ASAR	Alice Springs	159.14	47	PKP	PKPdf	13 20 17.1	+0.6
	comp=Z,0.9nm,1.0s,baz=342,slow=1.8,SNR=5.1						
ASAR				PKPab	PKPab	13 20 54.4	+1.1
	comp=Z,2.5nm,1.0s,baz=320,slow=4.1,SNR=8.7						

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*SGS **25** 13:13:09.6, 29°.48N×32°.49E, h7^{km}, Ml3.0*

*GII **25** 13:13:12.5±0.0, 29°.341N±0°.003×32°.737E±0°.001, h16^{km}, Mws3.2, confirmed*

ISC 25 13:13:10.2±3.0**, 29°.39N**±0°.07×**32°.7E**±0°.2**, h2**^{km}**, n41,** σ**1**^{s}**12**/44**, Egypt**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRMI	Paran Flat	1.89	67	P	Pn	13 13 44.6	+1.1
KRMI	Paran Flat	1.89	67	P	Pn	13 13 44.2	+0.6
KRMI	Paran Flat	1.89	67	S	Sn	13 14 07.6	-0.3
HAQS	Haql	1.95	99	P	Pg	13 13 59.5	+12
MBRI	Mt Berech	1.95	77	P	Pn	13 13 44.4	0.0
MBRI				S	Sn	13 14 10.2	+0.6
MBRI	Mt Berech	1.95	77	P	Pn	13 13 44.4	0.0
MBRI	Mt Berech	1.95	77	S	Sn	13 14 09.4	-0.2
EIL	Elat	1.96	81	P	Pn	13 13 44.4	-0.1
EIL	Elat	1.96	81	S	Sn	13 14 09.6	-0.2

HQLS		2.04	92	S	Sn	13 14 12.7	+0.9
HQLS				P	Pn	13 13 46.0	+0.4
AQBJ	Aqaba	2.06	80	P	Pn	13 13 47.2	+1.4
AQBJ				S	Sn	13 14 13.6	+1.6
JMOS	Jabal al Moall	2.10	95	S	Sn	13 14 14.3	+1.3
JMOS	Jabal al Moall	2.10	95	P	Pn	13 13 47.1	+0.8
KZIT	Kziot	2.10	43	P	Pn	13 13 47.1	+0.7
KZIT	Kziot	2.10	43	S	Sn	13 14 13.5	+0.4
HRFI	Mount Harif	2.12	72	P	Pn	13 13 46.8	+0.2
HRFI				S	Sn	13 14 15.3	+1.8
HRFI	Mount Harif	2.12	72	P	Pn	13 13 46.6	0.0
HRFI	Mount Harif	2.12	72	S	Sn	13 14 13.6	+0.1
RSHS		2.12	120	P	Pn	13 13 46.5	-0.1
RSHS		2.12	120	S	Sn	13 14 15.2	+1.6
PRNI	Paran	2.20	64	P	Pn	13 13 49.2	+1.3
PRNI	Paran	2.20	64	P	Pn	13 13 48.9	+1.1
PRNI	Paran	2.20	64	S	Sn	13 14 15.8	0.0
ZFRI	Zfri	2.43	61	P	Pn	13 13 52.0	+1.1
ZFRI	Zfri	2.43	61	S	Sn	13 14 21.1	-0.1
JLOS		2.51	104	P	Pn	13 13 51.9	-0.2
JLOS		2.51	104	S	Sn	13 14 25.0	+1.5
HSNJ	Maan	2.72	71	P	Pn	13 13 56.6	+1.6
YTIR	Yattir	2.86	46	P	Pn	13 13 57.7	+0.8
YTIR	Yattir	2.86	46	S	Sn	13 14 31.7	-0.2
MSBI	Mazada	2.98	49	P	Pb	13 14 02.0	-2.0
MSBI	Mazada	2.98	49	P	Pn	13 13 59.7	+1.3
MSBI	Mazada	2.98	49	S	Sn	13 14 33.8	-0.9
GHAJ	Ghor Haditha	3.11	51	P	Pn	13 14 03.3	+3.0
GHAJ	Ghor Haditha	3.11	51	P	Pn	13 14 01.1	+0.8
GHAJ	Ghor Haditha	3.11	51	S	Sn	13 14 38.2	+0.1
DSI	Dead Sea	3.16	46	P	Pb	13 14 05.4	-1.7
DSI	Dead Sea	3.16	46	P	Pn	13 14 02.1	+1.1
DSI	Dead Sea	3.16	46	S	Sn	13 14 39.8	+0.5
HMDT	Nahal Hemdat	3.74	39	P	Pn	13 14 10.5	+1.6
HMDT	Nahal Hemdat	3.74	39	S	Sn	13 14 55.0	+1.5

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*IDC **25** 13:27:40.2±0.8, 31°.13S×177°.13W, h0km, mb4.2/6, mbtmp4.2/7, ML4.1/1, MS4.0/17, Error ellipse: s-maj=29.3km s-min=22.7km az=154.0*

*NEIC **25** 13:27:42.2±1.4, 31°.05S±0°.03×177°.0W±0°.2, h10km±2km, mb4.3/17, Error ellipse: s-maj=26.4km s-min=5.6km az=88.0*

*GCMT **25** 13:27:47.2±0.5, 30°.91S±0°.05×176°.68W±0°.03, h16km±1km, MW4.9/69, Moment Tensor Solution. s20,c23; s69,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.03±.19; $M_{\theta\theta}$0.26±.12; $M_{\phi\phi}$1.78±.12; $M_{r\theta}$2.02±.54; $M_{\theta\phi}$0.44±.07; $M_{\phi r}$-1.20±.32; Best double couple: $M_0$2.82700×10^{16} NP1:ϕ_s206.00000°,δ33.00000°,λ-41.00000°. NP2: ϕ_s332.00000°,δ69.00000°,λ-116.00000°. Principal axes: T 2.1470, Plg20.0000°, Azm81.0000°; N 1.3660, Plg24.0000°, Azm342.0000°; P -3.5070, Plg58.0000°, Azm206.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 13:27:41.5±0.6, **31°.28S**±0°.05×**177°.2W**±0°.1, **h10km, n97, σ2^{s}19**/95, **mb4.3**/16, **MS4.1**/15, **1C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	2.12	341	P	Pn	13 28 14.7	-2.2
GLKZ				S	Sn	13 28 38.3	-4.9
RAO	Raoul Island	2.12	341	Pn	Pn	13 28 13.9	-3.1
	449nm,0.3s,baz=181,slow=13,SNR=13						
RAO				Sn	Sn	13 28 39.2	-4.3
	2µm,0.3s,baz=146,slow=19,SNR=14						
RAO	Raoul Island	2.12	341		Pn	13 28 14.4	-2.6
MXZ	Matakaoa Point	7.31	210	Pn	Pn	13 29 30.5	+2.2
WMGZ	Waiomatatini S	7.48	208	P	Pn	13 29 30.5	-0.2
WMGZ				S	Sn	13 30 57.6	+2.0
HAZ	Te Kaha	7.70	212	P	Pn	13 29 33.7	+0.1
HAZ				S	Sn	13 31 00.7	-0.2
PUZ	Puketiti	7.76	208	P	Pn	13 29 33.4	-1.2
PUZ				S	Sn	13 31 00.7	-1.9
RUGZ	Raukumara Rang	7.92	211	P	Pn	13 29 36.7	-0.1
RUGZ				S	Sn	13 31 05.9	-0.6
TWGZ	Tauwhareparae	7.97	209	P	Pn	13 29 35.8	-1.6
TWGZ				S	Sn	13 31 07.2	-0.4
TKGZ	Te Karaka	8.24	209	P	Pn	13 29 39.4	-1.7
TKGZ				S	Sn	13 31 13.2	-1.1
MWZ	Matawai	8.29	210	P	Pn	13 29 40.3	-1.5
MWZ				S	Sn	13 31 14.0	-1.5
URZ	Urewera	8.42	213	Pn	Pn	13 29 44.3	+0.9
	2.2nm,0.3s,baz=66,slow=8.0,SNR=11						
URZ				Sn	Sn	13 31 16.8	-1.7
	3.0nm,0.3s,baz=27,slow=24,SNR=12						
	4.9nm,0.3s						
URZ	Urewera	8.42	213	P	Pn	13 29 41.9	-1.5
URZ				S	Sn	13 31 17.0	-1.5
WCZ	Waipu Caves	8.48	234	P	Pn	13 29 48.6	+4.3
RIGZ	Rimuhau	8.51	208	P	Pn	13 29 42.5	-2.2
RIGZ				S	Sn	13 31 17.6	-3.3
OUZ	Omahuta	8.69	241	P	Pn	13 29 53.2	+5.9
SNGZ	Shannon Statio	8.75	210	P	Pn	13 29 46.8	-1.2
SNGZ				S	Sn	13 31 25.1	-1.5
RAHZ	Arahi	8.97	210	P	Pn	13 29 48.1	-3.0
RAHZ				S	Sn	13 31 29.8	-2.3
MTHZ	Maungataniwha	9.02	211	P	Pn	13 29 51.6	-0.2
MTHZ				S	Sn	13 31 32.5	-1.0
NMHZ	Naumai	9.24	211	P	Pn	13 29 52.7	-2.1
NMHZ				S	Sn	13 31 38.0	-0.9
BKZ	Black Stump Fm	9.43	212	P	Pn	13 29 54.8	-2.7
BKZ				S	Sn	13 31 37.6	-6.0
KWHZ	Kaweka Forest	9.68	211	P	Pn	13 29 58.9	-1.9
KWHZ				S	Sn	13 31 45.3	-4.3
TMVZ	Te Maari	9.76	215	P	Pn	13 30 01.2	-0.9
TMVZ				S	Sn	13 31 47.5	-4.3
KAHZ	Kahuranaki	9.79	208	P	Pn	13 29 58.6	-3.8
KAHZ				S	Sn	13 31 49.5	-2.9
OTVZ	Oturere	9.82	215	P	Pn	13 30 01.3	-1.5
SNVZ	South Ngauruho	9.85	215	P	Pn	13 30 03.1	-0.2
WNVZ	Wahianoa	9.98	214	P	Pn	13 30 04.7	-0.4
PNHZ	Pukenui	10.18	210	P	Pn	13 30 04.1	-3.6
DVHZ	Dannevirke	10.51	209	P	Pn	13 30 11.2	-1.0
BFZ	Birch Farm	10.80	208	P	Pn	13 30 11.9	-4.2
BFZ				S	Sn	13 32 09.9	-7.2
MRZ	Mangatainoka R	11.06	210	P	Pn	13 30 16.5	-3.2
MSWZ	Moikau Station	11.82	209	P	Pn	13 30 27.2	-3.0
NNZ	Nelson	12.52	215	P	Pn	13 30 39.0	-0.6
TKNZ	Takaka Hill	12.59	217	P	Pn	13 30 39.6	-1.0
MRNZ	Matariki Terra	12.96	216	P	Pn	13 30 44.3	-1.4
THZ	Tophouse	13.16	215	P	Pn	13 30 47.0	-1.5
KHZ	Kahutara	13.38	211	P	Pn	13 30 47.4	-3.9
GVZ	Greta Valley S	14.04	211	P	Pn	13 30 56.5	-3.9
MQZ	McQueen's Vall	14.80	210	P	Pn	13 31 06.9	-3.8
DZM	Mont Dzumac	17.28	298	LR	LR	13 37 32.4	
	comp=Z,648nm,18.0s,baz=171,slow=34						
RAR	Rarotonga	18.50	61	LR	LR	13 37 36.9	
	comp=Z,149nm,19.4s,baz=287,slow=32						
PPT	Papeete	28.48	68	LR	LR	13 44 02.6	
	comp=Z,163nm,19.2s,baz=255,slow=35						
EIDS	Eidsvold	28.52	274	P	P	13 33 38.3	+1.0
EIDS				IAmb	IAmb	13 33 40.2	
	comp=Z,8.6nm,1.1s						
TOO	Toolangi	31.31	248	P	P	13 34 03.6	+1.7
CTA	Charters Tower	34.67	280	P	P	13 34 33.3	+1.9
	comp=Z,3.9nm,0.5s,baz=108,slow=8.5,SNR=15						
CTA				LR	LR	13 47 52.4	
	comp=Z,412nm,19.0s,baz=92,slow=35						
	comp=Z,3.9nm,0.5s						
CTAO	Charters Tower	34.67	280		P	13 34 33.4	+1.9
STKA	Stephens Creek	35.01	258	LR	LR	13 48 26.8	
	comp=Z,304nm,18.1s,baz=69,slow=36						
INKA	Innaminka	36.66	265		P	13 34 49.8	+1.5
INKA				IAmb	IAmb	13 35 08.5	
	comp=Z,2.8nm,0.9s						
PMG	Port Moresby	39.64	296	LR	LR	13 48 36.0	
	comp=Z,122nm,21.2s,baz=159,slow=32						
AS31	Alice Springs	43.80	267	P	P	13 35 47.9	+0.2
ASAR	Alice Springs	43.80	267	P	P	13 35 47.2	-0.5
	comp=Z,1.7nm,0.7s,baz=111,slow=8.7,SNR=11						
ASAR				PcP	PcP	13 37 34.6	+0.3
	comp=Z,0.8nm,0.5s,baz=110,slow=3.7,SNR=5.3						
ASAR				LR	LR	13 54 13.3	
	comp=Z,222nm,18.4s,baz=110,slow=36						
	comp=Z,1.7nm,0.7s						
ASAR	Alice Springs	43.80	267	P	P	13 35 47.6	-0.1
WRA	Warramunga Arr	44.87	273	P	P	13 35 56.0	-0.4
	comp=Z,2.6nm,0.6s,baz=112,slow=8.3,SNR=6.3						
	comp=Z,2.6nm,0.6s						
WRA	Warramunga Arr	44.87	273	P	P	13 35 55.9	-0.4
WB0	Warramunga Arr	44.89	273	P	P	13 35 56.7	+0.2
SBA	Scott Base	47.22	185	P	P	13 36 18.9	+4.9
SBA				IAmb	IAmb	13 36 41.1	
	comp=Z,6.4nm,1.1s						
VNDA	Vanda	47.30	186	P	P	13 36 17.5	+2.8
VNDA				IAmb	IAmb	13 36 36.2	
	comp=Z,1.6nm,1.1s						
JAY	Jayapura	48.95	297	LR	LR	13 55 56.8	
	comp=Z,81nm,20.1s,baz=158,slow=35						
FITZ	Fitzroy Crossi	53.09	270	LR	LR	13 59 35.0	
	comp=Z,271nm,18.5s,baz=97,slow=36						
GUMO	Guam	57.62	315	LR	LR	14 00 34.7	
	comp=Z,66nm,19.7s,baz=150,slow=34						
BATI	Baumata	58.49	277	LR	LR	14 03 43.7	
	comp=Z,474nm,18.6s,baz=146,slow=37						
RPN	Rapa Nui	58.50	105	LR	LR	13 58 49.7	
	comp=Z,97nm,18.6s,baz=262,slow=32						
QSPA	South Pole Qui	58.84	180	P	P	13 37 41.9	+1.9
PMSA	Palmer Station	71.17	155	LR	LR	14 03 51.8	
	comp=Z,84nm,18.4s,baz=183,slow=30						
SBUM	Sibu	74.83	282	P	P	13 39 23.1	+0.6
SBUM				IAmb	IAmb	13 39 24.4	
	comp=Z,2.4nm,1.1s						
SNAA	Sanae	77.26	178	P	P	13 39 36.7	+1.1
SNAA				IAmb	IAmb	13 39 54.4	
	comp=Z,2.9nm,1.0s						
JYT	Yasato	78.16	326	P	P	13 39 41.0	+0.1
JGF	Kuroka	79.06	324	P	P	13 39 46.4	+0.5
JGF				IAmb	IAmb	13 40 00.7	
	comp=Z,10.0nm,1.1s						
H03S2	Juan Fernandez	79.37	123	T	T	15 07 06.3	
	baz=238,slow=74,SNR=8.5						
MJAR	Matsushiro Arr	79.38	325	P	P	13 39 46.5	-1.1
MJAR				IAmb	IAmb	13 39 54.2	
	comp=Z,1.2nm,0.8s						
H03S1	Juan Fernandez	79.38	123	T	T	15 07 07.5	
	baz=238,slow=74,SNR=10.0						
H03S3	Juan Fernandez	79.39	123	T	T	15 07 06.3	
	baz=238,slow=74,SNR=10						
H03N3	Juan Fernandez	79.57	123	T	T	15 07 12.8	
	baz=231,slow=74						
H03N2	Juan Fernandez	79.57	123	T	T	15 07 16.3	
	baz=231,slow=74						
H03N1	Juan Fernandez	79.58	123	T	T	15 07 25.4	
	baz=231						
YULB	Yu-li	80.17	305	P	P	13 39 51.9	-0.3
YULB				IAmb	IAmb	13 39 54.0	
	comp=Z,8.4nm,1.0s						
PLCA	Paso Flores	81.38	133	LR	LR	14 11 48.3	
	comp=Z,64nm,18.4s,baz=238,slow=32						
LPIG	La Paz	84.38	58	LR	LR	14 11 43.2	
	comp=Z,85nm,18.9s,baz=307,slow=31						
KSAR	Wonju Array Be	85.50	319	P	P	13 40 19.4	-0.1
PSI	Prapat	86.25	276	LR	LR	14 19 36.6	
	comp=Z,98nm,19.8s,baz=136,slow=36						
GSI	Gunungsitoli	86.63	274	P	P	13 40 25.8	+0.1
NVAR	Mina Array Bea	88.39	42	P	P	13 40 33.9	+0.1
	comp=Z,1.5nm,0.9s,baz=263,slow=3.3,SNR=9.9						
	comp=Z,1.5nm,0.9s						
BNX	BinXian	91.64	325	⇑P	P	13 40 49.8	+1.2
BNX				pmax	pmax		
	comp=Z,6.0nm,1.6s						
TXAR	Lajitas Array	92.25	57	P	P	13 40 52.4	+0.5
	comp=Z,0.8nm,0.9s,baz=203,slow=8.2,SNR=6.7						
	comp=Z,0.8nm,0.9s						
NNA	Nana	92.48	106	LR	LR	14 13 00.3	
	comp=Z,69nm,20.7s,baz=268,slow=29						
CMAR	Chiang Mai Arr	94.38	289	P	P	13 41 02.8	+0.9
	comp=Z,0.4nm,0.5s,baz=109,slow=5.8,SNR=5.1						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	118.89	310	PKP	PKPdf	13 46 29.1	-0.9
	comp=Z,0.2nm,0.5s,baz=98,slow=4.4,SNR=1.8						
KURBB	Kurchatov Arra	122.22	313	PKP	PKPdf	13 46 35.7	-0.5
	comp=Z,0.3nm,0.3s,baz=110,slow=1.7,SNR=5.6						
KBZ	Khabaz	146.20	303	PKPbc	PKPab	13 47 22.9	+0.3
	comp=Z,1.1nm,0.7s,baz=72,slow=9.0,SNR=5.2						
FINES	FINESS Array B	146.22	340	PKPbc	PKPbc	13 47 20.6	-0.8
	comp=Z,4.6nm,0.8s,baz=48,slow=2.3,SNR=24						
NB2	NORSAR Subarra	149.72	352	PKP	PKPbc	13 47 30.3	-0.6
	comp=Z,66nm,3.3s,baz=28,slow=2.4						
NB2	NORSAR Subarra	149.72	352	PKP	PKPbc	13 47 30.3	-0.6
	baz=28,slow=2.4						
NOA	NORSAR Array B	149.72	352	PKPbc	PKPbc	13 47 30.5	-0.3
	comp=Z,2.2nm,1.0s,baz=13,slow=4.1,SNR=6.0						
HFS	Hagfors	150.24	349	PKPbc	PKPbc	13 47 31.5	-0.6
	comp=Z,2.4nm,0.9s,baz=46,slow=4.3,SNR=5.4						
AKASG	Malin Array Be	152.44	322	PKPbc	PKPbc	13 47 37.1	-0.3
	comp=Z,1.1nm,0.5s,baz=48,slow=2.2,SNR=6.4						
BRTR	Keskin Array B	153.66	297	PKPab	PKPab	13 47 53.5	0.0
	comp=Z,1.1nm,0.8s,baz=114,slow=3.5,SNR=5.4						
TORD	Torodi Ar. Bea	161.93	176	PKPab	PKPab	13 48 29.9	+0.7
	comp=Z,1.1nm,0.7s,baz=178,slow=3.8,SNR=6.1						

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*DJA **25** 13:28:01.0±0.9, 5°S±3°×13°4E±°, h20km±9km, M4.6/17, mB5.2/7, mb4.8/9, MLv4.5/17, Mw(mB)4.6/7*

*IDC **25** 13:28:02.2±1.2, 5°.52S×133°.58E, h36km±6km, mb3.6/5, mbtmp3.9/10, ML3.9/4, MS3.5/7, Error ellipse: s-maj=32.3km s-min=22.2km az=85.0*

ISC 25 13:28:02.2±0.7, **5°.36S**±0°.05×**133°.61E**±0°.06, **h35km, n30, σ1^{s}37**/35, **mb4.1**/5, **MS3.4**/3, **Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
KMPI	Kaimana, Papua	1.69	3	P	Pn	13 28 27.4	-1.9
KMPI				S	Sn	13 28 49.3	-0.5
FAKI	Fak Fak	2.78	331	P	Pn	13 28 43.5	-0.9
FAKI				S	Sn	13 29 17.6	+0.9
SAUI	Saumlaki	3.47	221	P	Pn	13 28 56.1	+2.3
BNDI	Bandanaira	3.79	283	P	Pn	13 28 59.8	+1.6
RKPI	Ransiki, Papua	3.87	8	P	Pn	13 28 59.6	+0.3
RKPI				S	Sn	13 29 43.2	-0.3
MWPI	Manokwari, Pap	4.42	6	P	Pn	13 29 06.0	-0.9
MWPI				S	Sn	13 29 58.1	+0.8
BAKI	Biak	4.83	31	P	Pn	13 29 11.6	-1.0
SIJI	Sorong	5.04	332	P	Pn	13 29 15.6	+0.2
	0.3nm3µm31nm,0.7s						
SWI	Sorong	5.05	332	P	Pn	13 29 15.9	+0.4
	0.4nm65nm,0.6s						
SWI				S	Sn	13 30 13.5	+0.8
	0.4nm65nm,0.6s						
MSAI	Masohi	5.08	293	P	Pn	13 29 16.6	+0.6
	0.4nm3µm115nm,0.7s						
WAMI	Wamena	5.29	74	P	Pn	13 29 21.1	+2.3
KRAI	Karang Ratu	5.58	291	P	Pn	13 29 23.6	+0.7
AAI	Ambon	5.65	287	P	Pn	13 29 24.0	+0.2
	0.4nm1µm96nm,0.8s						
NLAI	Namlea	6.83	288	P	Pn	13 29 40.6	+0.6
	0.3nm49nm,1.0s						
JAY	Jayapura	7.62	68	LR	LR	13 33 49.9	
	comp=Z,290nm,21.4s,baz=303,slow=45						
SANI	Sanana	8.29	293	P	Pn	13 29 59.4	-0.7
BATI	Baumata	10.97	243	Pn	Pn	13 30 35.0	-1.9
	1.9nm,0.3s,baz=313,slow=23,SNR=1.8						
BATI				Sn	Sn	13 32 36.4	-2.0
	2.1nm,0.3s,baz=302,slow=22,SNR=4.5						
	20nm,0.9s						
PMG	Port Moresby	14.02	107	Pn	Pn	13 31 19.4	+0.9
	6.5nm,0.9s,baz=261,slow=9.5,SNR=3.7						
WRA	Warramunga Arr	14.51	177	Pn	Pn	13 31 24.0	-1.2
	0.4nm,0.3s,baz=356,slow=13,SNR=8.7						
WRA				Sn	Sn	13 33 48.1	-17
	baz=357,slow=26						
	1.1nm,0.7s						
DAV	Davao City (W)	14.72	327	LR	LR	13 38 45.1	
	comp=Z,55nm,18.7s,baz=165,slow=43						
FITZ	Fitzroy Crossi	14.86	211	Pn	Pn	13 31 26.6	-3.4
	0.5nm,0.3s,baz=45,slow=11,SNR=14						
FITZ				Sn	Sn	13 34 00.7	-13
	0.5nm,0.3s,baz=129,slow=17,SNR=3.9						
FITZ				LR	LR	13 38 35.1	
	comp=Z,262nm,18.1s,baz=40,slow=43						
	1.1nm,0.3s						
ASAR	Alice Springs	18.20	179	P	Pn	13 32 09.8	-2.4
	0.1nm,0.3s,baz=6.0,slow=11,SNR=15						
ASAR				S	Sn	13 35 22.1	-12
	0.3nm,0.7s,baz=140,slow=37,SNR=1.4						
ASAR				LR	LR	13 40 19.8	
	comp=Z,257nm,20.7s,baz=308,slow=41						
	2.1nm,0.8s						
PSI	Prapat	35.59	282	LR	LR	13 50 32.4	
	comp=Z,62nm,19.2s,baz=39,slow=38						
DZM	Mont Dzumac	35.83	121	LR	LR	13 47 40.2	
	comp=Z,374nm,19.1s,baz=172,slow=33						
CMAR	Chiang Mai Arr	41.58	306	P	P	13 35 47.9	+0.9
	0.3nm,0.3s,baz=116,slow=8.0,SNR=1.4						
CMAR				pP	pwP	13 35 58.8	+1.8
	0.6nm,0.5s,baz=126,slow=7.0,SNR=2.1						
	0.3nm,0.3s						
KSRS	Korea Array	42.93	353	LR	LR	13 56 18.8	
	comp=Z,37nm,18.2s,baz=345,slow=39						
MKAR	Makanchi Array	68.90	325	P	P	13 39 04.1	+0.5
	0.8nm,0.8s,baz=109,slow=7.5,SNR=6.9						
	0.8nm,0.8s						
ZALV	Zalesovo Beam	71.77	332	P	P	13 39 21.4	+0.5
	0.3nm,0.4s,baz=114,slow=7.0,SNR=3.5						
ZALV				pP	pP	13 39 32.3	+1.1
	1.7nm,0.7s,baz=95,slow=9.1,SNR=4.7						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	73.06	327	P	P	13 39 29.2	+0.6
	0.6nm,0.6s,baz=124,slow=4.7,SNR=12						
KURBB				pP	pP	13 39 39.6	+0.7
	2.2nm,0.9s,baz=126,slow=5.1,SNR=8.5						
	0.6nm,0.6s						
BVAR	Borovoye Array	78.64	327	P	P	13 40 00.9	+0.3
	1.3nm,0.7s,baz=114,slow=7.0,SNR=4.9						
BVAR				pP	pP	13 40 12.5	+1.6
	2.1nm,0.6s,baz=150,slow=6.3,SNR=7.8						
	1.3nm,0.7s						

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*IDC **25** 13:46:37.0±7.1, 39°.82N×31°.16W, h0km, mb3.6/5, mbtmp3.7/5, Error ellipse: s-maj=160.9km s-min=69.5km az=26.0*

*SVSA **25** 13:46:40.9±0.7, 39°.38N×29°.85W, h10km, ML3.1(INMG), Error ellipse: s-maj=11.4km s-min=5.0km az=51.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia Atlntico N*

ISC 25 13:46:37.0±1.0, **39°.1N**±0°.2×**29°.98W**±0°.10, **h11km, n15, σ1^{s}77**/18, **mb3.9**/4, **Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
H07S1	FLORES T-PHASE	0.99	287	Pn	Pg	13 46 57.1	+1.0
H07S1				T	T	13 48 03.8	
	SNR=6.1						
H07N1	FLORES T-PHASE	1.06	304	Pn	Pb	13 46 54.9	-2.5
H07N1				T	T	13 47 55.3	
PCED	Cedros	1.10	115	*e*P	Pb	13 46 58.5	+0.5
PCED				*e*S	Sb	13 47 11.6	-0.8
PCED				*i* IAML		13 47 12.0	
PCED				*i* IAML		13 47 12.2	
PCED				*i* IAML		13 47 12.6	
CALA	Caldeira	1.12	117	*e*S	Sb	13 47 12.8	-0.3
CALA				*i* IAML		13 47 14.1	
CALA				*i* IAML		13 47 14.8	
CALA				*i* IAML		13 47 14.8	
PFCBR	Castelo Branco	1.14	120	*e*S	Sb	13 47 13.2	-0.3
PFCBR				*i* IAML		13 47 15.4	
PFCBR				*i* IAML		13 47 15.5	
PFCBR				*i* IAML		13 47 15.6	
HOR	Horta	1.20	118	*e*S	Sb	13 47 14.7	-0.4
HOR				*i* IAML		13 47 15.8	
HOR				*i* IAML		13 47 16.2	
HOR				*i* IAML		13 47 16.7	
PCAN	Candelaria	1.33	118	*e*P	Pn	13 47 01.7	+0.2
PCAN				*e*S	Sb	13 47 17.4	-1.5
PCAN				*i* IAML		13 47 19.8	
PCAN				*i* IAML		13 47 19.9	
PCAN				*i* IAML		13 47 20.0	
PICO	Pico	1.35	115	*e*P	Pn	13 47 02.2	+0.3
PICO				*e*S	Sb	13 47 18.2	-1.5
PICO				*i* IAML		13 47 20.3	
PICO				*i* IAML		13 47 20.4	
PICO				*i* IAML		13 47 20.7	
ROSA	Rosais	1.41	105	*e*P	Pn	13 47 02.0	-0.5
ROSA				*e*S	Sn	13 47 17.6	-3.6
ROSA				*i* IAML		13 47 18.9	
ROSA				*i* IAML		13 47 19.1	
ROSA				*i* IAML		13 47 19.4	
PMAN	Manadas	1.55	107	*e*S	Sn	13 47 21.5	-3.0
PMAN				*i* IAML		13 47 22.7	
PMAN				*i* IAML		13 47 23.0	
PMAN				*i* IAML		13 47 23.8	
ESDC	Sonseca Array	20.10	80	P	Pn	13 51 20.9	+8.4
	0.9nm,0.8s,baz=286,slow=12,SNR=3.4						
	0.9nm,0.8s						
NOA	NORSAR Array B	33.53	35	P	P	13 53 17.7	+1.3
	0.6nm,1.0s,baz=238,slow=9.2,SNR=2.4						
	0.6nm,1.0s						
KURBB	Kurchatov Arra	70.93	40	P	P	13 57 55.5	+1.5
	0.6nm,0.8s,baz=310,slow=6.2,SNR=4.4						
	0.6nm,0.8s						
ZALV	Zalesovo Beam	71.72	34	P	P	13 58 00.6	+1.8
	0.4nm,0.3s,baz=330,slow=8.3,SNR=4.1						
	0.4nm,0.3s						
MKAR	Makanchi Array	75.31	41	P	P	13 58 22.0	+2.0
	1.5nm,0.9s,baz=298,slow=6.2,SNR=8.1						
	1.5nm,0.9s						

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*NEIC **25** 14:05:35.6±2.1, 16°.1S±0°.1×168°.2E±0°.1, h166km±8km, mb4.4/17, Error ellipse: s-maj=19.8km s-min=14.2km az=114.0*

*NOU **25** 14:05:35.4, 16°.48S×166°.59E, h0km, MLv4.7/7, Vanuatu Islands*

*IDC **25** 14:05:37.3±2.5, 16°.10S×167°.97E, h180km±23km, mb3.4/10, mbtmp3.9/11, Error ellipse: s-maj=26.4km s-min=18.1km az=140.0*

ISC 25 14:05:36.4±0.5, **16°.10S**±0°.07×**168°.10E**±0°.09, **h177km, n51, σ1^{s}18**/53, **mb4.1**/17, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	1.62	177	S	Sn	14 06 35.9	+1.0
DVP	Devils Point	1.62	177	P	Pn	14 06 10.7	+1.4
RTV	Rentapao	1.72	170	P	Pn	14 06 12.2	+1.9
MARNC	Mare, Loyalty	5.36	181		Pn	14 06 54.6	-0.4
DZM	Mont Dzumac	6.15	195	P	Pn	14 07 06.6	+1.2
	8.1nm,0.5s,baz=81,slow=12,SNR=33						
DZM				S	Sn	14 08 14.9	-0.7
	10nm,0.6s,baz=332,slow=22,SNR=5.6						
DZM	Mont Dzumac	6.15	195		Pn	14 07 05.8	+0.4
PINNC	Pines Island,	6.51	185		Pn	14 07 10.5	+0.4
FUNA	Funafuti	13.19	57	Pn	Pn	14 08 34.9	-2.3
EIDS	Eidsvold	18.38	237	P	P	14 09 38.4	+0.3
EIDS				IAmb	IAmb	14 09 55.6	
	comp=Z,35nm,1.5s						
ARMA	Armidale	20.75	224	P	P	14 10 04.5	+0.9
ARMA				IAmb	IAmb	14 10 11.8	
	comp=Z,17nm,1.4s						
CTA	Charters Tower	21.14	256	P	P	14 10 07.7	-0.1
	comp=Z,8.3nm,1.2s,baz=79,slow=16,SNR=3.1						
	comp=Z,8.3nm,1.2s						
COEN	Coen	24.16	272	P	P	14 10 35.8	-0.8
COEN				IAmb	IAmb	14 11 11.8	
	comp=Z,11nm,1.2s						
MRZ	Mangatainoka R	25.32	167	P	P	14 10 45.8	-1.0
MRZ				IAmb	IAmb	14 11 21.1	
	comp=Z,21nm,1.2s						
STKA	Stephens Creek	28.76	232	P	P	14 11 17.4	-0.2
	comp=Z,0.5nm,0.3s,baz=69,slow=10,SNR=9.6						
	comp=Z,0.5nm,0.3s						
WB0	Warramunga Arr	32.25	258	P	P	14 11 47.5	-1.0
WB0				IAmb	IAmb	14 12 03.2	
	comp=Z,7.5nm,1.5s						
WRA	Warramunga Arr	32.30	258	P	P	14 11 47.5	-1.4
	comp=Z,1.2nm,0.8s,baz=82,slow=7.8,SNR=4.6						
	comp=Z,1.2nm,0.8s						
WRA	Warramunga Arr	32.30	258	P	P	14 11 47.6	-1.3
AS31	Alice Springs	32.97	251	P	P	14 11 53.7	-1.0
ASAR	Alice Springs	32.97	251	P	P	14 11 53.9	-0.8
	comp=Z,2.9nm,0.5s,baz=76,slow=9.0,SNR=136						
ASAR				PcP	PcP	14 14 34.6	0.0
	comp=Z,0.3nm,0.7s,baz=86,slow=3.0,SNR=2.6						
ASAR				ScP	ScP	14 18 01.1	-1.2
	comp=Z,0.2nm,0.8s,baz=94,slow=4.4,SNR=4.5						
	comp=Z,2.9nm,0.5s						
ASAR	Alice Springs	32.97	251	P	P	14 11 53.6	-1.1
UGM	Wanagama	56.76	271	P	P	14 15 02.0	-0.4
MJAR	Matsushiro Arr	59.48	332	P	P	14 15 20.6	-0.3
	comp=Z,1.9nm,0.8s,baz=174,slow=8.1,SNR=4.9						
	comp=Z,1.9nm,0.8s						
SSLB	Suanglung	60.77	310	P	P	14 15 30.4	+0.6
JKA	Kamikawa-asahi	64.29	340	P	P	14 15 54.8	+2.0
KULM	Kulim	70.01	282	P	P	14 16 30.6	+1.1
KULM				IAmb	IAmb	14 16 54.7	
	comp=Z,9.1nm,1.1s						
QSPA	South Pole Qui	73.94	180	P	P	14 16 52.6	+0.5

QSPA				IAmb	IAmb	14 16 55.1	
	comp=Z,4.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**76.24**	**294**	P	**P**	**14 17 06.5**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=118,slow=6.3,SNR=4.9						
	comp=Z,0.4nm,0.6s						
K15K	**Wolf Creek Mou**	**81.72**	**14**	P	**P**	**14 17 34.5**	**-0.2**
L19K	**White Mountain**	**83.30**	**17**	P	**P**	**14 17 44.5**	**+1.5**
L19K				IAmb	IAmb	14 18 22.1	
	comp=Z,17nm,1.5s						
ULN	**Ulaanbaatar**	**83.71**	**324**	P	**P**	**14 17 45.6**	**+0.1**
SONM	**Songino Array**	**84.07**	**323**	P	**P**	**14 17 47.3**	**0.0**
	comp=Z,0.8nm,0.5s,baz=133,slow=6.3,SNR=4.5						
	comp=Z,0.8nm,0.5s						
CMB	**Columbia Colle**	**85.89**	**49**	P	**P**	**14 17 56.2**	**-0.3**
G19K	**Purcell Mounta**	**86.03**	**13**	P	**P**	**14 17 57.3**	**+0.8**
G19K				IAmb	IAmb	14 18 02.5	
	comp=Z,4.6nm,1.3s						
NVAR	**Mina Array Bea**	**87.55**	**49**	P	**P**	**14 18 06.4**	**+1.6**
	comp=Z,0.6nm,0.8s,baz=225,slow=9.5,SNR=4.9						
	comp=Z,0.6nm,0.8s						
ILAR	**Eielson Array**	**87.57**	**18**	P	**P**	**14 18 03.1**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=229,slow=5.0,SNR=8.3						
	comp=Z,0.5nm,0.7s						
TXAR	**Lajitas Array**	**96.22**	**61**	P	**P**	**14 18 45.9**	**+0.9**
	comp=Z,0.1nm,0.6s,baz=252,slow=5.5,SNR=1.2						
	comp=Z,0.1nm,0.6s						
ARCES	**ARCESS Array B**	**121.77**	**345**	PKP	**PKPdf**	**14 24 08.8**	**+0.1**
	comp=Z,3.1nm,0.8s,baz=349,slow=3.9,SNR=5.8						
FINES	**FINESS Array B**	**127.28**	**338**	PKP	**PKPdf**	**14 24 19.5**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=53,slow=0.7,SNR=2.2						
NOA	**NORSAR Array B**	**132.14**	**345**	PKP	**PKiKP**	**14 24 29.8**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=39,slow=2.1,SNR=2.0						
CONA	**Conrad Observa**	**140.90**	**330**	*e*PKiKP	**PKiKP**	**14 24 48.5**	**+0.4**
	comp=Z,1.5nm,0.8s						
SOKA	**Soboth**	**142.18**	**329**	*e*PKP	**PKPdf**	**14 24 45.4**	**-2.4**
	comp=Z,3.4nm,1.2s						
OBKA	**Obir**	**142.53**	**330**	*e*PKP	**PKPdf**	**14 24 49.3**	**+0.8**
	comp=Z,5.1nm,1.2s						
KBA	**Koelnbreinsper**	**142.69**	**331**	*e*PKP	**PKPdf**	**14 24 44.8**	**-4.0**
	comp=Z,14nm,0.7s						
LESA	**Schwarzleotal**	**142.74**	**332**	*i* PKP	**PKPdf**	**14 24 46.6**	**-2.2**
	comp=Z,5.2nm,1.0s						
ABTA	**Abfaltersbach**	**143.32**	**332**	*i* PKP	PKPbc	14 24 47.6	+0.1
	comp=Z,5.0nm,0.6s						
WTTA	**Wattenberg**	**143.32**	**333**	*e*PKP	**PKPdf**	**14 24 49.2**	**-0.7**
	comp=Z,2.9nm,0.7s						
SQTA	**Sankt Quirin**	**143.54**	**333**	*i* PKP	**PKPdf**	**14 24 49.1**	**-1.1**
	comp=Z,3.0nm,0.6s						
FETA	**Feichten**	**143.90**	**333**	*i* PKP	**PKPdf**	**14 24 50.4**	**-0.5**
	comp=Z,5.5nm,1.0s						
DAVA	**Damuels**	**144.05**	**335**	*i* PKP	**PKPdf**	**14 24 50.8**	**-0.4**
	comp=Z,5.8nm,0.8s						
ESDC	**Sonseca Array**	**155.51**	**345**	PKPab	**PKPab**	**14 25 36.6**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=32,slow=3.7,SNR=2.2						
TORD	**Torodi Ar. Bea**	**166.52**	**259**	PKPab	**PKPab**	**14 26 23.7**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=104,slow=6.1,SNR=3.6						

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*IDC **25** 14:11:19.0±0.8, 5°.94N×125°.86E, h173^{km}±8^{km}, mb3.3/5, mbtmp3.7/5, Error ellipse: s-maj=60.0km s-min=15.4km az=71.0*

ISC 25 14:11:17.5±1.0, **6°.1N**±0°.2×**126°.6E**±0°.3, **h150**^{km}, **n6**, σ**1^{s}.90**/7, **mb3.7**/5, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.42**	**314**	P	**Pn**	**14 11 47.5**	**+1.3**
	195nm,0.5s,baz=271,slow=13,SNR=1.7						
DAV				S	**Sn**	**14 12 09.3**	**+1.0**
	323nm,0.3s,baz=331,slow=22,SNR=9.6						
WRA	**Warramunga Arr**	**26.95**	**164**	P	**P**	**14 16 44.8**	**-0.3**
	0.3nm,0.4s,baz=341,slow=8.7,SNR=1.4						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**30.40**	**167**	P	**P**	**14 17 15.4**	**-0.3**
	0.6nm,0.4s,baz=338,slow=7.1,SNR=31						
	0.6nm,0.4s						
STKA	**Stephens Creek**	**40.35**	**160**	P	**P**	**14 18 41.3**	**+0.7**
	1.4nm,0.5s,baz=329,slow=10.0,SNR=6.9						
	1.4nm,0.5s						
MKAR	**Makanchi Array**	**55.58**	**324**	P	**P**	**14 20 34.3**	**-3.2**
	0.5nm,0.5s,baz=121,slow=7.4,SNR=12						
	0.5nm,0.5s						
ILAR	**Eielson Array**	**83.06**	**26**	P	**P**	**14 23 26.9**	**+1.0**
	0.4nm,0.8s,baz=255,slow=5.1,SNR=5.9						
	0.4nm,0.8s						

IDC 25 14:14:19.8±1.9, **6°.05S**×**130°.30E**, **h0**^{km}, **mb3.9**/1, **mbtmp3.9**/4, **ML3.8**/3, **Error ellipse: s-maj=56.7km s-min=29.4km az=78.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**7.76**	**237**	Pn	Pn	14 16 15.5	+1.3
	1.8nm,0.3s,baz=153,slow=4.5,SNR=1.5						
BATI				Sn	Sn	14 17 29.0	-14
	1.6nm,0.3s,baz=277,slow=17,SNR=1.8						
	9.6nm,0.5s						
WRA	**Warramunga Arr**	**14.36**	**165**	Pn	Pn	14 17 44.8	+0.2
	0.6nm,0.3s,baz=343,slow=11,SNR=11						
WRA				Sn	Sn	14 20 12.2	-12
	0.5nm,0.3s,baz=5.3,slow=21,SNR=4.8						
	0.4nm,0.2s						
ASAR	**Alice Springs**	**17.86**	**169**	P	Pn	14 18 29.2	-0.7
	0.3nm,0.3s,baz=342,slow=8.8,SNR=17						
ASAR				S	Sn	14 21 34.4	-15
	0.3nm,0.5s,baz=357,slow=27,SNR=5.0						
	1.2nm,0.6s						
MKAR	**Makanchi Array**	**67.60**	**326**	P	P	14 25 18.4	-0.1
	0.5nm,0.3s,baz=117,slow=8.0,SNR=13						
	0.5nm,0.3s						

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*BJI **25** 14:15:07.0, 22°.20S×173°.40E, h10^{km}, mB5.4/7, mb4.7/31, Ms4.9/6, Ms7 4.6/7*

*NEIC **25** 14:15:07.1, 22°.06S×173°.35E, h12^{km}*

*NEIC **25** 14:15:07.1, 21°.76S×173°.78E, h12^{km}, Moment Tensor Solution. Duration: 1^{s}.7 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.84; M$_{\theta\theta}$0.86; M$_{\phi\phi}$1.98; M$_{r\theta}$0.53; M$_{\theta\phi}$1.34; M$_{\phi r}$0.98; Fault plane solution: M$_{0}$3.07000×10^{16} NP1:ϕ_{s}35.74000°, δ34.40000°, λ-86.68000°. NP2:ϕ_{s}211.72000°, δ55.67000°, λ-92.27000°. Principal axes: T 3.0811, Plg11.0000°, Azm303.0000°; N -0.0256, Plg2.0000°, Azm213.0000°; P -3.0555, Plg79.0000°, Azm113.0000°;*

*NEIC **25** 14:15:07.0±1.7, 22°.1S±0°.1×173°.35E±0°.09, h10^{km}±1^{km}, mb4.9/51, Ms_20 4.6/31, Mww4.9/15 Error ellipse: s-maj=20.9km s-min=13.4km az=160.0*

*IDC **25** 14:15:09.4±0.7, 22°.18S×173°.66E, h0^{km}, mb4.3/14, mbtmp4.2/15, ML2.5/1, MS4.2/41, Error ellipse: s-maj=24.8km s-min=18.8km az=152.0*

*GCMT **25** 14:15:14.1±0.2, 22°.03S±0°.02×173°.59E±0°.01, h12^{km}, MW5.0/120, Moment Tensor Solution. s44,c54; s120,c185; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.68±.15; M$_{\theta\theta}$1.02±.10; M$_{\phi\phi}$2.65±.10; M$_{r\theta}$-1.05±.29; M$_{\theta\phi}$1.69±.06; M$_{\phi r}$0.31±.23; Best double couple: M$_{0}$3.84900×10^{16} NP1:ϕ_{s}198.00000°, δ45.00000°, λ-112.00000°. NP2:ϕ_{s}47.00000°, δ49.00000°, λ-70.00000°. Principal axes: T 3.7230, Plg2.0000°, Azm123.0000°; N 0.2410, Plg15.0000°, Azm213.0000°; P -3.9740, Plg75.0000°, Azm24.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **25** 14:15:16.9, 22°.55S×171°.51E, h33^{km}*

ISC 25 14:15:07.1±0.4, **22°.14S**±0°.07×**173°.39E**±0°.06, **h10**^{km}, **n234**, σ**1^{s}.93**/164, **mb4.8**/52, **MS4.4**/58, **29C-10D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**5.02**	**277**	Pn	**Pn**	**14 16 21.7**	**-0.8**
PINNC	**Pines Island,**	**5.52**	**264**	Pn	**Pn**	**14 16 27.8**	**-1.5**
MSVF	**Nonsavu**	**6.20**	**46**		**Pn**	**14 16 37.6**	**-1.3**
DZM	**Mont Dzumac**	**6.44**	**269**	Pn	Pn	14 16 49.3	+7.2
	0.1nm,0.3s,baz=177,slow=21,SNR=2.3						
	5.6nm,0.8s						
DZM	**Mont Dzumac**	**6.44**	**269**	*e*Pn	**Pn**	**14 16 44.1**	**+2.0**
	104nm,1.5s						
DZM				*e*LR	LR	14 17 59.8	
	6μm,24.1s						
DZM	**Mont Dzumac**	**6.44**	**269**	Pn	**Pn**	**14 16 40.1**	**-2.0**
TOZ	**Tahuroa Road**	**15.64**	**174**		**P**	**14 18 51.2**	**-0.6**
URZ	**Urewera**	**16.38**	**170**	Pn	**P**	**14 19 02.9**	**+2.9**
	0.3nm,0.3s,baz=65,slow=9.8,SNR=1.5						
URZ				LR	LR	14 23 56.8	
	comp=Z,1μm,21.3s,baz=351,slow=32						
RTZ	**Ruatahuna**	**16.71**	**170**		**Pn**	**14 19 03.1**	**+1.7**
BKZ	**Black Stump Fm**	**17.18**	**172**	P	**Pn**	**14 19 05.9**	**-1.4**
MRZ	**Mangatainoka R**	**18.55**	**175**	P	**P**	**14 19 23.1**	**-0.9**
MRZ				IAmb	IAmb	14 19 27.0	
	comp=Z,129nm,1.9s						
BFZ	**Birch Farm**	**18.64**	**173**	P	**P**	**14 19 25.1**	**+0.1**
BFZ				IAmb	IAmb	14 19 35.5	
	comp=Z,197nm,2.0s						
TCW	**Tory Channel**	**19.03**	**178**	P	**P**	**14 19 27.6**	**-1.6**
SNZO	**South Karori**	**19.14**	**177**	P	**P**	**14 19 29.1**	**-1.4**
SNZO				IAmb	IAmb	14 19 38.8	
	comp=Z,165nm,1.6s						
MRNZ	**Matariki Terra**	**19.21**	**181**	P	**P**	**14 19 29.2**	**-2.0**
TUWZ	**Tuamarina**	**19.24**	**179**	P	**P**	**14 19 29.5**	**-2.0**
MSWZ	**Moikau Station**	**19.28**	**176**	P	**P**	**14 19 29.4**	**-2.6**
BSWZ	**Blackbirch Sta**	**19.52**	**179**	P	**P**	**14 19 32.9**	**-1.8**
INZ	**Inchbonnie**	**20.59**	**184**	P	**P**	**14 19 45.2**	**-1.0**
LTZ	**Lake Taylor**	**20.60**	**182**		**P**	**14 19 44.5**	**-2.0**
EIDS	**Eidsvold**	**20.66**	**257**	P	**P**	**14 19 43.3**	**-3.9**
ARMA	**Armidale**	**21.15**	**243**		**P**	**14 19 50.5**	**-2.1**
ARMA				IAmb	IAmb	14 20 08.0	
	comp=Z,56nm,1.3s						
OXZ	**Oxford**	**21.16**	**183**	P	**P**	**14 19 51.9**	**-0.5**
MLZ	**Mavora Lakes**	**23.56**	**189**	P	**P**	**14 20 18.1**	**+0.3**
MLZ				IAmb	IAmb	14 20 34.0	
	comp=Z,53nm,1.7s						
DCZ	**Deep Cove**	**23.82**	**191**	P	**P**	**14 20 20.6**	**+0.4**
WHZ	**Wether Hill Ro**	**24.10**	**189**	P	**P**	**14 20 23.8**	**+0.8**
RAR	**Rarotonga**	**24.95**	**93**	LR	LR	14 28 14.9	
	comp=Z,488nm,21.4s,baz=294,slow=32						
CAN	**Canberra**	**25.01**	**233**	P	**P**	**14 20 30.7**	**-0.6**
CAN				IAmb	IAmb	14 20 53.1	
	comp=Z,102nm,1.9s						
CTA	**Charters Tower**	**25.38**	**270**	P	P	14 20 41.7	+6.9
	comp=Z,3.6nm,0.9s,baz=89,slow=10.0,SNR=6.5						
CTA				LR	LR	14 30 24.8	
	comp=Z,1μm,19.0s,baz=82,slow=36						
	comp=Z,3.6nm,0.9s						
CTAO	**Charters Tower**	**25.38**	**270**	P	**P**	**14 20 33.3**	**-1.5**
CTAO				IAmb	IAmb	14 20 48.8	
	comp=Z,64nm,2.0s						
CTAO	**Charters Tower**	**25.38**	**270**	IAMs_20	IAMs_20	14 30 30.6	
	comp=Z,2μm,18.0s						
PMG	**Port Moresby**	**28.18**	**293**	P	P	14 21 06.2	+6.2
	comp=Z,4.3nm,0.8s,baz=76,slow=6.5,SNR=3.0						
PMG				LR	LR	14 31 30.5	
	comp=Z,828nm,18.6s,baz=132,slow=34						
	comp=Z,4.3nm,0.8s						
PMG	**Port Moresby**	**28.18**	**293**	P	**P**	**14 20 58.6**	**-1.4**
PMG	**Port Moresby**	**28.18**	**293**	IAMs_20	IAMs_20	14 31 37.8	
	comp=Z,1μm,18.0s						
TOO	**Toolangi**	**28.52**	**231**	P	**P**	**14 21 02.1**	**-0.8**
COEN	**Coen**	**29.81**	**281**	P	**P**	**14 21 13.7**	**-0.9**
COEN				IAmb	IAmb	14 21 25.0	
	comp=Z,45nm,1.7s						
STKA	**Stephens Creek**	**29.84**	**244**	P	P	14 21 22.1	+7.4
	comp=Z,3.2nm,1.0s,baz=81,slow=9.9,SNR=5.1						
STKA				LR	LR	14 32 18.0	
	comp=Z,473nm,20.4s,baz=66,slow=34						
	comp=Z,3.2nm,1.0s						
STKA	**Stephens Creek**	**29.84**	**244**	P	**P**	**14 21 14.4**	**-0.3**
TAU	**Tasmania Unive**	**29.99**	**220**	P	**P**	**14 21 16.4**	**+0.6**
INKA	**Innaminka**	**30.06**	**253**		**P**	**14 21 15.6**	**-1.0**
TBI	**Tubuai**	**34.23**	**99**	*e*S	**S**	**14 27 18.4**	**-1.8**
	comp=Z,507nm,23.8s						
TBI				*e*LQ	LQ	14 29 26.8	
	comp=Z,1μm,32.2s						
TBI				*e*LR	LR	14 30 48.9	
	comp=Z,1μm,28.2s						
TBI				*e*LR	LR	14 31 01.9	
	comp=Z,6μm,29.2s						
BBOO	**Buckleboo**	**34.62**	**244**		**P**	**14 21 55.9**	**-0.7**
BBOO				IAmb	IAmb	14 22 04.7	
	comp=Z,32nm,1.2s						
PPT2	**Papeete2**	**35.07**	**89**	*e*S	**S**	**14 27 25.0**	**-8.4**
	comp=Z,152nm,25.5s						
PPT2				*e*LQ	LQ	14 29 50.0	
	comp=Z,433nm,34.0s						
PPT2				*e*LR	LR	14 31 16.5	
	comp=Z,1μm,28.5s						
PPT2				*e*LR	LR	14 31 24.2	
	comp=Z,1μm,26.5s						
PPT	**Papeete**	**35.08**	**89**	LR	LR	14 36 01.9	
	comp=Z,192nm,18.3s,baz=274,slow=36						
WR8	**Warramunga Arr**	**36.29**	**266**	P	**P**	**14 22 09.4**	**-1.7**
WR8				IAmb	IAmb	14 22 17.1	
	comp=Z,19nm,1.4s						
AS31	**Alice Springs**	**36.32**	**260**		**P**	**14 22 09.9**	**-1.5**
ASAR	**Alice Springs**	**36.32**	**260**	P	P	14 22 16.4	+5.0
	comp=Z,8.1nm,1.1s,baz=88,slow=8.0,SNR=26						
ASAR				LR	LR	14 37 21.2	
	comp=Z,852nm,19.0s,baz=100,slow=36						
	comp=Z,8.1nm,1.1s						
ASAR	**Alice Springs**	**36.32**	**260**		**P**	**14 22 09.6**	**-1.8**
WB0	**Warramunga Arr**	**36.42**	**266**	P	**P**	**14 22 11.4**	**-0.8**
WB0				IAmb	IAmb	14 22 18.3	
	comp=Z,28nm,1.4s						
WRAB	**Tennant Creek**	**36.43**	**266**	IAMs_20	IAMs_20	14 37 11.0	
	comp=Z,1μm,19.0s						
WRA	**Warramunga Arr**	**36.44**	**266**	P	P	14 22 17.2	+4.8
	comp=Z,3.9nm,1.0s,baz=104,slow=7.9,SNR=14						
	comp=Z,3.9nm,1.0s						
WRA	**Warramunga Arr**	**36.44**	**266**	P	**P**	**14 22 11.2**	**-1.3**
JAY	**Jayapura**	**37.26**	**297**	LR	LR	14 37 27.8	
	comp=Z,716nm,20.1s,baz=133,slow=36						
H11S2	**WAKE ISLAND Hy**	**40.91**	**350**	T	T	15 06 12.1	
	baz=171,slow=76,SNR=6.5						
H11S3	**WAKE ISLAND Hy**	**40.92**	**350**	T	T	15 06 12.5	
	baz=171,slow=76,SNR=4.1						
H11S1	**WAKE ISLAND Hy**	**40.93**	**350**	T	T	15 06 13.5	
	baz=171,slow=76,SNR=5.8						
MTN	**Manton Dam**	**41.23**	**276**	P	**P**	**14 22 51.6**	**-1.0**
MTN				IAmb	IAmb	14 22 59.7	
	comp=Z,23nm,1.2s						
KNRA	**Kununurra**	**42.58**	**271**	P	**P**	**14 23 03.0**	**-0.6**
KNRA				IAmb	IAmb	14 23 11.1	
	comp=Z,42nm,1.1s						
FAKI	**Fak Fak**	**44.25**	**290**	IAMs_20	IAMs_20	14 40 35.0	
	comp=Z,490nm,22.0s						
FITZ	**Fitzroy Crossi**	**44.87**	**266**	LR	LR	14 42 34.3	
	comp=Z,1μm,18.5s,baz=102,slow=36						
GUMO	**Guam**	**45.20**	**319**	LR	LR	14 40 31.8	
	comp=Z,371nm,20.2s,baz=161,slow=34						
TAOE	**Nuku Hiva Isla**	**46.50**	**81**	*e*S	**S**	**14 30 24.2**	**+0.4**
	comp=Z,183nm,25.8s						
TAOE				*e*LR	LR	14 36 39.5	
	comp=Z,959nm,27.0s						
RKT	**Rikitea**	**47.47**	**102**	*e*LR	LR	14 37 05.2	
	comp=Z,1μm,27.2s						
SOEI	**Soe**	**48.61**	**277**	P	**P**	**14 23 51.0**	**-0.6**
SOEI				IAMs_20	IAMs_20	14 44 26.0	
	comp=Z,526nm,22.0s						
BATI	**Baumata**	**49.00**	**276**	LR	LR	14 44 13.7	
	comp=Z,1μm,21.5s,baz=142,slow=35						
PSA00	**Pilbara Seismi**	**49.47**	**260**	P	**P**	**14 23 57.4**	**-0.6**
PSA00	**Pilbara Seismi**	**49.47**	**260**	P	**P**	**14 23 56.8**	**-1.2**
PSA00				IAmb	IAmb	14 24 06.0	
	comp=Z,32nm,1.6s						
MBWA	**Marble Bar**	**49.66**	**261**	P	**P**	**14 23 58.9**	**-0.5**
NWAO	**Narrogin (SRO)**	**50.43**	**245**	LR	LR	14 45 24.6	
	comp=Z,405nm,18.5s,baz=80,slow=36						
MMRI	**Maumere**	**50.88**	**277**	P	**P**	**14 24 08.2**	**-0.5**
EDFI	**Ende, Flores**	**51.34**	**277**	P	P	14 24 17.9	+5.6
	comp=Z,815nmcomp=Z,27nm,2.6s						
MORW	**Morawa**	**51.75**	**250**	P	**P**	**14 24 14.5**	**-0.6**
LBFI	**Labuhan Bajo,**	**53.09**	**276**	P	P	14 24 33.1	+7.9
	comp=Z,1μmcomp=Z,41nm,2.1s						
DBNI	**Kabupaten Domp**	**54.54**	**275**	P	P	14 24 42.5	+6.6
	comp=Z,12nm,1.5s						
DAV	**Davao City (W)**	**55.10**	**296**	LR	LR	14 49 40.5	
	comp=Z,96nm,18.2s,baz=128,slow=37						
VNDA	**Vanda**	**55.71**	**183**	P	**P**	**14 24 45.6**	**+2.3**
	comp=Z,0.9nm,0.9s,baz=35,slow=6.3,SNR=5.1						
VNDA				LR	LR	14 44 21.0	
	comp=Z,183nm,21.9s,baz=14,slow=32						
	comp=Z,0.9nm,0.9s						
VNDA	**Vanda**	**55.71**	**183**	P	**P**	**14 24 43.9**	**+0.6**
VNDA				IAmb	IAmb	14 24 52.2	
	comp=Z,16nm,1.8s						
SBA	**Scott Base**	**55.85**	**182**	P	**P**	**14 24 44.5**	**+0.2**
JCJ	**Chichijima**	**57.51**	**327**	LR	LR	14 47 06.0	
	comp=Z,131nm,22.0s,baz=136,slow=33						
JOW	**Kunigami**	**65.39**	**316**	LR	LR	14 50 19.1	
	comp=Z,168nm,21.5s,baz=132,slow=32						
TNG	**Tangerang**	**66.17**	**273**	P	**P**	**14 25 59.4**	**+4.0**
MJAR	**Matsushiro Arr**	**67.16**	**330**	LR	LR	14 50 08.9	
	comp=Z,135nm,21.9s,baz=153,slow=31						
QSPA	**South Pole Qui**	**67.93**	**180**	P	**P**	**14 26 05.0**	**-1.0**
QSPA				IAmb	IAmb	14 26 24.7	
	comp=Z,22nm,1.4s						
JNU	**Nakatsue**	**68.30**	**322**	LR	LR	14 53 52.5	
	comp=Z,45nm,20.2s,baz=132,slow=34						
MDSI	**Maura Dua**	**69.07**	**274**	P	P	14 26 21.0	+7.2
RPN	**Rapa Nui**	**69.40**	**112**	LR	LR	14 49 09.2	
	comp=Z,215nm,21.3s,baz=238,slow=30						
ASAJ	**Asahikawa**	**71.72**	**337**	LR	LR	14 53 24.7	
	comp=Z,222nm,21.4s,baz=155,slow=32						
KSRS	**Korea Array**	**73.11**	**324**	P	P	14 26 43.0	+5.3
	comp=Z,1.4nm,0.8s,baz=134,slow=6.2,SNR=5.5						
KSRS				LR	LR	14 54 55.6	
	comp=Z,73nm,21.6s,baz=130,slow=33						
	comp=Z,1.4nm,0.8s						
SHEM	**Shemya Is, Ala**	**74.56**	**0**	LR	LR	14 56 31.3	
	comp=Z,99nm,19.4s,baz=133,slow=33						
NJ2	**Nanjing**	**74.99**	**314**	*e*P	**P**	**14 26 50.3**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
IPM	**Ipoh**	**75.46**	**281**	P	**P**	**14 26 50.0**	**-2.0**
IPM				IAMs_20	IAMs_20	14 59 09.3	
	comp=Z,204nm,19.0s						
IPM	**Ipoh**	**75.46**	**281**	P	**P**	**14 26 56.3**	**+4.3**
	comp=Z,21nm,1.3s						
USRK	**Ussuriysk Ar.**	**76.12**	**331**	P	P	14 26 59.9	+4.8
	comp=Z,2.5nm,0.7s,baz=160,slow=4.6,SNR=5.5						
	comp=Z,2.5nm,0.7s						
KULM	**Kulim**	**76.13**	**282**	P	**P**	**14 26 54.0**	**-1.9**
KULM				IAmb	IAmb	14 27 02.8	
	comp=Z,12nm,1.1s						
PETK	**Petropavlovsk-**	**76.16**	**350**	LR	LR	14 56 59.7	
	comp=Z,171nm,18.5s,baz=150,slow=33						
PSI	**Prapat**	**76.71**	**279**	LR	LR	15 03 01.5	
	comp=Z,200nm,20.2s,baz=161,slow=37						
PSI	**Prapat**	**76.71**	**279**	P	**P**	**14 27 03.1**	**+3.8**
	comp=Z,8.4nm,1.5s						
MAW	**Mawson**	**77.19**	**202**	P	**P**	**14 27 05.6**	**+4.7**
	comp=Z,5.9nm,1.1s,baz=96,slow=8.1,SNR=4.6						
	comp=Z,5.9nm,1.1s						
GSI	**Gunungsitoli**	**77.36**	**277**	P	**P**	**14 27 01.0**	**-1.8**
GSI				IAmb	IAmb	14 27 10.2	
	comp=Z,27nm,1.2s						
BELA	**Belgrano 2**	**78.86**	**174**	P	**P**	**14 27 11.0**	**+1.0**
BELA				IAmb	IAmb	14 28 32.5	
	comp=Z,8.4nm,1.2s						
CN2	**Changchun**	**78.97**	**327**	P	P	14 27 16.3	+5.3
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
BNX	**BinXian**	**79.42**	**329**	P	**P**	**14 27 12.0**	**-1.4**
BNX				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HNS	**HongShan**	**80.96**	**316**	⇑P	**P**	**14 27 22.8**	**+0.9**
HNS				pmax	pmax		
	comp=Z,6.0nm,1.8s						
HNS				LR	LR		
	comp=Z,170nm,12.3s						
HNS				LR	LR		
	comp=Z,200nm,14.9s						
HNS				LR	LR		
	comp=Z,300nm,24.0s						
HEH	**HeiHe**	**82.75**	**332**	*e*P	P	14 27 35.8	+4.8
HEH				pmax	pmax		
	comp=Z,11nm,2.0s						
PMSA	**Palmer Station**	**82.83**	**159**	LR	LR	15 01 38.4	
	comp=Z,64nm,18.0s,baz=276,slow=34						
XAN	**Xi'an**	**82.93**	**311**	⇓P	P	14 27 37.8	+5.3
XAN				pmax	pmax		
	comp=Z,7.0nm,1.9s						
XAN				LR	LR		
	comp=Z,200nm,16.5s						
XAN				LR	LR		
	comp=Z,140nm,17.9s						
XAN				LR	LR		
	comp=Z,210nm,19.2s						
KMI	**Kunming**	**83.09**	**301**	P	P	14 27 42.8	+9.1
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SYO	**Syowa Base**	**83.20**	**195**	⇓*e*pP	pP	14 27 36.9	+1.0
CM31	**Chiang Mai Arr**	**83.22**	**293**	P	**P**	**14 27 32.2**	**-2.0**
CMAR	**Chiang Mai Arr**	**83.22**	**293**	P	P	14 27 40.3	+6.1
	comp=Z,7.6nm,1.1s,baz=127,slow=3.5,SNR=26						
	comp=Z,7.6nm,1.1s						
CMAR	**Chiang Mai Arr**	**83.22**	**293**	P	**P**	**14 27 32.4**	**-1.8**
CHTO	**Chiang Mai**	**83.37**	**293**	P	**P**	**14 27 33.6**	**-1.4**
CHTO				IAmb	IAmb	14 27 43.0	
	comp=Z,24nm,1.4s						
CHTO	**Chiang Mai**	**83.37**	**293**	P	P	14 27 39.9	+4.9
MA2	**Magadan**	**83.51**	**349**	LR	LR	14 59 01.0	
	comp=Z,244nm,20.2s,baz=156,slow=32						
ELIB	**Princess Elisa**	**83.94**	**189**	*d*P	**P**	**14 27 35.7**	**-1.5**
	comp=Z,2.3nm,1.3s						
PZH	**PanZhiHua**	**84.53**	**301**	P	**P**	**14 27 41.3**	**+0.4**
KDAK	**Kodiak Island**	**84.54**	**18**	LR	LR	14 57 28.7	
	comp=Z,109nm,21.4s,baz=180,slow=30						
JRSC	**Jasper Ridge**	**84.69**	**46**	IAMs_20	IAMs_20	15 07 27.7	
	comp=Z,318nm,21.0s						
HHC	**Hu-ho-hao-te**	**84.95**	**318**	*e*P	**P**	**14 27 43.0**	**+0.3**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,170nm,4.8s						
HHC				LR	LR		
	comp=Z,170nm,21.8s						
HHC				LR	LR		
	comp=Z,130nm,23.7s						
HHC				LR	LR		
	comp=Z,280nm,18.9s						
CD2	**Chengdu**	**85.08**	**306**	*e*P	**P**	**14 27 43.0**	**-0.5**
TROLL	**Troll, Antarti**	**85.89**	**183**	⇑P	P	14 27 41.3	-5.7
	comp=Z,26nm,0.4s						
SUTB	**Sutter Butte**	**85.97**	**45**	P	**P**	**14 27 48.8**	**+1.1**
SUTB				IAmb	IAmb	14 27 53.3	
	comp=Z,30nm,1.6s						
CMB	**Columbia Colle**	**86.26**	**46**	P	**P**	**14 27 49.5**	**+0.2**
CMB				IAmb	IAmb	14 27 56.6	
	comp=Z,11nm,1.4s						
ISA	**Isabella, Lake**	**86.36**	**49**	P	**P**	**14 27 48.7**	**-1.1**
ISA				IAmb	IAmb	14 28 03.4	
	comp=Z,7.3nm,1.1s						
SNAA	**Sanae**	**86.40**	**181**	LR	LR	15 02 53.9	
	comp=Z,94nm,21.6s,baz=132,slow=33						
SEY	**Seymchan**	**86.40**	**351**	LR	LR	15 02 12.1	
	comp=Z,255nm,20.1s,baz=142,slow=33						
O03E	**Paynes Creek**	**86.54**	**44**	P	**P**	**14 27 50.0**	**-0.6**
O03E				IAmb	IAmb	14 28 18.2	
	comp=Z,17nm,1.4s						
YBH	**Yreka Blue Hor**	**86.75**	**42**	LR	LR	15 00 44.3	
	comp=Z,11nm,18.1s,baz=317,slow=32						
PFO	**Pinyon Flats O**	**86.78**	**52**	LR	LR	15 02 12.4	
	comp=Z,83nm,18.3s,baz=244,slow=33						
VNA2	**Neumayer--Watz**	**87.18**	**180**	⇑P	P	14 28 06.2	+13
	comp=Z,0.4nm,0.3s,baz=1.4,slow=29						
LPIG	**La Paz**	**87.23**	**63**	LR	LR	15 02 45.2	
	comp=Z,81nm,18.3s,baz=280,slow=33						
LZH	**Lanzhou**	**87.55**	**311**	*e*P	**P**	**14 27 56.5**	**+0.8**
LZH				pP	pwP	14 28 01.5	+0.7
LZH				sP	sP	14 28 04.0	+4.5
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
NVAR	**Mina Array Bea**	**87.87**	**47**	P	**P**	**14 28 01.4**	**+4.1**
	comp=Z,2.0nm,1.1s,baz=251,slow=3.8,SNR=6.5						
NVAR				LR	LR	14 58 45.8	
	comp=Z,108nm,20.9s,baz=286,slow=30						
	comp=Z,2.0nm,1.1s						
BBB	**Bella Bella**	**89.83**	**32**	LR	LR	15 04 03.0	
	comp=Z,178nm,18.1s,baz=197,slow=33						
YAK	**Yakutsk**	**90.83**	**341**	LR	LR	15 03 22.7	
	comp=Z,147nm,21.2s,baz=116,slow=32						
KNB	**Kanab**	**91.00**	**50**	P	**P**	**14 28 09.7**	**-2.2**
KNB				IAmb	IAmb	14 28 19.2	
	comp=Z,21nm,1.6s						
ELK	**Elko**	**91.07**	**46**	P	**P**	**14 28 10.6**	**-1.7**
ELK				IAmb	IAmb	14 28 42.2	
	comp=Z,4.0nm,1.1s						
H03S2	**Juan Fernandez**	**91.53**	**128**	T	T	16 09 39.0	
	baz=241,slow=74,SNR=6.4						
H03S1	**Juan Fernandez**	**91.55**	**128**	T	T	16 09 39.1	
	baz=241,slow=74,SNR=5.5						
H03S3	**Juan Fernandez**	**91.55**	**128**	T	T	16 09 39.3	
	baz=241,slow=74,SNR=5.5						
LL01	**San Ignacio de**	**91.72**	**137**	IAMs_20	IAMs_20	14 58 10.3	
	comp=Z,402nm,22.0s						
SONM	**Songino Array**	**91.88**	**322**	P	**P**	**14 28 19.6**	**+4.0**

	comp=Z,1.2nm,1.0s,baz=125,slow=2.3,SNR=5.1						
SONM				LR	LR	15 07 45.3	
	comp=Z,85nm,20.5s,baz=98,slow=34						
	comp=Z,1.2nm,1.0s						
ILAR	Eielson Array	91.89	16	P	P	14 28 18.2	+3.0
	comp=Z,1.5nm,1.0s,baz=230,slow=5.7,SNR=6.1						
ILAR				LR	LR	15 01 38.4	
	comp=Z,83nm,21.1s,baz=214,slow=30						
	comp=Z,1.5nm,1.0s						
ILAR	Eielson Array	91.89	16	P	P	14 28 15.9	+0.7
GTA	Gaotai	91.94	312	P	P	14 28 22.3	+6.1
GTA				pP	pwP	14 28 26.5	+5.3
GTA				pmax	pmax		
	comp=Z,6.0nm,1.5s						
GTA				LR	LR		
	comp=Z,130nm,16.3s						
GTA				LR	LR		
	comp=Z,180nm,18.7s						
GTA				LR	LR		
	comp=Z,220nm,22.3s						
I26K	Coal Creek Min	93.29	17	P	P	14 28 20.2	-1.4
PLCA	Paso Flores	93.78	137	LR	LR	15 01 12.9	
	comp=Z,124nm,21.4s,baz=267,slow=30						
TXAR	Lajitas Array	94.78	60	P	P	14 28 33.9	+4.5
	comp=Z,0.8nm,1.1s,baz=255,slow=5.2,SNR=4.0						
	comp=Z,0.8nm,1.1s						
ANMO	Albuquerque	94.79	54	LR	LR	15 06 50.9	
	comp=Z,59nm,18.2s,baz=315,slow=33						
PALK	Pallekele	95.17	276	LR	LR	15 14 13.5	
	comp=Z,150nm,18.7s,baz=126,slow=37						
BI02	San Fabin de	95.53	133	IAMs_20	IAMs_20	15 04 34.4	
	comp=Z,314nm,21.0s						
Q24A	Divide	97.32	51	IAMs_20	IAMs_20	14 58 43.5	
	comp=Z,246nm,19.0s						
TIXI	Tiksi	98.40	347	LR	LR	15 10 47.7	
	comp=Z,76nm,19.0s,baz=192,slow=34						
WMQ	Urumqi	102.01	312	eP	Pdif	14 29 01.8	+0.2
WMQ				pmax	pmax		
	comp=Z,15nm,1.1s						
WMQ				LR	LR		
	comp=Z,140nm,24.0s						
OK048	Pawnee Station	102.55	56	IAMs_20	IAMs_20	15 01 35.0	
	comp=Z,245nm,19.0s						
TEIG	Tepich	104.78	74	IAMs_20	IAMs_20	15 06 10.1	
	comp=Z,165nm,22.0s						
KURK	Kurchatov	109.77	318	IAMs_20	IAMs_20	15 13 31.3	
	comp=Z,142nm,20.0s						
BVAR	Borovoye Array	115.12	319	PKP	PKPdf	14 33 51.5	+3.1
	comp=Z,0.4nm,0.5s,baz=157,slow=1.1,SNR=2.7						
UOSS	Minazif	122.80	286	IAMs_20	IAMs_20	15 26 23.4	
	comp=Z,98nm,22.0s						
ARCES	ARCESS Array B	128.83	346	PKP	PKiKP	14 34 18.1	+3.2
	comp=Z,4.5nm,1.0s,baz=50,slow=3.3,SNR=4.7						
AKASG	Malin Array Be	140.10	325	PKP	PKiKP	14 34 37.5	-0.7
	comp=Z,0.1nm,0.3s,baz=35,slow=2.3,SNR=1.3						
TESR	Tescani	143.75	320	⇑P	PKiKP	14 34 46.5	+0.6
BUR08	Bucovina Ar. S	143.98	323	PKPdf	PKPbc	14 34 40.2	-0.7
BURAR	Bucovina Array	143.99	323	PKPdf	PKPab	14 34 39.8	-0.5
BURAR	Bucovina Array	143.99	323	⇑P	PKiKP	14 34 48.6	+2.1
VRI	Vrincioaia	144.03	319	⇑P	PKiKP	14 34 45.9	-0.7
TURR	Turia	144.36	320	⇑P	PKiKP	14 34 48.8	+1.5
MLR	Muntele Rosu	144.69	319	PKPdf	PKPab	14 34 42.5	-0.5
MLR	Muntele Rosu	144.69	319	⇑P	PKiKP	14 34 48.2	+0.1
DOPR	Dopca	144.78	320	⇑P	PKiKP	14 34 48.2	+0.1
CJR	Cluj-Napoca	145.41	322	⇑P	PKiKP	14 34 50.7	+1.4
ARR	Arges	145.54	320	⇑P	PKiKP	14 34 50.1	+0.3
TNR	Turnu Rosu	145.61	320	⇑P	PKiKP	14 34 49.7	-0.1
MARR	Marisel-Cluj	145.70	323	⇑P	PKiKP	14 34 51.1	+1.1
MANT	Manisa	145.79	306	PKPdf	PKPdf	14 34 44.2	-2.4
DRGR		145.86	323	⇑P	PKiKP	14 34 51.4	+1.1
LANS	Liptovska Anna	146.04	329	ePKP	PKiKP	14 34 52.8	+2.2
STEB	Steborice	146.27	331	⇑ePKP	PKiKP	14 34 52.5	+1.5
STEB				ex	x	14 35 05.1	
OSTC	Ostas	146.48	333	⇑ePKP	PKiKP	14 34 53.4	+2.0
MORC	Moravsky Berou	146.49	331	PKPdf	PKPdf	14 34 45.8	-1.4
MORC	Moravsky Berou	146.49	331	⇑P	PKiKP	14 34 52.2	+0.7
MORC	Moravsky Berou	146.49	331	ePKP	PKiKP	14 34 52.6	+1.1
DPC	Dobruska-Polom	146.59	333	⇑ePKP	PKiKP	14 34 53.4	+1.7
GZR	Gura Zlata	146.63	321	⇑P	PKiKP	14 34 52.5	+0.5
PSZ	Piszkesteto	146.65	327	PKPdf	PKPdf	14 34 46.4	-1.1
PSZ	Piszkesteto	146.65	327	⇑P	PKPab	14 34 50.6	+0.4
EKA	Eskdalemuir Ar	146.75	356	PKPbc	PKiKP	14 34 51.1	-0.7
	comp=Z,4.8nm,1.0s,baz=15,slow=1.9,SNR=7.9						
SIRR	Siria	146.75	323	⇑P	PKiKP	14 34 52.7	+0.6
JAVC	Velka Javorina	147.09	330	ePKP	PKiKP	14 34 55.3	+2.5
HERR	Herculane	147.12	321	⇑P	PKiKP	14 34 53.4	+0.5
CLL	Collm	147.13	337	PKPdf	PKPdf	14 34 46.8	-1.4
CLL	Collm	147.13	337	ePKPbc	PKPbc	14 34 50.0	-0.3
CLL				i PKiKP	pPKPab	14 34 54.4	-0.2
	comp=Z,18nm,1.2s						
CLL				i x	x	14 35 16.2	
	comp=Z,26nm,1.6s						
CLL				AMS	AMS	15 38 00.0	
	comp=Z,100nm,20.0s						
BZS	Buzias	147.16	322	⇑P	PKiKP	14 34 53.9	+1.0
VRAC	Vranov	147.25	332	⇓P	PKiKP	14 34 52.5	-0.5
VRAC	Vranov	147.25	332	ePKP	PKiKP	14 34 54.5	+1.5
KRUC	Moravsky	147.52	331	ePKP	PKiKP	14 34 54.9	+1.3
MDVR	Moldovita	147.59	321	⇑P	PKiKP	14 34 54.1	+0.1
PRU	Pruhonice	147.60	334	⇑ePKP	PKiKP	14 34 55.6	+1.9
MODS	Modra-Piesok	147.62	330	ePKP	PKiKP	14 34 56.0	+2.2
ZVC	Zvikov	148.17	334	⇑ePKP	PKPab	14 34 57.2	+1.1
MORH	Mrgy, Hungar	148.42	326	⇑P	PKPbc	14 34 52.9	-1.0
RONA	Rosalia, Austr	148.56	330	i pPKiKP	PKPab	14 34 58.4	+0.7
	comp=Z,8.2nm,1.1s						
CONA	Conrad Observa	148.59	330	epPKiKP	PKPab	14 34 58.1	+0.2
	comp=Z,13nm,1.1s,SNR=6.8						
CKRC	Cesky Krumlov	148.60	333	ePKPDF	PKPbc	14 34 52.8	-1.6
CKRC				⇑ePKP	sPKPbc	14 34 58.4	+0.3
KHC	Kasperske Hory	148.66	334	PKPbc	PKPdf	14 34 52.3	+1.5
KHC	Kasperske Hory	148.66	334	ePKPDF	PKPbc	14 34 52.6	-1.9
KHC				⇑ePKP	sPKPbc	14 34 57.9	-0.4
GEC2	GERESS Array S	148.84	334	PKPbc	PKPbc	14 34 52.8	-2.2
GERES	GERESS Array B	148.84	334	PKPbc	PKPab	14 34 58.4	-0.5
	comp=Z,6.5nm,1.1s,baz=38,slow=2.4,SNR=13						
GRF	Grafenberg Arr	149.11	337	ePKP	PKPab	14 35 00.6	+0.8
	baz=45,slow=2.1						
ARSA	Arzberg	149.25	330	i pPKiKP	PKPab	14 35 01.0	+0.5
	comp=Z,5.2nm,1.1s						
MOA	Molln	149.37	332	i PKP	PKPab	14 35 00.2	-0.7
	comp=Z,9.8nm,1.5s						
BIOA	Bad Ischl, Aus	149.76	332	i PKP	PKPab	14 35 01.5	-1.1
	comp=Z,12nm,1.2s						
PERS	Pernice	149.89	329	i PKPbc	PKPab	14 35 01.4	-1.8
SOKA	Soboth	149.89	330	i pPKP	PKPab	14 35 00.9	-2.4
	comp=Z,16nm,1.3s,SNR=8.0						
BTNL	Ternell	149.90	344	dPKP	PKPab	14 35 01.1	-2.0
MEM	Membach	149.91	344	dPKP	PKiKP	14 34 59.7	+1.3
BHOU	Houvegnez	150.15	344	dPKP	PKPab	14 35 02.9	-1.2
OBKA	Obir	150.25	330	i pPKP	PKiKP	14 35 01.7	+2.3
	comp=Z,8.8nm,1.4s						
BCLA	Clavier	150.27	345	dPKP	PKPdf	14 34 54.0	+0.8
KBA	Koelnbreinsper	150.36	332	ePKP	PKPab	14 35 04.2	-1.1
	comp=Z,20nm,0.8s						
LESA	Schwarzleotal	150.38	333	i pPKiKP	PKPab	14 35 02.4	-2.8
	comp=Z,16nm,1.3s,SNR=5.8						
MYKA	Terra Mystica	150.57	331	i pPKiKP	PKPab	14 35 03.0	-3.0
	comp=Z,8.3nm,1.0s						
LJU	Ljubljana	150.60	329	i PKPbc	PKPab	14 35 03.4	-2.7
WLF	Walferdange	150.74	343	dPKP	PKiKP	14 35 02.2	+2.0
DOU	Dourbes	150.74	345	dPKP	PKPdf	14 34 52.4	-1.6
WATA	Walderalm	150.90	334	i pPKiKP	PKPab	14 35 04.4	-3.0
	comp=Z,18nm,1.4s						
WTTA	Wattenberg	150.94	334	i pPKiKP	PKPab	14 35 04.4	-3.2
	comp=Z,22nm,1.2s,SNR=7.8						
ABTA	Abfaltersbach	150.98	332	i pPKiKP	PKiKP	14 35 03.6	+2.7
	comp=Z,21nm,1.3s,SNR=7.7						
RETA	Reutte	151.10	335	epPKiKP	PKPab	14 35 05.6	-2.6
	comp=Z,2.2nm,0.5s						
SQTA	Sankt Quirin	151.14	334	i pPKiKP	PKPab	14 35 05.1	-3.4
	comp=Z,17nm,1.2s,SNR=6.4						
BFO	Black Forest	151.27	339		PKPdf	14 34 51.4	-3.5
FETA	Feichten	151.50	335	ePKP	PKPbc	14 34 59.7	-1.9
	comp=Z,10nm,1.2s						
DAVA	Damuels	151.60	336	epPKiKP	PKPab	14 35 06.7	-3.7
	comp=Z,3.4nm,0.9s						
TORD	Torodi Ar. Bea	168.06	223	PKP	PKPdf	14 35 18.8	+4.0
	comp=Z,0.8nm,1.0s,baz=33,slow=1.8,SNR=4.6						
TORD				PKPab	sPKPab	14 36 27.1	+1.1
	comp=Z,1.0nm,0.8s,baz=108,slow=6.8,SNR=5.2						

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*HEL **25** 14:18:14.5±0.3, 67°.83N×20°.26E, h0^{km}, ML1.5, Suspected explosion*

*IDC **25** 14:18:15.3±1.1, 67°.80N×20°.35E, h0^{km}, mbtmp2.8/4, ML1.9/4, Error ellipse: s-maj=19.0km s-min=8.3km az=117.0*

ISC 25 14:18:13.2±0.9**, 67°.82N**±0°.03×**20°.08E**±0°.04**, h0^{km}, n24,** σ1^{s}.**26**/40**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALU	Saltoluokta	0.75	235	eP	Pb	14 18 28.9	-0.2
LANU	Lannavaara	0.76	72	PG	Pg	14 18 26.5	-1.2
LANU				SG	Sg	14 18 36.7	-0.8
KIF	Kilpisjarvi	1.22	12	eP	Pb	14 18 37.1	0.0
KIF	Kilpisjarvi	1.22	12	PG	Pb	14 18 37.2	+0.1
KIF				MSG		14 18 52.1	
	comp=Z,5.1nm,0.2s						
KIF				SG	Sb	14 18 52.9	-0.5
PAJU	Pajala	1.42	123	PG	Pn	14 18 38.8	-1.4
PAJU				SN	Sb	14 18 59.0	0.0
HEF	Hetta	1.47	65	PN	Pn	14 18 40.2	-0.6
HEF				MSG		14 18 56.8	
	comp=Z,2.9nm,0.2s						
HEF				SN	Sg	14 18 59.3	-0.9
ERTU	Ertsjaerv	1.51	146	PG	Pn	14 18 41.4	-0.1
	baz=330						
ERTU				SN	Sn	14 19 03.2	+1.3
KLF	Kolari	1.60	110	PG	Pn	14 18 42.5	-0.2
KLF				MSG		14 19 00.6	
	comp=Z,3.1nm,0.2s						
KLF				SN	Sg	14 19 04.9	+0.3
KTK1	Kautokeino	1.67	43	PG	Pn	14 18 43.9	+0.2
KTK1				SN	Sg	14 19 07.7	+0.8
TRO	Tromso	1.87	348	PG	Pb	14 18 48.0	-0.1
TRO				SG	Sg	14 19 12.9	-0.3
KALU	Kalix	2.36	145	PB	Pn	14 18 54.4	+1.4
KALU				SG	Sb	14 19 26.8	+0.8
TOF	Tornio	2.42	134	PB	Pn	14 18 55.6	+1.7
TOF				MSG		14 19 24.7	
	comp=Z,2.3nm,0.2s						
TOF				SG	Sb	14 19 28.4	+0.7
RNF	Rovaniemi	2.61	115	PG	Pn	14 18 58.6	+2.1
	baz=306						
RNF				SG	Sb	14 19 32.0	-1.3
ARA0	ARCESS Array S	2.63	46	PB	Pn	14 18 58.7	+1.9
ARA0				SG	Sb	14 19 32.5	-1.3
ARCES	ARCESS Array B	2.63	46	Pn	Pn	14 18 58.4	+1.5
	comp=Z,0.3nm,0.3s,baz=226,slow=15,SNR=30						
ARCES				Sn	Sn	14 19 31.1	+1.8
	comp=Z,0.8nm,0.3s,baz=226,slow=24,SNR=13						
	comp=Z,0.7nm,0.2s						
RAJF	Raja-Jooseppi	3.15	74	PB	Pn	14 19 05.2	+1.3
RAJF				SG	Sb	14 19 50.0	+1.2
KEV	Kevo	3.18	49	SB	Sn	14 19 43.7	+0.7
BURU	Burvik	3.29	170	PB	Pb	14 19 10.1	-2.2
OBF8	Ulkokalla	3.76	157	SG	Sb	14 20 08.9	+2.5
OUF	Merijarvi	3.95	149	PN	Pn	14 19 13.7	-1.2
KU6	Riekki	4.26	110	PN	Pn	14 19 21.2	+2.0
	baz=295						
FINES	FINESS Array B	6.90	155	Pn	Pn	14 19 57.0	+1.7
	comp=Z,0.1nm,0.3s,baz=350,slow=13,SNR=1.6						
FINES				Sn	Sn	14 21 15.2	+0.8
	baz=343,slow=24,SNR=1.7						
FINES				Lg	Lg	14 21 49.3	
	comp=Z,0.2nm,0.3s,baz=339,slow=26,SNR=5.1						
	comp=Z,1.4nm,0.9s						
NOA	NORSAR Array B	7.80	214	Pn	Pn	14 20 09.1	+1.2
	baz=13,slow=3.6,SNR=4.1						
	comp=Z,0.4nm,0.9s						
HFS	Hagfors	8.21	203	Pn	Pn	14 20 13.3	0.0
	baz=29,slow=12,SNR=1.6						
HFS				Sn	Sn	14 21 44.9	-1.7
	comp=Z,0.1nm,0.3s,baz=20,slow=26,SNR=1.8						
HFS				Lg	Lg	14 22 32.0	
	comp=Z,0.2nm,0.3s,baz=29,slow=25,SNR=5.2						
	comp=Z,0.6nm,0.7s						

IDC 25 14:23:31.2±6.9**, 22°.55S**×**173°.70E, h0^{km}, mb3.6**/2**, mbtmp3.6**/2**, Error ellipse: s-maj=290.2km s-min=63.6km az=150.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	36.54	260	P	P	14 30 38.4	-0.5
	0.4nm,0.7s,baz=84,slow=9.8,SNR=5.4						
	0.4nm,0.7s						
CMAR	Chiang Mai Arr	83.65	293	P	P	14 36 03.0	+0.8
	0.3nm,0.3s,baz=128,slow=3.7,SNR=6.7						
	0.3nm,0.3s						
GERES	GERESS Array B	149.33	334	PKPbc	PKPbc	14 43 20.9	-1.1
	1.0nm,0.8s,baz=58,slow=3.7,SNR=3.5						

IDC 25 14:39:54.0±7.4**, 23°.08S**×**173°.96E, h0^{km}, mb3.8**/2**, mbtmp3.8**/2**, MS3.3**/2**, Error ellipse: s-maj=332.1km s-min=60.8km az=152.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.02	277	LR	LR	14 43 38.7	
	comp=Z,138nm,21.4s,baz=48,slow=32						
CTA	Charters Tower	25.92	271	LR	LR	14 54 30.2	
	comp=Z,107nm,18.9s,baz=42,slow=34						
ASAR	Alice Springs	36.69	261	P	P	14 47 02.9	-0.1
	1.0nm,1.0s,baz=101,slow=7.9,SNR=6.3						
	1.0nm,1.0s						
CMAR	Chiang Mai Arr	84.07	293	P	P	14 52 27.0	-0.1
	0.3nm,0.3s,baz=125,slow=4.5,SNR=4.5						
	0.3nm,0.3s						
GERES	GERESS Array B	149.91	334	PKPbc	PKPbc	14 59 45.9	-0.4
	0.8nm,0.8s,baz=64,slow=2.3,SNR=5.3						

IDC 25 14:46:14.5±3.9**, 22°.84S**×**173°.86E, h0^{km}, mb3.9**/3**, mbtmp3.8**/3**, Error ellipse: s-maj=212.8km s-min=41.9km az=159.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	36.64	261	P	P	14 53 23.2	+0.2
	0.7nm,0.9s,baz=95,slow=8.9,SNR=6.2						
	0.7nm,0.9s						
CMAR	Chiang Mai Arr	83.89	293	P	P	14 58 46.0	-0.8
	0.3nm,0.3s,baz=110,slow=3.9,SNR=5.8						
	0.3nm,0.3s						
PDAR	Pinedale Array	95.93	46	P	P	14 59 43.3	-0.3
	0.5nm,1.0s,baz=243,slow=4.2,SNR=2.7						
	0.5nm,1.0s						
GERES	GERESS Array B	149.65	334	PKPbc	PKPbc	15 06 06.4	+0.3
	0.7nm,0.8s,baz=26,slow=6.0,SNR=2.9						

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*CATAC **25** 14:53:58.6±0.6, 13°N±3°×9°0W±°, h17^{km}±2^{km}, M3.2/19, MLv3.2/19, Error ellipse: s-maj=6.3km s-min=3.6km az=25.0, confirmed*

*SNET **25** 14:53:59.2±1.6, 13°.11N×89°.89W, h16^{km}±8^{km}, ML3.2*

*GCG **25** 14:53:59.0±1.9, 13°.16N×89°.83W, h23^{km}±10^{km}, MD3.8, ML2.9*

ISC 25 14:53:59.6±2.0**, 13°.19N**±0°.07×**89°.79W**±0°.05**, h13^{km}**±10^{km}**, n53,** σ1^{s}.**53**/64**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.54	57	eP	Pb	14 54 10.9	0.0
LALI				eS	Sb	14 54 19.3	+0.6
LALI	Alcalda de L	0.54	57	i P	Pb	14 54 10.9	0.0
LALI				i S	Sg	14 54 18.9	+1.4
LALI				IAML		14 54 21.2	
	comp=E,325nm,0.3s						
LALI	Alcalda de L	0.54	57	P	Pb	14 54 10.9	0.0
JAYA	Jayaque - finc	0.57	35	eP	Pb	14 54 11.5	0.0
JAYA				eS	Sb	14 54 20.5	+1.0
JAYA	Jayaque - finc	0.57	35	i P	Pb	14 54 11.5	0.0
JAYA				i S	Sb	14 54 20.9	+1.3
JAYA	Jayaque - finc	0.57	35	P	Pb	14 54 11.5	0.0
CEVE	Cerro Verde	0.66	14	eP	Pb	14 54 12.8	-0.2
FAME	Alcaldia de Sa	0.69	341	P	Pg	14 54 12.5	-0.5
PMON	Piamonte	0.69	41	eP	Pb	14 54 13.2	-0.4
PMON				eS	Sn	14 54 25.0	-0.9
PMON	Piamonte	0.69	41	P	Pb	14 54 13.1	-0.6
NUBE	Las Nubes	0.71	1	eP	Pg	14 54 13.2	-0.3
NUBE				eS	Sb	14 54 23.7	+0.1
NUBE	Las Nubes	0.71	1	i P	Pg	14 54 13.1	-0.3
NUBE				i S	Sb	14 54 23.5	-0.1
NUBE	Las Nubes	0.71	1	P	Pg	14 54 13.1	-0.3
CEDA	San Andres	0.72	32	P	Pb	14 54 13.7	-0.3
CEDA	San Andres	0.72	32	S	Sg	14 54 24.7	+1.6
PANCS	Alcalda de	0.73	55	P	Pb	14 54 13.5	-0.6
PANCS	Alcalda de	0.73	55	S	Sb	14 54 24.0	0.0
BOQS	Boqueron	0.73	42	eP	Pb	14 54 13.9	-0.5
UEES	Universidad Ev	0.75	45	P	Pb	14 54 13.9	-0.6
UEES	Universidad Ev	0.75	45	S	Sb	14 54 24.9	+0.2
LOMA	Loma Larga	0.75	53	eP	Pb	14 54 13.3	-1.3
LOMA				eS	Sb	14 54 24.5	-0.3
LOMA	Loma Larga	0.75	53	P	Pb	14 54 13.2	-1.3
IGN	Direccin Gen	0.80	49	P	Pb	14 54 14.1	-1.3
IGN	Direccin Gen	0.80	49	S	Sb	14 54 26.2	+0.2
LOAL	Lomas de Alarc	0.81	1	P	Pb	14 54 15.1	-0.4
LOAL	Lomas de Alarc	0.81	1	S	Sg	14 54 26.6	+0.8
UDBS	Universidad Do	0.81	50	P	Pb	14 54 14.9	-0.6
UDBS	Universidad Do	0.81	50	S	Sb	14 54 26.9	+0.5
UNIC	Universidad Ca	0.82	16	P	Pb	14 54 14.9	-0.8
UNIC	Universidad Ca	0.82	16	S	Sb	14 54 26.4	-0.3
PAVA	Las Pavas	0.98	58	eP	Pb	14 54 18.3	-0.2
PAVA				eS	Sb	14 54 32.2	+0.9
PAVA	Las Pavas	0.98	58	P	Pb	14 54 18.3	-0.2
TECO	Alcaldia de Te	1.04	70	P	Pb	14 54 17.5	-1.9
TECO	Alcaldia de Te	1.04	70	S	Sb	14 54 31.6	-1.4
UESV	Universidad de	1.07	65	S	Sb	14 54 33.2	-0.7
UESV	Universidad de	1.07	65	P	Pn	14 54 18.6	-1.6
JUAM	Asuncion Mita	1.14	4	i P	Pn	14 54 19.9	-1.4
JUAM				i S	Sb	14 54 35.8	-0.2
JUAM				IAML		14 54 37.0	
	comp=N,481nm,0.3s						
SCLA	Alcaldia de Sa	1.15	64	P	Pn	14 54 20.2	-1.2
SCLA	Alcaldia de Sa	1.15	64	S	Sb	14 54 36.3	+0.1
LLGN	La Laguna	1.27	40	P	Pn	14 54 21.6	-1.5
LLGN	La Laguna	1.27	40	S	Sn	14 54 39.4	-0.6
MTO3	Montecristo	1.27	19	i P	Pn	14 54 21.7	-1.5
MTO3	Montecristo	1.27	19	P	Pn	14 54 21.7	-1.5
MTO3	Montecristo	1.27	19	S	Sb	14 54 39.1	-0.8
ESQI	Esquipulas	1.43	18	P	Pn	14 54 24.0	-1.4
PACA	Pacayal	1.45	79	P	Pn	14 54 24.8	-0.8
SARH	Santa Rosa de	1.87	32	i P	Pn	14 54 30.4	-0.9
SARH	Santa Rosa de	1.87	32	P	Pn	14 54 30.5	-0.8
CNCH	Conchagua	1.91	87	P	Pn	14 54 31.0	-0.8
APG	El Apazote	1.92	340	i P	Pn	14 54 30.9	-1.3
APG				i S	Sb	14 54 57.8	-0.7
CSGN	Cosiguina Volc	2.18	95	S	Sn	14 55 02.4	-0.1
NJ2	Nanjing	127.31	329	eP	Pdif	15 09 53.3	+6.9
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
PZH	PanZhiHua	138.98	344	P	Pdif	15 10 45.5	+6.9

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*SKHL **25** 14:56:19.9±0.8, 47°.70N×146°.60E, h505^{km}±9^{km}, mb4.6/10, msha4.6/4*

*IDC **25** 14:56:20.8±1.2, 48°.13N×146°.43E, h482^{km}±18^{km}, mb3.0/13, mbtmp3.9/20, Error ellipse: s-maj=21.0km s-min=11.0km az=165.0*

*JMA **25** 14:56:21.5±0.6, 47°N±3°×14°7E±°, h491^{km}, MV3.4/26, SOUTHERN SEA OF OKHOTSK*

*NEIC **25** 14:56:21.3±1.9, 48°.15N±0°.08×146°.4E±0°.1, h484^{km}±9^{km}, mb4.0/23, Error ellipse: s-maj=15.0km s-min=6.0km az=223.0*

ISC 25 14:56:19.7±0.5**, 47°.82N**±0°.06×**146°.61E**±0°.07**, h483^{km}, n85,** σ1^{s}.**30**/93**, mb3.8**/26**, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.73	161	eP	P	14 57 27.9	+0.4
KUR				AMB	AMB	14 57 32.3	
	70nm,0.7s						
KUR				eS	S	14 58 20.3	-2.2
KUR				A	A	14 58 29.5	
	60nm,0.7s						
KUR				A	A	14 58 29.5	
	60nm,0.7s						
YSS	Yuzhno-Sakhali	2.76	253	P	P	14 57 29.2	+1.6
YSS	Yuzhno-Sakhali	2.76	253	eP	P	14 57 29.3	+1.7
YSS				AMB	AMB	14 57 30.1	
	120nm,0.6s						
YSS				eS	S	14 58 24.0	+1.1
YSS				A	A	14 58 25.7	
	20nm,0.5s						
YSS				A	A	14 58 25.7	
	20nm,0.5s						
UGL	Uglegorsk	3.28	294	eP	P	14 57 32.1	+1.0
UGL				AMB	AMB	14 57 33.0	
	190nm,0.4s						
YUK	Yuzh-Kuril'sk	3.82	188	eP	P	14 57 34.9	-0.6
YUK				AMB	AMB	14 57 38.3	
	50nm,0.5s						
YUK				eS	S	14 58 34.5	-2.7
YUK				A	A	14 58 45.4	
	110nm,0.5s						
YUK				A	A	14 58 45.4	
	150nm,0.5s						
JSE	Soyaes	3.99	226	eP	P	14 57 38.7	+1.8
TYV	Tymovskoe	4.00	321	eP	P	14 57 37.1	+0.4
TYV				AMB	AMB	14 57 37.7	
	20nm,0.5s						
TYV				eS	S	14 58 38.9	-0.8
TYV				A	A	14 58 42.4	
	20nm,0.7s						
TYV				A	A	14 58 42.4	
	10.0nm,0.7s						
JRA	Rausu	4.02	196	eP	P	14 57 37.9	+0.8
JWK2	Keihoku	4.10	234	P	P	14 57 40.2	+2.5
JTKR	Abashiri--Toko	4.28	207	P	P	14 57 40.6	+1.2
JMP	Maruseppu	4.43	212	eP	P	14 57 41.9	+1.1
JNK	Nakash	4.43	198	P	P	14 57 41.3	+0.6
NMR	Nemuro--Hokkai	4.49	188	eP	P	14 57 40.2	-1.0
NMR				eS	S	14 58 43.5	-4.0
NEM2	Nemuro 2	4.49	188	P	P	14 57 40.1	-1.1
NEM2				eS	S	14 58 43.5	-4.1
JRBN	Rebuntou	4.51	240	P	P	14 57 42.5	+1.3
JRBN				eS	S	14 58 47.6	-0.1
JKA	Kamikawa-asahi	4.64	219	P	P	14 57 44.1	+1.6
ASAJ	Asahikawa	4.64	219	P	P	14 57 44.3	+1.8
	7.8nm,0.5s,baz=277,slow=5.1,SNR=24						
JAR	Ashorobuto	4.94	205	P	P	14 57 46.1	+0.9
AKK	Akkeshi	4.96	195	eP	P	14 57 44.5	-0.9
AKK				eS	S	14 58 51.0	-4.2
JAK	Akkeshi	5.01	196	P	P	14 57 44.9	-0.9
JAK				S	S	14 58 52.7	-3.3
JFR	Furan	5.44	213	P	P	14 57 51.7	+1.8
JCH	Churui	5.69	205	P	P	14 57 51.8	-0.4
JCH				S	S	14 59 03.6	-4.2
JBT2	Biratori 2	5.86	212	eP	P	14 57 54.5	+0.6
JBT2				eS	S	14 59 08.8	-2.1
JEW	Eniwo	6.16	218	eP	P	14 57 58.0	+1.1
JEW				eS	S	14 59 14.5	-1.9
JNBK	Urakawa-nobuka	6.17	208	P	P	14 57 56.8	-0.2
ERM	Erimo	6.30	204	P	P	14 57 58.8	+0.6
NKL	Nikolayevsk	6.54	327	eP	P	14 57 59.5	-0.8
NKL				AMB	AMB	14 58 01.0	
	20nm,0.4s						
SKR	Severo-Kuril's	6.85	62	eP	P	14 58 03.6	+0.1
SKR				AMB	AMB	14 58 04.7	
	120nm,0.7s						
JOT	Ohata	7.56	214	eP	P	14 58 11.6	+0.6
JOT				eS	S	14 59 38.4	-4.0
PAU	Pauzhetka	7.56	57	eP	P	14 58 12.3	+1.5
JOSM	Okushiri--Mats	7.64	224	eP	P	14 58 13.9	+2.0
JSI2	Shiura 2	8.08	216	eP	P	14 58 17.4	+0.9
JSI2				eS	S	14 59 50.1	-2.3
JIW	Iwasaki	8.64	216	eP	P	14 58 23.6	+1.2
PEA0B	Petropavlovsk-	8.83	49	P	P	14 58 26.0	+1.8
PETK	Petropavlovsk-	8.83	49	P	P	14 58 25.8	+1.6
	3.6nm,0.9s,baz=237,slow=9.8,SNR=5.1						
USRK	Ussuriysk Ar.	10.79	256	P	P	14 58 46.7	+1.4
	10nm,0.6s,baz=63,slow=12,SNR=14						
MDJ	Mudanjiang	12.21	261	P	P	14 58 59.8	-0.6
MAJO	Matsushiro	12.86	212	P	P	14 59 10.5	+3.0
MJAR	Matsushiro Arr	12.86	212	P	P	14 59 10.4	+2.9
	3.3nm,0.6s,baz=22,slow=11,SNR=8.4						
JGF	Kuroka	14.01	213	P	P	14 59 21.4	+1.6
SEY	Seymchan	15.49	10	P	P	14 59 34.1	-0.7
	2.6nm,0.5s,baz=194,slow=10,SNR=14						
KSRS	Korea Array	17.17	240	P	P	14 59 54.6	+1.8
	3.2nm,0.6s,baz=43,slow=10,SNR=17						
HILR	Hailar Array B	17.79	286	P	P	14 59 56.9	-1.8
	1.5nm,0.3s,baz=77,slow=10,SNR=5.1						
G16K	Koyuk River	31.97	38	P	P	15 02 04.0	-0.4
G16K				IAmb	IAmb	15 02 08.2	
	comp=Z,5.3nm,1.2s						

N15K	**Kwethluk River**	**32.73**	**48**	P	**P**	**15 02 11.8**	**+0.7**
C18K	**Utukok River**	**32.99**	**32**	P	**P**	**15 02 11.1**	**-2.2**
L16K	**Owhat River**	**33.00**	**45**	P	**P**	**15 02 13.0**	**-0.3**
L16K				IAmb	IAmb	15 02 44.9	
	comp=Z,15nm,1.3s						
M16K	**Timber Creek**	**33.26**	**46**	P	**P**	**15 02 16.2**	**+0.7**
G18K	**Tagagawik**	**33.55**	**37**	P	**P**	**15 02 16.3**	**-1.6**
G18K				IAmb	IAmb	15 02 21.0	
	comp=Z,5.9nm,1.5s						
M17K	**Holitna River**	**33.99**	**45**	P	**P**	**15 02 22.4**	**+0.8**
L18K	**Granite Mounta**	**34.31**	**44**	P	**P**	**15 02 24.6**	**+0.3**
L18K				IAmb	IAmb	15 02 25.8	
	comp=Z,16nm,1.5s						
G21K	**Allakaket**	**35.67**	**36**	P	**P**	**15 02 35.8**	**+0.1**
M20K	**Styx River**	**36.00**	**44**	P	**P**	**15 02 39.1**	**+0.5**
M20K				IAmb	IAmb	15 03 22.5	
	comp=Z,7.0nm,1.2s						
L22K	**Petersville**	**37.04**	**43**	P	**P**	**15 02 46.9**	**-0.2**
L22K				IAmb	IAmb	15 03 02.7	
	comp=Z,7.8nm,1.4s						
G24K	**Hadweenzic Riv**	**38.08**	**36**	P	**P**	**15 02 55.2**	**-0.3**
G24K				IAmb	IAmb	15 02 56.2	
	comp=Z,5.1nm,1.1s						
ILAR	**Eielson Array**	**38.50**	**39**	P	**P**	**15 02 58.5**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=274,slow=7.6,SNR=18						
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	**38.50**	**39**	P	**P**	**15 02 58.4**	**-0.6**
DHY	**Denali Highway**	**38.51**	**42**	P	**P**	**15 02 58.5**	**-0.8**
DHY				IAmb	IAmb	15 03 16.9	
	comp=Z,13nm,1.5s						
MKAR	**Makanchi Array**	**42.49**	**294**	P	**P**	**15 03 30.9**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=63,slow=5.7,SNR=9.5						
	comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	**42.49**	**294**	P	**P**	**15 03 30.5**	**-0.7**
MAKZ	**Makanchi**	**42.67**	**294**	P	**P**	**15 03 32.2**	**-0.5**
KURK	**Kurchatov**	**43.04**	**300**	P	**P**	**15 03 34.6**	**-0.8**
KURBB	**Kurchatov Arra**	**43.13**	**300**	P	**P**	**15 03 35.3**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=74,slow=8.6,SNR=7.7						
	comp=Z,0.7nm,0.5s						
BVAR	**Borovoye Array**	**46.71**	**306**	P	**P**	**15 04 03.6**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=69,slow=8.2,SNR=1.8						
	comp=Z,0.2nm,0.4s						
TARG	**Taragay, Kyrgy**	**47.76**	**289**	P	**P**	**15 04 13.2**	**+0.9**
CMAR	**Chiang Mai Arr**	**48.45**	**250**	P	**P**	**15 04 19.2**	**+2.0**
	comp=Z,0.5nm,0.5s,baz=32,slow=6.7,SNR=4.1						
	comp=Z,0.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**48.45**	**250**	P	**P**	**15 04 18.5**	**+1.2**
RES	**Resolute Bay**	**51.19**	**17**	P	**P**	**15 04 35.3**	**-1.3**
RES				IAmb	IAmb	15 04 36.7	
	comp=Z,6.1nm,1.0s						
YKA	**Yellowknife Ar**	**52.66**	**35**	P	**P**	**15 04 47.0**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=304,slow=7.6,SNR=14						
	comp=Z,0.6nm,0.8s						
GAR	**Garm**	**54.02**	**291**	P	**P**	**15 04 57.9**	**+0.2**
GAR				IAmb	IAmb	15 04 58.6	
	comp=Z,4.1nm,0.6s						
AB31	**Akbulak array**	**54.28**	**306**	P	**P**	**15 04 59.0**	**-0.2**
ABKAR	**Akbulak array**	**54.28**	**306**	P	**P**	**15 04 58.6**	**-0.7**
CHGR	**Chuyangaron**	**54.95**	**291**	P	**P**	**15 05 03.4**	**-0.9**
ARCES	**ARCESS Array B**	**55.31**	**339**	P	**P**	**15 05 05.3**	**-0.8**
	comp=Z,3.5nm,0.9s,baz=46,slow=7.2,SNR=2.1						
	comp=Z,3.5nm,0.9s						
SUMG	**Summit**	**59.86**	**2**	P	**P**	**15 05 36.6**	**-1.0**
SUMG				IAmb	IAmb	15 05 36.8	
	comp=Z,7.0nm,1.4s						
PINE	**Pine Mountain**	**60.75**	**56**	P	**P**	**15 05 46.0**	**+2.2**
PINE				IAmb	IAmb	15 05 49.6	
	comp=Z,8.9nm,1.3s						
FINES	**FINESS Array B**	**61.09**	**332**	P	**P**	**15 05 44.3**	**-1.2**
	comp=Z,3.2nm,1.1s,baz=31,slow=8.9,SNR=10						
	comp=Z,3.2nm,1.1s						
FINES	**FINESS Array B**	**61.09**	**332**	P	**P**	**15 05 43.9**	**-1.6**
K05A	**Summer Lake**	**61.46**	**57**	P	**P**	**15 05 50.2**	**+1.7**
K05A				IAmb	IAmb	15 05 54.5	
	comp=Z,11nm,1.5s						
NB2	**NORSAR Subarra**	**65.68**	**338**	P	**P**	**15 06 14.0**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**65.68**	**338**	P	**P**	**15 06 14.1**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=31,slow=6.7,SNR=12						
	comp=Z,0.4nm,0.5s						
NVAR	**Mina Array Bea**	**65.77**	**59**	P	**P**	**15 06 17.8**	**+1.6**
	comp=Z,0.8nm,0.7s,baz=287,slow=7.1,SNR=5.3						
	comp=Z,0.8nm,0.7s						
HFS	**Hagfors**	**65.80**	**336**	P	**P**	**15 06 14.3**	**-1.4**
	comp=Z,0.6nm,0.4s,baz=46,slow=4.3,SNR=9.4						
	comp=Z,0.6nm,0.4s						
PDAR	**Pinedale Array**	**67.59**	**51**	P	**P**	**15 06 28.0**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=16,slow=1.1,SNR=22						
	comp=Z,1.3nm,0.7s						
TXAR	**Lajitas Array**	**80.71**	**56**	P	**P**	**15 07 42.9**	**+0.9**
	comp=Z,0.8nm,0.5s,baz=291,slow=4.0,SNR=23						
	comp=Z,0.8nm,0.5s						

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*IDC **25** 14:56:59.6±2.7, 8°.86S×119°.62E, h0^{km}, mb3.3/2, mbtmp3.4/3, ML3.6/1, Error ellipse: s-maj=242.1km s-min=28.3km az=51.0*

*DJA **25** 14:57:08.2±0.1, 10°S±2°×11°9E±°, h53^{km}±3^{km}, M4.3/28, mB5.0/5, mb4.3/20, MLv4.3/28, Mw(mB)4.4/5*

ISC 25 14:57:06.7±0.8**, 9°.60S**±0°.07×**119°.28E**±0°.04**, h81**^{km}±8^{km}**, n53,** σ**2**^{s}**03**/53**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.11**	**109**	P	**Pn**	**14 57 17.9**	**-0.5**
WBSI				S	**Sn**	**14 57 25.7**	**-1.4**
WSI	**Waingapu**	**1.00**	**94**	P	**Pn**	**14 57 27.1**	**+1.3**
WSI				S	**Sn**	**14 57 42.2**	**+2.0**
LBFI	**Labuhan Bajo,**	**1.27**	**28**	P	**Pn**	**14 57 28.0**	**-1.1**
BASI	**Baing, Sumba**	**1.42**	**116**	P	**Pn**	**14 57 33.7**	**+2.7**
DBNI	**Kabupaten Domp**	**1.46**	**319**	P	**Pn**	**14 57 31.0**	**-0.5**
PLAI	**Plampang**	**1.68**	**297**	P	**Pn**	**14 57 34.1**	**-0.2**
PLAI	**Plampang**	**1.68**	**297**	S	**Sn**	**14 57 53.7**	**-1.6**
PLAI	**Plampang**	**1.68**	**297**	P	**Pn**	**14 57 34.1**	**-0.2**
TWSI	**Taliwang, Sumb**	**2.52**	**290**	P	**Pn**	**14 57 46.5**	**+0.9**
EDFI	**Ende, Flores**	**2.52**	**71**	P	**Pn**	**14 57 46.3**	**+0.6**
MMRI	**Maumere**	**3.07**	**72**	P	**Pn**	**14 57 55.1**	**+2.1**
MMRI	**Maumere**	**3.07**	**72**	S	**Sn**	**14 58 31.2**	**+2.4**
MMRI	**Maumere**	**3.07**	**72**	P	**Pn**	**14 57 55.1**	**+2.1**
KLNI	**Mataram**	**3.36**	**290**	P	**Pn**	**14 57 57.4**	**+0.5**
BSSI	**Bau Bau, Buton**	**3.64**	**19**	P	**Pn**	**14 58 00.5**	**-0.3**
KHKI	**Kahang-Kahang**	**3.83**	**288**	P	**Pn**	**14 58 04.7**	**+1.3**
DNP	**Denpasar**	**4.12**	**283**	P	**Pn**	**14 58 08.2**	**+0.9**
IGBI	**Denpasar**	**4.16**	**280**	P	**Pn**	**14 58 08.3**	**+0.5**
BKSI	**Bulukumba**	**4.33**	**11**	P	**Pn**	**14 58 10.5**	**+0.3**
BATI	**Baumata**	**4.36**	**98**	P	**Pn**	**14 58 13.7**	**+3.2**
RTBI	**Rangdo, Negare**	**4.43**	**284**	P	**Pn**	**14 58 11.8**	**+0.2**
KAPI	**Kappang**	**4.58**	**6**	P	**Pn**	**14 58 14.2**	**+0.6**
KAPI	**Kappang**	**4.58**	**6**	P	**Pn**	**14 58 14.3**	**+0.6**
SOEI	**Soe**	**4.92**	**92**	P	**Pn**	**14 58 21.1**	**+2.8**
SOEI	**Soe**	**4.92**	**92**	P	**Pn**	**14 58 21.3**	**+3.0**
JAGI	**Jajag, Banyuwa**	**5.19**	**282**	P	**Pn**	**14 58 21.4**	**-0.5**
	48nm,0.5s						
JAGI	**Jajag, Banyuwa**	**5.19**	**282**	S	**Sn**	**14 59 21.4**	**+0.9**
	48nm,0.5s						
JAGI	**Jajag, Banyuwa**	**5.19**	**282**	P	**Pn**	**14 58 21.1**	**-0.8**
ABJI	**Asem Bagus**	**5.30**	**289**	P	**Pn**	**14 58 23.7**	**+0.3**
	0.3nm36nm,0.6s						
SPSI	**Sidrap Palu**	**5.62**	**5**	P	**Pn**	**14 58 29.9**	**+2.1**
KMMI	**Kalianget**	**5.84**	**295**	P	**Pn**	**14 58 32.5**	**+1.8**
	0.3nm65nm,1.6s						
GMJI	**Gumukmas**	**5.92**	**282**	P	**Pn**	**14 58 30.9**	**-0.9**
	0.1nm25nm,1.3s						
BLJI	**Banyuglugur**	**5.92**	**288**	P	**Pn**	**14 58 32.2**	**+0.4**
PMSI	**Majene**	**6.07**	**357**	P	**Pn**	**14 58 35.4**	**+1.4**
TTSI	**Tana Toraja**	**6.54**	**5**	P	**Pn**	**14 58 40.5**	**+0.2**
	0.1nm29nm,0.5s						
MMSI	**Mamuju**	**6.88**	**357**	P	**Pn**	**14 58 44.1**	**-0.9**
	0.1nm31nm,0.7s						
SNJI	**Sawahan-Nganju**	**7.66**	**283**	P	**Pn**	**14 58 56.2**	**+0.5**
	0.2nm18nm,1.0s						
SJI	**Sawahan**	**7.66**	**283**	P	**Pn**	**14 58 56.0**	**+0.3**
	18nm,0.6s						
PCJI	**Pacitan**	**8.13**	**279**	P	**Pn**	**14 59 03.0**	**+1.0**
	29nm,1.2s						
UGM	**Wanagama**	**8.82**	**280**	P	**Pn**	**14 59 14.0**	**+2.5**
	34nm,0.4s						
UGM	**Wanagama**	**8.82**	**280**	S	**Sn**	**15 00 51.0**	**+1.7**
	34nm,0.4s						
UGM	**Wanagama**	**8.82**	**280**	P	**Pn**	**14 59 12.6**	**+1.1**
	36nm,1.7s						
BBJI	**Bungbulang**	**11.70**	**280**	P	**Pn**	**14 59 49.6**	**-1.2**
FAKI	**Fak Fak**	**14.49**	**64**	P	**Pn**	**15 00 27.1**	**-0.7**
	39nm,1.3s						
SIJI	**Sorong**	**14.75**	**55**	P	**P**	**15 00 34.4**	**-0.7**
	13nm,0.7s						
WRA	**Warramunga Arr**	**17.81**	**127**	P	**Pn**	**15 01 11.6**	**+2.3**
	0.2nm,0.3s,baz=306,slow=12,SNR=5.7						
WRA				S	**Sn**	**15 04 18.3**	**-9.2**
	0.5nm,0.5s,baz=316,slow=23,SNR=1.8						
	0.6nm,0.6s						
UBSI	**University, Be**	**17.86**	**288**	P	**Pn**	**15 01 10.5**	**+0.6**
ASAR	**Alice Springs**	**19.77**	**137**	P	**Pn**	**15 01 35.0**	**+2.3**
	0.5nm,0.5s,baz=315,slow=11,SNR=20						
ASAR				S	**S**	**15 05 05.4**	**-3.6**
	0.5nm,0.6s,baz=317,slow=23,SNR=5.4						
	0.5nm,0.5s						
PPSI	**Pulau Pagai**	**20.32**	**288**	P	Pn	15 01 38.3	-0.8
H08S2	**Diego Garcia H**	**46.27**	**269**	T	T	15 54 52.4	
	baz=95,slow=76,SNR=11						
H08S3	**Diego Garcia H**	**46.29**	**269**	T	T	15 54 53.2	
	baz=95,slow=76,SNR=15						
H08S1	**Diego Carcia H**	**46.29**	**269**	T	T	15 54 53.8	
	baz=95,slow=76,SNR=8.2						
MKAR	**Makanchi Array**	**65.12**	**333**	P	**P**	**15 07 39.0**	**+0.1**
	0.2nm,0.4s,baz=140,slow=7.5,SNR=4.9						
	0.2nm,0.4s						

NEIC 25 14:58:10.7±2.5**, 22°.09S**±0°.10×**173°.45E**±0°.09**, h10**^{km}±1^{km}**, mb4.7**/37**, Error ellipse: s-maj=17.1km s-min=14.1km az=164.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**5.07**	**276**	Pn	Pn	14 59 26.3	-0.5
PINNC	**Pines Island,**	**5.58**	**263**		Pn	14 59 31.8	-2.0
MSVF	**Nonsavu**	**6.12**	**46**	Pn	Pn	14 59 40.0	-1.3
DZM	**Mont Dzumac**	**6.50**	**269**		Pn	14 59 45.0	-1.5
TOZ	**Tahuroa Road**	**15.69**	**174**		Pn	15 01 52.0	+0.1
MXZ	**Matakaoa Point**	**15.98**	**166**	Pn	Pn	15 01 55.6	-0.1
MXZ				IAmb	IAmb	15 01 57.2	
	comp=Z,32nm,0.8s						
HIZ	**Hauiti**	**16.42**	**176**		Pn	15 02 00.7	-0.5
HIZ				IAmb	IAmb	15 02 05.5	
	comp=Z,106nm,1.3s						
RTZ	**Ruatahuna**	**16.75**	**170**		Pn	15 02 04.9	-0.6
BKZ	**Black Stump Fm**	**17.22**	**172**	P	Pn	15 02 11.3	-0.1
MRZ	**Mangatainoka R**	**18.61**	**175**	P	P	15 02 26.3	-1.8
MRZ				IAmb	IAmb	15 02 32.3	
	comp=Z,67nm,1.9s						
TKNZ	**Takaka Hill**	**18.90**	**181**	P	P	15 02 29.1	-2.2
NNZ	**Nelson**	**19.07**	**180**	P	P	15 02 32.4	-0.9
NNZ				IAmb	IAmb	15 02 34.0	
	comp=Z,134nm,1.7s						
TCW	**Tory Channel**	**19.08**	**178**	P	P	15 02 32.9	-0.4
MRNZ	**Matariki Terra**	**19.27**	**182**	P	P	15 02 34.6	-0.8
TUWZ	**Tuamarina**	**19.29**	**179**	P	P	15 02 36.0	+0.4
BHW	**Baring Head**	**19.30**	**177**	P	P	15 02 35.3	-0.5
BHW				IAmb	IAmb	15 02 38.1	
	comp=Z,37nm,1.2s						
MSWZ	**Moikau Station**	**19.33**	**176**	P	P	15 02 36.1	0.0
THZ	**Tophouse**	**19.62**	**181**		Pn	15 02 40.2	-0.6
DSZ	**Denniston Nort**	**19.65**	**184**	P	P	15 02 39.9	+0.3
DSZ				IAmb	IAmb	15 02 51.1	
	comp=Z,39nm,1.3s						
KHZ	**Kahutara**	**20.27**	**180**	P	Pn	15 02 47.4	-1.0
KHZ				IAmb	IAmb	15 02 55.8	
	comp=Z,36nm,1.3s						
INZ	**Inchbonnie**	**20.65**	**184**	P	P	15 02 51.4	+1.0
LTZ	**Lake Taylor**	**20.66**	**182**		P	15 02 51.7	+1.1
EIDS	**Eidsvold**	**20.73**	**257**		P	15 02 51.8	+0.2
OXZ	**Oxford**	**21.21**	**183**		P	15 02 55.5	-1.0
ARMA	**Armidale**	**21.23**	**242**		P	15 02 55.6	-1.4
ARMA				IAmb	IAmb	15 03 01.4	
	comp=Z,26nm,1.4s						
FOZ	**Fox Glacier**	**21.60**	**187**	P	P	15 02 57.7	-3.0
RPZ	**Rata Peaks**	**21.66**	**185**	P	P	15 02 59.8	-1.6
MLZ	**Mavora Lakes**	**23.63**	**189**		P	15 03 20.0	-2.0
WHZ	**Wether Hill Ro**	**24.17**	**189**	P	P	15 03 24.4	-2.6
WHZ				IAmb	IAmb	15 03 55.3	
	comp=Z,15nm,1.0s						
CTAO	**Charters Tower**	**25.44**	**269**	P	P	15 03 36.0	-2.9
CTAO				IAmb	IAmb	15 04 05.5	
	comp=Z,16nm,1.1s						
TOO	**Toolangi**	**28.61**	**231**		P	15 04 05.6	-1.6
STKA	**Stephens Creek**	**29.92**	**244**	P	P	15 04 17.8	-1.2
BBOO	**Buckleboo**	**34.70**	**244**	P	P	15 05 01.0	+0.1
AS31	**Alice Springs**	**36.39**	**260**	P	P	15 05 14.7	-0.9
ASAR	**Alice Springs**	**36.39**	**260**	P	P	15 05 13.7	-1.9
WB0	**Warramunga Arr**	**36.49**	**266**	P	P	15 05 14.8	-1.5
WB0				IAmb	IAmb	15 05 40.9	
	comp=Z,14nm,1.1s						
WRA	**Warramunga Arr**	**36.51**	**266**	P	P	15 05 16.3	-0.3
MTN	**Manton Dam**	**41.28**	**276**	P	P	15 05 54.4	-2.2
MTN				IAmb	IAmb	15 06 25.8	
	comp=Z,16nm,0.9s						
FORT	**Forrest**	**41.33**	**248**	P	P	15 05 55.5	-1.3
FORT				IAmb	IAmb	15 06 22.5	
	comp=Z,15nm,1.0s						
FITZ	**Fitzroy Crossi**	**44.94**	**266**	P	P	15 06 25.3	-0.9
FITZ				IAmb	IAmb	15 06 52.4	
	comp=Z,9.1nm,1.1s						
SOEI	**Soe**	**48.66**	**276**	P	P	15 06 54.3	-1.2
PSA00	**Pilbara Seismi**	**49.54**	**260**	P	P	15 07 03.7	+1.7
PSA00				IAmb	IAmb	15 07 27.6	
	comp=Z,23nm,1.5s						
MBWA	**Marble Bar**	**49.73**	**260**	P	P	15 07 03.6	+0.1
MMRI	**Maumere**	**50.93**	**277**	P	P	15 07 12.5	-0.1
KAPI	**Kappang**	**54.59**	**280**	P	P	15 07 39.9	+0.2
VNDA	**Vanda**	**55.77**	**183**	P	P	15 07 48.4	+1.1
VNDA				IAmb	IAmb	15 08 27.4	
	comp=Z,22nm,1.9s						
SBA	**Scott Base**	**55.91**	**182**	P	P	15 07 49.1	+0.8
SBA				IAmb	IAmb	15 08 24.3	
	comp=Z,13nm,1.1s						
TOLI2	**Tolitoli**	**56.28**	**287**	P	P	15 07 50.6	-1.3
TOLI2				IAmb	IAmb	15 08 20.8	
	comp=Z,8.3nm,0.9s						
JAGI	**Jajag, Banyuwa**	**58.46**	**274**	P	P	15 08 06.3	-1.0
MJAR	**Matsushiro Arr**	**67.14**	**330**	P	P	15 09 04.6	-0.1
QSPA	**South Pole Qui**	**67.98**	**180**	P	P	15 09 10.2	+0.3
QSPA				IAmb	IAmb	15 09 37.9	
	comp=Z,16nm,1.2s						
KSAR	**Wonju Array Be**	**73.11**	**324**	P	P	15 09 41.7	+0.4
IPM	**Ipoh**	**75.51**	**281**	P	P	15 09 55.5	-0.4

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*IDC **25** 14:58:31.8±0.6, 22°.07S×173°.55E, h0^{km}, mb4.4/17, mbtmp4.4/19, ML3.2/2, MS4.2/33, Error ellipse: s-maj=21.2km s-min=16.6km az=132.0*

*GCMT **25** 14:58:35.7±0.2, 22°.03S±0°.02×173°.57E±0°.01, h12^{km}, MW5.0/101, Moment Tensor Solution. s43,c56; s101,c178; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.30±.09; $M_{\theta\theta}$0.09±.09; $M_{\phi\phi}$3.20±.07; $M_{r\theta}$-0.16±.31; $M_{\theta\phi}$1.81±.06; $M_{\phi r}$0.70±.23; Best double couple: $M_0$3.74600×10^{16} NP1:ϕ_s34.00000°, δ41.00000°, λ-76.00000°. NP2:ϕ_s196.00000°, δ50.00000°, λ-102.00000°. Principal axes: T 4.0760, Plg4.0000°, Azm294.0000°; N -0.6670, Plg9.0000°, Azm204.0000°; P -3.4160, Plg80.0000°, Azm50.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **25** 14:58:39.0, 24°.20S×173°.80E, h100^{km}, mb4.7/22*

*BGR **25** 14:58:40.2, 22°.82S×174°.11E, h33^{km}*

ISC 25 14:58:32.8±0.5**, 22°.1S**±0°.1×**173°.7E**±0°.1**, h10**^{km}**, n170,** σ**1**^{s}**50**/126**, mb4.8**/44**, MS4.3**/35**, 19C-16D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.71**	**269**	Pn	**Pn**	**15 00 10.1**	**-1.4**
	0.4nm,0.3s,baz=90,slow=18,SNR=4.4						
DZM				LR	LR	15 02 02.9	
	comp=Z,1µm,18.2s,baz=122,slow=32						
	9.1nm,0.8s						
DZM	**Mont Dzumac**	**6.71**	**269**	*e*LR	LR	15 01 14.4	
	7µm,24.1s						
URZ	**Urewera**	**16.34**	**170**	Pn	**P**	**15 02 25.0**	**-0.1**
	0.1nm,0.3s,baz=221,slow=17,SNR=2.3						
	17nm,1.1s						
CTA	**Charters Tower**	**25.66**	**269**	P	**P**	**15 04 03.2**	**+0.3**
	5.4nm,0.8s,baz=107,slow=7.3,SNR=5.8						
CTA				LR	LR	15 13 46.4	
	comp=Z,2µm,18.9s,baz=82,slow=36						
	5.4nm,0.8s						
STKA	**Stephens Creek**	**30.09**	**244**	P	**P**	**15 04 43.4**	**+0.8**
	5.0nm,0.8s,baz=85,slow=9.7,SNR=8.9						
STKA				LR	LR	15 15 39.2	
	comp=Z,530nm,19.9s,baz=68,slow=34						
	5.0nm,0.8s						
TBI	**Tubuai**	**33.96**	**99**	*e*S	S	15 10 19.9	-22
	549nm,26.2s						
TBI				*e*LQ	LQ	15 12 24.0	
	11µm,40.0s						
TBI				*e*LR	LR	15 13 57.4	
	2µm,27.8s						
TBI				*e*LR	LR	15 13 58.9	
	8µm,29.2s						
PPT2	**Papeete2**	**34.80**	**89**	*e*S	S	15 10 35.3	-20
	154nm,23.8s						
PPT2				*e*LQ	LQ	15 12 52.6	
	527nm,28.5s						
PPT2				*e*LR	LR	15 14 16.8	
	1µm,28.2s						
PPT2				*e*LR	LR	15 14 22.1	
	2µm,26.2s						
PPT	**Papeete**	**34.80**	**89**	LR	LR	15 15 52.9	
	comp=Z,632nm,20.5s,baz=274,slow=30						
ASAR	**Alice Springs**	**36.59**	**260**	P	**P**	**15 05 38.2**	**-1.1**
	8.7nm,1.0s,baz=85,slow=8.6,SNR=37						
ASAR				LR	LR	15 20 42.4	
	comp=Z,1µm,18.2s,baz=100,slow=36						
	8.7nm,1.0s						
WRA	**Warramunga Arr**	**36.72**	**266**	P	**P**	**15 05 39.4**	**-1.1**
	3.5nm,0.9s,baz=102,slow=8.9,SNR=11						
	3.5nm,0.9s						
JAY	**Jayapura**	**37.50**	**297**	LR	LR	15 19 44.1	
	comp=Z,442nm,21.1s,baz=130,slow=34						
H11S2	**WAKE ISLAND Hy**	**40.95**	**350**	T	T	15 49 40.3	
	baz=171,slow=76,SNR=4.9						
H11S3	**WAKE ISLAND Hy**	**40.96**	**350**	T	T	15 49 38.3	
	baz=171,slow=76,SNR=3.6						
H11S1	**WAKE ISLAND Hy**	**40.97**	**350**	T	T	15 49 34.9	
	baz=171,slow=76,SNR=4.5						
FITZ	**Fitzroy Crossi**	**45.15**	**266**	LR	LR	15 25 55.8	
	comp=Z,1µm,18.2s,baz=104,slow=36						
GUMO	**Guam**	**45.38**	**319**	LR	LR	15 23 54.5	
	comp=Z,362nm,20.1s,baz=144,slow=34						
TAOE	**Nuku Hiva Isla**	**46.23**	**81**	*e*LR	LR	15 19 41.9	
	1µm,26.7s						
RKT	**Rikitea**	**47.20**	**102**	*e*LR	LR	15 20 08.6	
	4µm,33.0s						
KRAI	**Karang Ratu**	**47.72**	**286**	P	**P**	**15 07 12.1**	**+1.9**
	1µm33nm,1.9s						
AAI	**Ambon**	**47.73**	**286**	P	P	15 07 13.8	+3.5
	29nm,1.3s						
SOEI	**Soe**	**48.88**	**276**	P	**P**	**15 07 21.3**	**+2.0**
	55nm,1.4s						
BATI	**Baumata**	**49.28**	**276**	LR	LR	15 27 13.8	
	comp=Z,1µm,21.9s,baz=151,slow=35						
SANI	**Sanana**	**50.43**	**287**	P	**P**	**15 07 33.7**	**+2.7**
	19nm,1.7s						
NWAO	**Narrogin (SRO)**	**50.68**	**245**	LR	LR	15 28 06.7	
	comp=Z,431nm,19.0s,baz=89,slow=35						
MMRI	**Maumere**	**51.15**	**277**	P	**P**	**15 07 37.8**	**+1.4**
	1µm47nm,1.1s						
EDFI	**Ende, Flores**	**51.61**	**276**	P	**P**	**15 07 40.2**	**+0.2**
	602nm41nm,1.3s						
WSI	**Waingapu**	**52.57**	**275**	P	**P**	**15 07 48.5**	**+1.5**
LBFI	**Labuhan Bajo,**	**53.37**	**276**	P	**P**	**15 07 53.2**	**+0.3**
	813nm44nm,1.1s						
WBSI	**Waikabubak, Su**	**53.42**	**274**	P	**P**	**15 07 53.7**	**+0.4**
	795nm37nm,0.9s						
DBNI	**Kabupaten Domp**	**54.82**	**275**	P	**P**	**15 08 03.5**	**0.0**
	13nm,0.9s						
PLAI	**Plampang**	**55.20**	**275**	P	**P**	**15 08 07.2**	**+1.0**
	614nm45nm,1.1s						
VNDA	**Vanda**	**55.73**	**183**	P	**P**	**15 08 10.1**	**+1.0**
	1.3nm,0.8s,baz=3.8,slow=7.3,SNR=7.7						
	1.3nm,0.8s						
TWSI	**Taliwang, Sumb**	**56.05**	**274**	P	**P**	**15 08 13.2**	**+0.8**
	709nm38nm,1.4s						
MPSI	**Mapaga**	**56.93**	**286**	P	**P**	**15 08 21.3**	**+2.6**
KHKI	**Kahang-Kahang**	**57.36**	**274**	P	**P**	**15 08 22.5**	**+0.8**
	32nm,1.1s						
IGBI	**Denpasar**	**57.63**	**274**	P	**P**	**15 08 24.6**	**+1.0**
JAGI	**Jajag, Banyuwa**	**58.67**	**274**	P	**P**	**15 08 32.1**	**+1.2**
	34nm,1.6s						
SNJI	**Sawahan-Nganju**	**61.13**	**273**	P	**P**	**15 08 48.9**	**+0.9**
	27nm,1.3s						
SJI	**Sawahan**	**61.14**	**273**	P	**P**	**15 08 48.6**	**+0.6**
	22nm,1.2s						
JHJ	**Hachijo jima 2**	**63.76**	**329**	LR	LR	15 36 03.5	
	comp=Z,38nm,18.6s,baz=118,slow=35						
JOW	**Kunigami**	**65.58**	**316**	LR	LR	15 33 42.0	
	comp=Z,190nm,21.4s,baz=133,slow=32						
MJAR	**Matsushiro Arr**	**67.30**	**330**	P	**P**	**15 09 28.0**	**+0.2**
	3.7nm,0.9s,baz=161,slow=7.4,SNR=6.8						
MJAR				LR	LR	15 35 39.2	
	comp=Z,107nm,21.6s,baz=143,slow=33						
	3.7nm,0.9s						
JNU	**Nakatsue**	**68.46**	**322**	LR	LR	15 39 09.1	
	comp=Z,36nm,18.1s,baz=118,slow=36						
KASI	**Kota Agung**	**68.67**	**273**	P	**P**	**15 09 37.8**	**+0.9**
	28nm,1.0s						
RPN	**Rapa Nui**	**69.14**	**112**	LR	LR	15 32 08.4	
	comp=Z,222nm,21.8s,baz=248,slow=29						
MDSI	**Maura Dua**	**69.34**	**274**	P	**P**	**15 09 41.4**	**+0.3**
	11nm,0.9s						
KSI	**Kapahiang**	**71.12**	**274**	P	P	15 10 02.1	+10
ASAJ	**Asahikawa**	**71.82**	**337**	LR	LR	15 36 58.7	
	comp=Z,222nm,21.2s,baz=162,slow=32						
KSRS	**Korea Array**	**73.27**	**323**	P	**P**	**15 10 04.8**	**+0.5**
	1.1nm,0.8s,baz=139,slow=5.8,SNR=10						
KSRS				LR	LR	15 42 03.2	
	comp=Z,57nm,18.0s,baz=155,slow=36						
	1.1nm,0.8s						
SHEM	**Shemya Is, Ala**	**74.55**	**0**	LR	LR	15 40 09.5	
	comp=Z,90nm,19.7s,baz=130,slow=34						
IPM	**Ipoh**	**75.73**	**281**	P	**P**	**15 10 19.5**	**+0.3**
	28nm,1.0s						
PETK	**Petropavlovsk-**	**76.21**	**350**	P	**P**	**15 10 22.6**	**+1.6**
	8.8nm,1.0s,baz=191,slow=7.3,SNR=3.7						
	8.8nm,1.0s						
USRK	**Ussuriysk Ar.**	**76.25**	**330**	P	**P**	**15 10 22.0**	**+0.5**
	4.4nm,1.0s,baz=149,slow=4.4,SNR=11						
	4.4nm,1.0s						
PSI	**Prapat**	**76.98**	**278**	LR	LR	15 46 23.0	
	comp=Z,215nm,20.1s,baz=136,slow=37						
MAW	**Mawson**	**77.30**	**202**	P	**P**	**15 10 28.8**	**+1.7**
	11nm,1.1s,baz=105,slow=8.2,SNR=5.2						
	11nm,1.1s						
TIA	**Tai'an**	**78.88**	**317**	P	P	15 10 40.0	+3.6
TIA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CN2	**Changchun**	**79.12**	**327**	P	P	15 10 43.0	+5.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BNX	**BinXian**	**79.55**	**329**	⇓P	P	15 10 43.8	+4.0
BNX				pmax	pmax		
	comp=Z,20nm,1.1s						
LYN	**LuoYang**	**80.97**	**313**	P	**P**	**15 10 49.0**	**+1.3**
LYN				pmax	pmax		
	comp=Z,13nm,0.8s						
PMSA	**Palmer Station**	**82.74**	**159**	LR	LR	15 42 56.9	
	comp=Z,91nm,18.2s,baz=230,slow=32						
HEH	**HeiHe**	**82.87**	**332**	*e*P	P	15 11 02.3	+5.0
HEH				pmax	pmax		
	comp=Z,7.0nm,1.4s						
XAN	**Xi'an**	**83.14**	**311**	⇑P	P	15 11 03.8	+4.6
XAN				sP	pwP	15 11 38.8	+37
XAN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
XAN				LR	LR		
	comp=N,140nm,19.9s						
XAN				LR	LR		
	comp=E,200nm,15.1s						
XAN				LR	LR		
	comp=Z,200nm,17.2s						
CMAR	**Chiang Mai Arr**	**83.47**	**293**	P	**P**	**15 11 01.8**	**+0.6**
	1.2nm,0.7s,baz=128,slow=3.0,SNR=15						
	1.2nm,0.7s						
MA2	**Magadan**	**83.56**	**348**	LR	LR	15 42 34.9	
	comp=Z,183nm,21.1s,baz=163,slow=32						
CHTO	**Chiang Mai**	**83.62**	**293**	P	**P**	**15 11 02.9**	**+0.9**
ELIB	**Princess Elisa**	**83.98**	**189**	*d*P	**P**	**15 11 02.3**	**-0.8**
	comp=Z,3.4nm,1.3s						
TROLL	**Troll, Antarti**	**85.90**	**183**	P	**P**	**15 11 11.3**	**-1.4**
	comp=Z,164nm,0.8s						
SNAA	**Sanae**	**86.41**	**181**	P	P	15 11 20.7	+5.5
SEY	**Seymchan**	**86.45**	**350**	LR	LR	15 45 45.3	
	comp=Z,203nm,19.5s,baz=147,slow=33						
YBH	**Yreka Blue Hor**	**86.56**	**42**	LR	LR	15 44 22.7	
	comp=Z,12nm,18.7s,baz=324,slow=32						
PFO	**Pinyon Flats O**	**86.56**	**52**	LR	LR	15 44 57.0	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,99nm,18.9s,baz=260,slow=32						
LPIG	La Paz	86.98	63	LR	LR	15 40 42.5	
	comp=Z,118nm,21.8s,baz=226,slow=29						
NVAR	Mina Array Bea	87.67	47	P	P	15 11 23.7	+1.8
	comp=Z,4.9nm,1.1s,baz=227,slow=7.4,SNR=9.0						
NVAR				LR	LR	15 42 57.5	
	comp=Z,109nm,20.2s,baz=244,slow=30						
	comp=Z,4.9nm,1.1s						
LZH	Lanzhou	87.76	310	eP	P	15 11 27.8	+5.5
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
YAK	Yakutsk	90.92	341	P	P	15 11 35.7	-0.6
	comp=Z,2.8nm,0.3s,baz=113,slow=0.9,SNR=6.1						
YAK				LR	LR	15 46 46.0	
	comp=Z,151nm,21.6s,baz=114,slow=32						
	comp=Z,2.8nm,0.3s						
H03S2	Juan Fernandez	91.32	127	T	T	16 53 03.8	
	baz=241,slow=74,SNR=6.5						
H03S1	Juan Fernandez	91.33	127	T	T	16 53 06.4	
	baz=241,slow=74,SNR=7.1						
H03S3	Juan Fernandez	91.34	127	T	T	16 53 04.2	
	baz=241,slow=74,SNR=8.7						
ULN	Ulaanbaatar	91.68	322	P	P	15 11 46.0	+5.6
ILAR	Eielson Array	91.81	16	P	P	15 11 39.5	-0.9
	comp=Z,1.7nm,1.0s,baz=228,slow=6.5,SNR=9.2						
	comp=Z,1.7nm,1.0s						
SONM	Songino Array	92.04	322	P	P	15 11 42.7	+0.6
	comp=Z,3.3nm,1.1s,baz=145,slow=4.4,SNR=8.7						
SONM				LR	LR	15 51 07.7	
	comp=Z,90nm,20.9s,baz=102,slow=34						
	comp=Z,3.3nm,1.1s						
GTA	Gaotai	92.14	312	eP	P	15 11 48.0	+5.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
GTA				LR	LR		
	comp=Z,140nm,22.3s						
GTA				LR	LR		
	comp=Z,160nm,24.7s						
GTA				LR	LR		
	comp=Z,190nm,23.5s						
PLCA	Paso Flores	93.60	137	LR	LR	15 44 33.5	
	comp=Z,124nm,20.7s,baz=244,slow=30						
TXAR	Lajitas Array	94.54	60	P	P	15 11 55.9	+1.9
	comp=Z,1.1nm,1.1s,baz=212,slow=4.4,SNR=5.8						
TXAR				LR	LR	15 46 14.5	
	comp=Z,132nm,21.0s,baz=280,slow=30						
	comp=Z,1.1nm,1.1s						
ANMO	Albuquerque	94.56	54	LR	LR	15 45 32.6	
	comp=Z,86nm,21.6s,baz=290,slow=30						
PALK	Pallekele	95.45	276	LR	LR	15 57 35.4	
	comp=Z,189nm,18.7s,baz=142,slow=37						
PDAR	Pinedale Array	95.57	46	P	P	15 12 01.1	+2.5
	comp=Z,0.1nm,0.6s,baz=278,slow=6.0,SNR=3.6						
PDAR				LR	LR	15 51 13.6	
	comp=Z,74nm,18.0s,baz=275,slow=33						
	comp=Z,0.1nm,0.6s						
CMIG	Matias Romero	97.56	75	LR	LR	15 46 33.0	
	comp=Z,101nm,20.2s,baz=210,slow=30						
BVAR	Borovoye Array	115.30	319	PKP	PKPdf	15 17 13.3	-1.1
	comp=Z,1.0nm,0.6s,baz=72,slow=0.5,SNR=4.6						
ARTI	Arti	122.12	324	PKP	PKiKP	15 17 26.3	-1.3
	comp=Z,6.7nm,0.9s,baz=148,slow=2.9,SNR=6.7						
ARCES	ARCESS Array B	128.89	346	PKP	PKPdf	15 17 38.7	-1.3
	comp=Z,6.4nm,0.9s,baz=26,slow=1.8,SNR=3.8						
NACGM	Naroch	138.98	331	ePKP	PKiKP	15 18 06.9	+5.4
	comp=Z,12nm,1.0s,baz=51						
NOA	NORSAR Array B	139.25	347	PKP	PKiKP	15 18 00.5	-1.5
	comp=Z,1.1nm,0.9s,baz=39,slow=2.0,SNR=4.1						
HFS	Hagfors	139.50	345	PKP	PKiKP	15 18 00.6	-1.8
	comp=Z,1.9nm,0.9s,baz=78,slow=3.4,SNR=4.1						
AKASG	Malin Array Be	140.25	325	PKP	PKPdf	15 18 00.2	-1.6
	comp=Z,0.6nm,0.6s,baz=53,slow=3.1,SNR=1.9						
KIRS	Kirsehir-Merke	141.81	306	⇓P	PKiKP	15 18 09.6	+1.6
BRTR	Keskin Array B	141.87	307	PKP	PKiKP	15 18 05.7	-2.4
	comp=Z,0.9nm,0.8s,baz=126,slow=6.3,SNR=4.8						
TESR	Tescani	143.92	320	⇑P	PKPbc	15 18 05.7	-0.5
BURAR	Bucovina Array	144.15	323	⇓P	PKPdf	15 18 09.2	+0.3
ONER	Baraj Valea Uz	144.16	320	⇑P	PKPdf	15 18 09.0	+0.1
VRI	Vrincioaia	144.20	319	⇑P	PKPdf	15 18 08.0	-1.0
PLOR	Plostina	144.26	319	⇑P	PKPdf	15 18 07.5	-1.6
COVR	Voineasa-Covas	144.53	320	⇑P	PKPdf	15 18 08.5	-1.0
ISR	Istrita	144.69	318	⇑P	PKiKP	15 18 13.5	-0.1
MLR	Muntele Rosu	144.86	319	⇑P	PKPdf	15 18 10.2	-0.1
ARCR	ARCALIA	144.93	323	⇑P	PKPdf	15 18 10.3	+0.1
DOPR	Dopca	144.95	320	⇑P	PKPdf	15 18 10.8	+0.5
STHS	Stebnicka Huta	145.14	328	ePKP	PKiKP	15 18 15.7	+1.4
CJR	Cluj-Napoca	145.57	323	⇑P	PKiKP	15 18 12.6	-2.7
ARR	Arges	145.72	320	⇑P	PKPab	15 18 12.2	-0.2
TNR	Turnu Rosu	145.78	321	⇑P	PKiKP	15 18 16.8	+1.0
MARR	Marisel-Cluj	145.86	323	⇑P	PKPab	15 18 12.7	-0.2
LANS	Liptovska Anna	146.18	329	ePKP	PKiKP	15 18 15.2	-1.3
LOT	Lotru	146.19	321	⇑P	PKiKP	15 18 15.4	-1.3
STEB	Steborice	146.40	332	ePKP	PKPab	15 18 13.2	-1.5
DEV	Deva	146.44	322	⇑P	PKiKP	15 18 16.8	-0.3
OSTC	Ostas	146.59	334	ePKP	PKPab	15 18 15.0	-0.5
MORC	Moravsky Berou	146.61	332	⇑P	PKPab	15 18 14.7	-0.9
MORC	Moravsky Berou	146.61	332	ePKP	PKPab	15 18 14.3	-1.3
DPC	Dobruska-Polom	146.71	333	ePKP	PKPab	15 18 14.9	-1.1
KRLC	Kraliky	146.72	333	ePKP	PKPab	15 18 14.6	-1.4
EKA	Eskdalemuir Ar	146.77	357	PKPbc	PKPbc	15 18 13.6	-1.2
	comp=Z,1.8nm,0.6s,baz=12,slow=2.4,SNR=13						
MAUC	Maruska	146.78	331	ePKP	PKPab	15 18 15.4	-0.9
PSZ	Piszkesteto	146.80	327	⇑P	PKPab	15 18 15.7	-0.8
JAVC	Velka Javorina	147.22	330	ePKP	PKiKP	15 18 17.2	-1.5
CLL	Collm	147.23	337	i PKPbc	PKPab	15 18 15.8	-2.1
	comp=Z,18nm,1.5s						
CLL				i PKiKP	sPKPab	15 18 20.1	-1.8
	comp=Z,23nm,0.9s						
VRAC	Vranov	147.38	332	⇓P	PKPab	15 18 17.0	-1.6
VRAC	Vranov	147.38	332	ePKP	PKPab	15 18 16.3	-2.3
KRUC	Moravsky	147.65	332	ePKP	PKPbc	15 18 17.0	-0.4
SRO	Srobarova	147.66	328	ePKP	PKiKP	15 18 23.0	+3.5
PRU	Pruhonice	147.72	335	ePKP	PKiKP	15 18 17.7	-1.9
MODS	Modra-Piesok	147.75	330	ePKP	PKiKP	15 18 17.9	-1.9
ZVC	Zvikov	148.29	334	ePKP	PKiKP	15 18 19.4	-1.4
MORH	Mrgy, Hungar	148.57	326	⇑P	PKPbc	15 18 19.0	-0.9
RONA	Rosalia, Austr	148.69	330	i PKP	PKiKP	15 18 20.1	-1.6
	comp=Z,15nm,0.8s						
CKRC	Cesky Krumlov	148.72	333	ePKP	PKPbc	15 18 19.5	-0.8
CONA	Conrad Observa	148.73	331	i PKP	PKiKP	15 18 20.4	-1.5
	comp=Z,14nm,0.9s						
KHC	Kasperske Hory	148.78	334	ePKP	PKiKP	15 18 20.1	-1.8
GERES	GERESS Array B	148.95	334	PKPbc	PKPbc	15 18 19.9	-1.1
	comp=Z,3.7nm,0.8s,baz=34,slow=3.4,SNR=14						
GRF	Grafenberg Arr	149.21	338	ePKP	PKPab	15 18 27.1	+1.2
	baz=40,slow=2.0						
ARSA	Arzberg	149.38	330	i PKP	PKiKP	15 18 22.5	-0.6
	comp=Z,8.9nm,1.2s						
MOA	Molln	149.49	332	i PKiKP	PKPab	15 18 25.4	-1.7
	comp=Z,13nm,1.2s						
BIOA	Bad Ischl, Aus	149.88	333	ePKiKP	PKPab	15 18 26.1	-2.6
	comp=Z,9.8nm,1.0s						
BTNL	Ternell	149.98	344	dPKP	PKiKP	15 18 24.9	+0.6
MEM	Membach	149.99	344	dPKP	PKPbc	15 18 20.1	-3.3
SOKA	Soboth	150.03	330	i PKP	PKPbc	15 18 22.5	-1.2
	comp=Z,20nm,1.1s,SNR=4.5						
SOKA	Soboth	150.03	330	eP	PKPbc	15 18 22.5	-1.2
	comp=Z,20nm,1.1s,SNR=4.5						
BSTI	Sart Tilman	150.12	345	dPKP	PKiKP	15 18 24.0	-0.6
BHOU	Houvegnez	150.22	344	dPKP	PKPab	15 18 29.4	-0.6
BLY	Banja Luka	150.31	325	⇓P	PKiKP	15 18 25.1	0.0
BCLA	Clavier	150.34	345	dPKP	PKPbc	15 18 22.4	-1.8
OBKA	Obir	150.38	330	i PKP	PKPbc	15 18 23.5	-1.1
	comp=Z,9.5nm,1.1s						
BGES	Gesves	150.42	345	dPKP	PKPab	15 18 28.2	-2.5
KBA	Koelnbreinsper	150.49	332	ePKP	PKPbc	15 18 23.2	-1.7
	comp=Z,23nm,0.8s						
LESA	Schwarzleotal	150.50	333	i PKP	PKiKP	15 18 24.2	-1.3
	comp=Z,17nm,1.1s,SNR=9.3						
BMRD	Maredsous	150.57	345	dPKP	PKPbc	15 18 23.1	-1.6
RCHB	Rochefort	150.60	345	dPKP	PKPab	15 18 27.7	-3.8
MYKA	Terra Mystica	150.70	331	ePKP	PKiKP	15 18 24.4	-1.5
	comp=Z,8.7nm,1.0s						
DOU	Dourbes	150.80	346	dPKP	PKiKP	15 18 24.9	-1.0
WLF	Walferdange	150.81	343	dPKP	PKiKP	15 18 25.4	-0.6
WATA	Walderalm	151.02	334	i PKP	PKiKP	15 18 25.5	-1.2
	comp=Z,21nm,1.0s						
WTTA	Wattenberg	151.05	334	ePKP	PKiKP	15 18 26.0	-0.8
	comp=Z,29nm,0.9s						
ABTA	Abfaltersbach	151.10	333	i PKP	PKPbc	15 18 23.4	-2.8
	comp=Z,14nm,1.0s						
RETA	Reutte	151.21	336	ePKP	PKiKP	15 18 27.1	+0.1
	comp=Z,6.9nm,0.8s						
SQTA	Sankt Quirin	151.26	335	ePKP	PKiKP	15 18 26.3	-0.9
	comp=Z,23nm,0.9s,SNR=4.1						
SQTA	Sankt Quirin	151.26	335	P	PKiKP	15 18 26.3	-0.9
	comp=Z,23nm,0.9s,SNR=4.1						
FETA	Feichten	151.61	335	ePKP	PKPbc	15 18 26.1	-1.4
	comp=Z,17nm,0.9s						
DAVA	Damuels	151.71	336	ePKP	PKPbc	15 18 26.0	-1.8
	comp=Z,20nm,1.1s						
ESDC	Sonseca Array	162.40	354	PKPab	PKPab	15 19 22.3	-0.1
	comp=Z,3.4nm,1.1s,baz=355,slow=4.6,SNR=7.3						
TORD	Torodi Ar. Bea	168.25	222	PKP	PKPdf	15 18 39.9	-0.7
	comp=Z,2.2nm,0.9s,baz=3.2,slow=1.0,SNR=3.7						
TORD				PKPab	PKPab	15 19 48.4	-0.4
	comp=Z,2.1nm,0.8s,baz=99,slow=5.4,SNR=10						

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*IDC **25** 15:06:43.2±0.7, 21°.99S×173°.71E, h0^{km}, mb4.1/13, mbtmp4.1/15, ML3.2/2, MS4.1/5, Error ellipse: s-maj=23.6km s-min=19.3km az=100.0*

*NEIC **25** 15:06:45.5±1.5, 22°.0S±0°.1×173°.7E±0°.1, h10^{km}±1^{km}, mb4.6/28, Error ellipse: s-maj=21.2km s-min=19.4km az=27.0*

*GCMT **25** 15:06:47.5±0.3, 21°.95S±0°.03×173°.59E±0°.03, h15^{km}±1^{km}, MW4.9/90, Moment Tensor Solution. s19,c21; s90,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.61±.21; $M_{\theta\theta}$1.17±.14; $M_{\phi\phi}$1.45±.13; $M_{r\theta}$-0.47±.30; $M_{\theta\phi}$1.02±.06; $M_{\phi r}$0.26±.25; Best double couple: $M_0$2.52400×10^{16} NP1:ϕ_s211.00000°,δ45.00000°,λ-104.00000°. NP2: ϕ_s51.00000°,δ47.00000°,λ-76.00000°. Principal axes: T 2.3420, Plg1.0000°, Azm131.0000°; N 0.3740, Plg10.0000°, Azm222.0000°; P -2.7060, Plg80.0000°, Azm34.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 15:06:49.8±0.5**, 22°.00S**±0°.08×**173°.55E**±0°.09**, h40^{km}, n103, σ0ˢ75**/94**, mb4.4**/22**, MS4.0**/5**, 1C, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINNC	Pines Island,	5.69	263	Pn	Pn	15 08 12.3	+0.6
MSVF	Nonsavu	5.99	46	Pn	Pn	15 08 17.2	+1.2
DZM	Mont Dzumac	6.59	268	Pn	Pn	15 08 23.0	-1.3
	0.2nm,0.3s,baz=28,slow=20,SNR=2.6						
	9.5nm,1.0s						
DZM	Mont Dzumac	6.59	268	Pn	Pn	15 08 23.8	-0.6
URZ	Urewera	16.50	170	Pn	Pn	15 10 37.1	-1.1
	0.2nm,0.3s,baz=302,slow=19,SNR=1.2						
	5.1nm,0.9s						
BKZ	Black Stump Fm	17.30	172		P	15 10 48.9	-0.4
MRZ	Mangatainoka R	18.69	175	P	Pn	15 11 06.0	+0.7
MRZ				IAmb	IAmb	15 11 36.9	
	comp=Z,34nm,1.3s						
BFZ	Birch Farm	18.77	174	P	P	15 11 05.4	0.0
TCW	Tory Channel	19.17	178	P	Pn	15 11 10.5	-0.5
MSWZ	Moikau Station	19.41	176	P	Pn	15 11 14.8	+0.9
INZ	Inchbonnie	20.74	184	P	Pn	15 11 28.5	-1.0
LTZ	Lake Taylor	20.75	183	P	P	15 11 27.5	+0.3
LTZ				IAmb	IAmb	15 11 45.0	
	comp=Z,22nm,1.2s						
ARMA	Armidale	21.36	242	P	P	15 11 35.4	+1.6
ARMA				IAmb	IAmb	15 11 51.2	
	comp=Z,31nm,1.4s						
MLZ	Mavora Lakes	23.73	190	P	P	15 12 00.4	+2.2
MLZ				IAmb	IAmb	15 12 29.1	
	comp=Z,28nm,1.4s						
CTA	Charters Tower	25.54	269	P	P	15 12 16.2	+1.2
	comp=Z,4.4nm,1.1s,baz=110,slow=12,SNR=2.1						
CTA				LR	LR	15 22 07.7	
	comp=Z,904nm,18.1s,baz=74,slow=36						
	comp=Z,4.4nm,1.1s						
STKA	Stephens Creek	30.05	244	P	P	15 12 55.9	+0.7
	comp=Z,2.0nm,0.8s,baz=93,slow=7.8,SNR=3.9						
STKA				LR	LR	15 24 12.4	
	comp=Z,284nm,18.1s,baz=59,slow=35						
	comp=Z,2.0nm,0.8s						
STKA	Stephens Creek	30.05	244	P	P	15 12 55.8	+0.7
STKA				IAmb	IAmb	15 12 59.4	
	comp=Z,16nm,1.1s						
BBOO	Buckleboo	34.82	244	P	P	15 13 36.7	-0.2
PPT	Papeete	34.92	89	LR	LR	15 24 26.5	
	comp=Z,172nm,20.6s,baz=289,slow=31						
WR8	Warramunga Arr	36.45	266	P	P	15 13 50.1	-1.0
WR8				IAmb	IAmb	15 13 51.9	
	comp=Z,6.5nm,0.9s						
AS31	Alice Springs	36.50	260	P	P	15 13 51.6	0.0
ASAR	Alice Springs	36.50	260	P	P	15 13 51.5	0.0
	comp=Z,1.6nm,0.8s,baz=78,slow=9.8,SNR=24						
	comp=Z,1.6nm,0.8s						
ASAR	Alice Springs	36.50	260	P	P	15 13 50.6	-0.9
WB0	Warramunga Arr	36.59	266	P	P	15 13 51.9	-0.4
WB0				IAmb	IAmb	15 13 53.2	
	comp=Z,18nm,1.2s						
WRA	Warramunga Arr	36.61	266	P	P	15 13 51.7	-0.8
	comp=Z,2.5nm,0.8s,baz=101,slow=9.6,SNR=9.0						
	comp=Z,2.5nm,0.8s						
WRA	Warramunga Arr	36.61	266	P	P	15 13 50.7	-1.7
H11S2	WAKE ISLAND Hy	40.79	350	T	T	15 57 47.9	
	baz=169						
H11S3	WAKE ISLAND Hy	40.80	350	T	T	15 57 48.2	
	baz=169						
H11S1	WAKE ISLAND Hy	40.81	350	T	T	15 57 52.8	
	baz=169						
MTN	Manton Dam	41.37	275	P	P	15 14 30.9	-1.4
MTN				IAmb	IAmb	15 14 33.7	
	comp=Z,13nm,1.1s						
KNRA	Kununurra	42.74	270	P	P	15 14 43.4	-0.1
FITZ	Fitzroy Crossi	45.04	266	P	P	15 15 03.1	+1.2
VNDA	Vanda	55.86	183	P	P	15 16 21.6	-1.3
	comp=Z,0.7nm,0.5s,baz=273,slow=15,SNR=8.3						
VNDA				LR	LR	15 36 39.5	
	comp=Z,105nm,20.6s,baz=12,slow=32						
	comp=Z,0.7nm,0.5s						
VNDA	Vanda	55.86	183	P	P	15 16 21.9	-0.9
SBA	Scott Base	56.00	182	P	P	15 16 24.9	+1.0
JGF	Kuroka	66.76	328	P	P	15 17 37.3	+0.2
MJAR	Matsushiro Arr	67.11	330	P	P	15 17 38.0	-1.3
	comp=Z,2.2nm,0.9s,baz=170,slow=7.6,SNR=4.3						
	comp=Z,2.2nm,0.9s						
MJAR	Matsushiro Arr	67.11	330	P	P	15 17 38.7	-0.6
MJAR				IAmb	IAmb	15 17 51.1	
	comp=Z,5.6nm,1.2s						
QSPA	South Pole Qui	68.07	180	P	P	15 17 45.2	0.0
QSPA				IAmb	IAmb	15 17 47.5	
	comp=Z,7.1nm,0.9s						
JNU	Nakatsue	68.28	322	P	P	15 17 46.4	-0.3
KSRS	Korea Array	73.08	324	P	P	15 18 15.9	0.0
	comp=Z,1.0nm,0.8s,baz=123,slow=6.1,SNR=4.1						
	comp=Z,1.0nm,0.8s						
IPM	Ipoh	75.58	281	P	P	15 18 31.3	+0.3
USRK	Ussuriysk Ar.	76.07	331	P	P	15 18 33.4	+0.3
	comp=Z,3.7nm,0.7s,baz=96,slow=7.1,SNR=5.7						
	comp=Z,3.7nm,0.7s						
KULM	Kulim	76.25	282	P	P	15 18 35.3	+0.5
KULM				IAmb	IAmb	15 18 38.8	
	comp=Z,6.4nm,0.9s						
MAW	Mawson	77.39	202	P	P	15 18 40.6	+0.4
	comp=Z,3.3nm,0.8s,baz=162,slow=3.7,SNR=4.5						
	comp=Z,3.3nm,0.8s						
BELA	Belgrano 2	78.99	174	P	P	15 18 48.4	-0.6
BELA				IAmb	IAmb	15 18 59.5	
	comp=Z,6.6nm,1.3s						
CMAR	Chiang Mai Arr	83.30	293	P	P	15 19 13.8	+0.9
	comp=Z,1.0nm,0.8s,baz=140,slow=4.0,SNR=9.4						
	comp=Z,1.0nm,0.8s						
CMAR	Chiang Mai Arr	83.30	293	P	P	15 19 13.1	+0.2
CHTO	Chiang Mai	83.46	293	P	P	15 19 13.9	+0.2
CHTO				IAmb	IAmb	15 19 25.6	
	comp=Z,5.7nm,1.1s						
KDAK	Kodiak Island	84.36	17	LR	LR	15 47 55.3	
	comp=Z,96nm,21.2s,baz=220,slow=29						
L14K	Kuka Creek	85.23	11	P	P	15 19 21.1	-0.5
TROLL	Troll, Antarti	86.04	183	⇑P	P	15 19 25.9	-0.1
	comp=Z,164nm,0.8s						
SNAA	Sanae	86.55	181	P	P	15 19 27.3	-1.1
SNAA	Sanae	86.55	181	P	P	15 19 27.6	-0.8
	comp=Z,2.2nm,0.8s,baz=201,slow=3.4,SNR=4.4						
	comp=Z,2.2nm,0.8s						
SNAA	Sanae	86.55	181	P	P	15 19 27.4	-1.0
SNAA				IAmb	IAmb	15 19 29.8	
	comp=Z,8.5nm,1.3s						
VNA3	Neumayer Olymp	86.98	179	P	P	15 19 30.7	+0.3
VNA2	Neumayer--Watz	87.33	180	P	P	15 19 24.0	-8.1
	baz=208,slow=34						
H03S2	Juan Fernandez	91.50	127	T	T	17 01 17.5	
	baz=241						
H03S1	Juan Fernandez	91.51	127	T	T	17 01 12.6	
	baz=241						
H03S3	Juan Fernandez	91.52	127	T	T	17 01 12.8	
	baz=241						
ILAR	Eielson Array	91.71	16	P	P	15 19 51.4	-1.1
	comp=Z,0.6nm,0.9s,baz=209,slow=2.8,SNR=4.7						
	comp=Z,0.6nm,0.9s						
ILAR	Eielson Array	91.71	16	P	P	15 19 52.2	-0.2
SONM	Songino Array	91.86	322	P	P	15 19 53.6	-0.2
	comp=Z,0.8nm,0.9s,baz=110,slow=3.9,SNR=4.1						
	comp=Z,0.8nm,0.9s						
MKAR	Makanchi Array	106.54	314	Pdiff	Pdif	15 21 01.0	+1.3
	comp=Z,0.4nm,0.7s,baz=117,slow=5.0,SNR=4.0						
BVAR	Borovoye Array	115.11	319	PKP	PKiKP	15 25 25.7	-0.7
	comp=Z,0.6nm,0.5s,baz=292,slow=0.8,SNR=3.7						
ARTI	Arti	121.94	324	PKP	PKPdf	15 25 39.3	-0.1
	comp=Z,1.9nm,0.6s,baz=60,slow=2.7,SNR=3.4						
ARTI	Arti	121.94	324		PKPdf	15 25 38.8	-0.6
AKTO	Aktyubinsk	122.83	317	PKP	PKPdf	15 25 40.5	-0.9
	comp=Z,1.6nm,0.7s,baz=100,slow=1.7,SNR=6.3						
ARCES	ARCESS Array B	128.72	346	PKP	PKPdf	15 25 51.4	-0.7
	comp=Z,3.0nm,1.0s,baz=39,slow=8.4,SNR=3.8						
FINES	FINESS Array B	134.63	339	PKP	PKPdf	15 26 03.2	-0.2
	comp=Z,0.9nm,0.8s,baz=80,slow=5.7,SNR=1.6						
NOA	NORSAR Array B	139.09	347	PKP	PKPdf	15 26 11.4	-0.3
	comp=Z,0.6nm,0.8s,baz=28,slow=2.0,SNR=3.9						
OSTC	Ostas	146.42	334	ePKP	PKPab	15 26 27.5	+0.2
DPC	Dobruska-Polom	146.53	333	ePKP	PKPab	15 26 27.2	-0.5
KRLC	Kraliky	146.54	333	ePKP	PKPbc	15 26 27.2	+0.4
EKA	Eskdalemuir Ar	146.62	357	PKPbc	PKPdf	15 26 25.6	+0.5
	comp=Z,1.4nm,0.7s,baz=352,slow=2.4,SNR=8.8						
PRU	Pruhonice	147.54	334	ePKP	PKPbc	15 26 30.2	+0.7
ZVC	Zvikov	148.11	334	ePKP	PKPbc	15 26 31.5	+0.4
RONA	Rosalia, Austr	148.51	330	i PKP	PKPbc	15 26 32.9	+0.7
	comp=Z,3.6nm,0.7s,SNR=5.3						
CKRC	Cesky Krumlov	148.54	333	ePKP	PKPbc	15 26 32.8	+0.6
CONA	Conrad Observa	148.54	331	i PKP	PKPbc	15 26 33.0	+0.7
	comp=Z,5.1nm,0.9s,SNR=8.0						
CONA	Conrad Observa	148.54	331	i P	PKPbc	15 26 33.0	+0.7
	comp=Z,5.1nm,0.9s,SNR=8.0						
KHC	Kasperske Hory	148.60	334	ePKP	PKPbc	15 26 32.8	+0.4
GERES	GERESS Array B	148.78	334	PKPbc	PKPbc	15 26 33.4	+0.4
	comp=Z,3.3nm,0.8s,baz=44,slow=4.1,SNR=28						
ARSA	Arzberg	149.20	330	ePKP	PKPbc	15 26 34.5	+0.5
	comp=Z,4.4nm,1.3s						
MOA	Molln	149.31	332	i PKP	PKPbc	15 26 34.1	-0.1
	comp=Z,6.6nm,1.5s						
BIOA	Bad Ischl, Aus	149.70	333	ePKP	PKiKP	15 26 36.6	+0.4
	comp=Z,6.9nm,1.3s						
SOKA	Soboth	149.85	330	i PKP	PKPbc	15 26 35.5	-0.1
	comp=Z,7.7nm,1.5s,SNR=4.6						
SOKA	Soboth	149.85	330	eP	PKPbc	15 26 35.5	-0.1
	comp=Z,7.7nm,1.5s,SNR=4.6						
OBKA	Obir	150.20	330	i PKP	PKiKP	15 26 37.0	-0.3
	comp=Z,4.1nm,0.9s						
LESA	Schwarzleotal	150.32	333	i PKP	PKPbc	15 26 36.7	-0.1
	comp=Z,8.3nm,1.1s,SNR=6.6						
MYKA	Terra Mystica	150.52	331	i PKP	PKPbc	15 26 36.9	-0.4
	comp=Z,5.3nm,0.9s						
WATA	Walderalm	150.84	334	i PKP	PKPbc	15 26 37.7	-0.4
	comp=Z,3.9nm,0.7s,SNR=4.9						
WATA	Walderalm	150.84	334	eP	PKPbc	15 26 37.7	-0.4
	comp=Z,3.9nm,0.7s,SNR=4.9						
WTTA	Wattenberg	150.87	334	i PKP	PKPbc	15 26 38.2	0.0
	comp=Z,6.0nm,0.7s,SNR=8.0						
WTTA	Wattenberg	150.87	334	eP	PKPbc	15 26 38.2	0.0
	comp=Z,6.0nm,0.7s,SNR=8.0						
ABTA	Abfaltersbach	150.92	333	i PKP	PKPbc	15 26 37.5	-0.8
	comp=Z,4.8nm,0.8s,SNR=6.7						
RETA	Reutte	151.03	336	ePKiKP	PKiKP	15 26 41.1	+2.1
	comp=Z,1.6nm,0.6s						
SQTA	Sankt Quirin	151.08	335	i PKP	PKPbc	15 26 38.8	+0.2
	comp=Z,5.8nm,0.7s,SNR=6.9						
FETA	Feichten	151.43	335	i PKP	PKPbc	15 26 39.4	-0.1
	comp=Z,4.0nm,0.8s,SNR=6.2						
DAVA	Damuels	151.53	336	i PKP	PKiKP	15 26 40.3	+0.1
	comp=Z,5.4nm,0.8s						
ESDC	Sonseca Array	162.25	354	PKPab	PKPab	15 27 34.1	-0.2
	comp=Z,0.4nm,0.9s,baz=293,slow=8.7,SNR=2.7						
TORD	Torodi Ar. Bea	168.27	223	PKP	PKPdf	15 26 52.3	-0.7
	comp=Z,0.8nm,1.0s,baz=298,slow=3.2,SNR=4.2						
TORD				PKPab	PKPab	15 28 01.1	-0.3
	comp=Z,0.7nm,0.7s,baz=97,slow=3.1,SNR=4.9						
TORD	Torodi Ar. Bea	168.27	223	PKPdf	PKPdf	15 26 53.4	+0.5

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*IDC **25** 15:18:29.7±3.8, 22°.21S×173°.73E, h0^{km}, mb3.8/4, mbtmp3.8/5, ML2.7/1, Error ellipse: s-maj=170.0km s-min=31.4km az=156.0*

ISC 25 15:18:35.6±3.0**, 22°.1S**±0°.9×**173°.6E**±0°.3**, h40^{km}, n7, σ0ˢ50**/7**, mb3.8**/4**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.67	269	Pn	Pn	15 20 11.1	-0.2
	0.2nm,0.3s,baz=164,slow=16,SNR=2.0						
	6.0nm,1.0s						
ASAR	Alice Springs	36.56	260	P	P	15 25 38.0	+0.1
	1.5nm,1.0s,baz=80,slow=10,SNR=9.3						
	1.5nm,1.0s						
WRA	Warramunga Arr	36.68	266	P	P	15 25 38.6	-0.4
	1.3nm,0.9s,baz=102,slow=8.2,SNR=4.6						
	1.3nm,0.9s						
CMAR	Chiang Mai Arr	83.42	293	P	P	15 31 00.1	+0.8
	0.5nm,0.7s,baz=112,slow=3.4,SNR=6.3						
	0.5nm,0.7s						
ILAR	Eielson Array	91.79	16	P	P	15 31 38.5	-0.2
	0.6nm,1.0s,baz=225,slow=5.0,SNR=2.7						
	0.6nm,1.0s						
EKA	Eskdalemuir Ar	146.73	357	PKPbc	PKPbc	15 38 12.9	0.0
	0.4nm,0.6s,baz=338,slow=1.8,SNR=3.8						
GERES	GERESS Array B	148.91	334	PKPbc	PKiKP	15 38 20.1	-0.4
	1.0nm,0.8s,baz=48,slow=4.0,SNR=7.5						

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*IDC **25** 15:20:39.8±0.8, 22°.17S×173°.72E, h0^{km}, mb4.0/13, mbtmp4.0/15, ML3.3/2, MS4.0/14, Error ellipse: s-maj=28.4km s-min=20.5km az=146.0*

ISC 25 15:20:45.5±0.6**, 22°.2S**±0°.1×**173°.7E**±0°.1**, h40^{km}, n78, σ0ˢ70**/62**, mb4.0**/13**, MS4.0**/13**, 11C-2D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.71	270	Pn	Pn	15 22 21.3	-0.4
	0.3nm,0.3s,baz=108,slow=20,SNR=3.9						
	4.5nm,0.8s						
URZ	Urewera	16.27	170	Pn	Pn	15 24 30.5	-0.6
	0.3nm,0.3s,baz=346,slow=21,SNR=1.7						
URZ				LR	LR	15 29 43.7	
	comp=Z,290nm,18.1s,baz=0.5,slow=33						
	11nm,1.0s						
RAR	Rarotonga	24.67	93	LR	LR	15 33 32.9	
	comp=Z,212nm,21.8s,baz=297,slow=31						
CTA	Charters Tower	25.66	270	LR	LR	15 35 53.8	
	comp=Z,549nm,18.8s,baz=62,slow=36						
STKA	Stephens Creek	30.07	244	P	P	15 26 51.8	+0.6
	3.6nm,1.1s,baz=302,slow=16,SNR=2.1						
STKA				LR	LR	15 38 06.8	
	comp=Z,236nm,18.3s,baz=56,slow=35						
	3.6nm,1.1s						
PPT	Papeete	34.80	89	LR	LR	15 37 35.9	
	comp=Z,297nm,20.3s,baz=303,slow=29						
ASAR	Alice Springs	36.59	260	P	P	15 27 47.3	-0.7
	1.0nm,0.7s,baz=69,slow=9.8,SNR=12						
ASAR				LR	LR	15 42 20.6	
	comp=Z,400nm,20.3s,baz=108,slow=36						
	1.0nm,0.7s						
WRA	Warramunga Arr	36.72	266	P	P	15 27 47.9	-1.2
	0.6nm,0.6s,baz=103,slow=8.1,SNR=5.0						
	0.6nm,0.6s						
JAY	Jayapura	37.53	297	LR	LR	15 42 04.1	
	comp=Z,189nm,20.8s,baz=122,slow=34						
H11S2	WAKE ISLAND Hy	41.02	350	T	T	16 11 45.0	
	baz=171						
H11S3	WAKE ISLAND Hy	41.02	350	T	T	16 11 43.4	
	baz=171						
H11S1	WAKE ISLAND Hy	41.03	350	T	T	16 11 43.9	
	baz=171						
FITZ	Fitzroy Crossi	45.15	266	LR	LR	15 47 44.9	
	comp=Z,332nm,18.6s,baz=110,slow=36						
GUMO	Guam	45.43	319	LR	LR	15 45 51.4	
	comp=Z,131nm,20.9s,baz=138,slow=33						
BATI	Baumata	49.29	276	LR	LR	15 49 54.7	
	comp=Z,342nm,21.2s,baz=155,slow=36						
VNDA	Vanda	55.66	183	LR	LR	15 52 53.4	
	comp=Z,60nm,18.1s,baz=14,slow=35						
JOW	Kunigami	65.63	316	LR	LR	15 59 52.0	
	comp=Z,45nm,18.4s,baz=94,slow=36						
MJAR	Matsushiro Arr	67.35	330	P	P	15 31 36.9	+0.3

	2.2nm,1.0s,baz=154,slow=6.5,SNR=2.9						
	2.2nm,1.0s						
RPN	Rapa Nui	69.12	112	LR	LR	15 54 14.0	
	comp=Z,94nm,20.8s,baz=89,slow=29						
KSRS	Korea Array	73.32	323	P	P	15 32 13.7	+0.7
	0.5nm,0.8s,baz=130,slow=6.0,SNR=1.6						
	0.5nm,0.8s						
USRK	Ussuriysk Ar.	76.31	331	P	P	15 32 30.4	+0.2
	1.4nm,0.7s,baz=98,slow=6.0,SNR=1.9						
	1.4nm,0.7s						
MAW	Mawson	77.24	202	P	P	15 32 36.4	+1.2
	3.6nm,0.9s,baz=185,slow=3.6,SNR=4.3						
	3.6nm,0.9s						
CMAR	Chiang Mai Arr	83.50	293	P	P	15 33 11.2	+1.5
	2.9nm,1.1s,baz=132,slow=3.6,SNR=15						
	2.9nm,1.1s						
MA2	Magadan	83.63	348	LR	LR	16 04 53.5	
	comp=Z,57nm,19.9s,baz=134,slow=32						
NVAR	Mina Array Bea	87.71	47	P	P	15 33 30.2	-0.2
	2.2nm,1.2s,baz=238,slow=8.5,SNR=4.7						
	2.2nm,1.2s						
H03S2	Juan Fernandez	91.28	127	T	T	17 15 08.0	
	baz=240						
H03S1	Juan Fernandez	91.29	127	T	T	17 15 09.6	
	baz=240						
H03S3	Juan Fernandez	91.30	127	T	T	17 15 08.4	
	baz=240						
ILAR	Eielson Array	91.87	16	P	P	15 33 49.2	+0.2
	0.6nm,0.9s,baz=215,slow=7.4,SNR=2.7						
	0.6nm,0.9s						
SONM	Songino Array	92.10	322	P	P	15 33 50.8	+0.1
	0.2nm,0.4s,baz=116,slow=3.4,SNR=4.5						
	0.2nm,0.4s						
TXAR	Lajitas Array	94.56	60	P	P	15 34 01.7	-0.7
	0.3nm,0.8s,baz=204,slow=5.5,SNR=2.1						
	0.3nm,0.8s						
PDAR	Pinedale Array	95.62	46	P	P	15 34 07.7	+0.7
	0.3nm,0.9s,baz=264,slow=9.6,SNR=1.2						
	0.3nm,0.9s						
AKASG	Malin Array Be	140.31	325	PKP	PKPdf	15 40 09.2	-0.8
	0.3nm,0.3s,baz=48,slow=2.8,SNR=3.1						
MLR	Muntele Rosu	144.91	319	⇑P	PKPab	15 40 17.2	-0.5
DOPR	Dopca	145.00	320	⇑P	PKPdf	15 40 18.6	+0.2
ARR	Arges	145.77	320	⇑P	PKPab	15 40 21.1	+0.3
MARR	Marisel-Cluj	145.91	323	⇓P	PKPbc	15 40 20.9	+0.1
DRGR		146.07	323	⇑P	PKPbc	15 40 21.5	+0.2
STEB	Steborice	146.45	331	*e*PKP	PKPab	15 40 23.5	+0.3
OSTC	Ostas	146.65	334	*e*PKP	PKPbc	15 40 23.5	+0.7
MORC	Moravsky Berou	146.67	331	⇑P	PKPbc	15 40 23.2	+0.3
MORC	Moravsky Berou	146.67	331	*e*PKP	PKPbc	15 40 22.8	-0.1
DPC	Dobruska-Polom	146.77	333	*e*PKP	PKPbc	15 40 23.7	+0.5
UPC	Upice	146.78	334	*e*PKP	PKPbc	15 40 23.9	+0.8
EKA	Eskdalemuir Ar	146.83	357	PKPbc	PKPdf	15 40 22.1	+0.9
	1.8nm,0.8s,baz=6.8,slow=2.1,SNR=5.0						
MAUC	Maruska	146.84	331	*e*PKP	PKPab	15 40 24.4	-0.3
GZR	Gura Zlata	146.85	321	⇑P	PKPbc	15 40 23.2	-0.4
PSZ	Piszkesteto	146.86	327	⇑P	PKPbc	15 40 23.0	-0.5
SIRR	Siria	146.97	323	⇑P	PKPbc	15 40 24.2	+0.4
JAVC	Velka Javorina	147.28	330	*e*PKP	PKPab	15 40 26.0	-0.5
CLL	Collm	147.29	337	*i* PKP	PKPdf	15 40 21.2	-0.9
	comp=Z,12nm,1.3s						
CLL				*i* x	x	15 40 27.1	
CLL				*i* x	x	15 40 33.6	
BZS	Buzias	147.38	322	⇓P	PKPbc	15 40 25.3	+0.3
VRAC	Vranov	147.43	332	⇑P	PKPbc	15 40 25.6	+0.6
VRAC	Vranov	147.43	332	*e*PKP	PKPbc	15 40 25.3	+0.3
KRUC	Moravsky	147.70	332	*e*PKP	PKPbc	15 40 25.9	+0.2
PRU	Pruhonice	147.77	334	*e*PKP	PKPbc	15 40 26.2	+0.3
MDVR	Moldovita	147.81	321	⇑P	PKPbc	15 40 26.2	-0.1
ZVC	Zvikov	148.35	334	*e*PKP	PKPbc	15 40 27.6	+0.2
MORH	Mrgy, Hungar	148.62	326	⇑P	PKPdf	15 40 25.3	+0.8
RONA	Rosalia, Austr	148.75	330	*e*PKP	PKPbc	15 40 28.0	-0.6
	comp=Z,5.7nm,1.1s						
CKRC	Cesky Krumlov	148.78	333	*e*PKP	PKPbc	15 40 28.8	+0.2
CONA	Conrad Observa	148.78	331	*i* PKP	PKPbc	15 40 28.9	+0.1
	comp=Z,12nm,1.7s						
KHC	Kasperske Hory	148.84	334	*e*PKP	PKPbc	15 40 28.7	-0.1
GERES	GERESS Array B	149.01	334	PKPbc	PKPbc	15 40 29.2	0.0
	comp=Z,3.0nm,0.9s,baz=29,slow=3.0,SNR=15						
ARSA	Arzberg	149.44	330	*i* PKP	PKPab	15 40 34.1	-1.1
	comp=Z,7.0nm,1.5s						
MOA	Molln	149.55	332	*i* PKP	PKPbc	15 40 30.5	-0.1
	comp=Z,6.5nm,1.4s						
BIOA	Bad Ischl, Aus	149.94	333	*e*PKP	PKPbc	15 40 31.8	+0.2
	comp=Z,3.4nm,0.9s						
SOKA	Soboth	150.09	330	*e*PKP	PKPbc	15 40 31.3	-0.7
	comp=Z,9.1nm,1.2s						
OBKA	Obir	150.44	330	*e*PKP	PKPbc	15 40 31.5	-1.4
	comp=Z,3.0nm,1.0s						
LESA	Schwarzleotal	150.56	333	*i* PKP	PKPdf	15 40 28.2	+0.5
	comp=Z,6.9nm,0.9s						
MYKA	Terra Mystica	150.76	331	*e*PKP	PKPbc	15 40 33.2	-0.4
	comp=Z,1.2nm,0.4s						
WATA	Walderalm	151.08	334	*i* PKP	PKPbc	15 40 34.2	-0.2
	comp=Z,7.2nm,1.2s						
WTTA	Wattenberg	151.11	334	*i* PKP	PKPbc	15 40 34.3	-0.3
	comp=Z,7.9nm,1.2s						
ABTA	Abfaltersbach	151.16	333	*i* PKP	PKPbc	15 40 34.1	-0.4
	comp=Z,10nm,1.1s						
RETA	Reutte	151.27	336	*e*PKiKP	PKPab	15 40 39.8	-3.0
	comp=Z,1.5nm,0.4s						
SQTA	Sankt Quirin	151.32	335	*i* PKP	PKPbc	15 40 34.5	-0.4
	comp=Z,7.4nm,0.9s						
FETA	Feichten	151.67	335	*i* PKP	PKPbc	15 40 35.7	-0.1
	comp=Z,11nm,1.0s						
TORD	Torodi Ar. Bea	168.20	222	PKP	PKPdf	15 40 48.2	-0.5
	comp=Z,1.2nm,1.1s,baz=30,slow=1.8,SNR=4.1						
TORD				PKPab	PKPab	15 41 56.9	+0.1
	comp=Z,0.9nm,0.9s,baz=106,slow=4.9,SNR=4.9						

IDC 25 15:32:29.7±2.6**,22°.70S**×**173°.84E,h0^{km},mb3.9**/3**,**
mbtmp3.8/4**,ML2.5**/1**,MS3.9**/1**,Error ellipse:**
s-maj=154.0km s-min=34.1km az=167.0,Southeast of
Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	6.87	274	Pn	Pn	15 34 11.3	-0.5
	0.1nm,0.3s,baz=344,slow=23,SNR=2.2						
	5.1nm,0.9s						
ASAR	Alice Springs	36.64	260	P	P	15 39 37.9	-0.4
	0.5nm,0.9s,baz=89,slow=8.3,SNR=6.4						
ASAR				LR	LR	15 54 39.7	
	comp=Z,174nm,18.1s,baz=104,slow=36						
	0.5nm,0.9s						
CMAR	Chiang Mai Arr	83.81	293	P	P	15 45 02.2	+0.7
	0.7nm,0.3s,baz=109,slow=5.3,SNR=6.3						
	0.7nm,0.3s						
TXAR	Lajitas Array	94.69	60	P	P	15 45 53.0	-0.3
	0.7nm,1.1s,baz=246,slow=6.2,SNR=4.0						
	0.7nm,1.1s						
GERES	GERESS Array B	149.51	334	PKPbc	PKPbc	15 52 20.4	-0.7
	1.0nm,0.8s,baz=44,slow=4.1,SNR=6.0						

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*IDC **25** 15:35:15.9±3.2,23°.10S×174°.00E,h0^{km},mb4.0/2,*
mbtmp3.9/3,ML2.9/1,Error ellipse: s-maj=152.7km
s-min=40.3km az=163.0
*NEIC **25** 15:35:21.5±1.1,22°.5S±0°.1×173°.65E±0°.05,h10^{km}±1^{km},*
mb4.5/8,Error ellipse: s-maj=20.0km s-min=6.1km
az=197.0
ISC 25 15:35:25.1±0.8**,22°.4S**±0°.1×**173°.6E**±0°.1**,h44^{km},n48,**
σ1^{s}.06/48**,mb4.3**/6**,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINNC	Pines Island,	5.70	267	Pn	Pn	15 36 46.4	-0.8
MSVF	Nonsavu	6.26	43	Pn	Pn	15 36 54.6	-0.5
DZM	Mont Dzumac	6.64	272	Pn	Pn	15 36 60.0	-0.4
	0.2nm,0.3s,baz=198,slow=23,SNR=1.2						
	3.2nm,0.8s						
DZM	Mont Dzumac	6.64	272	Pn	Pn	15 36 59.6	-0.7
LTZ	Lake Taylor	20.33	183	P	P	15 39 56.0	-1.7
CTAO	Charters Tower	25.59	270	P	P	15 40 50.9	+0.5
CTAO				IAmb	IAmb	15 41 26.9	
	comp=Z,8.5nm,1.2s						
STKA	Stephens Creek	29.91	245	P	P	15 41 29.4	+0.5
COEN	Coen	30.06	281	P	P	15 41 31.9	+1.5
COEN				IAmb	IAmb	15 41 39.1	
	comp=Z,17nm,1.4s						
AS31	Alice Springs	36.48	260	P	P	15 42 26.4	+0.1
ASAR	Alice Springs	36.48	260	P	P	15 42 24.5	-1.8
	comp=Z,0.9nm,0.8s,baz=82,slow=8.2,SNR=8.3						
	comp=Z,0.9nm,0.8s						
ASAR	Alice Springs	36.48	260	P	P	15 42 25.3	-1.0
WR8	Warramunga Arr	36.48	266	P	P	15 42 24.7	-1.6
WR8				IAmb	IAmb	15 43 02.6	
	comp=Z,4.7nm,1.1s						
FITZ	Fitzroy Crossi	45.06	266	P	P	15 43 37.5	+0.4
QSPA	South Pole Qui	67.65	180	P	P	15 46 19.3	+1.9
QSPA				IAmb	IAmb	15 46 45.8	
	comp=Z,9.5nm,1.4s						
CMAR	Chiang Mai Arr	83.52	293	P	P	15 47 50.1	+1.2
	comp=Z,2.6nm,1.1s,baz=125,slow=3.9,SNR=12						
	comp=Z,2.6nm,1.1s						
CMAR	Chiang Mai Arr	83.52	293	P	P	15 47 49.6	+0.7
CHTO	Chiang Mai	83.67	293	P	P	15 47 50.2	+0.5
STEB	Steborice	146.61	331	*e*PKP	PKPbc	15 55 01.4	-0.4
STEB				*e*x	x	15 55 20.2	
OSTC	Ostas	146.82	333	*e*PKP	PKPbc	15 55 02.3	-0.1
OSTC				*e*x	x	15 55 23.3	
DPC	Dobruska-Polom	146.93	333	*e*PKP	PKPbc	15 55 02.0	-0.7
MAUC	Maruska	147.00	330	*e*PKP	PKPbc	15 55 02.7	-0.2
MAUC				*e*x	x	15 55 21.0	
EKA	Eskdalemuir Ar	147.05	357	PKPbc	PKPdf	15 55 00.1	-0.6
	comp=Z,1.9nm,0.9s,baz=316,slow=2.3,SNR=4.4						
JAVC	Velka Javorina	147.43	330	*e*PKP	PKPbc	15 55 05.2	+1.0
CLL	Collm	147.47	337	*i* PKPbc	PKPbc	15 55 03.3	-0.8
	comp=Z,9.0nm,1.3s						
CLL				*i* x	x	15 55 22.0	
	comp=Z,8.0nm,1.2s						
VRAC	Vranov	147.59	332	*e*PKP	PKPbc	15 55 04.2	-0.4
KRUC	Moravsky	147.86	331	*e*PKP	PKPbc	15 55 05.0	-0.3
PRU	Pruhonice	147.94	334	*e*PKP	PKPbc	15 55 05.0	-0.4
PRU				*e*x	x	15 55 23.7	
ZVC	Zvikov	148.51	334	*e*PKP	PKPbc	15 55 06.5	-0.5
RONA	Rosalia, Austr	148.90	330	*e*PKiKP	PKPab	15 55 11.7	-0.4
	comp=Z,1.6nm,0.6s						
CONA	Conrad Observa	148.94	330	*e*PKP	PKPbc	15 55 07.9	-0.3
	comp=Z,5.4nm,1.7s						
CKRC	Cesky Krumlov	148.94	333	*e*PKP	PKPbc	15 55 07.8	-0.3
KHC	Kasperske Hory	149.00	334		PKPbc	15 55 07.9	-0.4
KHC	Kasperske Hory	149.00	334	*e*PKP	PKPbc	15 55 07.9	-0.4
KHC				*e*x	x	15 55 25.9	
GEC2	GERESS Array S	149.18	334		PKPbc	15 55 07.8	-1.0
GERES	GERESS Array B	149.18	334	PKPbc	PKPbc	15 55 08.3	-0.5
	comp=Z,2.0nm,0.8s,baz=46,slow=3.9,SNR=15						
ARSA	Arzberg	149.59	330	*e*PKiKP	PKiKP	15 55 12.6	+1.8
	comp=Z,3.4nm,1.5s						
MOA	Molln	149.71	332	*e*PKP	PKPbc	15 55 10.4	+0.4
	comp=Z,3.0nm,1.2s						
BIOA	Bad Ischl, Aus	150.10	332	*e*PKP	PKPbc	15 55 09.8	-1.2
	comp=Z,2.1nm,0.8s						
SOKA	Soboth	150.24	330	*i* PKP	PKPbc	15 55 10.0	-1.4
	comp=Z,3.7nm,1.1s						
OBKA	Obir	150.59	330	*e*PKP	PKPbc	15 55 10.5	-1.8
	comp=Z,7.7nm,2.1s						
LESA	Schwarzleotal	150.72	333	*e*PKP	PKPbc	15 55 11.3	-1.3
	comp=Z,3.0nm,0.7s						
MYKA	Terra Mystica	150.91	331	*i* PKP	PKPbc	15 55 11.7	-1.4
	comp=Z,3.0nm,0.9s						
WATA	Walderalm	151.24	334	*e*PKP	PKPbc	15 55 12.7	-1.2
	comp=Z,3.5nm,1.0s						
WTTA	Wattenberg	151.28	334	*i* PKP	PKPbc	15 55 13.1	-0.9
	comp=Z,9.0nm,1.5s						
ABTA	Abfaltersbach	151.32	332	*e*PKP	PKPbc	15 55 11.6	-2.4
	comp=Z,6.2nm,1.4s						
SQTA	Sankt Quirin	151.48	334	*e*PKP	PKPbc	15 55 12.8	-1.6
	comp=Z,7.0nm,1.3s						
FETA	Feichten	151.84	335	*e*PKP	PKPbc	15 55 14.3	-1.0
	comp=Z,3.4nm,0.9s						
DAVA	Damuels	151.94	336	*e*PKP	PKPbc	15 55 15.6	0.0
	comp=Z,8.1nm,1.2s						

IDC 25 15:35:31.9±6.1**,23°.90S**×**174°.42E,h0^{km},mb3.9**/2**,**
mbtmp3.9/2**,MS3.8**/4**,Error ellipse: s-maj=311.2km**
s-min=49.2km az=156.0,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	7.58	282	LR	LR	15 39 33.9	
	comp=Z,672nm,20.6s,baz=76,slow=32						
PPT	Papeete	34.19	86	LR	LR	15 52 58.3	
	comp=Z,57nm,21.9s,baz=308,slow=31						
ASAR	Alice Springs	36.99	262	P	P	15 42 43.3	-0.1
	1.1nm,0.9s,baz=97,slow=7.9,SNR=6.1						
	1.1nm,0.9s						
BATI	Baumata	50.15	277	LR	LR	16 04 38.8	
	comp=Z,203nm,19.5s,baz=186,slow=35						
NWAO	Narrogin (SRO)	50.58	246	LR	LR	16 05 10.4	
	comp=Z,115nm,18.6s,baz=302,slow=35						
CMAR	Chiang Mai Arr	84.78	293	P	P	15 48 08.5	-0.1
	0.5nm,0.4s,baz=133,slow=3.6,SNR=5.2						
	0.5nm,0.4s						
EKA	Eskdalemuir Ar	148.56	357	PKPbc	PKPbc	15 55 19.2	-1.2
	0.9nm,0.6s,baz=0.0,slow=1.9,SNR=4.2						
GERES	GERESS Array B	150.83	333	PKPbc	PKPbc	15 55 26.6	+0.2
	2.2nm,0.8s,baz=20,slow=3.3,SNR=9.2						

IDC 25 15:41:04.0±7.0**,21°.78S**×**173°.53E,h0^{km},mb3.5**/2**,**
mbtmp3.5/2**,Error ellipse: s-maj=295.8km**
s-min=63.0km az=149.0,Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	36.52	259	P	P	15 48 11.0	-0.5
	0.6nm,0.9s,baz=84,slow=9.1,SNR=4.4						
	0.6nm,0.9s						
CMAR	Chiang Mai Arr	83.20	293	P	P	15 53 33.6	+0.9
	0.2nm,0.3s,baz=110,slow=3.8,SNR=4.2						
	0.2nm,0.3s						
GERES	GERESS Array B	148.57	334	PKPbc	PKPbc	16 00 51.9	-1.1
	0.6nm,0.8s,baz=29,slow=2.4,SNR=4.9						

IDC 25 15:42:04.6±7.2**,23°.17S**×**174°.09E,h0^{km},mb3.5**/2**,**
mbtmp3.5/2**,Error ellipse: s-maj=326.4km**
s-min=62.3km az=152.0,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	36.79	261	P	P	15 49 14.4	+0.1
	0.5nm,1.0s,baz=96,slow=9.6,SNR=5.7						
	0.5nm,1.0s						
CMAR	Chiang Mai Arr	84.21	293	P	P	15 54 38.1	-0.3
	0.2nm,0.3s,baz=129,slow=5.4,SNR=1.2						
	0.2nm,0.3s						
GERES	GERESS Array B	150.04	334	PKPbc	PKPbc	16 01 56.9	-0.3
	0.5nm,0.7s,baz=45,slow=3.1,SNR=4.4						

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*IDC **25** 15:44:11.7±0.9,6°.52N×125°.10E,h0^{km},mb3.6/7,*
mbtmp3.6/7,MS3.6/1,Error ellipse: s-maj=22.3km
s-min=9.9km az=121.0
*DJA **25** 15:44:13.1±0.8,7°N±6°×12°5E±°,h10^{km},M4.6/7,mb4.7/5,*
mB5.1/2,MLv4.5/7,Mw(mB)4.5/2
ISC 25 15:44:17.0±0.8**,6°.68N**±0°.07×**125°.3E**±0°.2**,h35^{km},n15,**
σ1^{s}.39/16**,mb3.6**/7**,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.48	35	Pg	Pn	15 44 25.9	-1.5
	1µm,0.3s,baz=245,slow=3.3,SNR=67						
DAV				Lg	Lg	15 44 35.7	
	610nm,0.3s,baz=116,slow=24,SNR=6.2						
DAV	Davao City (W)	0.48	35	P	Pn	15 44 25.5	-1.9
DAV				S	Sn	15 44 36.2	+1.6
DAV	Davao City (W)	0.48	35	P	Pn	15 44 23.0	-4.4
GTOI	Gorontalo	6.42	201	P	Pn	15 45 48.1	-1.1
	0.2nm578nm54nm,0.7s						
GTOI				S	Sn	15 47 00.8	-0.5
	0.2nm578nm54nm,0.7s						
MRSI	Marisa	7.01	209	P	Pn	15 45 57.2	-0.1
MRSI				S	Sn	15 47 16.7	+0.8
SANI	Sanana	8.69	175	P	Pn	15 46 21.5	+1.1
KRAI	Karang Ratu	10.40	163	P	Pn	15 46 46.5	+2.8
WRA	Warramunga Arr	27.91	162	P	P	15 50 03.2	-0.7
	0.4nm,0.4s,baz=329,slow=10,SNR=5.4						
	0.4nm,0.4s						
ASAR	Alice Springs	31.30	165	P	P	15 50 32.5	-1.7
	0.2nm,0.3s,baz=342,slow=8.3,SNR=12						
	0.2nm,0.3s						
STKA	Stephens Creek	41.37	159	P	P	15 51 59.4	-0.5
	1.6nm,0.9s,baz=353,slow=8.1,SNR=6.5						
	1.6nm,0.9s						
HILR	Hailar Array B	42.99	355	P	P	15 52 13.5	+0.5
	0.7nm,0.6s,baz=170,slow=12,SNR=2.2						
	0.7nm,0.6s						
SONM	Songino Array	44.07	342	LR	LR	16 10 43.6	
	comp=Z,77nm,21.3s,baz=154,slow=36						
MKAR	Makanchi Array	54.34	325	P	P	15 53 41.0	+0.8
	0.5nm,0.8s,baz=115,slow=8.2,SNR=4.2						
	0.5nm,0.8s						
KURBB	Kurchatov Arra	58.51	327	P	P	15 54 09.4	-0.4
	0.5nm,0.8s,baz=121,slow=6.0,SNR=3.7						
	0.5nm,0.8s						
ILAR	Eielson Array	83.07	26	P	P	15 56 39.7	+0.9
	0.3nm,0.6s,baz=263,slow=4.9,SNR=6.3						
	0.3nm,0.6s						

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*IDC **25** 15:50:06.3±3.1,13°.46N×92°.87W,h0^{km},mb3.5/4,*
mbtmp3.4/6,ML2.7/4,MS3.6/2,Error ellipse: s-maj=57.9km
s-min=27.1km az=174.0
*MEX **25** 15:50:09.1±1.0,13°.64N×93°.12W,h5^{km},MD4.1*
*GCG **25** 15:50:10.3±1.9,13°.48N×92°.85W,h32^{km}±182^{km},MD4.1*
ISC 25 15:50:06.8±1.9**,13°.71N**±0°.06×**92°.97W**±0°.04**,h2^{km}**±11^{km}**,**
n46,σ2^{s}.42/68**,mb3.6**/4**,Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.38	30	*e*P	Pb	15 50 32.9	-0.4
THIG				*e*S	Sg	15 50 52.8	+1.6
SMCA	Catarina	1.44	37	*i* S	Sg	15 50 54.3	+1.2
RTAL	Retalhuleu	1.48	57	*e*P	Pg	15 50 35.1	-0.2
RTAL				*e*S	Sg	15 50 55.7	+1.1
PATR	El Naranjo	1.57	27	*e*P	Pn	15 50 35.7	-0.4
PATR				*e*S	Sg	15 50 56.9	-0.7
CHUJ	Union Juarez	1.61	31	*e*P	Pn	15 50 36.6	-0.1
CHUJ				*e*S	Sb	15 50 57.7	-0.8
PAVE	Pavencul	1.67	27	*e*P	Pn	15 50 37.2	-0.1
PAVE				*e*S	Sg	15 51 00.1	-0.4
STG8	El Palmar, Qui	1.74	65	*i* S	Sb	15 51 00.2	-1.9
SOKI	Kika Raxquin	1.88	54	*i* P	Pg	15 50 42.4	-0.6
PCIG		2.00	353	*e*P	Pn	15 50 41.2	-0.5
PCIG				*e*S	Sn	15 51 06.0	-1.4
HUEH	Huehuetenango	2.15	41	*e*P	Pb	15 50 45.4	-1.2
HUEH				*e*S	Sg	15 51 14.8	-1.0
HUEH	Huehuetenango	2.15	41	*i* P	Pb	15 50 46.0	-0.6
ESSG	Sabana Grande	2.19	72	*i* P	Pn	15 50 43.2	-1.2
ESSG				*i* S	Sn	15 51 10.4	-1.7
QUIS	Sacapulas	2.41	49	*i* P	Pb	15 50 50.2	-0.8
QUIS				*i* S	Sg	15 51 21.6	-2.7
PCG5	San Vicente Pa	2.57	78	*i* P	Pn	15 50 46.9	-2.8
CCIG	Comitan	2.69	17	*e*P	Pb	15 50 54.4	-1.4
CCIG				*e*S	Sb	15 51 28.6	-0.7
APG	El Apazote	2.75	62	Pn	Pn	15 50 53.5	+1.3
	0.4nm,0.3s,baz=215,slow=17,SNR=24						
APG				Sn	Sb	15 51 28.2	-3.1
	1.7nm,0.3s,baz=133,slow=11,SNR=12						
APG	El Apazote	2.75	62	*i* P	Pn	15 50 53.6	+1.3
TGIG		3.06	357	*e*P	Pn	15 50 58.1	+1.8
TGIG				*e*S	Sn	15 51 34.0	+0.5
JAYA	Jayaque - finc	3.43	90	*i* S	Sn	15 51 39.9	-2.8
HUIG	Huatulco	3.66	304	*e*P	Pn	15 51 02.9	-1.6
HUIG				*e*S	Sn	15 51 40.1	-8.3
CMIG	Matias Romero	3.84	332	Pn	Pn	15 51 08.2	+1.2
	1.3nm,0.3s,baz=166,slow=14,SNR=18						
CMIG				Sn	Sn	15 51 52.0	-0.8
	2.6nm,0.3s,baz=80,slow=11,SNR=4.2						
	5.2nm,0.5s						
CMIG	Matias Romero	3.84	332	*e*P	Pn	15 51 07.5	+0.5
CMIG				*e*S	Sn	15 51 49.4	-3.4
PEIG	Puerto Escondi	4.63	300	*e*P	Pn	15 51 17.2	-0.8
PEIG				*e*S	Sn	15 52 02.9	-10
NEUV	Arroyo Zacate	4.83	326	*e*P	Pn	15 51 18.8	-1.8
NEUV				*e*S	Sn	15 52 12.7	-4.4
VHO	Vista Hermosa	4.94	313	*e*P	Pn	15 51 24.6	+2.3
VHO				*e*S	Sn	15 52 15.5	-4.6
YOIG	Yosondua	5.41	306	*e*P	Pn	15 51 30.2	+1.3
YOIG				*e*S	Sn	15 52 26.1	-5.9
SCIG	Sabancuy	5.51	18	*e*P	Pn	15 51 31.7	+1.8
SCIG				*e*S	Sn	15 52 31.8	-2.0
PNIG	Pinotepa	5.65	299	*e*P	Pn	15 51 32.0	+0.1
PNIG				*e*S	Sn	15 52 27.4	-10
TXIG	Tlaxiaco	5.81	308	*e*P	Pn	15 51 36.9	+2.5
TXIG				*e*S	Sn	15 52 37.4	-4.5
TOIG	Toxpalan	5.88	318	*e*P	Pn	15 51 38.5	+3.4
TOIG				*e*S	Sn	15 52 41.5	-1.7
HLIG	Huajuapan de L	6.20	312	*e*P	Pn	15 51 39.9	+0.3
HLIG				*e*S	Sn	15 52 50.9	-0.4
MGIG	Malinaltepec	6.49	303	*e*P	Pn	15 51 44.1	+0.5
MGIG				*e*S	Sn	15 52 52.8	-5.5
FTIG	Fresnillo de T	6.49	311	*e*P	Pn	15 51 46.7	+3.1
FTIG				*e*S	Sn	15 52 51.9	-6.4
TLIG	Tlapa	6.61	306	*e*P	Pn	15 51 45.6	+0.3
CRIG	Cruz Grande	6.66	298	*e*P	Pn	15 51 46.2	+0.3
JAUV	Jalcomulco	6.72	327	*e*P	Pn	15 51 42.8	-3.9
JAUV				*e*S	Sn	15 52 58.1	-5.8
TEIG	Tepich	7.89	34	Pn	Pn	15 52 03.3	+0.7
	baz=130,slow=24,SNR=7.0						
TEIG				Sn	Sn	15 53 29.3	-3.3
	baz=131,slow=24,SNR=4.2						
JTS	Las Juntas de	8.55	113	Pn	Pn	15 52 12.8	+1.1
	0.6nm,0.3s,baz=251,slow=9.7,SNR=1.5						
TXAR	Lajitas Array	18.44	329	P	Pn	15 54 27.5	+3.7
	baz=156,slow=12,SNR=6.4						
	0.5nm,0.8s						
PDAR	Pinedale Array	32.31	337	P	P	15 56 40.6	+3.0
	0.3nm,0.8s,baz=119,slow=12,SNR=2.8						
	0.3nm,0.8s						
NVAR	Mina Array Bea	33.31	322	P	P	15 56 49.5	+3.1
	0.5nm,0.7s,baz=136,slow=5.0,SNR=3.0						
	0.5nm,0.7s						
ULM	Lac du Bonnet	36.52	357	LR	LR	16 13 40.4	
	comp=Z,101nm,18.2s,baz=258,slow=38						
LPAZ	La Paz	38.61	140	LR	LR	16 13 23.1	
	comp=Z,90nm,21.2s,baz=260,slow=36						
YKA	Yellowknife Ar	51.10	347	P	P	15 59 11.5	+0.9
	0.7nm,0.9s,baz=155,slow=7.1,SNR=15						
	0.7nm,0.9s						
ILAR	Eielson Array	62.74	337	P	P	16 00 34.5	+1.3
	0.4nm,0.6s,baz=129,slow=6.1,SNR=8.4						
	0.4nm,0.6s						
CMAR	Chiang Mai Arr	145.95	340	PKPbc	PKPdf	16 09 48.1	-0.3
	0.3nm,0.5s,baz=331,slow=4.9,SNR=4.8						

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*TRN **25** 15:56:53.2,17°.28N×61°.84W,h24^{km},MD4.0,North of*
Antigua. Felt IV in Antigua.
*IDC **25** 15:56:56.1±1.1,17°.17N×61°.98W,h58^{km}±15^{km},mb3.3/4,*
mbtmp3.6/5,MS3.3/1,Error ellipse: s-maj=22.8km
s-min=8.9km az=33.0
ISC 25 15:56:54.8±0.9**,17°.35N**±0°.04×**61°.81W**±0°.05**,h44^{km}**±9^{km}**,**
n32,σ0^{s}.96/43**,mb3.7**/4**,1C,Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANWB	Willy Bob	0.31	4	⇑*i*P	Pn	15 57 03.6	0.0
ANWB				*e*S	Sn	15 57 09.7	0.0
MBWH	Windy Hill	0.71	211	*e*P	Pn	15 57 08.2	-0.4
MBWH				*e*S	Sn	15 57 17.9	-0.5
SKI	Saint Kitts	0.89	269	*e*P	Pn	15 57 10.9	-0.1
SKI				*e*S	Sn	15 57 23.7	+1.0
DHSZ	Broadband at M	1.08	178	*e*P	Pn	15 57 13.3	-0.2
DHSZ				*e*S	Sn	15 57 26.9	-0.3
ATGZ	Broadband at L	1.25	176	*e*P	Pn	15 57 16.6	+0.7
DSDZ	La Diserade, G	1.25	145	*e*P	Pn	15 57 16.4	+0.5
DSDZ				*e*S	Sn	15 57 32.9	+1.2
H05N1	Guadeloupe/Mar	1.26	145	P	Pn	15 57 16.5	+0.5
H05N1				S	Sn	15 57 32.8	+1.1
	SNR=1214						
MMLZ	Guadeloupe Bro	1.31	174	*e*P	Pn	15 57 16.9	+0.2
MMLZ				*e*S	Sn	15 57 32.8	-0.1
TBG	Guadaloupe-3	1.50	174	*e*P	Pn	15 57 20.1	+0.8
TBG				*e*S	Sn	15 57 38.6	+0.9
DWS	Wesley	1.84	165	*e*P	Pn	15 57 23.4	-0.5
DWS				*e*S	Sn	15 57 46.8	+0.8
DSLB	Salisbury	1.94	169	*e*P	Pn	15 57 26.0	+0.6
DSLB				*e*S	Sn	15 57 49.6	+1.0
SVN	Savane Anatole	2.57	166	*e*P	Pn	15 57 35.4	+1.3
ILAM	Ilet Lapin Mar	2.72	161	*e*P	Pn	15 57 35.9	-0.1
ILAM				*e*S	Sn	15 58 09.2	+1.5
ILAM	Ilet Lapin Mar	2.72	161	*e*	Pn	15 58 06.0	+30
ILAM				*e*S	Sn	15 58 09.2	+1.5
BIM	Bigot	2.91	166	*e*P	Pn	15 57 39.0	+0.3
BIM				*e*S	Sn	15 58 12.4	-0.1
H05S1	Guadeloupe/Mar	3.06	162	P	Pn	15 57 41.8	+1.2
	SNR=29						
H05S1				S	Sn	15 58 14.9	-1.1
SLBI	Saint Lucia, B	3.41	166	*e*P	Pn	15 57 46.2	+0.8
SLBI				*e*S	Sn	15 58 24.5	-0.2

MCLT	Moule a Chique	3.72	167	*e*P	Pn	15 57 50.5	+0.8
MCLT				*e*S	Sn	15 58 32.2	-0.2
SVB	Belmont	4.09	172	*e*P	Pn	15 57 56.3	+1.4
SJG	San Juan	4.21	281	P	Pn	15 57 57.6	+1.2
	42nm,0.4s,baz=103,slow=15,SNR=30						
SJG				S	Sn	15 58 42.9	-1.5
	56nm,0.5s,baz=225,slow=22,SNR=7.0						
SJG	San Juan	4.21	281	*e*P	Pn	15 57 57.5	+1.0
AOPR	Arecibo Observ	4.81	283	*e*P	Pn	15 58 06.8	+1.9
AOPR				*e*S	Sn	15 59 01.4	+2.0
JTS	Las Juntas de	23.53	256	LR	LR	16 10 35.2	
	comp=Z,70nm,20.5s,baz=274,slow=35						
TXAR	Lajitas Array	40.04	295	P	P	16 04 25.2	-0.8
	0.2nm,0.6s,baz=107,slow=7.1,SNR=4.8						
	0.2nm,0.6s						
CPUP	Villa Florida	43.64	174	P	P	16 04 53.8	-1.4
	1.0nm,0.7s,baz=355,slow=11,SNR=3.4						
	1.0nm,0.7s						
PDAR	Pinedale Array	47.67	312	P	P	16 05 27.4	+0.2
	0.8nm,0.7s,baz=117,slow=9.2,SNR=11						
	0.8nm,0.7s						
H10N3	ASCENSION HYDR	53.03	114	T	T	17 03 16.2	
	baz=299,slow=75,SNR=184						
H10N2	ASCENSION HYDR	53.03	114	T	T	17 03 19.2	
	baz=299,slow=75,SNR=220						
H10N1	ASCENSION HYDR	53.05	114	T	T	17 03 18.1	
	baz=299,slow=75,SNR=281						
H10S3	ASCENSION HYDR	53.42	116	T	T	17 03 51.6	
	baz=287,slow=74,SNR=274						
H10S2	ASCENSION HYDR	53.44	116	T	T	17 03 50.0	
	baz=293,slow=74,SNR=238						
YKA	Yellowknife Ar	57.95	334	P	P	16 06 42.5	0.0
	0.4nm,0.5s,baz=109,slow=6.7,SNR=16						
	0.4nm,0.5s						

IDC 25 15:59:34.6±5.6**, 21°.88S**×**173°.46E, h0^{km}, mb3.8**/2**, mbtmp3.8**/2**, Error ellipse: s-maj=257.7km s-min=48.0km az=152.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	36.44	259	P	P	16 06 40.6	-0.8
	0.6nm,0.8s,baz=78,slow=9.4,SNR=7.9						
	0.6nm,0.8s						
CMAR	Chiang Mai Arr	83.18	293	P	P	16 12 04.4	+1.2
	1.4nm,1.0s,baz=119,slow=5.2,SNR=8.0						
	1.4nm,1.0s						
EKA	Eskdalemuir Ar	146.49	357	PKPbc	PKPdf	16 19 15.9	-0.2
	1.5nm,0.9s,baz=35,slow=3.0,SNR=3.9						
GERES	GERESS Array B	148.63	334	PKPbc	PKPbc	16 19 22.9	-0.8
	1.4nm,0.8s,baz=44,slow=4.1,SNR=9.6						

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*IDC **25** 16:03:21.9±3.2, 22°.54S×173°.86E, h0^{km}, mb3.9/5, mbtmp3.9/5, MS3.8/12, Error ellipse: s-maj=121.0km s-min=32.7km az=149.0*

ISC 25 16:03:26.5±2.3**, 22°.7S**±0°.6×**174°.0E**±0°.4**, h35^{km}, n49, σ0^{s}63**/38**, mb3.8**/5**, MS3.8**/10**, 6C, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	6.99	273	LR	LR	16 07 09.8	
	comp=Z,478nm,21.3s,baz=86,slow=33						
URZ	Urewera	15.77	171	LR	LR	16 12 09.7	
	comp=Z,188nm,21.6s,baz=346,slow=33						
RAR	Rarotonga	24.40	92	LR	LR	16 16 28.6	
	comp=Z,118nm,21.4s,baz=297,slow=32						
CTA	Charters Tower	25.92	270	LR	LR	16 18 38.5	
	comp=Z,305nm,18.9s,baz=54,slow=36						
PMG	Port Moresby	28.87	293	LR	LR	16 19 43.5	
	comp=Z,170nm,19.4s,baz=166,slow=34						
STKA	Stephens Creek	30.11	245	LR	LR	16 20 50.7	
	comp=Z,123nm,18.4s,baz=39,slow=35						
ASAR	Alice Springs	36.76	260	P	P	16 10 30.6	-0.3
	1.2nm,0.8s,baz=88,slow=8.8,SNR=14						
ASAR				LR	LR	16 24 53.0	
	comp=Z,190nm,21.0s,baz=108,slow=35						
	1.2nm,0.8s						
WRA	Warramunga Arr	36.94	267	P	P	16 10 30.9	-1.6
	0.7nm,0.7s,baz=105,slow=8.8,SNR=3.7						
	0.7nm,0.7s						
JAY	Jayapura	37.97	297	LR	LR	16 25 31.3	
	comp=Z,162nm,20.8s,baz=307,slow=35						
FITZ	Fitzroy Crossi	45.37	267	LR	LR	16 30 47.9	
	comp=Z,220nm,18.2s,baz=113,slow=36						
GUMO	Guam	45.95	319	LR	LR	16 28 26.1	
	comp=Z,99nm,21.3s,baz=146,slow=33						
BATI	Baumata	49.59	276	LR	LR	16 32 16.9	
	comp=Z,242nm,21.9s,baz=152,slow=35						
RPN	Rapa Nui	68.71	111	LR	LR	16 36 34.6	
	comp=Z,79nm,21.4s,baz=58,slow=29						
USRK	Ussuriysk Ar.	76.84	330	P	P	16 15 14.6	-0.1
	2.4nm,0.9s,baz=118,slow=5.2,SNR=5.7						
	2.4nm,0.9s						
CMAR	Chiang Mai Arr	83.92	293	P	P	16 15 55.0	+1.8
	1.1nm,0.8s,baz=115,slow=5.1,SNR=9.2						
	1.1nm,0.8s						
ILAR	Eielson Array	92.25	16	P	P	16 16 31.1	-1.1
	0.4nm,0.9s,baz=235,slow=5.9,SNR=4.1						
	0.4nm,0.9s						
ARR	Arges	146.29	320	⇑P	PKPab	16 23 05.3	+1.0
DRGR		146.60	323	⇑P	PKPbc	16 23 04.7	+0.3
STEB	Steborice	146.99	331	*e*PKP	PKPab	16 23 06.3	-0.4
OSTC	Ostas	147.18	334	*e*PKP	PKiKP	16 23 08.2	0.0
EKA	Eskdalemuir Ar	147.31	357	PKPbc	PKPbc	16 23 05.6	-0.4
	1.4nm,0.8s,baz=8.3,slow=3.2,SNR=5.1						
GZR	Gura Zlata	147.37	321	⇑P	PKPbc	16 23 06.8	+0.2
MAUC	Maruska	147.37	331	*e*PKP	PKPab	16 23 08.1	-0.2
PSZ	Piszkesteto	147.39	327	⇑P	PKPbc	16 23 06.1	-0.5
SIRR	Siria	147.50	323	⇑P	PKPab	16 23 08.4	-0.5
JAVC	Velka Javorina	147.81	330	*e*PKP	PKPab	16 23 10.2	+0.1
CLL	Collm	147.82	337	*i* PKP	PKPbc	16 23 08.6	+1.1
	comp=Z,4.0nm,0.9s						
VRAC	Vranov	147.97	332	*e*PKP	PKiKP	16 23 09.5	-0.3
KRUC	Moravsky	148.24	332	*e*PKP	PKiKP	16 23 10.1	-0.3
PRU	Pruhonice	148.30	334	*e*PKP	PKiKP	16 23 10.5	0.0
ZVC	Zvikov	148.88	334	*e*PKP	PKiKP	16 23 12.0	+0.3
MORH	Mrgy, Hungar	149.15	326	⇑P	PKiKP	16 23 12.4	0.0
RONA	Rosalia, Austr	149.28	330	*e*PKP	PKiKP	16 23 12.8	+0.2
	comp=Z,2.9nm,0.7s						
CKRC	Cesky Krumlov	149.31	333	*e*PKP	PKiKP	16 23 12.3	-0.3
CONA	Conrad Observa	149.31	331	*i* PKP	PKiKP	16 23 12.7	-0.1
	comp=Z,3.2nm,0.8s						
KHC	Kasperske Hory	149.37	334	*e*PKP	PKiKP	16 23 12.7	-0.1
GERES	GERESS Array B	149.54	334	PKPbc	PKiKP	16 23 13.4	+0.2
	comp=Z,3.1nm,0.8s,baz=27,slow=3.3,SNR=18						
ARSA	Arzberg	149.97	330	*i* PKiKP	PKPab	16 23 19.8	+0.9
	comp=Z,3.8nm,1.3s						
MOA	Molln	150.08	332	*e*PKP	PKiKP	16 23 14.5	+0.2
	comp=Z,1.7nm,0.9s						
SOKA	Soboth	150.62	330	*i* PKP	PKiKP	16 23 16.2	+0.7
	comp=Z,3.7nm,1.0s						
OBKA	Obir	150.97	330	*i* PKP	PKiKP	16 23 17.3	+1.1
	comp=Z,4.8nm,1.1s						
LESA	Schwarzleotal	151.09	333	*i* PKP	PKiKP	16 23 16.4	-0.1
	comp=Z,5.9nm,0.8s						
MYKA	Terra Mystica	151.29	331	*i* PKP	PKiKP	16 23 16.9	0.0
	comp=Z,1.4nm,0.5s						
WATA	Walderalm	151.61	334	*e*PKP	PKiKP	16 23 17.7	+0.1
	comp=Z,5.9nm,1.0s						
WTTA	Wattenberg	151.64	334	*e*PKP	PKiKP	16 23 17.8	+0.1
	comp=Z,5.5nm,0.7s						
ABTA	Abfaltersbach	151.69	333	*i* PKP	PKPbc	16 23 17.2	-0.1
	comp=Z,6.0nm,1.0s						
RETA	Reutte	151.80	335	*e*PKP	PKiKP	16 23 18.1	+0.2
	comp=Z,4.0nm,0.7s						
SQTA	Sankt Quirin	151.85	335	*i* PKP	PKiKP	16 23 18.7	+0.7
	comp=Z,4.4nm,0.8s						
FETA	Feichten	152.20	335	*e*PKP	PKiKP	16 23 19.5	+0.6
	comp=Z,5.7nm,0.9s						

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*MEX **25** 16:03:33.2±0.6, 13°.52N×93°.14W, h16^{km}±30^{km}, MD3.9*

*GCG **25** 16:03:33.8±0.5, 14°.34N×93°.09W, h118^{km}±74^{km}, MD4.1*

*IDC **25** 16:03:38.8±3.4, 14°.29N×92°.87W, h0^{km}, mb3.4/2, mbtmp3.3/4, ML2.5/4, MS3.4/1, Error ellipse: s-maj=56.7km s-min=23.1km az=8.0*

ISC 25 16:03:31.4±1.4**, 13°.57N**±0°.09×**93°.09W**±0°.03**, h10^{km}, n27, σ2^{s}91**/45**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	Retalhuleu	1.65	55	*e*P	Pn	16 03 59.5	-0.9
RTAL				*e*S	Sn	16 04 18.8	-3.0
PATR	El Naranjo	1.75	28	*e*P	Pn	16 04 00.4	-1.6
PATR				*e*S	Sn	16 04 22.1	-2.4
CHUJ	Union Juarez	1.79	32	*e*P	Pn	16 04 01.1	-1.4
CHUJ				*e*S	Sn	16 04 22.8	-2.6
PAVE	Pavencul	1.84	29	*e*P	Pn	16 04 01.8	-1.5
PAVE				*e*S	Sn	16 04 24.5	-2.2
STG2	El Palmar, Qui	1.87	62	*e*P	Pn	16 04 01.7	-1.9
STG2				*e*S	Sn	16 04 23.0	-4.4
STG5	El Palmar, Qui	1.88	64	*e*P	Pn	16 04 01.4	-2.3
STG5				*e*S	Sn	16 04 23.4	-4.1
STG8	El Palmar, Qui	1.90	62	*e*P	Pn	16 04 02.3	-1.8
STG8				*e*S	Sn	16 04 24.5	-3.8
PCIG		2.12	357	*e*P	Pn	16 04 05.9	-1.1
PCIG				*e*S	Sn	16 04 30.3	-3.1
HUEH	Huehuetenango	2.32	41	*e*P	Pn	16 04 10.5	+0.6
HUEH				*e*S	Sn	16 04 39.0	+0.4
CCIG	Comitan	2.85	19	*e*P	Pn	16 04 19.0	+1.9
CCIG				*e*S	Sn	16 04 53.2	+1.7
APG	El Apazote	2.92	60	Pn	Pn	16 04 18.4	+0.3
	0.2nm,0.3s,baz=205,slow=12,SNR=14						
APG				Sn	Sn	16 04 53.6	+0.3
	0.8nm,0.3s,baz=119,slow=12,SNR=8.0						
APG	El Apazote	2.92	60	*e*P	Pn	16 04 18.4	+0.3
TGIG		3.19	359	*e*P	Pn	16 04 22.7	+1.0
TGIG				*e*S	Sn	16 04 58.3	-1.4
NUBE	Las Nubes	3.23	84	*e*P	Pn	16 04 22.5	+0.1
HUIG	Huatulco	3.65	307	*e*P	Pn	16 04 28.1	+0.2
HUIG				*e*S	Sn	16 05 05.1	-5.9
CMIG	Matias Romero	3.90	334	Pn	Pn	16 04 32.0	+0.6
	0.9nm,0.3s,baz=168,slow=16,SNR=7.8						
CMIG				Sn	Sn	16 05 14.3	-3.1
	2.5nm,0.3s,baz=357,slow=24,SNR=11						
	2.5nm,0.3s						
CMIG	Matias Romero	3.90	334	*e*P	Pn	16 04 32.6	+1.2
CMIG				*e*S	Sn	16 05 14.9	-2.4
PEIG	Puerto Escondi	4.61	302	*e*P	Pn	16 04 42.4	+1.3
PEIG				*e*S	Sn	16 05 28.1	-6.6
NEUV	Arroyo Zacate	4.88	328	*e*P	Pn	16 04 45.2	+0.4
NEUV				*e*S	Sn	16 05 36.5	-4.8
YOIG	Yosondua	5.40	308	*e*P	Pn	16 04 56.0	+3.7
YOIG				*e*S	Sn	16 05 50.8	-3.9
PNIG	Pinotepa	5.62	301	*e*P	Pn	16 04 56.7	+1.6
PNIG				*e*S	Sn	16 05 53.7	-6.0
TOIG	Toxpalan	5.90	320	*e*P	Pn	16 05 01.1	+2.0
TOIG				*e*S	Sn	16 06 03.6	-3.3
TEIG	Tepich	8.06	34	Pn	Pn	16 05 28.0	-0.6
	0.1nm,0.3s,baz=131,slow=23,SNR=7.5						
TEIG				Sn	Sn	16 06 55.0	-4.8
	baz=131,slow=23,SNR=3.6						
TXAR	Lajitas Array	18.50	330	P	Pn	16 07 50.5	+2.5
	baz=151,slow=12,SNR=5.2						
	0.3nm,0.8s						
TKL	Tuckaleechee C	23.54	19	LR	LR	16 16 55.6	
	comp=Z,99nm,20.7s,baz=292,slow=35						
YKA	Yellowknife Ar	51.20	347	P	P	16 12 37.8	+3.1
	0.6nm,1.0s,baz=154,slow=7.4,SNR=7.5						
	0.6nm,1.0s						
ILAR	Eielson Array	62.82	337	P	P	16 14 04.0	+7.0
	0.5nm,1.0s,baz=118,slow=6.4,SNR=3.4						
	0.5nm,1.0s						

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*IDC **25** 16:07:47.1±0.5, 26°.78S×67°.35E, h0^{km}, mb4.5/24, mbtmp4.4/24, MS3.7/14, Error ellipse: s-maj=17.5km s-min=15.1km az=83.0*

*NEIC **25** 16:07:48.7±1.9, 26°.9S±0°.1×67°.4E±0°.1, h10^{km}±1^{km}, mb4.7/46, Error ellipse: s-maj=19.0km s-min=17.0km az=199.0*

*GCMT **25** 16:07:51.7±0.4, 26°.81S±0°.03×67°.35E±0°.04, h19^{km}±1km, MW4.8/67, Moment Tensor Solution. s19,c21; s67,c80; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.94±.21; $M_{\theta\theta}$1.82±.14; $M_{\phi\phi}$0.11±.11; $M_{r\theta}$0.58±.23; $M_{\theta\phi}$0.83±.08; $M_{\phi r}$-0.56±.27; Best double couple: $M_0$2.21200×10^{16} NP1:ϕ_s49.00000°,δ44.00000°,λ-120.00000°. NP2: ϕ_s267.00000°,δ53.00000°,λ-65.00000°. Principal axes: T 2.1870, Plg5.0000°, Azm339.0000°; N 0.0450, Plg20.0000°, Azm71.0000°; P -2.2370, Plg69.0000°, Azm236.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 16:07:48.7±0.4**, 26°.74S**±0°.09×**67°.37E**±0°.08**, h10^{km}, n146, σ0^{s}95**/127**, mb4.7**/58**, MS3.7**/15**, 10C-3D, Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RER	Riviere de l'E	11.99	295	Pn	Pn	16 10 36.3	-3.6
VOI	Vohitsoka	19.36	280	P	Pn	16 12 20.5	+4.7
H08S1	Diego Carcia H	19.60	15	T	T	16 32 37.0	
	baz=194,slow=76,SNR=37						
H08S2	Diego Garcia H	19.61	15	T	T	16 32 37.8	
	baz=194,slow=76,SNR=47						
H08S3	Diego Garcia H	19.62	15	T	T	16 32 26.7	
	baz=194,slow=76,SNR=56						
H04N2	CROZET ISLANDS	23.00	209	T	T	16 36 36.3	
	baz=38,slow=73,SNR=863						
H04N1	CROZET ISLANDS	23.01	209	T	T	16 36 37.9	
	baz=38,slow=73,SNR=894						
H04N3	CROZET ISLANDS	23.02	209	T	T	16 36 40.9	
	baz=38,slow=73,SNR=1432						
PALK	Pallekele	36.20	23	LR	LR	16 26 54.7	
	comp=Z,137nm,19.3s,baz=196,slow=32						
BOSA	Boshof	37.21	257	P	P	16 15 00.4	-0.1
	5.5nm,0.9s,baz=111,slow=9.1,SNR=8.4						
BOSA				LR	LR	16 27 07.3	
	comp=Z,44nm,18.5s,baz=63,slow=31						
	5.5nm,0.9s						
BOSA	Boshof	37.21	257	P	P	16 15 01.1	+0.6
BOSA				IAmb	IAmb	16 15 01.8	
	comp=Z,11nm,1.1s						
LBTB	Lobatse	37.51	263	P	P	16 15 04.2	+1.1
LSZ	Lusaka	38.17	279	LR	LR	16 29 00.5	
	comp=Z,84nm,18.5s,baz=132,slow=33						
LSZ	Lusaka	38.17	279	P	P	16 15 09.6	+0.8
LSZ				IAmb	IAmb	16 15 10.4	
	comp=Z,8.1nm,0.8s						
SUR	Sutherland	40.64	251	LR	LR	16 28 52.5	
	comp=Z,68nm,19.2s,baz=168,slow=31						
SUR	Sutherland	40.64	251	P	P	16 15 30.6	+1.2
SUR				IAmb	IAmb	16 16 13.5	
	comp=Z,28nm,1.2s						
H01W2	Cape Leeuwin H	40.67	113	T	T	16 58 21.7	
	baz=269,slow=74,SNR=36						
H01W3	Cape Leeuwin H	40.67	113	T	T	16 58 29.5	
	baz=269,slow=74,SNR=30						
H01W1	Cape Leeuwin H	40.69	113	T	T	16 58 24.1	
	baz=269,slow=74,SNR=35						
MAW	Mawson	40.97	183	P	P	16 15 31.2	-0.1
	comp=Z,4.4nm,0.6s,baz=298,slow=18,SNR=8.7						
MAW				LR	LR	16 28 13.2	
	comp=Z,120nm,22.0s,baz=356,slow=30						
	comp=Z,4.4nm,0.6s						
KOOLE	Kule	42.78	264	P	P	16 15 46.7	-0.2
KOOLE				IAmb	IAmb	16 15 48.2	
	comp=Z,8.6nm,0.8s						
MBAR	Mbarara	43.76	300	LR	LR	16 30 27.7	
	comp=Z,133nm,21.6s,baz=84,slow=31						
ATD	Arta Tunnel	44.89	325	LR	LR	16 31 33.0	
	comp=Z,4.6nm,19.8s,baz=126,slow=32						
FURI	Furi	45.06	318	LR	LR	16 31 23.8	
	comp=Z,94nm,19.1s,baz=166,slow=31						
CM31	Chiang Mai Arr	54.38	38	P	P	16 17 16.1	+0.1
CMAR	Chiang Mai Arr	54.38	38	P	P	16 17 17.2	+1.2
	comp=Z,5.6nm,0.8s,baz=230,slow=7.3,SNR=48						
CMAR				LR	LR	16 38 23.1	
	comp=Z,20nm,18.6s,baz=240,slow=34						
	comp=Z,5.6nm,0.8s						
CMAR	Chiang Mai Arr	54.38	38	P	P	16 17 16.1	+0.1
BRDH	Bariadhala	54.45	28	LR	LR	16 39 38.0	
	comp=Z,52nm,18.7s,baz=166,slow=35						
CHTO	Chiang Mai	54.67	37	P	P	16 17 18.2	+0.1
MMRI	Maumere	54.85	81	P	P	16 17 20.4	+0.8
SOEI	Soe	56.16	84	P	P	16 17 29.3	+0.1
SHL	Shillong	57.12	26	P	P	16 17 36.1	+0.3
SNAA	Sanae	58.64	200	P	P	16 17 46.1	+0.3
	comp=Z,2.4nm,0.8s,baz=75,slow=3.9,SNR=4.8						
	comp=Z,2.4nm,0.8s						
SNAA	Sanae	58.64	200	P	P	16 17 45.9	+0.1
ASAR	Alice Springs	59.66	103	P	P	16 17 53.2	-0.3
	comp=Z,3.0nm,0.7s,baz=250,slow=6.4,SNR=42						
	comp=Z,3.0nm,0.7s						
ASAR	Alice Springs	59.66	103	P	P	16 17 52.5	-1.0
AS31	Alice Springs	59.66	103	P	P	16 17 52.1	-1.4
KBL	Kabul	60.97	2	P	P	16 18 02.9	+0.6
KBL				IAmb	IAmb	16 18 04.8	
	comp=Z,8.0nm,0.9s						
WRA	Warramunga Arr	61.25	99	P	P	16 18 04.2	-0.2
	comp=Z,3.0nm,0.7s,baz=246,slow=6.4,SNR=14						
	comp=Z,3.0nm,0.7s						
WB0	Warramunga Arr	61.36	99	P	P	16 18 03.3	-1.9
WB0				IAmb	IAmb	16 18 13.5	
	comp=Z,5.9nm,0.9s						
WR8	Warramunga Arr	61.39	99	P	P	16 18 04.6	-0.8
WR8				IAmb	IAmb	16 18 15.7	
	comp=Z,8.2nm,1.1s						
QSPA	South Pole Qui	63.40	180	P	P	16 18 17.6	-0.6
MANEM	Manem	64.07	4	P	P	16 18 22.4	-0.7
MANEM				IAmb	IAmb	16 18 26.0	
	comp=Z,13nm,0.9s						
INKA	Innaminka	64.28	109	P	P	16 18 25.0	+0.5
VNDA	Vanda	65.06	166	P	P	16 18 28.8	0.0
	comp=Z,2.4nm,0.8s,baz=278,slow=5.8,SNR=12						
	comp=Z,2.4nm,0.8s						
VNDA	Vanda	65.06	166	P	P	16 18 28.4	-0.3
GAR	Garm	65.46	3	P	P	16 18 30.9	-1.0
GAR				IAmb	IAmb	16 18 33.2	
	comp=Z,7.5nm,0.9s						
DRK	Karamyk	66.01	4	P	P	16 18 35.0	-0.7
DRK				IAmb	IAmb	16 18 37.3	
	comp=Z,4.9nm,0.9s						
KSH	Kashi	66.40	7	P	P	16 18 35.8	-2.2
KSH				pP	pwP	16 18 45.0	-0.8
KSH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BELA	Belgrano 2	66.54	193	P	P	16 18 38.0	-0.3
ARSB	Arslanbob	67.92	5	P	P	16 18 48.1	+0.5
ARSB				IAmb	IAmb	16 18 49.0	
	comp=Z,5.3nm,0.8s						
AAK	Ala-Archa	69.35	6	P	P	16 18 56.7	+0.2
KK31	Karatay Array	69.56	2	P	P	16 18 58.3	+0.7
KK31				IAmb	IAmb	16 18 59.5	
	comp=Z,6.6nm,0.9s						
KKAR	Karatay Array	69.56	2	P	P	16 18 57.9	+0.3
XAN	Xi'an	72.16	35	⇑P	P	16 19 14.0	+0.3
XAN				pP	pwP	16 19 22.8	+1.4
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA	Gaotai	72.44	26	*e*P	P	16 19 16.5	+1.1
GTA				pP	pwP	16 19 25.5	+2.4
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BRTR	Keskin Array B	73.22	333	P	P	16 19 20.6	+0.6
	comp=Z,2.2nm,0.9s,baz=157,slow=6.7,SNR=10						
	comp=Z,2.2nm,0.9s						
BRTR	Keskin Array B	73.22	333	P	P	16 19 20.3	+0.3
BR131	Keskin Array S	73.22	333	P	P	16 19 20.3	+0.3
BR131				IAmb	IAmb	16 19 21.1	
	comp=Z,6.3nm,1.1s						
KBZ	Khabaz	73.64	342	P	P	16 19 23.5	+1.4
	comp=Z,2.0nm,0.8s,baz=174,slow=5.3,SNR=6.0						
KBZ				LR	LR	16 50 41.2	
	comp=Z,62nm,18.1s,baz=158,slow=35						
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	74.42	11	P	P	16 19 26.9	+0.2
	comp=Z,2.3nm,0.7s,baz=200,slow=5.2,SNR=22						
MKAR				LR	LR	16 51 13.9	
	comp=Z,29nm,18.1s,baz=269,slow=35						
	comp=Z,2.3nm,0.7s						
MKAR	Makanchi Array	74.42	11	P	P	16 19 25.5	-1.2
TORD	Torodi Ar. Bea	75.07	293	P	P	16 19 30.8	-0.4
	comp=Z,1.5nm,0.7s,baz=100,slow=6.3,SNR=9.7						
	comp=Z,1.5nm,0.7s						
AB31	Akbulak array	75.94	355	P	P	16 19 35.9	+0.5
AB31				IAmb	IAmb	16 19 36.7	
	comp=Z,8.0nm,0.8s						
ABKAR	Akbulak array	75.94	355	P	P	16 19 35.3	-0.1
DBIC	Dimbokro	77.32	284	P	P	16 19 44.3	+0.2
	comp=Z,4.5nm,0.8s,baz=158,slow=3.8,SNR=7.2						
	comp=Z,4.5nm,0.8s						
DBIC	Dimbokro	77.32	284	P	P	16 19 44.0	-0.1
DBIC				IAmb	IAmb	16 19 45.6	
	comp=Z,5.8nm,0.9s						
KURBB	Kurchatov Arra	77.65	7	P	P	16 19 44.9	-0.1
	comp=Z,2.3nm,0.8s,baz=203,slow=6.4,SNR=14						
	comp=Z,2.3nm,0.8s						
KURK	Kurchatov	77.76	7	P	P	16 19 44.9	-0.7
BVAR	Borovoye Array	79.47	2	P	P	16 19 55.3	+0.3
	comp=Z,1.9nm,0.7s,baz=164,slow=7.6,SNR=12						
	comp=Z,1.9nm,0.7s						
BORK	Borovoye	79.49	2	P	P	16 19 54.8	-0.3
VRI	Vrincioaia	81.15	333	⇑P	P	16 20 04.9	+0.7
PLOR	Plostina	81.17	333	⇑P	P	16 20 05.5	+1.2
MLR	Muntele Rosu	81.17	332	LR	LR	16 52 47.0	
	comp=Z,95nm,21.6s,baz=245,slow=33						
MLR	Muntele Rosu	81.17	332	⇓P	P	16 20 05.9	+1.4
COVR	Voineasa-Covas	81.35	332	⇑P	P	16 20 06.6	+1.3
ARR	Arges	81.63	331	⇑P	P	16 20 05.3	-1.6
ZAA0	Zalesovo Array	81.76	10	P	P	16 20 08.0	+0.7
ZALV	Zalesovo Beam	81.76	10	P	P	16 20 07.6	+0.3
	comp=Z,10nm,0.7s,baz=196,slow=4.5,SNR=51						
	comp=Z,10nm,0.7s						
ZALV	Zalesovo Beam	81.76	10	P	P	16 20 07.4	+0.2
SONM	Songino Array	82.11	25	P	P	16 20 10.3	+0.9
	comp=Z,6.1nm,0.9s,baz=210,slow=5.0,SNR=25						
	comp=Z,6.1nm,0.9s						
SONM	Songino Array	82.11	25	P	P	16 20 09.7	+0.3
SONM				IAmb	IAmb	16 20 11.0	
	comp=Z,7.0nm,0.9s						
SORM	Soroca	82.35	335	⇑P	P	16 20 09.9	-0.6
ULN	Ulaanbaatar	82.39	26	P	P	16 20 11.6	+0.7
ULN				IAmb	IAmb	16 20 12.2	
	comp=Z,7.6nm,0.9s						
GZR	Gura Zlata	82.47	330	⇑P	P	16 20 11.8	+0.5
ARTI	Arti	83.15	355	P	P	16 20 14.3	-0.2
ARTI				IAmb	IAmb	16 20 15.9	
	comp=Z,7.4nm,0.9s						
BZS	Buzias	83.16	330	⇓P	P	16 20 13.5	-1.2
BURAR	Bucovina Array	83.17	333	P	P	16 20 15.3	+0.4
BURAR				IAmb	IAmb	16 20 17.4	
	comp=Z,3.5nm,0.9s						
BURAR	Bucovina Array	83.17	333	⇓P	P	16 20 15.6	+0.7
BUR08	Bucovina Ar. S	83.20	333	P	P	16 20 14.6	-0.5
BUR08				IAmb	IAmb	16 20 16.8	
	comp=Z,5.1nm,1.1s						
AKASG	Malin Array Be	84.16	337	P	P	16 20 20.1	+0.4
	comp=Z,3.1nm,0.7s,baz=146,slow=4.3,SNR=11						
AKASG				LR	LR	16 57 25.4	
	comp=Z,44nm,19.9s,baz=72,slow=35						
	comp=Z,3.1nm,0.7s						
AKBB	Malin Array Si	84.16	337	P	P	16 20 20.3	+0.6
KIEV	Kiev	84.16	337	⇑P	P	16 20 19.5	-0.2
MORH	Mrgy, Hungar	84.98	328	⇑P	P	16 20 24.6	+0.6
KIRV	Kirov	86.31	351	LR	LR	16 56 33.6	
	comp=Z,59nm,21.8s,baz=238,slow=34						
LANS	Liptovska Anna	86.79	331	*e*P	P	16 20 34.2	+1.2
LANS				*e*		16 59 13.5	
OBKA	Obir	87.16	327	*e*P	P	16 20 36.2	+1.2
	comp=Z,4.7nm,1.3s						
RONA	Rosalia, Austr	87.16	328	*i* P	P	16 20 34.9	+0.1
	comp=Z,8.6nm,1.0s						
ARSA	Arzberg	87.21	328	*i* P	P	16 20 36.3	+1.3
	comp=Z,5.4nm,1.1s						
JAVC	Velka Javorina	87.37	330	*e*PKP	P	16 20 36.5	+0.7
OJC	Ojcow	87.45	332	P	P	16 20 36.2	+0.1
CONA	Conrad Observa	87.53	328	*i* P	P	16 20 36.8	+0.2
	comp=Z,12nm,1.0s,SNR=6.5						
MAUC	Maruska	87.67	330	*e*P	P	16 20 37.8	+0.6
KRUC	Moravsky	88.10	329	*e*PKP	P	16 20 39.1	-0.1
MORC	Moravsky Berou	88.10	330	P	P	16 20 39.1	-0.2
MORC				IAmb	IAmb	16 20 41.1	
	comp=Z,7.7nm,1.1s						
MORC	Moravsky Berou	88.10	330	⇑P	P	16 20 39.7	+0.5
MORC	Moravsky Berou	88.10	330	*e*PKP	P	16 20 39.4	+0.1
STEB	Steborice	88.11	331	*e*P	P	16 20 39.3	0.0
VRAC	Vranov	88.19	330	*e*PKP	P	16 20 38.6	-1.1
MOA	Molln	88.24	327	*i* P	P	16 20 40.1	+0.2
	comp=Z,8.3nm,0.7s,SNR=5.0						
ABTA	Abfaltersbach	88.34	326	*e*P	P	16 20 41.4	+0.8
	comp=Z,9.6nm,0.9s,SNR=5.0						
BIOA	Bad Ischl, Aus	88.43	327	*i* P	P	16 20 40.7	-0.2
	comp=Z,7.3nm,1.2s						
LESA	Schwarzleotal	88.72	326	*i* P	P	16 20 42.2	-0.1
	comp=Z,3.1nm,0.6s,SNR=5.1						
SUW	Suwalki	89.02	336	P	P	16 20 43.8	+0.3
HILR	Hailar Array B	89.09	31	P	P	16 20 45.0	+1.0
	comp=Z,2.4nm,0.7s,baz=191,slow=6.0,SNR=7.1						
	comp=Z,2.4nm,0.7s						
WTTA	Wattenberg	89.13	326	*e*P	P	16 20 44.6	+0.2
	comp=Z,12nm,1.0s,SNR=5.3						

GERES	GERESS Array B	89.20	328	P	P	16 20 44.1	-0.4
	comp=Z,1.4nm,0.9s,baz=117,slow=1.8,SNR=7.5						
	comp=Z,1.4nm,0.9s						
WATA	Walderalm	89.21	326	*i* P	P	16 20 44.6	-0.1
	comp=Z,7.6nm,0.9s						
OSTC	Ostas	89.25	330	*e*P	P	16 20 45.2	+0.5
SQTA	Sankt Quirin	89.32	326	*i* P	P	16 20 45.6	+0.4
	comp=Z,12nm,0.9s,SNR=5.7						
CHVC	Chvalec	89.35	330	*e*P	P	16 20 45.9	+0.8
ZVC	Zvikov	89.38	328	*e*P	P	16 20 45.0	-0.3
FUORN	Ofenpass-Fuorn	89.40	325	P	P	16 20 46.2	+0.4
FETA	Feichten	89.43	325	*i* P	P	16 20 46.3	+0.6
	comp=Z,18nm,1.0s,SNR=6.5						
KHC	Kasperske Hory	89.46	328	*e*P	P	16 20 45.0	-0.7
RETA	Reutte	89.72	326	*i* P	P	16 20 47.5	+0.4
	comp=Z,5.3nm,0.6s						
TUE	Stuetta	89.78	324	P	P	16 20 47.1	-0.4
TUE				IAmb	IAmb	16 20 48.4	
	comp=Z,5.8nm,0.8s						
DAVA	Damuels	90.04	325	*i* P	P	16 20 49.2	+0.6
	comp=Z,14nm,1.0s						
SENIN	Lac Senin/Sane	90.80	323	P	P	16 20 52.1	-0.1
SENIN				IAmb	IAmb	16 20 55.1	
	comp=Z,3.9nm,0.9s						
ESDC	Sonseca Array	93.66	313	P	P	16 21 05.8	+0.4
	comp=Z,2.9nm,0.9s,baz=114,slow=3.9,SNR=15						
	comp=Z,2.9nm,0.9s						
ESDC	Sonseca Array	93.66	313	P	P	16 21 05.0	-0.5
ESDC				IAmb	IAmb	16 21 06.9	
	comp=Z,2.8nm,0.9s						
FINES	FINESS Array B	94.00	341	P	P	16 21 06.2	-0.2
	comp=Z,2.2nm,0.9s,baz=207,slow=2.1,SNR=4.2						
	comp=Z,2.2nm,0.9s						
FINES	FINESS Array B	94.00	341	P	P	16 21 05.7	-0.7
NRIK	Noril'sk	96.92	7	P	P	16 21 19.0	-0.6
	comp=Z,0.8nm,0.5s,baz=43,slow=5.5,SNR=3.8						
	comp=Z,0.8nm,0.5s						
HFS	Hagfors	97.03	336	P	P	16 21 20.1	-0.2
	comp=Z,1.5nm,0.8s,baz=124,slow=13,SNR=3.1						
	comp=Z,1.5nm,0.8s						
NOA	NORSAR Array B	98.55	336	P	P	16 21 26.1	-1.1
	comp=Z,0.7nm,0.9s,baz=116,slow=5.1,SNR=3.3						
	comp=Z,0.7nm,0.9s						
ILAR	Eielson Array	136.15	20	PKP	PKPdf	16 27 06.9	-2.7
	comp=Z,0.3nm,0.7s,baz=337,slow=3.8,SNR=4.3						
ILAR	Eielson Array	136.15	20	PKPdf	PKPdf	16 27 07.9	-1.7
INK	Inuvik	136.56	11	PKP	PKPdf	16 27 08.9	-1.3
	comp=Z,1.4nm,0.9s,baz=92,slow=6.5,SNR=4.4						
INK	Inuvik	136.56	11	PKPdf	PKPdf	16 27 09.2	-1.0
G29M	Pine Creek	136.88	14	PKPdf	PKPdf	16 27 11.8	+0.8
EPYK	Eagle Plains	137.62	14	PKPdf	PKiKP	16 27 13.8	-0.4
YKA	Yellowknife Ar	144.23	2	PKP	PKPbc	16 27 22.4	0.0
	comp=Z,3.6nm,0.8s,baz=339,slow=3.7,SNR=42						
ULM	Lac du Bonnet	153.24	336	PKPbc	PKPbc	16 27 44.8	-1.9
	comp=Z,3.8nm,0.6s,baz=348,slow=3.4,SNR=4.4						
PDAR	Pinedale Array	163.82	352	PKP	PKPdf	16 27 52.2	-0.2
	comp=Z,1.4nm,1.0s,baz=141,slow=2.8,SNR=6.3						
PDAR	Pinedale Array	163.82	352	PKPdf	PKPdf	16 27 50.6	-1.7

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*KOLA **25** 16:07:59.5, 69°.43N×30°.79E, h0^{km}, ML1.5, Error ellipse: s-maj=7.7km s-min=4.4km az=110.0, Zapolyarny City, Mines*

HEL 25 16:07:59.7±0.3**, 69°.40N×30°.68E, h0**^{km}**, ML1.1, Explosion, Norway-Murmansk border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VADS	Vadso	0.86	328	P	Pg	16 08 15.0	-1.2
VADS				S	Sg	16 08 25.6	-1.6
RAJF	Raja-Jooseppi	1.26	224	PG	Pg	16 08 22.0	-1.8
RAJF				SG	Sg	16 08 38.4	-1.7
KEV	Kevo	1.34	287	PG	Pg	16 08 23.7	-1.6
KEV				SG	Sg	16 08 41.3	-1.4
VRF	Varrio	1.70	194	PG	Pn	16 08 30.4	-0.2
VRF				MSG		16 08 50.5	
	comp=Z,1.2nm,0.2s						
VRF				SN	Sn	16 08 53.1	+0.1
ARA0	ARCESS Array S	1.83	277	PG	Pn	16 08 32.5	+0.1
	baz=94						
ARA0				SG	Sn	16 08 55.9	-0.3
ARCES	ARCESS Array B	1.83	277	P	Pn	16 08 31.8	-0.6
ARCES				S	Sn	16 08 56.2	-0.1
HEF	Hetta	2.73	252	MSG		16 09 20.0	
	comp=Z,0.5nm,0.2s						
HEF				SG	Sb	16 09 22.3	-0.9

HEL 25 16:08:09.3±0.2**, 67°.93N×25°.35E, h0**^{km}**, ML0.8, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEF	Hetta	0.80	308	PG	Pg	16 08 23.3	-1.2
	baz=122						
HEF				MSG		16 08 33.9	
	comp=Z,0.6nm,0.2s						
HEF				SB	Sg	16 08 35.5	+0.7
KLF	Kolari	0.87	218	PG	Pg	16 08 25.0	-1.0
KLF				MSG		16 08 36.3	
	comp=Z,0.7nm,0.2s						
KLF				SB	Sg	16 08 36.8	-0.5
PAJU	Pajala	1.25	225	PG	Pg	16 08 31.5	-1.7
PAJU				SN	Sn	16 08 53.8	+2.3
LANU	Lannavaara	1.27	277	PG	Pg	16 08 32.2	-1.4
LANU				SG	Sg	16 08 49.8	-0.3
KTK1	Kautokeino	1.34	325	PG	Pg	16 08 33.4	-1.6
RNF	Rovaniemi	1.35	169	PG	Pg	16 08 33.6	-1.4
	baz=352						
RNF				SG	Sg	16 08 51.1	-1.4
ARA0	ARCESS Array S	1.62	2	PN	Pn	16 08 38.8	-0.3
ERTU	Ertsjaerv	1.85	223	PG	Pn	16 08 40.7	-1.5
TOF	Tornio	1.90	193	MSG		16 09 05.8	
	comp=Z,0.6nm,0.2s						
TOF				SG	Sn	16 09 08.1	+0.7
KIF	Kilpisjarvi	2.00	305	PG	Pn	16 08 45.2	+1.0
	baz=119						
KIF				MSG		16 09 09.2	
	comp=Z,0.5nm,0.2s						
RANF	Ranua	2.00	163	PG	Pn	16 08 44.9	+0.6
	baz=349						
RANF				SG	Sb	16 09 11.0	-0.9
KU6	Riekki	2.61	135	MSG		16 09 26.3	
	comp=Z,0.2nm,0.2s						
KU6				SG	Sb	16 09 28.9	-0.6

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*MEX **25** 16:08:55.7±0.9, 13°.59N×93°.12W, h11^{km}±54^{km}, MD3.9*
*GCG **25** 16:08:56.0±1.0, 14°.62N×93°.13W, h0^{km}±28^{km}, MD4.4, ML3.2*

ISC 25 16:08:51.4±2.6**, 13°.8N**±0°.1×**93°.17W**±0°.04**, h1**^{km}±13^{km}**, n13, σ2**^{s}**.33**/23**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PATR	El Naranjo	1.56	35	*e*P	Pb	16 09 22.5	+1.1
PATR				*e*S	Sn	16 09 44.0	+2.3
RTAL	Retalhuleu	1.59	64	*e*P	Pn	16 09 21.6	+0.9
RTAL				*e*S	Sb	16 09 41.3	-0.8
CHUJ	Union Juarez	1.62	39	*e*P	Pg	16 09 23.2	+0.7
CHUJ				*e*S	Sn	16 09 44.1	+1.1
PAVE	Pavencul	1.66	35	*e*P	Pg	16 09 24.2	+0.9
PAVE				*e*S	Sn	16 09 47.0	+3.0
STG2	El Palmar, Qui	1.84	71	*e*P	Pn	16 09 22.5	-1.8
STG5	El Palmar, Qui	1.85	72	*e*P	Pn	16 09 23.6	-0.9
STG5				*e*S	Sn	16 09 45.7	-3.0
PCIG		1.86	359	*e*P	Pg	16 09 28.5	+1.4
PCIG				*e*S	Sg	16 09 52.7	+1.4
STG8	El Palmar, Qui	1.87	71	*e*P	Pn	16 09 24.4	-0.3
STG8				IAML		16 09 54.8	
	comp=E,314nm,0.2s						
CCIG	Comitan	2.63	22	*e*P	Pg	16 09 41.8	-0.1
CCIG				*e*S	Sg	16 10 16.4	+0.4
APG	El Apazote	2.87	66	*e*P	Pn	16 09 40.5	+1.9
TGIG		2.93	1	*e*P	Pb	16 09 45.3	+0.8
TGIG				*e*S	Sg	16 10 20.8	-4.7
HUIG	Huatulco	3.43	304	*e*P	Pn	16 09 49.6	+3.5
HUIG				*e*S	Sn	16 10 27.1	-0.4
CMIG	Matias Romero	3.64	333	*e*P	Pb	16 09 54.2	-2.4
CMIG				*e*S	Sb	16 10 36.6	-4.6

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*NOU **25** 16:10:02.7, 38°.36S×176°.29E, h185^{km}, MLv3.7/17, North Island, New Zealand*

*WEL **25** 16:10:06.3±1.0, 38°S±7°×17°6E±°, h159^{km}±8^{km}, M3.0/66, ML1.6/7, MLv3.0/66, Error ellipse: s-maj=9.0km s-min=8.1km az=171.7, confirmed*

ISC 25 16:10:01.6±1.6**, 38°.34S**±0°.04×**176°.14E**±0°.05**, h198**^{km}±9^{km}**, n149, σ1**^{s}**.29**/155**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRRZ	Handcock Road	0.12	115	P	Pn	16 10 28.5	+0.9
UTU	Utuhina	0.17	14	P	Pn	16 10 28.7	+0.9
WPRZ	Whakapapatarin	0.18	175	P	Pn	16 10 28.6	+0.9
NGRZ	Ngongotaha	0.24	8	P	Pn	16 10 28.7	+0.8
PRRZ	Plateau Road	0.25	129	P	Pn	16 10 28.4	+0.6
PRRZ				S	S	16 10 46.6	-1.5
ALRZ	Allen Road	0.27	145	P	Pn	16 10 28.6	+0.8
KUTZ	Kaahu Road	0.29	239	P	Pn	16 10 28.8	+0.9
RRRZ	Republican Roa	0.29	90	P	Pn	16 10 28.6	+0.7
OMRZ	Omania	0.29	38	P	Pn	16 10 28.6	+0.6
TARZ	Mount Tarawera	0.30	70	P	Pn	16 10 28.7	+0.7
MKRZ	Makatiti	0.33	52	P	Pn	16 10 29.3	+1.2
KARZ	Kaharoa	0.33	14	P	Pn	16 10 28.7	+0.7
LIRZ	Lichensteins R	0.39	30	P	Pn	16 10 28.8	+0.7
TLZ	Tolley Road	0.47	271	P	Pn	16 10 29.5	+1.1
WATZ	Wairara	0.49	221	P	Pn	16 10 29.6	+1.1
MUGZ	Murupara	0.51	106	P	Pn	16 10 29.1	+0.6
KMRZ	Kaimai	0.52	342	P	Pn	16 10 29.4	+0.8
EDRZ	Edgecumbe	0.52	64	P	Pn	16 10 29.2	+0.5
MRHZ	Matea Rd	0.54	157	P	Pn	16 10 29.6	+0.9
MARZ	Manawahe	0.55	50	P	Pn	16 10 29.2	+0.4
OPRZ	Ohinepanea	0.59	33	P	Pn	16 10 29.4	+0.5
RATZ	Rangitukua	0.60	209	P	Pn	16 10 30.0	+1.0
TGRZ	Tauranga	0.62	9	P	Pn	16 10 29.6	+0.6
RITZ	Rihia Road	0.67	199	P	Pn	16 10 30.8	+1.5
RTZ	Ruatahuna	0.71	113	P	Pn	16 10 30.5	+1.0
RTZ				S	S	16 10 49.9	-1.3
KATZ	Kakaramea	0.72	209	P	Pn	16 10 30.7	+1.0
KATZ				S	S	16 10 49.6	-1.9
MTHZ	Maungataniwha	0.75	133	P	Pn	16 10 31.0	+1.3
MTHZ				S	S	16 10 50.2	-1.3
URZ	Urewera	0.77	84	P	Pn	16 10 30.2	+0.5
URZ	Urewera	0.77	84	S	S	16 10 49.7	-1.7
URZ	Urewera	0.77	84	P	Pn	16 10 30.2	+0.5
URZ				S	S	16 10 49.2	-2.2
TOZ	Tahuroa Road	0.79	320	P	Pn	16 10 30.8	+0.9
TOZ				S	S	16 10 50.6	-1.0
NTVZ	North Tongarir	0.84	206	P	Pn	16 10 31.8	+1.5
TMVZ	Te Maari	0.85	204	P	Pn	16 10 31.7	+1.4
KRVZ	Karewarewa	0.85	207	P	Pn	16 10 31.6	+1.3
ETVZ	East Tongariro	0.86	203	P	Pn	16 10 31.8	+1.4
BKZ	Black Stump Fm	0.87	162	P	Pn	16 10 31.5	+1.1
BKZ	Black Stump Fm	0.87	162	S	S	16 10 51.3	-1.5
BKZ	Black Stump Fm	0.87	162	P	Pn	16 10 31.7	+1.3
WTVZ	West Tongariro	0.89	209	P	Pn	16 10 31.8	+1.3
NNVZ	North Ngauruho	0.89	207	P	Pn	16 10 32.3	+1.7
OTVZ	Oturere	0.90	204	P	Pn	16 10 32.2	+1.5
TWVZ	Taurewa	0.92	217	P	Pn	16 10 31.8	+1.1
NMHZ	Naumai	0.92	146	P	Pn	16 10 33.0	+2.3
SNVZ	South Ngauruho	0.93	205	P	Pn	16 10 32.2	+1.3
NGZ	Ngauruhoe	0.94	207	P	Pn	16 10 32.3	+1.4
RAHZ	Arahi	0.94	128	P	Pn	16 10 32.6	+1.9
COVZ	Chateau Observ	0.98	208	P	Pn	16 10 32.5	+1.4
TUVZ	Tukino	1.00	202	P	Pn	16 10 32.7	+1.4
RAGZ	Rawiri	1.01	99	P	Pn	16 10 32.6	+1.3
FWVZ	Far West T-bar	1.02	207	P	Pn	16 10 33.5	+1.9
HIZ	Hauiti	1.02	260	P	Pn	16 10 32.6	+1.3
HIZ	Hauiti	1.02	260	P	Pn	16 10 32.5	+1.2
SNGZ	Shannon Statio	1.04	116	P	Pn	16 10 33.2	+1.8
TRVZ	Turoa	1.06	206	P	Pn	16 10 33.8	+1.9
WNVZ	Wahianoa	1.07	203	P	Pn	16 10 33.2	+1.3
MWZ	Matawai	1.09	90	P	Pn	16 10 32.9	+1.1
KWHZ	Kaweka Forest	1.10	169	P	Pn	16 10 33.7	+1.8
MOVZ	Moawhango	1.11	196	P	Pn	16 10 33.2	+1.2
WHHZ	Waihua	1.13	131	P	Pn	16 10 34.1	+2.0
PKVZ	Pokaka	1.13	213	P	Pn	16 10 33.5	+1.3
ARHZ	Aropaoanui	1.14	144	P	Pn	16 10 34.3	+2.2
MTVZ	Mangateitei	1.17	206	P	Pn	16 10 33.9	+1.4
MCHZ	McNeill Hill	1.19	159	P	Pn	16 10 34.9	+2.5
RUGZ	Raukumara Rang	1.27	73	P	Pn	16 10 33.4	+0.1
KRHZ	Kereru	1.31	172	P	Pn	16 10 35.3	+1.8
RIGZ	Rimuhau	1.32	107	P	Pn	16 10 35.5	+1.8
VRZ	Vera Road	1.34	234	P	Pn	16 10 35.4	+1.7
TKGZ	Te Karaka	1.34	95	P	Pn	16 10 35.4	+1.6
KNZ	Kokohu	1.38	120	P	Pn	16 10 35.9	+1.9
HAZ	Te Kaha	1.42	66	P	Pn	16 10 34.7	+0.3
TWGZ	Tauwhareparae	1.46	84	P	Pn	16 10 36.4	+1.6
MKAZ	Moumakai	1.46	327	P	Pn	16 10 35.8	+1.0
PRGZ	Paritu Road	1.48	114	P	Pn	16 10 36.9	+1.9
CKHZ	Cape Kidnapper	1.50	151	P	Pn	16 10 37.5	+2.4
KAHZ	Kahuranaki	1.56	159	P	Pn	16 10 38.0	+2.3
PNHZ	Pukenui	1.57	178	P	Pn	16 10 37.3	+1.5
PKGZ	Pakihiroa	1.60	73	P	Pn	16 10 37.2	+1.1
MHGZ	Mahia Peninsul	1.60	121	P	Pn	16 10 38.4	+2.3
KUZ	Kuaotunu	1.63	348	P	Pn	16 10 37.1	+0.8
KUZ	Kuaotunu	1.63	348	P	S	16 11 02.7	-0.5
KUZ	Kuaotunu	1.63	348	P	Pn	16 10 37.2	+0.8
CNGZ	Carnagh Statio	1.63	96	P	Pn	16 10 38.7	+2.4
WAZ	Wanganui	1.68	212	P	Pn	16 10 38.3	+1.6
ETAZ	East Tamaki Re	1.69	325	P	Pn	16 10 37.7	+0.9
PUZ	Puketiti	1.69	82	P	Pn	16 10 37.9	+1.0
TSZ	Takapari Road	1.72	185	P	Pn	16 10 38.8	+1.6
WPHZ	Waipukurau	1.74	172	P	Pn	16 10 39.1	+1.8
WIAZ	Waiheke Island	1.74	332	P	Pn	16 10 38.5	+1.1
AWAZ	Awhitu Peninsu	1.74	316	P	Pn	16 10 38.4	+1.0
LREZ	Lake Rotokare	1.76	230	P	Pn	16 10 39.6	+2.1
PXZ	Pawanui	1.78	162	P	Pn	16 10 39.6	+1.9
MBAZ	Motutapu North	1.85	327	P	Pn	16 10 39.5	+1.0
WMGZ	Waiomatatini S	1.87	75	P	Pn	16 10 39.9	+1.3
WTAZ	Waiatarua	1.88	318	P	Pn	16 10 40.0	+1.2
PKE	Pukeiti	1.89	242	P	Pn	16 10 41.7	+2.9
KHEZ	Kahui Hut	1.92	240	P	Pn	16 10 41.0	+1.8
KHEZ	Kahui Hut	1.92	240	S	S	16 11 09.8	+1.4
DVHZ	Dannevirke	1.96	179	P	Pn	16 10 40.8	+1.3
PRHZ	Porangahau	1.96	169	P	Pn	16 10 41.3	+1.8
OHWZ	Ohakea	1.97	199	P	Pn	16 10 41.3	+1.7
RVAZ	Riverhead Bore	2.00	321	P	Pn	16 10 40.9	+0.9
POWZ	Post Office Ro	2.07	188	P	Pn	16 10 41.9	+1.2
ANWZ	Angora Road	2.13	173	P	Pn	16 10 43.0	+1.8
PRWZ	Pori Road	2.22	183	P	Pn	16 10 43.8	+1.6
BFZ	Birch Farm	2.34	178	P	Pn	16 10 44.9	+1.4
BFZ	Birch Farm	2.34	178	P	S	16 11 15.4	-1.0
BFZ	Birch Farm	2.34	178	P	Pn	16 10 44.7	+1.2
MRZ	Mangatainoka R	2.36	190	P	Pn	16 10 44.7	+1.0
TIWZ	Tintock	2.44	185	P	Pn	16 10 45.8	+1.1
OGWZ	Otaki Gorge	2.59	197	P	Pn	16 10 47.3	+1.0
HOWZ	Holdsworth Sta	2.60	191	P	Pn	16 10 47.2	+0.7
KIW	Kapiti Island	2.69	200	P	Pn	16 10 48.1	+0.6
TMWZ	Te Maipa	2.77	184	P	Pn	16 10 49.1	+0.7
WCZ	Waipu Caves	2.79	329	P	Pn	16 10 50.0	+1.3
MTW	Mount Morrison	2.86	190	P	Pn	16 10 49.8	+0.4
CAW	Cannon Point	2.89	196	P	Pn	16 10 50.3	+0.6
DUWZ	D'Urville Isla	3.00	214	P	Pn	16 10 51.5	+0.4
TRWZ	Traveller	3.08	186	P	Pn	16 10 52.6	+0.6
WEL	Wellington	3.13	199	P	Pn	16 10 53.0	+0.5
MSWZ	Moikau Station	3.15	192	P	Pn	16 10 53.0	+0.1
SNZO	South Karori	3.17	200	P	Pn	16 10 53.1	+0.1
TCW	Tory Channel	3.21	206	P	Pn	16 10 53.9	+0.4
BHW	Baring Head	3.22	197	P	Pn	16 10 53.9	+0.3
TUWZ	Tuamarina	3.52	208	P	Pn	16 10 58.3	+1.0
NNZ	Nelson	3.58	216	P	Pn	16 10 57.9	-0.1
TKNZ	Takaka Hill	3.64	221	P	Pn	16 10 58.5	-0.3
OUZ	Omahuta	3.72	326	P	Pn	16 11 01.9	+2.0
OUZ	Omahuta	3.72	326	P	Pn	16 11 01.7	+1.8
QRZ	Quartz Range	3.74	227	P	Pn	16 11 01.8	+1.8
QRZ	Quartz Range	3.74	227	P	Pn	16 10 59.4	-0.6
BSWZ	Blackbirch Sta	3.79	207	P	Pn	16 11 00.9	+0.3
MRNZ	Matariki Terra	4.01	219	P	Pn	16 11 03.3	-0.1
THZ	Tophouse	4.23	215	P	Pn	16 11 06.4	+0.3
KHZ	Kahutara	4.53	205	P	Pn	16 11 10.2	+0.4
KHZ	Kahutara	4.53	205	P	Pn	16 11 10.3	+0.4
DSZ	Denniston Nort	4.76	223	P	Pn	16 11 12.4	-0.5
GVZ	Greta Valley S	5.19	206	P	Pn	16 11 18.3	0.0
LTZ	Lake Taylor	5.33	212	P	Pn	16 11 19.9	-0.2
INZ	Inchbonnie	5.66	218	P	Pn	16 11 24.7	+0.4
OKCZ	Okains Bay	5.86	202	P	Pn	16 11 27.0	0.0
OXZ	Oxford	5.87	211	P	Pn	16 11 26.6	-0.5
MQZ	McQueen's Vall	5.97	205	P	Pn	16 11 27.3	-1.0
MHCZ	Mount Hutt	6.24	212	P	Pn	16 11 32.0	+0.1
ARCZ	Arundel	6.74	212	P	Pn	16 11 38.8	+0.5
FOZ	Fox Glacier	7.06	221	P	Pn	16 11 42.7	+0.2
ODZ	Otahua Downs	7.86	210	P	Pn	16 11 53.2	+0.3
	36nm,1.8s						
ODZ	Otahua Downs	7.86	210	P	Pn	16 11 53.0	+0.1
JCZ	Jackson Bay	7.97	222	P	Pn	16 11 55.7	+1.2
JCZ	Jackson Bay	7.97	222	P	Pn	16 11 54.7	+0.2

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*IDC **25** 16:13:37.5±0.6, 55°.74N×162°.26E, h0^{km}, mb4.0/22, mbtmp4.0/24, ML3.6/2, MS3.3/7, Error ellipse: s-maj=17.9km s-min=13.5km az=135.0*
*KRSC **25** 16:13:37.1±0.8, 55°.56N×162°.65E, h23^{km}±15^{km}, Mc4.9, Ml4.5*
*NEIC **25** 16:13:39.1±1.9, 55°.7N±0°.1×162°.2E±0°.2, h10^{km}±1^{km}, mb4.4/106, Error ellipse: s-maj=19.9km s-min=13.6km az=328.0*
*MOS **25** 16:13:40.1±1.1, 55°.66N×162°.49E, h33^{km}, mb4.4/18, Error ellipse: s-maj=7.4km s-min=4.1km az=76.3*

ISC 25 16:13:39.0±1.4**, 55°.67N**±0°.04×**162°.53E**±0°.03**, h14**^{km}±9^{km}**, n520, σ1**^{s}**.15**/503**, mb4.3**/83**, MS3.6**/5**, 1C, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.56	16	PN	Pg	16 13 49.8	-0.2
KBTR	Krutoberegovo	0.56	16	*i* P	Pg	16 13 49.9	-0.2
KBG	Krutoberegovo	0.59	9	PN	Pg	16 13 50.4	-0.1
KBG				S	Sb	16 14 00.2	+0.8
KBG	Krutoberegovo	0.59	9	*i* P	Pg	16 13 50.4	-0.1
KBG				*e*S	Sb	16 14 00.2	+0.8
ZLN	Zelenaya	1.03	290	PN	Pb	16 13 58.4	-0.3
ZLN	Zelenaya	1.03	290	*e*P	Pb	16 13 58.4	-0.3
BZGR	Bezymyannyi-Gr	1.07	285	PN	Pb	16 13 58.8	-0.5
BZGR	Bezymyannyi-Gr	1.07	285	*e*P	Pb	16 13 58.9	-0.5
SMKR	Semkarok	1.09	327	PN	Pb	16 13 59.1	-0.5
SMKR	Semkarok	1.09	327	*i* P	Pb	16 13 59.2	-0.5
CIRR	Tsirk	1.10	295	PN	Pb	16 13 59.3	-0.5
CIRR	Tsirk	1.10	295	*e*P	Pb	16 13 59.4	-0.5
BZWR	Bezymyannyi-We	1.19	285	PN	Pn	16 14 00.7	-0.6
BZWR	Bezymyannyi-We	1.19	285	*e*P	Pn	16 14 00.8	-0.6
KLY	Klyuchi	1.24	302	PN	Pn	16 13 59.8	-2.0
KLY				S	Sb	16 14 16.7	-1.2
KLY	Klyuchi	1.24	302	*e*P	Pn	16 13 59.9	-2.0
KLY				*e*S	Sb	16 14 16.7	-1.2
KIRR	Kirishev	1.27	284	PN	Pn	16 14 01.9	-0.5
KIRR	Kirishev	1.27	284	*e*P	Pn	16 14 02.0	-0.5
KMNR	Kamenistaya	1.30	275	PN	Pb	16 14 03.2	-0.1
KMNR	Kamenistaya	1.30	275	*e*P	Pb	16 14 03.2	-0.1
TUMD	Tumrok D	1.30	250	PN	Pn	16 14 02.0	-0.8
TUMD				S	Sb	16 14 19.7	-0.1
TUMD	Tumrok D	1.30	250	*e*P	Pn	16 14 02.1	-0.8
TUMD				*e*S	Sb	16 14 19.7	-0.1
KZV	Kizimen	1.40	247	PN	Pn	16 14 03.5	-0.7
KZV	Kizimen	1.40	247	*e*P	Pn	16 14 03.5	-0.7
KOZ	Kozyrevsk	1.55	286	PN	Pb	16 14 07.0	-0.4
KOZ	Kozyrevsk	1.55	286	*e*P	Pb	16 14 07.0	-0.4
SRDR	Sredinnyy	1.71	293	PN	Pn	16 14 09.0	+0.6
SRDR				S	Sb	16 14 32.3	+0.7
SRDR	Sredinnyy	1.71	293	*e*P	Pn	16 14 09.0	+0.6
SRDR				*e*S	Sb	16 14 32.3	+0.7
BKI	Bering	2.01	102	PN	Pn	16 14 12.2	-0.3
BKI				S	Sn	16 14 35.9	-1.6
BKI	Bering	2.01	102	*e*P	Pn	16 14 12.2	-0.3
BKI				*e*S	Sn	16 14 36.0	-1.6
ESO	Esso	2.18	278	PN	Pn	16 14 15.4	+0.6
ESO	Esso	2.18	278	*e*P	Pn	16 14 15.4	+0.6
KII	Karymskiy	2.42	229	PN	Pn	16 14 17.7	-0.5
KII	Karymskiy	2.42	229	*e*P	Pn	16 14 17.8	-0.5
SPN	Mys Shipunski	2.97	211	PN	Pn	16 14 23.7	-1.9
SPN				S	Sn	16 14 58.2	-2.8
SPN	Mys Shipunski	2.97	211	*e*P	Pn	16 14 23.8	-1.9
SPN				*e*S	Sn	16 14 58.3	-2.8
NLC	Nalytchevo	3.12	218	PN	Pn	16 14 26.8	-0.9
NLC	Nalytchevo	3.12	218	*e*P	Pn	16 14 26.8	-0.9
SDLR	Sedlovina	3.21	223	PN	Pn	16 14 28.8	-0.2
SDLR	Sedlovina	3.21	223	*e*P	Pn	16 14 28.8	-0.2
KRER	Koryakskii	3.24	224	PN	Pn	16 14 29.8	+0.2
KRER	Koryakskii	3.24	224	*e*P	Pn	16 14 29.8	+0.2
KRX	Arik	3.24	226	PN	Pn	16 14 29.6	+0.1
KRX	Arik	3.24	226	*e*P	Pn	16 14 29.6	+0.1
SMAR	Somma	3.25	224	PN	Pn	16 14 29.4	-0.3
SMAR	Somma	3.25	224	*e*P	Pn	16 14 29.4	-0.3
AVH	Avacha	3.27	224	PN	Pn	16 14 30.1	+0.2
AVH	Avacha	3.27	224	*e*P	Pn	16 14 30.1	+0.2
UGLR	Uglovaya	3.28	223	PN	Pn	16 14 28.9	-1.1
UGLR	Uglovaya	3.28	223	*e*P	Pn	16 14 29.0	-1.1
KOK	Koryaka	3.29	225	PN	Pn	16 14 31.3	+1.1
KOK	Koryaka	3.29	225	*e*P	Pn	16 14 31.3	+1.1
DALK	Dalny	3.45	221	PN	Pn	16 14 31.6	-0.6
DALK	Dalny	3.45	221	*e*P	Pn	16 14 31.6	-0.6
INSR	Institute	3.48	223	PN	Pn	16 14 34.3	+1.7
INSR	Institute	3.48	223	*e*P	Pn	16 14 34.4	+1.7
PET	Petropavlovsk	3.49	222		Pn	16 14 32.5	-0.3
PET	Petropavlovsk	3.49	222	PN	Pn	16 14 32.5	-0.3
PET				S	Sn	16 15 13.7	-0.2
PET	Petropavlovsk	3.49	222	*e*P	Pn	16 14 32.6	-0.3
PET				*e*S	Sn	16 15 13.7	-0.2
PET	Petropavlovsk	3.49	222	P	Pn	16 14 32.6	-0.2
OSSR	Ossora	3.60	4	PN	Pn	16 14 35.8	+1.5
OSSR	Ossora	3.60	4	*e*P	Pn	16 14 35.9	+1.5
PALN	Palana	3.70	339	PN	Pb	16 14 39.7	-4.3
PALN	Palana	3.70	339	*e*P	Pb	16 14 39.7	-4.3
PEA0B	Petropavlovsk-	3.82	230	Pn	Pn	16 14 37.6	+0.2
PEA0B	Petropavlovsk-	3.82	230	*i* PN	Pn	16 14 37.7	+0.4
PETK	Petropavlovsk-	3.82	230	Pn	Pn	16 14 36.7	-0.6
	3.2nm,0.3s,baz=68,slow=19,SNR=31						
PETK				Sn	Sn	16 15 25.1	+3.1
	4.5nm,0.3s,baz=276,slow=15,SNR=4.2						
PETK				LR	LR	16 16 23.9	
	comp=Z,426nm,19.1s,baz=37,slow=44						
	7.7nm,0.6s						
PETK	Petropavlovsk-	3.82	230	Pn	Pn	16 14 37.7	+0.4
KRMR	Karymshinskiy	3.84	224	PN	Pn	16 14 37.3	-0.3
KRMR	Karymshinskiy	3.84	224	*e*P	Pn	16 14 37.4	-0.3
GRL	Gorelyy	4.08	222	PN	Pn	16 14 41.4	+0.4
GRL	Gorelyy	4.08	222	*e*P	Pn	16 14 41.4	+0.4
MTVR	Mutnovka	4.09	221	PN	Pn	16 14 41.5	+0.3
MTVR	Mutnovka	4.09	221	*e*P	Pn	16 14 41.6	+0.3
APC	Apacha	4.18	231	PN	Pn	16 14 42.7	+0.4
APC	Apacha	4.18	231	*e*P	Pn	16 14 42.8	+0.4
ASAK	Asacha	4.28	222	PN	Pn	16 14 44.3	+0.6
ASAK	Asacha	4.28	222	*e*P	Pn	16 14 44.4	+0.6
TILK	Tilichiki	5.16	20	PN	Pn	16 14 58.4	+2.8
TILK	Tilichiki	5.16	20	*e*P	Pn	16 14 58.5	+2.8
KMSK	Kamenskaya	7.07	14	PN	Pn	16 15 25.6	+3.7
KMSK	Kamenskaya	7.07	14	*e*P	Pn	16 15 25.6	+3.7
SHEM	Shemya Is, Ala	7.40	109	LR	LR	16 18 01.3	
	comp=Z,108nm,18.3s,baz=47,slow=35						
BILL	Bilibino	12.53	6	*i* PN	Pn	16 16 38.9	+2.2
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,101nm,11.0s						
SPIA	Saint Paul Isl	15.10	73	P	Pn	16 17 11.8	+0.2
	baz=276						
GAMB	Gambell	15.22	47	P	Pn	16 17 12.4	-0.8
	baz=250						
P08K	Saint George I	15.55	75	P	Pn	16 17 17.8	+0.3
	baz=279						
NIKH	Nikolski High	16.85	87	P	Pn	16 17 34.8	+0.5
	baz=291						
M11K	Mekoryuk	17.11	61	P	Pn	16 17 37.2	-0.2
	baz=268						
JKA	Kamikawa-asahi	17.21	236		P	16 17 41.2	+0.9
ASAJ	Asahikawa	17.21	236	P	Pn	16 17 39.7	+0.9
	comp=Z,1.1nm,0.3s,baz=36,slow=9.2,SNR=11						
ASAJ				LR	LR	16 24 20.0	
	comp=Z,132nm,18.9s,baz=105,slow=38						
	comp=Z,3.9nm,0.6s						
ASAJ	Asahikawa	17.21	236	P	P	16 17 41.2	+0.9
ASAJ				pmax	pmax		
	comp=Z,16nm,0.9s						
TNA	Tin City	17.37	43	P	Pn	16 17 40.0	-0.6
	baz=250						
UNV	Unalaska Valle	17.89	83	P	P	16 17 47.8	+0.1
	baz=289						
K13K	Kusilvak Mount	17.96	56	P	P	16 17 48.5	0.0
	baz=265						
F14K	Arctic Creek	17.97	44	P	Pn	16 17 47.4	-0.6
	baz=252						
YAK	Yakutsk	17.99	304	*i* P	Pn	16 17 47.1	-1.2
YAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						

25d 16h

ANM	Nome	18.10	48	P	Pn	16 17 49.2	-0.5
	baz=256						
M13K	Dall Lake	18.53	61	P	P	16 17 54.2	-0.4
	baz=271						
J14K	Nanvaranak Lak	18.56	54	P	P	16 17 54.8	-0.2
	baz=264						
ERM	Erimo	18.60	231	P	Pn	16 17 56.1	+0.2
ERM				IAmb	IAmb	16 18 19.6	
	comp=Z,44nm,1.1s						
ERM	Erimo	18.60	231	P	Pn	16 17 56.1	+0.2
ERM				pmax	pmax		
	comp=Z,45nm,1.1s						
F15K	North Star Dit	18.70	44	P	P	16 17 56.6	0.0
	baz=254						
G15K	Niukluk	18.76	47	P	P	16 17 56.1	-1.2
	baz=257						
L14K	Kuka Creek	18.87	58	P	P	16 17 58.1	-0.3
	baz=269						
M14K	Bethel	19.21	60	P	P	16 18 01.9	-0.3
	baz=271						
FALS	False Pass	19.31	78	P	P	16 18 03.7	+0.3
	baz=287						
C16K	Lisburne Hills	19.36	37	P	Pn	16 18 06.2	+1.3
C16K	Lisburne Hills	19.36	37	P	P	16 18 03.1	-0.7
	baz=246,SNR=10						
N14K	Kuskokwak Cree	19.37	63	P	P	16 18 04.3	+0.4
	baz=274						
H16K	Elim	19.44	48	P	P	16 18 04.5	-0.1
	baz=260						
L15K	Ungalak Mounta	19.45	57	P	Pn	16 18 05.4	-0.6
	baz=269						
K15K	Wolf Creek Mou	19.46	55	P	Pn	16 18 07.5	+1.4
K15K				IAmb	IAmb	16 18 35.8	
	comp=Z,30nm,1.4s						
K15K	Wolf Creek Mou	19.46	55	P	P	16 18 05.1	+0.2
	baz=267						
G16K	Koyuk River	19.55	46	P	Pn	16 18 09.3	+2.1
G16K	Koyuk River	19.55	46	P	P	16 18 06.1	+0.3
	baz=257						
O14K	Tigyukauivet M	19.64	65	P	P	16 18 07.2	+0.4
	baz=276						
S12K	Black Hills	19.83	75	P	P	16 18 09.8	+0.8
	baz=285						
M15K	Kasigluk River	19.84	60	P	P	16 18 09.2	+0.1
	baz=272						
D17K	Noatak River	19.93	39	P	P	16 18 10.5	+0.5
	baz=250,SNR=6.3						
J16K	Anvik River	19.96	53	P	P	16 18 11.0	+0.7
	baz=265						
I17K	Unalakleet	19.98	51	P	Pn	16 18 13.1	+0.8
I17K	Unalakleet	19.98	51	P	Pn	16 18 11.7	-0.6
	baz=263						
RDOG	Red Dog Mine	20.12	38	P	Pn	16 18 14.1	+0.2
RDOG	Red Dog Mine	20.12	38	P	P	16 18 12.8	+0.7
	baz=250						
N15K	Kwethluk River	20.16	62	P	Pn	16 18 14.3	-0.1
N15K	Kwethluk River	20.16	62	P	Pn	16 18 13.5	-1.0
	baz=274						
C17K	DeLong Mountai	20.18	37	P	P	16 18 13.3	+0.6
	baz=248,SNR=5.5						
E17K	Hotham Inlet	20.19	41	P	P	16 18 13.5	+0.6
	baz=254						
F17K	Baldwin Pennin	20.24	43	P	Pn	16 18 15.6	+0.3
F17K	Baldwin Pennin	20.24	43	P	P	16 18 13.9	+0.6
	baz=256						
G17K	Kiwalik Mounta	20.26	46	P	P	16 18 14.2	+0.5
	baz=259						
O15K	Ungalikthiuk R	20.38	65	P	Pn	16 18 16.5	-0.6
	baz=277						
L16K	Owhat River	20.41	57	P	Pn	16 18 18.0	+0.7
L16K				IAmb	IAmb	16 18 21.6	
	comp=Z,20nm,1.4s						
L16K	Owhat River	20.41	57	P	Pn	16 18 16.4	-1.0
	baz=270						
H17K	Granite Mounta	20.47	48	P	Pn	16 18 17.3	-0.8
H17K	Granite Mounta	20.47	48	P	P	16 18 16.6	+0.7
	baz=261						
M16K	Timber Creek	20.67	59	P	P	16 18 18.6	+0.5
	baz=273						
E18K	Tukpahlearik C	20.75	41	P	Pn	16 18 21.0	-0.3
E18K	Tukpahlearik C	20.75	41	P	P	16 18 19.0	+0.1
	baz=254						
N16K	Nishlik Lake	20.79	61	P	P	16 18 20.4	+1.0
	baz=274						
SDPT	Sand Point	20.79	75	P	P	16 18 20.1	+0.7
	baz=287						
F18K	Selawik	20.90	43	P	P	16 18 20.7	+0.2
	baz=257						
C18K	Utukok River	20.92	37	P	Pn	16 18 22.2	-1.2
C18K	Utukok River	20.92	37	P	P	16 18 21.2	+0.4
	baz=250						
L17K	Donlin	20.97	56	P	P	16 18 22.1	+0.8
	baz=270						
K17K	Iditarod	20.97	54	P	Pn	16 18 23.5	-0.5
K17K	Iditarod	20.97	54	P	P	16 18 21.9	+0.6
	baz=269						
S14K	Fog Glacier	21.05	73	P	P	16 18 22.4	+0.1
	baz=285						
G18K	Tagagawik	21.15	46	P	P	16 18 25.0	+1.7
G18K	Tagagawik	21.15	46	P	P	16 18 23.3	0.0
	baz=260						
H18K	Honhosa River	21.15	48	P	P	16 18 25.0	+1.7
H18K	Honhosa River	21.15	48	P	P	16 18 23.5	+0.2
	baz=262						
O16K	Kokwok River B	21.21	63	P	P	16 18 24.2	+0.3
	baz=277						
P16K	Nushagak River	21.34	65	P	P	16 18 25.7	+0.4
	baz=279						
M17K	Holitna River	21.39	58	P	P	16 18 25.7	-0.1
	baz=273						
TIXI	Tiksi	21.41	331	P	P	16 18 26.8	+0.8
	comp=Z,11nm,0.5s,baz=123,slow=9.2,SNR=65						
	comp=Z,11nm,0.5s						
TIXI	Tiksi	21.41	331	P	P	16 18 26.9	+0.9
TIXI				IAmb	IAmb	16 18 30.5	
	comp=Z,18nm,0.8s						
TIXI	Tiksi	21.41	331	*i* P	P	16 18 24.8	-1.2
TIXI				pmax	pmax		
	comp=Z,16nm,0.9s						
CHNA	Chernabura Isl	21.43	76	P	P	16 18 26.7	+0.3
	baz=288						
A19K	Wainwright	21.55	33	P	P	16 18 26.5	-0.9
	baz=247						
N17K	Nushagak Hills	21.57	60	P	P	16 18 27.8	0.0
	baz=275						
C19K	Lookout Ridge	21.63	37	P	P	16 18 30.0	+1.7
C19K				IAmb	IAmb	16 18 35.7	
	comp=Z,14nm,1.1s						
C19K	Lookout Ridge	21.63	37	P	P	16 18 27.6	-0.8
	baz=251						
F19K	Shaleruckik Mo	21.68	43	P	P	16 18 28.5	-0.4
	baz=259						
O17K	Koliganek Bris	21.70	62	P	P	16 18 29.4	+0.2
	baz=277						
J18K	Innoko River	21.72	52	P	P	16 18 31.0	+1.6
J18K	Innoko River	21.72	52	P	P	16 18 29.5	+0.1
	baz=268						
L18K	Granite Mounta	21.72	56	P	P	16 18 33.8	+4.4
L18K	Granite Mounta	21.72	56	P	P	16 18 30.1	+0.7
	baz=272						
GCSA	Galena City Sc	21.73	49	P	P	16 18 28.1	-1.3
	baz=265						
R16K	Pilot Point	21.81	68	P	P	16 18 31.4	+1.0
	baz=282						
G19K	Purcell Mounta	21.82	45	P	P	16 18 32.2	+1.8
G19K				IAmb	IAmb	16 18 39.9	
	comp=Z,13nm,1.1s						
G19K	Purcell Mounta	21.82	45	P	P	16 18 30.9	+0.4
	baz=261						
D19K	Kuna River	21.95	39	P	P	16 18 35.4	+3.6
D19K				IAmb	IAmb	16 18 39.3	
	comp=Z,16nm,0.9s						
D19K	Kuna River	21.95	39	P	P	16 18 31.7	-0.2
	baz=254						
H19K	Roundabout Mou	22.00	47	P	P	16 18 32.1	-0.2
	baz=264,SNR=5.4						
E19K	Redstone River	22.02	42	P	P	16 18 35.0	+2.5
E19K				IAmb	IAmb	16 18 42.3	
	comp=Z,11nm,1.0s						
E19K	Redstone River	22.02	42	P	P	16 18 32.5	0.0
	baz=258						
Q16K	King Salmon	22.08	65	P	P	16 18 33.5	+0.3
	baz=280						
P17K	Kvichak River	22.11	64	P	P	16 18 34.7	+1.2
	baz=279						
M18K	Stony River	22.16	58	P	P	16 18 34.5	+0.4
	baz=274						
N18K	Kilae Creek	22.19	60	P	P	16 18 34.7	+0.2
	baz=276						
J19K	Poorman	22.23	51	P	P	16 18 36.6	+1.8
J19K	Poorman	22.23	51	P	P	16 18 34.6	-0.2
	baz=268						
F20K	Avaraart Lake	22.51	43	P	P	16 18 37.7	-0.1
	baz=261						
D20K	Etivluk River	22.54	39	P	P	16 18 38.7	+0.5
D20K				IAmb	IAmb	16 18 46.0	
	comp=Z,13nm,0.8s						
D20K	Etivluk River	22.54	39	P	P	16 18 38.1	-0.1
	baz=256						
Q17K	Contact Creek	22.55	66	P	P	16 18 38.7	+0.2
	baz=282						
E20K	Nigu River	22.58	40	P	P	16 18 38.6	0.0
	baz=257						
L19K	White Mountain	22.58	56	P	P	16 18 39.2	+0.6
	baz=273						
O18K	Koktuh Hills	22.63	62	P	P	16 18 38.8	-0.4
	baz=278						
H20K	Anotleneega Mo	22.64	47	P	P	16 18 38.8	-0.5
	baz=265						
P18K	Big Mountain,	22.69	63	P	P	16 18 38.9	-0.9
	baz=280						
B20K	Meade River	22.73	35	P	P	16 18 38.9	-1.2
	baz=252						
I20K	Naaghedeneel	22.76	49	P	P	16 18 39.3	-1.2
	baz=267						
N19K	Bonanza Creek	22.87	59	P	P	16 18 40.1	-1.7
	baz=277						
J20K	Nowinta River	22.88	51	P	P	16 18 39.9	-1.8
	baz=269						
K20K	Telida	22.91	53	P	P	16 18 42.0	-0.1
K20K				IAmb	IAmb	16 18 59.8	
	comp=Z,13nm,1.4s						
K20K	Telida	22.91	53	P	P	16 18 40.3	-1.8
	baz=271						
Q18K	Katmai Hardscr	22.93	65	P	P	16 18 40.5	-2.0
	baz=281						
O19K	Port Alsworth	23.02	61	P	P	16 18 41.3	-1.9
	baz=278						
C21K	Knifeblade Rid	23.29	38	P	P	16 18 44.7	-1.2
	baz=257						
CHIR	Chirikof Islan	23.30	72	P	P	16 18 45.3	-0.8
	baz=288						
G21K	Allakaket	23.31	45	P	P	16 18 48.1	+2.0
G21K				IAmb	IAmb	16 18 54.9	
	comp=Z,24nm,1.4s						
G21K	Allakaket	23.31	45	P	P	16 18 44.2	-1.9
	baz=264						
A21K	Barrow	23.34	32	P	P	16 18 44.8	-1.6
	baz=250						
F21K	Alatna River	23.40	43	P	P	16 18 45.8	-1.3
	baz=263						
M20K	Styx River	23.41	56	P	P	16 18 46.5	-0.8
	baz=275						
E21K	Killik River	23.42	40	IAmb	IAmb	16 18 56.1	
	comp=Z,8.8nm,1.2s						
E21K	Killik River	23.42	40	P	P	16 18 45.9	-1.4
	baz=259						
B21K	Ikpikpuk River	23.46	37	P	P	16 18 47.0	-0.6
B21K	Ikpikpuk River	23.46	37	P	P	16 18 46.8	-0.8
	baz=256						
H21K	Melozitna Rive	23.52	47	P	P	16 18 48.6	+0.4
H21K	Melozitna Rive	23.52	47	P	P	16 18 47.1	-1.1
	baz=267						
Q19K	Cape Douglas,	23.57	64	P	P	16 18 48.0	-0.8
	baz=282						
P19K	Oil Pt	23.65	62	P	P	16 18 48.9	-0.7
	baz=280						
CHUM	Lake Minchumin	23.68	51	P	P	16 18 48.9	-0.9
	baz=271						
A22K	Sinclair Lake	23.74	33	P	P	16 18 48.6	-1.7
	baz=252						
PPLA	Purkeypile	23.78	54	P	P	16 18 50.3	-0.7
	baz=274						
I21K	Tanana	23.84	48	P	P	16 18 50.6	-0.7
	baz=269						
SII	Sitkinak Islan	23.86	70	P	P	16 18 51.6	0.0
	baz=287						
O20K	Slope Mountain	23.88	61	P	P	16 18 50.9	-0.9
	baz=280						
SPCR	Spurr Chakacha	23.92	58	P	P	16 18 51.4	-0.9
	baz=278						
F22K	John River	23.94	42	P	P	16 18 51.7	-0.6
	baz=263						
D22K	Ayikyak River	23.97	39	P	P	16 18 53.6	+1.0
D22K				IAmb	IAmb	16 18 57.4	
	comp=Z,17nm,1.3s						
D22K	Ayikyak River	23.97	39	P	P	16 18 51.1	-1.5
	baz=260						
B22K	Teshekpuk Lake	24.04	35	P	P	16 18 51.9	-1.3
	baz=256,SNR=6.4						
H22K	Ishtalitna Cre	24.12	46	P	P	16 18 55.5	+1.5
H22K	Ishtalitna Cre	24.12	46	P	P	16 18 53.4	-0.6
	baz=268,SNR=5.2						
OHAK	Old Harbor	24.15	68	P	P	16 18 54.9	+0.6
	baz=286						
SKT	Skwentna	24.16	56	P	P	16 18 54.3	0.0
	baz=276						
E22K	Anaktuvuk Pass	24.16	41	P	P	16 18 55.4	+1.0
E22K				IAmb	IAmb	16 19 00.6	
	comp=Z,10nm,0.9s						
E22K	Anaktuvuk Pass	24.16	41	P	P	16 18 53.6	-0.8
	baz=262						
BPAW	Bear Paw Mtn.	24.27	51	P	P	16 18 54.9	-0.4
	baz=272						
Q20K	Shuyak Island	24.28	64	P	P	16 18 55.5	0.0
	baz=283						
KDAK	Kodiak Island	24.37	66	P	P	16 18 55.5	-0.8
	baz=285						
HOM	Homer	24.44	62	P	P	16 18 56.3	-0.7
	baz=281						
CAPN	Captain Cook N	24.49	59	P	P	16 18 56.4	-0.9
	baz=279						
SUA	Susitna One	24.59	57	P	P	16 18 57.3	-1.1
	baz=278						
TRF	Thorofare Moun	24.60	52	P	P	16 18 59.5	+0.9
TRF				IAmb	IAmb	16 19 19.8	
	comp=Z,20nm,1.4s						
TRF	Thorofare Moun	24.60	52	P	P	16 18 56.8	-1.8
	baz=274						
COLD	Coldfoot	24.67	43	P	P	16 18 59.5	+0.5
COLD				IAmb	IAmb	16 19 01.9	
	comp=Z,14nm,1.0s						
COLD	Coldfoot	24.67	43	P	P	16 18 57.0	-2.0
	baz=266,SNR=14						
D23K	Nanushuk River	24.70	39	IAmb	IAmb	16 19 02.3	
	comp=Z,7.2nm,0.8s						
D23K	Nanushuk River	24.70	39	P	P	16 18 57.7	-1.5
	baz=262						
CUT	Chulitna	24.70	55	P	P	16 18 58.8	-0.4
	baz=276						
G23K	Bananza Creek	24.71	44	P	P	16 18 59.6	+0.3
G23K				IAmb	IAmb	16 19 02.1	
	comp=Z,7.3nm,1.0s						
G23K	Bananza Creek	24.71	44	P	P	16 18 57.8	-1.5
	baz=267,SNR=7.2						
M22K	Willow	24.85	56	P	P	16 19 00.4	-0.2
	baz=278						
C23K	Itkillik River	24.87	37	P	P	16 19 00.5	-0.3
	baz=260						
BRSE	Bradley Lake S	24.87	61	P	P	16 18 60.0	-0.9
	baz=282						
I23K	Minto, Yukon-K	24.95	48	P	P	16 19 02.3	+0.9
I23K				IAmb	IAmb	16 19 09.7	
	comp=Z,8.9nm,1.0s						
I23K	Minto, Yukon-K	24.95	48	P	P	16 19 01.1	-0.3
	baz=271						
E23K	Chandalar	24.97	41	P	P	16 19 01.5	-0.3
	baz=265						
TOLK	Toolik Lake Re	25.05	40	P	P	16 19 03.9	+1.5
TOLK	Toolik Lake Re	25.05	40	P	P	16 19 02.2	-0.3
	baz=263,SNR=19						
NEA2	Nenana	25.08	50	P	P	16 19 03.6	+0.9
NEA2				IAmb	IAmb	16 19 04.4	
	comp=Z,5.3nm,1.0s						
NEA2	Nenana	25.08	50	P	P	16 19 02.8	+0.1
	baz=273						
MCK	McKinley	25.19	52	P	P	16 19 03.4	-0.3
	baz=274						
RND	Reindeer	25.25	52	P	P	16 19 05.3	+1.0
RND				IAmb	IAmb	16 19 05.5	
	comp=Z,14nm,1.2s						
RND	Reindeer	25.25	52	P	P	16 19 05.3	+1.0
RND				pmax	pmax		
	comp=Z,14nm,1.2s						
MJA0	Matsu Arr-Jizo	25.26	231	*e*P	P	16 19 08.1	+3.5
MJA0				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MJB9	Matsu-Tunnel	25.28	231	P	P	16 19 05.5	+0.8
MAJO	Matsushiro	25.28	231	P	P	16 19 04.0	-0.7
MAJO	Matsushiro	25.28	231	*i* P	P	16 19 05.0	+0.3
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MJAR	Matsushiro Arr	25.28	231	P	P	16 19 04.6	-0.1
	comp=Z,5.5nm,0.7s,baz=27,slow=8.4,SNR=17						
MJAR				LR	LR	16 29 58.1	
	comp=Z,62nm,19.2s,baz=76,slow=39						
	comp=Z,5.5nm,0.7s						
MJAR	Matsushiro Arr	25.28	231	P	P	16 19 02.9	-1.8
MJAR	Matsushiro Arr	25.28	231	P	P	16 19 02.9	-1.8
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PMR	Palmer	25.34	57	P	P	16 19 05.7	+0.8
	baz=279						
D24K	Happy Valley	25.39	39	P	P	16 19 06.3	+0.9
	baz=263						
E24K	Your Creek	25.40	41	P	P	16 19 06.8	+1.2
E24K	Your Creek	25.40	41	P	P	16 19 06.0	+0.5
	baz=266						
SEW	Seward	25.44	60	P	P	16 19 06.0	+0.1
	baz=282						
WAT1	Susitna Watana	25.45	54	P	P	16 19 05.9	-0.1
	baz=277						
C24K	Franklin Bluff	25.51	38	P	P	16 19 05.9	-0.6
	baz=262						
WRH	Wood River Hil	25.51	50	P	P	16 19 07.9	+1.4
WRH				IAmb	IAmb	16 19 09.2	
	comp=Z,12nm,0.9s						
H24K	Noodor Dome	25.55	47	IAmb	IAmb	16 19 21.3	
	comp=Z,7.0nm,1.2s						
H24K	Noodor Dome	25.55	47	P	P	16 19 06.9	-0.1
	baz=271						
F24K	Squaw Lake	25.59	43	P	P	16 19 07.1	-0.2
	baz=268						
COLA	College	25.59	49	*i* P	P	16 19 08.8	+1.5
COLA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
COLA	College	25.59	49	P	P	16 19 07.1	-0.2
	baz=273						
CCB	Clear Creek Bu	25.62	49	P	P	16 19 08.3	+0.7
CCB				IAmb	IAmb	16 19 17.9	
	comp=Z,7.2nm,1.0s						
SML	Sawmill	25.68	56	P	P	16 19 07.9	-0.3
	baz=279						
KNK	Knik Glacier	25.68	57	P	P	16 19 07.7	-0.5
	baz=280						
G24K	Hadweenzic Riv	25.72	45	P	P	16 19 08.6	+0.1
	baz=270						
POKR	Poker Plat Res	25.76	48	P	P	16 19 09.2	+0.4
	baz=273						
PWL	Port Wells	25.84	58	P	P	16 19 09.2	-0.4
PWL				IAmb	IAmb	16 19 26.8	
	comp=Z,12nm,1.0s						
PWL	Port Wells	25.84	58	P	P	16 19 09.1	-0.5
	baz=281						
WAT6	Susitna Watana	25.85	54	P	P	16 19 09.2	-0.7
	baz=278						
DHY	Denali Highway	25.95	53	P	P	16 19 10.7	-0.1
	baz=277						
M23K	Glacier View	25.97	56	P	P	16 19 10.9	+0.2
	baz=280						
HDA	Harding Lake	26.01	50	P	P	16 19 11.1	0.0
HDA				IAmb	IAmb	16 19 12.9	
	comp=Z,4.5nm,0.7s						
HDA	Harding Lake	26.01	50	P	P	16 19 11.2	+0.1
	baz=275						
IL31		26.01	49	P	P	16 19 10.5	-0.6
IL31				IAmb	IAmb	16 19 14.1	
	comp=Z,4.9nm,0.9s						
ILAR	Eielson Array	26.01	49	P	P	16 19 11.9	+0.8
	comp=Z,3.8nm,0.9s,baz=253,slow=3.7,SNR=45						
	comp=Z,3.8nm,0.9s						
ILAR	Eielson Array	26.01	49	P	P	16 19 12.4	+1.3
ILAR	Eielson Array	26.01	49	*e*P	P	16 19 11.9	+0.8
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SCM	Sheep Creek Mo	26.15	56	P	P	16 19 12.3	-0.1
	baz=280						
G25K	Bearman Lake	26.27	44	P	P	16 19 13.1	-0.3
	baz=271						
D25K	Kavik River	26.27	39	P	P	16 19 14.3	+0.8
D25K	Kavik River	26.27	39	P	P	16 19 12.9	-0.6
	baz=265						
GLI	Glacier Island	26.43	58	P	P	16 19 15.2	+0.2
	baz=282						
F25K	Christian Rive	26.45	43	IAmb	IAmb	16 19 19.3	
	comp=Z,7.0nm,1.1s						
F25K	Christian Rive	26.45	43	P	P	16 19 15.0	-0.1
	baz=269						
P23K	Montague Islan	26.47	60	P	P	16 19 14.7	-0.6
	baz=283						
E25K	Arctic Village	26.49	41	IAmb	IAmb	16 19 20.9	
	comp=Z,9.3nm,1.1s						
E25K	Arctic Village	26.49	41	P	P	16 19 15.1	-0.4
	baz=268						
K24K	Donnelly Dome	26.58	51	P	P	16 19 14.7	-1.6
	baz=277						
M24K	Tolsona, Glenn	26.64	55	P	P	16 19 16.1	-0.8
	baz=280						
J25K	Salcha River,	26.67	49	P	P	16 19 16.3	-0.9
	baz=276						
PAX	Paxson	26.83	53	P	P	16 19 18.3	-0.3
	baz=279						
C26K	Camden Bay	26.84	37	P	P	16 19 18.1	-0.4
	baz=266						
BMAR	Burnt Mountain	26.86	43	P	P	16 19 20.2	+1.4
KLU	Klutina	26.87	56	P	P	16 19 17.9	-1.0
	baz=281						
RIDG	Independent Ri	27.00	51	P	P	16 19 19.7	-0.4
	baz=278						
F26K	Sheenjek River	27.02	42	P	P	16 19 19.3	-0.9
	baz=271						
HARP	HAARP	27.06	54	P	P	16 19 19.7	-0.9
	baz=280						
Q23K	Middleton Isla	27.12	61	P	P	16 19 20.1	-1.0
	baz=285						
EYAK	Cordova Ski Ar	27.15	58	P	P	16 19 20.2	-1.1
	baz=283						
G26K	Porcupine Rive	27.18	44	IAmb	IAmb	16 19 30.2	
	comp=Z,7.4nm,0.9s						
G26K	Porcupine Rive	27.18	44	P	P	16 19 20.9	-0.7
	baz=272						
C27K	Jago River	27.23	38	IAmb	IAmb	16 19 28.9	
	comp=Z,8.7nm,1.0s						
C27K	Jago River	27.23	38	P	P	16 19 20.5	-1.6
	baz=267						
SCRK	Sand Creek	27.34	51	P	P	16 19 22.3	-1.0
SCRK				IAmb	IAmb	16 19 24.2	
	comp=Z,7.2nm,0.9s						
SCRK	Sand Creek	27.34	51	P	P	16 19 21.9	-1.4
	baz=278,SNR=5.4						
N25K	Chitina, Valde	27.47	56	P	P	16 19 23.0	-1.4
	baz=282						
I26K	Coal Creek Min	27.55	48	P	P	16 19 23.4	-1.6
	baz=276						
BMRM	Bremner River	27.60	57	P	P	16 19 24.3	-1.3
	baz=283						
L26K	Log Cabin Wild	27.77	52	P	P	16 19 25.8	-1.3
	baz=280						
KAIM	Kayak Island	27.94	59	P	P	16 19 26.8	-1.7
	baz=285						
E27K	Coleen River	27.98	41	P	P	16 19 27.1	-1.7
	baz=272						
G27K	Doyon Strip	28.02	44	P	P	16 19 27.5	-1.7
	baz=274						
M26K	Nabesna, AK	28.05	54	P	P	16 19 28.5	-1.0
	baz=282						
H27K	Steamboat Moun	28.12	45	IAmb	IAmb	16 19 37.5	
	comp=Z,7.5nm,1.1s						
H27K	Steamboat Moun	28.12	45	P	P	16 19 29.0	-1.1
	baz=276						
I27K	Kandik River	28.15	47	P	P	16 19 29.2	-1.2
	baz=277						
K27K	Chicken	28.17	50	P	P	16 19 31.1	+0.6
K27K				IAmb	IAmb	16 19 32.3	
	comp=Z,6.1nm,0.9s						
D27M	Malcolm River	28.19	39	IAmb	IAmb	16 19 37.1	
	comp=Z,4.5nm,1.0s						
D27M	Malcolm River	28.19	39	P	P	16 19 29.5	-1.2
	baz=271						
MCARA	McCarthy VSAT	28.25	56	P	P	16 19 30.5	-0.8
	baz=284						

CRQE	Cirque	28.37	57	P	P	16 19 30.7	-1.8
	baz=285						
L27K	Beaver Creek,	28.45	52	IAmb	IAmb	16 19 35.6	
	comp=Z,5.2nm,0.8s						
L27K	Beaver Creek,	28.45	52	P	P	16 19 32.3	-0.7
	baz=281,SNR=5.2						
M27K	Edge Creek, AK	28.57	54	P	P	16 19 33.4	-0.8
	baz=283						
F28M	Old Crow	28.66	42	P	P	16 19 36.3	+1.4
F28M	Old Crow	28.66	42	P	P	16 19 34.1	-0.8
	baz=275						
E28M	Babbage River	28.73	40	IAmb	IAmb	16 19 44.0	
	comp=Z,11nm,1.5s						
E28M	Babbage River	28.73	40	P	P	16 19 34.6	-0.8
	baz=273						
I28M	Miner Creek	28.87	47	P	P	16 19 36.7	-0.2
	baz=278						
D28M	Stokes Point	28.98	39	P	P	16 19 37.3	-0.3
	baz=272						
BVCY	Beaver Creek	29.02	53	P	P	16 19 38.0	-0.1
	baz=283						
CTG	Chitna Glacier	29.15	56	P	P	16 19 39.3	-0.1
	baz=285						
DAWY	Dawson	29.33	50	P	P	16 19 39.8	-1.1
	baz=281						
E29M	Blow River	29.34	41	IAmb	IAmb	16 19 46.9	
	comp=Z,8.3nm,1.4s						
E29M	Blow River	29.34	41	P	P	16 19 40.0	-0.9
	baz=275						
YUK3	Moose Creek	29.35	54	P	P	16 19 40.3	-1.0
	baz=285						
H29M	Whitestone	29.40	45	P	P	16 19 42.9	+1.5
H29M				IAmb	IAmb	16 19 48.6	
	comp=Z,6.4nm,1.0s						
H29M	Whitestone	29.40	45	P	P	16 19 40.8	-0.6
	baz=278						
G29M	Pine Creek	29.44	44	P	P	16 19 42.8	+1.0
G29M				IAmb	IAmb	16 19 49.4	
	comp=Z,9.9nm,1.0s						
G29M	Pine Creek	29.44	44	P	P	16 19 40.7	-1.1
	baz=277						
KSRS	Korea Array	29.54	246	LR	LR	16 31 52.3	
	comp=Z,31nm,18.5s,baz=55,slow=37						
I29M	Ogilvie Camp,	29.55	47	P	P	16 19 42.0	-0.8
	baz=280						
O28M	Mount Upton	29.74	56	P	P	16 19 44.4	-0.4
	baz=286						
J29N	Klondike Camp	29.76	49	P	P	16 19 44.1	-0.6
	baz=282						
YUK8	Steele Glacier	29.80	55	P	P	16 19 44.2	-1.1
	baz=286						
PINM	Pinnacle	29.91	58	P	P	16 19 45.1	-0.9
	baz=288						
EPYK	Eagle Plains	30.03	45	P	P	16 19 45.6	-1.4
	baz=279						
L29M	L29M	30.08	51	IAmb	IAmb	16 19 50.5	
	comp=Z,9.2nm,0.9s						
L29M	L29M	30.08	51	P	P	16 19 46.6	-0.9
	baz=284						
M29M	Somme Creek	30.10	53	P	P	16 19 46.2	-1.5
	baz=285						
G30M	tAoh Zraii Nji	30.14	43	P	P	16 19 46.6	-1.4
	baz=279						
K29M	Barlow Dome	30.18	50	P	P	16 19 46.9	-1.6
	baz=283						
F30M	Barrier River	30.22	42	P	P	16 19 50.7	+2.1
F30M				IAmb	IAmb	16 20 00.5	
	comp=Z,8.7nm,1.1s						
F30M	Barrier River	30.22	42	P	P	16 19 47.5	-1.1
	baz=278						
YUK4	Talbot Arm	30.30	55	P	P	16 19 49.0	-0.7
	baz=286						
I30M	Mount Dempster	30.38	47	IAmb	IAmb	16 20 00.7	
	comp=Z,8.9nm,1.4s						
I30M	Mount Dempster	30.38	47	P	P	16 19 49.2	-1.1
	baz=282						
J30M	Hart River	30.53	48	P	P	16 19 50.5	-1.0
	baz=283						
YUK6	Outpost Mounta	30.55	56	P	P	16 19 50.6	-1.3
	baz=287						
O29M	Mount Kennedy	30.64	57	P	P	16 19 51.8	-0.8
	baz=288						
M30M	Minto, Yukon	30.81	52	P	P	16 19 53.0	-0.9
	baz=286						
G31M	Satah River	30.90	43	P	P	16 19 53.9	-0.7
	baz=280						
INK	Inuvik	30.96	40	IAmb	IAmb	16 20 05.5	
	comp=Z,5.6nm,1.2s						
INK	Inuvik	30.96	40	P	P	16 19 54.8	-0.4
	baz=279						
HYT	Haines Junctio	30.98	55	P	P	16 19 55.0	-0.7
	baz=288						
N30M	Aishikik Lake	30.99	54	P	P	16 19 54.4	-1.2
	baz=287						
F31M	Tsiigehtchic	31.02	42	IAmb	IAmb	16 19 58.9	
	comp=Z,8.3nm,1.2s						
F31M	Tsiigehtchic	31.02	42	P	P	16 19 54.9	-0.8
	baz=280						
H31M	Peel River	31.09	45	P	P	16 19 58.0	+1.6
H31M	Peel River	31.09	45	P	P	16 19 55.1	-1.2
	baz=282						
P29M	Windy Craggy	31.26	58	P	P	16 19 57.5	-0.5
	baz=290						
P30M	Million Dollar	31.46	57	P	P	16 19 58.7	-1.1
	baz=290						
N31M	Braeburn, Yuko	31.58	54	P	P	16 19 59.8	-0.9
	baz=288						
O30N	Mendenhall	31.66	55	P	P	16 20 00.3	-1.1
	baz=289						
PLBC	Pleasant Camp	31.97	58	P	P	16 20 04.0	-0.2
	baz=291						
M31M	Drury Creek, Y	31.99	52	P	P	16 20 03.6	-0.8
	baz=288						
SKAG	Skagway	32.47	57	P	P	16 20 08.2	-0.3
	baz=291						
S31K	Pelican	32.59	60	P	P	16 20 08.8	-0.7
	baz=293						
R31K	City Hall, Gus	32.66	59	P	P	16 20 09.7	-0.4
	baz=293						
N32M	Quiet Lake	32.92	54	P	P	16 20 11.6	-0.9
	baz=290						
A36M	Sachs Harbour	33.18	33	P	P	16 20 16.2	+1.7
A36M				IAmb	IAmb	16 20 21.2	
	comp=Z,4.1nm,0.9s						
A36M	Sachs Harbour	33.18	33	P	P	16 20 13.6	-0.9
	baz=280						
P32M	Atlin	33.19	56	P	P	16 20 14.8	0.0
	baz=292						
R32K	Eaglecrest	33.31	59	P	P	16 20 15.5	-0.4
	baz=294						
P33M	Teslin, Yukon	33.38	55	P	P	16 20 16.2	-0.4
	baz=292						
SIT	Sitka	33.40	61	P	P	16 20 16.4	-0.2
	baz=295						
S32K	Killisnoo	33.60	60	P	P	16 20 17.4	-1.0
	baz=295						
Q32M	Nakina River	34.11	57	P	P	16 20 21.9	-1.2
	baz=294						
C36M	Paulatuk	34.12	37	P	P	16 20 24.1	+1.4
C36M	Paulatuk	34.12	37	P	P	16 20 21.7	-1.1
	baz=285						
U33K	Whale Pass	34.91	62	P	P	16 20 29.4	-0.4
	baz=297						
S34M	Telegraph Cree	35.09	58	P	P	16 20 31.0	-0.4
	baz=296						
WRAK	Wrangell Islan	35.16	61	P	P	16 20 31.5	-0.4
	baz=297						
CRAG	Craig	35.21	63	P	P	16 20 32.3	0.0
	baz=298						
WTLY	Watson Lake, Y	35.27	54	P	P	16 20 32.8	-0.1
	baz=294						
T35M	Bob Quinn	35.94	59	P	P	16 20 37.9	-0.7
	baz=297						
V35K	Ketchikan	36.03	62	P	P	16 20 39.1	-0.3
	baz=299						
H11N2	WAKE ISLAND Hy	36.03	173	T	T	16 59 15.2	
	baz=356,slow=76,SNR=496						
H11N3	WAKE ISLAND Hy	36.05	173	T	T	16 58 50.4	
	baz=356,slow=76,SNR=450						
H11N1	WAKE ISLAND Hy	36.05	173	T	T	16 59 09.1	
	baz=356,slow=76,SNR=397						
U35K	Hyder	36.54	61	P	P	16 20 44.1	+0.3
	baz=299						
LIRD	Liard River Hi	36.80	54	P	P	16 20 46.2	+0.2
	baz=297						
TOAD	Toad River Com	37.46	54	P	P	16 20 51.5	-0.1
	baz=298						
YKA	Yellowknife Ar	40.31	45	P	P	16 21 16.6	+1.3
	comp=Z,0.6nm,0.6s,baz=301,slow=8.4,SNR=16						
	comp=Z,0.6nm,0.6s						
YKA	Yellowknife Ar	40.31	45	P	P	16 21 15.6	+0.3
DGZ	Jazzator, Alta	43.84	295	*i* P	P	16 21 43.4	-1.1
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SPITS	Spitsbergen Ar	44.82	351	P	P	16 21 52.3	+0.4
	comp=Z,3.2nm,0.5s,baz=80,slow=9.7,SNR=9.6						
	comp=Z,3.2nm,0.5s						
SPITS	Spitsbergen Ar	44.82	351	P	P	16 21 52.5	+0.7
SPITS				pmax	pmax		
	comp=Z,69nm,1.4s						
SPB2	Spitsbergen Ar	44.82	351	P	P	16 21 52.0	+0.2
BLKN	Baker Lake	46.16	36	P	P	16 22 03.1	+0.5
BLKN				IAmb	IAmb	16 22 04.0	
	comp=Z,3.6nm,0.6s						
KURK	Kurchatov	47.60	301	P	P	16 22 12.2	-1.8
KURK				IAmb	IAmb	16 22 15.9	
	comp=Z,3.4nm,1.1s						
KURK	Kurchatov	47.60	301	*i* P	P	16 22 12.5	-1.5
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURBB	Kurchatov Arra	47.70	301	P	P	16 22 13.2	-1.5
	comp=Z,0.9nm,0.5s,baz=56,slow=7.8,SNR=8.0						
	comp=Z,0.9nm,0.5s						
MKAR	Makanchi Array	48.34	295	P	P	16 22 17.4	-2.4
	comp=Z,0.3nm,0.5s,baz=45,slow=6.2,SNR=5.8						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	48.34	295	P	P	16 22 17.6	-2.2
MKAR	Makanchi Array	48.34	295	*e*P	P	16 22 18.6	-1.2
MAKZ	Makanchi	48.49	295	P	P	16 22 19.0	-1.9
MAKZ				IAmb	IAmb	16 22 21.6	
	comp=Z,3.3nm,1.1s						
MAKZ	Makanchi	48.49	295	P	P	16 22 19.0	-1.9
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.2s						
BVAR	Borovoye Array	49.92	308	P	P	16 22 30.4	-1.4
	comp=Z,0.4nm,0.4s,baz=50,slow=7.7,SNR=2.9						
	comp=Z,0.4nm,0.4s						
FCC	Fort Churchill	50.58	41	P	P	16 22 36.3	-0.3
FCC	Fort Churchill	50.58	41	P	P	16 22 36.3	-0.3
FCC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	ARCESS Array B	51.27	342	P	P	16 22 42.1	+0.4
	comp=Z,3.6nm,0.9s,baz=31,slow=5.7,SNR=5.1						
	comp=Z,3.6nm,0.9s						
ARCES	ARCESS Array B	51.27	342	P	P	16 22 42.6	+0.9
ARCES	ARCESS Array B	51.27	342	*e*P	P	16 22 44.5	+2.7
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARTI	Arti	52.57	317	*i* P	P	16 22 51.3	-0.3
ARTI				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KIRV	Kirov	54.16	324	*i* P	P	16 23 03.0	-0.2
PDAR	Pinedale Array	55.06	64	P	P	16 23 11.4	+1.1
	comp=Z,0.2nm,0.5s,baz=0.1,slow=2.5,SNR=6.3						
	comp=Z,0.2nm,0.5s						
PDAR	Pinedale Array	55.06	64	P	P	16 23 11.6	+1.3
AAK	Ala-Archa	55.22	296	LR	LR	16 46 53.0	
	comp=Z,60nm,21.8s,baz=194,slow=36						
AAK	Ala-Archa	55.22	296	*i* P	P	16 23 10.8	-0.6
AAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KLMR	Klimovskoe	55.43	330	*e*P	P	16 23 10.4	-2.0
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.6s						
WSHM	Spangler Hills	56.09	75	P	P	16 23 19.0	+1.4
WSHM				IAmb	IAmb	16 23 37.1	
	comp=Z,2.0nm,0.7s						
KKAR	Karatay Array	56.88	299	P	P	16 23 21.4	-1.7
KKAR	Karatay Array	56.88	299	P	P	16 23 21.4	-1.7
AB31	Akbulak array	57.21	310	P	P	16 23 24.6	-0.7
AB31				IAmb	IAmb	16 23 25.0	
	comp=Z,3.7nm,1.5s						
ABKAR	Akbulak array	57.21	310	P	P	16 23 23.5	-1.7
FIA1	FINESS Array S	58.31	337	P	P	16 23 32.7	-0.1
FINES	FINESS Array B	58.31	337	P	P	16 23 33.0	+0.2
	comp=Z,6.2nm,0.6s,baz=35,slow=7.8,SNR=68						
	comp=Z,6.2nm,0.6s						
FINES	FINESS Array B	58.31	337	P	P	16 23 32.9	+0.2
CMAR	Chiang Mai Arr	60.10	259	P	P	16 23 45.8	0.0
	comp=Z,0.4nm,0.4s,baz=30,slow=8.1,SNR=4.2						
CMAR				PcP	PcP	16 24 31.8	+0.3
	comp=Z,0.8nm,0.5s,baz=17,slow=2.7,SNR=7.4						
	comp=Z,0.4nm,0.4s						
CMAR	Chiang Mai Arr	60.10	259	P	P	16 23 44.2	-1.6
OBN	Obninsk	61.10	328⇑	*e*P	P	16 23 55.0	+3.0
OBN				*e*		16 24 37.0	
OBN				*e*		16 26 03.9	
OBN				*e*S	PnS	16 32 32.3	+8.4
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,45nm,15.0s						
NC204	NORSAR Array S	61.29	345	P	P	16 23 52.9	-0.5
NB2	NORSAR Subarra	61.45	345	P	P	16 23 54.0	-0.4
	comp=Z,1.8nm,0.8s,baz=20,slow=6.9						
NOA	NORSAR Array B	61.45	345	P	P	16 23 54.2	-0.2
	comp=Z,0.6nm,0.5s,baz=20,slow=7.0,SNR=6.2						
	comp=Z,0.6nm,0.5s						
HFS	Hagfors	61.91	343	P	P	16 23 56.9	-0.7
	comp=Z,1.8nm,0.7s,baz=48,slow=4.6,SNR=11						
	comp=Z,1.8nm,0.7s						
PABE	Paberze	64.15	335	P	P	16 24 11.8	-0.6
AK21	Malin Array Si	67.10	330	P	P	16 24 30.7	-0.8
AK22	Malin Array Si	67.11	330	P	P	16 24 30.7	-0.9
AK04	Malin Array Si	67.11	330	P	P	16 24 30.7	-0.9
AKASG	Malin Array Be	67.12	330	P	P	16 24 31.1	-0.5
	comp=Z,1.3nm,0.3s,baz=31,slow=5.9,SNR=7.5						
	comp=Z,1.3nm,0.3s						
AKBB	Malin Array Si	67.12	330	P	P	16 24 30.8	-0.8
AKBB	Malin Array Si	67.12	330	*i* P	P	16 24 31.8	+0.2
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKBB	Malin Array Si	67.12	330	P	P	16 24 30.8	-0.8
KIEV	Kiev	67.13	330	P	P	16 24 30.7	-1.0
KIEV	Kiev	67.13	330	P	P	16 24 30.7	-1.0
KIEV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIEV	Kiev	67.13	330	P	P	16 24 30.8	-0.9
	comp=Z,24nm,2.6s						
AK11	Malin Array Si	67.15	330	P	P	16 24 31.2	-0.7
AK19	Malin Array Si	67.16	330	P	P	16 24 31.3	-0.6
AK02	Malin Array Si	67.16	330	P	P	16 24 31.3	-0.6
AK08	Malin Array Si	67.17	330	P	P	16 24 31.3	-0.7
AK09	Malin Array Si	67.18	330	P	P	16 24 31.4	-0.6
AK16	Malin Array Si	67.18	330	P	P	16 24 31.4	-0.6
AK17	Malin Array Si	67.18	330	P	P	16 24 31.4	-0.6
AK12	Malin Array Si	67.19	330	P	P	16 24 31.5	-0.6
AK05	Malin Array Si	67.20	330	P	P	16 24 31.5	-0.6
AK10	Malin Array Si	67.20	330	P	P	16 24 31.6	-0.6
AK14	Malin Array Si	67.21	330	P	P	16 24 31.6	-0.7
AK06	Malin Array Si	67.23	330	P	P	16 24 31.7	-0.7
AK13	Malin Array Si	67.24	330	P	P	16 24 31.8	-0.6
AK07	Malin Array Si	67.26	330	P	P	16 24 31.9	-0.6
TX31	Lajitas Ar. Si	68.35	70	P	P	16 24 40.6	+0.7
TX31				IAmb	IAmb	16 24 59.3	
	comp=Z,2.2nm,1.2s						
TXAR	Lajitas Array	68.36	70	P	P	16 24 41.5	+1.5
	comp=Z,0.3nm,0.4s,baz=296,slow=5.1,SNR=18						
	comp=Z,0.3nm,0.4s						
KIV	Kislovodsk	68.51	318	*e*P	P	16 24 40.0	-0.7
KIV				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KBZ	Khabaz	68.62	317	P	P	16 24 41.9	+0.7
	comp=Z,2.0nm,0.8s,baz=110,slow=2.0,SNR=5.7						
	comp=Z,2.0nm,0.8s						
KBZ	Khabaz	68.62	317	*e*P	P	16 24 40.8	-0.4
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
EKA	Eskdalemuir Ar	68.74	351	P	P	16 24 42.2	+0.4
	comp=Z,0.3nm,0.5s,baz=20,slow=4.5,SNR=6.4						
	comp=Z,0.3nm,0.5s						
D62A	Allapoint, All	68.84	35	P	P	16 24 42.5	-0.1
E62A	Clayton Lake	69.09	36	P	P	16 24 43.3	-0.8
CLL	Collm	70.43	340	*e*P	P	16 24 52.0	-0.3
BURAR	Bucovina Array	71.03	331	P	P	16 24 55.6	-0.6
BURAR				IAmb	IAmb	16 24 57.1	
	comp=Z,3.0nm,0.8s						
GERES	GERESS Array B	72.64	339	P	P	16 25 06.2	+0.5
	comp=Z,0.4nm,0.5s,baz=25,slow=7.2,SNR=3.5						
	comp=Z,0.4nm,0.5s						
M65A	Busby, Falmout	73.15	39	P	P	16 25 07.0	-1.8
	baz=332						
LRAL	Lakeview Retre	73.70	55	P	P	16 25 12.3	+0.1
BRTR	Keskin Array B	75.51	322	P	P	16 25 21.6	-1.1
	comp=Z,1.0nm,0.6s,baz=65,slow=3.3,SNR=5.5						
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	75.51	322	P	P	16 25 21.4	-1.4
NRCA	Norcia	78.50	338	P	P	16 25 40.1	+0.6
WRA	Warramunga Arr	79.03	207	P	P	16 25 43.4	+1.0
	comp=Z,1.1nm,0.6s,baz=21,slow=5.9,SNR=4.7						
	comp=Z,1.1nm,0.6s						
WRA	Warramunga Arr	79.03	207	P	P	16 25 42.2	-0.2
WRA	Warramunga Arr	79.03	207	*e*P	P	16 25 45.8	+3.4
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AS31	Alice Springs	82.70	206	P	P	16 26 02.1	+0.2
AS31				IAmb	IAmb	16 26 15.3	
	comp=Z,1.2nm,0.3s						
ASAR	Alice Springs	82.70	206	P	P	16 26 02.9	+0.9
	comp=Z,0.9nm,0.6s,baz=15,slow=5.0,SNR=20						
	comp=Z,0.9nm,0.6s						
ASAR	Alice Springs	82.70	206	P	P	16 26 01.7	-0.2
ESDC	Sonseca Array	84.33	350	LR	LR	17 04 33.1	
	comp=Z,38nm,19.9s,baz=70,slow=36						
PLCA	Paso Flores	142.58	89	PKP	PKPdf	16 33 11.4	+0.5
	comp=Z,2.0nm,1.1s,baz=355,slow=5.3,SNR=3.5						
PLCA	Paso Flores	142.58	89		PKPdf	16 33 10.5	-0.3
QSPA	South Pole Qui	145.42	180		PKPdf	16 33 14.2	-0.8
TRQA	Tornquist	145.56	78		PKPab	16 33 16.6	0.0
TRQA	Tornquist	145.56	78	PKP2	PKPab	16 33 16.6	0.0

IDC 25 16:14:12.7±7.1**,22°.31S**×**173°.72E,h0**^{km}**,mb3.6**/2**, mbtmp3.6**/2**,Error ellipse: s-maj=301.0km s-min=62.3km az=150.0,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	36.60	260	P	P	16 21 20.4	-0.4
	0.5nm,0.9s,baz=83,slow=9.3,SNR=5.3						
	0.5nm,0.9s						
CMAR	Chiang Mai Arr	83.57	293	P	P	16 26 43.9	+0.6
	0.8nm,1.0s,baz=107,slow=5.9,SNR=5.9						
	0.8nm,1.0s						
GERES	GERESS Array B	149.12	334	PKPbc	PKPbc	16 34 02.1	-0.9
	1.1nm,0.9s,baz=60,slow=4.0,SNR=4.6						

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*IDC **25** 16:25:42.5±2.3,50°.27N×129°.25W,h0^{km},mb3.9/2, mbtmp3.6/8,ML3.4/6,MS3.6/3,Error ellipse: s-maj=38.6km s-min=13.1km az=79.0*

*NEIC **25** 16:25:44.4±1.8,50°.46N±0°.09×129°.4W±0°.2,h10^{km}±2^{km}, mb4.0/48,Error ellipse: s-maj=19.3km s-min=11.4km az=232.0*

ISC 25 16:25:43.6±0.9**,50°.37N**±0°.07×**129°.36W**±0°.09**,h10**^{km}**, n101,**σ1^{s}**16**/92**,mb4.0**/8**,MS3.4**/3**,Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBB	Bella Bella	1.98	23	Pn	Pn	16 26 16.9	-0.2
	54nm,0.3s,baz=205,slow=6.8,SNR=725						
BBB				Sn	Sn	16 26 41.5	-0.3
	76nm,0.3s,baz=311,slow=22,SNR=14						
	101nm,0.3s						
BBB	Bella Bella	1.98	23		Pn	16 26 16.7	-0.4
HG4B	Hotspring	2.24	330	Pn	Pn	16 26 16.0	-4.8
CBB	Campbell River	2.59	96	Pn	Pn	16 26 24.5	-1.0
OZB	Mount Ozzard	2.88	118	Pn	Pn	16 26 25.7	-3.8
MOBC	Moresby Island	3.22	331	Pn	Pn	16 26 29.5	-4.6
DIB	Dawson Inlet,	3.43	327	Pn	Pn	16 26 31.6	-5.4
CLRS	Cowichan Lake	3.74	113	Pn	Pn	16 26 39.8	-1.5
C03A	Quillayute Air	3.97	126	Pn	Pn	16 26 43.3	-1.1
RUBB	Prince Rupert	4.00	352	Pn	Pn	16 26 44.0	-0.8
PGC	Sidney	4.22	112	Pn	Pn	16 26 46.8	-1.0
A04D	Lummi Island	4.63	108	Pn	Pn	16 26 54.5	+0.9
LLLB	Lillooet	4.78	84	Pn	Pn	16 26 56.5	+0.9
GNW	Green Mountain	5.14	121	Pn	Pn	16 27 00.6	+0.2
V35K	Ketchikan	5.15	345	Pn	Pn	16 26 57.8	-2.8
LON	Longmire	6.18	123	Pn	Pn	16 27 15.9	+1.0
MXC	Moxie City	7.12	119	Pn	Pn	16 27 27.9	+0.1
H04D	Lebanon	7.37	140	Pn	Pn	16 27 32.1	+0.9
E07A	Sunnyside	7.38	117	Pn	Pn	16 27 32.0	+0.7
H04A	Detroit Lake	7.48	137	Pn	Pn	16 27 32.6	0.0
NEW	Newport	8.27	100	PKP	Pn	16 27 44.6	+1.1
	2.7nm,0.4s,baz=296,slow=12,SNR=23						
NEW	Newport	8.27	100	Pn	Pn	16 27 44.1	+0.6
J05D	Fort Rock, OR	9.01	139	Pn	Pn	16 27 55.8	+2.0
F10A	Beach Ranch, E	9.22	114	Pn	Pn	16 27 56.0	-0.6
PLID	Pearl Lake	10.43	115	Pn	Pn	16 28 14.2	+0.9
BCYI	Bear Canyon	12.39	113	Pn	Pn	16 28 40.5	+0.3
MCMT	McKenzie Canyo	12.44	110	Pn	Pn	16 28 38.0	-2.7
PNTR	Pine Nut	13.23	145	Pn	Pn	16 28 54.5	+2.9
YHH	Holmes Hill	13.67	107	Pn	Pn	16 28 58.7	+1.1
MOOW	Moose Ponds	14.29	110	Pn	Pn	16 29 07.6	+1.5
NVAR	Mina Array Bea	14.30	142	Pn	Pn	16 29 05.8	-0.3
	0.1nm,0.3s,baz=333,slow=9.8,SNR=4.1						
	0.6nm,0.8s						
NVAR	Mina Array Bea	14.30	142		Pn	16 29 06.0	-0.1
BCAR	Beaver Creek A	14.40	337	P	P	16 29 16.6	+2.4
L27K	Beaver Creek,	14.40	337	P	P	16 29 15.0	+0.7
YKA	Yellowknife Ar	14.58	28	Pn	Pn	16 29 07.9	-1.8
	0.1nm,0.3s,baz=219,slow=13,SNR=7.5						
	0.2nm,0.7s						
YKA	Yellowknife Ar	14.58	28	Pn	Pn	16 29 09.5	-0.2
YKAW1	Yellowknife Wh	14.61	28	Pn	Pn	16 29 10.2	+0.1
YKAW3	Yellowknife Wh	14.63	28	Pn	Pn	16 29 09.9	-0.5
DAWY	Dawson	14.73	342	P	P	16 29 18.9	+0.9
K27K	Chicken	15.28	338	P	P	16 29 25.7	+1.7
K27K				IAmb	IAmb	16 29 26.8	
	comp=Z,7.5nm,1.2s						
PD31	Pinedale Array	15.57	112	P	P	16 29 27.1	-0.4
PD31				IAmb	IAmb	16 29 32.1	
	comp=Z,11nm,1.5s						
PDAR	Pinedale Array	15.57	112	Pn	Pn	16 29 23.9	+0.7
	comp=Z,0.1nm,0.3s,baz=306,slow=10,SNR=10						
	comp=Z,1.0nm,0.8s						
PDAR	Pinedale Array	15.57	112	P	P	16 29 26.3	-1.2
SCRK	Sand Creek	15.71	336	P	P	16 29 29.7	+0.8
SCRK				IAmb	IAmb	16 29 31.6	
	comp=Z,12nm,1.0s						
K24K	Donnelly Dome	16.07	333	P	P	16 29 34.4	+1.6
K24K				IAmb	IAmb	16 29 36.4	
	comp=Z,16nm,1.0s						
I28M	Miner Creek	16.09	344	P	P	16 29 32.7	-0.3
PSUT	Pine Spring	16.16	131	P	P	16 29 35.0	+0.8
J25K	Salcha River,	16.59	335	P	P	16 29 39.3	+0.7
G31M	Satah River	16.79	353		P	16 29 41.9	+1.3
G31M				IAmb	IAmb	16 29 43.4	
	comp=Z,17nm,1.2s						
ILAR	Eielson Array	17.12	334	P	P	16 29 44.0	-0.4
	comp=Z,0.1nm,0.3s,baz=148,slow=10,SNR=29						
	comp=Z,2.6nm,0.9s						
ILAR	Eielson Array	17.12	334		P	16 29 46.1	+1.7
FFC	Flin Flon	17.16	65	Pn	Pn	16 29 42.3	-0.9
FFC				IAmb	IAmb	16 29 48.7	
	comp=Z,16nm,1.4s						
WRH	Wood River Hil	17.25	332		P	16 29 47.1	+1.3
WRH				IAmb	IAmb	16 29 49.3	
	comp=Z,14nm,1.2s						
M20K	Styx River	17.44	320		P	16 29 47.8	-0.2
M20K				IAmb	IAmb	16 30 22.0	
	comp=Z,12nm,1.4s						
F30M	Barrier River	17.59	352		Pn	16 29 49.0	+0.5
PPLA	Purkeypile	17.62	324		P	16 29 50.0	0.0
PPLA				IAmb	IAmb	16 29 58.0	
	comp=Z,17nm,1.4s						
BPAW	Bear Paw Mtn.	17.92	328		P	16 29 53.4	+0.2
INK	Inuvik	18.11	355	P	P	16 29 55.5	+0.3
	baz=192,slow=11,SNR=4.5						
	comp=Z,2.2nm,1.0s						
E29M	Blow River	18.55	350	P	Pn	16 30 01.4	+1.1
E29M				IAmb	IAmb	16 30 02.7	
	comp=Z,14nm,1.4s						
BMAR	Burnt Mountain	18.73	342	P	Pn	16 30 04.0	+1.6
G24K	Hadweenzic Riv	18.77	337	P	P	16 30 02.9	+0.3
I21K	Tanana	18.95	330	P	Pn	16 30 05.4	+0.2
E28M	Babbage River	18.95	348	P	Pn	16 30 05.3	+0.1
M17K	Holitna River	19.06	316	P	P	16 30 05.5	-0.3
L18K	Granite Mounta	19.07	319	P	P	16 30 05.4	-0.5
F25K	Christian Rive	19.08	341	P	Pn	16 30 07.5	+0.7
F25K				IAmb	IAmb	16 30 09.4	
	comp=Z,15nm,1.4s						
H22K	Ishtalitna Cre	19.24	332	P	Pn	16 30 09.1	+0.4
G23K	Bananza Creek	19.44	335	P	P	16 30 10.6	+0.7
G23K				IAmb	IAmb	16 30 14.2	
	comp=Z,8.0nm,1.1s						
J19K	Poorman	19.51	324	P	P	16 30 10.7	+0.1

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J19K                                IAmb    IAmb    16 30 14.2
          comp=Z,8.9nm,1.1s
H21K  Melozitna Rive     19.52 330  P       P       16 30 11.2 +0.4
H21K                                IAmb    IAmb    16 30 15.1
          comp=Z,9.4nm,1.4s
D27M  Malcolm River      19.74 348  P       P       16 30 13.9 +0.7
K17K  Iditarod           19.96 319  P       P       16 30 15.2 -0.3
E24K  Your Creek         20.10 339  P       Pn      16 30 18.6 -0.3
E24K                                IAmb    IAmb    16 30 24.6
          comp=Z,10.0nm,1.4s
G21K  Allakaket          20.30 332  P       P       16 30 19.8 +0.6
G21K                                IAmb    IAmb    16 30 23.7
          comp=Z,12nm,1.1s
E23K  Chandalar          20.36 338  P       P       16 30 20.9 +1.0
E23K                                IAmb    IAmb    16 30 22.9
          comp=Z,6.9nm,0.9s
S22A  4UR Ranch, Cre     20.43 120  P       Pn      16 30 22.8 -0.4
J17K  VABM Dome          20.57 321  P       P       16 30 21.6 -0.6
H19K  Roundabout Mou     20.65 327  P       P       16 30 24.2 +1.2
TOLK  Toolik Lake Re     20.80 339  P       P       16 30 26.0 +1.3
TOLK                                IAmb    IAmb    16 30 27.7
          comp=Z,9.1nm,0.9s
H18K  Honhosa River      21.13 325  P       P       16 30 28.6 +0.4
H18K                                IAmb    IAmb    16 30 29.3
          comp=Z,8.2nm,1.1s
ULM   Lac du Bonnet      21.29  77  P       P       16 30 30.8 +0.8
          comp=Z,14nm,0.8s,baz=295,slow=11,SNR=10
ULM                                 LR      LR      16 38 23.9
          comp=Z,156nm,20.1s,baz=254,slow=36
          comp=Z,14nm,0.8s
ULM   Lac du Bonnet      21.29  77  P       P       16 30 30.8 +0.8
L14K  Kuka Creek         21.43 314  P       P       16 30 27.9 -3.5
C24K  Franklin Bluff     21.48 342  P       P       16 30 32.8 +0.9
H17K  Granite Mounta     21.60 324  P       P       16 30 32.1 -1.1
D22K  Ayikyak River      21.72 337  P       P       16 30 34.9 +0.4
F19K  Shaleruckik Mo     21.84 330  P       P       16 30 34.9 -0.8
F19K                                IAmb    IAmb    16 30 36.3
          comp=Z,8.7nm,1.2s
FCC   Fort Churchill     21.88  54  P       P       16 30 36.1 -0.1
FCC                                 IAmb    IAmb    16 30 44.7
          comp=Z,7.1nm,1.2s
E19K  Redstone River     22.04 331  P       P       16 30 39.8 +1.9
E19K                                IAmb    IAmb    16 30 48.0
          comp=Z,6.8nm,1.1s
EPLO  Experimental L     22.77  78  P       P       16 30 46.1 +0.1
D19K  Kuna River         22.93 333  P       P       16 30 47.0 -0.5
D19K                                IAmb    IAmb    16 30 49.3
          comp=Z,4.2nm,1.0s
ECSD  EROS Data Cent     23.14  94  P       P       16 30 49.9 +0.1
C18K  Utukok River       23.94 332  P       P       16 30 56.7 -0.8
C18K                                IAmb    IAmb    16 30 58.8
          comp=Z,4.1nm,0.8s
C16K  Lisburne Hills     25.07 329  P       P       16 31 07.4 -0.3
TXAR  Lajitas Array      28.57 128  P       P       16 31 40.2 +0.5
          comp=Z,0.4nm,0.9s,baz=324,slow=6.2,SNR=3.5
          comp=Z,0.4nm,0.9s
TXAR  Lajitas Array      28.57 128  P       P       16 31 40.3 +0.6
SADO  Sadowa             33.80  80  LR      LR      16 46 46.6
          comp=Z,162nm,20.4s,baz=327,slow=38
CMIG  Matias Romero      43.18 128  LR      LR      16 54 02.2
          comp=Z,46nm,18.4s,baz=186,slow=40
H11N2 WAKE ISLAND Hy     58.36 263  T       T       17 38 40.8
          baz=42,slow=76,SNR=21
H11N3 WAKE ISLAND Hy     58.36 263  T       T       17 38 35.6
          baz=42,slow=76,SNR=22
H11N1 WAKE ISLAND Hy     58.38 263  T       T       17 38 38.0
          baz=42,slow=76,SNR=16
```

IDC 25 16:27:32.8±4.2**,21°95S**×**173°47E,h0**^{km}**,mb3.7**/2**,**
mbtmp3.7/3**,ML2.7**/1**,Error ellipse: s-maj=197.5km**
s-min=40.9km az=158.0,Vanuatu Islands region

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op      ISC     h  m  s    ISC
DZM   Mont Dzumac         6.52 268  Pn      Pn      16 29 11.2 +1.2
          0.1nm,0.3s,baz=103,slow=22,SNR=1.6
          4.6nm,0.8s
ASAR  Alice Springs      36.43 260  P       P       16 34 38.9 -0.6
          0.5nm,0.9s,baz=82,slow=9.3,SNR=6.2
          0.5nm,0.9s
CMAR  Chiang Mai Arr     83.22 293  P       P       16 40 01.6 +0.1
          0.4nm,0.3s,baz=143,slow=4.3,SNR=5.1
          0.4nm,0.3s
EKA   Eskdalemuir Ar    146.57 357  PKPbc   PKPdf   16 47 14.8 +0.4
          0.7nm,0.7s,baz=356,slow=2.7,SNR=4.2
GERES GERESS Array B    148.70 334  PKPbc   PKPbc   16 47 21.8 -0.3
          1.3nm,0.8s,baz=49,slow=2.5,SNR=5.4
```

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*IDC **25** 16:30:04.5±1.9,3°04S×129°08E,h0^{km},mb3.8/3,*
mbtmp3.9/5,ML3.6/2,Error ellipse: s-maj=117.5km
s-min=23.1km az=72.0
*DJA **25** 16:30:08.4±0.2,4°S±2°×12°8E±°,h10^{km},M4.1/12,mB4.8/1,*
mb4.6/2,MLv3.9/12,Mw(mB)4.0/1
ISC 25 16:30:08.3±0.9**,3°56S**±0°06×**128°23E**±0°04**,h16**^{km}±7^{km}**,**
n15,σ**1**^{s}**30**/17**,Seram**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op      ISC     h  m  s    ISC
AAI   Ambon               0.14 197  P       Pg      16 30 12.3 +0.1
AAI                                 S       Sg      16 30 15.3 +0.6
KRAI  Karang Ratu         0.28  34  P       Pg      16 30 13.3 -1.1
MSAI  Masohi              0.72  73  P       Pb      16 30 21.5 -1.0
NLAI  Namlea              1.18 285  P       Pn      16 30 30.0 -0.1
NLAI                                S       Sg      16 30 47.0 +0.6
BNDI  Bandanaira          1.92 120  P       Pn      16 30 41.0 +0.6
SANI  Sanana              2.70 304  P       Pn      16 30 52.2 +1.2
SWI   Sorong              4.04  49  P       Pn      16 31 11.1 +1.6
SWI                                 S       Sn      16 31 58.0 +1.6
SIJI  Sorong              4.04  49  P       Pn      16 31 11.1 +1.6
SIJI                                S       Sn      16 31 58.0 +1.5
FAKI  Fak Fak             4.06  81  P       Pn      16 31 10.8 +1.0
LUWI  Luwuk               6.00 294  P       Pn      16 31 38.2 +1.7
          717nm94nm,0.9s
FITZ  Fitzroy Crossi     14.68 190  Pn      P       16 33 43.6 +2.0
          0.2nm,0.3s,baz=0.0,slow=14,SNR=7.0
          1.2nm,0.5s
WRA   Warramunga Arr     17.34 160  P       Pn      16 34 09.0 -0.8
          0.2nm,0.3s,baz=345,slow=13,SNR=7.2
          2.4nm,1.0s
ASAR  Alice Springs      20.73 165  P       Pn      16 34 50.8 +0.1
          6.6nm,0.6s,baz=346,slow=9.7,SNR=111
          6.6nm,0.6s
MKAR  Makanchi Array     64.40 327  P       P       16 40 43.0 -0.7
          0.4nm,0.7s,baz=116,slow=5.5,SNR=4.7
          0.4nm,0.7s
KURBB Kurchatov Arra     68.67 329  P       P       16 41 09.5 -1.4
          0.7nm,0.6s,baz=130,slow=5.6,SNR=7.6
          0.7nm,0.6s
```

IDC 25 16:36:54.4±4.7**,21°81S**×**173°36E,h0**^{km}**,mb3.8**/3**,**
mbtmp3.8/3**,Error ellipse: s-maj=209.1km**
s-min=42.5km az=153.0,Vanuatu Islands region

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op      ISC     h  m  s    ISC
ASAR  Alice Springs      36.36 259  P       P       16 44 00.3 -0.3
          1.1nm,1.0s,baz=78,slow=9.1,SNR=6.1
          1.1nm,1.0s
WRA   Warramunga Arr     36.44 266  P       P       16 44 00.0 -1.2
          1.0nm,1.0s,baz=98,slow=8.3,SNR=3.1
          1.0nm,1.0s
CMAR  Chiang Mai Arr     83.07 293  P       P       16 49 23.9 +1.5
          1.2nm,0.9s,baz=136,slow=4.3,SNR=10
          1.2nm,0.9s
EKA   Eskdalemuir Ar    146.43 356  PKPbc   PKPdf   16 56 35.7 -0.1
          1.2nm,0.8s,baz=318,slow=3.4,SNR=3.7
GERES GERESS Array B    148.53 334  PKPbc   PKPbc   16 56 42.3 -1.0
          1.7nm,0.8s,baz=33,slow=3.2,SNR=10.0
```

IDC 25 16:39:18.4±6.6**,21°40S**×**173°26E,h0**^{km}**,mb3.6**/3**,**
mbtmp3.6/3**,Error ellipse: s-maj=269.8km**
s-min=55.5km az=150.0,Vanuatu Islands region

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op      ISC     h  m  s    ISC
ASAR  Alice Springs      36.34 259  P       P       16 46 23.3 -1.1
          0.9nm,0.9s,baz=74,slow=8.1,SNR=5.8
          0.9nm,0.9s
WRA   Warramunga Arr     36.38 265  P       P       16 46 25.0 +0.3
          0.6nm,0.9s,baz=98,slow=7.9,SNR=2.3
          0.6nm,0.9s
CMAR  Chiang Mai Arr     82.82 293  P       P       16 51 47.0 +1.8
          0.3nm,0.3s,baz=107,slow=4.0,SNR=2.7
          0.3nm,0.3s
GERES GERESS Array B    148.12 334  PKPbc   PKPdf   16 59 04.6 +1.6
          0.5nm,0.7s,baz=27,slow=1.5,SNR=3.8
```

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*IDC **25** 16:39:30.4±0.8,21°78S×173°51E,h0^{km},mb4.1/10,*
mbtmp4.2/12,ML3.5/2,MS4.7/1,Error ellipse:
s-maj=26.2km s-min=21.1km az=128.0
*NEIC **25** 16:39:33.1±2.0,22°0S±0°1×173°4E±0°1,h10^{km}±1^{km},*
mb4.5/20,Error ellipse: s-maj=22.9km s-min=14.5km
az=159.0
*GCMT **25** 16:39:35.2±0.3,21°99S±0°02×173°48E±0°02,h14^{km}±1^{km},*
MW5.0/97,Moment Tensor Solution. s34,c41; s97,c135;
Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.11±.18;
M$_{\theta\theta}$1.15±.13; M$_{\phi\phi}$1.96±.12; M$_{r\theta}$-0.98±.31; M$_{\theta\phi}$1.53±.07;
M$_{\phi r}$1.17±.26; Best double couple: M$_0$3.44200×10^{16}
NP1:φ$_s$58.00000°,δ46.00000°,λ-59.00000°. NP2:
φ$_s$197.00000°,δ52.00000°,λ-118.00000°. Principal axes:
T 3.1570, Plg3.0000°, Azm306.0000°; N 0.5690,
Plg22.0000°, Azm215.0000°; P -3.7260, Plg68.0000°,
Azm44.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function
ISC 25 16:39:36.2±0.5**,21°92S**±0°08×**173°39E**±0°09**,h40**^{km}**,n110,**
σ**0**^{s}**92**/104**,mb4.3**/18**,MS4.8**/3**,15C-11D,Vanuatu Islands**
region

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op      ISC     h  m  s    ISC
PINNC Pines Island,       5.55 262  Pn      Pn      16 40 56.0 -0.3
MSVF  Nonsavu             6.05  47  Pn      Pn      16 41 04.8 +1.6
DZM   Mont Dzumac         6.45 267  Pn      Pn      16 41 09.2 +0.5
          0.4nm,0.3s,baz=71,slow=20,SNR=4.8
          9.3nm,0.8s
DZM   Mont Dzumac         6.45 267  Pn      Pn      16 41 08.2 -0.6
URZ   Urewera            16.60 170  Pn      P       16 43 27.8 -0.2
          0.4nm,0.3s,baz=354,slow=8.0,SNR=3.5
          21nm,1.1s
BKZ   Black Stump Fm     17.39 172          P       16 43 39.2 +2.4
MRZ   Mangatainoka R     18.77 175  P       P       16 43 51.6 -0.3
MRZ                                 IAmb    IAmb    16 44 10.3
          comp=Z,37nm,1.2s
TUWZ  Tuamarina          19.46 179  P       Pn      16 44 00.9 +0.1
MSWZ  Moikau Station     19.50 176  P       Pn      16 44 01.1 -0.3
INZ   Inchbonnie         20.81 184  P       P       16 44 13.8 -0.2
INZ                                 IAmb    IAmb    16 44 19.4
          comp=Z,24nm,1.2s
WHZ   Wether Hill Ro     24.32 189  P       P       16 44 51.2 +1.2
TOO   Toolangi           28.67 231  P       P       16 45 28.6 -0.7
STKA  Stephens Creek     29.95 244  P       P       16 45 42.8 +2.1
          comp=Z,2.0nm,0.7s,baz=52,slow=5.4,SNR=3.6
          comp=Z,2.0nm,0.7s
WR8   Warramunga Arr     36.31 266  P       P       16 46 36.5 +0.2
WR8                                 IAmb    IAmb    16 46 38.2
          comp=Z,4.9nm,0.8s
AS31  Alice Springs      36.37 260  P       P       16 46 37.0 +0.2
ASAR  Alice Springs      36.37 260  P       P       16 46 37.8 +0.9
          comp=Z,1.9nm,0.7s,baz=78,slow=10.0,SNR=32
          comp=Z,1.9nm,0.7s
ASAR  Alice Springs      36.37 260  P       P       16 46 37.1 +0.2
WB0   Warramunga Arr     36.45 266  P       P       16 46 37.7 +0.2
WB0                                 IAmb    IAmb    16 46 39.3
          comp=Z,11nm,1.1s
WRA   Warramunga Arr     36.46 266  P       P       16 46 37.3 -0.3
          comp=Z,1.7nm,0.7s,baz=106,slow=13,SNR=10
          comp=Z,1.7nm,0.7s
WRA   Warramunga Arr     36.46 266  P       P       16 46 36.1 -1.5
H11S2 WAKE ISLAND Hy     40.69 350  T       T       17 30 33.6
          baz=171,slow=76,SNR=7.1
H11S3 WAKE ISLAND Hy     40.70 350  T       T       17 30 32.9
          baz=171,slow=76,SNR=6.2
H11S1 WAKE ISLAND Hy     40.71 350  T       T       17 30 31.8
          baz=171,slow=76,SNR=7.5
MTN   Manton Dam         41.21 275  P       P       16 47 18.1 +0.6
MTN                                 IAmb    IAmb    16 47 30.9
          comp=Z,10nm,1.0s
KNRA  Kununurra          42.59 270  P       P       16 47 29.8 +1.2
FITZ  Fitzroy Crossi     44.89 266  LR      LR      17 05 54.8
          comp=Z,1μm,21.9s,baz=90,slow=35
FITZ  Fitzroy Crossi     44.89 266  P       P       16 47 48.7 +1.5
FITZ                                IAmb    IAmb    16 47 54.6
          comp=Z,4.5nm,1.2s
MBWA  Marble Bar         49.70 260  P       P       16 48 25.8 +1.2
MORW  Morawa             51.83 250  P       P       16 48 40.8 +0.2
VNDA  Vanda              55.93 183  P       P       16 49 10.1 +0.4
          comp=Z,0.7nm,0.7s,baz=344,slow=8.5,SNR=6.1
          comp=Z,0.7nm,0.7s
VNDA  Vanda              55.93 183  P       P       16 49 09.5 -0.2
VNDA                                IAmb    IAmb    16 49 22.3
          comp=Z,5.0nm,1.2s
SBA   Scott Base         56.07 182  P       P       16 49 11.9 +1.2
TOLI2 Tolitoli           56.18 287  P       P       16 49 12.3 -0.2
TOLI2                               IAmb    IAmb    16 49 14.7
          comp=Z,6.1nm,0.8s
MJAR  Matsushiro Arr     66.97 330  P       P       16 50 23.6 -1.2
          comp=Z,2.4nm,0.9s,baz=146,slow=4.7,SNR=5.2
          comp=Z,2.4nm,0.9s
QSPA  South Pole Qui     68.15 180  P       P       16 50 31.2 -0.8
USRK  Ussuriysk Ar.      75.93 331  P       P       16 51 19.2 +0.6
          comp=Z,3.2nm,0.7s,baz=121,slow=3.4,SNR=15
          comp=Z,3.2nm,0.7s
KULM  Kulim              76.09 282  P       P       16 51 20.2 -0.1
KULM                                IAmb    IAmb    16 51 42.8
          comp=Z,6.9nm,1.0s
CMAR  Chiang Mai Arr     83.14 293  P       P       16 52 00.3 +1.9
          comp=Z,3.7nm,1.1s,baz=121,slow=3.9,SNR=12
          comp=Z,3.7nm,1.1s
TROLL Troll, Antarti     86.11 183  ⇑P      P       16 52 11.5 -1.2
          comp=Z,217nm,0.6s
SNAA  Sanae              86.62 181  ⇑P      P       16 52 13.7 -1.4
          comp=Z,45nm,0.7s
SNAA  Sanae              86.62 181  P       P       16 52 13.2 -2.0
SNAA                                IAmb    IAmb    16 52 35.8
          comp=Z,7.5nm,1.3s
VNA2  Neumayer--Watz     87.41 180  ⇑P      P       16 52 12.2 -6.7
          comp=Z,3.2nm,0.4s,baz=27,slow=34
NVAR  Mina Array Bea     87.72  47  P       P       16 52 22.3 +1.2
          comp=Z,0.9nm,0.8s,baz=248,slow=7.8,SNR=3.9
          comp=Z,0.9nm,0.8s
ILAR  Eielson Array      91.68  16  P       P       16 52 36.8 -1.9
          comp=Z,0.9nm,0.9s,baz=233,slow=6.7,SNR=4.2
          comp=Z,0.9nm,0.9s
SONM  Songino Array      91.71 322  P       P       16 52 38.1 -1.4
          comp=Z,0.9nm,0.9s,baz=147,slow=1.7,SNR=5.5
          comp=Z,0.9nm,0.9s
MKAR  Makanchi Array    106.38 314  Pdiff   Pdif    16 53 46.0 +0.5
          comp=Z,0.3nm,0.7s,baz=104,slow=5.1,SNR=4.9
BVAR  Borovoye Array    114.96 320  PKP     PKiKP   16 58 11.9 -0.6
          comp=Z,0.8nm,0.6s,baz=97,slow=1.6,SNR=5.6
ARTI  Arti              121.79 324  PKPdf   PKPdf   16 58 25.1 -0.4
ARCES ARCESS Array B    128.61 346  PKP     PKPdf   16 58 37.7 -0.6
          comp=Z,8.0nm,1.0s,baz=15,slow=6.5,SNR=5.9
ARCES ARCESS Array B    128.61 346          PKPdf   16 58 38.0 -0.3
TESR  Tescani           143.58 320  ⇑P      PKPdf   16 59 05.6 -1.0
ODBI  Odobesti          143.71 319  ⇓P      PKPdf   16 59 08.0 +1.1
BUR08 Bucovina Ar. S    143.81 323          PKPdf   16 59 07.6 +0.4
BURAR Bucovina Array    143.81 323          PKPdf   16 59 07.2  0.0
BURAR Bucovina Array    143.81 323  ⇑P      PKPdf   16 59 08.1 +1.0
ONER  Baraj Valea Uz    143.82 320  ⇑P      PKPdf   16 59 07.3 +0.2
PLOR  Plostina          143.92 319  ⇓P      PKPbc   16 59 05.8 +0.6
MLR   Muntele Rosu      144.53 319  ⇑P      PKPbc   16 59 07.5 +0.3
ARCR  ARCALIA           144.60 323  ⇑P      PKPdf   16 59 08.8 +0.4
DOPR  Dopca             144.61 320  ⇓P      PKPdf   16 59 08.6 +0.2
OJC   Ojcow             144.96 330          PKPab   16 59 07.9 -0.3
TNR   Turnu Rosu        145.44 321  ⇓P      PKPab   16 59 11.2 +1.0
MARR  Marisel-Cluj      145.53 323  ⇓P      PKPab   16 59 11.2 +0.6
HUMR  Humele            145.60 318  ⇑P      PKPdf   16 59 10.0 -0.2
DRGR                    145.69 323  ⇑P      PKPab   16 59 11.7 +0.6
LOT   Lotru             145.85 321  ⇓P      PKPab   16 59 12.0 +0.2
STEB  Steborice         146.08 331  ePKP    PKPab   16 59 12.4  0.0
OSTC  Ostas             146.28 334  ePKP    PKPab   16 59 13.4 +0.2
MORC  Moravsky Berou    146.29 331  ⇑P      PKPbc   16 59 12.9 +0.4
MORC  Moravsky Berou    146.29 331  ePKP    PKPab   16 59 13.3  0.0
DPC   Dobruska-Polom    146.39 333  ePKP    PKPab   16 59 13.5 -0.1
DPC                                 AMS     AMS     18 02 30.0
          comp=Z,200nm,22.8s
UPC   Upice             146.40 334  ePKP    PKPab   16 59 13.4 -0.2
GZR   Gura Zlata        146.46 321  ⇑P      PKPab   16 59 13.7 -0.4
MAUC  Maruska           146.46 331  ePKP    PKPab   16 59 13.9  0.0
PSZ   Piszkesteto       146.47 327  ⇑P      PKPdf   16 59 12.4 +0.7
EKA   Eskdalemuir Ar    146.53 356  PKPbc   PKPbc   16 59 12.6 -0.3
          comp=Z,1.4nm,0.6s,baz=347,slow=2.0,SNR=13
SIRR  Siria             146.58 323  ⇓P      PKPbc   16 59 13.7 +0.3
JAVC  Velka Javorina    146.90 330  ePKP    PKPab   16 59 16.2 +0.5
CLL   Collm             146.93 337  i PKPbc PKPbc   16 59 13.9 -0.2
          comp=Z,11nm,1.1s
HERR  Herculane         146.96 321  ⇑P      PKPbc   16 59 14.9 +0.5
PVCC  Panska Ves        146.97 335  ePKP    PKPab   16 59 15.1 -0.7
BZS   Buzias            146.99 322  ⇓P      PKPdf   16 59 07.8 -4.7
VRAC  Vranov            147.06 332  ⇓P      PKPbc   16 59 15.1 +0.4
VRAC  Vranov            147.06 332  ePKP    PKPab   16 59 15.6 -0.6
KRUC  Moravsky          147.33 332  ePKP    PKPbc   16 59 16.1 +0.7
PRU   Pruhonice         147.40 334  ePKP    PKPbc   16 59 16.0 +0.5
MDVR  Moldovita         147.43 321  ⇓P      PKPab   16 59 17.6 -0.3
ZVC   Zvikov            147.97 334  ePKP    PKPbc   16 59 17.8 +0.7
BOVS  Bovan             148.08 319  ⇓P      PKPdf   16 59 13.4 -1.0
MORH  Mrgy, Hungar      148.24 326  ⇑P      PKPbc   16 59 17.8 -0.1
RONA  Rosalia, Austr    148.37 330  i PKiKP PKiKP   16 59 19.1 -0.8
          comp=Z,4.8nm,0.7s
CONA  Conrad Observa    148.41 331  i PKP   PKPbc   16 59 19.0 +0.6
          comp=Z,6.4nm,0.8s
CKRC  Cesky Krumlov     148.41 333  ePKP    PKPbc   16 59 19.1 +0.8
KHC   Kasperske Hory    148.47 334  ePKP    PKPbc   16 59 19.1 +0.6
KHC                                 AMS     AMS     17 58 00.0
          comp=Z,300nm,22.4s
GERES GERESS Array B    148.64 334  PKPbc   PKPbc   16 59 19.2 +0.2
          comp=Z,3.6nm,0.7s,baz=27,slow=3.3,SNR=20
ARSA  Arzberg           149.06 330  ePKiKP  PKiKP   16 59 20.8 -0.5
          comp=Z,5.2nm,1.4s
MOA   Molln             149.17 332  i PKP   PKPbc   16 59 20.6 +0.3
          comp=Z,6.1nm,1.2s
BIOA  Bad Ischl, Aus    149.57 333  ePKP    PKPbc   16 59 20.9 -0.4
          comp=Z,2.0nm,0.6s
SOKA  Soboth            149.71 330  i PKP   PKPbc   16 59 21.5 -0.2
          comp=Z,4.8nm,1.0s,SNR=5.0
OBKA  Obir              150.06 330  ePKP    PKPbc   16 59 21.9 -0.7
          comp=Z,4.0nm,1.0s
LESA  Schwarzleotal     150.18 333  i PKP   PKPbc   16 59 22.4 -0.4
          comp=Z,7.9nm,1.2s
MYKA  Terra Mystica     150.38 331  i PKP   PKPbc   16 59 22.3 -1.0
          comp=Z,4.9nm,0.8s,SNR=5.4
WATA  Walderalm         150.71 334  i PKP   PKPbc   16 59 24.1  0.0
          comp=Z,5.0nm,0.8s,SNR=5.4
WTTA  Wattenberg        150.74 334  i PKP   PKPbc   16 59 24.5 +0.2
          comp=Z,7.5nm,0.7s,SNR=6.4
ABTA  Abfaltersbach     150.78 333  i PKP   PKPbc   16 59 23.9 -0.4
          comp=Z,7.1nm,0.7s,SNR=6.4
RETA  Reutte            150.90 335  i PKP   PKPbc   16 59 24.4 -0.1
          comp=Z,4.0nm,0.8s
SQTA  Sankt Quirin      150.95 335  i PKP   PKPbc   16 59 24.9 +0.2
          comp=Z,7.0nm,0.7s
FETA  Feichten          151.30 335  ePKiKP  PKiKP   16 59 26.0 -0.1
          comp=Z,9.1nm,1.0s
DAVA  Damuels           151.41 336  i PKP   PKPbc   16 59 25.5 -0.3
          comp=Z,3.0nm,0.6s
TORD  Torodi Ar. Bea    168.22 224  PKP     PKPdf   16 59 39.2 -0.1
          comp=Z,0.5nm,0.9s,baz=164,slow=1.4,SNR=4.1
TORD                                PKPab   PKPab   17 00 47.7 +0.1
          comp=Z,1.1nm,0.9s,baz=130,slow=4.4,SNR=4.3
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*IDC **25** 16:43:27.8±0.9,21°94S×173°28E,h0^{km},mb4.0/9,*
mbtmp4.0/10,ML3.2/1,Error ellipse: s-maj=31.4km
s-min=23.0km az=155.0
*NEIC **25** 16:43:28.9±1.1,22°1S±0°1×173°6E±0°1,h10^{km}±1^{km},*
mb4.6/16,Error ellipse: s-maj=20.6km s-min=14.8km
az=159.0
*GCMT **25** 16:43:29.9±0.3,21°89S±0°02×173°59E±0°02,h18^{km}±1^{km},*
MW4.9/78,Moment Tensor Solution. s11,c12; s78,c102;
Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.79±.15;
M$_{\theta\theta}$0.00±.12; M$_{\phi\phi}$0.78±.12; M$_{r\theta}$-0.43±.26; M$_{\theta\phi}$2.39±.09;
M$_{\phi r}$-0.34±.28; Best double couple: M$_0$2.46600×10^{16}
NP1:φ$_s$175.00000°,δ80.00000°,λ178.00000°. NP2:
φ$_s$265.00000°,δ88.00000°,λ10.00000°. Principal axes: T
2.8930, Plg8.0000°, Azm131.0000°; N -0.8540,
Plg80.0000°, Azm278.0000°; P -2.0390, Plg5.0000°,
Azm40.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function
ISC 25 16:43:33.1±0.5**,22°01S**±0°10×**173°46E**±0°09**,h40**^{km}**,n63,**
σ**1**^{s}**09**/57**,mb4.2**/16**,Southeast of Loyalty Islands**

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Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op      ISC     h  m  s    ISC
PINNC Pines Island,       5.60 263  Pn      Pn      16 44 54.1 +0.3
MSVF  Nonsavu             6.06  46  Pn      Pn      16 44 57.7 -2.7
DZM   Mont Dzumac         6.50 268  Pn      Pn      16 45 03.8 -2.6
          0.6nm,0.3s,baz=155,slow=14,SNR=7.6
          9.5nm,1.0s
DZM   Mont Dzumac         6.50 268  Pn      Pn      16 45 06.8 +0.4
MSWZ  Moikau Station     19.41 176  P       Pn      16 47 57.8 +0.5
LTZ   Lake Taylor        20.74 182  P       P       16 48 09.8 -0.5
LTZ                                 IAmb    IAmb    16 48 36.9
          comp=Z,31nm,1.2s
CTAO  Charters Tower     25.45 269  P       P       16 48 58.8 +1.3
CTAO                                IAmb    IAmb    16 49 10.2
          comp=Z,25nm,1.4s
WR8   Warramunga Arr     36.37 266  P       P       16 50 33.6 -0.2
AS31  Alice Springs      36.41 260  P       P       16 50 34.5 +0.3
ASAR  Alice Springs      36.41 260  P       P       16 50 33.2 -0.9
          comp=Z,4.7nm,0.9s,baz=85,slow=8.9,SNR=24
          comp=Z,4.7nm,0.9s
ASAR  Alice Springs      36.41 260  P       P       16 50 34.1  0.0
WB0   Warramunga Arr     36.50 266  P       P       16 50 34.5 -0.4
WB0                                 IAmb    IAmb    16 50 36.2
          comp=Z,8.4nm,1.1s
WRA   Warramunga Arr     36.52 266  P       P       16 50 34.1 -0.9
          comp=Z,2.0nm,0.8s,baz=93,slow=8.4,SNR=8.2
          comp=Z,2.0nm,0.8s
WRA   Warramunga Arr     36.52 266  P       P       16 50 33.6 -1.5
H11S2 WAKE ISLAND Hy     40.79 350  T       T       17 34 18.0
          baz=171,slow=76,SNR=6.3
H11S3 WAKE ISLAND Hy     40.80 350  T       T       17 34 19.8
          baz=171,slow=76,SNR=4.5
H11S1 WAKE ISLAND Hy     40.81 350  T       T       17 34 19.1
          baz=171,slow=76,SNR=5.0
FITZ  Fitzroy Crossi     44.95 266  P       P       16 51 45.9 +1.4
FITZ                                IAmb    IAmb    16 51 46.7
          comp=Z,6.9nm,1.1s
MBWA  Marble Bar         49.74 260  P       P       16 52 21.6 -0.3
NWAO  Narrogin (SRO)     50.54 245  P       P       16 52 27.6 -0.2
MORW  Morawa             51.86 250  P       P       16 52 37.0 -0.7
VNDA  Vanda              55.85 183  P       P       16 53 06.1  0.0
          comp=Z,0.9nm,0.8s,baz=2.8,slow=6.8,SNR=5.6
          comp=Z,0.9nm,0.8s
VNDA  Vanda              55.85 183  P       P       16 53 05.8 -0.3
SBA   Scott Base         55.99 182  P       P       16 53 08.3 +1.2
SBA                                 IAmb    IAmb    16 53 09.1
          comp=Z,8.1nm,0.9s
MJAR  Matsushiro Arr     67.08 330  P       P       16 54 20.9 -1.6
          comp=Z,1.5nm,0.9s,baz=170,slow=7.0,SNR=5.0
          comp=Z,1.5nm,0.9s
QSPA  South Pole Qui     68.06 180  P       P       16 54 27.5 -1.0
QSPA                                IAmb    IAmb    16 54 29.7
          comp=Z,5.9nm,1.1s
KSRS  Korea Array        73.04 324  P       P       16 54 58.5 -0.4
          comp=Z,0.7nm,0.7s,baz=145,slow=4.6,SNR=5.5
          comp=Z,0.7nm,0.7s
BELA  Belgrano 2         78.98 174  P       P       16 55 30.3 -2.0
BELA                                IAmb    IAmb    16 55 57.2
          comp=Z,4.2nm,1.1s
PMSA  Palmer Station     82.94 159  P       P       16 55 53.1 -0.4
CMAR  Chiang Mai Arr     83.22 293  P       P       16 55 56.8 +1.0
          comp=Z,1.2nm,0.8s,baz=128,slow=3.9,SNR=9.7
          comp=Z,1.2nm,0.8s
CMAR  Chiang Mai Arr     83.22 293  P       P       16 55 56.7 +0.8
CHTO  Chiang Mai         83.38 293  P       P       16 55 56.4 -0.3
CHTO                                IAmb    IAmb    16 56 05.3
          comp=Z,4.0nm,1.0s
NVAR  Mina Array Bea     87.73  47  P       P       16 56 20.8 +2.7
          comp=Z,0.5nm,0.7s,baz=236,slow=8.3,SNR=3.9
          comp=Z,0.5nm,0.7s
H03S2 Juan Fernandez     91.56 127  T       T       18 37 48.7
          baz=241,slow=74,SNR=4.1
H03S1 Juan Fernandez     91.58 127  T       T       18 37 50.6
          baz=241,slow=74,SNR=4.2
H03S3 Juan Fernandez     91.58 127  T       T       18 37 49.5
          baz=241,slow=74,SNR=4.0
ILAR  Eielson Array      91.74  16  P       P       16 56 36.8 +0.8
          comp=Z,0.8nm,0.9s,baz=232,slow=6.6,SNR=6.4
          comp=Z,0.8nm,0.9s
TXAR  Lajitas Array      94.65  60  P       P       16 56 53.0 +2.6
          comp=Z,0.8nm,1.1s,baz=312,slow=5.7,SNR=3.5
          comp=Z,0.8nm,1.1s
BURAR Bucovina Array    143.92 323  PKPdf   PKPdf   17 03 04.1 -0.2
MORC  Moravsky Berou    146.40 331  ePKP    PKPbc   17 03 09.9 +0.2
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EKA	Eskdalemuir Ar	146.62	356	PKPbc	PKPdf	17 03 08.7	+0.2
	comp=Z,0.8nm,0.7s,baz=328,slow=3.0,SNR=3.8						
JAVC	Velka Javorina	147.00	330	*e*PKP	PKPab	17 03 12.7	-0.3
CLL	Collm	147.03	337	*e*PKPbc	PKPbc	17 03 11.0	-0.4
CLL				*e*PKPmax		17 03 20.0	
VRAC	Vranov	147.16	332	*e*PKP	PKPbc	17 03 11.4	-0.5
KRUC	Moravsky	147.43	332	*e*PKP	PKPbc	17 03 12.3	-0.3
RONA	Rosalia, Austr	148.48	330	*i* PKP	PKPdf	17 03 12.1	+0.2
	comp=Z,9.3nm,1.3s						
CONA	Conrad Observa	148.51	331	*i* PKP	PKPdf	17 03 12.9	+0.9
	comp=Z,13nm,1.7s						
GERES	GERESS Array B	148.75	334	PKPbc	PKPbc	17 03 14.9	-1.4
	comp=Z,0.3nm,0.4s,baz=48,slow=2.9,SNR=5.7						
ARSA	Arzberg	149.16	330	*i* PKP	PKPdf	17 03 13.2	+0.2
	comp=Z,3.2nm,1.0s						
MOA	Molln	149.28	332	*i* PKP	PKPdf	17 03 14.1	+1.0
	comp=Z,4.0nm,1.0s						
BIOA	Bad Ischl, Aus	149.67	333	*i* PKP	PKPdf	17 03 14.6	+0.7
	comp=Z,6.1nm,1.1s						
SOKA	Soboth	149.81	330	*e*PKP	PKPdf	17 03 14.7	+0.6
	comp=Z,6.3nm,1.1s						
OBKA	Obir	150.16	330	*e*PKP	PKPdf	17 03 15.6	+0.9
	comp=Z,3.4nm,1.1s						
KBA	Koelnbreinsper	150.27	332	*e*PKP	PKPdf	17 03 15.3	+0.4
	comp=Z,13nm,0.8s						
LESA	Schwarzleotal	150.29	333	*i* PKP	PKPdf	17 03 15.8	+1.0
	comp=Z,4.7nm,1.1s						
MYKA	Terra Mystica	150.48	331	*e*PKP	PKPdf	17 03 15.6	+0.4
	comp=Z,4.3nm,0.9s						
WATA	Walderalm	150.81	334	*i* PKP	PKPdf	17 03 16.5	+0.7
	comp=Z,9.6nm,1.3s						
WTTA	Wattenberg	150.84	334	*i* PKP	PKPdf	17 03 16.8	+0.9
	comp=Z,5.8nm,1.0s						
ABTA	Abfaltersbach	150.89	333	*e*PKP	PKPdf	17 03 16.6	+0.8
	comp=Z,9.0nm,1.3s						
RETA	Reutte	151.01	335	*i* PKP	PKPdf	17 03 16.8	+0.9
	comp=Z,7.5nm,1.5s						
SQTA	Sankt Quirin	151.05	335	*e*PKP	PKPdf	17 03 17.5	+1.4
	comp=Z,7.8nm,1.1s						
FETA	Feichten	151.40	335	*i* PKP	PKPdf	17 03 18.3	+1.6
	comp=Z,9.7nm,1.2s						
DAVA	Damuels	151.51	336	*e*PKP	PKPdf	17 03 17.5	+0.7
	comp=Z,7.0nm,1.3s						

IDC ***25*** *16:52:41.8±1.5, 55°.72N×160°.94E, h0km, mb3.5/2, mbtmp3.3/3, ML1.8/1, Error ellipse: s-maj=50.5km s-min=27.2km az=130.0*

KRSC ***25*** *16:52:53.5±1.1, 54°.73N×160°.86E, h136km±15km, Ml4.1*

MOS ***25*** *16:52:54.1±0.3, 54°.78N×160°.75E, h137km, mb3.7/1, Error ellipse: s-maj=21.5km s-min=7.7km az=82.9*

ISC 25 16:52:54.0±1.1**, 54°.77N**±0°.04×**160°.86E**±0°.05**, h142**km±9km**, n43, σ1s.33**/51**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZV	Kizimen	0.47	317	PN	Pn	16 53 14.5	0.0
KZV	Kizimen	0.47	317	*e*P	Pn	16 53 14.6	0.0
TUMD	Tumrok D	0.51	329	PN	Pn	16 53 14.3	-0.2
TUMD	Tumrok D	0.51	329	*e*P	Pn	16 53 14.4	-0.2
TUMR	Tumrok	0.66	322	PN	Pn	16 53 15.9	+0.4
TUMR	Tumrok	0.66	322	*e*P	Pn	16 53 15.9	+0.4
KMNR	Kamenistaya	1.05	341	PN	Pn	16 53 18.9	+0.3
KMNR	Kamenistaya	1.05	341	*e*P	Pn	16 53 18.9	+0.3
KII	Karymskiy	1.10	229	PN	Pn	16 53 19.3	+0.2
KII	Karymskiy	1.10	229	*e*P	Pn	16 53 19.3	+0.2
BZGR	Bezymyannyi-Gr	1.18	356	PN	Pn	16 53 20.2	+0.4
BZGR	Bezymyannyi-Gr	1.18	356	*e*P	Pn	16 53 20.2	+0.4
KIRR	Kirishev	1.22	346	PN	Pn	16 53 20.4	+0.2
KIRR	Kirishev	1.22	346	*e*P	Pn	16 53 20.4	+0.2
ZLN	Zelenaya	1.25	359	PN	Pn	16 53 21.1	+0.6
ZLN	Zelenaya	1.25	359	*e*P	Pn	16 53 21.2	+0.6
KOZ	Kozyrevsk	1.41	337	PN	Pn	16 53 21.9	0.0
KOZ	Kozyrevsk	1.41	337	*e*P	Pn	16 53 22.0	0.0
KLY	Klyuchi	1.55	356	PN	Pn	16 53 24.0	+0.6
KLY	Klyuchi	1.55	356	*e*P	Pn	16 53 24.0	+0.6
SRDR	Sredinnyy	1.68	338	PN	Pn	16 53 24.7	-0.3
SRDR	Sredinnyy	1.68	338	*e*P	Pn	16 53 24.8	-0.3
ESO	Esso	1.69	314	PN	Pn	16 53 24.4	-0.6
ESO	Esso	1.69	314	*e*P	Pn	16 53 24.5	-0.6
SPN	Mys Shipunski	1.75	197	PN	Pn	16 53 25.0	-0.7
SPN				S	Sn	16 53 47.8	-2.1
SPN	Mys Shipunski	1.75	197	*e*P	Pn	16 53 25.1	-0.7
SPN				*e*S	Sn	16 53 47.8	-2.1
KBG	Krutoberegovo	1.82	34	PN	Pn	16 53 27.6	+1.1
KBG				S	Sn	16 53 51.9	+0.4
KBG	Krutoberegovo	1.82	34	*e*P	Pn	16 53 27.6	+1.1
KBG				*e*S	Sn	16 53 51.9	+0.4
KBTR	Krutoberegovo	1.82	37	PN	Pn	16 53 27.6	+1.1
KBTR				S	Sn	16 53 51.7	+0.2
KBTR	Krutoberegovo	1.82	37	*e*P	Pn	16 53 27.6	+1.1
KBTR				*e*S	Sn	16 53 51.8	+0.2
SMKR	Semkarok	1.85	11	PN	Pn	16 53 27.7	+0.8
SMKR	Semkarok	1.85	11	*e*P	Pn	16 53 27.8	+0.8
SDLR	Sedlovina	1.89	219	PN	Pn	16 53 28.3	+0.8
SDLR	Sedlovina	1.89	219	*e*P	Pn	16 53 28.3	+0.8
SMAR	Somma	1.94	220	PN	Pn	16 53 28.6	+0.5
SMAR	Somma	1.94	220	*e*P	Pn	16 53 28.7	+0.5
PETK	Petropavlovsk-	2.50	230	Pn	Pn	16 53 33.9	-0.8
	0.5nm,0.3s,baz=63,slow=14,SNR=10						
PETK				Sn	Sn	16 54 13.4	+7.3
	0.9nm,0.3s,baz=80,slow=20,SNR=5.1						
	1.9nm,0.5s						
MTVR	Mutnovka	2.79	216	PN	Pn	16 53 39.5	+1.0
MTVR	Mutnovka	2.79	216	*e*P	Pn	16 53 39.6	+1.0
BKI	Bering	2.98	80	PN	Pn	16 53 42.0	+1.3
BKI				S	Sn	16 54 16.2	-0.6
BKI	Bering	2.98	80	*e*P	Pn	16 53 42.0	+1.3
BKI				*e*S	Sn	16 54 16.3	-0.6
FINES	FINESS Array B	58.76	336	P	P	17 02 34.9	-1.5
	0.5nm,0.7s,baz=22,slow=7.0,SNR=3.6						
	0.5nm,0.7s						
TXAR	Lajitas Array	69.58	68	P	P	17 03 50.1	+2.6
	0.2nm,0.5s,baz=301,slow=6.0,SNR=7.5						
	0.2nm,0.5s						

BJI ***25*** *16:56:13.4, 3°.63N×126°.89E, h10km, mB5.1/21, mb4.7/67, Ms4.7/65, Ms7 4.6/64*

MAN ***25*** *16:56:14.8, 3°.54N×126°.99E, h10km, mb5.7, ML4.7, MS5.1*

MOS ***25*** *16:56:17.7±0.9, 4°.07N×126°.79E, h14km, mb5.1/57, MS4.6/6, Error ellipse: s-maj=10.0km s-min=4.8km az=114.3*

NEIC ***25*** *16:56:19.1, 4°.12N×127°.08E, h24km, Moment Tensor Solution. Duration: 1s.0 Moment tensor: Scale 10^{16} Nm; M_{rr}-2.42; $M_{\theta\theta}$2.57; $M_{\phi\phi}$-0.15; $M_{r\theta}$-1.25; $M_{\theta\phi}$2.01; $M_{\phi r}$3.47; Fault plane solution: $M_0$4.89000×10^{16} NP1: ϕ_s91.57000°, δ49.68000°, λ-34.51000°. NP2: ϕ_s205.55000°, δ64.40000°, λ-134.16000°. Principal axes: T 3.7185, Plg9.0000°, Azm325.0000°; N 1.8173, Plg39.0000°, Azm228.0000°; P -5.5358, Plg50.0000°, Azm66.0000°;*

NEIC ***25*** *16:56:19.1±1.8, 4°.03N±0°.06×126°.78E±0°.10, h10km±1km, mb5.3/141, Mww5.1/20 Error ellipse: s-maj=17.0km s-min=8.8km az=254.0*

NEIC ***25*** *16:56:19.1, 4°.02N×126°.78E, h24km*

IDC ***25*** *16:56:20.3±2.6, 4°.01N×126°.76E, h19km±16km, mb4.5/31, mbtmp4.6/33, ML4.9/3, MS4.3/38, Error ellipse: s-maj=20.3km s-min=9.1km az=74.0*

DJA ***25*** *16:56:24.8±0.2, 4°N±2°×12°7E±°, h50km±2km, M5.1/120, mb5.5/120, mB5.6/78, MLv5.7/18, Mw(mB)5.1/78, MwMwp4.9/16, Mwp5.2/16*

GCMT ***25*** *16:56:24.1±0.1, 4°.03N±0°.01×126°.73E±0°.01, h27km, MW5.3/107, Moment Tensor Solution. s75,c113; s107,c189; Duration: 1s.0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.20±.02; $M_{\theta\theta}$0.55±.01; $M_{\phi\phi}$-0.34±.01; $M_{r\theta}$-0.46±.03; $M_{\theta\phi}$0.26±.01; $M_{\phi r}$0.73±.03; Best double couple: $M_0$0.96400×10^{17} NP1: ϕ_s225.00000°, δ35.00000°, λ-168.00000°. NP2: ϕ_s125.00000°, δ83.00000°, λ-55.00000°. Principal axes: T 0.7750, Plg29.0000°, Azm188.0000°; N 0.3790, Plg34.0000°, Azm300.0000°; P -1.1540, Plg42.0000°, Azm67.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 16:56:21.2±0.7**, 4°.09N**±0°.03×**126°.78E**±0°.04**, h24**km±4km**, n857, σ2s.05**/841**, mb5.2**/223**, MS4.4**/68**, 25C-6D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.31	252	P	Pb	16 56 46.4	+1.3
SGSI				S	Sb	16 57 02.9	+1.4
DAV	Davao City (W)	3.19	338	Pn	Pn	16 57 10.8	+0.9
	81nm,0.3s,baz=85,slow=12,SNR=9.4						
DAV				Sn	Sb	16 57 55.4	-0.2
	179nm,0.3s,baz=251,slow=20,SNR=5.0						
	111nm,0.4s						
DAV	Davao City (W)	3.19	338		Pn	16 57 11.1	+1.2
DAV	Davao City (W)	3.19	338	P	Pb	16 57 19.7	+2.5
DAV	Davao City (W)	3.19	338	P	Pb	16 57 14.7	-2.5
DAV	Davao City (W)	3.19	338	P	Pb	16 57 19.0	+1.8
TNTI	Ternate	3.35	170		Pn	16 57 10.9	-1.2
TNTI				Sn	Sn	16 57 49.9	-1.4
TNTI	Ternate	3.35	170	P	Pn	16 57 13.4	+1.2
TNTI	Ternate	3.35	170	P	Pn	16 57 13.1	+0.9
GTOI	Gorontalo	5.09	228	P	Pn	16 57 39.1	+3.0
MRSI	Marisa	6.02	233	P	Pn	16 57 52.8	+3.9
SANI	Sanana	6.15	187	P	Pn	16 57 50.1	-0.6
	525nm,1.0s						
SANI	Sanana	6.15	187	P	Pn	16 57 49.0	-1.7
	1.8nm4μm6μm535nm,0.8s						
LUWI	Luwuk	6.48	218	Pn	Pn	16 57 56.2	+1.0
LUWI	Luwuk	6.48	218	P	Pn	16 57 59.6	+4.4
SWI	Sorong	6.66	138	P	Pn	16 57 58.4	+0.8
	1.6nm5μm4μm244nm,0.6s						
SIJI	Sorong	6.67	138	P	Pn	16 57 58.4	+0.6
	4μm236nm,0.7s						
TOLI2	Tolitoli	6.68	244		Pn	16 57 58.7	+0.7
TOLI2	Tolitoli	6.68	244	P	Pn	16 58 00.8	+2.9
	677nm,0.9s						
APSI	Ampana	7.14	226	P	Pn	16 58 10.5	+6.3
NLAI	Namlea	7.29	177	P	Pn	16 58 06.4	+0.1
KRAI	Karang Ratu	7.54	168	P	Pn	16 58 11.9	+2.2
	1.5nm5μm4μm289nm,0.5s						
MSAI	Masohi	7.70	164	P	Pn	16 58 15.4	+3.5
	1.9nm6μm365nm,0.6s						
MPSI	Mapaga	7.82	242	P	Pn	16 58 16.4	+2.8
	1.5nm4μm3μm244nm,0.7s						
AAI	Ambon	7.86	170	P	Pn	16 58 15.0	+0.9
	1.2nm4μm305nm,0.8s						
PCI	Palu	8.53	235	P	Pn	16 58 25.9	+2.5
	5μm532nm,0.9s						
MWPI	Manokwari, Pap	8.81	124	P	Pn	16 58 29.1	+1.9
	3μm181nm,0.6s						
FAKI	Fak Fak	8.86	142	Pn	Pn	16 58 28.5	+0.7
FAKI	Fak Fak	8.86	142	P	Pn	16 58 29.5	+1.7
	189nm,0.8s						
FAKI	Fak Fak	8.86	142	P	Pn	16 58 29.0	+1.2
	2μm191nm,0.8s						
BNDI	Bandanaira	9.11	160	P	Pn	16 58 33.6	+2.3
	520nm,1.2s						
BNDI	Bandanaira	9.11	160	P	Pn	16 58 32.7	+1.4
	5μm520nm,1.2s						
TARAI	Tarakan	9.22	266	P	Pn	16 58 36.6	+3.8
	3μm250nm,0.7s						
RKPI	Ransiki, Papua	9.26	127	P	Pn	16 58 36.1	+2.8
	2μm284nm,0.9s						
KKSI	Kolaka, Sulawe	9.68	212	P	Pn	16 58 39.4	+0.3
	2μm212nm,0.7s						
TTSI	Tana Toraja	9.93	225	P	Pn	16 58 45.8	+3.2
	3μm401nm,1.1s						
MMSI	Mamuju	10.35	230	P	Pn	16 58 52.0	+3.6
	2μm185nm,0.9s						
SPSI	Sidrap Palu	10.63	221	P	Pn	16 58 54.4	+2.2
	2μm209nm,0.8s						
KKM	Kota Kinabalu	10.70	281	Pn	Pn	16 58 55.1	+2.0
KKM	Kota Kinabalu	10.70	281	P	Pn	16 58 58.8	+5.6
	129nm,1.2s						
KKM	Kota Kinabalu	10.70	281	P	Pn	16 58 58.4	+5.2
	1μm129nm,1.2s						
BAKI	Biak	10.70	119	P	Pn	16 58 57.5	+4.4
	3μm3μm309nm,1.5s						
PMSI	Majene	10.89	226	P	Pn	16 58 59.1	+3.3
	3μm204nm,0.9s						
SRPI	Serui, Papua	11.16	122	P	Pn	16 59 03.2	+3.8
	2μm125nm,0.8s						
BKB	Balikpapan	11.21	242		Pn	16 59 00.1	-0.1
BKB	Balikpapan	11.21	242	P	Pn	16 59 03.4	+3.2
	304nm,0.8s						
BKB	Balikpapan	11.21	242	P	Pn	16 59 01.6	+1.4
	4μm3μm301nm,0.8s						
KAPI	Kappang	11.45	218		Pn	16 59 04.0	+0.7
KAPI	Kappang	11.45	218	P	Pn	16 59 05.7	+2.3
	39nm,0.9s						
KAPI	Kappang	11.45	218	P	Pn	16 59 05.3	+1.9
KAPI	Kappang	11.45	218	P	Pn	16 59 04.1	+0.7
BKSI	Bulukumba	11.47	215	P	Pn	16 59 05.0	+1.3
	77nm,0.7s						
TGY	Tagaytay City	11.49	330	LR	LR	17 04 11.2	
	comp=Z,3μm,20.8s,baz=151,slow=41						
BSSI	Bau Bau, Buton	11.95	212	P	Pn	16 59 11.9	+1.7
	2μm158nm,0.6s						
SAUI	Saumlaki	12.82	159		Pn	16 59 20.4	-1.7
SAUI	Saumlaki	12.82	159	P	Pn	16 59 22.5	+0.4
	414nm,0.9s						
SAUI	Saumlaki	12.82	159	P	Pn	16 59 21.8	-0.3
	5μm408nm,0.9s						
MTKI	Muara Teweh, K	12.88	247	P	Pn	16 59 26.2	+3.2
	3μm181nm,0.8s						
SMPI	Sarmi	13.37	117	P	Pn	16 59 31.0	+1.4
MMRI	Maumere	13.43	200		Pn	16 59 30.7	+0.3
MMRI	Maumere	13.43	200	P	Pn	16 59 29.8	-0.7
	618nm,0.9s						
MMRI	Maumere	13.43	200	P	Pn	16 59 31.1	+0.6
EDFI	Ende, Flores	13.73	202	P	Pn	16 59 34.3	-0.4
	3μm319nm,0.7s						
SOEI	Soe	13.98	190		Pn	16 59 37.9	-0.2
SOEI	Soe	13.98	190	P	Pn	16 59 39.4	+1.3
	427nm,0.9s						
SOEI	Soe	13.98	190	P	Pn	16 59 39.8	+1.7
BBKI	Banjar Baru	14.09	238	P	Pn	16 59 42.4	+2.9
	2μm229nm,1.0s						
LBFI	Labuhan Bajo,	14.25	209	P	Pn	16 59 42.9	+1.2
	3μm345nm,0.7s						
BATI	Baumata	14.54	192	Pn	Pn	16 59 45.2	-0.4
	15nm,0.3s,baz=345,slow=0.5,SNR=40						
BATI	Baumata	14.54	192	P	Pn	16 59 47.2	+1.5
	3μm325nm,0.9s						
SBUM	Sibu	14.62	264	P	Pn	16 59 49.9	+3.1
SBUM	Sibu	14.62	264	P	P	16 59 50.7	-2.2
	61nm,1.4s						
SBUM	Sibu	14.62	264	P	P	16 59 50.2	-2.7
GENI	Genyem	14.94	116	P	P	16 59 57.1	+0.6
	435nm,0.9s						
GENI	Genyem	14.94	116	P	P	16 59 54.8	-1.7
DBNI	Kabupaten Domp	15.09	214	P	Pn	16 59 54.9	+1.8
	1μm176nm,0.9s						
WSI	Waingapu	15.12	205	P	Pn	16 59 54.6	+1.2
JAY	Jayapura	15.39	115	Pn	Pn	16 59 56.4	-0.6
	2.5nm,0.3s,baz=251,slow=10,SNR=9.3						
JAY				LR	LR	17 04 52.3	
	comp=Z,2μm,21.4s,baz=299,slow=33						
	13nm,1.0s						
JAY	Jayapura	15.39	115	P	P	16 59 59.6	-1.9
	1μm171nm,0.8s						
BASI	Baing, Sumba	15.50	203	P	Pn	16 59 58.1	-0.4
WBSI	Waikabubak, Su	15.50	208	P	Pn	16 59 59.0	+0.5
PLAI	Plampang	15.66	215	P	Pn	17 00 01.3	+0.8
	900nm,0.8s						
PLAI	Plampang	15.66	215	P	Pn	17 00 01.3	+0.8
TWSI	Taliwang, Sumb	16.12	218	P	Pn	17 00 07.6	+1.2
	3μm274nm,0.8s						
KLNI	Mataram	16.37	221	P	Pn	17 00 10.9	+1.2
	3μm280nm,0.8s						
KHKI	Kahang-Kahang	16.65	222	P	P	17 00 14.8	-0.6
	2μm158nm,1.3s						
KMMI	Kalianget	16.91	229	P	P	17 00 18.2	-0.1
	123nm,0.9s						
DRS	Darwin Rock St	16.92	166	P	Pn	17 00 15.0	-1.6
	372nm,0.9s						
DNP	Denpasar	17.14	222	P	P	17 00 21.9	+1.0
	517nm,1.0s						
RTBI	Rangdo, Negare	17.17	223	P	P	17 00 21.4	+0.2
	3μm276nm,0.9s						
ABJI	Asem Bagus	17.21	227	P	P	17 00 22.1	+0.5
	100nm,0.8s						
IGBI	Denpasar	17.29	222	P	P	17 00 22.8	+0.3
	4μm342nm,0.7s						
MTN	Manton Dam	17.38	166	P	Pn	17 00 19.5	-2.8
MTN	Manton Dam	17.38	166	P	Pn	17 00 18.9	-3.4
MTN				IAmb	IAmb	17 00 23.6	
	comp=Z,133nm,0.7s						
KDU	Kakadu	17.61	161	P	Pn	17 00 20.6	-4.6
BLJI	Banyuglugur	17.64	228	P	P	17 00 27.0	+0.6
	comp=Z,2μmcomp=Z,208nm,0.8s						
JAGI	Jajag, Banyuwa	17.73	225	P	Pn	17 00 26.9	+0.2
JAGI	Jajag, Banyuwa	17.73	225	P	P	17 00 27.3	-0.1
	comp=Z,143nm,0.8s						
JAGI	Jajag, Banyuwa	17.73	225	P	P	17 00 27.8	+0.4
	comp=Z,2μmcomp=Z,142nm,0.8s						
GMJI	Gumukmas	18.10	227	P	P	17 00 31.8	+0.3
	comp=Z,2μmcomp=Z,121nm,0.6s						
TBJI	Tambak Boyo	18.43	234	P	Pn	17 00 36.3	+1.1
	comp=Z,298nm,1.0s						
MMPI	Merauke	18.43	133	P	Pn	17 00 36.0	+0.7
SJI	Sawahan	19.04	232	P	P	17 00 40.6	-1.3
	comp=Z,2μmcomp=Z,183nm,0.8s						
NGJI	Ngawi	19.06	233	P	P	17 00 42.5	+0.5
	comp=Z,211nm,1.0s						
SNJI	Sawahan-Nganju	19.07	232	P	P	17 00 42.1	-0.2
	comp=Z,2μmcomp=Z,245nm,0.9s						
TWG	Pinlang	19.42	344	P	P	17 00 44.0	-1.8
SMRI	Semarang	19.71	236	P	P	17 00 49.5	+0.3
SMRI				IAmb	IAmb	17 01 01.4	
	comp=Z,134nm,0.8s						
SMRI	Semarang	19.71	236	P	Pn	17 00 50.3	-0.4
	comp=Z,204nm,1.0s						
SMRI	Semarang	19.71	236	P	P	17 00 49.9	+0.7
	comp=Z,200nm,1.0s						
KNRA	Kununurra	19.74	174	P	P	17 00 47.9	-1.6
	comp=Z,291nm,0.9s						
KNRA	Kununurra	19.74	174	P	P	17 00 48.1	-1.4
KNRA				IAmb	IAmb	17 00 52.7	
	comp=Z,199nm,0.8s						
PCJI	Pacitan	19.78	232	P	P	17 00 48.4	-1.5
	comp=Z,160nm,0.6s						
YULB	Yu-li	19.90	345	P	P	17 00 49.6	-1.6
TPUB	Ta-pu	20.00	343	P	P	17 00 51.2	-1.0
TPUB				IAmb	IAmb	17 01 03.3	
	comp=Z,81nm,0.8s						
UGM	Wanagama	20.13	234	P	P	17 00 53.9	+0.1
	comp=Z,81nm,0.7s						
YOGI	Yogyakarta	20.26	234	P	P	17 00 55.6	+0.5
	comp=Z,341nm,0.7s						
TPI	Tanjungpandan	20.29	251	P	Pn	17 00 56.6	-0.9
	comp=Z,2μmcomp=Z,92nm,0.9s						
SSLB	Suanglung	20.37	345	P	P	17 00 54.9	-1.4
YOJ	Yonaguni jima	20.57	350	P	Pn	17 01 07.3	+6.5
	comp=Z,92nm,1.0s						
NACB	Ninganchiao	20.58	346	P	P	17 00 59.3	+0.8
CTJI	Waduk Cacaban	20.73	238	P	P	17 01 00.3	0.0
	comp=Z,1μmcomp=Z,128nm,0.8s						
YHNB	Yeheng	21.11	346	P	P	17 01 03.4	-0.9
YHNB	Yeheng	21.11	346	P	P	17 01 12.9	+8.6
	comp=Z,62nm,0.8s						
KPJI	Karang Pucung	21.12	238	P	P	17 01 04.3	-0.2
	comp=Z,1μmcomp=Z,160nm,0.8s						
FITZ	Fitzroy Crossi	22.08	183	P	P	17 01 13.3	-1.4
	comp=Z,40nm,0.7s						
FITZ	Fitzroy Crossi	22.08	183	P	P	17 01 12.6	-2.2
	comp=Z,76nm,0.6s,baz=14,slow=7.6,SNR=180						
FITZ				S	S	17 05 11.2	-6.0
	comp=Z,17nm,0.8s,baz=203,slow=22,SNR=6.0						
	comp=Z,76nm,0.6s						
FITZ	Fitzroy Crossi	22.08	183	P	P	17 01 13.0	-1.8
FITZ	Fitzroy Crossi	22.08	183	P	P	17 01 12.5	-2.2
	comp=Z,394nm,0.7s						
QZH	Quanzhou	22.17	340	P	P	17 01 16.3	+0.6
QZH				S	S	17 05 15.0	-3.9
QZH				LR	LR		
	comp=Z,2μm,23.7s						
QZH				LR	LR		
	comp=Z,980nm,21.6s						
QZH				LR	LR		
	comp=Z,2μm,21.6s						
QIZ	Qiongzhong	22.22	313	P	P	17 01 15.0	-1.3
QIZ				S	S	17 05 17.0	-3.0
QIZ				LR	LR		
	comp=Z,860nm,13.9s						
QIZ				LR	LR		
	comp=Z,480nm,14.6s						
QIZ				LR	LR		
	comp=Z,880nm,20.5s						
BBJI	Bungbulang	22.27	239	P	P	17 01 16.2	-0.8
	comp=Z,73nm,0.8s						
BBJI	Bungbulang	22.27	239	P	P	17 01 16.1	-0.9
	comp=Z,73nm,0.8s						
TPRI	Tanjung Pinang	22.45	263	P	P	17 01 20.6	+1.8
DBJI	Dramaga	22.62	242	P	P	17 01 20.8	+0.2
	comp=Z,78nm,0.9s						
DSRI	Dabo	22.64	259	P	P	17 01 21.1	+0.2
CNJI	Cibinong	22.64	240	P	P	17 01 19.7	-1.1
JOW	Kunigami	22.66	3	P	P	17 01 21.7	+0.8
	comp=Z,18nm,0.6s,baz=205,slow=7.7,SNR=6.1						
	comp=Z,18nm,0.6s						
JOW	Kunigami	22.66	3	P	P	17 01 20.9	0.0
JOW	Kunigami	22.66	3	P	P	17 01 30.2	+9.4
	comp=Z,87nm,0.9s						
GZH	Guangzhou	22.92	327	P	P	17 01 26.0	+2.4
GZH				S	S	17 05 34.8	+2.5
GZH				pmax	pmax		
	comp=Z,20nm,1.0s						
GZH				LR	LR		
	comp=Z,2μm,17.5s						
GZH				LR	LR		
	comp=Z,890nm,17.2s						
GZH				LR	LR		
	comp=Z,3μm,18.7s						
MYKOM	Kota Tinggi	23.01	265	P	P	17 01 24.6	-0.1
MYKOM	Kota Tinggi	23.01	265	P	P	17 01 26.0	+1.3
	comp=Z,51nm,0.8s						
MYKOM	Kota Tinggi	23.01	265	P	P	17 01 25.4	+0.7
BLSI	Bandar Lampung	23.47	247	P	P	17 01 31.7	+2.4
	comp=Z,1μmcomp=Z,110nm,0.8s						
KLSI		23.69	249	P	P	17 01 30.9	-0.5
	comp=Z,1μmcomp=Z,108nm,0.8s						
JMBI	JAMBI	23.81	257	P	P	17 01 35.6	+3.0
	comp=Z,229nm,1.1s						
MDSI	Maura Dua	24.13	250	P	P	17 01 34.6	-1.0
	comp=Z,70nm,0.8s						
COEN	Coen	24.21	138	P	P	17 01 34.9	-1.5
	comp=Z,49nm,1.0s						
COEN	Coen	24.21	138	P	P	17 01 33.7	-2.6
COEN	Coen	24.21	138	P	P	17 01 36.2	-0.1
	comp=Z,50nm,1.0s						
KASI	Kota Agung	24.22	247	P	P	17 01 36.2	-0.2
	comp=Z,1μmcomp=Z,132nm,0.9s						
PMG	Port Moresby	24.34	124	LR	LR	17 12 07.1	
	comp=Z,718nm,19.8s,baz=282,slow=39						
PMG	Port Moresby	24.34	124	P	P	17 01 40.3	+2.8
	comp=Z,22nm,0.8s						
PMG	Port Moresby	24.34	124	P	P	17 01 39.4	+1.9
PMG	Port Moresby	24.34	124	*ce*P	P	17 01 35.8	-1.7
PMG				pmax	pmax		
	comp=Z,37nm,1.7s						
LWLI	Liwa	24.43	248	P	P	17 01 41.8	+3.3
	comp=Z,162nm,0.9s						
WB0	Warramunga Arr	24.87	163	P	P	17 01 40.3	-1.9
WRAB	Tennant Creek	25.01	163	P	P	17 01 42.1	-1.4
WRAB	Tennant Creek	25.01	163	P	P	17 01 42.1	-1.4
WRAB				pmax	pmax		
	comp=Z,202nm,0.6s						
WRA	Warramunga Arr	25.02	163	P	P	17 01 41.6	-2.0
	comp=Z,151nm,0.8s,baz=344,slow=9.4,SNR=107						
WRA				S	S	17 06 03.5	-3.0
	comp=Z,14nm,1.0s,baz=337,slow=16,SNR=7.3						
WRA	Warramunga Arr	25.02	163	P	P	17 01 41.9	-1.7
WRA	Warramunga Arr	25.02	163	P	P	17 01 41.9	-1.7
WRA				pmax	pmax		
	comp=Z,22nm,0.7s						
MNAI	Manna	25.24	251	P	P	17 01 44.2	-1.5
MNAI	Manna	25.24	251	P	P	17 01 47.9	+2.2
	comp=Z,3μmcomp=Z,152nm,1.1s						
XMI	Christmas Isla	25.49	235	P	P	17 01 48.3	+0.4
	comp=Z,126nm,0.8s						
MASI	Maura Aman, Be	25.55	254	P	P	17 01 49.2	+0.6
IPM	Ipoh	25.68	272	P	P	17 01 48.1	-1.6
IPM				IAmb	IAmb	17 02 10.0	
	comp=Z,63nm,1.0s						
IPM	Ipoh	25.68	272	P	P	17 01 51.2	+1.5
	comp=Z,65nm,1.0s						
IPM	Ipoh	25.68	272	P	P	17 01 51.3	+1.5
	comp=Z,768nmcomp=Z,65nm,1.0s						
UBSI	University, Be	25.70	253	P	P	17 01 52.8	+3.0
	comp=Z,199nm,1.1s						
BKNI	Bangkinang	25.98	262	P	P	17 01 50.2	-2.2
BKNI	Bangkinang	25.98	262	P	P	17 01 54.3	+1.8
	comp=Z,286nm,1.1s						
BKNI	Bangkinang	25.98	262	P	P	17 01 53.1	+0.6
	comp=Z,2μmcomp=Z,284nm,1.1s						
MBWA	Marble Bar	26.03	195	P	P	17 01 53.0	+0.3

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       comp=Z,147nm,1.0s
MBWA  Marble Bar         26.03 195   P      P       17 01 52.6  -0.2
MBWA  Marble Bar         26.03 195   P      P       17 01 52.3  -0.4
       comp=Z,84nm,1.0s
KULM  Kulim              26.07 274   P      P       17 01 50.9  -2.3
KULM                                 IAmb   IAmb    17 02 06.2
       comp=Z,108nm,1.4s
KULM  Kulim              26.07 274   P      P       17 01 55.5  +2.3
       comp=Z,49nm,1.1s
KULM  Kulim              26.07 274   P      P       17 01 54.9  +1.7
       comp=Z,49nm,1.1s
PSAC1 Pilbara Seismi     26.37 195   P      P       17 01 55.9  +0.1
       comp=Z,292nm,1.0s
PSAC2 Pilbara Seismi     26.37 195   P      P       17 01 55.9   0.0
       comp=Z,286nm,1.0s
PSA00 Pilbara Seismi     26.40 195   P      P       17 01 56.4  +0.3
       comp=Z,277nm,1.0s
PSA00 Pilbara Seismi     26.40 195   P      P       17 01 55.6  -0.4
PSA00 Pilbara Seismi     26.40 195   P      P       17 01 55.5  -0.4
PSA00                                IAmb   IAmb    17 01 57.4
       comp=Z,191nm,0.8s
PSA00 Pilbara Seismi     26.40 195   P      P       17 01 55.7  -0.4
       comp=Z,277nm,1.0s
PSAB3 Pilbara Seismi     26.41 195   P      P       17 01 56.2   0.0
       comp=Z,319nm,1.0s
PPI   Padang Panjang     26.74 261   P      P       17 01 59.4  +0.1
       comp=Z,1μmcomp=Z,53nm,1.2s
PDSI  Padang             26.76 260   P      P       17 01 59.8  +0.3
       comp=Z,41nm,0.7s
CNSH  ChangSha           27.34 333   P      P       17 02 03.5  -1.0
CNSH                                 S      S       17 06 49.5  +6.4
CNSH                                 LR     LR
       comp=Z,1μm,19.9s
CNSH                                 LR     LR
       comp=Z,740nm,15.1s
CNSH                                 LR     LR
       comp=Z,2μm,22.7s
MNSI  Mandailing Nat     27.36 264   P      P       17 02 05.8  +0.9
       comp=Z,110nm,1.0s
SSE   Sheshan            27.37 350   P      P       17 02 06.0  +1.3
SSE                                  S      S       17 06 46.0  +2.6
SSE                                  pmax   pmax
       comp=Z,21nm,0.8s
SSE                                  pmax   pmax
       comp=Z,110nm,3.1s
SSE                                  LR     LR
       comp=Z,260nm,26.4s
SSE                                  LR     LR
       comp=Z,250nm,25.8s
QIS   Mount Isa          27.55 153   P      P       17 02 05.8  -0.6
       comp=Z,59nm,0.7s
QIS   Mount Isa          27.55 153   P      P       17 02 05.2  -1.3
       comp=Z,59nm,0.7s
PPSI  Pulau Pagai        27.60 256   P      P       17 02 08.9  +1.9
PSI   Prapat             27.83 268   LR     LR      17 15 13.7
       comp=Z,707nm,20.1s,baz=103,slow=41
PSI   Prapat             27.83 268   P      P       17 02 10.0  +0.8
MTSU  Mount Surprise     28.05 142   P      P       17 02 11.7  +0.7
       comp=Z,20nm,1.0s
MTSU  Mount Surprise     28.05 142   P      P       17 02 12.1  +1.1
       comp=Z,20nm,1.0s
SISI  Saibi              28.19 260   P      P       17 02 11.3  -1.0
       comp=Z,69nm,0.8s
AS31  Alice Springs      28.45 166   P      P       17 02 13.1  -1.4
AS31                                 IAmb   IAmb    17 02 29.8
       comp=Z,22nm,0.5s
ASAR  Alice Springs      28.45 166   P      P       17 02 13.2  -1.3
       comp=Z,14nm,0.6s,baz=350,slow=7.3,SNR=333
ASAR                                 S      S       17 07 08.8  +8.0
       comp=Z,11nm,0.9s,baz=344,slow=21,SNR=7.8
ASAR                                 ScP    ScP     17 09 04.8  -1.6
       comp=Z,3.7nm,0.9s,baz=5.7,slow=2.5,SNR=4.5
       comp=Z,14nm,0.6s
ASAR  Alice Springs      28.45 166   P      P       17 02 13.1  -1.5
NJ2   Nanjing            28.79 346  eP      P       17 02 15.0  -2.4
NJ2                                  pmax   pmax
       comp=Z,7.0nm,0.7s
NJ2                                  pmax   pmax
       comp=Z,150nm,4.0s
NJ2                                  LR     LR
       comp=Z,450nm,24.6s
NJ2                                  LR     LR
       comp=Z,800nm,24.8s
NJ2                                  LR     LR
       comp=Z,660nm,23.7s
WHN   Wuhan              28.80 337   P      P       17 02 22.3  +4.8
KCSI  Kotacane, Aceh     28.95 270   P      P       17 02 18.4  -0.7
WRKA  Warakurna          29.00 177   P      P       17 02 18.9  -0.4
       comp=Z,58nm,0.8s
JNU   Nakatsue           29.13   7   P      P       17 02 19.6  -0.9
JNU                                  IAmb   IAmb    17 02 48.6
       comp=Z,33nm,0.7s
JNU   Nakatsue           29.13   7   P      P       17 02 27.7  +7.2
       comp=Z,46nm,0.9s
GIRL  Giralia            29.27 204   P      P       17 02 21.6  -0.1
GSI   Gunungsitoli       29.30 265   P      P       17 02 20.6  -1.6
GSI                                  IAmb   IAmb    17 02 39.1
       comp=Z,48nm,0.9s
GSI   Gunungsitoli       29.30 265   P      P       17 02 24.0  +1.8
       comp=Z,57nm,1.0s
GSI   Gunungsitoli       29.30 265   P      P       17 02 20.5  -1.6
       comp=Z,57nm,1.0s
GYA   Guiyang            29.41 321  ⇓P      P       17 02 21.8  -1.4
GYA                                  S      S       17 07 16.0  -0.1
GYA                                  pmax   pmax
       comp=Z,10.0nm,0.8s
GYA                                  pmax   pmax
       comp=Z,130nm,3.7s
GYA                                  LR     LR
       comp=Z,630nm,25.4s
GYA                                  LR     LR
       comp=Z,740nm,18.4s
GYA                                  LR     LR
       comp=Z,1μm,23.5s
TPTI                     29.55 269   P      P       17 02 23.9  -0.5
TV1H  Townsville Har     30.44 140   P      P       17 02 34.0  +1.8
       comp=Z,40nm,1.1s
CTA   Charters Tower     30.72 142   P      P       17 02 34.0  -0.7
       comp=Z,9.8nm,1.0s
CTA   Charters Tower     30.72 142   LR     LR      17 16 57.4
       comp=Z,399nm,18.5s,baz=318,slow=40
CTA   Charters Tower     30.72 142   P      P       17 02 37.1  +2.4
       comp=Z,0.7nm,1.0s
CTAO  Charters Tower     30.72 142   P      P       17 02 33.6  -1.1
CTAO  Charters Tower     30.72 142   P      P       17 02 36.9  +2.2
       comp=Z,9.0nm,0.9s
CTAO  Charters Tower     30.72 142   P      P       17 02 33.6  -1.1
CTAO                                 pmax   pmax
       comp=Z,21nm,0.9s
CM31  Chiang Mai Arr     30.73 300   P      P       17 02 34.3  -0.5
CMAR  Chiang Mai Arr     30.73 300   P      P       17 02 35.4  +0.6
       comp=Z,1.8nm,0.8s,baz=121,slow=7.5,SNR=20
CMAR                                 ScP    ScP     17 09 13.1  -0.7
       comp=Z,2.2nm,0.9s,baz=144,slow=2.3,SNR=8.9
       comp=Z,1.8nm,0.8s
CMAR  Chiang Mai Arr     30.73 300   P      P       17 02 35.1  +0.3
ENH   Enshi              30.74 330   P      P       17 02 35.4  +0.7
ENH                                  IAmb   IAmb    17 02 56.4
       comp=Z,24nm,0.8s
CHTO  Chiang Mai         30.88 300   P      P       17 02 36.0  -0.1
CHTO                                 IAmb   IAmb    17 02 48.7
       comp=Z,22nm,0.8s
CHTO  Chiang Mai         30.88 300   P      P       17 02 38.0  +1.9
       comp=Z,20nm,0.9s
CHTO  Chiang Mai         30.88 300   P      P       17 02 36.5  +0.4
       comp=Z,34nm,0.9s
CHTO  Chiang Mai         30.88 300   P      P       17 02 36.0  -0.1
CHTO                                 pmax   pmax
       comp=Z,22nm,0.8s
MEEK  Meekatharra        31.55 194   P      P       17 02 41.6  -0.4
       comp=Z,212nm,0.9s
MEEK  Meekatharra        31.55 194   P      P       17 02 41.1  -0.9
       comp=Z,212nm,0.9s
TJN   Taejon             32.13   1   P      P       17 02 55.5  +8.6
       comp=Z,124nm,0.9s
INU   Inuyama            32.51  16   P      P       17 02 48.6  -1.6
INU                                  IAmb   IAmb    17 03 08.3
       comp=Z,24nm,0.9s
INU   Inuyama            32.51  16   P      P       17 02 59.8   +10
       comp=Z,33nm,0.8s
PZH   PanZhiHua          32.72 315   P      P       17 02 59.3  +7.0
PZH                                  S      S       17 08 10.3  +2.5
PZH                                  pmax   pmax
       comp=Z,10.0nm,1.3s
PZH                                  pmax   pmax
       comp=Z,110nm,4.8s
PZH                                  LR     LR
       comp=N,390nm,22.2s
PZH                                  LR     LR
       comp=E,490nm,22.0s
PZH                                  LR     LR
       comp=Z,610nm,21.8s
JGF   Kuroka             32.84  16   P      P       17 02 51.6  -1.6
LYN   LuoYang            33.09 338   P      P       17 02 56.0  +0.7
LYN                                  pmax   pmax
       comp=Z,17nm,0.7s
TIA   Tai'an             33.18 346   P      P       17 02 57.5  +1.4
TIA                                  S      S       17 08 13.5  -0.9
TIA                                  pmax   pmax
       comp=Z,15nm,0.8s
TIA                                  LR     LR
       comp=Z,260nm,18.6s
TIA                                  LR     LR
       comp=Z,540nm,19.2s
TIA                                  LR     LR
       comp=Z,850nm,22.0s
KSRS  Korea Array        33.22   2   P      P       17 02 56.3   0.0
       comp=Z,3.3nm,0.8s,baz=176,slow=10.0,SNR=12
KSRS                                 PcP    PcP     17 05 39.6  +0.9
       comp=Z,2.6nm,0.7s,baz=188,slow=2.7,SNR=4.9
       comp=Z,3.3nm,0.8s
MAJO  Matsushiro         33.96  17  iP      P       17 03 01.1  -1.8
MAJO                                 pmax   pmax
       comp=Z,9.0nm,1.0s
MJAR  Matsushiro Arr     33.96  17   P      P       17 03 01.5  -1.4
       comp=Z,3.0nm,0.9s,baz=183,slow=9.3,SNR=9.8
MJAR                                 PcP    PcP     17 05 41.9  +1.0
       comp=Z,2.3nm,0.8s,baz=173,slow=3.5,SNR=4.3
       comp=Z,3.0nm,0.9s
MJAR  Matsushiro Arr     33.96  17   P      P       17 03 01.8  -1.1
MJAR  Matsushiro Arr     33.96  17   P      P       17 03 01.8  -1.1
MJAR                                 pmax   pmax
       comp=Z,12nm,1.6s
XAN   Xi'an              34.11 333  ⇓P      P       17 03 04.0  -0.3
XAN                                  pP     sP      17 03 15.0  +0.8
XAN                                  pmax   pmax
       comp=Z,28nm,1.2s
XAN                                  LR     LR
       comp=Z,840nm,22.0s
XAN                                  LR     LR
       comp=Z,1μm,19.2s
XAN                                  LR     LR
       comp=Z,2μm,19.9s
CD2   Chengdu            34.38 323   P      P       17 03 03.3  -3.4
CD2                                  S      S       17 08 33.3   0.0
CD2                                  pmax   pmax
       comp=Z,10.0nm,0.4s
CD2                                  LR     LR
       comp=Z,1μm,19.6s
CD2                                  LR     LR
       comp=Z,1μm,17.6s
INKA  Innaminka          34.40 158   P      P       17 03 05.5  -1.3
INKA                                 IAmb   IAmb    17 03 16.6
       comp=Z,29nm,0.7s
MORW  Morawa             34.55 197   P      P       17 03 08.0   0.0
       comp=Z,40nm,1.1s
MORW  Morawa             34.55 197   P      P       17 03 07.1  -1.0
MORW                                 IAmb   IAmb    17 03 18.0
       comp=Z,34nm,0.9s
MORW  Morawa             34.55 197   P      P       17 03 07.2  -0.8
       comp=Z,40nm,1.1s
FORT  Forrest            34.70 178   P      P       17 03 08.8  -0.5
       comp=Z,99nm,0.9s
FORT  Forrest            34.70 178   P      P       17 03 07.8  -1.6
QLP   Quilpie            34.86 152   P      P       17 03 10.0  -0.8
       comp=Z,56nm,1.0s
QLP   Quilpie            34.86 152   P      P       17 03 09.2  -1.6
       comp=Z,56nm,1.0s
HNS   HongShan           34.94 343  ⇓P      P       17 03 12.0  +0.7
HNS                                  S      S       17 08 40.8  -0.9
HNS                                  pmax   pmax
       comp=Z,22nm,0.9s
HNS                                  LR     LR
       comp=Z,750nm,21.6s
HNS                                  LR     LR
       comp=Z,830nm,20.6s
HNS                                  LR     LR
       comp=Z,1μm,20.8s
DL2   Dalian             34.97 353   P      P       17 03 11.8  +0.3
DL2                                  pmax   pmax
       comp=Z,91nm,1.2s
DL2                                  pmax   pmax
       comp=Z,510nm,9.1s
DL2                                  LR     LR
       comp=Z,890nm,19.8s
DL2                                  LR     LR
       comp=Z,810nm,20.1s
DL2                                  LR     LR
       comp=Z,1μm,20.1s
KMBL  Kambalda           35.57 187   P      P       17 03 16.4  -0.4
       comp=Z,82nm,1.0s
AUNRC North Rockhamp     35.79 141   P      P       17 03 19.9  +1.1
       comp=Z,76nm,1.1s
BLDU  Ballidu            35.83 195   P      P       17 03 18.6  -0.4
       comp=Z,82nm,1.1s
BLDU  Ballidu            35.83 195   P      P       17 03 18.0  -1.1
       comp=Z,82nm,1.1s
TIY   Taiyuan            35.94 340   P      P       17 03 16.5  -3.5
TIY                                  S      S       17 08 55.3  -1.9
TIY                                  pmax   pmax
       comp=Z,190nm,5.1s
TIY                                  LR     LR
       comp=Z,680nm,19.2s
TIY                                  LR     LR
       comp=Z,410nm,22.0s
TIY                                  LR     LR
       comp=Z,560nm,19.9s
KLBR  Kellerberrin       36.51 193   P      P       17 03 24.6  -0.3
       comp=Z,325nm,0.7s
KLBR  Kellerberrin       36.51 193   P      P       17 03 24.6  -0.3
       comp=Z,325nm,0.7s
BJT   Baijiatuau         37.03 346   P      P       17 03 29.2   0.0
BJT                                  IAmb   IAmb    17 03 50.2
       comp=Z,44nm,0.8s
BJT   Baijiatuau         37.03 346   P      P       17 03 29.2   0.0
BJT                                  pmax   pmax
       comp=Z,44nm,0.8s
BJI   Beijing            37.05 346   P      P       17 03 31.0  +1.7
BJI                                  pmax   pmax
       comp=Z,26nm,0.7s
BJI                                  LR     LR
       comp=Z,160nm,20.6s
BJI                                  LR     LR
       comp=Z,290nm,25.9s
BJI                                  LR     LR
       comp=Z,230nm,22.7s
MUN   Mundaring          37.26 195   P      P       17 03 31.0  -0.2
       comp=Z,87nm,0.9s
MUN   Mundaring          37.26 195   P      P       17 03 30.5  -0.7
       comp=Z,87nm,0.9s
EIDS  Eidsvold           37.61 142   P      P       17 03 34.3   0.0
       comp=Z,50nm,0.8s
EIDS  Eidsvold           37.61 142   IAmb   IAmb    17 03 35.0
       comp=Z,41nm,0.8s
EIDS  Eidsvold           37.61 142   P      P       17 03 35.0  +0.7
       comp=Z,50nm,0.8s
SNY   Shenyang           37.68 356  ⇓P      P       17 03 37.3  +2.7
SNY                                  S      S       17 09 21.0  -2.4
SNY                                  pmax   pmax
       comp=Z,19nm,0.7s
SNY                                  LR     LR
       comp=Z,420nm,21.5s
SNY                                  LR     LR
       comp=Z,520nm,22.0s
SNY                                  LR     LR
       comp=Z,820nm,22.3s
BBOO  Buckleboo          37.74 167   P      P       17 03 35.3  -0.1
       comp=Z,152nm,1.1s
BBOO  Buckleboo          37.74 167   P      P       17 03 34.1  -1.3
BBOO  Buckleboo          37.74 167   P      P       17 03 35.3  -0.1
       comp=Z,152nm,1.1s
NWAO  Narrogin (SRO)     37.91 193   P      P       17 03 36.8   0.0
       comp=Z,63nm,1.2s
NWAO  Narrogin (SRO)     37.91 193   P      P       17 03 36.8   0.0
       comp=Z,111nm,1.2s
NWAO  Narrogin (SRO)     37.91 193   P      P       17 03 36.8   0.0
       comp=Z,179nm,1.2s
NWAO  Narrogin (SRO)     37.91 193   P      P       17 03 36.3  -0.5
NWAO                                 IAmb   IAmb    17 03 37.6
       comp=Z,65nm,0.8s
NWAO  Narrogin (SRO)     37.91 193   P      P       17 03 36.5  -0.3
       comp=Z,83nm,1.2s
NWAO  Narrogin (SRO)     37.91 193   P      P       17 03 36.3  -0.5
       comp=Z,83nm,1.2s
NWAO  Narrogin (SRO)     37.91 193   P      P       17 03 36.3  -0.5
NWAO                                 pmax   pmax
       comp=Z,65nm,0.8s
LZH   Lanzhou            38.22 329  eP      P       17 03 40.3  +0.8
LZH                                  pP     pP      17 03 46.0  -0.6
LZH                                  pmax   pmax
       comp=Z,34nm,1.3s
LZH                                  LR     LR
       comp=Z,1μm,15.1s
LZH                                  LR     LR
       comp=Z,1μm,14.4s
LZH                                  LR     LR
       comp=Z,2μm,15.8s
WHYH  Whyalla            38.32 165   P      P       17 03 39.8  -0.3
       comp=Z,135nm,0.7s
STKA  Stephens Creek     38.45 160   P      P       17 03 41.2  -0.1
       comp=Z,311nm,0.8s
STKA  Stephens Creek     38.45 160   P      P       17 03 41.0  -0.4
       comp=Z,62nm,0.7s,baz=333,slow=8.4,SNR=86
       comp=Z,62nm,0.7s
STKA  Stephens Creek     38.45 160   P      P       17 03 40.3  -1.0
STKA  Stephens Creek     38.45 160   P      P       17 03 41.5  +0.2
       comp=Z,15nm,0.8s
STKA  Stephens Creek     38.45 160   P      P       17 03 40.3  -1.0
STKA                                 pmax   pmax
       comp=Z,293nm,0.9s
AUJCS Jamestown Cent     38.75 164   P      P       17 03 44.5  +0.7
       comp=Z,70nm,1.3s
AULRC Lightning Ridg     39.05 150   P      P       17 03 47.7  +1.3
       comp=Z,65nm,0.8s
HTT   Hallett            39.05 164   P      P       17 03 46.7  +0.3
       comp=Z,39nm,1.2s
HTT   Hallett            39.05 164   P      P       17 03 47.0  +0.5
       comp=Z,16nm,0.8s
HTT   Hallett            39.05 164   P      P       17 03 46.3  -0.1
       comp=Z,39nm,1.2s
HHC   Hu-ho-hao-te       39.07 342  eP      P       17 03 44.8  -1.7
HHC                                  sP     pP      17 03 53.8  +0.2
HHC                                  pmax   pmax
       comp=Z,12nm,0.7s
HHC                                  pmax   pmax
       comp=Z,130nm,4.6s
HHC                                  LR     LR
       comp=Z,420nm,18.9s
HHC                                  LR     LR
       comp=Z,520nm,23.7s
HHC                                  LR     LR
       comp=Z,570nm,20.8s
AUCAS Cummins Area S     39.07 168   P      P       17 03 46.4   0.0
       comp=Z,117nm,1.1s
CN2   Changchun          39.56 358   P      P       17 03 54.0  +3.6
CN2                                  S      S       17 09 54.5  +2.8
CN2                                  pmax   pmax
       comp=Z,10.0nm,0.7s
CN2                                  LR     LR
       comp=Z,400nm,23.0s
CN2                                  LR     LR
       comp=Z,500nm,23.0s
CN2                                  LR     LR
       comp=Z,500nm,17.0s
RKGY  Rocky Gully        39.59 193   P      P       17 03 52.2  +1.4
       comp=Z,258nm,0.8s
CMSA  Cobar Meteorol     39.75 154   P      P       17 03 52.2   0.0
       comp=Z,43nm,0.7s
CMSA  Cobar Meteorol     39.75 154   P      P       17 03 52.9  +0.7
       comp=Z,43nm,0.7s
TW1H  Toowoomba 1 Ha     39.75 144   P      P       17 03 53.7  +1.3
       comp=Z,93nm,0.8s
USRK  Ussuriysk Ar.      40.20   6   P      P       17 03 56.6  +0.9
       comp=Z,2.0nm,0.5s,baz=179,slow=9.8,SNR=7.6
       comp=Z,2.0nm,0.5s
GHSS  Government Hou     40.37 165   P      P       17 03 57.2  -0.1
       comp=Z,100nm,0.8s
MDJ   Mudanjiang         40.43   3   P      P       17 04 05.4  +7.7
       comp=Z,45nm,1.3s
XLT   XiLinHaoTe         40.75 348  eP      P       17 04 01.8  +1.3
XLT                                  S      S       17 10 06.5  -3.3
XLT                                  pmax   pmax
       comp=Z,25nm,0.9s
XLT                                  pmax   pmax
       comp=Z,180nm,4.0s
XLT                                  LR     LR
       comp=Z,45nm,19.0s
XLT                                  LR     LR
       comp=Z,400nm,20.4s
XLT                                  LR     LR
       comp=Z,550nm,20.7s
AUMBR Murray Bridge      40.75 164   P      P       17 04 01.1  +0.7
       comp=Z,73nm,1.1s
BNX   BinXian            41.48   1  ⇑P      P       17 04 08.5  +2.2
BNX                                  S      S       17 10 23.0  +2.6
BNX                                  pmax   pmax
       comp=Z,6.0nm,0.8s
BNX                                  pmax   pmax
       comp=Z,190nm,7.2s
BNX                                  LR     LR
       comp=Z,780nm,24.7s
BNX                                  LR     LR
       comp=Z,370nm,20.7s
BNX                                  LR     LR
       comp=Z,980nm,22.8s
AUDCS Dubbo College      41.67 152   P      P       17 04 08.5  +0.5
       comp=Z,64nm,0.8s
ARMA  Armidale           41.74 147   P      P       17 04 09.7  +0.9
       comp=Z,118nm,0.8s
ARMA  Armidale           41.74 147   P      P       17 04 07.7  -1.1
ARMA                                 IAmb   IAmb    17 04 20.0
       comp=Z,77nm,0.8s
ARMA  Armidale           41.74 147   P      P       17 04 09.5  +0.7
       comp=Z,118nm,0.8s
AUPHS Peel High Scho     41.88 148   P      P       17 04 10.7  +0.9
       comp=Z,22nm,1.6s
ASAJ  Asahikawa          42.23  17   P      P       17 04 12.5   0.0
ASAJ                                 pmax   pmax
       comp=Z,25nm,0.8s
JKA   Kamikawa-asahi     42.23  17   P      P       17 04 12.5   0.0
LSA   Lhasa              42.23 311   P      P       17 04 13.6  +0.3
LSA   Lhasa              42.23 311   P      P       17 04 13.6  +0.3
LSA                                  pmax   pmax
       comp=Z,17nm,0.8s
GTA   Gaotai             42.81 329  eP      P       17 04 18.3  +0.9
GTA                                  sP     sP      17 04 26.0  -1.6
GTA                                  pmax   pmax
       comp=Z,7.0nm,0.8s
GTA                                  LR     LR
       comp=Z,910nm,20.7s
GTA                                  LR     LR
       comp=Z,1μm,21.1s
GTA                                  LR     LR
       comp=Z,1μm,21.9s
ARPS  Mount Arapiles     43.02 162   P      P       17 04 19.4  +0.5
       comp=Z,101nm,1.0s
YNG   Young              43.29 154   P      P       17 04 22.3  +1.1
       comp=Z,22nm,1.2s
GOMU  GeErMu             43.43 321   P      P       17 04 20.8  -2.0
GOMU                                 S      S       17 10 51.0  +0.9
GOMU                                 pmax   pmax
       comp=Z,9.0nm,0.9s
GOMU                                 LR     LR
       comp=Z,420nm,18.4s
GOMU                                 LR     LR
       comp=Z,490nm,18.4s
SYDH  Sydney Hard Ro     43.94 151   P      P       17 04 29.2  +2.8
       comp=Z,36nm,0.6s
BRAT  Ballarat           44.40 160   P      P       17 04 31.2  +1.2
       comp=Z,42nm,0.9s
AUMTS Mt Stromlo         44.41 154   P      P       17 04 31.6  +1.3
       comp=Z,55nm,1.1s
CAN   Canberra           44.42 154   P      P       17 04 31.9  +1.6
       comp=Z,50nm,0.9s
CAN   Canberra           44.42 154   P      P       17 04 28.9  -1.4
CAN                                  IAmb   IAmb    17 04 32.3
       comp=Z,34nm,0.8s
CAN   Canberra           44.42 154   P      P       17 04 31.6  +1.3
       comp=Z,76nm,0.9s
CAN   Canberra           44.42 154   P      P       17 04 28.9  -1.4
CAN                                  pmax   pmax
       comp=Z,34nm,0.8s
AUDAR Daramalan Coll     44.42 154   P      P       17 04 32.3  +2.0
       comp=Z,24nm,1.1s
AUMTC Mt Clear Colle     44.44 161   P      P       17 04 31.7  +1.4
       comp=Z,30nm,1.1s
AUMHS Melrose High S     44.49 154   P      P       17 04 32.2  +1.3
       comp=Z,32nm,0.8s
CNB   Canberra Magne     44.57 153   P      P       17 04 32.9  +1.3
       comp=Z,28nm,1.0s
CNB   Canberra Magne     44.57 153   P      P       17 04 33.0  +1.4
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	comp=Z,28nm,1.0s						
YSS	**Yuzhno-Sakhali**	**44.88**	**16**	*e*P	**P**	**17 04 32.1**	**-1.7**
YSS				*e*S	**S**	**17 11 04.5**	**-5.7**
YSS				*e*SS	**ScS**	**17 14 27.6**	**-2.1**
YSS				pmax	pmax		
	comp=Z,20nm,1.4s						
YSS				MLR	MLR		
	comp=Z,400nm,18.0s						
TOO	**Toolangi**	**44.96**	**159**	P	**P**	**17 04 36.0**	**+1.4**
	comp=Z,16nm,1.3s						
TOO	**Toolangi**	**44.96**	**159**	P	**P**	**17 04 33.3**	**-1.3**
TOO	**Toolangi**	**44.96**	**159**	P	**P**	**17 04 33.3**	**-1.3**
TOO				pmax	pmax		
	comp=Z,16nm,1.2s						
MLBS	**Spotswood, Mel**	**44.98**	**160**	P	**P**	**17 04 36.0**	**+1.4**
AUSMG	**Snowy Mountain**	**45.18**	**155**	P	**P**	**17 04 37.4**	**+1.0**
	comp=Z,57nm,1.0s						
HIA	**Hailar**	**45.41**	**354**	P	**P**	**17 04 39.0**	**+1.0**
HIA				IAmb	IAmb	17 04 59.2	
	comp=Z,24nm,0.9s						
HIA	**Hailar**	**45.41**	**354**	P	P	17 04 44.2	+6.2
	comp=Z,34nm,1.1s						
HIA	**Hailar**	**45.41**	**354**	P	**P**	**17 04 39.0**	**+1.0**
HIA				pmax	pmax		
	comp=Z,24nm,0.9s						
HILR	**Hailar Array B**	**45.69**	**354**	P	**P**	**17 04 41.6**	**+1.4**
	comp=Z,10nm,0.8s,baz=168,slow=11,SNR=13						
HILR				PcP	**PcP**	**17 06 19.2**	**+1.2**
	comp=Z,7.2nm,0.6s,baz=154,slow=4.9,SNR=3.8						
	comp=Z,10nm,0.8s						
PALK	**Pallekele**	**45.94**	**276**	LR	LR	17 25 54.5	
	comp=Z,192nm,20.5s,baz=96,slow=39						
PALK	**Pallekele**	**45.94**	**276**	P	**P**	**17 04 43.6**	**+0.8**
MILA	**Mila**	**45.95**	**155**	P	**P**	**17 04 44.8**	**+2.4**
HEH	**HeiHe**	**46.00**	**1**	*e*P	**P**	**17 04 42.5**	**-0.1**
HEH				pmax	pmax		
	comp=Z,14nm,0.9s						
HEH				LR	LR		
	comp=Z,550nm,21.5s						
HEH				LR	LR		
	comp=Z,380nm,22.0s						
HEH				LR	LR		
	comp=Z,1µm,22.8s						
DZM	**Mont Dzumac**	**46.71**	**126**	P	**P**	**17 04 48.5**	**-0.3**
	comp=Z,7.8nm,0.6s,baz=230,slow=21,SNR=5.9						
	comp=Z,7.8nm,0.6s						
DZM	**Mont Dzumac**	**46.71**	**126**	*e*P	**P**	**17 04 48.4**	**-0.3**
	comp=Z,115nm,1.2s						
DZM	**Mont Dzumac**	**46.71**	**126**	*e*LR	LR	17 17 54.6	
	comp=Z,441nm,26.9s						
DZM	**Mont Dzumac**	**46.71**	**126**	P	**P**	**17 04 47.9**	**-0.8**
DZM				IAmb	IAmb	17 05 02.1	
	comp=Z,51nm,1.1s						
DZM	**Mont Dzumac**	**46.71**	**126**	P	**P**	**17 04 52.0**	**+3.3**
	comp=Z,45nm,1.2s						
ULN	**Ulaanbaatar**	**46.79**	**342**	P	**P**	**17 04 48.8**	**-0.3**
ULN				IAmb	IAmb	17 05 15.0	
	comp=Z,17nm,0.9s						
ULN	**Ulaanbaatar**	**46.79**	**342**	P	**P**	**17 04 50.4**	**+1.4**
	comp=Z,87nm,1.0s						
ULN	**Ulaanbaatar**	**46.79**	**342**	*ce*P	**P**	**17 04 47.0**	**-2.0**
ULN				pmax	pmax		
	comp=Z,22nm,1.7s						
SONM	**Songino Array**	**46.97**	**341**	P	**P**	**17 04 51.1**	**+0.7**
	comp=Z,2.4nm,0.6s,baz=160,slow=8.1,SNR=16						
SONM				PcP	**PcP**	**17 06 23.4**	**+0.8**
	comp=Z,3.9nm,0.7s,baz=146,slow=3.2,SNR=3.7						
SONM				LR	LR	17 25 58.2	
	comp=Z,550nm,20.8s,baz=152,slow=38						
	comp=Z,2.4nm,0.6s						
SONM	**Songino Array**	**46.97**	**341**	P	**P**	**17 04 50.8**	**+0.4**
SONM				IAmb	IAmb	17 05 15.4	
	comp=Z,49nm,1.7s						
SONM	**Songino Array**	**46.97**	**341**	P	**P**	**17 04 50.8**	**+0.4**
SONM				pmax	pmax		
	comp=Z,49nm,1.7s						
YATNC	**Mamie plateau,**	**47.06**	**125**	P	**P**	**17 04 54.8**	**+3.4**
	comp=Z,47nm,0.8s						
GRNR	**Gornyy**	**47.22**	**8**	*e*P	**P**	**17 04 52.1**	**0.0**
GLAD	**Gladstone**	**48.89**	**159**	P	**P**	**17 05 06.6**	**+1.4**
	comp=Z,24nm,0.8s						
CORO	**Coronation Par**	**48.99**	**160**	P	**P**	**17 05 07.0**	**+1.1**
	comp=Z,19nm,0.9s						
CIT	**Chita**	**49.02**	**349**	*e*P	**P**	**17 05 07.0**	**+0.9**
CIT				*e*		17 05 12.6	
CIT				*e*		17 06 34.2	
CIT				*e*		17 06 59.4	
CIT				pmax	pmax		
	comp=Z,69nm,2.3s						
HYB	**Hyderabad**	**49.04**	**289**	*e*P	**P**	**17 05 07.0**	**+0.2**
ZEA	**Zeya**	**49.49**	**0**	*e*P	**P**	**17 05 11.6**	**+2.0**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TLY	**Talaya**	**51.20**	**342**	*i* P	**P**	**17 05 22.8**	**+0.2**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MOY	**Mondy**	**52.06**	**340**	*e*P	**P**	**17 05 30.7**	**+1.5**
MOY				pmax	pmax		
	comp=Z,33nm,2.2s						
WMQ	**Urumqi**	**52.45**	**325**	*e*P	**P**	**17 05 32.8**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
WMQ				LR	LR		
	comp=Z,810nm,15.5s						
WMQ				LR	LR		
	comp=Z,550nm,21.1s						
WMQ				LR	LR		
	comp=Z,530nm,21.1s						
KNGR	**Kungurtug, Tuv**	**52.47**	**337**	*i* P	**P**	**17 05 32.7**	**+0.5**
KNGR				pmax	pmax		
	comp=Z,15nm,1.2s						
PETK	**Petropavlovsk-**	**55.08**	**22**	P	**P**	**17 05 51.8**	**+0.6**
	comp=Z,6.6nm,0.6s,baz=195,slow=4.0,SNR=16						
PETK				LR	LR	17 30 20.7	
	comp=Z,86nm,19.8s,baz=203,slow=37						
	comp=Z,6.6nm,0.6s						
PETK	**Petropavlovsk-**	**55.08**	**22**	P	**P**	**17 05 51.0**	**-0.2**
ZSN	**Zaisan**	**56.23**	**327**	*e*P	**P**	**17 05 59.6**	**+0.1**
ZSN	**Zaisan**	**56.23**	**327**	*e*P	**P**	**17 05 59.6**	**+0.1**
DGZ	**Jazzator, Alta**	**56.30**	**330**	*i* P	**P**	**17 06 00.0**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SHLS	**Shalkode**	**57.10**	**320**	*e*P	**P**	**17 06 04.0**	**-1.9**
	comp=Z,6.4nm,1.0s						
SHLS	**Shalkode**	**57.10**	**320**	*e*P	**P**	**17 06 04.0**	**-1.9**
SHLS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MK31	**Makanchi Array**	**57.28**	**325**	*ce*P	**P**	**17 06 08.2**	**+1.1**
MKAR	**Makanchi Array**	**57.28**	**325**	P	**P**	**17 06 07.2**	**+0.1**
	comp=Z,3.0nm,0.5s,baz=123,slow=7.6,SNR=30						
MKAR				ScP	**ScP**	**17 11 01.7**	**+2.0**
	comp=Z,0.9nm,0.6s,baz=131,slow=4.4,SNR=3.5						
MKAR				LR	LR	17 32 55.7	
	comp=Z,598nm,20.8s,baz=98,slow=38						
MKAR				PKPPKP	**P'P'df**	**17 35 58.5**	**+1.6**
	comp=Z,0.7nm,0.9s,baz=270,slow=0.7,SNR=3.8						
	comp=Z,3.0nm,0.5s						
MKAR	**Makanchi Array**	**57.28**	**325**	P	**P**	**17 06 06.7**	**-0.4**
MAKZ	**Makanchi**	**57.47**	**325**	P	**P**	**17 06 08.3**	**-0.1**
MAKZ				IAmb	IAmb	17 06 19.7	
	comp=Z,14nm,0.8s						
MAKZ	**Makanchi**	**57.47**	**325**	P	**P**	**17 06 08.3**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,15nm,0.8s						
TARG	**Taragay, Kyrgy**	**57.51**	**318**	P	**P**	**17 06 08.2**	**-1.1**
TARG	**Taragay, Kyrgy**	**57.51**	**318**	P	**P**	**17 06 08.2**	**-1.1**
TARG				pmax	pmax		
	comp=Z,12nm,0.8s						
SATY	**Saty**	**57.73**	**320**	*e*P	**P**	**17 06 10.4**	**0.0**
SATY	**Saty**	**57.73**	**320**	*e*P	**P**	**17 06 10.4**	**0.0**
NIL	**Nilore**	**57.74**	**308**	P	**P**	**17 06 10.9**	**+0.3**
NIL				IAmb	IAmb	17 06 28.9	
	comp=Z,38nm,1.1s						
NIL	**Nilore**	**57.74**	**308**	P	**P**	**17 06 10.9**	**+0.3**
NIL				pmax	pmax		
	comp=Z,38nm,1.1s						
KSH	**Kashi**	**57.82**	**315**	P	**P**	**17 06 14.0**	**+2.9**
KSH				sP	sP	17 06 24.5	+3.1
KSH				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KSH				LR	LR		
	comp=Z,420nm,19.2s						
KSH				LR	LR		
	comp=Z,370nm,19.2s						
KSH				LR	LR		
	comp=Z,480nm,20.3s						
YAK	**Yakutsk**	**57.84**	**2**	P	**P**	**17 06 10.1**	**-0.6**
YAK	**Yakutsk**	**57.84**	**2**	*e*P	**P**	**17 06 10.4**	**-0.2**
YAK				*e**PP	**pP**	**17 06 16.0**	**-2.1**
YAK				*e*		17 07 01.2	
YAK				*e*S	**S**	**17 14 10.6**	**+2.0**
YAK				*e**SS	sS	17 14 28.4	+7.4
YAK				*e*		17 15 59.9	
YAK				*e*SS	**SS**	**17 18 02.9**	**+3.3**
YAK				pmax	pmax		
	comp=Z,30nm,0.8s						
YAK				pmax	pmax		
	comp=N,11nm,1.7s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,97nm,3.5s						
YAK				pmax	pmax		
	comp=N,99nm,3.9s						
YAK				pmax	pmax		
	comp=E,85nm,3.2s						
YAK				smax	smax		
	comp=E,165nm,5.6s						
YAK				smax	smax		
	comp=N,65nm,3.2s						
MDOK	**Medeo**	**58.66**	**319**	*e*P	**P**	**17 06 16.9**	**0.0**
MDOK	**Medeo**	**58.66**	**319**	*e*P	**P**	**17 06 16.9**	**0.0**
TDK	**Taldyqorghan**	**58.66**	**322**	*e*P	**P**	**17 06 16.9**	**+0.1**
	comp=N,4.0nm,0.6s						
TDK	**Taldyqorghan**	**58.66**	**322**	*e*P	**P**	**17 06 16.9**	**+0.1**
TDK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TNSS	**Tian-Shan**	**58.67**	**319**	*e*P	**P**	**17 06 17.1**	**-0.3**
TNSS	**Tian-Shan**	**58.67**	**319**	*e*P	**P**	**17 06 17.0**	**-0.3**
AAA	**Alma-Ata**	**58.77**	**319**	*e*P	**P**	**17 06 17.7**	**0.0**
	comp=Z,5.5nm,0.4s						
AAA	**Alma-Ata**	**58.77**	**319**	*e*P	**P**	**17 06 17.6**	**0.0**
AAA				pmax	pmax		
	comp=Z,6.0nm,0.4s						
AAK	**Ala-Archa**	**60.12**	**318**	LR	LR	17 35 50.6	
	comp=Z,161nm,20.5s,baz=96,slow=39						
AAK	**Ala-Archa**	**60.12**	**318**	*i* P	**P**	**17 06 28.9**	**+1.8**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.5s						
ZAA0	**Zalesovo Array**	**60.29**	**333**	P	**P**	**17 06 25.6**	**-2.2**
ZAA0				IAmb	IAmb	17 06 40.5	
	comp=Z,13nm,0.8s						
ZALV	**Zalesovo Beam**	**60.29**	**333**	P	**P**	**17 06 27.0**	**-0.7**
	comp=Z,3.4nm,0.4s,baz=134,slow=7.3,SNR=13						
ZALV				LR	LR	17 35 16.8	
	comp=Z,302nm,19.1s,baz=130,slow=39						
ZALV				PKPPKP	**P'P'df**	**17 35 54.9**	**+3.1**
	comp=Z,0.7nm,0.7s,baz=259,slow=3.0,SNR=3.6						
	comp=Z,3.4nm,0.4s						
ZALV	**Zalesovo Beam**	**60.29**	**333**	P	**P**	**17 06 26.3**	**-1.5**
ZALV	**Zalesovo Beam**	**60.29**	**333**	*i* P	**P**	**17 06 29.7**	**+2.0**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ARSB	**Arslanbob**	**60.63**	**316**	IAmb	IAmb	17 06 52.0	
	comp=Z,23nm,1.0s						
DCZ	**Deep Cove**	**61.03**	**149**	P	**P**	**17 06 31.6**	**-1.4**
KBL	**Kabul**	**61.34**	**307**	P	**P**	**17 06 35.0**	**-0.6**
KBL				IAmb	IAmb	17 06 53.5	
	comp=Z,18nm,1.1s						
KBL	**Kabul**	**61.34**	**307**	P	**P**	**17 06 35.0**	**-0.6**
KBL				pmax	pmax		
	comp=Z,18nm,1.1s						
KURBB	**Kurchatov Arra**	**61.46**	**327**	P	**P**	**17 06 37.1**	**+1.3**
	comp=Z,8.0nm,0.5s,baz=124,slow=6.5,SNR=17						
KURBB				PKPPKP	**P'P'df**	**17 35 53.8**	**+3.6**
	comp=Z,0.3nm,0.3s,baz=309,slow=3.6,SNR=4.3						
	comp=Z,8.0nm,0.5s						
KURK	**Kurchatov**	**61.46**	**327**	P	**P**	**17 06 34.9**	**-0.9**
KURK	**Kurchatov**	**61.46**	**327**	*ce*P	**P**	**17 06 36.1**	**+0.3**
KURK				pmax	pmax		
	comp=Z,12nm,0.6s						
SEY	**Seymchan**	**61.67**	**13**	LR	LR	17 33 06.9	
	comp=Z,132nm,21.1s,baz=172,slow=36						
SEY	**Seymchan**	**61.67**	**13**	*ce*P	**P**	**17 06 38.4**	**+1.4**
SEY				pmax	pmax		
	comp=Z,26nm,2.5s						
LBZ	**Lake Benmore**	**61.96**	**146**	P	**P**	**17 06 37.0**	**-2.3**
RPZ	**Rata Peaks**	**62.03**	**145**	P	**P**	**17 06 39.5**	**-0.3**
SHEM	**Shemya Is, Ala**	**62.13**	**30**	LR	LR	17 29 14.5	
	comp=Z,255nm,21.1s,baz=280,slow=32						
URZ	**Urewera**	**62.77**	**137**	P	**P**	**17 06 44.8**	**-0.1**
	comp=Z,8.0nm,0.8s,baz=317,slow=20,SNR=1.5						
URZ				LR	LR	17 34 56.5	
	comp=Z,386nm,18.8s,baz=326,slow=37						
	comp=Z,8.0nm,0.8s						
BKZ	**Black Stump Fm**	**62.82**	**138**	P	**P**	**17 06 44.1**	**-1.1**
RTZ	**Ruatahuna**	**62.87**	**137**	P	**P**	**17 06 45.1**	**-0.4**
KKAR	**Karatay Array**	**63.00**	**317**	P	**P**	**17 06 46.6**	**+0.3**
KKAR	**Karatay Array**	**63.00**	**317**	P	**P**	**17 06 46.6**	**+0.3**
BRLS	**Borolday**	**63.43**	**317**	*e*P	**P**	**17 06 49.5**	**+0.3**
BRLS	**Borolday**	**63.43**	**317**	*e*P	**P**	**17 06 49.5**	**+0.3**
BVAR	**Borovoye Array**	**67.04**	**327**	P	**P**	**17 07 12.2**	**-0.1**
	comp=Z,3.3nm,0.7s,baz=125,slow=7.8,SNR=9.6						
	comp=Z,3.3nm,0.7s						
BORK	**Borovoye**	**67.09**	**327**	P	**P**	**17 07 13.0**	**+0.4**
BORK				IAmb	IAmb	17 07 27.0	
	comp=Z,37nm,1.0s						
BORK	**Borovoye**	**67.09**	**327**	*ce*P	**P**	**17 07 13.5**	**+0.8**
BORK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TIXI	**Tiksi**	**67.48**	**1**	P	**P**	**17 07 14.2**	**-0.6**
TIXI				IAmb	IAmb	17 07 34.4	
	comp=Z,21nm,0.9s						
TIXI	**Tiksi**	**67.48**	**1**	*i* P	**P**	**17 07 14.3**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BILL	**Bilibino**	**69.19**	**15**	*i* P	**P**	**17 07 25.5**	**-0.1**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NRIK	**Noril'sk**	**70.09**	**346**	P	**P**	**17 07 31.4**	**+0.3**
	comp=Z,8.3nm,0.7s,baz=123,slow=5.8,SNR=33						
NRIK				LR	LR	17 40 43.7	
	comp=Z,648nm,21.2s,baz=146,slow=38						
	comp=Z,8.3nm,0.7s						
NRIK	**Noril'sk**	**70.09**	**346**	*i* P	**P**	**17 07 31.2**	**+0.1**
NRIK				pmax	pmax		
	comp=Z,19nm,1.0s						
NIKH	**Nikolski High**	**71.49**	**35**	P	**P**	**17 07 38.7**	**-1.2**
	baz=251						
AB31	**Akbulak array**	**71.90**	**321**	P	**P**	**17 07 42.1**	**-0.4**
ABKAR	**Akbulak array**	**71.90**	**321**	P	**P**	**17 07 41.2**	**-1.3**
SPIA	**Saint Paul Isl**	**72.16**	**31**	P	**P**	**17 07 43.1**	**-0.7**
	baz=249						
P08K	**Saint George I**	**72.32**	**31**	P	**P**	**17 07 43.9**	**-0.9**
	baz=250						
UNV	**Unalaska Valle**	**73.10**	**35**	P	**P**	**17 07 48.2**	**-1.3**
	baz=253						
AKTO	**Aktyubinsk**	**73.40**	**322**	LR	LR	17 42 49.4	
	comp=Z,475nm,21.7s,baz=97,slow=38						
SVE	**Sverdlovsk**	**73.68**	**328**	*e*P	**P**	**17 07 54.4**	**+1.5**
SVE				pmax	pmax		
	comp=Z,27nm,1.1s						
GAMB	**Gambell**	**74.05**	**24**	P	**P**	**17 07 54.2**	**-0.6**
	baz=246						
ARTI	**Arti**	**74.74**	**328**	LR	LR	17 44 08.3	
	comp=Z,145nm,20.6s,baz=105,slow=38						
ARTI	**Arti**	**74.74**	**328**	P	**P**	**17 07 59.3**	**+0.3**
ARTI				IAmb	IAmb	17 08 35.4	
	comp=Z,26nm,1.1s						
ARTI	**Arti**	**74.74**	**328**	*c i*P	**P**	**17 08 00.0**	**+0.9**
ARTI						17 10 41.9	
ARTI				S	**S**	**17 17 36.7**	**+2.7**
ARTI				SS	**SS**	**17 22 17.9**	**-3.9**
ARTI				pmax	pmax		
	comp=Z,11nm,1.2s						
FALS	**False Pass**	**75.11**	**34**	P	**P**	**17 08 00.5**	**-0.8**
	baz=256						
M11K	**Mekoryuk**	**75.23**	**28**	P	**P**	**17 08 00.5**	**-1.2**
	baz=252						
S12K	**Black Hills**	**76.07**	**34**	P	**P**	**17 08 05.1**	**-1.7**
	baz=256						
TNA	**Tin City**	**76.24**	**23**	P	**P**	**17 08 06.7**	**-0.7**
	baz=249						
K13K	**Kusilvak Mount**	**76.42**	**27**	P	**P**	**17 08 08.1**	**-0.5**
	baz=253						
M13K	**Dall Lake**	**76.59**	**29**	P	**P**	**17 08 08.7**	**-0.9**
	baz=254						
F14K	**Arctic Creek**	**76.83**	**23**	P	**P**	**17 08 10.8**	**-0.1**
	baz=250						
SDPT	**Sand Point**	**76.87**	**34**	P	**P**	**17 08 09.9**	**-1.3**
	baz=258						
ANM	**Nome**	**76.92**	**24**	P	**P**	**17 08 11.9**	**+0.6**
	baz=251						
J14K	**Nanvaranak Lak**	**77.14**	**26**	P	**P**	**17 08 12.8**	**+0.2**
	baz=254						
L14K	**Kuka Creek**	**77.15**	**28**	P	**P**	**17 08 13.0**	**+0.3**
L14K	**Kuka Creek**	**77.15**	**28**	P	**P**	**17 08 11.7**	**-1.0**
	baz=255						
CHNA	**Chernabura Isl**	**77.26**	**35**	P	**P**	**17 08 12.4**	**-1.1**
	baz=259						
N14K	**Kuskokwak Cree**	**77.27**	**29**	P	**P**	**17 08 13.3**	**0.0**
	baz=256						
O14K	**Tigyukauivet M**	**77.32**	**30**	P	**P**	**17 08 13.4**	**-0.2**
	baz=256						
M14K	**Bethel**	**77.34**	**28**	P	**P**	**17 08 14.0**	**+0.2**
M14K				IAmb	IAmb	17 08 24.7	
	comp=Z,32nm,0.8s						
M14K	**Bethel**	**77.34**	**28**	P	**P**	**17 08 14.1**	**+0.2**
	baz=255						
F15K	**North Star Dit**	**77.57**	**23**	P	**P**	**17 08 14.8**	**-0.2**
	baz=252						
S14K	**Fog Glacier**	**77.57**	**33**	P	**P**	**17 08 14.7**	**-0.6**
	baz=258						
G15K	**Niukluk**	**77.59**	**24**	P	**P**	**17 08 14.8**	**-0.3**
	baz=253						
L15K	**Ungalak Mounta**	**77.80**	**28**	P	**P**	**17 08 16.4**	**+0.1**
	baz=256						
K15K	**Wolf Creek Mou**	**77.93**	**27**	P	**P**	**17 08 17.7**	**+0.6**
	baz=256						
M15K	**Kasigluk River**	**77.94**	**29**	P	**P**	**17 08 17.8**	**+0.7**
	baz=257						
O15K	**Ungalikthiuk R**	**78.02**	**30**	P	**P**	**17 08 17.7**	**0.0**
	baz=258						
N15K	**Kwethluk River**	**78.10**	**29**	P	**P**	**17 08 18.4**	**+0.3**
	baz=257						
C16K	**Lisburne Hills**	**78.13**	**21**	IAmb	IAmb	17 08 47.9	
	comp=Z,14nm,0.9s						
C16K	**Lisburne Hills**	**78.13**	**21**	P	**P**	**17 08 18.9**	**+0.8**
	baz=251						
H16K	**Elim**	**78.23**	**25**	P	**P**	**17 08 19.1**	**+0.4**
	baz=254,SNR=10						
G16K	**Koyuk River**	**78.39**	**24**	P	**P**	**17 08 20.6**	**+1.0**
	baz=254						
J16K	**Anvik River**	**78.58**	**26**	P	**P**	**17 08 21.6**	**+0.9**
	baz=256,SNR=5.8						
I17K	**Unalakleet**	**78.69**	**25**	P	**P**	**17 08 22.0**	**+0.8**
	baz=256,SNR=5.3						
L16K	**Owhat River**	**78.74**	**28**	P	**P**	**17 08 22.0**	**+0.5**
	baz=257,SNR=5.3						
D17K	**Noatak River**	**78.76**	**21**	P	**P**	**17 08 22.3**	**+0.8**
	baz=253						
N16K	**Nishlik Lake**	**78.81**	**29**	P	**P**	**17 08 21.7**	**-0.3**
	baz=258						
M16K	**Timber Creek**	**78.83**	**29**	P	**P**	**17 08 22.5**	**+0.4**
	baz=258						
R16K	**Pilot Point**	**78.87**	**32**	P	**P**	**17 08 22.0**	**-0.4**
	baz=260						
P16K	**Nushagak River**	**78.92**	**31**	P	**P**	**17 08 22.4**	**-0.1**
	baz=259						
RDOG	**Red Dog Mine**	**78.93**	**21**	P	**P**	**17 08 23.2**	**+0.7**
	baz=253						
C17K	**DeLong Mountai**	**78.96**	**21**	P	**P**	**17 08 23.1**	**+0.5**
	baz=253						
O16K	**Kokwok River B**	**78.97**	**30**	P	**P**	**17 08 22.1**	**-0.8**
	baz=259						
E17K	**Hotham Inlet**	**79.06**	**22**	P	**P**	**17 08 23.5**	**+0.4**
	baz=254,SNR=22						
AKT	**Akhty**	**79.09**	**311**	*e*P	**P**	**17 08 24.1**	**0.0**
AKT				*e*S	**S**	**17 18 19.2**	**-3.2**
AKT				pmax	pmax		
	comp=Z,17nm,0.9s						
G17K	**Kiwalik Mounta**	**79.10**	**24**	P	**P**	**17 08 23.6**	**+0.1**
	baz=256						
F17K	**Baldwin Pennin**	**79.11**	**23**	P	**P**	**17 08 23.8**	**+0.4**
F17K				IAmb	IAmb	17 08 39.3	
	comp=Z,34nm,1.4s						
F17K	**Baldwin Pennin**	**79.11**	**23**	P	**P**	**17 08 24.1**	**+0.7**
	baz=255,SNR=5.8						
H17K	**Granite Mounta**	**79.27**	**25**	P	**P**	**17 08 25.1**	**+0.7**
	baz=256						
J17K	**VABM Dome**	**79.28**	**26**	P	**P**	**17 08 25.1**	**+0.6**
	baz=258						
L17K	**Donlin**	**79.37**	**27**	P	**P**	**17 08 25.0**	**0.0**
	baz=258						
MAK	**Makhachkala**	**79.37**	**313**	*e*P	P	17 08 18.5	-6.9
MAK				*e*S	**S**	**17 18 16.3**	**-8.6**
MAK				*e*SS	**SS**	**17 23 31.4**	**-0.9**
MAK				*e*SSS	SSS	17 26 54.5	
MAK				pmax	pmax		
	comp=Z,26nm,0.4s						
MAK				MLR	MLR		
	comp=Z,475nm,21.0s						
K17K	**Iditarod**	**79.48**	**27**	P	**P**	**17 08 26.1**	**+0.4**
	baz=258						
O17K	**Koliganek Bris**	**79.50**	**30**	P	**P**	**17 08 25.6**	**-0.2**
	baz=260						
R17L	**Mt. Peulik Vol**	**79.53**	**32**	P	**P**	**17 08 25.5**	**-0.5**
	baz=261						
Q16K	**King Salmon**	**79.54**	**31**	P	**P**	**17 08 25.3**	**-0.6**
	baz=260						
N17K	**Nushagak Hills**	**79.59**	**29**	P	**P**	**17 08 26.3**	**+0.1**
	baz=260						
E18K	**Tukpahlearik C**	**79.60**	**22**	P	**P**	**17 08 27.0**	**+0.8**
	baz=255,SNR=26						
M17K	**Holitna River**	**79.63**	**28**	P	**P**	**17 08 26.8**	**+0.4**
	baz=259						
CHIR	**Chirikof Islan**	**79.66**	**34**	P	**P**	**17 08 26.1**	**-0.6**
	baz=262						
C18K	**Utukok River**	**79.71**	**21**	P	**P**	**17 08 27.6**	**+0.8**
	baz=254						
P17K	**Kvichak River**	**79.74**	**31**	P	**P**	**17 08 27.0**	**0.0**
	baz=261						
Q17K	**Contact Creek**	**79.88**	**32**	P	**P**	**17 08 27.2**	**-0.8**
	baz=261						
KIRV	**Kirov**	**79.94**	**329**	LR	LR	17 47 31.1	
	comp=Z,277nm,21.4s,baz=97,slow=38						
KIRV	**Kirov**	**79.94**	**329**	*i* P	**P**	**17 08 28.7**	**+0.6**
H18K	**Honhosa River**	**79.96**	**24**	P	**P**	**17 08 28.2**	**+0.1**
	baz=258						
G18K	**Tagagawik**	**80.00**	**24**	P	**P**	**17 08 28.6**	**+0.3**
	baz=257						
L18K	**Granite Mounta**	**80.13**	**28**	P	**P**	**17 08 29.6**	**+0.5**
	baz=260						
BELG	**Belogornoye**	**80.15**	**322**	*i* P	**P**	**17 08 29.7**	**+0.3**
BELG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
A19K	**Wainwright**	**80.16**	**19**	P	**P**	**17 08 30.3**	**+1.2**
	baz=254,SNR=6.7						
N18K	**Kilae Creek**	**80.25**	**29**	P	**P**	**17 08 30.0**	**+0.1**
	baz=261						
J18K	**Innoko River**	**80.33**	**26**	P	**P**	**17 08 30.8**	**+0.6**
	baz=260						
P18K	**Big Mountain,**	**80.38**	**31**	P	**P**	**17 08 30.2**	**-0.4**
	baz=262						
RAYN	**Ar Rayn**	**80.38**	**293**	P	**P**	**17 08 29.6**	**-1.8**
RAYN	**Ar Rayn**	**80.38**	**293**	P	**P**	**17 08 29.6**	**-1.8**
RAYN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
C19K	**Lookout Ridge**	**80.39**	**20**	P	**P**	**17 08 31.2**	**+0.7**
	baz=256,SNR=15						
Q18K	**Katmai Hardscr**	**80.39**	**31**	P	**P**	**17 08 30.9**	**+0.2**
	baz=262						
M18K	**Stony River**	**80.41**	**28**	P	**P**	**17 08 30.8**	**+0.2**
	baz=261						
O18K	**Koktuh Hills**	**80.46**	**30**	P	**P**	**17 08 31.3**	**+0.3**
	baz=262						
GCSA	**Galena City Sc**	**80.50**	**25**	P	**P**	**17 08 31.3**	**+0.3**
	baz=259						
R18K	**Karluk**	**80.54**	**32**	P	**P**	**17 08 31.1**	**-0.2**
	baz=263						
F19K	**Shaleruckik Mo**	**80.55**	**23**	IAmb	IAmb	17 09 26.5	
	comp=Z,37nm,0.8s						
F19K	**Shaleruckik Mo**	**80.55**	**23**	P	**P**	**17 08 31.1**	**-0.2**
	baz=258						
SII	**Sitkinak Islan**	**80.56**	**33**	P	**P**	**17 08 30.7**	**-0.9**
	baz=263						
G19K	**Purcell Mounta**	**80.68**	**24**	P	**P**	**17 08 32.3**	**+0.3**
	baz=259						
D19K	**Kuna River**	**80.77**	**21**	P	**P**	**17 08 33.0**	**+0.6**
D19K				IAmb	IAmb	17 08 56.6	
	comp=Z,35nm,1.1s						
D19K	**Kuna River**	**80.77**	**21**	P	**P**	**17 08 33.2**	**+0.7**
	baz=258						
H19K	**Roundabout Mou**	**80.82**	**24**	P	**P**	**17 08 33.2**	**+0.5**
	baz=260						
E19K	**Redstone River**	**80.88**	**22**	P	**P**	**17 08 33.4**	**+0.4**
	baz=258						
J19K	**Poorman**	**80.91**	**26**	P	**P**	**17 08 33.9**	**+0.6**

	baz=260						
O19K	Port Alsworth	80.95	30	P	P	17 08 33.3	-0.2
	baz=262						
N19K	Bonanza Creek	80.95	29	P	P	17 08 33.8	+0.1
	baz=262						
L19K	White Mountain	80.97	28	P	P	17 08 33.8	+0.1
	baz=262						
OHAK	Old Harbor	81.12	33	P	P	17 08 33.8	-0.7
	baz=264						
Q19K	Cape Douglas,	81.13	31	P	P	17 08 34.2	-0.4
	baz=263						
D20K	Etivluk River	81.35	21	IAmb	IAmb	17 08 50.5	
	comp=Z,27nm,0.9s						
D20K	Etivluk River	81.35	21	P	P	17 08 36.0	+0.4
	baz=259,SNR=26						
F20K	Avaraart Lake	81.38	23	IAmb	IAmb	17 09 00.1	
	comp=Z,20nm,1.0s						
F20K	Avaraart Lake	81.38	23	P	P	17 08 35.9	+0.2
	baz=260						
B20K	Meade River	81.42	20	P	P	17 08 36.9	+1.1
	baz=258						
E20K	Nigu River	81.42	22	P	P	17 08 36.6	+0.6
	baz=259						
P19K	Oil Pt	81.42	30	P	P	17 08 35.4	-0.7
	baz=263						
H20K	Anotleneega Mo	81.46	24	P	P	17 08 36.7	+0.5
	baz=261						
ABPO	Ambohimpanom	81.48	250	P	P	17 08 35.9	-1.5
ABPO				IAmb	IAmb	17 08 38.2	
	comp=Z,11nm,0.7s						
ABPO	Ambohimpanom	81.48	250	P	P	17 08 35.9	-1.5
ABPO				pmax	pmax		
	comp=Z,11nm,0.7s						
K20K	Telida	81.49	27	P	P	17 08 37.0	+0.6
	baz=262						
I20K	Naaghedeneel	81.52	25	P	P	17 08 37.2	+0.7
	baz=261						
KDAK	Kodiak Island	81.56	32	LR	LR	17 38 04.3	
	comp=Z,611nm,21.4s,baz=243,slow=31						
KDAK	Kodiak Island	81.56	32	P	P	17 08 36.2	-0.6
	baz=264						
J20K	Nowinta River	81.57	26	P	P	17 08 37.4	+0.6
	baz=262						
M20K	Styx River	81.73	28	P	P	17 08 38.4	+0.6
	baz=263						
Q20K	Shuyak Island	81.74	31	P	P	17 08 37.6	-0.2
	baz=264						
A21K	Barrow	81.86	18	P	P	17 08 39.0	+0.9
	baz=258						
C21K	Knifeblade Rid	82.08	21	P	P	17 08 40.0	+0.6
	baz=260						
SPCR	Spurr Chakacha	82.10	29	P	P	17 08 39.2	-0.5
	baz=264						
G21K	Allakaket	82.16	23	P	P	17 08 40.1	+0.2
	baz=262,SNR=9.6						
B21K	Ikpikpuk River	82.22	20	P	P	17 08 41.2	+1.1
	baz=261						
HOM	Homer	82.23	30	P	P	17 08 40.1	-0.2
	baz=265						
VOI	Vohitsoka	82.25	247	P	P	17 08 40.5	-0.8
VOI				IAmb	IAmb	17 08 41.2	
	comp=Z,25nm,0.8s						
E21K	Killik River	82.26	21	P	P	17 08 41.5	+1.1
	baz=261						
F21K	Alatna River	82.27	23	P	P	17 08 41.3	+0.8
	baz=262						
PPLA	Purkeypile	82.28	27	P	P	17 08 40.7	-0.1
	baz=264						
A22K	Sinclair Lake	82.33	19	P	P	17 08 41.9	+1.3
	baz=260						
CHUM	Lake Minchumin	82.34	26	P	P	17 08 41.5	+0.7
	baz=264,SNR=8.5						
H21K	Melozitna Rive	82.34	24	P	P	17 08 41.8	+1.0
	baz=263,SNR=10						
SKT	Skwentna	82.50	28	IAmb	IAmb	17 08 43.6	
	comp=Z,20nm,1.0s						
SKT	Skwentna	82.50	28	P	P	17 08 41.3	-0.4
	baz=264						
CAPN	Captain Cook N	82.57	29	P	P	17 08 41.8	-0.2
	baz=265						
I21K	Tanana	82.62	25	P	P	17 08 42.2	0.0
	baz=264,SNR=8.1						
BRSE	Bradley Lake S	82.69	30	P	P	17 08 42.6	-0.2
	baz=266						
B22K	Teshekpuk Lake	82.73	20	IAmb	IAmb	17 08 45.3	
	comp=Z,20nm,0.7s						
B22K	Teshekpuk Lake	82.73	20	P	P	17 08 43.0	+0.3
	baz=262,SNR=6.0						
KBZ	Khabaz	82.76	313	P	P	17 08 43.8	+0.3
	comp=Z,1.0nm,0.8s,baz=170,slow=3.9,SNR=5.1						
	comp=Z,1.0nm,0.8s						
KBZ	Khabaz	82.76	313	i P	P	17 08 44.1	+0.7
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.3s						
D22K	Ayikyak River	82.79	21	P	P	17 08 43.8	+0.7
	baz=262						
F22K	John River	82.81	23	P	P	17 08 43.4	+0.1
	baz=263						
SUA	Susitna One	82.82	29	P	P	17 08 42.5	-1.0
	baz=265,SNR=6.4						
NEUR	Neytrino	82.90	313	i P	P	17 08 43.3	-1.1
NEUR				pmax	pmax		
	comp=Z,1.0nm,1.2s						
KIV	Kislovodsk	82.92	314	eP	P	17 08 43.2	-1.2
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,203nm,19.0s						
BPAW	Bear Paw Mtn.	82.94	26	P	P	17 08 44.8	+0.8
	baz=265,SNR=10						
H22K	Ishtalitna Cre	82.95	24	P	P	17 08 44.0	0.0
H22K				IAmb	IAmb	17 08 59.4	
	comp=Z,18nm,1.0s						
H22K	Ishtalitna Cre	82.95	24	P	P	17 08 45.0	+1.0
	baz=264						
SLKM	Skilak Lake	83.01	30	IAmb	IAmb	17 09 25.3	
	comp=Z,29nm,1.0s						
E22K	Anaktuvuk Pass	83.02	22	P	P	17 08 45.3	+0.9
	baz=263,SNR=13						
M22K	Willow	83.14	28	P	P	17 08 44.9	-0.1
	baz=266						
TRF	Thorofare Moun	83.19	27	IAmb	IAmb	17 09 22.6	
	comp=Z,19nm,0.9s						
TRF	Thorofare Moun	83.19	27	P	P	17 08 45.2	-0.4
	baz=265,SNR=7.0						
O22K	Cooper Landing	83.25	30	P	P	17 08 45.4	-0.2
	baz=266						
RC01	Rabbit Creek A	83.28	29	IAmb	IAmb	17 08 57.8	
	comp=Z,24nm,1.0s						
RC01	Rabbit Creek A	83.28	29	P	P	17 08 46.1	+0.3
	baz=266						
SEW	Seward	83.36	30	P	P	17 08 46.4	+0.3
	baz=267						
D23K	Nanushuk River	83.52	21	P	P	17 08 48.0	+1.2
	baz=264						
COLD	Coldfoot	83.54	23	P	P	17 08 48.1	+1.1
	baz=265,SNR=15						
G23K	Bananza Creek	83.57	23	P	P	17 08 48.2	+1.0
G23K	Bananza Creek	83.57	23	P	P	17 08 47.8	+0.6
	baz=265,SNR=13						
PMR	Palmer	83.61	29	IAmb	IAmb	17 09 20.0	
	comp=Z,22nm,1.0s						
PMR	Palmer	83.61	29	P	P	17 08 47.7	+0.3
	baz=267						
C23K	Itkillik River	83.63	20	P	P	17 08 48.4	+1.0
	baz=264						
I23K	Minto, Yukon-K	83.72	25	P	P	17 08 48.3	+0.4
	baz=266,SNR=12						
VRH	Novokhopyorsk	83.73	321	eP	P	17 08 49.3	+1.0
VRH				pmax	pmax		
	comp=Z,31nm,0.8s						
VNDA	Vanda	83.78	173	P	P	17 08 48.0	0.0
	comp=Z,13nm,0.9s,baz=313,slow=5.9,SNR=47						
VNDA				LR	LR	17 47 23.6	
	comp=Z,92nm,18.2s,baz=340,slow=37						
	comp=Z,13nm,0.9s						
VNDA	Vanda	83.78	173	P	P	17 08 47.2	-0.8
VNDA				IAmb	IAmb	17 09 10.2	
	comp=Z,21nm,0.9s						
VNDA	Vanda	83.78	173	P	P	17 08 47.2	-0.8
VNDA				pmax	pmax		
	comp=Z,21nm,0.9s						
NEA2	Nenana	83.81	26	P	P	17 08 49.0	+0.5
	baz=266,SNR=7.0						
MCK	McKinley	83.82	26	P	P	17 08 48.4	-0.1
	baz=267,SNR=10						
E23K	Chandalar	83.83	22	P	P	17 08 49.7	+1.1
	baz=266						
TOLK	Toolik Lake Re	83.89	21	P	P	17 08 49.9	+1.1
	baz=266,SNR=14						
KNK	Knik Glacier	83.92	29	P	P	17 08 49.4	+0.3
	baz=267						
WAT1	Susitna Watana	83.94	27	P	P	17 08 49.1	-0.1
	baz=267						
PWL	Port Wells	83.95	29	P	P	17 08 49.5	+0.2
	baz=268						
SML	Sawmill	84.00	28	P	P	17 08 50.0	+0.5
	baz=267						
MAW	Mawson	84.11	200	P	P	17 08 50.6	+0.8
MAW	Mawson	84.11	200	P	P	17 08 48.5	-1.3
	comp=Z,3.4nm,0.8s,baz=72,slow=8.2,SNR=4.6						
	comp=Z,3.4nm,0.8s						
D24K	Happy Valley	84.20	21	P	P	17 08 51.4	+1.0
	baz=266						
WRH	Wood River Hil	84.23	26	IAmb	IAmb	17 09 22.5	
	comp=Z,25nm,1.2s						
E24K	Your Creek	84.25	22	P	P	17 08 50.4	-0.3
E24K				IAmb	IAmb	17 09 05.4	
	comp=Z,13nm,1.0s						
E24K	Your Creek	84.25	22	P	P	17 08 51.8	+1.1
	baz=267						
C24K	Franklin Bluff	84.28	20	P	P	17 08 52.3	+1.6
	baz=266						
M23K	Glacier View	84.28	28	P	P	17 08 51.3	+0.3
	baz=268,SNR=7.8						
WAT6	Susitna Watana	84.31	28	P	P	17 08 51.5	+0.3
	baz=268,SNR=7.9						
COLA	College	84.35	25	i P	P	17 08 50.8	-0.3
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
COLA	College	84.35	25	P	P	17 08 52.2	+1.1
	baz=268						
CCB	Clear Creek Bu	84.36	26	IAmb	IAmb	17 09 04.6	
	comp=Z,24nm,1.2s						
H24K	Noodor Dome	84.38	24	IAmb	IAmb	17 08 53.9	
	comp=Z,37nm,1.4s						
H24K	Noodor Dome	84.38	24	P	P	17 08 52.4	+1.0
	baz=267,SNR=7.5						
P23K	Montague Islan	84.39	30	P	P	17 08 51.7	+0.3
	baz=268						
F24K	Squaw Lake	84.45	23	P	P	17 08 52.8	+1.0
	baz=267						
SCM	Sheep Creek Mo	84.47	28	P	P	17 08 52.8	+0.8
	baz=268						
DHY	Denali Highway	84.49	27	P	P	17 08 52.4	+0.2
	baz=268						
POKR	Poker Plat Res	84.53	25	P	P	17 08 52.5	+0.4
	baz=268						
GLI	Glacier Island	84.56	29	P	P	17 08 52.6	+0.2
	baz=269						
G24K	Hadweenzic Riv	84.58	23	P	P	17 08 53.3	+1.0
	baz=268						
SBA	Scott Base	84.69	172	P	P	17 08 52.5	-0.1
SBA				IAmb	IAmb	17 09 04.9	
	comp=Z,19nm,1.2s						
SBA	Scott Base	84.69	172	P	P	17 08 52.5	-0.1
SBA				pmax	pmax		
	comp=Z,19nm,1.2s						
HDA	Harding Lake	84.72	26	P	P	17 08 53.2	+0.2
HDA				IAmb	IAmb	17 09 05.5	
	comp=Z,11nm,0.9s						
HDA	Harding Lake	84.72	26	P	P	17 08 53.3	+0.2
	baz=268						
IL31		84.76	25	P	P	17 08 52.6	-0.6
ILAR	Eielson Array	84.76	25	P	P	17 08 52.8	-0.5
	comp=Z,1.5nm,0.5s,baz=274,slow=6.0,SNR=18						
ILAR				LR	LR	17 41 39.4	
	comp=Z,119nm,21.8s,baz=238,slow=32						
	comp=Z,1.5nm,0.5s						
ILAR	Eielson Array	84.76	25	P	P	17 08 51.8	-1.5
ILAR	Eielson Array	84.76	25	P	P	17 08 51.8	-1.5
M24K	Tolsona, Glenn	85.02	28	P	P	17 08 55.0	+0.2
	baz=269						
SOC	Sochi	85.07	313	eP	P	17 08 53.7	-1.6
D25K	Kavik River	85.08	21	P	P	17 08 55.6	+0.7
	baz=268						
KLMR	Klimovskoe	85.11	331	eP	P	17 08 53.3	-1.8
KLMR				pmax	pmax		
	comp=Z,106nm,1.2s						
KLMR				MLR	MLR		
	comp=Z,567nm,19.0s						
G25K	Bearman Lake	85.13	23	P	P	17 08 56.1	+1.0
	baz=269						
KLU	Klutina	85.14	29	P	P	17 08 56.0	+0.6
	baz=270,SNR=5.2						
PPT	Papeete	85.18	108	LR	LR	17 43 54.2	
	comp=Z,47nm,19.0s,baz=262,slow=34						
PPT2	Papeete2	85.18	108	eLQ	LQ	17 31 59.5	
	comp=Z,213nm,28.0s						
PPT2				eLR	LR	17 35 39.3	
	comp=Z,176nm,29.2s						
PPT2				eLR	LR	17 35 46.8	
	comp=Z,223nm,25.5s						
EYAK	Cordova Ski Ar	85.22	30	P	P	17 08 55.5	-0.1
	baz=270						
K24K	Donnelly Dome	85.22	26	P	P	17 08 56.2	+0.5
	baz=269						
VORD	Divnogorie	85.26	321	eP	P	17 08 55.6	-0.4
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VORR	Voronezh	85.31	321	eP	P	17 08 56.4	+0.2
VORR				pmax	pmax		
	comp=Z,15nm,0.6s						
F25K	Christian Rive	85.32	23	P	P	17 08 56.8	+0.8
	baz=269						
VSR	Storozhevoye	85.34	321	eP	P	17 08 55.2	-1.2
VSR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
E25K	Arctic Village	85.35	22	P	P	17 08 57.0	+0.8
	baz=269						
PAX	Paxson	85.36	27	IAmb	IAmb	17 08 58.3	
	comp=Z,65nm,1.8s						
PAX	Paxson	85.36	27	P	P	17 08 56.7	+0.3
	baz=270						
J25K	Salcha River,	85.41	26	P	P	17 08 56.8	+0.2
	baz=270						
LPSR	Galich'ya Gora	85.47	322	eP	P	17 08 57.6	+0.6
LPSR				pmax	pmax		
	comp=Z,30nm,0.9s						
HARP	HAARP	85.50	28	P	P	17 08 57.9	+0.9
	baz=270						
C26K	Camden Bay	85.60	20	P	P	17 08 58.7	+1.4
	baz=270						
RIDG	Independent Ri	85.64	26	P	P	17 08 58.2	+0.5
	baz=270						
BMAR	Burnt Mountain	85.72	23	P	P	17 08 58.4	+0.3
N25K	Chitina, Valde	85.77	29	P	P	17 08 58.8	+0.3
	baz=271						
BMRM	Bremner River	85.78	29	P	P	17 08 58.4	-0.1
	baz=271						
KAIM	Kayak Island	85.89	30	P	P	17 08 58.5	-0.5
	baz=271						
F26K	Sheenjek River	85.89	22	P	P	17 09 00.0	+1.1
	baz=271						
TBI	Tubuai	85.89	114	eLQ	LQ	17 32 18.4	
	comp=Z,2µm,40.5s						
TBI				eLR	LR	17 36 00.8	
	comp=Z,1µm,27.8s						
SCRK	Sand Creek	86.02	26	IAmb	IAmb	17 09 37.3	
	comp=Z,21nm,1.4s						
SCRK	Sand Creek	86.02	26	P	P	17 09 00.3	+0.6
	baz=271						
C27K	Jago River	86.02	21	P	P	17 09 00.7	+1.2
	baz=271						
G26K	Porcupine Rive	86.04	23	P	P	17 09 00.5	+0.9
	baz=271						
GLB	Gilahina Butte	86.15	29	IAmb	IAmb	17 09 15.5	
	comp=Z,34nm,1.2s						
MOS	Moscow	86.17	325	eP	P	17 09 00.4	0.0
MOS				pmax	pmax		
	comp=Z,31nm,0.6s						
J26L	Joseph Creek	86.19	26	IAmb	IAmb	17 09 23.8	
	comp=Z,46nm,2.0s						
J26L	Joseph Creek	86.19	26	P	P	17 09 00.1	-0.4
	baz=271						
L26K	Log Cabin Wild	86.33	27	P	P	17 09 01.3	+0.2
	baz=272						
I26K	Coal Creek Min	86.34	25	IAmb	IAmb	17 09 36.2	
	comp=Z,28nm,1.6s						
I26K	Coal Creek Min	86.34	25	P	P	17 09 01.9	+0.8
	baz=272						
M26K	Nabesna, AK	86.51	28	P	P	17 09 01.4	-0.7
	baz=272						
CRQE	Cirque	86.52	29	P	P	17 09 01.6	-0.7
	baz=272						
MCARA	McCarthy VSAT	86.53	29	P	P	17 09 01.3	-0.8
	baz=272						
OBN	Obninsk	86.79	325	ceP	P	17 09 04.0	+0.5
OBN				e		17 12 24.9	
OBN				ePPP	PPP	17 14 18.9	
OBN				eS	SKSac	17 19 22.1	-6.8
OBN				pmax	pmax		
	comp=Z,29nm,0.5s						
OBN				MLR	MLR		
	comp=Z,152nm,19.0s						
E27K	Coleen River	86.84	22	IAmb	IAmb	17 09 18.9	
	comp=Z,14nm,1.1s						
E27K	Coleen River	86.84	22	P	P	17 09 04.7	+1.1
	baz=273						
G27K	Doyon Strip	86.89	23	P	P	17 09 04.8	+1.0
	baz=273						
I27K	Kandik River	86.97	25	P	P	17 09 05.0	+0.7
	baz=273						
H27K	Steamboat Moun	86.97	24	P	P	17 09 04.5	+0.2
	baz=273						
D27M	Malcolm River	87.00	21	P	P	17 09 04.5	+0.1
	baz=274						
L27K	Beaver Creek,	87.02	27	P	P	17 09 04.9	+0.4
	baz=273						
M27K	Edge Creek, AK	87.03	28	P	P	17 09 04.3	-0.5
	baz=273						
CTG	Chitna Glacier	87.37	29	P	P	17 09 05.6	-0.8
	baz=274						
BVCY	Beaver Creek	87.50	28	P	P	17 09 06.6	-0.2
	baz=274						
FURI	Furi	87.50	279	LR	LR	17 47 57.1	
	comp=Z,60nm,20.0s,baz=79,slow=35						
F28M	Old Crow	87.53	23	IAmb	IAmb	17 09 30.7	
	comp=Z,10nm,0.9s						
F28M	Old Crow	87.53	23	P	P	17 09 07.7	+0.8
	baz=275						
E28M	Babbage River	87.57	22	IAmb	IAmb	17 09 22.4	
	comp=Z,19nm,1.1s						
E28M	Babbage River	87.57	22	P	P	17 09 07.1	0.0
	baz=275						
I28M	Miner Creek	87.68	25	IAmb	IAmb	17 09 32.5	
	comp=Z,11nm,0.8s						
I28M	Miner Creek	87.68	25	P	P	17 09 08.0	+0.3
	baz=275						
ASF	Jabal al Asfar	87.74	302	LR	LR	17 54 38.7	
	comp=Z,68nm,20.6s,baz=49,slow=40						
D28M	Stokes Point	87.79	21	P	P	17 09 09.2	+1.2
	baz=276						
O28M	Mount Upton	87.94	29	P	P	17 09 08.9	-0.5
	baz=275						
PINM	Pinnacle	87.97	30	P	P	17 09 08.4	-0.8
	baz=275						
DAWY	Dawson	88.03	26	P	P	17 09 09.8	+0.4
	baz=275						
YUK8	Steele Glacier	88.11	29	P	P	17 09 10.2	+0.1
	baz=275						
E29M	Blow River	88.19	22	P	P	17 09 10.9	+0.9
	baz=276						
H29M	Whitestone	88.25	24	P	P	17 09 10.8	+0.5
	baz=276						
G29M	Pine Creek	88.31	23	IAmb	IAmb	17 09 34.9	
	comp=Z,28nm,1.4s						
G29M	Pine Creek	88.31	23	P	P	17 09 10.9	+0.3
	baz=276						
I29M	Ogilvie Camp,	88.36	25	P	P	17 09 11.3	+0.4
	baz=276						
J29N	Klondike Camp	88.50	26	P	P	17 09 12.0	+0.3
	baz=276						
M29M	Somme Creek	88.61	28	P	P	17 09 12.7	+0.4
	baz=276						
YUK4	Talbot Arm	88.64	29	P	P	17 09 12.7	+0.2
	baz=276						
L29M	L29M	88.69	27	P	P	17 09 13.0	+0.5
	baz=276						
O29M	Mount Kennedy	88.78	30	P	P	17 09 13.0	-0.1
	baz=276						
YUK6	Outpost Mounta	88.82	29	P	P	17 09 13.6	+0.1
	baz=276						
K29M	Barlow Dome	88.88	26	P	P	17 09 13.6	+0.1
	baz=277						
EPYK	Eagle Plains	88.89	24	P	P	17 09 13.4	0.0
	baz=278						
KIBK	Kibwezi	88.90	268	P	P	17 09 12.4	-2.2
KIBK				IAmb	IAmb	17 09 27.5	
	comp=Z,20nm,1.4s						
G30M	tAoh Zraii Nji	89.00	23	P	P	17 09 14.5	+0.6
	baz=278						
F30M	Barrier River	89.08	22	IAmb	IAmb	17 09 37.2	
	comp=Z,15nm,1.1s						
F30M	Barrier River	89.08	22	P	P	17 09 14.2	0.0
	baz=278						
I30M	Mount Dempster	89.19	25	P	P	17 09 14.8	-0.1
	baz=278						
HYT	Haines Junctio	89.25	29	P	P	17 09 14.8	-0.5
	baz=277						
P29M	Windy Craggy	89.28	30	P	P	17 09 14.5	-0.9
	baz=277						
J30M	Hart River	89.30	25	P	P	17 09 15.5	0.0
	baz=278						
M30M	Minto, Yukon	89.36	27	P	P	17 09 14.8	-0.9
	baz=278						
N30M	Aishikik Lake	89.37	29	P	P	17 09 15.4	-0.4
	baz=277						
P30M	Million Dollar	89.61	30	P	P	17 09 16.1	-0.8
	baz=277						
MAYO	Mayo, Yukon	89.63	26	P	P	17 09 16.9	+0.1
	baz=278						
G31M	Satah River	89.77	23	P	P	17 09 17.0	-0.4
	baz=280						
INK	Inuvik	89.81	21	P	P	17 09 17.4	-0.2
	comp=Z,2.5nm,0.7s,baz=319,slow=7.2,SNR=10.0						
INK				LR	LR	17 50 53.8	
	comp=Z,124nm,20.6s,baz=277,slow=36						
	comp=Z,2.5nm,0.7s						
INK	Inuvik	89.81	21	P	P	17 09 17.5	0.0
	baz=280						
BR131	Keskin Array S	89.83	310	P	P	17 09 17.3	-1.2
BR131				IAmb	IAmb	17 09 32.1	
	comp=Z,13nm,1.1s						
BR131	Keskin Array S	89.83	310	P	P	17 09 17.3	-1.2
BR131				pmax	pmax		
	comp=Z,13nm,1.1s						
BRTR	Keskin Array B	89.83	310	P	P	17 09 17.8	-0.7
	comp=Z,1.1nm,0.8s,baz=128,slow=2.0,SNR=5.7						
	comp=Z,1.1nm,0.8s						
BRTR	Keskin Array B	89.83	310	P	P	17 09 16.9	-1.6
F31M	Tsiigehtchic	89.88	22	P	P	17 09 17.7	-0.2
	baz=280						
H31M	Peel River	89.93	24	P	P	17 09 17.6	-0.7
	baz=280						
O30N	Mendenhall	89.94	29	P	P	17 09 18.0	-0.5
	baz=278						
N31M	Braeburn, Yuko	89.99	28	P	P	17 09 17.1	-1.5
	baz=278						
PLBC	Pleasant Camp	89.99	30	P	P	17 09 17.2	-1.4
	baz=278						
ARCES	ARCESS Array B	90.12	340	P	P	17 09 18.1	-1.0
	comp=Z,2.7nm,0.7s,baz=80,slow=5.0,SNR=10						
ARCES				LR	LR	17 55 38.4	
	comp=Z,258nm,19.6s,baz=78,slow=40						
	comp=Z,2.7nm,0.7s						
ARCES	ARCESS Array B	90.12	340	P	P	17 09 18.8	-0.3
ARCES	ARCESS Array B	90.12	340	P	P	17 09 18.8	-0.3
ARCES				pmax	pmax		
	comp=Z,187nm,2.0s						
SPITS	Spitsbergen Ar	90.13	349	P	P	17 09 18.9	-0.1
	comp=Z,4.5nm,0.7s,baz=104,slow=10,SNR=7.0						
SPITS				LR	LR	17 55 18.8	
	comp=Z,330nm,19.4s,baz=56,slow=39						
	comp=Z,4.5nm,0.7s						
S31K	Pelican	90.27	32	P	P	17 09 18.2	-1.7
	baz=278						
SKAG	Skagway	90.52	30	P	P	17 09 20.2	-0.8
	baz=279						
M31M	Drury Creek, Y	90.53	28	P	P	17 09 20.9	-0.2
	baz=280						
WHY	Whitehorse	90.55	29	P	P	17 09 20.7	-0.7
	baz=279						
SIT	Sitka	90.89	33	P	P	17 09 21.3	-1.5
	baz=279						
R32K	Eaglecrest	91.12	31	P	P	17 09 23.2	-0.7
	baz=280						
S32K	Killisnoo	91.22	32	P	P	17 09 23.5	-0.9
	baz=279						
P32M	Atlin	91.31	30	P	P	17 09 23.9	-0.9
	baz=280						
N32M	Quiet Lake	91.33	29	P	P	17 09 24.4	-0.5
	baz=281						
FINES	FINESS Array B	91.53	332	P	P	17 09 25.6	-0.2

	comp=Z,2.9nm,0.7s,baz=82,slow=5.4,SNR=9.9						
FINES				LR	LR	17 56 07.2	
	comp=Z,202nm,19.0s,baz=76,slow=39						
	comp=Z,2.9nm,0.7s						
FINES	FINESS Array B	91.53	332	P	P	17 09 26.9	+1.1
FINES	FINESS Array B	91.53	332	*i* P	P	17 09 26.8	+1.1
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
A36M	Sachs Harbour	91.63	17	P	P	17 09 26.1	+0.1
	baz=288						
P33M	Teslin, Yukon	91.63	29	P	P	17 09 25.9	-0.5
	baz=281						
AKASG	Malin Array Be	91.64	321	P	P	17 09 25.7	-0.8
	comp=Z,1.6nm,0.6s,baz=70,slow=4.5,SNR=5.7						
	comp=Z,1.6nm,0.6s						
AKASG	Malin Array Be	91.64	321	P	P	17 09 24.9	-1.5
AKBB	Malin Array Si	91.64	321	IAmb	IAmb	17 09 37.5	
	comp=Z,7.6nm,0.9s						
AKBB	Malin Array Si	91.64	321	*ce*P	P	17 09 26.1	-0.4
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KIEV	Kiev	91.65	321	P	P	17 09 25.0	-1.5
KIEV	Kiev	91.65	321	⇑P	P	17 09 25.2	-1.3
KIEV	Kiev	91.65	321	P	P	17 09 25.0	-1.5
KIEV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VSU	Vasula	91.78	329	*ce*P	P	17 09 27.6	+0.7
VSU				pmax	pmax		
	comp=Z,13nm,1.1s						
MNK	Minsk	91.85	325	*i* P	P	17 09 29.8	+2.4
MNK				*i*		17 13 09.0	
MNK				*i* PPP	PPP	17 15 07.7	
MNK				*i* S	SKSac	17 20 02.4	+3.6
MNK				*i* SS	SS	17 26 41.5	+6.5
MNK				*i* SSS	SSS	17 30 20.0	
MNK				pmax	pmax		
	comp=N,7.0nm,0.9s						
MNK				pmax	pmax		
	comp=E,6.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MNK				MLR	MLR		
	comp=N,106nm,16.0s						
MNK				MLR	MLR		
	comp=Z,199nm,19.0s						
MNK				MLR	MLR		
	comp=E,128nm,18.0s						
Q32M	Nakina River	92.15	31	P	P	17 09 27.9	-1.1
	baz=281						
T33K	Petersburg	92.21	33	P	P	17 09 27.9	-1.1
	baz=281						
U33K	Whale Pass	92.25	33	P	P	17 09 28.0	-1.1
	baz=281						
CRAG	Craig	92.37	34	P	P	17 09 27.9	-1.8
	baz=281						
WRAK	Wrangell Islan	92.62	33	P	P	17 09 29.6	-1.2
	baz=281						
NOR	Nord	92.73	355	*i* P	P	17 09 32.5	+1.5
SYO	Syowa Base	92.78	201	⇓*e*pP	pP	17 09 35.6	-3.3
C36M	Paulatuk	92.86	20	IAmb	IAmb	17 09 41.4	
	comp=Z,15nm,1.4s						
C36M	Paulatuk	92.86	20	P	P	17 09 31.6	-0.1
	baz=289						
S34M	Telegraph Cree	92.96	32	P	P	17 09 31.6	-0.8
	baz=282						
V35K	Ketchikan	93.24	34	P	P	17 09 32.8	-0.9
	baz=282						
WTLY	Watson Lake, Y	93.62	29	P	P	17 09 35.0	-0.5
	baz=284						
T35M	Bob Quinn	93.63	32	P	P	17 09 34.7	-0.8
	baz=283						
TAOE	Nuku Hiva Isla	93.65	99	*e*LR	LR	17 39 32.6	
	comp=Z,313nm,23.8s						
U35K	Hyder	93.99	33	P	P	17 09 36.2	-1.0
	baz=283						
TESR	Tescani	94.00	317	⇑P	P	17 09 37.9	+0.3
VRI	Vrincioaia	94.06	316	⇑P	P	17 09 38.3	+0.5
PLOR	Plostina	94.12	316	⇑P	P	17 09 36.6	-1.6
ONER	Baraj Valea Uz	94.21	317	⇓P	P	17 09 39.0	+0.5
TURR	Turia	94.52	317	⇑P	P	17 09 40.5	+0.5
MLR	Muntele Rosu	94.67	316	LR	LR	17 58 31.1	
	comp=Z,282nm,20.8s,baz=63,slow=39						
MLR	Muntele Rosu	94.67	316	⇑P	P	17 09 40.3	-0.4
BURAR	Bucovina Array	94.76	318	P	P	17 09 40.5	-0.6
BURAR				IAmb	IAmb	17 09 58.0	
	comp=Z,8.2nm,0.8s						
BURAR	Bucovina Array	94.76	318	⇑P	P	17 09 41.6	+0.5
BUR08	Bucovina Ar. S	94.77	318	P	P	17 09 40.1	-1.0
BUR08				IAmb	IAmb	17 09 54.2	
	comp=Z,15nm,1.1s						
LIRD	Liard River Hi	95.12	29	P	P	17 09 41.9	-0.4
	baz=287						
WRGLY	Wrigley	95.14	25	P	P	17 09 42.3	0.0
	baz=290						
BBB	Bella Bella	95.98	37	LR	LR	17 46 49.4	
	comp=Z,105nm,20.8s,baz=274,slow=32						
MBAR	Mbarara	96.06	270	LR	LR	17 49 54.0	
	comp=Z,100nm,21.3s,baz=66,slow=34						
MARR	Marisel-Cluj	96.36	318	⇑P	P	17 09 48.8	+0.4
DRGR		96.61	318	⇑P	P	17 09 49.8	+0.4
GZR	Gura Zlata	96.88	316	⇑P	P	17 09 50.7	0.0
STHS	Stebnicka Huta	96.93	321	*e*P	P	17 09 57.1	+6.3
IDI	Anoyia	97.31	306	LR	LR	17 58 59.4	
	comp=Z,69nm,20.6s,baz=116,slow=39						
SIRR	Siria	97.43	318	⇑P	Pdif	17 09 53.6	+0.4
RES	Resolute Bay	97.45	10	LR	LR	17 59 12.8	
	comp=Z,52nm,19.2s,baz=7.0,slow=39						
HFS	Hagfors	97.72	332	P	P	17 09 53.3	-0.8
	comp=Z,1.3nm,0.7s,baz=92,slow=10,SNR=6.1						
HFS				LR	LR	17 57 53.2	
	comp=Z,317nm,21.7s,baz=56,slow=38						
	comp=Z,1.3nm,0.7s						
PSZ	Piszkesteto	98.19	319	⇑P	P	17 09 56.0	-0.6
NB2	NORSAR Subarra	98.48	334	P	P	17 09 56.3	-1.3
	comp=Z,9.2nm,1.0s,baz=66,slow=4.6						
NB2	NORSAR Subarra	98.48	334	P	P	17 09 56.3	-1.3
	baz=66,slow=4.6						
NOA	NORSAR Array B	98.48	334	P	P	17 09 55.8	-1.8
	comp=Z,0.7nm,0.8s,baz=66,slow=4.6,SNR=9.5						
NOA				LR	LR	17 59 42.4	
	comp=Z,257nm,20.5s,baz=55,slow=39						
	comp=Z,0.7nm,0.8s						
NEEM	North Greenlan	98.56	360	*i* P	P	17 09 56.4	-1.6
YKA	Yellowknife Ar	99.15	24	P	Pdif	17 09 59.5	-0.9
	comp=Z,0.5nm,0.7s,baz=299,slow=5.1,SNR=15						
YKA				PP	PP	17 14 07.5	+4.9
	comp=Z,0.7nm,1.1s,baz=283,slow=8.6,SNR=4.2						
YKA				PKKPbc	PKKPdf	17 26 32.9	+1.6
	comp=Z,0.1nm,0.6s,baz=125,slow=1.4,SNR=3.8						
YKA				LR	LR	17 58 30.7	
	comp=Z,22nm,19.2s,baz=275,slow=38						
	comp=Z,0.5nm,0.7s						
YKA	Yellowknife Ar	99.15	24	P	Pdif	17 09 59.3	-1.2
YKA	Yellowknife Ar	99.15	24	*ce*P	Pdif	17 10 00.3	-0.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LSZ	Lusaka	99.34	255	LR	LR	17 50 53.8	
	comp=Z,236nm,21.6s,baz=122,slow=33						
MORH	Mrgy, Hungar	99.47	318	⇑P	Pdif	17 10 02.5	+0.3
JMIC	Jan Mayen	99.51	346	LR	LR	17 58 52.9	
	comp=Z,132nm,21.4s,baz=79,slow=38						
CONA	Conrad Observa	100.78	320	*i* PcP	Pdif	17 10 24.3	+16
	comp=Z,2.2nm,1.0s						
ARSA	Arzberg	101.21	320	*e*Pdiff	Pdif	17 10 25.0	+15
	comp=Z,1.7nm,0.7s						
SOKA	Soboth	101.71	319	*i* Pdiff	Pdif	17 10 22.1	+10
	comp=Z,2.7nm,1.3s						
MOA	Molln	101.82	321	*e*Pdiff	Pdif	17 10 22.4	+10
	comp=Z,9.7nm,1.7s						
GERES	GERESS Array B	101.83	322	P	Pdif	17 10 12.2	-0.6
	comp=Z,0.7nm,0.8s,baz=2.9,slow=2.7,SNR=4.0						
NVL	N'lazarevskaya	101.91	198	*e*P	Pdif	17 10 13.7	+1.2
NVL				*e*		17 14 27.2	
NVL				*e*PPP	PPP	17 16 33.4	
NVL				*e*S	SKSac	17 20 53.3	+3.1
NVL				*e*SS	SS	17 29 01.6	+5.4
NVL				*e*SSS	SSS	17 32 54.3	
NVL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
OBKA	Obir	102.08	319	*e*Pdiff	Pdif	17 10 25.9	+12
	comp=Z,5.6nm,1.5s						
BIOA	Bad Ischl, Aus	102.27	321	*e*Pdiff	Pdif	17 10 26.7	+12
	comp=Z,2.4nm,0.5s						
MYKA	Terra Mystica	102.63	320	*e*Pdiff	Pdif	17 10 29.1	+13
	comp=Z,0.8nm,0.7s						
KBA	Koelnbreinsper	102.67	320	*i* Pdiff	Pdif	17 10 28.4	+12
	comp=Z,14nm,0.8s						
LESA	Schwarzleotal	102.97	320	*e*Pdiff	Pdif	17 10 25.2	+7.3
	comp=Z,2.6nm,0.9s						
WTTA	Wattenberg	103.69	321	*e*Pdiff	Pdif	17 10 26.7	+5.5
	comp=Z,1.6nm,0.6s						
WATA	Walderalm	103.70	321	*e*Pdiff	Pdif	17 10 30.1	+8.9
	comp=Z,3.5nm,1.0s						
SQTA	Sankt Quirin	103.98	321	*e*Pdiff	Pdif	17 10 35.0	+13
	comp=Z,4.9nm,0.9s						
RETA	Reutte	104.16	321	*e*Pdiff	Pdif	17 10 34.1	+11
	comp=Z,1.0nm,0.6s						
FETA	Feichten	104.36	321	*e*Pdiff	Pdif	17 10 31.8	+7.6
	comp=Z,6.4nm,1.9s						
DAVA	Damuels	104.79	321	*e*Pdiff	Pdif	17 10 31.0	+4.8
	comp=Z,3.1nm,0.9s						
NVAR	Mina Array Bea	106.63	48	Pdiff	Pdif	17 10 35.5	+0.8
	comp=Z,0.8nm,0.7s,baz=337,slow=7.1,SNR=4.0						
NVAR				PKKP	PKKPdf	17 26 18.7	+1.2
	comp=Z,1.0nm,0.7s,baz=123,slow=6.1,SNR=5.2						
PDAR	Pinedale Array	111.05	41	PKiKP	PKiKP	17 14 54.0	+0.6
	comp=Z,0.3nm,0.6s,baz=139,slow=1.2,SNR=4.7						
PDAR				PKKPbc	PKKPbc	17 25 55.0	+3.5
	comp=Z,0.9nm,0.8s,baz=126,slow=6.3,SNR=7.7						
PDAR	Pinedale Array	111.05	41		PKiKP	17 14 52.3	-1.1
TXAR	Lajitas Array	121.34	52	PKP	PKPdf	17 15 13.1	-0.3
	comp=Z,0.7nm,0.7s,baz=282,slow=0.7,SNR=7.4						
TXAR				PKKPbc	PKKPbc	17 25 15.3	+0.4
	comp=Z,0.3nm,0.6s,baz=104,slow=5.3,SNR=3.4						
TXAR	Lajitas Array	121.34	52		PKPdf	17 15 12.8	-0.6
TORD	Torodi Ar. Bea	122.85	288	PKP	PKPdf	17 15 16.2	-0.2
	comp=Z,2.8nm,0.9s,baz=45,slow=3.3,SNR=9.5						
TORD				PKKPbc	PKKPab	17 25 11.5	+2.3
	comp=Z,0.7nm,0.7s,baz=307,slow=3.4,SNR=4.0						
DBIC	Dimbokro	130.55	282	SKPbc	SKPab	17 18 51.9	-1.6
	comp=Z,7.4nm,1.0s,baz=110,slow=3.0,SNR=6.3						
PLCA	Paso Flores	140.33	159	PKP	PKPdf	17 15 47.1	-1.7
	comp=Z,2.2nm,0.9s,baz=345,slow=1.8,SNR=5.8						
PLCA	Paso Flores	140.33	159	PKPdf	PKPdf	17 15 46.1	-2.7
ROC1	El Roble	146.80	152	*i* P	PKPab	17 16 03.2	-0.4
PEL	Peldehue	146.81	153	*i* P	PKPbc	17 16 02.6	+0.5
AAGR	Agrelo	147.68	155	*i* P	PKiKP	17 16 06.0	-0.7
ARCO	CERRO ARCO	147.85	155	*i* P	PKiKP	17 16 06.3	-0.8
ASAL	Salagasta	148.10	155	*i* P	PKiKP	17 16 07.4	-0.1
AUSP	Uspallata	148.18	153	*i* P	PKiKP	17 16 07.1	-0.8
CO02	Combarbal	148.26	150	PKPdf	PKPdf	17 16 00.1	-2.7
ACAN	Cantantal	149.06	157	*i* P	PKiKP	17 16 09.1	-0.4
AGUA	GUANDACOL	150.89	152	*i* P	PKiKP	17 16 15.0	+1.6
ACLC	CERRO LA CRUZ	151.64	154	*i* P	PKiKP	17 16 15.6	+0.5
TINO	Tinogasta	152.53	152	*i* P	PKiKP	17 16 17.0	+0.2
CPUP	Villa Florida	157.54	170	PKP	PKPdf	17 16 15.4	-0.9
	comp=Z,1.6nm,1.0s,baz=22,slow=12,SNR=3.2						
CPUP				PKPab	PKPab	17 16 48.0	0.0
	comp=Z,4.8nm,1.0s,baz=181,slow=3.6,SNR=6.8						
CPUP	Villa Florida	157.54	170	PKPdf	PKPdf	17 16 12.8	-3.5
LPAZ	La Paz	160.99	131	PKP	PKPdf	17 16 20.6	-0.8
	comp=Z,4.8nm,1.1s,baz=263,slow=0.9,SNR=7.8						
LPAZ				PKPab	PKPab	17 17 04.5	+0.4
	comp=Z,4.9nm,1.0s,baz=268,slow=2.4,SNR=4.3						
BDFB	Brasilia	167.43	204	PKP	PKPdf	17 16 26.3	-0.2
	comp=Z,1.6nm,0.8s,baz=102,slow=14,SNR=1.9						

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*NOU **25** 16:59:57.0, 31°.53S×177°.89W, h439^{km}, mb4.1/14, Kermadec Islands Region*

*NEIC **25** 16:59:59.3±2.0, 31°.1S±0°.1×179°.8W±0°.2, h321^{km}±8^{km}, mb4.3/15, Error ellipse: s-maj=20.0km s-min=16.8km az=89.0*

*IDC **25** 17:00:01.4±1.4, 31°.18S×179°.84W, h353^{km}±14^{km}, mb3.6/5, mbtmp4.3/7, Error ellipse: s-maj=22.9km s-min=17.6km az=97.0*

*WEL **25** 17:00:05.8±1.2, 32°S±8°×17°9W±2°1, h312^{km}±14^{km}, M4.6/9, mB4.8/7, ML5.0/8, MLv5.0/9, Mw(mB)4.1/7, Error ellipse: s-maj=28.8km s-min=6.0km az=106.6, confirmed*

ISC 25 17:00:01.4±0.5**, 31°.11S**±0°.06×**179°.98W**±0°.10**, h350**^{km}**, n92,** σ**1**^{s}**65**/90**, mb4.2**/11**, 1C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.56	44	P	Pn	17 00 56.8	-0.3
GLKZ				S	S	17 01 40.0	-1.7
RAO	Raoul Island	2.57	44	P	Pn	17 00 57.1	0.0
	316nm,0.3s,baz=56,slow=20,SNR=2.2						
RAO				S	S	17 01 30.8	-11
	581nm,0.3s,baz=84,slow=18,SNR=2.1						
RAO	Raoul Island	2.57	44		Pn	17 00 51.4	-5.7
MXZ	Matakaoa Point	6.59	192	Pn	Pn	17 01 38.9	+0.1
MXZ	Matakaoa Point	6.59	192	P	Pn	17 01 39.8	+1.0
	62nm,1.0s						
MXZ	Matakaoa Point	6.59	192	P	Pn	17 01 40.3	+1.5
MXZ				S	S	17 02 57.9	0.0
KUZ	Kuaotunu	6.66	211	P	Pn	17 01 45.1	+5.5
WCZ	Waipu Caves	6.75	223	P	Pn	17 01 47.3	+6.6
WMGZ	Waiomatatini S	6.82	191	P	Pn	17 01 43.5	+2.0
WMGZ				S	S	17 03 02.4	-0.4
HAZ	Te Kaha	6.88	195	P	Pn	17 01 43.3	+1.1
HAZ				S	S	17 03 03.2	-0.9
PKGZ	Pakihiroa	6.92	193	P	Pn	17 01 44.4	+1.6
PKGZ				S	S	17 03 03.5	-1.7
MBAZ	Motutapu North	7.07	216	P	Pn	17 01 50.9	+6.5
PUZ	Puketiti	7.09	191	P	Pn	17 01 45.4	+0.7
PUZ				S	S	17 03 05.5	-3.2
RUGZ	Raukumara Rang	7.10	195	P	Pn	17 01 46.7	+1.7
MKAZ	Moumakai	7.21	213	P	Pn	17 01 51.9	+5.8
TWGZ	Tauwhareparae	7.24	193	P	Pn	17 01 48.1	+1.6
TWGZ				S	S	17 03 11.0	-1.1
OPRZ	Ohinepanea	7.30	202	P	Pn	17 01 51.9	+4.9
MWZ	Matawai	7.49	195	P	Pn	17 01 50.5	+1.1
MWZ				S	S	17 03 15.5	-1.8
URZ	Urewera	7.52	198	P	Pn	17 01 49.4	-0.3
	7.8nm,0.3s,baz=264,slow=4.6,SNR=88						
URZ				S	S	17 03 17.1	-0.8
	72nm,0.6s,baz=46,slow=21,SNR=18						
URZ	Urewera	7.52	198	P	Pn	17 01 50.0	+0.3
	45nm,1.1s						
TKGZ	Te Karaka	7.52	193	P	Pn	17 01 50.4	+0.6
TOZ	Tahuroa Road	7.58	208		Pn	17 01 52.6	+2.1
RTZ	Ruatahuna	7.89	198		Pn	17 01 53.7	-0.5
HIZ	Hauiti	8.52	209	Pn	Pn	17 02 00.5	-1.0
HIZ	Hauiti	8.52	209	P	P	17 02 06.7	+2.5
	58nm,1.5s						
BKZ	Black Stump Fm	8.54	199	Pn	Pn	17 02 01.1	-0.7
BKZ	Black Stump Fm	8.54	199	P	Pn	17 02 01.2	-0.6
	19nm,1.2s						
BFZ	Birch Farm	10.03	197	Pn	Pn	17 02 17.7	-1.7
BFZ	Birch Farm	10.03	197	P	Pn	17 02 17.2	-2.3
MRZ	Mangatainoka R	10.18	199	Pn	Pn	17 02 17.5	-3.9
MSWZ	Moikau Station	10.98	199	Pn	Pn	17 02 27.0	-3.8
SNZO	South Karori	11.04	201	Pn	Pn	17 02 29.8	-1.8
SNZO	South Karori	11.04	201	P	Pn	17 02 30.2	-1.3
	25nm,1.4s						
BHW	Baring Head	11.08	201	Pn	Pn	17 02 28.1	-3.9
TCW	Tory Channel	11.09	203	Pn	Pn	17 02 29.4	-2.7
TUWZ	Tuamarina	11.40	204	Pn	Pn	17 02 32.9	-2.9
NNZ	Nelson	11.42	206	Pn	Pn	17 02 32.1	-3.9
TKNZ	Takaka Hill	11.42	208	Pn	Pn	17 02 34.1	-2.0
QRZ	Quartz Range	11.43	210		P	17 02 35.4	-1.1
QRZ	Quartz Range	11.43	210	P	P	17 02 35.6	-0.9
	38nm,2.3s						
CMWZ	Cape Campbell	11.59	202	P	P	17 02 38.4	+0.1
BSWZ	Blackbirch Sta	11.68	203	P	Pn	17 02 36.2	-2.9
MRNZ	Matariki Terra	11.81	208	P	Pn	17 02 37.5	-3.2
THZ	Tophouse	12.07	206	P	P	17 02 40.7	-2.9
KHZ	Kahutara	12.41	203		P	17 02 45.6	-1.8
KHZ	Kahutara	12.41	203	P	P	17 02 45.7	-1.7
	57nm,2.4s						
DSZ	Denniston Nort	12.50	210	P	P	17 02 46.6	-1.7
GVZ	Greta Valley S	13.07	203	P	P	17 02 52.1	-2.6
LTZ	Lake Taylor	13.18	206	P	P	17 02 55.1	-0.9
MSVF	Nonsavu	13.44	352	P	Pn	17 02 59.2	-1.2
MSVF	Nonsavu	13.44	352	P	Pn	17 03 00.2	-0.1
	21nm,0.8s						
OXZ	Oxford	13.74	205	P	P	17 03 00.1	-2.0
PINNC	Pines Island,	14.05	304	P	Pn	17 03 14.8	+7.5
	54nm,1.6s						
OUENC	Ouen Island, N	14.61	303	P	Pn	17 03 24.2	+10
	25nm,0.7s						
YATNC	Mamie plateau,	14.80	304	P	Pn	17 03 25.3	+9.3
	26nm,0.9s						
NIUE	Niue	15.04	39	P	P	17 03 16.2	-0.3
DZM	Mont Dzumac	15.11	303	P	Pn	17 03 28.9	+9.2
	23nm,1.7s						
ODZ	Otahua Downs	15.73	205	P	Pn	17 03 24.5	-2.0
CTAO	Charters Tower	32.26	282	P	P	17 05 58.2	-0.4
CTAO				IAmb	IAmb	17 06 06.2	
	comp=Z,25nm,1.4s						
AS31	Alice Springs	41.38	269	P	P	17 07 16.3	+1.5
AS31				IAmb	IAmb	17 07 22.3	
	comp=Z,18nm,1.4s						
ASAR	Alice Springs	41.38	269	P	P	17 07 16.0	+1.2
	comp=Z,1.8nm,0.8s,baz=113,slow=7.9,SNR=1.6						
	comp=Z,1.8nm,0.8s						
ASAR	Alice Springs	41.38	269	P	P	17 07 20.4	+5.6
WRA	Warramunga Arr	42.44	274	P	P	17 07 24.4	+1.1
	comp=Z,2.3nm,0.7s,baz=111,slow=8.2,SNR=6.1						
	comp=Z,2.3nm,0.7s						
SBA	Scott Base	47.21	184	P	P	17 08 02.4	+2.8
KNRA	Kununurra	49.08	276	P	P	17 08 16.1	+1.5
KNRA				IAmb	IAmb	17 08 34.5	
	comp=Z,26nm,1.4s						
MORW	Morawa	54.70	255	P	P	17 08 56.4	+0.8
MORW				IAmb	IAmb	17 09 37.6	
	comp=Z,11nm,1.1s						
QSPA	South Pole Qui	59.00	180	P	P	17 09 26.6	+1.5
BELA	Belgrano 2	69.30	173	P	P	17 10 30.9	-0.2
BELA				IAmb	IAmb	17 11 01.2	
	comp=Z,5.4nm,0.6s						
PMSA	Palmer Station	72.31	156	P	P	17 10 50.6	+1.5
TROLL	Troll, Antarti	77.15	181	⇑P	P	17 11 17.1	+0.4
	comp=Z,164nm,0.8s						
SNAA	Sanae	77.48	179	P	P	17 11 17.9	-0.6
SNAA	Sanae	77.48	179	P	P	17 11 17.2	-1.3
	comp=Z,3.8nm,0.8s,baz=196,slow=13,SNR=5.0						
	comp=Z,3.8nm,0.8s						
SNAA	Sanae	77.48	179	P	P	17 11 18.6	+0.1
SNAA				IAmb	IAmb	17 11 19.6	
	comp=Z,7.5nm,1.1s						
VNA3	Neumayer Olymp	77.70	177	P	P	17 11 19.6	-0.1
MJAR	Matsushiro Arr	77.88	327	P	P	17 11 20.9	-0.1
	comp=Z,2.8nm,1.0s,baz=166,slow=3.8,SNR=4.1						
	comp=Z,2.8nm,1.0s						
MJAR	Matsushiro Arr	77.88	327	IAmb	IAmb	17 11 21.3	
	comp=Z,6.7nm,1.3s						
MJAR				P	P	17 11 21.6	+0.6
VNA2	Neumayer--Watz	78.11	178	P	P	17 11 22.4	+0.6
	baz=331,slow=8.4						
PLCA	Paso Flores	83.25	134	P	P	17 11 50.0	+0.5
	comp=Z,3.6nm,0.9s,baz=231,slow=5.2,SNR=12						
	comp=Z,3.6nm,0.9s						
PLCA	Paso Flores	83.25	134	P	P	17 11 49.9	+0.3
PLCA				IAmb	IAmb	17 12 16.4	
	comp=Z,5.2nm,1.4s						
GSI	Gunungsitoli	84.20	275	P	P	17 11 56.1	+1.4
BI02	San Fabin de	85.15	130	P	P	17 11 59.0	-0.1
BI02				IAmb	IAmb	17 11 60.0	
	comp=Z,5.1nm,0.9s						
KBZ	Khabaz	144.08	303	PKP	PKPdf	17 18 54.6	-0.9
	comp=Z,0.8nm,0.4s,baz=192,slow=2.3,SNR=4.9						
FIA1	FINESS Array S	145.20	338	PKPdf	PKPbc	17 18 56.6	-0.7
FINES	FINESS Array B	145.20	338	PKPbc	PKPbc	17 18 56.6	-0.7
	comp=Z,2.6nm,0.4s,baz=55,slow=3.9,SNR=55						
NC303	NORSAR Array S	148.97	349	PKPbc	PKPbc	17 19 07.0	-0.6
NC405	NORSAR Array S	149.02	349	PKPbc	PKPbc	17 19 07.5	-0.3
NB2	NORSAR Subarra	149.17	349	PKP	PKPbc	17 19 07.2	-1.0
	comp=Z,1.0nm,0.5s,baz=15,slow=4.1						
NOA	NORSAR Array B	149.17	349	PKPbc	PKPbc	17 19 07.4	-0.7
	comp=Z,0.6nm,0.5s,baz=17,slow=4.2,SNR=5.8						
NC602	NORSAR Array S	149.41	349	PKPbc	PKPbc	17 19 07.5	-1.1
HFS	Hagfors	149.57	346	PKPbc	PKPbc	17 19 07.9	-1.1
	comp=Z,0.6nm,0.3s,baz=119,slow=1.9,SNR=17						
BRTR	Keskin Array B	151.42	297	PKPbc	PKiKP	17 19 13.8	-0.9
	comp=Z,0.6nm,0.7s,baz=154,slow=4.6,SNR=4.1						
TORD	Torodi Ar. Bea	162.05	185	PKPab	PKPab	17 20 09.2	-0.9
	comp=Z,1.3nm,0.8s,baz=148,slow=2.1,SNR=4.8						

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*NEIC **25** 17:00:39.1±1.6, 56°.58N±0°.08×148°.6W±0°.1, h10^{km}±2^{km}, mb4.0/1, ML3.7/92, ML3.6(AEIC), Error ellipse: s-maj=14.8km s-min=8.5km az=155.0*

*AEIC **25** 17:00:42.2±1.2, 56°.45N±0°.08×148°.5W±0°.1, h9^{km}±5^{km}, Error ellipse: s-maj=12.7km s-min=7.7km az=156.0*

*IDC **25** 17:00:44.2±1.6, 56°.81N×148°.87W, h0^{km}, mb3.7/4, mbtmp3.7/8, ML3.1/4, MS3.5/2, Error ellipse: s-maj=28.4km s-min=22.1km az=37.0*

ISC 25 17:00:38.6±1.5**, 56°.56N**±0°.09×**148°.53W**±0°.05**, h10**^{km}**, n144,** σ**1**^{s}**04**/122**, mb3.8**/4**, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.53	301	Pn	Pn	17 01 19.7	+0.1
	9.9nm,0.3s,baz=354,slow=2.1,SNR=186						
KDAK				Sn	Sn	17 01 49.7	-0.7
	17nm,0.3s,baz=141,slow=3.0,SNR=12						
KDAK				LR	LR	17 02 25.7	
	comp=Z,439nm,20.7s,baz=97,slow=45						
	22nm,0.3s						
KDAK	Kodiak Island	2.53	301		Pn	17 01 19.4	-0.2
KDAK	Kodiak Island	2.53	301		Sn	17 01 48.6	-1.8
OHAK	Old Harbor	2.69	286		Pn	17 01 21.2	-0.7
OHAK					Sn	17 01 51.7	-2.8
OHAK	Old Harbor	2.69	286	P	Pn	17 01 21.2	-0.7
SYI	Shuyak Island	2.92	316		Pn	17 01 25.4	+0.3
SYI					Sn	17 01 59.3	-1.0
MID	Middleton Isla	3.10	21		Pn	17 01 27.2	-0.4
MID					Sn	17 02 01.7	-2.9
MID	Middleton Isla	3.10	21	IAML		17 02 37.0	
	comp=E,208nm,1.2s						
MID				IAML		17 03 00.0	
	comp=N,159nm,1.1s						
SII	Sitkinak Islan	3.13	272		Pn	17 01 27.3	-0.7
SII					Sn	17 02 01.8	-3.5
SII	Sitkinak Islan	3.13	272	IAML		17 02 03.8	
	comp=E,277nm,0.9s						
SII				IAML		17 02 08.0	
	comp=N,319nm,0.8s						
SII	Sitkinak Islan	3.13	272	P	Pn	17 01 28.6	+0.7
CNPM	China Poot	3.31	335		Pn	17 01 30.3	0.0
CNPM	China Poot	3.31	335		Sn	17 02 08.4	-1.2
R18K	Karluk	3.39	290		Pn	17 01 31.5	0.0
R18K					Sn	17 02 09.8	-1.8
BRSE	Bradley Lake S	3.40	341		Pn	17 01 31.7	+0.1
BRSE					Sn	17 02 11.7	-0.3
BRLK	Bradley Lake	3.45	340		Pn	17 01 32.0	-0.3
BRLK				IAML		17 02 19.8	
	comp=N,115nm,0.7s						
P23K	Montague Islan	3.50	9		Pn	17 01 33.0	0.0
P23K				IAML		17 02 18.0	
	comp=E,178nm,0.6s						
P23K				IAML		17 02 20.1	
	comp=N,161nm,1.1s						
P23K	Montague Islan	3.50	9		Sn	17 02 12.6	-1.8
HOM	Homer	3.52	333		Pn	17 01 34.4	+1.1
HOM					Sn	17 02 14.4	-0.5
SEW	Seward	3.59	353		Pn	17 01 33.9	-0.3
SEW					Sn	17 02 15.6	-1.0
Q19K	Cape Douglas,	3.63	313		Pn	17 01 35.6	+0.8
KAPH	Katmai Pasha	3.74	306		Pn	17 01 36.9	+0.5
KAHG	Katmai Hook Gl	3.78	303		Pn	17 01 37.6	+0.7
AU22	Augustine Moun	3.82	320		Pn	17 01 38.2	+0.9
AUJK	Augustine Jueg	3.82	319		Pn	17 01 38.0	+0.7
AGU	Augustine-Summ	3.84	319		Pn	17 01 39.0	+1.3
KAWH	Katmai	3.85	301		Pn	17 01 38.2	+0.3
KAWH					Sn	17 02 21.4	-1.7
MGLS	Mageik Landsli	3.92	296		Pn	17 01 39.6	+0.8
KAKN	Katmai Knife C	3.94	299		Pn	17 01 39.9	+0.8
CAHL	Cahill	3.97	295		Pn	17 01 40.0	+0.6
P19K	Oil Pt	3.98	323		Pn	17 01 40.4	+0.8
P19K	Oil Pt	3.98	323	IAML		17 02 36.2	
	comp=N,170nm,0.9s						
O22K	Cooper Landing	3.98	351		Pn	17 01 39.5	-0.1
HIN	Hinchinbrook I	4.00	15		Pn	17 01 40.0	+0.2
KAIM	Kayak Island	4.02	31		Pn	17 01 39.9	-0.2
KAIM	Kayak Island	4.02	31	IAML		17 02 35.0	
	comp=N,121nm,0.6s						
KAIM				IAML		17 02 39.5	
	comp=E,129nm,1.2s						
CHIR	Chirikof Islan	4.03	262		Pn	17 01 39.7	-0.6
CHIR	Chirikof Islan	4.03	262	IAML		17 02 26.7	
	comp=N,147nm,0.9s						
CHIR	Chirikof Islan	4.03	262	P	Pn	17 01 39.9	-0.4
ACHA	Angle Creek He	4.04	297		Pn	17 01 40.9	+0.5
KABU	Katmai Buttres	4.04	298		Pn	17 01 41.0	+0.6
SLKM	Skilak Lake	4.06	348		Pn	17 01 41.0	+0.2
SLKM	Skilak Lake	4.06	348	IAML		17 02 33.1	
	comp=N,126nm,0.4s						
SLKM				IAML		17 02 34.5	
	comp=E,155nm,0.6s						
KAHC	Katmai Hardscr	4.07	304		Pn	17 01 41.5	+0.7

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ILSW  Iliamna Southw      4.21 327           Pn       17 01 43.1 +0.3
ILSW  Iliamna Southw      4.21 327  IAML              17 02 40.5
      comp=E,95nm,0.5s
EYAK  Cordova Ski Ar      4.26  19           Pn       17 01 43.5 +0.1
EYAK                                IAML              17 02 37.0
      comp=N,116nm,0.8s
EYAK                                IAML              17 02 41.6
      comp=E,91nm,0.7s
EYAK  Cordova Ski Ar      4.26  19  P        Pn       17 01 43.8 +0.4
PWL   Port Wells          4.32   1           Pn       17 01 44.3 +0.1
PWL   Port Wells          4.32   1  IAML              17 02 34.0
      comp=E,102nm,0.7s
PWL                                 IAML              17 02 41.9
      comp=N,112nm,1.0s
CNTC  Contact Creek       4.33 296           Pn       17 01 45.1 +0.6
FID   Port Fidalgo        4.34  13           Pn       17 01 44.4 -0.1
FID   Port Fidalgo        4.34  13  IAML              17 02 38.0
      comp=E,80nm,0.5s
FID                                 IAML              17 02 38.8
      comp=N,77nm,1.0s
PLK3  Peulik 3            4.37 288           Pn       17 01 45.4 +0.5
GLI   Glacier Island      4.40   9           Pn       17 01 45.5 +0.2
GLI   Glacier Island      4.40   9  IAML              17 02 35.6
      comp=N,66nm,1.0s
GLI                                 IAML              17 02 41.0
      comp=E,86nm,0.5s
PLK4  Peulik 4            4.40 287  IAML              17 02 45.1
      comp=N,110nm,1.1s
RED   Redoubt Volcan      4.47 332           Pn       17 01 46.1 -0.2
RED   Redoubt Volcan      4.47 332  IAML              17 02 47.7
      comp=N,90nm,0.7s
RED                                 IAML              17 02 49.7
      comp=E,97nm,0.7s
GOAT  Goat Mountain       4.50  25           Pn       17 01 46.8 +0.1
RDWB  Redoubt West        4.54 332           Pn       17 01 47.4  0.0
RC01  Rabbit Creek A      4.59 353           Pn       17 01 48.4 +0.5
RC01                                IAML              17 02 47.6
      comp=E,100nm,0.6s
RC01                                IAML              17 02 47.7
      comp=N,67nm,0.6s
BERG  Berg Lake           4.61  31           Pn       17 01 47.8 -0.4
NCT   North Crescent      4.63 332           Pn       17 01 48.4 -0.2
SNH   Sunshine Point      4.71  37  Pn       Pn       17 01 49.3 -0.3
SNH                                 IAML              17 03 04.6
      comp=E,51nm,1.1s
O19K  Port Alsworth       4.75 323           Pn       17 01 50.2  0.0
DIV   Divide              4.80  16           Pn       17 01 51.4 +0.4
O18K  Koktuh Hills        4.84 316           Pn       17 01 51.7 +0.3
BMRM  Bremner River       4.87  23  IAML              17 02 48.2
      comp=E,49nm,1.0s
BMRM                                IAML              17 02 56.9
      comp=N,45nm,0.7s
KNK   Knik Glacier        4.87   0           Pn       17 01 52.5 +0.7
KNK   Knik Glacier        4.87   0  IAML              17 03 01.7
      comp=N,44nm,1.0s
KNK                                 IAML              17 03 02.5
      comp=E,60nm,0.8s
SPCR  Spurr Chakacha      5.03 339           Pn       17 01 54.1  0.0
SUA   Susitna One         5.05 348  IAML              17 02 57.0
      comp=E,40nm,1.0s
SUA                                 IAML              17 03 01.4
      comp=N,37nm,1.0s
PMR   Palmer              5.06 357  IAML              17 02 57.2
      comp=N,64nm,0.8s
PMR                                 IAML              17 03 00.5
      comp=E,49nm,0.6s
PMR   Palmer              5.06 357  P        Pn       17 01 54.9 +0.5
CRQM  Cirque              5.06  32           Pn       17 01 54.3 -0.4
CRQM                                IAML              17 02 58.9
      comp=N,60nm,0.9s
CRQM                                IAML              17 03 00.6
      comp=E,58nm,0.7s
SPCG  Spurr Capps Gl      5.08 341           Pn       17 01 55.1 +0.3
KLU   Klutina             5.13  14  IAML              17 02 58.7
      comp=N,62nm,0.5s
KLU                                 IAML              17 03 02.9
      comp=E,61nm,0.9s
TGL   Tana Glacier        5.15  33           Pn       17 01 55.5 -0.3
TGL   Tana Glacier        5.15  33  IAML              17 03 02.6
      comp=E,54nm,0.6s
TGL                                 IAML              17 03 03.5
      comp=N,36nm,1.0s
YAH   Yahtse              5.22  40           Pn       17 01 56.5 -0.3
GHO   Glory Hole Cre      5.24 358           Pn       17 01 57.7 +0.9
SML   Sawmill             5.27   1           Pn       17 01 57.9 +0.6
SML   Sawmill             5.27   1  IAML              17 02 59.2
      comp=E,68nm,0.9s
M23K  Glacier View        5.27   4           Pn       17 01 58.1 +0.8
N19K  Bonanza Creek       5.28 326           Pn       17 01 57.5 +0.1
SCM   Sheep Creek Mo      5.33   6           Pn       17 01 58.9 +0.8
SCM   Sheep Creek Mo      5.33   6  IAML              17 03 26.5
      comp=E,63nm,1.1s
VRDI  Verde Repeater      5.37  27           Pn       17 01 58.8 -0.1
VRDI  Verde Repeater      5.37  27  IAML              17 02 59.9
      comp=E,27nm,0.9s
VRDI                                IAML              17 03 05.2
      comp=N,32nm,0.9s
KIAG  Kiagna River        5.43  34           Pn       17 01 59.3 -0.3
N25K  Chitina, Valde      5.45  20           Pn       17 02 00.3 +0.4
GRNC  Granite Creek       5.48  37           Pn       17 01 59.9 -0.5
MCARA McCarthy VSAT       5.61  28           Pn       17 02 02.1 +0.1
PCA   Pinnacle            5.62  47           Pn       17 02 01.9 -0.3
N18K  Kilae Creek         5.64 320  Pn       Pn       17 02 02.4  0.0
SKT   Skwentna            5.65 345           Pn       17 02 03.0 +0.5
M24K  Tolsona, Glenn      5.70  11           Pn       17 02 03.8 +0.6
BCPM  Bancas Point        5.80  50           Pn       17 02 04.3 -0.3
LOGN  Logan Glacier       5.80  39           Pn       17 02 04.5 -0.3
M20K  Styx River          5.84 338           Pn       17 02 05.2  0.0
WACK  Wrangell Chich      5.86  20           Pn       17 02 05.7 +0.2
WAT6  Susitna Watana      6.06   3           Pn       17 02 09.2 +1.0
O28M  Mount Upton         6.06  42           Pn       17 02 08.6 +0.2
L22K  Petersville         6.09 350           Pn       17 02 08.7 +0.1
P29M  Windy Craggy        6.50  57           Pn       17 02 13.5 -0.6
L19K  White Mountain      6.50 333           Pn       17 02 13.8 -0.4
PAX   Paxson              6.62  12           Pn       17 02 16.3 +0.5
YUK6  Outpost Mounta      6.88  46           Pn       17 02 19.1 -0.4
TRF   Thorofare Moun      6.97 353           Pn       17 02 21.5 +0.7
KTH   Kantishna Hill      7.12 351           Pn       17 02 23.2 +0.5
YUK5  Granite Creek       7.18  46           Pn       17 02 23.1 -0.5
SIT   Sitka               7.27  81  P        Pn       17 02 21.6 -3.1
BPAW  Bear Paw Mtn.       7.66 352           Pn       17 02 30.4 +0.3
JIS   Juneau Island       7.83  71  P        Pn       17 02 31.3 -1.1
K17K  Iditarod            7.91 325           Pn       17 02 33.4  0.0
WRH   Wood River Hil      7.94   1           Pn       17 02 34.8 +0.9
CCB   Clear Creek Bu      8.12   2           Pn       17 02 36.8 +0.4
J20K  Nowinta River       8.13 342           Pn       17 02 37.0 +0.5
N31M  Braeburn, Yuko      8.22  48           Pn       17 02 38.3 +0.5
WHY   Whitehorse          8.22  54           Pn       17 02 38.0 +0.1
IL31                      8.28   5           Pn       17 02 39.3 +0.8
ILAR  Eielson Array       8.28   5  Pn       Pn       17 02 39.0 +0.4
      comp=N,0.3nm,0.3s,baz=188,slow=14,SNR=18
ILAR                                Sn       Sn       17 04 08.2 -3.8
      comp=N,0.5nm,0.3s,baz=188,slow=23,SNR=8.0
      comp=N,1.0nm,0.4s
J26L  Joseph Creek        8.33  15           Pn       17 02 40.3 +0.9
COLA  College             8.35   2  P        Pn       17 02 40.6 +1.1
I23K  Minto, Yukon-K      8.63 358           Pn       17 02 43.9 +0.6
H21K  Melozitna Rive      9.36 349           Pn       17 02 53.4  0.0
G23K  Bananza Creek      10.21 357           Pn       17 03 06.4 +1.4
G21K  Allakaket          10.27 349           Pn       17 03 07.5 +1.7
E19K  Redstone River     11.66 343           Pn       17 03 24.8  0.0
INK   Inuvik             13.62  24  Pn       Pn       17 03 55.4 +3.9
      comp=N,0.1nm,0.3s,baz=204,slow=14,SNR=6.2
      comp=N,2.3nm,1.0s
YKA   Yellowknife Ar     18.04  57  Pn       P        17 04 52.7 +3.3
      baz=270,slow=12,SNR=25
      comp=N,3.4nm,0.9s
NVAR  Mina Array Bea     26.98 119  P        P        17 06 30.5  +10
      comp=N,0.2nm,0.5s,baz=312,slow=7.5,SNR=2.2
      comp=N,0.2nm,0.5s
TXAR  Lajitas Array      41.53 112  LR       LR       17 25 57.0
      comp=N,142nm,20.0s,baz=270,slow=36
H11N2 WAKE ISLAND Hy     49.38 241  T        T        18 02 41.3
      baz=31,slow=76,SNR=15
H11N3 WAKE ISLAND Hy     49.39 241  T        T        18 02 39.7
      baz=31,slow=76,SNR=14
H11N1 WAKE ISLAND Hy     49.40 241  T        T        18 02 44.7
      baz=31,slow=76,SNR=14
H11S1 WAKE ISLAND Hy     50.52 240  T        T        18 04 29.4
      baz=30,slow=76,SNR=12
H11S2 WAKE ISLAND Hy     50.54 240  T        T        18 04 12.8
      baz=30,slow=76,SNR=9.7
H11S3 WAKE ISLAND Hy     50.54 240  T        T        18 04 12.1
      baz=30,slow=76,SNR=8.1
GERES GERESS Array B     73.93  12  P        P        17 12 20.8 +7.2
      comp=N,0.4nm,0.6s,baz=340,slow=7.4,SNR=3.8
      comp=N,0.4nm,0.6s
ESDC  Sonseca Array      79.55  27  P        P        17 12 52.2 +6.8
      comp=N,1.0nm,0.9s,baz=343,slow=6.4,SNR=4.7
      comp=N,1.0nm,0.9s
ESDC  Sonseca Array      79.55  27  IAmb     IAmb     17 13 01.8
      comp=Z,2.1nm,1.3s
BRTR  Keskin Array B     84.07 358  P        P        17 13 14.9 +5.6
      comp=Z,0.6nm,0.7s,baz=328,slow=4.5,SNR=2.9
      comp=Z,0.6nm,0.7s
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*NEIC **25** 17:04:15.3±2.0, 20°.1S±0°.1×177°.6W±0°.2, h534^{km}±4^{km}, mb4.4/31, Error ellipse: s-maj=21.6km s-min=17.8km az=106.0*

*IDC **25** 17:04:15.6±6.7, 20°.05S×177°.58W, h539^{km}±63^{km}, mb3.7/9, mbtmp4.6/10, Error ellipse: s-maj=53.0km s-min=27.6km az=117.0*

ISC 25 17:04:16.3±0.6, 20°.0S±0°.1×177°.6W±0°.1, h550^{km}, n70, σ1^{s}.22/69, mb4.3/25, Fiji Islands region

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Code  Station Name          Δ°   AZ°   Phase ID          Time      Res
                                    Op       ISC       h  m  s    ISC
MSVF  Nonsavu             4.66 298           P        17 05 43.1 -0.4
DZM   Mont Dzumac        15.01 259  P        P        17 07 27.4 +1.3
      2.2nm,0.3s,baz=153,slow=23,SNR=6.4
DZM   Mont Dzumac        15.01 259  IAmb     IAmb     17 07 50.1
      comp=Z,17nm,1.2s
WHZ   Wether Hill Ro     28.45 201  P        P        17 09 27.4 +0.3
EIDS  Eidsvold           29.32 254  P        P        17 09 35.3 +0.4
EIDS                                IAmb     IAmb     17 09 35.7
      comp=Z,14nm,1.0s
ARMA  Armidale           29.61 243  P        P        17 09 37.5  0.0
ARMA                                IAmb     IAmb     17 09 49.1
      comp=Z,8.6nm,1.1s
CTAO  Charters Tower     33.89 263  P        P        17 10 14.5 +0.5
CTAO                                IAmb     IAmb     17 10 15.2
      comp=Z,11nm,0.8s
PMG   Port Moresby       35.56 282  P        P        17 10 29.0 +1.0
PMG                                 IAmb     IAmb     17 10 29.5
      comp=Z,9.8nm,0.8s
TOO   Toolangi           36.48 233  P        P        17 10 35.0 -0.4
COEN  Coen               37.90 273  P        P        17 10 47.8 +0.6
COEN                                IAmb     IAmb     17 10 48.6
      comp=Z,6.6nm,0.8s
STKA  Stephens Creek     38.33 244  P        P        17 10 50.9 +0.5
      comp=Z,2.8nm,0.5s,baz=84,slow=11,SNR=9.6
      comp=Z,2.8nm,0.5s
STKA  Stephens Creek     38.33 244  P        P        17 10 50.8 +0.3
INKA  Innaminka          38.70 250  P        P        17 10 54.2 +0.7
INKA                                IAmb     IAmb     17 11 32.1
      comp=Z,6.7nm,1.2s
BBOO  Buckleboo          43.09 243  P        P        17 11 28.1 -0.2
BBOO                                IAmb     IAmb     17 11 28.9
      comp=Z,10nm,0.7s
JAY   Jayapura           44.21 288  P        P        17 11 37.1 -0.2
      comp=Z,14nm,0.6s,baz=322,slow=1.6,SNR=6.4
      comp=Z,14nm,0.6s
WR8   Warramunga Arr     44.86 261  P        P        17 11 41.7 -0.6
WR8                                 IAmb     IAmb     17 11 42.9
      comp=Z,7.2nm,0.5s
AS31  Alice Springs      44.97 256  P        P        17 11 42.9 -0.2
ASAR  Alice Springs      44.97 256  P        P        17 11 43.1  0.0
      comp=Z,15nm,0.8s,baz=89,slow=7.7,SNR=82
ASAR                                S        S        17 17 40.1 -1.7
      comp=Z,1.0nm,0.7s,baz=96,slow=15,SNR=7.4
      comp=Z,15nm,0.8s
ASAR  Alice Springs      44.97 256  P        P        17 11 42.4 -0.7
WB0   Warramunga Arr     44.99 262  P        P        17 11 42.7 -0.5
WB2   Warramunga Arr     45.00 261  P        P        17 11 42.7 -0.6
WRAB  Tennant Creek      45.01 261  P        P        17 11 42.8 -0.5
WRAB                                IAmb     IAmb     17 11 43.7
      comp=Z,18nm,1.1s
WRA   Warramunga Arr     45.02 261  P        P        17 11 42.9 -0.5
      comp=Z,8.6nm,0.6s,baz=98,slow=8.1,SNR=71
      comp=Z,8.6nm,0.6s
WRA   Warramunga Arr     45.02 261  P        P        17 11 42.3 -1.1
MTN   Manton Dam         49.50 270  P        P        17 12 16.5 -0.6
MTN                                 IAmb     IAmb     17 12 17.8
      comp=Z,10nm,0.7s
FORT  Forrest            49.82 246  P        P        17 12 18.8 -0.5
FORT                                IAmb     IAmb     17 12 35.7
      comp=Z,8.8nm,1.0s
KNRA  Kununurra          51.04 266  P        P        17 12 28.0 -0.4
KNRA                                IAmb     IAmb     17 12 55.1
      comp=Z,19nm,1.4s
FITZ  Fitzroy Crossi     53.44 262  P        P        17 12 45.6 +0.1
      comp=Z,5.3nm,0.5s,baz=107,slow=3.8,SNR=30
      comp=Z,5.3nm,0.5s
FITZ  Fitzroy Crossi     53.44 262  P        P        17 12 45.4 -0.1
SOEI  Soe                56.83 271  P        P        17 13 10.0 +0.7
PSA00 Pilbara Seismi     58.12 257  P        P        17 13 17.6 -0.3
PSA00                               IAmb     IAmb     17 13 18.8
      comp=Z,8.5nm,1.1s
MBWA  Marble Bar         58.30 257  P        P        17 13 18.4 -0.8
MORW  Morawa             60.34 247  P        P        17 13 32.3 -0.4
MORW                                IAmb     IAmb     17 13 33.7
      comp=Z,20nm,1.4s
MJAR  Matsushiro Arr     69.99 323  P        P        17 14 33.4 +0.5
      comp=Z,3.4nm,0.8s,baz=156,slow=5.7,SNR=11
      comp=Z,3.4nm,0.8s
MJAR  Matsushiro Arr     69.99 323  P        P        17 14 33.2 +0.3
QSPA  South Pole Qui     70.09 180  P        P        17 14 32.5 -0.7
JKA   Kamikawa-asahi     73.43 331  P        P        17 14 55.3 +2.6
JKA                                 IAmb     IAmb     17 14 55.8
      comp=Z,13nm,1.0s
SSLB  Suanglung          73.97 303  P        P        17 14 55.7 -0.6
TPUB  Ta-pu              73.98 303  P        P        17 14 55.4 -1.0
USRK  Ussuriysk Ar.      78.73 326  P        P        17 15 23.6 +1.7
      comp=Z,4.1nm,0.8s,baz=93,slow=4.4,SNR=4.2
      comp=Z,4.1nm,0.8s
BELA  Belgrano 2         80.03 173  P        P        17 15 29.8 +1.5
ILAR  Eielson Array      87.73  13  P        P        17 16 06.2 -0.1
      comp=Z,0.9nm,0.7s,baz=218,slow=5.3,SNR=11
      comp=Z,0.9nm,0.7s
L29M  L29M               88.42  17  P        P        17 16 10.8 +1.2
L29M                                IAmb     IAmb     17 16 49.0
      comp=Z,6.6nm,1.3s
CMAR  Chiang Mai Arr     90.26 289  P        P        17 16 21.2 +2.1
      comp=Z,1.0nm,0.8s,baz=110,slow=2.3,SNR=11
      comp=Z,1.0nm,0.8s
CMAR  Chiang Mai Arr     90.26 289  P        P        17 16 19.8 +0.6
MKAR  Makanchi Array    111.09 314  PKiKP    PKiKP    17 21 46.9 -0.6
      comp=Z,0.3nm,0.6s,baz=250,slow=2.9,SNR=2.5
BVAR  Borovoye Array    118.90 320  PKP      PKPdf    17 22 02.0 -0.3
      comp=Z,0.7nm,0.5s,baz=38,slow=2.6,SNR=5.1
AKASG Malin Array Be    142.72 332  PKhKP    PKPpre   17 22 43.7
      comp=Z,2.8nm,0.6s,baz=44,slow=4.3,SNR=13
AKBB  Malin Array Si    142.72 332           PKPdf    17 22 43.2 -3.7
KIEV  Kiev              142.73 332           PKPdf    17 22 43.4 -3.7
ARPR  Arapgir-MALATY    143.67 310           PKPdf    17 22 49.7 +0.4
EKA   Eskdalemuir Ar    144.45   5  PKP      PKPdf    17 22 49.1 -0.8
      comp=Z,0.5nm,0.5s,baz=316,slow=3.0,SNR=8.0
BRTR  Keskin Array B    146.74 313  PKPbc    PKPbc    17 22 57.1  0.0
      comp=Z,1.3nm,0.6s,baz=135,slow=4.8,SNR=7.6
BRTR  Keskin Array B    146.74 313           PKPbc    17 22 56.7 -0.5
BUR08 Bucovina Ar. S    146.76 331           PKPbc    17 22 57.6 +0.7
BURAR Bucovina Array    146.77 331  PKPbc    PKPbc    17 22 57.7 +0.7
MMAI  Mount Meron Ar    147.85 301  PKPbc    PKiKP    17 23 00.9 -0.7
      comp=Z,1.3nm,0.5s,baz=39,slow=15,SNR=4.1
GEC2  GERESS Array S    149.79 345           PKPbc    17 23 04.6 +0.1
GERES GERESS Array B    149.79 345  PKPbc    PKiKP    17 23 05.0 -0.1
      comp=Z,1.8nm,0.8s,baz=50,slow=4.2,SNR=8.6
CONA  Conrad Observa    150.04 342  i PKP    PKiKP    17 23 05.7  0.0
      comp=Z,2.4nm,0.8s
RONA  Rosalia, Austr    150.12 341  i PKP    PKiKP    17 23 05.7 -0.1
      comp=Z,6.0nm,1.1s
MOA   Molln             150.56 344  ePKP     PKPbc    17 23 05.4 -0.8
      comp=Z,3.3nm,1.2s
ARSA  Arzberg           150.75 341  ePKiKP   PKiKP    17 23 11.3 +4.2
      comp=Z,1.0nm,0.7s
LESA  Schwarzleotal     151.36 345  ePKP     PKPab    17 23 16.6 -2.2
      comp=Z,5.9nm,2.0s
SOKA  Soboth            151.42 342  ePKP     PKPbc    17 23 08.4 +0.1
      comp=Z,1.9nm,0.9s
OBKA  Obir              151.71 342  i PKP    PKPdf    17 23 02.1  0.0
      comp=Z,5.9nm,1.6s
RETA  Reutte            151.72 348  ePKP     PKPab    17 23 19.6 -0.8
      comp=Z,5.0nm,1.3s
MYKA  Terra Mystica     151.85 343  ePKP     PKPdf    17 23 04.5 +2.3
      comp=Z,1.9nm,0.9s
ABTA  Abfaltersbach     152.03 345  ePKP     PKPbc    17 23 09.2 -0.4
      comp=Z,4.2nm,1.4s
FETA  Feichten          152.17 348  ePKP     PKPbc    17 23 07.7 -2.3
      comp=Z,6.0nm,1.9s
```

IDC 25 17:11:51.8±2.1, 1°.41N×126°.37E, h0^{km}, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=187.0km s-min=26.3km az=65.0, Northern Molucca Sea

```
Code  Station Name          Δ°   AZ°   Phase ID          Time      Res
                                    Op       ISC       h  m  s    ISC
WRA   Warramunga Arr     22.61 160  P        P        17 16 54.3 -0.1
      0.8nm,0.5s,baz=339,slow=10,SNR=7.2
      0.8nm,0.5s
ASAR  Alice Springs      25.98 164  P        P        17 17 26.3 -0.1
      0.3nm,0.8s,baz=341,slow=9.4,SNR=2.3
      0.3nm,0.8s
MKAR  Makanchi Array     59.26 326  P        P        17 21 55.2 +0.1
      0.2nm,0.4s,baz=120,slow=7.7,SNR=6.4
      0.2nm,0.4s
```

IDC 25 17:12:43.8±5.7, 21°.70S×173°.04E, h0^{km}, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=229.7km s-min=51.0km az=150.0, Vanuatu Islands region

```
Code  Station Name          Δ°   AZ°   Phase ID          Time      Res
                                    Op       ISC       h  m  s    ISC
ASAR  Alice Springs      36.08 259  P        P        17 19 47.6 +0.1
      0.9nm,0.9s,baz=75,slow=9.6,SNR=7.9
      0.9nm,0.9s
WRA   Warramunga Arr     36.15 266  P        P        17 19 46.4 -1.7
      0.8nm,1.0s,baz=99,slow=8.1,SNR=2.0
      0.8nm,1.0s
CMAR  Chiang Mai Arr     82.75 293  P        P        17 25 11.8 +1.6
      0.5nm,0.3s,baz=137,slow=4.2,SNR=10
      0.5nm,0.3s
GERES GERESS Array B    148.30 334  PKPbc    PKPdf    17 32 30.3 +1.6
      1.6nm,0.9s,baz=25,slow=5.1,SNR=7.8
```

IDC 25 17:34:33.3±2.7, 3°.86N×126°.45E, h0^{km}, mb3.3/3, mbtmp3.3/3, MS3.9/1, Error ellipse: s-maj=242.4km s-min=28.6km az=66.0, Talaud Islands

```
Code  Station Name          Δ°   AZ°   Phase ID          Time      Res
                                    Op       ISC       h  m  s    ISC
PMG   Port Moresby       24.49 123  LR       LR       17 52 27.0
      comp=Z,232nm,18.4s,baz=163,slow=44
WRA   Warramunga Arr     24.89 162  P        P        17 39 57.5 -0.6
      1.0nm,0.8s,baz=341,slow=9.2,SNR=2.5
      1.0nm,0.8s
ASAR  Alice Springs      28.31 165  P        P        17 40 29.5 +0.6
      0.2nm,0.7s,baz=346,slow=7.0,SNR=4.5
      0.2nm,0.7s
MKAR  Makanchi Array     57.29 325  P        P        17 44 22.8 -0.1
      0.2nm,0.5s,baz=114,slow=7.7,SNR=4.5
      0.2nm,0.5s
```

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*IDC **25** 17:35:09.0±3.1, 22°.71S×173°.83E, h0^{km}, mb4.2/5, mbtmp4.1/6, ML3.3/1, MS3.7/9, Error ellipse: s-maj=137.3km s-min=28.6km az=156.0*

*NEIC **25** 17:35:12.5±1.9, 22°.0S±0°.2×173°.60E±0°.07, h10^{km}±1^{km}, mb4.4/11, Error ellipse: s-maj=27.0km s-min=9.2km az=163.0*

ISC 25 17:35:16.5±0.7, 22°.0S±0°.1×173°.6E±0°.1, h40^{km}, n50, σ2^{s}.16/43, mb4.3/10, MS3.7/8, Vanuatu Islands region

```
Code  Station Name          Δ°   AZ°   Phase ID          Time      Res
                                    Op       ISC       h  m  s    ISC
MARNC Mare, Loyalty       5.15 274  Pn       Pn       17 36 30.4 -0.7
PINNC Pines Island,       5.69 262  Pn       Pn       17 36 38.0 -0.5
MSVF  Nonsavu             5.96  46  Pn       Pn       17 36 40.4 -2.0
DZM   Mont Dzumac         6.59 268  Pn       Pn       17 36 50.9 -0.2
      0.6nm,0.3s,baz=124,slow=13,SNR=7.4
      3.3nm,0.6s
DZM   Mont Dzumac         6.59 268           Pn       17 36 49.1 -1.9
URZ   Urewera            16.54 170  LR       LR       17 43 58.4
      comp=Z,262nm,19.4s,baz=348,slow=34
EIDS  Eidsvold           20.85 256  P        P        17 39 54.6 -0.4
EIDS                                IAmb     IAmb     17 40 20.9
      comp=Z,14nm,1.1s
STKA  Stephens Creek     30.06 244  LR       LR       17 52 17.0
      comp=Z,104nm,19.9s,baz=39,slow=34
PPT   Papeete            34.92  89  LR       LR       17 53 04.0
      comp=Z,67nm,21.0s,baz=269,slow=31
WR8   Warramunga Arr     36.45 266  P        P        17 42 16.9 -0.9
WR8                                 IAmb     IAmb     17 42 20.7
      comp=Z,5.4nm,0.9s
AS31  Alice Springs      36.50 260  P        P        17 42 17.5 -0.8
ASAR  Alice Springs      36.50 260  P        P        17 42 17.6 -0.7
      comp=Z,3.0nm,0.9s,baz=86,slow=8.3,SNR=28
ASAR                                LR       LR       17 56 48.6
      comp=Z,72nm,19.1s,baz=90,slow=36
      comp=Z,3.0nm,0.9s
ASAR  Alice Springs      36.50 260  P        P        17 42 15.7 -2.6
WB0   Warramunga Arr     36.59 266  P        P        17 42 17.1 -1.9
WB0                                 IAmb     IAmb     17 42 20.1
      comp=Z,4.5nm,0.8s
WRA   Warramunga Arr     36.60 266  P        P        17 42 17.9 -1.2
      comp=Z,2.3nm,0.8s,baz=103,slow=8.5,SNR=6.6
      comp=Z,2.3nm,0.8s
WRA   Warramunga Arr     36.60 266  P        P        17 42 17.8 -1.4
FITZ  Fitzroy Crossi     45.03 266  P        P        17 43 29.4 +0.7
      comp=Z,13nm,0.9s,baz=130,slow=7.5,SNR=14
      comp=Z,13nm,0.9s
FITZ  Fitzroy Crossi     45.03 266  P        P        17 43 29.3 +0.7
FITZ                                IAmb     IAmb     17 43 30.4
      comp=Z,4.2nm,1.0s
GUMO  Guam               45.15 319  LR       LR       18 00 09.8
      comp=Z,130nm,20.9s,baz=148,slow=33
BATI  Baumata            49.13 275  LR       LR       18 04 02.6
      comp=Z,172nm,21.3s,baz=128,slow=35
MBWA  Marble Bar         49.84 260  P        P        17 44 06.7 +0.7
DAV   Davao City (W)     55.14 296  LR       LR       18 09 39.7
      comp=Z,37nm,18.2s,baz=64,slow=37
VNDA  Vanda              55.91 183  P        P        17 44 50.1 +0.2
VNDA                                IAmb     IAmb     17 45 20.4
      comp=Z,2.9nm,1.3s
SBA   Scott Base         56.05 182  P        P        17 44 51.7 +0.8
SBA                                 IAmb     IAmb     17 45 15.4
      comp=Z,12nm,1.5s
QSPA  South Pole Qui     68.12 180  P        P        17 46 11.3 -0.9
CMAR  Chiang Mai Arr     83.28 293  P        P        17 47 40.8 +1.3
      comp=Z,1.3nm,1.0s,baz=132,slow=4.1,SNR=8.5
      comp=Z,1.3nm,1.0s
CMAR  Chiang Mai Arr     83.28 293  P        P        17 47 39.1 -0.4
CHTO  Chiang Mai         83.43 293  P        P        17 47 40.6 +0.3
CHTO                                IAmb     IAmb     17 47 48.3
      comp=Z,7.0nm,1.4s
PFO   Pinyon Flats O     86.54  52  LR       LR       18 21 23.9
      comp=Z,99nm,18.1s,baz=354,slow=32
ILAR  Eielson Array      91.66  16  P        P        17 48 22.3 +3.3
      comp=Z,0.7nm,0.9s,baz=234,slow=5.8,SNR=5.3
ILAR                                LR       LR       18 28 49.1
      comp=Z,44nm,18.1s,baz=214,slow=35
      comp=Z,0.7nm,0.9s
ILAR  Eielson Array      91.66  16  P        P        17 48 17.4 -1.6
EKA   Eskdalemuir Ar    146.57 357  PKPbc    PKPdf    17 54 51.8  0.0
      comp=Z,1.0nm,0.9s,baz=6.8,slow=3.5,SNR=3.4
CLL   Collm             147.01 337  ePKPbc   PKPab    17 54 56.0 -0.2
RONA  Rosalia, Austr    148.47 330  i PKP    PKPab    17 55 07.6 +5.3
      comp=Z,7.0nm,1.4s
CONA  Conrad Observa    148.50 331  i PKP    PKPab    17 55 07.8 +5.4
      comp=Z,4.6nm,1.2s
GERES GERESS Array B    148.73 334  PKPbc    PKPbc    17 54 59.2 -0.3
      comp=Z,1.4nm,0.9s,baz=48,slow=2.0,SNR=5.6
ARSA  Arzberg           149.15 330  ePKP     PKPab    17 55 10.3 +5.3
      comp=Z,5.0nm,1.6s
MOA   Molln             149.27 332  ePKiKP   PKPab    17 55 10.8 +5.4
      comp=Z,4.8nm,1.4s
BIOA  Bad Ischl, Aus    149.66 333  ePKP     PKPab    17 55 09.0 +1.9
      comp=Z,3.4nm,1.1s
SOKA  Soboth            149.80 330  ePKP     PKPab    17 55 09.3 +1.6
      comp=Z,3.4nm,1.2s
OBKA  Obir              150.15 330  ePKiKP   PKPab    17 55 13.0 +3.8
      comp=Z,2.9nm,1.3s
LESA  Schwarzleotal     150.27 333  i PKP    PKPab    17 55 10.8 +1.1
      comp=Z,4.5nm,1.3s
MYKA  Terra Mystica     150.47 331  ePKP     PKPab    17 55 12.2 +1.7
      comp=Z,3.9nm,1.0s
WATA  Walderalm         150.79 334  i PKP    PKPab    17 55 12.7 +0.8
      comp=Z,7.4nm,1.3s
WTTA  Wattenberg        150.83 334  ePKP     PKPab    17 55 13.2 +1.1
      comp=Z,11nm,1.3s
ABTA  Abfaltersbach     150.88 333  i PKP    PKPab    17 55 12.7 +0.5
      comp=Z,7.7nm,1.3s
RETA  Reutte            150.99 336  ePKP     PKPab    17 55 13.7 +1.1
      comp=Z,5.2nm,1.4s
SQTA  Sankt Quirin      151.03 335  ePKP     PKPab    17 55 13.9 +1.0
      comp=Z,5.4nm,0.9s
```

FETA	Feichten	151.38	335	*i* PKP	PKPab	17 55 14.7	+0.4
	comp=Z,5.0nm,1.0s						
DAVA	Damuels	151.49	336	*e*PKP	PKPab	17 55 13.9	-0.9
	comp=Z,8.2nm,1.4s						

IDC 25 17:38:06.8±5.6,**22°.62S**×**173°.76E,h0**^{km},**mb3.8**/3, **mbtmp3.8**/3,**MS3.5**/1,**Error ellipse: s-maj=241.6km s-min=50.6km az=153.0,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	6.80	273	LR	LR	17 41 52.6	
	comp=Z,328nm,18.9s,baz=104,slow=33						
ASAR	Alice Springs	36.58	260	P	P	17 45 14.6	-0.2
	1.5nm,0.9s,baz=88,slow=9.1,SNR=6.8						
	1.5nm,0.9s						
WRA	Warramunga Arr	36.76	267	P	P	17 45 16.0	-0.4
	0.4nm,0.8s,baz=103,slow=9.6,SNR=1.7						
	0.4nm,0.8s						
CMAR	Chiang Mai Arr	83.72	293	P	P	17 50 38.7	+0.6
	2.2nm,1.1s,baz=127,slow=4.2,SNR=12						
	2.2nm,1.1s						
STEB	Steborice	146.85	331	*e*PKP	PKPbc	17 57 50.2	-0.7
DPC	Dobruska-Polom	147.17	333	*e*PKP	PKPbc	17 57 50.8	-1.0
CLL	Collm	147.70	337	*i* PKP	PKPdf	17 57 50.0	-0.4
CLL				*i* x	x	17 57 51.7	
	comp=Z,6.0nm,1.1s						
ZVC	Zvikov	148.75	334	*e*PKP	PKPbc	17 57 55.1	-0.9
CONA	Conrad Observa	149.18	330	*e*PKP	PKPbc	17 57 56.7	-0.5
	comp=Z,3.9nm,1.1s						
CKRC	Cesky Krumlov	149.19	333	*e*PKP	PKPbc	17 57 56.5	-0.7
GERES	GERESS Array B	149.42	334	PKPbc	PKPbc	17 57 57.0	-0.9
	comp=Z,2.2nm,1.0s,baz=29,slow=3.0,SNR=9.4						
ARSA	Arzberg	149.83	330	*e*PKP	PKPab	17 58 02.2	-2.1
	comp=Z,3.2nm,1.2s						
MOA	Molln	149.95	332	*e*PKP	PKPab	17 58 02.5	-2.1
	comp=Z,2.7nm,1.1s						
SOKA	Soboth	150.48	330	*i* PKP	PKPdf	17 57 56.8	+1.6
	comp=Z,3.3nm,1.1s						
LESA	Schwarzleotal	150.96	333	*i* PKP	PKPbc	17 58 00.8	-0.8
	comp=Z,5.7nm,1.2s						
MYKA	Terra Mystica	151.16	331	*e*PKP	PKPbc	17 57 59.9	-2.2
	comp=Z,2.4nm,1.1s						
WATA	Walderalm	151.48	334	*e*PKP	PKPbc	17 58 01.4	-1.5
	comp=Z,5.5nm,0.9s						
WTTA	Wattenberg	151.52	334	*e*PKP	PKPbc	17 58 01.2	-1.8
	comp=Z,3.1nm,0.9s						
ABTA	Abfaltersbach	151.56	332	*e*PKP	PKPbc	17 58 00.7	-2.3
	comp=Z,6.5nm,1.3s						
RETA	Reutte	151.68	335	*i* PKP	PKPbc	17 58 00.8	-2.5
	comp=Z,4.0nm,1.0s						
SQTA	Sankt Quirin	151.72	334	*e*PKP	PKPbc	17 58 01.3	-2.1
	comp=Z,6.2nm,1.2s						
FETA	Feichten	152.08	335	*e*PKP	PKPdf	17 58 01.0	+3.3
	comp=Z,5.9nm,1.1s						

IDC 25 17:47:11.4±3.1,**31°.36S**×**179°.09W,h0**^{km},**mb3.3**/2, **mbtmp3.5**/3,**ML3.3**/1,**Error ellipse: s-maj=71.6km s-min=46.0km az=107.0,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	7.56	203	Pn	Pn	17 49 02.9	0.0
	0.5nm,0.3s,baz=272,slow=3.5,SNR=26						
URZ				Sn	Sn	17 50 17.4	-12
	0.9nm,0.3s,baz=0.0,slow=23,SNR=10						
	9.3nm,1.1s						
ASAR	Alice Springs	42.13	268	P	P	17 55 05.7	-0.1
	0.3nm,0.8s,baz=107,slow=7.3,SNR=4.2						
	0.3nm,0.8s						
WRA	Warramunga Arr	43.21	274	P	P	17 55 14.3	-0.2
	0.3nm,0.4s,baz=115,slow=8.1,SNR=1.8						
	0.3nm,0.4s						
FINES	FINESS Array B	145.71	339	PKPbc	PKPdf	18 06 50.6	-0.5
	1.0nm,0.8s,baz=41,slow=4.4,SNR=4.7						

DJA 25 17:52:23.7±0.2,**9°S**±3°×**11°8E**±°,**h118**^{km}±3^{km},**M3.9**/22, **mb4.1**/11,**MLv3.8**/22,**Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBNI	Kabupaten Domp	0.17	344	P	Pn	17 52 41.1	+1.0
DBNI				S	Sn	17 52 53.7	+1.4
PLAI	Plampang	0.60	255	P	Pn	17 52 43.6	+1.5
PLAI				S	Sn	17 52 57.9	+2.0
WBSI	Waikabubak, Su	1.40	134	P	Pn	17 52 50.1	+0.2
WBSI				S	Sn	17 53 11.5	+1.6
LBFI	Labuhan Bajo,	1.52	83	P	Pn	17 52 51.4	+0.1
LBFI				S	Sn	17 53 11.9	-0.4
WSI	Waingapu	2.15	118	P	Pn	17 52 59.3	+0.3
KLNI	Mataram	2.25	276	P	Pn	17 53 00.5	+0.2
BASI	Baing, Sumba	2.67	125	P	Pn	17 53 06.6	+0.9
KHKI	Kahang-Kahang	2.74	276	P	Pn	17 53 07.6	+1.1
DNP	Denpasar	3.11	270	P	Pn	17 53 11.8	+0.4
IGBI	Denpasar	3.18	267	P	Pn	17 53 12.9	+0.6
BSSI	Bau Bau, Buton	3.28	40	P	Pn	17 53 13.7	0.0
EDFI	Ende, Flores	3.29	92	P	Pn	17 53 14.4	+0.5
RTBI	Rangdo, Negare	3.39	273	P	Pn	17 53 15.5	+0.4
BKSI	Bulukumba	3.76	28	P	Pn	17 53 20.1	+0.1
MMRI	Maumere	3.83	90	P	Pn	17 53 20.2	-0.8
JAGI	Jajag, Banyuwa	4.17	272	P	Pn	17 53 24.6	-0.9
GMJI	Gumukmas	4.88	274	P	Pn	17 53 33.5	-1.5
BATI	Baumata	5.45	107	P	Pn	17 53 42.9	+0.1
	0.1nm8.1nm,0.4s						
SOEI	Soe	5.93	101	P	Pn	17 53 49.1	-0.2
	0.1nm11nm,0.7s						
MMSI	Mamuju	5.97	5	P	Pn	17 53 50.2	+0.5
SNJI	Sawahan-Nganju	6.59	277	P	Pn	17 53 59.5	+1.2
TBJI	Tambak Boyo	6.71	285	P	Pn	17 53 59.5	-0.3
PCJI	Pacitan	7.12	273	P	Pn	17 54 05.4	+0.1
	0.2nm23nm,1.2s						
UGM	Wanagama	7.79	275	P	Pn	17 54 14.1	-0.3
	43nm,1.9s						
TNG	Tangerang	11.88	281	P	Pn	17 55 10.1	+0.7

IDC ***25*** *18:02:10.6±5.7,22°.24S×173°.59E,h0*^{km}*,mb4.1/3, mbtmp4.1/3,Error ellipse: s-maj=235.2km s-min=52.2km az=151.0*

NEIC ***25*** *18:02:13.0±1.9,22°.1S±0°.3×173°.60E±0°.04,h10*^{km}*±1*^{km}*, mb4.2/8,Error ellipse: s-maj=46.3km s-min=3.9km az=352.0*

ISC 25 18:02:16.4±1.0,**22°.0S**±0°.3×**173°.6E**±0°.1,**h40**^{km}**,n14,** σ**1**^{s}**.17**/14,**mb4.2**/7,**Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINNC	Pines Island,	5.69	263	Pn	Pn	18 03 38.7	+0.3
DZM	Mont Dzumac	6.59	268	Pn	Pn	18 03 49.7	-1.2
NIUE	Niue	15.75	82		P	18 05 58.0	-0.8
WR8	Warramunga Arr	36.45	266	P	P	18 09 17.4	-0.4
WR8				IAmb	IAmb	18 09 40.5	
	comp=Z,7.3nm,1.4s						
AS31	Alice Springs	36.50	260	P	P	18 09 15.7	-2.5
ASAR	Alice Springs	36.50	260	P	P	18 09 17.8	-0.3
	comp=Z,1.9nm,0.9s,baz=86,slow=9.4,SNR=19						
	comp=Z,1.9nm,0.9s						
WB0	Warramunga Arr	36.59	266	P	P	18 09 18.2	-0.7
WB0				IAmb	IAmb	18 09 33.3	
	comp=Z,3.2nm,1.0s						
WRA	Warramunga Arr	36.61	266	P	P	18 09 18.2	-0.8
	comp=Z,1.2nm,0.7s,baz=101,slow=8.8,SNR=4.7						
	comp=Z,1.2nm,0.7s						
FITZ	Fitzroy Crossi	45.04	266	P	P	18 10 29.3	+0.8
FITZ				IAmb	IAmb	18 10 31.6	
	comp=Z,3.7nm,1.2s						
MBWA	Marble Bar	49.83	260	P	P	18 11 06.4	+0.6
QSPA	South Pole Qui	68.05	180	P	P	18 13 12.0	+0.3
QSPA				IAmb	IAmb	18 13 53.8	
	comp=Z,2.9nm,1.3s						
CMAR	Chiang Mai Arr	83.31	293	P	P	18 14 41.6	+2.0
	comp=Z,1.2nm,0.3s,baz=119,slow=5.2,SNR=4.8						
	comp=Z,1.2nm,0.3s						
CLL	Collm	147.08	337	*e*PKPbc	PKPab	18 21 56.0	-0.4
GERES	GERESS Array B	148.80	334	PKPbc	PKPbc	18 21 59.3	-0.3
	comp=Z,0.5nm,0.8s,baz=64,slow=2.3,SNR=4.2						

IDC ***25*** *18:05:28.2±0.7,22°.00S×173°.47E,h0*^{km}*,mb4.3/13, mbtmp4.3/15,ML3.4/2,MS4.1/8,Error ellipse: s-maj=22.8km s-min=18.3km az=124.0*

NEIC ***25*** *18:05:29.5±1.8,22°.1S±0°.1×173°.3E±0°.1,h10*^{km}*±1*^{km}*, mb4.9/47,Error ellipse: s-maj=21.9km s-min=17.7km az=167.0*

GCMT ***25*** *18:05:31.5±0.4,22°.06S±0°.03×173°.48E±0°.03,h16*^{km}*±1*^{km}*, MW4.8/72,Moment Tensor Solution. s17,c22; s72,c94; Duration: 0 Moment tensor: Scale 10*^{16}*Nm; M*$_{rr}$*-1.80±.18; M*$_{\theta\theta}$*0.50±.12; M*$_{\phi\phi}$*1.30±.10; M*$_{r\theta}$*-0.21±.36; M*$_{\theta\phi}$*1.21±.07; M*$_{\phi r}$*0.43±.27; Best double couple: M*$_0$*2.05700×10*^{16} *NP1:φ*$_s$*51.00000°,δ44.00000°,λ-68.00000°. NP2: φ*$_s$*201.00000°,δ50.00000°,λ-110.00000°. Principal axes: T 2.1870, Plg3.0000°, Azm305.0000°; N -0.2620, Plg15.0000°, Azm214.0000°; P -1.9260, Plg75.0000°, Azm47.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NOU ***25*** *18:05:39.8,21°.96S×173°.41E,h76*^{km}*,mb4.9/37,Vanuatu Islands Region*

ISC 25 18:05:33.8±0.4,**22°.27S**±0°.07×**173°.49E**±0°.07,**h44**^{km}**,n230,** σ**1**^{s}**.98**/211,**mb4.8**/76,**MS4.0**/6,**21C-26D,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	5.13	278	Pn	Pn	18 06 44.0	-4.1
PINNC	Pines Island,	5.60	265	Pn	Pn	18 06 50.3	-4.3
DZM	Mont Dzumac	6.53	270	Pn	Pn	18 07 07.2	-0.2
	0.8nm,0.3s,baz=208,slow=19,SNR=7.1						
	8.9nm,0.8s						
DZM	Mont Dzumac	6.53	270	*e*P	Pn	18 06 52.0	-15
	203nm,26.8s						
DZM				*e*LR	LR	18 08 11.0	
	2µm,24.9s						
DZM	Mont Dzumac	6.53	270	Pn	Pn	18 07 03.2	-4.2
RAO	Raoul Island	10.40	134	LR	LR	18 11 17.0	
	comp=Z,1µm,18.7s,baz=322,slow=33						
URZ	Urewera	16.24	170	Pn	P	18 09 22.8	+1.6
	0.2nm,0.3s,baz=345,slow=11,SNR=4.6						
URZ				LR	LR	18 14 12.9	
	comp=Z,533nm,20.9s,baz=348,slow=32						
	13nm,1.0s						
RTZ	Ruatahuna	16.57	170	P	Pn	18 09 19.0	-3.9
BKZ	Black Stump Fm	17.04	172	P	Pn	18 09 24.7	-4.1
BKZ	Black Stump Fm	17.04	172	P	P	18 09 35.5	+5.3
	22nm,2.6s						
MRZ	Mangatainoka R	18.42	175	P	P	18 09 40.3	-5.0
MRZ				IAmb	IAmb	18 09 51.1	
	comp=Z,78nm,1.6s						
BFZ	Birch Farm	18.50	173	P	P	18 09 41.8	-4.4
BFZ				IAmb	IAmb	18 09 49.2	
	comp=Z,114nm,1.7s						
MRNZ	Matariki Terra	19.08	182	P	P	18 09 48.3	-4.3
TW1H	Toowoomba 1 Ha	20.20	251	P	Pn	18 10 09.4	+2.2
	comp=Z,95nm,1.0s						
LTZ	Lake Taylor	20.48	183		P	18 10 06.0	-1.8
EIDS	Eidsvold	20.73	257		P	18 10 05.6	-5.0
EIDS	Eidsvold	20.73	257	P	Pn	18 10 13.5	+0.1
ARMA	Armidale	21.18	243		P	18 10 11.1	-4.5
ARMA				IAmb	IAmb	18 10 22.7	
	comp=Z,28nm,1.0s						
ARMA	Armidale	21.18	243	P	P	18 10 20.6	+5.0
	comp=Z,35nm,1.3s						
AUPHS	Peel High Scho	22.00	242	P	P	18 10 28.0	+3.8
	comp=Z,53nm,1.1s						
JCZ	Jackson Bay	22.09	189	P	P	18 10 33.4	+8.2
SYDH	Sydney Hard Ro	23.06	235	P	P	18 10 40.6	+5.1
	comp=Z,35nm,1.2s						
AUUHS	Ulladulla High	23.95	232	P	P	18 10 48.4	+4.5
	comp=Z,41nm,1.1s						
AULRC	Lightning Ridg	24.01	247	P	P	18 10 46.6	+2.1
	comp=Z,113nm,1.2s						
AUDCS	Dubbo College	24.18	240	P	P	18 10 49.0	+3.0
	comp=Z,24nm,1.1s						
CNB	Canberra Magne	24.74	233	P	P	18 10 55.1	+3.8
	comp=Z,41nm,1.5s						
RAR	Rarotonga	24.85	93	LR	LR	18 18 22.0	
	comp=Z,287nm,21.8s,baz=290,slow=31						
AUDAR	Daramalan Coll	24.88	233	P	P	18 10 56.2	+3.7
	comp=Z,40nm,1.4s						
AUMHS	Melrose High S	24.96	233	P	P	18 10 57.7	+4.5
	comp=Z,33nm,1.9s						
AUMTS	Mt Stromlo	25.02	233	P	P	18 10 58.7	+5.0
	comp=Z,21nm,1.2s						
CAN	Canberra	25.02	233		P	18 10 51.9	-1.8
CAN				IAmb	IAmb	18 11 00.9	
	comp=Z,32nm,1.3s						
CAN	Canberra	25.02	233	P	P	18 10 58.1	+4.4
	comp=Z,31nm,1.2s						
CTA	Charters Tower	25.48	270	LR	LR	18 20 51.1	
	comp=Z,655nm,18.1s,baz=86,slow=36						
AUSMG	Snowy Mountain	25.77	231	P	P	18 11 04.5	+3.9
	comp=Z,28nm,1.1s						
CMSA	Cobar Meteorol	26.39	244	P	P	18 11 08.9	+2.7
	comp=Z,16nm,1.2s						
MTSU	Mount Surprise	27.66	273	P	P	18 11 20.5	+2.8
	comp=Z,17nm,1.0s						
PMG	Port Moresby	28.32	293	LR	LR	18 21 48.3	
	comp=Z,361nm,18.6s,baz=150,slow=35						
PMG	Port Moresby	28.32	293	P	P	18 11 23.3	-0.2
TOO	Toolangi	28.52	231		P	18 11 24.2	-1.0
BRAT	Ballarat	29.65	232	P	P	18 11 39.3	+4.1
	comp=Z,16nm,1.0s						
AUMTC	Mt Clear Colle	29.71	232	P	P	18 11 40.2	+4.5
	comp=Z,20nm,1.9s						
STKA	Stephens Creek	29.88	244	P	P	18 11 38.8	+1.5
	comp=Z,4.5nm,0.9s,baz=79,slow=11,SNR=6.3						
	comp=Z,4.5nm,0.9s						
STKA	Stephens Creek	29.88	244	IAmb	IAmb	18 11 40.7	
	comp=Z,125nm,1.6s						
STKA	Stephens Creek	29.88	244	P	P	18 11 40.7	+3.4
	comp=Z,2.7nm,1.4s						
HTT	Hallett	32.39	242	P	P	18 12 02.0	+2.6
	comp=Z,16nm,1.0s						
AUMBR	Murray Bridge	32.46	239	P	P	18 12 03.7	+3.7
	comp=Z,29nm,1.1s						
TBI	Tubuai	34.11	99	*e*S	S	18 17 35.8	-1.8
	comp=Z,348nm,28.0s						
TBI				*e*LR	LR	18 21 19.1	
	comp=Z,2µm,27.2s						
TBI				*e*LR	LR	18 21 23.5	
	comp=Z,991nm,24.5s						
BBOO	Buckleboo	34.65	244		P	18 12 17.4	-1.7
BBOO	Buckleboo	34.65	244	P	P	18 12 21.3	+2.2
	comp=Z,35nm,1.1s						
PPT2	Papeete2	34.97	89	*e*S	S	18 17 49.0	-2.2
	comp=Z,130nm,26.8s						
PPT2				*e*LQ	LQ	18 20 07.1	
	comp=Z,329nm,38.8s						
PPT2				*e*LR	LR	18 21 33.9	
	comp=Z,532nm,28.2s						
PPT2				*e*LR	LR	18 21 42.2	
	comp=Z,667nm,26.2s						
PPT	Papeete	34.98	89	LR	LR	18 23 00.7	
	comp=Z,201nm,19.3s,baz=290,slow=30						
AS31	Alice Springs	36.40	260		P	18 12 31.9	-2.3
ASAR	Alice Springs	36.40	260	P	P	18 12 34.5	+0.2
	comp=Z,7.9nm,0.9s,baz=86,slow=8.6,SNR=38						
	comp=Z,7.9nm,0.9s						
ASAR	Alice Springs	36.40	260	P	P	18 12 32.1	-2.1
WB0	Warramunga Arr	36.52	267	P	P	18 12 33.9	-1.3
WB0				IAmb	IAmb	18 12 35.8	
	comp=Z,9.3nm,1.1s						
WRA	Warramunga Arr	36.53	266	P	P	18 12 34.8	-0.6
	comp=Z,3.4nm,0.8s,baz=98,slow=8.8,SNR=9.9						
	comp=Z,3.4nm,0.8s						
WRA	Warramunga Arr	36.53	266	P	P	18 12 33.0	-2.4
MTN	Manton Dam	41.34	276	P	P	18 13 12.7	-3.0
MTN				IAmb	IAmb	18 13 17.2	
	comp=Z,14nm,1.0s						
KNRA	Kununurra	42.68	271	P	P	18 13 24.5	-2.1
KNRA				IAmb	IAmb	18 13 28.7	
	comp=Z,39nm,1.2s						
SAUI	Saumlaki	42.97	283	P	P	18 13 18.8	-10
RKPI	Ransiki, Papua	43.42	293	P	P	18 13 34.0	+1.4
	comp=Z,20nm,0.7s						
FITZ	Fitzroy Crossi	44.96	266		P	18 13 42.3	-2.5
FITZ	Fitzroy Crossi	44.96	266	P	P	18 13 46.7	+1.8
	comp=Z,52nm,1.2s						
GUMO	Guam	45.36	319	LR	LR	18 30 27.8	
	comp=Z,173nm,21.2s,baz=160,slow=33						
TAOE	Nuku Hiva Isla	46.42	81	*e*LR	LR	18 27 00.2	
	comp=Z,376nm,23.9s						
KRAI	Karang Ratu	47.59	287	P	P	18 14 06.7	+1.1
	comp=Z,1µmcomp=Z,14nm,1.0s						
SOEI	Soe	48.72	277		P	18 14 12.2	-2.3
SOEI	Soe	48.72	277	P	P	18 14 17.3	+2.8
	comp=Z,34nm,1.1s						
SOEI	Soe	48.72	277	P	P	18 14 17.2	+2.8
	comp=Z,676nmcomp=Z,34nm,1.0s						
BATI	Baumata	49.11	276	P	P	18 14 20.4	+3.0
	comp=Z,43nm,1.1s						
KLBR	Kellerberrin	50.10	247	P	P	18 14 26.5	+1.8
	comp=Z,48nm,1.0s						
SANI	Sanana	50.30	287	P	P	18 14 32.0	+5.6
	comp=Z,12nm,0.9s						
MMRI	Maumere	50.99	277		P	18 14 29.1	-2.5
MMRI	Maumere	50.99	277	P	P	18 14 33.0	+1.4
	comp=Z,60nm,1.1s						
MMRI	Maumere	50.99	277	P	P	18 14 32.5	+0.9
EDFI	Ende, Flores	51.45	277	P	P	18 14 35.9	+0.7
	comp=Z,33nm,2.3s						
WSI	Waingapu	52.41	275	P	P	18 14 44.5	+2.4
LBFI	Labuhan Bajo,	53.21	276	P	P	18 14 49.7	+1.6
	comp=Z,669nmcomp=Z,29nm,0.8s						
WBSI	Waikabubak, Su	53.25	275	P	P	18 14 50.0	+1.5
	comp=Z,48nm,1.0s						
DBNI	Kabupaten Domp	54.65	275	P	P	18 14 59.8	+1.2
	comp=Z,13nm,1.6s						
KAPI	Kappang	54.65	280	P	P	18 14 59.5	+0.9
	comp=Z,5.8nm,1.3s						
PLAI	Plampang	55.03	275	P	P	18 15 03.4	+2.0
	comp=Z,54nm,1.1s						
PLAI	Plampang	55.03	275	P	P	18 15 03.0	+1.6
	comp=Z,555nmcomp=Z,53nm,1.1s						
VNDA	Vanda	55.59	183	P	P	18 15 06.7	+2.2
	comp=Z,0.9nm,0.7s,baz=350,slow=7.6,SNR=7.3						
	comp=Z,0.9nm,0.7s						
SBA	Scott Base	55.73	182	P	P	18 15 06.4	+1.0
SBA				IAmb	IAmb	18 15 18.3	
	comp=Z,16nm,1.1s						
JAGI	Jajag, Banyuwa	58.51	274		P	18 15 23.9	-2.1
JAGI	Jajag, Banyuwa	58.51	274	P	P	18 15 28.4	+2.4
	comp=Z,32nm,1.8s						
JAGI	Jajag, Banyuwa	58.51	274	P	P	18 15 27.5	+1.5
	comp=Z,32nm,1.2s						
BLJI	Banyuglugur	59.28	274	P	P	18 15 33.1	+1.7
BBKI	Banjar Baru	59.76	279	P	P	18 15 31.3	-3.4
MJAR	Matsushiro Arr	67.32	330	P	P	18 16 22.3	-1.8
	comp=Z,2.7nm,1.0s,baz=167,slow=7.6,SNR=4.5						
	comp=Z,2.7nm,1.0s						
MJAR	Matsushiro Arr	67.32	330	IAmb	IAmb	18 16 47.3	
	comp=Z,9.1nm,1.4s						
QSPA	South Pole Qui	67.80	180	P	P	18 16 27.8	+0.8
QSPA				IAmb	IAmb	18 16 29.9	
	comp=Z,17nm,1.3s						
KSRS	Korea Array	73.27	324	P	P	18 17 00.6	+0.2
	comp=Z,3.0nm,1.0s,baz=149,slow=6.4,SNR=7.2						
	comp=Z,3.0nm,1.0s						
KSAR	Wonju Array Be	73.28	324	P	P	18 16 59.1	-1.5
NJ2	Nanjing	75.15	314	*e*P	P	18 17 12.8	+1.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
IPM	Ipoh	75.58	281		P	18 17 13.5	-1.0
IPM				IAmb	IAmb	18 17 16.5	
	comp=Z,14nm,0.8s						
IPM	Ipoh	75.58	281	P	P	18 17 15.5	+1.0
	comp=Z,19nm,1.1s						
USRK	Ussuriysk Ar.	76.28	331	P	P	18 17 18.4	+0.7
	comp=Z,6.2nm,0.9s,baz=131,slow=5.3,SNR=6.5						
	comp=Z,6.2nm,0.9s						
MAW	Mawson	77.11	202	P	P	18 17 24.8	+2.6
	comp=Z,5.7nm,1.1s,baz=116,slow=6.6,SNR=5.4						
	comp=Z,5.7nm,1.1s						
MDJ	Mudanjiang	77.70	330	P	P	18 17 27.0	+1.3
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2	Changchun	79.13	327	P	P	18 17 34.3	+0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BNX	BinXian	79.57	329	⇑P	P	18 17 36.0	0.0
BNX				pmax	pmax		
	comp=Z,11nm,1.0s						
ENH	Enshi	80.66	308	P	P	18 17 43.3	+1.0
	comp=Z,15nm,1.1s						
HEH	HeiHe	82.90	332	*e*P	P	18 17 54.8	+1.2
HEH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
XAN	Xi'an	83.09	311	⇑P	P	18 17 56.3	+1.3
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CM31	Chiang Mai Arr	83.36	293	P	P	18 17 56.6	-0.1
CMAR	Chiang Mai Arr	83.36	293	P	P	18 17 58.5	+1.9
	comp=Z,9.7nm,1.0s,baz=132,slow=3.9,SNR=47						
	comp=Z,9.7nm,1.0s						
CMAR	Chiang Mai Arr	83.36	293	P	P	18 17 56.9	+0.2
CHTO	Chiang Mai	83.51	293		P	18 17 57.8	+0.3
CHTO	Chiang Mai	83.51	293	P	P	18 17 59.0	+1.5
	comp=Z,14nm,1.2s						
ELIB	Princess Elisa	83.83	189	*d*P	P	18 17 58.1	-0.3
	comp=Z,2.5nm,1.5s						
PZH	PanZhiHua	84.68	301	P	P	18 18 04.5	+1.1
HHC	Hu-ho-hao-te	85.11	318	*e*P	P	18 18 06.3	+1.1
HHC				pmax	pmax		
	comp=Z,14nm,0.6s						
HHC				pmax	pmax		
	comp=Z,95nm,4.4s						
CD2	Chengdu	85.23	306	*e*P	P	18 18 06.0	0.0
CMB	Columbia Colle	86.28	46		P	18 18 11.4	+0.4
CMB				IAmb	IAmb	18 18 23.9	
	comp=Z,9.1nm,1.2s						
ORV	Oroville	86.36	45	P	P	18 18 11.3	0.0
ORV				IAmb	IAmb	18 18 28.0	
	comp=Z,12nm,1.6s						
ISA	Isabella, Lake	86.36	49	P	P	18 18 11.2	-0.4
ISA				IAmb	IAmb	18 18 20.4	
	comp=Z,10.0nm,1.1s						
VNA3	Neumayer Olymp	86.72	179	P	P	18 18 17.1	+4.4
WSHM	Spangler Hills	87.02	50	IAmb	IAmb	18 18 24.2	
	comp=Z,6.3nm,1.1s						
CLC	China Lake	87.06	49	P	P	18 18 15.9	+1.0
CLC				IAmb	IAmb	18 18 31.8	
	comp=Z,12nm,1.4s						
VNA1	Neumayer--Stat	87.33	179	P	P	18 18 15.8	+0.2
NVAR	Mina Array Bea	87.89	47	P	P	18 18 20.1	+1.0
	comp=Z,1.7nm,1.0s,baz=220,slow=6.7,SNR=5.2						
	comp=Z,1.7nm,1.0s						
BILL	Bilibino	90.20	357		P	18 18 28.9	+0.1
BILL				IAmb	IAmb	18 18 31.1	
	comp=Z,13nm,1.4s						
G08A	Pilot Rock	90.98	41		P	18 18 32.0	-1.2
G08A				IAmb	IAmb	18 18 45.4	
	comp=Z,7.7nm,1.2s						
PSUT	Pine Spring	90.98	48	P	P	18 18 31.3	-2.2
PSUT				IAmb	IAmb	18 18 46.7	
	comp=Z,4.7nm,1.1s						
ELK	Elko	91.09	46		P	18 18 32.7	-1.3
ELK				IAmb	IAmb	18 18 46.3	
	comp=Z,6.1nm,1.2s						
ULN	Ulaanbaatar	91.67	322	P	P	18 18 35.5	-0.9
ULN				IAmb	IAmb	18 18 38.1	
	comp=Z,10nm,1.5s						
MTPU	Mount Pierson	91.93	50	IAmb	IAmb	18 18 48.3	
	comp=Z,4.5nm,1.0s						
ILAR	Eielson Array	91.98	16	P	P	18 18 36.1	-1.1
	comp=Z,1.4nm,1.0s,baz=237,slow=5.7,SNR=7.5						
	comp=Z,1.4nm,1.0s						
SONM	Songino Array	92.04	322	P	P	18 18 38.0	-0.1
	comp=Z,0.8nm,0.8s,baz=150,slow=6.3,SNR=6.1						
	comp=Z,0.8nm,0.8s						
SONM	Songino Array	92.04	322	IAmb	IAmb	18 18 39.7	
	comp=Z,3.0nm,1.2s						
GTA	Gaotai	92.09	312	*e*P	P	18 18 40.8	+2.2
GTA				sP	pP	18 18 48.0	-3.3
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SHL	Shillong	92.27	297	IAmb	IAmb	18 18 41.5	
	comp=Z,10nm,1.1s						
PLCA	Paso Flores	93.62	137	LR	LR	18 51 07.0	
	comp=Z,91nm,21.3s,baz=221,slow=29						
TXAR	Lajitas Array	94.75	60	P	P	18 18 53.2	+2.2
	comp=Z,0.8nm,1.0s,baz=224,slow=5.2,SNR=5.3						
	comp=Z,0.8nm,1.0s						
I29M	Ogilvie Camp,	94.78	18	P	P	18 18 51.0	+0.9
YKA	Yellowknife Ar	101.54	27	P	Pdif	18 19 20.0	-0.5
	comp=Z,0.1nm,0.8s,baz=279,slow=7.1,SNR=3.5						
MKAR	Makanchi Array	106.68	314	Pdiff	Pdif	18 19 44.6	+0.8
	comp=Z,0.2nm,0.7s,baz=90,slow=7.5,SNR=3.7						
BVAR	Borovoye Array	115.28	319	PKP	PKPdf	18 24 09.9	-0.3
	comp=Z,0.7nm,0.9s,baz=64,slow=3.4,SNR=4.1						
NOA	NORSAR Array B	139.34	347	PKP	PKPdf	18 24 55.9	+0.2
	comp=Z,0.7nm,0.9s,baz=326,slow=3.1,SNR=4.0						
AKASG	Malin Array Be	140.26	324	PKP	PKPdf	18 24 57.7	+0.1
	comp=Z,0.4nm,0.5s,baz=75,slow=1.1,SNR=4.5						
CFR	Carcaliu	143.64	317	⇑P	PKiKP	18 25 06.4	-0.8

TESR	**Tescani**	**143.91**	**320**	⇓P	**PKPdf**	**18 25 03.5**	**-0.8**
BURAR	**Bucovina Array**	**144.15**	**323**	⇓P	**PKPdf**	**18 25 03.9**	**-0.9**
ONER	**Baraj Valea Uz**	**144.15**	**320**	⇓P	**PKPdf**	**18 25 05.0**	**+0.3**
VRI	**Vrincioaia**	**144.18**	**319**	⇑P	**PKPdf**	**18 25 05.0**	**+0.3**
PLOR	**Plostina**	**144.24**	**319**	⇑P	**PKPdf**	**18 25 04.3**	**-0.6**
COVR	**Voineasa-Covas**	**144.51**	**319**	⇑P	**PKPdf**	**18 25 04.7**	**-0.7**
TURR	**Turia**	**144.52**	**320**	⇑P	**PKPdf**	**18 25 05.0**	**-0.3**
ISR	**Istrita**	**144.66**	**318**	⇑P	**PKPdf**	**18 25 06.7**	**+1.0**
CICN	**Ciocanesti**	**144.80**	**316**	⇓P	**PKPdf**	**18 25 05.2**	**-0.6**
MLR	**Muntele Rosu**	**144.85**	**319**		**PKPab**	**18 25 04.7**	**-0.5**
MLR	**Muntele Rosu**	**144.85**	**319**	⇑P	**PKPdf**	**18 25 05.4**	**-0.7**
DOPR	**Dopca**	**144.94**	**320**	⇓P	**PKPdf**	**18 25 06.7**	**+0.6**
TGMR	**Targu Mures**	**145.14**	**321**	⇑P	**PKPab**	**18 25 05.9**	**-0.2**
STHS	**Stebnicka Huta**	**145.15**	**328**	*e*PKP	**PKPab**	**18 25 05.8**	**-0.2**
MDB	**Medias**	**145.44**	**321**	⇓P	**PKPab**	**18 25 08.6**	**+1.4**
CJR	**Cluj-Napoca**	**145.57**	**322**	⇑P	**PKPab**	**18 25 08.9**	**+1.2**
CEI	**Carei**	**145.62**	**325**	⇑P	**PKiKP**	**18 25 09.6**	**-1.6**
ARR	**Arges**	**145.70**	**320**	⇓P	**PKPab**	**18 25 08.9**	**+0.7**
TNR	**Turnu Rosu**	**145.76**	**320**	⇑P	**PKPab**	**18 25 09.6**	**+1.2**
MARR	**Marisel-Cluj**	**145.86**	**323**	⇑P	**PKPab**	**18 25 09.3**	**+0.4**
HUMR	**Humele**	**145.92**	**318**	⇑P	**PKPab**	**18 25 08.8**	**-0.3**
DRGR		**146.02**	**323**	⇑P	**PKPab**	**18 25 09.1**	**-0.3**
LOT	**Lotru**	**146.17**	**320**	⇓P	**PKPbc**	**18 25 09.3**	**-0.1**
LANS	**Liptovska Anna**	**146.19**	**329**	*e*PKP	**PKiKP**	**18 25 11.9**	**-0.5**
STEB	**Steborice**	**146.43**	**331**	*e*PKP	**PKPbc**	**18 25 09.9**	**+0.1**
DEV	**Deva**	**146.44**	**322**	⇓P	**PKiKP**	**18 25 11.6**	**-1.3**
VLAD	**Vladila**	**146.55**	**318**	⇑P	**PKPab**	**18 25 11.5**	**+0.1**
OSTC	**Ostas**	**146.63**	**333**	*e*PKP	**PKPab**	**18 25 11.3**	**-0.3**
MORC	**Moravsky Berou**	**146.64**	**331**	⇑P	**PKPab**	**18 25 10.8**	**-0.9**
MORC	**Moravsky Berou**	**146.64**	**331**	*e*PKP	**PKPab**	**18 25 11.1**	**-0.6**
CHVC	**Chvalec**	**146.68**	**334**	*e*PKP	**PKPab**	**18 25 11.3**	**-0.5**
DPC	**Dobruska-Polom**	**146.74**	**333**	*e*PKP	**PKPab**	**18 25 11.7**	**-0.4**
UPC	**Upice**	**146.75**	**334**	*e*PKP	**PKPab**	**18 25 11.7**	**-0.3**
KRLC	**Kraliky**	**146.75**	**332**	*e*PKP	**PKPab**	**18 25 11.9**	**-0.2**
GZR	**Gura Zlata**	**146.78**	**321**	⇑P	**PKPbc**	**18 25 11.0**	**-0.2**
MAUC	**Maruska**	**146.81**	**331**	*e*PKP	**PKPbc**	**18 25 10.3**	**-0.7**
PSZ	**Piszkesteto**	**146.81**	**327**	⇓P	**PKPbc**	**18 25 10.1**	**-1.0**
EKA	**Eskdalemuir Ar**	**146.89**	**356**	PKPbc	**PKPbc**	**18 25 10.6**	**-0.4**
	comp=Z,5.6nm,0.9s,baz=340,slow=2.0,SNR=9.3						
SIRR	**Siria**	**146.91**	**323**	⇓P	**PKPbc**	**18 25 11.3**	**-0.1**
JAVC	**Velka Javorina**	**147.25**	**330**	*e*PKP	**PKPab**	**18 25 13.8**	**-0.3**
CLL	**Collm**	**147.28**	**337**	*i* PKPbc	**PKPbc**	**18 25 12.1**	**-0.1**
	comp=Z,19nm,1.0s						
HERR	**Herculane**	**147.28**	**320**	⇓P	**PKPbc**	**18 25 12.6**	**+0.2**
PVCC	**Panska Ves**	**147.32**	**335**	*e*PKP	**PKPab**	**18 25 13.8**	**-0.4**
BZS	**Buzias**	**147.32**	**322**	⇓P	**PKPbc**	**18 25 11.1**	**-1.4**
VRAC	**Vranov**	**147.41**	**332**	⇓P	**PKPab**	**18 25 13.3**	**-1.3**
VRAC	**Vranov**	**147.41**	**332**	*e*PKP	**PKPbc**	**18 25 13.0**	**+0.3**
KRUC	**Moravsky**	**147.68**	**331**	*e*PKP	**PKPbc**	**18 25 13.6**	**+0.2**
MDVR	**Moldovita**	**147.75**	**321**	⇑P	**PKPbc**	**18 25 12.1**	**-1.7**
PRU	**Pruhonice**	**147.75**	**334**	*e*PKP	**PKPbc**	**18 25 13.9**	**+0.3**
MODS	**Modra-Piesok**	**147.78**	**330**	*e*PKP	**PKiKP**	**18 25 15.1**	**-0.6**
ZVC	**Zvikov**	**148.33**	**334**	*e*PKP	**PKPbc**	**18 25 15.5**	**+0.4**
BOVS	**Bovan**	**148.40**	**319**	⇑P	**PKPdf**	**18 25 13.0**	**+1.0**
MORH	**Mrgy, Hungar**	**148.58**	**326**	⇓P	**PKPdf**	**18 25 13.1**	**+0.9**
RONA	**Rosalia, Austr**	**148.72**	**330**	*i* PKP	**PKPbc**	**18 25 16.5**	**+0.3**
	comp=Z,11nm,1.0s						
CONA	**Conrad Observa**	**148.75**	**330**	*i* PKiKP	**PKiKP**	**18 25 17.1**	**-0.7**
	comp=Z,11nm,1.3s,SNR=5.7						
CKRC	**Cesky Krumlov**	**148.76**	**333**	*e*PKP	**PKPbc**	**18 25 16.2**	**-0.1**
KHC	**Kasperske Hory**	**148.82**	**334**	*e*PKP	**PKPbc**	**18 25 16.5**	**+0.1**
GERES	**GERESS Array B**	**148.99**	**334**	PKPbc	**PKPbc**	**18 25 16.9**	**-0.1**
	comp=Z,8.4nm,0.9s,baz=38,slow=2.4,SNR=39						
ARSA	**Arzberg**	**149.40**	**330**	*i* PKP	**PKPbc**	**18 25 18.2**	**+0.2**
	comp=Z,5.1nm,1.2s						
MOA	**Molln**	**149.52**	**332**	*i* PKP	**PKPbc**	**18 25 18.1**	**-0.2**
	comp=Z,7.7nm,1.1s						
BIOA	**Bad Ischl, Aus**	**149.92**	**332**	*i* PKP	**PKPbc**	**18 25 18.9**	**-0.3**
	comp=Z,1.2nm,0.4s						
BTNL	**Ternell**	**150.05**	**344**	*d*PKiKP	**PKiKP**	**18 25 20.0**	**-0.3**
SOKA	**Soboth**	**150.05**	**330**	*i* PKP	**PKPbc**	**18 25 19.6**	**0.0**
	comp=Z,14nm,1.1s,SNR=6.5						
MEM	**Membach**	**150.06**	**344**	*d*PKP	**PKPbc**	**18 25 19.2**	**-0.2**
BSTI	**Sart Tilman**	**150.20**	**344**	*d*PKiKP	**PKiKP**	**18 25 20.7**	**+0.2**
UCC	**Uccle**	**150.28**	**346**	*d*PKiKP	**PKiKP**	**18 25 20.4**	**-0.3**
BHOU	**Houvegnez**	**150.30**	**344**	*d*PKP	**PKPbc**	**18 25 19.7**	**-0.3**
OBKA	**Obir**	**150.40**	**330**	*e*PKP	**PKiKP**	**18 25 20.6**	**-0.7**
	comp=Z,4.3nm,1.0s						
BGES	**Gesves**	**150.50**	**345**	*d*PKP	**PKPbc**	**18 25 19.4**	**-1.1**
LESA	**Schwarzleotal**	**150.53**	**333**	*i* PKP	**PKPbc**	**18 25 20.2**	**-0.5**
	comp=Z,6.9nm,0.8s,SNR=5.5						
BMRD	**Maredsous**	**150.65**	**345**	*d*PKP	**PKPbc**	**18 25 20.6**	**-0.2**
RCHB	**Rochefort**	**150.68**	**345**	*d*PKP	**PKiKP**	**18 25 20.9**	**-0.6**
MYKA	**Terra Mystica**	**150.73**	**331**	*i* PKP	**PKPbc**	**18 25 20.1**	**-1.2**
	comp=Z,10.0nm,1.2s						
DOU	**Dourbes**	**150.88**	**345**	*d*PKP	**PKPbc**	**18 25 20.9**	**-0.5**
WLF	**Walferdange**	**150.89**	**343**	*d*PKiKP	**PKiKP**	**18 25 21.8**	**-0.2**
WATA	**Walderalm**	**151.06**	**334**	*i* PKP	**PKPbc**	**18 25 21.5**	**-0.6**
	comp=Z,14nm,1.2s,SNR=5.5						
WTTA	**Wattenberg**	**151.09**	**334**	*i* PKP	**PKiKP**	**18 25 22.3**	**-0.5**
	comp=Z,20nm,1.0s,SNR=8.5						
ABTA	**Abfaltersbach**	**151.13**	**332**	*i* PKP	**PKPbc**	**18 25 21.5**	**-0.7**
	comp=Z,13nm,1.2s,SNR=6.0						
RETA	**Reutte**	**151.26**	**335**	*i* PKP	**PKPbc**	**18 25 22.3**	**-0.1**
	comp=Z,5.4nm,1.1s						
SQTA	**Sankt Quirin**	**151.30**	**334**	*i* PKP	**PKPbc**	**18 25 22.2**	**-0.4**
	comp=Z,12nm,1.0s,SNR=5.3						
BFO	**Black Forest**	**151.42**	**339**		**PKPbc**	**18 25 22.5**	**-0.2**
FETA	**Feichten**	**151.65**	**335**	*i* PKP	**PKPbc**	**18 25 23.3**	**-0.2**
	comp=Z,17nm,1.0s,SNR=6.5						
DAVA	**Damuels**	**151.76**	**336**	*i* PKP	**PKPbc**	**18 25 22.5**	**-1.2**
	comp=Z,8.6nm,1.6s						
CTI	**Castel Tesino**	**152.05**	**332**		**PKPdf**	**18 25 15.1**	**-2.7**
TUE	**Stuetta**	**152.64**	**336**		**PKPdf**	**18 25 16.9**	**-1.8**
ESDC	**Sonseca Array**	**162.51**	**353**	PKPab	**PKPab**	**18 26 17.0**	**-1.9**
	comp=Z,1.6nm,1.0s,baz=342,slow=5.5,SNR=5.9						
TORD	**Torodi Ar. Bea**	**168.03**	**222**	PKP	**PKPdf**	**18 25 34.9**	**-1.4**
	comp=Z,2.0nm,1.0s,baz=356,slow=2.1,SNR=8.1						
TORD				PKPab	**PKPab**	**18 26 45.0**	**+1.1**
	comp=Z,2.0nm,0.9s,baz=102,slow=4.5,SNR=9.8						

NEIC ***25*** *18:13:57.4±2.0, 54°.24S±0°.09×140°.4E±0°.2, h10*^{km}*±1*^{km}*, mb4.7/50, Error ellipse: s-maj=22.0km s-min=15.6km az=95.0*

IDC ***25*** *18:13:57.4±0.5, 54°.08S×141°.11E, h0*^{km}*, mb4.3/10, mbtmp4.3/10, MS4.3/23, Error ellipse: s-maj=26.3km s-min=16.6km az=85.0*

GCMT ***25*** *18:14:03.3±0.2, 54°.12S±0°.01×140°.76E±0°.04, h12*^{km}*, MW5.0/103, Moment Tensor Solution. s36,c41; s103,c163; Duration: 0 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*-4.01±.20;* $M_{\theta\theta}$*3.85±.14;* $M_{\phi\phi}$*0.16±.13;* $M_{r\theta}$*0.36±.34;* $M_{\theta\phi}$*-1.70±.09;* $M_{\phi r}$*0.68±.45; Best double couple:* M_0*4.34200×10*^{16} *NP1:*ϕ_s*123.00000°, δ46.00000°, λ-73.00000°. NP2:*ϕ_s*280.00000°, δ47.00000°, λ-106.00000°. Principal axes: T 4.5150, Plg1.0000°, Azm21.0000°; N -0.3430, Plg12.0000°, Azm291.0000°; P -4.1690, Plg78.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 18:13:57.8±0.4**, 54°.17S**±0°.06×**140°.74E**±0°.07**, h10**^{km}**, n164,** σ**1**^{s}**.77**/127**, mb4.8**/40**, MS4.4**/23**, 1C-1D, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAU	**Tasmania Unive**	**12.07**	**24**	Pn	**Pn**	**18 16 50.8**	**+1.1**
MGBR	**Mount Gambier**	**16.44**	**360**		**P**	**18 17 50.2**	**-0.9**
MGBR				IAmb	IAmb	18 17 56.3	
	comp=Z,69nm,1.2s						
TOO	**Toolangi**	**16.91**	**13**		**Pn**	**18 17 54.2**	**-0.3**
PYZ	**Puysegur Point**	**18.36**	**75**	P	**P**	**18 18 12.7**	**+0.3**
PYZ				IAmb	IAmb	18 18 27.0	
	comp=Z,88nm,1.3s						
CASY	**Casey**	**19.04**	**219**	P	**P**	**18 18 15.6**	**-4.1**
CASY				IAmb	IAmb	18 18 29.6	
	comp=Z,40nm,1.1s						
DCZ	**Deep Cove**	**19.04**	**74**	P	**P**	**18 18 18.8**	**-1.0**
WHZ	**Wether Hill Ro**	**19.24**	**76**	P	**P**	**18 18 19.8**	**-2.2**
MLZ	**Mavora Lakes**	**19.65**	**75**		**P**	**18 18 24.9**	**-1.5**
MLZ				IAmb	IAmb	18 18 35.8	
	comp=Z,54nm,1.3s						
CAN	**Canberra**	**19.71**	**20**	P	**P**	**18 18 27.6**	**+0.4**
WKZ	**Wanaka**	**20.48**	**74**	P	**P**	**18 18 33.6**	**-1.9**
WKZ				IAmb	IAmb	18 18 49.6	
	comp=Z,47nm,1.2s						
ODZ	**Otahua Downs**	**21.28**	**77**	P	**P**	**18 18 45.2**	**+1.1**
ODZ				IAmb	IAmb	18 19 25.0	
	comp=Z,42nm,1.5s						
LBZ	**Lake Benmore**	**21.41**	**75**	P	**P**	**18 18 43.2**	**-2.3**
LBZ				IAmb	IAmb	18 19 19.5	
	comp=Z,28nm,1.3s						
BBOO	**Buckleboo**	**21.61**	**349**		**P**	**18 18 47.7**	**0.0**
BBOO				IAmb	IAmb	18 19 07.4	
	comp=Z,42nm,1.4s						
STKA	**Stephens Creek**	**22.29**	**2**	P	**P**	**18 18 55.0**	**+0.1**
	comp=Z,15nm,1.1s,baz=170,slow=11,SNR=13						
STKA				LR	LR	18 26 10.5	
	comp=Z,1µm,20.8s,baz=178,slow=33						
	comp=Z,15nm,1.1s						
STKA	**Stephens Creek**	**22.29**	**2**		**P**	**18 18 55.3**	**+0.3**
OXZ	**Oxford**	**23.12**	**75**	P	**P**	**18 18 56.7**	**-7.0**
INZ	**Inchbonnie**	**23.17**	**73**	P	**P**	**18 18 60.0**	**-4.2**
INZ				IAmb	IAmb	18 19 15.9	
	comp=Z,25nm,1.1s						
MQZ	**McQueen's Vall**	**23.23**	**76**	P	**P**	**18 19 07.0**	**+2.1**
DSZ	**Denniston Nort**	**24.01**	**72**	P	**P**	**18 19 11.7**	**-0.9**
THZ	**Tophouse**	**24.62**	**73**		**P**	**18 19 15.4**	**-2.7**
THZ				IAmb	IAmb	18 19 28.4	
	comp=Z,24nm,1.0s						
VNDA	**Vanda**	**24.66**	**169**	P	**P**	**18 19 18.5**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=336,slow=8.0,SNR=10						
VNDA				LR	LR	18 28 30.1	
	comp=Z,1µm,18.7s,baz=336,slow=35						
	comp=Z,1.6nm,0.8s						
VNDA	**Vanda**	**24.66**	**169**		**P**	**18 19 15.7**	**-2.4**
VNDA				IAmb	IAmb	18 19 42.5	
	comp=Z,16nm,1.2s						
MRNZ	**Matariki Terra**	**24.77**	**72**	P	**P**	**18 19 18.6**	**-0.8**
ARMA	**Armidale**	**25.00**	**23**		**P**	**18 19 19.4**	**-2.2**
ARMA				IAmb	IAmb	18 19 31.5	
	comp=Z,22nm,1.1s						
QRZ	**Quartz Range**	**25.03**	**71**	P	**P**	**18 19 21.1**	**-0.7**
FORT	**Forrest**	**25.10**	**334**		**P**	**18 19 21.3**	**-1.1**
FORT				IAmb	IAmb	18 19 31.0	
	comp=Z,17nm,0.8s						
SBA	**Scott Base**	**25.52**	**168**		**P**	**18 19 25.2**	**-0.7**
SBA				IAmb	IAmb	18 19 36.8	
	comp=Z,18nm,1.0s						
INKA	**Innaminka**	**26.40**	**0**		**P**	**18 19 34.6**	**+0.4**
H01W1	**Cape Leeuwin H**	**26.77**	**305**	T	T	18 47 36.2	
	baz=142,slow=74,SNR=68						
H01W2	**Cape Leeuwin H**	**26.77**	**305**	T	T	18 47 36.6	
	baz=142,slow=74,SNR=59						
H01W3	**Cape Leeuwin H**	**26.78**	**305**	T	T	18 47 36.8	
	baz=142,slow=74,SNR=58						
MRZ	**Mangatainoka R**	**26.85**	**74**	P	**P**	**18 19 38.2**	**-0.1**
MRZ				IAmb	IAmb	18 19 45.7	
	comp=Z,18nm,1.0s						
NWAO	**Narrogin (SRO)**	**26.99**	**312**	LR	LR	18 28 06.8	
	comp=Z,265nm,20.0s,baz=77,slow=31						
URZ	**Urewera**	**29.36**	**72**	P	**P**	**18 19 59.9**	**-0.7**
	comp=Z,16nm,0.9s,baz=217,slow=12,SNR=4.0						
URZ				LR	LR	18 30 06.7	
	comp=Z,784nm,21.2s,baz=216,slow=33						
	comp=Z,16nm,0.9s						
EIDS	**Eidsvold**	**29.77**	**19**	P	**P**	**18 20 03.8**	**-0.6**
EIDS				IAmb	IAmb	18 20 16.8	
	comp=Z,13nm,0.9s						
ASAR	**Alice Springs**	**30.89**	**348**	P	**P**	**18 20 14.8**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=165,slow=10.0,SNR=28						
ASAR				PcP	**PcP**	**18 23 11.2**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=165,slow=2.7,SNR=9.3						
ASAR				LR	LR	18 31 14.5	
	comp=Z,464nm,20.3s,baz=152,slow=34						
	comp=Z,1.9nm,0.7s						
ASAR	**Alice Springs**	**30.89**	**348**	P	**P**	**18 20 13.7**	**-0.6**
AS31	**Alice Springs**	**30.89**	**348**	P	**P**	**18 20 14.3**	**0.0**
CTA	**Charters Tower**	**34.28**	**9**	LR	LR	18 33 47.8	
	comp=Z,716nm,20.5s,baz=160,slow=35						
CTAO	**Charters Tower**	**34.28**	**9**	P	**P**	**18 20 43.9**	**-0.1**
CTAO				IAmb	IAmb	18 20 51.7	
	comp=Z,22nm,1.5s						
WR8	**Warramunga Arr**	**34.48**	**350**	P	**P**	**18 20 45.7**	**-0.1**
WR8				IAmb	IAmb	18 20 53.1	
	comp=Z,15nm,1.0s						
WRA	**Warramunga Arr**	**34.51**	**349**	P	**P**	**18 20 46.0**	**0.0**
	comp=Z,3.8nm,0.9s,baz=171,slow=7.8,SNR=8.5						
WRA				PcP	**PcP**	**18 23 21.9**	**+1.0**
	comp=Z,3.7nm,0.8s,baz=183,slow=2.2,SNR=4.9						
	comp=Z,3.8nm,0.9s						
WRA	**Warramunga Arr**	**34.51**	**349**	P	**P**	**18 20 46.8**	**+0.8**
WRAB	**Tennant Creek**	**34.52**	**349**	P	**P**	**18 20 45.2**	**-0.9**
WB0	**Warramunga Arr**	**34.68**	**349**	P	**P**	**18 20 47.1**	**-0.3**
WB0				IAmb	IAmb	18 20 58.7	
	comp=Z,13nm,0.8s						
QSPA	**South Pole Qui**	**35.95**	**180**	P	**P**	**18 20 56.8**	**-1.3**
QSPA				IAmb	IAmb	18 21 07.0	
	comp=Z,12nm,1.1s						
QSPA					**PnPn**	**18 22 17.5**	**-0.9**
MAW	**Mawson**	**37.40**	**218**	LR	LR	18 35 24.4	
	comp=Z,570nm,19.6s,baz=92,slow=34						
DZM	**Mont Dzumac**	**37.47**	**41**	P	**P**	**18 21 09.5**	**-1.9**
	comp=Z,6.3nm,1.0s,baz=188,slow=6.3,SNR=3.5						
	comp=Z,6.3nm,1.0s						
DZM	**Mont Dzumac**	**37.47**	**41**	*e*S	**S**	**18 26 56.7**	**-3.3**
	comp=Z,177nm,26.2s						
DZM				*e*LR	LR	18 31 18.1	
	comp=Z,1µm,26.4s						
FITZ	**Fitzroy Crossi**	**37.84**	**336**	LR	LR	18 35 38.5	
	comp=Z,675nm,20.6s,baz=148,slow=34						
FITZ	**Fitzroy Crossi**	**37.84**	**336**	P	**P**	**18 21 14.4**	**0.0**
PMG	**Port Moresby**	**44.93**	**9**	LR	LR	18 39 25.0	
	comp=Z,463nm,21.5s,baz=170,slow=34						
BATI	**Baumata**	**45.91**	**336**	LR	LR	18 40 49.0	
	comp=Z,774nm,20.6s,baz=175,slow=35						
SOEI	**Soe**	**46.21**	**337**	P	**P**	**18 22 22.4**	**-0.6**
WBSI	**Waikabubak, Su**	**47.58**	**331**	P	P	18 22 40.2	+6.7
	comp=Z,25nm,0.8s						
MMRI	**Maumere**	**47.77**	**335**	P	**P**	**18 22 34.9**	**-0.1**
EDFI	**Ende, Flores**	**47.80**	**334**	P	**P**	**18 22 37.6**	**+2.2**
	comp=Z,13nm,1.5s						
BELA	**Belgrano 2**	**48.19**	**181**	P	**P**	**18 22 37.2**	**-0.4**
LBFI	**Labuhan Bajo,**	**48.54**	**332**	P	P	18 22 46.2	+5.2
	comp=Z,20nm,0.9s						
DBNI	**Kabupaten Domp**	**48.97**	**330**	P	P	18 22 51.6	+7.3
	comp=Z,11nm,0.9s						
TROLL	**Troll, Antarti**	**50.76**	**196**	⇑P	**P**	**18 22 59.4**	**+1.9**
	comp=Z,164nm,0.8s						
JAY	**Jayapura**	**51.48**	**360**	LR	LR	18 43 59.8	
	comp=Z,414nm,21.8s,baz=154,slow=35						
SNJI	**Sawahan-Nganju**	**51.79**	**322**	P	P	18 23 12.9	+7.1
	comp=Z,35nm,1.6s						
SJI	**Sawahan**	**51.83**	**322**	P	P	18 23 11.6	+5.6
	comp=Z,16nm,1.2s						
SNAA	**Sanae**	**51.86**	**194**	P	**P**	**18 23 07.7**	**+2.1**
SNAA	**Sanae**	**51.86**	**194**	P	**P**	**18 23 07.8**	**+2.2**
	comp=Z,2.4nm,0.8s,baz=195,slow=9.7,SNR=5.1						
SNAA				LR	LR	18 44 52.0	
	comp=Z,1µm,20.1s,baz=156,slow=36						
	comp=Z,2.4nm,0.8s						
SNAA	**Sanae**	**51.86**	**194**	P	**P**	**18 23 04.3**	**-1.3**
SNAA				IAmb	IAmb	18 23 28.9	
	comp=Z,11nm,1.2s						
SPSI	**Sidrap Palu**	**52.89**	**333**	P	P	18 23 22.2	+8.5
	comp=Z,28nm,1.0s						
VNA3	**Neumayer Olymp**	**53.14**	**192**	P	**P**	**18 23 15.0**	**0.0**
H04S1	**CROZET ISLANDS**	**53.39**	**239**	T	T	19 21 36.7	
	baz=131,slow=75,SNR=95						
H04S2	**CROZET ISLANDS**	**53.39**	**239**	T	T	19 21 34.2	
	baz=131,slow=75,SNR=86						
H04S3	**CROZET ISLANDS**	**53.41**	**239**	T	T	19 21 34.7	
	baz=131,slow=75,SNR=78						
MMSI	**Mamuju**	**54.34**	**333**	P	P	18 23 33.1	+8.7
	comp=Z,30nm,1.0s						
TOLI2	**Tolitoli**	**57.52**	**336**	P	**P**	**18 23 45.4**	**-1.8**
MDSI	**Maura Dua**	**57.74**	**315**	P	P	18 23 57.1	+8.4
	comp=Z,428nmcomp=Z,13nm,0.9s						
TBI	**Tubuai**	**59.64**	**88**	*e*S	**S**	**18 32 13.4**	**+1.2**
	comp=Z,366nm,32.0s						
TBI				*e*SS	**SS**	**18 36 08.8**	**+1.3**
	comp=Z,425nm,28.2s						
TBI				*e*LQ	LQ	18 39 02.3	
	comp=Z,782nm,26.5s						
TBI				*e*LR	LR	18 41 35.2	
	comp=Z,1µm,25.5s						
SBUM	**Sibu**	**61.19**	**327**	P	**P**	**18 24 11.6**	**-1.0**
SBUM				IAmb	IAmb	18 24 21.8	
	comp=Z,4.8nm,1.0s						
SBUM	**Sibu**	**61.19**	**327**	P	P	18 24 21.1	+8.6
	comp=Z,6.2nm,1.1s						
PPI	**Padang Panjang**	**62.96**	**313**	P	P	18 24 32.7	+8.3
PPT2	**Papeete2**	**64.04**	**84**	*e*S	**S**	**18 33 13.5**	**+5.3**
	comp=Z,57nm,26.8s						
PPT2				*e*SS	**SS**	**18 37 15.0**	**-1.7**
	comp=Z,47nm,23.5s						
PPT2				*e*LQ	LQ	18 40 50.3	
	comp=Z,409nm,26.2s						
PPT2				*e*LR	LR	18 43 36.4	
	comp=Z,131nm,27.2s						
PPT2				*e*LR	LR	18 43 43.1	
	comp=Z,134nm,21.5s						
PPTF	**Pamatai, Papee**	**64.05**	**84**	P	**P**	**18 24 30.9**	**-0.9**
MNSI	**Mandailing Nat**	**64.44**	**313**	P	P	18 24 41.4	+7.2
GSI	**Gunungsitoli**	**65.76**	**311**	P	**P**	**18 24 40.2**	**-2.6**
PSI	**Prapat**	**66.52**	**313**	P	P	18 24 54.3	+6.5
IPM	**Ipoh**	**67.16**	**316**	P	**P**	**18 24 50.4**	**-1.3**
IPM	**Ipoh**	**67.16**	**316**	P	P	18 25 00.3	+8.6
	comp=Z,14nm,0.9s						
KCSI	**Kotacane, Aceh**	**67.66**	**313**	P	P	18 25 01.2	+6.3
	comp=Z,12nm,1.2s						
KULM	**Kulim**	**68.04**	**316**	P	**P**	**18 24 55.3**	**-2.0**
KULM	**Kulim**	**68.04**	**316**	P	P	18 25 05.6	+8.3
	comp=Z,23nm,1.1s						
H08S2	**Diego Garcia H**	**71.16**	**283**	T	T	19 43 07.3	
	baz=144,slow=76,SNR=6.9						
H08S1	**Diego Carcia H**	**71.17**	**283**	T	T	19 43 11.1	
	baz=144,slow=76,SNR=9.5						
H08S3	**Diego Garcia H**	**71.18**	**283**	T	T	19 43 05.1	
	baz=144,slow=76,SNR=19						
TAOE	**Nuku Hiva Isla**	**76.50**	**86**	*e*LR	LR	18 49 33.9	
	comp=Z,263nm,29.4s						
SUR	**Sutherland**	**79.47**	**228**	LR	LR	18 55 23.0	
	comp=Z,214nm,19.5s,baz=164,slow=31						
BOSA	**Boshof**	**80.63**	**234**	LR	LR	18 54 50.7	
	comp=Z,190nm,21.6s,baz=186,slow=30						
CMAR	**Chiang Mai Arr**	**80.70**	**320**	P	**P**	**18 26 13.6**	**+2.7**
	comp=Z,2.1nm,0.8s,baz=179,slow=5.0,SNR=12						
CMAR				LR	LR	19 00 06.1	
	comp=Z,49nm,20.9s,baz=145,slow=34						
	comp=Z,2.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**80.70**	**320**	P	**P**	**18 26 09.5**	**-1.3**
JCJ	**Chichijima**	**80.93**	**1**	LR	LR	19 00 27.8	
	comp=Z,57nm,21.1s,baz=162,slow=34						
CHTO	**Chiang Mai**	**81.03**	**320**	P	**P**	**18 26 10.9**	**-1.7**
CHTO	**Chiang Mai**	**81.03**	**320**	P	**P**	**18 26 15.9**	**+3.3**
PLCA	**Paso Flores**	**81.73**	**156**	P	**P**	**18 26 17.9**	**+1.6**
	comp=Z,1.2nm,0.8s,baz=300,slow=6.6,SNR=3.5						
	comp=Z,1.2nm,0.8s						
PLCA	**Paso Flores**	**81.73**	**156**	IAmb	IAmb	18 26 22.9	
	comp=Z,3.3nm,1.1s						
LBTB	**Lobatse**	**83.49**	**236**	LR	LR	18 57 46.0	
	comp=Z,164nm,19.8s,baz=164,slow=31						
JHJ	**Hachijo jima 2**	**86.93**	**359**	LR	LR	19 03 07.4	
	comp=Z,125nm,21.6s,baz=142,slow=34						
PZH	**PanZhiHua**	**87.11**	**326**	P	**P**	**18 26 45.0**	**+1.5**
NJ2	**Nanjing**	**87.93**	**342**	*e*P	**P**	**18 26 48.5**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SHL	**Shillong**	**89.87**	**317**	P	**P**	**18 26 56.2**	**-0.5**
LSZ	**Lusaka**	**90.34**	**243**	LR	LR	19 01 45.7	
	comp=Z,179nm,20.2s,baz=160,slow=32						
MJAR	**Matsushiro Arr**	**90.37**	**358**	P	**P**	**18 26 59.7**	**+1.1**
	comp=Z,2.0nm,0.8s,baz=126,slow=7.9,SNR=5.7						
	comp=Z,2.0nm,0.8s						
MJAR	**Matsushiro Arr**	**90.37**	**358**	IAmb	IAmb	18 27 07.1	
	comp=Z,7.0nm,1.3s						
KSRS	**Korea Array**	**91.92**	**350**	LR	LR	19 08 37.0	
	comp=Z,33nm,19.3s,baz=155,slow=36						
XAN	**Xi'an**	**92.05**	**334**	⇓P	**P**	**18 27 09.5**	**+3.0**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.8s						
TSUM	**Tsumeb**	**92.27**	**232**	LR	LR	19 04 32.9	
	comp=Z,115nm,18.2s,baz=158,slow=33						
HHC	**Hu-ho-hao-te**	**97.90**	**338**	*e*P	Pdif	18 27 34.0	+0.8
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,140nm,4.5s						
ASAJ	**Asahikawa**	**97.92**	**1**	LR	LR	19 11 59.6	
	comp=Z,81nm,20.9s,baz=166,slow=36						
CPUP	**Villa Florida**	**98.33**	**164**	LR	LR	19 10 21.8	
	comp=Z,50nm,18.8s,baz=232,slow=34						
BVAR	**Borovoye Array**	**121.68**	**318**	PKP	**PKiKP**	**18 32 51.5**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=169,slow=1.5,SNR=1.8						
NVAR	**Mina Array Bea**	**126.04**	**72**	PKP	**PKiKP**	**18 33 01.4**	**+1.3**
	comp=Z,1.0nm,0.8s,baz=208,slow=3.1,SNR=5.6						
KBZ	**Khabaz**	**127.97**	**294**	PKP	**PKiKP**	**18 33 03.5**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=346,slow=1.4,SNR=3.8						
TORD	**Torodi Ar. Bea**	**127.98**	**234**	PKP	**PKiKP**	**18 33 04.7**	**+0.2**
	comp=Z,1.2nm,0.9s,baz=67,slow=1.6,SNR=6.0						
TXAR	**Lajitas Array**	**128.03**	**91**	PKP	**PKiKP**	**18 33 05.0**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=188,slow=3.5,SNR=5.8						
PDAR	**Pinedale Array**	**133.88**	**74**	PKP	**PKiKP**	**18 33 16.2**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=147,slow=3.0,SNR=4.3						
YKA	**Yellowknife Ar**	**141.76**	**47**	PKP	**PKPdf**	**18 33 29.4**	**+1.4**
	comp=Z,0.7nm,0.8s,baz=257,slow=3.4,SNR=10						
MODS	**Modra-Piesok**	**144.99**	**284**	*e*PKP	**PKPdf**	**18 33 35.1**	**+0.9**
MODS				*e*		18 33 41.2	
JAVC	**Velka Javorina**	**145.01**	**285**	*e*PKIKP	**PKiKP**	**18 33 36.2**	**-1.9**
MAUC	**Maruska**	**145.18**	**286**	*e*PKP	**PKPdf**	**18 33 35.7**	**+1.2**
RONA	**Rosalia, Austr**	**145.19**	**283**	*i* pPKP	**PKPab**	**18 33 35.8**	**+1.4**
	comp=Z,23nm,1.0s						
SOKA	**Soboth**	**145.38**	**280**	*i* pPKP	**PKPab**	**18 33 36.8**	**+1.7**
	comp=Z,26nm,1.0s,SNR=11						
ARSA	**Arzberg**	**145.40**	**281**	*i* pPKP	**PKPab**	**18 33 37.0**	**+1.8**
	comp=Z,34nm,0.9s						
STEB	**Steborice**	**145.49**	**287**	*e*PKP	**PKPab**	**18 33 37.0**	**+1.6**
MORC	**Moravsky Berou**	**145.55**	**286**	*e*PKIKP	**PKPab**	**18 33 36.7**	**+1.1**
CONA	**Conrad Observa**	**145.56**	**283**	*i* pPKP	**PKPab**	**18 33 37.1**	**+1.3**
	comp=Z,13nm,1.2s						
OBKA	**Obir**	**145.56**	**280**	*i* PKiKP	**PKiKP**	**18 33 40.9**	**+1.6**
	comp=Z,14nm,1.6s						
FINES	**FINESS Array B**	**145.82**	**309**	PKPbc	**PKPab**	**18 33 36.9**	**+0.8**
	comp=Z,2.3nm,0.8s,baz=126,slow=3.3,SNR=10						
KRUC	**Moravsky**	**145.84**	**285**	*e*PKIKP	**PKPab**	**18 33 37.9**	**+1.2**
VRAC	**Vranov**	**145.85**	**285**	*e*PKIKP	**PKPab**	**18 33 38.0**	**+1.3**
ULM	**Lac du Bonnet**	**145.88**	**73**	PKPbc	**PKPab**	**18 33 37.3**	**+0.5**
	comp=Z,2.9nm,0.7s,baz=167,slow=3.4,SNR=3.4						
MYKA	**Terra Mystica**	**146.16**	**279**	*i* pPKP	**PKPab**	**18 33 39.0**	**+1.0**
	comp=Z,17nm,1.2s						
MOA	**Molln**	**146.44**	**282**	*i* PKP	**PKPab**	**18 33 38.9**	**-0.1**
	comp=Z,8.0nm,1.0s						
TREC	**Trest**	**146.47**	**285**	*e*PKP	**PKiKP**	**18 33 41.3**	**+0.3**
DPC	**Dobruska-Polom**	**146.51**	**287**	*e*PKP	**PKiKP**	**18 33 40.2**	**-0.9**
OSTC	**Ostas**	**146.67**	**287**	*e*PKP	**PKiKP**	**18 33 40.8**	**-0.6**
BIOA	**Bad Ischl, Aus**	**146.72**	**281**	*i* PKP	**PKPab**	**18 33 40.0**	**-0.2**
	comp=Z,6.4nm,1.1s						
UPC	**Upice**	**146.76**	**287**	*e*PKP	**PKiKP**	**18 33 42.4**	**+0.8**
ABTA	**Abfaltersbach**	**146.88**	**279**	*e*pPKP	**PKPab**	**18 33 40.8**	**0.0**
	comp=Z,15nm,1.4s						
CKRC	**Cesky Krumlov**	**146.91**	**283**	*e*PKP	**PKPab**	**18 33 40.9**	**+0.1**
LESA	**Schwarzleotal**	**147.14**	**280**	*i* pPKP	**PKPab**	**18 33 41.1**	**-0.7**
	comp=Z,15nm,0.8s						
GERES	**GERESS Array B**	**147.27**	**283**	PKPbc	**PKPab**	**18 33 41.9**	**-0.4**
	comp=Z,1.9nm,0.8s,baz=106,slow=2.9,SNR=8.2						
ZVC	**Zvikov**	**147.28**	**284**	*e*PKP	**PKPab**	**18 33 42.1**	**-0.2**
KHC	**Kasperske Hory**	**147.48**	**283**	*e*PKP	**PKiKP**	**18 33 43.9**	**+0.8**
WTTA	**Wattenberg**	**147.66**	**279**	*i* pPKP	**PKPab**	**18 33 44.8**	**+0.8**
	comp=Z,9.0nm,1.0s						
ARCES	**ARCESS Array B**	**147.71**	**323**	PKPbc	**PKiKP**	**18 33 42.7**	**-0.2**
	comp=Z,4.9nm,0.9s,baz=11,slow=2.5,SNR=7.4						
WATA	**Walderalm**	**147.73**	**279**	*e*pPKP	**PKPab**	**18 33 45.4**	**+1.2**
	comp=Z,12nm,1.2s						
SQTA	**Sankt Quirin**	**147.88**	**279**	*i* PKiKP	**PKiKP**	**18 33 43.6**	**-0.6**
	comp=Z,0.1nm,0.3s,SNR=4.0						
FETA	**Feichten**	**148.06**	**278**	*i* PKiKP	**PKiKP**	**18 33 43.8**	**-0.8**
	comp=Z,12nm,0.9s						
RETA	**Reutte**	**148.28**	**279**	*e*PKiKP	**PKiKP**	**18 33 44.5**	**-0.4**
	comp=Z,16nm,1.2s,SNR=4.3						
DAVA	**Damuels**	**148.69**	**278**	*i* PKP	**PKPbc**	**18 33 44.5**	**+0.1**
	comp=Z,9.0nm,0.9s						
CLL	**Collm**	**148.82**	**286**	*i* PKPdf	**PKiKP**	**18 33 45.3**	**-0.5**
	comp=Z,3.0nm,0.8s						
CLL				*i* PKPbc	**sPKPab**	**18 33 51.2**	**-0.2**
	comp=Z,59nm,2.1s						
CLL				*i* PKPab	**PKPab**	**18 33 55.6**	**+7.2**
	comp=Z,16nm,1.3s						
CLL				*e*PP	PP	18 37 26.0	+10
	comp=Z,118nm,3.0s						
SPITS	**Spitsbergen Ar**	**149.31**	**341**	PKPbc	**PKiKP**	**18 33 45.9**	**-0.2**
	comp=Z,11nm,0.8s,baz=110,slow=7.2,SNR=12						
HFS	**Hagfors**	**151.35**	**304**	PKPab	**PKPab**	**18 34 00.1**	**+1.6**
	comp=Z,3.5nm,0.7s,baz=113,slow=3.4,SNR=6.2						
ESDC	**Sonseca Array**	**152.22**	**253**	PKPbc	**PKiKP**	**18 33 54.2**	**+0.9**
	comp=Z,2.8nm,0.8s,baz=94,slow=1.1,SNR=19						
ESDC	**Sonseca Array**	**152.22**	**253**		**PKPbc**	**18 33 52.9**	**-0.1**
NB2	**NORSAR Subarra**	**152.71**	**305**	PKP	**PKPab**	**18 33 59.2**	**-5.1**
	comp=Z,9.2nm,1.2s,baz=98,slow=4.3						
NOA	**NORSAR Array B**	**152.71**	**305**	PKPbc	**PKiKP**	**18 33 54.6**	**+1.0**
	comp=Z,0.6nm,1.0s,baz=91,slow=3.7,SNR=4.1						
NOA				PKPab	**PKPab**	**18 34 05.4**	**+1.1**
	comp=Z,2.2nm,0.9s,baz=97,slow=4.5,SNR=6.1						

IDC 25 18:21:39.0±7.5, 21°.80S×173°.23E, h0^{km}, mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=305.2km s-min=63.8km az=148.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	36.24	259	P	P	18 28 43.8	-0.3
	0.6nm,0.9s,baz=83,slow=9.2,SNR=6.1						
	0.6nm,0.9s						
CMAR	Chiang Mai Arr	82.95	293	P	P	18 34 06.8	+0.5
	0.3nm,0.3s,baz=126,slow=3.5,SNR=4.9						
	0.3nm,0.3s						
GERES	GERESS Array B	148.46	334	PKPbc	PKPbc	18 41 26.6	-1.0
	0.4nm,0.8s,baz=47,slow=4.5,SNR=2.9						

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*GCG **25** 18:26:27.4±0.9, 14°.53N×92°.45W, h58^{km}±11^{km}, MD3.7*
*MEX **25** 18:26:28.8±1.0, 14°.57N×92°.51W, h62^{km}±17^{km}, MD3.8*
ISC 25 18:26:24.4±1.7, 14°.42N±0°.08×92°.48W±0°.06, h74^{km}±11^{km}, n20, $\sigma 1^{s}.99$/36, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.53	23	*e*P	Pn	18 26 38.6	+0.8
THIG				*e*S	Sn	18 26 47.8	+0.1
SMCA	Catarina	0.59	42	*i* P	Pn	18 26 39.1	+0.7
SMCA				*i* S	Sn	18 26 48.6	-0.2
PATR	El Naranjo	0.74	19	*e*P	Pn	18 26 39.9	-0.4
PATR				*e*S	Sn	18 26 50.1	-1.9
CHUJ	Union Juarez	0.77	28	*e*P	Pn	18 26 40.5	-0.1
CHUJ				*i* S	Sn	18 26 51.2	-1.3
RTAL	Retalhuleu	0.77	82	*e*P	Pn	18 26 42.5	+2.1
RTAL				*e*S	Sn	18 26 54.5	+2.2
PAVE	Pavencul	0.83	21	*e*P	Pn	18 26 41.1	-0.1
PAVE				*e*S	Sn	18 26 52.0	-1.7
STG2	El Palmar, Qui	1.07	89	*i* P	Pn	18 26 43.0	-1.1
STG8	El Palmar, Qui	1.10	88	*i* P	Pn	18 26 43.6	-0.9
STG5	El Palmar, Qui	1.10	91	*i* P	Pn	18 26 43.5	-0.9
STG5				*i* S	Sn	18 26 56.9	-2.5
HUEH	Huehuetenango	1.30	46	*e*P	Pn	18 26 48.8	+1.6
HUEH				*e*S	Sn	18 27 05.3	+1.0
HUEH	Huehuetenango	1.30	46	*i* P	Pn	18 26 49.0	+1.8
PCIG		1.47	331	*e*P	Pn	18 26 49.6	+0.5
PCIG				*e*S	Sn	18 27 06.3	-1.3
ESSG	Sabana Grande	1.60	91	*i* P	Pn	18 26 53.5	+2.6
ESSG				*i* S	Sn	18 27 13.2	+2.3
QUIS	Sacapulas	1.60	57	*i* P	Pn	18 26 53.0	+2.0
QUIS				*i* S	Sn	18 27 12.9	+1.9
CCIG	Comitan	1.89	10	*e*P	Pn	18 26 55.5	+0.7
CCIG				*e*S	Sn	18 27 17.0	-0.8
FG16	Alotenango, Sa	1.92	94	*i* P	Pn	18 26 53.4	-1.8
FG16				*i* S	Sn	18 27 14.2	-4.5
APG	El Apazote	2.04	73	*i* P	Pn	18 26 59.6	+2.7
TGIG		2.43	345	*e*P	Pn	18 27 03.3	+1.3
TGIG				*e*S	Sn	18 27 27.4	-3.4
CMIG	Matias Romero	3.52	319	*e*P	Pn	18 27 18.9	+2.1
CMIG				*e*S	Sn	18 27 57.4	+0.1
PETF	Flores	3.54	45	*e*P	Pn	18 27 18.0	+1.0
PETF				*e*S	Sn	18 27 53.3	-4.4

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*IDC **25** 18:31:07.8±0.8, 54°.10S×140°.46E, h0^{km}, mb4.1/7, mbtmp4.1/7, MS4.0/9, Error ellipse: s-maj=56.3km s-min=17.5km az=83.0*

*NEIC **25** 18:31:08.7±1.2, 54°.1S±0°.1×141°.2E±0°.3, h10^{km}±1^{km}, mb4.5/15, Error ellipse: s-maj=32.3km s-min=13.2km az=56.0*

*GCMT **25** 18:31:10.8±0.3, 54°.31S±0°.03×141°.55E±0°.07, h21^{km}±1^{km}, MW4.9/72, Moment Tensor Solution. s12,c12; s72,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.44±.26; $M_{\theta\theta}$2.09±.16; $M_{\phi\phi}$0.34±.15; $M_{r\theta}$-1.17±.23; $M_{\theta\phi}$-0.02±.07; $M_{\phi r}$-2.13±.31; Best double couple: $M_0$3.16100×10^{16} NP1:ϕ_s280.00000°, δ30.00000°, λ-48.00000°. NP2: ϕ_s54.00000°, δ68.00000°, λ-112.00000°. Principal axes: T 2.5440, Plg20.0000°, Azm160.0000°; N 1.2270, Plg20.0000°, Azm62.0000°; P -3.7780, Plg61.0000°, Azm291.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 18:31:09.3±0.6, 54°.11S±0°.08×140°.7E±0°.2, h10^{km}, n70, $\sigma 0^{s}.71$/55, mb4.4/14, MS4.0/9, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGBR	Mount Gambier	16.39	360	P	Pn	18 35 00.2	+1.0
TOO	Toolangi	16.86	13	P	Pn	18 35 05.0	-0.3
STKA	Stephens Creek	22.23	2	P	P	18 36 05.4	-0.5
	14nm,1.2s,baz=168,slow=11,SNR=10						
	14nm,1.2s						
STKA	Stephens Creek	22.23	2	P	P	18 36 05.9	0.0
VNDA	Vanda	24.72	169	P	P	18 36 30.2	+0.1
	1.9nm,0.8s,baz=323,slow=8.1,SNR=11						
VNDA				LR	LR	18 44 53.9	
	comp=Z,328nm,21.4s,baz=352,slow=33						
	1.9nm,0.8s						
VNDA	Vanda	24.72	169	P	P	18 36 29.5	-0.6
VNDA				IAmb	IAmb	18 36 47.5	
	comp=Z,15nm,1.4s						
FORT	Forrest	25.05	333	P	P	18 36 34.0	+0.6
FORT				IAmb	IAmb	18 36 36.2	
	comp=Z,13nm,0.9s						
SBA	Scott Base	25.58	168	P	P	18 36 38.2	+0.3
SBA				IAmb	IAmb	18 36 42.5	
	comp=Z,10nm,1.1s						
INKA	Innaminka	26.34	0	P	P	18 36 43.7	-1.5
H01W1	Cape Leeuwin H	26.73	305	T	T	19 04 46.1	
	baz=143,slow=76,SNR=23						
H01W2	Cape Leeuwin H	26.74	305	T	T	19 04 50.5	
	baz=143,slow=76,SNR=27						
H01W3	Cape Leeuwin H	26.75	305	T	T	19 04 50.1	
	baz=143,slow=76,SNR=22						
ASAR	Alice Springs	30.83	348	P	P	18 37 25.2	-0.1
	comp=Z,1.8nm,0.9s,baz=172,slow=9.7,SNR=13						
ASAR				PcP	PcP	18 40 21.6	-0.6
	comp=Z,0.8nm,0.8s,baz=176,slow=2.5,SNR=6.6						
	comp=Z,1.8nm,0.9s						
ASAR	Alice Springs	30.83	348	P	P	18 37 23.0	-2.3
WRA	Warramunga Arr	34.46	349	P	P	18 37 57.1	0.0
	comp=Z,2.9nm,1.0s,baz=175,slow=8.1,SNR=6.4						
WRA				PcP	PcP	18 40 31.7	-0.6
	comp=Z,1.7nm,0.9s,baz=180,slow=2.6,SNR=4.7						
	comp=Z,2.9nm,1.0s						
WRA	Warramunga Arr	34.46	349	P	P	18 37 56.6	-0.4
WRAB	Tennant Creek	34.47	349	P	P	18 37 56.2	-0.9
WRAB				IAmb	IAmb	18 37 58.1	
	comp=Z,7.1nm,1.1s						
WB0	Warramunga Arr	34.62	349	P	P	18 37 57.4	-1.1
WB0				IAmb	IAmb	18 38 23.4	
	comp=Z,8.8nm,1.3s						
QSPA	South Pole Qui	36.00	180	P	P	18 38 09.8	-0.4
QSPA				IAmb	IAmb	18 38 12.6	
	comp=Z,12nm,1.3s						
MAW	Mawson	37.44	218	LR	LR	18 52 01.4	
	comp=Z,262nm,20.2s,baz=92,slow=34						
BELA	Belgrano 2	48.25	181	P	P	18 39 49.2	-0.4
BELA				IAmb	IAmb	18 39 51.6	
	comp=Z,4.2nm,0.9s						
SNAA	Sanae	51.91	194	P	P	18 40 16.6	-0.9
	comp=Z,2.8nm,1.0s,baz=19,slow=1.5,SNR=4.7						
SNAA				LR	LR	19 02 00.0	
	comp=Z,664nm,19.7s,baz=156,slow=36						
	comp=Z,2.8nm,1.0s						
SNAA	Sanae	51.91	194	P	P	18 40 16.3	-1.2
SNAA				IAmb	IAmb	18 40 23.5	
	comp=Z,9.3nm,1.3s						
H04S1	CROZET ISLANDS	53.41	239	T	T	19 38 51.6	
	baz=132,slow=74,SNR=15						
H04S2	CROZET ISLANDS	53.42	239	T	T	19 38 51.6	
	baz=132,slow=74,SNR=15						
H04S3	CROZET ISLANDS	53.43	239	T	T	19 38 45.4	
	baz=132,slow=74,SNR=18						
PMSA	Palmer Station	59.92	168	LR	LR	19 04 33.1	
	comp=Z,82nm,18.9s,baz=132,slow=33						
DAV	Davao City (W)	62.27	343	LR	LR	19 07 26.8	
	comp=Z,97nm,21.7s,baz=141,slow=35						
KULM	Kulim	68.00	316	P	P	18 42 09.0	+0.4
H08S2	Diego Garcia H	71.15	283	T	T	20 00 15.9	
	baz=136						
H08S1	Diego Carcia H	71.16	283	T	T	20 00 16.8	
	baz=136,slow=74,SNR=4.4						
H08S3	Diego Garcia H	71.17	283	T	T	20 00 19.6	
	baz=136,slow=74,SNR=6.2						
SUR	Sutherland	79.50	228	LR	LR	19 13 54.5	
	comp=Z,66nm,18.0s,baz=167,slow=32						
BOSA	Boshof	80.66	234	LR	LR	19 11 36.3	
	comp=Z,87nm,19.7s,baz=191,slow=30						
CMAR	Chiang Mai Arr	80.66	320	P	P	18 43 21.2	-0.9
	comp=Z,1.6nm,0.8s,baz=177,slow=5.1,SNR=17						
	comp=Z,1.6nm,0.8s						
CMAR	Chiang Mai Arr	80.66	320		P	18 43 22.0	-0.1
CHTO	Chiang Mai	80.98	320		P	18 43 24.4	+0.5
CHTO				IAmb	IAmb	18 43 26.3	
	comp=Z,6.6nm,1.0s						
PLCA	Paso Flores	81.78	156	P	P	18 43 30.1	+2.0
	comp=Z,1.3nm,0.9s,baz=208,slow=2.6,SNR=2.9						
	comp=Z,1.3nm,0.9s						
LBTB	Lobatse	83.52	236	LR	LR	19 15 07.0	
	comp=Z,72nm,19.6s,baz=178,slow=32						
TSUM	Tsumeb	92.30	232	LR	LR	19 21 33.6	
	comp=Z,64nm,18.1s,baz=158,slow=33						
NVAR	Mina Array Bea	126.03	72	PKP	PKPdf	18 50 10.4	-0.8
	comp=Z,0.8nm,0.8s,baz=266,slow=3.5,SNR=3.6						
NVAR	Mina Array Bea	126.03	72		PKPpre	18 50 02.4	
TORD	Torodi Ar. Bea	128.01	234	PKP	PKPdf	18 50 15.2	-0.2
	comp=Z,0.7nm,0.9s,baz=146,slow=1.9,SNR=3.2						
YKA	Yellowknife Ar	141.72	46	PKP	PKPdf	18 50 39.9	+0.4
	comp=Z,0.1nm,0.8s,baz=268,slow=3.2,SNR=4.2						
JAVC	Velka Javorina	145.00	285	*e*PKP	PKPdf	18 50 46.2	+0.5
RONA	Rosalia, Austr	145.18	283	*i* PKP	PKPab	18 50 45.9	+0.1
	comp=Z,10nm,0.9s,SNR=4.3						
SOKA	Soboth	145.36	280	*i* PKP	PKPab	18 50 47.0	+0.4
	comp=Z,12nm,1.0s,SNR=13						
SOKA	Soboth	145.36	280	*i* P	PKPab	18 50 47.0	+0.4
	comp=Z,12nm,1.0s,SNR=13						
ARSA	Arzberg	145.39	282	*i* PKP	PKPab	18 50 47.1	+0.5
	comp=Z,16nm,0.9s,SNR=14						
MORC	Moravsky Berou	145.53	287	*e*PKP	PKPdf	18 50 46.5	-0.1
CONA	Conrad Observa	145.55	283	*i* PKP	PKPdf	18 50 46.6	-0.2
	comp=Z,5.8nm,1.2s						
OBKA	Obir	145.55	280	*i* PKP	PKPab	18 50 47.9	+0.6
	comp=Z,2.7nm,1.1s						
FINES	FINESS Array B	145.78	309	PKPbc	PKPbc	18 50 47.2	+0.1
	comp=Z,1.9nm,1.1s,baz=66,slow=4.6,SNR=4.1						
KRUC	Moravsky	145.82	285	*e*PKP	PKPdf	18 50 47.0	-0.1
VRAC	Vranov	145.83	285	*e*PKP	PKPab	18 50 48.3	+0.1
MYKA	Terra Mystica	146.14	279	*i* PKP	PKPab	18 50 49.5	0.0
	comp=Z,17nm,1.9s						
MOA	Molln	146.43	282	*i* PKP	PKPbc	18 50 49.7	+0.1
	comp=Z,3.0nm,1.1s						
BIOA	Bad Ischl, Aus	146.71	281	*i* PKP	PKiKP	18 50 54.2	+1.1
	comp=Z,3.6nm,1.0s						
ABTA	Abfaltersbach	146.86	279	*i* PKP	PKPbc	18 50 51.0	+0.1
	comp=Z,5.4nm,0.9s,SNR=6.9						
LESA	Schwarzleotal	147.12	280	*i* PKP	PKPbc	18 50 51.3	-0.4
	comp=Z,4.7nm,1.0s						
GERES	GERESS Array B	147.25	283	PKPbc	PKPdf	18 50 50.7	+1.1
	comp=Z,1.7nm,0.8s,baz=122,slow=1.7,SNR=12						
WTTA	Wattenberg	147.65	279	*e*PKP	PKPbc	18 50 53.0	-0.3
	comp=Z,3.6nm,1.2s						
WATA	Walderalm	147.72	279	*i* PKP	PKPbc	18 50 53.2	-0.1
	comp=Z,8.9nm,1.9s						
SQTA	Sankt Quirin	147.87	279	*i* PKP	PKPbc	18 50 53.4	-0.4
	comp=Z,4.7nm,0.8s						
FETA	Feichten	148.05	278	*i* PKP	PKPbc	18 50 54.2	-0.1
	comp=Z,4.0nm,0.9s,SNR=5.7						
RETA	Reutte	148.27	279	*i* PKP	PKPbc	18 50 54.7	0.0
	comp=Z,4.3nm,0.9s						
DAVA	Damuels	148.68	278	*i* PKP	PKPbc	18 50 56.0	0.0
	comp=Z,4.1nm,1.0s						
HFS	Hagfors	151.32	304	PKPbc	PKiKP	18 51 02.7	+0.5
	comp=Z,1.6nm,0.8s,baz=84,slow=6.1,SNR=4.0						
ESDC	Sonseca Array	152.23	253	PKPbc	PKPbc	18 51 04.3	-0.2
	comp=Z,2.1nm,0.9s,baz=78,slow=1.1,SNR=12						
ESDC	Sonseca Array	152.23	253		PKiKP	18 51 05.1	+0.3

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*NOU **25** 18:32:55.4, 31°.60S×174°.98W, h40^{km}, mb4.5/19, Kermadec Islands Region*

*IDC **25** 18:33:02.8±0.9, 31°.06S×177°.16W, h0^{km}, mb4.3/5, mbtmp4.3/5, Error ellipse: s-maj=27.0km s-min=24.5km az=146.0*

*NEIC **25** 18:33:04.9±1.4, 31°.02S±0°.04×177°.1W±0°.1, h10^{km}±1^{km}, mb4.4/16, Error ellipse: s-maj=21.4km s-min=7.4km az=89.0*

ISC 25 18:33:04.0±0.8, 31°.25S±0°.05×177°.2W±0°.1, h10^{km}, n96, $\sigma 2^{s}.25$/109, mb4.5/9, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.06	343	P	Pn	18 33 37.7	-1.0
GLKZ				S	Sn	18 34 01.5	-3.0
RAO	Raoul Island	2.07	343	Pn	Pn	18 33 37.5	-1.3
	343nm,0.3s,baz=34,slow=12,SNR=6.5						
RAO				Sn	Sn	18 34 01.9	-2.8
	689nm,0.3s,baz=109,slow=22,SNR=5.6						
RAO	Raoul Island	2.07	343		Pn	18 33 36.3	-2.6
RIZ	Raoul Island	2.08	343	P	Pn	18 33 37.5	-1.5
RIZ				S	Sn	18 34 02.6	-2.4
MXZ	Matakaoa Point	7.30	209	Pn	Pn	18 34 53.1	+2.4
WMGZ	Waiomatatini S	7.47	207	P	Pn	18 34 52.8	-0.3
WMGZ				S	Sn	18 36 19.4	+1.6
PKGZ	Pakihiroa	7.65	209	P	Pn	18 34 54.7	-0.9
PKGZ				S	Sn	18 36 21.9	-0.4
HAZ	Te Kaha	7.68	211	P	Pn	18 34 56.2	+0.2
HAZ				S	Sn	18 36 23.9	+0.8
PUZ	Puketiti	7.75	207	P	Pn	18 34 55.4	-1.6
PUZ				S	Sn	18 36 23.8	-1.0
RUGZ	Raukumara Rang	7.90	211	P	Pn	18 34 58.7	-0.4
RUGZ				S	Sn	18 36 28.3	-0.4
TWGZ	Tauwhareparae	7.95	208	P	Pn	18 34 59.3	-0.4
TWGZ				S	Sn	18 36 29.6	-0.2
CNGZ	Carnagh Statio	8.13	206	P	Pn	18 35 01.0	-1.2
CNGZ				S	Sn	18 36 34.8	+0.7
TKGZ	Te Karaka	8.23	208	P	Pn	18 35 02.8	-0.7
TKGZ				S	Sn	18 36 35.2	-1.4
MWZ	Matawai	8.28	210	P	Pn	18 35 02.8	-1.4
MWZ				S	Sn	18 36 37.2	-0.6
URZ	Urewera	8.40	212	Pn	Pn	18 35 04.6	-1.2
	2.1nm,0.3s,baz=261,slow=8.0,SNR=9.9						
URZ				Sn	Sn	18 36 39.1	-1.5
	3.1nm,0.3s,baz=242,slow=18,SNR=7.8						
URZ	Urewera	8.40	212	P	Pn	18 35 05.0	-0.8
URZ	Urewera	8.40	212	P	Pn	18 35 05.8	0.0
URZ				S	Sn	18 36 38.8	-1.8
RAGZ	Rawiri	8.46	210	P	Pn	18 35 03.6	-3.1
RAGZ				S	Sn	18 36 42.0	-0.3
OUZ	Omahuta	8.64	240	P	Pn	18 35 19.5	+10
SNGZ	Shannon Statio	8.73	209	P	Pn	18 35 10.5	+0.1
SNGZ				S	Sn	18 36 48.3	-0.6
RTZ	Ruatahuna	8.75	211	Pn	Pn	18 35 10.0	-0.7
TOZ	Tahuroa Road	8.81	221	Pn	Pn	18 35 13.7	+2.2
MTHZ	Maungataniwha	9.01	211	P	Pn	18 35 14.8	+0.7
MTHZ				S	Sn	18 36 54.4	-1.3
BKZ	Black Stump Fm	9.42	211	P	Pn	18 35 20.7	+0.9
HIZ	Hauiti	9.73	220	Pn	Pn	18 35 20.7	-3.3
HIZ	Hauiti	9.73	220	P	Pn	18 35 28.6	+4.6
OTVZ	Oturere	9.80	214	P	Pn	18 35 24.7	-0.5
BFZ	Birch Farm	10.79	207	Pn	Pn	18 35 37.4	-1.2
MRZ	Mangatainoka R	11.05	210	Pn	Pn	18 35 41.0	-1.1
SNZO	South Karori	11.96	211	Pn	Pn	18 35 53.2	-1.3
SNZO	South Karori	11.96	211	P	Pn	18 35 53.6	-0.9
TUWZ	Tuamarina	12.39	212	Pn	Pn	18 35 55.7	-4.7
TUWZ	Tuamarina	12.39	212	P	Pn	18 36 00.8	+0.3
TUWZ				S	Sn	18 38 09.8	-8.9
CTZ	Chatham Island	12.48	178	Pn	Pn	18 35 56.3	-5.3
NNZ	Nelson	12.49	215	Pn	Pn	18 36 00.7	-1.2
TKNZ	Takaka Hill	12.56	216	Pn	Pn	18 36 00.8	-2.0
QRZ	Quartz Range	12.64	218	Pn	Pn	18 36 01.9	-1.9
QRZ	Quartz Range	12.64	218	P	Pn	18 36 06.9	+3.1
BSWZ	Blackbirch Sta	12.65	212	Pn	Pn	18 36 02.5	-1.5
THZ	Tophouse	13.14	214	Pn	Pn	18 36 08.1	-2.7
THZ	Tophouse	13.14	214	P	Pn	18 36 09.7	-1.1
THZ				S	Sn	18 38 28.2	-8.8
KHZ	Kahutara	13.36	211	Pn	Pn	18 36 09.8	-3.9
KHZ	Kahutara	13.36	211	P	Pn	18 36 12.6	-1.1
DSZ	Denniston Nort	13.68	217	Pn	Pn	18 36 17.3	-0.7
DSZ	Denniston Nort	13.68	217	P	Pn	18 36 12.7	-5.4
DSZ				S	Sn	18 38 38.5	-12
GVZ	Greta Valley S	14.03	211	Pn	Pn	18 36 20.6	-2.2
GVZ	Greta Valley S	14.03	211	P	Pn	18 36 20.6	-2.2
GVZ				S	Sn	18 38 46.5	-12
LTZ	Lake Taylor	14.22	213	Pn	Pn	18 36 22.8	-2.8
LTZ	Lake Taylor	14.22	213	P	Pn	18 36 22.3	-3.2
LTZ				S	Sn	18 38 49.5	-14
INZ	Inchbonnie	14.58	215	Pn	Pn	18 36 27.9	-2.4
OXZ	Oxford	14.76	212	Pn	Pn	18 36 29.4	-3.4
OXZ				IAmb	IAmb	18 36 40.7	
	comp=Z,44nm,1.4s						
OXZ	Oxford	14.76	212	P	Pn	18 36 28.7	-4.0
OXZ				S	Sn	18 39 01.6	-15
MHCZ	Mount Hutt	15.13	213	P	Pn	18 36 37.1	-0.8
RPZ	Rata Peaks	15.51	213	Pn	Pn	18 36 40.3	-2.5
RPZ	Rata Peaks	15.51	213	P	Pn	18 36 40.6	-2.2
FOZ	Fox Glacier	15.98	216	Pn	Pn	18 36 44.7	-4.2
PINNC	Pines Island,	16.12	299	P	P	18 37 04.2	+10
ODZ	Otahua Downs	16.72	211	Pn	Pn	18 36 55.2	-3.2
ODZ	Otahua Downs	16.72	211	P	Pn	18 36 57.3	-1.1
JCZ	Jackson Bay	16.89	217	P	Pn	18 36 58.5	-2.1
WKZ	Wanaka	17.32	215	Pn	Pn	18 37 00.9	-4.9
WKZ				IAmb	IAmb	18 37 16.2	
	comp=Z,36nm,1.4s						
MLZ	Mavora Lakes	18.14	215		Pn	18 37 14.3	-1.8
SYZ	Scrubby Hill	18.55	211	P	P	18 37 18.4	-2.3
DCZ	Deep Cove	18.70	216	P	P	18 37 21.5	-0.9
DCZ				IAmb	IAmb	18 37 59.0	
	comp=Z,18nm,1.3s						
ARMA	Armidale	26.70	264		P	18 38 46.2	+2.6
ARMA				IAmb	IAmb	18 39 20.8	
	comp=Z,18nm,1.1s						
ARMA	Armidale	26.70	264	P	P	18 38 48.4	+4.7
CNB	Canberra Magne	28.14	253	P	P	18 38 59.5	+3.1
TAU	Tasmania Unive	30.36	237	P	P	18 39 18.1	+2.1
CMSA	Cobar Meteorol	31.55	260	P	P	18 39 29.4	+2.8
CTAO	Charters Tower	34.58	280	P	P	18 39 54.8	+1.6
CTAO	Charters Tower	34.58	280	P	P	18 39 56.5	+3.3
STKA	Stephens Creek	34.93	258	P	P	18 39 57.0	+0.8
	comp=Z,2.3nm,0.6s,baz=104,slow=14,SNR=6.9						
	comp=Z,2.3nm,0.6s						
STKA	Stephens Creek	34.93	258	P	P	18 39 57.3	+1.2
STKA	Stephens Creek	34.93	258	P	P	18 39 58.9	+2.8
HTT	Hallett	36.90	255	P	P	18 40 15.1	+2.0
BBOO	Buckleboo	39.37	255	P	P	18 40 35.5	+1.6
BBOO				IAmb	IAmb	18 40 58.4	
	comp=Z,12nm,0.9s						
AS31	Alice Springs	43.72	267	P	P	18 41 10.5	+0.8
ASAR	Alice Springs	43.72	267	P	P	18 41 10.4	+0.7
	comp=Z,4.3nm,0.8s,baz=104,slow=7.2,SNR=50						
ASAR				PcP	PcP	18 42 57.5	+0.9
	comp=Z,0.8nm,0.4s,baz=111,slow=4.0,SNR=8.4						
	comp=Z,4.3nm,0.8s						
ASAR	Alice Springs	43.72	267	P	P	18 41 09.9	+0.2
WRA	Warramunga Arr	44.78	273	P	P	18 41 18.7	+0.5
	comp=Z,1.6nm,0.3s,baz=111,slow=8.2,SNR=31						
	comp=Z,1.6nm,0.3s						
WRA	Warramunga Arr	44.78	273	IAmb	IAmb	18 41 24.2	
	comp=Z,0.5nm,1.0s						
WB0	Warramunga Arr	44.81	273	P	P	18 41 18.8	+0.4
WB0				IAmb	IAmb	18 41 24.7	
	comp=Z,6.4nm,1.1s						
FITZ	Fitzroy Crossi	53.01	270	P	P	18 42 22.3	+0.9
	comp=Z,10.0nm,0.8s,baz=113,slow=13,SNR=16						
	comp=Z,10.0nm,0.8s						
FITZ	Fitzroy Crossi	53.01	270	P	P	18 42 22.4	+1.0
CASY	Casey	54.70	208	P	P	18 42 35.1	+2.0
QSPA	South Pole Qui	58.87	180	P	P	18 43 04.7	+1.9
QSPA				IAmb	IAmb	18 43 42.8	
	comp=Z,5.3nm,1.0s						
TXAR	Lajitas Array	92.30	57	P	P	18 46 14.1	-0.6
	comp=Z,0.6nm,1.0s,baz=127,slow=0.6,SNR=4.5						
	comp=Z,0.6nm,1.0s						
KURK	Kurchatov	122.10	313		PKPdf	18 51 58.1	-0.3
KURBB	Kurchatov Arra	122.14	313	PKP	PKPdf	18 51 58.1	-0.4
	comp=Z,0.2nm,0.5s,baz=108,slow=1.9,SNR=7.4						
FINES	FINESS Array B	146.16	340	PKPbc	PKPbc	18 52 43.9	+0.1
	comp=Z,3.3nm,0.6s,baz=38,slow=3.4,SNR=25						
NB2	NORSAR Subarra	149.68	352	PKP	PKPbc	18 52 53.6	+0.3
	comp=Z,0.9nm,0.8s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.68	352	PKPbc	PKPbc	18 52 52.2	-1.1
	comp=Z,2.8nm,1.1s,baz=15,slow=4.2,SNR=5.6						
HFS	Hagfors	150.20	349	PKPbc	PKPbc	18 52 54.4	-0.1
	comp=Z,1.9nm,0.8s,baz=132,slow=2.2,SNR=4.6						
AKASG	Malin Array Be	152.37	322	PKPbc	PKPbc	18 52 58.7	-1.2
	comp=Z,1.5nm,0.7s,baz=54,slow=1.7,SNR=5.6						
BRTR	Keskin Array B	153.57	297	PKPab	PKPab	18 53 15.8	+0.2
	comp=Z,0.5nm,0.5s,baz=136,slow=4.4,SNR=5.7						
TORD	Torodi Ar. Bea	161.96	177	PKPab	PKPab	18 53 53.4	+1.3
	comp=Z,1.1nm,0.6s,baz=179,slow=2.1,SNR=8.4						

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*BGR **25** 18:34:00.2, 24°.77S×177°.56E, h33^{km}*

*IDC **25** 18:34:03.4±1.8, 22°.44S×173°.65E, h0^{km}, mb4.3/10, mbtmp4.2/11, ML3.2/1, MS4.1/19, Error ellipse: s-maj=64.7km s-min=24.3km az=165.0*

*GCMT **25** 18:34:06.4±0.3, 22°.14S±0°.03×173°.48E±0°.02, h14^{km}±1^{km}, MW4.9/83, Moment Tensor Solution. s18,c20; s83,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.37±.18; $M_{\theta\theta}$0.59±.11; $M_{\phi\phi}$1.78±.11; $M_{r\theta}$-1.47±.31; $M_{\theta\phi}$0.71±.06; $M_{\phi r}$1.57±.25; Best double couple: $M_0$2.93800×10^{16} NP1:ϕ_s40.00000°, δ36.00000°, λ-47.00000°. NP2: ϕ_s171.00000°, δ64.00000°, λ-116.00000°. Principal axes: T 2.3420, Plg15.0000°, Azm280.0000°; N 1.1950, Plg23.0000°, Azm183.0000°; P -3.5350, Plg61.0000°, Azm40.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **25** 18:34:07.5, 22°.21S×172°.48E, h12^{km}*

*NEIC **25** 18:34:07.5, 22°.11S×173°.23E, h12^{km}, Moment Tensor Solution. Duration: $1^{s}.6$ Moment tensor: Scale 10^{16}Nm; M_{rr}-1.59; $M_{\theta\theta}$0.14; $M_{\phi\phi}$1.45; $M_{r\theta}$0.60; $M_{\theta\phi}$0.71; $M_{\phi r}$0.94; Fault plane solution: $M_0$2.02000×10^{16} NP1:ϕ_s17.55000°, δ28.63000°, λ-99.92000°. NP2:ϕ_s208.82000°, δ61.84000°, λ-84.63000°. Principal axes: T 2.0919, Plg17.0000°, Azm295.0000°; N -0.1594, Plg5.0000°, Azm26.0000°; P -1.9325, Plg73.0000°, Azm132.0000°;*

*NEIC **25** 18:34:07.5±2.2, 22°.21S±0°.10×172°.5E±0°.1, h10^{km}±1^{km}, mb5.0/49, Mww4.8/10 Error ellipse: s-maj=19.1km s-min=15.8km az=58.0*

ISC 25 18:34:10.1±0.5, 22°.4S±0°.1×172°.62E±0°.10, h35^{km}, n170, $\sigma 1^{s}.50$/127, mb4.9/38, MS4.2/18, 18C-20D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	4.35	281	Pn	Pn	18 35 09.8	-3.9
PINNC	Pines Island,	4.79	266	Pn	Pn	18 35 17.2	-2.6
DZM	Mont Dzumac	5.73	272	Pn	Pn	18 35 43.0	+10
	0.5nm,0.3s,baz=76,slow=19,SNR=6.4						
	10nm,0.7s						
DZM	Mont Dzumac	5.73	272	*e*Pn	Pn	18 35 44.0	+11
	77nm,1.1s						
DZM				*e*LR	LR	18 36 44.6	
	4µm,24.2s						
DZM	Mont Dzumac	5.73	272	Pn	Pn	18 35 29.8	-3.1
MSVF	Nonsavu	6.87	49		Pn	18 35 43.4	-5.2
URZ	Urewera	16.30	167	LR	LR	18 42 25.0	
	comp=Z,446nm,20.5s,baz=342,slow=31						
LTZ	Lake Taylor	20.36	181	Pn	Pn	18 38 47.3	+1.5
GVZ	Greta Valley S	20.55	179	P	P	18 38 45.8	+0.2
GVZ				IAmb	IAmb	18 38 51.9	
	comp=Z,143nm,1.7s						
OXZ	Oxford	20.91	181	P	Pn	18 38 51.6	-0.5
MLZ	Mavora Lakes	23.24	188	P	P	18 39 16.2	+2.0
MLZ				IAmb	IAmb	18 39 35.6	
	comp=Z,53nm,1.8s						
CAN	Canberra	24.32	233	P	P	18 39 25.6	+1.0
CTA	Charters Tower	24.68	270	LR	LR	18 49 44.7	
	comp=Z,1µm,18.0s,baz=112,slow=37						
RAR	Rarotonga	25.65	93	LR	LR	18 48 59.0	
	comp=Z,229nm,18.2s,baz=293,slow=36						
PMG	Port Moresby	27.61	294	LR	LR	18 50 24.6	
	comp=Z,419nm,19.0s,baz=158,slow=34						
TOO	Toolangi	27.84	231		P	18 39 55.3	-1.0
BBOO	Buckleboo	33.89	244	P	P	18 40 49.0	-0.7
BBOO				IAmb	IAmb	18 41 55.0	
	comp=Z,40nm,1.6s						
TBI	Tubuai	34.89	99	*e*LR	LR	18 50 04.9	
	comp=Z,3µm,26.8s						
WR8	Warramunga Arr	35.57	267	P	P	18 41 03.5	-0.9
AS31	Alice Springs	35.59	260		P	18 41 04.3	-0.2
AS31				IAmb	IAmb	18 41 12.9	
	comp=Z,2.1nm,0.9s						
ASAR	Alice Springs	35.59	260	LR	LR	18 56 05.4	
	comp=Z,656nm,18.7s,baz=109,slow=36						
ASAR	Alice Springs	35.59	260		P	18 41 03.2	-1.3
WB0	Warramunga Arr	35.71	267	P	P	18 41 04.1	-1.5
WRA	Warramunga Arr	35.72	267	P	P	18 41 10.8	+5.1
	comp=Z,2.3nm,0.8s,baz=101,slow=8.5,SNR=9.0						

	comp=Z,2.3nm,0.8s						
WRA	Warramunga Arr	35.72	267	P	P	18 41 03.5	-2.2
PPT2	Papeete2	35.78	89	*e*LR	LR	18 50 26.5	
	comp=Z,453nm,24.2s						
PPT2				*e*LR	LR	18 50 32.8	
	comp=Z,519nm,23.2s						
PPT	Papeete	35.78	89	LR	LR	18 51 12.8	
	comp=Z,371nm,20.5s,baz=272,slow=30						
JAY	Jayapura	36.73	298	LR	LR	18 56 21.7	
	comp=Z,428nm,19.7s,baz=152,slow=36						
MTN	Manton Dam	40.55	276		P	18 41 44.6	-1.7
KNRA	Kununurra	41.88	271	P	P	18 41 56.2	-1.1
FITZ	Fitzroy Crossi	44.15	267		P	18 42 14.7	-1.0
FITZ				IAmb	IAmb	18 42 24.3	
	comp=Z,2.0nm,0.8s						
GUMO	Guam	44.91	320	LR	LR	18 59 28.7	
	comp=Z,150nm,21.5s,baz=168,slow=34						
TAOE	Nuku Hiva Isla	47.23	81	*e*LR	LR	18 55 48.0	
	comp=Z,437nm,23.6s						
SOEI	Soe	47.93	277	P	P	18 42 46.2	+0.5
BATI	Baumata	48.33	276	P	P	18 42 55.2	+6.6
	comp=Z,26nm,0.8s,baz=352,slow=1.6,SNR=8.7						
BATI				LR	LR	19 04 54.0	
	comp=Z,478nm,18.1s,baz=152,slow=38						
	comp=Z,26nm,0.8s						
MMRI	Maumere	50.20	278		P	18 43 06.2	+3.3
VNDA	Vanda	55.45	183	LR	LR	19 03 22.0	
	comp=Z,59nm,22.0s,baz=27,slow=32						
JAGI	Jajag, Banyuwa	57.71	274	P	P	18 43 59.5	+1.7
JOW	Kunigami	65.06	316	LR	LR	19 09 57.2	
	comp=Z,75nm,21.0s,baz=96,slow=33						
MJAR	Matsushiro Arr	67.00	330	P	P	18 45 02.4	+2.9
	comp=Z,3.8nm,1.0s,baz=148,slow=6.4,SNR=5.3						
	comp=Z,3.8nm,1.0s						
MJAR	Matsushiro Arr	67.00	330	P	P	18 44 58.9	-0.6
MJAR				IAmb	IAmb	18 45 50.3	
	comp=Z,11nm,1.6s						
QSPA	South Pole Qui	67.71	180		P	18 45 04.3	+0.6
QSPA				IAmb	IAmb	18 45 05.7	
	comp=Z,17nm,1.4s						
KSRS	Korea Array	72.87	324	P	P	18 45 38.2	+2.8
	comp=Z,1.8nm,0.9s,baz=143,slow=6.4,SNR=5.4						
	comp=Z,1.8nm,0.9s						
NJ2	Nanjing	74.64	315	*e*P	P	18 45 47.5	+1.5
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
IPM	Ipoh	74.81	281	P	P	18 45 46.5	-1.0
IPM				IAmb	IAmb	18 45 58.1	
	comp=Z,14nm,0.9s						
USRK	Ussuriysk Ar.	75.97	331	P	P	18 45 54.5	+1.1
	comp=Z,3.7nm,0.8s,baz=139,slow=9.1,SNR=4.1						
	comp=Z,3.7nm,0.8s						
PSI	Prapat	76.05	279	LR	LR	19 22 23.7	
	comp=Z,98nm,18.3s,baz=161,slow=38						
CN2	Changchun	78.78	327	P	P	18 46 10.8	+1.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BNX	BinXian	79.25	330	⇑P	P	18 46 14.0	+2.4
BNX				pmax	pmax		
	comp=Z,10.0nm,1.1s						
XAN	Xi'an	82.54	311	⇑P	P	18 46 32.0	+2.4
XAN				pP	PcP	18 46 36.5	+1.9
XAN				pmax	pmax		
	comp=Z,4.0nm,1.4s						
HEH	HeiHe	82.61	333	*e*P	P	18 46 30.5	+1.1
CMAR	Chiang Mai Arr	82.66	293	P	P	18 46 35.0	+4.6
	comp=Z,4.3nm,0.9s,baz=129,slow=3.9,SNR=30						
	comp=Z,4.3nm,0.9s						
CHTO	Chiang Mai	82.81	294		P	18 46 31.5	+0.3
CHTO				IAmb	IAmb	18 46 42.2	
	comp=Z,13nm,1.1s						
ELIB	Princess Elisa	83.61	189	*d*P	P	18 46 35.0	+0.3
	comp=Z,1.9nm,1.4s						
PZH	PanZhiHua	84.04	302	P	P	18 46 39.0	+1.4
HHC	Hu-ho-hao-te	84.65	318	*e*P	P	18 46 44.3	+4.0
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,87nm,4.3s						
KDAK	Kodiak Island	84.97	18	LR	LR	19 18 40.7	
	comp=Z,149nm,19.5s,baz=207,slow=32						
CMB	Columbia Colle	86.93	47	IAmb	IAmb	18 47 00.1	
	comp=Z,12nm,1.4s						
ORV	Oroville	86.99	45	IAmb	IAmb	18 47 00.6	
	comp=Z,8.4nm,1.3s						
ISA	Isabella, Lake	87.03	50	P	P	18 46 52.1	-0.1
ISA				IAmb	IAmb	18 47 04.7	
	comp=Z,12nm,1.1s						
LZH	Lanzhou	87.16	311	*e*P	P	18 46 55.8	+2.9
LZH				pP	pP	18 47 01.5	-1.9
LZH				pmax	pmax		
	comp=Z,12nm,1.3s						
O03E	Paynes Creek	87.19	44	P	P	18 46 52.8	-0.1
O03E				IAmb	IAmb	18 47 01.6	
	comp=Z,17nm,1.4s						
NVAR	Mina Array Bea	88.54	47	P	P	18 46 56.1	-3.4
	comp=Z,0.7nm,0.8s,baz=220,slow=9.2,SNR=3.5						
	comp=Z,0.7nm,0.8s						
PRN	Pahroc Range	90.29	49	P	P	18 47 08.7	+1.0
PRN				IAmb	IAmb	18 47 20.6	
	comp=Z,13nm,1.5s						
WVOR	Wild Horse Val	90.33	44		P	18 47 08.7	+1.0
WVOR				IAmb	IAmb	18 47 16.3	
	comp=Z,13nm,1.4s						
LCMT	Little Creek M	91.39	50	P	P	18 47 13.4	+0.7
LCMT				IAmb	IAmb	18 47 21.1	
	comp=Z,11nm,1.5s						
SPR3	Spring Creek 3	91.53	48	IAmb	IAmb	18 47 22.2	
	comp=Z,8.2nm,1.3s						
X16A	Lo Mia Camp, P	91.54	53	IAmb	IAmb	18 47 21.9	
	comp=Z,6.4nm,1.2s						
CCUT	Cedar City	91.55	50	IAmb	IAmb	18 47 22.3	
	comp=Z,14nm,1.5s						
GTA	Gaotai	91.56	312	*e*P	P	18 47 16.3	+2.8
GTA				pP	pP	18 47 20.3	-3.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SONM	Songino Array	91.61	322	P	P	18 47 13.7	+0.2
	comp=Z,0.4nm,0.7s,baz=96,slow=6.0,SNR=4.5						
	comp=Z,0.4nm,0.7s						
SONM	Songino Array	91.61	322	IAmb	IAmb	18 47 21.2	
	comp=Z,6.8nm,1.5s						
KNB	Kanab	91.69	51	IAmb	IAmb	18 47 22.9	
	comp=Z,13nm,1.5s						
ELK	Elko	91.73	46	IAmb	IAmb	18 47 23.2	
	comp=Z,14nm,1.5s						
U15A	North Rim	91.81	51	IAmb	IAmb	18 47 23.5	
	comp=Z,8.6nm,1.0s						
RDOG	Red Dog Mine	91.94	9		P	18 47 11.7	-2.7
H03S2	Juan Fernandez	91.96	128	T	T	20 28 31.5	
	baz=240,slow=74,SNR=4.0						
H03S1	Juan Fernandez	91.97	128	T	T	20 28 34.3	
	baz=240,slow=74,SNR=5.3						
H03S3	Juan Fernandez	91.98	128	T	T	20 28 33.1	
	baz=240,slow=74,SNR=4.8						
ILAR	Eielson Array	92.30	16	P	P	18 47 12.4	-3.7
	comp=Z,0.8nm,0.8s,baz=228,slow=6.3,SNR=6.2						
ILAR				LR	LR	19 22 07.9	
	comp=Z,147nm,21.3s,baz=232,slow=31						
	comp=Z,0.8nm,0.8s						
MTPU	Mount Pierson	92.60	50	IAmb	IAmb	18 47 32.2	
	comp=Z,9.1nm,1.3s						
HMU	Henry Mountain	93.58	50	P	P	18 47 24.0	+1.0
Q16A	Castle Valley	93.70	49		P	18 47 23.4	-0.1
PLCA	Paso Flores	94.10	137	LR	LR	19 20 05.6	
	comp=Z,70nm,19.8s,baz=227,slow=30						
PALK	Pallekele	94.49	276	LR	LR	19 32 48.8	
	comp=Z,88nm,18.7s,baz=126,slow=37						
TASM	ASL Pad, Albuq	95.49	55	P	P	18 47 33.3	+1.5
TASM				IAmb	IAmb	18 47 38.7	
	comp=Z,4.2nm,1.2s						
ABQ	Albuquerque	95.49	55	P	P	18 47 32.1	+0.3
TXAR	Lajitas Array	95.50	61	P	P	18 47 27.8	-4.0
	comp=Z,0.3nm,0.8s,baz=202,slow=5.4,SNR=3.7						
	comp=Z,0.3nm,0.8s						
PDAR	Pinedale Array	96.44	46	LR	LR	19 27 38.7	
	comp=Z,78nm,18.3s,baz=264,slow=34						
INK	Inuvik	98.52	18	LR	LR	19 26 38.5	
	comp=Z,102nm,19.9s,baz=248,slow=32						
CMIG	Matias Romero	98.57	75	LR	LR	19 21 32.8	
	comp=Z,37nm,21.8s,baz=179,slow=29						
MKAR	Makanchi Array	106.17	314	Pdiff	Pdif	18 48 21.7	+2.6
	comp=Z,0.5nm,0.8s,baz=67,slow=11,SNR=3.8						
CFR	Carcaliu	143.16	317	⇓P	PKPdf	18 53 39.8	-0.6
SCHLR	Schela	143.23	317	⇓P	PKiKP	18 53 42.9	-0.9
TESR	Tescani	143.46	320	⇑P	PKPab	18 53 37.6	+0.4
ONER	Baraj Valea Uz	143.70	319	⇑P	PKPdf	18 53 41.0	-0.4
VRI	Vrincioaia	143.73	319	⇓P	PKPbc	18 53 39.3	+0.3
BURAR	Bucovina Array	143.73	322	⇓P	PKPdf	18 53 40.7	-0.8
PLOR	Plostina	143.78	319	⇓P	PKPdf	18 53 40.5	-1.1
COVR	Voineasa-Covas	144.06	319	⇑P	PKPbc	18 53 40.1	+0.1
TURR	Turia	144.07	319	⇓P	PKPdf	18 53 41.7	-0.4
OZUR		144.19	319	⇓P	PKPdf	18 53 42.0	-0.3
MLR	Muntele Rosu	144.39	318		PKPab	18 53 39.5	-1.4
MLR	Muntele Rosu	144.39	318	⇑P	PKPdf	18 53 42.0	-0.7
DOPR	Dopca	144.49	319	⇑P	PKPdf	18 53 42.7	-0.1
ARCR	ARCALIA	144.51	322	⇑P	PKPdf	18 53 42.9	+0.2
BMR	Baia Mare	144.67	323	⇑P	PKPdf	18 53 43.0	0.0
ELL	Elmali	144.78	302		PKPdf	18 53 44.0	+0.3
STHS	Stebnicka Huta	144.80	327	*e*PKP	PKPdf	18 53 43.7	+0.5
CJR	Cluj-Napoca	145.15	322	⇑P	PKPbc	18 53 42.9	-0.6
ARR	Arges	145.25	319	⇓P	PKPdf	18 53 45.6	+1.4
TNR	Turnu Rosu	145.32	320	⇓P	PKiKP	18 53 47.1	-1.1
MARR	Marisel-Cluj	145.44	322	⇓P	PKPab	18 53 45.1	+0.3
HUMR	Humele	145.46	318	⇓P	PKPab	18 53 45.4	+0.7
DRGR		145.61	322	⇑P	PKPbc	18 53 44.9	-0.1
LANS	Liptovska Anna	145.86	328	*e*PKP	PKiKP	18 53 47.9	-1.3
VLAD	Vladila	146.07	317	⇑P	PKPab	18 53 48.1	+1.1
STEB	Steborice	146.12	330	*e*PKP	PKPbc	18 53 46.2	-0.2
MORC	Moravsky Berou	146.33	330	⇓P	PKPbc	18 53 47.3	+0.2
MORC	Moravsky Berou	146.33	330	*e*PKP	PKPdf	18 53 46.2	+0.3
GZR	Gura Zlata	146.35	320	⇑P	PKPbc	18 53 47.3	-0.1
OSTC	Ostas	146.35	333	*e*PKP	PKPbc	18 53 47.0	-0.1
CHVC	Chvalec	146.40	333	*e*PKP	PKPbc	18 53 47.4	+0.2
PSZ	Piszkesteto	146.45	326		PKPdf	18 53 44.9	-1.3
PSZ	Piszkesteto	146.45	326	⇑P	PKPbc	18 53 47.8	+0.2
DPC	Dobruska-Polom	146.46	332	*e*PKP	PKPbc	18 53 47.4	0.0
MAUC	Maruska	146.49	330	*e*PKP	PKPbc	18 53 48.0	+0.4
SIRR	Siria	146.50	322	⇑P	PKPbc	18 53 47.7	+0.1
HERR	Herculane	146.84	320	⇑P	PKPbc	18 53 48.8	+0.1
BZS	Buzias	146.90	321	⇓P	PKPdf	18 53 46.6	-0.3
JAVC	Velka Javorina	146.92	329	*e*PKP	PKPab	18 53 49.9	-0.3
EKA	Eskdalemuir Ar	146.93	356	PKPbc	PKPdf	18 53 46.4	-0.2
	comp=Z,3.4nm,0.9s,baz=341,slow=2.3,SNR=11						
CLL	Collm	147.05	336		PKPdf	18 53 47.4	+0.5
CLL	Collm	147.05	336	*i* PKPbc	PKPdf	18 53 47.9	+1.0
	comp=Z,10.0nm,0.9s						
CLL				*i* PKPmax		18 53 53.1	
	comp=Z,24nm,1.3s						
PVCC	Panska Ves	147.06	334	*e*PKP	PKPbc	18 53 49.2	+0.1
VRAC	Vranov	147.10	331	⇑P	PKPab	18 53 50.1	-0.7
VRAC	Vranov	147.10	331	*e*PKP	PKPbc	18 53 48.9	-0.4
MDVR	Moldovita	147.32	320	⇑P	PKPbc	18 53 49.0	-1.0
KRUC	Moravsky	147.37	331	*e*PKP	PKPbc	18 53 49.5	-0.5
MODS	Modra-Piesok	147.45	329	*e*PKP	PKPbc	18 53 50.6	+0.3
PRU	Pruhonice	147.49	333	*e*PKP	PKPbc	18 53 50.2	-0.1
BOVS	Bovan	147.94	318	⇓P	PKPbc	18 53 51.1	-0.6
MORH	Mrgy, Hungar	148.20	325	⇓P	PKPbc	18 53 52.7	+0.4
RONA	Rosalia, Austr	148.39	329	*i* PKP	PKPbc	18 53 52.9	+0.1
	comp=Z,6.5nm,0.7s						
CONA	Conrad Observa	148.43	330	*i* PKP	PKPbc	18 53 52.8	-0.2
	comp=Z,11nm,0.9s						
CKRC	Cesky Krumlov	148.47	332	*e*PKP	PKPbc	18 53 53.1	+0.1
KHC	Kasperske Hory	148.55	333	*e*PKP	PKPbc	18 53 53.1	-0.1
GERES	GERESS Array B	148.72	333	PKPbc	PKPbc	18 53 53.2	-0.5
	comp=Z,3.9nm,0.8s,baz=41,slow=4.3,SNR=18						
GRF	Grafenberg Arr	149.03	336	*e*PKP	PKPbc	18 53 54.3	-0.1
	baz=36,slow=1.7						
ARSA	Arzberg	149.08	329	*i* PKP	PKPbc	18 53 54.8	+0.2
	comp=Z,5.6nm,1.3s						
MOA	Molln	149.22	331	*i* pPKP	PKPbc	18 53 54.6	-0.3
	comp=Z,9.2nm,1.4s						
BIOA	Bad Ischl, Aus	149.62	331	*i* pPKP	PKPbc	18 53 55.0	-0.9
	comp=Z,7.3nm,1.1s						
SOKA	Soboth	149.72	329	*i* pPKP	PKPbc	18 53 55.0	-1.3
	comp=Z,9.6nm,1.2s						
BTNL	Ternell	149.91	343	*d*PKP	PKPbc	18 53 55.1	-1.4
MEM	Membach	149.92	343	*d*PKP	PKPbc	18 53 55.5	-1.0
OBKA	Obir	150.07	329	*i* pPKP	PKPbc	18 53 56.3	-0.9
	comp=Z,5.4nm,1.1s						
LESA	Schwarzleotal	150.25	332	*i* pPKP	PKPbc	18 53 55.4	-2.1
	comp=Z,5.2nm,0.7s						
MYKA	Terra Mystica	150.41	330	*i* pPKP	PKPbc	18 53 56.9	-1.1
	comp=Z,5.9nm,0.7s						
BMRD	Maredsous	150.53	344	*d*PKP	PKPbc	18 53 57.6	-0.3
WLF	Walferdange	150.73	342		PKPbc	18 53 56.5	-2.0
WLF	Walferdange	150.73	342	*d*PKP	PKPbc	18 53 57.7	-0.8
WATA	Walderalm	150.79	333	*i* PKP	PKPbc	18 53 58.2	-0.7
	comp=Z,14nm,1.9s						
WTTA	Wattenberg	150.82	333	*i* pPKP	PKPbc	18 53 58.0	-1.1
	comp=Z,6.6nm,0.9s						
ABTA	Abfaltersbach	150.84	331	*i* pPKP	PKPbc	18 53 56.5	-2.5
	comp=Z,17nm,1.6s						
RETA	Reutte	151.00	334	*i* PKP	PKPbc	18 53 58.5	-0.8
	comp=Z,6.4nm,1.0s						
SQTA	Sankt Quirin	151.03	333	*i* pPKP	PKPbc	18 53 58.4	-1.1
	comp=Z,9.4nm,1.0s						
BFO	Black Forest	151.21	338		PKPdf	18 53 52.8	-1.0
FETA	Feichten	151.39	334	*i* pPKP	PKPbc	18 53 58.8	-1.6
	comp=Z,11nm,1.1s						
DAVA	Damuels	151.51	335	*i* PKP	PKiKP	18 54 01.0	0.0
	comp=Z,8.8nm,1.0s						
TUE	Stuetta	152.39	335		PKPbc	18 53 59.8	-2.9

*IDC **25** 18:40:30.3±2.8, 56.°99S×24.°57W, h0^{km}, mb4.0/2, mbtmp4.0/3, ML4.0/1, Error ellipse: s-maj=200.8km s-min=35.5km az=52.0*

*NEIC **25** 18:40:31.8±1.7, 57.°1S±0.°2×24.°4W±0.°3, h10^{km}±2^{km}, mb4.1/8, Error ellipse: s-maj=44.6km s-min=19.7km az=32.0*

ISC 25 18:40:31.4±1.3**, 57.°0S**±0.°2×**24.°4W**±0.°2**, h10**^{km}**, n19, σ0^{s}72**/18**, mb4.1**/4**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.39	287		Pn	18 42 19.7	+0.5
VNA1	Neumayer--Stat	15.33	160	P	Pn	18 44 08.3	+0.8
VNA3	Neumayer Olymp	15.58	162	P	Pn	18 44 10.8	+0.1
SNAA	Sanae	17.24	157	P	P	18 44 34.3	+0.9
SNAA	Sanae	17.24	157	P	P	18 44 32.6	-0.8
	0.6nm,0.3s,baz=329,slow=12,SNR=25						
	1.5nm,0.4s						
SNAA	Sanae	17.24	157	IAmb	IAmb	18 44 35.6	
	comp=Z,3.6nm,1.0s						
BELA	Belgrano 2	21.26	186	P	P	18 45 16.1	-1.1
PLCA	Paso Flores	33.71	279	P	P	18 47 13.2	+0.7
CPUP	Villa Florida	38.63	309	P	P	18 47 53.5	-1.1
	comp=Z,1.0nm,0.6s,baz=150,slow=8.3,SNR=5.3						
	comp=Z,1.0nm,0.6s						
CPUP	Villa Florida	38.63	309	P	P	18 47 54.5	-0.2
CPUP				IAmb	IAmb	18 48 11.5	
	comp=Z,5.9nm,1.4s						
PB07	IPOC Station P	48.36	297	P	P	18 49 12.2	-1.2
GO01	Chusmiza	49.79	300	P	P	18 49 24.4	-0.2
GO01				IAmb	IAmb	18 49 52.9	
	comp=Z,2.6nm,0.9s						
PB16	IPOC Station P	51.08	300	P	P	18 49 34.3	-0.3
PB16				IAmb	IAmb	18 49 58.0	
	comp=Z,3.3nm,1.4s						
LPAZ	La Paz	52.22	303	P	P	18 49 43.2	+0.1
	comp=Z,1.2nm,0.5s,baz=127,slow=4.9,SNR=4.9						
	comp=Z,1.2nm,0.5s						
LPAZ	La Paz	52.22	303	P	P	18 49 42.9	-0.2
LPAZ				IAmb	IAmb	18 49 43.7	
	comp=Z,1.5nm,0.7s						
A36M	Sachs Harbour	145.86	327	PKPdf	PKPab	19 00 09.7	+0.1
E25K	Arctic Village	151.92	317	PKPbc	PKiKP	19 00 26.1	+0.9
ILAR	Eielson Array	151.93	310	PKPbc	PKiKP	19 00 25.3	0.0
	comp=Z,0.6nm,0.5s,baz=109,slow=1.5,SNR=10.0						
ILAR	Eielson Array	151.93	310		PKiKP	19 00 25.5	+0.2

*SJA **25** 18:43:48.9±2.1, 22.°87S×68.°87W, h125^{km}, ML3.5, MW3.5*

*GUC **25** 18:43:50.0±0.6, 22.°93S×68.°86W, h108^{km}±5^{km}, ML3.7*

*IDC **25** 18:43:56.1±3.2, 22.°43S×68.°29W, h148^{km}±32^{km}, mb3.4/2, mbtmp3.8/5, Error ellipse: s-maj=49.8km s-min=27.3km az=126.0*

ISC 25 18:43:49.5±1.0**, 22.°87S**±0.°04×**68.°86W**±0.°05**, h122**^{km}±8^{km}**, n34, σ1^{s}10**/47**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AF01	San Pedro de A	0.63	97	*i* P	Pn	18 44 08.5	-0.4
AF01				*e*S	Sn	18 44 22.4	-1.0
AF01				IAML		18 44 37.8	
	comp=E,6μm,0.3s						
AF01	San Pedro de A	0.63	97	*i* P	Pn	18 44 07.7	-1.1
AF01				IAML		18 44 38.0	
	comp=Z,3μm,0.3s						
PB06	IPOC Station P	0.68	284	*i* P	Pn	18 44 09.7	+0.6
PB06				*e*S	Sn	18 44 24.1	+0.4
PB06				IAML		18 44 24.6	
	comp=N,7μm,0.1s						
PB06	IPOC Station P	0.68	284	*i* P	Pn	18 44 09.0	-0.1
PB06				IAML		18 44 24.5	
	comp=Z,1μm,0.1s						
PB06				*e*S	Sn	18 44 26.9	+3.1
PB09	IPOC Station P	1.13	341	*i* P	Pn	18 44 13.6	+0.5
PB09				*e*S	Sn	18 44 32.2	+1.2
PB09				IAML		18 44 33.1	
	comp=N,898nm,0.4s						
PB09	IPOC Station P	1.13	341	*i* P	Pn	18 44 13.7	+0.5
PB09				*e*S	Sn	18 44 31.8	+0.7
PB09				IAML		18 44 33.7	
	comp=Z,774nm,0.8s						
PB03	IPOC Station P	1.17	314	*i* P	Pn	18 44 14.5	+0.9
PB03				*e*S	Sn	18 44 32.2	+0.5
PB03				IAML		18 44 33.0	
	comp=E,3μm,0.1s						
PB03	IPOC Station P	1.17	314	*i* P	Pn	18 44 13.8	+0.2
PB03				*e*S	Sn	18 44 32.1	+0.5
PB03				IAML		18 44 34.0	
	comp=Z,2μm,0.1s						
PB05	IPOC Station P	1.24	271	*i* P	Pn	18 44 15.1	+0.8
PB05				*e*S	Sn	18 44 33.3	+0.3
PB05				IAML		18 44 35.1	
	comp=N,603nm,0.2s						
PB05	IPOC Station P	1.24	271	*i* P	Pn	18 44 14.4	+0.2
PB05				IAML		18 44 34.7	
	comp=Z,363nm,0.9s						
PB05				*e*S	Sn	18 44 34.8	+1.7
PB07	IPOC Station P	1.49	320	*i* P	Pn	18 44 18.2	+1.1
PB07				*e*S	Sn	18 44 38.5	+0.5
PB07				IAML		18 44 39.3	
	comp=E,2μm,0.3s						
PB07	IPOC Station P	1.49	320	*i* P	Pn	18 44 17.5	+0.4
PB10	IPOC Station P	1.69	247	*i* P	Pn	18 44 19.3	+0.1
PB10				IAML		18 44 43.1	
	comp=Z,156nm,0.3s						
PB02	IPOC Station P	1.82	328	*i* P	Pn	18 44 21.9	+1.0
PB02				*e*S	Sn	18 44 45.3	+0.3
PB02				IAML		18 44 47.9	
	comp=E,2μm,0.2s						
PB02	IPOC Station P	1.82	328	*i* P	Pn	18 44 21.5	+0.6
PB02				IAML		18 44 48.5	
	comp=Z,1μm,0.2s						
PB01	IPOC Station P	1.91	342	*i* P	Pn	18 44 23.0	+0.9
PB01				*e*S	Sn	18 44 47.6	+0.7
PB01				IAML		18 44 48.4	
	comp=E,1μm,0.3s						
PB01	IPOC Station P	1.91	342	*i* P	Pn	18 44 22.5	+0.4
PB01				IAML		18 44 48.1	
	comp=Z,573nm,0.4s						
PB14	IPOC Station P	2.25	219	*i* P	Pn	18 44 27.1	+0.6
PB14				*e*S	Sn	18 44 54.8	0.0
PB14				IAML		18 44 59.6	
	comp=N,96nm,0.4s						
PB14	IPOC Station P	2.25	219	*i* P	Pn	18 44 26.5	0.0
PB14				IAML		18 45 00.4	
	comp=Z,209nm,0.6s						
PATCX	Punta Patache	2.37	329	*i* P	Pn	18 44 27.8	0.0
PATCX				IAML		18 45 05.6	
	comp=Z,189nm,0.3s						
GO02	Mina Guanaco	2.38	196	*i* P	Pn	18 44 28.9	+0.8
GO02				*e*S	Sn	18 44 57.7	+0.1
GO02				IAML		18 45 06.8	
	comp=E,383nm,0.3s						
GO02	Mina Guanaco	2.38	196	*i* P	Pn	18 44 28.9	+0.8
GO02				IAML		18 45 02.8	
	comp=Z,278nm,0.5s						
TA01	Diego Aracena	2.60	332	*i* P	Pn	18 44 30.3	-0.4
TA01				IAML		18 45 22.3	
	comp=Z,82nm,0.3s						
SALTA		2.67	121	*i* P	Pn	18 44 34.2	+2.2
GO01	Chusmiza	3.20	354	*i* P	Pn	18 44 39.5	+0.6
GO01				IAML		18 45 18.9	
	comp=Z,98nm,0.3s						
AC01	Pan de Azucar	3.63	206	*i* P	Pn	18 44 42.9	-1.2
AC01				IAML		18 45 35.1	
	comp=Z,38nm,0.2s						
AZAP	Zapla	3.73	112	*i* P	Pn	18 44 48.5	+2.8
AZAP				IAML		18 45 35.1	
	comp=Z,14nm,1.3s						
AC02	Maricunga	3.96	184	*i* P	Pn	18 44 49.0	+0.1
AC02				IAML		18 46 01.7	
	comp=Z,40nm,0.6s						
PB16	IPOC Station P	4.55	352	*i* P	Pn	18 44 58.1	+1.0
PB16				IAML		18 45 55.4	
	comp=Z,27nm,0.7s						
LPAZ	La Paz	6.58	6	P	Pn	18 45 25.3	+0.9
	comp=Z,0.8nm,0.3s,baz=183,slow=6.4,SNR=4.5						
SIV	San Ignacio	10.04	48	P	Pn	18 46 07.7	-2.8
	comp=Z,1.0nm,0.3s,baz=239,slow=8.0,SNR=8.3						
SIV				S	Sn	18 47 50.7	-11
	comp=Z,1.0nm,0.5s,baz=128,slow=22,SNR=8.2						
PLCA	Paso Flores	17.87	184	P	Pn	18 47 59.0	+8.7
	comp=Z,4.5nm,1.3s,baz=337,slow=7.8,SNR=3.0						
BDFB	Brasilia	20.93	74	P	P	18 48 21.5	-1.4
	comp=Z,1.7nm,0.7s,baz=247,slow=5.9,SNR=3.7						
	comp=Z,1.7nm,0.7s						
TORD	Torodi Ar. Bea	77.77	70	P	P	18 55 33.7	0.0
	comp=Z,1.3nm,0.5s,baz=244,slow=4.7,SNR=9.6						
	comp=Z,1.3nm,0.5s						

*IDC **25** 18:48:10.3±6.5, 21.°79S×173.°69E, h0^{km}, mb4.2/3, mbtmp4.2/3, MS3.6/4, Error ellipse: s-maj=268.4km s-min=52.4km az=150.0*

*NEIC **25** 18:48:15.5±1.6, 21.°1S±0.°2×173.°3E±0.°1, h10^{km}±2^{km}, mb4.3/8, Error ellipse: s-maj=26.4km s-min=21.6km az=191.0*

ISC 25 18:48:13.1±3.2**, 21.°2S**±0.°5×**173.°5E**±0.°4**, h10**^{km}**, n19, σ1^{s}07**/15**, mb4.2**/7**, MS3.5**/3**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINNC	Pines Island,	5.77	255	Pn	Pn	18 49 39.2	+0.3
DZM	Mont Dzumac	6.60	261	Pn	Pn	18 49 50.8	+0.4
URZ	Urewera	17.27	170	LR	LR	18 56 34.6	
	comp=Z,245nm,20.7s,baz=9.5,slow=30						
RAR	Rarotonga	24.92	95	LR	LR	19 00 40.7	
	comp=Z,156nm,21.9s,baz=281,slow=30						
CTA	Charters Tower	25.49	268	LR	LR	19 02 55.6	
	comp=Z,145nm,18.3s,baz=46,slow=34						
PMG	Port Moresby	27.92	291	LR	LR	19 03 01.7	
	comp=Z,95nm,18.6s,baz=164,slow=32						
WR8	Warramunga Arr	36.45	265	P	P	18 55 16.8	-1.7
WR8				IAmb	IAmb	18 55 24.7	
	comp=Z,4.0nm,0.9s						
AS31	Alice Springs	36.58	259	P	P	18 55 18.9	-0.7
WB0	Warramunga Arr	36.58	265	P	P	18 55 19.0	-0.6
WB0				IAmb	IAmb	18 55 25.5	
	comp=Z,4.3nm,0.8s						
ASAR	Alice Springs	36.58	259	P	P	18 55 19.1	-0.5
	comp=Z,2.5nm,0.8s,baz=98,slow=10,SNR=21						
	comp=Z,2.5nm,0.8s						
WRAB	Tennant Creek	36.60	265	P	P	18 55 18.5	-1.2
WRAB				IAmb	IAmb	18 55 28.9	
	comp=Z,5.3nm,1.2s						
WRA	Warramunga Arr	36.60	265	P	P	18 55 19.5	-0.3
	comp=Z,2.3nm,0.7s,baz=102,slow=8.2,SNR=8.7						
	comp=Z,2.3nm,0.7s						
WRA	Warramunga Arr	36.60	265	P	P	18 55 17.9	-1.9
FITZ	Fitzroy Crossi	45.03	265	P	P	18 56 30.7	+1.4
FITZ				IAmb	IAmb	18 56 37.4	
	comp=Z,3.7nm,0.9s						
MBWA	Marble Bar	49.90	260	P	P	18 57 07.6	+0.4
HKPS	Hong Kong Po S	72.24	303	P	P	18 59 37.7	-1.2
KSAR	Wonju Array Be	72.44	323	P	P	18 59 40.4	+0.7
CMAR	Chiang Mai Arr	82.94	293	P	P	19 00 39.3	+0.5
	comp=Z,0.7nm,0.3s,baz=104,slow=6.2,SNR=4.1						
	comp=Z,0.7nm,0.3s						
GERES	GERESS Array B	148.05	334	PKPbc	PKPbc	19 07 59.0	0.0
	comp=Z,0.6nm,0.8s,baz=19,slow=3.5,SNR=3.4						

*SSNC **25** 18:51:43.8±4.4, 17.°26N×70.°35W, h0^{km}±911^{km}, mb4.7, MD3.4, ML3.1*

*OSPL **25** 18:51:48.1±2.0, 18.°62N×69.°40W, h100^{km}±14^{km}, ML3.1, Presumed earthquake*

*SDD **25** 18:51:48.5±2.2, 18.°78N×69.°42W, h98^{km}±7^{km}, MD3.5, ML3.2, MW3.5, Presumed earthquake*

ISC 25 18:51:42.8±1.3, 18°.88N±0°.05×69°.44W±0°.03, h131^{km}±7^{km}, n34, σ2^{s}.32/62, 1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATOM	Hato Mayor del	0.11	148	*e*Pg	Pn	18 52 00.3	-0.3
HATOM				*e*Sg	Sn	18 52 10.8	-3.4
HATOM				IAML		18 52 12.0	
	comp=N,1μm,0.2s						
MIDR	Miches	0.39	74	*e*Pg	Pn	18 52 01.9	+0.6
MIDR				*e*Pg		18 52 01.9	
MIDR				*e*Sg	Sn	18 52 13.6	-1.9
MIDR				*e*Sg		18 52 13.7	
MIDR				IAML		18 52 15.3	
	comp=N,501nm,0.2s						
MIDR				IAML		18 52 15.3	
	comp=N,1μm,0.2s						
DR08	Loma La Naviza	0.56	279	*e*Pg	Pn	18 52 03.3	+1.0
DR08				*e*Sg	Sn	18 52 16.0	-1.2
DR08				IAML		18 52 17.2	
	comp=N,40μm,0.2s						
SDD	Santo Domingo	0.61	227	*i* P	Pn	18 52 02.4	-0.3
SDD				*e*S	Sn	18 52 14.1	-3.6
NADR	Nagua	0.61	320	*e*Pg	Pn	18 52 04.5	+1.8
NADR				*e*Pg		18 52 19.4	
NADR				IAML		18 52 20.0	
	comp=N,4μm,0.2s						
NAG1	Nagua	0.62	320	*e*Pg	Pn	18 52 04.5	+1.7
NAG1				*e*Sg	Sn	18 52 17.5	-0.3
HGY1	Higuey	0.74	112	*e*Pg	Pn	18 52 03.8	+0.2
HGY1				*e*Sg	Sn	18 52 16.5	-2.9
HGY1				IAML		18 52 19.0	
	comp=N,885nm,0.2s						
HIDR	Higuey Centro	0.74	112	*e*Pg	Pn	18 52 04.3	+0.7
HIDR				*e*Sg	Sn	18 52 16.5	-2.8
HIDR				IAML		18 52 19.0	
	comp=N,2μm,0.2s						
CADR	Cabrera	0.92	329	*e*Pg	Pn	18 52 07.3	+2.3
CADR				*e*Sg	Sn	18 52 23.5	+1.5
CADR				IAML		18 52 24.6	
	comp=N,983nm,0.2s						
ABDR	Alto Bandera	1.12	267	*e*Pg	Pn	18 52 09.2	+1.8
ABDR				*e*Sg	Sn	18 52 26.3	+0.3
ABDR				IAML		18 52 44.7	
	comp=N,0.3nm,0.6s						
SC01	Santiago de lo	1.33	294	*i* P	Pn	18 52 12.7	+3.5
SC01				*e*S	Sn	18 52 33.2	+4.0
SC01				IAML		18 52 39.8	
	comp=Z,231nm,0.3s						
BRH1	Barahona	1.70	247	*e*Pg	Pn	18 52 14.8	+1.6
BRH1				*e*Sg	Sn	18 52 35.9	-0.6
LUDR	Luperon	1.75	306	*e*Pg	Pn	18 52 17.1	+3.3
LUDR				*e*Sg	Sn	18 52 38.8	+1.3
SDDR	Presa de Saban	1.75	274	*e*P	Pn	18 52 17.6	+3.7
SDDR				*e*S	Sn	18 52 38.5	+0.9
SDDR				IAML		18 52 43.4	
	comp=Z,150nm,0.6s						
SDDR				IAML		18 52 44.4	
	comp=Z,163nm,0.5s						
SDDR	Presa de Saban	1.75	274	*i* P	Pn	18 52 17.3	+3.4
SDDR				*e*S	Sn	18 52 39.1	+1.5
SDDR				IAML		18 52 43.7	
	comp=Z,92nm,0.3s						
PODR	Polo	1.88	248	*i* P	Pn	18 52 17.4	+1.8
PODR				*e*S	Sn	18 52 40.0	-0.7
LOPP1	Punta Rusia, P	1.92	301	*i* P	Pn	18 52 19.4	+3.6
LONE3	El Aguacate, B	1.93	262	*i* P	Pn	18 52 18.9	+2.8
LODU1	El Espartillar	2.00	255	*i* P	Pn	18 52 19.6	+2.9
LOVI	El Cajuil, Ovi	2.12	240	*i* P	Pn	18 52 19.5	+1.2
LOVI				*e*S	Sn	18 52 43.9	-1.7
LOVI				IAML		18 52 47.7	
	comp=Z,114nm,0.2s						
AGPR	Aguadilla, PR	2.25	100	*e*Pg	Pn	18 52 21.9	+2.1
AGPR				*e*Sg	Sn	18 52 48.2	-0.1
AGPR				IAML		18 52 59.0	
	comp=N,187nm,0.7s						
JIDR	Jimani	2.32	261	*e*Pg	Pn	18 52 24.1	+3.5
JIDR				*e*Sg	Sn	18 52 51.6	+1.7
JIDR				IAML		18 52 55.2	
	comp=N,77nm,0.3s						
CRPR	Cabo Rojo, PR	2.38	111	*e*Pg	Pn	18 52 23.4	+2.0
CRPR				*e*Sg	Sn	18 52 52.4	+1.2
CRPR				IAML		18 52 56.8	
	comp=N,58nm,0.9s						
CRPR	Cabo Rojo, PR	2.38	111	*i* P	Pn	18 52 23.9	+2.4
MLPR	Magueyes Islan	2.45	111	*e*Pg	Pn	18 52 24.2	+1.8
MLPR				*e*Sg	Sn	18 52 52.3	-0.5
MLPR				IAML		18 53 01.3	
	comp=N,16nm,0.3s						
AOPR	Arecibo Observ	2.60	101	*e*Pg	Pn	18 52 26.4	+2.1
AOPR				*e*Sg	Sn	18 52 56.5	+0.1
AOPR				IAML		18 53 08.8	
	comp=N,363nm,0.3s						
GRTK	Grand Turk	3.06	329	*e*P	Pn	18 52 27.2	-3.0
GRTK				*e*S	Sn	18 53 07.3	+0.4
MASC	Masc	4.70	287	*e*P	Pn	18 52 53.1	+1.3
MASC				⇓*e*S	Sn	18 53 43.6	-1.9
MASC				IAML		18 53 47.8	
	comp=N,6.2nm,0.2s						
MASC				IAML		18 53 49.5	
	comp=E,9.6nm,0.5s						
QMBU	Quimbuelo	5.23	285	*e*P	Pn	18 52 58.8	-0.3
QMBU				*e*S	Sn	18 53 55.9	-2.6
QMBU				IAML		18 54 06.9	
	comp=N,14nm,1.6s						
QMBU				IAML		18 54 09.3	
	comp=E,17nm,1.1s						
GTBY	Guantanamo Bay	5.45	282	*e*P	Pn	18 53 01.3	-0.6
GTBY				*e*S	Sn	18 54 02.3	-1.4
NMDO	Nuevo Mundo	5.48	289	*e*P	Pn	18 52 59.2	-3.1
NMDO				*e*S	Sn	18 54 01.7	-2.6
NMDO				IAML		18 54 06.0	
	comp=N,6.1nm,0.3s						
NMDO				IAML		18 54 08.3	
	comp=E,6.8nm,0.2s						
MOAC	Moa	5.49	290	*e*P	Pn	18 53 00.6	-1.9
MOAC				*e*S	Sn	18 54 03.1	-1.5
MOAC				IAML		18 54 05.4	
	comp=N,7.3nm,0.2s						
MOAC				IAML		18 54 06.6	
	comp=E,3.3nm,0.4s						
RCC	Rio Carpintero	6.01	282	*e*P	Pn	18 53 09.9	+0.6
RCC				*e*S	Sn	18 54 15.9	-1.1
PINC	Pinares de May	6.19	286	*e*P	Pn	18 53 07.1	-4.8
PINC				*e*S	Sn	18 54 14.3	-7.2
PINC				AMP		18 54 19.9	
	comp=N,2.8nm,0.2s						
PINC				IAML		18 54 22.8	
	comp=E,3.1nm,0.4s						

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*IDC **25** 19:11:01.3±1.1, 54°.07S×140°.87E, h0^{km}, mb3.8/5, mbtmp3.8/5, MS3.7/2, Error ellipse: s-maj=82.4km s-min=22.5km az=81.0*

*NEIC **25** 19:11:02.2±2.1, 54°.1S±0°.1×141°.4E±0°.6, h10^{km}±2^{km}, mb4.1/12, Error ellipse: s-maj=56.7km s-min=18.2km az=85.0*

ISC 25 19:11:02.2±0.8, 54°.04S±0°.10×141°.1E±0°.4, h10^{km}, n28, σ0^{s}.97/18, mb4.0/10, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MGBR	Mount Gambier	16.32	358	Pn	Pn	19 14 49.8	-1.5
TOO	Toolangi	16.74	12	Pn	Pn	19 14 56.4	-0.3
STKA	Stephens Creek	22.15	1	P	P	19 15 58.4	+0.3
	5.9nm,1.0s,baz=165,slow=10,SNR=6.6						
	5.9nm,1.0s						
STKA	Stephens Creek	22.15	1	P	P	19 15 57.7	-0.3
VNDA	Vanda	24.74	169	P	P	19 16 23.0	-0.3
	0.8nm,0.8s,baz=324,slow=6.9,SNR=5.5						
	0.8nm,0.8s						
VNDA	Vanda	24.74	169	IAmb	IAmb	19 16 41.2	
	comp=Z,2.4nm,0.9s						
H01W1	Cape Leeuwin H	26.88	304	T	T	19 44 34.9	
	baz=142,slow=74,SNR=16						
H01W2	Cape Leeuwin H	26.88	304	T	T	19 44 36.3	
	baz=142,slow=74,SNR=16						
H01W3	Cape Leeuwin H	26.89	304	T	T	19 44 36.0	
	baz=142,slow=74,SNR=12						
URZ	Urewera	29.11	72	LR	LR	19 27 50.5	
	comp=Z,173nm,18.1s,baz=207,slow=34						
ASAR	Alice Springs	30.81	347	P	P	19 17 19.0	+0.9
	comp=Z,1.1nm,0.7s,baz=165,slow=9.8,SNR=17						
	comp=Z,1.1nm,0.7s						
AS31	Alice Springs	30.81	347	P	P	19 17 18.9	+0.8
WR8	Warramunga Arr	34.40	349	P	P	19 17 48.5	-1.0
WR8				IAmb	IAmb	19 18 06.7	
	comp=Z,6.5nm,1.4s						
WRA	Warramunga Arr	34.43	349	P	P	19 17 49.1	-0.6
	comp=Z,1.7nm,0.8s,baz=172,slow=7.5,SNR=5.7						
	comp=Z,1.7nm,0.8s						
WRA	Warramunga Arr	34.43	349	IAmb	IAmb	19 17 49.6	
	comp=Z,0.5nm,1.0s						
WRAB	Tennant Creek	34.44	349	P	P	19 17 49.7	-0.1
WRAB				IAmb	IAmb	19 17 57.3	
	comp=Z,3.5nm,0.9s						
WB0	Warramunga Arr	34.60	349	P	P	19 17 50.5	-0.7
WB0				IAmb	IAmb	19 17 52.6	
	comp=Z,3.6nm,1.0s						
QSPA	South Pole Qui	36.07	180	P	P	19 18 02.4	-1.3
QSPA				IAmb	IAmb	19 18 04.9	
	comp=Z,3.8nm,1.0s						
MAW	Mawson	37.63	218	LR	LR	19 32 06.8	
	comp=Z,78nm,20.5s,baz=112,slow=34						
FITZ	Fitzroy Crossi	37.81	336	P	P	19 18 18.2	-0.5
FITZ				IAmb	IAmb	19 18 23.5	
	comp=Z,2.6nm,1.4s						
SNAA	Sanae	52.04	194	P	P	19 20 11.7	+0.4
H04S1	CROZET ISLANDS	53.64	238	T	T	20 18 39.8	
	baz=131,slow=75,SNR=11						
H04S2	CROZET ISLANDS	53.64	238	T	T	20 18 40.6	
	baz=131,slow=75,SNR=16						
H04S3	CROZET ISLANDS	53.66	238	T	T	20 18 35.4	
	baz=131,slow=75,SNR=9.2						
CMAR	Chiang Mai Arr	80.75	320	P	P	19 23 16.1	+0.6
	comp=Z,0.2nm,0.3s,baz=178,slow=6.7,SNR=4.3						
	comp=Z,0.2nm,0.3s						
TXAR	Lajitas Array	127.81	91	PKP	PKiKP	19 30 09.7	+1.4
	comp=Z,0.2nm,0.6s,baz=167,slow=5.9,SNR=3.5						
ARCES	ARCESS Array B	147.74	324	PKPbc	PKPbc	19 30 47.4	+1.9
	comp=Z,3.7nm,1.1s,baz=90,slow=0.4,SNR=3.7						
ESDC	Sonseca Array	152.47	253	PKPbc	PKPbc	19 30 57.7	-0.3
	comp=Z,0.4nm,0.6s,baz=104,slow=0.9,SNR=4.8						

IDC 25 19:20:16.7±6.4, 21°.36S×173°.15E, h0^{km}, mb3.3/2, mbtmp3.3/2, MS3.5/2, Error ellipse: s-maj=312.5km s-min=43.7km az=152.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	25.18	268	LR	LR	19 34 51.2	
	comp=Z,65nm,18.3s,baz=40,slow=35						
ASAR	Alice Springs	36.25	259	P	P	19 27 22.1	+0.2
	0.4nm,0.9s,baz=89,slow=8.8,SNR=5.4						
	0.4nm,0.9s						
WRA	Warramunga Arr	36.28	265	P	P	19 27 21.7	-0.5
	0.3nm,0.8s,baz=98,slow=8.3,SNR=0.9						
	0.3nm,0.8s						
BATI	Baumata	48.71	275	LR	LR	19 49 21.5	
	comp=Z,88nm,18.2s,baz=238,slow=36						
EKA	Eskdalemuir Ar	145.97	356	PKPbc	PKPdf	19 39 57.2	-0.1
	1.5nm,0.8s,baz=26,slow=2.1,SNR=4.7						
GERES	GERESS Array B	148.04	334	PKPbc	PKPbc	19 40 03.6	-0.7
	0.5nm,0.8s,baz=29,slow=2.4,SNR=3.7						

KRSC 25 19:39:58.5±0.7, 55°.57N×162°.63E, h20^{km}±21^{km}, Ml3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.65	9	*e*P	Pb	19 40 10.8	-0.4
KBTR				*e*S	Sb	19 40 19.7	-0.1
KBG	Krutoberegovo	0.69	3	*e*P	Pb	19 40 11.3	-0.6
KBG				*e*S	Sb	19 40 20.7	-0.2
BZGR	Bezymyannyi-Gr	1.16	290	*e*P	Pn	19 40 19.4	-0.2
BZGR				*e*S	Sn	19 40 34.9	0.0
SMKR	Semkarok	1.21	328	*e*P	Pn	19 40 19.8	-0.5
TUMD	Tumrok D	1.33	255	*e*P	Pb	19 40 23.1	+0.4
TUMD				*e*S	Sb	19 40 40.1	+0.8
KLY	Klyuchi	1.34	305	*e*P	Pn	19 40 20.5	-1.6
KLY				*e*S	Sn	19 40 36.4	-2.9
KIRR	Kirishev	1.35	288	*e*P	Pb	19 40 23.0	-0.2
KIRR				*e*S	Sg	19 40 41.3	-1.1
KMNR	Kamenistaya	1.37	279	*e*P	Pb	19 40 23.9	+0.4
KMNR				*e*S	Sg	19 40 42.2	-0.7
KZV	Kizimen	1.41	252	*e*P	Pb	19 40 24.3	+0.1
KZV				*e*S	Sb	19 40 41.7	-0.2
KOZ	Kozyrevsk	1.63	289	*e*P	Pb	19 40 27.6	-0.3
KOZ				*e*S	Sb	19 40 49.6	+1.5
SRDR	Sredinnyy	1.80	296	*e*S	Sb	19 40 53.1	+0.1
BKI	Bering	1.94	99	*e*P	Pb	19 40 33.3	+0.2
BKI				*e*S	Sb	19 40 58.3	+1.5
ESO	Esso	2.25	281	*e*P	Pb	19 40 36.9	-1.6
SPN	Mys Shipunski	2.91	213	*e*S	Sn	19 41 18.0	0.0
SDLR	Sedlovina	3.17	225	*e*P	Pn	19 40 49.7	+2.4
SDLR				*e*S	Sn	19 41 27.3	+2.6
AVH	Avacha	3.24	226	*e*P	Pb	19 40 52.7	-2.6
PET	Petropavlovsk	3.45	224	*e*P	Pn	19 40 53.4	+2.3
PET				*e*S	Sn	19 41 34.0	+2.6
KRMR	Karymshinskiy	3.81	226	*e*P	Pn	19 41 00.2	+4.2
KRMR				*e*S	Sn	19 41 45.1	+4.9
GRL	Gorelyy	4.04	224	*e*P	Pb	19 41 04.9	-4.2
MTVR	Mutnovka	4.05	222	*e*P	Pn	19 41 03.0	+3.5

IDC 25 19:40:16.6±11.0, 2°.84N×95°.70E, h0^{km}, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=598.2km s-min=26.2km az=55.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	44.17	123	P	P	19 48 26.9	-0.7
	0.8nm,0.9s,baz=304,slow=7.5,SNR=3.0						
	0.8nm,0.9s						
MKAR	Makanchi Array	45.31	347	P	P	19 48 37.1	+0.8
	0.4nm,0.7s,baz=167,slow=9.9,SNR=4.5						
	0.4nm,0.7s						
ASAR	Alice Springs	45.58	127	P	P	19 48 39.2	+0.4
	0.1nm,0.5s,baz=300,slow=8.1,SNR=1.7						
	0.1nm,0.5s						
KURBB	Kurchatov Arra	49.77	346	P	P	19 49 09.8	-1.1
	0.2nm,0.9s,baz=169,slow=6.5,SNR=4.3						
	0.2nm,0.9s						
H04N2	CROZET ISLANDS	62.30	213	T	T	20 58 08.2	
	baz=50,slow=75,SNR=6.7						
H04N1	CROZET ISLANDS	62.31	213	T	T	20 58 14.9	
	baz=50,slow=75,SNR=7.3						
H04N3	CROZET ISLANDS	62.32	213	T	T	20 58 14.8	
	baz=50,slow=75,SNR=6.3						

IDC 25 19:47:52.5±7.5, 22°.26S×174°.28E, h0^{km}, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=331.6km s-min=62.9km az=151.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	37.12	260	P	P	19 55 05.0	-0.2
	0.6nm,1.0s,baz=87,slow=7.5,SNR=4.7						
	0.6nm,1.0s						
CMAR	Chiang Mai Arr	84.03	293	P	P	20 00 25.6	+0.1
	0.7nm,1.1s,baz=134,slow=3.1,SNR=4.1						
	0.7nm,1.1s						
GERES	GERESS Array B	149.31	335	PKPbc	PKPbc	20 07 42.8	-0.5
	0.6nm,0.9s,baz=20,slow=2.0,SNR=4.6						

HEL 25 19:54:35.7±0.2, 68°.14N×33°.11E, h0^{km}, ML1.0, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVZ	Lovozero	0.63	112	SG	Sg	19 54 55.0	-0.8
VRF	Varrio	1.38	255	PG	Pg	19 55 00.4	-1.7
	baz=73						
VRF				MSG		19 55 17.2	
	comp=Z,1.6nm,0.2s						
VRF				SG	Sg	19 55 18.3	-1.6
RAJF	Raja-Jooseppi	1.81	283	PG	Pn	19 55 08.1	0.0
RAJF				SG	Sn	19 55 30.5	-1.3
KU6	Riekki	2.47	212	MSG		19 55 48.5	
	comp=Z,0.3nm,0.2s						
KU6				SG	Sb	19 55 51.6	-0.1
KEV	Kevo	2.74	309	PB	Pn	19 55 23.0	+2.2
KEV				SN	Sn	19 55 53.9	-0.6
MSF	Maaselka	2.75	217	SB	Sn	19 55 55.8	+1.0
ARA0	ARCESS Array S	3.10	300	SN	Sn	19 56 02.3	-1.1
RNF	Rovaniemi	3.14	244	SN	Sn	19 56 04.0	-0.6
HEF	Hetta	3.52	279	PN	Pn	19 55 32.1	+0.4
HEF				SN	Sn	19 56 12.5	-1.4

IDC 25 19:57:02.8±1.5, 55°.73S×28°.65W, h0^{km}, mb4.1/1, mbtmp4.0/2, ML4.0/1, MS3.1/1, Error ellipse: s-maj=75.9km s-min=37.0km az=80.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	Sanae	19.38	155	P	Pn	20 01 31.0	+0.2
	0.5nm,0.3s,baz=314,slow=11,SNR=21						
	1.7nm,0.4s						
PMSA	Palmer Station	19.50	228	LR	LR	20 07 34.5	
	comp=Z,62nm,20.5s,baz=334,slow=32						
TORD	Torodi Ar. Bea	73.19	31	P	P	20 08 36.0	+0.7
	0.8nm,0.4s,baz=200,slow=5.4,SNR=8.9						
	0.8nm,0.4s						
ILAR	Eielson Array	149.29	312	PKPbc	PKPbc	20 16 51.7	-0.2
	0.8nm,0.8s,baz=128,slow=3.1,SNR=10						
SONM	Songino Array	151.53	87	PKPbc	PKPbc	20 16 55.9	-2.0
	0.7nm,0.5s,baz=215,slow=3.3,SNR=7.2						

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*ATH **25** 20:08:11.6, 38°.60N×20°.57E, h14^{km}, ML2.9/17, Manual Solution by A.Agalos First location: 2019/12/25 20:09:11, This location: 2019/12/25 20:18:27 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*

*THE **25** 20:08:12.1, 38°.6N±0°.5×2° 1E±°, h11^{km}, M2.9/17, MLh2.9/17*

*IDC **25** 20:08:15.3±16.0, 39°.11N×21°.31E, h0^{km}, mb3.3/4, mbtmp3.4/4, MS3.5/1, Error ellipse: s-maj=312.4km s-min=47.1km az=40.0*

ISC 25 20:08:12.0±0.8, 38°.60N±0°.02×20°.61E±0°.03, h14^{km}±4^{km}, n65, σ0^{s}.69/82, mb3.5/4, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EVGI	Lefkada island	0.05	58	P	Pg	20 08 14.6	-0.1
EVGI				S	Sg	20 08 16.4	-0.1
EVGI	Lefkada island	0.05	58	P	Pg	20 08 14.6	-0.1
EVGI				S	Sg	20 08 16.1	-0.4
NYDR	Nydri-Lefkada	0.14	32	P	Pg	20 08 15.5	-0.1
NYDR				S	Sg	20 08 18.0	0.0
NYDR	Nydri-Lefkada	0.14	32	P	Pg	20 08 15.6	-0.1
NYDR				S	Sg	20 08 18.0	0.0
VSK1	VASILIKIADES	0.19	190	P	Pg	20 08 16.2	-0.2
LKD2	Lefkada island	0.20	12	P	Pg	20 08 16.3	-0.2
LKD2				S	Sg	20 08 19.7	0.0
LKD2	Lefkada island	0.20	12	P	Pg	20 08 16.3	-0.2
LKD2				S	Sg	20 08 19.5	-0.1
TSLK	Tsoukalades, L	0.23	10	P	Pg	20 08 17.0	-0.1
TSLK				S	Sg	20 08 21.1	+0.5
TSLK	Tsoukalades, L	0.23	10	P	Pg	20 08 17.0	-0.1
TSLK				S	Sg	20 08 20.8	+0.3
SMHA	Samh	0.35	175	P	Pg	20 08 17.9	-1.2
SMHA				S	Sg	20 08 23.6	-0.2
AST1	Astakos	0.38	98	P	Pg	20 08 19.9	+0.2
DMLN	Damoulianata-K	0.40	207	P	Pg	20 08 19.8	-0.2
DMLN				S	Sg	20 08 26.1	+0.6
DMLN	Damoulianata-K	0.40	207	P	Pg	20 08 19.6	-0.5
LXR1	Lixouri, Cepha	0.42	199	P	Pg	20 08 20.5	+0.2
LXR1				S	Sb	20 08 27.0	-0.3
VLS	Valsamata	0.42	182	P	Pg	20 08 20.1	-0.2
VLS				S	Sg	20 08 26.2	+0.2
VLS	Valsamata	0.42	182	P	Pg	20 08 20.0	-0.3
VLS				S	Sg	20 08 26.0	0.0
ARG2	Argostoli	0.43	193	P	Pg	20 08 19.9	-0.6
ARG2				S	Sg	20 08 26.2	-0.1
ARG2	Argostoli	0.43	193	P	Pg	20 08 19.9	-0.6
ARG2				S	Sg	20 08 26.1	-0.2
KFL1	Kefalonia,Entr	0.44	191	P	Pg	20 08 20.4	-0.3
KFL1				S	Sg	20 08 26.6	0.0
RTZL	Ratzakli, Kefa	0.54	166	P	Pg	20 08 22.3	-0.3
RTZL				S	Sg	20 08 30.2	+0.5
RTZL	Ratzakli, Kefa	0.54	166	P	Pg	20 08 22.2	-0.3
RTZL				S	Sg	20 08 30.1	+0.5
AMPL	Ampelaki	0.58	55	P	Pg	20 08 22.9	-0.4
ART2	Arta	0.63	29	P	Pg	20 08 24.3	0.0
ARTB	Arta	0.63	27	P	Pg	20 08 24.2	-0.1
PRGA	Parga	0.71	347	P	Pg	20 08 25.6	-0.2
PVO	Paravola	0.72	88	P	Pb	20 08 26.5	+0.2
AXS	Araxos	0.72	123	P	Pb	20 08 26.7	+0.4
ORTH	Orthonies,Zaky	0.75	175	P	Pg	20 08 26.6	0.0
KYPS	Kipseli, Zakin	0.80	167	P	Pg	20 08 27.2	-0.2
CLEM	Kyllini,Ilia,G	0.82	149	P	Pb	20 08 28.2	+0.2
RLS	Riolos of Patr	0.86	128	P	Pg	20 08 28.7	0.0
RLS	Riolos of Patr	0.86	128	P	Pg	20 08 28.8	0.0
LTHK	Lithakia	0.90	168	P	Pg	20 08 28.4	-1.1
TETR	Tetrakomo, Epi	0.91	35	P	Pg	20 08 29.1	-0.6
TETR	Tetrakomo, Epi	0.91	35	P	Pg	20 08 29.1	-0.6
IGT	Igoumenitsa	0.96	347	P	Pg	20 08 30.5	0.0
IGT	Igoumenitsa	0.96	347	P	Pg	20 08 29.6	-1.0
EVR	Evrytania	0.99	71	P	Pg	20 08 30.9	-0.3
EVR	Evrytania	0.99	71	P	Pg	20 08 30.9	-0.3
ANX	Ano Chora	1.03	90	P	Pg	20 08 31.6	-0.3
ANX	Ano Chora	1.03	90	P	Pg	20 08 31.6	-0.3
EFP	Efpalio	1.03	99	P	Pb	20 08 31.5	-0.1
EFP	Efpalio	1.03	99	P	Pb	20 08 31.5	-0.1
JAN	Janina	1.08	10	P	Pb	20 08 32.3	-0.1
JAN	Janina	1.08	10	P	Pb	20 08 32.7	+0.2
SERG	Sergoula	1.15	99	P	Pb	20 08 33.6	-0.1
KALE	Kalithea	1.22	99	P	Pn	20 08 34.4	-0.3
MAKR	Makrakomi, Fth	1.26	70	P	Pn	20 08 35.1	-0.2
KEK	Kerkira	1.28	331	P	Pn	20 08 34.7	-0.7
KLV	Kalavryta, Ach	1.33	114	P	Pn	20 08 36.0	-0.2
KLV	Kalavryta, Ach	1.33	114	P	Pn	20 08 36.3	0.0
AMT	Artemida-Makis	1.37	140	P	Pn	20 08 36.6	-0.2
AGG	Agios Georgios	1.41	72	P	Pn	20 08 37.9	+0.6
THL	Klokotos Trika	1.46	48	P	Pn	20 08 38.5	+0.6
GUR	Goura	1.52	115	P	Pn	20 08 39.5	+0.7
OHR	Ohrid	2.52	3	*i* Pn	Pb	20 08 55.5	-1.5
SOKA	Soboth	9.06	335	*i* Pn	Pn	20 10 21.2	-1.2
	0.4nm,0.3s						
OBKA	Obir	9.08	332	*e*Pn	Pn	20 10 25.9	+3.3
	0.3nm,0.2s						
MYKA	Terra Mystica	9.53	330	*e*Pn	Pn	20 10 32.1	+3.3
	0.7nm,0.4s						
WTTA	Wattenberg	10.87	326	*e*Pn	Pn	20 10 47.1	-0.1
	0.6nm,0.3s						
HFS	Hagfors	22.00	351	P	P	20 13 06.2	+0.8
	1.8nm,0.8s,baz=155,slow=11,SNR=4.8						
	1.8nm,0.8s						
FINES	FINESS Array B	23.12	7	P	P	20 13 16.8	-0.5
	0.8nm,0.7s,baz=189,slow=10.0,SNR=3.9						
	0.8nm,0.7s						
BELG	Belogornoye	23.26	45	LR	LR	20 23 24.5	
	comp=Z,145nm,21.8s,baz=87,slow=40						
MKAR	Makanchi Array	45.03	59	P	P	20 16 26.5	-0.5
	0.1nm,0.5s,baz=279,slow=8.6,SNR=1.7						
	0.1nm,0.5s						
ZALV	Zalesovo Beam	45.36	48	P	P	20 16 29.1	-0.5
	0.4nm,0.4s,baz=292,slow=7.6,SNR=2.4						
	0.4nm,0.4s						

IDC 25 20:08:55.7±6.1, 23°.02S×174°.17E, h0^{km}, mb3.7/2, mbtmp3.7/2, MS3.3/1, Error ellipse: s-maj=294.3km s-min=50.7km az=154.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	26.11	271	LR	LR	20 24 12.8	
	comp=Z,62nm,19.8s,baz=52,slow=35						
ASAR	Alice Springs	36.89	261	P	P	20 16 05.8	-0.5
	0.8nm,0.9s,baz=84,slow=9.4,SNR=5.8						
	0.8nm,0.9s						
CMAR	Chiang Mai Arr	84.22	293	P	P	20 21 30.2	+0.6
	0.5nm,0.8s,baz=110,slow=4.7,SNR=5.5						
	0.5nm,0.8s						
EKA	Eskdalemuir Ar	147.66	357	PKPbc	PKPdf	20 28 40.1	+1.0
	0.4nm,0.6s,baz=341,slow=1.5,SNR=1.3						
GERES	GERESS Array B	149.93	334	PKPbc	PKPbc	20 28 48.1	0.0
	0.9nm,0.9s,baz=63,slow=2.4,SNR=6.3						

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*IDC **25** 20:17:37.7±14.0, 20°.63S×176°.99W, h423^{km}±134^{km}, mb3.3/5, mbtmp4.0/5, Error ellipse: s-maj=97.8km*

s-min=39.8km az=120.0

ISC 25 20:17:35.9±1.9**,20°.6S**±0°.4×**177°.0W**±0°.3**,h400^{km},n9,σ1^{s}18**/9**,mb3.6**/5**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	45.40	257	P	P	20 25 17.3	+0.3
	2.9nm,0.6s,baz=97,slow=7.5,SNR=48						
ASAR				PcP	PcP	20 26 48.0	-0.5
	0.7nm,0.7s,baz=107,slow=3.4,SNR=6.5						
	2.9nm,0.6s						
WRA	Warramunga Arr	45.51	262	P	P	20 25 17.4	-0.4
	0.9nm,0.3s,baz=96,slow=6.8,SNR=59						
	0.9nm,0.3s						
MJAR	Matsushiro Arr	70.83	323	P	P	20 28 10.4	-0.3
	0.8nm,0.5s,baz=155,slow=6.3,SNR=5.1						
	0.8nm,0.5s						
ILAR	Eielson Array	88.19	12	P	P	20 29 42.5	+0.2
	0.3nm,0.9s,baz=206,slow=4.2,SNR=4.4						
	0.3nm,0.9s						
CMAR	Chiang Mai Arr	91.01	289	P	P	20 29 56.8	+0.3
	0.3nm,0.3s,baz=118,slow=2.9,SNR=6.9						
	0.3nm,0.3s						
BVAR	Borovoye Array	119.73	320	PKP	PKPdf	20 35 38.1	-0.9
	0.4nm,0.5s,baz=104,slow=0.6,SNR=2.5						
AKASG	Malin Array Be	143.53	332	PKP	PKPab	20 36 20.6	-0.8
	0.8nm,0.5s,baz=58,slow=2.3,SNR=3.0						
BRTR	Keskin Array B	147.57	313	PKPbc	PKPdf	20 36 33.3	+2.3
	0.5nm,0.6s,baz=152,slow=2.3,SNR=2.3						
ESDC	Sonseca Array	160.06	16	PKP	PKPdf	20 36 47.1	-1.3
	0.8nm,1.0s,baz=247,slow=2.0,SNR=2.4						

RSNC **25** *20:19:53.7±1.9,28°S±22°×11°8W±2°4,h0^{km},M5.8,mB6.3,mb5.5,Mw(mB)6.0,MwMwp5.5,Mwp5.6*

IDC **25** *20:20:10.7±0.4,25°.29S×115°.71W,h0^{km},mb4.7/30,mbtmp4.7/31,ML3.7/1,MS5.8/47,Error ellipse: s-maj=13.5km s-min=11.7km az=117.0*

MOS **25** *20:20:11.7±1.5,25°.23S×115°.78W,h10^{km},mb5.7/33,MS5.9/21,Error ellipse: s-maj=11.5km s-min=8.7km az=69.5*

ISC-PP **25** *20:20:12,25°.22S×115°.84W,h24^{km},Mwppsm6.3,Moment Tensor Solution. s49 Moment tensor: Scale 10^{18}Nm; M_{rr}0.04±.14; $M_{\theta\theta}$-0.68±.15; $M_{\phi\phi}$0.61±.14; $M_{r\theta}$-0.04±.20; $M_{\theta\phi}$0.07±.08; $M_{\phi r}$0.28±.11; Fault plane solution: $M_0$3.63000×10^{18} NP1:ϕ_s326.60000°,δ88.90000°,λ173.50000°. NP2:ϕ_s56.70000°,δ83.50000°,λ1.10000°.*

IPGP **25** *20:20:12.0,25°.26S×116°.01W,h9^{km},Mw6.2,Fault plane solution: NP1:ϕ_s236.00000°,δ82.00000°,λ-13.00000°. NP2:ϕ_s327.00000°,δ77.00000°,λ-172.00000°.*

NEIC **25** *20:20:12.8±2.3,25°.2S±0°.1×115°.84W±0°.10,h10^{km}±1^{km},mb5.8/611,Ms_20 5.9/736,Mwb6.0/136,Mww6.1/28,Error ellipse: s-maj=17.7km s-min=15.3km az=175.0,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.21; $M_{\theta\theta}$-1.06; $M_{\phi\phi}$0.85; $M_{r\theta}$-0.38; $M_{\theta\phi}$0.31; $M_{\phi r}$0.08; Fault plane solution: $M_0$1.09000×10^{18} NP1:ϕ_s52.77000°,δ78.08000°,λ-9.68000°. NP2:ϕ_s144.79000°,δ80.53000°,λ-167.91000°. Principal axes: T 0.9024, Plg2.0000°, Azm279.0000°; N 0.3110, Plg75.0000°, Azm182.0000°; P -1.2134, Plg15.0000°, Azm9.0000°;*

NEIC **25** *20:20:14.2,25°.26S×115°.82W,h10^{km}*

GFZ **25** *20:20:14.5,25°.41S×115°.94W,h15^{km},MW6.1,Moment Tensor Solution. s83 Moment tensor: M_{rr}-0.23; $M_{\theta\theta}$-1.36; $M_{\phi\phi}$1.59; $M_{r\theta}$0.00; $M_{\theta\phi}$0.63; $M_{\phi r}$-0.12; Fault plane solution: NP1:ϕ_s147.00000°,δ88.00000°,λ177.00000°. NP2:ϕ_s237.00000°,δ87.00000°,λ2.00000°. Principal axes: T 1.7200, Plg3.0000°, Azm102.0000°; N -0.2400, Plg86.0000°, Azm301.0000°; P -1.4900, Plg1.0000°, Azm192.0000°;*

NEIC **25** *20:20:14,25°.43S×115°.81W,h18^{km},Moment Tensor Solution. Duration: 5^{s}4 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.44; $M_{\theta\theta}$-1.02; $M_{\phi\phi}$1.46; $M_{r\theta}$-0.56; $M_{\theta\phi}$0.62; $M_{\phi r}$0.42; Fault plane solution: $M_0$1.60000×10^{18} NP1:ϕ_s54.50000°,δ62.55000°,λ-17.06000°. NP2:ϕ_s152.55000°,δ74.91000°,λ-151.48000°. Principal axes: T 1.6470, Plg8.0000°, Azm281.0000°; N -0.0993, Plg58.0000°, Azm178.0000°; P -1.5477, Plg31.0000°, Azm16.0000°;*

NEIC **25** *20:20:14,25°.23S×115°.81W,h18^{km}*

GCMT **25** *20:20:16.8±0.0,25°.38S×116°.12W,h14^{km},MW6.1/163,Moment Tensor Solution. s151,c337; s163,c593; Duration: 2^{s}7 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.12±.01; $M_{\theta\theta}$-1.45±.01; $M_{\phi\phi}$1.58±.01; $M_{r\theta}$-0.03±.01; $M_{\theta\phi}$0.73±.01; $M_{\phi r}$-0.04±.01; Best double couple: $M_0$1.68200×10^{18} NP1:ϕ_s148.00000°,δ88.00000°,λ179.00000°. NP2:ϕ_s238.00000°,δ89.00000°,λ2.00000°. Principal axes: T 1.7470, Plg1.0000°, Azm103.0000°; N -0.1260, Plg88.0000°, Azm256.0000°; P -1.6160, Plg1.0000°, Azm13.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 25 20:20:12.1±0.2**,25°.30S**±0°.06×**115°.91W**±0°.04**,h8^{km},n1201,σ1^{s}91**/672**,mb5.8**/350**,MS5.9**/442**,75C-43D, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA02	Isla de Pascua	6.10	109	Pn	Pn	20 21 41.2	-1.3
RPN	Rapa Nui	6.18	109	Pn	Pn	20 21 39.3	-4.3
	1.8nm,0.3s,baz=140,slow=4.7,SNR=1.3						
	21nm,0.7s						
RPN	Rapa Nui	6.18	109		Pn	20 21 39.3	-4.3
RPN	Rapa Nui	6.18	109	P	Pn	20 21 39.3	-4.3
RKT	Rikitea	17.53	273	*e*P	Pn	20 24 15.1	-1.8
	30µm,27.2s						
RKT				*e*LR	LR	20 28 13.2	
	460µm,26.8s						
TAOE	Nuku Hiva Isla	28.28	301	*e*P	P	20 26 01.0	-5.2
	992nm,23.7s						
TAOE				*e*S	S	20 30 45.6	-7.2
	6µm,27.9s						
TAOE				*e*LQ	LQ	20 32 02.5	
	21µm,22.7s						
TAOE				*e*LR	LR	20 33 14.3	
	92µm,25.9s						
TBI	Tubuai	30.59	266	*e*P	P	20 26 19.7	-6.9
	5µm,26.0s						
TBI				*e*S	S	20 31 23.4	-5.6
	10µm,23.5s						
TBI				*e*LQ	LQ	20 33 02.0	
	88µm,35.8s						
TBI				*e*LR	LR	20 34 06.7	
	51µm,30.8s						
TBI				*e*LR	LR	20 34 09.9	
	259µm,30.0s						
PPTF	Pamatai, Papee	32.19	277	P	P	20 26 37.1	-3.7
PPT2	Papeete2	32.20	277	*e*P	P	20 26 36.2	-4.7
	1µm,28.8s						
PPT2	Papeete2	32.20	277	*e*PP	PP	20 27 47.8	-5.8
	2µm,23.8s						
PPT2				*e*S	S	20 31 46.3	-8.0
	5µm,25.5s						
PPT2				*e*LQ	LQ	20 33 42.6	
	10µm,25.0s						
PPT2				*e*LR	LR	20 34 54.6	
	109µm,24.5s						
PPT2				*e*LR	LR	20 34 55.9	
	92µm,26.8s						
PPT	Papeete	32.20	277	P	P	20 26 40.9	0.0
	117nm,1.0s,baz=80,slow=11,SNR=3.8						
PPT				LR	LR	20 35 47.2	
	comp=Z,61µm,21.8s,baz=98,slow=29						
PPT	Papeete	32.20	277	P	P	20 26 40.9	0.0
PPT	Papeete	32.20	277	P	P	20 26 40.9	0.0
H03N2	Juan Fernandez	33.09	113	T	T	21 02 07.1	
	baz=278,slow=74,SNR=1322						
H03N3	Juan Fernandez	33.10	113	T	T	21 02 08.8	
	baz=278,slow=74,SNR=1576						
H03N1	Juan Fernandez	33.11	113	T	T	21 02 08.7	
	baz=278,slow=74,SNR=2080						
H03S2	Juan Fernandez	33.13	114	T	T	21 02 25.6	
	baz=282,slow=74						
H03S3	Juan Fernandez	33.14	114	T	T	21 02 17.4	
	baz=282,slow=74						
H03S1	Juan Fernandez	33.15	114	T	T	21 02 13.4	
	baz=282						
PAYG	Puerto Ayora	34.80	49	P	P	20 27 00.1	-3.5
PAYG	Puerto Ayora	34.80	49	P	P	20 27 11.0	+7.5
	24nm,2.1s						
BI05	Punta Hualpn	38.06	118	P	P	20 27 29.1	-2.1
LL05	Los Muermos	38.50	125	P	P	20 27 35.6	+0.8
LL05				IAmb	IAmb	20 27 51.9	
	comp=Z,505nm,1.9s						
LL05				IAMs_20	IAMs_20	20 39 06.0	
	comp=Z,21µm,18.0s						
LR03	Panguipulli	39.05	122	P	P	20 27 37.4	-2.1
NNA	Nana	39.16	78	LR	LR	20 39 28.3	
	comp=Z,23µm,21.3s,baz=243,slow=30						
NNA	Nana	39.16	78	IAMs_20	IAMs_20	20 39 44.1	
	comp=Z,21µm,21.0s						
NNA	Nana	39.16	78	*i* P	P	20 27 40.4	-0.3
NNA				pmax	pmax		
	comp=Z,43nm,1.3s						
NNA	Nana	39.16	78	P	P	20 27 40.9	+0.2
CO06	Fray Jorge	39.27	108	P	P	20 27 36.3	-5.1
CO06				IAmb	IAmb	20 28 02.9	
	comp=Z,312nm,1.9s						
ML02	Panimavida	39.42	116	P	P	20 27 42.9	+0.3
LL01	San Ignacio de	39.47	127	P	P	20 27 41.7	-1.1
LL01				IAMs_20	IAMs_20	20 39 39.6	
	comp=Z,25µm,22.0s						
VA06	Catapilco	39.48	111		P	20 27 40.2	-3.0
MT01	Popeta	39.51	113	P	P	20 27 41.5	-1.9
BI02	San Fabin de	39.59	118	P	P	20 27 43.2	-0.9
BO01	Tunca	39.65	114		P	20 27 44.3	-0.3
CO05	La Serena	39.66	107	P	P	20 27 41.9	-2.7
CO05				IAmb	IAmb	20 28 02.5	
	comp=Z,283nm,1.8s						
GO06	Curarrehue	39.72	122	⇓P	P	20 27 46.1	+1.0
MT09	Talagante	39.73	113	P	P	20 27 45.6	+0.2
CO02	Combarbal	39.78	109	P	P	20 27 43.5	-2.4
BO02	Sierra Bellavi	39.91	115	P	P	20 27 47.6	+0.8
MT05	Renca	39.94	112	P	P	20 27 45.5	-1.5
MT05				IAmb	IAmb	20 28 03.6	
	comp=Z,226nm,1.5s						
AC04	Llanos de Chal	39.97	104	P	P	20 27 46.4	-0.9
PEL	Peldehue	39.99	112	P	P	20 27 47.5	+0.1
PEL	Peldehue	39.99	112	P	P	20 27 47.5	+0.1
PEL				pmax	pmax		
	comp=Z,103nm,1.2s						
PEL				MLR	MLR		
	comp=Z,43µm,22.0s						
GO04	Tololo Observa	40.02	107	P	P	20 27 41.0	-7.0
GO04				IAmb	IAmb	20 28 09.3	
	comp=Z,421nm,1.9s						
LL02	Futaleuf	40.04	128		P	20 27 47.9	+0.2
LL02				IAMs_20	IAMs_20	20 39 59.8	
	comp=Z,26µm,22.0s						
LL02	Futaleuf	40.04	128	⇓P	P	20 27 50.5	+2.8
BO04	La Punta	40.04	113	P	P	20 27 46.7	-1.2
CO03	El Pedregal	40.07	108	P	P	20 27 48.4	+0.2
CO03				IAmb	IAmb	20 28 09.1	
	comp=Z,357nm,2.0s						
ATAH	Atahualpa	40.09	70	LR	LR	20 40 16.9	
	comp=Z,15µm,18.7s,baz=240,slow=30						
VA03	San Esteban	40.11	111	P	P	20 27 46.0	-2.5
MT16	CCHEN	40.12	113	P	P	20 27 47.1	-1.4
MT03	Universidad Ad	40.13	113		P	20 27 48.5	-0.2
LCO	Las Campanas	40.21	106		P	20 27 49.9	+0.3
LCO	Las Campanas	40.21	106	*e*P	P	20 27 49.9	+0.3
LCO	Las Campanas	40.21	106	⇑P	P	20 27 50.9	+1.3
MCRA	Macar, Loja	40.29	65	P	P	20 27 49.4	-0.7
MT13	San Alfonso	40.31	113	P	P	20 27 51.1	+0.9
RAR	Rarotonga	40.38	266	LR	LR	20 39 37.2	
	comp=Z,14µm,19.6s,baz=109,slow=29						
RAR	Rarotonga	40.38	266	IAMs_20	IAMs_20	20 39 24.1	
	comp=Z,14µm,20.0s						
LMEL	Las Melosas	40.38	113	P	P	20 27 51.9	+1.1
COYC	Coyhaique	40.43	131		P	20 27 51.9	+1.1
MT08	Bocatoma Ro	40.54	113	P	P	20 27 53.0	+0.7
PLCA	Paso Flores	40.57	124	P	P	20 27 52.3	+0.1
	comp=Z,55nm,0.9s,baz=277,slow=8.4,SNR=69						
PLCA				LR	LR	20 40 31.0	
	comp=Z,24µm,20.9s,baz=283,slow=30						
	comp=Z,55nm,0.9s						
PLCA	Paso Flores	40.57	124		P	20 27 52.5	+0.3
PLCA	Paso Flores	40.57	124	P	P	20 27 52.5	+0.3
PLCA				pmax	pmax		
	comp=Z,94nm,1.1s						
PLCA	Paso Flores	40.57	124	⇑P	P	20 27 53.1	+0.9
PLCA	Paso Flores	40.57	124	*i* P	P	20 27 54.4	+2.2
PLCA	Paso Flores	40.57	124	*e*P	P	20 27 51.5	-0.7
AC05	El Transito	40.60	105		P	20 27 52.6	-0.1
AC05				IAmb	IAmb	20 28 22.2	
	comp=Z,583nm,2.0s						
AC01	Pan de Azucar	40.67	101	P	P	20 27 52.6	-0.5
GO03	Copiapo	40.78	104	P	P	20 27 50.4	-3.7
GO03				IAmb	IAmb	20 28 06.9	
	comp=Z,276nm,1.8s						
AUSP	Uspallata	41.11	111	*i* P	P	20 27 59.1	+2.1
AROD	Rodeo	41.17	108	*i* P	P	20 27 59.4	+1.8
PPLP	Puerto Lpez	41.29	61	P	P	20 28 01.0	+2.7
	comp=Z,3µmcomp=Z,105nm,2.3s						
ARCO	CERRO ARCO	41.47	112	*i* P	P	20 28 01.4	+1.6
ACCO	Cerro Coronel	41.48	108	*i* P	P	20 28 01.1	+1.0
AAGR	Agrelo	41.55	112	*i* P	P	20 28 02.9	+2.5
ASAL	Salagasta	41.56	111	*i* P	P	20 28 02.3	+1.8
PB05	IPOC Station P	41.65	97	P	P	20 28 00.6	-0.7
GO02	Mina Guanaco	41.73	100	*i* P	P	20 28 04.6	+2.4
AC02	Maricunga	41.86	103		P	20 28 01.9	-1.6
AC02				IAmb	IAmb	20 28 20.2	
	comp=Z,323nm,1.9s						
AC02	Maricunga	41.86	103	*i* P	P	20 28 06.7	+3.2
RTLL	Cerro Villicun	41.94	109	*i* P	P	20 28 05.5	+2.0
COHC	Cochancay	41.95	63	P	P	20 28 04.7	+1.0
AGUA	GUANDACOL	42.08	107	*i* P	P	20 28 07.3	+2.5
MG05	Puerto Natales	42.09	140	IAMs_20	IAMs_20	20 41 25.6	
	comp=Z,13µm,19.0s						
CFA	Coronel Fontan	42.12	110	LR	LR	20 41 35.0	
	comp=Z,9µm,20.9s,baz=266,slow=31						
PATCX	Punta Patache	42.18	94	P	P	20 28 05.3	-0.3
PB07	IPOC Station P	42.20	95	P	P	20 28 04.3	-1.5
TA01	Diego Aracena	42.22	93	IAMs_20	IAMs_20	20 41 06.6	
	comp=Z,20µm,19.0s						
PB03	IPOC Station P	42.24	96	P	P	20 28 05.0	-1.2
PB02	IPOC Station P	42.29	94	P	P	20 28 05.1	-1.5
HMBC	Humberstone	42.56	93	IAMs_20	IAMs_20	20 41 16.6	
	comp=Z,21µm,20.0s						
PB12	IPOC Station P	42.63	90	IAMs_20	IAMs_20	20 41 06.5	
	comp=Z,18µm,20.0s						
AP01	Chacalluta	42.70	90	IAMs_20	IAMs_20	20 40 59.1	
	comp=Z,13µm,20.0s						
PB01	IPOC Station P	42.73	94	P	P	20 28 09.2	-0.9
PB01				IAMs_20	IAMs_20	20 41 04.9	
	comp=Z,18µm,19.0s						
PB09	IPOC Station P	42.76	95	IAMs_20	IAMs_20	20 41 27.9	
	comp=Z,17µm,20.0s						
PB11	IPOC Station P	42.91	92	P	P	20 28 12.1	+0.3
PB11				IAMs_20	IAMs_20	20 41 16.9	
	comp=Z,21µm,20.0s						
ACAN	Cantantal	42.97	111	*i* P	P	20 28 13.7	+1.9
TINO	Tinogasta	43.06	105	*i* P	P	20 28 13.2	+0.4
PB08	IPOC Station P	43.26	93	IAMs_20	IAMs_20	20 41 40.2	
	comp=Z,22µm,20.0s						
GO01	Chusmiza	43.36	92	IAMs_20	IAMs_20	20 41 22.7	
	comp=Z,20µm,20.0s						
ACLC	CERRO LA CRUZ	43.42	107	*i* P	P	20 28 16.7	+0.9
PB16	IPOC Station P	43.46	90	IAMs_20	IAMs_20	20 41 34.4	
	comp=Z,15µm,21.0s						
AANI	Anillaco	43.51	106	*i* P	P	20 28 18.7	+2.3
SLOR	San Lorenzo -	43.59	62	P	P	20 28 20.7	+3.1
PB18	Visviri	43.72	89	IAMs_20	IAMs_20	20 41 56.1	
	comp=Z,15µm,22.0s						
PAC1	Pacto, Paraso	43.96	60	P	P	20 28 21.2	+1.0
MRA	San Martin	44.20	111	*i* P	P	20 28 21.7	-0.2
OTAV	Otavalo	44.21	61	P	P	20 28 21.4	-1.1
OTAV	Otavalo	44.21	61	P	P	20 28 21.4	-1.1
OTAV				pmax	pmax		
	comp=Z,165nm,2.0s						
OTAV	Otavalo	44.21	61	⇑P	P	20 28 24.7	+2.1
OTAV	Otavalo	44.21	61	*e*P	P	20 28 23.2	+0.6
OTAV	Otavalo	44.21	61	P	P	20 28 24.9	+2.4
	comp=Z,2µmcomp=Z,2µmcomp=Z,46nm,2.4s						
MAPC	Malpelo	44.23	54	P	P	20 28 26.1	+3.9
	comp=Z,60nm,1.9s						
CUSE	Cuicocha Este	44.29	61	P	P	20 28 24.0	+0.8
	comp=Z,7µmcomp=Z,116nm,2.4s						
TUMC	Tumaco	44.98	59	P	P	20 28 30.6	+2.5
TULM	Tulcn-Chalpat	45.02	61	P	P	20 28 32.7	+3.6
	comp=Z,3µmcomp=Z,89nm,2.2s						
BONI	La Bonita	45.07	61	P	P	20 28 31.5	+2.3
	comp=Z,2µmcomp=Z,86nm,2.4s						
CMBC	Cumbal	45.13	60	P	P	20 28 33.3	+3.4
AHML	Horco Molle	45.22	103	*i* P	P	20 28 16.1	-14
TCA	Tanti	45.24	110	*i* P	P	20 28 30.8	+0.5
LPAZ	La Paz	45.36	88	P	P	20 28 30.6	-1.3
	comp=Z,9.7nm,0.7s,baz=274,slow=3.5,SNR=20						
LPAZ				LR	LR	20 43 11.1	
	comp=Z,11µm,20.0s,baz=250,slow=31						
	comp=Z,9.7nm,0.7s						
LPAZ	La Paz	45.36	88	P	P	20 28 30.1	-1.8
LPAZ				IAmb	IAmb	20 28 51.7	
	comp=Z,201nm,1.9s						
LPAZ	La Paz	45.36	88	P	P	20 28 30.1	-1.8
LPAZ				pmax	pmax		
	comp=Z,201nm,1.9s						
LPAZ	La Paz	45.36	88	⇑P	P	20 28 32.4	+0.5
LPAZ	La Paz	45.36	88	*e*P	P	20 28 30.1	-1.8
LPAZ	La Paz	45.36	88	P	P	20 28 33.7	+1.8
USHA	Ushuaia	45.52	143	LR	LR	20 43 46.5	
	comp=Z,12µm,18.7s,baz=294,slow=31						
GCUF	Volcan Galeras	45.68	61	P	P	20 28 36.9	+2.6
	comp=Z,3µmcomp=Z,162nm,1.9s						
AZAP	Zapla	45.95	100	*i* P	P	20 28 37.5	+1.4
JUD3	Juan Diaz 3	46.02	44	P	P	20 28 34.8	-1.6
PIRO	Carate, Puerto	46.13	48	P	P	20 28 35.3	-1.9
PIRO				IAmb	IAmb	20 28 50.2	
	comp=Z,192nm,1.7s						
GR1C	Gorgona, Isla	46.15	58	P	P	20 28 41.1	+3.7
CRUC	La Cruz	46.20	61	P	P	20 28 40.0	+1.7
BBAC	Balboa, Cauca	46.25	60	P	P	20 28 39.8	+1.3
	comp=Z,3µmcomp=Z,2µmcomp=Z,51nm,2.0s						
JTS	Las Juntas de	46.49	44	P	P	20 28 39.2	-0.8
	comp=Z,6.1nm,0.8s,baz=239,slow=5.4,SNR=5.3						
JTS				LR	LR	20 43 08.9	
	comp=Z,6µm,20.3s,baz=210,slow=30						
	comp=Z,6.1nm,0.8s						
JTS	Las Juntas de	46.49	44	P	P	20 28 43.5	+3.4
JTS				IAmb	IAmb	20 28 49.1	
	comp=Z,230nm,1.8s						
JTS	Las Juntas de	46.49	44	*i* P	P	20 28 41.3	+1.3
JTS				pmax	pmax		
	comp=Z,42nm,1.4s						
JTS	Las Juntas de	46.49	44	P	P	20 28 43.3	+3.3
	comp=Z,3µmcomp=Z,2µmcomp=Z,68nm,2.8s						
HDC	Heredia	46.80	45	P	P	20 28 40.1	-2.5
HDC	Heredia	46.80	45	*e*P	P	20 28 46.2	+3.5
BRU2	Volcan	46.85	48	P	P	20 28 41.7	-1.3
BRU2				IAmb	IAmb	20 28 55.6	
	comp=Z,152nm,1.3s						
CMIG	Matias Romero	46.85	28	P	P	20 28 42.2	-0.5
	comp=Z,7.6nm,0.8s,baz=230,slow=7.2,SNR=14						
CMIG				LR	LR	20 44 39.2	
	comp=Z,11µm,18.8s,baz=198,slow=31						
	comp=Z,7.6nm,0.8s						
HUEH	Huehuetenango	46.86	33	P	P	20 28 43.4	+0.3
RAFA	San Farael, Vo	46.97	46	P	P	20 28 43.4	-0.8
POPC	Popayan, Colom	47.02	60	P	P	20 28 45.8	+1.3
	comp=Z,1µmcomp=Z,53nm,2.1s						
TRQA	Tornquist	47.03	119	P	P	20 28 44.5	+0.4
TRQA				IAmb	IAmb	20 28 55.1	
	comp=Z,137nm,1.3s						
TRQA	Tornquist	47.03	119	*e*P	P	20 28 44.5	+0.4
PTLC	Puerto Leguiza	47.10	64	P	P	20 28 45.1	+0.2
APG	El Apazote	47.11	35	P	P	20 28 44.6	-0.6
	comp=Z,2.1nm,0.9s,baz=194,slow=12,SNR=8.0						
MGAN	Managua	47.13	41	P	P	20 28 44.7	-0.3
CNGN	Cerro Negro	47.14	41	P	P	20 28 44.0	-1.2
CNGN	Cerro Negro	47.14	41	P	P	20 28 48.7	+3.5
	comp=Z,32µmcomp=Z,2µm,2.3s						
MTO3	Montecristo	47.19	36	P	P	20 28 44.9	-0.8
FLOC	Florencia	47.24	62	P	P	20 28 49.4	+3.4
	comp=Z,2µmcomp=Z,2µmcomp=Z,81nm,1.9s						
UNM	Universidad Na	47.25	22	P	P	20 28 48.2	+2.1
UNM	Universidad Na	47.25	22	P	P	20 28 48.3	+2.1
UNM				pmax	pmax		
	comp=Z,114nm,0.6s						
UNM				MLR	MLR		
	comp=Z,26µm,20.0s						
ESQI	Esquipulas	47.33	36	P	P	20 28 48.4	+1.7
JAMC	Jamundi, Valle	47.44	59	P	P	20 28 49.2	+1.4
	comp=Z,2µmcomp=Z,3µmcomp=Z,118nm,2.4s						
BOAB	BOACO BROADBAN	47.71	42	P	P	20 28 45.9	-3.6
GARC	Garzon, Huila	47.73	61	P	P	20 28 51.5	+1.4
	comp=Z,1µmcomp=Z,41nm,2.3s						
PIZC	Pizarro, Choco	48.03	57	P	P	20 28 57.1	+5.0
	comp=Z,5µmcomp=Z,202nm,1.5s						
TGUH	Tegucigalpa,Un	48.05	39	P	P	20 28 54.6	+2.3
TGUH				IAmb	IAmb	20 29 00.4	
	comp=Z,83nm,1.1s						
TGUH	Tegucigalpa,Un	48.05	39	P	P	20 28 56.0	+3.7
	comp=Z,2µmcomp=Z,84nm,2.0s						
BETC	Betania	48.07	61	P	P	20 28 55.8	+3.3
JRQG	Juriquilla Cam	48.13	20	P	P	20 28 52.5	-0.4
YOTC	Yotoco, Valle	48.17	59	P	P	20 28 54.7	+1.3
	comp=Z,2µmcomp=Z,62nm,2.3s						
PLMC	San Jos del P	48.81	58	P	P	20 29 00.0	+1.8
	comp=Z,2µmcomp=Z,73nm,2.2s						
SOLC	Bahia Solano	48.81	55	P	P	20 29 01.3	+3.2
ORTC	Ortega, Tolima	48.98	59	P	P	20 29 02.9	+3.4
	comp=Z,2µmcomp=Z,77nm,2.5s						
MACC	Macarena, Meta	49.02	62	P	P	20 28 59.4	-0.4
PETF	Flores	49.03	34	P	P	20 28 59.6	-0.1
SLBS	Sierra La Lagu	49.04	7	P	P	20 29 01.3	+1.6
BCIP	Isla Barro Col	49.07	50	P	P	20 29 06.7	+6.7
PTAC	Punta Ardita,	49.13	54	P	P	20 29 03.6	+3.1
	comp=Z,2µmcomp=Z,109nm,1.2s						
PRAC	Prado	49.14	60	P	P	20 29 04.2	+3.5
	comp=Z,3µmcomp=Z,4µmcomp=Z,134nm,2.3s						
ANIL	Santa Ana	49.22	59	P	P	20 29 02.0	+0.4
	comp=Z,2µmcomp=Z,57nm,0.8s						
SIUN	Universidad Ur	49.24	42	P	P	20 29 03.7	+2.4
SIUN				IAmb	IAmb	20 29 09.0	
	comp=Z,125nm,1.9s						
URMC	La Uribe, Meta	49.26	61	P	P	20 29 05.2	+3.6
	comp=Z,2µmcomp=Z,86nm,2.4s						
LPIG	La Paz	49.41	7	P	P	20 29 02.3	-0.2
	comp=Z,6.6nm,0.3s,baz=100,slow=4.6,SNR=1.5						
LPIG				LR	LR	20 44 44.0	
	comp=Z,20µm,21.7s,baz=183,slow=30						
	comp=Z,6.6nm,0.3s						
LPIG	La Paz	49.41	7	P	P	20 29 02.3	-0.2
RECRC	Villamaria, Ca	49.55	58	P	P	20 29 08.7	+4.2
CBOC	Ciudad Bolivar	49.63	57	P	P	20 29 06.8	+2.2
	comp=Z,4µmcomp=Z,138nm,2.0s						
HELC	Santa Helena	50.20	57	P	P	20 29 08.0	-1.2
MEDEC	Medelln, Ant	50.21	57	P	P	20 29 11.5	+2.5
DBBC	Dabeiba	50.23	56	P	P	20 29 12.0	+3.0
SAIC	Isla e San And	50.25	46	P	P	20 29 13.3	+4.3
	comp=Z,140nm,1.4s						
CVER	Cruz Verde, Cu	50.27	60	P	P	20 29 13.8	+3.9
	comp=Z,4µmcomp=Z,126nm,2.2s						
ROSC	El Rosal	50.28	59	P	P	20 29 08.3	-1.5
	comp=Z,2.7nm,0.3s,baz=215,slow=5.6,SNR=11						
ROSC				LR	LR	20 47 25.0	
	comp=Z,8µm,18.2s,baz=225,slow=33						
	comp=Z,2.7nm,0.3s						
ROSC	El Rosal	50.28	59	P	P	20 29 12.3	+2.5
ROSC				IAmb	IAmb	20 29 49.3	
	comp=Z,252nm,1.9s						
ROSC	El Rosal	50.28	59	P	P	20 29 08.3	-1.5
NORC	Norcasia	50.31	58	P	P	20 29 12.3	+2.7
	comp=Z,1µmcomp=Z,45nm,2.4s						
VILC	Villavicencio,	50.32	61	P	P	20 29 13.2	+3.4
	comp=Z,415nmcomp=Z,31nm,0.9s						
CAPC	Capurgana	50.46	53	P	P	20 29 13.3	+2.6
	comp=Z,2µmcomp=Z,55nm,1.0s						
APAC	Apartado, Choc	50.53	54	P	P	20 29 15.0	+3.8
	comp=Z,3µmcomp=Z,77nm,2.1s						
CHIC	Chingaza	50.61	60	P	P	20 29 15.8	+3.5
	comp=Z,3µmcomp=Z,78nm,1.9s						
SPBC	San Pablo de B	50.98	59	P	P	20 29 17.7	+3.0
	comp=Z,2µmcomp=Z,108nm,2.3s						
PRVC	Isla de Provid	51.10	45	P	P	20 29 21.4	+6.0
PSAL	Palomas, Salto	51.21	111	*e*P	P	20 29 17.4	+1.2
UREC	San Jos de Ur	51.21	55	P	P	20 29 18.7	+2.3
PTBC	PUERTO BERRIO,	51.24	58	P	P	20 29 19.4	+2.8
	comp=Z,2µmcomp=Z,70nm,2.2s						
LCBC	Los crdobas,	51.33	54	P	P	20 29 21.0	+3.8
	comp=Z,5µmcomp=Z,4µmcomp=Z,92nm,1.8s						
PMSA	Palmer Station	51.42	154	LR	LR	20 44 45.9	
	comp=Z,3µm,22.0s,baz=294,slow=29						
SIV	San Ignacio	51.85	91	LR	LR	20 47 14.2	
	comp=Z,8µm,21.1s,baz=270,slow=31						
RUSC	La Rusia	51.89	59	P	P	20 29 23.5	+1.5
	comp=Z,2µmcomp=Z,82nm,2.6s						
BRJC	Barrancabermej	52.06	58	P	P	20 29 24.1	+1.4
	comp=Z,4µmcomp=Z,125nm,0.6s						
BARC	Barichara	52.25	58	P	P	20 29 27.5	+3.1
	comp=Z,106nm,1.0s						

CPUP	Villa Florida	52.34	105	P	P	20 29 23.3	-1.4
	comp=Z,4.6nm,0.9s,baz=260,slow=7.9,SNR=14						
CPUP				LR	LR	20 48 01.3	
	comp=Z,17µm,18.6s,baz=259,slow=32						
	comp=Z,4.6nm,0.9s						
CPUP	Villa Florida	52.34	105	P	P	20 29 24.3	-0.4
CPUP	Villa Florida	52.34	105	P	P	20 29 24.3	-0.4
CPUP				pmax	pmax		
	comp=Z,65nm,1.6s						
CPUP	Villa Florida	52.34	105	⇓P	P	20 29 24.7	0.0
TEIG	Tepich	52.62	33	P	P	20 29 24.7	-2.0
TEIG				IAmb	IAmb	20 29 37.5	
	comp=Z,125nm,1.2s						
TEIG	Tepich	52.62	33	P	P	20 29 29.7	+3.0
	comp=Z,7µmcomp=Z,10µmcomp=Z,215nm,1.4s						
HPIG		52.86	11	P	P	20 29 25.4	-3.2
HPIG				IAmb	IAmb	20 29 44.5	
	comp=Z,154nm,1.8s						
SJCC	San Jacinto, C	52.89	54	P	P	20 29 31.6	+2.7
	comp=Z,3µmcomp=Z,84nm,1.4s						
PAMC	Pamplona, Colo	53.09	58	P	P	20 29 32.0	+1.1
	comp=Z,326nmcomp=Z,25nm,1.4s						
OCAC	Ocana	53.19	57	P	P	20 29 33.4	+2.1
	comp=Z,3µmcomp=Z,58nm,0.9s						
SGC2	Sao Gabriel da	53.43	70	P	P	20 29 33.4	+0.5
	comp=Z,2µmcomp=Z,51nm,1.9s						
AFI	Afiamalu	53.51	271	IAMs_20	IAMs_20	20 45 48.0	
	comp=Z,14µm,22.0s						
ARGC	Ariguani, Magd	53.55	55	P	P	20 29 36.7	+3.0
	comp=Z,2µmcomp=Z,2µmcomp=Z,79nm,2.0s						
VILB	Vilhena	53.71	88	IAmb	IAmb	20 29 53.4	
	comp=Z,164nm,1.5s						
VILB	Vilhena	53.71	88	*e*P	P	20 29 34.1	-0.9
TEFE	Tefe	53.76	75	*e*P	P	20 29 34.2	-1.1
PTLB	Pontes e Lacer	53.78	91	*e*P	P	20 29 34.4	-1.0
HSIG		54.22	5	⇓P	P	20 29 39.5	+1.2
BDQN	Bodoquena, MS	54.35	98	*e*P	P	20 29 39.1	-0.5
SMRC	Santa Marta, M	54.43	53	P	P	20 29 42.5	+2.4
	comp=Z,2µmcomp=Z,76nm,1.7s						
HBVL	Hebbronville	54.65	19	P	P	20 29 37.6	-3.8
RAO	Raoul Island	54.70	251	LR	LR	20 47 04.8	
	comp=Z,4µm,21.0s,baz=104,slow=29						
CPSB	Cacapava Do Su	54.86	110	*e*P	P	20 29 43.8	+0.6
AMBA	Amambai (Brazi	55.23	101	*e*P	P	20 29 46.2	+0.3
AQDB	Aquidauana	55.28	98	P	P	20 29 46.6	+0.2
TX31	Lajitas Ar. Si	55.58	13	P	P	20 29 46.0	-2.3
TXAR	Lajitas Array	55.58	13	P	P	20 29 47.7	-0.6
	comp=Z,1.4nm,0.8s,baz=196,slow=8.4,SNR=13						
TXAR				LR	LR	20 48 59.3	
	comp=Z,6µm,19.2s,baz=166,slow=31						
	comp=Z,1.4nm,0.8s						
TXAR	Lajitas Array	55.58	13	P	P	20 29 46.6	-1.7
TXAR	Lajitas Array	55.58	13	P	P	20 29 47.7	-0.6
SDV	Santo Domingo	55.65	58	P	P	20 29 48.0	-1.2
	comp=Z,19nm,0.9s,baz=219,slow=2.5,SNR=20						
SDV				LR	LR	20 50 28.2	
	comp=Z,5µm,20.5s,baz=224,slow=33						
	comp=Z,19nm,0.9s						
SDV	Santo Domingo	55.65	58	P	P	20 29 48.0	-1.2
SDV				IAmb	IAmb	20 29 56.3	
	comp=Z,241nm,1.9s						
SDV	Santo Domingo	55.65	58	*e*P	P	20 29 48.8	-0.4
SDV	Santo Domingo	55.65	58	P	P	20 29 50.8	+1.6
URIC	Uribia, Colomb	56.42	55	P	P	20 29 54.0	-0.5
735A	Kenedy	56.58	19	IAMs_20	IAMs_20	20 51 02.4	
	comp=Z,12µm,19.0s						
ITAB	Concordia	56.66	107	*e*P	P	20 29 56.0	-0.2
319A	Douglas	56.71	7	IAmb	IAmb	20 30 13.3	
	comp=Z,228nm,1.6s						
VHRN	Van Horn	56.74	11	IAmb	IAmb	20 30 12.1	
	comp=Z,191nm,1.7s						
SALV	Santo Antonio	56.74	93	*e*P	P	20 29 56.2	-0.7
PP1B	Ponte de Pedra	56.91	95	*e*P	P	20 29 56.2	-1.9
214A	Organ Pipe Nat	57.01	3	IAmb	IAmb	20 30 14.1	
	comp=Z,181nm,1.7s						
URZ	Urewera	57.27	239	P	P	20 30 02.0	+1.8
	comp=Z,17nm,1.0s,baz=84,slow=3.8,SNR=4.8						
URZ				LR	LR	20 48 37.7	
	comp=Z,4µm,19.9s,baz=90,slow=30						
	comp=Z,17nm,1.0s						
CNLB	Canela	57.29	110	*e*P	P	20 30 01.5	+0.9
RTZ	Ruatahuna	57.32	239	IAmb	IAmb	20 30 16.2	
	comp=Z,150nm,1.3s						
PTGB	Pitanga	57.34	104	*e*P	P	20 30 01.2	+0.1
PDRB	Porto dos Gac	57.35	88	*e*P	P	20 29 59.7	-1.5
MACA	Manacapuru-AM	57.40	77	P	P	20 30 00.5	-1.0
MACA				IAmb	IAmb	20 30 07.5	
	comp=Z,106nm,1.0s						
MACA	Manacapuru-AM	57.40	77	*e*P	P	20 30 01.1	-0.4
EPT	El Paso	57.46	9	IAmb	IAmb	20 30 18.3	
	comp=Z,226nm,1.6s						
TUC	Tucson	57.49	5	P	P	20 30 01.3	-0.5
TUC				IAmb	IAmb	20 30 17.6	
	comp=Z,183nm,1.9s						
TUC	Tucson	57.49	5	IAMs_20	IAMs_20	20 49 06.1	
	comp=Z,14µm,21.0s						
TUC	Tucson	57.49	5	P	P	20 30 01.3	-0.5
TUC				pmax	pmax		
	comp=Z,183nm,1.9s						
TUC				MLR	MLR		
	comp=Z,14µm,21.0s						
TUC	Tucson	57.49	5	⇓P	P	20 30 02.8	+0.9
MNTX	Cornudas Mount	57.56	11	IAmb	IAmb	20 30 17.5	
	comp=Z,158nm,1.6s						
MNTX				IAMs_20	IAMs_20	20 49 20.5	
	comp=Z,9µm,21.0s						
MNTX	Cornudas Mount	57.56	11	⇑P	P	20 30 03.6	+1.4
JCT	Junction City	57.57	16	⇓P	P	20 30 02.4	0.0
BKZ	Black Stump Fm	57.62	238	IAmb	IAmb	20 30 21.0	
	comp=Z,142nm,1.5s						
YUH	Yuha Desert	57.62	360	IAmb	IAmb	20 30 19.1	
	comp=Z,204nm,1.7s						
BAR	Barrett	57.66	359	IAmb	IAmb	20 30 15.5	
	comp=Z,102nm,1.3s						
BAR				IAMs_20	IAMs_20	20 48 35.6	
	comp=Z,11µm,19.0s						
OZNA	Ozona	57.67	15	IAmb	IAmb	20 30 10.3	
	comp=Z,131nm,1.8s						
113A	Mohawk Valley,	57.78	2	IAmb	IAmb	20 30 19.3	
	comp=Z,211nm,1.8s						
CPE	Camp Elliot	57.88	359	IAmb	IAmb	20 30 19.6	
	comp=Z,155nm,1.8s						
CPE				IAMs_20	IAMs_20	20 48 23.3	
	comp=Z,11µm,20.0s						
121A	Cookes Peak, D	58.03	8	IAmb	IAmb	20 30 22.6	
	comp=Z,119nm,1.4s						
GLA	Glamis	58.03	1	IAMs_20	IAMs_20	20 49 06.5	
	comp=Z,13µm,20.0s						
MRZ	Mangatainoka R	58.13	236	P	P	20 30 06.4	+0.1
HKT	Hockley	58.21	21	P	P	20 30 06.8	+0.1
HKT				IAmb	IAmb	20 30 15.5	
	comp=Z,178nm,1.6s						
HKT	Hockley	58.21	21	*i* P	P	20 30 06.3	-0.4
HKT				pmax	pmax		
	comp=Z,52nm,1.5s						
HKT	Hockley	58.21	21	⇑P	P	20 30 08.7	+1.9
BORC	Borrego Spring	58.24	359	IAmb	IAmb	20 30 22.4	
	comp=Z,164nm,1.7s						
SALN	Salton City	58.25	360	P	P	20 30 06.7	-0.3
MSWZ	Moikau Station	58.28	236	P	P	20 30 06.6	-0.7
C2SB	Chapadao do Su	58.37	97	*e*P	P	20 30 07.8	-0.5
435B	Jarrell	58.46	19	IAmb	IAmb	20 30 16.3	
	comp=Z,167nm,1.4s						
CLDB	Colider	58.48	87	*e*P	P	20 30 08.0	-1.2
ODSA	Odessa	58.50	13	IAmb	IAmb	20 30 16.1	
	comp=Z,66nm,1.1s						
LDASE	Londrina, Braz	58.53	103	*e*P	P	20 30 09.5	0.0
PFO	Pinyon Flats O	58.59	359	P	P	20 30 09.4	-0.1
	comp=Z,3.5nm,1.0s,baz=175,slow=5.9,SNR=7.6						
PFO				LR	LR	20 49 53.1	
	comp=Z,9µm,18.5s,baz=182,slow=30						
	comp=Z,3.5nm,1.0s						
PFO	Pinyon Flats O	58.59	359	P	P	20 30 10.3	+0.8
PFO				IAmb	IAmb	20 30 25.0	
	comp=Z,125nm,1.8s						
PFO	Pinyon Flats O	58.59	359	IAMs_20	IAMs_20	20 49 40.7	
	comp=Z,10µm,18.0s						
PFO	Pinyon Flats O	58.59	359	*i* P	P	20 30 09.9	+0.4
PFO				pmax	pmax		
	comp=Z,40nm,1.3s						
TOZ	Tahuroa Road	58.60	240	P	P	20 30 09.5	-0.1
SGCY	Sterling City	58.62	15	IAmb	IAmb	20 30 16.6	
	comp=Z,131nm,1.4s						
BC3	Big Chuckawall	58.63	0	IAmb	IAmb	20 30 25.4	
	comp=Z,210nm,1.8s						
ELS	Elsinore Mount	58.64	359	P	P	20 30 08.2	-1.6
BLYC	Blythe	58.74	1	IAmb	IAmb	20 30 25.9	
	comp=Z,149nm,1.8s						
POHA	Pohakuloa	59.08	316	IAMs_20	IAMs_20	20 53 21.8	
	comp=Z,9µm,18.0s						
IRM	Iron Mountain	59.13	1	IAmb	IAmb	20 30 29.8	
	comp=Z,176nm,1.7s						
IRM				IAMs_20	IAMs_20	20 49 39.6	
	comp=Z,13µm,21.0s						
PASC	Pasadena Art C	59.18	358	IAmb	IAmb	20 30 29.8	
	comp=Z,171nm,1.6s						
MWC	Mount Wilson	59.23	358	P	P	20 30 14.2	+0.2
MWC				IAmb	IAmb	20 30 30.2	
	comp=Z,95nm,1.4s						
MWC	Mount Wilson	59.23	358	P	P	20 30 14.3	+0.2
MWC				pmax	pmax		
	comp=Z,95nm,1.4s						
MWC				MLR	MLR		
	comp=Z,15µm,18.0s						
KHZ	Kahutara	59.42	234	P	P	20 30 13.5	-1.7
KHZ				IAmb	IAmb	20 30 25.5	
	comp=Z,216nm,1.8s						
X16A	Lo Mia Camp, P	59.54	4	IAmb	IAmb	20 30 32.0	
	comp=Z,156nm,1.5s						
DANC	Danby, Needles	59.61	1	IAMs_20	IAMs_20	20 49 53.2	
	comp=Z,11µm,20.0s						
WHTX	Lake Whitney,	59.63	18	IAmb	IAmb	20 30 23.4	
	comp=Z,121nm,1.5s						
WHTX				IAMs_20	IAMs_20	20 52 27.1	
	comp=Z,11µm,19.0s						
POST	Post	59.64	14	IAmb	IAmb	20 30 23.3	
	comp=Z,115nm,1.6s						
ABTX	Abilene, Hawle	59.65	16	P	P	20 30 15.1	-1.7
ABTX				IAmb	IAmb	20 30 27.2	
	comp=Z,69nm,1.2s						
ABTX				IAMs_20	IAMs_20	20 52 25.7	
	comp=Z,10µm,20.0s						
NEE2	Needles Airpor	59.75	1	IAmb	IAmb	20 30 33.0	
	comp=Z,187nm,1.6s						
SN07	Snyder 07	59.80	15	IAmb	IAmb	20 30 42.9	
	comp=Z,127nm,1.8s						
441A	DeRidder	59.83	23	IAMs_20	IAMs_20	20 55 24.2	
	comp=Z,9µm,19.0s						
TPO	Tropico Hills	59.89	358	P	P	20 30 19.5	+1.0
PLPT	Palo Pinto	60.17	17	IAmb	IAmb	20 30 27.3	
	comp=Z,126nm,1.4s						
MSTX	Muleshoe	60.25	13	IAMs_20	IAMs_20	20 54 54.6	
	comp=Z,6µm,18.0s						
BOAV	Boa Vista	60.26	71	P	P	20 30 20.3	-1.0
BOAV				IAmb	IAmb	20 30 36.7	
	comp=Z,183nm,1.7s						
BOAV	Boa Vista	60.26	71	*e*P	P	20 30 21.8	+0.4
LTZ	Lake Taylor	60.30	234	IAMs_20	IAMs_20	20 51 52.7	
	comp=Z,7µm,19.0s						
ITRB	Iturama	60.30	99	*e*P	P	20 30 23.1	+1.5
ARAG	Araguaiana, MT	60.31	94	*e*P	P	20 30 22.2	+0.4
W18A	Petrified Fore	60.37	6	IAmb	IAmb	20 30 34.8	
	comp=Z,98nm,1.3s						
NPGB	Novo Progresso	60.43	84	*e*P	P	20 30 21.0	-1.6
LRMC	Laurel Mtn Rad	60.47	358	IAMs_20	IAMs_20	20 50 11.1	
	comp=Z,11µm,20.0s						
CCCA	Chr Cany lake	60.51	359	IAmb	IAmb	20 30 43.5	
	comp=Z,161nm,1.5s						
FW06	Azle	60.53	18	IAmb	IAmb	20 30 29.7	
	comp=Z,121nm,1.3s						
OUZ	Omahuta	60.56	242	⇑P	P	20 30 24.5	+1.2
TASM	ASL Pad, Albuq	60.58	9	IAmb	IAmb	20 30 43.9	
	comp=Z,32nm,1.3s						
ANMO	Albuquerque	60.58	9	P	P	20 30 22.6	-0.7
	comp=Z,5.3nm,1.1s,baz=158,slow=7.7,SNR=11						
ANMO				LR	LR	20 52 27.7	
	comp=Z,9µm,18.1s,baz=187,slow=32						
	comp=Z,5.3nm,1.1s						
ANMO	Albuquerque	60.58	9	P	P	20 30 22.1	-1.3
ANMO	Albuquerque	60.58	9	IAMs_20	IAMs_20	20 51 41.5	
	comp=Z,9µm,20.0s						
ANMO	Albuquerque	60.58	9	*ce*P	P	20 30 22.8	-0.6
ANMO				pmax	pmax		
	comp=Z,34nm,2.1s						
ANMO	Albuquerque	60.58	9	⇑P	P	20 30 24.6	+1.2
WSHM	Spangler Hills	60.59	359	IAmb	IAmb	20 30 35.6	
	comp=Z,63nm,1.3s						
WSHM				IAMs_20	IAMs_20	20 50 16.1	
	comp=Z,11µm,20.0s						
WUAZ	Wupatki	60.64	4	⇓P	P	20 30 24.9	+1.2
ISA	Isabella, Lake	60.68	358	IAmb	IAmb	20 30 36.4	
	comp=Z,77nm,1.3s						
V12A	Nelson	60.70	1	IAmb	IAmb	20 30 40.8	
	comp=Z,171nm,1.9s						
CLC	China Lake	60.80	358	IAmb	IAmb	20 30 39.8	
	comp=Z,103nm,1.6s						
SHOC	Shoshone, Teco	60.87	360	IAmb	IAmb	20 30 40.5	
	comp=Z,97nm,1.2s						
SHOC				IAMs_20	IAMs_20	20 50 30.5	
	comp=Z,10µm,20.0s						
VES	Vestal, Richgr	60.88	357	IAMs_20	IAMs_20	20 50 20.0	
	comp=Z,10µm,20.0s						
INZ	Inchbonnie	60.91	234	IAMs_20	IAMs_20	20 50 36.0	
	comp=Z,9µm,19.0s						
Z35A	Perchaven, San	60.95	18	IAMs_20	IAMs_20	20 53 16.9	
	comp=Z,7µm,19.0s						
WTFS	Witchita Falls	61.04	17	IAmb	IAmb	20 30 48.7	
	comp=Z,190nm,1.6s						
PKD	Bear Valley Ra	61.07	356	IAmb	IAmb	20 30 38.0	
	comp=Z,82nm,1.2s						
ODZ	Otahua Downs	61.15	231	IAMs_20	IAMs_20	20 51 58.3	
	comp=Z,8µm,19.0s						
ITTB	Itaituba	61.24	81	*e*P	P	20 30 26.9	-1.2
AMTX	Amarillo	61.35	13	IAmb	IAmb	20 30 35.2	
	comp=Z,106nm,1.4s						
AMTX				IAMs_20	IAMs_20	20 53 45.7	
	comp=Z,8µm,18.0s						
MSVF	Nonsavu	61.38	263	P	P	20 30 29.8	+0.7
MSVF	Nonsavu	61.38	263	IAMs_20	IAMs_20	20 49 50.6	
	comp=Z,10µm,22.0s						
MSVF	Nonsavu	61.38	263	*i* P	P	20 30 28.4	-0.7
MSVF				pmax	pmax		
	comp=Z,40nm,1.2s						
FURC	Furnace Creek,	61.44	359	IAMs_20	IAMs_20	20 50 44.2	
	comp=Z,10µm,21.0s						
CWC	Cottonwood Cre	61.44	358	IAmb	IAmb	20 30 45.5	
	comp=Z,161nm,1.6s						
SHPR	Sheep Range	61.48	1	IAmb	IAmb	20 30 45.4	
	comp=Z,126nm,1.4s						
U15A	North Rim	61.49	3	IAmb	IAmb	20 30 42.8	
	comp=Z,108nm,1.2s						
BB19B	Bebedouro	61.51	101	*e*P	P	20 30 30.2	+0.3
Z38A	Mt. Pleasant	61.55	20	IAmb	IAmb	20 30 36.8	
	comp=Z,134nm,1.7s						
LBZ	Lake Benmore	61.57	232	IAMs_20	IAMs_20	20 50 02.4	
	comp=Z,8µm,21.0s						
PET01	Itanhaem-SP	61.65	105	*e*P	P	20 30 30.8	0.0
SPB	Sao Paulo	61.72	104	*e*P	P	20 30 31.0	-0.2
WCT	Wildcat Mounta	61.76	359	IAmb	IAmb	20 30 47.0	
	comp=Z,74nm,1.4s						
WMOK	Wichita Mounta	61.88	16	IAMs_20	IAMs_20	20 53 44.3	
	comp=Z,11µm,19.0s						
WMOK	Wichita Mounta	61.88	16	⇓P	P	20 30 33.5	+1.5
TPNV	Topopah Spring	61.91	360	IAmb	IAmb	20 30 48.3	
	comp=Z,137nm,1.4s						
TPNV				IAMs_20	IAMs_20	20 51 02.5	
	comp=Z,12µm,21.0s						
SNDB	Serra Nova Dou	62.14	91	*e*P	P	20 30 33.0	-1.2
Z41A	Richland Creek	62.25	22	IAmb	IAmb	20 30 41.9	
	comp=Z,112nm,1.1s						
VAO	Valinhos	62.30	104	P	P	20 30 34.4	-0.9
VAO				IAmb	IAmb	20 30 52.0	
	comp=Z,130nm,1.4s						
VAO	Valinhos	62.30	104	*e*P	P	20 30 35.5	+0.3
PRN	Pahroc Range	62.38	1	IAmb	IAmb	20 30 53.7	
	comp=Z,100nm,1.3s						
MHC	Mount Hamilton	62.54	355	IAMs_20	IAMs_20	20 50 30.2	
	comp=Z,11µm,20.0s						
CCUT	Cedar City	62.56	2	IAmb	IAmb	20 30 52.8	
	comp=Z,133nm,1.3s						
JRSC	Jasper Ridge	62.65	354	IAMs_20	IAMs_20	20 50 48.1	
	comp=Z,12µm,22.0s						
IPMB	Ipameri, GO	62.78	98	*e*P	P	20 30 37.9	-0.6
SBA	Scott Base	62.78	193	P	P	20 30 37.8	+0.3
SBA				IAmb	IAmb	20 31 02.5	
	comp=Z,144nm,1.6s						
SBA	Scott Base	62.78	193	IAMs_20	IAMs_20	20 51 15.9	
	comp=Z,9µm,20.0s						
SBA	Scott Base	62.78	193	P	P	20 30 37.8	+0.3
SBA				pmax	pmax		
	comp=Z,144nm,1.6s						
SBA				MLR	MLR		
	comp=Z,9µm,20.0s						
MLZ	Mavora Lakes	62.87	230	P	P	20 30 38.7	+0.1
FARB	Farallon Islan	63.02	354	IAMs_20	IAMs_20	20 50 55.8	
	comp=Z,10µm,20.0s						
T25A	Trinidad	63.04	10	IAmb	IAmb	20 31 01.2	
	comp=Z,168nm,1.6s						
MTPU	Mount Pierson	63.10	3	IAmb	IAmb	20 30 56.5	
	comp=Z,188nm,1.8s						
CMB	Columbia Colle	63.14	356	IAmb	IAmb	20 30 55.6	
	comp=Z,138nm,1.4s						
MIAR	Mount Ida	63.17	21	⇓P	P	20 30 41.6	+1.0
OK029	Liberty Lake	63.22	17	IAMs_20	IAMs_20	20 55 06.0	
	comp=Z,6µm,18.0s						
X40A	Basin Creek Fa	63.36	21	IAmb	IAmb	20 30 49.6	
	comp=Z,101nm,1.9s						
NV11	Mina Array Sit	63.43	358	IAmb	IAmb	20 30 57.9	
	comp=Z,117nm,1.4s						
NVAR	Mina Array Bea	63.43	358	P	P	20 30 42.1	-0.3
	comp=Z,21nm,1.0s,baz=192,slow=9.6,SNR=24						
NVAR				LR	LR	20 52 27.7	
	comp=Z,16µm,18.4s,baz=180,slow=30						
	comp=Z,21nm,1.0s						
NVAR	Mina Array Bea	63.43	358	P	P	20 30 42.3	-0.2
MCCM	Marconi Confer	63.45	354	IAMs_20	IAMs_20	20 50 51.2	
	comp=Z,9µm,20.0s						
SDCO	Great Sand Dun	63.47	9	IAMs_20	IAMs_20	20 52 59.1	
	comp=Z,9µm,22.0s						
SDCO	Great Sand Dun	63.47	9	⇑P	P	20 30 42.0	-0.8
PV01	Paradox Valley	63.47	6	IAmb	IAmb	20 30 58.0	
	comp=Z,169nm,1.7s						
DEOK	Depew	63.52	18	IAmb	IAmb	20 30 58.4	
	comp=Z,143nm,1.9s						
PSUT	Pine Spring	63.53	2	IAmb	IAmb	20 30 56.3	
	comp=Z,80nm,1.1s						
OK038	West end E0370	63.54	15	IAMs_20	IAMs_20	20 54 35.6	
	comp=Z,8µm,19.0s						
WELL	Weller Preserv	63.56	356	IAMs_20	IAMs_20	20 51 26.2	
	comp=Z,11µm,20.0s						
OK052	Battle Ridge R	63.58	17	IAmb	IAmb	20 30 49.8	
	comp=Z,116nm,1.6s						
BELA	Belgrano 2	63.62	167	P	P	20 30 43.2	+0.2
BELA				IAmb	IAmb	20 31 08.2	
	comp=Z,110nm,1.6s						
RYN	Ryan	63.64	358	IAmb	IAmb	20 31 00.5	
	comp=Z,166nm,1.7s						
NOKA	Waynoka	63.65	15	IAmb	IAmb	20 30 50.7	
	comp=Z,81nm,1.3s						
CROK	Carrier	63.76	16	IAmb	IAmb	20 31 05.3	
	comp=Z,129nm,1.4s						
BDFB	Brasilia	63.76	96	P	P	20 30 43.5	-1.6
	comp=Z,10nm,0.8s,baz=269,slow=7.2,SNR=10						
BDFB				LR	LR	20 55 01.0	
	comp=Z,13µm,21.7s,baz=249,slow=33						
	comp=Z,10nm,0.8s						
BDFB	Brasilia	63.76	96	P	P	20 30 45.5	+0.3
BDFB	Brasilia	63.76	96	P	P	20 30 43.5	-1.6
PV07	Paradox Valley	63.77	6	IAmb	IAmb	20 30 59.6	
	comp=Z,192nm,1.9s						
TUL3	Leonard	63.78	18	IAmb	IAmb	20 31 09.7	
	comp=Z,80nm,1.4s						
HOPE	Hope Point	63.78	140	IAMs_20	IAMs_20	20 53 33.5	
	comp=Z,9µm,19.0s						
UALR	University of	63.79	22	IAmb	IAmb	20 30 51.6	
	comp=Z,85nm,1.5s						
VNDA	Vanda	63.81	194	P	P	20 30 44.0	-0.3
	comp=Z,4.1nm,0.9s,baz=92,slow=6.6,SNR=10						
VNDA				LR	LR	20 52 16.0	
	comp=Z,9µm,18.4s,baz=98,slow=30						
	comp=Z,4.1nm,0.9s						
VNDA	Vanda	63.81	194	P	P	20 30 45.7	+1.4
VNDA				IAmb	IAmb	20 30 59.8	
	comp=Z,85nm,1.9s						
VNDA	Vanda	63.81	194	P	P	20 30 45.7	+1.4
VNDA				pmax	pmax		
	comp=Z,85nm,1.9s						
PV22	Blue Mesa, Par	63.85	6	IAmb	IAmb	20 31 00.1	
	comp=Z,101nm,1.4s						
Z47A	Carrollton	63.93	26	IAmb	IAmb	20 30 56.4	
	comp=Z,85nm,1.0s						
OK048	Pawnee Station	63.94	17	IAmb	IAmb	20 30 52.3	
	comp=Z,109nm,1.4s						
SPR3	Spring Creek 3	63.98	1	IAmb	IAmb	20 31 01.1	
	comp=Z,103nm,1.4s						
OK051	E0350 and S346	64.05	17	IAMs_20	IAMs_20	20 55 58.0	
	comp=Z,6µm,18.0s						
MNRC	McLaughlin Min	64.13	354	IAMs_20	IAMs_20	20 51 33.4	
	comp=Z,8µm,22.0s						
PNTR	Pine Nut	64.14	357	IAmb	IAmb	20 30 56.3	
	comp=Z,80nm,0.9s						
PMNB	Patos De Minas	64.18	99	*e*P	P	20 30 47.8	-0.1
LRAL	Lakeview Retre	64.21	27	IAmb	IAmb	20 30 54.8	
	comp=Z,57nm,1.1s						
SRU	San Rafael Swe	64.27	5	IAmb	IAmb	20 31 02.9	
	comp=Z,141nm,1.5s						
WHAR	Wooly Hollow	64.28	21	IAmb	IAmb	20 31 28.6	
	comp=Z,162nm,2.0s						
TMUT	Trail Mountain	64.41	4	IAmb	IAmb	20 31 15.2	
	comp=Z,108nm,1.5s						
SUTB	Sutter Butte	64.43	355	IAmb	IAmb	20 31 04.5	
	comp=Z,142nm,1.9s						
SUTB				IAMs_20	IAMs_20	20 52 14.1	
	comp=Z,8µm,20.0s						
T35A	Sooner Cattle	64.53	17	IAmb	IAmb	20 30 56.3	
	comp=Z,75nm,1.2s						
T35A				IAMs_20	IAMs_20	20 55 56.6	
	comp=Z,6µm,18.0s						
OXF	Oxford	64.58	24	IAmb	IAmb	20 30 59.8	
	comp=Z,94nm,1.2s						
OXF				IAMs_20	IAMs_20	20 57 53.9	
	comp=Z,7µm,18.0s						
HHAR	Hobbs	64.67	20	IAmb	IAmb	20 31 01.6	
	comp=Z,115nm,1.9s						
U38A	Gravette	64.68	19	IAMs_20	IAMs_20	20 55 30.6	
	comp=Z,7µm,20.0s						
Q24A	Divide	64.72	9	IAMs_20	IAMs_20	20 54 40.1	
	comp=Z,6µm,18.0s						
ORV	Oroville	64.73	355	IAmb	IAmb	20 31 08.2	
	comp=Z,93nm,1.7s						
ORV				IAMs_20	IAMs_20	20 51 38.0	
	comp=Z,9µm,22.0s						
PAHR	Pah Rah Range	64.75	357	IAmb	IAmb	20 31 06.4	
	comp=Z,92nm,1.4s						
BSCB	Bom Sucesso	64.86	102	*e*P	P	20 30 52.0	-0.1
SJG	San Juan	64.86	53	LR	LR	20 55 32.0	
	comp=Z,1µm,19.6s,baz=210,slow=33						
152A	Waverly Hall	64.86	29	IAmb	IAmb	20 30 58.7	
	comp=Z,86nm,1.4s						
QSPA	South Pole Qui	64.86	180	P	P	20 30 49.3	-2.2
KCPM	Cahto Peak	65.04	353	IAMs_20	IAMs_20	20 53 32.2	
	comp=Z,10µm,18.0s						
MPU	Maple Canyon	65.10	4	IAmb	IAmb	20 31 06.2	
	comp=Z,71nm,1.2s						
Y49A	Blount Mountai	65.17	27	IAmb	IAmb	20 31 00.6	
	comp=Z,80nm,1.3s						
KSCO	Kaye Shedlock’	65.17	11	IAMs_20	IAMs_20	20 54 52.2	
	comp=Z,9µm,18.0s						
DUG	Dugway, Tooele	65.22	3	IAMs_20	IAMs_20	20 53 40.9	
	comp=Z,7µm,19.0s						
LCAR	Lake Charles	65.36	22	IAmb	IAmb	20 31 01.8	
	comp=Z,73nm,1.7s						
R32A	Long Quarter,	65.41	15	IAmb	IAmb	20 31 15.2	
	comp=Z,68nm,1.3s						
X48A	Hartselle	65.43	26	IAMs_20	IAMs_20	20 59 07.4	
	comp=Z,7µm,18.0s						
O02D	Mt. Diablo Mer	65.45	354	IAmb	IAmb	20 31 11.3	
	comp=Z,108nm,1.4s						
ISCO	Idaho Springs	65.47	9	IAmb	IAmb	20 31 11.2	
	comp=Z,97nm,1.3s						
ISCO				IAMs_20	IAMs_20	20 54 53.1	
	comp=Z,10µm,19.0s						
ISCO	Idaho Springs	65.47	9	⇓P	P	20 30 56.5	+0.6
O03E	Paynes Creek	65.49	355	IAmb	IAmb	20 31 12.8	
	comp=Z,92nm,1.3s						
O03E				IAMs_20	IAMs_20	20 52 01.1	
	comp=Z,8µm,21.0s						
O20A	White River Ci	65.49	6	IAMs_20	IAMs_20	20 54 46.6	
	comp=Z,7µm,18.0s						
PLAL	Pickwick Lake	65.50	25	IAmb	IAmb	20 31 02.0	
	comp=Z,88nm,1.4s						
CBKS	Cedar Bluff	65.55	14	IAmb	IAmb	20 31 17.6	
	comp=Z,84nm,1.3s						
CBKS				IAMs_20	IAMs_20	20 55 48.8	
	comp=Z,9µm,20.0s						
KMRM	Mail Ridge	65.59	353	IAMs_20	IAMs_20	20 52 02.1	
	comp=Z,11µm,20.0s						
VAS01	Vassouras-RJ	65.62	104	*e*P	P	20 30 56.8	-0.3
BSUT	Blindstream Ca	65.67	4	IAmb	IAmb	20 31 12.4	
	comp=Z,90nm,1.2s						
ELK	Elko	65.71	1	P	P	20 30 57.6	+0.2

	comp=Z,3.9nm,0.9s,baz=199,slow=6.0,SNR=15						
ELK				LR	LR	20 54 23.8	
	comp=Z,11µm,18.3s,baz=190,slow=31						
	comp=Z,3.9nm,0.9s						
ELK	**Elko**	**65.71**	**1**	IAmb	IAmb	20 31 12.9	
	comp=Z,184nm,1.8s						
ELK	**Elko**	**65.71**	**1**	P	**P**	**20 30 57.6**	**+0.2**
CTU	**Camp Tracy**	**65.77**	**3**	IAmb	IAmb	20 31 09.4	
	comp=Z,83nm,1.2s						
PRPB	**Parauapebas**	**65.79**	**85**	*e*P	**P**	**20 30 56.7**	**-1.5**
KMPM	**Mount Pierce**	**65.82**	**353**	IAMs_20	IAMs_20	20 53 26.9	
	comp=Z,8µm,18.0s						
KHBM	**Hayfork Bally**	**65.97**	**354**	IAMs_20	IAMs_20	20 52 20.8	
	comp=Z,7µm,21.0s						
HATC	**Hat Creek Radi**	**65.98**	**355**	IAMs_20	IAMs_20	20 53 59.2	
	comp=Z,7µm,18.0s						
MGMO	**Mountain Grove**	**65.99**	**21**	IAmb	IAmb	20 31 05.9	
	comp=Z,104nm,1.4s						
GOGA	**Godfrey**	**66.04**	**29**	IAmb	IAmb	20 31 06.1	
	comp=Z,108nm,1.5s						
FPAL	**Fort Paine**	**66.09**	**27**	IAmb	IAmb	20 31 06.1	
	comp=Z,68nm,1.4s						
S39A	**Bolivar**	**66.15**	**19**	IAMs_20	IAMs_20	20 56 26.6	
	comp=Z,10µm,21.0s						
Y52A	**Lilburn**	**66.16**	**29**	IAmb	IAmb	20 31 06.9	
	comp=Z,141nm,1.5s						
KHMM	**Horse Mountain**	**66.24**	**354**	IAMs_20	IAMs_20	20 52 59.8	
	comp=Z,11µm,21.0s						
T42A	**Van Buren**	**66.25**	**22**	IAmb	IAmb	20 31 07.1	
	comp=Z,70nm,1.4s						
X51A	**Calhoun**	**66.42**	**28**	IAMs_20	IAMs_20	21 00 19.7	
	comp=Z,7µm,18.0s						
KRPM	**Rodgers**	**66.55**	**353**	IAMs_20	IAMs_20	20 52 57.2	
	comp=Z,7µm,18.0s						
KSU1	**Kansas State U**	**66.56**	**16**	IAMs_20	IAMs_20	20 56 57.4	
	comp=Z,9µm,18.0s						
KSU1	**Kansas State U**	**66.56**	**16**	IAmb	IAmb	20 31 13.2	
	comp=Z,95nm,1.1s						
KSU1	**Kansas State U**	**66.56**	**16**	⇑P	**P**	**20 31 03.8**	**+1.2**
WVT	**Waverly**	**66.60**	**25**	P	**P**	**20 31 03.4**	**+0.5**
WVT				IAmb	IAmb	20 31 09.1	
	comp=Z,116nm,1.6s						
WVT	**Waverly**	**66.60**	**25**	IAMs_20	IAMs_20	20 58 57.5	
	comp=Z,9µm,18.0s						
WVT	**Waverly**	**66.60**	**25**	P	**P**	**20 31 03.4**	**+0.5**
WVT				pmax	pmax		
	comp=Z,116nm,1.6s						
WVT				MLR	MLR		
	comp=Z,9µm,18.0s						
V48A	**Smith Brothers**	**66.65**	**26**	IAmb	IAmb	20 31 09.5	
	comp=Z,128nm,1.5s						
HWUT	**Hardware Ranch**	**66.69**	**4**	⇓P	P	20 31 12.3	+8.7
SMTB	**Santa Maria do**	**66.70**	**89**	*e*P	**P**	**20 31 01.7**	**-2.4**
DIAM	**Diamantina, MG**	**66.73**	**100**	*e*P	**P**	**20 31 04.2**	**-0.2**
W50A	**Signal Mountai**	**66.78**	**27**	IAmb	IAmb	20 31 10.6	
	comp=Z,144nm,1.6s						
CGM3	**Cape Girardeau**	**66.98**	**23**	IAmb	IAmb	20 31 11.7	
	comp=Z,64nm,1.4s						
YBH	**Yreka Blue Hor**	**66.99**	**354**	P	**P**	**20 31 06.2**	**+0.9**
	comp=Z,0.7nm,0.9s,baz=222,slow=0.5,SNR=5.1						
YBH				LR	LR	20 53 38.1	
	comp=Z,823nm,20.6s,baz=180,slow=30						
YBH	**Yreka Blue Hor**	**66.99**	**354**	IAmb	IAmb	20 31 21.0	
	comp=Z,84nm,1.4s						
YBH	**Yreka Blue Hor**	**66.99**	**354**	P	**P**	**20 31 06.2**	**+0.9**
R40A	**Maddies Statio**	**67.03**	**20**	IAmb	IAmb	20 31 12.2	
	comp=Z,108nm,1.4s						
R40A				IAMs_20	IAMs_20	20 57 16.8	
	comp=Z,10µm,19.0s						
CCM	**Cathedral Cave**	**67.14**	**21**	P	**P**	**20 31 07.2**	**+0.9**
CCM				IAmb	IAmb	20 31 12.8	
	comp=Z,126nm,1.5s						
CCM	**Cathedral Cave**	**67.14**	**21**	P	**P**	**20 31 07.2**	**+0.9**
CCM				pmax	pmax		
	comp=Z,125nm,1.5s						
CCM				MLR	MLR		
	comp=Z,14µm,18.0s						
OGNE	**Ogallala**	**67.16**	**11**	IAMs_20	IAMs_20	20 55 27.7	
	comp=Z,9µm,21.0s						
W52A	**Murphy**	**67.27**	**28**	IAmb	IAmb	20 31 14.2	
	comp=Z,141nm,1.4s						
HODGE	**Hodges**	**67.27**	**30**	IAmb	IAmb	20 31 14.1	
	comp=Z,118nm,1.5s						
JANB	**Januaria**	**67.31**	**96**	*e*P	**P**	**20 31 07.0**	**-0.9**
CPCT	**Cooper Cave**	**67.32**	**27**	IAmb	IAmb	20 31 14.2	
	comp=Z,79nm,1.3s						
FVM	**French Village**	**67.34**	**22**	IAmb	IAmb	20 31 21.6	
	comp=Z,163nm,1.8s						
WVOR	**Wild Horse Val**	**67.44**	**358**	IAmb	IAmb	20 31 25.9	
	comp=Z,124nm,1.4s						
S44A	**Carbondale**	**67.48**	**23**	IAmb	IAmb	20 31 15.3	
	comp=Z,114nm,1.4s						
SIUC	**Southern Illin**	**67.51**	**23**	IAmb	IAmb	20 31 15.5	
	comp=Z,92nm,1.2s						
KBO	**Bosley Butte**	**67.61**	**353**	IAMs_20	IAMs_20	20 53 42.4	
	comp=Z,10µm,21.0s						
U49A	**Red Boiling Sp**	**67.73**	**26**	IAmb	IAmb	20 31 16.6	
	comp=Z,110nm,1.5s						
U49A				IAMs_20	IAMs_20	21 00 05.3	
	comp=Z,7µm,18.0s						
SDBA	**SAO DESIDERIO**	**67.75**	**94**	*e*P	**P**	**20 31 10.0**	**-0.9**
TKL	**Tuckaleechee C**	**67.82**	**28**	P	**P**	**20 31 10.8**	**+0.2**
	comp=Z,8.1nm,0.9s,baz=182,slow=8.8,SNR=6.8						
TKL				LR	LR	20 57 08.5	
	comp=Z,4µm,22.0s,baz=212,slow=33						
	comp=Z,8.1nm,0.9s						
TKL	**Tuckaleechee C**	**67.82**	**28**	IAmb	IAmb	20 31 17.0	
	comp=Z,73nm,1.4s						
TKL	**Tuckaleechee C**	**67.82**	**28**	P	**P**	**20 31 10.8**	**+0.2**
P38A	**Dawn**	**67.88**	**19**	IAMs_20	IAMs_20	20 58 25.4	
	comp=Z,6µm,19.0s						
PAULI	**Pauline**	**67.97**	**30**	IAmb	IAmb	20 31 18.6	
	comp=Z,102nm,1.4s						
BW06	**Boulder Array**	**67.98**	**5**	IAMs_20	IAMs_20	20 55 33.9	
	comp=Z,7µm,20.0s						
PDAR	**Pinedale Array**	**67.98**	**5**	P	**P**	**20 31 10.8**	**-1.0**
	comp=Z,3.2nm,0.6s,baz=168,slow=6.6,SNR=27						
PDAR				LR	LR	20 55 44.3	
	comp=Z,5µm,20.2s,baz=173,slow=31						
	comp=Z,3.2nm,0.6s						
PDAR	**Pinedale Array**	**67.98**	**5**	P	**P**	**20 31 11.5**	**-0.3**
P40A	**Paris**	**68.23**	**20**	IAmb	IAmb	20 31 19.6	
	comp=Z,85nm,1.5s						
P40A				IAMs_20	IAMs_20	20 57 50.7	
	comp=Z,7µm,20.0s						
V53A	**Saluda**	**68.24**	**29**	IAmb	IAmb	20 31 23.8	
	comp=Z,118nm,1.2s						
V53A				IAMs_20	IAMs_20	21 01 12.7	
	comp=Z,5µm,18.0s						
KEBM	**Edson Butte**	**68.28**	**353**	IAMs_20	IAMs_20	20 53 60.0	
	comp=Z,10µm,20.0s						
USIN	**University of**	**68.29**	**24**	IAmb	IAmb	20 31 20.2	
	comp=Z,138nm,1.4s						
MFID	**Camas Ranch**	**68.37**	**0**	IAmb	IAmb	20 31 29.2	
	comp=Z,142nm,1.4s						
MFID				IAMs_20	IAMs_20	20 55 50.5	
	comp=Z,8µm,18.0s						
BGNE	**Belgrade**	**68.38**	**14**	IAMs_20	IAMs_20	20 58 04.7	
	comp=Z,6µm,19.0s						
MDP	**Montagnes des**	**68.40**	**73**	LR	LR	20 58 08.2	
	comp=Z,14µm,19.2s,baz=232,slow=33						
BIRD	**Birdtown, Kers**	**68.44**	**31**	IAmb	IAmb	20 31 25.3	
	comp=Z,105nm,1.3s						
KMSC	**Kings Mountain**	**68.45**	**30**	IAmb	IAmb	20 31 25.1	
	comp=Z,104nm,1.4s						
HLID	**Hailey**	**68.53**	**1**	IAmb	IAmb	20 31 30.6	
	comp=Z,88nm,1.1s						
HLID				IAMs_20	IAMs_20	20 55 16.7	
	comp=Z,7µm,21.0s						
T50A	**Nancy**	**68.55**	**26**	IAmb	IAmb	20 31 21.5	
	comp=Z,74nm,1.2s						
T50A				IAMs_20	IAMs_20	21 00 25.9	
	comp=Z,7µm,18.0s						
SNOW	**Snow King Moun**	**68.58**	**4**	IAmb	IAmb	20 31 25.8	
	comp=Z,47nm,1.0s						
Q44A	**Meyer Farm, Va**	**68.65**	**22**	IAMs_20	IAMs_20	20 58 56.6	
	comp=Z,9µm,18.0s						
SJMB	**Sao Joao De Ma**	**68.81**	**101**	*e*P	**P**	**20 31 17.7**	**+0.4**
OLIL	**Olney**	**68.82**	**23**	IAmb	IAmb	20 31 30.9	
	comp=Z,134nm,1.4s						
MOOW	**Moose Ponds**	**68.87**	**4**	IAmb	IAmb	20 31 28.3	
	comp=Z,71nm,1.2s						
TMAB	**Tom-Au,PA,Br**	**68.96**	**82**	*e*P	**P**	**20 31 19.8**	**+1.5**
N38A	**Joes South For**	**69.05**	**18**	IAMs_20	IAMs_20	20 57 53.3	
	comp=Z,6µm,21.0s						
BSFB	**Barra de Sao F**	**69.06**	**102**	*e*P	**P**	**20 31 18.4**	**-0.4**
K30B	**Basset**	**69.28**	**13**	IAMs_20	IAMs_20	20 58 44.7	
	comp=Z,7µm,19.0s						
RIB01	**Linhares ES**	**69.29**	**102**	*e*P	**P**	**20 31 19.6**	**-0.7**
L34A	**Svendsen Farm,**	**69.32**	**15**	IAMs_20	IAMs_20	20 58 13.6	
	comp=Z,6µm,18.0s						
U54A	**Nelsons Funny**	**69.39**	**29**	IAmb	IAmb	20 31 27.1	
	comp=Z,150nm,1.5s						
R49A	**Shelbyville**	**69.51**	**25**	IAmb	IAmb	20 31 27.4	
	comp=Z,147nm,1.4s						
S51A	**Beattyville**	**69.58**	**27**	IAMs_20	IAMs_20	21 01 20.3	
	comp=Z,8µm,18.0s						
N41A	**Harden Midland**	**69.68**	**20**	IAmb	IAmb	20 31 28.9	
	comp=Z,172nm,1.5s						
N41A				IAMs_20	IAMs_20	20 58 36.9	
	comp=Z,6µm,20.0s						
BLO	**Bloomington**	**69.77**	**24**	IAmb	IAmb	20 31 33.8	
	comp=Z,138nm,1.6s						
BMO	**Blue Mountains**	**69.82**	**359**	IAmb	IAmb	20 31 38.3	
	comp=Z,138nm,1.6s						
R50A	**Paris**	**69.84**	**26**	IAmb	IAmb	20 31 29.2	
	comp=Z,144nm,1.4s						
R50A				IAMs_20	IAMs_20	20 59 40.1	
	comp=Z,6µm,20.0s						
YHB	**Horse Butte**	**69.84**	**4**	IAmb	IAmb	20 31 35.8	
	comp=Z,91nm,1.3s						
H04A	**Detroit Lake**	**69.88**	**355**	IAmb	IAmb	20 31 37.9	
	comp=Z,138nm,1.6s						
U56A	**King**	**69.88**	**30**	IAmb	IAmb	20 31 31.2	
	comp=Z,204nm,1.8s						
P46A	**Rosedale**	**69.92**	**23**	IAmb	IAmb	20 31 30.2	
	comp=Z,112nm,1.5s						
P46A				IAMs_20	IAMs_20	20 59 44.2	
	comp=Z,7µm,19.0s						
RSSD	**Black Hills**	**69.93**	**9**	P	**P**	**20 31 24.3**	**+0.4**
RSSD				IAmb	IAmb	20 31 30.3	
	comp=Z,76nm,1.3s						
RSSD	**Black Hills**	**69.93**	**9**	P	**P**	**20 31 24.3**	**+0.4**
RSSD				pmax	pmax		
	comp=Z,76nm,1.3s						
RSSD				MLR	MLR		
	comp=Z,5µm,20.0s						
YHL	**Hebgen Lake**	**69.94**	**4**	IAmb	IAmb	20 31 32.3	
	comp=Z,139nm,1.4s						
SCIA	**State Center**	**70.09**	**18**	IAmb	IAmb	20 31 31.7	
	comp=Z,79nm,1.3s						
SCIA				IAMs_20	IAMs_20	20 59 36.8	
	comp=Z,7µm,18.0s						
DZM	**Mont Dzumac**	**70.22**	**254**	P	**P**	**20 31 27.2**	**+1.1**
	comp=Z,4.8nm,0.7s,baz=85,slow=7.4,SNR=3.3						
DZM				LR	LR	20 54 42.6	
	comp=Z,7µm,21.7s,baz=110,slow=29						
	comp=Z,4.8nm,0.7s						
DZM	**Mont Dzumac**	**70.22**	**254**	*e*P	P	20 31 19.6	-6.5
	comp=Z,89nm,22.4s						
DZM				*e*S	**S**	**20 40 31.5**	**-7.0**
	comp=Z,2µm,26.3s						
DZM				*e*SS	SS	20 44 54.1	-14
	comp=Z,816nm,26.9s						
DZM				*e*LQ	LQ	20 48 49.2	
	comp=Z,8µm,28.9s						
DZM				*e*LR	LR	20 52 29.9	
	comp=Z,18µm,23.6s						
RLMT	**Red Lodge**	**70.34**	**5**	IAmb	IAmb	20 31 41.0	
	comp=Z,154nm,1.6s						
RLMT				IAMs_20	IAMs_20	20 56 48.5	
	comp=Z,8µm,20.0s						
DLMT	**Dillon**	**70.39**	**2**	IAmb	IAmb	20 31 41.6	
	comp=Z,138nm,1.6s						
DLMT				IAMs_20	IAMs_20	20 56 52.7	
	comp=Z,7µm,20.0s						
P48A	**Milroy**	**70.43**	**25**	IAMs_20	IAMs_20	21 00 30.9	
	comp=Z,7µm,18.0s						
BLA	**Blacksburg**	**70.58**	**29**	IAmb	IAmb	20 31 34.6	
	comp=Z,170nm,1.6s						
BLA	**Blacksburg**	**70.58**	**29**	⇓P	P	20 31 33.6	+5.8
SFIN	**Lafayette**	**70.63**	**23**	IAmb	IAmb	20 31 34.6	
	comp=Z,93nm,1.3s						
S54A	**Dingess, Beckl**	**70.68**	**28**	IAmb	IAmb	20 31 35.1	
	comp=Z,69nm,1.3s						
GUA01	**Guaratinga, BA**	**70.79**	**100**	*e*P	**P**	**20 31 30.6**	**+1.1**
L40A	**Anamosa**	**70.81**	**19**	IAMs_20	IAMs_20	20 59 08.8	
	comp=Z,7µm,21.0s						
T57A	**Hurt**	**70.93**	**30**	IAmb	IAmb	20 31 36.6	
	comp=Z,90nm,1.5s						
ECSD	**EROS Data Cent**	**70.94**	**15**	IAMs_20	IAMs_20	20 59 43.5	
	comp=Z,6µm,18.0s						
F10A	**Beach Ranch, E**	**70.94**	**359**	IAmb	IAmb	20 31 45.4	
	comp=Z,139nm,1.6s						
YPT	**Yellepit**	**71.06**	**358**	IAmb	IAmb	20 31 45.8	
	comp=Z,123nm,1.6s						
M44A	**Midewin, Midew**	**71.20**	**22**	IAmb	IAmb	20 31 38.2	
	comp=Z,168nm,1.5s						
L42A	**Oliver, Polo**	**71.23**	**20**	IAmb	IAmb	20 31 37.9	
	comp=Z,103nm,1.4s						
L42A				IAMs_20	IAMs_20	20 59 45.9	
	comp=Z,7µm,20.0s						
Q52A	**Bidwell**	**71.25**	**27**	IAmb	IAmb	20 31 38.5	
	comp=Z,116nm,1.3s						
VNA3	**Neumayer Olymp**	**71.32**	**161**	P	**P**	**20 31 32.3**	**+0.4**
VNA3				S	**S**	**20 40 51.8**	**+2.2**
HAWA	**Hanford**	**71.43**	**357**	IAmb	IAmb	20 31 48.2	
	comp=Z,107nm,1.6s						
HAWA				IAMs_20	IAMs_20	20 55 51.3	
	comp=Z,6µm,21.0s						
O49A	**Covington**	**71.48**	**25**	IAMs_20	IAMs_20	21 01 22.6	
	comp=Z,6µm,19.0s						
CMC01	**Camacan, BA**	**71.49**	**99**	*e*P	**P**	**20 31 34.0**	**+0.1**
E09A	**Wood Farm, Sta**	**71.50**	**358**	IAmb	IAmb	20 31 47.7	
	comp=Z,201nm,1.7s						
N47A	**Urbana**	**71.58**	**24**	IAmb	IAmb	20 31 39.8	
	comp=Z,115nm,1.4s						
N47A				IAMs_20	IAMs_20	21 00 56.1	
	comp=Z,8µm,18.0s						
NBIT	**Itapeh - BA**	**71.73**	**98**	*e*P	**P**	**20 31 34.8**	**-0.5**
WAH2	**Wahluke Slope**	**71.79**	**357**	IAmb	IAmb	20 31 50.1	
	comp=Z,120nm,1.5s						
MSO	**Missoula**	**71.81**	**1**	IAmb	IAmb	20 31 50.1	
	comp=Z,133nm,1.6s						
MSO				IAMs_20	IAMs_20	20 58 44.4	
	comp=Z,6µm,18.0s						
JFWS	**Jewell Farm**	**71.88**	**20**	IAMs_20	IAMs_20	21 00 03.1	
	comp=Z,7µm,20.0s						
JFWS	**Jewell Farm**	**71.88**	**20**	IAmb	IAmb	20 31 42.2	
	comp=Z,84nm,1.4s						
P52A	**Corning**	**71.88**	**27**	IAmb	IAmb	20 31 42.3	
	comp=Z,202nm,1.6s						
SANVU	**Saraoutou**	**71.91**	**261**	IAMs_20	IAMs_20	20 55 31.8	
	comp=Z,7µm,22.0s						
VNA1	**Neumayer--Stat**	**71.99**	**160**	⇑P	**P**	**20 31 35.0**	**-0.8**
	comp=Z,16nm,1.1s						
I37A	**Lemond, Waseca**	**72.00**	**17**	IAmb	IAmb	20 31 43.3	
	comp=Z,162nm,1.3s						
I37A				IAMs_20	IAMs_20	21 00 35.3	
	comp=Z,7µm,19.0s						
ACSO	**Alum Creek Sta**	**72.05**	**26**	IAMs_20	IAMs_20	21 01 58.5	
	comp=Z,7µm,18.0s						
P53A	**Whipple**	**72.06**	**27**	IAmb	IAmb	20 31 44.0	
	comp=Z,157nm,1.3s						
P53A				IAMs_20	IAMs_20	21 02 19.9	
	comp=Z,5µm,18.0s						
D08A	**Wollman Farm,**	**72.07**	**358**	IAmb	IAmb	20 31 51.6	
	comp=Z,123nm,1.6s						
N49A	**Columbus Grove**	**72.17**	**25**	IAMs_20	IAMs_20	21 01 39.9	
	comp=Z,7µm,18.0s						
LAO	**LASA Array**	**72.18**	**7**	IAmb	IAmb	20 31 43.9	
	comp=Z,120nm,1.3s						
LAO				IAMs_20	IAMs_20	20 59 02.8	
	comp=Z,6µm,18.0s						
K43A	**Burlington**	**72.29**	**21**	IAmb	IAmb	20 31 45.4	
	comp=Z,135nm,1.2s						
K43A				IAMs_20	IAMs_20	21 00 30.9	
	comp=Z,8µm,20.0s						
R58B	**Mineral**	**72.35**	**31**	IAmb	IAmb	20 31 45.4	
	comp=Z,83nm,1.5s						
L46A	**Eue Claire**	**72.36**	**23**	IAmb	IAmb	20 31 45.0	
	comp=Z,116nm,1.3s						
EPH	**Ephrata**	**72.39**	**357**	IAmb	IAmb	20 31 53.8	
	comp=Z,187nm,1.5s						
O52A	**Adamsville**	**72.41**	**27**	IAmb	IAmb	20 31 45.6	
	comp=Z,149nm,1.4s						
O52A				IAMs_20	IAMs_20	21 00 25.0	
	comp=Z,6µm,21.0s						
Q56A	**Snyder Ridge,**	**72.64**	**29**	IAmb	IAmb	20 31 47.6	
	comp=Z,127nm,1.6s						
I40A	**Norwalk**	**72.66**	**19**	IAmb	IAmb	20 31 47.1	
	comp=Z,86nm,1.5s						
I40A				IAMs_20	IAMs_20	21 01 20.8	
	comp=Z,6µm,20.0s						
NLWA	**Neilton Lookou**	**72.71**	**354**	IAMs_20	IAMs_20	20 56 31.2	
	comp=Z,7µm,20.0s						
NLWA	**Neilton Lookou**	**72.71**	**354**	⇓P	P	20 31 46.8	+6.4
O53A	**New Philadelph**	**72.78**	**27**	IAmb	IAmb	20 31 48.1	
	comp=Z,186nm,1.6s						
C09A	**Chrisman Ranch**	**72.79**	**358**	IAmb	IAmb	20 31 56.9	
	comp=Z,208nm,1.6s						
E28A	**Huff**	**72.85**	**11**	IAMs_20	IAMs_20	21 01 07.4	
	comp=Z,8µm,18.0s						
MCWV	**Mont Chateau**	**72.86**	**28**	IAmb	IAmb	20 31 48.8	
	comp=Z,169nm,1.4s						
N51A	**Ashland**	**72.87**	**26**	IAMs_20	IAMs_20	21 02 15.4	
	comp=Z,6µm,19.0s						
F33A	**5 Mile Ranch,**	**73.01**	**14**	IAMs_20	IAMs_20	21 01 17.2	
	comp=Z,6µm,18.0s						
M50A	**Fremont**	**73.03**	**25**	IAmb	IAmb	20 31 49.3	
	comp=Z,110nm,1.3s						
M50A				IAMs_20	IAMs_20	21 01 04.4	
	comp=Z,7µm,21.0s						
O54A	**Avella**	**73.07**	**28**	IAmb	IAmb	20 31 49.9	
	comp=Z,180nm,1.5s						
SNAA	**Sanae**	**73.08**	**162**	⇑P	**P**	**20 31 40.6**	**-1.9**
	comp=Z,190nm,0.8s						
SNAA				⇑S	**S**	**20 41 10.1**	**+0.2**
SNAA	**Sanae**	**73.08**	**162**	P	**P**	**20 31 40.6**	**-1.9**
	comp=Z,9.7nm,0.9s,baz=245,slow=4.5,SNR=15						
SNAA				LR	LR	20 58 57.5	
	comp=Z,3µm,20.6s,baz=254,slow=32						
	comp=Z,9.7nm,0.9s						
SNAA	**Sanae**	**73.08**	**162**	P	**P**	**20 31 41.1**	**-1.4**
SNAA				IAmb	IAmb	20 31 59.0	
	comp=Z,102nm,1.6s						
SNAA	**Sanae**	**73.08**	**162**	P	**P**	**20 31 41.1**	**-1.4**
SNAA				pmax	pmax		
	comp=Z,102nm,1.6s						
SNAA				MLR	MLR		
	comp=Z,3µm,20.0s						
I42A	**Draeger Farm,**	**73.17**	**20**	IAMs_20	IAMs_20	21 00 45.3	
	comp=Z,7µm,19.0s						
EGMT	**Eagleton**	**73.19**	**4**	IAmb	IAmb	20 31 51.7	
	comp=Z,178nm,1.4s						
EGMT				IAMs_20	IAMs_20	20 58 46.9	
	comp=Z,7µm,20.0s						
NEW	**Newport**	**73.23**	**359**	P	**P**	**20 31 42.7**	**-0.7**
	comp=Z,4.7nm,0.7s,baz=177,slow=5.4,SNR=9.8						
NEW				LR	LR	20 58 39.6	
	comp=Z,16µm,18.5s,baz=186,slow=32						
	comp=Z,4.7nm,0.7s						
NEW	**Newport**	**73.23**	**359**	P	**P**	**20 31 43.1**	**-0.4**
NEW				IAmb	IAmb	20 31 58.4	
	comp=Z,204nm,1.7s						
NEW	**Newport**	**73.23**	**359**	P	**P**	**20 31 43.1**	**-0.4**
NEW				pmax	pmax		
	comp=Z,204nm,1.7s						
NEW				MLR	MLR		
	comp=Z,16µm,19.0s						
NEW	**Newport**	**73.23**	**359**	⇑P	**P**	**20 31 44.5**	**+1.0**
N53A	**Lisbon**	**73.40**	**27**	IAMs_20	IAMs_20	21 02 52.3	
	comp=Z,7µm,18.0s						
P57A	**Homestead Farm**	**73.52**	**30**	IAmb	IAmb	20 31 52.8	
	comp=Z,115nm,1.5s						
AAM	**Ann Arbor**	**73.56**	**24**	IAMs_20	IAMs_20	21 02 02.7	
	comp=Z,6µm,18.0s						
M52A	**Chesterland**	**73.81**	**26**	IAmb	IAmb	20 31 54.2	
	comp=Z,210nm,1.4s						
PAMR	**Moraine State**	**73.82**	**27**	IAmb	IAmb	20 31 54.7	
	comp=Z,204nm,1.4s						
J47A	**Sunmer**	**73.95**	**23**	IAmb	IAmb	20 31 55.1	
	comp=Z,163nm,1.4s						
G40A	**Rib Lake**	**74.04**	**19**	IAmb	IAmb	20 31 55.5	
	comp=Z,117nm,1.4s						
G40A				IAMs_20	IAMs_20	21 02 15.3	
	comp=Z,6µm,18.0s						
H43A	**Windswept, Lux**	**74.05**	**21**	IAMs_20	IAMs_20	21 01 33.6	
	comp=Z,8µm,20.0s						
NBPS	**Pedro II - PI**	**74.09**	**87**	*e*P	**P**	**20 31 49.9**	**+0.5**
MDND	**Maddock**	**74.27**	**11**	IAmb	IAmb	20 32 10.7	
	comp=Z,153nm,1.3s						
TROLL	**Troll, Antarti**	**74.33**	**164**	⇑S	**S**	**20 41 27.6**	**+3.5**
TROLL	**Troll, Antarti**	**74.33**	**164**	⇑P	**P**	**20 31 50.3**	**+0.3**
	comp=Z,740nm,0.8s						
K50A	**Casco**	**74.36**	**25**	IAmb	IAmb	20 31 56.9	
	comp=Z,116nm,1.3s						
PAOC	**Oil Creek Stat**	**74.47**	**27**	IAmb	IAmb	20 31 58.1	
	comp=Z,147nm,1.5s						
SSPA	**Standing Stone**	**74.52**	**29**	⇓P	P	20 31 57.5	+6.3
MVL	**Millersville**	**74.69**	**30**	IAmb	IAmb	20 31 59.3	
	comp=Z,95nm,1.4s						
ERPA	**Erie**	**74.84**	**27**	IAMs_20	IAMs_20	21 03 48.6	
	comp=Z,7µm,18.0s						
E38A	**The Farm, Brul**	**74.89**	**17**	IAMs_20	IAMs_20	21 02 15.8	
	comp=Z,7µm,18.0s						
F42A	**Maple Grove Fa**	**75.09**	**20**	IAmb	IAmb	20 32 01.3	
	comp=Z,96nm,1.5s						
F42A				IAMs_20	IAMs_20	21 01 53.2	
	comp=Z,8µm,21.0s						
N58A	**Sunbury**	**75.20**	**30**	IAmb	IAmb	20 32 02.1	
	comp=Z,125nm,1.3s						
NBTA	**Tacaratu-PE**	**75.22**	**93**	*e*P	**P**	**20 31 55.6**	**-0.2**
I49A	**Point Hope**	**75.28**	**24**	IAMs_20	IAMs_20	21 02 43.2	
	comp=Z,5µm,18.0s						
AGMN	**Agassiz Nation**	**75.44**	**14**	P	**P**	**20 31 54.7**	**-1.6**
AGMN				IAmb	IAmb	20 32 16.0	
	comp=Z,91nm,1.5s						
AGMN				IAMs_20	IAMs_20	21 02 13.4	
	comp=Z,7µm,18.0s						
NBMO	**Morrinhos-CE**	**75.81**	**87**	*e*P	**P**	**20 31 57.6**	**-1.6**
L56A	**Greenwood**	**75.88**	**28**	IAMs_20	IAMs_20	21 04 47.0	
	comp=Z,7µm,18.0s						
EYMN	**Ely**	**76.14**	**17**	IAMs_20	IAMs_20	21 01 38.0	
	comp=Z,7µm,20.0s						
EYMN	**Ely**	**76.14**	**17**	IAmb	IAmb	20 32 07.0	
	comp=Z,68nm,1.2s						
KSPA	**Keystone Colle**	**76.20**	**30**	P	**P**	**20 31 58.6**	**-2.2**
KSPA				IAmb	IAmb	20 32 11.7	
	comp=Z,102nm,1.4s						
BINY	**Binghamton**	**76.62**	**29**	IAmb	IAmb	20 32 10.6	
	comp=Z,187nm,1.4s						
BINY	**Binghamton**	**76.62**	**29**	⇓P	**P**	**20 32 04.9**	**+1.8**
PAL	**Palisades**	**76.62**	**31**	IAMs_20	IAMs_20	21 05 01.7	
	comp=Z,5µm,21.0s						
J55A	**Hilton**	**76.69**	**28**	IAMs_20	IAMs_20	21 04 50.5	
	comp=Z,7µm,18.0s						
K57A	**Scipio Center**	**76.81**	**29**	IAmb	IAmb	20 32 11.3	
	comp=Z,164nm,1.5s						
K57A				IAMs_20	IAMs_20	21 05 08.7	
	comp=Z,6µm,18.0s						
E46A	**Sault Ste Mari**	**76.86**	**22**	IAmb	IAmb	20 32 11.9	
	comp=Z,91nm,1.3s						
E46A				IAMs_20	IAMs_20	21 03 33.1	
	comp=Z,7µm,20.0s						
EPLO	**Experimental L**	**77.20**	**15**	IAmb	IAmb	20 32 20.0	
	comp=Z,140nm,1.5s						
ULM	**Lac du Bonnet**	**77.28**	**13**	P	**P**	**20 32 05.8**	**-0.9**
	comp=Z,7.8nm,0.7s,baz=204,slow=4.7,SNR=9.8						
ULM				LR	LR	21 02 14.0	
	comp=Z,7µm,20.3s,baz=197,slow=33						
	comp=Z,7.8nm,0.7s						
ULM	**Lac du Bonnet**	**77.28**	**13**	IAmb	IAmb	20 32 27.9	
	comp=Z,165nm,1.8s						
ULM	**Lac du Bonnet**	**77.28**	**13**	P	**P**	**20 32 05.8**	**-0.9**
SADO	**Sadowa**	**77.39**	**26**	P	**P**	**20 32 06.8**	**-0.6**
	comp=Z,9.8nm,1.1s,baz=239,slow=7.2,SNR=6.1						
SADO				LR	LR	21 03 57.9	
	comp=Z,3µm,20.3s,baz=233,slow=34						
	comp=Z,9.8nm,1.1s						
SADO	**Sadowa**	**77.39**	**26**	IAmb	IAmb	20 32 14.4	
	comp=Z,131nm,1.5s						
NVL	**N'lazarevskaya**	**77.44**	**164**	*e*P	**P**	**20 32 08.2**	**+0.7**
NVL				*e*		20 35 02.3	
NVL				*e*PPP	PPP	20 36 49.5	
NVL				*e*S	**S**	**20 41 58.1**	**0.0**
NVL				*e*SS	**SS**	**20 46 57.5**	**+1.7**
NVL				*e*SSS	SSS	20 50 21.4	
NVL				pmax	pmax		
	comp=Z,63nm,1.7s						
NVL				MLR	MLR		
	comp=Z,4µm,17.0s						
NBPA	**Parau_RN**	**77.45**	**90**	*e*P	**P**	**20 32 07.6**	**-0.9**
PECO	**Prince Edward**	**77.58**	**28**	IAmb	IAmb	20 32 15.5	
	comp=Z,135nm,1.4s						
J57A	**Williamstown**	**77.59**	**29**	IAMs_20	IAMs_20	21 05 39.1	
	comp=Z,7µm,18.0s						
DELO	**Deloro Mine**	**77.80**	**27**	IAmb	IAmb	20 32 16.6	
	comp=Z,155nm,1.5s						
TAU	**Tasmania Unive**	**77.89**	**228**	P	**P**	**20 32 12.7**	**+2.2**
TAU	**Tasmania Unive**	**77.89**	**228**	IAMs_20	IAMs_20	21 00 34.2	
	comp=Z,7µm,19.0s						
TAU	**Tasmania Unive**	**77.89**	**228**	P	**P**	**20 32 12.7**	**+2.2**

TAU				pmax	pmax		
	comp=Z,276nm,1.9s						
TAU				MLR	MLR		
	comp=Z,7µm,19.0s						
BBB	Bella Bella	77.89	352	LR	LR	20 58 55.1	
	comp=Z,3µm,21.2s,baz=174,slow=30						
MOO	Moorlands	78.16	229	P	P	20 32 12.8	+0.8
	comp=Z,141nm,1.1s						
RCBR	Riachuelo	78.51	91	IAMs_20	IAMs_20	21 05 48.5	
	comp=Z,7µm,19.0s						
NCB	Newcomb	78.81	29	IAmb	IAmb	20 32 22.6	
	comp=Z,137nm,1.4s						
WES	Weston	78.92	32	IAmb	IAmb	20 32 26.8	
	comp=Z,94nm,1.5s						
BCX	Boston College	78.95	32	IAMs_20	IAMs_20	21 07 32.3	
	comp=Z,6µm,18.0s						
ELIB	Princess Elisa	79.05	168	*d*P	P	20 32 14.3	-2.3
	comp=Z,16nm,1.0s						
J61A	Chester	79.08	31	IAmb	IAmb	20 32 28.0	
	comp=Z,111nm,1.6s						
LONY	Lake Ozonia	79.17	29	IAmb	IAmb	20 32 24.5	
	comp=Z,140nm,1.4s						
LONY				IAMs_20	IAMs_20	21 06 32.9	
	comp=Z,5µm,18.0s						
LONY	Lake Ozonia	79.17	29	⇑P	P	20 32 19.3	+2.0
HNH	Hanover	79.48	31	IAmb	IAmb	20 32 26.6	
	comp=Z,157nm,1.6s						
ARMA	Armidale	79.60	241	P	P	20 32 20.0	-0.4
ARMA	Armidale	79.60	241	P	P	20 32 19.6	-0.8
ARMA				IAmb	IAmb	20 32 33.8	
	comp=Z,115nm,1.6s						
ARMA	Armidale	79.60	241	⇓P	P	20 32 22.9	+2.6
CAN	Canberra	79.69	236	P	P	20 32 21.4	+0.8
VT1	Waterbury	79.75	30	IAmb	IAmb	20 32 32.4	
	comp=Z,151nm,1.8s						
VT1				IAMs_20	IAMs_20	21 07 14.2	
	comp=Z,5µm,19.0s						
LBNH	Lisbon	80.06	30	IAMs_20	IAMs_20	21 07 30.5	
	comp=Z,7µm,18.0s						
TRQ	Mont Tremblant	80.45	28	IAmb	IAmb	20 32 31.3	
	comp=Z,166nm,1.4s						
I63A	Otisfield	80.54	31	IAmb	IAmb	20 32 32.2	
	comp=Z,117nm,1.6s						
YNG	Young	80.56	237	P	P	20 32 27.9	+2.6
FFC	Flin Flon	80.59	8	P	P	20 32 25.2	+0.5
FFC				IAmb	IAmb	20 32 41.6	
	comp=Z,204nm,1.9s						
FFC	Flin Flon	80.59	8	IAMs_20	IAMs_20	21 06 11.2	
	comp=Z,7µm,19.0s						
FFC	Flin Flon	80.59	8	P	P	20 32 25.2	+0.5
FFC				pmax	pmax		
	comp=Z,204nm,2.0s						
FFC				MLR	MLR		
	comp=Z,7µm,19.0s						
FFC	Flin Flon	80.59	8	⇑P	P	20 32 25.1	+0.3
H62A	Milan	80.67	31	IAMs_20	IAMs_20	21 07 58.6	
	comp=Z,7µm,18.0s						
TOO	Toolangi	81.35	233	P	P	20 32 30.6	+1.1
TOO	Toolangi	81.35	233	P	P	20 32 28.9	-0.6
TOO	Toolangi	81.35	233	P	P	20 32 28.9	-0.6
TOO				pmax	pmax		
	comp=Z,69nm,1.6s						
TOO	Toolangi	81.35	233	⇑P	P	20 32 32.1	+2.7
G62A	West of Eustis	81.44	31	IAMs_20	IAMs_20	21 08 10.2	
	comp=Z,6µm,19.0s						
U35K	Hyder	81.78	352	IAMs_20	IAMs_20	21 00 47.3	
	comp=Z,5µm,21.0s						
PKME	Peaks-Kenny Pk	82.06	31	IAMs_20	IAMs_20	21 08 46.4	
	comp=Z,6µm,18.0s						
EIDS	Eidsvold	82.06	246	P	P	20 32 33.3	-0.2
EIDS	Eidsvold	82.06	246	P	P	20 32 32.9	-0.5
EIDS				IAmb	IAmb	20 32 43.2	
	comp=Z,120nm,1.8s						
G65A	Princeton	82.83	32	IAmb	IAmb	20 32 44.2	
	comp=Z,175nm,1.7s						
F64A	Sherman	82.94	31	IAMs_20	IAMs_20	21 09 11.9	
	comp=Z,6µm,18.0s						
E62A	Clayton Lake	82.97	30	IAmb	IAmb	20 32 45.0	
	comp=Z,140nm,1.5s						
E62A				IAMs_20	IAMs_20	21 08 57.5	
	comp=Z,6µm,19.0s						
LMQ	La Malbaie	83.31	29	IAmb	IAmb	20 32 46.3	
	comp=Z,135nm,1.4s						
D62A	Allapoint, All	83.53	30	IAmb	IAmb	20 32 47.4	
	comp=Z,112nm,1.5s						
D62A				IAMs_20	IAMs_20	21 09 13.3	
	comp=Z,6µm,18.0s						
CMSA	Cobar Meteorol	83.78	238	P	P	20 32 42.5	+0.2
S34M	Telegraph Cree	83.87	352	IAmb	IAmb	20 32 57.3	
	comp=Z,72nm,1.4s						
SYO	Syowa Base	84.28	171	⇑*e*P	P	20 32 43.6	-0.4
SYO	Syowa Base	84.28	171	⇑*i*pP	pP	20 32 45.6	-0.2
SYO	Syowa Base	84.28	171	⇑*i*PP	PP	20 35 54.0	-3.9
ARPS	Mount Arapiles	84.32	232	P	P	20 32 47.1	+2.2
R33M	Jennings River	85.29	352	IAMs_20	IAMs_20	21 03 07.9	
	comp=Z,6µm,19.0s						
P32M	Atlin	85.84	351	IAMs_20	IAMs_20	21 03 12.5	
	comp=Z,4µm,20.0s						
P33M	Teslin, Yukon	86.32	352	IAmb	IAmb	20 33 08.8	
	comp=Z,112nm,1.5s						
STKA	Stephens Creek	86.75	236	P	P	20 32 59.5	+2.4
STKA	Stephens Creek	86.75	236	P	P	20 32 58.8	+1.7
	comp=Z,8.0nm,0.7s,baz=76,slow=12,SNR=6.0						
	comp=Z,8.0nm,0.7s						
STKA	Stephens Creek	86.75	236	P	P	20 32 56.7	-0.4
STKA	Stephens Creek	86.75	236	P	P	20 32 56.7	-0.4
STKA				pmax	pmax		
	comp=Z,643nm,1.8s						
H11S2	WAKE ISLAND Hy	86.93	292	T	T	22 08 48.7	
	baz=118,slow=76,SNR=1504						
H11S1	WAKE ISLAND Hy	86.94	292	T	T	22 08 44.4	
	baz=118,slow=76,SNR=4037						
H11S3	WAKE ISLAND Hy	86.94	292	T	T	22 08 49.3	
	baz=118,slow=76,SNR=2941						
QLP	Quilpie	87.11	242	P	P	20 32 59.6	+0.7
N32M	Quiet Lake	87.26	352	IAMs_20	IAMs_20	21 06 03.3	
	comp=Z,5µm,18.0s						
H11N3	WAKE ISLAND Hy	87.33	293	T	T	22 09 12.0	
	baz=114,slow=78,SNR=126						
H11N1	WAKE ISLAND Hy	87.34	293	T	T	22 09 15.3	
	baz=114,slow=78,SNR=125						
H11N2	WAKE ISLAND Hy	87.34	293	T	T	22 09 14.6	
	baz=114,slow=78,SNR=169						
MAW	Mawson	87.38	180	LR	LR	21 07 53.5	
	comp=Z,9µm,19.4s,baz=179,slow=33						
PCA	Pinnacle	87.40	348	IAMs_20	IAMs_20	21 03 03.7	
	comp=Z,4µm,19.0s						
YKAW1	Yellowknife Wh	87.48	1	IAmb	IAmb	20 33 14.2	
	comp=Z,103nm,1.5s						
YKA	Yellowknife Ar	87.49	1	P	P	20 32 59.4	-0.3
	comp=Z,7.1nm,0.8s,baz=184,slow=4.9,SNR=51						
YKA				LR	LR	21 07 54.1	
	comp=Z,10µm,18.2s,baz=185,slow=33						
	comp=Z,7.1nm,0.8s						
YKA	Yellowknife Ar	87.49	1	P	P	20 32 59.3	-0.4
YKA	Yellowknife Ar	87.49	1	P	P	20 32 59.3	-0.4
YKAW3	Yellowknife Wh	87.56	1	IAmb	IAmb	20 33 14.7	
	comp=Z,88nm,1.4s						
HYT	Haines Junctio	87.60	350	IAmb	IAmb	20 33 15.1	
	comp=Z,89nm,1.4s						
MESA	MESA	87.80	347	IAMs_20	IAMs_20	21 04 07.1	
	comp=Z,6µm,18.0s						
YAH	Yahtse	87.93	347	IAMs_20	IAMs_20	21 03 35.8	
	comp=Z,5µm,20.0s						
SNH	Sunshine Point	87.98	347	IAMs_20	IAMs_20	21 04 01.2	
	comp=Z,5µm,19.0s						
KAIM	Kayak Island	88.08	346	IAMs_20	IAMs_20	21 03 50.0	
	comp=Z,6µm,20.0s						
N30M	Aishikik Lake	88.13	350	IAmb	IAmb	20 33 13.0	
	comp=Z,37nm,1.1s						
N30M				IAMs_20	IAMs_20	21 05 56.1	
	comp=Z,4µm,18.0s						
LOGN	Logan Glacier	88.21	348	IAMs_20	IAMs_20	21 03 57.3	
	comp=Z,4µm,19.0s						
GRNC	Granite Creek	88.27	348	IAmb	IAmb	20 33 13.2	
	comp=Z,70nm,1.0s						
GRNC				IAMs_20	IAMs_20	21 03 56.9	
	comp=Z,5µm,19.0s						
KDAK	Kodiak Island	88.28	341	LR	LR	21 04 50.1	
	comp=Z,5µm,18.7s,baz=152,slow=30						
KDAK	Kodiak Island	88.28	341	IAMs_20	IAMs_20	21 03 31.4	
	comp=Z,6µm,20.0s						
CTA	Charters Tower	88.33	249	P	P	20 33 07.6	+2.6
	comp=Z,7.4nm,0.8s,baz=146,slow=6.5,SNR=6.5						
CTA				LR	LR	21 09 58.1	
	comp=Z,3µm,18.1s,baz=104,slow=34						
	comp=Z,7.4nm,0.8s						
CTA	Charters Tower	88.33	249	P	P	20 33 07.6	+2.6
CTAO	Charters Tower	88.33	249	IAMs_20	IAMs_20	21 10 30.6	
	comp=Z,4µm,18.0s						
BERG	Berg Lake	88.35	347	IAMs_20	IAMs_20	21 03 43.5	
	comp=Z,5µm,20.0s						
CTGM	Chitina Glacie	88.41	348	IAmb	IAmb	20 33 14.3	
	comp=Z,52nm,1.1s						
M31M	Drury Creek, Y	88.45	351	IAMs_20	IAMs_20	21 04 16.4	
	comp=Z,4µm,21.0s						
TGL	Tana Glacier	88.51	347	IAmb	IAmb	20 33 13.5	
	comp=Z,73nm,1.0s						
TGL				IAMs_20	IAMs_20	21 03 51.1	
	comp=Z,4µm,20.0s						
BARN	Barnard Glacie	88.56	348	IAMs_20	IAMs_20	21 04 07.4	
	comp=Z,4µm,19.0s						
RAGM	Ragged Mountai	88.56	346	IAMs_20	IAMs_20	21 04 43.5	
	comp=Z,5µm,20.0s						
CRQM	Cirque	88.57	347	IAMs_20	IAMs_20	21 04 03.4	
	comp=Z,5µm,19.0s						
P23K	Montague Islan	88.83	345	IAMs_20	IAMs_20	21 04 36.8	
	comp=Z,6µm,19.0s						
SYI	Shuyak Island	88.92	342	IAMs_20	IAMs_20	21 02 38.4	
	comp=Z,6µm,20.0s						
EYAK	Cordova Ski Ar	88.94	346	IAMs_20	IAMs_20	21 05 10.6	
	comp=Z,6µm,18.0s						
VRDI	Verde Repeater	89.06	347	IAMs_20	IAMs_20	21 04 17.8	
	comp=Z,4µm,19.0s						
BMRM	Bremner River	89.07	346	IAMs_20	IAMs_20	21 04 05.0	
	comp=Z,4µm,20.0s						
M30M	Minto, Yukon	89.15	350	IAMs_20	IAMs_20	21 06 46.9	
	comp=Z,3µm,18.0s						
FID	Port Fidalgo	89.28	346	IAMs_20	IAMs_20	21 04 52.9	
	comp=Z,5µm,20.0s						
CNPM	China Poot	89.38	343	IAMs_20	IAMs_20	21 04 08.6	
	comp=Z,4µm,21.0s						
SEW	Seward	89.42	344	IAMs_20	IAMs_20	21 03 17.5	
	comp=Z,4µm,21.0s						
DIV	Divide	89.46	346	IAMs_20	IAMs_20	21 05 12.5	
	comp=Z,5µm,19.0s						
BRLK	Bradley Lake	89.50	343	IAMs_20	IAMs_20	21 03 51.3	
	comp=Z,5µm,20.0s						
GLI	Glacier Island	89.54	345	IAMs_20	IAMs_20	21 05 10.4	
	comp=Z,4µm,19.0s						
Q19K	Cape Douglas,	89.55	341	IAMs_20	IAMs_20	21 04 24.0	
	comp=Z,5µm,20.0s						
N25K	Chitina, Valde	89.64	347	IAMs_20	IAMs_20	21 04 35.2	
	comp=Z,4µm,20.0s						
M27K	Edge Creek, AK	89.79	348	IAMs_20	IAMs_20	21 05 55.1	
	comp=Z,4µm,19.0s						
PWL	Port Wells	89.81	345	IAMs_20	IAMs_20	21 04 58.6	
	comp=Z,4µm,20.0s						
KLU	Klutina	89.82	346	IAmb	IAmb	20 33 26.1	
	comp=Z,63nm,1.4s						
KLU				IAMs_20	IAMs_20	21 05 59.9	
	comp=Z,4µm,19.0s						
L29M	L29M	89.86	350	IAMs_20	IAMs_20	21 05 17.7	
	comp=Z,3µm,18.0s						
P19K	Oil Pt	90.04	342	IAMs_20	IAMs_20	21 03 14.8	
	comp=Z,4µm,19.0s						
M26K	Nabesna, AK	90.04	348	IAMs_20	IAMs_20	21 04 54.8	
	comp=Z,4µm,20.0s						
SCHQ	Schefferville	90.20	26	P	P	20 33 12.9	+0.2
	comp=Z,8.4nm,0.8s,baz=261,slow=2.6,SNR=6.1						
SCHQ				LR	LR	21 12 08.5	
	comp=Z,3µm,18.5s,baz=222,slow=35						
	comp=Z,8.4nm,0.8s						
KNK	Knik Glacier	90.32	345	IAMs_20	IAMs_20	21 05 25.3	
	comp=Z,5µm,19.0s						
RC01	Rabbit Creek A	90.35	344	IAMs_20	IAMs_20	21 05 25.9	
	comp=Z,4µm,18.0s						
P18K	Big Mountain,	90.39	341	IAMs_20	IAMs_20	21 04 38.3	
	comp=Z,4µm,19.0s						
BCAR	Beaver Creek A	90.43	349	P	P	20 33 12.6	-1.1
L27K	Beaver Creek,	90.43	349	IAMs_20	IAMs_20	21 06 33.0	
	comp=Z,3µm,19.0s						
SCM	Sheep Creek Mo	90.43	346	IAMs_20	IAMs_20	21 05 42.1	
	comp=Z,4µm,18.0s						
K29M	Barlow Dome	90.46	351	IAmb	IAmb	20 33 28.2	
	comp=Z,75nm,1.8s						
P17K	Kvichak River	90.59	340	IAMs_20	IAMs_20	21 07 13.6	
	comp=Z,4µm,19.0s						
SML	Sawmill	90.64	345	IAMs_20	IAMs_20	21 05 45.6	
	comp=Z,3µm,19.0s						
L26K	Log Cabin Wild	90.68	348	IAMs_20	IAMs_20	21 05 44.6	
	comp=Z,4µm,19.0s						
GHO	Glory Hole Cre	90.75	345	IAMs_20	IAMs_20	21 05 48.4	
	comp=Z,4µm,18.0s						
O18K	Koktuh Hills	90.77	341	IAMs_20	IAMs_20	21 05 11.2	
	comp=Z,5µm,21.0s						
O19K	Port Alsworth	90.79	342	IAMs_20	IAMs_20	21 05 31.9	
	comp=Z,4µm,20.0s						
P16K	Nushagak River	90.94	340	IAMs_20	IAMs_20	21 06 58.8	
	comp=Z,4µm,20.0s						
DAWY	Dawson	90.95	350	P	P	20 33 15.5	-0.5
SPU	Mount Spurr	91.01	343	IAmb	IAmb	20 33 34.4	
	comp=Z,52nm,1.6s						
PAX	Paxson	91.05	347	IAmb	IAmb	20 33 31.3	
	comp=Z,92nm,1.7s						
J29N	Klondike Camp	91.14	351	IAMs_20	IAMs_20	21 06 42.5	
	comp=Z,4µm,19.0s						
N19K	Bonanza Creek	91.35	342	IAmb	IAmb	20 33 31.4	
	comp=Z,66nm,1.2s						
N19K				IAMs_20	IAMs_20	21 04 04.6	
	comp=Z,4µm,22.0s						
K27K	Chicken	91.37	349	IAmb	IAmb	20 33 29.2	
	comp=Z,75nm,1.7s						
K27K				IAMs_20	IAMs_20	21 08 02.7	
	comp=Z,3µm,18.0s						
DOT	Dot Lake	91.39	348	IAMs_20	IAMs_20	21 06 26.2	
	comp=Z,5µm,19.0s						
DHY	Denali Highway	91.54	346	IAMs_20	IAMs_20	21 05 34.5	
	comp=Z,4µm,19.0s						
SKT	Skwentna	91.56	344	IAmb	IAmb	20 33 30.1	
	comp=Z,74nm,1.4s						
RIDG	Independent Ri	91.62	348	IAmb	IAmb	20 33 33.4	
	comp=Z,82nm,1.5s						
RIDG				IAMs_20	IAMs_20	21 05 44.4	
	comp=Z,4µm,21.0s						
O15K	Ungalikthiuk R	91.64	339	IAMs_20	IAMs_20	21 08 23.4	
	comp=Z,4µm,20.0s						
N18K	Kilae Creek	91.64	342	IAMs_20	IAMs_20	21 05 58.2	
	comp=Z,4µm,20.0s						
SCRK	Sand Creek	91.67	348	IAMs_20	IAMs_20	21 06 34.7	
	comp=Z,5µm,18.0s						
K24K	Donnelly Dome	91.86	347	IAMs_20	IAMs_20	21 05 30.8	
	comp=Z,4µm,19.0s						
N17K	Nushagak Hills	91.89	341	IAMs_20	IAMs_20	21 05 36.0	
	comp=Z,4µm,20.0s						
H31M	Peel River	91.91	353	IAMs_20	IAMs_20	21 09 09.8	
	comp=Z,3µm,19.0s						
I29M	Ogilvie Camp,	92.01	351	IAMs_20	IAMs_20	21 08 46.5	
	comp=Z,4µm,19.0s						
J26L	Joseph Creek	92.07	348	IAMs_20	IAMs_20	21 07 35.2	
	comp=Z,4µm,19.0s						
RND	Reindeer	92.16	346	IAMs_20	IAMs_20	21 07 04.7	
	comp=Z,4µm,18.0s						
PMG	Port Moresby	92.23	259	LR	LR	21 07 44.2	
	comp=Z,6µm,21.1s,baz=98,slow=31						
PMG	Port Moresby	92.23	259	IAMs_20	IAMs_20	21 07 52.9	
	comp=Z,6µm,20.0s						
MCK	McKinley	92.46	346	IAMs_20	IAMs_20	21 07 24.7	
	comp=Z,4µm,19.0s						
N15K	Kwethluk River	92.50	340	IAMs_20	IAMs_20	21 08 17.5	
	comp=Z,4µm,19.0s						
PPLA	Purkeypile	92.50	344	IAMs_20	IAMs_20	21 06 45.8	
	comp=Z,3µm,19.0s						
J25K	Salcha River,	92.51	348	IAmb	IAmb	20 33 37.7	
	comp=Z,82nm,1.7s						
J25K				IAMs_20	IAMs_20	21 06 50.8	
	comp=Z,4µm,19.0s						
TRF	Thorofare Moun	92.52	345	IAMs_20	IAMs_20	21 07 05.3	
	comp=Z,4µm,18.0s						
L19K	White Mountain	92.58	343	IAmb	IAmb	20 33 37.8	
	comp=Z,59nm,1.7s						
HDA	Harding Lake	92.64	347	IAMs_20	IAMs_20	21 08 03.3	
	comp=Z,4µm,19.0s						
M17K	Holitna River	92.67	341	IAMs_20	IAMs_20	21 06 58.8	
	comp=Z,5µm,19.0s						
I26K	Coal Creek Min	92.73	349	IAMs_20	IAMs_20	21 06 06.7	
	comp=Z,4µm,20.0s						
EPYK	Eagle Plains	92.74	352	IAMs_20	IAMs_20	21 12 46.9	
	comp=Z,3µm,18.0s						
KTH	Kantishna Hill	92.75	345	IAMs_20	IAMs_20	21 06 53.5	
	comp=Z,4µm,19.0s						
M16K	Timber Creek	92.81	341	IAMs_20	IAMs_20	21 11 22.8	
	comp=Z,4µm,18.0s						
H29M	Whitestone	92.82	351	IAMs_20	IAMs_20	21 09 12.1	
	comp=Z,3µm,19.0s						
WRH	Wood River Hil	92.93	347	IAmb	IAmb	20 33 39.3	
	comp=Z,55nm,1.5s						
WRH				IAMs_20	IAMs_20	21 07 06.0	
	comp=Z,4µm,19.0s						
ILAR	Eielson Array	92.94	347	P	P	20 33 24.6	-0.5
	comp=Z,0.9nm,1.0s,baz=179,slow=5.1,SNR=8.8						
ILAR				LR	LR	21 08 24.4	
	comp=Z,3µm,18.1s,baz=144,slow=31						
	comp=Z,0.9nm,1.0s						
ILAR	Eielson Array	92.94	347	P	P	20 33 24.7	-0.5
G31M	Satah River	92.98	353	IAmb	IAmb	20 33 44.4	
	comp=Z,98nm,1.9s						
G31M				IAMs_20	IAMs_20	21 08 38.0	
	comp=Z,3µm,19.0s						
CCB	Clear Creek Bu	93.02	347	IAMs_20	IAMs_20	21 06 52.5	
	comp=Z,4µm,18.0s						
L18K	Granite Mounta	93.11	342	IAMs_20	IAMs_20	21 06 56.2	
	comp=Z,4µm,20.0s						
COLA	College	93.23	347	IAMs_20	IAMs_20	21 08 20.1	
	comp=Z,4µm,18.0s						
COLA	College	93.23	347	*i* P	P	20 33 26.3	-0.2
COLA				pmax	pmax		
	comp=Z,16nm,1.0s						
BPAW	Bear Paw Mtn.	93.24	345	IAmb	IAmb	20 33 39.5	
	comp=Z,65nm,1.4s						
H27K	Steamboat Moun	93.31	350	IAmb	IAmb	20 33 40.6	
	comp=Z,39nm,1.4s						
POKR	Poker Plat Res	93.36	347	IAMs_20	IAMs_20	21 06 47.5	
	comp=Z,4µm,19.0s						
F31M	Tsiigehtchic	93.42	353	IAMs_20	IAMs_20	21 07 50.7	
	comp=Z,4µm,20.0s						
G29M	Pine Creek	93.43	351	IAMs_20	IAMs_20	21 09 59.4	
	comp=Z,3µm,18.0s						
L16K	Owhat River	93.51	341	IAMs_20	IAMs_20	21 06 46.8	
	comp=Z,4µm,19.0s						
I23K	Minto, Yukon-K	93.78	346	IAMs_20	IAMs_20	21 07 50.7	
	comp=Z,4µm,19.0s						
G27K	Doyon Strip	93.86	350	IAMs_20	IAMs_20	21 08 15.9	
	comp=Z,4µm,21.0s						
K17K	Iditarod	93.96	342	IAmb	IAmb	20 33 46.5	
	comp=Z,53nm,1.3s						
K17K				IAMs_20	IAMs_20	21 06 52.7	
	comp=Z,4µm,21.0s						
H24K	Noodor Dome	94.08	347	IAMs_20	IAMs_20	21 07 47.6	
	comp=Z,4µm,20.0s						
J18K	Innoko River	94.13	343	IAmb	IAmb	20 33 45.1	
	comp=Z,70nm,1.6s						
J18K				IAMs_20	IAMs_20	21 05 57.0	
	comp=Z,4µm,22.0s						
INK	Inuvik	94.23	354	LR	LR	21 08 17.7	
	comp=Z,3µm,20.8s,baz=166,slow=31						
J19K	Poorman	94.27	344	IAMs_20	IAMs_20	21 07 14.8	
	comp=Z,4µm,19.0s						
G26K	Porcupine Rive	94.33	349	IAMs_20	IAMs_20	21 07 19.1	
	comp=Z,4µm,22.0s						
I21K	Tanana	94.39	346	IAMs_20	IAMs_20	21 08 23.6	
	comp=Z,3µm,19.0s						
C36M	Paulatuk	94.56	357	IAMs_20	IAMs_20	21 10 37.7	
	comp=Z,5µm,19.0s						
K15K	Wolf Creek Mou	94.58	340	IAMs_20	IAMs_20	21 12 44.1	
	comp=Z,4µm,18.0s						
J17K	VABM Dome	94.72	342	IAMs_20	IAMs_20	21 10 52.6	
	comp=Z,4µm,19.0s						
G24K	Hadweenzic Riv	94.77	348	IAMs_20	IAMs_20	21 08 11.6	
	comp=Z,4µm,20.0s						
H22K	Ishtalitna Cre	94.86	346	IAMs_20	IAMs_20	21 10 26.1	
	comp=Z,3µm,18.0s						
J16K	Anvik River	95.06	341	IAmb	IAmb	20 33 47.6	
	comp=Z,57nm,1.6s						
J16K				IAMs_20	IAMs_20	21 09 02.8	
	comp=Z,4µm,19.0s						
F26K	Sheenjek River	95.07	350	IAMs_20	IAMs_20	21 08 23.5	
	comp=Z,5µm,19.0s						
E27K	Coleen River	95.12	351	IAMs_20	IAMs_20	21 10 33.8	
	comp=Z,3µm,18.0s						
E28M	Babbage River	95.22	352	IAMs_20	IAMs_20	21 12 25.5	
	comp=Z,3µm,18.0s						
F25K	Christian Rive	95.23	349	IAMs_20	IAMs_20	21 09 08.8	
	comp=Z,3µm,20.0s						
G23K	Bananza Creek	95.28	347	IAMs_20	IAMs_20	21 09 36.1	
	comp=Z,4µm,18.0s						
K13K	Kusilvak Mount	95.29	339	IAMs_20	IAMs_20	21 11 05.9	
	comp=Z,3µm,18.0s						
J14K	Nanvaranak Lak	95.54	340	IAMs_20	IAMs_20	21 07 28.5	
	comp=Z,3µm,20.0s						
I17K	Unalakleet	95.56	342	IAMs_20	IAMs_20	21 08 22.8	
	comp=Z,3µm,20.0s						
F24K	Squaw Lake	95.57	348	IAMs_20	IAMs_20	21 09 05.7	
	comp=Z,4µm,19.0s						
E25K	Arctic Village	95.69	349	IAMs_20	IAMs_20	21 08 01.0	
	comp=Z,4µm,22.0s						
COLD	Coldfoot	95.76	347	IAMs_20	IAMs_20	21 08 11.9	
	comp=Z,3µm,19.0s						
H18K	Honhosa River	95.91	343	IAMs_20	IAMs_20	21 07 25.1	
	comp=Z,4µm,22.0s						
D27M	Malcolm River	96.01	351	IAmb	IAmb	20 33 53.5	
	comp=Z,55nm,1.9s						
H17K	Granite Mounta	96.15	343	IAMs_20	IAMs_20	21 08 23.5	
	comp=Z,4µm,19.0s						
E24K	Your Creek	96.17	348	IAMs_20	IAMs_20	21 10 11.5	
	comp=Z,4µm,18.0s						
FRB	Frobisher Bay	96.20	19	LR	LR	21 14 18.0	
	comp=Z,5µm,18.5s,baz=222,slow=34						
E23K	Chandalar	96.36	348	IAMs_20	IAMs_20	21 09 31.1	
	comp=Z,5µm,19.0s						
F21K	Alatna River	96.44	346	IAMs_20	IAMs_20	21 09 23.8	
	comp=Z,3µm,19.0s						
G18K	Tagagawik	96.58	344	IAMs_20	IAMs_20	21 07 57.6	
	comp=Z,3µm,20.0s						
ASAR	Alice Springs	96.71	240	P	P	20 33 44.6	+1.0
	comp=Z,1.5nm,0.8s,baz=125,slow=3.2,SNR=13						
ASAR				PP	PP	20 37 39.0	+1.0
	comp=Z,0.5nm,0.9s,baz=122,slow=6.5,SNR=4.3						
ASAR				PKKP	PKKPbc	20 50 26.1	+0.1
	comp=Z,0.3nm,0.9s,baz=298,slow=2.3,SNR=1.9						
ASAR				LR	LR	21 12 04.8	
	comp=Z,2µm,20.3s,baz=126,slow=32						
	comp=Z,1.5nm,0.8s						
ASAR	Alice Springs	96.71	240	P	P	20 33 44.7	+1.0
C27K	Jago River	96.76	351	IAMs_20	IAMs_20	21 09 42.0	
	comp=Z,3µm,20.0s						
F20K	Avaraart Lake	96.79	345	IAmb	IAmb	20 33 57.7	
	comp=Z,47nm,1.8s						
E22K	Anaktuvuk Pass	96.86	347	IAMs_20	IAMs_20	21 08 57.9	
	comp=Z,4µm,20.0s						
TOLK	Toolik Lake Re	96.86	348	IAMs_20	IAMs_20	21 09 58.9	
	comp=Z,5µm,19.0s						
D25K	Kavik River	96.90	350	IAMs_20	IAMs_20	21 09 33.2	
	comp=Z,3µm,21.0s						
G16K	Koyuk River	97.17	342	IAMs_20	IAMs_20	21 10 38.8	
	comp=Z,3µm,19.0s						
D24K	Happy Valley	97.17	349	IAMs_20	IAMs_20	21 08 24.4	
	comp=Z,4µm,21.0s						
A36M	Sachs Harbour	97.24	357	IAmb	IAmb	20 33 53.3	
	comp=Z,20nm,1.0s						
A36M				IAMs_20	IAMs_20	21 13 01.5	
	comp=Z,4µm,18.0s						
D23K	Nanushuk River	97.35	348	IAMs_20	IAMs_20	21 10 14.1	
	comp=Z,5µm,18.0s						
ANM	Nome	97.43	341	IAMs_20	IAMs_20	21 11 14.3	
	comp=Z,4µm,19.0s						
E19K	Redstone River	97.47	345	IAmb	IAmb	20 34 28.1	
	comp=Z,39nm,1.9s						
E21K	Killik River	97.56	347	IAmb	IAmb	20 33 55.4	
	comp=Z,24nm,1.1s						
E21K				IAMs_20	IAMs_20	21 11 06.4	
	comp=Z,4µm,19.0s						
ILON	Igloolik, Nuna	97.57	12	IAmb	IAmb	20 34 09.6	
	comp=Z,29nm,1.3s						
C24K	Franklin Bluff	97.64	349	IAMs_20	IAMs_20	21 11 22.9	
	comp=Z,3µm,18.0s						
D22K	Ayikyak River	97.66	347	IAmb	IAmb	20 33 57.0	
	comp=Z,19nm,1.1s						
D22K				IAMs_20	IAMs_20	21 10 12.1	
	comp=Z,3µm,20.0s						
F17K	Baldwin Pennin	97.67	343	IAMs_20	IAMs_20	21 08 07.9	
	comp=Z,4µm,22.0s						
F15K	North Star Dit	98.05	342	IAMs_20	IAMs_20	21 12 24.6	
	comp=Z,3µm,18.0s						
C23K	Itkillik River	98.08	348	IAmb	IAmb	20 33 57.9	
	comp=Z,18nm,1.1s						
C23K				IAMs_20	IAMs_20	21 11 00.5	
	comp=Z,5µm,20.0s						
WRA	Warramunga Arr	98.26	243	P	Pdif	20 33 51.6	+0.9
	comp=Z,2.5nm,0.8s,baz=118,slow=4.7,SNR=12						
WRA				PP	PP	20 37 51.7	+1.6
	comp=Z,2.6nm,1.2s,baz=115,slow=6.7,SNR=6.5						
WRA				PKKP	PKKPdf	20 50 24.7	+0.6

	comp=Z,0.5nm,0.7s,baz=316,slow=2.7,SNR=1.9						
	comp=Z,2.5nm,0.8s						
WRA	Warramunga Arr	98.26	243	P	Pdif	20 33 51.6	+0.9
SACV	Santiago Islan	98.29	77	IAMs_20	IAMs_20	21 12 55.6	
	comp=Z,3µm,21.0s						
D19K	Kuna River	98.50	345	IAmb	IAmb	20 34 05.1	
	comp=Z,59nm,1.6s						
D19K				IAMs_20	IAMs_20	21 12 07.8	
	comp=Z,3µm,18.0s						
SHEM	Shemya Is, Ala	98.57	325	LR	LR	21 13 57.3	
	comp=Z,1µm,18.3s,baz=129,slow=33						
B21K	Ikpikpuk River	98.66	347	IAMs_20	IAMs_20	21 10 25.6	
	comp=Z,4µm,18.0s						
TNA	Tin City	98.90	341	IAMs_20	IAMs_20	21 10 37.3	
	comp=Z,3µm,20.0s						
B22K	Teshekpuk Lake	99.03	348	IAMs_20	IAMs_20	21 11 29.2	
	comp=Z,5µm,19.0s						
B20K	Meade River	99.50	347	IAMs_20	IAMs_20	21 12 22.1	
	comp=Z,3µm,19.0s						
C16K	Lisburne Hills	100.10	343	IAMs_20	IAMs_20	21 11 30.7	
	comp=Z,4µm,19.0s						
SHEL	Horse Pasture	100.60	113	IAMs_20	IAMs_20	21 11 22.2	
	comp=Z,6µm,22.0s						
NRS	Narsarsuaq	103.01	28	IAMs_20	IAMs_20	21 20 02.7	
	comp=Z,4µm,18.0s						
NWAO	Narrogin (SRO)	103.11	224	IAMs_20	IAMs_20	21 13 06.4	
	comp=Z,4µm,19.0s						
H01W1	Cape Leeuwin H	103.63	220	T	T	22 31 07.3	
	baz=140,slow=74						
H01W2	Cape Leeuwin H	103.64	220	T	T	22 31 17.7	
	baz=140						
H01W3	Cape Leeuwin H	103.65	220	T	T	22 31 20.2	
	baz=140,slow=74						
GUMO	Guam	103.91	279	IAMs_20	IAMs_20	21 10 12.7	
	comp=Z,5µm,22.0s						
SFJD	Kangerlussuaq	104.01	22	IAMs_20	IAMs_20	21 18 28.0	
	comp=Z,4µm,21.0s						
CRZF	Crozet Islands	107.75	171	IAMs_20	IAMs_20	21 18 07.0	
	comp=Z,5µm,21.0s						
FAKI	Fak Fak	108.35	258	IAMs_20	IAMs_20	21 15 41.3	
	comp=Z,3µm,22.0s						
BILL	Bilibino	108.78	337	IAMs_20	IAMs_20	21 20 31.3	
	comp=Z,3µm,19.0s						
MBWA	Marble Bar	108.93	235	IAMs_20	IAMs_20	21 17 57.7	
	comp=Z,4µm,21.0s						
SCO	Scoresbysund	114.92	22	IAMs_20	IAMs_20	21 25 32.5	
	comp=Z,3µm,19.0s						
TSUM	Tsumeb	116.73	130	IAMs_20	IAMs_20	21 20 43.5	
	comp=Z,3µm,20.0s						
MAJO	Matsushiro	116.84	300	IAMs_20	IAMs_20	21 25 24.2	
	comp=Z,4µm,19.0s						
AVE	Averroes	118.21	64	IAMs_20	IAMs_20	21 28 07.8	
	comp=Z,3µm,19.0s						
DAV	Davao City (W)	118.74	264	IAMs_20	IAMs_20	21 18 38.8	
	comp=Z,4µm,21.0s						
SFS	San Fernando	119.83	61	IAMs_20	IAMs_20	21 37 38.7	
	comp=Z,3µm,20.0s						
TORD	Torodi Ar. Bea	120.30	89	PKP	PKPdf	20 39 03.8	-0.8
	comp=Z,4.7nm,1.0s,baz=327,slow=2.8,SNR=8.0						
TORD				PP	PP	20 40 30.0	-0.7
	comp=Z,1.7nm,0.9s,baz=287,slow=3.9,SNR=4.4						
TORD	Torodi Ar. Bea	120.30	89		PKPdf	20 39 03.8	-0.8
JAGI	Jajag, Banyuwa	120.84	242	IAMs_20	IAMs_20	21 26 25.2	
	comp=Z,2µm,22.0s						
DSB	Dublin	121.44	42	IAMs_20	IAMs_20	21 29 56.7	
	comp=Z,3µm,19.0s						
TIXI	Tiksi	121.69	340	PP	PP	20 40 39.7	+1.1
	comp=Z,2.6nm,0.2s,baz=87,slow=8.2,SNR=4.6						
TIXI	Tiksi	121.69	340	IAMs_20	IAMs_20	21 30 19.6	
	comp=Z,3µm,19.0s						
TIXI	Tiksi	121.69	340	*i* PKIKP	PKiKP	20 39 05.7	-0.1
PAB	San Pablo	121.78	58	IAMs_20	IAMs_20	21 26 39.0	
	comp=Z,3µm,19.0s						
ESDC	Sonseca Array	122.09	58	PKP	PKPdf	20 39 06.3	-1.2
	comp=Z,2.1nm,1.0s,baz=276,slow=1.4,SNR=6.8						
ESDC				PP	PP	20 40 41.3	-1.3
	comp=Z,0.3nm,1.0s,baz=289,slow=3.0,SNR=0.9						
ESDC	Sonseca Array	122.09	58		PKPdf	20 39 06.3	-1.2
BKB	Balikpapan	122.54	251	IAMs_20	IAMs_20	21 33 41.7	
	comp=Z,3µm,18.0s						
ESK	Eskdalemuir	123.26	39	IAMs_20	IAMs_20	21 32 20.7	
	comp=Z,3µm,18.0s						
EKA	Eskdalemuir Ar	123.28	39	PKP	PKiKP	20 39 10.0	+0.6
	comp=Z,2.6nm,1.0s,baz=225,slow=0.9,SNR=4.2						
EKA	Eskdalemuir Ar	123.28	39	PKIKP	PKiKP	20 39 10.0	+0.6
YAK	Yakutsk	123.45	329	IAMs_20	IAMs_20	21 24 45.1	
	comp=Z,2µm,22.0s						
YAK	Yakutsk	123.45	329	*e*PKIKP	PKiKP	20 39 11.3	+1.8
YAK				*e*		20 40 52.7	
YAK				*e*SS	SS	20 57 37.1	-0.4
YAK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,114nm,3.9s						
YAK				pmax	pmax		
	comp=N,103nm,3.8s						
YAK				pmax	pmax		
	comp=E,259nm,8.4s						
YAK				MLR	MLR		
	comp=E,832nm,19.0s						
EDA	Edea	124.02	103	IAMs_20	IAMs_20	21 23 17.4	
	comp=Z,4µm,22.0s						
UGM	Wanagama	124.05	240	IAMs_20	IAMs_20	21 25 26.0	
	comp=Z,2µm,21.0s						
MDJ	Mudanjiang	124.44	308	PKP	PKiKP	20 39 14.8	+2.8
SMRI	Semarang	124.64	241	IAMs_20	IAMs_20	21 28 54.6	
	comp=Z,3µm,22.0s						
KSRS	Korea Array	125.11	299	PKP	PKiKP	20 39 14.3	+0.7
	comp=Z,0.7nm,0.8s,baz=120,slow=4.4,SNR=2.1						
KSRS	Korea Array	125.11	299		PKiKP	20 39 14.3	+0.7
KSRS	Korea Array	125.11	299	PKIKP	PKiKP	20 39 14.3	+0.7
ZEA	Zeya	125.78	319	*e*PKIKP	PKiKP	20 39 16.8	+2.4
ZEA				*e*SS	SS	20 58 25.6	+18
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
HEH	HeiHe	125.93	315	PKP	PKiKP	20 39 17.0	+2.2
HEH				PP	PP	20 41 09.3	+1.5
HEH				SS	SS	20 58 08.3	-1.2
HEH				AMB	AMB		
	comp=Z,410nm,5.4s						
HEH				LR	LR		
	comp=Z,2µm,19.5s						
HEH				LR	LR		
	comp=Z,1µm,19.2s						
HEH				LR	LR		
	comp=Z,5µm,23.7s						
BNX	BinXian	126.02	309	⇓PKP	PKiKP	20 39 23.5	+8.4
BNX				PP	PP	20 41 08.3	-0.3
BNX	BinXian	126.02	309	SS	SS	20 58 11.5	+0.5
BNX				AMB	AMB		
	comp=Z,360nm,5.8s						
BNX				LR	LR		
	comp=N,2µm,19.8s						
BNX				LR	LR		
	comp=E,3µm,21.2s						
BNX				LR	LR		
	comp=Z,5µm,21.3s						
LSZ	Lusaka	126.61	135	IAMs_20	IAMs_20	21 29 59.8	
	comp=Z,3µm,20.0s						
KKM	Kota Kinabalu	126.67	258	IAMs_20	IAMs_20	21 26 06.7	
	comp=Z,3µm,22.0s						
TAM	Tamanrasset	126.82	80	IAMs_20	IAMs_20	21 32 52.7	
	comp=Z,2µm,18.0s						
CLF	Chambon-Foret	127.00	48	IAMs_20	IAMs_20	21 39 33.4	
	comp=Z,2µm,20.0s						
CN2	Changchun	127.40	307	PKP	PKPdf	20 39 17.5	+0.1
CN2				PP	PP	20 41 22.0	+4.2
CN2				SS	SS	20 58 25.8	-2.5
CN2				AMB	AMB		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=Z,1µm,22.0s						
CN2				LR	LR		
	comp=Z,4µm,22.0s						
CN2				LR	LR		
	comp=Z,4µm,23.0s						
SSB	Saint Sauveur	128.67	51	IAMs_20	IAMs_20	21 33 38.8	
	comp=Z,2µm,22.0s						
SNY	Shenyang	128.75	304	*e*PKP	PKiKP	20 39 26.0	+5.3
SNY				AMB	AMB		
	comp=Z,160nm,4.7s						
SNY				LR	LR		
	comp=Z,980nm,20.8s						
SNY				LR	LR		
	comp=Z,4µm,22.3s						
SNY				LR	LR		
	comp=Z,7µm,22.3s						
WLF	Walferdange	129.44	45	IAMs_20	IAMs_20	21 35 31.6	
	comp=Z,3µm,20.0s						
NB2	NORSAR Subarra	129.58	30	PKPdf	PKiKP	20 39 26.1	+4.2
	comp=Z,79nm,2.5s,baz=289,slow=1.9						
NB2	NORSAR Subarra	129.58	30	PKPdf	PKiKP	20 39 26.1	+4.2
	baz=289,slow=1.9						
NOA	NORSAR Array B	129.58	30	PKP	PKPdf	20 39 21.1	0.0
	comp=Z,3.3nm,0.9s,baz=293,slow=2.3,SNR=7.0						
NOA	NORSAR Array B	129.58	30		PKPdf	20 39 21.1	0.0
NOA	NORSAR Array B	129.58	30	PKIKP	PKPdf	20 39 21.1	0.0
SSE	Sheshan	129.81	290	PKP	PKPdf	20 39 22.5	+0.1
SSE				PP	PP	20 41 34.3	+0.2
SSE				SS	SS	20 58 59.5	+0.5
SSE				LR	LR		
	comp=Z,980nm,21.3s						
SSE				LR	LR		
	comp=Z,1µm,22.0s						
DL2	Dalian	130.16	301	PKP	PKiKP	20 39 29.0	+5.4
DL2				AMB	AMB		
	comp=Z,450nm,7.0s						
DL2				LR	LR		
	comp=Z,3µm,21.2s						
DL2				LR	LR		
	comp=Z,4µm,20.2s						
DL2				LR	LR		
	comp=Z,8µm,25.9s						
KEV	Kevo	130.52	16	IAMs_20	IAMs_20	21 33 16.4	
	comp=Z,3µm,20.0s						
SENIN	Lac Senin/Sane	130.53	50	IAMs_20	IAMs_20	21 38 23.9	
	comp=Z,2µm,19.0s						
HIA	Hailar	130.97	314	IAMs_20	IAMs_20	21 27 57.7	
	comp=Z,4µm,22.0s						
HFS	Hagfors	131.05	31	PKP	PKPdf	20 39 23.5	-0.4
	comp=Z,4.0nm,1.0s,baz=305,slow=5.1,SNR=2.1						
HFS	Hagfors	131.05	31		PKPdf	20 39 23.5	-0.4
HFS	Hagfors	131.05	31	PKIKP	PKPdf	20 39 23.5	-0.4
NJ2	Nanjing	131.91	291	*e*PKP	PKPdf	20 39 25.5	-0.9
NJ2				AMB	AMB		
	comp=Z,400nm,7.6s						
NJ2				LR	LR		
	comp=Z,2µm,18.0s						
NJ2				LR	LR		
	comp=Z,2µm,16.1s						
NJ2				LR	LR		
	comp=Z,3µm,20.8s						
DAVA	Damuels	132.20	48	*i* PKiKP	PKiKP	20 39 27.4	-0.3
	comp=Z,26nm,1.6s						
GRA1	Grafenberg Arr	132.69	45	IAMs_20	IAMs_20	21 38 21.5	
	comp=Z,2µm,18.0s						
RETA	Reutte	132.76	48	*i* PKiKP	PKiKP	20 39 28.7	-0.1
	comp=Z,12nm,1.5s						
RETA				*i* PP	PP	20 41 53.6	+1.0
	comp=Z,17nm,1.7s						
FETA	Feichten	132.81	48	*e*PKiKP	PKiKP	20 39 28.8	-0.2
	comp=Z,24nm,1.4s,SNR=5.8						
FETA				*e*PP	PP	20 41 52.1	-0.9
	comp=Z,18nm,1.7s						
SQTA	Sankt Quirin	133.10	48	*e*PKiKP	PKiKP	20 39 30.3	+0.8
	comp=Z,26nm,1.6s						
SQTA				*i* PP	PP	20 41 56.9	+2.1
	comp=Z,24nm,2.0s						
WATA	Walderalm	133.33	48	*i* PKiKP	PKiKP	20 39 29.7	-0.2
	comp=Z,23nm,1.7s,SNR=8.1						
WATA				*e*PP	PP	20 41 56.2	-0.1
	comp=Z,30nm,3.5s						
WTTA	Wattenberg	133.38	48	*i* PKiKP	PKiKP	20 39 30.5	+0.4
	comp=Z,32nm,1.8s,SNR=7.6						
WTTA				*i* PP	PP	20 41 57.1	+0.4
	comp=Z,26nm,1.9s						
CLL	Collm	133.45	42	IAMs_20	IAMs_20	21 40 56.4	
	comp=Z,2µm,19.0s						
CLL	Collm	133.45	42	*i* PKIKP	PKiKP	20 39 33.8	+3.9
CLL				pmax	pmax		
	comp=Z,68nm,1.9s						
CLL				MLR	MLR		
	comp=Z,2µm,19.2s						
APA	Apatity	133.72	16	⇓*i*PKIKP	PKiKP	20 39 31.0	+1.0
APA				*e*		20 41 58.4	
APA				*e*SS	SS	20 59 44.9	+1.0
APA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
APA				MLR	MLR		
	comp=Z,2µm,23.1s						
LVZ	Lovozero	133.76	15	IAMs_20	IAMs_20	21 37 08.1	
	comp=Z,3µm,19.0s						
NRIK	Noril'sk	133.79	349	PKP	PKiKP	20 39 29.4	-0.6
	comp=Z,1.1nm,0.3s,baz=342,slow=3.1,SNR=5.6						
NRIK	Noril'sk	133.79	349	PKPdf	PKiKP	20 39 33.3	+3.2
NRIK	Noril'sk	133.79	349	PKIKP	PKiKP	20 39 29.5	-0.6
HSKC	Hora Svate Kat	133.88	43	AMS	AMS	21 43 20.0	
	comp=Z,2µm,16.6s						
LESA	Schwarzleotal	134.05	48	*e*PKiKP	PKiKP	20 39 31.1	-0.3
	comp=Z,11nm,1.5s						
LESA				*i* PP	PP	20 42 03.3	+2.5
	comp=Z,3.1nm,1.1s						
ABTA	Abfaltersbach	134.06	49	*e*PKiKP	PKiKP	20 39 31.3	-0.1
	comp=Z,8.7nm,1.4s						
ABTA				*i* PP	PP	20 42 02.2	+1.2
	comp=Z,10nm,1.7s						
XLT	XiLinHaoTe	134.16	307	*e*PKP	PKPdf	20 39 22.0	-8.4
XLT	XiLinHaoTe	134.16	307	SS	SS	20 59 55.0	+3.7
XLT				LR	LR		
	comp=N,160nm,17.6s						
XLT				LR	LR		
	comp=E,2µm,18.5s						
XLT				LR	LR		
	comp=Z,2µm,18.5s						
CIT	Chita	134.25	319	*e*PKIKP	PKiKP	20 39 38.4	+6.8
CIT				*e*		20 42 03.2	
CIT				*e*		20 45 04.6	
CIT				pmax	pmax		
	comp=Z,41nm,2.6s						
RICC	Richard	134.31	43	AMS	AMS	21 42 30.0	
	comp=Z,2µm,18.2s						
KHC	Kasperske Hory	134.31	45		PKPdf	20 39 29.9	-0.6
KHC				IAMs_20	IAMs_20	21 36 37.4	
	comp=Z,2µm,21.0s						
KHC	Kasperske Hory	134.31	45	*c i*PKIKP	PKiKP	20 39 31.7	-0.1
KHC				pmax	pmax		
	comp=Z,9.0nm,1.7s						
KHC	Kasperske Hory	134.31	45	*e*PKPDF	PKiKP	20 39 33.1	+1.3
KHC				*e*x	x	20 42 05.3	
KHC				*e*x	x	20 58 58.8	
KHC				AMS	AMS	21 38 40.0	
	comp=Z,2µm,17.7s						
GERES	GERESS Array B	134.45	45	PKP	PKPdf	20 39 31.1	+0.3
	comp=Z,1.1nm,0.9s,baz=48,slow=2.0,SNR=5.8						
GERES				PP	PP	20 42 02.9	-0.4
	comp=Z,0.8nm,1.1s,baz=246,slow=8.4,SNR=2.9						
GERES	GERESS Array B	134.45	45		PKPdf	20 39 31.1	+0.3
GERES					PP	20 42 02.9	-0.4
GERES	GERESS Array B	134.45	45	PKIKP	PKPdf	20 39 31.1	+0.3
GERES						20 42 02.9	
PVCC	Panska Ves	134.60	43	AMS	AMS	21 42 50.0	
	comp=Z,2µm,17.3s						
PRA	Prague	134.63	44	AMS	AMS	21 41 10.0	
	comp=Z,2µm,16.6s						
BIOA	Bad Ischl, Aus	134.64	47	*e*PKiKP	PKiKP	20 39 32.3	-0.2
	comp=Z,7.3nm,1.2s						
BIOA				*e*PP	PP	20 42 05.1	+0.6
	comp=Z,9.6nm,1.3s						
PRU	Pruhonice	134.72	44	AMS	AMS	21 41 10.0	
	comp=Z,2µm,18.0s						
MYKA	Terra Mystica	134.84	49	*i* PKiKP	PKiKP	20 39 32.5	-0.5
	comp=Z,6.1nm,1.8s						
MYKA				*i* PP	PP	20 42 07.9	+2.0
	comp=Z,8.7nm,1.8s						
CKRC	Cesky Krumlov	134.85	45	AMS	AMS	21 36 50.0	
	comp=Z,2µm,20.9s						
MOA	Molln	135.03	47	*e*PKP	PKPdf	20 39 31.4	-0.3
	comp=Z,6.3nm,1.3s						
MOA				*e*PP	PP	20 42 07.2	+0.3
	comp=Z,16nm,2.1s						
OBKA	Obir	135.48	49	*e*PKiKP	PKiKP	20 39 34.0	-0.3
	comp=Z,6.0nm,1.3s						
OBKA				*e*PP	PP	20 42 10.3	+0.3
	comp=Z,14nm,1.8s						
TREC	Trest	135.49	44	AMS	AMS	21 38 50.0	
	comp=Z,2µm,20.4s						
CHVC	Chvalec	135.50	43	*e*PKPDF	PKiKP	20 39 38.6	+4.5
CHVC				AMS	AMS	21 37 20.0	
	comp=Z,2µm,22.0s						
HNS	HongShan	135.60	298	⇑PKP	PKiKP	20 39 38.0	+3.3
HNS				SS	SS	21 00 14.3	+5.4
HNS				LR	LR		
	comp=Z,3µm,19.6s						
HNS				LR	LR		
	comp=Z,4µm,17.0s						
HNS				LR	LR		
	comp=Z,4µm,19.4s						
OSTC	Ostas	135.61	43	*e*PKIKP	PKPdf	20 39 31.9	-0.9
OSTC	Ostas	135.61	43	*e*PKPDF	PKPdf	20 39 31.9	-0.9
FINES	FINESS Array B	135.68	25	PKP	PKPdf	20 39 31.9	-0.6
	comp=Z,2.1nm,0.7s,baz=132,slow=2.8,SNR=6.4						
FINES	FINESS Array B	135.68	25		PKPdf	20 39 31.9	-0.6
FINES	FINESS Array B	135.68	25	PKIKP	PKPdf	20 39 31.9	-0.6
DPC	Dobruska-Polom	135.73	43	AMS	AMS	21 45 10.0	
	comp=Z,2µm,16.9s						
SOKA	Soboth	135.78	48	*i* PKiKP	PKiKP	20 39 34.2	-0.7
	comp=Z,9.5nm,1.4s						
SOKA				*i* PP	PP	20 42 11.8	+0.1
	comp=Z,5.2nm,1.4s						
ARSA	Arzberg	135.99	47	*i* PKiKP	PKiKP	20 39 35.2	0.0
	comp=Z,6.5nm,1.1s						
ARSA				*e*PP	PP	20 42 12.8	-0.2
	comp=Z,13nm,1.9s						
CONA	Conrad Observa	136.06	46	*e*PKiKP	PKiKP	20 39 35.6	+0.2
	comp=Z,12nm,1.1s						
CONA				*e*PP	PP	20 42 12.9	-0.5
	comp=Z,11nm,2.1s						
KRLC	Kraliky	136.09	43	AMS	AMS	21 41 20.0	
	comp=Z,2µm,17.4s						
KRUC	Moravsky	136.12	45	*e*PKP	PKPdf	20 39 32.9	-0.9
VRAC	Vranov	136.19	44	⇑P	PKiKP	20 39 35.9	+0.3
VRAC	Vranov	136.19	44	*e*PKP	PKPdf	20 39 33.3	-0.6
RONA	Rosalia, Austr	136.40	47	*e*PKiKP	PKiKP	20 39 35.7	-0.4
	comp=Z,9.8nm,1.5s						
RONA				*e*PP	PP	20 42 15.2	-0.4
	comp=Z,15nm,1.9s						
WDD	Wied Dalam	136.45	64	IAMs_20	IAMs_20	21 46 59.6	
	comp=Z,3µm,19.0s						
CNSH	ChangSha	136.52	285	PKP	PKiKP	20 39 44.3	+7.4
CNSH				PP	PP	20 42 17.8	+0.7
BKNI	Bangkinang	136.54	241	IAMs_20	IAMs_20	21 35 00.1	
	comp=Z,2µm,21.0s						
MORC	Moravsky Berou	136.65	43	⇓P	PKiKP	20 39 36.2	-0.3
MORC	Moravsky Berou	136.65	43	*e*PKP	PKiKP	20 39 36.6	+0.1
MORC	Moravsky Berou	136.65	43	⇓PKIKP	PKiKP	20 39 36.2	-0.3
STEB	Steborice	136.75	43	*e*PKPDF	PKiKP	20 39 39.5	+2.8
MODS	Modra-Piesok	136.87	45	*e*PKP	PKiKP	20 39 39.9	+2.9
MAUC	Maruska	136.94	44	*e*PKPDF	PKiKP	20 39 40.6	+3.5
OKC	Ostrava-Krasne	137.00	43	AMS	AMS	21 41 20.0	
	comp=Z,2µm,18.4s						
QIZ	Qiongzhong	137.33	271	IAMs_20	IAMs_20	21 30 47.6	
	comp=Z,3µm,20.0s						
QIZ	Qiongzhong	137.33	271	PKP	PKPdf	20 39 35.3	-1.6
QIZ				SS	SS	21 00 30.3	-0.1
QIZ				AMB	AMB		
	comp=Z,230nm,8.8s						
QIZ				LR	LR		
	comp=Z,2µm,18.8s						
QIZ				LR	LR		
	comp=Z,2µm,20.0s						
QIZ				LR	LR		
	comp=Z,3µm,21.0s						
TIY	Taiyuan	137.40	299	PKP	PKPdf	20 39 36.8	+0.2
TIY				SKKS		20 49 19.0	
TIY				SS	SS	21 00 30.0	-0.5
TIY				LR	LR		
	comp=Z,2µm,20.6s						
TIY				LR	LR		
	comp=Z,4µm,19.9s						
TIY				LR	LR		
	comp=Z,6µm,20.6s						
LYN	LuoYang	137.41	294	PKP	PKPdf	20 39 29.5	-7.1
LYN				PP	PP	20 42 18.8	-3.6
VSU	Vasula	137.71	28	*c i*PKIKP	PKiKP	20 39 37.7	-0.6
VSU				pmax	pmax		
	comp=Z,17nm,0.8s						
HHC	Hu-ho-hao-te	137.82	304	*e*PKP	PKPdf	20 39 33.0	-4.3
PABE	Paberze	138.01	33	IAMs_20	IAMs_20	21 42 39.3	
	comp=Z,2µm,18.0s						
TIP	Timpagrande	138.09	59	IAMs_20	IAMs_20	21 43 48.7	
	comp=Z,3µm,21.0s						
MORH	Mrgy, Hungar	138.31	48	⇑P	PKPdf	20 39 37.5	-0.3
SUW	Suwalki	138.31	36	IAMs_20	IAMs_20	21 41 03.4	
	comp=Z,3µm,19.0s						
PSZ	Piszkesteto	138.68	45	IAMs_20	IAMs_20	21 39 31.0	
	comp=Z,2µm,22.0s						
PSZ	Piszkesteto	138.68	45	⇑P	PKPdf	20 39 36.7	-1.9
PSZ	Piszkesteto	138.68	45	PKIKP	PKPdf	20 39 36.7	-1.9
BTO	Baotou	139.02	303	*e*PKP	PKPdf	20 39 38.8	-0.7
BTO				PP	PP	20 42 37.5	+5.2
BTO				SS	SS	21 00 46.8	-2.7
BTO				AMB	AMB		
	comp=Z,330nm,9.1s						
BTO				LR	LR		
	comp=Z,4µm,20.9s						
BTO				LR	LR		
	comp=Z,13µm,21.6s						
BTO				LR	LR		
	comp=Z,21µm,21.4s						
ULN	Ulaanbaatar	139.49	315	P	PKPdf	20 39 41.2	+1.0
ULN	Ulaanbaatar	139.49	315		PKPdf	20 39 36.3	-4.0
ULN	Ulaanbaatar	139.49	315	*c i*PKIKP	PKPdf	20 39 40.5	+0.3
ULN				pmax	pmax		
	comp=Z,10.0nm,2.5s						
PDG	Podgorica	139.54	54	IAMs_20	IAMs_20	21 48 19.8	
	comp=Z,2µm,20.0s						
KULM	Kulim	139.73	247	IAMs_20	IAMs_20	21 35 30.2	
	comp=Z,3µm,22.0s						
ENH	Enshi	139.74	288	IAMs_20	IAMs_20	21 36 49.4	
	comp=Z,3µm,19.0s						
SONM	Songino Array	139.92	315	PKhKP	PKPpre	20 39 35.5	
	comp=Z,2.4nm,0.9s,baz=97,slow=1.0,SNR=7.9						
SONM				PP	PP	20 42 39.0	+1.5
	comp=Z,1.9nm,1.1s,baz=129,slow=2.2,SNR=3.6						
SIRR	Siria	140.31	47	⇓P	PKPdf	20 39 38.9	-2.7
XAN	Xi'an	140.34	293	PKP	PKPdf	20 39 40.0	-2.1
XAN				sPKP	sPKPdf	20 39 54.0	+9.5
XAN				SKKS		20 49 34.5	
XAN				SS	SS	21 01 05.0	-0.5
XAN				AMB	AMB		
	comp=Z,440nm,12.4s						
XAN				LR	LR		
	comp=Z,1µm,18.5s						
XAN				LR	LR		
	comp=Z,4µm,21.3s						
XAN				LR	LR		
	comp=Z,5µm,22.0s						
MNK	Minsk	140.46	33	*i* PKIKP	PKiKP	20 39 45.8	+1.7
MNK				*i*		20 42 42.5	
MNK				*i* PPP	PPP	20 45 49.5	
MNK				*i* SS	SS	21 01 10.9	+6.1
MNK				*i* SSS	SSS	21 06 21.5	
MNK				pmax	pmax		
	comp=Z,16nm,0.9s						
MNK				pmax	pmax		
	comp=E,12nm,0.8s						
MNK				pmax	pmax		
	comp=N,3.0nm,0.8s						
MNK				MLR	MLR		
	comp=Z,2µm,18.0s						
MNK				MLR	MLR		
	comp=N,2µm,17.0s						
MNK				MLR	MLR		
	comp=E,1µm,18.0s						
BZS	Buzias	140.47	48	⇓P	PKPdf	20 39 39.7	-2.1
BZS	Buzias	140.47	48	⇓PKIKP	PKPdf	20 39 39.7	-2.1
KLMR	Klimovskoe	140.68	19	*e*PKIKP	PKPdf	20 39 40.0	-1.7
KLMR				*e*		20 42 39.9	
KLMR				pmax	pmax		
	comp=Z,54nm,1.4s						
DRGR		140.85	46	⇑P	PKiKP	20 39 43.8	-1.4
DRGR		140.85	46	⇑PKIKP	PKiKP	20 39 43.8	-1.4
RNPP8	Varash	140.98	38	PKP	PKiKP	20 39 47.0	+1.8
BOVS	Bovan	141.05	51	⇑P	PKPdf	20 39 38.2	-4.7
MARR	Marisel-Cluj	141.15	46	⇑P	PKPdf	20 39 40.6	-2.6
GZR	Gura Zlata	141.32	48	⇑P	PKPdf	20 39 39.1	-4.4
GZR	Gura Zlata	141.32	48	⇑PKIKP	PKPdf	20 39 39.1	-4.4
MOY	Mondy	141.57	323	*e*PKIKP	PKPdf	20 39 44.1	+0.3
MOY				pmax	pmax		
	comp=Z,37nm,2.0s						
ARCR	ARCALIA	141.81	45	⇑P	PKiKP	20 39 47.9	+0.8
GYA	Guiyang	141.81	281	⇓PKP	PKPdf	20 39 44.3	-0.7
GYA				PP	PP	20 42 48.8	-1.1
GYA				SKS	SKSdf	20 46 48.8	-6.9
GYA				AMB	AMB		

	comp=Z,440nm,6.8s						
GYA				LR	LR		
	comp=Z,690nm,18.9s						
GYA				LR	LR		
	comp=Z,710nm,18.9s						
GYA				LR	LR		
	comp=Z,920nm,16.6s						
LOT	Lotru	141.97	48	⇑P	PKPdf	20 39 40.8	-3.9
BURAR	Bucovina Array	142.16	44	⇑P	PKPdf	20 39 44.3	-0.7
BURAR	Bucovina Array	142.16	44	⇑PKIKP	PKPdf	20 39 44.3	-0.7
TNR	Turnu Rosu	142.24	47	⇑P	PKiKP	20 39 46.7	-1.4
TNR	Turnu Rosu	142.24	47	⇑PKIKP	PKiKP	20 39 46.7	-1.4
VTS	Vitosha	142.38	52	*e*P	PKPdf	20 39 43.3	-2.3
ARR	Arges	142.57	47	⇓P	PKPdf	20 39 43.3	-2.4
HUMR	Humele	143.07	49	⇓P	PKPdf	20 39 47.5	+1.0
PGB	Panagyurishte	143.08	52	*e*P	PKiKP	20 39 52.4	+2.5
KIEV	Kiev	143.15	37	IAMs_20	IAMs_20	21 44 07.7	
	comp=Z,2μm,22.0s						
KIEV	Kiev	143.15	37	⇑P	PKPdf	20 39 45.5	-0.9
KIEV	Kiev	143.15	37	⇑PKIKP	PKPdf	20 39 45.5	-0.9
AKASG	Malin Array Be	143.16	37	PKP	PKPdf	20 39 44.9	-1.6
	comp=Z,4.0nm,0.8s,baz=302,slow=2.6,SNR=11						
AKASG				PP	PP	20 42 56.2	-0.5
	comp=Z,0.2nm,0.3s,baz=287,slow=3.6,SNR=4.4						
AKASG	Malin Array Be	143.16	37		PKPdf	20 39 44.9	-1.6
AKASG	Malin Array Be	143.16	37	PKIKP	PKPdf	20 39 44.9	-1.6
AKBB	Malin Array Si	143.16	37	*c i*PKIKP	PKiKP	20 39 48.0	-1.7
TURR	Turia	143.25	46	⇓P	PKiKP	20 39 48.7	-1.4
ONER	Baraj Valea Uz	143.39	45	⇑P	PKiKP	20 39 48.9	-1.5
MLR	Muntele Rosu	143.40	47	⇓P	PKPdf	20 39 46.0	-1.3
MLR	Muntele Rosu	143.40	47	⇓PKIKP	PKPdf	20 39 46.0	-1.3
COVR	Voineasa-Covas	143.44	46	⇑P	PKPab	20 39 42.6	-0.8
TESR	Tescani	143.49	45	⇑P	PKPdf	20 39 46.8	-0.4
PLOR	Plostina	143.73	46	⇓P	PKiKP	20 39 50.6	-0.6
VRI	Vrincioaia	143.78	46	⇑P	PKiKP	20 39 50.1	-1.1
SORM	Soroca	143.87	42	⇑P	PKPdf	20 39 47.3	-0.5
SORM	Soroca	143.87	42	⇑PKIKP	PKPdf	20 39 47.3	-0.5
SULR		143.88	48	⇓P	PKPdf	20 39 49.4	+1.4
MOS	Moscow	143.98	25	*i* PKIKP	PKiKP	20 39 49.7	-1.5
MOS				*e*		20 43 03.6	
MOS				*e*SS	SS	21 01 43.0	-2.1
MOS				*e*SSS	SSS	21 07 05.8	
MOS				pmax	pmax		
	comp=Z,175nm,2.1s						
KNGR	Kungurtug, Tuv	143.99	323	*i* PKIKP	PKPbc	20 39 46.9	+0.9
OBN	Obninsk	144.00	27	⇓P	PKiKP	20 39 53.4	+2.2
OBN	Obninsk	144.00	27	*c i*PKIKP	PKPdf	20 39 46.9	-0.9
OBN				*e*		20 43 00.7	
OBN				*e*		20 46 14.0	
OBN				pmax	pmax		
	comp=Z,214nm,2.5s						
OBN				MLR	MLR		
	comp=Z,3μm,19.0s						
GRER		144.12	47	⇑P	PKiKP	20 39 50.7	-1.2
KDZ	Kurdzhali	144.14	53	*e*P	PKiKP	20 39 50.2	-1.9
SZH	Strazhitsa	144.14	50	*e*P	PKPdf	20 39 48.3	-0.2
GHRR		144.14	45	⇑P	PKiKP	20 39 51.9	0.0
PGOR	Pogoanele	144.29	47	⇓P	PKiKP	20 39 52.2	0.0
LZH	Lanzhou	144.38	297	*e*PKP	PKPdf	20 39 49.0	-0.3
LZH				sPKP		20 40 04.0	
LZH				PP	PP	20 43 04.0	-1.2
LZH				SKKS		20 50 00.0	
LZH				SS	SS	21 01 55.0	+2.6
LZH				AMB	AMB		
	comp=Z,490nm,5.5s						
LZH				LR	LR		
	comp=Z,2μm,20.7s						
LZH				LR	LR		
	comp=Z,4μm,21.0s						
LZH				LR	LR		
	comp=Z,5μm,21.3s						
RDO	Rodhopi	144.41	54	⇓P	PKPdf	20 39 48.6	-0.4
TUDR		144.49	46	⇑P	PKPdf	20 39 48.7	-0.2
LZDM	Lanzhou Array	144.52	297	PKP	PKPdf	20 39 49.9	+0.1
	comp=Z,18nm,0.8s,baz=148,slow=1.4,SNR=8.5						
LZDM	Lanzhou Array	144.52	297		PKPdf	20 39 49.9	+0.1
IZVR	Izvoarele	144.57	46	⇑P	PKPbc	20 39 47.5	-0.3
AMRR	Amara	144.63	48	⇑P	PKPdf	20 39 48.9	-0.4
SCHLR	Schela	144.64	46	⇓P	PKPdf	20 39 50.6	+1.3
VLDR	Vladesti	144.66	45	⇑P	PKPdf	20 39 49.0	-0.2
SCTR	Scanteiesti	144.67	46	⇓P	PKiKP	20 39 51.2	-1.8
TATR	Tatarca	144.74	46	⇓P	PKPdf	20 39 49.5	+0.2
JMB	Yambol	144.76	51	*e*P	PKPdf	20 39 49.2	-0.3
LODK	Lodwar	144.84	124	P	PKPdf	20 39 50.9	+0.2
	SNR=58						
LODK	Lodwar	144.84	124		PKPab	20 39 48.7	-0.9
CFR	Carcaliu	144.95	46	⇑P	PKPbc	20 39 49.0	0.0
ICOR	Ion Corvin	145.12	48	⇓P	PKPdf	20 39 51.4	+1.3
KMI	Kunming	145.12	278	⇑PKPbc	PKPbc	20 39 49.5	-1.0
KMI				AMB	AMB		
	comp=Z,570nm,8.2s						
KMI				LR	LR		
	comp=Z,1μm,23.1s						
KMI				LR	LR		
	comp=Z,3μm,23.5s						
KMI				LR	LR		
	comp=Z,4μm,24.0s						
TLBR	Topalu	145.13	47	⇑P	PKPdf	20 39 50.2	+0.1
KIRV	Kirov	145.15	13	PKPbc	PKPbc	20 39 47.5	-1.7
	comp=Z,32nm,0.7s,baz=308,slow=1.3,SNR=11						
KIRV	Kirov	145.15	13		PKPbc	20 39 47.5	-1.7
KIRV	Kirov	145.15	13	PKP2	PKPbc	20 39 47.5	-1.7
PRD	Provadia	145.17	50	*e*P	PKPdf	20 39 49.8	-0.4
APE	Apeiranthos	145.21	61	⇓P	PKPbc	20 39 46.3	-3.9
APE	Apeiranthos	145.21	61	⇓PKHKP	PKPpre	20 39 46.3	
TLCR		145.39	46	⇑P	PKPbc	20 39 47.5	-2.9
TLCR		145.39	46	⇑PKP2	PKPbc	20 39 47.5	-2.9
TIRR	Tirgusor	145.40	47	IAMs_20	IAMs_20	21 47 19.2	
	comp=Z,3μm,19.0s						
TIRR	Tirgusor	145.40	47	⇑P	PKiKP	20 39 52.9	-1.6
TIRR	Tirgusor	145.40	47	⇑PKIKP	PKiKP	20 39 52.9	-1.6
TIRR	Tirgusor	145.40	47	⇓P	PKPdf	20 39 52.1	+1.5
PURM	Purcari	145.51	43	⇑P	PKPab	20 39 51.7	+0.8
PZH	PanZhiHua	146.19	280	PKPbc	PKiKP	20 39 56.0	-0.9
PZH				PP	PP	20 43 17.0	+0.7
PZH				SKKS		20 50 10.8	
PZH				SS	SS	21 02 17.0	+3.4
PZH				AMB	AMB		
	comp=Z,440nm,8.3s						
PZH				LR	LR		
	comp=Z,2μm,21.4s						
PZH				LR	LR		
	comp=Z,2μm,20.4s						
PZH				LR	LR		
	comp=Z,3μm,20.2s						
LPSR	Galich'ya Gora	146.77	28	*e*PKP2	PKPbc	20 39 54.4	0.0
LPSR				pmax	pmax		
	comp=Z,80nm,0.8s						
GTA	Gaotai	146.94	304	PKPbc	PKPab	20 39 56.8	-0.1
GTA				SS	SS	21 02 21.5	+0.4
GTA				LR	LR		
	comp=Z,2μm,23.1s						
GTA				LR	LR		
	comp=Z,6μm,23.9s						
GTA				LR	LR		
	comp=Z,9μm,23.9s						
CM31	Chiang Mai Arr	147.02	265	P	PKPbc	20 39 56.0	-0.1
	SNR=23						
CMAR	Chiang Mai Arr	147.02	265	PKPbc	PKPdf	20 39 54.8	+0.7
	comp=Z,15nm,1.0s,baz=103,slow=1.3,SNR=26						
CMAR	Chiang Mai Arr	147.02	265		PKPdf	20 39 55.1	+0.9
CMAR	Chiang Mai Arr	147.02	265	PKIKP	PKPdf	20 39 54.8	+0.7
CHTO	Chiang Mai	147.13	266	P	PKPbc	20 39 55.6	-0.9
CHTO	Chiang Mai	147.13	266		PKPdf	20 39 52.8	-1.5
CHTO				IAMs_20	IAMs_20	21 36 36.1	
	comp=Z,2μm,20.0s						
CHTO	Chiang Mai	147.13	266	PKIKP	PKPdf	20 39 52.8	-1.5
CHTO				MLR	MLR		
	comp=Z,2μm,20.0s						
CHTO	Chiang Mai	147.13	266	⇑P	PKPbc	20 39 56.1	-0.4
ZALV	Zalesovo Beam	147.48	337	PKPbc	PKPbc	20 39 55.2	-1.1
	comp=Z,9.9nm,0.6s,baz=12,slow=2.5,SNR=28						
ZALV	Zalesovo Beam	147.48	337		PKPdf	20 39 53.4	-0.4
ZALV	Zalesovo Beam	147.48	337	PKIKP	PKPdf	20 39 53.4	-0.4
VORR	Voronezh	147.55	29	*e*PKP2	PKPab	20 39 57.5	-1.2
VORR				pmax	pmax		
	comp=Z,128nm,1.1s						
VSR	Storozhevoye	147.85	30	*e*PKP2	PKPbc	20 39 56.4	-1.0
VSR				pmax	pmax		
	comp=Z,60nm,1.0s						
VORD	Divnogorie	148.09	30	*e*PKP2	PKPbc	20 39 58.4	+0.4
VORD				pmax	pmax		
	comp=Z,60nm,1.0s						
SAHE	Sakarya_HENDEK	148.34	52	⇑P	PKPab	20 40 02.4	+0.1
ARTI	Arti	148.66	6	PKPbc	PKPbc	20 39 58.9	-0.5
	comp=Z,12nm,0.8s,baz=118,slow=0.4,SNR=16						
ARTI	Arti	148.66	6		PKPdf	20 39 57.0	+1.3
ARTI	Arti	148.66	6	*i* PKIKP	PKPdf	20 39 55.7	0.0
ARTI				SS	SS	21 02 35.2	-2.5
ARTI				MLR	MLR		
	comp=Z,4μm,19.0s						
ARTI	Arti	148.66	6	⇓P	PKPbc	20 39 59.0	-0.4
ARTI				⇑P	pPKPab	20 40 04.4	-0.4
SIM	Simferopol'	148.87	43	*e*PKP2	PKPbc	20 40 00.1	-0.2
SIM				pmax	pmax		
	comp=Z,41nm,1.1s						
SIM				pmax	pmax		
	comp=Z,106nm,1.4s						
TNCH	TengChong	148.89	277	PKPbc	PKPbc	20 40 01.3	+0.1
TNCH				PKPab	sPKPab	20 40 11.3	+3.7
TNCH				PP	PP	20 43 38.5	+6.3
TNCH				SS	SS	21 02 45.5	+1.3
TNCH				AMB	AMB		
	comp=Z,360nm,4.9s						
TNCH				LR	LR		
	comp=Z,1μm,20.3s						
TNCH				LR	LR		
	comp=Z,2μm,19.9s						
TNCH				LR	LR		
	comp=Z,5μm,20.8s						
ISP	Isparta	148.96	58	IAMs_20	IAMs_20	21 52 01.9	
	comp=Z,2μm,20.0s						
VRH	Novokhopyorsk	148.98	28	*e*PKP2	PKPbc	20 40 00.6	+0.3
VRH				pmax	pmax		
	comp=Z,140nm,0.9s						
PBA	Port Blair	149.71	249	P	PKPdf	20 40 00.7	+2.1
ANTO	Ankara	150.07	53	P	PKPdf	20 40 00.3	+1.7
BR131	Keskin Array S	150.73	53	P	PKPbc	20 40 02.6	-2.6
	SNR=15						
BR131	Keskin Array S	150.73	53		PKPbc	20 40 04.9	-0.3
BR131	Keskin Array S	150.73	53	PKIKP	PKPbc	20 40 04.9	-0.3
BRTR	Keskin Array B	150.73	53	PKPbc	PKPbc	20 40 03.5	-1.7
	comp=Z,20nm,1.0s,baz=220,slow=1.2,SNR=29						
BRTR	Keskin Array B	150.73	53		PKPbc	20 40 03.3	-1.9
BRTR	Keskin Array B	150.73	53	PKIKP	PKPbc	20 40 03.3	-1.9
ANN	Anapa	150.97	41	*i* PKIKP	PKiKP	20 40 05.6	-0.4
ANN				*e*		20 43 41.9	
ANN				*e*SS	SS	21 03 03.9	-1.0
ANN				*e*SSS	SSS	21 08 44.5	
ANN				pmax	pmax		
	comp=Z,184nm,2.0s						
KIRS	Kirsehir-Merke	151.13	54	⇑P	PKiKP	20 40 07.0	+0.3
GOMU	GeErMu	151.56	300	PKPbc	PKPdf	20 39 59.5	-1.9
GOMU				SS	SS	21 03 13.0	-0.5
GOMU				LR	LR		
	comp=Z,780nm,18.2s						
GOMU				LR	LR		
	comp=Z,1μm,16.1s						
CSS	Mathiatis	151.80	63	IAMs_20	IAMs_20	22 01 44.5	
	comp=Z,2μm,21.0s						
BORK	Borovoye	151.90	352		PKPdf	20 40 00.9	+0.1
BORK	Borovoye	151.90	352	IAMs_20	IAMs_20	21 53 43.3	
	comp=Z,2μm,20.0s						
BORK	Borovoye	151.90	352	PKIKP	PKPdf	20 40 00.9	+0.1
BORK				MLR	MLR		
	comp=Z,2μm,20.0s						
BORK	Borovoye	151.90	352	⇑P	PKPbc	20 40 06.0	-1.3
BVAR	Borovoye Array	151.91	352	PKPbc	PKPbc	20 40 07.1	-0.2
	comp=Z,11nm,0.8s,baz=340,slow=1.6,SNR=16						
BVAR				PP	PP	20 43 48.0	+0.6
	comp=Z,1.2nm,0.8s,baz=26,slow=3.7,SNR=2.6						
BVAR	Borovoye Array	151.91	352		PKPbc	20 40 07.1	-0.2
BVAR					PP	20 43 48.0	+0.6
BVAR	Borovoye Array	151.91	352	PKIKP	PKPbc	20 40 07.1	-0.2
ERBR	Yeremizino-Bor	152.17	37	*i* PKIKP	PKPbc	20 40 07.4	-0.8
ERBR				pmax	pmax		
	comp=Z,81nm,1.0s						
KURK	Kurchatov	152.27	340	P	PKPdf	20 40 02.6	+1.1
KURK	Kurchatov	152.27	340	*c i*PKIKP	PKPbc	20 40 05.3	-2.9
KURK				pmax	pmax		
	comp=Z,12nm,1.3s						
KURBB	Kurchatov Arra	152.38	340	PKPbc	PKPbc	20 40 07.3	-1.2
	comp=Z,8.6nm,0.8s,baz=14,slow=1.7,SNR=16						
KURBB				PP	PP	20 43 50.8	+0.6
	comp=Z,1.2nm,1.0s,baz=26,slow=4.5,SNR=2.5						
BNN	Bunyan	152.64	54		PKPdf	20 40 01.8	-0.8
LABN	Labinsk	152.97	39	*i* PKIKP	PKPbc	20 40 08.0	-2.0
LABN				*e*		20 43 52.6	
LABN				pmax	pmax		
	comp=Z,28nm,1.0s						
SOC	Sochi	153.01	41	*i* PKIKP	PKPbc	20 40 09.7	-0.4
SOC				*e*		20 44 01.2	
WMQ	Urumqi	153.33	320	*e*PKPbc	PKPdf	20 39 58.3	-5.1
WMQ				PKPab	pPKPab	20 40 24.5	-0.2
WMQ				SKS	SKSdf	20 47 04.3	-6.5
WMQ				SS	SS	21 03 27.5	-3.6
WMQ				LR	LR		
	comp=Z,2μm,24.7s						
WMQ				LR	LR		
	comp=Z,2μm,19.5s						
WMQ				LR	LR		
	comp=Z,3μm,22.9s						
GOF	Gofitskoye	153.97	35	*c e*PKIKP	PKPbc	20 40 10.8	-1.3
MK31	Makanchi Array	154.11	331	*c i*PKIKP	PKPdf	20 40 05.1	+0.8
MKAR	Makanchi Array	154.11	331	PKP	PKPdf	20 40 04.5	+0.2
	comp=Z,2.4nm,0.9s,baz=40,slow=2.8,SNR=9.6						
MKAR				PKPbc	PKiKP	20 40 12.8	+0.3
	comp=Z,3.0nm,0.8s,baz=30,slow=2.0,SNR=10						
MKAR	Makanchi Array	154.11	331		PKPdf	20 40 04.7	+0.4
MKAR	Makanchi Array	154.11	331	PKIKP	PKPdf	20 40 04.5	+0.2
MKAR						20 40 12.8	
MAKZ	Makanchi	154.24	331	⇑P	PKiKP	20 40 13.8	+1.1
AKTO	Aktyubinsk	154.47	9	PKPbc	PKiKP	20 40 13.3	+0.2
	comp=Z,4.5nm,0.9s,baz=170,slow=0.7,SNR=3.7						
AKTO				PKPab	PKPab	20 40 27.4	+0.1
	comp=Z,17nm,1.0s,baz=249,slow=3.0,SNR=8.9						
AKTO				PP	PP	20 44 02.5	+0.7
	comp=Z,2.4nm,0.8s,baz=352,slow=9.2,SNR=2.0						
AKTO	Aktyubinsk	154.47	9		PKiKP	20 40 13.3	+0.2
AKTO					PKPab	20 40 27.4	+0.1
AKTO					PP	20 44 02.5	+0.7
AKTO	Aktyubinsk	154.47	9	PKIKP	PKiKP	20 40 13.3	+0.2
AKTO						20 40 27.4	
AKTO						20 44 02.5	
KIV	Kislovodsk	154.50	38	P	PKPdf	20 40 07.7	+2.6
KIV	Kislovodsk	154.50	38		PKPdf	20 40 02.0	-3.1
KIV				IAMs_20	IAMs_20	21 51 47.4	
	comp=Z,2μm,19.0s						
KIV	Kislovodsk	154.50	38	*e*PKIKP	PKPdf	20 40 03.2	-1.8
KIV				*e*		20 44 01.4	
KIV				*e*SS	SS	21 03 42.6	-1.1
KIV				*e*SSS	SSS	21 09 37.3	
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KBZ	Khabaz	154.76	38	PKP	PKPdf	20 40 05.2	0.0
	comp=Z,4.4nm,1.1s,baz=291,slow=3.8,SNR=11						
KBZ				PKPbc	PKiKP	20 40 14.3	+0.5
	comp=Z,7.1nm,1.0s,baz=31,slow=1.2,SNR=7.3						
KBZ	Khabaz	154.76	38	PKIKP	PKPdf	20 40 05.3	0.0
SHL	Shillong	154.92	277	P	PKPdf	20 40 06.8	+0.6
	SNR=17						
LSA	Lhasa	155.63	286	P	PKPdf	20 40 09.0	+1.5
LSA	Lhasa	155.63	286	IAMs_20	IAMs_20	21 41 32.0	
	comp=Z,2μm,22.0s						
LSA	Lhasa	155.63	286	PKP	PKPdf	20 40 06.5	-1.0
LSA				LR	LR		
	comp=Z,510nm,23.0s						
LSA				LR	LR		
	comp=Z,2μm,26.6s						
LSA				LR	LR		
	comp=Z,4μm,27.3s						
ATD	Arta Tunnel	155.68	120	P	PKPdf	20 40 10.7	+3.3
ATD	Arta Tunnel	155.68	120	IAMs_20	IAMs_20	21 45 48.6	
	comp=Z,2μm,20.0s						
MAK	Makhachkala	157.73	34	*e*PKIKP	PKPdf	20 40 03.5	-5.7
MAK				*e*		20 44 18.8	
MAK				*e*SS	SS	21 04 13.0	-5.0
MAK				*e*SSS	SSS	21 10 23.7	
MAK				pmax	pmax		
	comp=Z,73nm,1.0s						
MAK				MLR	MLR		
	comp=Z,3μm,21.0s						
AKT	Akhty	158.91	36	*e*PKIKP	PKPdf	20 40 16.1	+5.3
AKT				*e*		20 44 26.5	
AKT				*e*PPP	PPP	20 48 16.4	
AKT				pmax	pmax		
	comp=Z,24nm,1.8s						
AAK	Ala-Archa	160.70	336	PKP	PKPdf	20 40 12.8	-0.1
	comp=Z,1.8nm,0.9s,baz=130,slow=5.2,SNR=3.7						
AAK				PKPab	PKPab	20 40 55.3	+0.6
	comp=Z,6.3nm,1.1s,baz=129,slow=2.9,SNR=5.4						
AAK	Ala-Archa	160.70	336		PKPdf	20 40 12.8	-0.1
AAK	Ala-Archa	160.70	336	PKIKP	PKPdf	20 40 12.8	-0.1
KSH	Kashi	162.66	328	PKP	PKPdf	20 40 22.0	+7.0
KSH				PP	PP	20 44 52.5	+5.2
RAYN	Ar Rayn	162.97	92	P	PKPdf	20 40 19.2	+3.6
HYB	Hyderabad	164.42	243	*e*PKPab	PKPab	20 41 11.6	0.0
HYB				*e*SKPdf	SKPdf	20 43 47.6	-1.6
MZR	Muzera	170.04	101	P	PKPdf	20 40 22.8	+1.8
	SNR=7.1						
UMZA	Um Al Zommool	171.44	106	P	PKPdf	20 40 21.8	+0.1

IDC 25 20:28:04.9±6.3**, 22°.25S**×**173°.18E, h0^{km}, mb3.6**/2**, mbtmp3.6**/2**, Error ellipse: s-maj=294.6km s-min=59.4km az=154.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	36.11	260	P	P	20 35 08.7	-0.3
	1.1nm,0.9s,baz=84,slow=9.1,SNR=4.7						
	1.1nm,0.9s						
WRA	Warramunga Arr	36.24	266	P	P	20 35 10.2	+0.1
	0.6nm,0.7s,baz=102,slow=8.6,SNR=1.9						
	0.6nm,0.7s						
GERES	GERESS Array B	148.85	333	PKPbc	PKPbc	20 47 54.0	-0.6
	0.3nm,0.7s,baz=23,slow=1.5,SNR=3.2						

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*IDC **25** 20:33:40.7±2.3, 50°.37N×129°.29W, h0^{km}, mb3.5/2, mbtmp3.3/8, ML3.1/6, Error ellipse: s-maj=34.9km s-min=11.5km az=80.0*

ISC 25 20:33:41.8±1.6**, 50°.57N**±0°.07×**129°.2W**±0°.2**, h10^{km}, n15, σ1^{s}.00**/10**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBB	Bella Bella	1.77	23	Pn	Pb	20 34 13.8	-0.5
	24nm,0.3s,baz=226,slow=14,SNR=117						
BBB				Sn	Sg	20 34 38.7	+0.1
	26nm,0.3s,baz=309,slow=23,SNR=37						
NEW	Newport	8.23	102	Pn	Pn	20 35 41.3	0.0
	0.4nm,0.3s,baz=294,slow=9.3,SNR=5.3						
	0.8nm,0.4s						
YBH	Yreka Blue Hor	9.93	150	Pn	Pn	20 36 03.5	-1.0
	baz=178,slow=22,SNR=2.3						
	0.1nm,0.3s						
YKA	Yellowknife Ar	14.37	28	Pn	Pn	20 37 04.5	-0.6
	baz=217,slow=13,SNR=1.1						
	0.4nm,1.1s						
NVAR	Mina Array Bea	14.41	143	Pn	Pn	20 37 06.6	+0.6
	baz=325,slow=13,SNR=2.5						
	0.4nm,0.7s						
PDAR	Pinedale Array	15.57	112	Pn	Pn	20 37 23.2	+1.7
	baz=304,slow=14,SNR=3.8						
	0.8nm,0.9s						
ILAR	Eielson Array	16.98	334	P	P	20 37 42.0	+1.0
	baz=148,slow=11,SNR=9.3						
	1.0nm,0.8s						
ULM	Lac du Bonnet	21.17	78	P	P	20 38 27.8	+0.8
	5.2nm,0.8s,baz=276,slow=10,SNR=3.9						
	5.2nm,0.8s						
TXAR	Lajitas Array	28.63	128	P	P	20 39 37.9	-0.6
	0.1nm,0.6s,baz=334,slow=12,SNR=1.5						
	0.1nm,0.6s						
H11N2	WAKE ISLAND Hy	58.45	263	T	T	21 46 29.7	
	baz=42,slow=76,SNR=44						
H11N3	WAKE ISLAND Hy	58.46	263	T	T	21 46 28.1	
	baz=42,slow=76,SNR=32						
H11N1	WAKE ISLAND Hy	58.47	263	T	T	21 46 29.2	
	baz=42,slow=76,SNR=32						
H11S1	WAKE ISLAND Hy	59.48	262	T	T	21 47 37.2	
	baz=46						
H11S2	WAKE ISLAND Hy	59.49	262	T	T	21 47 37.5	
	baz=46						
H11S3	WAKE ISLAND Hy	59.50	262	T	T	21 47 35.3	
	baz=46						

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*IDC **25** 20:38:50.9±0.6, 50°.77N×130°.31W, h0^{km}, mb4.0/23, mbtmp4.0/30, ML3.7/7, MS4.8/6, Error ellipse: s-maj=12.1km s-min=9.3km az=45.0*

*NEIC **25** 20:38:52.6±2.7, 50°.92N±0°.06×130°.28W±0°.08, h10^{km}±1^{km}, mb4.5/280, Error ellipse: s-maj=11.2km s-min=6.8km az=212.0*

ISC 25 20:38:52.5±0.4**, 50°.91N**±0°.05×**130°.24W**±0°.05**, h10^{km}, n501, σ0^{s}.92**/383**, mb4.5**/58**, MS5.2**/4**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	1.36	100		Pn	20 39 15.8	-1.7
HOLB				Sn	Sb	20 39 33.1	-2.4
HG4B	Hotspring	1.51	337		Pn	20 39 17.1	-2.5
HG4B				Sn	Sn	20 39 37.1	-2.2
BBB	Bella Bella	1.84	45	Pn	Pn	20 39 24.4	+0.3
	399nm,0.3s,baz=239,slow=13,SNR=704						
BBB				Sn	Sn	20 39 48.2	+0.8
	675nm,0.3s,baz=153,slow=23,SNR=21						
BBB				LR	LR	20 40 00.9	
	comp=Z,989nm,21.6s,baz=243,slow=36						
BBB	Bella Bella	1.84	45		Pn	20 39 23.9	-0.2
MOBC	Moresby Island	2.48	335		Pn	20 39 30.8	-2.2
DIB	Dawson Inlet,	2.68	330		Pn	20 39 33.5	-2.1
H02S2	DAWSON INLET T	2.68	330	Pn	Pn	20 39 33.9	-1.8
H02S2				Sn	Sn	20 40 04.8	-3.3
CBB	Campbell River	3.23	104		Pn	20 39 42.0	-1.2
RUBB	Prince Rupert	3.42	360		Pn	20 39 44.9	-0.9
OZB	Mount Ozzard	3.63	121		Pn	20 39 46.5	-2.2
CLRS	Cowichan Lake	4.47	116		Pn	20 39 58.7	-1.4
V35K	Ketchikan	4.51	350		Pn	20 39 59.9	-0.8
V35K	Ketchikan	4.51	350	P	Pn	20 40 01.2	+0.6
	baz=169,SNR=9.7						
C03A	Quillayute Air	4.74	126	Pn	Pn	20 40 04.2	+0.3
CRAG	Craig	4.89	340		Pn	20 40 05.4	-0.6
CRAG	Craig	4.89	340	P	Pn	20 40 06.3	+0.4
	baz=158						
PGC	Sidney	4.94	115		Pn	20 40 06.2	-0.5
U35K	Hyder	5.02	1		Pn	20 40 08.7	+1.0
U35K	Hyder	5.02	1	P	Pn	20 40 08.2	+0.5
	baz=182,SNR=14						
B04A	Port Angeles	5.23	120		Pn	20 40 10.7	0.0
LLLB	Lillooet	5.31	90		Pn	20 40 12.3	+0.4
A04D	Lummi Island	5.34	111		Pn	20 40 13.0	+0.8
NLWA	Neilton Lookou	5.46	128		Pn	20 40 13.3	-0.6
U33K	Whale Pass	5.49	343	Pn	Pn	20 40 14.0	-0.2
U33K	Whale Pass	5.49	343	P	Pn	20 40 14.6	+0.4
	baz=161						
WRAK	Wrangell Islan	5.66	348	P	Pn	20 40 17.9	+1.4
	baz=167						
T35M	Bob Quinn	6.09	360	P	Pn	20 40 23.4	+0.9
	baz=180,SNR=11						
D05A	Enumclaw	6.58	121		Pn	20 40 29.9	+0.7
F03A	Seaside	6.67	136	Pn	Pn	20 40 31.2	+0.7
SIT	Sitka	6.85	336	P	Pn	20 40 34.0	+1.2
	baz=152						
LON	Longmire	6.95	124		Pn	20 40 35.2	+0.9
S34M	Telegraph Cree	7.04	356	P	Pn	20 40 37.1	+1.6
	baz=176						
S32K	Killisnoo	7.05	341	P	Pn	20 40 36.9	+1.3
	baz=157						
G04A	Mulino	7.71	135		Pn	20 40 45.7	+1.0
R32K	Eaglecrest	7.79	343	P	Pn	20 40 46.7	+1.0
	baz=160						
S31K	Pelican	7.88	336	P	Pn	20 40 47.2	+0.2
	baz=151						
E07A	Sunnyside	8.12	118		Pn	20 40 49.9	-0.5
H04D	Lebanon	8.14	139		Pn	20 40 51.4	+0.7
Q32M	Nakina River	8.15	353	P	Pn	20 40 52.0	+1.0
	baz=171						
TOAD	Toad River Com	8.46	18	P	Pn	20 40 56.5	+1.4
	baz=202,SNR=14						
R33M	Jennings River	8.52	357	P	Pn	20 40 57.0	+1.1
	baz=177						
LIRD	Liard River Hi	8.84	14	P	Pn	20 41 01.5	+1.3
	baz=197						
NEW	Newport	8.92	102	Pn	Pn	20 41 01.4	+0.1
	1.0nm,0.3s,baz=288,slow=14,SNR=20						
NEW				Lg	Lg	20 43 27.0	
	0.1nm,0.3s,baz=303,slow=3.2,SNR=3.1						
NEW				LR	LR	20 44 27.0	
	comp=Z,4μm,19.1s,baz=265,slow=38						
	5.1nm,0.5s						

P32M	Atlin baz=166	8.93	349	P	Pn	20 41 02.3	+1.0
SKAG	Skagway baz=159	9.05	343	P	Pn	20 41 04.0	+1.0
PLBC	Pleasant Camp baz=155	9.25	340	P	Pn	20 41 06.7	+0.9
WTLY	Watson Lake, Y	9.26	4		Pn	20 41 09.8	+3.8
WTLY	Watson Lake, Y baz=186	9.26	4	P	Pn	20 41 07.1	+1.1
P33M	Teslin, Yukon baz=170	9.44	352	P	Pn	20 41 09.0	+0.6
P29M	Windy Craggy baz=151	9.73	337	P	Pn	20 41 12.8	+0.4
KOTAN	Kotaneelee Air baz=204,SNR=6.2	9.88	18	P	Pn	20 41 15.6	+1.2
P30M	Million Dollar baz=155	9.98	340	P	Pn	20 41 16.8	+0.9
WHY	Whitehorse baz=163	10.12	347	P	Pn	20 41 18.6	+0.9
N32M	Quiet Lake baz=170	10.39	352	P	Pn	20 41 22.3	+0.9
O30N	Mendenhall baz=159	10.41	344	P	Pn	20 41 22.6	+0.9
O29M	Mount Kennedy baz=150	10.52	337	P	Pn	20 41 24.3	+1.0
YBH	Yreka Blue Hor baz=355,slow=16,SNR=3.7	10.54	148	Pn	Pn	20 41 22.9	-0.7
BMO	Blue Mountains	10.58	120		Pn	20 41 23.6	-0.6
HYT	Haines Junctio baz=155	10.74	341	P	Pn	20 41 26.5	+0.3
PINM	Pinnacle baz=144	10.80	332	P	Pn	20 41 27.4	+0.3
J08A	Circle Bar Ran	11.00	129		Pn	20 41 29.9	0.0
YUK6	Outpost Mounta baz=152	11.03	339	P	Pn	20 41 29.7	-0.7
N31M	Braeburn, Yuko baz=162	11.04	346	P	Pn	20 41 30.2	-0.1
N30M	Aishikik Lake baz=157	11.24	343	P	Pn	20 41 32.1	-0.9
O28M	Mount Upton baz=146	11.34	334	P	Pn	20 41 33.9	-0.8
KHBM	Hayfork Bally	11.35	152		Pn	20 41 36.4	+1.6
YUK4	Talbot Arm baz=153	11.45	339	P	Pn	20 41 36.9	+0.8
MSO	Missoula	11.48	104		Pn	20 41 36.1	-0.3
M31M	Drury Creek, Y baz=167	11.55	350	P	Pn	20 41 36.8	-0.4
YUK8	Steele Glacier baz=149	11.67	337	P	Pn	20 41 38.6	-0.4
CTG	Chitna Glacier baz=144	11.83	333	P	Pn	20 41 40.3	-0.8
BARN	Barnard Glacie	11.99	332		Pn	20 41 45.4	+1.9
KAIM	Kayak Island baz=132	12.08	324	P	Pn	20 41 43.1	-1.4
CRQE	Cirque baz=138	12.20	329	P	Pn	20 41 45.7	-0.5
M30M	Minto, Yukon baz=160	12.23	346	P	Pn	20 41 45.7	-0.8
YUK3	Moose Creek baz=148	12.26	337	P	Pn	20 41 46.4	-0.7
MFID	Camas Ranch	12.33	122		Pn	20 41 48.6	+0.5
M29M	Somme Creek baz=155	12.40	342	P	Pn	20 41 48.3	-0.7
Q23K	Middleton Isla baz=126	12.53	319	P	Pn	20 41 49.0	-1.6
MCARA	McCarthy VSAT baz=140	12.66	331	P	Pn	20 41 52.0	-0.4
BMRM	Bremner River baz=135	12.87	327	P	Pn	20 41 54.3	-1.0
WRGLY	Wrigley baz=200	12.88	14	P	Pn	20 41 55.3	0.0
BVCY	Beaver Creek baz=149	12.90	337	P	Pn	20 41 55.2	-0.6
L29M	L29M baz=157	12.95	344	P	Pn	20 41 56.2	-0.1
EYAK	Cordova Ski Ar baz=131	12.99	324	P	Pn	20 41 56.2	-0.6
HLID	Hailey	13.01	118		Pn	20 41 57.8	+0.4
MAYO	Mayo, Yukon baz=164	13.08	349	P	Pn	20 41 57.9	-0.1
M27K	Edge Creek, AK baz=146	13.11	335	P	Pn	20 41 58.2	-0.5
P23K	Montague Islan baz=126	13.29	320	P	Pn	20 42 00.2	-0.7
N25K	Chitina, Valde baz=137	13.33	329	P	Pn	20 42 01.1	-0.4
M26K	Nabesna, AK baz=143	13.45	334	P	Pn	20 42 02.7	-0.6
BOZ	Bozeman (W)	13.48	106		Pn	20 42 03.6	-0.2
K29M	Barlow Dome baz=160	13.54	346	P	Pn	20 42 04.0	-0.4
KLU	Klutina baz=134	13.69	327	P	Pn	20 42 05.7	-0.8
L27K	Beaver Creek, baz=148	13.69	337	P	Pn	20 42 06.4	0.0
GLI	Glacier Island baz=129	13.71	323	P	Pn	20 42 06.3	-0.4
L26K	Log Cabin Wild baz=144	14.05	335	P	Pn	20 42 11.6	+0.3
DAWY	Dawson baz=156	14.06	343	P	Pn	20 42 12.1	+0.6
J30M	Hart River baz=164	14.08	349	P	Pn	20 42 12.5	+0.7
HARP	HAARP baz=138	14.09	330	P	Pn	20 42 12.2	+0.3
YHL	Hebgen Lake	14.13	108		Pn	20 42 13.0	+0.2
PWL	Port Wells baz=127	14.18	322	P	Pn	20 42 12.5	-0.6
YHB	Horse Butte	14.18	108		Pn	20 42 11.8	-1.6
M24K	Tolsona, Glenn baz=135	14.21	328	P	Pn	20 42 13.4	-0.1
SEW	Seward baz=122	14.21	318	P	Pn	20 42 13.2	-0.3
J29N	Klondike Camp baz=159	14.22	346	P	Pn	20 42 14.5	+0.8
YKA	Yellowknife Ar 1.2nm,0.3s,baz=245,slow=8.8,SNR=68	14.39	30	Pn	Pn	20 42 14.0	-2.0
YKA	0.6nm,0.3s,baz=227,slow=22,SNR=6.5			Sn	Sn	20 44 51.2	-4.1
YKA	baz=123,slow=39 1.7nm,0.6s			Lg	Lg	20 46 24.2	
YKA	Yellowknife Ar	14.39	30		Pn	20 42 14.9	-1.0
SCM	Sheep Creek Mo baz=132	14.42	326	P	Pn	20 42 16.5	+0.1
YKAW1	Yellowknife Wh	14.42	30		Pn	20 42 15.1	-1.2
YKAW3	Yellowknife Wh	14.44	30		Pn	20 42 16.3	-0.3
O22K	Cooper Landing baz=123	14.52	319	P	Pn	20 42 17.9	+0.1
M23K	Glacier View baz=131	14.53	325	P	Pn	20 42 17.1	-0.9
ELK	Elko 0.1nm,0.3s,baz=320,slow=11,SNR=11 2.4nm,0.9s	14.55	129	Pn	Pn	20 42 19.8	+1.2
KNK	Knik Glacier baz=128	14.56	323	P	Pn	20 42 17.8	-0.6
BRSE	Bradley Lake S baz=118	14.59	315	P	Pn	20 42 17.5	-1.2
PAX	Paxson baz=139	14.62	332	P	Pn	20 42 18.8	-0.4
KDAK	Kodiak Island comp=Z,3µm,19.5s,baz=123,slow=32	14.69	307	LR	LR	20 46 35.1	
KDAK	Kodiak Island baz=108	14.69	307	P	Pn	20 42 19.9	-0.2
I30M	Mount Dempster baz=165	14.71	350	P	Pn	20 42 19.7	-0.7
SML	Sawmill baz=130	14.76	325	P	Pn	20 42 20.0	-1.1
RC01	Rabbit Creek A baz=125	14.87	321	P	Pn	20 42 21.3	-1.1
Q20K	Shuyak Island baz=112	14.88	310	P	Pn	20 42 21.3	-1.3
OHAK	Old Harbor baz=105	14.89	304	P	Pn	20 42 22.0	-0.8
PMR	Palmer baz=127	14.93	323	P	Pn	20 42 22.8	-0.4
HOM	Homer baz=116	14.95	314	P	Pn	20 42 23.1	-0.5
SCRK	Sand Creek baz=144,SNR=9.1	14.99	336	P	Pn	20 42 23.7	-0.6
MOOW	Moose Ponds	15.01	111	P	Pn	20 42 23.9	-0.7
RIDG	Independent Ri baz=142	15.03	334	P	Pn	20 42 24.3	-0.5
WAT6	Susitna Watana baz=133	15.06	328	P	Pn	20 42 24.1	-1.1
NVAR	Mina Array Bea 0.3nm,0.3s,baz=319,slow=11,SNR=18 1.0nm,0.8s	15.06	141	Pn	Pn	20 42 26.1	+0.6
NVAR	Mina Array Bea	15.06	141		Pn	20 42 25.3	-0.1
I29M	Ogilvie Camp, comp=Z,21nm,1.1s	15.09	347	IAmb	IAmb	20 42 47.6	
I29M	Ogilvie Camp, baz=160	15.09	347	P	Pn	20 42 25.2	-0.2
H31M	Peel River comp=Z,29nm,1.2s	15.09	353	IAmb	IAmb	20 42 44.3	
H31M	Peel River baz=170	15.09	353	P	Pn	20 42 25.9	+0.4
HVU	Hansel Valley comp=Z,29nm,1.3s	15.09	120	IAmb	IAmb	20 42 46.9	
NV11	Mina Array Sit comp=Z,28nm,1.2s	15.12	141	IAmb	IAmb	20 42 41.9	
RLMT	Red Lodge comp=Z,30nm,1.1s	15.16	104	IAmb	IAmb	20 42 38.7	
LOHW	Long Hollow comp=Z,25nm,1.1s	15.17	111	IAmb	IAmb	20 42 36.5	
SII	Sitkinak Islan baz=102	15.21	301	P	Pn	20 42 26.3	-0.9
CAPN	Captain Cook N baz=121	15.27	318	P	Pn	20 42 27.5	-0.4
DHY	Denali Highway comp=Z,43nm,1.3s	15.29	329	IAmb	IAmb	20 42 52.7	
DHY	Denali Highway baz=135	15.29	329	P	Pn	20 42 27.8	-0.4
J26L	Joseph Creek comp=Z,28nm,1.1s	15.32	338	IAmb	IAmb	20 42 46.0	
J26L	Joseph Creek baz=147,SNR=10	15.32	338	P	Pn	20 42 29.0	+0.3
K24K	Donnelly Dome baz=140	15.34	333	P	Pn	20 42 28.6	-0.3
M22K	Willow baz=126	15.40	322	P	Pn	20 42 28.9	-0.6
I28M	Miner Creek comp=Z,18nm,1.0s	15.42	345	IAmb	IAmb	20 42 46.3	
I28M	Miner Creek baz=156	15.42	345	P	Pn	20 42 29.7	-0.2
SUA	Susitna One baz=124	15.48	321	P	Pn	20 42 30.6	-0.2
WAT1	Susitna Watana baz=132	15.51	327	P	Pn	20 42 31.3	+0.3
O20K	Slope Mountain baz=116	15.59	315	P	Pn	20 42 32.0	0.0
Q19K	Cape Douglas, baz=111	15.60	310	P	Pn	20 42 32.2	-0.1
P19K	Oil Pt baz=114	15.68	313	P	Pn	20 42 33.3	0.0
CUT	Chulitna	15.85	324		Pn	20 42 35.4	0.0
CUT	Chulitna baz=128	15.85	324	P	Pn	20 42 35.6	+0.3
EPYK	Eagle Plains	15.86	350		Pn	20 42 36.6	+1.1
EPYK	comp=Z,63nm,1.4s			IAmb	IAmb	20 42 56.2	
EPYK	Eagle Plains baz=165	15.86	350	P	Pn	20 42 35.9	+0.4
I27K	Kandik River baz=153	15.86	343	P	Pn	20 42 35.9	+0.3
SPU	Mount Spurr	15.86	319		Pn	20 42 36.2	+0.6
SPU	comp=Z,47nm,1.3s			IAmb	IAmb	20 42 45.8	
J25K	Salcha River, comp=Z,33nm,1.3s	15.87	336	IAmb	IAmb	20 43 05.4	
J25K	Salcha River, baz=143	15.87	336	P	Pn	20 42 36.0	+0.3
HWUT	Hardware Ranch comp=Z,29nm,1.1s	15.88	119	IAmb	IAmb	20 43 01.3	
CHIR	Chirikof Islan baz=97	15.88	298	P	Pn	20 42 35.6	-0.2
H29M	Whitestone comp=Z,54nm,1.2s	15.91	348	IAmb	IAmb	20 42 56.7	
H29M	Whitestone baz=161,SNR=9.8	15.91	348	P	Pn	20 42 36.3	+0.2
I26K	Coal Creek Min baz=149	15.91	340	P	Pn	20 42 36.9	+0.7
SPCR	Spurr Chakacha baz=120	15.94	319	P	Pn	20 42 36.8	+0.2
RND	Reindeer	16.00	329		Pn	20 42 36.3	-1.1
RND	comp=Z,61nm,1.5s			IAmb	IAmb	20 42 59.0	
SKT	Skwentna	16.08	322		Pn	20 42 38.4	0.0
SKT	comp=Z,47nm,1.4s			IAmb	IAmb	20 42 49.1	
SKT	Skwentna baz=124	16.08	322	P	Pn	20 42 38.3	0.0
HDA	Harding Lake	16.14	333		Pn	20 42 38.4	-0.7
HDA	Harding Lake baz=139	16.14	333	P	Pn	20 42 38.6	-0.5
Q18K	Katmai Hardscr baz=108	16.18	308	P	Pn	20 42 39.4	-0.4
G31M	Satah River	16.19	354		Pn	20 42 40.2	+0.4
G31M	Satah River baz=171,SNR=5.8	16.19	354	P	Pn	20 42 40.0	+0.3
DUG	Dugway, Tooele	16.20	125		Pn	20 42 39.7	-0.5
DUG	comp=Z,40nm,1.2s			IAmb	IAmb	20 42 46.5	
MCK	McKinley comp=Z,50nm,1.3s	16.25	329	IAmb	IAmb	20 42 58.1	
MCK	McKinley baz=134	16.25	329	P	Pn	20 42 39.6	-0.9
BW06	Boulder Array comp=Z,57nm,1.2s	16.29	112	IAmb	IAmb	20 42 45.7	
PD31	Pinedale Array comp=Z,56nm,1.2s	16.29	112	IAmb	IAmb	20 42 45.7	
PDAR	Pinedale Array comp=Z,0.5nm,0.3s,baz=316,slow=10,SNR=136	16.29	112	Pn	P	20 42 44.1	-0.3
PDAR	Pinedale Array	16.29	112	P	P	20 42 43.8	-0.6
TCUT	Toone Canyon	16.30	120	P	Pn	20 42 43.1	+1.6
TCUT	comp=Z,36nm,1.3s			IAmb	IAmb	20 43 00.2	
ILAR	Eielson Array comp=Z,0.1nm,0.3s,baz=152,slow=9.8,SNR=17	16.40	334	Pn	P	20 42 44.9	-0.3
ILAR	comp=Z,1µm,20.1s,baz=139,slow=35 comp=Z,1.0nm,0.9s			LR	LR	20 48 28.1	
ILAR	Eielson Array	16.40	334	P	P	20 42 45.6	+0.4
G30M	tAoh Zraii Nji baz=167	16.40	352	P	Pn	20 42 41.3	-1.2
O19K	Port Alsworth	16.40	314	P	P	20 42 46.2	+0.9
O19K	comp=Z,59nm,1.2s			IAmb	IAmb	20 43 08.3	
O19K	Port Alsworth baz=114	16.40	314	P	Pn	20 42 42.2	-0.3
H27K	Steamboat Moun baz=154,SNR=9.3	16.41	344	P	Pn	20 42 42.1	-0.5
Q17K	Contact Creek baz=105	16.51	306	P	Pn	20 42 42.8	-1.2
TRF	Thorofare Moun comp=Z,46nm,1.4s	16.51	327	IAmb	IAmb	20 42 54.0	
TRF	Thorofare Moun baz=130	16.51	327	P	Pn	20 42 43.8	-0.2
WRH	Wood River Hil comp=Z,51nm,1.4s	16.52	332	IAmb	IAmb	20 43 21.8	
G29M	Pine Creek comp=Z,32nm,1.1s	16.52	349	IAmb	IAmb	20 43 06.2	
G29M	Pine Creek baz=162	16.52	349	P	Pn	20 42 43.9	-0.2
P18K	Big Mountain, baz=110	16.53	311	P	Pn	20 42 43.4	-0.7
R17L	Mt. Peulik Vol baz=103	16.60	304	P	Pn	20 42 44.6	-0.5
M20K	Styx River comp=Z,65nm,1.4s	16.67	320	IAmb	IAmb	20 42 58.2	
M20K	Styx River baz=121	16.67	320	P	Pn	20 42 46.6	+0.6
F31M	Tsiigehtchic comp=Z,41nm,1.5s	16.68	355	IAmb	IAmb	20 43 10.5	
F31M	Tsiigehtchic baz=172	16.68	355	P	Pn	20 42 46.8	+0.9
O18K	Koktuh Hills baz=112	16.68	312	P	Pn	20 42 46.4	+0.3
N19K	Bonanza Creek comp=Z,82nm,1.4s	16.73	316	IAmb	IAmb	20 42 58.6	
N19K	Bonanza Creek baz=116	16.73	316	P	Pn	20 42 47.2	+0.4
COLA	College baz=138	16.75	333	P	Pn	20 42 47.9	+1.1
KTH	Kantishna Hill comp=Z,52nm,1.1s	16.80	327	IAmb	IAmb	20 43 00.2	
POKR	Poker Plat Res comp=Z,52nm,1.4s	16.81	334	IAmb	IAmb	20 43 16.8	
POKR	Poker Plat Res baz=140	16.81	334	P	Pn	20 42 48.7	+1.0
PPLA	Purkeypile baz=125	16.85	324	P	Pn	20 42 48.6	+0.3
CWC	Cottonwood Cre	16.89	144	P	P	20 42 52.1	+1.0
NEA2	Nenana baz=135,SNR=7.2	16.90	331	P	Pn	20 42 49.0	+0.2
G27K	Doyon Strip comp=Z,61nm,1.4s	16.95	344	IAmb	IAmb	20 43 18.4	
G27K	Doyon Strip baz=155,SNR=14	16.95	344	P	Pn	20 42 50.6	+1.1
F30M	Barrier River comp=Z,47nm,1.4s	16.98	353	IAmb	IAmb	20 43 20.5	
Q16K	King Salmon baz=106	17.01	307	P	Pn	20 42 50.3	+0.1
BSUT	Blindstream Ca comp=Z,35nm,1.2s	17.05	120	IAmb	IAmb	20 43 01.4	
P17K	Kvichak River baz=108	17.05	309	P	Pn	20 42 50.2	-0.5
VES	Vestal, Richgr	17.07	148	P	P	20 42 52.0	-0.9
VES	comp=Z,35nm,1.3s			IAmb	IAmb	20 43 18.3	
TPNV	Topopah Spring comp=Z,63nm,1.5s	17.17	139	IAmb	IAmb	20 43 17.3	
BPAW	Bear Paw Mtn. baz=131	17.17	328	P	Pn	20 42 52.4	+0.2
R16K	Pilot Point baz=101	17.23	303	P	Pn	20 42 53.0	0.0
N18K	Kilae Creek	17.31	314		Pn	20 42 51.5	-2.5
N18K	comp=Z,71nm,1.4s			IAmb	IAmb	20 43 07.7	
N18K	Kilae Creek baz=113	17.31	314	P	Pn	20 42 53.7	-0.2
FURC	Furnace Creek, comp=Z,37nm,1.2s	17.33	141	IAmb	IAmb	20 43 13.4	
I23K	Minto, Yukon-K baz=136	17.38	332	P	Pn	20 42 55.1	+0.4
F28M	Old Crow comp=Z,36nm,1.3s	17.43	348	IAmb	IAmb	20 43 25.4	
F28M	Old Crow baz=159,SNR=6.2	17.43	348	P	P	20 42 56.5	-0.1
FFC	Flin Flon	17.45	66	P	Pn	20 42 56.5	+0.9
G26K	Porcupine Rive comp=Z,51nm,1.1s	17.47	342	IAmb	IAmb	20 43 07.3	
G26K	Porcupine Rive baz=150,SNR=12	17.47	342	P	P	20 42 56.9	-0.1
H24K	Noodor Dome comp=Z,62nm,1.2s	17.49	335	IAmb	IAmb	20 43 10.0	
H24K	Noodor Dome baz=140,SNR=12	17.49	335	P	Pn	20 42 56.4	+0.2
CHUM	Lake Minchumin baz=128	17.49	326	P	Pn	20 42 56.4	+0.3
L19K	White Mountain comp=Z,69nm,1.5s	17.52	320	IAmb	IAmb	20 43 14.5	
L19K	White Mountain baz=119	17.52	320	P	Pn	20 42 56.7	+0.1
INK	Inuvik baz=175,slow=10,SNR=7.3 comp=Z,4.4nm,1.1s	17.53	356	P	P	20 42 58.2	+0.5
INK	Inuvik baz=173,SNR=5.1	17.53	356	P	Pn	20 42 56.6	0.0
O17K	Koliganek Bris baz=108	17.55	311	P	Pn	20 42 57.2	+0.3
M18K	Stony River baz=115	17.61	317	P	Pn	20 42 57.8	+0.1
P16K	Nushagak River baz=105	17.78	308	P	Pn	20 42 59.4	-0.3
G25K	Bearman Lake baz=146	17.80	339	P	Pn	20 42 59.7	-0.2
K20K	Telida baz=123	17.82	323	P	Pn	20 42 60.0	-0.3
N17K	Nushagak Hills baz=111	17.85	313	P	Pn	20 43 00.1	-0.5
E29M	Blow River baz=164	17.93	351	P	P	20 43 02.4	+0.2
CCCA	Chr Cany lake comp=Z,40nm,1.3s	17.97	144	IAmb	IAmb	20 43 13.4	
O16K	Kokwok River B baz=107	17.98	310	P	Pn	20 43 02.3	0.0
BMAR	Burnt Mountain	18.04	342	P	P	20 43 05.0	+1.6
SHOC	Shoshone, Teco comp=Z,45nm,1.2s	18.06	141	IAmb	IAmb	20 43 14.2	
G24K	Hadweenzic Riv baz=143,SNR=9.0	18.06	338	P	Pn	20 43 03.3	+0.1
CHNA	Chernabura Isl baz=90	18.08	294	P	Pn	20 43 03.1	-0.4
S14K	Fog Glacier baz=95	18.13	299	P	Pn	20 43 03.3	-0.8
K22A	Casper comp=Z,58nm,1.1s	18.16	108	IAmb	IAmb	20 43 08.8	
F26K	Sheenjek River comp=Z,34nm,1.1s	18.19	343	IAmb	IAmb	20 43 15.9	
F26K	Sheenjek River baz=151,SNR=20	18.19	343	P	P	20 43 05.5	+0.4
E27K	Coleen River baz=157	18.20	346	P	Pn	20 43 05.2	+0.3
I21K	Tanana comp=Z,63nm,1.3s	18.21	330	IAmb	IAmb	20 43 34.7	
I21K	Tanana baz=131	18.21	330	P	Pn	20 43 05.0	+0.1
M17K	Holitna River baz=113	18.29	315	P	P	20 43 06.2	+0.1
L18K	Granite Mounta comp=Z,49nm,1.1s	18.30	318	IAmb	IAmb	20 43 26.3	
L18K	Granite Mounta baz=116	18.30	318	P	Pn	20 43 06.2	+0.1
J20K	Nowinta River baz=125	18.31	326	P	P	20 43 06.6	+0.2
E28M	Babbage River baz=161,SNR=9.1	18.32	349	P	P	20 43 07.1	+0.7
F25K	Christian Rive comp=Z,63nm,1.3s	18.39	341	IAmb	IAmb	20 43 19.1	
F25K	Christian Rive baz=148,SNR=27	18.39	341	P	Pn	20 43 07.6	+0.3
H22K	Ishtalitna Cre comp=Z,50nm,1.3s	18.51	332	IAmb	IAmb	20 43 36.3	
H22K	Ishtalitna Cre baz=134	18.51	332	P	Pn	20 43 09.7	+1.0
PKCU	Pink Cliffs comp=Z,54nm,1.4s	18.55	130	IAmb	IAmb	20 43 22.8	
N16K	Nishlik Lake baz=108	18.57	312	P	Pn	20 43 09.6	+0.2
SDPT	Sand Point baz=91	18.60	296	P	Pn	20 43 09.8	0.0
MTPC	Mountain Pass comp=Z,32nm,1.2s	18.71	140	IAmb	IAmb	20 43 15.4	
G23K	Bananza Creek comp=Z,47nm,1.4s	18.72	335	IAmb	IAmb	20 43 21.9	
G23K	Bananza Creek baz=138,SNR=8.4	18.72	335	P	P	20 43 10.9	0.0
O15K	Ungalikthiuk R baz=103	18.73	308	P	Pn	20 43 11.1	-0.2
O20A	White River Ci comp=Z,65nm,1.3s	18.73	117	IAmb	IAmb	20 43 22.6	
C36M	Paulatuk	18.73	7		P	20 43 11.4	+0.4
C36M	Paulatuk baz=192,SNR=8.8	18.73	7	P	Pn	20 43 11.7	+0.4
J19K	Poorman comp=Z,39nm,1.1s	18.75	324	IAmb	IAmb	20 43 22.0	
J19K	Poorman baz=122,SNR=5.3	18.75	324	P	P	20 43 11.4	+0.2
H21K	Melozitna Rive	18.78	330	P	Pn	20 43 12.3	+0.3
H21K	comp=Z,72nm,1.4s			IAmb	IAmb	20 43 25.4	
H21K	Melozitna Rive baz=131,SNR=7.7	18.78	330	P	Pn	20 43 12.2	+0.2
I20K	Naaghedeneel baz=126	18.79	327	P	Pn	20 43 12.1	0.0
F24K	Squaw Lake comp=Z,48nm,1.4s	18.82	339	IAmb	IAmb	20 43 26.6	
F24K	Squaw Lake baz=144	18.82	339	P	Pn	20 43 13.2	+0.7
E25K	Arctic Village comp=Z,46nm,1.5s	18.83	342	IAmb	IAmb	20 43 23.6	
E25K	Arctic Village baz=149,SNR=8.6	18.83	342	P	Pn	20 43 12.5	-0.1
M16K	Timber Creek baz=110	18.84	314	P	Pn	20 43 12.6	0.0
RSSD	Black Hills	18.89	101	P	P	20 43 12.0	-1.1
J18K	Innoko River comp=Z,26nm,1.1s	18.89	322	IAmb	IAmb	20 43 25.5	
J18K	Innoko River baz=119	18.89	322	P	Pn	20 43 13.8	+0.5
D28M	Stokes Point baz=163	18.92	351	P	Pn	20 43 14.3	+0.6
HMU	Henry Mountain comp=Z,47nm,1.3s	18.95	126	IAmb	IAmb	20 43 18.0	
L17K	Donlin baz=114	18.95	317	P	Pn	20 43 14.5	+0.5
D27M	Malcolm River comp=Z,38nm,1.3s	19.10	348	IAmb	IAmb	20 43 36.9	
D27M	Malcolm River baz=159	19.10	348	P	Pn	20 43 16.2	+0.3
N15K	Kwethluk River baz=106	19.11	311	P	Pn	20 43 15.9	-0.1
COLD	Coldfoot	19.15	336	IAmb	IAmb	20 43 27.6	

	comp=Z,56nm,1.5s						
COLD	Coldfoot	19.15	336	P	Pn	20 43 16.3	-0.1
	baz=139,SNR=9.1						
K17K	Iditarod	19.19	319	P	Pn	20 43 16.8	-0.2
	baz=115						
L16K	Owhat River	19.31	315	P	Pn	20 43 18.5	+0.2
L16K	Owhat River	19.31	315	P	Pn	20 43 18.0	-0.3
	baz=111						
H20K	Anotleneega Mo	19.35	328	P	P	20 43 18.1	+0.4
	baz=127,SNR=11						
E24K	Your Creek	19.40	339	IAmb	IAmb	20 43 30.1	
	comp=Z,35nm,1.2s						
E24K	Your Creek	19.40	339	P	P	20 43 19.1	+0.7
	baz=143						
O14K	Tigyukauivet M	19.47	307	P	P	20 43 19.2	+0.1
	baz=102						
PV23	Carpenter Ridg	19.48	122	IAmb	IAmb	20 43 32.5	
	comp=Z,22nm,0.8s						
S12K	Black Hills	19.50	297	P	P	20 43 19.0	-0.5
	baz=91						
PV10	Paradox Valley	19.52	122	IAmb	IAmb	20 43 23.4	
	comp=Z,42nm,1.0s						
PV14	Lion Creek, Pa	19.53	122	IAmb	IAmb	20 43 26.3	
	comp=Z,17nm,0.9s						
M15K	Kasigluk River	19.54	312	P	P	20 43 19.1	-0.7
	baz=106						
PV22	Blue Mesa, Par	19.54	121	IAmb	IAmb	20 43 26.6	
	comp=Z,21nm,1.0s						
G21K	Allakaket	19.57	332	P	P	20 43 19.7	-0.4
	baz=132,SNR=10						
PV20	West Nyswonger	19.59	122	IAmb	IAmb	20 43 27.4	
	comp=Z,33nm,0.9s						
GCSA	Galena City Sc	19.61	325	P	P	20 43 20.2	-0.4
	baz=122						
ELS	Elsinore Mount	19.63	147	IAmb	IAmb	20 43 40.0	
	comp=Z,47nm,1.5s						
PV16	Nyswonger Mesa	19.64	122	P	P	20 43 21.9	+0.6
PV17	East Wray Mesa	19.64	122	IAmb	IAmb	20 43 26.7	
	comp=Z,41nm,1.3s						
E23K	Chandalar	19.65	338	IAmb	IAmb	20 43 34.7	
	comp=Z,43nm,1.2s						
E23K	Chandalar	19.65	338	P	P	20 43 21.2	+0.1
	baz=141,SNR=16						
PV11	David Mesa, Pa	19.67	122	IAmb	IAmb	20 43 27.9	
	comp=Z,34nm,1.0s						
PV05	Paradox Valley	19.71	122	IAmb	IAmb	20 43 47.9	
	comp=Z,49nm,1.5s						
PV03	Paradox Valley	19.71	122	IAmb	IAmb	20 43 26.8	
	comp=Z,22nm,1.0s						
PV13	Radium Mtn., P	19.80	122	IAmb	IAmb	20 43 29.3	
	comp=Z,38nm,1.1s						
J17K	VABM Dome	19.80	320	IAmb	IAmb	20 43 37.1	
	comp=Z,41nm,1.3s						
J17K	VABM Dome	19.80	320	P	P	20 43 22.5	-0.2
	baz=116,SNR=5.2						
PV02	Paradox Valley	19.81	122	IAmb	IAmb	20 43 27.9	
	comp=Z,35nm,1.1s						
N14K	Kuskokwak Cree	19.82	309	P	P	20 43 22.0	-0.9
	baz=103						
C27K	Jago River	19.84	346	P	P	20 43 22.7	-0.4
	baz=154						
F22K	John River	19.88	335	P	P	20 43 22.7	-0.8
	baz=136						
H19K	Roundabout Mou	19.90	327	IAmb	IAmb	20 43 37.5	
	comp=Z,32nm,1.2s						
H19K	Roundabout Mou	19.90	327	P	P	20 43 23.3	-0.4
	baz=125						
PV01	Paradox Valley	19.95	121	IAmb	IAmb	20 43 29.5	
	comp=Z,20nm,1.1s						
PMD	Palm Desert	20.01	144	IAmb	IAmb	20 43 42.6	
	comp=Z,34nm,1.5s						
PFO	Pinyon Flats O	20.01	144	P	P	20 43 24.2	-1.1
	comp=Z,0.1nm,0.3s,baz=323,slow=7.5,SNR=5.7						
	comp=Z,2.9nm,0.8s						
PFO	Pinyon Flats O	20.01	144	P	P	20 43 24.1	-1.1
PFO				IAmb	IAmb	20 43 37.5	
	comp=Z,22nm,1.2s						
D25K	Kavik River	20.02	343	P	P	20 43 25.2	+0.2
	baz=149						
IRM	Iron Mountain	20.03	141	IAmb	IAmb	20 43 44.5	
	comp=Z,24nm,1.4s						
F21K	Alatna River	20.04	333	P	P	20 43 25.6	+0.3
	baz=133						
TOLK	Toolik Lake Re	20.10	339	P	Pn	20 43 27.4	-0.4
TOLK				IAmb	IAmb	20 43 39.2	
	comp=Z,41nm,1.1s						
TOLK	Toolik Lake Re	20.10	339	P	P	20 43 26.3	+0.4
	baz=142,SNR=14						
M14K	Bethel	20.16	311	P	P	20 43 26.7	+0.2
	baz=105						
L15K	Ungalak Mounta	20.20	314	P	P	20 43 27.0	0.0
	baz=108						
E22K	Anaktuvuk Pass	20.24	337	P	Pn	20 43 29.3	-0.1
E22K	Anaktuvuk Pass	20.24	337	P	P	20 43 28.5	+1.0
	baz=138,SNR=23						
C26K	Camden Bay	20.29	345	P	P	20 43 28.8	+0.9
	baz=152						
FALS	False Pass	20.29	294	P	P	20 43 27.7	-0.3
	baz=88						
D24K	Happy Valley	20.35	341	IAmb	IAmb	20 43 47.7	
	comp=Z,46nm,1.4s						
D24K	Happy Valley	20.35	341	P	Pn	20 43 30.3	-0.3
	baz=145						
H18K	Honhosa River	20.37	325	IAmb	IAmb	20 43 49.9	
	comp=Z,28nm,1.1s						
H18K	Honhosa River	20.37	325	P	Pn	20 43 30.1	-0.8
	baz=121						
J16K	Anvik River	20.38	319		P	20 43 29.6	+0.6
J16K	Anvik River	20.38	319	P	Pn	20 43 30.1	-0.9
	baz=113						
K15K	Wolf Creek Mou	20.42	316	P	Pn	20 43 30.6	-0.9
K15K	Wolf Creek Mou	20.42	316	P	P	20 43 30.3	+0.9
	baz=110						
G19K	Purcell Mounta	20.47	328	P	P	20 43 30.7	+0.8
	baz=125						
WUAZ	Wupatki	20.54	131	IAmb	IAmb	20 43 40.0	
	comp=Z,42nm,1.1s						
F20K	Avaraart Lake	20.58	331	P	P	20 43 31.6	+0.5
	baz=129						
D23K	Nanushuk River	20.61	339	P	P	20 43 31.6	+0.2
	baz=141,SNR=27						
L14K	Kuka Creek	20.65	313	P	P	20 43 31.4	-0.5
L14K	Kuka Creek	20.65	313	P	P	20 43 32.7	+0.8
	baz=106						
I17K	Unalakleet	20.67	321	P	P	20 43 33.2	+1.1
I17K	Unalakleet	20.67	321	P	P	20 43 33.2	+1.1
	baz=115						
MVCO	Mesa Verde	20.67	123	IAmb	IAmb	20 43 43.5	
	comp=Z,30nm,1.1s						
M13K	Dall Lake	20.74	310	P	P	20 43 34.0	+1.1
	baz=102						
BAR	Barrett	20.77	146	IAmb	IAmb	20 43 45.2	
	comp=Z,41nm,1.4s						
C24K	Franklin Bluff	20.80	342	P	Pn	20 43 34.9	-0.9
	baz=146						
H17K	Granite Mounta	20.83	324	P	Pn	20 43 35.3	-1.0
	baz=118						
G18K	Tagagawik	20.86	327	IAmb	IAmb	20 44 01.4	
	comp=Z,49nm,1.4s						
G18K	Tagagawik	20.86	327	P	P	20 43 35.3	+1.1
	baz=122						
D22K	Ayikyak River	21.01	337	P	P	20 43 36.4	+0.6
	baz=138						
E21K	Killik River	21.02	336	P	P	20 43 37.0	+1.1
	baz=135						
YUH	Yuha Desert	21.07	145	IAmb	IAmb	20 44 01.7	
	comp=Z,42nm,1.4s						
F19K	Shaleruckik Mo	21.09	329	IAmb	IAmb	20 43 53.5	
	comp=Z,38nm,1.4s						
F19K	Shaleruckik Mo	21.09	329	P	P	20 43 37.8	+1.2
	baz=126						
Y14A	Wickenburg	21.11	137	IAmb	IAmb	20 43 47.4	
	comp=Z,44nm,1.3s						
A36M	Sachs Harbour	21.27	4	P	P	20 43 40.9	+2.4
A36M				IAmb	IAmb	20 43 46.8	
	comp=Z,43nm,1.2s						
A36M	Sachs Harbour	21.27	4	P	P	20 43 39.4	+0.9
	baz=189						
C23K	Itkillik River	21.28	341	P	P	20 43 39.5	+0.9
	baz=143						
E19K	Redstone River	21.30	331	P	P	20 43 39.5	+0.7
	baz=128						
G17K	Kiwalik Mounta	21.37	325	P	P	20 43 39.8	+0.1
	baz=118						
X16A	Lo Mia Camp, P	21.41	133	IAmb	IAmb	20 43 58.2	
	comp=Z,22nm,1.1s						
J14K	Nanvaranak Lak	21.45	316	P	P	20 43 40.1	-0.4
	baz=108						
E20K	Nigu River	21.50	334	P	P	20 43 41.1	0.0
	baz=131						
H16K	Elim	21.59	322	P	P	20 43 41.9	-0.1
	baz=114,SNR=11						
K13K	Kusilvak Mount	21.72	314	P	P	20 43 43.3	-0.1
	baz=105						
ULM	Lac du Bonnet	21.72	78	P	P	20 43 43.6	+0.1
	comp=Z,8.6nm,0.6s,baz=270,slow=9.2,SNR=10						
	comp=Z,8.6nm,0.6s						
ULM	Lac du Bonnet	21.72	78	IAmb	IAmb	20 43 45.0	
	comp=Z,45nm,1.5s						
C21K	Knifeblade Rid	21.74	336	P	P	20 43 43.6	+0.1
	baz=135						
OGNE	Ogallala	21.88	106	IAmb	IAmb	20 43 52.4	
	comp=Z,20nm,0.7s						
SDCO	Great Sand Dun	21.92	117	IAmb	IAmb	20 43 60.0	
	comp=Z,16nm,1.2s						
G16K	Koyuk River	21.96	323	P	P	20 43 46.3	+0.3
	baz=116						
FCC	Fort Churchill	22.02	55	P	P	20 43 47.9	+1.2
B21K	Ikpikpuk River	22.03	337	IAmb	IAmb	20 44 10.9	
	comp=Z,26nm,1.2s						
B21K	Ikpikpuk River	22.03	337	P	P	20 43 46.5	-0.1
	baz=136						
F17K	Baldwin Pennin	22.05	327	P	P	20 43 46.4	-0.5
	baz=120						
M11K	Mekoryuk	22.13	309	P	P	20 43 47.2	-0.6
	baz=99						
UNV	Unalaska Valle	22.18	292	P	P	20 43 47.5	-0.9
	baz=83						
D19K	Kuna River	22.20	333	IAmb	IAmb	20 44 06.4	
	comp=Z,31nm,1.2s						
D19K	Kuna River	22.20	333	P	P	20 43 47.9	-0.7
	baz=128						
B22K	Teshekpuk Lake	22.28	339	P	P	20 43 48.5	-0.8
	baz=139,SNR=5.7						
AGMN	Agassiz Nation	22.31	83	IAmb	IAmb	20 43 56.0	
	comp=Z,18nm,0.8s						
E18K	Tukpahlearik C	22.34	329	IAmb	IAmb	20 44 20.4	
	comp=Z,42nm,1.4s						
E18K	Tukpahlearik C	22.34	329	P	P	20 43 49.7	-0.3
	baz=123						
BLKN	Baker Lake	22.37	40	P	P	20 43 51.6	+1.3
G15K	Niukluk	22.44	322	P	P	20 43 50.5	-0.6
	baz=113						
E17K	Hotham Inlet	22.57	328	P	P	20 43 51.7	-0.8
	baz=120						
ANM	Nome	22.82	320	P	P	20 43 54.0	-1.1
	baz=110						
B20K	Meade River	22.93	336	P	P	20 43 55.6	-0.6
	baz=133						
F15K	North Star Dit	22.96	323	P	P	20 43 55.9	-0.6
	baz=114						
T25A	Trinidad	22.96	117	IAmb	IAmb	20 44 08.5	
	comp=Z,17nm,1.2s						
C19K	Lookout Ridge	23.00	333	IAmb	IAmb	20 44 07.4	
	comp=Z,24nm,1.4s						
C19K	Lookout Ridge	23.00	333	P	P	20 43 55.6	-1.4
	baz=128						
A22K	Sinclair Lake	23.12	340	P	P	20 43 57.3	-0.9
	baz=138						
C18K	Utukok River	23.20	331	IAmb	IAmb	20 44 18.3	
	comp=Z,19nm,1.1s						
C18K	Utukok River	23.20	331	P	P	20 43 58.3	-0.8
	baz=124						
EPLO	Experimental L	23.21	79	P	P	20 43 58.5	-0.9
EPLO				IAmb	IAmb	20 44 05.2	
	comp=Z,27nm,1.3s						
D17K	Noatak River	23.30	328	P	P	20 43 58.6	-1.4
	baz=120						
RDOG	Red Dog Mine	23.42	329	P	P	20 44 00.7	-0.6
	baz=121						
TASM	ASL Pad, Albuq	23.46	124	IAmb	IAmb	20 44 03.8	
	comp=Z,18nm,1.3s						
TASM	ASL Pad, Albuq	23.46	124	IAmb	IAmb	20 44 03.8	
	comp=Z,18nm,1.3s						
TASM	ASL Pad, Albuq	23.46	124	IAmb	IAmb	20 44 03.8	
	comp=Z,20nm,1.3s						
TASM	ASL Pad, Albuq	23.46	124	IAmb	IAmb	20 44 03.8	
	comp=Z,18nm,1.3s						
ANMO	Albuquerque	23.46	124	P	P	20 44 02.3	+0.1
ANMO				IAmb	IAmb	20 44 03.8	
	comp=Z,18nm,1.3s						
ABQ	Albuquerque	23.46	124	IAmb	IAmb	20 44 03.8	
	comp=Z,19nm,1.3s						
TUC	Tucson	23.47	135	P	P	20 44 02.2	0.0
TUC				IAmb	IAmb	20 44 16.6	
	comp=Z,17nm,1.4s						
F14K	Arctic Creek	23.52	322	P	P	20 44 01.1	-1.1
	baz=111						
P08K	Saint George I	23.68	299	P	P	20 44 02.7	-1.2
	baz=87						
NIKH	Nikolski High	23.71	290	P	P	20 44 02.9	-1.3
	baz=79						
A21K	Barrow	23.72	339	P	P	20 44 03.4	-0.7
	baz=136						
C17K	DeLong Mountai	23.72	330	P	P	20 44 03.3	-0.9
	baz=121						
Y22A	Socorro	23.98	126	IAmb	IAmb	20 44 10.5	
	comp=Z,25nm,1.4s						
SPIA	Saint Paul Isl	24.04	301	P	P	20 44 05.7	-1.5
	baz=88						
A19K	Wainwright	24.08	335	P	P	20 44 06.2	-1.4
	baz=127						
TNA	Tin City	24.17	322	P	P	20 44 06.4	-2.1
	baz=109						
C16K	Lisburne Hills	24.32	329	P	P	20 44 08.3	-1.5
	baz=118,SNR=5.8						
RTBA	Rita Blanca	24.41	116	IAmb	IAmb	20 44 30.6	
	comp=Z,8.9nm,1.0s						
EYMN	Ely	25.18	82	P	P	20 44 18.8	+1.0
GAMB	Gambell	25.28	316	P	P	20 44 17.2	-1.3
	baz=101						
N35A	Tabor	25.88	99	P	P	20 44 25.5	+1.3
MNTX	Cornudas Mount	26.57	127	IAmb	IAmb	20 44 35.6	
	comp=Z,11nm,1.1s						
VHRN	Van Horn	27.50	127	IAmb	IAmb	20 44 57.8	
	comp=Z,10nm,1.1s						
WMOK	Wichita Mounta	27.89	113	IAmb	IAmb	20 44 45.4	
	comp=Z,9.6nm,0.9s						
P38A	Dawn	27.91	99	P	P	20 44 43.0	+0.6
P38A				IAmb	IAmb	20 44 47.4	
	comp=Z,13nm,1.2s						
RES	Resolute Bay	27.94	19	LR	LR	20 56 13.6	
	comp=Z,865nm,20.4s,baz=30,slow=37						
TX31	Lajitas Ar. Si	29.34	127	IAmb	IAmb	20 44 57.4	
	comp=Z,14nm,1.4s						
TXAR	Lajitas Array	29.34	127	P	P	20 44 55.8	+0.4
	comp=Z,3.5nm,0.9s,baz=328,slow=6.3,SNR=23						
	comp=Z,3.5nm,0.9s						
TXAR	Lajitas Array	29.34	127	P	P	20 44 55.6	+0.2
JCT	Junction City	30.47	120	IAmb	IAmb	20 45 18.3	
	comp=Z,6.2nm,0.8s						
DRIO	Del Rio	30.85	123	IAmb	IAmb	20 45 10.8	
	comp=Z,4.5nm,0.9s						
POIN	Pond Inlet	31.30	27	P	P	20 45 13.5	+1.4
POIN				IAmb	IAmb	20 45 26.1	
	comp=Z,5.5nm,0.9s						
LCAR	Lake Charles	31.58	103	IAmb	IAmb	20 45 45.0	
	comp=Z,11nm,1.4s						
833A	Chaparral WMA,	32.38	122	P	P	20 45 21.9	-0.2
M65A	Busby, Falmout	41.23	79	P	P	20 46 36.0	-1.3
	baz=304						
SEY	Seymchan	41.27	317	P	P	20 46 38.5	+1.1
	comp=Z,4.0nm,1.0s,baz=105,slow=9.7,SNR=7.4						
	comp=Z,4.0nm,1.0s						
H11N2	WAKE ISLAND Hy	57.87	262	T	T	21 51 08.1	
	baz=42,slow=76,SNR=1439						
H11N3	WAKE ISLAND Hy	57.88	262	T	T	21 51 08.2	
	baz=42,slow=76,SNR=1609						
H11N1	WAKE ISLAND Hy	57.89	262	T	T	21 51 09.3	
	baz=42,slow=76,SNR=1654						
ARCES	ARCESS Array B	58.56	10	P	P	20 48 49.7	+1.1
	comp=Z,5.6nm,1.1s,baz=358,slow=5.8,SNR=1.7						
	comp=Z,5.6nm,1.1s						
H11S1	WAKE ISLAND Hy	58.91	261	T	T	21 52 26.2	
	baz=40,slow=74,SNR=172						
H11S2	WAKE ISLAND Hy	58.92	261	T	T	21 52 36.5	
	baz=40,slow=74,SNR=112						
H11S3	WAKE ISLAND Hy	58.93	261	T	T	21 52 21.9	
	baz=40,slow=74,SNR=72						
USRK	Ussuriysk Ar.	61.56	306	P	P	20 49 10.8	+1.3
	comp=Z,1.4nm,0.7s,baz=52,slow=9.3,SNR=4.7						
	comp=Z,1.4nm,0.7s						
MJAR	Matsushiro Arr	63.57	296	P	P	20 49 21.8	-1.3
	comp=Z,1.1nm,0.8s,baz=49,slow=8.2,SNR=2.6						
	comp=Z,1.1nm,0.8s						
MJAR	Matsushiro Arr	63.57	296	IAmb	IAmb	20 49 41.1	
	comp=Z,5.2nm,1.4s						
NB2	NORSAR Subarra	64.20	20	P	P	20 49 28.7	+1.8
	comp=Z,0.7nm,0.8s,baz=338,slow=6.5						
NOA	NORSAR Array B	64.20	20	P	P	20 49 26.8	-0.1
	comp=Z,1.2nm,0.9s,baz=339,slow=6.4,SNR=4.6						
	comp=Z,1.2nm,0.9s						
EKA	Eskdalemuir Ar	65.35	30	P	P	20 49 35.5	+1.1
	comp=Z,0.6nm,0.6s,baz=331,slow=7.4,SNR=4.0						
	comp=Z,0.6nm,0.6s						
HFS	Hagfors	65.55	19	P	P	20 49 36.0	+0.4
	comp=Z,0.6nm,0.6s,baz=336,slow=3.3,SNR=5.5						
	comp=Z,0.6nm,0.6s						
FINES	FINESS Array B	66.41	12	P	P	20 49 41.8	+0.7
	comp=Z,2.7nm,0.8s,baz=350,slow=9.7,SNR=6.2						
	comp=Z,2.7nm,0.8s						
FINES	FINESS Array B	66.41	12	P	P	20 49 41.5	+0.4
OTAV	Otavalo	66.75	121	P	P	20 49 43.9	-0.6
SONM	Songino Array	70.28	323	P	P	20 50 08.0	+2.2
	comp=Z,0.3nm,0.8s,baz=46,slow=4.2,SNR=4.1						
	comp=Z,0.3nm,0.8s						
SONM	Songino Array	70.28	323	P	P	20 50 06.3	+0.5
ZAA0	Zalesovo Array	71.46	339	P	P	20 50 12.5	-0.2
ZAA0				IAmb	IAmb	20 50 19.2	
	comp=Z,4.5nm,1.2s						
ZALV	Zalesovo Beam	71.46	339	P	P	20 50 13.8	+1.1
	comp=Z,1.3nm,0.7s,baz=5.2,slow=4.9,SNR=6.0						
	comp=Z,1.3nm,0.7s						
ZALV	Zalesovo Beam	71.46	339	P	P	20 50 12.1	-0.6
ARTI	Arti	72.83	355	P	P	20 50 22.2	+1.4
	comp=Z,2.2nm,0.7s,baz=146,slow=5.4,SNR=4.4						
	comp=Z,2.2nm,0.7s						
ARTI	Arti	72.83	355	P	P	20 50 20.9	0.0
CLL	Collm	73.49	23	*e*P	P	20 50 23.0	-1.8
HHC	Hu-ho-hao-te	73.89	316	*e*P	P	20 50 29.8	+2.3
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,5.3s						
BVAR	Borovoye Array	74.99	347	P	P	20 50 34.9	+1.3
	comp=Z,1.0nm,0.7s,baz=41,slow=4.7,SNR=5.8						
	comp=Z,1.0nm,0.7s						
KURK	Kurchatov	75.82	342	P	P	20 50 39.2	+1.0
KURBB	Kurchatov Arra	75.92	342	P	P	20 50 39.4	+0.5
	comp=Z,1.7nm,0.9s,baz=22,slow=5.5,SNR=7.5						
	comp=Z,1.7nm,0.9s						
GERES	GERESS Array B	75.94	24	P	P	20 50 40.7	+1.6
	comp=Z,0.3nm,0.6s,baz=313,slow=4.9,SNR=3.6						
	comp=Z,0.3nm,0.6s						
AKASG	Malin Array Be	77.27	13	P	P	20 50 45.6	-0.9
	comp=Z,1.0nm,0.5s,baz=350,slow=4.9,SNR=5.4						
	comp=Z,1.0nm,0.5s						
AKBB	Malin Array Si	77.27	13	P	P	20 50 46.2	-0.3
ESDC	Sonseca Array	78.28	39	P	P	20 50 53.8	+1.3
	comp=Z,0.5nm,0.8s,baz=330,slow=4.2,SNR=2.4						
	comp=Z,0.5nm,0.8s						
MKAR	Makanchi Array	78.72	338	P	P	20 50 55.4	+0.7
	comp=Z,1.0nm,0.7s,baz=43,slow=5.5,SNR=9.7						
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	78.72	338	P	P	20 50 54.6	-0.1
MAKZ	Makanchi	78.78	338	P	P	20 50 55.5	+0.5
MAKZ				IAmb	IAmb	20 51 05.7	
	comp=Z,5.2nm,1.1s						
AKTO	Aktyubinsk	78.79	355	P	P	20 50 55.5	+0.5
	comp=Z,2.0nm,0.6s,baz=43,slow=5.2,SNR=5.9						
	comp=Z,2.0nm,0.6s						
AB31	Akbulak array	79.84	353	P	P	20 51 01.4	+0.7
AB31				IAmb	IAmb	20 51 06.0	
	comp=Z,9.7nm,1.4s						
WMQ	Urumqi	80.06	333	*e*P	P	20 51 02.3	+0.2
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				LR	LR		
	comp=N,1µm,20.5s						
WMQ				LR	LR		
	comp=E,580nm,22.3s						
WMQ				LR	LR		
	comp=Z,620nm,24.3s						
MDT	Midelt	83.86	44	LR	LR	21 28 07.8	
	comp=Z,2µm,18.4s,baz=266,slow=35						
KBZ	Khabaz	85.56	5	P	P	20 51 31.2	+0.7
	comp=Z,1.2nm,0.9s,baz=113,slow=0.4,SNR=5.9						
	comp=Z,1.2nm,0.9s						
LPAZ	La Paz	86.06	122	P	P	20 51 32.3	-1.8
	comp=Z,0.9nm,0.5s,baz=17,slow=4.4,SNR=3.6						
	comp=Z,0.9nm,0.5s						
LPAZ	La Paz	86.06	122	P	P	20 51 31.3	-2.8
BRTR	Keskin Array B	88.64	12	P	P	20 51 47.2	+1.3
	comp=Z,1.0nm,1.1s,baz=318,slow=4.1,SNR=1.8						
	comp=Z,1.0nm,1.1s						
PZH	PanZhiHua	90.34	315	P	P	20 51 53.5	-0.4
CMAR	Chiang Mai Arr	98.58	313	LR	LR	21 37 25.0	
	comp=Z,1µm,20.3s,baz=105,slow=36						

ATH 25 20:38:58.7, 38°.36N×21°.83E, h11^{km}±1^{km}, ML1.1/1, Manual Solution by A.Agalos First location: 2019/12/25 20:40:25, This location: 2019/12/25 20:55:00 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EFP	Efpalio	0.09	42	P	Pg	20 39 01.3	+0.1
EFP				S	Sg	20 39 03.2	+0.2
UPR	University Cam	0.09	204	P	Pg	20 39 01.2	0.0
UPR				S	Sg	20 39 02.9	0.0
PATC	Patra C	0.11	211	P	Pg	20 39 01.9	+0.4
PATC				S	Sg	20 39 03.6	+0.1
SERG	Sergoula	0.18	74	P	Pg	20 39 02.9	+0.2
SERG				S	Sg	20 39 05.6	+0.2
ANX	Ano Chora	0.24	17	P	Pg	20 39 04.0	+0.3
ANX				S	Sg	20 39 07.5	+0.3
KALE	Kalithea	0.24	83	P	Pb	20 39 04.5	-0.7
PVO	Paravola	0.35	317	P	Pg	20 39 05.9	+0.2
KLV	Kalavryta, Ach	0.41	142	P	Pg	20 39 06.8	0.0
RLS	Riolos of Patr	0.42	223	P	Pg	20 39 07.2	+0.2
EVR	Evrytania	0.55	358	P	Pg	20 39 09.7	+0.2
EVR				S	Sg	20 39 17.5	+0.7
GUR	Goura	0.59	137	P	Pg	20 39 10.3	+0.2
GUR				S	Sg	20 39 18.3	+0.5
AGG	Agios Georgios	0.77	30	P	Pg	20 39 13.5	0.0
AGG				S	Sb	20 39 24.6	+0.1
AMT	Artemida-Makis	0.83	187	P	Pb	20 39 15.7	+0.5

DJA ***25*** *20:45:07.7±0.4, 5°N±2°×12°6E±°, h145^{km}±5^{km}, M4.3/12, mB4.8/5, mb4.2/7, MLv4.4/12, Mw(mB)4.1/5*

NEIC ***25*** *20:45:09.2±2.5, 5°.45N±0°.07×126°.1E±0°.1, h100^{km}±7^{km}, mb4.2/21, Error ellipse: s-maj=19.5km s-min=6.4km az=62.0*

IDC ***25*** *20:45:09.7±1.2, 5°.54N×126°.00E, h112^{km}±9^{km}, mb3.5/15, mbtmp3.9/16, Error ellipse: s-maj=41.6km s-min=11.4km az=72.0*

ISC 25 20:45:09.7±0.5**, 5°.46N**±0°.04×**126°.08E**±0°.08**, h116^{km}, n56,** σ**1^{s}.44**/62**, mb4.0**/25**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	1.68	343	P	Pn	20 45 37.2	-1.8
	217nm,0.3s,baz=41,slow=2.0,SNR=1.9						
DAV				S	Sn	20 45 58.9	-2.4
	419nm,0.6s,baz=130,slow=22,SNR=7.0						
DAV	Davao City (W)	1.68	343		Pn	20 45 38.0	-1.0
DAV	Davao City (W)	1.68	343	P	Pn	20 45 37.8	-1.2
DAV				S	Sn	20 46 03.5	+2.2
SGSI	Sangihe	1.85	197	P	Pn	20 45 41.5	+0.4
SGSI				S	Sn	20 46 05.4	+0.3
TNTI	Ternate	4.83	165		Pn	20 46 18.6	-1.8
TNTI				Sn	Sn	20 47 14.1	-1.3
TNTI	Ternate	4.83	165	P	Pn	20 46 18.6	-1.8
GTOI	Gorontalo	5.69	213	P	Pn	20 46 31.2	-0.8
GTOI				S	Sn	20 47 33.8	-2.3
MRSI	Marisa	6.45	220	P	Pn	20 46 41.9	-0.4
	0.3nm77nm,0.7s						
MRSI				S	Sn	20 47 55.1	+0.6
	0.3nm77nm,0.7s						
TOLI2	Tolitoli	6.83	231		Pn	20 46 45.6	-1.9
TOLI2				Sn	Sn	20 47 55.5	-8.2
LUWI	Luwuk	7.26	207	Pn	Pn	20 46 54.5	+1.4
LUWI	Luwuk	7.26	207	P	Pn	20 46 52.5	-0.7
	1µm30nm,0.9s						
SANI	Sanana	7.46	181	P	Pn	20 46 51.1	-4.9
	0.1nm930nm19nm,0.6s						
MPSI	Mapaga	8.00	231	P	Pn	20 47 02.9	-0.4

SIJI	Sorong	8.14	140	P	Pn	20 47 02.1	-3.1
KRAI	Karang Ratu	9.02	165	P	Pn	20 47 14.7	-2.4
FAKI	Fak Fak	10.36	143	Pn	Pn	20 47 33.3	-1.8
SBUM	Sibu	14.15	258	P	P	20 48 27.8	-1.1
BATI	Baumata	15.75	189	P	P	20 48 47.0	+0.2
	2.7nm,0.3s,baz=48,slow=13,SNR=4.3						
TPUB	Ta-pu	18.50	344	P	P	20 49 14.4	-2.6
TPUB				IAmb	IAmb	20 49 22.0	
	comp=Z,34nm,1.2s						
MTN	Manton Dam	18.86	165	P	P	20 49 21.8	+0.7
MTN				IAmb	IAmb	20 49 44.1	
	comp=Z,15nm,1.3s						
KNRA	Kununurra	21.17	173	P	P	20 49 46.5	+0.7
KNRA				IAmb	IAmb	20 49 57.3	
	comp=Z,31nm,1.4s						
FITZ	Fitzroy Crossi	23.41	181	P	P	20 50 09.2	+0.7
COEN	Coen	25.69	139	P	P	20 50 28.4	-0.8
COEN				IAmb	IAmb	20 50 39.6	
	comp=Z,10nm,1.2s						
WB0	Warramunga Arr	26.37	162	P	P	20 50 35.4	+0.1
WB0				IAmb	IAmb	20 51 09.4	
	comp=Z,11nm,1.5s						
WRAB	Tennant Creek	26.51	162	P	P	20 50 38.7	+2.1
WRAB				IAmb	IAmb	20 50 49.5	
	comp=Z,8.6nm,1.4s						
WRA	Warramunga Arr	26.52	162	P	P	20 50 38.2	+1.6
	comp=Z,0.4nm,0.4s,baz=339,slow=10,SNR=7.5						
	comp=Z,0.4nm,0.4s						
WR8	Warramunga Arr	26.58	162	P	P	20 50 37.3	+0.1
WR8				IAmb	IAmb	20 51 11.4	
	comp=Z,4.9nm,1.1s						
NJ2	Nanjing	27.30	347	*e*P	P	20 50 48.3	+4.8
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
PSA00	Pilbara Seismi	27.55	193	P	P	20 50 45.5	-0.4
ASAR	Alice Springs	29.94	166	P	P	20 51 07.5	+0.5
	comp=Z,0.4nm,0.6s,baz=342,slow=7.0,SNR=7.9						
ASAR				PcP	PcP	20 54 08.1	+0.9
	comp=Z,0.3nm,0.7s,baz=341,slow=3.4,SNR=2.2						
ASAR				ScP	ScP	20 57 39.8	+1.1
	comp=Z,0.2nm,0.6s,baz=346,slow=3.9,SNR=4.1						
	comp=Z,0.4nm,0.6s						
KSRS	Korea Array	31.89	3	P	P	20 51 23.1	-0.8
	comp=Z,0.5nm,0.5s,baz=189,slow=8.5,SNR=2.1						
	comp=Z,0.5nm,0.5s						
FORT	Forrest	36.09	177	P	P	20 52 01.2	+0.8
NWAO	Narrogin (SRO)	39.09	192	P	P	20 52 26.5	+0.8
STKA	Stephens Creek	39.97	159	P	P	20 52 34.2	+1.2
	comp=Z,0.6nm,0.3s,baz=340,slow=12,SNR=4.7						
	comp=Z,0.6nm,0.3s						
STKA	Stephens Creek	39.97	159	IAmb	IAmb	20 52 43.0	
	comp=Z,18nm,1.1s						
HILR	Hailar Array B	44.27	354	P	P	20 53 07.9	+0.2
	comp=Z,0.7nm,0.4s,baz=168,slow=8.8,SNR=2.0						
	comp=Z,0.7nm,0.4s						
SONM	Songino Array	45.46	341	P	P	20 53 17.1	-0.2
	comp=Z,0.3nm,0.5s,baz=148,slow=7.6,SNR=2.8						
SONM				PcP	PcP	20 54 54.5	+0.1
	comp=Z,0.6nm,0.8s,baz=157,slow=1.9,SNR=4.6						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	55.78	325	P	P	20 54 34.4	-0.3
	comp=Z,1.5nm,0.5s,baz=120,slow=7.4,SNR=34						
	comp=Z,1.5nm,0.5s						
MAKZ	Makanchi	55.96	325	P	P	20 54 35.7	-0.3
MAKZ				IAmb	IAmb	20 54 40.2	
	comp=Z,5.9nm,1.5s						
AAK	Ala-Archa	58.65	317	P	P	20 54 55.4	+0.2
	comp=Z,0.3nm,0.3s,baz=343,slow=16,SNR=2.0						
	comp=Z,0.3nm,0.3s						
AAK	Ala-Archa	58.65	317	IAmb	IAmb	20 55 00.3	
	comp=Z,2.4nm,1.2s						
ZALV	Zalesovo Beam	58.76	333	P	P	20 54 54.2	-1.2
	comp=Z,0.7nm,0.3s,baz=134,slow=6.3,SNR=3.9						
	comp=Z,0.7nm,0.3s						
KURBB	Kurchatov Arra	59.94	327	P	P	20 55 03.2	-0.4
	comp=Z,1.3nm,0.6s,baz=128,slow=6.7,SNR=20						
	comp=Z,1.3nm,0.6s						
KURK	Kurchatov	59.94	327	P	P	20 55 03.0	-0.7
BVAR	Borovoye Array	65.53	327	P	P	20 55 40.0	-0.7
	comp=Z,0.6nm,0.7s,baz=134,slow=8.5,SNR=4.3						
	comp=Z,0.6nm,0.7s						
ABKAR	Akbulak array	70.41	321	P	P	20 56 10.9	-0.4
AKTO	Aktyubinsk	71.91	321	P	P	20 56 20.1	-0.3
	comp=Z,1.5nm,0.6s,baz=99,slow=5.8,SNR=5.6						
	comp=Z,1.5nm,0.6s						
C19K	Lookout Ridge	79.36	21	P	P	20 57 05.1	+2.6
D19K	Kuna River	79.75	21		P	20 57 05.7	+1.1
I23K	Minto, Yukon-K	82.78	25	P	P	20 57 22.3	+1.6
I23K				IAmb	IAmb	20 57 23.7	
	comp=Z,3.0nm,0.9s						
G24K	Hadweenzic Riv	83.61	24	P	P	20 57 27.4	+2.5
G24K				IAmb	IAmb	20 58 06.8	
	comp=Z,2.6nm,1.5s						
ILAR	Eielson Array	83.83	25	P	P	20 57 26.6	+0.6
	comp=Z,0.3nm,0.7s,baz=257,slow=6.1,SNR=4.9						
	comp=Z,0.3nm,0.7s						
ARCES	ARCESS Array B	88.61	340	P	P	20 57 49.0	-0.3
	comp=Z,3.3nm,1.0s,baz=24,slow=3.3,SNR=4.6						
	comp=Z,3.3nm,1.0s						
SPITS	Spitsbergen Ar	88.67	349	P	P	20 57 49.3	-0.2
	comp=Z,10nm,0.9s,baz=340,slow=8.1,SNR=2.2						
FINES	FINESS Array B	90.01	332	P	P	20 57 55.1	-0.9
	comp=Z,1.2nm,0.8s,baz=49,slow=5.8,SNR=5.8						
	comp=Z,1.2nm,0.8s						
TORD	Torodi Ar. Bea	121.76	289	PKP	PKiKP	21 03 51.7	+0.4
	comp=Z,0.8nm,0.7s,baz=36,slow=2.8,SNR=5.7						

IDC ***25*** *20:48:06.6±0.8, 52.°74S×10.°75E, h0^{km}, mb4.1/9, mbtmp4.1/10, ML3.7/1, Error ellipse: s-maj=29.4km s-min=20.6km az=88.0*

NEIC ***25*** *20:48:08.2±2.1, 52.°9S±0.°1×11.°0E±0.°2, h10^{km}±1^{km}, mb4.6/8, Error ellipse: s-maj=25.3km s-min=11.5km az=135.0*

ISC 25 20:48:08.0±0.7**, 52.°78S**±0.°09×**10.°8E**±0.°2**, h10**^{km}**, n31,** σ**0^{s}82**/22**, mb4.3**/9**, 2C-1D, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TROLL	Troll, Antarti	19.64	188	⇑P	Pn	20 52 38.7	+0.8
	comp=Z,302nm,0.7s						
SNAA	Sanae	19.89	193	⇑P	Pn	20 52 40.0	-0.8
	comp=Z,209nm,0.8s						
SNAA	Sanae	19.89	193	P	P	20 52 39.6	+0.4
	comp=Z,0.2nm,0.3s,baz=8.2,slow=10,SNR=20						
	comp=Z,8.5nm,0.8s						
SNAA	Sanae	19.89	193	P	P	20 52 39.8	+0.6
VNA3	Neumayer Olymp	20.65	199	⇓P	P	20 52 47.6	+0.2
	comp=Z,14nm,0.7s						
SUR	Sutherland	21.64	24	P	P	20 53 00.0	+1.5
	comp=Z,4.7nm,0.9s,baz=207,slow=15,SNR=1.5						
	comp=Z,4.7nm,0.9s						
SUR	Sutherland	21.64	24	IAmb	IAmb	20 53 32.3	
	comp=Z,28nm,1.4s						
H04S2	CROZET ISLANDS	26.90	94	T	T	21 22 05.2	
	baz=242,slow=75,SNR=36						
H04S3	CROZET ISLANDS	26.91	94	T	T	21 22 06.6	
	baz=242,slow=75,SNR=32						
H04S1	CROZET ISLANDS	26.92	94	T	T	21 22 06.1	
	baz=242,slow=75,SNR=46						
QSPA	South Pole Qui	37.46	180	P	P	20 55 21.2	-0.1
QSPA				IAmb	IAmb	20 55 33.4	
	comp=Z,13nm,1.4s						
VNDA	Vanda	48.73	172	P	P	20 56 52.7	+0.7
	comp=Z,1.4nm,0.9s,baz=238,slow=6.4,SNR=7.0						
	comp=Z,1.4nm,0.9s						
VNDA	Vanda	48.73	172	P	P	20 56 52.2	+0.2
CPUP	Villa Florida	56.37	270	P	P	20 57 49.0	-0.3
	comp=Z,1.2nm,0.7s,baz=153,slow=8.5,SNR=4.2						
	comp=Z,1.2nm,0.7s						
CPUP	Villa Florida	56.37	270	IAmb	IAmb	20 58 06.2	
	comp=Z,9.0nm,1.4s						
BDFB	Brasilia	58.92	286	P	P	20 58 07.0	-0.4
	comp=Z,3.6nm,0.9s,baz=128,slow=7.0,SNR=4.9						
	comp=Z,3.6nm,0.9s						
BDFB	Brasilia	58.92	286	IAmb	IAmb	20 58 16.4	
	comp=Z,6.3nm,1.1s						
DBIC	Dimbokro	60.69	342	P	P	20 58 19.2	-0.1
	comp=Z,4.4nm,1.1s,baz=161,slow=9.4,SNR=3.8						
	comp=Z,4.4nm,1.1s						
DBIC	Dimbokro	60.69	342	IAmb	IAmb	20 58 20.5	
	comp=Z,9.5nm,1.2s						
TORD	Torodi Ar. Bea	66.12	350	P	P	20 58 54.3	-0.9
	comp=Z,2.8nm,1.1s,baz=176,slow=5.0,SNR=7.4						
	comp=Z,2.8nm,1.1s						
H01W2	Cape Leeuwin H	70.31	122	T	T	22 16 54.9	
	baz=219,slow=75,SNR=8.5						
H01W3	Cape Leeuwin H	70.32	122	T	T	22 16 51.7	
	baz=219,slow=75,SNR=11						
H01W1	Cape Leeuwin H	70.32	122	T	T	22 16 54.2	
	baz=219,slow=75,SNR=10						
LPAZ	La Paz	70.50	269	P	P	20 59 24.6	+1.0
	comp=Z,4.0nm,0.8s,baz=106,slow=4.2,SNR=12						
	comp=Z,4.0nm,0.8s						
LPAZ	La Paz	70.50	269	P	P	20 59 24.4	+0.8
ASAR	Alice Springs	89.28	130	P	P	21 01 04.1	-0.3
	comp=Z,1.0nm,1.1s,baz=214,slow=6.1,SNR=7.4						
	comp=Z,1.0nm,1.1s						
ASAR	Alice Springs	89.28	130	P	P	21 01 02.5	-1.8
ESDC	Sonseca Array	92.96	349	P	P	21 01 21.4	+0.6
	comp=Z,0.8nm,1.0s,baz=188,slow=3.4,SNR=2.7						
	comp=Z,0.8nm,1.0s						
TXAR	Lajitas Array	127.34	271	PKP	PKPdf	21 07 12.6	0.0
	comp=Z,0.4nm,0.9s,baz=134,slow=3.6,SNR=3.5						
YKA	Yellowknife Ar	150.09	311	PKP	PKPdf	21 07 51.3	-1.1
	comp=Z,1.7nm,0.8s,baz=74,slow=0.9,SNR=4.1						
YKA				PKPbc	PKPbc	21 07 57.3	-0.1
	comp=Z,2.6nm,0.8s,baz=91,slow=1.9,SNR=38						
YKA	Yellowknife Ar	150.09	311		PKPbc	21 07 57.0	-0.4

IDC 25 20:49:40.1±5.8**, 22.°50S**×**172.°96E, h0**^{km}**, mb3.9**/2**, mbtmp3.9**/2**, Error ellipse: s-maj=282.4km s-min=51.2km az=154.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	35.87	260	P	P	20 56 42.4	+0.3
	1.9nm,0.9s,baz=90,slow=8.2,SNR=14						
	1.9nm,0.9s						
WRA	Warramunga Arr	36.02	267	P	P	20 56 42.6	-0.8
	1.2nm,0.7s,baz=102,slow=9.0,SNR=3.7						
	1.2nm,0.7s						
GERES	GERESS Array B	148.97	333	PKPbc	PKPbc	21 09 29.6	-0.5
	0.7nm,0.8s,baz=20,slow=4.3,SNR=8.5						

IDC ***25*** *20:53:17.9±1.4, 13.°11N×143.°64E, h211^{km}±19^{km}, mb3.1/6, mbtmp3.6/6, Error ellipse: s-maj=52.2km s-min=19.6km az=96.0*

ISC 25 20:53:17.1±0.9**, 13.°1N**±0.°2×**143.°4E**±0.°1**, h200**^{km}**, n7,** σ**0^{s}94**/8**, mb3.2**/6**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.48	70	P	Pn	20 53 51.3	+0.6
	38nm,0.5s,baz=276,slow=17,SNR=1.2						
GUMO				S	Sn	20 54 16.7	+0.1
	58nm,0.3s,baz=0.3,slow=23,SNR=9.2						
WRA	Warramunga Arr	34.03	195	P	P	20 59 41.9	-0.5
	0.7nm,0.7s,baz=19,slow=8.6,SNR=1.5						
	0.7nm,0.7s						
ASAR	Alice Springs	37.71	194	P	P	21 00 14.1	+0.4
	0.3nm,0.6s,baz=12,slow=8.5,SNR=4.7						
	0.3nm,0.6s						
MKAR	Makanchi Array	60.88	316	P	P	21 03 09.7	+1.0
	0.1nm,0.6s,baz=96,slow=6.4,SNR=1.3						
	0.1nm,0.6s						
BVAR	Borovoye Array	69.45	322	P	P	21 04 04.0	+0.4
	0.5nm,0.5s,baz=102,slow=7.5,SNR=2.6						
	0.5nm,0.5s						
ILAR	Eielson Array	69.61	25	P	P	21 04 03.5	-0.8
	0.3nm,0.9s,baz=248,slow=5.2,SNR=1.9						
	0.3nm,0.9s						
FINES	FINESS Array B	91.01	335	P	P	21 05 57.2	-1.2
	2.8nm,1.0s,baz=46,slow=4.2,SNR=3.5						
	2.8nm,1.0s						

MDD ***25*** *21:00:51.6±1.2, 36.°37N×10.°98W, h0^{km}, mb_Lg2.9/6, Error ellipse: s-maj=10.4km s-min=8.0km az=16.0*

INMG ***25*** *21:00:51.4±1.4, 36.°11N×11.°19W, h24^{km}±15^{km}, ML1.9, Error ellipse: s-maj=10.5km s-min=5.0km az=75.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*

IGIL ***25*** *21:00:51.3, 36.°11N×11.°10W, h18^{km}, ML1.6*

CNRM ***25*** *21:00:53.0, 36.°00N×10.°50W, h13^{km}*

ISC 25 21:00:46.7±1.9**, 36.°08N**±0.°04×**11.°09W**±0.°10**, h10**^{km}**, n58,** σ**1^{s}97**/90**, 1C, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.10	59	Pn	Pn	21 01 24.0	+2.1
PFVI				Sn	Sn	21 01 47.9	-0.1
PFVI	Vila Bisbo	2.10	59	⇑*i*P	Pn	21 01 24.0	+2.1
PFVI				*e*S	Sn	21 01 48.3	+0.2
PFVI				*i* IAML		21 01 48.5	
PFVI				*i* IAML		21 01 49.3	
PFVI				*i* IAML		21 01 51.0	
MORF	Marmelete	2.31	57	*e*P	Pn	21 01 26.9	+2.1
MORF				*e*S	Sn	21 01 52.6	-0.6
MORF				IAML		21 01 54.8	
	comp=N,7.0nm,0.1s						
MORF	Marmelete	2.31	57	*e*P	Pn	21 01 26.9	+2.1
MORF				*e*S	Sn	21 01 52.8	-0.4
MORF				*i* IAML		21 01 54.7	
MORF				*i* IAML		21 01 54.7	
MORF				*i* IAML		21 01 55.1	
PTEO	Sao Teotonio	2.39	52	*e*P	Pn	21 01 28.2	+2.3
PTEO				*e*S	Sn	21 01 55.0	-0.3
PTEO				*i* IAML		21 02 01.3	
PTEO				*i* IAML		21 02 03.1	
PTEO				*i* IAML		21 02 06.3	
PBDV	Barranco-do-Ve	2.79	64	Pn	Pn	21 01 33.9	+2.5
PBDV	Barranco-do-Ve	2.79	64	*e*P	Pn	21 01 33.9	+2.5
PBDV				*e*S	Sn	21 02 05.4	+0.3
PBDV				*i* IAML		21 02 11.0	
PBDV				*i* IAML		21 02 11.0	
PBDV				*i* IAML		21 02 12.8	
MESJ	Messejana	2.89	52	*e*P	Pn	21 01 34.7	+2.0
MESJ				*e*S	Sn	21 02 06.5	-1.0
MESJ				IAML		21 02 09.1	
	comp=E,1.1nm,0.2s						
MESJ	Messejana	2.89	52	*e*P	Pn	21 01 34.8	+2.0
MESJ				*e*S	Sn	21 02 07.2	-0.4
MESJ				*i* IAML		21 02 09.8	
MESJ				*i* IAML		21 02 14.7	
MESJ				*i* IAML		21 02 19.6	
PCVE	Castro Verde	2.89	57	Pn	Pn	21 01 34.7	+2.0
PCVE				Sn	Sn	21 02 07.5	-0.2
PCVE	Castro Verde	2.89	57	*e*P	Pn	21 01 35.1	+2.3
PCVE				*e*S	Sn	21 02 07.5	-0.2
PCVE				*i* IAML		21 02 09.7	
PCVE				*i* IAML		21 02 11.1	
PCVE				*i* IAML		21 02 14.3	
PVAQ	Vaqueiros	3.01	63	*e*P	Pn	21 01 36.8	+2.4
PVAQ				*e*S	Sn	21 02 10.4	-0.1
PVAQ				*i* IAML		21 02 13.4	
PVAQ				*i* IAML		21 02 13.6	
PVAQ				*i* IAML		21 02 14.6	
PVAQ	Vaqueiros	3.01	63	P	Pn	21 01 36.2	+1.8
PVAQ	Vaqueiros	3.01	63	S	Sn	21 02 07.7	-2.9
PMAFR	Mafra	3.21	26	Pn	Pn	21 01 38.1	+1.0
PMAFR	Mafra	3.21	26	*e*P	Pn	21 01 38.3	+1.1
PMAFR				*e*S	Sn	21 02 13.9	-1.5
PMAFR				*i* IAML		21 02 17.7	
PMAFR				*i* IAML		21 02 29.1	
PMAFR				*i* IAML		21 02 32.0	
PBEJ	Beja	3.23	52	*e*S	Sn	21 02 15.6	-0.2
PBEJ				*i* IAML		21 02 17.6	
PBEJ				*i* IAML		21 02 17.9	
EGRO	El Granado	3.23	62	Pn	Pn	21 01 40.1	+2.6
EGRO				Sn	Sn	21 02 16.0	-0.1
EGRO	El Granado	3.23	62	P	Pn	21 01 39.5	+2.0
EGRO				S	Sn	21 02 15.9	-0.1
MOE	Montemor	3.27	41	*e*P	Pn	21 01 39.8	+1.8
MOE				*e*S	Sn	21 02 17.0	0.0
MOE				*i* IAML		21 02 19.8	
MOE				*i* IAML		21 02 21.0	
MOE				*i* IAML		21 02 23.8	
EVO	Evora	3.46	44	Sn	Sn	21 02 19.8	-1.9
EVO				Pn	Pn	21 01 42.6	+2.0
PARRA	Arraiolos	3.65	41	*e*P	Pn	21 01 44.9	+1.7
PARRA				*e*S	Sn	21 02 24.6	-1.8
PARRA				*i* IAML		21 02 25.9	
PARRA				*i* IAML		21 02 27.8	
PARRA				*i* IAML		21 02 34.7	
PMTG	Montargil	3.75	36	*e*P	Pn	21 01 46.0	+1.5
PMTG				*e*S	Sn	21 02 27.1	-1.6
PMTG				*i* IAML		21 02 32.1	
PMTG				*i* IAML		21 02 33.5	
PMTG				*i* IAML		21 02 50.8	
PBAR	Barrancos	3.85	56	Pn	Pn	21 01 48.1	+2.2
PBAR				Sn	Sn	21 02 30.2	-1.0
PBAR	Barrancos	3.85	56	*e*P	Pn	21 01 48.1	+2.2
PBAR				*e*S	Sn	21 02 30.7	-0.6
PBAR				*i* IAML		21 02 33.1	
PBAR				*i* IAML		21 02 42.5	
PBAR				*i* IAML		21 02 50.5	
PSBE	So Bento	3.88	27	*e*P	Pn	21 01 47.7	+1.3
PSBE				*e*S	Sn	21 02 31.2	-0.8
PSBE				*i* IAML		21 02 43.4	
PSBE				*i* IAML		21 02 55.9	
EMIN	Mina Concepcio	3.92	63	Pn	Pn	21 01 49.2	+2.3
EMIN	Mina Concepcio	3.92	63	P	Pn	21 01 49.1	+2.3
EMIN				S	Sn	21 02 32.0	-0.8
EMIN				*i* IVmb_Lg		21 03 46.6	
PESTR	Estremoz	3.93	44	Pn	Pn	21 01 49.0	+1.9
PESTR	Estremoz	3.93	44	*e*P	Pn	21 01 49.0	+1.9
PESTR				*e*S	Sn	21 02 31.6	-1.7
PESTR				*i* IAML		21 02 43.6	
EBAD	Badajoz	4.20	49	Pn	Pn	21 01 52.1	+1.4
EBAD				Sn	Sn	21 02 38.0	-1.9
EBAD	Badajoz	4.20	49	P	Pn	21 01 51.8	+1.1
EBAD				S	Sn	21 02 37.1	-2.7
EBAD				*i* IVmb_Lg		21 04 09.3	
PSARD	Sardoal	4.21	32	*e*P	Pn	21 01 52.4	+1.5
PSARD				*e*S	Sn	21 02 38.5	-1.6
PSARD				*i* IAML		21 02 42.0	
PSARD				*i* IAML		21 02 43.6	
PSARD				*i* IAML		21 03 00.1	
ESPR	Espera	4.29	78	Sn	Sn	21 02 42.0	0.0
ESPR	Espera	4.29	78	S	Sn	21 02 41.8	-0.2
PMRV	Marv??o	4.44	40	*e*P	Pn	21 01 55.2	+1.1
PMRV				*e*S	Sn	21 02 43.6	-2.2
PMRV				*i* IAML		21 02 44.9	
PMRV				*i* IAML		21 02 46.9	
PMRV				*i* IAML		21 02 53.4	
PCAS	Casmilo, Conde	4.46	26	*e*P	Pn	21 01 55.7	+1.3
PCAS				*e*S	Sn	21 02 44.5	-1.8
PCAS				*i* IAML		21 02 46.1	
PCAS				*i* IAML		21 03 02.7	
ECAB	El Cabril	4.95	65	Pn	Pn	21 02 03.3	+2.2
ECAB	El Cabril	4.95	65	P	Pn	21 02 03.0	+2.0
ECAB				S	Sn	21 02 56.5	-1.9
ECAB				*i* IVmb_Lg		21 03 27.6	
PVIS	Viseu	5.26	27	*e*S	Sn	21 03 03.7	-2.5
IFR	Ifrane	5.53	116	Pn	Pn	21 02 10.8	+1.7
IFR				Sn	Sn	21 03 07.5	-5.4
OUK	Oukaimeden	5.55	150	P	Pn	21 02 11.2	+1.6
OUK	Oukaimeden	5.55	150	S	Sn	21 03 14.0	+0.2
EADA	Adamuz	5.60	66	P	Pn	21 02 12.4	+2.4
EADA				S	Sn	21 03 12.0	-2.5
EADA				*i* IVmb_Lg		21 04 49.5	
TIO	Tiouine	6.05	147	Pn	Pn	21 02 18.7	+2.3
TIO				Sn	Sn	21 03 24.4	-1.3
TIO	Tiouine	6.05	147	P	Pn	21 02 17.7	+1.4
TIO	Tiouine	6.05	147	S	Sn	21 03 25.0	-0.7
AKLM	AKL	6.11	103	P	Pn	21 02 14.3	-2.8
AKLM	AKL	6.11	103	S	Sn	21 03 18.6	-8.5
MD31	MD31	6.13	120	P	Pn	21 02 16.6	-0.7
MD31	MD31	6.13	120	S	Sn	21 03 23.4	-4.2
ELOB	Lobios	6.24	21	P	Pn	21 02 19.1	+0.2
ELOB				S	Sn	21 03 25.1	-5.1
MDT	Midelt	6.26	119	P	Pn	21 02 19.9	+0.6
MDT	Midelt	6.26	119	S	Sn	21 03 27.1	-3.8
PGAV	Gavieira, Arco	6.27	20	*e*P	Pn	21 02 20.4	+1.0
OUZM	OUZ	6.30	144	P	Pn	21 02 21.7	+2.0
OUZM	OUZ	6.30	144	S	Sn	21 03 30.9	-0.8
PAB	San Pablo	6.36	55	P	Pn	21 02 21.9	+1.4
PAB				S	Sn	21 03 28.4	-4.8
PAB				*i* IVmb_Lg		21 06 52.6	

IGQ 25 21:01:25.2±0.7**, 0°S**±4°×**8°1W**±°**, h5**^{km}±2^{km}**, MLv3.5**/29**, 6D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAB1	Cabo Pasado-Ma	0.38	124	S	Sg	21 01 37.9	+0.3
CAB1				⇓P	Pg	21 01 32.7	+0.1
ABH2	Ecuador-Univer	0.59	144	⇓P	Pg	21 01 37.1	+0.4
PECV	Mancha de Ca P	0.92	131	P	Pg	21 01 38.8	-4.1
FLF1	Flavio Alfaro-	0.92	101	⇓P	Pg	21 01 42.6	-0.3
FLF1				S	Sn	21 01 57.5	-1.0
ISPT	Isla de la Pla	1.13	197	P	Pg	21 01 46.8	-0.2
ISPT				S	Sb	21 02 02.3	0.0
JIPI	JIPIJAPA	1.20	171	⇓P	Pg	21 01 48.2	0.0
PPLP	Puerto Lpez	1.36	181	P	Pn	21 01 50.3	-0.7
PPLP				S	Sb	21 02 07.9	-1.1
RVRD	Rio Verde	1.83	48	P	Pn	21 01 57.9	+0.4
PAC1	Pacto, Paraso	2.00	77	P	Pn	21 01 58.2	-1.7
ILLI	Illinizas Sur	2.09	105	P	Pn	21 01 59.8	-1.6
GGPT	Toaza - Volcan	2.12	91	P	Pn	21 01 60.0	-1.8
PINO	Pino	2.14	90	P	Pn	21 02 00.3	-1.9
JUA2	San Juan 2	2.14	91	⇓P	Pn	21 02 00.5	-1.5
TERV	Terraza Guagua	2.14	90	P	Pn	21 02 00.3	-1.9
GGPC	Guagua Pichinc	2.15	90	P	Pn	21 02 00.7	-1.6
PULU	Pululahua	2.25	85	P	Pn	21 02 01.7	-1.8
CHSH	Refugio Sur-Vo	2.29	125	P	Pn	21 02 03.9	-0.4
CAMI	Rancho Maria	2.29	103	P	Pn	21 02 03.9	-0.3
SUCR	Mariscal Sucre	2.30	102	P	Pn	21 02 03.7	-0.5
SLOR	San Lorenzo -	2.31	104	P	Pn	21 02 03.8	-0.7
OTAV	Otavalo	2.33	80	P	Pn	21 02 03.1	-1.6
PITA	Cotopaxi Volc	2.34	99	P	Pn	21 02 04.6	-0.3
BMOR	Cotopaxi Volca	2.35	104	P	Pn	21 02 04.7	-0.4
BREF	Cotopaxi Volca	2.36	102	P	Pn	21 02 04.8	-0.4
PUEM	Granja Avicola	2.38	89	P	Pn	21 02 04.7	-0.5
BVC2	Cotopaxi Volca	2.38	102	P	Pn	21 02 05.3	-0.2
VC1	Cotopaxi 1	2.39	101	⇓P	Pn	21 02 05.5	-0.1
TAMH	Tambohuasha Ch	2.39	125	P	Pn	21 02 06.0	+0.5
CUSE	Cuicocha Este	2.39	79	P	Pn	21 02 05.1	-0.5
BTAM	Cotopaxi Volca	2.40	102	P	Pn	21 02 05.5	-0.2
MILO	Milagro-Astudi	2.41	150	P	Pn	21 02 03.5	-1.8
CUIC	Cuicocha-Domo	2.43	79	P	Pn	21 02 06.1	+0.1
VCES	Cotopaxi	2.43	105	P	Pn	21 02 05.8	-0.3
TAMB	Tambo	2.43	102	P	Pn	21 02 06.1	-0.1
ANTG	Antisana-Guama	2.51	97	P	Pn	21 02 07.4	+0.2
URCU	Urcuqui	2.56	76	P	Pn	21 02 08.2	+0.3
IMBA	Imbabura, San	2.58	80	P	Pn	21 02 09.0	+0.8
ANTS	Antisana-Sarah	2.59	97	P	Pn	21 02 08.3	-0.2
ANTI	Antisana	2.60	96	P	Pn	21 02 08.6	+0.1
BMAS	Trigal station	2.62	120	P	Pn	21 02 07.6	-1.0
BPAT	Tungurahua Vol	2.66	120	P	Pn	21 02 10.5	+1.2
COHC	Cochancay	2.72	147	P	Pn	21 02 08.7	-0.9
CAYR	Refugio Cayamb	2.74	86	P	Pn	21 02 11.1	+0.6
ANGU	Angureal	2.75	85	P	Pn	21 02 10.9	+0.4
CHMA	Chilma	2.87	69	P	Pn	21 02 09.7	-2.3
LNGL	El Angel-Carch	2.89	72	P	Pn	21 02 13.2	+0.8
CHL1	Volc¡n Chiles	2.96	71	P	Pn	21 02 13.1	-0.3
PCRA	Pucara 2	3.26	158	P	Pn	21 02 18.7	+1.2
BONI	La Bonita	3.27	79	P	Pn	21 02 19.7	+2.2
BOSC	San Juan Bosco	3.71	143	P	Pn	21 02 27.2	+3.7
BBAC	Balboa, Cauca	4.12	58	P	Pn	21 02 29.9	+0.7

NOU ***25*** *21:03:34.1, 36.°92S×177.°49E, h214^{km}, MLv3.7/12, Off E. Coast of N. Island, N.Z.*

WEL ***25*** *21:03:41.0±1.1, 37°S±6°×17°7E±°, h144^{km}±10^{km}, M3.1/34, ML2.8/17, MLv3.1/34, Error ellipse: s-maj=9.7km s-min=6.6km az=52.4, confirmed*

ISC 25 21:03:36.3±2.3**, 37.°05S**±0.°09×**177.°38E**±0.°09**, h186**^{km}±13^{km}**, n83,** σ**1^{s}67**/90**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	Te Kaha	0.77	155	P	Pn	21 04 03.6	+0.4
HAZ				S	Sn	21 04 22.0	-2.0
MXZ	Matakaoa Point	0.90	125	P	Pn	21 04 06.0	+2.1
MXZ	Matakaoa Point	0.90	125	P	Pn	21 04 05.5	+1.6
MXZ				S	Sn	21 04 24.3	-1.1
RUGZ	Raukumara Rang	0.94	165	P	Pn	21 04 04.4	+0.1
PKGZ	Pakihiroa	0.99	146	P	Pn	21 04 05.9	+1.3
PKGZ				S	Sn	21 04 25.0	-1.6
WMGZ	Waiomatatini S	1.13	133	P	Pn	21 04 06.7	+1.2
WMGZ				S	Sn	21 04 27.3	-1.0
TWGZ	Tauwhareparae	1.22	157	P	Pn	21 04 08.3	+1.9
TWGZ				S	Sn	21 04 28.1	-1.7
URZ	Urewera	1.22	190	P	Pn	21 04 07.0	+0.7
URZ	Urewera	1.22	190	P	Pn	21 04 07.1	+0.8

URZ				S	Sn	21 04 28.2	-1.5
PUZ	Puketiti	1.23	146	P	Pn	21 04 07.7	+1.2
MWZ	Matawai	1.28	175	P	Pn	21 04 08.5	+1.5
MWZ				S	Sn	21 04 29.7	-1.1
KUZ	Kuaotunu	1.36	283	P	Pn	21 04 07.4	-0.1
KUZ	Kuaotunu	1.36	283	P	Pn	21 04 07.6	+0.1
TARZ	Mount Tarawera	1.37	210	P	Pn	21 04 10.4	+2.7
KMRZ	Kaimai	1.39	235	P	Pn	21 04 09.0	+1.2
TKGZ	Te Karaka	1.43	165	P	Pn	21 04 09.7	+1.6
TKGZ				S	Sn	21 04 31.8	-1.2
MUGZ	Murupara	1.50	198	P	Pn	21 04 10.0	+1.3
CNGZ	Carnagh Statio	1.57	155	P	Pn	21 04 11.5	+2.0
RTZ	Ruatahuna	1.59	191	P	Pn	21 04 12.1	+2.4
TOZ	Tahuroa Road	1.64	245	P	Pn	21 04 11.6	+1.5
RIGZ	Rimuhau	1.68	170	P	Pn	21 04 12.4	+1.9
ALRZ	Allen Road	1.71	208	P	Pn	21 04 12.7	+1.8
SNGZ	Shannon Statio	1.73	181	P	Pn	21 04 12.6	+1.6
GRZ	Great Barrier	1.74	297	P	Pn	21 04 11.5	+0.4
MKAZ	Moumakai	1.77	268	P	Pn	21 04 12.7	+1.3
WIAZ	Waiheke Island	1.82	278	P	Pn	21 04 12.9	+1.0
MTHZ	Maungataniwha	1.84	193	P	Pn	21 04 14.2	+2.0
MRHZ	Matea Rd	1.93	203	P	Pn	21 04 14.7	+1.6
ETAZ	East Tamaki Re	1.96	272	P	Pn	21 04 15.0	+1.6
MBAZ	Motutapu North	2.01	277	P	Pn	21 04 15.3	+1.4
WHHZ	Waihua	2.02	183	P	Pn	21 04 15.9	+1.8
WHHZ				S	Sn	21 04 43.3	-0.2
NMHZ	Naumai	2.09	192	P	Pn	21 04 17.6	+2.8
ABAZ	Army Bay	2.09	282	P	Pn	21 04 16.2	+1.5
AWAZ	Awhitu Peninsu	2.19	269	P	Pn	21 04 17.7	+1.9
BKZ	Black Stump Fm	2.22	198	P	Pn	21 04 17.7	+1.5
BKZ	Black Stump Fm	2.22	198	P	Pn	21 04 17.9	+1.6
ARHZ	Aropaoanui	2.23	188	P	Pn	21 04 18.0	+1.8
WTAZ	Waiatarua	2.25	272	P	Pn	21 04 18.6	+2.1
RVAZ	Riverhead Bore	2.26	276	P	Pn	21 04 18.3	+1.7
NTVZ	North Tongarir	2.44	213	P	Pn	21 04 21.4	+2.5
TMVZ	Te Maari	2.44	212	P	Pn	21 04 21.1	+2.3
MCHZ	McNeill Hill	2.45	192	P	Pn	21 04 20.6	+1.9
KRVZ	Karewarewa	2.46	213	P	Pn	21 04 22.0	+3.0
HIZ	Hauiti	2.47	233	P	Pn	21 04 21.7	+2.7
HIZ	Hauiti	2.47	233	P	Pn	21 04 21.9	+2.9
KWHZ	Kaweka Forest	2.48	197	P	Pn	21 04 20.7	+1.5
WTVZ	West Tongariro	2.50	214	P	Pn	21 04 21.8	+2.4
NNVZ	North Ngauruho	2.50	213	P	Pn	21 04 22.2	+2.7
OTVZ	Oturere	2.50	212	P	Pn	21 04 21.6	+2.1
TWVZ	Taurewa	2.53	217	P	Pn	21 04 22.1	+2.3
SNVZ	South Ngauruho	2.53	212	P	Pn	21 04 22.1	+2.2
NGZ	Ngauruhoe	2.54	213	P	Pn	21 04 22.4	+2.4
TUVZ	Tukino	2.59	211	P	Pn	21 04 22.9	+2.3
CKHZ	Cape Kidnapper	2.61	185	P	Pn	21 04 22.2	+1.6
FWVZ	Far West T-bar	2.63	213	P	Pn	21 04 23.3	+2.3
TRVZ	Turoa	2.67	212	P	Pn	21 04 23.9	+2.5
WNVZ	Wahianoa	2.67	211	P	Pn	21 04 23.1	+1.7
MOVZ	Moawhango	2.67	208	P	Pn	21 04 22.3	+0.9
WCZ	Waipu Caves	2.68	294	P	Pn	21 04 22.1	+0.6
KRHZ	Kereru	2.70	197	P	Pn	21 04 22.6	+0.9
PKVZ	Pokaka	2.75	215	P	Pn	21 04 24.4	+2.1
KAHZ	Kahuranaki	2.77	188	P	Pn	21 04 23.8	+1.4
MTVZ	Mangateitei	2.77	212	P	Pn	21 04 24.8	+2.3
VRZ	Vera Road	2.92	224	P	Pn	21 04 29.9	+5.6
PXZ	Pawanui	3.00	188	P	Pn	21 04 26.4	+1.2
PNHZ	Pukenui	3.00	198	P	Pn	21 04 25.9	+0.6
WPHZ	Waipukurau	3.10	193	P	Pn	21 04 27.7	+1.4
TSZ	Takapari Road	3.20	200	P	Pn	21 04 28.4	+0.7
PRHZ	Porangahau	3.26	190	P	Pn	21 04 29.2	+0.8
DVHZ	Dannevirke	3.38	196	P	Pn	21 04 29.8	0.0
PKE	Pukeiti	3.42	230	P	Pn	21 04 34.6	+4.2
KHEZ	Kahui Hut	3.47	229	P	Pn	21 04 32.8	+1.8
ANWZ	Angora Road	3.47	191	P	Pn	21 04 32.0	+1.1
POWZ	Post Office Ro	3.56	200	P	Pn	21 04 32.7	+0.6
PRWZ	Pori Road	3.67	197	P	Pn	21 04 34.3	+1.0
BFZ	Birch Farm	3.73	193	P	Pn	21 04 34.8	+0.7
TIWZ	Tintock	3.90	197	P	Pn	21 04 36.4	+0.2
SNZO	South Karori	4.73	205	P	Pn	21 04 47.0	+0.2
QRZ	Quartz Range	5.33	224	P	Pn	21 04 54.6	-0.1
	45nm,2.9s						
KHZ	Kahutara	6.12	208	P	Pn	21 05 04.2	-0.6
	28nm,1.2s						
ODZ	Otahua Downs	9.46	210	P	Pn	21 05 47.9	-0.7
JCZ	Jackson Bay	9.58	220	P	Pn	21 05 49.9	-0.4
PYZ	Puysegur Point	12.11	218	P	Pn	21 06 22.1	-0.7
	56nm,1.3s						

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*IDC **25** 21:13:08.3±3.5, 29°.90N×143°.32E, h0^{km}, mb3.6/5, mbtmp3.6/8, ML3.2/3, Error ellipse: s-maj=113.4km s-min=20.3km az=74.0*

ISC 25 21:13:13.3±2.4, 29°.9N±0°.1×143°.2E±0°.4, h35^{km}, n8, σ0^s.65/8, mb3.6/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.91	199	Pn	Pn	21 13 56.4	-0.8
	3.7nm,0.3s,baz=253,slow=19,SNR=1.7						
	101nm,1.1s						
MJAR	Matsushiro Arr	7.88	329	Pn	Pn	21 15 04.8	-0.6
	0.2nm,0.3s,baz=160,slow=12,SNR=11						
	1.0nm,0.4s						
KSRS	Korea Array	14.82	305	Pn	Pn	21 16 40.9	+0.6
	0.1nm,0.3s,baz=121,slow=11,SNR=4.3						
	0.7nm,0.6s						
SONM	Songino Array	33.44	313	P	P	21 19 49.0	0.0
	0.9nm,0.9s,baz=112,slow=8.2,SNR=5.3						
	0.9nm,0.9s						
MKAR	Makanchi Array	49.48	308	P	P	21 22 00.4	+0.2
	0.8nm,0.7s,baz=88,slow=9.5,SNR=8.3						
	0.8nm,0.7s						
WRA	Warramunga Arr	50.25	191	P	P	21 22 06.8	+0.5
	0.3nm,0.5s,baz=6.6,slow=7.4,SNR=4.6						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	51.81	313	P	P	21 22 17.8	+0.1
	0.8nm,0.6s,baz=90,slow=7.7,SNR=9.4						
	0.8nm,0.6s						
ASAR	Alice Springs	53.97	191	P	P	21 22 34.5	+0.6
	0.2nm,0.6s,baz=5.9,slow=5.5,SNR=2.1						
	0.2nm,0.6s						

UCR 25 21:13:16.1±1.1, 8°.45N×82°.97W, h22^{km}±2^{km}, MW3.5, 6C-11D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPPC	Paso Canoas	0.15	59	⇑*e*P	Pb	21 13 20.7	-0.9
LPPC				*e*S	Sb	21 13 24.5	-1.1
NELY	Ciudad Neily	0.20	7	⇑*e*P	Pb	21 13 21.4	-0.4
NELY				*e*S	Sb	21 13 25.7	0.0
FITO	Golfito	0.25	313	⇑*i*P	Pb	21 13 21.3	-1.0
FITO				*e*S	Sb	21 13 25.1	-1.3
PTPA	Petro Terminal	0.27	159	⇑*e*P	Pb	21 13 22.7	+0.2
PTPA				*e*S	Sn	21 13 28.7	-1.6
DMCAL	E. de Neily	0.28	39	⇓*i*P	Pb	21 13 22.6	-0.1
DMCAL				*e*S	Sb	21 13 27.8	+0.6
EDAD	Golfito	0.28	315	⇑*i*P	Pb	21 13 21.8	-0.8
EDAD				*e*S	Sb	21 13 26.2	-0.9
VITO	San Vito	0.36	0	*e*P	Pb	21 13 23.8	-0.2
PIRO	Carate, Puerto	0.37	262	⇑*i*P	Pb	21 13 23.6	-0.3
LMNES	Limones	0.37	163	*e*P	Pb	21 13 24.4	+0.5
SCLRA	Santa Clara, W	0.42	26	*e*P	Pb	21 13 24.8	-0.2
BRU2	Volcan	0.44	39	⇓*i*P	Pb	21 13 25.1	-0.1
BRU2				*e*S	Sb	21 13 32.2	+0.8
CLLRA	Cordillera,	0.46	51	⇓*i*P	Pb	21 13 25.6	0.0
CLLRA				*e*S	Sb	21 13 31.6	-0.3
JEFFS	S de V. Baru	0.48	64	⇓*i*P	Pb	21 13 25.9	-0.1
ALCO	Alturas Coton,	0.51	15	⇓*i*P	Pb	21 13 26.1	-0.5
ALCO				*e*S	Sb	21 13 33.6	0.0
BQTLY	Boquete Panama	0.59	59	⇓*i*P	Pb	21 13 27.2	-0.6
BQTLY				*e*S	Sb	21 13 36.0	+0.1
EDP2	Potrero Grande	0.59	340	*e*P	Pb	21 13 27.5	-0.4
DAP26	falda E V. Bar	0.64	58	*e*P	Pb	21 13 27.8	-0.8
DAP26				*e*S	Sb	21 13 36.9	-0.4
FIMO	Fila Mora	0.65	325	*e*P	Pn	21 13 30.1	-0.1
FIMO				*e*S	Sb	21 13 37.3	-0.4
DRK0	Durika	0.85	341	⇓*e*P	Pb	21 13 30.9	-1.4
DRK0				*e*S	Sb	21 13 41.4	-1.9
PBNVO	Pueblo Nuevo,	0.88	60	⇓*e*P	Pb	21 13 31.5	-1.3
PBNVO				*e*S	Sb	21 13 43.1	-1.0
RBALA	Bur	0.91	62	⇓*i*P	Pb	21 13 32.2	-1.0
RBALA				*e*S	Sb	21 13 44.4	-0.5
EDPE	Pejibaye, P	0.92	320	*e*P	Pb	21 13 32.2	-1.2
SAJE	San Jernim	1.03	329	*e*P	Pb	21 13 34.0	-1.4
BRIBI	Bribri	1.17	7	⇓*i*P	Pb	21 13 37.7	+0.1
BRIBI				*e*S	Sn	21 13 54.8	+2.3
KKNTU	Kakintº	1.21	71	⇓*i*P	Pn	21 13 36.8	-1.0
KKNTU				*e*S	Sn	21 13 51.8	-1.8
BUS1	Rivas	1.34	325	*e*P	Pn	21 13 39.0	-0.9
PIEC	Cerro El Cedra	1.52	320	*e*P	Pn	21 13 41.6	-0.6
VTCV	VTCV, Calle Va	1.69	334	*e*P	Pn	21 13 45.0	+0.4
ABRB	Las Abras (San	1.71	334	*e*P	Pn	21 13 45.6	+0.7
CVTV	Tajo	1.72	334	*e*P	Pn	21 13 45.6	+0.5
VTR0	Volcan Turrial	1.74	333	*e*P	Pn	21 13 46.3	+0.9
CVTR	Volcan Turrial	1.74	333	*e*P	Pn	21 13 45.6	+0.2

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*IDC **25** 21:24:03.3±1.8, 1°.11S×126°.62E, h0^{km}, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=189.3km s-min=23.4km az=66.0*

*DJA **25** 21:24:05.2±0.2, 1°S±1°×12°8E±°, h10^{km}, M4.0/14, mb4.3/5, MLv3.8/14*

ISC 25 21:24:04.5±0.9, 0°.56S±0°.04×127°.75E±0°.05, h10^{km}, n15, σ1^s.06/23, mb3.7/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.38	344	P	Pn	21 24 30.2	+0.4
TNTI				S	Sg	21 24 50.2	+1.3
SANI	Sanana	2.30	230	P	Pn	21 24 41.9	-0.6
SANI				S	Sn	21 25 12.8	+1.9
NLAI	Namlea	2.74	194	P	Pn	21 24 49.2	+0.6
NLAI				S	Sn	21 25 22.2	+0.5
KRAI	Karang Ratu	2.81	167	P	Pn	21 24 50.6	+1.0
KRAI				S	Sn	21 25 24.8	+1.2
MSAI	Masohi	3.01	157	P	Pn	21 24 53.4	+1.2
MSAI				S	Sn	21 25 29.4	+1.0
AAI	Ambon	3.14	172	P	Pn	21 24 55.1	+1.1
AAI				S	Sn	21 25 31.6	0.0
SWI	Sorong	3.52	95	P	Pn	21 24 59.5	+0.2
SWI				S	Sn	21 25 41.9	+0.8
SIJI	Sorong	3.53	95	P	Pn	21 24 58.8	-0.6
SIJI				S	Sn	21 25 42.1	+0.8
FAKI	Fak Fak	5.07	118	P	Pn	21 25 20.2	-0.4
	0.1nm26nm,0.9s						
MRSI	Marisa	5.90	280	P	Pn	21 25 33.0	+0.9
APSI	Ampana	6.11	267	P	Pn	21 25 35.4	+0.4
WRA	Warramunga Arr	20.31	162	P	P	21 28 38.8	-2.1
	0.5nm,0.7s,baz=337,slow=11,SNR=1.8						
	0.5nm,0.7s						
ASAR	Alice Springs	23.73	166	P	P	21 29 15.6	-1.5
	1.1nm,0.8s,baz=341,slow=8.8,SNR=11						
	1.1nm,0.8s						
MKAR	Makanchi Array	61.65	326	P	P	21 34 22.4	-0.3
	0.3nm,0.5s,baz=115,slow=8.4,SNR=5.4						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	65.89	328	P	P	21 34 49.5	-1.0
	0.4nm,0.6s,baz=120,slow=5.7,SNR=3.5						
	0.4nm,0.6s						

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*NEIC **25** 21:26:11.7±1.3, 22°.2S±0°.2×173°.5E±0°.1, h10^{km}±2^{km}, mb4.4/11, Error ellipse: s-maj=27.3km s-min=21.0km az=18.0*

*IDC **25** 21:26:12.6±1.8, 22°.88S×173°.12E, h0^{km}, mb4.2/6, mbtmp4.1/7, ML3.3/1, Error ellipse: s-maj=74.0km s-min=25.6km az=161.0*

ISC 25 21:26:18.4±0.6, 22°.6S±0°.1×173°.0E±0°.1, h32^{km}, n43, σ1^s.30/41, mb4.4/12, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINNC	Pines Island,	5.15	269	Pn	Pn	21 27 35.2	+1.9
DZM	Mont Dzumac	6.12	274	Pn	Pn	21 27 47.4	+0.7
	0.7nm,0.3s,baz=59,slow=22,SNR=6.8						
	11nm,0.9s						
DZM	Mont Dzumac	6.12	274		Pn	21 27 47.6	+0.9
MRZ	Mangatainoka R	18.09	174	P	P	21 30 27.9	+0.4
MRZ				IAmb	IAmb	21 30 48.3	
	comp=Z,29nm,1.3s						
BFZ	Birch Farm	18.19	172		P	21 30 29.9	+1.4
CTAO	Charters Tower	25.05	271	P	P	21 31 39.8	-0.1
CTAO				IAmb	IAmb	21 32 09.0	
	comp=Z,13nm,1.2s						
AS31	Alice Springs	35.91	261		P	21 33 15.1	-0.8
ASAR	Alice Springs	35.91	261	P	P	21 33 15.8	-0.2
	comp=Z,4.3nm,0.8s,baz=85,slow=8.7,SNR=36						
	comp=Z,4.3nm,0.8s						
ASAR	Alice Springs	35.91	261	P	P	21 33 14.1	-1.8
WB0	Warramunga Arr	36.06	267		P	21 33 15.6	-1.8
WRA	Warramunga Arr	36.08	267	P	P	21 33 15.8	-1.6
	comp=Z,2.7nm,0.7s,baz=95,slow=7.9,SNR=13						
	comp=Z,2.7nm,0.7s						
WRA	Warramunga Arr	36.08	267	P	P	21 33 15.0	-2.4
FORT	Forrest	40.76	249	P	P	21 33 57.0	+0.4
FORT				IAmb	IAmb	21 34 04.3	
	comp=Z,6.0nm,0.8s						
FITZ	Fitzroy Crossi	44.51	267		P	21 34 26.7	-0.5
FITZ				IAmb	IAmb	21 34 28.3	
	comp=Z,5.4nm,0.9s						
VNDA	Vanda	55.20	183	P	P	21 35 47.8	+0.1
VNDA				IAmb	IAmb	21 35 55.8	
	comp=Z,5.1nm,1.4s						
MJAR	Matsushiro Arr	67.42	330	P	P	21 37 12.1	+1.3
	comp=Z,2.5nm,1.1s,baz=167,slow=6.7,SNR=4.3						
	comp=Z,2.5nm,1.1s						
QSPA	South Pole Qui	67.43	180	P	P	21 37 09.5	-1.2
QSPA				IAmb	IAmb	21 37 22.9	
	comp=Z,5.1nm,1.2s						
CMAR	Chiang Mai Arr	83.10	293	P	P	21 38 41.1	-0.4
	comp=Z,0.3nm,0.3s,baz=123,slow=4.5,SNR=4.8						
	comp=Z,0.3nm,0.3s						
CMAR	Chiang Mai Arr	83.10	293	P	P	21 38 38.3	-3.2
SNAA	Sanae	85.89	181	P	P	21 38 54.4	-0.4
SNAA				IAmb	IAmb	21 38 58.7	
	comp=Z,3.3nm,1.0s						
H03S2	Juan Fernandez	91.50	128	T	T	23 20 29.1	
	baz=241						
H03S1	Juan Fernandez	91.51	128	T	T	23 20 28.0	
	baz=241						
H03S3	Juan Fernandez	91.52	128	T	T	23 20 32.7	
	baz=241						
ILAR	Eielson Array	92.46	16	P	P	21 39 24.8	-0.9
	comp=Z,1.0nm,1.0s,baz=231,slow=5.7,SNR=3.7						
	comp=Z,1.0nm,1.0s						
TXAR	Lajitas Array	95.31	61	P	P	21 39 40.2	+0.5
	comp=Z,0.7nm,1.1s,baz=255,slow=2.3,SNR=3.4						
	comp=Z,0.7nm,1.1s						
EKA	Eskdalemuir Ar	147.23	356	PKPbc	PKPdf	21 45 55.7	-0.2
	comp=Z,1.1nm,0.8s,baz=0.8,slow=3.1,SNR=4.5						
CLL	Collm	147.45	337	*e*PKPbc	PKPdf	21 45 56.0	-0.4
VRAC	Vranov	147.52	331	*e*PKP	PKPbc	21 45 58.9	-0.3
CONA	Conrad Observa	148.86	330	*e*PKP	PKPab	21 46 05.8	-0.9
	comp=Z,2.1nm,0.9s						
GERES	GERESS Array B	149.13	333	PKP	PKPdf	21 45 59.4	0.0
	comp=Z,1.8nm,0.7s,baz=35,slow=3.6,SNR=8.7						
GERES				PKPbc	PKPbc	21 46 03.5	0.0
	comp=Z,1.8nm,0.7s,baz=56,slow=7.1,SNR=18						
MOA	Molln	149.64	331	*e*PKiKP	PKPab	21 46 10.1	+0.2
	comp=Z,4.4nm,1.1s						
BIOA	Bad Ischl, Aus	150.04	332	*e*PKP	PKPbc	21 46 04.5	-1.3
	comp=Z,4.7nm,1.0s						
SOKA	Soboth	150.15	329	*e*PKP	PKPbc	21 46 05.8	-0.3
	comp=Z,2.9nm,1.3s						
OBKA	Obir	150.50	329	*e*PKP	PKPdf	21 46 03.0	+1.4
	comp=Z,2.2nm,1.0s						
LESA	Schwarzleotal	150.66	332	*e*PKP	PKPbc	21 46 06.8	-0.5
	comp=Z,3.8nm,0.7s						
MYKA	Terra Mystica	150.84	330	*i* PKP	PKPbc	21 46 07.1	-0.6
	comp=Z,3.1nm,0.8s						
WATA	Walderalm	151.20	333	*e*PKP	PKPbc	21 46 08.1	-0.6
	comp=Z,3.3nm,0.7s						
WTTA	Wattenberg	151.23	333	*i* PKP	PKPbc	21 46 08.0	-0.7
	comp=Z,3.1nm,0.8s						
ABTA	Abfaltersbach	151.26	332	*i* PKP	PKPbc	21 46 07.5	-1.2
	comp=Z,3.7nm,1.0s						
RETA	Reutte	151.41	334	*e*PKP	PKiKP	21 46 12.0	+2.5
	comp=Z,2.2nm,0.8s						
SQTA	Sankt Quirin	151.44	334	*i* PKP	PKPbc	21 46 08.9	-0.3
	comp=Z,4.6nm,0.7s						
FETA	Feichten	151.80	334	*i* PKP	PKPbc	21 46 10.0	-0.1
	comp=Z,4.2nm,0.9s						
DAVA	Damuels	151.92	335	*e*PKiKP	PKiKP	21 46 14.2	+3.5
	comp=Z,0.2nm,0.3s						

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*BGR **25** 21:33:00.3, 24°.80S×177°.14E, h33^{km}*

*IDC **25** 21:33:03.2±0.7, 22°.09S×173°.53E, h0^{km}, mb4.3/15, mbtmp4.3/17, ML3.5/2, MS4.4/8, Error ellipse: s-maj=23.3km s-min=18.1km az=120.0*

*NEIC **25** 21:33:05.4±1.9, 22°.00S±0°.09×173°.62E±0°.06, h10^{km}±1^{km}, mb4.8/33, Error ellipse: s-maj=17.7km s-min=5.0km az=149.0*

ISC 25 21:33:09.1±0.5, 22°.06S±0°.09×173°.53E±0°.09, h40^{km}, n145, σ0^s.75/138, mb4.6/27, MS4.3/6, 19C-9D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINNC	Pines Island,	5.66	263		Pn	21 34 30.6	-0.1
DZM	Mont Dzumac	6.57	269	Pn	Pn	21 34 41.4	-1.9
	0.5nm,0.3s,baz=72,slow=19,SNR=6.0						
	7.3nm,0.6s						
DZM	Mont Dzumac	6.57	269		Pn	21 34 42.8	-0.6
RAO	Raoul Island	10.52	135	LR	LR	21 38 44.0	
	comp=Z,1µm,21.7s,baz=356,slow=32						
URZ	Urewera	16.44	170	Pn	Pn	21 36 54.9	-1.9
	0.3nm,0.3s,baz=4.8,slow=13,SNR=5.0						
URZ				LR	LR	21 41 24.5	
	comp=Z,862nm,19.5s,baz=324,slow=30						
	7.3nm,1.0s						
RTZ	Ruatahuna	16.77	171		Pn	21 37 00.9	-0.1
RTZ				IAmb	IAmb	21 37 17.3	
	comp=Z,63nm,1.4s						
TUWZ	Tuamarina	19.32	179	P	Pn	21 37 31.4	-0.7
EIDS	Eidsvold	20.81	256	P	P	21 37 48.4	+1.2
EIDS				IAmb	IAmb	21 38 00.5	
	comp=Z,30nm,1.4s						
ARMA	Armidale	21.31	242	P	P	21 37 54.7	+2.1
RAR	Rarotonga	24.82	93	LR	LR	21 46 10.5	
	comp=Z,435nm,20.2s,baz=292,slow=32						
CTA	Charters Tower	25.52	269	LR	LR	21 47 47.4	
	comp=Z,841nm,18.3s,baz=60,slow=35						
CTAO	Charters Tower	25.52	269	P	P	21 38 35.4	+1.3
CTAO				IAmb	IAmb	21 38 46.0	
	comp=Z,18nm,1.2s						
TOO	Toolangi	28.68	231	P	P	21 39 03.8	+1.5
STKA	Stephens Creek	30.00	244	P	P	21 39 12.7	-1.4
	comp=Z,2.9nm,0.8s,baz=90,slow=15,SNR=5.0						
	comp=Z,2.9nm,0.8s						
AS31	Alice Springs	36.47	260		P	21 40 10.5	-0.1
ASAR	Alice Springs	36.47	260	P	P	21 40 10.5	-0.1
	comp=Z,6.4nm,0.9s,baz=86,slow=8.9,SNR=46						
ASAR				LR	LR	21 55 05.7	
	comp=Z,527nm,18.6s,baz=128,slow=36						
	comp=Z,6.4nm,0.9s						
ASAR	Alice Springs	36.47	260	P	P	21 40 10.0	-0.6
WB0	Warramunga Arr	36.56	266	P	P	21 40 10.4	-1.0
WRA	Warramunga Arr	36.58	266	P	P	21 40 10.8	-0.8
	comp=Z,3.6nm,0.9s,baz=102,slow=9.0,SNR=8.6						
	comp=Z,3.6nm,0.9s						
WRA	Warramunga Arr	36.58	266	P	P	21 40 09.8	-1.7
JAY	Jayapura	37.34	297	LR	LR	21 55 01.1	
	comp=Z,777nm,18.4s,baz=266,slow=35						
MTN	Manton Dam	41.35	276		P	21 40 50.9	-0.6
MTN				IAmb	IAmb	21 40 52.8	
	comp=Z,24nm,1.1s						
FORT	Forrest	41.41	248	P	P	21 40 51.8	+0.1
FITZ	Fitzroy Crossi	45.01	266	P	P	21 41 21.8	+0.8
GUMO	Guam	45.23	319	LR	LR	21 59 26.3	
	comp=Z,243nm,18.7s,baz=108,slow=35						
SOEI	Soe	48.73	276		P	21 41 50.6	+0.3
NWAO	Narrogin (SRO)	50.58	245	P	P	21 42 04.4	+0.3
NWAO				IAmb	IAmb	21 42 23.0	
	comp=Z,24nm,1.2s						
MMRI	Maumere	51.00	277		P	21 42 06.8	-0.6
MORW	Morawa	51.91	250	P	P	21 42 14.0	0.0
MORW				IAmb	IAmb	21 42 15.4	
	comp=Z,16nm,0.9s						
VNDA	Vanda	55.80	183	P	P	21 42 41.3	-0.4
	comp=Z,0.6nm,0.6s,baz=353,slow=7.6,SNR=5.4						
	comp=Z,0.6nm,0.6s						
VNDA	Vanda	55.80	183	P	P	21 42 41.7	-0.1
JAGI	Jajag, Banyuwa	58.53	274	P	P	21 43 01.3	-0.7
MJAR	Matsushiro Arr	67.16	330	P	P	21 43 58.6	-0.4
	comp=Z,3.4nm,0.9s,baz=175,slow=7.6,SNR=7.6						
	comp=Z,3.4nm,0.9s						
MJAR	Matsushiro Arr	67.16	330	P	P	21 43 57.6	-1.4
MJAR				IAmb	IAmb	21 44 00.4	
	comp=Z,5.5nm,1.1s						
QSPA	South Pole Qui	68.01	180	P	P	21 44 03.8	-0.3
QSPA				IAmb	IAmb	21 44 19.6	
	comp=Z,13nm,1.4s						
KSRS	Korea Array	73.12	324	P	P	21 44 36.5	+1.2
	comp=Z,2.1nm,0.8s,baz=122,slow=6.1,SNR=7.1						
	comp=Z,2.1nm,0.8s						
KSAR	Wonju Array Be	73.14	324	P	P	21 44 35.1	-0.4
IPM	Ipoh	75.58	281	P	P	21 44 49.8	-0.5
PETK	Petropavlovsk-	76.11	350	P	P	21 44 52.1	-0.3
	comp=Z,6.4nm,0.8s,baz=158,slow=5.7,SNR=2.6						
	comp=Z,6.4nm,0.8s						
USRK	Ussuriysk Ar.	76.12	331	P	P	21 44 52.6	0.0
	comp=Z,4.3nm,0.7s,baz=172,slow=6.0,SNR=6.6						
	comp=Z,4.3nm,0.7s						
KULM	Kulim	76.25	282	P	P	21 44 54.5	+0.5
KULM				IAmb	IAmb	21 44 55.9	
	comp=Z,11nm,1.0s						
MAW	Mawson	77.32	202	P	P	21 45 00.2	+1.0
	comp=Z,2.6nm,0.8s,baz=142,slow=4.8,SNR=4.1						
	comp=Z,2.6nm,0.8s						
ENH	Enshi	80.56	308	P	P	21 45 17.6	0.0
ENH				IAmb	IAmb	21 45 19.5	
	comp=Z,9.1nm,0.9s						
CM31	Chiang Mai Arr	83.31	293	P	P	21 45 33.6	+1.4
CMAR	Chiang Mai Arr	83.31	293	P	P	21 45 33.0	+0.8
	comp=Z,7.6nm,1.0s,baz=130,slow=4.0,SNR=45						
	comp=Z,7.6nm,1.0s						
CMAR	Chiang Mai Arr	83.31	293		P	21 45 33.5	+1.2
CHTO	Chiang Mai	83.46	293		P	21 45 33.8	+0.7
CMB	Columbia Colle	86.11	46		P	21 45 46.2	+0.2
CMB				IAmb	IAmb	21 45 59.8	
	comp=Z,5.5nm,1.0s						
ISA	Isabella, Lake	86.20	49	P	P	21 45 47.2	+0.6
ISA				IAmb	IAmb	21 46 04.1	
	comp=Z,15nm,1.2s						
SEY	Seymchan	86.35	350	P	P	21 45 46.7	+0.3
	comp=Z,4.5nm,0.9s,baz=122,slow=7.7,SNR=5.4						
	comp=Z,4.5nm,0.9s						
NVAR	Mina Array Bea	87.72	47	P	P	21 45 53.6	-0.4
	comp=Z,1.5nm,1.0s,baz=240,slow=4.2,SNR=4.4						
	comp=Z,1.5nm,1.0s						
NVAR	Mina Array Bea	87.72	47	P	P	21 45 52.8	-1.2
ELK	Elko	90.92	46		P	21 46 09.0	0.0
ELK				IAmb	IAmb	21 46 21.9	
	comp=Z,7.1nm,1.2s						
U15A	North Rim	90.96	51	P	P	21 46 10.4	+1.0
U15A				IAmb	IAmb	21 46 30.8	
	comp=Z,11nm,1.3s						
H03S2	Juan Fernandez	91.48	127	T	T	23 27 45.9	
	baz=243,slow=74						
H03S1	Juan Fernandez	91.49	127	T	T	23 27 38.2	
	baz=243						
H03S3	Juan Fernandez	91.50	127	T	T	23 27 44.4	
	baz=243,slow=74						
ILAR	Eielson Array	91.78	16	P	P	21 46 12.2	0.0
	comp=Z,1.7nm,1.0s,baz=226,slow=6.8,SNR=8.3						
	comp=Z,1.7nm,1.0s						
ILAR	Eielson Array	91.78	16	P	P	21 46 11.4	-0.7
BCAR	Beaver Creek A	91.84	19	P	P	21 46 12.6	+0.1
SONM	Songino Array	91.90	322	P	P	21 46 14.2	+0.9
	comp=Z,1.3nm,1.0s,baz=130,slow=4.7,SNR=6.9						
	comp=Z,1.3nm,1.0s						
SONM	Songino Array	91.90	322	P	P	21 46 13.7	+0.5
SONM				IAmb	IAmb	21 46 15.2	
	comp=Z,4.6nm,1.3s						
SHL	Shillong	92.21	297		P	21 46 15.2	-0.1
SHL				IAmb	IAmb	21 46 17.0	
	comp=Z,9.4nm,1.1s						
TXAR	Lajitas Array	94.62	60	P	P	21 46 27.4	+1.2
	comp=Z,0.3nm,0.8s,baz=268,slow=4.9,SNR=2.9						
	comp=Z,0.3nm,0.8s						
TXAR	Lajitas Array	94.62	60	P	P	21 46 24.6	-1.6
TIXI	Tiksi	98.35	347	LR	LR	22 31 45.6	
	comp=Z,338nm,18.1s,baz=246,slow=36						
MKAR	Makanchi Array	106.57	314	Pdiff	Pdif	21 47 19.6	+0.4
	comp=Z,0.4nm,0.7s,baz=102,slow=6.1,SNR=4.1						
BVAR	Borovoye Array	115.15	319	PKP	PKiKP	21 51 45.5	-0.2
	comp=Z,0.4nm,0.5s,baz=196,slow=2.8,SNR=4.2						
ARCES	ARCESS Array B	128.78	346	PKP	PKPdf	21 52 11.6	+0.1
	comp=Z,4.0nm,0.9s,baz=131,slow=2.5,SNR=4.8						
HFS	Hagfors	139.39	345	PKP	PKPdf	21 52 31.4	-0.1
	comp=Z,0.7nm,0.8s,baz=210,slow=8.6,SNR=4.1						
AKASG	Malin Array Be	140.11	325	PKP	PKPdf	21 52 33.3	+0.1
	comp=Z,0.6nm,0.5s,baz=46,slow=3.6,SNR=2.1						
ODBI	Odobesti	143.90	319	⇑P	PKPdf	21 52 40.2	+0.1
BURAR	Bucovina Array	144.00	323	⇑P	PKPdf	21 52 40.7	+0.4
ONER	Baraj Valea Uz	144.01	320	⇑P	PKPdf	21 52 40.2	-0.2

VRI	Vrincioaia	144.05	319	⇑P	PKPdf	21 52 39.7	-0.7
PLOR	Plostina	144.10	319	⇑P	PKPdf	21 52 39.7	-0.8
TURR	Turia	144.38	320	⇑P	PKPdf	21 52 41.3	+0.3
LEHL	Lehliu	144.67	317	⇑P	PKPdf	21 52 42.1	+0.6
MLR	Muntele Rosu	144.71	319	⇓P	PKPdf	21 52 41.7	0.0
DOPR	Dopca	144.80	320	⇑P	PKPdf	21 52 42.7	+1.0
STHS	Stebnicka Huta	145.00	328	e	PKiKP	21 52 45.8	0.0
MDB	Medias	145.30	321	⇓P	PKPdf	21 52 44.4	+1.9
CJR	Cluj-Napoca	145.43	323	⇓P	PKPab	21 52 43.9	+0.9
MESR	Meseseni	145.53	324	⇑P	PKPab	21 52 44.4	+1.1
ARR	Arges	145.57	320	⇓P	PKPab	21 52 44.6	+0.9
HUMR	Humele	145.79	318	⇑P	PKPab	21 52 44.6	+0.2
DRGR		145.88	323	⇑P	PKPab	21 52 45.3	+0.5
LOT	Lotru	146.04	321	⇓P	PKPab	21 52 45.4	0.0
STEB	Steborice	146.26	331	ePKP	PKPab	21 52 46.0	0.0
DEV	Deva	146.29	322	⇓P	PKPab	21 52 46.4	+0.2
VLAD	Vladila	146.42	318	⇑P	PKPab	21 52 47.1	+0.3
OSTC	Ostas	146.46	334	ePKP	PKPab	21 52 46.9	+0.1
MORC	Moravsky Berou	146.48	331	⇓P	PKPab	21 52 46.6	-0.3
MORC	Moravsky Berou	146.48	331	ePKP	PKPab	21 52 46.6	-0.3
CHVC	Chvalec	146.51	334	ePKP	PKPab	21 52 47.0	+0.1
DPC	Dobruska-Polom	146.58	333	ePKP	PKPab	21 52 47.0	-0.2
UPC	Upice	146.59	334	ePKP	PKPab	21 52 47.2	0.0
GZR	Gura Zlata	146.65	321	⇑P	PKPbc	21 52 46.1	-0.5
MAUC	Maruska	146.65	331	ePKP	PKPab	21 52 47.7	+0.2
PSZ	Piszkesteto	146.66	327	PKPdf	PKPdf	21 52 45.3	+0.4
PSZ	Piszkesteto	146.66	327	⇓P	PKPab	21 52 47.2	-0.5
EKA	Eskdalemuir Ar	146.68	357	PKPbc	PKPbc	21 52 46.2	0.0
	comp=Z,6.0nm,0.9s,baz=5.5,slow=2.5,SNR=10						
SIRR	Siria	146.77	323	⇑P	PKPab	21 52 47.5	-0.6
SRE	Strehaia	146.80	320	⇑P	PKPdf	21 52 44.4	-0.8
JAVC	Velka Javorina	147.08	330	ePKP	PKiKP	21 52 49.8	-0.3
CLL	Collm	147.11	337	PKPbc	PKPbc	21 52 47.7	+0.2
CLL	Collm	147.11	337	i PKPbc	PKPbc	21 52 48.3	+0.7
	comp=Z,18nm,1.1s						
CLL				i PKiKP	PKiKP	21 52 52.7	+2.7
	comp=Z,11nm,1.0s						
HERR	Herculane	147.15	321	⇑P	PKPbc	21 52 48.2	+0.3
PVCC	Panska Ves	147.15	335	ePKP	PKPab	21 52 48.9	-0.5
BZS	Buzias	147.18	322	⇑P	PKPdf	21 52 46.0	+0.3
VRAC	Vranov	147.24	332	⇑P	PKPab	21 52 49.2	-0.6
VRAC	Vranov	147.24	332	ePKP	PKPbc	21 52 48.8	+0.7
KRUC	Moravsky	147.51	332	ePKP	PKPbc	21 52 49.5	+0.7
HSKC	Hora Svate Kat	147.52	336	ePKP	PKPbc	21 52 49.6	+0.8
PRU	Pruhonice	147.58	334	ePKP	PKPbc	21 52 49.7	+0.8
MODS	Modra-Piesok	147.61	330	e	PKiKP	21 52 50.9	-0.3
MDVR	Moldovita	147.62	321	⇓P	PKPdf	21 52 47.9	+1.3
TREC	Trest	147.73	333	ePKP	PKPbc	21 52 50.2	+0.8
ZVC	Zvikov	148.16	334	ePKP	PKPbc	21 52 51.3	+0.8
MORH	Mrgy, Hungar	148.43	326	⇑P	PKPbc	21 52 50.9	-0.4
RONA	Rosalia, Austr	148.56	330	i PKP	PKPbc	21 52 52.4	+0.7
	comp=Z,9.3nm,0.7s						
CONA	Conrad Observa	148.59	331	i PKP	PKiKP	21 52 52.6	-0.7
	comp=Z,9.1nm,1.0s						
CKRC	Cesky Krumlov	148.59	333	ePKP	PKiKP	21 52 52.5	-0.7
KHC	Kasperske Hory	148.65	334		PKPbc	21 52 52.2	+0.3
KHC	Kasperske Hory	148.65	334	ePKP	PKiKP	21 52 52.9	-0.4
GEC2	GERESS Array S	148.82	334	PKPbc	PKPbc	21 52 52.5	+0.1
GERES	GERESS Array B	148.82	334	PKPbc	PKPbc	21 52 52.7	+0.3
	comp=Z,7.6nm,0.8s,baz=29,slow=3.0,SNR=60						
GRF	Grafenberg Arr	149.08	337	ePKPbc	PKiKP	21 52 54.2	0.0
	baz=37,slow=1.7						
ARSA	Arzberg	149.24	330	i PKP	PKPbc	21 52 54.0	+0.6
	comp=Z,6.2nm,1.5s						
MOA	Molln	149.36	332	i PKP	PKPbc	21 52 54.2	+0.5
	comp=Z,6.5nm,1.3s						
BIOA	Bad Ischl, Aus	149.75	333	ePKP	PKPbc	21 52 54.9	+0.3
	comp=Z,9.5nm,1.1s						
SOKA	Soboth	149.89	330	i PKP	PKPbc	21 52 55.2	+0.1
	comp=Z,13nm,1.1s,SNR=7.1						
OBKA	Obir	150.24	330	i PKP	PKPbc	21 52 56.2	+0.3
	comp=Z,4.4nm,0.9s						
KBA	Koelnbreinsper	150.35	332	i PKP	PKPbc	21 52 56.0	-0.3
	comp=Z,18nm,0.8s						
LESA	Schwarzleotal	150.37	333	i PKP	PKPbc	21 52 56.3	+0.1
	comp=Z,20nm,1.2s,SNR=6.9						
MYKA	Terra Mystica	150.56	331	ePKP	PKPbc	21 52 56.4	-0.3
	comp=Z,5.8nm,0.7s						
WATA	Walderalm	150.89	334	i PKP	PKPbc	21 52 57.5	-0.1
	comp=Z,12nm,1.0s,SNR=5.5						
WTTA	Wattenberg	150.92	334	i PKP	PKiKP	21 52 58.2	-0.1
	comp=Z,14nm,0.8s,SNR=6.1						
ABTA	Abfaltersbach	150.97	333	i PKP	PKPbc	21 52 57.4	-0.2
	comp=Z,18nm,1.2s,SNR=5.4						
RETA	Reutte	151.08	335	i PKP	PKiKP	21 52 58.2	-0.3
	comp=Z,5.4nm,0.8s						
SQTA	Sankt Quirin	151.13	335	i PKP	PKiKP	21 52 58.5	-0.1
	comp=Z,12nm,0.8s,SNR=6.9						
FETA	Feichten	151.48	335	i PKP	PKiKP	21 52 59.4	0.0
	comp=Z,16nm,1.0s,SNR=7.7						
DAVA	Damuels	151.59	336	i PKP	PKiKP	21 52 59.8	+0.2
	comp=Z,6.3nm,0.9s						
ESDC	Sonseca Array	162.31	354	PKPab	PKPab	21 53 54.0	+0.2
	comp=Z,1.6nm,1.0s,baz=352,slow=4.1,SNR=5.6						
TORD	Torodi Ar. Bea	168.21	223	PKP	PKPdf	21 53 11.4	-0.8
	comp=Z,1.4nm,1.0s,baz=72,slow=0.9,SNR=5.7						
TORD				PKPab	PKPab	21 54 19.7	-0.7
	comp=Z,1.6nm,0.9s,baz=102,slow=5.7,SNR=8.5						

IDC 25 21:39:44.6±6.3**, 21.°56S**×**172.°99E, h0**^{km}**, mb3.7**/2**, mbtmp3.7**/2**, Error ellipse: s-maj=290.0km s-min=56.3km az=152.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	36.07	259	P	P	21 46 48.5	+0.3
	1.3nm,0.8s,baz=85,slow=9.4,SNR=11 1.3nm,0.8s						
WRA	Warramunga Arr	36.12	265	P	P	21 46 48.0	-0.7
	0.5nm,0.7s,baz=101,slow=8.7,SNR=2.4 0.5nm,0.7s						
GERES	GERESS Array B	148.16	334	PKPbc	PKPbc	21 59 31.8	-0.7
	0.4nm,0.8s,baz=18,slow=3.7,SNR=4.0						

IDC 25 21:55:09.1±6.8**, 21.°64S**×**173.°16E, h0**^{km}**, mb3.7**/2**, mbtmp3.7**/2**, MS4.1**/1**, Error ellipse: s-maj=320.7km s-min=58.3km az=153.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.26	265	LR	LR	21 58 35.7	
	comp=Z,2µm,21.4s,baz=99,slow=33						
ASAR	Alice Springs	36.21	259	P	P	22 02 14.2	+0.2
	0.8nm,0.8s,baz=85,slow=9.6,SNR=8.4 0.8nm,0.8s						
WRA	Warramunga Arr	36.27	265	P	P	22 02 14.1	-0.5
	1.0nm,0.7s,baz=103,slow=7.7,SNR=4.8 1.0nm,0.7s						
GERES	GERESS Array B	148.30	334	PKPbc	PKPbc	22 14 56.7	-0.6
	0.1nm,0.5s,baz=34,slow=5.6,SNR=1.7						

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*OSPL **25** 22:10:45.6±0.7, 19.°01N×64.°14W, h31^{km}±999^{km}, ML3.2, Presumed earthquake*

*NEIC **25** 22:10:46.4±1.1, 19.°0N±0.°1×64.°33W±0.°05, h35^{km}±2^{km}, ML3.7/40, Md3.7/13(RSPR), Error ellipse: s-maj=22.1km s-min=6.4km az=14.0*

*RSPR **25** 22:10:48.8, 19.°00N×64.°38W, h33^{km}±16^{km}, MD3.7/13*

ISC 25 22:10:44.8±2.4**, 19.°0N**±0.°1×**64.°32W**±0.°05**, h20**^{km}±21^{km}**, n70, σ0.^{s}81**/79**, 9C-6D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUMP	Col San Antoni	1.69	239		Pn	22 11 12.8	-0.5
HUMP					Sn	22 11 33.0	-1.4
HUMP	Col San Antoni	1.69	239	IAML		22 11 36.9	
	540nm,0.2s						
HUMP	Col San Antoni	1.69	239	⇑eP	Pn	22 11 12.9	-0.3
HUMP	Col San Antoni	1.69	239	eS	Sn	22 11 33.6	-0.8
SABA	Saba	1.73	144		Pn	22 11 14.2	+0.4
SABA					Sn	22 11 35.5	+0.2
SABA				IAML		22 11 36.9	
	comp=N,619nm,0.3s						
SABA				IAML		22 11 47.9	
	comp=E,1µm,0.7s						
SABA	Saba	1.73	144	⇓eP	Pb	22 11 15.8	-0.2
SABA	Saba	1.73	144	eS	Sn	22 11 35.9	+0.6
GCPR	Guaynabo City	1.82	247		Pn	22 11 14.6	-0.4
GCPR					Sn	22 11 36.4	-1.0
GCPR	Guaynabo City	1.82	247	⇑eP	Pn	22 11 14.7	-0.2
GCPR	Guaynabo City	1.82	247	eS	Sn	22 11 36.6	-0.8
SJG	San Juan	1.96	243		Pn	22 11 17.0	+0.1
SJG				IAML		22 11 51.4	
	comp=E,347nm,0.5s						
SJG	San Juan	1.96	243	⇑eP	Pn	22 11 17.3	+0.4
SJG	San Juan	1.96	243	eS	Sn	22 11 40.3	-0.5
SJG	San Juan	1.96	243	eP	Pn	22 11 16.6	-0.2
SJG	San Juan	1.96	243	i P	Pn	22 11 17.2	+0.4
ECPR	Experimental S	2.06	250	Pn	Pn	22 11 18.4	+0.1
ECPR				IAML		22 11 50.4	
	comp=E,832nm,0.2s						
ECPR				IAML		22 11 54.1	
	comp=E,569nm,0.2s						
ECPR	Experimental S	2.06	250	⇑eP	Pn	22 11 18.0	-0.3
ECPR	Experimental S	2.06	250	eS	Sn	22 11 43.6	+0.2
EMPR	Esperanza - Ma	2.16	256		Sn	22 11 45.2	-0.8
EMPR	Esperanza - Ma	2.16	256	Pn	Pn	22 11 19.7	0.0
EMPR				IAML		22 11 51.4	
	comp=E,407nm,0.7s						
EMPR				IAML		22 12 00.8	
	comp=E,396nm,0.5s						
EMPR	Esperanza - Ma	2.16	256	⇑eP	Pn	22 11 21.1	+1.4
EMPR	Esperanza - Ma	2.16	256	eS	Sn	22 11 45.2	-0.8
SKI	Saint Kitts	2.25	138	eP	Pn	22 11 20.4	-0.6
CELP	Cerrillos	2.34	247	Pn	Pn	22 11 22.3	+0.2
OBIP	Obispado Ponce	2.38	246		Pn	22 11 23.0	+0.3
OBIP					Sn	22 11 50.6	-0.7
OBIP	Obispado Ponce	2.38	246	⇓eP	Pn	22 11 23.5	+0.8
OBIP	Obispado Ponce	2.38	246	eS	Sn	22 11 50.9	-0.4
UUPR	Utuado, UPR, P	2.40	252	Pn	Pn	22 11 23.6	+0.6
AOPR	Arecibo Observ	2.40	254		Pn	22 11 23.5	+0.5
AOPR					Sn	22 11 51.3	-0.7
AOPR				IAML		22 12 02.4	
	comp=N,396nm,0.3s						
AOPR	Arecibo Observ	2.40	254	⇓eP	Pn	22 11 23.9	+0.8
AOPR	Arecibo Observ	2.40	254	eS	Sn	22 11 51.2	-0.7
AOPR	Arecibo Observ	2.40	254	eP	Pn	22 11 24.5	+1.4
AOPR				eS	Sn	22 11 53.8	+1.9
AGPR	Aguadilla, PR	2.70	259	Pn	Pn	22 11 27.6	+0.5
AGPR				IAML		22 12 03.7	
	comp=N,173nm,0.6s						
AGPR				IAML		22 12 10.4	
	comp=N,189nm,0.5s						
AGPR	Aguadilla, PR	2.70	259	⇑eP	Pn	22 11 28.2	+1.1
AGPR	Aguadilla, PR	2.70	259	eS	Sn	22 11 59.1	-0.2
AGPR	Aguadilla, PR	2.70	259	i P	Pn	22 11 28.3	+1.1
AGPR				eS	Sn	22 11 59.2	-0.1
AGPR				IAML		22 12 03.8	
	comp=Z,69nm,0.8s						
LSP	Las Mesas	2.75	253		Pn	22 11 29.0	+1.1
LSP					Sn	22 12 00.6	0.0
LSP	Las Mesas	2.75	253	⇑eP	Pn	22 11 29.0	+1.1
LSP	Las Mesas	2.75	253	eS	Sn	22 12 00.6	0.0
ANWB	Willy Bob	2.76	119	eP	Pn	22 11 26.6	-1.3
MLPR	Magueyes Islan	2.79	248	⇓eP	Pn	22 11 29.4	+1.1
MLPR	Magueyes Islan	2.79	248	eS	Sn	22 12 00.2	-1.2
PRSN	Puerto Rico Se	2.79	254		Sn	22 12 01.1	-0.5
PRSN	Puerto Rico Se	2.79	254	Pn	Pn	22 11 28.5	+0.1
PRSN				IAML		22 12 07.5	
	comp=Z,484nm,0.3s						
PRSN				IAML		22 12 09.4	
	comp=Z,456nm,0.4s						
PRSN	Puerto Rico Se	2.79	254	⇑eP	Pn	22 11 29.7	+1.3
PRSN	Puerto Rico Se	2.79	254	eS	Sn	22 12 01.1	-0.5
CRPR	Cabo Rojo, PR	2.83	250	Pn	Pn	22 11 29.5	+0.6
CRPR	Cabo Rojo, PR	2.83	250		Sn	22 12 02.1	-0.4
CRPR	Cabo Rojo, PR	2.83	250	⇑eP	Pn	22 11 29.9	+0.9
CRPR	Cabo Rojo, PR	2.83	250	eS	Sn	22 12 01.8	-0.7
CRPR	Cabo Rojo, PR	2.83	250	i P	Pn	22 11 29.8	+0.9
CRPR				eS	Sn	22 12 02.6	+0.1
CRPR				IAML		22 12 12.3	
	comp=Z,87nm,0.9s						
MBFL	Flemmings, Mon	3.02	138	eP	Pn	22 11 31.1	-0.5
IDE	Isla Desecheo	3.06	259		Pn	22 11 33.0	+1.0
IDE					Sn	22 12 07.8	-0.2
IDE	Isla Desecheo	3.06	259	⇓eP	Pn	22 11 33.0	+1.0
IDE	Isla Desecheo	3.06	259	eS	Sn	22 12 07.8	-0.2
MLYT	Lee's Yard	3.06	138	eP	Pn	22 11 31.8	-0.3
DHSZ	Broadband at M	3.66	138	eP	Pn	22 11 40.1	-0.2
GDHS	Morne Mazeau,	3.66	138	Pn	Pn	22 11 39.8	-0.6
GDHS				IAML		22 12 59.6	
	comp=N,238nm,0.6s						
ATGZ	Broadband at L	3.82	139	eP	Pn	22 11 42.2	-0.3
MMLZ	Guadeloupe Bro	3.90	139	eP	Pn	22 11 43.0	-0.6
CBE	Ff, Capester	3.92	138		Pn	22 11 43.7	-0.2
CBE	Ff, Capester	3.92	138	⇓eP	Pn	22 11 46.0	+2.1
CBE	Ff, Capester	3.92	138	eS	Sn	22 12 31.7	+2.4
TDBA	Terre de Bas,	4.07	141	Pn	Pn	22 11 45.7	-0.2
TDBA				IAML		22 12 41.9	
	comp=E,164nm,1.0s						
TDBA				IAML		22 13 52.6	
	comp=N,138nm,1.1s						
GDSD	La Dsirade Is	4.11	130	Pn	Pn	22 11 45.7	-0.8
GDSD				IAML		22 13 60.0	
	comp=E,58nm,2.8s						
GDSD				IAML		22 14 11.3	
	comp=N,59nm,2.7s						
MAGL	Barre de l’ile	4.21	136	Pn	Pn	22 11 46.8	-1.1
DSLB	Salisbury	4.51	142	eP	Pn	22 11 51.8	-0.4
DR12	Loma Pena Alta	4.80	268	Pn	Pn	22 11 55.0	-1.0
SDD	Santo Domingo	5.33	265	Pn	Pn	22 12 03.0	-0.3
BIM	Bigot	5.46	145	Pn	Pn	22 12 05.5	+0.4

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*IDC **25** 22:14:27.7±0.8, 27.°12N×55.°05E, h0^{km}, mb3.7/18, mbtmp3.7/20, ML3.4/2, Error ellipse: s-maj=19.0km s-min=16.8km az=14.0*

*DSN **25** 22:14:29.3±1.4, 27.°30N×55.°02E, h10^{km}, ML3.4/17, Error ellipse: s-maj=16.5km s-min=5.6km az=10.0*

*TEH **25** 22:14:30.7, 27.°17N×55.°11E, h15^{km}±22^{km}*

*OMAN **25** 22:14:31.7±0.1, 27.°12N×55.°06E, h13^{km}±1^{km}, mb4.3/6, ml3.7/23, Error ellipse: s-maj=3.2km s-min=0.9km az=5.0*

ISC 25 22:14:30.9±1.3**, 27.°17N**±0.°03×**55.°08E**±0.°03**, h17**^{km}±8^{km}**, n119, σ1.^{s}39**/135**, mb3.8**/24**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAR1	LAR	0.80	309	Pg	Pb	22 14 46.2	-0.1
BNDS	Bandar-Abbas	1.00	76	Pg	Pb	22 14 49.1	-0.8
GENO	Geno	1.00	76	Pg	Pb	22 14 49.1	-0.8
IBND	Bandar-abas	1.33	78	Pg	Pb	22 14 55.8	+0.4
SHME	Shamm	1.47	139	P	Pn	22 14 57.3	+0.8
	SNR=22						
SHME				S	Sg	22 15 19.4	+1.1
SHME	Shamm	1.47	139	eP	Pn	22 14 57.3	+0.8
	SNR=36						
SHME				S	Sg	22 15 19.2	+1.0
KHL1	Khalili_Fars	1.65	287	Pg	Pb	22 15 01.3	+0.6
BANOM	Banah	1.66	138	P	Pn	22 15 00.2	+1.1
BANOM				S	Sb	22 15 22.6	+1.1
BANOM	Banah	1.66	138	eP	Pn	22 15 00.2	+1.1
	SNR=141						
LMD1	Lamerd	1.71	276	Pg	Pg	22 15 02.6	-1.2
JHRM	Jahrom	1.88	315	Pn	Pb	22 15 04.3	-0.5
MASF	Masafi	2.04	151	P	Pn	22 15 06.2	+1.8
	SNR=16						
MSFE	Esma-Masafi	2.05	151	eP	Pn	22 15 06.2	+1.6
	SNR=16						
MDH	Madha	2.16	149	P	Pn	22 15 07.7	+1.6
	SNR=24						
MDH				S	Sn	22 15 34.8	+2.3
MDH	Madha	2.16	149	eP	Pn	22 15 07.5	+1.4
	SNR=9.6						
NAZ	Nazwa, Dubai	2.23	166	P	Pb	22 15 09.4	-1.4
	SNR=7.2						
NAZ	Nazwa, Dubai	2.23	166	eP	Pn	22 15 09.1	+2.1
	SNR=7.2						
UOSS	Minazif	2.43	155	P	Pn	22 15 11.1	+1.2
UOSS	Minazif	2.43	155	eP	Pn	22 15 11.0	+1.2
	SNR=9.2						
FAQ	Al Faqa, Dubai	2.46	169	P	Pn	22 15 12.4	+2.3
	SNR=5.3						
FAQ	Al Faqa, Dubai	2.46	169	P	Pn	22 15 12.1	+2.0
KHNJ	Kahnooj	2.46	71	Pn	Pn	22 15 11.4	+1.2
HATD	Hatta, Dubai	2.52	158	P	Pn	22 15 12.4	+1.3
	SNR=14						
HATD	Hatta, Dubai	2.52	158	eP	Pn	22 15 12.3	+1.3
	SNR=15						
ASUD	Al Ashush, Dub	2.54	175	P	Pb	22 15 14.1	-1.9
	SNR=8.9						
ASUD				S	Sn	22 15 43.1	+1.2
ASUD				S	Sn	22 15 43.1	+1.2
ASUD	Al Ashush, Dub	2.54	175	eP	Pn	22 15 13.4	+2.1
	SNR=8.9						
AJN	Ajban	2.59	182	P	Pn	22 15 13.8	+1.7
AJN				S	Sn	22 15 45.1	+2.0
ASHO	Ashiyiah	2.63	160	P	Pn	22 15 14.4	+1.9
	SNR=95						
ASHO	Ashiyiah	2.63	160	eP	Pn	22 15 14.0	+1.5
	SNR=95						
NGRK	Negar Kerman	2.87	30	Pn	Pn	22 15 17.5	+1.4
ALNE	Al Ain	3.16	169	P	Pn	22 15 21.6	+1.8
	SNR=13						
ALNE				S	Sn	22 15 58.4	+1.3
ALNE	Al Ain	3.16	169	i P	Pn	22 15 21.2	+1.4
	SNR=13						
SOHO	SOHO	3.29	156	P	Pn	22 15 22.5	+0.8
SOHO				S	Sn	22 16 00.8	+0.4
SOHO	SOHO	3.29	156	i P	Pn	22 15 22.5	+0.8
	SNR=12						
KHGB	Koh Gabri	3.43	21	Pn	Pn	22 15 25.9	+2.2
CHMN	Cheshme madani	3.45	38	Pn	Pn	22 15 25.7	+1.6
MZWR	Madinat Zayed	3.56	198	P	Pn	22 15 27.3	+2.0
MZWR				S	Sn	22 16 09.6	+2.7
KBAM	BAM	3.57	56	Pn	Pn	22 15 27.5	+2.0
DSBU	Dashti - Bushe	3.58	290	Pn	Pn	22 15 28.0	+2.3
GHWR	Ruwais	3.76	212	P	Pn	22 15 29.2	+1.1
GHWR				S	Sn	22 16 13.5	+1.7
KRM1	Kerman Provinc	3.84	30	Pn	Pn	22 15 31.3	+1.9
KAZ2	Kazeron-Fars-I	3.87	310	Pn	Pn	22 15 31.8	+2.2
SHMA	Al-Shehemyia	3.91	251	P	Pn	22 15 32.0	+1.9
	SNR=18						
ZRDN	Zarand Kerman	4.00	18	Pn	Pn	22 15 33.4	+1.9
ARQ	Araqi	4.03	161	P	Pn	22 15 33.2	+1.4
	SNR=31						
ARQ				S	Sn	22 16 20.5	+1.8
HOQ	Hoqain	4.10	150	P	Pn	22 15 32.2	-0.6
IMEH	Mehriz	4.23	355	Pn	Pn	22 15 36.8	+2.0
TRNA	Turayna	4.24	236	P	Pn	22 15 36.1	+1.4
	SNR=36						
TRNA				S	Sn	22 16 25.5	+1.9
SLWR	Sila	4.34	225	P	Pn	22 15 37.3	+1.2
SLWR				S	Sn	22 16 26.7	+0.5
MZR	Muzera	4.39	200	P	Pn	22 15 37.5	+0.7
	SNR=6.3						
MZR	Muzera	4.39	200	i P	Pn	22 15 37.5	+0.7
	SNR=6.5						
IBAF	Bafgh	4.43	5	Pn	Pn	22 15 39.0	+1.6
UMZA	Um Al Zommool	4.43	179	P	Pn	22 15 38.7	+1.4
UMZA				S	Sn	22 16 30.0	+1.4
SMRA	Abu-Samra	4.52	239	P	Pn	22 15 40.1	+1.6
	SNR=11						
BIDO	Bidbid	4.56	142	P	Pn	22 15 39.4	+0.3
BIDO				S	Sn	22 16 31.9	+0.2
BSY	Bisya	4.81	156	P	Pn	22 15 44.9	+2.4
KLNJ	Kolanjah	4.89	322	Pn	Pn	22 15 45.7	+1.8
SMDO	Samad	4.90	146	P	Pn	22 15 44.7	+0.9
	SNR=12						
WSAR	Wadi Sarin	5.07	140	P	Pn	22 15 46.9	+0.8
	SNR=23						
CHBR	Chabahar	5.10	107	Pn	Pn	22 15 47.4	+1.0
IRAM	Ramesheh	5.19	334	Pn	Pn	22 15 49.7	+1.8
JMDO	Jabal Madar	5.51	149	P	Pn	22 15 53.2	+1.0
	SNR=22						
ZHSF	Zahedan	5.58	63	Pn	Pn	22 15 55.8	+2.5
NGCH	Negor - Chabah	5.73	107	P	Pn	22 15 56.6	+1.5
	SNR=18						
NGCH	Negor - Chabah	5.73	107	Pn	Pn	22 15 56.7	+1.5
WBK	Wadi Bani Khal	5.75	141	P	Pn	22 15 56.0	+0.5
	SNR=60						
IBRJ	Brojen	5.78	326	Pn	Pn	22 15 58.1	+2.1
BSRN	Basiran	5.94	35	Pn	Pn	22 15 59.7	+1.5
TPRV	Parvadeh(Tabas	6.01	13	Pn	Pn	22 16 00.9	+1.9
ANAR	Anarak	6.12	349	Pn	Pn	22 16 01.7	+1.1
ZNGN	Zangian	6.15	324	Pn	Pn	22 16 03.1	+1.9
IKOO	Kooshah	6.25	32	Pn	Pn	22 16 04.1	+1.5
SRVN	Saravan	6.52	86	Pn	Pn	22 16 08.2	+2.0
ITEG	Tejag	6.54	28	Pn	Pn	22 16 08.3	+1.9
IPIR	Pirpir	6.59	328	Pn	Pn	22 16 08.5	+1.3
TKDS	Koohdasht(Taba	6.66	15	Pn	Pn	22 16 09.7	+1.6
MHTO	MHTO	6.70	156	P	Pn	22 16 09.3	+0.8
	SNR=62						
AMIS	Naft Sefid	6.75	313	Pn	Pn	22 16 12.0	+2.8
TNSJ	Nastanj	6.90	11	Pn	Pn	22 16 12.5	+1.2
IDAH	Dahanechah	6.94	36	Pn	Pn	22 16 14.1	+2.2
KRSH	Karshahi	7.24	340	Pn	Pn	22 16 17.2	+1.1
DQM	DQM	7.55	162	P	Pn	22 16 19.6	-0.6
ISFB	Sefidab	7.56	342	Pn	Pn	22 16 22.0	+1.6
DOK	Doka	8.55	186	P	Pn	22 16 33.5	-0.4
	SNR=17						
IDMV	Damavand	8.78	344	Pn	Pn	22 16 38.8	+1.6
SHAO	Shalim	9.12	177	P	Pn	22 16 41.6	0.0
	SNR=13						
SHAO	Shalim	9.12	177	i P	Pn	22 16 41.5	-0.2
	SNR=14						
WHFO	Wadi Hawf	9.28	188	P	Pn	22 16 43.3	-0.7
	SNR=65						
RAYN	Ar Rayn	9.39	249	P	Pn	22 16 45.2	-0.3
DMTO	DMTO	9.41	181	P	Pn	22 16 45.0	-0.7
ABTO	Aybut	9.90	190	P	Pn	22 16 52.0	-0.6
	SNR=46						
ASF	Jabal al Asfar	16.56	292	Pn	Pn	22 18 23.3	+0.9
	0.2nm,0.3s,baz=322,slow=15,SNR=2.4 3.3nm,0.8s						
KBZ	Khabaz	19.24	332	P	Pn	22 18 55.7	+0.5
	0.1nm,0.3s,baz=137,slow=13,SNR=4.7 0.9nm,0.6s						
BRTR	Keskin Array B	21.77	311	P	P	22 19 22.6	+0.7
	0.7nm,0.6s,baz=132,slow=13,SNR=6.1 0.7nm,0.6s						
BVAR	Borovoye Array	28.24	20	P	P	22 20 23.0	+0.2
	0.8nm,0.3s,baz=222,slow=6.0,SNR=5.5 0.8nm,0.3s						
MKAR	Makanchi Array	29.03	40	P	P	22 20 30.4	+0.4
	0.2nm,0.3s,baz=228,slow=10.0,SNR=6.3 0.2nm,0.3s						
KURBB	Kurchatov Arra	29.46	31	P	P	22 20 33.9	+0.3
	0.2nm,0.3s,baz=227,slow=8.7,SNR=4.0 0.2nm,0.3s						
AKASG	Malin Array Be	30.64	327	P	P	22 20 43.5	-0.6
	0.2nm,0.3s,baz=111,slow=6.7,SNR=2.0 0.2nm,0.3s						
ZALV	Zalesovo Beam	34.56	31	P	P	22 21 18.3	0.0
	1.6nm,0.6s,baz=238,slow=10,SNR=8.0 1.6nm,0.6s						
CONA	Conrad Observa	36.84	315	eP	P	22 21 38.4	+0.3
	0.2nm,0.2s						
WTTA	Wattenberg	39.36	312	eP	P	22 21 58.6	-0.9
	5.0nm,1.3s						
FINES	FINESS Array B	39.40	338	P	P	22 21 58.2	-1.1
	0.7nm,0.5s,baz=144,slow=8.7,SNR=7.9 0.7nm,0.5s						
WATA	Walderalm	39.42	313	eP	P	22 21 59.1	-0.9
	3.7nm,1.2s						
SQTA	Sankt Quirin	39.63	312	eP	P	22 22 00.6	-1.2
	1.6nm,0.5s						
FETA	Feichten	39.90	312	eP	P	22 22 03.2	-0.8
	3.6nm,1.2s						
RETA	Reutte	39.99	313	eP	P	22 22 03.3	-1.4
	0.7nm,0.5s						
DAVA	Damuels	40.53	312	eP	P	22 22 08.2	-1.0
	3.6nm,0.4s						
CMAR	Chiang Mai Arr	41.19	93	P	P	22 22 15.4	+0.6
	0.7nm,0.3s,baz=274,slow=8.0,SNR=1.6 0.7nm,0.3s						
HFS	Hagfors	43.30	331	P	P	22 22 30.9	-0.5
	0.7nm,0.4s,baz=125,slow=7.8,SNR=15 0.7nm,0.4s						
NB2	NORSAR Subarra	44.81	331	P	P	22 22 43.0	-0.7
	comp=Z,0.1nm,0.3s,baz=118,slow=8.6						
NOA	NORSAR Array B	44.81	331	P	P	22 22 42.6	-1.1
	comp=Z,0.1nm,0.4s,baz=119,slow=8.0,SNR=3.5 comp=Z,0.1nm,0.4s						
ARCES	ARCESS Array B	45.76	346	P	P	22 22 51.5	+0.5
	comp=Z,2.0nm,1.0s,baz=134,slow=5.2,SNR=1.3 comp=Z,2.0nm,1.0s						
ESDC	Sonseca Array	50.02	300	P	P	22 23 24.0	-0.5
	comp=Z,0.4nm,0.8s,baz=83,slow=7.2,SNR=7.5 comp=Z,0.4nm,0.8s						
EKA	Eskdalemuir Ar	50.16	321	P	P	22 23 24.1	-1.0
	comp=Z,0.3nm,0.3s,baz=118,slow=8.4,SNR=8.4 comp=Z,0.3nm,0.3s						
TORD	Torodi Ar. Bea	51.66	265	P	P	22 23 36.4	-0.7
	comp=Z,1.3nm,0.5s,baz=58,slow=8.9,SNR=16 comp=Z,1.3nm,0.5s						
BOSA	Boshof	62.41	210	P	P	22 24 52.8	-0.2
	comp=Z,1.5nm,0.7s,baz=39,slow=5.5,SNR=6.1 comp=Z,1.5nm,0.7s						
ILAR	Eielson Array	86.78	9	P	P	22 27 13.4	-0.4
	comp=Z,0.3nm,0.8s,baz=337,slow=6.5,SNR=2.2						

	comp=Z,0.3nm,0.8s						
WRA	Warramunga Arr	89.88	112	P	P	22 27 28.7	-0.6
	comp=Z,0.6nm,0.8s,baz=308,slow=4.3,SNR=3.0						
	comp=Z,0.6nm,0.8s						
ASAR	Alice Springs	91.32	116	P	P	22 27 34.8	-1.2
	comp=Z,0.3nm,0.5s,baz=303,slow=4.7,SNR=8.1						
	comp=Z,0.3nm,0.5s						

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*SOME **25** 22:18:43.1, 39°.40N×75°.77E, h10^{km}*
*NNC **25** 22:18:45.3±1.6, 39°.49N×75°.84E, h0^{km}, mb3.6, mpv3.1, Error ellipse: s-maj=10.9km s-min=9.4km az=167.0*
*KRNET **25** 22:18:54.2±0.1, 39°.74N×75°.94E, mb3.0*
ISC 25 22:18:42.8±1.8**, 39°.38N**±0°.07×**75°.89E**±0°.04**, h9**^{km}±16^{km}**, n30, σ2^{s}.53**/49**, 16C-14D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNKS	Jany-Kuch	1.69	354	⇓iP	Pg	22 19 19.5	+4.3
JNKS				⇓iS	Sg	22 19 38.2	+1.1
SFK	Sufi-Kurgan	1.95	290	⇑eP	Pg	22 19 29.5	+9.3
SFK				⇑eS	Sg	22 19 55.6	+10
SALK	Salom-Alik	2.18	314	⇓eP	Pg	22 19 31.1	+6.4
SALK				⇓eS	Sg	22 19 57.9	+4.9
OHH	Osh	2.65	297	⇑iP	Pg	22 19 38.8	+5.3
OHH				⇑iS	Sg	22 20 11.3	+3.5
ARLS	Aral	2.75	335	⇓iP	Pg	22 19 37.7	+2.2
ARLS				⇓iS	Sg	22 20 09.2	-2.0
TARG	Taragay, Kyrgy	2.76	31	⇑iP	Pg	22 19 37.5	+1.7
TARG				⇑iS	Sb	22 20 09.0	+2.2
KDJ	Kajisay	2.92	19	⇓iP	Pg	22 19 39.2	+0.5
KDJ				⇓iS	Sb	22 20 12.0	+1.0
ARSB	Arslanbob	2.95	312	⇑eP	Pg	22 19 41.9	+2.5
ARSB				⇑eS	Sg	22 20 16.9	-0.7
UCH	Uchtor	3.03	340	⇑eP	Pg	22 19 41.5	+0.6
UCH				⇑iS	Sb	22 20 15.9	+1.4
BOOM	Boomskoye usch	3.11	1	⇓iP	Pg	22 19 41.8	-0.6
BOOM				⇓iS	Sb	22 20 16.5	0.0
KBK	Karagaybulak	3.35	348	⇓iP	Pg	22 19 45.5	-1.5
KBK				⇓iS	Sb	22 20 22.7	-0.8
AAK	Ala-Archa	3.42	342	⇑iP	Pg	22 19 46.6	-1.8
AAK				⇑iS	Sb	22 20 24.7	-0.8
KST	Kastek	3.66	1	Pg	Pb	22 19 49.4	+1.6
	2.6nm,0.6s						
KST				Lg	Lg	22 20 38.0	
	6.9nm,0.7s						
KST	Kastek	3.66	1	eP	Pb	22 19 49.4	+1.6
	0.2nm,0.1s						
KST				eS	Sg	22 20 37.3	-3.0
	8.2nm,0.4s						
CHMS	Chumysh	3.72	347	⇑iP	Pb	22 19 50.4	+1.7
CHMS				⇑iS	Sb	22 20 31.4	-2.4
TNSS	Tian-Shan	3.74	12	eP	Pb	22 19 51.4	+2.1
	0.1nm,0.0s						
TNSS				eS	Sg	22 20 40.7	-2.3
	2.0nm,0.6s						
MTBS	Maitube	3.77	6	eP	Pg	22 19 52.5	-2.6
	0.5nm,0.1s						
MTBS				eS	Sg	22 20 42.4	-1.4
	1.9nm,0.1s						
DGS	Degeres	3.86	359	Pg	Pg	22 19 54.2	-2.6
	5.4nm,0.5s						
DGS				Lg	Lg	22 20 45.2	
	11nm,0.6s						
MDOK	Medeo	3.88	13	Pg	Pb	22 19 54.4	+2.9
	1.5nm,0.7s						
MDOK				Lg	Lg	22 20 45.2	
	4.0nm,0.7s						
MRKS	Merke	3.92	330	Pg	Pg	22 19 54.8	-3.1
	2.5nm,0.3s						
MRKS				Lg	Lg	22 20 47.2	
	5.6nm,0.5s						
MRKS	Merke	3.92	330	eP	Pg	22 19 54.8	-3.1
	0.7nm,0.1s						
MRKS				eS	Sg	22 20 46.4	-2.2
	5.6nm,0.5s						
KOTS	Kotyrbulak	3.96	13	Pg	Pb	22 19 54.7	+1.8
	2.5nm,0.3s						
KOTS				Lg	Lg	22 20 47.6	
	13nm,0.7s						
KOTS	Kotyrbulak	3.96	13	eP	Pb	22 19 54.7	+1.8
	0.7nm,0.1s						
KOTS				eS	Sg	22 20 46.3	-3.6
	12nm,0.5s						
USP	Ospenovka	4.02	345	⇑iP	Pb	22 19 54.7	+0.8
USP				⇑iS	Sb	22 20 38.9	-3.8
KRBS	Karabastau	4.32	358	Pg	Pb	22 20 01.8	+2.9
	0.8nm,0.3s						
KRBS				Lg	Lg	22 20 58.3	
	4.4nm,0.4s						
GAR	Garm	4.35	267	⇓iP	Pg	22 20 04.9	-1.2
GAR				⇓iS	Sg	22 20 56.6	-5.8
UZB	Uzynbulak	4.44	31	Pg	Pg	22 20 06.0	-2.0
	6.6nm,0.7s						
UZB				Lg	Lg	22 21 05.4	
	2.7nm,0.7s						
UZB	Uzynbulak	4.44	31	eP	Pg	22 20 06.0	-2.0
	1.0nm,0.1s						
UZB				eS	Sg	22 21 05.6	+0.1
	2.4nm,0.7s						
CHKK	Chushkaly	4.54	10	eP	Pg	22 20 06.8	-3.1
	1.0nm,0.1s						
CHKK				eS	Sg	22 21 07.0	-1.7
	2.1nm,0.1s						
KPKS	Kokpek	4.59	26	eP	Pb	22 20 07.2	+3.6
	0.1nm,0.1s						
KPKS				eS	Sg	22 21 07.4	-2.8
	5.0nm,0.5s						

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*IDC **25** 22:30:25.4±1.5, 13°.98N×56°.40E, h0^{km}, mb3.8/11, mbtmp3.8/11, Error ellipse: s-maj=38.7km s-min=23.6km az=32.0*
ISC 25 22:30:28.8±1.5**, 14°.0N**±0°.3×**56°.4E**±0°.2**, h20**^{km}**, n14, σ0^{s}.65**/11**, mb3.8**/11**, Socotra region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRTR	Keskin Array B	32.52	326	P	P	22 36 59.1	+0.7
	0.5nm,0.7s,baz=145,slow=10,SNR=2.3						
	0.5nm,0.7s						
MKAR	Makanchi Array	39.23	28	P	P	22 37 55.7	0.0
	0.3nm,0.6s,baz=221,slow=9.4,SNR=3.5						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	40.71	22	P	P	22 38 07.8	-0.1
	1.8nm,0.2s,baz=223,slow=7.5,SNR=1.6						
	1.8nm,0.2s						
CMAR	Chiang Mai Arr	41.01	78	P	P	22 38 11.7	+0.7
	0.3nm,0.3s,baz=269,slow=8.4,SNR=5.0						
	0.3nm,0.3s						
ZALV	Zalesovo Beam	45.69	23	P	P	22 38 47.2	-0.9
	1.4nm,0.7s,baz=227,slow=7.6,SNR=7.5						
	1.4nm,0.7s						
FINES	FINESS Array B	52.17	342	P	P	22 39 37.5	-0.2
	1.1nm,0.8s,baz=129,slow=6.1,SNR=6.6						
	1.1nm,0.8s						
SONM	Songino Array	53.27	40	P	P	22 39 46.3	0.0
	0.6nm,0.8s,baz=248,slow=7.6,SNR=5.0						
	0.6nm,0.8s						
ESDC	Sonseca Array	58.46	308	P	P	22 40 23.6	+0.1
	0.7nm,0.8s,baz=85,slow=6.5,SNR=5.0						
	0.7nm,0.8s						
ARCES	ARCESS Array B	58.81	348	P	P	22 40 24.7	-0.7
	2.4nm,0.8s,baz=147,slow=8.3,SNR=6.1						
	2.4nm,0.8s						
H01W3	Cape Leeuwin H	73.18	133	T	T	00 01 58.1	
	baz=301,slow=75,SNR=13						
H01W2	Cape Leeuwin H	73.19	133	T	T	00 01 56.7	
	baz=301,slow=75,SNR=12						
H01W1	Cape Leeuwin H	73.20	133	T	T	00 01 54.2	
	baz=301,slow=75,SNR=12						
WRA	Warramunga Arr	83.71	112	P	P	22 42 57.2	+0.3
	0.8nm,0.9s,baz=86,slow=3.2,SNR=0.9						
	0.8nm,0.9s						
ASAR	Alice Springs	84.44	116	P	P	22 42 59.7	-0.9
	0.3nm,0.7s,baz=303,slow=5.5,SNR=3.2						
	0.3nm,0.7s						

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*IDC **25** 22:35:48.5±2.0, 14°.06N×56°.54E, h0^{km}, mb3.7/10, mbtmp3.7/10, MS3.9/2, Error ellipse: s-maj=49.8km s-min=23.6km az=174.0*
*NEIC **25** 22:35:48.7±1.5, 14°.07N±0°.05×56°.4E±0°.1, h10^{km}±1^{km}, mb4.3/16, Error ellipse: s-maj=23.9km s-min=4.7km az=109.0*
*OMAN **25** 22:35:58.2±0.6, 14°.76N×56°.56E, h35^{km}±30^{km}, ml3.5/5, Error ellipse: s-maj=40.9km s-min=4.1km az=328.0*
ISC 25 22:35:50.5±0.6**, 14°.19N**±0°.07×**56°.44E**±0°.08**, h20**^{km}**, n38, σ2^{s}.04**/39**, mb4.1**/16**, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMTO	DMTO	3.79	338	P	Pn	22 36 48.0	+0.1
	SNR=5.8						
DMTO				S	Sn	22 37 27.1	-4.9
SHAO	Shalim	3.90	348	P	Pn	22 36 48.4	-0.9
SHAO				S	Sn	22 37 27.6	-6.9
ABTO	Aybut	4.37	317	P	Pn	22 36 56.2	+0.3
	SNR=12						
ABTO				S	Sn	22 37 44.2	-2.1
WHFO	Wadi Hawf	4.51	326	P	Pn	22 36 59.0	+1.1
	SNR=15						
WHFO				S	Sn	22 37 48.4	-1.4
DOK	Doka	4.94	334	P	Pn	22 37 04.2	+0.6
DOK				S	Sn	22 37 58.3	-1.8
RAYN	Ar Rayn	13.90	314		Pn	22 39 05.7	-0.9
HRA	Herat	20.79	14	P	P	22 40 29.7	-1.0
KBL	Kabul	23.25	27	P	P	22 40 57.5	+0.6
LODK	Lodwar	23.39	245	P	P	22 40 57.2	-1.2
KIBK	Kibwezi	24.54	229	P	P	22 41 06.5	-2.7
KIBK				IAmb	IAmb	22 41 20.5	
	comp=Z,5.7nm,1.1s						
NIL	Nilore	24.66	35	P	P	22 41 10.3	+0.2
NIL				IAmb	IAmb	22 41 27.7	
	comp=Z,7.2nm,1.1s						
MANEM	Manem	26.93	27	P	P	22 41 30.1	-0.7
MANEM				IAmb	IAmb	22 41 42.6	
	comp=Z,10nm,1.3s						
MARD	Mardin	26.93	332		P	22 41 31.3	+0.6
AAK	Ala-Archa	32.35	25	P	P	22 42 18.7	0.0
AAK				IAmb	IAmb	22 42 22.5	
	comp=Z,3.0nm,1.1s						
AB31	Akbulak array	35.09	4		P	22 42 42.5	+0.2
AB31				IAmb	IAmb	22 42 44.1	
	comp=Z,4.3nm,1.1s						
ABKAR	Akbulak array	35.09	4		P	22 42 42.6	+0.3
SHL	Shillong	35.09	66	P	P	22 42 42.3	-0.6
SHL				IAmb	IAmb	22 42 53.0	
	comp=Z,8.8nm,1.4s						
VOI	Vohitsoka	37.09	195	P	P	22 42 56.8	-3.1
MKAR	Makanchi Array	39.05	28	P	P	22 43 17.2	+1.2
	comp=Z,0.5nm,0.9s,baz=220,slow=8.7,SNR=3.7						
	comp=Z,0.5nm,0.9s						
KURBB	Kurchatov Arra	40.52	22	P	P	22 43 30.2	+2.1
	comp=Z,0.5nm,0.5s,baz=220,slow=8.6,SNR=7.1						
KURBB				LR	LR	23 03 15.8	
	comp=Z,111nm,18.1s,baz=176,slow=41						
	comp=Z,0.5nm,0.5s						
CMAR	Chiang Mai Arr	40.94	78	P	P	22 43 32.7	+0.5
	comp=Z,1.4nm,0.3s,baz=283,slow=8.8,SNR=4.9						
	comp=Z,1.4nm,0.3s						
CMAR	Chiang Mai Arr	40.94	78	P	P	22 43 30.9	-1.2
ARTI	Arti	42.14	2		P	22 43 40.9	-0.5
ARTI				IAmb	IAmb	22 43 43.2	
	comp=Z,6.9nm,1.0s						
AKASG	Malin Array Be	42.57	335	P	P	22 43 47.6	+2.7
	comp=Z,0.4nm,0.4s,baz=131,slow=6.8,SNR=1.9						
	comp=Z,0.4nm,0.4s						
ZAA0	Zalesovo Array	45.51	23	P	P	22 44 07.5	-1.0
ZALV	Zalesovo Beam	45.51	23	P	P	22 44 08.6	+0.1
	comp=Z,0.7nm,0.6s,baz=216,slow=7.1,SNR=6.5						
	comp=Z,0.7nm,0.6s						
ZALV	Zalesovo Beam	45.51	23	P	P	22 44 08.2	-0.3
FINES	FINESS Array B	52.00	342	P	P	22 45 01.3	+3.1
	comp=Z,1.9nm,0.8s,baz=140,slow=9.0,SNR=4.0						
	comp=Z,1.9nm,0.8s						
SONM	Songino Array	53.10	40	P	P	22 45 08.5	+1.7
	comp=Z,0.6nm,0.8s,baz=239,slow=7.6,SNR=5.7						
	comp=Z,0.6nm,0.8s						
TORD	Torodi Ar. Bea	53.10	276	P	P	22 45 09.5	+2.3
	comp=Z,1.1nm,1.1s,baz=80,slow=8.9,SNR=4.0						
	comp=Z,1.1nm,1.1s						
HFS	Hagfors	55.44	336	P	P	22 45 26.4	+2.9
	comp=Z,0.9nm,0.8s,baz=141,slow=7.1,SNR=1.9						
	comp=Z,0.9nm,0.8s						
MD01	Midelt array s	58.35	300	P	P	22 45 45.0	+0.2
ESDC	Sonseca Array	58.36	308	P	P	22 45 45.4	+0.7
	comp=Z,0.9nm,0.9s,baz=99,slow=6.2,SNR=5.4						
	comp=Z,0.9nm,0.9s						
CRZF	Crozet Islands	60.47	184	P	P	22 45 57.4	-1.4
HILR	Hailar Array B	62.06	41	LR	LR	23 17 17.9	
	comp=Z,126nm,18.7s,baz=25,slow=40						
H01W3	Cape Leeuwin H	73.29	133	T	T	00 07 16.9	
	baz=301,slow=75,SNR=24						
H01W2	Cape Leeuwin H	73.30	134	T	T	00 07 17.8	
	baz=301,slow=75,SNR=21						
H01W1	Cape Leeuwin H	73.31	133	T	T	00 07 18.2	
	baz=301,slow=75,SNR=26						

IDC 25 22:39:41.8±2.9**, 31°.36S**×**177°.17W, h0**^{km}**, mb3.7**/2**, mbtmp3.7**/3**, ML3.7**/1**, Error ellipse: s-maj=73.9km s-min=36.0km az=120.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.34	213	Pn	Pn	22 41 44.2	+0.3
	0.9nm,0.3s,baz=309,slow=2.9,SNR=5.6						
URZ				Sn	Sn	22 43 18.2	-0.5
	1.4nm,0.3s,baz=233,slow=22,SNR=7.3						
	1.9nm,0.3s						
ASAR	Alice Springs	43.77	268	P	P	22 47 49.8	+0.4
	0.5nm,0.4s,baz=111,slow=7.7,SNR=6.5						
	0.5nm,0.4s						
WRA	Warramunga Arr	44.85	273	P	P	22 47 57.5	-0.5
	0.6nm,0.5s,baz=111,slow=8.2,SNR=8.0						
	0.6nm,0.5s						
FINES	FINESS Array B	146.28	340	PKPbc	PKPdf	22 59 22.6	+0.2
	1.1nm,0.6s,baz=25,slow=4.2,SNR=12						

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*IDC **25** 22:43:35.4±1.4, 55°.35N×109°.41E, h0^{km}, mb3.3/2, mbtmp3.6/8, ML3.4/6, Error ellipse: s-maj=26.6km s-min=20.5km az=131.0*
*MOS **25** 22:43:35.2±1.3, 55°.32N×109°.49E, h12^{km}, mb3.6/1, Error ellipse: s-maj=14.7km s-min=8.1km az=75.0*
*BYKL **25** 22:43:36.5±0.2, 55°.28N×109°.56E*
ISC 25 22:43:36.0±0.6**, 55°.36N**±0°.02×**109°.47E**±0°.02**, h10**^{km}**, n61, σ2^{s}.74**/125**, 4C-7D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIZB	Nizh Angarsk	0.41	6	⇓iPg	Pb	22 43 46.3	+0.9
NIZB				eSg	Sb	22 43 53.3	+1.5
NIZB				Pmax			
	429nm,0.1s						
NIZB				Smax			
	4µm,0.3s						
NIZB	Nizh Angarsk	0.41	6	⇓iPG	Pb	22 43 46.3	+0.9
NIZB				e		22 43 53.1	
NIZB				pmax	pmax		
	comp=Z,433nm,0.1s						
NIZB				smax	smax		
	comp=E,4µm,0.2s						
YLYR	Ulyunkhan	1.09	116	⇓iPg	Pb	22 43 54.8	-2.1
	comp=E,131nm,0.5s						
YLYR				⇑iPg	Pb	22 43 54.8	-2.1
	comp=E,238nm,0.5s						
YLYR				⇑iPg	Pb	22 43 54.8	-2.1
	comp=E,231nm,0.5s						
YLYR				eSg	Sg	22 44 08.4	-2.6
YLYR				Pmax			
	comp=E,298nm,0.1s						
YLYR				Smax			
	comp=E,2µm,0.2s						
YLYR	Ulyunkhan	1.09	116	⇑iPG	Pb	22 43 54.7	-2.1
YLYR				e		22 44 07.8	
YLYR				pmax	pmax		
	comp=Z,298nm,0.1s						
YLYR				smax	smax		
	comp=N,2µm,0.1s						
KMO	Kumora	1.11	61	⇓iPg	Pb	22 43 56.4	-1.0
KMO				eSg	Sb	22 44 11.1	-0.8
KMO				Pmax			
	comp=N,233nm,0.3s						
KMO				Smax			
	comp=N,934nm,0.4s						
KMO	Kumora	1.11	61	ePG	Pb	22 43 56.4	-1.0
KMO				e		22 44 09.8	
KMO				pmax	pmax		
	comp=Z,73nm,0.2s						
KMO				smax	smax		
	comp=E,1µm,0.5s						
YOAB	Uoyan, Buryati	1.50	58	ePg	Pb	22 44 04.6	+0.7
YOAB				eSg	Sn	22 44 23.7	+1.2
YOAB				Pmax			
	comp=E,245nm,0.3s						
YOAB				Smax			
	comp=E,1µm,0.8s						
YOAB	Uoyan, Buryati	1.50	58	ePG	Pb	22 44 04.5	+0.7
YOAB				e		22 44 24.1	
YOAB				pmax	pmax		
	comp=Z,244nm,0.4s						
YOAB				smax	smax		
	comp=N,1µm,0.6s						
SYVR	Suvo	1.73	169	⇓iPg	Pn	22 44 06.8	+0.6
SYVR				eSg	Sn	22 44 29.0	+0.6
SYVR				Pmax			
	comp=N,175nm,0.5s						
SYVR				Smax			
	comp=N,824nm,0.3s						
SYVR	Suvo	1.73	169	⇓iPN	Pn	22 44 06.7	+0.6
SYVR				e		22 44 28.5	
SYVR				pmax	pmax		
	comp=Z,175nm,0.5s						
SYVR				smax	smax		
	comp=E,825nm,0.3s						
OGRR	Ongureny	2.04	213	⇑iPn	Pn	22 44 11.2	+0.9
OGRR				ePg	Pb	22 44 13.5	+0.4
OGRR				e		22 44 37.7	
OGRR				eSg	Sb	22 44 39.5	+1.0
OGRR				Pmax			
	comp=E,98nm,0.2s						
OGRR				Smax			
	comp=E,1µm,0.3s						
OGRR	Ongureny	2.04	213	⇓iPN	Pn	22 44 11.3	+0.9
OGRR				e		22 44 12.7	
OGRR				e		22 44 37.6	
OGRR				pmax	pmax		
	comp=Z,114nm,1.1s						
OGRR				smax	smax		
	comp=E,1µm,0.4s						
MXMB	Maximikha	2.15	192	ePn	Pn	22 44 13.3	+1.5
MXMB				ePg	Pb	22 44 14.6	-0.3
MXMB				eSg	Sb	22 44 41.6	+0.1
UZR	Uzur	2.28	207	ePn	Pn	22 44 15.3	+1.6
UZR				ePg	Pb	22 44 17.6	+0.4
UZR				e		22 44 44.3	
UZR				eSg	Sb	22 44 46.7	+1.3
UZR				Pmax			
	comp=E,99nm,0.2s						
UZR				Smax			
	comp=E,1µm,0.3s						
UKT	Uakit	2.37	85	ePn	Pn	22 44 15.7	+0.6
UKT				ePg	Pb	22 44 18.0	-0.9
UKT				e		22 44 20.3	
UKT				eSg	Sb	22 44 48.4	+0.2
UKT				max			
	comp=E,246nm,0.5s						
UKT				Smax			
	comp=E,1µm,0.4s						
SVKR	Severomuysk	2.43	70	ePn	Pn	22 44 17.7	+1.9
SVKR				ePg	Pb	22 44 20.3	+0.4
SVKR				eSg	Sb	22 44 51.2	+1.3
SVKR				Pmax			
	comp=E,134nm,0.2s						
SVKR				Smax			
	comp=E,1µm,0.5s						
GORB	Goryachinsk	2.48	197	ePn	Pn	22 44 17.3	+0.9
GORB				ePg	Pb	22 44 20.4	-0.2
GORB				eSg	Sb	22 44 52.7	+1.5
KELR	Kotokel	2.73	198	ePn	Pn	22 44 20.7	+0.8
KELR				ePg	Pb	22 44 24.8	-0.1
KELR				eSg	Sb	22 44 59.9	+1.5
ZRHB	Zarechye	3.13	207	eSg	Sb	22 45 12.7	+2.9
ZRHB				Smax			
	comp=E,764nm,0.5s						
TRG	Tyrgan	3.19	216	ePn	Pn	22 44 27.6	+1.3
TRG				ePg	Pb	22 44 33.2	+0.5
TRG				eSn	Sn	22 45 04.5	+0.2
TRG				eSg	Sb	22 45 14.0	+2.4
TRG				Pmax			
	comp=E,28nm,0.2s						
TRG				Smax			
	comp=E,299nm,0.4s						
TRG	Tyrgan	3.19	216	ePN	Pn	22 44 27.5	+1.3
TRG				e		22 44 33.8	
TRG				eS	Sn	22 45 04.7	+0.4
TRG				e		22 45 14.5	
TRG				pmax	pmax		
	comp=Z,25nm,0.3s						
TRG				smax	smax		
	comp=E,302nm,0.4s						
BOD	Bodaibo	3.52	44	ePn	Pn	22 44 31.7	+1.1
BOD				eSn	Pn	22 44 32.2	+1.6
BOD				ePg	Pb	22 44 39.2	+1.0
BOD				eSg	Sb	22 45 24.2	+3.3
BOD				Pmax			
	comp=E,32nm,0.3s						
BOD				Smax			
	comp=E,244nm,0.3s						
UUDB	Ulan-Yde	3.66	198	ePg	Pb	22 44 41.4	+0.6
UUDB				eSg	Sb	22 45 27.9	+2.7
UUDB				Pmax			
	comp=E,49nm,0.7s						
UUDB				Smax			
	comp=E,160nm,1.3s						
NLYR	Nelyaty	3.69	70	ePn	Pn	22 44 33.5	+0.5
NLYR				ePg	Pb	22 44 42.1	+0.9
NLYR				eSg	Sb	22 45 29.5	+3.6
NLYR				Pmax			
	comp=E,41nm,0.5s						
NLYR				Smax			
	comp=E,167nm,1.1s						
FFNB	Fofonovo	3.69	207	ePg	Pb	22 44 42.1	+0.9
FFNB				e		22 45 28.0	
FFNB				eSg	Sb	22 45 29.7	+3.7
STDB	Stepnoy Dvoret	3.69	211	ePn	Pn	22 44 34.5	+1.4
STDB				ePg	Pb	22 44 41.8	+0.6
STDB				e		22 45 22.2	
STDB				eSg	Sg	22 45 31.0	-3.4
KAB	Kabansk	3.71	208	eSg	Sb	22 45 29.8	+3.1
KAB				Smax			
	comp=E,389nm,0.7s						
HRMR	Khuramsha	4.03	203	ePn	Pn	22 44 39.2	+1.5
HRMR				ePg	Pb	22 44 47.8	+0.8
HRMR				eSg	Sb	22 45 39.5	+3.7
HRMR				Pmax			
	comp=E,51nm,0.4s						
HRMR				Smax			
	comp=E,195nm,0.5s						
BGT	Bolshoye Golou	4.11	218	ePn	Pn	22 44 40.0	+1.2
BGT				ePg	Pb	22 44 49.5	+1.2
BGT				eSn	Sn	22 45 27.2	+0.4
BGT				eSg	Sb	22 45 42.2	+4.3
BGT				Pmax			
	comp=E,31nm,0.4s						
BGT				Smax			
	comp=E,356nm,0.6s						
CIT	Chita	4.13	142	eSg	Sb	22 45 41.3	+2.5
CIT				Smax			
	comp=E,248nm,0.4s						
IRK	Irkutsk	4.39	227	eSg	Sg	22 45 51.9	-4.8
IRK				Smax			
	comp=E,620nm,0.4s						
VTMR	Vitim	4.42	21	ePn	Pn	22 44 44.3	+1.3
VTMR				ePg	Pb	22 44 57.4	+3.8
VTMR				e		22 45 52.5	
VTMR				eSg	Sg	22 45 56.0	-1.7
LSTR	Listvyanka	4.46	220	ePn	Pn	22 44 44.3	+0.7
LSTR				ePg	Pb	22 44 56.1	+1.8
LSTR				eSn	Sn	22 45 34.0	-1.5
LSTR				e		22 45 51.8	
LSTR				eSg	Sb	22 45 53.3	+5.3
LSTR				Pmax			
	comp=E,16nm,0.3s						
LSTR				Smax			
	comp=E,168nm,0.7s						
IVK	Ivanovka	4.67	222	ePn	Pn	22 44 47.3	+0.8
IVK				ePg	Pb	22 44 59.6	+1.7
IVK				e		22 45 02.1	
IVK				eSn	Sn	22 45 38.1	-2.6
IVK				eSg	Sb	22 45 59.1	+5.0
IVK				max			
	comp=E,27nm,0.2s						

IVK				Smax			
	comp=E,335nm,0.3s						
TLY	**Talaya**	**5.07**	**226**	*e*Pn	**Pn**	**22 44 52.5**	**+0.5**
TLY				*e*Pg	**Pb**	**22 45 06.5**	**+1.8**
TLY				*e*Sn	**Sn**	**22 45 50.3**	**-0.2**
TLY				*e*		22 46 09.3	
TLY				*e*Sg	**Sb**	**22 46 11.9**	**+6.3**
TLY				Pmax			
	comp=E,19nm,0.6s						
TLY				Smax			
	comp=E,179nm,0.6s						
CRS	**Chara**	**5.16**	**69**	*e*Pn	**Pn**	**22 44 55.6**	**+2.3**
CRS				*e*Pg	**Pb**	**22 45 08.1**	**+1.8**
CRS				*e*		22 45 11.3	
CRS				*e*Sg	**Sb**	**22 46 14.8**	**+6.5**
CRS				max			
	comp=E,24nm,1.0s						
CRS				Smax			
	comp=E,102nm,0.7s						
ARS	**Arshan**	**5.42**	**233**	*e*Pn	**Pn**	**22 44 57.5**	**+0.6**
ARS				*e*Pg	**Pb**	**22 45 13.5**	**+2.7**
ARS				*e*		22 45 18.1	
ARS				*e*Sn	**Sn**	**22 45 59.4**	**0.0**
ARS				*e*Sg	**Sg**	**22 46 24.0**	**-6.0**
ARS				max			
	comp=E,33nm,0.6s						
ARS				Smax			
	comp=E,481nm,0.6s						
KPC	**Khapcheranga**	**5.94**	**161**	*e*Pn	**Pn**	**22 45 03.8**	**-0.2**
KPC				*e*Pg	**Pb**	**22 45 21.2**	**+1.6**
KPC				*e*Sg	**Sb**	**22 46 37.0**	**+6.3**
KPC				Pmax			
	comp=E,9.0nm,0.7s						
KPC				Smax			
	comp=E,89nm,1.2s						
KPC	**Khapcheranga**	**5.94**	**161**	*e*PN	**Pn**	**22 45 03.3**	**-0.7**
KPC				*e*		22 45 21.1	
KPC				*e*		22 46 36.9	
KPC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KPC				smax	smax		
	comp=E,89nm,1.4s						
TUP	**Tupik**	**6.12**	**94**	*e*Pn	**Pn**	**22 45 05.9**	**-0.6**
TUP				*e*		22 45 09.7	
TUP				*e*		22 45 18.9	
TUP				*e*Pg	**Pb**	**22 45 25.0**	**+2.3**
TUP				*e*Sg	**Sb**	**22 46 44.0**	**+8.0**
TUP				Pmax			
	comp=E,9.0nm,0.5s						
TUP				Smax			
	comp=E,79nm,0.6s						
TUP	**Tupik**	**6.12**	**94**	*e*PN	**Pn**	**22 45 05.6**	**-0.9**
TUP				*e*		22 45 25.0	
TUP				*e*S	**Sn**	**22 46 12.8**	**-3.8**
TUP				*e*		22 46 43.8	
TUP				pmax	pmax		
	comp=Z,7.0nm,0.5s						
TUP				smax	smax		
	comp=N,103nm,1.1s						
ZAK	**Zakamensk**	**6.24**	**219**	*e*Sg	**Sg**	**22 46 48.9**	**-7.1**
ZAK				Smax			
	comp=N,177nm,0.7s						
ZAK	**Zakamensk**	**6.24**	**219**	*e*PG	**Pb**	**22 45 28.9**	**+4.2**
ZAK				*e*		22 46 46.4	
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ZAK				smax	smax		
	comp=N,176nm,1.0s						
MOY	**Mondy**	**6.26**	**237**	*e*Pn	**Pn**	**22 45 10.9**	**+2.4**
MOY				*e*Pg	**Pb**	**22 45 29.1**	**+4.0**
MOY				*e*		22 46 22.0	
MOY				*e*Sg	**Sg**	**22 46 50.6**	**-6.3**
MOY				Pmax			
	comp=N,16nm,0.6s						
MOY				Smax			
	comp=N,98nm,1.2s						
MOY	**Mondy**	**6.26**	**237**	*e*PN	**Pn**	**22 45 10.8**	**+2.3**
MOY				*e*		22 45 30.1	
MOY				*e*S	**Sn**	**22 46 20.7**	**+0.6**
MOY				*e*		22 46 50.3	
MOY				pmax	pmax		
	comp=Z,12nm,0.5s						
MOY				smax	smax		
	comp=E,100nm,1.4s						
ORL	**Orlik**	**6.36**	**248**	*e*Pn	**Pn**	**22 45 11.9**	**+2.0**
ORL				*e*Pg	**Pb**	**22 45 31.3**	**+4.5**
ORL				*e*		22 46 26.1	
ORL				*e*Sg	**Sg**	**22 46 54.3**	**-5.8**
ORL				Pmax			
	comp=E,9.0nm,0.8s						
ORL				Smax			
	comp=E,156nm,0.7s						
ORL	**Orlik**	**6.36**	**248**	*e*PN	**Pn**	**22 45 12.2**	**+2.3**
ORL				*e*		22 45 33.1	
ORL				*e*		22 46 53.8	
ORL				pmax	pmax		
	comp=Z,22nm,0.6s						
ORL				smax	smax		
	comp=N,156nm,1.4s						
YKLR	**Yuktali**	**6.95**	**75**	*e*Sg	Sb	22 47 10.5	+11
SONM	**Songino Array**	**7.78**	**195**	Pn	**Pn**	**22 45 30.0**	**+0.8**
	comp=N,0.3nm,0.3s,baz=6.4,slow=14,SNR=9.7						
SONM				Lg	Lg	22 47 40.4	
	comp=N,1.2nm,0.3s,baz=11,slow=24,SNR=12						
	comp=N,0.7nm,0.6s						
TDJR	**Todzha**	**8.44**	**255**	*e*Sg	**Sg**	**22 47 57.7**	**-8.8**
HILR	**Hailar Array B**	**8.55**	**129**	Pn	**Pn**	**22 45 40.8**	**+1.0**
	baz=321,slow=12						
HILR				Lg	Lg	22 47 57.8	
	baz=329,slow=28						
	comp=N,0.4nm,0.3s						
CLNS	**Chul'man**	**8.75**	**74**	*e*Pg	Pg	22 46 13.4	-10
CLNS				*e*Sg	Sg	22 48 05.9	-11
MINR	**Mina**	**8.76**	**273**	*e*Pn	**Pn**	**22 45 43.8**	**+1.1**
MINR				*e*Pg	Pg	22 46 15.1	-8.5
MINR				*e*Sn	**Sn**	**22 47 20.0**	**-1.4**
MINR				*e*Sg	**Sg**	**22 48 09.2**	**-7.7**
YAK	**Yakutsk**	**12.42**	**49**	Lg	Lg	22 49 55.8	
	comp=N,1.4nm,0.3s,baz=157,slow=15,SNR=5.1						
ZALV	**Zalesovo Beam**	**14.32**	**275**	Pn	**Pn**	**22 46 58.2**	**-0.3**
	comp=N,0.2nm,0.3s,baz=68,slow=12,SNR=7.7						
	comp=N,1.3nm,0.6s						
TIXI	**Tiksi**	**18.33**	**20**	P	**P**	**22 47 50.8**	**+0.9**
	comp=N,0.3nm,0.3s,baz=235,slow=5.3,SNR=4.5						
	comp=N,2.9nm,0.3s						
MKAR	**Makanchi Array**	**19.00**	**255**	P	**P**	**22 47 58.2**	**+0.6**
	comp=N,0.2nm,0.3s,baz=58,slow=10,SNR=16						
	comp=N,1.4nm,0.6s						
KURK	**Kurchatov**	**19.03**	**269**	P	**Pn**	**22 47 59.4**	**+0.8**
KURBB	**Kurchatov Arra**	**19.12**	**269**	P	**P**	**22 47 59.4**	**+0.5**
	comp=N,0.2nm,0.3s,baz=66,slow=12,SNR=5.6						
	comp=N,1.2nm,0.2s						
BVAR	**Borovoye Array**	**22.78**	**280**	P	**P**	**22 48 39.0**	**+0.7**
	comp=N,0.7nm,0.5s,baz=74,slow=12,SNR=3.0						
	comp=N,0.7nm,0.5s						
ILAR	**Eielson Array**	**46.84**	**35**	P	**P**	**22 52 06.3**	**+0.8**
	comp=N,0.2nm,0.6s,baz=306,slow=8.7,SNR=4.3						
	comp=N,0.2nm,0.6s						

THE ***25*** *22:44:25.4, 41˚N±23˚×2˚0E±˚, h8*^{km}*±11*^{km}*, M2.5/7, MLh2.5/7*
TIR ***25*** *22:44:26.4, 41°.13N×20°.16E, h22*^{km}*, Ml2.5/4*
PDG ***25*** *22:44:26.8±0.4, 41°.15N×20°.17E, h0*^{km}*±11*^{km}*, ML2.6/11, Error ellipse: s-maj=2.0km s-min=2.8km az=0.0*
ATH ***25*** *22:44:26.1±0.4, 41°.11N×20°.18E, h10*^{km}*, ML2.6/9, Manual Solution by G.Panopoulou First location: 2019/12/25 22:45:45, This location: 2019/12/25 23:29:35 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 2 km*
SKO ***25*** *22:44:26.6, 41°.02N×20°.12E, h0*^{km}*, ML2.6*
BEO ***25*** *22:44:29.0±0.7, 41°.18N×20°.27E, h0*^{km}*, ML2.3/5*
ISC 25 22:44:25.4±1.0**, 41°.08N**±0°.02×**20°.16E**±0°.02**, h15**^{km}±9^{km}**, n73,** σ1§**41**/103**, 8C-1D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.35**	**320**	Pg	**Pg**	**22 44 31.8**	**-0.7**
TIR				Sg	**Sb**	**22 44 38.2**	**-0.5**
TIR				AML	AML	22 44 42.3	
	2.0nm,0.6s						
OHR	**Ohrid**	**0.48**	**86**	*i* Pg	**Pb**	**22 44 35.2**	**-0.4**
OHR				*i* Sg	**Sb**	**22 44 43.4**	**+0.9**
OHR				*e*Lg	Lg	22 44 43.8	
	comp=N,335nm,0.3s						
OHR				*e*Lg	Lg	22 44 44.0	
	comp=E,476nm,0.5s						
PHP	**Peshkopia**	**0.64**	**19**	Pg	**Pg**	**22 44 37.1**	**-0.7**
PHP				Sg	**Sb**	**22 44 46.4**	**-0.6**
PHP				AML	AML	22 44 51.5	
	comp=E,1.4nm,0.3s						
PHP	**Peshkopia**	**0.64**	**19**	P	**Pg**	**22 44 37.0**	**-0.9**
PHP				S	**Sg**	**22 44 45.9**	**-0.5**
KBN	**Korca**	**0.66**	**134**	Pg	**Pg**	**22 44 37.5**	**-0.8**
KBN				Sg	**Sn**	**22 44 49.3**	**-1.2**
KBN	**Korca**	**0.66**	**134**	P	**Pg**	**22 44 36.8**	**-1.4**
KBN				S	**Sg**	**22 44 45.6**	**-1.4**
LMS2	**Laimos Florina**	**0.78**	**108**	P	**Pb**	**22 44 40.6**	**-0.1**
LMS2				S	**Sb**	**22 44 52.0**	**+0.9**
VLO	**Vlora**	**0.80**	**220**	Pn	**Pn**	**22 44 41.7**	**-0.4**
VLO				Sn	**Sn**	**22 44 53.2**	**-0.5**
VLO	**Vlora**	**0.80**	**220**	P	**Pn**	**22 44 41.6**	**-0.4**
NEST	**Nestorio**	**0.95**	**134**	P	**Pb**	**22 44 42.7**	**-0.9**
NEST	**Nestorio**	**0.95**	**134**	P	**Pg**	**22 44 43.5**	**-0.2**
SDA	**Shkodra**	**1.09**	**333**	Pg	**Pg**	**22 44 46.2**	**-0.2**
SDA				Sg	**Sn**	**22 45 01.2**	**+0.3**
SDA				AML	AML	22 45 07.1	
	comp=E,0.4nm,0.3s						
ULC	**Ulcinj**	**1.12**	**322**	*e*Pg	**Pg**	**22 44 45.9**	**-1.1**
ULC				*e*Sg	**Sn**	**22 45 03.2**	**+1.4**
PENT	**Pentalofos**	**1.16**	**140**	P	**Pb**	**22 44 47.0**	**-0.1**
PENT	**Pentalofos**	**1.16**	**140**	P	**Pg**	**22 44 47.5**	**-0.2**
SKO	**Skopje**	**1.31**	**47**	*i* Pg	**Pg**	**22 44 51.3**	**+0.8**
SKO				*i* Sg	**Sg**	**22 45 09.8**	**+2.2**
DRME	**Dracevica, Mon**	**1.32**	**327**	*e*Pg	**Pg**	**22 44 49.9**	**-1.0**
DRME				*e*Sg	**Sg**	**22 45 12.4**	**+4.3**
DRME	**Dracevica, Mon**	**1.32**	**327**	⇑*i*Pg	**Pb**	**22 44 49.4**	**-0.6**
DRME				*e*Sg	**Sg**	**22 45 10.6**	**+2.5**
KEK	**Kerkira**	**1.40**	**192**	Pn	**Pg**	**22 44 53.3**	**+1.1**
KEK				Sn	**Sg**	**22 45 13.3**	**+3.0**
KEK	**Kerkira**	**1.40**	**192**	P	**Pg**	**22 44 51.6**	**-0.6**
KZN	**Kozani**	**1.45**	**122**	P	**Pn**	**22 44 50.0**	**-1.1**
KZN	**Kozani**	**1.45**	**122**	P	**Pb**	**22 44 52.1**	**+0.1**
KPRO	**Kipourio**	**1.45**	**141**	P	**Pg**	**22 44 52.3**	**-0.9**
PDG	**Podgorica**	**1.51**	**334**	Pg	**Pg**	**22 44 53.5**	**-0.9**
PDG				Sg	**Sg**	**22 45 14.0**	**0.0**
PDG	**Podgorica**	**1.51**	**334**	*e*Pg	**Pg**	**22 44 54.0**	**-0.4**
PDG				*e*Sg	**Sg**	**22 45 16.2**	**+2.2**
PDG	**Podgorica**	**1.51**	**334**	P	**Pb**	**22 44 52.7**	**-0.4**
PDG	**Podgorica**	**1.51**	**334**	⇑*i*Pg	**Pg**	**22 44 53.8**	**-0.6**
PDG				*e*Sg	**Sg**	**22 45 15.5**	**+1.5**
JAN	**Janina**	**1.52**	**160**	P	**Pn**	**22 44 51.8**	**-0.3**
PVY	**Plav**	**1.52**	**354**	*e*Pg	**Pg**	**22 44 53.8**	**-0.8**
PVY	**Plav**	**1.52**	**354**	⇑*i*Pg	**Pb**	**22 44 52.8**	**-0.5**
PVY				*e*Sg	**Sg**	**22 45 16.2**	**+1.9**
BUM	**Brajici-Budva**	**1.54**	**322**	⇑*i*Pg	**Pg**	**22 44 54.5**	**-0.6**
BUM				*e*Sg	**Sg**	**22 45 18.1**	**+2.9**
IGT	**Igoumenitsa**	**1.55**	**175**	Pn	**Pg**	**22 44 56.0**	**+0.8**
IGT				Sn	**Sg**	**22 45 18.3**	**+2.9**
IGT	**Igoumenitsa**	**1.55**	**175**	P	**Pg**	**22 44 54.1**	**-1.1**
IGT	**Igoumenitsa**	**1.55**	**175**	P	**Pg**	**22 44 54.0**	**-1.3**
GRG	**Griva**	**1.70**	**94**	*i* Pn	**Pg**	**22 44 57.7**	**-0.2**
GRG	**Griva**	**1.70**	**94**	P	**Pb**	**22 44 56.3**	**-0.1**
CEME	**Cevo**	**1.73**	**328**	⇓*i*Pn	**Pg**	**22 44 57.6**	**-1.1**
CEME				*e*Sn	**Sg**	**22 45 23.5**	**+2.3**
BEY	**Berane**	**1.80**	**354**	*e*Pg	**Pg**	**22 45 00.1**	**+0.2**
IVA	**Berane**	**1.80**	**354**	⇑*i*Pn	**Pg**	**22 44 59.3**	**-0.6**
IVA				*e*Sn	**Sg**	**22 45 24.7**	**+1.4**
VAY	**Valandovo**	**1.83**	**82**	*i* Pn	**Pb**	**22 44 57.9**	**-0.7**
VAY				*i* Sn	**Sg**	**22 45 24.9**	**+0.7**
VAY				*e*Lg	Lg	22 45 25.1	
	comp=N,22nm,0.6s						
VAY				*e*Lg	Lg	22 45 26.4	
	comp=E,24nm,0.8s						
HCY	**Herceg Novi**	**1.85**	**318**	⇑*i*Pn	**Pg**	**22 45 00.0**	**-0.9**
HCY				*e*Sn	**Sg**	**22 45 26.5**	**+1.6**
NKME	**Niksic**	**1.91**	**332**	*e*Pn	**Pg**	**22 45 00.7**	**-1.3**
NKME				*e*Sn	**Sg**	**22 45 27.8**	**+1.0**
TETR	**Tetrakomo, Epi**	**1.93**	**154**	P	**Pb**	**22 45 00.1**	**-0.2**
LIT	**Litokhoron**	**2.02**	**118**	P	**Pb**	**22 45 00.3**	**-1.6**
THL	**Klokotos Trika**	**2.07**	**136**	P	**Pb**	**22 45 01.8**	**-0.9**
TREB	**Trebinje**	**2.12**	**321**	*e*Pg	**Pg**	**22 45 05.4**	**-0.7**
BARS	**Barje**	**2.13**	**35**	*i* Pn	**Pg**	**22 45 04.9**	**-1.2**
BARS	**Barje**	**2.13**	**35**	*e*Pn	**Pb**	**22 45 04.4**	**+0.8**
SJES	**Sjenica**	**2.18**	**356**	*e*Pg	**Pg**	**22 45 06.1**	**-1.1**
SJES				*e*Sg	**Sg**	**22 45 34.3**	**-1.2**
BRY	**Bratogost**	**2.19**	**327**	⇑*i*Pn	**Pb**	**22 45 05.0**	**+0.3**
BRY				*e*Sn	**Sg**	**22 45 34.6**	**-1.0**
BOSS	**Bosilegrad**	**2.23**	**50**	*e*Pn	**Pb**	**22 45 05.5**	**0.0**
SELS	**Selova**	**2.25**	**18**	*e*Pn	**Pb**	**22 45 06.5**	**+0.7**
SELS				*e*Sn	**Sb**	**22 45 33.5**	**+0.1**
UPM	**Unac-Piva**	**2.32**	**337**	⇑*i*Pn	**Pb**	**22 45 06.5**	**-0.5**
UPM				*e*Sn	**Sg**	**22 45 37.3**	**-2.6**
LKD2	**Lefkada island**	**2.32**	**170**	P	**Pb**	**22 45 04.9**	**-2.1**
KKB	**Krupnik**	**2.35**	**70**	*i* Pn	**Pb**	**22 45 06.9**	**-0.6**
NOCI	**Noci**	**2.37**	**264**	P	**Pn**	**22 45 04.0**	**+0.3**
NOCI	**Noci**	**2.37**	**264**	P	**Pn**	**22 45 04.3**	**+0.6**
NYDR	**Nydri-Lefkada**	**2.40**	**170**	P	**Pb**	**22 45 05.6**	**-2.7**
EVGI	**Lefkada island**	**2.49**	**171**	P	**Pn**	**22 45 06.6**	**+1.2**
IVAS	**Ivanjica**	**2.49**	**360**	*e*Pn	**Pb**	**22 45 08.5**	**-1.4**
EVR	**Evrytania**	**2.50**	**149**	P	**Pb**	**22 45 08.1**	**-2.0**
MAKR	**Makrakomi, Fth**	**2.56**	**143**	P	**Pb**	**22 45 08.8**	**-2.2**
AGG	**Agios Georgios**	**2.65**	**140**	P	**Pn**	**22 45 09.0**	**+1.4**
PVO	**Paravola**	**2.68**	**157**	P	**Pb**	**22 45 10.1**	**-2.9**
MMB	**Musomishta**	**2.74**	**79**	*i* Pn	**Pb**	**22 45 13.3**	**-0.8**
BOVS	**Bovan**	**2.79**	**24**	*e*Pn	**Pb**	**22 45 13.4**	**-1.6**
BOVS				*e*Sn	**Sn**	**22 45 44.4**	**+1.4**
ANX	**Ano Chora**	**2.83**	**151**	P	**Pn**	**22 45 12.2**	**+2.1**
GRUS	**Gruza**	**2.83**	**8**	*e*Pn	**Pb**	**22 45 15.1**	**-0.6**
ZAPS	**Zavoj**	**2.86**	**39**	*e*Pn	**Pb**	**22 45 15.2**	**-0.9**
VLS	**Valsamata**	**2.92**	**173**	P	**Pn**	**22 45 13.0**	**+1.7**
DIVS	**Divibare**	**3.02**	**358**	*e*Pn	**Pb**	**22 45 16.5**	**-2.3**
ZAGS	**Zajecar**	**3.13**	**29**	*e*Pn	**Pb**	**22 45 17.5**	**-3.2**
TEKS	**Tekeris**	**3.50**	**353**	*e*Pn	**Pb**	**22 45 24.2**	**-2.8**

IDC 25 23:02:11.8±7.0**, 23°.40N**×**95°.23E, h0**^{km}**, mb3.6**/4**, mbtmp3.6**/4**, MS3.7**/1**, Error ellipse: s-maj=675.7km s-min=23.0km az=59.0, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**25.56**	**339**	P	P	23 07 42.7	+0.4
	0.6nm,0.4s,baz=151,slow=9.8,SNR=22						
MKAR				S	S	23 11 53.3	-18
	0.3nm,0.4s,baz=184,slow=24,SNR=10						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**30.12**	**339**	P	P	23 08 22.5	-0.6
	0.4nm,0.5s,baz=150,slow=9.9,SNR=3.3						
	0.4nm,0.5s						
MMAI	**Mount Meron Ar**	**52.98**	**295**	LR	LR	23 36 59.1	
	comp=Z,65nm,18.1s,baz=259,slow=39						
WRA	**Warramunga Arr**	**57.54**	**135**	P	P	23 12 02.9	-0.5
	0.3nm,0.6s,baz=316,slow=8.0,SNR=2.1						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**60.00**	**139**	P	P	23 12 20.8	+0.3
	0.2nm,0.5s,baz=318,slow=7.0,SNR=5.4						
	0.2nm,0.5s						

NEIC ***25*** *23:15:04.1±1.1, 32°.85N±0°.04×119°.17W±0°.03, h13*^{km}*±8*^{km}*, Error ellipse: s-maj=6.4km s-min=1.5km az=209.0*
PAS ***25*** *23:15:05.9±1.6, 32°.92N±0°.04×119°.16W±0°.04, h6*^{km}*±2*^{km}*, ML3.7/41, ML3.4/134(NEIC), Error ellipse: s-maj=6.6km s-min=5.4km az=221.0*
IDC ***25*** *23:15:09.7±2.9, 32°.50N×118°.87W, h34*^{km}*±21*^{km}*, mb3.5/2, mbtmp3.3/7, ML3.3/5, Error ellipse: s-maj=23.5km s-min=14.9km az=35.0*
ISC 25 23:15:06.3±1.9**, 32°.96N**±0°.06×**119°.12W**±0°.05**, h6**^{km}±11^{km}**, n86,** σ1§**38**/85**, Off coast of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBI	**Santa Barbara**	**0.52**	**8**		**Pg**	**23 15 16.7**	**+0.3**
SBI					**Sg**	**23 15 24.3**	**+1.0**
CIAC	**Catalina I. Ai**	**0.74**	**53**		**Pg**	**23 15 20.4**	**-0.1**
CIAC					**Sg**	**23 15 30.9**	**+0.8**
RPV	**Rancho Palos V**	**0.98**	**37**		**Pg**	**23 15 25.1**	**-0.1**
RPV					**Sb**	**23 15 38.6**	**-0.5**
FMP	**Fort Macarthur**	**1.02**	**42**		**Pg**	**23 15 25.7**	**-0.2**
FMP					**Sg**	**23 15 39.2**	**0.0**
PASC	**Pasadena Art C**	**1.44**	**33**		**Pn**	**23 15 31.8**	**-1.2**
PASC				IAML		23 15 50.9	
	comp=N,415nm,0.6s						
MWC	**Mount Wilson**	**1.54**	**35**		**Pn**	**23 15 33.3**	**-1.3**
MWC				IAML		23 16 08.9	
	comp=E,315nm,0.8s						
MWC				IAML		23 16 09.1	
	comp=N,348nm,0.7s						
ELS	**Elsinore Mount**	**1.57**	**64**		**Pn**	**23 15 33.1**	**-1.8**
ELS				IAML		23 16 04.3	
	comp=N,576nm,0.8s						
ELS				IAML		23 16 05.2	
	comp=E,391nm,0.7s						
OSI	**Osito Audit: C**	**1.68**	**11**		**Pn**	**23 15 35.6**	**-0.8**
OSI				IAML		23 16 15.4	
	comp=N,429nm,0.9s						
OSI				IAML		23 16 19.1	
	comp=E,644nm,0.9s						
CPE	**Camp Elliot**	**1.69**	**92**		**Pn**	**23 15 34.7**	**-1.8**
CPE				IAML		23 15 55.7	
	comp=N,421nm,0.5s						
CPE				IAML		23 16 01.0	
	comp=E,388nm,0.5s						
TJX	**Tijuana**	**1.80**	**104**	Pn	**Pn**	**23 15 36.0**	**-1.9**
DPP	**Dos Picos Cty**	**1.83**	**88**		**Pn**	**23 15 36.7**	**-1.7**
DPP				IAML		23 16 12.6	
	comp=N,266nm,1.1s						
FIGC	**Figueroa Mtn.**	**1.91**	**338**		**Pn**	**23 15 39.0**	**-0.6**
TPO	**Tropico Hills**	**2.05**	**21**		**Pn**	**23 15 41.2**	**-0.2**
TPO				IAML		23 16 20.0	
	comp=E,318nm,1.1s						
BAR	**Barrett**	**2.08**	**97**		**Pn**	**23 15 40.1**	**-1.7**
BAR				IAML		23 16 14.0	
	comp=N,238nm,0.3s						
BAR				IAML		23 16 22.9	
	comp=E,192nm,0.9s						
CBX	**Cerro Bola**	**2.17**	**107**		**Pn**	**23 15 41.6**	**-1.6**
DNR	**Dunn Ranch,Anz**	**2.17**	**73**		**Pn**	**23 15 42.5**	**-0.7**
BORC	**Borrego Spring**	**2.29**	**82**		**Pn**	**23 15 43.5**	**-1.2**
BORC				IAML		23 16 28.6	
	comp=E,224nm,0.8s						
BORC				IAML		23 16 31.0	
	comp=N,184nm,0.9s						
PFO	**Pinyon Flats O**	**2.32**	**73**	Pn	**Pn**	**23 15 44.7**	**-0.5**
	comp=N,1.7nm,0.3s,baz=250,slow=14,SNR=12						
PFO				Pg	**Pg**	**23 15 51.3**	**+0.5**
	comp=N,3.2nm,0.3s,baz=250,slow=14,SNR=19						
PFO				Sn	**Sn**	**23 16 12.5**	**-1.6**
	comp=N,12nm,0.3s,baz=259,slow=7.8,SNR=4.1						
PFO				Lg	Lg	23 16 24.1	
	comp=N,14nm,0.3s,baz=340,slow=21,SNR=15						
	comp=N,10nm,0.5s						
PFO	**Pinyon Flats O**	**2.32**	**73**		**Pn**	**23 15 44.2**	**-1.0**
PFO				IAML		23 16 28.6	
	comp=N,190nm,0.8s						
CCX	**Cicese**	**2.34**	**117**		**Pn**	**23 15 43.9**	**-1.6**
CCX				IAML		23 16 40.4	
	comp=E,158nm,0.9s						
PMD	**Palm Desert**	**2.40**	**73**		**Pn**	**23 15 45.3**	**-0.8**
PMD				IAML		23 16 31.0	
	comp=N,159nm,0.8s						
SALN	**Salton City**	**2.65**	**82**	Pn	**Pn**	**23 15 48.0**	**-1.6**
YUH	**Yuha Desert**	**2.71**	**96**		**Pn**	**23 15 49.7**	**-0.7**
YUH				IAML		23 16 42.3	
	comp=E,107nm,1.0s						
ISA	**Isabella, Lake**	**2.75**	**11**		**Pn**	**23 15 51.0**	**-0.1**
LRMC	**Laurel Mtn Rad**	**2.78**	**25**		**Pn**	**23 15 50.5**	**-1.1**
LRMC				IAML		23 16 44.6	
	comp=E,101nm,0.8s						
ESJX	**Sierra Juarez**	**2.84**	**109**		**Pn**	**23 15 51.5**	**-0.9**
ESJX				IAML		23 16 18.1	
	comp=E,101nm,0.1s						
VES	**Vestal, Richgr**	**2.87**	**1**		**Pn**	**23 15 52.0**	**-0.7**
VES				IAML		23 16 26.6	
	comp=N,223nm,0.5s						
CCCA	**Chr Cany lake**	**2.94**	**29**		**Pn**	**23 15 53.6**	**-0.1**
WSHM	**Spangler Hills**	**2.96**	**27**		**Pn**	**23 15 53.5**	**-0.4**
WSHM				IAML		23 16 56.4	
	comp=N,83nm,1.2s						
GSC	**Goldstone, Bar**	**3.02**	**39**	Pn	**Pn**	**23 15 55.0**	**+0.1**
GSC				IAML		23 16 58.5	
	comp=N,126nm,1.0s						
CLC	**China Lake**	**3.11**	**23**		**Pn**	**23 15 55.5**	**-0.6**
CLC				IAML		23 17 01.0	
	comp=N,73nm,0.1s						
BC3	**Big Chuckawall**	**3.15**	**76**		**Pn**	**23 15 56.3**	**-0.3**
BC3				IAML		23 16 52.1	
	comp=E,77nm,0.9s						
BC3				IAML		23 17 02.5	
	comp=N,103nm,2.3s						
PKD	**Bear Valley Ra**	**3.20**	**339**		**Pn**	**23 15 55.8**	**-1.5**
PKD				IAML		23 17 02.6	
	comp=N,90nm,1.0s						
PKD				IAML		23 17 08.4	
	comp=E,76nm,1.4s						
VTX	**Valle De La Tr**	**3.23**	**118**		**Pn**	**23 15 56.6**	**-1.0**
CPBX	**Cerro Prieto**	**3.26**	**98**	Pn	**Pn**	**23 15 58.1**	**+0.1**
MPMC	**Manual Prospec**	**3.37**	**23**		**Pn**	**23 15 59.4**	**-0.3**
MPMC				IAML		23 17 08.7	
	comp=E,71nm,0.9s						
HULI	**Fort Hunter Li**	**3.52**	**331**		**Pn**	**23 16 00.1**	**-1.5**
HULI				IAML		23 16 46.3	
	comp=E,88nm,2.3s						
HULI				IAML		23 16 48.7	
	comp=N,106nm,2.5s						
IRM	**Iron Mountain**	**3.52**	**69**		**Pn**	**23 16 00.9**	**-0.8**
IRM				IAML		23 17 09.6	
	comp=N,52nm,1.9s						
IRM				IAML		23 17 12.7	
	comp=E,50nm,1.2s						
DANC	**Danby, Needles**	**3.53**	**61**		**Pn**	**23 16 00.6**	**-1.2**
DANC				IAML		23 17 19.8	
	comp=N,118nm,0.9s						
PMPB	**Monarch Peak**	**3.53**	**337**		**Pn**	**23 16 00.8**	**-1.0**
PMPB				IAML		23 16 37.4	
	comp=N,113nm,3.0s						
PMPB				IAML		23 17 11.6	
	comp=E,93nm,1.1s						
CWC	**Cottonwood Cre**	**3.58**	**14**		**Pn**	**23 16 01.7**	**-0.8**
GLA	**Glamis**	**3.61**	**87**		**Pn**	**23 16 01.9**	**-0.9**
GLA				IAML		23 17 11.9	
	comp=N,60nm,0.9s						
GLA				IAML		23 17 15.6	
	comp=E,80nm,0.8s						
SHOC	**Shoshone, Teco**	**3.76**	**38**		**Pn**	**23 16 04.6**	**-0.3**
MTPC	**Mountain Pass**	**3.88**	**49**		**Pn**	**23 16 05.4**	**-1.3**
MTPC				IAML		23 17 26.8	
	comp=N,41nm,1.2s						
BLYC	**Blythe**	**3.92**	**77**		**Pn**	**23 16 07.0**	**-0.2**
BLYC				IAML		23 17 23.2	
	comp=E,41nm,0.9s						
BLYC				IAML		23 17 24.0	
	comp=N,56nm,1.0s						
BBGB	**Big Mountain B**	**3.94**	**337**		**Pn**	**23 16 06.7**	**-0.8**
FURC	**Furnace Creek,**	**3.96**	**27**		**Pn**	**23 16 08.0**	**+0.3**
FURC				IAML		23 17 35.6	
	comp=N,95nm,1.1s						
FURC				IAML		23 17 36.4	
	comp=E,90nm,1.0s						
SFX	**San Felipe**	**4.10**	**117**	Pn	**Pn**	**23 16 08.7**	**-0.9**
SFX				IAML		23 17 31.1	
	comp=E,39nm,0.8s						
SFX				IAML		23 17 50.4	
	comp=N,35nm,1.1s						
TIN	**Tinemaha, Big**	**4.15**	**10**		**Pn**	**23 16 10.1**	**-0.2**
NEE2	**Needles Airpor**	**4.15**	**63**		**Pn**	**23 16 10.3**	**-0.1**
SAO	**San Andreas Ge**	**4.25**	**334**	Pn	**Pn**	**23 16 09.8**	**-1.8**
GRAC	**Grapevine Rang**	**4.28**	**19**		**Pn**	**23 16 13.0**	**+1.0**
GRAC				IAML		23 17 38.0	
	comp=E,41nm,1.1s						
GRAC				IAML		23 17 40.9	
	comp=N,46nm,0.9s						
WCT	**Wildcat Mounta**	**4.34**	**27**		**Pn**	**23 16 12.9**	**0.0**
V12A	**Nelson**	**4.48**	**51**	Pn	**Pn**	**23 16 14.8**	**-0.1**
113A	**Mohawk Valley,**	**4.51**	**91**		**Pn**	**23 16 14.8**	**-0.4**
GMN	**Gold Mountain**	**4.59**	**19**		**Pn**	**23 16 17.4**	**+0.8**
TPNV	**Topopah Spring**	**4.62**	**30**		**Pn**	**23 16 17.2**	**+0.3**
TPNV				IAML		23 17 53.2	
	comp=N,44nm,1.0s						
TPNV				IAML		23 17 56.4	
	comp=N,34nm,1.1s						
MDPB	**Devils Postpil**	**4.66**	**0**		**Pn**	**23 16 17.9**	**+0.4**
MDPB				IAML		23 17 21.1	
	comp=E,24nm,0.7s						
MDPB				IAML		23 17 35.4	
	comp=N,25nm,0.7s						
SHPR	**Sheep Range**	**4.81**	**42**		**Pn**	**23 16 20.1**	**+0.6**

MHC	Mount Hamilton	4.84	335	Pn	Pn	23 16 19.7	-0.1
MHC				IAML		23 17 28.2	
	comp=N,33nm,2.0s						
MHC				IAML		23 18 05.2	
	comp=E,29nm,4.2s						
W13A	Hualapai Mount	4.84	62		Pn	23 16 19.5	-0.5
W13A				IAML		23 18 06.0	
	comp=N,24nm,1.6s						
PIX	Pinacate	4.99	105	Pn	Pn	23 16 20.6	-1.2
CMB	Columbia Colle	5.17	349		Pn	23 16 24.2	-0.1
214A	Organ Pipe Nat	5.42	99	Pn	Pn	23 16 27.2	-0.6
NVAR	Mina Array Bea	5.50	7	Pn	Pb	23 16 36.9	-6.0
	comp=N,0.6nm,0.3s,baz=197,slow=12,SNR=6.8						
NVAR				Pg	Pg	23 16 50.2	-1.4
	comp=N,0.7nm,0.3s,baz=194,slow=17,SNR=13						
NVAR				Sn	Sb	23 17 41.1	-8.1
	comp=N,0.4nm,0.3s,baz=196,slow=19,SNR=2.0						
	comp=N,1.1nm,0.7s						
NVAR	Mina Array Bea	5.50	7	Pn	Pn	23 16 29.1	+0.2
NV11	Mina Array Sit	5.52	8		Pn	23 16 28.7	-0.4
PRN	Pahroc Range	5.55	36		Pn	23 16 30.1	+0.5
RYN	Ryan	5.68	5		Pn	23 16 32.6	+1.2
PNTR	Pine Nut	6.13	356		Pn	23 16 38.3	+0.6
LCMT	Little Creek M	6.29	48		Pn	23 16 40.5	+0.7
PAHR	Pah Rah Range	6.74	358	Pn	Pn	23 16 46.4	+0.4
ORV	Oroville	6.86	344		Pn	23 16 47.9	+0.4
ELK	Elko	8.37	21	Pn	Pn	23 17 09.0	+0.6
	comp=N,0.2nm,0.3s,baz=231,slow=14,SNR=3.7						
ELK				Lg	Lg	23 19 35.2	
	baz=191,slow=16,SNR=4.3						
121A	Cookes Peak, D	9.55	89		Pn	23 17 24.5	-0.1
PDAR	Pinedale Array	12.36	35	Pn	Pn	23 18 07.8	+4.8
	baz=220,slow=12,SNR=5.4						
	comp=N,0.6nm,0.9s						
TXAR	Lajitas Array	13.72	101	Pn	Pn	23 18 20.7	-0.9
	baz=298,slow=15,SNR=4.0						
	comp=N,0.1nm,0.5s						
NEW	Newport	15.36	5	Pn	P	23 18 51.3	+2.8
	comp=N,0.1nm,0.3s,baz=201,slow=8.6,SNR=2.1						
	comp=N,1.1nm,0.9s						
BBB	Bella Bella	20.29	344	P	Pn	23 19 47.3	+2.7
	comp=N,10nm,0.9s,baz=233,slow=20,SNR=3.1						
	comp=N,10nm,0.9s						
ILAR	Eielson Array	36.09	340	P	P	23 22 12.2	+3.6
	comp=N,0.2nm,0.6s,baz=136,slow=8.9,SNR=7.0						
	comp=N,0.2nm,0.6s						
H11N3	WAKE ISLAND Hy	66.40	279	T	T	00 38 10.2	
	baz=62,slow=75,SNR=3.7						
H11N2	WAKE ISLAND Hy	66.41	279	T	T	00 38 10.0	
	baz=62,slow=75,SNR=4.2						
H11N1	WAKE ISLAND Hy	66.42	279	T	T	00 38 11.6	
	baz=62,slow=75,SNR=6.0						
H11S1	WAKE ISLAND Hy	67.15	278	T	T	00 39 04.6	
	baz=61,slow=75						
H11S2	WAKE ISLAND Hy	67.16	278	T	T	00 39 05.2	
	baz=61,slow=75						
H11S3	WAKE ISLAND Hy	67.17	278	T	T	00 39 05.7	
	baz=61,slow=75						

RSNC 25 23:26:24.7±0.0,**3°N**±1°×**7°4W**±°,**h4**^{km}±2^{km},**M3.2,mb4.0, ML3.1,Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	La Uribe, Meta	0.32	221	P	Pg	23 26 29.6	-1.3
URMC				S	Sg	23 26 33.9	-1.2
PRAC	Prado	0.75	287	P	Pg	23 26 37.1	-2.0
VILC	Villavicencio,	0.78	38	P	Pg	23 26 38.6	-1.1
VILC				S	Sg	23 26 50.3	+0.5
CVER	Cruz Verde, Cu	1.03	5	P	Pg	23 26 42.5	-2.0
CVER				S	Sg	23 26 56.8	-1.1
ORTC	Ortega, Tolima	1.15	291	P	Pg	23 26 44.1	-2.7
ORTC				S	Sg	23 27 02.0	+0.2
CHIC	Chingaza	1.21	21	P	Pg	23 26 45.7	-2.3
CHIC				S	Sg	23 27 02.0	-1.8
MACC	Macarena, Meta	1.37	166	P	Pn	23 26 48.6	-2.1
MACC				S	Sg	23 27 06.5	-2.4
BETC	Betania	1.50	238	P	Pn	23 26 50.3	-2.2
BETC				S	Sn	23 27 09.9	-2.7
ANIL	Santa Ana	1.58	309	P	Pn	23 26 51.3	-2.5
ANIL				S	Sn	23 27 13.2	-1.7
GARC	Garzon, Huila	1.85	226	P	Pn	23 26 56.4	-1.1
GARC				S	Sn	23 27 19.8	-1.6
RECRC	Villamaria, Ca	1.88	321	P	Pn	23 26 57.0	-1.1
RECRC				S	Sn	23 27 21.0	-1.5
NIZA	Niza - Manizal	2.03	320	P	Pn	23 26 59.6	-0.3
SPBC	San Pablo de B	2.15	3	P	Pb	23 27 02.9	-1.4
SPBC				S	Sb	23 27 32.4	+1.0
NORC	Norcasia	2.17	341	P	Pn	23 27 00.7	-1.1
NORC				S	Sn	23 27 28.6	-0.6
YOTC	Yotoco, Valle	2.23	283	P	Pn	23 27 00.8	-1.7
FLOC	Florencia	2.41	218	P	Pn	23 27 05.4	+0.5
FLOC				S	Sn	23 27 36.2	+1.3
JAMC	Jamundi, Valle	2.51	264	P	Pn	23 27 06.3	-0.3
JAMC				S	Sb	23 27 41.8	-0.2
JAMC				S	Sb	23 27 41.8	-0.2
PLMC	San Jos del P	2.53	304	P	Pn	23 27 06.2	-0.5
RUSC	La Rusia	2.62	24	P	Pn	23 27 08.8	+0.5
POPC	Popayan, Colom	2.67	249	P	Pn	23 27 09.5	+0.7
POPC				S	Sb	23 27 46.4	-0.2
CBOC	Ciudad Bolivar	2.99	322	P	Pn	23 27 14.1	+1.0
HELC	Santa Helena	3.00	333	P	Pn	23 27 14.1	+0.6
PTBC	PUERTO BERRIO,	3.04	355	P	Pb	23 27 19.2	-0.3
PTLC	Puerto Leguiza	3.36	191	P	Pg	23 27 27.4	-1.7
BBAC	Balboa, Cauca	3.40	245	P	Pn	23 27 20.6	+1.8
BRJC	Barrancabermej	3.49	7	P	Pn	23 27 23.3	+3.5
DBBC	Dabeiba	4.05	330	P	Pn	23 27 30.6	+3.0
PAMC	Pamplona, Colo	4.09	21	P	Pn	23 27 28.5	-0.1
OCAC	Ocana	4.79	10	P	Pn	23 27 40.8	+2.9
SDV	Santo Domingo	6.41	33	P	Pn	23 28 00.8	+0.6

*NEIC **25** 23:28:39.8±1.5,21°.8S±0°.1×173°.48E±0°.08,h10^{km}±1^{km}, mb4.3/9,Error ellipse: s-maj=27.7km s-min=3.0km az=153.0*

*IDC **25** 23:28:43.4±2.6,21°.59S×172°.66E,h0^{km},mb4.0/4, mbtmp4.0/4,MS3.8/20,Error ellipse: s-maj=141.1km s-min=27.8km az=156.0*

ISC 25 23:28:47.0±0.7,**22°.3S**±0°.1×**172°.95E**±0°.09,**h35**^{km},**n57**, σ**1^{s}52**/36,**mb4.2**/7,**MS3.9**/18,**Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	4.63	279	Pn	Pn	23 29 55.5	+1.0
PINNC	Pines Island,	5.10	265	Pn	Pn	23 30 04.8	+3.8
DZM	Mont Dzumac	6.03	271	Pn	Pn	23 30 18.3	+4.4
	0.8nm,0.3s,baz=75,slow=19,SNR=7.0						
DZM				Sn	Sn	23 31 17.4	-4.4
	0.7nm,0.3s,baz=141,slow=22,SNR=1.4						
DZM	Mont Dzumac	6.03	271		Pn	23 30 16.3	+2.4
MSVF	Nonsavu	6.58	48	Pn	Pn	23 30 07.9	-13
RAO	Raoul Island	10.78	132	LR	LR	23 34 28.1	
	comp=Z,734nm,18.7s,baz=148,slow=30						
URZ	Urewera	16.34	168	LR	LR	23 37 35.8	
	comp=Z,392nm,18.7s,baz=352,slow=31						
RTZ	Ruatahuna	16.66	169		P	23 32 39.4	-0.6
RTZ				IAmb	IAmb	23 32 45.2	
	comp=Z,32nm,1.5s						
EIDS	Eidsvold	20.24	257	P	P	23 33 19.8	+0.4
EIDS				IAmb	IAmb	23 33 37.0	
	comp=Z,18nm,1.4s						
RAR	Rarotonga	25.35	93	LR	LR	23 43 26.5	
	comp=Z,109nm,19.8s,baz=296,slow=34						
STKA	Stephens Creek	29.43	244	LR	LR	23 45 46.8	
	comp=Z,136nm,21.6s,baz=35,slow=35						
AS31	Alice Springs	35.90	260	P	P	23 35 43.4	-0.8
ASAR	Alice Springs	35.91	260	P	P	23 35 44.8	+0.6
	comp=Z,2.6nm,0.8s,baz=84,slow=9.0,SNR=27						
	comp=Z,2.6nm,0.8s						
ASAR	Alice Springs	35.91	260	P	P	23 35 43.6	-0.6
WB0	Warramunga Arr	36.02	267		P	23 35 44.1	-1.0
WB0				IAmb	IAmb	23 35 47.0	
	comp=Z,10nm,1.4s						
WRA	Warramunga Arr	36.03	266	P	P	23 35 44.0	-1.3
	comp=Z,1.7nm,0.7s,baz=103,slow=8.5,SNR=14						
	comp=Z,1.7nm,0.7s						
WRA	Warramunga Arr	36.03	266	P	P	23 35 43.8	-1.5
FORT	Forrest	40.83	248	P	P	23 36 26.1	+0.6
FORT				IAmb	IAmb	23 36 33.3	
	comp=Z,7.2nm,0.8s						
FITZ	Fitzroy Crossi	44.46	266	LR	LR	23 55 01.2	
	comp=Z,102nm,19.9s,baz=110,slow=36						
FITZ	Fitzroy Crossi	44.46	266	P	P	23 36 55.5	+0.4
FITZ				IAmb	IAmb	23 36 57.3	
	comp=Z,2.8nm,0.8s						
GUMO	Guam	45.02	320	LR	LR	23 52 34.7	
	comp=Z,125nm,21.2s,baz=123,slow=32						
DAV	Davao City (W)	54.79	297	LR	LR	23 59 28.1	
	comp=Z,42nm,21.9s,baz=64,slow=34						
VNDA	Vanda	55.57	183	LR	LR	23 58 45.2	
	comp=Z,72nm,18.5s,baz=22,slow=32						
QSPA	South Pole Qui	67.81	180	P	P	23 39 40.4	-0.9
RPN	Rapa Nui	69.73	112	LR	LR	00 03 34.3	
	comp=Z,69nm,18.4s,baz=32,slow=30						
ASAJ	Asahikawa	71.67	337	LR	LR	00 06 06.6	
	comp=Z,82nm,19.5s,baz=160,slow=32						
PETK	Petropavlovsk-	76.21	351	LR	LR	00 09 33.3	
	comp=Z,81nm,19.6s,baz=124,slow=32						
MA2	Magadan	83.55	349	LR	LR	00 12 14.5	
	comp=Z,74nm,19.9s,baz=136,slow=32						
SNAA	Sanae	86.27	181	P	P	23 41 23.8	-1.1
SEY	Seymchan	86.45	351	LR	LR	00 15 16.3	
	comp=Z,88nm,19.6s,baz=140,slow=33						
YBH	Yreka Blue Hor	87.11	42	LR	LR	00 12 48.2	
	comp=Z,8.5nm,19.5s,baz=300,slow=30						
PFO	Pinyon Flats O	87.17	52	LR	LR	00 13 13.0	
	comp=Z,70nm,18.3s,baz=254,slow=31						
YAK	Yakutsk	90.81	341	LR	LR	00 15 41.1	
	comp=Z,60nm,19.9s,baz=103,slow=31						
ILAR	Eielson Array	92.11	16	P	P	23 41 50.5	-1.6
	comp=Z,0.7nm,0.8s,baz=232,slow=4.4,SNR=6.0						
	comp=Z,0.7nm,0.8s						
ILAR	Eielson Array	92.11	16	P	P	23 41 46.8	-5.4
PLCA	Paso Flores	93.97	137	LR	LR	00 18 11.2	
	comp=Z,42nm,18.1s,baz=226,slow=31						
TXAR	Lajitas Array	95.19	61	P	P	23 42 08.8	+1.5
	comp=Z,0.2nm,0.7s,baz=244,slow=5.4,SNR=3.3						
	comp=Z,0.2nm,0.7s						
ANMO	Albuquerque	95.19	54	LR	LR	00 16 48.5	
	comp=Z,39nm,20.7s,baz=274,slow=30						
PDAR	Pinedale Array	96.15	46	LR	LR	00 19 34.9	
	comp=Z,65nm,18.8s,baz=266,slow=32						
TIXI	Tiksi	98.42	347	LR	LR	00 24 20.6	
	comp=Z,43nm,18.3s,baz=16,slow=34						
STEB	Steborice	146.18	331	*e*PKP	PKPbc	23 48 23.5	0.0
OSTC	Ostas	146.40	333	*e*PKP	PKPab	23 48 25.5	+0.5
DPC	Dobruska-Polom	146.51	333	*e*PKP	PKPbc	23 48 24.3	-0.2
EKA	Eskdalemuir Ar	146.84	356	PKPbc	PKPbc	23 48 24.9	-0.4
	comp=Z,1.1nm,0.8s,baz=7.2,slow=2.1,SNR=5.2						
ZVC	Zvikov	148.10	333	*e*PKP	PKPbc	23 48 29.5	+0.6
CONA	Conrad Observa	148.50	330	*e*PKiKP	PKPab	23 48 34.0	+0.6
	comp=Z,1.7nm,0.6s						
KHC	Kasperske Hory	148.59	334	*e*PKP	PKPdf	23 48 27.3	+0.8
GERES	GERESS Array B	148.76	333	PKPbc	PKPbc	23 48 30.8	0.0
	comp=Z,1.6nm,0.9s,baz=38,slow=2.4,SNR=11						
LESA	Schwarzleotal	150.30	332	*i* PKP	PKPbc	23 48 34.4	-0.2
	comp=Z,2.7nm,0.7s						
MYKA	Terra Mystica	150.47	330	*e*PKP	PKiKP	23 48 35.2	-0.5
	comp=Z,2.7nm,0.9s						
WATA	Walderalm	150.83	334	*e*PKP	PKiKP	23 48 36.4	-0.2
	comp=Z,3.4nm,0.9s						
WTTA	Wattenberg	150.86	333	*e*PKP	PKPbc	23 48 36.0	-0.1
	comp=Z,4.7nm,0.7s						
ABTA	Abfaltersbach	150.89	332	*i* PKP	PKPbc	23 48 35.3	-0.7
	comp=Z,1.3nm,0.7s						
RETA	Reutte	151.04	335	*e*PKP	PKPbc	23 48 36.0	-0.3
	comp=Z,2.3nm,0.7s						
SQTA	Sankt Quirin	151.07	334	*i* PKP	PKPbc	23 48 36.3	-0.1
	comp=Z,1.4nm,0.6s						
FETA	Feichten	151.43	334	*i* PKP	PKiKP	23 48 38.0	+0.1
	comp=Z,4.7nm,1.1s						
DAVA	Damuels	151.55	335	*e*PKP	PKiKP	23 48 38.2	+0.1
	comp=Z,2.5nm,0.7s						

*IDC **25** 23:45:53.8±10.0,20°.79S×171°.74E,h79^{km}±58^{km},mb3.9/2, mbtmp4.0/3,ML2.9/1,MS3.5/7,Error ellipse: s-maj=262.8km s-min=60.2km az=150.0*

ISC 25 23:45:42.7±2.8,**22°S**±1°×**172°.8E**±0°.3,**h35**^{km},**n24**, σ**0^{s}33**/17,**MS3.6**/7,**Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.89	267	P	Pn	23 47 07.8	+0.2
	0.4nm,0.3s,baz=72,slow=20,SNR=1.8						
DZM				S	Sn	23 47 49.8	-24
	8.2nm,1.0s,baz=49,slow=22,SNR=1.6						
	5.8nm,0.9s						
CTA	Charters Tower	24.83	269	LR	LR	23 59 49.8	
	comp=Z,82nm,19.2s,baz=48,slow=35						
STKA	Stephens Creek	29.48	244	LR	LR	00 04 22.7	
	comp=Z,82nm,18.3s,baz=60,slow=38						
ASAR	Alice Springs	35.83	259	P	P	23 52 39.1	-0.1
	3.8nm,0.8s,baz=85,slow=8.8,SNR=27						
	3.8nm,0.8s						
WRA	Warramunga Arr	35.91	266	P	P	23 52 39.4	-0.5
	1.9nm,0.7s,baz=97,slow=8.3,SNR=10						
	1.9nm,0.7s						
GUMO	Guam	44.60	320	LR	LR	00 10 16.9	
	comp=Z,79nm,18.8s,baz=82,slow=34						
VNDA	Vanda	55.99	183	LR	LR	00 17 14.0	
	comp=Z,85nm,18.2s,baz=20,slow=33						
JOW	Kunigami	64.79	316	LR	LR	00 19 14.4	
	comp=Z,41nm,21.1s,baz=196,slow=32						
MJAR	Matsushiro Arr	66.62	330	LR	LR	00 18 19.8	
	comp=Z,55nm,21.7s,baz=58,slow=30						
KSRS	Korea Array	72.53	324	LR	LR	00 23 52.8	
	comp=Z,18nm,21.8s,baz=80,slow=32						
JAVC	Velka Javorina	146.54	330	*e*PKP	PKiKP	00 05 23.0	-0.2
KRUC	Moravsky	146.98	331	*e*PKP	PKPab	00 05 22.8	-0.2
RONA	Rosalia, Austr	148.01	329	*i* PKP	PKiKP	00 05 26.6	+0.4
	3.4nm,0.7s						
CONA	Conrad Observa	148.05	330	*i* PKP	PKiKP	00 05 26.7	+0.3
	2.2nm,0.8s						
GERES	GERESS Array B	148.31	333	PKPbc	PKiKP	00 05 26.6	-0.3
	1.7nm,0.8s,baz=29,slow=3.0,SNR=14						
SOKA	Soboth	149.35	329	*i* PKP	PKiKP	00 05 28.7	-0.4
	3.3nm,0.9s						
LESA	Schwarzleotal	149.85	333	*i* PKP	PKPbc	00 05 29.7	+0.5
	3.3nm,0.7s						
MYKA	Terra Mystica	150.03	331	*i* PKP	PKPbc	00 05 29.7	+0.1
	4.6nm,1.0s						
WATA	Walderalm	150.38	334	*i* PKP	PKPbc	00 05 31.0	+0.4
	3.8nm,0.8s						
WTTA	Wattenberg	150.41	334	*i* PKP	PKiKP	00 05 31.3	-0.1
	3.8nm,0.7s						
ABTA	Abfaltersbach	150.45	332	*i* PKP	PKPbc	00 05 30.7	+0.1
	2.7nm,0.7s						
RETA	Reutte	150.59	335	*e*PKP	PKiKP	00 05 31.4	-0.2
	6.5nm,1.7s						
SQTA	Sankt Quirin	150.63	334	*i* PKP	PKiKP	00 05 31.8	0.0
	4.1nm,0.8s						
FETA	Feichten	150.98	334	*i* PKP	PKiKP	00 05 32.8	+0.2
	3.2nm,0.8s						

*IDC **25** 23:58:45.3±0.8,38°.35N×144°.47E,h0^{km},mb3.4/11, mbtmp3.5/13,ML3.4/2,MS3.5/7,Error ellipse: s-maj=22.4km s-min=18.8km az=145.0*

*NIED **25** 23:58:48.6,38°.32N×144°.26E,h33^{km},MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.66; $M_{\theta\theta}$0.30; $M_{\phi\phi}$0.36; $M_{r\theta}$-0.79; $M_{\theta\phi}$-0.04; $M_{\phi r}$0.61; Fault plane solution: $M_0$1.12000×10^{15} NP1: ϕ_s318.00000°,δ14.00000°,λ-81.00000°. NP2: ϕ_s129.00000°,δ76.00000°,λ-92.00000°.*

*JMA **25** 23:58:48.6±0.2,38°.3N±0°.7×144°.3E±1°.0,h33^{km},MV3.9/32, FAR E OFF NORTH HONSHU*

ISC 25 23:58:49.2±0.8,**38°.38N**±0°.05×**144°.41E**±0°.06,**h29**^{km},**n35**, σ**1^{s}88**/45,**mb3.5**/10,**MS3.5**/7,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.25	289	P	Pn	23 59 23.8	-0.7
OFUJ				*e*S	Sn	23 59 49.8	-1.5
JIKH	Ishinomakikobu	2.31	269	*i* P	Pn	23 59 24.1	-1.2
JIKH				*e*S	Sn	23 59 50.0	-2.8
JKMT	Kesennumamotoy	2.34	282	P	Pn	23 59 24.8	-0.9
JKMT				S	Sn	23 59 51.6	-1.8
MIYJ	Miyakonagasawa	2.34	301	*i* P	Pn	23 59 25.0	-0.8
MIYJ				*e*S	Sn	23 59 52.2	-1.4
JMK	Ichinoseki	2.56	284	P	Pn	23 59 28.3	-0.4
JMK				*e*S	Sn	23 59 57.4	-1.5
JOM	Ohasama	2.66	295	P	Pn	23 59 29.9	-0.3
JOM				*e*S	Sn	00 00 01.2	-0.2
JANG	Nango	3.00	313	P	Pn	23 59 35.0	+0.2
JANG				*e*S	Sn	00 00 08.4	-1.3
JYK	Kaneyama	3.21	281	P	Pn	23 59 38.0	+0.3
JYK				S	Sn	00 00 15.3	+0.3
JOTO	OTAMA OYAMA	3.32	257	P	Pn	23 59 38.8	-0.4
JOTO				S	Sn	00 00 16.5	-1.2
JOT	Ohata	3.96	320	*e*P	Pn	23 59 49.5	+1.6
JCH	Churui	4.30	350	*e*P	Pn	23 59 52.2	-0.5
JCH				*e*S	Sn	00 00 38.3	-3.6
BSO1	Boso 1	4.63	218	*e*P	Pn	23 59 54.1	-2.6
BSO1				*e*S	Sn	00 00 45.8	-3.4
NEM2	Nemuro 2	5.08	11	P	Pn	00 00 01.1	-2.3
NEM2				*e*S	Sn	00 00 56.2	-4.9
MJAR	Matsushiro Arr	5.26	251	Pn	Pn	00 00 05.9	0.0
	0.6nm,0.3s,baz=75,slow=14,SNR=12						
MJAR				Sn	Sn	00 01 06.6	+1.1
	baz=308,slow=40						
	3.7nm,0.3s						
JOD2	Odawara 2	5.28	236	*e*P	Pn	00 00 05.7	-0.4
JOD2				S	Sn	00 01 00.7	-5.3
JOSM	Okushiri--Mats	5.28	316	*e*P	Pn	00 00 08.1	+1.9
JTKR	Abashiri--Toko	5.60	356	P	Pn	00 00 10.0	-0.4
JTKR				*e*S	Sn	00 01 10.8	-3.0
ASAJ	Asahikawa	5.89	347	Pn	Pn	00 00 15.2	+0.7
	1.5nm,0.3s,baz=315,slow=29,SNR=2.9						
ASAJ				Sn	Sn	00 01 19.0	-2.0
	0.8nm,0.3s,baz=359,slow=21,SNR=1.4						
	4.3nm,0.3s						
HILR	Hailar Array B	20.87	310	P	P	00 03 28.7	-0.1
	0.6nm,0.3s,baz=109,slow=9.9,SNR=2.6						
	0.6nm,0.3s						
SONM	Songino Array	29.06	301	P	P	00 04 47.9	+0.9
	0.2nm,0.3s,baz=91,slow=12,SNR=2.1						
	0.2nm,0.3s						
JAY	Jayapura	40.83	186	LR	LR	00 23 35.9	
	comp=Z,29nm,18.8s,baz=341,slow=36						
NRIK	Noril'sk	43.06	334	LR	LR	00 28 19.9	
	comp=Z,58nm,18.1s,baz=98,slow=41						
MKAR	Makanchi Array	45.43	302	P	P	00 07 07.0	+1.7
	0.3nm,0.8s,baz=77,slow=9.0,SNR=2.5						
	0.3nm,0.8s						
KURBB	Kurchatov Arra	47.06	307	P	P	00 07 18.8	+0.8
	0.3nm,0.5s,baz=82,slow=8.2,SNR=3.5						
KURBB				LR	LR	00 28 31.2	
	comp=Z,76nm,21.9s,baz=172,slow=38						
	0.3nm,0.5s						
ILAR	Eielson Array	47.08	33	P	P	00 07 18.1	0.0
	0.2nm,0.6s,baz=266,slow=6.1,SNR=4.6						
	0.2nm,0.6s						
WRA	Warramunga Arr	58.78	191	P	P	00 08 43.2	-1.5
	0.4nm,0.6s,baz=11,slow=7.3,SNR=2.0						
	0.4nm,0.6s						
AKTO	Aktyubinsk	59.53	312	LR	LR	00 35 39.5	
	comp=Z,29nm,19.9s,baz=103,slow=37						
YKA	Yellowknife Ar	61.44	31	P	P	00 09 01.9	-0.6
	0.2nm,0.6s,baz=297,slow=7.4,SNR=2.8						
	0.2nm,0.6s						
ASAR	Alice Springs	62.50	191	P	P	00 09 11.7	+1.6
	0.2nm,0.8s,baz=14,slow=7.0,SNR=6.6						
	0.2nm,0.8s						
ARCES	ARCESS Array B	63.56	340	LR	LR	00 41 23.7	
	comp=Z,52nm,18.3s,baz=9.5,slow=40						
FINES	FINESS Array B	68.71	333	LR	LR	00 45 16.6	
	comp=Z,60nm,18.2s,baz=36,slow=41						
NVAR	Mina Array Bea	72.28	55	P	P	00 10 13.9	+1.8
	0.5nm,0.7s,baz=280,slow=5.7,SNR=3.9						
	0.5nm,0.7s						
NOA	NORSAR Array B	73.84	338	LR	LR	00 47 18.9	
	comp=Z,20nm,19.7s,baz=335,slow=39						
PDAR	Pinedale Array	75.02	47	P	P	00 10 29.1	+0.9
	0.4nm,0.7s,baz=270,slow=1.6,SNR=4.7						
	0.4nm,0.7s						
TXAR	Lajitas Array	87.42	54	P	P	00 11 34.2	+0.1
	0.9nm,1.2s,baz=312,slow=3.1,SNR=2.6						
	0.9nm,1.2s						

*IDC **26** 00:08:09.6±0.9,38°.21N×144°.44E,h0^{km},mb3.6/12, mbtmp3.6/13,ML3.0/1,MS3.7/1,Error ellipse: s-maj=22.7km s-min=19.3km az=138.0*

*JMA **26** 00:08:13.8±0.3,38°.3N±0°.9×14°4E±°,h46^{km},MV3.9/21, FAR E OFF NORTH HONSHU*

*NIED **26** 00:08:13.8,38°.32N×144°.25E,h46^{km},MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-4.07; $M_{\theta\theta}$0.47; $M_{\phi\phi}$3.60; $M_{r\theta}$-0.91; $M_{\theta\phi}$0.15; $M_{\phi r}$5.20; Fault plane solution: $M_0$6.52000×10^{14} NP1:ϕ_s9.00000°, δ19.00000°,λ-74.00000°. NP2:ϕ_s173.00000°,δ72.00000°, λ-95.00000°.*

ISC 26 00:08:14.3±0.8,**38°.38N**±0°.08×**144°.33E**±0°.08,**h29**^{km},**n23**, σ**1^{s}15**/25,**mb3.7**/11,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.19	289	*e*P	Pn	00 08 48.3	-0.6
JIKH	Ishinomakikobu	2.25	269	P	Pn	00 08 48.6	-1.0
JKMT	Kesennumamotoy	2.28	282	*e*P	Pn	00 08 49.4	-0.6
JIO	Ouri	2.34	273	P	Pn	00 08 50.2	-0.6
JIO				*e*S	Sn	00 09 16.7	-1.9
JMK	Ichinoseki	2.50	284	*e*P	Pn	00 08 52.9	-0.1
JOM	Ohasama	2.61	296	*e*P	Pn	00 08 54.6	+0.1
JYK	Kaneyama	3.15	281	*e*P	Pn	00 09 02.1	+0.1
JOTO	OTAMA OYAMA	3.26	257	*e*P	Pn	00 09 02.7	-0.8
JOTO				*e*S	Sn	00 09 40.0	-1.4
MJAR	Matsushiro Arr	5.20	251	Pn	Pn	00 09 30.5	+0.3
	0.5nm,0.3s,baz=76,slow=14,SNR=16						
	4.6nm,0.4s						
ASAJ	Asahikawa	5.88	348	Pn	Pn	00 09 36.8	-2.6
	0.7nm,0.3s,baz=108,slow=20,SNR=2.1						
ASAJ				Sn	Sn	00 10 45.2	-0.6
	1.0nm,0.3s,baz=196,slow=18,SNR=2.2						
HILR	Hailar Array B	20.82	310	P	P	00 12 53.3	-0.2
	0.9nm,0.5s,baz=118,slow=12,SNR=4.9						
	0.9nm,0.5s						
SEY	Seymchan	25.07	9	P	P	00 13 37.4	+1.5
	4.6nm,0.6s,baz=198,slow=10.0,SNR=8.8						
	4.6nm,0.6s						
SONM	Songino Array	29.01	301	P	P	00 14 13.1	+1.4
	0.3nm,0.6s,baz=94,slow=9.2,SNR=2.3						
	0.3nm,0.6s						
MKAR	Makanchi Array	45.38	301	P	P	00 16 31.2	+1.1
	0.2nm,0.6s,baz=92,slow=7.2,SNR=2.4						
	0.2nm,0.6s						
KURBB	Kurchatov Arra	47.01	307	P	P	00 16 43.5	+0.8
	0.6nm,0.5s,baz=80,slow=8.2,SNR=6.6						
	0.6nm,0.5s						
ILAR	Eielson Array	47.11	33	P	P	00 16 42.8	-0.6
	0.5nm,0.9s,baz=256,slow=6.4,SNR=5.1						
	0.5nm,0.9s						
PMG	Port Moresby	47.61	176	LR	LR	00 34 01.9	
	comp=Z,83nm,21.3s,baz=122,slow=33						
WRA	Warramunga Arr	58.77	191	P	P	00 18 07.8	-1.9
	0.6nm,0.7s,baz=10.0,slow=6.9,SNR=3.0						
	0.6nm,0.7s						
YKA	Yellowknife Ar	61.47	31	P	P	00 18 28.1	+0.2
	0.3nm,0.8s,baz=300,slow=6.9,SNR=5.5						
	0.3nm,0.8s						
ASAR	Alice Springs	62.49	191	P	P	00 18 33.8	-1.3
	0.5nm,0.9s,baz=8.7,slow=6.2,SNR=4.9						
	0.5nm,0.9s						
FINES	FINESS Array B	68.68	333	P	P	00 19 15.4	+0.7
	0.8nm,0.8s,baz=151,slow=4.4,SNR=3.8						
	0.8nm,0.8s						
NVAR	Mina Array Bea	72.33	55	P	P	00 19 38.6	+1.0
	0.5nm,0.6s,baz=290,slow=5.9,SNR=5.3						
	0.5nm,0.6s						
PDAR	Pinedale Array	75.07	47	P	P	00 19 53.9	+0.3
	0.3nm,0.5s,baz=266,slow=1.3,SNR=5.4						
	0.3nm,0.5s						

*IDC **26** 00:14:10.7±0.8,38°.21N×144°.46E,h0^{km},mb3.8/16, mbtmp3.9/20,ML3.7/4,MS3.2/5,Error ellipse: s-maj=20.2km s-min=16.1km az=157.0*

*NEIC **26** 00:14:12.4±1.8,38°.28N±0°.08×144°.4E±0°.1,h10^{km}±1^{km}, mb4.4/9,Error ellipse: s-maj=18.7km s-min=12.5km az=108.0*

*NIED **26** 00:14:14.4,38°.33N×144°.29E,h47^{km},MW4.2,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.22; $M_{\theta\theta}$0.17; $M_{\phi\phi}$1.05; $M_{r\theta}$-0.50; $M_{\theta\phi}$-0.02; $M_{\phi r}$1.47; Fault plane solution: $M_0$1.92000×10^{15} NP1:ϕ_s6.00000°, δ19.00000°,λ-70.00000°. NP2:ϕ_s165.00000°,δ72.00000°, λ-97.00000°.*

*JMA **26** 00:14:14.4±0.2,38°.3N±0°.8×14°4E±°,h47^{km},MV4.2/27, FAR E OFF NORTH HONSHU*

ISC 26 00:14:15.5±0.6,**38°.34N**±0°.05×**144°.32E**±0°.07,**h29**^{km},**n60**, σ**1^{s}43**/67,**mb3.9**/20,**MS3.1**/4,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.20	290	P	Pn	00 14 49.4	-0.6
JIKH	Ishinomakikobu	2.24	270	P	Pn	00 14 49.6	-1.0
JIKH				*e*S	Sn	00 15 15.7	-1.6
JKMT	Kesennumamotoy	2.28	283	P	Pn	00 14 50.4	-0.7
JKMT				*e*S	Sn	00 15 17.4	-0.7
MIYJ	Miyakonagasawa	2.30	303	*e*P	Pn	00 14 50.4	-1.1
JMK	Ichinoseki	2.50	285	*e*P	Pn	00 14 53.8	-0.4
JOM	Ohasama	2.61	296	*e*P	Pn	00 14 55.4	-0.3
JOM				*e*S	Sn	00 15 26.8	+0.3
JANG	Nango	2.97	314	*e*P	Pn	00 14 59.7	-1.0
JANG				*e*S	Sn	00 15 34.1	-1.2
JYK	Kaneyama	3.15	282	P	Pn	00 15 03.4	+0.2
JYK				*e*S	Sn	00 15 39.8	0.0
JOTO	OTAMA OYAMA	3.24	257	*e*P	Pn	00 15 04.4	0.0
JOTO				*e*S	Sn	00 15 41.7	-0.4
ERM	Erimo	3.77	347	Pn	Pn	00 15 10.7	-1.0
JOT	Ohata	3.94	321	*e*P	Pn	00 15 13.9	-0.1
JOT				*e*S	Sn	00 15 57.1	-2.1
JNS	Sasagawa	3.98	264	*e*P	Pn	00 15 14.3	-0.2
JCH	Churui	4.33	351	*e*P	Pn	00 15 17.5	-1.8
JCH				*e*S	Sn	00 16 04.6	-4.1
JSD	Sado	4.78	268	Pn	Pn	00 15 24.9	-0.6
MJAR	Matsushiro Arr	5.18	252	Pn	Pn	00 15 31.7	+0.6
	1.1nm,0.3s,baz=66,slow=9.2,SNR=36						
MJAR				Sn	Sn	00 16 31.8	+2.0
	0.3nm,0.3s,baz=92,slow=26,SNR=2.2						
	12nm,0.6s						
MJAR	Matsushiro Arr	5.18	252		Pn	00 15 31.4	+0.3
MAJO	Matsushiro	5.18	252	Pn	Pn	00 15 31.7	+0.6
JKA	Kamikawa-asahi	5.91	348		Pn	00 15 39.5	-1.5
ASAJ	Asahikawa	5.91	348	Pn	Pn	00 15 39.9	-1.2
	2.2nm,0.3s,baz=206,slow=12,SNR=4.9						
ASAJ				Sn	Sn	00 16 45.1	-2.6
	0.9nm,0.3s,baz=127,slow=20,SNR=2.2						
	4.9nm,0.3s						
JGF	Kuroka	6.21	246		Pn	00 15 45.6	+0.4
JHJ2	Mitsune	6.37	216	Pn	Pn	00 15 45.4	-2.1
JHJ	Hachijo jima 2	6.38	217	Pn	Pn	00 15 44.3	-3.2
	19nm,0.3s,baz=255,slow=22,SNR=4.6						
JHJ				Sn	Sn	00 16 54.0	-5.4
	18nm,0.3s,baz=41,slow=23,SNR=3.7						
	36nm,0.3s						
JMN	Monobe	9.62	245	Pn	Pn	00 16 31.1	-0.9
USRK	Ussuriysk Ar.	10.96	306	Pn	Pn	00 16 52.4	+2.1
	0.3nm,0.3s,baz=114,slow=14,SNR=2.9						
	2.5nm,0.5s						
JNU	Nakatsue	12.10	249	LR	LR	00 22 54.8	
	comp=Z,88nm,18.3s,baz=91,slow=43						
HILR	Hailar Array B	20.84	310	P	P	00 18 54.5	-0.3
	1.1nm,0.4s,baz=120,slow=12,SNR=9.5						
	1.1nm,0.4s						
MA2	Magadan	21.65	9	LR	LR	00 27 52.1	
	comp=Z,36nm,19.9s,baz=152,slow=38						
SEY	Seymchan	25.11	9	P	P	00 19 37.6	+0.3
	5.8nm,0.7s,baz=176,slow=5.4,SNR=11						
SEY				LR	LR	00 30 16.2	
	comp=Z,60nm,20.5s,baz=132,slow=38						
	5.8nm,0.7s						
YAK	Yakutsk	25.37	344	P	P	00 19 40.6	+0.9
	6.3nm,0.3s,baz=176,slow=3.3,SNR=4.2						
	6.3nm,0.3s						
YAK	Yakutsk	25.37	344	P	P	00 19 39.3	-0.5
SONM	Songino Array	29.02	301	P	P	00 20 13.9	+1.0
	0.3nm,0.4s,baz=86,slow=8.9,SNR=3.4						
	0.3nm,0.4s						
ZALV	Zalesovo Beam	42.76	311	P	P	00 22 10.8	+0.8
	0.4nm,0.3s,baz=82,slow=10,SNR=1.7						
ZALV				PcP	PcP	00 24 01.1	+0.1
	0.8nm,0.6s,baz=92,slow=5.0,SNR=3.6						
	0.4nm,0.3s						
NRIK	Noril'sk	43.07	334	LR	LR	00 41 33.3	
	comp=Z,68nm,19.6s,baz=87,slow=38						
CMAR	Chiang Mai Arr	44.05	256	LR	LR	00 42 30.5	
	comp=Z,19nm,18.3s,baz=60,slow=38						
MKAR	Makanchi Array	45.39	302	P	P	00 22 32.4	+1.2
	0.7nm,0.8s,baz=92,slow=8.6,SNR=6.7						
	0.7nm,0.8s						
MKAR	Makanchi Array	45.39	302	P	P	00 22 30.7	-0.5
MAKZ	Makanchi	45.59	302	P	P	00 22 33.8	+0.9
MAKZ				IAmb	IAmb	00 23 00.1	
	comp=Z,3.1nm,1.2s						
KURK	Kurchatov	46.95	308	P	P	00 22 44.1	+0.8
KURK	Kurchatov	46.95	308	IAmb	IAmb	00 22 45.4	
	comp=Z,2.0nm,0.9s						
KURBB	Kurchatov Arra	47.02	307	P	P	00 22 44.1	+0.2
	comp=Z,0.9nm,0.6s,baz=82,slow=8.3,SNR=9.6						
	comp=Z,0.9nm,0.6s						
ILAR	Eielson Array	47.15	33	P	P	00 22 44.4	-0.4
	comp=Z,1.0nm,0.9s,baz=264,slow=6.9,SNR=8.3						
	comp=Z,1.0nm,0.9s						
I30M	Mount Dempster	51.56	32	P	P	00 23 17.6	-1.0
I30M				IAmb	IAmb	00 23 20.3	
	comp=Z,7.2nm,1.1s						
INK	Inuvik	52.16	28	P	P	00 23 22.4	-0.4
H31M	Peel River	52.29	31	P	P	00 23 23.6	-0.3
WB0	Warramunga Arr	58.55	191	P	P	00 24 08.3	-1.0
WB0				IAmb	IAmb	00 24 31.6	
	comp=Z,4.6nm,0.9s						
WRA	Warramunga Arr	58.73	191	P	P	00 24 09.1	-1.5
	comp=Z,0.8nm,0.7s,baz=12,slow=7.0,SNR=6.6						
	comp=Z,0.8nm,0.7s						
WRA	Warramunga Arr	58.73	191	P	P	00 24 07.4	-3.2
AB31	Akbulak array	58.85	310	P	P	00 24 11.3	+0.1
AB31				IAmb	IAmb	00 24 14.0	
	comp=Z,2.0nm,0.7s						
ABKAR	Akbulak array	58.85	310	P	P	00 24 11.5	+0.2
YKA	Yellowknife Ar	61.51	31	P	P	00 24 29.0	-0.2
	comp=Z,0.5nm,0.8s,baz=301,slow=7.2,SNR=6.3						
	comp=Z,0.5nm,0.8s						
FINES	FINESS Array B	68.71	333	P	P	00 25 18.2	+2.3
	comp=Z,0.5nm,0.7s,baz=340,slow=11,SNR=3.8						
	comp=Z,0.5nm,0.7s						
FINES	FINESS Array B	68.71	333	P	P	00 25 17.4	+1.5
KBZ	Khabaz	71.78	312	P	P	00 25 36.9	+1.9
	comp=Z,1.2nm,0.8s,baz=23,slow=7.7,SNR=3.7						
	comp=Z,1.2nm,0.8s						
NVAR	Mina Array Bea	72.36	55	P	P	00 25 39.1	+0.2
	comp=Z,1.1nm,0.8s,baz=288,slow=8.2,SNR=5.8						
	comp=Z,1.1nm,0.8s						
NVAR	Mina Array Bea	72.36	55	P	P	00 25 38.6	-0.3
AKASG	Malin Array Be	74.65	323	P	P	00 25 52.3	+0.5
	comp=Z,0.2nm,0.3s,baz=49,slow=5.2,SNR=1.8						
	comp=Z,0.2nm,0.3s						
PDAR	Pinedale Array	75.10	47	P	P	00 25 55.0	+0.1
	comp=Z,0.5nm,0.8s,baz=300,slow=2.9,SNR=6.2						
	comp=Z,0.5nm,0.8s						
PDAR	Pinedale Array	75.10	47	P	P	00 25 54.3	-0.7
TXAR	Lajitas Array	87.49	54	P	P	00 27 00.6	-0.2
	comp=Z,0.7nm,1.0s,baz=350,slow=3.8,SNR=4.7						
	comp=Z,0.7nm,1.0s						
TXAR	Lajitas Array	87.49	54	P	P	00 27 00.2	-0.5

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*IDC **26** 00:17:28.6±2.5, 20°.77S×172°.69E, h0^{km}, mb4.1/5, mbtmp4.1/5, MS3.7/24, Error ellipse: s-maj=147.6km s-min=25.2km az=157.0*

ISC 26 00:17:34.6±1.9**, 20°.9S**±0°.7×**172°.9E**±0°.3**, h35^{km}, n41, σ1^{s}.50**/19**, mb4.2**/5**, MS3.7**/23**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.11	258	Pn	Pn	00 19 04.1	+1.6
	0.6nm,0.3s,baz=90,slow=18,SNR=6.4						
URZ	Urewera	17.67	169	LR	LR	00 26 31.2	
	comp=Z,311nm,19.5s,baz=342,slow=30						
CTA	Charters Tower	24.95	267	LR	LR	00 31 05.2	
	comp=Z,101nm,18.9s,baz=28,slow=33						
RAR	Rarotonga	25.50	96	LR	LR	00 32 57.1	
	comp=Z,102nm,18.9s,baz=277,slow=36						
WRA	Warramunga Arr	36.08	265	P	P	00 24 30.9	-2.4
	2.9nm,0.9s,baz=104,slow=8.7,SNR=9.5						
	2.9nm,0.9s						
ASAR	Alice Springs	36.10	258	P	P	00 24 31.1	-2.3
	4.8nm,0.8s,baz=86,slow=8.8,SNR=39						
ASAR				LR	LR	00 38 35.5	
	comp=Z,129nm,19.4s,baz=98,slow=35						
	4.8nm,0.8s						
GUMO	Guam	43.97	319	LR	LR	00 40 52.4	
	comp=Z,212nm,22.0s,baz=120,slow=32						
DAV	Davao City (W)	54.14	296	LR	LR	00 51 07.6	
	comp=Z,26nm,18.1s,baz=126,slow=38						
VNDA	Vanda	56.91	183	LR	LR	00 47 21.4	
	comp=Z,62nm,19.8s,baz=11,slow=31						
JHJ	Hachijo jima 2	62.34	329	LR	LR	00 55 45.4	
	comp=Z,19nm,18.0s,baz=14,slow=37						
JOW	Kunigami	64.19	316	LR	LR	00 54 51.3	
	comp=Z,45nm,19.2s,baz=171,slow=35						
JNU	Nakatsue	67.05	322	LR	LR	00 56 31.5	
	comp=Z,45nm,18.1s,baz=138,slow=35						
RPN	Rapa Nui	70.29	112	LR	LR	00 53 38.1	
	comp=Z,34nm,20.3s,baz=300,slow=31						
ASAJ	Asahikawa	70.41	337	LR	LR	00 54 23.2	
	comp=Z,84nm,19.1s,baz=162,slow=32						
PETK	Petropavlovsk-	74.88	351	LR	LR	00 59 09.5	
	comp=Z,102nm,19.0s,baz=140,slow=34						
MA2	Magadan	82.22	349	LR	LR	01 01 12.2	
	comp=Z,78nm,20.5s,baz=168,slow=32						
SEY	Seymchan	85.12	351	LR	LR	01 01 34.5	
	comp=Z,100nm,20.1s,baz=143,slow=31						
YBH	Yreka Blue Hor	86.16	43	LR	LR	01 02 01.9	
	comp=Z,6.5nm,18.7s,baz=316,slow=31						
NVAR	Mina Array Bea	87.38	47	P	P	00 30 19.7	+1.2
	0.7nm,0.8s,baz=233,slow=10,SNR=5.0						
	0.7nm,0.8s						
YAK	Yakutsk	89.52	341	LR	LR	01 04 27.6	
	comp=Z,64nm,21.3s,baz=120,slow=32						
SONM	Songino Array	90.63	322	LR	LR	01 12 18.5	
	comp=Z,15nm,18.0s,baz=354,slow=36						
ILAR	Eielson Array	90.84	16	P	P	00 30 32.5	-1.4
	1.4nm,1.0s,baz=229,slow=6.6,SNR=7.6						
	1.4nm,1.0s						
NEW	Newport	92.88	39	LR	LR	01 07 57.4	
	comp=Z,57nm,18.1s,baz=238,slow=33						
ANMO	Albuquerque	94.45	54	LR	LR	01 06 48.4	
	comp=Z,29nm,20.2s,baz=283,slow=31						
TXAR	Lajitas Array	94.58	60	P	P	00 30 50.8	-1.4
	0.4nm,0.9s,baz=300,slow=3.7,SNR=3.9						
TXAR				LR	LR	01 05 30.1	
	comp=Z,49nm,18.8s,baz=298,slow=30						
	0.4nm,0.9s						
PLCA	Paso Flores	94.99	137	LR	LR	01 03 14.2	
	comp=Z,33nm,21.9s,baz=244,slow=29						
PDAR	Pinedale Array	95.26	46	LR	LR	01 09 15.9	
	comp=Z,48nm,18.1s,baz=266,slow=33						
TIXI	Tiksi	97.10	347	LR	LR	01 14 03.7	
	comp=Z,21nm,18.1s,baz=205,slow=35						
RONA	Rosalia, Austr	147.27	330	*e*PKP	PKiKP	00 37 18.1	+1.4
	3.9nm,0.7s						
CONA	Conrad Observa	147.30	331	*i* PKiKP	PKiKP	00 37 18.6	+1.8
	6.5nm,1.5s						
GERES	GERESS Array B	147.53	334	PKPbc	PKPdf	00 37 13.4	+0.9
	2.7nm,1.0s,baz=46,slow=3.9,SNR=13						
BIOA	Bad Ischl, Aus	148.46	333	*i* PKP	PKPab	00 37 20.8	-0.1
	2.9nm,0.9s						
SOKA	Soboth	148.60	330	*i* PKP	PKiKP	00 37 20.1	+0.6
	5.3nm,1.1s						
LESA	Schwarzleotal	149.08	333	*i* PKP	PKiKP	00 37 21.6	+1.2
	7.5nm,1.2s						
MYKA	Terra Mystica	149.28	331	*i* PKP	PKiKP	00 37 21.8	+1.0
	5.2nm,1.0s						
WATA	Walderalm	149.60	334	*i* PKP	PKiKP	00 37 22.7	+1.1
	4.8nm,1.0s						
WTTA	Wattenberg	149.63	334	*i* PKP	PKiKP	00 37 22.9	+1.1
	5.0nm,0.9s						
ABTA	Abfaltersbach	149.68	333	*i* PKP	PKiKP	00 37 22.6	+0.9
	4.8nm,0.9s						
RETA	Reutte	149.80	336	*i* PKP	PKiKP	00 37 23.2	+1.3
	3.1nm,0.9s						
SQTA	Sankt Quirin	149.84	335	*i* PKP	PKiKP	00 37 23.4	+1.3
	4.7nm,0.8s						
FETA	Feichten	150.19	335	*i* PKP	PKPbc	00 37 23.2	+1.1
	7.0nm,1.0s						

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*UPP **26** 00:25:51.6±0.0, 67°.85N×20°.20E, h0^{km}, ML2.3, Suspected explosion*
*HEL **26** 00:25:51.5±0.3, 67°.82N×20°.10E, h0^{km}, ML1.9, Explosion*
*IDC **26** 00:25:52.2±1.0, 67°.80N×20°.71E, h0^{km}, mbtmp2.8/4, ML1.9/4, Error ellipse: s-maj=17.9km s-min=6.5km az=121.0*
*BER **26** 00:25:54.3±2.4, 67°.85N×20°.38E, h0^{km}, ML1.9, Suspected explosion*

ISC 26 00:25:51.8±0.7**, 67°.85N**±0°.02×**20°.22E**±0°.02**, h0^{km}, n50, σ1^{s}.16**/76**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.12	22	P	Pg	00 25 54.1	0.0
KUA				S	Sg	00 25 55.8	+0.3
RATU	Laukkuluspa	0.24	265	P	Pg	00 25 56.2	-0.2
LANU	Lannavaara	0.70	73	P	Pg	00 26 04.8	-0.4
LANU	Lannavaara	0.70	73	PG	Pg	00 26 05.0	-0.1
LANU				SG	Sg	00 26 14.3	+0.1
DUNU	Dundret	0.74	170	P	Pg	00 26 05.7	-0.3
MASU	Masugnsbyn	0.78	119	P	Pg	00 26 06.6	-0.2
SALU	Saltoluokta	0.81	235	P	Pg	00 26 06.7	-0.6
SALU	Saltoluokta	0.81	235	*e*P	Pg	00 26 06.9	-0.4
KIF	Kilpisjarvi	1.18	10	*e*P	Pg	00 26 14.5	+0.1
KIF				*e*S	Sb	00 26 30.4	-0.5
KIF	Kilpisjarvi	1.18	10	PN	Pg	00 26 14.3	-0.1
KIF				MSG		00 26 29.6	
	comp=Z,15nm,0.2s						
KIF				SG	Sb	00 26 30.3	-0.6
PAJU	Pajala	1.39	125	PG	Pg	00 26 17.1	-1.3
	baz=305						
PAJU				SG	Sg	00 26 35.8	-0.5
HEF	Hetta	1.41	65	*e*P	Pg	00 26 17.7	-1.0
HEF				*e*S	Sg	00 26 36.2	-0.7
HEF	Hetta	1.41	65	PG	Pg	00 26 17.6	-1.2
	baz=250						
HEF				MSG		00 26 35.3	
	comp=Z,14nm,0.2s						
HEF				SN	Sn	00 26 40.2	+2.4
KLF	Kolari	1.56	111	PG	Pn	00 26 20.3	-0.5
KLF				MSG		00 26 39.2	
	comp=Z,6.6nm,0.2s						
KTK1	Kautokeino	1.61	42	*e*P	Pn	00 26 21.3	-0.2
KTK1				*e*S	Sb	00 26 42.9	-0.5
KTK1				IAML		00 26 53.4	
	comp=Z,12nm,0.3s						
KTK1	Kautokeino	1.61	42	PG	Pn	00 26 21.4	-0.2
KTK1				SN	Sg	00 26 44.9	+1.3
HARU	Harads	1.72	170	P	Pn	00 26 22.7	-0.2
JETT	Jettan, Norway	1.72	2	*e*P	Pn	00 26 23.0	0.0
JETT				*e*S	Sn	00 26 45.3	-0.4
JETT				IAML		00 26 47.8	
	comp=Z,55nm,0.3s						
TRO	Tromso	1.85	346	*e*P	Pn	00 26 24.9	0.0
TRO				*e*S	Sb	00 26 49.8	-0.4
TRO				IAML		00 26 59.2	
	comp=Z,16nm,0.3s						
TRO	Tromso	1.85	346	PG	Pn	00 26 25.1	+0.3
TRO				SG	Sb	00 26 50.1	-0.2
STEI	Steigen	1.89	275	*e*P	Pn	00 26 26.2	+1.0
STEI				*e*S	Sb	00 26 52.2	+1.0
STEI				IAML		00 26 58.6	
	comp=Z,11nm,0.4s						
FAUS	Fauske	1.95	258	*e*P	Pn	00 26 26.8	+0.8
FAUS				*e*S	Sb	00 26 53.0	+0.1
FAUS				IAML		00 26 57.3	
	comp=Z,20nm,0.4s						
KALU	Kalix	2.35	147	PG	Pn	00 26 32.5	+0.9
KALU				SG	Sn	00 27 03.4	+2.3
TOF	Tornio	2.40	136	PB	Pn	00 26 33.6	+1.3
TOF				MSG		00 27 02.8	
	comp=Z,4.3nm,0.2s						
TOF				SG	Sb	00 27 05.8	-0.1
LOF	Lofoten	2.53	280	*e*P	Pn	00 26 35.3	+1.2
ARA0	ARCESS Array S	2.57	46	*e*P	Pn	00 26 35.0	+0.4
ARA0				IAML		00 27 12.6	
	comp=Z,8.3nm,0.2s						
ARA0	ARCESS Array S	2.57	46	PB	Pn	00 26 35.5	+0.9
	baz=228						
ARA0				SB	Sb	00 27 09.8	-1.0
ARCES	ARCESS Array B	2.57	46	Pn	Pn	00 26 35.0	+0.4
	comp=Z,0.6nm,0.3s,baz=227,slow=15,SNR=41						
ARCES				Lg	Lg	00 27 08.8	
	comp=Z,1.9nm,0.3s,baz=230,slow=24,SNR=16						
	comp=Z,1.3nm,0.3s						
RNF	Rovaniemi	2.57	116	PB	Pn	00 26 36.2	+1.5
RNF				SB	Sb	00 27 10.4	-0.5
RAUS	Rausandaksla	2.80	242	*e*P	Pn	00 26 38.6	+0.8
MOR8	Moi Rana	2.83	236	*e*P	Pn	00 26 38.6	+0.4
MOR8				IAML		00 27 17.4	
	comp=Z,15nm,0.4s						
VAGH	Vaagaholmen	2.92	251	*e*P	Pn	00 26 40.1	+0.7
HAMF	Hammerfest	3.07	22	*e*P	Pn	00 26 42.9	+1.5
HAMF				IAML		00 27 43.3	
	comp=Z,9.8nm,0.6s						
RAJF	Raja-Jooseppi	3.09	75	PN	Pn	00 26 41.7	-0.1
RAJF				SG	Sb	00 27 26.6	+0.9
KEV	Kevo	3.12	49	*e*P	Pn	00 26 42.7	+0.5
KEV	Kevo	3.12	49	PN	Pn	00 26 42.4	+0.2
KEV				SN	Sn	00 27 21.4	+1.3
RANF	Ranua	3.17	122	PN	Pn	00 26 43.7	+0.8
RANF				SG	Sb	00 27 29.2	+1.1
STOK	Stokkvaagen	3.20	245	*e*P	Pn	00 26 44.5	+1.2
LEIR	Leirfjorden	3.29	241	*e*P	Pn	00 26 45.3	+0.7
BURU	Burvik	3.31	171	PB	Pn	00 26 47.0	+2.1
BURU				SB	Sn	00 27 27.0	+2.2
VRF	Varrio	3.56	87	PG	Pb	00 26 55.9	+0.3
VRF				SN	Sn	00 27 32.6	+1.5
OUL	Oulu	3.59	138	PG	Pb	00 26 56.3	+0.2
	baz=327						
OUL				SG	Sb	00 27 40.8	+0.8
MSF	Maaselka	3.98	115	PN	Pn	00 26 55.6	+1.5
	baz=305						
VADS	Vadso	4.00	51	*e*P	Pn	00 26 54.9	+0.6
KU6	Riekki	4.22	111	PN	Pn	00 26 57.8	+0.5
	baz=296						
KU1	Kurvinen	4.36	117	PN	Pn	00 27 00.7	+1.5
NSS	Namsos	4.72	229	*e*P	Pn	00 27 05.7	+1.6
FINES	FINESS Array B	6.90	156	Pn	Pn	00 27 33.5	-0.6
	baz=338,slow=17,SNR=1.8						
FINES				Sn	Sn	00 28 49.7	-3.5
	comp=Z,0.2nm,0.3s,baz=342,slow=21,SNR=1.9						
FINES				Lg	Lg	00 29 25.1	
	comp=Z,0.2nm,0.3s,baz=346,slow=27,SNR=3.7						
	comp=Z,0.8nm,0.7s						
NOA	NORSAR Array B	7.86	214	Pn	Pn	00 27 46.6	-0.7
	baz=25,slow=12,SNR=7.1						
NOA				Lg	Lg	00 29 58.6	
	baz=34,slow=19,SNR=3.9						
	comp=Z,0.2nm,0.5s						
HFS	Hagfors	8.25	203	Pn	Pn	00 27 52.0	-0.7
	comp=Z,0.1nm,0.3s,baz=15,slow=12,SNR=1.4						
HFS				Sn	Sn	00 29 21.6	-4.9
	comp=Z,0.1nm,0.3s,baz=22,slow=19,SNR=1.7						
HFS				Lg	Lg	00 30 10.5	
	comp=Z,0.2nm,0.3s,baz=23,slow=31,SNR=5.4						
	comp=Z,0.6nm,0.6s						

IDC 26 00:25:59.5±3.8**, 22°.36S**×**173°.05E, h0^{km}, mb4.0**/2**, mbtmp3.9**/3**, ML2.8**/1**, MS3.6**/3**, Error ellipse: s-maj=181.6km s-min=46.4km az=160.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.13	271	Pn	Pn	00 27 32.8	+1.3
	0.2nm,0.3s,baz=26,slow=11,SNR=1.9						
	5.9nm,0.8s						
RAO	Raoul Island	10.64	132	LR	LR	00 31 36.1	
	comp=Z,534nm,21.3s,baz=244,slow=32						
CTA	Charters Tower	25.07	270	LR	LR	00 40 25.2	
	comp=Z,88nm,18.4s,baz=38,slow=34						
ASAR	Alice Springs	35.98	260	P	P	00 33 02.4	0.0
	2.7nm,0.8s,baz=86,slow=8.6,SNR=24						
	2.7nm,0.8s						
WRA	Warramunga Arr	36.12	266	P	P	00 33 02.7	-0.9
	1.5nm,0.9s,baz=101,slow=8.6,SNR=5.6						
	1.5nm,0.9s						
MJAR	Matsushiro Arr	67.19	330	LR	LR	01 01 04.1	
	comp=Z,47nm,21.4s,baz=106,slow=31						
GERES	GERESS Array B	148.89	333	PKPbc	PKPbc	00 45 49.0	-0.3
	1.4nm,1.0s,baz=11,slow=6.2,SNR=6.5						

IDC 26 00:27:59.6±7.2**, 21°.62S**×**173°.47E, h0^{km}, mb4.0**/3**, mbtmp3.9**/3**, Error ellipse: s-maj=308.0km s-min=39.8km az=149.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	36.49	259	P	P	00 35 07.5	+0.7
	2.0nm,0.8s,baz=90,slow=8.6,SNR=13						
	2.0nm,0.8s						
WRA	Warramunga Arr	36.56	265	P	P	00 35 06.3	-1.1
	1.2nm,0.7s,baz=102,slow=9.2,SNR=6.3						
	1.2nm,0.7s						
ILAR	Eielson Array	91.37	16	P	P	00 41 06.8	-0.1
	0.8nm,1.0s,baz=203,slow=3.6,SNR=4.2						
	0.8nm,1.0s						

IDC 26 00:40:22.5±3.6**, 22°.64S**×**173°.89E, h0^{km}, mb3.9**/2**, mbtmp3.9**/3**, ML3.0**/1**, MS3.5**/5**, Error ellipse: s-maj=170.6km s-min=49.4km az=162.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.92	273	Pn	Pn	00 42 07.0	+1.7
	0.3nm,0.3s,baz=110,slow=9.3,SNR=3.6						
DZM				LR	LR	00 44 24.6	
	comp=Z,256nm,19.0s,baz=68,slow=35						
	11nm,1.1s						
URZ	Urewera	15.82	171	LR	LR	00 49 03.0	
	comp=Z,196nm,21.8s,baz=340,slow=33						
ASAR	Alice Springs	36.70	260	P	P	00 47 31.7	+0.2
	2.2nm,0.8s,baz=86,slow=8.3,SNR=23						
	2.2nm,0.8s						
WRA	Warramunga Arr	36.88	267	P	P	00 47 31.7	-1.4
	0.9nm,0.7s,baz=102,slow=8.8,SNR=4.8						
	0.9nm,0.7s						
MJAR	Matsushiro Arr	67.82	330	LR	LR	01 16 55.7	
	comp=Z,24nm,20.7s,baz=132,slow=32						
JNU	Nakatsue	68.97	322	LR	LR	01 18 42.1	
	comp=Z,32nm,19.7s,baz=326,slow=33						
ASAJ	Asahikawa	72.35	337	LR	LR	01 16 24.8	
	comp=Z,37nm,20.5s,baz=140,slow=30						
GERES	GERESS Array B	149.48	334	PKPbc	PKPbc	01 00 13.7	-0.1
	0.4nm,0.7s,baz=29,slow=3.0,SNR=3.8						

NNC 26 00:45:44.4±3.1**, 37°.53N**×**71°.48E, h0^{km}, mb3.6, mpv3.2, 4C-3D, Error ellipse: s-maj=30.2km s-min=21.7km az=55.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.60	23	⇑Pn	Pn	00 47 09.9	+0.8
	1.7nm,0.8s						
AAK				⇓Pg	Pb	00 47 24.5	+1.4
	2.0nm,0.6s						
AAK				⇓Lg	Lg	00 48 41.2	
	2.1nm,0.9s						
KK31	Karatay Array	5.61	353	⇑Pn	Pn	00 47 10.0	+0.9
	0.7nm,0.2s,baz=173,slow=12,SNR=82						
KK31				⇑Sn	Sn	00 48 15.8	+1.5
	0.8nm,0.3s,baz=174,slow=17,SNR=4.2						
KK31				⇓Lg	Lg	00 48 42.6	
	5.4nm,0.7s,baz=56,slow=23,SNR=2.9						
MK31	Makanchi Array	12.24	37	⇑P	Pn	00 48 39.7	-0.2
	1.3nm,0.8s,baz=223,slow=15,SNR=12						
AB31	Akbulak array	14.39	328	P	Pn	00 49 06.2	-3.0
	0.4nm,0.5s,baz=150,slow=12,SNR=12						

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*UPA **26** 00:46:19.9±0.7, 9°.01N×82°.88W, h15^{km}±2^{km}, ML3.3*
*CATAC **26** 00:46:21.1±0.2, 9°N±2°×8°3W±°, h5^{km}±1^{km}, M3.2/8, MLv3.2/8, Error ellipse: s-maj=4.8km s-min=2.9km az=37.9, confirmed*

ISC 26 00:46:19.8±1.0**, 9°.02N**±0°.03×**82°.83W**±0°.03**, h26^{km}**±8^{km}**, n31, σ1^{s}.01**/37**, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLIR3	Monte Lirio, C	0.23	178	*e*P	Pb	00 46 25.7	-0.4
MLIR3				AMP		00 46 25.8	
	comp=Z,5µm,0.1s						
MLIR3				*e*S	Sb	00 46 30.4	0.0
BRU2	Volcan	0.27	149	*e*P	Pb	00 46 26.6	0.0
BRU2				*e*S	Sb	00 46 31.7	+0.4
BRU2	Volcan	0.27	149	P	Pb	00 46 26.8	+0.1
CDITO	Canoas	0.45	185	P	Pb	00 46 28.9	-0.4
CDITO	Canoas	0.45	185	S	Sb	00 46 36.0	+0.4
LNBQ3	Los Naranjos,	0.45	121	*e*P	Pb	00 46 29.8	+0.4
PTAR3	Potrerillos Ar	0.46	135	*e*P	Pn	00 46 30.7	-0.2
DRK0	Durika	0.47	300	*e*P	Pb	00 46 29.5	-0.3
DRK0				*e*S	Sb	00 46 36.2	-0.4
DRK0	Durika	0.47	300	P	Pb	00 46 29.6	-0.2
DRK0	Durika	0.47	300	S	Sb	00 46 35.9	-0.7
BQSF3	Alto Boquete,	0.48	125	*e*P	Pn	00 46 30.9	-0.2
CNI2	El Empalme, Bo	0.54	42	*e*P	Pn	00 46 30.7	-1.1

PSOM3	**Paja de Sombre**	**0.60**	**124**	*e*P	**Pn**	**00 46 32.8**	**0.0**
LESP3	**La Esperanza,**	**0.61**	**176**	*e*P	**Pb**	**00 46 31.6**	**-0.4**
PTJ1	**Puerto Jimnez**	**0.67**	**224**	S	**Sb**	**00 46 42.8**	**+0.9**
PTJ1	**Puerto Jimnez**	**0.67**	**224**	P	**Pb**	**00 46 32.1**	**-0.9**
CHGR2	**Aguacate**	**0.68**	**97**	*e*P	**Pn**	**00 46 34.3**	**+0.5**
DVD	**David**	**0.69**	**147**	*e*P	**Pb**	**00 46 33.5**	**+0.1**
PIRO	**Carate, Puerto**	**0.79**	**219**	*i* P	**Pb**	**00 46 33.8**	**-1.2**
PIRO				*e*S	**Sb**	**00 46 44.6**	**-0.8**
PIRO	**Carate, Puerto**	**0.79**	**219**	P	**Pb**	**00 46 33.8**	**-1.2**
PIRO	**Carate, Puerto**	**0.79**	**219**	S	**Sn**	**00 46 47.2**	**+1.0**
OCHAL	**Ojochal**	**0.81**	**275**	P	**Pn**	**00 46 35.7**	**+0.2**
OCHAL	**Ojochal**	**0.81**	**275**	S	**Sn**	**00 46 47.0**	**+0.3**
PTPM	**Petroterminale**	**0.81**	**183**	*e*P	**Pb**	**00 46 35.3**	**-0.1**
PTPM				*e*S	**Sb**	**00 46 46.6**	**+0.6**
LCR2	**La Lucha 2**	**1.36**	**302**	S	**Sb**	**00 47 04.0**	**+2.1**
TRT2	**Tortugero**	**1.77**	**330**	P	**Pb**	**00 46 52.0**	**+0.4**
TRT2	**Tortugero**	**1.77**	**330**	S	**Sb**	**00 47 16.4**	**+3.1**
COVE	**Coope Vega, Sa**	**2.29**	**318**	P	**Pb**	**00 47 00.6**	**+0.1**
JTS	**Las Juntas de**	**2.44**	**301**	P	**Pb**	**00 47 02.4**	**-0.8**
JTS				S	**Sb**	**00 47 33.3**	**+0.5**
BCIP	**Isla Barro Col**	**2.96**	**87**	S	**Sb**	**00 47 46.2**	**-1.5**
BLUN	**Bluefields**	**3.11**	**343**	S	**Sb**	**00 47 49.3**	**-2.6**

*IDC **26** 00:56:27.1±1.1, 38°.25N×144°.49E, h0^{km}, mb3.6/9, mbtmp3.6/10, ML3.0/1, Error ellipse: s-maj=33.1km s-min=22.1km az=159.0*

*NIED **26** 00:56:31.0, 38°.33N×144°.27E, h41^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-3.82; M$_{θθ}$0.27; M$_{φφ}$3.55; M$_{rθ}$-1.46; M$_{θφ}$-0.18; M$_{φr}$5.84; Fault plane solution: M$_0$7.06000×10^{14} NP1:φ$_s$4.00000°, δ16.00000°, λ-74.00000°. NP2:φ$_s$168.00000°, δ74.00000°, λ-94.00000°.*

*JMA **26** 00:56:31.0±0.2, 38°.3N±0°.8×14°4E±°, h41^{km}, MV3.8/26, FAR E OFF NORTH HONSHU*

ISC 26 00:56:31.1±0.8, 38°.32N±0°.06×144°.37E±0°.07, h29^{km}, n23, σ1ˢ.38/33, mb3.6/9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.25**	**291**	P	**Pn**	**00 57 05.8**	**-0.5**
OFUJ				*e*S	**Sn**	**00 57 31.9**	**-1.1**
JIKH	**Ishinomakikobu**	**2.29**	**271**	P	**Pn**	**00 57 06.1**	**-0.7**
JIKH				*e*S	**Sn**	**00 57 32.3**	**-1.6**
JKMT	**Kesennumamotoy**	**2.32**	**283**	P	**Pn**	**00 57 07.0**	**-0.4**
JKMT				*e*S	**Sn**	**00 57 33.4**	**-1.5**
MIYJ	**Miyakonagasawa**	**2.35**	**303**	*i* P	**Pn**	**00 57 07.2**	**-0.5**
MIYJ				S	**Sn**	**00 57 35.0**	**-0.7**
JMK	**Ichinoseki**	**2.55**	**285**	P	**Pn**	**00 57 10.5**	**+0.1**
JMK				*e*S	**Sn**	**00 57 39.6**	**-0.9**
JOM	**Ohasama**	**2.67**	**297**	P	**Pn**	**00 57 12.1**	**+0.1**
JANG	**Nango**	**3.02**	**314**	*e*P	**Pn**	**00 57 17.0**	**+0.1**
JANG				*e*S	**Sn**	**00 57 50.6**	**-1.5**
JYK	**Kaneyama**	**3.20**	**282**	P	**Pn**	**00 57 20.3**	**+0.9**
JYK				*e*S	**Sn**	**00 57 56.3**	**-0.3**
JOTO	**OTAMA OYAMA**	**3.28**	**258**	P	**Pn**	**00 57 20.9**	**+0.4**
JOTO				*e*S	**Sn**	**00 57 57.7**	**-0.9**
JCH	**Churui**	**4.36**	**350**	*e*P	**Pn**	**00 57 34.5**	**-0.8**
JCH				*e*S	**Sn**	**00 58 20.9**	**-4.3**
BSO1	**Boso 1**	**4.56**	**218**	*e*P	**Pn**	**00 57 35.5**	**-2.2**
JRY	**Ryogami san**	**4.93**	**244**	P	**Pn**	**00 57 43.0**	**-0.3**
JRY				*e*S	**Sn**	**00 58 36.4**	**-3.0**
MJAR	**Matsushiro Arr**	**5.21**	**252**	Pn	**Pn**	**00 57 48.4**	**+1.3**
	0.6nm,0.3s,baz=67,slow=9.2,SNR=28						
	14nm,0.7s						
HILR	**Hailar Array B**	**20.89**	**310**	P	**P**	**01 01 09.2**	**-1.8**
	1.3nm,0.5s,baz=110,slow=12,SNR=3.7						
MKAR	**Makanchi Array**	**45.44**	**302**	P	**P**	**01 04 48.4**	**+1.1**
	0.2nm,0.5s,baz=86,slow=9.2,SNR=2.6						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**47.07**	**307**	P	**P**	**01 05 01.2**	**+1.2**
	0.6nm,0.6s,baz=82,slow=8.2,SNR=8.1						
	0.6nm,0.6s						
ILAR	**Eielson Array**	**47.15**	**33**	P	**P**	**01 05 00.2**	**-0.2**
	0.4nm,0.7s,baz=259,slow=6.8,SNR=4.9						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**58.71**	**191**	P	**P**	**01 06 25.7**	**-0.4**
	1.7nm,0.9s,baz=12,slow=7.4,SNR=1.7						
	1.7nm,0.9s						
YKA	**Yellowknife Ar**	**61.51**	**31**	P	**P**	**01 06 45.6**	**+0.8**
	0.2nm,0.7s,baz=301,slow=7.4,SNR=6.1						
	0.2nm,0.7s						
FINES	**FINESS Array B**	**68.76**	**333**	P	**P**	**01 07 32.7**	**+0.9**
	1.0nm,0.9s,baz=337,slow=8.3,SNR=3.5						
	1.0nm,0.9s						
NVAR	**Mina Array Bea**	**72.34**	**55**	P	**P**	**01 07 55.1**	**+0.7**
	0.7nm,0.7s,baz=293,slow=5.5,SNR=5.3						
	0.7nm,0.7s						
PDAR	**Pinedale Array**	**75.09**	**47**	P	**P**	**01 08 11.6**	**+1.1**
	0.4nm,0.6s,baz=339,slow=0.8,SNR=5.2						
	0.4nm,0.6s						
TXAR	**Lajitas Array**	**87.47**	**54**	P	**P**	**01 09 16.7**	**+0.5**
	0.2nm,0.7s,baz=341,slow=4.1,SNR=2.6						
	0.2nm,0.7s						

*IDC **26** 01:04:39.7±2.5, 10°.21N×126°.43E, h0^{km}, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=249.5km s-min=21.4km az=67.0*

*NEIC **26** 01:04:49.0±1.5, 10°.05N±0°.09×126°.0E±0°.2, h58^{km}±7^{km}, mb4.2/15, Error ellipse: s-maj=27.6km s-min=11.2km az=75.0*

ISC 26 01:04:47.9±0.7, 10°.03N±0°.10×126°.0E±0°.2, h54^{km}, n22, σ0ˢ.97/22, mb4.0/14, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOLI2	**Tolitoli**	**10.28**	**211**	Pn	**Pn**	**01 07 12.7**	**0.0**
MTN	**Manton Dam**	**23.29**	**167**	P	**P**	**01 09 51.3**	**+0.2**
MTN				IAmb	IAmb	01 10 04.2	
	comp=Z,12nm,1.4s						
FITZ	**Fitzroy Crossi**	**27.95**	**181**	P	**P**	**01 10 34.6**	**+1.3**
WRAB	**Tennant Creek**	**30.88**	**165**	P	**P**	**01 10 59.3**	**-0.1**
WRAB				IAmb	IAmb	01 11 08.2	
	comp=Z,6.6nm,1.4s						
WRA	**Warramunga Arr**	**30.89**	**165**	P	**P**	**01 10 57.9**	**-1.6**
	comp=Z,2.1nm,0.9s,baz=344,slow=8.2,SNR=7.3						
	comp=Z,2.1nm,0.9s						
WR8	**Warramunga Arr**	**30.95**	**164**	P	**P**	**01 11 00.5**	**+0.6**
WR8				IAmb	IAmb	01 11 06.6	
	comp=Z,3.4nm,1.1s						
ASAR	**Alice Springs**	**34.37**	**167**	P	**P**	**01 11 30.1**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=349,slow=6.7,SNR=4.9						
	comp=Z,0.3nm,0.4s						
EIDS	**Eidsvold**	**42.83**	**146**	P	**P**	**01 12 39.0**	**-1.8**
NWAO	**Narrogin (SRO)**	**43.53**	**191**	P	**P**	**01 12 47.3**	**+1.0**
NWAO				IAmb	IAmb	01 12 54.1	
	comp=Z,15nm,1.1s						
BBOO	**Buckleboo**	**43.66**	**168**	P	**P**	**01 12 48.0**	**+0.6**
BBOO				IAmb	IAmb	01 13 00.1	
	comp=Z,14nm,1.4s						
MGBR	**Mount Gambier**	**49.42**	**165**	P	**P**	**01 13 33.0**	**+0.6**
CAN	**Canberra**	**50.07**	**155**	P	**P**	**01 13 36.9**	**-0.6**
MKAR	**Makanchi Array**	**52.07**	**323**	P	**P**	**01 13 52.3**	**0.0**
	comp=Z,0.4nm,0.5s,baz=127,slow=7.7,SNR=5.6						
	comp=Z,0.4nm,0.5s						
KURK	**Kurchatov**	**56.12**	**326**	P	**P**	**01 14 21.0**	**-0.7**
KURK				IAmb	IAmb	01 14 22.5	
	comp=Z,1.7nm,0.9s						
KURBB	**Kurchatov Arra**	**56.13**	**326**	P	**P**	**01 14 21.4**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=127,slow=6.9,SNR=8.4						
	comp=Z,0.5nm,0.6s						
SHAA	**Shahritus**	**58.60**	**308**	P	**P**	**01 14 39.4**	**-0.1**
SHAA				IAmb	IAmb	01 14 50.4	
	comp=Z,3.7nm,0.8s						
AB31	**Akbulak array**	**66.89**	**319**	P	**P**	**01 15 33.8**	**-0.6**
ABKAR	**Akbulak array**	**66.89**	**319**	P	**P**	**01 15 33.7**	**-0.7**
C18K	**Utukok River**	**74.47**	**21**	P	**P**	**01 16 21.7**	**+1.5**
C18K				IAmb	IAmb	01 16 37.8	
	comp=Z,3.2nm,1.5s						
D19K	**Kuna River**	**75.55**	**22**	P	**P**	**01 16 26.9**	**+0.5**
D19K				IAmb	IAmb	01 16 46.7	
	comp=Z,1.5nm,1.1s						
E19K	**Redstone River**	**75.72**	**23**	P	**P**	**01 16 29.5**	**+2.1**
FINES	**FINESS Array B**	**85.98**	**332**	P	**P**	**01 17 21.9**	**-0.3**
	comp=Z,2.8nm,1.1s,baz=57,slow=4.0,SNR=9.0						
	comp=Z,2.8nm,1.1s						

*SKO **26** 01:05:01.3, 41°.57N×19°.38E, h1^{km}, ML2.5*

*TIR **26** 01:05:02.3, 41°.64N×19°.56E, h30^{km}, Ml2.5/5*

*PDG **26** 01:05:03.2±0.2, 41°.59N×19°.51E, h10^{km}, ML2.7/10, Error ellipse: s-maj=0.8km s-min=0.9km az=0.0*

*BEO **26** 01:05:03.4±0.7, 41°.53N×19°.68E, h6^{km}±4^{km}, ML2.3/7*

ISC 26 01:05:02.2±1.1, 41°.56N±0°.02×19°.51E±0°.02, h7^{km}±9^{km}, n50, σ0ˢ.83/84, 13C-9D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.34**	**128**	Pg	**Pg**	**01 05 08.6**	**-0.2**
TIR				Sg	**Sg**	**01 05 12.2**	**-1.1**
TIR				AML	AML	01 05 13.9	
	2.6nm,0.4s						
TIR	**Tirane**	**0.34**	**128**	*i* Pg	**Pg**	**01 05 08.6**	**-0.2**
TIR				*i* Sg	**Sg**	**01 05 14.4**	**+1.2**
ULC	**Ulcinj**	**0.45**	**334**	⇓*i*Pg	**Pg**	**01 05 11.0**	**0.0**
SDA	**Shkodra**	**0.49**	**359**	Pg	**Pg**	**01 05 11.5**	**-0.3**
SDA				Sg	**Sg**	**01 05 18.3**	**0.0**
SDA				AML	AML	01 05 25.1	
	0.6nm,0.4s						
DRME	**Dracevica, Mon**	**0.68**	**339**	*e*Pg	**Pg**	**01 05 14.8**	**-0.4**
DRME				*e*Sg	**Sn**	**01 05 28.4**	**-0.7**
DRME	**Dracevica, Mon**	**0.68**	**339**	⇑*i*Pg	**Pg**	**01 05 15.0**	**-0.2**
DRME				*e*Sg	**Sb**	**01 05 25.5**	**-0.5**
PHP	**Peshkopia**	**0.71**	**79**	Pg	**Pg**	**01 05 14.9**	**-0.9**
PHP				Sg	**Sg**	**01 05 25.0**	**-0.1**
PHP				AML	AML	01 05 30.2	
	1.4nm,0.5s						
BUM	**Brajici-Budva**	**0.88**	**328**	*e*Pg	**Pg**	**01 05 18.8**	**-0.2**
BUM				*e*Sg	**Sb**	**01 05 32.2**	**+0.4**
PDG	**Podgorica**	**0.89**	**348**	Pg	**Pg**	**01 05 18.5**	**-0.9**
PDG				Sg	**Sg**	**01 05 30.0**	**-1.0**
PDG	**Podgorica**	**0.89**	**348**	⇑P	**Pg**	**01 05 19.4**	**0.0**
PDG				⇑S	**Sb**	**01 05 32.1**	**-0.1**
PDG	**Podgorica**	**0.89**	**348**	*e*Pg	**Pg**	**01 05 19.5**	**+0.1**
PDG				*e*Sg	**Sn**	**01 05 34.6**	**+0.2**
PDG	**Podgorica**	**0.89**	**348**	*e*Pg	**Pg**	**01 05 19.0**	**-0.4**
PDG				*e*Sg	**Sn**	**01 05 34.6**	**+0.2**
OHR	**Ohrid**	**1.07**	**114**	*i* Pg	**Pg**	**01 05 22.4**	**-0.2**
OHR				*i* Sg	**Sn**	**01 05 39.6**	**+0.8**
OHR				*e*Lg	Lg	01 05 40.3	
	comp=N,99nm,0.5s						
OHR				*e*Lg	Lg	01 05 42.4	
	comp=E,63nm,0.5s						
CEME	**Cevo**	**1.08**	**336**	⇓*i*Pg	**Pg**	**01 05 22.5**	**-0.5**
CEME				*e*Sg	**Sn**	**01 05 39.3**	**0.0**
PVY	**Plav**	**1.09**	**18**	⇑*i*Pg	**Pg**	**01 05 22.9**	**-0.2**
PVY				*e*Sg	**Sn**	**01 05 39.4**	**-0.1**
HCY	**Herceg Novi**	**1.17**	**320**	*e*Pg	**Pb**	**01 05 24.5**	**-0.3**
HCY				*i* Sg	**Sn**	**01 05 42.2**	**+0.9**
NKME	**Niksic**	**1.28**	**341**	*e*Pg	**Pn**	**01 05 26.3**	**-0.3**
NKME				*e*Sg	**Sn**	**01 05 46.0**	**+2.0**
KBN	**Korca**	**1.34**	**134**	Pn	**Pn**	**01 05 27.0**	**-0.5**
KBN				Sn	**Sn**	**01 05 46.1**	**+0.5**
KBN				AML	AML	01 05 55.0	
	comp=E,0.2nm,0.7s						
IVA	**Berane**	**1.34**	**12**	⇓*i*Pg	**Pn**	**01 05 26.6**	**-0.9**
IVA				*e*Sg	**Sg**	**01 05 48.1**	**+2.6**
SKO	**Skopje**	**1.50**	**73**	*i* Pg	**Pb**	**01 05 30.7**	**+0.3**
SKO				*i* Sg	**Sg**	**01 05 51.0**	**+0.5**
BRY	**Bratogost**	**1.53**	**332**	*e*Pg	**Pn**	**01 05 30.6**	**+0.5**
BRY				*i* Sg	**Sg**	**01 05 53.2**	**+1.9**
NEST	**Nestorio**	**1.63**	**134**	Pn	**Pn**	**01 05 32.2**	**+0.7**
NEST				Sn	**Sg**	**01 05 54.9**	**+0.3**
NEST				AML	AML	01 06 02.8	
	comp=E,0.2nm,0.6s						
UPM	**Unac-Piva**	**1.71**	**345**	⇓*i*Pn	**Pb**	**01 05 33.9**	**-0.1**
UPM				*i* Sn	**Sg**	**01 05 57.4**	**+0.3**
SJES	**Sjenica**	**1.74**	**11**	*e*Pg	**Pb**	**01 05 34.5**	**0.0**
SJES				*e*Sg	**Sg**	**01 05 58.6**	**+0.5**
NOCI	**Noci**	**2.00**	**248**	Pn	**Pn**	**01 05 38.2**	**+1.8**
NOCI				Sn	**Sb**	**01 06 05.3**	**+1.2**
SELS	**Selova**	**2.04**	**35**	*e*Pn	**Pn**	**01 05 37.5**	**+0.4**
SELS				*e*Sn	**Sn**	**01 06 02.9**	**0.0**
IVAS	**Ivanjica**	**2.07**	**13**	*e*Pn	**Pn**	**01 05 38.2**	**+0.7**
IVAS				*e*Sn	**Sb**	**01 06 04.5**	**-1.7**
IGT	**Igoumenitsa**	**2.12**	**163**	Pn	**Pn**	**01 05 38.0**	**0.0**
BARS	**Barje**	**2.12**	**53**	*i* Pn	**Pn**	**01 05 38.7**	**+0.5**
BARS	**Barje**	**2.12**	**53**	*e*Pn	**Pn**	**01 05 38.3**	**+0.1**
BARS				*e*Sn	**Sn**	**01 06 04.7**	**-0.1**
MATE	**Matera**	**2.31**	**248**	⇑P	**Pn**	**01 05 39.3**	**-1.3**
MATE				⇑S	**Sn**	**01 06 07.6**	**-1.7**
VAY	**Valandovo**	**2.31**	**95**	*i* Pn	**Pn**	**01 05 41.0**	**+0.3**
VAY				*i* Sn	**Sn**	**01 06 10.6**	**+1.3**
VAY				*e*Lg	Lg	01 06 12.1	
	comp=N,13nm,0.7s						
VAY				*e*Lg	Lg	01 06 14.7	
	comp=E,11nm,0.6s						
BOSS	**Bosilegrad**	**2.40**	**66**	*e*Pn	**Pn**	**01 05 42.0**	**0.0**
GRUS	**Gruza**	**2.49**	**20**	*e*Pn	**Pn**	**01 05 43.8**	**+0.6**
DIVS	**Divibare**	**2.56**	**8**	*e*Pn	**Pn**	**01 05 44.8**	**+0.5**
DIVS				*e*Sn	**Sn**	**01 06 16.6**	**+0.8**
BOVS	**Bovan**	**2.63**	**37**	⇓P	**Pn**	**01 05 45.5**	**+0.4**
BOVS				⇓S	**Sn**	**01 06 17.3**	**-0.1**
BOVS	**Bovan**	**2.63**	**37**	*e*Pn	**Pn**	**01 05 45.2**	**0.0**
BOVS				*e*Sn	**Sn**	**01 06 15.7**	**-1.7**
KKB	**Krupnik**	**2.72**	**83**	*i* Pn	**Pn**	**01 05 47.3**	**+0.9**
TRUS	**Trudelj**	**2.75**	**14**	*e*Pn	**Pg**	**01 05 54.3**	**-0.5**
ZAPS	**Zavoj**	**2.88**	**52**	*e*Pn	**Pn**	**01 05 48.2**	**-0.4**
ZAGS	**Zajecar**	**3.02**	**41**	*e*Pn	**Pn**	**01 05 51.0**	**+0.6**
TIP	**Timpagrande**	**3.17**	**222**	⇑P	**Pn**	**01 05 51.4**	**-1.3**
KUBS	**Kucevo**	**3.27**	**28**	*e*Pn	**Pn**	**01 05 52.7**	**-1.2**
MDVR	**Moldovita**	**3.60**	**26**	⇓P	**Pn**	**01 05 58.7**	**+0.2**
PUNG	**Punghina**	**3.70**	**42**	⇓P	**Pn**	**01 05 59.7**	**-0.1**
HERR	**Herculane**	**3.94**	**32**	⇑P	**Pn**	**01 06 03.7**	**+0.6**
BZS	**Buzias**	**4.34**	**20**	⇑P	**Pn**	**01 06 09.2**	**+0.6**
BZS				⇑S	**Sn**	**01 06 57.6**	**-1.8**
GZR	**Gura Zlata**	**4.51**	**31**	⇑P	**Pn**	**01 06 11.9**	**+0.9**
GZR				⇓S	**Sn**	**01 07 03.4**	**-0.4**
SIRR	**Siria**	**4.96**	**18**	⇑P	**Pn**	**01 06 17.0**	**-0.2**
LOT	**Lotru**	**4.97**	**37**	⇑P	**Pn**	**01 06 17.3**	**-0.1**

IDC 26 01:05:51.3±9.6, 1°.42N×98°.92W, h0^{km}, mb3.4/4, mbtmp3.4/4, MS3.7/1, Error ellipse: s-maj=400.0km s-min=143.9km az=97.0, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TXAR	**Lajitas Array**	**28.13**	**351**	P	P	01 11 45.2	-0.1
	0.3nm,0.8s,baz=176,slow=8.5,SNR=4.9						
	0.3nm,0.8s						
H03N2	**Juan Fernandez**	**39.46**	**153**	T	T	01 57 03.1	
	baz=329,slow=78,SNR=20						
H03N1	**Juan Fernandez**	**39.47**	**153**	T	T	01 57 03.9	
	baz=329,slow=78,SNR=17						
H03N3	**Juan Fernandez**	**39.47**	**153**	T	T	01 57 04.5	
	baz=329,slow=78,SNR=21						
ELK	**Elko**	**41.85**	**341**	LR	LR	01 28 54.7	
	comp=Z,79nm,18.2s,baz=296,slow=33						
PDAR	**Pinedale Array**	**42.26**	**348**	P	P	01 13 47.4	+0.7
	0.7nm,1.1s,baz=158,slow=8.7,SNR=3.5						
	0.7nm,1.1s						
YKA	**Yellowknife Ar**	**62.06**	**352**	P	P	01 16 12.3	-1.1
	0.3nm,0.9s,baz=169,slow=7.4,SNR=4.7						
	0.3nm,0.9s						
ILAR	**Eielson Array**	**72.00**	**340**	P	P	01 17 17.1	+0.4
	0.5nm,1.0s,baz=150,slow=5.5,SNR=4.5						
	0.5nm,1.0s						

IDC 26 01:12:48.3±7.0, 22°.47S×173°.29E, h0^{km}, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=353.7km s-min=53.5km az=154.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**36.18**	**260**	P	P	01 19 53.8	+0.9
	1.2nm,0.9s,baz=92,slow=7.7,SNR=10.0						
	1.2nm,0.9s						
WRA	**Warramunga Arr**	**36.33**	**267**	P	P	01 19 52.6	-1.6
	0.4nm,0.7s,baz=104,slow=8.4,SNR=0.3						
	0.4nm,0.7s						
GERES	**GERESS Array B**	**149.09**	**333**	PKPbc	PKPbc	01 32 38.0	-0.5
	0.5nm,0.7s,baz=355,slow=2.3,SNR=6.2						

*IDC **26** 01:17:19.5±2.6, 21°.57S×172°.88E, h0^{km}, mb4.2/5, mbtmp4.2/5, MS3.7/21, Error ellipse: s-maj=148.3km s-min=25.6km az=158.0*

*NEIC **26** 01:17:20.2±1.1, 22°.05S±0°.07×173°.1E±0°.1, h10^{km}±1^{km}, mb4.7/18, Error ellipse: s-maj=20.2km s-min=7.6km az=62.0*

ISC 26 01:17:23.6±0.6, 22°.1S±0°.1×173°.1E±0°.1, h35^{km}, n71, σ0ˢ.85/51, mb4.6/14, MS3.8/19, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINNC	**Pines Island,**	**5.26**	**263**	Pn	**Pn**	**01 18 40.2**	**+0.5**
DZM	**Mont Dzumac**	**6.17**	**269**	Pn	**Pn**	**01 18 54.7**	**+2.3**
	0.4nm,0.3s,baz=69,slow=17,SNR=2.7						
DZM	**Mont Dzumac**	**6.17**	**269**		**Pn**	**01 18 50.9**	**-1.4**
RAO	**Raoul Island**	**10.81**	**133**	LR	LR	01 22 55.4	
	comp=Z,877nm,21.9s,baz=355,slow=30						
URZ	**Urewera**	**16.51**	**169**	LR	LR	01 25 51.7	
	comp=Z,498nm,20.9s,baz=352,slow=30						
TCW	**Tory Channel**	**19.11**	**177**	P	**P**	**01 21 42.9**	**-0.6**
ARMA	**Armidale**	**20.95**	**242**	P	**P**	**01 22 03.4**	**-0.3**
CTA	**Charters Tower**	**25.11**	**270**	LR	LR	01 31 44.0	
	comp=Z,84nm,21.8s,baz=80,slow=35						
STKA	**Stephens Creek**	**29.63**	**244**	LR	LR	01 35 15.4	
	comp=Z,133nm,18.4s,baz=35,slow=36						
WR8	**Warramunga Arr**	**36.03**	**266**	P	**P**	**01 24 21.1**	**-0.7**
AS31	**Alice Springs**	**36.07**	**260**	P	**P**	**01 24 21.7**	**-0.5**
ASAR	**Alice Springs**	**36.07**	**260**	P	**P**	**01 24 22.5**	**+0.3**
	4.3nm,0.8s,baz=84,slow=8.9,SNR=40						
ASAR				LR	LR	01 38 27.1	
	comp=Z,128nm,21.5s,baz=102,slow=35						
	4.3nm,0.8s						
ASAR	**Alice Springs**	**36.07**	**260**	P	**P**	**01 24 21.9**	**-0.3**
WB0	**Warramunga Arr**	**36.16**	**266**	P	**P**	**01 24 21.9**	**-1.1**
WB0				IAmb	IAmb	01 24 33.1	
	comp=Z,8.1nm,1.2s						
WRA	**Warramunga Arr**	**36.18**	**266**	P	**P**	**01 24 22.5**	**-0.6**
	comp=Z,2.7nm,0.8s,baz=102,slow=8.7,SNR=6.5						
	comp=Z,2.7nm,0.8s						
KNRA	**Kununurra**	**42.31**	**271**	P	**P**	**01 25 14.1**	**-0.3**
KNRA				IAmb	IAmb	01 25 22.6	
	comp=Z,19nm,1.1s						
GUMO	**Guam**	**44.97**	**319**	LR	LR	01 42 15.5	
	comp=Z,131nm,18.7s,baz=118,slow=34						
BATI	**Baumata**	**48.73**	**276**	LR	LR	01 46 06.2	
	comp=Z,174nm,19.7s,baz=134,slow=36						
NWAO	**Narrogin (SRO)**	**50.22**	**245**	LR	LR	01 46 17.3	
	comp=Z,128nm,20.4s,baz=340,slow=35						
VNDA	**Vanda**	**55.77**	**183**	LR	LR	01 47 32.4	
	comp=Z,40nm,20.3s,baz=15,slow=32						
CASY	**Casey**	**59.03**	**205**	P	**P**	**01 27 20.0**	**+0.2**
JHJ	**Hachijo jima 2**	**63.42**	**329**	LR	LR	01 54 14.1	
	comp=Z,13nm,19.2s,baz=155,slow=35						
JOW	**Kunigami**	**65.15**	**316**	LR	LR	01 55 01.8	
	comp=Z,60nm,18.9s,baz=264,slow=35						
MJAR	**Matsushiro Arr**	**66.96**	**330**	LR	LR	01 53 48.5	
	comp=Z,41nm,21.2s,baz=144,slow=33						
QSPA	**South Pole Qui**	**68.00**	**180**	P	**P**	**01 28 19.5**	**+0.4**
QSPA				IAmb	IAmb	01 28 22.9	
	comp=Z,7.1nm,1.1s						
JNU	**Nakatsue**	**68.07**	**323**	LR	LR	01 53 35.1	
	comp=Z,33nm,20.9s,baz=142,slow=32						
RPN	**Rapa Nui**	**69.68**	**112**	LR	LR	01 50 48.2	
	comp=Z,49nm,21.4s,baz=282,slow=29						
ASAJ	**Asahikawa**	**71.54**	**337**	LR	LR	01 53 51.9	
	comp=Z,77nm,21.1s,baz=179,slow=31						
KSRS	**Korea Array**	**72.89**	**324**	LR	LR	01 59 13.2	
	comp=Z,15nm,18.0s,baz=130,slow=35						
PETK	**Petropavlovsk-**	**76.04**	**351**	LR	LR	01 58 01.9	
	comp=Z,96nm,19.1s,baz=155,slow=32						
MA2	**Magadan**	**83.39**	**349**	LR	LR	02 01 03.4	
	comp=Z,66nm,21.0s,baz=126,slow=32						
SEY	**Seymchan**	**86.28**	**351**	LR	LR	02 01 25.1	
	comp=Z,92nm,20.8s,baz=134,slow=31						
ISA	**Isabella, Lake**	**86.51**	**49**	P	**P**	**01 30 03.6**	**+0.4**
ISA				IAmb	IAmb	01 30 05.8	
	comp=Z,4.9nm,0.8s						
PFO	**Pinyon Flats O**	**86.94**	**52**	LR	LR	02 06 19.0	
	comp=Z,43nm,18.5s,baz=238,slow=34						
NVAR	**Mina Array Bea**	**88.02**	**47**	P	**P**	**01 30 11.8**	**+1.2**
	comp=Z,1.2nm,0.7s,baz=237,slow=6.9,SNR=4.5						
	comp=Z,1.2nm,0.7s						
NVAR	**Mina Array Bea**	**88.02**	**47**	P	**P**	**01 30 10.3**	**-0.3**
TPNV	**Topopah Spring**	**88.70**	**49**	P	**P**	**01 30 14.6**	**+0.8**
TPNV				IAmb	IAmb	01 30 16.0	
	comp=Z,4.1nm,0.9s						
YAK	**Yakutsk**	**90.67**	**341**	LR	LR	02 04 17.9	
	comp=Z,48nm,20.3s,baz=106,slow=31						
X16A	**Lo Mia Camp, P**	**91.01**	**53**	P	**P**	**01 30 23.9**	**-0.8**
X16A				IAmb	IAmb	01 30 30.1	
	comp=Z,3.5nm,1.2s						
CCUT	**Cedar City**	**91.02**	**50**		**P**	**01 30 25.5**	**+0.8**
G08A	**Pilot Rock**	**91.07**	**41**		**P**	**01 30 24.3**	**-0.3**
PSUT	**Pine Spring**	**91.13**	**49**	P	**P**	**01 30 24.8**	**-0.3**
PSUT				IAmb	IAmb	01 30 28.7	
	comp=Z,3.8nm,1.1s						
ELK	**Elko**	**91.21**	**46**		**P**	**01 30 25.9**	**+0.3**
ELK				IAmb	IAmb	01 30 28.4	
	comp=Z,3.3nm,0.9s						
U15A	**North Rim**	**91.28**	**51**	P	**P**	**01 30 25.3**	**-0.7**
HAWA	**Hanford**	**91.29**	**40**	P	**P**	**01 30 25.1**	**-0.4**
ILAR	**Eielson Array**	**91.89**	**16**	P	**P**	**01 30 27.2**	**-0.5**
	comp=Z,2.1nm,1.0s,baz=225,slow=6.5,SNR=8.7						
	comp=Z,2.1nm,1.0s						
ILAR	**Eielson Array**	**91.89**	**16**	P	**P**	**01 30 27.6**	**-0.2**
MTPU	**Mount Pierson**	**92.08**	**50**		**P**	**01 30 28.5**	**-1.3**
MTPU				IAmb	IAmb	01 30 33.4	
	comp=Z,2.8nm,0.9s						
TXAR	**Lajitas Array**	**94.97**	**61**	P	**P**	**01 30 43.2**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=186,slow=1.3,SNR=3.6						
	comp=Z,0.4nm,0.8s						
TXAR	**Lajitas Array**	**94.97**	**61**	P	**P**	**01 30 43.1**	**+0.1**
STEB	**Steborice**	**146.07**	**331**	*e*PKP	**PKPbc**	**01 36 59.9**	**+0.1**
DPC	**Dobruska-Polom**	**146.40**	**333**	*e*PKP	**PKiKP**	**01 37 03.5**	**-0.3**
UPC	**Upice**	**146.41**	**333**	*e*PKP	**PKiKP**	**01 37 03.3**	**-0.5**
MAUC	**Maruska**	**146.45**	**330**	*e*PKP	**PKiKP**	**01 37 03.6**	**-0.3**
EKA	**Eskdalemuir Ar**	**146.66**	**356**	PKPbc	**PKPab**	**01 37 02.1**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=11,slow=2.1,SNR=4.1						
ZVC	**Zvikov**	**147.98**	**334**	*e*PKP	**PKPbc**	**01 37 05.0**	**-0.2**
RONA	**Rosalia, Austr**	**148.36**	**330**	*e*PKiKP	**PKiKP**	**01 37 08.8**	**+0.9**
	comp=Z,6.8nm,1.2s						
CONA	**Conrad Observa**	**148.39**	**330**	*i* PKiKP	**PKPab**	**01 37 09.0**	**-0.7**
	comp=Z,4.0nm,0.9s						
CKRC	**Cesky Krumlov**	**148.41**	**333**	*e*PKP	**PKPbc**	**01 37 05.4**	**-1.0**
KHC	**Kasperske Hory**	**148.47**	**334**	*e*PKP	**PKPbc**	**01 37 05.4**	**-1.2**
GERES	**GERESS Array B**	**148.65**	**333**	PKPbc	**PKPdf**	**01 37 04.9**	**+1.6**
	comp=Z,3.2nm,0.9s,baz=32,slow=5.2,SNR=16						
SOKA	**Soboth**	**149.69**	**329**	*i* PKiKP	**PKiKP**	**01 37 11.0**	**+0.2**
	comp=Z,7.2nm,1.1s						
LESA	**Schwarzleotal**	**150.19**	**333**	*i* PKiKP	**PKiKP**	**01 37 13.4**	**+1.6**
	comp=Z,6.8nm,0.9s						
MYKA	**Terra Mystica**	**150.37**	**331**	*i* PKiKP	**PKiKP**	**01 37 12.9**	**+0.7**
	comp=Z,3.8nm,0.9s						
WATA	**Walderalm**	**150.72**	**334**	*e*PKiKP	**PKiKP**	**01 37 13.8**	**+0.9**
	comp=Z,6.2nm,1.0s,SNR=5.1						
WTTA	**Wattenberg**	**150.75**	**334**	*i* PKiKP	**PKiKP**	**01 37 14.2**	**+1.1**
	comp=Z,7.0nm,0.9s,SNR=5.5						
ABTA	**Abfaltersbach**	**150.78**	**332**	*e*PKiKP	**PKiKP**	**01 37 13.7**	**+0.6**
	comp=Z,6.9nm,1.0s,SNR=4.8						
RETA	**Reutte**	**150.92**	**335**	*i* PKiKP	**PKiKP**	**01 37 14.4**	**+1.2**
	comp=Z,4.5nm,1.0s						
SQTA	**Sankt Quirin**	**150.96**	**334**	*i* PKiKP	**PKiKP**	**01 37 14.7**	**+1.2**
	comp=Z,6.9nm,0.8s						
FETA	**Feichten**	**151.31**	**334**	*i* PKiKP	**PKiKP**	**01 37 15.6**	**+1.4**
	comp=Z,5.0nm,0.9s						
DAVA	**Damuels**	**151.43**	**336**	*i* PKP	**PKPbc**	**01 37 14.2**	**+0.2**
	comp=Z,4.4nm,1.1s						

*SJA **26** 01:19:20.1±2.6, 23°.10S×68°.81W, h118^{km}±14^{km}, ML3.7, MW3.7*

*GUC **26** 01:19:21.8±0.9, 23°.08S×68°.71W, h105^{km}±4^{km}, ML4.0*

*NEIC **26** 01:19:21.4±0.8, 23°.11S±0°.05×68°.68W±0°.03, h101^{km}±6^{km}, mb4.5/14, Error ellipse: s-maj=7.5km s-min=3.8km az=178.0*

*IDC **26** 01:19:41.4±2.3, 19°.27S×63°.65W, h0^{km}, mb3.7/1, mbtmp3.4/3, ML3.3/2, Error ellipse: s-maj=75.8km s-min=33.3km az=34.0*

ISC 26 01:19:21.2±0.7, 23°.08S±0°.03×68°.72W±0°.04, h103^{km}±6^{km}, n98, σ1ˢ.24/117, mb4.6/5, 5C-5D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AF01	**San Pedro de A**	**0.52**	**76**		**Pn**	**01 19 37.6**	**-0.1**
AF01				Sn	**Sn**	**01 19 49.3**	**-0.8**
AF01	**San Pedro de A**	**0.52**	**76**	⇓*i*P	**Pn**	**01 19 37.8**	**0.0**
AF01				*i* S	**Sn**	**01 19 49.7**	**-0.4**
AF01				IAML		01 19 50.6	
	comp=N,10μm,0.3s						
AF01	**San Pedro de A**	**0.52**	**76**	*i* P	**Pn**	**01 19 37.0**	**-0.7**
AF01				IAML		01 20 02.4	
	comp=Z,5μm,0.6s						

PB06	IPOC Station P	0.87	295		Pn	01 19 41.2	+0.7
PB06				Sn	Sn	01 19 56.3	+1.2
PB06	IPOC Station P	0.87	295	⇑iP	Pn	01 19 41.5	+0.9
PB06				iS	Sn	01 19 56.0	+0.8
PB06				IAML		01 19 57.6	
	comp=N,6µm,0.1s						
PB06	IPOC Station P	0.87	295	iP	Pn	01 19 40.8	+0.3
PB06				eS	Sn	01 19 55.8	+0.7
PB06				IAML		01 19 57.7	
	comp=Z,3µm,0.2s						
PB09	IPOC Station P	1.36	339		Pn	01 19 46.8	+0.7
PB09				Sn	Sn	01 20 05.8	+0.8
PB09	IPOC Station P	1.36	339	⇓iP	Pn	01 19 47.5	+1.4
PB09				eS	Sn	01 20 06.3	+1.4
PB09	IPOC Station P	1.36	339	iP	Pn	01 19 47.1	+0.9
PB09				eS	Sn	01 20 07.3	+2.4
PB09				IAML		01 20 11.7	
	comp=Z,525nm,0.4s						
PB05	IPOC Station P	1.38	279		Pn	01 19 46.7	+0.5
PB05	IPOC Station P	1.38	279	⇑iP	Pn	01 19 46.9	+0.7
PB05				iS	Sn	01 20 06.0	+0.7
PB05	IPOC Station P	1.38	279	iP	Pn	01 19 46.2	0.0
PB05				eS	Sn	01 20 05.8	+0.6
PB05				IAML		01 20 09.7	
	comp=Z,822nm,0.7s						
PB03	IPOC Station P	1.40	317		Pn	01 19 47.4	+0.9
PB03	IPOC Station P	1.40	317	⇓iP	Pn	01 19 47.4	+0.9
PB03				iS	Sn	01 20 06.7	+1.0
PB03				IAML		01 20 11.6	
	comp=E,2µm,0.2s						
PB03	IPOC Station P	1.40	317	iP	Pn	01 19 46.8	+0.2
PB03				eS	Sn	01 20 06.6	+0.9
PB03				IAML		01 20 09.6	
	comp=Z,1µm,0.1s						
PB07	IPOC Station P	1.72	321	Pn	Pn	01 19 51.1	+0.5
PB07	IPOC Station P	1.72	321	⇓iP	Pn	01 19 51.5	+1.0
PB07				iS	Sn	01 20 13.4	+0.6
PB07				IAML		01 20 18.3	
	comp=E,2µm,0.6s						
PB07	IPOC Station P	1.72	321	iP	Pn	01 19 50.9	+0.3
PB07				IAML		01 20 18.2	
	comp=Z,1µm,0.3s						
PB10	IPOC Station P	1.74	255		Pn	01 19 51.4	+0.9
PB10	IPOC Station P	1.74	255	⇑iP	Pn	01 19 51.7	+1.2
PB10				iS	Sn	01 20 13.7	+0.8
PB10	IPOC Station P	1.74	255	iP	Pn	01 19 50.1	-0.3
PB10				eS	Sn	01 20 12.7	-0.1
PB10				IAML		01 20 21.0	
	comp=Z,568nm,0.6s						
PB02	IPOC Station P	2.06	328		Pn	01 19 55.5	+0.7
PB02	IPOC Station P	2.06	328	eP	Pn	01 19 55.7	+0.9
PB02				iS	Sn	01 20 21.1	+0.8
PB02				IAML		01 20 27.4	
	comp=E,1µm,0.3s						
PB02	IPOC Station P	2.06	328	iP	Pn	01 19 55.1	+0.4
PB02				⇓eS	Sn	01 20 23.4	+3.1
PB02				IAML		01 20 30.2	
	comp=Z,1µm,0.3s						
PB01	IPOC Station P	2.15	341		Pn	01 19 56.7	+0.9
PB01	IPOC Station P	2.15	341	eP	Pn	01 19 56.7	+0.9
PB01				eS	Sn	01 20 23.6	+1.3
PB01				IAML		01 20 29.3	
	comp=E,930nm,0.2s						
PB01	IPOC Station P	2.15	341	iP	Pn	01 19 56.3	+0.4
PB01				IAML		01 20 26.1	
	comp=Z,558nm,0.2s						
PB14	IPOC Station P	2.18	225		Pn	01 19 57.0	+0.6
PB14	IPOC Station P	2.18	225	eP	Pn	01 19 57.6	+1.2
PB14				iS	Sn	01 20 24.5	+1.2
PB14	IPOC Station P	2.18	225	iP	Pn	01 19 57.0	+0.6
PB14				IAML		01 20 30.2	
	comp=Z,563nm,0.4s						
GO02	Mina Guanaco	2.22	201		Pn	01 19 58.0	+1.0
GO02	Mina Guanaco	2.22	201	⇑iP	Pn	01 19 58.1	+1.2
GO02				eS	Sn	01 20 26.4	+2.1
GO02				IAML		01 20 33.4	
	comp=E,959nm,0.2s						
GO02	Mina Guanaco	2.22	201	iP	Pn	01 19 57.4	+0.4
GO02				IAML		01 20 34.3	
	comp=Z,553nm,0.1s						
SALTA		2.46	118	eP	Pn	01 20 03.1	+2.8
SALTA		2.46	118	iP	Pn	01 20 03.7	+3.3
SALTA				IAML		01 20 45.8	
	comp=Z,31nm,0.5s						
PATCX	Punta Patache	2.61	329		Pn	01 20 02.0	+0.1
PATCX	Punta Patache	2.61	329	eP	Pn	01 20 01.9	+0.1
PATCX	Punta Patache	2.61	329	iP	Pn	01 20 01.7	-0.2
PATCX				IAML		01 20 42.2	
	comp=Z,242nm,0.4s						
PX03	IPOC Station P	2.79	342	eP	Pn	01 20 04.0	-0.4
TA01	Diego Aracena	2.84	331		Pn	01 20 05.6	+0.7
TA01	Diego Aracena	2.84	331	iP	Pn	01 20 04.0	-1.0
TA01				IAML		01 20 50.5	
	comp=Z,184nm,0.5s						
PB08	IPOC Station P	2.95	352		Pn	01 20 07.5	+0.8
PB08	IPOC Station P	2.95	352	iP	Pn	01 20 07.2	+0.5
PB08				IAML		01 20 50.8	
	comp=Z,106nm,0.6s						
HMBC	Humberstone	2.99	339		Pn	01 20 05.3	-1.7
HMBC	Humberstone	2.99	339	eP	Pn	01 20 07.0	0.0
HMBC	Humberstone	2.99	339	iP	Pn	01 20 06.0	-1.1
HMBC				IAML		01 20 54.5	
	comp=Z,372nm,0.2s						
YJA	Yavi	3.10	74	eP	Pn	01 20 11.2	+2.5
YJA	Yavi	3.10	74	iP	Pn	01 20 12.0	+3.3
YJA				IAML		01 20 56.1	
	comp=Z,3.3nm,1.2s						
SLA	San Lorenzo	3.37	120	eP	Pn	01 20 16.5	+4.4
PB11	IPOC Station P	3.42	345		Pn	01 20 12.2	-0.5
PB11	IPOC Station P	3.42	345	eP	Pn	01 20 12.4	-0.3
PB11	IPOC Station P	3.42	345	iP	Pn	01 20 12.5	-0.2
PB11				IAML		01 21 05.7	
	comp=Z,168nm,0.2s						
GO01	Chusmiza	3.42	353		Pn	01 20 13.7	+0.6
GO01	Chusmiza	3.42	353	eP	Pn	01 20 13.7	+0.6
GO01	Chusmiza	3.42	353	iP	Pn	01 20 13.2	+0.1
GO01				IAML		01 21 06.4	
	comp=Z,122nm,0.5s						
AC01	Pan de Azucar	3.50	209		Pn	01 20 13.5	-0.2
AC01	Pan de Azucar	3.50	209	eP	Pn	01 20 13.1	-0.6
AC01	Pan de Azucar	3.50	209	iP	Pn	01 20 12.3	-1.3
AC01				IAML		01 21 07.9	
	comp=Z,221nm,0.2s						
AC02	Maricunga	3.76	186		Pn	01 20 17.8	+0.2
AC02	Maricunga	3.76	186	⇑eP	Pn	01 20 18.8	+1.3
AC02	Maricunga	3.76	186	iP	Pn	01 20 18.3	+0.7
AC02				IAML		01 21 34.2	
	comp=Z,52nm,0.3s						
AC06	Mina Casimiro	4.51	199		Pn	01 20 27.8	+0.5
PB12	IPOC Station P	4.69	341	Pn	Pn	01 20 30.6	+0.8
PB12	IPOC Station P	4.69	341	iP	Pn	01 20 29.8	-0.1
PB12				IAML		01 21 42.6	
	comp=Z,73nm,0.4s						
GO03	Copiapo	4.70	197		Pn	01 20 29.5	-0.4
GO03	Copiapo	4.70	197	iP	Pn	01 20 29.2	-0.7
GO03				IAML		01 21 56.0	
	comp=Z,79nm,0.3s						
PB16	IPOC Station P	4.78	351		Pn	01 20 31.6	+0.2
PB16	IPOC Station P	4.78	351	iP	Pn	01 20 33.2	+1.7
PB16				IAML		01 21 52.0	
	comp=Z,48nm,0.5s						
AP01	Chacalluta	4.92	342	iP	Pn	01 20 31.4	-1.5
AP01				IAML		01 21 49.1	
	comp=Z,161nm,0.3s						
PB18	Visviri	5.51	352	Pn	Pn	01 20 42.0	+0.6
AC04	Llanos de Chal	5.53	202	Pn	Pn	01 20 42.0	+0.9
AC05	El Transito	5.90	193	Pn	Pn	01 20 45.0	-1.2
LCO	Las Campanas	6.17	196	Pn	Pn	01 20 47.2	-2.8
LPAZ	La Paz	6.78	5	Pn	Pn	01 21 00.7	+2.0
	comp=Z,0.6nm,0.3s,baz=164,slow=5.2,SNR=13						
	comp=Z,1.9nm,0.4s						
LPAZ	La Paz	6.78	5	Pn	Pn	01 20 59.3	+0.6
CO01	Juntas del Tor	6.98	190	Pn	Pn	01 21 00.6	-0.4
GO04	Tololo Observa	7.30	194	Pn	Pn	01 21 04.5	-0.9
CO03	El Pedregal	7.92	192	Pn	Pn	01 21 10.6	-3.1
CO06	Fray Jorge	8.00	198	Pn	Pn	01 21 11.7	-2.9
CPUP	Villa Florida	10.85	110	Pn	Pn	01 21 54.2	+0.8
	comp=Z,0.1nm,0.3s,baz=304,slow=16,SNR=2.8						
	comp=Z,0.5nm,0.4s						
PTLB	Pontes e Lacer	11.81	52		Pn	01 22 04.6	-1.7
VILB	Vilhena	12.92	40	Pn	Pn	01 22 20.8	-0.3
TRQA	Tornquist	16.01	160	Pn	Pn	01 23 00.0	-0.4
VAO	Valinhos	20.02	94	P	P	01 23 45.6	-0.5
VAO				IAmb	IAmb	01 23 46.1	
	comp=Z,25nm,1.5s						
BDFB	Brasilia	20.88	73	P	P	01 23 55.3	0.0
BOAV	Boa Vista	26.55	19	P	P	01 24 50.4	+0.7
BOAV				IAmb	IAmb	01 25 13.2	
	comp=Z,12nm,1.5s						
MAGL	Barre de l'ile	39.47	11	P	P	01 26 39.0	-2.7
PMSA	Palmer Station	41.80	177	P	P	01 26 60.0	-0.3
Y45A	Yeager Farm, C	60.00	340	P	P	01 29 17.4	+0.5
HNDO	Hondo	60.00	329	P	P	01 29 18.1	+0.9
SNAA	Sanae	60.74	161	P	P	01 29 22.3	+0.6
SNAA				IAmb	IAmb	01 29 26.6	
	comp=Z,8.6nm,1.5s						
WHTX	Lake Whitney,	61.27	332	P	P	01 29 25.7	+0.1
WHTX				IAmb	IAmb	01 30 09.4	
	comp=Z,3.4nm,0.7s						
MET	Memphis--Engin	61.28	340	P	P	01 29 25.7	+0.1
SLBS	Sierra La Lagu	61.36	317	P	P	01 29 26.0	-0.6
WCI	Wyandotte Cave	63.18	345	P	P	01 29 38.0	-0.2
WCI				IAmb	IAmb	01 29 40.4	
	comp=Z,16nm,1.5s						
BINY	Binghamton	65.30	354	P	P	01 29 52.4	+0.3
BINY				IAmb	IAmb	01 30 26.4	
	comp=Z,15nm,1.4s						
TORD	Torodi Ar. Bea	77.73	70	P	P	01 31 07.3	0.0
	comp=Z,0.2nm,0.3s,baz=263,slow=4.5,SNR=10						
	comp=Z,0.2nm,0.3s						
MKAR	Makanchi Array	146.79	37	PKP	pPKPdf	01 39 15.1	-3.5
	comp=Z,0.4nm,0.8s,baz=327,slow=2.2,SNR=4.6						

IDC 26 01:24:53.2±3.3**, 23°.21S**×**173°.47E, h0^{km}, mb3.7**/2**, mbtmp3.6**/3**, ML3.0**/1**, Error ellipse: s-maj=146.7km s-min=50.0km az=165.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.59	279	Pn	Pn	01 26 31.4	0.0
	0.3nm,0.3s,baz=37,slow=20,SNR=1.0						
	2.6nm,0.6s						
ASAR	Alice Springs	36.22	261	P	P	01 31 58.6	+0.5
	1.0nm,0.8s,baz=92,slow=8.1,SNR=11						
	1.0nm,0.8s						
WRA	Warramunga Arr	36.46	268	P	P	01 31 59.3	-0.9
	0.7nm,0.7s,baz=103,slow=8.5,SNR=4.6						
	0.7nm,0.7s						
GERES	GERESS Array B	149.82	333	PKPbc	PKPbc	01 44 44.9	-0.4
	0.8nm,1.0s,baz=116,slow=2.3,SNR=4.1						

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*NNC **26** 01:53:41.2±0.4, 44°.46N×75°.26E, h0^{km}, mb3.6, mpv3.6, Error ellipse: s-maj=3.4km s-min=2.8km az=27.0*

*SOME **26** 01:53:41.7, 44°.47N×75°.32E, h15^{km}*

*KNET **26** 01:53:44.8±0.5, 44°.29N×75°.23E, h20^{km}±3^{km}, ml3.0, Error ellipse: s-maj=3.4km s-min=2.7km az=126.0*

ISC 26 01:53:40.9±1.2**, 44°.44N**±0°.03×**75°.24E**±0°.02**, h1**^{km}±10^{km}**, n51, σ1§16**/92**, 19C-18D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBS	Karabastau	0.81	157	P	Pb	01 53 57.0	-0.7
	86nm,0.1s						
KRBS				S	Sg	01 54 07.0	+0.3
	109nm,0.3s						
KUU	Kurty	0.96	124	P	Pb	01 53 59.9	-0.4
	22nm,0.1s						
KUU				S	Sg	01 54 11.9	+0.1
	444nm,0.3s						
KUU	Kurty	0.96	124	eP	Pb	01 53 59.7	-0.7
	22nm,0.1s						
KUU				eS	Sg	01 54 11.8	+0.1
	444nm,0.3s						
BTLS	Baital	1.04	306	P	Pn	01 54 01.0	-1.7
	60nm,0.1s						
BTLS				S	Sb	01 54 14.6	-1.3
	107nm,0.1s						
BTLS	Baital	1.04	306	eP	Pn	01 54 01.0	-1.7
	60nm,0.1s						
BTLS				eS	Sb	01 54 14.6	-1.3
	126nm,0.2s						
SGDS	Sogindy	1.08	204	P	Pn	01 54 02.4	-0.8
	25nm,0.1s						
SGDS				S	Sg	01 54 16.1	+0.6
	46nm,0.1s						
DGS	Degeres	1.25	162	P	Pb	01 54 05.1	-0.4
	40nm,0.2s						
DGS				S	Sg	01 54 21.2	0.0
	296nm,0.2s						
KTBS	Karatobe	1.27	124	P	Pb	01 54 05.4	-0.2
	26nm,0.3s						
KTBS				S	Sn	01 54 23.1	-0.4
	0.1nm,0.1s						
USP	Ospenovka	1.28	205	⇓P	Pb	01 54 06.1	+0.2
	51nm,0.1s,SNR=74						
USP				⇓S	Sb	01 54 22.6	-0.3
	110nm,0.2s						
CHMS	Chumysh	1.48	194	⇑P	Pg	01 54 09.4	+0.1
	23nm,0.1s,SNR=14						
CHMS				⇓S	Sn	01 54 28.3	-0.4
	99nm,0.2s						
KST	Kastek	1.49	159	P	Pg	01 54 09.5	+0.1
	44nm,0.1s						
KST				S	Sn	01 54 28.9	-0.2
	104nm,0.3s						
KST	Kastek	1.49	159	eP	Pg	01 54 09.5	+0.1
	44nm,0.2s						
KST				eS	Sn	01 54 28.9	-0.2
	223nm,0.3s						
TKM2	Tokmak 2	1.54	170	⇓P	Pb	01 54 10.1	-0.2
	32nm,0.1s,SNR=60						
TKM2				⇑S	Sb	01 54 30.3	0.0
	124nm,0.1s						
MTBS	Maitube	1.57	146	P	Pg	01 54 10.8	-0.2
	88nm,0.2s						
MTBS				S	Sb	01 54 31.1	+0.1
	327nm,0.3s						
MTBS	Maitube	1.57	146	eP	Pg	01 54 10.8	-0.2
	88nm,0.2s						
MTBS				eS	Sb	01 54 31.1	+0.1
	482nm,0.3s						
KNDC	Almaty	1.75	134	⇓Pn	Pg	01 54 14.2	-0.2
	23nm,0.2s						
KNDC				⇑Sn	Sg	01 54 37.2	+0.2
	70nm,0.5s						
KBK	Karagaybulak	1.79	187	⇓P	Pg	01 54 15.3	+0.1
	28nm,0.1s,SNR=44						
KBK				⇓S	Sg	01 54 38.8	+0.3
	249nm,0.3s						
KOTS	Kotyrbulak	1.81	131	P	Pg	01 54 15.0	-0.7
	23nm,0.2s						
KOTS				S	Sg	01 54 39.2	+0.1
	132nm,0.4s						
KOTS	Kotyrbulak	1.81	131	eP	Pg	01 54 15.0	-0.7
	23nm,0.2s						
KOTS				eS	Sg	01 54 39.2	+0.1
	132nm,0.4s						
MDOK	Medeo	1.83	134	Pg	Pb	01 54 15.0	-0.2
	14nm,0.3s						
MDOK				Lg	Lg	01 54 39.4	
	118nm,0.4s						
TNSS	Tian-Shan	1.87	138	P	Pb	01 54 15.8	-0.3
	7.3nm,0.2s						
TNSS				S	Sg	01 54 40.7	-0.3
	48nm,0.3s						
TNSS	Tian-Shan	1.87	138	eP	Pb	01 54 15.8	-0.3
	7.3nm,0.2s						
TNSS				eS	Sg	01 54 40.7	-0.3
	48nm,0.3s						
ARXS	Arharly	1.87	96	P	Pb	01 54 15.5	-0.4
	33nm,0.1s						
ARXS				S	Sg	01 54 40.3	-0.8
	187nm,0.3s						
ARXS	Arharly	1.87	96	eP	Pb	01 54 15.5	-0.4
	33nm,0.1s						
ARXS				eS	Sg	01 54 40.3	-0.8
	187nm,0.3s						
AAK	Ala-Archa	1.88	197	⇑P	Pg	01 54 16.5	-0.4
	19nm,0.2s,SNR=23						
AAK				⇓S	Sg	01 54 41.1	-0.1
	180nm,0.4s						
AAK	Ala-Archa	1.88	197	⇑Pn	Pg	01 54 16.3	-0.6
	50nm,0.5s						
AAK				⇓Sn	Sg	01 54 41.9	+0.7
	490nm,0.5s						
EKS2	Erkin-Say	2.07	211	⇓P	Pg	01 54 19.5	-1.1
	37nm,0.4s,SNR=23						
EKS2				⇑S	Sg	01 54 47.3	0.0
	86nm,0.2s						
MRKS	Merke	2.23	222	Pg	Pg	01 54 22.6	-1.1
	12nm,0.2s						
MRKS				Lg	Lg	01 54 51.8	
	126nm,0.2s						
MRKS	Merke	2.23	222	eP	Pg	01 54 22.6	-1.1
	12nm,0.2s						
MRKS				eS	Sg	01 54 51.8	-0.9
	126nm,0.2s						
UCH	Uchtor	2.27	194	⇑P	Pb	01 54 22.9	-0.1
	23nm,0.2s,SNR=27						
UCH				⇑S	Sb	01 54 51.5	-0.2
	92nm,0.4s						
ULHL	Ulahol	2.31	161	⇑P	Pb	01 54 23.1	-0.4
	20nm,0.2s,SNR=54						
ULHL				⇑S	Sb	01 54 52.7	+0.1
	53nm,0.2s						
KURS	Kuram	2.32	113	Pg	Pb	01 54 23.2	-0.4
	26nm,0.3s						
KURS				Lg	Lg	01 54 53.8	
	82nm,0.3s						
TDK	Taldyqorghan	2.33	75	Pg	Pb	01 54 21.9	-1.8
	60nm,0.4s						
TDK				Lg	Lg	01 54 51.4	
	84nm,0.4s						
TDK	Taldyqorghan	2.33	75	eP	Pb	01 54 21.9	-1.8
	60nm,0.4s						
TDK				eS	Sb	01 54 51.4	-1.5
	84nm,0.4s						
BLB	Baldybastay	2.35	97	Pg	Pb	01 54 24.1	0.0
	55nm,0.3s						
BLB				Lg	Lg	01 54 54.3	
	169nm,0.3s						
KPKS	Kokpek	2.67	110	Pg	Pb	01 54 28.5	-1.1
	0.3nm,0.1s						
KPKS				Lg	Lg	01 55 03.1	
	17nm,0.3s						
KPKS	Kokpek	2.67	110	eP	Pb	01 54 28.5	-1.1
	0.3nm,0.1s						
KPKS				eS	Sb	01 55 03.1	+0.2
	17nm,0.3s						
SATY	Saty	2.68	120	Pg	Pb	01 54 29.4	-0.4
	4.8nm,0.1s						
SATY				Lg	Lg	01 55 04.0	
	127nm,0.1s						
KNOS	Konyrlen	2.83	90	Pg	Pb	01 54 31.7	-0.6
	10nm,0.3s						
KNOS				Lg	Lg	01 55 07.9	
	22nm,0.2s						
UZB	Uzynbulak	3.03	114	Pg	Pb	01 54 35.1	-0.6
	3.6nm,0.2s						
UZB				Lg	Lg	01 55 14.0	
	24nm,0.3s						
UZB	Uzynbulak	3.03	114	eP	Pb	01 54 35.1	-0.6
	3.6nm,0.2s						
UZB				eS	Sb	01 55 14.0	+0.8
	24nm,0.3s						
PDGK	Podgornoye	3.27	108	⇑Pn	Pn	01 54 33.5	+0.1
	0.8nm,0.3s						
PDGK				⇑Pg	Pg	01 54 41.1	-2.4
	5.7nm,0.5s						
PDGK				⇑Lg	Lg	01 55 24.7	
	16nm,0.6s						
SHLS	Shalkode	3.32	111	Pg	Pg	01 54 46.5	+2.0
	6.4nm,0.3s						
SHLS				Lg	Lg	01 55 33.3	
	22nm,0.5s						
SHLS	Shalkode	3.32	111	eP	Pg	01 54 46.5	+2.0
	6.4nm,0.3s						
SHLS				eS	Sg	01 55 33.3	+5.9
	22nm,0.5s						
KK31	Karatay Array	3.67	250	Pn	Pn	01 54 40.8	+1.9
	0.3nm,0.1s,baz=68,slow=12,SNR=28						
KK31				⇑Pg	Pg	01 54 50.0	-1.3
	1.7nm,0.2s,baz=69,slow=15,SNR=24						
KK31				⇓Sn	Sn	01 55 25.5	+2.8
	1.4nm,0.3s,baz=72,slow=22,SNR=5.2						
KK31				⇓Lg	Lg	01 55 39.8	
	11nm,0.3s,baz=68,slow=29,SNR=9.9						
BRLS	Borolday	4.16	252	eP	Pg	01 55 01.5	+0.9
	1.4nm,0.2s						
BRLS				eS	Sg	01 55 58.5	+4.1
	18nm,0.6s						
MAKZ	Makanchi	5.29	61	⇓Pn	Pn	01 55 02.0	+1.0
	0.3nm,0.2s						
MAKZ				⇓Pg	Pb	01 55 14.8	+0.6
	0.7nm,0.5s						
MAKZ				⇑Sn	Sn	01 56 02.4	-0.3
	1.2nm,0.4s						
MAKZ				⇓Lg	Lg	01 56 26.3	
	7.6nm,0.7s						
MK31	Makanchi Array	5.48	62	⇓Pn	Pn	01 55 04.3	+0.6
	0.1nm,0.2s,baz=240,slow=11,SNR=17						
MK31				Pg	Pb	01 55 18.0	+0.6
	0.4nm,0.3s,baz=233,slow=14,SNR=8.8						
MK31				⇓Sn	Sn	01 56 07.4	0.0
	0.5nm,0.3s,baz=238,slow=26,SNR=5.0						
MK31				⇑Lg	Lg	01 56 32.7	
	4.6nm,0.6s,baz=257,slow=29,SNR=4.1						
KURBB	Kurchatov Arra	6.58	19	⇑Sn	Sn	01 56 33.5	-0.7
	4.4nm,0.7s						
KURBB				⇓Lg	Lg	01 57 07.2	
	19nm,0.6s						
KURK	Kurchatov	6.69	19	⇑Lg	Lg	01 57 11.5	
	7.1nm,0.9s						
BVA0	Borovoye Array	9.17	341	Pn	Pn	01 55 55.2	+0.9
BVA0				⇑Sn	Sn	01 57 37.8	-0.3
	0.9nm,0.5s,baz=151,slow=25,SNR=2.7						

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*AFAD **26** 01:55:27.7, 39°.46N×27°.92E, h7^{km}±3^{km}, MW3.7*

*ISK **26** 01:55:27.5, 39°.45N×27°.91E, h10^{km}, ML3.8/26*

*SOF **26** 01:55:31.7, 39°.78N±0°.03×27°.64E±0°.01, h7^{km}±2^{km}, MD3.7/10*

*THE **26** 01:55:32.9, 39°N±3°×2°8E±°, h34^{km}±14^{km}, M3.3/13, MLh3.3/13*

ISC 26 01:55:28.0±0.8**, 39°.45N**±0°.02×**27°.91E**±0°.02**, h16**^{km}±7^{km}**, n122, σ1§20**/161**, 33C-8D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	Balikesir	0.20	354	Pg	Pg	01 55 32.8	+0.1
BALB				Sg	Sb	01 55 36.1	-0.6
BKES	Balkesir-Mer	0.29	4	P	Pg	01 55 34.0	-0.1
BKES				S	Sg	01 55 37.5	-0.9
BALY	Balya	0.37	323	P	Pg	01 55 35.4	-0.2
BALY				S	Sg	01 55 40.6	-0.2
SOMA	Soma-Manisa	0.41	225	Pg	Pg	01 55 36.1	-0.2
SOMA				Sg	Sg	01 55 42.4	+0.5
BLKS	Balkesir-Sus	0.43	6	P	Pg	01 55 36.5	-0.2
BLKS				S	Sg	01 55 41.2	-1.4
DURS	Dursunbey	0.47	70	P	Pg	01 55 36.8	-0.6
DURS				S	Sg	01 55 42.9	-0.8
SUSR	Susurluk-Balik	0.53	15	Pg	Pg	01 55 38.4	-0.2
AKHS	Akhisar	0.57	187	P	Pg	01 55 38.9	-0.4
AKHS				S	Sg	01 55 47.1	+0.2
DST	Dursunbey	0.57	74	Pg	Pg	01 55 38.6	-0.8
GORD	Gordes-Manisa	0.58	158	Pg	Pg	01 55 39.2	-0.2
GORD				Sg	Sg	01 55 47.7	+0.6
GONE	Gonen-Balikesi	0.62	344	Pg	Pg	01 55 40.2	-0.1
BUHA	Balikesir, Bur	0.64	275	P	Pg	01 55 40.5	-0.2
BUHA				S	Sb	01 55 50.5	+0.9
YAYO	Edremit-Balk	0.67	285	Pg	Pg	01 55 40.8	-0.2
YENI	Yenice-Canakka	0.71	314	Pg	Pg	01 55 41.8	-0.1
GOMA	Golmarmara-Man	0.74	179	Pg	Pg	01 55 42.2	-0.2
DEMI	Demirci	0.75	122	P	Pg	01 55 42.5	0.0
ZEDA	zmir-Bergama	0.80	234	P	Pg	01 55 43.6	0.0
ZEDA				S	Sg	01 55 54.2	+0.1
DKL	Dikili	0.86	245	Pg	Pb	01 55 44.5	0.0
CANM	Can-anakkale	0.87	311	Pg	Pb	01 55 44.6	-0.1
KCTX	Karacabey (Bur	0.89	23	Pg	Pb	01 55 44.7	-0.4
SMAA	Simav-Kutahya	0.90	112	Pg	Pb	01 55 45.7	+0.4
SIMA	Simav-Kutahya	0.91	113	Pg	Pb	01 55 45.6	+0.1
BAND	Balkesir-Ban	0.92	9	P	Pb	01 55 45.5	-0.1
BAND				S	Sg	01 55 57.5	-0.5
BAND	Balkesir-Ban	0.92	9	⇑P	Pb	01 55 45.6	-0.1
BAND				⇓S	Sg	01 55 57.9	0.0
AYVA	Ayvalik	0.95	262	P	Pb	01 55 46.2	+0.1
AYVA				S	Sg	01 55 60.0	+1.0
ORLT	Orhaneli	0.97	52	Pg	Pb	01 55 46.5	0.0
BIGA	Biga-Canakkale	1.02	325	Pg	Pb	01 55 47.2	0.0
KRBG	Karabiga-Canak	1.06	334	Pg	Pb	01 55 47.6	-0.3
MANT	Manisa	1.08	152	P	Pb	01 55 48.5	0.0
MANT				S	Sb	01 56 00.8	-1.5
BAYC	CANAKKALE_Bayr	1.09	286	P	Pb	01 55 48.4	-0.1

BAYC				S	Sb	01 56 02.1	-0.4
EMET	Ktahya-Emet	1.10	93	P	Pb	01 55 49.1	+0.4
EMET				S	Sb	01 56 02.4	-0.4
KULA	Kula-Manisa	1.10	147	Pn	Pb	01 55 48.9	+0.2
SHAP	Saphane-Kutahy	1.11	112	Pn	Pb	01 55 49.3	+0.5
USAK	Uak-Merkez	1.13	130	P	Pb	01 55 49.8	+0.6
USAK				S	Sb	01 56 02.8	-1.0
LAPS	Lapseki, ANA	1.15	315	P	Pb	01 55 49.2	-0.3
MADA	Marmara adas	1.17	347	P	Pn	01 55 49.7	-0.1
MADA				S	Sb	01 56 04.9	+0.1
ULDT	Uludag	1.18	53	P	Pn	01 55 50.2	+0.3
ULDT				S	Sb	01 56 04.9	-0.3
MRMT	Marmara Adasi	1.18	348	Pn	Pg	01 55 50.5	-0.3
MDNY	Mudanya-Bursa	1.19	39	Pn	Pb	01 55 50.2	0.0
TVSB	Tavsanli	1.21	89	Pn	Pn	01 55 50.6	+0.3
EZNE	Ezine-Canakkal	1.23	285	Pn	Pn	01 55 50.4	-0.1
GEDZ	Gediz	1.23	108	Pn	Pb	01 55 51.6	+0.6
BLCB	Balcova	1.25	213	P	Pb	01 55 52.0	+0.7
GDZ	Gediz	1.27	106	P	Pb	01 55 52.1	+0.4
GDZ				S	Sb	01 56 08.3	+0.5
EZN	Ezine	1.28	288	P	Pb	01 55 51.9	+0.2
EZN				S	Sb	01 56 06.0	-1.9
EZN	Ezine	1.28	288	Pn	Pn	01 55 51.4	+0.2
LPK	Lapseki	1.28	317	Pn	Pb	01 55 52.1	+0.4
PRK	Paraskevi	1.28	262	P	Pn	01 55 51.7	+0.5
PRK				S	Sb	01 56 06.1	-1.9
AVDN	Avdancik/Bursa	1.29	48	P	Pb	01 55 51.8	-0.1
AVDN				S	Sn	01 56 08.5	+0.3
IZMR	zmir-demi	1.31	178	P	Pn	01 55 51.7	+0.1
IZMR				P	Pn	01 55 51.7	+0.1
IZMR				S	Sn	01 56 07.2	-1.5
ARMT	Armutlu	1.34	33	Pn	Pn	01 55 52.4	+0.4
RKY	Sarkoy-Tekirda	1.36	336	Pn	Pb	01 55 52.9	-0.2
SART	Tekirdag	1.36	336	P	Pb	01 55 53.2	+0.1
KRSK	Karsak	1.41	47	P	Pn	01 55 53.3	+0.2
KRSK				S	Sb	01 56 11.6	-0.2
DOMA	Ktahya-Doman	1.42	76	P	Pb	01 55 54.1	-0.1
DOMA				S	Sb	01 56 12.8	+0.7
ESNK	Esenk¶y	1.44	34	P	Pn	01 55 53.8	+0.4
GELI	Tayfur-Gelibol	1.46	311	Pn	Pb	01 55 54.7	0.0
KURT	Yalova, Merkez	1.52	41	P	Pn	01 55 54.5	0.0
ANDZ	Kutahya, Merke	1.54	87	P	Pn	01 55 55.9	+0.9
ANDZ				S	Sb	01 56 16.7	+1.1
BOTS	Marmara Eregli	1.54	2	Pn	Pb	01 55 56.1	-0.1
SIGR	SIGRI	1.61	262	P	Pn	01 55 56.2	+0.6
SIGR				S	Sn	01 56 14.0	-2.1
PASA	Karahalli, USA	1.65	131	P	Pn	01 55 57.3	+0.9
GADA	Gvkgeada	1.72	296	P	Pn	01 55 58.3	+1.1
GADA				S	Sn	01 56 17.4	-1.3
BNAZ	Uak-Banaz	1.72	116	P	Pb	01 55 58.8	-0.4
BNAZ				S	Sb	01 56 21.7	+1.1
CAVK	Edirne/Enez-Ca	1.82	314	⇑P	Pn	01 55 59.9	+1.2
HISA	Bilecik-Osmane	1.85	56	P	Pb	01 56 02.2	+0.7
ENEZ	Enez	1.86	314	P	Pn	01 56 00.6	+1.4
ENEZ				S	Sn	01 56 22.2	-0.2
SATE	Sancaktepe,	1.89	34	P	Pn	01 55 59.8	+0.3
ALN	Alexandroupoli	2.03	316	P	Pn	01 56 02.3	+0.7
ALN				S	Sn	01 56 26.8	+0.2
SMTH	Samothraki Isl	2.09	300	P	Pn	01 56 03.4	+1.0
SMTH				S	Sn	01 56 26.7	-1.4
LIA	Limnos Island	2.15	283	P	Pn	01 56 03.9	+0.8
LIA				S	Sn	01 56 29.1	-0.4
SILT	Sile	2.16	37	⇑P	Pb	01 56 07.1	+0.4
SILT				⇑S	Sg	01 56 37.3	-0.2
YER	Yerkesik	2.33	173	P	Pb	01 56 08.9	-0.6
RDO	Rodhopi	2.48	314	P	Pn	01 56 09.3	+1.5
RDO				S	Sn	01 56 38.9	+1.2
SAHE	Sakarya_HENDEK	2.66	57	⇑P	Pg	01 56 17.6	-1.4
SAHE				⇓S	Sg	01 56 52.8	-0.6
THAS	Thassos island	2.71	296	P	Pn	01 56 11.2	+0.4
THAS				S	Sn	01 56 42.4	-0.9
KDZ	Kurdzhali	2.93	319	P	Pn	01 56 14.8	+0.9
KDZ	Kurdzhali	2.93	319	*i* P	Pn	01 56 15.2	+1.3
KAVA	Kavala	3.02	302	P	Pn	01 56 16.1	+1.0
JMB	Yambol	3.22	342	P	Pn	01 56 18.9	+1.1
RZN	Rozhen	3.30	314	P	Pn	01 56 20.6	+1.5
PLD	Plovdiv	3.61	319	*e*P	Pn	01 56 24.4	+1.2
PRD	Provadia	3.73	354	P	Pn	01 56 25.8	+0.9
ANTO	Ankara	3.80	82	⇑P	Pb	01 56 36.7	+2.0
ANTO				⇑S	Sb	01 57 16.3	-4.1
MMB	Musomishta	3.80	305	P	Pn	01 56 27.9	+2.0
SZH	Strazhitsa	4.08	340	P	Pn	01 56 31.2	+1.5
KKB	Krupnik	4.35	305	P	Pn	01 56 35.8	+2.4
PLNA	Plana	4.55	313	P	Pn	01 56 38.8	+2.6
ICOR	Ion Corvin	4.67	359	⇑P	Pn	01 56 39.3	+1.5
KIRS	Kirsehir-Merke	4.67	92	⇑P	Pn	01 56 43.9	+5.9
VTS	Vitosha	4.75	313	*e*P	Pn	01 56 41.0	+2.0
SGRR	Singureni	4.99	344	⇑P	Pn	01 56 43.8	+1.7
MPEP	Malo Peshtene	5.01	323	P	Pn	01 56 44.1	+1.7
LEHL	Lehliu	5.09	351	⇓P	Pn	01 56 45.4	+1.9
TLBR	Topalu	5.10	1	⇑P	Pn	01 56 44.5	+0.9
VLAD	Vladila	5.25	331	⇓P	Pn	01 56 46.6	+0.9
CFR	Carcaliu	5.73	2	⇑P	Pn	01 56 52.8	+0.5
TLCR		5.78	6	⇑P	Pn	01 56 54.8	+1.8
GRER		5.97	354	⇑P	Pn	01 56 58.3	+2.6
MLR	Muntele Rosu	6.21	347	⇑P	Pn	01 57 02.0	+2.9
BOVS	Bovan	6.26	314	⇑P	Pn	01 57 00.0	+0.4
ARR	Arges	6.39	339	⇑P	Pn	01 57 01.3	-0.3
VLDR	Vladesti	6.40	1	⇑P	Pn	01 57 03.6	+2.1
VARL	Varlezi	6.45	360	⇓P	Pn	01 57 04.3	+2.1
PLOR	Plostina	6.47	352	⇑P	Pn	01 57 05.0	+2.4
VRI	Vrincioaia	6.47	353	⇑P	Pn	01 57 04.6	+2.0
COVR	Voineasa-Covas	6.52	349	⇓P	Pn	01 57 05.5	+2.3
TURR	Turia	6.75	349	⇑P	Pn	01 57 08.7	+2.3
TNR	Turnu Rosu	6.76	338	⇑P	Pn	01 57 08.6	+2.1
DOPR	Dopca	6.78	345	⇑P	Pn	01 57 09.0	+2.3
HERR	Herculane	6.79	325	⇓P	Pn	01 57 07.5	+0.6
OZUR		6.83	347	⇑P	Pn	01 57 09.9	+2.4
BOSR	Bodos	6.83	347	⇑P	Pn	01 57 10.2	+2.7
ONER	Baraj Valea Uz	6.97	351	⇑P	Pn	01 57 12.0	+2.5
MDVR	Moldovita	7.04	321	⇑P	Pn	01 57 11.7	+1.3
TESR	Tescani	7.12	353	⇓P	Pn	01 57 13.1	+1.6
MDB	Medias	7.18	340	⇑P	Pn	01 57 14.3	+2.1
ARCR	ARCALIA	8.06	342	⇑P	Pn	01 57 27.0	+2.6
SIRR	Siria	8.21	328	⇑P	Pn	01 57 29.0	+2.5
DRGR		8.27	334	⇑P	Pn	01 57 28.2	+1.0
BURAR	Bucovina Array	8.40	347	⇑P	Pn	01 57 31.2	+2.1
MORH	Mrgy, Hungar	9.59	318	⇑P	Pn	01 57 45.2	0.0

IDC 26 02:00:11.6±5.8**, 23°.21S**×**174°.07E, h0^{km}, mb3.8**/3**, mbtmp3.8**/3**, Error ellipse: s-maj=262.1km s-min=53.0km az=154.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	36.77	261	P	P	02 07 22.1	+0.7
	0.8nm,0.9s,baz=84,slow=9.0,SNR=5.5						
	0.8nm,0.9s						
WRA	Warramunga Arr	37.02	267	P	P	02 07 22.6	-0.8
	0.4nm,0.8s,baz=109,slow=8.0,SNR=1.7						
	0.4nm,0.8s						
CMAR	Chiang Mai Arr	84.22	293	P	P	02 12 45.0	-0.6
	1.1nm,0.3s,baz=116,slow=5.1,SNR=4.5						
	1.1nm,0.3s						
GERES	GERESS Array B	150.07	334	PKPbc	PKPbc	02 20 04.2	-0.1
	0.8nm,0.8s,baz=54,slow=2.3,SNR=6.3						

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*IDC **26** 02:03:31.9±2.2, 21°.57S×173°.19E, h0^{km}, mb4.1/5, mbtmp4.1/6, ML3.5/1, Error ellipse: s-maj=110.5km s-min=27.8km az=156.0*

*NEIC **26** 02:03:34.1±1.7, 21°.5S±0°.1×173°.16E±0°.09, h10^{km}±1^{km}, mb4.4/12, Error ellipse: s-maj=24.2km s-min=14.9km az=1.0*

ISC 26 02:03:37.4±0.8**, 21°.6S**±0°.2×**173°.1E**±0°.1**, h35^{km}, n25, σ0.^{s}93**/26**, mb4.3**/10**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINNC	Pines Island,	5.37	258	Pn	Pn	02 04 55.2	+0.2
PINNC				Sn	Sn	02 05 56.1	+0.5
DZM	Mont Dzumac	6.23	264	Pn	Pn	02 05 07.1	+0.1
	1.1nm,0.3s,baz=64,slow=21,SNR=7.4						
	3.3nm,0.5s						
DZM	Mont Dzumac	6.23	264		Pn	02 05 07.5	+0.5
TCW	Tory Channel	19.58	177	P	Pn	02 08 03.6	-0.3
TOO	Toolangi	28.68	230	P	P	02 09 30.4	-0.8
STKA	Stephens Creek	29.87	243	P	P	02 09 42.0	+0.3
	1.8nm,0.7s,baz=49,slow=6.3,SNR=3.4						
	1.8nm,0.7s						
STKA	Stephens Creek	29.87	243	P	P	02 09 42.3	+0.5
STKA				IAmb	IAmb	02 09 44.2	
	comp=Z,14nm,0.9s						
WR8	Warramunga Arr	36.09	265	P	P	02 10 34.5	-1.8
WR8				IAmb	IAmb	02 10 41.6	
	comp=Z,6.0nm,1.1s						
AS31	Alice Springs	36.19	259	P	P	02 10 36.7	-0.3
ASAR	Alice Springs	36.19	259	P	P	02 10 37.5	+0.5
	comp=Z,4.7nm,0.8s,baz=83,slow=9.1,SNR=42						
	comp=Z,4.7nm,0.8s						
ASAR	Alice Springs	36.19	259	P	P	02 10 36.0	-1.0
WB0	Warramunga Arr	36.22	266	P	P	02 10 36.8	-0.5
WB0				IAmb	IAmb	02 10 38.0	
	comp=Z,4.7nm,0.9s						
WRAB	Tennant Creek	36.24	265	P	P	02 10 36.1	-1.3
WRAB				IAmb	IAmb	02 10 37.8	
	comp=Z,3.3nm,1.0s						
WRA	Warramunga Arr	36.24	265	P	P	02 10 36.2	-1.3
	comp=Z,1.3nm,0.6s,baz=104,slow=8.2,SNR=8.2						
	comp=Z,1.3nm,0.6s						
WRA	Warramunga Arr	36.24	265	P	P	02 10 36.5	-1.1
FITZ	Fitzroy Crossi	44.67	266	P	P	02 11 47.8	+0.6
FITZ				IAmb	IAmb	02 11 49.8	
	comp=Z,4.9nm,1.1s						
MBWA	Marble Bar	49.51	260	P	P	02 12 24.4	-0.5
QSPA	South Pole Qui	68.47	180	P	P	02 14 36.9	+1.0
QSPA				IAmb	IAmb	02 14 55.6	
	comp=Z,2.7nm,1.0s						
CMAR	Chiang Mai Arr	82.78	293	P	P	02 15 59.8	+1.3
	comp=Z,0.8nm,0.3s,baz=100,slow=5.2,SNR=5.1						
	comp=Z,0.8nm,0.3s						
CMAR	Chiang Mai Arr	82.78	293	P	P	02 15 57.2	-1.2
M16K	Timber Creek	85.36	13	P	P	02 16 11.7	+1.1
L18K	Granite Mounta	86.92	14	P	P	02 16 18.4	+0.2
NVAR	Mina Array Bea	87.67	47	P	P	02 16 23.1	+0.3
	comp=Z,0.4nm,0.7s,baz=219,slow=9.6,SNR=3.9						
	comp=Z,0.4nm,0.7s						
NVAR	Mina Array Bea	87.67	47	P	P	02 16 22.4	-0.3
GERES	GERESS Array B	148.24	334	PKPbc	PKPbc	02 23 18.2	-1.6
	comp=Z,0.9nm,0.8s,baz=48,slow=2.0,SNR=7.2						

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*IDC **26** 02:06:33.6±0.8, 22°.71S×173°.54E, h0^{km}, mb4.4/12, mbtmp4.3/13, ML3.5/1, MS4.6/5, Error ellipse: s-maj=29.0km s-min=19.8km az=148.0*

*BJI **26** 02:06:33.9, 22°.59S×173°.73E, h10^{km}, mB5.4/11, mb4.8/35, Ms5.0/9, Ms7 4.7/9*

*MOS **26** 02:06:36.7±1.5, 22°.26S×173°.27E, h10^{km}, mb5.2/30, Error ellipse: s-maj=11.9km s-min=10.3km az=62.4*

*NEIC **26** 02:06:37.7±1.9, 22°.28S±0°.09×173°.31E±0°.09, h10^{km}±1^{km}, mb5.1/74, Error ellipse: s-maj=16.3km s-min=13.4km az=152.0*

*GCMT **26** 02:06:37.7±0.2, 22°.02S±0°.01×173°.42E±0°.01, h12^{km}±1^{km}, MW5.2/131, Moment Tensor Solution. s73,c111; s131,c207; Duration: 1.^{s}0 Moment tensor: Scale 10^{16} Nm; M_{rr}-1.64±.16; $M_{\theta\theta}$0.14±.18; $M_{\phi\phi}$1.50±.17; $M_{r\theta}$-0.67±.37; $M_{\theta\phi}$7.82±.15; $M_{\phi r}$-0.16±.35; Best double couple: $M_0$7.87900×10^{16} NP1:ϕ_s178.00000°, δ85.00000°, λ-179.00000°. NP2:ϕ_s87.00000°, δ89.00000°, λ-5.00000°. Principal axes: T 8.7030, Plg3.0000°, Azm133.0000°; N -1.6430, Plg85.0000°, Azm260.0000°; P -7.0550, Plg4.0000°, Azm42.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **26** 02:06:39.7, 23°.88S×171°.52E, h33^{km}*

ISC 26 02:06:37.6±0.3**, 22°.34S**±0°.06×**173°.31E**±0°.05**, h10^{km}, n320, σ1.^{s}52**/318**, mb5.0**/83**, MS4.6**/8**, 36C-22D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINNC	Pines Island,	5.43	266		Pn	02 07 58.3	-0.4
DZM	Mont Dzumac	6.37	271	Pn	Pn	02 08 11.8	+0.1
	0.9nm,0.3s,baz=129,slow=13,SNR=16						
DZM				Sn	Sn	02 09 23.6	-1.0
	0.4nm,0.3s,baz=108,slow=15,SNR=3.1						
DZM				LR	LR	02 10 28.1	
	comp=Z,3μm,20.2s,baz=164,slow=36						
	17nm,0.7s						
DZM	Mont Dzumac	6.37	271	*e*Pn	Pn	02 08 10.3	-1.4
	91nm,1.1s						
DZM				*e*LR	LR	02 09 33.5	
	3μm,23.8s						
DZM	Mont Dzumac	6.37	271		Pn	02 08 10.5	-1.2
DZM					Sn	02 09 22.0	-2.6
MSVF	Nonsavu	6.39	45	Pn	Pn	02 08 10.9	-1.0
MSVF	Nonsavu	6.39	45	*i* P	Pn	02 08 10.9	-1.0
TOZ	Tahuroa Road	15.46	173	Pn	Pn	02 10 16.1	+0.5
URZ	Urewera	16.20	169	Pn	P	02 10 28.3	-0.1
	0.7nm,0.3s,baz=259,slow=6.4,SNR=8.6						
URZ				LR	LR	02 15 17.8	
	comp=Z,3μm,20.0s,baz=348,slow=33						
RTZ	Ruatahuna	16.52	170	Pn	Pn	02 10 29.8	+0.3
BKZ	Black Stump Fm	16.99	172	Pn	Pn	02 10 34.6	-0.8
MRZ	Mangatainoka R	18.36	175		P	02 10 51.9	-0.5
TCW	Tory Channel	18.83	178	P	P	02 10 57.5	-0.1
THZ	Tophouse	19.37	181	P	P	02 11 02.9	-0.6
INZ	Inchbonnie	20.39	184	P	P	02 11 15.5	+1.0
INZ				IAmb	IAmb	02 11 30.4	
	comp=Z,56nm,1.1s						
EIDS	Eidsvold	20.55	257	P	P	02 11 15.1	-1.4
EIDS				IAmb	IAmb	02 11 28.0	
	comp=Z,64nm,1.2s						
OXZ	Oxford	20.95	183	P	P	02 11 21.6	+1.0
ARMA	Armidale	21.00	243		P	02 11 21.1	-0.3
ARMA				IAmb	IAmb	02 11 34.2	
	comp=Z,56nm,1.1s						
FOZ	Fox Glacier	21.33	187	P	P	02 11 25.4	+0.7
FOZ				IAmb	IAmb	02 11 39.6	
	comp=Z,133nm,1.6s						
MLZ	Mavora Lakes	23.36	189	P	P	02 11 47.2	+1.0
MLZ				IAmb	IAmb	02 12 00.9	
	comp=Z,50nm,1.2s						
CAN	Canberra	24.84	233	P	P	02 12 00.2	-0.1
CAN				IAmb	IAmb	02 12 09.8	
	comp=Z,31nm,1.2s						
CAN	Canberra	24.84	233	P	P	02 12 00.2	-0.1
CAN				pmax	pmax		
	comp=Z,31nm,1.2s						
RAR	Rarotonga	25.01	93	LR	LR	02 19 31.1	
	comp=Z,996nm,22.0s,baz=262,slow=31						
CTA	Charters Tower	25.32	270	LR	LR	02 21 45.3	
	comp=Z,1μm,18.4s,baz=84,slow=36						
PMG	Port Moresby	28.19	293	P	P	02 12 30.5	-0.2
PMG				IAmb	IAmb	02 12 34.6	
	comp=Z,24nm,1.1s						
PMG	Port Moresby	28.19	293	P	P	02 12 30.9	+0.3
	comp=Z,23nm,1.1s						
PMG	Port Moresby	28.19	293	*i* P	P	02 12 30.4	-0.2
PMG				pmax	pmax		
	comp=Z,18nm,1.0s						
STKA	Stephens Creek	29.70	245	P	P	02 12 43.1	-0.8
	comp=Z,5.7nm,0.9s,baz=101,slow=11,SNR=7.9						
STKA				LR	LR	02 23 33.4	
	comp=Z,1μm,20.7s,baz=72,slow=34						
	comp=Z,5.7nm,0.9s						
STKA	Stephens Creek	29.70	245	P	P	02 12 42.6	-1.3
STKA	Stephens Creek	29.70	245	*e*P	P	02 12 43.8	-0.1
STKA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
INKA	Innaminka	29.94	253		P	02 12 45.7	-0.4
TBI	Tubuai	34.26	99	*e*S	S	02 18 50.9	-0.3
	comp=Z,998nm,29.2s						
TBI				*e*LQ	LQ	02 20 52.7	
	comp=Z,10μm,40.8s						
TBI				*e*LR	LR	02 22 30.1	
	comp=Z,9μm,26.5s						
TBI				*e*LR	LR	02 22 32.7	
	comp=Z,2μm,25.8s						
BBOO	Buckleboo	34.47	244	P	P	02 13 24.9	-0.9
BBOO				IAmb	IAmb	02 13 31.7	
	comp=Z,32nm,1.0s						
PPT2	Papeete2	35.14	89	*e*S	S	02 19 00.3	-4.7
	comp=Z,215nm,27.5s						
PPT2				*e*LQ	LQ	02 21 10.0	
	comp=Z,3μm,27.8s						
PPT2				*e*LR	LR	02 22 50.6	
	comp=Z,2μm,26.2s						
PPT2				*e*LR	LR	02 22 52.9	
	comp=Z,2μm,26.2s						
WR8	Warramunga Arr	36.21	266	P	P	02 13 40.1	-0.8
AS31	Alice Springs	36.22	260	P	P	02 13 38.8	-2.2
ASAR	Alice Springs	36.22	260	P	P	02 13 39.0	-2.0
	comp=Z,4.3nm,0.9s,baz=87,slow=8.8,SNR=12						
	comp=Z,4.3nm,0.9s						
WB0	Warramunga Arr	36.35	267		P	02 13 39.7	-2.4
WRA	Warramunga Arr	36.36	266	P	P	02 13 39.3	-2.9
	comp=Z,2.9nm,0.9s,baz=102,slow=8.8,SNR=6.9						
	comp=Z,2.9nm,0.9s						
WRA	Warramunga Arr	36.36	266	P	P	02 13 41.3	-0.9
WRA	Warramunga Arr	36.36	266	*e*P	P	02 13 42.5	+0.3
WRA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
H11S2	WAKE ISLAND Hy	41.09	350	T	T	02 57 40.9	
	baz=171,slow=76,SNR=26						
H11S3	WAKE ISLAND Hy	41.10	350	T	T	02 57 39.9	
	baz=171,slow=76,SNR=18						
H11S1	WAKE ISLAND Hy	41.11	350	T	T	02 57 42.3	
	baz=171,slow=76,SNR=21						
FORT	Forrest	41.12	248	P	P	02 14 21.1	-0.9
MTN	Manton Dam	41.18	276	P	P	02 14 21.5	-1.1
MTN				IAmb	IAmb	02 14 31.0	
	comp=Z,53nm,1.9s						
BAKI	Biak	41.84	295	P	P	02 14 32.0	+4.0
H11N1	WAKE ISLAND Hy	42.27	351	T	T	02 59 08.0	
	baz=173,slow=76,SNR=4.7						
H11N3	WAKE ISLAND Hy	42.27	351	T	T	02 59 07.9	
	baz=173,slow=76,SNR=4.8						
H11N2	WAKE ISLAND Hy	42.28	351	T	T	02 59 12.0	
	baz=173,slow=76,SNR=4.6						
KNRA	Kununurra	42.52	271	P	P	02 14 33.1	-0.5
FAKI	Fak Fak	44.25	290	P	P	02 14 47.3	-0.3
FAKI				IAmb	IAmb	02 15 09.2	
	comp=Z,33nm,1.3s						
SIJI	Sorong	46.12	292	P	P	02 15 05.3	+2.8
SWI	Sorong	46.13	292	P	P	02 15 04.1	+1.6
	comp=Z,40nm,1.1s						
TAOE	Nuku Hiva Isla	46.59	81	*e*LR	LR	02 28 15.9	
	comp=Z,1μm,26.2s						
KRAI	Karang Ratu	47.45	287	P	P	02 15 09.7	-3.2
RKT	Rikitea	47.49	101	*e*S	S	02 22 08.6	+0.5
	comp=Z,1μm,27.0s						
RKT				*e*SS	SS	02 25 41.6	+5.7
	comp=Z,5μm,28.5s						
RKT				*e*LR	LR	02 28 35.3	
	comp=Z,3μm,25.2s						
SOEI	Soe	48.56	277	P	P	02 15 22.5	+0.8
	comp=Z,23nm,1.4s						
NLAI	Namlea	48.64	286	P	P	02 15 22.0	-0.1
	comp=Z,41nm,0.9s						
SANI	Sanana	50.16	287	P	P	02 15 36.0	+2.3
	comp=Z,37nm,0.8s						
MMRI	Maumere	50.84	277	P	P	02 15 39.9	+1.1
	comp=Z,2μmcomp=Z,57nm,0.9s						
MORW	Morawa	51.62	250		P	02 15 45.4	+0.8
BASI	Baing, Sumba	51.80	275	P	P	02 15 46.1	0.0
WBSI	Waikabubak, Su	53.10	275	P	P	02 15 57.9	+2.2
	comp=Z,35nm,0.9s						
GTOI	Gorontalo	54.05	288	P	P	02 16 05.1	+2.5
	comp=Z,10nm,1.1s						
DBNI	Kabupaten Domp	54.50	276	P	P	02 15 58.2	-7.8
KAPI	Kappang	54.51	280	P	P	02 16 04.9	-1.1
KAPI	Kappang	54.51	280	P	P	02 16 07.2	+1.2
KAPI	Kappang	54.51	280	P	P	02 16 04.9	-1.1
KAPI				pmax	pmax		
	comp=Z,42nm,1.3s						
PLAI	Plampang	54.87	275	P	P	02 16 07.1	-1.6
VNDA	Vanda	55.51	183	P	P	02 16 10.3	-2.1
	comp=Z,1.6nm,0.7s,baz=13,slow=6.1,SNR=4.5						
VNDA	Vanda	55.51	183	P	P	02 16 13.3	+0.9
VNDA	Vanda	55.51	183	P	P	02 16 13.3	+0.9
VNDA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TWSI	Taliwang, Sumb	55.73	275	P	P	02 16 19.3	+4.4
TOLI2	Tolitoli	56.23	287	P	P	02 16 17.1	-1.4
MPSI	Mapaga	56.66	286	P	P	02 16 24.6	+3.1
KHKI	Kahang-Kahang	57.04	275	P	P	02 16 22.7	-1.5
JAGI	Jajag, Banyuwa	58.35	274		P	02 16 33.4	0.0
JAGI	Jajag, Banyuwa	58.35	274	P	P	02 16 33.3	-0.1
	comp=Z,29nm,1.3s						
SNJI	Sawahan-Nganju	60.80	274	P	P	02 16 52.2	+1.6
	comp=Z,45nm,1.5s						
SJI	Sawahan	60.81	274	P	P	02 16 52.7	+2.1
	comp=Z,28nm,1.2s						
PCJI	Pacitan	61.19	273	P	P	02 16 56.0	+3.0
	comp=Z,73nm,1.8s						
KPJI	Karang Pucung	63.58	273	P	P	02 17 12.4	+3.4
MJAR	Matsushiro Arr	67.30	330	P	P	02 17 33.5	+0.9
	comp=Z,2.2nm,0.8s,baz=167,slow=5.8,SNR=4.3						
	comp=Z,2.2nm,0.8s						
MJAR	Matsushiro Arr	67.30	330	P	P	02 17 32.8	+0.2
MJAR				IAmb	IAmb	02 17 40.4	
	comp=Z,17nm,1.6s						
MAJO	Matsushiro	67.30	330	*i* P	P	02 17 32.9	+0.3
MAJO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
QSPA	South Pole Qui	67.73	180	P	P	02 17 35.8	+0.7
QSPA				IAmb	IAmb	02 17 40.2	
	comp=Z,15nm,1.1s						
MDSI	Maura Dua	69.02	274	P	P	02 17 43.8	-0.1
	comp=Z,12nm,1.4s						
KSRS	Korea Array	73.23	324	P	P	02 18 10.8	+1.9
	comp=Z,1.9nm,0.8s,baz=132,slow=7.4,SNR=6.7						
	comp=Z,1.9nm,0.8s						
KSRS	Korea Array	73.23	324	*e*P	P	02 18 11.5	+2.6
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YSS	Yuzhno-Sakhali	74.29	339	*e*P	P	02 18 16.3	+1.4
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
QIZ	Qiongzhong	74.41	299	P	P	02 18 16.0	-0.2
QIZ				S	S	02 27 51.5	+0.2
QIZ				SS	SS	02 32 37.5	-0.5
QIZ				LR	LR		
	comp=Z,320nm,15.3s						
QIZ				LR	LR		
	comp=Z,290nm,11.2s						
QIZ				LR	LR		
	comp=Z,340nm,21.1s						
NJ2	Nanjing	75.08	314	*e*P	P	02 18 21.3	+1.5
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PET	Petropavlovsk	76.12	351	*i* P	P	02 18 26.2	+0.9
PET				pmax	pmax		
	comp=Z,42nm,1.2s						
USRK	Ussuriysk Ar.	76.26	331	P	P	02 18 29.4	+3.1
	comp=Z,5.5nm,0.9s,baz=106,slow=4.7,SNR=6.4						
PETK	Petropavlovsk-	76.35	350	P	P	02 18 26.8	+0.2
	comp=Z,7.9nm,0.9s,baz=140,slow=9.2,SNR=4.4						
	comp=Z,7.9nm,0.9s						
CN2	Changchun	79.10	327	*e*P	P	02 18 44.5	+2.3
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
BNX	BinXian	79.55	329	⇑P	P	02 18 46.5	+1.9
BNX				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LYN	LuoYang	80.86	313	P	P	02 18 55.5	+3.6
LYN				pmax	pmax		
	comp=Z,12nm,1.0s						
HNS	HongShan	81.05	317	⇑P	P	02 18 56.0	+3.1
HNS				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BJI	Beijing	81.75	319	P	P	02 18 56.0	-0.5
BJI				S	S	02 29 07.0	-2.5
BJI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HEH	HeiHe	82.89	332	*e*P	P	02 19 04.5	+2.3
HEH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SYO	Syowa Base	82.99	195	⇓*e*PcP	PcP	02 19 07.2	-0.1
XAN	Xi'an	83.01	311	P	P	02 19 01.5	-1.8
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI	Kunming	83.13	301	P	P	02 19 06.0	+1.6
KMI				LR	LR		
	comp=Z,260nm,16.7s						
KMI				LR	LR		
	comp=Z,230nm,24.7s						
KMI				LR	LR		
	comp=Z,400nm,23.2s						
CMAR	Chiang Mai Arr	83.23	293	P	P	02 19 03.6	-1.2
	comp=Z,0.8nm,0.3s,baz=125,slow=4.1,SNR=8.7						
	comp=Z,0.8nm,0.3s						
CMAR	Chiang Mai Arr	83.23	293	*e*P	P	02 19 02.7	-2.1
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CHTO	Chiang Mai	83.39	293	P	P	02 19 04.2	-1.4
CHTO				IAmb	IAmb	02 19 10.9	

	comp=Z,20nm,1.4s						
CHTO	Chiang Mai	83.39	293	P	P	02 19 05.3	-0.3
CHTO	Chiang Mai	83.39	293	P	P	02 19 04.2	-1.4
CHTO				pmax	pmax		
	comp=Z,20nm,1.4s						
ELIB	Princess Elisa	83.73	189	dP	P	02 19 09.1	+2.5
	comp=Z,3.3nm,1.0s						
PZH	PanZhiHua	84.58	301	P	P	02 19 12.8	+1.2
HHC	Hu-ho-hao-te	85.06	318	eP	P	02 19 15.0	+1.3
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,170nm,4.8s						
ZEA	Zeya	85.55	335	eP	P	02 19 18.6	+2.9
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
TROLL	Troll, Antarti	85.69	183	⇓P	P	02 19 13.5	-3.0
	comp=Z,235nm,0.7s						
SUTB	Sutter Butte	86.16	45	P	P	02 19 19.0	-0.1
SNAA	Sanae	86.20	181	P	P	02 19 15.0	-3.9
	comp=Z,59nm,0.7s						
SNAA	Sanae	86.20	181	P	P	02 19 15.6	-3.4
	comp=Z,0.9nm,0.5s,baz=216,slow=4.5,SNR=8.0						
	comp=Z,0.9nm,0.5s						
SNAA	Sanae	86.20	181	i P	P	02 19 21.2	+2.3
SNAA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
NVL	N'lazarevskaya	86.24	186	eP	P	02 19 19.7	+0.7
NVL				e		02 22 39.8	
NVL				ePPP	PPP	02 24 34.6	
NVL				eS	SKSac	02 29 45.4	+0.4
NVL				eSS	SS	02 35 36.9	+5.4
NVL				eSSS	SSS	02 39 09.0	
NVL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NVL				MLR	MLR		
	comp=Z,583nm,23.0s						
CMB	Columbia Colle	86.45	46	P	P	02 19 21.1	+0.5
CMB				IAmb	IAmb	02 19 24.9	
	comp=Z,18nm,1.1s						
CMB	Columbia Colle	86.45	46	P	P	02 19 21.1	+0.5
CMB				pmax	pmax		
	comp=Z,18nm,1.2s						
TNCH	TengChong	86.49	299	eP	P	02 19 21.3	0.0
ORV	Oroville	86.52	45	P	P	02 19 21.1	+0.2
ORV				IAmb	IAmb	02 19 25.3	
	comp=Z,13nm,1.2s						
ORV	Oroville	86.52	45	P	P	02 19 21.1	+0.2
ORV				pmax	pmax		
	comp=Z,13nm,1.2s						
ISA	Isabella, Lake	86.53	49	P	P	02 19 21.0	-0.1
ISA	Isabella, Lake	86.53	49	P	P	02 19 21.0	-0.1
ISA				pmax	pmax		
	comp=Z,26nm,1.2s						
SEY	Seymchan	86.59	351	i P	P	02 19 21.7	+1.1
SEY				pmax	pmax		
	comp=Z,12nm,1.5s						
VNA3	Neumayer Olymp	86.65	179	⇓P	P	02 19 16.8	-4.3
	comp=Z,1.1nm,0.6s						
O03E	Paynes Creek	86.73	44		P	02 19 22.3	+0.4
YBH	Yreka Blue Hor	86.94	42		P	02 19 23.2	+0.2
YBH	Yreka Blue Hor	86.94	42	P	P	02 19 23.2	+0.2
YBH				pmax	pmax		
	comp=Z,43nm,1.8s						
RYN	Ryan	88.01	47	P	P	02 19 27.3	-1.0
NVAR	Mina Array Bea	88.05	47	P	P	02 19 25.6	-3.0
	comp=Z,1.2nm,1.0s,baz=233,slow=8.9,SNR=5.4						
	comp=Z,1.2nm,1.0s						
NVAR	Mina Array Bea	88.05	47	P	P	02 19 26.6	-2.0
NV11	Mina Array Sit	88.16	47	P	P	02 19 28.7	-0.3
NV11				IAmb	IAmb	02 19 33.5	
	comp=Z,15nm,1.3s						
GMN	Gold Mountain	88.20	48	P	P	02 19 29.2	-0.1
J05D	Fort Rock, OR	88.70	42	P	P	02 19 31.0	-0.5
TPNV	Topopah Spring	88.73	49	P	P	02 19 30.8	-1.0
TPNV				IAmb	IAmb	02 19 36.2	
	comp=Z,7.0nm,0.9s						
TPNV	Topopah Spring	88.73	49	P	P	02 19 30.8	-1.0
TPNV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PINE	Pine Mountain	89.15	41		P	02 19 33.5	-0.1
PINE				IAmb	IAmb	02 19 38.4	
	comp=Z,17nm,1.1s						
SHPR	Sheep Range	89.28	50		P	02 19 34.3	-0.1
WVOR	Wild Horse Val	89.88	43		P	02 19 37.6	+0.6
WVOR				IAmb	IAmb	02 19 40.9	
	comp=Z,17nm,1.3s						
WVOR	Wild Horse Val	89.88	43	P	P	02 19 37.6	+0.6
WVOR				pmax	pmax		
	comp=Z,17nm,1.3s						
G06A	Carlson Farm,	90.11	40	P	P	02 19 38.5	+0.6
G06A				IAmb	IAmb	02 19 41.5	
	comp=Z,17nm,1.3s						
BILL	Bilibino	90.26	357	i P	P	02 19 38.1	+0.1
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
J08A	Circle Bar Ran	90.45	43	P	P	02 19 39.9	+0.3
J08A				IAmb	IAmb	02 19 44.1	
	comp=Z,13nm,1.1s						
LCMT	Little Creek M	90.88	50	P	P	02 19 41.2	-0.6
LCMT				IAmb	IAmb	02 19 46.4	
	comp=Z,12nm,1.2s						
YAK	Yakutsk	91.00	341	i P	P	02 19 42.5	+1.0
YAK				pmax	pmax		
	comp=Z,13nm,1.1s						
X16A	Lo Mia Camp, P	91.01	53		P	02 19 41.8	-0.7
X16A				IAmb	IAmb	02 19 47.3	
	comp=Z,8.8nm,1.2s						
SPR3	Spring Creek 3	91.04	48		P	02 19 41.9	-0.8
KNB	Kanab	91.18	50		P	02 19 41.6	-1.6
KNB	Kanab	91.18	50	P	P	02 19 41.6	-1.6
KNB				pmax	pmax		
	comp=Z,38nm,1.7s						
U15A	North Rim	91.29	51	P	P	02 19 42.5	-1.3
U15A				IAmb	IAmb	02 19 48.8	
	comp=Z,14nm,1.0s						
H03S2	Juan Fernandez	91.47	128	T	T	04 01 06.2	
	baz=240,slow=74,SNR=21						
H03S1	Juan Fernandez	91.48	128	T	T	04 01 08.1	
	baz=240,slow=74,SNR=22						
H03S3	Juan Fernandez	91.48	128	T	T	04 01 10.3	
	baz=240,slow=74,SNR=5.6						
WUAZ	Wupatki	91.55	52		P	02 19 43.1	-1.9
WUAZ				IAmb	IAmb	02 19 49.7	
	comp=Z,9.2nm,1.1s						
ULN	Ulaanbaatar	91.63	322	i P	P	02 19 45.4	+0.4
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
H03N3	Juan Fernandez	91.65	127	T	T	04 01 17.2	
	baz=245,slow=73,SNR=4.3						
H03N2	Juan Fernandez	91.65	127	T	T	04 01 15.2	
	baz=245,slow=73,SNR=4.1						
H03N1	Juan Fernandez	91.66	127	T	T	04 01 16.2	
	baz=245,slow=73,SNR=7.4						
PKCU	Pink Cliffs	91.74	50		P	02 19 44.6	-1.4
BMO	Blue Mountains	91.93	42	P	P	02 19 45.1	-1.3
BMO				IAmb	IAmb	02 19 51.2	
	comp=Z,11nm,1.6s						
BMO	Blue Mountains	91.93	42	P	P	02 19 45.1	-1.3
BMO				pmax	pmax		
	comp=Z,11nm,1.7s						
COLA	College	91.94	16	i P	P	02 19 46.6	+0.8
COLA				pmax	pmax		
	comp=Z,11nm,1.0s						
SONM	Songino Array	91.99	322	P	P	02 19 46.6	-0.1
	comp=Z,2.1nm,1.0s,baz=108,slow=3.2,SNR=6.9						
	comp=Z,2.1nm,1.0s						
SONM	Songino Array	91.99	322	P	P	02 19 45.6	-1.0
SONM	Songino Array	91.99	322	P	P	02 19 45.6	-1.0
SONM				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA	Gaotai	92.02	312	eP	P	02 19 49.0	+2.0
GTA				pP	pwP	02 19 52.5	+0.3
GTA				pmax	pmax		
	comp=Z,8.0nm,1.8s						
GTA				LR	LR		
	comp=Z,210nm,21.5s						
GTA				LR	LR		
	comp=Z,340nm,21.1s						
MTPU	Mount Pierson	92.10	50		P	02 19 45.7	-2.0
MTPU				IAmb	IAmb	02 19 53.0	
	comp=Z,10nm,1.1s						
IL31		92.10	16		P	02 19 45.8	-0.7
IL31				IAmb	IAmb	02 19 49.8	
	comp=Z,10nm,1.1s						
ILAR	Eielson Array	92.10	16	P	P	02 19 45.5	-1.1
	comp=Z,3.8nm,1.0s,baz=259,slow=4.3,SNR=6.1						
	comp=Z,3.8nm,1.0s						
ILAR	Eielson Array	92.10	16	P	P	02 19 46.9	+0.3
F10A	Beach Ranch, E	92.54	41	P	P	02 19 48.4	-0.8
F10A				IAmb	IAmb	02 20 23.6	
	comp=Z,22nm,1.8s						
J26L	Joseph Creek	92.76	17		P	02 19 47.9	-1.9
J26L				IAmb	IAmb	02 19 54.2	
	comp=Z,13nm,1.1s						
PLID	Pearl Lake	92.86	42		P	02 19 50.0	-0.8
PLID				IAmb	IAmb	02 19 55.8	
	comp=Z,18nm,1.8s						
D19K	Kuna River	92.95	10	P	P	02 19 49.2	-1.3
I26K	Coal Creek Min	93.50	17	P	P	02 19 52.1	-0.9
SRU	San Rafael Swe	93.74	49	P	P	02 19 53.8	-1.2
SRU				IAmb	IAmb	02 19 59.3	
	comp=Z,11nm,1.4s						
SRU	San Rafael Swe	93.74	49	P	P	02 19 53.8	-1.2
SRU				pmax	pmax		
	comp=Z,11nm,1.4s						
F24K	Squaw Lake	94.09	14	P	P	02 19 54.7	-1.1
F24K				IAmb	IAmb	02 20 00.4	
	comp=Z,5.1nm,1.0s						
G26K	Porcupine Rive	94.61	16	P	P	02 19 57.9	-0.2
G26K				IAmb	IAmb	02 20 02.7	
	comp=Z,14nm,1.2s						
TXAR	Lajitas Array	94.93	60	P	P	02 19 58.3	-2.3
	comp=Z,0.8nm,1.0s,baz=238,slow=3.4,SNR=5.5						
	comp=Z,0.8nm,1.0s						
TXAR	Lajitas Array	94.93	60	P	P	02 19 59.3	-1.3
E28M	Babbage River	96.92	16	P	P	02 20 07.8	-0.9
D27M	Malcolm River	97.05	15		P	02 20 08.6	-0.7
D27M				IAmb	IAmb	02 20 12.7	
	comp=Z,12nm,1.6s						
YKA	Yellowknife Ar	101.68	27	P	Pdif	02 20 32.3	+2.3
	comp=Z,0.3nm,0.9s,baz=243,slow=5.1,SNR=5.0						
YKA	Yellowknife Ar	101.68	27		Pdif	02 20 30.6	+0.6
YKA	Yellowknife Ar	101.68	27	P	Pdif	02 20 30.6	+0.6
WMQ	Urumqi	102.10	312	eP	Pdif	02 20 34.3	+1.9
WMQ				LR	LR		
	comp=Z,230nm,24.5s						
BVAR	Borovoye Array	115.23	319	PKP	PKiKP	02 25 17.6	-1.4
	comp=Z,1.1nm,0.7s,baz=90,slow=1.5,SNR=5.5						
BORK	Borovoye	115.28	319	i PKIKP	PKPdf	02 25 20.2	+1.1
ARTI	Arti	122.08	323	i PKIKP	PKiKP	02 25 33.2	+0.9
KIRV	Kirov	126.33	327	i PKIKP	PKiKP	02 25 41.3	+0.7
ARCES	ARCESS Array B	129.00	346	PKP	PKPdf	02 25 42.5	-2.6
	comp=Z,7.0nm,1.0s,baz=51,slow=1.9,SNR=4.6						
ARCES	ARCESS Array B	129.00	346		PKPdf	02 25 43.7	-1.3
ARCES	ARCESS Array B	129.00	346	ePKIKP	PKPdf	02 25 44.0	-1.0
ARCES				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BELG	Belogornoye	129.02	320	i PKIKP	PKiKP	02 25 46.4	+0.2
KLMR	Klimovskoe	130.03	333	ePKIKP	PKPdf	02 25 46.6	-0.5
KLMR				e		02 27 58.5	
KLMR				pmax	pmax		
	comp=Z,18nm,1.5s						
KBZ	Khabaz	134.06	310	i PKIKP	PKiKP	02 25 56.8	+0.2
OBN	Obninsk	134.17	327	i PKIKP	PKiKP	02 25 55.9	-0.5
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIV	Kislovodsk	134.17	310	ePKIKP	PKiKP	02 25 57.2	+0.2
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SHA1	Shidzhatmaz	134.23	310	i PKIKP	PKPdf	02 25 56.2	+0.2
FINES	FINESS Array B	134.87	338	PKP	PKPdf	02 25 55.3	-1.0
	comp=Z,4.0nm,1.0s,baz=142,slow=4.8,SNR=5.8						
FINES	FINESS Array B	134.87	338		PKPdf	02 25 55.9	-0.4
FINES	FINESS Array B	134.87	338	ePKIKP	PKiKP	02 25 59.1	+1.4
FINES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NOA	NORSAR Array B	139.37	347	PKP	PKPdf	02 26 03.6	-1.1
	comp=Z,0.2nm,0.4s,baz=40,slow=2.2,SNR=6.3						
AKASG	Malin Array Be	140.22	324	PKP	PKPdf	02 26 06.0	-0.5
	comp=Z,1.0nm,0.6s,baz=63,slow=1.9,SNR=6.2						
AKASG	Malin Array Be	140.22	324		PKPdf	02 26 06.6	+0.1
AKASG	Malin Array Be	140.22	324	ePKIKP	PKiKP	02 26 08.4	-0.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GHRR		143.62	319	⇑P	PKPbc	02 26 11.4	+1.3
ONER	Baraj Valea Uz	144.10	320	⇑P	PKPab	02 26 09.0	-2.1
BURAR	Bucovina Array	144.10	322	⇑P	PKPab	02 26 10.5	-0.7
BURAR	Bucovina Array	144.10	322	⇑PKIKP	PKPab	02 26 10.5	-0.7
VRI	Vrincioaia	144.13	319	⇓P	PKPbc	02 26 12.6	+0.9
VRI	Vrincioaia	144.13	319	⇓PKIKP	PKPbc	02 26 12.6	+0.9
PLOR	Plostina	144.19	319	⇑P	PKPbc	02 26 12.8	+0.9
PLOR	Plostina	144.19	319	⇑PKIKP	PKPbc	02 26 12.8	+0.9
COVR	Voineasa-Covas	144.46	319	⇑P	PKPab	02 26 12.1	-0.4
TURR	Turia	144.47	320	⇑P	PKPab	02 26 10.3	-2.2
OZUR		144.58	320	⇑P	PKPbc	02 26 13.1	0.0
BOSR	Bodos	144.67	320	⇑P	PKPab	02 26 11.2	-2.0
LEHL	Lehliu	144.74	317	⇑P	PKPdf	02 26 16.2	+1.5
MLR	Muntele Rosu	144.79	319	⇓P	PKPab	02 26 13.4	-0.5
MLR	Muntele Rosu	144.79	319	⇓PKIKP	PKPab	02 26 13.4	-0.5
ARCR	ARCALIA	144.88	322	⇑P	PKPab	02 26 13.9	-0.1
DOPR	Dopca	144.89	320	⇑P	PKPab	02 26 11.9	-2.1
BMR	Baia Mare	145.03	324	⇑P	PKPab	02 26 12.0	-2.5
BMR	Baia Mare	145.03	324	⇑PKIKP	PKPab	02 26 12.0	-2.5
TGMR	Targu Mures	145.10	321	⇓P	PKPbc	02 26 14.1	-0.6
STHS	Stebnicka Huta	145.13	328	ePKIKP	PKPab	02 26 15.0	+0.2
STHS				e		02 26 21.1	
STHS	Stebnicka Huta	145.13	328	ePKP	PKPab	02 26 15.0	+0.2
STHS				e		02 26 21.1	
OJC	Ojcow	145.28	330		PKPbc	02 26 12.8	-2.4
OJC	Ojcow	145.28	330	PKP2	PKPbc	02 26 12.8	-2.4
MDB	Medias	145.39	321	⇓P	PKPdf	02 26 16.0	+0.2
MDB	Medias	145.39	321	⇓PKIKP	PKPdf	02 26 16.0	+0.2
CJR	Cluj-Napoca	145.52	322	⇓P	PKiKP	02 26 18.3	-1.8
CJR	Cluj-Napoca	145.52	322	⇓PKIKP	PKiKP	02 26 18.3	-1.8
ARR	Arges	145.65	320	⇑P	PKPbc	02 26 16.7	+0.1
TNR	Turnu Rosu	145.72	320	⇑P	PKiKP	02 26 18.9	-1.6
TNR	Turnu Rosu	145.72	320	⇑PKIKP	PKiKP	02 26 18.9	-1.6
MARR	Marisel-Cluj	145.81	322	⇓P	PKPdf	02 26 14.6	-2.0
HUMR	Humele	145.87	318	⇓P	PKPdf	02 26 13.6	-3.0
DRGR		145.98	323	⇑P	PKPdf	02 26 15.3	-1.6
DRGR		145.98	323	⇑PKIKP	PKPdf	02 26 15.3	-1.6
LANS	Liptovska Anna	146.17	329	ePKP2	PKPbc	02 26 18.3	+0.2
LANS	Liptovska Anna	146.17	329	ePKP	PKPbc	02 26 18.3	+0.2
LANS				e		02 26 22.5	
STEB	Steborice	146.41	331	ePKP	PKPdf	02 26 15.0	-2.4
VLAD	Vladila	146.49	318	⇑P	PKPab	02 26 19.8	-0.3
OSTC	Ostas	146.62	333	ePKP2	PKPbc	02 26 19.3	0.0
OSTC	Ostas	146.62	333	ePKP	PKPbc	02 26 19.3	0.0
MORC	Moravsky Berou	146.63	331	⇑P	PKPdf	02 26 14.1	-3.8
MORC	Moravsky Berou	146.63	331	ePKP	PKPdf	02 26 17.0	-0.8
MORC	Moravsky Berou	146.63	331	⇑PKHKP	PKPpre	02 26 14.1	
DPC	Dobruska-Polom	146.73	333	ePKIKP	PKPdf	02 26 16.5	-1.5
DPC	Dobruska-Polom	146.73	333	ePKP	PKPdf	02 26 16.5	-1.5
GZR	Gura Zlata	146.74	321	⇑P	PKPdf	02 26 17.2	-1.0
KRLC	Kraliky	146.74	332	ePKIKP	PKPdf	02 26 15.6	-2.4
KRLC	Kraliky	146.74	332	ePKP	PKPdf	02 26 15.6	-2.4
PSZ	Piszkesteto	146.78	327		PKPdf	02 26 16.9	-1.3
PSZ	Piszkesteto	146.78	327	⇑P	PKPdf	02 26 17.2	-1.0
PSZ	Piszkesteto	146.78	327	⇑PKIKP	PKPdf	02 26 17.2	-1.0
MAUC	Maruska	146.79	330	ePKP	PKPdf	02 26 16.7	-1.4
SIRR	Siria	146.87	323	⇑P	PKPdf	02 26 19.2	+0.8
EKA	Eskdalemuir Ar	146.95	356	PKPbc	PKPdf	02 26 15.6	-2.5
	comp=Z,2.9nm,0.7s,baz=339,slow=2.5,SNR=6.2						
JAVC	Velka Javorina	147.22	330	ePKP	PKPdf	02 26 18.8	-0.1
HERR	Herculane	147.24	320	⇑P	PKPdf	02 26 16.3	-2.6
BZS	Buzias	147.28	322	⇑P	PKPdf	02 26 19.7	+0.7
BZS	Buzias	147.28	322	⇑PKP2	PKPdf	02 26 19.7	+0.7
CLL	Collm	147.28	337		PKPdf	02 26 17.5	-1.3
CLL	Collm	147.28	337	i PKIKP	PKPdf	02 26 17.9	-0.9
CLL				i		02 26 20.5	
CLL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CLL				pmax	pmax		
	comp=Z,11nm,0.9s						
CLL	Collm	147.28	337	i PKPdf	PKPdf	02 26 17.9	-0.9
	comp=Z,8.0nm,1.1s						
CLL				i PKPbc	PKPbc	02 26 20.5	-0.6
	comp=Z,11nm,0.9s						
CLL				ePKPmax		02 26 21.0	
	comp=Z,18nm,1.0s						
CLL				ePPP	PPP	02 33 06.0	
PVCC	Panska Ves	147.31	335	ePKP2	PKPbc	02 26 20.9	-0.4
PVCC	Panska Ves	147.31	335	ePKP	PKPbc	02 26 20.9	-0.4
VRAC	Vranov	147.39	331	⇑P	PKPdf	02 26 18.2	-0.9
VRAC	Vranov	147.39	331	ePKP	PKPdf	02 26 18.4	-0.7
VRAC	Vranov	147.39	331	⇑PKIKP	PKPdf	02 26 18.2	-0.9
KRUC	Moravsky	147.66	331	ePKP	PKPdf	02 26 18.5	-1.0
MDVR	Moldovita	147.71	321	⇑P	PKPdf	02 26 19.4	-0.5
PRU	Pruhonice	147.75	334	ePKIKP	PKPdf	02 26 18.5	-1.1
PRU	Pruhonice	147.75	334	ePKP	PKPdf	02 26 18.5	-1.1
MODS	Modra-Piesok	147.75	330	ePKP2	PKiKP	02 26 23.6	-1.0
MODS	Modra-Piesok	147.75	330	ePKP	PKiKP	02 26 23.6	-1.0
ZVC	Zvikov	148.32	334	ePKP	PKPdf	02 26 20.7	+0.1
BOVS	Bovan	148.35	319	⇑P	PKPdf	02 26 20.4	-0.4
MORH	Mrgy, Hungar	148.54	325	⇓P	PKPdf	02 26 20.4	-0.7
RONA	Rosalia, Austr	148.70	329	i PKP	PKPdf	02 26 22.2	+0.8
	comp=Z,20nm,1.6s						
RONA				i PKP	PKPbc	02 26 25.6	+0.4
	comp=Z,10nm,1.3s						
CONA	Conrad Observa	148.73	330	i PKP	PKPdf	02 26 22.4	+1.0
	comp=Z,22nm,1.4s						
CONA				i PKP	PKPbc	02 26 25.4	+0.2
	comp=Z,14nm,1.3s						
CKRC	Cesky Krumlov	148.75	333	ePKIKP	PKPdf	02 26 21.3	-0.1
CKRC	Cesky Krumlov	148.75	333	ePKP	PKPdf	02 26 21.3	-0.1
KHC	Kasperske Hory	148.81	334		PKPdf	02 26 20.6	-0.9
KHC	Kasperske Hory	148.81	334	ePKIKP	PKPdf	02 26 21.6	+0.1
KHC	Kasperske Hory	148.81	334	ePKP	PKPdf	02 26 21.6	+0.1
GERES	GERESS Array B	148.98	333	PKPbc	PKPdf	02 26 22.5	+0.7
	comp=Z,4.6nm,0.9s,baz=39,slow=2.6,SNR=10						
GRF	Grafenberg Arr	149.26	337	ePKPbc	PKPbc	02 26 26.6	+0.2
	baz=46,slow=2.0						
ARSA	Arzberg	149.38	330		PKPdf	02 26 21.2	-1.2
ARSA	Arzberg	149.38	330	i PKP	PKPdf	02 26 23.3	+0.8
	comp=Z,8.5nm,1.4s						
ARSA				i pPKP	sPKPdf	02 26 26.3	+0.5
	comp=Z,8.5nm,1.4s						
MOA	Molln	149.51	332	i PKP	PKPdf	02 26 23.7	+1.1
	comp=Z,12nm,1.5s						
MOA				i PKP	sPKPdf	02 26 26.6	+0.7
	comp=Z,9.7nm,1.4s						
BIOA	Bad Ischl, Aus	149.90	332	ePKP	PKPdf	02 26 24.2	+0.9
	comp=Z,11nm,1.4s						
BIOA				i PKP	PKPbc	02 26 27.8	-0.3
	comp=Z,11nm,1.7s						
SOKA	Soboth	150.03	329	i PKP	PKPdf	02 26 24.7	+1.2
	comp=Z,17nm,1.1s						
SOKA				ePKP	sPKPdf	02 26 27.8	+0.8
	comp=Z,15nm,1.3s						
MEM	Membach	150.08	344	dPKP	PKiKP	02 26 31.3	+2.0
BLY	Banja Luka	150.28	324	⇓P	PKPbc	02 26 26.7	-2.4
PDG	Podgorica	150.51	319		PKPbc	02 26 29.1	-0.6
LESA	Schwarzleotal	150.52	333	i PKP	PKPdf	02 26 25.7	+1.4
	comp=Z,11nm,1.0s						
LESA				ePKP	PKPbc	02 26 29.3	-0.4
	comp=Z,15nm,1.2s						
BMRD	Maredsous	150.68	345	dPKPdf	PKPdf	02 26 26.2	+1.9
BMRD				dPKiKP	pPKPbc	02 26 32.4	-0.1
RCHB	Rochefort	150.70	344	dPKP	PKiKP	02 26 30.6	0.0
MYKA	Terra Mystica	150.71	331	ePKP	PKPdf	02 26 25.3	+0.7
	comp=Z,11nm,1.0s						
WLF	Walferdange	150.91	343	dPKPdf	PKPdf	02 26 24.6	-0.2
WATA	Walderalm	151.05	334	i PKP	PKPdf	02 26 26.2	+1.0
	comp=Z,16nm,1.2s						
WATA				i PKP	PKPbc	02 26 30.5	-0.5
	comp=Z,14nm,1.4s						
WTTA	Wattenberg	151.08	334	ePKP	PKPdf	02 26 26.7	+1.4
	comp=Z,16nm,1.1s						
WTTA				ePKP	PKPbc	02 26 30.2	-0.9
	comp=Z,16nm,1.1s						
ABTA	Abfaltersbach	151.12	332	epPKP	pPKPdf	02 26 27.0	-0.8
	comp=Z,19nm,1.1s,SNR=5.2						
RETA	Reutte	151.25	335	i PKP	PKPdf	02 26 27.0	+1.6
	comp=Z,12nm,1.3s						
RETA				i PKP	PKiKP	02 26 31.7	-0.2
	comp=Z,12nm,1.3s						
SQTA	Sankt Quirin	151.29	334	i PKP	PKPdf	02 26 26.8	+1.2
	comp=Z,18nm,1.2s						
SQTA				i PKP	PKPbc	02 26 30.9	-0.6
	comp=Z,18nm,1.2s						
STAL	STALIGIAL	151.41	331	PKPdf	PKPdf	02 26 25.4	-0.2
FETA	Feichten	151.65	334	epPKP	pPKPdf	02 26 27.7	-1.0
	comp=Z,16nm,1.0s						
FETA				i PKP	PKPbc	02 26 32.4	0.0
	comp=Z,16nm,1.0s						
DAVA	Damuels	151.76	336	i pPKP	pPKPdf	02 26 28.2	-0.6
	comp=Z,8.3nm,0.9s						
FUORN	Ofenpass-Fuorn	152.16	335	PKPdf	PKPdf	02 26 26.1	-0.9
ESDC	Sonseca Array	162.56	353	PKPab	PKPab	02 27 28.8	+0.8
	comp=Z,2.7nm,1.2s,baz=356,slow=5.5,SNR=7.0						
TORD	Torodi Ar. Bea	167.87	222	PKP	PKPdf	02 26 42.5	-2.6
	comp=Z,1.6nm,0.9s,baz=34,slow=1.9,SNR=7.0						
TORD				PKPab	PKPab	02 27 49.2	-2.7
	comp=Z,2.4nm,0.8s,baz=116,slow=5.7,SNR=13						
TORD	Torodi Ar. Bea	167.87	222		PKPdf	02 26 43.6	-1.6

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*IDC **26** 02:11:36.4±3.9, 22°.13S×173°.73E, h0^{km}, mb4.2/2, mbtmp4.0/3, ML3.4/1, Error ellipse: s-maj=180.3km s-min=47.9km az=159.0*

*NEIC **26** 02:11:40.6±0.9, 21°.94S±0°.10×173°.5E±0°.1, h10^{km}±2^{km}, mb4.4/15, Error ellipse: s-maj=21.4km s-min=13.2km az=54.0*

ISC 26 02:11:45.1±1.4**, 22°.0S**±0°.2×**173°.3E**±0°.2**, h40^{km}, n21, σ0^{s}.73**/21**, mb4.4**/11**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINNC	Pines Island,	5.49	263	Pn	Pn	02 13 05.6	+1.2
DZM	Mont Dzumac	6.40	268	Pn	Pn	02 13 17.7	+0.7
	0.8nm,0.3s,baz=180,slow=19,SNR=1.6						
	3.1nm,0.4s						
DZM	Mont Dzumac	6.40	268		Pn	02 13 16.3	-0.6
ARMA	Armidale	21.17	242	P	P	02 16 27.3	+0.1
ARMA				IAmb	IAmb	02 16 47.1	
	comp=Z,19nm,1.4s						
WKZ	Wanaka	23.03	188	P	P	02 16 46.4	-0.3
WKZ				IAmb	IAmb	02 16 58.1	
	comp=Z,26nm,1.2s						
CTAO	Charters Tower	25.34	269	P	P	02 17 08.1	-0.4
CTAO				IAmb	IAmb	02 17 47.0	
	comp=Z,21nm,1.5s						
WR8	Warramunga Arr	36.26	266	P	P	02 18 43.9	-0.9
WR8				IAmb	IAmb	02 18 44.4	
	comp=Z,4.6nm,1.1s						
AS31	Alice Springs	36.30	260	P	P	02 18 45.4	+0.2
ASAR	Alice Springs	36.30	260	P	P	02 18 45.1	-0.1
	comp=Z,3.6nm,0.8s,baz=84,slow=9.0,SNR=23						
	comp=Z,3.6nm,0.8s						
WB0	Warramunga Arr	36.39	266	P	P	02 18 45.8	-0.2
WB2	Warramunga Arr	36.40	266	P	P	02 18 46.4	+0.4
WB2				IAmb	IAmb	02 18 52.3	
	comp=Z,12nm,1.1s						
WRAB	Tennant Creek	36.40	266	P	P	02 18 45.6	-0.4
WRAB				IAmb	IAmb	02 18 47.1	
	comp=Z,7.1nm,1.4s						
WRA	Warramunga Arr	36.41	266	P	P	02 18 45.3	-0.8
	comp=Z,1.3nm,0.6s,baz=103,slow=9.2,SNR=13						
	comp=Z,1.3nm,0.6s						
WRA	Warramunga Arr	36.41	266	P	P	02 18 44.8	-1.4
MTN	Manton Dam	41.18	276	P	P	02 19 25.6	-0.5
MTN				IAmb	IAmb	02 19 37.2	
	comp=Z,13nm,1.3s						
FITZ	Fitzroy Crossi	44.84	266	P	P	02 19 56.3	+0.6
FITZ				IAmb	IAmb	02 19 57.5	
	comp=Z,3.4nm,1.1s						
PSA00	Pilbara Seismi	49.45	260	P	P	02 20 31.2	-0.5
MBWA	Marble Bar	49.64	260	P	P	02 20 33.1	0.0
MORW	Morawa	51.76	250	P	P	02 20 48.7	-0.2
MORW				IAmb	IAmb	02 21 07.8	
	comp=Z,5.8nm,0.9s						
NIKH	Nikolski High	76.26	11	P	P	02 23 29.0	-0.3
GERES	GERESS Array B	148.71	334	PKPbc	PKPdf	02 31 25.9	+1.5
	comp=Z,0.4nm,0.7s,baz=54,slow=3.4,SNR=4.3						

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*IDC **26** 02:16:53.2±0.7, 21°.97S×173°.72E, h0^{km}, mb4.5/13, mbtmp4.5/14, ML3.6/1, Error ellipse: s-maj=23.2km s-min=18.5km az=139.0*

*MOS **26** 02:16:56.2±1.3, 21°.98S×173°.42E, h14^{km}, mb5.0/27, MS5.4/5, Error ellipse: s-maj=11.0km s-min=9.8km az=144.4*

*NEIC **26** 02:16:56.9±1.5, 21°.96S±0°.09×173°.64E±0°.08, h10^{km}±1^{km}, mb5.1/82, Error ellipse: s-maj=15.6km s-min=12.3km az=163.0*

*GCMT **26** 02:16:56.9±0.5, 21°.77S±0°.03×173°.67E±0°.03, h12^{km}±2^{km}, MW5.1/74, Moment Tensor Solution. s24,c28; s74,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.70±.40; M$_{\theta\theta}$2.10±.34; M$_{\phi\phi}$0.60±.33; M$_{r\theta}$-0.54±.75; M$_{\theta\phi}$4.94±.27; M$_{\phi r}$-0.67±.82; Best double couple: M$_0$5.04800×10^{16}*

NP1:φs274.00000°,δ79.00000°,λ-3.00000°. NP2: φs5.00000°,δ87.00000°,λ-169.00000°. Principal axes: T 6.4260, Plg5.0000°, Azm139.0000°; N -2.7500, Plg79.0000°, Azm21.0000°; P -3.6710, Plg10.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

BJI ***26*** *02:16:57.9, 21°.91S×173°.29E, h17^{km}, mB5.4/11, mb4.8/38, Ms5.3/7, Ms7 5.3/7*

ISC 26 02:17:00.1±0.3**, 22°.01S**±0°.05×**173°.65E**±0°.06**, h40^{km}, n377,** σ**1^{s}35**/359**, mb5.0**/110**, MS5.5**/17**, 34C-26D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINNC	Pines Island,	5.77	263		Pn	02 18 22.6	-0.6
MSVF	Nonsavu	5.94	45		Pn	02 18 22.6	-2.9
MSVF	Nonsavu	5.94	45	*i* P	Pn	02 18 25.9	+0.4
DZM	Mont Dzumac	6.68	268	Pn	Pn	02 18 34.2	-1.6
	1.2nm,0.3s,baz=73,slow=19,SNR=12						
DZM				Sn	Sn	02 19 50.6	-0.2
	baz=49,slow=20						
	18nm,0.8s						
DZM	Mont Dzumac	6.68	268	*e*Pn	Pn	02 18 36.0	+0.2
	99nm,1.2s						
DZM				*e*LR	LR	02 20 10.1	
	2µm,25.4s						
DZM	Mont Dzumac	6.68	268		Pn	02 18 34.5	-1.3
DZM					Sn	02 19 49.2	-1.6
NFK	Norfolk Island	8.70	215	P	Pn	02 19 04.1	+0.7
	comp=Z,350nm,0.9s						
SANVU	Saraoutou	8.93	316		Pn	02 19 06.4	-0.2
TOZ	Tahuroa Road	15.75	175	P	P	02 20 41.5	-1.0
URZ	Urewera	16.47	170	Pn	P	02 20 52.0	+1.6
	comp=Z,0.4nm,0.3s,baz=2.2,slow=7.4,SNR=8.5						
MRZ	Mangatainoka R	18.67	175		Pn	02 21 15.3	0.0
TCW	Tory Channel	19.16	179	P	Pn	02 21 20.5	-0.6
INZ	Inchbonnie	20.74	185	P	Pn	02 21 37.6	-2.2
LTZ	Lake Taylor	20.75	183	P	P	02 21 36.5	-0.8
EIDS	Eidsvold	20.93	256	P	Pn	02 21 40.1	-2.1
	comp=Z,37nm,1.3s						
EIDS	Eidsvold	20.93	256		P	02 21 39.5	+0.1
OXZ	Oxford	21.30	183		P	02 21 45.6	+2.4
OXZ				IAmb	IAmb	02 21 52.3	
	comp=Z,84nm,1.5s						
ARMA	Armidale	21.43	242	P	P	02 21 46.2	+1.3
	comp=Z,37nm,1.3s						
ARMA	Armidale	21.43	242		P	02 21 45.3	+0.4
MGCD	Mangrove Creek	22.83	236	P	P	02 22 01.0	+1.3
	comp=Z,52nm,1.1s						
RMQ	Roma	23.11	254	P	P	02 22 02.0	-0.7
	comp=Z,43nm,1.5s						
MLZ	Mavora Lakes	23.74	190		P	02 22 10.5	+2.0
MLZ				IAmb	IAmb	02 22 11.7	
	comp=Z,46nm,0.9s						
WHZ	Wether Hill Ro	24.28	190	P	P	02 22 14.7	+1.2
CNB	Canberra Magne	25.02	233	P	P	02 22 21.9	+1.4
	comp=Z,45nm,1.4s						
CAN	Canberra	25.29	233	P	P	02 22 23.7	+0.9
CAN	Canberra	25.29	233	P	P	02 22 23.8	+0.9
CAN				IAmb	IAmb	02 22 34.6	
	comp=Z,34nm,1.1s						
CAN	Canberra	25.29	233	P	P	02 22 23.8	+0.9
CAN				pmax	pmax		
	comp=Z,34nm,1.1s						
YNG	Young	25.33	236	P	P	02 22 24.2	+0.9
	comp=Z,13nm,1.1s						
CTA	Charters Tower	25.62	269	P	P	02 22 26.1	+0.1
	comp=Z,8.0nm,0.7s						
CTAO	Charters Tower	25.62	269		P	02 22 26.1	+0.1
CTAO	Charters Tower	25.62	269	P	P	02 22 26.1	+0.1
CTAO				pmax	pmax		
	comp=Z,26nm,1.2s						
CMSA	Cobar Meteorol	26.64	243	P	P	02 22 35.2	+0.1
	comp=Z,25nm,1.4s						
QLP	Quilpie	27.16	254	P	P	02 22 39.6	-0.2
	comp=Z,46nm,1.4s						
MTSU	Mount Surprise	27.80	273	P	P	02 22 46.0	+0.4
	comp=Z,23nm,1.1s						
PMG	Port Moresby	28.35	292	P	P	02 22 49.7	-0.8
	comp=Z,17nm,1.1s						
PMG	Port Moresby	28.35	292	*i* P	P	02 22 49.6	-0.9
PMG				pmax	pmax		
	comp=Z,15nm,1.1s						
TOO	Toolangi	28.80	231	P	P	02 22 55.3	+1.0
	comp=Z,9.2nm,1.6s						
TOO	Toolangi	28.80	231	P	P	02 22 55.4	+1.0
TOO	Toolangi	28.80	231	P	P	02 22 55.4	+1.0
TOO				pmax	pmax		
	comp=Z,15nm,1.5s						
COEN	Coen	30.02	280	P	P	02 23 05.7	+0.3
MOO	Moorlands	30.06	221	P	P	02 23 06.5	+1.0
	comp=Z,55nm,2.2s						
STKA	Stephens Creek	30.12	244	P	P	02 23 06.2	+0.1
	comp=Z,73nm,1.7s						
STKA	Stephens Creek	30.12	244	P	P	02 23 06.8	+0.7
	comp=Z,6.4nm,0.8s,baz=93,slow=11,SNR=11						
	comp=Z,6.4nm,0.8s						
STKA	Stephens Creek	30.12	244		P	02 23 05.7	-0.5
STKA	Stephens Creek	30.12	244	*i* P	P	02 23 05.3	-0.8
INKA	Innaminka	30.33	252		P	02 23 08.0	-0.1
ARPS	Mount Arapiles	31.21	235	P	P	02 23 16.3	+0.7
	comp=Z,12nm,1.6s						
QIS	Mount Isa	31.72	266	P	P	02 23 19.6	-0.7
	comp=Z,19nm,1.5s						
HTT	Hallett	32.64	242	P	P	02 23 28.6	+0.3
	comp=Z,12nm,1.6s						
TBI	Tubuai	34.01	99	*e*LQ	LQ	02 31 07.2	
	comp=Z,6µm,40.0s						
TBI				*e*LR	LR	02 32 33.5	
	comp=Z,2µm,25.8s						
TBI				*e*LR	LR	02 32 43.5	
	comp=Z,4µm,24.5s						
PPT2	Papeete2	34.83	89	*e*LQ	LQ	02 31 24.0	
	comp=Z,1µm,25.8s						
PPT2				*e*LR	LR	02 32 57.9	
	comp=Z,561nm,31.0s						
PPT2				*e*LR	LR	02 33 03.8	
	comp=Z,931nm,30.0s						
BBOO	Buckleboo	34.90	244	P	P	02 23 48.3	+0.4
	comp=Z,36nm,1.1s						
BBOO	Buckleboo	34.90	244		P	02 23 47.7	-0.2
BBOO				IAmb	IAmb	02 23 48.8	
	comp=Z,41nm,1.1s						
WR8	Warramunga Arr	36.54	266		P	02 24 00.1	-2.0
WR8				IAmb	IAmb	02 24 01.9	
	comp=Z,30nm,0.9s						
AS31	Alice Springs	36.59	260		P	02 24 01.8	-0.8
ASAR	Alice Springs	36.59	260	P	P	02 24 01.6	-0.9
	comp=Z,35nm,0.8s,baz=85,slow=8.8,SNR=245						
ASAR				PcP	PcP	02 26 24.6	-0.7
	comp=Z,1.0nm,0.6s,baz=82,slow=3.7,SNR=4.1						
	comp=Z,35nm,0.8s						
WB0	Warramunga Arr	36.68	266		P	02 24 02.0	-1.4
WB0				IAmb	IAmb	02 24 03.0	
	comp=Z,44nm,0.9s						
WRAB	Tennant Creek	36.69	266	P	P	02 24 01.8	-1.6
WRAB				IAmb	IAmb	02 24 03.1	
	comp=Z,33nm,1.1s						
WRAB	Tennant Creek	36.69	266	P	P	02 24 01.8	-1.6
WRAB				pmax	pmax		
	comp=Z,33nm,1.1s						
WRA	Warramunga Arr	36.70	266	P	P	02 24 01.9	-1.6
	comp=Z,21nm,0.9s,baz=104,slow=9.2,SNR=19						
	comp=Z,21nm,0.9s						
WRA	Warramunga Arr	36.70	266	*e*P	P	02 24 01.8	-1.6
WRA				pmax	pmax		
	comp=Z,16nm,0.8s						
GENI	Genyem	37.81	296	P	P	02 24 12.9	-0.1
	comp=Z,9µmcomp=Z,47nm,1.0s						
KDU	Kakadu	40.27	276	P	P	02 24 33.0	-0.5
	comp=Z,8.1nm,1.1s						
H11S2	WAKE ISLAND Hy	40.82	350	T	T	03 07 48.2	
	baz=171,slow=76,SNR=5.0						
H11S3	WAKE ISLAND Hy	40.82	350	T	T	03 07 48.3	
	baz=171,slow=76,SNR=4.7						
H11S1	WAKE ISLAND Hy	40.84	350	T	T	03 07 47.7	
	baz=171,slow=76,SNR=5.2						
MTN	Manton Dam	41.46	275	P	P	02 24 42.2	-1.1
FORT	Forrest	41.53	248	P	P	02 24 43.8	+0.1
	comp=Z,33nm,1.0s						
FORT	Forrest	41.53	248	P	P	02 24 43.6	-0.1
FORT				IAmb	IAmb	02 24 44.3	
	comp=Z,26nm,0.8s						
WRKA	Warakurna	41.55	257	P	P	02 24 44.0	-0.1
	comp=Z,25nm,1.5s						
KNRA	Kununurra	42.83	270	P	P	02 24 54.3	-0.1
	comp=Z,52nm,1.1s						
KNRA	Kununurra	42.83	270	P	P	02 24 53.9	-0.6
KNRA				IAmb	IAmb	02 24 55.0	
	comp=Z,45nm,0.9s						
FITZ	Fitzroy Crossi	45.12	266	P	P	02 25 13.2	+0.3
FITZ				IAmb	IAmb	02 25 14.4	
	comp=Z,32nm,0.9s						
KMBL	Kambalda	46.82	247	P	P	02 25 26.0	-0.2
	comp=Z,12nm,1.1s						
RKT	Rikitea	47.26	102	*e*LR	LR	02 38 45.5	
	comp=Z,3µm,31.2s						
KRAI	Karang Ratu	47.65	286	P	P	02 25 32.8	0.0
	comp=Z,6µmcomp=Z,19nm,1.1s						
PSAC2	Pilbara Seismi	49.69	260	P	P	02 25 48.2	-0.2
	comp=Z,66nm,1.1s						
PSAB3	Pilbara Seismi	49.72	260	P	P	02 25 49.0	+0.4
	comp=Z,83nm,1.3s						
PSA00	Pilbara Seismi	49.73	260	P	P	02 25 49.1	+0.4
	comp=Z,75nm,1.4s						
PSA00	Pilbara Seismi	49.73	260	P	P	02 25 48.0	-0.7
PSA00	Pilbara Seismi	49.73	260	P	P	02 25 47.8	-1.0
PSA00				IAmb	IAmb	02 25 49.7	
	comp=Z,46nm,1.2s						
PSAC1	Pilbara Seismi	49.78	260	P	P	02 25 49.4	+0.4
	comp=Z,89nm,1.2s						
MBWA	Marble Bar	49.92	260	P	P	02 25 50.2	+0.1
	comp=Z,131nm,0.9s						
MBWA	Marble Bar	49.92	260	P	P	02 25 50.1	0.0
MEEK	Meekatharra	50.05	253	P	P	02 25 51.1	0.0
	comp=Z,51nm,1.1s						
KLBR	Kellerberrin	50.34	247	P	P	02 25 53.1	-0.1
	comp=Z,89nm,1.1s						
NWAO	Narrogin (SRO)	50.70	245	P	P	02 25 55.0	-0.9
	comp=Z,58nm,2.1s						
NWAO	Narrogin (SRO)	50.70	245	P	P	02 25 55.7	-0.2
NWAO	Narrogin (SRO)	50.70	245	P	P	02 25 55.7	-0.2
NWAO				pmax	pmax		
	comp=Z,51nm,1.1s						
BLDU	Ballidu	51.30	248	P	P	02 26 00.0	-0.4
	comp=Z,29nm,1.0s						
MUN	Mundaring	51.62	246	P	P	02 26 03.2	+0.3
	comp=Z,37nm,1.3s						
MORW	Morawa	52.03	250	P	P	02 26 05.7	-0.2
	comp=Z,72nm,1.0s						
MORW	Morawa	52.03	250		P	02 26 06.0	+0.1
KAPI	Kappang	54.75	280	*i* P	P	02 26 25.2	-0.9
KAPI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
DBNI	Kabupaten Domp	54.77	275	P	P	02 26 33.8	+7.6
PLAI	Plampang	55.15	275	P	P	02 26 37.0	+8.0
VNDA	Vanda	55.86	183	P	P	02 26 33.5	+0.4
	comp=Z,1.7nm,0.7s,baz=351,slow=9.8,SNR=4.3						
	comp=Z,1.7nm,0.7s						
SBA	Scott Base	56.00	182	P	P	02 26 35.9	+1.9
SBA				IAmb	IAmb	02 26 39.0	
	comp=Z,12nm,1.0s						
SBA	Scott Base	56.00	182	P	P	02 26 35.9	+1.9
SBA				pmax	pmax		
	comp=Z,12nm,1.0s						
TOLI2	Tolitoli	56.43	287	P	P	02 26 36.3	-1.8
TOLI2				IAmb	IAmb	02 26 43.5	
	comp=Z,13nm,0.9s						
MPSI	Mapaga	56.87	286	P	P	02 26 40.4	-0.8
	comp=Z,848nmcomp=Z,10nm,0.9s						
SNJI	Sawahan-Nganju	61.09	273	P	P	02 27 12.3	+1.5
	comp=Z,27nm,1.1s						
SJI	Sawahan	61.10	273	P	P	02 27 17.7	+7.0
CNJI	Cibinong	65.55	272	P	P	02 27 46.7	+6.6
DBJI	Dramaga	66.17	273	P	P	02 27 51.3	+7.2
MJAR	Matsushiro Arr	67.17	330	P	P	02 27 48.8	-1.1
	comp=Z,0.6nm,0.3s,baz=161,slow=6.6,SNR=5.1						
	comp=Z,0.6nm,0.3s						
MJAR	Matsushiro Arr	67.17	330	P	P	02 27 49.3	-0.6
MJAR				IAmb	IAmb	02 28 01.7	
	comp=Z,15nm,1.4s						
MJAR	Matsushiro Arr	67.17	330	P	P	02 27 49.3	-0.6
MJAR				pmax	pmax		
	comp=Z,15nm,1.4s						
MAJO	Matsushiro	67.17	330	*i* P	P	02 27 50.5	+0.6
MAJO				pmax	pmax		
	comp=Z,9.0nm,1.2s						
QSPA	South Pole Qui	68.06	180	P	P	02 27 55.5	+0.1
QSPA				IAmb	IAmb	02 28 06.0	
	comp=Z,19nm,1.3s						
KASI	Kota Agung	68.63	273	P	P	02 27 58.4	-1.2
MDSI	Maura Dua	69.30	274	P	P	02 28 02.1	-1.7
	comp=Z,988nmcomp=Z,26nm,1.0s						
KSRS	Korea Array	73.14	323	P	P	02 28 27.2	+0.8
	comp=Z,2.0nm,0.8s,baz=142,slow=6.2,SNR=5.4						
	comp=Z,2.0nm,0.8s						
KSAR	Wonju Array Be	73.16	323	P	P	02 28 27.6	+1.0
KSAR	Wonju Array Be	73.16	323	P	P	02 28 27.6	+1.0
YSS	Yuzhno-Sakhali	74.09	339	*e*P	P	02 28 31.8	0.0
YSS				*e*S	S	02 38 00.1	-1.6
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
QIZ	Qiongzhong	74.53	298	P	P	02 28 35.8	+0.8
QIZ				S	S	02 38 13.0	+5.3
QIZ				LR	LR		
	comp=Z,400nm,28.2s						
QIZ				LR	LR		
	comp=Z,390nm,20.4s						
QIZ				LR	LR		
	comp=Z,560nm,40.7s						
NJ2	Nanjing	75.07	314	*e*P	P	02 28 40.3	+2.4
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
IPM	Ipoh	75.67	281	P	P	02 28 41.1	-0.7
IPM				IAmb	IAmb	02 28 42.2	
	comp=Z,24nm,0.9s						
IPM	Ipoh	75.67	281	P	P	02 28 41.6	-0.2
	comp=Z,36nm,1.0s						
PET	Petropavlovsk	75.84	351	*i* P	P	02 28 41.3	-0.5
PET				pmax	pmax		
	comp=Z,55nm,1.2s						
KULM	Kulim	76.34	281	P	P	02 28 45.2	-0.4
KULM				IAmb	IAmb	02 28 46.0	
	comp=Z,30nm,1.3s						
RPSI	Rantau Prapat	76.89	278	P	P	02 28 47.9	-0.8
PSI	Prapat	76.93	278	P	P	02 28 47.9	-1.2
	comp=Z,15nm,0.9s,baz=153,slow=3.1,SNR=7.4						
	comp=Z,15nm,0.9s						
MAW	Mawson	77.41	202	P	P	02 28 49.8	-0.8
	comp=Z,8.7nm,1.1s,baz=138,slow=8.4,SNR=5.1						
	comp=Z,8.7nm,1.1s						
GSI	Gunungsitoli	77.59	277	P	P	02 28 52.6	0.0
KCSI	Kotacane, Aceh	78.27	279	P	P	02 29 01.5	+5.1
BELA	Belgrano 2	78.97	174	P	P	02 28 57.5	-1.6
CN2	Changchun	78.99	327	*e*P	P	02 29 03.5	+3.9
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
BNX	BinXian	79.42	329	⇓P	P	02 29 02.0	+0.1
BNX				pmax	pmax		
	comp=Z,10.0nm,1.8s						
LYN	LuoYang	80.86	313	P	P	02 29 10.0	+0.1
LYN				pmax	pmax		
	comp=Z,11nm,1.0s						
HNS	HongShan	81.03	316	⇑P	P	02 29 12.3	+1.5
HNS				pmax	pmax		
	comp=Z,8.0nm,1.6s						
BJI	Beijing	81.70	319	P	P	02 29 16.3	+2.0
BJI				PP	PP	02 32 26.0	+4.2
BJI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BJI				pmax	pmax		
	comp=Z,57nm,4.3s						
HEH	HeiHe	82.74	332	*e*P	P	02 29 22.0	+2.5
HEH				pmax	pmax		
	comp=Z,7.0nm,1.2s						
XAN	Xi'an	83.03	311	P	P	02 29 27.3	+5.9
XAN				pmax	pmax		
	comp=Z,24nm,1.0s						
CMAR	Chiang Mai Arr	83.39	293	P	P	02 29 24.2	+0.6
	comp=Z,1.1nm,0.3s,baz=139,slow=4.2,SNR=12						
	comp=Z,1.1nm,0.3s						
CMAR	Chiang Mai Arr	83.39	293	P	P	02 29 23.0	-0.6
CMAR	Chiang Mai Arr	83.39	293	*e*P	P	02 29 24.6	+1.0
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
SYO	Syowa Base	83.40	195	⇓*e*PcP	PcP	02 29 28.6	+1.5
CHTO	Chiang Mai	83.54	293	P	P	02 29 23.2	-1.2
CHTO	Chiang Mai	83.54	293	P	P	02 29 25.1	+0.7
ELIB	Princess Elisa	84.11	189	*d*P	P	02 29 25.6	-1.0
N15K	Kwethluk River	84.64	13	P	P	02 29 29.8	+0.8
PZH	PanZhiHua	84.67	301	P	P	02 29 32.3	+2.2
HHC	Hu-ho-hao-te	85.02	318	*e*P	P	02 29 33.5	+2.0
HHC				S	SKSac	02 39 57.8	+4.8
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,87nm,6.1s						
HHC				LR	LR		
	comp=Z,730nm,21.3s						
HHC				LR	LR		
	comp=Z,850nm,20.4s						
HHC				LR	LR		
	comp=Z,2µm,20.4s						
ZEA	Zeya	85.38	334	*e*P	P	02 29 31.9	-1.0
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
BTO	Baotou	85.85	317	*e*P	P	02 29 37.3	+1.6
BTO				pmax	pmax		
	comp=Z,18nm,0.9s						
BTO				pmax	pmax		
	comp=Z,350nm,5.0s						
BTO				LR	LR		
	comp=Z,2µm,22.8s						
BTO				LR	LR		
	comp=Z,2µm,24.8s						
BTO				LR	LR		
	comp=Z,5µm,23.3s						
O19K	Port Alsworth	85.97	15	P	P	02 29 36.7	+1.1
TROLL	Troll, Antarti	86.03	183	⇑P	P	02 29 34.6	-1.6
	comp=Z,494nm,0.6s						
ISA	Isabella, Lake	86.08	49	P	P	02 29 37.8	+0.9
ISA				IAmb	IAmb	02 29 45.8	
	comp=Z,10nm,1.3s						
ISA	Isabella, Lake	86.08	49	P	P	02 29 37.8	+0.9
ISA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SEY	Seymchan	86.31	350	*i* P	P	02 29 38.9	+1.7
SEY				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SNAA	Sanae	86.54	181	⇑P	P	02 29 37.0	-1.7
	comp=Z,101nm,1.3s						
SNAA	Sanae	86.54	181	P	P	02 29 37.1	-1.5
	comp=Z,6.4nm,1.1s,baz=204,slow=18,SNR=6.6						
	comp=Z,6.4nm,1.1s						
SNAA	Sanae	86.54	181	P	P	02 29 36.9	-1.7
SNAA				IAmb	IAmb	02 29 40.0	
	comp=Z,8.2nm,1.1s						
SNAA	Sanae	86.54	181	*i* P	P	02 29 37.8	-0.8
SNAA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NVL	N'lazarevskaya	86.60	186	*e*P	P	02 29 35.8	-3.0
NVL				*e*		02 33 00.0	
NVL				*e*S	SKSac	02 40 00.7	-1.3
NVL				*e*SS	SS	02 45 55.3	+2.8
NVL				*e*SSS	SSS	02 49 27.7	
NVL				pmax	pmax		
	comp=Z,11nm,1.1s						
NVL				MLR	MLR		
	comp=Z,947nm,20.0s						
VNA3	Neumayer Olymp	86.97	179	⇑P	P	02 29 39.8	-0.9
	comp=Z,10nm,0.8s						
NVAR	Mina Array Bea	87.60	47	P	P	02 29 45.3	+0.9
	comp=Z,0.5nm,0.7s,baz=216,slow=7.3,SNR=5.1						
	comp=Z,0.5nm,0.7s						
NVAR	Mina Array Bea	87.60	47	P	P	02 29 44.9	+0.5
J05D	Fort Rock, OR	88.25	42	P	P	02 29 48.5	+1.3
TPNV	Topopah Spring	88.28	49	P	P	02 29 49.0	+1.4
TPNV	Topopah Spring	88.28	49	P	P	02 29 49.0	+1.4
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL	Bilibino	89.94	357	*i* P	P	02 29 56.4	+1.9
BILL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
J08A	Circle Bar Ran	90.00	43	P	P	02 29 56.6	+1.1
J08A				IAmb	IAmb	02 30 04.0	
	comp=Z,9.6nm,1.1s						
LCMT	Little Creek M	90.43	50	P	P	02 29 58.6	+1.0
X16A	Lo Mia Camp, P	90.57	53		P	02 29 59.4	+0.9
SPR3	Spring Creek 3	90.59	48		P	02 29 59.0	+0.4
SPR3				IAmb	IAmb	02 30 03.2	
	comp=Z,9.7nm,1.4s						
CCUT	Cedar City	90.59	49		P	02 29 59.3	+0.8
CCUT				IAmb	IAmb	02 30 14.9	
	comp=Z,20nm,1.8s						
PSUT	Pine Spring	90.70	48	P	P	02 30 00.1	+1.1
YAK	Yakutsk	90.78	341	*e*P	P	02 30 00.0	+1.5
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
SZCU	Shurtz Canyon	90.81	50	P	P	02 30 01.0	+1.5
U15A	North Rim	90.84	51	P	P	02 30 00.8	+1.0
U15A				IAmb	IAmb	02 30 12.4	
	comp=Z,8.3nm,1.0s						
M26K	Nabesna, AK	90.88	19	P	P	02 30 00.6	+1.5
M26K				IAmb	IAmb	02 30 05.6	
	comp=Z,15nm,1.0s						
PKCU	Pink Cliffs	91.29	50		P	02 30 02.7	+0.8
PKCU				IAmb	IAmb	02 30 18.0	
	comp=Z,20nm,1.4s						
HDA	Harding Lake	91.38	16	P	P	02 30 02.9	+1.7
H03S2	Juan Fernandez	91.42	127	T	T	04 11 29.7	
	baz=241,slow=74,SNR=5.3						
H03S1	Juan Fernandez	91.44	127	T	T	04 11 32.9	
	baz=241,slow=74,SNR=5.7						
H03S3	Juan Fernandez	91.44	127	T	T	04 11 31.8	
	baz=241,slow=74,SNR=5.3						
COLA	College	91.54	15	*i* P	P	02 30 03.0	+1.1
COLA				pmax	pmax		
	comp=Z,14nm,1.1s						
ULN	Ulaanbaatar	91.56	322	P	P	02 30 08.7	+6.0
ULN	Ulaanbaatar	91.56	322	*i* P	P	02 30 05.4	+2.7
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
IL31		91.69	16	P	P	02 30 04.3	+1.7
ILAR	Eielson Array	91.69	16	P	P	02 29 59.9	-2.8
	comp=Z,1.5nm,0.9s,baz=236,slow=6.1,SNR=10						
	comp=Z,1.5nm,0.9s						
ILAR	Eielson Array	91.69	16	P	P	02 30 03.4	+0.7
ILAR	Eielson Array	91.69	16	P	P	02 30 03.4	+0.7
MFID	Camas Ranch	91.70	43	P	P	02 30 04.5	+1.1
L27K	Beaver Creek,	91.74	19	P	P	02 30 03.9	+0.9
L27K				IAmb	IAmb	02 30 10.1	
	comp=Z,15nm,1.3s						
SCRK	Sand Creek	91.83	17	P	P	02 30 02.8	-0.7
SCRK				IAmb	IAmb	02 30 09.4	
	comp=Z,12nm,1.0s						
SONM	Songino Array	91.92	322	P	P	02 30 03.4	-1.0
	comp=Z,1.1nm,0.9s,baz=127,slow=3.5,SNR=5.2						
	comp=Z,1.1nm,0.9s						
SONM	Songino Array	91.92	322	P	P	02 30 03.1	-1.2
SONM				IAmb	IAmb	02 30 15.0	
	comp=Z,6.5nm,1.2s						
SONM	Songino Array	91.92	322	*e*P	P	02 30 03.9	-0.4
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GTA	Gaotai	92.03	312	*e*P	P	02 30 05.3	+0.3
GTA				pP	pP	02 30 11.5	-5.0
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SHL	Shillong	92.28	297		P	02 30 06.2	-0.4
SHL				IAmb	IAmb	02 30 12.5	
	comp=Z,11nm,0.9s						
SHL	Shillong	92.28	297	P	P	02 30 06.2	-0.4
SHL				pmax	pmax		
	comp=Z,11nm,0.9s						
J26L	Joseph Creek	92.35	17		P	02 30 06.6	+0.7
K27K	Chicken	92.40	18	P	P	02 30 07.6	+1.6
K27K				IAmb	IAmb	02 30 12.6	
	comp=Z,11nm,1.0s						
D19K	Kuna River	92.57	10	P	P	02 30 08.2	+1.4
D19K				IAmb	IAmb	02 30 13.7	
	comp=Z,9.6nm,1.1s						
Q16A	Castle Valley	92.75	49		P	02 30 09.4	+0.9
Q16A				IAmb	IAmb	02 30 15.0	
	comp=Z,16nm,1.7s						
C19K	Lookout Ridge	92.89	9	P	P	02 30 09.7	+1.4
C19K				IAmb	IAmb	02 30 15.6	
	comp=Z,14nm,1.3s						
L29M	L29M	92.90	20	P	P	02 30 09.6	+1.2
M30M	Minto, Yukon	92.95	21		P	02 30 09.7	+1.1
D20K	Etivluk River	93.01	10	P	P	02 30 10.0	+1.3
D20K				IAmb	IAmb	02 30 15.8	

	comp=Z,10nm,1.1s						
I26K	Coal Creek Min	93.09	17	P	P	02 30 10.5	+1.4
DAWY	Dawson	93.22	19	P	P	02 30 11.0	+1.2
DAWY				IAmb	IAmb	02 30 16.4	
	comp=Z,12nm,1.1s						
SRU	San Rafael Swe	93.28	49	P	P	02 30 09.8	-1.1
SRU				IAmb	IAmb	02 30 18.3	
	comp=Z,6.3nm,1.3s						
SRU	San Rafael Swe	93.28	49	P	P	02 30 09.8	-1.1
SRU				pmax	pmax		
	comp=Z,6.0nm,1.3s						
F24K	Squaw Lake	93.69	14	P	P	02 30 12.8	+0.8
F24K				IAmb	IAmb	02 30 18.9	
	comp=Z,5.5nm,1.0s						
E23K	Chandalar	93.77	13	P	P	02 30 12.9	+0.6
E23K				IAmb	IAmb	02 30 21.0	
	comp=Z,13nm,1.4s						
G26K	Porcupine Rive	94.20	15	P	P	02 30 15.3	+1.1
D23K	Nanushuk River	94.31	12	P	P	02 30 16.5	+1.8
D23K				IAmb	IAmb	02 30 22.2	
	comp=Z,9.3nm,1.1s						
ANMO	Albuquerque	94.51	54	i P	P	02 30 18.1	+1.4
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.0s						
I30M	Mount Dempster	94.95	19	P	P	02 30 19.5	+1.7
I30M				IAmb	IAmb	02 32 43.3	
	comp=Z,13nm,1.6s						
G30M	tAoh Zraii Nji	96.23	18	P	P	02 30 24.6	+1.0
E28M	Babbage River	96.52	16	P	P	02 30 26.2	+1.4
E28M				IAmb	IAmb	02 30 31.6	
	comp=Z,12nm,1.3s						
D27M	Malcolm River	96.64	15	P	P	02 30 27.3	+1.9
D27M				IAmb	IAmb	02 30 31.6	
	comp=Z,11nm,1.4s						
TIXI	Tiksi	98.32	347	i P	Pdif	02 30 34.9	+2.1
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.0s						
YKA	Yellowknife Ar	101.25	27	P	Pdif	02 30 44.2	-1.8
	comp=Z,0.6nm,0.9s,baz=232,slow=6.2,SNR=7.3						
WMQ	Urumqi	102.10	312	eP	Pdif	02 30 52.0	+1.6
WMQ				pP	pPdif	02 30 57.8	-4.1
WMQ				pmax	pmax		
	comp=Z,11nm,1.1s						
WMQ				LR	LR		
	comp=Z,570nm,23.9s						
WMQ				LR	LR		
	comp=Z,620nm,23.3s						
WMQ				LR	LR		
	comp=Z,650nm,24.3s						
MKAR	Makanchi Array	106.61	314	Pdiff	Pdif	02 31 10.8	+0.5
	comp=Z,1.0nm,0.7s,baz=116,slow=4.2,SNR=5.3						
BVAR	Borovoye Array	115.18	319	PKP	PKiKP	02 35 35.4	-1.4
	comp=Z,1.9nm,0.9s,baz=90,slow=1.5,SNR=5.5						
BORK	Borovoye	115.22	320	i PKIKP	PKPdf	02 35 39.6	+2.7
ARTI	Arti	122.00	324	i PKIKP	PKiKP	02 35 49.2	-0.8
KIRV	Kirov	126.21	328	i PKIKP	PKiKP	02 35 58.7	+0.5
ARCES	ARCESS Array B	128.75	346	PKP	PKiKP	02 36 02.0	-1.1
	comp=Z,3.7nm,0.8s,baz=27,slow=5.6,SNR=6.9						
ARCES	ARCESS Array B	128.75	346		PKiKP	02 36 02.4	-0.7
ARCES	ARCESS Array B	128.75	346	PKIKP	PKiKP	02 36 02.0	-1.1
BELG	Belogornoye	128.97	320	i PKIKP	PKiKP	02 36 04.4	+0.5
VRH	Novokhopyorsk	132.82	320	ePKIKP	PKiKP	02 36 11.3	-0.4
VRH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
OBN	Obninsk	134.06	327	i PKIKP	PKiKP	02 36 13.2	-0.9
OBN				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KBZ	Khabaz	134.09	310	i PKIKP	PKiKP	02 36 14.0	-0.5
VORR	Voronezh	134.12	322	ePKIKP	PKiKP	02 36 14.9	+0.6
VORR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KIV	Kislovodsk	134.19	310	ePKIKP	PKiKP	02 36 14.2	-0.7
KIV				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SHA1	Shidzhatmaz	134.26	310	i PKIKP	PKiKP	02 36 14.3	-0.9
VSR	Storozhevoye	134.31	321	ePKIKP	PKPdf	02 36 12.9	-0.5
VSR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FINES	FINESS Array B	134.68	339	PKP	PKiKP	02 36 15.8	+0.7
	comp=Z,2.3nm,0.9s,baz=101,slow=4.4,SNR=3.9						
VSU	Vasula	136.52	335	i PKIKP	PKiKP	02 36 18.6	-0.4
NB2	NORSAR Subarra	139.12	347	PKP	PKiKP	02 36 28.3	+4.0
	comp=Z,4.0nm,1.0s,baz=28,slow=2.1						
NOA	NORSAR Array B	139.12	347	PKP	PKiKP	02 36 25.4	+1.1
	comp=Z,1.5nm,0.8s,baz=34,slow=2.0,SNR=6.6						
BRTR	Keskin Array B	141.76	307	PKP	PKPdf	02 36 27.1	-0.6
	comp=Z,0.6nm,0.8s,baz=97,slow=6.2,SNR=3.9						
BRTR	Keskin Array B	141.76	307		PKPdf	02 36 27.3	-0.4
CFR	Carcaliu	143.55	318	⇑P	PKPdf	02 36 28.8	-1.6
GHRR		143.57	319	⇑P	PKPdf	02 36 29.2	-1.3
TESR	Tescani	143.80	320	⇓P	PKPdf	02 36 29.0	-1.9
TLBR	Topalu	143.90	317	⇑P	PKiKP	02 36 34.9	+0.3
BUR08	Bucovina Ar. S	144.02	323		PKPdf	02 36 30.6	-0.7
BURAR	Bucovina Array	144.03	323		PKPbc	02 36 29.3	0.0
BURAR	Bucovina Array	144.03	323	⇑P	PKPdf	02 36 29.8	-1.6
ONER	Baraj Valea Uz	144.04	320	⇑P	PKPbc	02 36 29.2	-0.2
VRI	Vrincioaia	144.08	319	⇓P	PKPdf	02 36 29.5	-1.9
PLOR	Plostina	144.13	319	⇑P	PKPab	02 36 27.1	-2.1
GRER		144.17	319	⇑P	PKiKP	02 36 36.1	+1.0
PGOR	Pogoanele	144.40	318	⇑P	PKPdf	02 36 31.4	-0.5
COVR	Voineasa-Covas	144.41	320	⇓P	PKPbc	02 36 30.2	-0.3
TURR	Turia	144.41	320	⇑P	PKPdf	02 36 30.7	-1.3
OZUR		144.53	320	⇑P	PKPab	02 36 28.9	-1.7
BOSR	Bodos	144.61	320	⇓P	PKPdf	02 36 31.2	-1.2
LEHL	Lehliu	144.71	317	⇑P	PKiKP	02 36 34.4	-1.8
MLR	Muntele Rosu	144.74	319	⇑P	PKPbc	02 36 31.1	-0.6
ARCR	ARCALIA	144.81	323	⇑P	PKPdf	02 36 31.9	-0.7
DOPR	Dopca	144.83	320	⇑P	PKPdf	02 36 31.9	-0.8
BMR	Baia Mare	144.94	324	⇓P	PKPdf	02 36 32.2	-0.6
STHS	Stebnicka Huta	145.01	328	ePKIKP	PKPdf	02 36 33.8	+0.9
STHS				e		02 36 37.2	
STHS	Stebnicka Huta	145.01	328	ePKP	PKPdf	02 36 33.8	+0.9
STHS				e		02 36 37.2	
TGMR	Targu Mures	145.03	322	⇑P	PKPbc	02 36 30.8	-1.6
OJC	Ojcow	145.15	330		PKPdf	02 36 33.9	+0.8
OJC	Ojcow	145.15	330	PKIKP	PKPdf	02 36 33.9	+0.8
MDB	Medias	145.32	321	⇑P	PKiKP	02 36 35.0	-2.5
CJR	Cluj-Napoca	145.45	323	⇓P	PKPab	02 36 33.4	-0.7
CEI	Carei	145.49	325	⇓P	PKPab	02 36 33.4	-0.7
MESR	Meseseni	145.55	324	⇓P	PKiKP	02 36 39.9	+2.0
ARR	Arges	145.59	320	⇓P	PKPab	02 36 33.5	-1.1
TNR	Turnu Rosu	145.66	321	⇑P	PKiKP	02 36 36.3	-1.9
MARR	Marisel-Cluj	145.74	323	⇓P	PKPab	02 36 35.3	+0.1
HUMR	Humele	145.82	319	⇑P	PKPbc	02 36 34.1	-0.9
DRGR		145.90	323	⇑P	PKPbc	02 36 34.5	-0.7
KECS	Kecovo	146.00	328	ePKP2	PKiKP	02 36 42.4	+3.6
KECS	Kecovo	146.00	328	ePKP	PKiKP	02 36 42.4	+3.6
LANS	Liptovska Anna	146.04	329	ePKP2	PKPab	02 36 36.4	+0.2
LANS	Liptovska Anna	146.04	329	ePKP	PKPab	02 36 36.4	+0.2
LANS				e		02 36 42.6	
LOT	Lotru	146.06	321	⇓P	PKPab	02 36 35.9	-0.6
OKC	Ostrava-Krasne	146.17	331	AMS	AMS	03 43 30.0	
	comp=Z,600nm,21.9s						
STEB	Steborice	146.26	332	ePKP	PKPbc	02 36 35.1	-1.1
DEV	Deva	146.32	322	⇑P	PKPab	02 36 37.1	-0.2
VLAD	Vladila	146.45	318	⇓P	PKPab	02 36 36.9	-0.9
OSTC	Ostas	146.46	334	AMS	AMS	03 45 00.0	
	comp=Z,1μm,19.7s						
MORC	Moravsky Berou	146.48	332	⇑P	PKPbc	02 36 35.6	-1.3
MORC	Moravsky Berou	146.48	332	ePKP	PKPab	02 36 37.6	-0.2
CHVC	Chvalec	146.50	334	ePKP2	PKPbc	02 36 36.2	-0.7
CHVC				MLR	MLR		
	comp=Z,1μm,21.4s						
CHVC	Chvalec	146.50	334	ePKP	PKPbc	02 36 36.2	-0.7
CHVC				AMS	AMS	03 45 10.0	
	comp=Z,1μm,21.4s						
DPC	Dobruska-Polom	146.58	333	ePKP2	PKPbc	02 36 36.3	-0.8
DPC				MLR	MLR		
	comp=Z,900nm,21.1s						
DPC	Dobruska-Polom	146.58	333	ePKP	PKPbc	02 36 36.3	-0.8
DPC				AMS	AMS	03 45 20.0	
	comp=Z,900nm,21.1s						
UPC	Upice	146.58	334	AMS	AMS	03 45 00.0	
	comp=Z,1μm,21.3s						
KRLC	Kraliky	146.59	333	ePKP2	PKPbc	02 36 36.4	-0.8
KRLC				MLR	MLR		
	comp=Z,1μm,23.1s						
KRLC	Kraliky	146.59	333	ePKP	PKPbc	02 36 36.4	-0.8
KRLC				AMS	AMS	03 45 30.0	
	comp=Z,1μm,23.1s						
EKA	Eskdalemuir Ar	146.63	357	PKPbc	PKPdf	02 36 35.2	-0.2
	comp=Z,4.9nm,0.7s,baz=350,slow=2.6,SNR=6.8						
MAUC	Maruska	146.65	331	ePKP	PKPbc	02 36 36.4	-1.0
PSZ	Piszkesteto	146.67	327	⇑P	PKPdf	02 36 35.7	-0.2
GZR	Gura Zlata	146.67	321	⇓P	PKPbc	02 36 36.3	-1.3
SIRR	Siria	146.79	323	⇑P	PKPbc	02 36 37.2	-0.6
JAVC	Velka Javorina	147.09	330	ePKP	PKPab	02 36 39.2	-1.1
CLL	Collm	147.10	337		PKPbc	02 36 37.5	-1.0
CLL	Collm	147.10	337	PKIKP	PKPbc	02 36 37.5	-1.0
CLL	Collm	147.10	337	i PKPdf	PKPbc	02 36 37.1	-1.4
	comp=Z,4.0nm,0.9s						
CLL				i PKPbc	PKPab	02 36 39.3	-0.8
	comp=Z,10.0nm,0.8s						
CLL				i PKPmax		02 36 43.7	
	comp=Z,20nm,0.9s						
PVCC	Panska Ves	147.15	335	ePKP2	PKPbc	02 36 38.2	-0.5
PVCC	Panska Ves	147.15	335	ePKP	PKPbc	02 36 38.2	-0.5
HERR	Herculane	147.17	321	⇑P	PKPbc	02 36 38.0	-0.9
BZS	Buzias	147.21	323	⇑P	PKPbc	02 36 37.8	-1.2
VRAC	Vranov	147.25	332	⇑P	PKiKP	02 36 41.0	-0.4
VRAC	Vranov	147.25	332	ePKP	PKPbc	02 36 38.2	-0.8
HSKC	Hora Svate Kat	147.51	336	AMS	AMS	03 38 20.0	
	comp=Z,900nm,25.5s						
KRUC	Moravsky	147.51	332	ePKP	PKPbc	02 36 38.8	-0.9
PRA	Prague	147.56	335	AMS	AMS	03 40 20.0	
	comp=Z,1μm,24.0s						
PRU	Pruhonice	147.58	335	ePKIKP	PKPbc	02 36 38.9	-1.0
PRU				MLR	MLR		
	comp=Z,1μm,26.0s						
PRU	Pruhonice	147.58	335	ePKP	PKPbc	02 36 38.9	-1.0
PRU				AMS	AMS	03 40 00.0	
	comp=Z,1μm,26.0s						
MODS	Modra-Piesok	147.62	330	ePKP2	PKPbc	02 36 39.9	-0.2
MODS	Modra-Piesok	147.62	330	ePKP	PKPbc	02 36 39.9	-0.2
MODS				e		02 36 46.3	
MDVR	Moldovita	147.64	321	⇑P	PKiKP	02 36 41.4	-1.0
ZVC	Zvikov	148.16	334	ePKP	PKPbc	02 36 40.5	-1.0
ZVC				AMS	AMS	03 46 10.0	
	comp=Z,800nm,19.8s						
BOVS	Bovan	148.30	319	⇑P	PKPbc	02 36 40.5	-1.5
MORH	Mrgy, Hungar	148.44	326	⇑P	PKPbc	02 36 41.4	-0.9
RONA	Rosalia, Austr	148.56	330	i pPKP	PKPbc	02 36 42.1	-0.6
	comp=Z,18nm,0.9s						
CKRC	Cesky Krumlov	148.59	333	AMS	AMS	03 46 30.0	
	comp=Z,1μm,23.4s						
CONA	Conrad Observa	148.59	331	i pPKP	PKPbc	02 36 42.0	-0.8
	comp=Z,13nm,1.0s						
KHC	Kasperske Hory	148.65	335		PKPbc	02 36 40.3	-2.5
KHC	Kasperske Hory	148.65	335	PKIKP	PKPbc	02 36 40.3	-2.5
KHC	Kasperske Hory	148.65	335	ePKP	PKPbc	02 36 41.4	-1.4
KHC				AMS	AMS	03 40 30.0	
	comp=Z,1μm,25.0s						
GEC2	GERESS Array S	148.82	334		PKPdf	02 36 40.4	+0.9
GERES	GERESS Array B	148.82	334	PKPbc	PKPbc	02 36 42.1	-1.2
	comp=Z,3.2nm,0.7s,baz=25,slow=4.4,SNR=24						
ARSA	Arzberg	149.25	330		PKPab	02 36 49.0	+0.1
ARSA	Arzberg	149.25	330	i pPKP	PKPbc	02 36 43.1	-1.3
	comp=Z,4.5nm,0.8s						
MOA	Molln	149.36	332	epPKP	PKPbc	02 36 43.5	-1.1
	comp=Z,13nm,1.2s						
BIOA	Bad Ischl, Aus	149.75	333	i pPKP	PKiKP	02 36 45.2	-1.4
	comp=Z,7.8nm,0.9s						
BTNL	Ternell	149.84	344	dPKP	PKPab	02 36 51.0	-0.2
MEM	Membach	149.85	344	dPKP	PKPab	02 36 50.7	-0.5
SOKA	Soboth	149.90	330	i pPKP	PKPbc	02 36 44.7	-1.3
	comp=Z,14nm,1.1s						
BSTI	Sart Tilman	149.98	345	dPKP	PKPab	02 36 51.4	-0.3
UCC	Uccle	150.06	346		PKPab	02 36 49.9	-2.1
UCC	Uccle	150.06	346	PKP2	PKPab	02 36 49.9	-2.1
UCC	Uccle	150.06	346	dPKP	PKPab	02 36 51.3	-0.7
BHOU	Houvegnez	150.09	344	dPKP	PKPab	02 36 51.9	-0.3
BLY	Banja Luka	150.19	325	⇑P	PKiKP	02 36 46.9	-0.6
OBKA	Obir	150.25	330	i pPKP	PKPbc	02 36 43.9	-3.0
	comp=Z,7.7nm,0.8s						
KBA	Koelnbreinsper	150.35	332	i pPKP	PKPbc	02 36 44.3	-2.9
	comp=Z,24nm,0.8s						
LESA	Schwarzleotal	150.37	333	epPKP	PKPbc	02 36 45.7	-1.4
	comp=Z,4.5nm,0.6s,SNR=4.3						
LESA	Schwarzleotal	150.37	333	eP	PKPbc	02 36 45.7	-1.4
	comp=Z,4.5nm,0.6s,SNR=4.3						
PDG	Podgorica	150.46	320	⇓P	PKPbc	02 36 46.7	-0.7
RCHB	Rochefort	150.46	345	dPKP	PKPab	02 36 52.6	-1.1
STU	Stuttgart	150.56	339		PKPab	02 36 50.8	-3.4
STU	Stuttgart	150.56	339	PKIKP	PKPab	02 36 50.8	-3.4
MYKA	Terra Mystica	150.57	331	i pPKP	PKPbc	02 36 45.9	-1.7
	comp=Z,3.6nm,0.6s						
LJU	Ljubljana	150.60	330	i PKPbc	PKPbc	02 36 46.2	-1.5
LJU				e		02 36 52.6	
DOU	Dourbes	150.67	346	dPKPdf	PKPbc	02 36 44.1	-3.5
DOU				dPKP	pPKPdf	02 36 52.4	-1.7
WLF	Walferdange	150.68	343	dPKP	PKiKP	02 36 49.9	+1.5
CEY	Cerknica	150.88	329	i PKPbc	PKPbc	02 36 46.8	-1.5
CEY				e		02 36 53.1	
WATA	Walderalm	150.88	335	i pPKP	PKPbc	02 36 47.0	-1.5
	comp=Z,4.2nm,0.6s,SNR=4.5						
WTTA	Wattenberg	150.92	334	epPKP	PKPbc	02 36 46.3	-2.3
	comp=Z,8.2nm,0.6s,SNR=11						
WTTA	Wattenberg	150.92	334	P	PKPbc	02 36 46.3	-2.3
	comp=Z,8.2nm,0.6s,SNR=11						
ABTA	Abfaltersbach	150.97	333	i pPKP	PKPbc	02 36 46.8	-1.8
	comp=Z,11nm,1.5s,SNR=8.0						
RETA	Reutte	151.08	336	epPKP	PKPbc	02 36 47.6	-1.2
	comp=Z,2.3nm,0.6s,SNR=4.7						
RETA	Reutte	151.08	336	P	PKPbc	02 36 47.6	-1.2
	comp=Z,2.3nm,0.6s,SNR=4.7						
SABO	M.te Sabotino	151.08	331		PKPbc	02 36 47.5	-1.3
SQTA	Sankt Quirin	151.12	335	epPKP	PKPbc	02 36 47.8	-1.2
	comp=Z,8.4nm,0.6s,SNR=12						
SQTA	Sankt Quirin	151.12	335	P	PKPbc	02 36 47.8	-1.2
	comp=Z,8.4nm,0.6s,SNR=12						
BFO	Black Forest	151.23	339		PKPab	02 36 53.6	-3.4
STAL	STALIGIAL	151.26	332		PKPdf	02 36 43.2	0.0
FETA	Feichten	151.48	335	epPKP	PKPbc	02 36 48.1	-1.8
	comp=Z,6.7nm,1.0s						
DAVA	Damuels	151.58	336	epPKP	PKPbc	02 36 49.0	-1.1
	comp=Z,3.4nm,0.6s						
FUORN	Ofenpass-Fuorn	151.99	335		PKPdf	02 36 43.0	-1.6
TEOL	Teolo	152.42	332		PKPdf	02 36 45.3	+0.3
TUE	Stuetta	152.46	336		PKiKP	02 36 51.4	-1.0
ESDC	Sonseca Array	162.27	354	PKPab	PKPab	02 37 43.7	-0.9
	comp=Z,0.7nm,0.8s,baz=355,slow=5.3,SNR=3.1						
ESDC	Sonseca Array	162.27	354		PKPab	02 37 44.0	-0.6
TORD	Torodi Ar. Bea	168.32	222	PKP	PKPdf	02 37 01.9	-1.4
	comp=Z,1.1nm,0.9s,baz=194,slow=0.2,SNR=5.2						
TORD				PKPab	PKPab	02 38 10.8	-1.1
	comp=Z,1.9nm,0.9s,baz=108,slow=4.0,SNR=5.9						
TORD	Torodi Ar. Bea	168.32	222		PKPdf	02 37 01.5	-1.7
TORD					PKPab	02 38 11.5	-0.4
TAM	Tamanrasset	168.98	276		PKPab	02 38 13.8	-1.3
TAM	Tamanrasset	168.98	276	PKP2	PKPab	02 38 13.8	-1.3

BGR **26** 02:21:22.6, 23.°86S × 178.°66E, h33^{km}

IDC **26** 02:21:25.3±0.5, 22.°07S × 173.°36E, h0^{km}, mb4.7/22, mbtmp4.7/23, ML4.0/1, MS4.9/49, Error ellipse: s-maj=18.5km s-min=14.7km az=149.0

MOS **26** 02:21:26.4±1.2, 22.°05S × 173.°20E, h10^{km}, mb5.4/40, MS5.1/7, Error ellipse: s-maj=9.4km s-min=8.7km az=155.5

NEIC **26** 02:21:28.5±2.0, 21.°98S±0.°07 × 173.°22E±0.°08, h10^{km}±1^{km}, mb5.4/271, Mww5.4/11, Error ellipse: s-maj=15.2km s-min=8.5km az=48.0

GCMT **26** 02:21:30.5±0.1, 22.°00S±0.°01 × 173.°38E±0.°01, h13^{km}, MW5.5/149, Moment Tensor Solution. s105,c199; s149,c298; Duration: 1.^{s}4 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.52±.03; M$_{\theta\theta}$-0.10±.03; M$_{\phi\phi}$0.61±.03; M$_{r\theta}$-0.07±.06; M$_{\theta\phi}$2.51±.03; M$_{\phi r}$-0.11±.06; Best double couple: M$_0$2.53800×10^{17} NP1:ϕ_s266.00000°, δ88.00000°, λ1.00000°. NP2:ϕ_s176.00000°, δ89.00000°, λ178.00000°. Principal axes: T 2.7980, Plg2.0000°, Azm131.0000°; N -0.5200, Plg88.0000°, Azm325.0000°; P -2.2780, Plg1.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

BJI **26** 02:21:32.9, 21.°90S × 174.°05E, h75^{km}, mB5.6/39, mb4.9/63, Ms5.3/57, Ms7 5.1/58

NOU **26** 02:21:32.3, 22.°16S × 173.°36E, h37^{km}, ML5.4/114, Southeast of Loyalty Islands

NEIC **26** 02:21:35.2, 22.°14S × 173.°16E, h24^{km}, Moment Tensor Solution. Duration: 2.^{s}7 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.42; M$_{\theta\theta}$-0.69; M$_{\phi\phi}$0.26; M$_{r\theta}$0.08; M$_{\theta\phi}$1.48; M$_{\phi r}$-0.49; Fault plane solution: M$_0$1.67000×10^{17} NP1: ϕ_s261.85000°, δ69.89000°, λ7.35000°. NP2:ϕ_s169.31000°, δ83.10000°, λ159.74000°. Principal axes: T 1.4572, Plg19.0000°, Azm124.0000°; N 0.3616, Plg69.0000°, Azm331.0000°; P -1.8188, Plg9.0000°, Azm217.0000°;

NEIC **26** 02:21:35.2, 22.°14S × 173.°16E, h24^{km}

ISC 26 02:21:31.5±0.2, **22.°09S**±0.°04 × **173.°45E**±0.°04, **h40^{km}, n743, σ1.^{s}53**/619, **mb5.4**/291, **MS5.0**/77, **59C-26D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	5.07	276	Pn	Pn	02 22 42.8	-2.2
MARNC	Mare, Loyalty	5.07	276	P	Pn	02 22 44.9	-0.1
	0.9nm,1.7s						
PINNC	Pines Island,	5.58	263		Pn	02 22 49.8	-2.2
PINNC	Pines Island,	5.58	263	P	Pn	02 22 50.5	-1.5
	320nm,1.1s						
PINNC	Pines Island,	5.58	263	P	Pn	02 22 49.3	-2.7
	320nm,1.1s						
PINNC	Pines Island,	5.58	263	S	Sn	02 23 54.5	-0.3
	320nm,1.1s						
YATNC	Mamie plateau,	6.08	269	P	Pn	02 22 58.0	-0.9
	109nm,0.7s						
YATNC	Mamie plateau,	6.08	269	P	Pn	02 22 57.8	-1.1
	109nm,0.7s						
YATNC	Mamie plateau,	6.08	269	S	Sn	02 24 07.0	-0.2
	109nm,0.7s						
MSVF	Nonsavu	6.12	46	Pn	Pn	02 23 03.0	+3.5
MSVF	Nonsavu	6.12	46	P	Pn	02 23 00.8	+1.2
	212nm,1.4s						
MSVF	Nonsavu	6.12	46	i P	Pn	02 22 58.9	-0.7
OUENC	Ouen Island, N	6.13	266	P	Pn	02 22 58.5	-1.0
	200nm,0.9s						
OUENC	Ouen Island, N	6.13	266	P	Pn	02 22 57.0	-2.5
	200nm,0.9s						
OUENC	Ouen Island, N	6.13	266	S	Sn	02 24 08.8	+0.4
	200nm,0.9s						
DZM	Mont Dzumac	6.49	269	Pn	Pn	02 23 02.9	-1.7
	3.4nm,0.3s,baz=55,slow=21,SNR=17						
DZM				LR	LR	02 25 09.2	
	comp=Z,7μm,20.1s,baz=106,slow=35						
	49nm,0.8s						
DZM	Mont Dzumac	6.49	269	ePn	Pn	02 23 02.0	-2.6
	268nm,1.0s						
DZM				eLR	LR	02 24 17.4	
	8μm,21.8s						
DZM	Mont Dzumac	6.49	269		Pn	02 23 02.6	-2.0
DZM	Mont Dzumac	6.49	269	P	Pn	02 23 03.4	-1.2
	165nm,1.0s						
DZM	Mont Dzumac	6.49	269	P	Pn	02 23 02.8	-1.8
	165nm,1.0s						
DVP	Devils Point	6.58	310	P	Pn	02 23 08.6	+2.9
	4μm,1.2s						
NFK	Norfolk Island	8.53	215	P	Pn	02 23 31.6	-0.8
	comp=Z,608nm,1.1s,comp=Z,1782μm						
SANVU	Saraoutou	8.86	317		Pn	02 23 34.7	-2.3
SANVU	Saraoutou	8.86	317	P	Pn	02 23 36.9	-0.2
	comp=Z,324nm,1.2s						
RAO	Raoul Island	10.56	134	LR	LR	02 27 17.1	
	comp=Z,22μm,19.1s,baz=330,slow=33						
TOZ	Tahuroa Road	15.69	174		Pn	02 25 10.4	+0.7
MXZ	Matakaoa Point	15.99	166		Pn	02 25 14.2	+0.7
MXZ	Matakaoa Point	15.99	166	P	P	02 25 14.8	-1.7
	comp=Z,160nm,1.8s						
HURO	Huro Makira	15.99	314	P	P	02 25 16.8	+0.1
	comp=Z,178nm,2.4s						
AFI	Afiamalu	16.23	62		P	02 25 17.7	-1.7
AFI	Afiamalu	16.23	62	P	P	02 25 18.6	-0.8
	comp=Z,32nm,1.4s						
AFI	Afiamalu	16.23	62	P	P	02 25 17.7	-1.7
AFI				pmax	pmax		
	comp=Z,218nm,1.6s						
HIZ	Hauiti	16.42	176	P	P	02 25 23.7	+2.4
URZ	Urewera	16.43	170	Pn	P	02 25 21.8	+0.4
	comp=Z,0.6nm,0.3s,baz=355,slow=11,SNR=7.9						
URZ				LR	LR	02 30 10.8	
	comp=Z,8μm,21.1s,baz=347,slow=32						
NGOA	Tingoa Renbel	16.53	307	P	Pn	02 25 19.6	-0.9
	comp=Z,679nm,1.3s						
RTZ	Ruatahuna	16.75	170	P	P	02 25 25.8	+0.7
RTZ				IAmb	IAmb	02 25 32.6	
	comp=Z,443nm,1.6s						
BKZ	Black Stump Fm	17.23	172		P	02 25 31.7	+1.5
BKZ	Black Stump Fm	17.23	172	P	P	02 25 30.6	+0.3
	comp=Z,193nm,2.2s						
SAVO	Savo Central	18.36	312	P	Pn	02 25 43.0	-0.2
	comp=Z,166nm,1.4s						
MRZ	Mangatainoka R	18.61	175		Pn	02 25 46.8	+0.9
BFZ	Birch Farm	18.69	173	P	Pn	02 25 48.5	+1.5
BFZ				IAmb	IAmb	02 25 54.9	
	comp=Z,357nm,1.8s						
BFZ	Birch Farm	18.69	173	P	P	02 25 45.8	-0.6
	comp=Z,81nm,1.1s						
QRZ	Quartz Range	18.70	182	P	Pn	02 25 49.7	+2.6
TKNZ	Takaka Hill	18.90	181		Pn	02 25 52.6	+3.1
TATA	Tatamba Isabel	18.92	314	P	Pn	02 25 50.8	+0.9
	comp=Z,120nm,1.3s						
NNZ	Nelson	19.07	180	P	Pn	02 25 51.4	-0.2
TCW	Tory Channel	19.08	178	P	Pn	02 25 53.0	+1.4
SNZO	South Karori	19.20	177		Pn	02 25 53.2	+0.1
SNZO				IAmb	IAmb	02 26 02.4	
	comp=Z,417nm,1.5s						
SNZO	South Karori	19.20	177	P	Pn	02 25 52.2	-0.8
	comp=Z,108nm,1.6s						
MRNZ	Matariki Terra	19.27	182	P	Pn	02 25 54.2	+0.3
TUWZ	Tuamarina	19.29	179	P	Pn	02 25 54.4	+0.2
BHW	Baring Head	19.30	177	P	Pn	02 25 54.9	+0.6
BSWZ	Blackbirch Sta	19.58	179	P	Pn	02 25 59.3	+1.7
CMWZ	Cape Campbell	19.62	178	P	Pn	02 25 58.4	+0.3
THZ	Tophouse	19.62	181		Pn	02 26 00.3	+2.1
TW1H	Toowoomba 1 Ha	20.23	250	P	Pn	02 26 04.4	-1.1
	comp=Z,184nm,1.1s						
KHZ	Kahutara	20.27	180		Pn	02 26 05.0	-0.7
GD1S	Gladstone Soft	20.59	261	P	Pn	02 26 08.9	-0.7
	comp=Z,254nm,1.2s						
INZ	Inchbonnie	20.65	184	IAmb	IAmb	02 26 20.8	
	comp=Z,152nm,1.0s						
EIDS	Eidsvold	20.73	257	P	Pn	02 26 08.8	-2.4
	comp=Z,127nm,1.3s						
EIDS	Eidsvold	20.73	257		P	02 26 06.5	-2.2
EIDS				IAmb	IAmb	02 26 19.1	
	comp=Z,215nm,1.4s						
EIDS	Eidsvold	20.73	257	P	Pn	02 26 09.1	-2.2
	comp=Z,127nm,1.3s						
AUNRC	North Rockhamp	21.17	262	P	P	02 26 14.4	+0.9
	comp=Z,152nm,1.4s						
OXZ	Oxford	21.21	183		P	02 26 15.5	+1.7
OXZ				IAmb	IAmb	02 26 22.9	
	comp=Z,119nm,0.9s						
ARMA	Armidale	21.23	242	P	P	02 26 14.4	+0.3
	comp=Z,88nm,1.3s						
ARMA	Armidale	21.23	242		P	02 26 12.9	-1.2
ARMA	Armidale	21.23	242	P	P	02 26 15.3	+1.1
	comp=Z,88nm,1.3s						
FOZ	Fox Glacier	21.60	187	IAmb	IAmb	02 26 30.1	
	comp=Z,236nm,1.2s						
RPZ	Rata Peaks	21.66	185		P	02 26 19.6	+1.0
AUPHS	Peel High Scho	22.05	241	P	P	02 26 23.1	+0.3
	comp=Z,145nm,1.5s						
JCZ	Jackson Bay	22.27	189	P	P	02 26 26.4	+1.3
	comp=Z,159nm,1.3s						
AUKHS	Kincumber High	22.52	235	P	P	02 26 28.1	+0.2
	comp=Z,274nm,1.9s						
MGCD	Mangrove Creek	22.63	236	P	P	02 26 30.6	+1.5
	comp=Z,69nm,0.8s						
MGCD	Mangrove Creek	22.63	236	P	P	02 26 29.8	+0.8
	comp=Z,71nm,0.8s						
RIV	Riverview	22.85	234	P	P	02 26 31.1	-0.2
	comp=Z,253nm,1.8s						
RIV	Riverview	22.85	234	P	P	02 26 32.1	+0.8
	comp=Z,252nm,1.8s						
RMQ	Roma	22.91	254	P	P	02 26 32.8	+0.8
	comp=Z,72nm,1.3s						
RMQ	Roma	22.91	254	P	P	02 26 33.3	+1.2
	comp=Z,72nm,1.3s						
SYDH	Sydney Hard Ro	23.13	235	P	P	02 26 34.6	+0.4
	comp=Z,182nm,1.2s						
WOLH	Wollongong Har	23.31	233	P	P	02 26 36.4	+0.5
	comp=Z,152nm,1.0s						
MLZ	Mavora Lakes	23.63	189	IAmb	IAmb	02 26 48.0	
	comp=Z,110nm,1.3s						
AUUHS	Ulladulla High	24.03	232	P	P	02 26 42.4	-0.3
	comp=Z,280nm,1.1s						
AULRC	Lightning Ridg	24.04	247	P	P	02 26 42.9	0.0
	comp=Z,375nm,1.6s						
WHZ	Wether Hill Ro	24.17	189	IAmb	IAmb	02 26 54.2	

	comp=Z,306nm,2.0s						
AUDCS	Dubbo College	24.23	240	P	P	02 26 44.4	-0.3
	comp=Z,68nm,1.6s						
CNB	Canberra Magne	24.82	233	P	P	02 26 49.9	-0.1
	comp=Z,151nm,1.1s						
CNB	Canberra Magne	24.82	233	P	P	02 26 50.0	-0.1
	comp=Z,151nm,1.1s						
RAR	Rarotonga	24.90	93	LR	LR	02 34 23.9	
	comp=Z,3µm,21.9s,baz=262,slow=31						
AUDAR	Daramalan Coll	24.96	233	P	P	02 26 51.8	+0.5
	comp=Z,138nm,1.2s						
AUMHS	Melrose High S	25.04	233	P	P	02 26 52.2	+0.2
	comp=Z,172nm,1.2s						
TV1H	Townsville Har	25.08	272	P	P	02 26 53.9	+1.4
	comp=Z,52nm,1.1s						
AUMTS	Mt Stromlo	25.09	233	P	P	02 26 53.0	+0.5
	comp=Z,120nm,1.4s						
CAN	Canberra	25.09	233	P	P	02 26 52.1	-0.4
	comp=Z,107nm,1.3s						
CAN	Canberra	25.09	233	P	P	02 26 51.5	-1.0
CAN				IAmb	IAmb	02 27 02.7	
	comp=Z,165nm,1.3s						
CAN	Canberra	25.09	233	P	P	02 26 52.9	+0.4
	comp=Z,164nm,1.3s						
CAN	Canberra	25.09	233	P	P	02 26 51.5	-1.0
CAN				pmax	pmax		
	comp=Z,165nm,1.3s						
YNG	Young	25.13	236	P	P	02 26 52.7	-0.2
	comp=Z,54nm,1.1s						
CTA	Charters Tower	25.44	269	P	P	02 26 55.4	-0.4
	comp=Z,18nm,0.8s,baz=99,slow=11,SNR=16						
CTA				LR	LR	02 35 43.4	
	comp=Z,3µm,19.7s,baz=86,slow=34						
	comp=Z,18nm,0.8s						
CTA	Charters Tower	25.44	269	P	P	02 26 56.0	+0.3
	comp=Z,2.4nm,1.9s						
CTAO	Charters Tower	25.44	269	P	P	02 26 53.3	-2.5
CTAO	Charters Tower	25.44	269	P	P	02 26 56.0	+0.3
	comp=Z,30nm,1.9s						
CTAO	Charters Tower	25.44	269	P	P	02 26 53.3	-2.5
CTAO				pmax	pmax		
	comp=Z,287nm,1.8s						
AUSMG	Snowy Mountain	25.86	231	P	P	02 26 59.9	+0.4
	comp=Z,178nm,1.2s						
CMSA	Cobar Meteorol	26.44	243	P	P	02 27 03.8	-0.9
	comp=Z,58nm,1.3s						
CMSA	Cobar Meteorol	26.44	243	P	P	02 27 03.7	-0.9
	comp=Z,58nm,1.3s						
QLP	Quilpie	26.96	255	P	P	02 27 07.5	-1.9
	comp=Z,110nm,1.2s						
QLP	Quilpie	26.96	255	P	P	02 27 08.6	-0.8
	comp=Z,110nm,1.2s						
MTSU	Mount Surprise	27.61	273	P	P	02 27 14.0	-1.4
	comp=Z,86nm,1.1s						
MTSU	Mount Surprise	27.61	273	P	P	02 27 14.7	-0.7
	comp=Z,86nm,1.1s						
PMG	Port Moresby	28.21	292	P	P	02 27 20.1	-0.5
	comp=Z,26nm,1.1s,baz=82,slow=9.3,SNR=4.6						
	comp=Z,26nm,1.1s						
PMG	Port Moresby	28.21	292		P	02 27 19.4	-1.2
PMG				IAmb	IAmb	02 27 26.5	
	comp=Z,94nm,1.1s						
PMG	Port Moresby	28.21	292	P	P	02 27 23.5	+2.8
	comp=Z,75nm,1.1s						
PMG	Port Moresby	28.21	292	P	P	02 27 21.1	+0.4
	comp=Z,74nm,1.1s						
PMG	Port Moresby	28.21	292	*ce*P	P	02 27 19.3	-1.4
PMG				pmax	pmax		
	comp=Z,56nm,1.0s						
GLAD	Gladstone	28.56	223	P	P	02 27 24.8	+1.3
	comp=Z,44nm,1.0s						
TOO	Toolangi	28.60	231	P	P	02 27 23.7	-0.4
	comp=Z,28nm,1.2s						
TOO	Toolangi	28.60	231		P	02 27 22.8	-1.3
TOO	Toolangi	28.60	231	P	P	02 27 22.8	-1.3
TOO				pmax	pmax		
	comp=Z,30nm,1.2s						
CORO	Coronation Par	29.36	223	P	P	02 27 31.4	+0.8
	comp=Z,22nm,1.1s						
BRAT	Ballarat	29.73	232	P	P	02 27 34.9	+0.9
	comp=Z,45nm,1.1s						
AUMTC	Mt Clear Colle	29.79	232	P	P	02 27 35.9	+1.4
	comp=Z,62nm,1.3s						
COEN	Coen	29.85	281	P	P	02 27 35.7	+0.4
	comp=Z,53nm,2.0s						
COEN	Coen	29.85	281		P	02 27 34.7	-0.7
COEN				IAmb	IAmb	02 27 44.7	
	comp=Z,70nm,1.2s						
COEN	Coen	29.85	281	P	P	02 27 36.0	+0.7
	comp=Z,53nm,2.0s						
MOO	Moorlands	29.88	221	P	P	02 27 35.3	0.0
	comp=Z,88nm,1.2s						
MOO	Moorlands	29.88	221	P	P	02 27 36.2	+0.9
	comp=Z,88nm,1.2s						
STKA	Stephens Creek	29.92	244	P	P	02 27 34.4	-1.4
	comp=Z,163nm,1.6s						
STKA	Stephens Creek	29.92	244	P	P	02 27 34.9	-0.9
	comp=Z,15nm,1.1s,baz=85,slow=9.5,SNR=17						
STKA				LR	LR	02 38 27.0	
	comp=Z,4µm,21.3s,baz=72,slow=34						
	comp=Z,15nm,1.1s						
STKA	Stephens Creek	29.92	244	P	P	02 27 35.3	-0.5
	comp=Z,8.0nm,1.6s						
STKA	Stephens Creek	29.92	244	*e*P	P	02 27 34.5	-1.3
STKA				pmax	pmax		
	comp=Z,11nm,1.0s						
TAU	Tasmania Unive	30.07	220	P	P	02 27 36.9	0.0
	comp=Z,58nm,1.2s						
ARPS	Mount Arapiles	31.01	235	P	P	02 27 44.3	-1.0
	comp=Z,24nm,1.4s						
QIS	Mount Isa	31.52	266	P	P	02 27 49.3	-0.8
	comp=Z,28nm,1.4s						
QIS	Mount Isa	31.52	266	P	P	02 27 49.3	-0.8
	comp=Z,28nm,1.4s						
HTT	Hallett	32.43	242	P	P	02 27 56.8	-1.1
	comp=Z,21nm,1.3s						
HTT	Hallett	32.43	242	P	P	02 27 57.1	-0.9
	comp=Z,51nm,1.3s						
AUMBR	Murray Bridge	32.52	239	P	P	02 27 58.1	-0.5
	comp=Z,88nm,1.4s						
AUJCS	Jamestown Cent	32.65	243	P	P	02 27 59.3	-0.5
	comp=Z,36nm,1.4s						
WHYH	Whyalla	33.47	243	P	P	02 28 05.0	-1.9
	comp=Z,43nm,0.7s						
TBI	Tubuai	34.18	99	*e*S	S	02 33 37.7	+0.6
	comp=Z,6µm,27.5s						
TBI				*e*LQ	LQ	02 35 44.8	
	comp=Z,32µm,29.2s						
TBI				*e*LR	LR	02 37 21.6	
	comp=Z,38µm,28.8s						
TBI				*e*LR	LR	02 37 24.7	
	comp=Z,8µm,27.8s						
BBOO	Buckleboo	34.69	244	P	P	02 28 15.9	-1.7
	comp=Z,61nm,1.4s						
BBOO	Buckleboo	34.69	244	IAmb	IAmb	02 28 18.0	
	comp=Z,102nm,1.3s						
BBOO	Buckleboo	34.69	244	P	P	02 28 16.4	-1.2
	comp=Z,61nm,1.4s						
PPT2	Papeete2	35.01	89	*e*S	S	02 33 48.0	-2.2
	comp=Z,1µm,24.8s						
PPT2				*e*LQ	LQ	02 36 02.9	
	comp=Z,7µm,27.5s						
PPT2				*e*LR	LR	02 37 44.2	
	comp=Z,8µm,26.2s						
PPT2				*e*LR	LR	02 37 51.5	
	comp=Z,6µm,28.5s						
PPT	Papeete	35.02	89	LR	LR	02 38 51.4	
	comp=Z,3µm,21.9s,baz=251,slow=30						
AUCAS	Cummins Area S	35.21	242	P	P	02 28 21.4	-0.5
	comp=Z,75nm,1.5s						
WR8	Warramunga Arr	36.35	266	IAmb	IAmb	02 28 40.1	
	comp=Z,83nm,1.4s						
ASAR	Alice Springs	36.39	260	P	P	02 28 30.1	-2.2
	comp=Z,18nm,0.9s,baz=86,slow=8.8,SNR=54						
ASAR				LR	LR	02 42 54.9	
	comp=Z,1µm,21.0s,baz=96,slow=36						
	comp=Z,18nm,0.9s						
ASAR	Alice Springs	36.39	260		P	02 28 30.6	-1.7
ASAR	Alice Springs	36.39	260	P	P	02 28 30.6	-1.7
WB0	Warramunga Arr	36.48	266	IAmb	IAmb	02 28 37.8	
	comp=Z,79nm,1.4s						
WRAB	Tennant Creek	36.49	266	P	P	02 28 30.8	-2.4
WRAB				IAmb	IAmb	02 28 37.8	
	comp=Z,62nm,1.4s						
WRAB	Tennant Creek	36.49	266	P	P	02 28 30.8	-2.4
WRAB				pmax	pmax		
	comp=Z,62nm,1.4s						
WRA	Warramunga Arr	36.50	266	P	P	02 28 30.9	-2.4
	comp=Z,7.2nm,0.9s,baz=100,slow=8.0,SNR=22						
	comp=Z,7.2nm,0.9s						
WRA	Warramunga Arr	36.50	266	*e*P	P	02 28 30.8	-2.4
WRA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
JAY	Jayapura	37.28	297	LR	LR	02 44 00.8	
	comp=Z,3µm,18.6s,baz=135,slow=36						
JAY	Jayapura	37.28	297	P	P	02 28 41.0	+1.1
	comp=Z,34nm,1.4s						
GENI	Genyem	37.68	296	P	P	02 28 43.8	+0.5
	comp=Z,170nm,1.3s						
GENI	Genyem	37.68	296	P	P	02 28 43.1	-0.2
	comp=Z,3µmcomp=Z,173nm,1.3s						
SMPI	Sarmi	39.23	296	P	P	02 28 56.4	+0.1
	comp=Z,2µmcomp=Z,54nm,1.4s						
KDU	Kakadu	40.09	277	P	P	02 29 01.5	-2.0
	comp=Z,16nm,1.1s						
H11S2	WAKE ISLAND Hy	40.86	350	T	T	03 12 32.8	
	baz=171,slow=76,SNR=54						
H11S3	WAKE ISLAND Hy	40.87	350	T	T	03 12 33.3	
	baz=171,slow=76,SNR=39						
H11S1	WAKE ISLAND Hy	40.88	350	T	T	03 12 34.2	
	baz=171,slow=76,SNR=52						
MTN	Manton Dam	41.28	276	P	P	02 29 10.9	-2.4
	comp=Z,45nm,1.1s						
MTN	Manton Dam	41.28	276		P	02 29 11.5	-1.8
FORT	Forrest	41.32	248	P	P	02 29 11.8	-1.7
	comp=Z,28nm,1.3s						
FORT	Forrest	41.32	248		P	02 29 10.8	-2.7
WRKA	Warakurna	41.35	257	P	P	02 29 11.9	-1.9
	comp=Z,28nm,1.2s						
DRS	Darwin Rock St	41.63	276	P	P	02 29 16.3	+0.2
	comp=Z,29nm,1.1s						
BAKI	Biak	41.84	295	P	P	02 29 18.8	+0.9
	comp=Z,85nm,1.0s						
H11N1	WAKE ISLAND Hy	42.03	351	T	T	03 14 06.3	
	baz=172,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	42.03	351	T	T	03 14 02.2	
	baz=172,slow=76,SNR=8.4						
H11N2	WAKE ISLAND Hy	42.05	351	T	T	03 14 03.2	
	baz=172,slow=76,SNR=11						
KNRA	Kununurra	42.64	271	P	P	02 29 22.4	-2.0
	comp=Z,89nm,1.1s						
KNRA	Kununurra	42.64	271	P	P	02 29 22.9	-1.5
KNRA				IAmb	IAmb	02 29 29.9	
	comp=Z,96nm,1.1s						
KMPI	Kaimana, Papua	42.65	290	P	P	02 29 25.4	+0.9
	comp=Z,3µmcomp=Z,125nm,1.2s						
SAUI	Saumlaki	42.89	282	P	P	02 29 27.5	+1.1
	comp=Z,76nm,1.1s						
RKPI	Ransiki, Papua	43.31	293	P	P	02 29 30.7	+0.8
	comp=Z,46nm,1.2s						
FAKI	Fak Fak	44.28	290	P	P	02 29 37.2	-0.5
FAKI	Fak Fak	44.28	290	P	P	02 29 40.9	+3.3
	comp=Z,48nm,1.1s						
FAKI	Fak Fak	44.28	290	P	P	02 29 37.6	0.0
	comp=Z,1µmcomp=Z,48nm,1.1s						
FITZ	Fitzroy Crossi	44.93	266	P	P	02 29 40.8	-2.0
	comp=Z,32nm,1.2s						
FITZ	Fitzroy Crossi	44.93	266	P	P	02 29 41.6	-1.1
	comp=Z,53nm,1.0s,baz=116,slow=8.3,SNR=32						
FITZ				LR	LR	02 47 10.7	
	comp=Z,3µm,20.2s,baz=104,slow=34						
	comp=Z,53nm,1.0s						
FITZ	Fitzroy Crossi	44.93	266	P	P	02 29 42.1	-0.7
	comp=Z,319nm,1.2s						
GUMO	Guam	45.19	319	LR	LR	02 46 46.4	
	comp=Z,2µm,21.3s,baz=151,slow=34						
BNDI	Bandanaira	45.61	286	P	P	02 29 50.1	+1.9
	comp=Z,221nm,1.1s						
BNDI	Bandanaira	45.61	286	P	P	02 29 47.8	-0.4
	comp=Z,218nm,1.0s						
SIJI	Sorong	46.14	291	P	P	02 29 51.8	-0.6
	comp=Z,819nmcomp=Z,61nm,1.4s						
SWI	Sorong	46.15	291	P	P	02 29 51.5	-1.0
	comp=Z,89nm,1.2s						
TAOE	Nuku Hiva Isla	46.43	81	*e*SS	SS	02 40 14.8	+8.2
	comp=Z,5µm,27.2s						
TAOE				*e*LR	LR	02 43 07.8	
	comp=Z,4µm,26.5s						
KMBL	Kambalda	46.62	247	P	P	02 29 55.2	-0.8
	comp=Z,22nm,2.1s						
RKT	Rikitea	47.42	102	*e*S	S	02 36 51.2	-2.9
	comp=Z,4µm,24.2s						
RKT				*e*SS	SS	02 40 26.2	+4.0
	comp=Z,18µm,29.5s						
RKT				*e*LR	LR	02 43 27.1	
	comp=Z,15µm,28.8s						
AAI	Ambon	47.51	286	P	P	02 30 02.9	-0.2
	comp=Z,2µmcomp=Z,92nm,1.3s						
SOEI	Soe	48.66	276	P	P	02 30 13.1	+1.0
	comp=Z,148nm,1.2s						
SOEI	Soe	48.66	276	P	P	02 30 12.7	+0.6
	comp=Z,2µmcomp=Z,148nm,1.2s						
NLAI	Namlea	48.68	286	P	P	02 30 12.6	+0.4
	comp=Z,2µmcomp=Z,69nm,1.7s						
BATI	Baumata	49.05	276	LR	LR	02 50 13.3	
	comp=Z,6µm,21.3s,baz=140,slow=35						
BATI	Baumata	49.05	276	P	P	02 30 15.8	+0.7
	comp=Z,2µmcomp=Z,109nm,1.1s						
PSAC2	Pilbara Seismi	49.49	260	P	P	02 30 17.8	-0.5
	comp=Z,67nm,1.1s						
PSAB3	Pilbara Seismi	49.52	260	P	P	02 30 18.8	+0.3
	comp=Z,58nm,1.1s						
PSA00	Pilbara Seismi	49.54	260	P	P	02 30 17.6	-1.0
	comp=Z,67nm,1.2s						
PSA00	Pilbara Seismi	49.54	260	P	P	02 30 17.2	-1.4
PSA00				IAmb	IAmb	02 30 24.7	
	comp=Z,46nm,1.2s						
PSA00	Pilbara Seismi	49.54	260	IAmb	IAmb	02 30 26.1	
	comp=Z,65nm,1.1s						
PSA00	Pilbara Seismi	49.54	260	P	P	02 30 18.5	-0.2
	comp=Z,67nm,1.2s						
PSAC1	Pilbara Seismi	49.58	260	P	P	02 30 15.6	-3.3
	comp=Z,83nm,1.3s						
MBWA	Marble Bar	49.72	260	P	P	02 30 19.8	-0.2
	comp=Z,95nm,1.2s						
MBWA	Marble Bar	49.72	260	P	P	02 30 19.6	-0.5
MBWA	Marble Bar	49.72	260	P	P	02 30 19.5	-0.5
	comp=Z,55nm,1.2s						
MEEK	Meekatharra	49.84	253	P	P	02 30 20.3	-0.7
	comp=Z,45nm,1.6s						
MEEK	Meekatharra	49.84	253	P	P	02 30 19.8	-1.2
	comp=Z,45nm,1.6s						
KLBR	Kellerberrin	50.13	247	P	P	02 30 21.7	-1.3
	comp=Z,99nm,1.2s						
KLBR	Kellerberrin	50.13	247	P	P	02 30 21.8	-1.3
	comp=Z,99nm,1.2s						
SANI	Sanana	50.21	287	P	P	02 30 25.4	+1.6
	comp=Z,102nm,1.7s						
SANI	Sanana	50.21	287	P	P	02 30 24.1	+0.3
	comp=Z,2µmcomp=Z,103nm,1.7s						
NWAO	Narrogin (SRO)	50.50	245	P	P	02 30 25.4	-0.4
	comp=Z,54nm,1.3s						
NWAO	Narrogin (SRO)	50.50	245	LR	LR	02 50 41.3	
	comp=Z,4µm,19.8s,baz=104,slow=35						
NWAO	Narrogin (SRO)	50.50	245	P	P	02 30 24.7	-1.1
NWAO				IAmb	IAmb	02 30 26.1	
	comp=Z,66nm,1.1s						
NWAO	Narrogin (SRO)	50.50	245	P	P	02 30 25.0	-0.8
	comp=Z,30nm,1.5s						
NWAO	Narrogin (SRO)	50.50	245	P	P	02 30 24.7	-1.1
NWAO				pmax	pmax		
	comp=Z,66nm,1.1s						
MMRI	Maumere	50.92	277	P	P	02 30 28.6	-0.7
	comp=Z,197nm,1.3s						
MMRI	Maumere	50.92	277	P	P	02 30 28.5	-0.7
	comp=Z,3µmcomp=Z,198nm,1.4s						
BLDU	Ballidu	51.10	248	P	P	02 30 27.3	-3.1
	comp=Z,29nm,1.1s						
BLDU	Ballidu	51.10	248	P	P	02 30 28.7	-1.7
	comp=Z,29nm,1.1s						
MUN	Mundaring	51.42	246	P	P	02 30 31.7	-1.1
	comp=Z,55nm,1.5s						
MUN	Mundaring	51.42	246	P	P	02 30 32.0	-0.8
	comp=Z,54nm,1.5s						
KIP	Kipapa	51.43	35	*ce*P	P	02 30 30.2	-2.6
KIP				pmax	pmax		
	comp=Z,191nm,1.4s						
MORW	Morawa	51.82	250	P	P	02 30 34.2	-1.6
	comp=Z,56nm,1.2s						
MORW	Morawa	51.82	250		P	02 30 34.6	-1.2
MORW				IAmb	IAmb	02 30 42.3	
	comp=Z,56nm,1.1s						
MORW	Morawa	51.82	250	P	P	02 30 34.4	-1.4
	comp=Z,56nm,1.2s						
BASI	Baing, Sumba	51.90	274	P	P	02 30 37.4	+0.9
WSI	Waingapu	52.35	275	P	P	02 30 40.6	+0.7
KKSI	Kolaka, Sulawe	53.19	282	P	P	02 30 47.6	+1.5
WBSI	Waikabubak, Su	53.20	274	P	P	02 30 46.2	0.0
BSSI	Bau Bau, Buton	53.46	279	P	P	02 30 47.6	-0.5
	comp=Z,2µmcomp=Z,76nm,1.6s						
LUWI	Luwuk	53.53	286	P	P	02 30 48.5	-0.1
	comp=Z,129nm,1.5s						
LUWI	Luwuk	53.53	286	P	P	02 30 49.8	+1.2
	comp=Z,131nm,1.4s						
GIRL	Giralia	54.43	257	P	P	02 30 56.1	+1.0
	comp=Z,61nm,1.7s						
KAPI	Kappang	54.58	280	P	P	02 30 56.6	+0.4
KAPI	Kappang	54.58	280	P	P	02 30 56.8	+0.5
	comp=Z,30nm,2.0s						
KAPI	Kappang	54.58	280	P	P	02 30 57.4	+1.1
KAPI	Kappang	54.58	280	*i* P	P	02 30 55.0	-1.3
KAPI				pmax	pmax		
	comp=Z,58nm,1.4s						
APSI	Ampana	54.59	285	P	P	02 30 56.9	+0.6
	comp=Z,1µmcomp=Z,60nm,1.6s						
DBNI	Kabupaten Domp	54.59	275	P	P	02 30 55.3	-1.1
	comp=Z,882nmcomp=Z,66nm,1.2s						
MKS	Makassar	54.76	280	P	P	02 30 59.0	+1.5
	comp=Z,2µmcomp=Z,80nm,1.6s						
MRSI	Marisa	54.95	287	P	P	02 31 00.8	+1.8
PLAI	Plampang	54.97	275	P	P	02 30 58.4	-0.7
	comp=Z,279nm,1.2s						
PLAI	Plampang	54.97	275	P	P	02 30 58.0	-1.1
SPSI	Sidrap Palu	54.98	281	P	P	02 30 58.3	-0.9
	comp=Z,19nm,0.7s						
DAV	Davao City (W)	55.12	296	LR	LR	02 54 10.2	
	comp=Z,523nm,20.9s,baz=127,slow=36						
TTSI	Tana Toraja	55.32	282	P	P	02 31 02.6	+1.0
VNDA	Vanda	55.77	183	P	P	02 31 04.5	+0.7
	comp=Z,1.0nm,0.6s,baz=350,slow=9.0,SNR=4.1						
VNDA				LR	LR	02 52 31.6	
	comp=Z,1µm,18.5s,baz=16,slow=34						
	comp=Z,1.0nm,0.6s						
VNDA	Vanda	55.77	183	P	P	02 31 04.6	+0.7
TWSI	Taliwang, Sumb	55.83	274	P	P	02 31 04.5	-0.8
	comp=Z,2µmcomp=Z,169nm,1.3s						
SBA	Scott Base	55.91	182	P	P	02 31 06.2	+1.3
SBA				IAmb	IAmb	02 31 14.3	
	comp=Z,61nm,1.1s						
SBA	Scott Base	55.91	182	P	P	02 31 06.2	+1.3
SBA				pmax	pmax		
	comp=Z,61nm,1.1s						
TOLI2	Tolitoli	56.27	287	P	P	02 31 06.6	-1.8
TOLI2				IAmb	IAmb	02 31 13.9	
	comp=Z,34nm,1.0s						
TOLI2	Tolitoli	56.27	287	P	P	02 31 07.1	-1.3
	comp=Z,37nm,1.3s						
KLNI	Mataram	56.67	274	P	P	02 31 10.2	-1.1
	comp=Z,2µmcomp=Z,114nm,1.4s						
MPSI	Mapaga	56.71	286	P	P	02 31 10.2	-1.3
	comp=Z,26nm,1.1s						
KHKI	Kahang-Kahang	57.14	274	P	P	02 31 14.6	0.0
	comp=Z,2µmcomp=Z,167nm,1.2s						
IGBI	Denpasar	57.41	274	P	P	02 31 16.3	-0.2
SRBI	Singaraja	57.60	274	P	P	02 31 17.6	-0.3
	comp=Z,2µmcomp=Z,194nm,1.3s						
RTBI	Rangdo, Negare	57.72	274	P	P	02 31 18.3	-0.5
JAGI	Jajag, Banyuwa	58.45	274	P	P	02 31 23.2	-0.6
	comp=Z,145nm,1.2s						
JAGI	Jajag, Banyuwa	58.45	274	P	P	02 31 22.2	-1.6
	comp=Z,2µmcomp=Z,145nm,1.2s						
ABJI	Asem Bagus	58.61	274	P	P	02 31 26.0	+1.1
	comp=Z,72nm,1.1s						
KMMI	Kalianget	59.13	275	P	P	02 31 29.8	+1.3
	comp=Z,2µmcomp=Z,107nm,1.4s						
GMJI	Gumukmas	59.17	273	P	P	02 31 28.7	-0.1
	comp=Z,72nm,1.5s						
BLJI	Banyuglugur	59.22	274	P	P	02 31 30.3	+1.1
	comp=Z,68nm,1.4s						
BBKI	Banjar Baru	59.69	279	P	P	02 31 33.5	+1.1
SNJI	Sawahan-Nganju	60.91	273	P	P	02 31 41.1	+0.2
	comp=Z,144nm,1.4s						
SJI	Sawahan	60.92	273	P	P	02 31 40.6	-0.3
	comp=Z,2µmcomp=Z,78nm,1.1s						
PCJI	Pacitan	61.30	273	P	P	02 31 44.5	+1.1
	comp=Z,3µmcomp=Z,228nm,1.5s						
NGJI	Ngawi	61.33	274	P	P	02 31 44.8	+1.2
	comp=Z,76nm,1.3s						
UGM	Wanagama	62.01	273	P	P	02 31 44.9	-3.3
UGM	Wanagama	62.01	273	P	P	02 31 49.3	+1.1
	comp=Z,136nm,1.5s						
UGM	Wanagama	62.01	273	P	P	02 31 49.4	+1.2
	comp=Z,136nm,1.5s						
YOGI	Yogyakarta	62.25	273	P	P	02 31 51.0	+1.2
TGY	Tagaytay City	62.79	300	LR	LR	02 56 58.0	
	comp=Z,313nm,20.5s,baz=132,slow=34						
SCJI	Gunung Srandil	63.34	272	P	P	02 31 58.3	+1.2
	comp=Z,37nm,1.5s						
CTJI	Waduk Cacaban	63.57	273	P	P	02 31 59.8	+1.2
	comp=Z,2µmcomp=Z,79nm,1.4s						
JHJ	Hachijo jima 2	63.60	329	LR	LR	02 55 48.6	
	comp=Z,305nm,21.9s,baz=137,slow=32						
KPJI	Karang Pucung	63.69	273	P	P	02 31 58.6	-0.7
	comp=Z,75nm,1.4s						
SBUM	Sibu	64.52	284	P	P	02 32 03.8	-1.0
SBUM	Sibu	64.52	284	P	P	02 32 05.0	+0.3
	comp=Z,7.7nm,1.8s						
SBUM	Sibu	64.52	284	P	P	02 32 05.1	+0.3
BBJI	Bungbulang	64.83	272	P	P	02 32 06.3	-0.7
	comp=Z,23nm,1.6s						
BBJI	Bungbulang	64.83	272	P	P	02 32 06.2	-0.7
CNJI	Cibinong	65.36	272	P	P	02 32 09.7	-0.6
	comp=Z,786nmcomp=Z,43nm,1.2s						
JOW	Kunigami	65.39	316	LR	LR	02 58 36.3	
	comp=Z,731nm,19.5s,baz=136,slow=34						
XMI	Christmas Isla	65.62	268	P	P	02 32 12.6	+0.6
	comp=Z,155nm,1.2s						
DBJI	Dramaga	65.99	273	P	P	02 32 14.8	+0.4
	comp=Z,117nm,0.9s						
SKJI	Sukabumi	66.00	272	P	P	02 32 15.8	+1.4
	comp=Z,177nm,1.3s						
JGF	Kuroka	66.79	329	IAmb	IAmb	02 32 26.1	
	comp=Z,28nm,1.3s						
JGF	Kuroka	66.79	329	P	P	02 32 20.5	+1.5
	comp=Z,25nm,2.3s						
MJAR	Matsushiro Arr	67.14	330	P	P	02 32 20.8	-0.4
	comp=Z,9.4nm,1.0s,baz=162,slow=6.5,SNR=12						
MJAR				LR	LR	02 56 24.6	
	comp=Z,744nm,21.5s,baz=145,slow=31						
	comp=Z,9.4nm,1.0s						
MJAR	Matsushiro Arr	67.14	330	P	P	02 32 20.3	-0.9
MAJO	Matsushiro	67.14	330	P	P	02 32 20.2	-1.0
MAJO				IAmb	IAmb	02 32 27.1	
	comp=Z,48nm,1.2s						
MAJO	Matsushiro	67.14	330	P	P	02 32 20.4	-0.8
	comp=Z,34nm,1.2s						
MAJO	Matsushiro	67.14	330	*i* P	P	02 32 21.3	+0.1
MAJO				pmax	pmax		
	comp=Z,26nm,1.0s						
QSPA	South Pole Qui	67.98	180	P	P	02 32 26.5	+0.2
QSPA				IAmb	IAmb	02 32 34.0	
	comp=Z,56nm,1.2s						
NACB	Ninganchiao	68.22	309	P	P	02 32 30.5	+2.3
	comp=Z,43nm,1.5s						
JNU	Nakatsue	68.29	322	LR	LR	02 58 21.3	
	comp=Z,330nm,21.5s,baz=142,slow=32						
KASI	Kota Agung	68.44	273	P	P	02 32 28.8	-1.1
	comp=Z,49nm,1.1s						
KLSI		68.53	274	P	P	02 32 31.9	+1.4
	comp=Z,30nm,2.0s						
YHNB	Yeheng	68.68	310	P	P	02 32 35.9	+4.7
	comp=Z,53nm,1.6s						
MDSI	Maura Dua	69.12	274	P	P	02 32 32.3	-1.8
	comp=Z,655nmcomp=Z,28nm,1.3s						
RPN	Rapa Nui	69.37	112	LR	LR	02 55 50.1	
	comp=Z,1µm,21.8s,baz=252,slow=30						
MASI	Maura Aman, Be	71.41	274	P	P	02 32 49.7	+1.5
	comp=Z,2µmcomp=Z,78nm,0.9s						
ASAJ	Asahikawa	71.69	337	LR	LR	02 59 51.3	
	comp=Z,1µm,20.8s,baz=160,slow=32						
KRJI	Kerinci	72.53	275	P	P	02 33 00.0	+5.0
TJN	Taejon	72.64	322	*i* P	P	02 32 55.0	+0.1
SSE	Sheshan	72.85	315	P	P	02 32 56.5	+0.2
SSE				S	S	02 42 19.0	-0.7
SSE				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SSE				pmax	pmax		
	comp=Z,300nm,3.5s						
KSRS	Korea Array	73.09	324	P	P	02 32 57.0	-0.6
	comp=Z,4.0nm,0.9s,baz=140,slow=6.1,SNR=10						
KSRS				LR	LR	03 00 41.0	
	comp=Z,461nm,21.8s,baz=125,slow=32						
	comp=Z,4.0nm,0.9s						

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KSRS  Korea Array       73.09 324 eP      P        02 32 59.9 +2.3
KSRS                                pmax    pmax
      comp=Z,6.0nm,0.9s
KSAR  Wonju Array Be    73.11 324         P        02 32 57.1 -0.6
KSAR  Wonju Array Be    73.11 324  P      P        02 32 57.1 -0.6
YSS   Yuzhno-Sakhali    74.09 339  P      P        02 33 05.6 +2.3
      comp=Z,28nm,1.1s
YSS   Yuzhno-Sakhali    74.09 339 eP      P        02 33 05.2 +1.9
YSS                               eS      S        02 42 33.6 +0.5
YSS                                pmax   pmax
      comp=Z,30nm,1.0s
YSS                                MLR    MLR
      comp=N,600nm,17.0s
YSS                                MLR    MLR
      comp=Z,500nm,17.0s
YSS                                MLR    MLR
      comp=E,400nm,19.0s
QIZ   Qiongzhong        74.40 298  P      P        02 33 09.8 +4.1
QIZ                                S      S        02 42 41.3 +3.6
QIZ                                pmax   pmax
      comp=E,27nm,1.8s
QIZ                                pmax   pmax
      comp=E,240nm,4.0s
QIZ                                LR     LR
      comp=E,230nm,13.1s
QIZ                                LR     LR
      comp=E,470nm,20.0s
QIZ                                LR     LR
      comp=E,670nm,20.5s
SHEM  Shemya Is, Ala    74.50   0  LR     LR       03 03 26.4
      comp=E,498nm,18.9s,baz=153,slow=34
NJ2   Nanjing           74.99 314 eP      P        02 33 11.8 +3.0
NJ2                                pmax   pmax
      comp=E,11nm,0.5s
SISI  Saibi             75.01 275  P      P        02 33 11.1 +1.7
MNSI  Mandailing Nat    75.37 277  P      P        02 33 11.7 +0.2
      comp=E,26nm,0.8s
IPM   Ipoh              75.50 281  P      P        02 33 10.2 -2.1
IPM                                IAmb   IAmb     02 33 19.0
      comp=Z,64nm,1.1s
IPM   Ipoh              75.50 281  P      P        02 33 12.3  0.0
      comp=Z,58nm,1.2s
IPM   Ipoh              75.50 281  P      P        02 33 12.0 -0.3
      comp=Z,58nm,1.2s
USRK  Ussuriysk Ar.     76.10 331  P      P        02 33 15.2 +0.3
      comp=Z,12nm,1.0s,baz=121,slow=5.4,SNR=9.6
      comp=Z,12nm,1.0s
PETK  Petropavlovsk-    76.12 350  P      P        02 33 12.9 -1.9
      comp=Z,19nm,1.1s,baz=116,slow=8.4,SNR=5.2
PETK                               LR     LR       02 59 41.6
      comp=Z,727nm,20.3s,baz=161,slow=30
      comp=Z,19nm,1.1s
PETK  Petropavlovsk-    76.12 350  P      P        02 33 14.7 -0.1
PETK  Petropavlovsk-    76.12 350  P      P        02 33 14.7 -0.1
KULM  Kulim             76.17 282  IAmb   IAmb     02 33 22.3
      comp=Z,51nm,1.2s
KULM  Kulim             76.17 282  P      P        02 33 16.4 +0.3
      comp=Z,38nm,1.3s
KULM  Kulim             76.17 282  P      P        02 33 16.6 +0.5
      comp=Z,38nm,1.3s
UBPT  Khong Chiam       76.24 293  P      P        02 33 16.2 -0.1
      comp=Z,21nm,1.5s
RPSI  Rantau Prapat     76.71 278  P      P        02 33 17.9 -1.3
PSI   Prapat            76.76 279  P      P        02 33 17.9 -1.7
      comp=Z,20nm,0.9s,baz=152,slow=3.4,SNR=13
PSI                                LR     LR       03 07 59.2
      comp=Z,831nm,21.0s,baz=128,slow=36
      comp=Z,20nm,0.9s
WHN   Wuhan             77.18 311  P      P        02 33 21.8 +0.5
GULI  GuiLin            77.21 304  P      P        02 33 22.0 +0.3
GULI                               S      S        02 43 14.8 +6.2
GULI                               pmax   pmax
      comp=Z,21nm,1.8s
GULI                               pmax   pmax
      comp=Z,350nm,3.5s
GULI                               LR     LR
      comp=Z,490nm,19.1s
GULI                               LR     LR
      comp=Z,570nm,24.0s
GULI                               LR     LR
      comp=Z,970nm,21.8s
MAW   Mawson            77.27 202  P      P        02 33 21.3  0.0
      comp=Z,8.8nm,0.8s,baz=143,slow=6.3,SNR=9.0
MAW                                LR     LR       03 02 53.7
      comp=Z,667nm,20.2s,baz=98,slow=32
      comp=Z,8.8nm,0.8s
GSI   Gunungsitoli      77.41 277  P      P        02 33 22.5 -0.6
GSI                                IAmb   IAmb     02 33 29.7
      comp=Z,66nm,1.1s
GSI   Gunungsitoli      77.41 277  P      P        02 33 22.7 -0.4
      comp=Z,58nm,1.1s
MDJ   Mudanjiang        77.53 330  IAmb   IAmb     02 33 29.8
      comp=Z,42nm,1.1s
MDJ   Mudanjiang        77.53 330  P      P        02 33 23.3 +0.4
MDJ                                PcP    PcP      02 33 30.0 -3.1
MDJ                                pmax   pmax
      comp=Z,13nm,1.0s
MDJ                                LR     LR
      comp=Z,820nm,20.6s
MDJ                                LR     LR
      comp=Z,490nm,20.6s
MDJ                                LR     LR
      comp=Z,1µm,21.6s
MDJ   Mudanjiang        77.53 330  P      P        02 33 25.0 +2.1
      comp=Z,43nm,1.1s
DL2   Dalian            77.67 321  P      P        02 33 23.3 -0.6
DL2                                S      S        02 43 15.5 +2.6
DL2                                pmax   pmax
      comp=Z,52nm,1.0s
DL2                                LR     LR
      comp=Z,810nm,18.2s
DL2                                LR     LR
      comp=Z,1µm,21.3s
DL2                                LR     LR
      comp=Z,1µm,25.9s
KCSI  Kotacane, Aceh    78.10 279  P      P        02 33 31.6 +4.7
TIA   Tai'an            78.69 317  P      P        02 33 29.8 +0.2
TIA                                pmax   pmax
      comp=Z,15nm,1.0s
TIA                                pmax   pmax
      comp=Z,410nm,3.5s
TIA                                LR     LR
      comp=Z,980nm,21.4s
TIA                                LR     LR
      comp=Z,1µm,23.9s
TIA                                LR     LR
      comp=Z,3µm,25.0s
CN2   Changchun         78.96 327 ⇓P      P        02 33 36.0 +5.1
CN2                               eS      S        02 43 30.5 +3.9
CN2                                pmax   pmax
      comp=Z,40nm,1.1s
CN2                                pmax   pmax
      comp=Z,300nm,5.0s
CN2                                LR     LR
      comp=Z,200nm,15.0s
CN2                                LR     LR
      comp=Z,200nm,15.0s
CN2                                LR     LR
      comp=Z,300nm,17.0s
SNSI  Sinabang, Aceh    78.99 277  P      P        02 33 32.8 +1.0
BNX   BinXian           79.39 329 ⇑P      P        02 33 33.0 -0.2
BNX                                pmax   pmax
      comp=Z,11nm,0.9s
BNX                                pmax   pmax
      comp=Z,220nm,5.3s
BNX                                LR     LR
      comp=Z,480nm,20.5s
BNX                                LR     LR
      comp=Z,580nm,16.5s
BNX                                LR     LR
      comp=Z,920nm,21.3s
GRNR  Gornyy            79.55 337 eP      P        02 33 31.6 -2.4
ENH   Enshi             80.52 308  IAmb   IAmb     02 33 49.2
      comp=Z,68nm,1.0s
ENH   Enshi             80.52 308  P      P        02 33 39.7  0.0
      comp=Z,72nm,1.8s
GYA   Guiyang           80.67 303 ⇑P      P        02 33 41.0 +0.3
GYA                                pmax   pmax
      comp=Z,23nm,1.1s
LYN   LuoYang           80.77 313  P      P        02 33 41.0 +0.1
LYN                                S      S        02 43 49.0 +2.9
LYN                                pmax   pmax
      comp=Z,28nm,1.0s
LYN                                pmax   pmax
      comp=Z,370nm,4.8s
LYN                                LR     LR
      comp=Z,620nm,22.7s
LYN                                LR     LR
      comp=Z,850nm,21.6s
LYN                                LR     LR
      comp=Z,2µm,24.7s
HNS   HongShan          80.95 316 ⇑P      P        02 33 44.3 +2.5
HNS                                S      S        02 43 53.3 +5.5
HNS                                SS     SS       02 48 59.3 -3.9
HNS                                pmax   pmax
      comp=Z,18nm,1.6s
HNS                                LR     LR
      comp=Z,780nm,24.2s
HNS                                LR     LR
      comp=Z,1µm,22.8s
HNS                                LR     LR
      comp=Z,2µm,23.0s
BJT   Baijiatuau        81.63 319  P      P        02 33 48.4 +3.0
      comp=Z,18nm,1.3s
BJI   Beijing           81.64 319  P      P        02 33 48.3 +2.9
BJI                                S      S        02 43 53.5 -1.3
BJI                                pmax   pmax
      comp=Z,9.0nm,2.0s
BJI                                pmax   pmax
      comp=Z,110nm,5.4s
BJI                                LR     LR
      comp=Z,380nm,26.7s
BJI                                LR     LR
      comp=Z,340nm,31.4s
BJI                                LR     LR
      comp=Z,680nm,27.0s
TIY   Taiyuan           82.60 316  P      P        02 33 52.5 +1.9
TIY                                S      S        02 44 07.3 +2.2
TIY                                pmax   pmax
      comp=Z,290nm,4.5s
TIY                                LR     LR
      comp=Z,580nm,22.7s
TIY                                LR     LR
      comp=Z,480nm,24.1s
TIY                                LR     LR
      comp=Z,970nm,26.1s
HEH   HeiHe             82.72 332 eP      P        02 33 50.3 -0.5
HEH                                pmax   pmax
      comp=Z,30nm,1.6s
HEH                                LR     LR
      comp=Z,490nm,21.2s
HEH                                LR     LR
      comp=Z,220nm,20.6s
HEH                                LR     LR
      comp=Z,760nm,21.9s
PMSA  Palmer Station    82.87 159  LR     LR       03 06 00.6
      comp=Z,601nm,18.1s,baz=242,slow=32
XAN   Xi'an             82.93 311  P      P        02 33 52.3 -0.1
XAN                                S      S        02 44 11.0 +2.4
XAN                                pmax   pmax
      comp=Z,20nm,1.2s
XAN                                pmax   pmax
      comp=Z,480nm,3.6s
XAN                                LR     LR
      comp=Z,660nm,17.5s
XAN                                LR     LR
      comp=Z,390nm,18.0s
XAN                                LR     LR
      comp=Z,790nm,18.7s
KMI   Kunming           83.11 300  P      P        02 33 54.5 +0.8
KMI                                S      S        02 44 14.0 +2.9
KMI                                pmax   pmax
      comp=Z,25nm,1.4s
KMI                                pmax   pmax
      comp=Z,190nm,3.7s
KMI                                LR     LR
      comp=Z,290nm,27.7s
KMI                                LR     LR
      comp=Z,440nm,25.3s
KMI                                LR     LR
      comp=Z,620nm,25.6s
CMAR  Chiang Mai Arr    83.25 293  P      P        02 33 55.2 +0.9
      comp=Z,20nm,1.0s,baz=131,slow=3.9,SNR=66
CMAR                               PKKPbc PKKPbc   02 52 18.6 +4.0
      comp=Z,0.6nm,0.3s,baz=316,slow=2.3,SNR=4.3
CMAR                               LR     LR       03 11 14.0
      comp=Z,281nm,21.5s,baz=135,slow=36
      comp=Z,20nm,1.0s
CMAR  Chiang Mai Arr    83.25 293         P        02 33 54.0 -0.3
SYO   Syowa Base        83.27 195⇓eP      P        02 33 54.6 +1.1
SYO   Syowa Base        83.27 195⇓epP     P        02 33 57.6 +4.1
SYO   Syowa Base        83.27 195⇓iPcP    PcP      02 33 59.4 +1.4
CHTO  Chiang Mai        83.40 293  P      P        02 33 55.3 +0.2
CHTO  Chiang Mai        83.40 293  P      P        02 33 55.5 +0.4
      comp=Z,29nm,1.2s
CHTO  Chiang Mai        83.40 293  P      P        02 33 55.7 +0.6
      comp=Z,644nmcomp=Z,49nm,1.2s
CHTO  Chiang Mai        83.40 293  P      P        02 33 55.3 +0.2
CHTO                               pmax   pmax
      comp=Z,66nm,1.2s
MA2   Magadan           83.47 349  LR     LR       03 05 49.4
      comp=Z,1µm,21.3s,baz=171,slow=32
ELIB  Princess Elisa    84.00 189 dP      P        02 33 56.7 -0.7
      comp=Z,9.5nm,1.4s
XLT   XiLinHaoTe        84.07 322 eP      P        02 33 58.3 +0.2
XLT                                S      SKSac    02 44 21.0 +2.8
XLT                                SS     SS       02 49 52.3 +2.7
XLT                                pmax   pmax
      comp=Z,13nm,1.1s
XLT                                pmax   pmax
      comp=Z,290nm,4.1s
XLT                                LR     LR
      comp=Z,52nm,20.6s
XLT                                LR     LR
      comp=Z,430nm,16.1s
XLT                                LR     LR
      comp=Z,630nm,23.8s
KDAK  Kodiak Island     84.47  18  LR     LR       03 04 58.2
      comp=Z,794nm,20.2s,baz=206,slow=31
PZH   PanZhiHua         84.55 301  P      P        02 34 00.0 -0.9
PZH                                S      S        02 44 28.3 +3.0
PZH                                pmax   pmax
      comp=Z,20nm,1.6s
PZH                                pmax   pmax
      comp=Z,240nm,6.1s
PZH                                LR     LR
      comp=Z,220nm,16.3s
PZH                                LR     LR
      comp=Z,380nm,19.3s
PZH                                LR     LR
      comp=Z,400nm,19.5s
HHC   Hu-ho-hao-te      84.95 318 eP      P        02 34 03.0 +0.4
HHC                                S      SKSac    02 44 23.8 -0.2
HHC                                pmax   pmax
      comp=Z,8.0nm,0.6s
HHC                                pmax   pmax
      comp=Z,270nm,4.3s
HHC                                LR     LR
      comp=Z,740nm,21.3s
HHC                                LR     LR
      comp=Z,710nm,22.1s
HHC                                LR     LR
      comp=Z,2µm,21.3s
ZEA   Zeya              85.37 335 eP      P        02 34 04.6 +0.4
ZEA                                pmax   pmax
      comp=Z,20nm,1.2s
HILR  Hailar Array B    85.76 328  P      P        02 34 06.3 -0.1
      comp=Z,0.8nm,0.5s,baz=150,slow=10,SNR=5.8
      comp=Z,0.8nm,0.5s
O02D  Mt. Diablo Mer    85.76  44  IAmb   IAmb     02 34 15.0
      comp=Z,55nm,1.1s
BTO   Baotou            85.78 317 eP      P        02 34 08.5 +1.7
BTO                                S      S        02 44 37.5 +0.7
BTO                                SS     SS       02 50 20.0 +5.1
BTO                                pmax   pmax
      comp=Z,31nm,1.9s
BTO                                pmax   pmax
      comp=Z,690nm,8.4s
BTO                                LR     LR
      comp=Z,2µm,22.2s
BTO                                LR     LR
      comp=Z,2µm,24.3s
BTO                                LR     LR
      comp=Z,5µm,23.7s
TROLL Troll, Antarti    85.95 183 ⇑P      P        02 34 05.6 -1.6
      comp=Z,989nm,0.8s
TROLL                             ⇑x      x        02 34 06.8
      comp=E,729nm,1.0s
VTX   Valle De La Tr    86.13  54  IAmb   IAmb     02 34 20.0
      comp=Z,27nm,1.3s
ISA   Isabella, Lake    86.28  49  IAmb   IAmb     02 34 13.5
      comp=Z,32nm,1.2s
SEY   Seymchan          86.36 351  LR     LR       03 08 58.7
      comp=Z,978nm,20.2s,baz=160,slow=33
SEY   Seymchan          86.36 351ceP      P        02 34 09.9 +1.0
SEY                                pmax   pmax
      comp=Z,35nm,1.7s
M02C  Callahan          86.39  43  IAmb   IAmb     02 34 18.1
      comp=Z,33nm,1.1s
SNAA  Sanae             86.46 181  P      P        02 34 08.6 -1.0
      comp=Z,201nm,1.2s
SNAA  Sanae             86.46 181  P      P        02 34 08.5 -1.2
      comp=Z,2.6nm,0.9s,baz=190,slow=4.4,SNR=9.5
SNAA                               LR     LR       03 10 20.8
      comp=Z,439nm,19.0s,baz=180,slow=34
      comp=Z,2.6nm,0.9s
SNAA  Sanae             86.46 181  P      P        02 34 11.1 +1.5
SNAA                               IAmb   IAmb     02 34 16.1
      comp=Z,41nm,1.6s
SNAA  Sanae             86.46 181ceP      P        02 34 07.6 -2.1
SNAA                               pmax   pmax
      comp=Z,10.0nm,1.1s
TNCH  TengChong         86.47 299  P      P        02 34 12.0 +1.4
TNCH                               S      SKSac    02 44 41.5 +7.0
TNCH                               sS     sS       02 45 13.5  +10
TNCH                               pmax   pmax
      comp=Z,62nm,0.8s
TNCH                               pmax   pmax
      comp=Z,290nm,3.0s
TNCH                               LR     LR
      comp=Z,480nm,11.8s
TNCH                               LR     LR
      comp=Z,590nm,20.9s
TNCH                               LR     LR
      comp=Z,490nm,20.5s
NVL   N'lazarevskaya    86.50 186 eP      P        02 34 10.7 +0.9
NVL                               e                02 37 30.4
NVL                               eS      SKSac    02 44 31.9 -0.9
NVL                               eSS     SS       02 50 25.8 +3.3
NVL                               eSSS    SSS      02 53 58.3
NVL                                pmax   pmax
      comp=Z,27nm,1.2s
YBH   Yreka Blue Hor    86.67  42  LR     LR       03 04 26.5
      comp=Z,60nm,21.7s,baz=254,slow=30
YBH   Yreka Blue Hor    86.67  42  IAmb   IAmb     02 34 21.5
      comp=Z,37nm,1.4s
PFO   Pinyon Flats O    86.70  52  LR     LR       03 04 01.2
      comp=Z,872nm,21.8s,baz=247,slow=30
MDPB  Devils Postpil    86.86  47  IAmb   IAmb     02 34 27.5
      comp=Z,26nm,1.3s
VNA3  Neumayer Olymp    86.90 179 ⇑P      P        02 34 11.0 -0.8
      comp=Z,8.9nm,0.8s
CLC   China Lake        86.97  49  IAmb   IAmb     02 34 19.8
      comp=Z,23nm,1.2s
LPIG  La Paz            87.15  63  LR     LR       03 06 41.8
      comp=Z,633nm,18.3s,baz=245,slow=31
PNTR  Pine Nut          87.26  46  IAmb   IAmb     02 34 24.3
      comp=Z,36nm,1.3s
SLBS  Sierra La Lagu    87.27  63  P      P        02 34 17.1 +2.6
GSC   Goldstone, Bar    87.28  50  P      P        02 34 13.2 -1.0
GSC                                IAmb   IAmb     02 34 24.1
      comp=Z,44nm,1.7s
GSC   Goldstone, Bar    87.28  50  P      P        02 34 13.2 -1.0
GSC                                pmax   pmax
      comp=Z,45nm,1.7s
BBOR  Butler Butte      87.32  41  IAmb   IAmb     02 34 25.9
      comp=Z,68nm,1.8s
BC3   Big Chuckawall    87.46  52  P      P        02 34 17.3 +2.1
BC3                                IAmb   IAmb     02 34 30.5
      comp=Z,46nm,1.7s
LZH   Lanzhou           87.56 311 eP      P        02 34 17.0 +1.4
LZH                                SS     SS       02 50 47.0 +5.8
LZH                                pmax   pmax
      comp=Z,55nm,1.0s
LZH                                pmax   pmax
      comp=Z,290nm,4.8s
LZH                                LR     LR
      comp=Z,390nm,19.4s
LZH                                LR     LR
      comp=Z,510nm,18.9s
LZH                                LR     LR
      comp=Z,1µm,21.5s
LZDM  Lanzhou Array     87.60 310  P      P        02 34 16.3 +0.2
      comp=Z,0.6nm,0.3s,baz=109,slow=8.0,SNR=12
LZDM                               LR     LR       03 10 15.5
      comp=Z,331nm,21.8s,baz=65,slow=34
      comp=Z,0.6nm,0.3s
GLA   Glamis            87.63  53  IAmb   IAmb     02 34 25.1
      comp=Z,43nm,1.4s
PAHR  Pah Rah Range     87.72  45  IAmb   IAmb     02 34 26.2
      comp=Z,44nm,1.5s
RYN   Ryan              87.74  47  IAmb   IAmb     02 34 22.7
      comp=Z,37nm,1.6s
NVAR  Mina Array Bea    87.79  47  P      P        02 34 18.9 +2.1
      comp=Z,5.1nm,1.0s,baz=224,slow=7.2,SNR=22
NVAR                               LR     LR       03 05 28.9
      comp=Z,2µm,21.1s,baz=257,slow=30
      comp=Z,5.1nm,1.0s
NVAR  Mina Array Bea    87.79  47         P        02 34 18.5 +1.7
IRM   Iron Mountain     87.92  52  IAmb   IAmb     02 34 32.5
      comp=Z,42nm,1.6s
GMN   Gold Mountain     87.94  48  IAmb   IAmb     02 34 34.7
      comp=Z,27nm,1.8s
SHOC  Shoshone, Teco    87.94  50  IAmb   IAmb     02 34 47.2
      comp=Z,28nm,1.4s
WCT   Wildcat Mounta    88.13  49  IAmb   IAmb     02 34 38.8
      comp=Z,34nm,1.7s
BLYC  Blythe            88.18  52  IAmb   IAmb     02 34 29.7
      comp=Z,36nm,1.4s
MTPC  Mountain Pass     88.26  51  IAmb   IAmb     02 34 29.1
      comp=Z,51nm,1.9s
113A  Mohawk Valley,    88.29  54  IAmb   IAmb     02 34 38.2
      comp=Z,56nm,1.8s
TPNV  Topopah Spring    88.47  49  IAmb   IAmb     02 34 30.0
      comp=Z,26nm,1.1s
214A  Organ Pipe Nat    88.64  55  IAmb   IAmb     02 34 26.2
      comp=Z,47nm,1.7s
V12A  Nelson            88.88  51  IAmb   IAmb     02 34 30.7
      comp=Z,52nm,1.8s
W13A  Hualapai Mount    89.28  52  IAmb   IAmb     02 34 32.8
      comp=Z,33nm,1.7s
Y14A  Wickenburg        89.39  53  IAmb   IAmb     02 34 28.4
      comp=Z,37nm,1.8s
GNW   Green Mountain    89.83  37  P      P        02 34 28.2 +2.4
GNW                                IAmb   IAmb     02 34 29.9
      comp=Z,29nm,1.4s
BILL  Bilibino          90.01 357  P      P        02 34 26.5 +0.2
BILL  Bilibino          90.01 357ceP      P        02 34 26.7 +0.5
BILL                               pmax   pmax
      comp=Z,10.0nm,1.1s
PGC   Sidney            90.09  36  P      P        02 34 28.6 +1.6
PGC                                IAmb   IAmb     02 34 33.8
      comp=Z,26nm,1.1s
J08A  Circle Bar Ran    90.18  43  IAmb   IAmb     02 34 37.7
      comp=Z,39nm,1.4s
TUC   Tucson            90.33  55  P      P        02 34 30.9 +2.2
TUC                                IAmb   IAmb     02 34 38.0
      comp=Z,26nm,1.4s
TUC   Tucson            90.33  55  P      P        02 34 30.9 +2.2
TUC                                pmax   pmax
      comp=Z,26nm,1.4s
CIT   Chita             90.37 328 eP      P        02 34 29.0 +0.7
CIT                                pmax   pmax
      comp=Z,90nm,2.1s
F07A  Phinny Hill Vi    90.61  40  IAmb   IAmb     02 34 52.5
      comp=Z,19nm,1.1s
LCMT  Little Creek M    90.62  50  IAmb   IAmb     02 34 35.2
      comp=Z,37nm,1.7s
MXC   Moxie City        90.75  39  IAmb   IAmb     02 34 53.3
      comp=Z,26nm,1.5s
PAX   Paxson            90.75  17  IAmb   IAmb     02 34 41.3
      comp=Z,49nm,1.7s
X16A  Lo Mia Camp, P    90.77  53  IAmb   IAmb     02 34 40.0
      comp=Z,30nm,1.3s
SPR3  Spring Creek 3    90.78  48  IAmb   IAmb     02 34 35.6
      comp=Z,46nm,1.7s
CCUT  Cedar City        90.78  50  IAmb   IAmb     02 34 35.5
      comp=Z,27nm,1.4s
YAK   Yakutsk           90.80 341  LR     LR       03 08 55.3
      comp=Z,927nm,21.8s,baz=125,slow=31
YAK   Yakutsk           90.80 341 eP      P        02 34 29.9 -0.1
YAK                               e                02 38 05.3
YAK                               ePPP    PPP      02 40 03.6
YAK                               eS      SKSac    02 44 56.6 -1.5
YAK                               e*SS    ScS      02 45 23.7 -2.7
YAK                               eSP     SPn      02 46 29.9 -1.2
YAK                               eSS     SS       02 51 25.0 -1.8
YAK                               eSSS    SSS      02 55 02.3
YAK                                pmax   pmax
      comp=Z,28nm,1.2s
YAK                                pmax   pmax
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	comp=N,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,178nm,5.1s						
YAK				pmax	pmax		
	comp=N,74nm,5.4s						
YAK				pmax	pmax		
	comp=E,139nm,5.9s						
YAK				smax	smax		
	comp=N,135nm,4.7s						
YAK				smax	smax		
	comp=E,67nm,3.8s						
G08A	**Pilot Rock**	**90.87**	**41**	IAmb	IAmb	02 34 39.0	
	comp=Z,15nm,0.9s						
LTY	**Liberty**	**90.89**	**38**	IAmb	IAmb	02 34 44.0	
	comp=Z,47nm,1.7s						
ELK	**Elko**	**90.99**	**46**	LR	LR	03 08 35.5	
	comp=Z,1µm,19.8s,baz=246,slow=31						
ELK	**Elko**	**90.99**	**46**	IAmb	IAmb	02 34 35.8	
	comp=Z,18nm,1.2s						
E07A	**Sunnyside**	**91.00**	**39**	IAmb	IAmb	02 34 38.2	
	comp=Z,18nm,1.0s						
M26K	**Nabesna, AK**	**91.02**	**19**	IAmb	IAmb	02 34 48.0	
	comp=Z,46nm,1.6s						
U15A	**North Rim**	**91.04**	**51**	IAmb	IAmb	02 34 36.7	
	comp=Z,28nm,1.2s						
319A	**Douglas**	**91.08**	**57**	IAmb	IAmb	02 34 37.7	
	comp=Z,38nm,1.5s						
HAWA	**Hanford**	**91.10**	**40**	P	**P**	**02 34 33.5**	**+1.7**
HAWA				IAmb	IAmb	02 34 54.9	
	comp=Z,26nm,1.2s						
BRDH	**Bariadhala**	**91.21**	**294**	P	**P**	**02 34 34.2**	**+1.3**
	comp=Z,49nm,0.3s,baz=70,slow=7.6,SNR=7.2						
WUAZ	**Wupatki**	**91.30**	**52**	IAmb	IAmb	02 34 42.2	
	comp=Z,27nm,1.2s						
M27K	**Edge Creek, AK**	**91.32**	**19**	IAmb	IAmb	02 34 51.1	
	comp=Z,35nm,1.4s						
ULN	**Ulaanbaatar**	**91.50**	**322**	P	**P**	**02 34 33.3**	**-0.5**
ULN	**Ulaanbaatar**	**91.50**	**322**	P	**P**	**02 34 35.7**	**+1.8**
ULN	**Ulaanbaatar**	**91.50**	**322***c*	*e*P	**P**	**02 34 33.8**	**-0.1**
ULN				pmax	pmax		
	comp=Z,13nm,1.1s						
H03S2	**Juan Fernandez**	**91.53**	**127**	T	T	04 15 56.5	
	baz=240,slow=74,SNR=38						
H03S1	**Juan Fernandez**	**91.54**	**127**	T	T	04 16 01.8	
	baz=240,slow=74,SNR=35						
H03S3	**Juan Fernandez**	**91.54**	**127**	T	T	04 16 00.7	
	baz=240,slow=74,SNR=33						
EPH	**Ephrata**	**91.56**	**39**	IAmb	IAmb	02 34 43.5	
	comp=Z,59nm,1.8s						
BMO	**Blue Mountains**	**91.66**	**42**	IAmb	IAmb	02 34 44.1	
	comp=Z,55nm,1.9s						
COLA	**College**	**91.66**	**15**	P	**P**	**02 34 34.6**	**+0.7**
	comp=Z,13nm,2.1s						
COLA	**College**	**91.66**	**15**	*i* P	**P**	**02 34 35.5**	**+1.6**
COLA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
H22K	**Ishtalitna Cre**	**91.69**	**14**	IAmb	IAmb	02 34 43.0	
	comp=Z,35nm,1.8s						
H03N3	**Juan Fernandez**	**91.70**	**127**	T	T	04 16 11.0	
	baz=245,slow=73,SNR=8.8						
H03N2	**Juan Fernandez**	**91.70**	**127**	T	T	04 16 09.6	
	baz=245,slow=73,SNR=9.1						
H03N1	**Juan Fernandez**	**91.72**	**127**	T	T	04 16 06.8	
	baz=245,slow=73,SNR=14						
D08A	**Wollman Farm,**	**91.80**	**39**	IAmb	IAmb	02 34 40.1	
	comp=Z,25nm,1.3s						
IL31		**91.82**	**16**	IAmb	IAmb	02 34 42.5	
	comp=Z,25nm,1.4s						
ILAR	**Eielson Array**	**91.82**	**16**	P	**P**	**02 34 32.8**	**-1.9**
	comp=Z,3.5nm,1.1s,baz=227,slow=4.1,SNR=11						
ILAR				LR	LR	03 10 48.8	
	comp=Z,666nm,19.3s,baz=210,slow=32						
	comp=Z,3.5nm,1.1s						
ILAR	**Eielson Array**	**91.82**	**16**		**P**	**02 34 35.0**	**+0.3**
ILAR	**Eielson Array**	**91.82**	**16**	*e*P	**P**	**02 34 35.6**	**+0.9**
ILAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MTPU	**Mount Pierson**	**91.84**	**50**	IAmb	IAmb	02 34 47.5	
	comp=Z,21nm,1.2s						
SONM	**Songino Array**	**91.87**	**322**	P	**P**	**02 34 35.2**	**-0.3**
	comp=Z,4.3nm,1.1s,baz=143,slow=3.9,SNR=14						
SONM				LR	LR	03 14 42.0	
	comp=Z,350nm,20.4s,baz=126,slow=35						
	comp=Z,4.3nm,1.1s						
SONM	**Songino Array**	**91.87**	**322**	P	**P**	**02 34 34.8**	**-0.7**
TCRU	**Three Creeks R**	**91.91**	**49**	IAmb	IAmb	02 34 45.6	
	comp=Z,19nm,1.3s						
GTA	**Gaotai**	**91.94**	**312**	P	**P**	**02 34 37.0**	**+0.9**
GTA				SKS	**SKSac**	**02 45 03.8**	**-2.2**
GTA				SS	**SS**	**02 51 48.0**	**+3.4**
GTA				pmax	pmax		
	comp=Z,11nm,1.5s						
GTA				LR	LR		
	comp=Z,550nm,24.8s						
GTA				LR	LR		
	comp=Z,720nm,21.8s						
GTA				LR	LR		
	comp=Z,1µm,24.4s						
SCRK	**Sand Creek**	**91.96**	**17**	IAmb	IAmb	02 34 46.7	
	comp=Z,26nm,1.4s						
J25K	**Salcha River,**	**92.09**	**17**	IAmb	IAmb	02 34 47.7	
	comp=Z,41nm,1.7s						
W18A	**Petrified Fore**	**92.33**	**53**	IAmb	IAmb	02 34 42.1	
	comp=Z,23nm,1.5s						
C18K	**Utukok River**	**92.34**	**9**	IAmb	IAmb	02 34 49.6	
	comp=Z,25nm,1.6s						
DUG	**Dugway, Tooele**	**92.37**	**47**	IAmb	IAmb	02 34 46.7	
	comp=Z,28nm,1.9s						
J26L	**Joseph Creek**	**92.48**	**17**	IAmb	IAmb	02 34 40.9	
	comp=Z,24nm,1.3s						
K27K	**Chicken**	**92.54**	**18**	IAmb	IAmb	02 34 52.7	
	comp=Z,41nm,1.6s						
BGU	**Big Grassy Mou**	**92.56**	**47**	IAmb	IAmb	02 34 42.8	
	comp=Z,31nm,1.9s						
PLID	**Pearl Lake**	**92.59**	**42**	IAmb	IAmb	02 34 43.6	
	comp=Z,35nm,1.8s						
D19K	**Kuna River**	**92.68**	**10**	IAmb	IAmb	02 34 57.3	
	comp=Z,14nm,1.1s						
121A	**Cookes Peak, D**	**92.72**	**56**	IAmb	IAmb	02 34 48.0	
	comp=Z,18nm,1.4s						
HLID	**Hailey**	**92.86**	**44**	IAmb	IAmb	02 35 05.1	
	comp=Z,27nm,2.0s						
C19K	**Lookout Ridge**	**93.00**	**9**	IAmb	IAmb	02 34 52.1	
	comp=Z,33nm,1.5s						
L29M	**L29M**	**93.04**	**20**	IAmb	IAmb	02 35 04.0	
	comp=Z,23nm,1.3s						
M30M	**Minto, Yukon**	**93.09**	**21**	IAmb	IAmb	02 34 52.0	
	comp=Z,28nm,1.5s						
MPU	**Maple Canyon**	**93.10**	**48**	IAmb	IAmb	02 35 02.9	
	comp=Z,30nm,1.9s						
DAWY	**Dawson**	**93.35**	**19**	IAmb	IAmb	02 34 53.1	
	comp=Z,22nm,1.4s						
NEW	**Newport**	**93.46**	**39**	LR	LR	03 11 22.9	
	comp=Z,857nm,18.9s,baz=238,slow=32						
SRU	**San Rafael Swe**	**93.48**	**49**	IAmb	IAmb	02 34 51.9	
	comp=Z,23nm,1.5s						
P17A	**Butcher Ranch,**	**93.48**	**49**	IAmb	IAmb	02 34 53.1	
	comp=Z,23nm,1.5s						
E22K	**Anaktuvuk Pass**	**93.50**	**12**	IAmb	IAmb	02 34 54.0	
	comp=Z,44nm,1.6s						
PLCA	**Paso Flores**	**93.79**	**137**	P	**P**	**02 34 48.7**	**+4.1**
	comp=Z,4.3nm,1.0s,baz=212,slow=4.5,SNR=5.4						
PLCA				LR	LR	03 11 13.5	
	comp=Z,560nm,18.2s,baz=252,slow=32						
PLCA	**Paso Flores**	**93.79**	**137**	P	**P**	**02 34 46.4**	**+1.7**
PLCA	**Paso Flores**	**93.79**	**137**	P	**P**	**02 34 46.4**	**+1.7**
PLCA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
F24K	**Squaw Lake**	**93.82**	**14**	IAmb	IAmb	02 34 52.4	
	comp=Z,20nm,1.4s						
P18A	**Preston Nutter**	**93.89**	**49**	IAmb	IAmb	02 35 17.1	
	comp=Z,26nm,1.9s						
Y22A	**Socorro**	**93.92**	**55**	IAmb	IAmb	02 34 49.4	
	comp=Z,24nm,1.6s						
BSUT	**Blindstream Ca**	**93.93**	**48**	IAmb	IAmb	02 35 06.0	
	comp=Z,40nm,1.8s						
D22K	**Ayikyak River**	**93.97**	**12**	IAmb	IAmb	02 34 53.4	
	comp=Z,48nm,1.7s						
J29N	**Klondike Camp**	**93.98**	**19**	IAmb	IAmb	02 34 57.3	
	comp=Z,44nm,1.6s						
GOMU	**GeErMu**	**94.12**	**307**	P	**P**	**02 34 47.5**	**+1.0**
GOMU				PP	**PP**	**02 38 33.3**	**-0.3**
GOMU				SS	SS	02 52 14.5	-2.0
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,330nm,6.0s						
GOMU				LR	LR		
	comp=Z,300nm,17.6s						
GOMU				LR	LR		
	comp=Z,420nm,17.6s						
GOMU				LR	LR		
	comp=Z,980nm,17.2s						
PV18	**Skein Mesa, Pa**	**94.25**	**50**	IAmb	IAmb	02 35 54.8	
	comp=Z,49nm,1.8s						
PV13	**Radium Mtn., P**	**94.28**	**51**	IAmb	IAmb	02 34 55.5	
	comp=Z,29nm,1.8s						
PV03	**Paradox Valley**	**94.30**	**50**	IAmb	IAmb	02 34 51.9	
	comp=Z,23nm,1.7s						
PV04	**Paradox Valley**	**94.32**	**50**	IAmb	IAmb	02 35 06.1	
	comp=Z,50nm,1.8s						
G26K	**Porcupine Rive**	**94.33**	**16**	IAmb	IAmb	02 34 58.7	
	comp=Z,38nm,1.4s						
H27K	**Steamboat Moun**	**94.36**	**17**	IAmb	IAmb	02 34 58.8	
	comp=Z,36nm,1.6s						
PV02	**Paradox Valley**	**94.36**	**51**	IAmb	IAmb	02 34 51.4	
	comp=Z,54nm,2.0s						
D23K	**Nanushuk River**	**94.43**	**12**	IAmb	IAmb	02 34 59.3	
	comp=Z,33nm,1.6s						
BMAR	**Burnt Mountain**	**94.51**	**15**	P	**P**	**02 34 48.2**	**+1.1**
TXAR	**Lajitas Array**	**94.70**	**60**	P	**P**	**02 34 51.0**	**+2.0**
	comp=Z,3.2nm,1.1s,baz=235,slow=4.4,SNR=12						
TXAR				PKKPbc	**PKKPdf**	**02 51 49.9**	**+3.1**
	comp=Z,0.3nm,0.8s,baz=75,slow=4.6,SNR=3.7						
TXAR				LR	LR	03 08 53.0	
	comp=Z,867nm,21.4s,baz=244,slow=30						
	comp=Z,3.2nm,1.1s						
TXAR	**Lajitas Array**	**94.70**	**60**	P	**P**	**02 34 50.3**	**+1.4**
TXAR	**Lajitas Array**	**94.70**	**60**	P	**P**	**02 34 51.0**	**+2.0**
TASM	**ASL Pad, Albuq**	**94.71**	**54**	IAmb	IAmb	02 34 57.2	
	comp=Z,4.3nm,1.0s						
TASM	**ASL Pad, Albuq**	**94.71**	**54**	IAmb	IAmb	02 34 52.6	
	comp=Z,11nm,1.5s						
TASM	**ASL Pad, Albuq**	**94.71**	**54**	IAmb	IAmb	02 34 57.2	
	comp=Z,3.9nm,1.0s						
ANMO	**Albuquerque**	**94.71**	**54**	LR	LR	03 09 14.9	
	comp=Z,485nm,21.1s,baz=258,slow=30						
ANMO	**Albuquerque**	**94.71**	**54**	P	**P**	**02 34 49.4**	**+0.4**
ANMO	**Albuquerque**	**94.71**	**54**	*i* P	**P**	**02 34 50.0**	**+1.0**
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZAK	**Zakamensk**	**94.92**	**323**	*e*P	**P**	**02 34 47.9**	**-1.5**
ZAK				pmax	pmax		
	comp=Z,14nm,1.7s						
C23K	**Itkillik River**	**95.18**	**12**	IAmb	IAmb	02 35 02.7	
	comp=Z,29nm,1.4s						
PALK	**Pallekele**	**95.22**	**276**	LR	LR	03 20 26.8	
	comp=Z,811nm,18.9s,baz=118,slow=37						
TLY	**Talaya**	**95.34**	**324**	*i* P	**P**	**02 34 51.7**	**+0.4**
TLY				pmax	pmax		
	comp=Z,9.0nm,1.1s						
D25K	**Kavik River**	**95.61**	**13**	IAmb	IAmb	02 35 03.8	
	comp=Z,18nm,1.6s						
PDAR	**Pinedale Array**	**95.69**	**46**	P	**P**	**02 34 54.3**	**+0.9**
	comp=Z,0.6nm,1.0s,baz=263,slow=2.5,SNR=4.3						
PDAR				PP	**PP**	**02 38 45.5**	**0.0**
	comp=Z,0.8nm,1.0s,baz=266,slow=12,SNR=4.2						
PDAR				LR	LR	03 11 56.8	
	comp=Z,558nm,19.1s,baz=236,slow=32						
	comp=Z,0.6nm,1.0s						
PDAR	**Pinedale Array**	**95.69**	**46**	P	**P**	**02 34 53.7**	**+0.3**
E27K	**Coleen River**	**95.82**	**15**	IAmb	IAmb	02 35 04.8	
	comp=Z,31nm,1.8s						
C27K	**Jago River**	**96.43**	**14**	IAmb	IAmb	02 35 04.2	
	comp=Z,11nm,1.1s						
E28M	**Babbage River**	**96.64**	**16**	IAmb	IAmb	02 35 19.0	
	comp=Z,27nm,1.8s						
CMIG	**Matias Romero**	**97.76**	**75**	LR	LR	03 11 37.6	
	comp=Z,219nm,19.4s,baz=248,slow=31						
KNGR	**Kungurtug, Tuv**	**98.30**	**321**	*i* P	Pdif	02 35 08.4	+3.6
KNGR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TIXI	**Tiksi**	**98.36**	**347**	LR	LR	03 15 58.6	
	comp=Z,459nm,19.8s,baz=186,slow=33						
TIXI	**Tiksi**	**98.36**	**347**	*i* P	Pdif	02 35 05.5	+1.1
TIXI				pmax	pmax		
	comp=Z,11nm,2.4s						
YKA	**Yellowknife Ar**	**101.40**	**27**	P	**Pdif**	**02 35 18.5**	**+0.4**
	comp=Z,0.5nm,1.0s,baz=246,slow=5.5,SNR=4.7						
YKA				PP	**PP**	**02 39 25.2**	**-3.2**
	comp=Z,0.4nm,1.0s,baz=253,slow=7.1,SNR=3.8						
YKA	**Yellowknife Ar**	**101.40**	**27**		**Pdif**	**02 35 18.0**	**-0.2**
WMQ	**Urumqi**	**102.02**	**312**	*e*P	**Pdif**	**02 35 23.0**	**+1.5**
WMQ				LR	LR		
	comp=Z,600nm,24.0s						
WMQ				LR	LR		
	comp=Z,620nm,24.3s						
WMQ				LR	LR		
	comp=Z,640nm,24.1s						
MKAR	**Makanchi Array**	**106.53**	**314**	Pdiff	**Pdif**	**02 35 44.5**	**+3.1**
	comp=Z,1.7nm,0.9s,baz=96,slow=5.7,SNR=4.4						
MKAR				PKKPbc	**PKKPbc**	**02 51 15.6**	**+2.5**
	comp=Z,1.0nm,1.0s,baz=349,slow=4.4,SNR=5.3						
KURBB	**Kurchatov Arra**	**109.80**	**318**	PKKPbc	PKKPbc	02 51 02.1	-0.6
	comp=Z,0.9nm,0.6s,baz=292,slow=3.7,SNR=5.9						
BVAR	**Borovoye Array**	**115.12**	**319**	PKP	**PKPdf**	**02 40 07.1**	**-1.0**
	comp=Z,1.8nm,0.9s,baz=97,slow=3.6,SNR=8.2						
BORK	**Borovoye**	**115.16**	**319***c*	*i*PKIKP	**PKiKP**	**02 40 05.9**	**-2.3**
BORK				pmax	pmax		
	comp=Z,8.0nm,2.5s						
AB31	**Akbulak array**	**121.65**	**315**		**PKiKP**	**02 40 19.8**	**-1.1**
ABKAR	**Akbulak array**	**121.65**	**315**		**PKPdf**	**02 40 19.8**	**-1.0**
ARTI	**Arti**	**121.95**	**324**		**PKPdf**	**02 40 20.0**	**-1.2**
ARTI	**Arti**	**121.95**	**324***c*	*i*PKIKP	**PKiKP**	**02 40 20.2**	**-1.1**
ARTI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SPITS	**Spitsbergen Ar**	**122.81**	**355**	PKP	**PKPdf**	**02 40 20.8**	**-1.5**
	comp=Z,6.2nm,0.8s,baz=165,slow=3.5,SNR=4.1						
BDFB	**Brasilia**	**124.72**	**129**	PKP	**PKiKP**	**02 40 29.2**	**+1.0**
	comp=Z,3.9nm,1.0s,baz=251,slow=4.7,SNR=4.1						
KIRV	**Kirov**	**126.18**	**327***c*	*i*PKIKP	**PKiKP**	**02 40 28.8**	**-0.8**
ARCES	**ARCESS Array B**	**128.78**	**346**	PKP	**PKiKP**	**02 40 33.2**	**-1.3**
	comp=Z,5.1nm,0.9s,baz=51,slow=1.9,SNR=8.9						
ARCES	**ARCESS Array B**	**128.78**	**346**	*e*PKIKP	**PKiKP**	**02 40 34.1**	**-0.4**
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BELG	**Belogornoye**	**128.91**	**320**	*i* PKIKP	**PKiKP**	**02 40 34.0**	**-1.2**
KLMR	**Klimovskoe**	**129.86**	**333**	*e*PKIKP	**PKPdf**	**02 40 35.3**	**-0.8**
KLMR				pmax	pmax		
	comp=Z,24nm,1.4s						
MAK	**Makhachkala**	**130.80**	**308**	*e*P	**Pdif**	**02 37 31.4**	**+2.0**
MAK				*i*		02 40 36.9	
MAK				*e*		02 47 47.5	
MAK				*e*SS	SS	03 00 21.9	-0.2
MAK				*e*SSS	SSS	03 05 07.6	
MAK				pmax	pmax		
	comp=Z,75nm,1.6s						
AKT	**Akhty**	**130.81**	**306**	*i* PKIKP	**PKPdf**	**02 40 37.9**	**-0.8**
AKT				*e*		02 42 52.2	
AKT				*e*PPP	PPP	02 45 46.8	
AKT				*e*		02 47 47.3	
AKT				pmax	pmax		
	comp=Z,19nm,1.3s						
AKT				MLR	MLR		
	comp=Z,517nm,27.0s						
VRH	**Novokhopyorsk**	**132.76**	**320**	*e*PKIKP	**PKPdf**	**02 40 40.4**	**-1.5**
VRH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LPSR	**Galich'ya Gora**	**133.86**	**323**	*i* PKIKP	**PKPdf**	**02 40 42.2**	**-1.7**
LPSR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KBZ	**Khabaz**	**134.00**	**310**	PKP	**PKiKP**	**02 40 45.6**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=84,slow=3.2,SNR=3.9						
OBN	**Obninsk**	**134.02**	**327**	*i* PKIKP	**PKiKP**	**02 40 46.2**	**+0.8**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VORR	**Voronezh**	**134.06**	**322**	*e*PKIKP	**PKPdf**	**02 40 43.2**	**-1.1**
VORR				pmax	pmax		
	comp=Z,15nm,0.4s						
KIV	**Kislovodsk**	**134.10**	**310**	*i* PKIKP	**PKPdf**	**02 40 43.4**	**-1.4**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,359nm,23.0s						
SHA1	**Shidzhatmaz**	**134.16**	**310**	*i* PKIKP	**PKiKP**	**02 40 45.1**	**-1.4**
NEUR	**Neytrino**	**134.23**	**309**	*i* PKIKP	**PKiKP**	**02 40 45.2**	**-1.3**
VSR	**Storozhevoye**	**134.26**	**321**	*e*PKIKP	**PKPdf**	**02 40 42.3**	**-2.4**
VSR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
FINES	**FINESS Array B**	**134.68**	**339**	PKP	**PKiKP**	**02 40 45.7**	**-0.9**
	comp=Z,2.4nm,0.9s,baz=105,slow=6.5,SNR=5.2						
FINES	**FINESS Array B**	**134.68**	**339**		**PKiKP**	**02 40 46.1**	**-0.5**
FINES	**FINESS Array B**	**134.68**	**339**	*e*PKIKP	**PKiKP**	**02 40 46.1**	**-0.5**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ERBR	**Yeremizino-Bor**	**135.20**	**313**	*i* PKIKP	**PKiKP**	**02 40 51.2**	**+3.0**
ERBR				pmax	pmax		
	comp=Z,12nm,0.9s						
ERBR				MLR	MLR		
	comp=Z,962nm,24.0s						
LABN	**Labinsk**	**135.31**	**312**	*i* PKHKP	PKPpre	02 40 38.2	
LABN				pmax	pmax		
	comp=Z,12nm,0.7s						
SOC	**Sochi**	**136.28**	**311**	*i* PKHKP	PKPpre	02 40 40.2	
SOC				*e*		02 43 27.8	
SOC				MLR	MLR		
	comp=Z,529nm,23.0s						
VSU	**Vasula**	**136.51**	**335***c*	*i*PKIKP	**PKPdf**	**02 40 47.4**	**-1.3**
VSU				pmax	pmax		
	comp=Z,26nm,2.5s						
ANN	**Anapa**	**137.53**	**313**	*e*P	**Pdif**	**02 38 09.0**	**+10**
MNK	**Minsk**	**138.57**	**330**	*i* PKIKP	**PKiKP**	**02 40 54.1**	**-0.7**
MNK				*i*		02 43 42.5	
MNK				*i* PPP	PPP	02 46 43.8	
MNK				*i*		02 48 02.2	
MNK				*i* SS	SS	03 01 58.0	+3.9
MNK				*i* SSS	SSS	03 07 07.1	
MNK				pmax	pmax		
	comp=N,7.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MNK				pmax	pmax		
	comp=E,9.0nm,0.8s						
MNK				MLR	MLR		
	comp=N,509nm,25.0s						
MNK				MLR	MLR		
	comp=Z,790nm,23.0s						
MNK				MLR	MLR		
	comp=E,519nm,23.0s						
NB2	**NORSAR Subarra**	**139.15**	**347**	PKPdf	**PKiKP**	**02 40 54.1**	**-1.7**
	comp=Z,11nm,1.7s,baz=31,slow=1.9						
NB2	**NORSAR Subarra**	**139.15**	**347**	PKPdf	**PKiKP**	**02 40 54.1**	**-1.7**
	baz=31,slow=1.9						
NOA	**NORSAR Array B**	**139.15**	**347**	PKP	**PKPdf**	**02 40 52.4**	**-1.2**
	comp=Z,2.1nm,0.9s,baz=33,slow=2.0,SNR=7.7						
NOA	**NORSAR Array B**	**139.15**	**347**	*e*PKIKP	**PKiKP**	**02 40 54.5**	**-1.3**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HFS	**Hagfors**	**139.39**	**345**	PKP	**PKPdf**	**02 40 53.0**	**-1.0**
	comp=Z,2.9nm,0.8s,baz=48,slow=2.1,SNR=5.1						
HFS	**Hagfors**	**139.39**	**345**	PKIKP	**PKPdf**	**02 40 53.0**	**-1.0**
AKASG	**Malin Array Be**	**140.09**	**325**	PKP	**PKPdf**	**02 40 53.5**	**-2.0**
	comp=Z,2.6nm,0.9s,baz=58,slow=2.2,SNR=6.1						
AKASG	**Malin Array Be**	**140.09**	**325**	*e*PKIKP	**PKPdf**	**02 40 54.4**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKBB	**Malin Array Si**	**140.09**	**325***c*	*i*PKIKP	**PKiKP**	**02 40 56.9**	**-1.1**
KIRS	**Kirsehir-Merke**	**141.60**	**306**	⇑P	**PKiKP**	**02 41 00.6**	**-1.0**
BRTR	**Keskin Array B**	**141.66**	**307**	PKhKP	PKPpre	02 40 54.3	
	comp=Z,1.1nm,0.9s,baz=126,slow=8.2,SNR=5.5						
BRTR	**Keskin Array B**	**141.66**	**307**	*e*PKIKP	**PKPdf**	**02 40 58.5**	**-0.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SORM	**Soroca**	**141.91**	**322**	⇓P	**PKPdf**	**02 40 56.1**	**-2.8**
TPGR	**Topolog**	**143.45**	**317**	⇑P	**PKPdf**	**02 41 00.9**	**-0.9**
CFR	**Carcaliu**	**143.48**	**317**	⇓P	**PKPdf**	**02 41 00.4**	**-1.4**
GHRR		**143.51**	**319**	⇑P	**PKPdf**	**02 41 00.8**	**-1.0**
PRAR	**RASCA**	**143.54**	**322**	⇑P	**PKPdf**	**02 41 01.0**	**-0.8**
GIRR	**Girov**	**143.60**	**321**	⇑P	**PKPdf**	**02 41 00.2**	**-1.7**
TESR	**Tescani**	**143.74**	**320**	⇑P	**PKPdf**	**02 41 01.0**	**-1.2**
TLBR	**Topalu**	**143.83**	**317**	⇑P	**PKPdf**	**02 41 01.6**	**-0.8**
ODBI	**Odobesti**	**143.87**	**319**	⇑P	**PKPdf**	**02 41 01.7**	**-0.7**
BURAR	**Bucovina Array**	**143.97**	**323**		**PKPdf**	**02 41 02.6**	**-0.1**
BURAR	**Bucovina Array**	**143.97**	**323**	⇑P	**PKPdf**	**02 41 01.0**	**-1.7**
ONER	**Baraj Valea Uz**	**143.98**	**320**	⇓P	**PKPdf**	**02 41 01.0**	**-1.6**
VRI	**Vrincioaia**	**144.02**	**319**	⇑P	**PKPdf**	**02 41 00.8**	**-1.9**
PLOR	**Plostina**	**144.07**	**319**	⇑P	**PKPdf**	**02 41 01.0**	**-1.8**
GRER		**144.11**	**318**	⇑P	**PKiKP**	**02 41 07.6**	**+1.2**
AMRR	**Amara**	**144.25**	**317**	⇑P	**PKPdf**	**02 41 02.3**	**-0.8**
PGOR	**Pogoanele**	**144.33**	**318**	⇑P	**PKPdf**	**02 41 02.2**	**-1.0**
COVR	**Voineasa-Covas**	**144.34**	**320**	⇑P	**PKPab**	**02 41 00.3**	**-1.2**
TURR	**Turia**	**144.35**	**320**	⇑P	**PKPdf**	**02 41 02.3**	**-1.0**
OZUR		**144.47**	**320**	⇑P	**PKPab**	**02 40 57.5**	**-4.4**
ISR	**Istrita**	**144.50**	**318**	⇑P	**PKPdf**	**02 41 02.6**	**-1.0**
ISP	**Isparta**	**144.51**	**305**		PKPbc	02 41 01.8	-0.8
ISP	**Isparta**	**144.51**	**305**	PKIKP	PKPbc	02 41 01.8	-0.8
BOSR	**Bodos**	**144.55**	**320**	⇓P	**PKPdf**	**02 41 03.0**	**-0.7**
MLR	**Muntele Rosu**	**144.68**	**319**		**PKPdf**	**02 41 04.0**	**0.0**
MLR	**Muntele Rosu**	**144.68**	**319**	⇑P	**PKPdf**	**02 41 03.0**	**-1.1**
MLR	**Muntele Rosu**	**144.68**	**319**	PKIKP	**PKPdf**	**02 41 04.0**	**0.0**
ARCR	**ARCALIA**	**144.76**	**323**	⇑P	**PKPdf**	**02 41 03.8**	**-0.1**
DOPR	**Dopca**	**144.77**	**320**	⇑P	**PKPdf**	**02 41 03.6**	**-0.4**
PRD	**Provadia**	**144.85**	**315**	*e*P	**PKPdf**	**02 41 04.2**	**0.0**
SULR		**144.89**	**318**	⇑P	**PKPab**	**02 41 00.2**	**-3.2**
TGMR	**Targu Mures**	**144.97**	**322**	⇑P	PKPbc	02 41 02.7	-1.0
STHS	**Stebnicka Huta**	**144.98**	**328**	*e*PKIKP	**PKPdf**	**02 41 03.7**	**-0.6**
STHS	**Stebnicka Huta**	**144.98**	**328**	*e*PKP	**PKPdf**	**02 41 03.7**	**-0.6**
MDB	**Medias**	**145.27**	**321**	⇑P	**PKPdf**	**02 41 05.0**	**+0.1**
CJR	**Cluj-Napoca**	**145.40**	**323**	⇑P	**PKPab**	**02 41 05.7**	**+0.4**
CEI	**Carei**	**145.45**	**325**	⇓P	**PKPab**	**02 41 05.9**	**+0.5**
MESR	**Meseseni**	**145.50**	**324**	⇓P	**PKPab**	**02 41 05.3**	**-0.3**
ARR	**Arges**	**145.53**	**320**	⇑P	**PKPab**	**02 41 06.2**	**+0.3**
TNR	**Turnu Rosu**	**145.60**	**320**	⇑P	**PKiKP**	**02 41 07.6**	**-1.9**
MARR	**Marisel-Cluj**	**145.69**	**323**	⇓P	**PKPab**	**02 41 05.7**	**-0.7**
JMB	**Yambol**	**145.73**	**314**	*e*P	**PKiKP**	**02 41 09.5**	**-0.3**
HUMR	**Humele**	**145.76**	**318**	⇑P	**PKPab**	**02 41 05.3**	**-1.3**
MANT	**Manisa**	**145.80**	**307**		**PKPab**	**02 41 06.4**	**-0.9**
DRGR		**145.85**	**323**	⇑P	**PKPab**	**02 41 06.2**	**-0.8**
LTVH	**Ltavrtes, Hu**	**145.93**	**325**	⇑P	**PKPab**	**02 41 07.2**	**+0.1**
LOT	**Lotru**	**146.00**	**321**	⇑P	**PKPab**	**02 41 06.9**	**-0.8**
LANS	**Liptovska Anna**	**146.02**	**329**	*e*PKP2	**PKiKP**	**02 41 07.8**	**-2.5**
LANS	**Liptovska Anna**	**146.02**	**329**	*e*PKP	**PKiKP**	**02 41 07.8**	**-2.5**
BORR	**Bors**	**146.17**	**324**	⇑P	**PKPab**	**02 41 06.9**	**-1.2**
STEB	**Steborice**	**146.24**	**331**	*e*PKP	**PKPab**	**02 41 07.2**	**-1.1**
DEV	**Deva**	**146.27**	**322**	⇓P	**PKPdf**	**02 41 05.9**	**-0.6**
VLAD	**Vladila**	**146.38**	**318**	⇑P	**PKPab**	**02 41 08.0**	**-1.1**
OSTC	**Ostas**	**146.45**	**333**	*e*PKP2	**PKPbc**	**02 41 07.2**	**-1.0**
OSTC	**Ostas**	**146.45**	**333**	*e*PKP	**PKPbc**	**02 41 07.2**	**-1.0**
MORC	**Moravsky Berou**	**146.46**	**331**	⇓P	**PKPbc**	**02 41 06.8**	**-1.5**
MORC	**Moravsky Berou**	**146.46**	**331**	*e*PKP	**PKPbc**	**02 41 07.1**	**-1.2**
CHVC	**Chvalec**	**146.49**	**334**	*e*PKP2	**PKPab**	**02 41 08.6**	**-0.7**
CHVC	**Chvalec**	**146.49**	**334**	*e*PKP	**PKPab**	**02 41 08.6**	**-0.7**
DIM	**Dimitrovgrad**	**146.56**	**314**	*e*P	**PKPab**	**02 41 08.8**	**-1.0**
DPC	**Dobruska-Polom**	**146.56**	**333**	*e*PKP2	**PKPab**	**02 41 08.8**	**-0.8**
DPC	**Dobruska-Polom**	**146.56**	**333**	*e*PKP	**PKPab**	**02 41 08.8**	**-0.8**
KRLC	**Kraliky**	**146.57**	**332**	*e*PKP2	**PKPab**	**02 41 08.1**	**-1.5**
KRLC	**Kraliky**	**146.57**	**332**	*e*PKP	**PKPab**	**02 41 08.1**	**-1.5**
CRAR	**CRAIOVA**	**146.59**	**319**	⇑P	**PKPab**	**02 41 08.6**	**-1.2**
GZR	**Gura Zlata**	**146.62**	**321**	⇑P	**PKPbc**	**02 41 07.4**	**-1.5**
MAUC	**Maruska**	**146.63**	**331**	*e*PKP	**PKPab**	**02 41 08.9**	**-1.0**
PSZ	**Piszkesteto**	**146.64**	**327**	⇑P	**PKPdf**	**02 41 06.9**	**-0.4**
EKA	**Eskdalemuir Ar**	**146.70**	**356**	PKPbc	**PKPbc**	**02 41 07.8**	**-0.9**
	comp=Z,13nm,1.0s,baz=335,slow=2.2,SNR=8.4						
SIRR	**Siria**	**146.74**	**323**	⇑P	**PKPbc**	**02 41 07.5**	**-1.6**
KDZ	**Kurdzhali**	**146.90**	**314**	*e*P	**PKPbc**	**02 41 09.2**	**-0.5**
JAVC	**Velka Javorina**	**147.07**	**330**	*e*PKP	**PKPab**	**02 41 10.6**	**-1.0**
CLL	**Collm**	**147.10**	**337**	*i* PKP2	**PKPbc**	**02 41 09.0**	**-0.9**
CLL				pmax	pmax		
	comp=Z,25nm,1.1s						
CLL				pmax	pmax		
	comp=Z,47nm,1.1s						
CLL				MLR	MLR		
	comp=Z,600nm,28.6s						
HERR	**Herculane**	**147.12**	**321**	⇑P	**PKPbc**	**02 41 09.7**	**-0.6**
MPEP	**Malo Peshtene**	**147.12**	**317**	*e*P	**PKPab**	**02 41 10.7**	**-1.3**
PVCC	**Panska Ves**	**147.14**	**335**	*e*PKP2	**PKPab**	**02 41 10.5**	**-1.2**
PVCC	**Panska Ves**	**147.14**	**335**	*e*PKP	**PKPab**	**02 41 10.5**	**-1.2**
PUNG	**Punghina**	**147.14**	**319**	⇓P	**PKPbc**	**02 41 09.5**	**-0.7**
BZS	**Buzias**	**147.15**	**322**	⇓P	**PKPdf**	**02 41 07.7**	**-0.4**
VRAC	**Vranov**	**147.22**	**332**	PKPbc	**PKPab**	**02 41 10.3**	**-1.8**
	comp=Z,14nm,1.0s,baz=59,slow=2.2,SNR=17						
VRAC	**Vranov**	**147.22**	**332**	⇓P	**PKPab**	**02 41 10.5**	**-1.6**
VRAC	**Vranov**	**147.22**	**332**	*e*PKP	**PKPbc**	**02 41 09.6**	**-0.8**
RZN	**Rozhen**	**147.28**	**314**	*e*P	**PKPbc**	**02 41 10.6**	**-0.4**
RICC	**Richard**	**147.31**	**335**	*e*PKP	**PKiKP**	**02 41 12.0**	**-0.8**
KRUC	**Moravsky**	**147.50**	**331**	*e*PKP	**PKPbc**	**02 41 10.7**	**-0.4**
HSKC	**Hora Svate Kat**	**147.51**	**336**	*e*PKP	**PKPbc**	**02 41 10.8**	**-0.4**
BANR	**Banloc**	**147.56**	**322**	⇑P	**PKPab**	**02 41 12.0**	**-1.6**
PRU	**Pruhonice**	**147.57**	**334**	*e*PKP2	**PKPab**	**02 41 11.4**	**-2.1**
PRU	**Pruhonice**	**147.57**	**334**	*e*PKP	**PKPab**	**02 41 11.4**	**-2.1**
MDVR	**Moldovita**	**147.59**	**321**	⇑P	**PKPdf**	**02 41 08.8**	**-0.1**
MODS	**Modra-Piesok**	**147.59**	**330**	*e*PKP	**PKPab**	**02 41 12.1**	**-1.6**
BLSH	**Balsha**	**147.67**	**317**	*e*P	**PKiKP**	**02 41 12.5**	**-1.4**
TREC	**Trest**	**147.72**	**333**	*e*PKP2	**PKPbc**	**02 41 11.3**	**-0.5**

TREC	**Trest**	**147.72**	**333**	*e*PKP	**PKPbc**	**02 41 11.3**	**-0.5**
PLNA	**Plana**	**147.77**	**316**	*e*P	**PKiKP**	**02 41 12.3**	**-1.9**
VTS	**Vitosha**	**147.82**	**316**	*e*P	**PKiKP**	**02 41 12.3**	**-2.1**
MMB	**Musomishta**	**148.00**	**314**	*e*P	**PKPbc**	**02 41 12.4**	**-0.4**
ZVC	**Zvikov**	**148.14**	**334**	*e*PKP	**PKPbc**	**02 41 12.2**	**-0.7**
BOVS	**Bovan**	**148.23**	**319**	⇑P	**PKPbc**	**02 41 11.6**	**-1.7**
KKB	**Krupnik**	**148.27**	**315**	*e*P	**PKPbc**	**02 41 13.2**	**-0.3**
MORH	**Mrgy, Hungar**	**148.40**	**326**	⇑P	**PKPdf**	**02 41 10.2**	**+0.1**
RONA	**Rosalia, Austr**	**148.54**	**330**	*e*PKP	**PKPdf**	**02 41 10.7**	**+0.4**
	comp=Z,27nm,1.1s,SNR=6.9						
CONA	**Conrad Observa**	**148.57**	**331**	*e*PKP	**PKPdf**	**02 41 09.3**	**-1.1**
	comp=Z,35nm,1.3s,SNR=11						
CKRC	**Cesky Krumlov**	**148.58**	**333**	*e*PKP2	**PKPbc**	**02 41 13.2**	**-0.8**
CKRC	**Cesky Krumlov**	**148.58**	**333**	*e*PKP	**PKPbc**	**02 41 13.2**	**-0.8**
KHC	**Kasperske Hory**	**148.63**	**334**	*e*PKP2	**PKPbc**	**02 41 13.7**	**-0.5**
KHC	**Kasperske Hory**	**148.63**	**334**	*e*PKP	**PKPbc**	**02 41 13.7**	**-0.5**
GERES	**GERESS Array B**	**148.81**	**334**	PKPbc	**PKPbc**	**02 41 12.4**	**-2.3**
	comp=Z,12nm,0.9s,baz=77,slow=5.8,SNR=38						
GRF	**Grafenberg Arr**	**149.07**	**337**	*e*PKPbc	**PKiKP**	**02 41 15.4**	**-1.2**
	baz=33,slow=1.7						
ARSA	**Arzberg**	**149.22**	**330**	*i* PKP	**PKPdf**	**02 41 10.2**	**-1.3**
	comp=Z,14nm,1.6s						
MOA	**Molln**	**149.34**	**332**	*i* PKP	**PKPdf**	**02 41 11.5**	**-0.1**
	comp=Z,23nm,1.2s						
BIOA	**Bad Ischl, Aus**	**149.74**	**332**	*e*PKP	**PKPdf**	**02 41 12.1**	**-0.2**
	comp=Z,30nm,1.3s,SNR=7.9						
BTNL	**Ternell**	**149.86**	**344**	*d*PKP	**PKiKP**	**02 41 16.9**	**-1.3**
SOKA	**Soboth**	**149.87**	**330**	*e*PKP	**PKPdf**	**02 41 11.1**	**-1.5**
	comp=Z,36nm,1.4s,SNR=8.7						
UCC	**Uccle**	**150.09**	**346**	*d*PKP	**PKPbc**	**02 41 17.0**	**-0.7**
BLY	**Banja Luka**	**150.14**	**325**	⇓P	**PKiKP**	**02 41 18.4**	**-0.5**
OBKA	**Obir**	**150.22**	**330**	*e*PKP	**PKPdf**	**02 41 13.1**	**-0.1**
	comp=Z,25nm,1.4s						
BCLA	**Clavier**	**150.23**	**345**	*d*PKPdf	**PKPdf**	**02 41 10.0**	**-2.9**
BCLA				*d*PKP	**pPKPdf**	**02 41 23.5**	**-1.3**
BGES	**Gesves**	**150.31**	**345**	*d*PKP	**PKiKP**	**02 41 19.5**	**+0.5**
LESA	**Schwarzleotal**	**150.35**	**333**	*e*PKP	**PKPdf**	**02 41 13.0**	**-0.3**
	comp=Z,47nm,1.2s						
BMRD	**Maredsous**	**150.46**	**345**	*d*PKP	**PKPbc**	**02 41 17.4**	**-1.2**
MYKA	**Terra Mystica**	**150.55**	**331**	*e*PKP	**PKPdf**	**02 41 13.1**	**-0.5**
	comp=Z,22nm,1.1s,SNR=8.0						
LJU	**Ljubljana**	**150.58**	**329**	*e*PKPdf	**PKPdf**	**02 41 12.9**	**-0.7**
LJU				*e*PKPbc	**PKiKP**	**02 41 18.8**	**-1.0**
BOJS	**Bojanci**	**150.62**	**328**	*e*PKPbc	**PKiKP**	**02 41 19.1**	**-0.7**
DOU	**Dourbes**	**150.70**	**345**	*d*PKP	**PKPbc**	**02 41 18.1**	**-1.1**
WLF	**Walferdange**	**150.70**	**343**	*d*PKP	**PKiKP**	**02 41 19.3**	**-0.6**
CEY	**Cerknica**	**150.85**	**329**	*i* PKPbc	**PKiKP**	**02 41 19.4**	**-1.0**
WATA	**Walderalm**	**150.88**	**334**	*i* PKP	**PKPdf**	**02 41 11.6**	**-2.6**
	comp=Z,48nm,1.7s						
WTTA	**Wattenberg**	**150.91**	**334**	*e*PKP	**PKPdf**	**02 41 13.4**	**-0.9**
	comp=Z,62nm,1.1s,SNR=13						
ABTA	**Abfaltersbach**	**150.95**	**332**	*e*PKP	**PKPdf**	**02 41 13.2**	**-1.0**
	comp=Z,42nm,1.2s,SNR=8.3						
RETA	**Reutte**	**151.07**	**335**	*e*PKP	**PKPdf**	**02 41 14.4**	**0.0**
	comp=Z,21nm,1.1s,SNR=5.6						
SQTA	**Sankt Quirin**	**151.12**	**334**	*e*PKP	**PKPdf**	**02 41 13.6**	**-1.0**
	comp=Z,45nm,1.1s,SNR=9.9						
BFO	**Black Forest**	**151.23**	**339**	PKPdf	**PKPdf**	**02 41 15.4**	**+0.8**
BFO	**Black Forest**	**151.23**	**339**	PKIKP	**PKPdf**	**02 41 15.4**	**+0.8**
FETA	**Feichten**	**151.47**	**335**	*e*PKP	**PKPdf**	**02 41 13.6**	**-1.5**
	comp=Z,36nm,1.0s						
DAVA	**Damuels**	**151.57**	**336**	*e*PKP	**PKPdf**	**02 41 13.2**	**-2.1**
	comp=Z,38nm,1.8s						
FUORN	**Ofenpass-Fuorn**	**151.98**	**335**		**PKPbc**	**02 41 21.4**	**-1.2**
DAVOX	**Davos/Dischmat**	**152.00**	**336**	PKPbc	**PKiKP**	**02 41 22.0**	**-0.9**
	comp=Z,29nm,1.0s,baz=6.8,slow=4.5,SNR=22						
DAVOX	**Davos/Dischmat**	**152.00**	**336**	PKIKP	**PKiKP**	**02 41 22.0**	**-0.9**
ESDC	**Sonseca Array**	**162.33**	**353**	PKPab	**PKPab**	**02 42 14.2**	**-2.2**
	comp=Z,4.4nm,1.1s,baz=4.9,slow=4.3,SNR=6.5						
DBIC	**Dimbokro**	**164.59**	**186**	PKP	**PKPdf**	**02 41 29.5**	**-2.4**
	comp=Z,4.3nm,1.1s,baz=48,slow=3.1,SNR=3.1						
DBIC	**Dimbokro**	**164.59**	**186**		**PKPdf**	**02 41 31.5**	**-0.4**
DBIC	**Dimbokro**	**164.59**	**186**	PKIKP	**PKPdf**	**02 41 31.5**	**-0.4**
TORD	**Torodi Ar. Bea**	**168.14**	**223**	PKP	**PKPdf**	**02 41 33.0**	**-1.5**
	comp=Z,2.2nm,0.9s,baz=16,slow=1.1,SNR=10						
TORD				PKPab	**PKPab**	**02 42 41.3**	**-1.2**
	comp=Z,2.5nm,0.8s,baz=89,slow=4.1,SNR=7.5						
TORD	**Torodi Ar. Bea**	**168.14**	**223**		**PKPdf**	**02 41 33.5**	**-1.1**
TORD					**PKPab**	**02 42 41.2**	**-1.4**
TAM	**Tamanrasset**	**168.81**	**276**		**PKPdf**	**02 41 34.4**	**-0.7**
TAM					**PKPab**	**02 42 44.4**	**-1.4**
TAM	**Tamanrasset**	**168.81**	**276**	PKP2	**PKPab**	**02 42 44.4**	**-1.4**
TAM						03 41 34.4	
MD01	**Midelt array s**	**169.14**	**352**		**PKPdf**	**02 41 35.0**	**+0.1**
MDT	**Midelt**	**169.17**	**351**	PKP	**PKPdf**	**02 41 34.0**	**-0.9**
	comp=Z,2.2nm,0.9s,baz=22,slow=6.4,SNR=4.4						

IDC ***26*** *02:30:48.1±1.2, 23°.62N×143°.35E, h0^{km}, mb3.8/7, mbtmp3.8/7, MS4.2/3, Error ellipse: s-maj=36.6km s-min=32.3km az=107.0*

NEIC ***26*** *02:30:50.0±0.8, 23°.6N±0°.1×143°.4E±0°.2, h10^{km}±1^{km}, mb4.5/10, Error ellipse: s-maj=26.4km s-min=17.1km az=88.0*

ISC 26 02:30:52.5±0.6**, 23°.6N**±0°.1×**143°.4E**±0°.2**, h31**^{km}**, n27, σ0^{s}.51**/25**, mb4.2**/13**, MS4.3**/3**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.61**	**343**	Pn	**Pn**	**02 31 45.7**	**-0.7**
ASAJ	**Asahikawa**	**20.45**	**358**	LR	LR	02 43 58.6	
	comp=Z,275nm,19.4s,baz=168,slow=39						
ADK	**Adak**	**41.54**	**37**	P	**P**	**02 38 36.8**	**-0.2**
WB0	**Warramunga Arr**	**44.01**	**192**	P	**P**	**02 38 57.5**	**+0.2**
WB0				IAmb	IAmb	02 39 01.8	
	comp=Z,4.9nm,1.1s						
WRA	**Warramunga Arr**	**44.19**	**192**	P	**P**	**02 38 58.5**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=355,slow=9.5,SNR=2.5						
	comp=Z,0.7nm,0.7s						
PSA00	**Pilbara Seismi**	**50.42**	**209**	P	**P**	**02 39 47.0**	**-0.3**
PSA00				IAmb	IAmb	02 39 59.7	
	comp=Z,11nm,1.5s						
MKAR	**Makanchi Array**	**53.53**	**312**		**P**	**02 40 10.3**	**0.0**
MAKZ	**Makanchi**	**53.74**	**312**	P	**P**	**02 40 11.0**	**-0.8**
MAKZ				IAmb	IAmb	02 40 20.4	
	comp=Z,6.4nm,1.4s						
G16K	**Koyuk River**	**54.12**	**25**	P	**P**	**02 40 13.7**	**-0.5**
RDOG	**Red Dog Mine**	**55.02**	**22**	P	**P**	**02 40 21.6**	**+0.8**
RDOG				IAmb	IAmb	02 40 29.3	
	comp=Z,4.4nm,0.5s						
FORT	**Forrest**	**56.05**	**196**	P	**P**	**02 40 28.6**	**+0.1**
FORT				IAmb	IAmb	02 40 35.5	
	comp=Z,6.4nm,0.9s						
KURBB	**Kurchatov Arra**	**56.24**	**316**	P	**P**	**02 40 30.9**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=97,slow=7.5,SNR=5.1						
	comp=Z,0.6nm,0.5s						
ILAR	**Eielson Array**	**60.26**	**28**	P	**P**	**02 40 57.0**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=257,slow=6.5,SNR=4.4						
	comp=Z,0.2nm,0.6s						
BVAR	**Borovoye Array**	**61.32**	**319**	P	**P**	**02 41 05.7**	**+0.6**
	comp=Z,1.7nm,0.5s,baz=77,slow=6.2,SNR=7.7						
	comp=Z,1.7nm,0.5s						
AB31	**Akbulak array**	**68.28**	**316**	P	**P**	**02 41 50.7**	**+0.2**
ABKAR	**Akbulak array**	**68.28**	**316**	P	**P**	**02 41 50.5**	**+0.1**
YKA	**Yellowknife Ar**	**74.68**	**28**	P	**P**	**02 42 29.0**	**+0.2**
	comp=Z,0.3nm,0.8s,baz=298,slow=11,SNR=6.0						
YKA				LR	LR	03 13 39.3	
	comp=Z,412nm,21.4s,baz=265,slow=34						
	comp=Z,0.3nm,0.8s						
YKA	**Yellowknife Ar**	**74.68**	**28**	P	**P**	**02 42 28.6**	**-0.2**
FINES	**FINESS Array B**	**81.52**	**334**	P	**P**	**02 43 07.2**	**+0.6**
	comp=Z,3.0nm,1.1s,baz=98,slow=4.2,SNR=3.4						
	comp=Z,3.0nm,1.1s						
FINES	**FINESS Array B**	**81.52**	**334**	P	**P**	**02 43 06.9**	**+0.2**
NVAR	**Mina Array Bea**	**81.83**	**52**	P	**P**	**02 43 09.8**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=288,slow=7.7,SNR=3.8						
	comp=Z,0.5nm,0.7s						
NVAR	**Mina Array Bea**	**81.83**	**52**	P	**P**	**02 43 09.1**	**0.0**
SFJD	**Kangerlussuaq**	**89.05**	**5**	P	**P**	**02 43 44.7**	**+0.5**
X18A	**Snowflake**	**89.58**	**52**	P	**P**	**02 43 47.6**	**0.0**
X18A				IAmb	IAmb	02 44 04.8	
	comp=Z,3.6nm,1.4s						
SCHQ	**Schefferville**	**97.68**	**17**	LR	LR	03 34 15.1	
	comp=Z,91nm,19.0s,baz=288,slow=39						
PB05	**IPOC Station P**	**149.19**	**95**	PKPbc	**PKPbc**	**02 50 38.4**	**-0.4**
SHEL	**Horse Pasture**	**149.99**	**279**	PKPbc	**PKiKP**	**02 50 41.5**	**-0.1**

KRNET ***26*** *02:44:02.2±0.1, 39°.11N×69°.49E, h12^{km}, mb3.0*

NNC ***26*** *02:44:05.5±1.4, 38°.72N×69°.23E, h0^{km}, mb3.2, mpv2.7, Error ellipse: s-maj=9.9km s-min=7.5km az=175.0*

ISC 26 02:44:03.6±1.3**, 39°.03N**±0°.06×**69°.50E**±0°.05**, h2**^{km}±13^{km}**, n10, σ1^{s}.55**/17**, 11C-10D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHGR	**Chuyangaron**	**0.46**	**216**	⇑*e*P	**Pg**	**02 44 12.3**	**-0.1**
CHGR				⇑*i*S	**Sg**	**02 44 19.9**	**+1.4**
GAR	**Garm**	**0.63**	**93**	⇑*i*P	**Pg**	**02 44 14.8**	**-0.9**
GAR				⇑*i*S	**Sg**	**02 44 24.5**	**+0.5**
BTK	**Batken**	**1.44**	**44**	⇓*e*P	**Pn**	**02 44 28.8**	**-2.0**
BTK				⇓*e*S	**Sg**	**02 44 48.3**	**-1.6**
DRK	**Karamyk**	**1.84**	**75**	⇓*i*P	**Pn**	**02 44 36.8**	**+0.4**
DRK				⇓*i*S	**Sb**	**02 45 01.6**	**0.0**
OHH	**Osh**	**2.93**	**58**	⇑*e*P	**Pn**	**02 44 51.8**	**+0.5**
OHH				⇑*e*S	**Sn**	**02 45 27.4**	**+0.3**
SFK	**Sufi-Kurgan**	**3.24**	**71**	⇑*e*P	**Pn**	**02 44 56.4**	**+0.7**
SFK				⇑*e*S	**Sn**	**02 45 35.5**	**+0.5**
SALK	**Salom-Alik**	**3.80**	**60**	⇓*e*P	**Pn**	**02 45 04.0**	**+0.8**
SALK				⇓*e*S	**Sn**	**02 45 48.5**	**0.0**
KK31	**Karatay Array**	**4.14**	**10**	⇓Pn	**Pb**	**02 45 14.6**	**-2.5**
	0.2nm,0.2s,baz=194,slow=15,SNR=12						
KK31				⇓Pg	Pg	02 45 27.2	+4.4
	0.7nm,0.4s,baz=193,slow=17,SNR=4.1						
KK31				⇑Sn	**Sb**	**02 46 09.1**	**+1.6**
	1.4nm,0.5s,baz=193,slow=18,SNR=4.6						
KK31				⇓Lg	Lg	02 46 26.4	
	2.1nm,0.6s,baz=193,slow=29,SNR=5.0						
AAK	**Ala-Archa**	**5.22**	**45**	⇑Pg	**Pg**	**02 45 46.9**	**+3.3**
	0.8nm,0.6s						
AAK				⇑Lg	Lg	02 47 03.0	
	8.5nm,1.4s						
AB31	**Akbulak array**	**12.30**	**329**	⇓P	Pn	02 47 04.4	+4.8
	0.6nm,0.7s,baz=157,slow=11,SNR=6.8						

AFAD ***26*** *02:55:34.5, 39°.45N×27°.93E, h7^{km}±3^{km}, MW3.5*

ISK ***26*** *02:55:34.5, 39°.44N×27°.91E, h10^{km}, ML3.5/23*

THE ***26*** *02:55:37.8, 39°N±4°×2°8E±°, h15^{km}±28^{km}, M3.0/11, MLh3.0/11*

SOF ***26*** *02:55:38.3, 39°.82N±0°.02×27°.66E±0°.01, h2^{km}±2^{km}, MD3.2/3*

ISC 26 02:55:35.0±0.9**, 39°.44N**±0°.02×**27°.91E**±0°.02**, h14**^{km}±7^{km}**, n94, σ0^{s}.96**/126**, 13C-3D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.20**	**352**	Pg	**Pg**	**02 55 39.7**	**+0.2**
BALB				Sg	**Sg**	**02 55 43.2**	**+0.6**
BKES	**Balkesir-Mer**	**0.29**	**2**	P	**Pg**	**02 55 41.0**	**-0.1**
BKES				S	**Sg**	**02 55 44.9**	**-0.4**
BALY	**Balya**	**0.37**	**323**	P	**Pg**	**02 55 42.6**	**0.0**
BALY				S	**Sg**	**02 55 47.8**	**+0.1**
SOMA	**Soma-Manisa**	**0.41**	**226**	Pg	**Pg**	**02 55 42.9**	**-0.3**
SOMA				Sg	**Sg**	**02 55 48.9**	**+0.1**
BLKS	**Balkesir-Sus**	**0.43**	**6**	P	**Pb**	**02 55 43.5**	**-1.0**
BLKS				S	**Sg**	**02 55 48.8**	**-0.7**
DURS	**Dursunbey**	**0.46**	**70**	P	**Pg**	**02 55 43.9**	**-0.2**
DURS				S	**Sg**	**02 55 49.9**	**-0.5**
SUSR	**Susurluk-Balik**	**0.54**	**14**	Pg	**Pb**	**02 55 45.3**	**-0.8**
AKHS	**Akhisar**	**0.57**	**188**	P	**Pg**	**02 55 45.7**	**-0.4**
AKHS				S	**Sg**	**02 55 53.4**	**-0.3**
GORD	**Gordes-Manisa**	**0.57**	**159**	Pg	**Pg**	**02 55 46.1**	**-0.1**
GONE	**Gonen-Balikesi**	**0.63**	**344**	Pg	**Pb**	**02 55 47.1**	**-0.6**
BUHA	**Balikesir, Bur**	**0.65**	**275**	P	**Pg**	**02 55 47.3**	**-0.4**
YAYO	**Edremit-Balk**	**0.67**	**285**	Pg	**Pg**	**02 55 47.8**	**-0.3**
YENI	**Yenice-Canakka**	**0.72**	**314**	Pg	**Pg**	**02 55 48.7**	**-0.2**
GOMA	**Golmarmara-Man**	**0.73**	**180**	Pg	**Pg**	**02 55 48.9**	**-0.3**
DEMI	**Demirci**	**0.74**	**122**	P	**Pg**	**02 55 49.4**	**0.0**
ZEDA	**zmir-Bergama**	**0.81**	**234**	P	**Pg**	**02 55 50.5**	**-0.1**
ZEDA				S	**Sg**	**02 56 00.5**	**-0.7**
DKL	**Dikili**	**0.87**	**245**	Pg	**Pg**	**02 55 51.5**	**-0.2**
CANM	**Can-anakkale**	**0.87**	**311**	Pg	**Pg**	**02 55 51.4**	**-0.5**
KCTX	**Karacabey (Bur**	**0.89**	**22**	Pg	**Pb**	**02 55 51.7**	**-0.5**
SMAA	**Simav-Kutahya**	**0.90**	**112**	Pg	**Pg**	**02 55 52.3**	**0.0**
SIMA	**Simav-Kutahya**	**0.90**	**113**	Pg	**Pg**	**02 55 52.4**	**-0.1**
BAND	**Balkesir-Ban**	**0.92**	**9**	P	**Pb**	**02 55 52.3**	**-0.4**
BAND				S	**Sb**	**02 56 04.2**	**-0.7**
BAND	**Balkesir-Ban**	**0.92**	**9**	⇑P	**Pb**	**02 55 52.4**	**-0.4**
BAND				⇓S	**Sb**	**02 56 05.3**	**+0.4**
AYVA	**Ayvalik**	**0.96**	**262**	P	**Pg**	**02 55 53.3**	**-0.2**
AYVA				S	**Sg**	**02 56 05.2**	**-0.8**
ORLT	**Orhaneli**	**0.97**	**51**	Pg	**Pb**	**02 55 53.3**	**-0.2**
BIGA	**Biga-Canakkale**	**1.02**	**325**	Pg	**Pb**	**02 55 54.3**	**-0.1**
KRBG	**Karabiga-Canak**	**1.06**	**334**	Pg	**Pg**	**02 55 54.8**	**-0.6**
MANT	**Manisa**	**1.07**	**152**	P	**Pg**	**02 55 55.4**	**-0.4**
MANT				S	**Sg**	**02 56 08.1**	**-1.7**
EMET	**Ktahya-Emet**	**1.09**	**93**	P	**Pb**	**02 55 55.8**	**+0.1**
EMET				S	**Sg**	**02 56 09.8**	**-0.5**
KULA	**Kula-Manisa**	**1.09**	**148**	Pn	**Pg**	**02 55 55.6**	**-0.5**
BAYC	**CANAKKALE_Bayr**	**1.10**	**286**	P	**Pg**	**02 55 55.4**	**-0.8**
SHAP	**Saphane-Kutahy**	**1.10**	**112**	Pn	**Pg**	**02 55 56.1**	**-0.1**
YYLC	**Yaylacik**	**1.10**	**39**	P	**Pb**	**02 55 55.7**	**-0.1**
YYLC				S	**Sb**	**02 56 10.1**	**0.0**
USAK	**Uak-Merkez**	**1.13**	**130**	P	**Pg**	**02 55 56.2**	**-0.4**
USAK				S	**Sg**	**02 56 09.4**	**-2.0**
LAPS	**Lapseki, ANA**	**1.16**	**315**	P	**Pg**	**02 55 56.4**	**-0.8**
LAPS				S	**Sg**	**02 56 10.4**	**-1.9**
ULDT	**Uludag**	**1.17**	**53**	P	**Pn**	**02 55 57.2**	**+0.1**
ULDT				S	**Sb**	**02 56 12.4**	**+0.2**
MADA	**Marmara adas**	**1.18**	**347**	P	**Pb**	**02 55 56.9**	**-0.2**
MADA				S	**Sn**	**02 56 12.5**	**-0.4**
MRMT	**Marmara Adasi**	**1.18**	**348**	Pn	**Pn**	**02 55 57.5**	**+0.3**
MDNY	**Mudanya-Bursa**	**1.19**	**39**	Pn	**Pn**	**02 55 57.1**	**0.0**
TVSB	**Tavsanli**	**1.20**	**89**	Pn	**Pg**	**02 55 57.6**	**-0.5**
GEDZ	**Gediz**	**1.23**	**108**	Pn	**Pn**	**02 55 58.6**	**+0.8**
EZNE	**Ezine-Canakkal**	**1.24**	**285**	Pn	**Pn**	**02 55 58.4**	**+0.6**
BLCB	**Balcova**	**1.26**	**213**	P	**Pn**	**02 55 58.6**	**+0.6**
BLCB				S	**Sb**	**02 56 15.3**	**+0.9**
GDZ	**Gediz**	**1.27**	**106**	P	**Pn**	**02 55 58.9**	**+0.5**
GDZ				S	**Sg**	**02 56 15.3**	**-0.5**
AVDN	**Avdancik/Bursa**	**1.28**	**48**	P	**Pn**	**02 55 58.7**	**+0.2**
AVDN				S	**Sn**	**02 56 15.5**	**0.0**
EZN	**Ezine**	**1.28**	**288**	P	**Pn**	**02 55 58.8**	**+0.4**
EZN				S	**Sb**	**02 56 15.1**	**-0.1**
EZN	**Ezine**	**1.28**	**288**	Pn	**Pn**	**02 55 58.6**	**+0.2**
LPK	**Lapseki**	**1.28**	**317**	Pn	**Pn**	**02 55 58.9**	**+0.4**
PRK	**Paraskevi**	**1.29**	**262**	P	**Pn**	**02 55 59.0**	**+0.5**
PRK				S	**Sb**	**02 56 15.3**	**0.0**
IZMR	**zmir-demi**	**1.30**	**179**	P	**Pn**	**02 55 58.9**	**+0.1**
IZMR				S	**Sb**	**02 56 14.5**	**-1.3**
ARMT	**Armutlu**	**1.34**	**33**	Pn	**Pg**	**02 55 59.8**	**-0.9**
RKY	**Sarkoy-Tekirda**	**1.37**	**336**	Pn	**Pg**	**02 56 00.4**	**-0.8**
SART	**Tekirdag**	**1.37**	**336**	P	**Pb**	**02 56 00.3**	**0.0**
SART				S	**Sb**	**02 56 17.4**	**-0.2**
GPNR	**Gulpinar-Canak**	**1.38**	**271**	Pn	**Pn**	**02 56 00.1**	**+0.4**
KRSK	**Karsak**	**1.41**	**47**	P	**Pn**	**02 56 00.2**	**0.0**
KRSK				S	**Sg**	**02 56 19.7**	**-0.8**
DOMA	**Ktahya-Doman**	**1.42**	**75**	P	**Pb**	**02 56 01.1**	**-0.1**
DOMA				S	**Sb**	**02 56 18.9**	**-0.3**
GELI	**Tayfur-Gelibol**	**1.46**	**311**	Pn	**Pn**	**02 56 01.5**	**+0.6**
KURT	**Yalova, Merkez**	**1.52**	**41**	P	**Pn**	**02 56 00.9**	**-0.7**
ANDZ	**Kutahya, Merke**	**1.54**	**87**	P	**Pb**	**02 56 03.0**	**-0.2**
ANDZ				S	**Sg**	**02 56 23.8**	**-0.7**
BOTS	**Marmara Eregli**	**1.55**	**2**	Pn	**Pn**	**02 56 02.3**	**+0.3**
SIGR	**SIGRI**	**1.61**	**262**	P	**Pn**	**02 56 03.4**	**+0.4**
SIGR				S	**Sn**	**02 56 22.8**	**-0.8**
PASA	**Karahalli, USA**	**1.64**	**131**	P	**Pn**	**02 56 04.4**	**+0.9**
BNAZ	**Uak-Banaz**	**1.71**	**116**	P	**Pn**	**02 56 05.7**	**+1.2**
BNAZ				S	**Sb**	**02 56 28.8**	**+1.2**
GADA	**Gvkgeada**	**1.72**	**296**	P	**Pn**	**02 56 05.0**	**+0.5**
HISA	**Bilecik-Osmane**	**1.85**	**56**	P	**Pn**	**02 56 07.1**	**+0.8**
ENEZ	**Enez**	**1.87**	**314**	P	**Pn**	**02 56 07.5**	**+1.0**
ENEZ				S	**Sb**	**02 56 31.5**	**-0.5**
SATE	**Sancaktepe,**	**1.89**	**33**	P	**Pn**	**02 56 06.5**	**-0.2**
BORA	**Eskisehir**	**2.01**	**77**	P	**Pn**	**02 56 09.3**	**+0.8**
ALN	**Alexandroupoli**	**2.04**	**316**	P	**Pn**	**02 56 09.5**	**+0.6**
ALN				S	**Sn**	**02 56 34.9**	**+0.8**
SMTH	**Samothraki Isl**	**2.10**	**300**	P	**Pn**	**02 56 10.2**	**+0.5**
LIA	**Limnos Island**	**2.16**	**283**	P	**Pn**	**02 56 11.2**	**+0.8**
SILT	**Sile**	**2.16**	**37**	⇑P	**Pb**	**02 56 13.1**	**-0.7**
YER	**Yerkesik**	**2.32**	**173**	P	**Pn**	**02 56 16.0**	**+3.2**
RDO	**Rodhopi**	**2.49**	**314**	P	**Pn**	**02 56 16.1**	**+1.0**
THAS	**Thassos island**	**2.71**	**296**	P	**Pn**	**02 56 18.0**	**-0.1**
KDZ	**Kurdzhali**	**2.94**	**319**	*i* P	**Pn**	**02 56 22.0**	**+0.8**
DIM	**Dimitrovgrad**	**3.15**	**326**	*i* P	**Pn**	**02 56 25.3**	**+1.2**
MMB	**Musomishta**	**3.81**	**305**	*i* P	**Pn**	**02 56 34.5**	**+1.3**
KKB	**Krupnik**	**4.36**	**305**	*e*P	**Pn**	**02 56 42.4**	**+1.7**
PLNA	**Plana**	**4.55**	**313**	P	**Pn**	**02 56 45.5**	**+2.0**
KIRS	**Kirsehir-Merke**	**4.67**	**92**	⇑P	**Pn**	**02 56 47.6**	**+2.6**
VTS	**Vitosha**	**4.75**	**313**	P	**Pn**	**02 56 47.9**	**+1.6**
MLR	**Muntele Rosu**	**6.22**	**347**	⇑P	**Pn**	**02 57 08.8**	**+2.5**
BOVS	**Bovan**	**6.26**	**314**	⇓P	**Pn**	**02 57 08.8**	**+1.9**
VLDR	**Vladesti**	**6.40**	**1**	⇑P	**Pn**	**02 57 10.8**	**+2.1**
PLOR	**Plostina**	**6.47**	**352**	⇑P	**Pn**	**02 57 11.2**	**+1.4**
VRI	**Vrincioaia**	**6.48**	**353**	⇑P	**Pn**	**02 57 12.1**	**+2.3**
TURR	**Turia**	**6.75**	**349**	⇑P	**Pn**	**02 57 16.1**	**+2.4**
DOPR	**Dopca**	**6.78**	**345**	⇑P	**Pn**	**02 57 15.9**	**+1.9**
OZUR		**6.83**	**347**	⇓P	**Pn**	**02 57 16.3**	**+1.6**
ONER	**Baraj Valea Uz**	**6.98**	**351**	⇑P	**Pn**	**02 57 18.5**	**+1.8**
MDVR	**Moldovita**	**7.05**	**321**	⇑P	**Pn**	**02 57 18.7**	**+1.0**
TESR	**Tescani**	**7.13**	**353**	⇑P	**Pn**	**02 57 20.3**	**+1.5**
BURAR	**Bucovina Array**	**8.40**	**347**	⇑P	**Pn**	**02 57 37.4**	**+1.1**

DJA 26 03:01:22.8±0.4**, 9°S**±4°×**11°9E**±°**, h37**^{km}±9^{km}**, M3.7**/12**, mb4.2**/5**, MLv3.4**/12**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.32**	**126**	P	Pn	03 01 32.5	+1.4
WSI	**Waingapu**	**1.17**	**101**	P	Pn	03 01 42.8	+0.2
DBNI	**Kabupaten Domp**	**1.24**	**319**	P	Pn	03 01 43.6	0.0
PLAI	**Plampang**	**1.47**	**295**	P	Pn	03 01 46.7	-0.1
BASI	**Baing, Sumba**	**1.62**	**118**	P	Pn	03 01 49.4	+0.6
TWSI	**Taliwang, Sumb**	**2.33**	**287**	P	Pn	03 01 59.1	+0.5
EDFI	**Ende, Flores**	**2.62**	**75**	P	Pn	03 02 02.1	-0.6
KLNI	**Mataram**	**3.17**	**289**	P	Pn	03 02 10.5	+0.4
BSSI	**Bau Bau, Buton**	**3.55**	**22**	P	Pn	03 02 15.8	+0.4
KAPI	**Kappang**	**4.45**	**8**	P	Pn	03 02 27.4	-0.4
BATI	**Baumata**	**4.53**	**100**	P	Pn	03 02 29.2	+0.3
JAGI	**Jajag, Banyuwa**	**5.01**	**281**	P	Pn	03 02 35.6	+0.1
SOEI	**Soe**	**5.08**	**94**	P	Pn	03 02 36.8	+0.3
	0.1nm15nm,0.5s						
PCJI	**Pacitan**	**7.96**	**278**	P	Pn	03 03 15.8	-0.2
	23nm,1.6s						
YOGI	**Yogyakarta**	**8.88**	**280**	P	Pn	03 03 29.3	+0.6

ROM ***26*** *03:17:45.2±0.1, 43°.190N±0°.004×12°.933E±0°.005, h62^{km}, ML3.3/451, Error ellipse: s-maj=0.3km s-min=0.3km az=228.0*

PDG ***26*** *03:17:45.3±0.5, 43°.23N×12°.94E, h63^{km}, ML3.7/12, Error ellipse: s-maj=0.4km s-min=0.4km az=0.0*

PRU ***26*** *03:17:46.3, 43°.48N×13°.20E, h10^{km}*

LDG ***26*** *03:17:48.1±0.3, 43°.44N×12°.87E, h63^{km}, Ml3.5/29, Error ellipse: s-maj=5.3km s-min=4.3km az=112.0*

ISC 26 03:17:43.7±1.1**, 43°.23N**±0°.03×**12°.95E**±0°.02**, h72**^{km}±4^{km}**, n313, σ1^{s}.84**/408**, 37C-52D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNTG	**Esanatoglia**	**0.02**	**341**	⇑*i*P	**Pn**	**03 17 54.2**	**0.0**
SNTG				S	**Sn**	**03 18 01.0**	**-1.0**
SNTG				AML	AML		
	comp=E,21400μm,0.1s						
SNTG				AML	AML		
	comp=N,24950μm,0.3s						
SNTG				AML	AML		
	comp=N,25600μm,0.3s						
SNTG				AML	AML		
	comp=E,21450μm,0.1s						
SNTG				AML	AML		
	comp=N,25600μm,0.3s						
SNTG				AML	AML		
	comp=E,21423μm,0.1s						
SNTG				AML	AML		
	comp=N,24939μm,0.3s						
SNTG				AML	AML		
	comp=N,25613μm,0.3s						
SNTG				AML	AML		
	comp=E,21453μm,0.1s						
FIU1	**Fiuminata**	**0.05**	**197**	⇑*i*P	**Pn**	**03 17 54.1**	**-0.1**
FIU1				S	**Sn**	**03 18 00.8**	**-1.1**
MTL1	**Matelica**	**0.05**	**62**	P	**Pn**	**03 17 54.3**	**+0.1**
MTL1				S	**Sn**	**03 18 01.2**	**-0.7**
PIO1	**Pioraco**	**0.06**	**156**	⇑P	**Pn**	**03 17 54.1**	**-0.2**
PIO1				S	**Sn**	**03 18 00.8**	**-1.1**
GAG1	**Gagliole**	**0.09**	**87**	P	**Pn**	**03 17 54.4**	**+0.1**
GAG1				S	**Sn**	**03 18 01.4**	**-0.6**
SEF1	**Sefro**	**0.09**	**181**	⇑*i*P	**Pn**	**03 17 54.2**	**-0.1**
SEF1				S	**Sn**	**03 18 01.1**	**-0.9**
SEF1				AML	AML		
	comp=E,37050μm,0.3s						
SEF1				AML	AML		
	comp=N,49650μm,0.3s						
SEF1				AML	AML		
	comp=E,37062μm,0.3s						
SEF1				AML	AML		
	comp=N,49662μm,0.3s						
MML1	**Montelago di S**	**0.12**	**173**	⇑*i*P	**Pn**	**03 17 54.3**	**-0.2**
MML1				S	**Sn**	**03 18 01.3**	**-1.0**
EL6	**Elcito**	**0.15**	**49**	⇑*i*P	**Pn**	**03 17 54.8**	**+0.3**
EL6				S	**Sn**	**03 18 02.0**	**-0.5**
EL6				AML	AML		
	comp=N,18750μm,0.9s						
EL6				AML	AML		
	comp=E,15100μm,0.4s						
EL6				AML	AML		
	comp=E,15085μm,0.4s						
EL6				AML	AML		
	comp=N,16589μm,0.4s						
EL6				AML	AML		
	comp=E,15085μm,1.6s						
MDAR	**Monte D'Aria**	**0.15**	**106**	⇑P	**Pn**	**03 17 54.5**	**0.0**
MDAR				S	**Sn**	**03 18 01.6**	**-0.8**
MDAR				AML	AML		
	comp=E,8845μm,1.3s						
MDAR				AML	AML		
	comp=N,10975μm,0.3s						
MDAR				AML	AML		
	comp=E,8845μm,1.2s						
MDAR				AML	AML		
	comp=N,10980μm,0.3s						
MDAR				AML	AML		
	comp=E,7530μm,0.2s						
MDAR				AML	AML		
	comp=N,10976μm,0.3s						
FOSV	**Fossato di Vic**	**0.15**	**294**	⇓*i*P	**Pn**	**03 17 54.6**	**+0.1**
FOSV				S	**Sn**	**03 18 01.8**	**-0.6**
FOSV				AML	AML		
	comp=E,9150μm,0.3s						
FOSV				AML	AML		
	comp=N,13450μm,0.3s						
FOSV				AML	AML		
	comp=N,12801μm,0.2s						
FOSV				AML	AML		
	comp=E,9149μm,0.3s						
FOSV				AML	AML		
	comp=N,12801μm,1.8s						
SSM1	**San Severino M**	**0.17**	**92**	⇑P	**Pn**	**03 17 54.7**	**+0.2**
SSM1				S	**Sn**	**03 18 01.9**	**-0.5**
PF6	**Pievefavera**	**0.20**	**115**	⇑*i*P	**Pn**	**03 17 54.8**	**+0.1**
PF6				S	**Sn**	**03 18 02.2**	**-0.5**
MMUR	**Monte Murano**	**0.21**	**9**	P	**Pn**	**03 17 55.2**	**+0.4**
MMUR				S	**Sn**	**03 18 02.7**	**-0.1**
MMUR				AML	AML		
	comp=E,14350μm,0.5s						
MMUR				AML	AML		
	comp=N,11350μm,0.8s						
MMUR				AML	AML		
	comp=E,13276μm,0.3s						
MMUR				AML	AML		
	comp=N,11317μm,0.2s						
MMUR				AML	AML		
	comp=E,13276μm,1.7s						
FDMO	**Fiordimonte**	**0.22**	**153**	⇑*i*P	**Pn**	**03 17 54.8**	**0.0**
FDMO				S	**Sn**	**03 18 02.1**	**-0.8**
FDMO				AML	AML		
	comp=N,10350μm,0.5s						
FDMO				AML	AML		
	comp=E,10225μm,0.3s						
FDMO				AML	AML		
	comp=N,9465μm,0.1s						
FDMO				AML	AML		
	comp=E,10207μm,0.3s						
CING	**Cingoli**	**0.23**	**52**	⇑*i*P	**Pn**	**03 17 55.3**	**+0.4**
CING				S	**Sn**	**03 18 02.5**	**-0.5**
CESI	**CESI - Serrava**	**0.23**	**188**	⇑*i*P	**Pn**	**03 17 54.8**	**-0.1**
CESI				S	**Sn**	**03 18 02.6**	**-0.4**
CESI				AML	AML		
	comp=E,7225μm,1.1s						
CESI				AML	AML		
	comp=N,7805μm,0.5s						
CESI				AML	AML		
	comp=E,7220μm,1.1s						
CESI				AML	AML		
	comp=N,7810μm,0.5s						

CESI	comp=E,7565µm,1.1s			AML	AML		
CESI	comp=N,7715µm,0.5s			AML	AML		
CESI	comp=N,7652µm,0.3s			AML	AML		
CESI	comp=E,6857µm,0.5s			AML	AML		
CESI	comp=E,7020µm,0.5s			AML	AML		
CESI	comp=N,7645µm,0.3s			AML	AML		
ATCC	**AVT- Casa Cast**	**0.23**	**258**	⇓P	**Pn**	**03 17 55.4**	**+0.6**
ATCC				S	**Sn**	**03 18 02.9**	**0.0**
ATCC	comp=E,6775µm,0.2s			AML	AML		
ATCC	comp=N,7105µm,0.6s			AML	AML		
ATCC	comp=E,6776µm,0.2s			AML	AML		
ATCC	comp=N,5976µm,0.4s			AML	AML		
CSP1	**Cessapalombo**	**0.23**	**127**	⇑iP	**Pn**	**03 17 55.1**	**+0.1**
CSP1				S	**Sn**	**03 18 02.7**	**-0.5**
CSP1	comp=E,8775µm,1.2s			AML	AML		
CSP1	comp=N,8295µm,0.3s			AML	AML		
CSP1	comp=N,8290µm,0.3s			AML	AML		
CSP1	comp=E,8780µm,1.2s			AML	AML		
CSP1	comp=E,8482µm,0.3s			AML	AML		
CSP1	comp=E,8482µm,1.7s			AML	AML		
CSP1	comp=N,8292µm,0.3s			AML	AML		
SSFR	**Montelago di S**	**0.24**	**329**	⇓iP	**Pn**	**03 17 55.4**	**+0.5**
SSFR				S	**Sn**	**03 18 03.1**	**0.0**
SSFR				AML	AML		
SSFR				AML	AML		
SSFR	comp=E,69200µm,0.2s			AML	AML		
SSFR	comp=E,74750µm,0.3s			AML	AML		
SSFR	comp=E,69203µm,0.2s			AML	AML		
SSFR				AML	AML		
SSFR				AML	AML		
SSFR	comp=E,74786µm,0.3s			AML	AML		
ARVD	**Arcevia**	**0.26**	**359**	⇓iP	**Pn**	**03 17 55.6**	**+0.5**
ARVD				S	**Sn**	**03 18 03.2**	**0.0**
ARVD	comp=N,5235µm,0.4s			AML	AML		
ARVD	comp=E,3690µm,0.3s			AML	AML		
ARVD	comp=E,3694µm,0.3s			AML	AML		
ARVD	comp=N,4392µm,0.3s			AML	AML		
ATSC	**Scheggia e Pas**	**0.27**	**315**	⇓iP	**Pn**	**03 17 55.6**	**+0.5**
ATSC				S	**Sn**	**03 18 03.6**	**+0.2**
TRE1	**Treia**	**0.28**	**74**	P	**Pn**	**03 17 55.7**	**+0.6**
TRE1	comp=E,6050µm,0.2s			AML	AML		
TRE1	comp=E,6050µm,0.2s			AML	AML		
TRE1	comp=N,7160µm,1.0s			AML	AML		
TRE1	comp=N,7160µm,0.9s			AML	AML		
TRE1	comp=N,6488µm,0.3s			AML	AML		
TRE1	comp=E,6050µm,0.2s			AML	AML		
FEMA	**Monte Fema**	**0.28**	**165**	⇑iP	**Pn**	**03 17 55.4**	**+0.1**
FEMA				S	**Sn**	**03 18 03.5**	**-0.2**
FEMA	comp=E,21100µm,1.5s			AML	AML		
FEMA	comp=E,21100µm,1.5s			AML	AML		
FEMA	comp=N,18450µm,0.5s			AML	AML		
FEMA	comp=N,18450µm,0.5s			AML	AML		
FEMA	comp=E,18311µm,0.2s			AML	AML		
FEMA	comp=N,14208µm,0.3s			AML	AML		
ASSB	**Assisi San Ben**	**0.29**	**228**	⇓P	**Pn**	**03 17 55.4**	**+0.3**
MURB	**Monte Urbino**	**0.31**	**276**	⇓P	**Pn**	**03 17 56.4**	**+1.1**
MURB				S	**Sn**	**03 18 04.8**	**+0.9**
MURB	comp=E,11000µm,0.3s			AML	AML		
MURB	comp=N,9225µm,0.2s			AML	AML		
MURB	comp=N,11050µm,0.3s			AML	AML		
MURB	comp=E,11000µm,0.2s			AML	AML		
MURB	comp=E,10515µm,0.2s			AML	AML		
MURB	comp=E,10527µm,0.2s			AML	AML		
MURB	comp=N,9224µm,0.2s			AML	AML		
MURB	comp=E,10996µm,0.2s			AML	AML		
MURB	comp=N,11044µm,0.3s			AML	AML		
FRON	**Frontone**	**0.33**	**330**	⇓iP	**Pn**	**03 17 56.1**	**+0.7**
FRON				S	**Sn**	**03 18 04.6**	**+0.7**
FRON	comp=N,4585µm,0.7s			AML	AML		
FRON	comp=E,3340µm,0.1s			AML	AML		
FRON	comp=E,3339µm,0.1s			AML	AML		
FRON	comp=N,4205µm,0.3s			AML	AML		
GUMA	**Gualdo di Mace**	**0.33**	**121**	⇑iP	**Pn**	**03 17 56.0**	**+0.6**
GUMA				S	**Sn**	**03 18 04.3**	**+0.3**
GUMA	comp=E,13700µm,0.5s			AML	AML		
GUMA	comp=N,11040µm,0.5s			AML	AML		
GUMA	comp=E,17600µm,0.4s			AML	AML		
GUMA	comp=N,9970µm,1.6s			AML	AML		
GUMA	comp=N,9870µm,0.3s			AML	AML		
GUMA	comp=E,13714µm,0.5s			AML	AML		
GUMA	comp=N,11054µm,0.5s			AML	AML		
GUMA	comp=N,9870µm,1.7s			AML	AML		
GUMA	comp=E,17607µm,0.4s			AML	AML		
SAP2	**Sant'Angelo in**	**0.36**	**112**	⇑iP	**Pn**	**03 17 56.3**	**+0.7**
SAP2	comp=E,3340µm,0.9s			AML	AML		
SAP2	comp=N,20600µm,0.7s			AML	AML		
SAP2	comp=N,20550µm,0.7s			AML	AML		
SAP2	comp=E,3029µm,0.2s			AML	AML		
SAP2	comp=N,17675µm,0.2s			AML	AML		
MC2	**Monte Cornacci**	**0.37**	**151**	⇑P	**Pn**	**03 17 56.2**	**+0.3**
MC2				S	**Sn**	**03 18 04.9**	**+0.1**
ATBU	**Serra di Buran**	**0.38**	**310**	⇓iP	**Pn**	**03 17 56.5**	**+0.6**
MNTP	**Montappone**	**0.39**	**104**	⇑iP	**Pn**	**03 17 56.6**	**+0.8**
MNTP				S	**Sn**	**03 18 05.3**	**+0.6**
MNTP	comp=E,9855µm,0.6s			AML	AML		
MNTP	comp=N,14150µm,0.1s			AML	AML		
MNTP	comp=N,14129µm,0.1s			AML	AML		
MNTP	comp=E,8779µm,0.2s			AML	AML		
COR1	**Corinaldo**	**0.40**	**5**	⇓iP	**Pn**	**03 17 57.4**	**+1.4**
COR1				S	**Sn**	**03 18 06.9**	**+2.1**
COR1	comp=E,2555µm,1.2s			AML	AML		
COR1	comp=N,3515µm,0.4s			AML	AML		
COR1	comp=E,2550µm,1.2s			AML	AML		
COR1	comp=N,3520µm,0.4s			AML	AML		
COR1	comp=E,4350µm,0.3s			AML	AML		
COR1	comp=N,5305µm,0.5s			AML	AML		
COR1	comp=N,3518µm,0.4s			AML	AML		
COR1	comp=E,2534µm,0.3s			AML	AML		
ATLO	**AVT- Montelove**	**0.41**	**282**	⇑P	**Pn**	**03 17 57.0**	**+1.0**
ATLO				S	**Sn**	**03 18 05.0**	**0.0**
NRCA	**Norcia**	**0.42**	**163**	⇑iP	**Pn**	**03 17 56.7**	**+0.5**
NRCA				S	**Sn**	**03 18 05.3**	**0.0**
NRCA	comp=E,12850µm,1.6s			AML	AML		
NRCA	comp=N,18000µm,0.4s			AML	AML		
NRCA	comp=E,13000µm,0.8s			AML	AML		
NRCA	comp=N,18850µm,0.4s			AML	AML		
NRCA	comp=N,15571µm,0.2s			AML	AML		
NRCA	comp=E,11363µm,0.2s			AML	AML		
NRCA	comp=E,11306µm,0.2s			AML	AML		
NRCA	comp=N,16268µm,0.2s			AML	AML		
MPAG	**Monte Paganucc**	**0.42**	**341**	⇓iP	**Pn**	**03 17 57.1**	**+0.9**
MPAG				S	**Sn**	**03 18 06.3**	**+1.0**
MPAG	comp=E,3765µm,1.0s			AML	AML		
MPAG	comp=N,3290µm,0.5s			AML	AML		
MPAG	comp=E,3540µm,1.0s			AML	AML		
MPAG	comp=N,3285µm,0.5s			AML	AML		
MPAG	comp=E,3770µm,1.0s			AML	AML		
MPAG	comp=N,3283µm,0.5s			AML	AML		
MPAG	comp=N,3286µm,0.5s			AML	AML		
MPAG	comp=E,3474µm,0.3s			AML	AML		
MPAG	comp=E,3348µm,0.3s			AML	AML		
PIEI	**Pieia**	**0.43**	**315**	⇓iP	**Pn**	**03 17 57.1**	**+0.9**
PIEI				S	**Sn**	**03 18 06.7**	**+1.3**
PIEI	comp=E,2480µm,0.4s			AML	AML		
PIEI	comp=N,2200µm,0.2s			AML	AML		
PIEI	comp=E,2373µm,0.2s			AML	AML		
PIEI	comp=N,2202µm,0.2s			AML	AML		
MMO1	**Montemonaco**	**0.43**	**140**	⇑iP	**Pn**	**03 17 56.8**	**+0.5**
MMO1				S	**Sn**	**03 18 05.4**	**-0.1**
ATPC	**Poggio Castell**	**0.44**	**305**	⇓P	**Pn**	**03 17 57.5**	**+1.2**
ATTE	**AVT- Monte Tez**	**0.44**	**266**	⇑P	**Pn**	**03 17 57.0**	**+0.6**
ATTE				S	**Sn**	**03 18 05.4**	**-0.2**
ATTE	comp=N,2885µm,0.2s			AML	AML		
ATTE	comp=E,3040µm,0.5s			AML	AML		
ATTE	comp=E,2298µm,0.2s			AML	AML		
ATTE	comp=N,2887µm,0.2s			AML	AML		
MF5	**Montefalcone A**	**0.45**	**123**	⇑iP	**Pn**	**03 17 57.2**	**+0.8**
MF5				S	**Sn**	**03 18 06.2**	**+0.5**
MF5	comp=E,4605µm,0.7s			AML	AML		
MF5	comp=N,7090µm,0.7s			AML	AML		
MF5	comp=E,4600µm,0.7s			AML	AML		
MF5	comp=N,7095µm,0.7s			AML	AML		
MF5	comp=E,3864µm,0.4s			AML	AML		
MF5	comp=E,3864µm,1.6s			AML	AML		
MF5	comp=N,5377µm,0.2s			AML	AML		
ATPI	**Pietralunga -**	**0.46**	**299**	⇓P	**Pn**	**03 17 58.0**	**+1.5**
ATPI				S	**Sn**	**03 18 07.5**	**+1.7**
ATPI	comp=N,3545µm,0.4s			AML	AML		
ATPI	comp=E,3180µm,0.5s			AML	AML		
ATPI	comp=N,3620µm,0.4s			AML	AML		
ATPI	comp=E,3165µm,0.5s			AML	AML		
ATPI	comp=E,3181µm,0.5s			AML	AML		
ATPI	comp=E,3168µm,0.5s			AML	AML		
ATPI	comp=N,3545µm,0.4s			AML	AML		
ATPI	comp=N,3620µm,0.4s			AML	AML		
NARO	**Abbazia di Nar**	**0.46**	**325**	⇓iP	**Pn**	**03 17 57.6**	**+1.1**
NARO				S	**Sn**	**03 18 07.3**	**+1.5**
NARO	comp=E,1480µm,1.1s			AML	AML		
NARO	comp=N,1780µm,0.7s			AML	AML		
NARO	comp=N,1587µm,0.2s			AML	AML		
NARO	comp=E,1378µm,0.3s			AML	AML		
ATVA	**AVT- Monte Val**	**0.49**	**276**	⇑P	**Pn**	**03 17 57.3**	**+0.6**
ATVA				S	**Sn**	**03 18 06.1**	**-0.1**
PP3	**Marolino**	**0.50**	**73**	⇑iP	**Pn**	**03 17 58.0**	**+1.2**
PP3				S	**Sn**	**03 18 07.8**	**+1.5**
MNTT	**Montottone**	**0.50**	**110**	⇑iP	**Pn**	**03 17 57.8**	**+0.9**
MNTT	comp=E,5275µm,0.9s			AML	AML		
MNTT	comp=N,7175µm,0.2s			AML	AML		
MNTT	comp=E,5069µm,0.2s			AML	AML		
MNTT	comp=N,7174µm,0.2s			AML	AML		
ATMI	**Monte Miggiano**	**0.51**	**282**	P	**Pn**	**03 17 58.0**	**+1.1**
ATMI	comp=E,3840µm,0.3s			AML	AML		
ATMI	comp=N,3635µm,0.4s			AML	AML		
ATMI	comp=E,3841µm,0.3s			AML	AML		
ATMI	comp=N,3634µm,0.4s			AML	AML		
MOMA	**Monte Martano**	**0.51**	**213**	⇓P	**Pn**	**03 17 57.1**	**+0.1**
MOMA				S	**Sn**	**03 18 05.8**	**-1.0**
MOMA	comp=N,2565µm,0.6s			AML	AML		
MOMA	comp=N,2760µm,0.6s			AML	AML		
MOMA	comp=E,2595µm,1.0s			AML	AML		
MOMA	comp=E,2715µm,1.0s			AML	AML		
MOMA	comp=N,2755µm,0.6s			AML	AML		
MOMA	comp=E,2423µm,0.3s			AML	AML		
MOMA	comp=N,2017µm,0.2s			AML	AML		
MOMA	comp=E,2387µm,0.3s			AML	AML		
MOMA	comp=N,2261µm,0.2s			AML	AML		
MOMA	comp=E,2423µm,1.7s			AML	AML		
MOMA	comp=E,2387µm,1.7s			AML	AML		
SENI	**Senigallia**	**0.51**	**23**	⇓iP	**Pn**	**03 17 58.4**	**+1.5**
SENI				S	**Sn**	**03 18 08.4**	**+1.9**
SENI	comp=E,11200µm,0.2s			AML	AML		
SENI	comp=N,13600µm,0.6s			AML	AML		
SENI	comp=E,2005µm,0.6s			AML	AML		
SENI	comp=N,2265µm,0.6s			AML	AML		
SENI	comp=E,1874µm,0.2s			AML	AML		
SENI	comp=N,12741µm,0.2s			AML	AML		
SENI	comp=N,1882µm,0.2s			AML	AML		
SENI	comp=E,11215µm,0.2s			AML	AML		
CIMA	**Civitanova Mar**	**0.53**	**82**	P	**Pn**	**03 17 58.4**	**+1.3**
CIMA				S	**Sn**	**03 18 08.8**	**+1.9**
CIMA	comp=E,4285µm,0.1s			AML	AML		
CIMA	comp=N,3650µm,0.4s			AML	AML		
CIMA	comp=N,3229µm,0.2s			AML	AML		
CIMA	comp=E,4289µm,0.1s			AML	AML		
FCOR	**Fonte Corniale**	**0.54**	**350**	P	**Pn**	**03 17 58.7**	**+1.5**
PCRO	**Pietralacroce**	**0.56**	**48**	P	**Pn**	**03 17 58.5**	**+1.1**
PCRO				S	**Sn**	**03 18 08.3**	**+0.9**
PE3	**Peglio**	**0.57**	**325**	⇓P	**Pn**	**03 17 59.1**	**+1.6**
PE3	comp=E,7600µm,0.5s			AML	AML		
PE3	comp=N,7975µm,0.4s			AML	AML		
PE3	comp=E,7600µm,0.5s			AML	AML		
PE3	comp=N,7975µm,0.4s			AML	AML		
PE3	comp=N,7975µm,1.6s			AML	AML		
CDCA	**Citt‘ di Caste**	**0.57**	**293**	P	**Pn**	**03 17 58.9**	**+1.5**
CDCA				S	**Sn**	**03 18 08.5**	**+1.0**
AOI	**Ancona**	**0.57**	**56**	⇑P	**Pn**	**03 17 58.3**	**+0.8**
AOI				S	**Sn**	**03 18 07.8**	**+0.2**
AOI	comp=E,2500µm,0.9s			AML	AML		
AOI	comp=N,2490µm,0.6s			AML	AML		
AOI	comp=E,2269µm,0.4s			AML	AML		
AOI	comp=N,2276µm,0.3s			AML	AML		
MTRA	**Matera**	**0.58**	**145**	P	**Pn**	**03 17 58.3**	**+0.7**
MTRA				S	**Sn**	**03 18 08.0**	**+0.2**
MTRA	comp=E,5155µm,0.7s			AML	AML		
MTRA	comp=E,5090µm,0.7s			AML	AML		
MTRA	comp=N,3985µm,1.3s			AML	AML		
MTRA	comp=N,3955µm,1.3s			AML	AML		
MTRA	comp=N,3898µm,0.3s			AML	AML		
MTRA	comp=E,5103µm,0.3s			AML	AML		
MTRA	comp=N,3861µm,0.3s			AML	AML		
MTRA	comp=E,5080µm,0.2s			AML	AML		
BADI	**Badiali**	**0.58**	**298**	P	**Pn**	**03 17 59.3**	**+1.6**
BADI				S	**Sn**	**03 18 09.2**	**+1.4**
BADI	comp=E,2580µm,0.5s			AML	AML		
BADI	comp=E,2575µm,0.5s			AML	AML		
BADI	comp=N,3045µm,0.4s			AML	AML		
BADI	comp=N,3046µm,0.4s			AML	AML		
BADI	comp=E,2577µm,0.5s			AML	AML		
ATMC	**Monte Cedrone**	**0.59**	**291**	⇑P	**Pn**	**03 17 59.1**	**+1.4**
ATMC				S	**Sn**	**03 18 08.9**	**+0.9**
CADA	**Capodarco di F**	**0.59**	**94**	P	**Pn**	**03 17 59.3**	**+1.6**
CADA				S	**Sn**	**03 18 10.1**	**+2.2**
CADA	comp=E,8075µm,1.4s			AML	AML		
CADA	comp=E,8075µm,1.4s			AML	AML		
CADA	comp=N,7455µm,1.3s			AML	AML		
CADA	comp=N,7311µm,0.2s			AML	AML		
CADA	comp=E,8044µm,0.2s			AML	AML		
CADA	comp=E,8044µm,1.8s			AML	AML		
OFFI	**Offida**	**0.62**	**119**	⇑P	**Pn**	**03 17 59.3**	**+1.3**
OFFI	comp=E,5595µm,0.7s			AML	AML		
OFFI	comp=N,6915µm,0.4s			AML	AML		
OFFI	comp=N,6913µm,0.4s			AML	AML		
OFFI	comp=E,5594µm,0.7s			AML	AML		
MCIF	**Montecalvo in**	**0.62**	**338**	P	**Pn**	**03 17 60.0**	**+1.9**
LNSS	**Leonessa**	**0.63**	**174**	⇓iP	**Pn**	**03 17 58.6**	**+0.4**
LNSS				S	**Sn**	**03 18 08.9**	**0.0**
LNSS	comp=E,5805µm,1.0s			AML	AML		
LNSS	comp=E,5925µm,1.0s			AML	AML		
LNSS	comp=E,5810µm,1.1s			AML	AML		
LNSS	comp=N,4090µm,0.5s			AML	AML		
LNSS	comp=N,4525µm,0.5s			AML	AML		
LNSS	comp=E,5219µm,0.2s			AML	AML		
LNSS	comp=E,5194µm,0.2s			AML	AML		
LNSS	comp=N,4451µm,0.3s			AML	AML		
LNSS	comp=N,4010µm,0.3s			AML	AML		
PARC	**Parchiule**	**0.66**	**309**	P	**Pn**	**03 18 00.6**	**+2.2**
SMA1	**SAN MARTINO**	**0.67**	**155**	⇓P	**Pn**	**03 17 59.5**	**+0.9**
SMA1				S	**Sn**	**03 18 10.1**	**+0.6**
SMA1	comp=E,4320µm,0.4s			AML	AML		
SMA1	comp=N,6535µm,0.6s			AML	AML		
SMA1	comp=N,6245µm,0.3s			AML	AML		
SMA1	comp=N,6245µm,1.7s			AML	AML		
SMA1	comp=E,4319µm,0.4s			AML	AML		
ARRO	**Arrone**	**0.67**	**192**	⇓iP	**Pn**	**03 17 58.9**	**+0.4**
ARRO				S	**Sn**	**03 18 08.7**	**-0.6**
ARRO	comp=E,2080µm,0.2s			AML	AML		
ARRO	comp=N,1900µm,1.0s			AML	AML		
ARRO	comp=E,2081µm,0.2s			AML	AML		
ARRO	comp=N,1785µm,0.2s			AML	AML		
CESX	**Cesi**	**0.68**	**204**	⇓iP	**Pn**	**03 17 58.9**	**+0.3**
CESX				S	**Sn**	**03 18 08.9**	**-0.7**
CESX	comp=E,2265µm,1.2s			AML	AML		
CESX	comp=N,3100µm,0.3s			AML	AML		
CESX	comp=E,2220µm,0.3s			AML	AML		
CESX	comp=N,3100µm,0.3s			AML	AML		
SSP9	**Sansepolcro**	**0.69**	**300**	P	**Pn**	**03 18 00.4**	**+1.7**

SSP9			AML	AML	
	comp=E,1067µm,0.7s				
SSP9			AML	AML	
	comp=N,775µm,1.0s				
SSP9			AML	AML	
	comp=E,1066µm,0.7s				
SSP9			AML	AML	
	comp=N,774µm,1.0s				
SSP9			AML	AML	
	comp=E,1066µm,0.7s				
SSP9			AML	AML	
	comp=E,1066µm,1.3s				
SSP9			AML	AML	
	comp=N,689µm,0.4s				
MGAB	**Montegabbione**	**0.69 243**	⇑P	**Pn**	**03 17 59.6 +0.9**
MGAB			S	**Sn**	**03 18 10.2 +0.4**
MGAB			AML	AML	
	comp=E,3210µm,0.4s				
MGAB			AML	AML	
	comp=N,3775µm,1.3s				
MGAB			AML	AML	
	comp=E,3095µm,1.3s				
MGAB			AML	AML	
	comp=N,3240µm,1.3s				
MGAB			AML	AML	
	comp=E,3012µm,0.3s				
MGAB			AML	AML	
	comp=N,3185µm,0.3s				
MGAB			AML	AML	
	comp=N,2922µm,0.3s				
MGAB			AML	AML	
	comp=E,3210µm,0.4s				
PESA	**Pesaro**	**0.71 354**	⇓P	**Pn**	**03 18 00.4 +1.5**
PESA			AML	AML	
	comp=E,1900µm,0.3s				
PESA			AML	AML	
	comp=N,1360µm,1.5s				
PESA			AML	AML	
	comp=E,1899µm,0.3s				
PESA			AML	AML	
	comp=E,1899µm,1.7s				
PESA			AML	AML	
	comp=N,1311µm,0.3s				
CPGN	**Carpegna, Ital**	**0.73 321**	P	**Pn**	**03 18 01.8 +2.5**
CPGN			AML	AML	
	comp=E,1730µm,0.6s				
CPGN			AML	AML	
	comp=N,931µm,0.4s				
CPGN			AML	AML	
	comp=N,1365µm,1.6s				
CPGN			AML	AML	
	comp=E,1730µm,0.6s				
CPGN			AML	AML	
	comp=E,1315µm,0.6s				
CPGN			AML	AML	
	comp=E,1732µm,0.6s				
CPGN			AML	AML	
	comp=E,1315µm,0.6s				
CPGN			AML	AML	
	comp=N,1363µm,0.7s				
CPGN			AML	AML	
	comp=N,931µm,0.4s				
CPGN			AML	AML	
	comp=E,1315µm,1.4s				
CPGN			AML	AML	
	comp=E,1732µm,1.4s				
CPGN			AML	AML	
	comp=N,1363µm,1.3s				
RM33	**Pellescritta (**	**0.75 165**	⇓P	**Pn**	**03 18 00.3 +0.8**
RM33			S	**Sn**	**03 18 11.9 +0.8**
RM33			AML	AML	
	comp=E,5095µm,1.4s				
RM33			AML	AML	
	comp=N,4740µm,0.4s				
RM33			AML	AML	
	comp=E,5095µm,1.4s				
RM33			AML	AML	
	comp=N,4735µm,0.4s				
RM33			AML	AML	
	comp=E,5090µm,1.4s				
RM33			AML	AML	
	comp=N,4805µm,0.4s				
RM33			AML	AML	
	comp=E,4412µm,0.2s				
RM33			AML	AML	
	comp=E,4573µm,0.2s				
RM33			AML	AML	
	comp=N,4736µm,0.4s				
RM33			AML	AML	
	comp=N,4806µm,0.4s				
CAMP	**Campotosto**	**0.78 154**	⇓P	**Pn**	**03 18 00.8 +1.0**
CAMP			S	**Sn**	**03 18 12.1 +0.4**
CAMP			AML	AML	
	comp=E,1825µm,0.4s				
CAMP			AML	AML	
	comp=N,1840µm,0.6s				
CAMP			AML	AML	
	comp=E,1828µm,0.4s				
CAMP			AML	AML	
	comp=N,1839µm,0.6s				
CAMP			AML	AML	
	comp=E,1828µm,1.6s				
RSM	**Repubblica di**	**0.79 333**	P	**Pn**	**03 18 02.3 +2.4**
CRE	**Caprese Michel**	**0.82 298**	⇑P	**Pn**	**03 18 01.6 +1.2**
CRE			S	**Sn**	**03 18 13.5 +0.9**
CRE			AML	AML	
	comp=E,714µm,0.7s				
CRE			AML	AML	
	comp=N,1360µm,0.7s				
CRE			AML	AML	
	comp=E,664µm,0.5s				
CRE			AML	AML	
	comp=N,1313µm,0.2s				
CRE			AML	AML	
	comp=E,664µm,1.5s				
TRTR	**Tortoreto Alta**	**0.82 121**	⇑P	**Pn**	**03 18 02.1 +1.9**
TRTR			S	**Sn**	**03 18 14.6 +2.2**
TRTR			AML	AML	
	comp=E,8320µm,0.5s				
TRTR			AML	AML	
	comp=N,5660µm,1.5s				
TRTR			AML	AML	
	comp=E,8324µm,0.5s				
TRTR			AML	AML	
	comp=N,5508µm,0.3s				
SACS	**San Casciano d**	**0.85 244**	⇑*i*P	**Pn**	**03 18 01.4 +0.7**
SACS			S	**Sn**	**03 18 13.2 0.0**
SACS			AML	AML	
	comp=E,1430µm,0.5s				
SACS			AML	AML	
	comp=N,1120µm,1.1s				
SACS			AML	AML	
	comp=N,1144µm,1.4s				
SACS			AML	AML	
	comp=E,1430µm,0.5s				
SACS			AML	AML	
	comp=N,1118µm,1.1s				
SACS			AML	AML	
	comp=E,1435µm,0.5s				
SACS			AML	AML	
	comp=E,1427µm,0.5s				
SACS			AML	AML	
	comp=E,1434µm,0.5s				
SACS			AML	AML	
	comp=N,1104µm,0.3s				
SACS			AML	AML	
	comp=N,1106µm,0.3s				
GIGS	**Gran Sasso**	**0.91 150**	P	**Pn**	**03 18 02.3 +1.0**
GIGS			AML	AML	
	comp=N,639µm,0.4s				
GIGS			AML	AML	
	comp=E,620µm,0.3s				
GIGS			AML	AML	
	comp=N,639µm,0.4s				
GIGS			AML	AML	
	comp=E,619µm,0.3s				
AQU	**L'Aquila**	**0.94 159**	*e*Pg	**Pn**	**03 18 02.6 +0.9**
FIAM	**Fiamignano**	**0.97 173**	P	**Pn**	**03 18 03.0 +0.9**
FIAM			AML	AML	
	comp=E,577µm,1.3s				
FIAM			AML	AML	
	comp=N,544µm,1.2s				
FIAM			AML	AML	
	comp=N,485µm,0.8s				
FIAM			AML	AML	
	comp=E,5089µm,2.1s				
FIAM			AML	AML	
	comp=E,556µm,0.6s				
FIAM			AML	AML	
	comp=N,485µm,1.2s				
FIAM			AML	AML	
	comp=N,957µm,0.5s				
FIAM			AML	AML	
	comp=E,5089µm,1.9s				
ASQU	**Asqua**	**1.01 304**	P	**Pn**	**03 18 04.1 +1.5**
ASQU			S	**Sn**	**03 18 17.8 +1.1**
ASQU	**Asqua**	**1.01 304**	P	**Pn**	**03 18 04.2 +1.5**
ASQU			S	**Sn**	**03 18 18.2 +1.5**
ASQU			AML	AML	
	comp=E,431µm,0.3s				
ASQU			AML	AML	
	comp=N,376µm,0.6s				
ASQU			AML	AML	
	comp=E,431µm,0.3s				
ASQU			AML	AML	
	comp=N,334µm,0.4s				
SF04	**Casetta**	**1.03 248**	P	**Pn**	**03 18 03.6 +0.9**
SF04			S	**Sn**	**03 18 17.4 +0.5**
SF04			AML	AML	
	comp=E,539µm,0.5s				
SF04			AML	AML	
	comp=N,768µm,0.2s				
SF04			AML	AML	
	comp=E,539µm,0.5s				
SF04			AML	AML	
	comp=N,768µm,0.2s				
MCIV	**Monte Civitell**	**1.04 244**	AML	AML	
	comp=E,393µm,0.3s				
MCIV			AML	AML	
	comp=E,393µm,0.3s				
MCIV			AML	AML	
	comp=E,393µm,0.3s				
MCIV			AML	AML	
	comp=N,480µm,0.9s				
MCIV			AML	AML	
	comp=N,432µm,0.4s				
LATE	**Laterza**	**1.04 234**	P	**Pn**	**03 18 03.7 +0.7**
LATE			AML	AML	
	comp=E,787µm,0.3s				
LATE			AML	AML	
	comp=N,1070µm,0.3s				
LATE			AML	AML	
	comp=N,1070µm,0.3s				
LATE			AML	AML	
	comp=E,787µm,0.3s				
SFI	**Santa Sofia**	**1.05 310**	P	**Pn**	**03 18 05.2 +2.2**
SFI			AML	AML	
	comp=E,388µm,0.2s				
SFI			AML	AML	
	comp=N,303µm,0.7s				
SFI			AML	AML	
	comp=N,367µm,0.4s				
SFI			AML	AML	
	comp=N,303µm,0.7s				
SFI			AML	AML	
	comp=E,404µm,0.2s				
SFI			AML	AML	
	comp=E,388µm,0.2s				
SRES	**S.Oreste - Sor**	**1.05 198**	P	**Pn**	**03 18 03.5 +0.5**
SRES			S	**Sn**	**03 18 17.2 -0.1**
SRES			AML	AML	
	comp=E,814µm,1.6s				
SRES			AML	AML	
	comp=N,322µm,0.4s				
SRES			AML	AML	
	comp=E,683µm,0.3s				
SRES			AML	AML	
	comp=E,683µm,1.7s				
SRES			AML	AML	
	comp=N,322µm,0.4s				
VCEL	**Villa Celiera**	**1.06 142**	⇓P	**Pn**	**03 18 04.5 +1.2**
VCEL			S	**Sn**	**03 18 19.2 +1.4**
VCEL			AML	AML	
	comp=E,1895µm,0.3s				
VCEL			AML	AML	
	comp=N,1575µm,0.4s				
VCEL			AML	AML	
	comp=E,1894µm,0.3s				
VCEL			AML	AML	
	comp=N,1571µm,0.4s				
VCEL			AML	AML	
	comp=N,1571µm,1.6s				
FAGN	**Fagnano**	**1.07 154**	P	**Pn**	**03 18 04.9 +1.6**
FAGN			AML	AML	
	comp=E,1630µm,0.4s				
FAGN			AML	AML	
	comp=N,1995µm,0.5s				
FAGN			AML	AML	
	comp=E,1629µm,0.4s				
FAGN			AML	AML	
	comp=N,1994µm,0.5s				
SF01	**Poggio Pratacc**	**1.10 248**	P	**Pn**	**03 18 05.0 +1.3**
SF01			S	**Sn**	**03 18 19.1 +0.6**
SF01			AML	AML	
	comp=E,291µm,0.3s				
SF01			AML	AML	
	comp=N,410µm,0.5s				
SF01			AML	AML	
	comp=N,409µm,0.5s				
SF01			AML	AML	
	comp=E,291µm,0.3s				
ARCI	**Arcidosso**	**1.15 251**	⇑P	**Pn**	**03 18 05.4 +1.1**
ARCI			AML	AML	
	comp=E,136µm,0.5s				
ARCI			AML	AML	
	comp=N,196µm,0.8s				
ARCI			AML	AML	
	comp=N,163µm,0.3s				
ARCI			AML	AML	
	comp=N,166µm,0.3s				
ARCI			AML	AML	
	comp=E,136µm,0.5s				
ARCI			AML	AML	
	comp=E,195µm,0.6s				
ARCI			AML	AML	
	comp=E,136µm,1.5s				
ARCI			AML	AML	
	comp=E,195µm,1.4s				
BARO	**Barbarano Roma**	**1.19 214**	⇓P	**Pn**	**03 18 05.3 +0.6**
BARO			S	**Sn**	**03 18 20.0 -0.4**
RUFI	**Rufina**	**1.21 301**	P	**Pn**	**03 18 06.8 +1.8**
RUFI			S	**Sn**	**03 18 21.8 +0.8**
RUFI	**Rufina**	**1.21 301**	P	**Pn**	**03 18 06.6 +1.6**
RUFI			S	**Sn**	**03 18 22.3 +1.4**
RUFI			AML	AML	
	comp=E,350µm,0.8s				
RUFI			AML	AML	
	comp=N,342µm,1.6s				
RUFI			AML	AML	
	comp=E,316µm,0.3s				
RUFI			AML	AML	
	comp=E,316µm,1.7s				
RUFI			AML	AML	
	comp=N,330µm,0.5s				
MTCE	**Montecelio**	**1.22 187**	P	**Pn**	**03 18 05.4 +0.2**
MTCE			AML	AML	
	comp=E,297µm,0.5s				
MTCE			AML	AML	
	comp=N,172µm,0.8s				
MTCE			AML	AML	
	comp=E,297µm,0.5s				
MTCE			AML	AML	
	comp=N,169µm,0.4s				
MTCE			AML	AML	
	comp=E,297µm,1.5s				
BRSN	**Barisano**	**1.23 329**	P	**Pn**	**03 18 08.2 +3.0**
BRSN			AML	AML	
	comp=E,568µm,0.5s				
BRSN			AML	AML	
	comp=N,544µm,0.9s				
BRSN			AML	AML	
	comp=E,568µm,0.5s				
BRSN			AML	AML	
	comp=N,542µm,0.7s				
CSNT	**Castellina Chi**	**1.23 282**	P	**Pn**	**03 18 06.7 +1.4**
CSNT			S	**Sn**	**03 18 21.3 -0.2**
CSNT	**Castellina Chi**	**1.23 282**	P	**Pn**	**03 18 06.7 +1.4**
CSNT			S	**Sn**	**03 18 21.9 +0.4**
CSNT			AML	AML	
	comp=E,296µm,0.4s				
CSNT			AML	AML	
	comp=N,368µm,0.7s				
CSNT			AML	AML	
	comp=E,296µm,0.4s				
CSNT			AML	AML	
	comp=N,347µm,0.4s				
LMD	**Lutirano**	**1.23 313**	P	**Pn**	**03 18 08.2 +2.9**
LMD			S	**Sn**	**03 18 24.5 +3.0**
LMD	**Lutirano**	**1.23 313**	⇓P	**Pn**	**03 18 08.2 +2.9**
LMD			S	**Sn**	**03 18 24.9 +3.3**
LMD			AML	AML	
	comp=E,400µm,0.9s				
LMD			AML	AML	
	comp=N,351µm,0.2s				
LMD			AML	AML	
	comp=E,384µm,0.2s				
LMD			AML	AML	
	comp=N,351µm,0.2s				
PTQR	**Pietraquaria**	**1.26 165**	⇓*i*P	**Pn**	**03 18 07.0 +1.4**
PTQR			AML	AML	
	comp=E,182µm,1.5s				
PTQR			AML	AML	
	comp=N,300µm,0.5s				
PTQR			AML	AML	
	comp=N,300µm,0.5s				
PTQR			AML	AML	
	comp=E,182µm,0.8s				
OSSC	**Osservatorio P**	**1.28 284**	P	**Pn**	**03 18 07.3 +1.5**
OSSC			S	**Sn**	**03 18 22.9 +0.4**
OSSC	**Osservatorio P**	**1.28 284**	P	**Pn**	**03 18 07.4 +1.5**
OSSC			S	**Sn**	**03 18 23.5 +1.0**
OSSC			AML	AML	
	comp=E,312µm,0.7s				
OSSC			AML	AML	
	comp=N,332µm,0.8s				
OSSC			AML	AML	
	comp=N,312µm,0.4s				
OSSC			AML	AML	
	comp=E,271µm,0.4s				
OSSC			AML	AML	
	comp=E,321µm,0.4s				
OSSC			AML	AML	
	comp=N,292µm,0.4s				
OSSC			AML	AML	
	comp=E,271µm,1.6s				
OSSC			AML	AML	
	comp=N,312µm,1.6s				
OSSC			AML	AML	
	comp=E,321µm,1.6s				
OSSC			AML	AML	
	comp=N,292µm,1.6s				
CERT	**Cerreto**	**1.28 179**	P	**Pn**	**03 18 06.8 +0.7**
FROS	**Frosini**	**1.31 270**	AML	AML	
	comp=E,515µm,0.5s				
FROS			AML	AML	
	comp=E,515µm,0.5s				
FROS			AML	AML	
	comp=N,440µm,1.1s				
FROS			AML	AML	
	comp=N,417µm,0.5s				
TOLF	**Tolfa**	**1.36 211**	P	**Pn**	**03 18 07.5 +0.5**
TOLF			S	**Sn**	**03 18 24.3 -0.1**
TOLF			AML	AML	
	comp=E,276µm,0.6s				
TOLF			AML	AML	
	comp=N,364µm,0.3s				
TOLF			AML	AML	
	comp=E,262µm,0.5s				
TOLF			AML	AML	
	comp=N,363µm,0.3s				
RCAV	**Rocca di Cave**	**1.39 180**	P	**Pn**	**03 18 07.8 +0.4**
RCAV			AML	AML	
	comp=E,326µm,0.6s				
RCAV			AML	AML	
	comp=N,253µm,1.2s				
RCAV			AML	AML	
	comp=E,300µm,0.3s				
RCAV			AML	AML	
	comp=N,244µm,0.1s				
BRIS	**BRISIGHELLA**	**1.39 312**	⇓P	**Pn**	**03 18 09.2 +1.9**
BRIS			S	**Sn**	**03 18 26.7 +1.6**
BRIS			AML	AML	
	comp=E,500µm,0.6s				
BRIS			AML	AML	
	comp=N,457µm,0.3s				
BRIS			AML	AML	
	comp=E,500µm,0.6s				
BRIS			AML	AML	
	comp=E,126µm,0.8s				
BRIS			AML	AML	
	comp=N,457µm,0.3s				
BRIS			AML	AML	
	comp=N,984µm,0.5s				
INTR	**Introdacqua**	**1.41 150**	P	**Pn**	**03 18 08.4 +0.8**
INTR			AML	AML	
	comp=E,356µm,0.7s				
INTR			AML	AML	
	comp=N,482µm,0.8s				
INTR			AML	AML	
	comp=E,349µm,0.6s				
INTR			AML	AML	
	comp=N,438µm,0.4s				
INTR			AML	AML	
	comp=N,438µm,1.6s				
SEI	**Scarperia**	**1.42 306**	P	**Pn**	**03 18 10.2 +2.5**
SEI			S	**Sn**	**03 18 27.4 +1.6**
SEI	**Scarperia**	**1.42 306**	P	**Pn**	**03 18 10.2 +2.5**
SEI			AML	AML	
	comp=E,412µm,0.4s				
SEI			AML	AML	
	comp=N,761µm,0.3s				
SEI			AML	AML	
	comp=N,761µm,0.3s				
SEI			AML	AML	
	comp=E,412µm,0.4s				
RIBO	**Ribolla Roccas**	**1.42 259**	P	**Pn**	**03 18 08.7 +1.0**
RIBO	**Ribolla Roccas**	**1.42 259**	AML	AML	
	comp=E,340µm,0.3s				
IMOL	**Imola, Italy**	**1.43 323**	P	**Pn**	**03 18 11.2 +3.5**
IMOL			S	**Sn**	**03 18 29.6 +3.7**
IMOL	**Imola, Italy**	**1.43 323**	P	**Pn**	**03 18 11.2 +3.5**
IMOL			AML	AML	
	comp=E,1044µm,0.3s				
IMOL			AML	AML	
	comp=N,766µm,1.3s				
IMOL			AML	AML	
	comp=E,1043µm,0.3s				
IMOL			AML	AML	
	comp=N,597µm,0.3s				
RMP	**Rome, Mte Porz**	**1.43 187**	⇓P	**Pn**	**03 18 08.5 +0.6**
RMP			AML	AML	
	comp=E,1047µm,1.1s				
RMP			AML	AML	
	comp=N,1300µm,0.5s				
RMP			AML	AML	
	comp=E,981µm,0.5s				
RMP			AML	AML	
	comp=N,1300µm,0.5s				
VVLD	**Villa Vallelon**	**1.45 160**	P	**Pn**	**03 18 09.6 +1.4**
VVLD			AML	AML	
	comp=E,207µm,1.0s				
VVLD			AML	AML	
	comp=N,246µm,0.5s				
VVLD			AML	AML	
	comp=E,190µm,0.8s				
VVLD			AML	AML	
	comp=N,285µm,0.5s				
VVLD			AML	AML	
	comp=N,246µm,0.5s				
VVLD			AML	AML	
	comp=E,203µm,0.5s				
VVLD			AML	AML	
	comp=N,285µm,1.5s				
VVLD			AML	AML	
	comp=E,190µm,1.2s				
VISG	**Visignano**	**1.46 311**	AML	AML	
	comp=N,198µm,0.4s				
VISG			AML	AML	
	comp=E,272µm,0.8s				
VISG			AML	AML	
	comp=N,237µm,0.9s				
VISG			AML	AML	
	comp=E,193µm,0.5s				
VISG			AML	AML	
	comp=N,198µm,1.6s				
GUAR	**Guarcino**	**1.46 169**	P	**Pn**	**03 18 09.3 +0.9**
GUAR			AML	AML	
	comp=E,256µm,1.1s				
GUAR			AML	AML	
	comp=N,310µm,0.3s				
GUAR			AML	AML	

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          comp=E,247µm,0.5s
GUAR                                AML   AML
          comp=N,310µm,0.3s
GUAR                                AML   AML
          comp=N,310µm,1.7s
RDP   Rocca di Papa    1.48 187  ⇓P     Pn      03 18 09.3 +0.7
RDP                                 AML   AML
          comp=E,436µm,0.3s
RDP                                 AML   AML
          comp=N,773µm,0.5s
RDP                                 AML   AML
          comp=N,773µm,0.5s
RDP                                 AML   AML
          comp=N,773µm,1.5s
RDP                                 AML   AML
          comp=E,437µm,0.3s
VIVA  Pratoni del Vi   1.49 185   P     Pn      03 18 09.1 +0.4
VIVA                                AML   AML
          comp=E,736µm,0.4s
VIVA                                AML   AML
          comp=N,692µm,0.4s
VIVA                                AML   AML
          comp=E,736µm,0.4s
VIVA                                AML   AML
          comp=N,691µm,0.4s
LPEL  Lama dei Pelig   1.50 142   P     Pn      03 18 09.4 +0.6
LPEL                                AML   AML
          comp=E,572µm,0.3s
LPEL                                AML   AML
          comp=N,670µm,0.2s
LPEL                                AML   AML
          comp=E,537µm,1.3s
LPEL                                AML   AML
          comp=N,696µm,0.2s
LPEL                                AML   AML
          comp=N,669µm,0.2s
LPEL                                AML   AML
          comp=E,518µm,0.2s
LPEL                                AML   AML
          comp=N,696µm,0.2s
LPEL                                AML   AML
          comp=E,505µm,0.2s
TRIF  Trifonti         1.50 266     AML   AML
          comp=N,444µm,0.5s
TRIF                                AML   AML
          comp=E,483µm,0.9s
TRIF                                AML   AML
          comp=N,478µm,0.7s
TRIF                                AML   AML
          comp=E,473µm,0.3s
MPPT  Montemurlo       1.53 299   P     Pn      03 18 11.0 +1.8
MAON  Monte Argentar   1.56 240   P     Pn      03 18 10.3 +0.7
MAON                                AML   AML
          comp=E,146µm,1.3s
MAON                                AML   AML
          comp=N,102µm,1.3s
MAON                                AML   AML
          comp=E,138µm,0.4s
MAON                                AML   AML
          comp=N,176µm,1.0s
MAON                                AML   AML
          comp=N,84µm,0.4s
MAON                                AML   AML
          comp=E,138µm,1.6s
MAON                                AML   AML
          comp=E,98µm,0.2s
LAV9  Lanuvio          1.57 187   P     Pn      03 18 10.1 +0.5
LAV9                                AML   AML
          comp=E,538µm,0.3s
LAV9                                AML   AML
          comp=N,518µm,0.5s
LAV9                                AML   AML
          comp=E,1304µm,1.4s
LAV9                                AML   AML
          comp=N,518µm,0.5s
LAV9                                AML   AML
          comp=E,538µm,0.3s
LAV9                                AML   AML
          comp=E,1304µm,0.6s
LAV9                                AML   AML
          comp=N,518µm,1.5s
LAV9                                AML   AML
          comp=N,555µm,0.4s
CASP  Castiglione de   1.59 255  ⇑P     Pn      03 18 10.5 +0.5
CASP                                AML   AML
          comp=E,135µm,0.8s
CASP                                AML   AML
          comp=N,139µm,0.3s
CASP                                AML   AML
          comp=N,139µm,0.3s
CASP                                AML   AML
          comp=E,132µm,0.4s
POFI  Posta Fibreno    1.62 159   P     Pn      03 18 11.4 +1.1
POFI                                AML   AML
          comp=E,111µm,0.8s
POFI                                AML   AML
          comp=N,100µm,1.0s
POFI                                AML   AML
          comp=E,187µm,0.9s
POFI                                AML   AML
          comp=E,111µm,0.8s
POFI                                AML   AML
          comp=E,111µm,1.2s
POFI                                AML   AML
          comp=N,176µm,0.7s
POFI                                AML   AML
          comp=E,187µm,1.1s
POFI                                AML   AML
          comp=N,91µm,0.7s
LRP   Arpino           1.65 163   P     Pn      03 18 11.7 +0.8
LRP                                 AML   AML
          comp=E,153µm,0.3s
LRP                                 AML   AML
          comp=N,44µm,1.1s
LRP                                 AML   AML
          comp=E,153µm,0.3s
LRP                                 AML   AML
          comp=N,38µm,0.6s
MAGO  Bibbona          1.68 272     AML   AML
          comp=E,131µm,0.2s
MAGO                                AML   AML
          comp=E,131µm,0.2s
MAGO                                AML   AML
          comp=N,182µm,1.1s
MAGO                                AML   AML
          comp=N,177µm,0.4s
GIUL  Giuliano Di Ro   1.69 172   P     Pn      03 18 11.8 +0.5
GIUL                                AML   AML
          comp=E,108µm,0.4s
GIUL                                AML   AML
          comp=N,133µm,0.9s
GIUL                                AML   AML
          comp=E,108µm,0.4s
GIUL                                AML   AML
          comp=N,133µm,0.9s
LATB  Latina           1.74 180   P     Pn      03 18 12.1 +0.2
LATB                                AML   AML
          comp=E,43µm,0.8s
LATB                                AML   AML
          comp=N,34µm,1.3s
LATB                                AML   AML
          comp=N,33µm,0.9s
LATB                                AML   AML
          comp=E,43µm,0.8s
FIU   Minerbio Fiu     1.76 324   P     Pn      03 18 15.2 +3.1
FIU                                 AML   AML
          comp=E,423µm,0.1s
FIU                                 AML   AML
          comp=N,448µm,0.2s
POPM  Popiglio         1.79 298   P     Pn      03 18 14.2 +1.6
POPM  Popiglio         1.79 298   P     Pn      03 18 14.2 +1.6
POPM                                AML   AML
          comp=E,260µm,1.2s
POPM                                AML   AML
          comp=N,290µm,1.4s
POPM                                AML   AML
          comp=N,267µm,0.3s
POPM                                AML   AML
          comp=E,253µm,0.2s
FRES  Fresagrandinar   1.79 134   P     Pn      03 18 13.9 +1.3
FRES                                AML   AML
          comp=E,754µm,0.5s
FRES                                AML   AML
          comp=N,478µm,1.1s
FRES                                AML   AML
          comp=N,443µm,0.2s
FRES                                AML   AML
          comp=E,715µm,0.1s
FRES                                AML   AML
          comp=E,715µm,1.9s
CERA  Filignano        1.82 154   P     Pn      03 18 14.2 +1.2
CERA                                AML   AML
          comp=E,195µm,0.7s
CERA                                AML   AML
          comp=N,158µm,0.6s
CERA                                AML   AML
          comp=N,158µm,0.6s
CERA                                AML   AML
          comp=N,144µm,0.7s
CERA                                AML   AML
          comp=N,158µm,1.4s
CERA                                AML   AML
          comp=E,195µm,0.7s
CERA                                AML   AML
          comp=E,193µm,0.7s
CERA                                AML   AML
          comp=N,144µm,1.3s
PII   Pisa             1.83 286   P     Pn      03 18 14.7 +1.5
PII   Pisa             1.83 286   P     Pn      03 18 14.7 +1.5
PII                                 AML   AML
          comp=E,444µm,0.7s
PII                                 AML   AML
          comp=N,705µm,0.3s
PII                                 AML   AML
          comp=E,440µm,0.2s
PII                                 AML   AML
          comp=N,705µm,0.3s
PII                                 AML   AML
          comp=N,705µm,1.7s
MIDA  Miranda          1.86 148   P     Pn      03 18 14.7 +1.0
MIDA                                AML   AML
          comp=E,134µm,1.0s
MIDA                                AML   AML
          comp=N,180µm,0.9s
MIDA                                AML   AML
          comp=N,171µm,0.3s
MIDA                                AML   AML
          comp=N,131µm,0.5s
MIDA                                AML   AML
          comp=E,169µm,0.3s
MIDA                                AML   AML
          comp=E,124µm,0.2s
MIDA                                AML   AML
          comp=N,171µm,1.7s
MCI   Monte Cassino    1.86 160   P     Pn      03 18 14.9 +1.3
MCI                                 AML   AML
          comp=E,218µm,0.5s
MCI                                 AML   AML
          comp=N,158µm,0.3s
MCI                                 AML   AML
          comp=N,159µm,0.3s
MCI                                 AML   AML
          comp=E,218µm,0.5s
BDI   Bagni Di Lucca   1.90 297   P     Pn      03 18 15.5 +1.4
BDI   Bagni Di Lucca   1.90 297   P     Pn      03 18 15.5 +1.4
BDI                                 AML   AML
          comp=E,320µm,1.4s
BDI                                 AML   AML
          comp=N,313µm,1.4s
BDI                                 AML   AML
          comp=E,368µm,1.6s
BDI                                 AML   AML
          comp=N,312µm,0.3s
BDI                                 AML   AML
          comp=N,312µm,0.3s
BDI                                 AML   AML
          comp=E,338µm,0.3s
BDI                                 AML   AML
          comp=N,280µm,0.2s
BDI                                 AML   AML
          comp=E,314µm,0.2s
BDI                                 AML   AML
          comp=N,312µm,1.7s
MAIM  Mastiano         1.91 292   P     Pn      03 18 16.0 +1.8
RAVA  Ravarino         2.02 320   P     Pn      03 18 18.9 +3.3
RAVA                                AML   AML
          comp=E,440µm,0.5s
RAVA                                AML   AML
          comp=N,365µm,0.2s
RAVA                                AML   AML
          comp=N,365µm,0.2s
RAVA                                AML   AML
          comp=E,434µm,0.2s
GSCL  Gusciola         2.04 304   P     Pn      03 18 19.0 +3.0
VAGA  Valle Agricola   2.05 152   P     Pn      03 18 17.9 +1.7
VAGA                                AML   AML
          comp=E,108µm,0.6s
VAGA                                AML   AML
          comp=N,162µm,0.3s
VAGA                                AML   AML
          comp=E,112µm,0.6s
VAGA                                AML   AML
          comp=N,169µm,0.3s
VAGA                                AML   AML
          comp=E,80µm,0.4s
VAGA                                AML   AML
          comp=N,169µm,0.3s
VAGA                                AML   AML
          comp=E,87µm,0.2s
VAGA                                AML   AML
          comp=N,161µm,0.3s
VAGA                                AML   AML
          comp=E,80µm,1.6s
CELB  S.Piero in Cam   2.07 257   P     Pn      03 18 17.2 +0.8
CELB                                AML   AML
          comp=E,104µm,1.5s
CELB                                AML   AML
          comp=N,87µm,0.5s
CELB                                AML   AML
          comp=E,88µm,0.2s
CELB                                AML   AML
          comp=N,69µm,0.1s
SARO  Sassorosso       2.08 298   P     Pn      03 18 18.0 +1.4
BSSO  Busso            2.08 144   P     Pn      03 18 18.6 +2.0
BSSO                                AML   AML
          comp=E,60µm,0.3s
BSSO                                AML   AML
          comp=N,55µm,0.3s
BSSO                                AML   AML
BSSO                                AML   AML
BSSO                                AML   AML
          comp=N,55µm,0.3s
BSSO                                AML   AML
BSSO                                AML   AML
BSSO                                AML   AML
          comp=E,60µm,0.3s
SERM  Sermide          2.14 327   P     Pn      03 18 19.3 +2.1
SERM                                AML   AML
          comp=E,443µm,0.5s
SERM                                AML   AML
          comp=N,406µm,0.4s
SERM                                AML   AML
          comp=E,1490µm,0.2s
SERM                                AML   AML
          comp=N,1551µm,0.7s
SERM                                AML   AML
          comp=N,406µm,0.4s
SERM                                AML   AML
          comp=E,429µm,0.2s
SERM                                AML   AML
          comp=N,1551µm,1.3s
CIGN  Sant'Elia a Pi   2.14 137   P     Pn      03 18 18.9 +1.5
CIGN                                AML   AML
          comp=E,228µm,1.6s
CIGN                                AML   AML
          comp=N,191µm,1.6s
CIGN                                AML   AML
          comp=E,193µm,0.3s
CIGN                                AML   AML
          comp=N,165µm,0.2s
CAVE  Cavezzo          2.15 320   P     Pn      03 18 20.0 +2.6
CAVE                              S     Sn      03 18 44.3 +1.1
CAVE                                AML   AML
          comp=E,720µm,0.3s
CAVE                                AML   AML
          comp=N,500µm,1.1s
CAVE                                AML   AML
          comp=E,720µm,0.3s
CAVE                                AML   AML
          comp=N,468µm,0.3s
MODR  Mondragone       2.20 161   P     Pn      03 18 18.7 +0.6
MODR                                AML   AML
          comp=N,61µm,1.8s
MODR                                AML   AML
          comp=E,42µm,0.6s
MODR                                AML   AML
          comp=N,61µm,0.2s
PTRJ  Pietraroja       2.21 147   P     Pn      03 18 20.0 +1.7
PTRJ                                AML   AML
          comp=E,171µm,0.5s
PTRJ                                AML   AML
          comp=E,13µm,0.3s
PTRJ                                AML   AML
          comp=N,295µm,0.9s
PTRJ                                AML   AML
          comp=N,164µm,0.3s
PTRJ                                AML   AML
          comp=E,171µm,1.5s
MELA  Melanico ??? S   2.22 133   P     Pn      03 18 19.8 +1.5
MELA                                AML   AML
          comp=E,954µm,0.5s
MELA                                AML   AML
          comp=N,801µm,1.1s
MELA                                AML   AML
          comp=N,736µm,0.2s
MELA                                AML   AML
          comp=N,782µm,0.3s
MELA                                AML   AML
          comp=E,858µm,0.3s
MELA                                AML   AML
          comp=E,1117µm,0.4s
PIGN  Pignataro Magg   2.23 155   P     Pn      03 18 19.6 +1.1
PIGN                                AML   AML
          comp=E,54µm,1.6s
PIGN                                AML   AML
          comp=N,46µm,1.6s
PIGN                                AML   AML
          comp=N,41µm,1.0s
PIGN                                AML   AML
          comp=N,171µm,0.9s
PIGN                                AML   AML
          comp=E,128µm,0.8s
PIGN                                AML   AML
          comp=E,128µm,1.2s
PIGN                                AML   AML
          comp=E,46µm,0.2s
PIGN                                AML   AML
          comp=N,41µm,1.0s
SACR  S. Croce Del S   2.25 144   P     Pn      03 18 20.9 +2.0
SACR                                AML   AML
          comp=E,135µm,1.2s
SACR                                AML   AML
          comp=N,110µm,0.2s
SACR                                AML   AML
          comp=E,130µm,1.2s
SACR                                AML   AML
          comp=N,126µm,0.9s
SACR                                AML   AML
          comp=E,115µm,0.3s
SACR                                AML   AML
          comp=N,113µm,0.2s
SACR                                AML   AML
          comp=E,103µm,0.3s
SACR                                AML   AML
          comp=N,110µm,0.2s
SACR                                AML   AML
          comp=E,115µm,1.7s
GATE  Gambatesa        2.25 139   P     Pn      03 18 21.1 +2.2
GATE                                AML   AML
          comp=E,269µm,1.6s
GATE                                AML   AML
          comp=N,268µm,1.1s
GATE                                AML   AML
          comp=E,257µm,0.3s
GATE                                AML   AML
          comp=N,258µm,0.5s
GATE                                AML   AML
          comp=E,264µm,0.3s
GATE                                AML   AML
          comp=E,229µm,0.3s
TEOL  Teolo            2.32 337   P     Pn      03 18 20.7 +1.0
TEOL                                AML   AML
          comp=E,549µm,1.4s
TEOL                                AML   AML
          comp=N,518µm,1.2s
TEOL                                AML   AML
          comp=N,436µm,0.2s
TEOL                                AML   AML
          comp=E,536µm,0.3s
PLMA  Palmaria, Port   2.39 291   P     Pn      03 18 22.4 +1.8
PLMA                                AML   AML
          comp=E,116µm,1.5s
PLMA                                AML   AML
          comp=N,172µm,0.6s
PLMA                                AML   AML
          comp=E,82µm,0.3s
PLMA                                AML   AML
          comp=N,173µm,0.6s
VITU  Vitulano (BN)    2.40 148   P     Pn      03 18 22.2 +1.3
VITU                                AML   AML
          comp=E,205µm,1.3s
VITU                                AML   AML
          comp=N,267µm,0.3s
VITU                                AML   AML
          comp=N,267µm,0.3s
VITU                                AML   AML
          comp=E,234µm,0.6s
VITU                                AML   AML
          comp=E,170µm,0.3s
VITU                                AML   AML
          comp=E,234µm,1.4s
VITU                                AML   AML
          comp=N,307µm,0.4s
APRC  Apricena         2.42 127   P     Pn      03 18 22.0 +0.9
APRC                                AML   AML
          comp=E,593µm,0.2s
APRC                                AML   AML
          comp=N,730µm,1.1s
APRC                                AML   AML
          comp=N,644µm,0.2s
APRC                                AML   AML
          comp=N,1236µm,0.8s
APRC                                AML   AML
          comp=E,580µm,0.2s
APRC                                AML   AML
          comp=E,593µm,0.2s
APRC                                AML   AML
          comp=N,1236µm,1.2s
SKDS  Skadanscina      2.44  18 i Pn    Pn      03 18 22.0 +0.7
SKDS                            i Sn    Sn      03 18 50.5 +0.5
GRAM  Graiana          2.44 302   P     Pn      03 18 24.8 +3.5
OPPE  Oppeano          2.44 329   P     Pn      03 18 23.1 +1.8
OPPE                                AML   AML
          comp=E,1058µm,0.7s
OPPE                                AML   AML
          comp=N,1056µm,0.5s
OPPE                                AML   AML
          comp=N,1014µm,0.2s
OPPE                                AML   AML
          comp=E,732µm,0.3s
MRB1  Monte Rocchett   2.59 144   P     Pn      03 18 26.0 +2.6
MRB1                                AML   AML
          comp=E,255µm,1.4s
MRB1                                AML   AML
          comp=N,338µm,1.0s
MRB1                                AML   AML
          comp=E,221µm,0.3s
MRB1                                AML   AML
          comp=N,294µm,1.0s
MRB1                                AML   AML
          comp=N,232µm,0.7s
MRB1                                AML   AML
          comp=E,221µm,0.3s
MRB1                                AML   AML
          comp=N,267µm,0.5s
MRB1                                AML   AML
          comp=E,233µm,0.5s
MSAG  Monte S. Angel   2.67 124   P     Pn      03 18 25.5 +1.0
MSAG                                AML   AML
          comp=E,362µm,1.5s
MSAG                                AML   AML
          comp=N,772µm,0.2s
MSAG                                AML   AML
          comp=E,157µm,1.5s
MSAG                                AML   AML
          comp=N,330µm,0.2s
MSAG                                AML   AML
          comp=E,345µm,0.2s
MSAG                                AML   AML
          comp=N,331µm,0.2s
MSAG                                AML   AML
          comp=E,136µm,0.2s
MSAG                                AML   AML
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      comp=N,772µm,0.2s
SGTA  Sant Agata di   2.76 139  P      Pn     03 18 27.1 +1.3
SGTA                            AML    AML
      comp=E,142µm,1.2s
SGTA                            AML    AML
      comp=N,108µm,0.8s
SGTA                            AML    AML
      comp=E,176µm,0.4s
SGTA                            AML    AML
      comp=N,105µm,0.4s
SGTA                            AML    AML
      comp=N,213µm,0.8s
SGTA                            AML    AML
      comp=E,125µm,0.2s
ROVR  Rover Verones   2.76 332  P      Pn     03 18 26.9 +1.1
ROVR                            AML    AML
      comp=E,452µm,0.8s
ROVR                            AML    AML
      comp=N,1066µm,0.1s
ROVR                            AML    AML
      comp=E,186µm,0.8s
ROVR                            AML    AML
      comp=N,464µm,0.1s
ROVR                            AML    AML
      comp=N,464µm,0.1s
ROVR                            AML    AML
      comp=N,1067µm,0.1s
ROVR                            AML    AML
      comp=E,379µm,0.1s
ROVR                            AML    AML
      comp=E,150µm,0.1s
MTMR  Montemarano     2.77 146  P      Pn     03 18 28.3 +2.4
MTMR                            AML    AML
      comp=E,143µm,0.6s
MTMR                            AML    AML
      comp=N,196µm,0.2s
MTMR                            AML    AML
      comp=N,79µm,0.3s
MTMR                            AML    AML
      comp=E,143µm,1.4s
MTMR                            AML    AML
      comp=E,76µm,0.3s
MTMR                            AML    AML
      comp=N,196µm,1.8s
CAFE  Carife          2.78 142  P      Pn     03 18 28.1 +2.0
CAFE                            AML    AML
      comp=E,177µm,0.9s
CAFE                            AML    AML
      comp=N,111µm,1.5s
CAFE                            AML    AML
      comp=E,201µm,0.2s
CAFE                            AML    AML
      comp=E,175µm,0.2s
CAFE                            AML    AML
      comp=N,217µm,1.0s
CAFE                            AML    AML
      comp=N,89µm,0.3s
CAFE                            AML    AML
      comp=E,175µm,1.8s
CAFE                            AML    AML
      comp=E,201µm,1.8s
SABO  M.te Sabotino   2.79   9 ⇓P      Pn     03 18 27.1 +1.1
SABO                            AML    AML
      comp=E,1970µm,0.5s
SABO                            AML    AML
      comp=N,1865µm,0.3s
SABO                            AML    AML
      comp=E,454µm,0.5s
SABO                            AML    AML
      comp=N,498µm,0.3s
SABO                            AML    AML
      comp=N,498µm,0.3s
SABO                            AML    AML
      comp=E,357µm,0.2s
SABO                            AML    AML
      comp=E,1496µm,0.2s
SABO                            AML    AML
      comp=N,1868µm,0.3s
BOJS  Bojanci         2.81  35  AML    AML
      comp=E,480µm,0.3s
BOJS                            AML    AML
      comp=N,284µm,1.5s
BOJS                            AML    AML
      comp=N,262µm,0.5s
BOJS                            AML    AML
      comp=E,481µm,0.3s
MBAL  Monte Baldo -   2.88 329 ⇓P      Pn     03 18 28.6 +1.2
MBAL                            AML    AML
      comp=E,794µm,0.5s
MBAL                            AML    AML
      comp=N,531µm,0.3s
MBAL                            AML    AML
      comp=E,750µm,0.7s
MBAL                            AML    AML
      comp=N,712µm,0.1s
MBAL                            AML    AML
      comp=N,500µm,0.1s
MBAL                            AML    AML
      comp=E,739µm,0.1s
MBAL                            AML    AML
      comp=E,745µm,0.1s
MBAL                            AML    AML
      comp=N,712µm,0.1s
MBAL                            AML    AML
      comp=E,739µm,1.9s
MBAL                            AML    AML
      comp=E,745µm,1.9s
DOSS  Dosso del Somm  2.93 335  P      Pn     03 18 29.3 +1.1
DOSS                            AML    AML
      comp=E,272µm,1.6s
DOSS                            AML    AML
      comp=N,332µm,0.6s
DOSS                            AML    AML
      comp=E,329µm,1.6s
DOSS                            AML    AML
      comp=N,262µm,1.1s
DOSS                            AML    AML
      comp=E,247µm,0.1s
DOSS                            AML    AML
      comp=E,317µm,0.2s
DOSS                            AML    AML
      comp=N,254µm,0.1s
DOSS                            AML    AML
      comp=N,311µm,0.2s
DOSS                            AML    AML
      comp=N,254µm,1.9s
DOSS                            AML    AML
      comp=E,247µm,1.9s
PCN   Piacenza        2.94 309  P      Pn     03 18 32.2 +4.1
KNYS  Krupa na Uni    2.94  55 ePn     Pn     03 18 27.8  -0.3
CTI   Castel Tesino   2.96 342  P      Pn     03 18 29.8 +1.3
CTI                             AML    AML
      comp=E,758µm,0.9s
CTI                             AML    AML
      comp=N,662µm,0.2s
CTI                             AML    AML
      comp=E,757µm,0.2s
CTI                             AML    AML
      comp=N,662µm,0.2s
GORR  Gorreto         2.98 299  P      Pn     03 18 32.6 +4.0
GORR                            AML    AML
      comp=E,126µm,1.6s
GORR                            AML    AML
      comp=N,151µm,0.7s
GORR                            AML    AML
      comp=N,141µm,0.2s
GORR                            AML    AML
      comp=E,116µm,0.1s
VARA  Varagna         2.98 331 ⇓P      Pn     03 18 30.0 +1.2
VARA                            AML    AML
      comp=E,913µm,0.1s
VARA                            AML    AML
      comp=N,1185µm,0.9s
VARA                            AML    AML
      comp=E,1270µm,0.9s
VARA                            AML    AML
      comp=N,953µm,0.1s
VARA                            AML    AML
      comp=N,953µm,0.1s
VARA                            AML    AML
      comp=N,1140µm,0.1s
VARA                            AML    AML
      comp=E,1203µm,0.2s
VARA                            AML    AML
      comp=E,913µm,0.1s
DRE   Drenchia        2.98   9 ⇓P      Pn     03 18 29.7 +1.0
PGF   Pioggiola       2.98 258 ePn     Pn     03 18 30.9 +2.1
PGF                            eSn     Sn     03 19 05.2 +1.7
      comp=E,9.5nm,0.3s
MPRI  Monte Prat      3.01   1 ⇓P      Pn     03 18 30.5 +1.4
MPRI                            AML    AML
      comp=E,344µm,0.8s
MPRI                            AML    AML
      comp=N,354µm,0.7s
MPRI                            AML    AML
      comp=E,257µm,0.2s
MPRI                            AML    AML
      comp=E,320µm,0.2s
MPRI                            AML    AML
      comp=N,262µm,0.5s
MPRI                            AML    AML
      comp=N,330µm,0.5s
VULT  Monte Vulture   3.02 138  P      Pn     03 18 30.8 +1.5
VULT                            AML    AML
      comp=E,393µm,1.3s
VULT                            AML    AML
      comp=N,480µm,1.0s
VULT                            AML    AML
      comp=E,338µm,0.8s
VULT                            AML    AML
      comp=N,483µm,0.3s
VULT                            AML    AML
      comp=E,298µm,0.3s
VULT                            AML    AML
      comp=N,468µm,0.2s
VULT                            AML    AML
      comp=E,283µm,0.3s
VULT                            AML    AML
      comp=N,457µm,0.2s
LJU   Ljubljana       3.03  21  AML    AML
      comp=N,1889µm,0.4s
LJU                             AML    AML
      comp=E,1395µm,0.8s
LJU                             AML    AML
      comp=N,2480µm,0.7s
LJU                             AML    AML
      comp=E,1152µm,0.2s
STAL  STALIGIAL       3.03 357 ⇓P      Pn     03 18 30.5 +1.1
STAL                            AML    AML
      comp=E,517µm,0.3s
STAL                            AML    AML
      comp=N,674µm,1.2s
STAL                            AML    AML
      comp=E,432µm,0.8s
STAL                            AML    AML
      comp=N,435µm,0.3s
STAL                            AML    AML
      comp=E,471µm,0.2s
STAL                            AML    AML
      comp=N,637µm,0.3s
STAL                            AML    AML
      comp=N,435µm,0.3s
STAL                            AML    AML
      comp=E,402µm,0.2s
VINO  Villanova       3.03   4 ⇓P      Pn     03 18 30.4 +1.0
VINO                            AML    AML
      comp=E,346µm,0.2s
VINO                            AML    AML
      comp=N,380µm,1.4s
VINO                            AML    AML
      comp=N,327µm,0.2s
VINO                            AML    AML
      comp=E,345µm,0.2s
VINO                            AML    AML
      comp=N,327µm,1.8s
MAGA  Magasa          3.04 328 ⇓P      Pn     03 18 30.7 +1.2
MAGA                            AML    AML
      comp=E,1064µm,0.5s
MAGA                            AML    AML
      comp=N,772µm,0.4s
MAGA                            AML    AML
      comp=N,592µm,0.2s
MAGA                            AML    AML
      comp=E,788µm,0.2s
MAGA                            AML    AML
      comp=N,592µm,1.8s
PANI  Panarotta       3.04 338  P      Pn     03 18 31.1 +1.4
PANI                            AML    AML
      comp=E,236µm,0.3s
PANI                            AML    AML
      comp=N,340µm,0.4s
PANI                            AML    AML
      comp=N,335µm,0.2s
PANI                            AML    AML
      comp=E,191µm,0.1s
GEPF  Gemona          3.04   2 ⇓P      Pn     03 18 30.6 +1.1
GEPF                            AML    AML
      comp=E,248µm,0.7s
GEPF                            AML    AML
      comp=N,234µm,0.7s
GEPF                            AML    AML
      comp=N,180µm,0.2s
GEPF                            AML    AML
      comp=E,226µm,0.2s
GEPF                            AML    AML
      comp=N,180µm,1.8s
LUSI  Trento, Gardas  3.08 333 ⇓P      Pn     03 18 31.2 +1.1
LUSI                            AML    AML
      comp=E,381µm,0.7s
LUSI                            AML    AML
      comp=N,536µm,0.2s
LUSI                            AML    AML
      comp=E,335µm,0.1s
LUSI                            AML    AML
      comp=N,536µm,0.2s
CIMO  Cimolais        3.10 353 ⇓P      Pn     03 18 31.3 +1.0
CIMO                            AML    AML
      comp=E,128µm,1.2s
CIMO                            AML    AML
      comp=N,122µm,0.2s
CIMO                            AML    AML
      comp=E,112µm,1.2s
CIMO                            AML    AML
      comp=N,124µm,0.2s
CIMO                            AML    AML
      comp=N,124µm,0.2s
CIMO                            AML    AML
      comp=N,123µm,0.2s
CIMO                            AML    AML
      comp=E,101µm,0.2s
CIMO                            AML    AML
      comp=E,105µm,0.2s
AGOR  Agordo          3.12 348  P      Pn     03 18 31.9 +1.3
RNCA  Ronca, Sant'Ol  3.15 295  P      Pn     03 18 33.2 +2.3
FUSE  Fusea           3.18   1 ⇓P      Pn     03 18 32.4 +1.0
GAGG  Gaggia          3.18 334 ⇓P      Pn     03 18 32.9 +1.3
GAGG                            AML    AML
      comp=E,286µm,0.4s
GAGG                            AML    AML
      comp=N,410µm,0.8s
GAGG                            AML    AML
      comp=E,421µm,0.3s
GAGG                            AML    AML
      comp=N,294µm,0.4s
GAGG                            AML    AML
      comp=E,421µm,0.3s
GAGG                            AML    AML
      comp=N,396µm,0.3s
GAGG                            AML    AML
      comp=N,294µm,0.3s
GAGG                            AML    AML
      comp=E,274µm,0.3s
PTCC  Patocco-Chiusa  3.18   5  P      Pn     03 18 32.4 +0.9
PTCC                            AML    AML
      comp=E,140µm,1.0s
PTCC                            AML    AML
      comp=N,142µm,1.6s
PTCC                            AML    AML
      comp=E,126µm,0.1s
PTCC                            AML    AML
      comp=N,140µm,0.1s
ZIAN  Ziano           3.20 342  P      Pn     03 18 33.4 +1.7
ZIAN                            AML    AML
      comp=E,240µm,1.5s
ZIAN                            AML    AML
      comp=N,413µm,0.4s
ZIAN                            AML    AML
      comp=E,434µm,0.4s
ZIAN                            AML    AML
      comp=E,223µm,0.2s
ZIAN                            AML    AML
      comp=N,413µm,0.4s
ZIAN                            AML    AML
      comp=N,220µm,0.2s
ZIAN                            AML    AML
      comp=N,413µm,1.6s
ZIAN                            AML    AML
      comp=E,434µm,1.6s
PALZ  Palazzo San Ge  3.20 135  P      Pn     03 18 32.9 +1.2
PALZ                            AML    AML
      comp=E,190µm,1.6s
PALZ                            AML    AML
      comp=N,196µm,1.6s
PALZ                            AML    AML
      comp=N,127µm,0.7s
PALZ                            AML    AML
      comp=E,143µm,0.6s
PALZ                            AML    AML
      comp=N,127µm,1.3s
CLUD  Cludinico       3.22 359 ⇓P      Pn     03 18 33.1 +1.0
CLUD                            AML    AML
      comp=E,72µm,0.5s
CLUD                            AML    AML
      comp=N,58µm,1.5s
CLUD                            AML    AML
      comp=E,63µm,0.8s
CLUD                            AML    AML
      comp=E,56µm,0.3s
CLUD                            AML    AML
      comp=N,52µm,0.2s
CLUD                            AML    AML
      comp=N,61µm,0.2s
CLUD                            AML    AML
      comp=E,63µm,1.2s
ZONE  Zone            3.24 322  P      Pn     03 18 33.7 +1.5
ZONE                            AML    AML
      comp=E,621µm,0.2s
ZONE                            AML    AML
      comp=N,700µm,1.0s
ZONE                            AML    AML
      comp=N,10648µm,1.4s
ZONE                            AML    AML
      comp=E,168µm,0.4s
ZONE                            AML    AML
      comp=N,10648µm,0.6s
ZONE                            AML    AML
      comp=E,168µm,1.6s
ZONE                            AML    AML
      comp=N,681µm,0.2s
ZONE                            AML    AML
      comp=E,621µm,0.2s
MRVN  Minervino Murg  3.25 131  P      Pn     03 18 33.1 +0.8
MRVN                            AML    AML
      comp=E,218µm,0.2s
MRVN                            AML    AML
      comp=N,189µm,0.4s
MRVN                            AML    AML
      comp=E,218µm,0.2s
MRVN                            AML    AML
      comp=N,179µm,0.2s
CDRU  Civita di Ruta  3.26 147  P      Pn     03 18 34.0 +1.4
CDRU                            AML    AML
      comp=E,55µm,0.4s
CDRU                            AML    AML
      comp=N,42µm,1.1s
CDRU                            AML    AML
      comp=E,48µm,0.2s
CDRU                            AML    AML
      comp=N,32µm,0.2s
ACER  Acerenza        3.31 137  P      Pn     03 18 34.4 +1.2
ACER                            AML    AML
      comp=E,168µm,0.2s
ACER                            AML    AML
      comp=N,148µm,0.9s
ACER                            AML    AML
      comp=E,168µm,0.2s
ACER                            AML    AML
      comp=N,199µm,0.8s
ACER                            AML    AML
      comp=E,170µm,0.3s
ACER                            AML    AML
      comp=N,128µm,0.4s
MABI  Malga Bissina   3.31 329  P      Pn     03 18 34.8 +1.4
MABI                            AML    AML
      comp=E,304µm,0.9s
MABI                            AML    AML
      comp=N,182µm,0.3s
MABI                            AML    AML
      comp=N,171µm,0.2s
MABI                            AML    AML
      comp=E,263µm,0.2s
ACOM  Acomizza, Ital  3.34   7  P      Pn     03 18 35.2 +1.5
ACOM                            AML    AML
      comp=E,282µm,1.2s
ACOM                            AML    AML
      comp=N,258µm,1.5s
ACOM                            AML    AML
      comp=E,269µm,1.2s
ACOM                            AML    AML
      comp=N,230µm,0.2s
ACOM                            AML    AML
      comp=N,229µm,0.2s
ACOM                            AML    AML
      comp=N,226µm,0.2s
ACOM                            AML    AML
      comp=E,269µm,0.3s
ACOM                            AML    AML
      comp=E,265µm,0.4s
PZUN  Potenza         3.35 140  P      Pn     03 18 35.7 +2.0
PZUN                            AML    AML
      comp=N,75µm,0.2s
PZUN                            AML    AML
      comp=E,69µm,1.2s
PZUN                            AML    AML
      comp=E,155µm,1.2s
PZUN                            AML    AML
      comp=N,160µm,0.7s
PZUN                            AML    AML
      comp=E,155µm,0.8s
PZUN                            AML    AML
      comp=N,75µm,1.8s
FVI   Forni Avoltri   3.37 358 ⇓P      Pn     03 18 35.4 +1.4
FVI                             AML    AML
      comp=E,160µm,1.5s
FVI                             AML    AML
      comp=N,151µm,0.6s
FVI                             AML    AML
      comp=E,152µm,0.2s
FVI                             AML    AML
      comp=N,132µm,0.2s
CMPR  Campora         3.40 148  P      Pn     03 18 36.2 +1.7
CMPR                            AML    AML
      comp=N,47µm,1.7s
CMPR                            AML    AML
      comp=E,51µm,0.3s
CMPR                            AML    AML
      comp=N,47µm,0.3s
BLY   Banja Luka      3.41  62 ePn     Pn     03 18 37.1 +2.6
KOSI  Kohlern         3.42 341  P      Pn     03 18 36.8 +2.0
KOSI                            AML    AML
      comp=N,522µm,0.7s
KOSI                            AML    AML
      comp=E,162µm,0.8s
KOSI                            AML    AML
      comp=N,522µm,1.3s
KOSI                            AML    AML
      comp=E,162µm,1.2s
MYKA  Terra Mystica   3.43   8 i Pn    Pn     03 18 36.6 +1.8
      comp=E,4.3nm,0.1s,SNR=29
MDI   Monti di Nese   3.44 319  P      Pn     03 18 36.3 +1.3
MDI                             AML    AML
      comp=E,420µm,0.7s
MDI                             AML    AML
      comp=N,291µm,0.1s
MDI                             AML    AML
      comp=N,261µm,0.1s
MDI                             AML    AML
      comp=E,405µm,0.1s
MDI                             AML    AML
      comp=E,409µm,0.1s
MDI                             AML    AML
      comp=N,291µm,0.1s
OZOL  Ozolo           3.45 338 ⇓P      Pn     03 18 37.0 +1.9
OZOL                            AML    AML
      comp=E,854µm,1.4s
OZOL                            AML    AML
      comp=N,408µm,1.0s
OZOL                            AML    AML
      comp=E,588µm,1.3s
OZOL                            AML    AML
      comp=N,424µm,1.5s
OZOL                            AML    AML
      comp=N,391µm,0.4s
OZOL                            AML    AML
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	comp=E,674µm,1.1s						
OZOL				AML	AML		
	comp=E,539µm,0.3s						
OZOL				AML	AML		
	comp=E,674µm,0.9s						
OZOL				AML	AML		
	comp=N,391µm,1.6s						
OZOL				AML	AML		
	comp=N,355µm,0.3s						
BOSI	Bolzano	3.46	341	P	Pn	03 18 37.3	+2.1
BOSI				AML	AML		
	comp=E,332µm,0.3s						
BOSI				AML	AML		
	comp=N,405µm,0.4s						
BOSI				AML	AML		
	comp=E,333µm,0.3s						
BOSI				AML	AML		
	comp=N,324µm,0.2s						
OBKA	Obir	3.47	19	ePn	Pn	03 18 36.6	+1.2
	comp=N,4.7nm,0.2s,SNR=8.5						
APPI	Appiano	3.47	340	⇓P	Pn	03 18 37.2	+1.8
APPI				AML	AML		
	comp=E,316µm,0.7s						
APPI				AML	AML		
	comp=N,368µm,0.4s						
APPI				AML	AML		
	comp=E,302µm,0.3s						
APPI				AML	AML		
	comp=N,358µm,0.3s						
SLCN	Sala Consilina	3.48	144	P	Pn	03 18 37.9	+2.3
SLCN				AML	AML		
	comp=N,59µm,0.3s						
SLCN				AML	AML		
	comp=E,124µm,0.9s						
SLCN				AML	AML		
	comp=N,279µm,1.3s						
SLCN				AML	AML		
	comp=N,59µm,1.7s						
SLCN				AML	AML		
	comp=E,78µm,0.4s						
SLCN				AML	AML		
	comp=N,279µm,0.7s						
ABTA	Abfaltersbach	3.53	355	i Pn	Pn	03 18 38.3	+2.1
	comp=N,37nm,0.3s,SNR=165						
CANO	Canova, Maglio	3.55	288	P	Pn	03 18 38.2	+1.8
CANO				AML	AML		
	comp=E,218µm,0.3s						
CANO				AML	AML		
	comp=N,186µm,1.3s						
CANO				AML	AML		
	comp=E,219µm,0.3s						
CANO				AML	AML		
	comp=E,219µm,1.7s						
CANO				AML	AML		
	comp=N,161µm,0.4s						
PTRP	Pietrapertosa	3.57	138	P	Pn	03 18 38.7	+1.9
PTRP				AML	AML		
	comp=N,75µm,0.5s						
PTRP				AML	AML		
	comp=E,87µm,0.4s						
BRES	Bressanone	3.57	346	⇓P	Pn	03 18 39.0	+2.0
CARE	Lago del Cares	3.57	334	⇓P	Pn	03 18 39.2	+2.2
CARE				AML	AML		
	comp=E,115µm,0.4s						
CARE				AML	AML		
	comp=N,105µm,0.2s						
CARE				AML	AML		
	comp=E,431µm,1.1s						
CARE				AML	AML		
	comp=N,120µm,1.4s						
CARE				AML	AML		
	comp=E,431µm,0.9s						
CARE				AML	AML		
	comp=N,105µm,0.2s						
CARE				AML	AML		
	comp=E,97µm,0.3s						
CARE				AML	AML		
	comp=N,120µm,0.6s						
AMUR	Altamura	3.58	129	P	Pn	03 18 37.8	+0.9
AMUR				AML	AML		
	comp=E,362µm,1.4s						
AMUR				AML	AML		
	comp=N,352µm,0.3s						
AMUR				AML	AML		
	comp=E,346µm,0.3s						
AMUR				AML	AML		
	comp=N,352µm,0.3s						
MCEL	Monticello	3.60	143	P	Pn	03 18 39.0	+1.8
MCEL				AML	AML		
	comp=E,57µm,1.8s						
MCEL				AML	AML		
	comp=N,35µm,0.5s						
MCEL				AML	AML		
	comp=E,55µm,1.8s						
MCEL				AML	AML		
	comp=N,44µm,0.5s						
MCEL				AML	AML		
	comp=E,57µm,0.2s						
MCEL				AML	AML		
	comp=N,35µm,1.5s						
MCEL				AML	AML		
	comp=N,44µm,1.5s						
BULG	Bulgheria - Ca	3.64	149	P	Pn	03 18 39.8	+2.0
BULG				AML	AML		
	comp=E,80µm,1.4s						
BULG				AML	AML		
	comp=N,113µm,1.2s						
BULG				AML	AML		
	comp=E,78µm,2.2s						
BULG				AML	AML		
	comp=N,109µm,1.2s						
BULG				AML	AML		
	comp=N,109µm,0.8s						
BULG				AML	AML		
	comp=E,80µm,0.6s						
BULG				AML	AML		
	comp=N,113µm,0.8s						
BULG				AML	AML		
	comp=E,78µm,0.2s						
BRMO	Bormio	3.72	331	AML	AML		
	comp=N,86µm,0.5s						
BRMO				AML	AML		
	comp=E,112µm,0.6s						
SOKA	Soboth	3.75	23	i Pn	Pn	03 18 40.7	+1.5
	comp=E,1.7nm,0.2s,SNR=9.2						
MOSI	Grossmontoni	3.79	334	AML	AML		
	comp=N,208µm,0.4s						
MOSI				AML	AML		
	comp=E,197µm,0.4s						
MOSI				AML	AML		
	comp=E,197µm,1.6s						
BERNI	Berninapass	3.80	328	AML	AML		
	comp=N,123µm,1.6s						
BERNI				AML	AML		
	comp=E,86µm,0.4s						
BERNI				AML	AML		
	comp=N,123µm,0.4s						
MATE	Matera	3.81	131	AML	AML		
	comp=N,151µm,0.2s						
MATE				AML	AML		
	comp=E,160µm,0.6s						
ROSI	Rosskopf	3.85	344	AML	AML		
	comp=N,308µm,0.8s						
ROSI				AML	AML		
	comp=E,298µm,1.6s						
ROSI				AML	AML		
	comp=E,298µm,0.4s						
KBA	Koelnbreinsper	3.85	4	i Pn	Pn	03 18 42.8	+2.1
	comp=E,6.8nm,0.3s,SNR=6.0						
MUGIO	Muggio	3.88	315	AML	AML		
	comp=E,312µm,0.2s						
MUGIO				AML	AML		
	comp=N,258µm,0.1s						
FUORN	Ofenpass-Fuorn	3.89	332	AML	AML		
	comp=N,54µm,0.9s						
FUORN				AML	AML		
	comp=N,54µm,1.1s						
FUORN				AML	AML		
	comp=E,85µm,0.5s						
LTRZ	Laterza	3.90	131	AML	AML		
	comp=N,570µm,1.4s						
LTRZ				AML	AML		
	comp=E,107µm,1.6s						
LTRZ				AML	AML		
	comp=N,570µm,0.6s						
LTRZ				AML	AML		
	comp=E,107µm,0.4s						
NOCI	Noci	3.92	127	AML	AML		
	comp=E,242µm,1.2s						
NOCI				AML	AML		
	comp=E,242µm,0.8s						
NOCI				AML	AML		
	comp=N,275µm,1.3s						
NOCI				AML	AML		
	comp=N,275µm,0.7s						
KOGS	Kog	3.98	35	AML	AML		
	comp=E,389µm,0.8s						
KOGS				AML	AML		
	comp=N,371µm,1.3s						
KOGS				AML	AML		
	comp=E,389µm,1.2s						
VARE	Varese	3.98	313	AML	AML		
	comp=E,292µm,1.8s						
VARE				AML	AML		
	comp=E,292µm,0.2s						
VARE				AML	AML		
	comp=N,238µm,0.2s						
VARE				AML	AML		
	comp=N,238µm,1.8s						
TREB	Trebinje	4.00	96	ePn	Pn	03 18 42.8	+0.3
SBF	Sospel	4.06	281	ePn	Pn	03 18 46.1	+2.7
SBF				eSn	Sn	03 19 29.3	-0.4
	comp=N,45nm,0.6s						
FETA	Feichten	4.10	338	i Pn	Pn	03 18 46.7	+2.6
	comp=N,1.7nm,0.1s,SNR=20						
BRY	Bratogost	4.11	93	ePn	Pn	03 18 45.7	+1.5
BRY				i Sn	Sn	03 19 30.7	-0.3
TUE	Stuetta	4.13	323	AML	AML		
	comp=E,254µm,1.1s						
TUE				AML	AML		
	comp=E,256µm,1.1s						
TUE				AML	AML		
	comp=N,270µm,0.3s						
TUE				AML	AML		
	comp=N,272µm,0.3s						
TUE				AML	AML		
	comp=E,256µm,0.9s						
TUE				AML	AML		
	comp=E,254µm,0.9s						
WTTA	Wattenberg	4.14	347	i Pn	Pn	03 18 47.1	+2.5
	comp=E,8.5nm,0.1s,SNR=60						
HCY	Herceg Novi	4.15	99	ePn	Pn	03 18 46.5	+1.9
HCY				i Sn	Sn	03 19 31.6	-0.3
DAVOX	Davos/Dischmat	4.16	330	AML	AML		
	comp=N,433µm,0.4s						
DAVOX				AML	AML		
	comp=E,390µm,1.2s						
SQTA	Sankt Quirin	4.17	343	i Pn	Pn	03 18 47.6	+2.5
	comp=E,21nm,0.2s,SNR=75						
LESA	Schwarzleotal	4.20	357	i Pn	Pn	03 18 47.4	+2.1
	comp=E,13nm,0.2s,SNR=57						
WATA	Walderalm	4.21	347	i Pn	Pn	03 18 48.5	+2.9
	comp=E,30nm,0.3s,SNR=117						
TAR1	Taranto	4.22	128	AML	AML		
	comp=N,98µm,0.3s						
TAR1				AML	AML		
	comp=E,105µm,0.9s						
BEHE	Becsehely	4.23	39	ePn	Pn	03 18 46.3	+0.7
UPM	Unac-Piva	4.35	88	ePn	Pn	03 18 49.1	+1.6
UPM				i Sn	Sn	03 19 36.4	-0.7
ARSA	Arzberg	4.41	23	i Pn	Pn	03 18 49.3	+1.1
	comp=E,3.1nm,0.2s,SNR=12						
NKME	Niksic	4.43	94	ePn	Pn	03 18 50.1	+1.7
NKME				eSn	Sn	03 19 37.8	-0.9
FUSIO	Fusio	4.43	318	AML	AML		
	comp=N,214µm,0.8s						
FUSIO				AML	AML		
	comp=N,214µm,1.2s						
FUSIO				AML	AML		
	comp=E,280µm,0.5s						
CEME	Cevo	4.44	97	ePn	Pn	03 18 50.0	+1.4
CEME				eSn	Sn	03 19 37.6	-1.4
BUM	Brajici-Budva	4.47	100	ePn	Pn	03 18 50.7	+1.6
BUM				i Sn	Sn	03 19 38.9	-1.0
BIOA	Bad Ischl, Aus	4.48	6	i Pn	Pn	03 18 51.5	+2.3
	comp=E,10nm,0.3s,SNR=29						
RETA	Reutte	4.52	341	i Pn	Pn	03 18 52.7	+2.9
	comp=E,13nm,0.3s,SNR=50						
DAVA	Damuels	4.60	333	i Pn	Pn	03 18 53.7	+2.9
	comp=E,5.3nm,0.2s,SNR=30						
RUDO	Rudo	4.69	83	ePn	Pn	03 18 53.3	+1.3
MBDF	Montbardon	4.70	291	ePn	Pn	03 18 53.9	+1.6
MBDF				eSn	Sn	03 19 44.4	-1.2
	comp=E,9.3nm,0.4s						
PLE	Pljevlja	4.70	87	ePn	Pn	03 18 55.5	+3.2
PLE				eSn	Sn	03 19 44.5	-1.0
LMR	La Mourre	4.70	273	ePn	Pn	03 18 54.0	+1.8
LMR				eSn	Sn	03 19 44.2	-1.2
	comp=E,1.9nm,0.2s						
PDG	Podgorica	4.71	98	AML	AML		
	comp=E,108µm,0.3s						
PDG				AML	AML		
	comp=N,96µm,0.5s						
PDG				AML	AML		
	comp=N,96µm,1.5s						
PDG	Podgorica	4.71	98	⇑iPn	Pn	03 18 54.4	+2.2
PDG				eSn	Sn	03 19 44.5	-0.9
MOA	Molln	4.71	11	i Pn	Pn	03 18 54.3	+2.1
	comp=N,4.8nm,0.1s,SNR=34						
DRME	Dracevica, Mon	4.71	101	⇓iPn	Pn	03 18 54.2	+1.9
DRME				i Sn	Sn	03 19 44.5	-1.1
ULC	Ulcinj	4.82	103	⇑iPn	Pn	03 18 55.8	+2.1
ULC				i Sn	Sn	03 19 46.2	-2.0
LPG	La Plagne	4.99	299	ePn	Pn	03 18 56.7	+0.4
LPG				eSn	Sn	03 19 47.7	-5.0
	comp=N,13nm,0.3s						
LPL	La Plagne	5.01	299	ePn	Pn	03 18 57.8	+1.3
LPL				eSn	Sn	03 19 48.5	-4.6
	comp=N,33nm,0.8s						
MORH	Mrgy, Hungar	5.03	52	ePn	Pn	03 18 56.5	-0.1
RONA	Rosalia, Austr	5.05	27	i Pn	Pn	03 18 58.5	+1.6
	comp=N,15nm,0.1s,SNR=22						
IVA	Berane	5.10	92	ePn	Pn	03 19 00.6	+2.9
IVA				i Sn	Sn	03 19 55.2	-0.1
CONA	Conrad Observa	5.12	23	i Pn	Pn	03 18 59.2	+1.3
	comp=N,2.7nm,0.1s,SNR=16						
CONA				i Sn	Sn	03 19 53.9	-1.8
	comp=N,7.1nm,0.2s						
PVY	Plav	5.19	95	ePn	Pn	03 19 00.2	+1.3
PVY				i Sn	Sn	03 19 56.9	-0.5
ORIF	Oris-en-Rattie	5.37	291	ePn	Pn	03 19 03.7	+2.4
SMRF	Simiane la Rot	5.41	280	ePn	Pn	03 19 05.3	+3.5
SMRF				eSn	Sn	03 20 00.5	-2.2
	comp=N,1.8nm,0.3s						
CKRC	Cesky Krumlov	5.67	9	ePN	Pn	03 19 06.5	+1.2
CKRC				eSN	Sn	03 20 06.4	-2.6
KHC	Kasperske Hory	5.92	4	ePN	Pn	03 19 09.6	+0.9
KHC				eSN	Sn	03 20 12.3	-2.8
CABF	La Chapelle	5.93	307	ePn	Pn	03 19 09.8	+0.8
CABF				eSn	Sn	03 20 11.0	-4.5
	comp=N,4.2nm,0.2s						
MODS	Modra-Piesok	5.96	29	ePN	Pn	03 19 10.8	+1.4
MODS				eSN	Sn	03 20 12.4	-3.8
VIVF	Saint-Julien-l	6.18	288	ePn	Pn	03 19 13.8	+1.4
VIVF				eSn	Sn	03 20 19.2	-2.4
	comp=N,1.1nm,0.3s						
ZVC	Zvikov	6.27	7	eSN	Sn	03 20 20.9	-2.7
HINF	Hinteralfeld	6.27	319	ePn	Pn	03 19 14.1	+0.5
HINF				eSn	Sn	03 20 19.7	-4.1
	comp=N,14nm,0.2s						
KRUC	Moravsky	6.30	21	ePN	Pn	03 19 15.7	+1.8
KRUC				eSN	Sn	03 20 22.0	-2.4
TREC	Trest	6.31	15	ePN	Pn	03 19 14.8	+0.7
TREC				eSN	Sn	03 20 21.9	-2.9
CDF	Champ du Feu	6.52	325	ePn	Pn	03 19 18.3	+1.3
CDF				eSn	Sn	03 20 26.0	-4.0
	comp=N,23nm,0.3s						
VRAC	Vranov	6.58	21	ePN	Pn	03 19 18.8	+1.0
VRAC				eSN	Sn	03 20 28.3	-3.0
HAU	Haudompre	6.65	318	ePn	Pn	03 19 19.8	+1.1
HAU				eSn	Sn	03 20 28.1	-4.9
	comp=N,59nm,0.3s						
LASF	Ste Croix	6.65	280	ePn	Pn	03 19 21.1	+2.3
LASF				eSn	Sn	03 20 30.8	-2.3
	comp=N,3.0nm,0.4s						
PRU	Pruhonice	6.84	9	ePN	Pn	03 19 21.6	+0.2
PRU				eSN	Sn	03 20 34.1	-3.6
MAUC	Maruska	7.00	27	eSN	Sn	03 20 37.9	-3.7
MORC	Moravsky Berou	7.27	24	ePN	Pn	03 19 29.3	+2.1
SMF	Signal de Mont	7.31	301	ePn	Pn	03 19 28.2	+0.5
SMF				eSn	Sn	03 20 43.4	-5.7
	comp=N,13nm,0.3s						
PAGF	Fort de Pagny	7.33	319	ePn	Pn	03 19 29.5	+1.5
PAGF				eSn	Sn	03 20 44.2	-5.4
	comp=N,9.2nm,0.2s						
HSKC	Hora Svate Kat	7.38	2	eSN	Sn	03 20 47.2	-3.8
SFTF	Sexfontaines	7.44	315	ePn	Pn	03 19 30.7	+1.2
	baz=126						
SFTF				eSn	Sn	03 20 47.0	-5.3
	comp=N,20nm,0.4s						
DPC	Dobruska-Polom	7.49	17	ePN	Pn	03 19 30.7	+0.5
DPC				eSN	Sn	03 20 48.4	-5.1
UPC	Upice	7.57	15	ePN	Pn	03 19 31.5	+0.2
UPC				eSN	Sn	03 20 52.3	-3.2
LOR	Lormes	7.58	305	ePn	Pn	03 19 31.6	+0.2
	baz=118						
LOR				eSn	Sn	03 20 50.3	-5.4
	comp=N,22nm,0.4s						
MEZF	Maizieres J'vi	7.62	316	ePn	Pn	03 19 33.3	+1.3
	baz=130						
MEZF				eSn	Sn	03 20 51.2	-5.6
	comp=N,9.4nm,0.3s						
CHVC	Chvalec	7.66	15	ePN	Pn	03 19 32.2	-0.3
OSTC	Ostas	7.66	16	ePN	Pn	03 19 32.7	+0.2
SAVF	Savonnieres en	7.66	317	ePn	Pn	03 19 33.8	+1.3
SAVF	Savonnieres en	7.66	317	ePn	Pn	03 19 34.1	+1.6
	baz=131						
SAVF				eSn	Sn	03 20 51.5	-6.2
	comp=N,4.9nm,0.3s						
SAVF				eSn	Sn	03 20 52.0	-5.7
	comp=N,6.2nm,0.3s						
SSF	Saint Saulge	7.69	303	ePn	Pn	03 19 33.4	+0.4
BGF	Bois d'Agland	7.91	298	ePn	Pn	03 19 35.5	-0.4
BGF				eSn	Sn	03 20 58.7	-5.0
	comp=N,12nm,0.4s						
CAF	Calviac	8.02	286	ePn	Pn	03 19 39.4	+1.9
CLL	Collm	8.08	0	i Pn	Pn	03 19 39.1	+0.9
CLL				eSg	Sn	03 21 04.0	-3.9
TCF	Toulx Ste Croi	8.23	295	ePn	Pn	03 19 40.7	+0.4
TCF				eSn	Sn	03 21 06.3	-5.4
	comp=N,6.0nm,0.6s						
GIVF	Givet	8.85	324	ePn	Pn	03 19 51.9	+3.1
GIVF				eSn	Sn	03 21 22.0	-4.8
	comp=N,3.0nm,0.2s						
BAIF	Baives	9.09	322	ePn	Pn	03 19 53.9	+1.9
BAIF				eSn	Sn	03 21 26.5	-6.2
	comp=N,1.9nm,0.4s						

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*TAP **26** 03:30:34.8, 25°.04N×122°.22E, h154^{km}, ML3.2, D*
*JMA **26** 03:30:34.5±0.2, 25°N±1°×122°.3E±0°.4, h150^{km}±1^{km},*
MV2.8/15, TAIWAN REGION
ISC 26 03:30:33.4±1.9, **25°.00N**±0°.06×**122°.33E**±0°.04,
h159^{km}±11^{km}, **n67, σ0^{s}.92**/110, **1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.31	273	P	Pn	03 30 55.8	+0.9
SXI1	Grass Mountain	0.42	284	P	Pn	03 30 55.9	+0.5
SXI1				S	Sn	03 31 12.3	0.0
TIPB	Shuangxi	0.46	267	P	Pn	03 30 56.1	+0.6
TIPB				S	Sn	03 31 11.2	-1.2
WFSB	Wu-fen Shan	0.50	279	eS	Sn	03 31 12.8	+0.1
TNOU	National Taiwa	0.53	287	eP	Pn	03 30 57.4	+1.6
TNOU				eS	Sn	03 31 11.4	-1.6
EOS2	EOS2	0.58	189	eP	Pn	03 30 57.2	+1.2
EOS2				i S	Sn	03 31 13.9	+0.7
TWC	Suao	0.58	229	P	Pn	03 30 56.2	+0.2
TWC				S	Sn	03 31 11.9	-1.5
TWE	Neicheng	0.66	246	P	Pn	03 30 58.0	+1.5
TWE				eS	Sn	03 31 14.6	+0.4
NDS	Dongshan	0.66	237	eP	Pn	03 30 57.7	+1.1
NDS				eS	Sn	03 31 14.7	+0.4
PCYT	Pengchaiyu	0.67	340	eP	Pn	03 30 58.0	+1.3
YM08	YM08	0.70	286	eS	Sn	03 31 13.4	-1.3
YM01	YM01	0.70	283	eP	Pn	03 30 56.7	-0.2
YM01				S	Sn	03 31 13.5	-1.3
EOS3	EOS3	0.70	181	eP	Pn	03 30 57.5	+0.8
EOS3				S	Sn	03 31 15.2	+0.7
FUSB	Fushanzhiwuyua	0.71	251	P	Pn	03 30 57.4	+0.5
FUSB				S	Sn	03 31 14.6	-0.4
ZUZH	Zhuzihu	0.73	283	eP	Pn	03 30 57.0	0.0
ZUZH				eS	Sn	03 31 13.6	-1.5
EWUT	Wuta	0.74	223	eP	Pn	03 30 57.6	+0.5
ENA	Nanau	0.78	224	i P	Pn	03 30 57.7	+0.4
ENA				i S	Sn	03 31 15.6	0.0
ENTT	Nioudou	0.78	243	⇓iP	Pn	03 30 58.3	+1.0
ENTT				i S	Sn	03 31 15.6	0.0
NWLT	Wulai	0.78	254	P	Pn	03 30 58.1	+0.8
NWLT				i S	Sn	03 31 15.0	-0.6
TWS1	Kuangyinshan	0.83	277	P	Pn	03 30 57.8	+0.1
TWS1				S	Sn	03 31 15.3	-0.9
EAHA	Aohua	0.85	219	eS	Sn	03 31 16.2	-0.3
LATG	Datong	0.86	238	P	Pn	03 30 58.8	+0.7
LATG				i S	Sn	03 31 17.0	+0.1
EOS4	EOS4	0.87	181	eP	Pn	03 30 58.8	+1.3
EOS4				S	Sn	03 31 15.9	-0.1
YHNB	Yeheng	0.92	250	P	Pn	03 30 58.5	+0.1
YHNB				S	Sn	03 31 16.8	-0.8
NSK	Sanguang	0.94	250	i P	Pn	03 30 58.8	+0.2
NSK				eS	Sn	03 31 16.8	-1.0
NNSB	Datong	1.03	237	P	Pn	03 30 59.9	+0.5
NNSB				eS	Sn	03 31 18.5	-0.7
NNS	Nan Shan	1.03	238	eP	Pn	03 31 00.3	+0.9
NNS				eS	Sn	03 31 18.7	-0.5
ETL	Fush Village	1.05	218	eP	Pn	03 31 00.2	+0.8
ETL				eS	Sn	03 31 18.1	-1.3
NACB	Ninganchiao	1.05	219	P	Pn	03 30 59.3	-0.1
NACB				i S	Sn	03 31 18.2	-1.2
KSHI	Guanxi Townshi	1.07	259	eP	Pn	03 30 59.9	+0.4
KSHI				eS	Sn	03 31 19.0	-0.5
ETLH	Xiulin Townshi	1.10	225	eP	Pn	03 31 00.3	+0.4
ETLH				i S	Sn	03 31 18.4	-1.9
TWD	Chiawan	1.13	216	eP	Pn	03 31 00.1	0.0
TWD				i S	Sn	03 31 19.4	-1.2
NFF	Wufeng Townshi	1.16	252	i P	Pn	03 31 00.7	+0.3
NFF				i S	Sn	03 31 19.4	-1.7
FUSS	Fushou	1.24	233	eP	Pn	03 31 02.3	+0.9
LIOB	Emei	1.24	254	i P	Pn	03 31 01.7	+0.6
LIOB				S	Sn	03 31 20.9	-1.5
NSTT	Nanjuang	1.26	254	eP	Pn	03 31 01.8	+0.6
NSTT				eS	Sn	03 31 21.1	-1.5
ETM	Tongmen	1.28	217	eP	Pn	03 31 01.3	-0.2
TWT	Tachien	1.28	235	eP	Pn	03 31 03.0	+1.4
TWT				eS	Sn	03 31 23.6	+0.2
WHF	Hehuan Shan	1.29	229	eP	Pn	03 31 02.6	+0.7
WHF				S	Sn	03 31 23.2	-0.6
TDCB	Techi	1.30	236	P	Pn	03 31 03.1	+1.4
TDCB				i S	Sn	03 31 23.7	+0.2
SHUL	Shoufeng	1.39	210	eP	Pn	03 31 03.4	+0.9
SHUL				i S	Sn	03 31 24.5	-0.3
IRIF	Iriomote-Funau	1.44	117	P	Pn	03 31 02.9	0.0
IRIF				S	Sn	03 31 24.6	-1.0
WHP	Taichung City	1.45	241	P	Pn	03 31 04.2	+1.1
WHP				eS	Sn	03 31 25.5	-0.5
OWD	Renai	1.48	226	i P	Pn	03 31 04.4	+0.9
OWD				i S	Sn	03 31 26.0	-0.6
WUSB	Renai	1.49	228	i P	Pn	03 31 04.7	+1.1
WUSB				eS	Sn	03 31 26.8	0.0
WARBT	Fenglin Townsh	1.53	214	eP	Pn	03 31 03.6	-0.4
WARBT				i S	Sn	03 31 25.1	-2.4
TWQ1	Liyutan	1.56	246	eP	Pn	03 31 04.8	+0.6
WCS	Beigang Elemen	1.59	234	eP	Pn	03 31 05.1	+0.5
WCS				i S	Sn	03 31 28.6	+0.1
HATJ	Hateruma jima	1.64	124	eS	Sn	03 31 28.5	-0.8
VWDT	VWDT	1.64	221	eP	Pn	03 31 06.0	+0.9
VWDT				eS	Sn	03 31 29.8	+0.3
JKRS	Kuro-shima	1.71	116	eP	Pn	03 31 06.2	+0.5
HGSD	Ruisui	1.71	209	eP	Pn	03 31 06.9	+1.1
SMLT	Sun Moon Lake	1.71	230	eP	Pn	03 31 06.9	+0.9
TYC	Yuchr	1.73	231	eP	Pn	03 31 06.7	+0.7
SSLB	Suanglung	1.74	226	eP	Pn	03 31 06.9	+0.8
EHY	Hungye	1.74	212	P	Pn	03 31 06.9	+0.7
JIJ	Ishigaki jima	1.77	110	P	Pn	03 31 06.6	+0.2
JIJ				S	Sn	03 31 29.7	-2.1
JISG	Ishigakijimahi	1.85	102	P	Pn	03 31 07.5	+0.2
JISG				eS	Sn	03 31 31.9	-1.5
YULB	Yu-li	1.85	211	eP	Pn	03 31 06.7	-0.7
WHYT	Xinyi Township	1.87	226	eS	Sn	03 31 33.8	-0.1
ALS	Alishan	2.03	224	eP	Pn	03 31 10.2	+0.6
CHN5	Tsauling	2.05	228	eP	Pn	03 31 09.9	+0.2
JTJ	Tarama	2.19	99	eP	Pn	03 31 11.6	+0.4
JTJ				eS	Sn	03 31 39.7	-0.6
JIRB	Irabujima	2.59	93	eP	Pn	03 31 16.9	+0.9

JIKM	Ikemajima	2.65	91	*e*P	Pn	03 31 18.2	+1.5
JMJ2	Miyako jima3	2.74	95	*e*P	Pn	03 31 18.9	+1.1
JOGS	Gusukube	2.81	94	*e*P	Pn	03 31 19.9	+1.3

DJA 26 03:35:15.9±0.5**,7°S**±5°×**12°2E**±°**,h445**^{km}±7^{km}**,M3.9**/15**,mB4.6**/1**,mb3.7**/6**,MLv4.0**/15**,Mw(mB)3.8**/1**,Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDFI	Ende, Flores	1.99	181	P	P	03 36 16.9	+0.8
EDFI				S	S	03 37 05.9	+1.1
WSI	Waingapu	3.23	206	P	P	03 36 24.3	0.0
WSI				S	S	03 37 18.1	-1.7
SPSI	Sidrap Palu	3.39	325	P	P	03 36 25.6	0.0
BASI	Baing, Sumba	3.63	198	P	P	03 36 26.4	-1.2
WBSI	Waikabubak, Su	3.69	219	P	P	03 36 27.7	-0.4
DBNI	Kabupaten Domp	3.81	243	P	P	03 36 29.3	+0.2
SOEI	Soe	3.90	140	P	P	03 36 29.6	-0.4
BATI	Baumata	3.93	151	P	P	03 36 29.8	-0.4
PLAI	Plampang	4.43	242	P	P	03 36 35.2	+0.6
MMSI	Mamuju	4.92	325	P	P	03 36 38.9	-0.4
TWSI	Taliwang, Sumb	5.19	247	P	P	03 36 42.4	+0.5
	0.1nm17nm,0.9s						
KLNI	Mataram	5.83	253	P	P	03 36 49.9	+1.6
NLAI	Namlea	6.39	57	P	P	03 36 52.6	-1.5
	0.1nm10nm,0.6s						
RTBI	Rangdo, Negare	6.94	255	P	P	03 36 59.2	-0.8
	0.1nm22nm,1.0s						
JAGI	Jajag, Banyuwa	7.70	257	P	P	03 37 07.2	-1.0
SNJI	Sawahan-Nganju	9.94	263	P	P	03 37 34.1	+1.4

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*NEIC **26** 03:41:10.1±1.3, 38°36N±0°08×144°5E±0°1, h10^{km}±1^{km}, mb4.6/27, Error ellipse: s-maj=17.8km s-min=12.5km az=106.0*

*NIED **26** 03:41:11.0, 38°33N×144°31E, h48^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.95; $M_{\theta\theta}$0.19; $M_{\phi\phi}$0.76; $M_{r\theta}$-0.49; $M_{\theta\phi}$-0.00; $M_{\phi r}$1.43; Fault plane solution: $M_0$1.73000×10^{15} NP1:ϕ_s5.00000°, δ16.00000°, λ-70.00000°. NP2:ϕ_s164.00000°, δ75.00000°, λ-95.00000°.*

*IDC **26** 03:41:11.9±0.5, 38°25N×144°44E, h27^{km}±3^{km}, mb3.6/20, mbtmp3.9/25, ML3.7/5, MS3.1/3 Error ellipse: s-maj=13.3km s-min=12.1km az=136.0*

*JMA **26** 03:41:11.0±0.2, 38°3N±0°7×144°3E±0°9, h48^{km}, MV4.0/31, FAR E OFF NORTH HONSHU*

ISC 26 03:41:13.1±0.6**,38°35N**±0°06×**144°34E**±0°07**,h34**^{km}±1^{km}**,n85,**σ1^{s}**11**/105**,mb4.1**/33**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.21	290	P	Pn	03 41 46.1	-1.3
OFUJ				*e*S	Sn	03 42 12.1	-1.4
JIKH	Ishinomakikobu	2.26	270	P	Pn	03 41 46.5	-1.5
JIKH				*e*S	Sn	03 42 12.8	-2.0
JKMT	Kesennumamotoy	2.29	282	P	Pn	03 41 47.2	-1.3
JKMT				*e*S	Sn	03 42 14.0	-1.5
MIYJ	Miyakonagasawa	2.31	303	*e*P	Pn	03 41 47.5	-1.3
MIYJ				*e*S	Sn	03 42 14.5	-1.6
JMK	Ichinoseki	2.52	285	P	Pn	03 41 50.7	-0.9
JMK				S	Sn	03 42 20.1	-0.9
JOM	Ohasama	2.63	296	P	Pn	03 41 52.3	-0.8
JOM				*e*S	Sn	03 42 22.2	-1.6
JANG	Nango	2.98	314	*e*P	Pn	03 41 56.6	-1.3
JANG				*e*S	Sn	03 42 31.2	-1.3
JYK	Kaneyama	3.17	281	P	Pn	03 42 00.1	-0.5
JOTO	OTAMA OYAMA	3.27	257	P	Pn	03 42 01.3	-0.7
JOTO				*e*S	Sn	03 42 38.9	-0.8
ERM	Erimo	3.77	346	Pn	Pn	03 42 06.9	-1.8
JOT	Ohata	3.95	321	*e*P	Pn	03 42 11.1	-0.1
JOT				*e*S	Sn	03 42 54.5	-1.8
BSO1	Boso 1	4.58	217	P	Pn	03 42 16.2	-3.2
JSD	Sado	4.80	268	Pn	Pn	03 42 23.6	+0.6
JRY	Ryogami san	4.93	243	P	Pn	03 42 23.2	-1.6
NEM2	Nemuro 2	5.12	12	P	Pn	03 42 23.3	-4.0
MJAR	Matsushiro Arr	5.21	252	Pn	Pn	03 42 28.6	0.0
	0.9nm,0.3s,baz=66,slow=9.3,SNR=46						
MJAR				LR	LR	03 44 48.8	
	comp=Z,222nm,18.1s,baz=32,slow=41						
	15nm,0.5s						
MJAR	Matsushiro Arr	5.21	252		Pn	03 42 28.1	-0.5
MAJO	Matsushiro	5.21	252		Pn	03 42 28.5	-0.1
MJB9	Matsu-Tunnel	5.21	252		Pn	03 42 28.5	-0.1
JOD2	Odawara 2	5.22	235	P	Pn	03 42 23.4	-5.4
JHR	Hokuryu	5.74	341	P	Pn	03 42 35.5	-0.3
JKA	Kamikawa-asahi	5.90	348		Pn	03 42 36.4	-1.7
ASAJ	Asahikawa	5.91	348	Pn	Pn	03 42 37.1	-1.1
	3.0nm,0.3s,baz=208,slow=12,SNR=18						
ASAJ				Sn	Sn	03 43 42.5	-2.1
	baz=342,slow=20						
	8.0nm,0.4s						
JGF	Kuroka	6.23	246		Pn	03 42 42.0	-0.7
JHJ	Hachijo jima 2	6.41	217	Pn	Pn	03 42 43.2	-1.8
	13nm,0.3s,baz=60,slow=20,SNR=1.6						
JHJ				Sn	Sn	03 43 48.9	-8.1
	14nm,0.3s,baz=56,slow=23,SNR=6.0						
	32nm,0.3s						
USRK	Ussuriysk Ar.	10.97	306	Pn	Pn	03 43 49.2	+1.6
	0.4nm,0.3s,baz=102,slow=12,SNR=7.2						
	2.8nm,0.7s						
JNU	Nakatsue	12.12	249	LR	LR	03 49 11.4	
	comp=Z,102nm,18.3s,baz=29,slow=39						
KSRS	Korea Array	13.00	271	Pn	Pn	03 44 15.7	+0.3
	0.2nm,0.3s,baz=78,slow=12,SNR=2.9						
KSRS				LR	LR	03 48 38.1	
	comp=Z,80nm,21.6s,baz=75,slow=34						
	1.7nm,0.8s						
HILR	Hailar Array B	20.85	310	P	P	03 45 52.3	+0.4
	2.0nm,0.5s,baz=116,slow=13,SNR=4.5						
	2.0nm,0.5s						
SONM	Songino Array	29.03	301	P	P	03 47 12.7	+2.8
	0.8nm,0.9s,baz=90,slow=7.3,SNR=4.4						
	0.8nm,0.9s						
SONM	Songino Array	29.03	301	P	P	03 47 11.0	+1.1
C16K	Lisburne Hills	40.50	26		P	03 48 47.7	-0.5
C16K				IAmb	IAmb	03 48 49.3	
	comp=Z,8.1nm,1.0s						
ZALV	Zalesovo Beam	42.77	311	P	P	03 49 07.9	+0.9
	comp=Z,0.4nm,0.3s,baz=106,slow=11,SNR=2.6						
ZALV				pP	pP	03 49 15.3	+0.4
	comp=Z,1.8nm,0.6s,baz=81,slow=9.2,SNR=5.0						
	comp=Z,0.4nm,0.3s						
ZALV	Zalesovo Beam	42.77	311	P	P	03 49 06.5	-0.5
F19K	Shaleruckik Mo	42.87	30	P	P	03 49 06.9	-0.8
F19K				IAmb	IAmb	03 49 08.2	
	comp=Z,8.3nm,0.7s						
B22K	Teshekpuk Lake	45.13	25	P	P	03 49 26.1	+0.3
MKAR	Makanchi Array	45.40	302	P	P	03 49 29.1	+0.9
	comp=Z,0.5nm,0.7s,baz=89,slow=6.2,SNR=4.5						
MKAR				pP	pP	03 49 36.1	-0.2
	comp=Z,1.0nm,0.8s,baz=81,slow=8.7,SNR=6.5						
	comp=Z,0.5nm,0.7s						
MKAR	Makanchi Array	45.40	302	P	P	03 49 28.8	+0.6
KURK	Kurchatov	46.96	308	P	P	03 49 40.8	+0.3
KURBB	Kurchatov Arra	47.03	307	P	P	03 49 41.8	+0.8
	comp=Z,1.0nm,0.4s,baz=82,slow=8.0,SNR=7.7						
KURBB				pP	pP	03 49 49.9	+0.8
	comp=Z,1.7nm,0.6s,baz=82,slow=8.0,SNR=5.6						
	comp=Z,1.0nm,0.4s						
ILAR	Eielson Array	47.13	33	P	P	03 49 41.0	-0.6
	comp=Z,1.1nm,0.7s,baz=263,slow=6.6,SNR=14						
ILAR				pP	pP	03 49 50.1	+0.2
	comp=Z,0.6nm,0.7s,baz=257,slow=7.1,SNR=8.6						
	comp=Z,1.1nm,0.7s						
ILAR	Eielson Array	47.13	33	P	P	03 49 41.2	-0.4
D25K	Kavik River	47.43	27	P	P	03 49 44.4	+0.4
D25K				IAmb	IAmb	03 50 11.0	
	comp=Z,7.5nm,1.4s						
C27K	Jago River	48.38	26	P	P	03 49 51.9	+0.6
BVAR	Borovoye Array	51.41	312	P	P	03 50 15.4	+1.0
	comp=Z,1.4nm,0.7s,baz=77,slow=7.8,SNR=6.6						
BVAR				pP	sP	03 50 23.7	-2.5
	comp=Z,1.1nm,0.6s,baz=76,slow=8.1,SNR=5.3						
	comp=Z,1.4nm,0.7s						
INK	Inuvik	52.14	28	P	P	03 50 20.1	+0.5
	comp=Z,1.3nm,0.6s,baz=302,slow=6.8,SNR=14						
INK				pP	pP	03 50 28.7	+0.7
	comp=Z,0.8nm,0.7s,baz=334,slow=8.7,SNR=2.8						
	comp=Z,1.3nm,0.6s						
INK	Inuvik	52.14	28	P	P	03 50 19.9	+0.2
H31M	Peel River	52.27	31		P	03 50 21.3	+0.6
H31M				IAmb	IAmb	03 50 22.4	
	comp=Z,7.7nm,0.9s						
ARTI	Arti	57.02	319		P	03 50 55.9	+0.7
ARTI				IAmb	IAmb	03 50 56.7	
	comp=Z,7.3nm,1.0s						
WRA	Warramunga Arr	58.74	191	P	P	03 51 07.0	-0.6
	comp=Z,1.8nm,0.7s,baz=8.5,slow=6.9,SNR=6.7						
WRA				pP	pP	03 51 14.9	-1.2
	comp=Z,6.0nm,0.8s,baz=16,slow=7.3,SNR=14						
	comp=Z,1.8nm,0.7s						
WRA	Warramunga Arr	58.74	191	P	P	03 51 06.2	-1.4
AB31	Akbulak array	58.86	310		P	03 51 08.7	+0.5
AB31				IAmb	IAmb	03 51 18.5	
	comp=Z,3.6nm,0.8s						
ABKAR	Akbulak array	58.86	310	P	P	03 51 08.5	+0.3
YKA	Yellowknife Ar	61.49	31	P	P	03 51 25.5	-0.5
	comp=Z,0.8nm,0.8s,baz=301,slow=7.2,SNR=13						
YKA				pP	pP	03 51 34.7	+0.2
	comp=Z,0.2nm,0.6s,baz=12,slow=7.3,SNR=4.5						
	comp=Z,0.8nm,0.8s						
YKA	Yellowknife Ar	61.49	31	P	P	03 51 25.2	-0.8
ASAR	Alice Springs	62.47	191	P	P	03 51 31.8	-1.2
	comp=Z,0.3nm,0.6s,baz=12,slow=6.1,SNR=3.2						
ASAR				pP	pP	03 51 40.8	-0.7
	comp=Z,0.7nm,0.7s,baz=9.7,slow=5.7,SNR=6.8						
	comp=Z,0.3nm,0.6s						
ASAR	Alice Springs	62.47	191	P	P	03 51 32.5	-0.5
FINES	FINESS Array B	68.71	333	P	P	03 52 13.2	+0.3
	comp=Z,1.2nm,0.8s,baz=50,slow=7.2,SNR=4.8						
	comp=Z,1.2nm,0.8s						
FINES	FINESS Array B	68.71	333	P	P	03 52 13.7	+0.8
NVAR	Mina Array Bea	72.33	55	P	P	03 52 36.5	+0.8
	comp=Z,1.3nm,0.7s,baz=284,slow=6.3,SNR=9.8						
	comp=Z,1.3nm,0.7s						
NVAR	Mina Array Bea	72.33	55	P	P	03 52 36.1	+0.4
HFS	Hagfors	73.82	337	P	P	03 52 43.5	-0.3
	comp=Z,1.5nm,0.9s,baz=46,slow=6.2,SNR=4.1						
	comp=Z,1.5nm,0.9s						
NOA	NORSAR Array B	73.84	338	P	P	03 52 44.0	0.0
	comp=Z,0.6nm,0.9s,baz=30,slow=6.7,SNR=2.8						
	comp=Z,0.6nm,0.9s						
AKASG	Malin Array Be	74.65	323	P	P	03 52 49.9	+1.2
	comp=Z,0.2nm,0.3s,baz=46,slow=5.3,SNR=1.9						
	comp=Z,0.2nm,0.3s						
AKASG	Malin Array Be	74.65	323	P	P	03 52 48.8	0.0
PDAR	Pinedale Array	75.08	47	P	P	03 52 51.4	-0.3
	comp=Z,0.7nm,0.7s,baz=259,slow=1.6,SNR=9.6						
PDAR				pP	pP	03 53 00.4	-0.1
	comp=Z,0.5nm,0.6s,baz=245,slow=2.5,SNR=6.2						
	comp=Z,0.7nm,0.7s						
PDAR	Pinedale Array	75.08	47	P	P	03 52 51.8	+0.1
P17A	Butcher Ranch,	76.43	50	P	P	03 52 59.5	0.0
RDMU	Red Mountain	76.44	49	P	P	03 52 59.2	-0.3
RDMU				IAmb	IAmb	03 53 01.1	
	comp=Z,5.2nm,0.9s						
KNB	Kanab	76.67	53		P	03 53 00.8	-0.1
KNB				IAmb	IAmb	03 53 03.1	
	comp=Z,12nm,1.5s						
SRU	San Rafael Swe	76.79	50	P	P	03 53 01.8	+0.3
SRU				IAmb	IAmb	03 53 02.8	
	comp=Z,4.6nm,1.0s						
HMU	Henry Mountain	77.39	52		P	03 53 05.2	+0.2
HMU				IAmb	IAmb	03 53 06.3	
	comp=Z,3.8nm,0.9s						
PV10	Paradox Valley	78.15	50	P	P	03 53 09.8	+0.6
PV20	West Nyswonger	78.22	50	P	P	03 53 09.6	+0.1
PV19	Morning Glory	78.23	50	P	P	03 53 09.9	+0.4
PV16	Nyswonger Mesa	78.27	50	P	P	03 53 10.1	+0.3
PV16				IAmb	IAmb	03 53 11.2	
	comp=Z,4.3nm,1.0s						
PV05	Paradox Valley	78.31	51	P	P	03 53 10.1	+0.1
PV18	Skein Mesa, Pa	78.31	50		P	03 53 10.2	+0.1
PV18				IAmb	IAmb	03 53 11.5	
	comp=Z,8.1nm,1.0s						
PV03	Paradox Valley	78.34	50	P	P	03 53 10.9	+0.7
PV03				IAmb	IAmb	03 53 11.8	
	comp=Z,4.4nm,1.0s						
PV13	Radium Mtn., P	78.42	50	P	P	03 53 11.2	+0.5
PV13				IAmb	IAmb	03 53 12.8	
	comp=Z,11nm,1.4s						
BRTR	Keskin Array B	79.69	313	P	P	03 53 18.6	+1.2
	comp=Z,1.0nm,1.0s,baz=72,slow=4.7,SNR=3.7						
	comp=Z,1.0nm,1.0s						
BRTR	Keskin Array B	79.69	313	P	P	03 53 17.8	+0.3
CLL	Collm	81.08	332	*e*P	P	03 53 22.0	-2.5
GERES	GERESS Array B	82.78	330	P	P	03 53 34.7	+1.1
	comp=Z,0.2nm,0.5s,baz=17,slow=7.2,SNR=2.5						
GERES				pP	pP	03 53 43.2	+0.8
	comp=Z,0.2nm,0.6s,baz=29,slow=6.4,SNR=3.2						
	comp=Z,0.2nm,0.5s						
TXAR	Lajitas Array	87.47	54	P	P	03 53 57.5	0.0
	comp=Z,0.5nm,0.8s,baz=323,slow=3.6,SNR=5.7						
TXAR				pP	pP	03 54 06.0	-0.4
	comp=Z,0.3nm,0.7s,baz=309,slow=2.1,SNR=3.3						
	comp=Z,0.5nm,0.8s						

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*IDC **26** 03:48:27.7±0.4, 3°38N×74°11W, h0^{km}, mb4.3/22, mbtmp4.4/25, ML4.0/3, MS3.9/9, Error ellipse: s-maj=16.9km s-min=9.4km az=74.0*

*NEIC **26** 03:48:29.9±1.8, 3°37N±0°07×74°09W±0°03, h10^{km}±1^{km}, mb4.8/333, Error ellipse: s-maj=11.1km s-min=5.7km az=174.0*

*RSNC **26** 03:48:29.4±0.0, 3°N±1°×7°4W±°, h19^{km}±2^{km}, M4.7, mB5.3, mb5.3, ML4.5, Mw4.6, Mw(mB)4.7*

*VAO **26** 03:48:30.2±0.3, 3°36N×73°92W, h10^{km}, mb4.9, Presumed earthquake*

ISC 26 03:48:27.7±1.2**,3°41N**±0°02×**74°11W**±0°03**,h1**^{km}±7^{km}**,n320,**σ1^{s}**43**/230**,mb4.8**/163**,MS4.2**/5**,3C,Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URMC	La Uribe, Meta	0.32	238	P	Pg	03 48 34.3	+0.5
URMC				S	Sg	03 48 37.8	-0.1
VILC	Villavicencio,	0.81	31	P	Pb	03 48 44.9	+0.2
VILC				S	Sb	03 48 56.4	+0.2
PRAC	Prado	0.83	291	P	Pg	03 48 43.2	-0.4
PRAC				S	Sg	03 48 53.3	-1.1
CVER	Cruz Verde, Cu	1.10	2	P	Pg	03 48 49.2	+0.4
CVER				S	Sg	03 49 04.2	+1.0
ORTC	Ortega, Tolima	1.24	294	P	Pn	03 48 50.4	-1.8
ORTC				S	Sb	03 49 05.9	-2.5
CHIC	Chingaza	1.27	17	P	Pg	03 48 52.2	+0.2
CHIC				S	Sg	03 49 08.3	-0.1
MACC	Macarena, Meta	1.29	168	P	Pn	03 48 52.9	0.0
MACC				S	Sb	03 49 10.2	+0.3
ROSC	El Rosal	1.43	352	Pg	Pn	03 48 55.6	+0.4
	3μm,0.3s,baz=157,slow=6.0,SNR=4071						
ROSC				Lg	Lg	03 49 15.8	
	3μm,0.3s,baz=162,slow=20,SNR=8.6						
BETC	Betania	1.52	241	P	Pn	03 48 55.7	-0.4
BETC				S	Sn	03 49 14.0	-2.5
ANIL	Santa Ana	1.68	310	P	Pn	03 48 58.0	-0.5
ANIL				S	Sn	03 49 19.0	-1.8
GARC	Garzon, Huila	1.84	229	P	Pn	03 49 01.3	+0.5
GARC				S	Sn	03 49 24.4	-0.5
RECRC	Villamaria, Ca	1.97	321	P	Pn	03 49 03.8	+1.0
RECRC				S	Sn	03 49 28.6	+0.1
NIZA	Niza - Manizal	2.12	320	P	Pn	03 49 06.3	+1.6
NIZA				S	Sn	03 49 31.8	-0.1
SPBC	San Pablo de B	2.22	1	P	Pb	03 49 07.9	-0.9
SPBC				S	Sb	03 49 38.2	+1.3
NORC	Norcasia	2.27	341	P	Pn	03 49 07.2	+0.8
NORC				S	Sn	03 49 36.3	+1.2
YOTC	Yotoco, Valle	2.30	284	P	Pn	03 49 07.1	+0.1
YOTC				S	Sn	03 49 36.4	+0.3
FLOC	Florencia	2.38	220	P	Pn	03 49 10.0	+2.0
FLOC				S	Sn	03 49 40.2	+2.2
JAMC	Jamundi, Valle	2.57	266	P	Pn	03 49 12.1	+1.4
JAMC				S	Sn	03 49 45.6	+2.9
RUSC	La Rusia	2.67	23	P	Pb	03 49 15.1	-1.5
RUSC				S	Sb	03 49 49.3	-0.8
POPC	Popayan, Colom	2.71	251	P	Pn	03 49 14.5	+1.9
POPC				S	Sn	03 49 49.0	+2.8
CBOC	Ciudad Bolivar	3.09	322	P	Pn	03 49 19.7	+1.9
CBOC				S	Sn	03 49 58.8	+3.3
PTBC	PUERTO BERRIO,	3.12	354	P	Pn	03 49 20.0	+1.8
PTBC				S	Sb	03 50 00.4	-2.4
BARC	Barichara	3.29	16	P	Pn	03 49 23.1	+2.4
PTLC	Puerto Leguiza	3.29	192	P	Pb	03 49 26.7	-0.3
CRUC	La Cruz	3.38	237	P	Pn	03 49 25.5	+3.5
CRUC				S	Sb	03 50 09.7	-0.8
BBAC	Balboa, Cauca	3.42	246	P	Pn	03 49 24.1	+1.6
BRJC	Barrancabermej	3.56	6	P	Pn	03 49 26.3	+2.2
BRJC				S	Sb	03 50 11.9	-3.3
PIZC	Pizarro, Choco	3.59	296	P	Pn	03 49 27.0	+2.4
GR1C	Gorgona, Isla	4.07	264	P	Pn	03 49 31.6	+0.4
GR1C				S	Sn	03 50 19.8	+0.2
PAMC	Pamplona, Colo	4.14	20	P	Pn	03 49 35.8	+3.1
DBBC	Dabeiba	4.15	330	P	Pn	03 49 35.0	+2.7
CMBC	Cumbal	4.45	237	P	Pn	03 49 40.2	+3.4
BONI	La Bonita	4.51	229	P	Pn	03 49 39.3	+1.8
UREC	San Jos de Ur	4.54	342	P	Pn	03 49 40.3	+2.7
TULM	Tulcn-Chalpat	4.55	234	P	Pn	03 49 44.2	+6.0
OCAC	Ocana	4.86	9	P	Pn	03 49 44.0	+1.8
PTAC	Punta Ardita,	5.23	315	P	Pn	03 49 49.2	+2.1
	1μm182nm,0.8s						
OTAV	Otavalo	5.36	234		Pn	03 49 50.4	+1.0
OTAV	Otavalo	5.36	234	*e*P	Pn	03 49 52.5	+3.1
OTAV				*e*S	Sn	03 50 56.2	+4.1
OTAV	Otavalo	5.36	234	P	Pn	03 49 54.8	+5.4
PAC1	Pacto, Paraso	5.63	236	P	Pn	03 49 56.7	+3.9
	3μm149nm,0.5s						
CAPC	Capurgana	6.11	328	P	Pn	03 50 01.3	+2.1
	96nm,0.8s						
ARGC	Ariguani, Magd	6.40	359	P	Pn	03 50 06.7	+3.4
	2μm174nm,0.5s						
SDV	Santo Domingo	6.44	32	Pn	Pn	03 50 05.8	+1.8
	32nm,0.3s,baz=176,slow=10,SNR=128						
SDV				Sn	Sn	03 51 17.3	-1.1
	152nm,0.3s,baz=253,slow=23,SNR=12						
SDV				Lg	Lg	03 51 54.2	
	80nm,0.3s,baz=21,slow=12,SNR=6.6						
SDV				LR	LR	03 53 17.3	
	comp=Z,1μm,19.8s,baz=218,slow=45						
	89nm,0.3s						
SDV	Santo Domingo	6.44	32		Pn	03 50 04.2	+0.2
SDV	Santo Domingo	6.44	32	*e*P	Pn	03 50 04.9	+0.9
SDV				*e*S	Sn	03 51 18.7	+0.3
SDV	Santo Domingo	6.44	32	P	Pn	03 50 04.9	+0.9
	3μm322nm,0.4s						
SJCC	San Jacinto, C	6.53	351	P	Pn	03 50 04.9	-0.2
	1μm121nm,0.9s						
MAPC	Malpelo	7.50	275	P	Pn	03 50 18.6	+0.2
	132nm,0.6s						
URIC	Uribia, Colomb	8.50	14	P	Pn	03 50 31.7	-0.4
PIRO	Carate, Puerto	10.43	299	Pn	Pn	03 50 59.6	+1.0
ATAH	Atahualpa	11.32	202	Pn	Pn	03 51 10.7	-0.4
	1.8nm,0.3s,baz=16,slow=9.4,SNR=11						
ATAH				LR	LR	03 56 12.8	
	comp=Z,516nm,21.8s,baz=26,slow=41						
	20nm,0.8s						
TEFE	Tefe	11.70	126	*e*P	Pn	03 51 15.2	-0.8
JTS	Las Juntas de	12.75	303	LR	LR	03 56 17.2	
	comp=Z,326nm,21.4s,baz=111,slow=37						
BOAV	Boa Vista	13.61	94		Pn	03 51 40.7	-1.4
BOAV	Boa Vista	13.61	94	*e*P	Pn	03 51 39.0	-3.1
MACA	Manacapuru-AM	14.92	116		Pn	03 51 57.8	-2.3
MACA	Manacapuru-AM	14.92	116	*e*P	Pn	03 51 57.4	-2.7
MTDJ	Mount Denham	15.10	347	Pn	Pn	03 52 03.7	+1.2
NNA	Nana	15.54	190	Pn	Pn	03 52 09.1	+0.9
	0.5nm,0.3s,baz=0.0,slow=11,SNR=4.2						
	5.3nm,0.6s						
NNA	Nana	15.54	190		Pn	03 52 09.8	+1.5
SDDR	Presa de Saban	15.72	10		Pn	03 52 11.8	+1.2
SDDR				IAmb	IAmb	03 52 19.7	
	comp=Z,82nm,1.1s						
DR12	Loma Pena Alta	15.96	16		Pn	03 52 14.4	+0.6
SC01	Santiago de lo	16.26	11	Pn	Pn	03 52 17.7	+0.2
SC01				IAmb	IAmb	03 52 25.7	
	comp=Z,56nm,0.8s						
OBIP	Obispado Ponce	16.29	26	Pn	Pn	03 52 18.2	+0.2
SJG	San Juan	16.56	28	Pn	Pn	03 52 17.9	-3.5
	comp=Z,2.4nm,0.3s,baz=192,slow=15,SNR=9.2						
SJG				LR	LR	03 59 22.9	
	comp=Z,451nm,21.2s,baz=211,slow=40						
SJG	San Juan	16.56	28		Pn	03 52 19.3	-2.1
TGUH	Tegucigalpa,Un	16.75	310	P	P	03 52 26.4	+0.1
GCPR	Guaynabo City	16.76	27	Pn	Pn	03 52 24.4	+0.4
MTO3	Montecristo	18.59	307	P	P	03 52 46.7	-0.1
APG	El Apazote	19.81	307	LR	LR	04 01 44.6	
	comp=Z,18nm,20.1s,baz=84,slow=40						
ITTB	Itaituba	19.92	113	*e*P	P	03 53 00.4	-0.8
LPAZ	La Paz	20.45	163	P	P	03 53 07.6	+0.1
	comp=Z,7.2nm,0.9s,baz=342,slow=12,SNR=15						
LPAZ				Lg	Lg	03 59 08.8	
	comp=Z,0.2nm,0.3s,baz=86,slow=15,SNR=3.6						
LPAZ				LR	LR	04 02 18.9	
	comp=Z,126nm,20.3s,baz=318,slow=41						
	comp=Z,7.2nm,0.9s						
LPAZ	La Paz	20.45	163	P	P	03 53 06.0	-1.5
LPAZ	La Paz	20.45	163	*e*P	P	03 53 07.2	-0.3
VILB	Vilhena	21.34	140	P	P	03 53 14.9	-1.6
VILB				IAmb	IAmb	03 53 22.7	
	comp=Z,60nm,1.1s						
VILB	Vilhena	21.34	140	*e*P	P	03 53 16.3	-0.3
NPGB	Novo Progresso	21.41	119	*e*P	P	03 53 16.6	-0.7
MDP	Montagnes des	21.47	85	P	P	03 53 19.1	+1.1
	comp=Z,32nm,0.6s,baz=287,slow=3.8,SNR=25						
MDP				Lg	Lg	03 59 43.9	
	comp=Z,1.2nm,0.3s,baz=4.2,slow=19,SNR=5.7						
MDP				LR	LR	04 01 33.8	
	comp=Z,134nm,18.9s,baz=340,slow=37						
	comp=Z,32nm,0.6s						
PB16	IPOC Station P	22.08	168	P	P	03 53 25.9	+0.8
PDRB	Porto dos Gac	22.84	131	*e*P	P	03 53 31.9	-0.8
CLDB	Colider	23.10	128	*e*P	P	03 53 34.8	-0.6
SIV	San Ignacio	23.20	147	P	P	03 53 37.2	+0.9
	comp=Z,14nm,0.8s,baz=320,slow=9.0,SNR=50						
SIV				Lg	Lg	04 00 34.5	
	comp=Z,0.1nm,0.3s,baz=60,slow=24,SNR=4.7						
	comp=Z,14nm,0.8s						
GO01	Chusmiza	23.44	168	P	P	03 53 39.4	+0.1
PB11	IPOC Station P	23.44	169	P	P	03 53 38.9	-0.1
PTLB	Pontes e Lacer	23.89	142	P	P	03 53 44.2	+1.0
PTLB	Pontes e Lacer	23.89	142	*e*P	P	03 53 43.6	+0.4
HMBC	Humberstone	23.91	170	P	P	03 53 43.5	+0.1
PB02	IPOC Station P	24.93	171	IAmb	IAmb	03 54 07.1	
	comp=Z,24nm,1.1s						
PP1B	Ponte de Pedra	28.21	138	*e*P	P	03 54 22.0	-0.4
SMTB	Santa Maria do	29.12	115	*e*P	P	03 54 29.8	-0.7
LRAL	Lakeview Retre	31.84	339		P	03 54 55.7	+1.3
LRAL				IAmb	IAmb	03 54 58.9	
	comp=Z,22nm,1.2s						
BDFB	Brasilia	32.02	127	P	P	03 54 57.4	+1.1
	comp=Z,3.2nm,0.8s,baz=299,slow=11,SNR=5.9						
BDFB				Lg	Lg	04 05 09.7	
	comp=Z,0.1nm,0.3s,baz=22,slow=19,SNR=2.3						
BDFB				LR	LR	04 08 30.7	
	comp=Z,481nm,18.4s,baz=35,slow=38						
	comp=Z,3.2nm,0.8s						
BDFB	Brasilia	32.02	127	P	P	03 54 56.8	+0.5
AMBA	Amambai (Brazi	32.15	145	*e*P	P	03 54 57.1	-0.1
Z47A	Carrollton	32.38	338	P	P	03 54 60.0	+0.9
Y49A	Blount Mountai	32.39	341		P	03 54 59.5	+0.3
Y49A				IAmb	IAmb	03 55 08.9	
	comp=Z,20nm,1.2s						
BG3	Lake Jocassee	32.47	346	P	P	03 54 59.9	0.0
FPAL	Fort Paine	32.77	342	P	P	03 55 02.2	-0.3
FPAL				IAmb	IAmb	03 55 06.9	
	comp=Z,11nm,1.1s						
W52A	Murphy	32.81	345	P	P	03 55 02.9	0.0
W52A				IAmb	IAmb	03 55 28.1	
	comp=Z,23nm,1.3s						
X48A	Hartselle	33.15	340	P	P	03 55 06.0	+0.2
X48A				IAmb	IAmb	03 55 10.0	
	comp=Z,19nm,1.1s						
W50A	Signal Mountai	33.29	343	P	P	03 55 07.1	0.0
W50A				IAmb	IAmb	03 55 14.2	
	comp=Z,13nm,1.0s						
T59A	Double "B" Far	33.55	355		P	03 55 09.2	0.0
U54A	Nelsons Funny	33.70	349	P	P	03 55 11.2	+0.5
CPUP	Villa Florida	33.73	152	P	P	03 55 08.4	-2.5
	comp=Z,3.4nm,0.9s,baz=338,slow=16,SNR=9.0						
CPUP	Villa Florida	33.73	152	P	P	03 55 08.8	-2.1
CPUP				IAmb	IAmb	03 55 56.7	
	comp=Z,26nm,1.9s						
T57A	Hurt	33.76	353	P	P	03 55 10.6	-0.4
T57A				IAmb	IAmb	03 55 15.3	
	comp=Z,20nm,1.0s						
BLA	Blacksburg	34.13	351		P	03 55 15.4	+1.0
V48A	Smith Brothers	34.25	341	P	P	03 55 15.6	+0.2
CLTN	Cedars of Leba	34.42	342	P	P	03 55 18.3	+1.4
S57A	Dark Hollow, R	34.47	353	P	P	03 55 19.1	+1.9
S57A				IAmb	IAmb	03 55 22.2	
	comp=Z,14nm,0.9s						
CCAR	Cane Creek	34.53	334	P	P	03 55 19.0	+1.2
833A	Chaparral WMA,	34.55	318	P	P	03 55 17.4	-0.7
833A				IAmb	IAmb	03 55 22.9	
	comp=Z,11nm,0.9s						

U49A	Red Boiling Sp	34.65	343	P	P	03 55 19.4	+0.6
U49A				IAmb	IAmb	03 55 24.1	
	comp=Z,8.9nm,0.8s						
WVT	Waverly	34.94	340	P	P	03 55 21.9	+0.7
WLAR	White Oak Lake	34.95	332	P	P	03 55 22.8	+1.3
WLAR				IAmb	IAmb	03 55 26.4	
	comp=Z,13nm,0.9s						
R55A	Marlinton	35.14	352	P	P	03 55 23.1	+0.1
R55A				IAmb	IAmb	03 55 28.3	
	comp=Z,18nm,1.0s						
S51A	Beattyville	35.16	347	P	P	03 55 24.0	+0.9
S51A				IAmb	IAmb	03 55 27.7	
	comp=Z,14nm,1.0s						
CFA	Coronel Fontan	35.27	171	P	P	03 55 24.1	-0.1
	comp=Z,1.3nm,0.7s,baz=339,slow=12,SNR=4.1						
	comp=Z,1.3nm,0.7s						
HNDO	Hondo	35.28	320	P	P	03 55 23.6	-0.7
HNDO				IAmb	IAmb	03 55 27.0	
	comp=Z,18nm,1.3s						
X40A	Basin Creek Fa	35.48	333	P	P	03 55 26.2	+0.1
T47A	Sharon Grove	35.49	342		P	03 55 26.1	+0.1
GNAR	Gosnell	35.57	338	P	P	03 55 26.9	+0.1
HICK	Hickman	35.79	339	P	P	03 55 29.0	+0.4
MIAR	Mount Ida	35.88	332		P	03 55 29.3	-0.2
MIAR				IAmb	IAmb	03 55 33.3	
	comp=Z,22nm,1.5s						
Q54A	Coxs Mills	35.93	351	P	P	03 55 30.4	+0.6
Q54A				IAmb	IAmb	03 55 34.4	
	comp=Z,19nm,1.2s						
R50A	Paris	35.94	346	P	P	03 55 29.9	0.0
R50A				IAmb	IAmb	03 55 36.7	
	comp=Z,16nm,1.0s						
T45A	Paducah	36.02	340	P	P	03 55 31.2	+0.6
DRIO	Del Rio	36.08	319		P	03 55 30.8	-0.5
PARMO	Parma	36.09	338	P	P	03 55 31.3	+0.1
LCAR	Lake Charles	36.11	336		P	03 55 31.8	+0.4
LCAR				IAmb	IAmb	03 55 34.5	
	comp=Z,14nm,1.1s						
VA03	San Esteban	36.14	175	P	P	03 55 31.4	-0.4
BRDY	Brady	36.31	323		P	03 55 32.4	-0.9
VA01	Torpederas	36.31	177	P	P	03 55 33.2	+0.1
FCAR	Ozark Folk Cen	36.35	335	P	P	03 55 33.3	-0.2
FCAR				IAmb	IAmb	03 55 36.0	
	comp=Z,9.3nm,0.7s						
WCI	Wyandotte Cave	36.40	344	P	P	03 55 34.0	+0.2
WCI				IAmb	IAmb	03 55 38.9	
	comp=Z,16nm,0.8s						
Q51A	Peebles	36.43	348		P	03 55 34.7	+0.6
P52A	Corning	36.78	350	IAmb	IAmb	03 55 41.6	
	comp=Z,17nm,0.9s						
MT08	Bocatoma Ro	36.86	174	IAmb	IAmb	03 55 41.4	
	comp=Z,20nm,0.9s						
T42A	Van Buren	36.92	337	IAmb	IAmb	03 55 41.0	
	comp=Z,17nm,0.9s						
PLPT	Palo Pinto	37.00	325	IAmb	IAmb	03 55 42.3	
	comp=Z,18nm,1.0s						
SSPA	Standing Stone	37.21	355	P	P	03 55 42.6	+1.9
SSPA				IAmb	IAmb	03 55 45.8	
	comp=Z,14nm,0.9s						
O53A	New Philadelph	37.23	351	IAmb	IAmb	03 55 45.7	
	comp=Z,28nm,1.1s						
BLO	Bloomington	37.34	344	IAmb	IAmb	03 55 45.8	
	comp=Z,25nm,1.0s						
BO04	La Punta	37.35	175	IAmb	IAmb	03 55 44.1	
	comp=Z,17nm,0.9s						
OLIL	Olney	37.40	342	IAmb	IAmb	03 55 46.5	
	comp=Z,14nm,0.9s						
HHAR	Hobbs	37.48	333	IAmb	IAmb	03 55 46.0	
	comp=Z,12nm,0.8s						
MGMO	Mountain Grove	37.49	336	IAmb	IAmb	03 55 47.2	
	comp=Z,21nm,1.2s						
ACSO	Alum Creek Sta	37.52	349	IAmb	IAmb	03 55 48.0	
	comp=Z,24nm,0.9s						
ABTX	Abilene, Hawle	37.64	323	IAmb	IAmb	03 55 47.6	
	comp=Z,23nm,1.1s						
BO01	Tunca	37.71	176	IAmb	IAmb	03 55 47.1	
	comp=Z,30nm,1.1s						
PAMR	Moraine State	37.75	353	IAmb	IAmb	03 55 50.3	
	comp=Z,21nm,1.0s						
U38A	Gravette	37.81	333	IAmb	IAmb	03 55 48.1	
	comp=Z,13nm,0.8s						
M57A	Sunshine Farm,	37.85	356	IAmb	IAmb	03 55 50.9	
	comp=Z,20nm,0.8s						
M63A	Gales Ferry	37.87	3	P	P	03 55 47.3	+1.1
CCM	Cathedral Cave	37.87	338	P	P	03 55 46.2	-0.2
CCM				IAmb	IAmb	03 55 49.2	
	comp=Z,21nm,0.8s						
W35A	Tecumseh	37.98	329	IAmb	IAmb	03 55 50.5	
	comp=Z,9.9nm,0.7s						
KSPA	Keystone Colle	38.01	358	IAmb	IAmb	03 55 52.1	
	comp=Z,20nm,0.9s						
O48B	Farmland	38.01	346	IAmb	IAmb	03 55 51.1	
	comp=Z,21nm,0.9s						
TUL3	Leonard	38.04	331	IAmb	IAmb	03 55 50.9	
	comp=Z,19nm,0.7s						
X34A	Smith Ranch, M	38.06	327	IAmb	IAmb	03 55 54.5	
	comp=Z,15nm,1.0s						
TXAR	Lajitas Array	38.09	316	P	P	03 55 48.9	+0.4
	comp=Z,1.7nm,0.9s,baz=135,slow=9.7,SNR=15						
TXAR				PcP	PcP	03 58 04.8	+0.9
	comp=Z,2.1nm,0.8s,baz=139,slow=6.5,SNR=11						
	comp=Z,1.7nm,0.9s						
HPIG		38.18	311	P	P	03 55 49.5	0.0
UCCT	U. Connecticut	38.25	2	IAmb	IAmb	03 55 53.7	
	comp=Z,17nm,0.9s						
PAOC	Oil Creek Stat	38.26	353	IAmb	IAmb	03 55 54.5	
	comp=Z,20nm,0.9s						
DEOK	Depew	38.33	330	IAmb	IAmb	03 55 53.0	
	comp=Z,34nm,1.3s						
FNO	Franklin	38.34	329	IAmb	IAmb	03 55 53.5	
	comp=Z,12nm,0.8s						
N49A	Columbus Grove	38.43	348	IAmb	IAmb	03 55 55.3	
	comp=Z,18nm,0.9s						
R40A	Maddies Statio	38.47	337	IAmb	IAmb	03 55 53.8	
	comp=Z,11nm,0.6s						
OK052	Battle Ridge R	38.60	330	IAmb	IAmb	03 55 55.6	
	comp=Z,17nm,0.8s						
SFIN	Lafayette	38.63	344	IAmb	IAmb	03 55 55.8	
	comp=Z,14nm,0.9s						
M50A	Fremont	38.66	349	IAmb	IAmb	03 55 57.2	
	comp=Z,23nm,1.0s						
P43A	Skaggs, Pawnee	38.68	341	IAmb	IAmb	03 55 56.2	
	comp=Z,30nm,1.0s						
QUOK	Quay	38.70	330	IAmb	IAmb	03 55 56.0	
	comp=Z,17nm,0.9s						
MNHN	Monahans	38.73	319	P	P	03 55 53.5	-0.3
OK029	Liberty Lake	38.78	329	IAmb	IAmb	03 55 56.5	
	comp=Z,16nm,0.7s						
L61B	Northampton	38.89	2	P	P	03 55 56.9	+2.0
L61B				IAmb	IAmb	03 55 59.1	
	comp=Z,14nm,0.8s						
POST	Post	39.07	322	IAmb	IAmb	03 56 00.3	
	comp=Z,22nm,1.0s						
K62A	Royalston	39.12	2	P	P	03 55 59.1	+2.3
K62A				IAmb	IAmb	03 56 01.4	
	comp=Z,14nm,0.8s						
T35A	Sooner Cattle	39.19	331	IAmb	IAmb	03 56 00.1	
	comp=Z,16nm,0.9s						
P40A	Paris	39.47	338	IAmb	IAmb	03 56 02.3	
	comp=Z,23nm,1.0s						
CROK	Carrier	39.60	329	IAmb	IAmb	03 56 03.4	
	comp=Z,22nm,1.0s						
J57A	Williamstown	39.86	358	IAmb	IAmb	03 56 07.2	
	comp=Z,22nm,0.8s						
VHRN	Van Horn	39.87	316	P	P	03 56 04.4	+0.9
K50A	Casco	39.92	350	IAmb	IAmb	03 56 07.5	
	comp=Z,27nm,0.8s						
L46A	Eue Claire	39.95	346	IAmb	IAmb	03 56 06.8	
	comp=Z,16nm,0.7s						
BI02	San Fabin de	39.96	176	IAmb	IAmb	03 56 06.1	
	comp=Z,24nm,1.4s						
P38A	Dawn	40.12	337	IAmb	IAmb	03 56 08.0	
	comp=Z,20nm,0.9s						
NOKA	Waynoka	40.19	328	IAmb	IAmb	03 56 09.2	
	comp=Z,22nm,0.9s						
AMTX	Amarillo	40.44	324	IAmb	IAmb	03 56 13.1	
	comp=Z,14nm,0.6s						
MSTX	Muleshoe	40.46	322	IAmb	IAmb	03 56 11.8	
	comp=Z,26nm,1.1s						
I63A	Otisfield	40.59	4	IAmb	IAmb	03 56 13.4	
	comp=Z,15nm,0.7s						
LBNH	Lisbon	40.70	2	P	P	03 56 11.7	+1.8
LBNH				IAmb	IAmb	03 56 14.7	
	comp=Z,31nm,1.2s						
KSU1	Kansas State U	40.99	333	IAmb	IAmb	03 56 14.6	
	comp=Z,16nm,0.9s						
K43A	Burlington	41.13	344	IAmb	IAmb	03 56 17.1	
	comp=Z,24nm,1.1s						
L40A	Anamosa	41.42	341	IAmb	IAmb	03 56 18.2	
	comp=Z,15nm,0.7s						
G62A	West of Eustis	41.75	4	P	P	03 56 20.6	+2.1
G62A				IAmb	IAmb	03 56 23.4	
	comp=Z,18nm,1.0s						
JFWS	Jewell Farm	41.88	342	P	P	03 56 18.8	-0.8
JFWS				IAmb	IAmb	03 56 22.2	
	comp=Z,19nm,0.7s						
MNTQ	Montreal, Queb	41.92	1	P	P	03 56 21.1	+1.1
SCIA	State Center	41.97	339	IAmb	IAmb	03 56 26.7	
	comp=Z,20nm,0.9s						
N35A	Tabor	42.03	335	IAmb	IAmb	03 56 23.4	
	comp=Z,21nm,0.9s						
121A	Cookes Peak, D	42.83	316	P	P	03 56 29.2	+1.5
I40A	Norwalk	42.88	342	IAmb	IAmb	03 56 30.2	
	comp=Z,16nm,1.1s						
E62A	Clayton Lake	43.22	5	IAmb	IAmb	03 56 35.1	
	comp=Z,27nm,1.2s						
L34A	Svendsen Farm,	43.25	336	IAmb	IAmb	03 56 33.0	
	comp=Z,23nm,0.8s						
ANMO	Albuquerque	43.40	320	P	P	03 56 33.4	+0.9
TASM	ASL Pad, Albuq	43.41	320	IAmb	IAmb	03 56 37.9	
	comp=Z,7.5nm,0.9s						
TASM	ASL Pad, Albuq	43.41	320	IAmb	IAmb	03 56 37.9	
	comp=Z,8.0nm,0.9s						
T25A	Trinidad	43.59	324	IAmb	IAmb	03 57 07.2	
	comp=Z,48nm,2.0s						
KSCO	Kaye Shedlock’	43.91	328	IAmb	IAmb	03 56 40.0	
	comp=Z,16nm,1.1s						
G40A	Rib Lake	44.01	344	IAmb	IAmb	03 56 40.1	
	comp=Z,16nm,1.1s						
PLCA	Paso Flores	44.05	176	P	P	03 56 37.6	+0.2
	comp=Z,5.7nm,0.8s,baz=347,slow=8.8,SNR=22						
	comp=Z,5.7nm,0.8s						
PLCA	Paso Flores	44.05	176	P	P	03 56 38.1	+0.8
TUC	Tucson	44.81	314	P	P	03 56 45.0	+1.3
LL01	San Ignacio de	45.60	178	P	P	03 56 50.5	+0.9
LL01				IAmb	IAmb	03 56 51.0	
	comp=Z,8.1nm,0.7s						
W18A	Petrified Fore	45.65	318	IAmb	IAmb	03 56 55.1	
	comp=Z,8.5nm,0.9s						
PV02	Paradox Valley	46.88	322	IAmb	IAmb	03 57 04.3	
	comp=Z,9.0nm,0.8s						
PV13	Radium Mtn., P	46.90	322	IAmb	IAmb	03 57 04.4	
	comp=Z,7.3nm,0.9s						
WUAZ	Wupatki	46.98	317	P	P	03 57 02.0	+1.2
WUAZ				IAmb	IAmb	03 57 06.2	
	comp=Z,9.1nm,0.9s						
PV03	Paradox Valley	46.98	322	IAmb	IAmb	03 57 06.3	
	comp=Z,15nm,1.6s						
PV12	Saucer Basin,	46.99	322	IAmb	IAmb	03 57 05.9	
	comp=Z,8.4nm,0.8s						
PV22	Blue Mesa, Par	47.12	322	IAmb	IAmb	03 57 06.2	
	comp=Z,5.3nm,0.8s						
PV23	Carpenter Ridg	47.20	322	IAmb	IAmb	03 57 16.9	
	comp=Z,7.1nm,0.8s						
Y14A	Wickenburg	47.25	315	IAmb	IAmb	03 57 08.8	
	comp=Z,4.5nm,0.7s						
O20A	White River Ci	47.82	325	IAmb	IAmb	03 57 12.0	
	comp=Z,12nm,1.1s						
U15A	North Rim	48.10	318	IAmb	IAmb	03 57 18.6	
	comp=Z,7.5nm,1.1s						
GLA	Glamis	48.12	313	IAmb	IAmb	03 57 14.1	
	comp=Z,10nm,1.1s						
BLYC	Blythe	48.24	314	IAmb	IAmb	03 57 14.8	
	comp=Z,8.2nm,1.1s						
RSSD	Black Hills	48.39	331	P	P	03 57 13.8	+2.1
K22A	Casper	48.57	328	IAmb	IAmb	03 57 16.5	
	comp=Z,8.4nm,0.9s						
P18A	Preston Nutter	48.69	323	IAmb	IAmb	03 57 20.6	
	comp=Z,5.6nm,0.8s						
KNB	Kanab	48.78	318	IAmb	IAmb	03 57 23.2	
	comp=Z,20nm,1.6s						
RDMU	Red Mountain	48.88	324	IAmb	IAmb	03 57 19.5	
	comp=Z,9.2nm,1.0s						
P17A	Butcher Ranch,	48.89	322	IAmb	IAmb	03 57 19.5	
	comp=Z,9.5nm,0.9s						
IRM	Iron Mountain	48.89	314	IAmb	IAmb	03 57 19.9	
	comp=Z,7.9nm,1.0s						
MTPU	Mount Pierson	48.95	320	IAmb	IAmb	03 57 43.6	
	comp=Z,16nm,1.9s						
TCRU	Three Creeks R	49.44	320	IAmb	IAmb	03 57 32.0	
	comp=Z,9.6nm,1.0s						
BSUT	Blindstream Ca	49.56	323	IAmb	IAmb	03 57 24.9	
	comp=Z,10nm,0.9s						
MPU	Maple Canyon	49.77	322	IAmb	IAmb	03 57 26.1	
	comp=Z,8.1nm,0.9s						
ULM	Lac du Bonnet	50.17	342	P	P	03 57 25.4	+0.5
	comp=Z,6.3nm,0.7s,baz=150,slow=9.4,SNR=7.7						
	comp=Z,6.3nm,0.7s						
ULM	Lac du Bonnet	50.17	342	IAmb	IAmb	03 57 26.9	
	comp=Z,8.7nm,0.8s						
PDAR	Pinedale Array	50.29	326	P	P	03 57 26.2	-0.1
	comp=Z,2.1nm,0.8s,baz=121,slow=8.4,SNR=15						
PDAR				PcP	PcP	03 58 45.0	-0.2
	comp=Z,0.9nm,0.9s,baz=88,slow=5.0,SNR=2.1						
	comp=Z,2.1nm,0.8s						
PDAR	Pinedale Array	50.29	326	P	P	03 57 26.6	+0.3
HWUT	Hardware Ranch	50.70	324	IAmb	IAmb	03 57 32.6	
	comp=Z,8.7nm,0.9s						
BGU	Big Grassy Mou	51.16	322	IAmb	IAmb	03 57 36.5	
	comp=Z,13nm,0.9s						
SNOW	Snow King Moun	51.41	326	IAmb	IAmb	03 57 38.3	
	comp=Z,18nm,1.1s						
LOHW	Long Hollow	51.42	326	IAmb	IAmb	03 57 38.3	
	comp=Z,13nm,1.0s						
MOOW	Moose Ponds	51.59	327	IAmb	IAmb	03 57 39.2	
	comp=Z,8.7nm,0.8s						
SCHQ	Schefferville	51.60	5	P	P	03 57 36.4	+0.7
	comp=Z,18nm,1.0s,baz=188,slow=7.6,SNR=15						
	comp=Z,18nm,1.0s						
RLMT	Red Lodge	51.72	329	IAmb	IAmb	03 57 40.0	
	comp=Z,14nm,1.5s						
YMR	Madison River	52.31	327	IAmb	IAmb	03 57 45.4	
	comp=Z,15nm,1.0s						
YHB	Horse Butte	52.49	327	IAmb	IAmb	03 57 47.2	
	comp=Z,8.4nm,0.9s						
YHL	Hebgen Lake	52.55	327	IAmb	IAmb	03 57 47.6	
	comp=Z,19nm,0.9s						
NV11	Mina Array Sit	53.12	317	IAmb	IAmb	03 57 59.1	
	comp=Z,23nm,1.8s						
NVAR	Mina Array Bea	53.22	317	P	P	03 57 49.7	+1.4
	comp=Z,5.5nm,1.0s,baz=114,slow=7.2,SNR=18						
NVAR				PcP	PcP	03 58 55.4	-0.9
	comp=Z,2.1nm,0.7s,baz=134,slow=4.6,SNR=6.0						
	comp=Z,5.5nm,1.0s						
NVAR	Mina Array Bea	53.22	317	P	P	03 57 49.6	+1.3
HLID	Hailey	53.56	324	IAmb	IAmb	03 57 54.4	
	comp=Z,7.8nm,0.9s						
MFID	Camas Ranch	54.30	323	IAmb	IAmb	03 57 59.7	
	comp=Z,11nm,0.9s						
PAHR	Pah Rah Range	54.58	318	IAmb	IAmb	03 58 01.5	
	comp=Z,12nm,1.3s						
PLID	Pearl Lake	55.38	325	IAmb	IAmb	03 58 06.7	
	comp=Z,9.7nm,0.9s						
J08A	Circle Bar Ran	55.88	322	IAmb	IAmb	03 58 10.9	
	comp=Z,11nm,1.0s						
FFC	Flin Flon	55.94	341	P	P	03 58 07.4	0.0
FFC				IAmb	IAmb	03 58 10.2	
	comp=Z,12nm,1.2s						
F10A	Beach Ranch, E	56.59	325	IAmb	IAmb	03 58 18.6	
	comp=Z,7.9nm,1.0s						
LNOR	Lincton Mounta	57.14	325	IAmb	IAmb	03 58 20.8	
	comp=Z,10nm,0.8s						
FCC	Fort Churchill	57.36	348	IAmb	IAmb	03 58 20.0	
	comp=Z,13nm,0.9s						
E09A	Wood Farm, Sta	57.43	325	IAmb	IAmb	03 58 21.5	
	comp=Z,16nm,1.1s						
PINE	Pine Mountain	57.63	321	IAmb	IAmb	03 58 23.7	
	comp=Z,14nm,0.9s						
D08A	Wollman Farm,	58.17	325	IAmb	IAmb	03 58 26.8	
	comp=Z,9.1nm,1.0s						
G06A	Carlson Farm,	58.19	323	IAmb	IAmb	03 58 27.7	
	comp=Z,11nm,1.0s						
C09A	Chrisman Ranch	58.23	326	IAmb	IAmb	03 58 27.3	
	comp=Z,12nm,1.2s						
EPH	Ephrata	58.72	325	IAmb	IAmb	03 58 31.2	
	comp=Z,23nm,1.2s						
H04A	Detroit Lake	58.85	322	IAmb	IAmb	03 58 40.7	
	comp=Z,13nm,1.1s						
LON	Longmire	59.67	324	IAmb	IAmb	03 58 36.9	
	comp=Z,9.6nm,1.1s						
FRB	Frobisher Bay	60.34	3	LR	LR	04 24 53.7	
	comp=Z,194nm,19.2s,baz=110,slow=36						
GNW	Green Mountain	60.69	324	P	P	03 58 42.7	+1.9
BLKN	Baker Lake	62.82	349	P	P	03 58 54.9	+0.1
BLKN				IAmb	IAmb	03 58 59.1	
	comp=Z,5.6nm,1.0s						
ILON	Igloolik, Nuna	66.05	357	P	P	03 59 15.7	-0.2
YKA	Yellowknife Ar	66.12	341	P	P	03 59 16.4	0.0
	comp=Z,0.6nm,0.6s,baz=140,slow=5.8,SNR=14						
	comp=Z,0.6nm,0.6s						
DBIC	Dimbokro	69.02	84	P	P	03 59 35.5	-0.2
	comp=Z,5.1nm,0.8s,baz=289,slow=7.5,SNR=6.4						
	comp=Z,5.1nm,0.8s						
DBIC	Dimbokro	69.02	84	IAmb	IAmb	03 59 50.9	
	comp=Z,10nm,1.2s						
SUMG	Summit	72.50	11	P	P	03 59 56.4	0.0
ESDC	Sonseca Array	72.59	50	P	P	03 59 57.0	-0.1
	comp=Z,1.5nm,0.8s,baz=267,slow=5.8,SNR=9.6						
	comp=Z,1.5nm,0.8s						
ESDC	Sonseca Array	72.59	50	IAmb	IAmb	04 00 51.2	
	comp=Z,15nm,1.9s						
TULEG	Thule	73.12	1	P	P	04 00 00.1	+0.7
TORD	Torodi Ar. Bea	75.41	77	P	P	04 00 13.3	-0.7
	comp=Z,1.2nm,0.6s,baz=293,slow=5.0,SNR=21						
	comp=Z,1.2nm,0.6s						
TORD	Torodi Ar. Bea	75.41	77	IAmb	IAmb	04 00 14.0	
	comp=Z,8.3nm,1.5s						
INK	Inuvik	75.89	341	LR	LR	04 34 51.2	
	comp=Z,147nm,19.6s,baz=13,slow=37						
E29M	Blow River	77.39	340	IAmb	IAmb	04 00 31.0	
	comp=Z,9.3nm,1.0s						
E28M	Babbage River	78.03	340	IAmb	IAmb	04 00 38.7	
	comp=Z,21nm,1.8s						
ILAR	Eielson Array	79.62	335	P	P	04 00 36.4	-0.2
	comp=Z,1.4nm,0.7s,baz=110,slow=3.6,SNR=19						
ILAR				PP	PP	04 03 37.4	+0.3
	comp=Z,0.8nm,0.9s,baz=97,slow=6.8,SNR=4.1						
	comp=Z,1.4nm,0.7s						
D25K	Kavik River	80.60	340	IAmb	IAmb	04 00 49.1	
	comp=Z,11nm,1.2s						
BELA	Belgrano 2	83.97	172	P	P	04 00 59.5	+0.3
BELA				IAmb	IAmb	04 01 00.3	
	comp=Z,4.6nm,0.8s						
NB2	NORSAR Subarra	84.76	29	P	P	04 01 07.3	+3.6
	comp=Z,1.0nm,0.8s,baz=264,slow=5.3						
NOA	NORSAR Array B	84.76	29	P	P	04 01 03.3	-0.4
	comp=Z,1.8nm,0.8s,baz=268,slow=4.9,SNR=6.3						
	comp=Z,1.8nm,0.8s						
VNA3	Neumayer Olymp	85.22	163	⇑P	P	04 01 04.8	-0.9
	comp=Z,4.0nm,0.7s						
HFS	Hagfors	85.97	30	P	P	04 01 09.4	-0.2
	comp=Z,1.6nm,0.9s,baz=274,slow=4.3,SNR=4.8						
	comp=Z,1.6nm,0.9s						
GERES	GERESS Array B	86.01	41	P	P	04 01 10.7	+0.5
	comp=Z,0.8nm,0.7s,baz=318,slow=1.8,SNR=9.2						
	comp=Z,0.8nm,0.7s						
SNAA	Sanae	87.40	163	⇑P	P	04 01 16.4	-0.1
	comp=Z,128nm,1.0s						
SNAA	Sanae	87.40	163	P	P	04 01 16.4	-0.1
	comp=Z,4.2nm,0.8s,baz=279,slow=7.3,SNR=13						
	comp=Z,4.2nm,0.8s						
SNAA	Sanae	87.40	163	P	P	04 01 16.4	-0.1
TROLL	Troll, Antarti	89.11	162	⇑P	P	04 01 25.1	+0.3
	comp=Z,308nm,0.8s						
ARCES	ARCESS Array B	90.19	20	P	P	04 01 30.9	+1.2
	comp=Z,1.6nm,0.7s,baz=260,slow=5.0,SNR=6.5						
	comp=Z,1.6nm,0.7s						
FINES	FINESS Array B	91.89	28	P	P	04 01 38.8	+1.1
	comp=Z,1.1nm,0.7s,baz=213,slow=6.6,SNR=3.4						
	comp=Z,1.1nm,0.7s						
QSPA	South Pole Qui	93.45	180	P	P	04 01 45.1	+0.2
ZALV	Zalesovo Beam	120.19	14	PKP	PKPdf	04 07 19.5	-1.1
	comp=Z,0.5nm,0.6s,baz=358,slow=4.3,SNR=2.1						
ZALV	Zalesovo Beam	120.19	14		PKPdf	04 07 18.3	-2.4
KURK	Kurchatov	121.23	20		PKPdf	04 07 22.7	0.0
KURBB	Kurchatov Arra	121.27	20	PKP	PKPdf	04 07 22.7	-0.1
	comp=Z,0.4nm,0.4s,baz=314,slow=1.8,SNR=1.4						
MKAR	Makanchi Array	125.84	20	PKP	PKPdf	04 07 29.8	-2.0
	comp=Z,0.4nm,0.6s,baz=282,slow=2.4,SNR=4.6						
WMQ	Urumqi	130.21	17	*e*PKP	PKPdf	04 07 35.5	-4.7
HHC	Hu-ho-hao-te	135.65	354	*e*P	PKPdf	04 07 45.5	-5.1
NJ2	Nanjing	142.64	342	*e*P	PKPdf	04 08 03.3	-0.2
NJ2				pmax	pmax		
	comp=Z,14nm,0.7s						
WHN	Wuhan	145.28	347	PKPbc	PKPbc	04 08 07.0	-0.7
ASAR	Alice Springs	146.27	231	PKPbc	PKPdf	04 08 10.2	+0.1
	comp=Z,6.0nm,0.5s,baz=120,slow=4.0,SNR=48						
ASAR	Alice Springs	146.27	231		PKPdf	04 08 09.0	-1.1
WRA	Warramunga Arr	147.75	237	PKPbc	PKPbc	04 08 14.4	-1.0
	comp=Z,7.2nm,0.9s,baz=118,slow=3.2,SNR=21						
WRA	Warramunga Arr	147.75	237		PKPdf	04 08 11.8	-0.9
PZH	PanZhiHua	149.99	7	PKPbc	PKPdf	04 08 15.5	-0.7
CMAR	Chiang Mai Arr	157.22	17	PKPab	PKPab	04 08 56.5	-0.6
	comp=Z,1.2nm,0.4s,baz=326,slow=5.5,SNR=7.1						
CMAR	Chiang Mai Arr	157.22	17		PKPab	04 08 57.0	-0.1

IDC ***26*** *03:50:04.7±3.2, 6°.41S×110°.28E, h0^{km}, mb4.0/4, mbtmp4.0/4, MS3.7/2, Error ellipse: s-maj=206.2km s-min=23.3km az=53.0*

DJA ***26*** *03:50:14.1±1.5, 6°S±3°×11°1E±°, h13^{km}±12^{km}, M4.4/25, mB6.1/1, mb4.4/7, MLv4.3/25, Mw(mB)5.7/1*

ISC 26 03:50:12.1±1.2**, 5°.2S**±0°.1×**111°.47E**±0°.06**, h35^{km}, n36,** σ**1ˢ.28**/29**, mb3.8**/4**, Java Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BWJI	Bawean	1.33	118	P	Pn	03 50 34.3	+0.1
TBJI	Tambak Boyo	1.62	167	P	Pn	03 50 39.5	+1.3
SMRI	Semarang	2.08	209	P	Pn	03 50 45.4	+0.8
NGJI	Ngawi	2.13	180	P	Pn	03 50 47.0	+1.8
SJI	Sawahan	2.51	173	P	Pn	03 50 50.8	+0.3
SNJI	Sawahan-Nganju	2.56	174	P	Pn	03 50 52.7	+1.5
YOGI	Yogyakarta	2.83	204	P	Pn	03 50 54.9	+0.1
UGM	Wanagama	2.83	199	P	Pn	03 50 55.4	+0.5
CTJI	Waduk Cacaban	2.88	232	P	Pn	03 50 55.4	-0.2
PCJI	Pacitan	2.96	186	P	Pn	03 50 57.3	+0.6
KMMI	Kalianget	3.07	126	P	Pn	03 50 58.4	+0.3
BLJI	Banyuglugur	3.27	140	P	Pn	03 51 01.7	+0.8
KPJI	Karang Pucung	3.28	230	P	Pn	03 51 01.3	+0.3
SCJI	Gunung Srandil	3.35	223	P	Pn	03 51 02.5	+0.6
GMJI	Gumukmas	3.60	147	P	Pn	03 51 06.9	+1.4
ABJI	Asem Bagus	3.75	133	P	Pn	03 51 08.4	+1.0
BBKI	Banjar Baru	3.79	63	P	Pn	03 51 16.7	+8.7
BYJI	Banyuwangi	4.12	136	P	Pn	03 51 14.7	+2.1
JAGI	Jajag, Banyuwa	4.18	141	P	Pn	03 51 14.0	+0.6
SRBI	Singaraja	4.68	128	P	Pn	03 51 20.6	+0.4
RTBI	Rangdo, Negare	4.71	133	P	Pn	03 51 20.9	+0.2
CNJI	Cibinong	4.79	244	P	Pn	03 51 21.9	+0.1
KHKI	Kahang-Kahang	5.16	127	P	Pn	03 51 27.9	+1.1
MTKI	Muara Teweh, K	5.46	39	P	Pn	03 51 38.8	+7.8
TWSI	Taliwang, Sumb	6.40	123	P	Pn	03 51 43.6	-0.4
	16nm,1.0s						
KLSI		6.74	274	P	Pn	03 51 54.4	+5.8
	42nm,0.9s						
PLAI	Plampang	7.21	120	P	Pn	03 51 54.9	-0.1
	0.1nm48nm,1.0s						
MDSI	Maura Dua	7.31	275	P	Pn	03 52 03.6	+7.2
	0.2nm15nm,1.0s						
EDFI	Ende, Flores	10.73	110	P	Pn	03 52 46.2	+2.8
KKM	Kota Kinabalu	12.15	23	P	P	03 53 10.6	-4.5
CMAR	Chiang Mai Arr	26.58	333	P	P	03 55 49.6	+2.5
	3.8nm,0.8s,baz=153,slow=9.8,SNR=14						
	3.8nm,0.8s						
WRA	Warramunga Arr	26.62	125	P	P	03 55 47.0	-0.7
	0.9nm,1.0s,baz=297,slow=8.8,SNR=1.2						
	0.9nm,1.0s						
ASAR	Alice Springs	28.34	133	P	P	03 56 03.0	0.0
	1.4nm,0.8s,baz=304,slow=9.1,SNR=16						
	1.4nm,0.8s						
JAY	Jayapura	29.29	86	LR	LR	04 09 51.8	
	comp=Z,52nm,18.4s,baz=0.5,slow=39						
STKA	Stephens Creek	38.70	137	P	P	03 57 29.9	-3.0
	1.1nm,0.5s,baz=323,slow=10,SNR=3.2						
	1.1nm,0.5s						
KDAK	Kodiak Island	97.56	33	LR	LR	04 50 31.0	
	comp=Z,78nm,18.2s,baz=28,slow=37						

GCG 26 03:50:26.8±0.7**, 14°.53N**×**91°.85W, h94^{km}**±6^{km}**, MD3.6, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMCA	Catarina	0.39	325	*i* P	Pn	03 50 41.7	+0.5
SMCA				*i* S	Sn	03 50 53.0	+1.0
STG2	El Palmar, Qui	0.47	102	*i* P	Pn	03 50 40.9	-0.9
STG2				*i* S	Sn	03 50 52.2	-0.8
STG8	El Palmar, Qui	0.49	100	*i* P	Pn	03 50 41.2	-0.9
STG8				*i* S	Sn	03 50 53.0	-0.6
STG5	El Palmar, Qui	0.50	105	*i* P	Pn	03 50 41.0	-1.0

STG5				*i* S	Sn	03 50 51.9	-1.6
APG	El Apazote	1.42	71	*i* P	Pn	03 50 52.8	+0.9

IDC ***26*** *04:00:26.7±2.2, 22.°69S×173.°71E, h0km, mb4.0/5, mbtmp4.0/6, ML3.3/1, MS3.5/3, Error ellipse: s-maj=103.7km s-min=30.2km az=158.0*

ISC 26 04:00:33.4±1.6**, 22.°4S**±0.°5×**173.°5E**±0.°2**, h44km, n10, σ1.s31**/7**, mb3.9**/5**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.54	271	Pn	Pn	04 02 06.4	-0.9
	0.6nm,0.3s,baz=83,slow=17,SNR=2.1						
	6.3nm,0.7s						
URZ	Urewera	16.12	170	LR	LR	04 08 31.2	
	comp=Z,95nm,20.9s,baz=354,slow=31						
STKA	Stephens Creek	29.83	245	P	P	04 06 36.2	-0.3
	2.2nm,0.8s,baz=94,slow=17,SNR=2.1						
	2.2nm,0.8s						
ASAR	Alice Springs	36.38	260	P	P	04 07 34.6	+0.8
	1.2nm,0.8s,baz=86,slow=8.9,SNR=12						
	1.2nm,0.8s						
WRA	Warramunga Arr	36.53	266	P	P	04 07 34.6	-0.5
	1.1nm,0.9s,baz=107,slow=8.6,SNR=4.2						
	1.1nm,0.9s						
DAV	Davao City (W)	55.30	296	LR	LR	04 31 46.1	
	comp=Z,30nm,20.3s,baz=304,slow=34						
RPN	Rapa Nui	69.21	112	LR	LR	04 33 57.9	
	comp=Z,94nm,18.7s,baz=316,slow=29						
CMAR	Chiang Mai Arr	83.41	293	P	P	04 12 58.5	+1.8
	0.6nm,0.3s,baz=141,slow=3.7,SNR=5.8						
	0.6nm,0.3s						
PDAR	Pinedale Array	95.87	46	P	P	04 13 54.5	-1.2
	0.6nm,1.0s,baz=281,slow=3.9,SNR=4.2						
	0.6nm,1.0s						
GERES	GERESS Array B	149.11	334	PKPbc	PKiKP	04 20 18.7	+0.5
	0.5nm,0.8s,baz=38,slow=4.8,SNR=4.5						

IDC ***26*** *04:12:23.1±1.2, 25.°76N×99.°81E, h0km, mb3.7/8, mbtmp3.7/9, ML4.0/1, MS3.0/1, Error ellipse: s-maj=51.4km s-min=19.8km az=74.0*

ISC 26 04:12:25.1±1.0**, 25.°90N**±0.°08×**100.°0E**±0.°3**, h10km, n9, σ2.s02**/10**, mb3.8**/8**, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.47	188	Pn	Pn	04 14 11.2	-3.0
	0.7nm,0.3s,baz=9.2,slow=15,SNR=4.3						
CMAR				Pg	Pb	04 14 38.2	+3.3
	1.3nm,0.3s,baz=357,slow=18,SNR=18						
CMAR				Lg	Lg	04 16 08.9	
	1.1nm,0.3s,baz=359,slow=29,SNR=6.1						
CMAR				LR	LR	04 17 17.8	
	comp=Z,104nm,18.1s,baz=0.0,slow=40						
	1.1nm,0.3s						
SONM	Songino Array	22.46	11	P	P	04 17 26.6	+2.1
	0.6nm,0.7s,baz=190,slow=13,SNR=3.0						
	0.6nm,0.7s						
MKAR	Makanchi Array	25.16	331	P	P	04 17 50.2	-0.3
	1.9nm,0.8s,baz=142,slow=10.0,SNR=17						
	1.9nm,0.8s						
KURBB	Kurchatov Arra	29.68	332	P	P	04 18 30.8	-0.2
	0.5nm,0.5s,baz=145,slow=8.8,SNR=5.1						
	0.5nm,0.5s						
BVAR	Borovoye Array	35.00	329	P	P	04 19 17.4	-0.1
	1.3nm,0.6s,baz=129,slow=10,SNR=5.8						
	1.3nm,0.6s						
WRA	Warramunga Arr	56.47	140	P	P	04 22 06.5	-0.9
	0.3nm,0.6s,baz=322,slow=7.2,SNR=1.2						
	0.3nm,0.6s						
FINES	FINESS Array B	59.95	328	P	P	04 22 31.1	-0.2
	1.1nm,0.8s,baz=96,slow=8.9,SNR=2.4						
	1.1nm,0.8s						
HFS	Hagfors	66.10	327	P	P	04 23 12.6	+0.4
	0.6nm,0.6s,baz=97,slow=7.6,SNR=4.3						
	0.6nm,0.6s						
NOA	NORSAR Array B	67.12	328	P	P	04 23 17.3	-1.5
	0.4nm,0.7s,baz=78,slow=6.4,SNR=2.4						
	0.4nm,0.7s						

IDC ***26*** *04:30:56.7±1.8, 24.°40S×115.°07W, h0km, mb3.7/4, mbtmp3.7/4, MS3.8/3, Error ellipse: s-maj=93.8km s-min=31.4km az=57.0*

NEIC ***26*** *04:30:57.9±1.4, 24.°08S±0.°03×114.°9W±0.°2, h10km±1km, mb4.9/19, Error ellipse: s-maj=25.2km s-min=6.0km az=269.0*

ISC 26 04:30:57.5±0.7**, 24.°1S**±0.°1×**114.°9W**±0.°1**, h10km, n34, σ1.s36**/32**, mb4.8**/14**, MS3.8**/3**, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAOE	Nuku Hiva Isla	28.52	298	P	P	04 36 52.4	-1.1
PPT	Papeete	33.02	275	LR	LR	04 46 23.5	
	comp=Z,196nm,20.3s,baz=130,slow=28						
PAYG	Puerto Ayora	33.31	49	P	P	04 37 37.3	+1.5
ATAH	Atahualpa	38.80	70	LR	LR	04 51 01.0	
	comp=Z,138nm,18.3s,baz=40,slow=31						
LR03	Panguipulli	38.91	124	P	P	04 38 22.0	-1.4
LR03				IAmb	IAmb	04 38 39.1	
	comp=Z,60nm,2.0s						
CO02	Combarbal	39.30	110	P	P	04 38 26.7	-0.2
CO02				IAmb	IAmb	04 38 29.9	
	comp=Z,80nm,1.7s						
AC04	Llanos de Chal	39.37	106	P	P	04 38 27.0	-0.4
AC04				IAmb	IAmb	04 38 31.8	
	comp=Z,46nm,1.4s						
MT13	San Alfonso	39.93	114	P	P	04 38 30.9	-1.3
MT13				IAmb	IAmb	04 38 43.9	
	comp=Z,72nm,1.9s						
AC01	Pan de Azucar	39.99	103	P	P	04 38 31.9	-0.7
AC01				IAmb	IAmb	04 38 40.0	
	comp=Z,63nm,1.4s						
LMEL	Las Melosas	40.00	114	P	P	04 38 31.3	-1.5
LMEL				IAmb	IAmb	04 38 49.5	
	comp=Z,29nm,1.6s						
AC05	El Transito	40.02	107	P	P	04 38 32.1	-0.9
PLCA	Paso Flores	40.46	125	P	P	04 38 36.7	+0.3
	comp=Z,2.6nm,0.9s,baz=271,slow=7.6,SNR=6.1						
PLCA				LR	LR	04 51 15.5	
	comp=Z,132nm,20.9s,baz=44,slow=30						
	comp=Z,2.6nm,0.9s						
PLCA	Paso Flores	40.46	125	P	P	04 38 36.3	-0.2
AC02	Maricunga	41.22	104	P	P	04 38 42.4	-1.0
PB11	IPOC Station P	42.03	93	P	P	04 38 48.4	-1.2
HPIG		51.52	11	P	P	04 40 02.7	-1.0
HPIG				IAmb	IAmb	04 40 12.4	
	comp=Z,17nm,2.0s						
PMSA	Palmer Station	52.09	155	P	P	04 40 07.8	+0.4
GLA	Glamis	56.84	0	P	P	04 40 41.4	-0.9
435B	Jarrell	57.04	18	P	P	04 40 41.8	-1.9
435B				IAmb	IAmb	04 40 59.2	
	comp=Z,18nm,1.7s						
SGCY	Sterling City	57.23	14	P	P	04 40 44.7	-0.5
SGCY				IAmb	IAmb	04 40 51.7	
	comp=Z,23nm,2.0s						
NVAR	Mina Array Bea	62.29	357	P	P	04 41 21.0	+1.0
	comp=Z,0.3nm,0.8s,baz=183,slow=9.5,SNR=5.0						
	comp=Z,0.3nm,0.8s						
NVAR	Mina Array Bea	62.29	357	P	P	04 41 19.9	-0.1
MPU	Maple Canyon	63.86	3	P	P	04 41 30.7	+0.2
SBA	Scott Base	64.16	193	P	P	04 41 32.5	+0.8
SBA				IAmb	IAmb	04 41 51.1	
	comp=Z,12nm,1.4s						
PDAR	Pinedale Array	66.72	4	P	P	04 41 53.6	+4.7
	comp=Z,0.4nm,0.7s,baz=169,slow=7.3,SNR=4.7						
	comp=Z,0.4nm,0.7s						
PDAR	Pinedale Array	66.72	4	P	P	04 41 49.4	+0.4
YKA	Yellowknife Ar	86.30	0	P	P	04 43 40.8	+1.7
	comp=Z,0.5nm,1.0s,baz=183,slow=4.5,SNR=5.3						
	comp=Z,0.5nm,1.0s						
POKR	Poker Plat Res	92.42	347	P	P	04 44 06.2	-1.8
ZALV	Zalesovo Beam	146.74	339	PKPbc	PKPbc	04 50 39.4	0.0
	comp=Z,1.4nm,0.9s,baz=25,slow=1.3,SNR=4.8						
ZALV	Zalesovo Beam	146.74	339		PKPdf	04 50 37.8	+0.1
KURK	Kurchatov	151.45	342		PKPbc	04 50 50.9	-0.6
KURBB	Kurchatov Arra	151.56	342	PKPbc	PKiKP	04 50 53.6	+1.5
	comp=Z,0.3nm,0.4s,baz=46,slow=1.5,SNR=4.7						
MKAR	Makanchi Array	153.51	333	PKPbc	PKiKP	04 50 58.0	+1.6
	comp=Z,0.4nm,0.6s,baz=42,slow=2.0,SNR=3.9						
MKAR	Makanchi Array	153.51	333	PKPdf	PKPdf	04 50 48.6	0.0

IDC ***26*** *04:52:04.4±0.9, 52.°84S×21.°55E, h0km, mb4.0/10, mbtmp4.1/10, MS4.0/28, Error ellipse: s-maj=31.4km s-min=20.2km az=95.0*

NEIC ***26*** *04:52:06.0±1.4, 52.°9S±0.°1×21.°6E±0.°3, h10km±1km, mb4.6/14, Error ellipse: s-maj=26.6km s-min=20.5km az=93.0*

GCMT ***26*** *04:52:06.0±0.3, 53.°06S±0.°03×21.°93E±0.°07, h20km±1km, MW4.9/70, Moment Tensor Solution. s17,c17; s70,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.59±.21; M$_{\theta\theta}$2.27±.14; M$_{\phi\phi}$0.31±.14; M$_{r\theta}$-0.18±.27; M$_{\theta\phi}$-0.08±.09; M$_{\phi r}$1.83±.33; Best double couple: M$_0$2.88500×10^{16} NP1:φ$_s$252.00000°, δ46.00000°, λ-126.00000°. NP2: φ$_s$119.00000°, δ55.00000°, λ-58.00000°. Principal axes: T 2.2940, Plg5.0000°, Azm187.0000°; N 1.1800, Plg25.0000°, Azm279.0000°; P -3.4760, Plg64.0000°, Azm87.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 04:52:05.8±0.7**, 52.°87S**±0.°09×**21.°6E**±0.°2**, h10km, n61, σ0.s97**/35**, mb4.5**/13**, MS4.0**/28**, 4C-1D, South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H04S2	CROZET ISLANDS	20.34	85	T	T	05 17 21.6	
	baz=241,slow=76,SNR=37						
H04S3	CROZET ISLANDS	20.34	85	T	T	05 17 23.8	
	baz=241,slow=76,SNR=31						
H04S1	CROZET ISLANDS	20.36	85	T	T	05 17 23.2	
	baz=241,slow=76,SNR=35						
SUR	Sutherland	20.49	358	P	P	04 56 43.9	+0.1
	18nm,1.0s,baz=114,slow=4.8,SNR=4.3						
SUR				LR	LR	05 02 57.2	
	comp=Z,523nm,20.2s,baz=171,slow=32						
	18nm,1.0s						
SUR	Sutherland	20.49	358	P	P	04 56 44.4	+0.5
SUR				IAmb	IAmb	04 56 47.8	
	comp=Z,36nm,1.2s						
TROLL	Troll, Antarti	20.93	197	⇓P	P	04 56 49.2	+0.8
	comp=Z,399nm,0.8s						
SNAA	Sanae	21.71	201	⇑P	P	04 56 57.5	+0.9
	comp=Z,277nm,0.9s						
SNAA	Sanae	21.71	201	P	P	04 56 57.7	+1.1
	comp=Z,22nm,1.1s,baz=32,slow=11,SNR=17						
SNAA				LR	LR	05 03 28.8	
	comp=Z,596nm,19.7s,baz=354,slow=32						
	comp=Z,22nm,1.1s						
SNAA	Sanae	21.71	201	P	P	04 56 56.1	-0.5
SNAA				IAmb	IAmb	04 56 59.7	
	comp=Z,36nm,1.2s						
VNA2	Neumayer--Watz	22.27	205	⇑P	P	04 57 03.2	+0.7
	comp=Z,16nm,0.6s,baz=33,slow=11						
VNA1	Neumayer--Stat	22.32	206	⇑P	P	04 57 04.8	+1.7
	comp=Z,28nm,1.1s						
VNA3	Neumayer Olymp	23.05	205	⇑P	P	04 57 12.3	+1.5
	comp=Z,14nm,0.9s						
BOSA	Boshof	24.39	8	P	P	04 57 23.6	-0.5
	comp=Z,2.3nm,0.9s,baz=210,slow=9.2,SNR=3.3						
BOSA				LR	LR	05 05 17.4	
	comp=Z,499nm,19.7s,baz=192,slow=33						
	comp=Z,2.3nm,0.9s						
BOSA	Boshof	24.39	8	P	P	04 57 23.4	-0.7
BOSA				IAmb	IAmb	04 57 27.6	
	comp=Z,13nm,1.4s						
MAW	Mawson	24.61	143	LR	LR	05 04 49.5	
	comp=Z,157nm,21.9s,baz=300,slow=31						
LBTB	Lobatse	27.98	8	LR	LR	05 07 16.9	
	comp=Z,412nm,20.8s,baz=183,slow=33						
LBTB	Lobatse	27.98	8	P	P	04 57 55.3	-1.4
LBTB				IAmb	IAmb	04 58 19.1	
	comp=Z,13nm,1.4s						
LPHEP	Lephephe	29.64	8	P	P	04 58 11.6	+0.2
LPHEP				IAmb	IAmb	04 58 28.8	
	comp=Z,15nm,1.4s						
TSUM	Tsumeb	33.75	353	LR	LR	05 10 56.3	
	comp=Z,230nm,19.1s,baz=150,slow=34						
QSPA	South Pole Qui	37.35	180	P	P	04 59 17.4	-0.8
LSZ	Lusaka	37.87	10	LR	LR	05 13 21.2	
	comp=Z,627nm,19.3s,baz=160,slow=34						
PMSA	Palmer Station	42.41	219	LR	LR	05 13 41.7	
	comp=Z,213nm,18.9s,baz=117,slow=31						
VNDA	Vanda	47.55	169	P	P	05 00 42.1	+1.4
	comp=Z,1.3nm,0.9s,baz=190,slow=4.0,SNR=4.1						
VNDA				LR	LR	05 20 09.3	
	comp=Z,233nm,19.9s,baz=202,slow=35						
	comp=Z,1.3nm,0.9s						
VNDA	Vanda	47.55	169	P	P	05 00 41.1	+0.4
MBAR	Mbarara	52.65	12	LR	LR	05 21 46.7	
	comp=Z,166nm,21.5s,baz=190,slow=34						
TRQA	Tornquist	57.20	249	P	P	05 01 52.5	-0.2
PLCA	Paso Flores	60.02	241	P	P	05 02 11.9	-0.6
	comp=Z,3.7nm,1.1s,baz=159,slow=4.8,SNR=4.9						
	comp=Z,3.7nm,1.1s						
PLCA	Paso Flores	60.02	241	P	P	05 02 13.9	+1.4
PLCA				IAmb	IAmb	05 02 14.4	
	comp=Z,7.7nm,1.2s						
CPUP	Villa Florida	62.91	262	P	P	05 02 31.3	-0.8
	comp=Z,2.1nm,1.0s,baz=147,slow=7.9,SNR=4.4						
	comp=Z,2.1nm,1.0s						
CPUP	Villa Florida	62.91	262	P	P	05 02 32.9	+0.7
CPUP				IAmb	IAmb	05 02 37.0	
	comp=Z,9.2nm,1.4s						
FURI	Furi	63.23	19	LR	LR	05 26 38.4	
	comp=Z,69nm,21.4s,baz=192,slow=33						
DBIC	Dimbokro	63.43	330	LR	LR	05 23 50.9	
	comp=Z,114nm,21.5s,baz=182,slow=30						
BDFB	Brasilia	65.38	277	P	P	05 02 47.3	-1.3
	comp=Z,2.3nm,0.9s,baz=330,slow=6.7,SNR=3.4						
	comp=Z,2.3nm,0.9s						
BDFB	Brasilia	65.38	277	P	P	05 02 47.0	-1.6
BDFB				IAmb	IAmb	05 02 51.8	
	comp=Z,4.6nm,1.1s						
TORD	Torodi Ar. Bea	67.95	339	P	P	05 03 05.2	+0.5
	comp=Z,1.2nm,1.0s,baz=159,slow=3.6,SNR=5.0						
	comp=Z,1.2nm,1.0s						
TORD	Torodi Ar. Bea	67.95	339	P	P	05 03 05.1	+0.5
LPAZ	La Paz	77.03	260	P	P	05 04 00.3	+0.6
	comp=Z,0.5nm,0.5s,baz=141,slow=6.5,SNR=2.8						
LPAZ				LR	LR	05 35 08.7	
	comp=Z,29nm,18.6s,baz=99,slow=34						
	comp=Z,0.5nm,0.5s						
LPAZ	La Paz	77.03	260	P	P	05 03 58.5	-1.3
PALK	Pallekele	77.95	61	LR	LR	05 30 11.3	
	comp=Z,70nm,20.2s,baz=214,slow=29						
EIL	Elat	83.02	12	LR	LR	05 41 29.0	
	comp=Z,159nm,18.3s,baz=208,slow=36						
ASAR	Alice Springs	83.89	121	P	P	05 04 34.4	-1.4
	comp=Z,0.4nm,0.3s,baz=216,slow=3.0,SNR=4.1						
	comp=Z,0.4nm,0.3s						
ASAR	Alice Springs	83.89	121	P	P	05 04 35.5	-0.3
MDP	Montagnes des	84.62	286	LR	LR	05 35 45.3	
	comp=Z,35nm,21.3s,baz=154,slow=31						
ASF	Jabal al Asfar	85.73	13	LR	LR	05 43 22.1	
	comp=Z,82nm,19.1s,baz=207,slow=36						
MMAI	Mount Meron Ar	86.37	12	LR	LR	05 43 07.5	
	comp=Z,71nm,18.3s,baz=220,slow=36						
URZ	Urewera	86.78	161	LR	LR	05 42 27.2	
	comp=Z,114nm,18.6s,baz=171,slow=35						
MDT	Midelt	88.34	338	LR	LR	05 40 49.5	
	comp=Z,46nm,19.0s,baz=158,slow=33						
KEST	Kesra	88.88	350	LR	LR	05 45 05.6	
	comp=Z,126nm,19.6s,baz=295,slow=36						
RPN	Rapa Nui	89.61	222	LR	LR	05 35 37.6	
	comp=Z,28nm,21.8s,baz=107,slow=29						
VAE	Valguarnera	90.20	354	LR	LR	05 47 32.9	
	comp=Z,119nm,18.0s,baz=197,slow=37						
GURO	Guroymak-BITLI	92.76	16	P	P	05 05 18.4	+0.5
BRTR	Keskin Array B	92.81	9	LR	LR	05 49 40.5	
	comp=Z,40nm,18.1s,baz=180,slow=37						
BRDH	Bariadhala	96.53	61	LR	LR	05 42 52.3	
	comp=Z,49nm,20.2s,baz=24,slow=32						
CMAR	Chiang Mai Arr	97.14	69	LR	LR	05 44 26.8	
	comp=Z,22nm,18.1s,baz=260,slow=32						
KBZ	Khabaz	97.96	15	LR	LR	05 51 58.8	
	comp=Z,35nm,18.3s,baz=188,slow=37						
MLR	Muntele Rosu	98.06	3	LR	LR	05 51 44.8	
	comp=Z,78nm,20.0s,baz=230,slow=36						
PDAR	Pinedale Array	146.29	273	PKPbc	PKPdf	05 11 45.6	+0.7
	comp=Z,1.7nm,0.9s,baz=92,slow=3.4,SNR=8.6						
PDAR	Pinedale Array	146.29	273		PKPdf	05 11 44.5	-0.5
NVAR	Mina Array Bea	148.92	259	PKPbc	PKiKP	05 11 54.4	-0.4
	comp=Z,0.8nm,0.8s,baz=165,slow=3.1,SNR=4.7						
NVAR	Mina Array Bea	148.92	259	PKPdf	PKPdf	05 11 48.3	-1.2
YKA	Yellowknife Ar	155.17	310	PKPab	PKPab	05 12 23.6	+0.9
	comp=Z,0.6nm,0.8s,baz=91,slow=4.3,SNR=8.0						

DJA ***26*** *04:59:09.0±0.1, 7°S±2°×12°6E±°, h518km±2km, M4.2/48, mb4.4/48, mB4.8/21, MLv4.7/31, Mw(mB)4.0/21, MwMwp5.8/1, Mwp5.9/1*

NEIC ***26*** *04:59:09.6±1.6, 7.°0S±0.°1×125.°7E±0.°1, h515km±7km, mb4.4/10, Error ellipse: s-maj=20.8km s-min=14.1km az=63.0*

IDC ***26*** *04:59:09.9±1.4, 7.°07S×125.°62E, h523km±15km, mb3.3/8, mbtmp4.4/12, Error ellipse: s-maj=36.3km s-min=9.0km az=64.0*

ISC 26 04:59:08.8±0.4**, 7.°10S**±0.°06×**125.°62E**±0.°07**, h511km, n126, σ1.s21**/136**, mb4.5**/17**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	2.96	207		P	05 00 22.7	+2.1
SOEI	Soe	2.96	207	P	P	05 00 22.6	+2.0
SOEI	Soe	2.96	207	P	P	05 00 22.4	+1.8
SOEI				S	S	05 01 19.7	+0.8
BBSI	Bau Bau	3.43	298	P	P	05 00 26.7	+3.0
BBSI				S	S	05 01 27.7	+3.1
BATI	Baumata	3.65	212	P	P	05 00 27.6	+2.3
	139nm,0.3s,baz=49,slow=0.5,SNR=21						
BATI				S	S	05 01 25.1	-2.5
	188nm,0.4s,baz=322,slow=7.2,SNR=4.3						
BATI	Baumata	3.65	212	P	P	05 00 27.4	+2.1
MMRI	Maumere	3.69	245	P	P	05 00 26.0	+0.5
MMRI	Maumere	3.69	245	P	P	05 00 28.1	+2.5
MMRI	Maumere	3.69	245	P	P	05 00 26.1	+0.5
MMRI				S	S	05 01 27.2	-0.8
NLAI	Namlea	4.10	21	P	P	05 00 29.8	+0.9
EDFI	Ende, Flores	4.23	247	P	P	05 00 30.1	+0.1
AAI	Ambon	4.24	37	P	P	05 00 30.5	+0.5
KDI	Kendari	4.32	316	P	P	05 00 31.3	+0.7
KRAI	Karang Ratu	4.66	36	P	P	05 00 35.0	+1.5
KKSI	Kolaka, Sulawe	4.91	306	P	P	05 00 37.6	+2.0
BNDI	Bandanaira	4.97	59	P	P	05 00 36.6	+0.4
MSAI	Masohi	4.97	42	P	P	05 00 37.0	+0.8
SANI	Sanana	5.03	4	P	P	05 00 36.9	+0.2
SANI	Sanana	5.03	4	P	P	05 00 36.5	-0.2
	0.2nm73nm,0.8s						
BSSI	Bau Bau, Buton	5.19	280	P	P	05 00 40.7	+2.6
	0.6nm6μm181nm,0.8s						
SAUI	Saumlaki	5.70	99	P	P	05 00 43.3	+0.5
LBFI	Labuhan Bajo,	5.84	256	P	P	05 00 44.5	+0.3
WSI	Waingapu	5.86	244	P	P	05 00 45.2	+0.9
	110nm,0.5s						
BASI	Baing, Sumba	5.88	238	P	P	05 00 45.2	+0.8
	2μm104nm,0.4s						
KAPI	Kappang	6.19	289	P	P	05 00 50.1	+2.5
KAPI	Kappang	6.19	289	P	P	05 00 50.0	+2.5
	24nm,0.9s						
KAPI	Kappang	6.19	289	P	P	05 00 50.0	+2.5
	24nm,0.9s						
SPSI	Sidrap Palu	6.61	298	P	P	05 00 52.9	+1.4
	0.1nm28nm,0.8s						
LUWI	Luwuk	6.65	335		P	05 00 53.2	+1.3
LUWI	Luwuk	6.65	335	P	P	05 00 53.4	+1.4
	154nm,0.9s						
LUWI	Luwuk	6.65	335	P	P	05 00 53.4	+1.4
	0.5nm153nm,0.8s						
WBSI	Waikabubak, Su	6.67	247	P	P	05 00 51.3	-0.8
	1.0nm2μm168nm,0.7s						
TTSI	Tana Toraja	7.04	305	P	P	05 00 56.9	+1.0
	0.1nm31nm,0.6s						
APSI	Ampana	7.31	327	P	P	05 01 00.3	+1.7
	0.3nm981nm83nm,0.9s						
DBNI	Kabupaten Domp	7.38	259	P	P	05 00 58.4	-0.8
	0.2nm26nm,0.6s						
DRS	Darwin Rock St	7.43	136	P	P	05 01 01.1	+1.5
	52nm,0.6s						
PMSI	Majene	7.57	298	P	P	05 01 03.7	+2.5
	0.2nm32nm,0.8s						
FAKI	Fak Fak	7.79	58		P	05 01 02.6	-0.8
FAKI	Fak Fak	7.79	58	P	P	05 01 02.9	-0.6
	378nm,0.6s						
FAKI	Fak Fak	7.79	58	P	P	05 01 01.9	-1.6
MTN	Manton Dam	7.88	137		P	05 01 05.2	+1.0
PLAI	Plampang	7.96	257	P	P	05 01 04.0	-1.1
	0.3nm847nm82nm,0.7s						
GTOI	Gorontalo	8.11	341	P	P	05 01 09.1	+2.4
	63nm,1.1s						
SIJI	Sorong	8.36	43	P	P	05 01 09.4	+0.1
	2μm116nm,0.6s						
SWI	Sorong	8.36	42	P	P	05 01 09.2	-0.1
	2μm165nm,0.6s						
MRSI	Marisa	8.37	334	P	P	05 01 09.9	+0.5
	55nm,0.8s						
KMPI	Kaimana, Papua	8.74	67	P	P	05 01 13.4	+0.2
	125nm,0.6s						
TWSI	Taliwang, Sumb	8.81	259	P	P	05 01 12.5	-1.4
	624nm43nm,0.7s						
KNRA	Kununurra	9.07	160		P	05 01 18.1	+1.6
MPSI	Mapaga	9.34	322	P	P	05 01 19.4	0.0
TOLI2	Tolitoli	9.48	329	P	P	05 01 21.0	+0.2
TOLI2	Tolitoli	9.48	329	P	P	05 01 22.1	+1.2
	16nm,0.9s						
KLNI	Mataram	9.53	261	P	P	05 01 22.0	+0.6
	62nm,0.5s						
KHKI	Kahang-Kahang	10.01	262	P	P	05 01 27.3	+0.9
	42nm,0.6s						
RKPI	Ransiki, Papua	10.17	57	P	P	05 01 28.1	-0.1
MWPI	Manokwari, Pap	10.39	54	P	P	05 01 31.5	+1.0
IGBI	Denpasar	10.52	260	P	P	05 01 31.8	0.0
RTBI	Rangdo, Negare	10.67	262	P	P	05 01 33.9	+0.5
	48nm,0.8s						
FITZ	Fitzroy Crossi	10.94	180	P	P	05 01 37.5	+1.4
	2.3nm,0.3s,baz=2.1,slow=10,SNR=52						
FITZ				S	S	05 03 35.7	-1.7
	12nm,0.5s,baz=211,slow=14,SNR=23						
JAGI	Jajag, Banyuwa	11.45	262	P	P	05 01 40.0	-1.6
JAGI	Jajag, Banyuwa	11.45	262	P	P	05 01 43.7	+2.1
JAGI	Jajag, Banyuwa	11.45	262	P	P	05 01 40.3	-1.3
	1μm48nm,0.8s						
KMMI	Kalianget	11.57	270	P	P	05 01 45.2	+2.3
	63nm,0.7s						
BLJI	Banyuglugur	11.95	266	P	P	05 01 47.9	+1.0
BAKI	Biak	11.98	61	P	P	05 01 47.5	+0.2
	187nm,1.2s						
GMJI	Gumukmas	12.13	264	P	P	05 01 47.7	-1.1
	19nm,0.5s						
SNJI	Sawahan-Nganju	13.77	266	P	P	05 02 06.7	+0.5
	19nm,0.9s						
SMPI	Sarmi	13.99	69	P	P	05 02 07.7	-0.7
	24nm,1.2s						
PCJI	Pacitan	14.36	265	P	P	05 02 10.6	-1.7
	30nm,0.6s						
GENI	Genyem	15.16	74	P	P	05 02 20.6	-0.1
	91nm,1.0s						
GENI	Genyem	15.16	74	P	P	05 02 20.2	-0.5
	91nm,1.2s						
WB0	Warramunga Arr	15.20	147		P	05 02 20.9	-0.1
WB0				IAmb	IAmb	05 02 23.9	
	comp=Z,41nm,1.1s						
WRA	Warramunga Arr	15.32	147	P	P	05 02 21.8	-0.4
	comp=Z,8.9nm,0.3s,baz=337,slow=8.3,SNR=112						
WRA	Warramunga Arr	15.32	147	P	P	05 02 20.6	-1.7
WRA				IAmb	IAmb	05 02 25.2	
	comp=Z,0.9nm,0.3s						
WR8	Warramunga Arr	15.41	147		P	05 02 22.9	-0.3
JAY	Jayapura	15.70	74	P	P	05 02 24.7	-1.6
	comp=Z,25nm,0.9s						
SCJI	Gunung Srandil	16.33	267	P	P	05 02 32.0	-0.8
	comp=Z,25μmcomp=Z,22nm,0.7s						
KPJI	Karang Pucung	16.56	268	P	P	05 02 34.8	-0.3
	comp=Z,48nm,0.6s						
BBJI	Bungbulang	17.83	268	P	P	05 02 46.9	-0.4
	comp=Z,72nm,0.7s						
BBJI	Bungbulang	17.83	268	P	P	05 02 46.2	-1.1
AS31	Alice Springs	18.30	155	P	P	05 02 52.2	+0.8
AS31				IAmb	IAmb	05 02 54.3	
	comp=Z,12nm,0.4s						
ASAR	Alice Springs	18.30	155	P	P	05 02 52.1	+0.7
	comp=Z,15nm,0.4s,baz=342,slow=14,SNR=246						
ASAR				S	S	05 05 52.7	-0.1
	comp=Z,3.9nm,0.8s,baz=344,slow=23,SNR=14						
ASAR				PcP	PcP	05 06 55.9	-0.4
	comp=Z,0.6nm,0.4s,baz=352,slow=1.9,SNR=5.0						
ASAR				ScP	ScP	05 09 41.9	-1.5
	comp=Z,1.6nm,0.6s,baz=344,slow=1.7,SNR=14						
ASAR	Alice Springs	18.30	155	P	P	05 02 52.1	+0.7
ASAR					PcP	05 06 55.3	-1.0
ASAR					ScP	05 09 41.7	-1.7
CNJI	Cibinong	18.35	268	P	P	05 02 50.9	-1.1
	comp=Z,803nmcomp=Z,106nm,1.0s						
TPI	Tanjungpandan	18.41	283	P	P	05 02 53.5	+1.0

	comp=Z,886nmcomp=Z,29nm,0.9s						
COEN	Coen	18.55	113	P	P	05 02 53.8	+0.1
COEN				IAmb	IAmb	05 02 54.1	
	comp=Z,15nm,0.5s						
QIS	Mount Isa	19.04	136	P	P	05 02 58.4	+0.2
	comp=Z,72nm,0.4s						
KASI	Kota Agung	21.06	273	P	P	05 03 16.5	-0.1
	comp=Z,14nm,0.6s						
QLP	Quilpie	26.25	140	P	P	05 04 03.8	+1.0
	comp=Z,32nm,0.9s						
STKA	Stephens Creek	28.81	151	P	P	05 04 26.2	+1.1
	comp=Z,14nm,0.5s,baz=331,slow=8.7,SNR=60						
	comp=Z,14nm,0.5s						
STKA	Stephens Creek	28.81	151	P	P	05 04 26.1	+1.0
STKA	Stephens Creek	28.81	151	P	P	05 04 25.8	+0.6
	comp=Z,5.4nm,0.8s						
HTT	Hallett	28.96	157	P	P	05 04 27.7	+1.2
	comp=Z,26nm,0.8s						
AULRC	Lightning Ridg	30.61	139	P	P	05 04 41.1	+0.3
	comp=Z,21nm,1.4s						
CMSA	Cobar Meteorol	30.70	145	P	P	05 04 42.7	+1.1
	comp=Z,19nm,0.6s						
AUDCS	Dubbo College	32.93	142	P	P	05 05 01.7	+1.1
	comp=Z,32nm,0.8s						
CAN	Canberra	35.35	146	P	P	05 05 22.9	+1.9
	comp=Z,37nm,0.8s						
AUMHS	Melrose High S	35.43	146	P	P	05 05 23.2	+1.5
	comp=Z,35nm,0.8s						
CMAR	Chiang Mai Arr	36.57	314	P	P	05 05 31.5	+0.2
	comp=Z,1.8nm,0.6s,baz=143,slow=6.3,SNR=12						
	comp=Z,1.8nm,0.6s						
CMAR	Chiang Mai Arr	36.57	314	P	P	05 05 30.0	-1.3
RPZ	Rata Peaks	53.88	140	P	P	05 07 44.5	+0.8
SONM	Songino Array	57.27	345	P	P	05 08 07.1	-0.2
	comp=Z,0.7nm,0.7s,baz=155,slow=6.2,SNR=4.0						
	comp=Z,0.7nm,0.7s						
SONM	Songino Array	57.27	345	P	P	05 08 06.8	-0.5
PETK	Petropavlovsk-	65.85	21	P	P	05 09 03.5	+0.3
	comp=Z,2.7nm,0.7s,baz=212,slow=7.4,SNR=1.6						
	comp=Z,2.7nm,0.7s						
PETK	Petropavlovsk-	65.85	21	P	P	05 09 03.4	+0.2
MKAR	Makanchi Array	65.99	329	P	P	05 09 04.3	+0.1
	comp=Z,0.4nm,0.5s,baz=126,slow=7.1,SNR=6.7						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	65.99	329	P	P	05 09 04.2	-0.1
ZALV	Zalesovo Beam	69.81	336	P	P	05 09 26.5	-0.9
	comp=Z,2.1nm,0.4s,baz=133,slow=5.2,SNR=11						
	comp=Z,2.1nm,0.4s						
ZALV	Zalesovo Beam	69.81	336	P	P	05 09 26.7	-0.7
KURBB	Kurchatov Arra	70.38	330	P	P	05 09 30.4	-0.4
	comp=Z,0.7nm,0.6s,baz=133,slow=5.1,SNR=9.6						
	comp=Z,0.7nm,0.6s						
KURK	Kurchatov	70.39	330	P	P	05 09 30.9	0.0
VNDA	Vanda	72.91	172	P	P	05 09 45.0	-0.2
	comp=Z,1.3nm,0.5s,baz=325,slow=7.0,SNR=8.1						
	comp=Z,1.3nm,0.5s						
VNDA	Vanda	72.91	172	P	P	05 09 45.2	0.0
VNDA				IAmb	IAmb	05 09 47.1	
	comp=Z,1.6nm,0.7s						
TIXI	Tiksi	78.61	1		P	05 10 15.9	-0.8
TIXI				IAmb	IAmb	05 10 16.5	
	comp=Z,4.4nm,0.5s						
PDAR	Pinedale Array	120.02	44	PKP	PKPdf	05 17 01.1	-0.7
	comp=Z,0.2nm,0.5s,baz=84,slow=2.7,SNR=5.0						
PDAR	Pinedale Array	120.02	44		PKPdf	05 17 00.9	-0.8
TORD	Torodi Ar. Bea	124.56	281	PKP	PKPdf	05 17 10.7	-0.2
	comp=Z,1.0nm,0.8s,baz=28,slow=3.7,SNR=4.4						
TXAR	Lajitas Array	128.68	58	PKP	PKPdf	05 17 18.6	+0.1
	comp=Z,0.2nm,0.6s,baz=211,slow=3.6,SNR=4.2						
TXAR	Lajitas Array	128.68	58		PKiKP	05 17 19.1	-0.1
PLCA	Paso Flores	130.13	164	PKP	PKPdf	05 17 21.2	+0.2
	comp=Z,2.0nm,1.0s,baz=232,slow=6.7,SNR=3.4						
BLOK	Blackwell	131.11	46		PKPpre	05 17 15.1	
CPUP	Villa Florida	146.65	175	PKPbc	PKPbc	05 17 53.5	-0.1
	comp=Z,1.6nm,0.4s,baz=176,slow=2.5,SNR=12						
CPUP	Villa Florida	146.65	175		PKPbc	05 17 54.0	+0.3
NNA	Nana	150.70	130	PKPbc	PKiKP	05 18 04.5	0.0
	comp=Z,4.9nm,0.6s,baz=29,slow=3.1,SNR=4.0						
LPAZ	La Paz	153.07	150	PKPab	PKPab	05 18 23.6	-0.2
	comp=Z,2.5nm,0.6s,baz=189,slow=2.7,SNR=7.1						
LPAZ	La Paz	153.07	150	PKPbc	PKPbc	05 18 09.2	-0.8
LPAZ					PKPab	05 18 24.1	+0.2

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*IDC **26** 05:03:54.5±1.0, 3.°34N×74.°02W, h0^{km}, mb3.7/4, mbtmp3.9/6, ML3.4/2, MS3.1/6, Error ellipse: s-maj=26.6km s-min=13.1km az=85.0*

*NEIC **26** 05:03:56.8±1.9, 3.°48N±0.°06×73.°97W±0.°08, h10^{km}±2^{km}, mb4.3/7, Error ellipse: s-maj=15.9km s-min=6.6km az=121.0*

*RSNC **26** 05:03:56.6±0.0, 3°N±1°×7°4W±°, h18^{km}±2^{km}, M4.0, mB4.9, mb4.5, ML3.8, Mw4.0, Mw(mB)4.2*

ISC 26 05:03:55.7±0.5**, 3.°41N**±0.°02×**74.°16W**±0.°03**, h10**^{km}**, n64, σ1^{s}80**/93**, mb4.3**/3**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	La Uribe, Meta	0.28	234	P	Pg	05 04 00.9	-0.4
URMC				S	Sg	05 04 04.4	-0.7
PRAC	Prado	0.79	292	P	Pg	05 04 09.6	-1.3
PRAC				S	Sg	05 04 19.4	-1.8
VILC	Villavicencio,	0.84	34	P	Pg	05 04 11.8	-0.1
VILC				S	Sg	05 04 23.3	+0.5
ORTC	Ortega, Tolima	1.20	295	P	Pb	05 04 16.8	-1.7
ORTC				S	Sb	05 04 32.2	-1.8
CHIC	Chingaza	1.28	19	P	Pn	05 04 18.5	-1.6
CHIC				S	Sb	05 04 37.2	+0.3
MACC	Macarena, Meta	1.29	166	P	Pn	05 04 19.7	-0.2
MACC				S	Sb	05 04 37.8	+0.9
ROSC	El Rosal	1.43	353	Pg	Pn	05 04 22.4	+0.4
	349nm,0.3s,baz=160,slow=4.9,SNR=696						
ROSC				Lg	Lg	05 04 42.9	
	185nm,0.3s,baz=165,slow=21,SNR=8.3						
ROSC	El Rosal	1.43	353		Pn	05 04 22.3	+0.2
BETC	Betania	1.47	241	P	Pn	05 04 22.3	-0.1
BETC				S	Sn	05 04 41.2	-0.6
ANIL	Santa Ana	1.64	311	P	Pn	05 04 24.3	-0.6
ANIL				S	Sn	05 04 45.6	-0.7
GARC	Garzon, Huila	1.81	228	P	Pn	05 04 27.9	+0.8
GARC				S	Sn	05 04 51.1	+0.9
RECRC	Villamaria, Ca	1.95	322	P	Pn	05 04 30.2	+0.9
RECRC				S	Sn	05 04 54.4	+0.3
NIZA	Niza - Manizal	2.10	321	P	Pb	05 04 33.0	-1.0
NIZA				S	Sb	05 04 59.3	-0.9
CMAN1	Manizales, Cal	2.14	320	P	Pn	05 04 33.2	+1.4
CMAN1				S	Sb	05 05 01.8	+0.3
SPBC	San Pablo de B	2.23	2	P	Pn	05 04 35.1	+2.3
SPBC				S	Sb	05 05 04.9	+1.1
YOTC	Yotoco, Valle	2.26	285	P	Pn	05 04 33.7	+0.5
YOTC				S	Sb	05 05 03.9	-0.8
FLOC	Florencia	2.35	219	P	Pn	05 04 36.8	+2.3
FLOC				S	Sb	05 05 07.2	-0.2
JAMC	Jamundi, Valle	2.52	266	P	Pn	05 04 39.0	+2.1
JAMC				S	Sb	05 05 12.4	0.0
POPC	Popayan, Colom	2.66	251	P	Pn	05 04 41.2	+2.3
POPC				S	Sb	05 05 16.9	+0.5
RUSC	La Rusia	2.69	23	P	Pn	05 04 42.2	+2.7
RUSC				S	Sb	05 05 16.5	-1.0
CBOC	Ciudad Bolivar	3.06	323	P	Pb	05 04 47.9	-2.5
CBOC				P	Pb	05 04 47.9	-2.5
CBOC				P	Pb	05 04 47.9	-2.5
CBOC				S	Sb	05 05 28.1	+0.2
PTBC	PUERTO BERRIO,	3.12	355	P	Pn	05 04 46.8	+1.8
PTBC				S	Sn	05 05 25.9	+3.5
PTLC	Puerto Leguiza	3.28	191	P	Pn	05 04 51.7	+4.5
PTLC				S	Sb	05 05 33.3	-0.8
BARC	Barichara	3.31	17	P	Pn	05 04 50.8	+3.0
BARC				S	Sb	05 05 34.9	-0.1
CRUC	La Cruz	3.34	237	P	Pb	05 04 52.3	-2.9
CRUC				S	Sb	05 05 38.4	+2.3
BBAC	Balboa, Cauca	3.38	246	P	Pn	05 04 50.7	+1.9
BBAC				S	Sb	05 05 40.2	+3.0
BRJC	Barrancabermej	3.56	7	P	Pn	05 04 52.7	+1.6
BRJC				S	Sn	05 05 36.3	+3.0
GCUF	Volcan Galeras	3.85	236	P	Pn	05 04 58.7	+3.1
GR1C	Gorgona, Isla	4.03	264	P	Pn	05 04 59.3	+1.9
GR1C				S	Sn	05 05 45.8	+1.1
PAMC	Pamplona, Colo	4.16	20	P	Pn	05 05 02.9	+3.1
PAMC				S	Sn	05 05 50.0	+1.2
UREC	San Jos de Ur	4.53	342	P	Pn	05 05 06.8	+2.5
UREC				S	Sn	05 05 59.3	+2.2
OCAC	Ocana	4.87	10	P	Pn	05 05 10.9	+1.7
OCAC				S	Sn	05 06 08.5	+2.8
OTAV	Otavalo	5.33	234		Pn	05 05 19.1	+3.4
PAC1	Pacto, Paraso	5.59	236	P	Pn	05 05 23.9	+4.8
	751nm25nm,0.7s						
SLOR	San Lorenzo -	5.98	227		Pn	05 05 29.2	+4.5
CAPC	Capurgana	6.08	329	P	Pn	05 05 27.4	+1.6
	33nm,0.9s						
ARGC	Ariguani, Magd	6.41	359	P	Pn	05 05 32.0	+1.8
	37nm,1.1s						
SDV	Santo Domingo	6.47	33	Pn	Pn	05 05 33.1	+1.9
	6.8nm,0.3s,baz=331,slow=9.1,SNR=3.1						
SDV				Sn	Sn	05 06 43.2	-2.1
	0.7nm,0.3s,baz=359,slow=8.9,SNR=3.6						
SDV				Lg	Lg	05 07 17.5	
	11nm,0.3s,baz=340,slow=18,SNR=3.1						
SDV				LR	LR	05 08 32.7	
	comp=Z,162nm,18.6s,baz=256,slow=43						
	21nm,0.3s						
SDV	Santo Domingo	6.47	33		Pn	05 05 31.1	-0.2
SDV	Santo Domingo	6.47	33	P	Pn	05 05 31.8	+0.6
	930nm21nm,0.6s						
SJCC	San Jacinto, C	6.52	351	P	Pn	05 05 32.0	+0.1
	29nm,0.8s						
COHC	Cochancay	7.75	221	Pn	Pn	05 05 51.5	+2.9
SGC2	Sao Gabriel da	8.00	116	P	Pn	05 05 52.7	+0.6
SGC2				S	Sn	05 07 20.7	-2.0
URIC	Uribia, Colomb	8.51	14	P	Pn	05 05 59.9	+0.8
URIC				S	Sn	05 07 34.8	-0.5
ATAH	Atahualpa	11.30	202	Pn	Pn	05 06 37.8	+0.1
	0.3nm,0.3s,baz=42,slow=18,SNR=2.0						
ATAH				LR	LR	05 11 38.2	
	comp=Z,83nm,19.2s,baz=35,slow=41						
	3.3nm,0.6s						
JTS	Las Juntas de	12.71	303	LR	LR	05 12 11.4	
	comp=Z,48nm,18.1s,baz=10,slow=39						
BOAV	Boa Vista	13.65	94		Pn	05 07 07.6	-2.0
MACA	Manacapuru-AM	14.96	116	Pn	Pn	05 07 24.5	-3.0
MTDJ	Mount Denham	15.09	348	Pn	Pn	05 07 30.2	+0.9
MTDJ				IAmb	IAmb	05 07 47.9	
	comp=Z,18nm,1.1s						
NNA	Nana	15.53	190	Pn	Pn	05 07 36.8	+1.8
NNA				IAmb	IAmb	05 08 03.1	
	comp=Z,6.5nm,0.9s						
SDDR	Presa de Saban	15.73	10	Pn	Pn	05 07 38.0	+0.4
SDDR				IAmb	IAmb	05 07 49.1	
	comp=Z,16nm,1.1s						
DR12	Loma Pena Alta	15.98	17	Pn	Pn	05 07 40.8	0.0
SJG	San Juan	16.58	28	LR	LR	05 14 59.6	
	comp=Z,52nm,18.5s,baz=228,slow=40						
LPAZ	La Paz	20.46	163	P	P	05 08 33.4	-0.9
	comp=Z,1.2nm,0.9s,baz=326,slow=3.6,SNR=4.5						
	comp=Z,1.2nm,0.9s						
LPAZ	La Paz	20.46	163	P	P	05 08 33.7	-0.6
MDP	Montagnes des	21.52	85	P	P	05 08 44.2	-1.0
	comp=Z,16nm,1.0s,baz=272,slow=13,SNR=4.3						
	comp=Z,16nm,1.0s						
PB07	IPOC Station P	25.33	171	P	P	05 09 24.3	+1.2
PB07				IAmb	IAmb	05 09 52.4	
	comp=Z,7.2nm,1.0s						
BRAL	Brewton	30.17	338	P	P	05 10 06.0	-0.1
CPUP	Villa Florida	33.75	152	LR	LR	05 24 24.4	
	comp=Z,54nm,20.3s,baz=133,slow=37						
SADO	Sadowa	41.42	355	LR	LR	05 31 47.1	
	comp=Z,48nm,18.6s,baz=338,slow=40						
TORD	Torodi Ar. Bea	75.46	77	P	P	05 15 40.3	-0.5
	comp=Z,0.5nm,0.6s,baz=293,slow=8.7,SNR=1.0						
	comp=Z,0.5nm,0.6s						
ILAR	Eielson Array	79.61	335	P	P	05 16 05.1	+2.2
	comp=Z,0.3nm,0.8s,baz=136,slow=4.0,SNR=4.2						
	comp=Z,0.3nm,0.8s						
ASAR	Alice Springs	146.23	231	PKPbc	PKPdf	05 23 36.8	+0.4
	comp=Z,0.5nm,0.6s,baz=116,slow=3.8,SNR=6.9						
WRA	Warramunga Arr	147.71	237	PKPbc	PKPdf	05 23 40.8	+1.9
	comp=Z,0.8nm,0.9s,baz=113,slow=2.8,SNR=1.5						

HEL 26 05:11:39.0±0.6**, 67.°18N**×**20.°62E, h0**^{km}**, ML1.2, Suspected explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAJU	Pajala	0.99	98	PG	Pg	05 11 56.0	-1.9
PAJU				SB	Sg	05 12 11.6	+0.9
LANU	Lannavaara	1.02	31	PN	Pn	05 12 00.4	-0.1
LANU				SN	Sb	05 12 14.4	+1.0
KLF	Kolari	1.30	86	PG	Pg	05 12 01.6	-2.4
KLF				MSG		05 12 18.4	
	comp=Z,0.7nm,0.2s						
KLF				SG	Sg	05 12 19.5	-1.3
HEF	Hetta	1.69	42	*e*P	Pn	05 12 08.5	-1.2
HEF	Hetta	1.69	42	PG	Pn	05 12 09.0	-0.7
HEF				MSG		05 12 29.5	
	comp=Z,1.5nm,0.2s						
HEF				SG	Sn	05 12 32.1	+0.1
KALU	Kalix	1.72	139	PN	Pn	05 12 10.2	+0.1
KIF	Kilpisjarvi	1.83	2	*e*P	Pn	05 12 12.2	+0.6
KIF	Kilpisjarvi	1.83	2	PG	Pb	05 12 12.5	-0.8
KIF				MSG		05 12 34.7	
	comp=Z,2.1nm,0.2s						
KIF				SG	Sg	05 12 38.7	+0.9
TOF	Tornio	1.84	125	PG	Pn	05 12 11.6	-0.2
TOF				MSG		05 12 33.9	
	comp=Z,1.2nm,0.2s						
KTK1	Kautokeino	2.08	27	SG	Sb	05 12 44.3	+0.3
RNF	Rovaniemi	2.20	103	PG	Pn	05 12 18.0	+1.2
RNF				SG	Sb	05 12 46.6	-0.9
TRO	Tromso	2.54	346	SN	Sn	05 12 53.3	+0.3
RANF	Ranua	2.73	113	SG	Sb	05 13 02.2	-0.3
ARA0	ARCESS Array S	2.98	35	SG	Sb	05 13 09.4	-0.2
RAJF	Raja-Jooseppi	3.19	62	SG	Sb	05 13 15.8	0.0
VRF	Varrio	3.51	77	SG	Sb	05 13 27.7	+2.7
OLKF	Oulanka, Finla	3.59	100	SB	Sn	05 13 22.3	+3.5

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*ATH **26** 05:14:41.5, 34.°71N×23.°87E, h13^{km}±5^{km}, ML3.6/5, Manual Solution by I.Dede First location: 2019/12/26 05:16:06, This location: 2020/10/23 17:44:07 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*

*THE **26** 05:14:44.7, 35°N±5°×2°4E±°, h29^{km}±5^{km}, M3.4/5, MLh3.4/5*

*ISK **26** 05:14:45.1, 34.°91N×24.°14E, h22^{km}, ML3.1/11*

*IDC **26** 05:15:00.9±14.0, 35.°28N×23.°97E, h178^{km}±134^{km}, mb3.1/5, mbtmp3.5/6, MS2.8/1, Error ellipse: s-maj=73.6km s-min=30.4km az=171.0*

ISC 26 05:14:44.8±0.9**, 34.°89N**±0.°07×**24.°02E**±0.°05**, h28**^{km}±6^{km}**, n32, σ1^{s}04**/45**, mb3.7**/5**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.07	131	P	Pb	05 14 49.5	-0.2
GVD				S	Sb	05 14 53.5	+0.3
GVD	Gavdhos	0.07	131	Pg	Pb	05 14 49.3	-0.5
GVD				Sg	Sb	05 14 53.0	-0.2
VAM	Vamos	0.54	16	P	Pb	05 14 55.3	-0.6
VAM				S	Sn	05 15 04.2	-0.6
VAM	Vamos	0.54	16	P	Pn	05 14 56.2	-0.4
VAM				S	Sn	05 15 05.1	+0.4
IMMV	Iera Moni Meta	0.57	357	P	Pb	05 14 56.4	0.0
IMMV				S	Sn	05 15 06.0	+0.4
IMMV	Iera Moni Meta	0.57	357	Pg	Pn	05 14 56.8	-0.3
IMMV				Sg	Sn	05 15 05.7	+0.1
IMMV	Iera Moni Meta	0.57	357	P	Pb	05 14 56.3	-0.1
IMMV				S	Sn	05 15 06.1	+0.5
CHNB	Souda	0.60	4	P	Pb	05 14 56.8	0.0
CHNB				S	Sn	05 15 07.4	+1.2
CH01	Chania	0.63	0	P	Pn	05 14 57.6	-0.2
CH01				S	Sn	05 15 08.1	+1.2
CHAN	Chania	0.63	2	P	Pb	05 14 57.3	0.0
CHAN				S	Sn	05 15 06.8	-0.2
CHAN	Chania	0.63	2	P	Pb	05 14 57.4	0.0
CHAN				S	Sn	05 15 08.5	+1.6
IDI	Anoyia	0.82	60	P	Pb	05 14 59.2	-1.3
IDI				S	Sn	05 15 11.1	-0.7
IDI	Anoyia	0.82	60	Pg	Pb	05 14 59.4	-1.1
IDI				Sg	Sn	05 15 11.0	-0.7
IDI	Anoyia	0.82	60	P	Pn	05 15 00.9	+0.4
IDI				S	Sn	05 15 14.7	+3.0
NPS	Neapolis	1.36	74	P	Pb	05 15 09.2	-0.4
NPS	Neapolis	1.36	74	P	Pb	05 15 09.4	-0.2
KTHA	Kythira Island	1.57	331	Pn	Pb	05 15 13.3	0.0
KTHA	Kythira Island	1.57	331	P	Pn	05 15 10.7	-0.2
ZKR	Zakros	1.82	82	Pn	Pn	05 15 14.8	+0.6
ARG	Arkhangelos	3.60	67	Pn	Pn	05 15 39.7	+1.0
YER	Yerkesik	4.12	56	Pn	Pn	05 15 47.5	+1.6
DALY	Dalyan (Mula)	4.23	62	Pn	Pn	05 15 48.9	+1.6
AKAS	Kas	4.75	72	Pn	Pn	05 15 55.5	+0.9
CAME	Cameli-Denizli	4.75	63	Pn	Pn	05 15 56.3	+1.6
APMY	Acipayam-Deniz	4.99	57	Pn	Pn	05 15 59.8	+1.9
MLR	Muntele Rosu	10.69	7	LR	LR	05 21 45.2	
	comp=Z,54nm,19.1s,baz=197,slow=39						
GERES	GERESS Array B	15.90	334	P	P	05 18 31.2	+1.2
	0.4nm,0.7s,baz=163,slow=11,SNR=5.7						
ESDC	Sonseca Array	22.73	290	P	P	05 19 46.1	+1.6
	0.7nm,0.9s,baz=89,slow=8.9,SNR=6.0						
	0.7nm,0.9s						
NOA	NORSAR Array B	27.43	346	P	P	05 20 26.3	-1.7
	0.2nm,0.7s,baz=160,slow=11,SNR=5.9						
	0.2nm,0.7s						
MKAR	Makanchi Array	44.70	56	P	P	05 22 54.5	-0.8
	0.6nm,0.5s,baz=270,slow=8.4,SNR=10						
	0.6nm,0.5s						
ZALV	Zalesovo Beam	45.87	46	P	P	05 23 02.9	-1.4
	0.9nm,0.3s,baz=263,slow=7.6,SNR=4.2						
	0.9nm,0.3s						
SONM	Songino Array	60.38	50	P	P	05 24 50.7	-0.8
	0.3nm,0.5s,baz=290,slow=8.4,SNR=3.1						
	0.3nm,0.5s						

IDC 26 05:50:34.1±2.2**, 19.°57S**×**175.°58W, h0**^{km}**, mb4.2**/2**, mbtmp4.3**/3**, ML4.7**/1**, Error ellipse: s-maj=58.6km s-min=44.7km az=113.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	19.68	197	P	P	05 55 05.3	+0.5
	2.2nm,0.3s,baz=286,slow=3.1,SNR=14						
	9.1nm,0.5s						
ASAR	Alice Springs	46.95	256	P	P	05 59 07.3	+0.2
	3.3nm,0.9s,baz=86,slow=8.3,SNR=26						
ASAR				PcP	PcP	06 00 38.0	-1.7
	1.0nm,0.8s,baz=104,slow=3.8,SNR=7.5						
	3.3nm,0.9s						
WRA	Warramunga Arr	46.99	261	P	P	05 59 07.3	0.0
	1.2nm,0.3s,baz=100,slow=9.0,SNR=28						
	1.2nm,0.3s						
GERES	GERESS Array B	149.85	348	PKPbc	PKPbc	06 10 26.5	+0.2
	0.7nm,0.8s,baz=11,slow=1.0,SNR=4.2						

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*KRSC **26** 05:55:27.2±1.7, 58.°92N×158.°49E, h11^{km}±18^{km}, Ml4.4*

*BJI **26** 05:55:30.4, 58.°74N×158.°77E, h10^{km}, mB4.9/9, mb4.6/42, Ms4.5/20, Ms7 4.3/22*

*IDC **26** 05:55:30.4±0.4, 58.°77N×158.°93E, h0^{km}, mb4.5/38, mbtmp4.5/43, ML3.5/4, MS3.8/44, Error ellipse: s-maj=10.4km s-min=9.1km az=171.0*

*NEIC **26** 05:55:31.9±0.9, 58.°80N±0.°07×158.°8E±0.°1, h10^{km}±1^{km}, mb4.9/422, Error ellipse: s-maj=13.1km s-min=11.7km az=136.0*

*MOS **26** 05:55:32.7±1.0, 58.°83N×158.°91E, h28^{km}, mb5.0/43, MS3.8/11, Error ellipse: s-maj=8.3km s-min=3.6km az=97.8*

*NERS **26** 05:55:33.1, 58.°84N×158.°52E, h12^{km}*

ISC 26 05:55:35.5±0.3**, 58.°84N**±0.°03×**159.°02E**±0.°03**, h35**^{km}**, n759, σ1^{s}02**/610**, mb4.8**/260**, MS3.9**/48**, 18C-4D, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALN	Palana	0.56	62	PN	Pn	05 55 42.8	-4.1
PALN				S	Sn	05 55 52.3	-2.6
PALN	Palana	0.56	62	*e*P	Pn	05 55 42.7	-4.1
PALN				*e*S	Sn	05 55 52.3	-2.6
OSSR	Ossora	2.13	77	PN	Pn	05 56 07.2	-1.3
OSSR				S	Sn	05 56 35.2	+1.5
OSSR	Ossora	2.13	77	*e*P	Pn	05 56 07.6	-0.9
OSSR				*e*S	Sn	05 56 37.7	+4.0
SRDR	Sredinnyy	2.55	171	PN	Pn	05 56 12.3	-2.1
SRDR	Sredinnyy	2.55	171	*e*P	Pn	05 56 12.6	-1.8
SRDR				*e*S	Sn	05 56 46.9	+2.6
SMKR	Semkarok	2.62	149	PN	Pn	05 56 13.9	-1.4
SMKR	Semkarok	2.62	149	*e*P	Pn	05 56 14.4	-0.8
KLY	Klyuchi	2.68	160	PN	Pn	05 56 17.8	+1.8
KLY	Klyuchi	2.68	160	*e*P	Pn	05 56 15.8	-0.2
KOZ	Kozyrevsk	2.82	170	*e*P	Pn	05 56 16.7	-1.3
CIRR	Tsirk	2.88	160	PN	Pn	05 56 18.8	-0.2
ESO	Esso	2.92	183	*e*P	Pn	05 56 16.9	-2.5
KIRR	Kirishev	2.98	165	*e*P	Pn	05 56 20.9	+0.6
ZLN	Zelenaya	2.99	160	PN	Pn	05 56 19.9	-0.5
ZLN	Zelenaya	2.99	160	*e*P	Pn	05 56 19.9	-0.5
BZWR	Bezymyannyi-We	2.99	164	PN	Pn	05 56 22.2	+1.7
BZWR	Bezymyannyi-We	2.99	164	*e*P	Pn	05 56 18.6	-1.9
BZGR	Bezymyannyi-Gr	3.04	162	PN	Pn	05 56 20.6	-0.6
BZGR	Bezymyannyi-Gr	3.04	162	*e*P	Pn	05 56 22.2	+1.0
BZP	Bezymyannyi-Pe	3.04	164	PN	Pn	05 56 20.3	-1.0
BZP				S	Sn	05 57 00.1	+3.6
BZP	Bezymyannyi-Pe	3.04	164	*e*P	Pn	05 56 20.1	-1.1
KMNR	Kamenistaya	3.16	167	PN	Pn	05 56 22.3	-0.5
KMNR	Kamenistaya	3.16	167	*e*P	Pn	05 56 22.1	-0.6
KBG	Krutoberegovo	3.26	141	PN	Pn	05 56 28.5	+4.4
KBG	Krutoberegovo	3.26	141	*e*P	Pn	05 56 25.2	+1.1
KBTR	Krutoberegovo	3.34	140	PN	Pn	05 56 26.4	+1.3
KBTR	Krutoberegovo	3.34	140	*e*P	Pn	05 56 26.1	+0.9
TUMD	Tumrok D	3.72	168	PN	Pn	05 56 30.5	+0.1
TUMD	Tumrok D	3.72	168	*e*P	Pn	05 56 30.2	-0.1
KZV	Kizimen	3.80	169	PN	Pn	05 56 31.2	-0.4
KZV	Kizimen	3.80	169	*e*P	Pn	05 56 31.0	-0.6
TILK	Tilichiki	3.96	63	PN	Pn	05 56 33.3	-0.4
TILK	Tilichiki	3.96	63	*e*P	Pn	05 56 33.6	-0.1
GADL	Gadlja	4.04	285	*e*P	Pn	05 56 33.0	-1.7
GADL				*e*Pg		05 56 43.6	
GADL				Pgmax		05 56 46.6	
	200nm,0.5s						
GADL				*e*Sg	Sn	05 57 34.5	+14
GADL				Sgmax		05 57 58.4	
	6µm,0.8s						
GADL				Sgmax		05 57 58.4	
	3µm,1.0s						
GADL	Gadlja	4.04	285	*e*PN	Pn	05 56 33.0	-1.7
TLAR	Talaya	4.04	308	*e*P	Pn	05 56 33.2	-1.6
TLAR				*e*Pg		05 56 43.5	
TLAR				Pgmax		05 56 50.1	
	310nm,0.8s						
TLAR				*e*Sg	Sn	05 57 35.5	+15
TLAR				Sgmax		05 57 38.4	
	2µm,0.6s						
TLAR				Sgmax		05 57 38.4	
	1µm,0.5s						
TLAR	Talaya	4.04	308	*e*PN	Pn	05 56 33.2	-1.6
MA2	Magadan	4.30	283	Pn	Pn	05 56 37.5	-0.9
	35nm,0.6s,baz=94,slow=11,SNR=19						
MA2				Lg	Lg	05 57 43.6	
	41nm,0.3s,baz=202,slow=14,SNR=9.5						
MA2				LR	LR	05 58 19.6	
	comp=Z,1µm,20.2s,baz=130,slow=40						
MA2	Magadan	4.30	283		Pn	05 56 36.7	-1.7
MA2	Magadan	4.30	283	*e*P	Pn	05 56 36.2	-2.2
MA2				*e*Pg		05 56 49.1	
MA2				Pgmax		05 56 53.9	
	230nm,0.6s						
MA2				*e*Sg	Sn	05 57 43.3	+16
MA2				Sgmax		05 57 56.7	
	1µm,0.8s						
MA2	Magadan	4.30	283	*ce*PN	Pn	05 56 37.0	-1.4
MA2				pmax	pmax		
	comp=Z,38nm,0.7s						
MA2	Magadan	4.30	283	P	Pn	05 56 37.2	-1.2
MGD	Magadan 1	4.40	290	⇑*i*P	Pn	05 56 37.7	-2.0
MGD				Pmax		05 56 38.2	
	comp=Z,80nm,0.5s						
MGD				*e*Sg	Sn	05 57 46.0	+16
MGD				Sgmax		05 57 57.5	
	comp=Z,1µm,0.8s						
MGD				Sgmax		05 57 57.5	
	comp=Z,250nm,0.4s						
MGD	Magadan 1	4.40	290	*i* PN	Pn	05 56 37.7	-2.0
KMSK	Kamenskaya	5.08	41	PN	Pn	05 56 47.6	-1.3
KMSK	Kamenskaya	5.08	41	*e*P	Pn	05 56 50.5	+1.5
SEY	Seymchan	5.23	325	Pn	Pn	05 56 50.3	-0.8
	comp=Z,3.7nm,0.3s,baz=148,slow=17,SNR=16						
SEY				Lg	Lg	05 58 16.2	
	comp=Z,14nm,0.3s,baz=65,slow=15,SNR=5.1						
SEY				LR	LR	05 59 01.5	
	comp=Z,954nm,18.0s,baz=142,slow=40						
	comp=Z,7.2nm,0.3s						

SEY	**Seymchan**	**5.23**	**325**	*e*P	**Pn**	**05 56 50.1**	**-1.0**
SEY				*e*Pg		05 57 08.1	
SEY				Pgmax		05 57 12.9	
	comp=Z,70nm,0.8s						
SEY				Sgmax		05 57 33.5	
	comp=Z,460nm,0.9s						
SEY				Sgmax		05 57 33.5	
	comp=Z,270nm,1.1s						
SEY				*e*Sg	Sn	05 58 16.9	+27
SEY	**Seymchan**	**5.23**	**325**	*ce*PN	**Pn**	**05 56 50.3**	**-0.8**
SEY				pmax	pmax		
	comp=Z,16nm,0.8s						
TLON	**Talon**	**5.39**	**284**	*e*P	**Pn**	**05 56 55.5**	**+2.3**
TLON				*e*Sg	Sn	05 58 18.5	+25
TLON				Sgmax		05 58 35.0	
	comp=Z,3µm,0.7s						
TLON				Sgmax		05 58 35.0	
	comp=Z,430nm,0.7s						
TLON	**Talon**	**5.39**	**284**	*e*PN	**Pn**	**05 56 55.5**	**+2.3**
KRX	**Arik**	**5.49**	**182**	PN	**Pn**	**05 56 54.0**	**-0.9**
KRX	**Arik**	**5.49**	**182**	*e*P	**Pn**	**05 56 52.9**	**-1.9**
KRER	**Koryakskii**	**5.55**	**182**	PN	**Pn**	**05 56 57.4**	**+1.7**
KOK	**Koryaka**	**5.56**	**182**	PN	**Pn**	**05 56 56.2**	**+0.5**
SDLR	**Sedlovina**	**5.57**	**181**	PN	**Pn**	**05 56 56.0**	**+0.1**
SDLR	**Sedlovina**	**5.57**	**181**	*e*P	**Pn**	**05 56 55.2**	**-0.7**
PEA0B	**Petropavlovsk-**	**5.79**	**188**		**Pn**	**05 56 56.6**	**-2.2**
PEA0B	**Petropavlovsk-**	**5.79**	**188**	*i* PN	**Pn**	**05 56 56.9**	**-1.9**
PETK	**Petropavlovsk-**	**5.79**	**188**	Pn	**Pn**	**05 56 57.8**	**-1.0**
	comp=Z,1.1nm,0.3s,baz=41,slow=14,SNR=9.5						
PETK				LR	LR	05 59 37.2	
	comp=Z,298nm,18.9s,baz=41,slow=43						
	comp=Z,10nm,0.8s						
PETK	**Petropavlovsk-**	**5.79**	**188**		**Pn**	**05 56 57.0**	**-1.8**
PET	**Petropavlovsk**	**5.83**	**182**	*i* PN	**Pn**	**05 56 57.3**	**-2.0**
PET				MLR	MLR		
	comp=Z,603nm,13.0s						
APC	**Apacha**	**6.02**	**191**	*e*P	**Pn**	**05 57 01.8**	**-0.1**
SUUS	**Susuman**	**6.62**	**311**	*e*P	**Pn**	**05 57 09.6**	**-0.5**
SUUS				*e*Sg	Sn	05 59 00.3	+36
SUUS				Sgmax		05 59 19.7	
	comp=Z,570nm,0.9s						
SUUS				Sgmax		05 59 19.7	
	comp=Z,480nm,0.8s						
SUUS	**Susuman**	**6.62**	**311**	*e*PN	**Pn**	**05 57 09.6**	**-0.5**
BILL	**Bilibino**	**9.78**	**16**	Pn	**Pn**	**05 57 53.4**	**0.0**
BILL	**Bilibino**	**9.78**	**16**	*e*P	Pn	05 57 58.6	+5.1
BILL				*e*Sg		06 00 50.4	
BILL				Sgmax		06 00 58.8	
	comp=Z,290nm,2.2s						
BILL				Sgmax		06 00 58.8	
	comp=Z,200nm,1.4s						
BILL	**Bilibino**	**9.78**	**16**	*e*PN	Pn	05 57 58.6	+5.1
SHEM	**Shemya Is, Ala**	**10.45**	**119**	LR	LR	06 01 23.3	
	comp=Z,486nm,21.2s,baz=330,slow=34						
YAK	**Yakutsk**	**14.76**	**295**	Pn	**P**	**05 59 02.9**	**-4.1**
	baz=281,slow=9.5						
YAK				Lg	Lg	06 03 12.2	
	comp=Z,4.9nm,0.3s,baz=0.4,slow=23,SNR=6.4						
YAK				LR	LR	06 05 14.2	
	comp=Z,382nm,19.5s,baz=113,slow=40						
YAK	**Yakutsk**	**14.76**	**295**		**Pn**	**05 58 59.8**	**-1.5**
YAK	**Yakutsk**	**14.76**	**295**	*e*P	**P**	**05 59 02.8**	**-4.1**
YAK				*e*S	**Sn**	**06 01 47.7**	**+4.3**
YAK				pmax	pmax		
	comp=Z,24nm,1.0s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,21nm,1.2s						
YAK				pmax	pmax		
	comp=Z,72nm,1.5s						
YAK				pmax	pmax		
	comp=N,25nm,1.8s						
YAK				pmax	pmax		
	comp=E,42nm,1.2s						
YAK				smax	smax		
	comp=E,111nm,5.4s						
YAK				smax	smax		
	comp=N,106nm,4.3s						
YAK				MLR	MLR		
	comp=Z,854nm,17.0s						
YAK				MLR	MLR		
	comp=E,652nm,18.0s						
YAK				MLR	MLR		
	comp=N,232nm,20.0s						
GAMB	**Gambell**	**14.82**	**58**	P	**Pn**	**05 59 01.2**	**-0.9**
	baz=264						
GRNR	**Gornyy**	**15.27**	**248**	⇑*i*P	**P**	**05 59 13.3**	**+0.7**
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,320nm,15.0s						
GRNR				MLR	MLR		
	comp=N,360nm,13.0s						
GRNR				MLR	MLR		
	comp=Z,470nm,12.0s						
YSS	**Yuzhno-Sakhali**	**15.37**	**226**	Pn	**Pn**	**05 59 06.0**	**-3.4**
YSS	**Yuzhno-Sakhali**	**15.37**	**226**	*e*P	**P**	**05 59 14.8**	**+1.1**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=Z,300nm,13.0s						
YSS				MLR	MLR		
	comp=N,400nm,16.0s						
YSS				MLR	MLR		
	comp=E,400nm,15.0s						
SPIA	**Saint Paul Isl**	**16.30**	**83**	P	**Pn**	**05 59 21.6**	**+0.2**
	baz=289						
TNA	**Tin City**	**16.66**	**52**		**Pn**	**05 59 25.3**	**-0.6**
TNA	**Tin City**	**16.66**	**52**	P	**Pn**	**05 59 26.5**	**+0.7**
	baz=262						
P08K	**Saint George I**	**16.86**	**84**	P	**Pn**	**05 59 28.7**	**+0.3**
	baz=291						
F14K	**Arctic Creek**	**17.31**	**53**	P	**Pn**	**05 59 34.1**	**+0.1**
	baz=264						
M11K	**Mekoryuk**	**17.55**	**70**	P	**P**	**05 59 37.2**	**-0.6**
	baz=280						
ANM	**Nome**	**17.64**	**56**		**P**	**05 59 39.2**	**+0.4**
ANM	**Nome**	**17.64**	**56**	P	**P**	**05 59 39.2**	**+0.4**
ANM				pmax	pmax		
	comp=Z,16nm,1.5s						
ANM	**Nome**	**17.64**	**56**	P	**Pn**	**05 59 38.2**	**+0.1**
	baz=268						
TIXI	**Tiksi**	**17.71**	**328**	P	**P**	**05 59 39.2**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=121,slow=11,SNR=17						
TIXI				LR	LR	06 07 26.0	
	comp=Z,235nm,18.7s,baz=193,slow=40						
	comp=Z,9.6nm,0.5s						
TIXI	**Tiksi**	**17.71**	**328**		**P**	**05 59 38.3**	**-1.2**
TIXI	**Tiksi**	**17.71**	**328**	*ce*P	**P**	**05 59 38.9**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,27nm,2.5s						
TIXI				MLR	MLR		
	comp=Z,420nm,13.0s						
JKA	**Kamikawa-asahi**	**17.86**	**222**	P	**Pn**	**05 59 38.4**	**-2.5**
ASAJ	**Asahikawa**	**17.86**	**222**	P	**P**	**05 59 40.6**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=24,slow=8.1,SNR=5.3						
ASAJ				LR	LR	06 06 31.0	
	comp=Z,108nm,18.3s,baz=50,slow=37						
	comp=Z,9.8nm,0.9s						
ASAJ	**Asahikawa**	**17.86**	**222**	P	**Pn**	**05 59 38.4**	**-2.5**
ASAJ				pmax	pmax		
	comp=Z,19nm,1.1s						
F15K	**North Star Dit**	**18.02**	**52**		**P**	**05 59 43.6**	**+0.5**
F15K	**North Star Dit**	**18.02**	**52**	P	**P**	**05 59 43.4**	**+0.3**
	baz=265						
K13K	**Kusilvak Mount**	**18.06**	**65**	P	**P**	**05 59 43.7**	**+0.3**
	baz=276						
C16K	**Lisburne Hills**	**18.18**	**44**		**P**	**05 59 44.2**	**-0.4**
C16K	**Lisburne Hills**	**18.18**	**44**	P	**Pn**	**05 59 44.8**	**+0.2**
	baz=256						
G15K	**Niukluk**	**18.23**	**55**	P	**Pn**	**05 59 45.6**	**+0.2**
	baz=268						
ZEA	**Zeya**	**18.24**	**268**	*e*P	**P**	**05 59 45.9**	**+0.4**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA				MLR	MLR		
	comp=E,200nm,11.0s						
ZEA				MLR	MLR		
	comp=N,100nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,17.0s						
J14K	**Nanvaranak Lak**	**18.49**	**62**	P	**Pn**	**05 59 48.5**	**0.0**
J14K	**Nanvaranak Lak**	**18.49**	**62**	P	**P**	**05 59 47.9**	**-0.3**
	baz=275						
NIKH	**Nikolski High**	**18.81**	**94**	P	**Pn**	**05 59 52.4**	**-0.1**
	baz=301						
D17K	**Noatak River**	**18.90**	**46**	P	**P**	**05 59 51.8**	**-0.7**
	baz=261						
M13K	**Dall Lake**	**18.93**	**69**	P	**P**	**05 59 52.8**	**-0.1**
	baz=282						
G16K	**Koyuk River**	**18.96**	**54**	P	**Pn**	**05 59 53.8**	**-0.3**
G16K	**Koyuk River**	**18.96**	**54**	P	**P**	**05 59 52.8**	**-0.5**
	baz=268						
H16K	**Elim**	**19.00**	**56**	P	**P**	**05 59 53.9**	**+0.2**
	baz=270,SNR=12						
C17K	**DeLong Mountai**	**19.01**	**44**	P	**P**	**05 59 53.9**	**+0.1**
	baz=258						
RDOG	**Red Dog Mine**	**19.02**	**45**	P	**P**	**05 59 54.2**	**+0.2**
RDOG	**Red Dog Mine**	**19.02**	**45**	P	**P**	**05 59 54.1**	**+0.2**
	baz=260						
L14K	**Kuka Creek**	**19.08**	**66**	P	**P**	**05 59 54.8**	**+0.2**
	baz=280						
E17K	**Hotham Inlet**	**19.29**	**48**	P	**Pn**	**05 59 58.0**	**-0.1**
	baz=264						
F17K	**Baldwin Pennin**	**19.46**	**50**	P	**Pn**	**05 59 59.6**	**-0.5**
	baz=266						
K15K	**Wolf Creek Mou**	**19.48**	**63**	P	**P**	**05 59 59.3**	**+0.4**
	baz=278						
M14K	**Bethel**	**19.53**	**68**	P	**Pn**	**06 00 00.2**	**-0.8**
	baz=282						
L15K	**Ungalak Mounta**	**19.59**	**65**	P	**Pn**	**06 00 00.8**	**-0.9**
	baz=279						
UNV	**Unalaska Valle**	**19.60**	**90**	P	**Pn**	**06 00 02.1**	**+0.2**
UNV				IAmb	IAmb	06 00 09.2	
	comp=Z,72nm,1.0s						
UNV	**Unalaska Valle**	**19.60**	**90**	P	**Pn**	**06 00 01.2**	**-0.7**
	baz=299						
G17K	**Kiwalik Mounta**	**19.67**	**53**	P	**P**	**05 59 59.9**	**-1.2**
	baz=269						
I17K	**Unalakleet**	**19.70**	**58**	P	**Pn**	**06 00 02.8**	**-0.2**
I17K	**Unalakleet**	**19.70**	**58**	P	**P**	**06 00 01.0**	**-0.3**
	baz=274,SNR=6.8						
C18K	**Utukok River**	**19.76**	**44**	P	**Pn**	**06 00 03.4**	**-0.3**
C18K	**Utukok River**	**19.76**	**44**	P	**P**	**06 00 02.2**	**+0.1**
	baz=260						
J16K	**Anvik River**	**19.79**	**60**		**Pn**	**06 00 05.2**	**+1.2**
J16K	**Anvik River**	**19.79**	**60**	P	**P**	**06 00 02.9**	**+0.6**
	baz=276						
E18K	**Tukpahlearik C**	**19.80**	**48**	P	**P**	**06 00 02.7**	**+0.3**
	baz=264						
N14K	**Kuskokwak Cree**	**19.85**	**70**	P	**P**	**06 00 03.6**	**+0.5**
	baz=284						
H17K	**Granite Mounta**	**19.99**	**55**	P	**P**	**06 00 04.9**	**+0.4**
	baz=272,SNR=12						
HEH	**HeiHe**	**20.07**	**259**	*e*P	**Pn**	**06 00 04.8**	**-2.7**
HEH				pmax	pmax		
	comp=Z,25nm,0.9s						
HEH				LR	LR		
	comp=Z,430nm,13.0s						
HEH				LR	LR		
	comp=Z,460nm,13.0s						
HEH				LR	LR		
	comp=Z,760nm,14.3s						
A19K	**Wainwright**	**20.13**	**39**	P	**P**	**06 00 06.1**	**+0.2**
	baz=256						
M15K	**Kasigluk River**	**20.16**	**67**	P	**P**	**06 00 06.7**	**+0.4**
	baz=283						
O14K	**Tigyukauivet M**	**20.23**	**72**	P	**P**	**06 00 07.6**	**+0.4**
	baz=286						
C19K	**Lookout Ridge**	**20.41**	**43**	IAmb	IAmb	06 00 11.2	
	comp=Z,29nm,0.7s						
C19K	**Lookout Ridge**	**20.41**	**43**	P	**P**	**06 00 09.7**	**+0.6**
	baz=261						
J17K	**VABM Dome**	**20.46**	**59**	IAmb	IAmb	06 00 14.5	
	comp=Z,37nm,1.0s						
J17K	**VABM Dome**	**20.46**	**59**	P	**P**	**06 00 09.6**	**0.0**
	baz=276						
G18K	**Tagagawik**	**20.50**	**52**	P	**P**	**06 00 09.5**	**-0.6**
	baz=270						
L16K	**Owhat River**	**20.53**	**64**	P	**P**	**06 00 09.8**	**-0.6**
	baz=281						
N15K	**Kwethluk River**	**20.57**	**69**	IAmb	IAmb	06 00 14.7	
	comp=Z,39nm,1.0s						
N15K	**Kwethluk River**	**20.57**	**69**	P	**P**	**06 00 10.4**	**-0.5**
	baz=284						
H18K	**Honhosa River**	**20.64**	**54**	P	**P**	**06 00 11.5**	**-0.1**
	baz=272						
FALS	**False Pass**	**20.74**	**85**	P	**P**	**06 00 13.0**	**+0.3**
	baz=296						
D19K	**Kuna River**	**20.85**	**45**	P	**P**	**06 00 13.3**	**-0.6**
	baz=264						
F19K	**Shaleruckik Mo**	**20.87**	**50**	P	**P**	**06 00 14.0**	**0.0**
	baz=268						
K17K	**Iditarod**	**20.90**	**61**	IAmb	IAmb	06 00 18.6	
	comp=Z,35nm,1.0s						
K17K	**Iditarod**	**20.90**	**61**	P	**P**	**06 00 14.9**	**+0.5**
	baz=279						
M16K	**Timber Creek**	**20.91**	**66**	P	**P**	**06 00 13.6**	**-0.9**
	baz=283						
O15K	**Ungalikthiuk R**	**20.96**	**71**	P	**P**	**06 00 14.9**	**-0.2**
	baz=287						
L17K	**Donlin**	**21.00**	**63**	P	**P**	**06 00 15.5**	**+0.1**
	baz=280						
S12K	**Black Hills**	**21.07**	**82**	P	**P**	**06 00 15.7**	**-0.6**
	baz=295						
E19K	**Redstone River**	**21.10**	**48**	P	**P**	**06 00 17.2**	**+0.7**
	baz=267						
N16K	**Nishlik Lake**	**21.13**	**67**	P	**P**	**06 00 17.0**	**+0.1**
	baz=284						
G19K	**Purcell Mounta**	**21.14**	**51**	P	**P**	**06 00 17.4**	**+0.5**
	baz=271,SNR=18						
GCSA	**Galena City Sc**	**21.29**	**55**	P	**P**	**06 00 18.7**	**+0.2**
	baz=275						
B20K	**Meade River**	**21.40**	**41**	P	**P**	**06 00 19.5**	**-0.1**
	baz=261,SNR=18						
H19K	**Roundabout Mou**	**21.42**	**53**	IAmb	IAmb	06 00 24.1	
	comp=Z,42nm,0.8s						
H19K	**Roundabout Mou**	**21.42**	**53**	P	**P**	**06 00 19.7**	**-0.3**
	baz=273						
D20K	**Etivluk River**	**21.43**	**44**	P	**P**	**06 00 20.4**	**+0.4**
	baz=265						
J18K	**Innoko River**	**21.50**	**59**		**P**	**06 00 22.3**	**+1.4**
J18K	**Innoko River**	**21.50**	**59**	P	**P**	**06 00 20.5**	**-0.4**
	baz=278,SNR=13						
M17K	**Holitna River**	**21.55**	**65**	P	**P**	**06 00 20.6**	**-0.7**
	baz=283						
O16K	**Kokwok River B**	**21.69**	**69**	P	**P**	**06 00 23.3**	**+0.4**
	baz=287						
L18K	**Granite Mounta**	**21.72**	**62**	P	**P**	**06 00 23.5**	**+0.3**
	baz=281						
A21K	**Barrow**	**21.82**	**37**	P	**P**	**06 00 24.4**	**+0.3**
	baz=258,SNR=5.2						
P16K	**Nushagak River**	**21.91**	**71**	P	**P**	**06 00 23.6**	**-1.7**
	baz=288						
J19K	**Poorman**	**21.91**	**57**	P	**P**	**06 00 25.5**	**+0.3**
	baz=278						
SDPT	**Sand Point**	**22.04**	**81**	P	**P**	**06 00 25.3**	**-1.3**
	baz=296						
H20K	**Anotleneega Mo**	**22.08**	**53**	P	**P**	**06 00 26.4**	**-0.6**
	baz=274						
USRK	**Ussuriysk Ar.**	**22.09**	**240**	P	**P**	**06 00 26.9**	**-0.4**
	comp=Z,11nm,0.8s,baz=50,slow=11,SNR=7.8						
	comp=Z,11nm,0.8s						
S14K	**Fog Glacier**	**22.11**	**79**	P	**P**	**06 00 27.6**	**0.0**
	baz=294						
C21K	**Knifeblade Rid**	**22.12**	**43**	P	**P**	**06 00 27.3**	**-0.2**
	baz=266						
O17K	**Koliganek Bris**	**22.12**	**69**	P	**P**	**06 00 26.7**	**-0.8**
	baz=287						
B21K	**Ikpikpuk River**	**22.22**	**42**	IAmb	IAmb	06 00 33.7	
	comp=Z,61nm,1.1s						
B21K	**Ikpikpuk River**	**22.22**	**42**	P	**P**	**06 00 28.2**	**-0.3**
	baz=264						
M18K	**Stony River**	**22.28**	**64**	P	**P**	**06 00 29.9**	**+0.7**
	baz=284						
A22K	**Sinclair Lake**	**22.28**	**38**	P	**P**	**06 00 29.1**	**0.0**
	baz=261						
I20K	**Naaghedeneel**	**22.31**	**55**	P	**P**	**06 00 29.3**	**-0.2**
	baz=276						
N18K	**Kilae Creek**	**22.45**	**66**	P	**P**	**06 00 31.2**	**+0.1**
	baz=285						
J20K	**Nowinta River**	**22.53**	**56**	IAmb	IAmb	06 00 35.2	
	comp=Z,29nm,0.9s						
J20K	**Nowinta River**	**22.53**	**56**	P	**P**	**06 00 31.0**	**-0.8**
	baz=278,SNR=13						
F21K	**Alatna River**	**22.55**	**48**	IAmb	IAmb	06 00 35.0	
	comp=Z,24nm,0.9s						
F21K	**Alatna River**	**22.55**	**48**	P	**P**	**06 00 32.0**	**-0.1**
	baz=271,SNR=17						
G21K	**Allakaket**	**22.57**	**50**	IAmb	IAmb	06 00 35.4	
	comp=Z,51nm,0.9s						
G21K	**Allakaket**	**22.57**	**50**	P	**P**	**06 00 32.3**	**0.0**
	baz=273						
L19K	**White Mountain**	**22.57**	**62**	P	**P**	**06 00 31.6**	**-0.7**
	baz=282						
R16K	**Pilot Point**	**22.62**	**74**	P	**P**	**06 00 33.2**	**+0.4**
	baz=292						
P17K	**Kvichak River**	**22.62**	**70**	P	**P**	**06 00 32.8**	**0.0**
	baz=288						
Q16K	**King Salmon**	**22.68**	**71**	P	**P**	**06 00 33.3**	**-0.1**
	baz=290						
K20K	**Telida**	**22.70**	**59**	P	**P**	**06 00 33.6**	**-0.1**
	baz=280						
B22K	**Teshekpuk Lake**	**22.71**	**40**	P	**P**	**06 00 34.0**	**+0.3**
	baz=264,SNR=22						
CHNA	**Chernabura Isl**	**22.72**	**82**	P	**P**	**06 00 34.0**	**0.0**
	baz=297						
D22K	**Ayikyak River**	**22.86**	**44**	IAmb	IAmb	06 00 38.1	
	comp=Z,26nm,0.8s						
D22K	**Ayikyak River**	**22.86**	**44**	P	**P**	**06 00 35.0**	**-0.4**
	baz=268						
H21K	**Melozitna Rive**	**22.92**	**52**	P	**P**	**06 00 35.7**	**-0.3**
	baz=276						
F22K	**John River**	**23.05**	**48**	P	**P**	**06 00 37.4**	**+0.2**
	baz=272,SNR=31						
N19K	**Bonanza Creek**	**23.08**	**65**	P	**P**	**06 00 37.0**	**-0.7**
	baz=286						
BNX	**BinXian**	**23.09**	**249**	⇓P	**P**	**06 00 34.5**	**-3.4**
BNX				pmax	pmax		
	comp=Z,13nm,1.0s						
P18K	**Big Mountain,**	**23.14**	**69**	P	**P**	**06 00 38.2**	**-0.1**
	baz=289						
E22K	**Anaktuvuk Pass**	**23.18**	**46**		**P**	**06 00 38.9**	**+0.3**
E22K	**Anaktuvuk Pass**	**23.18**	**46**	P	**P**	**06 00 38.4**	**-0.2**
	baz=271,SNR=9.2						
Q17K	**Contact Creek**	**23.20**	**72**	P	**P**	**06 00 39.3**	**+0.3**
	baz=291						
I21K	**Tanana**	**23.32**	**54**	P	**P**	**06 00 40.8**	**+0.9**
I21K				IAmb	IAmb	06 00 43.7	
	comp=Z,21nm,1.0s						
I21K	**Tanana**	**23.32**	**54**	P	**P**	**06 00 39.1**	**-0.9**
	baz=278,SNR=11						
O19K	**Port Alsworth**	**23.33**	**67**	P	**P**	**06 00 39.2**	**-0.9**
	baz=287						
CHUM	**Lake Minchumin**	**23.38**	**57**	P	**P**	**06 00 41.1**	**+0.6**
	baz=280,SNR=8.7						
M20K	**Styx River**	**23.43**	**62**	P	**P**	**06 00 42.2**	**+1.0**
M20K	**Styx River**	**23.43**	**62**	P	**P**	**06 00 40.8**	**-0.4**
	baz=284						
H22K	**Ishtalitna Cre**	**23.48**	**52**	P	**P**	**06 00 42.2**	**+0.6**
H22K				IAmb	IAmb	06 00 44.2	
	comp=Z,19nm,0.8s						
H22K	**Ishtalitna Cre**	**23.48**	**52**	P	**P**	**06 00 41.7**	**+0.1**
	baz=276,SNR=16						
ACHA	**Angle Creek He**	**23.50**	**72**	P	**P**	**06 00 42.2**	**+0.4**
Q18K	**Katmai Hardscr**	**23.50**	**71**	P	**P**	**06 00 41.4**	**-0.5**
	baz=290						
D23K	**Nanushuk River**	**23.59**	**44**	P	**P**	**06 00 42.2**	**-0.3**
	baz=270						
PPLA	**Purkeypile**	**23.62**	**59**		**P**	**06 00 44.5**	**+1.4**
PPLA	**Purkeypile**	**23.62**	**59**	P	**P**	**06 00 43.4**	**+0.3**
	baz=283						
C23K	**Itkillik River**	**23.63**	**42**	IAmb	IAmb	06 00 47.3	
	comp=Z,46nm,1.1s						
C23K	**Itkillik River**	**23.63**	**42**	P	**P**	**06 00 42.8**	**-0.1**
	baz=268						
COLD	**Coldfoot**	**23.83**	**48**		**P**	**06 00 45.3**	**+0.5**
COLD				IAmb	IAmb	06 00 48.1	
	comp=Z,33nm,1.0s						
COLD	**Coldfoot**	**23.83**	**48**	P	**P**	**06 00 44.9**	**+0.1**
	baz=274,SNR=27						
BPAW	**Bear Paw Mtn.**	**23.91**	**56**		**P**	**06 00 46.7**	**+1.0**
BPAW				IAmb	IAmb	06 00 48.0	
	comp=Z,27nm,1.2s						
BPAW	**Bear Paw Mtn.**	**23.91**	**56**	P	**P**	**06 00 46.2**	**+0.5**
	baz=281,SNR=6.4						
G23K	**Bananza Creek**	**23.94**	**50**	IAmb	IAmb	06 00 48.9	
	comp=Z,23nm,0.9s						
G23K	**Bananza Creek**	**23.94**	**50**	P	**P**	**06 00 45.0**	**-0.9**
	baz=276,SNR=19						
ILSW	**Iliamna Southw**	**23.96**	**67**	P	**P**	**06 00 47.1**	**+0.9**
TOLK	**Toolik Lake Re**	**24.00**	**45**	P	**P**	**06 00 47.0**	**+0.5**
TOLK				IAmb	IAmb	06 00 50.1	
	comp=Z,69nm,1.3s						
TOLK	**Toolik Lake Re**	**24.00**	**45**	P	**P**	**06 00 45.9**	**-0.5**
	baz=272,SNR=23						
E23K	**Chandalar**	**24.00**	**46**	IAmb	IAmb	06 00 50.3	
	comp=Z,51nm,1.1s						
E23K	**Chandalar**	**24.00**	**46**	P	**P**	**06 00 45.5**	**-1.0**
	baz=273						
RED	**Redoubt Volcan**	**24.00**	**65**	P	**P**	**06 00 48.0**	**+1.4**
RED				IAmb	IAmb	06 01 10.9	
	comp=Z,54nm,1.2s						
P19K	**Oil Pt**	**24.02**	**67**	P	**P**	**06 00 46.9**	**+0.1**
	baz=289						
SPCR	**Spurr Chakacha**	**24.04**	**63**	P	**P**	**06 00 46.8**	**-0.1**
	baz=286						
KTH	**Kantishna Hill**	**24.05**	**57**		**P**	**06 00 48.7**	**+1.7**
KTH				IAmb	IAmb	06 00 51.5	
	comp=Z,39nm,0.9s						
Q19K	**Cape Douglas,**	**24.07**	**69**	P	**P**	**06 00 48.5**	**+1.4**
Q19K	**Cape Douglas,**	**24.07**	**69**	P	**P**	**06 00 47.2**	**0.0**
	baz=290						
SPU	**Mount Spurr**	**24.12**	**63**	P	**P**	**06 00 49.2**	**+1.6**
SPU				IAmb	IAmb	06 00 52.1	
	comp=Z,34nm,1.0s						
SKT	**Skwentna**	**24.14**	**61**		**P**	**06 00 48.4**	**+0.6**
SKT				IAmb	IAmb	06 00 50.4	
	comp=Z,44nm,1.5s						
SKT	**Skwentna**	**24.14**	**61**	P	**P**	**06 00 47.5**	**-0.3**
	baz=285						
O20K	**Slope Mountain**	**24.18**	**66**	P	**P**	**06 00 48.1**	**-0.1**
	baz=288						
D24K	**Happy Valley**	**24.25**	**43**	IAmb	IAmb	06 00 53.1	
	comp=Z,34nm,1.1s						
D24K	**Happy Valley**	**24.25**	**43**	P	**P**	**06 00 48.3**	**-0.5**
	baz=271						
C24K	**Franklin Bluff**	**24.29**	**42**	IAmb	IAmb	06 00 53.5	
	comp=Z,44nm,0.9s						
C24K	**Franklin Bluff**	**24.29**	**42**	P	**P**	**06 00 48.5**	**-0.6**
	baz=270						
CHIR	**Chirikof Islan**	**24.31**	**77**	P	**P**	**06 00 48.8**	**-0.5**
	baz=296						
TRF	**Thorofare Moun**	**24.35**	**58**		**P**	**06 00 51.0**	**+1.2**
TRF	**Thorofare Moun**	**24.35**	**58**	P	**P**	**06 00 49.5**	**-0.4**
	baz=283,SNR=13						
I23K	**Minto, Yukon-K**	**24.42**	**53**	P	**P**	**06 00 51.1**	**+0.9**
I23K	**Minto, Yukon-K**	**24.42**	**53**	P	**P**	**06 00 49.3**	**-0.9**
	baz=280						
E24K	**Your Creek**	**24.42**	**46**	IAmb	IAmb	06 00 52.5	
	comp=Z,29nm,0.8s						
E24K	**Your Creek**	**24.42**	**46**	P	**P**	**06 00 50.1**	**-0.3**
	baz=274						
HILR	**Hailar Array B**	**24.44**	**265**	P	**P**	**06 00 49.6**	**-1.0**
	comp=Z,6.8nm,0.9s,baz=72,slow=9.5,SNR=6.0						
	comp=Z,6.8nm,0.9s						
CUT	**Chulitna**	**24.60**	**60**	P	**P**	**06 00 50.7**	**-1.2**
	baz=285						
NEA2	**Nenana**	**24.64**	**55**	P	**P**	**06 00 53.2**	**+0.9**
NEA2				IAmb	IAmb	06 00 55.9	
	comp=Z,29nm,1.0s						
NEA2	**Nenana**	**24.64**	**55**	P	**P**	**06 00 51.2**	**-1.1**
	baz=281,SNR=13						
SUA	**Susitna One**	**24.64**	**62**	P	**P**	**06 00 52.2**	**-0.3**
	baz=287						
F24K	**Squaw Lake**	**24.70**	**47**	IAmb	IAmb	06 00 57.0	
	comp=Z,23nm,0.9s						
F24K	**Squaw Lake**	**24.70**	**47**	P	**P**	**06 00 52.9**	**+0.1**
	baz=276,SNR=20						
JSD	**Sado**	**24.76**	**222**	P	**P**	**06 00 53.2**	**-0.3**
JSD				IAmb	IAmb	06 00 53.9	
	comp=Z,17nm,0.8s						
HOM	**Homer**	**24.78**	**67**	P	**P**	**06 00 53.7**	**+0.1**
	baz=290						
Q20K	**Shuyak Island**	**24.79**	**69**	P	**P**	**06 00 53.8**	**+0.2**
	baz=292						
M22K	**Willow**	**24.85**	**61**	P	**P**	**06 00 53.5**	**-0.7**
	baz=286						
MCK	**McKinley**	**24.88**	**57**	P	**P**	**06 00 54.4**	**-0.1**
	baz=283,SNR=11						
OHAK	**Old Harbor**	**24.89**	**73**	P	**P**	**06 00 54.5**	**0.0**
	baz=294						
H24K	**Noodor Dome**	**24.92**	**51**	IAmb	IAmb	06 00 57.4	
	comp=Z,15nm,0.9s						
H24K	**Noodor Dome**	**24.92**	**51**	P	**P**	**06 00 55.6**	**+0.8**
	baz=279						
G24K	**Hadweenzic Riv**	**24.95**	**49**	IAmb	IAmb	06 00 58.3	
	comp=Z,22nm,1.1s						
G24K	**Hadweenzic Riv**	**24.95**	**49**	P	**P**	**06 00 55.7**	**+0.6**
	baz=278,SNR=6.7						

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KDAK  Kodiak Island      25.02  71   LR     LR     06 10 51.4
      comp=Z,279nm,18.0s,baz=269,slow=37
KDAK  Kodiak Island      25.02  71   P      P      06 00 55.8 +0.1
KDAK  Kodiak Island      25.02  71   P      P      06 00 55.8 +0.1
KDAK                                 pmax   pmax
      comp=Z,177nm,1.9s
KDAK  Kodiak Island      25.02  71   P      P      06 00 56.1 +0.4
      baz=293
CNPM  China Poot         25.02  67   P      P      06 00 55.6 -0.2
WRH   Wood River Hil     25.08  55   P      P      06 00 56.9 +0.6
WRH                                  IAmb   IAmb   06 00 59.6
      comp=Z,28nm,0.9s
COLA  College            25.10  54   P      P      06 00 57.0 +0.6
COLA                                 IAmb   IAmb   06 01 00.1
      comp=Z,40nm,1.2s
COLA  College            25.10  54   P      P      06 00 57.0 +0.6
COLA                                 pmax   pmax
      comp=Z,40nm,1.2s
COLA  College            25.10  54   P      P      06 00 56.3 -0.1
      baz=281
BRLK  Bradley Lake       25.11  66   P      P      06 00 56.3 -0.3
D25K  Kavik River        25.12  43   P      P      06 00 57.2 +0.6
D25K  Kavik River        25.12  43   P      P      06 00 56.6 -0.1
      baz=273
CCB   Clear Creek Bu     25.16  54          P      06 00 57.7 +0.7
BRSE  Bradley Lake S     25.18  66   P      P      06 00 57.3  0.0
      baz=290
RC01  Rabbit Creek A     25.22  63   P      P      06 00 57.1 -0.5
      baz=288
POKR  Poker Plat Res     25.23  53   P      P      06 00 58.2 +0.6
POKR                                 IAmb   IAmb   06 01 02.2
      comp=Z,32nm,1.5s
POKR  Poker Plat Res     25.23  53   P      P      06 00 58.1 +0.5
      baz=281
WAT1  Susitna Watana     25.26  59   P      P      06 00 57.9 -0.1
      baz=285
PMR   Palmer             25.34  61   P      P      06 00 58.2 -0.4
      baz=287
GHO   Glory Hole Cre     25.39  61   P      P      06 00 59.4 +0.3
O22K  Cooper Landing     25.42  64   P      P      06 00 59.7 +0.4
      baz=289
G25K  Bearman Lake       25.48  49   P      P      06 01 00.5 +0.6
      baz=279
E25K  Arctic Village     25.51  46          P      06 01 01.3 +1.1
E25K                                 IAmb   IAmb   06 01 03.3
      comp=Z,21nm,0.8s
E25K  Arctic Village     25.51  46   P      P      06 01 00.8 +0.6
      baz=276,SNR=22
IL31                     25.52  54          P      06 01 00.4 +0.2
ILAR  Eielson Array      25.52  54   P      P      06 01 00.1 -0.2
      comp=Z,7.3nm,0.8s,baz=271,slow=9.3,SNR=68
ILAR                                 LR     LR     06 11 35.3
      comp=Z,153nm,19.9s,baz=327,slow=38
      comp=Z,7.3nm,0.8s
ILAR  Eielson Array      25.52  54   P      P      06 01 00.2  0.0
ILAR  Eielson Array      25.52  54   P      P      06 01 00.3  0.0
F25K  Christian Rive     25.54  47   IAmb   IAmb   06 01 05.5
      comp=Z,26nm,1.0s
F25K  Christian Rive     25.54  47   P      P      06 01 00.4 -0.1
      baz=277
HDA   Harding Lake       25.58  55   P      P      06 01 01.5 +0.8
HDA                                  IAmb   IAmb   06 01 03.6
      comp=Z,29nm,1.2s
HDA   Harding Lake       25.58  55   P      P      06 01 00.8  0.0
      baz=283,SNR=9.7
C26K  Camden Bay         25.60  42   P      P      06 01 01.6 +0.7
      baz=273
SML   Sawmill            25.64  61   P      P      06 01 01.6 +0.1
      baz=287
SEW   Seward             25.67  65   P      P      06 01 02.0 +0.4
      baz=290
WAT6  Susitna Watana     25.69  59   P      P      06 01 02.3 +0.3
      baz=286
KNK   Knik Glacier       25.71  62   P      P      06 01 02.4 +0.4
KNK                                  IAmb   IAmb   06 01 04.8
      comp=Z,30nm,1.0s
KNK   Knik Glacier       25.71  62   P      P      06 01 02.4 +0.4
      baz=288
DHY   Denali Highway     25.72  58   P      P      06 01 02.3 +0.1
DHY                                  IAmb   IAmb   06 01 06.7
      comp=Z,16nm,0.9s
DHY   Denali Highway     25.72  58   P      P      06 01 02.8 +0.6
      baz=285
M23K  Glacier View       25.92  61   P      P      06 01 03.9 -0.1
      baz=288,SNR=6.9
PWL   Port Wells         25.94  63          P      06 01 04.5 +0.4
PWL   Port Wells         25.94  63   P      P      06 01 03.8 -0.3
      baz=289
BMAR  Burnt Mountain     25.97  47   P      P      06 01 05.3 +0.9
C27K  Jago River         26.04  42   P      P      06 01 04.8 -0.1
      baz=275
SCM   Sheep Creek Mo     26.09  60   P      P      06 01 05.2 -0.4
      baz=288,SNR=6.2
F26K  Sheenjek River     26.10  47   P      P      06 01 05.7 +0.1
      baz=278
MJB9  Matsu-Tunnel       26.12 221   P      P      06 01 05.7 -0.3
MJB9                                 IAmb   IAmb   06 01 09.4
      comp=Z,32nm,1.2s
MAJO  Matsushiro         26.12 221          P      06 01 05.0 -1.0
MAJO                                 IAmb   IAmb   06 01 08.4
      comp=Z,35nm,1.2s
MAJO  Matsushiro         26.12 221 i P      P      06 01 05.5 -0.5
MAJO                                 pmax   pmax
      comp=Z,16nm,0.9s
MJAR  Matsushiro Arr     26.12 221   P      P      06 01 04.9 -1.0
      comp=Z,9.6nm,0.8s,baz=13,slow=9.5,SNR=19
MJAR                                 LR     LR     06 11 44.7
      comp=Z,99nm,18.8s,baz=28,slow=37
      comp=Z,9.6nm,0.8s
MJAR  Matsushiro Arr     26.12 221          P      06 01 04.7 -1.2
MJAR  Matsushiro Arr     26.12 221   P      P      06 01 04.7 -1.2
MJAR                                 pmax   pmax
      comp=Z,4.0nm,0.8s
J25K  Salcha River,      26.19  54   P      P      06 01 06.5  0.0
      baz=284
K24K  Donnelly Dome      26.22  56   P      P      06 01 05.9 -0.7
      baz=285
G26K  Porcupine Rive     26.36  48   P      P      06 01 08.3 +0.6
      baz=280
GLI   Glacier Island     26.50  62   P      P      06 01 09.9 +0.7
      baz=290
M24K  Tolsona, Glenn     26.53  59   P      P      06 01 09.5 +0.1
      baz=288
PAX   Paxson             26.58  57   P      P      06 01 09.6 -0.3
      baz=287
RIDG  Independent Ri     26.64  55   P      P      06 01 09.6 -0.9
      baz=286,SNR=8.0
P23K  Montague Islan     26.67  64   P      P      06 01 10.4 -0.3
      baz=291
KLU   Klutina            26.84  61   P      P      06 01 11.4 -0.9
      baz=289
HARP  HAARP              26.89  58   P      P      06 01 13.4 +0.8
      baz=288
SCRK  Sand Creek         26.94  55          P      06 01 12.9 -0.3
SCRK  Sand Creek         26.94  55   P      P      06 01 12.7 -0.5
      baz=286,SNR=6.0
I26K  Coal Creek Min     26.95  52   P      P      06 01 13.3 +0.2
      baz=284
E27K  Coleen River       26.98  45   P      P      06 01 14.1 +0.7
      baz=279
J26L  Joseph Creek       26.98  54   P      P      06 01 13.8 +0.3
      baz=285
D27M  Malcolm River      27.04  43   IAmb   IAmb   06 01 20.0
      comp=Z,20nm,1.0s
D27M  Malcolm River      27.04  43   P      P      06 01 14.0 -0.1
      baz=278
G27K  Doyon Strip        27.21  48   P      P      06 01 15.6 +0.1
      baz=282,SNR=12
EYAK  Cordova Ski Ar     27.24  62   P      P      06 01 15.8 +0.1
      baz=291
JGF   Kuroka             27.26 221   IAmb   IAmb   06 01 17.2
      comp=Z,22nm,1.2s
Q23K  Middleton Isla     27.38  65   P      P      06 01 17.0  0.0
      baz=293
H27K  Steamboat Moun     27.38  49   P      P      06 01 17.7 +0.6
      baz=283,SNR=6.4
L26K  Log Cabin Wild     27.49  57   P      P      06 01 18.0 -0.1
      baz=288
I27K  Kandik River       27.50  51   P      P      06 01 18.1  0.0
      baz=284
BMRM  Bremner River      27.61  61   P      P      06 01 19.6 +0.4
      baz=291
E28M  Babbage River      27.66  44   P      P      06 01 19.9 +0.5
      baz=280,SNR=9.9
F28M  Old Crow           27.72  46          P      06 01 21.0 +1.0
F28M  Old Crow           27.72  46   P      P      06 01 20.7 +0.7
      baz=282
D28M  Stokes Point       27.82  42   P      P      06 01 21.4 +0.6
      baz=280
M26K  Nabesna, AK        27.84  58   P      P      06 01 21.8 +0.6
      baz=289
VRDI  Verde Repeater     28.04  60   P      P      06 01 23.7 +0.5
KAIM  Kayak Island       28.09  63   P      P      06 01 22.7 -0.7
      baz=293
L27K  Beaver Creek,      28.14  56   IAmb   IAmb   06 01 26.9
      comp=Z,14nm,1.1s
L27K  Beaver Creek,      28.14  56   P      P      06 01 23.9  0.0
      baz=289
BCAR  Beaver Creek A     28.15  56   P      P      06 01 24.8 +0.8
MCARA McCarthy VSAT      28.18  60   P      P      06 01 24.1 -0.1
      baz=291
I28M  Miner Creek        28.21  51   P      P      06 01 24.0 -0.5
      baz=286
E29M  Blow River         28.29  44   P      P      06 01 25.0 -0.1
      baz=282
M27K  Edge Creek, AK     28.35  57   P      P      06 01 25.4 -0.4
      baz=290
G29M  Pine Creek         28.58  47   IAmb   IAmb   06 01 31.8
      comp=Z,15nm,1.0s
G29M  Pine Creek         28.58  47   P      P      06 01 26.2 -1.5
      baz=285
H29M  Whitestone         28.63  49   P      P      06 01 27.7 -0.5
      baz=286
JHJ   Hachijo jima 2     28.77 215   LR     LR     06 15 05.0
      comp=Z,30nm,19.2s,baz=294,slow=41
BVCY  Beaver Creek       28.77  57   P      P      06 01 28.9 -0.5
      baz=291
DAWY  Dawson             28.85  53   P      P      06 01 30.9 +0.8
DAWY  Dawson             28.85  53   P      P      06 01 29.8 -0.4
      baz=289
I29M  Ogilvie Camp,      28.89  50   P      P      06 01 30.9 +0.4
I29M  Ogilvie Camp,      28.89  50   P      P      06 01 30.8 +0.3
      baz=287
CTG   Chitna Glacier     29.09  60   P      P      06 01 32.3 -0.2
      baz=293
CTGM  Chitina Glacie     29.10  60   P      P      06 01 33.8 +1.3
YUK3  Moose Creek        29.18  58   P      P      06 01 33.2 -0.1
      baz=292
J29N  Klondike Camp      29.21  52   P      P      06 01 33.0 -0.4
      baz=289
EPYK  Eagle Plains       29.23  48          P      06 01 34.3 +0.8
EPYK                                 IAmb   IAmb   06 01 34.6
      comp=Z,20nm,1.1s
EPYK  Eagle Plains       29.23  48   P      P      06 01 33.5 +0.1
      baz=286
F30M  Barrier River      29.24  45   IAmb   IAmb   06 01 37.9
      comp=Z,31nm,1.0s
F30M  Barrier River      29.24  45   P      P      06 01 33.3 -0.3
      baz=285,SNR=15
G30M  tAoh Zraii Nji     29.25  47   P      P      06 01 33.9 +0.3
      baz=286
KSRS  Korea Array        29.35 237   P      P      06 01 34.0 -0.7
      comp=Z,3.5nm,0.7s,baz=26,slow=8.6,SNR=7.7
KSRS                                 LR     LR     06 12 25.1
      comp=Z,69nm,21.8s,baz=55,slow=35
      comp=Z,3.5nm,0.7s
K29M  Barlow Dome        29.70  53   P      P      06 01 38.1 +0.3
      baz=290
I30M  Mount Dempster     29.71  50   P      P      06 01 38.4 +0.5
      baz=289
M29M  Somme Creek        29.80  56   P      P      06 01 39.3 +0.6
      baz=292
INK   Inuvik             29.89  44          P      06 01 40.0 +0.8
INK                                  IAmb   IAmb   06 01 41.0
      comp=Z,20nm,1.4s
INK   Inuvik             29.89  44   P      P      06 01 40.0 +0.8
INK                                  pmax   pmax
      comp=Z,20nm,1.5s
INK   Inuvik             29.89  44   P      P      06 01 40.2 +1.0
      baz=286,SNR=8.0
PINM  Pinnacle           29.94  61   P      P      06 01 40.4 +0.5
      baz=295
J30M  Hart River         29.94  51   P      P      06 01 40.1 +0.2
      baz=290
F31M  Tsiigehtchic       30.05  45          P      06 01 41.6 +0.9
F31M  Tsiigehtchic       30.05  45   P      P      06 01 41.3 +0.7
      baz=287
YUK4  Talbot Arm         30.15  58   P      P      06 01 41.8  0.0
      baz=294
H31M  Peel River         30.32  49   P      P      06 01 43.1 -0.1
      baz=289
YUK6  Outpost Mounta     30.44  59   P      P      06 01 44.4  0.0
      baz=294
O29M  Mount Kennedy      30.61  60   P      P      06 01 46.0 +0.1
      baz=295
N30M  Aishikik Lake      30.79  57   P      P      06 01 48.1 +0.7
      baz=294
NRIK  Noril'sk           30.99 319   LR     LR     06 14 08.9
      comp=Z,91nm,19.3s,baz=72,slow=36
NRIK  Noril'sk           30.99 319 i P      P      06 01 49.6 +0.6
NRIK                                 pmax   pmax
      comp=Z,3.0nm,1.4s
NRIK                                 MLR    MLR
      comp=Z,176nm,15.0s
N31M  Braeburn, Yuko     31.35  57   P      P      06 01 52.3 +0.1
      baz=295
P30M  Million Dollar     31.42  60   P      P      06 01 53.6 +0.7
      baz=296
A36M  Sachs Harbour      31.61  35   P      P      06 01 54.5 +0.1
      baz=286,SNR=16
JNU   Nakatsue           31.86 229   LR     LR     06 14 24.2
      comp=Z,124nm,18.2s,baz=34,slow=36
PLBC  Pleasant Camp      31.99  61   P      P      06 01 57.3 -0.5
      baz=298
ULN   Ulaanbaatar        32.09 273ceP       P      06 01 58.6 -0.4
ULN                                  pmax   pmax
      comp=Z,4.0nm,1.0s
SONM  Songino Array      32.45 274   P      P      06 02 02.1  0.0
      comp=Z,2.2nm,0.8s,baz=63,slow=8.6,SNR=8.8
SONM                                 PcP    PcP    06 04 48.1 -0.4
      comp=Z,2.3nm,0.9s,baz=47,slow=1.1,SNR=7.1
SONM                                 LR     LR     06 15 44.0
      comp=Z,320nm,18.7s,baz=27,slow=38
      comp=Z,2.2nm,0.8s
SONM  Songino Array      32.45 274   P      P      06 02 01.7 -0.5
SONM  Songino Array      32.45 274   P      P      06 02 01.7 -0.5
SONM                                 pmax   pmax
      comp=Z,2.0nm,0.9s
ZAK   Zakamensk          32.48 280 eP       P      06 02 03.2 +0.8
ZAK                                  pmax   pmax
      comp=Z,6.0nm,1.4s
S31K  Pelican            32.76  63   P      P      06 02 03.9 -0.7
      baz=300
C36M  Paulatuk           32.82  40          P      06 02 05.4 +0.4
C36M  Paulatuk           32.82  40   P      P      06 02 04.5 -0.5
      baz=291,SNR=23
S32K  Killisnoo          33.78  63   P      P      06 02 12.7 -0.7
      baz=301
Q32M  Nakina River       34.07  60   P      P      06 02 16.1 -0.1
      baz=300
HHC   Hu-ho-hao-te       34.58 260 eP       P      06 02 20.0 -0.8
HHC                                  pmax   pmax
      comp=Z,14nm,0.6s
HHC                                  LR     LR
      comp=Z,310nm,14.5s
HHC                                  LR     LR
      comp=Z,330nm,14.5s
HHC                                  LR     LR
      comp=Z,510nm,16.2s
HNS   HongShan           35.62 253 ⇓P       P      06 02 31.5 +2.0
HNS                                  pmax   pmax
      comp=Z,8.0nm,0.8s
HNS                                  LR     LR
      comp=Z,620nm,14.7s
HNS                                  LR     LR
      comp=Z,240nm,13.3s
HNS                                  LR     LR
      comp=Z,530nm,13.9s
LIRD  Liard River Hi     36.55  56   P      P      06 02 37.8 +0.4
      baz=303
TOAD  Toad River Com     37.23  56   P      P      06 02 43.6 +0.5
      baz=304
NJ2   Nanjing            37.95 243 eP       P      06 02 48.0 -1.4
NJ2                                  pmax   pmax
      comp=Z,12nm,0.5s
LYN   LuoYang            38.98 252   P      P      06 03 01.0 +3.0
LYN                                  pmax   pmax
      comp=Z,14nm,0.9s
LYN                                  LR     LR
      comp=Z,700nm,11.7s
LYN                                  LR     LR
      comp=Z,580nm,14.4s
LYN                                  LR     LR
      comp=Z,1μm,14.4s
ZALV  Zalesovo Beam      39.41 296   P      P      06 03 01.0 -0.4
      comp=Z,0.5nm,0.3s,baz=74,slow=2.1,SNR=1.1
ZALV                                 LR     LR     06 21 15.7
      comp=Z,152nm,18.4s,baz=28,slow=39
      comp=Z,0.5nm,0.3s
ZALV  Zalesovo Beam      39.41 296   P      P      06 03 00.3 -1.1
ZALV  Zalesovo Beam      39.41 296   P      P      06 03 00.3 -1.1
YKAW3 Yellowknife Wh     39.45  47          P      06 03 02.0 +0.4
YKA   Yellowknife Ar     39.49  47   P      P      06 03 02.8 +0.8
      comp=Z,4.4nm,0.8s,baz=304,slow=8.9,SNR=52
YKA                                  PcP    PcP    06 05 10.2 +1.2
      comp=Z,1.2nm,0.9s,baz=308,slow=4.3,SNR=7.3
      comp=Z,4.4nm,0.8s
YKAW1 Yellowknife Wh     39.54  47          P      06 03 03.5 +1.0
BBB   Bella Bella        39.88  67   LR     LR     06 19 25.3
      comp=Z,188nm,18.2s,baz=226,slow=36
DGZ   Jazzator, Alta     40.86 290 i P      P      06 03 14.1 +0.3
DGZ                                  pmax   pmax
      comp=Z,9.0nm,0.9s
SPITS Spitsbergen Ar     41.36 349   P      P      06 03 18.5 +1.1
      comp=Z,16nm,0.8s,baz=79,slow=8.6,SNR=9.3
      comp=Z,16nm,0.8s
SPITS Spitsbergen Ar     41.36 349   P      P      06 03 18.0 +0.6
SPITS                                pmax   pmax
      comp=Z,25nm,1.0s
SPB2  Spitsbergen Ar     41.37 349   P      P      06 03 18.0 +0.6
GTA   Gaotai             41.72 269 eP       P      06 03 20.8 -0.1
GTA                                  sP     pP     06 03 27.3 -3.8
GTA                                  S      S      06 09 43.5 +8.1
GTA                                  pmax   pmax
      comp=Z,8.0nm,1.2s
GTA                                  LR     LR
      comp=Z,320nm,17.5s
GTA                                  LR     LR
      comp=Z,380nm,17.8s
GTA                                  LR     LR
      comp=Z,560nm,16.7s
LZDM  Lanzhou Array      42.32 262   P      P      06 03 26.5 +0.5
      comp=Z,1.9nm,0.4s,baz=340,slow=1.7,SNR=5.1
LZDM                                 LR     LR     06 22 35.3
      comp=Z,117nm,19.4s,baz=160,slow=38
      comp=Z,1.9nm,0.4s
POIN  Pond Inlet         43.09  22   P      P      06 03 32.8 +1.4
LLLB  Lillooet           43.87  65   P      P      06 03 39.6 +1.6
LLLB                                 IAmb   IAmb   06 03 42.7
      comp=Z,12nm,0.9s
CLRS  Cowichan Lake      44.02  68   P      P      06 03 40.8 +1.7
CLRS                                 IAmb   IAmb   06 04 56.0
      comp=Z,32nm,1.5s
KURK  Kurchatov          44.40 296          P      06 03 41.6 -0.6
KURK  Kurchatov          44.40 296ceP       P      06 03 42.1 -0.1
KURK                                 pmax   pmax
      comp=Z,31nm,0.9s
KURBB Kurchatov Arra     44.50 296   P      P      06 03 42.8 -0.2
      comp=Z,20nm,0.9s,baz=49,slow=8.1,SNR=45
KURBB                                LR     LR     06 24 25.7
      comp=Z,184nm,18.7s,baz=189,slow=39
      comp=Z,20nm,0.9s
BLKN  Baker Lake         44.75  37          P      06 03 45.2 +0.4
BLKN                                 IAmb   IAmb   06 03 47.8
      comp=Z,29nm,1.2s
WMQ   Urumqi             44.77 283 eP       P      06 03 47.0 +1.6
WMQ                                  LR     LR
      comp=Z,97nm,24.2s
MK31  Makanchi Array     45.36 290ceP       P      06 03 49.5 -0.5
MKAR  Makanchi Array     45.36 290   P      P      06 03 49.0 -1.0
      comp=Z,4.2nm,0.9s,baz=60,slow=7.2,SNR=26
MKAR                                 LR     LR     06 23 32.8
      comp=Z,167nm,20.7s,baz=32,slow=37
      comp=Z,4.2nm,0.9s
MKAR  Makanchi Array     45.36 290   P      P      06 03 49.3 -0.6
MKAR  Makanchi Array     45.36 290   P      P      06 03 49.0 -1.0
MAKZ  Makanchi           45.50 290          P      06 03 50.1 -1.0
MAKZ  Makanchi           45.50 290   P      P      06 03 50.1 -1.0
MAKZ                                 pmax   pmax
      comp=Z,6.0nm,1.1s
GNW   Green Mountain     45.52  68   P      P      06 03 52.4 +1.3
GNW                                  IAmb   IAmb   06 04 56.8
      comp=Z,17nm,1.6s
EDM   Edmonton           45.94  57          P      06 03 55.4 +0.9
EDM                                  IAmb   IAmb   06 03 56.6
      comp=Z,18nm,0.8s
EDM   Edmonton           45.94  57   P      P      06 03 55.4 +0.9
EDM                                  pmax   pmax
      comp=Z,18nm,0.8s
BVAR  Borovoye Array     46.51 304   P      P      06 03 59.2 +0.3
      comp=Z,8.0nm,0.8s,baz=53,slow=7.6,SNR=32
BVAR                                 PcP    PcP    06 05 32.6 -0.1
      comp=Z,1.4nm,0.6s,baz=64,slow=3.4,SNR=3.5
BVAR                                 LR     LR     06 25 26.8
      comp=Z,335nm,18.8s,baz=45,slow=39
      comp=Z,8.0nm,0.8s
BORK  Borovoye           46.52 304   P      P      06 03 58.5 -0.5
BORK                                 IAmb   IAmb   06 04 00.5
      comp=Z,11nm,0.8s
BORK  Borovoye           46.52 304ceP       P      06 03 58.9 -0.1
BORK                                 pmax   pmax
      comp=Z,13nm,0.9s
B08A  Colville Reser     46.62  65   P      P      06 04 00.7 +0.8
B08A                                 IAmb   IAmb   06 04 01.9
      comp=Z,5.1nm,0.8s
GOMU  GeErMu             46.74 270   P      P      06 03 59.5 -1.9
GOMU                                 pP     pP     06 04 02.8 -8.9
GOMU                                 sP     sP     06 04 07.0 -8.8
GOMU                                 pmax   pmax
      comp=Z,6.0nm,0.8s
LTY   Liberty            46.77  67   P      P      06 04 01.8 +0.7
EPH   Ephrata            47.21  66          P      06 04 05.0 +0.5
EPH                                  IAmb   IAmb   06 04 07.4
      comp=Z,5.6nm,0.8s
MXC   Moxie City         47.44  68   P      P      06 04 07.4 +1.2
MXC                                  IAmb   IAmb   06 04 09.0
      comp=Z,8.0nm,1.1s
C09A  Chrisman Ranch     47.52  65   IAmb   IAmb   06 04 50.1
      comp=Z,14nm,1.7s
ARCES ARCESS Array B     47.65 340   P      P      06 04 07.0 -0.6
      comp=Z,3.7nm,0.9s,baz=30,slow=9.8,SNR=10
      comp=Z,3.7nm,0.9s
ARCES ARCESS Array B     47.65 340   P      P      06 04 07.3 -0.3
ARCES ARCESS Array B     47.65 340   P      P      06 04 07.3 -0.3
ARCES                                pmax   pmax
      comp=Z,77nm,1.9s
WAH2  Wahluke Slope      47.66  67   IAmb   IAmb   06 04 09.7
      comp=Z,10nm,0.8s
E07A  Sunnyside          47.66  67   IAmb   IAmb   06 04 11.5
      comp=Z,7.1nm,1.0s
NEW   Newport            47.73  64   LR     LR     06 23 40.8
      comp=Z,73nm,20.1s,baz=285,slow=35
APA   Apatity            47.74 335 eP       P      06 04 01.5 -6.7
HAWA  Hanford            47.93  67   IAmb   IAmb   06 04 12.1
      comp=Z,6.3nm,1.0s
F07A  Phinny Hill Vi     48.10  68   IAmb   IAmb   06 04 15.1
      comp=Z,7.1nm,0.8s
SUMG  Summit             48.32   7          P      06 04 13.5 +0.3
SUMG                                 IAmb   IAmb   06 04 16.3
      comp=Z,12nm,1.0s
SUMG  Summit             48.32   7   P      P      06 04 13.5 +0.3
SUMG                                 pmax   pmax
      comp=Z,12nm,1.0s
YPT   Yellepit           48.46  67   IAmb   IAmb   06 04 15.9
      comp=Z,8.5nm,0.9s
E09A  Wood Farm, Sta     48.51  66   IAmb   IAmb   06 04 16.3
      comp=Z,7.6nm,0.9s
WIFE  Three Sisters-     48.52  71   IAmb   IAmb   06 04 19.2
      comp=Z,10nm,1.0s
BBOR  Butler Butte       48.95  73   IAmb   IAmb   06 04 22.2
      comp=Z,13nm,1.1s
ARTI  Arti               48.97 314   PcP    PcP    06 05 40.9 -0.5
      comp=Z,5.1nm,0.8s,baz=90,slow=5.1,SNR=2.8
ARTI                                 LR     LR     06 27 51.7
      comp=Z,202nm,18.4s,baz=44,slow=40
ARTI  Arti               48.97 314   P      P      06 04 17.3 -0.6
ARTI  Arti               48.97 314ceP       P      06 04 18.2 +0.3
ARTI                                 pmax   pmax
      comp=Z,12nm,1.0s
ARTI                                 MLR    MLR
      comp=Z,265nm,17.0s
PINE  Pine Mountain      49.15  71   IAmb   IAmb   06 04 24.2
      comp=Z,18nm,1.0s
F10A  Beach Ranch, E     49.34  66   IAmb   IAmb   06 04 24.2
      comp=Z,7.3nm,0.9s
J05D  Fort Rock, OR      49.38  71   IAmb   IAmb   06 04 25.5
      comp=Z,16nm,1.0s
FCC   Fort Churchill     49.44  41   IAmb   IAmb   06 04 24.8
      comp=Z,21nm,1.1s
FFC   Flin Flon          49.57  49          P      06 04 23.5 +1.0
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FFC				IAmb	IAmb	06 04 24.5	
	comp=Z,17nm,1.4s						
FFC	**Flin Flon**	**49.57**	**49**	P	**P**	**06 04 23.5**	**+1.0**
FFC				pmax	pmax		
	comp=Z,17nm,1.4s						
YBH	**Yreka Blue Hor**	**49.80**	**74**	LR	LR	06 22 35.1	
	comp=Z,8.0nm,21.1s,baz=290,slow=33						
N02D	**Trinity Center**	**50.36**	**74**	IAmb	IAmb	06 04 36.7	
	comp=Z,20nm,1.4s						
KIRV	**Kirov**	**50.49**	**320**	LR	LR	06 26 27.9	
	comp=Z,80nm,19.5s,baz=31,slow=37						
KIRV	**Kirov**	**50.49**	**320**	*ce*P	**P**	**06 04 30.0**	**+0.6**
PZH	**PanZhiHua**	**50.87**	**256**	P	**P**	**06 04 32.8**	**0.0**
WUS	**Wushi**	**50.95**	**287**	IAmb	IAmb	06 04 36.5	
	comp=Z,7.3nm,0.6s						
EGMT	**Eagleton**	**51.27**	**59**	IAmb	IAmb	06 04 38.7	
	comp=Z,15nm,1.0s						
WVOR	**Wild Horse Val**	**51.28**	**70**	IAmb	IAmb	06 04 39.6	
	comp=Z,10nm,1.1s						
O03E	**Paynes Creek**	**51.33**	**74**	IAmb	IAmb	06 04 38.5	
	comp=Z,19nm,1.1s						
BOOM	**Boomskoye usch**	**51.60**	**290**		**P**	**06 04 37.2**	**-1.0**
BOOM				IAmb	IAmb	06 04 42.8	
	comp=Z,17nm,1.1s						
BOOM	**Boomskoye usch**	**51.60**	**290**	P	**P**	**06 04 37.2**	**-1.0**
BOOM				pmax	pmax		
	comp=Z,17nm,1.1s						
KLMR	**Klimovskoe**	**51.73**	**327**	*e*P	**P**	**06 04 36.5**	**-2.1**
KLMR				*e*		06 05 50.7	
KLMR				*e*		06 06 34.2	
KLMR				pmax	pmax		
	comp=Z,18nm,1.0s						
DLMT	**Dillon**	**51.97**	**63**	IAmb	IAmb	06 05 41.7	
	comp=Z,24nm,1.9s						
AAK	**Ala-Archa**	**52.19**	**292**	LR	LR	06 28 50.3	
	comp=Z,91nm,18.7s,baz=41,slow=38						
AAK	**Ala-Archa**	**52.19**	**292**	P	**P**	**06 04 42.0**	**-0.6**
AAK				IAmb	IAmb	06 04 44.1	
	comp=Z,10nm,0.9s						
AAK	**Ala-Archa**	**52.19**	**292**	*ce*P	**P**	**06 04 43.0**	**+0.4**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
QIZ	**Qiongzhong**	**53.24**	**243**	P	**P**	**06 04 49.5**	**-0.9**
QIZ				S	**S**	**06 12 20.5**	**+1.5**
QIZ				LR	LR		
	comp=Z,140nm,12.5s						
QIZ				LR	LR		
	comp=Z,180nm,11.0s						
QIZ				LR	LR		
	comp=Z,230nm,15.9s						
YNE	**Yellowstone No**	**53.44**	**62**	IAmb	IAmb	06 04 54.1	
	comp=Z,6.4nm,0.7s						
LKWY	**Lake**	**53.59**	**63**	IAmb	IAmb	06 04 58.0	
	comp=Z,12nm,1.1s						
AKTO	**Aktyubinsk**	**53.62**	**309**	P	**P**	**06 04 53.6**	**+0.9**
	comp=Z,11nm,0.9s,baz=14,slow=5.4,SNR=14						
AKTO				PcP	**PcP**	**06 05 59.0**	**+0.2**
	comp=Z,3.4nm,0.7s,baz=67,slow=2.0,SNR=2.4						
AKTO				LR	LR	06 30 03.8	
	comp=Z,154nm,18.1s,baz=225,slow=39						
	comp=Z,11nm,0.9s						
H17A	**Grant Village**	**53.64**	**63**	IAmb	IAmb	06 04 57.3	
	comp=Z,9.5nm,1.1s						
RLMT	**Red Lodge**	**53.69**	**61**	IAmb	IAmb	06 04 58.3	
	comp=Z,12nm,0.9s						
AB31	**Akbulak array**	**53.73**	**307**	P	**P**	**06 04 53.7**	**0.0**
ABKAR	**Akbulak array**	**53.73**	**307**	P	**P**	**06 04 53.7**	**0.0**
KK31	**Karatay Array**	**53.74**	**295**		**P**	**06 04 53.6**	**-0.2**
KK31	**Karatay Array**	**53.74**	**295**	P	**P**	**06 04 53.6**	**-0.2**
KK31				pmax	pmax		
	comp=Z,21nm,1.0s						
KKAR	**Karatay Array**	**53.74**	**295**	P	**P**	**06 04 53.4**	**-0.4**
KKAR	**Karatay Array**	**53.74**	**295**	P	**P**	**06 04 53.4**	**-0.4**
KSH	**Kashi**	**53.84**	**288**	P	P	06 04 59.3	+4.6
KSH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LAO	**LASA Array**	**53.86**	**58**	IAmb	IAmb	06 04 59.0	
	comp=Z,12nm,0.9s						
ARSB	**Arslanbob**	**53.92**	**292**	IAmb	IAmb	06 04 58.3	
	comp=Z,8.6nm,1.0s						
ELK	**Elko**	**54.22**	**69**	LR	LR	06 27 16.6	
	comp=Z,99nm,20.0s,baz=272,slow=35						
LOHW	**Long Hollow**	**54.23**	**64**	IAmb	IAmb	06 05 02.0	
	comp=Z,11nm,1.4s						
NVAR	**Mina Array Bea**	**54.50**	**73**	P	**P**	**06 05 01.1**	**+1.4**
	comp=Z,6.3nm,1.0s,baz=309,slow=6.6,SNR=20						
NVAR				LR	LR	06 29 31.5	
	comp=Z,100nm,18.1s,baz=309,slow=37						
	comp=Z,6.3nm,1.0s						
NVAR	**Mina Array Bea**	**54.50**	**73**		**P**	**06 05 00.2**	**+0.5**
FIA1	**FINESS Array S**	**54.63**	**334**	P	**P**	**06 04 59.9**	**-0.1**
FINES	**FINESS Array B**	**54.63**	**334**	P	**P**	**06 04 59.9**	**-0.1**
	comp=Z,7.2nm,0.8s,baz=28,slow=8.6,SNR=18						
FINES				LR	LR	06 34 57.9	
	comp=Z,34nm,19.4s,baz=6.0,slow=43						
	comp=Z,7.2nm,0.8s						
FINES	**FINESS Array B**	**54.63**	**334**	P	**P**	**06 04 59.6**	**-0.3**
FINES	**FINESS Array B**	**54.63**	**334**	*i* P	**P**	**06 04 59.9**	**-0.1**
FINES				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PDAR	**Pinedale Array**	**55.37**	**63**	P	**P**	**06 05 07.3**	**+1.5**
	comp=Z,2.6nm,0.7s,baz=329,slow=2.6,SNR=23						
PDAR				LR	LR	06 32 56.7	
	comp=Z,48nm,19.0s,baz=316,slow=40						
	comp=Z,2.6nm,0.7s						
PDAR	**Pinedale Array**	**55.37**	**63**	P	**P**	**06 05 06.2**	**+0.4**
ULM	**Lac du Bonnet**	**55.40**	**49**	P	**P**	**06 05 06.1**	**+0.4**
	comp=Z,5.5nm,0.7s,baz=352,slow=10,SNR=6.1						
	comp=Z,5.5nm,0.7s						
ULM	**Lac du Bonnet**	**55.40**	**49**	IAmb	IAmb	06 05 09.5	
	comp=Z,22nm,1.4s						
ULM	**Lac du Bonnet**	**55.40**	**49**	*i* P	**P**	**06 05 07.9**	**+2.2**
SPR3	**Spring Creek 3**	**56.01**	**70**	IAmb	IAmb	06 05 15.9	
	comp=Z,18nm,1.0s						
BELG	**Belogornoye**	**56.03**	**317**	P	**P**	**06 05 10.4**	**+0.2**
	comp=Z,51nm,0.9s,baz=144,slow=0.9,SNR=9.1						
	comp=Z,51nm,0.9s						
BELG	**Belogornoye**	**56.03**	**317**	*c i*P	**P**	**06 05 10.3**	**+0.2**
BELG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BSUT	**Blindstream Ca**	**56.53**	**66**	IAmb	IAmb	06 05 17.4	
	comp=Z,10.0nm,1.1s						
PSUT	**Pine Spring**	**56.61**	**70**	IAmb	IAmb	06 05 19.1	
	comp=Z,6.3nm,0.9s						
TPNV	**Topopah Spring**	**56.67**	**73**	IAmb	IAmb	06 05 22.4	
	comp=Z,13nm,1.1s						
FURC	**Furnace Creek,**	**56.74**	**74**	IAmb	IAmb	06 05 19.9	
	comp=Z,14nm,1.0s						
RSSD	**Black Hills**	**56.82**	**59**	P	**P**	**06 05 15.8**	**-0.5**
RSSD				IAmb	IAmb	06 05 19.9	
	comp=Z,9.8nm,0.9s						
RSSD	**Black Hills**	**56.82**	**59**	P	**P**	**06 05 15.8**	**-0.5**
RSSD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
RDMU	**Red Mountain**	**57.07**	**65**	IAmb	IAmb	06 05 23.9	
	comp=Z,13nm,1.4s						
VSU	**Vasula**	**57.13**	**332**	*i* P	**P**	**06 05 18.0**	**+0.1**
VSU				pmax	pmax		
	comp=Z,11nm,1.0s						
TMUT	**Trail Mountain**	**57.29**	**67**	IAmb	IAmb	06 05 24.0	
	comp=Z,10nm,1.1s						
P17A	**Butcher Ranch,**	**57.38**	**67**	IAmb	IAmb	06 05 25.1	
	comp=Z,16nm,1.4s						
OBN	**Obninsk**	**57.40**	**325**	*e*P	**P**	**06 05 19.7**	**-0.1**
OBN				*i*		06 06 11.7	
OBN				pmax	pmax		
	comp=Z,12nm,1.0s						
OBN				MLR	MLR		
	comp=Z,63nm,15.0s						
MANEM	**Manem**	**57.49**	**290**	IAmb	IAmb	06 05 22.7	
	comp=Z,17nm,0.9s						
P18A	**Preston Nutter**	**57.49**	**66**	IAmb	IAmb	06 05 25.6	
	comp=Z,9.5nm,1.1s						
CCUT	**Cedar City**	**57.62**	**70**	IAmb	IAmb	06 05 26.4	
	comp=Z,8.1nm,1.1s						
NC204	**NORSAR Array S**	**57.71**	**343**		**P**	**06 05 22.2**	**+0.2**
NC204				IAmb	IAmb	06 05 23.7	
	comp=Z,8.2nm,1.0s						
NC405	**NORSAR Array S**	**57.71**	**342**		**P**	**06 05 22.3**	**+0.3**
NC405				IAmb	IAmb	06 05 23.7	
	comp=Z,8.7nm,0.9s						
SRU	**San Rafael Swe**	**57.77**	**67**	IAmb	IAmb	06 05 36.7	
	comp=Z,9.6nm,1.0s						
NB201	**NORSAR Array S**	**57.84**	**342**	IAmb	IAmb	06 05 25.0	
	comp=Z,9.8nm,0.9s						
NB2	**NORSAR Subarra**	**57.86**	**342**	P	**P**	**06 05 23.0**	**-0.1**
	comp=Z,2.0nm,0.7s,baz=19,slow=7.4						
NOA	**NORSAR Array B**	**57.86**	**342**	P	**P**	**06 05 22.6**	**-0.4**
	comp=Z,4.6nm,0.9s,baz=19,slow=7.0,SNR=18						
	comp=Z,4.6nm,0.9s						
O20A	**White River Ci**	**58.04**	**65**	IAmb	IAmb	06 05 28.8	
	comp=Z,15nm,0.8s						
PKCU	**Pink Cliffs**	**58.22**	**69**	IAmb	IAmb	06 05 30.8	
	comp=Z,12nm,1.0s						
HFS	**Hagfors**	**58.30**	**340**	P	**P**	**06 05 24.9**	**-1.3**
	comp=Z,4.4nm,0.9s,baz=29,slow=6.8,SNR=8.3						
	comp=Z,4.4nm,0.9s						
KNB	**Kanab**	**58.31**	**70**	IAmb	IAmb	06 05 30.0	
	comp=Z,9.9nm,1.2s						
CHTO	**Chiang Mai**	**58.70**	**254**	P	**P**	**06 05 28.2**	**-1.2**
CHTO				IAmb	IAmb	06 05 30.3	
	comp=Z,8.8nm,1.1s						
CHTO	**Chiang Mai**	**58.70**	**254**	P	**P**	**06 05 28.2**	**-1.2**
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
F33A	**5 Mile Ranch,**	**58.77**	**52**	IAmb	IAmb	06 05 32.7	
	comp=Z,10.0nm,1.0s						
LPSR	**Galich'ya Gora**	**58.81**	**322**	*e*P	**P**	**06 05 28.6**	**-1.2**
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
PV21	**Cone Mtn., Par**	**58.94**	**66**	IAmb	IAmb	06 05 35.1	
	comp=Z,8.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**59.00**	**254**	P	**P**	**06 05 30.6**	**-0.9**
	comp=Z,0.8nm,0.3s,baz=11,slow=8.3,SNR=7.3						
CMAR				LR	LR	06 34 42.4	
	comp=Z,100nm,18.7s,baz=65,slow=40						
	comp=Z,0.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**59.00**	**254**	P	**P**	**06 05 30.3**	**-1.2**
CMAR	**Chiang Mai Arr**	**59.00**	**254**	*i* P	**P**	**06 05 30.8**	**-0.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
U15A	**North Rim**	**59.03**	**70**	IAmb	IAmb	06 05 36.3	
	comp=Z,12nm,1.0s						
PV14	**Lion Creek, Pa**	**59.07**	**66**	IAmb	IAmb	06 05 36.7	
	comp=Z,13nm,1.0s						
VRH	**Novokhopyorsk**	**59.08**	**319**	*e*P	**P**	**06 05 29.7**	**-1.9**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PV16	**Nyswonger Mesa**	**59.17**	**66**	IAmb	IAmb	06 05 37.3	
	comp=Z,12nm,0.9s						
PV03	**Paradox Valley**	**59.24**	**66**	IAmb	IAmb	06 05 37.8	
	comp=Z,11nm,0.9s						
W13A	**Hualapai Mount**	**59.30**	**72**	IAmb	IAmb	06 05 38.4	
	comp=Z,7.2nm,1.2s						
PV13	**Radium Mtn., P**	**59.33**	**66**	IAmb	IAmb	06 05 36.5	
	comp=Z,9.7nm,0.9s						
IRM	**Iron Mountain**	**59.43**	**74**	IAmb	IAmb	06 05 39.3	
	comp=Z,11nm,1.1s						
PV01	**Paradox Valley**	**59.47**	**66**	IAmb	IAmb	06 05 38.8	
	comp=Z,9.8nm,1.2s						
ISCO	**Idaho Springs**	**59.53**	**63**	IAmb	IAmb	06 05 39.9	
	comp=Z,13nm,1.2s						
NIL	**Nilore**	**59.79**	**286**		**P**	**06 05 36.4**	**-0.5**
NIL	**Nilore**	**59.79**	**286**	P	**P**	**06 05 36.4**	**-0.5**
NIL				pmax	pmax		
	comp=Z,21nm,0.8s						
VSR	**Storozhevoye**	**59.92**	**321**	*e*P	**P**	**06 05 36.5**	**-0.9**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BLYC	**Blythe**	**60.06**	**74**	IAmb	IAmb	06 05 43.0	
	comp=Z,7.1nm,1.0s						
VORD	**Divnogorie**	**60.09**	**321**	*e*P	**P**	**06 05 36.7**	**-1.9**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WUAZ	**Wupatki**	**60.21**	**70**	IAmb	IAmb	06 05 44.5	
	comp=Z,9.6nm,1.1s						
MVCO	**Mesa Verde**	**60.24**	**67**	IAmb	IAmb	06 05 48.9	
	comp=Z,6.9nm,1.2s						
ECSD	**EROS Data Cent**	**60.34**	**54**	IAmb	IAmb	06 05 42.0	
	comp=Z,10nm,0.9s						
MNK	**Minsk**	**60.38**	**330**	*i* P	**P**	**06 05 39.6**	**-0.9**
MNK				*i*		06 06 24.2	
MNK				*i*		06 07 52.8	
MNK				*i* S	**S**	**06 13 55.5**	**+3.1**
MNK				*i*		06 15 30.4	
MNK				*i* SS	**SS**	**06 17 54.7**	**+5.3**
MNK				pmax	pmax		
	comp=E,22nm,1.0s						
MNK				pmax	pmax		
	comp=N,16nm,0.7s						
MNK				pmax	pmax		
	comp=Z,26nm,0.7s						
MNK				MLR	MLR		
	comp=Z,125nm,16.0s						
MNK				MLR	MLR		
	comp=E,91nm,18.0s						
MNK				MLR	MLR		
	comp=N,65nm,17.0s						
GLA	**Glamis**	**60.47**	**74**	IAmb	IAmb	06 05 44.3	
	comp=Z,5.4nm,0.8s						
Y14A	**Wickenburg**	**60.67**	**72**	IAmb	IAmb	06 05 46.7	
	comp=Z,5.9nm,1.0s						
SCHQ	**Schefferville**	**60.85**	**28**	P	**P**	**06 05 43.2**	**-0.5**
	comp=Z,4.7nm,0.9s,baz=331,slow=10,SNR=2.2						
	comp=Z,4.7nm,0.9s						
X16A	**Lo Mia Camp, P**	**61.05**	**71**	IAmb	IAmb	06 05 50.4	
	comp=Z,7.3nm,1.1s						
KBL	**Kabul**	**61.16**	**290**	P	**P**	**06 05 45.6**	**-0.8**
KBL				IAmb	IAmb	06 05 47.6	
	comp=Z,10nm,0.8s						
KBL	**Kabul**	**61.16**	**290**	P	**P**	**06 05 45.6**	**-0.8**
KBL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SDCO	**Great Sand Dun**	**61.23**	**64**	IAmb	IAmb	06 05 50.7	
	comp=Z,6.1nm,0.9s						
KSCO	**Kaye Shedlock'**	**61.54**	**61**	IAmb	IAmb	06 05 53.4	
	comp=Z,9.8nm,0.8s						
X18A	**Snowflake**	**61.69**	**70**	IAmb	IAmb	06 05 54.6	
	comp=Z,12nm,0.9s						
PLTM	**Poltava**	**62.80**	**323**	P	**P**	**06 05 56.0**	**-0.9**
TASM	**ASL Pad, Albuq**	**63.04**	**67**	IAmb	IAmb	06 06 03.4	
	comp=Z,6.7nm,1.0s						
TASM	**ASL Pad, Albuq**	**63.04**	**67**	IAmb	IAmb	06 06 03.4	
	comp=Z,6.7nm,1.0s						
TASM	**ASL Pad, Albuq**	**63.04**	**67**	IAmb	IAmb	06 06 03.4	
	comp=Z,6.9nm,1.0s						
TASM	**ASL Pad, Albuq**	**63.04**	**67**	IAmb	IAmb	06 06 03.4	
	comp=Z,7.2nm,1.0s						
ANMO	**Albuquerque**	**63.04**	**67**	P	**P**	**06 05 59.1**	**+0.1**
ANMO				IAmb	IAmb	06 06 03.4	
	comp=Z,6.1nm,0.9s						
ANMO	**Albuquerque**	**63.04**	**67**	*ce*P	**P**	**06 06 00.3**	**+1.3**
ANMO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ABQ	**Albuquerque**	**63.05**	**67**	IAmb	IAmb	06 06 03.5	
	comp=Z,6.7nm,1.0s						
AK03	**Malin Array Si**	**63.39**	**327**	P	**P**	**06 06 00.7**	**-0.1**
AK21	**Malin Array Si**	**63.40**	**327**	P	**P**	**06 06 00.8**	**-0.1**
AKASG	**Malin Array Be**	**63.41**	**327**	P	**P**	**06 06 00.7**	**-0.2**
	comp=Z,6.4nm,0.7s,baz=30,slow=6.5,SNR=18						
AKASG				LR	LR	06 36 32.3	
	comp=Z,66nm,19.1s,baz=25,slow=39						
	comp=Z,6.4nm,0.7s						
AKASG	**Malin Array Be**	**63.41**	**327**	P	**P**	**06 06 00.1**	**-0.9**
AKASG	**Malin Array Be**	**63.41**	**327**	*i* P	**P**	**06 06 01.0**	**0.0**
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AKBB	**Malin Array Si**	**63.41**	**327**	IAmb	IAmb	06 06 01.7	
	comp=Z,8.6nm,0.8s						
AKBB	**Malin Array Si**	**63.41**	**327**	*ce*P	**P**	**06 06 01.0**	**0.0**
AKBB				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AKBB	**Malin Array Si**	**63.41**	**327**	P	**P**	**06 06 00.9**	**0.0**
KIEV	**Kiev**	**63.42**	**327**	P	**P**	**06 06 00.4**	**-0.6**
KIEV				IAmb	IAmb	06 06 01.6	
	comp=Z,7.7nm,0.8s						
KIEV	**Kiev**	**63.42**	**327**	P	**P**	**06 06 00.4**	**-0.6**
KIEV				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KIEV	**Kiev**	**63.42**	**327**	P	**P**	**06 06 00.9**	**-0.1**
	comp=Z,40nm,1.1s						
AK01	**Malin Array Si**	**63.43**	**327**	P	**P**	**06 06 01.0**	**-0.1**
LENM	**Lemitar**	**63.43**	**68**	P	**P**	**06 06 01.4**	**-0.2**
AK20	**Malin Array Si**	**63.44**	**327**	P	**P**	**06 06 01.1**	**0.0**
AK18	**Malin Array Si**	**63.44**	**327**	P	**P**	**06 06 01.1**	**0.0**
AK16	**Malin Array Si**	**63.48**	**327**	P	**P**	**06 06 01.2**	**-0.2**
AK13	**Malin Array Si**	**63.54**	**327**	P	**P**	**06 06 01.6**	**-0.2**
Y22A	**Socorro**	**63.62**	**68**	IAmb	IAmb	06 06 07.2	
	comp=Z,8.7nm,1.1s						
RNPP9	**Sopachiv**	**63.69**	**329**	P	**P**	**06 06 02.8**	**0.0**
RNPP5	**Staryi Chortor**	**63.86**	**329**	P	**P**	**06 06 03.9**	**0.0**
121A	**Cookes Peak, D**	**64.37**	**69**	IAmb	IAmb	06 06 11.8	
	comp=Z,7.2nm,1.1s						
LUBAR	**Lubar, Ukraine**	**64.53**	**327**	P	**P**	**06 06 08.1**	**-0.2**
319A	**Douglas**	**64.58**	**71**	IAmb	IAmb	06 06 13.4	
	comp=Z,8.9nm,0.9s						
KIV	**Kislovodsk**	**64.90**	**314**	*e*P	**P**	**06 06 12.1**	**+1.1**
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
KIV				MLR	MLR		
	comp=Z,52nm,17.0s						
KBZ	**Khabaz**	**65.02**	**314**	P	**P**	**06 06 12.7**	**+1.1**
	comp=Z,11nm,0.9s,baz=63,slow=4.7,SNR=29						
KBZ				LR	LR	06 38 12.5	
	comp=Z,116nm,20.5s,baz=11,slow=39						
	comp=Z,11nm,0.9s						
KBZ	**Khabaz**	**65.02**	**314**	*ce*P	**P**	**06 06 12.5**	**+0.9**
KBZ				pmax	pmax		
	comp=Z,12nm,0.9s						
SHA1	**Shidzhatmaz**	**65.10**	**314**	*ce*P	**P**	**06 06 13.2**	**+0.8**
EKA	**Eskdalemuir Ar**	**65.29**	**349**	P	**P**	**06 06 13.4**	**+0.3**
	comp=Z,4.0nm,0.8s,baz=17,slow=6.1,SNR=6.8						
	comp=Z,4.0nm,0.8s						
NEUR	**Neytrino**	**65.49**	**314**	*i* P	**P**	**06 06 14.6**	**-0.3**
NEUR				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MSTX	**Muleshoe**	**65.59**	**65**	IAmb	IAmb	06 06 19.1	
	comp=Z,11nm,0.9s						
EPT	**El Paso**	**65.61**	**69**	IAmb	IAmb	06 06 19.6	
	comp=Z,10nm,0.9s						
BAL3X	**Bal3x, Balta**	**65.79**	**325**	P	**P**	**06 06 15.8**	**-0.7**
SMWD	**Samnorwood**	**65.83**	**62**	IAmb	IAmb	06 06 18.9	
	comp=Z,7.4nm,0.8s						
T35A	**Sooner Cattle**	**66.00**	**58**	IAmb	IAmb	06 06 20.9	
	comp=Z,8.7nm,0.9s						
KMPD	**K-Podol'skiy**	**66.12**	**328**	P	**P**	**06 06 18.8**	**+0.2**
KMPD				P	pP	06 06 18.9	-10
MNTX	**Cornudas Mount**	**66.21**	**68**	IAmb	IAmb	06 06 23.6	
	comp=Z,6.4nm,1.1s						
SOC	**Sochi**	**66.31**	**316**	*e*P	**P**	**06 06 18.0**	**-1.9**
SOC				*e*		06 08 46.4	
SOC				*e*PPP	PPP	06 10 18.0	
SOC				*e*S	**S**	**06 15 09.9**	**+3.3**
R40A	**Maddies Statio**	**66.69**	**54**	IAmb	IAmb	06 06 24.6	
	comp=Z,12nm,1.0s						
STHS	**Stebnicka Huta**	**66.71**	**331**	*e*P	**P**	**06 06 23.5**	**+1.0**
STHS				pmax	pmax		
	comp=Z,12nm,0.8s						
STHS	**Stebnicka Huta**	**66.71**	**331**	*e*P	**P**	**06 06 23.5**	**+1.0**
CLL	**Collm**	**66.78**	**338**	P	**P**	**06 06 22.8**	**0.0**
CLL				IAmb	IAmb	06 06 24.1	
	comp=Z,10nm,1.0s						
CLL	**Collm**	**66.78**	**338**	P	**P**	**06 06 22.8**	**0.0**
CLL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CLL	**Collm**	**66.78**	**338**	*i* P	**P**	**06 06 23.3**	**+0.5**
	comp=Z,10.0nm,1.0s						
CLL				*i* x	x	06 06 47.1	
CHVC	**Chvalec**	**66.83**	**335**	*e*P	**P**	**06 06 24.1**	**+0.9**
CHVC	**Chvalec**	**66.83**	**335**	*e*P	**P**	**06 06 24.1**	**+0.9**
UPC	**Upice**	**66.91**	**335**	*e*P	**P**	**06 06 24.6**	**+0.9**
UPC	**Upice**	**66.91**	**335**	*e*P	**P**	**06 06 24.6**	**+0.9**
DPC	**Dobruska-Polom**	**66.99**	**335**	*e*P	**P**	**06 06 24.8**	**+0.5**
DPC	**Dobruska-Polom**	**66.99**	**335**	*e*P	**P**	**06 06 24.8**	**+0.5**
STEB	**Steborice**	**67.06**	**334**	*e*P	**P**	**06 06 25.3**	**+0.7**
KRLC	**Kraliky**	**67.15**	**335**	*e*P	**P**	**06 06 25.9**	**+0.6**
KRLC	**Kraliky**	**67.15**	**335**	*e*P	**P**	**06 06 25.9**	**+0.6**
VHRN	**Van Horn**	**67.16**	**68**	IAmb	IAmb	06 06 30.4	
	comp=Z,9.1nm,1.1s						
TUL3	**Leonard**	**67.16**	**58**	IAmb	IAmb	06 06 26.9	
	comp=Z,13nm,1.2s						
SN07	**Snyder 07**	**67.19**	**64**	IAmb	IAmb	06 06 27.6	
	comp=Z,7.2nm,1.0s						
PECS	**Pecos**	**67.21**	**67**	IAmb	IAmb	06 06 29.0	
	comp=Z,6.7nm,1.2s						
MORC	**Moravsky Berou**	**67.26**	**334**	IAmb	IAmb	06 06 28.0	
	comp=Z,10.0nm,0.9s						
MORC	**Moravsky Berou**	**67.26**	**334**	*e*P	**P**	**06 06 26.6**	**+0.6**
BUR08	**Bucovina Ar. S**	**67.31**	**328**	IAmb	IAmb	06 06 27.8	
	comp=Z,5.1nm,0.8s						
CCM	**Cathedral Cave**	**67.31**	**54**		**P**	**06 06 26.0**	**-0.4**
CCM				IAmb	IAmb	06 06 28.5	
	comp=Z,13nm,1.1s						
CCM	**Cathedral Cave**	**67.31**	**54**	P	**P**	**06 06 26.0**	**-0.4**
CCM				pmax	pmax		
	comp=Z,13nm,1.1s						
BURAR	**Bucovina Array**	**67.33**	**328**	P	**P**	**06 06 27.1**	**+0.6**
BURAR				IAmb	IAmb	06 06 28.3	
	comp=Z,6.1nm,0.7s						
U38A	**Gravette**	**67.34**	**57**		**P**	**06 06 26.8**	**+0.1**
APMT	**Aspermont**	**67.36**	**63**	IAmb	IAmb	06 06 28.1	
	comp=Z,14nm,1.1s						
LANS	**Liptovska Anna**	**67.39**	**333**	*e*P	**P**	**06 06 28.9**	**+2.1**
LANS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LANS	**Liptovska Anna**	**67.39**	**333**	*e*P	**P**	**06 06 28.9**	**+2.1**
E62A	**Clayton Lake**	**67.57**	**34**	P	**P**	**06 06 28.6**	**+0.6**
MAUC	**Maruska**	**67.58**	**334**	*e*P	**P**	**06 06 29.2**	**+1.2**
MGMO	**Mountain Grove**	**67.65**	**55**	IAmb	IAmb	06 06 30.6	
	comp=Z,12nm,1.1s						
PRU	**Pruhonice**	**67.72**	**336**	*e*P	**P**	**06 06 29.8**	**+1.0**
PRU	**Pruhonice**	**67.72**	**336**	*e*P	**P**	**06 06 29.8**	**+1.0**
FVM	**French Village**	**67.72**	**53**	IAmb	IAmb	06 06 30.0	
	comp=Z,12nm,1.1s						
MNHN	**Monahans**	**67.76**	**66**	IAmb	IAmb	06 06 32.5	
	comp=Z,6.3nm,1.1s						
VRAC	**Vranov**	**67.91**	**334**	P	**P**	**06 06 31.3**	**+1.2**
	comp=Z,6.1nm,0.8s,baz=320,slow=7.9,SNR=10						
VRAC				LR	LR	06 41 13.7	
	comp=Z,59nm,18.0s,baz=18,slow=40						
	comp=Z,6.1nm,0.8s						
VRAC	**Vranov**	**67.91**	**334**	*e*P	**P**	**06 06 31.0**	**+1.0**
SGCY	**Sterling City**	**68.06**	**65**	IAmb	IAmb	06 06 34.3	
	comp=Z,8.9nm,0.9s						
JAVC	**Velka Javorina**	**68.09**	**334**	*e*P	**P**	**06 06 33.1**	**+1.9**
TREC	**Trest**	**68.17**	**335**	*e*P	**P**	**06 06 32.9**	**+1.2**
TREC	**Trest**	**68.17**	**335**	*e*P	**P**	**06 06 32.9**	**+1.2**
KRUC	**Moravsky**	**68.19**	**335**	*e*P	**P**	**06 06 32.9**	**+1.1**
T42A	**Van Buren**	**68.25**	**54**	IAmb	IAmb	06 06 33.0	
	comp=Z,9.9nm,1.0s						
ZVC	**Zvikov**	**68.31**	**336**	*e*P	**P**	**06 06 33.5**	**+1.0**
SIUC	**Southern Illin**	**68.45**	**52**	IAmb	IAmb	06 06 35.6	
	comp=Z,7.6nm,0.8s						
PLPT	**Palo Pinto**	**68.62**	**62**	IAmb	IAmb	06 06 36.2	
	comp=Z,9.4nm,0.8s						
MODS	**Modra-Piesok**	**68.64**	**334**	*e*P	**P**	**06 06 36.9**	**+2.3**
MODS	**Modra-Piesok**	**68.64**	**334**	*e*P	**P**	**06 06 36.9**	**+2.3**
GRF	**Grafenberg Arr**	**68.67**	**338**	*e*P	**P**	**06 06 36.0**	**+1.2**
	comp=Z,4.4nm,0.8s,baz=15,slow=5.5						
MEM	**Membach**	**68.71**	**342**	*d*P	**P**	**06 06 34.9**	**0.0**
	comp=Z,10nm,1.0s						
KHC	**Kasperske Hory**	**68.73**	**336**	IAmb	IAmb	06 07 39.0	
	comp=Z,19nm,1.8s						
KHC	**Kasperske Hory**	**68.73**	**336**	*ce*P	**P**	**06 06 35.2**	**0.0**
KHC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KHC	**Kasperske Hory**	**68.73**	**336**	*e*P	**P**	**06 06 35.9**	**+0.7**
FCAR	**Ozark Folk Cen**	**68.78**	**56**	IAmb	IAmb	06 06 38.2	
	comp=Z,14nm,1.2s						
BSTI	**Sart Tilman**	**68.81**	**342**	*d*P	**P**	**06 06 36.7**	**+1.1**
GEC2	**GERESS Array S**	**68.98**	**336**	IAmb	IAmb	06 06 39.8	
	comp=Z,5.4nm,0.8s						
GERES	**GERESS Array B**	**68.98**	**336**	P	**P**	**06 06 37.8**	**+1.0**
	comp=Z,3.0nm,0.8s,baz=28,slow=6.0,SNR=20						
	comp=Z,3.0nm,0.8s						
TX31	**Lajitas Ar. Si**	**68.99**	**68**	IAmb	IAmb	06 06 41.0	
	comp=Z,9.9nm,1.1s						
TXAR	**Lajitas Array**	**68.99**	**68**	P	**P**	**06 06 38.7**	**+1.5**
	comp=Z,4.6nm,0.9s,baz=311,slow=4.0,SNR=32						
TXAR				LR	LR	06 37 26.4	
	comp=Z,47nm,18.4s,baz=312,slow=36						
	comp=Z,4.6nm,0.9s						
MLR	**Muntele Rosu**	**69.07**	**327**	P	**P**	**06 06 37.6**	**+0.2**
	comp=Z,3.8nm,0.6s,baz=134,slow=4.5,SNR=5.7						
	comp=Z,3.8nm,0.6s						
MLR	**Muntele Rosu**	**69.07**	**327**	IAmb	IAmb	06 06 47.1	
	comp=Z,6.9nm,0.9s						
MIAR	**Mount Ida**	**69.29**	**57**	IAmb	IAmb	06 06 42.6	
	comp=Z,20nm,1.6s						
CONA	**Conrad Observa**	**69.38**	**334**	*e*pP	**P**	**06 06 40.4**	**+1.1**
	comp=Z,6.5nm,0.9s,SNR=5.3						
RONA	**Rosalia, Austr**	**69.49**	**334**	*i* pP	**P**	**06 06 41.8**	**+1.8**
	comp=Z,8.6nm,0.9s						
UALR	**University of**	**69.63**	**56**	IAmb	IAmb	06 06 44.0	
	comp=Z,9.5nm,0.9s						
X40A	**Basin Creek Fa**	**69.66**	**57**	IAmb	IAmb	06 06 43.9	
	comp=Z,15nm,1.0s						
WHTX	**Lake Whitney,**	**69.70**	**62**	IAmb	IAmb	06 06 43.0	
	comp=Z,11nm,0.8s						
JCT	**Junction City**	**69.88**	**64**	IAmb	IAmb	06 06 45.5	

	comp=Z,6.5nm,0.8s						
ARSA	Arzberg	70.09	334	IAmb	IAmb	06 06 45.6	
	comp=Z,5.5nm,0.9s						
ARSA	Arzberg	70.09	334	*i* pP	P	06 06 45.1	+1.4
	comp=Z,4.3nm,0.8s						
WLAR	White Oak Lake	70.22	57	IAmb	IAmb	06 06 47.1	
	comp=Z,14nm,1.0s						
WVT	Waverly	70.38	52		P	06 06 45.4	-0.1
WVT				IAmb	IAmb	06 06 48.0	
	comp=Z,13nm,0.9s						
WVT	Waverly	70.38	52	P	P	06 06 45.4	-0.1
WVT				pmax	pmax		
	comp=Z,13nm,0.9s						
DRIO	Del Rio	70.38	66	IAmb	IAmb	06 06 48.7	
	comp=Z,13nm,0.9s						
LESA	Schwarzleotal	70.54	336	*e*pP	P	06 06 48.2	+1.8
	comp=Z,4.4nm,1.3s						
435B	Jarrell	70.66	63	IAmb	IAmb	06 06 51.1	
	comp=Z,12nm,1.1s						
HRV	Adam Dziewonsk	70.68	37	P	P	06 06 48.0	+0.7
HRV	Adam Dziewonsk	70.68	37	P	P	06 06 48.0	+0.7
HRV				pmax	pmax		
	comp=Z,74nm,1.9s						
SOKA	Soboth	70.74	335	*i* pP	P	06 06 48.8	+1.2
	comp=Z,4.6nm,0.9s,SNR=5.2						
WATA	Walderalm	70.85	337	*i* pP	P	06 06 50.0	+1.6
	comp=Z,8.0nm,1.2s						
WTTA	Wattenberg	70.91	337	*i* pP	P	06 06 50.5	+1.7
	comp=Z,5.1nm,1.2s						
OBKA	Obir	71.01	335	*e*pP	P	06 06 50.9	+1.6
	comp=Z,19nm,0.9s,SNR=6.6						
CLTN	Cedars of Leba	71.02	51	IAmb	IAmb	06 07 53.6	
	comp=Z,29nm,2.0s						
SQTA	Sankt Quirin	71.04	337	*e*pP	P	06 06 50.6	+1.1
	comp=Z,7.4nm,1.2s						
V48A	Smith Brothers	71.12	52	IAmb	IAmb	06 06 52.2	
	comp=Z,13nm,1.2s						
ABTA	Abfaltersbach	71.22	336	*e*pP	P	06 06 51.5	+1.0
	comp=Z,8.2nm,1.2s,SNR=4.7						
FETA	Feichten	71.32	338	*i* pP	P	06 06 52.5	+1.2
	comp=Z,9.8nm,1.3s						
L64A	Middleborough	71.43	37	P	P	06 06 52.3	+0.6
DAVOX	Davos/Dischmat	71.72	338	LR	LR	06 45 25.4	
	comp=Z,24nm,19.0s,baz=354,slow=42						
MLDN	Muldoon	71.74	63	P	P	06 06 54.1	+0.3
143A	Socs Landing,	71.80	57	P	P	06 06 54.8	+0.7
BRTR	Keskin Array B	71.85	319	P	P	06 06 54.9	+0.3
	comp=Z,0.9nm,0.6s,baz=51,slow=3.0,SNR=5.4						
BRTR				LR	LR	06 41 34.3	
	comp=Z,26nm,19.4s,baz=10.0,slow=38						
	comp=Z,0.9nm,0.6s						
BRTR	Keskin Array B	71.85	319	P	P	06 06 53.8	-0.7
BRTR	Keskin Array B	71.85	319	*i* P	P	06 06 56.0	+1.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SWET	Sewanee	71.94	51	IAmb	IAmb	06 06 57.7	
	comp=Z,9.8nm,1.0s						
HKT	Hockley	72.16	62	P	P	06 06 56.4	+0.1
HKT				IAmb	IAmb	06 07 00.7	
	comp=Z,11nm,1.4s						
HKT	Hockley	72.16	62	P	P	06 06 56.4	+0.1
HKT				pmax	pmax		
	comp=Z,11nm,1.4s						
PSI	Prapat	72.52	245	LR	LR	06 43 24.1	
	comp=Z,49nm,18.1s,baz=48,slow=40						
FPAL	Fort Paine	72.66	51	IAmb	IAmb	06 07 02.0	
	comp=Z,9.6nm,1.0s						
LRAL	Lakeview Retre	73.39	53	IAmb	IAmb	06 07 04.0	
	comp=Z,8.4nm,0.6s						
MTN	Manton Dam	74.95	208	P	P	06 07 12.5	-0.2
MTN				IAmb	IAmb	06 07 14.7	
	comp=Z,14nm,0.9s						
MMAI	Mount Meron Ar	77.21	314	LR	LR	06 44 00.7	
	comp=Z,52nm,18.5s,baz=320,slow=38						
ASF	Jabal al Asfar	77.40	313	LR	LR	06 48 14.0	
	comp=Z,57nm,19.3s,baz=25,slow=41						
CTA	Charters Tower	79.33	192	P	P	06 07 37.0	-0.2
	comp=Z,5.9nm,0.9s,baz=46,slow=5.6,SNR=5.0						
	comp=Z,5.9nm,0.9s						
CTA	Charters Tower	79.33	192	P	P	06 07 37.0	-0.2
VAE	Valguarnera	79.62	332	LR	LR	06 48 22.0	
	comp=Z,72nm,20.8s,baz=234,slow=40						
EIL	Elat	80.38	313	LR	LR	06 48 37.3	
	comp=Z,66nm,19.1s,baz=70,slow=40						
ESDC	Sonseca Array	80.83	347	P	P	06 07 46.2	+0.8
	comp=Z,4.0nm,0.9s,baz=2.1,slow=5.6,SNR=14						
	comp=Z,4.0nm,0.9s						
ESDC	Sonseca Array	80.83	347		P	06 07 45.5	+0.1
DZM	Mont Dzumac	80.84	173	P	P	06 07 44.4	-1.0
	comp=Z,5.5nm,0.7s,baz=47,slow=19,SNR=1.9						
	comp=Z,5.5nm,0.7s						
WB0	Warramunga Arr	80.90	203		P	06 07 45.4	-0.4
WB0				IAmb	IAmb	06 09 57.2	
	comp=Z,11nm,1.1s						
WR8	Warramunga Arr	81.06	203	P	P	06 07 46.2	-0.4
WR8				IAmb	IAmb	06 09 57.2	
	comp=Z,23nm,1.4s						
WRA	Warramunga Arr	81.08	203	P	P	06 07 45.9	-0.8
	comp=Z,4.7nm,0.9s,baz=17,slow=5.6,SNR=12						
	comp=Z,4.7nm,0.9s						
WRA	Warramunga Arr	81.08	203	P	P	06 07 46.9	+0.2
WRA	Warramunga Arr	81.08	203	P	P	06 07 46.9	+0.2
RAYN	Ar Rayn	81.46	302	P	P	06 07 48.4	-0.6
RAYN	Ar Rayn	81.46	302	P	P	06 07 48.4	-0.6
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KEST	Kesra	82.45	336	LR	LR	06 49 07.6	
	comp=Z,23nm,19.2s,baz=264,slow=39						
ASAR	Alice Springs	84.79	203	P	P	06 08 05.8	0.0
	comp=Z,1.8nm,0.6s,baz=13,slow=4.8,SNR=36						
	comp=Z,1.8nm,0.6s						
ASAR	Alice Springs	84.79	203	P	P	06 08 05.9	+0.1
MD01	Midelt array s	87.64	346	P	P	06 08 20.4	+0.2
MD31	MD31	87.64	346	IAmb	IAmb	06 09 41.3	
	comp=Z,18nm,1.9s						
MTO3	Montecristo	88.55	64	IAmb	IAmb	06 08 29.2	
	comp=Z,7.7nm,1.1s						
STKA	Stephens Creek	91.53	195	P	P	06 08 38.0	+0.1
	comp=Z,3.6nm,0.9s,baz=344,slow=9.1,SNR=5.3						
	comp=Z,3.6nm,0.9s						
STKA	Stephens Creek	91.53	195	P	P	06 08 38.0	+0.1
FURI	Furi	97.37	301	LR	LR	07 00 41.0	
	comp=Z,39nm,18.6s,baz=51,slow=40						
LPAZ	La Paz	125.29	60	PKP	PKiKP	06 14 33.0	-0.4
	comp=Z,1.2nm,0.8s,baz=28,slow=3.0,SNR=5.1						
LPAZ	La Paz	125.29	60	PKIKP	PKiKP	06 14 33.0	-0.4
PLCA	Paso Flores	144.24	82	PKP	PKPdf	06 15 05.8	-1.1
	comp=Z,2.9nm,0.8s,baz=305,slow=4.8,SNR=8.4						

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*IDC **26** 05:57:15.3±4.0, 22°.02S×173°.85E, h0^{km}, mb4.1/2, mbtmp4.0/3, ML3.3/1, MS3.5/5, Error ellipse: s-maj=188.0km s-min=48.7km az=159.0*

*NEIC **26** 05:57:16.6±1.1, 21°.9S±0°.2×173°.91E±0°.05, h10^{km}±2^{km}, mb4.3/18, Error ellipse: s-maj=30.4km s-min=7.2km az=352.0*

ISC 26 05:57:20.2±1.6, 21°.9S±0°.2×173°.8E±0°.2, h35^{km}, n30, σ0^{s}.88/25, mb4.2/12, MS3.6/4, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINNC	Pines Island,	5.90	262	Pn	Pn	05 58 45.1	-0.1
DZM	Mont Dzumac	6.80	267	Pn	Pn	05 58 58.8	+1.1
	0.5nm,0.3s,baz=287,slow=19,SNR=2.4						
	6.1nm,0.7s						
DZM	Mont Dzumac	6.80	267		Pn	05 58 58.0	+0.3
URZ	Urewera	16.58	171	LR	LR	06 06 05.7	
	comp=Z,127nm,20.6s,baz=350,slow=32						
EIDS	Eidsvold	21.07	256	P	P	06 02 01.7	+0.1
EIDS				IAmb	IAmb	06 02 23.6	
	comp=Z,10.0nm,1.0s						
ARMA	Armidale	21.59	242	P	P	06 02 04.8	-2.4
CTAO	Charters Tower	25.74	269	P	P	06 02 48.7	+1.0
CTAO				IAmb	IAmb	06 02 56.4	
	comp=Z,4.7nm,1.1s						
RABL	Rabaul	27.35	307	P	P	06 03 01.7	-0.6
COEN	Coen	30.11	280	P	P	06 03 27.6	+0.8
COEN				IAmb	IAmb	06 03 43.0	
	comp=Z,6.9nm,1.1s						
STKA	Stephens Creek	30.28	244	P	P	06 03 27.6	-0.6
BBOO	Buckleboo	35.06	244	P	P	06 04 10.7	+0.7
BBOO				IAmb	IAmb	06 04 26.6	
	comp=Z,9.6nm,1.1s						
WR8	Warramunga Arr	36.67	266	P	P	06 04 22.7	-1.2
WR8				IAmb	IAmb	06 04 27.9	
	comp=Z,5.6nm,1.1s						
AS31	Alice Springs	36.72	259	P	P	06 04 24.1	-0.3
ASAR	Alice Springs	36.72	259	P	P	06 04 24.9	+0.5
	comp=Z,2.8nm,0.9s,baz=85,slow=8.9,SNR=23						
	comp=Z,2.8nm,0.9s						
ASAR	Alice Springs	36.72	259	P	P	06 04 24.2	-0.2
WB0	Warramunga Arr	36.80	266	P	P	06 04 25.1	0.0
WB0				IAmb	IAmb	06 04 25.8	
	comp=Z,3.5nm,0.8s						
WRA	Warramunga Arr	36.82	266	P	P	06 04 24.8	-0.4
	comp=Z,1.8nm,0.8s,baz=101,slow=8.3,SNR=3.7						
	comp=Z,1.8nm,0.8s						
WRA	Warramunga Arr	36.82	266	P	P	06 04 24.5	-0.7
KNRA	Kununurra	42.94	270	P	P	06 05 15.5	-0.5
KNRA				IAmb	IAmb	06 05 23.4	
	comp=Z,5.0nm,0.9s						
GUMO	Guam	45.23	319	LR	LR	06 22 35.0	
	comp=Z,81nm,20.6s,baz=78,slow=34						
FITZ	Fitzroy Crossi	45.25	266	P	P	06 05 36.5	+1.9
FITZ				IAmb	IAmb	06 05 37.3	
	comp=Z,3.0nm,0.9s						
MBWA	Marble Bar	50.05	260	P	P	06 06 12.0	+0.2
NWAO	Narrogin (SRO)	50.87	245	P	P	06 06 18.0	+0.2
DAV	Davao City (W)	55.30	296	LR	LR	06 27 28.5	
	comp=Z,34nm,22.0s,baz=4.0,slow=33						
VNDA	Vanda	56.00	183	P	P	06 06 54.9	0.0
SBA	Scott Base	56.13	182	P	P	06 06 56.0	+0.2
SBA				IAmb	IAmb	06 06 59.6	
	comp=Z,5.2nm,0.9s						
JOW	Kunigami	65.45	316	LR	LR	06 32 24.1	
	comp=Z,32nm,21.5s,baz=13,slow=32						
QSPA	South Pole Qui	68.20	180	P	P	06 08 17.4	+0.4
QSPA				IAmb	IAmb	06 08 22.5	
	comp=Z,4.7nm,1.1s						
PETK	Petropavlovsk-	75.96	350	LR	LR	06 37 02.6	
	comp=Z,49nm,19.7s,baz=128,slow=31						
GERES	GERESS Array B	148.75	334	PKPbc	PKiKP	06 17 04.8	-0.5
	comp=Z,0.6nm,0.8s,baz=328,slow=3.5,SNR=4.0						

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*IDC **26** 06:05:20.8±1.2, 9°.94S×152°.49E, h0^{km}, mb4.0/9, mbtmp4.1/10, ML3.9/1, MS3.3/4, Error ellipse: s-maj=39.1km s-min=20.2km az=102.0*

*NEIC **26** 06:05:23.1±1.3, 9°.9S±0°.1×152°.5E±0°.1, h10^{km}±1^{km}, mb4.0/12, Error ellipse: s-maj=21.9km s-min=17.3km az=66.0*

ISC 26 06:05:26.3±0.9, 10°.0S±0°.1×152°.4E±0°.1, h35^{km}, n34, σ0^{s}.81/29, mb4.0/9, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.22	276	LR	LR	06 08 38.2	
	comp=Z,159nm,19.9s,baz=166,slow=37						
PMG	Port Moresby	5.22	276	Pn	Pn	06 06 41.7	-0.2
COEN	Coen	9.86	246	Pn	Pn	06 07 46.4	+0.8
CTA	Charters Tower	11.65	210	Pn	Pn	06 08 08.1	-2.0
	0.5nm,0.3s,baz=20,slow=16,SNR=9.6						
	3.5nm,0.6s						
CTAO	Charters Tower	11.65	210	Pn	Pn	06 08 09.1	-1.0
EIDS	Eidsvold	15.32	185	Pn	Pn	06 08 59.4	-0.6
EIDS				IAmb	IAmb	06 09 05.8	
	comp=Z,4.9nm,0.9s						
DZM	Mont Dzumac	18.02	133	LR	LR	06 15 33.2	
	comp=Z,197nm,19.2s,baz=206,slow=34						
WR8	Warramunga Arr	19.91	238	P	P	06 09 55.9	+0.8
WB0	Warramunga Arr	19.92	239	P	P	06 09 55.8	+0.6
WRA	Warramunga Arr	20.04	238	P	P	06 09 56.9	+0.4
	comp=Z,5.8nm,0.8s,baz=63,slow=10,SNR=19						
	comp=Z,5.8nm,0.8s						
WRA	Warramunga Arr	20.04	238	P	P	06 09 55.8	-0.8
INKA	Innaminka	20.78	210	P	Pn	06 10 05.9	-1.1
INKA				IAmb	IAmb	06 10 10.9	
	comp=Z,6.4nm,0.9s						
MTN	Manton Dam	21.05	260	P	P	06 10 08.0	+0.6
MTN				IAmb	IAmb	06 10 21.1	
	comp=Z,9.0nm,1.1s						
AS31	Alice Springs	22.28	230	P	P	06 10 21.9	+1.2
AS31				IAmb	IAmb	06 10 24.1	
	comp=Z,1.8nm,0.9s						
ASAR	Alice Springs	22.29	230	P	P	06 10 20.8	+0.1
	comp=Z,3.7nm,0.8s,baz=63,slow=8.4,SNR=29						
	comp=Z,3.7nm,0.8s						
ASAR	Alice Springs	22.29	230	P	P	06 10 21.4	+0.7
KNRA	Kununurra	23.73	254	P	P	06 10 36.0	+0.6
STKA	Stephens Creek	23.95	203	P	P	06 10 37.9	+0.5
	comp=Z,3.9nm,0.7s,baz=20,slow=15,SNR=8.4						
	comp=Z,3.9nm,0.7s						
FITZ	Fitzroy Crossi	27.16	250	P	P	06 11 06.3	-0.3
FORT	Forrest	30.66	224	P	P	06 11 37.5	-0.1
JHJ	Hachijo jima 2	44.55	345	LR	LR	06 31 08.6	
	comp=Z,38nm,18.8s,baz=12,slow=35						
ASAJ	Asahikawa	54.61	351	LR	LR	06 39 40.4	
	comp=Z,18nm,18.1s,baz=168,slow=38						
CMAR	Chiang Mai Arr	59.87	298	P	P	06 15 30.0	+1.1
	comp=Z,1.4nm,0.3s,baz=113,slow=7.7,SNR=5.4						
	comp=Z,1.4nm,0.3s						
CMAR	Chiang Mai Arr	59.87	298	P	P	06 15 28.8	-0.1
VNDA	Vanda	67.67	178	P	P	06 16 20.6	+1.2
	comp=Z,1.8nm,0.9s,baz=335,slow=7.4,SNR=5.2						
	comp=Z,1.8nm,0.9s						
VNDA	Vanda	67.67	178	P	P	06 16 20.4	+1.1
SONM	Songino Array	70.54	329	P	P	06 16 37.6	-0.2
	comp=Z,1.2nm,1.1s,baz=144,slow=5.5,SNR=3.7						
	comp=Z,1.2nm,1.1s						
SONM	Songino Array	70.54	329	P	P	06 16 38.2	+0.4
SONM				IAmb	IAmb	06 16 49.1	
	comp=Z,1.9nm,1.2s						
MKAR	Makanchi Array	84.00	319	P	P	06 17 53.4	+0.3
	comp=Z,1.2nm,1.0s,baz=96,slow=4.9,SNR=5.3						
	comp=Z,1.2nm,1.0s						
MKAR	Makanchi Array	84.00	319	P	P	06 17 52.9	-0.3
ZALV	Zalesovo Beam	85.27	327	P	P	06 17 58.8	-0.5
	comp=Z,1.2nm,0.6s,baz=104,slow=6.3,SNR=5.9						
	comp=Z,1.2nm,0.6s						
ILAR	Eielson Array	87.10	22	P	P	06 18 07.8	-0.3
	comp=Z,1.0nm,0.9s,baz=249,slow=4.5,SNR=4.7						
	comp=Z,1.0nm,0.9s						
ILAR	Eielson Array	87.10	22	P	P	06 18 08.1	-0.1
TORD	Torodi Ar. Bea	151.16	279	PKPbc	PKPbc	06 25 15.5	-1.4
	comp=Z,1.0nm,0.9s,baz=62,slow=3.5,SNR=5.0						

ANF 26 06:09:27.5±0.2, 65°.48N×134°.27W, h3^{km}±1^{km}, ML3.5/41, Error ellipse: s-maj=1.9km s-min=1.0km az=96.0, Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H31M	Peel River	0.32	354	P	Pg	06 09 34.6	+0.8
	baz=168						
H31M				S	Sg	06 09 38.0	0.0
	baz=168						
I30M	Mount Dempster	0.92	254	P	Pg	06 09 44.9	-0.2
	baz=73,SNR=1000						
I30M				S	Sg	06 09 57.9	+0.8
	baz=73						
J30M	Hart River	1.27	225	P	Pg	06 09 51.0	-0.7
	baz=44,SNR=1000						
J30M				S	Sg	06 10 07.2	-0.9
	baz=44						
EPYK	Eagle Plains	1.34	313	P	Pn	06 09 53.0	-0.2
	baz=129,SNR=214						
EPYK				S	Sn	06 10 11.6	+0.1
	baz=129						
I29M	Ogilvie Camp,	1.69	268	P	Pn	06 09 57.9	0.0
	baz=84						
I29M				S	Sb	06 10 21.3	+0.3
	baz=84						
G30M	tAoh Zraii Nji	1.70	333	P	Pn	06 09 57.5	-0.5
	baz=150						
G30M				S	Sb	06 10 20.9	-0.2
	baz=150						
H29M	Whitestone	1.84	295	P	Pn	06 10 00.0	+0.1
	baz=111,SNR=395						
H29M				S	Sb	06 10 24.9	-0.2
	baz=111						
J29N	Klondike Camp	1.97	240	P	Pn	06 10 01.9	+0.1
	baz=57,SNR=120						
J29N				Sb	Sg	06 10 30.6	-0.2
	baz=57						
F31M	Tsiigehtchic	1.98	6	P	Pn	06 10 01.4	-0.4
	baz=185,SNR=134						
F31M				S	Sn	06 10 26.8	-0.2
	baz=185						
MAYO	Mayo, Yukon	2.02	201	P	Pn	06 10 02.6	+0.1
	baz=21,SNR=9.4						
MAYO				S	Sb	06 10 29.3	-1.0
	baz=21						
G29M	Pine Creek	2.09	315	P	Pn	06 10 03.2	-0.2
	baz=131,SNR=420						
G29M				S	Sn	06 10 31.1	+1.2
	baz=131						
K29M	Barlow Dome	2.16	222	P	Pn	06 10 05.0	+0.6
	baz=40,SNR=122						
K29M				S	Sn	06 10 33.1	+1.3
	baz=40						
F30M	Barrier River	2.22	345	P	Pn	06 10 05.4	+0.2
	baz=162,SNR=491						
F30M				S	Sn	06 10 33.5	+0.5
	baz=162						
I28M	Miner Creek	2.37	272	P	Pn	06 10 07.1	-0.2
	baz=86						
I28M				Sg	Sg	06 10 45.0	+1.6
	baz=86						
DAWY	Dawson	2.62	239	P	Pn	06 10 10.9	+0.3
	baz=55,SNR=172						
DAWY				S	Sn	06 10 44.0	+1.1
	baz=55						
INK	Inuvik	2.85	6	P	Pn	06 10 13.1	-0.6
	baz=186,SNR=109						
INK				Sb	Sb	06 10 55.5	+1.3
	baz=186						
L29M	L29M	2.92	217	P	Pn	06 10 14.9	+0.1
	baz=34						
L29M				S	Sn	06 10 50.9	+0.5
	baz=34						
I27K	Kandik River	3.06	276	P	Pn	06 10 16.6	-0.1
	baz=89,SNR=112						
I27K				S	Sn	06 10 54.2	+0.4
	baz=89						
I27K				S	Sn	06 10 54.2	+0.4
	baz=89						
H27K	Steamboat Moun	3.08	287	P	Pn	06 10 17.0	0.0
	baz=100,SNR=95						
H27K				S	Sn	06 10 54.4	+0.2
	baz=100						
F28M	Old Crow	3.10	316	P	Pn	06 10 17.3	+0.1
	baz=131,SNR=38						
F28M				S	Sn	06 10 55.4	+0.7
	baz=131						
M30M	Minto, Yukon	3.12	202	P	Pn	06 10 17.1	-0.5
	baz=20,SNR=77						
M30M				Sb	Sg	06 11 04.9	-2.8
	baz=20						
E29M	Blow River	3.25	336	P	Pn	06 10 19.8	+0.5
	baz=152						
E29M				S	Sn	06 10 58.8	+0.5
	baz=152						
G27K	Doyon Strip	3.28	297	P	Pn	06 10 19.9	+0.1
	baz=110,SNR=46						
G27K				Sb	Sg	06 11 09.8	-3.0
	baz=110						
G27K				Sb	Sg	06 11 09.8	-3.0
	baz=110						
M31M	Drury Creek, Y	3.30	181	P	Pn	06 10 19.2	-0.7
	baz=1.6,SNR=88						
M31M				Sb	Sb	06 11 08.8	+1.8
	baz=1.6						
M29M	Somme Creek	3.57	213	P	Pn	06 10 23.8	0.0
	baz=30,SNR=80						
M29M				S	Sn	06 11 06.8	+0.3
	baz=30						
I26K	Coal Creek Min	3.72	271	P	Pn	06 10 25.4	-0.4
	baz=83						
E28M	Babbage River	3.75	329	P	Pn	06 10 25.9	-0.3
	baz=144						
E28M				S	Sn	06 11 10.0	-0.8
	baz=144						
E27K	Coleen River	3.97	316	P	Pn	06 10 28.7	-0.4
	baz=129						
J26L	Joseph Creek	4.07	260	P	Pn	06 10 30.1	-0.5
	baz=72,SNR=22						
J26L				Sb	Sb	06 11 31.4	+2.1
	baz=72						
J26L				Sb	Sb	06 11 31.4	+2.1
	baz=72						
N31M	Braeburn, Yuko	4.07	190	P	Pn	06 10 29.8	-0.8
	baz=9.4,SNR=58						
N31M				Sb	Sb	06 11 32.8	+3.5
	baz=9.4						
L27K	Beaver Creek,	4.09	237	P	Pn	06 10 31.0	+0.1
	baz=50						
L27K				Sb	Sb	06 11 33.4	+3.4
	baz=50						
G26K	Porcupine Rive	4.13	295	Sb	Sb	06 11 35.0	+4.2
	baz=106						
D28M	Stokes Point	4.23	338	P	Pn	06 10 32.9	+0.2
	baz=153						
D28M				S	Sn	06 11 22.4	-0.1
	baz=153						
N30M	Aishikik Lake	4.23	199	P	Pn	06 10 32.6	-0.2
	baz=17						
N30M				S	Sn	06 11 22.3	-0.5
	baz=17						
BVCY	Beaver Creek	4.24	226	P	Pn	06 10 33.2	+0.3
	baz=41						
BVCY				S	Sn	06 11 23.3	+0.5
	baz=41						
N32M	Quiet Lake	4.38	172	P	Pn	06 10 34.3	-0.6
	baz=354						
N32M				Sb	Sb	06 11 41.3	+3.0
	baz=354						
SCRK	Sand Creek	4.43	254	P	Pn	06 10 35.4	-0.3
	baz=66						
SCRK				Sb	Sb	06 11 43.2	+3.4
	baz=66						
F26K	Sheenjek River	4.52	304	P	Pn	06 10 37.0	+0.2
	baz=114						
D27M	Malcolm River	4.58	329	P	Pn	06 10 38.1	+0.5
	baz=142						
D27M				S	Sn	06 11 30.0	-1.1
	baz=142						
M27K	Edge Creek, AK	4.59	230	P	Pn	06 10 38.0	+0.1
	baz=44						
M27K				Sb	Sb	06 11 49.6	+5.1
	baz=44						
M27K				Sb	Sb	06 11 49.6	+5.1
	baz=44						
YUK4	Talbot Arm	4.60	207	P	Pn	06 10 37.1	-0.9
	baz=24						
YUK3	Moose Creek	4.63	219	P	Pn	06 10 38.9	+0.4
	baz=34						
YUK3				S	Sn	06 11 33.3	+0.4
	baz=34						
L26K	Log Cabin Wild	4.67	242	P	Pn	06 10 38.7	-0.1
	baz=54						
L26K				Sb	Sb	06 11 51.4	+5.0
	baz=54						
L26K				Sb	Sb	06 11 51.4	+5.0
	baz=54						
J25K	Salcha River,	4.78	265	P	Pn	06 10 39.9	-0.5
	baz=74						
O30N	Mendenhall	4.80	191	P	Pn	06 10 40.1	-0.6
	baz=9.6,SNR=93						
O30N				Sb	Sb	06 11 54.1	+3.7
	baz=9.6						
WHY	Whitehorse	4.85	184	Sb	Sb	06 11 55.2	+3.4
	baz=3.5						
HYT	Haines Junctio	4.90	199	P	Pn	06 10 42.2	+0.1
	baz=16						
HYT				Sb	Sb	06 11 56.7	+3.4
	baz=16						
M26K	Nabesna, AK	4.94	235	P	Pn	06 10 42.6	+0.1
	baz=48						
E25K	Arctic Village	5.19	306	P	Pn	06 10 45.8	-0.1
	baz=115						
P33M	Teslin, Yukon	5.33	172	P	Pn	06 10 47.0	-1.0
	baz=354,SNR=33						
C36M	Paulatuk	5.52	41	P	Pn	06 10 48.5	-1.9
	baz=230,SNR=21						

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*IDC **26** 06:16:33.1±36.0, 38°.55N×14°.55E, h0^{km}, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=699.1km s-min=77.4km az=50.0*

*TIR **26** 06:17:14.1, 41°.52N×19°.50E, h46^{km}, Ml3.0/7*

*SKO **26** 06:17:14.0, 41°.42N×19°.48E, h4^{km}, ML2.7*

*PDG **26** 06:17:14.6±0.2, 41°.39N×19°.48E, h13^{km}, MD3.3/1, ML3.2/11, Error ellipse: s-maj=0.7km s-min=1.4km az=0.0*

*BEO **26** 06:17:15.0±0.4, 41°.42N×19°.63E, h6^{km}±2^{km}, ML2.3/14*

*THE **26** 06:17:16.5, 41°N±10°×2°0E±°, h1^{km}±19^{km}, M2.9/10, MLh2.9/10*

ISC 26 06:17:14.9±0.9, 41°.44N±0°.02×19°.58E±0°.02, h14^{km}±6^{km}, n98, σ1^{s}.32/155, 10C-16D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.23**	**113**	Pg	**Pg**	**06 17 19.9**	**-0.1**
TIR				Sg	**Sg**	**06 17 22.8**	**-0.5**
TIR				AML	AML	06 17 23.5	
	20nm,0.3s						
TIR	**Tirane**	**0.23**	**113**	*i* Pg	**Pg**	**06 17 19.9**	**-0.1**
TIR				*i* Sg	**Sg**	**06 17 24.2**	**+0.9**
ULC	**Ulcinj**	**0.58**	**334**	⇓*i*Pg	**Pg**	**06 17 25.9**	**-0.4**
ULC				*e*Sg	**Sb**	**06 17 35.4**	**+0.4**
SDA	**Shkodra**	**0.61**	**354**	Pg	**Pg**	**06 17 26.0**	**-0.9**
SDA				Sg	**Sg**	**06 17 35.0**	**0.0**
SDA				AML	AML	06 17 42.5	
	1.3nm,0.4s						
PHP	**Peshkopia**	**0.69**	**69**	Pg	**Pg**	**06 17 26.9**	**-1.4**
PHP				Sg	**Sg**	**06 17 39.4**	**+2.0**
PHP				AML	AML	06 17 40.0	
	3.2nm,0.4s						
PHP	**Peshkopia**	**0.69**	**69**	P	**Pg**	**06 17 26.9**	**-1.4**
PHP				S	**Sg**	**06 17 35.1**	**-2.3**
DRME	**Dracevica, Mon**	**0.80**	**339**	*e*Pg	**Pg**	**06 17 30.2**	**-0.3**
DRME				*e*Sg	**Sb**	**06 17 41.9**	**+0.5**
DRME	**Dracevica, Mon**	**0.80**	**339**	⇑*i*Pg	**Pg**	**06 17 29.8**	**-0.7**
DRME				*e*Sg	**Sb**	**06 17 43.1**	**+1.7**
VLO	**Vlora**	**0.97**	**184**	Pn	**Pg**	**06 17 33.1**	**-0.5**
VLO				Sn	**Sn**	**06 17 47.4**	**-0.2**
VLO				AML	AML	06 17 56.8	
	7.9nm,0.5s						
VLO	**Vlora**	**0.97**	**184**	P	**Pn**	**06 17 35.6**	**+1.6**
VLO				S	**Sn**	**06 17 49.8**	**+2.1**
OHR	**Ohrid**	**0.97**	**109**	*i* Pg	**Pg**	**06 17 32.7**	**-1.1**
OHR				*i* Sg	**Sg**	**06 17 47.6**	**+1.1**
OHR				*e*Lg	Lg	06 17 48.4	
	comp=N,216nm,0.8s						
OHR				*e*Lg	Lg	06 17 51.1	
	comp=E,225nm,0.5s						
BUM	**Brajici-Budva**	**1.00**	**329**	*e*Pg	**Pg**	**06 17 33.8**	**-0.4**
BUM				*e*Sg	**Sn**	**06 17 49.3**	**+0.7**
PDG	**Podgorica**	**1.02**	**346**	Pn	**Pg**	**06 17 32.0**	**-2.5**
PDG				Sn	**Sg**	**06 17 45.4**	**-2.5**
PDG	**Podgorica**	**1.02**	**346**	⇓P	**Pg**	**06 17 34.4**	**-0.2**
PDG				⇑S	**Sb**	**06 17 49.1**	**+1.5**
PDG	**Podgorica**	**1.02**	**346**	*e*Pg	**Pg**	**06 17 34.3**	**-0.2**
PDG				*e*Sg	**Sn**	**06 17 49.9**	**+1.0**
PDG	**Podgorica**	**1.02**	**346**	*e*Pg	**Pg**	**06 17 34.0**	**-0.5**
PDG				*e*Sg	**Sn**	**06 17 50.6**	**+1.7**
PVY	**Plav**	**1.19**	**14**	*e*Pg	**Pg**	**06 17 37.4**	**-0.4**
PVY				*e*Sg	**Sb**	**06 17 54.6**	**+2.0**
PVY	**Plav**	**1.19**	**14**	*e*Pg	**Pg**	**06 17 37.9**	**+0.1**
PVY				*i* Sg	**Sn**	**06 17 57.7**	**+4.5**
CEME	**Cevo**	**1.21**	**336**	⇑*i*Pg	**Pg**	**06 17 37.4**	**-0.8**
CEME				*e*Sg	**Sn**	**06 17 56.2**	**+2.5**
KBN	**Korca**	**1.22**	**131**	Pn	**Pg**	**06 17 37.5**	**-1.0**
KBN				Sn	**Sb**	**06 17 55.2**	**+1.7**
KBN				AML	AML	06 17 59.5	
	comp=E,0.8nm,0.6s						
KBN	**Korca**	**1.22**	**131**	P	**Pg**	**06 17 38.5**	**+0.1**
KBN				S	**Sg**	**06 17 54.0**	**-0.4**
HCY	**Herceg Novi**	**1.29**	**322**	*e*Pg	**Pg**	**06 17 39.8**	**+0.1**
HCY				*i* Sg	**Sn**	**06 17 58.4**	**+2.8**
NKME	**Niksic**	**1.41**	**341**	⇓*i*Pg	**Pn**	**06 17 40.9**	**+0.8**
NKME				*e*Sg	**Sg**	**06 18 01.9**	**+1.7**
BEY	**Berane**	**1.45**	**9**	*e*Pg	**Pn**	**06 17 41.0**	**+0.2**
BEY				*e*Sg	**Sg**	**06 18 02.7**	**+1.1**
IVA	**Berane**	**1.45**	**9**	⇑*i*Pg	**Pn**	**06 17 40.9**	**+0.2**
IVA				*e*Sg	**Sg**	**06 18 04.0**	**+2.4**
SKO	**Skopje**	**1.49**	**68**	*i* Pg	**Pn**	**06 17 42.5**	**+1.2**
SKO				*i* Sg	**Sn**	**06 18 02.1**	**+1.6**
NEST	**Nestorio**	**1.51**	**132**	P	**Pn**	**06 17 42.3**	**+0.6**
NEST				S	**Sb**	**06 18 03.4**	**+1.5**
NEST				AML	AML	06 18 08.1	
	comp=E,0.5nm,0.3s						
NEST	**Nestorio**	**1.51**	**132**	P	**Pb**	**06 17 43.2**	**+0.5**
NEST				S	**Sn**	**06 18 03.2**	**+2.1**
TREB	**Trebinje**	**1.57**	**325**	*e*Pn	**Pn**	**06 17 42.9**	**+0.5**
TREB	**Trebinje**	**1.57**	**325**	*e*Pg	**Pn**	**06 17 42.9**	**+0.5**
TREB				*e*Sg	**Sg**	**06 18 06.2**	**+0.7**
BRY	**Bratogost**	**1.65**	**332**	⇑*i*Pn	**Pb**	**06 17 44.9**	**-0.3**
BRY				*e*Sn	**Sg**	**06 18 08.9**	**+0.8**
PENT	**Pentalofos**	**1.71**	**136**	P	**Pb**	**06 17 46.3**	**+0.1**
PENT				S	**Sn**	**06 18 08.5**	**+2.3**
KEK	**Kerkira**	**1.73**	**174**	P	**Pn**	**06 17 44.9**	**+0.4**
KEK				P	**Pn**	**06 17 44.9**	**+0.4**
SJES	**Sjenica**	**1.84**	**9**	*e*Pn	**Pn**	**06 17 47.5**	**+1.3**
SJES				*e*Sn	**Sn**	**06 18 12.0**	**+2.6**
KLINJ	**Klinje**	**1.88**	**337**	*e*Pn	**Pg**	**06 17 50.4**	**-0.5**
PLE	**Pljevlja**	**1.90**	**356**	*e*Pg	**Pb**	**06 17 49.3**	**0.0**
PLE				*e*Sg	**Sb**	**06 18 14.2**	**+1.3**
PLE	**Pljevlja**	**1.90**	**356**	⇓*i*Pn	**Pn**	**06 17 48.5**	**+1.6**
PLE				*i* Sn	**Sb**	**06 18 14.8**	**+1.9**
IGT	**Igoumenitsa**	**1.99**	**163**	P	**Pn**	**06 17 49.0**	**+0.9**
IGT	**Igoumenitsa**	**1.99**	**163**	P	**Pn**	**06 17 49.0**	**+0.9**
IGT	**Igoumenitsa**	**1.99**	**163**	*e*Pn	**Pn**	**06 17 48.8**	**+0.7**
IGT				*e*Sn	**Sb**	**06 18 15.2**	**-0.3**
KPRO	**Kipourio**	**2.01**	**137**	P	**Pn**	**06 17 50.2**	**+1.8**
KPRO				S	**Sb**	**06 18 17.0**	**+0.9**
NOCI	**Noci**	**2.01**	**252**	P	**Pn**	**06 17 47.5**	**-0.9**
KZN	**Kozani**	**2.01**	**124**	P	**Pn**	**06 17 48.7**	**+0.2**
KZN				S	**Sn**	**06 18 13.7**	**+0.2**
SELS	**Selova**	**2.11**	**32**	*e*Pn	**Pn**	**06 17 50.7**	**+0.9**
SELS				*e*Sn	**Sn**	**06 18 17.3**	**+1.4**
BARS	**Barje**	**2.16**	**50**	*i* Pn	**Pn**	**06 17 51.2**	**+0.8**
BARS				*i* Sn	**Sn**	**06 18 20.8**	**+3.8**
BARS	**Barje**	**2.16**	**50**	*e*Pn	**Pn**	**06 17 51.2**	**+0.8**
BARS				*e*Sn	**Sn**	**06 18 18.6**	**+1.6**
IVAS	**Ivanjica**	**2.18**	**11**	*e*Pn	**Pn**	**06 17 51.7**	**+1.0**
IVAS				*e*Sn	**Sn**	**06 18 19.3**	**+1.8**
GRG	**Griva**	**2.18**	**102**	P	**Pn**	**06 17 51.4**	**+0.6**
GRG	**Griva**	**2.18**	**102**	*i* Pn	**Pn**	**06 17 51.6**	**+0.8**
RUDO	**Rudo**	**2.18**	**356**	*e*Pn	**Pb**	**06 17 53.5**	**-0.7**
RUDO	**Rudo**	**2.18**	**356**	*e*Pn	**Pb**	**06 17 53.4**	**-0.7**
RUDO				*e*Sn	**Sb**	**06 18 21.0**	**-0.1**
PRMD	**Pramanda**	**2.23**	**148**	P	**Pn**	**06 17 53.2**	**+1.7**
MATE	**Matera**	**2.31**	**251**	⇑P	**Pn**	**06 17 52.4**	**-0.1**
GOCS	**Kraljevo Serbi**	**2.33**	**24**	*e*Pn	**Pn**	**06 17 54.1**	**+1.3**
GOCS				*e*Sn	**Sn**	**06 18 23.4**	**+2.1**
BOSS	**Bosilegrad**	**2.41**	**63**	*e*Pn	**Pn**	**06 17 54.2**	**+0.4**
BOSS				*e*Sn	**Sn**	**06 18 24.0**	**+0.9**
BBLS	**Lazi&#263i**	**2.43**	**357**	*e*Pn	**Pn**	**06 17 56.9**	**+2.7**
BBLS				*e*Sn	**Sn**	**06 18 26.3**	**+2.5**
TETR	**Tetrakomo, Epi**	**2.46**	**148**	P	**Pn**	**06 17 56.3**	**+1.7**
MRVN	**Minervino Murg**	**2.58**	**263**	P	**Pn**	**06 17 56.0**	**-0.2**
GRUS	**Gruza**	**2.59**	**19**	*e*Pn	**Pn**	**06 17 57.4**	**+1.1**
THL	**Klokotos Trika**	**2.64**	**134**	P	**Pn**	**06 17 58.5**	**+1.5**
DIVS	**Divibare**	**2.67**	**6**	*e*Pn	**Pn**	**06 17 58.5**	**+0.9**
DIVS				*e*Sn	**Sn**	**06 18 31.4**	**+1.6**
KKB	**Krupnik**	**2.69**	**80**	*i* Pn	**Pn**	**06 17 58.5**	**+0.8**
BOVS	**Bovan**	**2.70**	**35**	⇓P	**Pn**	**06 17 56.7**	**-1.1**
BOVS				⇓S	**Sn**	**06 18 29.0**	**-1.3**
BOVS	**Bovan**	**2.70**	**35**	*e*Pn	**Pn**	**06 17 58.5**	**+0.7**
BOVS				*e*Sn	**Sn**	**06 18 31.8**	**+1.5**
TRUS	**Trudelj**	**2.85**	**12**	*e*Pn	**Pn**	**06 18 00.9**	**+1.0**
ZAPS	**Zavoj**	**2.91**	**50**	*e*Pn	**Pn**	**06 18 01.7**	**+0.9**
ZAPS				*e*Sn	**Sn**	**06 18 36.5**	**+0.9**
VTS	**Vitosha**	**2.97**	**65**	*e*Pn	**Pn**	**06 18 02.3**	**+0.6**
SRS	**Serrai**	**3.04**	**95**	*i* Pn	**Pn**	**06 18 03.1**	**+0.5**
SRS	**Serrai**	**3.04**	**95**	*e*Pn	**Pn**	**06 18 03.1**	**+0.5**
ZAGS	**Zajecar**	**3.08**	**39**	*e*Pn	**Pn**	**06 18 03.7**	**+0.7**
ZAGS				*e*Sn	**Sn**	**06 18 40.9**	**+1.3**
TEKS	**Tekeris**	**3.11**	**359**	*e*Pn	**Pn**	**06 18 04.1**	**+0.6**
TIP	**Timpagrande**	**3.12**	**225**	P	**Pn**	**06 18 03.4**	**-0.3**
TIP	**Timpagrande**	**3.12**	**225**	⇓P	**Pn**	**06 18 03.2**	**-0.5**
MMB	**Musomishta**	**3.13**	**87**	*i* Pn	**Pn**	**06 18 05.5**	**+1.7**
BORS2	**Bor- Borsko je**	**3.20**	**33**	*e*Pn	**Pn**	**06 18 05.1**	**+0.3**
BORS2				*e*Sn	**Sn**	**06 18 43.6**	**+0.9**
KUBS	**Kucevo**	**3.35**	**27**	*e*Pn	**Pn**	**06 18 07.4**	**+0.7**
MDVR	**Moldovita**	**3.69**	**24**	⇑P	**Pn**	**06 18 10.4**	**-1.1**
BLY	**Banja Luka**	**3.74**	**333**	*e*Pn	**Pb**	**06 18 22.6**	**+1.9**
VRSS	**Vrsac**	**3.90**	**18**	*e*Pn	**Pn**	**06 18 15.8**	**+1.5**
KLV	**Kalavryta, Ach**	**3.93**	**149**	P	**Pn**	**06 18 16.1**	**+1.3**
HERR	**Herculane**	**4.02**	**30**	⇑P	**Pn**	**06 18 14.8**	**-1.2**
KNYS	**Krupa na Uni**	**4.19**	**326**	*e*Pn	**Pn**	**06 18 19.0**	**+0.6**
BZS	**Buzias**	**4.43**	**19**	P	**Pn**	**06 18 22.2**	**+0.5**
BZS	**Buzias**	**4.43**	**19**	⇓P	**Pn**	**06 18 21.2**	**-0.5**
BZS				⇓S	**Sn**	**06 19 11.8**	**-1.2**
BZS	**Buzias**	**4.43**	**19**	*e*Pn	**Pn**	**06 18 22.0**	**+0.4**
GZR	**Gura Zlata**	**4.59**	**29**	⇓P	**Pn**	**06 18 23.2**	**-0.7**
GZR				⇓S	**Sn**	**06 19 16.3**	**-0.6**
GZR	**Gura Zlata**	**4.59**	**29**	*e*Pn	**Pn**	**06 18 25.5**	**+1.6**
AQU	**L'Aquila**	**4.70**	**283**	*e*Pn	**Pn**	**06 18 25.2**	**-0.2**
MORH	**Mrgy, Hungar**	**4.82**	**352**	*e*Pn	**Pn**	**06 18 27.9**	**+0.9**
MORH	**Mrgy, Hungar**	**4.82**	**352**	⇓P	**Pn**	**06 18 26.7**	**-0.3**
SIRR	**Siria**	**5.05**	**17**	⇓P	**Pn**	**06 18 29.0**	**-1.2**
SIRR				⇓S	**Sn**	**06 19 28.7**	**+0.3**
BOJS	**Bojanci**	**5.14**	**324**	*e*Pn	**Pn**	**06 18 31.8**	**+0.4**
ARR	**Arges**	**5.38**	**41**	⇓P	**Pn**	**06 18 33.7**	**-1.1**
ARR				⇑S	**Sn**	**06 19 33.8**	**-2.8**
CEY	**Cerknica**	**5.70**	**321**	*e*Pn	**Pn**	**06 18 39.5**	**+0.4**
DRGR		**5.80**	**22**	⇑P	**Pn**	**06 18 39.8**	**-0.8**
DRGR				⇓S	**Sn**	**06 19 45.9**	**-1.1**
FINES	**FINESS Array B**	**20.42**	**9**	P	**P**	**06 21 49.4**	**-1.9**
	comp=E,0.7nm,0.3s,baz=198,slow=9.2,SNR=7.9						
	comp=E,0.7nm,0.3s						
ZALV	**Zalesovo Beam**	**44.11**	**50**	P	**P**	**06 25 19.9**	**-2.6**
	comp=E,0.5nm,0.5s,baz=297,slow=6.3,SNR=3.7						
	comp=E,0.5nm,0.5s						
MKAR	**Makanchi Array**	**44.28**	**61**	P	**P**	**06 25 22.4**	**-1.6**
	comp=E,0.4nm,0.7s,baz=297,slow=6.3,SNR=4.1						
	comp=E,0.4nm,0.7s						

RSNC ***26*** *06:27:44.7±0.0, 6°N±1°×7°6W±°, h0^{km}±2^{km}, M4.0, mB4.9, mb4.8, ML3.6, Mw(mB)4.2*

IDC ***26*** *06:27:45.6±2.7, 5°.55N×75°.51W, h35^{km}±22^{km}, mb3.7/12, mbtmp3.9/12, MS3.2/6, Error ellipse: s-maj=25.6km s-min=17.2km az=58.0*

NEIC ***26*** *06:27:49.0±1.2, 5°.54N±0°.07×75°.33W±0°.04, h66^{km}±7^{km}, mb4.4/69, Error ellipse: s-maj=10.6km s-min=4.7km az=166.0*

VAO ***26*** *06:27:49.5±0.8, 5°.45N×75°.24W, h79^{km}, mb4.5, Presumed earthquake*

ISC 26 06:27:44.2±1.0**, 5°.51N**±0°.02×**75°.56W**±0°.02**, h28**^{km}±7^{km}**, n140, σ2^{s}.45**/156**, mb4.5**/39**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIZA	**Niza - Manizal**	**0.46**	**169**	P	**Pn**	**06 27 53.8**	**-1.4**
NIZA				S	**Sn**	**06 28 01.8**	**-0.8**
CBOC	**Ciudad Bolivar**	**0.57**	**308**	P	**Pb**	**06 27 53.4**	**-2.5**
CBOC				S	**Sb**	**06 28 00.9**	**-2.9**
RECRC	**Villamaria, Ca**	**0.59**	**160**	P	**Pn**	**06 27 55.8**	**-1.4**
RECRC				S	**Sn**	**06 28 05.1**	**-0.9**
MEDEC	**Medelln, Ant**	**0.76**	**358**	P	**Pb**	**06 27 55.3**	**-3.7**
MEDEC				S	**Sb**	**06 28 04.4**	**-4.7**
ANIL	**Santa Ana**	**1.03**	**171**	P	**Pn**	**06 28 03.2**	**+0.2**
ROSC	**El Rosal**	**1.40**	**118**	Pg	**Pb**	**06 28 10.9**	**+0.9**
	351nm,0.3s,baz=318,slow=8.4,SNR=190						
ROSC				Lg	Lg	06 28 32.2	
	235nm,0.3s,baz=198,slow=16,SNR=7.0						
ROSC	**El Rosal**	**1.40**	**118**		**Pb**	**06 28 11.1**	**+1.1**
SPBC	**San Pablo de B**	**1.48**	**85**	P	**Pb**	**06 28 10.2**	**-1.0**
SPBC				S	**Sb**	**06 28 30.1**	**+0.4**
ORTC	**Ortega, Tolima**	**1.62**	**169**	P	**Pb**	**06 28 14.0**	**+0.4**
ORTC				S	**Sb**	**06 28 40.0**	**+6.3**
DBBC	**Dabeiba**	**1.63**	**337**	P	**Pn**	**06 28 11.4**	**+0.3**
DBBC				S	**Sn**	**06 28 32.9**	**+1.7**
YOTC	**Yotoco, Valle**	**1.71**	**207**	P	**Pb**	**06 28 13.6**	**-1.5**
YOTC				S	**Sb**	**06 28 37.8**	**+1.5**
PIZC	**Pizarro, Choco**	**1.88**	**253**	P	**Pb**	**06 28 17.4**	**-0.4**
PIZC				S	**Sb**	**06 28 46.0**	**+5.1**
PRAC	**Prado**	**1.91**	**159**	P	**Pb**	**06 28 18.8**	**+0.4**
PRAC				S	**Sb**	**06 28 47.3**	**+5.4**
SOLC	**Bahia Solano**	**1.97**	**291**	P	**Pb**	**06 28 17.3**	**-2.2**
SOLC				S	**Sb**	**06 28 45.8**	**+2.1**
CHIC	**Chingaza**	**2.02**	**116**	P	**Pb**	**06 28 21.0**	**+0.5**
CHIC				S	**Sb**	**06 28 48.6**	**+3.2**
UREC	**San Jos de Ur**	**2.22**	**1**	P	**Pn**	**06 28 20.9**	**+1.7**
UREC				S	**Sb**	**06 28 49.2**	**-1.7**
BRJC	**Barrancabermej**	**2.31**	**51**	P	**Pn**	**06 28 21.4**	**+1.0**
BRJC				S	**Sb**	**06 28 51.2**	**-2.3**
VILC	**Villavicencio,**	**2.32**	**127**	P	**Pb**	**06 28 25.5**	**0.0**
VILC				S	**Sb**	**06 28 55.6**	**+1.8**
RUSC	**La Rusia**	**2.49**	**81**	P	**Pb**	**06 28 26.2**	**-2.4**
RUSC				S	**Sb**	**06 28 57.1**	**-1.9**
URMC	**La Uribe, Meta**	**2.54**	**152**	P	**Pb**	**06 28 27.9**	**-1.3**
URMC				S	**Sb**	**06 29 01.8**	**+1.7**
JAMC	**Jamundi, Valle**	**2.54**	**206**	P	**Pb**	**06 28 28.3**	**-1.0**
JAMC				S	**Sb**	**06 29 02.6**	**+2.4**
BARC	**Barichara**	**2.59**	**65**	P	**Pb**	**06 28 27.2**	**-3.0**
BARC				S	**Sn**	**06 28 57.7**	**+2.5**
PTAC	**Punta Ardita,**	**2.76**	**306**	P	**Pn**	**06 28 28.0**	**+1.4**
PTAC				S	**Sn**	**06 29 00.8**	**+1.7**
BETC	**Betania**	**2.82**	**178**	P	**Pb**	**06 28 32.6**	**-1.3**
BETC				S	**Sb**	**06 29 08.1**	**+0.1**
POPC	**Popayan, Colom**	**3.16**	**201**	P	**Pb**	**06 28 36.0**	**-3.8**
POPC				S	**Sb**	**06 29 15.9**	**-2.1**
GARC	**Garzon, Huila**	**3.31**	**179**	P	**Pb**	**06 28 39.7**	**-2.6**
GARC				S	**Sb**	**06 29 20.3**	**-2.0**
PAMC	**Pamplona, Colo**	**3.37**	**57**	P	**Pn**	**06 28 38.2**	**+2.8**
PAMC				S	**Sn**	**06 29 19.3**	**+4.6**
LCBC	**Los crdobas,**	**3.42**	**346**	P	**Pn**	**06 28 36.7**	**+1.1**
OCAC	**Ocana**	**3.50**	**39**	P	**Pn**	**06 28 39.1**	**+2.1**
OCAC				S	**Sn**	**06 29 20.5**	**+2.9**
CAPC	**Capurgana**	**3.58**	**330**	P	**Pn**	**06 28 40.1**	**+2.3**
CAPC				S	**Sn**	**06 29 22.7**	**+3.5**
GR1C	**Gorgona, Isla**	**3.60**	**226**	P	**Pn**	**06 28 40.4**	**+2.2**
GR1C				S	**Sb**	**06 29 25.8**	**-4.8**
MACC	**Macarena, Meta**	**3.75**	**153**	P	**Pn**	**06 28 44.0**	**+3.7**
MACC				S	**Sb**	**06 29 32.1**	**-2.9**
BBAC	**Balboa, Cauca**	**3.86**	**206**	P	Pb	06 28 46.2	-5.5
FLOC	**Florencia**	**3.91**	**181**	P	Pb	06 28 47.0	-5.5
FLOC				S	**Sb**	**06 29 36.8**	**-2.5**
SJCC	**San Jacinto, C**	**4.37**	**5**	P	**Pn**	**06 28 49.4**	**+0.6**
SJCC				S	**Sn**	**06 29 44.1**	**+5.2**
ARGC	**Ariguani, Magd**	**4.51**	**17**	P	**Pn**	**06 28 54.5**	**+3.8**
GCUF	**Volcan Galeras**	**4.62**	**203**	P	Pb	06 28 59.2	-5.7
GCUF				S	**Sb**	**06 29 52.3**	**-8.0**
TULM	**Tulcn-Chalpat**	**5.26**	**205**	P	Pb	06 29 07.7	-8.1
BCIP	**Isla Barro Col**	**5.58**	**311**	P	**Pn**	**06 29 06.6**	**+1.1**
	84nm,1.9s						
BCIP				S	**Sn**	**06 30 09.1**	**+0.4**
	84nm,1.9s						
CUSE	**Cuicocha Este**	**5.90**	**209**	P	Pn	06 29 14.8	+4.6
	2µm65nm,0.4s						
CUSE				S	**Sn**	**06 30 22.6**	**+5.5**
	2µm65nm,0.4s						
SDV	**Santo Domingo**	**5.92**	**55**	Pn	**Pn**	**06 29 13.5**	**+3.2**
	5.8nm,0.3s,baz=224,slow=14,SNR=13						
SDV				Sn	**Sn**	**06 30 15.6**	**-1.7**
	5.7nm,0.3s,baz=270,slow=12,SNR=3.7						
SDV				LR	LR	06 31 59.4	
	comp=Z,98nm,20.7s,baz=228,slow=43						
SDV	**Santo Domingo**	**5.92**	**55**		**Pn**	**06 29 11.9**	**+1.7**
SDV	**Santo Domingo**	**5.92**	**55**	*e*P	**Pn**	**06 29 13.6**	**+3.2**
SDV				*e*S	**Sn**	**06 30 15.4**	**-1.9**
SDV	**Santo Domingo**	**5.92**	**55**	P	**Pn**	**06 29 12.5**	**+2.2**
	1µm107nm,0.8s						
SDV				S	**Sn**	**06 30 18.9**	**+1.5**
	1µm107nm,0.8s						
OTAV	**Otavalo**	**5.98**	**209**		Pn	06 29 15.9	+4.6
OTAV	**Otavalo**	**5.98**	**209**	P	Pn	06 29 15.4	+4.0
	409nm31nm,0.7s						
OTAV				S	**Sn**	**06 30 25.4**	**+6.2**
	409nm31nm,0.7s						
PAC1	**Pacto, Paraso**	**6.13**	**212**	P	**Pn**	**06 29 13.7**	**+0.6**
SLOR	**San Lorenzo -**	**6.86**	**205**		Pn	06 29 28.8	+5.3
URIC	**Uribia, Colomb**	**7.09**	**30**	P	**Pn**	**06 29 27.4**	**+1.3**
URIC				S	**Sn**	**06 30 48.3**	**+2.6**
JTS	**Las Juntas de**	**10.45**	**298**	LR	LR	06 34 31.4	
	comp=Z,184nm,21.1s,baz=85,slow=39						
MTDJ	**Mount Denham**	**12.78**	**351**	Pn	**Pn**	**06 30 47.1**	**+2.9**
ATAH	**Atahualpa**	**12.88**	**193**	LR	LR	06 36 38.3	
	comp=Z,122nm,18.1s,baz=43,slow=41						
CNGN	**Cerro Negro**	**13.01**	**303**	Pn	**P**	**06 30 53.8**	**-3.6**
SDDR	**Presa de Saban**	**14.02**	**17**		**Pn**	**06 31 02.5**	**+1.4**
CHIV	**Chivirico**	**14.40**	**357**	Pn	**Pn**	**06 31 09.1**	**+2.8**
DR12	**Loma Pena Alta**	**14.50**	**24**	Pn	**Pn**	**06 31 07.7**	**0.0**
BOAV	**Boa Vista**	**15.31**	**101**		**Pn**	**06 31 17.1**	**-1.4**
BOAV				IAmb	IAmb	06 31 24.1	
	comp=Z,16nm,0.7s						
SJG	**San Juan**	**15.53**	**35**	LR	LR	06 37 46.7	
	comp=Z,76nm,18.8s,baz=246,slow=39						
HUMP	**Col San Antoni**	**15.73**	**36**	Pn	**Pn**	**06 31 23.8**	**-0.1**
HUMP				IAmb	IAmb	06 31 56.3	
	comp=Z,55nm,1.5s						
PAYG	**Puerto Ayora**	**15.94**	**248**	Pn	**P**	**06 31 32.0**	**+2.0**
PAYG				IAmb	IAmb	06 31 39.5	
	comp=Z,41nm,1.2s						
MACA	**Manacapuru-AM**	**17.17**	**120**	P	**Pn**	**06 31 41.8**	**-0.5**
MACA				IAmb	IAmb	06 32 04.1	
	comp=Z,13nm,0.6s						
MACA	**Manacapuru-AM**	**17.17**	**120**	*e*P	**Pn**	**06 31 40.0**	**-2.3**
MACA				*e*S	**Sn**	**06 34 49.2**	**-3.5**
LPAZ	**La Paz**	**22.87**	**161**	P	**P**	**06 32 46.9**	**+0.6**
	comp=Z,1.4nm,0.5s,baz=330,slow=11,SNR=6.8						
LPAZ				LR	LR	06 42 14.6	
	comp=Z,91nm,19.3s,baz=327,slow=38						
	comp=Z,1.4nm,0.5s						
LPAZ	**La Paz**	**22.87**	**161**	P	**P**	**06 32 46.7**	**+0.4**
NPGB	**Novo Progresso**	**23.71**	**122**	*e*P	**P**	**06 32 53.0**	**-1.0**
NPGB				*e*S	**S**	**06 36 59.5**	**-8.0**
VILB	**Vilhena**	**23.86**	**140**		**P**	**06 32 54.5**	**-1.0**
VILB				IAmb	IAmb	06 33 09.4	
	comp=Z,12nm,0.7s						
VILB	**Vilhena**	**23.86**	**140**	*e*P	**P**	**06 32 53.3**	**-2.2**
VILB				*e*S	**S**	**06 37 04.2**	**-5.8**
PB16	**IPOC Station P**	**24.44**	**166**	P	**P**	**06 33 01.5**	**+0.2**
PDRB	**Porto dos Gac**	**25.30**	**132**	*e*P	**P**	**06 33 04.9**	**-3.8**
PDRB				*e*S	**S**	**06 37 25.5**	**-7.7**
PB11	**IPOC Station P**	**25.78**	**167**	P	**P**	**06 33 12.5**	**-0.5**
GO01	**Chusmiza**	**25.80**	**166**	P	**P**	**06 33 12.6**	**-0.9**
PB08	**IPOC Station P**	**26.26**	**166**	P	**P**	**06 33 16.6**	**-1.0**
PTLB	**Pontes e Lacer**	**26.43**	**142**	P	**P**	**06 33 17.6**	**-1.1**
BG3	**Lake Jocassee**	**30.12**	**348**	P	**P**	**06 33 52.8**	**+1.3**
AQDB	**Aquidauana**	**32.37**	**143**	P	**P**	**06 34 10.3**	**-1.2**
AQDB				IAmb	IAmb	06 34 25.3	
	comp=Z,5.3nm,1.2s						
R55A	**Marlinton**	**32.88**	**353**	P	**P**	**06 34 15.7**	**-0.2**
R55A				IAmb	IAmb	06 34 26.2	
	comp=Z,8.1nm,0.9s						
PEBM	**Pemiscott Bayo**	**33.17**	**339**	P	**P**	**06 34 17.7**	**-0.7**
LCAR	**Lake Charles**	**33.62**	**337**	P	**P**	**06 34 22.4**	**+0.1**
LCAR				IAmb	IAmb	06 34 30.6	
	comp=Z,8.8nm,1.2s						
BRDY	**Brady**	**33.78**	**322**	P	**P**	**06 34 24.7**	**+0.9**
BRDY				IAmb	IAmb	06 34 33.6	
	comp=Z,7.6nm,1.2s						
FCAR	**Ozark Folk Cen**	**33.85**	**335**	P	**P**	**06 34 25.2**	**+0.8**
FCAR				IAmb	IAmb	06 34 47.8	
	comp=Z,5.3nm,1.2s						
USIN	**University of**	**34.13**	**343**	P	**P**	**06 34 27.9**	**+1.1**
CGM3	**Cape Girardeau**	**34.16**	**340**	P	**P**	**06 34 28.5**	**+1.5**
CGM3				IAmb	IAmb	06 34 29.0	
	comp=Z,4.6nm,0.7s						
BDFB	**Brasilia**	**34.44**	**128**	LR	LR	06 49 33.8	
	comp=Z,58nm,21.5s,baz=336,slow=38						
T42A	**Van Buren**	**34.44**	**338**	P	**P**	**06 34 30.7**	**+1.3**
HHAR	**Hobbs**	**34.97**	**334**	P	**P**	**06 34 34.7**	**+0.7**
HHAR				IAmb	IAmb	06 34 40.6	
	comp=Z,9.6nm,1.3s						
MGMO	**Mountain Grove**	**35.00**	**336**	P	**P**	**06 34 35.5**	**+1.2**
FVM	**French Village**	**35.04**	**339**		**P**	**06 34 36.1**	**+1.5**
ABTX	**Abilene, Hawle**	**35.11**	**323**	P	**P**	**06 34 36.7**	**+1.4**
U38A	**Gravette**	**35.29**	**333**	P	**P**	**06 34 37.4**	**+0.6**
U38A				IAmb	IAmb	06 34 38.1	
	comp=Z,5.9nm,1.0s						
CCM	**Cathedral Cave**	**35.40**	**338**	P	**P**	**06 34 38.2**	**+0.5**
TXAR	**Lajitas Array**	**35.59**	**315**	P	**P**	**06 34 39.5**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=118,slow=10,SNR=4.8						
TXAR				PcP	**PcP**	**06 37 09.9**	**+1.7**
	comp=Z,0.8nm,0.8s,baz=135,slow=5.0,SNR=7.4						
	comp=Z,0.2nm,0.6s						
TXAR	**Lajitas Array**	**35.59**	**315**	P	**P**	**06 34 39.7**	**+0.1**
FNO	**Franklin**	**35.80**	**329**	IAmb	IAmb	06 34 48.1	
	comp=Z,4.5nm,0.8s						
CPUP	**Villa Florida**	**36.25**	**152**	P	**P**	**06 34 42.5**	**-2.6**
ABQ	**Albuquerque**	**40.88**	**320**		**P**	**06 35 25.2**	**+1.0**
ANMO	**Albuquerque**	**40.88**	**320**	P	**P**	**06 35 25.5**	**+1.3**
ANMO				IAmb	IAmb	06 35 32.7	
	comp=Z,9.1nm,1.5s						
ANMO	**Albuquerque**	**40.88**	**320**	P	**P**	**06 35 25.5**	**+1.3**
ANMO				IAmb	IAmb	06 35 32.7	
	comp=Z,9.0nm,1.5s						
TASM	**ASL Pad, Albuq**	**40.88**	**320**	IAmb	IAmb	06 35 32.2	
	comp=Z,1.9nm,0.9s						
TASM	**ASL Pad, Albuq**	**40.88**	**320**	IAmb	IAmb	06 35 32.7	
	comp=Z,8.9nm,1.5s						
SDCO	**Great Sand Dun**	**42.10**	**324**	IAmb	IAmb	06 35 43.6	
	comp=Z,4.9nm,1.1s						
K30B	**Basset**	**42.71**	**334**	P	**P**	**06 35 39.4**	**+0.5**
PV01	**Paradox Valley**	**44.20**	**322**	IAmb	IAmb	06 35 59.9	
	comp=Z,6.3nm,1.0s						
PV02	**Paradox Valley**	**44.35**	**322**	IAmb	IAmb	06 36 00.5	
	comp=Z,11nm,1.1s						
PV13	**Radium Mtn., P**	**44.37**	**322**	IAmb	IAmb	06 36 01.0	
	comp=Z,7.5nm,1.1s						
WUAZ	**Wupatki**	**44.46**	**317**	IAmb	IAmb	06 36 05.1	
	comp=Z,7.5nm,1.0s						
RSSD	**Black Hills**	**45.86**	**331**	P	**P**	**06 36 04.5**	**+0.2**
RSSD				IAmb	IAmb	06 36 07.2	
	comp=Z,11nm,1.5s						
PLCA	**Paso Flores**	**46.25**	**175**	P	**P**	**06 36 09.7**	**+2.6**
	comp=Z,1.9nm,1.0s,baz=75,slow=5.2,SNR=3.9						
	comp=Z,1.9nm,1.0s						
PLCA	**Paso Flores**	**46.25**	**175**	P	**P**	**06 36 06.9**	**-0.2**
TCRU	**Three Creeks R**	**46.92**	**320**	IAmb	IAmb	06 36 23.9	
	comp=Z,5.8nm,1.2s						
BSUT	**Blindstream Ca**	**47.02**	**323**	IAmb	IAmb	06 36 23.2	
	comp=Z,9.8nm,1.4s						
MPU	**Maple Canyon**	**47.23**	**322**	IAmb	IAmb	06 36 23.3	
	comp=Z,5.0nm,1.1s						
ULM	**Lac du Bonnet**	**47.74**	**342**	P	**P**	**06 36 21.6**	**+3.0**
	comp=Z,3.6nm,0.7s,baz=137,slow=6.0,SNR=3.4						
PDAR	**Pinedale Array**	**47.76**	**326**	P	**P**	**06 36 20.6**	**+1.4**
	comp=Z,0.5nm,0.8s,baz=123,slow=11,SNR=5.0						
	comp=Z,0.5nm,0.8s						
PDAR	**Pinedale Array**	**47.76**	**326**	P	**P**	**06 36 19.6**	**+0.5**
DUG	**Dugway, Tooele**	**48.07**	**321**	IAmb	IAmb	06 36 35.6	
	comp=Z,7.5nm,1.2s						
BGU	**Big Grassy Mou**	**48.63**	**322**	IAmb	IAmb	06 36 34.4	
	comp=Z,4.2nm,1.2s						
LOHW	**Long Hollow**	**48.89**	**326**	IAmb	IAmb	06 36 35.8	
	comp=Z,3.9nm,1.0s						
MOOW	**Moose Ponds**	**49.05**	**326**	IAmb	IAmb	06 36 36.3	
	comp=Z,3.1nm,0.9s						
SCHQ	**Schefferville**	**49.68**	**7**	P	**P**	**06 36 34.8**	**+1.4**
	comp=Z,7.3nm,1.1s,baz=144,slow=8.7,SNR=2.0						
	comp=Z,7.3nm,1.1s						
NVAR	**Mina Array Bea**	**50.71**	**316**	P	**P**	**06 36 42.7**	**+0.9**
	comp=Z,0.5nm,0.8s,baz=75,slow=9.4,SNR=2.7						
NVAR				PcP	**PcP**	**06 38 00.3**	**+1.4**
	comp=Z,0.9nm,0.6s,baz=131,slow=4.7,SNR=6.1						
	comp=Z,0.5nm,0.8s						
BOZ	**Bozeman (W)**	**50.74**	**328**	P	**P**	**06 36 43.7**	**+1.9**
FCC	**Fort Churchill**	**55.02**	**348**	IAmb	IAmb	06 37 19.1	
	comp=Z,4.8nm,1.0s						
YKA	**Yellowknife Ar**	**63.67**	**341**	P	**P**	**06 38 13.1**	**+0.4**
	comp=Z,1.9nm,0.8s,baz=137,slow=6.2,SNR=38						
	comp=Z,1.9nm,0.8s						
YKA	**Yellowknife Ar**	**63.67**	**341**	P	**P**	**06 38 13.0**	**+0.3**
YKAW3	**Yellowknife Wh**	**63.73**	**341**	P	**P**	**06 38 13.6**	**+0.6**
ILON	**Igloolik, Nuna**	**63.90**	**358**	P	**P**	**06 38 14.2**	**+0.1**
ILON				IAmb	IAmb	06 38 25.6	
	comp=Z,4.3nm,1.3s						
DBIC	**Dimbokro**	**70.26**	**85**	P	**P**	**06 38 54.5**	**-1.0**
	comp=Z,2.6nm,0.8s,baz=279,slow=8.4,SNR=3.8						
	comp=Z,2.6nm,0.8s						
DBIC	**Dimbokro**	**70.26**	**85**	P	**P**	**06 38 54.4**	**-1.1**
DBIC				IAmb	IAmb	06 39 02.2	
	comp=Z,8.8nm,1.4s						
D27M	**Malcolm River**	**76.30**	**341**	P	**P**	**06 39 30.8**	**+0.6**
TORD	**Torodi Ar. Bea**	**76.38**	**78**	P	**P**	**06 39 30.5**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=289,slow=5.6,SNR=4.0						
	comp=Z,0.3nm,0.3s						
ILAR	**Eielson Array**	**77.13**	**335**	P	**P**	**06 39 34.0**	**-0.9**
	comp=Z,0.4nm,0.9s,baz=132,slow=5.3,SNR=5.5						
	comp=Z,0.4nm,0.9s						
NB2	**NORSAR Subarra**	**83.65**	**29**	P	**P**	**06 40 11.4**	**+1.4**
	comp=Z,3.5nm,1.1s,baz=270,slow=6.5						
NOA	**NORSAR Array B**	**83.65**	**29**	P	**P**	**06 40 09.8**	**-0.2**
	comp=Z,1.1nm,0.9s,baz=270,slow=5.0,SNR=4.0						
	comp=Z,1.1nm,0.9s						
FINES	**FINESS Array B**	**90.73**	**28**	P	**P**	**06 40 44.9**	**+0.6**
	comp=Z,2.2nm,0.8s,baz=275,slow=9.0,SNR=4.6						
	comp=Z,2.2nm,0.8s						
FINES	**FINESS Array B**	**90.73**	**28**	P	**P**	**06 40 43.7**	**-0.6**
BRTR	**Keskin Array B**	**101.05**	**48**	P	**Pdif**	**06 41 32.0**	**+0.1**
	comp=Z,1.0nm,1.0s,baz=316,slow=6.0,SNR=3.6						
ASAR	**Alice Springs**	**146.38**	**235**	PKPbc	**PKPbc**	**06 47 22.9**	**-0.5**
	comp=Z,3.1nm,0.8s,baz=125,slow=3.9,SNR=27						
ASAR	**Alice Springs**	**146.38**	**235**		**PKPbc**	**06 47 23.7**	**+0.3**
WRA	**Warramunga Arr**	**147.59**	**241**	PKPbc	**PKPdf**	**06 47 24.4**	**+0.2**
	comp=Z,2.7nm,0.7s,baz=111,slow=3.0,SNR=9.0						
CMAR	**Chiang Mai Arr**	**155.57**	**13**	PKPab	**PKPab**	**06 48 02.4**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=317,slow=6.8,SNR=4.3						

*NEIC **26** 06:29:02.4±0.5, 19.°05N±0.°05×67.°69W±0.°08, h10^{km}±2^{km}, ML2.1/8, Md2.8/6(RSPR), Error ellipse: s-maj=15.2km s-min=3.3km az=241.0*

RSPR 26 06:29:06.9, 19.°03N×67.°69W, h27^{km}±16^{km}**, MD2.8**/6, **5C-1D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.78	136	Pg	Pb	06 29 17.3	-4.6
AGPR	Aguadilla, PR	0.78	136	⇑eP	Pb	06 29 19.9	-1.9
AGPR	Aguadilla, PR	0.78	136	eS	Sb	06 29 30.0	-2.1
LSP	Las Mesas	1.02	146		Pn	06 29 23.0	-2.5
LSP					Sb	06 29 36.1	-2.9
LSP	Las Mesas	1.02	146	⇑eP	Pn	06 29 23.0	-2.5
LSP	Las Mesas	1.02	146	eS	Sb	06 29 36.1	-2.9
AOPR	Arecibo Observ	1.11	127		Pn	06 29 24.5	-2.3
AOPR				IAML		06 29 38.3	
	comp=N,38nm,2.8s						
AOPR					Sn	06 29 38.7	-2.6
AOPR				IAML		06 29 52.7	
	comp=E,46nm,2.4s						
AOPR	Arecibo Observ	1.11	127	⇑eP	Pn	06 29 24.7	-2.1
AOPR	Arecibo Observ	1.11	127	eS	Sn	06 29 38.7	-2.6
CRPR	Cabo Rojo, PR	1.15	152		Pn	06 29 24.9	-2.4
CRPR	Cabo Rojo, PR	1.15	152	IAML		06 29 28.9	
	comp=E,33nm,3.0s						
CRPR				IAML		06 29 46.4	
	comp=E,29nm,2.7s						
CRPR	Cabo Rojo, PR	1.15	152	⇑eP	Pn	06 29 25.8	-1.6
CRPR	Cabo Rojo, PR	1.15	152	eS	Sn	06 29 39.4	-2.9
MLPR	Magueyes Islan	1.22	150	⇑eP	Pn	06 29 26.4	-1.8
MLPR	Magueyes Islan	1.22	150	eS	Sn	06 29 41.3	-2.5
OBIP	Obispado Ponce	1.42	134		Pn	06 29 28.4	-2.6
OBIP				IAML		06 29 45.1	
	comp=E,25nm,2.5s						
OBIP					Sn	06 29 47.0	-1.8
OBIP				IAML		06 30 04.3	
	comp=N,25nm,3.1s						
OBIP	Obispado Ponce	1.42	134	⇓eP	Pn	06 29 28.7	-2.3
OBIP	Obispado Ponce	1.42	134	eS	Sn	06 29 46.5	-2.3

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*IDC **26** 06:43:32.6±2.6, 22.°35S×173.°91E, h0^{km}, mb4.4/6, mbtmp4.3/7, MS3.9/38, Error ellipse: s-maj=101.3km s-min=28.3km az=149.0*

*GCMT **26** 06:43:38.6±0.3, 21.°79S±0.°01×173.°63E±0.°02, h21^{km}±1^{km}, MW4.9/89, Moment Tensor Solution. s27,c29; s89,c112; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.99±.14; $M_{\theta\theta}$1.69±.13; $M_{\phi\phi}$-0.69±.11; $M_{r\theta}$-0.12±.18; $M_{\theta\phi}$2.34±.08; $M_{\phi r}$-0.22±.16; Best double couple: $M_0$2.63900×10^{16} NP1:ϕ_s283.00000°, δ83.00000°, λ-2.00000°. NP2: ϕ_s14.00000°, δ88.00000°, λ-173.00000°. Principal axes: T 3.1360, Plg3.0000°, Azm148.0000°; N -0.9910, Plg83.0000°, Azm32.0000°; P -2.1430, Plg6.0000°, Azm239.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **26** 06:43:41.6±1.1, 21.°6S±0.°1×172.°94E±0.°10, h10^{km}±2^{km}, mb4.5/18 Error ellipse: s-maj=19.4km s-min=14.2km az=149.0*

ISC 26 06:43:40.5±1.1**, 21.°8S**±0.°3×**173.°1E**±0.°2**, h10**^{km}**, n74, σ0^{s}99**/43**, mb4.5**/13**, MS4.0**/37**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.17	267	Pn	Pn	06 45 15.1	+3.3
	5.1nm,0.6s,baz=90,slow=20						
DZM	Mont Dzumac	6.17	267	Pn	Pn	06 45 10.9	-0.9
MSVF	Nonsavu	6.21	50	Pn	Pn	06 45 12.5	+0.2
URZ	Urewera	16.73	169	LR	LR	06 52 32.5	
	comp=Z,730nm,18.1s,baz=346,slow=34						
ARMA	Armidale	21.05	242		P	06 48 25.7	+0.9
CTA	Charters Tower	25.11	269	LR	LR	06 58 13.3	
	comp=Z,191nm,19.6s,baz=82,slow=34						
RAR	Rarotonga	25.25	94	LR	LR	06 58 01.7	
	comp=Z,73nm,18.1s,baz=287,slow=36						
PMG	Port Moresby	27.80	292	LR	LR	06 58 24.3	
	comp=Z,200nm,19.5s,baz=139,slow=31						
STKA	Stephens Creek	29.72	244	P	P	06 49 45.0	-2.0
	2.1nm,0.8s,baz=74,slow=12,SNR=3.7						
STKA				LR	LR	07 01 25.4	
	comp=Z,274nm,18.3s,baz=49,slow=36						
	2.1nm,0.8s						
STKA	Stephens Creek	29.72	244	P	P	06 49 47.2	+0.2
STKA				IAmb	IAmb	06 50 15.7	
	comp=Z,17nm,1.1s						
INKA	Innaminka	29.89	252	P	P	06 49 48.7	+0.3
PPT	Papeete	35.35	90	LR	LR	07 00 57.0	
	comp=Z,122nm,20.7s,baz=277,slow=30						
WR8	Warramunga Arr	36.03	266		P	06 50 41.3	-1.0
WR8				IAmb	IAmb	06 50 41.7	
	comp=Z,6.0nm,0.8s						
AS31	Alice Springs	36.10	259		P	06 50 42.5	-0.4
AS31				IAmb	IAmb	06 50 43.8	
	comp=Z,4.2nm,0.8s						
ASAR	Alice Springs	36.10	259	P	P	06 50 42.2	-0.6
	comp=Z,12nm,0.9s,baz=86,slow=8.7,SNR=73						
ASAR				LR	LR	07 05 20.3	
	comp=Z,150nm,21.7s,baz=97,slow=36						
	comp=Z,12nm,0.9s						
ASAR	Alice Springs	36.10	259		P	06 50 42.5	-0.3
WB0	Warramunga Arr	36.17	266		P	06 50 42.1	-1.2
WB0				IAmb	IAmb	06 50 42.9	
	comp=Z,11nm,1.0s						
WRA	Warramunga Arr	36.19	266	P	P	06 50 42.4	-1.2
	comp=Z,5.2nm,0.9s,baz=99,slow=8.8,SNR=9.6						
	comp=Z,5.2nm,0.9s						
WRA	Warramunga Arr	36.19	266	P	P	06 50 42.7	-0.8
JAY	Jayapura	36.87	297	LR	LR	07 03 58.5	
	comp=Z,184nm,21.8s,baz=278,slow=32						
MTN	Manton Dam	40.92	276	P	P	06 51 22.8	-0.6
MTN				IAmb	IAmb	06 51 39.1	
	comp=Z,11nm,1.1s						
FORT	Forrest	41.10	248	P	P	06 51 24.6	-0.1
FORT				IAmb	IAmb	06 51 31.8	
	comp=Z,6.3nm,0.8s						
KNRA	Kununurra	42.30	270	P	P	06 51 34.3	-0.4
KNRA				IAmb	IAmb	06 51 45.3	
	comp=Z,10nm,1.1s						
FITZ	Fitzroy Crossi	44.61	266	LR	LR	07 10 30.7	
	comp=Z,227nm,18.4s,baz=102,slow=36						
FITZ	Fitzroy Crossi	44.61	266		P	06 51 53.9	+0.6
FITZ				IAmb	IAmb	06 51 54.8	
	comp=Z,10nm,1.1s						
GUMO	Guam	44.79	319	LR	LR	07 08 33.9	
	comp=Z,215nm,20.5s,baz=132,slow=33						
BATI	Baumata	48.70	276	LR	LR	07 12 37.4	
	comp=Z,227nm,21.2s,baz=112,slow=35						
PSA00	Pilbara Seismi	49.25	260	P	P	06 52 29.2	-0.4
PSA00	Pilbara Seismi	49.25	260		P	06 52 29.2	-0.4
MBWA	Marble Bar	49.43	260		P	06 52 30.8	-0.1
NWAO	Narrogin (SRO)	50.30	245	LR	LR	07 12 48.6	
	comp=Z,199nm,20.5s,baz=89,slow=35						
MORW	Morawa	51.59	250	P	P	06 52 46.8	-0.5
VNDA	Vanda	55.99	183	LR	LR	07 13 51.1	
	comp=Z,90nm,19.1s,baz=16,slow=33						
JCJ	Chichijima	57.10	327	LR	LR	07 17 43.2	
	comp=Z,36nm,18.7s,baz=160,slow=35						
JHJ	Hachijo jima 2	63.22	329	LR	LR	07 21 02.9	
	comp=Z,21nm,18.4s,baz=112,slow=35						
JOW	Kunigami	64.98	316	LR	LR	07 18 53.7	
	comp=Z,67nm,21.4s,baz=222,slow=32						
MJAR	Matsushiro Arr	66.76	330	LR	LR	07 20 17.6	
	comp=Z,66nm,21.6s,baz=150,slow=33						
JNU	Nakatsue	67.89	323	LR	LR	07 17 41.6	
	comp=Z,54nm,21.5s,baz=141,slow=30						
RPN	Rapa Nui	69.77	112	LR	LR	07 16 57.2	
	comp=Z,85nm,21.8s,baz=250,slow=29						
ASAJ	Asahikawa	71.33	337	LR	LR	07 21 47.8	
	comp=Z,124nm,20.8s,baz=163,slow=32						
KSRS	Korea Array	72.70	324	LR	LR	07 23 47.0	
	comp=Z,20nm,20.9s,baz=180,slow=33						
PETK	Petropavlovsk-	75.82	351	LR	LR	07 24 29.9	
	comp=Z,112nm,19.3s,baz=137,slow=32						
CMAR	Chiang Mai Arr	82.84	293	P	P	06 56 05.1	-0.5
	comp=Z,2.0nm,0.3s,baz=134,slow=4.4,SNR=6.5						
	comp=Z,2.0nm,0.3s						
CMAR	Chiang Mai Arr	82.84	293	P	P	06 56 04.5	-1.2
O15K	Ungalikthiuk R	83.75	14	P	P	06 56 09.0	-0.4
SEY	Seymchan	86.06	351	LR	LR	07 30 33.7	
	comp=Z,123nm,19.4s,baz=140,slow=32						
SNAA	Sanae	86.69	181	LR	LR	07 34 28.1	
	comp=Z,67nm,18.2s,baz=191,slow=35						
YBH	Yreka Blue Hor	86.72	42	LR	LR	07 25 40.5	
	comp=Z,6.2nm,21.5s,baz=248,slow=29						
PFO	Pinyon Flats O	86.81	52	LR	LR	07 25 39.2	
	comp=Z,71nm,21.8s,baz=266,slow=29						
LPIG	La Paz	87.34	63	LR	LR	07 28 12.1	
	comp=Z,75nm,18.1s,baz=280,slow=31						
NVAR	Mina Array Bea	87.87	47	LR	LR	07 29 35.9	
	comp=Z,93nm,18.0s,baz=229,slow=32						
BBB	Bella Bella	89.72	32	LR	LR	07 29 42.7	
	comp=Z,65nm,18.9s,baz=235,slow=31						
YAK	Yakutsk	90.46	341	LR	LR	07 30 49.1	
	comp=Z,102nm,21.3s,baz=115,slow=31						
KNB	Kanab	91.03	50	P	P	06 56 45.7	+0.3
RIDG	Independent Ri	91.40	17	P	P	06 56 46.0	-0.3
SONM	Songino Array	91.47	322	P	P	06 56 45.7	-1.4
	comp=Z,0.8nm,0.8s,baz=120,slow=5.3,SNR=5.0						
	comp=Z,0.8nm,0.8s						
SONM	Songino Array	91.47	322	P	P	06 56 46.1	-1.0
ILAR	Eielson Array	91.68	16	P	P	06 56 41.3	-6.2
	comp=Z,1.2nm,1.1s,baz=209,slow=5.0,SNR=3.5						
ILAR				LR	LR	07 35 49.2	
	comp=Z,71nm,18.1s,baz=226,slow=34						
	comp=Z,1.2nm,1.1s						
NEW	Newport	93.48	39	LR	LR	07 34 07.3	
	comp=Z,79nm,18.2s,baz=244,slow=32						
PLCA	Paso Flores	94.19	137	LR	LR	07 29 38.5	
	comp=Z,58nm,21.9s,baz=233,slow=30						
ANMO	Albuquerque	94.84	54	LR	LR	07 29 57.6	
	comp=Z,58nm,21.4s,baz=263,slow=30						
TXAR	Lajitas Array	94.87	60	LR	LR	07 31 03.2	
	comp=Z,84nm,20.1s,baz=266,slow=30						
PDAR	Pinedale Array	95.77	46	LR	LR	07 37 49.8	
	comp=Z,41nm,18.1s,baz=255,slow=34						
CMIG	Matias Romero	98.02	75	LR	LR	07 34 52.3	
	comp=Z,26nm,18.1s,baz=252,slow=32						
TIXI	Tiksi	98.04	347	LR	LR	07 42 58.4	
	comp=Z,46nm,19.0s,baz=195,slow=36						
RONA	Rosalia, Austr	148.16	330	ePKP	PKPdf	07 03 24.4	+1.1
	comp=Z,3.2nm,0.7s						
RONA				i PKiKP	sPKPbc	07 03 30.0	+0.2
	comp=Z,3.9nm,0.7s						
CONA	Conrad Observa	148.20	330	i PKP	PKPdf	07 03 24.6	+1.1
	comp=Z,3.4nm,1.0s						
CONA				ePKiKP	PKPab	07 03 30.0	+0.4
	comp=Z,4.7nm,1.3s						
GERES	GERESS Array B	148.44	334	PKPbc	PKPdf	07 03 23.2	-0.6
	comp=Z,0.9nm,0.8s,baz=28,slow=3.6,SNR=6.9						
BIOA	Bad Ischl, Aus	149.37	332	ePKP	PKiKP	07 03 31.4	+0.6
	comp=Z,6.5nm,1.3s						
SOKA	Soboth	149.50	330	ePKP	PKiKP	07 03 32.0	+0.8
	comp=Z,7.7nm,1.7s						
WATA	Walderalm	150.51	334	ePKP	PKiKP	07 03 34.5	+1.1
	comp=Z,3.3nm,0.8s						
WTTA	Wattenberg	150.54	334	i PKP	PKPdf	07 03 28.5	+1.2
	comp=Z,3.9nm,0.8s						
WTTA				i PKP	PKiKP	07 03 34.6	+1.1
	comp=Z,11nm,1.6s						
ABTA	Abfaltersbach	150.58	332	ePKP	PKPdf	07 03 28.3	+1.0
	comp=Z,1.7nm,0.7s						
ABTA				ePKP	PKiKP	07 03 34.4	+1.0
	comp=Z,2.8nm,0.8s						
SQTA	Sankt Quirin	150.75	334	ePKP	PKPdf	07 03 28.8	+1.2
	comp=Z,9.3nm,1.5s						
SQTA				i PKP	PKiKP	07 03 34.3	+0.5
	comp=Z,3.6nm,0.8s						

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*NNC **26** 07:09:55.5±0.7, 49.°97N×78.°52E, h0^{km}, mb3.0, mpv2.3, Error ellipse: s-maj=16.8km s-min=3.0km az=82.0, Suspected Mining explosion.*

*IDC **26** 07:09:57.2±1.2, 50.°05N×78.°82E, h0^{km}, mbtmp2.5/2, ML1.9/2, Error ellipse: s-maj=13.1km s-min=7.9km az=61.0*

ISC 26 07:09:57.4±1.2**, 50.°11N**±0.°08×**78.°8E**±0.°2**, h0**^{km}**, n16, σ0^{s}56**/25**, 14C-10D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.51	339	⇑P	Pg	07 10 07.6	+0.5
KUR07				⇑S	Sb	07 10 16.6	-0.5
KUR14	Kurchatov Arra	0.52	345	⇑P	Pg	07 10 07.9	+0.6
KUR14				⇑S	Sb	07 10 16.8	-0.6
KUR06	Kurchatov Arra	0.52	340	⇑P	Pg	07 10 07.9	+0.5
KUR06				⇑S	Sb	07 10 17.0	-0.5
KUR15	Kurchatov Arra	0.53	343	⇑P	Pg	07 10 08.0	+0.5
KUR15				⇓S	Sb	07 10 18.2	+0.4
KURBB	Kurchatov Arra	0.54	341	Pg	Pg	07 10 08.4	+0.7
	0.5nm,0.3s,baz=164,slow=18,SNR=40						
KURBB				Lg	Lg	07 10 18.4	
	0.6nm,0.3s,baz=160,slow=33,SNR=14						
KURBB	Kurchatov Arra	0.54	341	⇑P	Pg	07 10 08.2	+0.5
	7.0nm,0.5s						
KURBB				⇓S	Sb	07 10 17.7	-0.3
	24nm,0.7s						
KUR16	Kurchatov Arra	0.55	340	⇓P	Pg	07 10 08.5	+0.6
KUR16				⇓S	Sb	07 10 17.6	-0.7
KUR05	Kurchatov Arra	0.56	342	⇑P	Pg	07 10 08.4	+0.4
KUR05				⇓S	Sb	07 10 17.6	-0.9
KUR17	Kurchatov Arra	0.56	338	⇓P	Pg	07 10 08.7	+0.6
KUR17				⇑S	Sb	07 10 18.0	-0.7
KUR04	Kurchatov Arra	0.57	343	⇑P	Pg	07 10 08.8	+0.4
KUR04				⇑S	Sb	07 10 18.4	-0.7
KURK	Kurchatov	0.61	349	⇓P	Pg	07 10 09.4	+0.2
	1.2nm,0.6s						
KURK				⇑S	Sb	07 10 19.7	-0.5
	7.8nm,1.1s						
MAKZ	Makanchi	3.92	146	⇓Lg	Lg	07 12 01.9	
	3.2nm,0.7s						
MK31	Makanchi Array	4.05	144	⇓Pn	Pn	07 11 00.3	-0.3
	baz=322,slow=10,SNR=6.7						
MK31				⇓Pg	Pb	07 11 09.8	+0.2
	0.7nm,0.6s,baz=319,slow=13,SNR=6.7						
MK31				⇑Lg	Lg	07 12 03.6	
	5.2nm,0.8s,baz=336,slow=27,SNR=10						
MKAR	Makanchi Array	4.05	144	Pn	Pn	07 11 00.4	-0.3
	baz=321,slow=11,SNR=7.8						
MKAR				Lg	Lg	07 12 04.3	
	0.4nm,0.3s,baz=330,slow=25,SNR=14						
	0.2nm,0.5s						
I46RU	ZALESOVO INFRA	5.34	42	I	I	07 44 10.0	
	baz=219,slow=304,SNR=1.0						
ZALV	Zalesovo Beam	5.34	42	Pn	Pn	07 11 18.3	0.0
	0.5nm,0.3s,baz=228,slow=19,SNR=2.3						
	0.7nm,0.3s						

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*IDC **26** 07:22:03.4±0.6, 7.°55S×107.°01E, h0^{km}, mb4.5/23, mbtmp4.5/24, ML3.9/1, MS3.8/30, Error ellipse: s-maj=23.0km s-min=12.2km az=59.0*

*DJA **26** 07:22:07.7±0.2, 8°S±2°×10°7E±°, h10^{km}, M4.9/30, mB5.4/18, mb4.9/30, MLv5.0/30, Mw4.8/20, Mw(mB)4.8/18, MwMwp4.6/1, Mwp4.9/1*

*NEIC **26** 07:22:11.5±1.3, 7.°75S±0.°10×106.°86E±0.°08, h62^{km}±7^{km}, mb4.7/58, Error ellipse: s-maj=15.3km s-min=9.8km az=209.0*

ISC 26 07:22:08.9±0.4**, 8.°00S**±0.°05×**106.°77E**±0.°05**, h46**^{km}**, n229, σ1^{s}81**/201**, mb4.6**/61**, MS3.8**/32**, 3C-6D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNJI	Cibinong	0.77	28	P	Pn	07 22 22.5	-1.0
CNJI				S	Sn	07 22 35.6	+1.6
SKJI	Sukabumi	1.01	348	P	Pn	07 22 27.0	+0.4
SKJI				S	Sn	07 22 43.1	+3.4
BBJI	Bungbulang	1.02	59	P	Pn	07 22 26.7	-0.2
BBJI	Bungbulang	1.02	59	P	Pn	07 22 25.5	-1.4
DBJI	Dramaga	1.43	359	P	Pn	07 22 33.8	+1.3
DBJI				S	Sn	07 22 54.4	+4.2
TNG	Tangerang	1.82	356	P	Pn	07 22 40.3	+2.6
TNG				P	Pn	07 22 40.3	+2.6
TNG				S	Sn	07 23 04.1	+4.5
TNG				S		07 23 04.2	
SBJI	Serang	1.97	341	P	Pn	07 22 41.9	+2.1
SBJI				S	Sn	07 23 09.3	+6.0
KPJI	Karang Pucung	2.25	73	P	Pn	07 22 44.1	+0.5
SCJI	Gunung Srandil	2.40	83	P	Pn	07 22 46.5	+0.8
CTJI	Waduk Cacaban	2.59	68	P	Pn	07 22 49.8	+1.5
XMI	Christmas Isla	2.66	203	P	Pn	07 22 49.5	+0.2
BLSI	Bandar Lampung	3.02	330	P	Pn	07 22 57.2	+3.0
KASI	Kota Agung	3.33	317	P	Pn	07 23 01.8	+3.3
YOGI	Yogyakarta	3.50	87	P	Pn	07 23 00.5	-0.3
KLI	Kotabumi	3.65	329	P	Pn	07 23 06.7	+3.9
UGM	Wanagama	3.72	89		Pn	07 23 03.9	0.0
UGM	Wanagama	3.72	89	P	Pn	07 23 04.3	+0.4
UGM	Wanagama	3.72	89	P	Pn	07 23 03.7	-0.2
SMRI	Semarang	3.76	76		Pn	07 23 05.7	+1.3
SMRI	Semarang	3.76	76	P	Pn	07 23 06.1	+1.7
SMRI	Semarang	3.76	76	P	Pn	07 23 06.5	+2.1
KLSI		3.86	328	P	Pn	07 23 09.1	+3.3
LWLI	Liwa	4.00	318	P	Pn	07 23 10.4	+2.6
MDSI	Maura Dua	4.33	323	P	Pn	07 23 15.0	+2.7
PCJI	Pacitan	4.37	93	P	Pn	07 23 13.6	+0.8
NGJI	Ngawi	4.70	83	P	Pn	07 23 18.3	+1.1
SNJI	Sawahan-Nganju	4.95	88	P	Pn	07 23 22.9	+2.0
SJI	Sawahan	4.96	87	P	Pn	07 23 22.3	+1.3
MNAI	Manna	5.24	313		Pn	07 23 26.8	+2.1
MNAI	Manna	5.24	313	P	Pn	07 23 25.6	+0.9
	290nm,0.6s						
MNAI	Manna	5.24	313	P	Pn	07 23 27.3	+2.6
TPI	Tanjungpandan	5.28	10	P	Pn	07 23 28.7	+3.4
	0.8nm3µm2µm176nm,1.1s						
PPBI	Pangkal Pinang	5.83	354	P	Pn	07 23 36.5	+3.6
KSI	Kapahiang	5.99	316	P	Pn	07 23 37.8	+2.7
UBSI	University, Be	6.14	313	P	Pn	07 23 39.4	+2.3
	1.1nm6µm142nm,0.7s						
MASI	Maura Aman, Be	6.60	317	P	Pn	07 23 47.5	+4.0
	3µm340nm,1.0s						
GMJI	Gumukmas	6.62	93	P	Pn	07 23 44.7	+1.1
	0.4nm2µm80nm,0.6s						
BLJI	Banyuglugur	6.77	88	P	Pn	07 23 46.2	+0.5
	0.6nm2µm116nm,0.6s						
KMMI	Kalianget	7.20	83	P	Pn	07 23 51.4	-0.2
	0.2nm41nm,0.8s						
JAGI	Jajag, Banyuwa	7.33	94		Pn	07 23 56.1	+2.7
JAGI	Jajag, Banyuwa	7.33	94	P	Pn	07 23 55.8	+2.4
	183nm,0.9s						
JAGI	Jajag, Banyuwa	7.33	94	S	Sn	07 25 18.0	+2.7
	183nm,0.9s						
JAGI	Jajag, Banyuwa	7.33	94	P	Pn	07 23 56.1	+2.7
	0.8nm3µm139nm,0.9s						
ABJI	Asem Bagus	7.40	89	P	Pn	07 23 57.7	+3.3
DSRI	Dabo	7.78	344	P	Pn	07 24 03.7	+4.1
	0.4nm43nm,0.7s						
RTBI	Rangdo, Negare	8.11	94	P	Pn	07 24 07.1	+3.0
IGBI	Denpasar	8.33	96	P	Pn	07 24 08.3	+1.2
SRBI	Singaraja	8.37	91	P	Pn	07 24 10.8	+3.2
	2µm135nm,0.7s						
PPSI	Pulau Pagai	8.50	307	P	Pn	07 24 09.9	+0.4
KHKI	Kahang-Kahang	8.76	93	P	Pn	07 24 13.5	+0.5
	1µm63nm,0.7s						
KLNI	Mataram	9.24	93	P	Pn	07 24 22.3	+2.6
	37nm,0.5s						
PDSI	Padang	9.43	318	P	Pn	07 24 24.7	+2.4
	30nm,0.7s						
TWSI	Taliwang, Sumb	10.04	95	P	Pn	07 24 31.6	+1.1
	844nm49nm,0.5s						
PLAI	Plampang	10.92	95	P	Pn	07 24 43.6	+0.9
	67nm,0.6s						
PLAI	Plampang	10.92	95	P	Pn	07 24 41.5	-1.2
	69nm,0.6s						
DBNI	Kabupaten Domp	11.44	93	P	Pn	07 24 49.8	+0.1
	23nm,0.6s						
SBUM	Sibu	11.72	28	Pn	Pn	07 24 52.0	-1.5
SBUM	Sibu	11.72	28	P	Pn	07 24 55.2	+1.7
WBSI	Waikabubak, Su	12.58	98	P	Pn	07 25 04.8	-0.6
	30nm,0.8s						
GSI	Gunungsitoli	13.01	315		Pn	07 25 08.1	-3.2
GSI	Gunungsitoli	13.01	315	P	Pn	07 25 09.8	-1.5
	58nm,0.6s						
PSI	Prapat	13.28	324	Pn	Pn	07 25 11.6	-3.4
	0.6nm,0.3s,baz=122,slow=15,SNR=2.6						
	2.0nm,0.4s						
BSSI	Bau Bau, Buton	13.74	83	P	Pn	07 25 21.9	+0.6
	918nm85nm,1.1s						
KULM	Kulim	14.54	335	Pn	Pn	07 25 30.4	-1.6
TPTI		14.71	319	P	P	07 25 36.7	-2.8
	11nm,0.7s						
EDFI	Ende, Flores	14.79	94	P	Pn	07 25 30.7	-4.6
MPSI	Mapaga	15.49	58	P	P	07 25 47.6	-0.5
	2µm27nm,1.3s						
MLSI	Meulaboh, Aceh	15.98	319	P	P	07 26 03.0	+9.5
APSI	Ampana	16.41	65	P	P	07 25 58.1	-0.3
	934nm53nm,1.1s						
TOLI2	Tolitoli	16.65	58	Pn	Pn	07 25 55.0	-4.2
TOLI2	Tolitoli	16.65	58	P	P	07 26 00.9	-0.1
	19nm,0.9s						
KKM	Kota Kinabalu	16.83	34	Pn	Pn	07 25 57.5	-4.1
KKM				IAmb	IAmb	07 26 17.9	
	comp=Z,70nm,1.3s						
KKM	Kota Kinabalu	16.83	34	P	P	07 26 17.4	+14
MRSI	Marisa	17.31	62	P	P	07 26 09.4	+1.1
	comp=Z,2µmcomp=Z,22nm,0.9s						
SOEI	Soe	17.38	97	P	Pn	07 26 05.7	-2.7
SOEI				IAmb	IAmb	07 26 44.0	
	comp=Z,60nm,0.8s						
MBWA	Marble Bar	18.11	138	P	P	07 26 18.1	+1.1
MBWA	Marble Bar	18.11	138	P	P	07 26 18.4	+1.3
	comp=Z,12nm,1.5s						
PSA00	Pilbara Seismi	18.47	138	P	P	07 26 21.7	+0.6
PSA00	Pilbara Seismi	18.47	138	P	Pn	07 26 23.3	+1.7
	comp=Z,31nm,2.1s						
SANI	Sanana	20.03	74	P	P	07 26 37.8	-0.4
NLAI	Namlea	20.77	78	P	Pn	07 26 48.3	-0.8
	comp=Z,77nm,0.6s						
FITZ	Fitzroy Crossi	20.93	121	P	P	07 26 49.3	+1.5
	comp=Z,16nm,0.9s,baz=297,slow=8.0,SNR=28						
FITZ				LR	LR	07 34 33.7	
	comp=Z,190nm,21.7s,baz=314,slow=36						
	comp=Z,16nm,0.9s						
FITZ	Fitzroy Crossi	20.93	121		P	07 26 48.8	+1.0
MEEK	Meekatharra	21.69	150	P	P	07 26 58.1	+2.1
	comp=Z,20nm,2.2s						
KNRA	Kununurra	22.82	112	P	P	07 27 08.4	+0.3
KNRA				IAmb	IAmb	07 27 32.6	
	comp=Z,20nm,1.0s						
DAV	Davao City (W)	24.00	52	LR	LR	07 37 14.6	
	comp=Z,171nm,20.9s,baz=238,slow=39						
MTN	Manton Dam	24.43	103	P	P	07 27 23.6	+0.1
MTN				IAmb	IAmb	07 27 54.6	
	comp=Z,13nm,0.7s						
FAKI	Fak Fak	25.86	80	P	P	07 27 35.5	-0.9
FAKI				IAmb	IAmb	07 28 01.7	
	comp=Z,18nm,0.8s						
NWAO	Narrogin (SRO)	26.64	160	LR	LR	07 38 29.9	
	comp=Z,292nm,19.7s,baz=265,slow=37						
QIZ	Qiongzhong	27.03	6	P	P	07 27 47.8	+0.9
QIZ				S	S	07 32 22.5	+0.9
QIZ				sS	sS	07 32 45.0	+4.6
QIZ				LR	LR		
	comp=N,190nm,19.3s						
QIZ				LR	LR		
	comp=E,270nm,16.5s						
QIZ				LR	LR		
	comp=Z,250nm,20.5s						
CMAR	Chiang Mai Arr	27.40	344	P	P	07 27 47.8	-2.4
	comp=Z,1.0nm,0.3s,baz=180,slow=8.9,SNR=14						
CMAR				PcP	PcP	07 31 10.9	+2.4
	comp=Z,1.5nm,0.3s,baz=198,slow=3.1,SNR=4.4						
CMAR				LR	LR	07 40 47.3	
	comp=Z,166nm,19.1s,baz=175,slow=42						
	comp=Z,1.0nm,0.3s						
H01W3	Cape Leeuwin H	27.60	167	T	T	07 58 08.9	
	baz=342,slow=74						
H01W1	Cape Leeuwin H	27.62	167	T	T	07 58 49.4	
	baz=342						
H01W2	Cape Leeuwin H	27.62	167	T	T	07 58 42.3	
	baz=342,slow=74						
CHTO	Chiang Mai	27.74	344	P	P	07 27 50.6	-2.7
CHTO	Chiang Mai	27.74	344	P	P	07 27 52.4	-0.9
WB0	Warramunga Arr	29.21	116		P	07 28 07.0	+0.6
WRA	Warramunga Arr	29.22	117	P	P	07 28 06.9	+0.4
	comp=Z,3.9nm,0.8s,baz=289,slow=9.7,SNR=9.9						
	comp=Z,3.9nm,0.8s						
WRA	Warramunga Arr	29.22	117	P	P	07 28 07.3	+0.7
WRAB	Tennant Creek	29.22	117	P	P	07 28 07.3	+0.7
	comp=Z,4.6nm,1.4s						
WR8	Warramunga Arr	29.36	117		P	07 28 08.7	+0.9
AS31	Alice Springs	30.31	124		P	07 28 17.2	+0.9
ASAR	Alice Springs	30.31	124	P	P	07 28 17.8	+1.5
	comp=Z,1.7nm,0.8s,baz=302,slow=8.7,SNR=17						
ASAR				LR	LR	07 42 25.3	
	comp=Z,196nm,19.4s,baz=288,slow=40						
	comp=Z,1.7nm,0.8s						
ASAR	Alice Springs	30.31	124	P	P	07 28 17.4	+1.2
BRDH	Bariadhala	33.89	334	LR	LR	07 45 23.2	
	comp=Z,132nm,19.5s,baz=198,slow=42						
H08S2	Diego Garcia H	33.95	268	T	T	08 04 17.9	
	baz=91,slow=76						
H08S3	Diego Garcia H	33.96	268	T	T	08 04 19.5	
	baz=91						

H08S1	**Diego Carcia H**	**33.97**	**268**	T	T	08 04 19.3	
	baz=91,slow=76						
YHNB	**Yeheng**	**35.46**	**23**	P	**P**	**07 29 00.3**	**-0.8**
YHNB				IAmb	IAmb	07 29 03.6	
	comp=Z,37nm,1.4s						
SHL	**Shillong**	**36.37**	**337**		**P**	**07 29 06.3**	**-2.7**
SHL				IAmb	IAmb	07 29 09.9	
	comp=Z,8.2nm,0.4s						
CTA	**Charters Tower**	**40.04**	**112**	LR	LR	07 46 10.6	
	comp=Z,124nm,21.6s,baz=243,slow=36						
STKA	**Stephens Creek**	**40.16**	**131**	P	**P**	**07 29 42.2**	**+1.5**
	comp=Z,3.7nm,0.4s,baz=317,slow=7.4,SNR=9.1						
STKA				LR	LR	07 47 17.5	
	comp=Z,165nm,20.9s,baz=273,slow=38						
	comp=Z,3.7nm,0.4s						
STKA	**Stephens Creek**	**40.16**	**131**	P	**P**	**07 29 42.1**	**+1.5**
NJ2	**Nanjing**	**41.46**	**16**	*e*P	**P**	**07 29 52.3**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CMSA	**Cobar Meteorol**	**43.13**	**128**	P	**P**	**07 30 07.9**	**+2.9**
	comp=Z,28nm,1.0s						
TOO	**Toolangi**	**45.74**	**136**	P	**P**	**07 30 25.9**	**0.0**
CAN	**Canberra**	**47.22**	**132**	P	**P**	**07 30 38.1**	**+0.6**
CAN				IAmb	IAmb	07 30 55.9	
	comp=Z,29nm,1.2s						
GTA	**Gaotai**	**47.60**	**353**	*e*P	**P**	**07 30 42.0**	**+1.6**
GTA				pP	pP	07 30 49.0	-3.3
GTA				PcP	**PcP**	**07 32 11.0**	**+1.4**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				LR	LR		
	comp=N,300nm,18.9s						
GTA				LR	LR		
	comp=E,140nm,22.2s						
GTA				LR	LR		
	comp=Z,220nm,18.9s						
HHC	**Hu-ho-hao-te**	**48.80**	**5**	*e*P	**P**	**07 30 51.5**	**+1.9**
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,78nm,5.3s						
KSAR	**Wonju Array Be**	**49.33**	**22**	P	**P**	**07 30 53.0**	**-0.5**
KSRS	**Korea Array**	**49.36**	**22**	P	**P**	**07 30 51.5**	**-2.3**
	comp=Z,3.5nm,0.8s,baz=216,slow=10,SNR=8.5						
KSRS				LR	LR	07 53 18.2	
	comp=Z,28nm,20.9s,baz=190,slow=38						
	comp=Z,3.5nm,0.8s						
JHJ	**Hachijo jima 2**	**51.55**	**36**	LR	LR	07 52 58.6	
	comp=Z,30nm,19.6s,baz=250,slow=36						
MJAR	**Matsushiro Arr**	**53.23**	**32**	P	**P**	**07 31 19.6**	**-3.3**
	comp=Z,2.0nm,0.6s,baz=214,slow=7.6,SNR=5.7						
MJAR				LR	LR	07 54 56.5	
	comp=Z,32nm,20.4s,baz=203,slow=37						
	comp=Z,2.0nm,0.6s						
JYT	**Yasato**	**54.05**	**33**	P	**P**	**07 31 27.4**	**-1.5**
WMQ	**Urumqi**	**54.40**	**343**	*e*P	**P**	**07 31 31.0**	**-0.3**
WMQ				sP	sP	07 31 53.8	+5.4
WMQ				PcP	**PcP**	**07 32 35.5**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
KSH	**Kashi**	**55.21**	**331**	P	**P**	**07 31 36.5**	**-0.9**
KSH				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KBL	**Kabul**	**55.34**	**322**	P	**P**	**07 31 36.9**	**-1.6**
SONM	**Songino Array**	**55.59**	**360**	P	**P**	**07 31 38.5**	**-1.4**
	comp=Z,2.3nm,0.6s,baz=174,slow=8.0,SNR=12						
SONM				PcP	**PcP**	**07 32 39.7**	**+0.5**
	comp=Z,2.2nm,0.7s,baz=185,slow=3.3,SNR=5.4						
SONM				LR	LR	07 58 28.6	
	comp=Z,157nm,18.8s,baz=192,slow=40						
	comp=Z,2.3nm,0.6s						
SONM	**Songino Array**	**55.59**	**360**	P	**P**	**07 31 38.8**	**-1.1**
ULN	**Ulaanbaatar**	**55.62**	**0**	P	**P**	**07 31 38.9**	**-1.3**
ULN				IAmb	IAmb	07 31 40.4	
	comp=Z,3.4nm,0.8s						
ULN	**Ulaanbaatar**	**55.62**	**0**	P	P	07 31 44.7	+4.5
	comp=Z,17nm,0.7s						
MANEM	**Manem**	**55.92**	**327**	P	**P**	**07 31 41.5**	**-1.2**
MANEM				IAmb	IAmb	07 31 44.0	
	comp=Z,43nm,0.7s						
TARG	**Taragay, Kyrgy**	**56.15**	**334**	P	**P**	**07 31 43.9**	**-0.6**
TARG				IAmb	IAmb	07 32 01.9	
	comp=Z,3.9nm,0.8s						
BNX	**BinXian**	**56.60**	**17**	⇓P	**P**	**07 31 46.0**	**-1.0**
BNX				pmax	pmax		
	comp=Z,16nm,0.9s						
USRK	**Ussuriysk Ar.**	**56.74**	**22**	P	**P**	**07 31 45.7**	**-2.3**
	comp=Z,2.9nm,0.6s,baz=220,slow=8.4,SNR=5.6						
	comp=Z,2.9nm,0.6s						
KDJ	**Kajisay**	**56.75**	**334**	P	**P**	**07 31 47.1**	**-1.3**
KDJ				IAmb	IAmb	07 31 49.7	
	comp=Z,13nm,0.6s						
BOOM	**Boomskoye usch**	**57.59**	**333**	P	**P**	**07 31 53.5**	**-0.8**
BOOM				IAmb	IAmb	07 32 17.2	
	comp=Z,6.3nm,1.0s						
GAR	**Garm**	**57.72**	**327**	P	**P**	**07 31 54.4**	**-0.9**
SHAA	**Shahritus**	**57.94**	**324**	P	**P**	**07 31 55.6**	**-1.2**
SHAA				IAmb	IAmb	07 31 56.0	
	comp=Z,26nm,0.8s						
ARSB	**Arslanbob**	**58.06**	**330**	P	**P**	**07 31 57.1**	**-0.5**
ARSB				IAmb	IAmb	07 31 58.5	
	comp=Z,11nm,0.8s						
CHGR	**Chuyangaron**	**58.11**	**326**	P	**P**	**07 31 56.9**	**-1.1**
AAK	**Ala-Archa**	**58.35**	**332**	P	**P**	**07 31 58.9**	**-0.8**
AAK				IAmb	IAmb	07 32 35.2	
	comp=Z,5.9nm,1.4s						
HILR	**Hailar Array B**	**58.43**	**10**	P	**P**	**07 31 57.5**	**-2.4**
	comp=Z,5.0nm,0.6s,baz=187,slow=9.9,SNR=9.9						
	comp=Z,5.0nm,0.6s						
MKAR	**Makanchi Array**	**58.74**	**341**	P	**P**	**07 32 00.5**	**-1.7**
	comp=Z,7.3nm,0.7s,baz=146,slow=7.4,SNR=45						
MKAR				LR	LR	08 00 48.5	
	comp=Z,71nm,19.5s,baz=156,slow=40						
	comp=Z,7.3nm,0.7s						
MKAR	**Makanchi Array**	**58.74**	**341**	P	**P**	**07 32 00.8**	**-1.3**
MAKZ	**Makanchi**	**58.86**	**340**	P	**P**	**07 32 01.6**	**-1.3**
MAKZ				IAmb	IAmb	07 32 04.2	
	comp=Z,4.7nm,1.1s						
DZM	**Mont Dzumac**	**58.97**	**111**	LR	LR	07 59 34.2	
	comp=Z,102nm,18.2s,baz=204,slow=38						
DZM	**Mont Dzumac**	**58.97**	**111**	*e*LR	LR	07 49 21.4	
	comp=Z,158nm,25.6s						
ERM	**Erimo**	**59.87**	**31**	P	**P**	**07 32 09.4**	**-0.5**
	comp=Z,54nm,1.5s						
H04N2	**CROZET ISLANDS**	**60.36**	**221**	T	T	08 38 27.6	
	baz=69,slow=75,SNR=124						
H04N1	**CROZET ISLANDS**	**60.37**	**221**	T	T	08 38 45.3	
	baz=69,slow=75,SNR=155						
H04N3	**CROZET ISLANDS**	**60.38**	**221**	T	T	08 38 36.7	
	baz=69,slow=75,SNR=125						
H04S1	**CROZET ISLANDS**	**60.53**	**220**	T	T	08 39 05.2	
	baz=75,slow=74						
H04S3	**CROZET ISLANDS**	**60.55**	**220**	T	T	08 38 42.9	
	baz=75,slow=74						
H04S2	**CROZET ISLANDS**	**60.55**	**220**	T	T	08 39 00.1	
	baz=75						
KK31	**Karatay Array**	**60.60**	**330**	P	**P**	**07 32 13.9**	**-1.1**
KKAR	**Karatay Array**	**60.60**	**330**	P	**P**	**07 32 13.9**	**-1.1**
HEH	**HeiHe**	**60.73**	**15**	*e*P	**P**	**07 32 14.0**	**-1.6**
HEH				pmax	pmax		
	comp=Z,12nm,0.7s						
ASAJ	**Asahikawa**	**61.15**	**29**	LR	LR	08 00 34.3	
	comp=Z,34nm,18.3s,baz=216,slow=38						
KURBB	**Kurchatov Arra**	**63.30**	**340**	P	**P**	**07 32 31.6**	**-1.3**
	comp=Z,5.6nm,0.5s,baz=150,slow=6.0,SNR=60						
KURBB				LR	LR	08 04 03.9	
	comp=Z,97nm,18.4s,baz=171,slow=40						
	comp=Z,5.6nm,0.5s						
KURK	**Kurchatov**	**63.35**	**340**	P	**P**	**07 32 32.2**	**-1.0**
KURK				IAmb	IAmb	07 32 34.3	
	comp=Z,8.3nm,0.7s						
YSS	**Yuzhno-Sakhali**	**63.37**	**27**	P	**P**	**07 32 32.1**	**-1.3**
ZALV	**Zalesovo Beam**	**64.44**	**346**	P	**P**	**07 32 38.4**	**-1.9**
	comp=Z,2.8nm,0.4s,baz=150,slow=6.7,SNR=10						
ZALV				LR	LR	08 01 37.9	
	comp=Z,75nm,19.1s,baz=148,slow=37						
	comp=Z,2.8nm,0.4s						
MAW	**Mawson**	**66.35**	**197**	LR	LR	07 55 45.1	
	comp=Z,47nm,21.4s,baz=36,slow=30						
RAYN	**Ar Rayn**	**67.53**	**299**	P	**P**	**07 33 01.1**	**+0.2**
RAYN				IAmb	IAmb	07 33 22.2	
	comp=Z,6.0nm,0.8s						
BVAR	**Borovoye Array**	**68.19**	**337**	P	**P**	**07 33 03.7**	**-0.7**
	comp=Z,9.5nm,0.5s,baz=143,slow=8.4,SNR=45						
	comp=Z,9.5nm,0.5s						
BORK	**Borovoye**	**68.23**	**337**	P	**P**	**07 33 02.9**	**-1.7**
BORK				IAmb	IAmb	07 33 05.6	
	comp=Z,12nm,0.8s						
URZ	**Urewera**	**69.67**	**128**	LR	LR	08 02 51.9	
	comp=Z,98nm,21.8s,baz=280,slow=35						
AB31	**Akbulak array**	**70.15**	**329**	P	**P**	**07 33 16.4**	**-0.2**
ABKAR	**Akbulak array**	**70.15**	**329**	P	**P**	**07 33 16.6**	**+0.1**
YAK	**Yakutsk**	**72.05**	**11**	LR	LR	08 09 10.0	
	comp=Z,43nm,19.0s,baz=297,slow=40						
PEA0B	**Petropavlovsk-**	**74.57**	**29**	P	**P**	**07 33 41.4**	**-1.5**
PETK	**Petropavlovsk-**	**74.57**	**29**	P	**P**	**07 33 39.6**	**-3.3**
	comp=Z,4.1nm,0.9s,baz=185,slow=1.3,SNR=9.8						
	comp=Z,4.1nm,0.9s						
PETK	**Petropavlovsk-**	**74.57**	**29**	P	**P**	**07 33 41.1**	**-1.8**
VNDA	**Vanda**	**75.04**	**169**	P	**P**	**07 33 47.6**	**+2.4**
	comp=Z,2.0nm,0.8s,baz=311,slow=5.9,SNR=8.0						
VNDA				LR	LR	08 02 38.1	
	comp=Z,31nm,19.1s,baz=320,slow=32						
	comp=Z,2.0nm,0.8s						
VNDA	**Vanda**	**75.04**	**169**	P	**P**	**07 33 47.4**	**+2.1**
ARTI	**Arti**	**75.47**	**335**	P	**P**	**07 33 48.3**	**+0.4**
LSZ	**Lusaka**	**76.97**	**256**	LR	LR	08 04 30.5	
	comp=Z,108nm,19.2s,baz=138,slow=33						
KBZ	**Khabaz**	**77.23**	**318**	P	**P**	**07 33 58.6**	**+0.4**
	comp=Z,5.8nm,0.9s,baz=124,slow=6.1,SNR=12						
	comp=Z,5.8nm,0.9s						
ASF	**Jabal al Asfar**	**77.54**	**305**	LR	LR	08 08 16.9	
	comp=Z,27nm,21.9s,baz=111,slow=36						
NRIK	**Noril'sk**	**78.30**	**353**	P	**P**	**07 34 01.7**	**-1.9**
	comp=Z,2.6nm,0.3s,baz=123,slow=5.2,SNR=11						
NRIK				LR	LR	08 11 26.2	
	comp=Z,124nm,19.0s,baz=158,slow=38						
	comp=Z,2.6nm,0.3s						
NRIK	**Noril'sk**	**78.30**	**353**	P	**P**	**07 34 03.5**	**-0.2**
NRIK				IAmb	IAmb	07 34 04.2	
	comp=Z,17nm,1.2s						
EIL	**Elat**	**78.41**	**302**	LR	LR	08 09 31.8	
	comp=Z,42nm,18.5s,baz=358,slow=36						
TIXI	**Tiksi**	**80.82**	**7**	LR	LR	08 15 05.0	
	comp=Z,28nm,19.7s,baz=202,slow=40						
TIXI	**Tiksi**	**80.82**	**7**	P	**P**	**07 34 16.3**	**-1.0**
TIXI				IAmb	IAmb	07 34 16.7	
	comp=Z,5.1nm,0.8s						
KIRS	**Kirsehir-Merke**	**81.94**	**311**	⇓P	**P**	**07 34 25.8**	**+1.7**
QSPA	**South Pole Qui**	**82.00**	**180**	P	**P**	**07 34 25.4**	**+1.5**
QSPA				IAmb	IAmb	07 34 46.1	
	comp=Z,4.5nm,0.9s						
BR104	**Keskin Array S**	**82.31**	**312**	P	**P**	**07 34 26.1**	**0.0**
	comp=Z,5.9nm,0.9s						
BR131	**Keskin Array S**	**82.32**	**312**	P	**P**	**07 34 25.2**	**-0.9**
BR131				IAmb	IAmb	07 34 46.2	
	comp=Z,10nm,1.1s						
BRTR	**Keskin Array B**	**82.32**	**312**	P	**P**	**07 34 26.9**	**+0.8**
	comp=Z,4.0nm,0.9s,baz=139,slow=6.9,SNR=17						
	comp=Z,4.0nm,0.9s						
BRTR	**Keskin Array B**	**82.32**	**312**	P	**P**	**07 34 25.7**	**-0.4**
BR105	**Keskin Array S**	**82.33**	**312**	P	**P**	**07 34 26.0**	**-0.2**
	comp=Z,6.7nm,1.0s						
BR106	**Keskin Array S**	**82.33**	**312**	P	**P**	**07 34 26.3**	**+0.1**
	comp=Z,5.4nm,1.0s						
SUR	**Sutherland**	**82.37**	**238**	LR	LR	08 04 59.3	
	comp=Z,122nm,20.0s,baz=153,slow=31						
AKASG	**Malin Array Be**	**88.33**	**322**	P	**P**	**07 34 55.7**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=86,slow=5.0,SNR=8.6						
	comp=Z,0.7nm,0.4s						
AKBB	**Malin Array Si**	**88.33**	**322**	P	**P**	**07 34 55.2**	**-0.4**
AK01	**Malin Array Si**	**88.33**	**322**	P	**P**	**07 34 55.1**	**-0.5**
SNAA	**Sanae**	**88.51**	**197**	P	**P**	**07 34 59.6**	**+3.4**
	comp=Z,1.7nm,0.7s,baz=133,slow=6.5,SNR=7.0						
	comp=Z,1.7nm,0.7s						
SNAA	**Sanae**	**88.51**	**197**	P	**P**	**07 34 56.9**	**+0.6**
SNAA				IAmb	IAmb	07 35 17.8	
	comp=Z,4.0nm,0.9s						
VRI	**Vrincioaia**	**88.81**	**316**	⇓P	**P**	**07 35 00.5**	**+2.5**
PLOR	**Plostina**	**88.86**	**316**	⇑P	**P**	**07 35 00.3**	**+2.0**
TESR	**Tescani**	**89.00**	**317**	⇓P	**P**	**07 35 01.0**	**+2.1**
LUBAR	**Lubar, Ukraine**	**89.05**	**321**	P	**P**	**07 34 58.9**	**-0.2**
ONER	**Baraj Valea Uz**	**89.13**	**317**	⇑P	**P**	**07 35 01.8**	**+2.2**
MLR	**Muntele Rosu**	**89.26**	**316**	P	**P**	**07 34 59.4**	**-1.0**
MLR				IAmb	IAmb	07 35 32.2	
	comp=Z,12nm,1.0s						
MLR	**Muntele Rosu**	**89.26**	**316**	⇑P	**P**	**07 35 02.8**	**+2.5**
BURAR	**Bucovina Array**	**90.19**	**318**	P	**P**	**07 35 05.8**	**+1.2**
BURAR				IAmb	IAmb	07 35 07.4	
	comp=Z,1.9nm,0.8s						
BURAR	**Bucovina Array**	**90.19**	**318**	⇓P	**P**	**07 35 07.0**	**+2.4**
BUR08	**Bucovina Ar. S**	**90.21**	**318**	P	**P**	**07 35 05.0**	**+0.4**
BUR08				IAmb	IAmb	07 35 44.0	
	comp=Z,5.1nm,1.2s						
RNPP5	**Staryi Chortor**	**90.50**	**322**	P	**P**	**07 35 05.1**	**-0.7**
ITM	**Ithomi**	**90.69**	**307**		**P**	**07 35 07.9**	**+0.8**
LIT	**Litokhoron**	**90.74**	**310**	P	**P**	**07 35 07.7**	**+0.4**
GZR	**Gura Zlata**	**91.43**	**315**	⇓P	**P**	**07 35 13.5**	**+3.1**
FINES	**FINESS Array B**	**92.53**	**332**	P	**P**	**07 35 15.3**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=92,slow=5.7,SNR=9.9						
	comp=Z,1.8nm,0.8s						
FINES	**FINESS Array B**	**92.53**	**332**	P	**P**	**07 35 15.6**	**+0.6**
ARCES	**ARCESS Array B**	**94.39**	**340**	P	**P**	**07 35 23.4**	**0.0**
	comp=Z,2.1nm,0.8s,baz=112,slow=3.1,SNR=8.4						
ARCES				LR	LR	08 24 09.6	
	comp=Z,78nm,18.5s,baz=82,slow=40						
	comp=Z,2.1nm,0.8s						
SPITS	**Spitsbergen Ar**	**97.85**	**348**	LR	LR	08 25 30.8	
	comp=Z,72nm,19.7s,baz=102,slow=39						
C18K	**Utukok River**	**98.14**	**22**	P	**P**	**07 35 40.0**	**-0.5**
C18K				IAmb	IAmb	07 35 41.2	
	comp=Z,2.4nm,0.8s						
J16K	**Anvik River**	**98.27**	**27**	P	**P**	**07 35 40.8**	**-0.4**
H17K	**Granite Mounta**	**98.60**	**25**	P	**P**	**07 35 42.2**	**-0.3**
H17K				IAmb	IAmb	07 35 44.0	
	comp=Z,1.9nm,0.7s						
C19K	**Lookout Ridge**	**98.72**	**21**	P	**P**	**07 35 41.8**	**-1.3**
C19K				IAmb	IAmb	07 36 21.0	
	comp=Z,6.2nm,1.5s						
D19K	**Kuna River**	**99.27**	**22**	P	**Pdif**	**07 35 45.4**	**-0.2**
TBI	**Tubuai**	**99.34**	**115**	*e*LR	LR	08 08 12.1	
	comp=Z,353nm,32.2s						
NOA	**NORSAR Array B**	**99.64**	**331**	LR	LR	08 25 06.5	
	comp=Z,36nm,21.9s,baz=315,slow=38						
E19K	**Redstone River**	**99.64**	**23**	P	**Pdif**	**07 35 46.6**	**-0.6**
E19K				IAmb	IAmb	07 35 48.1	
	comp=Z,2.4nm,0.8s						
PPT2	**Papeete2**	**100.46**	**110**	*e*LR	LR	08 08 45.6	
	comp=Z,70nm,24.8s						
PDAR	**Pinedale Array**	**132.93**	**37**	PKP	**PKiKP**	**07 41 22.1**	**+1.1**
	comp=Z,0.3nm,0.8s,baz=294,slow=1.5,SNR=2.8						
TXAR	**Lajitas Array**	**144.39**	**49**	PKP	**PKPdf**	**07 41 40.8**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=212,slow=0.7,SNR=24						
BDFB	**Brasilia**	**145.71**	**227**	PKPbc	**PKiKP**	**07 41 46.7**	**-0.9**
	comp=Z,3.4nm,0.5s,baz=142,slow=2.5,SNR=9.2						

DJA 26 07:38:53.6±0.3**, 4°S**±3°×**12°8E**±°**, h10^{km}, M3.4**/7**, MLv3.4**/7**,
Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.17**	**215**	P	Pg	07 38 57.5	+0.3
AAI				S	Sg	07 39 01.2	+1.5
KRAI	**Karang Ratu**	**0.25**	**24**	P	Pg	07 38 58.6	-0.2
KRAI				S	Sg	07 39 02.9	+0.7
MSAI	**Masohi**	**0.67**	**72**	P	Pb	07 39 07.5	+0.1
MSAI				S	Sb	07 39 16.2	-0.5
NLAI	**Namlea**	**1.23**	**285**	P	Pn	07 39 16.7	-0.1
SANI	**Sanana**	**2.74**	**303**	P	Pn	07 39 38.4	+0.7
SWI	**Sorong**	**3.99**	**48**	P	Pn	07 39 55.9	+1.0
SIJI	**Sorong**	**3.99**	**48**	P	Pn	07 39 55.3	+0.4

ASRS ***26*** *07:53:40.0±2.4, 53°.71N×91°.10E, h0^{km}, M3.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

NNC 26 07:53:55.5±3.1**, 53°.24N×90°.23E, h9^{km}**±18^{km}**, mb3.7,
mpv3.4, 9C-3D, Error ellipse: s-maj=18.7km
s-min=17.1km az=57.0, Suspected Mining explosion.,
Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**3.30**	**285**	⇑Pn	Pn	07 54 48.1	+0.8
	1.8nm,0.5s						
ZAA0				⇓Lg	Lg	07 55 40.3	
	18nm,1.0s						
KURK	**Kurchatov**	**7.60**	**255**	⇑Pn	Pn	07 55 45.2	-1.2
	1.6nm,0.8s						
KURK				⇓Sn	Sn	07 57 12.2	-0.4
	9.0nm,0.9s						
KURK				⇑Lg	Lg	07 57 59.3	
	16nm,0.9s						
KURBB	**Kurchatov Arra**	**7.69**	**255**	⇑Pn	Pn	07 55 46.5	-1.1
	6.6nm,0.8s						
KURBB				⇑Sn	Sn	07 57 16.0	+1.1
	59nm,1.0s						
KURBB				⇑Lg	Lg	07 58 00.6	
	61nm,1.0s						
MK31	**Makanchi Array**	**8.23**	**222**	⇑Pn	Pn	07 55 54.8	-0.2
	1.1nm,0.6s,baz=31,slow=12,SNR=29						
MK31				⇓Sn	Sn	07 57 29.9	+1.8
	2.9nm,0.8s,baz=47,slow=13,SNR=6.0						
MAKZ	**Makanchi**	**8.34**	**223**	⇑Pn	Pn	07 55 56.0	-0.6
	2.1nm,0.9s						
MAKZ				⇑Sn	Sn	07 57 33.8	+2.9
	5.0nm,0.9s						

IDC ***26*** *07:54:08.5±1.0, 15°.13N×60°.30W, h0^{km}, mb3.6/7, mbtmp3.8/11, ML3.2/4, MS3.1/2, Error ellipse: s-maj=27.5km s-min=18.0km az=63.0*

NEIC ***26*** *07:54:10.1±1.2, 15°.12N±0°.03×60°.40W±0°.04, h6^{km}±3^{km}, mb4.2/6, Error ellipse: s-maj=5.5km s-min=4.2km az=93.0*

TRN ***26*** *07:54:12.6, 15°.05N×60°.58W, h31^{km}, MD4.3, North-east of Martinique.*

ISC 26 07:54:09.9±1.3**, 15°.08N**±0°.03×**60°.39W**±0°.05**, h9^{km}**±8^{km}**,
n75, σ0^{s}.89**/94**, mb3.9**/8**, 1C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPOM	**Morne Pois Mar**	**0.78**	**216**		**Pg**	**07 54 25.7**	**+0.7**
MPOM				Sg	**Sg**	**07 54 34.8**	**-0.4**
SVN	**Savane Anatole**	**0.79**	**252**		**Pg**	**07 54 25.8**	**+0.7**
SVN				Sg	**Sg**	**07 54 35.0**	**-0.5**
SVN	**Savane Anatole**	**0.79**	**252**	*e*P	**Pb**	**07 54 26.4**	**+0.6**
SVN				*e*S	**Sb**	**07 54 36.8**	**+0.2**
CXM	**Morne La Croix**	**0.80**	**250**		**Pb**	**07 54 26.3**	**+0.2**
CXM				Sg	**Sg**	**07 54 35.9**	**+0.1**
DLPL	**La Plaine**	**0.86**	**287**	⇑*i*P	**Pn**	**07 54 28.0**	**-0.3**
DLPL				*e*S	**Sb**	**07 54 39.2**	**+0.4**
BIM	**Bigot**	**0.87**	**230**		**Pg**	**07 54 27.1**	**+0.5**
BIM				Sg	**Sg**	**07 54 37.3**	**-0.6**
BIM	**Bigot**	**0.87**	**230**	*e*P	**Pb**	**07 54 27.5**	**+0.3**
BIM				*e*S	**Sg**	**07 54 38.3**	**+0.3**
DWS	**Wesley**	**1.01**	**299**	*e*P	**Pb**	**07 54 30.0**	**+0.4**
DWS				*e*S	**Sb**	**07 54 42.5**	**-0.5**
DSLB	**Salisbury**	**1.06**	**290**	*e*P	**Pn**	**07 54 31.0**	**+0.1**
DSLB				*e*S	**Sb**	**07 54 44.1**	**-0.2**
SLBI	**Saint Lucia, B**	**1.20**	**208**	*e*P	**Pg**	**07 54 32.5**	**-0.4**
SLBI				*e*S	**Sg**	**07 54 47.1**	**-1.4**
SLCP	**Castries, St.**	**1.22**	**209**	*e*P	**Pg**	**07 54 32.9**	**-0.4**
SLCP				*e*S	**Sg**	**07 54 47.5**	**-1.7**
MAGL	**Barre de l'ile**	**1.22**	**315**		**Pg**	**07 54 32.5**	**-0.8**
SLAC	**Saint Lucia, A**	**1.28**	**203**	*e*P	**Pn**	**07 54 34.2**	**+0.3**
SLAC				*e*S	**Sg**	**07 54 49.6**	**-1.5**
DSDZ	**La Diserade, G**	**1.39**	**332**	*e*P	**Pg**	**07 54 36.3**	**-0.3**
DSDZ				*e*S	**Sb**	**07 54 52.9**	**-0.8**
DSDZ				x	x	07 54 56.6	
GDSD	**La Dsirade Is**	**1.39**	**332**		**Pn**	**07 54 35.6**	**+0.2**
TDBA	**Terre de Bas,**	**1.42**	**303**		**Pn**	**07 54 35.8**	**-0.2**
TBG	**Guadaloupe-3**	**1.43**	**302**	*e*P	**Pn**	**07 54 35.9**	**-0.2**
MCLT	**Moule a Chique**	**1.47**	**201**	*e*P	**Pn**	**07 54 36.4**	**-0.2**
MCLT				*e*S	**Sn**	**07 54 56.0**	**+0.1**
CBE	**Ff, Capester**	**1.53**	**310**		**Pn**	**07 54 37.6**	**+0.2**
MMLZ	**Guadeloupe Bro**	**1.56**	**308**	*e*P	**Pn**	**07 54 37.9**	**+0.1**
MMLZ				*e*S	**Sn**	**07 54 56.4**	**-1.7**
ATGZ	**Broadband at L**	**1.64**	**308**	*e*P	**Pn**	**07 54 39.4**	**+0.6**
ABD	**La Joyeuse, An**	**1.74**	**323**		**Pn**	**07 54 40.7**	**+0.4**
DHSZ	**Broadband at M**	**1.78**	**312**	*e*P	**Pn**	**07 54 41.7**	**+0.9**
DHSZ				*e*S	**Sn**	**07 55 02.5**	**-0.9**
GDHS	**Morne Mazeau,**	**1.78**	**312**		**Pn**	**07 54 41.2**	**+0.4**
SVB	**Belmont**	**1.99**	**205**	*e*P	**Pn**	**07 54 44.4**	**+0.7**
SVB				*e*S	**Sn**	**07 55 08.0**	**-0.7**
BBGH	**Gun Hill**	**2.09**	**157**	*e*P	**Pb**	**07 54 48.8**	**+0.7**
MBWH	**Windy Hill**	**2.39**	**314**	*e*P	**Pn**	**07 54 50.8**	**+1.5**
MBWH				*e*S	**Sn**	**07 55 18.2**	**-0.5**
GCMP	**Grenada, Carri**	**2.77**	**201**	*e*P	**Pn**	**07 54 54.9**	**+0.4**
GCMP				*e*S	**Sn**	**07 55 26.8**	**-1.3**
ANWB	**Willy Bob**	**2.90**	**333**	*e*P	**Pn**	**07 54 57.0**	**+0.8**
ANWB				*e*S	**Sn**	**07 55 30.3**	**-0.9**
GRHS	**Sauteurs**	**3.09**	**203**	*e*P	**Pn**	**07 55 00.2**	**+1.3**
GRHS				*e*S	**Sn**	**07 55 34.0**	**-1.9**
GRW	**Mount Saint Ca**	**3.16**	**203**	*e*P	**Pn**	**07 55 02.0**	**+2.1**
GRW				*e*S	**Sn**	**07 55 36.2**	**-1.6**
SKI	**Saint Kitts**	**3.18**	**315**	*e*P	**Pn**	**07 55 02.0**	**+1.9**
SKI				*e*S	**Sn**	**07 55 37.1**	**-1.0**
GRGR	**Grenville**	**3.18**	**203**		**Pn**	**07 55 00.9**	**+0.8**
GRGR	**Grenville**	**3.18**	**203**	*e*P	**Pn**	**07 55 01.3**	**+1.2**
GRFF	**Grenada Fort F**	**3.29**	**204**	*e*P	**Pn**	**07 55 03.0**	**+1.4**
GRFF				*e*S	**Sn**	**07 55 39.6**	**-1.3**
SEUS	**St. Eustatius**	**3.45**	**314**	Pn	**Pn**	**07 55 03.9**	**0.0**
TRN	**Trinidad (W)**	**4.52**	**193**	*e*P	**Pn**	**07 55 19.8**	**+1.2**
TRN				*e*S	**Sn**	**07 56 09.8**	**-1.3**
HUMP	**Col San Antoni**	**6.05**	**301**	Pn	**Pn**	**07 55 39.3**	**-0.4**
SJG	**San Juan**	**6.29**	**299**	Pn	**Pn**	**07 55 43.6**	**+0.7**
	2.0nm,0.3s,baz=135,slow=16,SNR=2.1						
	6.6nm,0.3s						
SJG	**San Juan**	**6.29**	**299**		**Pn**	**07 55 42.8**	**-0.1**
SJG	**San Juan**	**6.29**	**299**	*e*P	**Pn**	**07 55 43.8**	**+0.9**
ECPR	**Experimental S**	**6.56**	**300**	Pn	**Pn**	**07 55 45.9**	**-0.8**
CELP	**Cerrillos**	**6.64**	**297**	Pn	**Pn**	**07 55 48.5**	**+0.8**
OBIP	**Obispado Ponce**	**6.65**	**297**	Pn	**Pn**	**07 55 48.2**	**+0.4**
AOPR	**Arecibo Observ**	**6.91**	**299**	Pn	**Pn**	**07 55 52.4**	**+1.0**
AOPR	**Arecibo Observ**	**6.91**	**299**	*e*P	**Pn**	**07 55 52.6**	**+1.2**
CRPR	**Cabo Rojo, PR**	**7.07**	**295**	Pn	**Pn**	**07 55 53.6**	**0.0**
DR12	**Loma Pena Alta**	**9.36**	**294**	Pn	**Pn**	**07 56 26.9**	**+1.8**
SDDR	**Presa de Saban**	**11.12**	**292**	Pn	**Pn**	**07 56 50.6**	**+1.3**
SDV	**Santo Domingo**	**11.76**	**240**	Pn	**Pn**	**07 56 59.5**	**+1.3**
	0.9nm,0.3s,baz=74,slow=12,SNR=6.3						
SDV				LR	LR	08 02 03.7	
	comp=Z,46nm,18.1s,baz=27,slow=40						
	1.0nm,0.3s						
SDV	**Santo Domingo**	**11.76**	**240**	Pn	**Pn**	**07 56 57.0**	**-1.1**
MDP	**Montagnes des**	**12.51**	**142**	Pn	**Pn**	**07 57 08.0**	**-0.2**
	0.3nm,0.3s,baz=327,slow=14,SNR=8.2						
MDP				Sn	Sn	07 59 15.1	-13
	1.2nm,0.3s,baz=241,slow=23,SNR=9.8						
	6.4nm,0.9s						
BOAV	**Boa Vista**	**12.61**	**181**	Pn	**Pn**	**07 57 08.3**	**-1.3**
ROSC	**El Rosal**	**17.07**	**235**	P	**Pn**	**07 58 11.0**	**+1.7**
	0.4nm,0.3s,baz=94,slow=19,SNR=1.2						
	4.3nm,0.4s						
OTAV	**Otavalo**	**23.16**	**232**	P	**P**	**07 59 16.6**	**-0.7**
OTAV				IAmb	IAmb	07 59 36.9	
	comp=Z,5.2nm,1.1s						
MTO3	**Montecristo**	**28.02**	**272**	P	**P**	**08 00 02.5**	**+0.7**
LPAZ	**La Paz**	**32.09**	**194**	P	**P**	**08 00 38.5**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=345,slow=7.3,SNR=4.3						
	comp=Z,0.9nm,0.7s						
LPAZ	**La Paz**	**32.09**	**194**	P	**P**	**08 00 37.9**	**-0.3**
LPAZ				IAmb	IAmb	08 01 11.4	
	comp=Z,3.2nm,1.2s						
CPUP	**Villa Florida**	**41.27**	**176**	P	**P**	**08 01 55.9**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=3.1,slow=9.1,SNR=6.6						
	comp=Z,1.2nm,0.6s						
CPUP	**Villa Florida**	**41.27**	**176**	P	**P**	**08 01 55.9**	**+0.3**
TXAR	**Lajitas Array**	**42.26**	**297**	P	**P**	**08 02 04.5**	**+0.5**
	comp=Z,0.1nm,0.4s,baz=127,slow=6.8,SNR=6.2						
	comp=Z,0.1nm,0.4s						
TXAR	**Lajitas Array**	**42.26**	**297**	P	**P**	**08 02 03.9**	**-0.1**
AC02	**Maricunga**	**42.52**	**192**	P	**P**	**08 02 06.8**	**+0.4**
AC02				IAmb	IAmb	08 02 07.9	
	comp=Z,9.0nm,1.1s						
PDAR	**Pinedale Array**	**50.20**	**314**	P	**P**	**08 03 06.5**	**0.0**
	comp=Z,0.3nm,0.5s,baz=119,slow=9.7,SNR=8.0						
	comp=Z,0.3nm,0.5s						
PDAR	**Pinedale Array**	**50.20**	**314**	P	**P**	**08 03 05.8**	**-0.7**
H10N3	**ASCENSION HYDR**	**50.87**	**113**	T	T	08 58 16.4	
	baz=296,slow=75,SNR=70						
H10N2	**ASCENSION HYDR**	**50.87**	**113**	T	T	08 58 15.5	
	baz=296,slow=75,SNR=75						
H10N1	**ASCENSION HYDR**	**50.89**	**113**	T	T	08 58 18.0	
	baz=296,slow=75,SNR=76						
H10S3	**ASCENSION HYDR**	**51.23**	**115**	T	T	08 58 46.9	
	baz=292,slow=75,SNR=123						
H10S2	**ASCENSION HYDR**	**51.24**	**115**	T	T	08 58 48.2	
	baz=288,slow=75,SNR=93						
PLCA	**Paso Flores**	**56.33**	**189**	P	**P**	**08 03 51.6**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=0.6,slow=8.0,SNR=10						
	comp=Z,1.5nm,0.6s						
PLCA	**Paso Flores**	**56.33**	**189**	P	**P**	**08 03 51.6**	**+0.4**
PLCA				IAmb	IAmb	08 03 52.5	
	comp=Z,2.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**60.07**	**83**	P	**P**	**08 04 17.5**	**-0.4**

	comp=Z,0.4nm,0.5s,baz=292,slow=6.7,SNR=2.4						
	comp=Z,0.4nm,0.5s						
YKA	Yellowknife Ar	60.57	334	P	P	08 04 20.6	+0.1
	comp=Z,0.1nm,0.6s,baz=108,slow=6.9,SNR=7.2						
	comp=Z,0.1nm,0.6s						
BRTR	Keskin Array B	83.55	51	LR	LR	08 42 46.0	
	comp=Z,17nm,18.1s,baz=242,slow=35						

NOU 26 07:57:51.1,15°.73S×167°.44E,h20^{km},MLv4.5/14, Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.36	321	P	Pb	07 57 59.8	+1.0
SANVU	Saraoutou	0.36	321	S	Sn	07 58 07.0	-0.8
DVP	Devils Point	2.11	160	P	Pn	07 58 25.7	+0.4
DVP	Devils Point	2.11	160	S	Sn	07 58 52.2	+1.3
KOUNC	Koumac, New Ca	5.66	212	P	Pn	07 59 14.3	+0.3
	38nm,1.4s						
YATNC	Mamie plateau,	6.32	185	P	Pn	07 59 24.2	+1.0
	24nm,1.2s						
DZM	Mont Dzumac	6.38	188	P	Pn	07 59 23.2	-0.9
	20nm,2.5s						
OUENC	Ouen Island, N	6.68	185	P	Pn	07 59 29.5	+1.4
	28nm,1.3s						

DJA 26 08:08:28.6±5.2,8°N±59°×12°5E±1°5,h15^{km}±24^{km},M4.5/6, mB5.0/2,mb4.7/3,MLv4.4/6,Mw(mB)4.3/2,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.02	124	P	Pb	08 08 47.9	-0.1
DAV	Davao City (W)	1.02	124	P	Pn	08 08 50.0	+1.6
GTOI	Gorontalo	7.18	194	P	Pn	08 10 12.0	-1.1
KSI	Kapahiang	24.78	244	P	P	08 13 45.8	-4.4

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*NEIC **26** 08:18:12.6±1.4, 16°.29S±0°.08×72°.90W±0°.09, h110^{km}±8^{km}, mb4.3/9, Error ellipse: s-maj=13.8km s-min=10.2km az=54.0*

*IDC **26** 08:18:17.7±1.8, 14°.16S×71°.74W, h87^{km}±43^{km}, mb3.2/3, mbtmp3.8/6, MS2.7/1, Error ellipse: s-maj=171.6km s-min=14.1km az=23.0*

*VAO **26** 08:18:24.0±4.1, 15°.63S×71°.82W, h154^{km}±13^{km}, mb3.9, Presumed earthquake*

ISC 26 08:18:11.0±0.6,16°.20S±0°.08×72°.82W±0°.08,h100^{km},n50, σ1^{s}58/49,mb4.0/6,Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	3.20	133	Pn	Pn	08 19 01.2	+1.7
PB12	IPOC Station P	3.38	136		Pn	08 19 03.1	+1.2
PB18	Visviri	3.48	114		Pn	08 19 07.5	+3.7
PB16	IPOC Station P	3.81	124	Pn	Pn	08 19 10.4	+2.2
LPAZ	La Paz	4.50	92	P	Pn	08 19 18.7	+1.0
	9.9nm,0.4s,baz=271,slow=7.3,SNR=85						
LPAZ				S	Sn	08 19 59.3	-10
	10.0nm,0.7s,baz=256,slow=11,SNR=6.0						
LPAZ	La Paz	4.50	92		Pn	08 19 18.8	+1.1
LPAZ	La Paz	4.50	92	*e*P	Pn	08 19 19.4	+1.8
PB11	IPOC Station P	4.65	140		Pn	08 19 20.4	+1.2
GO01	Chusmiza	4.88	136	Pn	Pn	08 19 24.4	+1.8
TA01	Diego Aracena	5.01	150		Pn	08 19 25.9	+2.0
PATCX	Punta Patache	5.25	152		Pn	08 19 28.9	+1.8
NNA	Nana	5.72	317	P	Pn	08 19 36.5	+2.8
	64nm,0.6s,baz=146,slow=10.0,SNR=41						
NNA				S	Sn	08 20 37.5	-0.7
	25nm,0.3s,baz=259,slow=16,SNR=12						
NNA	Nana	5.72	317		Pn	08 19 35.1	+1.4
PB01	IPOC Station P	5.76	147		Pn	08 19 35.6	+1.4
PB02	IPOC Station P	5.80	152		Pn	08 19 36.3	+1.6
PB07	IPOC Station P	6.16	154		Pn	08 19 41.0	+1.4
PB03	IPOC Station P	6.50	154		Pn	08 19 45.4	+1.1
PB09	IPOC Station P	6.51	149		Pn	08 19 46.5	+2.0
PB05	IPOC Station P	7.06	160		Pn	08 19 52.3	+0.4
PB06	IPOC Station P	7.16	155		Pn	08 19 54.4	+1.1
PB10	IPOC Station P	7.58	164	Pn	Pn	08 19 58.8	-0.1
PB14	IPOC Station P	8.68	165	Pn	Pn	08 20 13.4	-0.7
GO02	Mina Guanaco	9.41	162	Pn	Pn	08 20 24.0	-0.1
SIV	San Ignacio	11.29	91	P	Pn	08 20 44.5	-4.9
	2.1nm,0.5s,baz=277,slow=9.1,SNR=20						
AC06	Mina Casimiro	11.34	169	Pn	Pn	08 20 49.5	-0.4
PTLB	Pontes e Lacer	13.19	89	Pn	Pn	08 21 14.8	+0.3
CO05	La Serena	13.73	174	Pn	Pn	08 21 21.1	-0.4
AQDB	Aquidauana	16.80	107	Pn	Pn	08 21 59.6	-0.6
PEL	Peldehue	16.98	174		Pn	08 22 01.5	-1.0
PEL				IAmb	IAmb	08 22 21.1	
	comp=Z,33nm,1.4s						
PP1B	Ponte de Pedra	17.23	97	*e*P	P	08 22 04.4	-1.1
NPGB	Novo Progresso	19.36	64	*e*P	P	08 22 25.8	-3.2
ARAG	Araguaiana, MT	20.21	92	*e*P	P	08 22 37.4	-0.7
ITTB	Itaituba	20.49	57	*e*P	P	08 22 37.8	-3.4
PTGB	Pitanga	21.19	117	*e*P	P	08 22 50.7	+2.0
SNDB	Serra Nova Dou	21.29	81	*e*P	P	08 22 47.4	-2.5
BB19B	Bebedouro	23.51	106	*e*P	P	08 23 15.0	+2.7
IPMB	Ipameri, GO	23.59	98	*e*P	P	08 23 11.8	-1.2
BDFB	Brasilia	23.86	92	P	P	08 23 16.4	+0.9
BDFB				IAmb	IAmb	08 23 51.5	
	comp=Z,12nm,1.5s						
LL05	Los Muermos	25.12	181	P	P	08 23 25.8	-0.9
JANB	Januaria	27.47	92	*e*P	P	08 23 47.6	-0.5
JTS	Las Juntas de	28.93	335	LR	LR	08 33 53.0	
	comp=Z,14nm,18.8s,baz=24,slow=34						
HNDO	Hondo	52.15	331	P	P	08 27 12.0	+0.6
HNDO				IAmb	IAmb	08 27 12.8	
	comp=Z,4.8nm,0.8s						
TX31	Lajitas Ar. Si	54.19	326	P	P	08 27 26.2	-0.3
TXAR	Lajitas Array	54.19	326	P	P	08 27 27.0	+0.5
	comp=Z,0.2nm,0.5s,baz=158,slow=9.1,SNR=7.6						
	comp=Z,0.2nm,0.5s						
TXAR	Lajitas Array	54.19	326	P	P	08 27 26.4	-0.1
SNAA	Sanae	68.46	161	P	P	08 29 03.4	+1.3
SNAA				IAmb	IAmb	08 29 20.5	
	comp=Z,9.9nm,1.5s						
TORD	Torodi Ar. Bea	79.21	73	P	P	08 30 04.9	-0.9
	comp=Z,1.5nm,0.8s,baz=256,slow=4.1,SNR=7.9						
	comp=Z,1.5nm,0.8s						
VNDA	Vanda	81.39	190	P	P	08 30 16.6	+0.3
VNDA				IAmb	IAmb	08 30 35.1	
	comp=Z,3.5nm,1.4s						
YKA	Yellowknife Ar	85.01	342	P	P	08 30 35.0	0.0
	comp=Z,0.2nm,0.7s,baz=138,slow=3.6,SNR=5.5						
	comp=Z,0.2nm,0.7s						
CASY	Casey	97.73	181	P	P	08 31 32.8	-1.7

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*HEL **26** 09:08:27.1±0.4, 61°.96N×31°.26E, h0^{km}, ML1.9, Explosion*

*IDC **26** 09:08:28.2±3.1, 61°.85N×31°.12E, h0^{km}, mbtmp3.0/3, ML1.9/3, Error ellipse: s-maj=33.4km s-min=14.1km az=123.0*

ISC 26 09:08:24.6±1.4,61°.85N±0°.04×31°.21E±0°.07,h0^{km},n22, σ1^{s}63/34,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOF	Joensuu	1.07	2	PG	Pg	09 08 44.7	-0.4
	baz=177						
JOF				SB	Sg	09 08 57.6	-1.3
RUF	Ruokolahti	1.16	249	PG	Pn	09 08 49.2	+1.1
RUF				MSG		09 09 04.2	
	comp=Z,21nm,0.2s						
RUF				SG	Sn	09 09 05.3	+0.6
NIF	Nilsia	2.20	316	PG	Pb	09 09 05.5	+0.2
NIF				MSG		09 09 30.6	
	comp=Z,10.0nm,0.2s						
NIF				SG	Sg	09 09 35.4	+0.1
VJF	Virojoki	2.21	235	PB	Pg	09 09 06.8	-0.1
VJF				MSG		09 09 34.7	
	comp=Z,5.6nm,0.2s						
VJF				SG	Sg	09 09 36.0	+0.5
RMF	Romuvaara	2.44	347	PB	Pn	09 09 07.6	+1.9
	baz=163						
RMF				MSG		09 09 36.3	
	comp=Z,2.3nm,0.2s						
RMF				SG	Sb	09 09 40.0	0.0
FIA0	FINESS Array S	2.49	263	PB	Pb	09 09 10.1	0.0
	baz=75						
FIA0				MSG		09 09 41.5	
	comp=Z,3.7nm,0.2s						
FIA0				SB	Sb	09 09 42.2	+1.1
FINES	FINESS Array B	2.49	263	Pn	Pb	09 09 10.2	+0.1
	comp=Z,0.4nm,0.3s,baz=79,slow=14,SNR=19						
FINES				Sn	Sb	09 09 42.3	+1.1
	comp=Z,2.8nm,0.3s,baz=76,slow=25,SNR=10.0						
	comp=Z,1.0nm,0.3s						
SUF	Sumiainen	2.52	292	PG	Pg	09 09 12.1	-0.8
SUF				MSG		09 09 41.0	
	comp=Z,2.6nm,0.2s						
SUF				SG	Sg	09 09 45.7	+0.2
PVF	Pernaja	2.91	245	SN	Sb	09 09 51.5	-1.7
PVF				MSG		09 09 54.4	
	comp=Z,2.9nm,0.2s						
KEF	Keuruu	3.01	279	PB	Pb	09 09 19.0	0.0
	baz=95						
KEF				MSG		09 09 55.7	
	comp=Z,2.4nm,0.2s						
KEF				SB	Sb	09 09 55.9	-0.3
NUR	Nurmijarvi	3.45	250	SN	Sb	09 10 05.8	-3.2
MEF	Metsahovi	3.70	247	SN	Sn	09 10 10.0	+2.8
KU1	Kurvinen	3.80	350	PN	Pn	09 09 24.4	+0.1
KU1				SN	Sn	09 10 09.8	+0.2
OUL	Oulu	4.03	326	PG	Pb	09 09 39.1	+2.8
	baz=141						
VSU	Vasula	4.07	215	SG	Sg	09 10 34.4	-0.9
KU2	Taivalkoski	4.09	342	PN	Pn	09 09 30.4	+2.1
MSF	Maaselka	4.18	348	SN	Sn	09 10 20.0	+0.8
KU6	Riekki	4.23	353	PN	Pn	09 09 29.8	-0.4
KU6				SN	Sn	09 10 17.5	-2.7
RANF	Ranua	4.61	337	PN	Pn	09 09 38.5	+3.0
I43RU	DUBNA INFRASON	6.00	146	I	I	09 42 50.0	
	baz=338,slow=304,SNR=3.6						
ARCES	ARCESS Array B	8.06	346	Pn	Pn	09 10 23.5	+0.8
	comp=Z,0.1nm,0.3s,baz=154,slow=13,SNR=1.4						
ARCES				Sn	Sn	09 11 50.2	-4.3
	comp=Z,0.1nm,0.3s,baz=161,slow=25,SNR=2.1						
	comp=Z,2.5nm,1.1s						
HFS	Hagfors	8.68	266	Pn	Pn	09 10 31.3	-0.1
	baz=85,slow=16,SNR=1.3						
HFS				Sn	Sn	09 12 08.3	-1.5
	comp=Z,0.1nm,0.3s,baz=64,slow=24,SNR=1.5						
HFS				Lg	Lg	09 12 58.6	
	comp=Z,0.4nm,0.3s,baz=73,slow=28,SNR=6.0						
	comp=Z,0.7nm,0.7s						

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*NNC **26** 09:16:05.9±0.6, 51°.47N×75°.22E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=33.9km s-min=3.2km az=25.0, Suspected Mining explosion.*

*IDC **26** 09:16:09.5±1.0, 51°.72N×75°.52E, h0^{km}, mbtmp2.7/3, ML1.8/3, Error ellipse: s-maj=27.3km s-min=7.3km az=30.0*

ISC 26 09:16:08.7±1.1,51°.7N±0°.1×75°.45E±0°.06,h0^{km},n11, σ1^{s}35/10,5C-5D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	2.21	118	Pg	Pb	09 16 49.1	-0.4
	0.1nm,0.3s,baz=302,slow=19,SNR=9.3						
KURBB				Lg	Lg	09 17 18.1	
	0.2nm,0.3s,baz=305,slow=31,SNR=9.1						
KURBB	Kurchatov Arra	2.21	118	⇓Pg	Pn	09 16 47.0	+0.4
	1.6nm,0.2s						
KURBB				⇑Lg	Lg	09 17 17.7	
	28nm,0.8s						
KURK	Kurchatov	2.22	115	⇓Pg	Pn	09 16 47.3	+0.5
	0.8nm,0.7s						
KURK				⇑Lg	Lg	09 17 18.1	
	9.0nm,0.9s						
BVA0	Borovoye Array	3.38	295	⇑Pg	Pb	09 17 08.1	-1.4
	2.0nm,0.8s,baz=114,slow=16,SNR=6.9						
BVA0				⇑Lg	Lg	09 17 51.0	
	11nm,0.9s,baz=114,slow=27,SNR=8.5						
BVAR	Borovoye Array	3.38	295	Pn	Pn	09 17 04.7	+1.9
	baz=94,slow=13,SNR=3.3						
BVAR				Pg	Pb	09 17 09.2	-0.4
	0.1nm,0.3s,baz=114,slow=16,SNR=8.4						
BVAR				Lg	Lg	09 17 55.3	
	0.1nm,0.3s,baz=104,slow=25,SNR=11						
	1.8nm,0.5s						
BRVK	Borovoye	3.45	295	⇓Pg	Pb	09 17 08.4	-2.3
	2.1nm,0.8s						
BRVK				⇑Lg	Lg	09 17 52.9	
	12nm,1.2s						
I46RU	ZALESOVO INFRA	6.11	65	I	I	09 54 10.0	
	baz=247,slow=301,SNR=1.8						
ZALV	Zalesovo Beam	6.11	65	Pn	Pn	09 17 41.1	+0.8
	0.1nm,0.3s,baz=256,slow=15,SNR=2.6						
	0.6nm,0.5s						
MAKZ	Makanchi	6.49	136	⇓Lg	Lg	09 19 30.1	
	5.9nm,0.9s						
MK31	Makanchi Array	6.63	135	⇓Lg	Lg	09 19 33.0	
	3.8nm,0.8s,baz=322,slow=27,SNR=6.5						
MKAR	Makanchi Array	6.63	135	Pn	Pn	09 17 47.4	0.0
	0.1nm,0.3s,baz=317,slow=10,SNR=3.0						
MKAR				Sn	Sn	09 19 03.3	-0.4
	0.1nm,0.3s,baz=332,slow=25,SNR=5.1						
MKAR				Lg	Lg	09 19 36.5	
	0.1nm,0.3s,baz=316,slow=28,SNR=9.2						
	0.3nm,0.5s						

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*GFZ **26** 09:24:23.1, 5°.26S×151°.27E, h110^{km}, MW5.3, Moment Tensor Solution. s49 Moment tensor: M$_{rr}$0.14; M$_{\theta\theta}$0.47; M$_{\phi\phi}$-0.61; M$_{r\theta}$-0.57; M$_{\theta\phi}$0.83; M$_{\phi r}$0.16; Fault plane solution: NP1:ϕ_s288.00000°,δ85.00000°, λ31.00000°. NP2:ϕ_s196.00000°,δ59.00000°,λ175.00000°. Principal axes: T 1.1200, Plg25.0000°, Azm157.0000°; N 0.0800, Plg58.0000°, Azm296.0000°; P -1.2000, Plg18.0000°, Azm58.0000°;*

*MOS **26** 09:24:32.2±0.9, 5°.40S×150°.87E, h107^{km}, mb5.2/27 Error ellipse: s-maj=10.0km s-min=5.7km az=100.8*

*BJI **26** 09:24:32.7, 5°.35S×151°.42E, h127^{km}, mB5.2/18, mb5.2/66*

*IDC **26** 09:24:32.0±0.6, 5°.55S×150°.93E, h97^{km}±4^{km}, mb4.8/26, mbtmp5.2/30, MS3.9/43, Error ellipse: s-maj=12.7km s-min=7.0km az=107.0*

*NEIC **26** 09:24:33.9±1.5, 5°.48S±0°.06×150°.92E±0°.07, h107^{km}±5^{km}, mb5.2/242, Mww5.3/17, Error ellipse: s-maj=10.1km s-min=8.4km az=128.0*

*NEIC **26** 09:24:33.8, 5°.48S×150°.92E, h110^{km}*

*NEIC **26** 09:24:33.8, 5°.38S×150°.92E, h110^{km}, Moment Tensor Solution. Duration: 2^{s}2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.03; M$_{\theta\theta}$0.61; M$_{\phi\phi}$-0.64; M$_{r\theta}$-0.59; M$_{\theta\phi}$0.59; M$_{\phi r}$0.02; Fault plane solution: M$_0$1.04000×10^{17} NP1: ϕ_s199.93000°,δ58.62000°,λ171.97000°. NP2: ϕ_s294.13000°,δ83.15000°,λ31.64000°. Principal axes: T 1.1215, Plg27.0000°, Azm162.0000°; N -0.1757, Plg58.0000°, Azm305.0000°; P -0.9458, Plg16.0000°, Azm63.0000°;*

*GCMT **26** 09:24:35.0±0.1, 5°.52S±0°.01×150°.91E±0°.01, h101^{km}±1^{km}, MW5.3/140, Moment Tensor Solution. s103,c152; s140,c251; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.12±.02; M$_{\theta\theta}$0.39±.02; M$_{\phi\phi}$-0.26±.02; M$_{r\theta}$-0.78±.01; M$_{\theta\phi}$0.56±.02; M$_{\phi r}$0.21±.01; Best double couple: M$_0$1.03700×10^{17} NP1:ϕ_s198.00000°,δ39.00000°, λ-173.00000°. NP2:ϕ_s102.00000°,δ86.00000°, λ-52.00000°. Principal axes: T 1.0400, Plg30.0000°, Azm162.0000°; N -0.0050, Plg38.0000°, Azm279.0000°; P -1.0340, Plg37.0000°, Azm46.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **26** 09:24:36.9±0.6, 6°S±3°×15°1E±°, h124^{km}±5^{km}, M5.3/39, mB5.5/21, mb5.3/39, MLv6.4/1, Mw5.3/22, Mw(mB)5.0/21, MwMwp4.7/1, Mwp5.0/1*

ISC 26 09:24:33.4±0.3,5°.48S±0°.03×150°.93E±0°.04,h109^{km}±2^{km}, h109^{km}:pP-P,n845,σ1^{s}23/777,mb5.2/250,15C-11D,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.77	44	Pn	Pn	09 25 03.0	-0.4
MANU	Manus Island	4.93	314		Pn	09 25 47.1	+1.8
PMG	Port Moresby	5.41	224	P	Pn	09 25 50.7	-1.0
	4μm,0.7s,baz=40,slow=7.1,SNR=747						
PMG				S	Sn	09 26 50.1	-2.6
	5μm,0.8s,baz=170,slow=20,SNR=14						
PMG				LR	LR	09 27 15.6	
	comp=Z,346nm,19.6s,baz=46,slow=30						
PMG	Port Moresby	5.41	224		Pn	09 25 51.7	0.0
PMG	Port Moresby	5.41	224	P	Pn	09 25 52.7	+1.0
	6μm,0.8s						
PMG	Port Moresby	5.41	224	S	Sn	09 26 52.1	-0.7
	6μm,0.8s						
PMG	Port Moresby	5.41	224	P	Pn	09 25 52.5	+0.8
	6μm,0.8s						
PMG	Port Moresby	5.41	224	S	Sn	09 26 52.2	-0.6
	6μm,0.8s						
PMG	Port Moresby	5.41	224	P	Pn	09 25 51.3	-0.4
TATA	Tatamba Isabel	9.27	109	P	Pn	09 26 45.5	+1.4
	215nm,0.9s						
TATA	Tatamba Isabel	9.27	109	S	Sn	09 28 27.1	+0.5
	215nm,0.9s						
SAVO	Savo Central	9.53	113	P	Pn	09 26 50.1	+2.4
	95nm,1.3s						
SAVO	Savo Central	9.53	113	S	Sn	09 28 33.4	+0.3
	95nm,1.3s						
JAY	Jayapura	10.62	286	P	Pn	09 27 02.3	-0.2
	62nm,1.1s,baz=17,slow=21,SNR=8.0						
JAY				LR	LR	09 30 15.6	
	comp=Z,863nm,21.1s,baz=166,slow=32						
JAY	Jayapura	10.62	286	P	Pn	09 27 03.8	+1.3
NGOA	Tingoa Renbel	10.86	124	P	Pn	09 27 05.5	-0.2
	323nm,1.1s						
GENI	Genyem	11.11	285	P	Pn	09 27 10.4	+1.2
	240nm,1.6s						
GENI	Genyem	11.11	285	P	Pn	09 27 10.0	+0.8
	4μm236nm,1.5s						
COEN	Coen	11.38	222	Pn	Pn	09 27 12.1	-0.5
HURO	Huro Makira	11.94	115	P	Pn	09 27 22.2	+2.1
	208nm,1.1s						
SMPI	Sarmi	12.68	285	P	Pn	09 27 32.0	+2.1
	2μm137nm,1.7s						
MTSU	Mount Surprise	14.14	207	P	Pn	09 27 50.4	+1.5
	comp=Z,185nm,0.8s						
MTSU	Mount Surprise	14.14	207	P	Pn	09 27 49.8	+0.9
	comp=Z,185nm,0.8s						
PATS	Pohnpei	14.28	31	P	Pn	09 27 50.9	+0.3
	comp=Z,281nm,1.0s						
PATS	Pohnpei	14.28	31		Pn	09 27 49.8	-0.8
PATS	Pohnpei	14.28	31	P	P	09 27 52.7	-1.9
	comp=Z,302nm,1.0s						
TV1H	Townsville Har	14.28	196	P	Pn	09 27 52.6	+1.9
	comp=Z,406nm,0.9s						
CTA	Charters Tower	15.22	197	P	Pn	09 28 02.8	+0.2
	comp=Z,131nm,0.9s,baz=16,slow=12,SNR=66						
CTA				S	Sn	09 30 51.6	+0.7
	comp=Z,7.2nm,0.7s,baz=326,slow=12,SNR=1.4						
CTA				LR	LR	09 33 59.5	
	comp=Z,365nm,18.3s,baz=16,slow=37						
CTAO	Charters Tower	15.22	197		P	09 28 04.3	-0.7
CTAO	Charters Tower	15.22	197	P	P	09 28 04.1	-0.9
	comp=Z,146nm,1.2s						
CTAO	Charters Tower	15.22	197	P	P	09 28 04.3	-0.7
AUNRC	North Rockhamp	17.77	181	P	Pn	09 28 34.2	+0.3
	comp=Z,583nm,1.1s						
GD1S	Gladstone Soft	18.26	179	P	Pn	09 28 40.4	+0.7
	comp=Z,291nm,1.2s						
QIS	Mount Isa	18.60	215	P	Pn	09 28 43.2	-0.6
	comp=Z,119nm,0.8s						
QIS	Mount Isa	18.60	215	P	P	09 28 43.0	+0.7
	comp=Z,119nm,0.8s						
SANVU	Saraoutou	18.80	123	P	Pn	09 28 46.2	-0.1
SANVU	Saraoutou	18.80	123	P	Pn	09 28 46.9	+0.7
	comp=Z,578nm,1.0s						
FAKI	Fak Fak	18.81	277	P	P	09 28 44.4	-0.3
KDU	Kakadu	19.58	247	P	P	09 28 52.3	-0.7
	comp=Z,105nm,1.1s						
SAUI	Saumlaki	19.66	262	P	P	09 28 53.5	-0.4
SAUI	Saumlaki	19.66	262	P	P	09 28 54.2	+0.3
	comp=Z,278nm,1.3s						
SAUI	Saumlaki	19.66	262	P	Pn	09 29 12.2	+16
EIDS	Eidsvold	19.78	180	P	P	09 28 56.2	+1.1
	comp=Z,551nm,0.9s						
EIDS	Eidsvold	19.78	180		Pn	09 28 56.5	-1.1
EIDS	Eidsvold	19.78	180	P	Pn	09 28 56.5	-1.1
	comp=Z,551nm,0.9s						
KOUNC	Koumac, New Ca	19.82	140	P	Pn	09 28 58.0	-0.1
	comp=Z,208nm,1.3s						
GUMO	Guam	19.88	342	P	P	09 28 57.2	+1.0
	comp=Z,2μm,1.1s,baz=175,slow=7.3,SNR=24						
GUMO				LR	LR	09 36 30.9	
	comp=Z,239nm,18.3s,baz=156,slow=36						
SIJI	Sorong	20.16	282	P	P	09 28 58.8	-0.5
	comp=Z,94nm,1.0s						
SWI	Sorong	20.17	282	P	P	09 29 00.0	+0.6
	comp=Z,129nm,1.1s						
MTN	Manton Dam	20.86	248	P	P	09 29 06.3	-0.5
	comp=Z,191nm,1.3s,comp=Z,0.0nm						
MTN	Manton Dam	20.86	248		P	09 29 06.1	-0.7
DRS	Darwin Rock St	20.95	249	P	P	09 29 08.1	+0.3
	comp=Z,243nm,0.8s						
RMQ	Roma	21.00	185	P	P	09 29 09.9	+1.7
	comp=Z,174nm,0.9s						
RMQ	Roma	21.00	185	P	P	09 29 09.9	+1.7
	comp=Z,174nm,0.9s						
DPSS	Saipan	21.21	346		P	09 29 11.8	+1.3
WB0	Warramunga Arr	21.47	227		P	09 29 13.0	-0.3
WR0	Warramunga Arr	21.48	226	P	P	09 29 13.5	+0.1
	comp=Z,411nm,1.0s						
WB9	Warramunga Arr	21.49	227	P	P	09 29 13.7	+0.2
	comp=Z,367nm,1.1s						
WR8	Warramunga Arr	21.51	227		P	09 29 13.4	-0.3
WRAB	Tennant Creek	21.60	227	P	P	09 29 14.8	0.0
	comp=Z,141nm,1.2s						
WB2	Warramunga Arr	21.61	227	P	P	09 29 14.6	-0.2
	comp=Z,279nm,0.9s						
WR1	Warramunga Arr	21.62	227	P	P	09 29 14.9	0.0
	comp=Z,244nm,1.0s						
WRA	Warramunga Arr	21.62	227	P	P	09 29 14.2	-0.8
	comp=Z,58nm,0.7s,baz=50,slow=10,SNR=102						
WRA				S	S	09 33 05.8	-2.4
	comp=Z,68nm,1.0s,baz=48,slow=17,SNR=26						
WRA				ScP	ScP	09 36 40.2	+0.1
	comp=Z,8.0nm,1.0s,baz=49,slow=2.6,SNR=4.5						
	comp=Z,58nm,0.7s						
WRA	Warramunga Arr	21.62	227	P	P	09 29 13.7	-1.3
WB1	Warramunga Ar.	21.62	227	P	P	09 29 14.6	-0.3
	comp=Z,317nm,1.0s						
WB1	Warramunga Ar.	21.62	227	P	P	09 29 14.0	-1.0
	comp=Z,317nm,1.0s						
QLP	Quilpie	21.94	196	P	P	09 29 19.2	+1.0
	comp=Z,1μm,1.1s						
QLP	Quilpie	21.94	196	P	P	09 29 19.3	+1.0
	comp=Z,1μm,1.1s						
TW1H	Toowoomba 1 Ha	21.97	178	P	P	09 29 19.3	+0.7
	comp=Z,590nm,0.8s						
DZM	Mont Dzumac	22.30	139	LR	LR	09 36 16.9	
	comp=Z,1μm,21.8s,baz=320,slow=32						
DZM	Mont Dzumac	22.30	139	*e*P	P	09 29 22.0	-0.1
	comp=Z,572nm,0.8s						
DZM				*e*S	S	09 33 13.9	-6.4
	comp=Z,572nm,23.7s						
DZM				*e*LR	LR	09 34 53.9	
	comp=Z,2μm,28.9s						
DZM	Mont Dzumac	22.30	139		P	09 29 22.8	+0.7
DZM	Mont Dzumac	22.30	139	P	P	09 29 23.3	+1.2
	comp=Z,437nm,0.8s						
YATNC	Mamie plateau,	22.59	138	P	P	09 29 26.6	+1.6
	comp=Z,302nm,0.9s						
GC1S	Gold Coast 1 S	22.69	174	P	P	09 29 27.0	+1.1
	comp=Z,267nm,0.9s						
OUENC	Ouen Island, N	22.80	139	P	P	09 29 28.3	+1.2
	comp=Z,127nm,1.6s						
MARNC	Mare, Loyalty	22.97	135		P	09 29 29.3	+0.6
MARNC	Mare, Loyalty	22.97	135	P	P	09 29 30.0	+1.3
	comp=Z,2.8nm,1.1s						
AULRC	Lightning Ridg	23.99	186	P	P	09 29 38.4	+0.4
	comp=Z,1μm,1.1s						
KNRA	Kununurra	24.01	243	P	P	09 29 38.5	+0.2
	comp=Z,168nm,0.8s						
KNRA	Kununurra	24.01	243		P	09 29 38.3	0.0
INKA	Innaminka	24.17	203		P	09 29 40.2	+0.6
AS31	Alice Springs	24.41	221		P	09 29 42.2	+0.3
ASAR	Alice Springs	24.41	221	P	P	09 29 42.8	+0.8
	comp=Z,148nm,0.8s,baz=57,slow=8.4,SNR=1890						
ASAR				S	S	09 33 53.0	-1.2
	comp=Z,11nm,0.8s,baz=52,slow=13,SNR=6.4						
ASAR				ScP	ScP	09 36 48.0	+0.6
	comp=Z,27nm,1.0s,baz=49,slow=3.2,SNR=26						
ASAR				PKiKP	PKiKP	09 40 59.4	-1.5
	comp=Z,0.9nm,0.8s,baz=41,slow=1.4,SNR=4.6						
	comp=Z,148nm,0.8s						
ASAR	Alice Springs	24.41	221	P	P	09 29 42.5	+0.6
ARMA	Armidale	24.82	179	P	P	09 29 46.8	+1.2
	comp=Z,241nm,1.3s						
ARMA	Armidale	24.82	179		P	09 29 46.8	+1.2
ARMA	Armidale	24.82	179	P	P	09 29 47.2	+1.6
	comp=Z,241nm,1.3s						
SANI	Sanana	25.12	277	P	P	09 29 51.1	+2.7
	comp=Z,43nm,1.1s						

SANI	Sanana	25.12	277	P	P	09 29 48.3	-0.1
AUPHS	Peel High Scho	25.49	180	P	P	09 29 52.9	+1.3
	comp=Z,184nm,1.3s						
CMSA	Cobar Meteorol	26.39	190	P	P	09 29 59.8	+0.2
	comp=Z,185nm,1.1s						
CMSA	Cobar Meteorol	26.39	190	P	P	09 29 59.7	0.0
	comp=Z,185nm,1.1s						
AUDCS	Dubbo College	26.70	184	P	P	09 30 02.8	+0.3
	comp=Z,402nm,1.1s						
BATI	Baumata	27.41	258	LR	LR	09 43 31.8	
	comp=Z,521nm,21.2s,baz=100,slow=42						
MGCD	Mangrove Creek	27.59	180	P	P	09 30 11.7	+1.2
	comp=Z,99nm,0.8s						
MGCD	Mangrove Creek	27.59	180	P	P	09 30 11.9	+1.4
	comp=Z,102nm,0.8s						
STKA	Stephens Creek	27.68	197	P	P	09 30 11.1	-0.1
	comp=Z,572nm,1.0s						
STKA	Stephens Creek	27.68	197	P	P	09 30 11.1	-0.1
	comp=Z,69nm,0.7s,baz=359,slow=9.3,SNR=124						
STKA				ScP	ScP	09 36 58.9	+2.1
	comp=Z,13nm,0.8s,baz=23,slow=4.7,SNR=9.2						
STKA				LR	LR	09 40 46.2	
	comp=Z,553nm,21.0s,baz=15,slow=35						
	comp=Z,69nm,0.7s						
STKA	Stephens Creek	27.68	197	P	P	09 30 11.2	0.0
STKA	Stephens Creek	27.68	197	P	P	09 30 11.3	0.0
	comp=Z,28nm,1.0s						
STKA	Stephens Creek	27.68	197	c iP	P	09 30 11.3	0.0
FITZ	Fitzroy Crossi	27.70	241	P	P	09 30 11.4	-0.2
	comp=Z,40nm,1.2s						
FITZ	Fitzroy Crossi	27.70	241	LR	LR	09 41 35.3	
	comp=Z,485nm,18.8s,baz=69,slow=37						
FITZ	Fitzroy Crossi	27.70	241	P	P	09 30 11.4	-0.2
FITZ				IAmb	IAmb	09 30 36.0	
	comp=Z,47nm,1.1s						
FITZ	Fitzroy Crossi	27.70	241	P	P	09 30 11.6	0.0
	comp=Z,392nm,1.2s						
SYDH	Sydney Hard Ro	28.14	180	P	P	09 30 16.8	+1.5
	comp=Z,66nm,0.8s						
YNG	Young	28.77	184	P	P	09 30 21.7	+0.7
	comp=Z,75nm,1.3s						
WRKA	Warakurna	29.15	226	P	P	09 30 24.1	-0.4
	comp=Z,77nm,0.9s						
MSVF	Nonsavu	29.17	117	P	P	09 30 26.8	+2.1
	comp=Z,56nm,2.2s						
EDFI	Ende, Flores	29.19	262	P	P	09 30 24.0	-1.1
AUDAR	Daramalan Coll	29.68	183	P	P	09 30 30.3	+1.3
	comp=Z,71nm,1.0s						
CNB	Canberra Magne	29.73	183	P	P	09 30 30.5	+1.0
	comp=Z,108nm,1.4s						
CNB	Canberra Magne	29.73	183	P	P	09 30 31.0	+1.5
	comp=Z,108nm,1.4s						
AUMTS	Mt Stromlo	29.75	183	P	P	09 30 30.8	+1.1
	comp=Z,106nm,0.9s						
CAN	Canberra	29.75	183	P	P	09 30 30.5	+0.9
	comp=Z,94nm,0.9s						
CAN	Canberra	29.75	183	P	P	09 30 30.6	+0.9
CAN				IAmb	IAmb	09 30 31.9	
	comp=Z,57nm,0.8s						
CAN	Canberra	29.75	183	P	P	09 30 30.8	+1.1
	comp=Z,144nm,0.9s						
CAN	Canberra	29.75	183	P	P	09 30 30.6	+0.9
CAN				pmax	pmax		
	comp=Z,57nm,0.8s						
AUMHS	Melrose High S	29.79	183	P	P	09 30 31.3	+1.3
	comp=Z,79nm,1.0s						
AUJCS	Jamestown Cent	29.88	201	P	P	09 30 30.9	+0.1
	comp=Z,140nm,0.8s						
HTT	Hallett	29.98	200	P	P	09 30 31.9	+0.2
	comp=Z,90nm,0.9s						
HTT	Hallett	29.98	200	P	P	09 30 32.0	+0.3
	comp=Z,223nm,0.9s						
WHYH	Whyalla	30.11	203	P	P	09 30 32.9	+0.1
	comp=Z,109nm,0.9s						
BBOO	Buckleboo	30.53	205	P	P	09 30 36.3	-0.2
	comp=Z,144nm,1.1s						
BBOO	Buckleboo	30.53	205	P	P	09 30 36.0	-0.5
BBOO	Buckleboo	30.53	205	P	P	09 30 36.3	-0.2
	comp=Z,144nm,1.1s						
TOLI2	Tolitoli	30.82	281	P	P	09 30 39.4	+0.2
AUSMG	Snowy Mountain	30.87	184	P	P	09 30 41.0	+1.5
	comp=Z,47nm,1.4s						
AUMBR	Murray Bridge	31.41	199	P	P	09 30 44.6	+0.4
	comp=Z,304nm,1.0s						
GHSS	Government Hou	31.44	200	P	P	09 30 45.5	+1.1
	comp=Z,264nm,0.8s						
MILA	Mila	31.47	183	P	P	09 30 45.6	+0.8
	comp=Z,13nm,1.0s						
WBSI	Waikabubak, Su	31.53	261	P	P	09 30 44.6	-1.0
	comp=Z,888nmcomp=Z,42nm,0.7s						
AUCAS	Cummins Area S	31.92	204	P	P	09 30 49.0	+0.3
	comp=Z,329nm,1.0s						
ARPS	Mount Arapiles	32.24	194	P	P	09 30 52.2	+0.7
	comp=Z,122nm,1.1s						
TOO	Toolangi	32.33	188	P	P	09 30 53.2	+0.9
	comp=Z,53nm,1.1s						
TOO	Toolangi	32.33	188	P	P	09 30 53.3	+1.0
TOO				IAmb	IAmb	09 30 54.6	
	comp=Z,43nm,0.9s						
TOO	Toolangi	32.33	188	P	P	09 30 53.3	+1.0
TOO				pmax	pmax		
	comp=Z,43nm,0.9s						
BRAT	Ballarat	32.56	190	P	P	09 30 55.5	+1.3
	comp=Z,104nm,0.9s						
AUMTC	Mt Clear Colle	32.62	190	P	P	09 30 56.2	+1.4
	comp=Z,187nm,0.9s						
FORT	Forrest	33.10	218	P	P	09 30 59.3	+0.2
	comp=Z,199nm,0.8s						
FORT	Forrest	33.10	218	P	P	09 30 58.8	-0.3
MGBR	Mount Gambier	33.46	195	P	P	09 31 03.5	+1.4
JCJ	Chichijima	33.47	346	LR	LR	09 43 10.5	
	comp=Z,232nm,21.9s,baz=160,slow=33						
JCJ	Chichijima	33.47	346	P	P	09 31 01.0	-1.2
MBWA	Marble Bar	34.02	240	P	P	09 31 07.3	+0.1
	comp=Z,61nm,0.7s						
MBWA	Marble Bar	34.02	240		P	09 31 07.2	-0.1
MBWA	Marble Bar	34.02	240	P	P	09 31 07.1	-0.1
	comp=Z,35nm,0.7s						
MBWA	Marble Bar	34.02	240	P	P	09 31 07.2	-0.1
PSAC2	Pilbara Seismi	34.04	239	P	P	09 31 07.2	-0.2
	comp=Z,86nm,1.3s						
PSA00	Pilbara Seismi	34.09	239	P	P	09 31 07.6	-0.1
	comp=Z,70nm,1.0s						
PSA00	Pilbara Seismi	34.09	239	P	P	09 31 06.9	-0.9
PSA00				IAmb	IAmb	09 31 30.6	
	comp=Z,33nm,1.1s						
PSA00	Pilbara Seismi	34.09	239	P	P	09 31 07.1	-0.7
PSA00				IAmb	IAmb	09 31 30.7	
	comp=Z,68nm,1.0s						
PSA00	Pilbara Seismi	34.09	239	P	P	09 31 07.7	-0.1
	comp=Z,70nm,1.0s						
PSAB3	Pilbara Seismi	34.09	239	P	P	09 31 07.7	0.0
	comp=Z,65nm,1.3s						
PSAC1	Pilbara Seismi	34.10	239	P	P	09 31 07.4	-0.6
	comp=Z,91nm,1.1s						
GLAD	Gladstone	35.45	184	P	P	09 31 20.9	+1.7
	comp=Z,80nm,1.0s						
CORO	Coronation Par	35.98	185	P	P	09 31 25.8	+2.1
	comp=Z,84nm,0.9s						
OUZ	Omahuta	36.24	148	P	P	09 31 28.2	+2.2
KKM	Kota Kinabalu	36.50	288	P	P	09 31 28.4	-0.3
KKM				IAmb	IAmb	09 32 22.6	
	comp=Z,28nm,1.1s						
JAGI	Jajag, Banyuwa	36.62	263	P	P	09 31 28.6	-1.0
JAGI				IAmb	IAmb	09 32 39.5	
	comp=Z,46nm,1.0s						
MOO	Moorlands	36.96	185	P	P	09 31 34.2	+2.2
	comp=Z,254nm,1.0s						
MOO	Moorlands	36.96	185	P	P	09 31 34.2	+2.2
	comp=Z,254nm,1.0s						
MOO	Moorlands	36.96	185	P	P	09 31 33.6	+1.5
WCZ	Waipu Caves	37.18	148	P	P	09 31 36.0	+2.0
MEEK	Meekatharra	37.32	232	P	P	09 31 35.7	+0.3
	comp=Z,211nm,0.6s						
MEEK	Meekatharra	37.32	232	P	P	09 31 35.5	+0.1
	comp=Z,211nm,0.6s						
TAU	Tasmania Unive	37.41	184	P	P	09 31 37.0	+1.1
TAU	Tasmania Unive	37.41	184	P	P	09 31 37.8	+1.9
	comp=Z,206nm,1.1s						
TAU	Tasmania Unive	37.41	184	P	P	09 31 37.0	+1.1
TAU				pmax	pmax		
	comp=Z,363nm,1.5s						
KMBL	Kambalda	37.48	223	P	P	09 31 36.8	+0.1
	comp=Z,67nm,0.9s						
SZP	Santa	37.81	308	P	P	09 31 40.6	+1.1
	comp=Z,63nm,0.5s						
WTAZ	Waiatarua	38.05	149	P	P	09 31 44.0	+2.6
MKAZ	Moumakai	38.49	148	P	P	09 31 46.9	+1.9
KUZ	Kuaotunu	38.52	147	P	P	09 31 47.2	+2.0
	comp=Z,116nm,1.3s						
KUZ	Kuaotunu	38.52	147	P	P	09 31 46.8	+1.5
JOW	Kunigami	38.90	327	P	P	09 31 49.5	+0.9
	comp=Z,87nm,1.0s,baz=190,slow=8.0,SNR=6.1						
JOW				LR	LR	09 44 35.5	
	comp=Z,199nm,21.9s,baz=100,slow=31						
	comp=Z,87nm,1.0s						
JOW	Kunigami	38.90	327	P	P	09 31 50.0	+1.5
JOW	Kunigami	38.90	327	P	P	09 31 51.1	+2.6
	comp=Z,148nm,1.4s						
SJI	Sawahan	38.96	265	P	P	09 31 59.9	+11
TOZ	Tahuroa Road	39.14	149	P	P	09 31 52.5	+2.1
GIRL	Giralia	39.31	241	P	P	09 31 52.6	+0.5
GIRL				IAmb	IAmb	09 32 15.7	
	comp=Z,63nm,1.0s						
HIZ	Hauiti	39.41	150	P	P	09 31 55.3	+2.7
SBUM	Sibu	39.46	281	P	P	09 31 53.3	-0.2
TLZ	Tolley Road	39.61	149	P	P	09 31 56.5	+2.1
JHJ	Hachijo jima 2	39.82	345	LR	LR	09 45 38.9	
	comp=Z,221nm,20.7s,baz=172,slow=32						
VRZ	Vera Road	39.83	151	P	P	09 31 58.5	+2.3
WIZ	White Island	39.89	147	P	P	09 31 59.3	+2.7
TWVZ	Taurewa	40.12	150	P	P	09 32 01.0	+2.3
QRZ	Quartz Range	40.17	154	P	P	09 32 01.0	+2.1
KATZ	Kakaramea	40.18	150	P	P	09 32 01.8	+2.6
PKVZ	Pokaka	40.25	150	P	P	09 32 02.2	+2.5
NTVZ	North Tongarir	40.27	150	P	P	09 32 02.5	+2.6
NGZ	Ngauruhoe	40.29	150	P	P	09 32 02.5	+2.4
TMVZ	Te Maari	40.29	150	P	P	09 32 02.7	+2.6
OTVZ	Oturere	40.31	150	P	P	09 32 02.9	+2.6
ETVZ	East Tongariro	40.31	150	P	P	09 32 03.1	+2.8
FWVZ	Far West T-bar	40.32	150	P	P	09 32 03.1	+2.6
MAVZ	Matarangi	40.34	150	P	P	09 32 03.3	+2.6
TRVZ	Turoa	40.35	150	P	P	09 32 03.2	+2.5
HAZ	Te Kaha	40.38	146	P	P	09 32 01.9	+1.2
URZ	Urewera	40.38	148	LR	LR	09 46 26.0	
	comp=Z,300nm,19.1s,baz=317,slow=33						
URZ	Urewera	40.38	148	P	P	09 32 01.9	+1.2
WNVZ	Wahianoa	40.40	150	P	P	09 32 03.8	+2.8
WAZ	Wanganui	40.43	151	P	P	09 32 03.6	+2.5
MORW	Morawa	40.48	230	P	P	09 32 01.7	0.0
MORW	Morawa	40.48	230	P	P	09 32 01.2	-0.5
	comp=Z,94nm,1.0s						
KLBR	Kellerberrin	40.50	226	P	P	09 32 00.9	-0.9
	comp=Z,213nm,0.8s						
KLBR	Kellerberrin	40.50	226	P	P	09 32 00.9	-0.9
	comp=Z,213nm,0.8s						
PKGZ	Pakihiroa	40.62	146	P	P	09 32 04.8	+2.1
DSZ	Denniston Nort	40.63	156	P	P	09 32 04.3	+1.6
MWZ	Matawai	40.66	147	P	P	09 32 05.1	+2.1
BKZ	Black Stump Fm	40.73	149	P	P	09 32 05.0	+1.4
	comp=Z,56nm,1.2s						
BKZ	Black Stump Fm	40.73	149	P	P	09 32 04.6	+1.0
BLDU	Ballidu	40.74	228	P	P	09 32 03.3	-0.5
	comp=Z,68nm,1.2s						
YULB	Yu-li	40.75	316	P	P	09 32 05.3	+1.3
	comp=Z,36nm,1.3s						
NNZ	Nelson	40.86	154	P	P	09 32 05.0	+0.4
PUZ	Puketiti	40.87	146	P	P	09 32 06.0	+1.3
NACB	Ninganchiao	41.06	317	P	P	09 32 08.1	+1.6
	comp=Z,60nm,0.9s						
THZ	Tophouse	41.10	155	P	P	09 32 07.5	+0.9
TSZ	Takapari Road	41.14	150	P	P	09 32 08.2	+1.2
KNZ	Kokohu	41.24	148	P	P	09 32 08.6	+0.9
SSLB	Suanglung	41.25	316	P	P	09 32 09.9	+1.9
	comp=Z,46nm,0.9s						
INZ	Inchbonnie	41.31	157	P	P	09 32 09.2	+0.9
WVZ	Waitaha Valley	41.34	158	P	P	09 32 10.2	+1.7
MRZ	Mangatainoka R	41.42	151	P	P	09 32 09.7	+0.5
JCZ	Jackson Bay	41.52	161	P	P	09 32 11.9	+1.8
	comp=Z,174nm,1.2s						
SNZO	South Karori	41.52	153	P	P	09 32 10.5	+0.5
SNZO	South Karori	41.52	153	P	P	09 32 11.4	+1.4
	comp=Z,128nm,1.2s						
SNZO	South Karori	41.52	153	P	P	09 32 11.0	+1.0
YHNB	Yeheng	41.54	317		P	09 32 10.7	+0.2
YHNB				IAmb	IAmb	09 32 16.4	
	comp=Z,54nm,0.8s						
YHNB	Yeheng	41.54	317	P	P	09 32 12.7	+2.2
	comp=Z,77nm,0.8s						
PXZ	Pawanui	41.57	150	P	P	09 32 11.3	+0.9
NWAO	Narrogin (SRO)	41.60	225	P	P	09 32 10.3	-0.5
	comp=Z,44nm,1.0s						
NWAO	Narrogin (SRO)	41.60	225	LR	LR	09 49 16.9	
	comp=Z,152nm,21.5s,baz=78,slow=36						
NWAO	Narrogin (SRO)	41.60	225	P	P	09 32 10.3	-0.5
NWAO				IAmb	IAmb	09 32 11.2	
	comp=Z,29nm,0.8s						
NWAO	Narrogin (SRO)	41.60	225	P	P	09 32 10.3	-0.5
NWAO				pmax	pmax		
	comp=Z,29nm,0.8s						
NWAO	Narrogin (SRO)	41.60	225	P	P	09 32 10.3	-0.5
JSU	Suzuyama	41.65	333		P	09 32 12.0	+0.8
JSU	Suzuyama	41.65	333	P	P	09 32 12.7	+1.5
	comp=Z,167nm,1.2s						
LTZ	Lake Taylor	41.68	156	P	P	09 32 12.3	+1.0
BFZ	Birch Farm	41.76	151	P	P	09 32 12.6	+0.6
	comp=Z,140nm,1.4s						
BFZ	Birch Farm	41.76	151	P	P	09 32 12.5	+0.6
KPJI	Karang Pucung	41.77	265	P	P	09 32 26.8	+14
MUN	Mundaring	41.81	227	P	P	09 32 12.1	-0.5
KHZ	Kahutara	41.90	155	P	P	09 32 13.5	+0.5
OXZ	Oxford	42.05	157	P	P	09 32 14.8	+0.5
GVZ	Greta Valley S	42.15	156	P	P	09 32 16.1	+1.0
JMN	Monobe	42.20	339	P	P	09 32 17.3	+1.6
	comp=Z,135nm,1.4s						
PYZ	Puysegur Point	42.77	164	P	P	09 32 21.3	+1.2
	comp=Z,284nm,0.9s						
JNU	Nakatsue	42.85	335	P	P	09 32 22.1	+1.2
	comp=Z,238nm,0.8s,baz=132,slow=3.1,SNR=64						
JNU				LR	LR	09 48 43.9	
	comp=Z,141nm,19.2s,baz=142,slow=34						
	comp=Z,238nm,0.8s						
JNU	Nakatsue	42.85	335	P	P	09 32 22.4	+1.5
	comp=Z,336nm,1.2s						
BBJI	Bungbulang	43.04	265	P	P	09 32 24.1	+1.3
	comp=Z,30nm,0.8s						
BBJI	Bungbulang	43.04	265	P	P	09 32 25.0	+2.2
	comp=Z,30nm,0.7s						
MJAR	Matsushiro Arr	43.46	345	P	P	09 32 25.2	-0.6
	comp=Z,7.2nm,0.8s,baz=162,slow=7.7,SNR=6.4						
MJAR				LR	LR	09 50 23.7	
	comp=Z,105nm,18.4s,baz=159,slow=36						
	comp=Z,7.2nm,0.8s						
MJAR	Matsushiro Arr	43.46	345		P	09 32 25.1	-0.7
MAJO	Matsushiro	43.47	345	⇓iP	P	09 32 25.5	-0.3
MAJO				pmax	pmax		
	comp=Z,19nm,1.0s						
KNMB	Chin-men Tao	43.48	315	P	P	09 32 25.5	-0.5
QZH	Quanzhou	43.63	315	P	P	09 32 28.5	+1.2
QZH				pmax	pmax		
	comp=Z,150nm,1.1s						
JSD	Sado	44.87	346	IAmb	IAmb	09 32 37.7	
	comp=Z,36nm,1.2s						
MDSI	Maura Dua	46.58	269	P	P	09 33 07.2	+16
TJN	Taejon	47.13	334	P	P	09 32 56.6	+1.9
	comp=Z,508nm,1.3s						
TJN	Taejon	47.13	334	⇑iP	P	09 32 56.4	+1.7
TJN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
QIZ	Qiongzhong	47.23	302	P	P	09 32 56.0	+0.2
QIZ				S	S	09 39 40.0	-1.0
QIZ				LR	LR		
	comp=Z,310nm,15.9s						
QIZ				LR	LR		
	comp=Z,190nm,14.9s						
QIZ				LR	LR		
	comp=Z,280nm,30.6s						
CTZ	Chatham Island	47.60	148	P	P	09 33 00.8	+2.5
	comp=Z,140nm,1.7s						
ERM	Erimo	47.79	352	P	P	09 32 60.0	+0.2
ERM				IAmb	IAmb	09 33 23.4	
	comp=Z,27nm,0.9s						
ERM	Erimo	47.79	352	P	P	09 33 00.0	+0.2
ERM				pmax	pmax		
	comp=Z,27nm,1.0s						
KSRS	Korea Array	47.80	335	P	P	09 33 01.4	+1.5
	comp=Z,34nm,0.8s,baz=151,slow=9.0,SNR=43						
KSRS				LR	LR	09 52 16.3	
	comp=Z,60nm,20.1s,baz=145,slow=35						
	comp=Z,34nm,0.8s						
KSAR	Wonju Array Be	47.80	335	P	P	09 33 00.3	+0.4
KSAR	Wonju Array Be	47.80	335	P	P	09 33 00.3	+0.4
KS19	Wonju Array Si	47.86	335	P	P	09 33 00.1	-0.2
NJ2	Nanjing	48.23	323	⇓P	P	09 33 05.0	+1.7
NJ2				pP	pwP	09 33 29.5	-1.0
NJ2				sP	sP	09 33 43.3	+3.0
NJ2				pmax	pmax		
	comp=Z,35nm,0.7s						
INCN	Inchon	48.37	334	P	P	09 33 04.2	-0.1
INCN	Inchon	48.37	334	P	P	09 33 06.3	+2.0
	comp=Z,188nm,1.4s						
INCN	Inchon	48.37	334	P	P	09 33 04.2	-0.1
INCN				pmax	pmax		
	comp=Z,256nm,1.2s						
INCN	Inchon	48.37	334	P	P	09 33 05.8	+1.5
INCN				pP	pP	09 33 30.8	+1.3
ASAJ	Asahikawa	49.93	352	P	P	09 33 16.2	+0.1
	comp=Z,29nm,0.7s,baz=197,slow=9.3,SNR=12						
ASAJ				LR	LR	09 53 18.4	
	comp=Z,103nm,21.4s,baz=168,slow=34						
	comp=Z,29nm,0.7s						
WHN	Wuhan	50.08	318	P	P	09 33 19.0	+1.6
WHN				pmax	pmax		
	comp=Z,140nm,1.1s						
PSTR	Posyet	51.28	341	⇑iP	P	09 33 26.1	-0.1
VLA	Vladivostok	51.36	342	⇑iP	P	09 33 27.2	+0.4
VLA				pmax	pmax		
	comp=Z,26nm,0.8s						
DL2	Dalian	51.83	331	P	P	09 33 31.3	+0.9
DL2				pmax	pmax		
	comp=Z,85nm,1.0s						
XMAS	Kiritimati	52.10	83	P	P	09 33 32.8	-0.1
XMAS	Kiritimati	52.10	83	P	P	09 33 34.7	+1.9
	comp=Z,185nm,0.9s						
TIA	Tai'an	52.18	325	P	P	09 33 33.8	+0.7
TIA				pmax	pmax		
	comp=Z,49nm,1.0s						
USRK	Ussuriysk Ar.	52.31	343	P	P	09 33 34.1	+0.3
	comp=Z,14nm,0.8s,baz=185,slow=8.7,SNR=14						
	comp=Z,14nm,0.8s						
YSS	Yuzhno-Sakhali	52.70	353	P	P	09 33 35.8	-0.9
YSS				IAmb	IAmb	09 33 42.7	
	comp=Z,16nm,0.7s						
YSS	Yuzhno-Sakhali	52.70	353	eP	P	09 33 36.4	-0.3
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
ENH	Enshi	53.27	314	P	P	09 33 41.3	+0.1
ENH	Enshi	53.27	314	P	P	09 33 42.7	+1.4
	comp=Z,83nm,1.2s						
MDJ	Mudanjiang	53.43	341	P	P	09 33 41.6	-0.5
MDJ				IAmb	IAmb	09 34 14.1	
	comp=Z,33nm,1.3s						
MDJ	Mudanjiang	53.43	341	P	P	09 33 42.5	+0.4
MDJ				pmax	pmax		
	comp=Z,22nm,1.4s						
GSI	Gunungsitoli	53.71	276	P	P	09 33 43.5	-1.3
GSI				IAmb	IAmb	09 34 18.9	
	comp=Z,30nm,0.9s						
LYN	LuoYang	53.85	321	P	P	09 33 46.5	+1.1
LYN				pmax	pmax		
	comp=Z,71nm,1.3s						
CN2	Changchun	54.18	337	eP	P	09 33 47.5	0.0
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
HNS	HongShan	54.39	325	⇓P	P	09 33 50.0	+0.8
HNS				pmax	pmax		
	comp=Z,82nm,1.3s						
BNX	BinXian	55.14	340	⇑P	P	09 33 54.8	+0.3
BNX				pmax	pmax		
	comp=Z,29nm,1.0s						
BNX				pmax	pmax		
	comp=Z,430nm,12.0s						
BJT	Baijiatuau	55.44	328	P	P	09 33 56.8	+0.1
BJT				IAmb	IAmb	09 33 58.8	
	comp=Z,30nm,1.3s						
BJT	Baijiatuau	55.44	328	P	P	09 33 58.4	+1.7
	comp=Z,23nm,1.9s						
BJT	Baijiatuau	55.44	328	P	P	09 33 56.8	+0.1
BJT				pmax	pmax		
	comp=Z,30nm,1.3s						
BJI	Beijing	55.45	328	P	P	09 33 58.0	+1.2
BJI				pP	pP	09 34 27.5	+4.9
BJI				PcP	PcP	09 34 55.0	-0.7
BJI				ScP	ScP	09 38 42.5	-2.2
BJI				S	S	09 41 31.3	-2.1
BJI				pmax	pmax		
	comp=Z,11nm,1.7s						
BJI				pmax	pmax		
	comp=Z,110nm,4.0s						
BJI				LR	LR		
	comp=Z,94nm,6.4s						
BJI				LR	LR		
	comp=Z,92nm,7.8s						
BJI				LR	LR		
	comp=Z,110nm,14.0s						
KMI	Kunming	55.84	305	P	P	09 34 02.5	+2.4
KMI				pmax	pmax		
	comp=Z,44nm,0.6s						
XAN	Xi'an	55.85	318	P	P	09 34 00.5	+0.7
XAN				pP	pP	09 34 27.0	+1.4
XAN				S	S	09 41 41.5	+2.4
XAN				pmax	pmax		
	comp=Z,84nm,1.0s						
XAN				pmax	pmax		
	comp=Z,160nm,3.9s						
XAN	Xi'an	55.85	318	P	P	09 33 59.7	-0.1
XAN				pP	pP	09 34 26.1	+0.5
TIY	Taiyuan	55.94	323	P	P	09 34 01.8	+1.4
TIY				S	S	09 41 35.0	-5.1
TIY				pmax	pmax		
	comp=Z,36nm,0.8s						
TIY				pmax	pmax		
	comp=Z,240nm,4.7s						
CM31	Chiang Mai Arr	56.49	296	P	P	09 34 05.3	+0.7
CMAR	Chiang Mai Arr	56.49	296	P	P	09 34 05.5	+0.8
	comp=Z,3.1nm,0.5s,baz=109,slow=5.7,SNR=19						
CMAR				LR	LR	09 58 45.3	
	comp=Z,47nm,18.9s,baz=100,slow=36						
CMAR				PKP2bc	P'P'bc	10 04 08.2	-4.9
	comp=Z,1.1nm,0.4s,baz=331,slow=2.0,SNR=4.7						
	comp=Z,3.1nm,0.5s						
CMAR	Chiang Mai Arr	56.49	296	P	P	09 34 04.4	-0.2
CMAR	Chiang Mai Arr	56.49	296	i P	P	09 34 06.0	+1.4
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TYV	Tymovskoe	56.57	354	eP	P	09 34 04.4	-0.1
TYV				eS	S	09 41 44.2	-3.6
TYV				pmax	pmax		
	comp=Z,43nm,0.7s						
TYV				pmax	pmax		
	comp=Z,100nm,2.3s						
TYV				smax	smax		
	comp=N,100nm,3.8s						
TYV				smax	smax		
	comp=E,200nm,3.8s						
CHTO	Chiang Mai	56.61	297	P	P	09 34 05.5	0.0
CHTO				IAmb	IAmb	09 34 34.7	
	comp=Z,13nm,0.7s						
CHTO	Chiang Mai	56.61	297	P	P	09 34 07.3	+1.8
	comp=Z,10nm,0.8s						
CHTO	Chiang Mai	56.61	297	P	P	09 34 07.0	+1.5
	comp=Z,18nm,0.8s						
CHTO	Chiang Mai	56.61	297	P	P	09 34 05.5	0.0
CHTO				pmax	pmax		
	comp=Z,13nm,0.7s						
PZH	PanZhiHua	57.25	306	P	P	09 34 12.3	+2.3
POHA	Pohakuloa	58.30	63	P	P	09 34 18.4	+0.7
POHA	Pohakuloa	58.30	63	P	P	09 34 18.6	+1.0
	comp=Z,137nm,1.8s						
XLT	XiLinHaoTe	58.33	331	eP	P	09 34 17.0	-0.2
XLT				pP	pP	09 34 44.5	+1.2
XLT				pmax	pmax		
	comp=Z,33nm,0.6s						
HHC	Hu-ho-hao-te	58.53	326	eP	P	09 34 20.5	+1.8
HHC				pmax	pmax		
	comp=Z,24nm,0.6s						
HHC				pmax	pmax		
	comp=Z,150nm,5.4s						
HHC				LR	LR		
	comp=Z,130nm,17.9s						
HHC				LR	LR		
	comp=Z,210nm,18.7s						
HHC				LR	LR		
	comp=Z,260nm,19.6s						
PEA0B	Petropavlovsk-	58.65	5	P	P	09 34 19.2	+0.1
PEA0B	Petropavlovsk-	58.65	5	P	P	09 34 19.2	+0.1
PEA0B				pmax	pmax		
	comp=Z,163nm,1.5s						

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PETK  Petropavlovsk-      58.65    5  P        P         09 34 18.5 -0.6
      comp=Z,33nm,0.7s,baz=168,slow=5.2,SNR=34
PETK                                  pP       pP        09 34 43.5 -1.9
      comp=Z,21nm,0.8s,baz=161,slow=5.9,SNR=4.2
PETK                                  LR       LR        09 56 04.8
      comp=Z,155nm,20.2s,baz=187,slow=32
      comp=Z,33nm,0.7s
PETK  Petropavlovsk-      58.65    5  P        P         09 34 18.8 -0.3
PET   Petropavlovsk       58.65    5  P        P         09 34 19.4 +0.4
HIL   Hilo                58.69   63  P        P         09 34 21.1 +1.2
HIL                                   IAmb     IAmb      09 35 43.1
      comp=Z,664nm,1.9s
HEH   HeiHe               59.12  343 ⇓P        P         09 34 22.0 -0.4
HEH                                   pmax     pmax
      comp=Z,42nm,0.7s
BTO   Baotou              59.25  325 eP        P         09 34 26.5 +2.9
BTO                                   pP       sP        09 34 56.8 -4.7
BTO                                   sP       PcP       09 35 11.0 +0.2
BTO                                   pmax     pmax
      comp=Z,42nm,1.0s
BTO                                   pmax     pmax
      comp=Z,350nm,5.7s
PPT2  Papeete2            59.30  107 eLQ       LQ        09 49 08.2
      comp=Z,706nm,32.0s
PPT2                                 eLR       LR        09 51 38.9
      comp=Z,74nm,22.8s
PPT2                                 eLR       LR        09 51 45.7
      comp=Z,131nm,28.5s
TBI   Tubuai              59.98  114 eS        S         09 42 28.4 -4.8
      comp=Z,1µm,25.2s
TBI                                  eLQ       LQ        09 49 48.8
      comp=Z,4µm,39.8s
TBI                                  eLR       LR        09 52 12.3
      comp=Z,848nm,27.2s
TBI                                  eLR       LR        09 52 31.8
      comp=Z,1µm,36.0s
LZH   Lanzhou             60.44  317 eP        P         09 34 33.5 +1.6
LZH                                   pP       pP        09 34 59.3 +0.9
LZH                                   pmax     pmax
      comp=Z,56nm,1.1s
LZH                                   pmax     pmax
      comp=Z,390nm,5.3s
LZDM  Lanzhou Array       60.47  317  P        P         09 34 33.5 +1.2
      comp=Z,22nm,0.9s,baz=132,slow=8.2,SNR=11
LZDM                                  LR       LR        09 58 50.3
      comp=Z,51nm,21.1s,baz=115,slow=34
      comp=Z,22nm,0.9s
HIA   Hailar              60.91  337  P        P         09 34 35.3 +0.6
HIA                                   sP       sP        09 35 13.2 +0.4
HILR  Hailar Array B      61.14  337  P        P         09 34 36.6 +0.4
      comp=Z,13nm,0.6s,baz=138,slow=8.1,SNR=12
HILR                                  pP       pP        09 35 00.4 -2.0
      comp=Z,8.3nm,0.7s,baz=132,slow=8.4,SNR=2.3
      comp=Z,13nm,0.6s
SHEM  Shemya Is, Ala      61.23   16  LR       LR        09 54 41.9
      comp=Z,161nm,21.4s,baz=140,slow=30
ZEA   Zeya                62.27  344 eP        P         09 34 44.2 +0.5
ZEA                                  e                   09 35 12.2
ZEA                                   pmax     pmax
      comp=Z,20nm,0.6s
MA2   Magadan             64.85  360  P        P         09 34 59.7 -0.9
      comp=Z,34nm,0.7s,baz=164,slow=6.7,SNR=18
MA2                                   LR       LR        09 59 15.4
      comp=Z,174nm,21.9s,baz=160,slow=32
      comp=Z,34nm,0.7s
MA2   Magadan             64.85  360  P        P         09 35 00.9 +0.3
MA2   Magadan             64.85  360  P        P         09 35 02.2 +1.7
      comp=Z,62nm,0.8s
MA2   Magadan             64.85  360⇓iP        P         09 35 00.5  0.0
MA2                                   pmax     pmax
      comp=Z,31nm,0.8s
MA2   Magadan             64.85  360  P        P         09 35 00.7 +0.2
      comp=Z,60nm,0.8s
MA2   Magadan             64.85  360  P        P         09 35 00.3 -0.2
MA2                                   sP       sP        09 35 38.2 -0.9
GTA   Gaotai              64.90  318  P        P         09 35 03.0 +1.5
GTA                                   pmax     pmax
      comp=Z,21nm,1.7s
ULN   Ulaanbaatar         65.60  329  P        P         09 35 06.6 +0.8
ULN   Ulaanbaatar         65.60  329  P        P         09 35 09.3 +3.4
      comp=Z,76nm,1.2s
ULN   Ulaanbaatar         65.60  329⇑iP        P         09 35 06.9 +1.0
ULN                                   pmax     pmax
      comp=Z,8.0nm,0.9s
SONM  Songino Array       65.92  329  P        P         09 35 08.1 +0.2
      comp=Z,30nm,1.3s,baz=147,slow=7.0,SNR=13
SONM                                  pP       pP        09 35 33.2 -1.3
      comp=Z,20nm,1.0s,baz=143,slow=5.5,SNR=8.3
SONM                                  LR       LR        10 03 22.5
      comp=Z,169nm,21.5s,baz=122,slow=35
      comp=Z,30nm,1.3s
SONM  Songino Array       65.92  329           P         09 35 08.4 +0.5
SONM                                  IAmb     IAmb      09 35 36.1
      comp=Z,44nm,1.4s
CASY  Casey               66.83  197           P         09 35 13.8 +0.6
CASY  Casey               66.83  197  P        P         09 35 13.8 +0.6
NIKH  Nikolski High       67.40   25  P        P         09 35 18.7 +1.7
      baz=224
SEY   Seymchan            68.23    1  LR       LR        10 01 25.8
      comp=Z,82nm,21.0s,baz=161,slow=32
ZAK   Zakamensk           69.12  330 eP        P         09 35 27.8 -0.1
ZAK                                   pmax     pmax
      comp=Z,21nm,1.2s
YAK   Yakutsk             69.28  349  LR       LR        10 06 29.6
      comp=Z,30nm,20.0s,baz=132,slow=36
YAK   Yakutsk             69.28  349  P        P         09 35 29.4 +0.9
YAK                                   IAmb     IAmb      09 35 32.4
      comp=Z,28nm,0.7s
YAK   Yakutsk             69.28  349 eP        P         09 35 27.2 -1.3
YAK                                  e*PP      PcP       09 35 53.2 +1.8
YAK                                  e                   09 38 01.5
YAK                                  ePPP      PPP       09 39 43.2
YAK                                  eS        S         09 44 23.9 -2.1
YAK                                  e*SS      SKSac     09 45 16.7 -1.5
YAK                                   pmax     pmax
      comp=Z,29nm,1.5s
YAK                                   pmax     pmax
      comp=N,10.0nm,1.3s
YAK                                   pmax     pmax
      comp=E,3.0nm,0.9s
YAK                                   pmax     pmax
      comp=Z,172nm,5.3s
YAK                                   pmax     pmax
      comp=N,162nm,5.3s
YAK                                   pmax     pmax
      comp=E,128nm,4.2s
YAK                                   smax     smax
      comp=E,173nm,5.8s
YAK                                   smax     smax
      comp=N,198nm,5.4s
AKUT  Akutan              69.53   26  P        P         09 35 30.3 +0.1
P08K  Saint George I      69.78   22  P        P         09 35 33.2 +1.6
      baz=222
SPIA  Saint Paul Isl      69.95   21  P        P         09 35 34.2 +1.5
      baz=222
FALS  False Pass          71.03   26  P        P         09 35 40.7 +1.4
      baz=229
MOY   Mondy               71.04  330 eP        P         09 35 40.6 +0.9
MOY                                   pmax     pmax
      comp=Z,30nm,1.3s
PALK  Pallekele           71.21  280  LR       LR        10 10 52.8
      comp=Z,34nm,18.3s,baz=94,slow=39
CCD   Concordia, Ant      71.36  187  P        P         09 35 42.8 +1.2
S12K  Black Hills         72.17   26  P        P         09 35 48.0 +1.7
      baz=230
VNDA  Vanda               72.23  178  P        P         09 35 47.0 +0.8
      comp=Z,19nm,0.8s,baz=332,slow=6.8,SNR=79
VNDA                                  pP       pP        09 36 10.4 -3.2
      comp=Z,6.7nm,0.8s,baz=348,slow=8.3,SNR=4.5
VNDA                                  LR       LR        10 06 49.4
      comp=Z,61nm,18.0s,baz=346,slow=35
      comp=Z,19nm,0.8s
VNDA  Vanda               72.23  178  P        P         09 35 47.5 +1.2
VNDA  Vanda               72.23  178  P        P         09 35 47.5 +1.2
VNDA                                  pmax     pmax
      comp=Z,21nm,0.9s
VNDA  Vanda               72.23  178  P        P         09 35 47.4 +1.2
SDPT  Sand Point          72.65   27  P        P         09 35 50.6 +1.6
      baz=232
CHNA  Chernabura Isl      72.73   27  P        P         09 35 51.3 +1.9
      baz=232
SBA   Scott Base          72.81  177  P        P         09 35 50.4 +0.8
SBA                                   IAmb     IAmb      09 36 15.9
      comp=Z,82nm,1.8s
SBA   Scott Base          72.81  177  P        P         09 35 50.4 +0.8
SBA                                   pmax     pmax
      comp=Z,82nm,1.8s
S14K  Fog Glacier         73.64   26  P        P         09 35 56.6 +1.7
      baz=232
M11K  Mekoryuk            73.73   21  P        P         09 35 57.0 +1.7
      baz=225
BILL  Bilibino            74.14    6  P        P         09 35 57.6 +0.1
BILL                                  IAmb     IAmb      09 35 60.0
      comp=Z,33nm,1.3s
BILL  Bilibino            74.14    6 ⇓P        P         09 35 58.1 +0.6
BILL  Bilibino            74.14    6  P        P         09 35 58.6 +1.0
GAMB  Gambell             74.54   16  P        P         09 36 01.4 +1.5
      baz=219
M13K  Dall Lake           74.78   22  P        P         09 36 03.2 +1.9
      baz=228
O14K  Tigyukauivet M      74.80   23  P        P         09 36 03.2 +1.8
      baz=230
HYB   Hyderabad           74.96  290 eP        P         09 36 04.1 +0.8
HYB                                  ePcP      PcP       09 36 16.9 +0.2
HYB                                  epP       pP        09 36 30.6 -0.3
HYB                                  eS        S         09 45 33.3 +0.5
WMQ   Urumqi              74.99  318 eP        P         09 36 05.5 +2.5
WMQ                                   pmax     pmax
      comp=Z,19nm,1.1s
WMQ                                   LR       LR
      comp=Z,160nm,24.2s
N14K  Kuskokwak Cree      75.07   23  P        P         09 36 04.8 +1.8
      baz=229
CHIR  Chirikof Islan      75.15   28  P        P         09 36 05.1 +1.5
      baz=236
O15K  Ungalikthiuk R      75.32   24  IAmb     IAmb      09 36 08.6
      comp=Z,21nm,0.7s
O15K  Ungalikthiuk R      75.32   24  P        P         09 36 06.3 +1.8
      baz=231
K13K  Kusilvak Mount      75.36   20  P        P         09 36 06.4 +1.8
      baz=226
M14K  Bethel              75.51   22  IAmb     IAmb      09 36 08.6
      comp=Z,23nm,0.7s
M14K  Bethel              75.51   22  P        P         09 36 07.3 +1.8
      baz=229
L14K  Kuka Creek          75.64   21  IAmb     IAmb      09 36 09.3
      comp=Z,34nm,0.7s
L14K  Kuka Creek          75.64   21  P        P         09 36 08.0 +1.8
      baz=228
N15K  Kwethluk River      75.84   23  IAmb     IAmb      09 37 05.1
      comp=Z,91nm,1.6s
N15K  Kwethluk River      75.84   23  P        P         09 36 09.2 +1.7
      baz=231
M15K  Kasigluk River      75.95   22  P        P         09 36 09.7 +1.6
      baz=230
P16K  Nushagak River      75.98   24  P        P         09 36 09.7 +1.5
      baz=233
O16K  Kokwok River B      76.28   24  P        P         09 36 10.8 +0.9
      baz=233
J14K  Nanvaranak Lak      76.29   20  P        P         09 36 11.5 +1.6
      baz=227
L15K  Ungalak Mounta      76.30   21  P        P         09 36 11.7 +1.7
      baz=229
Q16K  King Salmon         76.33   25  P        P         09 36 11.2 +1.0
      baz=234
Q17K  Contact Creek       76.42   26  P        P         09 36 11.8 +0.9
      baz=235
N16K  Nishlik Lake        76.55   23  P        P         09 36 12.9 +1.4
      baz=232
R18K  Karluk              76.66   27  P        P         09 36 13.5 +1.4
      baz=237
K15K  Wolf Creek Mou      76.69   21  IAmb     IAmb      09 36 31.9
      comp=Z,28nm,0.9s
K15K  Wolf Creek Mou      76.69   21  P        P         09 36 13.8 +1.6
      baz=229
P17K  Kvichak River       76.72   25  P        P         09 36 14.0 +1.6
      baz=234
O17K  Koliganek Bris      76.79   24  P        P         09 36 14.4 +1.6
      baz=234
M16K  Timber Creek        76.81   23  P        P         09 36 13.5 +0.5
      baz=232
TNA   Tin City            76.96   16  P        P         09 36 13.8 +0.2
      baz=222
ANM   Nome                76.98   18  IAmb     IAmb      09 36 15.2
      comp=Z,85nm,2.0s
ANM   Nome                76.98   18  P        P         09 36 14.6 +0.8
      baz=225,SNR=6.2
OHAK  Old Harbor          77.00   27  P        P         09 36 14.8 +0.8
      baz=238
Q18K  Katmai Hardscr      77.02   26  P        P         09 36 14.7 +0.4
      baz=236
L16K  Owhat River         77.05   22  IAmb     IAmb      09 36 41.1
      comp=Z,62nm,1.7s
L16K  Owhat River         77.05   22  P        P         09 36 14.7 +0.4
      baz=231
N17K  Nushagak Hills      77.20   24  P        P         09 36 15.9 +0.7
      baz=234
P18K  Big Mountain,       77.34   25  P        P         09 36 16.6 +0.6
      baz=236
F14K  Arctic Creek        77.35   17  P        P         09 36 16.7 +0.8
      baz=224
KDAK  Kodiak Island       77.62   27  LR       LR        10 03 29.9
      comp=Z,154nm,21.9s,baz=237,slow=30
J16K  Anvik River         77.66   20  P        P         09 36 18.4 +0.8
      baz=230
G15K  Niukluk             77.69   18  P        P         09 36 18.8 +1.0
      baz=226
L17K  Donlin              77.75   22  P        P         09 36 19.3 +1.1
      baz=232
Q19K  Cape Douglas,       77.76   26  P        P         09 36 19.0 +0.6
      baz=237
N18K  Kilae Creek         77.81   24  P        P         09 36 19.1 +0.6
      baz=235
F15K  North Star Dit      78.00   17  P        P         09 36 20.3 +0.8
      baz=226
H16K  Elim                78.01   19  P        P         09 36 20.4 +0.9
      baz=228
I17K  Unalakleet          78.02   20  IAmb     IAmb      09 36 23.4
      comp=Z,82nm,1.9s
I17K  Unalakleet          78.02   20  P        P         09 36 20.1 +0.6
      baz=230,SNR=5.5
K17K  Iditarod            78.11   21  IAmb     IAmb      09 36 39.9
      comp=Z,28nm,1.1s
K17K  Iditarod            78.11   21  P        P         09 36 20.6 +0.5
      baz=232
Q20K  Shuyak Island       78.14   27  P        P         09 36 21.0 +0.7
      baz=238
O19K  Port Alsworth       78.18   25  P        P         09 36 21.2 +0.7
      baz=236
ZSN   Zaisan              78.20  321 eP        P         09 36 20.7 -0.4
ZSN   Zaisan              78.20  321 eP        P         09 36 20.6 -0.4
J17K  VABM Dome           78.26   21  IAmb     IAmb      09 36 23.8
      comp=Z,46nm,1.4s
J17K  VABM Dome           78.26   21  P        P         09 36 21.7 +0.7
      baz=231
M18K  Stony River         78.31   23  P        P         09 36 22.3 +1.1
      baz=235
TIXI  Tiksi               78.33  353  LR       LR        10 07 10.4
      comp=Z,56nm,21.9s,baz=201,slow=33
TIXI  Tiksi               78.33  353⇑iP        P         09 36 19.7 -1.4
TIXI                                  pmax     pmax
      comp=Z,7.0nm,1.1s
P19K  Oil Pt              78.33   25  P        P         09 36 21.8 +0.3
      baz=237
L18K  Granite Mounta      78.41   22  P        P         09 36 22.4 +0.6
      baz=234
N19K  Bonanza Creek       78.45   24  P        P         09 36 22.9 +0.7
      baz=236
G16K  Koyuk River         78.48   18  IAmb     IAmb      09 36 24.5
      comp=Z,24nm,0.8s
G16K  Koyuk River         78.48   18  P        P         09 36 22.8 +0.7
      baz=228
O20K  Slope Mountain      78.83   25  P        P         09 36 24.6 +0.4
      baz=238
H17K  Granite Mounta      78.96   19  IAmb     IAmb      09 37 06.6
      comp=Z,26nm,0.9s
H17K  Granite Mounta      78.96   19  P        P         09 36 25.9 +1.2
      baz=230
HOM   Homer               79.02   26  P        P         09 36 26.1 +1.0
      baz=239
L19K  White Mountain      79.08   23  P        P         09 36 26.4 +0.9
      baz=235
G17K  Kiwalik Mounta      79.09   19  P        P         09 36 25.9 +0.5
      baz=229
J18K  Innoko River        79.14   21  P        P         09 36 26.2 +0.4
      baz=233
BRSE  Bradley Lake S      79.46   26  P        P         09 36 28.4 +0.8
      baz=240
F17K  Baldwin Pennin      79.52   18  P        P         09 36 28.7 +1.0
      baz=229
M20K  Styx River          79.59   24  IAmb     IAmb      09 37 10.4
      comp=Z,44nm,1.7s
M20K  Styx River          79.59   24  P        P         09 36 28.9 +0.5
      baz=237
MK31  Makanchi Array      79.62  319  P        P         09 36 29.1 +0.3
MK31  Makanchi Array      79.62  319⇑iP        P         09 36 29.6 +0.8
MKAR  Makanchi Array      79.62  319  P        P         09 36 29.9 +1.2
      comp=Z,5.4nm,0.8s,baz=107,slow=5.6,SNR=4.9
MKAR                                  PKKPbc   PKKPbc    09 55 16.1 -2.0
      comp=Z,0.6nm,0.7s,baz=290,slow=1.5,SNR=5.1
MKAR                                  LR       LR        10 10 18.8
      comp=Z,67nm,20.8s,baz=94,slow=34
      comp=Z,5.4nm,0.8s
MKAR  Makanchi Array      79.62  319  P        P         09 36 28.8  0.0
MKAR  Makanchi Array      79.62  319  P        P         09 36 30.0 +1.2
C16K  Lisburne Hills      79.64   15  P        P         09 36 28.7 +0.3
      baz=224
E17K  Hotham Inlet        79.78   17  P        P         09 36 29.4 +0.2
      baz=228,SNR=20
MAKZ  Makanchi            79.83  319           P         09 36 30.0 +0.1
MAKZ  Makanchi            79.83  319  P        P         09 36 30.0 +0.1
MAKZ                                  pmax     pmax
      comp=Z,11nm,0.9s
D17K  Noatak River        79.84   16  P        P         09 36 29.2 -0.3
      baz=227
J19K  Poorman             79.85   21  P        P         09 36 29.2 -0.4
      baz=234
GCSA  Galena City Sc      79.85   20  P        P         09 36 29.5 -0.1
      baz=233
K20K  Telida              80.05   22  P        P         09 36 30.7 -0.1
      baz=236
RDOG  Red Dog Mine        80.13   16  IAmb     IAmb      09 36 32.8
      comp=Z,27nm,0.8s
RDOG  Red Dog Mine        80.13   16  P        P         09 36 30.9 -0.2
      baz=227
SEW   Seward              80.20   26  P        P         09 36 31.5 -0.1
      baz=241
O22K  Cooper Landing      80.27   26  P        P         09 36 31.5 -0.4
      baz=240
SKT   Skwentna            80.28   24  P        P         09 36 31.7 -0.3
      baz=238
SUA   Susitna One         80.33   24  P        P         09 36 32.0 -0.5
      baz=239
C17K  DeLong Mountai      80.35   16  P        P         09 36 32.0 -0.2
      baz=226
E18K  Tukpahlearik C      80.36   17  P        P         09 36 32.7 +0.4
      baz=229
SHLS  Shalkode            80.39  315 eP        P         09 36 31.1 -2.1
SHLS  Shalkode            80.39  315 eP        P         09 36 31.1 -2.1
J20K  Nowinta River       80.48   21  P        P         09 36 33.6 +0.7
      baz=236,SNR=5.5
PPLA  Purkeypile          80.51   23  P        P         09 36 33.6 +0.2
      baz=238
RC01  Rabbit Creek A      80.57   25  P        P         09 36 33.9 +0.3
      baz=240
ZALV  Zalesovo Beam       80.69  327  P        P         09 36 34.3  0.0
      comp=Z,6.7nm,0.6s,baz=113,slow=6.3,SNR=5.0
ZALV                                  S        S         09 46 37.1 +4.2
      comp=Z,0.9nm,0.3s,baz=102,slow=13,SNR=5.2
ZALV                                  LR       LR        10 10 48.5
      comp=Z,92nm,21.9s,baz=104,slow=34
      comp=Z,6.7nm,0.6s
UZB   Uzynbulak           80.70  315 eP        P         09 36 34.1 -0.8
UZB   Uzynbulak           80.70  315 eP        P         09 36 34.0 -0.8
M22K  Willow              80.74   24  P        P         09 36 34.9 +0.5
      baz=240
CHUM  Lake Minchumin      80.99   22  P        P         09 36 35.3 -0.4
      baz=238,SNR=10.0
C18K  Utukok River        81.01   16  P        P         09 36 35.7 -0.1
      baz=228
CUT   Chulitna            81.01   24  P        P         09 36 36.3 +0.5
      baz=240
PWL   Port Wells          81.05   26  IAmb     IAmb      09 36 40.0
      comp=Z,51nm,0.8s
PWL   Port Wells          81.05   26  P        P         09 36 36.3 +0.2
      baz=242
P23K  Montague Islan      81.06   27  P        P         09 36 36.1  0.0
      baz=242
PMR   Palmer              81.07   25  P        P         09 36 36.1 -0.1
      baz=241
SATY  Saty                81.11  315 eP        P         09 36 36.3 -0.7
SATY  Saty                81.11  315 eP        P         09 36 36.3 -0.7
GHO   Glory Hole Cre      81.24   25  IAmb     IAmb      09 36 42.0
      comp=Z,37nm,1.1s
KNK   Knik Glacier        81.27   25  P        P         09 36 37.3 +0.1
      baz=241
Q23K  Middleton Isla      81.27   27  P        P         09 36 37.3  0.0
      baz=244
KTH   Kantishna Hill      81.34   23  IAmb     IAmb      09 36 40.1
      comp=Z,27nm,1.0s
E19K  Redstone River      81.39   18  P        P         09 36 37.6 -0.2
      baz=232
SML   Sawmill             81.51   25  IAmb     IAmb      09 36 40.1
      comp=Z,34nm,0.8s
SML   Sawmill             81.51   25  P        P         09 36 38.6  0.0
      baz=241,SNR=6.8
TRF   Thorofare Moun      81.54   23  P        P         09 36 38.7 -0.1
      baz=239
GLI   Glacier Island      81.60   26  P        P         09 36 38.9 -0.1
      baz=243
BPAW  Bear Paw Mtn.       81.61   22  P        P         09 36 39.3 +0.3
      baz=239
TDK   Taldyqorghan        81.65  317 eP        P         09 36 39.3 -0.4
      comp=Z,10.0nm,0.8s
TDK   Taldyqorghan        81.65  317 eP        P         09 36 39.3 -0.4
TDK                                   pmax     pmax
      comp=Z,10.0nm,0.8s
C19K  Lookout Ridge       81.75   16  P        P         09 36 39.7  0.0
      baz=230
M23K  Glacier View        81.75   25  P        P         09 36 39.6 -0.2
      baz=242
D19K  Kuna River          81.77   17  P        P         09 36 39.6 -0.2
      baz=231
H21K  Melozitna Rive      81.78   20  IAmb     IAmb      09 37 13.5
      comp=Z,18nm,0.6s
H21K  Melozitna Rive      81.78   20  P        P         09 36 40.1 +0.2
      baz=237,SNR=12
I21K  Tanana              81.81   21  P        P         09 36 40.2 +0.2
      baz=238,SNR=7.6
WAT1  Susitna Watana      81.91   24  P        P         09 36 39.8 -0.9
      baz=241
SCM   Sheep Creek Mo      81.94   25  P        P         09 36 40.5 -0.4
      baz=242
KSH   Kashi               81.97  311  P        P         09 36 43.0 +1.4
KSH                                   pmax     pmax
      comp=Z,13nm,1.4s
RND   Reindeer            82.07   23  IAmb     IAmb      09 36 41.9
      comp=Z,30nm,0.7s
A19K  Wainwright          82.08   15  P        P         09 36 41.2 -0.1
      baz=228
MDOK  Medeo               82.09  315 eP        P         09 36 41.7 -0.5
MDOK  Medeo               82.09  315 eP        P         09 36 41.7 -0.5
WAT6  Susitna Watana      82.12   24  P        P         09 36 41.8 -0.1
      baz=242
TNSS  Tian-Shan           82.13  315 eP        P         09 36 41.7 -1.0
TNSS  Tian-Shan           82.13  315 eP        P         09 36 41.7 -1.0
MCK   McKinley            82.20   23  IAmb     IAmb      09 36 45.1
      comp=Z,40nm,0.9s
MCK   McKinley            82.20   23  P        P         09 36 41.7 -0.5
      baz=241,SNR=12
DIV   Divide              82.29   26  IAmb     IAmb      09 36 47.3
      comp=Z,21nm,0.8s
D20K  Etivluk River       82.34   17  P        P         09 36 42.7 -0.1
      baz=233
KAIM  Kayak Island        82.37   27  P        P         09 36 43.1  0.0
      baz=245
KLU   Klutina             82.38   26  IAmb     IAmb      09 36 46.5
      comp=Z,40nm,1.1s
KLU   Klutina             82.38   26  P        P         09 36 42.5 -0.6
      baz=244
H22K  Ishtalitna Cre      82.41   20  P        P         09 36 43.0 -0.1
      baz=238
DHY   Denali Highway      82.50   24  P        P         09 36 44.6 +0.7
DHY   Denali Highway      82.50   24  P        P         09 36 43.5 -0.4
      baz=242,SNR=7.3
M24K  Tolsona, Glenn      82.55   25  P        P         09 36 44.6 +0.6
M24K  Tolsona, Glenn      82.55   25  P        P         09 36 43.6 -0.4
      baz=243
NEA2  Nenana              82.58   22  IAmb     IAmb      09 36 44.7
      comp=Z,19nm,0.8s
NEA2  Nenana              82.58   22  P        P         09 36 43.5 -0.5
      baz=240,SNR=6.0
BOOM  Boomskoye usch      82.71  314  IAmb     IAmb      09 36 48.0
      comp=Z,15nm,0.6s
BMRM  Bremner River       82.73   26  P        P         09 36 44.7 -0.3
      baz=245
I23K  Minto, Yukon-K      82.75   22  P        P         09 36 44.5 -0.3
      baz=240
NIL   Nilore              82.83  305  P        P         09 36 45.7 -0.4
NIL                                   IAmb     IAmb      09 36 46.7
      comp=Z,39nm,0.8s
NIL   Nilore              82.83  305  P        P         09 36 45.7 -0.4
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NIL                                 pmax     pmax
       comp=Z,39nm,0.8s
B20K   Meade River        82.98  16 P        P        09 36 45.8 -0.1
       baz=232,SNR=5.3
N25K   Chitina, Valde     83.00  26 P        P        09 36 46.4  0.0
       baz=245
TKM2   Tokmak 2           83.06 314 P        P        09 36 47.8 +0.5
       SNR=8.0
CCB    Clear Creek Bu     83.08  22 IAmb     IAmb     09 36 48.8
       comp=Z,25nm,1.1s
HARP   HAARP              83.11  25 P        P        09 36 47.1 +0.2
       baz=244
C21K   Knifeblade Rid     83.14  17 P        P        09 36 47.0 +0.1
       baz=235
KURK   Kurchatov          83.16 322 P        P        09 36 47.1 -0.2
KURK   Kurchatov          83.16 322 IAmb     IAmb     09 37 21.7
       comp=Z,28nm,1.2s
KURK   Kurchatov          83.16 322⇑iP       P        09 36 46.9 -0.4
KURK                                pmax     pmax
       comp=Z,24nm,1.1s
COLA   College            83.17  22 P        P        09 36 45.3 -1.7
COLA                                IAmb     IAmb     09 36 49.2
       comp=Z,33nm,0.8s
COLA   College            83.17  22⇑iP       P        09 36 45.3 -1.7
COLA                                pmax     pmax
       comp=Z,24nm,0.9s
COLA   College            83.17  22 P        P        09 36 46.9 -0.1
       baz=242
COLA   College            83.17  22 P        P        09 36 45.0 -2.1
COLA                                pP       pP       09 37 12.6 -2.4
KURBB  Kurchatov Arra     83.19 322 P        P        09 36 47.1 -0.3
       comp=Z,6.7nm,0.8s,baz=109,slow=3.9,SNR=9.2
KURBB                               LR       LR       10 14 19.7
       comp=Z,59nm,21.3s,baz=174,slow=36
       comp=Z,6.7nm,0.8s
PAX    Paxson             83.23  24 P        P        09 36 47.3 -0.2
       baz=244
HDA    Harding Lake       83.29  23 P        P        09 36 47.2 -0.5
       baz=242
G23K   Bananza Creek      83.30  20 P        P        09 36 47.6 -0.2
       baz=239
CRQE   Cirque             83.31  27 P        P        09 36 47.6 -0.4
       baz=246
POKR   Poker Plat Res     83.44  22 P        P        09 36 48.0 -0.5
       baz=242
B21K   Ikpikpuk River     83.46  17 P        P        09 36 48.3 -0.2
       baz=235
E22K   Anaktuvuk Pass     83.47  18 P        P        09 36 48.3 -0.3
       baz=238,SNR=5.8
K24K   Donnelly Dome      83.47  24 IAmb     IAmb     09 36 51.5
       comp=Z,34nm,1.0s
K24K   Donnelly Dome      83.47  24 P        P        09 36 48.7  0.0
       baz=244
ILAR   Eielson Array      83.49  22 P        P        09 36 47.0 -1.7
       comp=Z,17nm,0.8s,baz=248,slow=5.4,SNR=30
ILAR                                PKKPbc   PKKPbc   09 55 07.0 -3.2
       comp=Z,0.3nm,0.6s,baz=9.2,slow=1.0,SNR=4.7
ILAR                                LR       LR       10 09 18.4
       comp=Z,123nm,20.3s,baz=256,slow=32
       comp=Z,17nm,0.8s
COLD   Coldfoot           83.51  20 P        P        09 36 48.7  0.0
       baz=239
MCARA  McCarthy VSAT      83.60  26 P        P        09 36 49.4 +0.1
       baz=246
D22K   Ayikyak River      83.61  18 P        P        09 36 49.3 +0.1
       baz=237
H24K   Noodor Dome        83.62  21 P        P        09 36 49.6 +0.1
       baz=241
UCH    Uchtor             83.68 313 P        P        09 36 52.0 +1.2
       SNR=5.6
CHMS   Chumysh            83.68 314 P        P        09 36 50.1 -0.2
       SNR=6.4
AAK    Ala-Archa          83.78 314 P        P        09 36 53.1 +2.1
       SNR=6.9
AAK    Ala-Archa          83.78 314 P        P        09 36 50.9 -0.1
       comp=Z,9.1nm,0.8s,baz=114,slow=7.0,SNR=10
       comp=Z,9.1nm,0.8s
AAK    Ala-Archa          83.78 314 P        P        09 36 51.0 +0.1
AAK    Ala-Archa          83.78 314⇑iP       P        09 36 50.5 -0.5
AAK                               i *PP      pP       09 37 19.8 +1.0
AAK                                 pmax     pmax
       comp=Z,12nm,0.9s
RIDG   Independent Ri     83.82  24 P        P        09 36 51.0 +0.5
RIDG   Independent Ri     83.82  24 P        P        09 36 50.1 -0.4
       baz=244
USP    Ospenovka          83.93 314 P        P        09 36 51.9 +0.4
       SNR=13
A21K   Barrow             83.93  15 P        P        09 36 50.4 -0.4
       baz=233
MENT   Mentasta           83.94  25 P        P        09 36 51.6 +0.5
J25K   Salcha River,      84.00  23 IAmb     IAmb     09 36 54.2
       comp=Z,34nm,0.7s
J25K   Salcha River,      84.00  23 P        P        09 36 50.8 -0.7
       baz=244,SNR=22
M26K   Nabesna, AK        84.02  25 P        P        09 36 51.3 -0.2
       baz=246
BARN   Barnard Glacie     84.08  27 P        P        09 36 52.4 +0.3
E23K   Chandalar          84.13  19 P        P        09 36 52.0 -0.1
       baz=240,SNR=5.5
L26K   Log Cabin Wild     84.13  25 IAmb     IAmb     09 36 53.8
       comp=Z,14nm,0.6s
L26K   Log Cabin Wild     84.13  25 P        P        09 36 52.0 -0.1
       baz=246,SNR=7.0
A22K   Sinclair Lake      84.17  15 P        P        09 36 52.4 +0.4
       baz=234,SNR=5.9
G24K   Hadweenzic Riv     84.18  21 P        P        09 36 52.0 -0.2
       baz=242
CTG    Chitna Glacier     84.19  27 P        P        09 36 52.4 -0.1
       baz=248
MAW    Mawson             84.23 203 P        P        09 36 52.4 -0.1
       comp=Z,31nm,0.7s,baz=98,slow=6.8,SNR=40
MAW                                 LR       LR       10 12 10.0
       comp=Z,86nm,20.2s,baz=84,slow=34
       comp=Z,31nm,0.7s
D23K   Nanushuk River     84.26  18 P        P        09 36 53.1 +0.5
       baz=238
SCRK   Sand Creek         84.27  24 P        P        09 36 53.1 +0.3
       baz=245
EKS2   Erkin-Say          84.31 314 P        P        09 36 54.1 +0.6
       SNR=11
F24K   Squaw Lake         84.43  20 P        P        09 36 53.7 +0.2
       baz=241
TOLK   Toolik Lake Re     84.44  18 IAmb     IAmb     09 36 57.2
       comp=Z,20nm,0.8s
TOLK   Toolik Lake Re     84.44  18 P        P        09 36 53.8 +0.2
       baz=240,SNR=11
M27K   Edge Creek, AK     84.48  26 IAmb     IAmb     09 36 56.3
       comp=Z,27nm,0.7s
M27K   Edge Creek, AK     84.48  26 P        P        09 36 54.3 +0.3
       baz=247
QSPA   South Pole Qui     84.49 180          P        09 36 54.7 +0.7
QSPA                                IAmb     IAmb     09 36 55.3
       comp=Z,32nm,0.7s
QSPA   South Pole Qui     84.49 180 P        P        09 36 54.7 +0.7
E24K   Your Creek         84.50  19 P        P        09 36 54.0 +0.1
       baz=241
J26L   Joseph Creek       84.65  23 P        P        09 36 54.9 +0.2
       baz=246,SNR=5.6
G25K   Bearman Lake       84.69  21 P        P        09 36 54.9 +0.2
       baz=243
C23K   Itkillik River     84.74  17 P        P        09 36 54.9  0.0
       baz=238
L27K   Beaver Creek,      84.78  25 IAmb     IAmb     09 37 33.8
       comp=Z,33nm,1.5s
L27K   Beaver Creek,      84.78  25 P        P        09 36 55.3  0.0
       baz=247
BCAR   Beaver Creek A     84.80  25 P        P        09 36 55.5  0.0
YUK3   Moose Creek        84.88  26 P        P        09 36 56.2 +0.1
       baz=249
D24K   Happy Valley       84.93  18 IAmb     IAmb     09 36 58.3
       comp=Z,22nm,0.8s
D24K   Happy Valley       84.93  18 P        P        09 36 56.5 +0.6
       baz=240,SNR=9.1
BVCY   Beaver Creek       84.94  26 P        P        09 36 57.0 +0.8
       baz=248,SNR=6.7
YUK8   Steele Glacier     85.01  27 P        P        09 36 57.7 +0.8
       baz=249
I26K   Coal Creek Min     85.14  23 P        P        09 36 57.7 +0.7
       baz=246
O29M   Mount Kennedy      85.22  28 P        P        09 36 57.5 -0.2
       baz=250
F25K   Christian Rive     85.23  20 P        P        09 36 57.5  0.0
       baz=243,SNR=7.5
C24K   Franklin Bluff     85.25  18 IAmb     IAmb     09 36 59.8
       comp=Z,28nm,0.8s
C24K   Franklin Bluff     85.25  18 P        P        09 36 58.0 +0.5
       baz=240
E25K   Arctic Village     85.49  20 P        P        09 36 59.5 +0.7
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       baz=243
BMAR   Burnt Mountain     85.52  20          P        09 36 59.6 +0.6
YUK4   Talbot Arm         85.54  27 P        P        09 36 59.1 -0.3
       baz=250
G26K   Porcupine Rive     85.60  21 P        P        09 37 00.1 +0.8
       baz=245
S31K   Pelican            85.62  31 P        P        09 36 59.3 -0.3
       baz=253
D25K   Kavik River        85.78  18 P        P        09 37 00.0 -0.2
       baz=243
F26K   Sheenjek River     85.79  20 P        P        09 37 01.0 +0.7
       baz=245,SNR=7.6
SIT    Sitka              85.82  32 P        P        09 37 00.8 +0.3
       baz=253
I27K   Kandik River       85.85  23 IAmb     IAmb     09 37 04.2
       comp=Z,23nm,0.8s
I27K   Kandik River       85.85  23 P        P        09 37 00.6  0.0
       baz=247,SNR=12
HYT    Haines Junctio     85.89  28 IAmb     IAmb     09 37 05.1
       comp=Z,23nm,0.7s
HYT    Haines Junctio     85.89  28 P        P        09 37 01.9 +0.8
       baz=251,SNR=5.2
P30M   Million Dollar     85.92  29 P        P        09 37 01.6 +0.4
       baz=252
M29M   Somme Creek        86.00  26 IAmb     IAmb     09 37 03.9
       comp=Z,16nm,0.8s
M29M   Somme Creek        86.00  26 P        P        09 37 01.9 +0.4
       baz=250
NRIK   Noril'sk           86.00 341 P        P        09 37 00.4 -0.9
       comp=Z,9.0nm,0.7s,baz=80,slow=3.9,SNR=6.5
NRIK                                LR       LR       10 13 12.9
       comp=Z,90nm,21.7s,baz=122,slow=34
       comp=Z,9.0nm,0.7s
NRIK   Noril'sk           86.00 341          P        09 37 00.8 -0.4
NRIK                                IAmb     IAmb     09 37 37.5
       comp=Z,21nm,1.2s
NRIK   Noril'sk           86.00 341⇓iP       P        09 37 00.6 -0.6
NRIK                              i *PP      pP       09 37 29.2  0.0
NRIK                                pmax     pmax
       comp=Z,9.0nm,0.9s
PLBC   Pleasant Camp      86.00  29 P        P        09 37 02.0 +0.5
       baz=252
DZA    Taraz              86.12 314 eP       P        09 37 01.9 -0.5
       comp=Z,7.9nm,0.6s
DZA    Taraz              86.12 314 eP       P        09 37 01.9 -0.5
DZA                                 pmax     pmax
       comp=Z,8.0nm,0.6s
H27K   Steamboat Moun     86.13  22          P        09 37 02.3 +0.3
H27K                                IAmb     IAmb     09 37 05.7
       comp=Z,24nm,0.8s
H27K   Steamboat Moun     86.13  22 P        P        09 37 02.4 +0.4
       baz=247
GAR    Garm               86.16 310 P        P        09 37 02.4 -0.5
GAR                                 IAmb     IAmb     09 37 04.7
       comp=Z,27nm,1.0s
DAWY   Dawson             86.17  24 IAmb     IAmb     09 37 31.1
       comp=Z,20nm,1.2s
DAWY   Dawson             86.17  24 P        P        09 37 02.9 +0.7
       baz=249
N30M   Aishikik Lake      86.29  27 P        P        09 37 03.8 +0.9
       baz=252
G27K   Doyon Strip        86.31  21 P        P        09 37 03.3 +0.4
       baz=247
L29M   L29M               86.36  26 IAmb     IAmb     09 37 06.1
       comp=Z,21nm,0.8s
L29M   L29M               86.36  26 P        P        09 37 04.4 +1.2
       baz=251
I28M   Miner Creek        86.44  23 P        P        09 37 04.8 +1.1
       baz=249
C26K   Camden Bay         86.51  18 P        P        09 37 04.1 +0.5
       baz=244
O30N   Mendenhall         86.53  28 P        P        09 37 04.4 +0.3
       baz=252
KK31   Karatay Array      86.75 314 IAmb     IAmb     09 37 07.0
       comp=Z,19nm,1.0s
C27K   Jago River         86.76  19 P        P        09 37 05.8 +0.8
       baz=245
M30M   Minto, Yukon       86.77  26 P        P        09 37 05.9 +0.7
       baz=252
J29N   Klondike Camp      86.78  24 IAmb     IAmb     09 37 10.4
       comp=Z,16nm,0.8s
J29N   Klondike Camp      86.78  24 P        P        09 37 05.9 +0.7
       baz=250
K29M   Barlow Dome        86.87  25 IAmb     IAmb     09 37 08.3
       comp=Z,27nm,0.8s
K29M   Barlow Dome        86.87  25 P        P        09 37 06.5 +0.7
       baz=251
E27K   Coleen River       86.87  20 P        P        09 37 06.5 +0.9
       baz=247
N31M   Braeburn, Yuko     86.89  27 P        P        09 37 06.0 +0.2
       baz=253
I29M   Ogilvie Camp,      87.05  23 IAmb     IAmb     09 37 10.1
       comp=Z,20nm,0.8s
I29M   Ogilvie Camp,      87.05  23 P        P        09 37 06.5  0.0
       baz=250,SNR=10
WHY    Whitehorse         87.07  28 P        P        09 37 07.2 +0.4
       baz=254
BRLS   Borolday           87.22 314 eP       P        09 37 07.4 -0.4
BRLS   Borolday           87.22 314 eP       P        09 37 07.4 -0.4
F28M   Old Crow           87.26  21 IAmb     IAmb     09 37 10.9
       comp=Z,21nm,0.8s
F28M   Old Crow           87.26  21 P        P        09 37 07.8 +0.4
       baz=249,SNR=11
CHM    Chimkent           87.27 313 eP       P        09 37 07.6 -0.4
       comp=Z,7.8nm,0.4s
CHM    Chimkent           87.27 313 eP       P        09 37 07.6 -0.4
CHM                                 pmax     pmax
       comp=Z,8.0nm,0.4s
H29M   Whitestone         87.32  23 P        P        09 37 08.3 +0.5
       baz=250
P32M   Atlin              87.34  30 P        P        09 37 07.8 -0.2
       baz=255
MAYO   Mayo, Yukon        87.48  25 P        P        09 37 09.2 +0.7
       baz=253,SNR=7.4
D27M   Malcolm River      87.49  19 P        P        09 37 08.6  0.0
       baz=248
J30M   Hart River         87.59  24 IAmb     IAmb     09 37 13.5
       comp=Z,17nm,0.8s
J30M   Hart River         87.59  24 P        P        09 37 09.3 +0.1
       baz=252
G29M   Pine Creek         87.68  22 IAmb     IAmb     09 37 12.8
       comp=Z,13nm,0.8s
G29M   Pine Creek         87.68  22 P        P        09 37 10.0 +0.5
       baz=250
M31M   Drury Creek, Y     87.73  27 IAmb     IAmb     09 39 44.0
       comp=Z,73nm,2.0s
M31M   Drury Creek, Y     87.73  27 P        P        09 37 10.2 +0.4
       baz=254
E28M   Babbage River      87.73  20 IAmb     IAmb     09 37 13.2
       comp=Z,17nm,0.8s
E28M   Babbage River      87.73  20 P        P        09 37 10.2 +0.5
       baz=249
I30M   Mount Dempster     87.77  24 P        P        09 37 10.1  0.0
       baz=252
Q32M   Nakina River       87.89  30 P        P        09 37 10.5 -0.3
       baz=256
P33M   Teslin, Yukon      87.94  29 P        P        09 37 11.4 +0.5
       baz=255
EPYK   Eagle Plains       88.00  23 IAmb     IAmb     09 37 14.3
       comp=Z,22nm,0.8s
EPYK   Eagle Plains       88.00  23 P        P        09 37 11.1 +0.1
       baz=252
N32M   Quiet Lake         88.05  28 IAmb     IAmb     09 37 13.8
       comp=Z,20nm,0.8s
N32M   Quiet Lake         88.05  28 P        P        09 37 10.9 -0.5
       baz=255
E29M   Blow River         88.23  21 P        P        09 37 11.8 -0.2
       baz=251
S34M   Telegraph Cree     88.23  31 P        P        09 37 12.6 +0.4
       baz=257
D28M   Stokes Point       88.26  20 P        P        09 37 12.4 +0.4
       baz=250
G30M   tAoh Zraii Nji     88.38  22 P        P        09 37 13.0 +0.2
       baz=252
R33M   Jennings River     88.65  30 P        P        09 37 14.2 -0.2
       baz=257
BVAR   Borovoye Array     88.67 323 P        P        09 37 13.2 -1.3
       comp=Z,4.6nm,0.7s,baz=108,slow=4.8,SNR=4.5
BVAR                                LR       LR       10 18 58.5
       comp=Z,49nm,19.3s,baz=88,slow=37
       comp=Z,4.6nm,0.7s
BORK   Borovoye           88.72 323⇑iP       P        09 37 14.1 -0.5
BORK                              i *PP      pP       09 37 44.0 +1.2
BORK                                pmax     pmax
       comp=Z,7.0nm,0.9s
F30M   Barrier River      88.73  22 P        P        09 37 13.9 -0.5
       baz=253
H31M   Peel River         88.76  23 P        P        09 37 14.1 -0.5
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       baz=254
BBB    Bella Bella        88.76  37 LR       LR       10 08 50.1
       comp=Z,86nm,20.3s,baz=220,slow=30
F31M   Tsiigehtchic       89.44  22 P        P        09 37 17.1 -0.5
       baz=254
INK    Inuvik             89.75  21 LR       LR       10 16 18.6
       comp=Z,86nm,19.6s,baz=296,slow=35
INK    Inuvik             89.75  21 P        P        09 37 18.3 -0.7
       baz=255
WTLY   Watson Lake, Y     89.88  30 IAmb     IAmb     09 37 22.6
       comp=Z,18nm,1.0s
WTLY   Watson Lake, Y     89.88  30 P        P        09 37 20.0  0.0
       baz=259
K02D   Willamette Mer     90.30  47 IAmb     IAmb     09 37 23.7
       comp=Z,12nm,0.7s
I03D   Drain, OR          90.65  46 IAmb     IAmb     09 37 25.4
       comp=Z,18nm,0.9s
O02D   Mt. Diablo Mer     90.65  50 IAmb     IAmb     09 37 26.9
       comp=Z,13nm,0.8s
M02C   Callahan           90.74  49 IAmb     IAmb     09 37 26.4
       comp=Z,12nm,0.8s
N02D   Trinity Center     90.81  49 IAmb     IAmb     09 37 28.9
       comp=Z,12nm,0.7s
YBH    Yreka Blue Hor     90.89  48 IAmb     IAmb     09 37 26.8
       comp=Z,10nm,0.8s
BBOR   Butler Butte       91.04  47 IAmb     IAmb     09 37 28.5
       comp=Z,8.1nm,0.8s
LIRD   Liard River Hi     91.10  31 P        P        09 37 25.6  0.0
       baz=261
O03E   Paynes Creek       91.42  50 IAmb     IAmb     09 37 31.7
       comp=Z,22nm,1.2s
G04A   Mulino             91.44  45 IAmb     IAmb     09 37 35.7
       comp=Z,21nm,0.9s
TOAD   Toad River Com     91.46  31 P        P        09 37 27.2 -0.2
       baz=262
H04A   Detroit Lake       91.59  45 IAmb     IAmb     09 37 33.7
       comp=Z,28nm,1.5s
K04D   Chiloquin, OR      91.69  48 P        P        09 37 28.9  0.0
WIFE   Three Sisters-     91.79  46 IAmb     IAmb     09 37 30.9
       comp=Z,12nm,0.7s
J05D   Fort Rock, OR      92.14  47 P        P        09 37 31.1 +0.1
J05D                                IAmb     IAmb     09 37 32.5
       comp=Z,14nm,0.8s
I05D   Terrebonne, OR     92.16  46 P        P        09 37 31.1 +0.1
KOTAN  Kotaneelee Air     92.22  30 P        P        09 37 30.6 -0.2
       baz=263
CMB    Columbia Colle     92.30  52 IAmb     IAmb     09 37 35.8
       comp=Z,16nm,1.4s
K05A   Summer Lake        92.33  47 IAmb     IAmb     09 37 33.5
       comp=Z,14nm,0.8s
PINE   Pine Mountain      92.40  46 IAmb     IAmb     09 37 33.6
       comp=Z,9.4nm,0.8s
SYO    Syowa Base         92.41 200⇑iP       P        09 37 31.4 -0.1
SYO    Syowa Base         92.41 200⇓ePcP     PcP      09 37 34.4 +2.2
WRGLY  Wrigley            92.87  27 P        P        09 37 33.3 -0.4
       baz=264
PNTR   Pine Nut           93.00  51 IAmb     IAmb     09 37 37.2
       comp=Z,9.0nm,0.8s
A36M   Sachs Harbour      93.25  18 IAmb     IAmb     09 37 38.0
       comp=Z,26nm,0.8s
A36M   Sachs Harbour      93.25  18 P        P        09 37 34.7 -0.6
       baz=262
MDPB   Devils Postpil     93.30  53 IAmb     IAmb     09 37 38.0
       comp=Z,11nm,0.8s
C36M   Paulatuk           93.32  21 IAmb     IAmb     09 37 37.7
       comp=Z,14nm,0.7s
C36M   Paulatuk           93.32  21 P        P        09 37 34.7 -0.9
       baz=264
E07A   Sunnyside          93.39  44 IAmb     IAmb     09 37 42.6
       comp=Z,5.6nm,0.8s
NVAR   Mina Array Bea     93.96  52 P        P        09 37 40.1 +0.5
       comp=Z,8.5nm,0.8s,baz=252,slow=6.7,SNR=55
       comp=Z,8.5nm,0.8s
CWC    Cottonwood Cre     94.01  54 IAmb     IAmb     09 37 41.3
       comp=Z,11nm,0.9s
NV11   Mina Array Sit     94.08  52 IAmb     IAmb     09 37 41.5
       comp=Z,7.6nm,0.8s
J08A   Circle Bar Ran     94.15  47 IAmb     IAmb     09 37 43.5
       comp=Z,5.8nm,0.8s
CLC    China Lake         94.36  55 IAmb     IAmb     09 37 43.0
       comp=Z,7.0nm,0.9s
WSHM   Spangler Hills     94.43  55 IAmb     IAmb     09 37 43.4
       comp=Z,11nm,1.1s
PFO    Pinyon Flats O     95.17  57 LR       LR       10 13 06.4
       comp=Z,125nm,20.2s,baz=272,slow=31
F10A   Beach Ranch, E     95.18  44 IAmb     IAmb     09 37 46.0
       comp=Z,9.8nm,0.8s
NEW    Newport            95.34  42 LR       LR       10 13 50.8
       comp=Z,80nm,20.2s,baz=266,slow=31
NEW    Newport            95.34  42 IAmb     IAmb     09 38 13.0
       comp=Z,7.1nm,1.2s
SHOC   Shoshone, Teco     95.44  55 IAmb     IAmb     09 37 47.3
       comp=Z,12nm,0.8s
TPNV   Topopah Spring     95.50  53 IAmb     IAmb     09 37 49.5
       comp=Z,14nm,0.9s
ARTI   Arti               95.94 326 LR       LR       10 22 42.9
       comp=Z,96nm,19.4s,baz=88,slow=36
AKTO   Aktyubinsk         96.04 320 LR       LR       10 23 12.1
       comp=Z,30nm,19.6s,baz=157,slow=37
MFID   Camas Ranch        96.08  47 IAmb     IAmb     09 37 55.8
       comp=Z,22nm,2.0s
SHPR   Sheep Range        96.36  54 IAmb     IAmb     09 37 54.2
       comp=Z,15nm,1.8s
BELA   Belgrano 2         96.71 179 P        P        09 37 51.2 +0.1
YKA    Yellowknife Ar     96.89  28 P        P        09 37 51.7 -0.4
       comp=Z,2.2nm,0.7s,baz=275,slow=5.3,SNR=18
YKA                                 PKiKP    PKiKP    09 42 27.2 -0.6
       comp=Z,0.4nm,0.7s,baz=277,slow=2.1,SNR=7.2
YKA                                 PKKPbc   PKKPbc   09 54 32.8 -3.3
       comp=Z,0.2nm,0.7s,baz=71,slow=1.8,SNR=3.6
YKA                                 LR       LR       10 16 04.9
       comp=Z,111nm,21.6s,baz=338,slow=32
       comp=Z,2.2nm,0.7s
SPR3   Spring Creek 3     97.09  51 IAmb     IAmb     09 37 57.6
       comp=Z,7.5nm,0.8s
EDM    Edmonton           97.78  37 IAmb     IAmb     09 39 28.0
       comp=Z,44nm,0.4s
BCYI   Bear Canyon        97.85  46 IAmb     IAmb     09 39 15.7
       comp=Z,17nm,2.0s
LCMT   Little Creek M     97.91  54 IAmb     IAmb     09 38 47.8
       comp=Z,22nm,2.0s
SZCU   Shurtz Canyon      98.05  53 IAmb     IAmb     09 40 14.7
       comp=Z,22nm,1.9s
KNB    Kanab              98.25  54 IAmb     IAmb     09 38 02.6
       comp=Z,7.1nm,1.2s
HVU    Hansel Valley      98.31  49 IAmb     IAmb     09 38 02.6
       comp=Z,3.8nm,0.8s
BOZ    Bozeman (W)        99.09  45 IAmb     IAmb     09 38 07.4
       comp=Z,7.8nm,1.1s
NVL    N'lazarevskaya     99.20 193 eP       Pdif     09 38 03.3 +1.0
NVL                                 e                 09 42 06.6
NVL                                 eS       SKSac    09 48 30.0 -0.4
NVL                                 eSS      SS       09 56 15.5 +1.3
NVL                                 eSSS     SSS      10 00 05.1
NVL                                 pmax     pmax
       comp=Z,6.0nm,0.8s
HWUT   Hardware Ranch     99.22  49 IAmb     IAmb     09 38 31.9
       comp=Z,6.1nm,1.1s
TROLL  Troll, Antarti     99.98 190 ⇓P       Pdif     09 38 06.3 +0.3
       comp=Z,331nm,0.8s
PDAR   Pinedale Array    100.68  48 P        Pdif     09 38 09.2 -0.6
       comp=Z,3.1nm,0.6s,baz=216,slow=2.0,SNR=41
SNAA   Sanae             101.10 188 ⇑P       Pdif     09 38 10.8 -0.1
       comp=Z,35nm,0.7s
SNAA   Sanae             101.10 188 P        Pdif     09 38 10.5 -0.4
       comp=Z,2.4nm,0.9s,baz=149,slow=6.5,SNR=4.5
SNAA   Sanae             101.10 188⇓iP       Pdif     09 38 11.4 +0.5
SNAA                                pmax     pmax
       comp=Z,4.0nm,1.2s
TXAR   Lajitas Array     106.08  61 Pdiff    Pdif     09 38 35.3 +1.3
       comp=Z,0.5nm,0.9s,baz=316,slow=1.8,SNR=4.7
RAYN   Ar Rayn           106.31 293 ⇑P       Pdif     09 38 43.1 +8.1
ARCES  ARCESS Array B    106.96 343 PKiKP    PKiKP    09 42 45.2 -0.7
       comp=Z,2.6nm,0.7s,baz=86,slow=2.0,SNR=8.4
ARCES                               PKKPbc   PKKPbc   09 54 04.5 -2.4
       comp=Z,3.1nm,1.0s,baz=240,slow=3.0,SNR=4.2
FINES  FINESS Array B    110.89 335 PKiKP    PKiKP    09 42 52.6 -0.9
       comp=Z,2.0nm,0.8s,baz=98,slow=3.9,SNR=5.6
MNK    Minsk             113.18 328 i P      Pdif     09 39 03.5 -1.3
MNK                                 i                 09 42 57.0
MNK                                 i                 09 43 48.1
MNK                                 i PPP    PPP      09 46 11.9
MNK                                 i                 09 49 58.8
MNK                                 i SS     SS       09 59 28.6 +3.3
MNK                                 i SSS    SSS      10 03 34.3
MNK                                 pmax     pmax
       comp=N,5.0nm,0.6s
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MNK				pmax	pmax		
	comp=E,8.0nm,0.7s						
MNK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MNK				MLR	MLR		
	comp=Z,123nm,21.0s						
MNK				MLR	MLR		
	comp=E,253nm,19.0s						
MNK				MLR	MLR		
	comp=N,504nm,23.0s						
AKASG	Malin Array Be	113.95	324	PKP	PKiKP	09 42 58.7	-0.9
	comp=N,0.9nm,0.5s,baz=64,slow=2.2,SNR=1.6						
BRTR	Keskin Array B	114.36	311	PKP	PKPdf	09 43 00.1	-0.9
	comp=N,0.8nm,0.8s,baz=66,slow=4.9,SNR=3.1						
HFS	Hagfors	116.61	338	PKP	PKPdf	09 43 02.8	-1.6
	comp=N,1.6nm,0.7s,baz=46,slow=4.3,SNR=4.5						
NB2	NORSAR Subarra	116.90	339	PKPdf	PKPdf	09 43 03.8	-1.3
	comp=Z,1.5nm,0.7s,baz=44,slow=1.9						
NOA	NORSAR Array B	116.90	339	PKP	PKPdf	09 43 04.1	-1.0
	comp=Z,1.1nm,0.6s,baz=48,slow=1.8,SNR=15						
BOSA	Boshof	117.73	234	PKP	PKiKP	09 43 08.0	+0.2
	comp=Z,3.5nm,0.6s,baz=124,slow=2.8,SNR=12						
WCI	Wyandotte Cave	118.87	49		PKPdf	09 43 09.2	-0.3
WCI	Wyandotte Cave	118.87	49	PKIKP	PKPdf	09 43 09.2	-0.3
LANS	Liptovska Anna	120.29	325	*e*PKIKP	PKiKP	09 43 13.0	+0.9
LANS	Liptovska Anna	120.29	325	*e*PKP	PKiKP	09 43 13.0	+0.9
PLCA	Paso Flores	120.34	144	PKP	PKiKP	09 43 12.6	0.0
	comp=Z,2.7nm,0.6s,baz=237,slow=2.4,SNR=20						
PLCA				SKP	SKPdf	09 46 40.3	+2.2
	comp=Z,4.3nm,1.3s,baz=251,slow=4.3,SNR=3.5						
PLCA				PKP2ab		09 59 55.3	
	comp=Z,1.6nm,1.0s,baz=318,slow=4.9,SNR=3.6						
STEB	Steborice	120.82	327	*e*PKP	PKPdf	09 43 12.8	-0.1
VLDQ	Val d'Or	120.89	36		PKPdf	09 43 12.1	-1.0
OSTC	Ostas	121.32	328	*e*PKIKP	PKiKP	09 43 15.6	+1.6
OSTC	Ostas	121.32	328	*e*PKP	PKiKP	09 43 15.6	+1.6
MODS	Modra-Piesok	121.93	325	*e*PKIKP	PKiKP	09 43 19.3	+4.0
MODS	Modra-Piesok	121.93	325	*e*PKP	PKiKP	09 43 19.3	+4.0
SCHQ	Schefferville	122.18	25	PKP	PKPdf	09 43 14.6	-0.8
	comp=Z,4.7nm,0.9s,baz=180,slow=1.0,SNR=3.5						
PVCC	Panska Ves	122.20	329	*e*PKIKP	PKiKP	09 43 15.8	+0.1
PVCC	Panska Ves	122.20	329	*e*PKP	PKiKP	09 43 15.8	+0.1
BI02	San Fabin de	122.45	140		PKiKP	09 43 17.6	+0.8
CLL	Collm	122.53	330		PKPdf	09 43 16.2	+0.1
CLL	Collm	122.53	330	PKIKP	PKPdf	09 43 16.2	+0.1
CLL	Collm	122.53	330	*i* PKPdf	PKPdf	09 43 15.7	-0.4
	comp=Z,6.0nm,0.7s						
CLL				AMS	AMS	10 38 00.0	
	comp=Z,100nm,19.5s						
PRU	Pruhonice	122.53	328	*e*PKIKP	PKPdf	09 43 15.7	-0.5
PRU	Pruhonice	122.53	328	*e*PKP	PKPdf	09 43 15.7	-0.5
HSKC	Hora Svate Kat	122.73	329	*e*PKP	PKPdf	09 43 16.7	+0.1
RONA	Rosalia, Austr	122.85	325	*i* PKP	PKPdf	09 43 16.3	-0.7
	comp=Z,2.3nm,0.6s						
CONA	Conrad Observa	122.97	326	*i* PKP	PKPdf	09 43 16.8	-0.4
	comp=Z,2.3nm,0.8s						
ZVC	Zvikov	123.03	328	*e*PKP	PKPdf	09 43 17.0	-0.2
CKRC	Cesky Krumlov	123.33	327	*e*PKIKP	PKPdf	09 43 17.6	-0.2
CKRC	Cesky Krumlov	123.33	327	*e*PKP	PKPdf	09 43 17.6	-0.2
ARSA	Arzberg	123.53	325	*i* PKP	PKPdf	09 43 17.5	-0.7
	comp=Z,3.1nm,1.2s						
KHC	Kasperske Hory	123.54	328		PKPdf	09 43 18.2	0.0
KHC	Kasperske Hory	123.54	328	PKIKP	PKPdf	09 43 18.2	0.0
KHC	Kasperske Hory	123.54	328	*e*PKP	PKPdf	09 43 17.7	-0.5
GEC2	GERESS Array S	123.64	327		PKPdf	09 43 18.4	0.0
GERES	GERESS Array B	123.64	327	PKP	PKPdf	09 43 18.1	-0.4
	comp=Z,3.3nm,0.6s,baz=58,slow=2.3,SNR=32						
SSPA	Standing Stone	124.08	44		PKPdf	09 43 19.6	+0.2
SOKA	Soboth	124.12	325	*i* PKP	PKPdf	09 43 18.6	-0.9
	comp=Z,3.9nm,1.0s						
KOOLE	Kule	124.18	238		PKiKP	09 43 21.6	+0.9
M57A	Sunshine Farm,	124.29	43		PKiKP	09 43 20.1	-0.1
LONY	Lake Ozonia	124.37	38		PKPdf	09 43 19.9	0.0
J59A	Piesco	125.00	39		PKPdf	09 43 21.4	+0.2
LESA	Schwarzleotal	125.03	326	*i* PKP	PKPdf	09 43 20.2	-1.0
	comp=Z,3.4nm,0.6s						
ABTA	Abfaltersbach	125.52	326	*i* PKP	PKPdf	09 43 21.0	-1.2
	comp=Z,5.2nm,0.9s						
WATA	Walderalm	125.68	327	*i* PKP	PKPdf	09 43 21.8	-0.7
	comp=Z,3.1nm,0.6s						
WTTA	Wattenberg	125.69	327	*i* PKP	PKPdf	09 43 22.1	-0.5
	comp=Z,7.1nm,0.8s						
TRY	Troy	125.90	40		PKiKP	09 43 23.7	+0.5
SQTA	Sankt Quirin	125.95	327	*i* PKP	PKPdf	09 43 22.6	-0.4
	comp=Z,3.8nm,0.6s						
EKA	Eskdalemuir Ar	126.12	342	PKP	PKPdf	09 43 22.4	-0.5
	comp=Z,1.2nm,0.5s,baz=12,slow=2.3,SNR=8.9						
HNH	Hanover	126.26	38		PKiKP	09 43 24.0	0.0
FETA	Feichten	126.33	327	*i* PKP	PKPdf	09 43 23.4	-0.4
	comp=Z,5.2nm,0.9s						
DAVA	Damuels	126.62	328	*i* PKP	PKPdf	09 43 24.0	-0.3
	comp=Z,4.7nm,0.5s						
L61B	Northampton	126.67	40		PKiKP	09 43 24.8	0.0
BMRD	Maredsous	127.09	333	*d*PKPdf	PKiKP	09 43 25.5	+0.1
TUE	Stuetta	127.42	327		PKPdf	09 43 25.9	0.0
AC05	El Transito	127.70	133		PKiKP	09 43 28.5	+1.0
ATAH	Atahualpa	129.21	104	PKP	PKiKP	09 43 31.9	+0.7
	comp=Z,11nm,0.8s,baz=290,slow=1.8,SNR=6.5						
ROSC	El Rosal	134.93	89	PKP	PKiKP	09 43 42.2	-0.6
	comp=Z,22nm,0.7s,baz=65,slow=0.6,SNR=9.6						
ROSC	El Rosal	134.93	89		PKPdf	09 43 38.8	-2.5
LPAZ	La Paz	135.72	120	PKP	PKPdf	09 43 40.6	-2.4
	comp=Z,11nm,0.9s,baz=258,slow=1.3,SNR=16						
LPAZ				SKP	SKPdf	09 47 08.1	-0.2
	comp=Z,7.5nm,1.0s,baz=254,slow=4.0,SNR=5.8						
CPUP	Villa Florida	138.16	140	PKP	PKPdf	09 43 44.6	-1.9
	comp=Z,5.4nm,0.9s,baz=272,slow=4.9,SNR=12						
CPUP				SKP	SKPdf	09 47 12.6	+0.9
	comp=Z,3.9nm,0.9s,baz=223,slow=3.7,SNR=6.5						
ESDC	Sonseca Array	139.12	330	SKPbc	SKPbc	09 47 11.6	-1.7
	comp=Z,1.0nm,0.8s,baz=51,slow=2.9,SNR=4.5						
HUMP	Col San Antoni	141.95	67		PKPdf	09 43 49.2	-4.3
AQDB	Aquidauana	143.26	135		PKPbc	09 43 54.3	+1.2
PTLB	Pontes e Lacer	143.68	125		PKPbc	09 43 55.2	+0.8
VILB	Vilhena	144.06	121		PKPbc	09 43 56.4	+0.8
MD01	Midelt array s	144.56	323		PKPab	09 43 56.3	-0.4
MD31	MD31	144.56	323		PKPdf	09 43 57.7	-0.2
GDHS	Morne Mazeau,	146.20	69		PKPbc	09 44 02.0	-0.2
BIM	Bigot	147.27	72		PKPbc	09 44 05.1	-0.2
BOAV	Boa Vista	148.47	94		PKPdf	09 44 05.9	+1.1
TORD	Torodi Ar. Bea	148.73	286	PKPbc	PKPbc	09 44 08.4	-0.8
	comp=Z,22nm,0.7s,baz=62,slow=3.6,SNR=73						
TORD	Torodi Ar. Bea	148.73	286		PKPbc	09 44 09.6	+0.5
BDFB	Brasilia	151.85	138	PKP	PKPdf	09 44 11.3	+1.1
	comp=Z,6.5nm,0.9s,baz=167,slow=0.7,SNR=5.3						
BDFB				PKPbc	PKiKP	09 44 17.4	+0.4
	comp=Z,28nm,0.6s,baz=245,slow=1.0,SNR=17						
DBIC	Dimbokro	155.90	274	PKP	PKPdf	09 44 15.2	-0.6
	comp=Z,1.5nm,0.6s,baz=81,slow=1.4,SNR=4.0						

BJI ***26*** *09:26:37.8, 38°.52N×141°.80E, h69^{km}, mB5.0/22, mb5.0/71, Ms4.3/21, Ms7 4.0/22*

JMA ***26*** *09:26:38.6±0.1, 38°.5N±0°.2×141°.8E±0°.6, h49^{km}, MD4.7/40, MW4.7/40, KINKAZAN REGION*

JMA Felt III J1 at KINKAZAN REGION .

IDC ***26*** *09:26:38.3±1.6, 38°.54N×141°.92E, h56^{km}±13^{km}, mb4.5/30, mbtmp4.8/35, MS3.7/21, Error ellipse: s-maj=13.6km s-min=9.2km az=108.0*

NIED ***26*** *09:26:38.6, 38°.53N×141°.82E, h49^{km}, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.59; $M_{\theta\theta}$-0.09; $M_{\phi\phi}$-0.49; $M_{r\theta}$0.36; $M_{\theta\phi}$-0.27; $M_{\phi r}$0.77; Fault plane solution: $M_0$1.05000×10^{16} NP1: ϕ_s208.00000°, δ18.00000°, λ93.00000°. NP2: ϕ_s25.00000°, δ72.00000°, λ89.00000°.*

BGR ***26*** *09:26:39.9, 39°.10N×142°.13E, h33^{km}, mb4.7*

NEIC ***26*** *09:26:40.6±1.3, 38°.62N±0°.06×141°.7E±0°.1, h65^{km}±6^{km}, mb4.9/160, Error ellipse: s-maj=13.0km s-min=7.3km az=122.0*

ISC 26 09:26:39.2±0.5**, 38°.55N**±0°.04×**141°.79E**±0°.04**, h60**^{km}±3^{km}**, h60**^{km}**:pP-P, n548, σ1^{s}.29**/455**, mb4.8**/159**, MS3.9**/21**, 13C-34D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.35	227	⇓*i*P	Pn	09 26 48.0	-1.6
JIKH				⇓S	Sn	09 26 54.6	-2.6
JIKH	Ishinomakikobu	0.35	227	A	A	09 26 48.0	
	comp=N,146nm,0.9s,comp=E,274nm,1.6s						
JKMT	Kesennumamotoy	0.36	316	⇓P	Pn	09 26 48.6	-1.1
JKMT				⇓S	Sn	09 26 55.4	-2.0
JKMT	Kesennumamotoy	0.36	316	A	A	09 26 48.6	
	comp=N,52nm,1.9s,comp=E,75nm,1.0s						
JIO	Ouri	0.36	254	⇓*i*P	Pn	09 26 48.3	-1.4
JIO				⇓*i*S	Sn	09 26 55.0	-2.4
JIO	Ouri	0.36	254	A	A	09 26 48.3	
	comp=N,102nm,0.6s,comp=E,146nm,0.4s						
OFUJ	Ofunato	0.54	350	⇓P	Pn	09 26 50.5	-1.0
OFUJ	Ofunato	0.54	350	A	A	09 26 50.5	
	comp=N,68nm,0.9s,comp=E,104nm,2.3s						
JMK	Ichinoseki	0.60	312	⇓P	Pn	09 26 51.6	-0.6
JMK				⇓S	Sn	09 27 00.7	-1.0
JMK	Ichinoseki	0.60	312	A	A	09 26 51.6	
	comp=N,42nm,4.1s,comp=E,91nm,0.9s						
JOFO	Osakifurukawao	0.69	274	A	A	09 26 52.5	
	comp=N,155nm,0.9s,comp=E,109nm,2.4s						
JOU	Okura	0.91	258	⇓*i*P	Pn	09 26 55.1	-0.9
JOU				⇓S	Sn	09 27 07.5	-0.9
JOU	Okura	0.91	258	A	A	09 26 55.1	
	comp=N,42nm,1.2s,comp=E,35nm,0.7s						
JOM	Ohasama	1.00	337	⇓*i*P	Pn	09 26 56.8	-0.4
JOM	Ohasama	1.00	337	A	A	09 26 56.8	
	comp=N,14nm,5.3s,comp=E,29nm,2.0s						
MIYJ	Miyakonagasawa	1.02	1	A	A	09 26 57.2	
	comp=N,15nm,2.1s,comp=E,13nm,1.4s						
JMM	Marumori	1.04	229	⇓*i*P	Pn	09 26 56.3	-1.4
JMM				⇓S	Sn	09 27 09.6	-1.9
JMM	Marumori	1.04	229	A	A	09 26 56.3	
	comp=N,22nm,0.4s,comp=E,17nm,0.7s						
JMST	Minamisoumatoc	1.09	221	A	A	09 26 57.8	
	comp=N,31nm,1.3s,comp=E,21nm,0.5s						
JYK	Kaneyama	1.18	288	⇓*i*P	Pn	09 26 59.2	-0.3
JYK	Kaneyama	1.18	288	A	A	09 26 59.2	
	comp=N,13nm,1.1s,comp=E,20nm,1.0s						
JRG	Rokugo	1.23	313	⇓*i*P	Pn	09 26 59.9	-0.3
JRG	Rokugo	1.23	313	A	A	09 26 59.9	
	comp=N,14nm,1.7s,comp=E,17nm,2.0s						
JSZI	Iwateshizukuis	1.35	331	A	A	09 27 02.0	
	comp=N,28nm,2.3s,comp=E,27nm,3.7s						
JTH	Tanohata	1.39	2	A	A	09 27 02.4	
	comp=N,9.0nm,1.3s,comp=E,12nm,3.7s						
JFK	Kawauchi	1.39	212	⇓*i*P	Pn	09 27 01.0	-1.3
JFK				⇓S	Sn	09 27 17.6	-2.1
JFK	Kawauchi	1.39	212	A	A	09 27 01.0	
	comp=N,19nm,0.4s,comp=E,15nm,0.5s						
JYS	Shirataka	1.40	257	⇓*i*P	Pn	09 27 02.0	-0.4
JYS	Shirataka	1.40	257	A	A	09 27 02.0	
	comp=N,32nm,3.2s,comp=E,20nm,1.7s						
JYAR	Yonezawaarcadi	1.45	244	A	A	09 27 03.0	
	comp=N,33nm,1.3s,comp=E,33nm,1.3s						
JKZ	Kuzumaki	1.47	346	A	A	09 27 03.7	
	comp=N,9.0nm,1.2s,comp=E,12nm,2.9s						
JOTO	OTAMA OYAMA	1.52	230	A	A	09 27 03.9	
	comp=N,30nm,0.6s,comp=E,19nm,0.7s						
JYYZ	Yamagatayuza	1.53	288	A	A	09 27 04.4	
	comp=N,26nm,2.4s,comp=E,40nm,2.9s						
JYW	Yuwa	1.58	309	A	A	09 27 05.3	
	comp=N,44nm,1.6s,comp=E,39nm,1.2s						
JYA	Atsumi	1.63	272	A	A	09 27 05.8	
	comp=N,14nm,0.7s,comp=E,16nm,0.8s						
ONAJ	Iwakimizuishiy	1.65	209	A	A	09 27 05.6	
	comp=N,27nm,0.3s,comp=E,26nm,0.3s						
JKEN	Kujiedanarisaw	1.65	358	A	A	09 27 06.2	
	comp=N,39nm,0.6s,comp=E,24nm,0.7s						
JFFD	Fukushimafurud	1.75	214	A	A	09 27 07.2	
	comp=N,8.0nm,1.0s,comp=E,8.0nm,1.4s						
JANG	Nango	1.83	353	A	A	09 27 08.8	
	comp=N,8.0nm,1.3s,comp=E,7.0nm,0.6s						
JTB	Tobi-shima	1.86	291	A	A	09 27 09.2	
	comp=N,9.0nm,1.1s,comp=E,13nm,1.8s						
JFY	Yanaizu	2.01	236	A	A	09 27 10.9	
	comp=N,5.0nm,1.7s,comp=E,7.0nm,3.3s						
JNS	Sasagawa	2.08	250	A	A	09 27 12.1	
	comp=N,6.0nm,2.1s,comp=E,6.0nm,1.4s						
JNTW	Noshirotokiwa	2.13	324	A	A	09 27 13.1	
	comp=N,24nm,1.7s,comp=E,21nm,2.7s						
JSB	Shiboa	2.17	224	A	A	09 27 13.1	
	comp=N,14nm,2.7s,comp=E,13nm,2.0s						
JHHS	Hirosakihyakuz	2.37	333	A	A	09 27 16.5	
	comp=N,18nm,2.5s,comp=E,13nm,2.9s						
JHYU	Hitachinakayam	2.41	204	A	A	09 27 16.4	
	comp=N,6.0nm,0.5s,comp=E,6.0nm,0.9s						
JIW	Iwasaki	2.46	326	A	A	09 27 17.8	
	comp=N,6.0nm,3.1s,comp=E,7.0nm,0.9s						
JARK	Aomorirokkasho	2.47	353	A	A	09 27 17.9	
	comp=N,7.0nm,1.1s,comp=E,9.0nm,3.1s						
JOG3	Oga3	2.51	304	A	A	09 27 12.1	
	comp=N,12nm,1.9s,comp=E,14nm,2.0s						
JIZZ	Izumozaki	2.64	248	A	A	09 27 20.0	
	comp=N,11nm,5.9s,comp=E,11nm,4.2s						
JAHD	Aomorihigashid	2.73	353	A	A	09 27 21.6	
	comp=N,18nm,1.6s,comp=E,16nm,0.9s						
JAG	Ashikaga	2.82	222	A	A	09 27 22.4	
	comp=N,3.0nm,1.5s,comp=E,3.0nm,2.6s						
JSD	Sado	2.83	261		Pn	09 27 21.1	-0.7
JSD	Sado	2.83	261	P	Pn	09 27 21.6	-0.2
JOT	Ohata	2.88	349	A	A	09 27 23.8	
	comp=N,4.0nm,2.2s,comp=E,5.0nm,5.1s						
JCAJ	Choshiashikaji	2.92	195	A	A	09 27 23.7	
	comp=N,5.0nm,6.6s,comp=E,7.0nm,2.0s						
JSR	Shiriuchi	3.15	341	A	A	09 27 27.6	
	comp=N,6.0nm,1.8s,comp=E,4.0nm,4.9s						
JGK	Kuni	3.20	233	A	A	09 27 27.8	
	comp=N,4.0nm,4.9s,comp=E,3.0nm,1.6s						
JJN	Nakama	3.22	244	A	A	09 27 28.2	
	comp=N,3.0nm,2.4s,comp=E,4.0nm,3.5s						
TOK	Tokyo	3.29	210	A	A	09 27 28.9	
	comp=N,12nm,1.3s,comp=E,12nm,2.1s						
MJAR	Matsushiro Arr	3.48	236	P	Pn	09 27 31.8	+0.9
	comp=E,242nm,1.2s,baz=40,slow=11,SNR=156						
MJAR				S	Sn	09 28 16.2	+5.4
	comp=E,70nm,0.7s,baz=51,slow=24,SNR=4.6						
MJAR				LR	LR	09 29 17.7	
	comp=E,902nm,20.7s,baz=59,slow=45						
MAJO	Matsushiro	3.48	236		Pn	09 27 31.6	+0.7
MAJO	Matsushiro	3.48	236	P	Pn	09 27 32.6	+1.7
MJB9	Matsu-Tunnel	3.48	236		Pn	09 27 32.7	+1.8
ERM	Erimo	3.61	16		Pn	09 27 32.4	-0.2
ERM	Erimo	3.61	16	P	Pn	09 27 32.6	0.0
JEM	Erimo	3.61	16	P	Pn	09 27 32.7	+0.1
JYM2	Yakumo 2	3.72	343	A	A	09 27 35.6	
	comp=N,3.0nm,4.2s,comp=E,3.0nm,4.4s						
JNBK	Urakawa-nobuka	3.79	11	A	A	09 27 36.5	
	comp=N,5.0nm,4.3s,comp=E,6.0nm,6.9s						
TATJ	Tateyama 2	3.83	204	A	A	09 27 36.5	
	comp=N,11nm,3.0s,comp=E,10.0nm,2.6s						
JOD2	Odawara 2	3.93	214	A	A	09 27 38.0	
	comp=N,5.0nm,2.1s,comp=E,6.0nm,1.4s						
JIAM	Iburiatsuma	4.07	1	A	A	09 27 40.3	
	comp=N,7.0nm,1.0s,comp=E,6.0nm,3.0s						
JHTM	Izuhatsuma	4.23	213	A	A	09 27 42.1	
	comp=N,8.0nm,1.3s,comp=E,7.0nm,1.0s						
JIM2	Oshima 3	4.27	207	A	A	09 27 42.7	
	comp=N,5.0nm,0.7s,comp=E,5.0nm,9.6s						
JNY	Yasuok	4.48	226	A	A	09 27 45.7	
	comp=N,8.0nm,2.0s,comp=E,3.0nm,2.2s						
SHZ3	Shizuoka 3	4.51	221	A	A	09 27 46.2	
	comp=N,3.0nm,2.6s,comp=E,3.0nm,1.2s						
JGF	Kuroka	4.61	232		Pn	09 27 47.9	+1.5
JGF	Kuroka	4.61	232	P	Pn	09 27 48.4	+2.1
JSG	Sagara	4.84	218		Pn	09 27 51.6	+2.2
JSG	Sagara	4.84	218	P	Pn	09 27 50.2	+0.8
JAB	Ashibetsu	4.96	4	A	A	09 27 52.8	
	comp=N,4.0nm,2.3s,comp=E,4.0nm,3.2s						
INU	Inuyama	4.98	232		Pn	09 27 53.3	+1.8
INU	Inuyama	4.98	232	P	Pn	09 27 53.2	+1.8
ASAJ	Asahikawa	5.59	6	P	Pn	09 27 59.7	0.0
	comp=E,22nm,0.4s,baz=222,slow=11,SNR=46						
ASAJ				S	Sn	09 28 59.3	-3.2
	comp=E,58nm,0.7s,baz=218,slow=11,SNR=4.0						
JKA	Kamikawa-asahi	5.59	6		Sn	09 28 59.3	-3.2
JKA	Kamikawa-asahi	5.59	6		Pn	09 27 59.2	-0.5
JHJ2	Mitsune	5.66	197	P	Pn	09 27 59.6	-1.1
JHJ	Hachijo jima 2	5.66	197	P	Pn	09 27 59.4	-1.3
	comp=E,95nm,0.3s,baz=52,slow=20,SNR=14						
JHJ				S	Sn	09 28 59.0	-5.4
	comp=E,226nm,0.3s,baz=95,slow=23,SNR=7.2						
JHJ				LR	LR	09 30 27.7	
	comp=E,371nm,20.8s,baz=358,slow=40						
JMN	Monobe	8.01	235		Pn	09 28 33.7	+0.9
JMN	Monobe	8.01	235	P	Pn	09 28 33.0	+0.1
YSS	Yuzhno-Sakhali	8.43	5		Pn	09 28 36.9	-1.6
USRK	Ussuriysk Ar.	9.28	311	P	Pn	09 28 52.1	+2.0
	comp=E,39nm,0.8s,baz=123,slow=13,SNR=30						
JNU	Nakatsue	10.38	242	P	Pn	09 29 06.4	+1.1
	comp=E,27nm,0.7s,baz=147,slow=1.0,SNR=15						
JNU				LR	LR	09 33 45.9	
	comp=E,298nm,20.8s,baz=41,slow=41						
JNU	Nakatsue	10.38	242		Pn	09 29 05.8	+0.5
JNU	Nakatsue	10.38	242	P	Pn	09 29 06.9	+1.6
MDJ	Mudanjiang	10.96	307		Pn	09 29 11.2	-1.9
MDJ	Mudanjiang	10.96	307	P	Pn	09 29 15.5	+2.4
MDJ				pmax	pmax		
	comp=E,33nm,1.3s						
KSRS	Korea Array	11.00	269	P	Pn	09 29 17.4	+3.8
	comp=E,6.7nm,0.6s,baz=80,slow=14,SNR=24						
KSRS				LR	LR	09 33 09.3	
	comp=E,382nm,20.6s,baz=80,slow=35						
KSAR	Wonju Array Be	11.03	269	Pn	Pn	09 29 12.4	-1.7
KS19	Wonju Array Si	11.04	269		Pn	09 29 12.3	-1.8
JCJ	Chichijima	11.43	178	LR	LR	09 34 30.4	
	comp=E,69nm,21.1s,baz=138,slow=41						
BNX	BinXian	12.86	309	⇓P	Pn	09 29 40.5	+1.6
BNX				pmax	pmax		
	comp=E,18nm,1.1s						
SNY	Shenyang	14.30	289	⇓P	P	09 30 06.0	+2.1
SNY				S	Sn	09 32 32.5	-2.9
SNY				pmax	pmax		
	comp=Z,20nm,0.6s						
SNY				pmax	pmax		
	comp=Z,230nm,5.1s						
SNY				LR	LR		
	comp=N,200nm,8.7s						
SNY				LR	LR		
	comp=E,500nm,16.7s						
SNY				LR	LR		
	comp=Z,530nm,19.6s						
HEH	HeiHe	15.54	323	*e*P	Pn	09 30 14.0	-0.3
HEH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HEH				LR	LR		
	comp=Z,270nm,12.7s						
HEH				LR	LR		
	comp=Z,230nm,13.0s						
HEH				LR	LR		
	comp=Z,350nm,14.5s						
DL2	Dalian	15.74	278	P	P	09 30 19.0	-0.9
DL2				sP	sP	09 30 36.8	-3.5
DL2				*e*S	S	09 33 17.3	-4.9
DL2				pmax	pmax		
	comp=Z,93nm,1.0s						
DL2				LR	LR		
	comp=Z,310nm,14.8s						
DL2				LR	LR		
	comp=Z,480nm,15.4s						
DL2				LR	LR		
	comp=Z,670nm,15.9s						
PETK	Petropavlovsk-	18.23	32	LR	LR	09 38 45.9	
	comp=Z,71nm,18.2s,baz=225,slow=40						
HILR	Hailar Array B	19.21	312	P	P	09 30 55.9	-2.2
	comp=Z,3.9nm,0.5s,baz=108,slow=13,SNR=7.6						
HILR				LR	LR	09 38 38.2	
	comp=Z,250nm,18.7s,baz=190,slow=37						
TIA	Tai'an	19.73	271	P	P	09 31 03.3	-0.5
TIA				pmax	pmax		
	comp=Z,23nm,0.8s						
NJ2	Nanjing	19.79	258	*e*P	P	09 31 05.3	+0.8
NJ2				pmax	pmax		
	comp=Z,30nm,0.7s						
BJI	Beijing	19.86	282	P	P	09 31 04.0	-1.2
BJI				pP	pP	09 31 16.5	-1.7
BJI				sP	sP	09 31 24.8	-1.0
BJI				S	S	09 34 36.5	-9.1
BJI				PcP	PcP	09 35 20.5	+0.1
BJI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BJI				pmax	pmax		
	comp=Z,56nm,6.2s						
BJI				LR	LR		
	comp=Z,100nm,12.4s						
BJI				LR	LR		
	comp=Z,76nm,13.8s						
BJI				LR	LR		
	comp=Z,120nm,20.4s						
BJT	Baijiatuau	19.87	282		P	09 31 04.2	-1.2
XLT	XiLinHaoTe	20.02	294	*e*P	P	09 31 05.3	-1.8
XLT				pmax	pmax		
	comp=Z,21nm,0.8s						
XLT				pmax	pmax		
	comp=Z,160nm,4.9s						
HNS	HongShan	21.36	275	⇓P	P	09 31 18.5	-2.9
HNS				pmax	pmax		
	comp=Z,11nm,0.9s						
MA2	Magadan	21.81	12	P	P	09 31 24.5	-1.4
	comp=Z,18nm,0.6s,baz=199,slow=10,SNR=11						
MA2				LR	LR	09 39 33.8	
	comp=Z,91nm,19.6s,baz=184,slow=36						
	comp=Z,18nm,0.6s						
MA2	Magadan	21.81	12	P	P	09 31 26.0	0.0
MA2				IAmb	IAmb	09 31 44.9	
	comp=Z,32nm,0.7s						
MA2	Magadan	21.81	12	P	P	09 31 25.5	-0.5
	comp=Z,51nm,0.8s						
MA2				pP	pP	09 31 39.6	+0.5
	comp=Z,51nm,0.8s						
NACB	Ninganchiao	22.36	236	IAmb	IAmb	09 31 31.3	
	comp=Z,34nm,1.0s						
SSLB	Suanglung	23.04	236	P	P	09 31 35.1	-4.3
HHC	Hu-ho-hao-te	23.32	285	*e*P	P	09 31 40.8	-1.2
HHC				pmax	pmax		
	comp=Z,17nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,4.3s						
TPUB	Ta-pu	23.60	236		P	09 31 43.2	-1.4
TPUB				IAmb	IAmb	09 32 04.6	
	comp=Z,77nm,1.1s						
LYN	LuoYang	23.84	269	P	P	09 31 46.0	-0.8
LYN				pmax	pmax		
	comp=Z,93nm,0.8s						
LYN				LR	LR		
	comp=Z,290nm,14.4s						
LYN				LR	LR		
	comp=Z,470nm,22.7s						
WHN	Wuhan	23.91	259	P	P	09 31 47.0	-0.4
WHN				pmax	pmax		
	comp=Z,76nm,0.7s						
BTO	Baotou	24.51	285	*e*P	P	09 31 55.3	+2.4
BTO				pP	pP	09 32 09.5	+1.9
BTO				sP	sP	09 32 17.0	+2.3
BTO				PP	PnPn	09 32 32.8	+6.3
BTO				S	S	09 36 08.5	-0.7
BTO				sS	sS	09 36 32.8	-1.2
BTO				SS	SnSn	09 37 05.8	+7.1
BTO				pmax	pmax		
	comp=Z,47nm,0.8s						
BTO				pmax	pmax		
	comp=Z,240nm,4.3s						
BTO				LR	LR		
	comp=Z,480nm,10.6s						
BTO				LR	LR		
	comp=Z,800nm,18.1s						
BTO				LR	LR		
	comp=Z,790nm,17.1s						
YAK	Yakutsk	24.66	346	LR	LR	09 42 01.5	
	comp=Z,167nm,18.9s,baz=88,slow=37						
YAK	Yakutsk	24.66	346		P	09 31 52.7	-1.2
YAK				IAmb	IAmb	09 31 54.6	
	comp=Z,66nm,1.0s						
CNSH	ChangSha	26.13	255	P	P	09 32 07.5	-0.1
CNSH				pmax	pmax		
	comp=Z,25nm,1.0s						
ULN	Ulaanbaatar	26.78	302		P	09 32 12.8	-0.7
XAN	Xi'an	26.79	271	P	P	09 32 13.3	-0.3
XAN				pmax	pmax		
	comp=Z,25nm,0.7s						
SONM	Songino Array	27.22	301	P	P	09 32 16.4	-0.9
	comp=Z,3.3nm,0.7s,baz=108,slow=7.9,SNR=20						
SONM				LR	LR	09 43 34.5	
	comp=Z,112nm,20.2s,baz=88,slow=37						
	comp=Z,3.3nm,0.7s						
SONM	Songino Array	27.22	301	P	P	09 32 16.9	-0.5
ENH	Enshi	27.79	263		P	09 32 22.4	-0.2
H11N2	WAKE ISLAND Hy	28.70	124	T	T	10 02 45.0	
	baz=316,slow=76,SNR=2267						
H11N1	WAKE ISLAND Hy	28.71	124	T	T	10 02 46.1	
	baz=316,slow=76,SNR=4510						
H11N3	WAKE ISLAND Hy	28.72	124	T	T	10 02 46.9	
	baz=316,slow=76,SNR=2654						
H11S1	WAKE ISLAND Hy	29.47	126	T	T	10 03 41.0	
	baz=318,slow=76,SNR=671						
H11S3	WAKE ISLAND Hy	29.47	126	T	T	10 03 41.2	
	baz=318,slow=76,SNR=667						
H11S2	WAKE ISLAND Hy	29.48	126	T	T	10 03 42.3	
	baz=318,slow=76,SNR=367						

LZH	Lanzhou	30.14	277	*e*P	P	09 32 44.3	+0.8
LZH				sP	sP	09 33 05.5	+0.1
LZH				pmax	pmax		
	comp=Z,38nm,1.0s						
LZH				LR	LR		
	comp=Z,460nm,12.9s						
LZH				LR	LR		
	comp=Z,440nm,12.7s						
LZH				LR	LR		
	comp=Z,310nm,17.4s						
LZDM	Lanzhou Array	30.29	277	P	P	09 32 44.3	-0.7
	comp=Z,12nm,0.6s,baz=119,slow=5.2,SNR=18						
LZDM				LR	LR	09 45 34.3	
	comp=Z,176nm,20.4s,baz=25,slow=37						
	comp=Z,12nm,0.6s						
GYA	Guiyang	31.80	258	⇑P	P	09 32 58.5	+0.4
GYA				pmax	pmax		
	comp=Z,40nm,1.1s						
GTA	Gaotai	32.43	285	*e*P	P	09 33 04.5	+0.9
GTA				pmax	pmax		
	comp=Z,11nm,1.1s						
GTA				LR	LR		
	comp=Z,120nm,16.4s						
GTA				LR	LR		
	comp=Z,280nm,18.9s						
GTA				LR	LR		
	comp=Z,380nm,17.4s						
BILL	Bilibino	32.49	17		P	09 33 04.4	+0.8
BILL				IAmb	IAmb	09 33 06.0	
	comp=Z,16nm,1.3s						
BILL	Bilibino	32.49	17	P	P	09 33 04.6	+1.0
TIXI	Tiksi	33.82	353	LR	LR	09 48 18.6	
	comp=Z,107nm,18.2s,baz=200,slow=38						
TIXI	Tiksi	33.82	353		P	09 33 14.3	-0.8
QIZ	Qiongzhong	33.84	244	P	P	09 33 16.0	+0.1
QIZ				pP	pP	09 33 31.5	+0.7
QIZ				S	S	09 38 36.8	+0.9
QIZ				LR	LR		
	comp=Z,170nm,19.5s						
QIZ				LR	LR		
	comp=Z,260nm,22.3s						
QIZ				LR	LR		
	comp=Z,250nm,15.0s						
GOMU	GeErMu	37.09	281	P	P	09 33 43.3	-0.8
GOMU				pmax	pmax		
	comp=Z,11nm,0.7s						
TNCH	TengChong	38.83	263	P	P	09 33 58.8	+0.2
TNCH				pP	pP	09 34 14.8	+1.0
TNCH				S	S	09 39 54.0	+1.7
TNCH				pmax	pmax		
	comp=Z,92nm,1.0s						
TNCH				pmax	pmax		
	comp=Z,260nm,3.5s						
TNCH				LR	LR		
	comp=Z,990nm,47.9s						
TNCH				LR	LR		
	comp=Z,1µm,41.5s						
TNA	Tin City	39.39	30	P	P	09 34 03.0	+0.5
TNA				IAmb	IAmb	09 34 24.5	
	comp=Z,12nm,0.9s						
TNA	Tin City	39.39	30	P	P	09 34 01.8	-0.7
	baz=252						
FALS	False Pass	39.84	48	P	P	09 34 06.7	+0.2
	baz=270						
K13K	Kusilvak Mount	39.90	36	P	P	09 34 06.5	-0.3
	baz=260						
F14K	Arctic Creek	40.00	31	P	P	09 34 07.0	-0.6
	baz=254						
ANM	Nome	40.15	32	P	P	09 34 10.9	+2.0
ANM	Nome	40.15	32	P	P	09 34 08.5	-0.4
	baz=256						
WMQ	Urumqi	40.44	295	*e*P	P	09 34 11.8	+0.1
WMQ				ScP	ScP	09 39 58.5	+0.9
WMQ				pmax	pmax		
	comp=Z,27nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,130nm,3.7s						
WMQ				LR	LR		
	comp=Z,150nm,24.3s						
WMQ	Urumqi	40.44	295	P	P	09 34 13.3	+1.6
WMQ				pP	pP	09 34 29.5	+2.6
S12K	Black Hills	40.63	46	P	P	09 34 13.8	+0.8
	baz=270						
F15K	North Star Dit	40.73	31	P	P	09 34 14.3	+0.6
	baz=256						
G15K	Niukluk	40.81	32	P	P	09 34 15.0	+0.7
	baz=257						
M14K	Bethel	41.01	38	P	P	09 34 16.5	+0.6
	baz=264						
ZAA0	Zalesovo Array	41.13	311		P	09 34 16.8	-0.2
ZAA0				IAmb	IAmb	09 34 18.3	
	comp=Z,18nm,0.8s						
ZALV	Zalesovo Beam	41.13	311	P	P	09 34 17.6	+0.5
	comp=Z,12nm,0.6s,baz=89,slow=7.4,SNR=51						
ZALV				PcP	PcP	09 36 15.9	+0.5
	comp=Z,7.9nm,0.8s,baz=90,slow=3.3,SNR=6.6						
ZALV				LR	LR	09 52 07.3	
	comp=Z,142nm,19.4s,baz=103,slow=37						
	comp=Z,12nm,0.6s						
ZALV	Zalesovo Beam	41.13	311		P	09 34 16.2	-0.9
C16K	Lisburne Hills	41.21	27	P	P	09 34 18.2	+0.6
	baz=252						
L15K	Ungalak Mounta	41.35	37	P	P	09 34 18.9	+0.1
	baz=263						
K15K	Wolf Creek Mou	41.41	36	P	P	09 34 19.2	0.0
	baz=263						
H16K	Elim	41.48	33	P	P	09 34 19.4	-0.5
	baz=259						
SDPT	Sand Point	41.53	47	P	P	09 34 21.3	+0.9
	baz=271						
G16K	Koyuk River	41.59	31	P	P	09 34 21.3	+0.6
	baz=258						
ZSN	Zaisan	41.73	301	*e*P	P	09 34 22.0	-0.2
	comp=Z,21nm,0.8s						
D17K	Noatak River	41.86	28	P	P	09 34 22.8	-0.1
	baz=255,SNR=8.0						
N15K	Kwethluk River	41.88	39	P	P	09 34 23.0	-0.2
	baz=266						
I17K	Unalakleet	42.02	34	P	P	09 34 23.5	-0.7
	baz=262						
RDOG	Red Dog Mine	42.02	27	P	P	09 34 23.5	-0.7
	baz=255						
NRIK	Noril'sk	42.02	335	P	P	09 34 23.9	-0.3
	comp=Z,4.8nm,0.6s,baz=128,slow=6.0,SNR=8.1						
NRIK				LR	LR	09 52 49.3	
	comp=Z,221nm,19.7s,baz=108,slow=37						
	comp=Z,4.8nm,0.6s						
NRIK	Noril'sk	42.02	335	P	P	09 34 23.1	-1.1
NRIK				IAmb	IAmb	09 34 43.0	
	comp=Z,25nm,1.4s						
C17K	DeLong Mountai	42.04	27	P	P	09 34 23.6	-0.7
	baz=254						
E17K	Hotham Inlet	42.17	29	P	P	09 34 25.8	+0.3
	baz=257,SNR=12						
FAKI	Fak Fak	42.20	194	P	P	09 34 26.9	+0.7
FAKI				IAmb	IAmb	09 34 51.2	
	comp=Z,15nm,0.8s						
F17K	Baldwin Pennin	42.26	30	P	P	09 34 26.4	+0.4
	baz=258						
L16K	Owhat River	42.30	37	P	P	09 34 26.4	-0.1
	baz=265						
G17K	Kiwalik Mounta	42.31	32	P	P	09 34 25.8	-0.8
	baz=260						
H17K	Granite Mounta	42.52	32	P	P	09 34 28.1	-0.2
	baz=261						
J17K	VABM Dome	42.66	35	P	P	09 34 29.0	-0.5
	baz=264						
E18K	Tukpahlearik C	42.72	29	P	P	09 34 29.8	-0.1
	baz=258						
C18K	Utukok River	42.79	27	IAmb	IAmb	09 34 51.3	
	comp=Z,10nm,0.8s						
C18K	Utukok River	42.79	27	P	P	09 34 30.4	-0.1
	baz=256						
P16K	Nushagak River	42.89	41	P	P	09 34 31.5	+0.1
	baz=269						
K17K	Iditarod	42.95	36	P	P	09 34 31.7	-0.1
	baz=265						
G18K	Tagagawik	43.19	31	P	P	09 34 33.5	-0.3
	baz=261						
H18K	Honhosa River	43.20	32	IAmb	IAmb	09 34 54.3	
	comp=Z,57nm,1.9s						
H18K	Honhosa River	43.20	32	P	P	09 34 33.7	-0.1
	baz=262						
A19K	Wainwright	43.24	25	P	P	09 34 34.0	-0.1
	baz=254						
C19K	Lookout Ridge	43.46	26	P	P	09 34 36.7	+0.8
	baz=257						
MKAR	Makanchi Array	43.58	301	P	P	09 34 37.5	+0.3
	comp=Z,17nm,0.8s,baz=86,slow=9.3,SNR=88						
	comp=Z,17nm,0.8s						
MKAR	Makanchi Array	43.58	301	P	P	09 34 36.8	-0.4
F19K	Shaleruckik Mo	43.69	30	P	P	09 34 38.3	+0.6
	baz=261						
J18K	Innoko River	43.73	35	P	P	09 34 38.2	+0.1
	baz=266						
SHL	Shillong	43.74	268		P	09 34 38.5	-0.3
SHL				IAmb	IAmb	09 35 04.9	
	comp=Z,31nm,1.1s						
MAKZ	Makanchi	43.79	301		P	09 34 38.2	-0.6
MAKZ				IAmb	IAmb	09 34 40.4	
	comp=Z,19nm,0.9s						
MAKZ	Makanchi	43.79	301	P	P	09 34 39.2	+0.3
MAKZ				sP	sP	09 35 02.8	+1.6
D19K	Kuna River	43.86	27	IAmb	IAmb	09 35 00.3	
	comp=Z,26nm,0.9s						
D19K	Kuna River	43.86	27	P	P	09 34 39.1	0.0
	baz=259						
G19K	Purcell Mounta	43.86	31	P	P	09 34 40.0	+0.9
	baz=263						
E19K	Redstone River	44.00	29	P	P	09 34 41.6	+1.4
E19K				IAmb	IAmb	09 35 02.1	
	comp=Z,15nm,0.8s						
E19K	Redstone River	44.00	29	P	P	09 34 41.0	+0.8
	baz=261,SNR=9.7						
H19K	Roundabout Mou	44.04	32	P	P	09 34 41.7	+1.2
	baz=264						
J19K	Poorman	44.26	34	P	P	09 34 42.8	+0.5
	baz=266						
SEM	Semipalatinsk	44.27	306	*e*P	P	09 34 42.6	-0.2
	comp=Z,21nm,1.1s						
P18K	Big Mountain,	44.31	41	P	P	09 34 43.4	+0.6
	baz=271						
D20K	Etivluk River	44.44	27	P	P	09 34 44.5	+0.8
	baz=260						
Q18K	Katmai Hardscr	44.45	42	P	P	09 34 44.8	+0.8
	baz=272						
B20K	Meade River	44.49	25	IAmb	IAmb	09 35 05.4	
	comp=Z,34nm,1.1s						
B20K	Meade River	44.49	25	P	P	09 34 44.9	+0.8
	baz=259						
N19K	Bonanza Creek	44.67	39	P	P	09 34 46.7	+1.0
	baz=271						
H20K	Anotleneega Mo	44.69	32	P	P	09 34 46.3	+0.5
	baz=265						
K20K	Telida	44.91	35	P	P	09 34 48.6	+1.1
	baz=268						
J20K	Nowinta River	44.91	34	P	P	09 34 48.7	+1.2
	baz=268						
A21K	Barrow	44.95	24	P	P	09 34 48.3	+0.7
	baz=258						
C21K	Knifeblade Rid	45.16	27	P	P	09 34 50.5	+1.0
	baz=262						
KURK	Kurchatov	45.24	307		P	09 34 49.8	-0.5
B21K	Ikpikpuk River	45.29	26	P	P	09 34 49.7	-0.8
	baz=262						
KURBB	Kurchatov Arra	45.32	307	P	P	09 34 51.1	+0.2
	comp=Z,50nm,0.7s,baz=82,slow=8.1,SNR=214						
KURBB				LR	LR	09 54 32.4	
	comp=Z,126nm,19.2s,baz=178,slow=37						
	comp=Z,50nm,0.7s						
G21K	Allakaket	45.34	31	IAmb	IAmb	09 36 38.5	
	comp=Z,7.8nm,0.6s						
G21K	Allakaket	45.34	31	P	P	09 34 50.5	-0.3
	baz=266						
A22K	Sinclair Lake	45.41	24	P	P	09 34 51.6	+0.3
	baz=260,SNR=5.7						
H21K	Melozitna Rive	45.56	32	P	P	09 34 53.4	+0.7
	baz=267						
SPCR	Spurr Chakacha	45.77	38	P	P	09 34 55.4	+0.9
	baz=272						
D22K	Ayikyak River	45.88	27	P	P	09 34 55.8	+0.7
	baz=264						
E22K	Anaktuvuk Pass	46.12	28		P	09 34 58.7	+1.6
E22K	Anaktuvuk Pass	46.12	28	P	P	09 34 57.4	+0.3
	baz=266,SNR=8.1						
BPAW	Bear Paw Mtn.	46.30	34	P	P	09 34 59.8	+1.3
BPAW				IAmb	IAmb	09 36 39.9	
	comp=Z,14nm,1.2s						
SHLS	Shalkode	46.41	297	*e*P	P	09 34 57.5	-2.3
	comp=Z,6.5nm,0.7s						
D23K	Nanushuk River	46.61	27	P	P	09 35 00.9	+0.1
	baz=266						
TRF	Thorofare Moun	46.61	35	P	P	09 35 00.9	-0.2
	baz=272						
TDK	Taldyqorghan	46.64	299	*e*P	P	09 35 01.5	+0.1
	comp=Z,8.5nm,0.6s						
C23K	Itkillik River	46.70	26	P	P	09 35 02.5	+1.0
	baz=265						
UZB	Uzynbulak	46.72	297	*e*P	P	09 35 02.2	-0.1
	comp=Z,9.9nm,1.3s						
G23K	Bananza Creek	46.74	30	P	P	09 35 02.9	+1.0
	baz=269						
M22K	Willow	46.75	37	P	P	09 35 03.3	+1.3
	baz=273						
E23K	Chandalar	46.94	29	IAmb	IAmb	09 35 25.8	
	comp=Z,26nm,1.0s						
E23K	Chandalar	46.94	29	P	P	09 35 04.3	+0.7
	baz=268,SNR=8.9						
TOLK	Toolik Lake Re	46.99	28	P	P	09 35 04.8	+1.0
	baz=267						
NEA2	Nenana	47.12	33	P	P	09 35 06.1	+1.2
	baz=272						
WUS	Wushi	47.17	294	P	P	09 35 06.8	+1.0
SATY	Saty	47.18	297	*e*P	P	09 35 06.0	+0.2
SEW	Seward	47.20	40	P	P	09 35 05.8	+0.3
	baz=276						
PMR	Palmer	47.23	37	P	P	09 35 06.4	+0.7
	baz=274						
D24K	Happy Valley	47.28	27	P	P	09 35 06.7	+0.7
	baz=268						
C24K	Franklin Bluff	47.36	26	P	P	09 35 07.4	+0.8
	baz=267						
E24K	Your Creek	47.37	29	IAmb	IAmb	09 35 29.1	
	comp=Z,19nm,0.9s						
E24K	Your Creek	47.37	29	P	P	09 35 07.3	+0.5
	baz=269						
F24K	Squaw Lake	47.59	29	P	P	09 35 08.9	+0.4
	baz=270						
H24K	Noodor Dome	47.60	32	P	P	09 35 09.2	+0.5
	baz=272						
G24K	Hadweenzic Riv	47.75	30	P	P	09 35 10.8	+1.1
	baz=271						
POKR	Poker Plat Res	47.81	33	P	P	09 35 11.5	+1.3
	baz=273						
WAT6	Susitna Watana	47.82	36	P	P	09 35 11.1	+0.6
	baz=275						
HDA	Harding Lake	48.05	34	P	P	09 35 11.9	-0.2
	baz=274						
IL31		48.06	33		P	09 35 12.9	+0.8
ILAR	Eielson Array	48.06	33	P	P	09 35 12.8	+0.7
	comp=Z,2.8nm,0.7s,baz=267,slow=6.2,SNR=34						
	comp=Z,2.8nm,0.7s						
SCM	Sheep Creek Mo	48.07	37	P	P	09 35 12.2	-0.2
	baz=276						
MDOK	Medeo	48.10	297	*e*P	P	09 35 13.1	+0.1
D25K	Kavik River	48.16	27	P	P	09 35 13.2	+0.2
	baz=270						
AAA	Alma-Ata	48.18	297	*e*P	P	09 35 13.4	0.0
TNSS	Tian-Shan	48.21	297	*e*P	P	09 35 13.8	-0.2
GLI	Glacier Island	48.28	38	P	P	09 35 14.8	+0.9
	baz=277						
G25K	Bearman Lake	48.29	30	P	P	09 35 14.1	+0.2
	baz=272						
F25K	Christian Rive	48.45	29	P	P	09 35 16.0	+0.9
	baz=272						
E25K	Arctic Village	48.46	29	IAmb	IAmb	09 35 37.3	
	comp=Z,14nm,1.2s						
E25K	Arctic Village	48.46	29	P	P	09 35 15.4	+0.2
	baz=272						
K24K	Donnelly Dome	48.61	34	P	P	09 35 17.0	+0.6
	baz=275						
C26K	Camden Bay	48.68	26	P	P	09 35 17.2	+0.4
	baz=271						
Q23K	Middleton Isla	48.83	40	P	P	09 35 19.2	+1.1
	baz=279						
F26K	Sheenjek River	49.02	29	P	P	09 35 20.4	+0.9
	baz=273,SNR=11						
HARP	HAARP	49.03	36	P	P	09 35 20.1	+0.4
	baz=277						
C27K	Jago River	49.10	27	P	P	09 35 20.7	+0.6
	baz=272						
TKM2	Tokmak 2	49.19	297	P	P	09 35 22.4	+1.1
	SNR=22						
G26K	Porcupine Rive	49.20	30	P	P	09 35 21.5	+0.6
	baz=274						
SCRK	Sand Creek	49.38	34	P	P	09 35 23.2	+0.8
	baz=277						
KBK	Karagaybulak	49.72	297	P	P	09 35 26.2	+0.8
	SNR=15						
L26K	Log Cabin Wild	49.78	35	P	P	09 35 25.3	-0.1
	baz=278						
BVAR	Borovoye Array	49.78	311	P	P	09 35 25.8	+0.3
	comp=Z,8.7nm,0.7s,baz=73,slow=7.6,SNR=27						
BVAR				PcP	PcP	09 36 46.2	+0.7
	comp=Z,9.6nm,0.8s,baz=77,slow=3.9,SNR=8.1						
	comp=Z,8.7nm,0.7s						
BORK	Borovoye	49.82	311		P	09 35 25.7	-0.1
BORK				IAmb	IAmb	09 35 27.0	
	comp=Z,9.4nm,0.8s						
BORK	Borovoye	49.82	311	P	P	09 35 26.1	+0.3
BORK				PcP	PcP	09 36 46.4	+0.8
USP	Ospenovka	49.84	298	P	P	09 35 26.4	+0.3
	SNR=6.8						
KULM	Kulim	49.85	239	P	P	09 35 26.7	+0.3
KULM				IAmb	IAmb	09 35 28.1	
	comp=Z,12nm,0.8s						
E27K	Coleen River	49.94	28	P	P	09 35 26.7	+0.2
	baz=275						
AAK	Ala-Archa	50.05	297	P	P	09 35 28.3	+0.5
	SNR=5.7						
AAK	Ala-Archa	50.05	297	P	P	09 35 28.0	+0.1
	comp=Z,3.1nm,0.6s,baz=127,slow=3.2,SNR=13						
	comp=Z,3.1nm,0.6s						
AAK	Ala-Archa	50.05	297	P	P	09 35 27.6	-0.2
G27K	Doyon Strip	50.05	30	P	P	09 35 27.5	+0.1
	baz=276						
KSH	Kashi	50.07	293	P	P	09 35 32.5	+4.4
KSH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
D27M	Malcolm River	50.09	27	P	P	09 35 28.1	+0.4
	baz=275						
H27K	Steamboat Moun	50.16	31	P	P	09 35 28.9	+0.7
	baz=277						
MCARA	McCarthy VSAT	50.17	37	P	P	09 35 29.0	+0.7
	baz=280						
UCH	Uchtor	50.17	297	P	P	09 35 29.8	+0.7
	SNR=6.2						
IPM	Ipoh	50.19	238		P	09 35 27.9	-1.1
L27K	Beaver Creek,	50.46	35	P	P	09 35 31.5	+1.0
	baz=279						
F28M	Old Crow	50.65	29	P	P	09 35 32.6	+0.7
	baz=277						
E28M	Babbage River	50.66	28	P	P	09 35 31.4	-0.5
	baz=277						
BVCY	Beaver Creek	51.00	36	P	P	09 35 35.1	+0.5
	baz=281						
E29M	Blow River	51.29	28	IAmb	IAmb	09 35 59.2	
	comp=Z,12nm,0.9s						
E29M	Blow River	51.29	28	P	P	09 35 35.7	-1.0
	baz=278						
DAWY	Dawson	51.37	34	P	P	09 35 38.5	+1.1
	baz=280						
H29M	Whitestone	51.43	31	P	P	09 35 38.2	+0.4
	baz=280						
G29M	Pine Creek	51.46	30	IAmb	IAmb	09 36 00.3	
	comp=Z,20nm,1.1s						
G29M	Pine Creek	51.46	30	P	P	09 35 39.3	+1.4
	baz=279						
I29M	Ogilvie Camp,	51.60	32	P	P	09 35 39.5	+0.4
	baz=280						
EPYK	Eagle Plains	52.06	30	P	P	09 35 43.2	+0.7
EPYK	Eagle Plains	52.06	30	P	P	09 35 43.2	+0.7
	baz=281						
M29M	Somme Creek	52.09	35	P	P	09 35 43.6	+0.8
	baz=282						
L29M	L29M	52.10	35	P	P	09 35 43.6	+0.8
	baz=282						
DZA	Taraz	52.15	299	*e*P	P	09 35 43.5	0.0
	comp=Z,8.5nm,0.8s						
G30M	tAoh Zraii Nji	52.15	30	P	P	09 35 43.1	0.0
	baz=281						
F30M	Barrier River	52.20	29	P	P	09 35 44.1	+0.7
	baz=281						
K29M	Barlow Dome	52.22	34	P	P	09 35 43.8	0.0
	baz=282						
I30M	Mount Dempster	52.42	32	IAmb	IAmb	09 36 07.5	
	comp=Z,19nm,0.9s						
I30M	Mount Dempster	52.42	32	P	P	09 35 45.9	+0.6
	baz=282						
J30M	Hart River	52.58	33	P	P	09 35 47.7	+1.3
	baz=283						
KK31	Karatay Array	52.63	299		P	09 35 46.8	-0.2
KKAR	Karatay Array	52.63	299		P	09 35 46.9	-0.1
INK	Inuvik	52.90	28	IAmb	IAmb	09 36 09.8	
	comp=Z,9.5nm,0.9s						
INK	Inuvik	52.90	28	P	P	09 35 48.6	0.0
	baz=282						
F31M	Tsiigehtchic	53.00	29	P	P	09 35 51.5	+2.2
	baz=283						
BRLS	Boroldаy	53.12	299	*e*P	P	09 35 52.1	+1.5
	comp=Z,7.9nm,1.2s						
H31M	Peel River	53.13	31	IAmb	IAmb	09 36 12.5	
	comp=Z,22nm,1.1s						
H31M	Peel River	53.13	31	P	P	09 35 52.3	+2.0
	baz=283						
CHM	Chimkent	53.54	299	*e*P	P	09 35 53.8	+0.1
	comp=Z,7.0nm,0.4s						
MANEM	Manem	53.94	292	IAmb	IAmb	09 36 00.2	
	comp=Z,30nm,0.9s						
SKAG	Skagway	54.32	39	P	P	09 36 01.7	+2.7
	baz=287						
NIL	Nilore	54.44	287		P	09 35 59.8	-0.6
A36M	Sachs Harbour	54.74	22	P	P	09 36 02.4	+0.5
	baz=287,SNR=8.5						
GSI	Gunungsitoli	54.84	239	P	P	09 36 02.7	-0.7
ARTI	Arti	55.53	318	P	P	09 36 07.9	+0.1
	comp=Z,23nm,0.6s,baz=88,slow=4.0,SNR=40						
	comp=Z,23nm,0.6s						
ARTI	Arti	55.53	318		P	09 36 08.0	+0.1
ARTI	Arti	55.53	318	P	P	09 36 08.0	+0.1
ARTI				sP	sP	09 36 32.5	+1.8
C36M	Paulatuk	55.93	25	P	P	09 36 11.7	+1.2
	baz=290,SNR=5.8						
SHAA	Shahritus	56.50	294	IAmb	IAmb	09 36 17.3	
	comp=Z,46nm,0.6s						
KBL	Kabul	57.16	290		P	09 36 19.4	-0.6
KBL				IAmb	IAmb	09 36 21.5	
	comp=Z,16nm,1.1s						
AB31	Akbulak array	57.20	310	P	P	09 36 19.7	-0.2
ABKAR	Akbulak array	57.20	310	P	P	09 36 19.7	-0.1
AKTO	Aktyubinsk	57.89	311	P	P	09 36 24.6	-0.1
	comp=Z,12nm,0.8s,baz=67,slow=10.0,SNR=25						
AKTO				PcP	PcP	09 37 15.7	-0.7
	comp=Z,7.2nm,0.7s,baz=50,slow=3.6,SNR=4.0						
	comp=Z,12nm,0.8s						
WRGLY	Wrigley	58.40	32	P	P	09 36 30.2	+2.1
	baz=294						
CTA	Charters Tower	58.48	175	P	P	09 36 27.7	-1.4
	comp=Z,21nm,1.1s,baz=344,slow=6.4,SNR=6.5						
	comp=Z,21nm,1.1s						
CTAO	Charters Tower	58.48	175		P	09 36 28.1	-1.0
WR8	Warramunga Arr	58.60	188	P	P	09 36 29.7	-0.1
WRA	Warramunga Arr	58.60	188	P	P	09 36 29.3	-0.6
	comp=Z,11nm,0.8s,baz=7.0,slow=6.9,SNR=10						
	comp=Z,11nm,0.8s						
LIRD	Liard River Hi	58.76	37	P	P	09 36 31.8	+1.2
	baz=294,SNR=5.3						
KIRV	Kirov	59.22	322	P	P	09 36 34.2	+0.5
	comp=Z,18nm,0.6s,baz=68,slow=3.7,SNR=8.7						
	comp=Z,18nm,0.6s						
YKAW3	Yellowknife Wh	62.31	31		P	09 36 55.6	+0.9
YKAW3				IAmb	IAmb	09 37 53.7	
	comp=Z,4.8nm,0.8s						
YKA	Yellowknife Ar	62.35	31	P	P	09 36 55.5	+0.5
	comp=Z,2.6nm,0.8s,baz=303,slow=6.9,SNR=34						
	comp=Z,2.6nm,0.8s						
YKAW1	Yellowknife Wh	62.40	31	IAmb	IAmb	09 36 57.1	
	comp=Z,9.1nm,1.1s						
ARCES	ARCESS Array B	62.68	339	P	P	09 36 57.0	-0.1
	comp=Z,6.3nm,0.9s,baz=35,slow=4.4,SNR=6.4						
	comp=Z,6.3nm,0.9s						
BELG	Belogornoye	62.90	317	P	P	09 36 59.0	+0.2
	comp=Z,27nm,0.8s,baz=359,slow=2.4,SNR=13						
	comp=Z,27nm,0.8s						
TULEG	Thule	63.56	8	IAmb	IAmb	09 37 03.6	
	comp=Z,15nm,0.8s						
DZM	Mont Dzumac	64.59	155	*e*LR	LR	09 56 50.7	
	comp=Z,145nm,21.9s						
FAUS	Fauske	66.92	340	*e*P	P	09 37 24.4	-0.2
LTY	Liberty	67.40	47	P	P	09 37 29.7	+1.6
LTY				IAmb	IAmb	09 38 48.9	
	comp=Z,33nm,2.0s						
FIA1	FINESS Array S	67.61	332		P	09 37 29.5	+0.4

FINES	FINESS Array B	67.61	332	P	P	09 37 28.8	-0.3
	comp=Z,9.3nm,0.8s,baz=52,slow=7.7,SNR=24						
FINES				LR	LR	10 12 17.6	
	comp=Z,61nm,18.2s,baz=52,slow=40						
	comp=Z,9.3nm,0.8s						
FINES	FINESS Array B	67.61	332	P	P	09 37 29.5	+0.3
ILON	Igloolik, Nuna	67.72	15	IAmb	IAmb	09 37 30.4	
	comp=Z,9.1nm,0.8s						
BLKN	Baker Lake	67.88	23	IAmb	IAmb	09 37 32.0	
	comp=Z,12nm,0.8s						
EPH	Ephrata	67.96	46	IAmb	IAmb	09 37 39.2	
	comp=Z,6.3nm,0.9s						
MOR8	Moi Rana	68.05	340	eP	P	09 37 30.9	-0.9
NEW	Newport	68.84	45	P	P	09 37 38.5	+1.4
NEW	Newport	68.84	45	P	P	09 37 38.5	+1.4
NEW	Newport	68.84	45	pmax	pmax		
	comp=Z,4.0nm,0.9s						
SUMG	Summit	69.17	0	IAmb	IAmb	09 37 41.2	
	comp=Z,15nm,0.9s						
E09A	Wood Farm, Sta	69.25	47	IAmb	IAmb	09 37 43.9	
	comp=Z,8.8nm,0.8s						
KIV	Kislovodsk	70.14	311		P	09 37 46.0	+0.8
KIV	Kislovodsk	70.14	311	⇓P	P	09 37 47.5	+2.2
KIV	Kislovodsk	70.14	311	P	P	09 37 46.1	+0.8
	comp=Z,41nm,1.1s						
KBZ	Khabaz	70.14	310	P	P	09 37 45.6	+0.5
	comp=Z,12nm,0.9s,baz=55,slow=3.7,SNR=37						
	comp=Z,12nm,0.9s						
BCA	Borcka	72.23	309	⇓P	P	09 37 58.6	+0.8
FFC	Flin Flon	72.27	33		P	09 37 58.5	+0.6
FFC	Flin Flon	72.27	33	P	P	09 37 58.2	+0.4
FCC	Fort Churchill	72.51	27	IAmb	IAmb	09 38 00.6	
	comp=Z,24nm,1.3s						
NC405	NORSAR Array S	72.69	337	IAmb	IAmb	09 38 01.8	
	comp=Z,24nm,1.1s						
NC303	NORSAR Array S	72.71	337		P	09 38 00.8	+0.5
NC303				IAmb	IAmb	09 38 01.3	
	comp=Z,13nm,0.9s						
MOL	Molde	72.74	340	eP	P	09 38 01.2	+0.8
DOMB	Dombas	72.74	339	eP	P	09 38 01.0	+0.5
HFS	Hagfors	72.83	336	P	P	09 38 01.0	0.0
	comp=Z,12nm,0.7s,baz=57,slow=5.5,SNR=41						
HFS				LR	LR	10 12 49.0	
	comp=Z,160nm,18.4s,baz=47,slow=38						
	comp=Z,12nm,0.7s						
NB201	NORSAR Array S	72.87	337	IAmb	IAmb	09 38 02.7	
	comp=Z,16nm,0.8s						
NB2	NORSAR Subarra	72.90	337	P	P	09 38 01.7	+0.2
	comp=Z,14nm,0.8s,baz=39,slow=6.2						
NB2	NORSAR Subarra	72.90	337	P	P	09 38 01.7	+0.2
	baz=39,slow=6.2						
NOA	NORSAR Array B	72.90	337	P	P	09 38 01.9	+0.3
	comp=Z,11nm,0.8s,baz=39,slow=6.0,SNR=56						
NOA				LR	LR	10 12 30.8	
	comp=Z,100nm,21.9s,baz=40,slow=38						
	comp=Z,11nm,0.8s						
EGMT	Eagleton	72.94	42	IAmb	IAmb	09 38 04.4	
	comp=Z,12nm,0.9s						
NBO00	NORSAR Array S	73.04	337	IAmb	IAmb	09 38 03.7	
	comp=Z,14nm,0.8s						
NC602	NORSAR Array S	73.04	337	IAmb	IAmb	09 40 37.4	
	comp=Z,45nm,1.9s						
NC602	NORSAR Array S	73.04	337	eP	P	09 38 02.3	0.0
NAO01	NORSAR Array S	73.16	337	IAmb	IAmb	09 38 04.2	
	comp=Z,9.6nm,0.8s						
AK03	Malin Array Si	73.27	322	P	P	09 38 03.4	-0.4
AKASG	Malin Array Be	73.28	322	P	P	09 38 03.9	0.0
	comp=Z,9.3nm,0.7s,baz=46,slow=6.3,SNR=25						
	comp=Z,9.3nm,0.7s						
AKASG	Malin Array Be	73.28	322	IAmb	IAmb	09 38 04.5	
	comp=Z,5.0nm,0.9s						
AKBB	Malin Array Si	73.28	322	IAmb	IAmb	09 38 04.8	
	comp=Z,16nm,0.8s						
AKBB	Malin Array Si	73.28	322	P	P	09 38 03.4	-0.5
AK01	Malin Array Si	73.29	322	P	P	09 38 03.6	-0.3
KIEV	Kiev	73.29	322	P	P	09 38 03.5	-0.5
KIEV				IAmb	IAmb	09 38 04.8	
	comp=Z,15nm,0.8s						
KIEV	Kiev	73.29	322	⇑P	P	09 38 04.1	+0.2
KIEV	Kiev	73.29	322	P	P	09 38 03.4	-0.5
KIEV	Kiev	73.29	322	P	P	09 38 03.7	-0.2
AK04	Malin Array Si	73.30	322	P	P	09 38 03.6	-0.4
AK22	Malin Array Si	73.32	322	P	P	09 38 03.7	-0.4
AK02	Malin Array Si	73.32	322	P	P	09 38 03.7	-0.4
AK21	Malin Array Si	73.32	322	P	P	09 38 03.7	-0.4
AK18	Malin Array Si	73.34	322	P	P	09 38 04.0	-0.2
AK13	Malin Array Si	73.42	322	P	P	09 38 04.2	-0.5
GURO	Guroymak-BITLI	73.68	306	IAmb	IAmb	09 39 37.3	
	comp=Z,9.9nm,0.6s						
OSL	Oslo	73.92	337	eP	P	09 38 08.5	+1.0
SKAR	Skarslia	74.06	338	eP	P	09 38 09.4	+1.1
FOO	Floro	74.21	340	eP	P	09 38 09.8	+0.7
HYA	Hoyanger	74.26	339	eP	P	09 38 10.3	+1.0
RNPP9	Sopachiv	74.37	324	P	P	09 38 10.3	+0.1
RNPP8	Varash	74.44	324	P	P	09 38 10.2	-0.4
KONO	Kongsberg	74.50	337	eP	P	09 38 11.3	+0.5
RNPP5	Staryi Chortor	74.50	324	P	P	09 38 10.7	-0.3
LUBAR	Lubar, Ukraine	74.50	322	P	P	09 38 10.6	-0.5
ASK	Askoy	75.10	339	eP	P	09 38 15.3	+1.0
BER	Bergen	75.14	339	eP	P	09 38 15.6	+1.1
ODD1	Odda	75.17	338	eP	P	09 38 15.8	+1.1
SNOW	Snow King Moun	75.27	46	IAmb	IAmb	09 40 26.3	
	comp=Z,19nm,1.8s						
SORM	Soroca	75.41	321	⇑P	P	09 38 16.2	0.0
BLS5	Blasjo	75.62	338	eP	P	09 38 18.5	+1.1
LAO	LASA Array	75.63	41	IAmb	IAmb	09 38 20.1	
	comp=Z,10nm,0.9s						
HOMB	Homborsund	75.95	337	eP	P	09 38 20.0	+0.9
KMPD	K-Podol'skiy	76.05	322	P	P	09 38 19.5	-0.4
KMPD				P	P	09 38 19.5	-0.4
KMY	Karmoy	76.14	339	eP	P	09 38 21.1	+0.8
SNART	Snartemo	76.29	337	eP	P	09 38 22.3	+1.2
BURAR	Bucovina Array	77.31	322		P	09 38 27.1	-0.1
BURAR	Bucovina Array	77.31	322	⇑P	P	09 38 27.8	+0.6
BNN	Bunyan	77.32	310	IAmb	IAmb	09 38 28.9	
	comp=Z,12nm,1.0s						
TESR	Tescani	77.36	320	⇓P	P	09 38 28.3	+0.9
TPGR	Topolog	77.58	318	⇑P	P	09 38 29.1	+0.5
ONER	Baraj Valea Uz	77.61	320	⇑P	P	09 38 30.0	+1.2
VRI	Vrincioaia	77.77	320	⇓P	P	09 38 31.5	+1.8
RDMU	Red Mountain	77.81	48	IAmb	IAmb	09 38 32.7	
	comp=Z,9.4nm,0.9s						
STHS	Stebnicka Huta	77.89	325	eP	P	09 38 31.2	+0.9
COVR	Voineasa-Covas	78.04	320	⇑P	P	09 38 32.0	+0.7
BRTR	Keskin Array B	78.07	311	P	P	09 38 30.6	-1.0
	comp=Z,2.5nm,0.9s,baz=90,slow=4.9,SNR=9.4						
	comp=Z,2.5nm,0.9s						
BRTR	Keskin Array B	78.07	311	P	P	09 38 30.9	-0.8
ULM	Lac du Bonnet	78.07	34	P	P	09 38 31.0	-0.2
	comp=Z,4.8nm,1.0s,baz=342,slow=5.7,SNR=3.5						
	comp=Z,4.8nm,1.0s						
SRU	San Rafael Swe	78.19	49	IAmb	IAmb	09 38 54.0	
	comp=Z,6.8nm,0.6s						
ICOR	Ion Corvin	78.41	318	⇑P	P	09 38 35.6	+2.4
MLR	Muntele Rosu	78.42	320	LR	LR	10 15 22.0	
	comp=Z,125nm,19.9s,baz=68,slow=37						
BSEG	Bad Segeberg	78.84	333	eP	P	09 38 36.0	+0.6
	comp=Z,6.6nm,0.9s,baz=36,slow=5.3						
LANS	Liptovska Anna	78.88	326	eP	P	09 38 37.4	+1.6
MARR	Marisel-Cluj	78.98	322	⇑P	P	09 38 37.6	+1.1
STEB	Steborice	79.03	327	eP	P	09 38 37.6	+1.0
DRGR		79.10	322	⇑P	P	09 38 38.0	+1.0
ARR	Arges	79.17	320	⇓P	P	09 38 39.3	+1.8
MORC	Moravsky Berou	79.25	327	IAmb	IAmb	09 38 39.8	
	comp=Z,9.5nm,0.9s						
MORC	Moravsky Berou	79.25	327	⇑P	P	09 38 38.9	+1.1
MORC	Moravsky Berou	79.25	327	eP	P	09 38 38.2	+0.4
DPC	Dobruska-Polom	79.33	328	eP	P	09 38 39.4	+1.1
KRLC	Kraliky	79.35	328	eP	P	09 38 39.5	+1.1
PSZ	Piszkesteto	79.60	325	⇓P	P	09 38 37.9	-1.8
PV20	West Nyswonger	79.61	49	IAmb	IAmb	09 38 42.5	
	comp=Z,10nm,0.8s						
PV18	Skein Mesa, Pa	79.71	49	IAmb	IAmb	09 39 03.0	
	comp=Z,13nm,1.0s						
FLTG	Flechtingen	79.79	332	eP	P	09 38 40.9	+0.3
	comp=Z,11nm,0.8s,baz=36,slow=5.3						
JAVC	Velka Javorina	79.89	326	eP	P	09 38 43.1	+1.8
BRG	Berggiesshubel	79.90	329	eP	P	09 38 42.4	+1.1
	comp=Z,6.0nm,1.0s,baz=36,slow=5.3						
PVCC	Panska Ves	79.92	329	eP	P	09 38 42.9	+1.5
CLL	Collm	79.93	330	IAmb	IAmb	09 38 42.7	
	comp=Z,15nm,0.9s						
CLL	Collm	79.93	330	eP	P	09 38 42.0	+0.6
	comp=Z,10nm,0.8s,baz=36,slow=5.3						
CLL	Collm	79.93	330	i P	P	09 38 41.6	+0.2
	comp=Z,17nm,1.0s						
SIRR	Siria	79.98	322	⇓P	P	09 38 42.4	+0.5
VRAC	Vranov	80.01	327	⇓P	P	09 38 43.2	+1.3
VRAC	Vranov	80.01	327	eP	P	09 38 42.8	+0.9
GZR	Gura Zlata	80.07	321	⇓P	P	09 38 43.2	+0.8
RICC	Richard	80.09	329	eP	P	09 38 44.4	+2.1
KRUC	Moravsky	80.28	327	eP	P	09 38 43.9	+0.5
HSKC	Hora Svate Kat	80.31	330	eP	P	09 38 44.3	+0.8
PRU	Pruhonice	80.34	329	eP	P	09 38 44.6	+0.9
RAYN	Ar Rayn	80.36	292		P	09 38 43.7	-0.6
MODS	Modra-Piesok	80.42	326	eP	P	09 38 45.5	+1.3
KUQ	Kuujjuuaa	80.43	16	P	P	09 38 44.5	+0.5
KUQ				IAmb	IAmb	09 38 44.9	
	comp=Z,21nm,1.3s						
BZS	Buzias	80.47	322	⇓P	P	09 38 45.0	+0.6
CLZ	Clausthal	80.50	332	eP	P	09 38 44.8	+0.2
	comp=Z,10.0nm,0.9s,baz=36,slow=5.3						
TANN	Tannenbergstha	80.84	330	eP	P	09 38 47.2	+0.8
	comp=Z,2.0nm,0.8s,baz=36,slow=5.3						
GTTG	Gottingen	80.89	332	eP	P	09 38 47.3	+0.8
	comp=Z,9.8nm,0.8s,baz=36,slow=5.3						
MOX	Moxa	80.99	330	eP	P	09 38 47.7	+0.6
	comp=Z,4.6nm,1.0s,baz=36,slow=5.3						
MDVR	Moldovita	81.03	321	⇑P	P	09 38 47.9	+0.4
IBBN	Ibbenburen	81.07	333	eP	P	09 38 48.0	+0.6
	comp=Z,15nm,0.9s,baz=36,slow=5.3						
MANZ	Manzenberg	81.32	330	eP	P	09 38 49.7	+0.7
	comp=Z,1.3nm,0.9s,baz=36,slow=5.3						
CKRC	Cesky Krumlov	81.35	328	eP	P	09 38 50.0	+0.9
RONA	Rosalia, Austr	81.36	326	i P	P	09 38 50.5	+1.3
	comp=Z,12nm,0.8s						
CONA	Conrad Observa	81.38	327	i P	P	09 38 50.5	+1.2
	comp=Z,8.7nm,0.9s,SNR=5.6						
KHC	Kasperske Hory	81.41	329	IAmb	IAmb	09 38 51.3	
	comp=Z,9.6nm,0.9s						
KHC	Kasperske Hory	81.41	329	eP	P	09 38 50.4	+1.0
ROTZ	Rotzenmuhle	81.46	330	eP	P	09 38 50.6	+1.0
	comp=Z,0.8nm,0.8s,baz=36,slow=5.3						
UBBA	Unterbreizbach	81.47	331	eP	P	09 38 50.0	+0.5
	comp=Z,1.8nm,0.7s,baz=36,slow=5.3						
GEC2	GERESS Array S	81.58	328	eP	P	09 38 51.1	+0.7
	comp=Z,5.2nm,1.1s,baz=36,slow=5.3						
GERES	GERESS Array B	81.58	328	P	P	09 38 49.8	-0.7
	comp=Z,3.3nm,0.8s,baz=39,slow=5.1,SNR=22						
	comp=Z,3.3nm,0.8s						
WET	Wettzell	81.68	329	eP	P	09 38 51.7	+0.8
	comp=Z,8.5nm,1.1s,baz=36,slow=5.3						
KASTN	Kahler Asten	81.74	332	eP	P	09 38 52.1	+1.0
	comp=Z,5.5nm,0.9s,baz=36,slow=5.3						
EKA	Eskdalemuir Ar	81.80	341	P	P	09 38 50.5	-0.8
	comp=Z,2.5nm,0.7s,baz=26,slow=4.6,SNR=5.7						
	comp=Z,2.5nm,0.7s						
K30B	Basset	81.81	41	IAmb	IAmb	09 39 30.8	
	comp=Z,14nm,0.6s						
BOVS	Bovan	81.87	321	⇓P	P	09 38 52.3	+0.4
GRA1	Grafenberg Arr	81.91	330	IAmb	IAmb	09 38 54.0	
	comp=Z,18nm,0.9s						
GRF	Grafenberg Arr	81.91	330	eP	P	09 38 53.0	+1.0
	comp=Z,11nm,0.8s,baz=36,slow=5.3						
GRFO	Grafenberg	81.91	330	P	P	09 38 53.0	+1.0
ARSA	Arzberg	82.05	326	i P	P	09 38 53.3	+0.5
	comp=Z,6.8nm,1.3s						
MOA	Molln	82.12	327	i PcP	P	09 38 55.0	+1.8
	comp=Z,7.8nm,1.2s						
BIOA	Bad Ischl, Aus	82.51	328	i P	P	09 38 55.9	+0.7
	comp=Z,12nm,1.1s						
TNS	Taunus Mts	82.53	332	eP	P	09 38 55.8	+0.5
	comp=Z,4.0nm,0.8s,baz=36,slow=5.3						
SOKA	Soboth	82.70	326	i P	P	09 38 56.7	+0.4
	comp=Z,20nm,1.1s,SNR=5.5						
OBKA	Obir	83.04	326	i P	P	09 38 59.0	+0.9
	comp=Z,4.2nm,0.8s						
MEM	Membach	83.09	333	dP	P	09 38 58.1	0.0
	comp=Z,9.1nm,0.8s						
FUR	Furstenfeldbru	83.11	329	eP	P	09 38 59.2	+0.9
	comp=Z,17nm,0.8s,baz=36,slow=5.3						
KBA	Koelnbreinsper	83.11	327	i PcP	P	09 38 59.5	+1.0
	comp=Z,16nm,1.2s						
LESA	Schwarzleotal	83.12	328	i P	P	09 38 59.0	+0.6
	comp=Z,8.8nm,0.7s						
MYKA	Terra Mystica	83.34	327	i P	P	09 38 59.2	-0.4
	comp=Z,6.1nm,0.7s						
TASM	ASL Pad, Albuq	83.38	50	IAmb	IAmb	09 39 33.9	
	comp=Z,14nm,1.8s						
ANMO	Albuquerque	83.38	50	P	P	09 39 01.6	+1.4
ANMO				IAmb	IAmb	09 39 33.9	
	comp=Z,19nm,2.0s						
STU	Stuttgart	83.43	331	IAmb	IAmb	09 39 01.5	
	comp=Z,14nm,0.9s						
STU	Stuttgart	83.43	331	eP	P	09 39 00.9	+0.9
	comp=Z,20nm,0.8s,baz=36,slow=5.3						
WATA	Walderalm	83.65	328	i P	P	09 39 01.5	+0.2
	comp=Z,2.9nm,0.7s						
WTTA	Wattenberg	83.68	328	i P	P	09 39 01.9	+0.5
	comp=Z,5.7nm,0.8s						
ABTA	Abfaltersbach	83.73	328	i P	P	09 39 00.8	-0.8
	comp=Z,6.7nm,0.9s						
SCHQ	Schefferville	83.80	16	P	P	09 39 01.9	+0.2
	comp=Z,7.8nm,0.9s,baz=35,slow=1.8,SNR=4.1						
	comp=Z,7.8nm,0.9s						
RETA	Reutte	83.86	329	eP	P	09 39 03.0	+0.8
	comp=Z,26nm,1.2s,SNR=5.4						
SQTA	Sankt Quirin	83.89	329	i P	P	09 39 02.9	+0.5
	comp=Z,5.3nm,0.7s						
UBR	Ueberruh	83.96	330	eP	P	09 39 03.6	+0.8
	comp=Z,4.5nm,0.9s,baz=36,slow=5.3						
PDG	Podgorica	83.97	321	⇑P	P	09 39 02.9	+0.2
STAL	STALIGIAL	84.03	327	IAmb	IAmb	09 39 03.0	
	comp=Z,10nm,0.7s						
BFO	Black Forest	84.13	331		P	09 39 03.5	0.0
BFO				IAmb	IAmb	09 39 04.9	
	comp=Z,17nm,0.9s						
BFO	Black Forest	84.13	331	eP	P	09 39 04.4	+0.9
	comp=Z,11nm,0.9s,baz=36,slow=5.3						
BFO	Black Forest	84.13	331	P	P	09 39 04.0	+0.5
FETA	Feichten	84.24	329	i P	P	09 39 04.7	+0.4
	comp=Z,13nm,1.2s						
DAVA	Damuels	84.37	329	i P	P	09 39 05.3	+0.3
	comp=Z,22nm,0.9s						
CTI	Castel Tesino	84.64	328	IAmb	IAmb	09 39 06.3	
	comp=Z,6.1nm,0.7s						
ECH	Echery	84.66	331	IAmb	IAmb	09 39 07.5	
	comp=Z,12nm,0.9s						
PPT2	Papeete2	85.06	117	eLR	LR	10 06 09.6	
	comp=Z,134nm,24.0s						
PPT2				eLR	LR	10 06 15.2	
	comp=Z,144nm,24.2s						
TUE	Stuetta	85.25	329	IAmb	IAmb	09 39 13.3	
	comp=Z,8.7nm,0.9s						
P38A	Dawn	87.15	39	IAmb	IAmb	09 39 19.7	
	comp=Z,5.3nm,0.7s						
P40A	Paris	87.96	39	IAmb	IAmb	09 39 24.2	
	comp=Z,12nm,1.1s						
SGCY	Sterling City	88.68	49	IAmb	IAmb	09 39 29.4	
	comp=Z,6.0nm,0.9s						
TX31	Lajitas Ar. Si	88.96	53	IAmb	IAmb	09 39 56.3	
	comp=Z,8.2nm,1.6s						
TXAR	Lajitas Array	88.96	53	P	P	09 39 28.6	+1.0
	comp=Z,1.8nm,0.7s,baz=287,slow=3.3,SNR=16						
	comp=Z,1.8nm,0.7s						
JCT	Junction City	90.50	49	IAmb	IAmb	09 42 59.0	
	comp=Z,3.4nm,0.7s						
WHTX	Lake Whitney,	90.77	47	IAmb	IAmb	09 39 37.6	
	comp=Z,4.7nm,0.8s						
FURI	Furi	94.61	285	LR	LR	10 27 04.0	
	comp=Z,23nm,18.9s,baz=121,slow=38						
ESDC	Sonseca Array	96.06	334	P	P	09 39 58.7	-1.4
	comp=Z,0.7nm,0.7s,baz=27,slow=4.2,SNR=3.0						
ESDC				LR	LR	10 28 09.4	
	comp=Z,70nm,19.8s,baz=31,slow=38						
	comp=Z,0.7nm,0.7s						
SNAA	Sanae	142.29	197	PKhKP	PKPpre	09 45 58.3	
	comp=Z,1.9nm,0.9s,baz=175,slow=5.7,SNR=5.0						
LPAZ	La Paz	145.65	58	PKPbc	PKPdf	09 46 11.7	-0.2
	comp=Z,7.5nm,0.8s,baz=328,slow=3.9,SNR=11						
LPAZ	La Paz	145.65	58		PKPbc	09 46 12.2	0.0

IDC ***26*** *09:28:53.5±1.6, 21°.11S×70°.28W, h0^{km}, mb4.2/2, mbtmp3.9/8, ML3.7/6, MS2.9/3, Error ellipse: s-maj=34.0km s-min=24.4km az=95.0*

SJA ***26*** *09:28:55.3±2.1, 21°.07S×70°.54W, h53^{km}±13^{km}, ML4.1, MW3.8*

NEIC ***26*** *09:28:57.9±1.9, 21°.10S±0°.03×70°.49W±0°.05, h44^{km}±7^{km}, mb4.3/9, ML4.2(GUC), Error ellipse: s-maj=7.0km s-min=4.7km az=75.0*

GUC ***26*** *09:28:58.3±0.9, 21°.04S×70°.37W, h55^{km}±4^{km}, ML4.2*

VAO ***26*** *09:28:58.5±1.4, 20°.92S×70°.28W, h52^{km}, mb4.5, Presumed earthquake*

ISC 26 09:28:56.7±0.8**, 21°.08S**±0°.03×**70°.54W**±0°.05**, h48**^{km}±7^{km}**, n121,** σ1^{s}.**54**/136**, mb4.4**/4**, 8C-8D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PATCX	Punta Patache	0.44	55		Pn	09 29 08.0	+0.7
PATCX					Sn	09 29 15.6	+0.8
PATCX	Punta Patache	0.44	55	⇓i P	Pn	09 29 08.3	+1.1
PATCX				i S	Sn	09 29 15.6	+0.8
PATCX				IAML		09 29 15.9	
	comp=N,30μm,0.2s						
PATCX	Punta Patache	0.44	55	i P	Pn	09 29 07.6	+0.3
PATCX				⇑eS	Sn	09 29 15.4	+0.7
PATCX				IAML		09 29 18.1	
	comp=Z,6μm,0.2s						
TA01	Diego Aracena	0.61	33		Pn	09 29 09.9	+0.7
TA01					Sn	09 29 18.6	+0.4
TA01	Diego Aracena	0.61	33	⇓i P	Pn	09 29 10.1	+0.9
TA01				i S	Sn	09 29 18.4	+0.2
TA01				IAML		09 29 19.1	
	comp=E,22μm,0.3s						
TA01	Diego Aracena	0.61	33	i P	Pn	09 29 09.2	-0.1
TA01				eS	Sn	09 29 18.7	+0.6
TA01				IAML		09 29 19.8	
	comp=Z,7μm,0.3s						
PB02	IPOC Station P	0.65	112		Pn	09 29 10.7	+0.9
PB02					Sn	09 29 19.6	+0.4
PB02	IPOC Station P	0.65	112	⇓i P	Pn	09 29 10.9	+1.1
PB02				i S	Sn	09 29 19.5	+0.2
PB02				IAML		09 29 20.3	
	comp=N,58μm,0.3s						
PB02	IPOC Station P	0.65	112	i P	Pn	09 29 10.2	+0.4
PB02				⇓eS	Sn	09 29 19.5	+0.2
PB02				IAML		09 29 21.1	
	comp=Z,55μm,0.3s						
PB07	IPOC Station P	0.89	137		Pn	09 29 14.5	+1.4
PB07	IPOC Station P	0.89	137	⇑i P	Pn	09 29 14.4	+1.3
PB07				eS	Sn	09 29 25.9	+0.9
PB07				IAML		09 29 26.8	
	comp=N,10μm,0.6s						
PB07	IPOC Station P	0.89	137	i P	Pn	09 29 13.7	+0.6
PB07				⇓eS	Sn	09 29 25.4	+0.4
PB07				IAML		09 29 26.3	
	comp=Z,8μm,0.5s						
TA02	Huaiquique	0.89	26	eP	Pn	09 29 13.6	+0.7
TA02				i S	Sn	09 29 24.8	+0.1
TA02				IAML		09 29 25.5	
	comp=E,26μm,0.4s						
TA02	Huaiquique	0.89	26	i P	Pn	09 29 13.1	+0.2
TA02				IAML		09 29 28.2	
	comp=Z,5μm,0.1s						
PB01	IPOC Station P	0.98	88		Pn	09 29 14.7	+0.5
PB01					Sn	09 29 26.1	-1.0
PB01	IPOC Station P	0.98	88	⇓i P	Pn	09 29 14.7	+0.5
PB01				i S	Sn	09 29 26.2	-1.0
PB01	IPOC Station P	0.98	88	i P	Pn	09 29 14.0	-0.2
PB01				eS	Sn	09 29 26.5	-0.6
PB01				IAML		09 29 27.4	
	comp=Z,22μm,0.2s						
PX03	IPOC Station P	1.08	52	eP	Pn	09 29 15.2	-0.4
PX03				i S	Sn	09 29 28.3	-1.3
PX03				IAML		09 29 28.9	
	comp=E,8μm,0.2s						
PB03	IPOC Station P	1.21	143		Pn	09 29 18.7	+1.2
PB03					Sn	09 29 33.5	+0.7
PB03	IPOC Station P	1.21	143	⇑i P	Pn	09 29 18.7	+1.2
PB03	IPOC Station P	1.21	143	i P	Pn	09 29 18.0	+0.6
PB03				IAML		09 29 36.9	
	comp=Z,4μm,0.5s						
PB09	IPOC Station P	1.41	121		Pn	09 29 21.6	+1.5
PB09	IPOC Station P	1.41	121	⇑i P	Pn	09 29 21.6	+1.5
PB09				i S	Sn	09 29 38.0	+0.5
PB09	IPOC Station P	1.41	121	i P	Pn	09 29 20.9	+0.9
PB09				eS	Sn	09 29 38.3	+0.8
PB09				IAML		09 29 39.7	
	comp=Z,5μm,0.6s						
PB11	IPOC Station P	1.55	32		Pn	09 29 22.6	+0.6
PB11	IPOC Station P	1.55	32	⇓i P	Pn	09 29 22.2	+0.2
PB11				IAML		09 29 42.0	
	comp=E,8μm,0.4s						
PB11	IPOC Station P	1.55	32	i P	Pn	09 29 21.6	-0.4
PB11				IAML		09 29 44.8	
	comp=Z,3μm,0.2s						
PB08	IPOC Station P	1.60	55		Pn	09 29 23.6	+0.7
PB08	IPOC Station P	1.60	55	i P	Pn	09 29 23.5	+0.7
PB08				i S	Sn	09 29 41.6	-1.0
PB08				IAML		09 29 44.4	
	comp=E,8μm,0.2s						
PB08	IPOC Station P	1.60	55	i P	Pn	09 29 22.8	-0.1
PB08				eS	Sn	09 29 43.8	+1.3
PB08				IAML		09 29 44.5	
	comp=Z,5μm,0.3s						
PB05	IPOC Station P	1.79	170		Pn	09 29 26.1	+0.8
PB05	IPOC Station P	1.79	170	⇑i P	Pn	09 29 26.6	+1.3
PB05	IPOC Station P	1.79	170	i P	Pn	09 29 26.0	+0.6
PB05				IAML		09 29 59.7	
	comp=Z,616nm,0.5s						
PB06	IPOC Station P	1.85	151		Pn	09 29 27.2	+1.0
PB06	IPOC Station P	1.85	151	⇑i P	Pn	09 29 27.2	+1.0
PB06				i S	Sn	09 29 49.0	+0.5
PB06				IAML		09 29 49.4	
	comp=E,2μm,0.4s						
PB06	IPOC Station P	1.85	151	i P	Pn	09 29 26.5	+0.3
PB06				IAML		09 29 56.1	
	comp=Z,1μm,0.6s						
GO01	Chusmiza	1.89	42		Pn	09 29 27.7	+0.8
GO01	Chusmiza	1.89	42	⇓eP	Pn	09 29 27.5	+0.6
GO01				⇑eP	Pn	09 29 27.5	+0.6
GO01				i S	Sn	09 29 49.0	-0.7
GO01	Chusmiza	1.89	42	i P	Pn	09 29 26.9	0.0
GO01				IAML		09 29 52.8	
	comp=Z,2μm,0.1s						
PB10	IPOC Station P	2.42	180		Pn	09 29 35.1	+1.2
PB10	IPOC Station P	2.42	180	eP	Pn	09 29 35.0	+1.1
PB10	IPOC Station P	2.42	180	i P	Pn	09 29 34.5	+0.6
PB10				IAML		09 30 27.4	
	comp=Z,233nm,0.4s						
PB12	IPOC Station P	2.46	5		Pn	09 29 35.4	+1.0
PB12	IPOC Station P	2.46	5	eP	Pn	09 29 34.7	+0.3
PB12				IAML		09 30 12.1	
	comp=E,1μm,0.1s						
PB12	IPOC Station P	2.46	5	i P	Pn	09 29 34.5	+0.1
PB12				IAML		09 30 12.7	
	comp=Z,517nm,0.3s						
AF01	San Pedro de A	2.88	131		Pn	09 29 43.0	+2.7
AF01	San Pedro de A	2.88	131	⇑i P	Pn	09 29 43.3	+3.0
AF01	San Pedro de A	2.88	131	i P	Pn	09 29 42.9	+2.5
AF01				IAML		09 30 56.3	
	comp=Z,2μm,0.8s						
PB16	IPOC Station P	2.90	20		Pn	09 29 41.8	+1.0
PB16	IPOC Station P	2.90	20	eP	Pn	09 29 42.0	+1.2
PB16	IPOC Station P	2.90	20	i P	Pn	09 29 41.5	+0.6
PB16				IAML		09 30 28.4	
	comp=Z,314nm,0.3s						
PB14	IPOC Station P	3.54	178		Pn	09 29 49.7	+0.3
PB14	IPOC Station P	3.54	178	i P	Pn	09 29 49.8	+0.4
PB14				IAML		09 30 33.6	
	comp=Z,163nm,0.2s						
GO02	Mina Guanaco	4.16	168		Pn	09 29 58.9	+0.9
GO02	Mina Guanaco	4.16	168	i P	Pn	09 29 58.6	+0.6
GO02				IAML		09 31 03.8	
	comp=Z,178nm,0.5s						
AC01	Pan de Azucar	5.05	181	i P	Pn	09 30 08.9	-1.0
AC01				IAML		09 31 43.1	
	comp=Z,73nm,0.8s						
HJA	Humahuaca	5.21	115	i P	Pn	09 30 16.4	+4.0
HJA				IAML		09 31 21.8	
	comp=Z,6.0nm,0.8s						
LPAZ	La Paz	5.28	26	Pn	Pn	09 30 14.4	+0.7
	comp=Z,1.0nm,0.3s,baz=214,slow=5.7,SNR=22						
LPAZ				LR	LR	09 32 02.2	
	comp=Z,48nm,19.6s,baz=230,slow=36						
	comp=Z,0.9nm,0.3s						
LPAZ	La Paz	5.28	26		Pn	09 30 18.1	+4.5
LPAZ	La Paz	5.28	26	eP	Pn	09 30 11.1	-2.6
AC02	Maricunga	5.88	168		Pn	09 30 23.2	+1.5
AC06	Mina Casimiro	6.25	178	Pn	Pn	09 30 27.7	+1.2
GO03	Copiapo	6.49	178	Pn	Pn	09 30 30.0	+0.3
AC04	Llanos de Chal	7.11	184	Pn	Pn	09 30 37.2	-1.0

AC05	El Transito	7.73	178	Pn	Pn	09 30 46.5	-0.3
LCO	Las Campanas	7.90	181	Pn	Pn	09 30 49.8	+0.5
CO01	Juntas del Tor	8.87	177	Pn	Pn	09 31 01.6	-1.0
CO06	Fray Jorge	9.61	186	Pn	Pn	09 31 13.4	+1.0
CO03	El Pedregal	9.72	181	Pn	Pn	09 31 13.0	-1.1
SIV	San Ignacio	10.30	62	Pn	Pn	09 31 20.1	-1.9
	comp=Z,0.2nm,0.3s,baz=251,slow=12,SNR=24						
	comp=Z,5.2nm,0.6s						
CFA	Coronel Fontan	10.69	169	Pn	Pn	09 31 26.0	-1.1
	comp=Z,0.3nm,0.3s,baz=351,slow=13,SNR=5.5						
CFA				Sn	Sn	09 33 17.5	-7.9
	comp=Z,0.2nm,0.3s,baz=240,slow=22,SNR=1.5						
	comp=Z,0.5nm,0.3s						
NNA	Nana	10.87	325	Pn	Pn	09 31 32.9	+3.1
	comp=Z,1.0nm,0.3s,baz=148,slow=9.5,SNR=1.5						
NNA				Sn	Sn	09 33 25.3	-4.8
	comp=Z,1.6nm,0.3s,baz=170,slow=2.6,SNR=2.6						
	comp=Z,2.7nm,0.4s						
PTLB	Pontes e Lacer	12.19	65		Pn	09 31 48.1	+0.3
VILB	Vilhena	12.76	52		Pn	09 31 55.0	-0.7
VILB	Vilhena	12.76	52	*e*P	Pn	09 31 52.5	-3.1
BDQN	Bodoquena, MS	12.92	90	*e*P	Pn	09 31 54.1	-3.5
CPUP	Villa Florida	13.18	116	Pn	Pn	09 31 58.7	-2.5
	baz=295,slow=18,SNR=3.7						
CPUP				LR	LR	09 38 06.5	
	comp=Z,41nm,18.9s,baz=257,slow=43						
	comp=Z,0.3nm,0.4s						
AQDB	Aquidauana	13.89	90		Pn	09 32 10.8	-0.2
AQDB	Aquidauana	13.89	90	*e*P	Pn	09 32 10.6	-0.4
H03N1	Juan Fernandez	14.38	209	T	T	09 47 36.1	
	baz=34,slow=72,SNR=149						
H03N2	Juan Fernandez	14.39	209	T	T	09 47 27.2	
	baz=34,slow=72,SNR=175						
H03N3	Juan Fernandez	14.40	209	T	T	09 47 26.1	
	baz=34,slow=72,SNR=163						
SALV	Santo Antonio	14.99	72	*e*P	Pn	09 32 23.4	-2.2
PP1B	Ponte de Pedra	15.18	80	*e*P	Pn	09 32 26.2	-1.9
PDRB	Porto dos Gac	16.24	57	*e*P	Pn	09 32 39.9	-1.8
C2SB	Chapadao do Su	16.80	85	*e*P	Pn	09 32 47.7	-1.0
PTGB	Pitanga	17.40	106	*e*P	Pn	09 32 55.7	-0.5
CLDB	Colider	17.41	57	*e*P	Pn	09 32 55.1	-1.3
TRQA	Tornquist	18.47	158	P	P	09 33 08.4	-0.1
ARAG	Araguaiana, MT	18.55	76	*e*P	Pn	09 33 09.2	-1.0
ITRB	Iturama	18.97	89	*e*P	Pn	09 33 13.8	-1.4
PLCA	Paso Flores	19.59	180	P	Pn	09 33 23.9	+1.3
	comp=Z,0.1nm,0.3s,baz=356,slow=11,SNR=5.1						
	comp=Z,2.0nm,0.9s						
PLCA	Paso Flores	19.59	180		P	09 33 21.8	+0.9
MACA	Manacapuru-AM	20.23	30	P	P	09 33 27.9	+0.1
MACA				IAmb	IAmb	09 33 29.7	
	comp=Z,8.2nm,0.6s						
NPGB	Novo Progresso	20.25	49	*e*P	P	09 33 28.2	0.0
BB19B	Bebedouro	20.54	94	*e*P	P	09 33 29.5	-1.8
IPMB	Ipameri, GO	21.26	86	*e*P	P	09 33 38.4	-0.7
RCLB	Rio Claro- Sao	21.41	98	*e*P	P	09 33 40.0	-0.7
SPB	Sao Paulo	21.52	101	P	P	09 33 42.7	+1.0
SPB				IAmb	IAmb	09 33 45.0	
	comp=Z,13nm,0.8s						
PET01	Itanhaem-SP	21.70	103	*e*P	P	09 33 43.5	-0.1
VAO	Valinhos	21.93	99	P	P	09 33 44.6	-1.7
VAO				IAmb	IAmb	09 33 47.0	
	comp=Z,22nm,1.3s						
ITTB	Itaituba	21.97	43	*e*P	P	09 33 44.2	-2.4
BDFB	Brasilia	22.04	80	P	P	09 33 46.3	-1.3
	comp=Z,5.0nm,0.3s,baz=252,slow=9.6,SNR=13						
	comp=Z,5.0nm,0.3s						
BDFB	Brasilia	22.04	80	P	P	09 33 48.2	+0.6
BDFB				IAmb	IAmb	09 33 52.2	
	comp=Z,8.9nm,1.1s						
BSCB	Bom Sucesso	24.04	94	*e*P	P	09 34 06.5	-1.0
SMTB	Santa Maria do	25.23	65	*e*P	P	09 34 17.8	-0.6
DIAM	Diamantina, MG	25.44	88	*e*P	P	09 34 19.4	-0.9
JANB	Januaria	25.62	81	*e*P	P	09 34 20.5	-1.4
GUA01	Guaratinga, BA	29.40	87	*e*P	P	09 34 54.7	-1.0
MDP	Montagnes des	31.39	36	LR	LR	09 50 07.5	
	comp=Z,55nm,18.2s,baz=190,slow=41						
SNAA	Sanae	63.17	161	P	P	09 39 19.5	+0.1
SBA	Scott Base	75.97	191	P	P	09 40 38.8	+0.8
TORD	Torodi Ar. Bea	78.65	71	P	P	09 40 58.3	+4.2
	comp=Z,0.8nm,0.4s,baz=252,slow=4.0,SNR=7.2						
	comp=Z,0.8nm,0.4s						
TORD	Torodi Ar. Bea	78.65	71	IAmb	IAmb	09 41 00.0	
	comp=Z,2.4nm,0.6s						
H11S2	WAKE ISLAND Hy	126.32	278	T	T	12 07 18.2	
	baz=103,slow=74,SNR=167						
H11S1	WAKE ISLAND Hy	126.33	278	T	T	12 07 16.7	
	baz=103,slow=74,SNR=123						
H11S3	WAKE ISLAND Hy	126.33	278	T	T	12 07 17.8	
	baz=103,slow=74,SNR=97						
H11N3	WAKE ISLAND Hy	126.39	279	T	T	12 07 26.1	
	baz=102,slow=75,SNR=65						
H11N2	WAKE ISLAND Hy	126.41	279	T	T	12 07 24.6	
	baz=102,slow=75,SNR=59						
H11N1	WAKE ISLAND Hy	126.41	279	T	T	12 07 27.4	
	baz=102,slow=75,SNR=35						
MKAR	Makanchi Array	146.16	34	PKPbc	PKPab	09 48 32.5	+0.1
	comp=Z,0.6nm,0.7s,baz=305,slow=3.2,SNR=5.8						

TAP 26 09:31:28.4, 24°.14N×121°.61E, h3^{km}±1^{km}, ML0.7, 1C, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	Fush Village	0.02	37	*i* P	Pg	09 31 29.3	+0.2
ETL				*e*S	Sg	09 31 30.0	+0.4
NACB	Ninganchiao	0.03	338	⇑*i*P	Pg	09 31 29.8	+0.6
NACB				S	Sg	09 31 30.4	+0.6
NACB	Ninganchiao	0.03	338	P	Pg	09 31 29.5	+0.3
TWD	Chiawan	0.06	191	*i* P	Pg	09 31 30.4	+0.7
TWD				*i* S	Sg	09 31 31.6	+1.1
LXIB	Xiulin Townshi	0.22	236	*i* P	Pg	09 31 33.6	+1.0
LXIB				S	Sg	09 31 37.7	+2.3

DJA ***26*** *09:41:34.5±0.7, 2°S±3°×10°1E±°, h16^{km}±7^{km}, M4.4/20, mB5.0/2, mb4.3/6, MLv4.4/20, Mw(mB)4.3/2, MwMwp4.4/1, Mwp4.8/1*

NEIC ***26*** *09:41:35.9±1.8, 2°.09S±0°.07×100°.6E±0°.1, h65^{km}±7^{km}, mb4.5/17, Error ellipse: s-maj=17.9km s-min=6.9km az=60.0*

IDC ***26*** *09:41:37.6±3.2, 1°.86S×100°.97E, h80^{km}±27^{km}, mb3.7/11, mbtmp4.0/12, MS3.8/6, Error ellipse: s-maj=50.9km s-min=12.8km az=54.0*

ISC 26 09:41:34.4±0.6, **2°.14S**±0°.05×**100°.58E**±0°.05, **h56^{km}, n69,** σ**1^{s}59**/63, **mb4.3**/19, **MS4.1**/6, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPSI	Pulau Pagai	0.84	222	P	Pn	09 41 52.1	+1.9
KRJI	Kerinci	0.89	87	P	Pn	09 41 51.2	+0.3
KRJI				S	Sn	09 42 03.7	+0.7
PDSI	Padang	1.23	355	P	Pn	09 41 55.5	+0.1
PPI	Padang Panjang	1.68	354	P	Pn	09 42 02.3	+0.8
SISI	Saibi	1.69	299	P	Pn	09 42 03.1	+1.5
MASI	Maura Aman, Be	1.94	121	P	Pn	09 42 06.9	+1.9
UBSI	University, Be	2.34	134	P	Pn	09 42 11.7	+1.3
BKNI	Bangkinang	2.49	11	Pn	Pn	09 42 13.4	+0.8
KSI	Kapahiang	2.51	127	P	Pn	09 42 15.5	+2.6
MNSI	Mandailing Nat	3.08	341	P	Pn	09 42 22.2	+1.6
PBSI	Pulau Batu	3.09	312	P	Pn	09 42 22.5	+1.7
MNAI	Manna	3.24	133		Pn	09 42 24.7	+1.9
MNAI	Manna	3.24	133	P	Pn	09 42 24.8	+1.9
EGSI	Enggano, Bengk	3.61	152	P	Pn	09 42 28.3	+0.4
MDSI	Maura Dua	4.28	123	P	Pn	09 42 39.5	+2.4
DSRI	Dabo	4.33	68	P	Pn	09 42 40.3	+2.6
LWLI	Liwa	4.50	130	P	Pn	09 42 42.8	+2.6
GSI	Gunungsitoli	4.55	319		Pn	09 42 41.3	+0.5
GSI	Gunungsitoli	4.55	319	P	Pn	09 42 41.2	+0.5
KLSI		4.86	122	P	Pn	09 42 47.6	+2.6
RPSI	Rantau Prapat	5.08	341		Pn	09 42 51.5	+3.5
RPSI					Sn	09 43 45.1	-0.3
MYKOM	Kota Tinggi	5.09	40		Pn	09 42 48.6	+0.4
MYKOM	Kota Tinggi	5.09	40	P	Pn	09 42 49.2	+1.0
	20nm,0.8s						
KASI	Kota Agung	5.16	131	P	Pn	09 42 50.0	+0.9
PSI	Prapat	5.18	341	P	Pn	09 42 51.5	+2.0
	13nm,0.6s,baz=153,slow=13,SNR=12						
PSI				S	Sn	09 43 45.1	-2.9
	12nm,0.6s,baz=166,slow=12,SNR=4.7						
PSI	Prapat	5.18	341	P	Pn	09 42 53.3	+3.8
KCSI	Kotacane, Aceh	6.29	334	P	Pn	09 43 07.7	+3.1
TPTI		6.35	328	P	Pn	09 43 08.3	+2.9
	0.1nm13nm,0.6s						
KULM	Kulim	7.38	1		Pn	09 43 22.6	+2.9
KULM	Kulim	7.38	1	P	Pn	09 43 22.5	+2.9
	0.1nm15nm,0.7s						
BBJI	Bungbulang	8.81	127	P	Pn	09 43 37.7	-1.5
UGM	Wanagama	11.44	120	Pn	Pn	09 44 15.6	+0.4
SNJI	Sawahan-Nganju	12.47	117	P	Pn	09 44 30.3	+1.0
CMAR	Chiang Mai Arr	20.53	356	P	P	09 46 08.6	+0.3
	0.8nm,0.3s,baz=172,slow=10,SNR=1.7						
	0.8nm,0.3s						
SGSI	Sangihe	25.60	77	P	P	09 47 11.3	+13
FITZ	Fitzroy Crossi	29.26	124	P	P	09 47 30.9	-0.5
KNRA	Kununurra	30.86	117	P	P	09 47 45.6	0.0
KNRA				IAmb	IAmb	09 48 21.2	
	comp=Z,15nm,1.1s						
NWAO	Narrogin (SRO)	34.39	155	LR	LR	10 02 44.6	
	comp=Z,26nm,18.9s,baz=280,slow=37						
WB0	Warramunga Arr	37.40	120	P	P	09 48 41.2	-1.1
WB0				IAmb	IAmb	09 48 56.8	
	comp=Z,3.9nm,0.9s						
WRA	Warramunga Arr	37.42	121	P	P	09 48 41.3	-1.2
	comp=Z,0.9nm,0.6s,baz=303,slow=9.1,SNR=16						
	comp=Z,0.9nm,0.6s						
WRAB	Tennant Creek	37.43	121	P	P	09 48 42.2	-0.3
WRAB				IAmb	IAmb	09 49 22.3	
	comp=Z,9.2nm,1.4s						
WR8	Warramunga Arr	37.57	121	P	P	09 48 42.5	-1.2
WR8				IAmb	IAmb	09 48 58.0	
	comp=Z,5.6nm,1.2s						
AS31	Alice Springs	38.70	126	P	P	09 48 53.0	-0.3
AS31				IAmb	IAmb	09 48 53.6	
	comp=Z,2.4nm,0.5s						
ASAR	Alice Springs	38.70	126	P	P	09 48 53.0	-0.3
	comp=Z,5.0nm,0.6s,baz=303,slow=7.8,SNR=91						
	comp=Z,5.0nm,0.6s						
MANEM	Manem	47.71	329		P	09 50 06.0	+0.1
MANEM				IAmb	IAmb	09 50 15.5	
	comp=Z,15nm,0.6s						
STKA	Stephens Creek	48.63	132	P	P	09 50 12.8	-0.1
	comp=Z,1.3nm,0.4s,baz=296,slow=7.6,SNR=5.7						
	comp=Z,1.3nm,0.4s						
ARSB	Arslanbob	50.01	333		P	09 50 23.7	+0.3
SONM	Songino Array	50.03	5	P	P	09 50 21.6	-1.8
	comp=Z,0.7nm,0.8s,baz=170,slow=8.8,SNR=2.3						
	comp=Z,0.7nm,0.8s						
SONM	Songino Array	50.03	5	IAmb	IAmb	09 50 27.2	
	comp=Z,1.6nm,1.3s						
MKAR	Makanchi Array	51.32	344	P	P	09 50 32.8	-0.2
	comp=Z,2.1nm,0.6s,baz=151,slow=8.0,SNR=24						
	comp=Z,2.1nm,0.6s						
KURBB	Kurchatov Arra	55.85	343	P	P	09 51 05.5	-0.6
	comp=Z,0.7nm,0.8s,baz=161,slow=8.4,SNR=4.0						
	comp=Z,0.7nm,0.8s						
ARMA	Armidale	55.85	126	P	P	09 51 07.0	+0.3
ARMA				IAmb	IAmb	09 51 46.7	
	comp=Z,7.2nm,1.1s						
KURK	Kurchatov	55.91	343	P	P	09 51 05.5	-1.0
ZAA0	Zalesovo Array	57.41	349		P	09 51 16.4	-0.7
ZAA0				IAmb	IAmb	09 51 17.8	
	comp=Z,3.8nm,0.8s						
ZALV	Zalesovo Beam	57.41	349	P	P	09 51 16.5	-0.6
	comp=Z,2.3nm,0.6s,baz=163,slow=5.6,SNR=17						
	comp=Z,2.3nm,0.6s						
ZALV	Zalesovo Beam	57.41	349		P	09 51 16.3	-0.8
BVAR	Borovoye Array	60.52	340	P	P	09 51 37.9	-0.7
	comp=Z,0.8nm,0.6s,baz=148,slow=8.5,SNR=2.4						
	comp=Z,0.8nm,0.6s						
AB31	Akbulak array	62.04	331	P	P	09 51 48.7	-0.3
AB31				IAmb	IAmb	09 51 49.3	
	comp=Z,2.1nm,0.7s						
ABKAR	Akbulak array	62.04	331	P	P	09 51 48.5	-0.5
KBZ	Khabaz	68.79	319	P	P	09 52 33.6	+0.9
	comp=Z,1.5nm,0.8s,baz=126,slow=8.7,SNR=4.3						
	comp=Z,1.5nm,0.8s						
BELG	Belogornoye	70.15	329	LR	LR	10 25 44.6	
	comp=Z,77nm,20.0s,baz=92,slow=38						
BKZ	Black Stump Fm	77.74	129	P	P	09 53 25.6	-0.2
BKZ				IAmb	IAmb	09 54 01.9	
	comp=Z,7.3nm,1.2s						
AKASG	Malin Array Be	79.95	322	LR	LR	10 32 41.7	
	comp=Z,91nm,20.8s,baz=46,slow=38						
ARCES	ARCESS Array B	86.80	340	P	P	09 54 12.4	0.0
	comp=Z,1.9nm,0.8s,baz=108,slow=5.8,SNR=1.4						
	comp=Z,1.9nm,0.8s						
VRAC	Vranov	87.68	319	LR	LR	10 37 12.4	
	comp=Z,100nm,21.9s,baz=64,slow=38						
GERES	GERESS Array B	89.53	319	LR	LR	10 39 01.4	
	comp=Z,77nm,20.6s,baz=63,slow=38						
DAVOX	Davos/Dischmat	92.02	317	LR	LR	10 41 37.6	
	comp=Z,74nm,20.6s,baz=62,slow=39						
TXAR	Lajitas Array	144.46	38	PKP	PKPbc	10 01 04.3	+0.4
	comp=Z,0.2nm,0.5s,baz=300,slow=0.7,SNR=9.6						
CPUP	Villa Florida	144.55	216	PKPbc	PKPdf	10 01 05.2	-0.2
	comp=Z,2.0nm,0.8s,baz=258,slow=2.3,SNR=5.6						

SDD ***26*** *09:47:43.8±0.8, 18°.09N×67°.54W, h166^{km}±6^{km}, MD3.3, ML2.8, MW3.0, Presumed earthquake*

NEIC ***26*** *09:47:45.7±1.0, 18°.2N±0°.1×67°.55W±0°.05, h137^{km}±3^{km}, ML3.0/22, Md3.3/5(RSPR), Error ellipse: s-maj=15.1km s-min=6.9km az=193.0*

RSPR ***26*** *09:47:46.4, 18°.27N×67°.46W, h138^{km}±1^{km}, MD3.3/5*

ISC 26 09:47:44.9±2.1, **18°.2N**±0°.1×**67°.55W**±0°.05, **h144^{km}**±12^{km}, **n43,** σ**0^{s}59**/53, **9C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDE	Isla Desecheo	0.20	21		Pn	09 48 05.0	+0.6
IDE					Sn	09 48 19.2	-0.1
IDE	Isla Desecheo	0.20	21	⇑*e*P	Pn	09 48 05.0	+0.6
IDE	Isla Desecheo	0.20	21	*e*S	Sn	09 48 19.2	-0.1
PRSN	Puerto Rico Se	0.39	87	Pn	Pn	09 48 05.3	+0.4
PRSN				IAML		09 48 22.8	
	359nm,0.3s						
PRSN				IAML		09 48 24.7	
	212nm,0.3s						
LSP	Las Mesas	0.44	93		Pn	09 48 05.3	+0.1
LSP					Sn	09 48 19.5	-1.2
LSP	Las Mesas	0.44	93	⇑*e*P	Pn	09 48 05.3	+0.1
LSP	Las Mesas	0.44	93	*e*S	Sn	09 48 19.5	-1.2
CRPR	Cabo Rojo, PR	0.46	115		Pn	09 48 05.3	0.0
CRPR					Sn	09 48 21.0	+0.3
CRPR	Cabo Rojo, PR	0.46	115	⇑*e*P	Pn	09 48 05.3	0.0
CRPR	Cabo Rojo, PR	0.46	115	*e*S	Sn	09 48 21.0	+0.3
CRPR	Cabo Rojo, PR	0.46	115	*e*Pg	Pn	09 48 05.5	+0.2
CRPR				*e*Sg	Sn	09 48 21.3	+0.5
CRPR				IAML		09 48 22.3	
	comp=N,132nm,0.6s						
AGPR	Aguadilla, PR	0.49	57	Pn	Pn	09 48 04.4	-1.0
AGPR				IAML		09 48 17.8	
	comp=N,126nm,2.8s						
AGPR				IAML		09 48 53.8	
	comp=N,188nm,2.6s						
AGPR	Aguadilla, PR	0.49	57	⇑*e*P	Pn	09 48 06.0	+0.5
AGPR	Aguadilla, PR	0.49	57	*e*S	Sn	09 48 20.0	-1.1
AGPR	Aguadilla, PR	0.49	57	*e*Pg	Pn	09 48 05.7	+0.2
AGPR				*e*Sg	Sn	09 48 22.4	+1.3
AGPR				IAML		09 48 27.5	
	comp=N,171nm,2.2s						
MLPR	Magueyes Islan	0.53	115	⇑*e*P	Pn	09 48 05.5	-0.1
MLPR	Magueyes Islan	0.53	115	*e*S	Sn	09 48 21.8	+0.4
MLPR	Magueyes Islan	0.53	115	*e*Pg	Pn	09 48 05.5	-0.1
MLPR				*e*Sg	Sn	09 48 21.9	+0.6
MLPR				IAML		09 48 23.2	
	comp=N,38nm,0.2s						
AOPR	Arecibo Observ	0.77	79		Pn	09 48 07.3	+0.1
AOPR					Sn	09 48 24.3	+0.1
AOPR	Arecibo Observ	0.77	79	⇑*e*P	Pn	09 48 07.3	+0.1
AOPR	Arecibo Observ	0.77	79	*e*S	Sn	09 48 24.3	+0.1
AOPR	Arecibo Observ	0.77	79	*e*Pg	Pn	09 48 07.2	+0.1
AOPR				*e*Sg	Sn	09 48 25.1	+0.9
AOPR				IAML		09 48 25.7	
	comp=N,441nm,0.4s						
UUPR	Utuado, UPR, P	0.79	86	Pn	Pn	09 48 07.6	+0.3
OBIP	Obispado Ponce	0.91	100		Pn	09 48 08.0	-0.2
OBIP					Sn	09 48 25.2	-0.8
OBIP	Obispado Ponce	0.91	100	⇑*e*P	Pn	09 48 08.0	-0.2
OBIP	Obispado Ponce	0.91	100	*e*S	Sn	09 48 25.2	-0.8
CELP	Cerrillos	0.93	98	Pn	Pn	09 48 08.6	+0.1
CELP				IAML		09 48 27.7	
	comp=N,100nm,0.3s						
EMPR	Esperanza - Ma	1.01	74		Pn	09 48 09.1	0.0
EMPR					Sn	09 48 27.6	+0.1
EMPR	Esperanza - Ma	1.01	74	IAML		09 48 31.4	
	comp=N,165nm,0.5s						
EMPR				IAML		09 48 32.2	
	comp=N,222nm,1.9s						
EMPR	Esperanza - Ma	1.01	74	⇑*e*P	Pn	09 48 09.1	0.0
EMPR	Esperanza - Ma	1.01	74	*e*S	Sn	09 48 27.6	+0.1
ECPR	Experimental S	1.13	84	Pn	Pn	09 48 10.1	-0.1
ECPR				IAML		09 48 32.4	
	comp=N,385nm,0.2s						
ECPR	Experimental S	1.13	84	⇑*e*P	Pn	09 48 10.2	-0.1
ECPR	Experimental S	1.13	84	*e*S	Sn	09 48 29.8	+0.3
SJG	San Juan	1.33	94	Pn	Pn	09 48 12.4	+0.2
SJG	San Juan	1.33	94	IAML		09 48 34.9	
	comp=N,91nm,0.4s						
GCPR	Guaynabo City	1.40	85		Sn	09 48 33.8	-0.4
GCPR	Guaynabo City	1.40	85	*e*S	Sn	09 48 33.8	-0.4
HUMP	Col San Antoni	1.62	92	Pn	Pn	09 48 14.9	-0.3
HUMP				IAML		09 48 39.8	
	comp=N,93nm,0.4s						
HUMP				IAML		09 48 43.3	
	comp=N,98nm,0.2s						
MIDR	Miches	1.62	299	*e*Pg	Pn	09 48 14.7	-0.5
MIDR				*e*Pg		09 48 15.6	
MIDR				*e*Sg	Sn	09 48 37.5	-1.0
MIDR				*e*Sg		09 48 38.5	
MIDR				IAML		09 48 44.7	
	comp=N,46nm,0.3s						
MIDR				IAML		09 48 48.0	
	comp=N,26nm,1.9s						
DR12	Loma Pena Alta	1.83	289	Pn	Pn	09 48 17.7	0.0
HATOM	Hato Mayor del	1.83	289	*e*Pg	Pn	09 48 17.2	-0.5
HATOM				*e*Sg	Sn	09 48 42.0	-0.8
HATOM				IAML		09 48 51.8	
	comp=N,56nm,3.3s						
SC01	Santiago de lo	3.25	293	Pn	Pn	09 48 36.9	+1.7

GCG 26 09:51:33.1±1.1, **13°.59N×91°.38W, h50^{km}**±135^{km}, **MD3.8, MW2.6, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG5	El Palmar, Qui	0.81	2	*i* P	Pn	09 51 52.6	+4.2
STG2	El Palmar, Qui	0.84	0	*i* S	Sn	09 52 08.1	+7.7
STG8	El Palmar, Qui	0.85	2	*i* P	Pn	09 51 53.4	+4.2
ESSG	Sabana Grande	0.95	34	*i* P	Pn	09 51 50.5	+0.2
ESSG				*i* S	Sn	09 52 03.5	+0.6
FG16	Alotenango, Sa	1.08	51	*i* P	Pn	09 51 51.7	-0.5
NUBE	Las Nubes	1.58	79	*i* P	Pn	09 51 58.9	0.0
APG	El Apazote	1.66	32	*i* P	Pn	09 52 02.4	+2.4

IDC ***26*** *10:10:53.4±1.5, 22°.38S×179°.63W, h595^{km}±15^{km}, mb3.5/18, mbtmp4.5/19, Error ellipse: s-maj=17.1km s-min=14.4km az=146.0*

NEIC ***26*** *10:10:53.6±1.5, 22°.4S±0°.1×179°.6W±0°.1, h595^{km}±5^{km}, mb4.5/37, Error ellipse: s-maj=18.0km s-min=15.1km az=126.0*

NOU ***26*** *10:10:54.0, 22°.22S×179°.60W, h603^{km}, mb4.7/22, South of Fiji Islands*

ISC 26 10:10:53.6±0.5, **22°.47S**±0°.08×**179°.66W**±0°.09, **h600^{km}, n109,** σ**1^{s}19**/94, **mb4.5**/47, **1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	5.18	335		P	10 12 26.3	-1.8
MSVF	Nonsavu	5.18	335	P	P	10 12 26.5	-1.6
MARNC	Mare, Loyalty	11.47	273	P	P	10 13 26.6	-0.4
DZM	Mont Dzumac	12.88	269	P	P	10 13 42.9	+1.6
	9.9nm,0.8s,baz=89,slow=20,SNR=12						
TOZ	Tahuroa Road	15.78	194	P	P	10 14 08.6	0.0
URZ	Urewera	15.98	189	P	P	10 14 08.5	-2.1
	4.4nm,0.5s,baz=90,slow=5.2,SNR=5.0						
URZ				S	S	10 16 45.3	-5.8
	7.0nm,0.8s,baz=232,slow=23,SNR=7.3						
QRZ	Quartz Range	19.46	198	P	P	10 14 45.1	+2.8
	33nm,1.6s						
ARMA	Armidale	26.85	247	P	P	10 15 49.1	+1.0
ARMA				IAmb	IAmb	10 15 50.7	
	comp=Z,8.1nm,0.7s						
EIDS	Eidsvold	26.88	258	P	P	10 15 49.3	+0.9
EIDS				IAmb	IAmb	10 15 49.8	
	comp=Z,9.9nm,0.7s						
SYDH	Sydney Hard Ro	28.33	240	P	P	10 16 02.8	+1.9
	comp=Z,40nm,0.7s						
AULRC	Lightning Ridg	29.85	250	P	P	10 16 14.9	+0.8
	comp=Z,36nm,0.8s						
AUMHS	Melrose High S	30.09	238	P	P	10 16 17.6	+1.5
	comp=Z,45nm,0.8s						
CAN	Canberra	30.15	238	P	P	10 16 17.9	+1.3
CAN				IAmb	IAmb	10 16 18.8	
	comp=Z,16nm,0.8s						
CTA	Charters Tower	31.81	268	P	P	10 16 31.4	+0.4
CTAO	Charters Tower	31.81	268	P	P	10 16 31.4	+0.4
CTAO	Charters Tower	31.81	268	P	P	10 16 31.4	+0.4
	comp=Z,12nm,0.9s						
CMSA	Cobar Meteorol	32.06	246	P	P	10 16 33.7	+0.8
	comp=Z,37nm,1.0s						
QLP	Quilpie	33.03	255	P	P	10 16 41.9	+0.7
	comp=Z,37nm,0.8s						
TOO	Toolangi	33.50	235		P	10 16 46.1	+1.1
MTSU	Mount Surprise	34.01	271	P	P	10 16 49.9	+0.4
	comp=Z,11nm,0.7s						
PMG	Port Moresby	34.35	287	P	P	10 16 52.2	-0.1
	comp=Z,29nm,0.8s,baz=93,slow=6.6,SNR=18						
	comp=Z,29nm,0.8s						
PMG	Port Moresby	34.35	287	IAmb	IAmb	10 16 53.4	
	comp=Z,29nm,0.8s						
PMG	Port Moresby	34.35	287	P	P	10 16 52.3	-0.1
	comp=Z,40nm,0.8s						
BRAT	Ballarat	34.69	236	P	P	10 16 56.6	+1.8
	comp=Z,20nm,0.7s						
STKA	Stephens Creek	35.56	246	P	P	10 17 02.8	+0.6
	comp=Z,14nm,0.6s,baz=94,slow=11,SNR=39						
	comp=Z,14nm,0.6s						
STKA	Stephens Creek	35.56	246		P	10 17 03.0	+0.8
STKA	Stephens Creek	35.56	246	P	P	10 17 03.2	+1.0
	comp=Z,4.6nm,1.0s						
INKA	Innaminka	36.13	253		P	10 17 08.4	+1.6
INKA				IAmb	IAmb	10 17 09.1	
	comp=Z,5.2nm,0.7s						
COEN	Coen	36.23	277	P	P	10 17 08.0	+0.2
COEN				IAmb	IAmb	10 17 28.0	
	comp=Z,15nm,1.1s						
BBOO	Buckleboo	40.31	245	P	P	10 17 40.7	+0.2
BBOO				IAmb	IAmb	10 17 41.3	
	comp=Z,16nm,0.9s						
AS31	Alice Springs	42.59	259		P	10 17 58.9	+0.2
AS31				IAmb	IAmb	10 17 59.8	
	comp=Z,9.6nm,0.4s						
ASAR	Alice Springs	42.60	259	P	P	10 17 58.8	+0.1
	comp=Z,20nm,0.6s,baz=98,slow=7.3,SNR=319						
ASAR				PcP	PcP	10 19 37.1	+0.3
	comp=Z,2.2nm,0.7s,baz=108,slow=4.2,SNR=5.0						
ASAR				ScP	ScP	10 22 32.2	+0.9
	comp=Z,0.6nm,0.8s,baz=86,slow=3.4,SNR=4.0						
	comp=Z,20nm,0.6s						
ASAR	Alice Springs	42.60	259		P	10 17 59.0	+0.3
WR8	Warramunga Arr	42.69	265		P	10 17 59.0	-0.4
WR8				IAmb	IAmb	10 17 59.7	
	comp=Z,13nm,0.9s						
WB0	Warramunga Arr	42.82	265		P	10 18 00.1	-0.4
WRAB	Tennant Creek	42.83	265	P	P	10 17 60.0	-0.6
WRAB				IAmb	IAmb	10 18 00.8	
	comp=Z,24nm,0.9s						
WRAB	Tennant Creek	42.83	265	P	P	10 17 59.9	-0.6
	comp=Z,18nm,1.6s						
WRA	Warramunga Arr	42.84	264	P	P	10 18 00.2	-0.4
	comp=Z,18nm,0.6s,baz=91,slow=5.8,SNR=247						
WRA				PcP	PcP	10 19 38.2	+0.5
	comp=Z,1.1nm,0.8s,baz=94,slow=3.1,SNR=2.8						
WRA				ScP	ScP	10 22 32.2	-0.1
	comp=Z,0.9nm,1.1s,baz=98,slow=4.1,SNR=5.8						
	comp=Z,18nm,0.6s						
WRA	Warramunga Arr	42.84	264	P	P	10 17 59.3	-1.3
JAY	Jayapura	43.26	292	P	P	10 18 03.6	-0.4
	comp=Z,25nm,0.6s,baz=121,slow=0.5,SNR=5.3						
	comp=Z,25nm,0.6s						
FORT	Forrest	47.12	248	P	P	10 18 33.0	-0.1
FORT				IAmb	IAmb	10 18 33.6	
	comp=Z,13nm,0.7s						
MTN	Manton Dam	47.68	273		P	10 18 36.9	-0.6
KNRA	Kununurra	49.02	268		P	10 18 47.5	+0.1
FITZ	Fitzroy Crossi	51.27	264		P	10 19 04.2	+0.5
FITZ	Fitzroy Crossi	51.27	264	P	P	10 19 04.1	+0.4
	comp=Z,35nm,1.0s						
SOEI	Soe	55.05	274	P	P	10 19 31.3	+0.6

	comp=Z,66nm,0.7s						
PSA00	**Pilbara Seismi**	**55.74**	**259**	P	**P**	**10 19 34.7**	**-0.6**
VNDA	**Vanda**	**55.83**	**185**	P	**P**	**10 19 35.8**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=9.6,slow=5.3,SNR=2.6						
	comp=Z,0.7nm,0.6s						
MBWA	**Marble Bar**	**55.94**	**259**	P	**P**	**10 19 36.4**	**-0.2**
MBWA				IAmb	IAmb	10 19 37.0	
	comp=Z,18nm,0.7s						
NWAO	**Narrogin (SRO)**	**56.12**	**245**	P	**P**	**10 19 37.5**	**-0.2**
NWAO				IAmb	IAmb	10 20 17.8	
	comp=Z,30nm,1.2s						
SANI	**Sanana**	**56.48**	**283**	P	**P**	**10 19 40.8**	**+0.4**
	comp=Z,18nm,0.6s						
DAV	**Davao City (W)**	**61.10**	**292**	P	**P**	**10 20 11.2**	**-0.1**
TOLI2	**Tolitoli**	**62.53**	**284**	P	**P**	**10 20 19.7**	**-0.9**
TOLI2				IAmb	IAmb	10 20 37.4	
	comp=Z,24nm,0.9s						
UGM	**Wanagama**	**68.40**	**270**	P	**P**	**10 20 57.0**	**-0.2**
KKM	**Kota Kinabalu**	**68.80**	**286**	P	**P**	**10 20 59.5**	**0.0**
KKM				IAmb	IAmb	10 21 07.5	
	comp=Z,24nm,1.1s						
MJAR	**Matsushiro Arr**	**70.90**	**325**	P	**P**	**10 21 11.1**	**-0.4**
	comp=Z,2.5nm,0.7s,baz=163,slow=5.2,SNR=7.0						
	comp=Z,2.5nm,0.7s						
MJAR	**Matsushiro Arr**	**70.90**	**325**	IAmb	IAmb	10 21 11.5	
	comp=Z,3.7nm,1.1s						
TPUB	**Ta-pu**	**73.77**	**304**	P	**P**	**10 21 26.9**	**-1.4**
SSLB	**Suanglung**	**73.79**	**305**	P	**P**	**10 21 27.1**	**-1.2**
SSLB				IAmb	IAmb	10 21 27.8	
	comp=Z,10nm,0.6s						
JKA	**Kamikawa-asahi**	**74.73**	**333**	P	**P**	**10 21 34.2**	**+1.0**
JKA				IAmb	IAmb	10 22 09.1	
	comp=Z,19nm,1.4s						
KSRS	**Korea Array**	**77.36**	**320**	P	**P**	**10 21 48.0**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=125,slow=6.5,SNR=2.8						
	comp=Z,1.2nm,0.7s						
PETK	**Petropavlovsk-**	**77.79**	**346**	P	**P**	**10 21 49.3**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=160,slow=5.4,SNR=6.7						
	comp=Z,1.5nm,0.6s						
MAW	**Mawson**	**79.20**	**200**	P	**P**	**10 21 57.8**	**+0.8**
	comp=Z,1.6nm,0.6s,baz=109,slow=8.8,SNR=2.3						
	comp=Z,1.6nm,0.6s						
USRK	**Ussuriysk Ar.**	**79.74**	**327**	P	**P**	**10 22 00.3**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=169,slow=5.7,SNR=4.9						
	comp=Z,2.0nm,0.7s						
NVAR	**Mina Array Bea**	**83.51**	**44**	P	**P**	**10 22 19.8**	**0.0**
	comp=Z,3.3nm,1.1s,baz=225,slow=7.0,SNR=7.3						
NVAR				PP	**sP**	**10 25 31.2**	**+5.0**
	comp=Z,0.5nm,0.8s,baz=259,slow=4.3,SNR=3.8						
	comp=Z,3.3nm,1.1s						
PLCA	**Paso Flores**	**89.03**	**134**	P	**P**	**10 22 46.6**	**+0.6**
	comp=Z,1.6nm,0.9s,baz=256,slow=12,SNR=3.9						
	comp=Z,1.6nm,0.9s						
PLCA	**Paso Flores**	**89.03**	**134**	IAmb	IAmb	10 23 24.9	
	comp=Z,7.3nm,1.4s						
MNTX	**Cornudas Mount**	**89.14**	**55**	IAmb	IAmb	10 22 47.7	
	comp=Z,3.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**89.33**	**290**	P	**P**	**10 22 49.4**	**+1.7**
	comp=Z,3.6nm,0.8s,baz=134,slow=3.2,SNR=24						
	comp=Z,3.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**89.33**	**290**		**P**	**10 22 48.5**	**+0.9**
TXAR	**Lajitas Array**	**89.41**	**58**	P	**P**	**10 22 48.5**	**+0.6**
	comp=Z,1.4nm,0.9s,baz=212,slow=5.8,SNR=11						
	comp=Z,1.4nm,0.9s						
HILR	**Hailar Array B**	**89.57**	**325**	P	**P**	**10 22 48.6**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=111,slow=7.9,SNR=2.3						
	comp=Z,0.8nm,0.5s						
ILAR	**Eielson Array**	**90.57**	**13**	P	**P**	**10 22 52.1**	**-0.2**
	comp=Z,0.5nm,1.0s,baz=201,slow=4.4,SNR=1.8						
	comp=Z,0.5nm,1.0s						
PDAR	**Pinedale Array**	**91.44**	**44**	P	**P**	**10 22 56.8**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=217,slow=3.0,SNR=5.4						
	comp=Z,0.6nm,0.8s						
DRIO	**Del Rio**	**91.85**	**59**	IAmb	IAmb	10 22 59.6	
	comp=Z,4.3nm,0.8s						
MKAR	**Makanchi Array**	**111.41**	**313**	PKiKP	**PKiKP**	**10 28 19.0**	**-1.5**
	comp=Z,0.3nm,0.4s,baz=118,slow=1.0,SNR=6.0						
KURK	**Kurchatov**	**114.38**	**317**		PKPdf	10 28 24.6	-1.3
KURBB	**Kurchatov Arra**	**114.42**	**317**	PKiKP	PKPdf	10 28 24.6	-1.4
	comp=Z,0.2nm,0.3s,baz=89,slow=2.7,SNR=2.3						
BVAR	**Borovoye Array**	**119.57**	**319**	PKP	**PKPdf**	**10 28 34.9**	**-0.9**
	comp=Z,1.5nm,0.3s,baz=118,slow=1.5,SNR=7.6						
SPITS	**Spitsbergen Ar**	**123.72**	**356**	PKP	**PKPdf**	**10 28 42.5**	**-0.7**
	comp=Z,8.0nm,1.1s,baz=11,slow=2.9,SNR=1.6						
ARCES	**ARCESS Array B**	**130.55**	**349**	PKP	**PKPdf**	**10 28 56.4**	**0.0**
	comp=Z,3.8nm,0.9s,baz=42,slow=5.5,SNR=2.7						
ARCES				SKPbc	**SKPab**	**10 31 25.1**	**-0.4**
	comp=Z,3.4nm,0.9s,baz=15,slow=5.0,SNR=5.1						
FINES	**FINESS Array B**	**137.19**	**342**	PKP	**PKPdf**	**10 29 08.2**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=56,slow=3.5,SNR=4.4						
FINES				SKP	**SKPbc**	**10 31 47.3**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=42,slow=5.9,SNR=4.9						
HFS	**Hagfors**	**141.20**	**349**	PKhKP	PKPpre	10 29 10.5	
	comp=Z,1.9nm,0.4s,baz=79,slow=3.2,SNR=21						
HFS				PKP	**PKPdf**	**10 29 15.7**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=66,slow=3.6,SNR=1.2						
AK03	**Malin Array Si**	**143.91**	**329**	PKP	PKPbc	10 29 19.5	-1.3
AKASG	**Malin Array Be**	**143.93**	**329**	PKP	PKPbc	10 29 19.7	-1.2
	comp=Z,2.5nm,0.4s,baz=46,slow=4.2,SNR=18						
AKBB	**Malin Array Si**	**143.93**	**329**	PKP	PKPbc	10 29 19.7	-1.2
AK01	**Malin Array Si**	**143.94**	**329**	PKP	PKPbc	10 29 19.5	-1.4
KIEV	**Kiev**	**143.94**	**329**	PKP	PKPbc	10 29 19.6	-1.3
AK04	**Malin Array Si**	**143.94**	**329**	PKP	PKPbc	10 29 19.6	-1.3
AK09	**Malin Array Si**	**143.96**	**328**	PKP	PKPbc	10 29 19.8	-1.2
AK08	**Malin Array Si**	**143.96**	**328**	PKP	PKPbc	10 29 18.8	-2.2
AK22	**Malin Array Si**	**143.96**	**329**	PKP	PKPbc	10 29 19.8	-1.2
AK02	**Malin Array Si**	**143.97**	**329**	PKP	PKPbc	10 29 19.8	-1.2
AK21	**Malin Array Si**	**143.97**	**329**	PKP	PKPbc	10 29 19.7	-1.3
AK11	**Malin Array Si**	**143.97**	**329**	PKP	PKPbc	10 29 19.8	-1.2
AK10	**Malin Array Si**	**143.98**	**328**	PKP	PKPbc	10 29 19.8	-1.3
AK18	**Malin Array Si**	**143.99**	**329**	PKP	PKPbc	10 29 19.7	-1.4
AK12	**Malin Array Si**	**144.00**	**329**	PKP	PKPbc	10 29 19.9	-1.2
AK20	**Malin Array Si**	**144.00**	**329**	PKP	PKPbc	10 29 19.9	-1.2
AK14	**Malin Array Si**	**144.03**	**329**	PKP	PKPbc	10 29 19.9	-1.3
AK13	**Malin Array Si**	**144.06**	**329**	PKP	PKPbc	10 29 20.2	-1.1
MI28	**Mi28,Pidlybu**	**144.51**	**330**	PKP	**PKPdf**	**10 29 20.9**	**-1.5**
BR131	**Keskin Array S**	**146.94**	**309**		**PKPbc**	**10 29 29.7**	**-0.5**
BRTR	**Keskin Array B**	**146.94**	**309**	PKPbc	**PKPbc**	**10 29 29.6**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=136,slow=4.7,SNR=11						
EKA	**Eskdalemuir Ar**	**147.07**	**4**	PKPbc	**PKPbc**	**10 29 28.9**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=320,slow=2.2,SNR=1.2						
MMAI	**Mount Meron Ar**	**147.37**	**296**	PKPbc	**PKPbc**	**10 29 32.1**	**+0.7**
	comp=Z,3.0nm,0.3s,baz=81,slow=5.3,SNR=2.6						
CLL	**Collm**	**149.57**	**344**	⇓*i*PKPbc	**PKPbc**	**10 29 35.7**	**-0.4**
	comp=Z,9.0nm,0.9s						
CLL				*i* PKPab	**PKPab**	**10 29 43.1**	**-0.7**
GERES	**GERESS Array B**	**151.61**	**341**	PKPbc	**PKPbc**	**10 29 40.4**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=28,slow=3.5,SNR=6.0						
GERES				PKPab	**PKPab**	**10 29 52.0**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=48,slow=6.2,SNR=4.6						
TORD	**Torodi Ar. Bea**	**170.64**	**188**	PKPab	**PKPab**	**10 31 16.1**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=164,slow=4.1,SNR=2.4						

IDC 26 10:20:47.6±4.7**,6°.39S**×**147°.24E,h0^{km},mb3.8**/2**,mbtmp3.7**/4**,ML3.8**/1**,Error ellipse: s-maj=65.3km s-min=52.7km az=63.0,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.00**	**182**	Pn	Pn	10 21 38.4	+2.0
	24nm,0.3s,baz=0.1,slow=5.8,SNR=20						
PMG				Sn	Sn	10 22 15.8	+2.7
	4.6nm,0.3s,baz=18,slow=19,SNR=6.7						
WRA	**Warramunga Arr**	**18.40**	**222**	P	Pn	10 25 04.3	-0.1
	0.4nm,0.3s,baz=49,slow=12,SNR=17						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**21.44**	**215**	P	P	10 25 37.5	-0.1
	0.8nm,0.3s,baz=51,slow=8.9,SNR=45						
	0.8nm,0.3s						
STKA	**Stephens Creek**	**25.90**	**191**	P	P	10 26 20.5	-0.9
	1.0nm,0.3s,baz=13,slow=9.0,SNR=7.9						
	1.0nm,0.3s						

UPP **26** *10:23:58.3±2.8,64°.34N×31°.60E,h1^{km},ML1.7,Presumed earthquake*

HEL **26** *10:24:03.8±0.2,64°.68N×30°.67E,h0^{km},ML1.9,Suspected explosion*

IDC **26** *10:24:05.7±1.9,64°.69N×30°.63E,h0^{km},mbtmp2.8/4, ML1.9/4,Error ellipse: s-maj=24.5km s-min=7.6km az=101.0*

ISC 26 10:24:03.8±0.9**,64°.74N**±0°.02×**30°.50E**±0°.04**,h0^{km},n41, σ1^{s}.60**/59**,Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RMF	**Romuvaara**	**0.58**	**206**	PG	**Pg**	**10 24 14.3**	**-0.5**
	baz=32						
RMF				MSG		10 24 22.0	
	comp=Z,22nm,0.2s						
RMF				SG	**Sg**	**10 24 22.0**	**-0.2**
KU1	**Kurvinen**	**0.92**	**335**	PG	**Pg**	**10 24 22.2**	**+0.7**
KU6	**Riekki**	**1.32**	**349**	PG	**Pg**	**10 24 28.9**	**-0.1**
	baz=165						
KU6				MSG		10 24 45.5	
	comp=Z,13nm,0.2s						
KU6				SG	**Sn**	**10 24 48.3**	**+0.6**
MSF	**Maaselka**	**1.33**	**333**	PG	**Pg**	**10 24 29.2**	**0.0**
	baz=155						
MSF				SB	**Sn**	**10 24 47.7**	**-0.3**
KU2	**Taivalkoski**	**1.37**	**317**	PG	**Pg**	**10 24 30.1**	**+0.1**
	baz=138						
OLKF	**Oulanka, Finla**	**1.66**	**344**	PG	**Pn**	**10 24 35.0**	**+0.9**
OLKF				MSG		10 24 55.4	
	comp=Z,8.6nm,0.2s						
OLKF				SN	**Sg**	**10 24 59.0**	**+2.1**
NIF	**Nilsia**	**1.80**	**222**	PG	**Pn**	**10 24 36.3**	**+0.3**
	baz=41						
NIF				MSG		10 24 57.5	
	comp=Z,8.1nm,0.2s						
JOF	**Joensuu**	**1.86**	**168**	PG	**Pn**	**10 24 35.7**	**-1.2**
	baz=348						
JOF				SN	**Sn**	**10 25 00.7**	**-0.3**
OUL	**Oulu**	**1.99**	**282**	PG	**Pb**	**10 24 40.8**	**0.0**
	baz=97						
OUL				SG	**Sg**	**10 25 07.1**	**-0.6**
RANF	**Ranua**	**2.02**	**311**	PG	**Pb**	**10 24 41.0**	**-0.2**
	baz=131						
RANF				SG	**Sg**	**10 25 09.0**	**+0.6**
OBF4	**Vikkela, Lumij**	**2.31**	**274**	PG	**Pb**	**10 24 45.9**	**-0.4**
OBF4				MSG		10 25 14.3	
	comp=Z,9.5nm,0.2s						
OUF	**Merijarvi**	**2.52**	**264**	PN	**Pn**	**10 24 47.7**	**+1.8**
	baz=76						
OUF				MSG		10 25 20.0	
	comp=Z,7.2nm,0.2s						
OUF				SB	**Sg**	**10 25 22.6**	**-2.0**
RNF	**Rovaniemi**	**2.64**	**317**	PB	**Pb**	**10 24 50.4**	**-1.5**
RNF				SB	**Sg**	**10 25 26.6**	**-2.0**
OBF0	**Syolatti, Pyha**	**2.71**	**268**	PB	**Pb**	**10 24 51.8**	**-1.2**
OBF0				MSG		10 25 25.7	
	comp=Z,6.8nm,0.2s						
OBF0				SG	**Sg**	**10 25 29.3**	**-1.4**
SUF	**Sumiainen**	**2.80**	**226**	PB	**Pn**	**10 24 51.7**	**+2.0**
SUF				MSG		10 25 26.7	
	comp=Z,2.2nm,0.2s						
TOF	**Tornio**	**2.91**	**300**	PB	**Pn**	**10 24 53.7**	**+2.4**
TOF				MSG		10 25 31.9	
	comp=Z,3.3nm,0.2s						
TOF				SG	**Sg**	**10 25 36.4**	**-0.9**
VRF	**Varrio**	**3.05**	**354**	PN	**Pn**	**10 24 54.6**	**+1.4**
	baz=167						
VRF				MSG		10 25 35.3	
	comp=Z,2.9nm,0.2s						
VRF				SG	**Sg**	**10 25 40.7**	**-0.9**
KALU	**Kalix**	**3.21**	**294**	P	**Pn**	**10 24 57.8**	**+2.5**
KALU				S	**Sb**	**10 25 40.6**	**-0.4**
KALU	**Kalix**	**3.21**	**294**	PB	**Pn**	**10 24 58.0**	**+2.7**
KALU				SG	**Sg**	**10 25 42.8**	**-3.8**
RUF	**Ruokolahti**	**3.40**	**193**	PN	**Pn**	**10 24 58.8**	**+0.8**
LVZ	**Lovozero**	**3.59**	**26**	PG	**Pb**	**10 25 05.8**	**-2.3**
KEF	**Keuruu**	**3.61**	**227**	PN	**Pn**	**10 25 03.1**	**+2.2**
KLF	**Kolari**	**3.67**	**316**	PN	**Pn**	**10 25 04.2**	**+2.6**
	baz=125						
PAJU	**Pajala**	**3.80**	**310**	P	**Pn**	**10 25 05.3**	**+1.8**
PAJU	**Pajala**	**3.80**	**310**	PB	**Pb**	**10 25 11.3**	**-0.4**
PAJU				SG	**Sg**	**10 26 05.1**	**-0.7**
SJUU	**Sjulsmark**	**3.84**	**286**	P	**Pn**	**10 25 06.0**	**+2.0**
VAF	**Ylistaro**	**3.85**	**247**	PN	**Pn**	**10 25 06.3**	**+2.1**
RAJF	**Raja-Jooseppi**	**3.86**	**348**	PN	**Pn**	**10 25 05.2**	**+0.9**
FIA0	**FINESS Array S**	**3.87**	**213**	PG	**Pb**	**10 25 11.6**	**-1.2**
FINES	**FINESS Array B**	**3.87**	**213**	Pn	**Pn**	**10 25 05.0**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=39,slow=14,SNR=5.5						
FINES				Pg	**Pb**	**10 25 13.1**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=27,slow=15,SNR=7.9						
FINES				Sn	**Sn**	**10 25 50.1**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=34,slow=20,SNR=2.1						
FINES				Lg	Lg	10 26 06.5	
	comp=Z,0.7nm,0.3s,baz=43,slow=25,SNR=6.5						
	comp=Z,0.8nm,0.9s						
BURU	**Burvik**	**3.93**	**272**	P	**Pn**	**10 25 05.4**	**+0.2**
HARU	**Harads**	**4.22**	**294**	P	**Pn**	**10 25 11.7**	**+2.4**
ODEU	**Stanfors**	**4.23**	**270**	P	**Pn**	**10 25 09.5**	**+0.1**
UMAU	**Umeaa**	**4.36**	**263**	P	**Pn**	**10 25 11.2**	**0.0**
UMAU	**Umeaa**	**4.36**	**263**	PN	**Pn**	**10 25 11.4**	**+0.2**
VJF	**Virojoki**	**4.43**	**199**	SG	**Sb**	**10 26 20.1**	**+4.0**
HEF	**Hetta**	**4.59**	**327**	PN	**Pn**	**10 25 16.2**	**+1.9**
HEF				SG	**Sg**	**10 26 26.8**	**-4.1**
ARCES	**ARCESS Array B**	**5.20**	**340**	Pn	**Pn**	**10 25 23.3**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=152,slow=13,SNR=29						
ARCES				Sn	**Sn**	**10 26 21.8**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=155,slow=22,SNR=5.1						
ARCES				Lg	Lg	10 26 48.9	
	comp=Z,0.3nm,0.3s,baz=156,slow=28,SNR=6.4						
	comp=Z,3.5nm,1.1s						
I43RU	**DUBNA INFRASON**	**8.68**	**155**	I	I	11 15 30.0	
	baz=348,slow=301,SNR=1.6						
HFS	**Hagfors**	**9.04**	**247**	Pn	**Pn**	**10 26 15.3**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=60,slow=14,SNR=1.5						
HFS				Lg	Lg	10 28 51.1	
	comp=Z,0.1nm,0.3s,baz=52,slow=28,SNR=2.3						
	comp=Z,0.7nm,0.8s						
NOA	**NORSAR Array B**	**9.54**	**256**	Pn	**Pn**	**10 26 22.0**	**-0.1**
	baz=56,slow=14,SNR=2.2						
NOA				Lg	Lg	10 29 04.5	
	baz=61,slow=5.5,SNR=3.5						
	comp=Z,0.2nm,0.6s						

IDC 26 10:27:56.4±999.0**,50°.85N**×**50°.53E,h0^{km},Error ellipse: s-maj=977.7km s-min=108.0km az=91.0,Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I31KZ	**AKTYUBINSK INF**	**4.80**	**92**	I	I	11 00 10.0	
	1.1nm,0.7s,baz=278,slow=311,SNR=5.4						
I46RU	**ZALESOVO INFRA**	**21.03**	**68**	I	I	12 34 50.0	
	0.1nm,1.1s,baz=276,slow=316,SNR=1.2						
I34MN	**SONGINO INFRAS**	**35.81**	**73**	I	I	14 04 00.0	
	baz=296,slow=328,SNR=0.5						

SOME **26** *10:31:34.4,43°.30N×81°.90E,h5^{km}*

NNC **26** *10:31:37.0±1.2,43°.30N×81°.83E,h0^{km},mb3.7,mpv3.4, Error ellipse: s-maj=12.3km s-min=5.0km az=149.0, Suspected Mining explosion.*

ISC 26 10:31:35.0±2.2**,43°.2N**±0°.1×**81°.77E**±0°.09**,h0^{km},n18, σ2^{s}.19**/30**,3C-4D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**1.06**	**282**	P	**Pb**	**10 31 57.3**	**+1.0**
	6.0nm,0.1s						
KTMS				S	**Sn**	**10 32 13.6**	**+0.8**
	16nm,0.3s						
KTMS	**Ketmen**	**1.06**	**282**	*e*P	**Pb**	**10 31 57.3**	**+1.0**
	6.8nm,0.2s						
KTMS				*e*S	**Sn**	**10 32 13.6**	**+0.8**
	16nm,0.3s						
PDGK	**Podgornoye**	**1.67**	**274**	⇓Pn	**Pb**	**10 32 07.8**	**+1.1**
	27nm,0.4s						
PDGK				⇓Sn	**Sg**	**10 32 31.9**	**+3.2**
	91nm,0.6s						
SHLS	**Shalkode**	**1.69**	**268**	P	**Pn**	**10 32 03.5**	**-2.4**
	35nm,0.1s						
SHLS				S	**Sn**	**10 32 24.5**	**-3.9**
	64nm,0.3s						
SHLS	**Shalkode**	**1.69**	**268**	*e*P	**Pn**	**10 32 03.5**	**-2.4**
	35nm,0.1s						
SHLS				*e*S	**Sn**	**10 32 24.5**	**-3.9**
	64nm,0.3s						
UZB	**Uzynbulak**	**2.02**	**269**	Pg	**Pb**	**10 32 14.2**	**+1.6**
	26nm,0.3s						
UZB				Lg	Lg	10 32 43.0	
	46nm,0.4s						
UZB	**Uzynbulak**	**2.02**	**269**	*e*P	**Pb**	**10 32 14.2**	**+1.6**
	26nm,0.3s						
UZB				*e*S	**Sg**	**10 32 42.9**	**+3.1**
	46nm,0.4s						
KNOS	**Konyrlen**	**2.19**	**302**	Pg	**Pb**	**10 32 15.7**	**0.0**
	7.0nm,0.2s						
KNOS				Lg	Lg	10 32 45.6	
	24nm,0.3s						
SATY	**Saty**	**2.47**	**267**	Pg	**Pb**	**10 32 21.8**	**+1.5**
	14nm,0.4s						
SATY				Lg	Lg	10 32 56.5	
	57nm,0.4s						
KURS	**Kuram**	**2.64**	**277**	Pg	**Pb**	**10 32 23.9**	**+0.6**
	4.8nm,0.3s						
KURS				Lg	Lg	10 32 59.3	
	12nm,0.3s						
ARXS	**Arharly**	**3.03**	**290**	*e*P	**Pb**	**10 32 31.3**	**+1.5**
	3.4nm,0.4s						
ARXS				*e*S	**Sg**	**10 33 12.1**	**-0.1**
	13nm,0.3s						
KOTS	**Kotyrbulak**	**3.41**	**272**	Pg	**Pb**	**10 32 38.1**	**+1.7**
	4.9nm,0.2s						
KOTS				Lg	Lg	10 33 23.9	
	22nm,0.6s						
KOTS	**Kotyrbulak**	**3.41**	**272**	*e*P	**Pb**	**10 32 38.1**	**+1.7**
	4.9nm,0.2s						
KOTS				*e*S	**Sg**	**10 33 23.9**	**-0.5**
	22nm,0.6s						
MAKZ	**Makanchi**	**3.58**	**2**	⇓Pn	**Pn**	**10 32 33.5**	**+1.6**
	2.9nm,0.6s						
MAKZ				⇓Pg	**Pg**	**10 32 42.4**	**-1.3**
	3.1nm,0.7s						
MAKZ				⇑Lg	Lg	10 33 29.8	
	1.5nm,0.3s						
MK31	**Makanchi Array**	**3.59**	**6**	Pn	**Pn**	**10 32 33.3**	**+1.4**
	0.2nm,0.2s,baz=184,slow=13,SNR=17						
MK31				⇑Pg	**Pg**	**10 32 40.7**	**-3.0**
	2.3nm,0.5s						
MK31				⇑Lg	Lg	10 33 30.2	
	2.1nm,0.5s,baz=183,slow=31,SNR=5.0						
MTBS	**Maitube**	**3.91**	**270**	*e*P	**Pg**	**10 32 49.3**	**-0.6**
	1.4nm,0.1s						
MTBS				*e*S	**Sg**	**10 33 42.3**	**+1.7**
	7.3nm,0.2s						
KST	**Kastek**	**4.26**	**270**	*e*P	**Pb**	**10 32 54.5**	**+3.7**
	4.7nm,0.6s						
KST				*e*S	**Sg**	**10 33 52.0**	**+0.2**
	8.5nm,0.4s						
DGS	**Degeres**	**4.39**	**272**	Pg	**Pb**	**10 32 56.8**	**+3.9**
	6.3nm,0.3s						
DGS				Lg	Lg	10 33 56.4	
	7.2nm,0.5s						

IDC **26** *10:36:34.4±0.5,30°.97N×113°.45E,h0^{km},mb4.6/33, mbtmp4.6/41,ML4.0/8,MS4.0/55,Error ellipse: s-maj=13.2km s-min=10.2km az=42.0*

BJI **26** *10:36:34.7,30°.85N×113°.40E,h10^{km},mB5.0/25,mb4.7/50, ML5.4/30,Ms4.9/68,Ms7 4.7/64*

MOS **26** *10:36:36.0±0.8,30°.99N×113°.44E,h18^{km},mb5.0/46, MS4.4/12,Error ellipse: s-maj=6.8km s-min=4.3km az=121.2*

NEIC **26** *10:36:37.2±2.1,30°.97N±0°.06×113°.43E±0°.07,h10^{km}±1^{km}, mb5.0/153,Error ellipse: s-maj=10.2km s-min=9.5km az=90.0*

GCMT **26** *10:36:37.2±0.3,30°.88N±0°.02×113°.40E±0°.02,h18^{km}±1^{km}, MW4.8/85,Moment Tensor Solution. s13,c14; s85,c121; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.66±.10; M$_{\theta\theta}$1.22±.06; M$_{\phi\phi}$-1.89±.08; M$_{r\theta}$0.24±.16; M$_{\theta\phi}$-0.70±.05; M$_{\phi r}$0.10±.15; Best double couple: M$_0$1.73800×10^{16} NP1:φ$_s$148.00000°,δ77.00000°,λ9.00000°. NP2: φ$_s$56.00000°,δ81.00000°,λ167.00000°. Principal axes: T 1.4300, Plg16.0000°, Azm11.0000°; N 0.6080, Plg74.0000°, Azm203.0000°; P -2.0460, Plg3.0000°, Azm102.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR **26** *10:37:34.2,35°.95N×104°.84E,h33^{km},mb4.9*

ISC 26 10:36:36.6±0.2**,30°.92N**±0°.03×**113°.42E**±0°.03**,h10^{km},n672, σ1^{s}.33**/632**,mb4.9**/192**,MS4.2**/67**,44C-29D,Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WHN	**Wuhan**	**0.88**	**115**	⇓*i*Pg	**Pg**	**10 36 51.5**	**-2.1**
WHN				Sg	**Sg**	**10 37 03.0**	**-2.1**
WHN				smax	smax		
	comp=N,90µm,0.5s						
WHN				smax	smax		
	comp=E,59µm,0.7s						
CNSH	**ChangSha**	**2.76**	**189**	Pn	**Pn**	**10 37 19.0**	**-1.9**
CNSH				Sn	**Sn**	**10 37 50.5**	**-3.7**
CNSH				smax	smax		
	comp=N,10µm,0.5s						
CNSH				smax	smax		
	comp=E,9µm,1.0s						
ENH	**Enshi**	**3.45**	**260**		**Pn**	**10 37 30.4**	**-0.1**
LYN	**LuoYang**	**3.71**	**348**	Pn	**Pn**	**10 37 34.0**	**-0.1**
LYN				Sn	**Sn**	**10 38 16.8**	**-1.1**
LYN				Sg	**Sg**	**10 38 34.8**	**-1.1**
LYN				smax	smax		
	comp=N,5µm,1.2s						
LYN				smax	smax		
	comp=E,12µm,0.9s						
LYN				LR	LR		
	comp=N,24µm,4.6s						
LYN				LR	LR		
	comp=E,12µm,3.8s						
LYN				LR	LR		
	comp=Z,19µm,6.0s						
NJ2	**Nanjing**	**4.78**	**75**	*e*Pn	**Pn**	**10 37 48.0**	**-0.7**
NJ2				Pg	**Pb**	**10 38 02.0**	**+1.6**
NJ2				Sg	**Sb**	**10 39 02.5**	**+4.5**
NJ2				smax	smax		
	comp=N,6µm,0.8s						
NJ2				smax	smax		
	comp=E,4µm,0.7s						
NJ2				LR	LR		
	comp=N,10µm,4.3s						
NJ2				LR	LR		
	comp=E,6µm,3.8s						
NJ2				LR	LR		
	comp=Z,7µm,5.7s						
XAN	**Xi'an**	**4.92**	**311**	Pn	**Pn**	**10 37 50.0**	**-0.6**
XAN				Pg	**Pb**	**10 38 05.3**	**+2.4**
XAN				Sn	**Sn**	**10 38 47.8**	**+0.2**
XAN				Sg	**Sb**	**10 39 07.0**	**+4.9**
XAN				smax	smax		
	comp=N,5µm,0.7s						
XAN				smax	smax		
	comp=E,3µm,0.9s						
XAN				LR	LR		
	comp=N,20µm,5.3s						
XAN				LR	LR		
	comp=E,11µm,4.3s						
XAN				LR	LR		
	comp=Z,12µm,6.0s						
TIA	**Tai'an**	**6.12**	**29**	Pn	**Pn**	**10 38 07.5**	**+0.4**
TIA				Sn	**Sn**	**10 39 23.0**	**+5.8**
TIA				LR	LR		
	comp=N,8µm,8.1s						
TIA				LR	LR		
	comp=E,6µm,9.0s						
TIA				LR	LR		
	comp=Z,11µm,8.8s						
GULI	**GuiLin**	**6.22**	**206**	Pn	**Pn**	**10 38 06.3**	**-2.2**
GULI				Sn	**Sn**	**10 39 17.5**	**-2.2**
GULI				smax	smax		
	comp=N,2µm,1.0s						
GULI				smax	smax		
	comp=E,2µm,1.4s						
HNS	**HongShan**	**6.55**	**9**	⇑Pn	**Pn**	**10 38 13.8**	**+0.7**
HNS				Sn	**Sn**	**10 39 31.8**	**+3.9**
HNS				Sg	**Sg**	**10 40 08.0**	**+1.0**
HNS				smax	smax		
	comp=N,530nm,1.1s						
HNS				smax	smax		
	comp=E,630nm,1.1s						
SSE	**Sheshan**	**6.67**	**86**	Pn	**Pn**	**10 38 16.0**	**+1.4**
SSE				Sn	**Sn**	**10 39 31.5**	**+0.8**
SSE				smax	smax		
	comp=N,1µm,0.9s						
SSE				smax	smax		
	comp=E,470nm,0.9s						
SSE				LR	LR		
	comp=N,2µm,6.9s						
SSE				LR	LR		
	comp=E,3µm,6.9s						
TIY	**Taiyuan**	**6.83**	**353**	Pn	**Pn**	**10 38 18.5**	**+1.6**

TIY				Sn	**Sn**	**10 39 37.5**	**+2.7**
TIY				LR	LR		
	comp=N,12μm,8.7s						
TIY				LR	LR		
	comp=E,4μm,5.3s						
TIY				LR	LR		
	comp=Z,4μm,7.6s						
GYA	**Guiyang**	**7.41**	**235**	⇓Pn	**Pn**	**10 38 26.8**	**+1.8**
QZH	**Quanzhou**	**7.50**	**141**	⇑*i*Pn	**Pn**	**10 38 23.5**	**-2.6**
QZH				Sn	**Sn**	**10 39 47.5**	**-3.8**
QZH				LR	LR		
	comp=N,21μm,5.7s						
QZH				LR	LR		
	comp=E,26μm,5.7s						
QZH				LR	LR		
	comp=Z,8μm,6.3s						
GZH	**Guangzhou**	**7.80**	**181**	Pn	Pn	10 38 21.5	-8.7
GZH				Sn	Sn	10 39 43.5	-15
GZH				smax	smax		
	comp=N,2μm,1.3s						
GZH				smax	smax		
	comp=E,3μm,0.8s						
HKPS	**Hong Kong Po S**	**8.63**	**176**		**Pn**	**10 38 40.4**	**-1.2**
BJT	**Baijiatuau**	**9.36**	**13**		**Pn**	**10 38 51.6**	**+0.1**
BJT	**Baijiatuau**	**9.36**	**13**	P	**Pn**	**10 38 51.6**	**+0.1**
BJI	**Beijing**	**9.38**	**13**	P	**Pn**	**10 38 52.3**	**+0.5**
BJI				sP		10 38 57.8	
BJI				S	**Sn**	**10 40 38.0**	**+0.7**
BJI				pmax	pmax		
	comp=Z,25nm,0.7s						
BJI				pmax	pmax		
	comp=Z,77nm,5.2s						
BJI				LR	LR		
	comp=N,1μm,13.8s						
BJI				LR	LR		
	comp=E,670nm,13.8s						
BJI				LR	LR		
	comp=Z,1μm,19.2s						
YHNB	**Yeheng**	**9.39**	**130**		**Pn**	**10 38 52.6**	**+0.4**
LZH	**Lanzhou**	**9.51**	**305**	P	**Pn**	**10 38 55.5**	**+1.6**
LZH				S	**Sn**	**10 40 44.3**	**+3.4**
LZH				smax	smax		
	comp=N,1μm,1.2s						
LZH				smax	smax		
	comp=E,600nm,1.1s						
LZH				LR	LR		
	comp=N,4μm,5.0s						
LZH				LR	LR		
	comp=E,8μm,5.8s						
LZH				LR	LR		
	comp=Z,8μm,8.3s						
LZDM	**Lanzhou Array**	**9.55**	**304**	Pn	**Pn**	**10 38 54.0**	**-0.6**
	baz=144,slow=13						
LZDM				Sn	**Sn**	**10 40 42.6**	**+0.5**
	baz=143,slow=20						
LZDM				Lg	Lg	10 41 30.9	
	baz=164,slow=21						
LZDM				LR	LR	10 42 57.7	
	comp=Z,967nm,19.8s,baz=95,slow=40						
	5.3nm,0.3s						
SSLB	**Suanglung**	**9.76**	**135**		**Pn**	**10 38 56.2**	**-0.9**
NACB	**Ninganchiao**	**9.88**	**131**	Pn	**Pn**	**10 38 58.6**	**-0.1**
TPUB	**Ta-pu**	**9.93**	**138**		**Pn**	**10 38 57.5**	**-2.0**
HHC	**Hu-ho-hao-te**	**10.03**	**352**	*e*P	**Pn**	**10 39 03.3**	**+2.5**
HHC				sP		10 39 09.5	
HHC				PP	**PnPn**	**10 39 11.8**	**+3.2**
HHC				pmax	pmax		
	comp=Z,17nm,0.6s						
HHC				LR	LR		
	comp=N,5μm,8.9s						
HHC				LR	LR		
	comp=E,1μm,8.3s						
HHC				LR	LR		
	comp=Z,3μm,8.9s						
BTO	**Baotou**	**10.06**	**345**	*e*P	**Pn**	**10 39 05.8**	**+4.6**
BTO				pP		10 39 09.0	
BTO				sP		10 39 11.8	
BTO				PP	**PnPn**	**10 39 14.0**	**+5.0**
BTO				S	Sn	10 41 02.8	+8.7
BTO				pmax	pmax		
	comp=Z,34nm,2.0s						
BTO				pmax	pmax		
	comp=Z,390nm,6.5s						
BTO				LR	LR		
	comp=N,6μm,10.1s						
BTO				LR	LR		
	comp=E,16μm,10.6s						
BTO				LR	LR		
	comp=Z,7μm,10.7s						
YULB	**Yu-li**	**10.26**	**135**		**Pn**	**10 39 03.4**	**-0.6**
DL2	**Dalian**	**10.43**	**38**	P	**Pn**	**10 39 08.0**	**+1.7**
DL2				*e*S	**Sn**	**10 41 10.0**	**+6.8**
DL2				pmax	pmax		
	comp=Z,44nm,0.9s						
DL2				pmax	pmax		
	comp=Z,720nm,4.8s						
DL2				LR	LR		
	comp=N,5μm,11.6s						
DL2				LR	LR		
	comp=E,7μm,12.5s						
DL2				LR	LR		
	comp=Z,4μm,8.5s						
KMI	**Kunming**	**11.06**	**241**	P	**Pn**	**10 39 15.3**	**+0.2**
KMI				S	Sn	10 41 10.0	-9.0
KMI				pmax	pmax		
	comp=Z,95nm,0.9s						
KMI				LR	LR		
	comp=N,12μm,10.3s						
KMI				LR	LR		
	comp=E,6μm,10.3s						
KMI				LR	LR		
	comp=Z,1μm,6.2s						
QIZ	**Qiongzhong**	**12.27**	**196**	P	**Pn**	**10 39 33.5**	**+2.0**
QIZ				S	**Sn**	**10 41 52.8**	**+4.4**
QIZ				LR	LR		
	comp=N,3μm,7.8s						
QIZ				LR	LR		
	comp=E,3μm,7.4s						
QIZ				LR	LR		
	comp=Z,4μm,12.6s						
XLT	**XiLinHaoTe**	**13.13**	**8**	*e*P	**Pn**	**10 39 44.8**	**+1.6**
XLT				pP	P	10 39 47.0	-6.5
XLT				pmax	pmax		
	comp=Z,83nm,1.7s						
XLT				LR	LR		
	comp=E,1μm,7.1s						
XLT				LR	LR		
	comp=Z,1μm,15.2s						
SNY	**Shenyang**	**13.61**	**34**	⇓P	**Pn**	**10 39 51.3**	**+1.6**
SNY				pmax	pmax		
	comp=Z,14nm,0.8s						
SNY				pmax	pmax		
	comp=Z,230nm,4.5s						
SNY				LR	LR		
	comp=N,2μm,15.6s						
SNY				LR	LR		
	comp=E,900nm,8.0s						
SNY				LR	LR		
	comp=Z,2μm,15.9s						
JOW	**Kunigami**	**13.63**	**104**	Pn	**Pn**	**10 39 50.1**	**0.0**
	0.9nm,0.3s,baz=304,slow=13,SNR=3.6						
JOW				LR	LR	10 45 35.5	
	comp=Z,729nm,18.1s,baz=262,slow=40						
	76nm,1.3s						
KSRS	**Korea Array**	**13.65**	**58**	Pn	**Pn**	**10 39 50.0**	**-0.2**
	0.6nm,0.3s,baz=242,slow=13,SNR=9.3						
KSRS				Lg	Lg	10 43 39.4	
	0.7nm,0.3s,baz=248,slow=30,SNR=5.6						
KSRS				LR	LR	10 45 57.7	
	comp=Z,233nm,20.0s,baz=230,slow=42						
	2.3nm,0.5s						
GTA	**Gaotai**	**13.98**	**311**	*e*P	**Pn**	**10 39 53.0**	**-1.9**
GTA				pP	P	10 39 56.5	-6.5
GTA				PP	**PnPn**	**10 40 06.0**	**+3.2**
GTA				S	**Sn**	**10 42 33.3**	**+3.1**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				LR	LR		
	comp=N,2μm,8.0s						
GTA				LR	LR		
	comp=E,2μm,9.1s						
GTA				LR	LR		
	comp=Z,3μm,8.7s						
TNCH	**TengChong**	**14.41**	**250**	P	**Pn**	**10 40 00.0**	**-0.9**
TNCH				pP	P	10 40 01.0	-6.9
TNCH				sP		10 40 04.8	
TNCH				PP	**PnPn**	**10 40 10.3**	**+1.5**
TNCH				S	**Sn**	**10 42 41.0**	**+0.1**
TNCH				pmax	pmax		
	comp=Z,75nm,0.8s						
TNCH				LR	LR		
	comp=N,5μm,9.4s						
TNCH				LR	LR		
	comp=E,3μm,9.6s						
TNCH				LR	LR		
	comp=Z,2μm,11.9s						
JNU	**Nakatsue**	**14.97**	**77**	Pn	**Pn**	**10 40 08.5**	**+0.1**
	0.3nm,0.3s,baz=257,slow=15,SNR=1.4						
JNU				Lg	Lg	10 44 28.2	
	0.1nm,0.3s,baz=0.0,slow=20,SNR=1.5						
JNU				LR	LR	10 45 31.6	
	comp=Z,476nm,20.8s,baz=257,slow=36						
	5.9nm,0.9s						
CN2	**Changchun**	**16.00**	**33**	*e*P	**Pn**	**10 40 21.5**	**-0.3**
CN2				*e*sP	pP	10 40 28.0	-0.1
CN2				*e*S	**Sn**	**10 43 18.0**	**-1.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,2μm,10.0s						
CN2				LR	LR		
	comp=E,1μm,10.0s						
CN2				LR	LR		
	comp=Z,1μm,11.0s						
GOMU	**GeErMu**	**16.38**	**294**	P	**Pn**	**10 40 25.0**	**-2.0**
GOMU				pP	P	10 40 28.5	-1.4
GOMU				sP	pP	10 40 32.5	-0.2
GOMU				S	**Sn**	**10 43 28.8**	**-0.1**
GOMU				LR	LR		
	comp=N,2μm,15.9s						
GOMU				LR	LR		
	comp=E,820nm,15.3s						
GOMU				LR	LR		
	comp=Z,1μm,15.3s						
JMN	**Monobe**	**17.52**	**75**		**P**	**10 40 42.0**	**-0.1**
ULN	**Ulaanbaatar**	**17.62**	**346**		**Pn**	**10 40 42.2**	**-0.1**
ULN	**Ulaanbaatar**	**17.62**	**346**	P	**P**	**10 40 43.0**	**-0.3**
	75nm,0.8s						
ULN	**Ulaanbaatar**	**17.62**	**346**	⇑*e*P	**Pn**	**10 40 41.9**	**-0.4**
ULN				pmax	pmax		
	comp=Z,37nm,1.7s						
SONM	**Songino Array**	**17.73**	**344**	P	**Pn**	**10 40 43.8**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=163,slow=10,SNR=24						
SONM				Lg	Lg	10 45 56.4	
	comp=Z,0.2nm,0.3s,baz=166,slow=18,SNR=5.8						
SONM				LR	LR	10 48 16.1	
	comp=Z,772nm,21.0s,baz=158,slow=40						
	comp=Z,6.2nm,0.9s						
SONM	**Songino Array**	**17.73**	**344**		**Pn**	**10 40 44.0**	**+0.3**
SONM	**Songino Array**	**17.73**	**344**	P	**Pn**	**10 40 44.1**	**+0.3**
SONM				pmax	pmax		
	comp=Z,11nm,0.9s						
CHTO	**Chiang Mai**	**17.80**	**231**		**Pn**	**10 40 44.9**	**+0.3**
CHTO	**Chiang Mai**	**17.80**	**231**	P	**Pn**	**10 40 45.1**	**+0.5**
CHTO	**Chiang Mai**	**17.80**	**231**	P	**Pn**	**10 40 44.9**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,22nm,1.0s						
CM31	**Chiang Mai Arr**	**18.06**	**230**	P	**Pn**	**10 40 48.3**	**+0.6**
CMAR	**Chiang Mai Arr**	**18.06**	**230**	P	**Pn**	**10 40 48.5**	**+0.8**
	comp=Z,1.0nm,0.3s,baz=35,slow=10,SNR=29						
CMAR				Lg	Lg	10 46 10.7	
	comp=Z,0.3nm,0.3s,baz=329,slow=33,SNR=1.6						
	comp=Z,22nm,0.9s						
CMAR	**Chiang Mai Arr**	**18.06**	**230**	P	**P**	**10 40 49.4**	**+1.3**
CMAR	**Chiang Mai Arr**	**18.06**	**230**	*ce*P	**P**	**10 40 52.2**	**+4.0**
CMAR				pmax	pmax		
	comp=Z,26nm,0.9s						
PSTR	**Posyet**	**18.16**	**45**	⇑*i*P	**Pn**	**10 40 47.6**	**-1.2**
BNX	**BinXian**	**18.38**	**32**	⇓P	**P**	**10 40 53.3**	**+1.8**
BNX				S	**S**	**10 44 19.0**	**-2.5**
BNX				pmax	pmax		
	comp=Z,25nm,1.1s						
BNX				pmax	pmax		
	comp=Z,130nm,4.2s						
BNX				LR	LR		
	comp=Z,2μm,8.7s						
BNX				LR	LR		
	comp=Z,830nm,8.0s						
BNX				LR	LR		
	comp=Z,2μm,8.8s						
MDJ	**Mudanjiang**	**18.67**	**38**	P	**Pn**	**10 40 55.6**	**+0.5**
MDJ	**Mudanjiang**	**18.67**	**38**	P	**P**	**10 40 54.8**	**0.0**
MDJ				pP	pP	10 40 56.8	-0.8
MDJ				S	**S**	**10 44 29.0**	**+1.5**
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,300nm,4.0s						
MDJ				LR	LR		
	comp=Z,3μm,13.4s						
MDJ				LR	LR		
	comp=Z,3μm,12.4s						
MDJ				LR	LR		
	comp=Z,1μm,8.8s						
VLA	**Vladivostok**	**19.07**	**45**	*ce*P	**Pn**	**10 41 00.8**	**+0.8**
VLA				pmax	pmax		
	comp=Z,80nm,1.0s						
HILR	**Hailar Array B**	**19.22**	**13**	P	**P**	**10 41 00.7**	**-0.2**
	baz=186,slow=13						
HILR				LR	LR	10 49 20.5	
	comp=Z,642nm,18.4s,baz=145,slow=40						
	comp=Z,21nm,0.9s						
LSA	**Lhasa**	**19.27**	**272**	P	**P**	**10 41 01.6**	**-0.3**
LSA	**Lhasa**	**19.27**	**272**	P	**P**	**10 40 58.8**	**-3.1**
LSA				S	**Sn**	**10 44 37.8**	**-1.4**
LSA				pmax	pmax		
	comp=Z,26nm,1.2s						
LSA				LR	LR		
	comp=Z,590nm,8.6s						
LSA				LR	LR		
	comp=Z,580nm,10.2s						
LSA	**Lhasa**	**19.27**	**272**	P	**P**	**10 41 01.6**	**-0.3**
LSA				pmax	pmax		
	comp=Z,34nm,0.7s						
SHL	**Shillong**	**19.70**	**260**		**P**	**10 41 07.1**	**+0.7**
SHL	**Shillong**	**19.70**	**260**	P	**P**	**10 41 07.1**	**+0.7**
SHL				pmax	pmax		
	comp=Z,52nm,1.1s						
USRK	**Ussuriysk Ar.**	**19.75**	**43**	P	**P**	**10 41 06.2**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=244,slow=9.4,SNR=16						
USRK				Lg	Lg	10 46 59.5	
	comp=Z,0.2nm,0.3s,baz=250,slow=28,SNR=5.4						
	comp=Z,11nm,0.9s						
INU	**Inuyama**	**20.23**	**71**		**P**	**10 41 12.0**	**0.0**
JGF	**Kuroka**	**20.54**	**70**	P	**P**	**10 41 15.7**	**+0.4**
ZAK	**Zakamensk**	**20.88**	**342**	*e*P	**P**	**10 41 19.2**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,60nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,53nm,2.0s						
BRDH	**Bariadhala**	**21.08**	**252**	P	**P**	**10 41 21.4**	**+0.3**
	comp=Z,123nm,0.4s,baz=59,slow=19,SNR=6.4						
BRDH				LR	LR	10 49 18.7	
	comp=Z,573nm,20.6s,baz=140,slow=36						
MAJO	**Matsushiro**	**21.34**	**68**	⇑*e*P	**P**	**10 41 24.1**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MJAR	**Matsushiro Arr**	**21.34**	**68**	P	**P**	**10 41 23.8**	**-0.1**
	comp=Z,4.8nm,0.8s,baz=268,slow=9.9,SNR=12						
MJAR				LR	LR	10 49 15.3	
	comp=Z,190nm,18.3s,baz=110,slow=36						
	comp=Z,4.8nm,0.8s						
TLY	**Talaya**	**21.97**	**344**	P	**P**	**10 41 30.0**	**-0.6**
TLY	**Talaya**	**21.97**	**344**	*de*P	**P**	**10 41 30.6**	**+0.1**
TLY				pmax	pmax		
	comp=Z,11nm,1.0s						
HEH	**HeiHe**	**21.98**	**24**	*e*P	**P**	**10 41 30.5**	**-0.1**
HEH				pP	**pP**	**10 41 33.0**	**-0.5**
HEH				S	**S**	**10 45 34.0**	**+0.9**
HEH				pmax	pmax		
	comp=Z,74nm,1.1s						
HEH				LR	LR		
	comp=Z,1μm,10.7s						
HEH				LR	LR		
	comp=Z,600nm,11.1s						
HEH				LR	LR		
	comp=Z,2μm,11.5s						
IRK	**Irkutsk**	**22.35**	**345**	*e*P	**P**	**10 41 34.3**	**-0.3**
IRK				pmax	pmax		
	comp=Z,56nm,2.0s						
JHJ	**Hachijo jima 2**	**22.44**	**77**	LR	LR	10 49 40.9	
	comp=Z,344nm,20.5s,baz=266,slow=35						
MOY	**Mondy**	**22.68**	**340**	*e*P	**P**	**10 41 38.4**	**+0.2**
MOY				pmax	pmax		
	comp=Z,29nm,2.5s						
KNGR	**Kungurtug, Tuv**	**22.97**	**333**	⇑*e*P	**P**	**10 41 40.7**	**-0.6**
KNGR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
WMQ	**Urumqi**	**24.05**	**310**	*e*P	**P**	**10 41 53.5**	**+1.5**
WMQ				pmax	pmax		
	comp=Z,19nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,360nm,5.9s						
WMQ				LR	LR		
	comp=Z,1μm,11.9s						
WMQ				LR	LR		
	comp=Z,2μm,9.3s						
WMQ				LR	LR		
	comp=Z,370nm,12.5s						
KKM	**Kota Kinabalu**	**24.88**	**173**	P	**P**	**10 42 01.9**	**+2.1**
KKM				IAmb	IAmb	10 42 03.9	
	comp=Z,49nm,1.0s						
KKM	**Kota Kinabalu**	**24.88**	**173**	P	**P**	**10 42 03.3**	**+3.5**
	comp=Z,606nmcomp=Z,56nm,0.9s						
ZEA	**Zeya**	**24.91**	**20**	*e*P	**P**	**10 42 00.0**	**+0.4**
ZEA				MLR	MLR		
	comp=N,400nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,16.0s						
JCJ	**Chichijima**	**25.41**	**91**	LR	LR	10 51 01.6	
	comp=Z,235nm,21.9s,baz=31,slow=34						
ERM	**Erimo**	**26.23**	**57**	P	**P**	**10 42 12.2**	**+0.5**
ERM	**Erimo**	**26.23**	**57**	P	**P**	**10 42 12.2**	**+0.5**
ERM				pmax	pmax		
	comp=Z,20nm,1.0s						
DAV	**Davao City (W)**	**26.31**	**152**	LR	LR	10 53 37.4	
	comp=Z,290nm,18.8s,baz=250,slow=39						
ASAJ	**Asahikawa**	**26.48**	**52**	P	**P**	**10 42 16.4**	**+2.5**
ASAJ				pmax	pmax		
	comp=Z,11nm,0.9s						
JKA	**Kamikawa-asahi**	**26.48**	**52**	P	**P**	**10 42 16.4**	**+2.4**
DGZ	**Jazzator, Alta**	**27.07**	**321**	⇑*e*P	**P**	**10 42 18.9**	**-0.6**
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ZSN	**Zaisan**	**27.40**	**315**	*e*P	**P**	**10 42 22.3**	**0.0**
ZSN	**Zaisan**	**27.40**	**315**	*e*P	**P**	**10 42 22.2**	**0.0**
YSS	**Yuzhno-Sakhali**	**27.66**	**46**	*e*P	**P**	**10 42 18.4**	**-6.1**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=Z,900nm,14.0s						
YSS				MLR	MLR		
	comp=N,800nm,11.0s						
YSS				MLR	MLR		
	comp=E,900nm,14.0s						
KULM	**Kulim**	**28.18**	**208**	P	**P**	**10 42 30.5**	**+1.1**
SBUM	**Sibu**	**28.34**	**183**	P	**P**	**10 42 32.2**	**+1.4**
SBUM	**Sibu**	**28.34**	**183**	P	**P**	**10 42 32.8**	**+2.0**
MK31	**Makanchi Array**	**28.73**	**312**	*c i*P	**P**	**10 42 34.3**	**+0.2**
MKAR	**Makanchi Array**	**28.73**	**312**	P	**P**	**10 42 34.5**	**+0.3**
	comp=E,7.2nm,0.7s,baz=108,slow=11,SNR=59						
MKAR				PcP	**PcP**	**10 45 44.0**	**-0.2**
	comp=E,1.9nm,0.9s,baz=114,slow=3.5,SNR=3.0						
	comp=E,7.2nm,0.7s						
MKAR	**Makanchi Array**	**28.73**	**312**	P	**P**	**10 42 34.0**	**-0.1**
IPM	**Ipoh**	**28.77**	**206**	P	**P**	**10 42 36.6**	**+1.9**
	comp=E,22nm,0.8s						
MAKZ	**Makanchi**	**28.93**	**312**	P	**P**	**10 42 36.1**	**+0.2**
MAKZ				IAmb	IAmb	10 42 39.7	
	comp=Z,16nm,0.8s						
MAKZ	**Makanchi**	**28.93**	**312**	⇓P	**P**	**10 42 36.4**	**+0.5**
SHLS	**Shalkode**	**29.53**	**304**	*e*P	**P**	**10 42 38.8**	**-2.6**
	comp=Z,11nm,1.2s						
SHLS	**Shalkode**	**29.53**	**304**	*e*P	**P**	**10 42 38.8**	**-2.6**
SHLS				pmax	pmax		
	comp=Z,11nm,1.2s						
UZB	**Uzynbulak**	**29.84**	**304**	*e*P	**P**	**10 42 44.2**	**0.0**
	comp=Z,8.5nm,0.8s						
UZB	**Uzynbulak**	**29.84**	**304**	*e*P	**P**	**10 42 44.2**	**0.0**
UZB				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SATY	**Saty**	**30.27**	**303**	*e*P	P	10 43 16.8	+29
	comp=Z,12nm,0.9s						
TDK	**Taldyqorghan**	**30.72**	**307**	*e*P	**P**	**10 42 51.9**	**+0.1**
	comp=Z,10nm,0.6s						
TDK	**Taldyqorghan**	**30.72**	**307**	*e*P	**P**	**10 42 51.9**	**+0.1**
TDK				pmax	pmax		
	comp=Z,11nm,0.6s						
ZAA0	**Zalesovo Array**	**30.87**	**327**	P	**P**	**10 42 53.0**	**+0.1**
ZALV	**Zalesovo Beam**	**30.87**	**327**	P	**P**	**10 42 52.5**	**-0.4**
	comp=Z,8.8nm,0.5s,baz=122,slow=8.6,SNR=14						
	comp=Z,8.8nm,0.5s						
ZALV	**Zalesovo Beam**	**30.87**	**327**	P	**P**	**10 42 52.4**	**-0.5**
KDJ	**Kajisay**	**30.99**	**301**	IAmb	IAmb	10 42 56.4	
	comp=Z,18nm,1.1s						
MPSI	**Mapaga**	**31.02**	**167**	P	**P**	**10 42 58.1**	**+3.5**
PSI	**Prapat**	**31.14**	**209**	LR	LR	10 55 04.7	
	comp=Z,294nm,21.3s,baz=360,slow=36						
MDOK	**Medeo**	**31.26**	**303**	*e*P	**P**	**10 42 56.9**	**+0.1**
MDOK	**Medeo**	**31.26**	**303**	*e*P	**P**	**10 42 56.8**	**0.0**
TNSS	**Tian-Shan**	**31.31**	**303**	*e*P	**P**	**10 42 57.2**	**-0.3**
TNSS	**Tian-Shan**	**31.31**	**303**	*e*P	**P**	**10 42 57.2**	**-0.3**
MRSI	**Marisa**	**31.33**	**163**	P	**P**	**10 43 00.1**	**+2.8**
	comp=Z,785nmcomp=Z,55nm,0.9s						
AAA	**Alma-Ata**	**31.37**	**303**	*e*P	**P**	**10 42 57.6**	**0.0**
AAA	**Alma-Ata**	**31.37**	**303**	*e*P	**P**	**10 42 57.6**	**0.0**
SEM	**Semipalatinsk**	**31.44**	**318**	*e*P	**P**	**10 42 57.9**	**-0.5**
SEM	**Semipalatinsk**	**31.44**	**318**	*e*P	**P**	**10 42 57.8**	**-0.5**
GTOI	**Gorontalo**	**31.46**	**161**	P	**P**	**10 43 00.1**	**+1.7**
	comp=Z,17nm,0.8s						
KSH	**Kashi**	**31.59**	**296**	P	**P**	**10 43 04.0**	**+4.3**
KSH				pP	sP	10 43 06.3	+2.3
KSH				pmax	pmax		
	comp=Z,14nm,1.0s						
KSH				pmax	pmax		
	comp=Z,140nm,5.2s						
KSH				LR	LR		
	comp=Z,860nm,18.9s						
KSH				LR	LR		
	comp=Z,550nm,16.5s						
KSH				LR	LR		
	comp=Z,700nm,16.5s						
BOOM	**Boomskoye usch**	**31.95**	**302**	P	**P**	**10 43 03.2**	**+0.3**
BOOM	**Boomskoye usch**	**31.95**	**302**	P	**P**	**10 43 03.2**	**+0.3**
BOOM				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KURK	**Kurchatov**	**32.51**	**318**	P	**P**	**10 43 07.2**	**-0.2**
KURK	**Kurchatov**	**32.51**	**318**	⇓*e*P	**P**	**10 43 07.5**	**+0.1**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURBB	**Kurchatov Arra**	**32.53**	**317**	P	**P**	**10 43 07.2**	**-0.4**
	comp=Z,2.2nm,0.4s,baz=122,slow=7.8,SNR=11						
	comp=Z,2.2nm,0.4s						
APSI	**Ampana**	**32.60**	**165**	P	**P**	**10 43 11.0**	**+2.5**
YAK	**Yakutsk**	**32.88**	**14**	P	**P**	**10 43 09.6**	**-0.9**
	comp=Z,8.5nm,0.3s,baz=252,slow=0.6,SNR=8.1						
YAK				LR	LR	10 58 11.4	
	comp=Z,619nm,18.9s,baz=220,slow=40						
	comp=Z,8.5nm,0.3s						
YAK	**Yakutsk**	**32.88**	**14**	P	**P**	**10 43 09.6**	**-0.9**
YAK	**Yakutsk**	**32.88**	**14**	*e*P	**P**	**10 43 09.1**	**-1.4**
YAK				*e**PP	**pP**	**10 43 13.8**	**+0.3**
YAK				*e*		10 44 16.1	
YAK				*e*		10 45 54.8	
YAK				*e*S	**S**	**10 48 27.8**	**0.0**
YAK				*e**SS	**sS**	**10 48 36.2**	**+3.3**
YAK				*e*SS	**SnSn**	**10 50 23.8**	**-0.5**
YAK				*e*		10 53 40.4	
YAK				pmax	pmax		
	comp=Z,22nm,1.0s						
YAK				pmax	pmax		
	comp=N,12nm,1.3s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,121nm,4.4s						
YAK				pmax	pmax		
	comp=N,94nm,5.0s						
YAK				pmax	pmax		
	comp=E,158nm,4.3s						
YAK				smax	smax		
	comp=E,158nm,4.3s						
YAK				smax	smax		
	comp=N,55nm,4.0s						
YAK				MLR	MLR		
	comp=Z,1μm,16.0s						

YAK				MLR	MLR		
	comp=E,551nm,17.0s						
YAK				MLR	MLR		
	comp=N,818nm,16.0s						
LUWI	Luwuk	33.00	163	P	P	10 43 12.9	+0.9
LUWI	Luwuk	33.00	163	P	P	10 43 14.7	+2.7
	comp=N,44nm,0.8s						
AAK	Ala-Archa	33.03	302	P	P	10 43 11.6	-0.7
	comp=N,3.9nm,0.7s,baz=47,slow=2.6,SNR=10						
AAK				LR	LR	10 56 58.3	
	comp=N,466nm,21.7s,baz=93,slow=37						
	comp=N,3.9nm,0.7s						
AAK	Ala-Archa	33.03	302	P	P	10 43 13.0	+0.7
AAK	Ala-Archa	33.03	302	ceP	P	10 43 13.3	+1.0
AAK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GUMO	Guam	33.66	114	LR	LR	10 58 06.1	
	comp=Z,131nm,18.6s,baz=300,slow=38						
MMSI	Mamuju	33.83	170	P	P	10 43 22.6	+3.4
	comp=Z,37nm,0.7s						
TTSI	Tana Toraja	34.32	169	P	P	10 43 26.2	+2.8
	comp=Z,21nm,0.9s						
HYB	Hyderabad	34.38	255	eP	P	10 43 25.2	+1.1
DRK	Karamyk	34.82	296	P	P	10 43 29.0	+1.0
DRK				IAmb	IAmb	10 43 32.8	
	comp=Z,14nm,0.8s						
DRK	Karamyk	34.82	296	P	P	10 43 29.0	+1.0
DRK				pmax	pmax		
	comp=Z,14nm,0.8s						
SANI	Sanana	34.90	158	P	P	10 43 30.7	+2.2
MANEM	Manem	34.92	292	P	P	10 43 30.9	+2.0
MANEM				IAmb	IAmb	10 44 16.9	
	comp=Z,8.9nm,0.7s						
SPSI	Sidrap Palu	35.21	169	P	P	10 43 33.4	+2.3
	comp=Z,46nm,0.8s						
DZA	Taraz	35.37	302	eP	P	10 43 32.5	+0.1
	comp=Z,6.0nm,0.6s						
DZA	Taraz	35.37	302	eP	P	10 43 32.5	+0.1
DZA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GAR	Garm	35.97	295	IAmb	IAmb	10 43 41.8	
	comp=Z,22nm,0.9s						
KK31	Karatay Array	35.99	302	P	P	10 43 37.9	+0.1
KK31	Karatay Array	35.99	302	P	P	10 43 37.9	+0.1
KK31				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KKAR	Karatay Array	35.99	302		P	10 43 37.9	+0.2
KKAR	Karatay Array	35.99	302	P	P	10 43 37.9	+0.2
MDSI	Maura Dua	36.29	196	P	P	10 43 43.1	+2.7
	comp=Z,15nm,1.2s						
KLSI		36.37	195	P	P	10 43 44.2	+3.1
	comp=Z,27nm,0.8s						
BRLS	Borolday	36.48	302	⇑iP	P	10 43 42.9	+0.9
BRLS	Borolday	36.48	302	c iP	P	10 43 42.8	+0.9
CHM	Chimkent	36.60	301	eP	P	10 43 43.0	+0.1
	comp=Z,9.6nm,0.6s						
CHM	Chimkent	36.60	301	eP	P	10 43 43.0	+0.1
CHM				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CHGR	Chuyangaron	36.88	294	P	P	10 43 45.2	-0.3
CHGR				IAmb	IAmb	10 43 49.8	
	comp=Z,22nm,0.8s						
CHGR	Chuyangaron	36.88	294	P	P	10 43 45.2	-0.3
CHGR				pmax	pmax		
	comp=Z,22nm,0.8s						
KRAI	Karang Ratu	36.92	155	P	P	10 43 46.3	+0.5
	comp=Z,61nm,0.8s						
KBL	Kabul	37.29	288	P	P	10 43 50.5	+1.4
KBL	Kabul	37.29	288	P	P	10 43 50.5	+1.4
KBL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SHAA	Shahritus	37.74	293	P	P	10 43 53.1	+0.3
SHAA				IAmb	IAmb	10 44 03.6	
	comp=Z,60nm,1.2s						
MA2	Magadan	38.02	30	LR	LR	10 59 48.6	
	comp=Z,165nm,18.9s,baz=260,slow=37						
MA2	Magadan	38.02	30	deP	P	10 43 54.3	-0.4
MA2				pmax	pmax		
	comp=Z,37nm,1.7s						
BVAR	Borovoye Array	38.10	318	P	P	10 43 54.8	-0.8
	comp=Z,9.6nm,0.8s,baz=111,slow=8.1,SNR=22						
BVAR				PcP	PcP	10 46 08.8	-1.6
	comp=Z,3.4nm,0.8s,baz=98,slow=6.3,SNR=3.7						
BVAR				LR	LR	11 00 51.0	
	comp=Z,71nm,19.9s,baz=102,slow=38						
	comp=Z,9.6nm,0.8s						
BORK	Borovoye	38.15	318	P	P	10 43 55.4	-0.5
BORK	Borovoye	38.15	318	deP	P	10 43 56.4	+0.5
BORK				pmax	pmax		
	comp=Z,11nm,0.8s						
KPJI	Karang Pucung	38.27	187	P	P	10 44 00.5	+3.3
SNJI	Sawahan-Nganju	38.51	183	P	P	10 44 03.3	+3.9
	comp=Z,38nm,1.0s						
PALK	Pallekele	38.59	239	LR	LR	11 02 21.6	
	comp=Z,258nm,18.4s,baz=47,slow=40						
PETK	Petropavlovsk-	38.84	42	LR	LR	10 59 28.9	
	comp=Z,331nm,20.1s,baz=250,slow=35						
JAGI	Jajag, Banyuwa	39.17	179	IAmb	IAmb	10 44 08.2	
	comp=Z,24nm,0.8s						
RTBI	Rangdo, Negare	39.18	178	P	P	10 44 08.2	+3.3
KLNI	Mataram	39.20	176	P	P	10 44 07.7	+2.7
	comp=Z,25nm,0.9s						
DBNI	Kabupaten Domp	39.47	172	P	P	10 44 09.5	+2.2
	comp=Z,27nm,0.8s						
TWSI	Taliwang, Sumb	39.56	175	P	P	10 44 10.1	+2.0
	comp=Z,672nmcomp=Z,76nm,0.9s						
PLAI	Plampang	39.73	173	P	P	10 44 12.1	+2.6
	comp=Z,39nm,0.8s						
MMRI	Maumere	40.22	166	P	P	10 44 14.4	+0.8
MMRI				IAmb	IAmb	10 44 20.3	
	comp=Z,41nm,0.9s						
EDFI	Ende, Flores	40.23	167	P	P	10 44 14.6	+0.9
	comp=Z,638nmcomp=Z,75nm,0.8s						
SEY	Seymchan	40.51	26	LR	LR	11 02 56.9	
	comp=Z,169nm,18.9s,baz=234,slow=39						
SEY	Seymchan	40.51	26	eP	P	10 44 14.7	-0.8
SEY				pmax	pmax		
	comp=Z,21nm,1.0s						
SEY				MLR	MLR		
	comp=Z,445nm,15.0s						
WBSI	Waikabubak, Su	40.73	171	P	P	10 44 19.5	+1.7
	comp=Z,69nm,0.8s						
NRIK	Noril'sk	41.20	346	P	P	10 44 20.4	-0.7
	comp=Z,33nm,0.9s,baz=136,slow=7.3,SNR=41						
NRIK				LR	LR	11 01 13.8	
	comp=Z,120nm,20.2s,baz=156,slow=36						
	comp=Z,33nm,0.9s						
NRIK	Noril'sk	41.20	346	P	P	10 44 20.6	-0.5
NRIK				IAmb	IAmb	10 44 21.6	
	comp=Z,28nm,0.8s						
NRIK	Noril'sk	41.20	346	c iP	P	10 44 20.4	-0.7
NRIK				pmax	pmax		
	comp=Z,31nm,0.9s						
TIXI	Tiksi	41.64	7	LR	LR	11 04 04.8	
	comp=Z,636nm,19.0s,baz=201,slow=40						
TIXI	Tiksi	41.64	7	P	P	10 44 22.9	-1.8
TIXI	Tiksi	41.64	7	⇓eP	P	10 44 23.1	-1.6
TIXI				pmax	pmax		
	comp=Z,16nm,1.3s						
JAY	Jayapura	42.20	137	P	P	10 44 29.5	-0.4
	comp=Z,17nm,0.9s,baz=3.6,slow=16,SNR=1.5						
JAY				LR	LR	11 01 22.0	
	comp=Z,113nm,19.5s,baz=328,slow=35						
	comp=Z,17nm,0.9s						
AB31	Akbulak array	43.84	311	P	P	10 44 43.3	+0.5
AB31				IAmb	IAmb	10 44 47.1	
	comp=Z,36nm,0.8s						
ABKAR	Akbulak array	43.84	311	P	P	10 44 43.3	+0.5
SVE	Sverdlovsk	44.54	321	eP	P	10 44 48.6	+0.3
SVE				pmax	pmax		
	comp=Z,38nm,1.0s						
AKTO	Aktyubinsk	45.16	312	P	P	10 44 52.9	-0.5
	comp=Z,6.5nm,0.7s,baz=113,slow=14,SNR=26						
	comp=Z,6.5nm,0.7s						
ARTI	Arti	45.67	320	P	P	10 44 56.9	-0.4
	comp=Z,21nm,0.8s,baz=108,slow=3.5,SNR=22						
ARTI				LR	LR	11 04 02.3	
	comp=Z,271nm,18.6s,baz=102,slow=36						
	comp=Z,21nm,0.8s						
ARTI	Arti	45.67	320	P	P	10 44 56.9	-0.4
ARTI				IAmb	IAmb	10 45 00.3	
	comp=Z,22nm,0.7s						
ARTI	Arti	45.67	320	c iP	P	10 44 56.9	-0.4
ARTI				pmax	pmax		
	comp=Z,24nm,0.8s						
BILL	Bilibino	48.02	24	⇓eP	P	10 45 14.9	-0.6
BILL				pmax	pmax		
	comp=Z,8.0nm,1.7s						
KNRA	Kununurra	48.62	160	P	P	10 45 20.2	-0.5
	comp=Z,15nm,1.4s						
KNRA	Kununurra	48.62	160	P	P	10 45 21.4	+0.8
KNRA				IAmb	IAmb	10 45 22.6	
	comp=Z,13nm,0.9s						
FITZ	Fitzroy Crossi	50.13	165	LR	LR	11 06 11.4	
	comp=Z,55nm,21.2s,baz=348,slow=35						
FITZ	Fitzroy Crossi	50.13	165	P	P	10 45 32.9	+0.8
KIRV	Kirov	50.74	323	P	P	10 45 35.2	-1.2
	comp=Z,29nm,0.9s,baz=75,slow=2.8,SNR=13						
KIRV				LR	LR	11 08 50.1	
	comp=Z,201nm,19.7s,baz=98,slow=38						
	comp=Z,29nm,0.9s						
KIRV	Kirov	50.74	323	ceP	P	10 45 36.0	-0.4
PMG	Port Moresby	51.52	136	P	P	10 45 45.3	+2.5
PMG	Port Moresby	51.52	136	ceP	P	10 45 45.5	+2.7
PMG				pmax	pmax		
	comp=Z,14nm,1.7s						
BELG	Belogornoye	51.69	315	P	P	10 45 42.6	-1.1
	comp=Z,30nm,0.9s,baz=127,slow=4.1,SNR=9.8						
	comp=Z,30nm,0.9s						
BELG	Belogornoye	51.69	315	ceP	P	10 45 43.2	-0.4
BELG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PSAC1	Pilbara Seismi	52.51	172	P	P	10 45 50.8	+0.8
	comp=Z,26nm,0.9s						
PSAC2	Pilbara Seismi	52.55	172	P	P	10 45 51.1	+0.8
	comp=Z,28nm,1.4s						
PSA00	Pilbara Seismi	52.55	172	P	P	10 45 51.3	+1.0
	comp=Z,25nm,1.1s						
PSA00	Pilbara Seismi	52.55	172		P	10 45 50.6	+0.3
PSA00	Pilbara Seismi	52.55	172	P	P	10 45 51.5	+1.2
PSA00				IAmb	IAmb	10 45 52.5	
	comp=Z,20nm,1.1s						
PSAB3	Pilbara Seismi	52.57	172	P	P	10 45 50.7	+0.3
	comp=Z,18nm,0.9s						
MAK	Makhachkala	52.80	303	eP	P	10 45 46.6	-5.5
MAK				eS	S	10 53 11.2	-9.2
MAK				eSS	SS	10 56 50.8	-8.1
MAK				eSSS	SSS	10 58 37.3	
MAK				pmax	pmax		
	comp=Z,154nm,1.1s						
MAK				MLR	MLR		
	comp=Z,365nm,15.0s						
AKT	Akhty	52.90	301	eP	P	10 45 50.5	-2.5
AKT				e		10 46 59.9	
AKT				e		10 47 49.3	
AKT				ePPP	PPP	10 48 52.1	
AKT				pmax	pmax		
	comp=Z,27nm,1.4s						
AKT				MLR	MLR		
	comp=Z,241nm,12.0s						
WB0	Warramunga Arr	54.27	155	IAmb	IAmb	10 46 05.5	
	comp=Z,9.7nm,0.8s						
WRA	Warramunga Arr	54.41	156	P	P	10 46 03.2	-0.9
	comp=Z,9.4nm,0.7s,baz=344,slow=7.8,SNR=48						
WRA				PcP	PcP	10 47 08.2	+0.4
	comp=Z,1.4nm,0.6s,baz=339,slow=4.1,SNR=2.6						
	comp=Z,9.4nm,0.7s						
WRA	Warramunga Arr	54.41	156	P	P	10 46 03.4	-0.7
WRA	Warramunga Arr	54.41	156	i P	P	10 46 05.8	+1.7
WRA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WR8	Warramunga Arr	54.48	155	P	P	10 46 04.1	-0.5
WR8				IAmb	IAmb	10 46 07.1	
	comp=Z,9.4nm,0.8s						
VRH	Novokhopyorsk	55.45	314	eP	P	10 46 10.9	-0.3
VRH				pmax	pmax		
	comp=Z,49nm,1.0s						
GOF	Gofitskoye	55.59	306	ceP	P	10 46 12.8	+0.4
KLMR	Klimovskoe	55.78	325	eP	P	10 46 11.0	-2.4
KLMR				S	S	10 53 59.0	-1.1
KLMR				SS	SS	10 57 46.9	+1.8
KLMR				pmax	pmax		
	comp=Z,40nm,0.8s						
KLMR				MLR	MLR		
	comp=Z,683nm,13.0s						
KBZ	Khabaz	55.95	304	P	P	10 46 14.2	-0.7
	comp=Z,5.5nm,1.0s,baz=104,slow=4.2,SNR=8.9						
KBZ				LR	LR	11 12 38.9	
	comp=Z,192nm,19.2s,baz=66,slow=39						
	comp=Z,5.5nm,1.0s						
KBZ	Khabaz	55.95	304	ceP	P	10 46 15.0	0.0
KBZ				pmax	pmax		
	comp=Z,11nm,1.1s						
KIV	Kislovodsk	56.06	305	P	P	10 46 16.8	+0.9
KIV	Kislovodsk	56.06	305	eP	P	10 46 16.6	+0.7
KIV				pmax	pmax		
	comp=Z,19nm,1.1s						
KIV				MLR	MLR		
	comp=Z,161nm,16.0s						
GAMB	Gambell	56.11	31	P	P	10 46 15.0	-0.8
	baz=272						
SHA1	Shidzhatmaz	56.12	304	deP	P	10 46 17.3	+0.8
NEUR	Neytrino	56.19	304	⇑eP	P	10 46 18.7	+1.7
NEUR				pmax	pmax		
	comp=Z,11nm,1.8s						
VORR	Voronezh	56.93	314	eP	P	10 46 21.3	-0.6
VORR				pmax	pmax		
	comp=Z,91nm,0.5s						
LPSR	Galich'ya Gora	56.96	315	eP	P	10 46 21.1	-0.9
LPSR				pmax	pmax		
	comp=Z,41nm,1.0s						
QIS	Mount Isa	57.02	150	P	P	10 46 22.4	-0.4
	comp=Z,15nm,1.0s						
VSR	Storozhevoye	57.03	314	eP	P	10 46 20.1	-2.5
VSR				pmax	pmax		
	comp=Z,20nm,0.9s						
MTSU	Mount Surprise	57.10	144	P	P	10 46 23.7	+0.3
	comp=Z,6.2nm,0.8s						
MOS	Moscow	57.26	319	eP	P	10 46 22.8	-1.3
MOS				pmax	pmax		
	comp=Z,67nm,0.9s						
SPIA	Saint Paul Isl	57.36	39	P	P	10 46 23.6	-1.2
	baz=277						
WRKA	Warakurna	57.43	164	P	P	10 46 25.7	+0.1
	comp=Z,12nm,0.8s						
LVZ	Lovozero	57.55	334	P	P	10 46 23.4	-2.6
AS31	Alice Springs	57.71	158	P	P	10 46 27.6	-0.1
AS31				IAmb	IAmb	10 46 30.8	
	comp=Z,8.3nm,0.7s						
ASAR	Alice Springs	57.71	158	P	P	10 46 27.6	-0.1
	comp=Z,20nm,0.7s,baz=344,slow=6.4,SNR=74						
	comp=Z,20nm,0.7s						
ASAR	Alice Springs	57.71	158		P	10 46 26.9	-0.7
GURO	Guroymak-BITLI	57.84	299		P	10 46 27.4	-1.2
GURO				IAmb	IAmb	10 46 40.5	
	comp=Z,12nm,0.9s						
OBN	Obninsk	57.95	319	P	P	10 46 27.9	-1.0
	comp=Z,14nm,0.4s,baz=86,slow=6.9,SNR=6.8						
OBN				LR	LR	11 12 14.1	
	comp=Z,106nm,20.2s,baz=352,slow=37						
	comp=Z,14nm,0.4s						
OBN	Obninsk	57.95	319	eP	P	10 46 28.5	-0.4
OBN				pmax	pmax		
	comp=Z,34nm,1.3s						
SOC	Sochi	58.23	305	eP	P	10 46 24.9	-6.3
SOC				e		10 48 42.6	
SOC				eSS	SS	10 58 21.6	-2.8
SOC				MLR	MLR		
	comp=Z,131nm,12.0s						
F14K	Arctic Creek	58.31	29	P	P	10 46 30.7	-0.7
	baz=276						
C16K	Lisburne Hills	58.45	26	P	P	10 46 31.5	-0.7
	baz=275						
ANM	Nome	58.81	30	P	P	10 46 34.6	-0.3
	baz=277						
F15K	North Star Dit	58.98	29		P	10 46 35.8	-0.3
F15K				IAmb	IAmb	10 46 37.0	
	comp=Z,9.5nm,1.1s						
F15K	North Star Dit	58.98	29	P	P	10 46 35.8	-0.3
	baz=277,SNR=5.6						
M11K	Mekoryuk	59.00	35	P	P	10 46 35.0	-1.2
	baz=279						
MARD	Mardin	59.14	298	P	P	10 46 39.5	+1.7
C17K	DeLong Mountai	59.23	25	P	P	10 46 37.3	-0.5
	baz=276						
G15K	Niukluk	59.32	29	P	P	10 46 38.3	-0.1
	baz=278						
D17K	Noatak River	59.36	26	P	P	10 46 38.4	-0.2
	baz=277,SNR=26						
RDOG	Red Dog Mine	59.38	26	P	P	10 46 38.3	-0.5
	baz=277						
K13K	Kusilvak Mount	59.50	33	P	P	10 46 39.2	-0.4
	baz=279						
CTA	Charters Tower	59.72	144	LR	LR	11 10 07.5	
	comp=Z,58nm,21.7s,baz=21,slow=34						
A19K	Wainwright	59.76	23	P	P	10 46 41.5	+0.2
	baz=277,SNR=11						
E17K	Hotham Inlet	59.92	27	P	P	10 46 42.0	-0.5
	baz=278,SNR=7.7						
C18K	Utukok River	59.93	25	P	P	10 46 42.5	-0.1
	baz=278						
G16K	Koyuk River	59.97	29	P	P	10 46 42.3	-0.5
	baz=279,SNR=5.1						
H16K	Elim	60.14	30	P	P	10 46 43.4	-0.6
	baz=280						
F17K	Baldwin Pennin	60.25	27	P	P	10 46 44.3	-0.4
	baz=279						
E18K	Tukpahlearik C	60.34	26	P	P	10 46 45.4	+0.1
	baz=279						
M13K	Dall Lake	60.39	35	P	P	10 46 45.2	-0.5
	baz=281						
C19K	Lookout Ridge	60.44	24	P	P	10 46 46.1	+0.1
	baz=279						
L14K	Kuka Creek	60.53	33	P	P	10 46 46.9	+0.2
	baz=281						
G17K	Kiwalik Mounta	60.65	29	P	P	10 46 47.5	0.0
	baz=280						
ARA0	ARCESS Array S	60.69	336	eP	P	10 46 47.3	-0.5
ARCES	ARCESS Array B	60.69	336	P	P	10 46 46.6	-1.1
	comp=Z,8.7nm,0.8s,baz=72,slow=7.2,SNR=15						
ARCES				LR	LR	11 14 42.9	
	comp=Z,199nm,18.1s,baz=86,slow=38						
	comp=Z,8.7nm,0.8s						
ARCES	ARCESS Array B	60.69	336	P	P	10 46 47.4	-0.3
ARCES	ARCESS Array B	60.69	336	P	P	10 46 47.4	-0.3
ARCES				pmax	pmax		
	comp=Z,44nm,1.5s						
K15K	Wolf Creek Mou	60.88	32	P	P	10 46 48.8	-0.3
	baz=282						
I17K	Unalakleet	60.94	30	IAmb	IAmb	10 46 53.4	
	comp=Z,6.5nm,0.8s						
I17K	Unalakleet	60.94	30	P	P	10 46 49.1	-0.4
	baz=281						
M14K	Bethel	60.99	34	P	P	10 46 49.7	-0.2
	baz=282						
L15K	Ungalak Mounta	61.03	33	P	P	10 46 49.3	-0.7
	baz=282						
A21K	Barrow	61.04	22	P	P	10 46 49.5	-0.5
	baz=281,SNR=5.6						
H17K	Granite Mounta	61.06	29	P	P	10 46 50.2	-0.2
	baz=281						
D19K	Kuna River	61.07	25	P	P	10 46 50.2	-0.2
	baz=281						
J16K	Anvik River	61.10	31	P	P	10 46 50.6	0.0
	baz=282						
B20K	Meade River	61.12	23	P	P	10 46 50.5	-0.1
	baz=281						
N14K	Kuskokwak Cree	61.30	35	P	P	10 46 51.3	-0.6
	baz=283						
G18K	Tagagawik	61.39	28	P	P	10 46 51.7	-0.9
	baz=282						
SPITS	Spitsbergen Ar	61.41	347	P	P	10 46 51.3	-1.2
	comp=Z,13nm,1.0s,baz=100,slow=7.9,SNR=5.4						
SPITS				LR	LR	11 17 19.9	
	comp=Z,189nm,18.2s,baz=54,slow=40						
	comp=Z,13nm,1.0s						
F19K	Shaleruckik Mo	61.54	27	P	P	10 46 52.8	-0.7
	baz=282						
FALS	False Pass	61.56	41	P	P	10 46 53.3	-0.4
	baz=284						
D20K	Etivluk River	61.57	25	P	P	10 46 53.2	-0.5
	baz=282						
E19K	Redstone River	61.61	26	IAmb	IAmb	10 46 54.8	
	comp=Z,18nm,0.8s						
E19K	Redstone River	61.61	26	P	P	10 46 53.7	-0.3
	baz=282						
A22K	Sinclair Lake	61.63	22	P	P	10 46 53.9	-0.2
	baz=282						
H18K	Honhosa River	61.66	29	P	P	10 46 54.2	-0.2
	baz=283						
O14K	Tigyukauivet M	61.66	36	P	P	10 46 54.6	+0.2
	baz=283						
J17K	VABM Dome	61.75	31	P	P	10 46 54.3	-0.6
	baz=283						
L16K	Owhat River	61.95	33	P	P	10 46 55.7	-0.6
	baz=284						
G19K	Purcell Mounta	61.96	27	P	P	10 46 56.0	-0.4
	baz=283						
B21K	Ikpikpuk River	62.06	23	P	P	10 46 56.5	-0.4
	baz=284						
C21K	Knifeblade Rid	62.11	24	P	P	10 46 56.6	-0.7
	baz=284						
FINES	FINESS Array B	62.13	327	P	P	10 46 56.4	-1.1
	comp=Z,6.1nm,0.8s,baz=57,slow=7.0,SNR=12						
FINES				LR	LR	11 14 13.3	
	comp=Z,280nm,20.8s,baz=80,slow=36						
	comp=Z,6.1nm,0.8s						
FINES	FINESS Array B	62.13	327	i P	P	10 46 56.7	-0.8
FINES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
K17K	Iditarod	62.25	31	P	P	10 46 57.9	-0.4
	baz=284						
B22K	Teshekpuk Lake	62.29	22	P	P	10 46 58.4	-0.1
	baz=284						
H19K	Roundabout Mou	62.36	28	P	P	10 46 58.5	-0.5
	baz=284						
M16K	Timber Creek	62.36	33	P	P	10 46 58.8	-0.3
	baz=284						
GCSA	Galena City Sc	62.37	29	P	P	10 46 58.8	-0.2
	baz=284						
L17K	Donlin	62.39	32	P	P	10 46 59.2	-0.1
	baz=284						
O15K	Ungalikthiuk R	62.40	35	P	P	10 46 59.4	0.0
	baz=284						
JETT	Jettan, Norway	62.44	337	eP	P	10 46 59.1	-0.4
VSU	Vasula	62.55	324	ceP	P	10 46 58.4	-2.0
VSU				pmax	pmax		
	comp=Z,26nm,1.3s						
N16K	Nishlik Lake	62.59	34	P	P	10 47 00.5	-0.1
	baz=285						
J18K	Innoko River	62.76	30	P	P	10 47 01.7	-0.1
	baz=285						
D22K	Ayikyak River	62.92	24	P	P	10 47 02.9	+0.2
	baz=286						
M17K	Holitna River	62.98	33	P	P	10 47 03.4	+0.1
	baz=285						
MNK	Minsk	62.98	319	i P	P	10 47 00.9	-2.5
	comp=E,18nm,0.7s						
MNK				i P	P	10 47 00.9	-2.5
	comp=N,6.0nm,0.8s						
MNK				i P	P	10 47 00.9	-2.5
	comp=Z,16nm,0.7s,baz=74						
MNK				i PcP	PcP	10 47 38.7	-2.6
MNK				i PP	PP	10 49 19.2	-2.3
MNK				i PPP	PPP	10 50 47.1	
MNK				i S	S	10 55 31.6	-1.9
MNK				i ScS	SKKSac	10 56 53.6	-2.5
MNK				i SS	SS	10 59 38.1	-0.3
MNK				i SSS	SSS	11 02 33.1	
MNK	Minsk	62.98	319	i P	P	10 47 00.8	-2.5
MNK				i		10 47 38.7	
MNK				i		10 49 19.2	
MNK				i S	S	10 55 31.5	-1.9
MNK				i		10 56 53.6	
MNK				i SS	SS	10 59 38.0	-0.3
MNK				pmax	pmax		
	comp=Z,16nm,0.7s						
MNK				pmax	pmax		
	comp=E,18nm,0.7s						
MNK				pmax	pmax		
	comp=N,6.0nm,0.8s						
MNK				MLR	MLR		
	comp=Z,227nm,17.0s						
H20K	Anotleneega Mo	63.00	28	P	P	10 47 03.0	-0.3
	baz=285						
F21K	Alatna River	63.08	26	P	P	10 47 03.6	-0.2
	baz=286						
J19K	Poorman	63.09	30	IAmb	IAmb	10 47 04.4	
	comp=Z,11nm,1.1s						
J19K	Poorman	63.09	30	P	P	10 47 03.7	-0.3
	baz=286						
L18K	Granite Mounta	63.10	32	P	P	10 47 03.6	-0.4
	baz=286						
G21K	Allakaket	63.26	27	P	P	10 47 04.6	-0.4
	baz=286						
AKASG	Malin Array Be	63.27	315	P	P	10 47 04.2	-1.1
	comp=Z,1.1nm,0.3s,baz=62,slow=6.3,SNR=12						
AKASG				LR	LR	11 13 58.0	
	comp=Z,177nm,18.3s,baz=65,slow=36						
	comp=Z,1.1nm,0.3s						
AKASG	Malin Array Be	63.27	315	IAmb	IAmb	10 47 05.8	

	comp=Z,8.7nm,1.1s						
AKASG	Malin Array Be	63.27	315	*ce*P	P	10 47 04.4	-0.9
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AKBB	Malin Array Si	63.27	315	IAmb	IAmb	10 47 05.4	
	comp=Z,13nm,1.1s						
AKBB	Malin Array Si	63.27	315	⇓*e*P	P	10 47 04.5	-0.8
KIEV	Kiev	63.28	315	P	P	10 47 04.4	-1.0
KIEV				IAmb	IAmb	10 47 05.4	
	comp=Z,12nm,1.1s						
KIEV	Kiev	63.28	315	⇑P	P	10 47 05.0	-0.4
KIEV	Kiev	63.28	315	⇑P	P	10 47 05.0	-0.4
S14K	Fog Glacier	63.31	39	P	P	10 47 04.6	-1.1
	baz=286						
C23K	Itkillik River	63.35	23	P	P	10 47 05.3	-0.2
	baz=287,SNR=7.8						
E22K	Anaktuvuk Pass	63.43	25	IAmb	IAmb	10 47 07.1	
	comp=Z,20nm,0.9s						
E22K	Anaktuvuk Pass	63.43	25	P	P	10 47 06.2	0.0
	baz=287,SNR=15						
NACGM	Naroch	63.48	320	⇑*i*P	P	10 47 06.1	-0.6
	comp=Z,55nm,0.9s,baz=74						
O17K	Koliganek Bris	63.58	34	P	P	10 47 07.4	+0.1
	baz=286						
D23K	Nanushuk River	63.59	24	P	P	10 47 07.0	-0.2
	baz=287,SNR=13						
NWAO	Narrogin (SRO)	63.60	176	LR	LR	11 16 25.4	
	comp=Z,49nm,19.6s,baz=23,slow=38						
J20K	Nowinta River	63.66	29	IAmb	IAmb	10 47 08.6	
	comp=Z,10nm,0.8s						
J20K	Nowinta River	63.66	29	P	P	10 47 07.9	+0.2
	baz=287						
M18K	Stony River	63.70	32	P	P	10 47 08.3	+0.4
	baz=287						
CHNA	Chernabura Isl	63.70	40	P	P	10 47 08.5	+0.5
	baz=287						
KIRS	Kirsehir-Merke	63.70	301	⇑P	P	10 47 08.7	+0.1
BR131	Keskin Array S	63.70	302	IAmb	IAmb	10 47 12.5	
	comp=Z,11nm,0.8s						
BR131	Keskin Array S	63.70	302	*d i*P	P	10 47 08.7	+0.1
BRTR	Keskin Array B	63.70	302	P	P	10 47 08.2	-0.4
	comp=Z,6.4nm,0.8s,baz=113,slow=6.1,SNR=16						
BRTR				LR	LR	11 17 16.3	
	comp=Z,77nm,20.3s,baz=67,slow=38						
	comp=Z,6.4nm,0.8s						
BRTR	Keskin Array B	63.70	302	P	P	10 47 08.4	-0.2
BRTR	Keskin Array B	63.70	302	*ce*P	P	10 47 08.6	0.0
BRTR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
H21K	Melozitna Rive	63.78	27	P	P	10 47 08.7	+0.2
	baz=287,SNR=8.7						
ASF	Jabal al Asfar	63.85	293	LR	LR	11 19 23.7	
	comp=Z,70nm,20.6s,baz=30,slow=40						
INKA	Innaminka	63.89	153	P	P	10 47 11.7	+2.1
N18K	Kilae Creek	63.90	33	P	P	10 47 09.7	+0.3
	baz=287						
K20K	Telida	63.94	30	P	P	10 47 09.9	+0.3
	baz=287						
L19K	White Mountain	63.94	31	P	P	10 47 09.6	0.0
	baz=287						
C24K	Franklin Bluff	64.02	23	IAmb	IAmb	10 47 10.5	
	comp=Z,14nm,0.9s						
C24K	Franklin Bluff	64.02	23	P	P	10 47 09.9	0.0
	baz=289,SNR=5.8						
TOLK	Toolik Lake Re	64.07	24	P	P	10 47 10.1	-0.3
	baz=288,SNR=6.2						
P17K	Kvichak River	64.07	35	P	P	10 47 09.9	-0.5
	baz=287						
Q16K	King Salmon	64.12	35	P	P	10 47 10.0	-0.8
	baz=287						
D24K	Happy Valley	64.16	23	P	P	10 47 10.6	-0.4
	baz=289						
E23K	Chandalar	64.24	24	P	P	10 47 11.0	-0.6
	baz=289						
I21K	Tanana	64.25	28	P	P	10 47 11.6	+0.1
	baz=288,SNR=13						
H22K	Ishtalitna Cre	64.27	27	P	P	10 47 11.5	-0.2
	baz=288						
COLD	Coldfoot	64.30	25	IAmb	IAmb	10 47 12.9	
	comp=Z,16nm,0.9s						
COLD	Coldfoot	64.30	25	P	P	10 47 11.8	-0.1
	baz=289,SNR=13						
N19K	Bonanza Creek	64.52	33	P	P	10 47 13.4	-0.1
	baz=288						
CHUM	Lake Minchumin	64.52	29	P	P	10 47 13.7	+0.4
	baz=288,SNR=6.4						
G23K	Bananza Creek	64.53	26	P	P	10 47 13.4	0.0
	baz=289						
P18K	Big Mountain,	64.60	34	P	P	10 47 14.1	0.0
	baz=288						
Q17K	Contact Creek	64.63	36	P	P	10 47 13.8	-0.5
	baz=288						
E24K	Your Creek	64.64	24	P	P	10 47 14.0	-0.1
	baz=290						
MMAI	Mount Meron Ar	64.71	295	LR	LR	11 20 56.7	
	comp=Z,117nm,18.4s,baz=60,slow=41						
STEI	Steigen	64.72	336	*e*P	P	10 47 13.5	-1.0
O19K	Port Alsworth	64.79	33	P	P	10 47 14.7	-0.4
	baz=288						
M20K	Styx River	64.80	32	P	P	10 47 15.5	+0.1
	baz=289						
FAUS	Fauske	64.89	335	*e*P	P	10 47 14.2	-1.5
PPLA	Purkeypile	64.89	30	P	P	10 47 15.0	-1.0
	baz=289						
NOR	Nord	64.90	353	*i* P	P	10 47 14.5	-1.1
NOR				IAmb	IAmb	10 47 15.6	
	comp=Z,3.7nm,0.8s						
D25K	Kavik River	64.92	23	P	P	10 47 15.3	-0.7
	baz=291						
Q18K	Katmai Hardscr	64.95	35	P	P	10 47 15.9	-0.5
	baz=288						
BPAW	Bear Paw Mtn.	65.01	29		P	10 47 15.7	-0.9
BPAW	Bear Paw Mtn.	65.01	29	P	P	10 47 16.2	-0.4
	baz=289,SNR=8.6						
F24K	Squaw Lake	65.04	25	P	P	10 47 16.3	-0.5
	baz=290						
C26K	Camden Bay	65.18	22	P	P	10 47 17.3	-0.2
	baz=292						
I23K	Minto, Yukon-K	65.31	27	IAmb	IAmb	10 47 19.6	
	comp=Z,8.9nm,0.8s						
I23K	Minto, Yukon-K	65.31	27	P	P	10 47 18.6	+0.2
	baz=290,SNR=6.2						
G24K	Hadweenzic Riv	65.48	26	P	P	10 47 19.5	-0.1
	baz=291						
P19K	Oil Pt	65.48	34	P	P	10 47 19.1	-0.6
	baz=290						
SKT	Skwentna	65.48	31	P	P	10 47 19.3	-0.4
	baz=290						
TRF	Thorofare Moun	65.52	29	P	P	10 47 20.0	-0.1
	baz=290						
CHIR	Chirikof Islan	65.55	38	P	P	10 47 19.9	-0.2
	baz=289						
NEA2	Nenana	65.62	28	P	P	10 47 20.4	-0.1
	baz=291,SNR=12						
O20K	Slope Mountain	65.63	33	P	P	10 47 19.4	-1.4
	baz=290						
E25K	Arctic Village	65.64	24	P	P	10 47 20.3	-0.3
	baz=292						
H24K	Noodor Dome	65.64	27	IAmb	IAmb	10 47 22.1	
	comp=Z,11nm,0.9s						
H24K	Noodor Dome	65.64	27	P	P	10 47 20.3	-0.4
	baz=291,SNR=7.1						
C27K	Jago River	65.68	22	P	P	10 47 20.9	+0.1
	baz=293						
RAUS	Rausandaksla	65.68	334	*e*P	P	10 47 19.7	-1.2
CFR	Carcaliu	65.71	309	⇓P	P	10 47 20.9	-0.5
CFR	Carcaliu	65.71	309	⇓P	P	10 47 20.9	-0.5
F25K	Christian Rive	65.82	24	P	P	10 47 21.8	0.0
	baz=292						
CUT	Chulitna	65.89	30	P	P	10 47 21.9	-0.4
	baz=291						
G25K	Bearman Lake	65.97	25	P	P	10 47 22.2	-0.5
	baz=292						
MCK	McKinley	65.99	29	P	P	10 47 22.3	-0.6
	baz=291						
COLA	College	66.01	28	P	P	10 47 22.9	0.0
COLA	College	66.01	28	*de*P	P	10 47 23.1	+0.1
COLA				pmax	pmax		
	comp=Z,32nm,0.9s						
COLA	College	66.01	28	P	P	10 47 22.5	-0.4
	baz=292						
SUA	Susitna One	66.02	32	P	P	10 47 22.9	-0.4
	baz=291,SNR=6.3						
WRH	Wood River Hil	66.06	28	IAmb	IAmb	10 47 24.7	
	comp=Z,11nm,0.9s						
POKR	Poker Plat Res	66.08	27	P	P	10 47 23.3	-0.2
	baz=292,SNR=8.4						
CCB	Clear Creek Bu	66.11	28	IAmb	IAmb	10 47 24.6	
	comp=Z,7.5nm,0.8s						
LEIR	Leirfjorden	66.15	334	*e*P	P	10 47 22.8	-1.0
M22K	Willow	66.19	31	P	P	10 47 23.4	-0.8
	baz=291						
Q20K	Shuyak Island	66.25	35	P	P	10 47 23.8	-0.8
	baz=291						
BMAR	Burnt Mountain	66.26	24	P	P	10 47 25.1	+0.4
OHAK	Old Harbor	66.29	36	P	P	10 47 23.9	-1.0
	baz=290						
F26K	Sheenjek River	66.30	24	P	P	10 47 24.1	-0.8
	baz=294						
EIL	Elat	66.34	291	LR	LR	11 20 51.0	
	comp=Z,133nm,18.1s,baz=332,slow=40						
VRI	Vrincioaia	66.40	310	⇓P	P	10 47 26.0	+0.1
VRI	Vrincioaia	66.40	310	⇓P	P	10 47 26.0	+0.1
IL31		66.43	27	IAmb	IAmb	10 47 28.9	
	comp=Z,35nm,1.9s						
ILAR	Eielson Array	66.43	27	P	P	10 47 23.9	-1.8
	comp=Z,2.7nm,0.9s,baz=282,slow=6.0,SNR=23						
ILAR				LR	LR	11 21 40.0	
	comp=Z,93nm,20.1s,baz=243,slow=41						
	comp=Z,2.7nm,0.9s						
KDAK	Kodiak Island	66.45	36	LR	LR	11 17 25.9	
	comp=Z,151nm,20.6s,baz=302,slow=37						
KDAK	Kodiak Island	66.45	36	P	P	10 47 24.7	-1.1
	baz=291						
PLOR	Plostina	66.46	310	⇑P	P	10 47 26.4	+0.1
PLOR	Plostina	66.46	310	⇑P	P	10 47 26.4	+0.1
WAT1	Susitna Watana	66.48	30	P	P	10 47 25.0	-1.1
	baz=292						
HDA	Harding Lake	66.54	28	IAmb	IAmb	10 47 26.5	
	comp=Z,10nm,1.0s						
HDA	Harding Lake	66.54	28	P	P	10 47 25.7	-0.8
	baz=293						
RC01	Rabbit Creek A	66.61	32	P	P	10 47 26.4	-0.5
	baz=292						
BRSE	Bradley Lake S	66.64	33	P	P	10 47 26.7	-0.4
	baz=291						
PMR	Palmer	66.69	31	P	P	10 47 26.7	-0.7
	baz=292						
D27M	Malcolm River	66.72	22	P	P	10 47 27.1	-0.5
	baz=296						
G26K	Porcupine Rive	66.73	25	P	P	10 47 27.1	-0.5
	baz=294						
BUR08	Bucovina Ar. S	66.75	313	IAmb	IAmb	10 47 31.5	
	comp=Z,7.8nm,1.0s						
BURAR	Bucovina Array	66.75	313	P	P	10 47 27.9	-0.3
BURAR	Bucovina Array	66.75	313	⇑P	P	10 47 28.2	0.0
BURAR	Bucovina Array	66.75	313	⇑P	P	10 47 28.2	0.0
DHY	Denali Highway	66.88	29	P	P	10 47 28.3	-0.5
	baz=293						
WAT6	Susitna Watana	66.92	30	P	P	10 47 28.6	-0.4
	baz=293						
SML	Sawmill	66.96	31	P	P	10 47 28.8	-0.4
	baz=292						
E27K	Coleen River	66.97	23	P	P	10 47 28.8	-0.3
	baz=296						
MLR	Muntele Rosu	67.05	310	P	P	10 47 29.5	-0.7
	comp=Z,3.5nm,0.8s,baz=94,slow=18,SNR=4.3						
MLR				LR	LR	11 17 20.6	
	comp=Z,209nm,21.1s,baz=73,slow=36						
	comp=Z,3.5nm,0.8s						
MLR	Muntele Rosu	67.05	310	IAmb	IAmb	10 48 45.1	
	comp=Z,20nm,1.5s						
MLR	Muntele Rosu	67.05	310	⇓P	P	10 47 31.2	+1.0
MLR	Muntele Rosu	67.05	310	P	P	10 47 31.2	+1.0
KNK	Knik Glacier	67.06	31	P	P	10 47 29.1	-0.7
	baz=292						
J25K	Salcha River,	67.09	27	P	P	10 47 29.8	-0.2
	baz=294						
SEW	Seward	67.11	33	P	P	10 47 29.5	-0.6
	baz=292						
M23K	Glacier View	67.23	31	P	P	10 47 30.4	-0.5
	baz=293						
DOPR	Dopca	67.24	311	⇓P	P	10 47 30.4	-0.8
K24K	Donnelly Dome	67.25	28	P	P	10 47 29.8	-1.2
	baz=294,SNR=13						
SCM	Sheep Creek Mo	67.39	30	P	P	10 47 31.7	-0.2
	baz=293						
D28M	Stokes Point	67.39	21	P	P	10 47 31.3	-0.5
	baz=298						
E28M	Babbage River	67.47	22	P	P	10 47 31.9	-0.4
	baz=297						
G27K	Doyon Strip	67.56	24	P	P	10 47 32.3	-0.6
	baz=296						
I26K	Coal Creek Min	67.66	26	P	P	10 47 33.1	-0.4
	baz=295						
RIDG	Independent Ri	67.66	28	P	P	10 47 32.9	-0.7
	baz=295,SNR=5.1						
PAX	Paxson	67.72	29	P	P	10 47 33.5	-0.6
	baz=294						
M24K	Tolsona, Glenn	67.78	30	P	P	10 47 34.0	-0.4
	baz=294						
F28M	Old Crow	67.81	23	IAmb	IAmb	10 47 34.8	
	comp=Z,6.7nm,0.9s						
F28M	Old Crow	67.81	23	P	P	10 47 33.9	-0.6
	baz=297,SNR=8.6						
J26L	Joseph Creek	67.85	27	P	P	10 47 34.1	-0.7
	baz=295						
H27K	Steamboat Moun	67.86	25	P	P	10 47 34.3	-0.5
	baz=296						
SCRK	Sand Creek	67.91	28	IAmb	IAmb	10 47 35.3	
	comp=Z,14nm,0.8s						
SCRK	Sand Creek	67.91	28	P	P	10 47 34.5	-0.8
	baz=295,SNR=9.7						
STKA	Stephens Creek	67.92	154	P	P	10 47 35.0	-0.5
	comp=Z,4.5nm,0.8s,baz=334,slow=5.4,SNR=6.0						
STKA				LR	LR	11 21 49.5	
	comp=Z,48nm,18.1s,baz=22,slow=40						
	comp=Z,4.5nm,0.8s						
STKA	Stephens Creek	67.92	154	P	P	10 47 37.2	+1.7
STKA	Stephens Creek	67.92	154	P	P	10 47 37.2	+1.7
STKA				pmax	pmax		
	comp=Z,35nm,1.0s						
ARR	Arges	67.95	311	⇑P	P	10 47 36.1	+0.3
HUMR	Humele	68.04	310	⇑P	P	10 47 35.9	-0.4
P23K	Montague Islan	68.09	32	P	P	10 47 35.7	-0.6
	baz=294						
E29M	Blow River	68.11	22	P	P	10 47 35.6	-0.6
	baz=299						
I27K	Kandik River	68.11	26	P	P	10 47 35.9	-0.5
	baz=296,SNR=9.8						
KLU	Klutina	68.14	31	P	P	10 47 36.2	-0.5
	baz=294						
HFS	Hagfors	68.29	328	P	P	10 47 36.4	-1.2
	comp=Z,5.9nm,0.8s,baz=74,slow=6.3,SNR=12						
HFS				LR	LR	11 18 08.6	
	comp=Z,260nm,18.2s,baz=66,slow=36						
	comp=Z,5.9nm,0.8s						
MARR	Marisel-Cluj	68.43	312	⇓P	P	10 47 39.0	+0.2
MENT	Mentasta	68.46	29	IAmb	IAmb	10 47 39.6	
	comp=Z,14nm,0.8s						
STHS	Stebnicka Huta	68.54	315	*e*P	P	10 47 41.2	+1.8
STHS				pmax	pmax		
	comp=Z,9.0nm,1.2s						
STHS	Stebnicka Huta	68.54	315	*e*P	P	10 47 41.2	+1.8
DAG	Danmarks Havn	68.60	349	*i* P	P	10 47 37.0	-2.2
DAG				IAmb	IAmb	10 47 38.6	
	comp=Z,8.9nm,1.2s						
EYAK	Cordova Ski Ar	68.61	31	P	P	10 47 39.0	-0.6
	baz=295						
DRGR		68.65	312	⇑P	P	10 47 40.0	-0.1
DRGR		68.65	312	⇑P	P	10 47 40.0	-0.1
N25K	Chitina, Valde	68.67	30	P	P	10 47 39.2	-0.8
	baz=296						
NC405	NORSAR Array S	68.76	329	P	P	10 47 39.3	-1.3
NC405				IAmb	IAmb	10 47 40.2	
	comp=Z,16nm,1.0s						
G29M	Pine Creek	68.78	24	P	P	10 47 39.7	-0.8
	baz=299						
I28M	Miner Creek	68.80	25	P	P	10 47 40.8	0.0
	baz=298						
NC303	NORSAR Array S	68.86	330	IAmb	IAmb	10 47 44.0	
	comp=Z,11nm,0.9s						
BMRM	Bremner River	68.94	31	P	P	10 47 41.7	0.0
	baz=296						
NB201	NORSAR Array S	68.97	329	IAmb	IAmb	10 47 41.3	
	comp=Z,17nm,1.0s						
H29M	Whitestone	69.00	24	P	P	10 47 41.7	-0.2
	baz=299						
M26K	Nabesna, AK	69.00	29	P	P	10 47 41.7	-0.3
	baz=297						
NC602	NORSAR Array S	69.00	329	IAmb	IAmb	10 47 48.3	
	comp=Z,10nm,1.1s						
NC602	NORSAR Array S	69.00	329	*e*P	P	10 47 40.5	-1.5
NB2	NORSAR Subarra	69.01	329	P	P	10 47 40.3	-1.8
	comp=Z,8.5nm,0.9s,baz=65,slow=6.2						
NB2	NORSAR Subarra	69.01	329	P	P	10 47 40.3	-1.8
	baz=65,slow=6.2						
NOA	NORSAR Array B	69.01	329	P	P	10 47 40.4	-1.7
	comp=Z,5.2nm,0.8s,baz=65,slow=6.0,SNR=26						
	comp=Z,5.2nm,0.8s						
NC204	NORSAR Array S	69.11	330	P	P	10 47 41.4	-1.3
NC204				IAmb	IAmb	10 47 44.9	
	comp=Z,13nm,1.1s						
GZR	Gura Zlata	69.15	311	⇓P	P	10 47 43.7	+0.4
GZR	Gura Zlata	69.15	311	⇓P	P	10 47 43.7	+0.4
L27K	Beaver Creek,	69.18	28	P	P	10 47 42.8	-0.3
	baz=297						
F30M	Barrier River	69.19	23	P	P	10 47 42.7	-0.3
	baz=301						
BCAR	Beaver Creek A	69.19	28	P	P	10 47 43.4	+0.2
G30M	tAoh Zraii Nji	69.36	23	P	P	10 47 43.2	-1.0
	baz=301						
I29M	Ogilvie Camp,	69.44	25	P	P	10 47 44.4	-0.3
	baz=299						
MCARA	McCarthy VSAT	69.44	30	P	P	10 47 44.5	-0.3
	baz=297,SNR=6.1						
M27K	Edge Creek, AK	69.48	29	P	P	10 47 44.8	-0.3
	baz=298						
KAIM	Kayak Island	69.48	32	P	P	10 47 44.8	-0.1
	baz=296						
DOMB	Dombas	69.48	331	*e*P	P	10 47 44.0	-1.0
EPYK	Eagle Plains	69.50	24	P	P	10 47 44.2	-0.8
	baz=300,SNR=6.1						
SIRR	Siria	69.52	312	⇑P	P	10 47 42.1	-3.4
INK	Inuvik	69.55	21	LR	LR	11 20 47.6	
	comp=Z,114nm,18.9s,baz=292,slow=38						
INK	Inuvik	69.55	21	P	P	10 47 44.5	-0.7
	baz=302,SNR=28						
HERR	Herculane	69.59	311	⇓P	P	10 47 44.1	-1.8
DAWY	Dawson	69.67	27		P	10 47 45.4	-0.7
DAWY				IAmb	IAmb	10 47 46.5	
	comp=Z,12nm,1.0s						
DAWY	Dawson	69.67	27	P	P	10 47 45.9	-0.2
	baz=299,SNR=5.3						
OSL	Oslo	69.72	328	*e*P	P	10 47 45.7	-0.7
BZS	Buzias	69.81	312	⇓P	P	10 47 46.6	-0.6
BZS	Buzias	69.81	312	⇓P	P	10 47 46.6	-0.6
BVCY	Beaver Creek	69.88	29	P	P	10 47 47.6	+0.1
	baz=298,SNR=6.4						
J29N	Klondike Camp	69.92	26	IAmb	IAmb	10 47 49.0	
	comp=Z,15nm,0.9s						
J29N	Klondike Camp	69.92	26	P	P	10 47 47.5	-0.2
	baz=300,SNR=6.3						
F31M	Tsiigehtchic	69.94	22	P	P	10 47 46.7	-1.0
	baz=302,SNR=16						
PSZ	Piszkesteto	69.96	314	⇑P	P	10 47 47.7	-0.5
PSZ	Piszkesteto	69.96	314	⇑P	P	10 47 47.7	-0.5
MDVR	Moldovita	70.08	311	⇑P	P	10 47 48.9	-0.2
I30M	Mount Dempster	70.21	25	P	P	10 47 48.6	-1.0
	baz=301						
OKC	Ostrava-Krasne	70.22	317	AMS	AMS	11 18 00.0	
	comp=Z,300nm,9.3s						
AKN	Aaknes	70.28	331	*e*P	P	10 47 48.8	-1.1
YUK3	Moose Creek	70.35	29	P	P	10 47 49.5	-1.0
	baz=299						
CTG	Chitna Glacier	70.36	30	P	P	10 47 50.0	-0.6
	baz=298						
STEB	Steborice	70.40	317	*e*P	P	10 47 50.4	-0.4
K29M	Barlow Dome	70.50	26	P	P	10 47 50.4	-0.9
	baz=300						
J30M	Hart River	70.56	25	P	P	10 47 51.7	-0.1
	baz=301						
MORC	Moravsky Berou	70.60	317	IAmb	IAmb	10 47 55.4	
	comp=Z,9.1nm,1.1s						
MORC	Moravsky Berou	70.60	317	⇑P	P	10 47 51.7	-0.4
MORC	Moravsky Berou	70.60	317	*e*P	P	10 47 51.5	-0.6
MORC	Moravsky Berou	70.60	317	⇑P	P	10 47 51.7	-0.4
H31M	Peel River	70.62	24	P	P	10 47 51.4	-0.5
	baz=302						
L29M	L29M	70.63	27	P	P	10 47 51.8	-0.2
	baz=300						
DBG	Daneborg	70.70	348	*i* P	P	10 47 51.4	-0.8
DBG				IAmb	IAmb	10 47 52.2	
	comp=Z,13nm,1.2s						
M29M	Somme Creek	70.83	28	P	P	10 47 53.3	-0.1
	baz=300						
YUK8	Steele Glacier	70.88	29	P	P	10 47 53.6	-0.3
	baz=300						
JAVC	Velka Javorina	70.91	316	*e*P	P	10 47 54.5	+0.5
KRLC	Kraliky	70.92	317	AMS	AMS	11 18 00.0	
	comp=Z,300nm,15.2s						
O28M	Mount Upton	70.95	30	P	P	10 47 54.0	-0.3
	baz=299						
OSTC	Ostas	71.04	318	*e*P	P	10 47 54.8	+0.1
OSTC	Ostas	71.04	318	*e*P	P	10 47 54.8	+0.1
DPC	Dobruska-Polom	71.06	318	*e*P	P	10 47 54.3	-0.6
DPC				MLR	MLR		
	comp=Z,300nm,17.2s						
DPC	Dobruska-Polom	71.06	318	*e*P	P	10 47 54.3	-0.6
DPC				AMS	AMS	11 20 30.0	
	comp=Z,300nm,17.2s						
SMOL	Smolenice	71.21	316	*e*P	P	10 47 56.6	+0.8
SMOL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MAYO	Mayo, Yukon	71.24	26	P	P	10 47 55.8	+0.1
	baz=302						
PINM	Pinnacle	71.25	31	P	P	10 47 55.9	0.0
	baz=300						
YUK4	Talbot Arm	71.31	29	P	P	10 47 55.9	-0.6
	baz=300						
VRAC	Vranov	71.36	317	LR	LR	11 18 27.7	
	comp=Z,119nm,18.2s,baz=68,slow=35						
VRAC	Vranov	71.36	317	⇓P	P	10 47 56.2	-0.5
VRAC	Vranov	71.36	317	*e*P	P	10 47 56.6	-0.1
VRAC	Vranov	71.36	317	⇓P	P	10 47 56.2	-0.5
M30M	Minto, Yukon	71.43	27	P	P	10 47 56.6	-0.3
	baz=302						
MORH	Mrgy, Hungar	71.45	313	⇑P	P	10 47 56.7	-0.5
NEEM	North Greenlan	71.48	356	*i* P	P	10 47 56.4	-0.9
NEEM				IAmb	IAmb	10 47 57.5	
	comp=Z,13nm,0.8s						
KRUC	Moravsky	71.58	317	*e*P	P	10 47 57.6	-0.4
YUK6	Outpost Mounta	71.64	29	P	P	10 47 57.8	-0.6
	baz=301						
C36M	Paulatuk	71.69	18	IAmb	IAmb	10 47 57.4	
	comp=Z,18nm,0.9s						
C36M	Paulatuk	71.69	18	P	P	10 47 58.0	-0.3
	baz=310,SNR=17						
O29M	Mount Kennedy	71.88	30	P	P	10 47 59.0	-0.7
	baz=301						
N30M	Aishikik Lake	71.90	28	P	P	10 47 59.3	-0.5
	baz=302						
HYT	Haines Junctio	72.06	29	IAmb	IAmb	10 48 02.3	
	comp=Z,18nm,0.9s						
HYT	Haines Junctio	72.06	29	P	P	10 47 59.8	-1.0
	baz=301						
PRU	Pruhonice	72.25	318	*e*P	P	10 48 02.9	+0.9
PRU				MLR	MLR		
	comp=Z,300nm,15.5s						
PRU	Pruhonice	72.25	318	*e*P	P	10 48 02.9	+0.9
PRU				AMS	AMS	11 19 10.0	
	comp=Z,300nm,15.5s						
PRA	Prague	72.28	318	AMS	AMS	11 19 00.0	
	comp=Z,400nm,16.7s						
CONA	Conrad Observa	72.41	316	*e*P	P	10 48 02.3	-0.8
	comp=Z,8.1nm,1.5s						
N31M	Braeburn, Yuko	72.42	28	P	P	10 48 02.7	-0.1
	baz=303						
CLL	Collm	72.52	320	IAmb	IAmb	10 48 03.8	
	comp=Z,9.3nm,0.9s						
CLL	Collm	72.52	320	*i* P	P	10 48 02.5	-1.1
CLL				pmax	pmax		
	comp=Z,12nm,1.0s						
CLL				MLR	MLR		
	comp=Z,200nm,19.8s						
CLL	Collm	72.52	320	*i* P	P	10 48 02.5	-1.1
	comp=Z,12nm,1.0s						
CLL				AMS	AMS	11 21 00.0	
	comp=Z,200nm,19.8s						
M31M	Drury Creek, Y	72.58	27	P	P	10 48 03.5	-0.3
	baz=304						
P29M	Windy Craggy	72.58	30	P	P	10 48 03.4	-0.5
	baz=302						
HSKC	Hora Svate Kat	72.60	319	*e*P	P	10 48 03.9	-0.2
P30M	Million Dollar	72.66	30	P	P	10 48 04.2	-0.1
	baz=302						
O30N	Mendenhall	72.68	29	P	P	10 48 04.0	-0.4
	baz=303						
ZVC	Zvikov	72.70	318	*e*P	P	10 48 04.4	-0.3
TULEG	Thule	72.80	1	*i* P	P	10 48 02.5	-2.3

TULEG				IAmb	IAmb	10 48 04.0	
	comp=Z,4.9nm,0.9s						
CKRC	Cesky Krumlov	72.92	317	*e*P	P	10 48 05.8	-0.3
CKRC	Cesky Krumlov	72.92	317	*e*P	P	10 48 05.8	-0.3
RES	Resolute Bay	73.03	8	LR	LR	11 24 24.1	
	comp=Z,70nm,18.1s,baz=21,slow=39						
KHC	Kasperske Hory	73.20	317	AMS	AMS	11 19 20.0	
	comp=Z,300nm,12.8s						
DZM	Mont Dzumac	73.23	129	*e*LR	LR	11 10 33.4	
	comp=Z,93nm,22.9s						
WHY	Whitehorse	73.24	29	P	P	10 48 07.6	-0.2
	baz=304						
GERES	GERESS Array B	73.27	317	P	P	10 48 07.2	-0.9
	comp=Z,2.3nm,0.9s,baz=54,slow=6.9,SNR=13						
	comp=Z,2.3nm,0.9s						
PLBC	Pleasant Camp	73.27	30	P	P	10 48 08.0	+0.2
	baz=303						
MOA	Molln	73.40	316	*i* P	P	10 48 08.8	-0.1
	comp=Z,4.4nm,0.9s						
SOKA	Soboth	73.48	315	*i* P	P	10 48 09.5	0.0
	comp=Z,5.2nm,1.1s						
N32M	Quiet Lake	73.69	28	P	P	10 48 10.2	-0.1
	baz=305						
SKAG	Skagway	73.71	30	P	P	10 48 10.2	-0.3
	baz=304						
BIOA	Bad Ischl, Aus	73.84	316	*i* P	P	10 48 12.0	+0.5
	comp=Z,6.6nm,1.2s						
OBKA	Obir	73.85	315	*i* P	P	10 48 11.6	0.0
	comp=Z,11nm,1.8s						
SCO	Scoresbysund	73.98	346	IAmb	IAmb	10 48 15.4	
	comp=Z,35nm,1.7s						
GRF	Grafenberg Arr	74.29	319	*e*P	P	10 48 14.6	+0.5
	comp=Z,6.4nm,0.9s,baz=65,slow=5.5						
KBA	Koelnbreinsper	74.31	316	*i* P	P	10 48 14.5	+0.1
	comp=Z,5.1nm,0.9s						
MYKA	Terra Mystica	74.35	315	*i* P	P	10 48 12.7	-1.8
	comp=Z,6.1nm,1.2s						
LESA	Schwarzleotal	74.54	316	*i* P	P	10 48 14.9	-0.8
	comp=Z,12nm,0.9s						
R32K	Eaglecrest	74.72	31	P	P	10 48 16.2	-0.2
	baz=304						
ABTA	Abfaltersbach	74.97	316	*i* P	P	10 48 17.3	-0.9
	comp=Z,5.2nm,1.0s						
SUMG	Summit	74.98	352	IAmb	IAmb	10 48 18.8	
	comp=Z,14nm,0.8s						
SUMG	Summit	74.98	352	*i* P	P	10 48 16.0	-2.2
SUMG				IAmb	IAmb	10 48 18.5	
	comp=Z,13nm,0.8s						
SIT	Sitka	75.05	32	P	P	10 48 18.1	-0.1
	baz=304						
WATA	Walderalm	75.24	316	*i* P	P	10 48 18.3	-1.5
	comp=Z,4.2nm,0.9s						
WTTA	Wattenberg	75.24	316	*e*P	P	10 48 19.8	-0.1
	comp=Z,3.8nm,0.7s						
SQTA	Sankt Quirin	75.52	317	*i* P	P	10 48 21.1	-0.3
	comp=Z,6.0nm,1.1s						
R33M	Jennings River	75.57	28	P	P	10 48 21.3	-0.1
	baz=307						
FETA	Feichten	75.90	317	*i* P	P	10 48 21.7	-1.9
	comp=Z,8.3nm,1.1s						
WRGLY	Wrigley	75.93	23	P	P	10 48 22.9	-0.2
	baz=312,SNR=6.1						
WTLY	Watson Lake, Y	76.00	27	P	P	10 48 23.4	-0.4
	baz=308						
DAVA	Damuels	76.26	317	*i* P	P	10 48 24.4	-1.3
	comp=Z,7.0nm,1.0s						
FUORN	Ofenpass-Fuorn	76.38	316	IAmb	IAmb	10 48 26.8	
	comp=Z,8.7nm,0.8s						
DAVOX	Davos/Dischmat	76.52	317	LR	LR	11 23 34.8	
	comp=Z,177nm,19.6s,baz=62,slow=37						
CRAG	Craig	76.97	32	P	P	10 48 29.3	+0.1
	baz=306						
LIRD	Liard River Hi	77.50	27	P	P	10 48 32.2	0.0
	baz=311						
V35K	Ketchikan	77.75	32	P	P	10 48 33.6	0.0
	baz=307						
TOAD	Toad River Com	78.21	27	P	P	10 48 35.9	-0.3
	baz=312						
BORG	Borgarnes	78.33	342	LR	LR	11 25 26.4	
	comp=Z,111nm,18.9s,baz=23,slow=38						
EKA	Eskdalemuir Ar	78.47	329	P	P	10 48 36.8	-0.9
	comp=Z,3.2nm,0.9s,baz=65,slow=6.8,SNR=4.3						
EKA				LR	LR	11 25 06.8	
	comp=Z,189nm,18.9s,baz=37,slow=37						
	comp=Z,3.2nm,0.9s						
YKAW3	Yellowknife Wh	79.23	21	IAmb	IAmb	10 50 13.4	
	comp=Z,24nm,1.9s						
YKA	Yellowknife Ar	79.29	21	P	P	10 48 40.1	-1.9
	comp=Z,2.0nm,0.8s,baz=319,slow=5.6,SNR=24						
YKA				LR	LR	11 28 08.4	
	comp=Z,150nm,18.8s,baz=337,slow=39						
	comp=Z,2.0nm,0.8s						
YKA	Yellowknife Ar	79.29	21	*ce*P	P	10 48 40.5	-1.5
YKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILON	Igloolik, Nuna	79.39	5	IAmb	IAmb	10 48 42.1	
	comp=Z,9.4nm,0.9s						
SFJD	Kangerlussuaq	81.64	354	LR	LR	11 27 06.5	
	comp=Z,96nm,18.2s,baz=7.0,slow=37						
SFJD	Kangerlussuaq	81.64	354	*i* P	P	10 48 52.8	-1.8
SFJD				IAmb	IAmb	10 48 54.9	
	comp=Z,13nm,0.8s						
LLLB	Lillooet	85.28	32	IAmb	IAmb	10 49 38.8	
	comp=Z,24nm,1.5s						
FRB	Frobisher Bay	85.65	1	LR	LR	11 28 12.4	
	comp=Z,87nm,20.2s,baz=7.5,slow=36						
EDM	Edmonton	86.87	26	IAmb	IAmb	10 49 21.8	
	comp=Z,16nm,1.4s						
GNW	Green Mountain	86.98	34	IAmb	IAmb	10 50 29.6	
	comp=Z,31nm,1.8s						
FCC	Fort Churchill	87.76	14	IAmb	IAmb	10 49 25.3	
	comp=Z,9.4nm,1.0s						
LON	Longmire	88.04	34	IAmb	IAmb	10 49 43.4	
	comp=Z,9.1nm,1.3s						
B08A	Colville Reser	88.05	32	IAmb	IAmb	10 49 27.9	
	comp=Z,8.8nm,0.8s						
ESDC	Sonseca Array	88.86	317	P	P	10 49 30.9	-0.4
	comp=Z,3.5nm,0.9s,baz=42,slow=4.5,SNR=15						
	comp=Z,3.5nm,0.9s						
C09A	Chrisman Ranch	88.94	32	IAmb	IAmb	10 49 32.5	
	comp=Z,10.0nm,0.8s						
WAH2	Wahluke Slope	89.11	33	IAmb	IAmb	10 49 32.8	
	comp=Z,8.3nm,1.0s						
NEW	Newport	89.12	31	IAmb	IAmb	10 49 33.3	
	comp=Z,6.9nm,0.8s						
E07A	Sunnyside	89.12	34	IAmb	IAmb	10 49 33.5	
	comp=Z,8.6nm,0.9s						
HAWA	Hanford	89.39	34	IAmb	IAmb	10 51 35.5	
	comp=Z,27nm,1.9s						
FFC	Flin Flon	89.42	20	P	P	10 49 32.3	-1.2
FFC				IAmb	IAmb	10 49 33.4	
	comp=Z,9.8nm,1.0s						
FFC	Flin Flon	89.42	20	P	P	10 49 32.3	-1.2
FFC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
E09A	Wood Farm, Sta	89.95	33	IAmb	IAmb	10 49 37.3	
	comp=Z,7.0nm,0.8s						
PINE	Pine Mountain	90.58	36	IAmb	IAmb	10 49 46.9	
	comp=Z,14nm,1.1s						
F10A	Beach Ranch, E	90.78	33	IAmb	IAmb	10 49 42.0	
	comp=Z,5.2nm,0.9s						
K05A	Summer Lake	91.36	37	IAmb	IAmb	10 49 44.9	
	comp=Z,10nm,1.0s						
MSO	Missoula	91.61	30	IAmb	IAmb	10 49 44.5	
	comp=Z,8.8nm,0.9s						
J08A	Circle Bar Ran	92.13	35	IAmb	IAmb	10 49 48.5	
	comp=Z,9.6nm,1.2s						
LSZ	Lusaka	93.72	255	LR	LR	11 29 54.1	
	comp=Z,60nm,22.0s,baz=102,slow=34						
HLID	Hailey	93.92	33	IAmb	IAmb	10 50 01.4	
	comp=Z,5.7nm,1.1s						
ULM	Lac du Bonnet	95.12	18	LR	LR	11 37 43.5	
	comp=Z,97nm,19.2s,baz=324,slow=39						
NVAR	Mina Array Bea	95.84	38	P	P	10 50 03.2	-0.6
	comp=Z,0.2nm,0.5s,baz=287,slow=4.3,SNR=2.4						
	comp=Z,0.2nm,0.5s						
PDAR	Pinedale Array	96.73	30	P	P	10 50 06.6	-1.2
	comp=Z,0.5nm,0.9s,baz=321,slow=1.9,SNR=3.8						
PDAR				LR	LR	11 37 51.8	
	comp=Z,51nm,18.2s,baz=334,slow=38						
	comp=Z,0.5nm,0.9s						
TORD	Torodi Ar. Bea	101.21	293	P	Pdif	10 50 27.5	-0.5
	comp=Z,0.1nm,0.3s,baz=30,slow=2.1,SNR=1.4						
PPT2	Papeete2	104.68	102	*e*LR	LR	11 24 58.8	
	comp=Z,78nm,22.5s						
PPT2				*e*LR	LR	11 25 04.9	
	comp=Z,90nm,24.0s						
TBI	Tubuai	107.42	107	*e*LR	LR	11 26 19.9	
	comp=Z,334nm,26.0s						
RKT	Rikitea	119.40	101	*e*LR	LR	11 31 48.9	
	comp=Z,4μm,40.8s						
NVL	N'lazarevskaya	122.65	203	*e*PKIKP	PKPdf	10 55 28.8	-2.8
NVL				*e*		10 57 08.0	
NVL				*e*PPP	PPP	10 59 44.2	
NVL				*e*SSS	SSS	11 18 23.9	
NVL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
NVL				MLR	MLR		
	comp=Z,445nm,22.0s						
BDFB	Brasilia	157.21	308	PKPab	PKPab	10 57 02.4	-1.9
	comp=Z,4.7nm,0.8s,baz=58,slow=1.3,SNR=5.9						
LPAZ	La Paz	165.37	6	PKP	PKPdf	10 56 42.1	-0.7
	comp=Z,1.1nm,0.8s,baz=14,slow=4.2,SNR=4.2						
LPAZ	La Paz	165.37	6		PKPdf	10 56 41.8	-1.0
CPUP	Villa Florida	170.68	297	PKP	PKPdf	10 56 45.5	+0.2
	comp=Z,0.9nm,0.7s,baz=356,slow=3.8,SNR=4.3						
CPUP				PKPab	PKPab	10 58 02.0	-1.1
	comp=Z,1.7nm,0.8s,baz=79,slow=5.2,SNR=4.8						

IDC 26 10:41:07.4±1.9**,50°.93N**×**129°.87W,h0**km**,mb3.3**/1**, mbtmp3.2**/4**,ML3.1**/3**,MS3.1**/2**,Error ellipse: s-maj=25.7km s-min=12.4km az=115.0,Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBB	Bella Bella	1.67	40	Pg	Pn	10 41 36.7	-1.1
	27nm,0.3s,baz=224,slow=11,SNR=97						
BBB				Lg	Lg	10 42 00.5	
	17nm,0.3s,baz=207,slow=11,SNR=6.0						
YKA	Yellowknife Ar	14.25	30	Pn	Pn	10 44 27.1	-3.1
	0.1nm,0.3s,baz=228,slow=12,SNR=8.9						
YKA				Sn	Sn	10 46 59.6	-9.2
	baz=228,slow=23,SNR=4.0						
	0.2nm,0.5s						
ELK	Elko	14.39	129	LR	LR	10 49 31.8	
	comp=Z,53nm,19.9s,baz=312,slow=35						
PDAR	Pinedale Array	16.08	113	Pn	Pn	10 44 56.4	+1.4
	baz=314,slow=12,SNR=5.6						
	0.7nm,0.8s						
ILAR	Eielson Array	16.48	334	Pn	P	10 45 01.1	-1.4
	baz=144,slow=11,SNR=4.7						
ILAR				LR	LR	10 51 10.8	
	comp=Z,98nm,20.2s,baz=105,slow=37						
	0.4nm,0.8s						
TXAR	Lajitas Array	29.17	128	P	P	10 47 12.3	+1.9
	0.4nm,1.0s,baz=332,slow=6.6,SNR=2.6						
	0.4nm,1.0s						
H11N2	WAKE ISLAND Hy	58.11	262	T	T	11 53 14.4	
	baz=41,slow=75						
H11N3	WAKE ISLAND Hy	58.11	262	T	T	11 53 15.5	
	baz=41,slow=75						
H11N1	WAKE ISLAND Hy	58.12	262	T	T	11 53 14.0	
	baz=41,slow=75						
H11S1	WAKE ISLAND Hy	59.14	261	T	T	11 54 32.6	
	baz=40						
H11S2	WAKE ISLAND Hy	59.15	261	T	T	11 54 42.0	
	baz=40						
H11S3	WAKE ISLAND Hy	59.16	261	T	T	11 54 42.3	
	baz=40						

IDC ***26*** *10:45:15.6±1.1,28°.40N×104°.99E,h0km,mb3.7/8, mbtmp3.6/10,ML3.8/2,Error ellipse: s-maj=31.8km s-min=15.9km az=70.0*

ISC 26 10:45:18.4±1.3**,28°.4N**±0°.1×**105°.0E**±0°.2**,h19**km**,n10, σ0ˢ.72**/11**,mb3.6**/8**,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZDM	Lanzhou Array	7.64	352	Pn	Pn	10 47 08.9	-0.1
	baz=182,slow=14						
LZDM				Sn	Sn	10 48 35.7	+0.5
	baz=166,slow=20						
LZDM				Lg	Lg	10 49 19.6	
	baz=168,slow=28						
	0.9nm,0.3s						
SONM	Songino Array	19.46	3	P	P	10 49 44.4	+0.4
	0.1nm,0.3s,baz=186,slow=12,SNR=3.1						
	1.4nm,1.0s						
KSRS	Korea Array	21.24	59	P	P	10 50 03.7	+0.5
	1.2nm,0.8s,baz=240,slow=11,SNR=2.2						
	1.2nm,0.8s						
HILR	Hailar Array B	23.98	24	P	P	10 50 32.3	+0.6
	0.4nm,0.3s,baz=199,slow=8.5,SNR=1.9						
	0.4nm,0.3s						
MKAR	Makanchi Array	25.57	322	P	P	10 50 46.2	+0.1
	1.3nm,0.8s,baz=129,slow=11,SNR=6.8						
	1.3nm,0.8s						
MJAR	Matsushiro Arr	29.09	65	P	P	10 51 16.6	-1.1
	0.9nm,0.5s,baz=261,slow=8.0,SNR=2.5						
	0.9nm,0.5s						
KURBB	Kurchatov Arra	29.89	325	P	P	10 51 24.1	-0.7
	0.6nm,0.6s,baz=130,slow=8.6,SNR=4.5						
	0.6nm,0.6s						
WRA	Warramunga Arr	55.79	146	P	P	10 54 54.9	+0.5
	1.2nm,0.8s,baz=338,slow=8.0,SNR=8.5						
	1.2nm,0.8s						
ASAR	Alice Springs	58.77	149	P	P	10 55 16.2	+0.8
	0.6nm,0.6s,baz=333,slow=7.0,SNR=12						
	0.6nm,0.6s						
ILAR	Eielson Array	71.96	25	P	P	10 56 39.7	-0.6
	0.6nm,1.1s,baz=279,slow=5.0,SNR=2.4						
	0.6nm,1.1s						

IDC ***26*** *10:52:18.2±0.7,3°.39N×74°.24W,h0km,mb3.8/12, mbtmp3.9/15,ML3.8/3,MS3.6/9,Error ellipse: s-maj=20.3km s-min=11.1km az=91.0*

RSNC ***26*** *10:52:19.4±0.0,3°N±1°×7°4W±°,h15km±2km,M4.2,mB5.0, mb4.8,ML4.0,Mw4.3,Mw(mB)4.3*

CATAC ***26*** *10:52:20.2±0.5,4°N±3°×7°4W±°,h1km,M4.6/6,mb4.5/1, MLv4.7/6,Error ellipse: s-maj=8.8km s-min=4.9km az=136.0,confirmed*

VAO ***26*** *10:52:20.5±0.5,3°.34N×73°.85W,h0km,mb4.7,Presumed earthquake*

NEIC ***26*** *10:52:21.3±2.1,3°.39N±0°.05×74°.03W±0°.09,h10km±1km, mb4.4/49,Error ellipse: s-maj=15.1km s-min=9.0km az=101.0*

ISC 26 10:52:19.5±0.4**,3°.37N**±0°.02×**74°.15W**±0°.02**,h10**km**,n111, σ1ˢ.98**/135**,mb4.4**/31**,MS3.5**/6**,Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	La Uribe, Meta	0.26	241	P	Pg	10 52 24.3	-0.5
URMC				S	Sg	10 52 27.7	-0.7
PRAC	Prado	0.81	295	P	Pg	10 52 33.3	-1.8
PRAC				S	Sg	10 52 43.9	-1.8
PRAC	Prado	0.81	295	P	Pg	10 52 33.0	-2.1
PRAC				S	Sg	10 52 43.7	-1.9
VILC	Villavicencio,	0.86	32	P	Pg	10 52 34.5	-1.7
VILC				S	Sg	10 52 46.6	-0.9
ORTC	Ortega, Tolima	1.21	296	P	Pb	10 52 40.2	-2.4
ORTC				S	Sb	10 52 56.1	-2.3
BOG	Bogota	1.24	4	P	Pg	10 52 43.4	-0.1
BOG				S	Sn	10 53 00.8	+0.5
MACC	Macarena, Meta	1.26	166	P	Pn	10 52 42.8	-0.4
MACC				S	Sg	10 53 00.2	+0.1
CHIC	Chingaza	1.32	19	P	Pn	10 52 41.9	-2.4
CHIC				S	Sb	10 52 59.5	-2.2
ROSC	El Rosal	1.47	353	Pg	Pn	10 52 45.5	-0.8
	624nm,0.3s,baz=156,slow=20,SNR=434						
ROSC				Lg	Lg	10 53 05.4	
	492nm,0.3s,baz=180,slow=22,SNR=9.9						
ANIL	Santa Ana	1.67	312	P	Pn	10 52 47.8	-1.3
ANIL				S	Sn	10 53 09.0	-1.8
GARC	Garzon, Huila	1.78	229	P	Pn	10 52 51.2	+0.5
GARC				S	Sn	10 53 14.0	+0.5
RECRC	Villamaria, Ca	1.98	323	P	Pn	10 52 53.9	+0.3
RECRC				S	Sn	10 53 18.9	+0.2
NIZA	Niza - Manizal	2.13	322	P	Pn	10 52 56.5	+1.1
NIZA				S	Sn	10 53 23.0	+1.0
SPBC	San Pablo de B	2.26	2	P	Pb	10 52 59.1	-1.5
SPBC				S	Sb	10 53 29.2	+0.5
YOTC	Yotoco, Valle	2.27	286	P	Pn	10 52 57.6	+0.4
YOTC				S	Sn	10 53 26.8	+1.4
FLOC	Florencia	2.33	220	P	Pb	10 53 00.5	-1.1
FLOC				S	Sb	10 53 30.9	+0.4
FLOC	Florencia	2.33	220	P	Pb	10 52 59.9	-1.7
FLOC				S	Sb	10 53 29.7	-0.8
JAMC	Jamundi, Valle	2.52	266	P	Pn	10 53 02.6	+1.8
JAMC				S	Sb	10 53 34.4	-1.9
POPC	Popayan, Colom	2.65	252	P	Pn	10 53 04.4	+1.8
POPC				S	Sb	10 53 40.4	+0.4
RUSC	La Rusia	2.72	23	P	Pn	10 53 05.3	+1.6
RUSC				S	Sb	10 53 42.6	+0.4
RUSC	La Rusia	2.72	23	P	Pn	10 53 05.4	+1.7
RUSC				S	Sb	10 53 39.6	-2.6
CBOC	Ciudad Bolivar	3.09	323	P	Pn	10 53 10.3	+1.7
CBOC				S	Sb	10 53 50.3	-2.3
PTBC	PUERTO BERRIO,	3.16	355	P	Pn	10 53 10.1	+0.7
PTBC				S	Sn	10 53 49.3	+2.1
PTLC	Puerto Leguiza	3.25	191	P	Pb	10 53 16.1	-1.2
PTLC				S	Sg	10 54 01.1	-2.8
CRUC	La Cruz	3.32	237	P	Pb	10 53 15.3	-3.5
CRUC				S	Sb	10 54 02.4	+3.0
BBAC	Balboa, Cauca	3.37	247	P	Pn	10 53 15.4	+3.0
BBAC				S	Sb	10 54 02.9	+2.2
PIZC	Pizarro, Choco	3.57	296	P	Pn	10 53 17.0	+2.0
PIZC				S	Sn	10 53 59.6	+2.4
BRJC	Barrancabermej	3.60	6	P	Pn	10 53 16.8	+1.4
BRJC				S	Sn	10 54 01.1	+3.1
GCUF	Volcan Galeras	3.84	236	P	Pn	10 53 22.5	+3.4
GCUF				S	Sn	10 54 05.6	+1.0
GR1C	Gorgona, Isla	4.03	265	P	Pn	10 53 23.5	+2.2
GR1C				S	Sn	10 54 10.6	+2.1
PAMC	Pamplona, Colo	4.20	20	P	Pn	10 53 26.3	+2.2
PAMC				S	Sn	10 54 14.3	+0.9
CMBC	Cumbal	4.39	237	P	Pb	10 53 32.4	-4.7
CMBC				S	Sn	10 54 19.6	+1.3
BONI	La Bonita	4.45	229	P	Pn	10 53 29.1	+1.7
BONI				S	Sn	10 54 21.5	+2.1
UREC	San Jos de Ur	4.56	343	P	Pn	10 53 31.1	+2.5
UREC				S	Sn	10 54 26.1	+4.3
OCAC	Ocana	4.90	10	P	Pn	10 53 35.0	+1.5
OCAC				S	Sn	10 54 32.6	+2.2
PTAC	Punta Ardita,	5.22	316	P	Pn	10 53 38.8	+1.0
	826nm22nm,1.0s						
PTAC				S	Sn	10 54 40.2	+2.1
	826nm22nm,1.0s						
OTAV	Otavalo	5.31	234		Pn	10 53 44.5	+5.2
OTAV	Otavalo	5.31	234	*e*P	Pn	10 53 44.0	+4.7
OTAV				*e*S	Sb	10 54 49.2	-7.5
OTAV	Otavalo	5.31	234	P	Pn	10 53 40.8	+1.5
	819nm52nm,0.7s						
SLOR	San Lorenzo -	5.96	227		Pn	10 53 52.1	+3.9
SDV	Santo Domingo	6.50	32	Pn	Pn	10 53 56.2	+0.8
	8.6nm,0.3s,baz=146,slow=7.8,SNR=32						
SDV				Sn	Sn	10 55 10.2	+0.4
	5.7nm,0.3s,baz=270,slow=20,SNR=3.4						
SDV				Lg	Lg	10 55 45.4	
	24nm,0.3s,baz=291,slow=17,SNR=5.1						
SDV				LR	LR	10 57 07.4	
	comp=Z,725nm,20.1s,baz=254,slow=44						
	25nm,0.3s						
SDV	Santo Domingo	6.50	32		Pn	10 53 55.8	+0.3
SDV	Santo Domingo	6.50	32	*e*P	Pn	10 53 55.8	+0.3
SDV	Santo Domingo	6.50	32	P	Pn	10 53 56.2	+0.8
	918nm77nm,0.4s						
SDV				S	Sn	10 55 07.9	-1.9
	918nm77nm,0.4s						
SJCC	San Jacinto, C	6.56	351	P	Pn	10 53 55.9	-0.3
	50nm,0.9s						
SJCC				S	Sn	10 55 13.2	+2.1
	50nm,0.9s						
SGC2	Sao Gabriel da	7.98	116	P	Pn	10 54 15.4	-0.3
SGC2				S	Sn	10 55 42.5	-3.6
URI	Uribia	8.54	14	P	Pn	10 54 22.6	-0.8
URI				S	Sn	10 55 58.4	-1.6
URIC	Uribia, Colomb	8.55	14	P	Pn	10 54 22.9	-0.5
URIC				S	Sn	10 56 00.6	+0.6
CDITO	Canoas	10.09	301	P	Pn	10 54 42.5	-2.1
ATAH	Atahualpa	11.27	202	Pn	Pn	10 55 00.8	-0.3
	0.4nm,0.3s,baz=41,slow=5.8,SNR=6.2						
ATAH				Sn	Sn	10 57 08.4	+1.1
	0.5nm,0.3s,baz=62,slow=15,SNR=1.4						
ATAH				Lg	Lg	10 58 11.2	
	1.7nm,0.3s,baz=6.1,slow=19,SNR=4.0						
	8.1nm,0.8s						
JTS	Las Juntas de	12.73	303	LR	LR	11 00 17.4	
	comp=Z,153nm,18.3s,baz=116,slow=38						
BOAV	Boa Vista	13.65	94		Pn	10 55 30.2	-3.1
BOAV	Boa Vista	13.65	94	*e*P	Pn	10 55 29.1	-4.2
BOAV				*e*S	Sn	10 58 00.9	-4.2
NNA	Nana	15.49	190	Pn	Pn	10 55 59.3	+1.0
	1.1nm,0.3s,baz=8.7,slow=13,SNR=1.3						
NNA				Sn	Sn	10 58 53.0	+2.8
	baz=122,slow=19						
	2.8nm,0.3s						
DR12	Loma Pena Alta	16.02	17	Pn	Pn	10 56 04.7	-0.4
SJG	San Juan	16.61	28	LR	LR	11 03 12.9	
	comp=Z,240nm,21.3s,baz=189,slow=39						
LPAZ	La Paz	20.42	163	P	Pn	10 56 58.9	-0.9
	2.9nm,0.9s,baz=341,slow=12,SNR=7.3						
LPAZ				Lg	Lg	11 02 59.8	
	0.1nm,0.3s,baz=302,slow=13,SNR=4.7						
LPAZ				LR	LR	11 06 09.2	
	comp=Z,49nm,19.0s,baz=322,slow=41						
	2.9nm,0.9s						
LPAZ	La Paz	20.42	163		P	10 56 57.3	-0.4
LPAZ	La Paz	20.42	163	*e*P	Pn	10 56 59.4	-0.4
NPGB	Novo Progresso	21.43	119	*e*P	P	10 57 08.2	+0.3
MDP	Montagnes des	21.52	85	P	P	10 57 10.6	+1.6
	9.6nm,0.5s,baz=270,slow=11,SNR=5.0						
MDP				Lg	Lg	11 03 26.3	
	0.5nm,0.3s,baz=174,slow=19,SNR=2.7						
MDP				LR	LR	11 05 29.7	
	comp=Z,160nm,20.6s,baz=259,slow=37						
	9.6nm,0.5s						
PDRB	Porto dos Gac	22.85	131	*e*S	S	11 01 32.7	-0.2
BDFB	Brasilia	32.03	127	LR	LR	11 12 03.1	
	comp=Z,163nm,18.4s,baz=320,slow=37						
Z47A	Carrollton	32.40	338	P	P	10 58 50.9	+1.2
TKL	Tuckaleechee C	33.34	346	LR	LR	11 12 51.0	
	comp=Z,83nm,19.1s,baz=170,slow=37						
T59A	Double "B" Far	33.58	355	P	P	10 59 01.0	+1.1
V48A	Smith Brothers	34.27	342	P	P	10 59 07.7	+1.8
WVT	Waverly	34.96	340	P	P	10 59 11.8	0.0
WVT				IAmb	IAmb	10 59 15.0	
	comp=Z,6.1nm,0.9s						
T47A	Sharon Grove	35.51	342		P	10 59 17.8	+1.2
FCAR	Ozark Folk Cen	36.37	335	P	P	10 59 25.4	+1.4
FCAR				IAmb	IAmb	10 59 26.1	
	comp=Z,7.6nm,1.1s						
PBMO	Poplar Bluff	36.46	338	P	P	10 59 26.1	+1.3
PBMO				IAmb	IAmb	10 59 27.2	
	comp=Z,8.4nm,0.8s						
CGM3	Cape Girardeau	36.64	339	P	P	10 59 26.5	+0.3
CGM3				IAmb	IAmb	10 59 30.1	
	comp=Z,10nm,1.1s						
SIUC	Southern Illin	36.86	340	P	P	10 59 30.0	+1.9
M57A	Sunshine Farm,	37.89	356	P	P	10 59 40.3	+3.5
M57A				IAmb	IAmb	10 59 40.9	
	comp=Z,10nm,0.9s						
CCM	Cathedral Cave	37.89	338		P	10 59 38.2	+1.3
CCM				IAmb	IAmb	10 59 38.9	
	comp=Z,6.6nm,0.8s						
TXAR	Lajitas Array	38.09	316	P	P	10 59 38.0	-0.9
	comp=Z,0.5nm,0.9s,baz=136,slow=9.0,SNR=4.6						
TXAR				PcP	PcP	11 01 52.9	-1.1
	comp=Z,0.8nm,1.0s,baz=120,slow=4.7,SNR=4.6						
	comp=Z,0.5nm,0.9s						
FNO	Franklin	38.35	329	IAmb	IAmb	11 00 09.4	
	comp=Z,6.0nm,0.7s						
P40A	Paris	39.49	338	IAmb	IAmb	10 59 52.0	
	comp=Z,7.0nm,1.0s						
P38A	Dawn	40.14	337		P	10 59 57.0	+1.2
P38A				IAmb	IAmb	10 59 57.2	
	comp=Z,8.9nm,1.0s						
ABQ	Albuquerque	43.41	320		P	11 00 23.6	+0.8
ANMO	Albuquerque	43.41	320	P	P	11 00 23.5	+0.7
TASM	ASL Pad, Albuq	43.41	320	IAmb	IAmb	11 00 27.7	
	comp=Z,3.0nm,1.0s						
TASM	ASL Pad, Albuq	43.41	320	IAmb	IAmb	11 00 27.7	
	comp=Z,2.8nm,0.9s						
TASM	ASL Pad, Albuq	43.41	320	IAmb	IAmb	11 00 27.7	
	comp=Z,3.2nm,1.0s						
PLCA	Paso Flores	44.02	176	P	P	11 00 28.1	+0.7
	comp=Z,0.9nm,0.7s,baz=346,slow=7.8,SNR=3.4						
	comp=Z,0.9nm,0.7s						
PLCA	Paso Flores	44.02	176	IAmb	IAmb	11 01 07.3	
	comp=Z,5.6nm,1.2s						
RPN	Rapa Nui	45.52	226	LR	LR	11 17 39.9	
	comp=Z,57nm,18.1s,baz=85,slow=34						
X16A	Lo Mia Camp, P	46.41	316		P	11 00 48.9	+2.1
X16A				IAmb	IAmb	11 00 54.1	

	comp=Z,3.0nm,1.0s						
RSSD	**Black Hills**	**48.40**	**331**		**P**	**11 01 04.6**	**+2.5**
RSSD				IAmb	IAmb	11 01 04.9	
	comp=Z,5.9nm,1.0s						
PDAR	**Pinedale Array**	**50.30**	**326**	P	**P**	**11 01 17.2**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=123,slow=7.8,SNR=6.9						
	comp=Z,0.7nm,0.8s						
TCUT	**Toone Canyon**	**50.31**	**324**	IAmb	IAmb	11 01 21.9	
	comp=Z,5.5nm,0.8s						
BGU	**Big Grassy Mou**	**51.17**	**322**	IAmb	IAmb	11 01 26.7	
	comp=Z,3.7nm,0.9s						
MOOW	**Moose Ponds**	**51.60**	**327**	IAmb	IAmb	11 01 29.0	
	comp=Z,3.6nm,1.0s						
SCHQ	**Schefferville**	**51.64**	**5**	P	**P**	**11 01 27.1**	**+0.9**
	comp=Z,7.0nm,1.1s,baz=210,slow=5.4,SNR=4.4						
	comp=Z,7.0nm,1.1s						
YHH	**Holmes Hill**	**52.34**	**327**	P	**P**	**11 01 35.4**	**+3.4**
YHL	**Hebgen Lake**	**52.56**	**327**	IAmb	IAmb	11 01 37.4	
	comp=Z,4.3nm,0.9s						
NVAR	**Mina Array Bea**	**53.22**	**317**	P	**P**	**11 01 38.9**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=136,slow=6.3,SNR=5.7						
NVAR				PcP	**PcP**	**11 02 47.2**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=104,slow=4.7,SNR=3.8						
	comp=Z,1.0nm,0.8s						
MFID	**Camas Ranch**	**54.31**	**323**	IAmb	IAmb	11 01 51.1	
	comp=Z,3.9nm,0.9s						
WVOR	**Wild Horse Val**	**55.49**	**321**	IAmb	IAmb	11 01 58.1	
	comp=Z,5.9nm,1.1s						
G08A	**Pilot Rock**	**57.22**	**324**	IAmb	IAmb	11 02 09.9	
	comp=Z,4.8nm,1.0s						
FCC	**Fort Churchill**	**57.39**	**348**	P	**P**	**11 02 09.2**	**+1.3**
FCC				IAmb	IAmb	11 02 15.2	
	comp=Z,8.1nm,1.5s						
PINE	**Pine Mountain**	**57.63**	**321**		**P**	**11 02 13.2**	**+3.0**
PINE				IAmb	IAmb	11 02 13.9	
	comp=Z,5.6nm,0.9s						
NEW	**Newport**	**57.89**	**327**	LR	LR	11 30 35.4	
	comp=Z,69nm,18.9s,baz=316,slow=40						
YKA	**Yellowknife Ar**	**66.14**	**341**	P	**P**	**11 03 06.3**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=143,slow=5.6,SNR=7.4						
	comp=Z,0.3nm,0.8s						
ESDC	**Sonseca Array**	**72.64**	**50**	P	**P**	**11 03 48.5**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=257,slow=7.3,SNR=2.9						
	comp=Z,0.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**75.46**	**77**	P	**P**	**11 04 03.7**	**-0.8**
	comp=Z,0.8nm,0.8s,baz=242,slow=3.8,SNR=4.4						
	comp=Z,0.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**75.46**	**77**	IAmb	IAmb	11 04 16.3	
	comp=Z,5.4nm,0.8s						
ILAR	**Eielson Array**	**79.64**	**335**	P	**P**	**11 04 25.4**	**-1.6**
	comp=Z,0.4nm,0.9s,baz=120,slow=3.7,SNR=6.9						
	comp=Z,0.4nm,0.9s						
NOA	**NORSAR Array B**	**84.82**	**29**	P	**P**	**11 04 56.6**	**+2.4**
	comp=Z,0.6nm,0.8s,baz=288,slow=7.2,SNR=2.9						
	comp=Z,0.6nm,0.8s						
ASAR	**Alice Springs**	**146.21**	**231**	PKPbc	**PKPdf**	**11 12 00.6**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=119,slow=3.9,SNR=13						
WRA	**Warramunga Arr**	**147.70**	**237**	PKPbc	**PKPbc**	**11 12 04.9**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=122,slow=2.8,SNR=5.8						

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*NIED **26** 10:53:56.3, 32°.14N×130°.06E, h8^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.51; M$_{\theta\theta}$5.14; M$_{\phi\phi}$-4.63; M$_{r\theta}$1.46; M$_{\theta\phi}$2.54; M$_{\phi r}$-1.08; Fault plane solution: M$_0$5.81000×10^{14} NP1:φ$_s$32.00000°, δ71.00000°, λ-176.00000°. NP2:φ$_s$301.00000°, δ86.00000°, λ-19.00000°.*

*IDC **26** 10:53:56.0±1.3, 32°.18N×130°.07E, h0^{km}, mb3.5/3, mbtmp3.5/6, ML3.5/3, MS3.0/1 Error ellipse: s-maj=21.1km s-min=13.4km az=120.0*

*JMA **26** 10:53:56.3±0.0, 32°.1N±0°.1×130°.1E±0°.2, h8^{km}, MD3.8/37, MV3.7/37, AMAKUSA REGION*

JMA Felt III J1 at AMAKUSA REGION .

ISC 26 10:53:56.8±1.2**, 32°.13N**±0°.03×**130°.06E**±0°.04**, h4**^{km}±10^{km}**, n19,** σ1^{s}**34**/23**, mb3.6**/3**, 6D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHD	**Hondo**	**0.34**	**11**	*i* P	**Pg**	**10 54 03.2**	**-0.1**
JHD				*e*S	**Sb**	**10 54 08.5**	**-2.6**
JHD	**Hondo**	**0.34**	**11**	A	A	10 54 03.2	
	comp=N,7.0nm,1.2s,comp=E,20nm,2.5s						
JZO	**Okuchi**	**0.46**	**89**	⇓*i*P	**Pg**	**10 54 05.4**	**-0.1**
JZO				⇓S	**Sg**	**10 54 11.8**	**+0.3**
JZO	**Okuchi**	**0.46**	**89**	A	A	10 54 05.4	
	comp=N,11nm,2.3s,comp=E,11nm,1.3s						
JSJ	**Shimokoshiki**	**0.54**	**213**	*i* P	**Pg**	**10 54 06.2**	**-1.0**
JSJ				S	**Sg**	**10 54 13.7**	**-0.4**
JSJ	**Shimokoshiki**	**0.54**	**213**	A	A	10 54 06.2	
	comp=N,9.0nm,0.3s,comp=E,11nm,0.2s						
JSU	**Suzuyama**	**0.71**	**152**	*i* P	**Pg**	**10 54 09.8**	**-0.5**
JSU				S	**Sg**	**10 54 19.4**	**-0.1**
JSU	**Suzuyama**	**0.71**	**152**	A	A	10 54 09.8	
	comp=N,8.0nm,0.2s,comp=E,6.0nm,0.7s						
JIU3	**Izumi3**	**0.76**	**57**	⇓*i*P	**Pg**	**10 54 10.3**	**-1.0**
JIU3				⇓S	**Sg**	**10 54 20.9**	**-0.3**
JTZ	**Takazaki**	**0.90**	**105**	⇓*i*P	**Pg**	**10 54 13.9**	**-0.2**
JTZ				⇓*e*S	**Sb**	**10 54 26.1**	**-1.3**
JTA	**Tamana**	**0.92**	**26**	*i* P	**Pg**	**10 54 13.3**	**-1.1**
JTA				S	**Sb**	**10 54 26.0**	**-1.9**
JNU	**Nakatsue**	**1.20**	**35**	Pg	**Pg**	**10 54 18.4**	**-1.5**
	comp=E,145nm,0.3s,baz=241,slow=6.7,SNR=561						
JNU				Lg	Lg	10 54 33.8	
	comp=E,206nm,0.3s,baz=284,slow=21,SNR=27						
JNKG	**Nichinankitago**	**1.21**	**112**	A	A	10 54 19.0	
	comp=N,5.0nm,0.9s,comp=E,3.0nm,2.8s						
KSRS	**Korea Array**	**5.59**	**342**	Pn	**Pn**	**10 55 20.6**	**-0.1**
	comp=E,1.3nm,0.3s,baz=159,slow=14,SNR=14						
KSRS				Pg	**Pb**	**10 55 38.3**	**+3.4**
	comp=E,1.2nm,0.3s,baz=160,slow=17,SNR=7.6						
KSRS				Sn	**Sn**	**10 56 26.9**	**+1.4**
	comp=E,0.5nm,0.3s,baz=158,slow=29,SNR=4.8						
KSRS				Lg	Lg	10 56 49.7	
	comp=E,1.4nm,0.3s,baz=170,slow=30,SNR=5.7						
	comp=E,2.7nm,0.4s						
MJAR	**Matsushiro Arr**	**8.04**	**55**	Pn	**Pn**	**10 55 55.4**	**+1.0**
	comp=E,0.1nm,0.3s,baz=243,slow=14,SNR=5.9						
MJAR				LR	LR	10 59 03.4	
	comp=E,102nm,19.0s,baz=245,slow=38						
	comp=E,1.6nm,0.5s						
HILR	**Hailar Array B**	**19.04**	**339**	P	**Pn**	**10 58 19.3**	**-1.2**
	baz=153,slow=13						
	comp=E,0.9nm,0.5s						
SONM	**Songino Array**	**23.84**	**318**	P	**P**	**10 59 10.8**	**-0.3**
	comp=E,0.3nm,0.6s,baz=132,slow=12,SNR=3.9						
	comp=E,0.3nm,0.6s						
ASAR	**Alice Springs**	**55.61**	**176**	P	**P**	**11 03 33.5**	**-0.3**
	comp=E,0.5nm,0.8s,baz=358,slow=5.6,SNR=7.4						
	comp=E,0.5nm,0.8s						
FINES	**FINESS Array B**	**68.55**	**330**	P	**P**	**11 05 00.1**	**-0.2**
	comp=E,0.9nm,0.8s,baz=46,slow=4.0,SNR=4.1						
	comp=E,0.9nm,0.8s						

IDC 26 11:01:03.8±4.4**, 17°.97S**×**173°.60W, h0**^{km}**, mb4.0**/3**, mbtmp4.0**/3**, Error ellipse: s-maj=204.0km s-min=35.6km az=141.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**49.12**	**259**	P	P	11 09 52.5	-1.1
	0.4nm,0.3s,baz=96,slow=8.2,SNR=23						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**49.17**	**254**	P	P	11 09 54.9	+0.9
	5.9nm,0.7s,baz=91,slow=7.5,SNR=118						
ASAR				PcP	PcP	11 11 16.9	-0.5
	0.3nm,0.8s,baz=94,slow=3.4,SNR=2.3						
	5.9nm,0.7s						
ILAR	**Eielson Array**	**84.99**	**11**	P	P	11 13 40.6	0.0
	0.3nm,0.5s,baz=213,slow=5.3,SNR=8.8						
	0.3nm,0.5s						

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*TAP **26** 11:11:55.8, 24°.62N×122°.66E, h14^{km}±1^{km}, ML2.6, C*

*JMA **26** 11:11:55.1±0.1, 25°N±2°×122°.7E±0°.7, h22^{km}±3^{km}, MV1.7/6, NW OFF ISHIGAKIJIMA IS*

ISC 26 11:11:54.8±1.4**, 24°.65N**±0°.04×**122°.69E**±0°.03**, h19**^{km}±3^{km}**, n41,** σ0^{s}**45**/67**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.30**	**131**	P	**Pb**	**11 12 01.7**	**0.0**
JYNG				S	**Sb**	**11 12 06.4**	**+0.1**
YOJ	**Yonaguni jima**	**0.35**	**123**	*i* P	**Pb**	**11 12 02.4**	**-0.1**
YOJ				*i* S	**Sb**	**11 12 07.8**	**+0.1**
YOJ	**Yonaguni jima**	**0.35**	**123**	P	**Pb**	**11 12 02.4**	**-0.1**
YOJ				*e*S	**Sb**	**11 12 07.7**	**0.0**
EOS2	**EOS2**	**0.48**	**241**	*e*P	**Pg**	**11 12 04.5**	**+0.1**
EOS3	**EOS3**	**0.50**	**223**	*e*P	**Pg**	**11 12 04.9**	**0.0**
EOS4	**EOS4**	**0.63**	**213**	*e*P	**Pg**	**11 12 07.2**	**0.0**
EGS		**0.72**	**286**	P	**Pb**	**11 12 08.5**	**-0.2**
EGS				S	**Sb**	**11 12 18.4**	**+0.2**
TWB1	**Santiao Chiao**	**0.73**	**299**	*e*P	**Pb**	**11 12 09.1**	**+0.1**
TWC	**Suao**	**0.77**	**267**	*e*P	**Pb**	**11 12 09.4**	**-0.2**
TWC				S	**Sb**	**11 12 19.2**	**-0.5**
ESAO	**Su ao**	**0.78**	**265**	*i* P	**Pb**	**11 12 09.8**	**0.0**
ESAO				*e*S	**Sb**	**11 12 19.9**	**0.0**
TIPB	**Shuangxi**	**0.85**	**292**	*e*P	**Pb**	**11 12 10.9**	**-0.2**
EWUT	**Wuta**	**0.86**	**256**	P	**Pb**	**11 12 11.1**	**0.0**
EWUT				S	**Sb**	**11 12 21.3**	**-0.9**
SXI1	**Grass Mountain**	**0.86**	**301**	*e*P	**Pg**	**11 12 11.8**	**+0.1**
NDS	**Dongshan**	**0.89**	**269**	*e*P	**Pb**	**11 12 11.6**	**0.0**
NDS				*e*S	**Sb**	**11 12 23.1**	**0.0**
ENA	**Nanau**	**0.89**	**256**	P	**Pb**	**11 12 11.5**	**-0.3**
ENA				*e*S	**Sb**	**11 12 22.4**	**-0.9**
EAHA	**Aohua**	**0.92**	**250**	*e*P	**Pb**	**11 12 11.9**	**-0.4**
TWE	**Neicheng**	**0.93**	**275**	P	**Pb**	**11 12 12.6**	**+0.2**
TWE				S	**Sb**	**11 12 24.7**	**+0.2**
TNOU	**National Taiwa**	**0.97**	**301**	P	**Pg**	**11 12 13.8**	**0.0**
TNOU				S	**Sb**	**11 12 26.0**	**+0.4**
FUSB	**Fushanzhiwuyua**	**1.01**	**276**	P	**Pn**	**11 12 14.2**	**+0.1**
FUSB				*e*S	**Sb**	**11 12 27.3**	**+0.5**
ENTT	**Nioudou**	**1.02**	**270**	*e*P	**Pb**	**11 12 14.1**	**+0.1**
ENTT				S	**Sb**	**11 12 26.5**	**-0.6**
LATG	**Datong**	**1.07**	**264**	P	**Pb**	**11 12 14.9**	**+0.1**
LATG				S	**Sb**	**11 12 28.1**	**-0.3**
NWLT	**Wulai**	**1.09**	**277**	P	**Pg**	**11 12 15.7**	**-0.3**
NWLT				*e*S	**Sb**	**11 12 28.3**	**-0.6**
ETL	**Fush Village**	**1.09**	**244**	*e*P	**Pb**	**11 12 14.9**	**-0.2**
NACB	**Ninganchiao**	**1.11**	**245**	P	**Pb**	**11 12 15.3**	**-0.1**
NACB				S	**Sb**	**11 12 29.1**	**-0.3**
YM01	**YM01**	**1.13**	**296**	P	**Pg**	**11 12 17.4**	**+0.6**
ETLH	**Xiulin Townshi**	**1.19**	**248**	*e*P	**Pn**	**11 12 16.6**	**0.0**
ETLH				S	**Sb**	**11 12 31.8**	**-0.1**
YHNB	**Yeheng**	**1.20**	**271**	*e*P	**Pn**	**11 12 16.9**	**+0.2**
YHNB				S	**Sb**	**11 12 30.5**	**-1.6**
NNSB	**Datong**	**1.21**	**260**	P	**Pb**	**11 12 17.2**	**0.0**
NNSB				S	**Sb**	**11 12 32.2**	**-0.4**
NSK	**Sanguang**	**1.21**	**271**	P	**Pg**	**11 12 18.0**	**-0.4**
NSK				*e*S	**Sb**	**11 12 32.0**	**-0.6**
NNS	**Nan Shan**	**1.22**	**260**	P	**Pb**	**11 12 17.4**	**0.0**
NNS				*e*S	**Sb**	**11 12 32.2**	**-0.6**
JIJ	**Ishigaki jima**	**1.35**	**102**	*e*P	**Pn**	**11 12 18.3**	**-0.4**
FUSS	**Fushou**	**1.38**	**253**	S	**Sb**	**11 12 37.7**	**+0.1**
WHF	**Hehuan Shan**	**1.39**	**249**	*e*P	**Pb**	**11 12 20.8**	**+0.3**
WHF				*e*S	**Sn**	**11 12 38.0**	**+0.1**
NFF	**Wufeng Townshi**	**1.43**	**270**	*e*P	**Pg**	**11 12 22.9**	**+0.5**
NFF				*e*S	**Sb**	**11 12 39.5**	**+0.5**
WARBT	**Fenglin Townsh**	**1.51**	**232**	*e*P	**Pn**	**11 12 21.6**	**+0.6**
LIOB	**Emei**	**1.52**	**270**	*e*P	**Pg**	**11 12 24.4**	**+0.2**
NSTT	**Nanjuang**	**1.54**	**270**	*e*S	**Sg**	**11 12 44.3**	**-0.3**
OWD	**Renai**	**1.55**	**244**	*e*P	**Pb**	**11 12 22.9**	**-0.1**
OWD				*e*S	**Sb**	**11 12 43.2**	**+0.9**
WUSB	**Renai**	**1.58**	**246**	*e*P	**Pg**	**11 12 24.9**	**-0.4**
WUSB				S	**Sb**	**11 12 43.9**	**+0.8**
HGSD	**Ruisui**	**1.63**	**225**	*e*P	**Pn**	**11 12 23.5**	**+0.9**
YULB	**Yu-li**	**1.79**	**226**	P	**Pn**	**11 12 25.7**	**+0.9**
YULB				*e*S	**Sn**	**11 12 46.5**	**-0.5**

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*NIED **26** 11:15:58.3, 28°.05N×128°.00E, h12^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.12; M$_{\theta\theta}$0.41; M$_{\phi\phi}$-0.29; M$_{r\theta}$-0.49; M$_{\theta\phi}$0.70; M$_{\phi r}$0.44; Fault plane solution: M$_0$1.00000×10^{15} NP1: φ$_s$199.00000°, δ57.00000°, λ-165.00000°. NP2: φ$_s$101.00000°, δ78.00000°, λ-34.00000°.*

*IDC **26** 11:15:58.3±0.9, 27°.72N×127°.53E, h0^{km}, mb3.5/6, mbtmp3.6/9, ML3.4/2, MS3.0/6 Error ellipse: s-maj=31.6km s-min=13.8km az=61.0*

*JMA **26** 11:15:58.3±0.3, 28°.1N±0°.5×128°.0E±0°.7, h12^{km}±2^{km}, MV3.7/15, NW OFF OKINAWAJIMA IS*

ISC 26 11:15:58.1±1.7**, 28°.00N**±0°.05×**128°.08E**±0°.05**, h5**^{km}±11^{km}**, n27,** σ1^{s}**20**/30**, mb3.5**/6**, MS2.8**/3**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOKE	**Okinoerabujima**	**0.77**	**145**	P	**Pb**	**11 16 14.3**	**+0.2**
JOKE				S	**Sb**	**11 16 25.7**	**+0.8**
JTK	**Tokunoshima**	**0.80**	**105**	P	**Pn**	**11 16 15.0**	**-1.1**
JTK				S	**Sb**	**11 16 26.7**	**+1.0**
JIH	**Iheya**	**0.97**	**186**	*i* P	**Pb**	**11 16 17.1**	**-0.2**
JIH				S	**Sb**	**11 16 30.7**	**+0.3**
JAMN	**Amaminishikomi**	**1.00**	**76**	P	**Pn**	**11 16 18.0**	**-0.9**
JAMN				*e*S	**Sn**	**11 16 32.0**	**-1.3**
JYRO	**Yoronjima**	**1.03**	**161**	P	**Pn**	**11 16 18.6**	**-0.6**
JYRO				*e*S	**Sb**	**11 16 33.4**	**+1.2**
JOW	**Kunigami**	**1.18**	**171**	Pn	**Pn**	**11 16 21.1**	**-0.2**
	354nm,0.3s,baz=346,slow=16,SNR=417						
JOW				Sn	**Sg**	**11 16 36.6**	**+0.7**
	149nm,0.3s,baz=338,slow=29,SNR=7.1						
JOW	**Kunigami**	**1.18**	**171**	P	**Pb**	**11 16 20.8**	**-0.2**
JOW				S	**Sg**	**11 16 36.8**	**+0.8**
JAM	**Amami Oshima**	**1.41**	**73**	P	**Pg**	**11 16 24.4**	**-0.8**
JAM				*e*S	**Sn**	**11 16 43.2**	**-0.2**
JNTH	**Nagotoyohara**	**1.48**	**182**	P	**Pn**	**11 16 25.4**	**0.0**
JAGN	**Aguni-jima**	**1.59**	**208**	P	**Pn**	**11 16 26.2**	**-0.8**
JZK	**Kikaishima**	**1.70**	**79**	*e*P	**Pg**	**11 16 30.5**	**-0.3**
JJT3	**Tamagusuku3**	**1.87**	**188**	*e*P	**Pb**	**11 16 31.5**	**-1.2**
JKDJ	**Kitadaitoujima**	**3.52**	**125**	*e*P	**Pn**	**11 16 53.5**	**-0.1**
JKDJ				*e*S	**Sn**	**11 17 34.6**	**-1.1**
JMZ	**Minamidaito 2**	**3.55**	**127**	*e*P	**Pn**	**11 16 53.8**	**-0.2**
JNU	**Nakatsue**	**5.65**	**25**	Pn	Pb	11 17 28.8	-8.5
	2.1nm,0.3s,baz=222,slow=7.3,SNR=16						
	46nm,0.8s						
KSRS	**Korea Array**	**9.43**	**359**	LR	LR	11 21 56.3	
	comp=Z,57nm,19.4s,baz=150,slow=37						
JHJ	**Hachijo jima 2**	**11.30**	**60**	LR	LR	11 22 24.6	
	comp=Z,67nm,19.9s,baz=346,slow=32						
MJAR	**Matsushiro Arr**	**12.08**	**43**	Pn	Pn	11 18 59.9	+8.9
	baz=231,slow=12,SNR=2.4						
MJAR				LR	LR	11 24 05.3	
	comp=Z,43nm,19.5s,baz=220,slow=39						
	1.2nm,1.1s						
USRK	**Ussuriysk Ar.**	**16.47**	**10**	Pn	**P**	**11 19 56.7**	**+4.0**
	1.6nm,0.7s,baz=184,slow=13,SNR=2.5						
GUMO	**Guam**	**21.22**	**129**	LR	LR	11 28 03.9	
	comp=Z,32nm,18.5s,baz=356,slow=34						
SONM	**Songino Array**	**26.01**	**325**	P	**P**	**11 21 32.4**	**+0.2**
	0.7nm,0.8s,baz=143,slow=11,SNR=3.6						
	0.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**28.35**	**257**	LR	LR	11 32 55.5	
	comp=Z,14nm,19.6s,baz=300,slow=37						
MKAR	**Makanchi Array**	**40.27**	**310**	P	**P**	**11 23 34.0**	**-2.2**
	0.4nm,0.7s,baz=100,slow=10.0,SNR=7.0						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**43.49**	**315**	P	**P**	**11 24 01.9**	**-0.5**
	0.2nm,0.3s,baz=104,slow=8.7,SNR=1.5						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**48.04**	**172**	P	**P**	**11 24 37.6**	**-1.0**
	0.7nm,0.7s,baz=350,slow=7.7,SNR=3.6						
	0.7nm,0.7s						
BVAR	**Borovoye Array**	**48.88**	**317**	P	**P**	**11 24 46.4**	**+1.6**
	0.7nm,0.6s,baz=80,slow=9.2,SNR=3.7						
BVAR				LR	LR	11 47 09.8	
	comp=Z,51nm,18.1s,baz=9.2,slow=38						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**51.67**	**173**	P	**P**	**11 25 06.0**	**-0.1**
	0.6nm,1.0s,baz=349,slow=9.1,SNR=5.6						
	0.6nm,1.0s						

IDC 26 11:30:59.6±2.0**, 0°.94N**×**126°.73E, h0**^{km}**, mb3.4**/4**, mbtmp3.4**/4**, Error ellipse: s-maj=193.8km s-min=23.4km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.06**	**161**	P	P	11 35 56.1	-0.2
	0.7nm,0.5s,baz=340,slow=10,SNR=6.3						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**25.44**	**165**	P	P	11 36 29.5	+0.1
	0.4nm,0.7s,baz=344,slow=7.8,SNR=8.6						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**59.84**	**326**	P	P	11 41 06.6	-0.5
	0.1nm,0.4s,baz=134,slow=6.2,SNR=2.3						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**64.08**	**328**	P	P	11 41 35.8	+0.4
	0.2nm,0.3s,baz=130,slow=7.0,SNR=2.0						
	0.2nm,0.3s						

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*IDC **26** 11:38:53.7±2.7, 23°.08S×173°.80E, h0^{km}, mb4.0/6, mbtmp4.0/7, ML2.9/1, MS3.5/10, Error ellipse: s-maj=134.1km s-min=26.5km az=160.0*

ISC 26 11:39:00.5±2.2**, 22°.6S**±0°.7×**173°.6E**±0°.2**, h35**^{km}**, n16,** σ1^{s}**55**/8**, mb4.0**/6**, MS3.6**/8**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.65**	**273**	Pn	**Pn**	**11 40 35.9**	**0.0**
	0.2nm,0.3s,baz=90,slow=20,SNR=1.2						
	3.6nm,0.7s						
RAO	**Raoul Island**	**10.09**	**133**	LR	LR	11 43 09.2	
	comp=Z,60nm,21.1s,baz=356,slow=26						
URZ	**Urewera**	**15.88**	**170**	LR	LR	11 47 42.1	
	comp=Z,184nm,20.3s,baz=2.5,slow=34						
CTA	**Charters Tower**	**25.58**	**270**	LR	LR	11 52 14.1	
	comp=Z,52nm,21.4s,baz=46,slow=31						
STKA	**Stephens Creek**	**29.83**	**245**	LR	LR	11 55 19.8	
	comp=Z,84nm,20.7s,baz=27,slow=33						
ASAR	**Alice Springs**	**36.44**	**260**	P	**P**	**11 46 01.8**	**-0.5**
	3.1nm,0.9s,baz=86,slow=8.6,SNR=24						
ASAR				LR	LR	12 00 18.7	
	comp=Z,49nm,20.6s,baz=100,slow=35						
	3.1nm,0.9s						
WRA	**Warramunga Arr**	**36.62**	**267**	P	**P**	**11 46 01.2**	**-2.5**
	1.7nm,0.8s,baz=102,slow=8.8,SNR=8.3						
	1.7nm,0.8s						
FITZ	**Fitzroy Crossi**	**45.05**	**267**	P	**P**	**11 47 13.2**	**0.0**
	13nm,0.9s,baz=105,slow=8.1,SNR=15						
	13nm,0.9s						
GUMO	**Guam**	**45.69**	**319**	LR	LR	12 03 42.4	
	comp=Z,81nm,21.4s,baz=144,slow=32						
VNDA	**Vanda**	**55.25**	**183**	LR	LR	12 09 18.6	
	comp=Z,42nm,18.1s,baz=358,slow=33						
RPN	**Rapa Nui**	**69.04**	**112**	LR	LR	12 12 18.3	
	comp=Z,156nm,22.0s,baz=144,slow=29						
CMAR	**Chiang Mai Arr**	**83.59**	**293**	P	**P**	**11 51 27.5**	**+1.8**
	0.3nm,0.4s,baz=102,slow=3.9,SNR=5.1						
	0.3nm,0.4s						
NVAR	**Mina Array Bea**	**88.04**	**47**	P	**P**	**11 51 47.6**	**0.0**
	0.2nm,0.5s,baz=258,slow=5.2,SNR=1.8						
NVAR				LR	LR	12 25 26.5	
	comp=Z,46nm,19.3s,baz=290,slow=32						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**92.29**	**16**	P	**P**	**11 52 06.4**	**-0.1**
	0.5nm,0.9s,baz=236,slow=6.4,SNR=3.1						
	0.5nm,0.9s						
TXAR	**Lajitas Array**	**94.83**	**60**	LR	LR	12 26 50.3	
	comp=Z,34nm,20.5s,baz=278,slow=30						
GERES	**GERESS Array B**	**149.35**	**334**	PKPbc	**PKPbc**	**11 58 44.3**	**-1.4**
	1.0nm,0.8s,baz=22,slow=4.8,SNR=3.6						

IDC 26 11:45:16.4±1.3**, 0°.83N**×**126°.58E, h0**^{km}**, mb3.5**/4**, mbtmp3.6**/5**, ML3.2**/1**, MS3.4**/2**, Error ellipse: s-maj=58.9km s-min=12.7km az=82.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.83**	**183**	P	P	11 49 36.5	-1.4
	0.1nm,0.3s,baz=7.1,slow=16,SNR=2.8						
FITZ				S	Sn	11 53 11.3	+1.5
	0.7nm,0.3s,baz=180,slow=13,SNR=8.6						
	3.5nm,1.1s						
WRA	**Warramunga Arr**	**22.00**	**160**	P	P	11 50 11.6	-0.7
	0.3nm,0.3s,baz=339,slow=11,SNR=12						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**25.37**	**164**	P	P	11 50 46.0	+0.6
	0.4nm,0.5s,baz=344,slow=10.0,SNR=24						
	0.4nm,0.5s						
NWAO	**Narrogin (SRO)**	**34.72**	**194**	LR	LR	12 07 00.6	
	comp=Z,72nm,21.6s,baz=244,slow=38						
PETK	**Petropavlovsk-**	**58.16**	**22**	LR	LR	12 18 50.9	
	comp=Z,25nm,21.3s,baz=88,slow=35						
MKAR	**Makanchi Array**	**59.85**	**326**	P	P	11 55 23.6	-0.3
	0.4nm,0.5s,baz=115,slow=8.1,SNR=9.6						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**64.10**	**328**	P	P	11 55 52.6	+0.3
	0.7nm,0.7s,baz=121,slow=7.1,SNR=6.4						
	0.7nm,0.7s						

IDC 26 11:51:05.5±2.7**, 2°.35N**×**128°.41E, h0**^{km}**, mb3.3**/4**, mbtmp3.4**/4**, Error ellipse: s-maj=227.4km s-min=23.9km az=68.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.91**	**166**	P	P	11 56 11.0	-0.2
	0.9nm,0.9s,baz=345,slow=11,SNR=3.0						
	0.9nm,0.9s						
ASAR	**Alice Springs**	**26.41**	**169**	P	P	11 56 44.0	0.0
	0.3nm,0.6s,baz=351,slow=8.7,SNR=6.4						
	0.3nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**40.78**	**64**	T	T	12 41 56.7	
	baz=238						
H11S2	**WAKE ISLAND Hy**	**40.80**	**64**	T	T	12 41 58.6	
	baz=238						
H11S1	**WAKE ISLAND Hy**	**40.80**	**64**	T	T	12 41 57.0	
	baz=238						
H11N1	**WAKE ISLAND Hy**	**41.36**	**63**	T	T	12 42 39.5	
	baz=250,slow=75						
H11N2	**WAKE ISLAND Hy**	**41.37**	**62**	T	T	12 42 42.3	
	baz=250,slow=75						
H11N3	**WAKE ISLAND Hy**	**41.38**	**63**	T	T	12 42 42.0	
	baz=250,slow=75						
MKAR	**Makanchi Array**	**59.63**	**325**	P	P	12 01 11.8	+0.2
	0.4nm,0.7s,baz=120,slow=7.2,SNR=3.8						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**63.79**	**327**	P	P	12 01 39.3	-0.2
	0.1nm,0.3s,baz=120,slow=5.5,SNR=2.0						
	0.1nm,0.3s						

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*MOS **26** 12:19:47.0±0.9, 11°.07N×122°.64E, h23^{km}, mb5.2/46, MS4.4/11, Error ellipse: s-maj=12.6km s-min=4.8km az=119.5*

*GFZ **26** 12:19:48.6, 11°.32N×122°.64E, h32^{km}, MW5.0, Moment Tensor Solution. s68 Moment tensor: M$_{rr}$-1.89; M$_{\theta\theta}$2.27; M$_{\phi\phi}$-0.38; M$_{r\theta}$-1.67; M$_{\theta\phi}$-2.26; M$_{\phi r}$-0.54; Fault plane solution: NP1:φ$_s$88.00000°, δ68.00000°, λ-131.00000°. NP2:φ$_s$335.00000°, δ47.00000°, λ-31.00000°. Principal axes: T 3.8200, Plg12.0000°, Azm207.0000°; N -0.6200, Plg38.0000°, Azm107.0000°; P -3.2000, Plg49.0000°, Azm311.0000°;*

*BJI **26** 12:19:49.1, 10°.90N×122°.63E, h45^{km}, mB5.1/21, mb4.9/74, Ms4.6/53, Ms7 4.4/53*

*IDC **26** 12:19:50.2±4.0, 11°.05N×122°.58E, h33^{km}±30^{km}, mb4.5/34, mbtmp4.7/36, ML4.6/2, MS4.1/62, Error ellipse: s-maj=17.5km s-min=9.7km az=72.0*

*NEIC **26** 12:19:51.4±2.0, 11°.17N±0°.06×122°.68E±0°.08, h30^{km}±4^{km}, mb4.9/156, Error ellipse: s-maj=12.0km s-min=8.1km az=68.0*

*DJA **26** 12:19:51.6±1.2, 11°N±3°×12°2E±°, h16^{km}±8^{km}, M4.8/67, mB5.4/43, mb5.1/67, Mw5.0/54, Mw(mB)4.8/43, MwMwp4.8/7, Mwp5.1/7*

*GCMT **26** 12:19:52.4±0.2, 11°.18N±0°.01×122°.63E±0°.02, h31^{km}, MW5.1/99, Moment Tensor Solution. s45,c68; s99,c156; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.97±.17; M$_{\theta\theta}$2.96±.11; M$_{\phi\phi}$-0.99±.13; M$_{r\theta}$-2.23±.15; M$_{\theta\phi}$-3.74±.08; M$_{\phi r}$-0.99±.17; Best double couple: M$_0$5.13500×10^{16} NP1:φ$_s$341.00000°, δ55.00000°, λ-21.00000°. NP2: φ$_s$83.00000°, δ73.00000°, λ-144.00000°. Principal axes: T 5.4930, Plg11.0000°, Azm208.0000°; N -0.7180, Plg50.0000°, Azm104.0000°; P -4.7770, Plg37.0000°, Azm307.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **26** 12:20:01.4, 13°.10N×121°.56E, h33^{km}, mb5.4*

ISC 26 12:19:52.2±0.4**, 11°.17N**±0°.03×**122°.69E**±0°.05**, h44**^{km}±3^{km}**, h44**^{km}**:pP-P, n556,** σ1^{s}**60**/500**, mb4.9**/189**, MS4.2**/87**, 33C-22D, Panay**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**3.38**	**330**	Pn	**Pn**	**12 20 42.5**	**-0.1**
	130nm,0.3s,baz=140,slow=6.4,SNR=8.6						
TGY				Sn	**Sn**	**12 21 20.6**	**-1.0**
	126nm,0.3s,baz=246,slow=7.4,SNR=5.8						
TGY				LR	LR	12 21 52.9	
	comp=Z,2μm,19.9s,baz=172,slow=36						

	316nm,0.3s						
DAV	Davao City (W)	4.97	145	Pn	Pn	12 21 09.8	+5.4
	76nm,0.3s,baz=72,slow=3.0,SNR=6.2						
DAV				LR	LR	12 23 22.8	
	comp=Z,6µm,20.0s,baz=329,slow=43						
DAV	Davao City (W)	4.97	145	P	Pn	12 21 06.3	+1.9
DAV				S	Sn	12 22 03.9	+3.3
DAV	Davao City (W)	4.97	145		Pn	12 21 04.5	+0.1
DAV	Davao City (W)	4.97	145	P	Pn	12 21 08.2	+3.8
DAV	Davao City (W)	4.97	145	P	Pn	12 21 14.0	+10
SGSI	Sangihe	7.95	159	P	Pn	12 21 49.8	+4.6
KKM	Kota Kinabalu	8.18	232		Pn	12 21 49.2	+0.6
KKM	Kota Kinabalu	8.18	232	P	Pn	12 21 47.2	-1.3
	4µm65nm,1.0s						
TARAI	Tarakan	9.30	213	P	Pn	12 22 04.3	+0.5
TOLI2	Tolitoli	10.17	191	Pn	Pn	12 22 15.2	-0.5
GTOI	Gorontalo	10.47	178	P	Pn	12 22 18.8	-1.0
	52nm,0.7s						
MRSI	Marisa	10.64	184	P	Pn	12 22 25.1	+2.9
	3µm29nm,0.5s						
MPSI	Mapaga	11.11	195	P	Pn	12 22 30.6	+2.0
TNTI	Ternate	11.32	155	Pn	Pn	12 22 31.1	-0.4
TNTI	Ternate	11.32	155	P	Pn	12 22 32.7	+1.2
APSI	Ampana	12.04	185	P	Pn	12 22 44.1	+2.7
	2µm128nm,1.1s						
LUWI	Luwuk	12.13	180		Pn	12 22 44.4	+1.9
LUWI	Luwuk	12.13	180	P	Pn	12 22 45.7	+3.2
TPUB	Ta-pu	12.23	351		Pn	12 22 44.1	+0.3
YULB	Yu-li	12.23	354		Pn	12 22 44.4	+0.4
I39PW	PALAU INFRASON	12.24	106	I	I	13 34 40.0	
	baz=290,slow=298,SNR=1.3						
PCI	Palu	12.32	193	P	Pn	12 22 48.0	+2.8
	85nm,0.9s						
SSLB	Suanglung	12.66	353		Pn	12 22 50.6	+0.8
YHNB	Yeheng	13.49	355	Pn	Pn	12 23 00.8	-0.3
SBUM	Sibu	13.52	231		Pn	12 23 01.6	0.0
SBUM	Sibu	13.52	231	P	Pn	12 23 00.4	-1.2
	32nm,0.9s						
SANI	Sanana	13.53	166	P	Pn	12 23 01.5	-0.2
QZH	Quanzhou	14.24	345	*e*P	Pn	12 23 12.8	+1.5
MMSI	Mamuju	14.27	196	P	Pn	12 23 14.1	+2.3
	1µm127nm,1.0s						
MTKI	Muara Teweh, K	14.31	213	P	Pn	12 23 12.8	+0.5
	143nm,0.8s						
TTSI	Tana Toraja	14.40	192	P	Pn	12 23 15.8	+2.3
	976nm78nm,1.0s						
QIZ	Qiongzhong	14.66	304		Pn	12 23 16.8	-0.1
QIZ	Qiongzhong	14.66	304	P	Pn	12 23 17.0	+0.1
QIZ				pP	P	12 23 24.5	+2.2
QIZ				sP		12 23 31.5	
QIZ				S	Sn	12 26 00.0	+1.8
QIZ				pmax	pmax		
	comp=Z,56nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,270nm,3.6s						
QIZ				LR	LR		
	comp=N,370nm,12.8s						
QIZ				LR	LR		
	comp=E,400nm,10.7s						
QIZ				LR	LR		
	comp=Z,460nm,13.8s						
SWI	Sorong	14.68	144	P	P	12 23 22.6	+0.1
	72nm,1.4s						
SIJI	Sorong	14.68	144	P	P	12 23 22.8	+0.2
	904nm60nm,1.2s						
PMSI	Majene	15.05	195	P	Pn	12 23 24.3	+2.2
	1µm2µm130nm,1.3s						
KKSI	Kolaka, Sulawe	15.27	184	P	Pn	12 23 26.0	+1.0
SPSI	Sidrap Palu	15.31	191	P	P	12 23 28.1	-1.5
	1µm46nm,1.1s						
KRAI	Karang Ratu	15.47	158	P	Pn	12 23 26.8	-0.7
MSAI	Masohi	15.70	156	P	P	12 23 35.4	+1.5
	3µm61nm,0.4s						
AAI	Ambon	15.74	159	P	P	12 23 35.8	+1.5
	55nm,1.1s						
PKKI	Palangkaraya	15.89	214	P	P	12 23 39.2	+3.1
KAPI	Kappang	16.34	190	P	Pn	12 23 38.6	0.0
KAPI				P	Pn	12 23 38.6	0.0
KAPI				S	Sn	12 26 39.6	+0.5
KAPI				S	Sn	12 26 39.6	+0.5
KAPI	Kappang	16.34	190		P	12 23 41.5	+0.5
KAPI				IAmb	IAmb	12 23 58.7	
	comp=Z,137nm,1.5s						
KAPI	Kappang	16.34	190	P	P	12 23 41.4	+0.5
KAPI	Kappang	16.34	190	⇑*i*P	P	12 23 40.6	-0.4
JOW	Kunigami	16.45	18	Pn	P	12 23 41.5	-0.7
	comp=Z,2.4nm,0.3s,baz=198,slow=10,SNR=6.6						
JOW				LR	LR	12 29 26.0	
	comp=Z,821nm,20.7s,baz=250,slow=35						
	comp=Z,145nm,1.1s						
JOW	Kunigami	16.45	18	P	Pn	12 23 41.1	+1.2
MWPI	Manokwari, Pap	16.48	136	P	P	12 23 46.4	+3.8
BBKI	Banjar Baru	16.50	209	P	P	12 23 42.1	-0.7
	comp=Z,4µmcomp=Z,97nm,0.9s						
BKSI	Bulukumba	16.58	189	P	P	12 23 44.6	+1.0
	comp=Z,50nm,1.2s						
FAKI	Fak Fak	16.92	145	P	P	12 23 47.6	+0.2
FAKI				IAmb	IAmb	12 23 56.0	
	comp=Z,152nm,1.4s						
FAKI	Fak Fak	16.92	145	P	P	12 23 49.8	+2.4
	comp=Z,1µmcomp=Z,75nm,1.2s						
RKPI	Ransiki, Papua	17.00	137	P	P	12 23 52.9	+4.5
	comp=Z,231nm,1.4s						
BNDI	Bandanaira	17.16	155	P	P	12 23 54.0	+3.9
	comp=Z,113nm,1.6s						
BAKI	Biak	18.13	132	P	Pn	12 24 08.5	+7.6
GULI	GuiLin	18.27	322	P	P	12 24 02.0	-0.3
GULI				pmax	pmax		
	comp=Z,98nm,1.1s						
SRPI	Serui, Papua	18.69	133	P	Pn	12 24 09.3	+1.6
CNSH	ChangSha	19.24	333	P	Pn	12 24 13.8	-0.4
CNSH				S	S	12 27 49.0	+0.3
CNSH				pmax	pmax		
	comp=Z,78nm,1.0s						
CNSH				LR	LR		
	comp=Z,2µm,16.9s						
CNSH				LR	LR		
	comp=Z,900nm,17.3s						
CNSH				LR	LR		
	comp=Z,1µm,15.3s						
MMRI	Maumere	19.68	181		P	12 24 17.7	-0.1
MMRI	Maumere	19.68	181	P	P	12 24 17.4	-0.4
EDFI	Ende, Flores	19.81	183	P	P	12 24 18.0	-1.3
DBNI	Kabupaten Domp	20.02	193	P	P	12 24 22.3	+0.8
	comp=Z,865nmcomp=Z,82nm,1.1s						
KMMI	Kalianget	20.07	206	P	Pn	12 24 24.2	+0.1
	comp=Z,2µmcomp=Z,126nm,1.0s						
TPI	Tanjungpandan	20.38	228	P	Pn	12 24 27.0	-0.8
	comp=Z,1µmcomp=Z,126nm,1.1s						
PLAI	Plampang	20.45	194	P	P	12 24 27.2	+1.0
	comp=Z,2µmcomp=Z,174nm,1.0s						
KLNI	Mataram	20.54	199	P	P	12 24 27.2	+0.1
TWSI	Taliwang, Sumb	20.60	197	P	P	12 24 28.4	+0.6
	comp=Z,803nmcomp=Z,67nm,1.0s						
SMPI	Sarmi	20.61	128	P	Pn	12 24 34.0	+3.5
	comp=Z,2µmcomp=Z,99nm,1.3s						
ABJI	Asem Bagus	20.63	204	P	Pn	12 24 30.1	-0.7
	comp=Z,108nm,1.0s						
KHKI	Kahang-Kahang	20.64	200	P	Pn	12 24 29.8	-1.1
	comp=Z,801nmcomp=Z,90nm,1.1s						
WHN	Wuhan	20.78	339	P	P	12 24 31.0	+1.4
WHN				S	S	12 28 14.8	-4.4
WHN				sS	Sn	12 28 30.5	+4.4
WHN				pmax	pmax		
	comp=Z,190nm,0.9s						
WHN				LR	LR		
	comp=Z,4µm,26.2s						
SOEI	Soe	20.84	176		P	12 24 31.8	+1.3
SOEI				IAmb	IAmb	12 24 52.8	
	comp=Z,63nm,0.9s						
SOEI	Soe	20.84	176	P	Pn	12 24 34.6	+1.2
	comp=Z,1µmcomp=Z,73nm,1.1s						
BLJI	Banyuglugur	20.85	206	P	P	12 24 31.4	+0.9
	comp=Z,105nm,0.8s						
SAUI	Saumlaki	20.86	155	P	Pn	12 24 32.3	-1.2
SAUI				IAmb	IAmb	12 24 40.8	
	comp=Z,67nm,0.9s						
MYKOM	Kota Tinggi	20.89	245	P	P	12 24 31.1	+0.1
MYKOM				IAmb	IAmb	12 24 42.9	
	comp=Z,33nm,0.8s						
MYKOM	Kota Tinggi	20.89	245	P	P	12 24 31.2	+0.2
	comp=Z,48nm,1.1s						
WBSI	Waikabubak, Su	20.93	189	P	Pn	12 24 34.9	+0.5
	comp=Z,710nmcomp=Z,49nm,0.8s						
RTBI	Rangdo, Negare	20.97	202	P	Pn	12 24 34.3	-0.5
	comp=Z,2µmcomp=Z,166nm,1.1s						
DNP	Denpasar	21.07	201	P	P	12 24 35.5	+2.6
NJ2	Nanjing	21.09	351	*e*P	P	12 24 35.3	+2.4
NJ2				pmax	pmax		
	comp=Z,29nm,0.7s						
IGBI	Denpasar	21.23	201	P	P	12 24 35.1	+0.6
	comp=Z,3µmcomp=Z,237nm,1.1s						
BATI	Baumata	21.25	177	P	P	12 24 33.1	-1.8
	comp=Z,53nm,0.7s,baz=250,slow=0.9,SNR=14						
	comp=Z,53nm,0.7s						
BATI	Baumata	21.25	177	P	P	12 24 34.0	-0.9
JAGI	Jajag, Banyuwa	21.28	204		P	12 24 35.4	+0.2
JAGI	Jajag, Banyuwa	21.28	204	P	P	12 24 36.9	+1.8
	comp=Z,2µmcomp=Z,189nm,1.0s						
GMJI	Gumukmas	21.39	206	P	P	12 24 37.4	+1.1
	comp=Z,61nm,1.1s						
GYA	Guiyang	21.45	317	⇑P	P	12 24 39.5	+2.5
GYA				pmax	pmax		
	comp=Z,34nm,1.0s						
NGJI	Ngawi	21.54	212	P	P	12 24 41.6	+3.7
	comp=Z,170nm,1.2s						
SJI	Sawahan	21.70	211	P	P	12 24 42.9	+3.2
	comp=Z,3µmcomp=Z,164nm,1.1s						
SNJI	Sawahan-Nganju	21.74	210	P	P	12 24 42.2	+2.0
	comp=Z,149nm,1.1s						
GUMO	Guam	21.79	81	LR	LR	12 31 24.9	
	comp=Z,346nm,21.4s,baz=258,slow=32						
GENI	Genyem	22.11	127	P	P	12 24 47.5	+3.4
PCJI	Pacitan	22.39	211	P	P	12 24 49.3	+2.3
	comp=Z,2µmcomp=Z,235nm,1.1s						
IPM	Ipoh	22.46	254	P	P	12 24 47.9	0.0
IPM	Ipoh	22.46	254	P	P	12 24 49.9	+2.0
JAY	Jayapura	22.49	126	P	P	12 24 49.2	+1.0
	comp=Z,61nm,1.2s,baz=288,slow=3.5,SNR=5.2						
JAY				LR	LR	12 33 40.1	
	comp=Z,425nm,20.2s,baz=298,slow=37						
	comp=Z,61nm,1.2s						
JAY	Jayapura	22.49	126	P	P	12 24 54.7	+6.5
	comp=Z,799nmcomp=Z,65nm,1.2s						
UGM	Wanagama	22.49	213		P	12 24 48.6	+0.4
UGM	Wanagama	22.49	213	P	P	12 24 57.4	+9.2
CTJI	Waduk Cacaban	22.51	217	P	P	12 24 49.8	+1.5
	comp=Z,141nm,1.0s						
KULM	Kulim	22.57	257		P	12 24 49.7	+0.6
KULM	Kulim	22.57	257	P	P	12 24 51.9	+2.8
ENH	Enshi	22.63	329	P	P	12 24 49.1	-0.5
KPJI	Karang Pucung	22.92	217	P	P	12 24 55.0	+2.4
	comp=Z,66nm,1.2s						
JNU	Nakatsue	23.11	18	P	P	12 24 54.0	-0.5
	comp=Z,4.9nm,0.7s,baz=134,slow=1.8,SNR=5.4						
JNU				LR	LR	12 36 01.7	
	comp=Z,377nm,18.0s,baz=216,slow=42						
	comp=Z,4.9nm,0.7s						
JNU	Nakatsue	23.11	18	IAmb	IAmb	12 25 04.7	
	comp=Z,38nm,1.0s						
KMI	Kunming	23.45	309	⇓P	P	12 24 58.3	+0.2
KMI				pP	pP	12 25 10.0	+0.6
KMI				sP	sP	12 25 13.8	-1.0
KMI				pmax	pmax		
	comp=Z,56nm,0.9s						
KMI				pmax	pmax		
	comp=Z,250nm,4.4s						
KMI				LR	LR		
	comp=Z,400nm,18.9s						
KMI				LR	LR		
	comp=Z,360nm,19.6s						
KMI				LR	LR		
	comp=Z,520nm,18.7s						
DBJI	Dramaga	23.70	223	P	P	12 25 07.4	+7.1
BBJI	Bungbulang	23.80	220	P	P	12 25 02.7	+1.4
	comp=Z,658nmcomp=Z,52nm,0.7s						
KLSI		23.83	230	P	P	12 25 02.2	+0.8
CNJI	Cibinong	24.01	221	P	P	12 25 05.5	+2.3
	comp=Z,710nmcomp=Z,84nm,1.0s						
CM31	Chiang Mai Arr	24.06	290	P	P	12 25 02.9	-0.7
CMAR	Chiang Mai Arr	24.06	290	P	P	12 25 03.2	-0.4
	comp=Z,24nm,0.9s,baz=106,slow=8.0,SNR=144						
CMAR				PcP	PcP	12 28 43.8	-0.8
	comp=Z,0.9nm,0.5s,baz=91,slow=2.5,SNR=4.2						
CMAR				LR	LR	12 35 38.7	
	comp=Z,380nm,18.3s,baz=105,slow=40						
	comp=Z,24nm,0.9s						
CMAR	Chiang Mai Arr	24.06	290	P	P	12 25 05.0	+1.4
MDSI	Maura Dua	24.11	231	P	P	12 25 04.8	+0.8
	comp=Z,41nm,1.1s						
CHTO	Chiang Mai	24.15	291	P	P	12 25 03.2	-1.2
CHTO	Chiang Mai	24.15	291	P	P	12 25 03.9	-0.4
CHTO				IAmb	IAmb	12 25 18.9	
	comp=Z,50nm,1.4s						
CHTO	Chiang Mai	24.15	291	P	P	12 25 04.0	-0.4
JCJ	Chichijima	24.24	46	LR	LR	12 36 07.1	
	comp=Z,228nm,18.2s,baz=169,slow=40						
LWLI	Liwa	24.54	230	P	P	12 25 20.9	+13
JMN	Monobe	24.68	23	P	P	12 25 10.0	+0.8
JMN				IAmb	IAmb	12 25 36.4	
	comp=Z,25nm,0.8s						
MASI	Maura Aman, Be	24.82	236	P	P	12 25 13.5	+2.9
PZH	PanZhiHua	24.96	311	P	P	12 25 13.5	+1.7
PPI	Padang Panjang	24.99	244	P	P	12 25 20.4	+8.3
PSI	Prapat	24.99	252	LR	LR	12 35 08.2	
	comp=Z,602nm,21.3s,baz=78,slow=37						
PSI	Prapat	24.99	252	P	P	12 25 15.2	+2.9
LYN	LuoYang	25.08	340	⇑P	P	12 25 13.3	+0.6
LYN				S	S	12 29 41.0	+6.8
LYN				sS	sS	12 29 49.0	-4.9
LYN				pmax	pmax		
	comp=Z,100nm,0.9s						
LYN				pmax	pmax		
	comp=Z,520nm,4.5s						
LYN				LR	LR		
	comp=Z,670nm,18.9s						
LYN				LR	LR		
	comp=Z,870nm,19.9s						
LYN				LR	LR		
	comp=Z,1µm,21.3s						
PDSI	Padang	25.15	243	P	P	12 25 16.1	+2.5
	comp=Z,1µmcomp=Z,37nm,1.1s						
MNSI	Mandailing Nat	25.16	247	P	P	12 25 15.9	+2.3
	comp=Z,37nm,0.8s						
MTN	Manton Dam	25.28	160	P	P	12 25 16.8	+2.1
	comp=Z,15nm,1.8s						
MTN	Manton Dam	25.28	160	P	P	12 25 15.4	+0.8
TIA	Tai'an	25.44	349	P	P	12 25 16.0	0.0
TIA				pmax	pmax		
	comp=Z,33nm,1.1s						
TIA				LR	LR		
	comp=Z,610nm,20.3s						
TIA				LR	LR		
	comp=Z,610nm,19.1s						
TIA				LR	LR		
	comp=Z,970nm,21.0s						
KDU	Kakadu	25.61	157	P	P	12 25 22.5	+4.8
KCSI	Kotacane, Aceh	25.84	255	P	P	12 25 20.8	+1.0
XAN	Xi'an	26.02	333	P	P	12 25 20.3	-1.0
XAN				S	S	12 29 47.0	-2.2
XAN				pmax	pmax		
	comp=Z,98nm,0.8s						
XAN				pmax	pmax		
	comp=Z,210nm,4.1s						
XAN				LR	LR		
	comp=Z,1µm,16.0s						
XAN				LR	LR		
	comp=Z,1µm,15.3s						
XAN				LR	LR		
	comp=Z,2µm,18.9s						
SISI	Saibi	26.55	244	P	P	12 25 34.7	+8.5
KSRS	Korea Array	26.59	9	P	P	12 25 26.5	+0.1
	comp=Z,4.3nm,0.8s,baz=180,slow=10,SNR=9.3						
KSRS				LR	LR	12 35 19.9	
	comp=Z,340nm,20.7s,baz=180,slow=35						
	comp=Z,4.3nm,0.8s						
TNCH	TengChong	26.73	304	⇓P	P	12 25 27.3	-0.7
TNCH				pP	pP	12 25 41.3	+1.5
TNCH				sP	sP	12 25 45.8	+0.6
TNCH				S	S	12 30 01.0	0.0
TNCH				sS	sS	12 30 17.5	-3.3
TNCH				SS	SnSn	12 31 11.5	+4.0
TNCH				pmax	pmax		
	comp=Z,30nm,1.1s						
TNCH				pmax	pmax		
	comp=Z,150nm,2.6s						
TNCH				LR	LR		
	comp=Z,310nm,4.7s						
TNCH				LR	LR		
	comp=Z,230nm,4.5s						
TNCH				LR	LR		
	comp=Z,330nm,12.6s						
GSI	Gunungsitoli	26.79	250	IAmb	IAmb	12 25 44.8	
	comp=Z,23nm,0.9s						
JHJ	Hachijo jima 2	26.90	33	LR	LR	12 34 49.2	
	comp=Z,237nm,20.4s,baz=269,slow=33						
HNS	HongShan	27.09	346	⇓P	P	12 25 30.5	-0.3
HNS				sP	sP	12 25 51.0	+3.1
HNS				S	S	12 30 07.5	+1.6
HNS				sS	sS	12 30 26.5	+0.8
HNS				SS	SnSn	12 31 27.0	+11
HNS				pmax	pmax		
	comp=Z,20nm,1.1s						
HNS				LR	LR		
	comp=Z,300nm,21.6s						
HNS				LR	LR		
	comp=Z,860nm,19.8s						
HNS				LR	LR		
	comp=Z,620nm,24.0s						
KNRA	Kununurra	27.34	167	P	P	12 25 31.9	-1.3
INU	Inuyama	27.37	26	P	P	12 25 32.6	-0.8
INU				IAmb	IAmb	12 25 42.8	
	comp=Z,22nm,1.0s						
JGF	Kuroka	27.73	26	P	P	12 25 36.7	+0.1
MAJO	Matsushiro	28.89	26	P	P	12 25 47.3	+0.4
MJAR	Matsushiro Arr	28.89	26	P	P	12 25 45.6	-1.3
	comp=Z,1.0nm,0.5s,baz=201,slow=7.5,SNR=5.6						
MJAR				LR	LR	12 35 59.9	
	comp=Z,325nm,19.9s,baz=216,slow=33						
	comp=Z,1.0nm,0.5s						
MJAR	Matsushiro Arr	28.89	26	P	P	12 25 47.5	+0.5
FITZ	Fitzroy Crossi	29.22	174	LR	LR	12 39 42.3	
	comp=Z,126nm,18.0s,baz=348,slow=41						
FITZ	Fitzroy Crossi	29.22	174	P	P	12 25 46.6	-3.4
BJT	Baijiatuau	29.31	350	IAmb	IAmb	12 25 59.1	
	comp=Z,19nm,1.0s						
BJI	Beijing	29.33	350	P	P	12 25 51.0	+0.2
BJI				pP	pP	12 26 00.5	-2.1
BJI				sP	sP	12 26 04.8	-3.1
BJI				S	S	12 30 40.8	-0.3
BJI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BJI				LR	LR		
	comp=Z,150nm,19.7s						
BJI				LR	LR		
	comp=Z,160nm,19.5s						
BJI				LR	LR		
	comp=Z,230nm,20.8s						
LZDM	Lanzhou Array	30.09	328	P	P	12 25 57.5	-0.5
	comp=Z,5.8nm,0.6s,baz=150,slow=12,SNR=8.2						
LZDM				LR	LR	12 38 51.6	
	comp=Z,490nm,18.6s,baz=135,slow=38						
	comp=Z,5.8nm,0.6s						
LZH	Lanzhou	30.11	329	⇓P	P	12 25 58.3	+0.4
LZH				sP	pP	12 26 12.5	+2.7
LZH				PP	PnPn	12 26 58.5	+2.1
LZH				ScP	ScP	12 32 35.5	-2.2
LZH				pmax	pmax		
	comp=Z,42nm,1.0s						
LZH				pmax	pmax		
	comp=Z,190nm,4.8s						
LZH				LR	LR		
	comp=Z,900nm,14.3s						
LZH				LR	LR		
	comp=Z,740nm,14.1s						
LZH				LR	LR		
	comp=Z,1µm,16.1s						
SNY	Shenyang	30.55	1	⇓P	P	12 26 02.0	+0.4
SNY				pmax	pmax		
	comp=Z,17nm,1.1s						
SNY				pmax	pmax		
	comp=Z,180nm,4.8s						
SNY				LR	LR		
	comp=Z,330nm,19.1s						
SNY				LR	LR		
	comp=Z,640nm,19.7s						
SNY				LR	LR		
	comp=Z,480nm,17.8s						
HHC	Hu-ho-hao-te	31.15	344	*e*P	P	12 26 08.0	+1.0
HHC				pmax	pmax		
	comp=Z,21nm,0.7s						
HHC				pmax	pmax		
	comp=Z,200nm,5.7s						
HHC				LR	LR		
	comp=Z,460nm,14.5s						
HHC				LR	LR		
	comp=Z,420nm,15.2s						
HHC				LR	LR		
	comp=Z,430nm,14.5s						
BRDH	Bariadhala	31.76	295	LR	LR	12 40 16.3	
	comp=Z,469nm,19.0s,baz=152,slow=39						
PMG	Port Moresby	31.78	129	P	P	12 26 12.3	-0.4
PMG				IAmb	IAmb	12 26 19.6	
	comp=Z,21nm,1.1s						
PMG	Port Moresby	31.78	129	P	P	12 26 18.9	+6.2
	comp=Z,18nm,1.4s						
PMG	Port Moresby	31.78	129	⇑*i*P	P	12 26 13.5	+0.8
PMG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MBWA	Marble Bar	32.25	185	P	P	12 26 16.0	-0.7
	comp=Z,15nm,1.1s						
MBWA	Marble Bar	32.25	185	P	P	12 26 17.2	+0.5
SHL	Shillong	32.45	300	P	P	12 26 17.9	-0.8
SHL	Shillong	32.45	300		P	12 26 17.7	-1.0
CN2	Changchun	32.60	4	*e*P	P	12 26 21.3	+1.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PSA00	Pilbara Seismi	32.65	185	P	P	12 26 19.2	-1.0
WB0	Warramunga Arr	32.83	159	P	P	12 26 19.6	-2.2
WRAB	Tennant Creek	32.97	160	P	P	12 26 21.0	-2.0
WRA	Warramunga Arr	32.97	160	P	P	12 26 19.9	-3.1
	comp=Z,1.2nm,0.5s,baz=341,slow=9.1,SNR=13						
WRA				PcP	PcP	12 29 04.7	-1.8
	comp=Z,1.6nm,0.7s,baz=336,slow=3.4,SNR=3.8						
	comp=Z,1.2nm,0.5s						
WRA	Warramunga Arr	32.97	160	*i* P	P	12 26 20.7	-2.4
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WB2	Warramunga Arr	32.98	160	P	P	12 26 20.7	-2.4
WR8	Warramunga Arr	33.04	159	P	P	12 26 21.9	-1.8
WR0	Warramunga Arr	33.06	159	P	P	12 26 21.8	-2.0
XLT	XiLinHaoTe	33.11	351	*e*P	P	12 26 27.0	+2.8
XLT				sS	sS	12 31 58.0	-2.3
XLT				pmax	pmax		
	comp=Z,11nm,0.9s						
XLT				pmax	pmax		
	comp=Z,260nm,4.9s						
XLT				LR	LR		
	comp=Z,420nm,16.1s						
XLT				LR	LR		
	comp=Z,260nm,16.5s						
MDJ	Mudanjiang	33.86	9	P	P	12 26 33.8	+3.3
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MDJ	Mudanjiang	33.86	9	P	P	12 26 31.3	+0.8
USRK	Ussuriysk Ar.	33.88	12	P	P	12 26 31.1	+0.4
	comp=Z,9.2nm,0.7s,baz=204,slow=6.7,SNR=11						
	comp=Z,9.2nm,0.7s						
LSA	Lhasa	34.66	307	IAmb	IAmb	12 26 48.8	
	comp=Z,8.9nm,0.7s						
LSA	Lhasa	34.66	307	P	P	12 26 34.0	-4.3
BNX	BinXian	34.69	6	⇑P	P	12 26 37.8	+0.1
BNX				pmax	pmax		
	comp=Z,12nm,0.9s						
GTA	Gaotai	34.71	328	P	P	12 26 39.0	+0.9
GTA				sS	sS	12 32 28.5	+3.2
GTA				pmax	pmax		
	comp=Z,34nm,1.1s						
GTA				LR	LR		
	comp=Z,660nm,17.4s						
GTA				LR	LR		
	comp=Z,810nm,17.8s						
GTA				LR	LR		
	comp=Z,1µm,17.4s						
GOMU	GeErMu	35.44	319	P	P	12 26 44.5	-0.2
GOMU				S	S	12 32 20.3	+3.3
GOMU				pmax	pmax		
	comp=Z,15nm,1.0s						
GOMU				LR	LR		
	comp=Z,460nm,19.8s						
GOMU				LR	LR		
	comp=Z,580nm,19.7s						
GOMU				LR	LR		
	comp=Z,910nm,19.5s						
ERM	Erimo	35.57	27	P	P	12 26 44.8	-0.5
ERM				IAmb	IAmb	12 27 09.3	
	comp=Z,18nm,1.0s						

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QIS   Mount Isa         35.65 152   P      P      12 26 44.3 -1.9
ASAR  Alice Springs     36.31 162   P      P      12 26 50.0 -2.0
      comp=Z,2.2nm,0.6s,baz=342,slow=7.0,SNR=78
ASAR                                PcP    PcP    12 29 15.5 -0.7
      comp=Z,1.7nm,0.7s,baz=337,slow=3.0,SNR=3.0
ASAR                                LR     LR     12 44 17.9
      comp=Z,238nm,19.2s,baz=324,slow=40
      comp=Z,2.2nm,0.6s
ASAR  Alice Springs     36.31 162   P      P      12 26 51.1 -0.8
ASAJ  Asahikawa         37.06  24   P      P      12 26 58.2 +0.2
      comp=Z,2.3nm,0.5s,baz=239,slow=11,SNR=8.2
      comp=Z,2.3nm,0.5s
MEEK  Meekatharra       37.78 186   P      P      12 27 02.4 -2.0
HILR  Hailar Array B    38.35 357   P      P      12 27 08.4 -0.5
      comp=Z,3.2nm,0.4s,baz=192,slow=9.4,SNR=7.6
HILR                                PcP    PcP    12 29 21.8 -0.2
      comp=Z,1.4nm,0.6s,baz=165,slow=6.0,SNR=2.3
      comp=Z,3.2nm,0.4s
CTA   Charters Tower    38.76 143   LR     LR     12 46 31.7
      comp=Z,96nm,18.8s,baz=311,slow=41
ULN   Ulaanbaatar       38.87 343   P      P      12 27 14.7 +1.2
ULN                                 P      P      12 27 14.7 +1.2
ULN   Ulaanbaatar       38.87 343          P      12 27 13.7 +0.2
ULN                                 IAmb   IAmb   12 27 14.9
      comp=Z,32nm,1.1s
ULN   Ulaanbaatar       38.87 343   P      P      12 27 13.7 +0.2
ULN   Ulaanbaatar       38.87 343d iP      P      12 27 13.8 +0.3
ULN                                 pmax   pmax
      comp=Z,27nm,1.0s
ULN   Ulaanbaatar       38.87 343   P      P      12 27 13.8 +0.3
SONM  Songino Array     39.03 343   P      P      12 27 15.1 +0.3
      comp=Z,13nm,0.7s,baz=166,slow=10,SNR=70
SONM                                PcP    PcP    12 29 23.9 -0.4
      comp=Z,2.4nm,0.8s,baz=139,slow=2.9,SNR=4.8
SONM                                LR     LR     12 46 14.6
      comp=Z,344nm,18.3s,baz=165,slow=40
      comp=Z,13nm,0.7s
SONM  Songino Array     39.03 343   P      P      12 27 14.7 -0.1
SONM                                IAmb   IAmb   12 27 16.1
      comp=Z,22nm,1.1s
HEH   HeiHe             39.17   5  eP      P      12 27 16.0 +0.3
HEH                                 pmax   pmax
      comp=Z,15nm,1.2s
HEH                                 LR     LR
      comp=Z,350nm,18.0s
HEH                                 LR     LR
      comp=Z,520nm,20.0s
HEH                                 LR     LR
      comp=Z,500nm,19.1s
YSS   Yuzhno-Sakhali    39.50  22  eP      P      12 27 25.5 +7.0
YSS                                 pmax   pmax
      comp=Z,20nm,0.8s
YSS                                 MLR    MLR
      comp=Z,400nm,16.0s
YSS                                 MLR    MLR
      comp=N,200nm,18.0s
YSS                                 MLR    MLR
      comp=E,400nm,17.0s
MORW  Morawa            40.51 189   P      P      12 27 30.2 +3.1
MORW  Morawa            40.51 189   P      P      12 27 27.2 +0.2
MORW                                IAmb   IAmb   12 27 31.1
      comp=Z,22nm,0.8s
PALK  Pallekele         41.60 268   LR     LR     12 46 45.0
      comp=Z,130nm,18.1s,baz=82,slow=39
FORT  Forrest           42.02 173   P      P      12 27 38.3 -1.2
ZAK   Zakamensk         42.24 342  eP      P      12 27 40.0 -1.2
ZAK                                 pmax   pmax
      comp=Z,14nm,1.2s
INKA  Innaminka         42.45 156   P      P      12 27 41.8 -1.2
ZEA   Zeya              42.62   4  eP      P      12 27 44.3 +0.3
ZEA                                 pmax   pmax
      comp=Z,10.0nm,1.1s
ZEA                                 MLR    MLR
      comp=N,100nm,17.0s
ZEA                                 MLR    MLR
      comp=Z,200nm,17.0s
KLBR  Kellerberrin      42.77 186   P      P      12 27 45.2 -0.4
      comp=Z,28nm,1.1s
TYV   Tymovskoe         42.83  19  eP      P      12 27 50.8 +5.0
TYV                                eS      S      12 34 15.8 +8.8
TYV                                 pmax   pmax
      comp=Z,9.0nm,0.9s
TYV                                 pmax   pmax
      comp=Z,100nm,3.6s
TYV                                 smax   smax
      comp=N,200nm,3.8s
TYV                                 smax   smax
      comp=E,300nm,3.8s
TLY   Talaya            43.27 343   P      P      12 27 50.2 +0.7
TLY                                 P      P      12 27 50.2 +0.7
TLY   Talaya            43.27 343   P      P      12 27 49.8 +0.3
TLY                                 IAmb   IAmb   12 27 50.9
      comp=Z,19nm,0.9s
TLY   Talaya            43.27 343ceP       P      12 27 50.3 +0.8
TLY                                 pmax   pmax
      comp=Z,16nm,0.7s
TLY   Talaya            43.27 343   P      P      12 27 50.0 +0.6
IRK   Irkutsk           43.60 344  eP      P      12 27 51.9 -0.1
IRK                                 pmax   pmax
      comp=Z,41nm,2.7s
MOY   Mondy             44.08 341  eP      P      12 27 56.0  0.0
MOY                                 pmax   pmax
      comp=Z,31nm,1.6s
NWAO  Narrogin (SRO)    44.15 187   P      P      12 27 57.6 +0.9
NWAO  Narrogin (SRO)    44.15 187   P      P      12 27 56.4 -0.3
NWAO                                IAmb   IAmb   12 28 02.1
      comp=Z,18nm,0.7s
WMQ   Urumqi            44.39 324  eP      P      12 27 59.5 +0.9
WMQ                                 S      S      12 34 30.0 -0.2
WMQ                                 pmax   pmax
      comp=Z,17nm,0.9s
WMQ                                 LR     LR
      comp=Z,630nm,16.9s
WMQ                                 LR     LR
      comp=Z,520nm,14.3s
WMQ                                 LR     LR
      comp=Z,480nm,21.1s
KNGR  Kungurtug, Tuv    44.42 337⇑iP       P      12 28 00.8 +2.0
KNGR                                pmax   pmax
      comp=Z,24nm,1.0s
BBOO  Buckleboo         45.55 164   P      P      12 28 06.7 -1.2
EIDS  Eidsvold          45.65 143   P      P      12 28 08.6 -0.2
EIDS                                IAmb   IAmb   12 28 24.4
      comp=Z,18nm,1.1s
STKA  Stephens Creek    46.47 158   P      P      12 28 13.5 -1.6
      comp=Z,2.3nm,0.8s,baz=355,slow=9.2,SNR=3.8
STKA                                LR     LR     12 51 10.4
      comp=Z,127nm,18.0s,baz=345,slow=40
      comp=Z,2.3nm,0.8s
STKA  Stephens Creek    46.47 158   P      P      12 28 14.0 -1.0
HTT   Hallett           46.97 161   P      P      12 28 17.5 -1.5
CMSA  Cobar Meteorol    47.84 153   P      P      12 28 29.9 +4.1
ZSN   Zaisan            48.14 326  eP      P      12 28 27.3 -0.6
ZSN   Zaisan            48.14 326  eP      P      12 28 27.3 -0.6
DGZ   Jazzator, Alta    48.20 330⇑iP       P      12 28 29.3 +0.8
DGZ                                 pmax   pmax
      comp=Z,16nm,1.2s
SHLS  Shalkode          49.13 318  eP      P      12 28 33.1 -2.7
      comp=Z,11nm,0.9s
SHLS  Shalkode          49.13 318  eP      P      12 28 33.1 -2.7
SHLS                                pmax   pmax
      comp=Z,11nm,0.9s
MK31  Makanchi Array    49.21 324   P      P      12 28 36.5 +0.3
MK31  Makanchi Array    49.21 324d iP      P      12 28 35.6 -0.6
MKAR  Makanchi Array    49.21 324   P      P      12 28 35.6 -0.6
      comp=Z,18nm,0.8s,baz=126,slow=7.6,SNR=98
MKAR                                PcP    PcP    12 29 58.6 -0.2
      comp=Z,9.1nm,0.9s,baz=118,slow=3.0,SNR=7.8
MKAR                                LR     LR     12 51 03.1
      comp=Z,472nm,18.0s,baz=115,slow=38
      comp=Z,18nm,0.8s
MKAR  Makanchi Array    49.21 324   P      P      12 28 36.3  0.0
MAKZ  Makanchi          49.40 324   P      P      12 28 37.8 +0.1
MAKZ  Makanchi          49.40 324   P      P      12 28 37.5 -0.2
MAKZ  Makanchi          49.40 324   PcP    PcP    12 29 59.5  0.0
UZB   Uzynbulak         49.41 318  eP      P      12 28 37.3 -0.7
      comp=Z,11nm,0.6s
UZB   Uzynbulak         49.41 318  eP      P      12 28 37.2 -0.7
UZB                                 pmax   pmax
      comp=Z,11nm,0.6s
TARG  Taragay, Kyrgy    49.61 316   IAmb   IAmb   12 28 43.2
      comp=Z,7.2nm,0.8s
SATY  Saty              49.78 318  eP      P      12 28 40.0 -0.8
      comp=Z,9.5nm,0.8s
SATY  Saty              49.78 318  eP      P      12 28 39.9 -0.8
SATY                                pmax   pmax
      comp=Z,10.0nm,0.8s
KSH   Kashi             50.03 313   P      P      12 28 43.8 +1.1
KSH                                 sP     sP     12 29 00.5 +0.2
KSH                                 PcP    PcP    12 30 03.5 +1.4
KSH                                 pmax   pmax
      comp=Z,6.0nm,1.3s
KSH                                 LR     LR
      comp=Z,350nm,18.9s
KSH                                 LR     LR
      comp=Z,460nm,18.9s
KSH                                 LR     LR
      comp=Z,630nm,19.6s
KDJ   Kajisay           50.20 316   IAmb   IAmb   12 28 46.1
      comp=Z,12nm,0.7s
NIL   Nilore            50.33 305   P      P      12 28 44.5 -0.4
NIL   Nilore            50.33 305          P      12 28 44.4 -0.6
PEA0B Petropavlovsk-    50.35  27   P      P      12 28 45.4 +0.6
PETK  Petropavlovsk-    50.35  27   P      P      12 28 45.0 +0.3
      comp=Z,2.7nm,0.6s,baz=186,slow=3.5,SNR=11
PETK                                LR     LR     12 51 46.4
      comp=Z,123nm,18.7s,baz=220,slow=38
      comp=Z,2.7nm,0.6s
TDK   Taldyqorghan      50.66 320  eP      P      12 28 46.7 -0.5
      comp=Z,22nm,1.0s
TDK   Taldyqorghan      50.66 320  eP      P      12 28 46.7 -0.5
TDK                                 pmax   pmax
      comp=Z,22nm,1.0s
MDOK  Medeo             50.72 317  eP      P      12 28 47.1 -0.7
MDOK  Medeo             50.72 317  eP      P      12 28 47.1 -0.7
TNSS  Tian-Shan         50.73 317  eP      P      12 28 47.5 -0.8
TNSS  Tian-Shan         50.73 317  eP      P      12 28 47.5 -0.8
ULHL  Ulahol            50.88 316   P      P      12 28 49.2  0.0
      SNR=34
YAK   Yakutsk           51.03   4   P      P      12 28 49.5 -0.2
      comp=Z,9.1nm,0.4s,baz=160,slow=4.3,SNR=9.5
YAK                                 LR     LR     12 53 51.9
      comp=Z,172nm,18.1s,baz=188,slow=40
      comp=Z,9.1nm,0.4s
YAK   Yakutsk           51.03   4   P      P      12 28 49.4 -0.2
YAK   Yakutsk           51.03   4  eP      P      12 28 49.3 -0.3
YAK                                e*PP    pP     12 29 00.7 -1.4
YAK                                e              12 30 04.5
YAK                                e              12 30 45.9
YAK                                ePPP    PPP    12 31 44.1
YAK                                eS      S      12 36 03.5 -0.1
YAK                                e*SS    sS     12 36 21.7 -2.7
YAK                                e              12 38 36.8
YAK                                eSS     SS     12 39 39.5 +0.5
YAK                                eSSS    SSS    12 41 13.3
YAK                                 pmax   pmax
      comp=Z,25nm,1.2s
YAK                                 pmax   pmax
      comp=N,14nm,1.4s
YAK                                 pmax   pmax
      comp=E,6.0nm,1.5s
YAK                                 pmax   pmax
      comp=Z,124nm,5.4s
YAK                                 pmax   pmax
      comp=N,160nm,5.0s
YAK                                 pmax   pmax
      comp=E,133nm,4.8s
YAK                                 smax   smax
      comp=E,159nm,5.6s
YAK                                 smax   smax
      comp=N,146nm,4.8s
BOOM  Boomskoye usch    51.19 316   IAmb   IAmb   12 28 53.7
      comp=Z,9.8nm,0.8s
KUU   Kurty             51.49 318  eP      P      12 28 53.0 -0.6
      comp=Z,22nm,1.2s
KUU   Kurty             51.49 318  eP      P      12 28 52.9 -0.6
KUU                                 pmax   pmax
      comp=Z,22nm,1.2s
TKM2  Tokmak 2          51.59 317   P      P      12 28 54.5  0.0
      SNR=12
KBK   Karagaybulak      51.93 316   P      P      12 28 57.4 +0.5
      SNR=18
UCH   Uchtor            52.06 315   P      P      12 28 58.6 +0.3
      SNR=50
ZALV  Zalesovo Beam     52.19 333   P      P      12 28 58.0 -0.5
      comp=Z,21nm,0.7s,baz=116,slow=6.8,SNR=111
ZALV                                PcP    PcP    12 30 08.1 -1.6
      comp=Z,1.7nm,0.7s,baz=118,slow=5.7,SNR=0.9
ZALV                                LR     LR     12 52 02.2
      comp=Z,287nm,21.3s,baz=128,slow=37
      comp=Z,21nm,0.7s
ZALV  Zalesovo Beam     52.19 333   P      P      12 28 57.8 -0.6
ZALV  Zalesovo Beam     52.19 333 i P      P      12 28 58.0 -0.5
ZALV                                pmax   pmax
      comp=Z,21nm,0.7s
CHMS  Chumysh           52.19 316   P      P      12 28 58.6 -0.1
      SNR=13
AAK   Ala-Archa         52.23 316   P      P      12 28 59.5 +0.4
      SNR=11
AAK   Ala-Archa         52.23 316   LR     LR     12 52 44.9
      comp=Z,639nm,21.8s,baz=99,slow=38
AAK   Ala-Archa         52.23 316   P      P      12 28 59.1  0.0
AAK   Ala-Archa         52.23 316   P      P      12 28 58.5 -0.6
AAK   Ala-Archa         52.23 316⇑iP       P      12 28 59.6 +0.4
AAK                                 pmax   pmax
      comp=Z,9.0nm,1.0s
AAK   Ala-Archa         52.23 316   PcP    PcP    12 30 10.1 -0.2
SEM   Semipalatinsk     52.32 327  eP      P      12 28 58.9 -1.0
SEM   Semipalatinsk     52.32 327  eP      P      12 28 58.8 -1.0
USP   Ospenovka         52.47 317   P      P      12 29 00.9 +0.1
      SNR=10
MA2   Magadan           52.68  18   LR     LR     12 52 09.4
      comp=Z,107nm,21.1s,baz=226,slow=37
EKS2  Erkin-Say         52.73 316   P      P      12 29 03.2 +0.4
      SNR=12
ARSB  Arslanbob         52.81 314   IAmb   IAmb   12 29 05.7
      comp=Z,17nm,0.8s
KURBB Kurchatov Arra    53.36 326   P      P      12 29 06.9 -0.3
      comp=Z,15nm,0.6s,baz=128,slow=6.8,SNR=97
KURBB                               LR     LR     12 53 06.0
      comp=Z,184nm,18.3s,baz=166,slow=37
      comp=Z,15nm,0.6s
KURK  Kurchatov         53.36 327   P      P      12 29 07.6 +0.4
KURK  Kurchatov         53.36 327   P      P      12 29 07.4 +0.2
KURK  Kurchatov         53.36 327d iP      P      12 29 06.8 -0.4
KURK                                pmax   pmax
      comp=Z,48nm,1.0s
KURK  Kurchatov         53.36 327   P      P      12 29 07.0 -0.2
KBL   Kabul             53.93 305   P      P      12 29 11.6 -0.3
KBL   Kabul             53.93 305   P      P      12 29 11.7 -0.3
DZM   Mont Dzumac       54.15 128  eS      S      12 36 40.6 -7.0
      comp=Z,50nm,22.4s
DZM                                eSS     SKiKP  12 40 24.1 +2.1
      comp=Z,82nm,24.9s
DZM                                eLR     LR     12 44 48.1
      comp=Z,228nm,24.4s
DZA   Taraz             54.49 315  eP      P      12 29 15.2 -0.5
      comp=Z,12nm,0.9s
DZA   Taraz             54.49 315  eP      P      12 29 15.1 -0.5
DZA                                 pmax   pmax
      comp=Z,13nm,0.9s
KKAR  Karatay Array     55.13 315   P      P      12 29 19.7 -0.6
CHM   Chimkent          55.52 314  eP      P      12 29 22.6 -0.5
      comp=Z,9.6nm,0.5s
CHM   Chimkent          55.52 314  eP      P      12 29 22.5 -0.5
CHM                                 pmax   pmax
      comp=Z,10.0nm,0.5s
BRLS  Borolday          55.58 315⇓iP       P      12 29 23.0 -0.5
      comp=Z,5.6nm,0.6s
BRLS  Borolday          55.58 315d iP      P      12 29 23.0 -0.5
BRLS                                pmax   pmax
      comp=Z,6.0nm,0.6s
SEY   Seymchan          55.87  16   P      P      12 29 25.9 +0.8
      comp=Z,2.9nm,0.7s,baz=217,slow=6.0,SNR=10
SEY                                 LR     LR     12 54 00.2
      comp=Z,134nm,19.1s,baz=220,slow=37
      comp=Z,2.9nm,0.7s
SEY   Seymchan          55.87  16⇓iP       P      12 29 26.8 +1.7
SEY                                 pmax   pmax
      comp=Z,9.0nm,1.4s
BVAR  Borovoye Array    58.95 326   P      P      12 29 46.6 -0.4
      comp=Z,12nm,0.7s,baz=118,slow=8.8,SNR=34
BVAR                                PcP    PcP    12 30 35.5 -0.4
      comp=Z,9.0nm,0.7s,baz=117,slow=5.2,SNR=6.3
BVAR                                LR     LR     12 56 29.8
      comp=Z,296nm,22.0s,baz=107,slow=37
      comp=Z,12nm,0.7s
BORK  Borovoye          59.00 326   P      P      12 29 47.2 -0.1
BORK  Borovoye          59.00 326 i P      P      12 29 47.0 -0.4
BORK                                pmax   pmax
      comp=Z,48nm,1.0s
BORK  Borovoye          59.00 326   P      P      12 29 47.4  0.0
BORK                                PcP    PcP    12 30 35.5 -0.5
TIXI  Tiksi             60.56   2   LR     LR     12 57 41.5
      comp=Z,195nm,19.6s,baz=197,slow=37
TIXI  Tiksi             60.56   2   P      P      12 29 57.1 -0.6
TIXI  Tiksi             60.56   2⇑iP       P      12 29 57.4 -0.3
TIXI                                pmax   pmax
      comp=Z,35nm,1.1s
WBK   Wadi Bani Khal    61.64 290   P      P      12 30 05.0 -1.0
WSAR  Wadi Sarin        61.95 290   P      P      12 30 07.0 -1.1
NRIK  Noril'sk          62.31 347   P      P      12 30 09.3 -0.3
      comp=Z,5.9nm,0.6s,baz=134,slow=5.7,SNR=17
NRIK                                LR     LR     12 58 43.4
      comp=Z,250nm,20.7s,baz=150,slow=37
      comp=Z,5.9nm,0.6s
NRIK  Noril'sk          62.31 347c iP      P      12 30 09.6  0.0
NRIK                                pmax   pmax
      comp=Z,17nm,1.3s
JMDO  Jabal Madar       62.45 289   P      P      12 30 10.6 -0.9
MHTO  MHTO              62.61 288   P      P      12 30 10.9 -1.6
BSY   Bisya             63.27 290   P      P      12 30 16.2 -0.8
BILL  Bilibino          63.53  17   P      P      12 30 18.1 +0.3
BILL                                IAmb   IAmb   12 30 29.1
      comp=Z,13nm,0.9s
BILL  Bilibino          63.53  17⇓iP       P      12 30 18.8 +1.0
BILL                                pmax   pmax
      comp=Z,7.0nm,1.0s
AB31  Akbulak array     63.91 320   IAmb   IAmb   12 30 31.8
      comp=Z,8.8nm,0.9s
ABKAR Akbulak array     63.91 320   P      P      12 30 19.7 -0.9
BANOM Banah             64.05 293   P      P      12 30 22.0  0.0
AKTO  Aktyubinsk        65.40 321   LR     LR     13 01 13.4
      comp=Z,452nm,19.6s,baz=82,slow=38
SVE   Sverdlovsk        65.57 328ceP       P      12 30 31.1 -0.2
SVE                                 pmax   pmax
      comp=Z,76nm,1.1s
DOK   Doka              66.35 285   P      P      12 30 36.4 -0.6
ARTI  Arti              66.64 327   LR     LR     13 02 38.8
      comp=Z,144nm,18.0s,baz=106,slow=38
ARTI  Arti              66.64 327   P      P      12 30 37.2 -0.9
ARTI  Arti              66.64 327⇑iP       P      12 30 37.3 -0.9
ARTI                                pmax   pmax
      comp=Z,32nm,1.0s
ARTI  Arti              66.64 327   P      P      12 30 37.0 -1.2
MZR   Muzera            66.69 290   P      P      12 30 38.5 -0.6
      SNR=8.1
ABTO  Aybut             67.24 284   P      P      12 30 41.9 -0.8
ABTO                                P      P      12 30 42.1 -0.7
TRNA  Turayna           68.69 292   P      P      12 30 50.9 -0.7
SMRA  Abu-Samra         69.04 292   P      P      12 30 53.4 -0.5
URZ   Urewera           70.68 137   LR     LR     13 03 38.1
      comp=Z,53nm,18.7s,baz=298,slow=37
AKT   Akhty             71.44 310⇓iP       P      12 31 05.1 -3.3
AKT                                eS      P      12 31 07.6 -0.8
AKT                                 pmax   pmax
      comp=Z,11nm,0.1s
KIRV  Kirov             71.83 328   LR     LR     13 04 44.3
      comp=Z,257nm,20.4s,baz=94,slow=38
KIRV  Kirov             71.83 328⇑iP       P      12 31 09.8 -0.4
BELG  Belogornoye       72.12 322d iP      P      12 31 11.2 -0.9
BELG                                pmax   pmax
      comp=Z,15nm,1.0s
C16K  Lisburne Hills    73.04  22   IAmb   IAmb   12 31 28.9
      comp=Z,8.0nm,0.8s
RAYN  Ar Rayn           73.97 291   P      P      12 31 22.9 -0.8
RAYN  Ar Rayn           73.97 291   P      P      12 31 23.0 -0.7
RAYN  Ar Rayn           73.97 291   P      P      12 31 23.5 -0.2
RAYN  Ar Rayn           73.97 291   P      P      12 31 23.0 -0.8
H17K  Granite Mounta    74.62  26   IAmb   IAmb   12 31 38.9
      comp=Z,11nm,0.9s
KBZ   Khabaz            75.02 312   P      P      12 31 28.7 -0.6
      comp=Z,4.4nm,0.9s,baz=95,slow=4.8,SNR=9.4
KBZ                                 LR     LR     13 08 52.7
      comp=Z,197nm,18.8s,baz=65,slow=39
      comp=Z,4.4nm,0.9s
KBZ   Khabaz            75.02 312⇓iP       P      12 31 28.8 -0.5
KBZ                                 pmax   pmax
      comp=Z,10.0nm,1.3s
KIV   Kislovodsk        75.16 313   P      P      12 31 30.5 +0.2
KIV   Kislovodsk        75.16 313  eP      P      12 31 29.5 -0.8
KIV                                 pmax   pmax
      comp=Z,17nm,1.0s
KIV                                 MLR    MLR
      comp=Z,104nm,18.0s
SHA1  Shidzhatmaz       75.19 312⇑iP       P      12 31 30.3 -0.3
C19K  Lookout Ridge     75.26  21   IAmb   IAmb   12 31 42.5
      comp=Z,13nm,0.8s
D19K  Kuna River        75.72  22   IAmb   IAmb   12 31 44.7
      comp=Z,18nm,0.9s
VRH   Novokhopyorsk     75.73 320  eP      P      12 31 31.4 -1.8
VRH                                 pmax   pmax
      comp=Z,40nm,0.4s
E19K  Redstone River    75.95  23   IAmb   IAmb   12 31 57.9
      comp=Z,10nm,0.9s
B20K  Meade River       76.21  20   IAmb   IAmb   12 31 47.5
      comp=Z,9.4nm,0.8s
D20K  Etivluk River     76.29  22   IAmb   IAmb   12 31 48.4
      comp=Z,16nm,0.8s
LABN  Labinsk           76.55 313  eP      P      12 31 46.2 +8.1
LABN                                pmax   pmax
      comp=Z,22nm,0.5s
ERBR  Yeremizino-Bor    76.67 314  eP      P      12 31 35.3 -3.4
ERBR                                pmax   pmax
      comp=Z,34nm,1.2s
ERBR                                MLR    MLR
      comp=Z,261nm,21.0s
KLMR  Klimovskoe        77.00 330  eP      P      12 31 38.6 -1.7
KLMR                               e              12 34 31.8
KLMR                                pmax   pmax
      comp=Z,70nm,1.0s
KLMR                                MLR    MLR
      comp=Z,254nm,16.0s
VORD  Divnogorie        77.27 320  eP      P      12 31 38.6 -3.3
VORD                                pmax   pmax
      comp=Z,20nm,1.0s
VORR  Voronezh          77.30 321  eP      P      12 31 40.5 -1.6
VORR                                pmax   pmax
      comp=Z,94nm,0.4s
SOC   Sochi             77.33 312  eP      P      12 31 40.8 -1.6
SOC                                e              12 34 35.6
SOC                                eS      S      12 41 34.7 +5.2
SOC                                eSS     SS     12 46 27.5 -0.7
SOC                                 pmax   pmax
      comp=Z,24nm,0.7s
SOC                                 MLR    MLR
      comp=Z,108nm,18.0s
VSR   Storozhevoye      77.34 320  eP      P      12 31 39.5 -2.8
VSR                                 pmax   pmax
      comp=Z,20nm,0.9s
G21K  Allakaket         77.37  24   IAmb   IAmb   12 31 54.5
      comp=Z,14nm,0.9s
LPSR  Galich'ya Gora    77.44 322  eP      P      12 31 40.2 -2.7
LPSR                                pmax   pmax
      comp=Z,40nm,0.9s
H21K  Melozitna Rive    77.64  25   IAmb   IAmb   12 32 11.6
      comp=Z,13nm,1.2s
D22K  Ayikyak River     77.72  22   IAmb   IAmb   12 31 55.7
      comp=Z,17nm,1.3s
KDAK  Kodiak Island     77.83  33   LR     LR     13 07 28.8
      comp=Z,58nm,18.9s,baz=227,slow=37
I21K  Tanana            77.98  25   IAmb   IAmb   12 32 10.6
      comp=Z,12nm,1.0s
E22K  Anaktuvuk Pass    78.04  22   IAmb   IAmb   12 31 59.3
      comp=Z,10nm,1.1s
MOS   Moscow            78.09 325  eP      P      12 31 44.4 -2.0
MOS                                 pmax   pmax
      comp=Z,55nm,0.8s
H22K  Ishtalitna Cre    78.23  25   IAmb   IAmb   12 32 01.3
      comp=Z,10nm,1.0s
D23K  Nanushuk River    78.45  22   IAmb   IAmb   12 32 02.4
      comp=Z,7.9nm,0.8s
C23K  Itkillik River    78.46  21   IAmb   IAmb   12 32 15.3
      comp=Z,23nm,1.4s
COLD  Coldfoot          78.67  23   P      P      12 31 51.2 +1.8
OBN   Obninsk           78.72 324   LR     LR     13 08 16.9
      comp=Z,341nm,21.7s,baz=38,slow=37
OBN   Obninsk           78.72 324⇑iP       P      12 31 48.9 -1.0
OBN                                i              12 31 54.2
OBN                                i              12 34 51.8
OBN                                 pmax   pmax
      comp=Z,24nm,1.0s
OBN                                 MLR    MLR
      comp=Z,361nm,21.0s
TOLK  Toolik Lake Re    78.86  22   IAmb   IAmb   12 32 02.4
      comp=Z,8.1nm,0.8s
E23K  Chandalar         78.86  23   IAmb   IAmb   12 32 01.4
      comp=Z,13nm,0.9s
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ANN	Anapa	78.88	314	eP	P	12 31 49.4	-1.6
ANN				pmax	pmax		
	comp=Z,21nm,0.8s						
D24K	Happy Valley	79.11	21	IAmb	IAmb	12 32 03.7	
	comp=Z,9.5nm,0.8s						
C24K	Franklin Bluff	79.13	21	IAmb	IAmb	12 32 05.5	
	comp=Z,10.0nm,1.1s						
E24K	Your Creek	79.29	22	IAmb	IAmb	12 32 23.1	
	comp=Z,9.5nm,0.9s						
MCK	McKinley	79.36	27	IAmb	IAmb	12 32 23.7	
	comp=Z,20nm,1.1s						
APA	Apatity	79.49	337	⇓eP	P	12 31 52.5	-1.4
APA				e		12 31 59.8	
APA				MLR	MLR		
	comp=Z,869nm,18.0s						
F24K	Squaw Lake	79.55	23	IAmb	IAmb	12 32 08.4	
	comp=Z,8.0nm,0.7s						
D25K	Kavik River	79.97	21	IAmb	IAmb	12 32 10.2	
	comp=Z,7.8nm,0.8s						
ILAR	Eielson Array	80.17	26	P	P	12 31 59.2	+1.6
	comp=Z,0.9nm,0.9s,baz=265,slow=4.0,SNR=5.4						
ILAR				LR	LR	13 10 29.4	
	comp=Z,59nm,18.6s,baz=263,slow=38						
	comp=Z,0.9nm,0.9s						
ASF	Jabal al Asfar	80.62	301	LR	LR	13 12 25.0	
	comp=Z,96nm,20.7s,baz=35,slow=39						
BNN	Bunyan	80.66	308	IAmb	IAmb	12 32 01.9	
	comp=Z,17nm,1.0s						
BMAR	Burnt Mountain	80.83	23	P	P	12 32 02.4	+1.2
C27K	Jago River	80.87	21	IAmb	IAmb	12 32 13.8	
	comp=Z,8.2nm,0.8s						
SIM	Simferopol'	81.21	314	P	P	12 32 03.6	0.0
SIM				pmax	pmax		
	comp=Z,28nm,0.9s						
SIM				MLR	MLR		
	comp=Z,100nm,20.0s						
E27K	Coleen River	81.84	22	IAmb	IAmb	12 32 18.5	
	comp=Z,13nm,1.1s						
KIRS	Kirsehir-Merke	82.11	308	⇑P	P	12 32 08.3	-0.3
ARA0	ARCESS Array S	82.13	339	eP	P	12 32 08.1	+0.2
ARCES	ARCESS Array B	82.13	339	P	P	12 32 07.8	-0.1
	comp=Z,20nm,0.9s,baz=83,slow=5.4,SNR=21						
ARCES				LR	LR	13 12 38.3	
	comp=Z,135nm,18.2s,baz=88,slow=38						
	comp=Z,20nm,0.9s						
ARCES	ARCESS Array B	82.13	339	P	P	12 32 07.9	-0.1
BR104	Keskin Array S	82.24	309	P	P	12 32 08.5	-0.9
	comp=Z,6.0nm,1.0s						
BR131	Keskin Array S	82.24	309	⇑iP	P	12 32 07.4	-2.0
BRTR	Keskin Array B	82.24	309	P	P	12 32 08.2	-1.1
	comp=Z,4.1nm,0.8s,baz=100,slow=3.2,SNR=18						
BRTR				LR	LR	13 13 41.2	
	comp=Z,45nm,18.8s,baz=70,slow=39						
	comp=Z,4.1nm,0.8s						
BRTR	Keskin Array B	82.24	309	i P	P	12 32 08.6	-0.8
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BR105	Keskin Array S	82.26	309	P	P	12 32 08.6	-0.9
	comp=Z,7.7nm,0.9s						
I27K	Kandik River	82.27	25	IAmb	IAmb	12 32 25.0	
	comp=Z,15nm,1.0s						
SPA0	Spitsbergen Ar	82.45	348	eP	P	12 32 09.8	+0.3
SPITS	Spitsbergen Ar	82.45	348	P	P	12 32 09.4	-0.1
	comp=Z,39nm,0.8s,baz=89,slow=9.3,SNR=37						
SPITS				LR	LR	13 12 41.7	
	comp=Z,138nm,20.0s,baz=67,slow=38						
	comp=Z,39nm,0.8s						
FURI	Furi	82.49	278	LR	LR	13 07 02.5	
	comp=Z,97nm,20.2s,baz=103,slow=34						
E28M	Babbage River	82.51	22	IAmb	IAmb	12 32 13.7	
	comp=Z,17nm,1.4s						
RAR	Rarotonga	82.62	113	LR	LR	13 06 09.8	
	comp=Z,173nm,20.9s,baz=265,slow=34						
I28M	Miner Creek	82.98	25	IAmb	IAmb	12 32 25.0	
	comp=Z,7.8nm,0.8s						
HSPB	Hornsund (broa	83.00	347	eP	P	12 32 11.9	-0.5
KBS	Kingsbay	83.02	350	P	P	12 32 12.2	-0.3
KBS	Kingsbay	83.02	350	eP	P	12 32 12.7	+0.2
KBS	Kingsbay	83.02	350	P	P	12 32 12.6	+0.2
KTK1	Kautokeino	83.03	339	eP	P	12 32 12.0	-0.7
FINES	FINESS Array B	83.43	331	P	P	12 32 14.1	-0.7
	comp=Z,14nm,0.8s,baz=90,slow=5.7,SNR=57						
FINES				LR	LR	13 12 10.6	
	comp=Z,163nm,19.5s,baz=79,slow=38						
	comp=Z,14nm,0.8s						
FINES	FINESS Array B	83.43	331		P	12 32 14.3	-0.5
AK09	Malin Array Si	83.62	320	P	P	12 32 14.7	-1.3
AK08	Malin Array Si	83.63	320	P	P	12 32 14.9	-1.2
AK03	Malin Array Si	83.64	320	P	P	12 32 14.8	-1.3
AKASG	Malin Array Be	83.64	320	P	P	12 32 14.6	-1.6
	comp=Z,8.5nm,0.9s,baz=70,slow=4.8,SNR=12						
AKASG				LR	LR	13 13 03.9	
	comp=Z,68nm,18.2s,baz=63,slow=38						
	comp=Z,8.5nm,0.9s						
AKASG	Malin Array Be	83.64	320	IAmb	IAmb	12 32 16.2	
	comp=Z,15nm,1.3s						
AKASG	Malin Array Be	83.64	320	i P	P	12 32 15.1	-1.1
AKASG				pmax	pmax		
	comp=Z,12nm,0.9s						
AKBB	Malin Array Si	83.64	320	IAmb	IAmb	12 32 15.8	
	comp=Z,13nm,1.0s						
AKBB	Malin Array Si	83.64	320	⇑iP	P	12 32 15.0	-1.2
AKBB	Malin Array Si	83.64	320	P	P	12 32 14.7	-1.5
AK10	Malin Array Si	83.64	320	P	P	12 32 15.0	-1.2
AK01	Malin Array Si	83.65	320	P	P	12 32 14.7	-1.5
KIEV	Kiev	83.65	320	P	P	12 32 14.7	-1.5
KIEV				IAmb	IAmb	12 32 15.8	
	comp=Z,12nm,1.0s						
KIEV	Kiev	83.65	320	⇓P	P	12 32 15.4	-0.9
KIEV	Kiev	83.65	320	P	P	12 32 15.3	-0.9
KIEV	Kiev	83.65	320	P	P	12 32 14.7	-1.5
	comp=Z,58nm,1.5s						
AK02	Malin Array Si	83.66	320	P	P	12 32 14.9	-1.4
AK04	Malin Array Si	83.67	320	P	P	12 32 14.6	-1.7
VSU	Vasula	83.68	328	⇑iP	P	12 32 14.9	-1.2
VSU				pmax	pmax		
	comp=Z,74nm,0.9s						
AK07	Malin Array Si	83.68	320	P	P	12 32 15.1	-1.3
AK11	Malin Array Si	83.68	320	P	P	12 32 14.8	-1.6
MNK	Minsk	83.78	324	i P	P	12 32 15.1	-1.7
MNK				i		12 35 28.4	
MNK				i PPP	PPP	12 37 20.6	
MNK				i S	SKSac	12 42 34.5	-1.6
MNK				i SS	SS	12 48 05.4	+1.4
MNK				i SSS	SSS	12 51 35.4	
MNK				pmax	pmax		
	comp=N,13nm,0.5s						
MNK				pmax	pmax		
	comp=E,14nm,0.7s						
MNK				pmax	pmax		
	comp=Z,30nm,0.7s						
MNK				MLR	MLR		
	comp=N,358nm,22.0s						
MNK				MLR	MLR		
	comp=Z,418nm,21.0s						
MNK				MLR	MLR		
	comp=E,283nm,24.0s						
JETT	Jettan, Norway	83.87	340	eP	P	12 32 16.9	-0.1
G30M	tAoh Zraii Nji	84.11	23	IAmb	IAmb	12 32 26.2	
	comp=Z,14nm,1.1s						
I30M	Mount Dempster	84.49	25	IAmb	IAmb	12 32 34.5	
	comp=Z,11nm,1.1s						
MI28	Mi28,Pidlybu	84.57	321	P	P	12 32 19.2	-1.7
SORM	Soroca	84.66	318	⇑P	P	12 32 20.4	-1.0
SORM	Soroca	84.66	318	P	P	12 32 20.3	-1.0
J30M	Hart River	84.67	25	IAmb	IAmb	12 32 50.2	
	comp=Z,14nm,1.4s						
LUBAR	Lubar, Ukraine	84.71	320	P	P	12 32 20.4	-1.2
INK	Inuvik	84.74	21	LR	LR	13 13 57.8	
	comp=Z,50nm,18.8s,baz=329,slow=38						
TLCR		84.89	315	⇑P	P	12 32 22.2	-0.4
TLCR		84.89	315	P	P	12 32 22.1	-0.4
TPGR	Topolog	85.22	315	⇑P	P	12 32 24.3	0.0
CFR	Carcaliu	85.36	315	⇓P	P	12 32 24.3	-0.6
CFR	Carcaliu	85.36	315	P	P	12 32 24.3	-0.6
RNPP9	Sopachiv	85.57	321	P	P	12 32 24.7	-1.2
RNPP8	Varash	85.61	321	P	P	12 32 25.2	-0.9
RNPP5	Staryi Chortor	85.61	321	P	P	12 32 25.1	-1.0
COSR	Cosmesti PH	85.80	316	⇑P	P	12 32 27.7	+0.6
KMPD	K-Podol'skiy	85.81	319	P	P	12 32 25.9	-1.2
KMPD				P	P	12 32 25.9	-1.2
KMPD				pP	pP	12 32 37.4	-3.0
PANC	Panciu	85.91	316	⇑P	P	12 32 28.0	+0.4
TESR	Tescani	86.11	316	⇑P	P	12 32 28.3	-0.4
STEI	Steigen	86.16	339	eP	P	12 32 27.0	-1.4
VRI	Vrincioaia	86.19	316	⇑P	P	12 32 29.3	+0.1
VRI	Vrincioaia	86.19	316	P	P	12 32 29.2	+0.1
PLOR	Plostina	86.25	316	⇑P	P	12 32 29.2	-0.2
PLOR	Plostina	86.25	316	P	P	12 32 29.2	-0.2
FAUS	Fauske	86.34	338	eP	P	12 32 27.3	-2.0
COVR	Voineasa-Covas	86.56	316	⇓P	P	12 32 30.0	-0.9
NEHR	Nehoiu	86.58	315	⇑P	P	12 32 31.5	+0.4
LODK	Lodwar	86.73	273		P	12 32 32.1	-0.4
MLR	Muntele Rosu	86.81	316	LR	LR	13 14 29.0	
	comp=Z,131nm,21.6s,baz=76,slow=38						
MLR	Muntele Rosu	86.81	316	⇑P	P	12 32 32.1	-0.2
MLR	Muntele Rosu	86.81	316	P	P	12 32 32.1	-0.2
BURAR	Bucovina Array	86.83	318	P	P	12 32 32.0	-0.3
BURAR	Bucovina Array	86.83	318	⇑P	P	12 32 32.0	-0.3
BURAR	Bucovina Array	86.83	318	P	P	12 32 32.0	-0.3
MOR8	Moi Rana	87.08	337	eP	P	12 32 30.7	-2.3
RAUS	Rausandaksla	87.13	338	eP	P	12 32 32.0	-1.3
C36M	Paulatuk	87.56	19	IAmb	IAmb	12 32 47.0	
	comp=Z,7.2nm,0.7s						
VLAD	Vladila	88.22	314	⇓P	P	12 32 38.3	-0.6
MARR	Marisel-Cluj	88.44	317	⇑P	P	12 32 39.7	-0.4
NSS	Namsos	88.66	336	eP	P	12 32 38.8	-1.7
DRGR		88.69	317	⇓P	P	12 32 40.0	-1.2
DRGR		88.69	317	P	P	12 32 40.0	-1.2
STHS	Stebnicka Huta	88.94	320	eP	P	12 32 42.2	-0.1
STHS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
STHS	Stebnicka Huta	88.94	320	eP	P	12 32 42.2	-0.1
MAW	Mawson	89.35	199	LR	LR	13 11 57.3	
	comp=Z,24nm,18.3s,baz=57,slow=35						
HFS	Hagfors	89.62	332	P	P	12 32 43.9	-1.3
	comp=Z,8.7nm,0.8s,baz=67,slow=3.7,SNR=19						
HFS				LR	LR	13 17 24.1	
	comp=Z,178nm,18.4s,baz=59,slow=38						
	comp=Z,8.7nm,0.8s						
LANS	Liptovska Anna	90.13	320	eP	P	12 32 48.2	+0.3
LANS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LANS	Liptovska Anna	90.13	320	eP	P	12 32 48.1	+0.2
PSZ	Piszkesteto	90.22	319	IAmb	IAmb	12 32 48.5	
	comp=Z,5.9nm,0.9s						
PSZ	Piszkesteto	90.22	319	⇑P	P	12 32 47.3	-1.0
PSZ	Piszkesteto	90.22	319	P	P	12 32 47.3	-1.0
NC303	NORSAR Array S	90.25	333	IAmb	IAmb	12 32 48.5	
	comp=Z,12nm,1.1s						
NC602	NORSAR Array S	90.37	333	eP	P	12 32 47.3	-1.3
NB2	NORSAR Subarra	90.39	333	P	P	12 32 46.9	-1.9
	comp=Z,7.9nm,0.8s,baz=66,slow=4.6						
NB2	NORSAR Subarra	90.39	333	P	P	12 32 46.9	-1.9
	baz=66,slow=4.6						
NOA	NORSAR Array B	90.39	333	P	P	12 32 47.1	-1.7
	comp=Z,4.4nm,0.7s,baz=66,slow=4.8,SNR=33						
NOA				LR	LR	13 16 26.0	
	comp=Z,225nm,21.3s,baz=65,slow=38						
	comp=Z,4.4nm,0.7s						
DOMB	Dombas	90.90	334	eP	P	12 32 50.0	-1.1
STEB	Steborice	90.94	321	eP	P	12 32 51.0	-0.6
MORC	Moravsky Berou	91.13	321	IAmb	IAmb	12 32 52.6	
	comp=Z,7.2nm,1.1s						
MORC	Moravsky Berou	91.13	321	⇓P	P	12 32 52.4	-0.2
MORC	Moravsky Berou	91.13	321	eP	P	12 32 52.1	-0.4
MORC	Moravsky Berou	91.13	321	P	P	12 32 52.3	-0.2
PPT	Papeete	91.18	108	LR	LR	13 12 50.8	
	comp=Z,45nm,18.5s,baz=38,slow=35						
PPT2	Papeete2	91.19	108	eLR	LR	13 01 55.1	
	comp=Z,83nm,23.0s						
RES	Resolute Bay	91.21	9	LR	LR	13 16 54.2	
	comp=Z,40nm,19.4s,baz=16,slow=38						
VNDA	Vanda	91.28	172	P	P	12 32 50.9	-1.6
	comp=Z,1.6nm,0.6s,baz=319,slow=5.7,SNR=6.7						
	comp=Z,1.6nm,0.6s						
VNDA	Vanda	91.28	172	P	P	12 32 53.0	+0.6
VNDA				IAmb	IAmb	12 32 58.7	
	comp=Z,6.2nm,1.2s						
JAVC	Velka Javorina	91.35	320	eP	P	12 32 54.2	+0.7
DPC	Dobruska-Polom	91.69	322	eP	P	12 32 54.7	-0.4
DPC	Dobruska-Polom	91.69	322	eP	P	12 32 54.7	-0.4
AKN	Aaknes	91.70	335	eP	P	12 32 54.3	-0.6
JMIC	Jan Mayen	91.72	346	LR	LR	13 19 55.7	
	comp=Z,78nm,18.1s,baz=86,slow=39						
SKAR	Skarslia	91.83	333	eP	P	12 32 55.0	-0.6
VRAC	Vranov	91.87	321	LR	LR	13 16 16.3	
	comp=Z,117nm,21.6s,baz=64,slow=37						
VRAC	Vranov	91.87	321	eP	P	12 32 55.8	-0.1
MBAR	Mbarara	92.03	270	LR	LR	13 10 22.6	
	comp=Z,110nm,21.7s,baz=92,slow=33						
TBI	Tubuai	92.40	113	eLR	LR	13 02 30.0	
	comp=Z,751nm,27.5s						
TREC	Trest	92.56	321	eP	P	12 32 58.6	-0.5
TREC	Trest	92.56	321	eP	P	12 32 58.6	-0.5
RONA	Rosalia, Austr	92.59	320	i P	P	12 32 58.8	-0.6
	comp=Z,2.5nm,0.7s						
CONA	Conrad Observa	92.79	320	i P	P	12 32 60.0	-0.3
	comp=Z,6.8nm,1.4s						
PRU	Pruhonice	92.89	322	eP	P	12 33 00.0	-0.6
PRU	Pruhonice	92.89	322	eP	P	12 33 00.0	-0.6
BLS5	Blasjo	93.23	333	eP	P	12 33 01.0	-1.0
ARSA	Arzberg	93.24	319	i P	P	12 33 01.7	-0.6
	comp=Z,2.6nm,0.9s						
ZVC	Zvikov	93.30	322	eP	P	12 33 02.1	-0.4
CLL	Collm	93.31	324	i P	P	12 33 01.4	-1.1
CLL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CLL				MLR	MLR		
	comp=Z,200nm,20.3s						
CLL	Collm	93.31	324	i P	P	12 33 01.4	-1.1
	comp=Z,5.0nm,0.8s						
CLL				i x	x	12 33 08.2	
CLL				AMS	AMS	13 17 00.0	
	comp=Z,200nm,20.3s						
CKRC	Cesky Krumlov	93.45	321	eP	P	12 33 03.0	-0.2
CKRC	Cesky Krumlov	93.45	321	eP	P	12 33 03.0	-0.2
SOKA	Soboth	93.75	319	i P	P	12 33 03.7	-1.1
	comp=Z,4.7nm,1.1s						
KHC	Kasperske Hory	93.78	322	IAmb	IAmb	12 33 04.7	
	comp=Z,6.3nm,1.1s						
KHC	Kasperske Hory	93.78	322	eP	P	12 33 04.2	-0.6
KHC				MLR	MLR		
	comp=Z,200nm,17.7s						
KHC	Kasperske Hory	93.78	322	eP	P	12 33 04.2	-0.6
KHC				AMS	AMS	13 17 00.0	
	comp=Z,200nm,17.7s						
GERES	GERESS Array B	93.81	321	P	P	12 33 03.9	-1.1
	comp=Z,4.8nm,0.9s,baz=58,slow=5.3,SNR=32						
GERES				LR	LR	13 18 32.7	
	comp=Z,93nm,18.6s,baz=53,slow=38						
	comp=Z,4.8nm,0.9s						
MOA	Molln	93.83	320	eP	P	12 33 04.8	-0.2
	comp=Z,9.0nm,0.8s						
BIOA	Bad Ischl, Aus	94.28	320	i P	P	12 33 06.3	-0.7
	comp=Z,2.7nm,0.7s						
YKA	Yellowknife Ar	94.34	23	P	P	12 33 06.7	-0.2
	comp=Z,2.2nm,1.0s,baz=305,slow=5.2,SNR=23						
	comp=Z,2.2nm,1.0s						
YKA	Yellowknife Ar	94.34	23	i P	P	12 33 07.0	0.0
YKA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
YKAW1	Yellowknife Wh	94.40	23	IAmb	IAmb	12 33 14.7	
	comp=Z,6.8nm,1.1s						
LESA	Schwarzleotal	94.98	320	i P	P	12 33 09.3	-1.1
	comp=Z,3.7nm,0.6s,SNR=4.3						
GRF	Grafenberg Arr	94.99	323	eP	P	12 33 10.2	-0.1
	comp=Z,13nm,0.9s,baz=67,slow=4.0						
WTTA	Wattenberg	95.70	320	i P	P	12 33 12.7	-1.0
	comp=Z,9.9nm,0.7s,SNR=11						
WATA	Walderalm	95.70	320	i P	P	12 33 12.6	-1.2
	comp=Z,8.3nm,1.1s						
SQTA	Sankt Quirin	95.98	320	i P	P	12 33 13.9	-1.0
	comp=Z,8.2nm,0.8s,SNR=5.4						
FETA	Feichten	96.36	320	i P	P	12 33 16.0	-0.8
	comp=Z,6.5nm,0.9s						
DAVA	Damuels	96.78	321	i P	P	12 33 18.0	-0.7
	comp=Z,6.3nm,1.3s						
DAVOX	Davos/Dischmat	96.99	320	LR	LR	13 20 06.0	
	comp=Z,94nm,20.9s,baz=76,slow=37						
LSZ	Lusaka	97.17	256	LR	LR	13 12 17.2	
	comp=Z,86nm,19.1s,baz=128,slow=32						
TAOE	Nuku Hiva Isla	98.64	97	eLR	LR	13 05 28.5	
	comp=Z,312nm,26.1s						
BORG	Borgarnes	99.60	345	LR	LR	13 21 13.7	
	comp=Z,84nm,21.8s,baz=24,slow=37						
EKA	Eskdalemuir Ar	99.82	332	LR	LR	13 24 24.1	
	comp=Z,270nm,18.0s,baz=12,slow=39						
NVAR	Mina Array Bea	104.75	45	Pdiff	Pdif	12 33 54.6	+0.1
	comp=Z,0.5nm,0.7s,baz=307,slow=0.7,SNR=5.1						
TORD	Torodi Ar. Bea	116.67	291	PKP	PKPdf	12 38 31.1	-1.5
	comp=Z,1.2nm,0.8s,baz=41,slow=3.3,SNR=5.6						
TXAR	Lajitas Array	119.84	47	PKP	PKiKP	12 38 38.5	-0.1
	comp=Z,0.8nm,0.9s,baz=330,slow=2.7,SNR=6.8						
JCT	Junction City	121.84	43		PKiKP	12 38 42.4	-0.1
DBIC	Dimbokro	124.88	286	PKP	PKiKP	12 38 48.6	-0.2
	comp=Z,2.5nm,0.7s,baz=90,slow=5.1,SNR=3.5						
LL02	Futaleuf	145.68	161		PKPbc	12 39 26.2	-0.3
DR12	Loma Pena Alta	147.94	22		PKPbc	12 39 34.3	+0.6
PLCA	Paso Flores	148.32	161	PKPbc	PKPbc	12 39 33.2	-1.0
	comp=Z,3.9nm,0.9s,baz=202,slow=2.9,SNR=6.6						
PLCA	Paso Flores	148.32	161		PKPbc	12 39 34.1	0.0
LPAZ	La Paz	168.32	117	PKP	PKPdf	12 39 55.9	0.0
	comp=Z,2.0nm,0.8s,baz=335,slow=1.8,SNR=4.8						

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*IDC **26** 12:40:06.6±5.4, 5°.50S×152°.47E, h50km±47km, mb3.8/12, mbtmp4.1/13, ML1.5/1, MS3.2/1, Error ellipse: s-maj=44.5km s-min=26.7km az=124.0*

ISC 26 12:40:05.7±1.5**, 5°.4S**±0°.2×**152°.5E**±0°.3**, h40km, n15,** σ0s.89/15**, mb4.0**/12**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.60	233	P	Pn	12 41 41.5	+1.2
	0.7nm,0.3s,baz=39,slow=8.6,SNR=9.4						
PMG				S	Sn	12 42 54.0	-0.4
	101nm,0.8s,baz=126,slow=15,SNR=9.7						
	16nm,0.8s						
WRA	Warramunga Arr	22.80	229	P	P	12 45 04.1	-1.2
	1.2nm,0.6s,baz=54,slow=9.9,SNR=18						
	1.2nm,0.6s						
ASAR	Alice Springs	25.48	223	P	P	12 45 29.8	-0.7
	1.2nm,0.7s,baz=58,slow=9.5,SNR=19						
	1.2nm,0.7s						
MJAR	Matsushiro Arr	43.83	343	LR	LR	13 05 56.2	
	comp=Z,28nm,19.8s,baz=174,slow=35						
CMAR	Chiang Mai Arr	57.85	296	P	P	12 49 53.4	-0.5
	0.9nm,0.3s,baz=113,slow=7.7,SNR=5.6						
	0.9nm,0.3s						
PETK	Petropavlovsk-	58.47	4	P	P	12 49 57.2	-0.4
	7.8nm,1.1s,baz=212,slow=7.6,SNR=1.2						
	7.8nm,1.1s						
SONM	Songino Array	66.67	328	P	P	12 50 53.1	+0.5
	0.7nm,0.6s,baz=137,slow=5.3,SNR=3.8						
	0.7nm,0.6s						
MKAR	Makanchi Array	80.58	319	P	P	12 52 14.4	+0.2
	0.5nm,0.6s,baz=92,slow=7.6,SNR=5.1						
	0.5nm,0.6s						
ZALV	Zalesovo Beam	81.49	326	P	P	12 52 17.9	-0.9
	0.4nm,0.4s,baz=103,slow=4.7,SNR=4.8						
	0.4nm,0.4s						
ILAR	Eielson Array	82.84	22	P	P	12 52 25.2	-0.4
	2.3nm,0.8s,baz=246,slow=5.5,SNR=34						
	2.3nm,0.8s						
KURBB	Kurchatov Arra	84.09	322	P	P	12 52 32.4	+0.1
	1.5nm,0.8s,baz=105,slow=4.2,SNR=8.1						
	1.5nm,0.8s						
AAK	Ala-Archa	84.86	314	P	P	12 52 38.2	+1.5
	1.5nm,0.8s,baz=151,slow=5.8,SNR=4.4						
	1.5nm,0.8s						
BVAR	Borovoye Array	89.54	323	P	P	12 52 58.1	-0.8
	1.7nm,0.6s,baz=104,slow=6.3,SNR=8.8						
	1.7nm,0.6s						
YKA	Yellowknife Ar	96.11	28	P	P	12 53 29.9	+1.0
	0.3nm,0.6s,baz=275,slow=5.4,SNR=4.2						
	0.3nm,0.6s						
TORD	Torodi Ar. Bea	150.19	287	PKPbc	PKPbc	12 59 52.8	-0.7
	0.8nm,0.7s,baz=57,slow=3.5,SNR=5.3						

GCG 26 12:42:14.1±0.9**, 13°.70N×91°.20W, h20km**±12km**, MD3.8, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG5	El Palmar, Qui	0.71	349	i P	Pn	12 42 33.5	+4.3
STG8	El Palmar, Qui	0.76	349	i P	Pn	12 42 34.5	+4.6
ESSG	Sabana Grande	0.77	28	i P	Pb	12 42 28.4	-0.5
ESSG				i S	Sb	12 42 39.6	+0.7
FG16	Alotenango, Sa	0.88	50	i P	Pb	12 42 29.8	-1.1
SOKI	Kika Raxquin	1.13	350	i P	Pb	12 42 35.2	0.0
SOKI				i S	Sn	12 42 51.6	+1.3
APG	El Apazote	1.48	29	i P	Pn	12 42 40.3	+0.5

DJA 26 12:58:14.4±0.3**, 8°S**±5°×**10°9E**±°**, h50km**±13km**, M3.7**/13**, mB5.4**/1**, mb3.9**/4**, MLv3.6**/13**, Mw(mB)4.8**/1**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KPJI	Karang Pucung	1.15	8	P	Pn	12 58 34.5	+0.3
KPJI				S	Sn	12 58 49.5	+0.6
BBJI	Bungbulang	1.49	313	P	Pn	12 58 39.0	+0.1
CTJI	Waduk Cacaban	1.52	16	P	Pn	12 58 39.2	0.0
YOGI	Yogyakarta	1.66	67	P	Pn	12 58 40.8	-0.3
UGM	Wanagama	1.83	72	P	Pn	12 58 42.9	-0.6
CNJI	Cibinong	1.99	306	P	Pn	12 58 45.5	-0.1
SMRI	Semarang	2.19	50	P	Pn	12 58 48.4	0.0
PCJI	Pacitan	2.41	83	P	Pn	12 58 51.7	+0.3
SNJI	Sawahan-Nganju	3.05	77	P	Pn	12 59 01.1	+0.8
SJI	Sawahan	3.07	76	P	Pn	12 59 01.3	+0.8
GMJI	Gumukmas	4.64	88	P	Pn	12 59 22.9	+0.9
KASI	Kota Agung	5.15	304	P	Pn	12 59 29.5	+0.5
	0.1nm15nm,1.1s						
KLSI		5.50	313	P	Pn	12 59 33.3	-0.5
EGSI	Enggano, Bengk	7.15	295	P	Pn	12 59 55.0	-1.4
TWSI	Taliwang, Sumb	8.04	92	P	Pn	13 00 08.3	-0.3
	9.0nm,1.2s						
KAPI	Kappang	11.45	73	P	Pn	13 00 53.0	-2.3
	5.1nm,0.4s						

IDC 26 13:09:45.9±6.0**, 30°.46S×177°.90W, h0km, mb3.4**/2**, mbtmp3.4**/2**, Error ellipse: s-maj=288.6km s-min=45.2km az=158.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.20	267	P	P	13 17 48.8	-0.1
	0.3nm,0.8s,baz=106,slow=7.5,SNR=5.2						
	0.3nm,0.8s						
WRA	Warramunga Arr	44.19	272	P	P	13 17 56.7	-0.2
	0.3nm,0.3s,baz=110,slow=8.1,SNR=7.8						
	0.3nm,0.3s						
FINES	FINESS Array B	145.23	340	PKPbc	PKPbc	13 29 23.2	-1.3
	0.5nm,0.5s,baz=48,slow=2.8,SNR=6.9						
HFS	Hagfors	149.32	349	PKPbc	PKPbc	13 29 36.1	+0.1
	1.4nm,0.9s,baz=17,slow=1.5,SNR=5.8						

IDC 26 13:28:31.1±4.3**, 7°.46S×127°.90E, h286km**±46km**, mb2.9**/2**, mbtmp3.9**/6**, Error ellipse: s-maj=54.0km s-min=18.1km az=56.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.00	237	P	Pn	13 29 48.1	-0.1
	123nm,0.5s,baz=65,slow=14,SNR=45						
BATI				S	S	13 30 50.6	+0.6
	32nm,0.4s,baz=31,slow=18,SNR=8.5						
FITZ	Fitzroy Crossi	10.80	192	P	Pn	13 30 58.5	-0.8
	3.2nm,0.4s,baz=26,slow=13,SNR=55						
FITZ				S	S	13 33 01.2	+0.9
	0.8nm,0.3s,baz=132,slow=18,SNR=1.8						
WRA	Warramunga Arr	13.89	154	P	P	13 31 34.8	-2.0
	0.8nm,0.3s,baz=329,slow=12,SNR=19						
WRA				S	S	13 34 08.3	-1.9
	2.5nm,0.8s,baz=329,slow=20,SNR=8.9						
ASAR	Alice Springs	17.11	161	P	P	13 32 13.2	+1.1
	1.3nm,0.5s,baz=346,slow=12,SNR=42						
ASAR				S	S	13 35 16.5	+0.9
	0.5nm,0.8s,baz=341,slow=24,SNR=6.6						
STKA	Stephens Creek	27.44	154	P	P	13 33 51.1	-0.1
	0.7nm,0.3s,baz=348,slow=11,SNR=4.1						
	0.7nm,0.3s						
MKAR	Makanchi Array	67.49	328	P	P	13 38 56.7	+0.1
	0.1nm,0.5s,baz=140,slow=8.1,SNR=2.2						
	0.1nm,0.5s						

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*RSNC **26** 13:57:25.9±0.3, 1°S±2°×7°9W±°, h122km±4km, M3.9, mb3.9, mB4.8, ML3.2, Mw(mB)4.0, MwMwp5.9, Mwp6.0*

*IGQ **26** 13:57:27.9±0.2, 1°S±1°×7°9W±°, h101km±3km, MLv3.8/48*

ISC 26 13:57:26.0±1.3**, 0°.88S**±0°.03×**79°.22W**±0°.04**, h121km**±7km**, n122,** σ1s.48/147**, 33C-14D, Ecuador**

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

ILLI	Illinizas Sur	0.52	71	S	Sn	13 57 58.3	-0.7
ILLI				P	Pn	13 57 44.8	0.0
PAST	Pastocalle	0.61	72	P	Pn	13 57 45.8	+0.5
ASDO	Santo Domingo	0.62	9	S	Sn	13 57 57.2	-2.1
ASDO				P	Pn	13 57 44.3	-0.7
ASLC	Ecuador-Salced	0.65	104	P	Pn	13 57 45.6	+0.1
CHSH	Refugio Sur-Vo	0.70	150	⇓P	Pn	13 57 46.6	+0.4
CHSH				S	Sn	13 58 03.3	+2.0
SLOR	San Lorenzo -	0.74	78	⇑P	Pn	13 57 46.9	+0.5
CAMI	Rancho Maria	0.74	74	⇑P	Pn	13 57 47.2	+0.8
SUCR	Mariscal Sucre	0.76	72	⇑P	Pn	13 57 47.3	+0.8
BMOR	Cotopaxi Volca	0.77	79	⇓P	Pn	13 57 47.3	+0.6
TAMH	Tambohuasha Ch	0.79	146	⇓P	Pn	13 57 47.3	+0.5
TAMH				S	Sn	13 58 05.4	+3.0
BREF	Cotopaxi Volca	0.81	75	⇑P	Pn	13 57 47.9	+0.8
FLF1	Flavio Alfaro-	0.81	310	⇑P	Pn	13 57 47.2	+0.7
FLF1	Flavio Alfaro-	0.81	310	P	Pn	13 57 47.0	+0.5
FLF1				S	Sn	13 58 01.1	-0.9
VCES	Cotopaxi	0.83	84	⇑P	Pn	13 57 47.6	+0.4
IGUA	Igualata	0.84	136	⇓P	Pn	13 57 47.4	+0.1
BVC2	Cotopaxi Volca	0.84	74	⇑P	Pn	13 57 47.9	+0.7
PECV	Mancha de Ca P	0.84	277	P	Pn	13 57 50.9	+4.2
BTAM	Cotopaxi Volca	0.85	76	⇑P	Pn	13 57 47.9	+0.6
PITA	Cotopaxi Volc	0.85	68	⇑P	Pn	13 57 48.0	+0.8
VC1	Cotopaxi 1	0.85	74	⇑P	Pn	13 57 48.1	+0.7
PIS1	Pisayambo	0.85	102	⇓P	Pn	13 57 47.6	+0.3
JSCH	Cashca Tororas	0.86	164	⇓P	Pn	13 57 47.3	0.0
TAMB	Tambo	0.87	78	⇑P	Pn	13 57 48.2	+0.7
TOMA	Boca Toma-Volc	0.87	64	⇑P	Pn	13 57 48.3	+0.9
GGPT	Toaza - Volcan	0.89	42	⇑P	Pn	13 57 48.3	+0.8
JUA2	San Juan 2	0.90	43	⇑P	Pn	13 57 48.7	+0.9
BIL2	Estacion Bilba	0.91	128	P	Pn	13 57 47.8	+0.2
BBIL	Ulba Tungurahu	0.92	128	⇓P	Pn	13 57 47.8	0.0
TERV	Terraza Guagua	0.93	41	⇑P	Pn	13 57 49.0	+0.9
GGPC	Guagua Pichinc	0.94	42	⇑P	Pn	13 57 49.2	+1.0
PINO	Pino	0.94	40	⇑P	Pn	13 57 49.1	+0.8
ABAB	Ecuador-Univer	0.96	198	P	Pn	13 57 47.4	-0.3
TING	Casa Alexandra	0.97	52	P	Pn	13 57 49.4	+1.2
APR2	Miler	0.99	15	P	Pn	13 57 48.4	+0.3
CIVI	Edificio de In	0.99	47	P	Pn	13 57 49.8	+1.3
BPAT	Tungurahua Vol	1.00	128	⇓P	Pn	13 57 48.7	0.0
YANA	Yana	1.00	40	⇑P	Pn	13 57 49.4	+0.8
ANTG	Antisana-Guama	1.03	69	⇑P	Pn	13 57 49.9	+0.8
BV15	Puerto Quito-O	1.03	360	⇑P	Pn	13 57 48.3	-0.2
ANTM	Antisana-La Mi	1.05	71	P	Pn	13 57 50.2	+1.0
ANTS	Antisana-Sarah	1.11	70	⇑P	Pn	13 57 50.8	+0.9
PUEM	Granja Avicola	1.13	49	⇑P	Pn	13 57 51.3	+1.6
ANTI	Antisana	1.14	68	P	Pn	13 57 51.4	+1.2
PULU	Pululahua	1.15	39	P	Pn	13 57 51.2	+1.1
ABH2	Ecuador-Univer	1.20	281	P	Pn	13 57 52.6	+2.4
AV18	Acelerografo,	1.22	348	⇑P	Pn	13 57 51.3	+0.9
PAC1	Pacto, Paraso	1.22	20	⇑P	Pn	13 57 51.2	+0.6
PAC1	Pacto, Paraso	1.22	20	P	Pn	13 57 51.1	+0.6
PAC1				S	Sn	13 58 09.8	+0.6
AMIL	Milagro (Trans	1.30	197	P	Pn	13 57 51.0	-0.3
CAB1	Cabo Pasado-Ma	1.31	292	P	Pn	13 57 52.7	+1.3
PUYO	Puyo, Santa Ro	1.34	117	P	Pn	13 57 52.7	+0.9
APUY	Puyo	1.35	115	P	Pn	13 57 52.1	+0.2
OTAV	Otavalo	1.35	35	⇑P	Pn	13 57 53.3	+1.0
OTAV	Otavalo	1.35	35	P	Pn	13 57 52.6	+0.3
OTAV				S	Sn	13 58 12.6	+0.3
AGUAY	Guayaquil	1.38	212	P	Pn	13 57 51.3	-0.8
ARDO	Archidona, Ten	1.42	94	⇓P	Pn	13 57 53.5	+0.8
JIPI	JIPIJAPA	1.42	250	⇓P	Pn	13 57 53.1	+0.4
MILO	Milagro-Astudi	1.43	194	⇓P	Pn	13 57 51.1	-1.6
GYE3	Ecuador-Guayaq	1.44	208	P	Pn	13 57 51.3	-1.5
SANGA	Volcan Sangay	1.44	144	P	Pn	13 57 53.7	+0.4
CUSE	Cuicocha Este	1.44	35	⇑P	Pn	13 57 54.5	+1.2
CUSE	Cuicocha Este	1.44	35	P	Pn	13 57 54.2	+0.9
CUSE				S	Sn	13 58 15.2	+1.3
CUIC	Cuicocha-Domo	1.46	36	⇑P	Pn	13 57 54.9	+1.4
AC07	Ecuador-Guayaq	1.47	211	P	Pn	13 57 52.6	-0.7
COTA	Cotacachi	1.50	36	P	Pn	13 57 55.8	+1.8
CAYR	Refugio Cayamb	1.50	54	P	Pn	13 57 55.9	+1.7
ANGU	Angureal	1.52	53	P	Pn	13 57 56.0	+1.6
IMBA	Imbabura, San	1.54	41	P	Pn	13 57 56.8	+2.4
AV21	Acelerografo,	1.57	348	P	Pn	13 57 55.4	+1.1
COHC	Cochancay	1.57	181	⇓P	Pn	13 57 53.4	-1.0
COHC	Cochancay	1.57	181	P	Pn	13 57 53.7	-0.7
COHC				S	Sn	13 58 14.1	-1.9
URCU	Urcuqui	1.63	36	⇑P	Pn	13 57 57.3	+1.9
PPLP	Puerto Lpez	1.69	247	P	Pn	13 57 55.5	-0.3
PPLP	Puerto Lpez	1.69	247	⇑P	Pn	13 57 55.8	0.0
PPLP	Puerto Lpez	1.69	247	P	Pn	13 57 55.7	-0.1
YAHU	Yahuarcocha	1.69	43	P	Pn	13 57 58.2	+2.0
REVS	Reventador Sur	1.77	64	P	Pn	13 57 58.5	+1.5
REVN	San Rafael	1.78	63	P	Pn	13 57 58.9	+1.8
PKYU	Pakayacu	1.79	115	⇓P	Pn	13 57 58.3	+1.3
AMA1	Acelerografo,	1.88	344	P	Pn	13 58 00.1	+2.0
ISPT	Isla de la Pla	1.89	259	⇑P	Pn	13 57 58.5	+0.3
RVRD	Rio Verde	1.94	355	P	Pn	13 58 00.2	+1.3
LNGL	El Angel-Carch	2.02	37	P	Pn	13 58 01.9	+1.6
ACUE	Ecuador-Cuenca	2.03	173	P	Pn	13 58 02.3	+2.0
MORR	Playas El Morr	2.07	213	⇑P	Pn	13 58 01.0	+0.5
CHMA	Chilma	2.08	34	P	Pn	13 58 02.1	+1.2
CHL1	Volc¡n Chiles	2.09	37	P	Pn	13 58 03.3	+2.0
CHL2	Volc¡n Chiles	2.12	38	P	Pn	13 58 03.6	+2.0
BONI	La Bonita	2.15	52	P	Pn	13 58 03.5	+1.9
BONI	La Bonita	2.15	52	P	Pn	13 58 03.0	+1.4
SNLR	San Lorenzo-Es	2.19	10	⇑P	Pn	13 58 03.3	+1.4
SALI	Salinas	2.19	234	P	Pn	13 58 02.6	+0.6
TAIS	Taisha	2.27	131	P	Pn	13 58 04.6	+1.6
CMBC	Cumbal	2.29	38	P	Pn	13 58 08.4	+4.8
PCRA	Pucara 2	2.33	187	⇓P	Pn	13 58 03.6	-0.5
BOSC	San Juan Bosco	2.37	162	P	Pn	13 58 07.0	+2.7
TUMC	Tumaco	2.73	10	P	Pn	13 58 10.9	+2.0
TUMC	Tumaco	2.73	10	P	Pn	13 58 10.4	+1.5
TUMC				S	Sn	13 58 43.9	+2.0
ARNL	Arenillas	2.78	198	⇑P	Pn	13 58 09.2	-0.3
GCUF	Volcan Galeras	2.81	42	P	Pn	13 58 12.2	+1.8
CRUC	La Cruz	3.33	43	P	Pn	13 58 18.5	+1.5
GONZ	Gonzanam	3.34	183	P	Pn	13 58 19.1	+1.9
BBAC	Balboa, Cauca	3.49	34	P	Pn	13 58 19.0	-0.1
BBAC				S	Sn	13 59 03.7	+3.6
AMCR	Ecuador-Macara	3.54	192	P	Pn	13 58 19.9	+0.3
MCRA	Macar, Loja	3.54	192	P	Pn	13 58 19.4	-0.1
MCRA	Macar, Loja	3.54	192	P	Pn	13 58 19.2	-0.4
MCRA				S	Sn	13 58 58.8	-2.2
ZUMB	Zumba	3.96	179	P	Pn	13 58 27.0	+1.8
GR1C	Gorgona, Isla	4.00	15	P	Pn	13 58 26.9	+1.3
GR1C				S	Sn	13 59 08.7	-3.1
POPC	Popayan, Colom	4.25	37	P	Pn	13 58 30.2	+1.1
POPC				S	Sn	13 59 17.4	-0.6
FLOC	Florencia	4.33	56	P	Pn	13 58 29.6	-0.4
FLOC				S	Sn	13 59 16.5	-3.2
PTLC	Puerto Leguiza	4.54	77	P	Pn	13 58 33.1	+0.2
JAMC	Jamundi, Valle	4.80	32	P	Pn	13 58 37.4	+0.9
JAMC				S	Sn	13 59 29.8	-1.5
GARC	Garzon, Huila	4.81	51	P	Pn	13 58 37.9	+1.2
GARC				S	Sn	13 59 32.2	+0.5
YOTC	Yotoco, Valle	5.62	31	P	Pn	13 58 46.6	-0.9
	645nm6.2nm,0.5s						
YOTC				S	Sn	13 59 47.2	-3.8
	645nm6.2nm,0.5s						
MACC	Macarena, Meta	6.16	61	P	Pn	13 58 55.6	+1.0
	19nm,0.7s						
MACC				S	Sn	14 00 03.3	-0.5
	19nm,0.7s						
ORTC	Ortega, Tolima	6.20	40	P	Pn	13 58 54.9	-0.3
	11nm,0.6s						
ORTC				S	Sn	14 00 05.2	+0.3
	11nm,0.6s						
PRAC	Prado	6.29	43	P	Pn	13 58 56.4	-0.1
	15nm,0.5s						
PRAC				S	Sn	14 00 05.4	-1.7
	15nm,0.5s						
PLMC	San Jos del P	6.45	27	P	Pn	13 58 55.5	-3.2
PLMC				S	Sn	14 00 05.2	-5.9
ANIL	Santa Ana	6.56	35	P	Pn	13 58 58.8	-1.5
ANIL				S	Sn	14 00 10.9	-3.1
CBOC	Ciudad Bolivar	7.43	25	P	Pn	13 59 12.0	0.0
	4.5nm,1.1s						
CBOC				S	Sn	14 00 32.1	-2.7
	4.5nm,1.1s						
CHIC	Chingaza	7.75	45	P	Pn	13 59 17.4	+0.9
	11nm,0.5s						
CHIC				S	Sn	14 00 42.8	-0.1
	11nm,0.5s						
PTAC	Punta Ardita,	8.10	10	P	Pn	13 59 21.5	+0.6
PTAC				S	Sn	14 00 50.0	-0.9

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*DNK **26** 14:48:17.5±0.9, 67°.82N×20°.25E, h0^{km}, ML2.8(UPP), Suspected explosion*

*UPP **26** 14:48:17.3±0.3, 67°.82N×20°.21E, h2^{km}±3^{km}, ML2.8, Confirmed Induced event*

*IDC **26** 14:48:17.0±0.7, 67°.81N×20°.53E, h0^{km}, mbtmp3.2/5, ML2.4/5, Error ellipse: s-maj=13.1km s-min=5.7km az=118.0*

*HEL **26** 14:48:17.7±0.0, 67°.83N×20°.21E, h1^{km}, ML2.3, ML2.8(UPP), Confirmed Induced event*

ISC 26 14:48:15.9±0.7**, 67°.79N**±0°.02×**20°.27E**±0°.02**, h0**^{km}**, n44, σ0^{s}.84**/64**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.17	9	P	Pg	14 48 20.0	+0.9
	baz=189						
KUA				S	Sg	14 48 21.9	+0.5
KUA	Kurravaara	0.17	9	P	Pg	14 48 20.0	+0.9
	baz=189						
KUA				S	Sg	14 48 21.9	+0.5
KUA	Kurravaara	0.17	9	iP	Pg	14 48 20.0	+0.9
KUA				iS	Sg	14 48 21.9	+0.5
RATU	Laukkuluspa	0.26	279	P	Pg	14 48 21.8	+1.0
RATU				S	Sg	14 48 25.0	+0.8
RATU	Laukkuluspa	0.26	279	P	Pg	14 48 21.8	+1.0
RATU				S	Sg	14 48 25.0	+0.8
RATU	Laukkuluspa	0.26	279	iP	Pg	14 48 21.8	+1.0
RATU				iS	Sg	14 48 25.0	+0.8
NIKU	Nikkaluokta	0.47	280	P	Pg	14 48 25.6	+0.7
NIKU				S	Sg	14 48 31.8	+0.8
NIKU	Nikkaluokta	0.47	280	P	Pg	14 48 25.6	+0.7
NIKU				S	Sg	14 48 31.8	+0.8
NIKU	Nikkaluokta	0.47	280	iP	Pg	14 48 25.6	+0.7
NIKU				iS	Sg	14 48 31.8	+0.8
DUNU	Dundret	0.68	170	P	Pb	14 48 30.6	0.0
DUNU	Dundret	0.68	170	P	Pb	14 48 30.6	0.0
DUNU	Dundret	0.68	170	iP	Pb	14 48 30.6	0.0
LANU	Lannavaara	0.70	67	P	Pb	14 48 30.5	-0.5
LANU	Lannavaara	0.70	67	P	Pb	14 48 30.5	-0.5
LANU	Lannavaara	0.70	67	eP	Pb	14 48 30.5	-0.5
LANU				eS	Sb	14 48 40.3	-1.0
MASU	Masugnsbyn	0.74	116	P	Pb	14 48 31.7	0.0
MASU	Masugnsbyn	0.74	116	P	Pb	14 48 31.7	0.0
MASU	Masugnsbyn	0.74	116	iP	Pb	14 48 31.7	0.0
SALU	Saltoluokta	0.79	240	P	Pb	14 48 32.0	-0.5
SALU	Saltoluokta	0.79	240	eP	Pg	14 48 31.8	+0.8
SALU	Saltoluokta	0.79	240	P	Pb	14 48 32.0	-0.5
SALU	Saltoluokta	0.79	240	iP	Pb	14 48 32.0	-0.5
KIF	Kilpisjarvi	1.24	9	eP	Pb	14 48 40.2	+0.1
KIF	Kilpisjarvi	1.24	9	eP	Pb	14 48 40.2	+0.1
KIF				eS	Sb	14 48 56.4	-0.2
KIF				MSG		14 48 59.1	
	comp=Z,32nm,0.2s						
PAJU	Pajala	1.34	124	P	Pb	14 48 42.3	+0.4
PAJU	Pajala	1.34	124	P	Pb	14 48 42.3	+0.4
PAJU	Pajala	1.34	124	eP	Pb	14 48 42.3	+0.4
HEF	Hetta	1.42	62	eP	Pn	14 48 43.1	+0.2
HEF				eS	Sg	14 49 01.6	+0.2
HEF				MSG		14 49 07.9	
	comp=Z,36nm,0.2s						
ERTU	Ertsjaerv	1.45	148	eP	Pb	14 48 44.4	+0.8
ERTU				eSN	Sn	14 49 04.8	+1.8
KLF	Kolari	1.53	110	eP	Pg	14 48 45.7	+0.6
KLF				eSN	Sn	14 49 06.6	+1.8
KLF				MSG		14 49 11.2	
	comp=Z,24nm,0.2s						
HARU	Harads	1.65	170	P	Pg	14 48 47.8	+0.2
HARU	Harads	1.65	170	P	Pg	14 48 47.8	+0.2
HARU	Harads	1.65	170	eP	Pg	14 48 47.8	+0.2
TRO	Tromso	1.92	346	ePG	Pb	14 48 51.2	-0.4
TRO				eSG	Sb	14 49 16.2	0.0
KALU	Kalix	2.29	146	P	Pb	14 48 57.8	-0.2
KALU	Kalix	2.29	146	P	Pb	14 48 57.8	-0.2
KALU	Kalix	2.29	146	eP	Pb	14 48 57.8	-0.2
TOF	Tornio	2.34	135	ePB	Pb	14 48 58.9	-0.1
TOF				eSG	Sg	14 49 30.9	-0.2
SGF	Sodankyl	2.42	95	eP	Pb	14 48 59.0	-1.2
SGF				eS	Sb	14 49 30.0	-0.6
ARCES	ARCESS Array B	2.60	45	Pn	Pn	14 49 00.4	+1.2
	comp=Z,1.7nm,0.3s,baz=230,slow=14,SNR=195						
ARCES				Lg	Lg	14 49 34.5	
	comp=Z,4.3nm,0.3s,baz=230,slow=25,SNR=15						
	comp=Z,4.9nm,0.3s						
FINES	FINESS Array B	6.84	156	Pn	Pn	14 49 59.6	+2.3
	comp=Z,0.1nm,0.3s,baz=342,slow=11,SNR=6.9						
FINES				Sn	Sn	14 51 14.9	-0.8
	comp=Z,0.5nm,0.3s,baz=346,slow=23,SNR=7.0						
FINES				Lg	Lg	14 51 49.9	
	comp=Z,0.9nm,0.3s,baz=344,slow=28,SNR=7.4						
	comp=Z,1.9nm,0.8s						
NOA	NORSAR Array B	7.81	214	Pn	Pn	14 50 11.2	+0.5
	baz=24,slow=11,SNR=7.7						
NOA				Sn	Sn	14 51 37.6	-2.2
	baz=30,slow=20,SNR=4.9						
NOA				Lg	Lg	14 52 20.6	
	comp=Z,0.1nm,0.3s,baz=23,slow=16,SNR=6.0						
	comp=Z,0.2nm,0.6s						
HFS	Hagfors	8.20	204	Pn	Pn	14 50 16.2	+0.2
	comp=Z,0.1nm,0.3s,baz=16,slow=13,SNR=13						
HFS				Sn	Sn	14 51 47.2	-2.0
	comp=Z,0.4nm,0.3s,baz=22,slow=27,SNR=6.2						
HFS				Lg	Lg	14 52 32.6	
	comp=Z,0.6nm,0.3s,baz=23,slow=30,SNR=5.3						
	comp=Z,0.5nm,0.5s						
SPITS	Spitsbergen Ar	10.51	356	Pn	Pn	14 50 46.3	-1.2
	baz=174,slow=20						
	comp=Z,9.2nm,1.1s						

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*MEX **26** 14:52:14.7±1.4, 29°.80N×114°.42W, h10^{km}, MD4.0*

*ECX **26** 14:52:18.0±0.2, 30°.33N×114°.06W, h16^{km}±5^{km}, ML2.8*

ISC 26 14:52:17.3±1.3**, 30°.33N**±0°.04×**114°.06W**±0°.03**, h10**^{km}±11^{km}**, n13, σ1^{s}.99**/22**, 1C-3D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
SLGB	San Luis Gonza	0.58	211	⇓eP	Pb	14 52 28.4	-1.2
SLGB				eS	Sb	14 52 36.5	-1.4
SLGB				IAML		14 52 48.3	
	comp=N,368nm,0.6s						
SFX	San Felipe	0.98	316	eP	Pg	14 52 35.1	-1.0
SFX				eS	Sb	14 52 48.6	-0.7
SFX				IAML		14 52 59.3	
	comp=N,295nm,0.7s						
SFX				⇑e		14 52 59.3	
SFX				IAML		14 52 59.3	
	comp=E,278nm,0.6s						
SFX				⇓e		14 52 59.3	
SFX	San Felipe	0.98	316	eP	Pn	14 52 36.6	-0.4
SFX				eS	Sn	14 52 52.8	+1.8
PPXB	Puerto Peasco	1.06	20	eP	Pg	14 52 36.5	-1.3
PPXB				eS	Sg	14 52 50.9	-0.7
PPXB				⇓e		14 52 52.0	
SPIG	San Pedro Mart	1.40	301	eP	Pn	14 52 41.9	-1.4
SPIG				eS	Sb	14 53 01.1	-0.8
SPIG	San Pedro Mart	1.40	301	eP	Pn	14 52 40.8	-2.5
SPIG				eS	Sb	14 53 00.3	-1.5
BAHB	Baha de los	1.45	162	eP	Pn	14 52 42.4	-1.2
BAHB	Baha de los	1.45	162	eP	Pn	14 52 34.9	-8.6
BAHB				iS	Sn	14 52 47.3	-15
LAPR	La Primavera	1.51	83	eP	Pn	14 52 43.5	-1.0
LAPR				eS	Sn	14 53 03.5	-0.7
LAPR				IAML		14 53 13.7	
	comp=E,78nm,0.5s						
SQX	San Quintin	1.58	279	eP	Pg	14 52 50.1	+2.4
SQX				eS	Sg	14 53 10.9	+2.6
HSIG		3.01	115	eP	Pn	14 53 07.2	+2.1
HSIG				eS	Sb	14 53 44.0	-3.8
TUC	Tucson	3.43	54	eP	Pb	14 53 19.6	+1.4
NZIG	Nacozari, Sono	3.90	88	eP	Pn	14 53 20.5	+3.1
NZIG				eS	Sn	14 54 05.3	+2.0

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*KRSC **26** 14:54:07.2±1.6, 58°.92N×158°.55E, h13^{km}±7^{km}, Ml3.6*

*NERS **26** 14:54:12.0, 58°.85N×158°.64E, h10^{km}*

ISC 26 14:54:10.4±1.0**, 58°.80N**±0°.06×**158°.80E**±0°.03**, h10**^{km}**, n13, σ1^{s}.88**/21**, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
PALN	Palana	0.67	64	eP	Pg	14 54 22.0	-1.4
PALN				eS	Sg	14 54 31.5	-0.6
OSSR	Ossora	2.25	77	eP	Pn	14 54 47.4	-0.2
OSSR				eS	Sn	14 55 17.1	+1.8
SRDR	Sredinnyy	2.54	168	eP	Pn	14 54 53.5	+1.8
KLY	Klyuchi	2.69	157	eP	Pn	14 54 56.0	+2.3
KOZ	Kozyrevsk	2.81	168	eP	Pn	14 54 55.7	+0.2
ESO	Esso	2.89	181	eP	Pn	14 54 56.2	-0.3
GADL	Gadlja	3.94	286	eSg	Sg	14 56 14.2	-2.6
GADL				Sgmax		14 56 37.2	
	160nm,0.9s						
TLAR	Talaya	3.98	309	eP	Pn	14 55 13.7	+2.3
TLAR				ePg	Pg	14 55 24.6	-1.9
TLAR				eSg	Sg	14 56 15.1	-2.9
TLAR				Sgmax		14 56 24.2	
	60nm,0.4s						
MA2	Magadan	4.21	284	eP	Pn	14 55 17.2	+2.7
MA2				eSg	Sg	14 56 23.5	-1.8
MA2				Sgmax		14 56 31.9	
	30nm,0.9s						
MGD	Magadan 1	4.31	290	eP	Pn	14 55 16.7	+0.8
MGD				eSg	Sg	14 56 26.0	-2.6
MGD				Sgmax		14 56 35.9	
	30nm,0.9s						
SEY	Seymchan	5.20	326	eP	Pn	14 55 29.6	+1.5
SEY				eSg	Sg	14 56 55.6	-1.5
SEY				Sgmax		14 57 12.5	
	20nm,0.9s						
TLON	Talon	5.29	285	eSg	Sg	14 57 00.4	+0.3
TLON				Sgmax		14 57 13.8	
	60nm,0.6s						
SUUS	Susuman	6.55	312	eP	Pg	14 56 16.4	+0.6
SUUS				eSg	Sg	14 57 42.2	+1.6
SUUS				Sgmax		14 57 59.9	
	20nm,0.9s						

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*IDC **26** 15:02:57.7±2.6, 34°.36S×179°.00W, h0^{km}, mb3.9/2, mbtmp4.0/3, ML4.0/1, Error ellipse: s-maj=66.1km s-min=35.2km az=124.0*

*WEL **26** 15:03:01.7±0.9, 34°S±8°×17°9W±1°0, h33^{km}, M4.1/10, mB4.7/5, ML4.1/18, MLv4.1/10, Mw(mB)3.9/5, Error ellipse: s-maj=14.3km s-min=6.9km az=124.1, confirmed*

ISC 26 15:03:00.7±1.6**, 34°.44S**±0°.10×**178°.6W**±0°.1**, h35**^{km}**, n29, σ0^{s}.88**/45**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	4.00	218	P	Pn	15 04 00.1	+0.6
MXZ				S	Sn	15 04 45.9	+0.7
WMGZ	Waiomatatini S	4.15	215	P	Pn	15 04 02.4	+0.9
WMGZ				S	Sn	15 04 51.5	+2.6
PKGZ	Pakihiroa	4.35	217	P	Pn	15 04 04.3	-0.1
PKGZ				S	Sn	15 04 55.1	+1.2
HAZ	Te Kaha	4.42	220	P	Pn	15 04 05.9	+0.6
HAZ				S	Sn	15 04 55.2	-0.3
PUZ	Puketiti	4.43	214	P	Pn	15 04 04.7	-0.7
PUZ				S	Sn	15 04 56.5	+0.8
RUGZ	Raukumara Rang	4.63	220	P	Pn	15 04 08.6	+0.2
RUGZ				S	Sn	15 05 01.1	+0.2
TWGZ	Tauwhareparae	4.64	216	P	Pn	15 04 09.4	+1.0
TWGZ				S	Sn	15 05 01.5	+0.4
TKGZ	Te Karaka	4.91	215	P	Pn	15 04 11.9	-0.2
TKGZ				S	Sn	15 05 08.6	+0.9
MWZ	Matawai	4.99	218	P	Pn	15 04 12.3	-0.9
MWZ				S	Sn	15 05 09.6	0.0
URZ	Urewera	5.15	221	Pn	Pn	15 04 14.7	-0.6
	6.4nm,0.3s,baz=75,slow=18,SNR=30						
URZ				Sn	Sn	15 05 11.8	-1.7
	3.7nm,0.3s,baz=4.5,slow=18,SNR=9.4						
	11nm,0.3s						
URZ	Urewera	5.15	221	P	Pn	15 04 15.2	-0.1
URZ				S	Sn	15 05 14.0	+0.5
RAGZ	Rawiri	5.17	217	P	Pn	15 04 16.0	+0.4
RAGZ				S	Sn	15 05 12.4	-1.7
RIGZ	Rimuhau	5.17	213	P	Pn	15 04 15.2	-0.4
RIGZ				S	Sn	15 05 12.7	-1.3
KUZ	Kuaotunu	5.17	242	P	Pn	15 04 16.5	+1.0
OPRZ	Ohinepanea	5.19	228	P	Pn	15 04 16.7	+0.9
PRGZ	Paritu Road	5.29	211	P	Pn	15 04 17.3	0.0
TGRZ	Tauranga	5.30	230	P	Pn	15 04 17.6	+0.2
SNGZ	Shannon Statio	5.43	216	P	Pn	15 04 19.2	0.0
KNZ	Kokohu	5.47	212	P	Pn	15 04 19.4	-0.3
RTZ	Ruatahuna	5.48	219	P	Pn	15 04 19.7	-0.3
RTZ				S	Sn	15 05 21.4	-0.4
MUGZ	Murupara	5.49	221	P	Pn	15 04 19.6	-0.4
MUGZ				S	Sn	15 05 20.9	-1.1
RRRZ	Republican Roa	5.54	224	P	Pn	15 04 20.8	+0.1
TOZ	Tahuroa Road	5.80	234	P	Pn	15 04 24.8	+0.6
BKZ	Black Stump Fm	6.15	218	P	Pn	15 04 27.8	-1.2
OUZ	Omahuta	6.47	261	P	Pn	15 04 34.5	+1.1
CTZ	Chatham Island	9.41	171	P	Pn	15 05 15.1	+1.4
ASAR	Alice Springs	42.55	272	P	P	15 10 52.5	-0.8
	1.8nm,0.7s,baz=113,slow=8.0,SNR=21						
ASAR				PcP	PcP	15 12 45.9	+0.5
	0.5nm,0.8s,baz=121,slow=4.2,SNR=2.1						
	1.8nm,0.7s						
WRA	Warramunga Arr	43.90	277	P	P	15 11 03.6	-0.6
	0.6nm,0.5s,baz=118,slow=7.7,SNR=11						
	0.6nm,0.5s						
FINES	FINESS Array B	148.71	337	PKPbc	PKiKP	15 22 45.0	+0.2
	2.2nm,0.9s,baz=48,slow=2.1,SNR=8.1						

IDC 26 15:12:41.3±1.7**, 7°.61N**×**124°.54E, h0**^{km}**, mb3.3**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=44.8km s-min=15.1km az=28.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	1.16	117	Pg	Pn	15 13 05.5	+0.8
	82nm,0.3s,baz=252,slow=20,SNR=7.3						
DAV				Lg	Lg	15 13 17.3	
	213nm,0.3s,baz=235,slow=23,SNR=18						
DAV				LR	LR	15 13 36.1	
	comp=Z,238nm,20.3s,baz=152,slow=47						
SWI	Sorong	10.75	141	P	Pn	15 15 20.1	+3.4
WRA	Warramunga Arr	29.02	161	P	P	15 18 43.6	+0.3
	0.2nm,0.5s,baz=338,slow=8.4,SNR=1.9						
	0.2nm,0.5s						
ASAR	Alice Springs	32.40	164	P	P	15 19 12.8	-0.2
	0.2nm,0.6s,baz=340,slow=6.9,SNR=11						
	0.2nm,0.6s						
MKAR	Makanchi Array	53.15	325	P	P	15 22 00.6	-0.5
	0.3nm,0.9s,baz=120,slow=8.5,SNR=2.1						
	0.3nm,0.9s						

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*IDC **26** 15:14:30.3±0.6, 55°.60S×26°.88W, h0^{km}, mb4.1/9, mbtmp4.1/10, ML3.8/1, Error ellipse: s-maj=22.5km s-min=19.3km az=46.0*

*NEIC **26** 15:14:31.0±2.0, 55°.6S±0°.1×27°.18W±0°.07, h10^{km}±1^{km}, mb4.6/36, Error ellipse: s-maj=18.5km s-min=5.1km az=194.0*

ISC 26 15:14:33.2±0.4**, 55°.63S**±0°.08×**27°.14W**±0°.08**, h25**^{km}**, n82, σ0^{s}.99**/72**, mb4.5**/17**, 3D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	5.55	280	Pn	Pn	15 15 55.0	+0.9
VNA3	Neumayer Olymp	17.38	161	⇓P	Pn	15 18 33.0	-0.6
	comp=Z,7.2nm,0.8s						
EFI	East Falkland	18.66	269	P	P	15 18 45.3	-3.6
EFI				IAmb	IAmb	15 19 13.0	
	comp=Z,47nm,1.2s						
SNAA	Sanae	19.12	157	⇓P	P	15 18 54.2	+0.2
	comp=Z,114nm,0.8s						
SNAA	Sanae	19.12	157	P	P	15 18 53.7	-0.2
	comp=Z,0.3nm,0.3s,baz=308,slow=8.3,SNR=13						
	comp=Z,3.6nm,0.7s						
SNAA	Sanae	19.12	157	P	P	15 18 52.7	-1.2
PMSA	Palmer Station	20.20	228	P	Pn	15 19 08.8	+1.2
	comp=Z,19nm,1.0s,baz=112,slow=5.4,SNR=5.1						
	comp=Z,19nm,1.0s						
PMSA	Palmer Station	20.20	228	P	P	15 19 07.0	+1.3
PMSA				IAmb	IAmb	15 19 29.1	
	comp=Z,50nm,1.1s						
TROLL	Troll, Antarti	20.61	154	⇓P	P	15 19 09.7	-0.6
	comp=Z,235nm,0.6s						
BELA	Belgrano 2	22.50	184	P	P	15 19 28.7	-1.6
BELA				IAmb	IAmb	15 19 34.6	
	comp=Z,15nm,0.7s						
MG02	Cerro Sombrero	24.50	259	P	P	15 19 48.9	-1.2
TRQA	Tornquist	29.18	292	P	P	15 20 32.0	-0.3

TRQA				IAmb	IAmb	15 20 49.5	
	comp=Z,13nm,1.4s						
PLCA	**Paso Flores**	**31.95**	**279**	P	**P**	**15 20 58.0**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=131,slow=9.3,SNR=1.2						
	comp=Z,0.3nm,0.6s						
PLCA	**Paso Flores**	**31.95**	**279**	P	**P**	**15 20 57.9**	**+1.0**
QSPA	**South Pole Qui**	**34.62**	**180**	P	**P**	**15 21 20.8**	**+0.9**
SPB	**Sao Paulo**	**35.33**	**327**	P	**P**	**15 21 25.1**	**-1.1**
VAO	**Valinhos**	**35.74**	**328**	P	**P**	**15 21 29.1**	**-0.7**
CPUP	**Villa Florida**	**36.55**	**311**	P	**P**	**15 21 37.9**	**+1.2**
	comp=Z,1.5nm,0.8s,baz=149,slow=9.4,SNR=4.2						
	comp=Z,1.5nm,0.8s						
CPUP	**Villa Florida**	**36.55**	**311**	P	**P**	**15 21 36.2**	**-0.4**
CO03	**El Pedregal**	**39.31**	**291**	P	**P**	**15 22 00.7**	**+0.7**
CO03				IAmb	IAmb	15 22 04.7	
	comp=Z,12nm,1.3s						
CO01	**Juntas del Tor**	**39.68**	**292**	P	**P**	**15 22 02.5**	**-0.8**
AC05	**El Transito**	**40.68**	**293**	P	**P**	**15 22 11.3**	**-0.2**
AC05				IAmb	IAmb	15 22 23.6	
	comp=Z,15nm,0.9s						
SHEL	**Horse Pasture**	**42.86**	**31**	P	**P**	**15 22 29.9**	**+0.6**
AC01	**Pan de Azucar**	**43.03**	**295**	P	**P**	**15 22 28.8**	**-1.7**
PB14	**IPOC Station P**	**44.18**	**296**	P	**P**	**15 22 39.5**	**-0.6**
PB14				IAmb	IAmb	15 22 51.5	
	comp=Z,13nm,1.1s						
BOSA	**Boshof**	**45.84**	**76**	P	**P**	**15 22 52.6**	**-0.6**
	comp=Z,2.9nm,0.8s,baz=207,slow=9.0,SNR=4.7						
	comp=Z,2.9nm,0.8s						
BOSA	**Boshof**	**45.84**	**76**	P	**P**	**15 22 52.8**	**-0.3**
BOSA				IAmb	IAmb	15 23 21.3	
	comp=Z,11nm,1.2s						
PB09	**IPOC Station P**	**45.96**	**300**	P	**P**	**15 22 52.6**	**-1.5**
PB03	**IPOC Station P**	**46.00**	**299**	P	**P**	**15 22 53.1**	**-1.4**
PB03				IAmb	IAmb	15 23 07.2	
	comp=Z,20nm,1.5s						
PB07	**IPOC Station P**	**46.34**	**299**	P	**P**	**15 22 55.7**	**-1.4**
SBA	**Scott Base**	**46.50**	**184**	P	**P**	**15 22 57.5**	**0.0**
SBA				IAmb	IAmb	15 23 01.2	
	comp=Z,6.5nm,1.2s						
PB02	**IPOC Station P**	**46.69**	**300**	P	**P**	**15 22 59.0**	**-0.7**
PB01	**IPOC Station P**	**46.72**	**300**	P	**P**	**15 22 59.6**	**-0.5**
VNDA	**Vanda**	**47.00**	**183**	P	**P**	**15 23 02.5**	**+1.0**
	comp=Z,3.0nm,0.7s,baz=192,slow=5.3,SNR=18						
	comp=Z,3.0nm,0.7s						
VNDA	**Vanda**	**47.00**	**183**	P	**P**	**15 23 01.4**	**0.0**
VNDA				IAmb	IAmb	15 23 06.9	
	comp=Z,3.0nm,0.7s						
PTLB	**Pontes e Lacer**	**47.01**	**316**	P	**P**	**15 23 02.6**	**+0.4**
PTLB				IAmb	IAmb	15 23 12.1	
	comp=Z,3.9nm,0.9s						
SIV	**San Ignacio**	**47.30**	**313**	P	**P**	**15 23 05.4**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=143,slow=7.1,SNR=5.9						
	comp=Z,0.8nm,0.5s						
H10S2	**ASCENSION HYDR**	**47.59**	**17**	T	T	16 14 33.0	
	baz=190						
H10S3	**ASCENSION HYDR**	**47.59**	**17**	T	T	16 14 33.3	
	baz=30						
GO01	**Chusmiza**	**47.74**	**301**	P	**P**	**15 23 08.8**	**+0.3**
GO01				IAmb	IAmb	15 23 21.7	
	comp=Z,8.2nm,0.8s						
H10N1	**ASCENSION HYDR**	**48.71**	**17**	T	T	16 15 57.2	
	baz=188						
H10N3	**ASCENSION HYDR**	**48.71**	**17**	T	T	16 15 58.0	
	baz=188						
H10N2	**ASCENSION HYDR**	**48.72**	**17**	T	T	16 15 58.3	
	baz=188						
KGCAE	**Kacgae**	**48.79**	**68**	P	**P**	**15 23 15.9**	**-0.2**
LBTB	**Lobatse**	**48.86**	**74**	P	**P**	**15 23 16.7**	**0.0**
LBTB				IAmb	IAmb	15 23 19.2	
	comp=Z,12nm,1.4s						
LPAZ	**La Paz**	**50.15**	**305**	P	**P**	**15 23 30.1**	**+3.0**
	comp=Z,2.1nm,0.6s,baz=160,slow=5.3,SNR=7.0						
	comp=Z,2.1nm,0.6s						
LPAZ	**La Paz**	**50.15**	**305**	P	**P**	**15 23 27.0**	**-0.1**
KSANE	**Kasane**	**54.51**	**68**	P	**P**	**15 23 57.4**	**-1.5**
BOAV	**Boa Vista**	**63.96**	**322**	P	**P**	**15 25 02.7**	**-1.4**
BOAV				IAmb	IAmb	15 25 08.1	
	comp=Z,6.5nm,1.3s						
TORD	**Torodi Ar. Bea**	**72.67**	**29**	P	**P**	**15 25 59.6**	**+1.0**
	comp=Z,1.9nm,0.7s,baz=197,slow=6.0,SNR=10.0						
	comp=Z,1.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**72.67**	**29**	P	**P**	**15 25 59.3**	**+0.7**
GDHS	**Morne Mazeau,**	**77.36**	**326**	P	**P**	**15 26 26.5**	**+0.9**
INZ	**Inchbonnie**	**80.75**	**194**	P	**P**	**15 26 45.0**	**+1.0**
ASAR	**Alice Springs**	**99.39**	**162**	P	**Pdif**	**15 28 14.7**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=178,slow=3.7,SNR=8.1						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**99.39**	**162**	P	**Pdif**	**15 28 13.4**	**0.0**
AS31	**Alice Springs**	**99.39**	**162**	P	**Pdif**	**15 28 13.4**	**+0.1**
FINES	**FINESS Array B**	**124.00**	**28**	PKP	**PKiKP**	**15 33 28.4**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=226,slow=3.6,SNR=4.9						
FINES	**FINESS Array B**	**124.00**	**28**		**PKiKP**	**15 33 28.4**	**+0.5**
BVAR	**Borovoye Array**	**134.53**	**57**	PKP	**PKiKP**	**15 33 49.5**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=205,slow=3.0,SNR=3.8						
BVAR	**Borovoye Array**	**134.53**	**57**		**PKiKP**	**15 33 49.5**	**+0.1**
YKA	**Yellowknife Ar**	**135.87**	**318**	PKP	**PKPdf**	**15 33 51.3**	**+1.2**
	comp=Z,0.1nm,0.4s,baz=135,slow=1.7,SNR=6.9						
YKA	**Yellowknife Ar**	**135.87**	**318**		**PKPdf**	**15 33 49.7**	**-0.4**
SPITS	**Spitsbergen Ar**	**136.15**	**12**	PKP	**PKiKP**	**15 33 52.0**	**0.0**
	comp=Z,6.1nm,1.0s,baz=246,slow=8.8,SNR=2.1						
SPITS	**Spitsbergen Ar**	**136.15**	**12**		**PKiKP**	**15 33 52.0**	**0.0**
MKAR	**Makanchi Array**	**136.73**	**71**	PKP	**PKPdf**	**15 33 51.1**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=208,slow=1.1,SNR=2.5						
MKAR	**Makanchi Array**	**136.73**	**71**		**PKPdf**	**15 33 51.1**	**-1.1**
ZALV	**Zalesovo Beam**	**142.16**	**63**	PKhKP	PKPpre	15 33 57.1	
	comp=Z,0.5nm,0.6s,baz=225,slow=3.9,SNR=2.6						
ZALV	**Zalesovo Beam**	**142.16**	**63**		PKPpre	15 33 57.1	
M31M	**Drury Creek, Y**	**143.74**	**311**	PKPdf	PKPbc	15 34 03.5	+1.3
A36M	**Sachs Harbour**	**143.86**	**329**		**PKPdf**	**15 34 04.0**	**-0.4**
P29M	**Windy Craggy**	**144.17**	**306**	PKPdf	PKPbc	15 34 04.3	+0.8
N30M	**Aishikik Lake**	**144.62**	**309**	PKPdf	**PKPdf**	**15 34 06.2**	**+0.1**
M30M	**Minto, Yukon**	**144.92**	**311**	PKPdf	**PKPdf**	**15 34 07.0**	**+0.4**
H31M	**Peel River**	**145.04**	**317**		**PKPbc**	**15 34 06.0**	**-0.1**
F31M	**Tsiigehtchic**	**145.32**	**319**	PKPbc	**PKPbc**	**15 34 06.9**	**+0.1**
INK	**Inuvik**	**145.49**	**321**		**PKPdf**	**15 34 07.1**	**-0.1**
NRIK	**Noril'sk**	**148.66**	**38**	PKPbc	**PKiKP**	**15 34 17.7**	**-0.1**
	comp=Z,1.4nm,0.4s,baz=308,slow=2.4,SNR=6.2						
NRIK	**Noril'sk**	**148.66**	**38**		**PKiKP**	**15 34 17.7**	**-0.1**
ILAR	**Eielson Array**	**149.85**	**312**	PKPbc	**PKPbc**	**15 34 20.0**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=127,slow=3.9,SNR=27						
ILAR	**Eielson Array**	**149.85**	**312**		**PKPbc**	**15 34 20.2**	**+0.7**
SONM	**Songino Array**	**150.67**	**86**	PKPbc	**PKPbc**	**15 34 22.3**	**+0.2**
	comp=Z,2.9nm,0.8s,baz=229,slow=3.1,SNR=13						
SONM	**Songino Array**	**150.67**	**86**		**PKPbc**	**15 34 21.8**	**-0.3**

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*IDC **26** 15:15:11.3±0.4, 55.°64S×26.°95W, h0^{km}, mb4.9/16, mbtmp4.8/17, ML4.6/1, MS4.4/3, Error ellipse: s-maj=17.9km s-min=13.2km az=41.0*

*NEIC **26** 15:15:12.9, 55.°74S×27.°16W, h26^{km}*

*NEIC **26** 15:15:12.9, 55.°34S×27.°51W, h26^{km}, Moment Tensor Solution. Duration: 2^{s}1 Moment tensor: Scale 10^{16}Nm; M_{rr}4.97; $M_{\theta\theta}$-2.32; $M_{\phi\phi}$-2.65; $M_{r\theta}$1.54; $M_{\theta\phi}$4.98; $M_{\phi r}$4.40; Fault plane solution: $M_0$8.07000×10^{16} NP1: ϕ_s105.71000°, δ45.61000°, λ38.00000°. NP2: ϕ_s347.05000°, δ63.90000°, λ128.84000°. Principal axes: T 8.2596, Plg54.0000°, Azm306.0000°; N -0.3967, Plg34.0000°, Azm148.0000°; P -7.8630, Plg11.0000°, Azm50.0000°;*

*NEIC **26** 15:15:13.1±1.7, 55.°73S±0.°09×27.°2W±0.°1, h18^{km}±1^{km}, mb5.2/107, Mww5.2/9 Error ellipse: s-maj=14.0km s-min=10.4km az=207.0*

*MOS **26** 15:15:15.6±1.7, 55.°72S×27.°31W, h38^{km}, mb5.3/16, Error ellipse: s-maj=18.0km s-min=11.7km az=115.7*

*BJI **26** 15:15:17.0, 55.°80S×27.°30W, h40^{km}, Ms5.2/6, Ms7 4.9/11*

*GCMT **26** 15:15:18.9±0.1, 55.°67S±0.°01×26.°86W±0.°02, h19^{km}, MW5.3/115, Moment Tensor Solution. s91,c132; s115,c188; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.52±.02; $M_{\theta\theta}$-0.13±.01; $M_{\phi\phi}$-0.39±.01; $M_{r\theta}$-0.12±.03; $M_{\theta\phi}$0.49±.01; $M_{\phi r}$0.75±.04; Best double couple: $M_0$1.01400×10^{17} NP1:ϕ_s114.00000°, δ28.00000°, λ41.00000°. NP2:ϕ_s346.00000°, δ72.00000°, λ112.00000°. Principal axes: T 0.9580, Plg58.0000°, Azm285.0000°; N 0.1120, Plg21.0000°, Azm159.0000°; P -1.0700, Plg24.0000°, Azm59.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 15:15:15.6±0.2, **55.°76S**±0.°05×**27.°22W**±0.°05, **h35^{km}, n294, σ1^{s}42**/286, **mb5.2**/64, **MS4.5**/9, **13C-11D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.53**	**282**		**Pn**	**15 16 35.4**	**0.0**
HOPE				Sn	**Sn**	**15 17 35.0**	**-2.6**
HOPE	**Hope Point**	**5.53**	**282**	*e*P	**Pn**	**15 16 35.6**	**+0.3**
VNA1	**Neumayer--Stat**	**17.08**	**158**	⇑P	**P**	**15 19 14.9**	**+2.3**
	comp=Z,57nm,0.6s						
VNA3	**Neumayer Olymp**	**17.27**	**161**	⇑P	**P**	**15 19 17.2**	**+2.3**
	comp=Z,44nm,0.6s						
EFI	**East Falkland**	**18.61**	**270**	P	**P**	**15 19 27.6**	**-2.1**
EFI	**East Falkland**	**18.61**	**270**	⇑*e*P	**Pn**	**15 19 30.0**	**-0.2**
EFI				pmax	pmax		
	comp=Z,35nm,0.9s						
SNAA	**Sanae**	**19.02**	**156**	⇑P	**Pn**	**15 19 35.6**	**+0.6**
	comp=Z,641nm,0.6s						
SNAA				⇓S	**S**	**15 23 09.1**	**+1.3**
	comp=N,3µm,3.3s						
SNAA	**Sanae**	**19.02**	**156**	P	**Pn**	**15 19 35.3**	**+0.3**
	comp=N,1.7nm,0.3s,baz=287,slow=11,SNR=13						
SNAA				PcP	**PcP**	**15 23 58.4**	**+0.7**
	comp=N,1.4nm,0.4s,baz=346,slow=4.2,SNR=1.8						
SNAA				LR	LR	15 25 22.8	
	comp=N,1µm,21.6s,baz=335,slow=32						
SNAA				ScP	**ScP**	**15 27 32.7**	**+2.3**
	comp=N,9.1nm,1.0s,baz=320,slow=7.9,SNR=7.2						
	comp=N,14nm,0.6s						
SNAA	**Sanae**	**19.02**	**156**		**ScP**	**15 27 31.5**	**+1.1**
SNAA	**Sanae**	**19.02**	**156**		**Pn**	**15 19 33.3**	**-1.7**
SNAA	**Sanae**	**19.02**	**156**	*de*P	**Pn**	**15 19 35.2**	**+0.2**
SNAA				pmax	pmax		
	comp=Z,40nm,0.8s						
PMSA	**Palmer Station**	**20.08**	**228**	P	Pn	15 19 47.8	+0.3
	comp=Z,25nm,0.8s,baz=73,slow=6.4,SNR=14						
	comp=Z,25nm,0.8s						
PMSA	**Palmer Station**	**20.08**	**228**	P	**P**	**15 19 44.8**	**-0.8**
PMSA				IAmb	IAmb	15 19 54.6	
	comp=Z,82nm,0.8s						
PMSA	**Palmer Station**	**20.08**	**228**	*e*P	Pn	15 19 50.8	+3.3
TROLL	**Troll, Antarti**	**20.52**	**154**	⇓P	Pn	15 19 52.3	-0.5
	comp=Z,2µm,0.7s						
TROLL				⇑S	Sn	15 23 44.8	+2.0
	comp=E,186nm,0.8s						
BELA	**Belgrano 2**	**22.37**	**184**	P	**P**	**15 20 10.1**	**0.0**
NVL	**N'lazarevskaya**	**22.52**	**147**	*e*P	**P**	**15 20 08.0**	**-3.8**
NVL				*e*PPP	PPP	15 20 38.6	
NVL				*e*S	**S**	**15 24 12.9**	**-3.3**
NVL				*e*SSS	SSS	15 24 58.9	
NVL				pmax	pmax		
	comp=Z,17nm,1.0s						
NVL				MLR	MLR		
	comp=Z,754nm,17.0s						
MG02	**Cerro Sombrero**	**24.43**	**259**	P	**P**	**15 20 30.4**	**-0.2**
MG05	**Puerto Natales**	**26.73**	**260**		**P**	**15 20 50.5**	**-0.9**
MG05				IAmb	IAmb	15 21 20.7	
	comp=Z,139nm,1.8s						
GO09	**Cerro Castillo**	**26.82**	**261**	P	**P**	**15 20 51.7**	**-0.6**
GO09				IAmb	IAmb	15 21 27.4	
	comp=Z,57nm,1.2s						
TRQA	**Tornquist**	**29.19**	**293**		**P**	**15 21 14.7**	**+1.1**
TRQA				IAmb	IAmb	15 21 27.0	
	comp=Z,30nm,0.8s						
TRQA	**Tornquist**	**29.19**	**293**	P	**P**	**15 21 14.7**	**+1.1**
TRQA				pmax	pmax		
	comp=Z,30nm,0.8s						
COYC	**Coyhaique**	**29.70**	**271**	P	**P**	**15 21 18.9**	**+1.0**
COYC				IAmb	IAmb	15 22 10.2	
	comp=Z,47nm,1.3s						
AY01	**Puyuhuapi**	**30.72**	**272**	P	**P**	**15 21 26.9**	**0.0**
AY01				IAmb	IAmb	15 21 29.4	
	comp=Z,23nm,0.8s						
CPSB	**Cacapava Do Su**	**31.40**	**313**	*e*P	**P**	**15 21 35.0**	**+1.9**
SYO	**Syowa Base**	**31.82**	**141**	⇓*e*pP	**P**	**15 21 36.3**	**-0.1**
SYO	**Syowa Base**	**31.82**	**141**	⇑*e*sP	**P**	**15 21 39.0**	**+2.6**
PLCA	**Paso Flores**	**31.93**	**280**	P	**P**	**15 21 39.2**	**+1.5**
	comp=Z,4.1nm,0.8s,baz=137,slow=8.3,SNR=9.3						
PLCA				PcP	**PcP**	**15 24 29.0**	**+1.7**
	comp=Z,2.6nm,0.8s,baz=180,slow=1.0,SNR=3.4						
PLCA				ScP	**ScP**	**15 28 11.1**	**+3.3**
	comp=Z,2.1nm,1.0s,baz=143,slow=5.1,SNR=3.3						
PLCA				LR	LR	15 35 26.8	
	comp=Z,642nm,18.2s,baz=127,slow=38						
	comp=Z,4.1nm,0.8s						
PLCA	**Paso Flores**	**31.93**	**280**		**P**	**15 21 37.2**	**-0.6**
PLCA	**Paso Flores**	**31.93**	**280**		**ScP**	**15 28 08.3**	**+0.6**
PSAL	**Palomas, Salto**	**32.63**	**306**	*e*P	**P**	**15 21 45.9**	**+2.0**
ITAB	**Concordia**	**33.69**	**317**		**P**	**15 21 53.9**	**+0.8**
ITAB				IAmb	IAmb	15 22 06.4	
	comp=Z,45nm,1.3s						
LR04	**Corral**	**34.12**	**278**	P	**P**	**15 21 55.9**	**-0.8**
LR04				IAmb	IAmb	15 22 58.9	
	comp=Z,94nm,1.7s						
QSPA	**South Pole Qui**	**34.49**	**180**	P	**P**	**15 22 01.8**	**+1.8**
QSPA				IAmb	IAmb	15 22 19.4	
	comp=Z,21nm,0.8s						
BI02	**San Fabin de**	**35.20**	**284**	P	**P**	**15 22 07.5**	**+1.3**
VAO	**Valinhos**	**35.83**	**328**	P	**P**	**15 22 12.1**	**+0.4**
BO02	**Sierra Bellavi**	**36.32**	**287**	P	**P**	**15 22 15.8**	**0.0**
CPUP	**Villa Florida**	**36.60**	**311**	P	**P**	**15 22 18.9**	**+0.7**
	comp=Z,18nm,0.8s,baz=150,slow=9.5,SNR=25						
CPUP				PcP	**PcP**	**15 24 42.1**	**+1.3**
	comp=Z,2.3nm,0.8s,baz=211,slow=2.5,SNR=3.2						
CPUP				ScP	**ScP**	**15 28 27.6**	**+3.2**
	comp=Z,1.0nm,0.7s,baz=121,slow=12,SNR=3.4						
	comp=Z,18nm,0.8s						
CPUP	**Villa Florida**	**36.60**	**311**	P	**P**	**15 22 18.4**	**+0.2**
CPUP					**PcP**	**15 24 40.8**	**0.0**
BO04	**La Punta**	**36.84**	**288**	P	**P**	**15 22 21.0**	**+0.8**
BO04				IAmb	IAmb	15 22 41.6	
	comp=Z,74nm,1.9s						
MT13	**San Alfonso**	**36.85**	**288**	P	**P**	**15 22 20.4**	**0.0**
MT08	**Bocatoma Ro**	**36.93**	**289**	P	**P**	**15 22 22.9**	**+1.6**
MT08				IAmb	IAmb	15 22 27.7	
	comp=Z,22nm,0.7s						
MT09	**Talagante**	**37.20**	**288**	P	**P**	**15 22 23.4**	**-0.1**
MT16	**CCHEN**	**37.22**	**289**	P	**P**	**15 22 24.3**	**+0.8**
MT16				IAmb	IAmb	15 22 27.5	
	comp=Z,57nm,1.1s						
MT01	**Popeta**	**37.28**	**287**	P	**P**	**15 22 23.8**	**-0.1**
MT05	**Renca**	**37.36**	**288**	P	**P**	**15 22 24.3**	**-0.4**
MT05				IAmb	IAmb	15 23 12.7	
	comp=Z,63nm,1.2s						
CFA	**Coronel Fontan**	**37.43**	**293**	PcP	**PcP**	**15 24 45.0**	**+1.7**
	comp=Z,1.7nm,0.5s,baz=159,slow=4.0,SNR=2.7						
PEL	**Peldehue**	**37.52**	**289**		**P**	**15 22 26.1**	**0.0**
PEL				IAmb	IAmb	15 22 29.4	
	comp=Z,40nm,0.8s						
PEL	**Peldehue**	**37.52**	**289**	P	**P**	**15 22 26.1**	**0.0**
PEL				pmax	pmax		
	comp=Z,40nm,0.8s						
VA05	**Santo Domingo**	**37.63**	**287**	P	**P**	**15 22 27.6**	**+0.7**
VA05				IAmb	IAmb	15 22 42.3	
	comp=Z,41nm,0.8s						
VA03	**San Esteban**	**37.74**	**289**	P	**P**	**15 22 28.6**	**+0.6**
VA03				IAmb	IAmb	15 22 48.4	
	comp=Z,44nm,1.1s						
BB19B	**Bebedouro**	**38.13**	**327**	*e*P	**P**	**15 22 33.0**	**+1.8**
VA01	**Torpederas**	**38.13**	**288**	P	**P**	**15 22 30.0**	**-1.1**
VA01				IAmb	IAmb	15 22 57.3	
	comp=Z,42nm,1.0s						
VA06	**Catapilco**	**38.30**	**289**		**P**	**15 22 32.1**	**-0.4**
VA06				IAmb	IAmb	15 22 36.0	
	comp=Z,48nm,0.9s						
SJMB	**Sao Joao De Ma**	**38.47**	**338**	*e*P	**P**	**15 22 35.2**	**+1.1**
AMBA	**Amambai (Brazi**	**38.68**	**317**	*e*P	**P**	**15 22 36.8**	**+1.0**
CO02	**Combarbal**	**39.19**	**290**	IAmb	IAmb	15 22 58.3	
	comp=Z,64nm,1.3s						
CO03	**El Pedregal**	**39.32**	**291**	P	**P**	**15 22 40.6**	**-0.6**
DIAM	**Diamantina, MG**	**39.42**	**335**	*e*P	**P**	**15 22 43.5**	**+1.3**
CO01	**Juntas del Tor**	**39.69**	**292**	P	**P**	**15 22 44.7**	**+0.2**
CO01				IAmb	IAmb	15 22 49.2	
	comp=Z,32nm,0.7s						
GO04	**Tololo Observa**	**39.90**	**291**	P	**P**	**15 22 46.2**	**0.0**
CO05	**La Serena**	**40.33**	**291**	P	**P**	**15 22 49.9**	**+0.4**
MAW	**Mawson**	**40.40**	**144**	P	**P**	**15 22 50.8**	**+1.2**
	comp=Z,7.4nm,0.6s,baz=220,slow=7.9,SNR=11						
	comp=Z,7.4nm,0.6s						
SUR	**Sutherland**	**40.58**	**75**	P	**P**	**15 22 51.9**	**+0.1**
SUR				IAmb	IAmb	15 23 02.7	
	comp=Z,128nm,1.8s						
AC05	**El Transito**	**40.69**	**293**		**P**	**15 22 51.8**	**-0.8**
AC05				IAmb	IAmb	15 22 56.6	
	comp=Z,53nm,0.8s						
LCO	**Las Campanas**	**40.77**	**293**	P	**P**	**15 22 52.1**	**-1.4**
LCO				IAmb	IAmb	15 22 56.8	
	comp=Z,34nm,0.8s						
LCO	**Las Campanas**	**40.77**	**293**	*e*P	**P**	**15 22 53.2**	**-0.3**
IPMB	**Ipameri, GO**	**40.94**	**329**	*e*P	**P**	**15 22 56.0**	**+1.4**
AQDB	**Aquidauana**	**41.17**	**317**	P	**P**	**15 22 55.7**	**-0.8**
CMC01	**Camacan, BA**	**41.41**	**342**	*e*P	**P**	**15 22 59.2**	**+0.7**
BDQN	**Bodoquena, MS**	**41.60**	**316**	*e*P	**P**	**15 23 00.2**	**+0.1**
VA04	**Juan Fernndez**	**41.60**	**280**	P	**P**	**15 22 59.6**	**-0.3**
AC04	**Llanos de Chal**	**41.62**	**293**	P	**P**	**15 22 59.4**	**-0.7**
GO03	**Copiapo**	**41.67**	**294**	P	**P**	**15 23 00.4**	**-0.3**
GO03				IAmb	IAmb	15 23 04.0	
	comp=Z,50nm,0.8s						
C2SB	**Chapadao do Su**	**41.69**	**322**	*e*P	**P**	**15 23 02.6**	**+1.9**
AC02	**Maricunga**	**41.73**	**296**	IAmb	IAmb	15 23 06.4	
	comp=Z,80nm,0.9s						
AC06	**Mina Casimiro**	**41.93**	**294**	P	**P**	**15 23 02.3**	**-0.3**
AC06				IAmb	IAmb	15 23 06.0	
	comp=Z,120nm,1.4s						
JANB	**Januaria**	**42.69**	**335**	*e*P	**P**	**15 23 08.8**	**-0.2**
AC01	**Pan de Azucar**	**43.04**	**295**		**P**	**15 23 11.3**	**-0.5**
AC01				IAmb	IAmb	15 23 26.7	
	comp=Z,80nm,1.4s						
BDFB	**Brasilia**	**43.10**	**330**	P	**P**	**15 23 14.1**	**+1.7**
	comp=Z,3.6nm,0.6s,baz=180,slow=9.6,SNR=6.0						
	comp=Z,3.6nm,0.6s						
BDFB	**Brasilia**	**43.10**	**330**	P	**P**	**15 23 12.0**	**-0.3**
BDFB	**Brasilia**	**43.10**	**330**	P	**P**	**15 23 12.0**	**-0.3**
BDFB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PP1B	**Ponte de Pedra**	**43.49**	**320**	*e*P	**P**	**15 23 16.3**	**+0.9**
ARAG	**Araguaiana, MT**	**44.19**	**325**	*e*P	**P**	**15 23 22.9**	**+1.8**
PB14	**IPOC Station P**	**44.19**	**297**	P	**P**	**15 23 21.0**	**-0.3**
PB14				IAmb	IAmb	15 23 36.4	
	comp=Z,27nm,0.9s						
AF01	**San Pedro de A**	**44.49**	**300**	P	**P**	**15 23 23.3**	**-0.4**
SALV	**Santo Antonio**	**45.35**	**320**	*e*P	**P**	**15 23 31.2**	**+0.9**
PB06	**IPOC Station P**	**45.38**	**299**	IAmb	IAmb	15 23 42.5	
	comp=Z,22nm,0.7s						
SDBA	**SAO DESIDERIO**	**45.39**	**335**	*e*P	**P**	**15 23 31.1**	**+0.5**
PB05	**IPOC Station P**	**45.57**	**298**	P	**P**	**15 23 30.2**	**-1.9**
PB05				IAmb	IAmb	15 23 35.9	
	comp=Z,38nm,0.9s						
BOSA	**Boshof**	**45.92**	**76**	P	**P**	**15 23 34.0**	**-0.8**
	comp=Z,11nm,0.8s,baz=219,slow=7.0,SNR=17						
	comp=Z,11nm,0.8s						
BOSA	**Boshof**	**45.92**	**76**	P	**P**	**15 23 33.2**	**-1.6**
BOSA	**Boshof**	**45.92**	**76**	P	**P**	**15 23 33.2**	**-1.6**
BOSA				pmax	pmax		
	comp=Z,17nm,0.9s						
PB09	**IPOC Station P**	**45.99**	**300**	P	**P**	**15 23 34.8**	**-0.7**
PB03	**IPOC Station P**	**46.02**	**299**	IAmb	IAmb	15 23 47.7	
	comp=Z,27nm,0.9s						
PB07	**IPOC Station P**	**46.36**	**299**	P	**P**	**15 23 39.2**	**+0.8**
SBA	**Scott Base**	**46.37**	**184**	P	**P**	**15 23 38.7**	**+1.1**
SBA				IAmb	IAmb	15 23 48.7	
	comp=Z,27nm,1.3s						
SBA	**Scott Base**	**46.37**	**184**	P	**P**	**15 23 38.7**	**+1.1**
SBA				pmax	pmax		
	comp=Z,27nm,1.3s						
PB01	**IPOC Station P**	**46.74**	**300**	P	**P**	**15 23 41.8**	**+0.5**
VNDA	**Vanda**	**46.87**	**183**	P	**P**	**15 23 44.0**	**+2.5**
	comp=Z,15nm,0.6s,baz=188,slow=6.5,SNR=38						
	comp=Z,15nm,0.6s						
VNDA	**Vanda**	**46.87**	**183**	P	**P**	**15 23 42.7**	**+1.2**
VNDA				IAmb	IAmb	15 23 46.5	
	comp=Z,15nm,0.7s						
VNDA	**Vanda**	**46.87**	**183**	P	**P**	**15 23 42.7**	**+1.2**
VNDA				pmax	pmax		
	comp=Z,15nm,0.7s						
PTLB	**Pontes e Lacer**	**47.07**	**316**	P	**P**	**15 23 44.4**	**+0.6**
PTLB	**Pontes e Lacer**	**47.07**	**316**	*e*P	**P**	**15 23 45.1**	**+1.4**
NBTA	**Tacaratu-PE**	**47.30**	**345**	*e*P	**P**	**15 23 47.2**	**+1.6**
LKGWB	**Lokgwabe**	**47.33**	**68**		**P**	**15 23 47.9**	**+2.0**
PB08	**IPOC Station P**	**47.35**	**301**	P	**P**	**15 23 46.2**	**-0.2**
SIV	**San Ignacio**	**47.36**	**313**	P	**P**	**15 23 46.8**	**+0.7**
	comp=Z,12nm,0.7s,baz=142,slow=7.4,SNR=34						
SIV				PcP	**PcP**	**15 25 18.7**	**+2.2**
	comp=Z,2.8nm,0.5s,baz=145,slow=3.4,SNR=2.2						
	comp=Z,12nm,0.7s						
TA01	**Diego Aracena**	**47.49**	**300**		**P**	**15 23 47.3**	**+0.3**
TA01				IAmb	IAmb	15 23 58.9	
	comp=Z,25nm,0.8s						
SNDB	**Serra Nova Dou**	**47.54**	**327**	*e*P	**P**	**15 23 49.3**	**+1.8**
HMBC	**Humberstone**	**47.59**	**300**	P	**P**	**15 23 47.5**	**-0.5**
H04S2	**CROZET ISLANDS**	**47.69**	**114**	T	T	16 15 27.9	
	baz=230,slow=76,SNR=14						
H04S3	**CROZET ISLANDS**	**47.69**	**114**	T	T	16 15 32.9	
	baz=230,slow=76,SNR=12						
H04S1	**CROZET ISLANDS**	**47.70**	**114**	T	T	16 15 28.6	
	baz=230,slow=76,SNR=25						
KOOLE	**Kule**	**47.71**	**67**	IAmb	IAmb	15 23 49.4	
	comp=Z,19nm,0.7s						
H10S2	**ASCENSION HYDR**	**47.72**	**17**	T	T	16 15 13.9	
	baz=192,slow=74						
H10S3	**ASCENSION HYDR**	**47.73**	**17**	T	T	16 15 14.0	
	baz=28,slow=74						
GO01	**Chusmiza**	**47.77**	**302**	P	**P**	**15 23 50.5**	**+0.7**
PB11	**IPOC Station P**	**47.92**	**301**		**P**	**15 23 50.9**	**+0.3**
H10N1	**ASCENSION HYDR**	**48.84**	**17**	T	T	16 16 37.9	
	baz=187,slow=75						
H10N3	**ASCENSION HYDR**	**48.84**	**17**	T	T	16 16 37.9	
	baz=187,slow=75						
H10N2	**ASCENSION HYDR**	**48.86**	**17**	T	T	16 16 39.1	
	baz=187,slow=75						
KGCAE	**Kacgae**	**48.88**	**68**		**P**	**15 23 56.5**	**-1.4**
KGCAE				IAmb	IAmb	15 23 59.9	
	comp=Z,46nm,1.1s						
LBTB	**Lobatse**	**48.94**	**73**	P	**P**	**15 23 56.8**	**-1.5**
LBTB				IAmb	IAmb	15 23 59.7	
	comp=Z,45nm,1.4s						
LBTB	**Lobatse**	**48.94**	**73**	P	**P**	**15 23 56.8**	**-1.5**
LBTB				pmax	pmax		
	comp=Z,45nm,1.5s						
PB16	**IPOC Station P**	**49.07**	**302**	P	**P**	**15 23 59.6**	**-0.3**
PB16				IAmb	IAmb	15 24 12.9	
	comp=Z,22nm,1.2s						
SMTB	**Santa Maria do**	**49.46**	**333**	*e*P	**P**	**15 24 03.8**	**+1.6**
TSUM	**Tsumeb**	**49.56**	**61**	P	**P**	**15 24 00.4**	**-2.7**
GRTLG	**Ghanzi**	**49.59**	**66**	P	**P**	**15 24 02.2**	**-1.2**
GRTLG				IAmb	IAmb	15 24 04.5	
	comp=Z,33nm,1.6s						
NBPV	**Pedro Velho**	**49.62**	**349**	*e*P	**P**	**15 24 04.9**	**+1.5**
PDRB	**Porto dos Gac**	**49.68**	**321**	*e*P	**P**	**15 24 04.8**	**+0.9**
VILB	**Vilhena**	**49.76**	**316**		**P**	**15 24 03.1**	**-1.4**
VILB				IAmb	IAmb	15 24 16.5	
	comp=Z,32nm,0.9s						
VILB	**Vilhena**	**49.76**	**316**	*e*P	**P**	**15 24 04.9**	**+0.4**
CLDB	**Colider**	**50.04**	**322**	*e*P	**P**	**15 24 07.5**	**+0.8**
LPAZ	**La Paz**	**50.19**	**305**	P	**P**	**15 24 10.3**	**+1.8**
	comp=Z,29nm,0.7s,baz=141,slow=6.2,SNR=29						
	comp=Z,29nm,0.7s						
LPAZ	**La Paz**	**50.19**	**305**	P	**P**	**15 24 09.3**	**+0.9**
LPAZ				IAmb	IAmb	15 24 12.8	
	comp=Z,34nm,0.8s						
LPAZ	**La Paz**	**50.19**	**305**	P	**P**	**15 24 09.4**	**+0.9**
LPAZ				pmax	pmax		
	comp=Z,34nm,0.8s						
LPAZ	**La Paz**	**50.19**	**305**	*e*P	**P**	**15 24 09.9**	**+1.5**
QNGWA	**Qangwa**	**51.09**	**65**	P	**P**	**15 24 13.5**	**-1.1**
KHWEE	**KHWEE**	**51.34**	**71**	P	**P**	**15 24 15.1**	**-1.4**
KHWEE				IAmb	IAmb	15 24 17.7	
	comp=Z,50nm,1.1s						
GMARE	**Gumare**	**51.71**	**66**	P	**P**	**15 24 18.4**	**-0.9**
PHDHD	**Phuduhudu**	**52.28**	**69**	P	**P**	**15 24 22.2**	**-1.4**
PHDHD				IAmb	IAmb	15 24 24.3	
	comp=Z,27nm,0.7s						
PRPB	**Parauapebas**	**52.62**	**331**	*e*P	**P**	**15 24 27.9**	**+1.9**
NPGB	**Novo Progresso**	**53.47**	**324**	*e*P	**P**	**15 24 32.8**	**+0.6**
CASY	**Casey**	**54.19**	**160**	P	**P**	**15 24 37.0**	**+0.1**
KSANE	**Kasane**	**54.59**	**68**		**P**	**15 24 39.1**	**-1.4**
KSANE				IAmb	IAmb	15 24 41.9	
	comp=Z,30nm,0.9s						
ITTB	**Itaituba**	**56.10**	**325**	*e*P	**P**	**15 24 52.6**	**+1.4**
NNA	**Nana**	**58.09**	**299**	P	**P**	**15 25 07.4**	**+2.0**
	comp=Z,8.1nm,0.5s,baz=149,slow=4.1,SNR=1.7						
	comp=Z,8.1nm,0.5s						
NNA	**Nana**	**58.09**	**299**	IAmb	IAmb	15 25 17.2	
	comp=Z,22nm,1.1s						
NNA	**Nana**	**58.09**	**299**	⇓*e*P	**P**	**15 25 06.6**	**+1.2**
NNA				pmax	pmax		
	comp=Z,54nm,1.6s						
LSZ	**Lusaka**	**58.28**	**69**	P	**P**	**15 25 06.0**	**-0.9**
LSZ				IAmb	IAmb	15 25 08.2	
	comp=Z,16nm,0.9s						
LSZ	**Lusaka**	**58.28**	**69**	P	**P**	**15 25 06.0**	**-0.9**
LSZ				pmax	pmax		
	comp=Z,16nm,1.0s						

MACA	**Manacapuru-AM**	**58.93**	**320**		**P**	**15 25 10.7**	**-0.5**
MACA	**Manacapuru-AM**	**58.93**	**320**	*e*P	**P**	**15 25 11.2**	**+0.1**
TEFE	**Tefe**	**60.11**	**316**	*e*P	**P**	**15 25 20.0**	**+0.7**
ATAH	**Atahualpa**	**63.03**	**300**	P	**P**	**15 25 41.6**	**+2.1**
	comp=Z,10nm,0.7s,baz=182,slow=7.9,SNR=6.1						
ATAH				LR	LR	15 52 26.7	
	comp=Z,260nm,21.8s,baz=156,slow=35						
	comp=Z,10nm,0.7s						
VOI	**Vohitsoka**	**63.22**	**90**	P	**P**	**15 25 39.4**	**-1.1**
VOI				IAmb	IAmb	15 26 57.6	
	comp=Z,32nm,1.4s						
BOAV	**Boa Vista**	**64.03**	**322**	P	**P**	**15 25 45.2**	**-0.4**
BOAV				IAmb	IAmb	15 25 48.5	
	comp=Z,24nm,0.8s						
BOAV	**Boa Vista**	**64.03**	**322**	*e*P	**P**	**15 25 45.1**	**-0.5**
DBIC	**Dimbokro**	**64.91**	**25**	P	**P**	**15 25 50.8**	**-0.6**
	comp=Z,11nm,1.0s,baz=201,slow=4.6,SNR=8.7						
	comp=Z,11nm,1.0s						
DBIC	**Dimbokro**	**64.91**	**25**	P	**P**	**15 25 50.7**	**-0.6**
DBIC				IAmb	IAmb	15 25 52.8	
	comp=Z,14nm,1.0s						
DBIC	**Dimbokro**	**64.91**	**25**	P	**P**	**15 25 50.7**	**-0.6**
DBIC				pmax	pmax		
	comp=Z,14nm,1.0s						
EDA	**Edea**	**66.78**	**41**	P	**P**	**15 26 02.4**	**-1.0**
SLOR	**San Lorenzo -**	**68.65**	**303**	P	**P**	**15 26 14.2**	**-1.6**
SLOR				IAmb	IAmb	15 26 21.1	
	comp=Z,9.8nm,0.6s						
OTAV	**Otavalo**	**69.48**	**304**	P	**P**	**15 26 21.1**	**+0.2**
OTAV				IAmb	IAmb	15 26 26.6	
	comp=Z,23nm,1.2s						
OTAV	**Otavalo**	**69.48**	**304**	*e*P	**P**	**15 26 21.1**	**+0.2**
OTAV	**Otavalo**	**69.48**	**304**	*e*P	**P**	**15 26 23.3**	**+2.4**
URMC	**La Uribe, Meta**	**70.28**	**309**	P	**P**	**15 26 26.0**	**+0.7**
PRAC	**Prado**	**70.92**	**309**	P	**P**	**15 26 29.2**	**0.0**
CHIC	**Chingaza**	**71.24**	**310**	P	**P**	**15 26 31.6**	**+0.1**
ORTC	**Ortega, Tolima**	**71.25**	**308**	P	**P**	**15 26 31.6**	**+0.4**
ROSC	**El Rosal**	**71.68**	**310**	P	**P**	**15 26 36.0**	**+1.8**
	comp=Z,9.6nm,0.4s,baz=172,slow=12,SNR=4.0						
	comp=Z,9.6nm,0.4s						
ROSC	**El Rosal**	**71.68**	**310**	P	**P**	**15 26 33.6**	**-0.6**
ROSC				IAmb	IAmb	15 26 38.4	
	comp=Z,14nm,0.8s						
ROSC	**El Rosal**	**71.68**	**310**	P	**P**	**15 26 33.6**	**-0.6**
ROSC				pmax	pmax		
	comp=Z,14nm,0.9s						
YOTC	**Yotoco, Valle**	**71.81**	**307**	P	**P**	**15 26 34.2**	**-0.5**
MBAR	**Mbarara**	**72.03**	**63**	P	**P**	**15 26 36.8**	**+0.7**
MBAR	**Mbarara**	**72.03**	**63**⇓	*e*P	**P**	**15 26 35.2**	**-0.9**
MBAR				pmax	pmax		
	comp=Z,13nm,1.3s						
RUSC	**La Rusia**	**72.09**	**311**	P	**P**	**15 26 36.5**	**-0.3**
NORC	**Norcasia**	**72.56**	**310**	P	**P**	**15 26 38.5**	**-0.6**
PLMC	**San Jos del P**	**72.60**	**308**	P	**P**	**15 26 39.6**	**+0.3**
TORD	**Torodi Ar. Bea**	**72.81**	**30**	P	**P**	**15 26 40.9**	**+0.6**
	comp=Z,9.0nm,0.7s,baz=195,slow=5.8,SNR=23						
	comp=Z,9.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**72.81**	**30**	P	**P**	**15 26 40.6**	**+0.2**
PTBC	**PUERTO BERRIO,**	**73.26**	**310**	P	**P**	**15 26 41.3**	**-1.8**
CBOC	**Ciudad Bolivar**	**73.33**	**309**	P	**P**	**15 26 43.1**	**-0.7**
SDV	**Santo Domingo**	**73.79**	**315**	P	**P**	**15 26 45.9**	**-0.6**
SDV				IAmb	IAmb	15 26 56.9	
	comp=Z,29nm,0.9s						
SDV	**Santo Domingo**	**73.79**	**315**	*e*P	**P**	**15 26 47.7**	**+1.2**
SDV	**Santo Domingo**	**73.79**	**315**	P	**P**	**15 26 47.5**	**+1.1**
	comp=Z,34nm,0.9s						
KIBK	**Kibwezi**	**74.35**	**70**	P	**P**	**15 26 49.6**	**-0.1**
SJCC	**San Jacinto, C**	**76.58**	**311**	P	**P**	**15 27 03.0**	**+0.7**
GDHS	**Morne Mazeau,**	**77.44**	**326**	P	**P**	**15 27 06.6**	**-0.5**
LODK	**Lodwar**	**77.82**	**65**	P	**P**	**15 27 09.6**	**+0.2**
RKT	**Rikitea**	**80.59**	**243**	*e*LR	LR	15 52 42.5	
	comp=Z,3µm,28.0s						
JTS	**Las Juntas de**	**81.34**	**303**⇑	*e*P	**P**	**15 27 27.5**	**-0.9**
JTS				pmax	pmax		
	comp=Z,24nm,1.3s						
JUD3	**Juan Diaz 3**	**81.51**	**302**		P	15 27 33.0	+3.6
SIUN	**Universidad Ur**	**84.24**	**304**	P	**P**	**15 27 43.0**	**-0.3**
SIUN				IAmb	IAmb	15 27 46.4	
	comp=Z,16nm,1.0s						
HERN	**Volcan Telica**	**84.25**	**302**	IAmb	IAmb	15 28 02.2	
	comp=Z,581nm,0.5s						
MTO3	**Montecristo**	**87.01**	**301**	IAmb	IAmb	15 28 00.9	
	comp=Z,17nm,0.8s						
TBI	**Tubuai**	**87.25**	**231**	*e*S	**S**	**15 38 30.3**	**-5.4**
	comp=Z,561nm,26.5s						
TBI				*e*SS	**SS**	**15 44 20.4**	**+1.3**
	comp=Z,269nm,26.5s						
TBI	**Tubuai**	**87.25**	**231**	*e*LR	LR	15 55 31.7	
	comp=Z,763nm,25.0s						
TBI				*e*LR	LR	15 55 35.2	
	comp=Z,2µm,29.2s						
MD31	**MD31**	**90.34**	**19**	P	**P**	**15 28 14.2**	**+1.7**
MD01	**Midelt array s**	**90.34**	**19**		**P**	**15 28 12.0**	**-0.7**
TEIG	**Tepich**	**91.52**	**305**	P	**P**	**15 28 18.0**	**-0.2**
STKA	**Stephens Creek**	**92.19**	**170**	P	**P**	**15 28 23.3**	**+1.9**
	comp=Z,2.9nm,0.8s,baz=142,slow=7.1,SNR=6.3						
	comp=Z,2.9nm,0.8s						
STKA	**Stephens Creek**	**92.19**	**170**⇑	*e*P	**P**	**15 28 18.1**	**-3.4**
PPT2	**Papeete2**	**92.34**	**234**	*e*S	**S**	**15 39 15.5**	**-7.7**
	comp=Z,235nm,29.8s						
PPT2	**Papeete2**	**92.34**	**234**	*e*LR	LR	15 57 55.2	
	comp=Z,390nm,34.8s						
PPT2				*e*LR	LR	15 57 56.2	
	comp=Z,666nm,34.0s						
TAOE	**Nuku Hiva Isla**	**95.25**	**246**	*e*LR	LR	15 59 16.8	
	comp=Z,346nm,24.0s						
INKA	**Innaminka**	**96.20**	**169**	P	**P**	**15 28 40.0**	**+0.1**
ASAR	**Alice Springs**	**99.28**	**163**	P	**Pdif**	**15 28 54.0**	**+0.1**
	comp=Z,2.3nm,0.7s,baz=182,slow=4.1,SNR=16						
ASAR				PP	**PP**	**15 32 58.7**	**+2.8**
	comp=Z,0.9nm,0.7s,baz=182,slow=6.5,SNR=5.3						
ASAR				PKKPbc	**PKKPdf**	**15 45 15.8**	**-1.7**
	comp=Z,0.4nm,0.7s,baz=18,slow=2.2,SNR=6.2						
	comp=Z,2.3nm,0.7s						
ASAR	**Alice Springs**	**99.28**	**163**	P	**Pdif**	**15 28 52.8**	**-1.1**
ASAR	**Alice Springs**	**99.28**	**163**	P	**Pdif**	**15 28 52.8**	**-1.1**
AS31	**Alice Springs**	**99.28**	**163**		**Pdif**	**15 28 53.1**	**-0.8**
DZM	**Mont Dzumac**	**101.61**	**193**	*e*LR	LR	16 02 14.2	
	comp=Z,334nm,25.1s						
WRA	**Warramunga Arr**	**102.99**	**162**	Pdiff	**Pdif**	**15 29 12.6**	**+2.2**
	comp=Z,0.5nm,0.6s,baz=194,slow=4.3,SNR=5.3						
TXAR	**Lajitas Array**	**106.64**	**298**	PP	**PP**	**15 33 50.8**	**-1.4**
	comp=Z,0.1nm,0.4s,baz=202,slow=5.5,SNR=2.6						
MASI	**Maura Aman, Be**	**108.29**	**126**	P	**Pdif**	**15 29 36.9**	**+2.9**
GERES	**GERESS Array B**	**109.70**	**27**	PP	**PP**	**15 34 12.7**	**-1.8**
	comp=Z,0.5nm,0.8s,baz=226,slow=9.1,SNR=4.5						
CLL	**Collm**	**111.79**	**26**	*e*PS	PS	15 44 07.0	+5.9
CLL				*e*PPS	PPS	15 45 04.0	
CLL				*e*SS	SS	15 50 06.0	+3.0
CLL				AMS	AMS	16 15 00.0	
	comp=Z,100nm,20.1s						
RNPP8	**Varash**	**115.43**	**34**	PKP	**PKiKP**	**15 33 51.5**	**-0.9**
KIV	**Kislovodsk**	**115.49**	**49**	*i* PKIKP	**PKiKP**	**15 33 54.3**	**+1.4**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,135nm,22.0s						
MI28	**MI28,Pidlybu**	**115.66**	**35**	PKP	**PKiKP**	**15 33 51.8**	**-1.0**
AK02	**Malin Array Si**	**115.93**	**36**	PKP	**PKiKP**	**15 33 52.6**	**-0.7**
AK22	**Malin Array Si**	**115.97**	**36**	PKP	**PKiKP**	**15 33 53.1**	**-0.3**
MAK	**Makhachkala**	**116.80**	**53**	*e*P	**Pdif**	**15 30 18.2**	**+7.3**
MAK				*i*		15 33 54.3	
MAK				*e*		15 35 02.5	
MAK				*e*		15 40 41.5	
MAK				*e*SP	SP	15 44 50.3	+7.1
MAK				*e*SS	**SS**	**15 51 09.1**	**-0.1**
MAK				pmax	pmax		
	comp=Z,177nm,1.4s						
MNK	**Minsk**	**118.78**	**33**	*i* PKIKP	**PKiKP**	**15 34 00.1**	**+1.4**
MNK				*i*		15 35 18.1	
MNK				*i* PPP	PPP	15 37 48.7	
MNK				*i*		15 41 12.2	
MNK				*i* SS	SS	15 51 38.1	+3.5
MNK				*i* SSS	SSS	15 56 01.4	
MNK				pmax	pmax		
	comp=N,4.0nm,0.6s						
MNK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MNK				pmax	pmax		
	comp=E,8.0nm,0.8s						
MNK				MLR	MLR		
	comp=E,717nm,22.0s						
MNK				MLR	MLR		
	comp=N,371nm,17.0s						
MNK				MLR	MLR		
	comp=Z,127nm,18.0s						
HFS	**Hagfors**	**120.02**	**22**	PKP	**PKiKP**	**15 34 00.8**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=172,slow=4.2,SNR=2.6						
PDAR	**Pinedale Array**	**120.17**	**302**	PKP	**PKiKP**	**15 34 02.6**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=115,slow=5.7,SNR=6.3						
NB2	**NORSAR Subarra**	**120.34**	**21**	PKPdf	**PKiKP**	**15 34 02.5**	**+0.8**
	comp=Z,2.3nm,1.0s,baz=202,slow=1.8						
NOA	**NORSAR Array B**	**120.34**	**21**	PKP	**PKiKP**	**15 34 01.7**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=204,slow=2.0,SNR=4.2						
NVAR	**Mina Array Bea**	**121.26**	**293**	PKP	**PKiKP**	**15 34 04.6**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=152,slow=2.4,SNR=1.8						
FINES	**FINESS Array B**	**124.13**	**28**	PKP	**PKiKP**	**15 34 09.0**	**-0.1**
	comp=Z,2.8nm,0.6s,baz=210,slow=1.0,SNR=11						
FINES	**FINESS Array B**	**124.13**	**28**	PKIKP	**PKiKP**	**15 34 09.0**	**-0.1**
BELG	**Belogornoye**	**124.15**	**46**	*i* PKIKP	**PKiKP**	**15 34 11.6**	**+2.3**
CMAR	**Chiang Mai Arr**	**125.19**	**110**	PKhKP	PKPpre	15 33 59.6	
	comp=Z,0.4nm,0.4s,baz=206,slow=4.3,SNR=4.9						
CMAR				PKP	**PKiKP**	**15 34 13.0**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=233,slow=3.6,SNR=6.8						
CMAR	**Chiang Mai Arr**	**125.19**	**110**		**PKPdf**	**15 34 10.7**	**-1.5**
CMAR	**Chiang Mai Arr**	**125.19**	**110**	PKIKP	**PKPdf**	**15 34 10.7**	**-1.5**
BMO	**Blue Mountains**	**125.48**	**299**		**PKiKP**	**15 34 11.2**	**-1.2**
BMO	**Blue Mountains**	**125.48**	**299**	PKIKP	**PKiKP**	**15 34 11.2**	**-1.2**
G08A	**Pilot Rock**	**126.61**	**298**		**PKiKP**	**15 34 14.2**	**-0.5**
AB31	**Akbulak array**	**127.22**	**55**		**PKiKP**	**15 34 14.9**	**-0.7**
ABKAR	**Akbulak array**	**127.22**	**55**		**PKiKP**	**15 34 14.9**	**-0.7**
MORE	**Moreh**	**127.34**	**102**		**PKPdf**	**15 34 14.9**	**-1.2**
KLMR	**Klimovskoe**	**127.59**	**35**	*e*PKIKP	**PKiKP**	**15 34 15.6**	**-0.4**
KLMR				*e*		15 36 16.4	
KLMR				pmax	pmax		
	comp=Z,22nm,1.4s						
KKAR	**Karatay Array**	**128.12**	**67**		**PKPdf**	**15 34 15.2**	**-1.9**
KKAR	**Karatay Array**	**128.12**	**67**	PKIKP	**PKPdf**	**15 34 15.2**	**-1.9**
EPH	**Ephrata**	**128.37**	**300**		**PKiKP**	**15 34 20.7**	**+2.6**
KSH	**Kashi**	**128.51**	**74**	PKP	**PKiKP**	**15 34 18.8**	**+0.1**
KIRV	**Kirov**	**129.37**	**41**⇑	*i*PKIKP	**PKiKP**	**15 34 20.5**	**+0.9**
AAK	**Ala-Archa**	**129.90**	**70**		**PKiKP**	**15 34 23.1**	**+1.7**
AAK	**Ala-Archa**	**129.90**	**70**⇓	*i*PKIKP	**PKiKP**	**15 34 20.9**	**-0.5**
ARCES	**ARCESS Array B**	**130.68**	**22**	PKP	**PKiKP**	**15 34 21.5**	**-0.5**
	comp=Z,3.5nm,0.8s,baz=214,slow=1.3,SNR=9.3						
BLKN	**Baker Lake**	**130.79**	**328**		**PKiKP**	**15 34 21.2**	**-1.0**
ILON	**Igloolik, Nuna**	**130.94**	**338**		**PKiKP**	**15 34 21.5**	**-0.9**
QIZ	**Qiongzhong**	**131.22**	**121**	PKP	**PKiKP**	**15 34 23.5**	**-1.1**
QIZ				sPKP	**sPKPdf**	**15 34 38.0**	**-0.2**
QIZ				SS	SS	15 54 12.5	+1.6
QIZ				LR	LR		
	comp=Z,250nm,20.8s						
QIZ				LR	LR		
	comp=Z,310nm,17.1s						
QIZ				LR	LR		
	comp=Z,360nm,17.2s						
ARTI	**Arti**	**131.41**	**48**		**PKiKP**	**15 34 25.8**	**+2.0**
ARTI	**Arti**	**131.41**	**48**⇓	*i*PKIKP	**PKiKP**	**15 34 25.7**	**+1.9**
SVE	**Sverdlovsk**	**132.65**	**48**	*e*PKIKP	**PKiKP**	**15 34 25.9**	**-0.4**
PZH	**PanZhiHua**	**133.21**	**107**	PKP	**PKiKP**	**15 34 27.5**	**-1.1**
BORK	**Borovoye**	**134.62**	**57**⇑	*i*PKIKP	**PKiKP**	**15 34 31.7**	**+1.3**
BVAR	**Borovoye Array**	**134.64**	**57**	PKP	**PKiKP**	**15 34 30.7**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=264,slow=1.4,SNR=8.7						
YKA	**Yellowknife Ar**	**135.94**	**318**	PKP	**PKiKP**	**15 34 32.5**	**-0.2**
	comp=Z,2.6nm,0.8s,baz=139,slow=1.6,SNR=23						
YKA				PP	**PP**	**15 37 11.1**	**-0.4**
	comp=Z,1.5nm,1.0s,baz=128,slow=5.6,SNR=8.4						
YKA				SKPbc	**SKPab**	**15 38 03.1**	**-1.9**
	comp=Z,0.3nm,0.5s,baz=126,slow=1.1,SNR=5.8						
YKA	**Yellowknife Ar**	**135.94**	**318**		**PKPdf**	**15 34 30.5**	**-0.6**
SPITS	**Spitsbergen Ar**	**136.28**	**12**	PKhKP	PKPpre	15 34 22.3	
	comp=Z,7.8nm,1.1s,baz=281,slow=3.8,SNR=1.7						
SPITS				PKP	**PKiKP**	**15 34 33.9**	**+0.7**
	comp=Z,14nm,1.1s,baz=230,slow=3.6,SNR=4.2						
MK31	**Makanchi Array**	**136.81**	**71**⇓	*i*PKIKP	**PKiKP**	**15 34 36.0**	**+0.9**
MKAR	**Makanchi Array**	**136.81**	**71**	PKhKP	PKPpre	15 34 21.9	
	comp=Z,0.3nm,0.4s,baz=180,slow=1.4,SNR=8.4						
MKAR				PKP	**PKiKP**	**15 34 35.9**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=225,slow=6.0,SNR=4.2						
MKAR				SKPbc	**SKiKP**	**15 38 05.7**	**-2.5**
	comp=Z,0.9nm,0.8s,baz=201,slow=2.5,SNR=5.3						
KURK	**Kurchatov**	**137.30**	**64**⇑	*i*PKIKP	**PKiKP**	**15 34 35.7**	**-0.2**
RES	**Resolute Bay**	**137.57**	**339**		**PKiKP**	**15 34 35.1**	**-0.6**
RES	**Resolute Bay**	**137.57**	**339**	PKIKP	**PKiKP**	**15 34 35.2**	**-0.6**
WMQ	**Urumqi**	**137.86**	**78**	*e*PKP	**PKiKP**	**15 34 36.8**	**-0.6**
WMQ				LR	LR		
	comp=Z,130nm,24.3s						
LZH	**Lanzhou**	**141.68**	**100**	*e*PKP	**PKPdf**	**15 34 42.8**	**0.0**
GTA	**Gaotai**	**141.76**	**93**	*e*PKP	**PKPdf**	**15 34 42.5**	**-0.2**
GTA				LR	LR		
	comp=Z,110nm,22.2s						
GTA				LR	LR		
	comp=Z,150nm,22.2s						
GTA				LR	LR		
	comp=Z,150nm,20.4s						
ZAA0	**Zalesovo Array**	**142.26**	**64**		**PKPdf**	**15 34 41.6**	**-1.3**
ZALV	**Zalesovo Beam**	**142.26**	**64**	PKhKP	PKPpre	15 34 38.5	
	comp=Z,1.1nm,0.6s,baz=239,slow=3.8,SNR=6.1						
ZALV				PKP	**PKiKP**	**15 34 45.5**	**-0.5**
	comp=Z,5.2nm,0.7s,baz=240,slow=3.6,SNR=11						
ZALV	**Zalesovo Beam**	**142.26**	**64**		PKPpre	15 34 39.2	
XAN	**Xi'an**	**142.95**	**107**	PKP	**PKiKP**	**15 34 47.5**	**-0.6**
M31M	**Drury Creek, Y**	**143.79**	**311**		**PKPdf**	**15 34 44.5**	**-0.9**
O30N	**Mendenhall**	**143.94**	**308**		**PKPdf**	**15 34 44.8**	**-1.0**
N31M	**Braeburn, Yuko**	**144.10**	**309**		**PKPdf**	**15 34 45.2**	**-0.8**
INK	**Inuvik**	**145.56**	**321**		**PKPab**	**15 34 48.7**	**-0.2**
INK	**Inuvik**	**145.56**	**321**	PKIKP	**PKPab**	**15 34 48.7**	**-0.2**
NJ2	**Nanjing**	**146.51**	**121**	*e*PKPbc	**PKPab**	**15 34 52.3**	**-1.3**
KNGR	**Kungurtug, Tuv**	**147.25**	**75***c*	*i*PKP2	**PKiKP**	**15 34 56.7**	**+0.2**
BTO	**Baotou**	**148.30**	**100**	*e*PKPbc	**PKiKP**	**15 34 58.3**	**-0.7**
HNS	**HongShan**	**148.57**	**110**	⇑PKPbc	**PKPab**	**15 35 00.3**	**-1.3**
NRIK	**Noril'sk**	**148.79**	**38**	PKPbc	**PKPab**	**15 34 59.4**	**-2.2**
	comp=Z,8.6nm,0.8s,baz=270,slow=2.1,SNR=16						
NRIK	**Noril'sk**	**148.79**	**38***d*	*i*PKP2	**PKPab**	**15 34 59.2**	**-2.4**
HHC	**Hu-ho-hao-te**	**149.32**	**102**	*e*PKPbc	**PKPdf**	**15 34 56.0**	**+0.4**
MOY	**Mondy**	**149.68**	**76**	*e*PKP2	**PKiKP**	**15 35 01.0**	**-0.5**
MOY				pmax	pmax		
	comp=Z,32nm,1.8s						
ILAR	**Eielson Array**	**149.91**	**312**	PKPbc	**PKiKP**	**15 35 01.2**	**-0.2**
	comp=Z,22nm,0.8s,baz=127,slow=1.9,SNR=37						
ZAK	**Zakamensk**	**150.31**	**79**	*e*PKIKP	**PKiKP**	**15 35 01.4**	**-1.4**
ZAK				pmax	pmax		
	comp=Z,21nm,1.7s						
COLA	**College**	**150.33**	**312***d*	*i*PKIKP	**PKiKP**	**15 35 02.3**	**+0.1**
SONM	**Songino Array**	**150.73**	**86**	PKPbc	**PKiKP**	**15 35 03.8**	**0.0**
	comp=Z,6.5nm,0.8s,baz=220,slow=3.1,SNR=13						
CN2	**Changchun**	**158.84**	**113**	*e*PKP	**PKPdf**	**15 35 11.0**	**+2.3**
HILR	**Hailar Array B**	**159.17**	**93**	PKPab	**PKPab**	**15 35 46.8**	**+0.6**
	comp=Z,2.5nm,0.6s,baz=193,slow=3.8,SNR=5.3						

DJA 26 15:25:08.1±0.9**,7°N**±19°×**12°5E**±°**,h17**^{km}±25^{km}**,M4.4**/7**,mb4.5**/7**,mB4.7**/1**,MLv4.3**/7**,Mw(mB)3.9**/1**,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.61**	**56**	P	Pb	15 25 20.3	0.0
DAV				S	Sn	15 25 30.2	-1.2
DAV	**Davao City (W)**	**0.61**	**56**	P	Pn	15 25 22.0	0.0
SGSI	**Sangihe**	**3.06**	**171**	P	Pn	15 25 52.7	-3.0
GTOI	**Gorontalo**	**6.39**	**199**	P	Pn	15 26 43.2	+1.6
GTOI				S	Sn	15 27 53.2	-1.0
MRSI	**Marisa**	**6.95**	**207**	P	Pn	15 26 48.5	-0.8
	0.2nm29nm,0.5s						
MRSI				S	Sn	15 28 09.4	+1.4
	0.2nm29nm,0.5s						
SANI	**Sanana**	**8.77**	**174**	P	Pn	15 27 14.0	-0.2

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*SKHL **26** 15:37:49.4±0.6, 45°.40N×153°.50E, h40^{km}±9^{km}, mb4.5/3*
*JMA **26** 15:37:51.0±0.9, 46°N±7°×15°3E±°, h30^{km}, MV3.8/12, KURILE ISLANDS REGION*
*IDC **26** 15:37:54.4±9.5, 47°.07N×152°.32E, h0^{km}, mb3.8/5, mbtmp3.8/7, ML2.8/2, Error ellipse: s-maj=221.2km s-min=33.6km az=141.0*
ISC 26 15:37:47.9±1.9**,45°.3N**±0°.2×**153°.7E**±0°.2**,h35**^{km}**,n26,** σ**2^{s}40**/29**,mb3.9**/5**,East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**4.09**	**271**	*e*P	**Pn**	**15 38 48.8**	**+0.9**
KUR				AMB	AMB	15 38 51.1	
	80nm,0.7s						
KUR				*i* S	**Sn**	**15 39 32.7**	**-1.8**
KUR				A	A	15 39 36.7	
	60nm,0.5s						
KUR				A	A	15 39 36.7	
	70nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.71**	**260**	*e*P	**Pn**	**15 39 11.7**	**+1.5**
YUK				AMB	AMB	15 39 15.6	
	70nm,0.7s						
YUK				*i* S	**Sn**	**15 40 13.7**	**-0.7**
YUK				A	A	15 40 17.6	
	60nm,0.6s						
YUK				A	A	15 40 17.6	
	80nm,0.6s						
NEM2	**Nemuro 2**	**6.01**	**254**	*e*P	**Pn**	**15 39 16.8**	**+2.6**
NEM2				*e*S	**Sn**	**15 40 20.5**	**-1.3**
NMR	**Nemuro--Hokkai**	**6.02**	**254**	*e*P	**Pn**	**15 39 16.4**	**+2.0**
NMR				*i* S	**Sn**	**15 40 21.4**	**-0.6**
GLVR	**Golovnino**	**6.03**	**258**	*e*P	**Pn**	**15 39 17.9**	**+3.3**
GLVR				AMB	AMB	15 39 20.2	
	20nm,0.3s						
GLVR				*i* S	**Sn**	**15 40 23.6**	**+1.2**
GLVR				A	A	15 40 27.5	
	60nm,0.4s						
GLVR				A	A	15 40 27.5	
	40nm,0.4s						
JNK	**Nakash**	**6.63**	**258**	*e*P	**Pn**	**15 39 26.3**	**+3.5**
JNK				*e*S	**Sn**	**15 40 37.8**	**+0.6**
JAK	**Akkeshi**	**6.86**	**253**	*e*P	**Pn**	**15 39 28.3**	**+2.4**
JAK				*e*S	**Sn**	**15 40 40.6**	**-2.0**
JTKR	**Abashiri--Toko**	**7.09**	**262**	*e*P	**Pn**	**15 39 32.2**	**+3.1**
JAR	**Ashorobuto**	**7.38**	**257**	*e*P	**Pn**	**15 39 36.0**	**+2.9**
JAR				*e*S	**Sn**	**15 40 55.6**	**+0.1**
JCH	**Churui**	**7.91**	**254**	*e*P	**Pn**	**15 39 43.8**	**+3.4**
JCH				*e*S	**Sn**	**15 41 06.3**	**-2.2**
JKK2	**Kamakawa 2**	**7.92**	**263**	*e*P	**Pn**	**15 39 44.0**	**+3.4**
ASAJ	**Asahikawa**	**7.97**	**265**	Pn	**Pn**	**15 39 44.3**	**+3.1**
	0.3nm,0.3s,baz=68,slow=18,SNR=4.9						
	1.8nm,0.6s						
PETK	**Petropavlovsk-**	**8.22**	**17**	Pn	Pn	15 39 38.1	-6.5
	0.1nm,0.3s,baz=214,slow=10.0,SNR=3.9						
	10.0nm,1.1s						
JNBK	**Urakawa-nobuka**	**8.46**	**253**	*e*P	**Pn**	**15 39 50.2**	**+2.3**
JNBK				*e*S	**Sn**	**15 41 19.1**	**-3.0**
JANG	**Nango**	**10.20**	**245**	*e*S	**Sn**	**15 41 60.0**	**-4.8**
H11N2	**WAKE ISLAND Hy**	**27.79**	**152**	T	T	16 15 31.6	
	baz=339,slow=74						
H11N1	**WAKE ISLAND Hy**	**27.80**	**152**	T	T	16 15 42.0	
	baz=339,slow=74						
H11N3	**WAKE ISLAND Hy**	**27.80**	**152**	T	T	16 15 35.4	
	baz=339						
H11S1	**WAKE ISLAND Hy**	**28.87**	**154**	T	T	16 16 50.8	
	baz=340,slow=76,SNR=4.0						
H11S3	**WAKE ISLAND Hy**	**28.88**	**154**	T	T	16 16 54.1	
	baz=340,slow=76,SNR=4.0						
H11S2	**WAKE ISLAND Hy**	**28.89**	**154**	T	T	16 16 50.5	
	baz=340,slow=76,SNR=4.4						
MKAR	**Makanchi Array**	**47.94**	**299**	P	**P**	**15 46 21.7**	**-1.1**
	0.6nm,0.7s,baz=60,slow=6.8,SNR=4.9						
	0.6nm,0.7s						
FINES	**FINESS Array B**	**65.48**	**335**	P	**P**	**15 48 26.1**	**-0.9**
	1.4nm,0.7s,baz=28,slow=8.6,SNR=6.0						
	1.4nm,0.7s						
NOA	**NORSAR Array B**	**69.69**	**342**	P	**P**	**15 48 53.4**	**-0.2**
	0.4nm,0.8s,baz=27,slow=6.4,SNR=2.2						
	0.4nm,0.8s						
HFS	**Hagfors**	**69.92**	**340**	P	**P**	**15 48 54.5**	**-0.5**
	0.6nm,0.5s,baz=44,slow=6.6,SNR=5.4						
	0.6nm,0.5s						
AKASG	**Malin Array Be**	**72.94**	**327**	P	**P**	**15 49 13.1**	**-0.2**
	0.7nm,0.4s,baz=38,slow=5.9,SNR=4.3						
	0.7nm,0.4s						

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*MEX **26** 15:38:26.3±1.2, 14°.85N×92°.18W, h100^{km}±10^{km}, MD4.0*
*GCG **26** 15:38:27.9±1.3, 14°.97N×92°.18W, h73^{km}±9^{km}, MD3.8, ML3.8*
ISC 26 15:38:21.9±1.6**,14°.65N**±0°.06×**92°.25W**±0°.04**,h110**^{km}±8^{km}**,n21,** σ**2^{s}38**/39**,Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.26**	**357**	*e*P	**Pn**	**15 38 38.5**	**+1.0**
THIG				*e*S	**Sn**	**15 38 48.8**	**-0.4**
SMCA	**Catarina**	**0.27**	**39**	*e*P	**Pn**	**15 38 38.7**	**+1.1**
SMCA				*e*S	**Sn**	**15 38 48.0**	**-1.3**
SMCA				IAML		15 38 49.3	
	comp=E,3µm,0.2s						
CHUJ	**Union Juarez**	**0.47**	**17**	*e*P	**Pn**	**15 38 39.5**	**+0.7**
CHUJ				*e*S	**Sn**	**15 38 50.4**	**-1.2**
PATR	**El Naranjo**	**0.47**	**2**	*e*P	**Pn**	**15 38 39.4**	**+0.5**
PATR				*e*S	**Sn**	**15 38 49.3**	**-2.2**
PAVE	**Pavencul**	**0.55**	**8**	*e*P	**Pn**	**15 38 40.3**	**+1.0**
PAVE				*e*S	**Sn**	**15 38 51.5**	**-0.9**
RTAL	**Retalhuleu**	**0.55**	**103**	*e*P	**Pn**	**15 38 41.8**	**+2.7**
RTAL				*e*S	**Sn**	**15 38 53.3**	**+1.3**
STG2	**El Palmar, Qui**	**0.87**	**104**	*e*P	**Pn**	**15 38 41.8**	**-0.2**
STG2				*e*S	**Sn**	**15 38 53.6**	**-3.5**
STG8	**El Palmar, Qui**	**0.89**	**103**	*e*P	**Pn**	**15 38 42.2**	**0.0**
STG8				*e*S	**Sn**	**15 38 54.7**	**-2.9**
STG8				IAML		15 38 57.1	
	comp=N,2µm,0.2s						
STG5	**El Palmar, Qui**	**0.91**	**105**	*e*P	**Pn**	**15 38 42.2**	**0.0**
STG5				*e*S	**Sn**	**15 38 54.7**	**-2.9**
HUEH	**Huehuetenango**	**0.98**	**47**	*i* P	**Pn**	**15 38 46.0**	**+2.9**
HUEH				*i* S	**Sn**	**15 39 01.1**	**+1.9**
PCIG		**1.41**	**319**	*e*P	**Pn**	**15 38 49.7**	**+2.1**
PCIG				*e*S	**Sn**	**15 39 07.2**	**+0.1**
CCIG	**Comitan**	**1.63**	**4**	*i* P	**Pn**	**15 38 53.1**	**+2.6**
CCIG				*e*S	**Sn**	**15 39 10.3**	**-1.9**
FG16	**Alotenango, Sa**	**1.73**	**102**	*e*P	**Pn**	**15 38 52.8**	**+1.2**
FG16				IAML		15 39 17.0	
	comp=N,2µm,0.2s						
APG	**El Apazote**	**1.76**	**78**	*e*P	**Pn**	**15 38 56.2**	**+4.1**
TGIG		**2.28**	**339**	*e*P	**Pn**	**15 38 59.6**	**+1.1**
TGIG				*e*S	**Sn**	**15 39 21.2**	**-5.4**
PETF	**Flores**	**3.22**	**45**	*e*P	**Pn**	**15 39 12.3**	**+1.5**
PETF				*e*S	**Sn**	**15 39 44.9**	**-3.6**
CMIG	**Matias Romero**	**3.51**	**314**	*e*P	**Pn**	**15 39 17.4**	**+2.7**
CMIG				*e*S	**Sn**	**15 39 53.5**	**-2.0**
HUIG	**Huatulco**	**3.89**	**287**	*e*P	**Pn**	**15 39 22.7**	**+3.0**
HUIG				*e*S	**Sn**	**15 40 03.0**	**-1.5**
SCIG	**Sabancuy**	**4.42**	**13**	*e*P	**Pn**	**15 39 29.2**	**+2.4**
SCIG				*e*S	**Sn**	**15 40 15.0**	**-2.2**
NEUV	**Arroyo Zacate**	**4.58**	**312**	*e*P	**Pn**	**15 39 30.2**	**+1.2**
NEUV				*e*S	**Sn**	**15 40 17.4**	**-3.7**
JAUV	**Jalcomulco**	**6.40**	**318**	*e*S	**Sn**	**15 41 03.0**	**-2.5**

IDC 26 15:43:02.1±3.0**,30°.39S**×**177°.95W,h0**^{km}**,mb3.3**/2**,mbtmp3.5**/3**,ML3.0**/1**,Error ellipse: s-maj=72.1km s-min=21.4km az=110.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.13**	**1**	Pn	Pn	15 43 26.6	+1.4
	90nm,0.3s,baz=238,slow=22,SNR=1.7						
RAO				Sn	Sb	15 43 40.6	+0.8
	137nm,0.3s,baz=54,slow=22,SNR=2.2						
URZ	**Urewera**	**8.85**	**206**	Pn	Pn	15 45 11.8	+0.5
	0.1nm,0.3s,baz=25,slow=19,SNR=1.6						
	4.5nm,0.8s						
ASAR	**Alice Springs**	**43.16**	**267**	P	P	15 51 04.9	+0.1
	0.2nm,0.7s,baz=107,slow=7.5,SNR=5.8						
	0.2nm,0.7s						
WRA	**Warramunga Arr**	**44.14**	**272**	P	P	15 51 12.4	-0.3
	0.4nm,0.4s,baz=112,slow=8.2,SNR=6.6						
	0.4nm,0.4s						
H03S2	**Juan Fernandez**	**80.43**	**124**	T	T	17 24 26.0	
	baz=238,slow=74,SNR=6.2						
H03S1	**Juan Fernandez**	**80.45**	**124**	T	T	17 24 24.9	
	baz=238,slow=74,SNR=5.5						
H03S3	**Juan Fernandez**	**80.45**	**124**	T	T	17 24 25.4	
	baz=238,slow=74,SNR=6.9						
H03N3	**Juan Fernandez**	**80.63**	**123**	T	T	17 24 39.5	
	baz=242,slow=73,SNR=4.9						
H03N2	**Juan Fernandez**	**80.63**	**123**	T	T	17 24 39.1	
	baz=242,slow=73,SNR=5.6						
H03N1	**Juan Fernandez**	**80.64**	**123**	T	T	17 24 39.3	
	baz=242,slow=73,SNR=7.1						
FINES	**FINESS Array B**	**145.15**	**340**	PKPbc	PKPbc	16 02 38.8	-1.6
	2.4nm,0.9s,baz=20,slow=4.4,SNR=4.0						

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*IDC **26** 15:49:28.1±0.9, 55°.61S×26°.45W, h0^{km}, mb4.0/5, mbtmp3.9/6, ML3.7/1, MS3.6/2, Error ellipse: s-maj=46.5km s-min=23.1km az=72.0*
*NEIC **26** 15:49:29.3±1.7, 55°.8S±0°.1×27°.1W±0°.1, h10^{km}±1^{km}, mb4.3/10, Error ellipse: s-maj=25.8km s-min=11.3km az=21.0*
ISC 26 15:49:29.4±0.8**,55°.8S**±0°.1×**27°.1W**±0°.1**,h10**^{km}**,n24,**

σ1^{s}26/18**,mb4.2**/6**,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.60**	**281**	Pn	**Pn**	**15 50 52.2**	**-0.3**
SNAA	**Sanae**	**18.99**	**156**	P	**Pn**	**15 53 52.6**	**+1.2**
	0.2nm,0.3s,baz=320,slow=13,SNR=5.6						
	0.6nm,0.5s						
SNAA	**Sanae**	**18.99**	**156**	P	**Pn**	**15 53 50.9**	**-0.5**
PMSA	**Palmer Station**	**20.12**	**228**	P	**P**	**15 54 01.7**	**-1.4**
BELA	**Belgrano 2**	**22.37**	**184**	P	**P**	**15 54 25.8**	**-1.4**
QSPA	**South Pole Qui**	**34.49**	**180**	P	**P**	**15 56 17.9**	**+0.6**
QSPA				IAmb	IAmb	15 56 28.8	
	comp=Z,6.3nm,1.5s						
VAO	**Valinhos**	**35.87**	**328**	P	**P**	**15 56 28.7**	**-0.7**
VAO				IAmb	IAmb	15 56 32.5	
	comp=Z,16nm,1.4s						
CPUP	**Villa Florida**	**36.66**	**311**	P	**P**	**15 56 36.6**	**+0.6**
CPUP				IAmb	IAmb	15 56 59.5	
	comp=Z,6.7nm,1.5s						
BDFB	**Brasilia**	**43.14**	**330**	P	**P**	**15 57 32.2**	**+2.1**
	comp=Z,1.9nm,0.5s,baz=153,slow=6.8,SNR=3.5						
	comp=Z,1.9nm,0.5s						
BDFB	**Brasilia**	**43.14**	**330**	P	**P**	**15 57 30.3**	**+0.2**
BDFB				IAmb	IAmb	15 57 42.6	
	comp=Z,6.5nm,1.1s						
GO02	**Mina Guanaco**	**43.40**	**297**	P	**P**	**15 57 31.9**	**-0.5**
VNDA	**Vanda**	**46.87**	**183**	P	**P**	**15 58 00.7**	**+1.7**
	comp=Z,1.0nm,0.6s,baz=195,slow=7.5,SNR=12						
	comp=Z,1.0nm,0.6s						
VNDA	**Vanda**	**46.87**	**183**	P	**P**	**15 58 00.2**	**+1.2**
VNDA				IAmb	IAmb	15 58 01.4	
	comp=Z,4.1nm,1.5s						
H10N1	**ASCENSION HYDR**	**48.83**	**17**	T	T	16 50 53.6	
	baz=188						
H10N3	**ASCENSION HYDR**	**48.83**	**17**	T	T	16 50 50.7	
	baz=188						
H10N2	**ASCENSION HYDR**	**48.84**	**17**	T	T	16 50 54.6	
	baz=188						
TSUM	**Tsumeb**	**49.50**	**61**	LR	LR	16 15 07.7	
	comp=Z,54nm,20.1s,baz=155,slow=31						
LPAZ	**La Paz**	**50.25**	**305**	P	**P**	**15 58 28.2**	**+1.9**
	comp=Z,0.9nm,0.5s,baz=166,slow=4.2,SNR=3.0						
	comp=Z,0.9nm,0.5s						
LPAZ	**La Paz**	**50.25**	**305**	IAmb	IAmb	15 58 44.6	
	comp=Z,2.8nm,1.1s						
DBIC	**Dimbokro**	**64.88**	**25**	LR	LR	16 22 28.4	
	comp=Z,58nm,19.1s,baz=246,slow=31						
TORD	**Torodi Ar. Bea**	**72.78**	**29**	P	**P**	**16 00 56.7**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=198,slow=5.6,SNR=4.0						
	comp=Z,0.6nm,0.5s						
ASAR	**Alice Springs**	**99.25**	**162**	P	**Pdif**	**16 03 10.9**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=190,slow=5.1,SNR=1.6						
	comp=Z,0.2nm,0.7s						
ILAR	**Eielson Array**	**149.96**	**312**	PKPbc	**PKPbc**	**16 09 17.8**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=94,slow=1.6,SNR=15						
SONM	**Songino Array**	**150.66**	**86**	PKPbc	**PKPbc**	**16 09 19.3**	**-1.5**
	comp=Z,0.6nm,0.5s,baz=221,slow=3.4,SNR=6.4						

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*IDC **26** 16:59:48.6±0.8, 3°.09S×130°.93E, h0^{km}, mb4.0/11, mbtmp4.0/14, ML4.4/2, MS3.3/2, Error ellipse: s-maj=33.8km s-min=15.6km az=73.0*

*NEIC **26** 16:59:49.4±2.2, 3°.32S±0°.03×130°.76E±0°.04, h10^{km}±1^{km}, mb4.4/35, Error ellipse: s-maj=7.7km s-min=4.8km az=251.0*

*DJA **26** 16:59:51.7±0.1, 3°S±2°×13°1E±°, h10^{km}, M4.4/25, mb4.4/25, mB5.4/5, MLv4.2/18, Mw(mB)4.8/5*

ISC 26 16:59:51.9±0.4**, 3°.32S**±0°.04×**130°.70E**±0°.04**, h31**^{km}**, n97, σ2^{s}20**/98**, mb4.2**/18**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.44**	**213**	P	**Pb**	**17 00 20.9**	**+2.8**
FAKI	**Fak Fak**	**1.60**	**76**		**Pn**	**17 00 19.6**	**+1.5**
FAKI				Sn	**Sn**	**17 00 37.3**	**-0.4**
FAKI	**Fak Fak**	**1.60**	**76**	P	**Pb**	**17 00 20.2**	**-0.7**
MSAI	**Masohi**	**1.76**	**269**	P	**Pb**	**17 00 22.9**	**-0.7**
KRAI	**Karang Ratu**	**2.30**	**270**	P	**Pn**	**17 00 29.9**	**+2.2**
SIJI	**Sorong**	**2.50**	**13**	P	**Pn**	**17 00 29.0**	**-1.4**
SWI	**Sorong**	**2.50**	**13**	P	**Pn**	**17 00 29.2**	**-1.3**
AAI	**Ambon**	**2.52**	**262**	P	**Pn**	**17 00 33.3**	**+2.5**
KMPI	**Kaimana, Papua**	**3.02**	**97**	P	**Pn**	**17 00 41.1**	**+3.4**
NLAI	**Namlea**	**3.59**	**271**	P	**Pn**	**17 00 48.0**	**+2.5**
RKPI	**Ransiki, Papua**	**3.91**	**63**	P	**Pn**	**17 00 51.5**	**+1.6**
MWPI	**Manokwari, Pap**	**4.10**	**55**	P	**Pn**	**17 00 54.1**	**+1.6**
SAUI	**Saumlaki**	**4.67**	**173**	Pn	**Pn**	**17 00 57.2**	**-3.2**
SAUI				Sn	**Sn**	**17 01 58.9**	**+5.2**
SAUI	**Saumlaki**	**4.67**	**173**	P	Pn	17 01 05.5	+5.1
SANI	**Sanana**	**4.87**	**285**	P	**Pn**	**17 01 02.5**	**-0.5**
SRPI	**Serui, Papua**	**5.72**	**76**	P	**Pn**	**17 01 16.3**	**+1.5**
	0.5nm53nm,0.7s						
BAKI	**Biak**	**5.80**	**69**	P	**Pn**	**17 01 18.5**	**+2.5**
SMPI	**Sarmi**	**8.11**	**81**	P	**Pn**	**17 01 50.1**	**+2.4**
	30nm,0.9s						
LUWI	**Luwuk**	**8.23**	**286**	Pn	**Pn**	**17 01 44.9**	**-4.4**
LUWI				Sn	**Sn**	**17 03 16.6**	**-4.8**
LUWI	**Luwuk**	**8.23**	**286**	P	**Pn**	**17 01 48.7**	**-0.6**
	2μm29nm,0.7s						
SOEI	**Soe**	**9.04**	**225**	P	Pn	17 02 05.8	+5.3
	15nm,0.6s						
APSI	**Ampana**	**9.35**	**285**	P	**Pn**	**17 02 05.1**	**+0.5**
MTN	**Manton Dam**	**9.48**	**177**		**Pn**	**17 02 06.9**	**+0.5**
MTN				Sn	**Sn**	**17 03 51.2**	**-0.7**
GENI	**Genyem**	**9.49**	**86**	P	**Pn**	**17 02 09.4**	**+2.9**
	43nm,1.1s						
MRSI	**Marisa**	**9.53**	**293**	P	**Pn**	**17 02 06.5**	**-0.6**
	21nm,0.5s						
BATI	**Baumata**	**9.78**	**225**	Pn	Pn	17 02 16.9	+6.4
	4.8nm,0.3s,baz=137,slow=1.7,SNR=6.4						
BATI				LR	LR	17 05 55.0	
	comp=Z,226nm,21.3s,baz=65,slow=36						
	16nm,0.5s						
BATI	**Baumata**	**9.78**	**225**	P	**Pn**	**17 02 12.9**	**+2.4**
	24nm,0.7s						
JAY	**Jayapura**	**10.03**	**86**	Pn	**Pn**	**17 02 13.8**	**-0.2**
	0.7nm,0.3s,baz=273,slow=19,SNR=1.4						
JAY	**Jayapura**	**10.03**	**86**	P	**Pn**	**17 02 16.7**	**+2.7**
	18nm,0.9s						
EDFI	**Ende, Flores**	**10.45**	**239**	P	**Pn**	**17 02 22.3**	**+2.4**
	14nm,1.0s						
BKSI	**Bulukumba**	**10.73**	**259**	P	**Pn**	**17 02 27.1**	**+3.6**
	16nm,0.6s						
TOLI2	**Tolitoli**	**10.84**	**294**	Pn	**Pn**	**17 02 25.9**	**+0.8**
TOLI2				Sn	**Sn**	**17 04 21.9**	**-3.5**
MMSI	**Mamuju**	**11.79**	**273**	P	**Pn**	**17 02 38.3**	**+0.3**
	11nm,1.0s						
KNRA	**Kununurra**	**12.43**	**189**	Pn	**Pn**	**17 02 46.0**	**-0.8**
KNRA				Sn	**Sn**	**17 04 59.9**	**-4.4**
DBNI	**Kabupaten Domp**	**13.35**	**247**	P	**Pn**	**17 03 03.5**	**+4.1**
	19nm,0.6s						
PLAI	**Plampang**	**13.96**	**246**	P	**P**	**17 03 11.6**	**-3.8**
KLNI	**Mataram**	**15.38**	**250**	P	**P**	**17 03 29.5**	**-1.7**
FITZ	**Fitzroy Crossi**	**15.50**	**198**	Pn	**Pn**	**17 03 27.5**	**-1.0**
	0.3nm,0.3s,baz=25,slow=7.7,SNR=7.5						
FITZ				Sn	**Sn**	**17 06 15.1**	**-4.2**
	0.2nm,0.3s,baz=28,slow=17,SNR=1.6						
FITZ	**Fitzroy Crossi**	**15.50**	**198**	Pn	**Pn**	**17 03 26.0**	**-2.4**
KHKI	**Kahang-Kahang**	**15.82**	**251**	P	**P**	**17 03 35.6**	**-0.5**
COEN	**Coen**	**16.24**	**131**	Pn	**Pn**	**17 03 33.2**	**-4.7**
COEN				IAmb	IAmb	17 04 10.5	
	comp=Z,44nm,1.4s						
WB0	**Warramunga Arr**	**16.75**	**168**		**Pn**	**17 03 43.2**	**-1.2**
WRA	**Warramunga Arr**	**16.90**	**168**	P	**P**	**17 03 47.8**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=349,slow=11,SNR=16						
WRA				S	**Sn**	**17 06 47.1**	**-6.3**
	comp=Z,1.3nm,0.5s,baz=359,slow=24,SNR=5.5						
	comp=Z,3.3nm,0.7s						
WRA	**Warramunga Arr**	**16.90**	**168**	P	**Pn**	**17 03 43.2**	**-3.1**
WR8	**Warramunga Arr**	**16.95**	**168**		**Pn**	**17 03 44.6**	**-2.3**
WR8				IAmb	IAmb	17 04 00.2	
	comp=Z,27nm,1.4s						
KMMI	**Kalianget**	**17.07**	**257**	P	**P**	**17 03 52.2**	**+2.3**
	comp=Z,24nm,1.5s						
JAGI	**Jajag, Banyuwa**	**17.23**	**252**	Pn	**Pn**	**17 03 48.9**	**-1.5**
JAGI				IAmb	IAmb	17 04 06.2	
	comp=Z,19nm,1.1s						
JAGI	**Jajag, Banyuwa**	**17.23**	**252**	P	**P**	**17 03 51.0**	**-0.7**
	comp=Z,19nm,1.8s						
PMG	**Port Moresby**	**17.44**	**111**	P	**Pn**	**17 03 51.5**	**-1.5**
	comp=Z,4.1nm,1.1s,baz=294,slow=10.0,SNR=4.7						
PMG	**Port Moresby**	**17.44**	**111**	P	**P**	**17 03 54.2**	**+0.1**
PMG	**Port Moresby**	**17.44**	**111**	P	**P**	**17 03 57.0**	**+3.0**
	comp=Z,17nm,1.5s						
SNJI	**Sawahan-Nganju**	**19.36**	**256**	P	**Pn**	**17 04 18.4**	**+1.8**
PCJI	**Pacitan**	**20.01**	**255**	P	**Pn**	**17 04 24.0**	**-0.2**
	comp=Z,47nm,1.9s						
AS31	**Alice Springs**	**20.47**	**172**		Pn	17 04 30.2	+0.7
AS31				IAmb	IAmb	17 04 39.7	
	comp=Z,14nm,0.5s						
ASAR	**Alice Springs**	**20.47**	**172**	P	Pn	17 04 30.3	+0.8
	comp=Z,9.6nm,0.4s,baz=350,slow=10,SNR=435						
ASAR				S	**S**	**17 08 12.0**	**-2.9**
	comp=Z,2.4nm,1.0s,baz=352,slow=24,SNR=6.6						
	comp=Z,9.6nm,0.4s						
ASAR	**Alice Springs**	**20.47**	**172**		Pn	17 04 29.7	+0.2
MBWA	**Marble Bar**	**20.70**	**210**	P	**P**	**17 04 29.8**	**+0.1**
MBWA				IAmb	IAmb	17 04 30.1	
	comp=Z,22nm,1.4s						
PSA00	**Pilbara Seismi**	**20.99**	**209**	P	**P**	**17 04 33.1**	**+0.2**
KPJI	**Karang Pucung**	**22.03**	**259**	P	**P**	**17 04 47.2**	**+3.1**
CTA	**Charters Tower**	**22.55**	**139**	LR	LR	17 14 18.2	
	comp=Z,78nm,21.7s,baz=259,slow=38						
CTAO	**Charters Tower**	**22.55**	**139**	P	**P**	**17 04 49.1**	**-0.5**
CTAO				IAmb	IAmb	17 05 18.7	
	comp=Z,25nm,1.4s						
GIRL	**Giralia**	**24.97**	**218**	P	**P**	**17 05 12.4**	**-0.5**
INKA	**Innaminka**	**26.12**	**159**	P	**P**	**17 05 23.2**	**0.0**
MYKOM	**Kota Tinggi**	**27.31**	**280**	P	**P**	**17 05 35.7**	**+1.5**
MORW	**Morawa**	**29.15**	**207**	P	**P**	**17 05 50.4**	**-0.1**
BBOO	**Buckleboo**	**29.77**	**171**	P	**P**	**17 05 55.9**	**+0.1**
STKA	**Stephens Creek**	**30.20**	**161**	P	**P**	**17 06 02.1**	**+2.4**
	comp=Z,0.8nm,0.4s,baz=348,slow=12,SNR=4.0						
	comp=Z,0.8nm,0.4s						
STKA	**Stephens Creek**	**30.20**	**161**	P	**P**	**17 05 58.3**	**-1.4**
KULM	**Kulim**	**31.21**	**286**	P	**P**	**17 06 07.4**	**-1.4**
NWAO	**Narrogin (SRO)**	**32.04**	**202**	P	**P**	**17 06 13.7**	**-2.2**
GSI	**Gunungsitoli**	**33.42**	**277**	P	**P**	**17 06 27.9**	**-0.3**
CAN	**Canberra**	**36.08**	**154**	P	**P**	**17 06 48.8**	**-2.2**
CMAR	**Chiang Mai Arr**	**38.03**	**306**	P	**P**	**17 07 09.3**	**+1.6**
	comp=Z,0.7nm,0.8s,baz=132,slow=7.2,SNR=9.2						
	comp=Z,0.7nm,0.8s						
MARNC	**Mare, Loyalty**	**40.52**	**120**	P	**P**	**17 07 27.5**	**-1.0**
PBA	**Port Blair**	**40.56**	**292**	P	**P**	**17 07 28.4**	**-0.5**
KSRS	**Korea Array**	**40.64**	**357**	P	**P**	**17 07 28.1**	**-1.1**
	comp=Z,1.3nm,0.6s,baz=173,slow=9.1,SNR=6.2						
	comp=Z,1.3nm,0.6s						
LYN	**LuoYang**	**41.39**	**337**	P	**P**	**17 07 39.8**	**+4.4**
LYN				pmax	pmax		
	comp=Z,14nm,0.9s						
SONM	**Songino Array**	**55.21**	**340**	P	**P**	**17 09 21.9**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=137,slow=9.5,SNR=2.0						
	comp=Z,0.3nm,0.3s						
MK31	**Makanchi Array**	**65.57**	**326**	P	**P**	**17 10 33.4**	**+0.7**
MK31				IAmb	IAmb	17 10 43.5	
	comp=Z,4.8nm,1.4s						
MKAR	**Makanchi Array**	**65.57**	**326**	P	**P**	**17 10 33.8**	**+1.0**
	comp=Z,0.9nm,0.4s,baz=113,slow=8.1,SNR=22						
	comp=Z,0.9nm,0.4s						
MKAR	**Makanchi Array**	**65.57**	**326**	P	**P**	**17 10 33.3**	**+0.6**
MAKZ	**Makanchi**	**65.75**	**326**		**P**	**17 10 34.2**	**+0.3**
MAKZ				IAmb	IAmb	17 11 09.2	
	comp=Z,3.8nm,1.3s						
SEY	**Seymchan**	**68.08**	**10**	P	**P**	**17 10 49.9**	**+1.5**
	comp=Z,2.2nm,0.8s,baz=173,slow=20,SNR=2.4						
	comp=Z,2.2nm,0.8s						
ZALV	**Zalesovo Beam**	**68.62**	**333**	P	**P**	**17 10 52.2**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=111,slow=9.3,SNR=4.2						
	comp=Z,0.6nm,0.6s						
KURK	**Kurchatov**	**69.77**	**328**	P	**P**	**17 10 59.8**	**+0.7**
KURK				IAmb	IAmb	17 11 10.6	
	comp=Z,2.5nm,0.8s						
BVAR	**Borovoye Array**	**75.35**	**327**	P	**P**	**17 11 33.2**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=131,slow=7.7,SNR=6.6						
	comp=Z,1.1nm,0.7s						
BORK	**Borovoye**	**75.40**	**327**	P	**P**	**17 11 32.2**	**-0.3**
BORK				IAmb	IAmb	17 11 34.8	
	comp=Z,1.3nm,0.6s						
VNDA	**Vanda**	**76.00**	**173**	P	**P**	**17 11 38.1**	**+2.6**
	comp=Z,0.4nm,0.7s,baz=315,slow=7.1,SNR=1.7						
	comp=Z,0.4nm,0.7s						
VNDA	**Vanda**	**76.00**	**173**	IAmb	IAmb	17 11 54.9	
	comp=Z,4.7nm,1.5s						
NRIK	**Noril'sk**	**78.18**	**346**	P	**P**	**17 11 49.4**	**+1.4**
	comp=Z,1.1nm,0.4s,baz=130,slow=5.9,SNR=4.3						
	comp=Z,1.1nm,0.4s						
NRIK	**Noril'sk**	**78.18**	**346**	P	**P**	**17 11 49.2**	**+1.3**
NRIK				IAmb	IAmb	17 12 11.8	
	comp=Z,4.6nm,1.2s						
AB31	**Akbulak array**	**80.08**	**321**	P	**P**	**17 11 58.6**	**-0.2**
AB31				IAmb	IAmb	17 12 36.9	
	comp=Z,4.0nm,1.5s						
ABKAR	**Akbulak array**	**80.08**	**321**	P	**P**	**17 11 58.7**	**-0.1**
O14K	**Tigyukauivet M**	**81.81**	**29**	P	**P**	**17 12 07.2**	**-0.5**
QSPA	**South Pole Qui**	**86.64**	**180**	P	**P**	**17 12 31.8**	**-0.6**
QSPA				IAmb	IAmb	17 12 41.4	
	comp=Z,6.2nm,1.4s						
RAYN	**Ar Rayn**	**86.90**	**294**	P	**P**	**17 12 35.4**	**+1.0**
KNK	**Knik Glacier**	**88.51**	**28**	P	**P**	**17 12 42.5**	**+1.2**

IDC 26 17:09:50.2±8.5**, 5°.82S**×**150°.87E, h88**^{km}±59^{km}**, mb2.9**/2**, mbtmp3.3**/3**, ML1.5**/1**, Error ellipse: s-maj=133.8km s-min=55.8km az=125.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.12**	**226**	P	Pn	17 11 04.9	+0.3
	1.3nm,0.3s,baz=45,slow=4.9,SNR=12						
PMG				S	Sn	17 12 03.2	+0.8
	8.3nm,0.5s,baz=139,slow=20,SNR=10						
	3.7nm,0.3s						
WRA	**Warramunga Arr**	**21.34**	**227**	P	P	17 14 29.9	-0.5
	0.4nm,0.5s,baz=51,slow=9.6,SNR=4.6						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**24.12**	**221**	P	P	17 14 58.0	0.0
	0.5nm,0.7s,baz=55,slow=9.3,SNR=9.0						
	0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**148.76**	**286**	PKPbc	PKPbc	17 29 28.2	-0.4
	1.1nm,0.7s,baz=63,slow=3.9,SNR=4.7						

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*KRSC **26** 17:13:47.9±1.7, 58°.82N×158°.80E, h14^{km}±23^{km}, Mc5.7, Ml5.8, Felt [III-IV] at Palana, Tigil; [III] at Sedanka; Felt at Lesnay.*

*BJI **26** 17:13:48.1, 58°.70N×158°.95E, h11^{km}, mB5.4/51, mb5.0/83, Ms5.6/79, Ms7 5.5/77*

*MOS **26** 17:13:49.1±0.9, 58°.83N×158°.93E, h12^{km}, mb5.4/79, MS5.2/32, Error ellipse: s-maj=6.7km s-min=2.8km az=95.1*

*IDC **26** 17:13:49.0±0.4, 58°.80N×158°.96E, h0^{km}, mb4.9/35, mbtmp4.8/41, ML4.2/6, MS4.7/86, Error ellipse: s-maj=10.2km s-min=8.7km az=166.0*

*NEIC **26** 17:13:50.5, 58°.44N×158°.77E, h12^{km}, Moment Tensor Solution. Duration: 2^{s}2 Moment tensor: Scale 10^{16}Nm; M_{rr}6.57; $M_{\theta\theta}$-0.33; $M_{\phi\phi}$-6.24; $M_{r\theta}$-1.68; $M_{\theta\phi}$-1.66; $M_{\phi r}$-5.07; Fault plane solution: $M_0$8.50000×10^{16} NP1: ϕ_s12.25000°, δ25.63000°, λ85.73000°. NP2: ϕ_s196.99000°, δ64.45000°, λ92.05000°. Principal axes: T 8.4560, Plg70.0000°, Azm111.0000°; N 0.0961, Plg2.0000°, Azm16.0000°; P -8.5521, Plg19.0000°, Azm285.0000°;*

*NEIC **26** 17:13:50.2±1.5, 58°.83N±0°.07×158°.8E±0°.1, h9^{km}±3^{km}, mb5.4/694, Mww5.2/60 Error ellipse: s-maj=10.5km s-min=9.4km az=116.0*

*NEIC **26** 17:13:50.5, 58°.84N×158°.77E, h12^{km}*

*NERS **26** 17:13:51.4, 58°.91N×158°.66E, h14^{km}*

*GCMT **26** 17:13:53.2±0.1, 58°.80N±0°.01×158°.94E±0°.01, h12^{km}, MW5.2/141, Moment Tensor Solution. s75,c122; s141,c257; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.68±.01; $M_{\theta\theta}$-0.04±.01; $M_{\phi\phi}$-0.64±.01; $M_{r\theta}$-0.05±.03; $M_{\theta\phi}$-0.23±.01; $M_{\phi r}$-0.28±.02; Best double couple: $M_0$0.75600×10^{17} NP1: ϕ_s22.00000°, δ34.00000°, λ96.00000°. NP2: ϕ_s195.00000°, δ56.00000°, λ86.00000°. Principal axes: T 0.7360, Plg79.0000°, Azm92.0000°; N 0.0400, Plg3.0000°, Azm197.0000°; P -0.7760, Plg11.0000°, Azm288.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **26** 17:13:58.3, 59°.66N×161°.05E, h33^{km}, mb5.0*

ISC 26 17:13:51.4±0.4**, 58°.80N**±0°.03×**158°.95E**±0°.02**, h15**^{km}±2^{km}**, h15**^{km}**:pP-P, n1277, σ1^{s}19**/1028**, mb5.4**/469**, MS5.1**/135**, 58C-53D, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALN	**Palana**	**0.60**	**60**	PN	**Pg**	**17 14 00.8**	**-2.4**
PALN				S	**Sg**	**17 14 10.4**	**-0.7**
PALN	**Palana**	**0.60**	**60**	*e*P	**Pg**	**17 14 00.8**	**-2.4**
PALN				*e*S	**Sg**	**17 14 10.5**	**-0.7**
OSSR	**Ossora**	**2.17**	**76**	PN	**Pn**	**17 14 25.7**	**-1.3**
OSSR				S	**Sn**	**17 14 53.6**	**0.0**
OSSR	**Ossora**	**2.17**	**76**	*e*P	**Pn**	**17 14 25.7**	**-1.3**
OSSR				*e*S	**Sn**	**17 14 53.7**	**0.0**
SRDR	**Sredinnyy**	**2.52**	**170**	PN	**Pn**	**17 14 31.2**	**-0.6**
SRDR	**Sredinnyy**	**2.52**	**170**	*e*P	**Pn**	**17 14 31.3**	**-0.6**
SMKR	**Semkarok**	**2.60**	**148**	PN	**Pn**	**17 14 32.4**	**-0.5**
SMKR	**Semkarok**	**2.60**	**148**	*e*P	**Pn**	**17 14 32.4**	**-0.5**
KLY	**Klyuchi**	**2.65**	**159**	PN	**Pn**	**17 14 32.6**	**-1.0**
KLY	**Klyuchi**	**2.65**	**159**	*e*P	**Pn**	**17 14 32.6**	**-1.0**
KOZ	**Kozyrevsk**	**2.79**	**169**	PN	**Pn**	**17 14 35.4**	**-0.1**
KOZ	**Kozyrevsk**	**2.79**	**169**	*e*P	**Pn**	**17 14 35.4**	**-0.1**
CIRR	**Tsirk**	**2.86**	**159**	PN	**Pn**	**17 14 36.2**	**-0.3**
CIRR	**Tsirk**	**2.86**	**159**	*e*P	**Pn**	**17 14 36.3**	**-0.3**
ESO	**Esso**	**2.88**	**183**	PN	**Pn**	**17 14 35.3**	**-1.5**
ESO	**Esso**	**2.88**	**183**	*e*P	**Pn**	**17 14 35.4**	**-1.5**
KIRR	**Kirishev**	**2.95**	**165**	PN	**Pn**	**17 14 36.5**	**-1.3**
KIRR	**Kirishev**	**2.95**	**165**	*e*P	**Pn**	**17 14 36.6**	**-1.3**
BZWR	**Bezymyannyi-We**	**2.96**	**163**	PN	**Pn**	**17 14 37.1**	**-0.9**
BZWR	**Bezymyannyi-We**	**2.96**	**163**	*e*P	**Pn**	**17 14 37.2**	**-0.9**
ZLN	**Zelenaya**	**2.96**	**159**	PN	**Pn**	**17 14 38.9**	**+1.0**
ZLN	**Zelenaya**	**2.96**	**159**	*e*P	**Pn**	**17 14 38.9**	**+1.0**
BZGR	**Bezymyannyi-Gr**	**3.02**	**161**	PN	**Pn**	**17 14 38.2**	**-0.5**
BZGR	**Bezymyannyi-Gr**	**3.02**	**161**	*e*P	**Pn**	**17 14 38.3**	**-0.5**
BZP	**Bezymyannyi-Pe**	**3.02**	**163**	PN	**Pn**	**17 14 37.7**	**-1.1**
BZP	**Bezymyannyi-Pe**	**3.02**	**163**	*e*P	**Pn**	**17 14 37.7**	**-1.1**
KMNR	**Kamenistaya**	**3.13**	**167**	PN	**Pn**	**17 14 39.0**	**-1.2**
KMNR	**Kamenistaya**	**3.13**	**167**	*e*P	**Pn**	**17 14 39.1**	**-1.2**
KBG	**Krutoberegovo**	**3.25**	**140**	PN	**Pn**	**17 14 44.3**	**+2.5**
KBG	**Krutoberegovo**	**3.25**	**140**	*e*P	**Pn**	**17 14 44.3**	**+2.5**
KBTR	**Krutoberegovo**	**3.33**	**140**	PN	**Pn**	**17 14 43.5**	**+0.6**
KBTR	**Krutoberegovo**	**3.33**	**140**	*e*P	**Pn**	**17 14 43.5**	**+0.6**
TUMR	**Tumrok**	**3.58**	**169**	PN	**Pn**	**17 14 46.4**	**-0.1**
TUMR	**Tumrok**	**3.58**	**169**	*e*P	**Pn**	**17 14 46.5**	**-0.1**
TUMD	**Tumrok D**	**3.69**	**167**	PN	**Pn**	**17 14 49.3**	**+1.5**
TUMD	**Tumrok D**	**3.69**	**167**	*e*P	**Pn**	**17 14 49.4**	**+1.5**
KZV	**Kizimen**	**3.77**	**168**	PN	**Pn**	**17 14 49.9**	**+0.9**
KZV	**Kizimen**	**3.77**	**168**	*e*P	**Pn**	**17 14 50.0**	**+0.9**
TILK	**Tilichiki**	**4.01**	**63**	PN	**Pn**	**17 14 54.3**	**+2.1**
TILK	**Tilichiki**	**4.01**	**63**	*e*P	**Pn**	**17 14 54.3**	**+2.1**
GADL	**Gadlja**	**4.02**	**286**	*e*P	**Pn**	**17 14 51.6**	**-0.7**
GADL				*e*Pg	**Pb**	**17 15 02.5**	**+0.7**
GADL				Pgmax		17 15 11.7	
	2μm,0.9s						
GADL				*e*Sg	**Sb**	**17 15 55.7**	**+5.6**
GADL				Sgmax		17 16 15.8	
	18μm,0.9s						
GADL	**Gadlja**	**4.02**	**286**	*e*PN	**Pn**	**17 14 51.6**	**-0.7**
TLAR	**Talaya**	**4.04**	**308**	*e*P	**Pn**	**17 14 51.6**	**-1.1**
TLAR				*e*Pg	**Pb**	**17 15 04.7**	**+2.5**
TLAR				Pgmax		17 15 10.4	
	2μm,0.6s						
TLAR				*e*Sg	**Sb**	**17 15 54.1**	**+3.3**
TLAR				Sgmax		17 16 07.8	
	7μm,0.8s						
TLAR				Sgmax		17 16 07.8	
	2μm,0.6s						
TLAR	**Talaya**	**4.04**	**308**	*e*PN	**Pn**	**17 14 51.6**	**-1.1**
MA2	**Magadan**	**4.28**	**284**	Pn	**Pn**	**17 14 55.9**	**-0.1**
	8.2nm,0.3s,baz=84,slow=12,SNR=42						
MA2				Lg	Lg	17 16 02.6	
	90nm,0.3s,baz=178,slow=22,SNR=9.7						
MA2				LR	LR	17 16 38.7	
	comp=Z,19μm,20.0s,baz=60,slow=40						
	76nm,0.6s						
MA2	**Magadan**	**4.28**	**284**		**Pn**	**17 14 54.0**	**-1.9**
MA2	**Magadan**	**4.28**	**284**	*e*P	**Pn**	**17 14 55.7**	**-0.3**
MA2				*e*Pg	**Pb**	**17 15 06.7**	**+0.4**
MA2				Pgmax		17 15 12.6	
	670nm,0.7s						
MA2				*e*Sg	**Sb**	**17 16 02.0**	**+4.3**
MA2				Sgmax		17 16 22.2	
	3μm,0.9s						
MA2				Sgmax		17 16 22.2	
	2μm,1.1s						
MA2	**Magadan**	**4.28**	**284**	*e*PN	**Pn**	**17 14 55.7**	**-0.3**
MGD	**Magadan 1**	**4.38**	**290**	*e*P	**Pn**	**17 14 55.5**	**-1.8**
MGD				Pmax		17 14 56.9	
	110nm,0.5s						
MGD				*e*Sg	**Sb**	**17 16 03.9**	**+3.3**
MGD				Sgmax		17 16 19.8	
	2μm,0.6s						
MGD				Sgmax		17 16 19.8	
	1μm,0.5s						
MGD	**Magadan 1**	**4.38**	**290**	*e*PN	**Pn**	**17 14 55.5**	**-1.8**
KII	**Karymskiy**	**4.78**	**176**	PN	**Pn**	**17 15 02.7**	**-0.2**
KII	**Karymskiy**	**4.78**	**176**	*e*P	**Pn**	**17 15 02.8**	**-0.2**
KMSK	**Kamenskaya**	**5.13**	**41**	PN	**Pn**	**17 15 08.9**	**+1.4**
KMSK	**Kamenskaya**	**5.13**	**41**	*e*P	**Pn**	**17 15 08.9**	**+1.4**
SEY	**Seymchan**	**5.24**	**325**	Pn	**Pn**	**17 15 08.3**	**-0.9**
	12nm,0.3s,baz=143,slow=14,SNR=120						
SEY				Lg	Lg	17 16 37.1	
	57nm,0.3s,baz=31,slow=14,SNR=5.8						
SEY				LR	LR	17 17 20.9	
	comp=Z,18μm,19.5s,baz=143,slow=40						
	31nm,0.4s						
SEY	**Seymchan**	**5.24**	**325**	*e*P	**Pn**	**17 15 08.0**	**-1.2**
SEY				*e*Pg	**Pb**	**17 15 26.8**	**+4.1**
SEY				Pgmax		17 15 33.3	
	360nm,0.9s						
SEY				*e*Sg	**Sg**	**17 16 35.3**	**-4.2**
SEY				Sgmax		17 16 46.6	
	830nm,1.0s						
SEY				Sgmax		17 16 46.6	
	2μm,1.0s						
SEY	**Seymchan**	**5.24**	**325**	*e*PN	**Pn**	**17 15 08.0**	**-1.2**
TLON	**Talon**	**5.37**	**285**	*e*P	**Pn**	**17 15 12.1**	**+1.3**
TLON				*e*Pg	**Pg**	**17 15 32.0**	**-2.0**
TLON				*e*Sg	**Sg**	**17 16 37.6**	**-5.8**
TLON				Sgmax		17 16 41.8	
	5μm,0.7s						
TLON				Sgmax		17 16 41.8	
	3μm,0.8s						
TLON	**Talon**	**5.37**	**285**	*e*PN	**Pn**	**17 15 12.1**	**+1.3**
KRX	**Arik**	**5.45**	**182**	PN	**Pn**	**17 15 13.2**	**+1.0**
KRX	**Arik**	**5.45**	**182**	*e*P	**Pn**	**17 15 13.3**	**+1.0**
KRER	**Koryakskii**	**5.51**	**181**	PN	**Pn**	**17 15 14.0**	**+1.0**
KRER	**Koryakskii**	**5.51**	**181**	*e*P	**Pn**	**17 15 14.0**	**+1.0**
KOK	**Koryaka**	**5.52**	**182**	PN	**Pn**	**17 15 14.2**	**+1.1**
KOK	**Koryaka**	**5.52**	**182**	*e*P	**Pn**	**17 15 14.3**	**+1.1**
SDLR	**Sedlovina**	**5.53**	**180**	PN	**Pn**	**17 15 14.2**	**+1.0**
SDLR	**Sedlovina**	**5.53**	**180**	*e*P	**Pn**	**17 15 14.3**	**+1.0**
AVH	**Avacha**	**5.55**	**181**	PN	**Pn**	**17 15 14.5**	**+1.1**
AVH	**Avacha**	**5.55**	**181**	*e*P	**Pn**	**17 15 14.6**	**+1.1**
SMAR	**Somma**	**5.55**	**181**	PN	**Pn**	**17 15 14.2**	**+0.7**
SMAR	**Somma**	**5.55**	**181**	*e*P	**Pn**	**17 15 14.3**	**+0.7**
UGLR	**Uglovaya**	**5.60**	**181**	PN	**Pn**	**17 15 15.6**	**+1.4**
UGLR	**Uglovaya**	**5.60**	**181**	*e*P	**Pn**	**17 15 15.6**	**+1.4**
PEA0B	**Petropavlovsk-**	**5.75**	**188**		**Pn**	**17 15 16.3**	**+0.2**
PEA0B	**Petropavlovsk-**	**5.75**	**188**	*de*PN	**Pn**	**17 15 16.6**	**+0.5**
PETK	**Petropavlovsk-**	**5.75**	**188**	Pn	**Pn**	**17 15 15.4**	**-0.7**
	3.1nm,0.3s,baz=48,slow=15,SNR=36						
PETK				LR	LR	17 17 48.7	
	comp=Z,5μm,19.4s,baz=57,slow=42						
	34nm,0.8s						
PETK	**Petropavlovsk-**	**5.75**	**188**	Pn	**Pn**	**17 15 15.7**	**-0.4**
INSR	**Institute**	**5.75**	**182**	PN	Pn	17 15 21.3	+5.2
INSR	**Institute**	**5.75**	**182**	*e*P	Pn	17 15 21.3	+5.2
DALK	**Dalny**	**5.78**	**181**	PN	**Pn**	**17 15 16.6**	**+0.1**
DALK	**Dalny**	**5.78**	**181**	*e*P	**Pn**	**17 15 16.6**	**+0.1**
PET	**Petropavlovsk**	**5.79**	**182**		**Pn**	**17 15 15.8**	**-0.9**
PET	**Petropavlovsk**	**5.79**	**182**	⇑*e*PN	**Pn**	**17 15 17.2**	**+0.6**
PET				pmax	pmax		
	comp=Z,89nm,1.8s						
PET	**Petropavlovsk**	**5.79**	**182**	P	**Pn**	**17 15 16.6**	**-0.1**
	comp=Z,2.1nmcomp=Z,360nm,1.0s						
APC	**Apacha**	**5.97**	**190**	PN	**Pn**	**17 15 21.0**	**+1.9**
APC	**Apacha**	**5.97**	**190**	*e*P	**Pn**	**17 15 21.0**	**+1.9**
KRMR	**Karymshinskiy**	**6.00**	**185**	PN	**Pn**	**17 15 19.9**	**+0.4**
KRMR	**Karymshinskiy**	**6.00**	**185**	*e*P	**Pn**	**17 15 20.0**	**+0.4**
GRL	**Gorelyy**	**6.28**	**185**	PN	**Pn**	**17 15 24.2**	**+0.7**
GRL	**Gorelyy**	**6.28**	**185**	*e*P	**Pn**	**17 15 24.2**	**+0.7**
MTVR	**Mutnovka**	**6.34**	**184**	PN	**Pn**	**17 15 26.0**	**+1.6**
MTVR	**Mutnovka**	**6.34**	**184**	*e*P	**Pn**	**17 15 26.1**	**+1.6**
ASAK	**Asacha**	**6.46**	**186**	PN	**Pn**	**17 15 26.8**	**+0.9**
ASAK	**Asacha**	**6.46**	**186**	*e*P	**Pn**	**17 15 26.9**	**+0.9**
SUUS	**Susuman**	**6.62**	**312**	*e*P	**Pn**	**17 15 28.4**	**+0.4**
SUUS				*e*Pg	**Pg**	**17 15 55.3**	**-2.6**
SUUS				*e*Sg	**Sg**	**17 17 17.1**	**-6.3**
SUUS				Sgmax		17 17 34.8	

	comp=Z,3µm,1.1s						
SUUS				Sgmax		17 17 34.8	
	comp=Z,2µm,1.0s						
SUUS	Susuman	6.62	312	ePN	Pn	17 15 28.4	+0.4
BILL	Bilibino	9.83	16		Pn	17 16 11.9	-0.1
BILL	Bilibino	9.83	16	eP	Pn	17 16 13.2	+1.2
BILL				ePg		17 18 49.9	
BILL				eS		17 19 02.2	
BILL				Sgmax		17 19 25.2	
	comp=Z,620nm,1.0s						
BILL				Sgmax		17 19 25.2	
	comp=Z,90nm,1.1s						
BILL	Bilibino	9.83	16	ePN	Pn	17 16 13.2	+1.2
OKH	Okha	10.35	246	dePN	Pn	17 16 11.7	-7.4
OKH				pmax	pmax		
	comp=Z,300nm,7.7s						
OKH				MLR	MLR		
	comp=E,15µm,13.0s						
OKH				MLR	MLR		
	comp=Z,10µm,13.0s						
OKH				MLR	MLR		
	comp=N,13µm,12.0s						
SHEM	Shemya Is, Ala	10.46	119	LR	LR	17 19 42.4	
	comp=N,8µm,20.9s,baz=303,slow=34						
NKL	Nikolayevsk	11.67	249	ePN	Pn	17 16 40.2	+3.0
NKL				pmax	pmax		
	comp=N,88nm,0.8s						
NKL				pmax	pmax		
	comp=E,100nm,0.8s						
NKL				pmax	pmax		
	comp=Z,38nm,1.5s						
NKL				MLR	MLR		
	comp=E,8µm,13.0s						
NKL				MLR	MLR		
	comp=N,24µm,14.0s						
NKL				MLR	MLR		
	comp=Z,36µm,14.0s						
TYV	Tymovskoe	12.28	237	ePN	Pn	17 16 48.3	+2.8
TYV				eS	Sn	17 19 09.4	+7.5
TYV				pmax	pmax		
	comp=Z,400nm,2.9s						
TYV				pmax	pmax		
	comp=Z,19nm,1.4s						
TYV				smax	smax		
	comp=N,11nm,1.3s						
TYV				smax	smax		
	comp=E,10.0nm,1.3s						
TYV				smax	smax		
	comp=N,500nm,4.3s						
TYV				smax	smax		
	comp=E,600nm,4.3s						
TYV				MLR	MLR		
	comp=Z,5µm,18.0s						
TYV				MLR	MLR		
	comp=E,6µm,18.0s						
UGL	Uglegorsk	13.87	233	⇓eP	Pn	17 17 09.4	+2.2
UGL				eS	Sn	17 19 51.8	+11
UGL				pmax	pmax		
	comp=Z,59nm,2.5s						
UGL				pmax	pmax		
	comp=Z,900nm,3.8s						
UGL				smax	smax		
	comp=E,900nm,7.7s						
UGL				smax	smax		
	comp=N,800nm,5.2s						
UGL				MLR	MLR		
	comp=Z,4µm,15.0s						
UGL				MLR	MLR		
	comp=N,8µm,14.0s						
UGL				MLR	MLR		
	comp=E,4µm,12.0s						
YAK	Yakutsk	14.75	295	Pn	Pn	17 17 19.2	+0.1
	comp=E,0.9nm,0.3s,baz=86,slow=16,SNR=35						
YAK				Lg	Lg	17 21 39.5	
	comp=E,0.5nm,0.3s,baz=162,slow=23,SNR=7.3						
YAK				LR	LR	17 23 33.2	
	comp=E,7µm,19.1s,baz=91,slow=40						
	comp=E,57nm,1.1s						
YAK	Yakutsk	14.75	295		Pn	17 17 20.5	+1.4
YAK	Yakutsk	14.75	295	d iP	Pn	17 17 20.1	+1.0
YAK				eS	Sn	17 20 02.6	+0.6
YAK				pmax	pmax		
	comp=Z,96nm,1.5s						
YAK				pmax	pmax		
	comp=N,11nm,1.3s						
YAK				pmax	pmax		
	comp=E,89nm,1.4s						
YAK				pmax	pmax		
	comp=Z,376nm,1.5s						
YAK				pmax	pmax		
	comp=E,585nm,1.5s						
YAK				pmax	pmax		
	comp=N,146nm,2.0s						
YAK				smax	smax		
	comp=E,119nm,2.8s						
YAK				smax	smax		
	comp=N,98nm,2.8s						
YAK				MLR	MLR		
	comp=Z,15µm,17.0s						
YAK				MLR	MLR		
	comp=E,11µm,17.0s						
GAMB	Gambell	14.87	58		Pn	17 17 21.5	+0.7
GAMB	Gambell	14.87	58	P	Pn	17 17 20.7	-0.1
	baz=264						
KUR	Kuril'sk	15.17	211	eP	Pn	17 17 26.0	+1.1
KUR				eS	Sn	17 20 15.2	+2.8
KUR				pmax	pmax		
	comp=Z,547nm,1.0s						
KUR				pmax	pmax		
	comp=E,352nm,2.4s						
KUR				pmax	pmax		
	comp=N,101nm,0.6s						
KUR				pmax	pmax		
	comp=Z,2µm,3.7s						
KUR				MLR	MLR		
	comp=Z,2µm,17.0s						
GRNR	Gornyy	15.22	248	⇓iP	Pn	17 17 28.0	+2.4
GRNR				pmax	pmax		
	comp=Z,40nm,1.1s						
GRNR				MLR	MLR		
	comp=N,4µm,12.0s						
GRNR				MLR	MLR		
	comp=E,5µm,12.0s						
GRNR				MLR	MLR		
	comp=Z,6µm,12.0s						
YSS	Yuzhno-Sakhali	15.31	226		Pn	17 17 26.4	-0.5
YSS	Yuzhno-Sakhali	15.31	226	⇑eP	Pn	17 17 26.9	+0.1
YSS				eS	Sn	17 20 13.4	-2.6
YSS				pmax	pmax		
	comp=N,600nm,4.0s						
YSS				pmax	pmax		
	comp=Z,500nm,4.0s						
YSS				pmax	pmax		
	comp=Z,50nm,1.1s						
YSS				MLR	MLR		
	comp=Z,2µm,15.0s						
YSS				MLR	MLR		
	comp=E,2µm,17.0s						
SPIA	Saint Paul Isl	16.34	82	P	Pn	17 17 40.4	+0.4
	baz=289						
TNA	Tin City	16.71	52	P	P	17 17 45.7	-1.1
TNA	Tin City	16.71	52	P	Pn	17 17 44.9	+0.3
	baz=262,SNR=9.5						
YUK	Yuzh-Kuril'sk	16.84	214	eP	Pn	17 17 46.9	+0.6
YUK				i S	Sn	17 20 49.6	-3.3
YUK				pmax	pmax		
	comp=Z,865nm,2.2s						
YUK				pmax	pmax		
	comp=Z,122nm,0.8s						
YUK				pmax	pmax		
	comp=N,111nm,0.7s						
YUK				pmax	pmax		
	comp=E,55nm,0.9s						
YUK				MLR	MLR		
	comp=Z,3µm,15.0s						
YUK				MLR	MLR		
	comp=N,2µm,12.0s						
P08K	Saint George I	16.90	84	P	P	17 17 47.8	-1.2
	baz=291						
F14K	Arctic Creek	17.36	53	P	P	17 17 53.3	-0.7
	baz=264						
M11K	Mekoryuk	17.59	70	P	P	17 17 57.2	+0.6
M11K	Mekoryuk	17.59	70	P	P	17 17 56.9	+0.2
	baz=280,SNR=7.8						
ANM	Nome	17.69	56	P	P	17 17 58.1	+0.3
ANM	Nome	17.69	56	P	P	17 17 58.1	+0.3
ANM				pmax	pmax		
	comp=Z,105nm,1.4s						
ANM	Nome	17.69	56	P	P	17 17 57.9	+0.1
	baz=268,SNR=22						
TIXI	Tiksi	17.73	329	P	Pn	17 17 57.6	+0.3
	comp=Z,0.6nm,0.3s,baz=128,slow=13,SNR=31						
TIXI				LR	LR	17 24 43.7	
	comp=Z,4µm,19.2s,baz=147,slow=37						
	comp=Z,14nm,0.8s						
TIXI	Tiksi	17.73	329	P	Pn	17 17 56.8	-0.5
TIXI	Tiksi	17.73	329	⇑eP	Pn	17 17 56.3	-1.0
TIXI				pmax	pmax		
	comp=Z,122nm,2.5s						
TIXI				MLR	MLR		
	comp=Z,6µm,15.0s						
JKA	Kamikawa-asahi	17.81	222	P	Pn	17 17 58.6	+0.2
ASAJ	Asahikawa	17.81	222	P	P	17 17 59.3	+0.1
	comp=Z,0.3nm,0.3s,baz=22,slow=8.3,SNR=18						
ASAJ				LR	LR	17 24 40.3	
	comp=Z,1µm,19.5s,baz=48,slow=37						
	comp=Z,42nm,0.9s						
ASAJ	Asahikawa	17.81	222	P	Pn	17 17 58.7	+0.2
ASAJ				pmax	pmax		
	comp=Z,111nm,1.2s						
F15K	North Star Dit	18.07	52	P	P	17 18 02.8	+0.9
	baz=265,SNR=15						
K13K	Kusilvak Mount	18.11	65	P	P	17 18 02.7	+0.3
K13K	Kusilvak Mount	18.11	65	P	P	17 18 03.0	+0.6
	baz=277,SNR=16						
ZEA	Zeya	18.20	268	eP	P	17 18 03.8	+0.3
ZEA				eS	Sn	17 21 15.5	-11
ZEA				pmax	pmax		
	comp=E,400nm,4.0s						
ZEA				pmax	pmax		
	comp=N,200nm,3.0s						
ZEA				pmax	pmax		
	comp=Z,700nm,5.1s						
ZEA				pmax	pmax		
	comp=E,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.0s						
ZEA				smax	smax		
	comp=E,500nm,5.6s						
ZEA				smax	smax		
	comp=N,600nm,6.5s						
ZEA				MLR	MLR		
	comp=E,3µm,13.0s						
ZEA				MLR	MLR		
	comp=N,3µm,16.0s						
ZEA				MLR	MLR		
	comp=Z,7µm,14.0s						
C16K	Lisburne Hills	18.23	44	P	Pn	17 18 02.6	-0.9
C16K	Lisburne Hills	18.23	44	P	P	17 18 03.5	-0.2
	baz=257,SNR=16						
G15K	Niukluk	18.28	55	P	P	17 18 05.5	+1.2
	baz=268,SNR=23						
J14K	Nanvaranak Lak	18.54	62	P	P	17 18 06.8	-0.3
J14K	Nanvaranak Lak	18.54	62	P	Pn	17 18 08.3	+1.0
	baz=275,SNR=17						
NIKH	Nikolski High	18.84	94	P	Pn	17 18 10.9	-0.2
NIKH				IAmb	IAmb	17 18 14.9	
	comp=Z,397nm,1.2s						
NIKH	Nikolski High	18.84	94	P	Pn	17 18 11.4	+0.3
	baz=301						
D17K	Noatak River	18.95	46	P	Pn	17 18 12.1	-0.1
	baz=261,SNR=20						
M13K	Dall Lake	18.98	69	P	Pn	17 18 13.9	+1.3
	baz=282						
G16K	Koyuk River	19.01	53	P	Pn	17 18 13.5	+0.5
	baz=268						
H16K	Elim	19.05	56	P	Pn	17 18 13.9	+0.5
	baz=271,SNR=32						
C17K	DeLong Mountai	19.06	44	P	Pn	17 18 13.7	+0.1
	baz=258						
RDOG	Red Dog Mine	19.08	45	P	Pn	17 18 13.7	-0.1
	baz=260						
L14K	Kuka Creek	19.12	66	P	Pn	17 18 15.0	+0.6
	baz=280,SNR=7.0						
E17K	Hotham Inlet	19.35	48	P	Pn	17 18 17.2	+0.2
	baz=264,SNR=31						
TEY	Ternei	19.35	234	⇑eP	Pn	17 18 17.0	-0.2
TEY				pmax	pmax		
	comp=N,10.0nm,1.2s						
TEY				pmax	pmax		
	comp=Z,20nm,1.2s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.2s						
TEY				pmax	pmax		
	comp=N,100nm,5.7s						
TEY				pmax	pmax		
	comp=Z,100nm,3.5s						
ERM	Erimo	19.50	217	P	P	17 18 17.2	-0.5
ERM	Erimo	19.50	217	P	P	17 18 17.2	-0.5
ERM				pmax	pmax		
	comp=Z,89nm,1.1s						
F17K	Baldwin Pennin	19.52	50	P	Pn	17 18 19.2	+0.2
	baz=266						
K15K	Wolf Creek Mou	19.52	63	P	Pn	17 18 19.6	+0.4
	baz=278,SNR=16						
M14K	Bethel	19.58	68	P	Pn	17 18 20.3	+0.5
M14K	Bethel	19.58	68	P	Pn	17 18 20.0	+0.2
	baz=282,SNR=13						
UNV	Unalaska Valle	19.64	90	P	Pn	17 18 20.6	+0.1
UNV				IAmb	IAmb	17 18 31.1	
	comp=Z,160nm,0.9s						
UNV	Unalaska Valle	19.64	90	P	Pn	17 18 20.8	+0.2
	baz=299,SNR=10						
L15K	Ungalak Mounta	19.64	65	P	Pn	17 18 20.6	+0.1
	baz=280,SNR=14						
G17K	Kiwalik Mounta	19.72	53	P	Pn	17 18 21.4	-0.1
	baz=270,SNR=30						
I17K	Unalakleet	19.75	58	P	Pn	17 18 21.6	-0.2
I17K				IAmb	IAmb	17 18 34.3	
	comp=Z,276nm,1.4s						
I17K	Unalakleet	19.75	58	P	Pn	17 18 22.0	+0.3
	baz=274,SNR=38						
C18K	Utukok River	19.81	44	P	P	17 18 21.5	+0.5
	baz=260						
J16K	Anvik River	19.84	60	P	Pn	17 18 22.8	-0.1
	baz=276,SNR=27						
AKUT	Akutan	19.88	88	P	Pn	17 18 24.3	+0.9
AKUT				IAmb	IAmb	17 18 27.3	
	comp=Z,376nm,1.3s						
N14K	Kuskokwak Cree	19.90	70	IAmb	IAmb	17 18 33.1	
	comp=Z,224nm,1.4s						
N14K	Kuskokwak Cree	19.90	70	P	Pn	17 18 23.2	-0.3
	baz=284						
HEH	HeiHe	20.03	259	eP	P	17 18 23.3	-0.2
HEH				sP	pP	17 18 27.8	+0.2
HEH				S	S	17 22 09.0	+1.0
HEH				pmax	pmax		
	comp=Z,100nm,0.8s						
HEH				LR	LR		
	comp=Z,6µm,13.3s						
HEH				LR	LR		
	comp=Z,6µm,16.4s						
HEH				LR	LR		
	comp=Z,12µm,14.3s						
H17K	Granite Mounta	20.04	55	P	Pn	17 18 25.0	-0.3
	baz=272,SNR=57						
F18K	Selawik	20.16	50	P	Pn	17 18 26.1	-0.6
	baz=268						
A19K	Wainwright	20.18	39	P	Pn	17 18 26.0	-0.8
	baz=256,SNR=78						
M15K	Kasigluk River	20.20	67	P	Pn	17 18 26.4	-0.8
	baz=283						
O14K	Tigyukauivet M	20.28	72	P	Pn	17 18 27.7	-0.4
	baz=286,SNR=14						
C19K	Lookout Ridge	20.46	43	P	P	17 18 28.9	+0.8
	baz=261						
J17K	VABM Dome	20.51	59	P	Pn	17 18 30.2	-0.6
	baz=277,SNR=63						
G18K	Tagagawik	20.55	52	P	Pn	17 18 30.3	-1.0
	baz=270,SNR=68						
L16K	Owhat River	20.57	64	P	Pn	17 18 30.3	-1.2
L16K	Owhat River	20.57	64	P	Pn	17 18 30.6	-1.0
	baz=281,SNR=24						
N15K	Kwethluk River	20.61	69	P	Pn	17 18 31.3	-0.7
	baz=284						
H18K	Honhosa River	20.69	54	IAmb	IAmb	17 18 35.8	
	comp=Z,162nm,1.1s						
H18K	Honhosa River	20.69	54	P	Pn	17 18 31.9	-1.0
	baz=273,SNR=57						
FALS	False Pass	20.77	85	P	P	17 18 32.4	+0.9
FALS				IAmb	IAmb	17 18 33.1	
	comp=Z,187nm,0.7s						
FALS	False Pass	20.77	85	P	P	17 18 31.8	+0.3
	baz=297						
D19K	Kuna River	20.91	45	P	P	17 18 32.8	-0.1
	baz=264,SNR=46						
F19K	Shaleruckik Mo	20.92	49	P	P	17 18 33.5	+0.5
	baz=269						
K17K	Iditarod	20.95	61	P	P	17 18 34.3	+0.9
	baz=279,SNR=56						
M16K	Timber Creek	20.96	66	P	Pn	17 18 34.7	-1.4
	baz=283,SNR=17						
O15K	Ungalikthiuk R	21.01	71	P	P	17 18 34.5	+0.5
	baz=287,SNR=11						
L17K	Donlin	21.05	63	P	P	17 18 35.7	+1.2
	baz=280,SNR=15						
S12K	Black Hills	21.11	81	P	P	17 18 35.3	+0.2
	baz=295						
E19K	Redstone River	21.16	48	P	P	17 18 36.5	+1.0
	baz=268						
N16K	Nishlik Lake	21.18	67	P	P	17 18 37.2	+1.4
	baz=284,SNR=19						
G19K	Purcell Mounta	21.19	51	P	P	17 18 36.5	+0.6
	baz=271						
GCSA	Galena City Sc	21.34	55	P	P	17 18 37.9	+0.4
	baz=275,SNR=11						
B20K	Meade River	21.45	41	P	P	17 18 38.9	+0.3
	baz=261						
H19K	Roundabout Mou	21.47	53	P	P	17 18 39.7	+0.8
	baz=273,SNR=48						
D20K	Etivluk River	21.48	44	P	P	17 18 38.8	-0.2
	baz=265						
J18K	Innoko River	21.55	59	IAmb	IAmb	17 18 42.2	
	comp=Z,170nm,1.2s						
J18K	Innoko River	21.55	59	P	P	17 18 40.9	+1.0
	baz=278,SNR=49						
M17K	Holitna River	21.59	64	P	P	17 18 41.5	+1.2
	baz=283						
F20K	Avaraart Lake	21.73	49	P	P	17 18 42.2	+0.6
	baz=270						
O16K	Kokwok River B	21.74	69	P	P	17 18 42.2	+0.4
	baz=287						
L18K	Granite Mounta	21.77	62	IAmb	IAmb	17 18 45.8	
	comp=Z,225nm,1.5s						
L18K	Granite Mounta	21.77	62	P	P	17 18 42.8	+0.6
	baz=281,SNR=29						
A21K	Barrow	21.87	37	P	P	17 18 42.9	-0.3
	baz=258,SNR=79						
N17K	Nushagak Hills	21.92	67	P	P	17 18 44.1	+0.3
	baz=285,SNR=7.2						
P16K	Nushagak River	21.96	71	IAmb	IAmb	17 19 00.7	
	comp=Z,142nm,1.1s						
P16K	Nushagak River	21.96	71	P	P	17 18 44.6	+0.4
	baz=288						
J19K	Poorman	21.96	57	P	P	17 18 44.3	+0.1
	baz=278,SNR=33						
USRK	Ussuriysk Ar.	22.04	240	P	P	17 18 45.0	-0.2
	comp=Z,44nm,0.9s,baz=44,slow=9.9,SNR=32						
	comp=Z,44nm,0.9s						
SDPT	Sand Point	22.08	81	P	P	17 18 46.6	+1.1
	baz=296						
H20K	Anotleneega Mo	22.13	53	P	P	17 18 46.5	+0.5
	baz=275,SNR=37						
S14K	Fog Glacier	22.16	78	P	P	17 18 46.6	+0.1
	baz=294						
O17K	Koliganek Bris	22.17	69	P	P	17 18 46.8	+0.3
	baz=287,SNR=10						
C21K	Knifeblade Rid	22.17	43	P	P	17 18 46.6	+0.1
	baz=266						
B21K	Ikpikpuk River	22.28	42	P	P	17 18 47.2	-0.3
	baz=265						
M18K	Stony River	22.33	64	P	P	17 18 48.8	+0.7
	baz=284,SNR=13						
A22K	Sinclair Lake	22.34	38	P	P	17 18 47.5	-0.6
	baz=261						
N18K	Kilae Creek	22.50	66	P	P	17 18 50.6	+0.6
	baz=286,SNR=5.5						
J20K	Nowinta River	22.58	56	P	P	17 18 51.2	+0.3
	baz=278,SNR=78						
F21K	Alatna River	22.60	48	P	P	17 18 51.1	0.0
	baz=272,SNR=40						
G21K	Allakaket	22.62	50	P	P	17 18 51.5	+0.2
	baz=273,SNR=101						
L19K	White Mountain	22.62	62	P	P	17 18 51.4	+0.1
	baz=283,SNR=11						
P17K	Kvichak River	22.66	70	P	P	17 18 53.5	+1.7
P17K	Kvichak River	22.66	70	P	P	17 18 51.9	+0.1
	baz=289,SNR=8.2						
Q16K	King Salmon	22.73	71	P	P	17 18 52.3	-0.1
	baz=290						
K20K	Telida	22.75	58	P	P	17 18 52.7	+0.1
	baz=280,SNR=23						
B22K	Teshekpuk Lake	22.76	40	P	P	17 18 51.8	-0.8
	baz=264,SNR=66						
CHNA	Chernabura Isl	22.76	82	P	P	17 18 53.1	+0.2
	baz=297						
MDJ	Mudanjiang	22.83	244	P	P	17 18 52.8	-0.8
MDJ				S	S	17 23 04.8	+2.6
MDJ				SS	SnSn	17 23 39.3	+6.5
MDJ				pmax	pmax		
	comp=Z,54nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,1µm,3.8s						
MDJ				LR	LR		
	comp=Z,6µm,13.7s						
MDJ				LR	LR		
	comp=Z,8µm,12.5s						
MDJ				LR	LR		
	comp=Z,12µm,11.8s						
D22K	Ayikyak River	22.91	44	P	P	17 18 53.5	-0.8
	baz=268						
H21K	Melozitna Rive	22.97	52	P	P	17 18 54.4	-0.5
	baz=276,SNR=26						
BNX	BinXian	23.05	249	⇓P	P	17 18 55.5	-0.4
BNX				S	S	17 23 06.8	+0.8
BNX				pmax	pmax		
	comp=Z,30nm,1.0s						
BNX				pmax	pmax		
	comp=Z,850nm,6.6s						
BNX				LR	LR		
	comp=Z,12µm,14.2s						
BNX				LR	LR		
	comp=Z,11µm,13.9s						
BNX				LR	LR		
	comp=Z,18µm,14.1s						
O18K	Koktuh Hills	23.06	68	P	P	17 18 56.0	+0.1
	baz=288						
F22K	John River	23.10	48	P	P	17 18 56.5	+0.2
	baz=272						
N19K	Bonanza Creek	23.13	65	P	P	17 18 57.0	+0.3
	baz=286,SNR=7.0						
P18K	Big Mountain,	23.19	69	P	P	17 18 57.4	+0.2
	baz=289,SNR=7.1						
E22K	Anaktuvuk Pass	23.23	46	P	P	17 18 57.0	-0.5
	baz=271,SNR=49						
R17L	Mt. Peulik Vol	23.25	73	P	P	17 18 57.9	+0.1
	baz=292						
Q17K	Contact Creek	23.25	72	P	P	17 18 57.6	-0.3
	baz=291						
BOD	Bodaibo	23.30	287	eP	P	17 18 57.6	-0.7
BOD				pmax	pmax		
	comp=Z,173nm,1.6s						
I21K	Tanana	23.37	54	P	P	17 18 58.6	-0.3
	baz=278,SNR=33						
O19K	Port Alsworth	23.38	66	P	P	17 18 59.0	-0.1
	baz=288						
CHUM	Lake Minchumin	23.43	57	P	P	17 19 00.2	+0.7
	baz=280,SNR=43						
M20K	Styx River	23.48	62	P	P	17 19 00.6	+0.4
	baz=284						
H22K	Ishtalitna Cre	23.53	52	IAmb	IAmb	17 19 03.0	
	comp=Z,136nm,1.2s						
H22K	Ishtalitna Cre	23.53	52	P	P	17 19 00.4	-0.2
	baz=276,SNR=49						
ACHA	Angle Creek He	23.55	72	IAmb	IAmb	17 19 02.1	
	comp=Z,181nm,2.0s						
D23K	Nanushuk River	23.64	44	P	P	17 19 01.5	-0.1
	baz=270,SNR=28						
PPLA	Purkeypile	23.68	59	P	P	17 19 02.7	+0.6
	baz=283,SNR=22						
C23K	Itkillik River	23.68	42	P	P	17 19 01.8	-0.2
	baz=268,SNR=81						
COLD	Coldfoot	23.88	48	IAmb	IAmb	17 19 05.0	
	comp=Z,162nm,1.2s						
COLD	Coldfoot	23.88	48	P	P	17 19 03.7	-0.2
	baz=274,SNR=58						
BPAW	Bear Paw Mtn.	23.96	56	P	P	17 19 04.8	0.0
	baz=281,SNR=44						
G23K	Bananza Creek	23.99	49	IAmb	IAmb	17 19 07.2	
	comp=Z,114nm,1.1s						
G23K	Bananza Creek	23.99	49	P	P	17 19 04.7	-0.4
	baz=276,SNR=66						

TOLK	Toolik Lake Re	24.05	45	P	P	17 19 05.3	-0.3
	baz=272						
E23K	Chandalar	24.05	46	P	P	17 19 05.6	-0.1
	baz=273						
P19K	Oil Pt	24.07	67	P	P	17 19 06.0	+0.2
	baz=289						
SPCR	Spurr Chakacha	24.09	63	P	P	17 19 06.4	+0.4
	baz=286,SNR=7.3						
Q19K	Cape Douglas,	24.11	69	P	P	17 19 06.5	+0.2
	baz=290						
SKT	Skwentna	24.19	61	P	P	17 19 07.4	+0.6
	baz=285,SNR=9.5						
O20K	Slope Mountain	24.22	66	P	P	17 19 08.1	+0.8
	baz=289						
C24K	Franklin Bluff	24.34	42	P	P	17 19 08.0	-0.2
	baz=270						
CHIR	Chirikof Islan	24.35	77	P	P	17 19 08.5	+0.2
	baz=296						
TRF	Thorofare Moun	24.40	57	P	P	17 19 09.0	0.0
	baz=283,SNR=40						
HILR	Hailar Array B	24.40	265	P	P	17 19 08.8	-0.1
	comp=Z,16nm,0.8s,baz=61,slow=9.2,SNR=16						
HILR				LR	LR	17 29 11.6	
	comp=Z,3µm,19.4s,baz=70,slow=38						
	comp=Z,16nm,0.8s						
I23K	Minto, Yukon-K	24.47	53	P	P	17 19 09.5	+0.1
	baz=280,SNR=25						
E24K	Your Creek	24.48	46	P	P	17 19 09.1	-0.4
	baz=274						
CUT	Chulitna	24.65	60	P	P	17 19 10.4	-0.6
	baz=285,SNR=12						
SUA	Susitna One	24.69	62	IAmb	IAmb	17 19 28.9	
	comp=Z,102nm,1.2s						
SUA	Susitna One	24.69	62	P	P	17 19 11.2	-0.3
	baz=287						
NEA2	Nenana	24.69	54	IAmb	IAmb	17 19 18.0	
	comp=Z,78nm,1.0s						
NEA2	Nenana	24.69	54	P	P	17 19 11.1	-0.3
	baz=281,SNR=41						
CAPN	Captain Cook N	24.70	64	P	P	17 19 10.1	-1.4
	baz=288						
JSD	Sado	24.70	222	IAmb	IAmb	17 19 12.4	
	comp=Z,114nm,1.1s						
F24K	Squaw Lake	24.75	47	P	P	17 19 11.7	-0.2
	baz=276						
SII	Sitkinak Islan	24.76	75	P	P	17 19 12.3	+0.2
	baz=295						
HOM	Homer	24.83	67	P	P	17 19 12.2	-0.5
	baz=290						
Q20K	Shuyak Island	24.84	69	P	P	17 19 11.8	-0.9
	baz=292						
M22K	Willow	24.89	61	IAmb	IAmb	17 19 21.8	
	comp=Z,62nm,0.9s						
M22K	Willow	24.89	61	P	P	17 19 12.7	-0.5
	baz=286						
MCK	McKinley	24.93	56	P	P	17 19 13.4	-0.1
	baz=283,SNR=51						
OHAK	Old Harbor	24.93	73	P	P	17 19 12.6	-1.0
	baz=294						
H24K	Noodor Dome	24.97	51	P	P	17 19 13.9	-0.1
	baz=279,SNR=26						
G24K	Hadweenzic Riv	25.00	49	P	P	17 19 13.8	-0.4
	baz=278,SNR=39						
KDAK	Kodiak Island	25.06	71	LR	LR	17 29 09.2	
	comp=Z,3µm,21.0s,baz=284,slow=37						
KDAK	Kodiak Island	25.06	71	P	P	17 19 14.7	-0.1
KDAK				IAmb	IAmb	17 19 15.7	
	comp=Z,183nm,1.4s						
KDAK	Kodiak Island	25.06	71	*de*P	P	17 19 14.8	+0.1
KDAK				pmax	pmax		
	comp=Z,188nm,1.4s						
KDAK	Kodiak Island	25.06	71	P	P	17 19 14.4	-0.3
	baz=293						
WRH	Wood River Hil	25.13	55	IAmb	IAmb	17 19 16.6	
	comp=Z,127nm,1.0s						
COLA	College	25.15	54	P	P	17 19 14.9	-0.6
COLA				IAmb	IAmb	17 19 16.5	
	comp=Z,82nm,1.1s						
COLA	College	25.15	54	*c i*P	P	17 19 15.2	-0.3
COLA				pmax	pmax		
	comp=Z,70nm,1.0s						
COLA	College	25.15	54	P	P	17 19 15.2	-0.3
	baz=281						
D25K	Kavik River	25.17	43	P	P	17 19 15.6	-0.2
	baz=273						
CCB	Clear Creek Bu	25.21	54	IAmb	IAmb	17 19 43.5	
	comp=Z,93nm,1.3s						
BRSE	Bradley Lake S	25.23	66	P	P	17 19 16.0	-0.4
	baz=290						
RC01	Rabbit Creek A	25.27	63	P	P	17 19 16.9	+0.3
	baz=288						
POKR	Poker Plat Res	25.28	53	P	P	17 19 16.6	-0.1
	baz=281,SNR=8.8						
WAT1	Susitna Watana	25.31	58	P	P	17 19 16.2	-0.9
	baz=285						
PMR	Palmer	25.39	61	P	P	17 19 17.0	-0.7
	baz=287						
CN2	Changchun	25.41	249	*e*P	P	17 19 17.3	-0.8
CN2				*e*sP	sP	17 19 24.0	-0.3
CN2				*e*S	S	17 23 39.5	-4.6
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
CN2				pmax	pmax		
	comp=Z,500nm,5.0s						
CN2				LR	LR		
	comp=Z,4µm,13.0s						
CN2				LR	LR		
	comp=Z,4µm,13.0s						
CN2				LR	LR		
	comp=Z,5µm,13.0s						
GHO	Glory Hole Cre	25.43	61	IAmb	IAmb	17 19 23.1	
	comp=Z,75nm,1.1s						
O22K	Cooper Landing	25.46	64	P	P	17 19 18.2	-0.2
	baz=289						
G25K	Bearman Lake	25.53	49	P	P	17 19 18.4	-0.6
	baz=279						
E25K	Arctic Village	25.56	46	IAmb	IAmb	17 19 22.1	
	comp=Z,87nm,0.9s						
E25K	Arctic Village	25.56	46	P	P	17 19 19.5	+0.2
	baz=276,SNR=88						
ILAR	Eielson Array	25.57	54	P	P	17 19 18.5	-0.9
	comp=Z,24nm,0.9s,baz=270,slow=9.3,SNR=188						
ILAR				PcP	PcP	17 22 48.8	-1.0
	comp=Z,2.4nm,1.1s,baz=263,slow=3.4,SNR=1.9						
ILAR				LR	LR	17 30 38.5	
	comp=Z,2µm,18.7s,baz=280,slow=40						
	comp=Z,24nm,0.9s						
ILAR	Eielson Array	25.57	54	P	P	17 19 18.0	-1.4
F25K	Christian Rive	25.60	47	P	P	17 19 19.7	+0.1
	baz=278						
HDA	Harding Lake	25.63	54	P	P	17 19 19.2	-0.7
	baz=283,SNR=28						
C26K	Camden Bay	25.65	41	P	P	17 19 20.2	+0.2
	baz=273						
SML	Sawmill	25.69	61	IAmb	IAmb	17 19 37.6	
	comp=Z,75nm,1.0s						
SML	Sawmill	25.69	61	P	P	17 19 20.0	-0.6
	baz=287,SNR=8.3						
SEW	Seward	25.72	65	IAmb	IAmb	17 19 21.0	
	comp=Z,153nm,1.1s						
SEW	Seward	25.72	65	P	P	17 19 19.6	-1.1
	baz=290,SNR=8.2						
WAT6	Susitna Watana	25.74	59	P	P	17 19 19.8	-1.2
	baz=286,SNR=13						
KNK	Knik Glacier	25.75	62	IAmb	IAmb	17 19 21.8	
	comp=Z,59nm,0.8s						
KNK	Knik Glacier	25.75	62	P	P	17 19 20.2	-0.9
	baz=288,SNR=6.9						
DHY	Denali Highway	25.77	58	IAmb	IAmb	17 19 23.6	
	comp=Z,215nm,1.6s						
DHY	Denali Highway	25.77	58	P	P	17 19 20.5	-0.8
	baz=286,SNR=17						
M23K	Glacier View	25.97	60	P	P	17 19 21.9	-1.1
	baz=288,SNR=18						
PWL	Port Wells	25.99	63	IAmb	IAmb	17 19 23.6	
	comp=Z,108nm,0.8s						
PWL	Port Wells	25.99	63	P	P	17 19 22.3	-0.9
	baz=289,SNR=10						
BMAR	Burnt Mountain	26.02	47	P	P	17 19 23.3	-0.2
MJB9	Matsu-Tunnel	26.07	220	P	P	17 19 24.4	+0.2
MJB9				IAmb	IAmb	17 19 25.8	
	comp=Z,120nm,1.3s						
MAJO	Matsushiro	26.07	220	P	P	17 19 23.2	-0.9
MAJO				IAmb	IAmb	17 19 24.8	
	comp=Z,123nm,1.3s						
MAJO	Matsushiro	26.07	220	*d i*P	P	17 19 23.9	-0.2
MAJO				pmax	pmax		
	comp=Z,107nm,1.3s						
MJAR	Matsushiro Arr	26.07	220	P	P	17 19 23.7	-0.4
	comp=Z,75nm,1.2s,baz=11,slow=8.9,SNR=59						
MJAR				PcP	PcP	17 22 52.0	+0.5
	comp=Z,3.6nm,1.1s,baz=90,slow=2.5,SNR=4.1						
MJAR				LR	LR	17 29 23.9	
	comp=Z,1µm,22.0s,baz=30,slow=36						
	comp=Z,75nm,1.2s						
MJAR	Matsushiro Arr	26.07	220	P	P	17 19 22.9	-1.2
MJAR				IAmb	IAmb	17 19 24.9	
	comp=Z,97nm,1.2s						
MJAR	Matsushiro Arr	26.07	220	P	P	17 19 22.9	-1.2
MJAR						17 22 52.0	
MJAR				pmax	pmax		
	comp=Z,97nm,1.2s						
C27K	Jago River	26.09	42	P	P	17 19 23.8	-0.2
	baz=275						
SCM	Sheep Creek Mo	26.14	60	P	P	17 19 23.5	-1.1
	baz=288,SNR=24						
F26K	Sheenjek River	26.15	47	P	P	17 19 24.5	-0.2
	baz=278						
CIT	Chita	26.21	275	*e*P	P	17 19 25.2	-0.1
CIT				*e*		17 20 10.8	
CIT				*e*		17 20 16.6	
CIT				*e*		17 25 04.6	
CIT				pmax	pmax		
	comp=Z,168nm,2.4s						
J25K	Salcha River,	26.25	54	P	P	17 19 24.3	-1.2
	baz=284,SNR=9.5						
K24K	Donnelly Dome	26.27	56	IAmb	IAmb	17 19 47.3	
	comp=Z,155nm,1.5s						
K24K	Donnelly Dome	26.27	56	P	P	17 19 24.6	-1.1
	baz=285,SNR=8.1						
G26K	Porcupine Rive	26.41	48	P	P	17 19 27.0	+0.2
	baz=280						
GLI	Glacier Island	26.55	62	P	P	17 19 27.9	-0.4
	baz=290						
M24K	Tolsona, Glenn	26.57	59	P	P	17 19 28.2	-0.3
	baz=288,SNR=8.3						
PAX	Paxson	26.63	57	P	P	17 19 28.2	-0.9
	baz=287,SNR=10.0						
RIDG	Independent Ri	26.69	55	IAmb	IAmb	17 19 29.4	
	comp=Z,99nm,1.0s						
RIDG	Independent Ri	26.69	55	P	P	17 19 28.5	-1.0
	baz=286,SNR=7.3						
P23K	Montague Islan	26.72	64	P	P	17 19 29.5	-0.3
	baz=291						
KLU	Klutina	26.89	61	P	P	17 19 30.7	-0.6
	baz=289,SNR=5.8						
HARP	HAARP	26.94	58	P	P	17 19 31.7	-0.1
	baz=288						
SCRK	Sand Creek	26.99	55	P	P	17 19 30.9	-1.4
	baz=286,SNR=19						
I26K	Coal Creek Min	27.00	52	P	P	17 19 31.3	-0.9
	baz=284,SNR=8.2						
E27K	Coleen River	27.03	45	P	P	17 19 32.5	0.0
	baz=280						
J26L	Joseph Creek	27.03	53	P	P	17 19 32.5	-0.2
	baz=285						
DOT	Dot Lake	27.05	55	IAmb	IAmb	17 19 39.6	
	comp=Z,87nm,1.0s						
D27M	Malcolm River	27.10	43	P	P	17 19 33.1	-0.1
	baz=278						
JGF	Kuroka	27.21	221	IAmb	IAmb	17 19 35.7	
	comp=Z,120nm,1.3s						
G27K	Doyon Strip	27.26	48	P	P	17 19 35.1	+0.5
	baz=282,SNR=33						
EYAK	Cordova Ski Ar	27.29	62	IAmb	IAmb	17 20 11.5	
	comp=Z,118nm,1.3s						
EYAK	Cordova Ski Ar	27.29	62	P	P	17 19 34.7	-0.1
	baz=291						
Q23K	Middleton Isla	27.43	65	P	P	17 19 36.1	0.0
	baz=293						
H27K	Steamboat Moun	27.44	49	IAmb	IAmb	17 19 38.0	
	comp=Z,192nm,1.9s						
H27K	Steamboat Moun	27.44	49	P	P	17 19 36.5	+0.3
	baz=283,SNR=19						
N25K	Chitina, Valde	27.45	60	P	P	17 19 36.3	-0.1
	baz=290						
L26K	Log Cabin Wild	27.54	56	P	P	17 19 36.9	-0.3
	baz=288						
I27K	Kandik River	27.55	51	P	P	17 19 37.4	+0.1
	baz=284,SNR=16						
INU	Inuyama	27.56	221	P	P	17 19 36.3	-1.2
INU				IAmb	IAmb	17 19 38.1	
	comp=Z,132nm,1.5s						
BMRM	Bremner River	27.66	61	IAmb	IAmb	17 20 10.4	
	comp=Z,56nm,1.0s						
BMRM	Bremner River	27.66	61	P	P	17 19 38.1	-0.2
	baz=291,SNR=6.0						
E28M	Babbage River	27.71	44	P	P	17 19 38.5	-0.1
	baz=280,SNR=31						
F28M	Old Crow	27.77	46	P	P	17 19 39.3	+0.1
	baz=282,SNR=12						
SNY	Shenyang	27.80	248	⇓P	P	17 19 38.3	-1.3
SNY				S	S	17 24 19.5	-2.3
SNY				pmax	pmax		
	comp=Z,10.0nm,0.4s						
SNY				pmax	pmax		
	comp=Z,560nm,4.6s						
SNY				LR	LR		
	comp=Z,6µm,14.3s						
SNY				LR	LR		
	comp=Z,5µm,14.2s						
SNY				LR	LR		
	comp=Z,9µm,14.1s						
D28M	Stokes Point	27.87	42	P	P	17 19 39.5	-0.4
	baz=280,SNR=6.9						
M26K	Nabesna, AK	27.89	58	P	P	17 19 40.6	+0.3
	baz=289,SNR=12						
VRDI	Verde Repeater	28.09	60	IAmb	IAmb	17 20 32.2	
	comp=Z,77nm,1.4s						
L27K	Beaver Creek,	28.19	56	P	P	17 19 43.3	+0.3
	baz=289						
BCAR	Beaver Creek A	28.20	56	P	P	17 19 42.3	-0.8
MCARA	McCarthy VSAT	28.23	60	IAmb	IAmb	17 20 18.0	
	comp=Z,76nm,1.2s						
MCARA	McCarthy VSAT	28.23	60	P	P	17 19 43.9	+0.6
	baz=291,SNR=5.2						
I28M	Miner Creek	28.27	51	P	P	17 19 44.2	+0.5
	baz=286						
E29M	Blow River	28.34	44	P	P	17 19 44.6	+0.3
	baz=282						
M27K	Edge Creek, AK	28.40	57	P	P	17 19 45.4	+0.5
	baz=290						
CRQM	Cirque	28.41	61	IAmb	IAmb	17 20 26.2	
	comp=Z,78nm,1.1s						
CRQE	Cirque	28.43	61	P	P	17 19 45.6	+0.3
	baz=292						
G29M	Pine Creek	28.63	47	P	P	17 19 47.5	+0.7
	baz=285,SNR=14						
H29M	Whitestone	28.68	49	P	P	17 19 47.8	+0.5
	baz=286,SNR=14						
JHJ	Hachijo jima 2	28.72	215	LR	LR	17 32 41.8	
	comp=Z,396nm,19.1s,baz=82,slow=39						
BVCY	Beaver Creek	28.82	57	P	P	17 19 48.9	+0.2
	baz=291						
DAWY	Dawson	28.90	53	P	P	17 19 49.2	0.0
	baz=289,SNR=6.7						
I29M	Ogilvie Camp,	28.94	50	P	P	17 19 49.8	+0.2
	baz=287,SNR=13						
BARN	Barnard Glacie	28.96	60	IAmb	IAmb	17 20 16.2	
	comp=Z,95nm,1.2s						
CTG	Chitna Glacier	29.14	60	P	P	17 19 52.3	+0.7
	baz=293,SNR=6.1						
CTGM	Chitina Glacie	29.15	60	IAmb	IAmb	17 19 53.4	
	comp=Z,48nm,0.9s						
YUK3	Moose Creek	29.23	58	P	P	17 19 52.5	0.0
	baz=292						
EPYK	Eagle Plains	29.28	48	IAmb	IAmb	17 19 53.9	
	comp=Z,70nm,1.2s						
EPYK	Eagle Plains	29.28	48	P	P	17 19 52.7	+0.1
	baz=287,SNR=16						
F30M	Barrier River	29.30	45	P	P	17 19 53.0	+0.3
	baz=285,SNR=43						
G30M	tAoh Zraii Nji	29.30	47	P	P	17 19 52.7	-0.1
	baz=286						
KSRS	Korea Array	29.30	237	P	P	17 19 52.6	-0.4
	comp=Z,13nm,0.9s,baz=30,slow=9.0,SNR=20						
KSRS				LR	LR	17 31 41.6	
	comp=Z,767nm,19.2s,baz=35,slow=37						
	comp=Z,13nm,0.9s						
KSAR	Wonju Array Be	29.33	237	P	P	17 19 51.7	-1.5
KSAR	Wonju Array Be	29.33	237	P	P	17 19 51.7	-1.5
YUK8	Steele Glacier	29.73	59	P	P	17 19 56.9	0.0
	baz=293						
O28M	Mount Upton	29.74	60	P	P	17 19 56.9	-0.1
	baz=294,SNR=5.2						
K29M	Barlow Dome	29.75	53	P	P	17 19 57.0	0.0
	baz=290,SNR=5.4						
L29M	L29M	29.75	55	IAmb	IAmb	17 19 58.6	
	comp=Z,76nm,1.6s						
L29M	L29M	29.75	55	P	P	17 19 57.1	+0.3
	baz=291,SNR=7.3						
I30M	Mount Dempster	29.76	50	IAmb	IAmb	17 19 58.1	
	comp=Z,84nm,1.8s						
I30M	Mount Dempster	29.76	50	P	P	17 19 56.8	-0.2
	baz=289,SNR=14						
M29M	Somme Creek	29.85	56	P	P	17 19 58.3	+0.5
	baz=292,SNR=6.6						
INK	Inuvik	29.94	44	LR	LR	17 34 12.5	
	comp=Z,873nm,21.2s,baz=258,slow=41						
INK	Inuvik	29.94	44	IAmb	IAmb	17 19 59.8	
	comp=Z,83nm,1.4s						
INK	Inuvik	29.94	44	P	P	17 19 58.4	+0.1
	baz=286,SNR=28						
PINM	Pinnacle	29.99	61	P	P	17 19 59.0	0.0
	baz=295						
J30M	Hart River	29.99	51	P	P	17 19 59.0	0.0
	baz=290,SNR=12						
XLT	XiLinHaoTe	30.03	259	*e*P	P	17 19 59.5	0.0
XLT				S	S	17 24 53.5	-3.5
XLT				pmax	pmax		
	comp=Z,9.0nm,1.8s						
XLT				pmax	pmax		
	comp=Z,260nm,7.6s						
XLT				LR	LR		
	comp=Z,570nm,14.3s						
XLT				LR	LR		
	comp=Z,4µm,14.4s						
XLT				LR	LR		
	comp=Z,8µm,15.1s						
F31M	Tsiigehtchic	30.10	45	IAmb	IAmb	17 20 01.0	
	comp=Z,126nm,1.4s						
F31M	Tsiigehtchic	30.10	45	P	P	17 19 59.7	-0.1
	baz=287,SNR=22						
YUK4	Talbot Arm	30.20	58	P	P	17 20 00.7	-0.3
	baz=294						
H31M	Peel River	30.37	48	P	P	17 20 01.9	-0.4
	baz=289						
YUK6	Outpost Mounta	30.49	59	P	P	17 20 03.3	-0.3
	baz=294						
MAYO	Mayo, Yukon	30.52	53	P	P	17 20 03.5	-0.1
	baz=292						
M30M	Minto, Yukon	30.52	55	IAmb	IAmb	17 20 05.8	
	comp=Z,78nm,1.8s						
M30M	Minto, Yukon	30.52	55	P	P	17 20 03.9	+0.2
	baz=293						
O29M	Mount Kennedy	30.66	60	P	P	17 20 05.1	+0.1
	baz=295						
IRK	Irkutsk	30.86	282	*e*P	P	17 20 06.8	+0.1
IRK				pmax	pmax		
	comp=Z,116nm,2.9s						
HYT	Haines Junctio	30.92	59	P	P	17 20 07.1	-0.1
	baz=295						
NRIK	Noril'sk	31.00	319	P	P	17 20 06.8	-1.0
	comp=Z,4.0nm,0.6s,baz=81,slow=11,SNR=9.4						
NRIK				LR	LR	17 34 24.2	
	comp=Z,1µm,19.0s,baz=76,slow=40						
	comp=Z,4.0nm,0.6s						
NRIK	Noril'sk	31.00	319	P	P	17 20 06.5	-1.2
NRIK	Noril'sk	31.00	319	⇓*e*P	P	17 20 08.0	+0.3
NRIK				pmax	pmax		
	comp=Z,21nm,1.6s						
DL2	Dalian	31.01	247	P	P	17 20 05.5	-2.6
DL2				S	S	17 25 11.5	-0.7
DL2				pmax	pmax		
	comp=Z,32nm,0.9s						
DL2				pmax	pmax		
	comp=Z,310nm,5.5s						
DL2				LR	LR		
	comp=Z,5µm,15.1s						
DL2				LR	LR		
	comp=Z,5µm,14.5s						
DL2				LR	LR		
	comp=Z,8µm,13.9s						
P29M	Windy Craggy	31.33	61	P	P	17 20 10.5	-0.3
	baz=297						
N31M	Braeburn, Yuko	31.40	57	P	P	17 20 11.3	-0.1
	baz=295						
P30M	Million Dollar	31.46	60	P	P	17 20 12.2	+0.2
	baz=296						
TLY	Talaya	31.50	282	P	P	17 20 11.3	-1.0
TLY				S	S	17 25 21.4	+1.6
TLY	Talaya	31.50	282	*ce*P	P	17 20 13.2	+0.8
TLY				pmax	pmax		
	comp=Z,35nm,1.6s						
O30N	Mendenhall	31.57	58	P	P	17 20 13.1	+0.2
	baz=296						
A36M	Sachs Harbour	31.66	35	P	P	17 20 13.2	-0.3
A36M				IAmb	IAmb	17 20 15.2	
	comp=Z,68nm,1.0s						
A36M	Sachs Harbour	31.66	35	P	P	17 20 14.0	+0.4
	baz=286,SNR=22						
M31M	Drury Creek, Y	31.70	55	P	P	17 20 14.3	+0.3
	baz=295						
JNU	Nakatsue	31.81	229	LR	LR	17 32 05.0	
	comp=Z,1µm,21.8s,baz=5.0,slow=34						
PLBC	Pleasant Camp	32.03	61	P	P	17 20 17.7	+0.8
	baz=298						
ULN	Ulaanbaatar	32.05	273	P	P	17 20 17.7	+0.2
ULN				P	P	17 20 17.7	+0.2
ULN				S	S	17 25 29.3	+0.6
ULN				S	S	17 25 29.3	+0.6
ULN	Ulaanbaatar	32.05	273	P	P	17 20 16.3	-1.1
ULN	Ulaanbaatar	32.05	273	P	P	17 20 18.1	+0.6
	comp=Z,2µmcomp=Z,66nm,1.1s						
ULN	Ulaanbaatar	32.05	273	*c i*P	P	17 20 18.0	+0.6
ULN				pmax	pmax		
	comp=Z,39nm,2.5s						
WHY	Whitehorse	32.15	58	P	P	17 20 18.8	+0.7
	baz=297,SNR=7.7						
SONM	Songino Array	32.41	274	P	P	17 20 20.8	+0.3
	comp=Z,9.5nm,0.9s,baz=62,slow=6.6,SNR=42						
SONM				PcP	PcP	17 23 07.3	-0.3
	comp=Z,4.5nm,0.8s,baz=63,slow=0.9,SNR=8.5						
SONM				LR	LR	17 34 02.9	
	comp=Z,6µm,18.2s,baz=52,slow=37						
	comp=Z,9.5nm,0.9s						
SONM	Songino Array	32.41	274	P	P	17 20 19.6	-1.0
ZAK	Zakamensk	32.45	280	*e*P	P	17 20 20.8	0.0
ZAK				pmax	pmax		
	comp=Z,17nm,1.4s						
SKAG	Skagway	32.50	60	P	P	17 20 22.0	+1.0
	baz=298						
N32M	Quiet Lake	32.72	56	P	P	17 20 23.6	+0.6
	baz=297						
BJI	Beijing	32.81	254	P	P	17 20 23.8	-0.1
BJI				PP	PnPn	17 21 32.0	-0.2
BJI				S	S	17 25 38.0	-2.2
BJI				pmax	pmax		
	comp=Z,7.0nm,1.6s						
BJI				pmax	pmax		
	comp=Z,130nm,4.1s						
BJI				LR	LR		
	comp=Z,950nm,12.7s						
BJI				LR	LR		
	comp=Z,1µm,13.4s						
BJI				LR	LR		
	comp=Z,2µm,13.1s						
S31K	Pelican	32.81	63	P	P	17 20 24.8	+1.1
	baz=300						
MOY	Mondy	32.86	283	*e*P	P	17 20 25.3	+0.9
MOY				pmax	pmax		
	comp=Z,65nm,2.5s						
C36M	Paulatuk	32.88	40	P	P	17 20 23.6	-0.6
C36M	Paulatuk	32.88	40	P	P	17 20 24.1	0.0
	baz=291,SNR=62						
P32M	Atlin	33.16	59	P	P	17 20 27.5	+0.6
	baz=299						
P33M	Teslin, Yukon	33.27	58	P	P	17 20 28.6	+0.8
	baz=298						
R32K	Eaglecrest	33.45	62	P	P	17 20 30.5	+1.3
	baz=300						
SIT	Sitka	33.69	64	P	P	17 20 33.0	+1.6
	baz=301						
JCJ	Chichijima	33.78	208	LR	LR	17 34 46.8	
	comp=Z,220nm,20.0s,baz=356,slow=37						
Q32M	Nakina River	34.12	59	P	P	17 20 36.8	+1.4
	baz=300						
R33M	Jennings River	34.48	58	P	P	17 20 39.9	+1.5
	baz=300,SNR=6.8						
HHC	Hu-ho-hao-te	34.54	260	*e*P	P	17 20 39.8	+0.7
HHC				pP	pP	17 20 44.0	+0.4
HHC				S	S	17 26 07.0	-0.4
HHC				sS	pS	17 26 14.0	+1.5

HHC				SS	**SnSn**	**17 28 17.3**	**-1.3**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,240nm,5.3s						
HHC				LR	LR		
	comp=Z,5µm,16.2s						
HHC				LR	LR		
	comp=Z,4µm,15.3s						
HHC				LR	LR		
	comp=Z,8µm,15.3s						
S34M	**Telegraph Cree**	**35.17**	**60**	P	**P**	**17 20 45.6**	**+1.3**
	baz=302						
U33K	**Whale Pass**	**35.23**	**64**	P	**P**	**17 20 46.3**	**+1.6**
	baz=304						
KNGR	**Kungurtug, Tuv**	**35.25**	**284**	⇑*e*P	**P**	**17 20 46.3**	**+1.2**
KNGR				pmax	pmax		
	comp=Z,12nm,1.0s						
TIA	**Tai'an**	**35.32**	**249**	P	**P**	**17 20 45.5**	**-0.2**
TIA				pmax	pmax		
	comp=Z,79nm,1.9s						
TIA				pmax	pmax		
	comp=Z,780nm,3.5s						
TIA				LR	LR		
	comp=Z,4µm,19.5s						
TIA				LR	LR		
	comp=Z,3µm,18.6s						
TIA				LR	LR		
	comp=Z,3µm,18.9s						
WRAK	**Wrangell Islan**	**35.42**	**63**	P	**P**	**17 20 48.0**	**+1.6**
	baz=303						
BTO	**Baotou**	**35.52**	**261**	*e*P	**P**	**17 20 47.8**	**+0.3**
BTO				pP	**pP**	**17 20 52.3**	**+0.3**
BTO				sP	**sP**	**17 20 55.0**	**+1.2**
BTO				PP	**PP**	**17 22 07.5**	**-0.5**
BTO				S	**S**	**17 26 25.0**	**+2.7**
BTO				sS	**sS**	**17 26 31.3**	**+1.7**
BTO				SS	**SnSn**	**17 28 40.5**	**-1.6**
BTO				pmax	pmax		
	comp=Z,42nm,2.2s						
BTO				pmax	pmax		
	comp=Z,720nm,6.4s						
BTO				LR	LR		
	comp=Z,7µm,12.8s						
BTO				LR	LR		
	comp=Z,5µm,19.6s						
BTO				LR	LR		
	comp=Z,8µm,18.0s						
HNS	**HongShan**	**35.57**	**253**	⇓P	**P**	**17 20 48.3**	**+0.5**
HNS				pmax	pmax		
	comp=Z,23nm,1.4s						
HNS				LR	LR		
	comp=Z,8µm,14.3s						
HNS				LR	LR		
	comp=Z,3µm,15.3s						
HNS				LR	LR		
	comp=Z,7µm,15.7s						
WRGLY	**Wrigley**	**35.72**	**49**	IAmb	IAmb	17 20 51.0	
	comp=Z,64nm,1.4s						
WRGLY	**Wrigley**	**35.72**	**49**	P	**P**	**17 20 49.8**	**+1.0**
	baz=300,SNR=6.4						
T35M	**Bob Quinn**	**36.08**	**61**	IAmb	IAmb	17 20 55.8	
	comp=Z,57nm,0.9s						
T35M	**Bob Quinn**	**36.08**	**61**	P	**P**	**17 20 54.5**	**+2.4**
	baz=304,SNR=7.6						
V35K	**Ketchikan**	**36.38**	**64**	P	**P**	**17 20 56.7**	**+2.2**
	baz=305						
TIY	**Taiyuan**	**36.47**	**255**	P	**P**	**17 20 56.5**	**+0.9**
TIY				S	**S**	**17 26 40.0**	**+3.2**
TIY				pmax	pmax		
	comp=Z,15nm,0.8s						
TIY				LR	LR		
	comp=Z,2µm,13.7s						
TIY				LR	LR		
	comp=Z,2µm,15.8s						
TIY				LR	LR		
	comp=Z,4µm,15.1s						
LIRD	**Liard River Hi**	**36.60**	**56**	P	**P**	**17 20 57.9**	**+1.5**
	baz=303,SNR=8.2						
TOAD	**Toad River Com**	**37.28**	**56**	P	**P**	**17 21 03.9**	**+1.6**
	baz=304,SNR=15						
NJ2	**Nanjing**	**37.90**	**243**	*e*P	**P**	**17 21 07.3**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
NJ2				LR	LR		
	comp=Z,3µm,16.1s						
NJ2				LR	LR		
	comp=Z,3µm,13.3s						
NJ2				LR	LR		
	comp=Z,2µm,16.6s						
RES	**Resolute Bay**	**38.32**	**24**	P	**P**	**17 21 10.2**	**-0.6**
	comp=Z,9.1nm,1.1s,baz=301,slow=9.6,SNR=15						
RES				PcP	**PcP**	**17 23 24.2**	**+0.1**
	comp=Z,8.4nm,1.0s,baz=292,slow=4.2,SNR=4.1						
	comp=Z,9.1nm,1.1s						
RES	**Resolute Bay**	**38.32**	**24**	P	**P**	**17 21 10.0**	**-0.7**
LYN	**LuoYang**	**38.93**	**252**	P	**P**	**17 21 17.0**	**+0.6**
LYN				PP	**PnPn**	**17 22 48.3**	**+0.5**
LYN				S	**S**	**17 27 15.0**	**+0.9**
LYN				pmax	pmax		
	comp=Z,54nm,1.9s						
LYN				pmax	pmax		
	comp=Z,420nm,3.6s						
LYN				LR	LR		
	comp=Z,11µm,14.4s						
LYN				LR	LR		
	comp=Z,5µm,13.4s						
LYN				LR	LR		
	comp=Z,13µm,14.1s						
ZAA0	**Zalesovo Array**	**39.39**	**296**	P	**P**	**17 21 18.5**	**-1.5**
ZALV	**Zalesovo Beam**	**39.39**	**296**	P	**P**	**17 21 19.8**	**-0.3**
	comp=Z,3.1nm,0.7s,baz=47,slow=6.5,SNR=13						
ZALV				PcP	**PcP**	**17 23 28.2**	**+0.3**
	comp=Z,3.3nm,0.8s,baz=56,slow=2.7,SNR=1.6						
ZALV				LR	LR	17 37 55.8	
	comp=Z,874nm,21.8s,baz=38,slow=37						
	comp=Z,3.1nm,0.7s						
ZALV	**Zalesovo Beam**	**39.39**	**296**	P	**P**	**17 21 19.3**	**-0.8**
YKA	**Yellowknife Ar**	**39.54**	**47**	P	**P**	**17 21 21.1**	**-0.1**
	comp=Z,14nm,0.8s,baz=304,slow=8.9,SNR=130						
YKA				PcP	**PcP**	**17 23 28.8**	**+0.5**
	comp=Z,2.5nm,0.9s,baz=306,slow=4.1,SNR=5.8						
YKA				LR	LR	17 39 19.3	
	comp=Z,724nm,18.0s,baz=293,slow=39						
	comp=Z,14nm,0.8s						
YKA	**Yellowknife Ar**	**39.54**	**47**	P	**P**	**17 21 20.1**	**-1.1**
BBB	**Bella Bella**	**39.93**	**66**	LR	LR	17 37 53.9	
	comp=Z,2µm,19.1s,baz=300,slow=36						
DGZ	**Jazzator, Alta**	**40.84**	**290**	*ce*P	**P**	**17 21 33.0**	**+0.7**
DGZ				pmax	pmax		
	comp=Z,19nm,0.9s						
DGZ				MLR	MLR		
	comp=Z,3µm,18.0s						
XAN	**Xi'an**	**41.11**	**255**	P	**P**	**17 21 33.8**	**-0.8**
XAN				S	**S**	**17 27 47.8**	**+1.0**
XAN				pmax	pmax		
	comp=Z,18nm,1.2s						
XAN				pmax	pmax		
	comp=Z,410nm,4.8s						
XAN				LR	LR		
	comp=Z,5µm,15.1s						
XAN				LR	LR		
	comp=Z,4µm,15.1s						
XAN				LR	LR		
	comp=Z,7µm,15.3s						
KBS	**Kingsbay**	**41.13**	**351**	P	**P**	**17 21 33.9**	**-0.3**
KBS	**Kingsbay**	**41.13**	**351**	*ce*P	**P**	**17 21 35.0**	**+0.9**
KBS				pmax	pmax		
	comp=Z,62nm,2.5s						
WHN	**Wuhan**	**41.27**	**247**	P	**P**	**17 21 35.3**	**-0.5**
WHN				pmax	pmax		
	comp=Z,2µm,2.6s						
WHN				LR	LR		
	comp=Z,6µm,13.8s						
WHN				LR	LR		
	comp=Z,5µm,12.0s						
WHN				LR	LR		
	comp=Z,10µm,14.6s						
SPITS	**Spitsbergen Ar**	**41.39**	**349**	P	**P**	**17 21 36.4**	**0.0**
	comp=Z,32nm,0.9s,baz=77,slow=11,SNR=18						
SPITS				LR	LR	17 38 28.3	
	comp=Z,565nm,18.1s,baz=30,slow=36						
	comp=Z,32nm,0.9s						
SPITS	**Spitsbergen Ar**	**41.39**	**349**	P	**P**	**17 21 35.9**	**-0.5**
SPITS				pmax	pmax		
	comp=Z,75nm,1.2s						
GTA	**Gaotai**	**41.69**	**269**	P	**P**	**17 21 39.5**	**+0.2**
GTA				S	**S**	**17 27 56.0**	**+0.5**
GTA				pmax	pmax		
	comp=Z,34nm,2.2s						
GTA				pmax	pmax		
	comp=Z,370nm,5.1s						
GTA				LR	LR		
	comp=Z,5µm,17.5s						
GTA				LR	LR		
	comp=Z,6µm,16.4s						
GTA				LR	LR		
	comp=Z,10µm,17.1s						
LZH	**Lanzhou**	**42.10**	**262**	⇑P	**P**	**17 21 44.0**	**+1.2**
LZH				sP	sP	17 21 50.0	+0.9
LZH				S	**S**	**17 28 06.5**	**+4.7**
LZH				pmax	pmax		
	comp=Z,74nm,1.1s						
LZH				pmax	pmax		
	comp=Z,670nm,4.1s						
LZH				LR	LR		
	comp=Z,5µm,14.1s						
LZH				LR	LR		
	comp=Z,5µm,14.9s						
LZH				LR	LR		
	comp=Z,8µm,15.3s						
LZDM	**Lanzhou Array**	**42.28**	**262**	P	**P**	**17 21 45.4**	**+1.0**
	comp=Z,6.0nm,0.4s,baz=333,slow=1.7,SNR=5.9						
LZDM				LR	LR	17 40 53.7	
	comp=Z,2µm,18.5s,baz=40,slow=38						
	comp=Z,6.0nm,0.4s						
POIN	**Pond Inlet**	**43.14**	**22**	P	**P**	**17 21 50.0**	**-0.6**
ZSN	**Zaisan**	**43.62**	**289**	*e*P	**P**	**17 21 55.0**	**+0.1**
ZSN	**Zaisan**	**43.62**	**289**	*e*P	**P**	**17 21 54.9**	**+0.1**
SEM	**Semipalatinsk**	**43.83**	**295**	*e*P	**P**	**17 21 56.1**	**-0.6**
	comp=Z,30nm,1.4s						
SEM	**Semipalatinsk**	**43.83**	**295**	*e*P	**P**	**17 21 56.1**	**-0.6**
SEM				pmax	pmax		
	comp=Z,30nm,1.4s						
KURK	**Kurchatov**	**44.38**	**296**	P	**P**	**17 22 00.1**	**-0.7**
KURK				S	**S**	**17 28 35.9**	**+1.4**
KURK	**Kurchatov**	**44.38**	**296**	P	**P**	**17 22 00.3**	**-0.5**
KURK				IAmb	IAmb	17 22 04.0	
	comp=Z,66nm,0.9s						
KURK	**Kurchatov**	**44.38**	**296**	*ce*P	**P**	**17 22 00.8**	**0.0**
KURK				pmax	pmax		
	comp=Z,37nm,1.1s						
PGC	**Sidney**	**44.51**	**68**	IAmb	IAmb	17 22 03.9	
	comp=Z,144nm,1.9s						
WMQ	**Urumqi**	**44.75**	**283**	⇑P	**P**	**17 22 05.5**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,27nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,320nm,3.8s						
WMQ				LR	LR		
	comp=Z,2µm,11.7s						
WMQ				LR	LR		
	comp=Z,3µm,17.5s						
WMQ				LR	LR		
	comp=Z,2µm,16.9s						
BLKN	**Baker Lake**	**44.80**	**37**	IAmb	IAmb	17 22 04.7	
	comp=Z,61nm,1.0s						
ILON	**Igloolik, Nuna**	**44.91**	**26**	P	**P**	**17 22 03.6**	**-1.1**
ILON				IAmb	IAmb	17 22 07.1	
	comp=Z,76nm,1.7s						
MK31	**Makanchi Array**	**45.34**	**290**	*c i*P	**P**	**17 22 07.7**	**-0.9**
MK31				pmax	pmax		
	comp=Z,12nm,0.8s						
MKAR	**Makanchi Array**	**45.34**	**290**	P	**P**	**17 22 08.2**	**-0.4**
	comp=Z,13nm,0.9s,baz=60,slow=6.5,SNR=49						
MKAR				PP	**PP**	**17 23 56.8**	**+2.4**
	comp=Z,4.2nm,0.9s,baz=39,slow=9.3,SNR=3.0						
MKAR				LR	LR	17 41 41.9	
	comp=Z,4µm,18.2s,baz=28,slow=37						
	comp=Z,13nm,0.9s						
MKAR	**Makanchi Array**	**45.34**	**290**	P	**P**	**17 22 07.0**	**-1.6**
MKAR	**Makanchi Array**	**45.34**	**290**	P	**P**	**17 22 07.0**	**-1.6**
MAKZ	**Makanchi**	**45.48**	**290**	P	**P**	**17 22 07.2**	**-2.5**
MAKZ	**Makanchi**	**45.48**	**290**	P	**P**	**17 22 07.2**	**-2.5**
MAKZ				pmax	pmax		
	comp=Z,16nm,1.1s						
D05A	**Enumclaw**	**46.23**	**68**	IAmb	IAmb	17 22 18.2	
	comp=Z,73nm,1.2s						
GUMO	**Guam**	**46.34**	**199**	LR	LR	17 38 59.3	
	comp=Z,270nm,20.3s,baz=30,slow=33						
BVA0	**Borovoye Array**	**46.50**	**304**	*i* P	**P**	**17 22 16.9**	**-0.7**
BVAR	**Borovoye Array**	**46.50**	**304**	P	**P**	**17 22 17.6**	**0.0**
	comp=Z,25nm,0.8s,baz=58,slow=6.9,SNR=41						
BVAR				PcP	**PcP**	**17 23 52.4**	**+0.6**
	comp=Z,5.6nm,0.7s,baz=73,slow=2.8,SNR=2.0						
BVAR				LR	LR	17 43 46.2	
	comp=Z,6µm,19.1s,baz=44,slow=39						
	comp=Z,25nm,0.8s						
BORK	**Borovoye**	**46.52**	**304**	P	**P**	**17 22 16.6**	**-1.1**
BORK				IAmb	IAmb	17 22 20.9	
	comp=Z,38nm,0.8s						
BORK	**Borovoye**	**46.52**	**304**	*ce*P	**P**	**17 22 17.7**	**0.0**
BORK				pmax	pmax		
	comp=Z,39nm,0.9s						
LON	**Longmire**	**46.63**	**68**	IAmb	IAmb	17 22 20.9	
	comp=Z,47nm,1.6s						
GOMU	**GeErMu**	**46.71**	**270**	P	**P**	**17 22 17.5**	**-2.4**
GOMU				sP	pP	17 22 25.3	+0.9
GOMU				pmax	pmax		
	comp=Z,20nm,0.9s						
LTY	**Liberty**	**46.82**	**67**	IAmb	IAmb	17 22 22.0	
	comp=Z,62nm,1.3s						
LVZ	**Lovozero**	**47.21**	**335**	⇑*e*P	**P**	**17 22 22.0**	**-1.0**
LVZ				pmax	pmax		
	comp=Z,30nm,1.2s						
EPH	**Ephrata**	**47.26**	**66**	IAmb	IAmb	17 22 25.0	
	comp=Z,64nm,1.3s						
COR	**Corvallis**	**47.45**	**71**	P	**P**	**17 22 25.2**	**+0.1**
COR	**Corvallis**	**47.45**	**71**	P	**P**	**17 22 25.2**	**+0.1**
COR				pmax	pmax		
	comp=Z,76nm,1.2s						
MXC	**Moxie City**	**47.48**	**67**	IAmb	IAmb	17 22 27.4	
	comp=Z,63nm,1.3s						
GULI	**GuiLin**	**47.58**	**247**	P	**P**	**17 22 25.5**	**-0.8**
GULI				pmax	pmax		
	comp=Z,44nm,1.1s						
ARCES	**ARCESS Array B**	**47.68**	**340**	P	**P**	**17 22 26.2**	**-0.4**
	comp=Z,5.8nm,0.8s,baz=29,slow=8.6,SNR=13						
ARCES				PcP	**PcP**	**17 23 56.3**	**+0.7**
	comp=Z,5.6nm,0.9s,baz=15,slow=6.3,SNR=2.3						
ARCES				LR	LR	17 46 11.4	
	comp=Z,737nm,19.1s,baz=41,slow=41						
	comp=Z,5.8nm,0.8s						
ARCES	**ARCESS Array B**	**47.68**	**340**	P	**P**	**17 22 24.1**	**-2.4**
ARCES				IAmb	IAmb	17 22 46.6	
	comp=Z,68nm,1.6s						
ARCES	**ARCESS Array B**	**47.68**	**340**	P	**P**	**17 22 24.1**	**-2.4**
ARCES				pmax	pmax		
	comp=Z,68nm,1.7s						
WAH2	**Wahluke Slope**	**47.70**	**67**	IAmb	IAmb	17 22 28.6	
	comp=Z,38nm,0.8s						
E07A	**Sunnyside**	**47.71**	**67**	IAmb	IAmb	17 22 29.0	
	comp=Z,53nm,1.2s						
APA	**Apatity**	**47.76**	**335**	⇓*e*P	P	17 22 19.9	-7.3
APA				MLR	MLR		
	comp=Z,2µm,16.3s						
H04D	**Lebanon**	**47.77**	**71**	IAmb	IAmb	17 22 29.2	
	comp=Z,43nm,1.2s						
NEW	**Newport**	**47.78**	**64**	LR	LR	17 42 07.3	
	comp=Z,1µm,20.1s,baz=315,slow=36						
SVE	**Sverdlovsk**	**47.79**	**313**	*de*P	**P**	**17 22 28.5**	**+0.9**
SVE				pmax	pmax		
	comp=Z,44nm,1.1s						
SVE				MLR	MLR		
	comp=Z,5µm,17.0s						
D08A	**Wollman Farm,**	**47.80**	**66**	IAmb	IAmb	17 22 28.7	
	comp=Z,33nm,1.2s						
H04A	**Detroit Lake**	**47.93**	**71**	IAmb	IAmb	17 22 30.7	
	comp=Z,79nm,1.6s						
G05A	**Wamic**	**47.95**	**69**	IAmb	IAmb	17 22 38.8	
	comp=Z,33nm,1.0s						
HAWA	**Hanford**	**47.98**	**67**	IAmb	IAmb	17 22 31.0	
	comp=Z,43nm,1.3s						
I03D	**Drain, OR**	**48.07**	**72**	IAmb	IAmb	17 23 22.9	
	comp=Z,68nm,1.6s						
G06A	**Carlson Farm,**	**48.29**	**69**	IAmb	IAmb	17 23 18.9	
	comp=Z,47nm,1.6s						
SUMG	**Summit**	**48.36**	**7**	P	**P**	**17 22 31.7**	**-0.6**
SUMG	**Summit**	**48.36**	**7**	P	**P**	**17 22 31.7**	**-0.6**
SUMG				pmax	pmax		
	comp=Z,212nm,1.6s						
GYA	**Guiyang**	**48.41**	**251**	⇑P	**P**	**17 22 33.0**	**+0.2**
GYA				pmax	pmax		
	comp=Z,48nm,0.8s						
I04A	**Tendick Farm,**	**48.47**	**72**	IAmb	IAmb	17 22 34.9	
	comp=Z,36nm,1.1s						
YPT	**Yellepit**	**48.50**	**67**	IAmb	IAmb	17 22 34.9	
	comp=Z,32nm,1.0s						
TDK	**Taldyqorghan**	**48.52**	**291**	*e*P	**P**	**17 22 33.5**	**0.0**
	comp=Z,14nm,1.3s						
TDK	**Taldyqorghan**	**48.52**	**291**	*e*P	**P**	**17 22 33.4**	**0.0**
TDK				pmax	pmax		
	comp=Z,14nm,1.3s						
JETT	**Jettan, Norway**	**48.53**	**342**	*e*P	**P**	**17 22 33.1**	**-0.1**
KTK1	**Kautokeino**	**48.53**	**340**	*e*P	**P**	**17 22 32.9**	**-0.3**
E09A	**Wood Farm, Sta**	**48.56**	**66**	IAmb	IAmb	17 22 35.2	
	comp=Z,42nm,1.0s						
WIFE	**Three Sisters-**	**48.56**	**71**	IAmb	IAmb	17 22 36.1	
	comp=Z,44nm,1.0s						
ARTI	**Arti**	**48.97**	**314**	LR	LR	17 46 38.0	
	comp=Z,4µm,19.6s,baz=40,slow=40						
ARTI	**Arti**	**48.97**	**314**	P	**P**	**17 22 35.7**	**-1.0**
ARTI				IAmb	IAmb	17 22 39.3	
	comp=Z,75nm,1.2s						
ARTI	**Arti**	**48.97**	**314**	*c i*P	**P**	**17 22 36.8**	**+0.1**
ARTI				pmax	pmax		
	comp=Z,31nm,0.9s						
BBOR	**Butler Butte**	**49.00**	**73**	IAmb	IAmb	17 22 39.6	
	comp=Z,38nm,1.1s						
KSXB	**Camp Six Broad**	**49.18**	**74**	IAmb	IAmb	17 22 41.2	
	comp=Z,82nm,1.4s						
PINE	**Pine Mountain**	**49.19**	**70**	IAmb	IAmb	17 22 41.1	
	comp=Z,65nm,1.0s						
PDGK	**Podgornoye**	**49.21**	**289**	P	**P**	**17 22 38.7**	**-0.2**
SHLS	**Shalkode**	**49.35**	**289**	*e*P	**P**	**17 22 38.3**	**-1.7**
	comp=Z,34nm,1.1s						
SHLS	**Shalkode**	**49.35**	**289**	*e*P	**P**	**17 22 38.2**	**-1.7**
SHLS				pmax	pmax		
	comp=Z,34nm,1.1s						
J05D	**Fort Rock, OR**	**49.42**	**71**	IAmb	IAmb	17 22 43.0	
	comp=Z,65nm,1.0s						
FCC	**Fort Churchill**	**49.49**	**41**	IAmb	IAmb	17 22 41.7	
	comp=Z,67nm,1.1s						
UZB	**Uzynbulak**	**49.58**	**289**	*e*P	**P**	**17 22 41.7**	**0.0**
	comp=Z,19nm,1.1s						
UZB	**Uzynbulak**	**49.58**	**289**	*e*P	**P**	**17 22 41.7**	**0.0**
UZB				pmax	pmax		
	comp=Z,19nm,1.1s						
FFC	**Flin Flon**	**49.62**	**49**	P	**P**	**17 22 41.3**	**-0.4**
FFC				IAmb	IAmb	17 22 43.3	
	comp=Z,77nm,1.4s						
FFC	**Flin Flon**	**49.62**	**49**	P	**P**	**17 22 41.3**	**-0.4**
FFC				pmax	pmax		
	comp=Z,77nm,1.4s						
YBH	**Yreka Blue Hor**	**49.84**	**74**	LR	LR	17 40 54.5	
	comp=Z,100nm,21.8s,baz=294,slow=33						
YBH	**Yreka Blue Hor**	**49.84**	**74**	IAmb	IAmb	17 22 46.3	
	comp=Z,56nm,1.5s						
SATY	**Saty**	**49.95**	**289**	*e*P	**P**	**17 22 44.6**	**+0.1**
	comp=Z,28nm,1.1s						
SATY	**Saty**	**49.95**	**289**	*e*P	**P**	**17 22 44.6**	**+0.1**
SATY				pmax	pmax		
	comp=Z,28nm,1.1s						
KHMM	**Horse Mountain**	**49.97**	**75**	IAmb	IAmb	17 22 47.4	
	comp=Z,74nm,1.4s						
K05A	**Summer Lake**	**50.00**	**71**	IAmb	IAmb	17 22 47.6	
	comp=Z,98nm,1.4s						
BMO	**Blue Mountains**	**50.17**	**67**	IAmb	IAmb	17 22 48.1	
	comp=Z,58nm,1.3s						
JMIC	**Jan Mayen**	**50.20**	**355**	LR	LR	17 43 03.0	
	comp=Z,208nm,18.2s,baz=350,slow=35						
MSO	**Missoula**	**50.30**	**63**	IAmb	IAmb	17 22 48.8	
	comp=Z,111nm,1.9s						
KHBM	**Hayfork Bally**	**50.38**	**75**	IAmb	IAmb	17 22 51.4	
	comp=Z,65nm,1.7s						
N02D	**Trinity Center**	**50.41**	**74**	IAmb	IAmb	17 22 50.6	
	comp=Z,52nm,1.4s						
KIRV	**Kirov**	**50.50**	**320**	LR	LR	17 47 14.4	
	comp=Z,1µm,18.3s,baz=32,slow=40						
KIRV	**Kirov**	**50.50**	**320**	*ce*P	**P**	**17 22 48.1**	**-0.1**
MDOK	**Medeo**	**50.53**	**290**	*e*P	**P**	**17 22 49.1**	**+0.1**
MDOK	**Medeo**	**50.53**	**290**	*e*P	**P**	**17 22 49.0**	**+0.1**
TNSS	**Tian-Shan**	**50.68**	**290**	*e*P	**P**	**17 22 50.1**	**-0.2**
TNSS	**Tian-Shan**	**50.68**	**290**	*e*P	**P**	**17 22 50.1**	**-0.2**
PZH	**PanZhiHua**	**50.83**	**256**	P	**P**	**17 22 51.3**	**0.0**
PZH				S	**S**	**17 30 05.0**	**-1.8**
PZH				pmax	pmax		
	comp=Z,40nm,1.4s						
PZH				pmax	pmax		
	comp=Z,280nm,4.1s						
PZH				LR	LR		
	comp=Z,1µm,19.8s						
PZH				LR	LR		
	comp=Z,1µm,17.7s						
PZH				LR	LR		
	comp=Z,2µm,16.8s						
LOF	**Lofoten**	**50.87**	**344**	*e*P	**P**	**17 22 50.7**	**-0.2**
HATC	**Hat Creek Radi**	**51.15**	**73**	IAmb	IAmb	17 22 55.9	
	comp=Z,67nm,1.2s						
FAUS	**Fauske**	**51.31**	**343**	*e*P	**P**	**17 22 52.9**	**-1.3**
EGMT	**Eagleton**	**51.33**	**59**	IAmb	IAmb	17 22 57.5	
	comp=Z,41nm,1.1s						
WVOR	**Wild Horse Val**	**51.33**	**70**	IAmb	IAmb	17 22 57.1	
	comp=Z,39nm,1.1s						
O03E	**Paynes Creek**	**51.37**	**74**	IAmb	IAmb	17 22 56.9	
	comp=Z,66nm,1.2s						
TKM2	**Tokmak 2**	**51.42**	**291**	P	**P**	**17 22 55.9**	**+0.1**
	SNR=21						
KMI	**Kunming**	**51.47**	**254**	P	**P**	**17 22 56.0**	**-0.2**
KMI				S	**S**	**17 30 17.5**	**+1.7**
KMI				pmax	pmax		
	comp=Z,46nm,0.7s						
KMI				pmax	pmax		
	comp=Z,300nm,3.1s						
KMI				LR	LR		
	comp=Z,2µm,13.8s						
KMI				LR	LR		
	comp=Z,1µm,13.7s						
KMI				LR	LR		
	comp=Z,3µm,14.0s						
USP	**Ospenovka**	**51.69**	**292**	P	**P**	**17 22 58.2**	**+0.6**
	SNR=32						
KLMR	**Klimovskoe**	**51.74**	**327**	*e*P	**P**	**17 22 56.2**	**-1.3**
KLMR				*e*		17 24 08.3	
KLMR				*e*		17 24 53.7	
KLMR				pmax	pmax		
	comp=Z,51nm,1.0s						
KLMR				MLR	MLR		
	comp=Z,2µm,15.0s						
CHMS	**Chumysh**	**51.77**	**292**	P	**P**	**17 22 58.6**	**+0.5**
	SNR=16						
KBK	**Karagaybulak**	**51.94**	**291**	P	**P**	**17 23 00.1**	**+0.6**
	SNR=15						
FRU1	**Bishkek**	**51.97**	**292**	IAmb	IAmb	17 23 03.1	
	comp=Z,36nm,0.9s						
DLMT	**Dillon**	**52.02**	**63**	IAmb	IAmb	17 23 02.0	
	comp=Z,51nm,1.3s						
AAK	**Ala-Archa**	**52.17**	**292**	P	**P**	**17 23 01.8**	**+0.6**
	SNR=28						
AAK	**Ala-Archa**	**52.17**	**292**	LR	LR	17 48 43.6	
	comp=Z,480nm,18.2s,baz=34,slow=40						
AAK	**Ala-Archa**	**52.17**	**292**	P	**P**	**17 23 01.4**	**+0.2**
AAK	**Ala-Archa**	**52.17**	**292**	P	**P**	**17 23 00.7**	**-0.6**
AAK	**Ala-Archa**	**52.17**	**292**	*i* P	**P**	**17 23 01.3**	**0.0**
	SNR=34						
AAK	**Ala-Archa**	**52.17**	**292**	*ce*P	**P**	**17 23 01.4**	**+0.2**
AAK				pmax	pmax		
	comp=Z,20nm,1.0s						
VAGH	**Vaagaholmen**	**52.22**	**344**	*e*P	**P**	**17 22 58.3**	**-2.7**
BOZ	**Bozeman (W)**	**52.29**	**63**	IAmb	IAmb	17 23 04.1	
	comp=Z,90nm,1.8s						
RAUS	**Rausandaksla**	**52.38**	**343**	*e*P	**P**	**17 23 01.7**	**-0.5**
UCH	**Uchtor**	**52.47**	**291**	P	**P**	**17 23 04.8**	**+1.0**
	SNR=10						
EKS2	**Erkin-Say**	**52.50**	**292**	P	**P**	**17 23 04.8**	**+1.2**
	SNR=14						
CVS	**Carmenet Viney**	**52.52**	**76**	IAmb	IAmb	17 23 05.9	
	comp=Z,124nm,1.4s						
FRB	**Frobisher Bay**	**52.54**	**24**	LR	LR	17 48 51.9	
	comp=Z,439nm,18.3s,baz=316,slow=40						
MOR8	**Moi Rana**	**52.56**	**343**	*e*P	**P**	**17 23 01.6**	**-2.1**
LEIR	**Leirfjorden**	**52.82**	**343**	*e*P	**P**	**17 23 06.5**	**+1.0**
YHB	**Horse Butte**	**53.13**	**63**	IAmb	IAmb	17 23 10.5	
	comp=Z,48nm,1.3s						
QIZ	**Qiongzhong**	**53.19**	**243**	P	**P**	**17 23 09.5**	**+0.7**
QIZ				S	**S**	**17 30 40.5**	**+1.4**
QIZ				pmax	pmax		
	comp=Z,37nm,1.9s						
QIZ				pmax	pmax		
	comp=Z,500nm,3.4s						

QIZ				LR	LR		
	comp=Z,1µm,13.1s						
QIZ				LR	LR		
	comp=Z,2µm,15.0s						
QIZ				LR	LR		
	comp=Z,2µm,14.3s						
YMR	Madison River	53.30	63	IAmb	IAmb	17 23 11.9	
	comp=Z,65nm,1.4s						
DGMT	Dagmar	53.42	55	IAmb	IAmb	17 24 19.0	
	comp=Z,39nm,0.9s						
DZA	Taraz	53.49	294	eP	P	17 23 10.9	+0.1
DZA	Taraz	53.49	294	eP	P	17 23 10.9	+0.1
AKTO	Aktyubinsk	53.61	309	LR	LR	17 48 22.3	
	comp=Z,2µm,18.1s,baz=43,slow=39						
AKTO	Aktyubinsk	53.61	309	P	P	17 23 11.0	-0.6
YMP	Mirror Lake Pl	53.62	62	IAmb	IAmb	17 23 14.6	
	comp=Z,66nm,1.4s						
TNCH	TengChong	53.68	258	P	P	17 23 12.8	+0.2
TNCH				pP	pP	17 23 16.0	-1.2
TNCH				sP	sP	17 23 19.3	+0.3
TNCH				PP	PP	17 25 14.3	+1.0
TNCH				S	S	17 30 45.5	-0.5
TNCH				sS	sS	17 30 56.8	+3.2
TNCH				pmax	pmax		
	comp=Z,43nm,1.3s						
TNCH				pmax	pmax		
	comp=Z,380nm,2.8s						
TNCH				LR	LR		
	comp=Z,1µm,13.2s						
TNCH				LR	LR		
	comp=Z,2µm,12.1s						
TNCH				LR	LR		
	comp=Z,3µm,15.0s						
H17A	Grant Village	53.69	63	IAmb	IAmb	17 23 16.1	
	comp=Z,47nm,1.2s						
LSA	Lhasa	53.70	268	P	P	17 23 09.0	-4.0
LSA				pmax	pmax		
	comp=Z,14nm,0.8s						
LSA	Lhasa	53.70	268	P	P	17 23 13.5	+0.5
KK31	Karatay Array	53.72	295	IAmb	IAmb	17 23 15.2	
	comp=Z,63nm,1.0s						
KK31	Karatay Array	53.72	295	i P	P	17 23 12.5	0.0
KKAR	Karatay Array	53.72	295	P	P	17 23 11.9	-0.6
KKAR	Karatay Array	53.72	295	P	P	17 23 11.9	-0.6
AB31	Akbulak array	53.73	307	P	P	17 23 11.8	-0.6
ABKAR	Akbulak array	53.73	307	P	P	17 23 11.8	-0.6
RLMT	Red Lodge	53.74	61	IAmb	IAmb	17 23 15.3	
	comp=Z,59nm,1.1s						
KSH	Kashi	53.82	288	P	P	17 23 17.8	+4.4
KSH				S	S	17 30 59.0	+12
KSH				pmax	pmax		
	comp=Z,20nm,1.3s						
KSH				LR	LR		
	comp=Z,3µm,14.1s						
KSH				LR	LR		
	comp=Z,2µm,17.2s						
KSH				LR	LR		
	comp=Z,4µm,13.7s						
ARSB	Arslanbob	53.90	292	IAmb	IAmb	17 23 17.2	
	comp=Z,37nm,1.2s						
LAO	LASA Array	53.91	58	IAmb	IAmb	17 23 16.1	
	comp=Z,36nm,0.9s						
BRLS	Borolday	54.10	295	eP	P	17 23 17.2	+2.0
BRLS	Borolday	54.10	295	eP	P	17 23 17.2	+2.0
ELK	Elko	54.27	69	LR	LR	17 45 45.7	
	comp=Z,958nm,20.0s,baz=328,slow=35						
LOHW	Long Hollow	54.27	63	IAmb	IAmb	17 23 19.4	
	comp=Z,54nm,1.4s						
NSS	Namsos	54.47	343	eP	P	17 23 18.9	+1.3
NVAR	Mina Array Bea	54.54	73	P	P	17 23 19.6	+0.8
	comp=Z,19nm,0.9s,baz=302,slow=7.2,SNR=65						
NVAR				LR	LR	17 43 49.9	
	comp=Z,996nm,21.9s,baz=329,slow=33						
	comp=Z,19nm,0.9s						
LHV	Little Huntoon	54.58	73	IAmb	IAmb	17 23 21.9	
	comp=Z,81nm,1.3s						
NV11	Mina Array Sit	54.61	73	IAmb	IAmb	17 23 21.8	
	comp=Z,78nm,1.6s						
FINES	FINESS Array B	54.65	334	P	P	17 23 17.9	-1.0
	comp=Z,17nm,0.8s,baz=44,slow=8.5,SNR=27						
FINES				LR	LR	17 50 06.5	
	comp=Z,339nm,18.2s,baz=24,slow=40						
	comp=Z,17nm,0.8s						
FINES	FINESS Array B	54.65	334	P	P	17 23 18.0	-1.0
FINES	FINESS Array B	54.65	334	P	P	17 23 18.0	-1.0
IUG	Iuzhnay	54.68	294	eP	P	17 23 19.7	0.0
	comp=Z,27nm,1.0s						
IUG	Iuzhnay	54.68	294	eP	P	17 23 19.6	0.0
IUG				pmax	pmax		
	comp=Z,27nm,1.0s						
CHM	Chimkent	54.75	295	eP	P	17 23 20.0	0.0
	comp=Z,14nm,0.6s						
CHM	Chimkent	54.75	295	eP	P	17 23 20.0	0.0
CHM				pmax	pmax		
	comp=Z,14nm,0.6s						
MDPB	Devils Postpil	54.77	74	IAmb	IAmb	17 23 23.4	
	comp=Z,44nm,1.1s						
SPUT	South Promonto	55.18	67	IAmb	IAmb	17 23 25.8	
	comp=Z,87nm,1.8s						
PKD	Bear Valley Ra	55.34	77	IAmb	IAmb	17 23 30.3	
	comp=Z,42nm,1.1s						
HWUT	Hardware Ranch	55.37	66	IAmb	IAmb	17 23 27.4	
	comp=Z,93nm,1.6s						
BW06	Boulder Array	55.41	63	IAmb	IAmb	17 23 26.9	
	comp=Z,46nm,1.4s						
PD31	Pinedale Array	55.41	63	IAmb	IAmb	17 23 26.9	
	comp=Z,46nm,1.4s						
PDAR	Pinedale Array	55.41	63	P	P	17 23 25.5	+0.4
	comp=Z,12nm,0.8s,baz=329,slow=2.8,SNR=90						
PDAR				LR	LR	17 50 02.6	
	comp=Z,609nm,18.4s,baz=334,slow=39						
	comp=Z,12nm,0.8s						
PDAR	Pinedale Array	55.41	63	P	P	17 23 24.9	-0.1
ULM	Lac du Bonnet	55.45	49	P	P	17 23 24.9	0.0
	comp=Z,23nm,1.1s,baz=321,slow=6.7,SNR=12						
ULM				LR	LR	17 50 43.6	
	comp=Z,691nm,18.4s,baz=334,slow=40						
	comp=Z,23nm,1.1s						
ULM	Lac du Bonnet	55.45	49	IAmb	IAmb	17 23 26.4	
	comp=Z,74nm,1.4s						
ULM	Lac du Bonnet	55.45	49	d iP	P	17 23 25.5	+0.6
DSP	Deep Springs	55.53	74	IAmb	IAmb	17 23 28.9	
	comp=Z,55nm,1.2s						
TCUT	Toone Canyon	55.82	66	IAmb	IAmb	17 23 31.5	
	comp=Z,38nm,1.2s						
DUG	Dugway, Tooele	55.87	68	IAmb	IAmb	17 23 30.8	
	comp=Z,50nm,1.2s						
DRK	Karamyk	55.90	291	IAmb	IAmb	17 23 31.8	
	comp=Z,35nm,1.0s						
BELG	Belogornoye	56.04	317	LR	LR	17 49 48.8	
	comp=Z,2µm,20.1s,baz=112,slow=38						
BELG	Belogornoye	56.04	317	c iP	P	17 23 29.2	+0.2
BELG				pmax	pmax		
	comp=Z,19nm,0.9s						
GRAC	Grapevine Rang	56.12	73	IAmb	IAmb	17 23 32.4	
	comp=Z,31nm,1.0s						
CWC	Cottonwood Cre	56.20	74	IAmb	IAmb	17 23 33.4	
	comp=Z,106nm,1.9s						
MOS	Moscow	56.56	325	eP	P	17 23 31.0	-1.7
MOS				pmax	pmax		
	comp=Z,73nm,1.4s						
MOS				MLR	MLR		
	comp=Z,1µm,18.0s						
MPU	Maple Canyon	56.57	67	IAmb	IAmb	17 23 36.0	
	comp=Z,104nm,1.7s						
TPNV	Topopah Spring	56.72	73	IAmb	IAmb	17 23 39.4	
	comp=Z,51nm,1.1s						
EPLO	Experimental L	56.75	48	IAmb	IAmb	17 23 35.1	
	comp=Z,42nm,1.3s						
BORG	Borgarnes	56.78	0	LR	LR	17 49 18.9	
	comp=Z,161nm,18.6s,baz=345,slow=38						
FURC	Furnace Creek,	56.79	73	IAmb	IAmb	17 23 37.5	
	comp=Z,70nm,1.1s						
RSSD	Black Hills	56.87	59	P	P	17 23 35.3	-0.1
RSSD				IAmb	IAmb	17 23 37.3	
	comp=Z,46nm,1.1s						
RSSD	Black Hills	56.87	59	P	P	17 23 35.3	-0.1
RSSD				pmax	pmax		
	comp=Z,46nm,1.1s						
MOL	Molde	56.97	345	eP	P	17 23 35.9	+0.3
VSU	Vasula	57.15	332	ceP	P	17 23 35.5	-1.4
VSU				pmax	pmax		
	comp=Z,34nm,0.8s						
QSM	Queen of Sheba	57.18	74	IAmb	IAmb	17 23 40.1	
	comp=Z,50nm,1.2s						
DOMB	Dombas	57.26	344	eP	P	17 23 37.1	-0.6
TMUT	Trail Mountain	57.34	67	IAmb	IAmb	17 23 41.5	
	comp=Z,43nm,1.1s						
OBN	Obninsk	57.41	325	LR	LR	17 50 16.1	
	comp=Z,1µm,18.0s,baz=338,slow=38						
OBN	Obninsk	57.41	325	P	P	17 23 37.8	-0.9
OBN				IAmb	IAmb	17 23 41.0	
	comp=Z,80nm,1.3s						
OBN	Obninsk	57.41	325	c iP	P	17 23 38.3	-0.4
OBN				i		17 23 43.1	
OBN				i		17 24 27.0	
OBN				i		17 25 46.7	
OBN				pmax	pmax		
	comp=Z,28nm,1.0s						
OBN				MLR	MLR		
	comp=Z,1µm,16.0s						
AKN	Aaknes	57.42	345	eP	P	17 23 38.6	-0.2
P17A	Butcher Ranch,	57.42	67	IAmb	IAmb	17 23 41.9	
	comp=Z,85nm,1.6s						
MANEM	Manem	57.47	290	IAmb	IAmb	17 23 43.1	
	comp=Z,61nm,0.9s						
P18A	Preston Nutter	57.54	66	IAmb	IAmb	17 23 43.1	
	comp=Z,42nm,1.1s						
DAV	Davao City (W)	57.59	220	LR	LR	17 48 51.3	
	comp=Z,224nm,19.9s,baz=38,slow=36						
GSC	Goldstone, Bar	57.73	74	IAmb	IAmb	17 23 44.0	
	comp=Z,36nm,1.1s						
NC204	NORSAR Array S	57.73	342	IAmb	IAmb	17 23 43.1	
	comp=Z,32nm,1.1s						
SZCU	Shurtz Canyon	57.77	70	IAmb	IAmb	17 23 44.4	
	comp=Z,39nm,1.1s						
NB2	NORSAR Subarra	57.89	342	P	P	17 23 41.2	-0.9
	comp=Z,48nm,1.2s,baz=18,slow=7.4						
NB2	NORSAR Subarra	57.89	342	P	P	17 23 41.2	-0.9
	baz=18,slow=7.4						
NOA	NORSAR Array B	57.89	342	P	P	17 23 40.8	-1.3
	comp=Z,11nm,1.0s,baz=19,slow=7.0,SNR=30						
NOA				LR	LR	17 52 54.1	
	comp=Z,439nm,18.2s,baz=30,slow=40						
	comp=Z,11nm,1.0s						
NC602	NORSAR Array S	58.12	342	eP	P	17 23 44.0	+0.3
HAYD	Hayden	58.24	63	IAmb	IAmb	17 23 50.4	
	comp=Z,62nm,1.7s						
PKCU	Pink Cliffs	58.26	69	IAmb	IAmb	17 23 51.6	
	comp=Z,88nm,1.4s						
HFS	Hagfors	58.33	340	P	P	17 23 43.8	-1.4
	comp=Z,15nm,1.1s,baz=35,slow=5.4,SNR=10						
HFS				LR	LR	17 51 49.2	
	comp=Z,550nm,19.8s,baz=30,slow=39						
	comp=Z,15nm,1.1s						
CHTO	Chiang Mai	58.65	254	P	P	17 23 48.4	+0.4
CHTO				P	P	17 23 48.4	+0.4
CHTO	Chiang Mai	58.65	254	P	P	17 23 47.1	-0.9
	comp=Z,617nmcomp=Z,27nm,1.0s						
SKAR	Skarslia	58.68	344	eP	P	17 23 47.4	-0.2
F33A	5 Mile Ranch,	58.82	52	IAmb	IAmb	17 23 50.3	
	comp=Z,41nm,1.1s						
LPSR	Galich'ya Gora	58.82	322	eP	P	17 23 46.7	-2.0
LPSR				pmax	pmax		
	comp=Z,60nm,0.9s						
LPSR				MLR	MLR		
	comp=Z,2µm,14.0s						
CM31	Chiang Mai Arr	58.95	254	P	P	17 23 50.6	+0.5
	SNR=12						
CM31				P	P	17 23 50.6	+0.5
	SNR=12						
CMAR	Chiang Mai Arr	58.95	254	P	P	17 23 49.4	-0.7
	comp=Z,2.7nm,0.7s,baz=10,slow=7.0,SNR=28						
CMAR				LR	LR	17 53 01.5	
	comp=Z,2µm,18.9s,baz=25,slow=40						
	comp=Z,2.7nm,0.7s						
CMAR	Chiang Mai Arr	58.95	254	i P	P	17 23 50.2	+0.1
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PV21	Cone Mtn., Par	58.99	66	IAmb	IAmb	17 23 54.0	
	comp=Z,33nm,1.0s						
VRH	Novokhopyorsk	59.08	319	eP	P	17 23 49.0	-1.5
VRH				pmax	pmax		
	comp=Z,40nm,0.6s						
VRH				MLR	MLR		
	comp=Z,2µm,14.0s						
PV14	Lion Creek, Pa	59.11	66	IAmb	IAmb	17 23 53.5	
	comp=Z,55nm,1.0s						
BRDH	Bariadhala	59.15	263	LR	LR	17 51 24.1	
	comp=Z,969nm,19.2s,baz=70,slow=38						
SHAA	Shahritus	59.18	292	IAmb	IAmb	17 23 54.6	
	comp=Z,99nm,1.1s						
PFO	Pinyon Flats O	59.24	75	LR	LR	17 49 10.9	
	comp=Z,342nm,18.4s,baz=321,slow=36						
KONO	Kongsberg	59.47	343	P	P	17 23 52.6	-0.4
KONO				IAmb	IAmb	17 23 55.4	
	comp=Z,30nm,1.1s						
KONO	Kongsberg	59.47	343	eP	P	17 23 52.6	-0.4
KONO	Kongsberg	59.47	343	P	P	17 23 52.6	-0.4
KONO				pmax	pmax		
	comp=Z,30nm,1.1s						
PV01	Paradox Valley	59.52	66	IAmb	IAmb	17 23 55.7	
	comp=Z,24nm,1.0s						
VORR	Voronezh	59.52	321	eP	P	17 23 51.4	-2.1
VORR				pmax	pmax		
	comp=Z,40nm,0.5s						
VORR				MLR	MLR		
	comp=Z,1µm,11.0s						
ISCO	Idaho Springs	59.58	63	IAmb	IAmb	17 23 57.4	
	comp=Z,45nm,1.2s						
ODD1	Odda	59.66	344	eP	P	17 23 53.7	-0.8
VSR	Storozhevoye	59.92	321	eP	P	17 23 54.2	-2.1
VSR				pmax	pmax		
	comp=Z,60nm,0.9s						
VSR				MLR	MLR		
	comp=Z,3µm,14.0s						
VORD	Divnogorie	60.10	321	eP	P	17 23 53.8	-3.7
BLYC	Blythe	60.10	74	IAmb	IAmb	17 24 00.5	
	comp=Z,48nm,1.1s						
WUAZ	Wupatki	60.25	70	P	P	17 23 60.0	+0.9
WUAZ				IAmb	IAmb	17 24 01.9	
	comp=Z,51nm,1.1s						
ECSD	EROS Data Cent	60.39	54	IAmb	IAmb	17 24 00.9	
	comp=Z,42nm,1.1s						
MNK	Minsk	60.39	330	i P	P	17 23 58.5	-1.0
MNK				i		17 24 50.4	
MNK				i		17 26 11.8	
MNK				i S	S	17 32 13.4	0.0
MNK				i		17 33 48.1	
MNK				i SS	SS	17 36 12.8	+2.7
MNK				pmax	pmax		
	comp=N,22nm,1.0s						
MNK				pmax	pmax		
	comp=E,27nm,0.9s						
MNK				pmax	pmax		
	comp=Z,62nm,0.9s						
MNK				MLR	MLR		
	comp=N,384nm,15.0s						
MNK				MLR	MLR		
	comp=Z,2µm,16.0s						
MNK				MLR	MLR		
	comp=E,2µm,16.0s						
PABE	Paberze	60.48	332	P	P	17 23 58.9	-1.1
GLA	Glamis	60.51	74	IAmb	IAmb	17 24 03.2	
	comp=Z,42nm,1.1s						
Y14A	Wickenburg	60.71	72	IAmb	IAmb	17 24 04.7	
	comp=Z,36nm,1.2s						
SPMN	Marine on St.	60.73	50	IAmb	IAmb	17 24 26.6	
	comp=Z,30nm,1.3s						
SCHQ	Schefferville	60.90	28	P	P	17 24 02.9	-0.1
	comp=Z,9.4nm,1.0s,baz=26,slow=7.9,SNR=3.6						
SCHQ				LR	LR	17 52 34.8	
	comp=Z,501nm,19.7s,baz=328,slow=38						
	comp=Z,9.4nm,1.0s						
X16A	Lo Mia Camp, P	61.10	71	IAmb	IAmb	17 24 07.8	
	comp=Z,25nm,1.1s						
KBL	Kabul	61.15	290	P	P	17 24 04.3	-0.9
	SNR=13						
KBL	Kabul	61.15	290	P	P	17 24 03.9	-1.3
KBL				IAmb	IAmb	17 24 06.5	
	comp=Z,31nm,0.8s						
KBL	Kabul	61.15	290	P	P	17 24 03.9	-1.3
KBL				pmax	pmax		
	comp=Z,31nm,0.9s						
113A	Mohawk Valley,	61.27	74	IAmb	IAmb	17 24 09.4	
	comp=Z,51nm,1.6s						
SDCO	Great Sand Dun	61.28	64	IAmb	IAmb	17 24 08.7	
	comp=Z,35nm,1.1s						
W18A	Petrified Fore	61.37	69	IAmb	IAmb	17 24 12.2	
	comp=Z,26nm,1.0s						
I37A	Lemond, Waseca	61.49	51	IAmb	IAmb	17 24 08.6	
	comp=Z,52nm,1.2s						
SUW	Suwalki	62.03	332	P	P	17 24 09.4	-1.1
SUW	Suwalki	62.03	332	P	P	17 24 09.4	-1.1
BAKI	Biak	62.48	206	P	P	17 24 15.5	+1.5
SMPI	Sarmi	62.69	203	P	P	17 24 16.8	+1.4
	comp=Z,95nm,1.4s						
I40A	Norwalk	62.71	50	IAmb	IAmb	17 24 16.2	
	comp=Z,55nm,1.3s						
MWPI	Manokwari, Pap	62.72	208	P	P	17 24 17.5	+1.9
JAY	Jayapura	62.82	201	LR	LR	17 56 22.1	
	comp=Z,140nm,18.0s,baz=345,slow=41						
TNTI	Ternate	62.94	216	P	P	17 24 16.3	-0.8
TNTI				IAmb	IAmb	17 24 17.8	
	comp=Z,22nm,1.0s						
TNTI	Ternate	62.94	216	P	P	17 24 17.6	+0.5
	comp=Z,564nmcomp=Z,25nm,1.1s						
TASM	ASL Pad, Albuq	63.09	67	IAmb	IAmb	17 24 20.5	
	comp=Z,23nm,1.0s						
TASM	ASL Pad, Albuq	63.09	67	IAmb	IAmb	17 24 20.4	
	comp=Z,22nm,1.0s						
TASM	ASL Pad, Albuq	63.09	67	IAmb	IAmb	17 24 20.5	
	comp=Z,23nm,1.0s						
ANMO	Albuquerque	63.09	67	LR	LR	17 53 33.9	
	comp=Z,463nm,18.8s,baz=337,slow=38						
ANMO	Albuquerque	63.09	67	P	P	17 24 18.2	0.0
ANMO				IAmb	IAmb	17 24 20.5	
	comp=Z,21nm,1.0s						
ANMO	Albuquerque	63.09	67	⇑eP	P	17 24 19.2	+1.0
ANMO				pmax	pmax		
	comp=Z,23nm,1.0s						
ABQ	Albuquerque	63.09	67	IAmb	IAmb	17 24 20.5	
	comp=Z,23nm,1.0s						
SRPI	Serui, Papua	63.11	206	P	P	17 24 18.9	+0.7
TUC	Tucson	63.12	72	P	P	17 24 18.5	+0.2
TUC				IAmb	IAmb	17 24 21.0	
	comp=Z,32nm,1.4s						
TUC	Tucson	63.12	72	P	P	17 24 18.5	+0.2
TUC				pmax	pmax		
	comp=Z,32nm,1.4s						
SIJI	Sorong	63.38	211	P	P	17 24 20.0	0.0
AK23	Malin Array Si	63.40	327	P	P	17 24 19.7	-0.1
AK03	Malin Array Si	63.41	327	P	P	17 24 18.9	-0.9
AK21	Malin Array Si	63.41	327	P	P	17 24 18.9	-0.9
AK22	Malin Array Si	63.42	327	P	P	17 24 19.0	-0.9
AK04	Malin Array Si	63.42	327	P	P	17 24 19.0	-0.9
AKASG	Malin Array Be	63.43	327	P	P	17 24 19.3	-0.7
	comp=Z,16nm,0.7s,baz=31,slow=6.4,SNR=26						
AKASG				LR	LR	17 55 02.3	
	comp=Z,1µm,20.0s,baz=21,slow=39						
	comp=Z,16nm,0.7s						
AKASG	Malin Array Be	63.43	327	P	P	17 24 19.7	-0.3
AKASG				IAmb	IAmb	17 24 22.3	
	comp=Z,31nm,1.5s						
AKASG	Malin Array Be	63.43	327	i P	P	17 24 19.2	-0.7
AKASG				pmax	pmax		
	comp=Z,17nm,0.7s						
AKBB	Malin Array Si	63.43	327	IAmb	IAmb	17 24 22.0	
	comp=Z,30nm,0.9s						
AKBB	Malin Array Si	63.43	327	c iP	P	17 24 18.5	-1.4
AKBB	Malin Array Si	63.43	327	P	P	17 24 19.1	-0.8
KIEV	Kiev	63.44	327	P	P	17 24 18.5	-1.5
KIEV				IAmb	IAmb	17 24 22.0	
	comp=Z,27nm,0.9s						
KIEV	Kiev	63.44	327	⇑P	P	17 24 19.3	-0.7
KIEV	Kiev	63.44	327	i P	P	17 24 19.0	-1.0
	SNR=15						
KIEV	Kiev	63.44	327	P	P	17 24 18.5	-1.5
KIEV				pmax	pmax		
	comp=Z,27nm,0.9s						
AK01	Malin Array Si	63.44	327	P	P	17 24 19.1	-0.9
MI28	Mi28,Pidlybu	63.66	328	P	P	17 24 20.6	-0.9
Y22A	Socorro	63.67	68	IAmb	IAmb	17 24 24.7	
	comp=Z,28nm,1.1s						
RNPP9	Sopachiv	63.70	329	P	P	17 24 20.8	-1.0
RNPP8	Varash	63.78	329	P	P	17 24 21.6	-0.7
GOF	Gofitskoye	63.83	315	ceP	P	17 24 23.2	+0.5
VLDQ	Val d'Or	63.86	38	P	P	17 24 20.6	-2.1
RNPP5	Staryi Chortor	63.87	329	P	P	17 24 22.1	-0.8
MAK	Makhachkala	63.89	310	eP	P	17 24 21.8	-1.3
MAK				e		17 26 43.6	
MAK				ePPP	PPP	17 28 18.9	
MAK				eS	S	17 32 55.7	-2.1
MAK				eSS	SS	17 37 12.9	+7.6
MAK				pmax	pmax		
	comp=Z,147nm,1.2s						
MAK				MLR	MLR		
	comp=Z,4µm,13.0s						
L40A	Anamosa	64.00	51	IAmb	IAmb	17 25 00.1	
	comp=Z,21nm,1.0s						
ERBR	Yeremizino-Bor	64.19	317	eP	P	17 24 24.9	-0.2
ERBR				e*PP	sP	17 24 31.7	+0.2
ERBR				eS	S	17 33 02.2	+0.7
ERBR				pmax	pmax		
	comp=Z,58nm,0.9s						
ERBR				MLR	MLR		
	comp=Z,2µm,14.0s						
ERBR				MLR	MLR		
	comp=E,955nm,9.0s						
ERBR				MLR	MLR		
	comp=N,3µm,12.0s						
121A	Cookes Peak, D	64.41	69	IAmb	IAmb	17 24 29.8	
	comp=Z,38nm,1.1s						
LUBAR	Lubar, Ukraine	64.54	327	P	P	17 24 26.7	-0.6
HRA	Herat	64.55	295	IAmb	IAmb	17 24 31.1	
	comp=Z,47nm,1.1s						
319A	Douglas	64.62	71	IAmb	IAmb	17 24 30.9	
	comp=Z,45nm,1.1s						
L42A	Oliver, Polo	64.68	50	IAmb	IAmb	17 24 28.1	
	comp=Z,20nm,0.9s						
BSEG	Bad Segeberg	64.81	340	eP	P	17 24 29.2	+0.3
	comp=Z,4.3nm,0.8s,baz=16,slow=6.3						
TOLI2	Tolitoli	64.81	223	IAmb	IAmb	17 24 30.7	
	comp=Z,31nm,0.9s						
KVAR	Kislovodsk Arr	64.90	314	LR	LR	17 55 48.2	
	comp=Z,2µm,20.7s,baz=271,slow=39						
KIV	Kislovodsk	64.90	314	P	P	17 24 31.0	+1.2
KIV	Kislovodsk	64.90	314	P	P	17 24 29.0	-0.8
KIV	Kislovodsk	64.90	314	⇓P	P	17 24 31.1	+1.2
KIV	Kislovodsk	64.90	314	i P	P	17 24 30.4	+0.5
	SNR=15						
KIV	Kislovodsk	64.90	314	eP	P	17 24 29.8	-0.1
KIV				eS	S	17 33 10.8	+0.3
KIV				pmax	pmax		
	comp=Z,21nm,1.0s						
KIV				MLR	MLR		
	comp=Z,959nm,17.0s						
KBZ	Khabaz	65.02	314	P	P	17 24 31.1	+0.6
	comp=Z,26nm,0.8s,baz=58,slow=2.9,SNR=38						
KBZ				LR	LR	17 56 31.9	
	comp=Z,2µm,20.7s,baz=15,slow=39						
	comp=Z,26nm,0.8s						
KBZ	Khabaz	65.02	314	ceP	P	17 24 31.2	+0.8
KBZ				pmax	pmax		
	comp=Z,27nm,0.9s						
LABN	Labinsk	65.03	316	eP	P	17 24 30.0	-0.6
LABN				e*PP	pP	17 24 36.2	+0.9
LABN				eS	S	17 33 11.1	-0.8
LABN				pmax	pmax		
	comp=Z,19nm,0.7s						
LABN				MLR	MLR		
	comp=Z,1µm,14.0s						
AKT	Akhty	65.05	309	eP	P	17 24 31.1	+0.2
AKT				e		17 26 52.3	
AKT				pmax	pmax		
	comp=Z,73nm,1.2s						
AKT				MLR	MLR		
	comp=Z,2µm,17.0s						
P38A	Dawn	65.08	54	IAmb	IAmb	17 24 31.6	
	comp=Z,44nm,1.2s						
SHA1	Shidzhatmaz	65.10	314	ceP	P	17 24 31.8	+0.5
EKA	Eskdalemuir Ar	65.32	349	P	P	17 24 31.6	-0.7
	comp=Z,8.5nm,0.7s,baz=15,slow=5.1,SNR=20						
EKA				LR	LR	17 51 32.9	
	comp=Z,217nm,19.9s,baz=20,slow=35						
	comp=Z,8.5nm,0.7s						
ESK	Eskdalemuir	65.34	349	P	P	17 24 32.0	-0.4
ESK				IAmb	IAmb	17 24 33.0	
	comp=Z,57nm,1.2s						
ESK	Eskdalemuir	65.34	349	P	P	17 24 32.0	-0.4
ESK				pmax	pmax		
	comp=Z,57nm,1.3s						
NEUR	Neytrino	65.49	314	ceP	P	17 24 34.5	+0.7
NEUR				pmax	pmax		
	comp=Z,19nm,2.4s						
HORU	Horodok	65.55	328	P	P	17 24 33.4	-0.5
MSTX	Muleshoe	65.64	65	IAmb	IAmb	17 24 36.1	
	comp=Z,39nm,0.9s						
EPT	El Paso	65.66	69	IAmb	IAmb	17 24 37.0	
	comp=Z,39nm,1.1s						

BAL3X	Bal3x, Balta	65.80	325	P	P	17 24 35.9	+0.4
MPSI	Mapaga	65.84	224	P	P	17 24 36.9	+0.8
SMWD	Samnorwood	65.88	62	IAmb	IAmb	17 24 37.7	
	comp=Z,42nm,0.9s						
LDAQ	Lac Daran	65.91	34	IAmb	IAmb	17 24 36.8	
	comp=Z,26nm,1.0s						
IDGL	Inch Island, C	65.96	352	P	P	17 24 37.2	+0.8
SORM	Soroca	65.98	326	⇓P	P	17 24 36.3	-0.3
SORM	Soroca	65.98	326	⇓P	P	17 24 36.3	-0.3
SANI	Sanana	66.03	217	P	P	17 24 36.6	-0.7
	comp=Z,861nmcomp=Z,25nm,1.8s						
T35A	Sooner Cattle	66.05	58	IAmb	IAmb	17 24 40.6	
	comp=Z,25nm,0.8s						
ANN	Anapa	66.06	318	eP	P	17 24 38.1	+0.9
ANN				e*PP	sP	17 24 45.3	+1.7
ANN				e		17 27 03.5	
ANN				eS	S	17 33 28.4	+4.0
ANN				pmax	pmax		
	comp=Z,30nm,0.9s						
ANN				MLR	MLR		
	comp=Z,1µm,14.0s						
ANN				MLR	MLR		
	comp=E,1µm,14.0s						
ANN				MLR	MLR		
	comp=N,443nm,12.0s						
KMPD	K-Podol'skiy	66.14	328	P	P	17 24 36.3	-1.3
KMPD				P	P	17 24 36.3	-1.3
FLTG	Flechtingen	66.17	339	eP	P	17 24 37.8	0.0
	comp=N,3.6nm,1.0s,baz=16,slow=6.3						
SADO	Sadowa	66.22	41	LR	LR	17 53 38.0	
	comp=N,301nm,21.9s,baz=342,slow=36						
MNTX	Cornudas Mount	66.26	68	IAmb	IAmb	17 24 41.1	
	comp=Z,48nm,1.3s						
OK048	Pawnee Station	66.28	59	IAmb	IAmb	17 24 39.4	
	comp=Z,46nm,1.4s						
VSLR	Vesyoloye	66.30	316	ceP	P	17 24 39.3	+0.5
VSLR				pmax	pmax		
	comp=Z,31nm,0.9s						
SOC	Sochi	66.31	316	eP	P	17 24 38.7	-0.1
SOC				e		17 27 01.2	
SOC				ePPP	PPP	17 28 37.3	
SOC				eS	S	17 33 24.1	-3.4
SOC				eSS	SS	17 37 46.7	+3.9
SOC				pmax	pmax		
	comp=Z,25nm,1.1s						
SOC				MLR	MLR		
	comp=Z,877nm,15.0s						
OJC	Ojcow	66.34	333	P	P	17 24 38.7	-0.2
	comp=Z,894nmcomp=Z,74nm,1.2s						
ASSE	Asse, Remlinge	66.47	339	eP	P	17 24 39.9	+0.3
	comp=Z,12nm,1.0s,baz=16,slow=6.3						
LMQ	La Malbaie	66.55	34	IAmb	IAmb	17 24 42.8	
	comp=Z,42nm,1.0s						
KSP	Ksiaz	66.56	335	P	P	17 24 39.9	-0.4
	comp=Z,596nmcomp=Z,28nm,1.0s						
QUOK	Quay	66.59	59	IAmb	IAmb	17 24 41.5	
	comp=Z,39nm,1.2s						
STHS	Stebnicka Huta	66.73	331	eP	P	17 24 41.4	-0.1
STHS				pmax	pmax		
	comp=Z,27nm,0.8s						
STHS	Stebnicka Huta	66.73	331	eP	P	17 24 41.4	-0.1
P43A	Skaggs, Pawnee	66.73	51	IAmb	IAmb	17 24 41.8	
	comp=Z,26nm,1.0s						
R40A	Maddies Statio	66.74	54	IAmb	IAmb	17 24 42.0	
	comp=Z,37nm,1.0s						
KSV	Kosov	66.75	328	P	P	17 24 40.5	-1.1
DKNS	Dickens	66.75	63	IAmb	IAmb	17 24 42.6	
	comp=Z,33nm,1.0s						
CLL	Collm	66.80	338	IAmb	IAmb	17 24 44.3	
	comp=Z,32nm,1.0s						
CLL	Collm	66.80	338	i P	P	17 24 41.6	-0.3
CLL				pmax	pmax		
	comp=Z,42nm,1.1s						
CLL				MLR	MLR		
	comp=Z,800nm,16.1s						
CLL	Collm	66.80	338	eP	P	17 24 42.2	+0.3
	comp=Z,17nm,0.9s,baz=16,slow=6.3						
CLL	Collm	66.80	338	P	P	17 24 41.0	-0.9
IBBN	Ibbenburen	66.81	341	eP	P	17 24 41.7	-0.2
	comp=Z,10nm,1.0s,baz=16,slow=6.3						
OSTC	Ostas	66.84	335	eP	P	17 24 42.5	+0.3
OSTC				MLR	MLR		
	comp=Z,900nm,15.7s						
OSTC	Ostas	66.84	335	eP	P	17 24 42.5	+0.3
OSTC				AMS	AMS	17 59 20.0	
	comp=Z,900nm,15.7s						
CHVC	Chvalec	66.85	335	eP	P	17 24 42.8	+0.6
CHVC				MLR	MLR		
	comp=Z,900nm,17.2s						
CHVC	Chvalec	66.85	335	eP	P	17 24 42.8	+0.6
CHVC				AMS	AMS	17 59 20.0	
	comp=Z,900nm,17.2s						
SBUM	Sibu	66.87	232	P	P	17 24 43.9	+1.2
	comp=Z,20nm,2.2s						
UPC	Upice	66.93	335	eP	P	17 24 43.4	+0.7
UPC				MLR	MLR		
	comp=Z,900nm,15.9s						
UPC	Upice	66.93	335	eP	P	17 24 43.4	+0.7
UPC				AMS	AMS	17 59 30.0	
	comp=Z,900nm,15.9s						
DEOK	Depew	66.95	59	IAmb	IAmb	17 24 44.2	
	comp=Z,53nm,1.3s						
DPC	Dobruska-Polom	67.01	335	eP	P	17 24 44.1	+0.8
DPC				MLR	MLR		
	comp=Z,1µm,14.6s						
DPC	Dobruska-Polom	67.01	335	eP	P	17 24 44.1	+0.8
DPC				AMS	AMS	17 59 00.0	
	comp=Z,1µm,14.6s						
BRG	Berggiesshubel	67.03	337	eP	P	17 24 43.6	+0.4
	comp=Z,3.2nm,0.9s,baz=16,slow=6.3						
SIM	Simferopol'	67.05	321	eP	P	17 24 45.5	+2.0
SIM				pmax	pmax		
	comp=Z,21nm,1.0s						
STEB	Steborice	67.08	334	eP	P	17 24 44.5	+0.9
OKC	Ostrava-Krasne	67.08	334	AMS	AMS	17 57 50.0	
	comp=Z,1µm,14.4s						
NEUB	Neuenburg	67.14	338	eP	P	17 24 44.3	+0.3
	comp=Z,7.3nm,0.8s,baz=16,slow=6.3						
GTTG	Gottingen	67.16	340	eP	P	17 24 44.2	+0.1
	comp=Z,15nm,1.4s,baz=16,slow=6.3						
KRLC	Kraliky	67.17	335	eP	P	17 24 44.9	+0.6
KRLC				MLR	MLR		
	comp=Z,1µm,15.0s						
KRLC	Kraliky	67.17	335	eP	P	17 24 44.9	+0.6
KRLC				AMS	AMS	17 58 50.0	
	comp=Z,1µm,15.0s						
VHRN	Van Horn	67.20	68	IAmb	IAmb	17 24 47.2	
	comp=Z,34nm,1.1s						
PVCC	Panska Ves	67.22	336	eP	P	17 24 47.1	+2.6
PVCC				MLR	MLR		
	comp=Z,1µm,14.6s						
PVCC	Panska Ves	67.22	336	eP	P	17 24 47.1	+2.6
PVCC				AMS	AMS	17 59 20.0	
	comp=Z,1µm,14.6s						
SN07	Snyder 07	67.24	64	IAmb	IAmb	17 24 46.4	
	comp=Z,44nm,1.2s						
ODSA	Odessa	67.27	65	IAmb	IAmb	17 24 46.7	
	comp=Z,35nm,1.1s						
MORC	Moravsky Berou	67.28	334	IAmb	IAmb	17 24 48.4	
	comp=Z,37nm,1.0s						
MORC	Moravsky Berou	67.28	334	⇑P	P	17 24 45.9	+0.9
MORC	Moravsky Berou	67.28	334	eP	P	17 24 45.3	+0.3
MORC	Moravsky Berou	67.28	334	⇑P	P	17 24 45.9	+0.9
RICC	Richard	67.31	337	eP	P	17 24 45.8	+0.7
WBO	Williamsburg	67.31	39	IAmb	IAmb	17 24 44.8	
	comp=Z,43nm,1.3s						
RLO	Rose Lookout	67.34	57	IAmb	IAmb	17 24 46.3	
	comp=Z,39nm,1.0s						
D62A	Allapoint, All	67.34	33	IAmb	IAmb	17 24 46.0	
	comp=Z,29nm,1.0s						
BURAR	Bucovina Array	67.34	328	P	P	17 24 44.7	-0.8
BURAR				IAmb	IAmb	17 24 48.7	
	comp=Z,16nm,0.8s						
BURAR	Bucovina Array	67.34	328	⇓P	P	17 24 45.7	+0.2
BURAR	Bucovina Array	67.34	328	⇓P	P	17 24 45.7	+0.2
W35A	Tecumseh	67.36	59	IAmb	IAmb	17 24 47.1	
	comp=Z,34nm,1.0s						
CCM	Cathedral Cave	67.37	54	P	P	17 24 44.1	-1.6
CCM				IAmb	IAmb	17 24 46.0	
	comp=Z,38nm,1.1s						
CCM	Cathedral Cave	67.37	54	P	P	17 24 44.1	-1.6
CCM				pmax	pmax		
	comp=Z,38nm,1.1s						
HSKC	Hora Svate Kat	67.38	337	eP	P	17 24 46.1	+0.5
HSKC				AMS	AMS	18 01 50.0	
	comp=Z,900nm,13.5s						
MNTQ	Montreal, Queb	67.39	37	IAmb	IAmb	17 24 46.3	
	comp=Z,47nm,1.2s						
LANS	Liptovska Anna	67.41	332	eP	P	17 24 47.2	+1.4
LANS				pmax	pmax		
	comp=Z,26nm,0.8s						
LANS	Liptovska Anna	67.41	332	eP	P	17 24 47.2	+1.4
GIRR	Girov	67.59	327	⇓P	P	17 24 47.2	+0.2
MAUC	Maruska	67.60	334	eP	P	17 24 48.1	+1.1
E62A	Clayton Lake	67.63	34	IAmb	IAmb	17 24 47.7	
	comp=Z,44nm,1.0s						
DSB	Dublin	67.68	351	P	P	17 24 47.3	-0.1
PRA	Prague	67.68	336	AMS	AMS	17 59 10.0	
	comp=Z,1µm,11.9s						
P46A	Rosedale	67.69	50	IAmb	IAmb	17 24 47.9	
	comp=Z,48nm,1.1s						
MGMO	Mountain Grove	67.70	55	IAmb	IAmb	17 24 48.0	
	comp=Z,36nm,1.0s						
MOX	Moxa	67.71	338	eP	P	17 24 48.0	+0.4
	comp=Z,6.6nm,0.8s,baz=16,slow=6.3						
BUG	Bochum--Univer	67.73	341	eP	P	17 24 47.7	0.0
	comp=Z,8.7nm,0.8s,baz=16,slow=6.3						
PRU	Pruhonice	67.74	336	eP	P	17 24 48.5	+0.7
PRU				MLR	MLR		
	comp=Z,900nm,15.2s						
PRU	Pruhonice	67.74	336	eP	P	17 24 48.5	+0.7
PRU				AMS	AMS	17 59 00.0	
	comp=Z,900nm,15.2s						
N49A	Columbus Grove	67.74	47	IAmb	IAmb	17 24 48.4	
	comp=Z,51nm,1.5s						
IGLA	Glengowla, Co	67.74	352	P	P	17 24 49.1	+1.4
BMR	Baia Mare	67.76	329	⇓P	P	17 24 49.0	+1.0
BMR	Baia Mare	67.76	329	⇓P	P	17 24 49.0	+1.0
KASTN	Kahler Asten	67.76	340	eP	P	17 24 47.8	-0.2
	comp=Z,6.4nm,1.0s,baz=16,slow=6.3						
TANN	Tannenbergstha	67.76	338	eP	P	17 24 48.3	+0.2
	comp=Z,6.3nm,0.9s,baz=16,slow=6.3						
FVM	French Village	67.77	53	IAmb	IAmb	17 24 48.6	
	comp=Z,34nm,1.0s						
KECS	Kecovo	67.78	332	eP	P	17 24 48.8	+0.7
KECS				pmax	pmax		
	comp=Z,21nm,0.9s						
KECS	Kecovo	67.78	332	eP	P	17 24 48.8	+0.7
MNHN	Monahans	67.81	66	IAmb	IAmb	17 24 51.5	
	comp=Z,25nm,1.1s						
UBBA	Unterbreizbach	67.84	339	eP	P	17 24 48.4	+0.1
	comp=Z,3.4nm,0.8s,baz=16,slow=6.3						
LONY	Lake Ozonia	67.87	38	IAmb	IAmb	17 24 49.1	
	comp=Z,49nm,1.4s						
BIR	Birlad	67.89	326	⇑P	P	17 24 50.5	+1.7
BIR	Birlad	67.89	326	⇑P	P	17 24 50.5	+1.7
VRAC	Vranov	67.93	334	LR	LR	17 59 31.4	
	comp=Z,1µm,18.1s,baz=24,slow=40						
VRAC	Vranov	67.93	334	⇑P	P	17 24 50.3	+1.2
VRAC	Vranov	67.93	334	eP	P	17 24 49.8	+0.7
VRAC	Vranov	67.93	334	⇑P	P	17 24 50.3	+1.2
TESR	Tescani	67.95	327	⇑P	P	17 24 49.5	+0.3
BATG	Bathurst New B	68.00	31	IAmb	IAmb	17 24 49.9	
	comp=Z,43nm,1.1s						
ARCR	ARCALIA	68.06	328	⇓P	P	17 24 51.5	+1.5
OLIL	Olney	68.08	51	IAmb	IAmb	17 24 50.4	
	comp=Z,48nm,1.2s						
JAVC	Velka Javorina	68.11	334	eP	P	17 24 52.0	+1.8
SGCY	Sterling City	68.11	65	IAmb	IAmb	17 24 51.8	
	comp=Z,52nm,1.2s						
GHRR		68.14	326	⇓P	P	17 24 51.7	+1.3
ONER	Baraj Valea Uz	68.18	327	⇑P	P	17 24 51.6	+0.9
TREC	Trest	68.19	335	eP	P	17 24 51.4	+0.7
TREC				MLR	MLR		
	comp=Z,1µm,15.1s						
TREC	Trest	68.19	335	eP	P	17 24 51.4	+0.7
TREC				AMS	AMS	17 59 50.0	
	comp=Z,1µm,15.1s						
KRUC	Moravsky	68.21	334	eP	P	17 24 51.3	+0.5
MANZ	Manzenberg	68.24	338	eP	P	17 24 51.5	+0.5
	comp=Z,1.5nm,0.9s,baz=16,slow=6.3						
T42A	Van Buren	68.30	54	IAmb	IAmb	17 24 52.0	
	comp=Z,39nm,1.0s						
PANC	Panciu	68.38	326	⇑P	P	17 24 50.6	-1.3
ROTZ	Rotzenmuhle	68.43	338	eP	P	17 24 52.8	+0.6
	comp=Z,2.0nm,0.9s,baz=16,slow=6.3						
PSZ	Piszkesteto	68.45	332	IAmb	IAmb	17 24 56.1	
	comp=Z,44nm,1.2s						
PSZ	Piszkesteto	68.45	332	⇑P	P	17 24 53.7	+1.2
PSZ	Piszkesteto	68.45	332	⇑P	P	17 24 53.7	+1.2
SMOL	Smolenice	68.49	334	eP	P	17 24 54.1	+1.5
SMOL				pmax	pmax		
	comp=Z,23nm,1.3s						
SIUC	Southern Illin	68.50	52	IAmb	IAmb	17 24 53.0	
	comp=Z,28nm,1.0s						
S44A	Carbondale	68.50	52	IAmb	IAmb	17 24 53.0	
	comp=Z,27nm,1.0s						
ODBI	Odobesti	68.51	326	⇑P	P	17 24 54.4	+1.7
TLCR		68.51	324	⇑P	P	17 24 55.6	+2.9
TLCR		68.51	324	⇑P	P	17 24 55.6	+2.9
VRI	Vrincioaia	68.51	326	⇓P	P	17 24 51.9	-0.9
VRI	Vrincioaia	68.51	326	⇓P	P	17 24 51.9	-0.9
IWEX	Carrickbyrne,	68.58	351	P	P	17 24 54.1	+1.1
G62A	West of Eustis	68.60	35	IAmb	IAmb	17 25 12.8	
	comp=Z,78nm,1.7s						
BEBN	Eben Emael	68.61	342	dP	P	17 24 52.6	-0.7
CJR	Cluj-Napoca	68.61	329	⇓P	P	17 24 54.7	+1.3
CJR	Cluj-Napoca	68.61	329	⇓P	P	17 24 54.7	+1.3
PMG	Port Moresby	68.64	193	LR	LR	17 52 33.0	
	comp=Z,108nm,21.1s,baz=344,slow=34						
PMG	Port Moresby	68.64	193	P	P	17 24 53.8	+0.1
PMG				IAmb	IAmb	17 24 55.2	
	comp=Z,31nm,1.1s						
PMG	Port Moresby	68.64	193	P	P	17 24 54.3	+0.6
	comp=Z,688nmcomp=Z,38nm,2.0s						
PMG	Port Moresby	68.64	193	ceP	P	17 24 53.9	+0.2
PMG				pmax	pmax		
	comp=Z,26nm,1.7s						
MODS	Modra-Piesok	68.66	334	eP	P	17 24 55.0	+1.4
MODS				pmax	pmax		
	comp=Z,629nm,2.7s						
MODS	Modra-Piesok	68.66	334	eP	P	17 24 55.0	+1.4
COVR	Voineasa-Covas	68.68	327	⇓P	P	17 24 55.2	+1.4
GRA1	Grafenberg Arr	68.69	338	IAmb	IAmb	17 24 57.1	
	comp=Z,52nm,1.2s						
GRF	Grafenberg Arr	68.69	338	eP	P	17 24 54.2	+0.4
	comp=Z,13nm,0.9s,baz=16,slow=6.3						
TNS	Taunus Mts	68.70	340	eP	P	17 24 54.2	+0.3
	comp=Z,7.9nm,0.8s,baz=16,slow=6.3						
CFR	Carcaliu	68.72	325	⇓P	P	17 24 54.7	+0.7
CFR	Carcaliu	68.72	325	⇓P	P	17 24 54.7	+0.7
MEM	Membach	68.74	342	dP	P	17 24 53.7	-0.3
	comp=Z,23nm,0.9s						
BTNL	Ternell	68.74	342	dP	P	17 24 54.0	-0.1
KHC	Kasperske Hory	68.75	336	IAmb	IAmb	17 24 57.6	
	comp=Z,20nm,1.0s						
KHC	Kasperske Hory	68.75	336	ceP	P	17 24 54.5	+0.3
KHC				pmax	pmax		
	comp=Z,65nm,2.5s						
KHC	Kasperske Hory	68.75	336	eP	P	17 24 55.2	+1.0
KHC				epP	pP	17 24 57.2	-1.8
KHC				AMS	AMS	17 59 40.0	
	comp=Z,900nm,16.2s						
MARR	Marisel-Cluj	68.78	329	⇓P	P	17 24 54.7	+0.2
DRGR		68.78	329	⇑P	P	17 24 54.7	+0.2
DRGR		68.78	329	⇑P	P	17 24 54.7	+0.2
PBMO	Poplar Bluff	68.79	54	IAmb	IAmb	17 24 56.5	
	comp=Z,32nm,1.0s						
ACSO	Alum Creek Sta	68.79	46	IAmb	IAmb	17 24 55.0	
	comp=Z,30nm,1.1s						
DOPR	Dopca	68.80	327	⇓P	P	17 24 55.6	+1.0
PAOC	Oil Creek Stat	68.88	43	IAmb	IAmb	17 24 55.4	
	comp=Z,36nm,1.3s						
WET	Wettzell	68.89	337	eP	P	17 24 55.6	+0.5
	comp=Z,8.1nm,0.8s,baz=16,slow=6.3						
CKRC	Cesky Krumlov	68.89	336	eP	P	17 24 55.7	+0.6
CKRC				MLR	MLR		
	comp=Z,1µm,14.5s						
CKRC	Cesky Krumlov	68.89	336	eP	P	17 24 55.7	+0.6
CKRC				AMS	AMS	18 00 20.0	
	comp=Z,1µm,14.5s						
PKME	Peaks-Kenny Pk	68.92	34	IAmb	IAmb	17 24 55.9	
	comp=Z,24nm,1.0s						
J59A	Piesco	68.93	39	IAmb	IAmb	17 24 55.7	
	comp=Z,46nm,1.4s						
SRO	Srobarova	68.94	333	eP	P	17 24 55.9	+0.6
SRO				pmax	pmax		
	comp=Z,229nm,2.9s						
SRO	Srobarova	68.94	333	eP	P	17 24 55.9	+0.6
BHOU	Houvegnez	68.99	342	dP	P	17 24 55.8	+0.2
H62A	Milan	68.99	36	IAmb	IAmb	17 24 59.0	
	comp=Z,61nm,1.5s						
GEC2	GERESS Array S	69.00	336	P	P	17 24 54.9	-1.0
GEC2				IAmb	IAmb	17 24 58.8	
	comp=Z,19nm,0.9s						
GEC2	GERESS Array S	69.00	336	eP	P	17 24 56.3	+0.4
	comp=Z,10.0nm,0.8s,baz=16,slow=6.3						
GERES	GERESS Array B	69.00	336	P	P	17 24 56.2	+0.4
	comp=Z,6.6nm,0.7s,baz=21,slow=5.7,SNR=46						
GERES				LR	LR	18 00 02.4	
	comp=Z,598nm,19.1s,baz=28,slow=40						
	comp=Z,6.6nm,0.7s						
MMSI	Mamuju	69.00	223	P	P	17 24 56.2	+0.1
	comp=Z,32nm,1.5s						
BCLA	Clavier	69.03	342	dP	P	17 24 54.8	-1.1
TX31	Lajitas Ar. Si	69.04	68	IAmb	IAmb	17 24 58.6	
	comp=Z,47nm,1.2s						
TXAR	Lajitas Array	69.04	68	P	P	17 24 56.8	+0.4
	comp=Z,13nm,1.0s,baz=308,slow=4.6,SNR=80						
TXAR				LR	LR	17 56 23.1	
	comp=Z,667nm,18.7s,baz=325,slow=37						
	comp=Z,13nm,1.0s						
TXAR	Lajitas Array	69.04	68	P	P	17 24 56.5	+0.1
LBNH	Lisbon	69.06	37	IAmb	IAmb	17 24 58.9	
	comp=Z,50nm,1.3s						
MLR	Muntele Rosu	69.08	327	LR	LR	17 59 25.6	
	comp=Z,960nm,20.5s,baz=56,slow=40						
MLR	Muntele Rosu	69.08	327	IAmb	IAmb	17 25 05.3	
	comp=Z,63nm,1.5s						
MLR	Muntele Rosu	69.08	327	⇓P	P	17 24 58.5	+2.0
MLR	Muntele Rosu	69.08	327	⇓P	P	17 24 58.5	+2.0
L56A	Greenwood	69.08	42	IAmb	IAmb	17 24 55.9	
	comp=Z,52nm,1.3s						
BGES	Gesves	69.10	342	dP	P	17 24 55.0	-1.3
KOPT	Kop Dagi	69.12	314	P	P	17 24 56.9	-0.1
KOPT				IAmb	IAmb	17 25 07.2	
	comp=Z,32nm,0.9s						
BMRD	Maredsous	69.23	343	dP	P	17 24 56.8	-0.4
WCI	Wyandotte Cave	69.24	50	P	P	17 24 56.2	-1.2
WCI				IAmb	IAmb	17 24 57.9	
	comp=Z,37nm,1.1s						
WCI	Wyandotte Cave	69.24	50	P	P	17 24 56.2	-1.2
WCI				pmax	pmax		
	comp=Z,37nm,1.1s						
SAND	Sanderson	69.27	66	IAmb	IAmb	17 24 59.3	
	comp=Z,34nm,1.1s						
O52A	Adamsville	69.32	46	IAmb	IAmb	17 24 58.1	
	comp=Z,42nm,1.3s						
MIAR	Mount Ida	69.34	57	IAmb	IAmb	17 24 59.5	
	comp=Z,38nm,1.1s						
CONA	Conrad Observa	69.40	334	epP	P	17 24 59.5	+1.2
	comp=Z,32nm,1.2s,SNR=20						
P51A	Williamsport	69.42	47	IAmb	IAmb	17 24 59.7	
	comp=Z,19nm,0.8s						
O53A	New Philadelph	69.44	45	IAmb	IAmb	17 24 58.7	
	comp=Z,59nm,1.4s						
DOU	Dourbes	69.46	343	dP	P	17 24 58.6	0.0
KULM	Kulim	69.47	245	P	P	17 24 57.6	-1.5
KULM				IAmb	IAmb	17 25 01.5	
	comp=Z,85nm,1.8s						
KULM	Kulim	69.47	245	P	P	17 24 58.5	-0.6
	comp=Z,689nmcomp=Z,24nm,2.0s						
RONA	Rosalia, Austr	69.51	334	i pP	P	17 25 00.4	+1.4
	comp=Z,23nm,1.1s,SNR=12						
SIRR	Siria	69.54	330	⇑P	P	17 25 00.2	+1.1
ARR	Arges	69.56	327	⇑P	P	17 25 00.5	+1.1
BINY	Binghamton	69.57	40	IAmb	IAmb	17 25 01.1	
	comp=Z,56nm,1.5s						
I62A	Tamworth	69.57	36	IAmb	IAmb	17 25 00.7	
	comp=Z,68nm,1.4s						
BRDY	Brady	69.63	63	IAmb	IAmb	17 25 01.1	
	comp=Z,92nm,1.9s						
WLF	Walferdange	69.63	342	dP	P	17 25 00.6	+1.0
R49A	Shelbyville	69.63	49	IAmb	IAmb	17 25 00.6	
	comp=Z,80nm,1.6s						
J61A	Chester	69.66	38	IAmb	IAmb	17 25 00.5	
	comp=Z,36nm,1.2s						
UALR	University of	69.68	56	IAmb	IAmb	17 25 03.9	
	comp=Z,32nm,1.1s						
X40A	Basin Creek Fa	69.71	57	IAmb	IAmb	17 25 01.4	
	comp=Z,46nm,1.0s						
WHTX	Lake Whitney,	69.75	62	IAmb	IAmb	17 25 01.8	
	comp=Z,58nm,1.1s						
ICOR	Ion Corvin	69.78	325	⇑P	P	17 25 02.2	+1.6
O54A	Avella	69.80	45	IAmb	IAmb	17 25 01.5	
	comp=Z,56nm,1.5s						
GURO	Guroymak-BITLI	69.81	312	IAmb	IAmb	17 25 10.0	
	comp=Z,29nm,1.2s						
MOA	Molln	69.82	335	i pP	P	17 25 01.3	+0.4
	comp=Z,31nm,2.3s,SNR=7.3						
SPSI	Sidrap Palu	69.88	222	P	P	17 25 01.5	0.0
	comp=Z,1µmcomp=Z,13nm,1.1s						
L59A	Walton	69.89	40	IAmb	IAmb	17 25 01.8	
	comp=Z,46nm,1.3s						
JCT	Junction City	69.93	64	IAmb	IAmb	17 25 03.0	
	comp=Z,42nm,1.1s						
M57A	Sunshine Farm,	69.94	42	IAmb	IAmb	17 25 01.8	
	comp=Z,54nm,1.6s						
R50A	Paris	69.97	48	IAmb	IAmb	17 25 02.6	
	comp=Z,40nm,1.1s						
T47A	Sharon Grove	69.98	51	IAmb	IAmb	17 25 02.7	
	comp=Z,50nm,1.0s						
IPM	Ipoh	70.01	244	P	P	17 25 00.4	-2.0
IPM				IAmb	IAmb	17 25 03.2	
	comp=Z,78nm,1.7s						
IPM	Ipoh	70.01	244	P	P	17 25 01.9	-0.5
	comp=Z,744nmcomp=Z,23nm,2.1s						
GZR	Gura Zlata	70.05	329	⇑P	P	17 25 02.5	+0.1
GZR	Gura Zlata	70.05	329	⇑P	P	17 25 02.5	+0.1
HPIG		70.06	71	IAmb	IAmb	17 25 05.1	
	comp=Z,39nm,1.4s						
LPIG	La Paz	70.09	76	LR	LR	17 55 58.3	
	comp=Z,127nm,18.3s,baz=332,slow=36						
BIOA	Bad Ischl, Aus	70.11	336	i pP	P	17 25 03.2	+0.5
	comp=Z,17nm,1.5s,SNR=7.6						
ARSA	Arzberg	70.11	334	i pP	P	17 25 03.7	+1.1
	comp=Z,13nm,1.0s,SNR=10.0						
BZS	Buzias	70.15	330	⇓P	P	17 25 02.9	0.0
BZS	Buzias	70.15	330	⇓P	P	17 25 02.9	0.0
SAUI	Saumlaki	70.19	209	P	P	17 25 03.9	+0.5
SAUI	Saumlaki	70.19	209	P	P	17 25 03.3	0.0
SSPA	Standing Stone	70.30	43	P	P	17 25 02.6	-1.2
SSPA				IAmb	IAmb	17 25 04.1	
	comp=Z,78nm,1.8s						
HYB	Hyderabad	70.31	271	eP	P	17 25 03.5	-0.8
TOKA	Tokat	70.33	317	IAmb	IAmb	17 25 12.5	
	comp=Z,50nm,1.3s						
MORH	Mrgy, Hungar	70.35	332	⇑P	P	17 25 04.1	0.0
DRIO	Del Rio	70.42	66	IAmb	IAmb	17 25 05.7	
	comp=Z,48nm,0.9s						
WVT	Waverly	70.43	52	P	P	17 25 03.9	-0.8
WVT				IAmb	IAmb	17 25 05.5	
	comp=Z,40nm,1.0s						
WVT	Waverly	70.43	52	P	P	17 25 03.9	-0.8
WVT				pmax	pmax		
	comp=Z,40nm,1.0s						
BFO	Black Forest	70.54	340	P	P	17 25 03.6	-1.7
BFO	Black Forest	70.54	340	P	P	17 25 03.6	-1.7
BFO				pmax	pmax		
	comp=Z,13nm,1.1s						
BFO	Black Forest	70.54	340	eP	P	17 25 05.5	+0.2
	baz=16,slow=6.3						
LESA	Schwarzleotal	70.56	336	i P	P	17 25 05.5	0.0
	comp=Z,28nm,1.7s,SNR=7.6						
HERR	Herculane	70.62	329	⇑P	P	17 25 05.9	+0.1
HRV	Adam Dziewonsk	70.74	37	P	P	17 25 05.5	-0.9
HRV	Adam Dziewonsk	70.74	37	P	P	17 25 05.6	-0.9
HRV				pmax	pmax		
	comp=Z,92nm,1.5s						
KBA	Koelnbreinsper	70.75	336	i pP	P	17 25 07.9	+1.2
	comp=Z,50nm,1.4s,SNR=12						
SOKA	Soboth	70.76	335	i P	P	17 25 07.0	+0.2
	comp=Z,13nm,0.9s,SNR=9.2						
PERS	Pernice	70.78	334	i P	P	17 25 07.4	+0.6
S51A	Beattyville	70.81	48	IAmb	IAmb	17 25 07.0	
	comp=Z,47nm,1.3s						
UBR	Ueberruh	70.83	338	eP	P	17 25 07.4	+0.3
	comp=Z,5.5nm,0.8s,baz=16,slow=6.3						
ECH	Echery	70.86	340	IAmb	IAmb	17 25 14.9	
	comp=Z,58nm,1.7s						
WATA	Walderalm	70.87	337	i pP	P	17 25 08.0	+0.6
	comp=Z,27nm,1.3s,SNR=8.7						
RETA	Reutte	70.89	338	i P	P	17 25 07.5	+0.1
	comp=Z,7.4nm,0.9s						
WES	Weston	70.92	37	P	P	17 25 06.6	-1.0
WES	Weston	70.92	37	P	P	17 25 06.6	-1.0
WES				pmax	pmax		
	comp=Z,108nm,1.4s						

WTTA	Wattenberg	70.93	337	i pP	P	17 25 08.6	+0.8
	comp=Z,40nm,1.8s,SNR=7.9						
OBKA	Obir	71.03	335	i pP	P	17 25 09.4	+1.0
	comp=Z,32nm,0.9s,SNR=13						
SQTA	Sankt Quirin	71.06	337	i pP	P	17 25 08.9	+0.3
	comp=Z,33nm,1.4s,SNR=7.9						
HAL	Halifax	71.10	31	IAmb	IAmb	17 25 10.9	
	comp=Z,36nm,0.9s						
MYKA	Terra Mystica	71.11	336	i pP	P	17 25 09.4	+0.5
	comp=Z,34nm,1.7s,SNR=9.1						
ABTA	Abfaltersbach	71.24	336	i pP	P	17 25 10.1	+0.5
	comp=Z,23nm,1.4s,SNR=11						
Q56A	Snyder Ridge,	71.24	44	IAmb	IAmb	17 25 10.2	
	comp=Z,43nm,1.4s						
DAVA	Damuels	71.25	338	i P	P	17 25 09.9	+0.1
	comp=Z,10.0nm,1.2s						
PLAL	Pickwick Lake	71.31	53	IAmb	IAmb	17 25 10.6	
	comp=Z,37nm,1.1s						
FETA	Feichten	71.34	338	i pP	P	17 25 10.8	+0.5
	comp=Z,16nm,1.1s,SNR=9.6						
MARD	Mardin	71.37	312	IAmb	IAmb	17 25 14.2	
	comp=Z,40nm,1.2s						
LJU	Ljubljana	71.48	335	i P	P	17 25 11.1	+0.2
STAL	STALIGIAL	71.67	336	IAmb	IAmb	17 25 17.4	
	comp=Z,61nm,2.0s						
DAVOX	Davos/Dischmat	71.74	338	LR	LR	18 00 19.0	
	comp=Z,284nm,20.5s,baz=79,slow=39						
TZTN	Tazewell	71.79	49	IAmb	IAmb	17 25 13.2	
	comp=Z,34nm,1.2s						
FUORN	Ofenpass-Fuorn	71.82	338	IAmb	IAmb	17 25 16.8	
	comp=Z,105nm,2.0s						
BOJS	Bojanci	71.83	334	i P	P	17 25 13.4	+0.3
BR131	Keskin Array S	71.86	319	P	P	17 25 14.7	+1.2
	SNR=6.1						
BR131	Keskin Array S	71.86	319	d iP	P	17 25 14.1	+0.6
BRTR	Keskin Array B	71.86	319	P	P	17 25 13.9	+0.4
	comp=Z,2.4nm,0.8s,baz=20,slow=3.9,SNR=10						
BRTR				LR	LR	17 59 10.2	
	comp=Z,615nm,19.8s,baz=40,slow=38						
	comp=Z,2.4nm,0.8s						
BRTR	Keskin Array B	71.86	319	P	P	17 25 12.7	-0.8
BRTR	Keskin Array B	71.86	319	i P	P	17 25 13.8	+0.3
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
833A	Chaparral WMA,	71.93	65	IAmb	IAmb	17 25 15.6	
	comp=Z,34nm,1.3s						
BOVS	Bovan	71.97	329	⇓P	P	17 25 13.5	-0.4
SWET	Sewanee	71.99	51	IAmb	IAmb	17 25 14.3	
	comp=Z,36nm,1.0s						
ANTO	Ankara	72.02	319	P	P	17 25 14.9	+0.5
ANTO	Ankara	72.02	319	P	P	17 25 14.0	-0.4
ANTO	Ankara	72.02	319	P	P	17 25 14.0	-0.4
ANTO				pmax	pmax		
	comp=Z,29nm,1.3s						
X48A	Hartselle	72.20	52	IAmb	IAmb	17 25 15.8	
	comp=Z,34nm,1.3s						
HKT	Hockley	72.21	62	P	P	17 25 15.8	+0.3
HKT	Hockley	72.21	62	c iP	P	17 25 16.0	+0.5
HKT				pmax	pmax		
	comp=Z,28nm,1.5s						
BLA	Blacksburg	72.40	46	IAmb	IAmb	17 25 17.3	
	comp=Z,42nm,1.2s						
S57A	Dark Hollow, R	72.46	45	IAmb	IAmb	17 25 17.9	
	comp=Z,44nm,1.3s						
PSI	Prapat	72.47	245	LR	LR	17 59 02.1	
	comp=Z,422nm,18.6s,baz=8.0,slow=37						
PSI	Prapat	72.47	245	P	P	17 25 17.1	-0.3
	comp=Z,529nmcomp=Z,6.3nm,0.7s						
TKL	Tuckaleechee C	72.47	49	LR	LR	18 00 09.3	
	comp=Z,852nm,18.7s,baz=332,slow=38						
NGCH	Negor - Chabah	72.56	290	P	P	17 25 18.1	+0.3
R58B	Mineral	72.67	44	IAmb	IAmb	17 25 19.0	
	comp=Z,58nm,1.5s						
TEOL	Teolo	72.74	336	IAmb	IAmb	17 25 34.4	
	comp=Z,41nm,0.8s						
GAZ	Gaziantep	72.85	315	IAmb	IAmb	17 25 23.1	
	comp=Z,26nm,1.0s						
W52A	Murphy	72.90	50	IAmb	IAmb	17 25 20.3	
	comp=Z,29nm,1.0s						
Y49A	Blount Mountai	72.97	52	IAmb	IAmb	17 25 20.4	
	comp=Z,28nm,0.9s						
X51A	Calhoun	72.99	51	IAmb	IAmb	17 25 20.7	
	comp=Z,35nm,1.1s						
RDO	Rodhopi	73.18	325	IAmb	IAmb	17 25 29.6	
	comp=Z,45nm,1.4s						
U56A	King	73.18	47	IAmb	IAmb	17 25 22.2	
	comp=Z,81nm,1.7s						
HBVL	Hebbronville	73.33	65	IAmb	IAmb	17 25 25.1	
	comp=Z,72nm,1.3s						
BG3	Lake Jocassee	73.38	49	IAmb	IAmb	17 25 23.4	
	comp=Z,38nm,1.2s						
LRAL	Lakeview Retre	73.44	53	IAmb	IAmb	17 25 22.8	
	comp=Z,23nm,0.7s						
EDFI	Ende, Flores	73.70	219	P	P	17 25 22.9	-1.7
BALB	Balikesir	73.83	323	IAmb	IAmb	17 25 28.0	
	comp=Z,49nm,1.1s						
KMSC	Kings Mountain	73.88	48	IAmb	IAmb	17 25 26.0	
	comp=Z,39nm,1.2s						
BNI	Bardonecchia	74.00	340	IAmb	IAmb	17 25 29.7	
	comp=Z,56nm,1.6s						
V58A	Windy Hill, Pi	74.14	46	IAmb	IAmb	17 25 27.9	
	comp=Z,67nm,1.4s						
SHME	Shamm	74.39	294	P	P	17 25 27.5	-1.0
SHME				P	P	17 25 27.5	-1.0
SHME	Shamm	74.39	294	i P	P	17 25 27.6	-0.9
	SNR=5.7						
GSI	Gunungsitoli	74.42	246	P	P	17 25 26.6	-2.1
GSI	Gunungsitoli	74.42	246	P	P	17 25 28.7	0.0
	comp=Z,35nm,1.9s						
BANOM	Banah	74.42	294	P	P	17 25 28.2	-0.5
BANOM	Banah	74.42	294	i P	P	17 25 27.9	-0.8
	SNR=8.2						
BATI	Baumata	74.45	216	P	P	17 25 28.3	-0.5
	comp=Z,23nm,1.1s						
MURB	Monte Urbino	74.56	335	IAmb	IAmb	17 25 38.7	
	comp=Z,61nm,1.1s						
OSSC	Osservatorio P	74.59	336	IAmb	IAmb	17 25 32.2	
	comp=Z,48nm,1.4s						
PPI	Padang Panjang	74.64	242	P	P	17 25 29.5	-0.5
	comp=Z,785nmcomp=Z,23nm,1.4s						
MANT	Manisa	74.67	322	IAmb	IAmb	17 25 32.9	
	comp=Z,91nm,1.7s						
152A	Waverly Hall	74.70	52	IAmb	IAmb	17 25 31.8	
	comp=Z,60nm,1.7s						
NRCA	Norcia	74.84	335	IAmb	IAmb	17 25 39.1	
	comp=Z,78nm,1.2s						
MTN	Manton Dam	74.90	208	P	P	17 25 30.9	-0.5
MTN				IAmb	IAmb	17 25 33.6	
	comp=Z,49nm,0.9s						
MDH	Madha	74.95	294	P	P	17 25 30.5	-1.3
MDH				P	P	17 25 30.5	-1.3
MDH	Madha	74.95	294	i P	P	17 25 30.3	-1.5
	SNR=6.3						
MASF	Masafi	74.96	294	P	P	17 25 33.2	+1.4
	SNR=5.8						
MASF				P	P	17 25 33.2	+1.4
	SNR=5.8						
MSFE	Esma-Masafi	74.97	294	i P	P	17 25 31.1	-0.7
	SNR=7.6						
PDSI	Padang	75.01	242	P	P	17 25 30.7	-1.5
	comp=Z,31nm,1.3s						
CESX	Cesi	75.17	335	IAmb	IAmb	17 25 35.7	
	comp=Z,60nm,1.5s						
UOSS	Minazif	75.30	294	P	P	17 25 31.8	-2.0
UOSS				P	P	17 25 31.8	-2.0
UOSS	Minazif	75.30	294	P	P	17 25 32.4	-1.4
UOSS	Minazif	75.30	294	i P	P	17 25 33.5	-0.2
	SNR=6.2						
WBSI	Waikabubak, Su	75.30	220	P	P	17 25 31.1	-2.7
	comp=Z,33nm,1.3s						
HATD	Hatta, Dubai	75.43	294	P	P	17 25 35.0	+0.4
	SNR=7.4						
HATD				P	P	17 25 35.0	+0.4
	SNR=7.4						
HATD	Hatta, Dubai	75.43	294	i P	P	17 25 34.1	-0.5
	SNR=8.7						
INTR	Introdacqua	75.44	334	IAmb	IAmb	17 25 42.0	
	comp=Z,45nm,1.3s						
NAZ	Nazwa, Dubai	75.52	294	i P	P	17 25 34.2	-0.8
	SNR=5.4						
WSAR	Wadi Sarin	75.57	291	P	P	17 25 35.1	-0.2
ASHO	Ashiyiah	75.59	294	P	P	17 25 37.0	+1.5
	SNR=8.7						
ASHO				P	P	17 25 37.0	+1.5
	SNR=8.7						
ASHO	Ashiyiah	75.59	294	i P	P	17 25 34.2	-1.2
	SNR=7.7						
352A	Blakely	75.65	52	IAmb	IAmb	17 25 36.3	
	comp=Z,39nm,0.9s						
SOHO	SOHO	75.83	293	i P	P	17 25 35.4	-1.3
	SNR=6.2						
HOQ	Hoqain	75.92	292	P	P	17 25 39.0	+1.6
	SNR=6.8						
HOQ				P	P	17 25 39.0	+1.6
	SNR=6.8						
ASUD	Al Ashush, Dub	75.98	294	P	P	17 25 36.8	-0.8
SISI	Saibi	76.01	243	P	P	17 25 37.1	-0.8
	comp=Z,62nm,2.0s						
MASI	Maura Aman, Be	76.18	239	P	P	17 25 37.6	-1.3
	comp=Z,54nm,1.1s						
ALNE	Al Ain	76.27	294	P	P	17 25 39.2	-0.1
	SNR=9.5						
ALNE	Al Ain	76.27	294	i P	P	17 25 38.7	-0.7
	SNR=8.1						
ARQ	Araqi	76.51	293	P	P	17 25 41.0	+0.3
	SNR=6.6						
ARQ				P	P	17 25 41.0	+0.3
	SNR=6.6						
MDSI	Maura Dua	76.52	237	P	P	17 25 39.0	-1.7
JMDO	Jabal Madar	76.56	291	P	P	17 25 42.0	+0.9
	SNR=5.1						
BSY	Bisya	76.68	292	P	P	17 25 44.0	+2.2
	SNR=7.1						
BSY				P	P	17 25 44.0	+2.2
	SNR=7.1						
SHMA	Al-Shehemyia	76.97	298	P	P	17 25 43.1	-0.1
MMAI	Mount Meron Ar	77.22	314	LR	LR	18 05 46.2	
	comp=Z,772nm,18.6s,baz=14,slow=40						
ASF	Jabal al Asfar	77.40	313	LR	LR	18 06 24.0	
	comp=Z,974nm,19.3s,baz=21,slow=41						
MZWR	Madinat Zayed	77.41	295	P	P	17 25 43.8	-1.9
MZWR				P	P	17 25 43.8	-1.9
TIP	Timpagrande	77.44	331	IAmb	IAmb	17 25 47.9	
	comp=Z,61nm,1.4s						
UMZA	Um Al Zommool	77.69	293	P	P	17 25 46.0	-1.3
UMZA				P	P	17 25 46.0	-1.3
GHWR	Ruwais	77.70	296	P	P	17 25 45.6	-1.8
PALK	Pallekele	77.73	264	LR	LR	18 06 13.2	
	comp=Z,672nm,18.4s,baz=24,slow=40						
PALK	Pallekele	77.73	264	P	P	17 25 47.9	+0.2
MHTO	MHTO	77.80	290	P	P	17 25 47.4	-0.6
	SNR=5.1						
MHTO				P	P	17 25 47.4	-0.6
	SNR=5.1						
TRNA	Turayna	77.82	298	P	P	17 25 45.5	-2.5
SMRA	Abu-Samra	77.99	298	P	P	17 25 47.9	-1.1
SLWR	Sila	78.17	297	P	P	17 25 49.2	-0.7
SLWR				P	P	17 25 49.2	-0.7
KNRA	Kununurra	78.22	210	IAmb	IAmb	17 25 51.2	
	comp=Z,37nm,0.9s						
MZR	Muzera	78.24	295	P	P	17 25 51.4	+0.9
	SNR=5.2						
MZR	Muzera	78.24	295	i P	P	17 25 49.9	-0.5
	SNR=7.0						
IDI	Anoyia	78.77	323	LR	LR	18 03 57.2	
	comp=Z,516nm,19.8s,baz=25,slow=38						
PGAV	Gavieira, Arco	79.04	350	eP	P	17 25 54.8	+0.2
CTA	Charters Tower	79.29	192	LR	LR	17 56 53.4	
	comp=Z,68nm,21.8s,baz=24,slow=33						
CTAO	Charters Tower	79.29	192	P	P	17 25 55.4	-0.5
CTAO	Charters Tower	79.29	192	P	P	17 25 55.4	-0.5
CTAO				pmax	pmax		
	comp=Z,21nm,0.9s						
POLO	Lamas de Olo	79.58	350	eP	P	17 25 57.1	-0.5
VAE	Valguarnera	79.63	332	LR	LR	18 06 23.3	
	comp=Z,1µm,18.6s,baz=352,slow=40						
PVRL	Vila Real	79.67	350	eP	P	17 25 58.8	+0.7
PVIS	Viseu	80.25	350	eP	P	17 26 01.4	+0.2
EIL	Elat	80.38	313	LR	LR	18 08 08.1	
	comp=Z,921nm,18.1s,baz=17,slow=40						
MTE	Manteigas	80.53	350	eP	P	17 26 02.9	+0.2
MTE				i IAmb	IAmb	17 26 06.8	
	comp=Z,47nm,2.0s						
DZM	Mont Dzumac	80.80	173	P	P	17 26 05.2	+1.0
	comp=Z,15nm,0.9s,baz=347,slow=4.4,SNR=5.5						
	comp=Z,15nm,0.9s						
DZM	Mont Dzumac	80.80	173	eSS	SS	17 41 21.4	-4.4
	comp=Z,108nm,25.8s						
DZM				eLQ	LQ	17 47 51.2	
	comp=Z,565nm,28.1s						
DZM				eLR	LR	17 51 25.6	
	comp=Z,547nm,29.9s						
ESDC	Sonseca Array	80.86	347	P	P	17 26 04.5	+0.1
	comp=Z,7.8nm,0.8s,baz=3.6,slow=5.2,SNR=36						
	comp=Z,7.8nm,0.8s						
ESDC	Sonseca Array	80.86	347	P	P	17 26 02.9	-1.6
PCAS	Casmilo, Conde	80.96	350	eP	P	17 26 05.3	+0.3
WR8	Warramunga Arr	81.02	203	IAmb	IAmb	17 26 06.3	
	comp=Z,100nm,1.9s						
WRAB	Tennant Creek	81.03	203	d eP	P	17 26 05.4	+0.1
WRAB				pmax	pmax		
	comp=Z,18nm,0.9s						
PAB	San Pablo	81.03	347	P	P	17 26 04.7	-0.7
PAB	San Pablo	81.03	347	P	P	17 26 04.7	-0.7
PAB				pmax	pmax		
	comp=Z,26nm,1.5s						
WRA	Warramunga Arr	81.04	203	P	P	17 26 04.7	-0.7
	comp=Z,14nm,0.8s,baz=18,slow=5.6,SNR=24						
	comp=Z,14nm,0.8s						
WRA	Warramunga Arr	81.04	203	P	P	17 26 04.2	-1.2
WRA	Warramunga Arr	81.04	203	i P	P	17 26 05.4	0.0
WRA				pmax	pmax		
	comp=Z,14nm,0.9s						
PCBR	Castelo Branco	81.07	349	eP	P	17 26 05.7	+0.1
PCBR				i IAmb	IAmb	17 26 09.7	
	comp=Z,42nm,1.7s						
RAYN	Ar Rayn	81.45	302	P	P	17 26 06.9	-0.9
RAYN	Ar Rayn	81.45	302	P	P	17 26 06.6	-1.2
RAYN	Ar Rayn	81.45	302	i P	P	17 26 07.5	-0.4
	SNR=5.6						
RAYN	Ar Rayn	81.45	302	P	P	17 26 06.6	-1.2
RAYN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PMTG	Montargil	81.91	350	eP	P	17 26 11.2	+1.3
PMTG				i IAmb	IAmb	17 26 33.6	
	comp=Z,32nm,1.6s						
PESTR	Estremoz	82.05	349	eP	P	17 26 10.7	-0.1
EVO	Evora	82.42	350	eP	P	17 26 13.0	+0.3
EVO				i IAmb	IAmb	17 26 15.8	
	comp=Z,44nm,1.7s						
MOE	Montemor	82.46	350	eP	P	17 26 12.8	-0.1
KEST	Kesra	82.47	335	P	P	17 26 13.9	+0.8
	comp=Z,11nm,0.9s,baz=334,slow=4.7,SNR=8.2						
KEST				LR	LR	18 09 05.0	
	comp=Z,682nm,18.7s,baz=9.7,slow=40						
	comp=Z,11nm,0.9s						
KEST	Kesra	82.47	335	P	P	17 26 13.8	+0.8
KEST				P	P	17 26 13.8	+0.8
KEST	Kesra	82.47	335	IAmb	IAmb	17 26 33.4	
	comp=Z,32nm,1.2s						
PBAR	Barrancos	82.68	349	eP	P	17 26 14.2	+0.2
PBAR				i IAmb	IAmb	17 26 18.0	
	comp=Z,24nm,2.3s						
TAOE	Nuku Hiva Isla	83.13	120	eLR	LR	17 52 19.5	
	comp=Z,1µm,23.0s						
ABTO	Aybut	83.17	292	P	P	17 26 14.3	-2.6
ABTO				P	P	17 26 14.3	-2.6
PCVE	Castro Verde	83.32	350	eP	P	17 26 20.1	+2.7
PVAQ	Vaqueiros	83.51	349	eP	P	17 26 20.7	+2.4
CMIG	Matias Romero	83.64	68	LR	LR	18 03 17.1	
	comp=Z,299nm,21.4s,baz=342,slow=36						
PBDV	Barranco-do-Ve	83.69	349	eP	P	17 26 20.0	+0.7
ASAR	Alice Springs	84.74	203	P	P	17 26 24.1	-0.4
	comp=Z,8.4nm,0.8s,baz=8.3,slow=5.0,SNR=64						
ASAR				LR	LR	18 02 45.9	
	comp=Z,47nm,21.0s,baz=354,slow=35						
	comp=Z,8.4nm,0.8s						
ASAR	Alice Springs	84.74	203	P	P	17 26 23.5	-1.0
ASAR	Alice Springs	84.74	203	P	P	17 26 23.5	-1.0
MBWA	Marble Bar	85.98	216	P	P	17 26 29.7	-1.0
MBWA				IAmb	IAmb	17 26 30.8	
	comp=Z,23nm,1.1s						
PSA00	Pilbara Seismi	86.33	216	P	P	17 26 30.9	-1.5
PSA00	Pilbara Seismi	86.33	216	IAmb	IAmb	17 26 31.9	
	comp=Z,32nm,1.2s						
RAR	Rarotonga	86.68	142	LR	LR	17 57 18.9	
	comp=Z,166nm,21.9s,baz=311,slow=30						
PPT	Papeete	86.95	132	LR	LR	17 56 14.7	
	comp=Z,242nm,21.5s,baz=318,slow=29						
PPT2	Papeete2	86.97	132	eS	S	17 37 09.7	-4.0
	comp=Z,89nm,23.2s						
PPT2	Papeete2	86.97	132	eLR	LR	17 54 05.6	
	comp=Z,734nm,33.8s						
PPT2				eLR	LR	17 54 12.8	
	comp=Z,1µm,31.8s						
INKA	Innaminka	87.53	196	IAmb	IAmb	17 26 41.2	
	comp=Z,20nm,1.1s						
MD01	Midelt array s	87.67	346	P	P	17 26 38.2	-1.1
MDT	Midelt	87.71	346	LR	LR	18 11 09.0	
	comp=Z,179nm,18.2s,baz=30,slow=39						
ARMA	Armidale	89.09	186	IAmb	IAmb	17 26 48.1	
	comp=Z,26nm,1.1s						
CHIV	Chivirico	89.33	51	IAmb	IAmb	17 26 48.8	
	comp=Z,22nm,1.2s						
SIUN	Universidad Ur	91.31	61	IAmb	IAmb	17 26 58.2	
	comp=Z,14nm,1.1s						
STKA	Stephens Creek	91.49	195	P	P	17 26 56.4	-0.2
	comp=Z,9.4nm,0.8s,baz=341,slow=7.4,SNR=16						
STKA				LR	LR	18 10 14.9	
	comp=Z,125nm,19.0s,baz=16,slow=37						
	comp=Z,9.4nm,0.8s						
STKA	Stephens Creek	91.49	195	P	P	17 26 56.0	-0.6
STKA	Stephens Creek	91.49	195	P	P	17 26 56.0	-0.6
STKA				pmax	pmax		
	comp=Z,104nm,1.2s						
TBI	Tubuai	92.25	134	eP	P	17 26 47.2	-13
	comp=Z,670nm,36.5s						
TBI	Tubuai	92.25	134	eS	S	17 38 01.7	-0.8
	comp=Z,1µm,35.2s						
TBI				eSS	SS	17 44 12.5	-0.9
	comp=Z,1µm,28.0s						
TBI				eLQ	LQ	17 52 06.4	
	comp=Z,1µm,40.5s						
TBI				eLR	LR	17 56 27.6	
	comp=Z,2µm,32.0s						
ATD	Arta Tunnel	93.15	298	LR	LR	18 14 14.9	
	comp=Z,52nm,18.0s,baz=3.5,slow=39						
JTS	Las Juntas de	94.24	62	LR	LR	18 15 46.6	
	comp=Z,138nm,18.2s,baz=328,slow=40						
SJG	San Juan	94.92	43	LR	LR	18 14 52.0	
	comp=Z,160nm,19.2s,baz=309,slow=39						
FURI	Furi	97.36	301	LR	LR	18 18 08.5	
	comp=Z,692nm,18.4s,baz=15,slow=40						
URZ	Urewera	97.88	166	LR	LR	18 05 15.5	
	comp=Z,139nm,21.9s,baz=15,slow=32						
RKT	Rikitea	97.99	122	eLR	LR	17 59 11.0	
	comp=Z,2µm,22.0s						
TORD	Torodi Ar. Bea	105.95	337	PKiKP	PKiKP	17 32 15.8	+1.2
	comp=Z,0.9nm,0.9s,baz=22,slow=2.9,SNR=4.3						
LPAZ	La Paz	125.34	60	PKP	PKiKP	17 32 52.3	-0.2
	comp=Z,2.4nm,0.9s,baz=19,slow=6.8,SNR=8.3						
LPAZ	La Paz	125.34	60		PKPdf	17 32 51.8	-0.4
LPAZ	La Paz	125.34	60	PKIKP	PKPdf	17 32 51.8	-0.4
VILB	Vilhena	125.72	49	eP	PKPdf	17 32 51.7	-0.5
PTLB	Pontes e Lacer	128.40	49	eP	PKiKP	17 32 57.6	-0.3
SALV	Santo Antonio	130.14	46	eP	PKPdf	17 33 00.5	-0.1
BDFB	Brasilia	132.52	36	PKP	PKPdf	17 33 05.6	+0.4
	comp=Z,3.7nm,0.9s,baz=143,slow=2.8,SNR=4.2						
VNDA	Vanda	136.07	179	PKP	PKPdf	17 33 10.6	+0.7
	comp=Z,0.6nm,0.3s,baz=85,slow=0.8,SNR=6.2						
VNDA	Vanda	136.07	179		PKPpre	17 33 00.8	
VNDA				PKPdf	PKPdf	17 33 10.4	+0.5
VNDA	Vanda	136.07	179	PKHKP	PKPpre	17 33 00.8	
VNDA						17 33 10.4	
AMBA	Amambai (Brazi	136.79	49	eP	PKPdf	17 33 13.0	0.0
CPUP	Villa Florida	138.88	54	PKP	PKPdf	17 33 16.8	+0.2
	comp=Z,3.7nm,0.9s,baz=11,slow=5.6,SNR=7.2						
MAW	Mawson	144.07	220	PKP	PKPbc	17 33 22.7	0.0
	comp=Z,24nm,1.0s,baz=70,slow=3.4,SNR=23						
CPSB	Cacapava Do Su	144.07	52	eP	PKPbc	17 33 24.1	+0.2
PLCA	Paso Flores	144.28	82	PKP	PKPbc	17 33 24.4	0.0
	comp=Z,7.7nm,0.8s,baz=320,slow=3.9,SNR=16						
PLCA	Paso Flores	144.28	82		PKPbc	17 33 24.6	+0.3
PLCA	Paso Flores	144.28	82	eP	PKPbc	17 33 24.4	0.0
LL02	Futaleuf	145.38	86		PKPdf	17 33 27.7	0.0
TRQA	Tornquist	146.58	70		PKPdf	17 33 30.1	+0.1
TRQA	Tornquist	146.58	70	PKP2	PKPdf	17 33 30.1	+0.1
SYO	Syowa Base	152.67	223	⇓iPKPbc	PKiKP	17 33 46.1	+0.3
SYO	Syowa Base	152.67	223	⇓epPKiKP	PKPab	17 33 52.2	-4.3
ELIB	Princess Elisa	158.00	216	dPKPdf	PKPdf	17 33 44.8	-1.1
ELIB				dPKP	PKPab	17 34 18.9	-0.6
NVL	N'lazarevskaya	161.88	215	ePKIKP	PKPdf	17 33 49.2	-0.9
NVL				e		17 38 17.9	
NVL				ePPP	PPP	17 42 05.6	
NVL				eSS	SS	17 58 39.1	+0.5
NVL				eSSS	SSS	18 04 54.2	
NVL				pmax	pmax		
	comp=Z,16nm,1.1s						
TROLL	Troll, Antarti	163.70	206	⇑P	PKPab	17 34 44.1	-0.3
	comp=Z,338nm,0.8s						

MEX ***26*** *17:15:27.8±0.5, 13°.69N×93°.10W, h10^{km}, MD4.1*
GCG ***26*** *17:15:29.7±1.0, 13°.96N×92°.73W, h0^{km}±66^{km}, ML3.2*
ISC 26 17:15:24.4±2.7**, 13°.57N**±0°.09×**93°.05W**±0°.04**, h32**^{km}±23^{km}**,**
n16, σ2^{s}.50/29**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	Retalhuleu	1.62	54	i P	Pn	17 15 52.8	+2.0
RTAL				i S	Sb	17 16 12.0	-1.9
PATR	El Naranjo	1.73	27	eP	Pn	17 15 53.0	+0.5
PATR				eS	Sn	17 16 13.6	0.0
CHUJ	Union Juarez	1.77	31	eP	Pn	17 15 54.1	+1.1
CHUJ				eS	Sn	17 16 14.2	-0.4
PAVE	Pavencul	1.83	28	i P	Pn	17 15 55.4	+1.6
PAVE				i S	Sn	17 16 16.5	+0.6
STG5	El Palmar, Qui	1.85	63	eP	Pn	17 15 54.7	+0.7
STG5				eS	Sn	17 16 13.2	-3.2
STG8	El Palmar, Qui	1.87	62	eP	Pn	17 15 55.4	+1.0
STG8				eS	Sn	17 16 16.8	-0.2
STG8				IAML		17 16 19.1	
	comp=N,361nm,0.2s						
PCIG		2.13	356	eP	Pn	17 15 58.6	+0.8
PCIG				eS	Sn	17 16 21.0	-2.1
FG16	Alotenango, Sa	2.56	74	eP	Pn	17 16 03.7	-0.2
CCIG	Comitan	2.84	18	eP	Pn	17 16 10.0	+2.3
CCIG				eS	Sn	17 16 39.8	-1.1
TGIG		3.19	359	eP	Pn	17 16 13.4	+1.0
TGIG				i S	Sn	17 16 49.7	+0.2
NUBE	Las Nubes	3.20	84	eP	Pn	17 16 17.0	+4.5
HUIG	Huatulco	3.68	307	i P	Pn	17 16 21.0	+1.9
HUIG				eS	Sn	17 16 57.1	-4.3
CMIG	Matias Romero	3.93	333	eP	Pn	17 16 24.6	+2.1
CMIG				eS	Sn	17 17 07.9	+0.4
NEUV	Arroyo Zacate	4.90	328	eP	Pn	17 16 38.6	+2.8
NEUV				eS	Sn	17 17 27.6	-4.0
PNIG	Pinotepa	5.65	300	eP	Pn	17 16 49.6	+3.4
PNIG				eS	Sn	17 17 45.4	-4.7
CRIG	Cruz Grande	6.66	299	i P	Pn	17 17 04.0	+4.0

BJI ***26*** *17:21:39.7, 58°.71N×158°.91E, h10^{km}, mB5.2/6, mb4.7/47, Ms5.1/7, Ms7 4.9/8*
KRSC ***26*** *17:21:40.2±1.1, 58°.86N×158°.86E, h47^{km}±17^{km}, Ml5.1*
IDC ***26*** *17:21:40.2±0.5, 58°.76N×158°.91E, h0^{km}, mb4.5/31, mbtmp4.4/35, ML3.2/3, Error ellipse: s-maj=12.1km s-min=9.8km az=148.0*
MOS ***26*** *17:21:42.6±0.9, 58°.83N×158°.94E, h43^{km}, mb5.0/43, Error ellipse: s-maj=12.3km s-min=3.9km az=92.4*
NERS ***26*** *17:21:42.2, 58°.80N×158°.46E, h2^{km}*
NEIC ***26*** *17:21:42.6±1.5, 58°.80N±0°.07×158°.9E±0°.2, h16^{km}±4^{km}, mb4.9/279, Error ellipse: s-maj=12.3km s-min=10.6km az=84.0*
BGR ***26*** *17:21:49.4, 60°.15N×164°.63E, h33^{km}, mb4.5*
ISC 26 17:21:41.6±0.3**, 58°.79N**±0°.03×**158°.88E**±0°.02**, h10**^{km}**, n649,**
σ1^{s}.19/570**, mb4.8**/208**, MS5.1**/4**, 18C-11D, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALN	Palana	0.64	61	PN	Pg	17 21 53.1	-0.8
PALN				S	Sg	17 22 03.2	+0.9
PALN	Palana	0.64	61	eP	Pg	17 21 53.2	-0.8
PALN				eS	Sg	17 22 03.2	+0.9
OSSR	Ossora	2.21	76	PN	Pn	17 22 17.4	-0.9
OSSR				S	Sn	17 22 45.0	-0.6
OSSR	Ossora	2.21	76	eP	Pn	17 22 17.5	-0.9
OSSR				eS	Sn	17 22 45.0	-0.6
SRDR	Sredinnyy	2.52	169	PN	Pn	17 22 21.8	-0.8
SRDR				S	Sn	17 22 53.3	0.0
SRDR	Sredinnyy	2.52	169	eP	Pn	17 22 21.8	-0.8
SRDR				eS	Sn	17 22 53.4	0.0
SMKR	Semkarok	2.61	147	PN	Pn	17 22 23.7	-0.2
SMKR	Semkarok	2.61	147	eP	Pn	17 22 23.8	-0.2

KLY	Klyuchi	2.66	158	PN	Pn	17 22 25.6	+1.2
KLY	Klyuchi	2.66	158	*e*P	Pn	17 22 25.6	+1.2
KOZ	Kozyrevsk	2.79	168	PN	Pn	17 22 26.2	-0.1
KOZ	Kozyrevsk	2.79	168	*e*P	Pn	17 22 26.2	-0.1
CIRR	Tsirk	2.86	159	PN	Pn	17 22 28.6	+1.2
CIRR	Tsirk	2.86	159	*e*P	Pn	17 22 28.6	+1.2
ESO	Esso	2.87	182	PN	Pn	17 22 26.7	-0.7
ESO	Esso	2.87	182	*e*P	Pn	17 22 26.7	-0.7
KIRR	Kirishev	2.95	164	PN	Pn	17 22 27.6	-1.0
KIRR	Kirishev	2.95	164	*e*P	Pn	17 22 27.6	-1.0
BZWR	Bezymyannyi-We	2.96	162	PN	Pn	17 22 28.1	-0.7
BZWR	Bezymyannyi-We	2.96	162	*e*P	Pn	17 22 28.2	-0.7
BZGR	Bezymyannyi-Gr	3.02	160	PN	Pn	17 22 30.1	+0.6
BZGR	Bezymyannyi-Gr	3.02	160	*e*P	Pn	17 22 30.2	+0.6
BZP	Bezymyannyi-Pe	3.02	162	PN	Pn	17 22 29.5	-0.1
BZP	Bezymyannyi-Pe	3.02	162	*e*P	Pn	17 22 29.5	-0.1
KMNR	Kamenistaya	3.13	166	PN	Pn	17 22 31.1	+0.1
KMNR	Kamenistaya	3.13	166	*e*P	Pn	17 22 31.1	+0.1
KBTR	Krutoberegovo	3.35	139	PN	Pn	17 22 35.1	+1.2
KBTR	Krutoberegovo	3.35	139	*e*P	Pn	17 22 35.2	+1.2
KZV	Kizimen	3.76	168	PN	Pn	17 22 40.4	+0.6
KZV	Kizimen	3.76	168	*e*P	Pn	17 22 40.4	+0.6
GADL	Gadlja	3.98	286	*e*P	Pn	17 22 42.9	+0.2
GADL				*e*Pg	Pb	17 22 52.0	+0.2
GADL				Pgmax		17 22 58.5	
	570nm,1.0s						
GADL				*e*Sg	Sb	17 23 43.0	+3.0
GADL				Sgmax		17 23 53.6	
	2µm,0.4s						
GADL				Sgmax		17 23 53.6	
	2µm,0.4s						
GADL	Gadlja	3.98	286	*e*PN	Pn	17 22 42.9	+0.2
TLAR	Talaya	4.02	309	*e*P	Pn	17 22 43.3	+0.1
TLAR				*e*Pg	Pb	17 22 55.5	+3.1
TLAR				Pgmax		17 23 02.0	
	370nm,0.8s						
TLAR				*e*S	Sn	17 23 30.3	0.0
TLAR				*e*Sg	Sb	17 23 45.3	+4.3
TLAR				Sgmax		17 24 04.3	
	3µm,0.6s						
TLAR				Sgmax		17 24 04.3	
	2µm,0.7s						
TLAR	Talaya	4.02	309	*e*PN	Pn	17 22 43.3	+0.1
TLAR				*e*S	Sn	17 23 30.3	0.0
TILK	Tilichiki	4.05	63	PN	Pn	17 22 42.0	-1.5
TILK	Tilichiki	4.05	63	*e*P	Pn	17 22 42.0	-1.5
MA2	Magadan	4.25	284	Pn	Pn	17 22 47.4	+1.1
	82nm,0.8s,baz=104,slow=13,SNR=14						
MA2				Lg	Lg	17 23 52.2	
	64nm,0.3s,baz=333,slow=22,SNR=8.9						
MA2	Magadan	4.25	284	Pn	Pn	17 22 47.2	+0.9
MA2	Magadan	4.25	284	*e*P	Pn	17 22 47.0	+0.7
MA2				*e*Pg	Pb	17 22 56.5	+0.2
MA2				Pgmax		17 23 04.7	
	290nm,0.6s						
MA2				*e*Sg	Sb	17 23 51.0	+3.4
MA2				Sgmax		17 24 09.0	
	1µm,0.7s						
MA2				Sgmax		17 24 09.0	
	1µm,1.1s						
MA2	Magadan	4.25	284	*e*PN	Pn	17 22 47.0	+0.7
MGD	Magadan 1	4.35	290	*e*P	Pn	17 22 47.3	-0.4
MGD				Pmax		17 22 49.0	
	100nm,0.4s						
MGD				*e*Sg	Sb	17 23 54.2	+3.6
MGD				Sgmax		17 24 07.8	
	1µm,0.8s						
MGD				Sgmax		17 24 07.8	
	990nm,0.5s						
MGD	Magadan 1	4.35	290	*e*PN	Pn	17 22 47.3	-0.4
KII	Karymskiy	4.77	176	PN	Pn	17 22 53.8	+0.2
KII	Karymskiy	4.77	176	*e*P	Pn	17 22 53.9	+0.2
KMSK	Kamenskaya	5.16	41	PN	Pn	17 22 58.6	-0.2
KMSK	Kamenskaya	5.16	41	*e*P	Pn	17 22 58.6	-0.2
SEY	Seymchan	5.23	325	Pn	Pn	17 23 00.2	+0.4
	1.0nm,0.3s,baz=166,slow=19,SNR=1.3						
SEY				Lg	Lg	17 24 24.5	
	35nm,0.3s,baz=54,slow=23,SNR=5.6						
	22nm,0.9s						
SEY	Seymchan	5.23	325	*e*Pg	Pb	17 23 17.5	+4.4
SEY				Pgmax		17 23 22.9	
	50nm,0.6s						
SEY				*e*Sg	Sg	17 24 26.9	-2.5
SEY				Sgmax		17 24 44.2	
	630nm,0.7s						
SEY				Sgmax		17 24 44.2	
	190nm,0.6s						
SEY	Seymchan	5.23	325	⇑*e*PN	Pn	17 22 59.2	-0.6
SEY				pmax	pmax		
	comp=Z,24nm,1.1s						
TLON	Talon	5.33	285	*e*P	Pb	17 23 13.8	-1.0
TLON				*e*Sg	Sb	17 24 26.5	+7.7
TLON				Sgmax		17 24 43.9	
	comp=Z,3µm,0.8s						
TLON				Sgmax		17 24 43.9	
	comp=Z,2µm,0.7s						
KRX	Arik	5.44	181	PN	Pn	17 23 03.4	+0.6
KRX	Arik	5.44	181	*e*P	Pn	17 23 03.5	+0.6
KRER	Koryakskii	5.50	181	PN	Pn	17 23 04.9	+1.3
KRER	Koryakskii	5.50	181	*e*P	Pn	17 23 05.0	+1.3
KOK	Koryaka	5.51	182	PN	Pn	17 23 05.9	+2.2
KOK	Koryaka	5.51	182	*e*P	Pn	17 23 06.0	+2.2
SDLR	Sedlovina	5.52	180	PN	Pn	17 23 05.3	+1.4
SDLR	Sedlovina	5.52	180	*e*P	Pn	17 23 05.4	+1.4
AVH	Avacha	5.54	181	PN	Pn	17 23 05.9	+1.9
AVH	Avacha	5.54	181	*e*P	Pn	17 23 06.0	+1.9
SMAR	Somma	5.54	180	PN	Pn	17 23 04.6	+0.4
SMAR	Somma	5.54	180	*e*P	Pn	17 23 04.7	+0.4
PEA0B	Petropavlovsk-	5.73	187		Pn	17 23 06.9	+0.2
PEA0B	Petropavlovsk-	5.73	187	⇑*e*PN	Pn	17 23 06.5	-0.2
PETK	Petropavlovsk-	5.73	187	Pn	Pn	17 23 07.4	+0.7
	comp=Z,4.0nm,0.3s,baz=46,slow=15,SNR=62						
	comp=Z,9.3nm,0.5s						
PETK	Petropavlovsk-	5.73	187		Pn	17 23 07.3	+0.6
PETK	Petropavlovsk-	5.73	187	PN	Pn	17 23 07.3	+0.6
PET	Petropavlovsk	5.78	181	Pn	Pn	17 23 08.5	+1.2
PET	Petropavlovsk	5.78	181	*e*PN	Pn	17 23 08.0	+0.7
PET	Petropavlovsk	5.78	181	Pn	Pn	17 23 13.8	+6.5
	comp=Z,0.6nmcomp=Z,129nm,1.1s						
APC	Apacha	5.96	190	PN	Pn	17 23 11.2	+1.5
APC	Apacha	5.96	190	*e*P	Pn	17 23 11.2	+1.5
GRL	Gorelyy	6.27	185	PN	Pn	17 23 15.3	+1.2
GRL	Gorelyy	6.27	185	*e*P	Pn	17 23 15.3	+1.2
ASAK	Asacha	6.44	185	PN	Pn	17 23 16.8	+0.3
ASAK	Asacha	6.44	185	*e*P	Pn	17 23 16.8	+0.3
SUUS	Susuman	6.59	312	*e*P	Pn	17 23 20.4	+1.9
SUUS				*e*Pg	Pg	17 23 44.5	-3.3
SUUS				*e*Sg	Sg	17 25 07.7	-5.4
SUUS				Sgmax		17 25 24.7	
	comp=Z,830nm,0.8s						
SUUS				Sgmax		17 25 24.7	
	comp=Z,560nm,0.8s						
SUUS	Susuman	6.59	312	*e*PN	Pn	17 23 20.4	+1.9
BILL	Bilibino	9.85	16	*e*Sg		17 27 00.1	
BILL				Sgmax		17 27 30.0	
	comp=Z,50nm,1.1s						
BILL				Sgmax		17 27 30.0	
	comp=Z,80nm,1.1s						
YAK	Yakutsk	14.72	295	Pn	P	17 25 16.1	+0.4
	comp=Z,1.5nm,0.3s,baz=112,slow=0.7,SNR=5.1						
YAK	Yakutsk	14.72	295	P	P	17 25 15.2	-0.5
YAK	Yakutsk	14.72	295	*e*P	Pn	17 25 07.6	-2.0
YAK				*e*S	Sn	17 27 51.9	-0.6
YAK				pmax	pmax		
	comp=Z,22nm,1.3s						
YAK				smax	smax		
	comp=E,2µm,5.6s						
YAK				smax	smax		
	comp=N,2µm,5.2s						
YAK				MLR	MLR		
	comp=Z,547nm,15.0s						
YAK				MLR	MLR		
	comp=N,441nm,17.0s						
YAK				MLR	MLR		
	comp=E,214nm,19.0s						
GAMB	Gambell	14.90	58	P	Pn	17 25 11.3	-0.8
	baz=264						
GRNR	Gornyy	15.18	248	⇓*i*P	P	17 25 23.2	+2.2
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YSS	Yuzhno-Sakhali	15.28	226	*e*P	Pn	17 25 19.5	+2.3
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SPIA	Saint Paul Isl	16.38	82	P	Pn	17 25 30.5	-0.8
	baz=289						
TNA	Tin City	16.74	52	P	Pn	17 25 34.7	-1.2
	baz=262						
F14K	Arctic Creek	17.39	53	P	Pn	17 25 42.9	-1.1
	baz=264						
M11K	Mekoryuk	17.63	70	P	Pn	17 25 45.8	-1.1
	baz=280						
TIXI	Tiksi	17.72	329	P	P	17 25 50.4	+1.6
	comp=Z,12nm,0.8s,baz=121,slow=7.6,SNR=9.1						
TIXI	Tiksi	17.72	329	IAmb	IAmb	17 25 52.2	
	comp=Z,89nm,1.6s						
TIXI	Tiksi	17.72	329	P	P	17 25 50.4	+1.6
TIXI				pmax	pmax		
	comp=Z,89nm,1.7s						
ANM	Nome	17.73	56	P	Pn	17 25 47.2	-1.0
	baz=268						
JKA	Kamikawa-asahi	17.77	221	P	Pn	17 25 50.1	+1.2
JKA	Kamikawa-asahi	17.77	221	IAmb	IAmb	17 25 54.1	
	comp=Z,49nm,1.5s						
ASAJ	Asahikawa	17.78	221	P	Pn	17 25 50.1	+1.2
	comp=Z,0.1nm,0.3s,baz=293,slow=12,SNR=3.6						
	comp=Z,7.2nm,1.0s						
F15K	North Star Dit	18.11	52	P	Pn	17 25 52.0	-0.9
	baz=265						
K13K	Kusilvak Mount	18.15	64	P	Pn	17 25 52.9	-0.5
	baz=276						
C16K	Lisburne Hills	18.26	44	P	Pn	17 25 54.2	-0.6
	baz=256						
G15K	Niukluk	18.32	55	P	Pn	17 25 54.6	-0.8
	baz=268						
J14K	Nanvaranak Lak	18.58	62	P	P	17 25 57.4	-1.0
	baz=275						
NIKH	Nikolski High	18.88	94	P	P	17 26 01.1	-0.7
	baz=301						
D17K	Noatak River	18.98	46	P	P	17 26 02.0	-0.8
	baz=261						
G16K	Koyuk River	19.04	53	P	P	17 26 02.8	-0.7
	baz=268						
C17K	DeLong Mountai	19.09	44	P	P	17 26 03.7	-0.4
	baz=258						
RDOG	Red Dog Mine	19.11	45	P	P	17 26 04.0	-0.2
	baz=260						
L14K	Kuka Creek	19.16	66	P	P	17 26 05.1	+0.4
	baz=280						
E17K	Hotham Inlet	19.38	48	P	P	17 26 08.1	+0.9
	baz=264						
F17K	Baldwin Pennin	19.55	50	P	P	17 26 10.3	+1.3
	baz=266						
K15K	Wolf Creek Mou	19.56	63	P	P	17 26 10.4	+1.2
	baz=278						
M14K	Bethel	19.62	67	P	P	17 26 11.0	+1.3
	baz=282						
UNV	Unalaska Valle	19.67	89	P	Pn	17 26 12.1	+0.2
	baz=299						
L15K	Ungalak Mounta	19.67	65	P	Pn	17 26 12.0	+0.2
	baz=279						
G17K	Kiwalik Mounta	19.76	53	P	P	17 26 12.6	+1.3
	baz=269						
I17K	Unalakleet	19.78	58	P	Pn	17 26 13.0	0.0
	baz=274						
C18K	Utukok River	19.84	44	P	Pn	17 26 13.8	-0.1
	baz=260						
J16K	Anvik River	19.87	60	P	Pn	17 26 14.2	+0.1
	baz=276						
N14K	Kuskokwak Cree	19.93	70	P	Pn	17 26 15.0	+0.2
	baz=284						
HEH	HeiHe	20.00	259	*e*P	P	17 26 14.3	+0.3
HEH				pmax	pmax		
	comp=Z,38nm,0.8s						
H17K	Granite Mounta	20.07	55	P	Pn	17 26 16.6	+0.1
	baz=272						
F18K	Selawik	20.20	50	P	Pn	17 26 17.9	-0.1
	baz=267						
A19K	Wainwright	20.21	39	P	Pn	17 26 18.0	-0.1
	baz=256						
M15K	Kasigluk River	20.24	67	P	Pn	17 26 18.5	0.0
	baz=282						
O14K	Tigyukauivet M	20.31	72	P	P	17 26 15.9	-1.4
O14K				IAmb	IAmb	17 26 22.6	
	comp=Z,82nm,1.2s						
O14K	Tigyukauivet M	20.31	72	P	Pn	17 26 19.2	-0.2
	baz=286						
C19K	Lookout Ridge	20.49	43	P	P	17 26 20.9	+1.6
	baz=260						
J17K	VABM Dome	20.54	59	P	Pn	17 26 21.8	-0.2
	baz=276,SNR=5.4						
G18K	Tagagawik	20.59	52	P	P	17 26 21.4	+1.0
	baz=270						
L16K	Owhat River	20.61	64	P	P	17 26 19.5	-1.1
L16K	Owhat River	20.61	64	P	P	17 26 21.6	+1.0
	baz=281,SNR=6.3						
N15K	Kwethluk River	20.65	69		P	17 26 22.4	+1.4
N15K				IAmb	IAmb	17 26 23.9	
	comp=Z,47nm,0.9s						
N15K	Kwethluk River	20.65	69	P	P	17 26 22.4	+1.4
	baz=284						
H18K	Honhosa River	20.72	54	P	P	17 26 23.2	+1.4
	baz=272						
D19K	Kuna River	20.94	45	P	P	17 26 25.3	+1.1
	baz=264						
F19K	Shaleruckik Mo	20.95	49	P	P	17 26 25.4	+1.2
	baz=268						
K17K	Iditarod	20.98	61		P	17 26 22.0	-2.6
K17K				IAmb	IAmb	17 26 27.4	
	comp=Z,71nm,1.1s						
K17K	Iditarod	20.98	61	P	P	17 26 25.6	+0.9
	baz=279,SNR=6.7						
M16K	Timber Creek	20.99	66		P	17 26 25.4	+0.6
M16K				IAmb	IAmb	17 26 27.4	
	comp=Z,42nm,1.1s						
M16K	Timber Creek	20.99	66	P	P	17 26 26.0	+1.3
	baz=283						
O15K	Ungalikthiuk R	21.05	71	P	P	17 26 26.6	+1.3
	baz=287						
L17K	Donlin	21.08	63	P	P	17 26 27.0	+1.3
	baz=280						
S12K	Black Hills	21.15	81	P	P	17 26 27.5	+1.1
	baz=295						
E19K	Redstone River	21.19	48	P	P	17 26 28.2	+1.4
	baz=267						
N16K	Nishlik Lake	21.21	67	P	P	17 26 28.7	+1.6
	baz=284						
G19K	Purcell Mounta	21.22	51	P	P	17 26 28.8	+1.6
	baz=271						
GCSA	Galena City Sc	21.38	55	P	P	17 26 30.0	+1.2
	baz=275						
B20K	Meade River	21.48	41	P	P	17 26 30.6	+0.8
	baz=261						
H19K	Roundabout Mou	21.51	53	P	P	17 26 31.5	+1.3
	baz=273						
D20K	Etivluk River	21.51	44	P	P	17 26 31.4	+1.1
	baz=265						
J18K	Innoko River	21.59	59	P	P	17 26 32.4	+1.2
	baz=278						
M17K	Holitna River	21.63	64	P	P	17 26 32.9	+1.4
	baz=283						
F20K	Avaraart Lake	21.76	49	P	P	17 26 34.2	+1.3
	baz=270						
O16K	Kokwok River B	21.77	69	P	P	17 26 34.3	+1.2
	baz=287						
L18K	Granite Mounta	21.81	62	P	P	17 26 34.9	+1.5
L18K				IAmb	IAmb	17 26 36.3	
	comp=Z,80nm,1.6s						
L18K	Granite Mounta	21.81	62	P	P	17 26 35.0	+1.5
	baz=281,SNR=7.3						
A21K	Barrow	21.90	37	P	P	17 26 35.1	+0.8
	baz=258,SNR=9.2						
N17K	Nushagak Hills	21.96	67	P	P	17 26 36.1	+1.0
	baz=285						
P16K	Nushagak River	21.99	71	P	P	17 26 35.9	+0.5
	baz=288						
J19K	Poorman	22.00	57	P	P	17 26 36.8	+1.2
	baz=278						
USRK	Ussuriysk Ar.	22.00	240	P	P	17 26 36.1	+0.5
	comp=Z,13nm,0.9s,baz=44,slow=11,SNR=11						
	comp=Z,13nm,0.9s						
H20K	Anotleneega Mo	22.16	53	P	P	17 26 38.1	+0.9
	baz=274						
C21K	Knifeblade Rid	22.21	43	P	P	17 26 38.6	+0.9
	baz=265						
O17K	Koliganek Bris	22.21	68	P	P	17 26 39.1	+1.4
	baz=287						
B21K	Ikpikpuk River	22.31	42	P	P	17 26 39.9	+1.1
	baz=264						
M18K	Stony River	22.36	64	P	P	17 26 40.8	+1.3
	baz=283						
A22K	Sinclair Lake	22.36	38	P	P	17 26 40.8	+1.5
	baz=261						
N18K	Kilae Creek	22.53	66	P	P	17 26 42.0	+0.7
	baz=285						
J20K	Nowinta River	22.62	56		P	17 26 41.8	-0.3
J20K				IAmb	IAmb	17 26 45.0	
	comp=Z,72nm,1.1s						
J20K	Nowinta River	22.62	56	P	P	17 26 43.1	+1.0
	baz=278						
F21K	Alatna River	22.64	48	P	P	17 26 41.9	-0.5
F21K				IAmb	IAmb	17 26 44.3	
	comp=Z,36nm,0.8s						
F21K	Alatna River	22.64	48	P	P	17 26 43.6	+1.2
	baz=271,SNR=10						
G21K	Allakaket	22.66	50	P	P	17 26 43.6	+1.1
	baz=273						
L19K	White Mountain	22.66	62	P	P	17 26 43.4	+0.8
	baz=282						
R16K	Pilot Point	22.70	74	P	P	17 26 44.6	+1.6
	baz=292						
P17K	Kvichak River	22.70	70	P	P	17 26 43.3	+0.3
	baz=288						
Q16K	King Salmon	22.76	71	P	P	17 26 43.8	+0.1
	baz=290						
K20K	Telida	22.78	58	P	P	17 26 43.4	-0.5
K20K				IAmb	IAmb	17 26 58.8	
	comp=Z,46nm,1.5s						
K20K	Telida	22.78	58	P	P	17 26 44.5	+0.6
	baz=280,SNR=7.3						
B22K	Teshekpuk Lake	22.79	40	P	P	17 26 42.9	-1.0
B22K	Teshekpuk Lake	22.79	40	P	P	17 26 43.9	0.0
	baz=264,SNR=18						
CHNA	Chernabura Isl	22.80	82	P	P	17 26 43.3	-0.8
	baz=297						
D22K	Ayikyak River	22.95	44	P	P	17 26 45.4	-0.2
	baz=268						
H21K	Melozitna Rive	23.01	52	P	P	17 26 46.3	0.0
	baz=276						
BNX	BinXian	23.01	249	⇑P	P	17 26 45.8	-0.6
BNX				pmax	pmax		
	comp=Z,13nm,0.9s						
F22K	John River	23.13	48	P	P	17 26 48.3	+0.8
	baz=272						
N19K	Bonanza Creek	23.16	65	P	P	17 26 48.5	+0.6
	baz=286						
P18K	Big Mountain,	23.23	69	P	P	17 26 49.4	+0.9
	baz=289						
E22K	Anaktuvuk Pass	23.26	46	P	P	17 26 47.8	-1.0
E22K				IAmb	IAmb	17 27 04.3	
	comp=Z,29nm,1.1s						
E22K	Anaktuvuk Pass	23.26	46	P	P	17 26 48.9	+0.1
	baz=271,SNR=6.3						
Q17K	Contact Creek	23.29	72	P	P	17 26 48.7	-0.5
	baz=291						
I21K	Tanana	23.40	53	P	P	17 26 49.0	-1.2
I21K	Tanana	23.40	53	P	P	17 26 50.2	0.0
	baz=278,SNR=6.9						
O19K	Port Alsworth	23.42	66	P	P	17 26 50.7	+0.4
	baz=287						
CHUM	Lake Minchumin	23.46	57	P	P	17 26 51.3	+0.5
	baz=280,SNR=12						
M20K	Styx River	23.52	62	P	P	17 26 51.3	-0.2
	baz=284						
H22K	Ishtalitna Cre	23.57	52	P	P	17 26 51.2	-0.7
H22K				IAmb	IAmb	17 26 54.4	
	comp=Z,38nm,1.3s						
H22K	Ishtalitna Cre	23.57	52	P	P	17 26 52.2	+0.3
	baz=276,SNR=12						
D23K	Nanushuk River	23.67	44	IAmb	IAmb	17 27 13.4	
	comp=Z,73nm,1.9s						
D23K	Nanushuk River	23.67	44	P	P	17 26 53.3	+0.4
	baz=270						
PPLA	Purkeypile	23.71	59		P	17 26 53.1	-0.3
PPLA	Purkeypile	23.71	59	P	P	17 26 53.6	+0.2
	baz=282,SNR=6.2						
C23K	Itkillik River	23.71	42	P	P	17 26 51.7	-1.5
C23K				IAmb	IAmb	17 26 55.6	
	comp=Z,65nm,1.1s						
C23K	Itkillik River	23.71	42	P	P	17 26 53.3	+0.1
	baz=268,SNR=13						
COLD	Coldfoot	23.91	48		P	17 26 54.5	-0.7
COLD				IAmb	IAmb	17 26 56.4	
	comp=Z,45nm,1.0s						
COLD	Coldfoot	23.91	48	P	P	17 26 55.0	-0.2
	baz=274,SNR=18						
BPAW	Bear Paw Mtn.	24.00	56		P	17 26 56.5	+0.5
BPAW				IAmb	IAmb	17 26 58.9	
	comp=Z,81nm,1.4s						
BPAW	Bear Paw Mtn.	24.00	56	P	P	17 26 56.0	0.0
	baz=281,SNR=13						
G23K	Bananza Creek	24.03	49	P	P	17 26 55.2	-1.1
G23K				IAmb	IAmb	17 26 57.2	
	comp=Z,31nm,0.9s						
G23K	Bananza Creek	24.03	49	P	P	17 26 56.1	-0.2
	baz=276,SNR=20						
TOLK	Toolik Lake Re	24.08	45	P	P	17 26 57.0	+0.2
	baz=272						
E23K	Chandalar	24.09	46	P	P	17 26 56.9	0.0
	baz=273						
RED	Redoubt Volcan	24.09	65	P	P	17 26 57.3	+0.4
P19K	Oil Pt	24.11	67	P	P	17 26 57.6	+0.5
	baz=289						
SPCR	Spurr Chakacha	24.12	63	P	P	17 26 57.3	0.0
	baz=286						
KTH	Kantishna Hill	24.13	57		P	17 26 57.4	0.0
KTH				IAmb	IAmb	17 27 00.3	
	comp=Z,61nm,1.0s						
Q19K	Cape Douglas,	24.15	69	P	P	17 26 58.0	+0.5
	baz=290						
SKT	Skwentna	24.23	61	P	P	17 26 59.0	+0.9
	baz=285						
O20K	Slope Mountain	24.26	66	P	P	17 26 58.3	-0.2
	baz=288						
D24K	Happy Valley	24.34	43	P	P	17 26 60.0	+0.9
	baz=271						
HILR	Hailar Array B	24.36	265	P	P	17 26 59.9	+0.3
	comp=Z,7.6nm,0.8s,baz=64,slow=10,SNR=7.4						
	comp=Z,7.6nm,0.8s						
C24K	Franklin Bluff	24.38	42	P	P	17 27 00.1	+0.7
	baz=270						
CHIR	Chirikof Islan	24.39	77	P	P	17 27 00.4	+0.7
	baz=296						
TRF	Thorofare Moun	24.43	57	P	P	17 26 59.5	-0.7
TRF	Thorofare Moun	24.43	57	P	P	17 27 00.4	+0.2
	baz=283,SNR=12						
L22K	Petersville	24.43	60		P	17 26 59.5	-0.6
I23K	Minto, Yukon-K	24.50	53	P	P	17 27 00.7	+0.1
I23K	Minto, Yukon-K	24.50	53	P	P	17 27 01.4	+0.8
	baz=280,SNR=7.1						
E24K	Your Creek	24.51	46	P	P	17 27 01.1	+0.4
	baz=274						
CUT	Chulitna	24.69	60	P	P	17 27 02.9	+0.6
	baz=285						
NEA2	Nenana	24.72	54	P	P	17 27 02.4	-0.3
NEA2				IAmb	IAmb	17 27 04.2	
	comp=Z,26nm,0.9s						
NEA2	Nenana	24.72	54	P	P	17 27 03.2	+0.5
	baz=281,SNR=15						
SUA	Susitna One	24.73	62	P	P	17 27 03.0	+0.2
	baz=286						
F24K	Squaw Lake	24.78	47	P	P	17 27 04.1	+1.0
	baz=276						
SII	Sitkinak Islan	24.80	75	P	P	17 27 04.5	+1.1
	baz=295						
Q20K	Shuyak Island	24.88	69	P	P	17 27 04.2	+0.1
	baz=292						
M22K	Willow	24.93	61	P	P	17 27 05.1	+0.6
	baz=286						
MCK	McKinley	24.96	56		P	17 27 05.3	+0.5
MCK	McKinley	24.96	56	P	P	17 27 05.3	+0.5
MCK				pmax	pmax		
	comp=Z,67nm,1.0s						
MCK	McKinley	24.96	56	P	P	17 27 05.0	+0.2
	baz=283,SNR=21						
H24K	Noodor Dome	25.00	51	P	P	17 27 05.6	+0.4
	baz=279						
G24K	Hadweenzic Riv	25.04	49	IAmb	IAmb	17 27 08.7	
	comp=Z,29nm,1.0s						
G24K	Hadweenzic Riv	25.04	49	P	P	17 27 06.2	+0.8
	baz=278,SNR=13						
KDAK	Kodiak Island	25.10	71	P	P	17 27 06.1	0.0
	baz=293						
WRH	Wood River Hil	25.16	55	P	P	17 27 06.3	-0.2
WRH				IAmb	IAmb	17 27 08.4	
	comp=Z,44nm,1.0s						
COLA	College	25.18	54	P	P	17 27 06.5	-0.2
COLA				IAmb	IAmb	17 27 07.9	
	comp=Z,17nm,0.8s						
COLA	College	25.18	54	*de*P	P	17 27 07.1	+0.4

COLA				pmax	pmax		
	comp=Z,23nm,1.0s						
COLA	**College**	**25.18**	**54**	P	**P**	**17 27 07.3**	**+0.6**
	baz=281						
D25K	**Kavik River**	**25.20**	**43**	P	**P**	**17 27 06.9**	**0.0**
	baz=273						
CCB	**Clear Creek Bu**	**25.25**	**54**	IAmb	IAmb	17 27 09.0	
	comp=Z,30nm,1.3s						
POKR	**Poker Plat Res**	**25.31**	**53**	P	**P**	**17 27 08.7**	**+0.8**
	baz=281						
WAT1	**Susitna Watana**	**25.35**	**58**	P	**P**	**17 27 08.7**	**+0.4**
	baz=285						
PMR	**Palmer**	**25.43**	**61**	P	**P**	**17 27 09.2**	**+0.3**
	baz=287						
O22K	**Cooper Landing**	**25.50**	**64**	P	**P**	**17 27 10.1**	**+0.5**
	baz=289						
G25K	**Bearman Lake**	**25.57**	**49**	P	**P**	**17 27 10.8**	**+0.6**
	baz=279						
E25K	**Arctic Village**	**25.59**	**46**	IAmb	IAmb	17 27 13.5	
	comp=Z,42nm,1.0s						
E25K	**Arctic Village**	**25.59**	**46**	P	**P**	**17 27 11.4**	**+0.9**
	baz=276,SNR=24						
ILAR	**Eielson Array**	**25.61**	**54**	P	**P**	**17 27 10.4**	**-0.2**
	comp=Z,8.9nm,0.8s,baz=270,slow=9.5,SNR=49						
	comp=Z,8.9nm,0.8s						
ILAR	**Eielson Array**	**25.61**	**54**	P	**P**	**17 27 09.6**	**-1.0**
F25K	**Christian Rive**	**25.63**	**47**	P	**P**	**17 27 11.6**	**+0.7**
	baz=277						
HDA	**Harding Lake**	**25.66**	**54**	IAmb	IAmb	17 27 12.4	
	comp=Z,20nm,0.9s						
HDA	**Harding Lake**	**25.66**	**54**	P	**P**	**17 27 11.9**	**+0.8**
	baz=283,SNR=11						
C26K	**Camden Bay**	**25.68**	**41**	P	**P**	**17 27 11.6**	**+0.4**
	baz=273						
SML	**Sawmill**	**25.73**	**61**	P	**P**	**17 27 12.2**	**+0.4**
	baz=287						
SEW	**Seward**	**25.75**	**65**	P	**P**	**17 27 12.8**	**+0.8**
	baz=290						
WAT6	**Susitna Watana**	**25.77**	**59**	P	**P**	**17 27 13.1**	**+0.8**
	baz=286						
KNK	**Knik Glacier**	**25.79**	**62**	P	**P**	**17 27 12.1**	**-0.3**
	baz=288						
DHY	**Denali Highway**	**25.80**	**58**	IAmb	IAmb	17 27 14.9	
	comp=Z,27nm,0.9s						
DHY	**Denali Highway**	**25.80**	**58**	P	**P**	**17 27 12.9**	**+0.3**
	baz=285,SNR=7.3						
M23K	**Glacier View**	**26.01**	**60**	P	**P**	**17 27 14.2**	**-0.1**
	baz=288						
PWL	**Port Wells**	**26.02**	**63**	P	**P**	**17 27 14.5**	**+0.1**
	baz=289						
MJB9	**Matsu-Tunnel**	**26.04**	**220**	IAmb	IAmb	17 27 18.7	
	comp=Z,38nm,1.0s						
MAJO	**Matsushiro**	**26.04**	**220**		**P**	**17 27 12.1**	**-2.7**
MAJO				IAmb	IAmb	17 27 17.7	
	comp=Z,37nm,1.0s						
MAJO	**Matsushiro**	**26.04**	**220**	*ce*P	**P**	**17 27 12.3**	**-2.5**
MAJO				pmax	pmax		
	comp=Z,40nm,1.4s						
MJAR	**Matsushiro Arr**	**26.04**	**220**	P	**P**	**17 27 14.8**	**0.0**
	comp=Z,16nm,0.9s,baz=17,slow=9.1,SNR=32						
	comp=Z,16nm,0.9s						
MJAR	**Matsushiro Arr**	**26.04**	**220**	P	**P**	**17 27 15.2**	**+0.4**
MJAR	**Matsushiro Arr**	**26.04**	**220**	P	**P**	**17 27 15.2**	**+0.4**
MJAR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BMAR	**Burnt Mountain**	**26.06**	**47**	P	**P**	**17 27 13.9**	**-0.8**
C27K	**Jago River**	**26.12**	**42**	P	**P**	**17 27 15.3**	**+0.1**
	baz=275						
SCM	**Sheep Creek Mo**	**26.18**	**60**	P	**P**	**17 27 15.9**	**0.0**
	baz=288,SNR=5.3						
F26K	**Sheenjek River**	**26.18**	**46**	P	**P**	**17 27 15.9**	**0.0**
	baz=278						
J25K	**Salcha River,**	**26.28**	**54**	P	**P**	**17 27 16.4**	**-0.4**
	baz=284						
K24K	**Donnelly Dome**	**26.30**	**55**	P	**P**	**17 27 17.0**	**0.0**
	baz=285						
G26K	**Porcupine Rive**	**26.44**	**48**	P	**P**	**17 27 17.9**	**-0.3**
	baz=280						
GLI	**Glacier Island**	**26.59**	**62**	P	**P**	**17 27 18.9**	**-0.6**
	baz=290						
M24K	**Tolsona, Glenn**	**26.61**	**59**	P	**P**	**17 27 19.5**	**-0.3**
	baz=288						
PAX	**Paxson**	**26.67**	**57**	P	**P**	**17 27 19.5**	**-0.9**
	baz=287						
RIDG	**Independent Ri**	**26.72**	**55**	P	**P**	**17 27 20.9**	**+0.1**
	baz=286						
P23K	**Montague Islan**	**26.75**	**64**	P	**P**	**17 27 20.9**	**-0.2**
	baz=291						
KLU	**Klutina**	**26.92**	**60**	P	**P**	**17 27 22.3**	**-0.3**
	baz=289						
HARP	**HAARP**	**26.97**	**58**	P	**P**	**17 27 22.8**	**-0.2**
	baz=288						
SCRK	**Sand Creek**	**27.02**	**55**	P	**P**	**17 27 22.8**	**-0.8**
	baz=286,SNR=9.4						
I26K	**Coal Creek Min**	**27.03**	**52**	P	**P**	**17 27 23.1**	**-0.4**
	baz=284						
E27K	**Coleen River**	**27.06**	**45**	P	**P**	**17 27 23.6**	**-0.1**
	baz=279						
D27M	**Malcolm River**	**27.13**	**43**	P	**P**	**17 27 24.7**	**+0.3**
	baz=278						
JGF	**Kuroka**	**27.18**	**221**	P	**P**	**17 27 24.3**	**-0.8**
JGF				IAmb	IAmb	17 27 27.9	
	comp=Z,44nm,1.3s						
G27K	**Doyon Strip**	**27.29**	**48**	P	**P**	**17 27 26.1**	**+0.2**
	baz=282,SNR=14						
EYAK	**Cordova Ski Ar**	**27.32**	**62**	P	**P**	**17 27 26.8**	**+0.6**
	baz=291						
H27K	**Steamboat Moun**	**27.47**	**49**	P	**P**	**17 27 28.0**	**+0.5**
	baz=283,SNR=7.1						
N25K	**Chitina, Valde**	**27.48**	**60**	P	**P**	**17 27 27.6**	**-0.1**
	baz=290						
L26K	**Log Cabin Wild**	**27.57**	**56**	P	**P**	**17 27 28.3**	**-0.1**
	baz=288						
I27K	**Kandik River**	**27.58**	**51**	P	**P**	**17 27 29.2**	**+0.7**
	baz=284						
BMRM	**Bremner River**	**27.70**	**61**	P	**P**	**17 27 30.1**	**+0.5**
	baz=291						
E28M	**Babbage River**	**27.74**	**44**	IAmb	IAmb	17 27 35.2	
	comp=Z,20nm,1.2s						
E28M	**Babbage River**	**27.74**	**44**	P	**P**	**17 27 30.4**	**+0.6**
	baz=280,SNR=11						
F28M	**Old Crow**	**27.80**	**46**	P	**P**	**17 27 31.1**	**+0.7**
	baz=282						
D28M	**Stokes Point**	**27.90**	**42**	P	**P**	**17 27 31.4**	**+0.3**
	baz=280						
M26K	**Nabesna, AK**	**27.93**	**58**	P	**P**	**17 27 32.4**	**+0.8**
	baz=289						
KAIM	**Kayak Island**	**28.17**	**63**	P	**P**	**17 27 33.0**	**-0.8**
	baz=293						
L27K	**Beaver Creek,**	**28.22**	**56**	P	**P**	**17 27 34.7**	**+0.5**
	baz=289						
MCARA	**McCarthy VSAT**	**28.27**	**60**	P	**P**	**17 27 34.9**	**+0.3**
	baz=291						
I28M	**Miner Creek**	**28.30**	**51**	P	**P**	**17 27 35.8**	**+0.9**
	baz=286						
E29M	**Blow River**	**28.37**	**44**	P	**P**	**17 27 35.9**	**+0.5**
	baz=282						
M27K	**Edge Creek, AK**	**28.43**	**57**	P	**P**	**17 27 36.9**	**+0.7**
	baz=290						
CRQE	**Cirque**	**28.47**	**61**	P	**P**	**17 27 36.9**	**+0.4**
	baz=292						
G29M	**Pine Creek**	**28.67**	**47**	P	**P**	**17 27 38.3**	**+0.2**
	baz=284,SNR=6.4						
H29M	**Whitestone**	**28.71**	**49**	IAmb	IAmb	17 27 40.3	
	comp=Z,24nm,1.1s						
H29M	**Whitestone**	**28.71**	**49**	P	**P**	**17 27 39.3**	**+0.8**
	baz=286,SNR=5.8						
BVCY	**Beaver Creek**	**28.86**	**57**	P	**P**	**17 27 40.2**	**+0.4**
	baz=290						
DAWY	**Dawson**	**28.93**	**53**	P	**P**	**17 27 40.4**	**-0.1**
	baz=289						
I29M	**Ogilvie Camp,**	**28.98**	**50**	P	**P**	**17 27 41.6**	**+0.7**
	baz=287,SNR=6.2						
CTG	**Chitna Glacier**	**29.18**	**60**	P	**P**	**17 27 43.0**	**+0.1**
	baz=293						
KSRS	**Korea Array**	**29.27**	**237**	P	**P**	**17 27 43.0**	**-0.7**
	comp=Z,6.3nm,0.8s,baz=31,slow=8.9,SNR=11						
	comp=Z,6.3nm,0.8s						
EPYK	**Eagle Plains**	**29.31**	**48**	P	**P**	**17 27 43.6**	**-0.2**
	baz=286						
F30M	**Barrier River**	**29.33**	**45**	P	**P**	**17 27 43.8**	**-0.2**
	baz=285						
G30M	**tAoh Zraii Nji**	**29.33**	**47**	P	**P**	**17 27 44.2**	**+0.1**
	baz=286						
YUK8	**Steele Glacier**	**29.76**	**59**	P	**P**	**17 27 48.1**	**0.0**
	baz=293						
O28M	**Mount Upton**	**29.77**	**60**	P	**P**	**17 27 48.0**	**-0.3**
	baz=294						
K29M	**Barlow Dome**	**29.79**	**53**	P	**P**	**17 27 47.5**	**-0.7**
	baz=290						
L29M	**L29M**	**29.79**	**55**	P	**P**	**17 27 47.8**	**-0.4**
	baz=291						
I30M	**Mount Dempster**	**29.79**	**50**	P	**P**	**17 27 48.0**	**-0.2**
	baz=289						
M29M	**Somme Creek**	**29.89**	**56**	P	**P**	**17 27 49.1**	**0.0**
	baz=292						
INK	**Inuvik**	**29.97**	**43**	P	**P**	**17 27 49.7**	**+0.1**
	baz=286,SNR=7.8						
PINM	**Pinnacle**	**30.02**	**61**	P	**P**	**17 27 50.5**	**+0.3**
	baz=295						
J30M	**Hart River**	**30.02**	**51**	P	**P**	**17 27 50.7**	**+0.5**
	baz=290						
F31M	**Tsiigehtchic**	**30.13**	**45**	IAmb	IAmb	17 27 52.4	
	comp=Z,19nm,1.1s						
F31M	**Tsiigehtchic**	**30.13**	**45**	P	**P**	**17 27 51.0**	**0.0**
	baz=287,SNR=7.0						
YUK4	**Talbot Arm**	**30.23**	**58**	P	**P**	**17 27 52.3**	**+0.1**
	baz=293						
H31M	**Peel River**	**30.41**	**48**	P	**P**	**17 27 53.5**	**0.0**
	baz=289						
YUK6	**Outpost Mounta**	**30.52**	**59**	P	**P**	**17 27 54.2**	**-0.6**
	baz=294						
M30M	**Minto, Yukon**	**30.55**	**55**	P	**P**	**17 27 55.4**	**+0.5**
	baz=293						
O29M	**Mount Kennedy**	**30.70**	**60**	P	**P**	**17 27 56.9**	**+0.7**
	baz=295						
N30M	**Aishikik Lake**	**30.87**	**57**	P	**P**	**17 27 58.3**	**+0.6**
	baz=294						
HYT	**Haines Junctio**	**30.95**	**59**	P	**P**	**17 27 58.8**	**+0.3**
	baz=295						
NRIK	**Noril'sk**	**30.98**	**319⇑**	*e*P	**P**	**17 27 59.9**	**+1.4**
NRIK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
P29M	**Windy Craggy**	**31.37**	**61**	P	**P**	**17 28 02.4**	**+0.3**
	baz=297						
N31M	**Braeburn, Yuko**	**31.43**	**57**	P	**P**	**17 28 03.0**	**+0.4**
	baz=295						
TLY	**Talaya**	**31.47**	**282⇑**	*e*P	**P**	**17 28 02.5**	**-0.5**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.9s						
A36M	**Sachs Harbour**	**31.69**	**35**	P	**P**	**17 28 05.1**	**+0.4**
A36M				IAmb	IAmb	17 28 06.6	
	comp=Z,26nm,0.9s						
A36M	**Sachs Harbour**	**31.69**	**35**	P	**P**	**17 28 05.2**	**+0.4**
	baz=286,SNR=6.9						
M31M	**Drury Creek, Y**	**31.73**	**55**	P	**P**	**17 28 05.2**	**-0.1**
	baz=295						
ULN	**Ulaanbaatar**	**32.02**	**273⇑**	*e*P	**P**	**17 28 06.7**	**-1.4**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PLBC	**Pleasant Camp**	**32.07**	**60**	P	**P**	**17 28 07.6**	**-0.6**
	baz=298						
WHY	**Whitehorse**	**32.19**	**58**	P	**P**	**17 28 09.1**	**-0.2**
	baz=297						
SONM	**Songino Array**	**32.38**	**274**	P	**P**	**17 28 12.2**	**+1.0**
	comp=Z,1.5nm,0.7s,baz=62,slow=8.5,SNR=8.4						
SONM				PcP	**PcP**	**17 30 56.9**	**-1.6**
	comp=Z,1.5nm,0.8s,baz=275,slow=0.6,SNR=6.3						
	comp=Z,1.5nm,0.7s						
SONM	**Songino Array**	**32.38**	**274**	IAmb	IAmb	17 28 20.4	
	comp=Z,11nm,1.9s						
SKAG	**Skagway**	**32.54**	**60**	P	**P**	**17 28 11.8**	**-0.5**
	baz=298						
N32M	**Quiet Lake**	**32.75**	**56**	P	**P**	**17 28 14.2**	**0.0**
	baz=297						
S31K	**Pelican**	**32.85**	**63**	P	**P**	**17 28 14.7**	**-0.2**
	baz=300						
C36M	**Paulatuk**	**32.91**	**40**	P	**P**	**17 28 14.7**	**-0.6**
C36M	**Paulatuk**	**32.91**	**40**	P	**P**	**17 28 15.1**	**-0.3**
	baz=291,SNR=27						
R32K	**Eaglecrest**	**33.48**	**62**	P	**P**	**17 28 19.2**	**-1.4**
	baz=300						
SIT	**Sitka**	**33.73**	**64**	P	**P**	**17 28 21.2**	**-1.4**
	baz=301						
S32K	**Killisnoo**	**33.87**	**63**	P	**P**	**17 28 23.0**	**-0.9**
	baz=301						
HHC	**Hu-ho-hao-te**	**34.51**	**260**	*e*P	**P**	**17 28 30.3**	**+0.5**
HHC				pmax	pmax		
	comp=Z,15nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,6.7s						
R33M	**Jennings River**	**34.52**	**58**	P	**P**	**17 28 29.8**	**+0.1**
	baz=300						
TIA	**Tai'an**	**35.28**	**249**	P	**P**	**17 28 37.0**	**+0.6**
TIA				pmax	pmax		
	comp=Z,17nm,0.8s						
HNS	**HongShan**	**35.53**	**253**	⇑P	**P**	**17 28 40.8**	**+2.3**
HNS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WRGLY	**Wrigley**	**35.75**	**49**	P	**P**	**17 28 39.9**	**-0.2**
	baz=300						
T35M	**Bob Quinn**	**36.12**	**61**	P	**P**	**17 28 43.1**	**-0.3**
	baz=304						
LIRD	**Liard River Hi**	**36.64**	**56**	P	**P**	**17 28 48.0**	**+0.3**
	baz=303						
TOAD	**Toad River Com**	**37.32**	**56**	P	**P**	**17 28 54.4**	**+0.8**
	baz=304,SNR=5.3						
NJ2	**Nanjing**	**37.86**	**243**	*e*P	**P**	**17 28 59.3**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LYN	**LuoYang**	**38.89**	**252**	P	**P**	**17 29 09.0**	**+2.0**
LYN				pmax	pmax		
	comp=Z,20nm,0.8s						
YKA	**Yellowknife Ar**	**39.57**	**47**	P	**P**	**17 29 12.6**	**+0.2**
	comp=Z,5.3nm,0.8s,baz=305,slow=8.8,SNR=40						
	comp=Z,5.3nm,0.8s						
YKA	**Yellowknife Ar**	**39.57**	**47**	*i* P	**P**	**17 29 13.0**	**+0.6**
YKA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
DGZ	**Jazzator, Alta**	**40.81**	**290⇓**	*e*P	**P**	**17 29 24.1**	**+1.1**
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KBS	**Kingsbay**	**41.13**	**351⇑**	*e*P	**P**	**17 29 23.9**	**-1.2**
KBS				pmax	pmax		
	comp=Z,29nm,2.6s						
WHN	**Wuhan**	**41.24**	**247**	P	**P**	**17 29 27.3**	**+0.8**
SPITS	**Spitsbergen Ar**	**41.40**	**349**	P	**P**	**17 29 27.8**	**+0.5**
	comp=Z,12nm,0.7s,baz=105,slow=9.6,SNR=12						
	comp=Z,12nm,0.7s						
SPITS	**Spitsbergen Ar**	**41.40**	**349**	P	**P**	**17 29 27.3**	**0.0**
SPITS				pmax	pmax		
	comp=Z,19nm,1.0s						
SPB2	**Spitsbergen Ar**	**41.40**	**349**	IAmb	IAmb	17 29 30.5	
	comp=Z,19nm,0.8s						
GTA	**Gaotai**	**41.65**	**269**	*e*P	**P**	**17 29 30.5**	**+0.5**
GTA				sP	sP	17 29 37.0	+2.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
LZH	**Lanzhou**	**42.07**	**262**	*e*P	**P**	**17 29 35.0**	**+1.5**
LZH				sP	sP	17 29 44.0	+6.2
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZDM	**Lanzhou Array**	**42.24**	**262**	P	**P**	**17 29 34.5**	**-0.6**
	comp=Z,2.7nm,0.4s,baz=331,slow=5.8,SNR=3.6						
	comp=Z,2.7nm,0.4s						
LLLB	**Lillooet**	**43.95**	**64**	P	**P**	**17 29 49.2**	**+0.8**
KURK	**Kurchatov**	**44.36**	**296**	P	**P**	**17 29 50.6**	**-1.0**
KURK				IAmb	IAmb	17 29 54.7	
	comp=Z,18nm,0.8s						
KURK	**Kurchatov**	**44.36**	**296**	*ce*P	**P**	**17 29 51.8**	**+0.2**
KURK				pmax	pmax		
	comp=Z,22nm,0.8s						
WMQ	**Urumqi**	**44.72**	**283**	*e*P	**P**	**17 29 58.0**	**+3.3**
WMQ				S	**S**	**17 36 31.0**	**-0.1**
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				LR	LR		
	comp=Z,1µm,14.1s						
WMQ				LR	LR		
	comp=Z,2µm,18.7s						
BLKN	**Baker Lake**	**44.83**	**37**	P	**P**	**17 29 55.0**	**-0.1**
BLKN				IAmb	IAmb	17 29 56.0	
	comp=Z,23nm,1.0s						
MK31	**Makanchi Array**	**45.31**	**290**	*de*P	**P**	**17 29 59.2**	**-0.1**
MKAR	**Makanchi Array**	**45.31**	**290**	P	**P**	**17 29 59.4**	**+0.1**
	comp=Z,4.5nm,0.9s,baz=56,slow=6.4,SNR=18						
	comp=Z,4.5nm,0.9s						
MKAR	**Makanchi Array**	**45.31**	**290**	P	**P**	**17 29 59.1**	**-0.2**
EDM	**Edmonton**	**46.03**	**57**	P	**P**	**17 30 05.5**	**+0.6**
EDM	**Edmonton**	**46.03**	**57**	P	**P**	**17 30 05.5**	**+0.6**
EDM				pmax	pmax		
	comp=Z,30nm,0.9s						
BVAR	**Borovoye Array**	**46.48**	**304**	P	**P**	**17 30 09.1**	**+0.7**
	comp=Z,8.1nm,0.9s,baz=58,slow=8.0,SNR=18						
	comp=Z,8.1nm,0.9s						
BORK	**Borovoye**	**46.49**	**304**	P	**P**	**17 30 08.7**	**+0.2**
BORK				IAmb	IAmb	17 30 10.4	
	comp=Z,7.9nm,0.8s						
BORK	**Borovoye**	**46.49**	**304**	*c i*P	**P**	**17 30 08.7**	**+0.2**
BORK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
B08A	**Colville Reser**	**46.71**	**65**	IAmb	IAmb	17 30 12.0	
	comp=Z,7.6nm,0.8s						
LTY	**Liberty**	**46.85**	**67**	IAmb	IAmb	17 30 13.2	
	comp=Z,10nm,1.1s						
EPH	**Ephrata**	**47.30**	**66**	IAmb	IAmb	17 30 16.3	
	comp=Z,15nm,1.0s						
MXC	**Moxie City**	**47.52**	**67**	IAmb	IAmb	17 30 18.7	
	comp=Z,10nm,1.0s						
ARCES	**ARCESS Array B**	**47.67**	**340**	P	**P**	**17 30 17.8**	**+0.2**
	comp=Z,3.2nm,0.8s,baz=23,slow=7.9,SNR=8.2						
	comp=Z,3.2nm,0.8s						
ARCES	**ARCESS Array B**	**47.67**	**340**	P	**P**	**17 30 17.1**	**-0.4**
ARCES	**ARCESS Array B**	**47.67**	**340**	P	**P**	**17 30 17.1**	**-0.4**
ARCES				pmax	pmax		
	comp=Z,76nm,1.9s						
WAH2	**Wahluke Slope**	**47.74**	**67**	IAmb	IAmb	17 30 19.9	
	comp=Z,13nm,0.8s						
SVE	**Sverdlovsk**	**47.77**	**313**	*e*P	**P**	**17 30 19.8**	**+1.4**
D08A	**Wollman Farm,**	**47.83**	**66**	IAmb	IAmb	17 30 20.4	
	comp=Z,13nm,1.1s						
HAWA	**Hanford**	**48.02**	**67**	IAmb	IAmb	17 30 22.3	
	comp=Z,8.2nm,1.0s						
F07A	**Phinny Hill Vi**	**48.19**	**68**	IAmb	IAmb	17 30 23.8	
	comp=Z,16nm,1.1s						
GYA	**Guiyang**	**48.37**	**251**	⇓P	**P**	**17 30 24.5**	**+1.0**
GYA				pmax	pmax		
	comp=Z,22nm,0.8s						
SUMG	**Summit**	**48.37**	**7**	P	**P**	**17 30 23.4**	**0.0**
SUMG				IAmb	IAmb	17 30 24.5	
	comp=Z,16nm,1.1s						
SUMG	**Summit**	**48.37**	**7**	P	**P**	**17 30 23.4**	**0.0**
SUMG				pmax	pmax		
	comp=Z,16nm,1.1s						
E09A	**Wood Farm, Sta**	**48.59**	**66**	IAmb	IAmb	17 30 26.5	
	comp=Z,13nm,1.0s						
WIFE	**Three Sisters-**	**48.60**	**71**	IAmb	IAmb	17 30 27.3	
	comp=Z,15nm,1.0s						
ARTI	**Arti**	**48.95**	**314**	P	**P**	**17 30 27.7**	**+0.2**
ARTI				IAmb	IAmb	17 30 29.0	
	comp=Z,11nm,0.9s						
ARTI	**Arti**	**48.95**	**314**	*ce*P	**P**	**17 30 27.6**	**+0.1**
ARTI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LNOR	**Lincton Mounta**	**48.99**	**67**	IAmb	IAmb	17 30 30.1	
	comp=Z,12nm,1.2s						
J04A	**Umpqua Nationa**	**49.06**	**72**	IAmb	IAmb	17 30 31.0	
	comp=Z,17nm,1.0s						
PINE	**Pine Mountain**	**49.23**	**70**	IAmb	IAmb	17 30 32.4	
	comp=Z,22nm,1.0s						
F10A	**Beach Ranch, E**	**49.42**	**66**	IAmb	IAmb	17 30 33.0	
	comp=Z,9.5nm,0.9s						
J05D	**Fort Rock, OR**	**49.46**	**71**	IAmb	IAmb	17 30 34.2	
	comp=Z,19nm,1.0s						
FCC	**Fort Churchill**	**49.53**	**41**	IAmb	IAmb	17 30 33.0	
	comp=Z,17nm,0.9s						
FFC	**Flin Flon**	**49.66**	**49**	P	**P**	**17 30 32.6**	**-0.3**
FFC				IAmb	IAmb	17 30 34.6	
	comp=Z,26nm,1.4s						
FFC	**Flin Flon**	**49.66**	**49**	P	**P**	**17 30 32.6**	**-0.3**
FFC				pmax	pmax		
	comp=Z,26nm,1.4s						
BMO	**Blue Mountains**	**50.21**	**67**	IAmb	IAmb	17 30 39.3	
	comp=Z,12nm,1.1s						
KIRV	**Kirov**	**50.48**	**320⇓**	*e*P	**P**	**17 30 39.5**	**+0.4**
PZH	**PanZhiHua**	**50.79**	**256**	P	**P**	**17 30 42.8**	**+0.8**
EGMT	**Eagleton**	**51.36**	**59**	IAmb	IAmb	17 30 47.5	
	comp=Z,13nm,1.0s						
WVOR	**Wild Horse Val**	**51.37**	**70**	IAmb	IAmb	17 30 48.3	
	comp=Z,11nm,1.1s						
KMI	**Kunming**	**51.43**	**254**	P	**P**	**17 30 47.5**	**+0.6**
KMI				pmax	pmax		
	comp=Z,21nm,0.8s						
KLMR	**Klimovskoe**	**51.73**	**327**	*e*P	**P**	**17 30 46.0**	**-2.4**
KLMR				pmax	pmax		
	comp=Z,13nm,0.9s						
AAK	**Ala-Archa**	**52.14**	**292**	P	**P**	**17 30 52.4**	**+0.4**
AAK	**Ala-Archa**	**52.14**	**292⇑**	*e*P	**P**	**17 30 52.6**	**+0.6**
AAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
YMR	**Madison River**	**53.34**	**63**	IAmb	IAmb	17 31 03.2	
	comp=Z,12nm,1.1s						
YNE	**Yellowstone No**	**53.52**	**62**	IAmb	IAmb	17 31 04.4	
	comp=Z,11nm,0.9s						
TNCH	**TengChong**	**53.64**	**258**	P	**P**	**17 31 05.5**	**+2.2**
TNCH				S	**S**	**17 38 31.0**	**-5.9**
TNCH				sS	pS	17 38 42.5	+1.8
TNCH				pmax	pmax		
	comp=Z,18nm,0.9s						
TNCH				pmax	pmax		
	comp=Z,190nm,3.9s						
TNCH				LR	LR		
	comp=Z,330nm,8.4s						
TNCH				LR	LR		
	comp=Z,620nm,13.3s						
LKWY	**Lake**	**53.68**	**63**	IAmb	IAmb	17 31 06.8	
	comp=Z,8.8nm,0.9s						
KK31	**Karatay Array**	**53.69**	**295**	IAmb	IAmb	17 31 06.0	
	comp=Z,11nm,0.8s						
KKAR	**Karatay Array**	**53.69**	**295**	P	**P**	**17 31 03.2**	**0.0**
KKAR	**Karatay Array**	**53.69**	**295**	P	**P**	**17 31 03.3**	**0.0**
ABKAR	**Akbulak array**	**53.71**	**307**	P	**P**	**17 31 03.3**	**+0.1**
H17A	**Grant Village**	**53.73**	**63**	IAmb	IAmb	17 31 07.4	
	comp=Z,10nm,1.0s						
RLMT	**Red Lodge**	**53.77**	**61**	IAmb	IAmb	17 31 06.5	
	comp=Z,15nm,0.9s						
KSH	**Kashi**	**53.79**	**288**	P	**P**	**17 31 08.8**	**+4.7**
KSH				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KSH				LR	LR		
	comp=Z,820nm,11.0s						
KSH				LR	LR		
	comp=Z,860nm,13.1s						
NVAR	**Mina Array Bea**	**54.58**	**73**	P	**P**	**17 31 11.8**	**+1.7**
	comp=Z,4.8nm,0.8s,baz=303,slow=7.6,SNR=19						
	comp=Z,4.8nm,0.8s						
NVAR	**Mina Array Bea**	**54.58**	**73**	P	**P**	**17 31 10.1**	**0.0**
LHV	**Little Huntoon**	**54.62**	**73**	IAmb	IAmb	17 31 13.1	
	comp=Z,21nm,1.2s						
FINES	**FINESS Array B**	**54.64**	**334**	P	**P**	**17 31 09.9**	**0.0**
	comp=Z,7.6nm,0.8s,baz=35,slow=7.9,SNR=26						
	comp=Z,7.6nm,0.8s						
FINES	**FINESS Array B**	**54.64**	**334**	P	**P**	**17 31 09.4**	**-0.5**
HVU	**Hansel Valley**	**54.70**	**66**	IAmb	IAmb	17 31 13.3	
	comp=Z,8.6nm,1.0s						
MDPB	**Devils Postpil**	**54.81**	**74**	IAmb	IAmb	17 31 14.6	
	comp=Z,9.4nm,1.0s						
HWUT	**Hardware Ranch**	**55.41**	**66**	IAmb	IAmb	17 31 18.4	
	comp=Z,14nm,1.4s						
PDAR	**Pinedale Array**	**55.45**	**63**	P	**P**	**17 31 17.0**	**+0.7**
	comp=Z,4.1nm,0.9s,baz=329,slow=2.8,SNR=31						
PDAR				ScP	**ScP**	**17 36 05.8**	**-9.1**
	comp=Z,0.4nm,0.8s,baz=28,slow=2.7,SNR=4.0						
	comp=Z,4.1nm,0.9s						
PDAR	**Pinedale Array**	**55.45**	**63**	P	**P**	**17 31 16.7**	**+0.4**
ULM	**Lac du Bonnet**	**55.48**	**49**	P	**P**	**17 31 16.8**	**+0.7**
	comp=Z,11nm,1.1s,baz=330,slow=8.5,SNR=4.6						
	comp=Z,11nm,1.1s						
ULM	**Lac du Bonnet**	**55.48**	**49**	IAmb	IAmb	17 31 17.0	
	comp=Z,21nm,1.2s						
ULM	**Lac du Bonnet**	**55.48**	**49⇑**	*e*P	**P**	**17 31 16.0**	**-0.1**
DSP	**Deep Springs**	**55.57**	**74**	IAmb	IAmb	17 31 20.2	
	comp=Z,11nm,1.1s						
DUG	**Dugway, Tooele**	**55.90**	**68**	IAmb	IAmb	17 31 22.0	
	comp=Z,11nm,1.1s						
BELG	**Belogornoye**	**56.02**	**316**	*de*P	**P**	**17 31 20.7**	**+0.8**
BELG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SPR3	**Spring Creek 3**	**56.10**	**70**	IAmb	IAmb	17 31 24.5	
	comp=Z,21nm,1.0s						
CWC	**Cottonwood Cre**	**56.24**	**74**	IAmb	IAmb	17 32 45.5	
	comp=Z,30nm,1.9s						
BSUT	**Blindstream Ca**	**56.62**	**66**	IAmb	IAmb	17 31 27.7	
	comp=Z,19nm,1.2s						
PSUT	**Pine Spring**	**56.69**	**70**	IAmb	IAmb	17 31 27.8	
	comp=Z,8.8nm,1.1s						
RSSD	**Black Hills**	**56.91**	**59**	P	**P**	**17 31 26.7**	**+0.1**
RSSD				IAmb	IAmb	17 31 28.6	
	comp=Z,14nm,0.9s						
RSSD	**Black Hills**	**56.91**	**59**	P	**P**	**17 31 26.7**	**+0.1**
RSSD				pmax	pmax		
	comp=Z,14nm,1.0s						

K22A	**Casper**	**56.94**	**61**	IAmb	IAmb	17 31 28.6	
	comp=Z,10nm,1.1s						
VSU	**Vasula**	**57.14**	**332**	*ce*P	**P**	**17 31 26.7**	**-1.1**
VSU				pmax	pmax		
	comp=Z,13nm,0.8s						
TCRU	**Three Creeks R**	**57.32**	**69**	IAmb	IAmb	17 31 35.4	
	comp=Z,13nm,1.1s						
TMUT	**Trail Mountain**	**57.38**	**67**	IAmb	IAmb	17 31 32.7	
	comp=Z,12nm,1.0s						
OBN	**Obninsk**	**57.40**	**325**	⇓*e*P	**P**	**17 31 27.5**	**-2.1**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MANEM	**Manem**	**57.44**	**290**	IAmb	IAmb	17 31 33.8	
	comp=Z,13nm,0.8s						
P17A	**Butcher Ranch,**	**57.46**	**67**	IAmb	IAmb	17 31 33.2	
	comp=Z,10nm,1.1s						
P18A	**Preston Nutter**	**57.58**	**66**	IAmb	IAmb	17 31 34.3	
	comp=Z,13nm,1.0s						
Q16A	**Castle Valley**	**57.69**	**67**	IAmb	IAmb	17 31 35.0	
	comp=Z,8.4nm,1.0s						
CCUT	**Cedar City**	**57.70**	**70**	IAmb	IAmb	17 31 35.1	
	comp=Z,9.1nm,1.0s						
NC204	**NORSAR Array S**	**57.73**	**342**	P	**P**	**17 31 31.8**	**-0.2**
NC405	**NORSAR Array S**	**57.74**	**342**	P	**P**	**17 31 31.5**	**-0.5**
NC405				IAmb	IAmb	17 31 32.9	
	comp=Z,11nm,1.1s						
SZCU	**Shurtz Canyon**	**57.80**	**70**	IAmb	IAmb	17 31 35.6	
	comp=Z,14nm,1.1s						
SRU	**San Rafael Swe**	**57.85**	**67**	IAmb	IAmb	17 31 35.9	
	comp=Z,18nm,1.1s						
NB201	**NORSAR Array S**	**57.86**	**342**	IAmb	IAmb	17 31 34.4	
	comp=Z,9.6nm,0.9s						
NB2	**NORSAR Subarra**	**57.89**	**342**	P	**P**	**17 31 32.4**	**-0.7**
	comp=Z,2.8nm,0.7s,baz=19,slow=7.4						
NOA	**NORSAR Array B**	**57.89**	**342**	P	**P**	**17 31 32.9**	**-0.2**
	comp=Z,3.3nm,0.7s,baz=19,slow=7.0,SNR=28						
	comp=Z,3.3nm,0.7s						
MTPU	**Mount Pierson**	**57.89**	**69**	IAmb	IAmb	17 31 37.1	
	comp=Z,8.5nm,1.0s						
HFS	**Hagfors**	**58.33**	**340**	P	**P**	**17 31 35.6**	**-0.5**
	comp=Z,2.2nm,0.6s,baz=45,slow=2.5,SNR=9.5						
	comp=Z,2.2nm,0.6s						
KNB	**Kanab**	**58.39**	**70**	IAmb	IAmb	17 31 51.9	
	comp=Z,11nm,1.1s						
LPSR	**Galich'ya Gora**	**58.81**	**322**	*e*P	**P**	**17 31 36.0**	**-3.6**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
F33A	**5 Mile Ranch,**	**58.85**	**52**	IAmb	IAmb	17 31 41.5	
	comp=Z,18nm,1.2s						
CMAR	**Chiang Mai Arr**	**58.92**	**254**	P	**P**	**17 31 41.6**	**+0.9**
	comp=Z,1.7nm,0.8s,baz=7.3,slow=7.2,SNR=19						
	comp=Z,1.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**58.92**	**254**	P	**P**	**17 31 40.7**	**-0.1**
PV21	**Cone Mtn., Par**	**59.02**	**66**	IAmb	IAmb	17 31 43.9	
	comp=Z,11nm,1.0s						
VRH	**Novokhopyorsk**	**59.07**	**319**	*e*P	**P**	**17 31 38.9**	**-2.5**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PV14	**Lion Creek, Pa**	**59.15**	**66**	IAmb	IAmb	17 31 44.8	
	comp=Z,14nm,0.9s						
SHAA	**Shahritus**	**59.15**	**292**	IAmb	IAmb	17 31 53.0	
	comp=Z,18nm,0.9s						
IRM	**Iron Mountain**	**59.51**	**74**	IAmb	IAmb	17 31 47.5	
	comp=Z,10nm,1.0s						
PV01	**Paradox Valley**	**59.55**	**66**	IAmb	IAmb	17 31 47.6	
	comp=Z,6.9nm,0.9s						
ISCO	**Idaho Springs**	**59.62**	**63**	IAmb	IAmb	17 31 48.7	
	comp=Z,11nm,1.0s						
NIL	**Nilore**	**59.74**	**286**		**P**	**17 31 46.8**	**+0.4**
NIL	**Nilore**	**59.74**	**286**	P	**P**	**17 31 46.8**	**+0.4**
NIL				pmax	pmax		
	comp=Z,22nm,0.7s						
VSR	**Storozhevoye**	**59.91**	**321**	*e*P	**P**	**17 31 45.1**	**-2.1**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VORD	**Divnogorie**	**60.08**	**321**	*e*P	**P**	**17 31 47.8**	**-0.6**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WUAZ	**Wupatki**	**60.29**	**70**	IAmb	IAmb	17 31 53.1	
	comp=Z,17nm,1.1s						
MNK	**Minsk**	**60.38**	**330**	*i* P	**P**	**17 31 49.5**	**-0.9**
MNK				*i*		17 32 37.2	
MNK				*i*		17 34 03.0	
MNK				*i* PPP	PPP	17 35 25.9	
MNK				*i* S	**S**	**17 40 04.7**	**0.0**
MNK				*i*		17 41 39.1	
MNK				*i* SS	**SS**	**17 44 04.1**	**+2.7**
MNK				pmax	pmax		
	comp=N,8.0nm,0.4s						
MNK				pmax	pmax		
	comp=E,8.0nm,0.5s						
MNK				pmax	pmax		
	comp=Z,23nm,0.6s						
ECSD	**EROS Data Cent**	**60.43**	**54**	IAmb	IAmb	17 31 52.1	
	comp=Z,14nm,0.9s						
Y14A	**Wickenburg**	**60.75**	**72**	IAmb	IAmb	17 31 55.9	
	comp=Z,13nm,1.2s						
KBL	**Kabul**	**61.12**	**289**	P	**P**	**17 31 54.8**	**-1.2**
KBL				IAmb	IAmb	17 31 57.2	
	comp=Z,8.5nm,0.8s						
KBL	**Kabul**	**61.12**	**289**	P	**P**	**17 31 54.8**	**-1.2**
KBL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
X16A	**Lo Mia Camp, P**	**61.13**	**71**	IAmb	IAmb	17 31 59.1	
	comp=Z,7.7nm,1.1s						
SDCO	**Great Sand Dun**	**61.32**	**64**	IAmb	IAmb	17 31 60.0	
	comp=Z,8.3nm,1.0s						
W18A	**Petrified Fore**	**61.41**	**69**	IAmb	IAmb	17 32 00.6	
	comp=Z,8.5nm,1.1s						
TASM	**ASL Pad, Albuq**	**63.13**	**67**	IAmb	IAmb	17 32 11.8	
	comp=Z,4.9nm,0.9s						
TASM	**ASL Pad, Albuq**	**63.13**	**67**	IAmb	IAmb	17 32 11.8	
	comp=Z,5.3nm,1.0s						
ANMO	**Albuquerque**	**63.13**	**67**	P	**P**	**17 32 10.3**	**+0.9**
ANMO	**Albuquerque**	**63.13**	**67**	P	**P**	**17 32 10.4**	**+0.9**
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AK03	**Malin Array Si**	**63.40**	**327**	P	**P**	**17 32 10.4**	**-0.3**
AK21	**Malin Array Si**	**63.40**	**327**	P	**P**	**17 32 10.5**	**-0.2**
AK22	**Malin Array Si**	**63.41**	**327**	P	**P**	**17 32 09.8**	**-1.0**
AK04	**Malin Array Si**	**63.41**	**327**	P	**P**	**17 32 10.2**	**-0.6**
AKASG	**Malin Array Be**	**63.42**	**327**	P	**P**	**17 32 10.7**	**-0.2**
	comp=Z,5.3nm,0.7s,baz=30,slow=6.6,SNR=11						
	comp=Z,5.3nm,0.7s						
AKASG	**Malin Array Be**	**63.42**	**327**	P	**P**	**17 32 10.3**	**-0.5**
AKASG	**Malin Array Be**	**63.42**	**327**	*i* P	**P**	**17 32 11.0**	**+0.2**
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AKBB	**Malin Array Si**	**63.42**	**327**	IAmb	IAmb	17 32 11.6	
	comp=Z,7.2nm,0.8s						
AKBB	**Malin Array Si**	**63.42**	**327**	*de*P	**P**	**17 32 10.9**	**+0.1**
AKBB	**Malin Array Si**	**63.42**	**327**	P	**P**	**17 32 10.5**	**-0.3**
KIEV	**Kiev**	**63.43**	**327**	P	**P**	**17 32 10.1**	**-0.8**
KIEV				IAmb	IAmb	17 32 11.6	
	comp=Z,6.2nm,0.8s						
KIEV	**Kiev**	**63.43**	**327**	P	**P**	**17 32 10.1**	**-0.8**
KIEV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KIEV	**Kiev**	**63.43**	**327**	P	**P**	**17 32 10.5**	**-0.4**
	comp=Z,45nm,0.9s						
AK01	**Malin Array Si**	**63.43**	**327**	P	**P**	**17 32 10.4**	**-0.5**
AK20	**Malin Array Si**	**63.44**	**327**	P	**P**	**17 32 10.6**	**-0.4**
AK18	**Malin Array Si**	**63.44**	**327**	P	**P**	**17 32 10.7**	**-0.3**
AK15	**Malin Array Si**	**63.45**	**327**	P	**P**	**17 32 10.2**	**-0.9**
AK11	**Malin Array Si**	**63.45**	**327**	P	**P**	**17 32 10.8**	**-0.3**
MI28	**Mi28,Pidlybu**	**63.65**	**328**	P	**P**	**17 32 11.4**	**-1.0**
RNPP9	**Sopachiv**	**63.70**	**329**	P	**P**	**17 32 12.7**	**0.0**
GOF	**Gofitskoye**	**63.81**	**315**	*ce*P	**P**	**17 32 13.9**	**+0.3**
RNPP5	**Staryi Chortor**	**63.86**	**329**	P	**P**	**17 32 13.6**	**-0.2**
MAK	**Makhachkala**	**63.87**	**310**	*e*P	**P**	**17 32 11.3**	**-2.7**
MAK				*e*S	**S**	**17 40 46.2**	**-2.8**
MAK				MLR	MLR		
	comp=Z,895nm,15.0s						
LUBAR	**Lubar, Ukraine**	**64.53**	**327**	P	**P**	**17 32 17.2**	**-1.0**
KIV	**Kislovodsk**	**64.88**	**314**	*e*P	**P**	**17 32 20.4**	**-0.3**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KBZ	**Khabaz**	**65.00**	**314**	P	**P**	**17 32 22.2**	**+0.9**
	comp=Z,9.2nm,0.7s,baz=48,slow=5.0,SNR=28						
	comp=Z,9.2nm,0.7s						
KBZ	**Khabaz**	**65.00**	**314**	*ce*P	**P**	**17 32 22.6**	**+1.3**
KBZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AKT	**Akhty**	**65.03**	**309**	*e*P	**P**	**17 32 20.1**	**-1.7**
AKT				*e*PPP	PPP	17 36 14.6	
AKT				pmax	pmax		
	comp=Z,29nm,1.3s						
SHA1	**Shidzhatmaz**	**65.08**	**314**	*de*P	**P**	**17 32 23.5**	**+1.3**
EKA	**Eskdalemuir Ar**	**65.32**	**349**	P	**P**	**17 32 23.4**	**+0.1**
	comp=Z,4.0nm,0.7s,baz=16,slow=5.6,SNR=9.6						
	comp=Z,4.0nm,0.7s						
AMTX	**Amarillo**	**65.43**	**63**	IAmb	IAmb	17 32 26.4	
	comp=Z,8.5nm,0.8s						
MSTX	**Muleshoe**	**65.67**	**64**	IAmb	IAmb	17 32 27.3	
	comp=Z,14nm,0.9s						
SMWD	**Samnorwood**	**65.91**	**62**	IAmb	IAmb	17 32 29.0	
	comp=Z,12nm,1.0s						
KMPD	**K-Podol'skiy**	**66.12**	**328**	P	**P**	**17 32 28.6**	**+0.1**
KMPD				P	**P**	**17 32 28.6**	**+0.1**
KWP	**Kalwaria Pacla**	**66.15**	**331**	P	**P**	**17 32 29.7**	**+1.0**
MNTX	**Cornudas Mount**	**66.30**	**68**	IAmb	IAmb	17 32 32.3	
	comp=Z,10nm,1.1s						
LMQ	**La Malbaie**	**66.58**	**34**	P	**P**	**17 32 30.8**	**-0.7**
STHS	**Stebnicka Huta**	**66.72**	**331**	*e*P	**P**	**17 32 33.5**	**+1.1**
STHS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
STHS	**Stebnicka Huta**	**66.72**	**331**	*e*P	**P**	**17 32 33.5**	**+1.1**
R40A	**Maddies Statio**	**66.77**	**54**	IAmb	IAmb	17 32 33.3	
	comp=Z,11nm,0.9s						
DKNS	**Dickens**	**66.79**	**63**	IAmb	IAmb	17 32 34.4	
	comp=Z,15nm,1.0s						
CLL	**Collm**	**66.80**	**337**	IAmb	IAmb	17 32 34.0	
	comp=Z,8.8nm,0.9s						
CLL	**Collm**	**66.80**	**337**	*i* P	**P**	**17 32 33.0**	**+0.2**
CLL				pmax	pmax		
	comp=Z,12nm,1.1s						
CLL	**Collm**	**66.80**	**337**	*i* P	**P**	**17 32 33.0**	**+0.2**
	comp=Z,12nm,1.1s						
CHVC	**Chvalec**	**66.84**	**335**	*e*P	**P**	**17 32 34.0**	**+0.8**
CHVC	**Chvalec**	**66.84**	**335**	*e*P	**P**	**17 32 34.0**	**+0.8**
UPC	**Upice**	**66.93**	**335**	*e*P	**P**	**17 32 34.8**	**+1.1**
UPC	**Upice**	**66.93**	**335**	*e*P	**P**	**17 32 34.8**	**+1.1**
DPC	**Dobruska-Polom**	**67.01**	**335**	*e*P	**P**	**17 32 35.3**	**+1.1**
DPC	**Dobruska-Polom**	**67.01**	**335**	*e*P	**P**	**17 32 35.3**	**+1.1**
STEB	**Steborice**	**67.07**	**334**	*e*P	**P**	**17 32 35.6**	**+1.0**
KRLC	**Kraliky**	**67.16**	**335**	*e*P	**P**	**17 32 36.4**	**+1.2**
KRLC	**Kraliky**	**67.16**	**335**	*e*P	**P**	**17 32 36.4**	**+1.2**
VHRN	**Van Horn**	**67.24**	**68**	IAmb	IAmb	17 32 38.4	
	comp=Z,7.3nm,1.1s						
MORC	**Moravsky Berou**	**67.27**	**334**	IAmb	IAmb	17 32 39.1	
	comp=Z,7.4nm,0.8s						
MORC	**Moravsky Berou**	**67.27**	**334**	*e*P	**P**	**17 32 36.9**	**+1.0**
SN07	**Snyder 07**	**67.28**	**64**	IAmb	IAmb	17 32 37.6	
	comp=Z,13nm,1.1s						
BUR08	**Bucovina Ar. S**	**67.31**	**328**	P	**P**	**17 32 36.4**	**+0.1**
BUR08				IAmb	IAmb	17 32 47.6	
	comp=Z,8.2nm,1.2s						
BURAR	**Bucovina Array**	**67.33**	**328**	P	**P**	**17 32 36.6**	**+0.2**
HSKC	**Hora Svate Kat**	**67.38**	**337**	*e*P	**P**	**17 32 37.2**	**+0.6**
LANS	**Liptovska Anna**	**67.40**	**332**	*e*P	**P**	**17 32 38.5**	**+1.7**
LANS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LANS	**Liptovska Anna**	**67.40**	**332**	*e*P	**P**	**17 32 38.5**	**+1.7**
APMT	**Aspermont**	**67.44**	**63**	IAmb	IAmb	17 32 38.3	
	comp=Z,14nm,0.9s						
MAUC	**Maruska**	**67.59**	**334**	*e*P	**P**	**17 32 39.3**	**+1.4**
MGMO	**Mountain Grove**	**67.73**	**55**	IAmb	IAmb	17 32 39.2	
	comp=Z,15nm,1.0s						
PRU	**Pruhonice**	**67.73**	**336**	*e*P	**P**	**17 32 40.1**	**+1.3**
PRU	**Pruhonice**	**67.73**	**336**	*e*P	**P**	**17 32 40.1**	**+1.3**
VRAC	**Vranov**	**67.93**	**334**	*e*P	**P**	**17 32 41.2**	**+1.2**
JAVC	**Velka Javorina**	**68.10**	**334**	*e*P	**P**	**17 32 43.3**	**+2.1**
KRUC	**Moravsky**	**68.20**	**334**	*e*P	**P**	**17 32 42.8**	**+1.1**
ZVC	**Zvikov**	**68.33**	**336**	*e*P	**P**	**17 32 43.3**	**+0.8**
PMG	**Port Moresby**	**68.62**	**192**	P	**P**	**17 32 45.4**	**+0.8**
	comp=Z,5.3nm,0.8s,baz=9.1,slow=6.5,SNR=4.3						
	comp=Z,5.3nm,0.8s						
PMG	**Port Moresby**	**68.62**	**192**	P	**P**	**17 32 44.7**	**+0.1**
PMG				IAmb	IAmb	17 32 47.0	
	comp=Z,14nm,1.1s						
PMG	**Port Moresby**	**68.62**	**192**	P	**P**	**17 32 44.7**	**+0.1**
PMG				pmax	pmax		
	comp=Z,14nm,1.1s						
MODS	**Modra-Piesok**	**68.65**	**334**	*e*P	**P**	**17 32 46.1**	**+1.5**
MODS				pmax	pmax		
	comp=Z,94nm,2.2s						
MODS	**Modra-Piesok**	**68.65**	**334**	*e*P	**P**	**17 32 46.1**	**+1.5**
GRF	**Grafenberg Arr**	**68.69**	**338**	*e*P	**P**	**17 32 46.2**	**+1.4**
	comp=Z,2.7nm,0.8s,baz=16,slow=5.5						
BTNL	**Ternell**	**68.74**	**342**	*d*P	**P**	**17 32 45.7**	**+0.6**
	comp=Z,9.1nm,0.8s						
KHC	**Kasperske Hory**	**68.75**	**336**	*ce*P	**P**	**17 32 45.8**	**+0.6**
KHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KHC	**Kasperske Hory**	**68.75**	**336**	*e*P	**P**	**17 32 46.2**	**+1.0**
CKRC	**Cesky Krumlov**	**68.89**	**336**	*e*P	**P**	**17 32 46.7**	**+0.6**
CKRC	**Cesky Krumlov**	**68.89**	**336**	*e*P	**P**	**17 32 46.7**	**+0.6**
GERES	**GERESS Array B**	**68.99**	**336**	P	**P**	**17 32 47.2**	**+0.4**
	comp=Z,2.5nm,0.8s,baz=28,slow=6.0,SNR=24						
	comp=Z,2.5nm,0.8s						
TX31	**Lajitas Ar. Si**	**69.08**	**68**	IAmb	IAmb	17 32 49.8	
	comp=Z,7.8nm,1.1s						
TXAR	**Lajitas Array**	**69.08**	**68**	P	**P**	**17 32 48.1**	**+0.5**
	comp=Z,3.6nm,0.9s,baz=307,slow=5.0,SNR=21						
	comp=Z,3.6nm,0.9s						
TXAR	**Lajitas Array**	**69.08**	**68**	P	**P**	**17 32 48.0**	**+0.4**
KOPT	**Kop Dagi**	**69.11**	**314**	P	**P**	**17 32 46.5**	**-1.4**
SAND	**Sanderson**	**69.30**	**66**	IAmb	IAmb	17 32 50.6	
	comp=Z,6.1nm,1.0s						
CONA	**Conrad Observa**	**69.39**	**334**	*i* pP	**P**	**17 32 50.4**	**+1.2**
	comp=Z,11nm,1.4s						
RONA	**Rosalia, Austr**	**69.51**	**334**	*e*pP	**P**	**17 32 51.5**	**+1.6**
	comp=Z,4.9nm,0.8s						
BRDY	**Brady**	**69.66**	**63**	IAmb	IAmb	17 33 47.6	
	comp=Z,6.0nm,0.8s						
MOA	**Molln**	**69.82**	**335**	*i* pP	**P**	**17 32 53.6**	**+1.7**
	comp=Z,5.0nm,0.8s						
BIOA	**Bad Ischl, Aus**	**70.10**	**336**	*i* pP	**P**	**17 32 55.4**	**+1.8**
	comp=Z,6.9nm,1.6s						
ARSA	**Arzberg**	**70.11**	**334**	*i* pP	**P**	**17 32 55.1**	**+1.4**
	comp=Z,4.3nm,0.8s						
DRIO	**Del Rio**	**70.46**	**66**	IAmb	IAmb	17 32 56.9	
	comp=Z,15nm,1.0s						
WVT	**Waverly**	**70.46**	**52**	P	**P**	**17 32 54.8**	**-1.1**
WVT				IAmb	IAmb	17 32 56.7	
	comp=Z,12nm,0.9s						
WVT	**Waverly**	**70.46**	**52**	P	**P**	**17 32 54.8**	**-1.1**
WVT				pmax	pmax		
	comp=Z,12nm,0.9s						
LESA	**Schwarzleotal**	**70.56**	**336**	*i* pP	**P**	**17 32 57.6**	**+1.1**
	comp=Z,6.0nm,1.6s						
KBA	**Koelnbreinsper**	**70.75**	**336**	*e*pP	**P**	**17 32 59.3**	**+1.6**
	comp=Z,4.7nm,0.6s						
SOKA	**Soboth**	**70.76**	**335**	*i* pP	**P**	**17 32 58.8**	**+1.1**
	comp=Z,6.4nm,1.0s						
WATA	**Walderalm**	**70.87**	**337**	*i* pP	**P**	**17 33 00.2**	**+1.8**
	comp=Z,2.6nm,0.7s						
RETA	**Reutte**	**70.89**	**338**	*i* pP	**P**	**17 32 59.6**	**+1.2**
	comp=Z,2.8nm,0.8s						
WTTA	**Wattenberg**	**70.93**	**337**	*i* pP	**P**	**17 32 59.7**	**+0.9**
	comp=Z,13nm,1.4s						
OBKA	**Obir**	**71.03**	**335**	*i* pP	**P**	**17 33 00.8**	**+1.5**
	comp=Z,17nm,0.8s						
SQTA	**Sankt Quirin**	**71.05**	**337**	*i* pP	**P**	**17 33 00.3**	**+0.8**
	comp=Z,4.3nm,0.9s						
MYKA	**Terra Mystica**	**71.11**	**335**	*i* pP	**P**	**17 33 01.5**	**+1.7**
	comp=Z,4.7nm,1.0s						
ABTA	**Abfaltersbach**	**71.24**	**336**	*i* pP	**P**	**17 33 01.6**	**+1.0**
	comp=Z,9.7nm,1.6s						
DAVA	**Damuels**	**71.25**	**338**	*i* pP	**P**	**17 33 02.1**	**+1.4**
	comp=Z,7.0nm,1.6s						
FETA	**Feichten**	**71.34**	**338**	*i* pP	**P**	**17 33 01.9**	**+0.6**
	comp=Z,7.2nm,1.6s						
BRTR	**Keskin Array B**	**71.84**	**318**	P	**P**	**17 33 05.5**	**+1.1**
	comp=Z,1.0nm,0.8s,baz=51,slow=3.9,SNR=5.5						
	comp=Z,1.0nm,0.8s						
BRTR	**Keskin Array B**	**71.84**	**318**	P	**P**	**17 33 04.2**	**-0.2**
SWET	**Sewanee**	**72.02**	**51**	IAmb	IAmb	17 33 05.5	
	comp=Z,10nm,0.8s						
TEOL	**Teolo**	**72.74**	**336**	IAmb	IAmb	17 33 11.1	
	comp=Z,17nm,1.0s						
LRAL	**Lakeview Retre**	**73.48**	**53**	IAmb	IAmb	17 33 14.1	
	comp=Z,9.5nm,0.7s						
UOSS	**Minazif**	**75.27**	**294**	P	**P**	**17 33 23.2**	**-1.4**
ESDC	**Sonseca Array**	**80.86**	**347**	P	**P**	**17 33 55.0**	**-0.5**
	comp=Z,2.3nm,0.8s,baz=3.3,slow=5.5,SNR=14						
	comp=Z,2.3nm,0.8s						
ESDC	**Sonseca Array**	**80.86**	**347**		**P**	**17 33 55.2**	**-0.3**
WRA	**Warramunga Arr**	**81.01**	**203**	P	**P**	**17 33 55.8**	**-0.5**
	comp=Z,3.8nm,1.0s,baz=20,slow=5.7,SNR=8.2						
	comp=Z,3.8nm,1.0s						
WRA	**Warramunga Arr**	**81.01**	**203**	P	**P**	**17 33 56.1**	**-0.2**
WRA	**Warramunga Arr**	**81.01**	**203**	*i* P	**P**	**17 33 58.0**	**+1.7**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FITZ	**Fitzroy Crossi**	**81.33**	**212**	P	**P**	**17 33 57.3**	**-0.7**
	comp=Z,2.2nm,0.8s,baz=18,slow=14,SNR=2.2						
	comp=Z,2.2nm,0.8s						
RAYN	**Ar Rayn**	**81.42**	**302**	P	**P**	**17 33 57.0**	**-1.7**
RAYN	**Ar Rayn**	**81.42**	**302**	P	**P**	**17 33 57.0**	**-1.7**
RAYN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
AS31	**Alice Springs**	**84.72**	**203**	P	**P**	**17 34 15.4**	**0.0**
ASAR	**Alice Springs**	**84.72**	**203**	P	**P**	**17 34 15.4**	**-0.1**
	comp=Z,2.9nm,0.7s,baz=13,slow=5.0,SNR=48						
	comp=Z,2.9nm,0.7s						
ASAR	**Alice Springs**	**84.72**	**203**	P	**P**	**17 34 14.4**	**-1.0**
INKA	**Innaminka**	**87.51**	**196**	P	**P**	**17 34 29.1**	**+0.1**
MD01	**Midelt array s**	**87.67**	**346**	P	**P**	**17 34 30.2**	**-0.2**
STKA	**Stephens Creek**	**91.47**	**195**	P	**P**	**17 34 47.3**	**-0.3**
	comp=Z,3.0nm,0.8s,baz=333,slow=5.2,SNR=5.4						
	comp=Z,3.0nm,0.8s						
STKA	**Stephens Creek**	**91.47**	**195**	P	**P**	**17 34 47.1**	**-0.3**
STKA	**Stephens Creek**	**91.47**	**195**	P	**P**	**17 34 47.2**	**-0.3**
STKA				pmax	pmax		
	comp=Z,22nm,1.0s						
MAW	**Mawson**	**144.04**	**220**	PKP	PKPbc	17 41 14.7	+1.1
	comp=Z,5.9nm,0.9s,baz=56,slow=3.6,SNR=6.5						
PLCA	**Paso Flores**	**144.32**	**82**	PKP	**PKPab**	**17 41 14.7**	**-0.4**
	comp=Z,2.8nm,0.9s,baz=276,slow=5.6,SNR=4.2						
PLCA	**Paso Flores**	**144.32**	**82**		**PKPab**	**17 41 15.9**	**+0.8**
PLCA	**Paso Flores**	**144.32**	**82**	PKIKP	**PKPab**	**17 41 15.9**	**+0.8**

KRSC ***26*** *17:26:26.8±0.9, 58.°84N×158.°65E, h10km±6km, Ml4.5*
IDC ***26*** *17:26:28.5±1.2, 58.°71N×159.°01E, h0km, mb3.6/7, mbtmp3.6/8, ML4.7/1, Error ellipse: s-maj=30.0km s-min=19.6km az=161.0*
NEIC ***26*** *17:26:30.2±1.0, 58.°8N±0.°2×158.°8E±0.°2, h10km±2km, mb4.3/16, Error ellipse: s-maj=26.6km s-min=18.4km az=175.0*
MOS ***26*** *17:26:30.2±0.9, 58.°83N×158.°86E, h23km, mb4.1/1, Error ellipse: s-maj=17.9km s-min=8.4km az=91.8*
NERS ***26*** *17:26:31.1, 58.°81N×158.°45E, h0km*
ISC 26 17:26:30.4±0.6**, 58.°77N**±0.°05×**158.°85E**±0.°03**, h10**km**, n56, σ1.s54**/63**, mb4.0**/15**, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALN	**Palana**	**0.66**	**61**	PN	**Pg**	**17 26 41.7**	**-1.5**
PALN				S	**Sg**	**17 26 51.1**	**-0.8**
PALN	**Palana**	**0.66**	**61**	*e*P	**Pg**	**17 26 41.7**	**-1.5**
PALN				*e*S	**Sg**	**17 26 51.2**	**-0.8**
OSSR	**Ossora**	**2.23**	**76**	PN	**Pn**	**17 27 06.5**	**-0.9**
OSSR				S	**Sn**	**17 27 36.5**	**+1.6**
OSSR	**Ossora**	**2.23**	**76**	*e*P	**Pn**	**17 27 06.5**	**-0.9**
OSSR				*e*S	**Sn**	**17 27 36.6**	**+1.6**
SMKR	**Semkarok**	**2.61**	**146**	PN	**Pn**	**17 27 12.8**	**+0.2**
SMKR	**Semkarok**	**2.61**	**146**	*e*P	**Pn**	**17 27 12.8**	**+0.2**
KOZ	**Kozyrevsk**	**2.78**	**168**	PN	**Pn**	**17 27 14.8**	**-0.1**
KOZ	**Kozyrevsk**	**2.78**	**168**	*e*P	**Pn**	**17 27 14.9**	**-0.1**
ESO	**Esso**	**2.85**	**182**	PN	**Pn**	**17 27 15.1**	**-0.9**
ESO	**Esso**	**2.85**	**182**	*e*P	**Pn**	**17 27 15.2**	**-0.9**
KIRR	**Kirishev**	**2.94**	**163**	PN	**Pn**	**17 27 17.5**	**+0.2**
KIRR	**Kirishev**	**2.94**	**163**	*e*P	**Pn**	**17 27 17.6**	**+0.2**
KMNR	**Kamenistaya**	**3.12**	**165**	PN	**Pn**	**17 27 20.6**	**+1.0**
KMNR	**Kamenistaya**	**3.12**	**165**	*e*P	**Pn**	**17 27 20.7**	**+1.0**
KZV	**Kizimen**	**3.75**	**167**	PN	**Pn**	**17 27 30.0**	**+1.5**
KZV	**Kizimen**	**3.75**	**167**	*e*P	**Pn**	**17 27 30.0**	**+1.5**
GADL	**Gadlja**	**3.97**	**286**	*e*Pg	**Pb**	**17 27 41.3**	**+0.9**
GADL				Pgmax		17 27 46.1	
	100nm,0.4s						
GADL				*e*Sg	**Sb**	**17 28 31.0**	**+2.6**
GADL				Sgmax		17 28 52.9	
	660nm,0.8s						
GADL				Sgmax		17 28 52.9	
	440nm,0.7s						
GADL	**Gadlja**	**3.97**	**286**	*e*PN	**Pb**	**17 27 41.3**	**+0.9**
TLAR	**Talaya**	**4.01**	**309**	*e*P	**Pg**	**17 27 47.6**	**+0.4**
TLAR				*e*Sg	**Sb**	**17 28 33.6**	**+3.9**
TLAR				Sgmax		17 28 52.4	
	320nm,0.5s						
TLAR				Sgmax		17 28 52.4	
	70nm,0.7s						
TILK	**Tilichiki**	**4.07**	**63**	PN	**Pn**	**17 27 34.0**	**+1.4**
TILK	**Tilichiki**	**4.07**	**63**	*e*P	**Pn**	**17 27 34.1**	**+1.4**
MA2	**Magadan**	**4.24**	**284**	Pn	**Pn**	**17 27 36.8**	**+1.8**
	4.1nm,0.3s,baz=145,slow=21,SNR=2.3						
MA2				Lg	Lg	17 28 40.1	
	8.0nm,0.3s,baz=336,slow=19,SNR=4.4						
	11nm,0.9s						
MA2	**Magadan**	**4.24**	**284**		**Pn**	**17 27 35.0**	**0.0**
MA2	**Magadan**	**4.24**	**284**	*e*P	**Pn**	**17 27 36.7**	**+1.8**
MA2				*e*Pg	**Pb**	**17 27 46.2**	**+1.3**
MA2				*e*Sg	**Sb**	**17 28 39.5**	**+3.5**
MA2				Sgmax		17 28 55.7	
	160nm,0.7s						
MA2				Sgmax		17 28 55.7	
	100nm,0.9s						
MGD	**Magadan 1**	**4.34**	**291**	*e*P	**Pn**	**17 27 35.7**	**-0.7**
MGD				*e*Sg	**Sb**	**17 28 42.1**	**+3.0**
MGD				Sgmax		17 28 47.1	
	180nm,0.5s						
MGD				Sgmax		17 28 47.1	
	50nm,0.4s						
MGD	**Magadan 1**	**4.34**	**291**	*e*PN	**Pn**	**17 27 35.7**	**-0.7**
SEY	**Seymchan**	**5.24**	**326**	*e*Sg	**Sg**	**17 29 15.0**	**-3.3**
SEY				Sgmax		17 29 27.8	
	80nm,0.7s						
TLON	**Talon**	**5.32**	**285**	*e*Sg	**Sg**	**17 29 15.4**	**-5.6**
TLON				Sgmax		17 29 30.5	
	390nm,0.8s						
TLON				Sgmax		17 29 30.5	
	110nm,0.6s						
SUUS	**Susuman**	**6.59**	**312**	*e*Sg	**Sg**	**17 29 58.6**	**-3.2**
SUUS				Sgmax		17 30 20.2	
	130nm,0.8s						
SUUS				Sgmax		17 30 20.2	
	100nm,1.0s						
BILL	**Bilibino**	**9.87**	**16**	*e*Sg		17 31 49.0	
BILL				Sgmax		17 32 02.9	
	20nm,1.0s						
C18K	**Utukok River**	**19.86**	**44**	P	**P**	**17 31 01.2**	**-0.1**
C19K	**Lookout Ridge**	**20.52**	**43**	P	**P**	**17 31 08.7**	**+0.3**
J17K	**VABM Dome**	**20.57**	**59**	P	**P**	**17 31 09.0**	**+0.1**
B21K	**Ikpikpuk River**	**22.33**	**42**	P	**P**	**17 31 28.8**	**+1.0**
B21K				IAmb	IAmb	17 31 29.8	
	comp=Z,15nm,1.2s						
J20K	**Nowinta River**	**22.64**	**56**	P	**P**	**17 31 30.4**	**-0.8**
J20K				IAmb	IAmb	17 31 44.4	
	comp=Z,13nm,1.2s						
G21K	**Allakaket**	**22.68**	**50**	P	**P**	**17 31 31.4**	**-0.2**
G21K				IAmb	IAmb	17 31 33.6	
	comp=Z,7.8nm,0.9s						
ILSW	**Iliamna Southw**	**24.07**	**66**	P	**P**	**17 31 44.0**	**-1.6**
TOLK	**Toolik Lake Re**	**24.10**	**45**	P	**P**	**17 31 45.4**	**-0.5**
TOLK				IAmb	IAmb	17 31 49.0	
	comp=Z,11nm,1.2s						
E23K	**Chandalar**	**24.11**	**46**	P	**P**	**17 31 45.8**	**-0.1**
E24K	**Your Creek**	**24.53**	**46**	P	**P**	**17 31 49.3**	**-0.5**
E24K				IAmb	IAmb	17 31 51.0	
	comp=Z,6.7nm,0.9s						
D25K	**Kavik River**	**25.23**	**43**	P	**P**	**17 31 55.6**	**-0.4**
D25K				IAmb	IAmb	17 31 57.9	
	comp=Z,7.5nm,0.9s						
ILAR	**Eielson Array**	**25.63**	**54**	P	**P**	**17 31 59.3**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=278,slow=9.7,SNR=7.4						
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	**25.63**	**54**	P	**P**	**17 31 58.6**	**-1.1**
ILAR	**Eielson Array**	**25.63**	**54**	P	**P**	**17 31 58.6**	**-1.1**
F25K	**Christian Rive**	**25.65**	**47**	P	**P**	**17 32 00.5**	**+0.6**
F25K				IAmb	IAmb	17 32 38.7	
	comp=Z,8.8nm,1.5s						
MJAR	**Matsushiro Arr**	**26.02**	**220**	P	**P**	**17 32 03.1**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=19,slow=9.9,SNR=4.1						
	comp=Z,1.1nm,0.7s						
M24K	**Tolsona, Glenn**	**26.63**	**59**	P	**P**	**17 32 10.2**	**+1.4**
H27K	**Steamboat Moun**	**27.49**	**49**	P	**P**	**17 32 16.1**	**-0.4**
INK	**Inuvik**	**29.99**	**43**	P	**P**	**17 32 38.5**	**-0.1**
INK				IAmb	IAmb	17 32 54.6	
	comp=Z,3.4nm,1.2s						
INK	**Inuvik**	**29.99**	**43**	P	**P**	**17 32 38.5**	**-0.1**
YKA	**Yellowknife Ar**	**39.60**	**47**	P	**P**	**17 34 01.6**	**+0.2**
	comp=Z,0.7nm,0.9s,baz=303,slow=9.1,SNR=5.6						
	comp=Z,0.7nm,0.9s						

BVAR	Borovoye Array	46.47	304	P	P	17 34 57.3	+0.2
	comp=Z,1.1nm,0.8s,baz=46,slow=6.4,SNR=3.7						
	comp=Z,1.1nm,0.8s						
NOA	NORSAR Array B	57.90	342	P	P	17 36 21.6	-0.4
	comp=Z,0.4nm,0.7s,baz=18,slow=6.5,SNR=2.2						
	comp=Z,0.4nm,0.7s						
AKASG	Malin Array Be	63.42	327	P	P	17 36 58.7	-1.0
	comp=Z,0.4nm,0.4s,baz=42,slow=7.7,SNR=1.5						
	comp=Z,0.4nm,0.4s						
AKASG	Malin Array Be	63.42	327	IAmb	IAmb	17 37 03.5	
	comp=Z,2.7nm,1.1s						
ASAR	Alice Springs	84.69	203	P	P	17 39 03.6	-0.6
	comp=Z,0.3nm,0.7s,baz=18,slow=4.3,SNR=2.7						
	comp=Z,0.3nm,0.7s						

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*DJA **26** 17:28:23.3±0.9, 0°N±3°×9°7E±°, h33^{km}±11^{km}, M3.5/12, mb3.7/1, MLv3.5/12*

*IDC **26** 17:28:25.9±21.0, 0°.19S×97°.83E, h0^{km}, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=988.5km s-min=32.8km az=53.0*

ISC 26 17:28:19.0±1.9**, 0°.16N**±0°.08×**97°.0E**±0°.1**, h22^{km}, n21,** σ**1^{s}98**/12**, mb3.6**/3**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	Gunungsitoli	1.27	27	P	Pb	17 28 42.6	+0.3
GSI				S	Sn	17 28 56.5	-1.4
PBSI	Pulau Batu	1.29	99	P	Pb	17 28 44.0	+1.3
PBSI				S	Sb	17 28 59.7	+0.8
SNSI	Sinabang, Aceh	2.33	343	P	Pb	17 28 59.9	-0.5
SISI	Saibi	2.56	125	P	Pb	17 29 01.4	-2.8
MNSI	Mandailing Nat	2.65	76	P	Pb	17 29 02.3	-3.5
TPTI		3.08	3	P	Pn	17 29 06.8	+0.4
KCSI	Kotacane, Aceh	3.43	13	P	Pn	17 29 12.1	+0.9
PPI	Padang Panjang	3.45	100	P	Pn	17 29 13.5	+2.1
PDSI	Padang	3.62	107	P	Pn	17 29 15.7	+1.9
PPSI	Pulau Pagai	4.18	134	P	Pb	17 29 23.7	-8.2
KRJI	Kerinci	4.99	117	P	Pn	17 29 36.4	+3.7
KULM	Kulim	6.26	35	P	Pn	17 29 51.3	+1.1
H08S2	Diego Garcia H	25.64	252	T	T	18 00 49.8	
	baz=72,slow=76,SNR=6.0						
H08S3	Diego Garcia H	25.64	252	T	T	18 00 58.7	
	baz=72,slow=76,SNR=9.7						
H08S1	Diego Carcia H	25.66	252	T	T	18 00 54.5	
	baz=72,slow=76,SNR=6.2						
WRA	Warramunga Arr	41.66	121	P	P	17 36 09.1	+2.8
	0.4nm,0.6s,baz=297,slow=8.0,SNR=2.2						
	0.4nm,0.6s						
MKAR	Makanchi Array	48.20	346	P	P	17 37 12.1	+14
	0.3nm,0.5s,baz=154,slow=8.3,SNR=5.7						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	54.55	351	P	P	17 37 59.2	+14
	0.9nm,0.4s,baz=177,slow=6.3,SNR=4.7						
	0.9nm,0.4s						
H04N2	CROZET ISLANDS	60.81	214	T	T	18 45 18.5	
	baz=54						
H04N1	CROZET ISLANDS	60.82	214	T	T	18 45 14.5	
	baz=54						
H04N3	CROZET ISLANDS	60.83	214	T	T	18 45 14.8	
	baz=54						

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*IDC **26** 17:30:36.3±2.3, 2°.89S×131°.10E, h0^{km}, mb3.7/3, mbtmp3.7/5, ML3.5/2, Error ellipse: s-maj=133.0km s-min=24.4km az=77.0*

*DJA **26** 17:30:40.1±0.4, 3°S±4°×13°1E±°, h12^{km}±3^{km}, M4.0/11, mb5.0/1, MLv3.5/11*

ISC 26 17:30:41.1±0.8**, 3°.05S**±0°.08×**130°.63E**±0°.05**, h24^{km}, n15,** σ**1^{s}20**/18**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	1.62	85	P	Sn	17 31 29.1	+0.7
FAKI				S	Sb	17 31 29.3	-1.1
BNDI	Bandanaira	1.63	206	P	Pb	17 31 10.3	-0.3
MSAI	Masohi	1.73	260	P	Pn	17 31 09.7	0.0
KRAI	Karang Ratu	2.25	263	P	Pn	17 31 18.2	+1.3
SIJI	Sorong	2.26	16	P	Pn	17 31 17.5	+0.5
SWI	Sorong	2.26	16	P	Pn	17 31 17.5	+0.4
AAI	Ambon	2.51	255	P	Pn	17 31 20.0	-0.5
NLAI	Namlea	3.53	267	P	Pn	17 31 35.7	+1.2
NLAI				S	Sn	17 32 17.1	+1.6
SANI	Sanana	4.74	282	P	Pn	17 31 52.0	+0.8
SANI				S	Sn	17 32 43.3	-2.2
BAKI	Biak	5.78	71	P	Pn	17 32 07.1	+1.7
FITZ	Fitzroy Crossi	15.73	198	Pn	Pn	17 34 23.1	+1.8
	0.1nm,0.3s,baz=25,slow=13,SNR=1.7						
	1.6nm,0.7s						
WRA	Warramunga Arr	17.17	168	P	Pn	17 34 39.0	-0.7
	0.2nm,0.3s,baz=349,slow=11,SNR=6.4						
	1.0nm,0.7s						
ASAR	Alice Springs	20.74	171	P	P	17 35 19.4	-0.8
	4.2nm,0.5s,baz=350,slow=10,SNR=70						
	4.2nm,0.5s						
MKAR	Makanchi Array	65.31	326	P	P	17 41 21.6	+0.3
	0.2nm,0.4s,baz=106,slow=8.0,SNR=5.0						
	0.2nm,0.4s						
ZALV	Zalesovo Beam	68.36	333	P	P	17 41 39.6	-0.9
	0.3nm,0.4s,baz=133,slow=8.0,SNR=2.4						
	0.3nm,0.4s						

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*KRSC **26** 17:36:33.5±0.9, 58°.87N×158°.58E, h7^{km}±6^{km}, Ml4.1*

*IDC **26** 17:36:35.9±1.0, 58°.71N×159°.01E, h0^{km}, mb3.5/9, mbtmp3.5/12, ML3.5/3, Error ellipse: s-maj=23.0km s-min=19.0km az=166.0*

*NERS **26** 17:36:40.3, 58°.90N×158°.44E, h10^{km}*

ISC 26 17:36:37.3±0.6**, 58°.76N**±0°.05×**158°.65E**±0°.04**, h10^{km}, n26,** σ**1^{s}90**/34**, mb3.6**/9**, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALN	Palana	0.76	63	*e*P	Pg	17 36 49.1	-2.8
PALN				*e*S	Sg	17 36 59.1	-2.7
OSSR	Ossora	2.33	76	*e*P	Pn	17 37 13.8	-1.9
OSSR				*e*S	Sn	17 37 44.4	+0.1
KOZ	Kozyrevsk	2.79	166	*e*P	Pn	17 37 22.5	+0.6
ESO	Esso	2.84	179	*e*P	Pn	17 37 23.1	+0.4
BZP	Bezymyannyi-Pe	3.03	159	*e*P	Pn	17 37 26.3	+0.9
BZGR	Bezymyannyi-Gr	3.04	158	*e*P	Pn	17 37 26.3	+0.9
KMNR	Kamenistaya	3.13	163	*e*P	Pn	17 37 28.0	+1.2
GADL	Gadlja	3.88	287	*e*P	Pb	17 37 42.7	-3.0
GADL				*e*Sg	Sg	17 38 38.5	-3.2
GADL				Sgmax		17 39 04.0	
	310nm,0.8s						
GADL				Sgmax		17 39 04.0	
	130nm,0.8s						
TLAR	Talaya	3.94	310	*e*P	Pn	17 37 39.7	+1.9
TLAR				*e*Pg	Pg	17 37 50.2	-2.5
TLAR				Pgmax		17 37 53.1	
	10.0nm,0.4s						
TLAR				*e*Sg	Sg	17 38 41.2	-2.6
TLAR				Sgmax		17 38 56.3	
	160nm,0.5s						
TLAR				Sgmax		17 38 56.3	
	70nm,0.4s						
MA2	Magadan	4.14	285	Pn	Pn	17 37 43.3	+2.8
	0.7nm,0.3s,baz=124,slow=22,SNR=1.8						
MA2				Lg	Lg	17 38 48.8	
	4.8nm,0.3s,baz=127,slow=23,SNR=6.4						
	5.4nm,0.5s						
MA2	Magadan	4.14	285	*e*P	Pn	17 37 44.3	+3.8
MA2				*e*Pg	Pg	17 37 54.5	-2.0
MA2				Pgmax		17 38 01.1	
	30nm,0.8s						
MA2				*e*Sg	Sg	17 38 48.7	-1.4
MA2				Sgmax		17 39 06.1	
	80nm,0.7s						
MA2				Sgmax		17 39 06.1	
	60nm,0.9s						
MGD	Magadan 1	4.25	291	*e*P	Pn	17 37 43.4	+1.4
MGD				*e*Sg	Sg	17 38 52.4	-1.2
MGD				Sgmax		17 38 55.2	
	50nm,0.7s						
MGD				Sgmax		17 38 55.2	
	30nm,0.5s						
SEY	Seymchan	5.19	326	Pn	Pn	17 37 56.9	+2.0
	0.5nm,0.3s,baz=147,slow=16,SNR=4.3						
SEY				Lg	Lg	17 39 20.4	
	1.3nm,0.3s,baz=181,slow=22,SNR=2.2						
	1.2nm,0.3s						
SEY	Seymchan	5.19	326	*e*P	Pn	17 37 56.8	+2.0
SEY				*e*Pg	Pg	17 38 14.9	-1.6
SEY				*e*Sg	Sg	17 39 21.8	-1.9
SEY				Sgmax		17 39 40.6	
	10.0nm,0.9s						
SEY				Sgmax		17 39 40.6	
	30nm,0.9s						
SUUS	Susuman	6.53	313	*e*P	Pg	17 38 42.7	+0.6
SUUS				*e*Sg	Sg	17 40 04.0	-2.5
SUUS				Sgmax		17 40 30.7	
	40nm,0.7s						
BILL	Bilibino	9.91	17	*e*Sg		17 41 55.4	
BILL				Sgmax		17 42 09.1	
	10.0nm,0.9s						
TIXI	Tiksi	17.68	329	P	P	17 40 45.6	+1.5
	0.1nm,0.3s,baz=108,slow=3.7,SNR=4.3						
	0.7nm,0.5s						
ILAR	Eielson Array	25.72	53	P	P	17 42 06.3	-1.0
	0.6nm,0.7s,baz=268,slow=7.7,SNR=7.8						
	0.6nm,0.7s						
MJAR	Matsushiro Arr	25.94	220	P	P	17 42 10.5	+0.9
	1.5nm,0.7s,baz=20,slow=10,SNR=3.8						
	1.5nm,0.7s						
YKA	Yellowknife Ar	39.68	47	P	P	17 44 08.6	-0.3
	0.3nm,0.8s,baz=303,slow=8.4,SNR=5.4						
	0.3nm,0.8s						
MKAR	Makanchi Array	45.21	290	P	P	17 44 54.6	+0.5
	0.3nm,0.6s,baz=38,slow=8.0,SNR=3.7						
	0.3nm,0.6s						
BVAR	Borovoye Array	46.39	304	P	P	17 45 05.2	+1.8
	0.3nm,0.5s,baz=43,slow=8.6,SNR=3.3						
	0.3nm,0.5s						
NOA	NORSAR Array B	57.88	342	P	P	17 46 27.6	-1.0
	0.5nm,0.8s,baz=17,slow=6.9,SNR=3.5						
	0.5nm,0.8s						
AKASG	Malin Array Be	63.38	327	P	P	17 47 07.1	+0.9
	0.4nm,0.4s,baz=232,slow=49,SNR=1.5						
	0.4nm,0.4s						
GERES	GERESS Array B	68.97	336	P	P	17 47 44.0	+1.7
	0.1nm,0.4s,baz=0.0,slow=7.8,SNR=2.9						
	0.1nm,0.4s						
ASAR	Alice Springs	84.64	203	P	P	17 49 11.5	+0.8
	0.4nm,0.7s,baz=10,slow=5.1,SNR=9.5						
	0.4nm,0.7s						

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*IDC **26** 17:47:08.4±0.7, 39°.57N×95°.61E, h0^{km}, mb3.8/13, mbtmp3.8/17, ML3.7/4, MS4.3/1, Error ellipse: s-maj=21.9km s-min=13.1km az=43.0*

*NEIC **26** 17:47:09.6±1.8, 39°.69N±0°.08×95°.36E±0°.06, h10^{km}±1^{km}, mb4.1/24, Error ellipse: s-maj=13.6km s-min=7.2km az=161.0*

ISC 26 17:47:09.3±0.4**, 39°.65N**±0°.04×**95°.44E**±0°.04**, h10^{km}, n69,** σ**1^{s}54**/79**, mb3.9**/18**, Gansu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTA	Gaotai	3.39	93	Pn	Pn	17 48 03.0	+0.6
GTA				Pg	Pb	17 48 07.5	-2.1
GTA				Sg	Sb	17 48 50.3	-0.7
GTA				smax	smax		
	comp=N,970nm,0.7s						
GTA				smax	smax		
	comp=E,480nm,0.8s						
GTA				LR	LR		
	comp=N,2µm,8.7s						
GTA				LR	LR		
	comp=E,1µm,10.2s						
GOMU	GeErMu	3.48	188	Pn	Pn	17 48 05.0	+1.2
GOMU				Pg	Pb	17 48 10.0	-1.1
GOMU				Sn	Sn	17 48 48.8	+3.6
GOMU				Sg	Sb	17 48 54.5	+0.9
GOMU				smax	smax		
	comp=N,160nm,0.5s						
GOMU				smax	smax		
	comp=E,170nm,0.8s						
WMQ	Urumqi	7.13	308	Pn	Pn	17 48 56.0	+2.3
WMQ				Sn	Sn	17 50 16.5	+1.6
WMQ				smax	smax		
	comp=N,380nm,1.9s						
WMQ				smax	smax		
	comp=E,540nm,1.7s						
LZH	Lanzhou	7.54	115	*e*P	Pn	17 49 02.8	+3.4
LZH				sP	Pb	17 49 16.0	-4.2
LZH				pmax	pmax		
	comp=Z,23nm,1.6s						
LSA	Lhasa	10.53	201		Pn	17 49 41.6	+0.9
SONM	Songino Array	11.38	40	Pn	Pn	17 49 52.6	+0.6
	comp=Z,0.6nm,0.3s,baz=225,slow=14,SNR=16						
SONM				Lg	Lg	17 53 09.6	
	comp=Z,1.1nm,0.3s,baz=221,slow=31,SNR=8.8						
	comp=Z,1.2nm,0.5s						
SONM	Songino Array	11.38	40	Pn	Pn	17 49 51.3	-0.7
ULN	Ulaanbaatar	11.74	42	Pn	Pn	17 49 59.1	+2.2
MKAR	Makanchi Array	11.95	311	Pn	Pn	17 49 59.2	-0.4
	comp=Z,1.9nm,0.3s,baz=117,slow=14,SNR=52						
MKAR				Sn	Sn	17 52 08.9	-4.0
	comp=Z,1.5nm,0.3s,baz=114,slow=26,SNR=7.7						
MKAR				Lg	Lg	17 53 31.4	
	baz=147,slow=30						
	comp=Z,2.8nm,0.4s						
MKAR	Makanchi Array	11.95	311		Pn	17 49 59.7	0.0
MAKZ	Makanchi	12.14	311		Pn	17 50 01.8	-0.4
ZIRO	ZIRO	12.16	187	*e*P	Pn	17 50 01.8	-1.0
ZIRO				*e*S	Sn	17 52 17.7	-0.8
ZIRO				IAML		17 52 24.4	
	comp=E,9.8nm,0.5s						
ZIRO				IAML		17 52 24.4	
	comp=N,10nm,0.4s						
LKP	Lekhapani	12.29	178	*e*P	Pn	17 50 02.8	-1.4
LKP				*e*S	Sn	17 52 20.6	-0.7
LKP				IAML		17 54 30.6	
	comp=E,50nm,0.6s						
LKP				IAML		17 54 31.5	
	comp=N,55nm,0.5s						
HHC	Hu-ho-hao-te	12.38	79	*e*P	Pn	17 50 07.8	+2.1
HHC				pmax	pmax		
	comp=Z,11nm,0.5s						
HHC				pmax	pmax		
	comp=Z,320nm,6.0s						
WUS	Wushi	12.46	282		Pn	17 50 05.6	-1.2
PRZ	Przheval'sk	13.16	288		Pn	17 50 16.0	-0.4
TARG	Taragay, Kyrgy	13.54	285		Pn	17 50 21.0	-0.8
GTK	Tadong	13.54	207	*e*P	Pn	17 50 18.3	-3.3
GTK				*e*S	Sn	17 52 50.3	-2.0
GTK				IAML		17 55 13.5	
	comp=N,51nm,0.2s						
GTK				IAML		17 55 14.6	
	comp=E,47nm,0.2s						
KOHI	KOHIMA	13.93	185	*e*P	Pn	17 50 25.4	-1.5
KOHI				*e*S	Sn	17 53 00.0	-1.7
KOHI				IAML		17 53 14.9	
	comp=E,23nm,0.5s						
KOHI				IAML		17 53 15.8	
	comp=N,21nm,0.3s						
KDJ	Kajisay	14.03	286		Pn	17 50 26.9	-1.4
PZH	PanZhiHua	14.13	156	P	Pn	17 50 32.3	+2.7
LYN	LuoYang	14.51	105	P	Pn	17 50 34.5	-0.1
LYN				pmax	pmax		
	comp=Z,20nm,0.6s						
BOOM	Boomskoye usch	14.98	287		Pn	17 50 39.6	-1.5
KSH	Kashi	15.01	276	P	P	17 50 45.3	-1.8
KSH				pmax	pmax		
	comp=Z,43nm,0.8s						
ZAA0	Zalesovo Array	16.02	337	Pn	Pn	17 50 53.9	-0.6
ZALV	Zalesovo Beam	16.02	337	Pn	Pn	17 50 55.8	+1.3
	comp=Z,0.1nm,0.3s,baz=140,slow=12,SNR=8.7						
ZALV				Lg	Lg	17 55 40.9	
	comp=Z,0.1nm,0.3s,baz=145,slow=24,SNR=5.8						
	comp=Z,0.5nm,0.5s						
ZALV	Zalesovo Beam	16.02	337	Pn	Pn	17 50 54.0	-0.5
AAK	Ala-Archa	16.05	287	Pn	Pn	17 50 53.8	-1.4
	comp=Z,0.5nm,0.3s,baz=125,slow=8.8,SNR=9.6						
AAK				Lg	Lg	17 55 44.8	
	comp=Z,0.1nm,0.3s,baz=333,slow=14,SNR=3.7						
	comp=Z,3.1nm,0.6s						
AAK	Ala-Archa	16.05	287		Pn	17 50 53.0	-2.2
KURK	Kurchatov	16.18	319		Pn	17 50 55.3	-1.3
KURK				IAmb	IAmb	17 50 56.6	
	comp=Z,5.3nm,0.7s						
ARSB	Arslanbob	17.16	283		Pn	17 51 07.2	-2.1
ARSB				IAmb	IAmb	17 51 15.8	
	comp=Z,14nm,1.2s						
MANEM	Manem	18.68	271		Pn	17 51 27.8	-0.3
MANEM				IAmb	IAmb	17 51 31.3	
	comp=Z,17nm,0.7s						
NIL	Nilore	18.76	258		P	17 51 27.8	-0.7
NIL				IAmb	IAmb	17 51 32.5	
	comp=Z,8.8nm,0.7s						
KK31	Karatay Array	19.00	289	P	P	17 51 30.3	-0.7
KKAR	Karatay Array	19.00	289	P	Pn	17 51 31.1	-0.6
GAR	Garm	19.43	276		P	17 51 34.7	-1.2
GAR				IAmb	IAmb	17 51 38.6	
	comp=Z,13nm,0.8s						
CHGR	Chuyangaron	20.38	276		P	17 51 45.4	-0.9
CHTO	Chiang Mai	20.98	171	P	P	17 51 52.8	+0.1
CM31	Chiang Mai Arr	21.33	171	P	P	17 51 55.8	-0.7
CM31				IAmb	IAmb	17 52 09.4	
	comp=Z,5.7nm,1.1s						
CMAR	Chiang Mai Arr	21.33	171	P	P	17 51 55.7	-0.7
	comp=Z,1.6nm,0.7s,baz=345,slow=9.8,SNR=18						
	comp=Z,1.6nm,0.7s						
CMAR	Chiang Mai Arr	21.33	171	P	P	17 51 56.4	-0.1
SHAA	Shahritus	21.42	273		P	17 51 57.8	+0.4
SHAA				IAmb	IAmb	17 52 05.8	
	comp=Z,30nm,1.0s						
KBL	Kabul	21.62	265		P	17 51 59.0	-0.8
KBL				IAmb	IAmb	17 52 04.5	
	comp=Z,12nm,0.9s						
BVAR	Borovoye Array	21.72	316	P	P	17 52 01.5	+1.0
	comp=Z,1.8nm,0.6s,baz=116,slow=8.8,SNR=12						
	comp=Z,1.8nm,0.6s						
BORK	Borovoye	21.77	316		P	17 52 01.7	+0.8
BORK				IAmb	IAmb	17 52 13.3	
	comp=Z,3.9nm,0.9s						
KSRS	Korea Array	25.43	85	P	P	17 52 35.3	-1.7
	comp=Z,2.4nm,0.9s,baz=279,slow=9.9,SNR=3.1						
	comp=Z,2.4nm,0.9s						
ABKAR	Akbulak array	26.88	303	P	P	17 52 50.3	+0.3
KBZ	Khabaz	38.91	294	P	P	17 54 37.3	+2.4
	comp=Z,1.4nm,0.7s,baz=105,slow=6.3,SNR=5.1						
	comp=Z,1.4nm,0.7s						
FINES	FINESS Array B	46.52	322	P	P	17 55 37.9	+1.4
	comp=Z,2.4nm,0.8s,baz=80,slow=10,SNR=7.4						
	comp=Z,2.4nm,0.8s						
FINES	FINESS Array B	46.52	322	P	P	17 55 35.8	-0.7
BRTR	Keskin Array B	46.69	291	P	P	17 55 40.3	+1.9
	comp=Z,1.0nm,0.9s,baz=81,slow=7.6,SNR=4.3						
	comp=Z,1.0nm,0.9s						
BRTR	Keskin Array B	46.69	291	P	P	17 55 37.4	-1.0
HFS	Hagfors	52.72	322	P	P	17 56 25.9	+2.1
	comp=Z,1.6nm,0.7s,baz=102,slow=14,SNR=2.6						
	comp=Z,1.6nm,0.7s						
NC405	NORSAR Array S	53.38	323	P	P	17 56 29.1	+0.5
NC602	NORSAR Array S	53.57	323	P	P	17 56 28.7	-1.3
NB201	NORSAR Array S	53.59	323	P	P	17 56 29.2	-1.0
NB2	NORSAR Subarra	53.63	323	P	P	17 56 31.8	+1.3
	comp=Z,1.9nm,0.8s,baz=71,slow=7.9						
NOA	NORSAR Array B	53.63	323	P	P	17 56 31.5	+1.0
	comp=Z,0.6nm,0.6s,baz=75,slow=6.9,SNR=7.1						
	comp=Z,0.6nm,0.6s						
BATI	Baumata	56.10	146	LR	LR	18 22 04.8	
	comp=Z,257nm,18.8s,baz=278,slow=38						
D19K	Kuna River	59.33	24	P	P	17 57 10.8	-0.2
FUORN	Ofenpass-Fuorn	59.65	307	P	P	17 57 11.7	-2.1
FUORN				IAmb	IAmb	17 57 19.9	
	comp=Z,2.7nm,0.9s						
EKA	Eskdalemuir Ar	62.90	321	P	P	17 57 38.5	+3.2
	comp=Z,1.6nm,0.7s,baz=49,slow=6.8,SNR=2.6						
	comp=Z,1.6nm,0.7s						
ILAR	Eielson Array	65.14	25	P	P	17 57 51.3	+1.4
	comp=Z,0.5nm,1.0s,baz=320,slow=33,SNR=3.0						
	comp=Z,0.5nm,1.0s						
E29M	Blow River	65.20	19	P	P	17 57 51.5	+1.3
E29M				IAmb	IAmb	17 57 52.0	
	comp=Z,4.2nm,1.5s						
WRA	Warramunga Arr	69.53	141	P	P	17 58 19.3	+1.1
	comp=Z,0.5nm,0.7s,baz=339,slow=5.8,SNR=2.0						
	comp=Z,0.5nm,0.7s						
ESDC	Sonseca Array	72.13	307	P	P	17 58 35.9	+1.8
	comp=Z,0.8nm,0.7s,baz=50,slow=6.0,SNR=6.8						
	comp=Z,0.8nm,0.7s						
ESDC	Sonseca Array	72.13	307	P	P	17 58 33.2	-0.8
ASAR	Alice Springs	72.51	143	P	P	17 58 35.8	-0.5
	comp=Z,0.7nm,0.7s,baz=333,slow=6.2,SNR=13						
	comp=Z,0.7nm,0.7s						
ASAR	Alice Springs	72.51	143	P	P	17 58 36.3	+0.1

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*KRSC **26** 18:08:59.1±1.2, 58°.79N×158°.69E, h15^{km}±11^{km}, Ml4.6*

*MOS **26** 18:09:00.6±0.9, 58°.78N×158°.89E, h11^{km}, mb4.5/20, Error ellipse: s-maj=11.9km s-min=5.6km az=98.6*

*IDC **26** 18:09:00.4±0.6, 58°.75N×158°.86E, h0^{km}, mb4.0/22, mbtmp4.0/26, ML3.8/3, MS3.6/21, Error ellipse: s-maj=14.3km s-min=11.0km az=4.0*

*NEIC **26** 18:09:02.3±1.6, 58°.78N±0°.07×158°.8E±0°.2, h10^{km}±1^{km}, mb4.4/103, Error ellipse: s-maj=13.7km s-min=12.1km az=75.0*

*NERS **26** 18:09:07.6, 58°.85N×158°.15E, h33^{km}*

ISC 26 18:09:02.2±0.4**, 58°.78N**±0°.04×**158°.83E**±0°.02**, h10^{km}, n199,** σ**1^{s}47**/187**, mb4.4**/86**, MS3.7**/18**, 8C-3D, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALN	Palana	0.67	61	PN	Pg	18 09 13.1	-2.0
PALN				S	Sg	18 09 22.6	-1.2
PALN	Palana	0.67	61	*e*P	Pg	18 09 13.1	-2.0
PALN				*e*S	Sg	18 09 22.7	-1.2
OSSR	Ossora	2.24	76	PN	Pn	18 09 38.3	-1.0
OSSR				S	Sn	18 10 07.8	+0.9
OSSR	Ossora	2.24	76	*e*P	Pn	18 09 38.4	-1.0
OSSR				*e*S	Sn	18 10 07.9	+0.9
SRDR	Sredinnyy	2.51	169	PN	Pn	18 09 42.0	-1.1
SRDR	Sredinnyy	2.51	169	*e*P	Pn	18 09 42.0	-1.1
SMKR	Semkarok	2.62	146	PN	Pn	18 09 45.5	+1.0
SMKR	Semkarok	2.62	146	*e*P	Pn	18 09 45.5	+1.0
KLY	Klyuchi	2.66	158	PN	Pn	18 09 44.2	-0.8
KLY				S	Sn	18 10 17.1	-0.1
KLY	Klyuchi	2.66	158	*e*P	Pn	18 09 44.2	-0.8
KLY				*e*S	Sn	18 10 17.1	-0.1
KOZ	Kozyrevsk	2.78	168	PN	Pn	18 09 46.4	-0.3
KOZ	Kozyrevsk	2.78	168	*e*P	Pn	18 09 46.5	-0.3
GADL	Gadlja	3.96	286	*e*P	Pb	18 10 10.2	-1.8
GADL				*e*Pg	Pg	18 10 16.6	-1.4
GADL				Pgmax		18 10 21.5	
	170nm,0.4s						
GADL				*e*Sg	Sg	18 11 04.7	-4.6
GADL				Sgmax		18 11 27.8	
	2µm,1.0s						
GADL				Sgmax		18 11 27.8	
	660nm,1.0s						
GADL	Gadlja	3.96	286	*e*PN	Pb	18 10 10.2	-1.8
TLAR	Talaya	4.00	309	*e*P	Pn	18 10 04.2	+0.6
TLAR				*e*Pg	Pb	18 10 15.1	+2.3
TLAR				Pgmax		18 10 27.0	
	120nm,0.7s						
TLAR				*e*Sg	Sg	18 11 06.0	-4.7
TLAR				Sgmax		18 11 24.2	
	130nm,0.6s						
TLAR				Sgmax		18 11 24.2	
	880nm,0.6s						
TLAR	Talaya	4.00	309	*e*PN	Pn	18 10 04.2	+0.6
MA2	Magadan	4.22	284	Pn	Pn	18 10 07.0	+0.5
	1.2nm,0.3s,baz=95,slow=13,SNR=8.8						
MA2				Lg	Lg	18 11 11.7	
	10nm,0.3s,baz=28,slow=9.0,SNR=5.5						
MA2				LR	LR	18 11 49.4	
	comp=Z,605nm,21.8s,baz=47,slow=40						
	13nm,0.7s						
MA2	Magadan	4.22	284		Pn	18 10 06.3	-0.2
MA2	Magadan	4.22	284	*e*P	Pn	18 10 06.4	-0.2
MA2				*e*Pg	Pb	18 10 18.2	+1.7
MA2				Pgmax		18 10 27.7	
	60nm,0.7s						
MA2				*e*Sg	Sb	18 11 12.3	+4.8
MA2				Sgmax		18 11 29.4	
	290nm,0.7s						
MA2				Sgmax		18 11 29.4	
	130nm,0.7s						
MA2	Magadan	4.22	284	*e*PN	Pn	18 10 06.4	-0.2
MGD	Magadan 1	4.33	291	*e*P	Pn	18 10 08.2	+0.2
MGD				*e*Sg	Sg	18 11 16.8	-4.3
MGD				Sgmax		18 11 18.7	
	250nm,0.5s						
MGD				Sgmax		18 11 18.7	
	100nm,0.4s						
SEY	Seymchan	5.23	326	Pn	Pn	18 10 20.3	0.0
	1.0nm,0.3s,baz=144,slow=15,SNR=19						
SEY				Lg	Lg	18 11 45.8	
	5.6nm,0.3s,baz=87,slow=24,SNR=4.8						
SEY				LR	LR	18 12 32.4	

	comp=Z,689nm,21.0s,baz=157,slow=40						
	2.2nm,0.3s						
SEY	**Seymchan**	**5.23**	**326**	*e*P	**Pn**	**18 10 20.6**	**+0.3**
SEY				*e*Pg	**Pg**	**18 10 40.6**	**-1.6**
SEY				Pgmax		18 10 44.9	
	20nm,0.8s						
SEY				*e*Sg	**Sg**	**18 11 47.4**	**-2.4**
SEY				Sgmax		18 12 01.2	
	130nm,0.7s						
SEY				Sgmax		18 12 01.2	
	80nm,0.8s						
SEY	**Seymchan**	**5.23**	**326**	*e*PN	**Pn**	**18 10 20.6**	**+0.3**
TLON	**Talon**	**5.31**	**285**	*e*P	**Sb**	**18 11 42.2**	**+3.5**
TLON				*e*Sg	**Sg**	**18 11 45.5**	**-7.0**
TLON				Sgmax		18 12 03.9	
	360nm,0.7s						
TLON				Sgmax		18 12 03.9	
	610nm,0.7s						
KRX	**Arik**	**5.43**	**181**	PN	**Pn**	**18 10 23.4**	**+0.2**
KRX	**Arik**	**5.43**	**181**	*e*P	**Pn**	**18 10 23.4**	**+0.2**
PEA0B	**Petropavlovsk-**	**5.72**	**187**	⇑*e*PN	**Pn**	**18 10 29.0**	**+1.9**
PETK	**Petropavlovsk-**	**5.72**	**187**	Pn	**Pn**	**18 10 27.0**	**0.0**
	7.5nm,1.0s,baz=42,slow=14,SNR=4.9						
PETK				LR	LR	18 12 58.7	
	comp=Z,247nm,20.7s,baz=73,slow=42						
SUUS	**Susuman**	**6.58**	**312**	*e*P	**Pn**	**18 10 40.0**	**+1.0**
SUUS				*e*Pg	**Pg**	**18 11 08.3**	**+0.2**
SUUS				*e*Sg	**Sg**	**18 12 28.4**	**-4.9**
SUUS				Sgmax		18 12 54.0	
	70nm,0.7s						
SUUS				Sgmax		18 12 54.0	
	240nm,0.7s						
SUUS	**Susuman**	**6.58**	**312**	*e*PN	**Pn**	**18 10 40.0**	**+1.0**
BILL	**Bilibino**	**9.87**	**17**	*e*P	Pn	18 11 31.5	+7.6
BILL				*e*Sg		18 14 27.6	
BILL				Sgmax		18 14 37.7	
	10.0nm,1.0s						
BILL				Sgmax		18 14 37.7	
	20nm,1.0s						
BILL	**Bilibino**	**9.87**	**17**	*e*PN	Pn	18 11 31.5	+7.6
SHEM	**Shemya Is, Ala**	**10.51**	**119**	LR	LR	18 14 54.4	
	comp=Z,303nm,21.8s,baz=322,slow=34						
AMKA	**Amchitka**	**13.83**	**113**	Pn	**Pn**	**18 12 15.9**	**-2.1**
YAK	**Yakutsk**	**14.70**	**295**	Pn	**P**	**18 12 34.0**	**-2.1**
	0.8nm,0.3s,baz=113,slow=13,SNR=5.9						
YAK				Lg	Lg	18 16 49.0	
	0.7nm,0.3s,baz=163,slow=23,SNR=6.1						
YAK				LR	LR	18 19 01.1	
	comp=Z,80nm,21.9s,baz=113,slow=41						
YAK	**Yakutsk**	**14.70**	**295**	Pn	**Pn**	**18 12 29.2**	**-0.7**
YAK	**Yakutsk**	**14.70**	**295**	*e*P	**Pn**	**18 12 29.7**	**-0.2**
YAK				*e*S	**Sn**	**18 15 12.1**	**-0.5**
YAK				pmax	pmax		
	comp=Z,11nm,1.1s						
YAK				smax	smax		
	comp=N,202nm,7.4s						
YAK				smax	smax		
	comp=E,239nm,5.2s						
YAK				MLR	MLR		
	comp=Z,568nm,17.0s						
YAK				MLR	MLR		
	comp=N,210nm,24.0s						
YAK				MLR	MLR		
	comp=E,173nm,21.0s						
TIXI	**Tiksi**	**17.71**	**329**	P	**P**	**18 13 09.3**	**0.0**
	comp=E,0.2nm,0.3s,baz=115,slow=12,SNR=8.3						
TIXI				LR	LR	18 21 04.3	
	comp=E,200nm,19.6s,baz=191,slow=41						
	comp=E,1.8nm,0.5s						
TIXI	**Tiksi**	**17.71**	**329**		**Pn**	**18 13 08.3**	**-0.2**
TIXI	**Tiksi**	**17.71**	**329**	⇑*e*P	**P**	**18 13 09.4**	**0.0**
TIXI				pmax	pmax		
	comp=Z,13nm,2.3s						
ZEA	**Zeya**	**18.14**	**268**	*e*P	**P**	**18 13 15.6**	**+1.3**
ZEA				MLR	MLR		
	comp=E,100nm,11.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,12.0s						
C18K	**Utukok River**	**19.87**	**44**	P	**P**	**18 13 33.1**	**-0.1**
HEH	**HeiHe**	**19.97**	**258**	*e*P	**P**	**18 13 34.3**	**0.0**
HEH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
H17K	**Granite Mounta**	**20.10**	**55**	P	**P**	**18 13 36.2**	**+0.6**
O14K	**Tigyukauivet M**	**20.34**	**71**		**P**	**18 13 39.1**	**+0.8**
O14K				IAmb	IAmb	18 13 54.4	
	comp=Z,22nm,1.1s						
C19K	**Lookout Ridge**	**20.52**	**43**		**P**	**18 13 39.8**	**-0.4**
J17K	**VABM Dome**	**20.57**	**59**		**P**	**18 13 41.5**	**+0.7**
G18K	**Tagagawik**	**20.61**	**52**		**P**	**18 13 40.6**	**-0.6**
L16K	**Owhat River**	**20.64**	**64**	P	**P**	**18 13 40.9**	**-0.6**
H18K	**Honhosa River**	**20.75**	**54**	P	**P**	**18 13 42.5**	**-0.2**
D19K	**Kuna River**	**20.97**	**45**	P	**P**	**18 13 43.5**	**-1.6**
K17K	**Iditarod**	**21.01**	**61**		**P**	**18 13 46.3**	**+0.8**
K17K				IAmb	IAmb	18 13 49.7	
	comp=Z,12nm,1.0s						
O15K	**Ungalikthiuk R**	**21.08**	**71**	P	**P**	**18 13 47.8**	**+1.6**
O15K				IAmb	IAmb	18 13 59.3	
	comp=Z,38nm,1.4s						
E19K	**Redstone River**	**21.22**	**48**		**P**	**18 13 47.4**	**-0.3**
J18K	**Innoko River**	**21.62**	**59**	P	**P**	**18 13 52.2**	**+0.1**
L18K	**Granite Mounta**	**21.84**	**62**	P	**P**	**18 13 55.6**	**+1.2**
J20K	**Nowinta River**	**22.65**	**56**		**P**	**18 14 01.5**	**-1.5**
J20K				IAmb	IAmb	18 14 06.4	
	comp=Z,9.9nm,0.9s						
F21K	**Alatna River**	**22.67**	**48**	P	**P**	**18 14 01.7**	**-1.5**
G21K	**Allakaket**	**22.68**	**50**	P	**P**	**18 14 02.0**	**-1.5**
G21K				IAmb	IAmb	18 14 04.8	
	comp=Z,16nm,0.9s						
B22K	**Teshekpuk Lake**	**22.82**	**40**	IAmb	IAmb	18 14 07.6	
	comp=Z,16nm,0.8s						
H21K	**Melozitna Rive**	**23.04**	**52**	P	**P**	**18 14 06.1**	**-1.0**
I21K	**Tanana**	**23.43**	**53**	P	**P**	**18 14 09.3**	**-1.8**
H22K	**Ishtalitna Cre**	**23.60**	**52**	IAmb	IAmb	18 14 13.4	
	comp=Z,18nm,1.4s						
C23K	**Itkillik River**	**23.74**	**42**		**P**	**18 14 14.2**	**+0.1**
C23K				IAmb	IAmb	18 14 14.8	
	comp=Z,9.2nm,0.7s						
COLD	**Coldfoot**	**23.94**	**48**		**P**	**18 14 15.1**	**-0.9**
E23K	**Chandalar**	**24.11**	**46**	IAmb	IAmb	18 14 25.9	
	comp=Z,11nm,0.9s						
KTH	**Kantishna Hill**	**24.16**	**57**	P	**P**	**18 14 18.9**	**+0.7**
KTH				IAmb	IAmb	18 14 26.1	
	comp=Z,16nm,1.1s						
HILR	**Hailar Array B**	**24.34**	**265**	LR	LR	18 24 33.5	
	comp=Z,82nm,21.4s,baz=70,slow=38						
D24K	**Happy Valley**	**24.36**	**43**	IAmb	IAmb	18 14 21.9	
	comp=Z,9.8nm,0.9s						
TRF	**Thorofare Moun**	**24.46**	**57**	P	**P**	**18 14 21.6**	**+0.6**
TRF				IAmb	IAmb	18 14 26.4	
	comp=Z,15nm,1.0s						
NEA2	**Nenana**	**24.75**	**54**	P	**P**	**18 14 22.9**	**-0.6**
NEA2				IAmb	IAmb	18 14 25.2	
	comp=Z,6.3nm,0.9s						
F24K	**Squaw Lake**	**24.81**	**47**	P	**P**	**18 14 24.2**	**+0.2**
F24K				IAmb	IAmb	18 14 26.4	
	comp=Z,6.8nm,0.9s						
MCK	**McKinley**	**24.99**	**56**		**P**	**18 14 24.8**	**-0.8**
MCK				IAmb	IAmb	18 14 28.5	
	comp=Z,10.0nm,0.8s						
MCK	**McKinley**	**24.99**	**56**	P	**P**	**18 14 24.8**	**-0.8**
MCK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
H24K	**Noodor Dome**	**25.03**	**51**		**P**	**18 14 24.1**	**-1.9**
H24K				IAmb	IAmb	18 14 28.6	
	comp=Z,8.1nm,1.0s						
G24K	**Hadweenzic Riv**	**25.06**	**49**	IAmb	IAmb	18 14 37.2	
	comp=Z,9.9nm,1.2s						
WRH	**Wood River Hil**	**25.19**	**54**	P	**P**	**18 14 26.5**	**-1.0**
WRH				IAmb	IAmb	18 14 29.4	
	comp=Z,9.7nm,0.9s						
COLA	**College**	**25.21**	**53**	⇑*e*P	**P**	**18 14 27.2**	**-0.4**
COLA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
E25K	**Arctic Village**	**25.62**	**46**		**P**	**18 14 31.8**	**+0.5**
E25K				IAmb	IAmb	18 14 41.6	
	comp=Z,7.6nm,1.1s						
IL31		**25.64**	**54**		**P**	**18 14 30.5**	**-0.9**
IL31				IAmb	IAmb	18 14 38.4	
	comp=Z,5.5nm,1.0s						
ILAR	**Eielson Array**	**25.64**	**54**	P	**P**	**18 14 30.6**	**-0.8**
	comp=Z,2.3nm,0.8s,baz=266,slow=8.4,SNR=29						
	comp=Z,2.3nm,0.8s						
ILAR	**Eielson Array**	**25.64**	**54**	P	**P**	**18 14 29.9**	**-1.6**
F25K	**Christian Rive**	**25.66**	**47**	IAmb	IAmb	18 14 34.8	
	comp=Z,5.7nm,0.8s						
HDA	**Harding Lake**	**25.69**	**54**	P	**P**	**18 14 31.6**	**-0.4**
HDA				IAmb	IAmb	18 14 33.4	
	comp=Z,6.1nm,0.8s						
MJAR	**Matsushiro Arr**	**26.01**	**220**	P	**P**	**18 14 34.6**	**-0.5**
	comp=Z,3.3nm,0.9s,baz=17,slow=11,SNR=5.9						
MJAR				LR	LR	18 25 21.2	
	comp=Z,48nm,20.7s,baz=317,slow=38						
	comp=Z,3.3nm,0.9s						
G26K	**Porcupine Rive**	**26.47**	**48**	P	**P**	**18 14 38.9**	**0.0**
G27K	**Doyon Strip**	**27.32**	**48**	IAmb	IAmb	18 14 51.1	
	comp=Z,5.1nm,0.9s						
H27K	**Steamboat Moun**	**27.50**	**49**	P	**P**	**18 14 48.2**	**-0.1**
H27K				IAmb	IAmb	18 15 19.9	
	comp=Z,6.1nm,1.2s						
MCARA	**McCarthy VSAT**	**28.30**	**60**	P	**P**	**18 14 55.8**	**+0.4**
I28M	**Miner Creek**	**28.33**	**51**	P	**P**	**18 14 56.3**	**+0.5**
H29M	**Whitestone**	**28.74**	**49**	P	**P**	**18 14 59.2**	**-0.1**
H29M				IAmb	IAmb	18 15 14.4	
	comp=Z,12nm,1.3s						
KSRS	**Korea Array**	**29.24**	**237**	LR	LR	18 26 14.0	
	comp=Z,23nm,18.4s,baz=35,slow=35						
F30M	**Barrier River**	**29.36**	**45**	IAmb	IAmb	18 15 08.4	
	comp=Z,10nm,0.9s						
A36M	**Sachs Harbour**	**31.72**	**35**		**P**	**18 15 25.7**	**+0.2**
A36M				IAmb	IAmb	18 15 28.8	
	comp=Z,5.8nm,0.7s						
SONM	**Songino Array**	**32.35**	**274**	P	**P**	**18 15 32.5**	**+0.9**
	comp=Z,1.0nm,0.9s,baz=104,slow=5.2,SNR=4.3						
SONM				PcP	**PcP**	**18 18 18.1**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=61,slow=1.6,SNR=4.0						
SONM				LR	LR	18 29 41.7	
	comp=Z,189nm,18.5s,baz=356,slow=38						
	comp=Z,1.0nm,0.9s						
C36M	**Paulatuk**	**32.93**	**40**		**P**	**18 15 35.7**	**-0.5**
C36M				IAmb	IAmb	18 15 38.1	
	comp=Z,5.7nm,0.8s						
HHC	**Hu-ho-hao-te**	**34.48**	**260**	*e*P	**P**	**18 15 51.0**	**+0.9**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,200nm,4.8s						
HHC				LR	LR		
	comp=N,260nm,12.8s						
HHC				LR	LR		
	comp=E,270nm,12.8s						
HHC				LR	LR		
	comp=Z,330nm,14.5s						
RES	**Resolute Bay**	**38.36**	**24**	LR	LR	18 33 01.9	
	comp=Z,82nm,19.3s,baz=94,slow=38						
ZALV	**Zalesovo Beam**	**39.35**	**296**	LR	LR	18 34 36.7	
	comp=Z,95nm,20.5s,baz=282,slow=39						
YKA	**Yellowknife Ar**	**39.60**	**47**	P	**P**	**18 16 32.9**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=305,slow=8.7,SNR=21						
	comp=Z,1.6nm,0.8s						
YKA	**Yellowknife Ar**	**39.60**	**47**	P	**P**	**18 16 31.6**	**-1.6**
DGZ	**Jazzator, Alta**	**40.79**	**290**	⇓*e*P	**P**	**18 16 44.4**	**+0.9**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SPITS	**Spitsbergen Ar**	**41.40**	**349**	P	**P**	**18 16 48.2**	**+0.3**
	comp=Z,6.0nm,0.8s,baz=21,slow=8.5,SNR=5.0						
	comp=Z,6.0nm,0.8s						
LZH	**Lanzhou**	**42.04**	**262**	*e*P	**P**	**18 16 56.3**	**+2.5**
LZH				sP	sP	18 17 01.5	+3.4
LZH				PcP	**PcP**	**18 18 53.3**	**+4.7**
LZH				S	S	18 22 59.5	-13
LZH				pmax	pmax		
	comp=Z,11nm,1.0s						
LZH				LR	LR		
	comp=N,270nm,13.4s						
LZH				LR	LR		
	comp=E,400nm,11.9s						
LZH				LR	LR		
	comp=Z,430nm,13.9s						
KURK	**Kurchatov**	**44.34**	**296**		**P**	**18 17 12.7**	**+0.7**
KURK				IAmb	IAmb	18 17 15.0	
	comp=Z,5.6nm,0.8s						
KURK	**Kurchatov**	**44.34**	**296**	*de*P	**P**	**18 17 12.3**	**+0.3**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WMQ	**Urumqi**	**44.69**	**283**	*e*P	**P**	**18 17 19.3**	**+4.2**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BLKN	**Baker Lake**	**44.85**	**37**	P	**P**	**18 17 14.6**	**-1.4**
BLKN				IAmb	IAmb	18 17 15.4	
	comp=Z,4.5nm,1.0s						
MK31	**Makanchi Array**	**45.29**	**290**	⇓*e*P	**P**	**18 17 20.1**	**+0.4**
MKAR	**Makanchi Array**	**45.29**	**290**	P	**P**	**18 17 19.4**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=61,slow=6.2,SNR=7.6						
MKAR				LR	LR	18 37 00.8	
	comp=Z,110nm,19.4s,baz=312,slow=37						
	comp=Z,1.2nm,0.8s						
MKAR	**Makanchi Array**	**45.29**	**290**	P	**P**	**18 17 19.1**	**-0.6**
MKAR	**Makanchi Array**	**45.29**	**290**	*i* P	**P**	**18 17 21.0**	**+1.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
EDM	**Edmonton**	**46.06**	**57**		**P**	**18 17 25.9**	**+0.2**
EDM	**Edmonton**	**46.06**	**57**	P	**P**	**18 17 25.9**	**+0.2**
EDM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BVAR	**Borovoye Array**	**46.46**	**304**	P	**P**	**18 17 29.2**	**+0.3**
	comp=Z,2.1nm,0.8s,baz=60,slow=6.0,SNR=7.8						
BVAR				LR	LR	18 38 56.9	
	comp=Z,211nm,18.9s,baz=33,slow=39						
	comp=Z,2.1nm,0.8s						
BORK	**Borovoye**	**46.48**	**304**		**P**	**18 17 29.2**	**+0.2**
BORK				IAmb	IAmb	18 17 31.0	
	comp=Z,4.1nm,0.9s						
BORK	**Borovoye**	**46.48**	**304**	⇑*e*P	**P**	**18 17 29.6**	**+0.6**
BORK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ARCES	**ARCESS Array B**	**47.67**	**340**	P	**P**	**18 17 39.2**	**+1.1**
	comp=Z,6.3nm,1.1s,baz=41,slow=3.9,SNR=3.6						
	comp=Z,6.3nm,1.1s						
ARTI	**Arti**	**48.94**	**313**	LR	LR	18 41 39.0	
	comp=Z,200nm,18.3s,baz=34,slow=40						
PINE	**Pine Mountain**	**49.26**	**70**	P	**P**	**18 17 52.0**	**+1.1**
PINE				IAmb	IAmb	18 17 53.0	
	comp=Z,3.9nm,0.8s						
FCC	**Fort Churchill**	**49.55**	**41**	P	**P**	**18 17 52.1**	**-0.5**
FCC				IAmb	IAmb	18 17 53.9	
	comp=Z,4.6nm,0.9s						
FCC	**Fort Churchill**	**49.55**	**41**	P	**P**	**18 17 52.1**	**-0.5**
FCC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FFC	**Flin Flon**	**49.68**	**49**	*i* P	**P**	**18 17 54.1**	**+0.4**
YBH	**Yreka Blue Hor**	**49.91**	**73**	LR	LR	18 35 32.5	
	comp=Z,5.9nm,21.6s,baz=311,slow=32						
KIRV	**Kirov**	**50.47**	**320**	LR	LR	18 42 45.8	
	comp=Z,72nm,18.1s,baz=53,slow=40						
PZH	**PanZhiHua**	**50.76**	**256**	P	**P**	**18 18 04.8**	**+2.4**
AAK	**Ala-Archa**	**52.12**	**292**		**P**	**18 18 12.8**	**+0.4**
AAK	**Ala-Archa**	**52.12**	**292**	⇑*e*P	**P**	**18 18 13.7**	**+1.3**
AAK				pmax	pmax		
	comp=Z,6.0nm,2.5s						
YNE	**Yellowstone No**	**53.55**	**62**	IAmb	IAmb	18 18 25.4	
	comp=Z,3.4nm,0.8s						
AKTO	**Aktyubinsk**	**53.58**	**309**	LR	LR	18 42 56.4	
	comp=Z,55nm,19.6s,baz=80,slow=38						
KK31	**Karatay Array**	**53.67**	**295**		**P**	**18 18 23.7**	**0.0**
KK31				IAmb	IAmb	18 18 26.3	
	comp=Z,4.8nm,0.8s						
KK31	**Karatay Array**	**53.67**	**295**	P	**P**	**18 18 23.7**	**0.0**
KK31				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KKAR	**Karatay Array**	**53.67**	**295**		**P**	**18 18 23.4**	**-0.3**
KKAR	**Karatay Array**	**53.67**	**295**	P	**P**	**18 18 23.4**	**-0.3**
KSH	**Kashi**	**53.77**	**288**	P	**P**	**18 18 26.0**	**+1.4**
KSH				pmax	pmax		
	comp=Z,2.0nm,1.2s						
NVAR	**Mina Array Bea**	**54.61**	**73**	P	**P**	**18 18 31.3**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=290,slow=8.2,SNR=7.2						
	comp=Z,1.5nm,0.8s						
NVAR	**Mina Array Bea**	**54.61**	**73**	P	**P**	**18 18 31.1**	**+0.3**
FINES	**FINESS Array B**	**54.64**	**334**	P	**P**	**18 18 29.8**	**-0.7**
	comp=Z,2.9nm,0.8s,baz=62,slow=8.9,SNR=7.5						
	comp=Z,2.9nm,0.8s						
FINES	**FINESS Array B**	**54.64**	**334**	P	**P**	**18 18 29.6**	**-0.8**
FINES	**FINESS Array B**	**54.64**	**334**	*i* P	**P**	**18 18 31.6**	**+1.1**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PDAR	**Pinedale Array**	**55.48**	**63**	P	**P**	**18 18 36.6**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=350,slow=2.5,SNR=11						
	comp=Z,1.0nm,0.8s						
PDAR	**Pinedale Array**	**55.48**	**63**	P	**P**	**18 18 36.9**	**-0.2**
SPR3	**Spring Creek 3**	**56.13**	**70**	IAmb	IAmb	18 18 44.4	
	comp=Z,3.9nm,0.9s						
GAR	**Garm**	**56.94**	**292**	IAmb	IAmb	18 18 49.2	
	comp=Z,5.7nm,0.8s						
TMUT	**Trail Mountain**	**57.41**	**67**	IAmb	IAmb	18 18 57.5	
	comp=Z,4.2nm,1.2s						
CCUT	**Cedar City**	**57.73**	**70**	IAmb	IAmb	18 19 37.6	
	comp=Z,3.9nm,1.4s						
NB2	**NORSAR Subarra**	**57.89**	**342**	P	**P**	**18 18 52.8**	**-0.9**
	comp=Z,3.0nm,1.0s,baz=18,slow=6.9						
NOA	**NORSAR Array B**	**57.89**	**342**	P	**P**	**18 18 52.9**	**-0.8**
	comp=Z,1.5nm,0.7s,baz=19,slow=7.0,SNR=11						
	comp=Z,1.5nm,0.7s						
O20A	**White River Ci**	**58.15**	**64**	IAmb	IAmb	18 18 57.6	
	comp=Z,6.7nm,1.0s						
HFS	**Hagfors**	**58.33**	**340**	P	**P**	**18 18 55.9**	**-0.8**
	comp=Z,1.8nm,0.7s,baz=112,slow=6.6,SNR=3.9						
	comp=Z,1.8nm,0.7s						
LPSR	**Galich'ya Gora**	**58.80**	**322**	*e*P	**P**	**18 18 59.1**	**-1.0**
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**58.89**	**254**	P	**P**	**18 19 01.5**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=360,slow=6.1,SNR=5.9						
CMAR				LR	LR	18 48 20.8	
	comp=Z,51nm,18.9s,baz=335,slow=40						
	comp=Z,0.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**58.89**	**254**	P	**P**	**18 19 01.3**	**+0.1**
CMAR	**Chiang Mai Arr**	**58.89**	**254**	*i* P	**P**	**18 19 03.0**	**+1.8**
VRH	**Novokhopyorsk**	**59.06**	**319**	*e*P	**P**	**18 19 00.1**	**-1.8**
VRH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PV22	**Blue Mesa, Par**	**59.16**	**66**	IAmb	IAmb	18 19 04.5	
	comp=Z,4.3nm,0.8s						
PV16	**Nyswonger Mesa**	**59.28**	**66**	IAmb	IAmb	18 19 05.4	
	comp=Z,4.1nm,0.8s						
NIL	**Nilore**	**59.72**	**286**		**P**	**18 19 07.0**	**+0.2**
NIL	**Nilore**	**59.72**	**286**	P	**P**	**18 19 07.0**	**+0.2**
NIL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VSR	**Storozhevoye**	**59.90**	**321**	*e*P	**P**	**18 19 06.3**	**-1.4**
VSR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
X18A	**Snowflake**	**61.81**	**69**	IAmb	IAmb	18 19 24.4	
	comp=Z,4.2nm,0.9s						
TASM	**ASL Pad, Albuq**	**63.16**	**67**	IAmb	IAmb	18 19 32.5	
	comp=Z,2.5nm,0.9s						
TASM	**ASL Pad, Albuq**	**63.16**	**67**	IAmb	IAmb	18 19 33.2	
	comp=Z,1.9nm,0.9s						
ANMO	**Albuquerque**	**63.16**	**67**	P	**P**	**18 19 30.5**	**+0.3**
ANMO				IAmb	IAmb	18 19 32.4	
	comp=Z,2.1nm,0.8s						
ANMO	**Albuquerque**	**63.16**	**67**	⇑*e*P	**P**	**18 19 32.3**	**+2.1**
ANMO				pmax	pmax		
	comp=Z,6.0nm,2.5s						
ABQ	**Albuquerque**	**63.16**	**67**	P	**P**	**18 19 30.6**	**+0.4**
ABQ				IAmb	IAmb	18 19 32.5	
	comp=Z,2.4nm,1.0s						
AKASG	**Malin Array Be**	**63.41**	**327**	P	**P**	**18 19 30.0**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=30,slow=6.5,SNR=4.2						
	comp=Z,0.6nm,0.3s						
AKASG	**Malin Array Be**	**63.41**	**327**	IAmb	IAmb	18 20 00.8	
	comp=Z,3.6nm,1.1s						
AKASG	**Malin Array Be**	**63.41**	**327**	*ce*P	**P**	**18 19 32.2**	**+0.8**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
RTBA	**Rita Blanca**	**63.69**	**63**		**P**	**18 19 33.8**	**+0.1**
KBZ	**Khabaz**	**64.99**	**314**	P	**P**	**18 19 42.6**	**+0.8**
	comp=Z,3.9nm,0.8s,baz=17,slow=1.8,SNR=11						
KBZ				LR	LR	18 51 42.9	
	comp=Z,120nm,19.2s,baz=4.0,slow=39						
	comp=Z,3.9nm,0.8s						
KBZ	**Khabaz**	**64.99**	**314**	⇑*e*P	**P**	**18 19 43.3**	**+1.5**
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
EKA	**Eskdalemuir Ar**	**65.33**	**349**	P	**P**	**18 19 43.3**	**-0.6**
	comp=Z,3.0nm,0.9s,baz=30,slow=3.8,SNR=4.1						
	comp=Z,3.0nm,0.9s						
OJC	**Ojcow**	**66.33**	**333**		**P**	**18 19 50.6**	**+0.2**
OJC	**Ojcow**	**66.33**	**333**	P	**P**	**18 19 50.7**	**+0.2**
STHS	**Stebnicka Huta**	**66.72**	**331**	*e*P	**P**	**18 19 53.9**	**+0.9**
STHS	**Stebnicka Huta**	**66.72**	**331**	*e*P	**P**	**18 19 53.9**	**+0.9**
CLL	**Collm**	**66.80**	**337**	*i* P	**P**	**18 19 53.2**	**-0.2**
MORC	**Moravsky Berou**	**67.27**	**334**		**P**	**18 19 56.7**	**+0.2**
MORC				IAmb	IAmb	18 19 59.3	
	comp=Z,2.5nm,0.8s						
MORC	**Moravsky Berou**	**67.27**	**334**	P	**P**	**18 19 56.7**	**+0.2**
MORC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BUR08	**Bucovina Ar. S**	**67.31**	**328**		**P**	**18 19 57.1**	**+0.3**
BUR08				IAmb	IAmb	18 20 00.1	
	comp=Z,3.2nm,1.1s						
BURAR	**Bucovina Array**	**67.33**	**328**	P	**P**	**18 19 57.4**	**+0.4**
BURAR				IAmb	IAmb	18 19 59.3	
	comp=Z,1.9nm,0.8s						
LANS	**Liptovska Anna**	**67.40**	**332**	*e*P	**P**	**18 19 59.6**	**+2.2**
LANS	**Liptovska Anna**	**67.40**	**332**	*e*P	**P**	**18 19 59.5**	**+2.2**
VRAC	**Vranov**	**67.92**	**334**	LR	LR	18 53 24.3	
	comp=Z,44nm,19.9s,baz=333,slow=39						
GERES	**GERESS Array B**	**68.99**	**336**	P	**P**	**18 20 07.7**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=24,slow=4.5,SNR=13						
	comp=Z,1.2nm,0.8s						
TXAR	**Lajitas Array**	**69.11**	**68**	P	**P**	**18 20 08.8**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=308,slow=4.5,SNR=10						
	comp=Z,0.9nm,0.8s						
TXAR	**Lajitas Array**	**69.11**	**68**	P	**P**	**18 20 08.2**	**-0.2**
CONA	**Conrad Observa**	**69.39**	**334**	*e*P	**P**	**18 20 10.7**	**+0.9**
	comp=Z,2.7nm,1.1s						
ARSA	**Arzberg**	**70.11**	**334**	*i* P	**P**	**18 20 15.7**	**+1.5**
	comp=Z,2.3nm,1.0s						
OBKA	**Obir**	**71.02**	**335**	*i* P	**P**	**18 20 21.1**	**+1.2**
	comp=Z,4.6nm,0.7s						
ABTA	**Abfaltersbach**	**71.24**	**336**	*i* P	**P**	**18 20 22.9**	**+1.7**
	comp=Z,2.8nm,0.8s						
EIL	**Elat**	**80.35**	**313**	LR	LR	19 01 47.5	
	comp=Z,49nm,20.2s,baz=158,slow=39						
ESDC	**Sonseca Array**	**80.87**	**347**	P	**P**	**18 21 15.4**	**-0.7**
	comp=Z,1.3nm,0.9s,baz=358,slow=5.9,SNR=7.9						
	comp=Z,1.3nm,0.9s						
ESDC	**Sonseca Array**	**80.87**	**347**	P	**P**	**18 21 12.9**	**-3.2**
WRA	**Warramunga Arr**	**80.99**	**203**	P	**P**	**18 21 14.8**	**-1.9**
	comp=Z,1.1nm,1.0s,baz=16,slow=6.2,SNR=2.2						
	comp=Z,1.1nm,1.0s						
ASAR	**Alice Springs**	**84.69**	**203**	P	**P**	**18 21 35.1**	**-0.8**
	comp=Z,1.0nm,0.9s,baz=20,slow=7.1,SNR=7.3						
	comp=Z,1.0nm,0.9s						
ASAR	**Alice Springs**	**84.69**	**203**	P	**P**	**18 21 34.8**	**-1.2**

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*NNC **26** 18:11:20.5±0.8, 46.°79N×83.°29E, h0^{km}, mpv2.5, Error ellipse: s-maj=4.1km s-min=2.9km az=91.0*

*SOME **26** 18:11:21.6, 46.°97N×83.°00E, h25^{km}*

*ASRS **26** 18:11:23.8±0.4, 47°N±3°×8°3E±°, h9^{km}, MLh3.1/8, Error ellipse: s-maj=7.3km s-min=3.3km az=150.5, confirmed*

ISC 26 18:11:23.5±0.9**, 47.°03N**±0.°06×**83.°24E**±0.°04**, h18^{km}, n14, σ2.^{s}87**/25**, 1C-5D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**0.69**	**251**	⇓P	**Pb**	**18 11 34.1**	**-2.9**
	2.5nm,0.2s,baz=92,slow=18,SNR=633						
MK31				⇓S	**Sb**	**18 11 43.7**	**-2.6**
	11nm,0.2s,baz=90,slow=33,SNR=46						
MAKZ	**Makanchi**	**0.90**	**256**	Pg	**Pb**	**18 11 38.0**	**-2.6**
MAKZ				Sg	**Sb**	**18 11 50.4**	**-1.8**
MAKZ	**Makanchi**	**0.90**	**256**	⇓P	**Pb**	**18 11 37.9**	**-2.6**
	3.2nm,0.3s						
MAKZ				⇓S	**Sb**	**18 11 50.3**	**-1.8**
	13nm,0.2s						
ZSN	**Zaisan**	**1.18**	**68**	*e*P	**Pb**	**18 11 44.9**	**-0.5**
	5.2nm,0.2s						
ZSN				*e*S	**Sg**	**18 12 01.6**	**-0.3**
	47nm,0.3s						
DGZ	**Jazzator, Alta**	**3.87**	**45**	Pn	**Pn**	**18 12 25.5**	**+3.3**
DGZ				Pg	**Pg**	**18 12 37.2**	**-0.3**
DGZ				S	**Sn**	**18 13 03.8**	**-3.4**
DGZ				Sg	**Sg**	**18 13 26.3**	**-1.3**
UKR	**Ust'-Kan**	**4.04**	**14**	Pn	**Pb**	**18 12 29.6**	**-4.5**
UKR				Sg	**Sg**	**18 13 37.4**	**+4.2**
CHBI	**Chibit, Altay**	**4.33**	**39**	Pn	**Pn**	**18 12 32.1**	**+3.6**
CHBI				Sg	**Sg**	**18 13 43.3**	**+0.8**
AKAR	**Aktash**	**4.39**	**40**	Pn	Pn	18 12 33.9	+4.6
AKAR				Sg	**Sg**	**18 13 47.1**	**+2.8**
PDGK	**Podgornoye**	**4.55**	**217**	⇑Lg	Lg	18 13 38.6	
	11nm,0.6s						
CUR	**Chagan-Uzun**	**4.58**	**46**	Pn	**Pn**	**18 12 35.8**	**+3.9**
CUR				Pg	**Pg**	**18 12 48.8**	**-2.3**
CUR				Sg	**Sg**	**18 13 51.3**	**+0.9**
ELDR	**Elanda**	**4.59**	**23**	Pn	Pn	18 12 37.1	+5.1
ELDR				Sg	**Sg**	**18 13 52.9**	**+2.1**

KURK	Kurchatov	4.79	322	Pn	Pn	18 12 37.6	+3.0
KURK				Sg	Sg	18 14 01.5	+4.4
KURK	Kurchatov	4.79	322	⇓Lg	Lg	18 13 58.5	
	1.6nm,0.3s						
KPKS	Kokpek	4.80	224	*e*P	Pb	18 12 46.6	-0.5
	0.2nm,0.2s						
KPKS				*e*S	Sb	18 13 47.4	+2.9
	10nm,0.5s						

IDC 26 18:14:04.6±6.5**, 5°.12S**×**151°.92E, h100**^{km}±54^{km}**, mb3.0**/3**, mbtmp3.3**/4**, Error ellipse: s-maj=158.5km s-min=32.2km az=127.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.36	228	P	Pn	18 15 34.5	-1.3
	4.2nm,0.7s,baz=55,slow=11,SNR=6.6						
PMG				S	Sn	18 16 48.1	+1.0
	22nm,0.8s,baz=26,slow=13,SNR=7.8						
WRA	Warramunga Arr	22.58	228	P	P	18 18 56.3	-0.6
	0.4nm,0.4s,baz=53,slow=9.7,SNR=5.1 0.4nm,0.4s						
ASAR	Alice Springs	25.33	222	P	P	18 19 22.9	+0.7
	0.2nm,0.7s,baz=56,slow=9.7,SNR=6.2 0.2nm,0.7s						
ILAR	Eielson Array	82.78	22	P	P	18 26 17.4	+0.1
	0.4nm,0.7s,baz=238,slow=5.2,SNR=6.1 0.4nm,0.7s						

IDC 26 18:14:52.3±3.1**, 30°.84S**×**60°.37E, h0**^{km}**, mb3.6**/2**, mbtmp3.6**/2**, Error ellipse: s-maj=95.8km s-min=57.9km az=48.0, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H04N2	CROZET ISLANDS	16.69	201	T	T	18 36 57.8	
	baz=25,slow=75,SNR=41						
H04N1	CROZET ISLANDS	16.69	201	T	T	18 36 48.4	
	baz=25,slow=75,SNR=52						
H04N3	CROZET ISLANDS	16.70	201	T	T	18 37 00.3	
	baz=25,slow=75,SNR=34						
CMAR	Chiang Mai Arr	61.46	42	P	P	18 25 10.8	0.0
	0.5nm,0.8s,baz=225,slow=7.6,SNR=5.0 0.5nm,0.8s						
ASAR	Alice Springs	64.71	103	P	P	18 25 32.6	0.0
	0.6nm,0.9s,baz=242,slow=6.0,SNR=5.9 0.6nm,0.9s						
YKA	Yellowknife Ar	148.17	356	PKPbc	PKPbc	18 34 38.6	-0.7
	0.3nm,0.8s,baz=346,slow=3.6,SNR=5.0						

KRSC ***26*** *18:39:19.2±1.8, 59°.20N×158°.40E, h52^{km}±17^{km}, Ml4.0*
NERS ***26*** *18:39:26.9, 58°.88N×158°.54E, h6^{km}*
ISC 26 18:39:25.1±0.9**, 58°.84N**±0°.05×**158°.72E**±0°.04**, h10**^{km}**, n17, σ2^{s}.45**/26**, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALN	Palana	0.69	68	*e*P	Pg	18 39 36.4	-2.0
PALN				*e*S	Sg	18 39 46.0	-1.5
OSSR	Ossora	2.28	78	*e*P	Pn	18 39 59.1	-3.6
OSSR				*e*S	Sn	18 40 26.5	-4.3
SMKR	Semkarok	2.70	146	*e*P	Pn	18 40 08.1	-0.5
KLY	Klyuchi	2.74	157	*e*P	Pn	18 40 10.0	+1.0
KLY				*e*S	Sn	18 40 48.6	+6.5
KOZ	Kozyrevsk	2.85	167	*e*P	Pn	18 40 10.3	-0.4
ESO	Esso	2.92	180	*e*P	Pn	18 40 10.8	-0.8
KIRR	Kirishev	3.02	162	*e*P	Pn	18 40 13.7	+0.6
BZWR	Bezymyannyi-We	3.04	161	*e*P	Pn	18 40 14.7	+1.4
BZP	Bezymyannyi-Pe	3.09	161	*e*P	Pn	18 40 14.6	+0.5
GADL	Gadlja	3.89	286	*e*Sg	Sg	18 41 27.3	-2.6
GADL				Sgmax		18 41 46.5	
	310nm,0.6s						
GADL				Sgmax		18 41 46.5	
	90nm,0.7s						
TLAR	Talaya	3.92	309	*e*P	Pn	18 40 27.9	+2.5
TLAR				*e*Pg	Pg	18 40 38.9	-1.3
TLAR				Pgmax		18 40 42.9	
	20nm,0.4s						
TLAR				*e*Sg	Sg	18 41 29.8	-1.1
TLAR				Sgmax		18 41 48.2	
	40nm,0.6s						
TLAR				Sgmax		18 41 48.2	
	120nm,0.6s						
MA2	Magadan	4.16	284	*e*P	Pn	18 40 27.4	-1.1
MA2				*e*Pg	Pg	18 40 42.9	-1.7
MA2				Pgmax		18 40 48.0	
	10.0nm,0.7s						
MA2				*e*Sg	Sg	18 41 37.4	-1.0
MA2				Sgmax		18 41 49.4	
	80nm,0.8s						
MA2				Sgmax		18 41 49.4	
	40nm,0.6s						
MGD	Magadan 1	4.26	290	*e*P	Pn	18 40 33.0	+3.1
MGD				*e*Sg	Sg	18 41 39.6	-2.1
MGD				Sgmax		18 41 51.0	
	20nm,0.6s						
MGD				Sgmax		18 41 51.0	
	80nm,0.6s						
SEY	Seymchan	5.14	326	*e*P	Pn	18 40 43.8	+1.7
SEY				*e*Pg	Pb	18 40 59.3	+4.3
SEY				Pgmax		18 41 07.7	
	10.0nm,0.6s						
SEY				*e*Sg	Sg	18 42 10.3	+0.2
SEY				Sgmax		18 42 26.7	
	20nm,0.7s						
TLON	Talon	5.24	284	*e*Sg	Sg	18 42 11.0	-2.2
TLON				Sgmax		18 42 28.1	
	140nm,0.7s						
SUUS	Susuman	6.50	312	*e*P	Pb	18 41 15.6	-2.6
SUUS				*e*Pg	Pg	18 41 29.4	0.0
SUUS				*e*Sg	Sg	18 42 52.3	-1.2
SUUS				Sgmax		18 43 01.5	
	30nm,0.7s						
SUUS				Sgmax		18 43 01.5	
	20nm,0.8s						
BILL	Bilibino	9.82	17	*e*Sg		18 44 43.6	

IDC ***26*** *18:49:27.1±3.0, 11°.60N×142°.87E, h61^{km}±31^{km}, mb3.3/8, mbtmp3.6/9, ML3.8/1, MS3.6/1, Error ellipse: s-maj=31.8km s-min=17.8km az=111.0*
ISC 26 18:49:24.4±1.0**, 11°.6N**±0°.2×**142°.8E**±0°.2**, h32**^{km}**, n10, σ1^{s}.08**/10**, mb3.7**/8**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	2.89	45	P	Pn	18 50 08.9	+0.6
	14nm,0.3s,baz=205,slow=17,SNR=4.1						
GUMO				S	Sn	18 50 42.4	+0.5
	75nm,0.3s,baz=13,slow=21,SNR=5.8 34nm,0.3s						
JHJ	Hachijo jima 2	21.63	353	LR	LR	19 02 02.4	
	comp=Z,140nm,18.6s,baz=71,slow=35						
WRA	Warramunga Arr	32.38	195	P	P	18 55 50.8	-0.5
	1.1nm,1.0s,baz=17,slow=9.0,SNR=3.4 1.1nm,1.0s						
ASAR	Alice Springs	36.06	194	P	P	18 56 23.9	+0.6
	0.2nm,0.6s,baz=25,slow=9.5,SNR=5.9 0.2nm,0.6s						
CMAR	Chiang Mai Arr	42.78	285	P	P	18 57 21.0	+1.5
	0.3nm,0.5s,baz=85,slow=7.2,SNR=4.7 0.3nm,0.5s						
MKAR	Makanchi Array	61.54	317	P	P	18 59 37.8	-0.8
	0.3nm,0.5s,baz=97,slow=7.4,SNR=4.1 0.3nm,0.5s						
ZALV	Zalesovo Beam	62.09	325	P	P	18 59 41.8	-0.3
	0.3nm,0.4s,baz=146,slow=8.4,SNR=1.8 0.3nm,0.4s						
BVAR	Borovoye Array	70.25	322	P	P	19 00 33.4	-1.0
	1.0nm,0.6s,baz=116,slow=6.7,SNR=5.9 1.0nm,0.6s						
ILAR	Eielson Array	71.28	25	P	P	19 00 38.8	-1.6
	0.5nm,0.7s,baz=248,slow=6.1,SNR=7.8 0.5nm,0.7s						
YKA	Yellowknife Ar	85.60	27	P	P	19 01 59.7	+0.2
	0.3nm,0.8s,baz=292,slow=5.5,SNR=4.6 0.3nm,0.8s						

IDC ***26*** *19:04:29.0±1.3, 17°.45S×178°.69W, h540^{km}±13^{km}, mb4.2/26, mbtmp5.1/27, Error ellipse: s-maj=12.3km s-min=9.2km az=123.0*
NOU ***26*** *19:04:29.7, 17°.45S×178°.60W, h550^{km}, ML4.8/95, Fiji Islands Region*
NEIC ***26*** *19:04:30.0±1.8, 17°.4S±0°.1×178°.8W±0°.1, h547^{km}±6^{km}, mb4.8/386, Error ellipse: s-maj=18.3km s-min=14.0km az=140.0*
MOS ***26*** *19:04:34.1±1.3, 16°.91S×179°.15W, h577^{km}, mb4.9/16, Error ellipse: s-maj=18.0km s-min=13.7km az=118.9*
ISC 26 19:04:30.1±0.6**, 17°.41S**±0°.05×**178°.74W**±0°.05**, h555**^{km}±7^{km}**, n978, σ0^{s}.98**/801**, mb4.8**/324**, 42C-63D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.08	263		P	19 05 49.8	+3.6
MSVF	Nonsavu	3.08	263	*c i*P	P	19 05 50.1	+3.9
AFI	Afiamalu	7.55	64	P	P	19 06 21.8	-2.0
AFI	Afiamalu	7.55	64	P	P	19 06 22.5	-1.3
	169nm,0.7s						
AFI	Afiamalu	7.55	64	P	P	19 06 22.4	-1.4
NIUE	Niue	8.53	103	P	P	19 06 33.9	+0.6
	comp=Z,451nm,1.7s						
NIUE	Niue	8.53	103	P	P	19 06 34.0	+0.6
NIUE	Niue	8.53	103	P	P	19 06 34.2	+0.9
NIUE				S	S	19 08 23.0	+8.5
GLKZ	Green Lake	11.82	177	P	P	19 07 06.8	0.0
GLKZ				S	S	19 09 14.2	-1.5
MARNC	Mare, Loyalty	13.12	250		P	19 07 19.7	-0.6
MARNC	Mare, Loyalty	13.12	250	P	P	19 07 20.0	-0.3
	comp=Z,2.7nm,1.1s						
SANVU	Saraoutou	13.63	276	P	P	19 07 26.3	+0.7
PINNC	Pines Island,	13.98	246	P	P	19 07 28.7	-0.4
PINNC	Pines Island,	13.98	246	P	P	19 07 29.2	+0.1
	comp=Z,376nm,0.8s						
YATNC	Mamie plateau,	14.30	249	P	P	19 07 32.4	0.0
	comp=Z,55nm,0.5s						
OUENC	Ouen Island, N	14.45	247	P	P	19 07 34.1	+0.2
	comp=Z,166nm,0.8s						
DZM	Mont Dzumac	14.70	249	P	P	19 07 36.5	-0.2
	comp=Z,95nm,0.8s,baz=79,slow=18,SNR=73						
DZM				S	S	19 10 08.3	-1.8
	comp=Z,8.5nm,0.9s,baz=22,slow=13,SNR=1.5						
DZM	Mont Dzumac	14.70	249	*e*P	P	19 07 35.8	-0.8
	comp=Z,335nm,1.2s						
DZM				*e*S	S	19 10 06.7	-3.4
	comp=Z,76nm,1.2s						
DZM	Mont Dzumac	14.70	249		P	19 07 36.1	-0.5
DZM	Mont Dzumac	14.70	249	P	P	19 07 36.4	-0.2
	comp=Z,161nm,0.9s						
KOUNC	Koumac, New Ca	16.36	256	P	P	19 07 54.6	+1.7
	comp=Z,156nm,1.0s						
NFK	Norfolk Island	16.84	224	P	P	19 07 59.3	+2.2
	comp=Z,281nm,0.6s						
NFK	Norfolk Island	16.84	224	P	P	19 07 59.6	+2.4
OUZ	Omahuta	19.01	200	P	P	19 08 19.0	+2.1
WCZ	Waipu Caves	19.45	197	P	P	19 08 23.5	+2.6
GRZ	Great Barrier	19.46	194	P	P	19 08 22.6	+1.7
KUZ	Kuaotunu	19.88	193	P	P	19 08 26.0	+1.3
	comp=Z,168nm,0.8s						
KUZ	Kuaotunu	19.88	193	P	P	19 08 26.2	+1.5
WIAZ	Waiheke Island	20.06	194	P	P	19 08 28.2	+1.9
MBAZ	Motutapu North	20.09	195	P	P	19 08 29.1	+2.5
MXZ	Matakaoa Point	20.25	187	P	P	19 08 26.2	-1.9
MXZ	Matakaoa Point	20.25	187	P	P	19 08 26.7	-1.4
	comp=Z,80nm,0.6s						
MXZ	Matakaoa Point	20.25	187	P	P	19 08 26.4	-1.7
ETAZ	East Tamaki Re	20.26	195	P	P	19 08 30.3	+2.2
WTAZ	Waiatarua	20.33	196	P	P	19 08 30.9	+2.1
MKAZ	Moumakai	20.35	194	P	P	19 08 30.7	+1.7
TARA	Tarawa	20.37	335	P	P	19 08 30.1	+0.6
	comp=Z,383nm,1.2s						
AWAZ	Awhitu Peninsu	20.43	195	P	P	19 08 31.5	+1.8
WMGZ	Waiomatatini S	20.49	186	P	P	19 08 29.2	-1.1
HAZ	Te Kaha	20.50	188	P	P	19 08 28.6	-1.7
PKGZ	Pakihiroa	20.57	187	P	P	19 08 30.8	-0.2
TGRZ	Tauranga	20.72	191	P	P	19 08 34.3	+2.0
RUGZ	Raukumara Rang	20.72	188	P	P	19 08 30.9	-1.6
PUZ	Puketiti	20.76	187	P	P	19 08 32.0	-0.7
TOZ	Tahuroa Road	20.87	193		P	19 08 35.0	+1.3
TOZ	Tahuroa Road	20.87	193	P	P	19 08 35.8	+2.1
KMRZ	Kaimai	20.89	192	P	P	19 08 35.7	+1.7
TWGZ	Tauwhareparae	20.89	187	P	P	19 08 33.2	-0.7
URZ	Urewera	21.09	189	P	P	19 08 33.0	-2.7
	comp=Z,39nm,0.5s,baz=358,slow=5.9,SNR=27						
URZ				S	S	19 11 47.9	-6.1
	comp=Z,5.4nm,0.6s,baz=24,slow=19,SNR=1.7 comp=Z,39nm,0.5s						
URZ	Urewera	21.09	189	P	P	19 08 33.6	-2.1
	comp=Z,84nm,0.8s						
URZ	Urewera	21.09	189	P	P	19 08 33.6	-2.1
MWZ	Matawai	21.11	188	P	P	19 08 34.5	-1.3
TLZ	Tolley Road	21.44	192	P	P	19 08 40.0	+1.1
RTZ	Ruatahuna	21.46	189	P	P	19 08 37.3	-1.8
HIZ	Hauiti	21.76	194	P	P	19 08 44.1	+2.4
BKZ	Black Stump Fm	22.08	190		P	19 08 42.3	-2.2
BKZ	Black Stump Fm	22.08	190	P	P	19 08 42.6	-2.0
	comp=Z,16nm,0.8s						
BFZ	Birch Farm	23.60	190	P	P	19 08 56.2	-1.8
MRZ	Mangatainoka R	23.69	191		P	19 08 55.1	-3.7
QRZ	Quartz Range	24.52	196	P	P	19 09 06.2	-0.1
QRZ	Quartz Range	24.52	196	P	P	19 09 06.7	+0.4
	comp=Z,77nm,0.9s						
TKNZ	Takaka Hill	24.61	195	P	P	19 09 05.5	-1.5
TUWZ	Tuamarina	24.75	193	P	P	19 09 06.8	-1.5
MRNZ	Matariki Terra	25.00	195	P	P	19 09 09.6	-0.9
BSWZ	Blackbirch Sta	25.04	193	P	P	19 09 10.4	-0.4
DSZ	Denniston Nort	25.58	197	P	P	19 09 14.3	-1.3
KHZ	Kahutara	25.79	193		P	19 09 15.2	-2.1
GVZ	Greta Valley S	26.42	194	P	P	19 09 21.5	-1.5
LTZ	Lake Taylor	26.43	195		P	19 09 21.1	-2.0
INZ	Inchbonnie	26.59	196	P	P	19 09 22.3	-2.1
OXZ	Oxford	27.00	195		P	19 09 26.3	-1.7
MQZ	McQueen’s Vall	27.21	194	P	P	19 09 28.4	-1.5
RPZ	Rata Peaks	27.61	196		P	19 09 31.9	-1.5
GC1S	Gold Coast 1 S	27.67	242	P	P	19 09 35.4	+1.3
FOZ	Fox Glacier	27.79	198	P	P	19 09 33.7	-1.3
PPT2	Papeete2	27.80	95	*e*sS	sS	19 16 25.7	-3.0
	comp=Z,106nm,24.8s						
TBI	Tubuai	28.04	107	*e*S	S	19 13 39.8	-3.8
	comp=Z,878nm,36.5s						
TBI				*e*sS	sS	19 16 28.9	-3.5
	comp=Z,516nm,32.8s						
LBZ	Lake Benmore	28.47	197		P	19 09 38.8	-2.1
JCZ	Jackson Bay	28.59	199	P	P	19 09 41.7	-0.4
	comp=Z,276nm,0.6s						
TW1H	Toowoomba 1 Ha	28.82	244	P	P	19 09 45.4	+1.1
	comp=Z,454nm,0.7s						
ODZ	Otahua Downs	28.96	196	P	P	19 09 43.4	-1.7
ODZ	Otahua Downs	28.96	196	P	P	19 09 43.9	-1.2
	comp=Z,33nm,1.3s						
EIDS	Eidsvold	29.15	249	P	P	19 09 46.8	-0.3
	comp=Z,69nm,1.0s						
EIDS	Eidsvold	29.15	249		P	19 09 46.6	-0.5
EIDS	Eidsvold	29.15	249	P	P	19 09 47.0	-0.1
	comp=Z,69nm,1.0s						
WKZ	Wanaka	29.21	198	P	P	19 09 46.0	-1.3
ARMA	Armidale	29.93	239	P	P	19 09 54.9	+1.1
	comp=Z,107nm,1.0s						
ARMA	Armidale	29.93	239		P	19 09 54.0	+0.1
ARMA	Armidale	29.93	239	P	P	19 09 54.6	+0.8
	comp=Z,107nm,1.0s						
MLZ	Mavora Lakes	29.97	199		P	19 09 54.0	+0.1
DCZ	Deep Cove	30.36	200		P	19 09 56.6	-0.6
WHZ	Wether Hill Ro	30.49	198	P	P	19 09 58.4	0.0
AUPHS	Peel High Scho	30.75	238	P	P	19 10 01.6	+0.8
	comp=Z,155nm,1.1s						
MGCD	Mangrove Creek	31.33	234	P	P	19 10 06.6	+0.9
	comp=Z,159nm,0.8s						
MGCD	Mangrove Creek	31.33	234	P	P	19 10 06.7	+1.0
	comp=Z,163nm,0.8s						
RIV	Riverview	31.54	233	P	P	19 10 07.4	0.0
	comp=Z,91nm,1.3s						
SYDH	Sydney Hard Ro	31.83	233	P	P	19 10 11.2	+1.3
	comp=Z,150nm,0.8s						
WOLH	Wollongong Har	31.98	232	P	P	19 10 12.3	+1.1
	comp=Z,100nm,0.6s						
AUUHS	Ulladulla High	32.68	231	P	P	19 10 17.8	+0.6
	comp=Z,152nm,1.8s						
AULRC	Lightning Ridg	32.69	242	P	P	19 10 17.9	+0.6
	comp=Z,106nm,0.9s						
TV1H	Townsville Har	32.74	261	P	P	19 10 18.2	+0.3
	comp=Z,53nm,0.6s						
AUDCS	Dubbo College	32.94	237	P	P	19 10 20.2	+0.8
	comp=Z,54nm,1.3s						
CTA	Charters Tower	33.22	260	P	P	19 10 22.0	0.0
	comp=Z,41nm,0.8s						
CTA	Charters Tower	33.22	260	P	P	19 10 21.9	-0.1
	comp=Z,63nm,0.7s,baz=84,slow=9.2,SNR=36 comp=Z,63nm,0.7s						
CTA	Charters Tower	33.22	260	P	P	19 10 22.0	0.0
	comp=Z,3.0nm,0.8s						
CTAO	Charters Tower	33.22	260		P	19 10 21.9	0.0
CTAO	Charters Tower	33.22	260	P	P	19 10 22.1	0.0
	comp=Z,38nm,0.8s						
CNB	Canberra Magne	33.49	232	P	P	19 10 25.0	+0.9
	comp=Z,217nm,0.8s						
AUDAR	Daramalan Coll	33.63	232	P	P	19 10 26.1	+0.9
	comp=Z,115nm,0.9s						
AUMHS	Melrose High S	33.71	232	P	P	19 10 26.6	+0.7
	comp=Z,179nm,1.1s						
AUMTS	Mt Stromlo	33.76	232	P	P	19 10 27.0	+0.7
	comp=Z,86nm,1.0s						
CAN	Canberra	33.76	232	P	P	19 10 26.9	+0.6
	comp=Z,79nm,1.0s						
CAN	Canberra	33.76	232		P	19 10 25.7	-0.6
CAN	Canberra	33.76	232	P	P	19 10 27.0	+0.6
	comp=Z,121nm,1.0s						
CAN	Canberra	33.76	232	P	P	19 10 26.9	+0.6
YNG	Young	33.83	234	P	P	19 10 27.5	+0.6
	comp=Z,48nm,1.1s						
PMG	Port Moresby	34.07	279		P	19 10 30.1	+1.0
PMG	Port Moresby	34.07	279	P	P	19 10 30.6	+1.5
	comp=Z,164nm,0.9s						
PMG	Port Moresby	34.07	279	P	P	19 10 30.1	+1.0
	comp=Z,1μmcomp=Z,164nm,0.9s						
PMG	Port Moresby	34.07	279	*d i*P	P	19 10 30.6	+1.5
PMG				pmax	pmax		
	comp=Z,148nm,1.0s						
MILA	Mila	34.37	229	P	P	19 10 32.1	+0.6
	comp=Z,26nm,1.2s						
AUSMG	Snowy Mountain	34.50	230	P	P	19 10 33.5	+1.0
	comp=Z,246nm,0.7s						
CMSA	Cobar Meteorol	35.13	240	P	P	19 10 38.2	+0.4
	comp=Z,151nm,1.0s						
CMSA	Cobar Meteorol	35.13	240	P	P	19 10 38.0	+0.2
	comp=Z,151nm,1.0s						
MTSU	Mount Surprise	35.15	263	P	P	19 10 38.2	+0.1
	comp=Z,66nm,0.7s						
MTSU	Mount Surprise	35.15	263	P	P	19 10 38.3	+0.1
	comp=Z,66nm,0.7s						
QLP	Quilpie	35.42	249	P	P	19 10 40.6	+0.3
	comp=Z,303nm,0.8s						
QLP	Quilpie	35.42	249	P	P	19 10 40.1	-0.2
	comp=Z,303nm,0.8s						
COEN	Coen	36.79	270	P	P	19 10 52.7	+1.0
	comp=Z,147nm,0.8s						
GLAD	Gladstone	36.99	224	P	P	19 10 53.8	+0.8
	comp=Z,219nm,0.7s						
TOO	Toolangi	37.25	230	P	P	19 10 56.2	+1.1
	comp=Z,81nm,1.0s						
TOO	Toolangi	37.25	230		P	19 10 55.1	0.0
MLBS	Spotswood, Mel	37.78	230	P	P	19 11 00.3	+0.8
CORO	Coronation Par	37.79	223	P	P	19 11 00.9	+1.4
	comp=Z,194nm,0.8s						
MOO	Moorlands	38.25	222	P	P	19 11 03.6	+0.4
	comp=Z,133nm,1.1s						
MOO	Moorlands	38.25	222	P	P	19 11 04.0	+0.8
	comp=Z,133nm,1.1s						
BRAT	Ballarat	38.39	231	P	P	19 11 05.7	+1.3
	comp=Z,160nm,0.8s						
TAU	Tasmania Unive	38.41	221	P	P	19 11 04.3	-0.1
TAU	Tasmania Unive	38.41	221	P	P	19 11 04.8	+0.3
	comp=Z,99nm,0.9s						
TAU	Tasmania Unive	38.41	221	P	P	19 11 04.7	+0.3
STKA	Stephens Creek	38.60	241	P	P	19 11 07.2	+1.0
	comp=Z,665nm,0.9s						
STKA	Stephens Creek	38.60	241	P	P	19 11 06.9	+0.7
	comp=Z,58nm,0.5s,baz=87,slow=10,SNR=237 comp=Z,58nm,0.5s						
STKA	Stephens Creek	38.60	241		P	19 11 07.0	+0.7
STKA	Stephens Creek	38.60	241	P	P	19 11 06.8	+0.6
	comp=Z,33nm,0.9s						
STKA	Stephens Creek	38.60	241	*d i*P	P	19 11 07.0	+0.7
QIS	Mount Isa	39.44	259	P	P	19 11 12.9	-0.3
	comp=Z,22nm,0.6s						
QIS	Mount Isa	39.44	259	P	P	19 11 12.8	-0.4
	comp=Z,22nm,0.6s						
ARPS	Mount Arapiles	39.70	233	P	P	19 11 15.5	+0.5
	comp=Z,73nm,0.8s						
HTT	Hallett	41.13	239	P	P	19 11 27.4	+0.8
	comp=Z,75nm,0.8s						
HTT	Hallett	41.13	239	P	P	19 11 27.0	+0.5
	comp=Z,186nm,0.8s						
AUMBR	Murray Bridge	41.23	236	P	P	19 11 27.5	+0.3
	comp=Z,434nm,0.9s						
AUJCS	Jamestown Cent	41.34	239	P	P	19 11 28.8	+0.6
	comp=Z,196nm,0.9s						
GHSS	Government Hou	41.72	237	P	P	19 11 31.8	+0.7
	comp=Z,257nm,0.7s						
WHYH	Whyalla	42.16	240	P	P	19 11 35.2	+0.6
	comp=Z,291nm,0.7s						
GENI	Genyem	42.93	285	P	P	19 11 43.6	+2.7
	comp=Z,144nm,0.7s						
GENI	Genyem	42.93	285	P	P	19 11 41.8	+0.9
	comp=Z,3μmcomp=Z,103nm,0.9s						
KHLU	Kahalu`u	43.07	32	P	P	19 11 42.4	+0.5
CPK	Cone Peak	43.20	33	P	P	19 11 44.1	+1.1
BBOO	Buckleboo	43.38	240		P	19 11 44.0	-0.1
BBOO	Buckleboo	43.38	240	P	P	19 11 44.4	+0.3
	comp=Z,275nm,0.9s						
AUCAS	Cummins Area S	43.91	238	P	P	19 11 48.8	+0.6
	comp=Z,280nm,0.8s						
WRAB	Tennant Creek	44.41	259	P	P	19 11 51.3	-1.0
WRAB	Tennant Creek	44.41	259	P	P	19 11 51.8	-0.5
	comp=Z,65nm,1.1s						
WRAB	Tennant Creek	44.41	259	*d i*P	P	19 11 51.5	-0.7
WRAB				pmax	pmax		
	comp=Z,67nm,0.9s						
WRAB	Tennant Creek	44.41	259	P	P	19 11 51.5	-0.7
WB1	Warramunga Ar.	44.41	259	P	P	19 11 51.7	-0.6
WRA	Warramunga Arr	44.42	259	P	P	19 11 51.5	-0.8
	comp=Z,57nm,0.6s,baz=95,slow=6.9,SNR=361						
WRA				PcP	PcP	19 13 24.2	+0.2
	comp=Z,7.0nm,0.8s,baz=98,slow=3.8,SNR=4.6						
WRA				ScP	ScP	19 16 25.0	+1.5
	comp=Z,4.0nm,0.9s,baz=82,slow=4.7,SNR=6.8						
WRA				S	S	19 17 38.9	-8.4
	comp=Z,2.1nm,0.8s,baz=84,slow=12,SNR=5.3 comp=Z,57nm,0.6s						
WRA	Warramunga Arr	44.42	259	P	P	19 11 50.3	-2.1
AS31	Alice Springs	44.63	254		P	19 11 54.0	0.0
ASAR	Alice Springs	44.63	254	P	P	19 11 54.1	+0.1
	comp=Z,555nm,0.5s,baz=89,slow=7.9						
ASAR				PcP	PcP	19 13 24.9	+0.2
	comp=Z,7.0nm,0.5s,baz=102,slow=3.2,SNR=1.7						
ASAR				ScP	ScP	19 16 25.7	+1.4
	comp=Z,4.1nm,0.7s,baz=95,slow=4.7,SNR=6.8						
ASAR				S	S	19 17 46.2	-4.0
	comp=Z,8.6nm,0.9s,baz=88,slow=16,SNR=22						
ASAR	Alice Springs	44.63	254	P	P	19 11 53.2	-0.8
SAUI	Saumlaki	49.51	274	P	P	19 12 31.9	+1.2
SAUI	Saumlaki	49.51	274	P	P	19 12 30.9	+0.2
	comp=Z,2μmcomp=Z,135nm,1.0s						
SIJI	Sorong	51.82	283	P	P	19 12 47.6	+0.1
	comp=Z,788nmcomp=Z,105nm,0.9s						
SWI	Sorong	51.83	283	P	P	19 12 47.6	0.0
FITZ	Fitzroy Crossi	52.80	260	S	S	19 19 37.7	-4.2
	comp=Z,2.5nm,0.9s,baz=135,slow=20,SNR=1.2						
KRAI	Karang Ratu	53.67	279	P	P	19 13 01.3	+0.6
	comp=Z,1μmcomp=Z,45nm,0.8s						
AAI	Ambon	53.74	278	P	P	19 13 02.2	+1.0
	comp=Z,1μmcomp=Z,55nm,0.5s						
NLAI	Namlea	54.91	278	P	P	19 13 11.4	+1.9
	comp=Z,793nmcomp=Z,73nm,0.6s						
SOEI	Soe	55.76	270	P	P	19 13 17.4	+1.9
	comp=Z,230nm,0.9s						
SOEI	Soe	55.76	270	P	P	19 13 16.9	+1.4
DRV	Dumont d’Urvil	56.04	198	P	P	19 13 16.5	+0.1
DRV				PcP	PcP	19 14 09.8	+3.5
TNTI	Ternate	56.04	283		P	19 13 17.3	0.0
TNTI				IAmb	IAmb	19 13 18.9	
	comp=Z,28nm,0.7s						
TNTI	Ternate	56.04	283	P	P	19 13 18.3	+1.0
	comp=Z,40nm,0.9s						
TNTI	Ternate	56.04	283	P	P	19 13 18.2	+1.0
	comp=Z,39nm,0.9s						
BATI	Baumata	56.22	269	P	P	19 13 20.1	+1.5
	comp=Z,68nm,0.7s						
SANI	Sanana	56.35	279	P	P	19 13 19.5	+0.1
	comp=Z,56nm,0.8s						
SANI	Sanana	56.35	279	P	P	19 13 19.1	-0.3
	comp=Z,56nm,0.9s						
PSA00	Pilbara Seismi	57.73	255	P	P	19 13 28.1	-0.7

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PSA00                                IAmb    IAmb    19 13 29.5
       comp=Z,45nm,0.9s
PSA00  Pilbara Seismi    57.73 255   IAmb    IAmb    19 13 29.4
       comp=Z,97nm,0.8s
PSA00  Pilbara Seismi    57.73 255   P       P       19 13 28.7  -0.1
       comp=Z,154nm,0.8s
MBWA   Marble Bar        57.89 256   P       P       19 13 29.0  -0.8
MBWA                                 IAmb    IAmb    19 13 30.5
       comp=Z,46nm,0.8s
MBWA   Marble Bar        57.89 256   P       P       19 13 29.7  -0.2
       comp=Z,43nm,1.0s
MMRI   Maumere           57.98 271   P       P       19 13 30.6  +0.1
       comp=Z,99nm,0.8s
MMRI   Maumere           57.98 271   P       P       19 13 30.4  -0.1
       comp=Z,100nm,0.8s
MEEK   Meekatharra       58.32 249   P       P       19 13 32.2  -0.5
       comp=Z,82nm,0.9s
EDFI   Ende, Flores      58.47 270   P       P       19 13 33.4  -0.6
       comp=Z,612nmcomp=Z,74nm,0.9s
KLBR   Kellerberrin      58.77 243   P       P       19 13 35.1  -0.5
       comp=Z,424nm,0.7s
NWAO   Narrogin (SRO)    59.17 242           P       19 13 37.6  -0.7
NWAO   Narrogin (SRO)    59.17 242   P       P       19 13 38.1  -0.2
       comp=Z,34nm,1.1s
BLDU   Ballidu           59.71 244   P       P       19 13 41.5  -0.4
       comp=Z,82nm,1.0s
LUWI   Luwuk             59.72 279   IAmb    IAmb    19 13 44.1
       comp=Z,74nm,1.2s
LUWI   Luwuk             59.72 279   P       P       19 13 43.1  +0.9
       comp=Z,36nm,0.8s
LUWI   Luwuk             59.72 279   P       P       19 13 43.9  +1.7
       comp=Z,738nmcomp=Z,36nm,0.7s
MUN    Mundaring         60.07 243   P       P       19 13 44.5  +0.2
       comp=Z,62nm,1.0s
BSSI   Bau Bau, Buton    60.32 273   P       P       19 13 46.2   0.0
       comp=Z,52nm,1.0s
MORW   Morawa            60.40 246           P       19 13 45.7  -0.8
MORW   Morawa            60.40 246   P       P       19 13 46.2  -0.3
       comp=Z,80nm,0.9s
WBSI   Waikabubak, Su    60.44 269   P       P       19 13 47.3  +0.3
       comp=Z,54nm,0.7s
APSI   Ampana            60.82 279   P       P       19 13 51.2  +1.7
       comp=Z,850nmcomp=Z,58nm,1.1s
SBA    Scott Base        60.90 183   P       P       19 13 50.7  +1.8
SBA                                  IAmb    IAmb    19 13 52.2
       comp=Z,27nm,0.9s
SBA    Scott Base        60.90 183   P       P       19 13 50.6  +1.8
SBA                                  x       x       19 15 43.7
BKSI   Bulukumba         60.91 274   P       P       19 13 51.5  +1.5
VNDA   Vanda             60.92 185   P       P       19 13 49.8  +0.7
       comp=Z,9.8nm,0.9s,baz=355,slow=6.9,SNR=30
       comp=Z,9.8nm,0.9s
VNDA   Vanda             60.92 185           P       19 13 49.6  +0.7
MRSI   Marisa            61.01 281   P       P       19 13 51.4  +0.7
KAPI   Kappang           61.35 274           P       19 13 52.6  -0.4
KAPI   Kappang           61.35 274   P       P       19 13 53.3  +0.4
       comp=Z,15nm,1.1s
KAPI   Kappang           61.35 274   P       P       19 13 53.4  +0.5
KAPI   Kappang           61.35 274d iP       P       19 13 52.9   0.0
KAPI                                 pmax    pmax
       comp=Z,15nm,0.9s
SPSI   Sidrap Palu       61.64 275   P       P       19 13 54.2  -0.7
       comp=Z,36nm,0.8s
H01W1  Cape Leeuwin H    61.67 239   P       P       19 13 55.8  +1.4
       baz=109,slow=6.0,SNR=7.2
H01W3  Cape Leeuwin H    61.68 239   P       P       19 13 56.1  +1.5
       baz=109,slow=6.0,SNR=5.5
H01W2  Cape Leeuwin H    61.68 239   P       P       19 13 55.1  +0.6
       baz=109,slow=6.0,SNR=3.9
DBNI   Kabupaten Domp    61.76 270   P       P       19 13 54.8  -0.9
PLAI   Plampang          62.19 269   P       P       19 13 58.4   0.0
       comp=Z,99nm,0.7s
PLAI   Plampang          62.19 269   P       P       19 13 58.0  -0.4
       comp=Z,1µmcomp=Z,98nm,0.7s
TOLI2  Tolitoli          62.31 281   P       P       19 14 00.0  +0.8
       comp=Z,18nm,0.8s
PCI    Palu              62.53 278   P       P       19 14 02.5  +1.8
       comp=Z,81nm,1.0s
PMSI   Majene            62.59 275   P       P       19 14 02.2  +1.1
       comp=Z,100nm,0.8s
MPSI   Mapaga            62.88 280   P       P       19 14 03.0  +0.1
       comp=Z,676nmcomp=Z,34nm,1.1s
KLNI   Mataram           63.90 269   P       P       19 14 08.4  -1.0
       comp=Z,46nm,0.5s
KHKI   Kahang-Kahang     64.38 269   P       P       19 14 12.7  +0.3
       comp=Z,33nm,0.7s
IGBI   Denpasar          64.70 268   P       P       19 14 14.5   0.0
RTBI   Rangdo, Negare    64.99 269   P       P       19 14 16.9  +0.6
       comp=Z,75nm,0.8s
CCD    Concordia, Ant    65.28 194   P       P       19 14 17.9  +0.4
CCD                                  PcP     PcP     19 14 44.9  +0.5
JAGI   Jajag, Banyuwa    65.74 268           P       19 14 18.9  -2.2
JAGI   Jajag, Banyuwa    65.74 268   P       P       19 14 20.0  -1.0
       comp=Z,106nm,0.8s
JAGI   Jajag, Banyuwa    65.74 268   P       P       19 14 19.7  -1.3
       comp=Z,105nm,0.8s
ABJI   Asem Bagus        65.84 269   P       P       19 14 21.9  +0.3
       comp=Z,56nm,1.1s
KMMI   Kalianget         66.30 270   P       P       19 14 25.3  +0.8
       comp=Z,62nm,0.8s
CASY   Casey             66.46 205           P       19 14 24.1  -0.4
BLJI   Banyuglugur       66.46 269   P       P       19 14 25.5   0.0
BBKI   Banjar Baru       66.48 274   P       P       19 14 27.2  +1.6
       comp=Z,53nm,1.1s
MJAR   Matsushiro Arr    67.32 323   P       P       19 14 30.2  -0.1
       comp=Z,15nm,0.6s,baz=159,slow=6.0,SNR=64
       comp=Z,15nm,0.6s
MJAR   Matsushiro Arr    67.32 323           P       19 14 29.9  -0.4
MAJO   Matsushiro        67.32 323   P       P       19 14 30.0  -0.3
MAJO                                 IAmb    IAmb    19 14 30.9
       comp=Z,20nm,0.6s
MAJO   Matsushiro        67.32 323   P       P       19 14 30.6  +0.3
       comp=Z,25nm,0.9s
MAJO   Matsushiro        67.32 323c iP       P       19 14 30.3   0.0
MAJO                                 pmax    pmax
       comp=Z,13nm,0.9s
MAJO   Matsushiro        67.32 323   P       P       19 14 30.2   0.0
MJB9   Matsu-Tunnel      67.33 323   P       P       19 14 31.1  +0.8
MJB9                                 IAmb    IAmb    19 14 31.8
       comp=Z,19nm,0.6s
SNJI   Sawahan-Nganju    68.21 268   P       P       19 14 37.4  +1.0
       comp=Z,63nm,1.0s
SJI    Sawahan           68.21 268   P       P       19 14 36.6  +0.3
       comp=Z,56nm,1.5s
PCJI   Pacitan           68.65 268   P       P       19 14 39.1  +0.2
NIKH   Nikolski High     70.61   6   P       P       19 14 48.9  -0.7
       baz=190
JKA    Kamikawa-asahi    70.69 332   IAmb    IAmb    19 14 52.9
       comp=Z,31nm,0.8s
ASAJ   Asahikawa         70.69 332   P       P       19 14 52.1  +1.8
       comp=Z,32nm,0.7s,baz=209,slow=5.2,SNR=39
       comp=Z,32nm,0.7s
SBUM   Sibu              70.82 279   P       P       19 14 52.8  +1.0
       comp=Z,7.0nm,1.0s
SBUM   Sibu              70.82 279   P       P       19 14 53.0  +1.2
CTJI   Waduk Cacaban     70.87 268   P       P       19 14 53.0  +0.9
       comp=Z,66nm,0.9s
KPJI   Karang Pucung     71.03 268   P       P       19 14 53.1  +0.1
       comp=Z,69nm,1.0s
UNV    Unalaska Valle    71.73   8   P       P       19 14 55.5  -0.7
       baz=192
BBJI   Bungbulang        72.21 268   P       P       19 14 59.5  -0.5
       comp=Z,45nm,0.8s
BBJI   Bungbulang        72.21 268   P       P       19 14 59.3  -0.7
       comp=Z,44nm,0.9s
QSPA   South Pole Qui    72.64 180   P       P       19 15 02.2  +0.6
QSPA                                 x       x       19 17 00.6
PET    Petropavlovsk     72.81 346  eP       P       19 15 01.9  -0.5
PET                                  pmax    pmax
       comp=Z,28nm,0.6s
YSS    Yuzhno-Sakhali    72.83 333  eP       P       19 15 03.5  +0.8
YSS                                  pmax    pmax
       comp=Z,20nm,0.6s
PEA0B  Petropavlovsk-    73.12 345deP        P       19 15 04.7  +0.5
PETK   Petropavlovsk-    73.12 345   P       P       19 15 03.8  -0.4
       comp=Z,34nm,0.8s,baz=120,slow=6.4,SNR=21
       comp=Z,34nm,0.8s
PETK   Petropavlovsk-    73.12 345   P       P       19 15 04.1  -0.1
FALS   False Pass        73.15   9   P       P       19 15 03.7  -0.6
       baz=195
DBJI   Dramaga           73.32 268   P       P       19 15 06.5  +0.2
       comp=Z,107nm,1.1s
CHNA   Chernabura Isl    73.78  11   P       P       19 15 07.9   0.0
       baz=199
SDPT   Sand Point        74.11  11   P       P       19 15 09.8  +0.1
       baz=198
KSRS   Korea Array       74.12 318   P       P       19 15 11.7  +1.5
       comp=Z,3.7nm,0.7s,baz=126,slow=6.4,SNR=11
       comp=Z,3.7nm,0.7s
S12K   Black Hills       74.18  10   P       P       19 15 10.1  -0.1
       baz=197
SPIA   Saint Paul Isl    74.64   5   P       P       19 15 12.8  +0.2
       baz=188
S14K   Fog Glacier       75.16  11   P       P       19 15 15.7  -0.1
       baz=199
CHIR   Chirikof Islan    75.52  13   P       P       19 15 17.4  -0.2
       baz=203
PSTR   Posyet            75.66 324ceP        P       19 15 20.2  +1.5
KASI   Kota Agung        75.76 269   P       P       19 15 19.0  -1.0
       comp=Z,102nm,0.8s
USRK   Ussuriysk Ar.     76.03 326   P       P       19 15 21.2  +0.4
       comp=Z,4.1nm,0.7s,baz=128,slow=8.0,SNR=5.0
       comp=Z,4.1nm,0.7s
LWLI   Liwa              76.32 269   P       P       19 15 22.7  -0.5
       comp=Z,77nm,0.7s
MDSI   Maura Dua         76.36 270   P       P       19 15 21.9  -1.4
       comp=Z,28nm,1.1s
PKD    Bear Valley Ra    76.44  45   P       P       19 15 24.1  +0.9
SII    Sitkinak Islan    76.51  14   P       P       19 15 23.1   0.0
       baz=204
R16K   Pilot Point       76.74  12   P       P       19 15 24.4  +0.1
       baz=201
R17L   Mt. Peulik Vol    77.04  12   P       P       19 15 26.1  +0.1
       baz=202
MWC    Mount Wilson      77.23  48   IAmb    IAmb    19 15 29.3
       comp=Z,21nm,0.7s
OHAK   Old Harbor        77.32  14   P       P       19 15 27.6  +0.1
       baz=205
VES    Vestal, Richgr    77.37  46   IAmb    IAmb    19 15 29.9
       comp=Z,40nm,0.9s
R18K   Karluk            77.38  13   P       P       19 15 27.7  -0.1
       baz=204
NJ2    Nanjing           77.38 310  eP       P       19 15 30.3  +1.9
NJ2                                  pmax    pmax
       comp=Z,12nm,0.6s
TPO    Tropico Hills     77.46  47   IAmb    IAmb    19 15 31.0
       comp=Z,40nm,1.0s
MDJ    Mudanjiang        77.60 325   IAmb    IAmb    19 15 31.7
       comp=Z,33nm,0.9s
MDJ    Mudanjiang        77.60 325   P       P       19 15 30.3  +1.0
MDJ                                  pmax    pmax
       comp=Z,45nm,0.9s
MDJ    Mudanjiang        77.60 325   P       P       19 15 31.0  +1.7
       comp=Z,45nm,1.2s
MDJ    Mudanjiang        77.60 325   P       P       19 15 30.4  +1.1
MDJ                                  PcP     PcP     19 15 37.3  +0.4
ISA    Isabella, Lake    77.70  46   IAmb    IAmb    19 15 32.2
       comp=Z,29nm,1.0s
O14K   Tigyukauivet M    77.71   9   P       P       19 15 29.3  -0.3
       baz=197
Q17K   Contact Creek     77.72  12   P       P       19 15 29.4  -0.4
       baz=202
O15K   Ungalikthiuk R    77.86  10   P       P       19 15 30.3  -0.1
       baz=198
N02D   Trinity Center    77.89  40   IAmb    IAmb    19 15 33.5
       comp=Z,78nm,1.9s
Q16K   King Salmon       77.95  12   P       P       19 15 30.8  -0.1
       baz=202
KDAK   Kodiak Island     77.99  14   P       P       19 15 31.0  -0.1
       baz=206
P16K   Nushagak River    78.04  11   P       P       19 15 31.3   0.0
       baz=200
O03E   Paynes Creek      78.06  41   IAmb    IAmb    19 15 40.9
       comp=Z,32nm,1.4s
PFO    Pinyon Flats O    78.06  49   P       P       19 15 32.3  +0.1
       comp=Z,3.5nm,0.8s,baz=198,slow=5.9,SNR=2.5
       comp=Z,3.5nm,0.8s
KSI    Kapahiang         78.11 270   P       P       19 15 33.9  +1.0
       comp=Z,30nm,0.5s
M11K   Mekoryuk          78.18   6   P       P       19 15 32.6  +0.6
       baz=192
N14K   Kuskokwak Cree    78.29   9   P       P       19 15 33.1  +0.4
       baz=197
YBH    Yreka Blue Hor    78.34  39   P       P       19 15 33.9  +0.4
       comp=Z,1.1nm,0.8s,baz=226,slow=8.1,SNR=16
MDPB   Devils Postpil    78.34  44   IAmb    IAmb    19 15 35.7
       comp=Z,26nm,0.9s
CWC    Cottonwood Cre    78.38  46   IAmb    IAmb    19 15 35.8
       comp=Z,38nm,1.6s
CCCA   Chr Cany lake     78.40  47   IAmb    IAmb    19 15 36.1
       comp=Z,22nm,0.8s
M03C   McCloud           78.43  40   IAmb    IAmb    19 15 35.9
       comp=Z,36nm,0.9s
GRNR   Gornyy            78.45 333⇑iP        P       19 15 34.8  +1.0
GRNR                                 pmax    pmax
       comp=Z,30nm,1.0s
P17K   Kvichak River     78.48  11   P       P       19 15 33.6  -0.1
       baz=202,SNR=6.5
M13K   Dall Lake         78.54   8   P       P       19 15 34.3  +0.4
       baz=195
O16K   Kokwok River B    78.55  11   IAmb    IAmb    19 18 02.6
       comp=Z,104nm,1.9s
O16K   Kokwok River B    78.55  11   P       P       19 15 34.2  +0.2
       baz=200
HATC   Hat Creek Radi    78.57  41   IAmb    IAmb    19 15 36.9
       comp=Z,52nm,1.1s
MASI   Maura Aman, Be    78.60 270   P       P       19 15 37.0  +1.5
       comp=Z,63nm,1.1s
N15K   Kwethluk River    78.77   9   P       P       19 15 35.5  +0.3
       baz=198
Q20K   Shuyak Island     78.78  14   P       P       19 15 35.4  +0.1
       baz=206
PNTR   Pine Nut          78.79  43   IAmb    IAmb    19 15 38.1
       comp=Z,47nm,0.8s
Q19K   Cape Douglas,     78.80  13   P       P       19 15 35.4   0.0
       baz=204
BC3    Big Chuckawall    78.81  49   IAmb    IAmb    19 15 39.6
       comp=Z,69nm,1.9s
L04D   Klamath Falls     78.87  39   IAmb    IAmb    19 15 38.2
       comp=Z,32nm,0.8s
O17K   Koliganek Bris    78.90  11   P       P       19 15 36.0  +0.1
       baz=201
P18K   Big Mountain,     78.90  12   P       P       19 15 35.7  -0.3
       baz=203,SNR=7.2
M14K   Bethel            79.05   8   IAmb    IAmb    19 15 38.0
       comp=Z,61nm,1.4s
M14K   Bethel            79.05   8   P       P       19 15 37.0  +0.4
       baz=196
GRAC   Grapevine Rang    79.16  46   IAmb    IAmb    19 15 39.7
       comp=Z,24nm,0.7s
M15K   Kasigluk River    79.18   9   P       P       19 15 37.8  +0.4
       baz=198
N16K   Nishlik Lake      79.27  10   P       P       19 15 38.2  +0.3
       baz=199
NVAR   Mina Array Bea    79.28  44   P       P       19 15 39.7  +0.9
       comp=Z,15nm,0.8s,baz=224,slow=8.9,SNR=75
       comp=Z,15nm,0.8s
NVAR   Mina Array Bea    79.28  44           P       19 15 39.1  +0.4
O18K   Koktuh Hills      79.33  12   P       P       19 15 38.1  -0.1
       baz=203
SHOC   Shoshone, Teco    79.35  47   P       P       19 15 39.6  +0.7
SHOC                                 IAmb    IAmb    19 15 40.7
       comp=Z,28nm,1.2s
CN2    Changchun         79.44 322  eP       P       19 15 40.8  +1.7
CN2                                  pmax    pmax
       comp=Z,10.0nm,0.6s
BNX    BinXian           79.51 325 ⇑P        P       19 15 40.0  +0.5
BNX                                  pmax    pmax
       comp=Z,35nm,0.8s
L14K   Kuka Creek        79.52   8   IAmb    IAmb    19 17 28.1
       comp=Z,62nm,1.2s
L14K   Kuka Creek        79.52   8   P       P       19 15 39.6  +0.4
       baz=196
P19K   Oil Pt            79.55  13   P       P       19 15 39.6  +0.2
       baz=205
J04A   Umpqua Nationa    79.58  38   P       P       19 15 40.6  +0.4
N17K   Nushagak Hills    79.59  11   IAmb    IAmb    19 16 28.6
       comp=Z,67nm,1.8s
N17K   Nushagak Hills    79.59  11   P       P       19 15 39.6   0.0
       baz=201
I04A   Tendick Farm,     79.73  38   P       P       19 15 41.1  +0.3
M16K   Timber Creek      79.76  10   IAmb    IAmb    19 15 42.6
       comp=Z,54nm,0.9s
M16K   Timber Creek      79.76  10   P       P       19 15 40.6  +0.2
       baz=199
O19K   Port Alsworth     79.82  12   P       P       19 15 40.5  -0.2
       baz=204
K13K   Kusilvak Mount    79.86   7   IAmb    IAmb    19 15 42.7
       comp=Z,43nm,1.4s
K13K   Kusilvak Mount    79.86   7   P       P       19 15 41.1  +0.2
       baz=194
HOM    Homer             79.90  14   P       P       19 15 41.2   0.0
       baz=206
N18K   Kilae Creek       79.97  11   P       P       19 15 41.2  -0.4
       baz=202
L15K   Ungalak Mounta    80.01   8   P       P       19 15 41.8  +0.1
       baz=197
K05A   Summer Lake       80.01  39   IAmb    IAmb    19 15 44.6
       comp=Z,35nm,0.9s
O20K   Slope Mountain    80.07  13   P       P       19 15 42.0  -0.1
       baz=205
G03D   McMinnville, O    80.08  36   IAmb    IAmb    19 15 44.5
       comp=Z,69nm,1.3s
J05D   Fort Rock, OR     80.13  39   P       P       19 15 43.8  +0.8
J05D                                 IAmb    IAmb    19 15 45.1
       comp=Z,46nm,0.8s
BRSE   Bradley Lake S    80.18  14   P       P       19 15 42.7   0.0
       baz=207
WIFE   Three Sisters-    80.23  38   IAmb    IAmb    19 15 45.4
       comp=Z,20nm,0.9s
L16K   Owhat River       80.33   9   IAmb    IAmb    19 15 45.2
       comp=Z,38nm,1.2s
L16K   Owhat River       80.33   9   P       P       19 15 44.0  +0.6
       baz=199,SNR=7.1
RED    Redoubt Volcan    80.34  13   IAmb    IAmb    19 15 44.1
       comp=Z,40nm,0.9s
N19K   Bonanza Creek     80.36  12   P       P       19 15 43.3  -0.4
       baz=203
M17K   Holitna River     80.36  10   P       P       19 15 43.9  +0.3
       baz=201
H04A   Detroit Lake      80.38  37   IAmb    IAmb    19 15 45.0
       comp=Z,16nm,0.7s
K15K   Wolf Creek Mou    80.59   8   P       P       19 15 45.6  +0.9
       baz=197
PINE   Pine Mountain     80.59  38   IAmb    IAmb    19 15 47.6
       comp=Z,28nm,0.9s
S11A   Rachel            80.60  46   IAmb    IAmb    19 15 47.5
       comp=Z,41nm,1.2s
MA2    Magadan           80.63 345   P       P       19 15 44.3  -0.7
MA2                                  IAmb    IAmb    19 15 45.4
       comp=Z,39nm,1.1s
MA2    Magadan           80.63 345ceP        P       19 15 44.4  -0.7
MA2                                  pmax    pmax
       comp=Z,47nm,2.5s
MA2    Magadan           80.63 345   P       P       19 15 44.6  -0.4
       comp=Z,47nm,1.1s
MA2    Magadan           80.63 345   P       P       19 15 44.3  -0.7
MA2                                  PcP     PcP     19 15 50.3  +0.5
I05D   Terrebonne, OR    80.67  38   IAmb    IAmb    19 15 47.5
       comp=Z,24nm,1.1s
M18K   Stony River       80.73  11   P       P       19 15 46.1  +0.7
       baz=202
J14K   Nanvaranak Lak    80.78   7   P       P       19 15 46.3  +0.6
       baz=195
SEW    Seward            80.80  14   P       P       19 15 46.0  +0.2
       baz=208
L17K   Donlin            80.91  10   P       P       19 15 47.6  +1.2
       baz=200
PDSI   Padang            80.95 272   P       P       19 15 47.1  -0.7
       comp=Z,30nm,0.6s
Q23K   Middleton Isla    80.99  16   P       P       19 15 47.4  +0.6
       baz=211
HOOD   Mount Hood Mea    81.06  37   IAmb    IAmb    19 15 49.3
       comp=Z,36nm,1.2s
GAMB   Gambell           81.11   3   P       P       19 15 48.0  +0.7
       baz=187
PPI    Padang Panjang    81.15 272   P       P       19 15 50.1  +1.4
       comp=Z,20nm,0.8s
SPCR   Spurr Chakacha    81.17  13   P       P       19 15 47.8  -0.1
       baz=206
G05A   Wamic             81.21  37   IAmb    IAmb    19 16 44.8
       comp=Z,72nm,1.8s
P23K   Montague Islan    81.21  15   P       P       19 15 47.9  -0.1
       baz=210
WVOR   Wild Horse Val    81.23  40   IAmb    IAmb    19 15 50.7
       comp=Z,37nm,1.1s
L18K   Granite Mounta    81.26  10   P       P       19 15 48.9  +0.7
       baz=201
K17K   Iditarod          81.46   9   IAmb    IAmb    19 15 51.1
       comp=Z,46nm,1.4s
K17K   Iditarod          81.46   9   P       P       19 15 50.0  +0.8
       baz=200
L19K   White Mountain    81.55  11   IAmb    IAmb    19 15 51.7
       comp=Z,22nm,0.9s
L19K   White Mountain    81.55  11   P       P       19 15 50.3  +0.6
       baz=203
M20K   Styx River        81.60  12   P       P       19 15 50.0   0.0
       baz=205
RC01   Rabbit Creek A    81.61  14   IAmb    IAmb    19 15 50.8
       comp=Z,30nm,1.0s
RC01   Rabbit Creek A    81.61  14   P       P       19 15 50.0   0.0
       baz=208
TUC    Tucson            81.64  52   P       P       19 15 52.8  +1.8
J16K   Anvik River       81.67   8   P       P       19 15 50.7  +0.4
       baz=198
SUA    Susitna One       81.72  13   P       P       19 15 50.8  +0.1
       baz=207
PWL    Port Wells        81.73  14   P       P       19 15 50.5  -0.2
       baz=209
GNW    Green Mountain    81.74  35   IAmb    IAmb    19 15 52.7
       comp=Z,18nm,0.9s
J08A   Circle Bar Ran    81.83  40   IAmb    IAmb    19 15 53.6
       comp=Z,41nm,1.2s
KAIM   Kayak Island      81.94  17   P       P       19 15 51.7   0.0
       baz=213
J17K   VABM Dome         81.99   9   IAmb    IAmb    19 15 53.1
       comp=Z,21nm,0.7s
J17K   VABM Dome         81.99   9   P       P       19 15 52.4  +0.5
       baz=199
SKT    Skwentna          82.01  13   P       P       19 15 51.2  -0.9
       baz=206
LCMT   Little Creek M    82.02  47   IAmb    IAmb    19 15 55.0
       comp=Z,16nm,0.9s
BBB    Bella Bella       82.03  29   P       P       19 15 52.4  +0.1
       comp=Z,53nm,1.0s,baz=231,slow=4.5,SNR=4.0
       comp=Z,53nm,1.0s
IPM    Ipoh              82.05 277   P       P       19 15 54.3  +0.9
       comp=Z,36nm,1.0s
IPM    Ipoh              82.05 277   P       P       19 15 54.1  +0.7
       comp=Z,36nm,1.0s
GLI    Glacier Island    82.05  15   P       P       19 15 51.5  -0.8
       baz=210
X16A   Lo Mia Camp, P    82.10  50   IAmb    IAmb    19 15 56.0
       comp=Z,23nm,0.9s
EYAK   Cordova Ski Ar    82.11  16   P       P       19 15 52.3  -0.3
       baz=212
M22K   Willow            82.11  13   P       P       19 15 52.4  -0.1
       baz=208
CRAG   Craig             82.19  24   P       P       19 15 52.7  -0.3
       baz=224
KNK    Knik Glacier      82.19  14   IAmb    IAmb    19 15 53.6
       comp=Z,26nm,0.8s
KNK    Knik Glacier      82.19  14   P       P       19 15 52.9  -0.1
       baz=209,SNR=6.3
PMR    Palmer            82.19  14   IAmb    IAmb    19 15 54.1
       comp=Z,51nm,1.3s
PMR    Palmer            82.19  14   P       P       19 15 52.5  -0.4
       comp=Z,32nm,1.3s
PMR    Palmer            82.19  14   P       P       19 15 52.9   0.0
       baz=208,SNR=6.6
I17K   Unalakleet        82.23   8   P       P       19 15 53.1  +0.1
       baz=197,SNR=6.8
KNB    Kanab             82.32  48   IAmb    IAmb    19 15 56.8
       comp=Z,20nm,0.9s
HEH    HeiHe             82.32 328  eP       P       19 15 54.0  +0.1
HEH                                  pmax    pmax
       comp=Z,11nm,0.8s
PSUT   Pine Spring       82.33  46   IAmb    IAmb    19 15 56.3
       comp=Z,18nm,0.7s
ANM    Nome              82.36   6   IAmb    IAmb    19 15 55.5
       comp=Z,29nm,1.3s
ANM    Nome              82.36   6   P       P       19 15 54.0  +0.3
       baz=193,SNR=6.5
319A   Douglas           82.38  54   IAmb    IAmb    19 15 57.7
       comp=Z,32nm,1.0s
F07A   Phinny Hill Vi    82.38  37   IAmb    IAmb    19 15 55.9
       comp=Z,15nm,0.7s
SZCU   Shurtz Canyon     82.41  47   IAmb    IAmb    19 15 57.2
       comp=Z,24nm,1.2s
J18K   Innoko River      82.42  10   IAmb    IAmb    19 15 55.4
       comp=Z,38nm,0.8s
J18K   Innoko River      82.42  10   P       P       19 15 54.4  +0.3
       baz=201
ELK    Elko              82.51  43   IAmb    IAmb    19 15 57.1
       comp=Z,16nm,0.8s
SML    Sawmill           82.56  14   P       P       19 15 55.2  +0.2
       baz=209
G08A   Pilot Rock        82.61  38   IAmb    IAmb    19 15 57.4
       comp=Z,26nm,1.1s
WUAZ   Wupatki           82.66  49   IAmb    IAmb    19 15 58.6
       comp=Z,23nm,1.0s
U33K   Whale Pass        82.66  24   P       P       19 15 55.3  -0.1
       baz=223
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L22K	Petersville	82.66	13	IAmb	IAmb	19 15 55.9	
	comp=Z,28nm,0.9s						
M23K	Glacier View	82.69	14	P	P	19 15 55.2	-0.3
	baz=210						
PPLA	Purkeypile	82.71	12	P	P	19 15 55.2	-0.5
	baz=206						
BMRM	Bremner River	82.76	16	IAmb	IAmb	19 15 56.6	
	comp=Z,32nm,0.8s						
BMRM	Bremner River	82.76	16	P	P	19 15 55.8	-0.1
	baz=213,SNR=6.1						
H16K	Elim	82.76	7	P	P	19 15 56.0	+0.3
	baz=196,SNR=21						
K20K	Telida	82.77	11	IAmb	IAmb	19 15 56.9	
	comp=Z,41nm,0.8s						
K20K	Telida	82.77	11	P	P	19 15 56.0	+0.1
	baz=204						
E07A	Sunnyside	82.80	37	IAmb	IAmb	19 15 58.2	
	comp=Z,39nm,1.2s						
SCM	Sheep Creek Mo	82.82	14	P	P	19 15 56.2	0.0
	baz=210,SNR=13						
KLU	Klutina	82.87	15	P	P	19 15 56.7	+0.2
	baz=211						
PKCU	Pink Cliffs	82.88	47	IAmb	IAmb	19 16 00.5	
	comp=Z,43nm,1.1s						
HAWA	Hanford	82.89	37	IAmb	IAmb	19 15 58.6	
	comp=Z,24nm,0.9s						
S31K	Pelican	82.90	21	P	P	19 15 57.0	+0.4
	baz=220						
G15K	Niukluk	82.91	6	P	P	19 15 56.9	+0.4
	baz=194						
CRQM	Cirque	82.98	17	IAmb	IAmb	19 15 57.7	
	comp=Z,38nm,0.9s						
CRQE	Cirque	82.99	17	P	P	19 15 57.3	+0.1
	baz=214,SNR=5.4						
YPT	Yellepit	83.03	37	IAmb	IAmb	19 15 58.8	
	comp=Z,11nm,0.6s						
DUN6	Lazy B Ranch	83.04	53	IAmb	IAmb	19 16 00.3	
	comp=Z,35nm,1.1s						
TGL	Tana Glacier	83.07	17	IAmb	IAmb	19 15 58.4	
	comp=Z,50nm,1.1s						
J19K	Poorman	83.09	10	IAmb	IAmb	19 15 58.3	
	comp=Z,13nm,0.7s						
J19K	Poorman	83.09	10	P	P	19 15 57.9	+0.5
	baz=202,SNR=7.8						
TNA	Tin City	83.12	5	IAmb	IAmb	19 15 59.0	
	comp=Z,42nm,1.0s						
TNA	Tin City	83.12	5	P	P	19 15 58.1	+0.6
	baz=190,SNR=6.3						
F14K	Arctic Creek	83.16	5	P	P	19 15 58.3	+0.5
	baz=192,SNR=6.2						
WRAK	Wrangell Islan	83.18	24	P	P	19 15 58.3	+0.3
	baz=224						
BJT	Baijiatuau	83.20	315	P	P	19 15 59.9	+1.3
BJI	Beijing	83.21	315	P	P	19 15 59.5	+0.9
BJI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SEY	Seymchan	83.22	347	⇑eP	P	19 15 58.0	-0.1
SEY				pmax	pmax		
	comp=Z,43nm,0.8s						
T33K	Petersburg	83.23	23	P	P	19 15 58.9	+0.6
	baz=224						
MTPU	Mount Pierson	83.25	47	IAmb	IAmb	19 16 02.1	
	comp=Z,24nm,1.0s						
VRDI	Verde Repeater	83.29	16	IAmb	IAmb	19 15 59.5	
	comp=Z,25nm,0.9s						
N25K	Chitina, Valde	83.30	16	P	P	19 15 58.8	+0.1
	baz=213,SNR=18						
M24K	Tolsona, Glenn	83.34	15	P	P	19 15 59.1	+0.3
	baz=211,SNR=6.8						
TCRU	Three Creeks R	83.34	46	IAmb	IAmb	19 16 02.1	
	comp=Z,17nm,1.0s						
H17K	Granite Mounta	83.34	8	P	P	19 15 58.8	+0.1
	baz=198						
WAT6	Susitna Watana	83.38	14	P	P	19 15 58.8	-0.3
	baz=210,SNR=15						
EPH	Ephrata	83.40	36	IAmb	IAmb	19 16 00.8	
	comp=Z,20nm,0.9s						
WAT1	Susitna Watana	83.41	13	P	P	19 15 59.1	-0.1
	baz=209						
G16K	Koyuk River	83.48	7	IAmb	IAmb	19 16 00.7	
	comp=Z,21nm,1.1s						
G16K	Koyuk River	83.48	7	P	P	19 15 59.6	+0.3
	baz=196						
MFID	Camas Ranch	83.50	41	IAmb	IAmb	19 16 01.9	
	comp=Z,18nm,1.0s						
J20K	Nowinta River	83.51	11	IAmb	IAmb	19 16 00.6	
	comp=Z,24nm,0.8s						
J20K	Nowinta River	83.51	11	P	P	19 16 00.0	+0.5
	baz=204,SNR=15						
MCARA	McCarthy VSAT	83.53	16	IAmb	IAmb	19 16 00.7	
	comp=Z,38nm,1.2s						
MCARA	McCarthy VSAT	83.53	16	P	P	19 15 59.8	+0.1
	baz=214						
F15K	North Star Dit	83.55	6	P	P	19 15 59.8	+0.1
	baz=194						
KTH	Kantishna Hill	83.55	12	IAmb	IAmb	19 16 00.4	
	comp=Z,35nm,1.0s						
CHUM	Lake Minchumin	83.58	11	P	P	19 15 59.4	-0.5
	baz=205,SNR=12						
TRF	Thorofare Moun	83.59	12	P	P	19 15 59.4	-0.7
	baz=207,SNR=24						
GCSA	Galena City Sc	83.59	9	P	P	19 16 00.2	+0.3
	baz=201,SNR=5.1						
D08A	Wollman Farm,	83.61	36	IAmb	IAmb	19 16 02.1	
	comp=Z,20nm,0.9s						
CTG	Chitna Glacier	83.66	17	P	P	19 16 00.5	0.0
	baz=216,SNR=5.8						
P29M	Windy Craggy	83.68	20	P	P	19 16 01.1	+0.6
	baz=219						
ENH	Enshi	83.73	304	P	P	19 16 02.6	+1.1
E09A	Wood Farm, Sta	83.76	37	IAmb	IAmb	19 16 02.5	
	comp=Z,31nm,1.6s						
H18K	Honhosa River	83.76	9	P	P	19 16 00.9	+0.2
	baz=200						
G17K	Kiwalik Mounta	83.79	7	P	P	19 16 01.2	+0.3
	baz=197						
O28M	Mount Upton	83.83	18	IAmb	IAmb	19 16 03.0	
	comp=Z,43nm,1.1s						
O28M	Mount Upton	83.83	18	P	P	19 16 01.7	+0.1
	baz=217						
HARP	HAARP	83.83	15	P	P	19 16 01.4	+0.2
	baz=212,SNR=5.4						
DHY	Denali Highway	83.89	14	P	P	19 16 01.4	-0.2
	baz=210,SNR=7.1						
O29M	Mount Kennedy	83.94	19	P	P	19 16 02.0	+0.1
	baz=218						
PLBC	Pleasant Camp	83.99	20	P	P	19 16 02.6	+0.6
	baz=220						
F10A	Beach Ranch, E	84.00	38	IAmb	IAmb	19 16 03.7	
	comp=Z,31nm,1.0s						
BPAW	Bear Paw Mtn.	84.03	12	IAmb	IAmb	19 16 01.6	
	comp=Z,12nm,0.8s						
BPAW	Bear Paw Mtn.	84.03	12	P	P	19 16 01.8	-0.3
	baz=207						
MCK	McKinley	84.12	13	P	P	19 16 02.1	-0.5
	baz=208,SNR=14						
MAW	Mawson	84.22	200	P	P	19 16 03.7	+0.6
	comp=Z,28nm,0.6s,baz=134,slow=5.3,SNR=67						
	comp=Z,28nm,0.6s						
PAX	Paxson	84.25	15	IAmb	IAmb	19 16 03.5	
	comp=Z,17nm,0.9s						
PAX	Paxson	84.25	15	P	P	19 16 02.6	-0.7
	baz=212,SNR=6.6						
P30M	Million Dollar	84.31	20	P	P	19 16 04.1	+0.5
	baz=220						
SKAG	Skagway	84.34	21	P	P	19 16 04.3	+0.6
	baz=221						
GSI	Gunungsitoli	84.36	273	P	P	19 16 06.0	+1.1
	comp=Z,66nm,0.9s						
GSI	Gunungsitoli	84.36	273	P	P	19 16 06.0	+1.1
	comp=Z,65nm,0.9s						
YUK8	Steele Glacier	84.37	18	P	P	19 16 04.3	+0.2
	baz=217,SNR=9.4						
M26K	Nabesna, AK	84.39	16	P	P	19 16 04.1	+0.1
	baz=214						
C09A	Chrisman Ranch	84.39	36	IAmb	IAmb	19 16 05.1	
	comp=Z,12nm,0.6s						
H19K	Roundabout Mou	84.39	9	P	P	19 16 04.0	+0.2
	baz=201						
G18K	Tagagawik	84.42	8	P	P	19 16 04.1	+0.1
	baz=199						
HLID	Hailey	84.46	41	IAmb	IAmb	19 16 07.0	
	comp=Z,14nm,0.8s						
YUK6	Outpost Mounta	84.51	19	P	P	19 16 04.8	0.0
	baz=218						
YUK3	Moose Creek	84.56	17	P	P	19 16 05.2	+0.1
	baz=216,SNR=16						
ZEA	Zeya	84.60	331	eP	P	19 16 05.8	+0.7
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
H20K	Anotleneega Mo	84.61	10	P	P	19 16 05.2	+0.3
	baz=203						
F17K	Baldwin Pennin	84.62	7	P	P	19 16 05.2	+0.3
	baz=197						
M27K	Edge Creek, AK	84.65	16	P	P	19 16 05.8	+0.5
	baz=215						
MENT	Mentasta	84.65	15	IAmb	IAmb	19 16 06.2	
	comp=Z,22nm,0.9s						
MENT	Mentasta	84.65	15	P	P	19 16 05.6	+0.4
	comp=Z,34nm,0.8s						
HYT	Haines Junctio	84.69	19	IAmb	IAmb	19 16 06.8	
	comp=Z,13nm,0.9s						
HYT	Haines Junctio	84.69	19	P	P	19 16 06.1	+0.6
	baz=219						
S34M	Telegraph Cree	84.71	23	P	P	19 16 06.5	+1.0
	baz=225						
YUK4	Talbot Arm	84.75	18	P	P	19 16 06.8	+0.8
	baz=218						
L26K	Log Cabin Wild	84.82	15	IAmb	IAmb	19 16 07.0	
	comp=Z,21nm,1.0s						
I21K	Tanana	84.82	11	IAmb	IAmb	19 16 06.7	
	comp=Z,18nm,0.9s						
I21K	Tanana	84.82	11	P	P	19 16 06.2	+0.3
	baz=206,SNR=9.1						
KCSI	Kotacane, Aceh	84.84	275	P	P	19 16 07.2	-0.1
	comp=Z,13nm,0.8s						
NEA2	Nenana	84.86	12	P	P	19 16 05.9	-0.2
	baz=208						
G19K	Purcell Mounta	84.88	9	P	P	19 16 06.4	+0.2
	baz=201						
K24K	Donnelly Dome	84.89	14	P	P	19 16 06.5	+0.1
	baz=211,SNR=20						
F18K	Selawik	84.96	8	P	P	19 16 06.5	0.0
	baz=198						
BVCY	Beaver Creek	84.97	17	P	P	19 16 07.2	+0.4
	baz=216,SNR=6.1						
P32M	Atlin	84.99	21	P	P	19 16 07.6	+0.7
	baz=223						
Q32M	Nakina River	85.04	22	IAmb	IAmb	19 16 09.0	
	comp=Z,24nm,0.7s						
Q32M	Nakina River	85.04	22	P	P	19 16 08.0	+0.6
	baz=224						
RIDG	Independent Ri	85.05	14	P	P	19 16 07.1	-0.1
	baz=212						
O30N	Mendenhall	85.09	19	IAmb	IAmb	19 16 08.8	
	comp=Z,18nm,0.8s						
O30N	Mendenhall	85.09	19	P	P	19 16 07.7	+0.3
	baz=220,SNR=5.7						
H21K	Melozitna Rive	85.11	10	IAmb	IAmb	19 16 09.5	
	comp=Z,36nm,1.7s						
H21K	Melozitna Rive	85.11	10	P	P	19 16 07.3	-0.1
	baz=205,SNR=7.3						
HDA	Harding Lake	85.14	13	IAmb	IAmb	19 16 07.9	
	comp=Z,24nm,0.8s						
HDA	Harding Lake	85.14	13	P	P	19 16 07.3	-0.3
	baz=210,SNR=14						
CCB	Clear Creek Bu	85.17	13	IAmb	IAmb	19 16 08.9	
	comp=Z,20nm,0.8s						
E17K	Hotham Inlet	85.17	7	P	P	19 16 07.7	+0.1
	baz=196,SNR=17						
TCUT	Toone Canyon	85.22	44	IAmb	IAmb	19 16 10.1	
	comp=Z,13nm,0.9s						
L27K	Beaver Creek,	85.24	16	IAmb	IAmb	19 16 09.8	
	comp=Z,36nm,1.8s						
L27K	Beaver Creek,	85.24	16	P	P	19 16 08.1	0.0
	baz=215						
I23K	Minto, Yukon-K	85.29	12	P	P	19 16 08.2	0.0
	baz=208						
NEW	Newport	85.29	36	P	P	19 16 08.2	-0.4
	comp=Z,8.1nm,0.6s,baz=241,slow=4.1,SNR=18						
	comp=Z,8.1nm,0.6s						
N30M	Aishikik Lake	85.31	19	P	P	19 16 08.4	-0.1
	baz=220						
COLA	College	85.36	13	P	P	19 16 07.5	-1.0
COLA				IAmb	IAmb	19 16 09.2	
	comp=Z,27nm,0.8s						
COLA	College	85.36	13	P	P	19 16 08.1	-0.4
	comp=Z,20nm,1.3s						
COLA	College	85.36	13	ceP	P	19 16 07.6	-0.9
COLA				pmax	pmax		
	comp=Z,41nm,1.3s						
COLA	College	85.36	13	P	P	19 16 08.5	0.0
	baz=209						
COLA	College	85.36	13	P	P	19 16 07.5	-1.0
WHY	Whitehorse	85.39	20	P	P	19 16 09.0	0.0
	baz=222						
F19K	Shaleruckik Mo	85.43	8	P	P	19 16 08.8	-0.1
	baz=200						
PV05	Paradox Valley	85.44	48	IAmb	IAmb	19 16 12.0	
	comp=Z,31nm,1.5s						
SCRK	Sand Creek	85.46	15	IAmb	IAmb	19 16 10.0	
	comp=Z,12nm,0.7s						
SCRK	Sand Creek	85.46	15	P	P	19 16 09.1	-0.1
	baz=213,SNR=12						
IL31		85.47	13	IAmb	IAmb	19 16 08.8	
	comp=Z,19nm,1.1s						
ILAR	Eielson Array	85.47	13	P	P	19 16 08.1	-1.0
	comp=Z,12nm,0.7s,baz=225,slow=5.1,SNR=146						
	comp=Z,12nm,0.7s						
ILAR	Eielson Array	85.47	13		P	19 16 07.7	-1.4
VHRN	Van Horn	85.50	56	IAmb	IAmb	19 16 12.8	
	comp=Z,22nm,1.4s						
MNTX	Cornudas Mount	85.55	55	IAmb	IAmb	19 16 12.4	
	comp=Z,17nm,1.3s						
H22K	Ishtalitna Cre	85.57	11	P	P	19 16 09.9	+0.3
	baz=206						
PV10	Paradox Valley	85.61	48	IAmb	IAmb	19 16 13.8	
	comp=Z,10nm,0.8s						
PV19	Morning Glory	85.62	48	IAmb	IAmb	19 16 12.9	
	comp=Z,49nm,1.7s						
D17K	Noatak River	85.64	6	P	P	19 16 10.0	+0.2
	baz=195,SNR=11						
PV18	Skein Mesa, Pa	85.64	48	IAmb	IAmb	19 16 14.8	
	comp=Z,20nm,1.3s						
PV20	West Nyswonger	85.64	48	IAmb	IAmb	19 16 14.0	
	comp=Z,15nm,0.9s						
POKR	Poker Plat Res	85.66	13	IAmb	IAmb	19 16 09.8	
	comp=Z,16nm,0.6s						
POKR	Poker Plat Res	85.66	13	P	P	19 16 09.1	-0.9
	baz=210,SNR=6.4						
PV23	Carpenter Ridg	85.66	48	IAmb	IAmb	19 16 12.2	
	comp=Z,14nm,0.9s						
M29M	Somme Creek	85.67	18	IAmb	IAmb	19 16 11.4	
	comp=Z,12nm,0.8s						
M29M	Somme Creek	85.67	18	P	P	19 16 10.0	-0.2
	baz=218						
J25K	Salcha River,	85.67	14	IAmb	IAmb	19 16 10.2	
	comp=Z,12nm,0.7s						
J25K	Salcha River,	85.67	14	P	P	19 16 10.1	-0.1
	baz=212,SNR=10						
PV03	Paradox Valley	85.69	48	IAmb	IAmb	19 16 12.7	
	comp=Z,22nm,1.6s						
PV11	David Mesa, Pa	85.69	48	IAmb	IAmb	19 16 13.6	
	comp=Z,17nm,1.3s						
XAN	Xi'an	85.71	307	P	P	19 16 12.3	+1.3
XAN				pmax	pmax		
	comp=Z,19nm,0.8s						
N31M	Braeburn, Yuko	85.73	19	IAmb	IAmb	19 16 11.8	
	comp=Z,28nm,1.1s						
N31M	Braeburn, Yuko	85.73	19	P	P	19 16 10.7	+0.2
	baz=221						
PV02	Paradox Valley	85.75	48	IAmb	IAmb	19 18 16.8	
	comp=Z,32nm,1.6s						
PV12	Saucer Basin,	85.75	48	IAmb	IAmb	19 16 13.8	
	comp=Z,10nm,0.7s						
P33M	Teslin, Yukon	85.75	21	P	P	19 16 10.7	+0.1
	baz=223						
G21K	Allakaket	85.77	10	IAmb	IAmb	19 16 11.2	
	comp=Z,14nm,0.7s						
G21K	Allakaket	85.77	10	P	P	19 16 10.6	+0.1
	baz=204						
R33M	Jennings River	85.82	22	IAmb	IAmb	19 16 13.0	
	comp=Z,18nm,1.1s						
R33M	Jennings River	85.82	22	P	P	19 16 11.3	+0.3
	baz=225						
BILL	Bilibino	85.90	354		P	19 16 10.8	-0.3
BILL				IAmb	IAmb	19 16 12.1	
	comp=Z,22nm,0.8s						
BILL	Bilibino	85.90	354	deP	P	19 16 11.4	+0.3
BILL				pmax	pmax		
	comp=Z,37nm,1.3s						
F20K	Avaraart Lake	85.92	9	P	P	19 16 11.1	0.0
	baz=202						
HILR	Hailar Array B	85.93	325	P	P	19 16 12.4	+0.7
	comp=Z,3.0nm,0.7s,baz=120,slow=8.7,SNR=5.1						
	comp=Z,3.0nm,0.7s						
TX31	Lajitas Ar. Si	85.99	58	IAmb	IAmb	19 16 15.5	
	comp=Z,18nm,0.9s						
TXAR	Lajitas Array	85.99	58	P	P	19 16 14.3	+1.8
	comp=Z,11nm,0.8s,baz=216,slow=6.2,SNR=98						
	comp=Z,11nm,0.8s						
TXAR	Lajitas Array	85.99	58		P	19 16 13.9	+1.4
C16K	Lisburne Hills	85.99	5	P	P	19 16 11.6	+0.2
	baz=193						
J26L	Joseph Creek	86.00	14	P	P	19 16 11.9	+0.2
	baz=214						
RDOG	Red Dog Mine	86.00	6	P	P	19 16 11.8	+0.2
	baz=195						
TASM	ASL Pad, Albuq	86.03	52	IAmb	IAmb	19 16 15.0	
	comp=Z,14nm,1.3s						
TASM	ASL Pad, Albuq	86.03	52	IAmb	IAmb	19 16 14.9	
	comp=Z,14nm,1.3s						
ANMO	Albuquerque	86.03	52	P	P	19 16 13.3	+0.6
	comp=Z,7.2nm,1.0s,baz=215,slow=4.8,SNR=8.1						
	comp=Z,7.2nm,1.0s						
ANMO	Albuquerque	86.03	52	P	P	19 16 13.3	+0.6
ANMO	Albuquerque	86.03	52	⇑eP	P	19 16 13.2	+0.5
ANMO				pmax	pmax		
	comp=Z,11nm,1.3s						
ANMO	Albuquerque	86.03	52	P	P	19 16 13.4	+0.6
ANMO				x	x	19 18 10.4	
E19K	Redstone River	86.09	8	IAmb	IAmb	19 16 12.7	
	comp=Z,15nm,0.7s						
E19K	Redstone River	86.09	8	P	P	19 16 12.0	0.0
	baz=201,SNR=19						
H24K	Noodor Dome	86.19	12	P	P	19 16 11.1	-1.4
	baz=209						
M30M	Minto, Yukon	86.26	18	IAmb	IAmb	19 16 14.0	
	comp=Z,22nm,0.8s						
M30M	Minto, Yukon	86.26	18	P	P	19 16 13.2	+0.3
	baz=220,SNR=12						
L29M	L29M	86.28	17	IAmb	IAmb	19 16 14.6	
	comp=Z,24nm,0.8s						
L29M	L29M	86.28	17	P	P	19 16 13.7	+0.7
	baz=218						
N32M	Quiet Lake	86.35	20	P	P	19 16 14.1	+0.6
	baz=223						
C17K	DeLong Mountai	86.38	6	P	P	19 16 13.0	-0.4
	baz=195						
F21K	Alatna River	86.42	10	P	P	19 16 13.1	-0.5
	baz=204						
DLMT	Dillon	86.48	40	IAmb	IAmb	19 16 16.4	
	comp=Z,20nm,0.9s						
G23K	Bananza Creek	86.55	11	P	P	19 16 14.4	+0.1
	baz=207						
DAWY	Dawson	86.69	16	IAmb	IAmb	19 16 16.1	
	comp=Z,15nm,1.1s						
DAWY	Dawson	86.69	16	P	P	19 16 15.4	+0.4
	baz=217						
HHC	Hu-ho-hao-te	86.70	315	eP	P	19 16 17.5	+1.9
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,68nm,4.9s						
M31M	Drury Creek, Y	86.70	19	IAmb	IAmb	19 18 27.3	
	comp=Z,51nm,1.9s						
M31M	Drury Creek, Y	86.70	19	P	P	19 16 14.9	-0.2
	baz=222						
SNOW	Snow King Moun	86.74	43	IAmb	IAmb	19 16 18.0	
	comp=Z,25nm,0.9s						
C18K	Utukok River	86.75	6	P	P	19 16 14.9	-0.3
	baz=197						
I26K	Coal Creek Min	86.77	14	P	P	19 16 15.5	+0.3
	baz=214						
F22K	John River	86.89	10	P	P	19 16 16.0	+0.1
	baz=205						
LOHW	Long Hollow	86.91	42	IAmb	IAmb	19 16 18.5	
	comp=Z,10nm,0.7s						
O20A	White River Ci	86.93	46	IAmb	IAmb	19 16 18.8	
	comp=Z,21nm,1.3s						
D19K	Kuna River	86.95	7	IAmb	IAmb	19 16 16.6	
	comp=Z,12nm,0.7s						
D19K	Kuna River	86.95	7	P	P	19 16 15.9	-0.2
	baz=200,SNR=11						
COLD	Coldfoot	86.98	11	IAmb	IAmb	19 16 17.4	
	comp=Z,20nm,0.9s						
COLD	Coldfoot	86.98	11	P	P	19 16 16.6	+0.4
	baz=207,SNR=21						
G24K	Hadweenzic Riv	87.03	12	P	P	19 16 16.5	0.0
	baz=210						
K29M	Barlow Dome	87.03	17	P	P	19 16 16.8	+0.1
	baz=219						
YHB	Horse Butte	87.06	41	IAmb	IAmb	19 16 19.8	
	comp=Z,21nm,1.0s						
WTLY	Watson Lake, Y	87.11	23	IAmb	IAmb	19 16 18.7	
	comp=Z,30nm,1.3s						
YHL	Hebgen Lake	87.11	41	IAmb	IAmb	19 16 20.3	
	comp=Z,20nm,0.8s						
YMR	Madison River	87.17	41	IAmb	IAmb	19 16 20.4	
	comp=Z,17nm,0.8s						
BOZ	Bozeman (W)	87.19	40	IAmb	IAmb	19 16 20.4	
	comp=Z,51nm,2.0s						
BW06	Boulder Array	87.20	44	IAmb	IAmb	19 16 19.4	
	comp=Z,35nm,1.4s						
PD31	Pinedale Array	87.20	44	IAmb	IAmb	19 16 19.4	
	comp=Z,35nm,1.4s						
PDAR	Pinedale Array	87.20	44	P	P	19 16 18.3	+0.2
	comp=Z,8.6nm,0.7s,baz=213,slow=3.2,SNR=97						
	comp=Z,8.6nm,0.7s						
PDAR	Pinedale Array	87.20	44	P	P	19 16 17.9	-0.2
H17A	Grant Village	87.29	42	IAmb	IAmb	19 16 21.6	
	comp=Z,16nm,0.8s						
MAYO	Mayo, Yukon	87.30	18	P	P	19 16 18.3	+0.5
	baz=220						
G25K	Bearman Lake	87.36	12	P	P	19 16 17.9	-0.1
	baz=211						
C19K	Lookout Ridge	87.36	7	IAmb	IAmb	19 16 18.9	
	comp=Z,9.7nm,0.8s						
C19K	Lookout Ridge	87.36	7	P	P	19 16 18.0	0.0
	baz=198						
I27K	Kandik River	87.38	15	IAmb	IAmb	19 17 41.7	
	comp=Z,44nm,2.0s						
I27K	Kandik River	87.38	15	P	P	19 16 18.2	0.0
	baz=215						
LKWY	Lake	87.48	42	IAmb	IAmb	19 16 22.6	
	comp=Z,12nm,0.8s						
E22K	Anaktuvuk Pass	87.52	10	IAmb	IAmb	19 16 19.5	
	comp=Z,18nm,0.9s						
E22K	Anaktuvuk Pass	87.52	10	P	P	19 16 18.8	0.0
	baz=206,SNR=13						
TOAD	Toad River Com	87.64	25	P	P	19 16 19.9	+0.4
	baz=230,SNR=8.8						
LIRD	Liard River Hi	87.66	24	P	P	19 16 20.1	+0.5
	baz=229,SNR=5.0						
F24K	Squaw Lake	87.66	11	IAmb	IAmb	19 16 20.5	
	comp=Z,16nm,0.8s						
F24K	Squaw Lake	87.66	11	P	P	19 16 19.7	+0.3
	baz=209						
I28M	Miner Creek	87.66	15	IAmb	IAmb	19 16 20.0	
	comp=Z,9.2nm,0.7s						
I28M	Miner Creek	87.66	15	P	P	19 16 19.2	-0.4
	baz=217						
HAYD	Hayden	87.78	46	IAmb	IAmb	19 16 22.8	
	comp=Z,10.0nm,0.9s						
E23K	Chandalar	87.83	11	IAmb	IAmb	19 16 21.2	
	comp=Z,14nm,0.8s						
E23K	Chandalar	87.83	11	P	P	19 16 20.3	+0.1
	baz=208,SNR=13						
H27K	Steamboat Moun	87.91	14	IAmb	IAmb	19 16 21.8	
	comp=Z,22nm,1.4s						
H27K	Steamboat Moun	87.91	14	P	P	19 16 20.8	+0.1
	baz=215						
YNE	Yellowstone No	87.93	41	IAmb	IAmb	19 16 23.7	
	comp=Z,11nm,0.8s						
J30M	Hart River	87.93	17	IAmb	IAmb	19 18 56.8	
	comp=Z,38nm,1.9s						
J30M	Hart River	87.93	17	P	P	19 16 20.7	-0.1
	baz=220						
ODSA	Odessa	87.93	56	IAmb	IAmb	19 16 23.3	
	comp=Z,12nm,0.9s						
G26K	Porcupine Rive	88.00	13	P	P	19 16 21.2	+0.3
	baz=213						
I29M	Ogilvie Camp,	88.01	16	IAmb	IAmb	19 16 21.6	
	comp=Z,7.8nm,0.8s						
I29M	Ogilvie Camp,	88.01	16	P	P	19 16 21.0	-0.1
	baz=218,SNR=5.9						
C21K	Knifeblade Rid	88.01	8	P	P	19 16 21.3	+0.3
	baz=203						
E24K	Your Creek	88.04	11	P	P	19 16 21.4	+0.2
	baz=209						
D22K	Ayikyak River	88.06	9	P	P	19 16 21.5	+0.2
	baz=205						
F25K	Christian Rive	88.16	12	IAmb	IAmb	19 16 23.1	
	comp=Z,7.5nm,0.8s						

F25K	Christian Rive	88.16	12	P	P	19 16 22.2	+0.4
	baz=211,SNR=9.8						
BMAR	Burnt Mountain	88.24	13		P	19 16 22.5	+0.4
A19K	Wainwright	88.26	6	P	P	19 16 22.2	+0.2
	baz=197						
TOLK	Toolik Lake Re	88.35	10	P	P	19 16 22.7	+0.1
	baz=208						
G27K	Doyon Strip	88.36	14	P	P	19 16 23.0	+0.3
	baz=215						
I30M	Mount Dempster	88.41	17	IAmb	IAmb	19 16 23.8	
	comp=Z,10nm,0.9s						
I30M	Mount Dempster	88.41	17	P	P	19 16 23.2	+0.1
	baz=220						
CMAR	Chiang Mai Arr	88.42	290	P	P	19 16 25.9	+1.8
	comp=Z,2.8nm,0.9s,baz=105,slow=2.9,SNR=17						
CMAR				PP	PP	19 20 04.2	+1.8
	comp=Z,0.2nm,0.3s,baz=122,slow=7.6,SNR=1.6						
	comp=Z,2.8nm,0.9s						
CMAR	Chiang Mai Arr	88.42	290		P	19 16 25.0	+0.9
MSTX	Muleshoe	88.45	54	IAmb	IAmb	19 16 25.4	
	comp=Z,14nm,1.0s						
RLMT	Red Lodge	88.45	42	IAmb	IAmb	19 16 25.9	
	comp=Z,10nm,0.9s						
D23K	Nanushuk River	88.46	10	P	P	19 16 23.6	+0.5
	baz=207,SNR=14						
B21K	Ikpikpuk River	88.47	8	P	P	19 16 23.2	+0.2
	baz=203						
B20K	Meade River	88.50	7	P	P	19 16 23.3	+0.1
	baz=201						
CHTO	Chiang Mai	88.53	290	P	P	19 16 24.9	+0.3
CHTO	Chiang Mai	88.53	290	P	P	19 16 25.6	+1.0
	comp=Z,3.1nm,1.0s						
F26K	Sheenjek River	88.55	13	IAmb	IAmb	19 16 25.1	
	comp=Z,11nm,1.0s						
F26K	Sheenjek River	88.55	13	P	P	19 16 24.2	+0.6
	baz=213,SNR=7.5						
E25K	Arctic Village	88.63	12	IAmb	IAmb	19 16 25.1	
	comp=Z,9.2nm,0.9s						
E25K	Arctic Village	88.63	12	P	P	19 16 24.3	+0.4
	baz=212,SNR=6.0						
PZH	PanZhiHua	88.64	298	P	P	19 16 25.8	+0.7
H29M	Whitestone	88.67	15	P	P	19 16 24.5	+0.4
	baz=218						
KOTAN	Kotaneelee Air	88.92	24	P	P	19 16 26.0	+0.6
	baz=231						
D24K	Happy Valley	88.93	10	IAmb	IAmb	19 16 26.3	
	comp=Z,12nm,0.8s						
D24K	Happy Valley	88.93	10	P	P	19 16 25.5	+0.2
	baz=208						
YAK	Yakutsk	89.00	338	P	P	19 16 24.9	-0.8
	comp=Z,7.6nm,0.6s,baz=36,slow=2.4,SNR=4.8						
	comp=Z,7.6nm,0.6s						
YAK	Yakutsk	89.00	338	P	P	19 16 24.3	-1.4
YAK				IAmb	IAmb	19 16 25.7	
	comp=Z,10nm,0.9s						
YAK	Yakutsk	89.00	338	*e*P	P	19 16 24.4	-1.3
YAK				*e*		19 20 04.6	
YAK				*e*S	SKSac	19 26 01.2	-0.9
YAK				*e*SP	SP	19 27 37.1	+1.2
YAK				*e*SS	SS	19 32 35.3	-2.2
YAK				pmax	pmax		
	comp=Z,12nm,1.1s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.6s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,136nm,4.7s						
YAK				pmax	pmax		
	comp=N,136nm,4.9s						
YAK				pmax	pmax		
	comp=E,150nm,4.7s						
YAK				smax	smax		
	comp=E,238nm,6.1s						
YAK				smax	smax		
	comp=N,132nm,5.8s						
POST	Post	89.10	55	IAmb	IAmb	19 16 28.0	
	comp=Z,13nm,0.8s						
833A	Chaparral WMA,	89.12	60	IAmb	IAmb	19 16 29.3	
	comp=Z,15nm,0.9s						
EPYK	Eagle Plains	89.21	16	IAmb	IAmb	19 16 27.4	
	comp=Z,19nm,1.1s						
EPYK	Eagle Plains	89.21	16	P	P	19 16 26.8	+0.1
	baz=220,SNR=5.4						
C23K	Itkillik River	89.25	9	P	P	19 16 26.9	+0.2
	baz=207						
B22K	Teshekpuk Lake	89.29	8	P	P	19 16 26.8	0.0
	baz=204						
G29M	Pine Creek	89.30	15	IAmb	IAmb	19 16 27.7	
	comp=Z,15nm,1.1s						
G29M	Pine Creek	89.30	15	P	P	19 16 26.7	-0.3
	baz=218						
H31M	Peel River	89.41	17	IAmb	IAmb	19 16 29.1	
	comp=Z,11nm,1.0s						
H31M	Peel River	89.41	17	P	P	19 16 27.1	-0.5
	baz=222						
F28M	Old Crow	89.42	14	IAmb	IAmb	19 16 29.9	
	comp=Z,7.4nm,0.9s						
F28M	Old Crow	89.42	14	P	P	19 16 27.3	-0.3
	baz=217						
C24K	Franklin Bluff	89.45	10	P	P	19 16 27.9	+0.2
	baz=209						
E27K	Coleen River	89.50	13	P	P	19 16 28.2	+0.2
	baz=215						
D25K	Kavik River	89.51	11	P	P	19 16 27.5	-0.5
	baz=211						
ELIB	Princess Elisa	89.62	187	*d*P	P	19 16 28.5	-0.3
	comp=Z,41nm,0.8s						
ELIB				*d*pP	pwP	19 18 31.0	+1.2
AMTX	Amarillo	89.62	53	IAmb	IAmb	19 16 31.2	
	comp=Z,7.1nm,0.7s						
A22K	Sinclair Lake	89.70	8	P	P	19 16 28.7	0.0
	baz=203						
A21K	Barrow	89.80	7	P	P	19 16 29.1	-0.1
	baz=201						
G30M	tAoh Zraii Nji	89.81	15	P	P	19 16 29.3	-0.1
	baz=220						
C27K	Jago River	90.27	12	P	P	19 16 31.4	-0.1
	baz=213						
APMT	Aspermont	90.27	55	IAmb	IAmb	19 18 46.0	
	comp=Z,17nm,1.1s						
C26K	Camden Bay	90.29	11	P	P	19 16 31.9	+0.4
	baz=212						
E28M	Babbage River	90.29	13	IAmb	IAmb	19 16 32.5	
	comp=Z,10.0nm,0.9s						
E28M	Babbage River	90.29	13	P	P	19 16 31.7	+0.1
	baz=217,SNR=11						
LZH	Lanzhou	90.34	308	*e*P	P	19 16 37.0	+4.2
LZH				pP	pP	19 18 33.5	-0.6
LZH				sP	sP	19 19 29.5	-0.1
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
F30M	Barrier River	90.40	15	P	P	19 16 32.0	-0.1
	baz=221						
E29M	Blow River	90.49	14	P	P	19 16 32.6	+0.1
	baz=219						
F31M	Tsiigehtchic	90.79	16	P	P	19 16 33.7	-0.1
	baz=222,SNR=9.5						
TROLL	Troll, Antarti	90.81	180	⇓P	P	19 16 34.2	-0.1
	comp=Z,2µm,0.8s						
D28M	Stokes Point	91.05	13	P	P	19 16 34.7	-0.3
	baz=218						
WRGLY	Wrigley	91.08	22	P	P	19 16 35.0	-0.3
	baz=232						
SNAA	Sanae	91.10	179	⇓P	P	19 16 34.7	-0.9
	comp=Z,240nm,0.6s						
SNAA	Sanae	91.10	179	P	P	19 16 35.1	-0.5
	comp=Z,9.1nm,0.6s,baz=209,slow=8.2,SNR=45						
	comp=Z,9.1nm,0.6s						
SNAA	Sanae	91.10	179		P	19 16 34.2	-1.3
SNAA	Sanae	91.10	179	*de*P	P	19 16 35.0	-0.5
SNAA				pmax	pmax		
	comp=Z,14nm,1.0s						
VNA3	Neumayer Olymp	91.26	176	⇓P	P	19 16 36.3	+0.1
	comp=Z,64nm,0.7s						
RSSD	Black Hills	91.42	44		P	19 16 36.7	-1.0
RSSD				IAmb	IAmb	19 16 38.7	
	comp=Z,13nm,1.1s						
INK	Inuvik	91.49	15	IAmb	IAmb	19 16 37.5	
	comp=Z,12nm,0.8s						
INK	Inuvik	91.49	15	P	P	19 16 36.6	-0.5
	baz=223,SNR=13						
NVL	N'lazarevskaya	91.75	183	*e*P	P	19 16 37.6	-0.8
NVL				pmax	pmax		
	comp=Z,16nm,0.8s						
VNA1	Neumayer--Stat	91.92	177	⇓P	P	19 16 39.9	+0.7
	comp=Z,43nm,1.0s						
ULN	Ulaanbaatar	92.57	320		P	19 16 42.6	-0.1
ULN				IAmb	IAmb	19 16 44.0	
	comp=Z,4.1nm,0.7s						
ULN	Ulaanbaatar	92.57	320	P	P	19 16 44.6	+1.8
ULN	Ulaanbaatar	92.57	320	*de*P	P	19 16 43.3	+0.5
ULN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HKT	Hockley	92.60	60	⇑*e*P	P	19 16 43.8	+0.8
HKT				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SONM	Songino Array	92.97	319	P	P	19 16 44.4	-0.2
	comp=Z,1.2nm,0.6s,baz=138,slow=5.5,SNR=9.8						
SONM				PP	PP	19 20 31.2	-6.2
	comp=Z,0.7nm,0.9s,baz=103,slow=6.2,SNR=3.4						
	comp=Z,1.2nm,0.6s						
SONM	Songino Array	92.97	319	P	P	19 16 44.4	-0.2
YKA	Yellowknife Ar	94.01	25	P	P	19 16 48.5	-0.3
	comp=Z,4.1nm,0.8s,baz=253,slow=5.1,SNR=71						
YKA				PP	PP	19 20 39.0	-5.8
	comp=Z,0.3nm,0.8s,baz=245,slow=8.1,SNR=3.0						
	comp=Z,4.1nm,0.8s						
YKA	Yellowknife Ar	94.01	25	P	P	19 16 48.1	-0.7
YKAW3	Yellowknife Wh	94.04	25	IAmb	IAmb	19 16 49.6	
	comp=Z,6.3nm,0.8s						
YKAW1	Yellowknife Wh	94.05	25	IAmb	IAmb	19 16 49.7	
	comp=Z,7.8nm,0.9s						
GTA	Gaotai	94.47	310	*e*P	P	19 16 52.5	+0.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
C36M	Paulatuk	94.71	17	P	P	19 16 51.2	-0.5
	baz=231						
TIXI	Tiksi	95.59	345	P	P	19 16 54.6	-1.1
	comp=Z,2.9nm,0.7s,baz=134,slow=4.6,SNR=9.4						
	comp=Z,2.9nm,0.7s						
TIXI	Tiksi	95.59	345		P	19 16 54.8	-0.9
TIXI				IAmb	IAmb	19 16 55.6	
	comp=Z,4.1nm,0.8s						
TIXI	Tiksi	95.59	345	⇑*e*P	P	19 16 53.3	-2.4
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
A36M	Sachs Harbour	96.08	15	P	P	19 16 57.7	-0.2
	baz=230						
ZALV	Zalesovo Beam	107.65	322	PKiKP	PKiKP	19 21 52.2	-1.9
	comp=Z,0.9nm,0.6s,baz=155,slow=1.2,SNR=5.7						
ZALV				PP	PP	19 22 23.9	-2.3
	comp=Z,0.9nm,0.7s,baz=87,slow=7.9,SNR=4.0						
MKAR	Makanchi Array	108.56	314	Pdiff	Pdif	19 17 53.5	-0.6
	comp=Z,0.3nm,0.7s,baz=90,slow=4.3,SNR=2.7						
MKAR				PKiKP	PKiKP	19 21 55.1	-1.0
	comp=Z,0.7nm,0.5s,baz=66,slow=2.1,SNR=18						
BVAR	Borovoye Array	116.26	321	PKP	PKPdf	19 22 09.9	-0.7
	comp=Z,2.2nm,0.4s,baz=110,slow=2.2,SNR=27						
BVAR				PP	PP	19 23 24.5	-2.2
	comp=Z,0.4nm,0.6s,baz=85,slow=4.8,SNR=4.4						
BORK	Borovoye	116.30	321		PKPdf	19 22 09.7	-1.0
KBS	Kingsbay	118.24	358	*d i*PKIKP	PKiKP	19 22 14.3	+0.5
SPITS	Spitsbergen Ar	118.75	356	PKP	PKPdf	19 22 13.6	-1.1
	comp=Z,2.4nm,0.6s,baz=92,slow=4.2,SNR=10.0						
ARTI	Arti	122.37	326		PKPdf	19 22 21.5	-0.8
ARTI	Arti	122.37	326	⇓*i*PKIKP	PKPdf	19 22 21.7	-0.5
ARCES	ARCESS Array B	125.77	350	PKP	PKPdf	19 22 28.1	-0.3
	comp=Z,1.7nm,0.5s,baz=65,slow=3.2,SNR=9.7						
BOSA	Boshof	128.70	207	PKP	PKPdf	19 22 35.5	0.0
	comp=Z,1.3nm,0.7s,baz=115,slow=12,SNR=1.3						
FINES	FINESS Array B	132.62	344	PKhKP	PKPpre	19 22 28.1	
	comp=Z,1.3nm,0.8s,baz=338,slow=1.0,SNR=4.1						
FINES				PKP	PKPdf	19 22 40.6	-0.9
	comp=Z,1.3nm,0.5s,baz=104,slow=3.7,SNR=6.3						
FINES				SKPbc	SKPbc	19 25 18.2	+1.0
	comp=Z,4.1nm,0.7s,baz=36,slow=2.6,SNR=8.6						
OBN	Obninsk	133.71	333	*e*PKIKP	PKPdf	19 22 43.9	+0.1
OBN				*i*		19 25 20.3	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
NB2	NORSAR Subarra	135.84	353	PKPdf	PKPdf	19 22 36.6	-11
	comp=Z,2.0nm,1.1s,baz=27,slow=1.8						
NOA	NORSAR Array B	135.84	353	PKhKP	PKPpre	19 22 35.8	
	comp=Z,0.9nm,0.9s,baz=40,slow=2.2,SNR=4.6						
NOA				PKP	PKPdf	19 22 48.5	+0.8
	comp=Z,0.6nm,0.6s,baz=19,slow=4.1,SNR=5.9						
NOA				SKPab	SKiKP	19 25 33.8	+0.7
	comp=Z,1.1nm,0.8s,baz=14,slow=3.2,SNR=4.9						
HFS	Hagfors	136.39	351	PKhKP	PKPpre	19 22 35.1	
	comp=Z,1.7nm,0.6s,baz=57,slow=5.5,SNR=8.2						
HFS				SKPbc	SKPbc	19 25 30.0	+0.8
	comp=Z,2.4nm,0.9s,baz=52,slow=5.8,SNR=3.7						
MNK	Minsk	137.68	337	*i* PKIKP	PKPdf	19 22 52.4	+1.2
MNK				*i*		19 25 06.6	
MNK				*i*		19 25 45.4	
MNK				*i* PPP	PPP	19 28 52.6	
MNK				*i*		19 29 05.6	
MNK				*i* SS	SS	19 43 10.8	+0.6
MNK				*i* SSS	SSS	19 48 29.8	
MNK				pmax	pmax		
	comp=N,5.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,8.0nm,0.8s						
AKASG	Malin Array Be	139.97	332	PKhKP	PKPpre	19 22 47.5	
	comp=E,0.9nm,0.4s,baz=45,slow=4.1,SNR=7.2						
AKASG				PKP	PKPdf	19 22 57.3	+1.8
	comp=E,1.7nm,0.4s,baz=43,slow=3.2,SNR=7.6						
AKASG				SKPbc	SKPbc	19 25 39.6	+0.1
	comp=E,3.7nm,0.8s,baz=34,slow=2.7,SNR=6.9						
AKBB	Malin Array Si	139.97	332	PKP	PKiKP	19 22 57.3	-0.8
AK04	Malin Array Si	139.98	332	PKP	PKPdf	19 22 57.1	+1.6
AK01	Malin Array Si	139.99	332	PKP	PKPdf	19 22 56.3	+0.8
KIEV	Kiev	139.99	332	PKP	PKiKP	19 22 57.4	-0.7
AK22	Malin Array Si	140.00	333	PKP	PKPdf	19 22 56.6	+1.1
RNPP8	Varash	140.91	336	PKP	PKPdf	19 22 58.1	+0.9
EKA	Eskdalemuir Ar	141.99	4	PKhKP	PKPpre	19 22 54.2	
	comp=E,3.3nm,0.7s,baz=337,slow=2.5,SNR=11						
SORM	Soroca	142.20	330	⇓P	PKPdf	19 22 55.9	-3.7
SORM	Soroca	142.20	330	⇓PKHKP	PKPpre	19 22 55.9	
ILTH	Belurgan, Co L	142.98	7	PKPdf		19 22 57.7	
BNN	Bunyan	143.09	312		PKPab	19 23 00.1	+0.8
DSB	Dublin	143.74	8	PKPdf	PKPbc	19 23 00.1	-1.1
PRAR	RASCA	143.75	331	⇓P	PKPbc	19 23 01.1	-0.4
LODK	Lodwar	143.79	251		PKPbc	19 23 02.9	+0.3
GIRR	Girov	143.92	330	⇓P	PKPbc	19 23 02.4	+0.5
VLDR	Vladesti	143.92	328	⇑P	PKPdf	19 23 03.0	+0.4
TLCR		143.98	326	⇓P	PKPbc	19 23 02.7	+0.5
TLCR		143.98	326	⇓PKIKP	PKPbc	19 23 02.7	+0.5
BURAR	Bucovina Array	144.03	332		PKPbc	19 23 02.5	+0.1
BURAR	Bucovina Array	144.03	332	⇑P	PKPbc	19 23 02.9	+0.5
BURAR	Bucovina Array	144.03	332	⇑PKIKP	PKPbc	19 23 02.9	+0.5
SCTR	Scanteiesti	144.08	327	⇑P	PKPbc	19 23 01.8	-0.7
GHRR		144.12	328	⇑P	PKPab	19 23 04.1	+1.3
TESR	Tescani	144.17	330	⇑P	PKPbc	19 23 03.1	+0.4
BR131	Keskin Array S	144.21	315		PKPbc	19 23 01.7	-1.6
BRTR	Keskin Array B	144.21	315	PKP	PKPbc	19 23 03.4	+0.1
	comp=E,2.7nm,0.4s,baz=97,slow=2.9,SNR=27						
BRTR	Keskin Array B	144.21	315		PKPbc	19 23 01.9	-1.4
STHS	Stebnicka Huta	144.21	338	*e*PKIKP	PKPbc	19 23 02.5	-0.3
STHS	Stebnicka Huta	144.21	338	*e*PKP	PKPbc	19 23 02.5	-0.3
IZVR	Izvoarele	144.29	327	⇑P	PKPab	19 23 04.7	+1.2
KIRS	Kirsehir-Merke	144.30	314	⇓P	PKPbc	19 23 03.9	+0.4
CFR	Carcaliu	144.35	327	⇑P	PKPab	19 23 04.6	+0.9
CFR	Carcaliu	144.35	327	⇑PKIKP	PKPab	19 23 04.6	+0.9
PANC	Panciu	144.38	328	⇓P	PKPbc	19 23 04.0	+0.7
TPGR	Topolog	144.41	326	⇓P	PKPab	19 23 04.6	+0.5
ONER	Baraj Valea Uz	144.42	330	⇓P	PKPdf	19 23 04.0	+0.4
ODBI	Odobesti	144.50	328	⇓P	PKPab	19 23 05.9	+1.6
IWEX	Carrickbyrne,	144.54	8	PKPdf	PKPdf	19 23 03.5	0.0
VRI	Vrincioaia	144.59	329	⇓P	PKPbc	19 23 04.5	+0.4
VRI	Vrincioaia	144.59	329	⇓PKIKP	PKPbc	19 23 04.5	+0.4
PLOR	Plostina	144.64	329	⇓P	PKPbc	19 23 04.8	+0.6
PLOR	Plostina	144.64	329	⇓PKIKP	PKPbc	19 23 04.8	+0.5
ANTO	Ankara	144.70	316	⇓P	PKPab	19 23 05.7	+0.3
ANTO	Ankara	144.70	316	⇓PKIKP	PKPab	19 23 05.7	+0.3
BMR	Baia Mare	144.73	334	⇓P	PKPbc	19 23 05.1	+0.7
BMR	Baia Mare	144.73	334	⇓PKIKP	PKPbc	19 23 05.1	+0.7
TURR	Turia	144.80	330	⇓P	PKPab	19 23 06.1	+0.6
ARCR	ARCALIA	144.81	332	⇓P	PKPab	19 23 05.9	+0.4
TLBR	Topalu	144.82	326	⇓P	PKPbc	19 23 05.6	+0.8
OSTC	Ostas	144.82	343	*e*PKIKP	PKPbc	19 23 05.4	+0.7
OSTC	Ostas	144.82	343	*e*PKP	PKPbc	19 23 05.4	+0.7
CHVC	Chvalec	144.84	344	*e*PKIKP	PKPbc	19 23 05.4	+0.7
CHVC	Chvalec	144.84	344	*e*PKP	PKPbc	19 23 05.4	+0.7
COVR	Voineasa-Covas	144.86	329	⇑P	PKPbc	19 23 05.4	+0.5
OKC	Ostrava-Krasne	144.90	341	*e*PKIKP	PKPbc	19 23 05.3	+0.4
OKC	Ostrava-Krasne	144.90	341	*e*PKP	PKPbc	19 23 05.3	+0.4
CLL	Collm	144.91	347	*i* PKIKP	PKPdf	19 23 04.9	+0.7
CLL				pmax	pmax		
	comp=Z,43nm,0.7s						
CLL	Collm	144.91	347	*i* PKPbc	PKPdf	19 23 04.9	+0.7
	comp=Z,43nm,0.7s						
CLL				*i* PKPab	PKPab	19 23 06.0	+0.3
	comp=Z,36nm,1.0s						
UPC	Upice	144.92	344	*e*PKIKP	PKPbc	19 23 05.7	+0.8
UPC	Upice	144.92	344	*e*PKP	PKPbc	19 23 05.7	+0.8
STEB	Steborice	144.93	341	*e*PKP	PKPbc	19 23 05.2	+0.2
CVDA	Cernavoda	144.96	326	⇓P	PKPab	19 23 07.2	+1.1
DPC	Dobruska-Polom	144.98	343	*e*PKIKP	PKPbc	19 23 05.9	+0.7
DPC	Dobruska-Polom	144.98	343	*e*PKP	PKPbc	19 23 05.9	+0.7
LANS	Liptovska Anna	145.06	339	*e*PKIKP	PKPab	19 23 06.6	+0.2
LANS	Liptovska Anna	145.06	339	*e*PKP	PKPab	19 23 06.6	+0.2
KRLC	Kraliky	145.10	342	*e*PKIKP	PKPbc	19 23 05.8	+0.3
KRLC	Kraliky	145.10	342	*e*PKP	PKPbc	19 23 05.8	+0.3
MORC	Moravsky Berou	145.14	341	⇓P	PKPbc	19 23 06.4	+0.7
MORC	Moravsky Berou	145.14	341	*e*PKP	PKPbc	19 23 05.8	+0.1
MORC	Moravsky Berou	145.14	341	⇓PKIKP	PKPbc	19 23 06.4	+0.7
AMRR	Amara	145.15	327	⇓P	PKiKP	19 23 08.5	-0.4
AMRR	Amara	145.15	327	⇓PKIKP	PKiKP	19 23 08.5	-0.4
DOPR	Dopca	145.17	330	⇑P	PKPab	19 23 07.0	+0.1
ISR	Istrita	145.21	328	⇑P	PKPbc	19 23 07.0	+1.0
ISR	Istrita	145.21	328	⇑PKIKP	PKPbc	19 23 07.0	+1.0
ICOR	Ion Corvin	145.23	326	⇓P	PKPab	19 23 08.5	+1.4
MLR	Muntele Rosu	145.24	329		PKPbc	19 23 06.8	+0.6
MLR	Muntele Rosu	145.24	329	⇓P	PKPbc	19 23 07.0	+0.8
MLR	Muntele Rosu	145.24	329	⇓PKIKP	PKPbc	19 23 07.0	+0.8
KECS	Kecovo	145.26	337	*e*PKIKP	PKPbc	19 23 06.7	+0.7
KECS	Kecovo	145.26	337	*e*PKP	PKPbc	19 23 06.7	+0.7
PVCC	Panska Ves	145.28	345	*e*PKIKP	PKPbc	19 23 06.5	+0.5
PVCC	Panska Ves	145.28	345	*e*PKP	PKPbc	19 23 06.5	+0.5
RICC	Richard	145.38	346	*e*PKP	PKPbc	19 23 07.0	+0.8
MAUC	Maruska	145.41	341	*e*PKP	PKPbc	19 23 07.1	+0.6
CJR	Cluj-Napoca	145.43	333	⇓P	PKPbc	19 23 07.1	+0.5
CJR	Cluj-Napoca	145.43	333	⇓PKIKP	PKPbc	19 23 07.1	+0.5
HSKC	Hora Svate Kat	145.47	346	*e*PKP	PKPbc	19 23 06.8	+0.2
LEHL	Lehliu	145.51	327	⇓P	PKPbc	19 23 07.7	+0.8
LTVH	Ltavrtes, Hu	145.62	335	⇓P	PKPbc	19 23 08.2	+1.2
SULR		145.66	328	⇑P	PKPab	19 23 09.1	+0.3
MARR	Marisel-Cluj	145.67	333	⇑P	PKPbc	19 23 07.9	+0.5
DRGR		145.75	333	⇑P	PKPbc	19 23 07.8	+0.2
DRGR		145.75	333	⇑PKIKP	PKPbc	19 23 07.8	+0.2
PRU	Pruhonice	145.78	345	*e*PKIKP	PKPbc	19 23 07.8	+0.4
PRU	Pruhonice	145.78	345	*e*PKP	PKPbc	19 23 07.8	+0.4
VRAC	Vranov	145.84	342	⇑P	PKPbc	19 23 08.4	+0.7
VRAC	Vranov	145.84	342	*e*PKP	PKPbc	19 23 07.8	+0.2
VRAC	Vranov	145.84	342	⇑PKP2	PKPbc	19 23 08.4	+0.7
MBAR	Mbarara	145.90	241		PKPbc	19 23 09.0	-0.1
MBAR	Mbarara	145.90	241	*d i*PKIKP	PKPbc	19 23 09.3	+0.2
JAVC	Velka Javorina	145.91	341	*e*PKP	PKPbc	19 23 09.0	+1.1
PSZ	Piszkesteto	145.95	337	⇑P	PKPdf	19 23 05.8	-0.4
PSZ	Piszkesteto	145.95	337	⇑PKIKP	PKPdf	19 23 05.8	-0.4
ARR	Arges	145.97	330	⇓P	PKPdf	19 23 07.5	+1.2
KRUC	Moravsky	146.12	342	*e*PKP	PKPbc	19 23 08.5	+0.1
LOT	Lotru	146.31	331	⇓P	PKPdf	19 22 57.7	-9.2
ZVC	Zvikov	146.38	345	*e*PKP	PKPbc	19 23 09.5	+0.4
ZVC				*e*x	x	19 23 12.4	
HUMR	Humele	146.41	329	⇑P	PKPdf	19 23 08.1	+1.1
MODS	Modra-Piesok	146.46	341	*e*PKP2	PKPbc	19 23 10.2	+0.8
MODS	Modra-Piesok	146.46	341	*e*PKP	PKPbc	19 23 10.2	+0.8
UCC	Uccle	146.59	356	*d*PKPdf	PKPdf	19 23 06.3	-0.8
SRO	Srobarova	146.60	339	*e*PKIKP	PKPbc	19 23 09.4	-0.4
SRO	Srobarova	146.60	339	*e*PKP	PKPbc	19 23 09.4	-0.4
SIRR	Siria	146.61	334	⇓P	PKPbc	19 23 10.6	+0.7
MEM	Membach	146.66	354	*d*PKP	PKPbc	19 23 09.7	-0.1
BTNL	Ternell	146.67	354	*d*PKP	PKPbc	19 23 09.9	0.0
GZR	Gura Zlata	146.81	332	⇑P	PKPbc	19 23 10.5	0.0
GZR	Gura Zlata	146.81	332	⇑PKIKP	PKPbc	19 23 10.5	0.0
KHC	Kasperske Hory	146.81	345	*c i*PKIKP	PKPbc	19 23 10.3	-0.1
KHC	Kasperske Hory	146.81	345	*e*PKP	PKPbc	19 23 10.8	+0.4
CKRC	Cesky Krumlov	146.92	344	*e*PKIKP	PKPbc	19 23 11.1	+0.5
CKRC	Cesky Krumlov	146.92	344	*e*PKP	PKPbc	19 23 11.1	+0.5
BGES	Gesves	146.96	356	*d*PKP	PKPbc	19 23 10.3	-0.3
GEC2	GERESS Array S	147.05	345		PKPbc	19 23 11.3	+0.2
GERES	GERESS Array B	147.05	345	PKPbc	PKPbc	19 23 11.2	+0.1
	comp=Z,11nm,0.7s,baz=23,slow=3.3,SNR=118						
VLAD	Vladila	147.08	329	⇑P	PKPbc	19 23 11.7	+0.6
BZS	Buzias	147.15	333	⇑P	PKPbc	19 23 11.5	+0.2
BZS	Buzias	147.15	333	⇑PKIKP	PKPbc	19 23 11.5	+0.2
DOU	Dourbes	147.28	356	*d*PKP	PKPbc	19 23 11.7	+0.2
CONA	Conrad Observa	147.29	342	*i* PKiKP	PKPbc	19 23 12.3	+0.6
	comp=Z,20nm,0.6s,SNR=13						
RONA	Rosalia, Austr	147.36	341	*i* PKP	PKPbc	19 23 12.3	+0.5
	comp=Z,18nm,0.7s,SNR=11						
HERR	Herculane	147.37	332	⇑P	PKPbc	19 23 12.1	+0.2
WLF	Walferdange	147.58	354	*d*PKP	PKPbc	19 23 13.0	+0.7
MDVR	Moldovita	147.76	332	⇓P	PKPbc	19 23 13.2	+0.3
MOA	Molln	147.82	343	*i* PKP	PKPbc	19 23 13.1	+0.1
	comp=Z,3.6nm,0.5s						
MORH	Mrgy, Hungar	147.85	337	⇑P	PKPbc	19 23 13.2	+0.1
ARSA	Arzberg	148.00	342	*i* PKP	PKPbc	19 23 13.3	-0.2
	comp=Z,8.4nm,1.1s						
BIOA	Bad Ischl, Aus	148.13	344	*i* PKP	PKPbc	19 23 13.6	-0.2
	comp=Z,10nm,0.9s,SNR=6.1						
BFO	Black Forest	148.62	351		PKPbc	19 23 14.8	-0.2
LESA	Schwarzleotal	148.62	345	*i* PKP	PKPbc	19 23 15.2	+0.1
	comp=Z,7.6nm,0.4s,SNR=7.0						
BOVS	Bovan	148.65	331	⇑P	PKPbc	19 23 15.2	0.0
SOKA	Soboth	148.66	342	*i* PKP	PKPbc	19 23 14.8	-0.5
	comp=Z,11nm,0.9s,SNR=6.1						
PERS	Pernice	148.68	341	*i* PKPbc	PKPbc	19 23 14.7	-0.5
PERS				*i* PKPab	PKPab	19 23 20.9	-0.1
KBA	Koelnbreinsper	148.77	344	*i* PKP	PKPbc	19 23 14.9	-0.7
	comp=Z,11nm,0.5s,SNR=5.5						
OBKA	Obir	148.96	342	*i* PKP	PKPbc	19 23 15.3	-0.7
	comp=Z,1.9nm,0.7s						
WATA	Walderalm	148.97	346	*i* PKP	PKPbc	19 23 15.8	-0.3
	comp=Z,12nm,0.5s,SNR=7.2						
RETA	Reutte	149.00	347	*i* PKP	PKPbc	19 23 15.9	-0.1
	comp=Z,8.0nm,0.5s,SNR=5.4						
WTTA	Wattenberg	149.02	346	*i* PKP	PKPbc	19 23 16.2	0.0
	comp=Z,24nm,0.5s,SNR=12						
MYKA	Terra Mystica	149.11	343	*i* PKP	PKPbc	19 23 15.5	-0.8
	comp=Z,13nm,0.5s,SNR=10.0						
SQTA	Sankt Quirin	149.16	347	*i* PKP	PKPbc	19 23 16.4	0.0
	comp=Z,19nm,0.5s,SNR=11						
ABTA	Abfaltersbach	149.29	345	*i* PKP	PKPbc	19 23 16.1	-0.7
	comp=Z,22nm,0.6s,SNR=13						
DAVA	Damuels	149.37	348	*i* PKP	PKPbc	19 23 17.0	0.0
	comp=Z,14nm,0.7s,SNR=6.4						
LJU	Ljubljana	149.39	342	*i* PKPbc	PKPbc	19 23 16.8	-0.1
LJU				*i* PKPab	PKPab	19 23 23.5	-0.4
FETA	Feichten	149.45	347	*i* PKP	PKPbc	19 23 17.3	+0.1
	comp=Z,11nm,0.7s,SNR=6.4						
BLY	Banja Luka	149.64	337	⇓P	PKPbc	19 23 18.2	+0.7
BOJS	Bojanci	149.65	340	*i* PKPbc	PKPbc	19 23 17.7	+0.2
CEY	Cerknica	149.69	342	*i* PKPbc	PKPbc	19 23 17.5	-0.2
FUORN	Ofenpass-Fuorn	149.93	348		PKPbc	19 23 18.5	0.0
PDG	Podgorica	150.71	332	⇓P	PKPbc	19 23 18.1	-2.0
BNI	Bardonecchia	152.06	352		PKiKP	19 23 24.1	+0.6
PGAV	Gavieira, Arco	154.20	16	*e*PKPab	PKPab	19 23 44.4	-0.2
PCAB	Cabril	154.50	16	*e*PKPab	PKPab	19 23 46.2	+0.5
PBRG	Braganca	154.73	14	*e*PKPab	PKPab	19 23 46.5	-0.2
POLO	Lamas de Olo	154.88	16	*e*PKPab	PKPab	19 23 47.5	+0.1
PVRL	Vila Real	154.99	16	*e*PKPab	PKPab	19 23 48.3	+0.5
MVO	Moncorvo	155.27	15	*e*PKPab	PKPab	19 23 49.8	+0.7
PVIS	Viseu	155.46	17	*e*PKPab	PKPab	19 23 50.1	+0.2
MTE	Manteigas	155.85	17	*e*PKPab	PKPab	19 23 52.0	+0.3
PCAS	Casmilo, Conde	155.90	19	*e*PKPab	PKPab	19 23 52.0	+0.2
PSBE	So Bento	156.30	20	*e*PKPab	PKPab	19 23 54.3	+0.7
PCBR	Castelo Branco	156.39	17	*e*PKPab	PKPab	19 23 53.9	0.0
PSARD	Sardoal	156.42	18	*e*PKPab	PKPab	19 23 54.0	0.0
PMAFR	Mafra	156.64	21	*e*PKPab	PKPab	19 23 55.1	+0.1
PMRV	Marv??o	156.80	17	*e*PKPab	PKPab	19 23 55.7	0.0
PMTG	Montargil	156.88	19	*e*PKPab	PKPab	19 23 55.8	-0.2
PARRA	Arraiolos	157.17	19	*e*PKPab	PKPab	19 23 57.3	0.0
PESTR	Estremoz	157.26	18	*e*PKPab	PKPab	19 23 57.6	-0.1
MOE	Montemor	157.34	20	*e*PKPab	PKPab	19 23 58.1	+0.1
ESDC	Sonseca Array	157.35	11	PKP	PKPdf	19 23 23.5	+0.2
	comp=Z,0.6nm,0.9s,baz=355,slow=2.9,SNR=3.3						
ESDC				PKPab	PKPab	19 23 57.5	-0.6
	comp=Z,3.6nm,0.8s,baz=340,slow=4.1,SNR=18						
ESDC	Sonseca Array	157.35	11		PKPdf	19 23 23.1	-0.2
ESDC					PKPab	19 23 57.8	-0.3
EVO	Evora	157.44	19	*e*PKPab	PKPab	19 23 58.5	+0.1
MESJ	Messejana	158.00	20	*e*PKPab	PKPab	19 24 01.0	+0.1
PBAR	Barrancos	158.06	18	*e*PKPab	PKPab	19 24 01.5	+0.3
PCVE	Castro Verde	158.25	20	*e*PKPab	PKPab	19 24 02.4	+0.4
PVAQ	Vaqueiros	158.57	20	*e*PKPab	PKPab	19 24 03.8	+0.4
KEST	Kesra	160.38	340	PKPab	PKPab	19 24 11.9	+0.4
	comp=Z,3.7nm,0.6s,baz=38,slow=2.4,SNR=5.7						
MD31	MD31	163.68	18		PKPab	19 24 26.2	+0.2

DBIC	Dimbokro	167.77	150	PKP	PKPdf	19 23 33.2	-0.8
	comp=Z,2.5nm,0.8s,baz=229,slow=3.5,SNR=3.6						
TORD	Torodi Ar. Bea	175.75	186	PKP	PKPdf	19 23 36.6	-1.0
	comp=Z,1.2nm,0.7s,baz=132,slow=2.1,SNR=7.2						
TORD				PKPab	PKPab	19 25 19.1	-0.5
	comp=Z,2.3nm,0.7s,baz=165,slow=3.8,SNR=11						
TORD				PP	PP	19 29 11.3	0.0
	comp=Z,2.4nm,0.8s,baz=324,slow=30,SNR=15						

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*KRSC **26** 19:04:48.3±1.6, 58°.90N×158°.55E, h5^km±8^km, Ml4.5*
*IDC **26** 19:04:51.1±0.7, 58°.79N×159°.04E, h0^km, mb3.8/23, mbtmp3.9/28, ML4.1/4, MS3.1/3, Error ellipse: s-maj=16.1km s-min=10.3km az=178.0*
*MOS **26** 19:04:52.1±0.9, 58°.84N×158°.86E, h18^km, mb4.4/10, Error ellipse: s-maj=11.2km s-min=5.1km az=100.9*
*NEIC **26** 19:04:53.1±1.6, 58°.72N±0°.05×159°.0E±0°.2, h15^km±5^km, mb4.2/32, Error ellipse: s-maj=13.4km s-min=6.3km az=77.0*
*NERS **26** 19:04:54.1, 58°.95N×158°.53E, h6^km*
ISC 26 19:04:52.7±0.4, **58°.75N**±0°.04×**158°.92E**±0°.02, **h10**^km, **n135**, σ**1s.65**/149, **mb4.1**/44, **4C-2D, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALN	Palana	0.64	58	PN	Pg	19 05 03.6	-1.4
PALN				S	Sg	19 05 13.1	-0.3
PALN	Palana	0.64	58	eP	Pg	19 05 03.7	-1.4
PALN				eS	Sg	19 05 13.1	-0.3
OSSR	Ossora	2.20	75	PN	Pn	19 05 29.3	+0.1
OSSR				S	Sb	19 06 00.2	+0.5
OSSR	Ossora	2.20	75	eP	Pn	19 05 29.4	+0.1
OSSR				eS	Sb	19 06 00.3	+0.5
SRDR	Sredinnyy	2.48	170	PN	Pn	19 05 34.1	+0.9
SRDR	Sredinnyy	2.48	170	eP	Pn	19 05 34.2	+0.9
SMKR	Semkarok	2.57	147	PN	Pn	19 05 35.5	+1.1
SMKR	Semkarok	2.57	147	eP	Pn	19 05 35.6	+1.1
KLY	Klyuchi	2.62	158	PN	Pn	19 05 36.9	+1.9
KLY	Klyuchi	2.62	158	eP	Pn	19 05 36.9	+1.9
KOZ	Kozyrevsk	2.75	169	PN	Pn	19 05 37.4	+0.5
KOZ	Kozyrevsk	2.75	169	eP	Pn	19 05 37.4	+0.5
ESO	Esso	2.84	183	PN	Pn	19 05 37.7	-0.4
ESO	Esso	2.84	183	eP	Pn	19 05 37.7	-0.4
KIRR	Kirishev	2.91	164	PN	Pn	19 05 40.5	+1.3
KIRR	Kirishev	2.91	164	eP	Pn	19 05 40.6	+1.3
BZWR	Bezymyannyi-We	2.92	162	PN	Pn	19 05 41.4	+2.0
BZWR	Bezymyannyi-We	2.92	162	eP	Pn	19 05 41.4	+2.0
BZP	Bezymyannyi-Pe	2.98	162	PN	Pn	19 05 42.2	+2.0
BZP	Bezymyannyi-Pe	2.98	162	eP	Pn	19 05 42.2	+2.0
KMNR	Kamenistaya	3.09	166	PN	Pn	19 05 43.7	+2.1
KMNR	Kamenistaya	3.09	166	eP	Pn	19 05 43.7	+2.1
KZV	Kizimen	3.73	168	PN	Pn	19 05 52.1	+1.7
KZV	Kizimen	3.73	168	eP	Pn	19 05 52.2	+1.7
GADL	Gadlja	4.01	286	eP	Pn	19 05 54.8	+0.6
GADL				ePg	Pb	19 06 05.0	+1.5
GADL				Pgmax		19 06 09.1	
	110nm,0.3s						
GADL				eSg	Sb	19 06 55.9	+3.9
GADL				Sgmax		19 07 23.6	
	1μm,0.8s						
GADL				Sgmax		19 07 23.6	
	580nm,0.8s						
GADL	Gadlja	4.01	286	ePN	Pn	19 05 54.8	+0.6
TILK	Tilichiki	4.04	62	PN	Pn	19 05 55.7	+1.1
TILK				S	Sn	19 06 46.7	+4.8
TILK	Tilichiki	4.04	62	eP	Pn	19 05 55.8	+1.1
TILK				eS	Sn	19 06 46.7	+4.8
TLAR	Talaya	4.05	309	eP	Pn	19 05 53.9	-0.9
TLAR				ePg	Pb	19 06 03.0	-1.2
TLAR				Pgmax		19 06 09.1	
	70nm,0.4s						
TLAR				eSg	Sb	19 06 54.8	+1.6
TLAR				Sgmax		19 06 59.0	
	530nm,0.5s						
TLAR				Sgmax		19 06 59.0	
	350nm,0.7s						
TLAR	Talaya	4.05	309	ePN	Pn	19 05 53.9	-0.9
MA2	Magadan	4.28	285	Pn	Pn	19 05 58.0	+0.2
	2.9nm,0.3s,baz=116,slow=13,SNR=14						
MA2				Pg	Pb	19 06 07.9	-0.1
	7.8nm,0.3s,baz=100,slow=14,SNR=14						
MA2				Lg	Lg	19 07 04.5	
	7.7nm,0.3s,baz=173,slow=19,SNR=6.6						
MA2				LR	LR	19 07 08.1	
	comp=Z,41nm,21.1s,baz=100,slow=32						
	7.2nm,0.4s						
MA2	Magadan	4.28	285		Pn	19 05 57.4	-0.5
MA2					Pb	19 06 08.0	+0.1
MA2	Magadan	4.28	285	eP	Pn	19 05 57.8	0.0
MA2				ePg	Pb	19 06 09.4	+1.4
MA2				Pgmax		19 06 14.6	
	40nm,0.5s						
MA2				eSg	Sb	19 07 02.5	+2.9
MA2				Sgmax		19 07 13.8	
	220nm,0.8s						
MA2				Sgmax		19 07 13.8	
	180nm,0.8s						
MA2	Magadan	4.28	285	ePN	Pn	19 05 57.8	0.0
MGD	Magadan 1	4.38	291	eP	Pn	19 05 58.3	-1.0
MGD				eS	Sn	19 06 47.2	-3.1
MGD				eSg	Sb	19 07 05.1	+2.5
MGD				Sgmax		19 07 18.1	
	240nm,0.5s						
MGD				Sgmax		19 07 18.1	
	70nm,0.7s						
MGD	Magadan 1	4.38	291	ePN	Pn	19 05 58.3	-1.0
SEY	Seymchan	5.27	325	Pn	Pn	19 06 10.7	-0.7
	1.6nm,0.3s,baz=140,slow=14,SNR=22						
SEY				Lg	Lg	19 07 36.6	
	7.1nm,0.3s,baz=204,slow=20,SNR=4.6						
	3.4nm,0.4s						
SEY	Seymchan	5.27	325	eP	Pn	19 06 10.7	-0.7
SEY				ePg	Pb	19 06 26.7	+1.8
SEY				Pgmax		19 06 34.9	
	30nm,0.6s						
SEY				eSg	Sb	19 07 36.1	+8.0
SEY				Sgmax		19 07 53.4	
	100nm,0.7s						
SEY				Sgmax		19 07 53.4	
	70nm,0.9s						
SEY	Seymchan	5.27	325	⇑iPN	Pn	19 06 10.4	-1.0
TLON	Talon	5.36	285	eSg	Sb	19 07 38.3	+7.6
TLON				Sgmax		19 08 09.2	
	430nm,0.7s						
PEA0B	Petropavlovsk-	5.70	187	Pn	Pn	19 06 16.8	-0.6
PEA0B	Petropavlovsk-	5.70	187	PN	Pn	19 06 16.8	-0.6
PETK	Petropavlovsk-	5.70	187	Pn	Pn	19 06 18.6	+1.2
	3.5nm,0.6s,baz=39,slow=14,SNR=7.6						
PETK	Petropavlovsk-	5.70	187		Pn	19 06 14.9	-2.5
PETK	Petropavlovsk-	5.70	187	PN	Pn	19 06 14.9	-2.5
SUUS	Susuman	6.63	312	eP	Pn	19 06 30.6	+0.4
SUUS				ePg	Pg	19 06 57.8	-1.8
SUUS				eSg	Sb	19 08 17.5	+10
SUUS				Sgmax		19 08 26.4	
	20nm,0.6s						
SUUS				Sgmax		19 08 26.4	
	120nm,0.6s						
SUUS	Susuman	6.63	312	ePN	Pn	19 06 30.6	+0.4
BILL	Bilibino	9.88	16	eSg		19 10 08.3	
YAK	Yakutsk	14.75	295	Pn	Pn	19 08 22.7	+1.6
	0.7nm,0.3s,baz=18,slow=1.9,SNR=2.0						
YAK				Lg	Lg	19 12 36.5	
	baz=111,slow=17						
	4.7nm,0.7s						
YAK	Yakutsk	14.75	295	Pn	Pn	19 08 20.3	-0.8
YAK	Yakutsk	14.75	295	eP	Pn	19 08 22.2	+1.1
YAK				eS	Sn	19 11 05.5	+1.1
YAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,142nm,4.2s						
YAK				pmax	pmax		
	comp=N,123nm,3.9s						
YAK				pmax	pmax		
	comp=E,72nm,3.7s						
YAK				smax	smax		
	comp=E,153nm,4.7s						
YAK				smax	smax		
	comp=N,173nm,4.9s						
YAK				MLR	MLR		
	comp=Z,108nm,24.0s						
TIXI	Tiksi	17.76	329	P	Pn	19 09 00.4	+0.8
	comp=Z,0.2nm,0.3s,baz=107,slow=11,SNR=5.2						
	comp=Z,3.5nm,0.3s						
TIXI	Tiksi	17.76	329		Pn	19 08 57.0	-2.6
TIXI	Tiksi	17.76	329	P	Pn	19 08 57.0	-2.6
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.4s						
ZEA	Zeya	18.19	268	eP	P	19 09 06.2	+0.9
C18K	Utukok River	19.85	44	P	P	19 09 23.8	+0.4
C19K	Lookout Ridge	20.50	43		P	19 09 30.7	+0.1
C19K				IAmb	IAmb	19 09 38.5	
	comp=Z,6.5nm,0.8s						
J17K	VABM Dome	20.54	59	P	P	19 09 30.2	-0.7
J17K				IAmb	IAmb	19 09 46.5	
	comp=Z,18nm,1.4s						
G18K	Tagagawik	20.59	52		P	19 09 32.0	+0.6
E19K	Redstone River	21.19	48		P	19 09 38.5	+0.5
G19K	Purcell Mounta	21.23	51	P	P	19 09 37.5	-0.9
USRK	Ussuriysk Ar.	22.00	240	P	P	19 09 48.3	+1.5
	comp=Z,2.3nm,0.7s,baz=39,slow=12,SNR=2.1						
	comp=Z,2.3nm,0.7s						
B21K	Ikpikpuk River	22.32	42	P	P	19 09 49.9	0.0
B21K				IAmb	IAmb	19 09 54.3	
	comp=Z,11nm,0.9s						
J20K	Nowinta River	22.62	56	P	P	19 09 54.4	+1.2
J20K				IAmb	IAmb	19 09 55.4	
	comp=Z,7.4nm,1.1s						
F21K	Alatna River	22.64	48	P	P	19 09 53.8	+0.3
F21K				IAmb	IAmb	19 10 36.0	
	comp=Z,9.4nm,0.8s						
G21K	Allakaket	22.66	50	P	P	19 09 53.5	-0.2
G21K				IAmb	IAmb	19 09 57.1	
	comp=Z,8.5nm,0.8s						
H22K	Ishtalitna Cre	23.57	52	P	P	19 10 02.3	-0.8
H22K				IAmb	IAmb	19 10 45.9	
	comp=Z,7.9nm,1.3s						
C23K	Itkillik River	23.72	42	P	P	19 10 04.1	-0.3
C23K				IAmb	IAmb	19 10 07.5	
	comp=Z,12nm,1.1s						
COLD	Coldfoot	23.92	48	P	P	19 10 05.9	-0.5
COLD				IAmb	IAmb	19 10 08.3	
	comp=Z,8.1nm,1.0s						
TOLK	Toolik Lake Re	24.09	45	P	P	19 10 07.3	-0.6
E23K	Chandalar	24.09	46	P	P	19 10 06.9	-1.2
E23K				IAmb	IAmb	19 10 11.0	
	comp=Z,7.4nm,1.0s						
D24K	Happy Valley	24.35	43	P	P	19 10 10.6	+0.3
D24K				IAmb	IAmb	19 10 13.8	
	comp=Z,6.2nm,0.9s						
F24K	Squaw Lake	24.79	47	P	P	19 10 15.1	+0.7
F24K				IAmb	IAmb	19 10 17.8	
	comp=Z,4.3nm,0.8s						
WRH	Wood River Hil	25.16	54	P	P	19 10 17.7	0.0
COLA	College	25.18	53	⇓eP	P	19 10 17.8	-0.1
COLA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ILAR	Eielson Array	25.61	54	P	P	19 10 21.4	-0.4
	comp=Z,1.3nm,0.7s,baz=275,slow=8.5,SNR=20						
	comp=Z,1.3nm,0.7s						
ILAR	Eielson Array	25.61	54	P	P	19 10 21.5	-0.3
F25K	Christian Rive	25.64	47	P	P	19 10 23.9	+1.8
F25K				IAmb	IAmb	19 10 27.1	
	comp=Z,5.0nm,1.1s						
MJA0	Matsu Arr-Jizo	26.02	220	eP	P	19 10 26.6	+0.9
MJA0				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MJAR	Matsushiro Arr	26.03	220	P	P	19 10 25.4	-0.4
	comp=Z,3.1nm,0.9s,baz=12,slow=8.6,SNR=5.5						
	comp=Z,3.1nm,0.9s						
MJAR	Matsushiro Arr	26.03	220	P	P	19 10 25.2	-0.6
MJAR	Matsushiro Arr	26.03	220	P	P	19 10 25.2	-0.6
MJAR				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KSRS	Korea Array	29.27	237	P	P	19 10 54.3	-0.4
	comp=Z,2.5nm,1.0s,baz=89,slow=14,SNR=1.4						
	comp=Z,2.5nm,1.0s						
INK	Inuvik	29.98	43	LR	LR	19 24 16.1	
	comp=Z,117nm,19.8s,baz=337,slow=39						
SONM	Songino Array	32.40	274	P	P	19 11 23.0	+0.5
	comp=Z,0.2nm,0.4s,baz=104,slow=4.6,SNR=2.7						
	comp=Z,0.2nm,0.4s						
C36M	Paulatuk	32.92	40	P	P	19 11 26.3	-0.3
HHC	Hu-ho-hao-te	34.52	260	eP	P	19 11 33.0	-8.0
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,230nm,4.9s						
ZALV	Zalesovo Beam	39.40	296	P	P	19 12 23.3	+1.1
	comp=Z,0.2nm,0.4s,baz=74,slow=7.7,SNR=1.7						
	comp=Z,0.2nm,0.4s						
ZALV	Zalesovo Beam	39.40	296	P	P	19 12 19.2	-3.0
ZALV	Zalesovo Beam	39.40	296	P	P	19 12 19.2	-3.0
YKA	Yellowknife Ar	39.58	47	P	P	19 12 23.4	-0.1
	comp=Z,1.0nm,0.9s,baz=304,slow=8.9,SNR=9.1						
	comp=Z,1.0nm,0.9s						
YKA	Yellowknife Ar	39.58	47	P	P	19 12 20.6	-3.0
DGZ	Jazzator, Alta	40.84	290	⇑eP	P	19 12 34.0	-0.4
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SPITS	Spitsbergen Ar	41.43	349	P	P	19 12 38.3	-0.4
	comp=Z,6.5nm,1.0s,baz=84,slow=7.6,SNR=2.3						
	comp=Z,6.5nm,1.0s						
LZH	Lanzhou	42.09	262	eP	P	19 12 30.3	-14
LZH				sP	pP	19 12 36.5	-11
LZH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KURK	Kurchatov	44.39	296		P	19 13 02.5	-0.5
KURK	Kurchatov	44.39	296	⇑eP	P	19 13 02.9	-0.1
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MK31	Makanchi Array	45.34	290	⇑eP	P	19 13 08.8	-1.9
MKAR	Makanchi Array	45.34	290	P	P	19 13 09.5	-1.1
	comp=Z,1.1nm,0.9s,baz=52,slow=8.1,SNR=6.4						
	comp=Z,1.1nm,0.9s						
MKAR	Makanchi Array	45.34	290	P	P	19 13 09.8	-0.8
MKAR	Makanchi Array	45.34	290	eP	P	19 13 11.0	+0.3
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BVAR	Borovoye Array	46.52	304	P	P	19 13 19.4	-0.4
	comp=Z,1.3nm,0.7s,baz=50,slow=7.7,SNR=9.3						
	comp=Z,1.3nm,0.7s						
BORK	Borovoye	46.53	304		P	19 13 19.6	-0.3
BORK				IAmb	IAmb	19 13 20.7	
	comp=Z,2.9nm,0.9s						
BORK	Borovoye	46.53	304	deP	P	19 13 19.9	0.0
BORK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	ARCESS Array B	47.71	340	P	P	19 13 28.9	-0.1
	comp=Z,2.9nm,0.9s,baz=34,slow=9.0,SNR=3.9						
	comp=Z,2.9nm,0.9s						
ARCES	ARCESS Array B	47.71	340	P	P	19 13 28.7	-0.2
ARCES	ARCESS Array B	47.71	340	eP	P	19 13 30.7	+1.8
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TGY	Tagaytay City	52.75	229	LR	LR	19 38 36.2	
	comp=Z,39nm,18.8s,baz=104,slow=38						
AKTO	Aktyubinsk	53.63	309	P	P	19 14 13.8	0.0
	comp=Z,2.1nm,0.9s,baz=29,slow=8.3,SNR=5.1						
	comp=Z,2.1nm,0.9s						
KK31	Karatay Array	53.73	295		P	19 14 13.5	-1.1
KK31				IAmb	IAmb	19 14 15.5	
	comp=Z,4.1nm,0.9s						
KK31	Karatay Array	53.73	295	P	P	19 14 13.5	-1.1
KK31				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KKAR	Karatay Array	53.73	295		P	19 14 14.2	-0.4
KKAR	Karatay Array	53.73	295	P	P	19 14 14.3	-0.4
NVAR	Mina Array Bea	54.57	73	P	P	19 14 20.6	-0.5
	comp=Z,0.8nm,0.7s,baz=317,slow=8.0,SNR=3.6						
	comp=Z,0.8nm,0.7s						
FINES	FINESS Array B	54.68	334	P	P	19 14 20.4	-0.9
	comp=Z,4.0nm,1.0s,baz=34,slow=7.4,SNR=4.5						
	comp=Z,4.0nm,1.0s						
FINES	FINESS Array B	54.68	334	P	P	19 14 20.2	-1.1
PDAR	Pinedale Array	55.45	63	P	P	19 14 27.5	+0.1
	comp=Z,0.5nm,0.7s,baz=309,slow=1.7,SNR=5.9						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	55.45	63	P	P	19 14 27.4	0.0
CHGR	Chuyangaron	57.82	292	P	P	19 14 43.9	-0.2
CHGR	Chuyangaron	57.82	292	P	P	19 14 43.9	-0.2
CHGR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NB2	NORSAR Subarra	57.92	342	P	P	19 14 43.6	-0.9
	comp=Z,0.4nm,0.6s,baz=18,slow=7.4						
NOA	NORSAR Array B	57.92	342	P	P	19 14 43.2	-1.2
	comp=Z,0.7nm,0.8s,baz=19,slow=7.0,SNR=4.1						
	comp=Z,0.7nm,0.8s						
HFS	Hagfors	58.36	340	P	P	19 14 45.8	-1.7
	comp=Z,1.8nm,0.9s,baz=21,slow=8.4,SNR=2.5						
	comp=Z,1.8nm,0.9s						
VRH	Novokhopyorsk	59.11	319	eP	P	19 14 49.1	-3.7
VRH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VSR	Storozhevoye	59.95	321	eP	P	19 14 56.7	-1.9
VSR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKASG	Malin Array Be	63.46	327	P	P	19 15 21.5	-0.7
	comp=Z,0.3nm,0.3s,baz=29,slow=6.9,SNR=3.1						
	comp=Z,0.3nm,0.3s						
AKASG	Malin Array Be	63.46	327	IAmb	IAmb	19 15 27.5	
	comp=Z,4.0nm,1.2s						
KBZ	Khabaz	65.04	314	P	P	19 15 33.3	+0.6
	comp=Z,2.4nm,0.9s,baz=44,slow=16,SNR=5.8						
	comp=Z,2.4nm,0.9s						
GEC2	GERESS Array S	69.03	336	P	P	19 15 58.4	+0.2
GEC2				IAmb	IAmb	19 16 04.7	
	comp=Z,2.5nm,1.0s						
GERES	GERESS Array B	69.03	336	P	P	19 15 58.0	-0.2
	comp=Z,0.4nm,0.7s,baz=24,slow=7.6,SNR=6.3						
	comp=Z,0.4nm,0.7s						
GERES	GERESS Array B	69.03	336	eP	P	19 15 58.3	+0.2
TXAR	Lajitas Array	69.07	68	P	P	19 15 58.8	+0.1
	comp=Z,0.8nm,0.9s,baz=319,slow=5.1,SNR=5.8						
	comp=Z,0.8nm,0.9s						
BRTR	Keskin Array B	71.88	319	P	P	19 16 16.2	+0.4
	comp=Z,0.5nm,0.7s,baz=11,slow=7.1,SNR=2.1						
	comp=Z,0.5nm,0.7s						
ESDC	Sonseca Array	80.90	347	P	P	19 17 06.4	-0.5
	comp=Z,0.6nm,0.7s,baz=1.5,slow=5.3,SNR=4.8						
	comp=Z,0.6nm,0.7s						
ESDC	Sonseca Array	80.90	347	P	P	19 17 06.2	-0.6

IDC 26 19:12:28.5±14.0, **7°.70S**×**127°.92E, h134**^km±153^km, **mb2.9**/1, **mbtmp3.7**/4, **ML3.8**/3, **Error ellipse: s-maj=97.1km s-min=60.5km az=29.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	10.57	192	P	Pn	19 14 58.1	+1.7
	0.6nm,0.3s,baz=18,slow=14,SNR=1.8						
FITZ				S	Sn	19 16 51.5	-1.6
	2.9nm,0.4s,baz=330,slow=16,SNR=1.9						
	3.0nm,0.4s						
WRA	Warramunga Arr	13.67	154	P	Pn	19 15 35.2	-1.8
	0.5nm,0.3s,baz=327,slow=14,SNR=1.4						
WRA				S	Sn	19 18 00.2	-7.8
	0.7nm,0.2s,baz=325,slow=22,SNR=5.5						
	1.0nm,0.7s						
ASAR	Alice Springs	16.88	161	P	Pn	19 16 17.8	+0.9
	0.2nm,0.3s,baz=346,slow=10,SNR=4.8						
ASAR				S	Sn	19 19 16.4	-8.9
	0.3nm,0.6s,baz=344,slow=26,SNR=1.1						
	1.6nm,0.6s						
MKAR	Makanchi Array	67.70	328	P	P	19 23 11.3	-0.1
	0.2nm,0.5s,baz=113,slow=8.1,SNR=1.5						
	0.2nm,0.5s						

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*IDC **26** 19:24:53.4±0.6, 32°.24N×105°.20E, h0^km, mb4.0/25, mbtmp4.0/29, ML4.3/3, MS3.1/5, Error ellipse: s-maj=16.1km s-min=10.5km az=62.0*
*NEIC **26** 19:24:55.3±1.6, 32°.21N±0°.07×105°.16E±0°.10, h10^km±1^km, mb4.6/64, Error ellipse: s-maj=15.9km s-min=9.8km az=234.0*
ISC 26 19:24:55.9±0.4, **32°.19N**±0°.03×**105°.12E**±0°.04, **h14**^km, **n128**, σ**1s.64**/138, **mb4.4**/58, **MS3.1**/3, **2C-2D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XAN	Xi'an	3.69	59	Pn	Pn	19 25 53.3	+0.7
XAN				Pg	Pb	19 26 01.8	+0.9
XAN				Sn	Sn	19 26 35.0	-0.9
XAN				Sg	Sb	19 26 48.0	+2.5
XAN				smax	smax		
	comp=N,2μm,0.6s						
XAN				smax	smax		
	comp=E,2μm,0.7s						
XAN				LR	LR		
	comp=N,2μm,5.5s						
XAN				LR	LR		
	comp=E,2μm,6.5s						
XAN				LR	LR		
	comp=Z,2μm,7.4s						
LZDM	Lanzhou Array	3.94	343	Pn	Pn	19 25 57.0	+0.7
	baz=174,slow=16						
LZDM				Pg	Pb	19 26 06.7	+1.3
	baz=163,slow=16						
LZDM				Sn	Sn	19 26 43.3	+0.8
	baz=95,slow=12						
LZDM				Lg	Lg	19 26 57.7	
	baz=153,slow=33						
	comp=Z,30nm,0.3s						
LZH	Lanzhou	4.03	345	Pn	Pn	19 25 58.8	+1.4
LZH				Pg	Pb	19 26 10.0	+3.2
LZH				Sn	Sn	19 26 45.3	+0.8
LZH				Sg	Sb	19 26 59.5	+4.0
LZH				smax	smax		
	comp=N,370nm,1.0s						
LZH				smax	smax		
	comp=E,2μm,0.8s						
LZH				LR	LR		
	comp=N,2μm,6.7s						
LZH				LR	LR		
	comp=E,2μm,6.2s						
LZH				LR	LR		
	comp=Z,910nm,6.9s						
ENH	Enshi	4.20	116		Pn	19 26 00.3	+0.7
GYA	Guiyang	5.86	166	⇑Pn	Pn	19 26 29.0	+6.5
PZH	PanZhiHua	6.38	208	Pn	Pn	19 26 32.5	+2.8
PZH				Pg	Pb	19 26 50.8	+4.0
PZH				Sn	Sn	19 27 36.0	-6.4
PZH				Sg	Sg	19 28 21.5	+0.7
PZH				smax	smax		
	comp=N,70nm,0.9s						
PZH				smax	smax		
	comp=E,100nm,1.2s						
KMI	Kunming	7.34	197	Pn	Pn	19 26 47.5	+4.6
KMI				Sn	Sn	19 28 10.0	+3.9
KMI				smax	smax		
	comp=N,48nm,0.8s						
KMI				smax	smax		
	comp=E,39nm,0.8s						
KMI				LR	LR		
	comp=N,540nm,6.1s						
KMI				LR	LR		
	comp=E,350nm,4.2s						
KMI				LR	LR		
	comp=Z,300nm,6.0s						
CNSH	ChangSha	7.85	119	P	Pn	19 26 55.3	+5.6
CNSH				S	Sn	19 28 29.8	+11
CNSH				smax	smax		
	comp=N,190nm,0.8s						
CNSH				smax	smax		
	comp=E,150nm,0.7s						
WHN	Wuhan	8.06	99	Pn	Pn	19 26 54.5	+1.9
WHN				Sn	Sn	19 28 20.5	-3.1
WHN				smax	smax		
	comp=N,420nm,0.9s						
WHN				smax	smax		
	comp=E,240nm,0.9s						
GTA	Gaotai	8.40	331	eP	Pn	19 26 57.8	+0.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				LR	LR		
	comp=N,380nm,6.2s						
GTA				LR	LR		
	comp=E,210nm,9.1s						
GTA				LR	LR		
	comp=Z,360nm,9.1s						
BTO	Baotou	9.28	24	eP	Pn	19 27 10.3	+0.9
BTO				pP		19 27 13.5	
BTO				sP		19 27 16.3	
BTO				S	Sn	19 28 55.0	+1.3
BTO				pmax	pmax		
	comp=Z,18nm,0.8s						
BTO				pmax	pmax		
	comp=Z,440nm,5.3s						
BTO				LR	LR		
	comp=N,870nm,8.5s						
BTO				LR	LR		
	comp=E,970nm,12.3s						
BTO				LR	LR		

	comp=Z,360nm,14.0s						
HNS	**HongShan**	**9.45**	**54**	⇑Pn	**Pn**	**19 27 14.0**	**+2.5**
HNS				Pg		19 27 45.3	
HNS				Sn	**Sn**	**19 29 03.5**	**+6.0**
HNS				Sg		19 29 51.0	
HNS				smax	smax		
	comp=N,80nm,1.2s						
HNS				smax	smax		
	comp=E,43nm,1.0s						
HHC	**Hu-ho-hao-te**	**10.08**	**29**	*e*P	**Pn**	**19 27 21.8**	**+1.5**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,4.8s						
HHC				LR	LR		
	comp=N,180nm,8.1s						
HHC				LR	LR		
	comp=E,220nm,7.9s						
HHC				LR	LR		
	comp=Z,190nm,8.5s						
NJ2	**Nanjing**	**11.65**	**87**	*e*P	**Pn**	**19 27 40.5**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
SHL	**Shillong**	**13.33**	**244**		**Pn**	**19 28 04.0**	**-0.9**
QIZ	**Qiongzhong**	**13.77**	**161**	P	**Pn**	**19 28 11.0**	**+0.2**
QIZ				S	**Sn**	**19 30 48.0**	**+4.3**
QIZ				pmax	pmax		
	comp=Z,39nm,1.6s						
QIZ				LR	LR		
	comp=N,370nm,8.1s						
QIZ				LR	LR		
	comp=E,150nm,8.7s						
QIZ				LR	LR		
	comp=Z,490nm,9.5s						
CHTO	**Chiang Mai**	**14.43**	**204**	P	**P**	**19 28 25.1**	**-1.5**
CMAR	**Chiang Mai Arr**	**14.76**	**204**	Pn	**Pn**	**19 28 24.5**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=16,slow=11,SNR=8.6						
CMAR				Lg	Lg	19 32 44.1	
	baz=350,slow=24						
CMAR				LR	LR	19 34 51.4	
	comp=Z,73nm,19.8s,baz=215,slow=40						
	comp=Z,0.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**14.76**	**204**		**Pn**	**19 28 24.3**	**0.0**
SONM	**Songino Array**	**15.66**	**3**	Pn	**Pn**	**19 28 35.6**	**-0.7**
	comp=Z,3.9nm,1.0s,baz=182,slow=12,SNR=12						
SONM				Lg	Lg	19 33 06.9	
	comp=Z,0.1nm,0.3s,baz=164,slow=29,SNR=2.4						
SONM	**Songino Array**	**15.66**	**3**	Pn	**Pn**	**19 28 36.1**	**-0.2**
ULN	**Ulaanbaatar**	**15.73**	**5**		**Pn**	**19 28 37.0**	**-0.2**
WMQ	**Urumqi**	**17.94**	**315**	*e*P	**Pn**	**19 29 06.8**	**+1.8**
WMQ				sP	sP	19 29 14.5	+2.7
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
KSRS	**Korea Array**	**19.43**	**68**	P	**P**	**19 29 19.2**	**-2.7**
	comp=Z,0.4nm,0.3s,baz=259,slow=10,SNR=9.7						
KSRS				LR	LR	19 38 01.1	
	comp=Z,20nm,18.1s,baz=195,slow=41						
	comp=Z,4.0nm,0.8s						
HILR	**Hailar Array B**	**20.52**	**28**	P	**P**	**19 29 31.8**	**-1.9**
	comp=Z,2.0nm,0.5s,baz=178,slow=13,SNR=5.3						
HILR				LR	LR	19 38 55.1	
	comp=Z,81nm,21.3s,baz=305,slow=41						
	comp=Z,2.0nm,0.5s						
BNX	**BinXian**	**21.90**	**45**	⇓P	**P**	**19 29 49.0**	**+0.5**
BNX				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WUS	**Wushi**	**22.57**	**301**	P	**P**	**19 29 56.2**	**+0.3**
WUS				IAmb	IAmb	19 30 02.0	
	comp=Z,16nm,0.8s						
MKAR	**Makanchi Array**	**22.76**	**316**	P	**P**	**19 29 57.5**	**-0.2**
	comp=Z,1.5nm,0.6s,baz=113,slow=11,SNR=21						
	comp=Z,1.5nm,0.6s						
MKAR	**Makanchi Array**	**22.76**	**316**		**P**	**19 29 57.3**	**-0.5**
MAKZ	**Makanchi**	**22.95**	**316**		**P**	**19 30 00.7**	**+0.9**
PRZ	**Przheval'sk**	**23.51**	**304**	P	**P**	**19 30 06.5**	**+0.9**
PRZ				IAmb	IAmb	19 30 13.5	
	comp=Z,13nm,1.1s						
TARG	**Taragay, Kyrgy**	**23.73**	**301**		**P**	**19 30 08.8**	**+0.8**
USRK	**Ussuriysk Ar.**	**24.17**	**53**	P	**P**	**19 30 10.1**	**-1.6**
	comp=Z,3.2nm,0.7s,baz=174,slow=1.4,SNR=2.5						
	comp=Z,3.2nm,0.7s						
HEH	**HeiHe**	**24.48**	**36**	*e*P	**P**	**19 30 14.8**	**+0.3**
HEH				pmax	pmax		
	comp=Z,12nm,0.9s						
KSH	**Kashi**	**24.66**	**295**	P	**P**	**19 30 23.5**	**+7.2**
KSH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ZAA0	**Zalesovo Array**	**26.15**	**332**		**P**	**19 30 29.6**	**+0.1**
ZALV	**Zalesovo Beam**	**26.15**	**332**	P	**P**	**19 30 28.9**	**-0.6**
	comp=Z,1.9nm,0.6s,baz=137,slow=9.4,SNR=9.4						
	comp=Z,1.9nm,0.6s						
ZALV	**Zalesovo Beam**	**26.15**	**332**		**P**	**19 30 28.2**	**-1.3**
AAK	**Ala-Archa**	**26.34**	**302**	LR	LR	19 41 55.9	
	comp=Z,66nm,18.3s,baz=201,slow=39						
NIL	**Nilore**	**26.74**	**282**	P	**P**	**19 30 37.7**	**+2.6**
NIL				IAmb	IAmb	19 30 41.8	
	comp=Z,7.9nm,0.7s						
KURK	**Kurchatov**	**26.92**	**321**		**P**	**19 30 36.3**	**-0.2**
MJAR	**Matsushiro Arr**	**27.58**	**72**	P	**P**	**19 30 42.0**	**-0.6**
	comp=Z,1.8nm,0.7s,baz=277,slow=10,SNR=5.0						
	comp=Z,1.8nm,0.7s						
GAR	**Garm**	**28.98**	**293**		**P**	**19 30 55.0**	**-0.3**
GAR				IAmb	IAmb	19 30 59.5	
	comp=Z,4.8nm,0.7s						
CHGR	**Chuyangaron**	**29.87**	**293**	P	**P**	**19 31 03.4**	**+0.3**
CHGR				IAmb	IAmb	19 31 09.1	
	comp=Z,6.9nm,0.8s						
KBL	**Kabul**	**30.12**	**284**	P	**P**	**19 31 06.6**	**+1.1**
KBL				IAmb	IAmb	19 31 11.2	
	comp=Z,7.6nm,1.3s						
BVAR	**Borovoye Array**	**32.50**	**320**	P	**P**	**19 31 25.9**	**-0.1**
	comp=Z,1.8nm,0.6s,baz=112,slow=10,SNR=10.0						
	comp=Z,1.8nm,0.6s						
BORK	**Borovoye**	**32.55**	**320**		**P**	**19 31 26.3**	**-0.1**
AB31	**Akbulak array**	**37.62**	**310**	P	**P**	**19 32 09.8**	**-0.2**
ABKAR	**Akbulak array**	**37.62**	**310**	P	**P**	**19 32 09.8**	**-0.2**
NRIK	**Noril'sk**	**38.51**	**350**	P	**P**	**19 32 17.1**	**-0.2**
	comp=Z,3.6nm,1.0s,baz=147,slow=7.2,SNR=9.6						
	comp=Z,3.6nm,1.0s						
NRIK	**Noril'sk**	**38.51**	**350**		**P**	**19 32 15.8**	**-1.6**
NRIK				IAmb	IAmb	19 32 23.5	
	comp=Z,6.0nm,0.8s						
ARTI	**Arti**	**40.20**	**321**		**P**	**19 32 32.0**	**+0.4**
GUMO	**Guam**	**40.74**	**108**	LR	LR	19 50 16.7	
	comp=Z,16nm,18.7s,baz=110,slow=37						
SEY	**Seymchan**	**42.73**	**30**	P	**P**	**19 32 52.0**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=253,slow=8.5,SNR=8.6						
	comp=Z,1.5nm,0.5s						
PETK	**Petropavlovsk-**	**42.81**	**45**	P	**P**	**19 32 52.3**	**-0.9**
	comp=Z,5.8nm,0.9s,baz=200,slow=3.9,SNR=3.8						
	comp=Z,5.8nm,0.9s						
PETK	**Petropavlovsk-**	**42.81**	**45**	P	**P**	**19 32 51.9**	**-1.3**
KBZ	**Khabaz**	**49.33**	**302**	P	**P**	**19 33 44.2**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=143,slow=5.0,SNR=5.6						
	comp=Z,0.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**53.73**	**156**	P	**P**	**19 34 16.1**	**-1.6**
	comp=Z,2.9nm,1.1s,baz=285,slow=16,SNR=1.6						
	comp=Z,2.9nm,1.1s						
ARCES	**ARCESS Array B**	**56.63**	**336**	P	**P**	**19 34 37.4**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=90,slow=8.1,SNR=5.8						
	comp=Z,1.3nm,0.7s						
ARCES	**ARCESS Array B**	**56.63**	**336**	P	**P**	**19 34 37.2**	**-0.8**
BRTR	**Keskin Array B**	**56.96**	**299**	P	**P**	**19 34 40.3**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=75,slow=4.8,SNR=5.5						
	comp=Z,0.8nm,0.6s						
BRTR	**Keskin Array B**	**56.96**	**299**	P	**P**	**19 34 40.1**	**-1.0**
FIA1	**FINESS Array S**	**57.16**	**326**	P	**P**	**19 34 40.2**	**-1.6**
FINES	**FINESS Array B**	**57.16**	**326**	P	**P**	**19 34 41.0**	**-0.9**
	comp=Z,2.2nm,0.7s,baz=110,slow=11,SNR=5.4						
	comp=Z,2.2nm,0.7s						
FINES	**FINESS Array B**	**57.16**	**326**	P	**P**	**19 34 40.6**	**-1.3**
AKASG	**Malin Array Be**	**57.28**	**313**	P	**P**	**19 34 42.9**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=66,slow=7.2,SNR=2.0						
	comp=Z,0.4nm,0.4s						
SPITS	**Spitsbergen Ar**	**58.50**	**346**	P	**P**	**19 34 51.5**	**+0.3**
	comp=Z,2.6nm,0.9s,baz=15,slow=6.0,SNR=5.8						
	comp=Z,2.6nm,0.9s						
WB0	**Warramunga Arr**	**58.78**	**147**	P	**P**	**19 34 53.5**	**-0.3**
WRA	**Warramunga Arr**	**58.91**	**148**	P	**P**	**19 34 54.9**	**+0.2**
	comp=Z,2.8nm,0.7s,baz=339,slow=7.2,SNR=16						
	comp=Z,2.8nm,0.7s						
C18K	**Utukok River**	**61.75**	**25**	P	**P**	**19 35 12.8**	**-0.8**
ASAR	**Alice Springs**	**61.98**	**150**	P	**P**	**19 35 16.4**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=331,slow=6.6,SNR=28						
	comp=Z,1.6nm,0.7s						
ASAR	**Alice Springs**	**61.98**	**150**	P	**P**	**19 35 16.1**	**+0.5**
C19K	**Lookout Ridge**	**62.18**	**24**	P	**P**	**19 35 15.7**	**-0.8**
C19K				IAmb	IAmb	19 35 17.2	
	comp=Z,3.7nm,0.8s						
D19K	**Kuna River**	**62.88**	**24**	P	**P**	**19 35 20.3**	**-0.8**
HFS	**Hagfors**	**63.36**	**326**	P	**P**	**19 35 23.4**	**-1.0**
	comp=Z,1.3nm,0.6s,baz=91,slow=12,SNR=4.1						
	comp=Z,1.3nm,0.6s						
H17K	**Granite Mounta**	**63.37**	**28**	P	**P**	**19 35 23.8**	**-0.6**
H17K				IAmb	IAmb	19 35 25.1	
	comp=Z,5.0nm,0.9s						
E19K	**Redstone River**	**63.54**	**25**	P	**P**	**19 35 24.3**	**-1.2**
E19K				IAmb	IAmb	19 35 33.2	
	comp=Z,6.2nm,1.4s						
B22K	**Teshekpuk Lake**	**63.78**	**22**	P	**P**	**19 35 27.0**	**0.0**
NB2	**NORSAR Subarra**	**64.22**	**327**	P	**P**	**19 35 28.5**	**-1.6**
	comp=Z,1.1nm,0.5s,baz=71,slow=6.5						
NOA	**NORSAR Array B**	**64.22**	**327**	P	**P**	**19 35 28.9**	**-1.2**
	comp=Z,1.2nm,0.7s,baz=71,slow=6.7,SNR=11						
	comp=Z,1.2nm,0.7s						
N14K	**Kuskokwak Cree**	**64.27**	**34**	P	**P**	**19 35 29.3**	**-1.1**
NC204	**NORSAR Array S**	**64.34**	**328**		**P**	**19 35 29.7**	**-1.2**
C23K	**Itkillik River**	**64.87**	**22**	P	**P**	**19 35 34.1**	**0.0**
C23K				IAmb	IAmb	19 35 35.5	
	comp=Z,4.4nm,1.1s						
J18K	**Innoko River**	**65.20**	**29**	P	**P**	**19 35 35.9**	**-0.5**
J18K				IAmb	IAmb	19 35 37.5	
	comp=Z,3.2nm,0.8s						
D23K	**Nanushuk River**	**65.21**	**23**	P	**P**	**19 35 36.7**	**+0.3**
D23K				IAmb	IAmb	19 35 41.9	
	comp=Z,7.5nm,1.4s						
G21K	**Allakaket**	**65.25**	**26**	P	**P**	**19 35 36.5**	**-0.2**
G21K				IAmb	IAmb	19 35 39.9	
	comp=Z,1.8nm,0.8s						
D24K	**Happy Valley**	**65.73**	**22**	P	**P**	**19 35 39.6**	**-0.2**
D24K				IAmb	IAmb	19 35 39.8	
	comp=Z,2.6nm,0.8s						
J20K	**Nowinta River**	**65.96**	**28**	P	**P**	**19 35 40.4**	**-1.0**
J20K				IAmb	IAmb	19 35 58.3	
	comp=Z,7.3nm,1.4s						
K20K	**Telida**	**66.33**	**29**	P	**P**	**19 35 43.7**	**0.0**
K20K				IAmb	IAmb	19 36 19.2	
	comp=Z,2.8nm,1.1s						
G23K	**Bananza Creek**	**66.43**	**25**	P	**P**	**19 35 43.8**	**-0.5**
G23K				IAmb	IAmb	19 35 48.4	
	comp=Z,5.2nm,1.3s						
F24K	**Squaw Lake**	**66.80**	**24**	P	**P**	**19 35 46.4**	**-0.3**
BPAW	**Bear Paw Mtn.**	**67.24**	**28**	P	**P**	**19 35 49.7**	**+0.2**
BPAW				IAmb	IAmb	19 35 51.9	
	comp=Z,4.1nm,0.8s						
E25K	**Arctic Village**	**67.27**	**23**	P	**P**	**19 35 49.5**	**-0.1**
E25K				IAmb	IAmb	19 36 21.6	
	comp=Z,6.6nm,1.5s						
PPLA	**Purkeypile**	**67.30**	**29**	P	**P**	**19 35 50.1**	**+0.1**
G24K	**Hadweenzic Riv**	**67.33**	**24**	P	**P**	**19 35 49.8**	**-0.2**
G24K				IAmb	IAmb	19 35 51.1	
	comp=Z,4.9nm,1.0s						
GERES	**GERESS Array B**	**67.41**	**314**	P	**P**	**19 35 50.3**	**-0.7**
	comp=Z,0.1nm,0.6s,baz=35,slow=4.9,SNR=4.7						
	comp=Z,0.1nm,0.6s						
F25K	**Christian Rive**	**67.51**	**23**	P	**P**	**19 35 51.5**	**+0.3**
H24K	**Noodor Dome**	**67.60**	**25**	P	**P**	**19 35 51.5**	**-0.3**
H24K				IAmb	IAmb	19 36 05.9	
	comp=Z,5.2nm,1.4s						
BMAR	**Burnt Mountain**	**67.95**	**23**	P	**P**	**19 35 54.2**	**+0.2**
F26K	**Sheenjek River**	**67.95**	**23**	P	**P**	**19 35 53.4**	**-0.6**
F26K				IAmb	IAmb	19 36 22.5	
	comp=Z,3.7nm,1.3s						
L22K	**Petersville**	**68.05**	**29**	P	**P**	**19 35 54.0**	**-0.7**
ILAR	**Eielson Array**	**68.49**	**26**	P	**P**	**19 35 55.1**	**-2.2**
	comp=Z,0.4nm,0.7s,baz=289,slow=3.7,SNR=6.9						
	comp=Z,0.4nm,0.7s						
ILAR	**Eielson Array**	**68.49**	**26**	P	**P**	**19 35 55.3**	**-2.0**
E28M	**Babbage River**	**68.91**	**21**	P	**P**	**19 35 59.9**	**0.0**
E28M				IAmb	IAmb	19 36 00.6	
	comp=Z,4.3nm,0.8s						
SML	**Sawmill**	**69.40**	**29**	P	**P**	**19 36 02.1**	**-1.0**
H27K	**Steamboat Moun**	**69.61**	**23**	P	**P**	**19 36 04.5**	**+0.2**
H27K				IAmb	IAmb	19 36 05.5	
	comp=Z,3.6nm,0.7s						
RIDG	**Independent Ri**	**69.79**	**26**	P	**P**	**19 36 04.2**	**-1.2**
J26L	**Joseph Creek**	**69.85**	**25**	P	**P**	**19 36 04.7**	**-1.2**
J26L				IAmb	IAmb	19 36 05.6	
	comp=Z,3.2nm,0.7s						
SCRK	**Sand Creek**	**69.98**	**26**	P	**P**	**19 36 05.9**	**-0.9**
SCRK				IAmb	IAmb	19 36 07.0	
	comp=Z,2.9nm,0.9s						
G29M	**Pine Creek**	**70.36**	**22**	P	**P**	**19 36 08.7**	**-0.3**
G29M				IAmb	IAmb	19 36 46.5	
	comp=Z,8.4nm,1.4s						
A36M	**Sachs Harbour**	**70.40**	**15**		**P**	**19 36 08.4**	**-0.5**
KLU	**Klutina**	**70.55**	**29**	P	**P**	**19 36 10.4**	**+0.1**
KLU				IAmb	IAmb	19 36 45.6	
	comp=Z,4.1nm,1.0s						
I28M	**Miner Creek**	**70.60**	**24**	P	**P**	**19 36 10.1**	**-0.4**
F30M	**Barrier River**	**70.63**	**21**		**P**	**19 36 10.7**	**+0.2**
H29M	**Whitestone**	**70.67**	**23**	P	**P**	**19 36 10.5**	**-0.3**
H29M				IAmb	IAmb	19 36 50.8	
	comp=Z,9.2nm,1.4s						
INK	**Inuvik**	**70.85**	**20**	P	**P**	**19 36 11.1**	**-0.7**
INK				IAmb	IAmb	19 36 12.1	
	comp=Z,4.7nm,0.9s						
N25K	**Chitina, Valde**	**71.03**	**28**	P	**P**	**19 36 13.6**	**+0.4**
EPYK	**Eagle Plains**	**71.11**	**22**	P	**P**	**19 36 12.4**	**-1.1**
BCAR	**Beaver Creek A**	**71.31**	**26**	P	**P**	**19 36 15.3**	**+0.5**
BMRD	**Maredsous**	**72.00**	**318**	*d*P	**P**	**19 36 19.1**	**0.0**
STKA	**Stephens Creek**	**72.45**	**148**	P	**P**	**19 36 21.7**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=347,slow=3.2,SNR=4.4						
	comp=Z,1.8nm,0.8s						
STKA	**Stephens Creek**	**72.45**	**148**	P	**P**	**19 36 20.8**	**-1.1**
C36M	**Paulatuk**	**72.60**	**16**	IAmb	IAmb	19 36 23.1	
	comp=Z,7.6nm,1.2s						
YKA	**Yellowknife Ar**	**80.41**	**18**	P	**P**	**19 37 06.0**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=326,slow=5.6,SNR=23						
	comp=Z,1.2nm,0.6s						
YKA	**Yellowknife Ar**	**80.41**	**18**	P	**P**	**19 37 05.3**	**-1.3**
YKAW1	**Yellowknife Wh**	**80.44**	**17**	P	**P**	**19 37 06.8**	**0.0**
ESDC	**Sonseca Array**	**82.93**	**313**	P	**P**	**19 37 22.2**	**+1.7**
	comp=Z,0.3nm,0.8s,baz=51,slow=5.5,SNR=1.7						
	comp=Z,0.3nm,0.8s						
ESDC	**Sonseca Array**	**82.93**	**313**	IAmb	IAmb	19 37 26.6	
	comp=Z,1.6nm,1.2s						

IDC 26 19:39:29.0±10.0**, 4°.27S**×**152°.71E, h82**^{km}±70^{km}**, mb3.3**/3**, mbtmp3.6**/4**, ML1.6**/1**, Error ellipse: s-maj=124.6km s-min=37.5km az=105.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.51**	**227**	P	Pn	19 41 15.5	-0.3
	0.5nm,0.3s,baz=42,slow=14,SNR=2.2						
PMG				S	Sn	19 42 41.8	+2.3
	4.6nm,0.7s,baz=73,slow=14,SNR=2.3						
	5.1nm,0.7s						
WRA	**Warramunga Arr**	**23.73**	**227**	P	P	19 44 33.6	-0.2
	2.0nm,0.6s,baz=40,slow=9.1,SNR=13						
	2.0nm,0.6s						
ASAR	**Alice Springs**	**26.48**	**222**	P	P	19 44 58.1	-0.6
	0.1nm,0.4s,baz=46,slow=9.2,SNR=8.1						
	0.1nm,0.4s						
SONM	**Songino Array**	**65.83**	**328**	P	P	19 50 05.8	-0.1
	0.4nm,0.5s,baz=123,slow=5.3,SNR=2.3						
	0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**150.06**	**289**	PKPbc	PKPbc	19 59 11.5	+0.3
	0.5nm,0.6s,baz=56,slow=3.0,SNR=4.8						

*IDC **26** 19:42:18.7±1.8, 5°.32S×154°.85E, h0^{km}, mb4.0/7, mbtmp4.0/7, Error ellipse: s-maj=73.6km s-min=22.2km az=112.0*

ISC 26 19:42:24.0±1.6**, 5°.4S**±0°.2×**154°.8E**±0°.5**, h35**^{km}**, n7,** σ1^{s}.**28**/7**, mb3.7**/7**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.62**	**232**	P	**P**	**19 47 42.5**	**+1.1**
	1.3nm,0.9s,baz=55,slow=8.3,SNR=8.5						
	1.3nm,0.9s						
ASAR	**Alice Springs**	**27.14**	**226**	P	**P**	**19 48 04.5**	**+0.4**
	0.7nm,0.3s,baz=58,slow=9.4,SNR=24						
	0.7nm,0.3s						
STKA	**Stephens Creek**	**29.14**	**204**	P	**P**	**19 48 21.0**	**-0.8**
	0.5nm,0.4s,baz=27,slow=6.8,SNR=5.1						
	0.5nm,0.4s						
YAK	**Yakutsk**	**69.93**	**348**	P	**P**	**19 53 29.7**	**-1.5**
	5.2nm,0.5s,baz=214,slow=3.6,SNR=3.0						
	5.2nm,0.5s						
ILAR	**Eielson Array**	**81.93**	**22**	P	**P**	**19 54 40.9**	**+1.2**
	0.4nm,0.7s,baz=256,slow=4.6,SNR=4.0						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**82.06**	**319**	P	**P**	**19 54 41.6**	**+0.7**
	0.7nm,0.7s,baz=93,slow=6.5,SNR=7.6						
	0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**82.72**	**326**	P	**P**	**19 54 43.8**	**-0.2**
	0.5nm,0.5s,baz=87,slow=5.9,SNR=2.5						
	0.5nm,0.5s						

*IDC **26** 19:48:23.0±2.0, 37°.63N×118°.94W, h0^{km}, mbtmp3.1/4, ML3.6/4, Error ellipse: s-maj=27.3km s-min=6.6km az=100.0*

*REN **26** 19:48:23.9±0.9, 37°.56N±0°.02×118°.84W±0°.05, h8^{km}±6^{km}, Error ellipse: s-maj=5.4km s-min=2.4km az=85.0*

*NEIC **26** 19:48:23.2±1.2, 37°.60N±0°.02×118°.82W±0°.04, h13^{km}±4^{km}, Error ellipse: s-maj=4.1km s-min=3.4km az=95.0*

*NCEDC **26** 19:48:23.6±1.0, 37°.58N±0°.02×118°.82W±0°.02, h10^{km}±4^{km}, Mwr3.6/4, ML4.0/2(REN), ML3.7/168(NEIC), Error ellipse: s-maj=3.1km s-min=2.5km az=185.0*

ISC 26 19:48:23.2±0.8**, 37°.56N**±0°.02×**118°.85W**±0°.02**, h15**^{km}±4^{km}**, n155,** σ**0^{s}.92**/143**, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCVM	**Convict Lake**	**0.03**	**32**		**Pg**	**19 48 25.8**	**-0.5**
MCMM	**Convict Lake**	**0.05**	**338**		**Pg**	**19 48 26.2**	**-0.2**
EXSG	**Experiment Sta**	**0.05**	**17**		**Sg**	**19 48 27.9**	**-0.5**
MLAC	**Mammoth, Mammo**	**0.07**	**10**		**Pg**	**19 48 26.1**	**-0.4**
MLCM	**Laurel Creek C**	**0.07**	**313**		**Pg**	**19 48 26.3**	**-0.2**
MDRNC	**Doe Ridge**	**0.07**	**9**		**Pg**	**19 48 26.2**	**-0.4**
MCBM	**Casa Benchmark**	**0.09**	**335**		**Pg**	**19 48 26.5**	**-0.2**
MCBM					**Sg**	**19 48 28.1**	**-0.8**
MCSM	**Casa Diablo Ho**	**0.10**	**334**		**Pg**	**19 48 26.6**	**-0.2**
MLHM	**Little Hot Cre**	**0.12**	**14**		**Pg**	**19 48 26.6**	**-0.3**
MEMM	**East Mammoth H**	**0.12**	**325**		**Pg**	**19 48 27.0**	**-0.1**
MMLB	**Mammoth Lakes**	**0.14**	**313**		**Pg**	**19 48 27.4**	**+0.2**
MMPM	**Mammoth Pass**	**0.15**	**288**		**Pg**	**19 48 27.5**	**+0.1**
MMPM	**Mammoth Pass**	**0.15**	**288**		**Pg**	**19 48 27.5**	**+0.1**
MMPM					**Sg**	**19 48 30.3**	**+0.2**
MLIM	**Lincoln Peak**	**0.15**	**299**		**Pg**	**19 48 27.9**	**+0.4**
MLIM	**Lincoln Peak**	**0.15**	**299**		**Pg**	**19 48 27.8**	**+0.4**
MDYM	**Dry Creek**	**0.16**	**306**		**Sg**	**19 48 30.7**	**+0.3**
MDYM	**Dry Creek**	**0.16**	**306**		**Pg**	**19 48 27.8**	**+0.2**
MMSM	**Mammoth Summit**	**0.16**	**295**		**Pg**	**19 48 27.9**	**+0.3**
MINS	**Minaret Summit**	**0.19**	**298**		**Pg**	**19 48 28.1**	**+0.2**
MINS					**Sg**	**19 48 31.2**	**+0.1**
MDPB	**Devils Postpil**	**0.20**	**291**		**Pg**	**19 48 28.2**	**+0.3**
MDPB				IAML		19 48 31.5	
	comp=E,21μm,0.3s						
MDCM	**Deadman Creek**	**0.21**	**314**		**Pg**	**19 48 28.3**	**+0.1**
MTUM	**Tungsten Hills**	**0.31**	**133**		**Pg**	**19 48 29.9**	**+0.2**
MFBM	**Five Bridges**	**0.36**	**112**		**Pg**	**19 48 31.0**	**+0.3**
KCC	**Kaiser Creek**	**0.44**	**237**		**Pb**	**19 48 32.6**	**-0.1**
KCC	**Kaiser Creek**	**0.44**	**237**		**Sb**	**19 48 39.0**	**-0.2**
TIN	**Tinemaha, Big**	**0.71**	**136**		**Pg**	**19 48 37.3**	**+0.2**
TIN				IAML		19 48 47.7	
	comp=N,5μm,0.7s						
TIN				IAML		19 48 48.6	
	comp=E,4μm,0.6s						
MMIM	**Miami Mountain**	**0.72**	**259**		**Pn**	**19 48 37.7**	**-1.3**
FRI	**Friant**	**0.89**	**230**		**Pn**	**19 48 40.6**	**-0.5**
TVH1	**TV Hill, Hawth**	**0.90**	**4**		**Sb**	**19 48 51.9**	**-0.7**
TVH1	**TV Hill, Hawth**	**0.90**	**4**		**Pg**	**19 48 40.3**	**-0.3**
NV08	**Mina Array Sit**	**0.94**	**26**		**Pb**	**19 48 40.8**	**-0.5**
NV08					**Sb**	**19 48 52.7**	**-0.9**
MHDM	**Hidden Dam**	**0.94**	**242**		**Pg**	**19 48 41.7**	**+0.2**
NV09	**Mina Array Sit**	**0.96**	**25**		**Pb**	**19 48 41.2**	**-0.5**
NV09					**Sg**	**19 48 54.2**	**-0.3**
NVAR	**Mina Array Bea**	**0.97**	**26**	Pg	**Pb**	**19 48 41.2**	**-0.5**
	comp=E,366nm,0.3s,baz=210,slow=18,SNR=2826						
NVAR				Lg	Lg	19 48 54.0	
	comp=E,198nm,0.3s,baz=204,slow=28,SNR=5.4						
NVAR	**Mina Array Bea**	**0.97**	**26**		**Pb**	**19 48 40.4**	**-1.4**
NV11	**Mina Array Sit**	**1.03**	**32**		**Pb**	**19 48 42.2**	**-0.5**
NV11	**Mina Array Sit**	**1.03**	**32**		**Sb**	**19 48 55.8**	**-0.3**
BUCR	**Buckhorn Ranch**	**1.04**	**276**		**Pg**	**19 48 43.0**	**-0.3**
LEGD	**La Grand CA**	**1.09**	**252**		**Pg**	**19 48 44.1**	**-0.1**
RYN	**Ryan**	**1.09**	**14**		**Pn**	**19 48 43.7**	**-0.4**
RYN				IAML		19 48 59.1	
	comp=E,2μm,0.3s						
RYN				IAML		19 48 59.4	
	comp=N,2μm,0.2s						
RYN	**Ryan**	**1.09**	**14**		**Sn**	**19 48 58.1**	**-0.9**
KARE	**Kearney REC, C**	**1.10**	**209**		**Pg**	**19 48 44.2**	**-0.1**
EBP	**Ebbets Pass**	**1.27**	**324**		**Pg**	**19 48 47.5**	**-0.1**
CWC	**Cottonwood Cre**	**1.28**	**151**		**Pb**	**19 48 47.2**	**+0.1**
CWC				IAML		19 49 05.3	
	comp=E,940nm,0.1s						
CWC				IAML		19 49 15.0	
	comp=N,816nm,0.2s						
CMB	**Columbia Colle**	**1.30**	**292**		**Pb**	**19 48 47.3**	**-0.1**
CMB				IAML		19 49 06.2	
	comp=E,1μm,0.5s						
CMB				IAML		19 49 08.2	
	comp=N,2μm,0.6s						
GRAC	**Grapevine Rang**	**1.31**	**115**		**Pg**	**19 48 48.0**	**-0.4**
GRAC				IAML		19 49 11.3	
	comp=E,2μm,0.7s						
VOG	**Valley Oaks Go**	**1.31**	**199**		**Pg**	**19 48 48.2**	**-0.2**
CGO	**Cerro Gordo**	**1.31**	**140**		**Pb**	**19 48 47.7**	**-0.1**
SPG2	**Springville 2**	**1.36**	**177**		**Pg**	**19 48 48.9**	**-0.6**
WSRE	**Westside REC,**	**1.59**	**220**		**Pg**	**19 48 53.6**	**-0.2**
PNTR	**Pine Nut**	**1.63**	**339**		**Pb**	**19 48 52.3**	**-0.8**
PNTR				IAML		19 49 19.4	
	comp=E,553nm,1.2s						
MFS	**McCloud Flat S**	**1.65**	**151**		**Pg**	**19 48 54.1**	**-0.8**
WELL	**Weller Preserv**	**1.72**	**301**		**Pb**	**19 48 54.4**	**-0.1**
VES	**Vestal, Richgr**	**1.73**	**186**		**Pb**	**19 48 55.2**	**+0.6**
WCSM	**Coso Springs S**	**1.76**	**150**		**Pg**	**19 48 56.2**	**-0.8**
BMSM	**Mercy Hot Spri**	**1.80**	**240**		**Pg**	**19 48 56.5**	**-1.3**
SCKWR	**San Luis Creek**	**1.81**	**259**		**Pg**	**19 48 57.0**	**-0.9**
Q09A	**Carvers**	**1.83**	**46**		**Pn**	**19 48 54.5**	**+0.3**
Q09A				IAML		19 49 27.8	
	comp=E,1μm,0.7s						
WNMM	**Nine Mile Cany**	**1.88**	**156**		**Pb**	**19 48 58.0**	**+0.8**
ISA	**Isabella, Lake**	**1.92**	**171**		**Pb**	**19 48 57.9**	**-0.1**
ISA				IAML		19 49 26.6	
	comp=N,830nm,0.3s						
WORM	**Onyx Ranch**	**1.93**	**165**		**Pb**	**19 48 58.9**	**+0.9**
AVNL	**Avenal, CA USA**	**1.93**	**217**		**Pb**	**19 48 58.5**	**+0.4**
FURC	**Furnace Creek,**	**1.93**	**124**		**Pb**	**19 48 56.6**	**-1.4**
FURC				IAML		19 49 27.4	
	comp=N,356nm,0.8s						
FURC				IAML		19 49 39.3	
	comp=E,502nm,1.3s						
NTA	**Nevada Test Si**	**1.94**	**98**		**Pb**	**19 48 57.1**	**-1.3**
MTOS	**Mt Oso, Westle**	**1.97**	**269**		**Pb**	**19 48 58.9**	**+0.1**
CMPM	**Mikes Peak**	**1.98**	**265**		**Pb**	**19 48 58.8**	**-0.1**
HPCM	**Pacheco Lake**	**2.00**	**256**		**Pb**	**19 48 59.1**	**-0.1**
BBGB	**Big Mountain B**	**2.01**	**241**		**Pb**	**19 48 59.8**	**+0.3**
CTM	**Castle Mountai**	**2.02**	**217**		**Pb**	**19 48 59.9**	**+0.2**
PSMM	**Smith Mountain**	**2.04**	**224**		**Pb**	**19 48 59.9**	**-0.2**
PMPB	**Monarch Peak**	**2.06**	**230**		**Pb**	**19 49 00.0**	**-0.3**
SRTC	**Snort**	**2.07**	**154**		**Pg**	**19 49 01.9**	**-0.9**
LRV	**Little Rabbit**	**2.08**	**237**		**Pb**	**19 49 00.5**	**-0.1**
TRC	**Taylor Ranch**	**2.08**	**219**		**Pb**	**19 49 00.2**	**-0.3**
PPTM	**Peach Tree Val**	**2.09**	**226**		**Pb**	**19 49 00.2**	**-0.6**
PHFM	**Heflinger Ranc**	**2.09**	**217**		**Pb**	**19 49 00.4**	**-0.4**
PMRM	**Maxey Ranch**	**2.10**	**213**		**Pb**	**19 49 00.5**	**-0.4**
CSTL	**Corral Hollow**	**2.10**	**273**		**Pb**	**19 49 00.7**	**-0.3**
CMMM	**Mount Mocho**	**2.10**	**268**		**Pb**	**19 49 00.4**	**-0.7**
GHIB	**Gold Hill**	**2.11**	**215**		**Pb**	**19 49 00.2**	**-0.8**
GHIB	**Gold Hill**	**2.11**	**215**		**Pb**	**19 49 00.0**	**-1.0**
PSTM	**Stockdale Moun**	**2.11**	**220**		**Pb**	**19 49 00.6**	**-0.5**
PSTM	**Stockdale Moun**	**2.11**	**220**		**Pb**	**19 49 00.4**	**-0.7**
PKD	**Bear Valley Ra**	**2.11**	**221**		**Pb**	**19 49 00.4**	**-0.7**
PKD				IAML		19 49 33.5	
	comp=N,376nm,0.8s						
PKD				IAML		19 49 40.2	
	comp=E,404nm,1.1s						
BVL	**Bear Valley**	**2.12**	**243**		**Pb**	**19 49 01.5**	**+0.3**
HFEM	**San Felipe**	**2.12**	**255**		**Pb**	**19 49 01.1**	**-0.2**
PHPM	**Hope Ranch**	**2.12**	**222**		**Pb**	**19 49 00.5**	**-0.8**
PVCM	**Vineyard Canyo**	**2.12**	**220**		**Pb**	**19 49 00.7**	**-0.7**
DONR	**Donner Summit**	**2.13**	**328**		**Pb**	**19 48 59.9**	**-1.7**
PHGM	**Hog Canyon**	**2.14**	**218**		**Pb**	**19 49 01.1**	**-0.5**
PAGB	**Antelope Grade**	**2.15**	**212**		**Pb**	**19 49 01.0**	**-0.8**
PKLM	**Kerr Lake**	**2.15**	**214**		**Pb**	**19 49 01.3**	**-0.6**
CDC	**Canada Road**	**2.17**	**256**		**Pb**	**19 49 02.2**	**+0.1**

BJOM	Mount Johnson	2.18	245		Pb	19 49 02.0	-0.2
PAHR	Pah Rah Range	2.18	349		Pb	19 49 00.1	-2.3
PWKM	Work Ranch	2.20	218		Pb	19 49 01.7	-1.0
PPO	Portuguese Can	2.21	220		Pb	19 49 01.9	-0.9
PBPM	Bitterwater Pu	2.21	207		Pb	19 49 02.0	-0.9
SAO	San Andreas Ge	2.22	250		Pb	19 49 02.3	-0.8
GWY	Greenwater Val	2.23	128		Pn	19 49 00.4	+0.7
CMLM	Mount Lewis	2.23	269		Pb	19 49 03.0	-0.2
MHC	Mount Hamilton	2.23	265		Pb	19 49 02.4	-0.9
BSGM	Shirttail Gulc	2.24	240		Pb	19 49 02.6	-0.8
PSAM	San Ardo	2.24	227		Pb	19 49 02.8	-0.6
HSFM	Saint Francis	2.24	251		Pb	19 49 03.1	-0.3
QSM	Queen of Sheba	2.25	134		Pn	19 49 01.1	+1.2
SCZ	Santa Cruz	2.26	245		Pb	19 49 02.5	-1.1
FRP	Fremont Peak	2.26	250		Pb	19 49 02.4	-1.3
FRP	Fremont Peak	2.26	250		Pb	19 49 02.6	-1.1
NSP	Numbskull Pass	2.27	111		Pn	19 49 01.5	+1.3
BJCM	Johnson Can.	2.27	244		Pb	19 49 02.8	-1.1
LRMC	Laurel Mtn Rad	2.28	155	IAML		19 49 37.2	
	comp=E,330nm,0.4s						
LRMC				IAML		19 49 39.1	
	comp=N,304nm,0.6s						
WENL	Wente Vineyard	2.31	272		Pb	19 49 04.9	+0.4
AMDNV	Amargosa	2.34	118		Pb	19 49 02.6	-2.3
CCCA	Chr Cany lake	2.36	149	IAML		19 49 47.6	
	comp=N,554nm,0.6s						
CCCA				IAML		19 49 52.7	
	comp=E,462nm,0.7s						
HULI	Fort Hunter Li	2.46	232		Pb	19 49 05.3	-1.7
HULI				IAML		19 49 43.2	
	comp=N,402nm,1.0s						
HULI				IAML		19 49 46.9	
	comp=E,410nm,0.6s						
SHOC	Shoshone, Teco	2.65	128	IAML		19 50 03.8	
	comp=E,263nm,0.7s						
SHOC				IAML		19 50 08.1	
	comp=N,363nm,1.0s						
R11B	Troy Canyon, C	2.70	72		Pn	19 49 06.7	+0.5
JRSC	Jasper Ridge	2.70	268		Pn	19 49 06.8	+0.8
JRSC				IAML		19 50 07.6	
	comp=N,172nm,1.8s						
JRSC				IAML		19 50 09.2	
	comp=E,208nm,1.2s						
TPO	Tropico Hills	2.73	169		Pg	19 49 14.1	-1.3
TPO				IAML		19 50 02.1	
	comp=N,242nm,1.2s						
GSC	Goldstone, Bar	2.79	143	IAML		19 50 01.1	
	comp=E,235nm,0.9s						
ORV	Oroville	2.88	315		Pn	19 49 09.7	+1.2
ORV				IAML		19 49 56.9	
	comp=E,156nm,0.7s						
ORV				IAML		19 50 09.4	
	comp=N,136nm,0.6s						
OSI	Osito Audit: C	2.94	178		Pn	19 49 09.6	+0.1
OSI				IAML		19 49 57.4	
	comp=E,318nm,1.0s						
OSI				IAML		19 49 58.7	
	comp=N,305nm,0.7s						
CVS	Carmenet Viney	2.96	286		Pn	19 49 09.5	-0.1
CVS				IAML		19 49 56.4	
	comp=N,277nm,0.9s						
CVS				IAML		19 49 59.6	
	comp=E,203nm,1.7s						
PRN	Pahroc Range	3.03	92		Pn	19 49 11.6	+0.9
MNRC	McLaughlin Min	3.12	296		Pn	19 49 13.5	+1.6
MNRC				IAML		19 50 16.5	
	comp=E,184nm,1.2s						
MNRC				IAML		19 50 16.8	
	comp=N,165nm,1.0s						
SHPR	Sheep Range	3.14	109		Pn	19 49 13.3	+1.1
MTPC	Mountain Pass	3.37	127	IAML		19 50 31.4	
	comp=E,116nm,0.5s						
MWC	Mount Wilson	3.39	169	IAML		19 50 12.2	
	comp=E,257nm,1.0s						
MWC				IAML		19 50 14.0	
	comp=N,243nm,1.1s						
PASC	Pasadena Art C	3.43	171		Pn	19 49 16.9	+0.9
PASC				IAML		19 50 17.0	
	comp=N,132nm,0.9s						
PASC				IAML		19 50 17.4	
	comp=E,173nm,0.9s						
O03E	Paynes Creek	3.57	321		Pn	19 49 21.2	+3.1
O03E				IAML		19 50 35.8	
	comp=N,172nm,0.6s						
HATC	Hat Creek Radi	3.83	329		Pn	19 49 23.0	+1.4
HATC				IAML		19 50 35.3	
	comp=E,166nm,2.6s						
HATC				IAML		19 50 51.3	
	comp=N,152nm,2.2s						
SPR3	Spring Creek 3	3.83	67		Pn	19 49 22.2	+0.3
SPR3				IAML		19 50 23.9	
	comp=N,136nm,0.9s						
SPR3				IAML		19 50 24.0	
	comp=E,117nm,0.7s						
O02D	Mt. Diablo Mer	4.03	312	IAML		19 50 54.5	
	comp=E,58nm,1.8s						
DANC	Danby, Needles	4.05	135	IAML		19 50 53.7	
	comp=E,127nm,0.3s						
DANC				IAML		19 51 01.2	
	comp=N,153nm,0.3s						
ELK	Elko	4.24	40	Pn	Pn	19 49 28.4	+1.0
	comp=N,1.4nm,0.3s,baz=223,slow=14,SNR=28						
ELK				Pg	Pb	19 49 37.5	0.0
	baz=231,slow=9.2						
ELK				Lg	Lg	19 50 35.0	
	comp=N,22nm,0.3s,baz=171,slow=7.5,SNR=11						
	comp=N,6.8nm,0.5s						
ELK	Elko	4.24	40		Pn	19 49 28.0	+0.6
ELK				IAML		19 50 39.7	
	comp=N,44nm,0.3s						
ELK				IAML		19 50 40.3	
	comp=N,41nm,0.6s						
PFO	Pinyon Flats O	4.40	153	Pn	Pn	19 49 32.2	+2.7
	comp=N,1.5nm,0.3s,baz=329,slow=16,SNR=9.1						
PFO				Pg	Pb	19 49 42.8	+2.6
	comp=N,1.5nm,0.3s,baz=335,slow=15,SNR=6.3						
PFO				Lg	Lg	19 50 42.5	
	comp=N,3.4nm,0.3s,baz=41,slow=20,SNR=11						
	comp=N,2.4nm,0.4s						
NEE2	Needles Airpor	4.42	128	IAML		19 50 41.3	
	comp=N,73nm,0.7s						
NEE2				IAML		19 51 09.4	
	comp=E,104nm,0.7s						
M03C	McCloud	4.49	327	IAML		19 51 03.4	
	comp=N,97nm,0.9s						
M03C				IAML		19 51 04.4	
	comp=E,80nm,1.0s						
N02D	Trinity Center	4.53	320	IAML		19 51 01.5	
	comp=E,53nm,0.7s						
N02D				IAML		19 51 06.3	
	comp=N,73nm,0.6s						
SZCU	Shurtz Canyon	4.58	88	IAML		19 50 52.1	
	comp=N,50nm,0.3s						
SZCU				IAML		19 50 57.4	
	comp=E,72nm,0.8s						
KHBM	Hayfork Bally	4.59	314	IAML		19 51 03.1	
	comp=N,39nm,1.6s						
KHBM				IAML		19 51 15.5	
	comp=E,42nm,4.8s						
BORC	Borrego Spring	4.72	154	IAML		19 51 00.4	
	comp=N,58nm,0.9s						
WVOR	Wild Horse Val	4.87	2		Pb	19 49 51.5	+3.3
TCRU	Three Creeks R	5.16	76	IAML		19 51 12.4	
	comp=N,46nm,1.1s						
TCRU				IAML		19 51 16.7	
	comp=E,55nm,0.6s						
PKCU	Pink Cliffs	5.20	89	IAML		19 51 22.0	
	comp=N,69nm,1.9s						
MTPU	Mount Pierson	5.30	83	IAML		19 51 19.7	
	comp=N,34nm,1.1s						
K05A	Summer Lake	5.39	344	IAML		19 50 32.0	
	comp=N,30nm,4.0s						
K05A				IAML		19 51 42.5	
	comp=E,27nm,4.9s						
DUG	Dugway, Tooele	5.39	59		Pn	19 49 43.9	+0.7
DUG				IAML		19 51 14.9	
	comp=E,51nm,0.7s						
DUG				IAML		19 51 16.2	
	comp=E,50nm,0.7s						
MFID	Camas Ranch	6.28	21		Pb	19 50 15.0	+2.7
HLID	Hailey	6.88	28		Pb	19 50 21.8	-0.7
PDAR	Pinedale Array	8.81	51	Pn	Pn	19 50 35.0	+4.8
	comp=E,0.1nm,0.3s,baz=232,slow=13,SNR=4.9						
PDAR				Lg	Lg	19 52 58.3	
	comp=E,0.1nm,0.3s,baz=253,slow=31,SNR=1.5						
	comp=E,0.4nm,0.6s						
TXAR	Lajitas Array	15.09	119	Pn	P	19 52 02.0	+0.9
	comp=E,0.1nm,0.3s,baz=322,slow=3.7,SNR=2.1						
	comp=E,0.1nm,0.3s						
HHC	Hu-ho-hao-te	89.35	324	*e*P	P	20 01 19.0	-0.2
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,4.6s						

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*IDC **26** 19:48:53.1±1.2, 39°.63N×143°.74E, h0^{km}, mb3.7/12, mbtmp3.7/16, ML3.2/3, MS2.8/1, Error ellipse: s-maj=28.3km s-min=18.5km az=91.0*

*JMA **26** 19:48:55.4±0.4, 39°.7N±0°.9×14°4E±°, h28^{km}, MV3.9/34, FAR E OFF SANRIKU*

*NIED **26** 19:48:55.4, 39°.69N×143°.68E, h28^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.94; $M_{\theta\theta}$0.94; $M_{\phi\phi}$-3.88; $M_{r\theta}$2.44; $M_{\theta\phi}$-1.16; $M_{\phi r}$1.62; Fault plane solution: $M_0$4.71000×10^{14} NP1: ϕ_s165.00000°, δ37.00000°, λ41.00000°. NP2: ϕ_s40.00000°, δ67.00000°, λ120.00000°.*

ISC 26 19:48:55.6±0.9**, 39°.66N**±0°.06×**143°.61E**±0°.08**, h11^{km}, n32, σ1^{s}23**/35**, mb3.7**/12**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	Tanohata	1.37	282	P	Pn	19 49 19.7	-0.9
MIYJ	Miyakonagasawa	1.38	267	*i* P	Pn	19 49 20.3	-0.5
JKEN	Kujiedanarisaw	1.56	291	*e*P	Pn	19 49 21.8	-1.4
JKEN				*e*S	Sn	19 49 41.8	-1.6
OFUJ	Ofunato	1.61	250	*i* P	Pn	19 49 23.5	-0.4
JANG	Nango	1.76	295	*i* P	Pn	19 49 25.1	-0.8
JOM	Ohasama	1.80	265	*i* P	Pn	19 49 26.8	+0.3
JMK	Ichinoseki	1.98	250	P	Pn	19 49 28.9	-0.1
JIO	Ouri	2.13	236	*i* P	Pn	19 49 30.4	-0.6
JTM	Tenmabayashi	2.25	301	P	Pn	19 49 32.9	+0.2
JTM				*e*S	Sn	19 50 00.6	+0.2
JOT	Ohata	2.60	312	*e*P	Pn	19 49 37.8	+0.2
JYK	Kaneyama	2.63	255	P	Pn	19 49 38.4	+0.5
JNBK	Urakawa-nobuka	2.70	346	*e*P	Pn	19 49 39.5	+0.6
JCH	Churui	2.96	357	P	Pn	19 49 42.2	-0.3
JOTO	OTAMA OYAMA	3.31	232	P	Pn	19 49 47.6	+0.3
JAK	Akkeshi	3.44	13	*e*P	Pn	19 49 48.5	-0.5
ASAJ	Asahikawa	4.52	351	Pn	Pn	19 50 05.0	+1.1
	1.4nm,0.3s,baz=195,slow=7.0,SNR=11						
ASAJ				Sn	Sn	19 50 57.9	+1.4
	1.7nm,0.3s,baz=91,slow=11,SNR=5.7						
	4.6nm,0.4s						
MJAR	Matsushiro Arr	5.27	236	Pn	Pn	19 50 15.7	+1.5
	0.2nm,0.3s,baz=40,slow=13,SNR=18						
MJAR				LR	LR	19 52 40.5	
	comp=Z,88nm,18.0s,baz=112,slow=43						
	3.6nm,0.6s						
USRK	Ussuriysk Ar.	9.77	301	Pn	Pn	19 51 17.3	+1.2
	0.2nm,0.3s,baz=110,slow=11,SNR=1.9						
	2.8nm,0.7s						
KSRS	Korea Array	12.47	265	Pn	Pn	19 51 57.5	+4.5
	0.1nm,0.3s,baz=70,slow=14,SNR=2.3						
HILR	Hailar Array B	19.58	308	P	P	19 53 22.0	-1.5
	1.5nm,0.3s,baz=108,slow=13,SNR=4.6						
YAK	Yakutsk	23.96	344	P	P	19 54 08.3	-1.3
	3.1nm,0.5s,baz=126,slow=16,SNR=2.1						
	3.1nm,0.5s						
SONM	Songino Array	27.88	299	P	P	19 54 45.5	+0.1
	0.8nm,0.7s,baz=106,slow=9.4,SNR=4.4						
	0.8nm,0.7s						
ZALV	Zalesovo Beam	41.48	310	P	P	19 56 41.9	-0.4
	0.6nm,0.5s,baz=107,slow=7.8,SNR=4.0						
	0.6nm,0.5s						
CMAR	Chiang Mai Arr	43.85	254	P	P	19 57 02.7	+0.8
	0.5nm,0.3s,baz=46,slow=7.1,SNR=1.5						
	0.5nm,0.3s						
MKAR	Makanchi Array	44.24	300	P	P	19 57 04.9	+0.1
	0.9nm,0.8s,baz=82,slow=9.6,SNR=7.3						
	0.9nm,0.8s						
ILAR	Eielson Array	46.36	34	P	P	19 57 21.4	+0.1
	0.2nm,0.6s,baz=271,slow=9.5,SNR=2.1						
	0.2nm,0.6s						
BVAR	Borovoye Array	50.12	311	P	P	19 57 50.5	0.0
	0.6nm,0.4s,baz=79,slow=7.5,SNR=2.7						
	0.6nm,0.4s						
WRA	Warramunga Arr	59.91	190	P	P	19 58 58.8	-2.8
	0.6nm,0.8s,baz=7.9,slow=7.4,SNR=2.2						
	0.6nm,0.8s						
ASAR	Alice Springs	63.64	190	P	P	19 59 26.8	+0.1
	0.3nm,0.8s,baz=16,slow=10,SNR=2.1						
	0.3nm,0.8s						
FINES	FINESS Array B	67.30	332	P	P	19 59 49.8	-0.1
	1.3nm,0.7s,baz=29,slow=3.2,SNR=3.7						
	1.3nm,0.7s						
HFS	Hagfors	72.40	336	P	P	20 00 21.2	-0.2
	4.8nm,1.2s,baz=25,slow=12,SNR=1.9						
	4.8nm,1.2s						
NOA	NORSAR Array B	72.43	338	P	P	20 00 20.8	-0.7
	0.3nm,0.6s,baz=36,slow=6.1,SNR=2.7						
	0.3nm,0.6s						

WEL 26 19:49:05.5±0.9**, 31°S**±7°×**17°9W**±1°8**, h275^{km}**±14^{km}**, mB4.6**/8**, ML4.3**/10**, MLv4.8**/8**, Mw(mB)3.8**/8**, Error ellipse: s-maj=24.5km s-min=6.0km az=106.4, confirmed, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.42	29	P	Pn	19 49 53.7	-0.2
GLKZ				S	S	19 50 35.6	+3.3
RIZ	Raoul Island	2.43	29	S	S	19 50 30.2	-2.3
MXZ	Matakaoa Point	6.48	197	P	Pn	19 50 42.7	+2.7
MXZ				S	S	19 51 55.8	-0.1
WMGZ	Waiomatatini S	6.69	196	P	Pn	19 50 44.2	+1.6
WMGZ				S	S	19 52 02.2	+1.4
HAZ	Te Kaha	6.80	200	P	Pn	19 50 44.5	+0.5
HAZ				S	S	19 52 03.8	+0.5
PKGZ	Pakihiroa	6.82	198	P	Pn	19 50 43.6	-0.6
PUZ	Puketiti	6.97	196	P	Pn	19 50 44.8	-1.3
PUZ				S	S	19 52 06.7	-0.5
WCZ	Waipu Caves	7.00	228	P	Pn	19 50 46.8	+0.4
RUGZ	Raukumara Rang	7.03	200	P	Pn	19 50 46.5	-0.3
RUGZ				S	S	19 52 08.4	-0.1
OUZ	Omahuta	7.09	236	P	Pn	19 50 46.3	-1.3
TWGZ	Tauwhareparae	7.14	198	P	Pn	19 50 49.8	+1.6
TWGZ				S	S	19 52 11.5	+0.5
OPRZ	Ohinepanea	7.30	207	P	Pn	19 50 52.4	+2.2
CNGZ	Carnagh Statio	7.38	196	P	Pn	19 50 50.5	-0.6
MWZ	Matawai	7.41	200	P	Pn	19 50 50.9	-0.7
TKGZ	Te Karaka	7.42	198	P	Pn	19 50 49.9	-1.8
URZ	Urewera	7.47	203	P	Pn	19 50 51.8	-0.5
RAGZ	Rawiri	7.60	200	P	Pn	19 50 55.1	+1.2
RIGZ	Rimuhau	7.70	198	P	Pn	19 50 55.7	+0.7
SNGZ	Shannon Statio	7.88	200	P	Pn	19 50 57.0	-0.4
HIZ	Hauiti	8.59	213	P	Pn	19 51 08.4	+2.2
OTVZ	Oturere	8.79	207	P	Pn	19 51 07.3	-1.6

TRN 26 19:50:27.6, 13°.99N×60°.51W, h62^{km}, MD3.5, East of Saint Lucia., Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLAC	Saint Lucia, A	0.39	256	*e*P	Pn	19 50 39.9	+1.2
SLAC				*e*S	Sn	19 50 48.8	+2.1
SLBI	Saint Lucia, B	0.45	274	*e*P	Pn	19 50 40.2	+1.0
SLBI				*e*S	Sn	19 50 49.5	+1.8
SLCP	Castries, St.	0.47	272	*e*P	Pn	19 50 40.5	+1.2
SLCP				*e*S	Sn	19 50 50.0	+2.1
MCLT	Moule a Chique	0.51	236	*e*P	Pn	19 50 40.8	+1.0
MCLT				*e*S	Sn	19 50 50.3	+1.6
BIM	Bigot	0.75	314	*e*P	Pn	19 50 43.8	+1.2
SVB	Belmont	1.02	225	*e*P	Pn	19 50 47.0	+1.0
SVB				*e*S	Sn	19 51 00.9	+1.3
SVN	Savane Anatole	1.06	323	*e*P	Pn	19 50 47.8	+1.3
SVN				*e*S	Sn	19 51 02.7	+2.1
DLPL	La Plaine	1.51	332	*e*P	Pn	19 50 53.6	+1.1
DLPL				*e*S	Sn	19 51 12.5	+1.3
DSLB	Salisbury	1.69	329	*e*P	Pn	19 50 56.2	+1.3
DSLB				*e*S	Sn	19 51 17.1	+1.6
GCMP	Grenada, Carri	1.74	211	*e*P	Pn	19 50 56.7	+1.1
DWS	Wesley	1.75	334	*e*P	Pn	19 50 56.7	+1.1
DWS				*e*S	Sn	19 51 18.1	+1.1
GRSS	Sisters	2.00	213	*e*P	Pn	19 50 59.8	+0.7
GRHS	Sauteurs	2.08	212	*e*P	Pn	19 51 01.5	+1.4
GRW	Mount Saint Ca	2.14	212	*e*P	Pn	19 51 01.5	+0.4
GRW				*e*S	Sn	19 51 28.8	+2.2
TBG	Guadaloupe-3	2.15	329	*e*P	Pn	19 51 02.6	+1.5
TBG				*e*S	Sn	19 51 28.9	+2.2
GRGR	Grenville	2.16	211	*e*P	Pn	19 51 03.4	+2.2
GRFF	Grenada Fort F	2.27	212	*e*P	Pn	19 51 03.8	+0.9
MMLZ	Guadeloupe Bro	2.33	331	*e*P	Pn	19 51 05.1	+1.5
MMLZ				*e*S	Sn	19 51 31.9	+0.8
DSDZ	La Diserade, G	2.37	347	*e*P	Pn	19 51 05.0	+0.9
ATGZ	Broadband at L	2.40	331	*e*P	Pn	19 51 06.7	+2.2
DHSZ	Broadband at M	2.57	332	*e*P	Pn	19 51 09.6	+2.8
DHSZ				*e*S	Sn	19 51 37.3	+0.3
MBWH	Windy Hill	3.18	330	*e*P	Pn	19 51 17.0	+1.8
TRN	Trinidad (W)	3.44	195	*e*P	Pn	19 51 20.4	+1.7
ANWB	Willy Bob	3.86	342	*e*P	Pn	19 51 25.8	+1.4

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*IDC **26** 19:56:03.6±0.9, 52°.66N×169°.04W, h0^{km}, mb3.7/8, mbtmp3.7/10, ML3.1/2, Error ellipse: s-maj=33.2km s-min=19.3km az=159.0*

*NEIC **26** 19:56:11.1±1.5, 52°.50N±0°.08×168°.66W±0°.05, h35^{km}±2^{km}, mb4.1/15, ML4.0/14, ML3.7(AEIC), Error ellipse: s-maj=14.2km s-min=5.5km az=174.0*

*AEIC **26** 19:56:12.7±2.2, 52°.8N±0°.1×168°.82W±0°.08, h50^{km}±8^{km}, Error ellipse: s-maj=17.8km s-min=2.9km az=157.0*

ISC 26 19:56:11.4±1.1**, 52°.7N**±0°.1×**168°.84W**±0°.06**, h62^{km}**±8^{km}**, n88, σ1^{s}71**/82**, mb3.8**/9**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.29	358	Pn	Pn	19 56 21.3	-0.3
NIKH				Sn	Sn	19 56 28.6	-0.5
NIKH				IAML		19 56 29.1	
	comp=N,13µm,0.5s						
NIKH				IAML		19 56 29.4	
	comp=E,7µm,0.5s						
CLCO	Concord Point,	0.55	281		Pn	19 56 24.8	+0.8
CLCO					Sn	19 56 34.9	+1.7
CLES	Cleveland East	0.66	283	Pn	Pn	19 56 25.8	+0.6
CLES				Sn	Sn	19 56 36.4	+1.0
OKTU	Okmok Mt. Tuli	0.85	34		Pn	19 56 27.9	+0.3
OKER	Okmok East Rim	0.91	31		Pn	19 56 28.8	+0.5
OKFG	Magazine Ridge	0.92	37		Pn	19 56 28.8	+0.4
MGOD	Makushin Gods	1.62	46		Pn	19 56 37.9	+0.1
MGOD					Sn	19 56 57.9	+0.2
MREP	Makushin Rep’t	1.69	47		Pn	19 56 39.2	+0.6
MSW	Makushin Switc	1.74	44		Pn	19 56 39.9	+0.6
MSW					Sn	19 57 01.6	+1.1
MNAT	Makushin Natee	1.76	46		Pn	19 56 40.3	+0.7
UNV	Unalaska Valle	1.82	49		Pn	19 56 40.9	+0.5
UNV				Sn	Sn	19 57 01.6	-0.8
UNV				IAML		19 57 04.4	
	comp=E,1µm,0.4s						
UNV				IAML		19 57 04.5	
	comp=N,1µm,0.3s						
UNV	Unalaska Valle	1.82	49	P	Pn	19 56 41.0	+0.6
AKRB	Akutan Reef Bi	2.20	48		Pn	19 56 46.8	+1.2
AKMO	Akutan Morgan	2.20	49		Pn	19 56 46.7	+1.2
ZRO	Akutan Zero	2.22	49		Pn	19 56 47.1	+1.3
ZRO					Sn	19 57 15.0	+2.9
LVA	Lava Point	2.24	47		Pn	19 56 45.5	-0.5
LVA				IAML		19 57 20.7	
	comp=N,1µm,0.7s						
LVA				IAML		19 57 22.4	
	comp=E,879nm,0.6s						
AKBBA	Akutan Broad B	2.24	50		Pn	19 56 47.7	+1.6
AKV	Akutan Volcano	2.25	49		Pn	19 56 47.7	+1.5
AKGG	Akutan Green G	2.28	47		Pn	19 56 48.1	+1.5
AHB	Akutan Harbor	2.31	50		Pn	19 56 48.6	+1.5
AKUT	Akutan	2.34	50		Pn	19 56 47.9	+0.5
AKUT	Akutan	2.34	50	P	Pn	19 56 49.4	+2.0
FALS	False Pass	3.88	54	P	Pn	19 57 11.6	+3.1
P08K	Saint George I	3.95	354	Pn	Pn	19 57 09.4	+0.1
P08K				IAML		19 58 04.9	
	comp=N,102nm,1.1s						
SPIA	Saint Paul Isl	4.58	350		Pn	19 57 19.0	+1.1
SPIA				IAML		19 58 13.2	
	comp=E,198nm,0.6s						
DTNA	Dutton South F	4.61	55		Pn	19 57 19.1	+0.7
PS4A	Pavlof South-4	4.90	54		Pn	19 57 24.7	+2.2
SDPT	Sand Point	5.60	58	Pn	Pn	19 57 33.4	+1.4
SDPT	Sand Point	5.60	58	P	Pn	19 57 35.3	+3.3
M11K	Mekoryuk	7.86	10		Pn	19 58 04.6	+1.8
N14K	Kuskokwak Cree	8.27	26		Pn	19 58 10.5	+2.1
P16K	Nushagak River	8.80	39	Pn	Pn	19 58 18.1	+2.3
M14K	Bethel	8.92	22		Pn	19 58 19.0	+1.7
N15K	Kwethluk River	8.92	29	Pn	Pn	19 58 19.6	+2.2
O16K	Kokwok River B	9.15	37	Pn	Pn	19 58 22.3	+1.8
L14K	Kuka Creek	9.30	19		Pn	19 58 25.0	+2.5
M16K	Timber Creek	9.94	29	Pn	Pn	19 58 34.0	+2.7
OHAK	Old Harbor	10.02	57	Pn	Pn	19 58 30.4	-2.0
L16K	Owhat River	10.36	26	Pn	Pn	19 58 38.0	+1.0
K15K	Wolf Creek Mou	10.40	19	Pn	Pn	19 58 40.0	+2.5
KDAK	Kodiak Island	10.58	55	Pn	Pn	19 58 38.0	-2.0
	comp=E,0.5nm,0.3s,baz=263,slow=8.1,SNR=6.5						
N18K	Kilae Creek	10.70	36	Pn	Pn	19 58 42.0	+0.4
GAMB	Gambell	11.22	353	Pn	Pn	19 58 50.3	+1.5
ILSW	Iliamna Southw	11.35	44	Pn	Pn	19 58 51.0	+0.4
J17K	VABM Dome	11.90	22	Pn	Pn	19 59 00.4	+2.4
CNPM	China Poot	11.95	48	Pn	Pn	19 58 56.5	-2.2
ANM	Nome	12.05	7	Pn	Pn	19 59 01.5	+1.5
SLKM	Skilak Lake	12.87	45	Pn	Pn	19 59 09.5	-1.7
KTH	Kantishna Hill	14.36	34	Pn	Pn	19 59 30.9	-0.3
HIN	Hinchinbrook I	14.48	49	Pn	Pn	19 59 31.0	-1.7
TRF	Thorofare Moun	14.51	35	Pn	Pn	19 59 32.7	-0.6
SCM	Sheep Creek Mo	14.74	43	Pn	Pn	19 59 34.8	-1.4
KLU	Klutina	15.18	45	Pn	Pn	19 59 39.4	-2.5
KLU				IAmb	IAmb	20 00 00.5	
	comp=Z,20nm,1.4s						
BMRM	Bremner River	15.56	48	Pn	Pn	19 59 44.7	-1.9
CCB	Clear Creek Bu	16.12	34		Pn	19 59 49.9	-3.8
CRQM	Cirque	16.16	50		Pn	19 59 51.7	-2.8
VRDI	Verde Repeater	16.18	48		Pn	19 59 51.9	-2.7
VRDI				IAmb	IAmb	20 00 32.7	
	comp=Z,22nm,1.3s						
TGL	Tana Glacier	16.31	50	Pn	Pn	19 59 54.4	-1.8
MCARA	McCarthy VSAT	16.42	48	Pn	Pn	19 59 55.0	-2.5
MCARA				IAmb	IAmb	20 00 05.4	
	comp=Z,16nm,1.1s						
ILAR	Eielson Array	16.51	34	Pn	Pn	19 59 56.8	-1.7
	comp=Z,0.1nm,0.3s,baz=212,slow=8.5,SNR=8.0						
	comp=Z,0.3nm,0.5s						
ILAR	Eielson Array	16.51	34	Pn	Pn	19 59 55.3	-3.2
GRNC	Granite Creek	16.80	51	Pn	Pn	19 59 59.9	-2.6
GRNC				IAmb	IAmb	20 00 15.7	
	comp=Z,32nm,1.4s						
HYT	Haines Junctio	18.85	52	IAmb	IAmb	20 00 29.5	
	comp=Z,8.1nm,0.7s						
BMAR	Burnt Mountain	18.90	29	P	P	20 00 25.5	-1.0
PETK	Petropavlovsk-	20.09	285	P	P	20 00 37.9	-1.7
	comp=Z,0.2nm,0.3s,baz=76,slow=16,SNR=1.9						
	comp=Z,4.0nm,0.9s						
H29M	Whitestone	20.29	36	P	P	20 00 40.3	-1.3
H29M				IAmb	IAmb	20 00 47.8	
	comp=Z,7.3nm,0.9s						
G29M	Pine Creek	20.73	35	P	P	20 00 45.2	-1.3
G29M				IAmb	IAmb	20 00 51.6	
	comp=Z,24nm,1.4s						
INK	Inuvik	22.90	34	P	P	20 01 07.1	-2.4
INK				IAmb	IAmb	20 01 36.4	
	comp=Z,3.4nm,1.4s						
YKA	Yellowknife Ar	29.79	49	P	P	20 02 11.2	-0.6
	comp=Z,0.1nm,0.4s,baz=273,slow=8.8,SNR=5.2						
	comp=Z,0.1nm,0.4s						
H11N2	WAKE ISLAND Hy	37.90	219	T	T	20 43 56.9	
	baz=24,slow=76,SNR=43						
H11N3	WAKE ISLAND Hy	37.91	219	T	T	20 44 12.0	
	baz=24,slow=76,SNR=54						
H11N1	WAKE ISLAND Hy	37.92	219	T	T	20 43 59.2	
	baz=24,slow=76,SNR=56						
H11S1	WAKE ISLAND Hy	39.09	219	T	T	20 45 25.9	
	baz=23,slow=76,SNR=280						
H11S2	WAKE ISLAND Hy	39.11	219	T	T	20 45 28.5	
	baz=23,slow=76,SNR=288						
H11S3	WAKE ISLAND Hy	39.11	219	T	T	20 45 27.7	
	baz=23,slow=76,SNR=115						
PDAR	Pinedale Array	40.02	80	P	P	20 03 41.3	+0.9
	comp=Z,0.5nm,0.6s,baz=305,slow=3.7,SNR=6.4						
	comp=Z,0.5nm,0.6s						
TXAR	Lajitas Array	52.42	90	P	P	20 05 19.0	+1.4
	comp=Z,1.1nm,0.6s,baz=296,slow=5.0,SNR=12						
	comp=Z,1.1nm,0.6s						
H06E1	SOCORRO T-PHAS	55.92	104	T	T	21 06 27.4	
HFS	Hagfors	67.52	359	P	P	20 07 01.2	+0.9
	comp=Z,2.1nm,0.9s,baz=2.7,slow=3.0,SNR=4.7						

	comp=Z,2.1nm,0.9s						
PZH	PanZhiHua	69.05	286	P	P	20 07 15.3	+4.7
CMAR	Chiang Mai Arr	76.86	283	P	P	20 07 56.5	-0.3
	comp=Z,0.4nm,0.5s,baz=36,slow=6.2,SNR=4.4						
	comp=Z,0.4nm,0.5s						
ESDC	Sonseca Array	87.08	12	P	P	20 08 50.2	+0.1
	comp=Z,0.9nm,1.2s,baz=344,slow=9.7,SNR=2.5						
	comp=Z,0.9nm,1.2s						
ESDC	Sonseca Array	87.08	12	IAmb	IAmb	20 09 16.1	
	comp=Z,1.0nm,1.4s						
WRA	Warramunga Arr	87.45	232	P	P	20 08 52.1	+0.2
	comp=Z,0.6nm,0.9s,baz=4.1,slow=5.4,SNR=1.8						
	comp=Z,0.6nm,0.9s						
ASAR	Alice Springs	90.85	230	P	P	20 09 08.9	+1.1
	comp=Z,0.4nm,0.6s,baz=27,slow=4.8,SNR=6.9						
	comp=Z,0.4nm,0.6s						
H03N2	Juan Fernandez	115.74	112	T	T	22 21 06.6	
	baz=322,slow=78,SNR=5.5						
H03N1	Juan Fernandez	115.75	112	T	T	22 21 23.6	
	baz=322,slow=78,SNR=6.2						
H03N3	Juan Fernandez	115.75	112	T	T	22 21 19.5	
	baz=322,slow=78,SNR=6.7						

IDC 26 20:02:14.2±2.1, 9°.51S×129°.67E, h0^{km}, mb3.6/1, mbtmp3.2/3, ML2.7/2, Error ellipse: s-maj=97.6km s-min=33.1km az=66.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	11.31	157	Pn	Pn	20 04 58.1	+0.8
	baz=336,slow=14,SNR=1.4						
	0.4nm,0.8s						
ASAR	Alice Springs	14.65	164	Pn	Pn	20 05 41.8	-1.2
	0.1nm,0.3s,baz=341,slow=9.9,SNR=7.3						
	0.2nm,0.8s						
MKAR	Makanchi Array	70.14	327	P	P	20 13 28.7	0.0
	0.5nm,0.8s,baz=117,slow=5.0,SNR=3.9						
	0.5nm,0.8s						

JMA 26 20:06:03.8±0.1, 24°.0N±0°.8×122°.4E±0°.3, h22^{km}±2^{km}, MV2.8/11, NW OFF ISHIGAKIJIMA IS

TAP 26 20:06:04.5, 24°.13N×122°.40E, h28^{km}, ML3.5, C

ISC 26 20:06:04.2±0.9, 24°.05N±0°.02×122°.41E±0°.02, h30^{km}±7^{km}, n110, σ0^s.72/177, 1C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	EOS4	0.11	310	P	Pn	20 06 09.2	-0.5
EOS4				*i* S	Sb	20 06 12.9	+0.4
EOS3	EOS3	0.25	340	⇑*i*P	Pb	20 06 10.7	-0.2
EOS3				S	Sb	20 06 15.4	0.0
EOS2	EOS2	0.41	336	*i* P	Pb	20 06 13.1	0.0
EOS2				*i* S	Sn	20 06 19.6	-0.9
JYNG	Yonagunijimaku	0.63	50	P	Pb	20 06 16.2	-0.6
JYNG				*e*S	Sb	20 06 24.6	-0.8
EHP	Heping Village	0.67	293	*e*P	Pb	20 06 16.2	-1.2
EAHA	Aohua	0.68	295	*e*P	Pn	20 06 17.8	0.0
EAHA				*e*S	Sn	20 06 27.4	0.0
YOJ	Yonaguni jima	0.68	53	P	Pb	20 06 17.7	0.0
YOJ	Yonaguni jima	0.68	53	S	Sn	20 06 27.3	-0.2
YOJ	Yonaguni jima	0.68	53	P	Pb	20 06 17.3	-0.4
YOJ				*i* S	Sn	20 06 27.1	-0.4
YOJ	Yonaguni jima	0.68	53	*e*P	Pb	20 06 17.2	-0.4
YOJ				*e*S	Sb	20 06 26.9	+0.1
ENA	Nanau	0.72	302	*i* P	Pb	20 06 17.5	-0.8
ENA				*e*S	Sb	20 06 27.1	-0.8
ETL	Fush Village	0.73	279	*e*P	Pb	20 06 18.4	-0.1
ETL				S	Sn	20 06 28.7	-0.1
ESAO	Su ao	0.74	315	P	Pb	20 06 17.6	-1.0
ESAO				*e*S	Sb	20 06 27.1	-1.4
HWA	Hwalien	0.74	265	*e*P	Pn	20 06 19.6	+0.9
HWA				*e*S	Sn	20 06 30.8	+1.9
TWD	Chiawan	0.75	273	P	Pb	20 06 18.2	-0.6
TWD				*i* S	Sb	20 06 28.7	0.0
NACB	Ninganchiao	0.76	280	P	Pb	20 06 18.7	-0.2
NACB	Ninganchiao	0.76	280	S	Sb	20 06 29.2	+0.2
NACB	Ninganchiao	0.76	280	⇓*i*P	Pb	20 06 18.4	-0.5
NACB				*e*S	Sn	20 06 29.4	0.0
TWC	Suao	0.76	317	P	Pb	20 06 17.8	-1.2
TWC				*i* S	Sb	20 06 26.9	-2.1
TEYL	Yanliau Villag	0.77	257	*e*P	Pb	20 06 18.9	-0.1
TEYL				*e*S	Sn	20 06 29.8	+0.2
SHUL	Shoufeng	0.82	252	*e*P	Pb	20 06 19.8	-0.2
SHUL				*e*S	Sn	20 06 31.7	+0.8
ETM	Tongmen	0.85	265	P	Pb	20 06 19.5	-0.9
ETM				*e*S	Sb	20 06 31.0	-0.4
NDS	Dongshan	0.86	313	*e*P	Pb	20 06 20.4	-0.4
NDS				*e*S	Sn	20 06 31.9	-0.1
ETLH	Xiulin Townshi	0.87	281	*i* P	Pb	20 06 20.1	-0.7
ETLH				*i* S	Sb	20 06 31.9	-0.2
EGS		0.91	331	*e*P	Pn	20 06 21.1	+0.1
EGS				S	Sb	20 06 32.1	-1.0
LXIB	Xiulin Townshi	0.92	269	P	Pb	20 06 20.6	-1.1
LXIB				*e*S	Sb	20 06 33.1	-0.4
ESL	Shilin	0.93	256	*e*P	Pn	20 06 20.6	-0.6
ILA	Ilan	0.94	320	*e*P	Pb	20 06 21.2	-0.8
LATG	Datong	0.94	301	*e*P	Pn	20 06 21.9	+0.3
LATG				*e*S	Sn	20 06 34.4	+0.2
TWE	Neicheng	0.96	315	*i* P	Pn	20 06 21.7	0.0
TWE				S	Sb	20 06 33.8	-0.8
ENTT	Nioudou	0.97	308	*i* P	Pb	20 06 22.2	-0.3
ENTT				*i* S	Sn	20 06 35.2	+0.5
WARBT	Fenglin Townsh	1.00	251	*e*P	Pn	20 06 21.6	-0.6
WARBT				*e*S	Sb	20 06 35.5	-0.2
NNSB	Datong	1.01	292	P	Pn	20 06 22.7	+0.1
NNSB				*e*S	Sn	20 06 36.2	+0.3
NNS	Nan Shan	1.03	293	*e*P	Pn	20 06 23.1	+0.3
NNS				S	Sn	20 06 36.6	+0.4
FUSB	Fushanzhiwuyua	1.03	313	P	Pb	20 06 23.5	-0.1
FUSB				S	Sn	20 06 37.1	+0.8
WHF	Hehuan Shan	1.05	276	P	Pn	20 06 23.3	-0.1
WHF				*e*S	Sb	20 06 37.6	-0.2
HGSD	Ruisui	1.06	239	*e*P	Pn	20 06 23.2	+0.1
HGSD				*e*S	Sb	20 06 36.6	-0.9
FUSS	Fushou	1.09	281	*e*P	Pn	20 06 23.9	+0.3
FUSS				*e*S	Sn	20 06 38.5	+0.7
EHYH	Wanrong	1.12	241	*e*P	Pn	20 06 24.5	+0.6
EHYH				*e*S	Sb	20 06 39.8	+0.5
YHNB	Yeheng	1.13	303	P	Pb	20 06 24.7	-0.6
YHNB	Yeheng	1.13	303	P	Pb	20 06 24.7	-0.6
YHNB				*e*S	Sn	20 06 38.7	0.0
EHY	Hungye	1.14	242	*e*P	Pn	20 06 24.1	-0.1
EHY				*e*S	Sn	20 06 39.2	+0.5
OWD	Renai	1.14	266	*i* P	Pn	20 06 24.3	+0.1
OWD				*i* S	Sn	20 06 38.5	-0.4
ECBN	Changbin	1.14	231	*e*P	Pn	20 06 22.9	-1.3
ECBN				*e*S	Sn	20 06 38.7	-0.2
NSK	Sanguang	1.15	303	*e*P	Pn	20 06 24.8	+0.4
NSK				S	Sn	20 06 39.2	+0.1
TWT	Tachien	1.15	281	P	Pb	20 06 25.6	0.0
TWT				*e*S	Sb	20 06 40.0	-0.3
SXI1	Grass Mountain	1.15	335	*e*P	Pn	20 06 24.3	-0.1
SXI1				*e*S	Sn	20 06 39.1	-0.1
TDCB	Techi	1.17	280	*e*P	Pb	20 06 25.6	-0.3
TDCB				S	Sn	20 06 40.0	+0.4
WFSB	Wu-fen Shan	1.17	331	*e*P	Pn	20 06 24.4	-0.2
WFSB				*e*S	Sn	20 06 39.3	-0.3
WUSB	Renai	1.19	268	*i* P	Pn	20 06 25.3	+0.4
WUSB				*e*S	Sb	20 06 41.1	-0.2
TWA	Mucha	1.20	321	*e*P	Pb	20 06 26.5	+0.1
TWA				*i* S	Sb	20 06 41.2	-0.2
VWDT	VWDT	1.20	256	*i* P	Pn	20 06 25.6	+0.6
VWDT				*e*S	Sb	20 06 42.1	+0.6
YULB	Yu-li	1.21	238	P	Pn	20 06 25.1	-0.1
YULB	Yu-li	1.21	238	*i* P	Pn	20 06 25.2	0.0
NHDH	Xindian Distri	1.22	319	*i* P	Pb	20 06 26.7	+0.1
NHDH				S	Sb	20 06 42.5	+0.4
IRIF	Iriomote-Funau	1.24	76	*e*P	Pb	20 06 26.6	-0.4
TWF1	Yuli	1.24	236	*e*P	Pn	20 06 25.6	+0.1
TWF1				*e*S	Sn	20 06 41.7	+0.5
TNOU	National Taiwa	1.24	332	*e*P	Pb	20 06 26.3	-0.8
TATO	Taipei	1.25	318	P	Pb	20 06 27.1	-0.1
TATO	Taipei	1.25	318	S	Sb	20 06 42.9	-0.1
NHY	Taipei	1.25	322	*e*P	Pb	20 06 28.4	+1.1
NHY				*e*S	Sb	20 06 43.9	+0.9
CHKH	Chenggong	1.26	228	*e*P	Pb	20 06 27.6	+0.2
TAP	Taipei	1.29	320	*e*P	Pb	20 06 27.5	-0.3
TAP				*e*S	Sb	20 06 44.9	+0.9
NFF	Wufeng Townshi	1.32	296	*e*P	Pb	20 06 28.7	+0.3
FULB	Fuli	1.33	231	*e*P	Pn	20 06 26.8	-0.1
FULB				S	Sn	20 06 43.6	+0.1
KSHI	Guanxi Townshi	1.34	303	*e*P	Pb	20 06 28.6	-0.2
KSHI				S	Sb	20 06 46.8	+1.3
WHP	Taichung City	1.36	280	*e*P	Pb	20 06 29.4	+0.3
SSLB	Suanglung	1.36	259	P	Pn	20 06 27.9	+0.6
SSLB	Suanglung	1.36	259	S	Sb	20 06 45.8	-0.3
SSLB	Suanglung	1.36	259	*i* P	Pn	20 06 27.9	+0.6
SSLB				S	Sb	20 06 46.2	+0.1
ZUZH	Zhuzihu	1.36	325	*e*P	Pn	20 06 27.7	+0.4
SMLT	Sun Moon Lake	1.40	264	*e*P	Pn	20 06 28.5	+0.7
SMLT				*i* S	Sn	20 06 46.0	+0.7
LIOB	Emei	1.41	295	*e*P	Pb	20 06 29.6	-0.3
LIOB				S	Sb	20 06 47.6	+0.2
NSTT	Nanjuang	1.41	295	*e*P	Pb	20 06 29.7	-0.2
NSTT				*e*S	Sb	20 06 47.2	-0.4
EHD	Haiduan	1.42	231	*e*P	Pn	20 06 27.6	-0.5
TYC	Yuchr	1.43	265	P	Pn	20 06 29.1	+0.9
WHYT	Xinyi Township	1.47	257	*e*P	Pn	20 06 30.0	+1.2
TWQ1	Liyutan	1.53	282	*e*P	Pb	20 06 31.9	-0.1
TWQ1				*i* S	Sb	20 06 50.9	0.0
ELDTW	Lidau	1.54	237	*e*P	Pn	20 06 29.9	+0.2
ELDTW				*e*S	Sn	20 06 48.2	-0.6
WJS	Zhushan	1.56	262	*e*P	Pb	20 06 32.4	0.0
WJS				*e*S	Sb	20 06 52.1	+0.3
ALS	Alishan	1.57	250	*i* P	Pn	20 06 31.6	+1.3
ALS				*e*S	Sn	20 06 51.1	+1.4
WNT	Mingjian	1.59	264	*e*P	Pb	20 06 32.8	-0.2
JIJ	Ishigaki jima	1.61	78	*e*P	Pn	20 06 31.1	+0.5
JIJ				*e*S	Sn	20 06 51.1	+0.7
CHN5	Tsauling	1.65	255	*e*P	Pb	20 06 33.5	-0.6
CHN5				*i* S	Sb	20 06 54.7	+0.2
TWGBT	Beinan	1.73	225	P	Pn	20 06 33.1	+0.8
TWGBT	Beinan	1.73	225	S	Sn	20 06 52.9	-0.5
TWGBT	Beinan	1.73	225	*e*P	Pn	20 06 32.8	+0.5
TWGBT				*i* S	Sn	20 06 53.1	-0.4
WGK	Gukeng	1.73	258	*e*P	Pb	20 06 35.7	+0.3
TWG	Pinlang	1.73	226	*e*P	Pn	20 06 32.6	+0.2
TWG				*i* S	Sn	20 06 52.9	-0.6
STYH	Taoyuan	1.74	240	*i* P	Pn	20 06 33.5	+1.1
WDLH	Douliu	1.75	259	*e*P	Pb	20 06 34.8	-1.0
WCKO	Fanlu	1.77	250	*i* P	Pb	20 06 34.8	-1.1
TPUB	Ta-pu	1.80	246	P	Pn	20 06 34.9	+1.7
TPUB	Ta-pu	1.80	246	*i* P	Pb	20 06 35.3	-1.2
TPUB				*i* S	Sb	20 06 58.5	-0.2
JISG	Ishigakijimahi	1.81	72	*e*P	Pn	20 06 34.0	+0.6
JISG				*e*S	Sn	20 06 56.1	+0.8
WTP	Ta-pu	1.83	245	*e*P	Pb	20 06 36.3	-0.9
TWK	Hsinying	1.93	247	*e*P	Pb	20 06 37.5	-1.2
CHN1	Nanshi	1.93	244	*e*P	Pb	20 06 38.1	-0.7
SGST	Jiashian	1.94	241	*e*P	Pn	20 06 37.0	+1.8
SGST				*i* S	Sb	20 07 01.8	-0.8
SNST	Tainan City	1.94	245	P	Pb	20 06 37.8	-1.2
SNST				*e*S	Sb	20 07 02.7	-0.1
ECL	Taimali	1.97	223	*e*P	Pn	20 06 35.5	-0.1
WSL	Shuilin Townsh	2.07	256	*e*P	Pb	20 06 39.3	-1.9
WSL				*i* S	Sb	20 07 05.5	-0.9
SSD	Sandimen	2.09	232	*e*P	Pb	20 06 39.6	-1.8
MASBT	Mashibuluo	2.17	229	*e*P	Pn	20 06 39.6	+1.2
LYUB	Lan-yu	2.17	201	*e*P	Pn	20 06 38.4	0.0
EAST	Anshuo	2.19	221	*e*P	Pn	20 06 40.7	+2.0
TWM1	Shoushan	2.20	237	*e*P	Pb	20 06 44.0	+0.7
TSCK	Chigu Township	2.32	248	*e*P	Pn	20 06 42.5	+2.2
SCZT	Fangliau	2.35	225	P	Pb	20 06 44.1	-1.7
SMST	Manzhou Townsh	2.49	216	*e*P	Pn	20 06 43.6	+0.9

NEIC 26 20:21:35.8±1.6, 17°.68S±0°.08×178°.59W±0°.10, h526^{km}±8^{km}, mb4.4/21, Error ellipse: s-maj=16.8km s-min=6.4km az=48.0

IDC 26 20:21:36.5±4.0, 17°.72S×178°.66W, h540^{km}±45^{km}, mb3.4/12, mbtmp4.3/13, Error ellipse: s-maj=26.0km s-min=20.3km az=158.0

ISC 26 20:21:36.5±0.5, 17°.7S±0°.1×178°.61W±0°.09, h547^{km}, n61, σ0^s.98/59, mb4.3/20, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.19	268	P	P	20 22 50.3	-2.2
AFI	Afiamalu	7.56	61	P	P	20 23 26.9	-3.0
NIUE	Niue	8.36	101	P	P	20 23 37.6	-0.2
MARNC	Mare, Loyalty	13.15	251	P	P	20 24 26.1	-0.9
SANVU	Saraoutou	13.78	277	P	P	20 24 34.5	+1.0
DZM	Mont Dzumac	14.73	250	P	P	20 24 42.4	-0.9
	8.2nm,0.8s,baz=154,slow=14,SNR=6.1						
URZ	Urewera	20.86	189	P	P	20 25 38.7	-1.6
	3.5nm,0.5s,baz=0.0,slow=3.0,SNR=2.2						
	3.5nm,0.5s						
TCW	Tory Channel	24.26	193	P	P	20 26 10.4	-0.3
KHZ	Kahutara	25.57	194	P	P	20 26 22.2	0.0
FOZ	Fox Glacier	27.59	198	P	P	20 26 39.9	0.0
FOZ				IAmb	IAmb	20 26 52.9	
	comp=Z,17nm,1.2s						
EIDS	Eidsvold	29.17	249	P	P	20 26 53.9	-0.2
ARMA	Armidale	29.90	239	P	P	20 27 01.8	+1.4
ARMA				IAmb	IAmb	20 27 45.7	
	comp=Z,16nm,1.4s						
CTA	Charters Tower	33.30	260	P	P	20 27 28.9	-0.6
	comp=Z,3.5nm,0.7s,baz=57,slow=7.9,SNR=1.7						
	comp=Z,3.5nm,0.7s						
PMG	Port Moresby	34.23	279	P	P	20 27 37.6	+0.4
	comp=Z,9.0nm,0.8s,baz=148,slow=15,SNR=4.0						
	comp=Z,9.0nm,0.8s						
PMG	Port Moresby	34.23	279	IAmb	IAmb	20 27 39.2	
	comp=Z,9.7nm,0.8s						
COEN	Coen	36.91	270	P	P	20 28 00.4	+0.8
STKA	Stephens Creek	38.58	241	P	P	20 28 13.7	+0.8
	comp=Z,3.2nm,0.5s,baz=91,slow=10,SNR=17						
	comp=Z,3.2nm,0.5s						
STKA	Stephens Creek	38.58	241	P	P	20 28 13.4	+0.5
INKA	Innaminka	38.66	248	P	P	20 28 15.1	+1.4
BBOO	Buckleboo	43.36	241	P	P	20 28 51.5	+0.7
BBOO				IAmb	IAmb	20 28 52.2	
	comp=Z,16nm,1.1s						
WR8	Warramunga Arr	44.34	259	P	P	20 28 57.7	-0.9
WR8				IAmb	IAmb	20 29 07.5	
	comp=Z,14nm,1.4s						
WB0	Warramunga Arr	44.46	260	P	P	20 28 58.9	-0.6
WRA	Warramunga Arr	44.49	259	P	P	20 28 58.9	-0.9
	comp=Z,1.6nm,0.6s,baz=79,slow=4.9,SNR=30						
	comp=Z,1.6nm,0.6s						
WRA	Warramunga Arr	44.49	259	P	P	20 28 59.1	-0.7
AS31	Alice Springs	44.67	254	P	P	20 29 01.1	-0.1
AS31				IAmb	IAmb	20 29 01.9	
	comp=Z,6.2nm,0.6s						
ASAR	Alice Springs	44.68	254	P	P	20 29 01.4	+0.1
	comp=Z,19nm,0.5s,baz=88,slow=8.1,SNR=352						
	comp=Z,19nm,0.5s						
ASAR	Alice Springs	44.68	254	P	P	20 29 01.1	-0.1
MTN	Manton Dam	48.62	268	P	P	20 29 30.6	-0.4
MTN				IAmb	IAmb	20 29 31.3	
	comp=Z,23nm,1.2s						
FORT	Forrest	49.94	244	P	P	20 29 40.5	-0.1
KNRA	Kununurra	50.33	264	P	P	20 29 43.5	-0.1
KNRA				IAmb	IAmb	20 30 16.4	
	comp=Z,30nm,1.4s						
MBWA	Marble Bar	57.95	256	P	P	20 30 37.3	+0.1
MBWA				IAmb	IAmb	20 31 09.6	
	comp=Z,20nm,1.2s						
NVAR	Mina Array Bea	79.38	44	P	P	20 32 47.6	+1.3
	comp=Z,0.9nm,0.6s,baz=218,slow=7.0,SNR=5.3						
	comp=Z,0.9nm,0.6s						
ILAR	Eielson Array	85.69	13	P	P	20 33 16.8	-0.4
	comp=Z,0.5nm,0.4s,baz=225,slow=5.3,SNR=17						
	comp=Z,0.5nm,0.4s						
TX31	Lajitas Ar. Si	86.02	58	P	P	20 33 21.9	+2.2
TXAR	Lajitas Array	86.02	58	P	P	20 33 22.1	+2.3
	comp=Z,1.1nm,0.7s,baz=221,slow=6.5,SNR=16						
	comp=Z,1.1nm,0.7s						
TXAR	Lajitas Array	86.02	58	P	P	20 33 21.2	+1.5
PDAR	Pinedale Array	87.30	44	P	P	20 33 26.6	+1.0
	comp=Z,0.6nm,0.5s,baz=207,slow=3.5,SNR=12						
	comp=Z,0.6nm,0.5s						
PDAR	Pinedale Array	87.30	44	P	P	20 33 26.4	+0.7
DRIO	Del Rio	88.53	59	P	P	20 33 32.5	+1.1
DRIO				IAmb	IAmb	20 33 34.0	
	comp=Z,4.3nm,0.9s						
AMTX	Amarillo	89.68	53	P	P	20 33 35.6	-1.1
SNAA	Sanae	90.85	179	P	P	20 33 41.6	+0.1
	comp=Z,2.0nm,0.7s,baz=201,slow=9.4,SNR=6.4						
	comp=Z,2.0nm,0.7s						
SNAA	Sanae	90.85	179	P	P	20 33 41.9	+0.5
SNAA				IAmb	IAmb	20 34 02.5	
	comp=Z,8.5nm,1.2s						
YKA	Yellowknife Ar	94.19	25	P	P	20 33 56.5	-0.1
	comp=Z,0.3nm,0.8s,baz=258,slow=4.9,SNR=4.8						
	comp=Z,0.3nm,0.8s						
MKAR	Makanchi Array	108.83	314	PKiKP	PKiKP	20 39 03.4	-0.4
	comp=Z,0.1nm,0.3s,baz=129,slow=0.7,SNR=1.7						
BVAR	Borovoye Array	116.53	321	PKP	PKPdf	20 39 17.8	-0.4
	comp=Z,0.4nm,0.3s,baz=85,slow=4.9,SNR=4.3						
ARCES	ARCESS Array B	126.04	350	PKP	PKPdf	20 39 35.9	-0.1
	comp=Z,1.9nm,0.9s,baz=358,slow=2.7,SNR=1.4						
NOA	NORSAR Array B	136.11	353	PKP	PKPdf	20 39 56.4	+1.0
	comp=Z,0.4nm,0.9s,baz=359,slow=10,SNR=1.4						
BUR08	Bucovina Ar. S	144.29	332		PKPbc	20 40 11.3	+1.0
BRTR	Keskin Array B	144.47	315	PKP	PKPdf	20 40 11.7	+0.5
	comp=Z,0.8nm,0.7s,baz=131,slow=3.4,SNR=3.9						
BRTR	Keskin Array B	144.47	315		PKPdf	20 40 10.8	-0.3
GERES	GERESS Array B	147.32	345	PKPbc	PKPbc	20 40 19.4	+0.5
	comp=Z,0.9nm,0.5s,baz=27,slow=3.2,SNR=14						
CONA	Conrad Observa	147.57	342	*i* PKP	PKPbc	20 40 20.6	+1.0
	comp=Z,1.6nm,0.6s						
BIOA	Bad Ischl, Aus	148.41	344	*i* PKP	PKPbc	20 40 23.1	+1.5
	comp=Z,0.2nm,0.3s						
LESA	Schwarzleotal	148.90	345	*i* PKP	PKPbc	20 40 23.6	+0.7
	comp=Z,1.2nm,0.4s						
SOKA	Soboth	148.94	342	*i* PKP	PKPbc	20 40 23.2	+0.2
	comp=Z,0.6nm,0.5s						
WATA	Walderalm	149.24	346	*i* PKP	PKPbc	20 40 24.2	+0.4
	comp=Z,1.9nm,0.5s						
WTTA	Wattenberg	149.29	346	*i* PKP	PKPbc	20 40 24.7	+0.7
	comp=Z,2.3nm,0.4s						
MYKA	Terra Mystica	149.38	343	*i* PKP	PKPbc	20 40 24.0	-0.1
	comp=Z,1.5nm,0.4s						
SQTA	Sankt Quirin	149.43	347	*i* PKP	PKPbc	20 40 24.5	+0.3
	comp=Z,1.5nm,0.6s						
ABTA	Abfaltersbach	149.57	345	*i* PKP	PKPbc	20 40 24.4	-0.1
	comp=Z,2.5nm,0.7s						
FUORN	Ofenpass-Fuorn	150.20	348		PKPbc	20 40 26.2	0.0

IDC 26 20:29:23.4±9.6, 30°.55S×178°.88W, h399^{km}±112^{km}, mb2.5/2, mbtmp3.6/3, Error ellipse: s-maj=106.9km s-min=50.5km az=2.0

ISC 26 20:29:16.4±1.2, 30°.07S±0°.10×178°.3W±0°.2, h350^{km}, n29, σ2^s.04/37, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	0.86	21	P	Pn	20 30 02.7	+0.9
GLKZ				S	S	20 30 34.6	-3.4
MXZ	Matakaoa Point	8.00	200	P	P	20 31 14.3	+3.9
WMGZ	Waiomatatini S	8.20	199	P	Pn	20 31 14.9	+2.0
WMGZ				S	S	20 32 48.6	+0.7
HAZ	Te Kaha	8.34	202	P	Pn	20 31 14.6	+0.2
HAZ				S	S	20 32 50.5	-0.2
PKGZ	Pakihiroa	8.34	200	P	P	20 31 17.2	-0.2
PUZ	Puketiti	8.48	199	P	Pn	20 31 15.7	-0.5
PUZ				S	S	20 32 50.8	-3.2
WCZ	Waipu Caves	8.53	225	P	Pn	20 31 19.0	+2.3
RUGZ	Raukumara Rang	8.56	202	P	Pn	20 31 19.1	+1.9
RUGZ				S	S	20 32 53.5	-2.4
TWGZ	Tauwhareparae	8.66	200	P	P	20 31 20.9	0.0
TWGZ				S	S	20 32 57.2	-0.7
OPRZ	Ohinepanea	8.86	208	P	P	20 31 24.2	+1.1
MWZ	Matawai	8.95	202	P	Pn	20 31 23.3	+1.5
MWZ				S	S	20 33 01.3	-2.9
URZ	Urewera	9.02	204	P	Pn	20 31 22.3	-0.2
	6.5nm,0.3s,baz=34,slow=7.7,SNR=29						
URZ				S	S	20 33 00.5	-5.2
	5.0nm,0.3s,baz=348,slow=20,SNR=7.6						
URZ	Urewera	9.02	204	P	Pn	20 31 23.8	+1.2
RAGZ	Rawiri	9.13	202	P	P	20 31 27.0	+0.9
RIGZ	Rimuhau	9.21	200	P	P	20 31 28.6	+1.5
MUGZ	Murupara	9.33	205	P	Pn	20 31 28.1	+1.8
RTZ	Ruatahuna	9.38	203	P	P	20 31 29.2	+0.2
SNGZ	Shannon Statio	9.41	201	P	Pn	20 31 28.8	+1.5
KNZ	Kokohu	9.53	199	P	P	20 31 30.6	+0.1
MHGZ	Mahia Peninsul	9.59	198	P	P	20 31 33.6	+2.4
RAHZ	Arahi	9.62	202	P	Pn	20 31 31.3	+1.6
MTHZ	Maungataniwha	9.64	203	P	Pn	20 31 30.6	+0.6
WHHZ	Waihua	9.72	201	P	P	20 31 33.9	+1.3
MRHZ	Matea Rd	9.78	205	P	Pn	20 31 33.1	+1.4
NMHZ	Naumai	9.87	203	P	Pn	20 31 34.5	+1.6
HIZ	Hauiti	10.16	212	P	P	20 31 40.5	+3.0
ASAR	Alice Springs	42.90	267	P	P	20 36 41.8	-0.2
	0.2nm,0.6s,baz=107,slow=7.6,SNR=1.4						
	0.2nm,0.6s						
WRA	Warramunga Arr	43.85	272	P	P	20 36 46.8	-2.8
	0.4nm,0.6s,baz=110,slow=8.1,SNR=1.9						
	0.4nm,0.6s						
FINES	FINESS Array B	144.76	340	PKPbc	PKPab	20 48 12.6	+1.2
	1.7nm,0.7s,baz=59,slow=4.5,SNR=6.9						

KRNET 26 20:41:32.2±0.1, 40°.94N×79°.01E, h20^{km}, mb3.5

SOME 26 20:41:32.3, 40°.77N×78°.45E, h15^{km}

NNC 26 20:41:35.2±1.1, 40°.86N×78°.43E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=8.1km s-min=5.8km az=168.0

ISC 26 20:41:34.1±1.4, 40°.77N±0°.06×78°.43E±0°.04, h10^{km}, n51, σ1^s.67/71, 24C-11D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.07	334	⇑*i*P	Pn	20 41 55.2	-0.3
TARG				⇑*i*S	Sn	20 42 12.3	+1.7
KDJ	Kajisay	1.65	326	⇑*i*P	Pg	20 42 05.6	-0.2
KDJ				⇑*i*S	Sg	20 42 30.5	+3.2
PRZ	Przheval'sk	1.71	359	⇑*e*P	Pn	20 42 03.0	-1.2
PRZ				⇑*e*S	Sn	20 42 25.0	-1.2
ULHL	Ulahol	2.21	313	P	Pg	20 42 16.5	+0.1
	SNR=13						
ULHL	Ulahol	2.21	313	⇑*i*P	Pg	20 42 16.1	-0.3
ULHL				⇑*i*S	Sg	20 42 48.0	+2.9
SATY	Saty	2.29	360	Pg	Pb	20 42 16.3	+0.7
	42nm,0.4s						
SATY				Lg	Lg	20 42 48.0	
	98nm,0.3s						
UZB	Uzynbulak	2.42	10	Pg	Pb	20 42 17.2	-0.5
UZB				Lg	Lg	20 42 49.8	
	108nm,0.5s						
UZB	Uzynbulak	2.42	10	*e*P	Pb	20 42 17.2	-0.5
UZB				*e*S	Sg	20 42 49.9	-1.8
	108nm,0.5s						
SHLS	Shalkode	2.51	18	Pg	Pg	20 42 20.4	-1.7
	44nm,0.3s						
SHLS				Lg	Lg	20 42 55.1	
	236nm,0.4s						
SHLS	Shalkode	2.51	18	*e*P	Pg	20 42 20.4	-1.7
	44nm,0.3s						
SHLS				*e*S	Sg	20 42 55.1	+0.5
	236nm,0.4s						
TNSS	Tian-Shan	2.52	334	Pg	Pb	20 42 20.0	+0.3
	9.3nm,0.5s						
TNSS				Lg	Lg	20 42 54.3	
	12nm,0.8s						
TNSS	Tian-Shan	2.52	334	*e*P	Pb	20 42 20.0	+0.3
	9.3nm,0.5s						
TNSS				*e*S	Sg	20 42 54.3	-0.8
	12nm,0.8s						
BOOM	Boomskoye usch	2.54	313	⇑*e*P	Pb	20 42 20.2	+0.4
BOOM				⇑*i*S	Sg	20 42 54.8	-0.8
MDOK	Medeo	2.60	337	Pg	Pb	20 42 21.0	+0.1
	64nm,0.4s						
MDOK				Lg	Lg	20 42 55.9	
	60nm,0.7s						
KOTS	Kotyrbulak	2.65	339	Pg	Pb	20 42 21.9	+0.2
	37nm,0.4s						
KOTS				Lg	Lg	20 42 57.7	
	130nm,0.6s						
KOTS	Kotyrbulak	2.65	339	*e*P	Pb	20 42 21.9	+0.2
	37nm,0.4s						
KOTS				*e*S	Sg	20 42 57.7	-1.5
	130nm,0.6s						
PDGK	Podgornoye	2.67	17	⇓Pn	Pn	20 42 19.4	+2.0
	9.9nm,0.5s						
PDGK				⇓Lg	Lg	20 42 56.5	
	89nm,0.6s						
KNDC	Almaty	2.68	336	⇑Pn	Pn	20 42 19.4	+2.1
	79nm,0.7s						
KNDC				⇓Lg	Lg	20 42 57.6	
	122nm,0.7s						
KPKS	Kokpek	2.70	4	Pg	Pb	20 42 22.8	+0.2
	0.6nm,0.2s						
KPKS				Lg	Lg	20 42 58.9	
	152nm,0.5s						
KPKS	Kokpek	2.70	4	*e*P	Pb	20 42 22.8	+0.2
	0.6nm,0.2s						

KPKS				eS	Sg	20 42 58.9	-1.9
	152nm,0.5s						
KURS	Kuram	2.72	356	Pg	Pb	20 42 23.6	+0.7
	16nm,0.5s						
KURS				Lg	Lg	20 43 00.6	
	37nm,0.5s						
MTBS	Maitube	2.79	328	Pg	Pb	20 42 23.8	-0.3
	10nm,0.4s						
MTBS				Lg	Lg	20 43 00.8	
	9.9nm,0.3s						
MTBS	Maitube	2.79	328	eP	Pb	20 42 23.8	-0.3
	10nm,0.4s						
MTBS				eS	Sg	20 43 00.8	-2.9
	9.9nm,0.3s						
KST	Kastek	2.92	322	Pg	Pb	20 42 26.0	-0.4
	14nm,0.4s						
KST				Lg	Lg	20 43 04.2	
	18nm,0.6s						
KST	Kastek	2.92	322	eP	Pb	20 42 26.0	-0.4
	14nm,0.4s						
KST				eS	Sb	20 43 04.2	+1.9
	18nm,0.6s						
TKM2	Tokmak 2	3.02	316	P	Pb	20 42 27.7	-0.3
	SNR=14						
TKM2	Tokmak 2	3.02	316	⇑eP	Pb	20 42 26.0	-2.0
TKM2				⇑iS	Sb	20 43 05.3	+0.3
KTMS	Ketmen	3.03	27	Pg	Pb	20 42 27.1	-1.2
	9.5nm,0.3s						
KTMS				Lg	Lg	20 43 06.3	
	43nm,0.3s						
KTMS	Ketmen	3.03	27	eP	Pb	20 42 27.1	-1.2
	9.5nm,0.3s						
KTMS				eS	Sb	20 43 06.3	+1.0
	43nm,0.3s						
DGS	Degeres	3.17	322	Pg	Pb	20 42 29.6	-0.9
	21nm,0.4s						
DGS				Lg	Lg	20 43 11.1	
	27nm,0.4s						
KTBS	Karatobe	3.21	337	Pg	Pb	20 42 32.2	+0.9
	25nm,0.4s						
KTBS				Lg	Lg	20 43 15.3	
	0.2nm,0.2s						
KBK	Karagaybulak	3.22	307	P	Pb	20 42 31.1	-0.3
	SNR=14						
ARLS	Aral	3.28	291	⇑eP	Pb	20 42 32.1	-0.4
ARLS				⇑eS	Sb	20 43 15.7	+3.2
UCH	Uchtor	3.28	298	P	Pg	20 42 36.6	-0.4
	SNR=20						
ARXS	Arharly	3.47	353	Pg	Pb	20 42 36.8	+1.2
	12nm,0.5s						
ARXS				Lg	Lg	20 43 23.2	
	52nm,0.4s						
ARXS	Arharly	3.47	353	eP	Pb	20 42 36.8	+1.2
	12nm,0.5s						
ARXS				eS	Sg	20 43 23.2	-2.2
	52nm,0.4s						
AAK	Ala-Archa	3.49	304	P	Pg	20 42 40.0	-0.9
	SNR=9.0						
AAK	Ala-Archa	3.49	304	⇑Pg	Pg	20 42 39.6	-1.4
	8.1nm,0.6s						
AAK				⇑Lg	Lg	20 43 25.1	
	21nm,1.1s						
FRU1	Bishkek	3.50	307	⇓eP	Pb	20 42 33.6	-2.5
FRU1				⇓eS	Sb	20 43 18.8	+0.1
SALK	Salom-Alik	3.50	273	⇑eP	Pb	20 42 36.4	+0.2
SALK				⇑eS	Sb	20 43 22.7	+3.8
CHMS	Chumysh	3.54	310	P	Pb	20 42 38.7	+1.9
	SNR=6.9						
KNOS	Konyrlen	3.63	8	Pg	Pb	20 42 38.6	+0.2
	3.0nm,0.1s						
KNOS				Lg	Lg	20 43 26.1	
	33nm,0.4s						
SFK	Sufi-Kurgan	3.84	260	⇓eP	Pb	20 42 41.5	-0.5
SFK				⇓eS	Sb	20 43 31.0	+2.3
USP	Ospenovka	3.85	312	P	Pg	20 42 45.6	-2.1
	SNR=7.5						
EKS2	Erkin-Say	3.96	300	P	Pg	20 42 49.1	-0.9
	SNR=13						
ARSB	Arslanbob	4.16	279	⇑eP	Pb	20 42 44.6	-2.8
ARSB				⇑eS	Sb	20 43 37.7	-0.1
KAPS	Kapalarasan	4.56	8	Pg	Pb	20 42 55.4	+1.2
	1.1nm,0.1s						
KAPS				Lg	Lg	20 43 55.0	
	10nm,0.2s						
MNAS	Manas	4.76	293	⇓eP	Pn	20 42 52.1	+6.1
MNAS				⇓eS	Sb	20 43 50.2	-4.9
KK31	Karatay Array	6.35	294	Pg	Pg	20 43 32.0	-3.6
	2.0nm,0.7s,baz=112,slow=15,SNR=15						
KK31				⇑Lg	Lg	20 44 56.5	
	0.9nm,0.5s,baz=110,slow=23,SNR=3.8						
MAKZ	Makanchi	6.56	22	⇓Pn	Pn	20 43 13.5	+3.0
	0.8nm,0.7s						
MAKZ				⇓Lg	Lg	20 45 00.7	
	2.3nm,0.8s						
MK31	Makanchi Array	6.64	24	Pn	Pn	20 43 13.8	+2.1
	0.1nm,0.3s,baz=200,slow=12,SNR=16						
MK31				⇑Pg	Pb	20 43 34.3	+4.8
	1.0nm,0.7s						
MK31				⇑Lg	Lg	20 45 01.7	
	1.2nm,0.5s,baz=199,slow=13,SNR=5.0						

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*IDC **26** 21:01:37.5±1.0, 27.°02S×66.°91E, h0^{km}, mb3.9/9, mbtmp3.9/9, MS3.3/8, Error ellipse: s-maj=35.3km s-min=22.6km az=180.0*

*NEIC **26** 21:01:40.3±1.2, 27.°0S±0.°2×67.°02E±0.°10, h10^{km}±1^{km}, mb4.4/9, Error ellipse: s-maj=34.7km s-min=6.6km az=202.0*

ISC 26 21:01:39.7±0.9**, 27.°0S**±0.°2×**67.°1E**±0.°1**, h10^{km}, n40, σ1.^{s}41**/24**, mb4.3**/12**, MS3.3**/8**, Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VOI	Vohitsoka	19.15	281	P	Pn	21 06 05.4	+1.1
VOI				IAmb	IAmb	21 06 41.5	
	comp=Z,23nm,1.4s						
H08S1	Diego Carcia H	19.94	16	T	T	21 26 19.3	
	baz=194,slow=76,SNR=16						
H08S2	Diego Garcia H	19.94	16	T	T	21 26 17.4	
	baz=194,slow=76,SNR=17						
H08S3	Diego Garcia H	19.96	16	T	T	21 26 20.9	
	baz=194,slow=76,SNR=20						
H04N2	CROZET ISLANDS	22.63	208	T	T	21 30 47.0	
	baz=38,slow=74,SNR=440						
H04N1	CROZET ISLANDS	22.64	208	T	T	21 30 43.3	
	baz=38,slow=74,SNR=504						
H04N3	CROZET ISLANDS	22.65	208	T	T	21 30 40.2	
	baz=38,slow=74,SNR=488						
BOSA	Boshof	36.89	258	P	P	21 08 47.8	-1.0
	comp=Z,2.5nm,0.9s,baz=89,slow=7.5,SNR=6.2						
BOSA				LR	LR	21 22 15.3	
	comp=Z,45nm,18.7s,baz=46,slow=34						
	comp=Z,2.5nm,0.9s						
BOSA	Boshof	36.89	258	P	P	21 08 47.9	-0.9
BOSA				IAmb	IAmb	21 09 08.8	
	comp=Z,21nm,1.4s						
LBTB	Lobatse	37.22	264	P	P	21 08 52.3	+0.7
LBTB				IAmb	IAmb	21 09 09.6	
	comp=Z,12nm,1.4s						
LPHEP	Lephephe	37.36	266	P	P	21 08 52.1	-0.7
LSZ	Lusaka	37.96	280	LR	LR	21 22 21.5	
	comp=Z,47nm,20.9s,baz=121,slow=33						
SUR	Sutherland	40.30	251	LR	LR	21 24 58.8	
	comp=Z,43nm,18.4s,baz=128,slow=35						
MAW	Mawson	40.69	182	LR	LR	21 22 05.9	
	comp=Z,37nm,19.8s,baz=34,slow=30						
H01W2	Cape Leeuwin H	40.80	113	T	T	21 52 14.3	
	baz=269,slow=75,SNR=49						
H01W3	Cape Leeuwin H	40.81	113	T	T	21 52 14.4	
	baz=269,slow=75,SNR=40						
H01W1	Cape Leeuwin H	40.82	113	T	T	21 52 15.7	
	baz=269,slow=75,SNR=47						
MBAR	Mbarara	43.68	301	LR	LR	21 26 49.3	
	comp=Z,38nm,18.1s,baz=116,slow=35						
FURI	Furi	45.09	318	LR	LR	21 26 04.6	
	comp=Z,22nm,21.2s,baz=176,slow=33						
CMAR	Chiang Mai Arr	54.76	38	P	P	21 11 09.7	0.0
	comp=Z,1.2nm,0.8s,baz=233,slow=7.1,SNR=11						
	comp=Z,1.2nm,0.8s						
LUWI	Luwuk	59.28	74	P	P	21 11 42.1	+0.2
ASAR	Alice Springs	59.85	103	P	P	21 11 46.3	+0.5
	comp=Z,1.5nm,0.8s,baz=245,slow=7.0,SNR=13						
	comp=Z,1.5nm,0.8s						
WRA	Warramunga Arr	61.47	99	P	P	21 11 57.1	+0.2
	comp=Z,2.4nm,0.9s,baz=248,slow=6.7,SNR=4.7						
	comp=Z,2.4nm,0.9s						
WR8	Warramunga Arr	61.60	99	P	P	21 11 57.3	-0.5
EIL	Elat	64.22	329	LR	LR	21 35 37.9	
	comp=Z,20nm,18.6s,baz=172,slow=32						
VNDA	Vanda	64.86	166	LR	LR	21 38 02.6	
	comp=Z,60nm,18.1s,baz=257,slow=34						
MKAR	Makanchi Array	74.75	11	P	P	21 13 18.1	-1.4
	comp=Z,0.4nm,0.7s,baz=194,slow=5.3,SNR=4.7						
	comp=Z,0.4nm,0.7s						
MKAR	Makanchi Array	74.75	11	P	P	21 13 18.7	-0.9
TORD	Torodi Ar. Bea	74.94	293	P	P	21 13 19.7	-1.7
	comp=Z,0.1nm,0.5s,baz=94,slow=4.6,SNR=3.1						
	comp=Z,0.1nm,0.5s						
AB31	Akbulak array	76.20	355	P	P	21 13 28.7	+0.9
AB31				IAmb	IAmb	21 13 38.1	
	comp=Z,2.8nm,0.8s						
ABKAR	Akbulak array	76.20	355	P	P	21 13 28.8	+1.0
DBIC	Dimbokro	77.14	284	P	P	21 13 37.4	+3.4
	comp=Z,2.1nm,0.7s,baz=144,slow=9.0,SNR=3.7						
ZAA0	Zalesovo Array	82.08	10	P	P	21 14 00.6	+0.7
ZAA0				IAmb	IAmb	21 14 09.9	
	comp=Z,3.0nm,1.1s						
ZALV	Zalesovo Beam	82.08	10	P	P	21 14 01.2	+1.3
	comp=Z,1.6nm,0.7s,baz=197,slow=3.9,SNR=9.9						
	comp=Z,1.6nm,0.7s						
ZALV	Zalesovo Beam	82.08	10	P	P	21 14 00.1	+0.2
SONM	Songino Array	82.47	26	P	P	21 14 02.8	+0.6
	comp=Z,1.3nm,0.9s,baz=223,slow=4.3,SNR=7.9						
	comp=Z,1.3nm,0.9s						
SONM	Songino Array	82.47	26	P	P	21 14 03.1	+0.8
ESDC	Sonseca Array	93.65	313	P	P	21 14 53.8	-2.6
	comp=Z,0.3nm,0.9s,baz=130,slow=5.1,SNR=4.8						
	comp=Z,0.3nm,0.9s						
ESDC	Sonseca Array	93.65	313	P	P	21 14 53.9	-2.6
YKA	Yellowknife Ar	144.51	1	PKP	PKPab	21 21 12.9	-1.1
	comp=Z,0.5nm,0.8s,baz=331,slow=3.6,SNR=5.9						

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*IDC **26** 21:24:56.6±0.7, 14.°30N×123.°69E, h46^{km}±6^{km}, mb3.5/12, mbtmp3.8/12, ML4.6/1, MS3.2/5, Error ellipse: s-maj=22.0km s-min=13.0km az=73.0*

*NEIC **26** 21:24:56.6±1.6, 14.°42N±0.°08×123.°8E±0.°1, h46^{km}±10^{km}, mb4.5/18, Error ellipse: s-maj=17.5km s-min=11.4km az=89.0*

ISC 26 21:24:55.1±0.5**, 14.°35N**±0.°06×**123.°7E**±0.°1**, h33^{km}, n50, σ0.^{s}97**/47**, mb4.2**/19**, MS3.5**/3**, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	2.71	265	P	Pn	21 25 39.0	+2.5
	116nm,0.3s,baz=44,slow=2.3,SNR=9.7						
DAV	Davao City (W)	7.46	166	LR	LR	21 30 03.7	
	comp=Z,271nm,21.2s,baz=360,slow=41						
TWG	Pinlang	8.79	344	Pn	Pn	21 26 57.7	-2.4
YULB	Yu-li	9.29	346	Pn	Pn	21 27 04.8	-1.9
TPUB	Ta-pu	9.37	342	Pn	Pn	21 27 07.4	-0.6
SSLB	Suanglung	9.75	345	Pn	Pn	21 27 14.4	+1.3
NACB	Ninganchiao	9.98	349	Pn	Pn	21 27 16.4	+0.2
YHNB	Yeheng	10.50	348	Pn	Pn	21 27 23.3	-0.2
LUWI	Luwuk	15.32	184		Pn	21 28 30.9	+1.8
LUWI				IAmb	IAmb	21 28 40.7	
	comp=Z,34nm,1.0s						
SBUM	Sibu	16.39	225		Pn	21 28 43.7	+0.8
KAPI	Kappang	19.64	192	P	Pn	21 29 22.7	+0.1
KAPI				IAmb	IAmb	21 29 24.0	
	comp=Z,10nm,0.7s						
JNU	Nakatsue	19.79	18	LR	LR	21 36 17.6	
	comp=Z,40nm,18.8s,baz=141,slow=34						
KSRS	Korea Array	23.32	8	P	P	21 30 01.1	+0.9
	comp=Z,1.2nm,0.8s,baz=218,slow=7.2,SNR=1.9						
KSRS				LR	LR	21 38 37.9	
	comp=Z,18nm,19.7s,baz=65,slow=35						
	comp=Z,1.2nm,0.8s						
SAUI	Saumlaki	23.42	161		P	21 30 01.9	+0.4
CMAR	Chiang Mai Arr	24.11	283	P	P	21 30 07.3	-0.8
	comp=Z,3.2nm,0.8s,baz=93,slow=8.1,SNR=27						
CMAR				pP	sP	21 30 20.1	-1.5
	comp=Z,4.1nm,1.0s,baz=95,slow=8.2,SNR=8.0						
	comp=Z,3.2nm,0.8s						
CMAR	Chiang Mai Arr	24.11	283	P	P	21 30 06.8	-1.3
CHTO	Chiang Mai	24.15	284	P	P	21 30 06.9	-1.5
BATI	Baumata	24.39	180	P	P	21 30 10.0	-0.7
	comp=Z,27nm,0.7s,baz=294,slow=1.9,SNR=10						
MJAR	Matsushiro Arr	25.62	28	P	P	21 30 22.3	+0.7
	comp=Z,0.7nm,0.6s,baz=281,slow=14,SNR=1.9						
	comp=Z,0.7nm,0.6s						
MJAR	Matsushiro Arr	25.62	28	P	P	21 30 21.4	-0.2
WB0	Warramunga Arr	35.49	163	P	P	21 31 48.5	-0.4
MBWA	Marble Bar	35.50	186	P	P	21 31 48.5	-0.5
MBWA				IAmb	IAmb	21 31 48.9	
	comp=Z,7.2nm,0.7s						
WRAB	Tennant Creek	35.63	163	P	P	21 31 49.7	-0.4
WRAB				IAmb	IAmb	21 31 50.4	
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	35.64	163	P	P	21 31 49.6	-0.6
	comp=Z,3.5nm,0.5s,baz=343,slow=9.2,SNR=12						
	comp=Z,3.5nm,0.5s						
WRA	Warramunga Arr	35.64	163	P	P	21 31 49.8	-0.4
WR8	Warramunga Arr	35.70	162	P	P	21 31 50.4	-0.3
WR8				IAmb	IAmb	21 31 51.0	
	comp=Z,11nm,1.1s						
PSA00	Pilbara Seismi	35.90	186	P	P	21 31 52.1	-0.3
PSA00				IAmb	IAmb	21 31 52.7	
	comp=Z,13nm,1.0s						
ULN	Ulaanbaatar	36.17	341	P	P	21 31 56.3	+1.6
ULN				IAmb	IAmb	21 32 08.7	
	comp=Z,5.4nm,0.8s						
SONM	Songino Array	36.36	340	P	P	21 31 57.1	+0.8
	comp=Z,0.4nm,0.6s,baz=162,slow=10,SNR=3.7						
SONM				pP	pP	21 32 07.5	+1.6
	comp=Z,4.1nm,0.6s,baz=156,slow=9.8,SNR=21						
	comp=Z,0.4nm,0.6s						
SONM	Songino Array	36.36	340	P	P	21 31 56.5	+0.3
SONM				IAmb	IAmb	21 32 10.7	
	comp=Z,3.3nm,0.8s						
AS31	Alice Springs	39.07	165	P	P	21 32 18.8	-0.5
AS31				IAmb	IAmb	21 32 21.8	
	comp=Z,2.0nm,0.4s						
ASAR	Alice Springs	39.07	165	P	P	21 32 19.2	-0.1
	comp=Z,1.3nm,0.4s,baz=342,slow=7.1,SNR=30						
ASAR				PcP	PcP	21 34 28.5	-0.4
	comp=Z,0.6nm,0.5s,baz=340,slow=3.6,SNR=1.4						
	comp=Z,1.3nm,0.4s						
ASAR	Alice Springs	39.07	165	P	P	21 32 19.6	+0.3
H11S3	WAKE ISLAND Hy	41.35	78	T	T	22 16 37.3	
	baz=272,slow=74,SNR=424						
H11S1	WAKE ISLAND Hy	41.36	78	T	T	22 16 44.6	
	baz=272,slow=74,SNR=446						
H11S2	WAKE ISLAND Hy	41.37	78	T	T	22 16 39.5	
	baz=272,slow=74,SNR=673						
H11N1	WAKE ISLAND Hy	41.54	76	T	T	22 16 55.2	
	baz=266,slow=74,SNR=146						
H11N2	WAKE ISLAND Hy	41.54	76	T	T	22 16 42.2	
	baz=266,slow=74,SNR=158						
H11N3	WAKE ISLAND Hy	41.55	76	T	T	22 16 56.4	
	baz=266,slow=74,SNR=151						
MKAR	Makanchi Array	47.30	322	P	P	21 33 25.3	-0.2
	comp=Z,0.6nm,0.7s,baz=122,slow=7.9,SNR=6.2						
MKAR				pP	sP	21 33 39.2	-0.2
	comp=Z,0.9nm,0.6s,baz=116,slow=9.1,SNR=7.9						
	comp=Z,0.6nm,0.7s						
MKAR	Makanchi Array	47.30	322	P	P	21 33 25.9	+0.4
NWAO	Narrogin (SRO)	47.41	187	P	P	21 33 25.9	-0.5
STKA	Stephens Creek	49.05	160	P	P	21 33 38.8	-0.3
	comp=Z,2.2nm,0.6s,baz=334,slow=4.6,SNR=5.0						
	comp=Z,2.2nm,0.6s						
STKA	Stephens Creek	49.05	160	P	P	21 33 39.0	-0.2
ZALV	Zalesovo Beam	49.88	331	P	P	21 33 45.2	0.0
	comp=Z,0.2nm,0.4s,baz=129,slow=8.7,SNR=1.6						
ZALV				pP	sP	21 33 57.9	-1.1
	comp=Z,1.6nm,0.6s,baz=130,slow=8.5,SNR=7.8						
	comp=Z,0.2nm,0.4s						
AAK	Ala-Archa	50.71	314	LR	LR	21 57 53.3	
	comp=Z,42nm,18.4s,baz=104,slow=39						
BVAR	Borovoye Array	56.92	325	P	P	21 34 36.8	-0.2
	comp=Z,0.2nm,0.5s,baz=121,slow=6.9,SNR=2.2						
BVAR				pP	sP	21 34 49.8	-1.1
	comp=Z,0.6nm,0.5s,baz=128,slow=6.3,SNR=4.8						
	comp=Z,0.2nm,0.5s						
FINES	FINESS Array B	81.14	331	P	P	21 37 07.8	+0.8
	comp=Z,1.4nm,0.9s,baz=46,slow=8.2,SNR=4.3						
	comp=Z,1.4nm,0.9s						
NOA	NORSAR Array B	88.02	333	LR	LR	22 19 31.3	
	comp=Z,18nm,18.1s,baz=260,slow=37						
YKA	Yellowknife Ar	91.04	23	P	P	21 37 56.0	0.0
	baz=301,slow=5.2,SNR=1.3						
YKA				pP	sP	21 38 10.6	+0.3
	comp=Z,0.1nm,0.6s,baz=299,slow=5.0,SNR=2.3						

IDC 26 21:25:11.4±4.5**, 7.°72S**×**128.°69E, h277^{km}**±48^{km}**, mb2.7**/1**, mbtmp3.7**/5**, Error ellipse: s-maj=51.3km s-min=21.7km az=54.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.55	243	P	Pn	21 26 34.7	0.0
	3.2nm,0.3s,baz=45,slow=10.0,SNR=1.9						
BATI				S	S	21 27 42.1	+0.7
	5.2nm,0.3s,baz=36,slow=19,SNR=3.7						
FITZ	Fitzroy Crossi	10.73	196	P	Pn	21 27 37.6	-1.2
	1.0nm,0.3s,baz=32,slow=11,SNR=11						
FITZ				S	S	21 29 36.9	-2.3
	1.6nm,0.4s,baz=76,slow=19,SNR=6.6						
WRA	Warramunga Arr	13.33	156	P	Pn	21 28 09.7	-0.9
	0.7nm,0.3s,baz=339,slow=12,SNR=11						
WRA				S	S	21 30 28.9	-10
	0.8nm,0.5s,baz=342,slow=19,SNR=6.0						
ASAR	Alice Springs	16.63	163	P	Pn	21 28 49.5	-0.3
	1.5nm,0.4s,baz=346,slow=11,SNR=30						
ASAR				S	S	21 31 49.9	+2.7
	0.2nm,0.4s,baz=320,slow=16,SNR=5.1						
MKAR	Makanchi Array	68.12	328	P	P	21 35 41.8	0.0
	0.2nm,0.6s,baz=128,slow=7.1,SNR=1.6						
	0.2nm,0.6s						

IDC 26 21:31:48.5±3.2**, 31.°61S**×**178.°29W, h0^{km}, mb3.7**/2**, mbtmp3.7**/3**, ML3.5**/1**, Error ellipse: s-maj=73.6km s-min=48.0km az=119.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.63	208	Pn	Pn	21 33 40.9	-0.1
	0.7nm,0.3s,baz=11,slow=10,SNR=2.1						
URZ				Sn	Sn	21 35 01.9	-6.2
	0.2nm,0.3s,baz=111,slow=18,SNR=2.0						
	4.4nm,0.7s						
ASAR	Alice Springs	42.81	268	P	P	21 39 48.3	-0.1
	0.4nm,0.5s,baz=107,slow=7.2,SNR=10.0						
	0.4nm,0.5s						
WRA	Warramunga Arr	43.91	274	P	P	21 39 57.0	-0.3
	0.6nm,0.5s,baz=112,slow=8.1,SNR=6.2						
	0.6nm,0.5s						
FINES	FINESS Array B	146.19	339	PKPbc	PKPdf	21 51 29.3	+0.3
	1.5nm,0.8s,baz=18,slow=0.4,SNR=4.8						

IDC 26 21:43:38.8±1.6**, 0.°89N**×**121.°23E, h0^{km}, mb3.4**/3**, mbtmp3.4**/3**, MS3.3**/1**, Error ellipse: s-maj=238.6km s-min=27.3km az=60.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.37	149	P	P	21 48 59.1	+0.2
	1.2nm,0.9s,baz=325,slow=10,SNR=9.5						
	1.2nm,0.9s						
ASAR	Alice Springs	27.35	154	P	P	21 49 25.8	0.0
	0.2nm,0.6s,baz=337,slow=9.6,SNR=6.6						
	0.2nm,0.6s						
NWAO	Narrogin (SRO)	33.85	186	LR	LR	22 03 11.4	
	comp=Z,51nm,18.6s,baz=342,slow=35						
MKAR	Makanchi Array	56.93	329	P	P	21 53 25.7	-0.2
	0.2nm,0.5s,baz=132,slow=8.3,SNR=4.1						
	0.2nm,0.5s						

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*KNET **26** 21:44:51.4±0.3, 42.°53N×75.°29E, h18^{km}±6^{km}, ml1.2, Error ellipse: s-maj=3.8km s-min=2.2km az=166.0*

*NNC **26** 21:44:52.7±0.5, 42.°59N×75.°24E, h0^{km}, mpv2.6, Error ellipse: s-maj=6.8km s-min=1.2km az=166.0*

*SOME **26** 21:44:53.2, 42.°57N×75.°27E, h10^{km}*

ISC 26 21:44:52.6±1.0**, 42.°54N**±0.°04×**75.°27E**±0.°02**, h12^{km}**±10^{km}**, n24, σ0.^{s}77**/45**, 11C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBK	Karagaybulak	0.27	296	⇑P	Pg	21 44 58.5	+0.3
	17nm,0.1s,SNR=84						
KBK				⇓S	Sb	21 45 02.8	-1.1
	102nm,0.1s						
TKM2	Tokmak 2	0.45	32	⇓P	Pg	21 45 01.6	0.0
	4.0nm,0.1s,SNR=6.9						
TKM2				⇑S	Sg	21 45 07.9	+0.2
	14nm,0.1s						
AAK	Ala-Archa	0.58	280	⇑P	Pg	21 45 03.8	-0.2
	5.9nm,0.2s,SNR=17						
AAK				⇑S	Sg	21 45 11.7	0.0
	14nm,0.2s						
AAK	Ala-Archa	0.58	280	⇑P	Pg	21 45 03.3	-0.6
	0.3nm,0.3s						
AAK				⇑S	Sg	21 45 11.5	-0.2
	3.2nm,0.5s						
CHMS	Chumysh	0.60	320	⇑P	Pg	21 45 04.0	-0.2
	1.9nm,0.2s,SNR=5.9						
CHMS				⇑S	Sb	21 45 12.3	-1.0
	16nm,0.1s						
UCH	Uchtor	0.64	241	⇑P	Pg	21 45 04.8	-0.4
	0.8nm,0.1s,SNR=5.2						
UCH				⇑S	Sg	21 45 13.3	-0.4
	6.3nm,0.2s						
KST	Kastek	0.72	45	P	Pg	21 45 06.4	-0.1
	3.8nm,0.1s						
KST				S	Sg	21 45 15.9	-0.1
	8.3nm,0.3s						
KST	Kastek	0.72	45	eP	Pg	21 45 06.4	-0.1
	3.8nm,0.1s						
KST				eS	Sg	21 45 15.9	-0.1
	6.2nm,0.1s						
ULHL	Ulahol	0.78	112	⇓P	Pg	21 45 07.1	-0.5
	1.4nm,0.1s,SNR=9.0						
ULHL				⇓S	Sg	21 45 17.6	-0.3
	3.9nm,0.2s						
DGS	Degeres	0.79	28	P	Pg	21 45 07.9	0.0
	5.5nm,0.1s						
DGS				S	Sb	21 45 18.5	-0.6
	6.2nm,0.3s						
DGS	Degeres	0.79	28	eP	Pg	21 45 07.9	0.0
	4.8nm,0.1s						
DGS				eS	Sb	21 45 18.3	-0.7
	6.2nm,0.2s						
USP	Ospenovka	0.92	322	⇑P	Pg	21 45 09.9	-0.4
	1.2nm,0.1s,SNR=6.2						
MTBS	Maitube	1.04	55	P	Pg	21 45 12.2	-0.4
	2.4nm,0.1s						
MTBS				S	Sb	21 45 26.1	0.0
	17nm,0.3s						
MTBS	Maitube	1.04	55	eP	Pb	21 45 12.6	+0.1
	0.9nm,0.1s						
MTBS				eS	Sb	21 45 26.2	+0.2
	16nm,0.3s						
TNSS	Tian-Shan	1.33	67	eP	Pg	21 45 18.2	+0.1
	0.1nm,0.0s						
TNSS				eS	Sn	21 45 35.9	+0.8
	0.5nm,0.2s						
KOTS	Kotyrbulak	1.52	62	P	Pg	21 45 21.5	-0.3
	1.3nm,0.2s						
KOTS				S	Sg	21 45 41.7	+0.1
	7.4nm,0.5s						
KOTS	Kotyrbulak	1.52	62	eP	Pg	21 45 21.5	-0.3
	1.3nm,0.2s						
KOTS				eS	Sg	21 45 41.7	+0.1
	7.4nm,0.5s						
MRKS	Merke	1.52	278	P	Pb	21 45 21.0	+0.2
	0.5nm,0.1s						
MRKS				S	Sb	21 45 40.7	+0.7
	7.5nm,0.3s						
MRKS	Merke	1.52	278	eP	Pb	21 45 21.0	+0.2
	0.5nm,0.1s						
MRKS				eS	Sb	21 45 40.7	+0.7
	7.5nm,0.3s						
CHKK	Chushkaly	1.82	43	eP	Pg	21 45 26.5	-0.9
	0.7nm,0.1s						
CHKK				eS	Sg	21 45 50.1	-0.9
	5.6nm,0.2s						
SATY	Saty	2.37	76	Pg	Pg	21 45 37.1	-0.8
	0.8nm,0.1s						
SATY				Lg	Lg	21 46 08.6	
	3.7nm,0.2s						
KPKS	Kokpek	2.67	69	Pg	Pb	21 45 41.6	+1.3
	0.2nm,0.1s						
KPKS				Lg	Lg	21 46 16.1	
	2.1nm,0.4s						
KPKS	Kokpek	2.67	69	eP	Pb	21 45 41.6	+1.3
	0.2nm,0.1s						
KPKS				eS	Sg	21 46 16.1	-2.2
	2.1nm,0.4s						

UZB	**Uzynbulak**	**2.83**	**76**	*e*P	**Pb**	**21 45 44.7**	**+1.7**
	0.9nm,0.1s						
UZB				*e*S	**Sg**	**21 46 21.3**	**-2.0**
	2.2nm,0.3s						

IDC 26 21:47:32.9±5.2**, 6°.69S×129°.99E, h188**km±50km**, mb3.5**/1**, mbtmp3.7**/4**, Error ellipse: s-maj=74.8km s-min=21.9km az=71.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**7.16**	**240**	S	Sn	21 50 41.3	+5.0
	9.1nm,0.3s,baz=112,slow=19,SNR=3.5						
FITZ	**Fitzroy Crossi**	**12.10**	**200**	P	Pn	21 50 19.1	-0.4
	0.8nm,0.4s,baz=29,slow=12,SNR=14						
FITZ				S	Sn	21 52 29.2	-5.0
	2.6nm,0.3s,baz=66,slow=19,SNR=9.8						
WRA	**Warramunga Arr**	**13.83**	**163**	P	Pn	21 50 40.2	-1.1
	0.4nm,0.3s,baz=346,slow=12,SNR=9.6						
WRA				S	Sn	21 53 06.3	-9.2
	0.9nm,0.4s,baz=332,slow=24,SNR=7.2						
ASAR	**Alice Springs**	**17.29**	**168**	P	Pn	21 51 23.8	+0.5
	0.6nm,0.6s,baz=350,slow=9.7,SNR=11						
ASAR				S	S	21 54 32.1	-0.1
	0.7nm,0.8s,baz=348,slow=27,SNR=4.9						
MKAR	**Makanchi Array**	**67.96**	**327**	P	P	21 58 11.6	0.0
	0.7nm,0.4s,baz=113,slow=8.2,SNR=22						
	0.7nm,0.4s						

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*NEIC **26** 21:47:48.0±1.7, 17°.23N±0°.08×68°.31W±0°.05, h10km±2km, ML2.5/14, Md3.1/6(RSPR), Error ellipse: s-maj=13.5km s-min=8.5km az=181.0*

*SDD **26** 21:47:51.7±1.7, 17°.48N×68°.35W, h15km±19km, MD3.1, ML3.0, MW2.6, Presumed earthquake*

*RSPR **26** 21:47:52.4, 17°.30N×68°.37W, h29km±29km, MD3.1/6*

ISC 26 21:47:46.5±2.1**, 17°.3N**±0°.1×**68°.37W**±0°.03**, h9**km±11km**, n37, σ0ˢ.74**/45**, 1C-6D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**1.38**	**38**		**Pg**	**21 48 14.1**	**+1.0**
IDE					**Sg**	**21 48 30.6**	**-0.3**
IDE	**Isla Desecheo**	**1.38**	**38**	⇓*i*P	**Pg**	**21 48 14.1**	**+1.0**
IDE	**Isla Desecheo**	**1.38**	**38**	*e*S	**Sg**	**21 48 30.6**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.40**	**59**		**Pg**	**21 48 13.6**	**+0.4**
CRPR					**Sb**	**21 48 30.6**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.40**	**59**	⇑*i*P	**Pg**	**21 48 13.7**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.40**	**59**	*e*S	**Sb**	**21 48 30.6**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.40**	**59**	*e*Pg	**Pg**	**21 48 13.7**	**+0.4**
CRPR				*e*Sg	**Sg**	**21 48 31.0**	**-0.5**
CRPR				IAML		21 48 31.8	
	comp=N,210nm,0.3s						
MLPR	**Magueyes Islan**	**1.43**	**62**	⇑*e*P	**Pg**	**21 48 14.4**	**+0.5**
MLPR	**Magueyes Islan**	**1.43**	**62**	*e*S	**Sb**	**21 48 31.6**	**-0.2**
MLPR	**Magueyes Islan**	**1.43**	**62**	*e*Pg	**Pg**	**21 48 14.2**	**+0.2**
MLPR				*e*Sg	**Sg**	**21 48 32.2**	**-0.4**
MLPR				IAML		21 48 36.7	
	comp=N,99nm,0.3s						
LSP	**Las Mesas**	**1.51**	**54**		**Pg**	**21 48 15.7**	**+0.2**
LSP					**Sb**	**21 48 33.7**	**-0.2**
LSP	**Las Mesas**	**1.51**	**54**	⇓*i*P	**Pg**	**21 48 15.7**	**+0.2**
LSP	**Las Mesas**	**1.51**	**54**	*e*S	**Sb**	**21 48 33.7**	**-0.2**
AGPR	**Aguadilla, PR**	**1.67**	**46**	Pn	**Pb**	**21 48 17.4**	**-0.1**
AGPR				IAML		21 48 41.4	
	comp=N,70nm,1.4s						
AGPR	**Aguadilla, PR**	**1.67**	**46**	*e*S	**Sb**	**21 48 37.9**	**-0.8**
DR12	**Loma Pena Alta**	**1.77**	**327**	Pn	**Pg**	**21 48 20.4**	**0.0**
HATOM	**Hato Mayor del**	**1.77**	**327**	*e*Pg	**Pg**	**21 48 20.6**	**+0.2**
HATOM				*e*Sg	**Sb**	**21 48 40.4**	**-1.0**
HATOM				IAML		21 48 41.4	
	comp=N,165nm,0.3s						
OBIP	**Obispado Ponce**	**1.84**	**66**	Pn	**Pb**	**21 48 19.7**	**-0.6**
AOPR	**Arecibo Observ**	**1.86**	**56**		**Sn**	**21 48 42.3**	**0.0**
AOPR	**Arecibo Observ**	**1.86**	**56**		**Pb**	**21 48 20.0**	**-0.7**
AOPR				IAML		21 48 44.0	
	comp=N,74nm,0.4s						
AOPR	**Arecibo Observ**	**1.86**	**56**	⇓*e*P	**Pb**	**21 48 20.5**	**-0.2**
AOPR	**Arecibo Observ**	**1.86**	**56**	*e*S	**Sn**	**21 48 42.3**	**0.0**
AOPR	**Arecibo Observ**	**1.86**	**56**	*i* P	**Pb**	**21 48 20.8**	**+0.1**
AOPR				*e*Sg	**Sb**	**21 48 44.7**	**+0.5**
AOPR				IAML		21 48 44.9	
	comp=N,557nm,0.2s						
EMPR	**Esperanza - Ma**	**2.11**	**56**		**Pb**	**21 48 24.9**	**-0.1**
EMPR					**Sb**	**21 48 49.8**	**-1.5**
EMPR	**Esperanza - Ma**	**2.11**	**56**	⇓*e*P	**Pb**	**21 48 24.9**	**-0.1**
EMPR	**Esperanza - Ma**	**2.11**	**56**	*e*S	**Sb**	**21 48 49.8**	**-1.5**
ECPR	**Experimental S**	**2.17**	**62**	⇓*e*P	**Pb**	**21 48 25.4**	**-0.5**
ECPR	**Experimental S**	**2.17**	**62**	*e*S	**Sn**	**21 48 49.7**	**-0.1**
SJG	**San Juan**	**2.27**	**69**	Pn	**Pn**	**21 48 24.8**	**+0.6**
SJG				IAML		21 48 53.3	
	comp=N,25nm,0.7s						
SJG				IAML		21 48 56.9	
	comp=N,20nm,1.0s						
GCPR	**Guaynabo City**	**2.40**	**65**		**Sn**	**21 48 55.4**	**-0.2**
GCPR	**Guaynabo City**	**2.40**	**65**	*e*S	**Sn**	**21 48 55.4**	**-0.2**
HUMP	**Col San Antoni**	**2.55**	**70**		**Sn**	**21 48 58.6**	**-0.5**
HUMP	**Col San Antoni**	**2.55**	**70**	Pn	**Pn**	**21 48 28.3**	**+0.3**
HUMP				IAML		21 49 00.1	
	comp=N,21nm,0.3s						
HUMP				IAML		21 49 03.5	
	comp=N,34nm,1.4s						
HUMP	**Col San Antoni**	**2.55**	**70**	*e*S	**Sn**	**21 48 58.6**	**-0.5**
SDDR	**Presa de Saban**	**3.24**	**302**		**Pn**	**21 48 40.0**	**+2.4**
SDDR				IAML		21 49 19.5	
	comp=N,14nm,1.5s						
SDDR				IAML		21 49 22.0	
	comp=N,10nm,1.5s						
SDDR	**Presa de Saban**	**3.24**	**302**	⇓*e*P	**Pb**	**21 48 42.2**	**-2.0**
SDDR	**Presa de Saban**	**3.24**	**302**	*e*S	**Sn**	**21 49 16.9**	**+0.5**

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*IDC **26** 22:07:01.8±1.8, 17°.18S×35°.57E, h0km, mb3.7/4, mbtmp3.7/5, ML3.8/1, Error ellipse: s-maj=56.5km s-min=28.0km az=130.0*

*NEIC **26** 22:07:04.5±1.6, 17°.0S±0°.1×35°.44E±0°.05, h10km±1km, mb4.2/3, Error ellipse: s-maj=18.6km s-min=5.1km az=157.0*

*PRE **26** 22:07:10.7±0.8, 16°.75S×34°.74E, h5km, ML3.4*

ISC 26 22:07:04.3±0.8**, 17°.12S**±0°.07×**35°.34E**±0°.07**, h10**km**, n36, σ2ˢ.39**/44**, mb3.8**/3**, Mozambique**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**7.11**	**284**		**Pn**	**22 08 49.7**	**+1.2**
LSZ				Sn	**Sn**	**22 10 07.8**	**-1.7**
LSZ	**Lusaka**	**7.11**	**284**	*e*P	**Pn**	**22 08 48.5**	**0.0**
LSZ				*e*S	Sn	22 09 58.1	-11
LSZ				IAML		22 11 02.6	
	comp=Z,38nm,0.5s						
LSZ	**Lusaka**	**7.11**	**284**	*i* P	**Pn**	**22 08 51.7**	**+3.2**
LSZ				*i* S	**Sn**	**22 10 07.7**	**-1.7**
MUSN	**Musina, Limpop**	**7.28**	**224**	*e*P	Pn	22 08 57.3	+6.5
MUSN				*e*S	**Sn**	**22 10 16.2**	**+2.5**
MUSN				IAML		22 11 06.5	
	comp=Z,62nm,0.7s						
BROLN	**Tlhalogang**	**8.54**	**241**	*i* P	**Pn**	**22 09 12.3**	**+4.1**
BROLN				*i* S	**Sn**	**22 10 45.0**	**+0.4**
BROLN				IAML		22 11 37.4	
	comp=N,110nm,0.6s						
MREMI	**Moremi**	**9.19**	**233**	*i* P	**Pn**	**22 09 21.9**	**+4.8**
MREMI				*i* S	**Sn**	**22 11 04.3**	**+3.6**
MREMI				IAML		22 12 04.2	
	comp=E,304nm,0.2s						
KSANE	**Kasane**	**9.73**	**264**		**Pn**	**22 09 26.6**	**+2.0**
KSANE	**Kasane**	**9.73**	**264**	*i* P	**Pn**	**22 09 23.1**	**-1.5**
LEPH	**Lephalale, Lim**	**9.74**	**225**	*e*P	Pn	22 09 30.7	+6.1
LEPH				*e*S	**Sn**	**22 11 14.0**	**-0.1**
LEPH				IAML		22 12 24.9	
	comp=Z,54nm,0.6s						
KHWEE	**KHWEE**	**10.49**	**241**	Pn	**Pn**	**22 09 37.0**	**+2.1**
KHWEE	**KHWEE**	**10.49**	**241**	*i* P	**Pn**	**22 09 38.1**	**+3.2**
KHWEE				*i* S	**Sn**	**22 11 33.8**	**+1.2**
KHWEE				IAML		22 12 42.4	
	comp=N,344nm,0.7s						
PHDHD	**Phuduhudu**	**10.68**	**252**	Pn	**Pn**	**22 09 40.2**	**+2.6**
PHDHD	**Phuduhudu**	**10.68**	**252**	*i* P	**Pn**	**22 09 38.9**	**+1.3**
PHDHD				*i* S	**Sn**	**22 11 34.6**	**-2.8**
PHDHD				IAML		22 12 46.0	
	comp=N,290nm,0.7s						
LPHEP	**Lephephe**	**10.85**	**234**	Pn	**Pn**	**22 09 41.7**	**+1.9**
LPHEP	**Lephephe**	**10.85**	**234**	*i* P	Pn	22 09 44.9	+5.1
LPHEP				*i* S	**Sn**	**22 11 42.0**	**+0.6**
LPHEP				IAML		22 12 56.9	
	comp=N,72nm,1.0s						
ABPO	**Ambohimpanom**	**11.47**	**101**	Pn	**Pn**	**22 09 48.4**	**+0.1**
VOI	**Vohitsoka**	**11.80**	**116**	Pn	**Pn**	**22 09 52.1**	**-0.9**
LBTB	**Lobatse**	**12.01**	**228**	Pn	**Pn**	**22 09 59.0**	**+3.2**
LBTB	**Lobatse**	**12.01**	**228**	*e*P	Pn	22 10 01.5	+5.8
LBTB				*e*S	**Sn**	**22 12 07.2**	**-2.7**
LBTB				IAML		22 12 35.2	
	comp=Z,3.3nm,0.7s						
LBTB	**Lobatse**	**12.01**	**228**	*i* P	**Pn**	**22 09 56.0**	**+0.3**
LBTB				*i* S	**Sn**	**22 12 04.9**	**-5.0**
GMARE	**Gumare**	**12.72**	**258**	Pn	**Pn**	**22 10 07.1**	**+1.6**
KGCAE	**Kacgae**	**13.60**	**243**		**Pn**	**22 10 19.2**	**+1.8**
QNGWA	**Qangwa**	**13.66**	**258**		**Pn**	**22 10 19.2**	**+0.9**
BOSA	**Boshof**	**14.73**	**217**	Pn	**Pn**	**22 10 34.2**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=50,slow=8.4,SNR=6.8						
BOSA				Sn	**Sn**	**22 13 19.0**	**+2.7**
	comp=Z,0.2nm,0.3s,baz=323,slow=9.9,SNR=2.0						
BOSA				Lg	Lg	22 14 51.0	
	comp=Z,0.3nm,0.3s,baz=112,slow=14,SNR=3.6						
	comp=Z,2.8nm,1.1s						
BOSA	**Boshof**	**14.73**	**217**		**Pn**	**22 10 34.9**	**+2.0**
BOSA	**Boshof**	**14.73**	**217**	*i* P	**Pn**	**22 10 33.4**	**+0.5**
BOSA				*i* S	**Sn**	**22 13 11.3**	**-5.0**
KIBK	**Kibwezi**	**14.92**	**11**	Pn	Pn	22 10 29.2	-6.3
LKGWB	**Lokgwabe**	**14.93**	**240**		**Pn**	**22 10 31.7**	**-4.0**
KOOLE	**Kule**	**15.38**	**245**		**Pn**	**22 10 42.3**	**+0.7**
KOOLE				IAmb	IAmb	22 10 56.8	
	comp=Z,14nm,0.6s						
TSUM	**Tsumeb**	**17.00**	**260**	Pn	**Pn**	**22 11 03.4**	**+0.9**
TSUM				IAmb	IAmb	22 11 25.8	
	comp=Z,15nm,1.4s						
WIN	**Windhoek**	**17.99**	**250**		**Pn**	**22 11 15.7**	**+0.9**
WIN				IAmb	IAmb	22 11 19.1	
	comp=Z,26nm,1.4s						
TORD	**Torodi Ar. Bea**	**44.81**	**310**	P	**P**	**22 15 18.9**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=134,slow=7.3,SNR=4.4						
	comp=Z,0.8nm,0.8s						
GERES	**GERESS Array B**	**68.43**	**345**	P	**P**	**22 18 07.0**	**+0.7**
	comp=Z,0.3nm,0.8s,baz=142,slow=5.0,SNR=3.8						
	comp=Z,0.3nm,0.8s						
MKAR	**Makanchi Array**	**76.35**	**31**	P	**P**	**22 18 51.7**	**-1.9**
	comp=Z,0.6nm,0.6s,baz=223,slow=7.3,SNR=5.7						
	comp=Z,0.6nm,0.6s						
MKAR	**Makanchi Array**	**76.35**	**31**	P	**P**	**22 18 52.2**	**-1.5**
ZALV	**Zalesovo Beam**	**82.46**	**27**	P	**P**	**22 19 26.3**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=225,slow=5.9,SNR=4.1						
	comp=Z,0.5nm,0.5s						

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*IDC **26** 22:07:46.3±0.7, 3°.44N×74°.10W, h0km, mb3.6/13, mbtmp3.7/15, ML3.7/2, MS3.1/5, Error ellipse: s-maj=18.3km s-min=12.4km az=89.0*

*RSNC **26** 22:07:47.7±0.0, 3°N±1°×7°4W±°, h16km±2km, M4.0, mB4.9, mb4.6, ML3.8, Mw4.0, Mw(mB)4.2*

ISC 26 22:07:46.6±1.3**, 3°.43N**±0°.02×**74°.18W**±0°.03**, h2**km±8km**, n57, σ1ˢ.39**/74**, mb3.5**/11**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	**La Uribe, Meta**	**0.27**	**227**	P	**Pg**	**22 07 52.5**	**+0.7**
URMC				S	**Sg**	**22 07 56.0**	**+0.7**
PRAC	**Prado**	**0.76**	**292**	P	**Pg**	**22 08 01.3**	**+0.2**
PRAC				S	**Sg**	**22 08 11.7**	**+0.8**
VILC	**Villavicencio,**	**0.83**	**36**	P	**Pb**	**22 08 03.2**	**-0.6**
VILC				S	**Sb**	**22 08 14.7**	**-0.9**
ORTC	**Ortega, Tolima**	**1.16**	**294**	P	**Pn**	**22 08 08.5**	**-1.4**
ORTC				S	**Sn**	**22 08 25.3**	**-1.1**
CHIC	**Chingaza**	**1.27**	**21**	P	**Pn**	**22 08 10.4**	**-1.3**
CHIC				S	**Sb**	**22 08 26.8**	**-1.7**
MACC	**Macarena, Meta**	**1.32**	**165**	P	**Pn**	**22 08 11.0**	**-1.1**
MACC				S	**Sb**	**22 08 28.3**	**-1.2**
ROSC	**El Rosal**	**1.41**	**354**	Pg	**Pb**	**22 08 13.8**	**0.0**
	588nm,0.3s,baz=175,slow=4.0,SNR=299						
ROSC				Lg	Lg	22 08 32.0	
	410nm,0.3s,baz=174,slow=23,SNR=4.9						
BETC	**Betania**	**1.46**	**239**	P	**Pn**	**22 08 13.9**	**-0.1**
BETC				S	**Sb**	**22 08 33.2**	**-0.4**
ANIL	**Santa Ana**	**1.61**	**311**	P	**Pn**	**22 08 16.1**	**-0.2**
ANIL				S	**Sn**	**22 08 37.2**	**-0.6**
GARC	**Garzon, Huila**	**1.80**	**227**	P	**Pb**	**22 08 19.5**	**-1.0**
GARC				S	**Sb**	**22 08 42.5**	**-1.1**
SPBC	**San Pablo de B**	**2.21**	**3**	P	**Pb**	**22 08 27.4**	**+0.1**
SPBC				S	**Sb**	**22 08 56.9**	**+1.8**
NORC	**Norcasia**	**2.23**	**342**	P	**Pn**	**22 08 25.9**	**+1.4**
NORC				S	**Sb**	**22 08 54.5**	**-1.1**
YOTC	**Yotoco, Valle**	**2.23**	**284**	P	**Pb**	**22 08 26.7**	**-0.9**
YOTC				S	**Sb**	**22 08 56.0**	**+0.3**
FLOC	**Florencia**	**2.35**	**219**	P	**Pb**	**22 08 28.2**	**-1.5**
FLOC				S	**Sb**	**22 08 58.4**	**-0.9**
JAMC	**Jamundi, Valle**	**2.50**	**265**	P	**Pb**	**22 08 30.9**	**-1.4**
JAMC				S	**Sb**	**22 09 02.5**	**-1.1**
PLMC	**San Jos del P**	**2.56**	**305**	P	**Pn**	**22 08 30.3**	**+1.2**
PLMC				S	**Sb**	**22 09 05.6**	**+0.5**
POPC	**Popayan, Colom**	**2.64**	**250**	P	**Pb**	**22 08 32.7**	**-2.1**
POPC				S	**Sb**	**22 09 08.7**	**+0.9**
RUSC	**La Rusia**	**2.68**	**24**	P	**Pb**	**22 08 33.3**	**-2.2**
RUSC				S	**Sb**	**22 09 09.8**	**+0.7**
CBOC	**Ciudad Bolivar**	**3.03**	**323**	P	**Pb**	**22 08 39.8**	**-1.5**
CBOC				S	**Sb**	**22 09 19.2**	**+0.4**
HELC	**Santa Helena**	**3.05**	**334**	P	**Pb**	**22 08 39.4**	**-2.4**
HELC				S	**Sb**	**22 09 18.2**	**-1.5**
PTBC	**PUERTO BERRIO,**	**3.10**	**355**	P	**Pn**	**22 08 38.1**	**+1.6**
PTBC				S	**Sb**	**22 09 19.9**	**-0.8**
BARC	**Barichara**	**3.29**	**18**	P	**Pb**	**22 08 44.4**	**-1.5**
BARC				S	**Sb**	**22 09 27.0**	**+0.4**
PTLC	**Puerto Leguiza**	**3.30**	**191**	P	**Pg**	**22 08 51.0**	**+1.2**
CRUC	**La Cruz**	**3.33**	**236**	P	**Pb**	**22 08 44.4**	**-2.2**
BBAC	**Balboa, Cauca**	**3.37**	**245**	P	**Pn**	**22 08 42.4**	**+2.0**
BRJC	**Barrancabermej**	**3.54**	**7**	P	**Pb**	**22 08 47.3**	**-2.7**
GCUF	**Volcan Galeras**	**3.85**	**235**	P	**Pb**	**22 08 53.6**	**-1.9**
OCAC	**Ocana**	**4.85**	**10**	P	**Pn**	**22 09 05.0**	**+4.2**
APAC	**Apartado, Choc**	**5.04**	**332**	P	Pb	22 09 09.7	-5.8
	67nm,0.7s						
OTAV	**Otavalo**	**5.32**	**233**	P	Pn	22 09 12.6	+5.1
	25nm,0.8s						
PAC1	**Pacto, Paraso**	**5.58**	**236**	P	Pb	22 09 20.3	-4.5
SDV	**Santo Domingo**	**6.46**	**33**	Pn	**Pn**	**22 09 22.6**	**-0.4**
	6.7nm,0.3s,baz=148,slow=3.5,SNR=27						
SDV				Sn	**Sn**	**22 10 35.4**	**-2.1**
	20nm,0.3s,baz=270,slow=21,SNR=8.2						
SDV				Lg	Lg	22 11 08.3	
	16nm,0.3s,baz=328,slow=16,SNR=6.3						
SDV				LR	LR	22 12 13.6	
	comp=Z,135nm,19.7s,baz=256,slow=42						
	14nm,0.3s						
SDV	**Santo Domingo**	**6.46**	**33**	P	**Pn**	**22 09 24.2**	**+1.2**
	836nm37nm,0.8s						
SJCC	**San Jacinto, C**	**6.50**	**351**	P	**Pn**	**22 09 24.6**	**+1.3**
	25nm,0.9s						
SGC2	**Sao Gabriel da**	**8.03**	**116**	P	**Pn**	**22 09 43.7**	**-0.7**
URIC	**Uribia, Colomb**	**8.50**	**15**	P	**Pn**	**22 09 50.3**	**-0.4**
ATAH	**Atahualpa**	**11.31**	**202**	Pn	**Pn**	**22 10 30.8**	**+1.1**
	1.4nm,0.3s,baz=61,slow=6.5,SNR=7.4						
ATAH				Sn	**Sn**	**22 12 40.8**	**+3.9**
	0.2nm,0.3s,baz=86,slow=22,SNR=1.3						
ATAH				LR	LR	22 16 02.0	
	comp=Z,97nm,21.7s,baz=17,slow=44						
	3.1nm,0.5s						
JTS	**Las Juntas de**	**12.68**	**303**	LR	LR	22 15 47.5	
	comp=Z,30nm,19.8s,baz=100,slow=38						
SJG	**San Juan**	**16.57**	**28**	LR	LR	22 18 51.9	
	comp=Z,60nm,19.5s,baz=142,slow=40						
LPAZ	**La Paz**	**20.49**	**163**	P	Pn	22 12 28.1	-0.6
	1.5nm,0.7s,baz=5.9,slow=11,SNR=4.6						
	1.5nm,0.7s						
MDP	**Montagnes des**	**21.54**	**85**	P	**P**	**22 12 37.0**	**-0.5**
	6.9nm,0.6s,baz=249,slow=12,SNR=6.6						
	6.9nm,0.6s						
SIV	**San Ignacio**	**23.25**	**146**	S	**S**	**22 17 10.7**	**+1.9**
	0.7nm,0.6s,baz=338,slow=16,SNR=1.6						
SIV				Lg	Lg	22 19 58.6	
	baz=46,slow=23,SNR=5.9						
TXAR	**Lajitas Array**	**38.03**	**316**	P	**P**	**22 15 07.2**	**+0.6**
	0.2nm,0.7s,baz=122,slow=8.0,SNR=1.5						
TXAR				PcP	**PcP**	**22 17 23.8**	**+1.5**
	0.1nm,0.4s,baz=128,slow=4.8,SNR=3.4						
	0.2nm,0.7s						
PFO	**Pinyon Flats O**	**49.52**	**312**	LR	LR	22 40 45.2	
	comp=Z,58nm,19.8s,baz=52,slow=40						
PDAR	**Pinedale Array**	**50.24**	**326**	P	**P**	**22 16 44.6**	**+0.1**
	0.4nm,0.8s,baz=126,slow=9.3,SNR=3.9						
	0.4nm,0.8s						
SCHQ	**Schefferville**	**51.59**	**5**	P	**P**	**22 16 54.0**	**-0.2**
	2.6nm,0.8s,baz=194,slow=8.2,SNR=4.6						
	2.6nm,0.8s						
NVAR	**Mina Array Bea**	**53.16**	**317**	P	**P**	**22 17 07.0**	**+0.6**
	0.7nm,0.8s,baz=126,slow=7.6,SNR=4.3						
	0.7nm,0.8s						
YKA	**Yellowknife Ar**	**66.08**	**341**	P	**P**	**22 18 35.3**	**+0.5**
	0.1nm,0.5s,baz=100,slow=8.4,SNR=5.7						
	0.1nm,0.5s						
DBIC	**Dimbokro**	**69.09**	**84**	P	**P**	**22 18 55.0**	**+0.3**
	2.3nm,0.8s,baz=280,slow=10,SNR=3.7						
	2.3nm,0.8s						
ESDC	**Sonseca Array**	**72.63**	**50**	P	**P**	**22 19 15.8**	**-0.2**
	0.4nm,0.9s,baz=280,slow=6.4,SNR=2.0						
	0.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**75.48**	**77**	P	**P**	**22 19 31.6**	**-1.4**
	0.2nm,0.4s,baz=286,slow=5.6,SNR=4.0						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**79.58**	**335**	P	**P**	**22 19 55.5**	**+0.5**
	0.3nm,0.6s,baz=104,slow=3.8,SNR=4.5						
	0.3nm,0.6s						
NOA	**NORSAR Array B**	**84.78**	**29**	P	**P**	**22 20 22.6**	**+0.2**
	0.2nm,0.5s,baz=310,slow=9.0,SNR=5.0						
	0.2nm,0.5s						
GERES	**GERESS Array B**	**86.04**	**41**	P	**P**	**22 20 28.8**	**-0.2**
	0.1nm,0.6s,baz=282,slow=6.9,SNR=1.6						
	0.1nm,0.6s						
ASAR	**Alice Springs**	**146.22**	**231**	PKPbc	**PKPdf**	**22 27 27.8**	**-0.9**
	0.9nm,0.5s,baz=122,slow=4.0,SNR=20						
WRA	**Warramunga Arr**	**147.70**	**237**	PKPbc	**PKPbc**	**22 27 32.0**	**-1.8**
	1.2nm,0.8s,baz=118,slow=2.9,SNR=4.8						
BATI	**Baumata**	**161.06**	**248**	PKPab	**PKPab**	**22 28 31.9**	**-0.9**
	16nm,0.7s,baz=75,slow=4.4,SNR=4.4						

IDC 26 22:12:30.9±2.2**, 16°.85S×35°.58E, h0**km**, mb3.7**/4**, mbtmp3.8**/5**, MS2.9**/4**, Error ellipse: s-maj=68.0km s-min=41.0km az=152.0, Malawi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**7.28**	**281**	LR	LR	22 17 09.6	
	comp=Z,66nm,21.1s,baz=100,slow=38						
LBTB	**Lobatse**	**12.37**	**227**	LR	LR	22 20 15.5	
	comp=Z,59nm,19.1s,baz=59,slow=38						
BOSA	**Boshof**	**15.08**	**217**	Pn	Pn	22 16 05.5	-0.1
	5.4nm,1.0s,baz=270,slow=18,SNR=0.9						
BOSA				Sn	Sn	22 18 41.6	-12
	0.2nm,0.3s,baz=330,slow=18,SNR=1.1						
BOSA				Lg	Lg	22 20 20.9	
	0.3nm,0.3s,baz=332,slow=18,SNR=3.2						
BOSA				LR	LR	22 21 52.0	
	comp=Z,36nm,20.4s,baz=7.5,slow=37						
SUR	**Sutherland**	**20.44**	**218**	LR	LR	22 25 02.1	
	comp=Z,79nm,18.4s,baz=82,slow=37						
TORD	**Torodi Ar. Bea**	**44.83**	**310**	P	P	22 20 46.9	-0.1
	0.9nm,0.9s,baz=112,slow=7.3,SNR=4.4						
	0.9nm,0.9s						
BVAR	**Borovoye Array**	**75.80**	**21**	P	P	22 24 18.3	-0.2
	0.4nm,0.6s,baz=202,slow=7.4,SNR=3.0						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**76.00**	**31**	P	P	22 24 20.2	+0.3
	0.4nm,0.6s,baz=217,slow=5.2,SNR=4.7						
	0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**82.11**	**27**	P	P	22 24 53.2	0.0
	0.5nm,0.5s,baz=219,slow=6.7,SNR=4.1						
	0.5nm,0.5s						

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*PRU **26** 23:28:44.3, 43°.12N×18°.47E, h10km*

*BEO **26** 23:28:45.8±0.3, 43°.28N×18°.10E, h13km±2km, ML2.7/12*

*RHSSO **26** 23:28:46.0±0.3, 43°.20N×18°.13E, h8km, ML3.0/7*

*PDG **26** 23:28:46.2±0.0, 43°.18N×18°.15E, h12km, MD3.1/6, ML3.0/12, Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*

ISC 26 23:28:44.9±1.1**, 43°.25N**±0°.02×**18°.15E**±0°.02**, h4**km±9km**, n92, σ1ˢ.56**/159**, 17C-15D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLINJ	**Klinje**	**0.33**	**104**	*e*Pg	**Pb**	**23 28 52.7**	**-0.7**
KLINJ				*e*Sg	**Sb**	**23 28 58.3**	**-0.7**
BRY	**Bratogost**	**0.45**	**141**	⇑*i*Pg	**Pg**	**23 28 53.9**	**+0.3**
BRY				*i* Sg	**Sg**	**23 29 00.4**	**+0.9**
STON	**Ston**	**0.50**	**221**	*e*Pg	**Pg**	**23 28 53.6**	**-1.0**
STON				Sg	**Sg**	**23 29 00.5**	**-0.6**
TREB	**Trebinje**	**0.55**	**165**	⇑*i*Pg	**Pg**	**23 28 55.1**	**-0.4**
TREB				*e*Sg	**Sg**	**23 29 03.7**	**+1.0**
TREB	**Trebinje**	**0.55**	**165**	*e*Pg	**Pg**	**23 28 55.3**	**-0.2**
UPM	**Unac-Piva**	**0.55**	**95**	⇓*i*Pg	**Pb**	**23 28 56.6**	**-0.7**
UPM				*i* Sg	**Sb**	**23 29 05.5**	**-0.1**
DBRK	**Dubrovnik**	**0.58**	**180**	*e*Pg	**Pg**	**23 28 55.9**	**-0.2**
DBRK				Sg	**Sg**	**23 29 03.1**	**-0.5**
NKME	**Niksic**	**0.76**	**129**	⇓*i*Pg	**Pg**	**23 28 59.6**	**+0.1**
NKME				*e*Sg	**Sb**	**23 29 11.4**	**0.0**
RICI	**Ricice**	**0.78**	**289**	*e*Pg	**Pg**	**23 28 59.0**	**-0.9**
RICI				Sg	**Sg**	**23 29 09.8**	**-0.2**
MAKA	**Makarska**	**0.83**	**273**	*e*Pg	**Pg**	**23 28 59.2**	**-1.6**
MAKA				Sg	**Sg**	**23 29 11.2**	**-0.3**
HCY	**Herceg Novi**	**0.84**	**162**	⇓*i*Pg	**Pg**	**23 29 00.6**	**-0.4**
HCY				*i* Sg	**Sg**	**23 29 13.0**	**+1.1**
CEME	**Cevo**	**0.90**	**141**	⇓*i*Pg	**Pg**	**23 29 01.8**	**-0.4**
CEME				*e*Sg	**Sb**	**23 29 15.4**	**-0.1**
PLE	**Pljevlja**	**0.91**	**84**	*e*Pg	**Pn**	**23 29 03.8**	**-0.8**
PLE	**Pljevlja**	**0.91**	**84**	⇓*i*Pg	**Pb**	**23 29 03.3**	**0.0**
PLE				*i* Sg	**Sn**	**23 29 17.8**	**-0.3**
RUDO	**Rudo**	**0.96**	**67**	⇑*i*Pg	**Pb**	**23 29 03.4**	**-0.7**
RUDO				*e*Sg	**Sn**	**23 29 17.5**	**-1.8**
RUDO	**Rudo**	**0.96**	**67**	*e*Pg	**Pb**	**23 29 03.5**	**-0.7**
LSTV	**Lastovo**	**1.04**	**243**	*e*Pg	**Pg**	**23 29 02.5**	**-2.4**
LSTV				Sg	**Sg**	**23 29 16.5**	**-1.9**
BUM	**Brajici-Budva**	**1.09**	**150**	⇓*i*Pg	**Pg**	**23 29 05.4**	**-0.5**
BUM				*i* Sg	**Sb**	**23 29 21.8**	**+0.7**
BBLS	**Lazi&#263i**	**1.10**	**56**	*e*Pg	**Pn**	**23 29 06.8**	**-0.4**
BBLS				*e*Sg	**Sn**	**23 29 22.4**	**-0.4**
PDG	**Podgorica**	**1.15**	**135**	⇑P	**Pg**	**23 29 06.4**	**-0.6**
PDG				⇑S	**Sn**	**23 29 24.0**	**+0.1**
PDG	**Podgorica**	**1.15**	**135**	*e*Pg	**Pg**	**23 29 06.3**	**-0.7**
PDG				*e*Sg	**Sn**	**23 29 24.7**	**+0.7**
PDG	**Podgorica**	**1.15**	**135**	⇑*i*Pg	**Pg**	**23 29 06.4**	**-0.6**
PDG				*i* Sg	**Sn**	**23 29 23.8**	**-0.2**
HVAR	**Hvar**	**1.25**	**267**	*e*Pg	**Pn**	**23 29 06.4**	**-2.6**
HVAR				Sg	**Sg**	**23 29 24.1**	**-0.8**
DRME	**Dracevica, Mon**	**1.31**	**144**	*e*Pg	**Pn**	**23 29 09.6**	**-0.3**
DRME				*e*Sg	**Sn**	**23 29 29.4**	**+1.6**
DRME	**Dracevica, Mon**	**1.31**	**144**	⇓*i*Pg	**Pn**	**23 29 09.4**	**-0.5**
DRME				*e*Sg	**Sn**	**23 29 28.9**	**+1.1**
BEY	**Berane**	**1.33**	**106**	*e*Pg	**Pb**	**23 29 11.0**	**+0.5**
IVA	**Berane**	**1.33**	**106**	⇑*i*Pg	**Pb**	**23 29 10.3**	**-0.2**
IVA				*i* Sg	**Sn**	**23 29 31.3**	**+2.8**
SJES	**Sjenica**	**1.33**	**89**	*e*Pg	**Pb**	**23 29 11.0**	**+0.5**
KIJV	**Kijevo**	**1.48**	**301**	*e*Pn	**Pn**	**23 29 12.0**	**-0.3**
KIJV				Sg	**Sn**	**23 29 32.3**	**+0.3**
PVY	**Plav**	**1.48**	**116**	*e*Pg	**Pg**	**23 29 13.8**	**+0.5**
PVY	**Plav**	**1.48**	**116**	⇑*i*Pg	**Pb**	**23 29 13.0**	**-0.1**
PVY				*i* Sg	**Sg**	**23 29 34.8**	**+2.3**
IVAS	**Ivanjica**	**1.50**	**77**	*e*Pg	**Pn**	**23 29 12.6**	**0.0**
IVAS				*e*Sg	**Sg**	**23 29 33.8**	**+0.8**
ULC	**Ulcinj**	**1.52**	**147**	⇓*i*Pg	**Pn**	**23 29 13.1**	**+0.3**
ULC				*i* Sg	**Sg**	**23 29 35.0**	**+1.3**
DIVS	**Divibare**	**1.58**	**57**	*e*Pg	**Pn**	**23 29 13.8**	**0.0**
DIVS				*e*Sg	**Sg**	**23 29 35.5**	**-0.3**
TEKS	**Tekeris**	**1.64**	**37**	*e*Pg	**Pn**	**23 29 13.8**	**-0.7**
TEKS				*e*Sg	**Sg**	**23 29 38.6**	**+1.1**
BLY	**Banja Luka**	**1.65**	**335**	*e*Pn	**Pb**	**23 29 16.1**	**+0.2**
BLY				*e*Sn	**Sg**	**23 29 37.9**	**-0.2**
BLY	**Banja Luka**	**1.65**	**335**	⇑P	**Pn**	**23 29 14.9**	**+0.2**
BLY				⇑S	**Sg**	**23 29 39.2**	**+1.2**
BLY	**Banja Luka**	**1.65**	**335**	*e*Pg	**Pb**	**23 29 16.4**	**+0.5**
BLY				*e*Sg	**Sg**	**23 29 38.6**	**+0.5**
ZIRJ	**Zirje**	**1.87**	**283**	*e*Pn	**Pn**	**23 29 17.6**	**-0.1**
ZIRJ				Sn	**Sn**	**23 29 40.7**	**-1.0**
MORI	**Morici**	**1.88**	**290**	*e*Pn	**Pn**	**23 29 18.3**	**+0.5**
MORI				Sn	**Sn**	**23 29 41.9**	**-0.1**
TRUS	**Trudelj**	**1.90**	**58**	*e*Pn	**Pn**	**23 29 18.1**	**0.0**
TRUS				*e*Sn	**Sb**	**23 29 43.5**	**-0.8**
GRUS	**Gruza**	**1.97**	**70**	*e*Pn	**Pn**	**23 29 19.1**	**0.0**
GOCS	**Kraljevo Serbi**	**2.01**	**80**	*e*Pn	**Pn**	**23 29 20.5**	**+0.8**
KNYS	**Krupa na Uni**	**2.10**	**322**	⇑*i*Pn	**Pn**	**23 29 22.1**	**+1.2**
KNYS				*e*Sn	**Sn**	**23 29 49.1**	**+1.6**
UDBI	**Udbina**	**2.15**	**307**	*e*Pn	**Pn**	**23 29 22.6**	**+1.1**
UDBI				Sn	**Sn**	**23 29 49.2**	**+0.6**
SELS	**Selova**	**2.17**	**90**	*e*Pn	**Pn**	**23 29 22.4**	**+0.6**

SELS				eSn	Sb	23 29 49.9	-2.1
AVAS	Avala Beograd	2.24	49	ePn	Pn	23 29 22.0	-0.7
AVAS				eSn	Sn	23 29 48.6	-2.2
FRGS	Fruska Gora	2.25	31	ePn	Pn	23 29 21.8	-1.1
DUGI	Dugi Otok	2.37	289	ePn	Pn	23 29 24.8	+0.3
DUGI				Sn	Sn	23 29 53.7	-0.2
VIRC	Vir	2.47	296	ePn	Pn	23 29 26.5	+0.6
VIRC				Sn	Sn	23 29 57.0	+0.4
BOVS	Bovan	2.62	80	⇓P	Pn	23 29 27.0	-0.9
BOVS	Bovan	2.62	80	ePn	Pn	23 29 28.0	+0.1
NVLJ	Novalja	2.71	300	ePn	Pn	23 29 30.0	+0.9
NVLJ				Sn	Sn	23 30 01.4	-0.9
BARS	Barje	2.72	98	ePn	Pn	23 29 30.1	+0.7
BARS				eSn	Sn	23 30 03.5	+0.8
OHR	Ohrid	2.91	136	i Pn	Pb	23 29 34.8	-2.5
OHR				i Sn	Sg	23 30 24.5	+6.2
VRSS	Vrsac	2.95	50	ePn	Pn	23 29 31.9	-0.7
MORH	Mrgy, Hungar	2.99	7	ePn	Pn	23 29 35.2	+2.2
MORH				eSn	Sn	23 30 10.7	+1.5
MORH	Mrgy, Hungar	2.99	7	⇑P	Pn	23 29 32.2	-0.7
MORH	Mrgy, Hungar	2.99	7	ePn	Pn	23 29 32.3	-0.7
MDVR	Moldovita	2.99	58	⇓P	Pn	23 29 32.0	-1.1
MDVR	Moldovita	2.99	58	ePn	Pn	23 29 32.9	-0.2
ZAGS	Zajecar	3.02	78	ePn	Pn	23 29 33.8	+0.3
ZAGS				eSn	Sn	23 30 09.4	-0.7
ZAPS	Zavoj	3.27	88	ePn	Pn	23 29 37.8	+0.8
RIY	Rijeka	3.35	310	ePn	Pn	23 29 38.4	+0.4
BEHE	Becsehely	3.37	344	ePn	Pn	23 29 38.6	+0.4
BEHE				eSn	Sn	23 30 19.3	+0.7
BZS	Buzias	3.43	45	⇓P	Pn	23 29 37.8	-1.3
BZS				⇑S	Sn	23 30 16.8	-3.4
BZS	Buzias	3.43	45	ePn	Pn	23 29 38.6	-0.5
HERR	Herculane	3.48	61	⇑P	Pn	23 29 38.1	-1.7
HERR				⇓S	Sn	23 30 19.5	-1.9
AQU	L'Aquila	3.61	257	ePn	Pn	23 29 41.3	-0.3
AQU				eSn	Sn	23 30 23.3	-1.3
VTS	Vitosha	3.79	98	ePn	Pn	23 29 44.9	+0.7
VAY	Valandovo	3.80	119	i Pn	Pn	23 29 45.7	+1.5
SIRR	Siria	3.92	38	⇑P	Pn	23 29 44.7	-1.1
SIRR				⇓S	Sn	23 30 28.2	-4.1
SIRR	Siria	3.92	38	ePn	Pn	23 29 44.6	-1.2
GZR	Gura Zlata	3.95	56	⇑P	Pn	23 29 45.0	-1.4
GZR				⇓S	Sn	23 30 30.8	-2.4
IGT	Igoumenitsa	4.06	155	ePn	Pn	23 29 46.7	-1.1
SOKA	Soboth	4.08	328	i Pn	Pn	23 29 48.7	+0.6
	1.0nm,0.2s						
SOKA				i Sn	Sn	23 30 36.2	-0.1
	1.0nm,0.3s						
ARSA	Arzberg	4.41	336	ePn	Pn	23 29 53.2	+0.6
	3.5nm,0.3s						
ARSA				i Sn	Sn	23 30 45.6	+1.2
	1.4nm,0.4s						
SRS	Serrai	4.57	116	ePn	Pn	23 29 56.6	+1.8
RONA	Rosalia, Austr	4.64	344	i Pn	Pn	23 29 57.2	+1.4
	0.7nm,0.2s						
RONA				i Sn	Sn	23 30 49.6	-0.4
	2.2nm,0.5s						
MARR	Marisel-Cluj	4.92	44	⇑P	Pn	23 29 58.1	-1.5
MARR				⇓S	Sn	23 30 54.7	-2.3
CONA	Conrad Observa	4.95	342	ePn	Pn	23 30 01.8	+1.8
	0.7nm,0.3s						
CONA				i Sn	Sn	23 30 55.2	-2.5
	1.3nm,0.4s						
ABTA	Abfaltersbach	5.31	313	i Pn	Pn	23 30 05.8	+0.7
	0.2nm,0.1s						
ABTA				i Sn	Sn	23 31 06.5	-0.1
	1.2nm,0.3s						
ABTA				i Sg	Sg	23 31 42.4	+7.0
	19nm,0.8s						
MOA	Molln	5.35	331	i Pn	Pn	23 30 06.0	+0.6
	0.3nm,0.1s						
MOA				i Sn	Sn	23 31 07.4	-0.1
	1.2nm,0.2s						
BIOA	Bad Ischl, Aus	5.46	326	i Pn	Pn	23 30 08.9	+1.9
	0.8nm,0.2s						
BIOA				i Sn	Sn	23 31 18.3	+8.1
	2.7nm,0.4s						
KECS	Kecovo	5.48	16	eSN	Sn	23 31 08.7	-2.1
LESA	Schwarzleotal	5.68	319	i Pn	Pn	23 30 11.9	+1.8
	0.5nm,0.2s						
LESA				i Sn	Sn	23 31 17.2	+1.4
	0.5nm,0.2s						
WTTA	Wattenberg	6.10	313	i Pn	Pn	23 30 17.8	+1.8
	1.4nm,0.3s						
WTTA				i Sn	Sn	23 31 27.6	+1.3
	3.3nm,0.5s						
CKRC	Cesky Krumlov	6.18	336	eSN	Sn	23 31 28.6	+0.7
WATA	Walderalm	6.18	314	i Pn	Pn	23 30 19.4	+2.4
	1.4nm,0.4s						
WATA				i Sn	Sn	23 31 29.4	+1.3
	1.8nm,0.4s						
SQTA	Sankt Quirin	6.31	311	i Pn	Pn	23 30 20.3	+1.6
	0.5nm,0.1s						
SQTA				i Sn	Sn	23 31 33.1	+1.9
	1.3nm,0.3s						
KHC	Kasperske Hory	6.68	333	ePN	Pn	23 30 25.2	+1.4
KHC				eSN	Sn	23 31 39.0	-1.4
RETA	Reutte	6.71	312	i Pn	Pn	23 30 26.1	+1.8
	0.3nm,0.2s						
RETA				i Sn	Sn	23 31 43.8	+2.8
	1.1nm,0.4s						

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*ISN **26** 23:29:27.7±2.8, 36°.50N×45°.30E, h23km±25km, ML3.1*
*TEH **26** 23:29:27.2, 36°.48N×45°.28E, h6km*
ISC 26 23:29:28.5±1.1**, 36°.51N**±0°.05×**45°.23E**±0°.05**, h10**km**, n12, σ1ˢ.53**/14**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAHB	Mahabad	0.46	56	Pg	Pg	23 29 36.3	-1.2
MAHB				Sg	Sg	23 29 42.4	-1.2
IAZR	Azarshahr	1.31	27	Pg	Pn	23 29 51.3	-1.8
IKRK	Kirkuk	1.32	213	ePg	Pn	23 29 51.0	-2.0
	baz=35						
IKRK				eSg	Sb	23 30 11.0	+0.6
IKRK				AML	AML	23 30 17.1	
	comp=E,331nm,0.4s						
IKRK				AML	AML	23 30 17.4	
	comp=N,411nm,0.3s						
MSL	Mosul	1.71	267	ePn	Pn	23 29 57.0	-1.4
MSL				eSn	Sn	23 30 22.0	+1.6
ISHB	Shabestar	1.79	10	Pn	Pn	23 30 01.3	+1.6
IHSH	Hashtrud	1.81	63	Pg	Pn	23 29 59.4	-0.6
ITBZ	Tabriz	1.87	23	Pn	Pn	23 30 01.7	+1.0
IDHR	Dehrash	2.04	152	Pn	Pn	23 30 02.8	-0.2
IHRS	Heris	2.31	38	Pn	Pn	23 30 09.6	+2.8
ISRB	Sarab	2.34	55	Pn	Pn	23 30 08.6	+1.3
IGHG	Ghaleghazi	2.44	153	Pn	Pn	23 30 09.2	+0.6
GLG1	Gilan-e-Gharb	2.46	167	Pn	Pn	23 30 09.5	+0.8

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*NEIC **26** 23:41:10.7±1.0, 56°.90N±0°.04×153°.65W±0°.08, h34km±4km, Error ellipse: s-maj=8.1km s-min=4.2km az=132.0*
AEIC 26 23:41:11.1±1.2**, 56°.91N**±0°.04×**153°.70W**±0°.06**, h37**km±8km**, ML3.1, ML3.3**/58(NEIC)**, Error ellipse: s-maj=7.4km s-min=2.5km az=141.0, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHAK	Old Harbor	0.39	35		Pn	23 41 19.4	-0.5
OHAK					Sn	23 41 25.8	-1.0
OHAK				IAML		23 41 26.6	
	comp=E,2µm,0.4s						
OHAK				IAML		23 41 27.1	
	comp=N,2µm,0.3s						
SII	Sitkinak Islan	0.44	218		Pn	23 41 20.4	-0.3
SII					Sn	23 41 27.9	+0.2
SII				IAML		23 41 29.0	
	comp=N,4µm,0.4s						
SII				IAML		23 41 29.5	
	comp=E,4µm,0.3s						
R18K	Karluk	0.78	328		Pn	23 41 24.4	-1.1
R18K					Sn	23 41 34.6	-1.4
R18K	Karluk	0.78	328	IAML		23 41 35.2	
	comp=E,1µm,0.4s						
R18K				IAML		23 41 35.4	
	comp=N,1µm,0.4s						
KDAK	Kodiak Island	1.07	34		Pn	23 41 29.0	-0.4
KDAK	Kodiak Island	1.07	34		Sn	23 41 42.9	-0.2
CAHL	Cahill	1.44	324		Pn	23 41 33.8	-0.9
MGLS	Mageik Landsli	1.46	328		Pn	23 41 34.1	-0.9
CHIR	Chirikof Islan	1.53	225		Pn	23 41 35.1	-0.7
CHIR	Chirikof Islan	1.53	225	IAML		23 42 12.4	
	comp=E,122nm,0.9s						
KJL	Kejulik	1.53	319		Pn	23 41 35.0	-1.0
ACHA	Angle Creek He	1.57	327		Pn	23 41 36.8	+0.3
ACHA	Angle Creek He	1.57	327		Sn	23 41 55.9	+0.2
KAKN	Katmai Knife C	1.58	333		Pn	23 41 35.6	-0.9
KAKN					Sn	23 41 56.3	+0.6
KAWH	Katmai	1.60	339		Pn	23 41 36.2	-0.6
KAWH					Sn	23 41 56.4	+0.3
PLK3	Peulik 3	1.60	300		Pn	23 41 37.1	+0.3
KABU	Katmai Buttres	1.61	329		Pn	23 41 36.7	-0.3
ANCK	Angle Creek	1.62	324		Pn	23 41 36.8	-0.4
PLK4	Peulik 4	1.62	298		Pn	23 41 36.9	-0.3
PLK4	Peulik 4	1.62	298	IAML		23 42 09.3	
	comp=E,288nm,0.7s						
PLK4				IAML		23 42 09.6	
	comp=N,172nm,0.7s						
KAHG	Katmai Hook Gl	1.66	344		Pn	23 41 37.5	-0.1
KAHG					Sn	23 41 58.8	+1.1
KARR	Katmai Rainbow	1.69	342		Pn	23 41 38.0	-0.1
KAPH	Katmai Pasha	1.73	349		Pn	23 41 38.1	-0.6
KAPH					Sn	23 42 00.9	+1.4
CNTC	Contact Creek	1.80	320		Pn	23 41 39.4	-0.3
SYI	Shuyak Island	1.85	22		Pn	23 41 40.2	0.0
SYI				IAML		23 42 10.6	
	comp=N,96nm,0.5s						
SYI				IAML		23 42 12.0	
	comp=E,102nm,0.9s						
Q19K	Cape Douglas,	2.03	1	Pn	Pn	23 41 43.6	+0.9
Q19K				IAML		23 42 17.6	
	comp=N,179nm,1.1s						
Q19K				IAML		23 42 23.9	
	comp=E,222nm,1.1s						
P18K	Big Mountain,	2.62	343		Pn	23 41 50.2	-0.7
P17K	Kvichak River	2.72	329	Pn	Pn	23 41 53.0	+0.8
P17K				IAML		23 43 17.8	
	comp=N,80nm,1.1s						
P17K				IAML		23 43 22.3	
	comp=E,82nm,1.1s						
CNPM	China Poot	2.93	25		Pn	23 41 55.1	0.0
ILS	Iliamna Low So	3.08	6		Pn	23 41 57.0	-0.2
ILSW	Iliamna Southw	3.10	5		Pn	23 41 57.0	-0.6
P16K	Nushagak River	3.13	315	Pn	Pn	23 41 58.8	+1.1
P16K				IAML		23 42 39.9	
	comp=E,33nm,1.2s						
IVE	Iliamna Volcan	3.14	6		Pn	23 41 57.8	-0.3
ILW	Iliamna West	3.18	5		Pn	23 41 58.4	-0.2
BRLK	Bradley Lake	3.23	26	Pn	Pn	23 41 58.3	-0.8
O19K	Port Alsworth	3.31	355		Pn	23 42 00.4	0.0
RED	Redoubt Volcan	3.56	7	Pn	Pn	23 42 03.8	0.0
O16K	Kokwok River B	3.56	321	Pn	Pn	23 42 04.0	+0.3
DFR	Drift River	3.73	8		Pn	23 42 06.0	-0.3
SEW	Seward	3.90	33	Pn	Pn	23 42 07.0	-1.4
SEW				IAML		23 43 42.3	
	comp=N,69nm,0.8s						
CNBA	Chernabura Isl	3.92	240	Pn	Pn	23 42 09.7	+1.0
CNBA				IAML		23 44 09.5	
	comp=E,17nm,1.1s						
N19K	Bonanza Creek	3.94	354	Pn	Pn	23 42 09.1	+0.1
N18K	Kilae Creek	3.95	344	Pn	Pn	23 42 09.0	-0.1
N18K				IAML		23 44 09.3	
	comp=E,15nm,0.7s						
N18K				IAML		23 44 10.0	
	comp=N,18nm,0.7s						
O15K	Ungalikthiuk R	3.97	308	Pn	Pn	23 42 10.8	+1.4
SLKM	Skilak Lake	4.04	25		Pn	23 42 09.3	-1.1
N17K	Nushagak Hills	4.06	335	Pn	Pn	23 42 10.7	0.0
N17K				IAML		23 44 28.4	
	comp=N,13nm,0.6s						
SPU	Mount Spurr	4.37	10	Pn	Pn	23 42 14.9	0.0
RC01	Rabbit Creek A	4.67	24		Pn	23 42 18.0	-0.9
M18K	Stony River	4.73	348		Pn	23 42 19.6	-0.2
PWL	Port Wells	4.84	33		Pn	23 42 20.0	-1.3
HIN	Hinchinbrook I	5.13	44		Pn	23 42 24.0	-1.4
HIN	Hinchinbrook I	5.13	44	IAML		23 43 25.4	
	comp=N,36nm,1.1s						
FID	Port Fidalgo	5.38	41		Pn	23 42 26.5	-2.2
FID	Port Fidalgo	5.38	41	IAML		23 44 20.0	
	comp=E,21nm,1.2s						
FID				IAML		23 44 32.9	
	comp=N,29nm,0.9s						
KLU	Klutina	6.09	38		Pn	23 42 37.4	-1.1

IDC 26 23:45:37.7±1.5**, 9°.81N×123°.63E, h0**km**, mb3.6**/4**, mbtmp3.6**/4**, MS3.0**/3**, Error ellipse: s-maj=177.8km s-min=22.6km az=68.0, Negros**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	3.34	145	LR	LR	23 48 01.3	
	comp=Z,35nm,19.4s,baz=326,slow=43						
MJAR	Matsushiro Arr	29.71	24	LR	LR	00 04 25.7	
	comp=Z,22nm,18.3s,baz=120,slow=38						
WRA	Warramunga Arr	31.39	160	P	P	23 52 00.4	-0.3
	1.0nm,0.9s,baz=347,slow=8.7,SNR=2.4						
	1.0nm,0.9s						
ASAR	Alice Springs	34.76	163	P	P	23 52 30.1	+0.1
	0.7nm,0.5s,baz=341,slow=7.0,SNR=18						
	0.7nm,0.5s						
SONM	Songino Array	40.59	342	P	P	23 53 19.9	+0.6
	0.4nm,0.7s,baz=154,slow=7.4,SNR=3.9						
	0.4nm,0.7s						
MKAR	Makanchi Array	50.84	324	P	P	23 54 39.4	-0.9
	0.6nm,0.9s,baz=133,slow=8.5,SNR=3.7						
	0.6nm,0.9s						
MLR	Muntele Rosu	88.42	316	LR	LR	00 42 08.7	
	comp=Z,46nm,18.9s,baz=238,slow=38						

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*KRNET **26** 23:51:21.5±0.1, 39°.77N×70°.38E, h10km, mb3.8*
*SOME **26** 23:51:23.7, 39°.90N×70°.27E, h5km*
*ISU **26** 23:51:25, 39°.72N×70°.25E, h29km*
*NNC **26** 23:51:25.1±3.3, 39°.90N×70°.34E, h0km±15km, mb3.7, mpv3.7, Error ellipse: s-maj=23.1km s-min=12.4km az=18.0*
ISC 26 23:51:22.1±0.7**, 39°.76N**±0°.02×**70°.35E**±0°.02**, h10**km**, n58, σ2ˢ.02**/94**, 28C-15D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	Garm	0.76	182	⇑iP	Pg	23 51 36.4	-0.3
GAR				⇑eS	Sg	23 51 46.8	+0.2
MINT	Mingtut	0.85	34	P	Pg	23 51 38.0	-0.5
MINT				S	Sb	23 51 50.6	+0.1
CHMI	Chimion	1.04	60	P	Pg	23 51 40.9	-1.1
CHMI				S	Sg	23 51 55.6	+0.1
DRK	Karamyk	1.16	104	⇓eP	Pg	23 51 43.0	-1.3
DRK				⇓eS	Sg	23 51 58.8	-0.6
CHDK	Chadak	1.25	14	P	Pg	23 51 47.6	+1.5
CHDK				S	Sn	23 52 04.4	+1.8
FRG	Fergana	1.26	60	P	Pn	23 51 45.0	-0.8
FRG				S	Sb	23 52 01.7	-0.6
CHGR	Chuyangaron	1.44	220	⇑eP	Pb	23 51 48.9	-0.1
CHGR				⇑eS	Sg	23 52 08.9	+0.6
NAM	Namangan	1.59	39	P	Pg	23 51 52.5	0.0
KSNS	Kasansay	1.66	32	P	Pb	23 51 53.3	+0.5
KSNS				S	Sb	23 52 14.1	+0.3
NZBK	Nazarbek	1.73	328	P	Pg	23 52 02.4	+7.1
TGS	TashGRES	1.78	340	P	Pg	23 51 56.5	+0.4
TGS				S	Sb	23 52 17.5	+0.4
CHMG	Chimgan	1.81	352	P	Pb	23 51 55.8	+0.5
CHMG				S	Sb	23 52 17.5	-0.6
TSTA	Tashata	1.83	63	P	Pb	23 51 55.4	-0.2
TSTA				S	Sb	23 52 17.9	-0.6
TVKS	Tavaksay	1.89	344	P	Pg	23 51 57.7	-0.6
TVKS				S	Sb	23 52 19.9	-0.4
CHRV	Charvak	1.90	351	P	Pb	23 51 57.9	+1.0
CHRV				S	Sb	23 52 20.7	-0.1
DZI	Dzhizak	1.97	281	P	Pb	23 51 58.6	+0.6
ARK	Arkit	2.38	31	⇑iP	Pn	23 52 03.3	+2.1
ARK				⇑iS	Sb	23 52 33.7	-0.8
SFK	Sufi-Kurgan	2.44	83	⇑iP	Pn	23 52 04.0	+1.8
SFK				⇑iS	Sb	23 52 35.1	-1.3
ARSB	Arslanbob	2.54	51	⇓iP	Pn	23 52 05.6	+2.1
ARSB				⇓iS	Sb	23 52 37.3	-2.0
CHM	Chimkent	2.62	348	eP	Pb	23 52 10.8	+1.7
	80nm,0.2s						
CHM				eS	Sg	23 52 44.6	-1.5
	179nm,0.5s						
AGL	Agalyk	2.69	266	P	Pg	23 52 12.3	-1.2
AGL				S	Sb	23 52 41.5	-1.8
SALK	Salom-Alik	2.88	66	⇓eP	Pn	23 52 09.6	+1.4
SALK				⇓eS	Sn	23 52 45.9	+2.8
BAYS	Baysun	2.90	239	P	Pb	23 52 12.8	-1.1
MNAS	Manas	3.17	30	⇑eP	Pn	23 52 14.4	+2.2
MNAS				⇑iS	Sn	23 52 52.8	+2.6
DZA	Taraz	3.22	13	Pg	Pg	23 52 21.7	-1.9
	14nm,0.1s						
DZA				Lg	Lg	23 53 03.8	
	86nm,0.3s						
DZA	Taraz	3.22	13	eP	Pg	23 52 21.7	-1.9
	14nm,0.1s						
DZA				eS	Sg	23 53 03.8	-1.5
	86nm,0.3s						
BRLS	Borolday	3.29	353	Pg	Pb	23 52 19.1	-1.4
	5.3nm,0.2s						
BRLS				Lg	Lg	23 52 59.0	
	33nm,0.2s						
BRLS	Borolday	3.29	353	eP	Pb	23 52 19.1	-1.4
	5.3nm,0.2s						
BRLS				eS	Sb	23 52 59.0	-1.6
	33nm,0.2s						
PKMR	Pachkamar	3.31	250	P	Pg	23 52 25.3	-0.1
PKMR				S	Sb	23 52 59.9	-1.2
KK31	Karatay Array	3.34	2	Pn	Pn	23 52 17.6	+3.3
	0.9nm,0.2s,baz=197,slow=15,SNR=76						
KK31				⇑Pg	Pb	23 52 23.1	+1.7
	1.8nm,0.2s,baz=188,slow=17,SNR=13						
KK31				⇓Lg	Lg	23 53 06.7	
	18nm,0.3s,baz=185,slow=29,SNR=19						
ZRB	Zarabog	3.58	244	P	Pn	23 52 19.6	+2.0
NUT	Nurota	3.66	284	S	Pb	23 52 22.2	-4.7
ARLS	Aral	3.68	54	⇓eP	Pn	23 52 21.1	+2.0
ARLS				⇓iS	Sn	23 53 04.6	+2.0
MRKS	Merke	3.69	35	Pg	Pb	23 52 29.8	+2.4
	13nm,0.4s						
MRKS				Lg	Lg	23 53 17.1	
	39nm,0.4s						
MRKS	Merke	3.69	35	eP	Pb	23 52 29.8	+2.4
	13nm,0.4s						
MRKS				eS	Sg	23 53 17.1	-3.4
	39nm,0.4s						
EKS2	Erkin-Say	3.89	41	P	Pn	23 52 25.1	+3.1
	SNR=19						
EKS2	Erkin-Say	3.89	41	⇑iP	Pn	23 52 24.0	+2.0
EKS2				⇑eS	Sn	23 53 09.8	+2.1
UCH	Uchtor	4.00	51	P	Pn	23 52 26.6	+2.7
	SNR=14						
UCH	Uchtor	4.00	51	⇑eP	Pn	23 52 26.0	+2.1
UCH				⇑iS	Sn	23 53 13.0	+1.9
AAK	Ala-Archa	4.25	46	P	Pn	23 52 29.7	+2.7
	SNR=9.2						
AAK	Ala-Archa	4.25	46	⇓iP	Pn	23 52 29.1	+2.1
AAK				⇓eS	Sn	23 53 18.7	+2.0
AAK	Ala-Archa	4.25	46	⇓Pn	Pn	23 52 29.5	+2.5
	3.2nm,0.8s						
AAK				⇑Pg	Pg	23 52 42.4	-1.1
	3.2nm,0.5s						
AAK				⇓Lg	Lg	23 53 40.4	
	12nm,0.8s						
FRU1	Bishkek	4.44	45	⇑iP	Pn	23 52 31.9	+2.4
FRU1				⇑iS	Sn	23 53 23.1	+1.8
KBK	Karagaybulak	4.52	49	P	Pn	23 52 34.0	+3.3
	SNR=10						
KBK	Karagaybulak	4.52	49	⇑eP	Pn	23 52 32.9	+2.2
KBK				⇑iS	Sn	23 53 25.0	+1.6
CHMS	Chumysh	4.63	44	⇑iP	Pn	23 52 34.5	+2.4
CHMS				⇑iS	Sn	23 53 27.5	+1.5
USP	Ospenovka	4.69	40	P	Pn	23 52 35.1	+2.1
	SNR=5.6						
USP	Ospenovka	4.69	40	⇑iP	Pn	23 52 35.3	+2.4
USP				⇑iS	Sn	23 53 29.0	+1.6
TMD	Tamdy-Bulak	4.77	296	S	Sg	23 53 53.8	-1.3
BOOM	Boomskoye usch	5.03	55	⇑eP	Pn	23 52 39.8	+2.1
BOOM				⇑iS	Sn	23 53 37.1	+1.2
TKM2	Tokmak 2	5.06	50	P	Pn	23 52 40.7	+2.6
	SNR=9.1						
TKM2	Tokmak 2	5.06	50	⇑iP	Pn	23 52 40.3	+2.2
TKM2				⇑iS	Sn	23 53 38.0	+1.3
ULHL	Ulahol	5.11	59	⇓iP	Pn	23 52 41.0	+2.2
ULHL				⇓iS	Sn	23 53 39.1	+1.2
KST	Kastek	5.35	50	Pg	Pg	23 53 00.6	-3.9
	5.4nm,0.4s						
KST				Lg	Lg	23 54 10.1	
	11nm,0.7s						
KST	Kastek	5.35	50	eP	Pg	23 53 00.6	-3.9
	5.4nm,0.4s						
KST				eS	Sg	23 54 10.1	-3.6
	11nm,0.7s						
BTLS	Baital	5.95	26	Pg	Pb	23 53 11.0	+5.3
	4.1nm,0.3s						
BTLS				Lg	Lg	23 54 26.3	
	5.0nm,0.5s						
BTLS	Baital	5.95	26	eP	Pb	23 53 11.0	+5.3
	4.1nm,0.3s						
BTLS				eS	Sg	23 54 26.3	-6.6
	5.0nm,0.5s						
AB31	Akbulak array	12.04	325	P	Pn	23 54 13.4	-0.2
	0.2nm,0.3s,baz=133,slow=16,SNR=13						

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*IDC **26** 23:53:54.0±0.7, 35°.70N×138°.68E, h135km±5km, mb3.4/7, mbtmp3.8/8, Error ellipse: s-maj=34.0km s-min=9.5km az=72.0*
*JMA **26** 23:53:54.2±0.2, 35°.8N±0°.7×139°.0E±0°.7, h132km±1km, MV3.5/39, TOKYO PREF*
ISC 26 23:53:53.9±0.8**, 35°.79N**±0°.04×**138°.97E**±0°.05**, h134**km±5km**, n27, σ0ˢ.84**/39**, mb3.9**/7**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JRY	Ryogami san	0.23	346	i P	Pn	23 54 12.8	+0.5
JRY				S	Sn	23 54 26.8	+0.4
JSGW	Sagamiharawaka	0.27	134	i P	Pn	23 54 12.4	0.0
JSGW				S	Sn	23 54 25.9	-0.4
JYN	Shimob	0.45	230	i P	Pn	23 54 13.3	0.0
JYN				S	Sn	23 54 28.4	+0.6
JOD2	Odawara 2	0.53	170	i P	Pn	23 54 13.8	+0.1
JOD2				S	Sn	23 54 28.6	+0.1
JNT	Takato	0.68	277	i P	Pn	23 54 15.2	+0.6
JNT				S	Sn	23 54 31.2	+0.8
JAG	Ashikaga	0.75	32	i P	Pn	23 54 14.9	-0.1
JAG				S	Sn	23 54 30.6	-0.5
MJAR	Matsushiro Arr	0.97	321	P	Pn	23 54 16.7	-0.2
	165nm,0.4s,baz=159,slow=8.9,SNR=435						
MJAR				S	Sn	23 54 34.3	-0.1
	23nm,0.4s,baz=147,slow=16,SNR=4.2						
MAJO	Matsushiro	0.97	321	P	Pn	23 54 16.7	-0.2
MAT	Matsushiro	0.97	321	i P	Pn	23 54 17.0	+0.1
MAT				S	Sn	23 54 33.9	-0.6
JGF	Kuroka	1.33	262	P	Pn	23 54 21.2	+0.8
INU	Inuyama	1.65	255	P	Pn	23 54 24.3	+0.4
JYTA	Yamagatataniai	1.83	265	P	Pn	23 54 26.7	+0.7
JYTA				S	Sn	23 54 50.8	+0.2
BSO1	Boso 1	2.00	124	P	Pn	23 54 27.3	-0.1
BSO1				eS	Sn	23 54 53.6	+0.4
JNS	Sasagawa	2.04	8	P	Pn	23 54 29.2	+0.6
JOTO	OTAMA OYAMA	2.08	31	P	Pn	23 54 29.9	+0.9
JOTO				eS	Sn	23 54 57.7	+1.7
JSD	Sado	2.31	346	P	Pn	23 54 32.2	+0.3
JHJ	Hachijo jima 2	2.75	166	P	Pn	23 54 37.3	-0.1
	91nm,0.3s,baz=17,slow=14,SNR=7.3						
JHJ				S	Sn	23 55 11.2	+0.2
	96nm,0.4s,baz=65,slow=18,SNR=1.8						
JHJ2	Mitsune	2.76	165	P	Pn	23 54 37.9	+0.3
ERM	Erimo	7.02	26	P	Pn	23 55 32.0	-2.0
JEM	Erimo	7.02	26	P	Pn	23 55 32.0	-2.1
MKAR	Makanchi Array	43.12	303	P	P	00 01 39.6	-1.3
	0.4nm,0.6s,baz=91,slow=8.5,SNR=3.0						
	0.4nm,0.6s						
ILAR	Eielson Array	51.59	32	P	P	00 02 47.9	+1.9
	0.2nm,0.8s,baz=279,slow=7.1,SNR=1.6						
	0.2nm,0.8s						
WRA	Warramunga Arr	55.60	185	P	P	00 03 14.4	-1.3
	2.6nm,0.7s,baz=1.2,slow=7.3,SNR=16						
	2.6nm,0.7s						
ASAR	Alice Springs	59.33	185	P	P	00 03 41.6	-0.1
	0.5nm,0.4s,baz=8.2,slow=5.1,SNR=9.5						
	0.5nm,0.4s						
ARCES	ARCESS Array B	64.46	339	P	P	00 04 14.8	-0.8
	2.7nm,0.8s,baz=64,slow=12,SNR=1.9						
	2.7nm,0.8s						
FINES	FINESS Array B	68.98	332	P	P	00 04 43.9	-0.4
	1.6nm,0.7s,baz=49,slow=8.6,SNR=6.6						
	1.6nm,0.7s						
TXAR	Lajitas Array	92.44	51	P	P	00 06 50.7	+0.8
	0.1nm,0.5s,baz=310,slow=3.0,SNR=2.1						

	0.1nm,0.5s						

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*SOME **26** 23:54:33.3, 39°.48N×73°.30E, h10^{km}*
*KRNET **26** 23:54:36.2±0.1, 39°.43N×73°.59E, h22^{km}, mb3.8*
*NNC **26** 23:54:39.6±2.1, 39°.67N×73°.31E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=17.1km s-min=9.9km az=167.0*
ISC 26 23:54:37.2±1.5**, 39°.51N**±0°.05×**73°.46E**±0°.03**, h4^{km}**±10^{km}**, n45, σ1^{s}.42**/75**, 35C-14D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.50**	**4**	⇓iP	**Pg**	**23 54 47.7**	**+0.8**
SFK				⇓iS	**Sb**	**23 54 55.9**	**-0.7**
OHH	**Osh**	**1.14**	**333**	⇑iP	**Pb**	**23 54 58.8**	**-0.8**
OHH				⇑eS	**Sn**	**23 55 16.1**	**-0.1**
DRK	**Karamyk**	**1.29**	**269**	⇑iP	**Pn**	**23 55 01.8**	**-0.5**
DRK				⇑eS	**Sg**	**23 55 20.3**	**+1.7**
SALK	**Salom-Alik**	**1.40**	**11**	⇑eP	**Pn**	**23 55 03.2**	**-0.5**
SALK				⇑eS	**Sb**	**23 55 22.6**	**+0.3**
ARSB	**Arslanbob**	**1.85**	**349**	⇑eP	**Pb**	**23 55 11.1**	**-0.6**
ARSB				⇑iS	**Sg**	**23 55 36.4**	**-0.2**
ARLS	**Aral**	**2.44**	**15**	⇑iP	**Pn**	**23 55 18.3**	**+0.3**
ARLS				⇑iS	**Sn**	**23 55 49.3**	**+0.9**
GAR	**Garm**	**2.50**	**259**	⇓iP	**Pn**	**23 55 19.7**	**+0.9**
GAR				⇓iS	**Sb**	**23 55 51.3**	**-2.5**
ARK	**Arkit**	**2.55**	**334**	⇑iP	**Pn**	**23 55 20.9**	**+1.3**
ARK				⇑iS	**Sb**	**23 55 53.5**	**-2.0**
UCH	**Uchtor**	**2.83**	**16**	P	**Pb**	**23 55 29.5**	**+0.9**
	SNR=16						
UCH	**Uchtor**	**2.83**	**16**	⇓iP	**Pn**	**23 55 24.2**	**+0.5**
UCH				⇓iS	**Sn**	**23 55 59.1**	**+0.6**
MNAS	**Manas**	**3.06**	**347**	⇑iP	**Pn**	**23 55 27.9**	**+1.3**
MNAS				⇑iS	**Sn**	**23 56 05.6**	**+1.9**
EKS2	**Erkin-Say**	**3.16**	**4**	P	**Pb**	**23 55 34.1**	**+0.1**
	SNR=5.5						
EKS2	**Erkin-Say**	**3.16**	**4**	⇑iP	**Pn**	**23 55 28.7**	**+0.8**
EKS2				⇑iS	**Sn**	**23 56 07.3**	**+1.2**
AAK	**Ala-Archa**	**3.22**	**14**	P	**Pb**	**23 55 35.5**	**+0.4**
	SNR=13						
AAK	**Ala-Archa**	**3.22**	**14**	⇑iP	**Pn**	**23 55 29.5**	**+0.7**
AAK				⇑iS	**Sn**	**23 56 08.2**	**+0.5**
AAK	**Ala-Archa**	**3.22**	**14**	⇑Pn	**Pn**	**23 55 31.1**	**+2.3**
	11nm,0.7s						
AAK				⇑Lg	Lg	23 56 19.1	
	56nm,0.9s						
MRKS	**Merke**	**3.24**	**357**	Pg	**Pb**	**23 55 33.4**	**-1.9**
	13nm,0.6s						
MRKS				Lg	Lg	23 56 16.5	
	110nm,0.6s						
MRKS	**Merke**	**3.24**	**357**	eP	**Pb**	**23 55 33.4**	**-1.9**
	13nm,0.6s						
MRKS				eS	**Sb**	**23 56 16.6**	**+1.4**
	110nm,0.6s						
KBK	**Karagaybulak**	**3.34**	**19**	P	**Pg**	**23 55 43.0**	**+1.9**
	SNR=7.5						
KBK	**Karagaybulak**	**3.34**	**19**	⇑iP	**Pn**	**23 55 30.9**	**+0.5**
KBK				⇑iS	**Sn**	**23 56 10.9**	**+0.3**
FRU1	**Bishkek**	**3.41**	**15**	⇑iP	**Pn**	**23 55 32.2**	**+0.9**
FRU1				⇑iS	**Sn**	**23 56 13.2**	**+0.9**
ULHL	**Ulahol**	**3.45**	**37**	P	**Pg**	**23 55 42.9**	**-0.5**
	SNR=16						
ULHL	**Ulahol**	**3.45**	**37**	⇓iP	**Pn**	**23 55 31.9**	**-0.1**
ULHL				⇓iS	**Sn**	**23 56 12.7**	**-0.7**
CHGR	**Chuyangaron**	**3.46**	**257**	⇓iP	**Pn**	**23 55 32.8**	**+0.9**
CHGR				⇓iS	**Sn**	**23 56 14.3**	**+0.9**
BOOM	**Boomskoye usch**	**3.52**	**31**	⇑iP	**Pn**	**23 55 32.9**	**0.0**
BOOM				⇑iS	**Sn**	**23 56 14.5**	**-0.5**
CHMS	**Chumysh**	**3.62**	**15**	P	**Pb**	**23 55 39.9**	**-1.9**
	SNR=6.5						
CHMS	**Chumysh**	**3.62**	**15**	⇓iP	**Pn**	**23 55 34.8**	**+0.7**
CHMS				⇓eS	**Sn**	**23 56 17.6**	**+0.3**
DZA	**Taraz**	**3.74**	**335**	eP	**Pb**	**23 55 41.4**	**-2.5**
	20nm,0.3s						
DZA				eS	**Sb**	**23 56 29.9**	**+0.2**
	34nm,0.5s						
TKM2	**Tokmak 2**	**3.77**	**25**	⇑iP	**Pn**	**23 55 36.7**	**+0.3**
TKM2				⇑iS	**Sn**	**23 56 20.8**	**-0.5**
USP	**Ospenovka**	**3.83**	**11**	⇑iP	**Pn**	**23 55 37.7**	**+0.6**
USP				⇑iS	**Sn**	**23 56 22.8**	**+0.2**
KDJ	**Kajisay**	**3.85**	**46**	⇑iP	**Pn**	**23 55 37.1**	**-0.3**
KDJ				⇑eS	**Sn**	**23 56 21.8**	**-1.4**
TARG	**Taragay, Kyrgy**	**3.98**	**55**	⇑eP	**Pn**	**23 55 38.8**	**-0.6**
TARG				⇑eS	**Sn**	**23 56 24.4**	**-2.4**
KST	**Kastek**	**4.00**	**27**	Pg	**Pb**	**23 55 50.0**	**+1.6**
	5.1nm,0.5s						
KST				Lg	Lg	23 56 44.9	
	73nm,0.9s						
KST	**Kastek**	**4.00**	**27**	eP	**Pb**	**23 55 50.0**	**+1.6**
	5.1nm,0.5s						
KST				eS	**Sg**	**23 56 44.9**	**-0.9**
	73nm,0.9s						
CHM	**Chimkent**	**4.05**	**315**	eP	**Pb**	**23 55 46.9**	**-2.3**
	12nm,0.2s						
CHM				eS	**Sb**	**23 56 39.5**	**+1.0**
	175nm,0.3s						
DGS	**Degeres**	**4.11**	**24**	Pg	**Pb**	**23 55 52.3**	**+2.0**
	6.8nm,0.7s						
DGS				Lg	Lg	23 56 49.3	
	41nm,0.8s						
KK31	**Karatay Array**	**4.22**	**329**	⇓Pn	**Pn**	**23 55 43.3**	**+0.9**
	1.7nm,0.3s,baz=136,slow=12,SNR=11						
KK31				⇓Pg	**Pb**	**23 55 53.9**	**+1.9**
	7.3nm,0.6s,baz=149,slow=13,SNR=4.0						
KK31				⇑Lg	Lg	23 56 48.1	
	37nm,0.7s,baz=165,slow=30,SNR=4.2						
MTBS	**Maitube**	**4.25**	**31**	Pg	**Pb**	**23 55 55.4**	**+2.8**
	9.2nm,0.5s						
MTBS				Lg	Lg	23 56 54.1	
	21nm,0.6s						
MTBS	**Maitube**	**4.25**	**31**	eP	**Pb**	**23 55 53.5**	**+0.9**
	4.6nm,0.3s						
MTBS				eS	**Sg**	**23 56 51.2**	**-2.6**
	21nm,0.6s						
TNSS	**Tian-Shan**	**4.39**	**36**	eP	**Pb**	**23 55 56.5**	**+1.2**
	2.3nm,0.6s						
TNSS				eS	**Sg**	**23 56 55.9**	**-2.4**
	6.7nm,1.1s						
BRLS	**Borolday**	**4.45**	**323**	Pg	**Pb**	**23 55 54.3**	**-1.7**
	2.5nm,0.4s						
BRLS				Lg	Lg	23 56 52.4	
	30nm,0.6s						
BRLS	**Borolday**	**4.45**	**323**	eP	Pb	23 55 51.2	-4.9
	2.8nm,0.3s						
BRLS				eS	**Sb**	**23 56 47.2**	**-2.9**
	30nm,0.6s						
KOTS	**Kotyrbulak**	**4.62**	**35**	Pg	**Pb**	**23 56 02.4**	**+3.4**
	6.1nm,0.4s						
KOTS				Lg	Lg	23 57 06.5	
	85nm,1.1s						
KOTS	**Kotyrbulak**	**4.62**	**35**	eP	**Pb**	**23 56 00.6**	**+1.5**
	3.2nm,0.4s						
KOTS				eS	**Sg**	**23 57 03.6**	**-2.1**
	85nm,1.1s						
NB2	**NORSAR Subarra**	**43.21**	**321**	P	**P**	**00 02 39.3**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=90,slow=7.9						

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*IDC **26** 23:59:54.4±1.6, 0°.65S×123°.37E, h0^{km}, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=130.9km s-min=22.1km az=58.0*
*DJA **26** 23:59:58.2±0.3, 1°S±3°×12°3E±°, h10^{km}, M3.8/11, mB5.7/1, mb4.0/1, MLv3.7/11, Mw(mB)5.2/1*
ISC 26 23:59:57.2±1.0**, 0°.73S**±0°.06×**123°.09E**±0°.08**, h10^{km}, n14, σ1^{s}.35**/14**, mb3.5**/4**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.44**	**226**	P	**Pg**	**00 00 05.6**	**-0.3**
GTOI	**Gorontalo**	**1.36**	**357**	P	**Pn**	**00 00 23.1**	**+0.8**
APSI	**Ampana**	**1.46**	**263**	P	**Pb**	**00 00 24.8**	**+0.4**
MRSI	**Marisa**	**1.67**	**316**	P	**Pn**	**00 00 26.8**	**+0.4**
KDI	**Kendari**	**3.24**	**188**	P	**Pn**	**00 00 49.6**	**+1.5**
PCI	**Palu**	**3.26**	**267**	P	**Pn**	**00 00 49.9**	**+1.5**
MPSI	**Mapaga**	**3.37**	**288**	P	**Pn**	**00 00 51.6**	**+1.7**
TTSI	**Tana Toraja**	**4.00**	**235**	P	**Pn**	**00 00 58.3**	**-0.2**
SPSI	**Sidrap Palu**	**4.62**	**226**	P	**Pn**	**00 01 07.6**	**+0.5**
KRAI	**Karang Ratu**	**5.89**	**116**	P	**Pn**	**00 01 26.7**	**+2.2**
WRA	**Warramunga Arr**	**22.04**	**151**	P	**P**	**00 04 51.5**	**-0.6**
	0.5nm,0.6s,baz=333,slow=10,SNR=3.0						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**25.09**	**156**	P	**P**	**00 05 19.9**	**-2.3**
	0.4nm,0.6s,baz=341,slow=14,SNR=7.3						
	0.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**30.45**	**310**	P	**P**	**00 06 10.2**	**-0.1**
	0.7nm,0.3s,baz=134,slow=7.1,SNR=4.1						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**59.28**	**329**	P	**P**	**00 09 58.5**	**-0.6**
	0.3nm,0.4s,baz=127,slow=8.9,SNR=8.8						
	0.3nm,0.4s						

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*IDC **27** 00:19:40.5±1.7, 2°.22N×127°.46E, h0^{km}, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=169.0km s-min=21.9km az=69.0*
*DJA **27** 00:19:48.3±0.9, 2°N±3°×12°7E±°, h18^{km}±8^{km}, M3.6/9, MLv3.6/9*
ISC 27 00:19:47.0±1.1**, 2°.35N**±0°.08×**127°.5E**±0°.1**, h35^{km}, n9, σ2^{s}.46**/10**, mb3.3**/4**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**0.57**	**153**	P	**Pn**	**00 20 01.5**	**+2.8**
TNTI	**Ternate**	**1.58**	**186**	P	**Pn**	**00 20 14.1**	**+1.5**
TNTI				S	**Sn**	**00 20 33.9**	**+2.2**
SGSI	**Sangihe**	**2.40**	**304**	P	**Pn**	**00 20 26.9**	**+3.0**
SANI	**Sanana**	**4.64**	**199**	P	**Pn**	**00 20 55.8**	**+1.2**
GTOI	**Gorontalo**	**4.83**	**249**	P	**Pn**	**00 20 57.9**	**+0.6**
WRA	**Warramunga Arr**	**23.14**	**164**	P	**P**	**00 24 47.4**	**-3.0**
	0.3nm,0.3s,baz=342,slow=10.0,SNR=2.1						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**26.59**	**167**	P	**P**	**00 25 19.6**	**-2.7**
	0.2nm,0.3s,baz=346,slow=12,SNR=8.1						
	0.2nm,0.3s						
SONM	**Songino Array**	**48.85**	**341**	P	**P**	**00 28 28.8**	**-0.5**
	0.2nm,0.6s,baz=155,slow=7.9,SNR=2.7						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**59.14**	**325**	P	**P**	**00 29 43.6**	**-0.7**
	0.7nm,0.3s,baz=116,slow=7.8,SNR=26						
	0.7nm,0.3s						

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*UPP **27** 00:27:30.8±0.0, 67°.85N×20°.21E, h0^{km}, ML1.8, Suspected explosion*
*HEL **27** 00:27:30.6±0.2, 67°.83N×20°.11E, h0^{km}, ML1.8, Suspected explosion*
*IDC **27** 00:27:31.3±1.1, 67°.81N×20°.39E, h0^{km}, mbtmp2.8/4, ML1.7/4, Error ellipse: s-maj=21.2km s-min=8.0km az=122.0*
ISC 27 00:27:30.3±0.8**, 67°.84N**±0°.02×**20°.19E**±0°.03**, h0^{km}, n34, σ1^{s}.45**/58**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.13**	**25**	P	**Pg**	**00 27 33.2**	**+0.4**
KUA				S	**Sg**	**00 27 34.8**	**+0.3**
RATU	**Laukkuluspa**	**0.23**	**267**	P	**Pg**	**00 27 35.5**	**+0.8**
LANU	**Lannavaara**	**0.71**	**72**	P	**Pg**	**00 27 44.1**	**+0.1**
LANU	**Lannavaara**	**0.71**	**72**	PG	**Pg**	**00 27 44.1**	**+0.1**
LANU				SG	**Sg**	**00 27 53.2**	**0.0**
DUNU	**Dundret**	**0.73**	**168**	P	**Pg**	**00 27 44.7**	**+0.4**
MASU	**Masugnsbyn**	**0.79**	**118**	P	**Pg**	**00 27 45.8**	**+0.4**
SALU	**Saltoluokta**	**0.79**	**235**	P	**Pg**	**00 27 45.9**	**+0.4**
SALU	**Saltoluokta**	**0.79**	**235**	eP	**Pg**	**00 27 46.2**	**+0.7**
KIF	**Kilpisjarvi**	**1.20**	**11**	eP	**Pb**	**00 27 54.2**	**+0.4**
KIF	**Kilpisjarvi**	**1.20**	**11**	PG	**Pg**	**00 27 53.7**	**+0.5**
	baz=191						
KIF				MSG		00 28 08.2	
	comp=Z,12nm,0.2s						
KIF				SG	**Sg**	**00 28 09.1**	**+0.4**
PAJU	**Pajala**	**1.39**	**124**	P	**Pg**	**00 27 56.4**	**-0.6**
PAJU	**Pajala**	**1.39**	**124**	PG	**Pg**	**00 27 56.0**	**-0.9**
	baz=303						
PAJU				SB	**Sg**	**00 28 14.9**	**0.0**
HEF	**Hetta**	**1.42**	**65**	PG	**Pn**	**00 27 56.6**	**-0.8**
	baz=251						
HEF				MSG		00 28 14.2	
	comp=Z,6.0nm,0.2s						
HEF				SG	**Sg**	**00 28 15.1**	**-0.8**
ERTU	**Ertsjaerv**	**1.50**	**148**	P	**Pn**	**00 27 58.3**	**-0.2**
KLF	**Kolari**	**1.57**	**111**	PG	**Pn**	**00 27 59.3**	**-0.1**
	baz=295						
KLF				MSG		00 28 18.6	
	comp=Z,6.2nm,0.2s						
KLF				SN	**Sb**	**00 28 20.8**	**+0.2**
KTK1	**Kautokeino**	**1.63**	**42**	PG	**Pn**	**00 28 00.4**	**+0.2**
KTK1				SN	**Sn**	**00 28 21.9**	**-0.1**
TRO	**Tromso**	**1.86**	**346**	PG	**Pn**	**00 28 03.3**	**-0.1**
TRO				SG	**Sb**	**00 28 29.1**	**+0.1**
KALU	**Kalix**	**2.35**	**146**	PB	**Pn**	**00 28 11.6**	**+1.6**
KALU				SG	**Sb**	**00 28 42.6**	**-0.2**
TOF	**Tornio**	**2.40**	**135**	PG	**Pn**	**00 28 12.6**	**+1.9**
TOF				MSG		00 28 42.1	
	comp=Z,6.0nm,0.2s						
TOF				SG	**Sb**	**00 28 44.8**	**+0.5**
RNF	**Rovaniemi**	**2.58**	**116**	PB	**Pn**	**00 28 15.2**	**+1.9**
	baz=305						
RNF				SG	**Sb**	**00 28 49.2**	**-0.3**
ARA0	**ARCESS Array S**	**2.59**	**46**	PB	**Pn**	**00 28 14.5**	**+1.1**
ARA0				SB	**Sb**	**00 28 48.0**	**-1.8**
ARCES	**ARCESS Array B**	**2.59**	**46**	Pn	**Pn**	**00 28 14.2**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=229,slow=15,SNR=26						
ARCES				Sn	**Sn**	**00 28 46.1**	**+0.7**
	comp=Z,1.5nm,0.3s,baz=230,slow=22,SNR=13						
	comp=Z,0.9nm,0.3s						
RAJF	**Raja-Jooseppi**	**3.10**	**74**	PN	**Pn**	**00 28 21.4**	**+0.9**
RAJF				SB	**Sb**	**00 29 04.0**	**-0.7**
KEV	**Kevo**	**3.14**	**49**	PN	**Pn**	**00 28 22.3**	**+1.3**
KEV				SN	**Sn**	**00 29 00.2**	**+1.2**
RANF	**Ranua**	**3.18**	**122**	PB	**Pn**	**00 28 23.2**	**+1.7**
RANF				SG	**Sb**	**00 29 08.2**	**+1.5**
VRF	**Varrio**	**3.58**	**87**	PG	**Pb**	**00 28 34.6**	**+0.2**
VRF				SB	**Sb**	**00 29 17.2**	**-1.1**
OUL	**Oulu**	**3.59**	**138**	PG	**Pb**	**00 28 35.8**	**+1.3**
	baz=318						
OUL				SG	**Sb**	**00 29 19.8**	**+1.2**
OLKF	**Oulanka, Finla**	**3.91**	**109**	PN	**Pn**	**00 28 33.1**	**+1.5**
OLKF				SG	**Sb**	**00 29 31.8**	**+4.0**
MSF	**Maaselka**	**3.99**	**115**	PN	**Pn**	**00 28 34.5**	**+1.8**
MSF				SG	**Sg**	**00 29 35.1**	**-3.2**
KU6	**Riekki**	**4.23**	**111**	PN	**Pn**	**00 28 38.1**	**+2.2**
	baz=298						
KU1	**Kurvinen**	**4.36**	**117**	PN	**Pn**	**00 28 39.8**	**+2.0**
KU1				SN	**Sn**	**00 29 30.0**	**+0.7**
FINES	**FINESS Array B**	**6.89**	**156**	Pn	**Pn**	**00 29 13.5**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=341,slow=12,SNR=1.3						
FINES				Sn	**Sn**	**00 30 29.7**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=344,slow=24,SNR=1.2						
FINES				Lg	Lg	00 31 01.6	
	comp=Z,0.4nm,0.3s,baz=340,slow=31,SNR=5.9						
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**7.84**	**214**	Pn	**Pn**	**00 29 25.6**	**+0.1**
	baz=28,slow=17,SNR=1.6						
NOA				Sn	**Sn**	**00 30 50.1**	**-4.7**
	baz=53,slow=18,SNR=1.3						
NOA				Lg	Lg	00 31 32.8	
	baz=38,slow=19,SNR=1.8						
	comp=Z,0.3nm,0.8s						
HFS	**Hagfors**	**8.24**	**203**	Pn	**Pn**	**00 29 31.0**	**+0.1**
	baz=21,slow=13,SNR=2.2						
HFS				Sn	**Sn**	**00 31 00.9**	**-3.6**
	comp=Z,0.1nm,0.3s,baz=24,slow=23,SNR=1.5						
HFS				Lg	Lg	00 31 47.3	
	comp=Z,0.1nm,0.3s,baz=12,slow=28,SNR=1.4						
	comp=Z,1.8nm,0.9s						

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*SJA **27** 00:31:20.5±0.7, 20°.29S×70°.50W, h34^{km}±1^{km}, ML3.2, MW3.6*
*GUC **27** 00:31:22.7±0.8, 20°.28S×70°.49W, h30^{km}±4^{km}, ML3.2*
ISC 27 00:31:21.9±1.2**, 20°.29S**±0°.02×**70°.51W**±0°.05**, h25^{km}**±10^{km}**, n30, σ0^{s}.91**/52**, 2C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.36**	**87**	eP	**Pb**	**00 31 29.7**	**-0.1**
TA02				eS	**Sb**	**00 31 35.3**	**+0.1**
TA02				IAML		00 31 35.6	
	comp=E,7μm,0.2s						
TA02	**Huaiquique**	**0.36**	**87**	eP	**Pb**	**00 31 29.6**	**-0.2**
TA02				IAML		00 31 35.5	
	comp=Z,2μm,0.5s						
TA02				eS	**Sb**	**00 31 35.6**	**+0.4**
TA01	**Diego Aracena**	**0.41**	**132**	⇓iP	**Pb**	**00 31 30.5**	**-0.2**
TA01				eS	**Sb**	**00 31 36.7**	**0.0**
TA01				IAML		00 31 37.2	
	comp=N,9μm,0.2s						
TA01	**Diego Aracena**	**0.41**	**132**	eP	**Pb**	**00 31 30.4**	**-0.3**
TA01				IAML		00 31 37.1	
	comp=Z,1μm,0.3s						
PX03	**IPOC Station P**	**0.83**	**98**	eP	**Pn**	**00 31 36.2**	**-1.9**
PB11	**IPOC Station P**	**0.96**	**57**	⇓iP	**Pn**	**00 31 38.8**	**-1.1**
PB11				eS	**Sn**	**00 31 51.6**	**-1.2**
PB11				IAML		00 31 55.2	
	comp=N,899nm,0.5s						
PB11	**IPOC Station P**	**0.96**	**57**	eP	**Pn**	**00 31 38.8**	**-1.1**
PB11				eS	**Sb**	**00 31 54.7**	**+2.4**
PB11				IAML		00 31 55.2	
	comp=Z,411nm,0.7s						
PB02	**IPOC Station P**	**1.18**	**151**	⇓iP	**Pn**	**00 31 42.3**	**-0.5**
PB02				eS	**Sn**	**00 31 57.4**	**-0.7**
PB02				IAML		00 32 00.2	
	comp=N,2μm,0.4s						
PB02	**IPOC Station P**	**1.18**	**151**	eP	**Pn**	**00 31 42.3**	**-0.5**
PB02				eS	**Sn**	**00 31 57.7**	**-0.4**
PB02				IAML		00 32 00.2	
	comp=Z,2μm,0.3s						
PB01	**IPOC Station P**	**1.22**	**128**	⇓iP	**Pn**	**00 31 42.8**	**-0.6**
PB01				eS	**Sn**	**00 31 58.7**	**-0.4**
PB01				IAML		00 32 02.3	
	comp=N,878nm,0.5s						
PB01	**IPOC Station P**	**1.22**	**128**	eP	**Pn**	**00 31 42.8**	**-0.6**
PB01				eS	**Sn**	**00 31 59.1**	**0.0**
PB01				IAML		00 32 02.7	
	comp=Z,534nm,0.2s						
PB08	**IPOC Station P**	**1.28**	**84**	i P	**Pn**	**00 31 44.2**	**-0.3**
PB08				eS	**Sn**	**00 32 00.9**	**-0.2**
PB08				IAML		00 32 03.2	
	comp=N,323nm,0.2s						
PB08	**IPOC Station P**	**1.28**	**84**	eP	**Pn**	**00 31 43.5**	**-1.0**
PB08				eS	**Sb**	**00 32 01.9**	**+0.1**
PB08				IAML		00 32 02.2	
	comp=Z,229nm,0.4s						
GO01	**Chusmiza**	**1.38**	**64**	⇓iP	**Pn**	**00 31 45.8**	**-0.2**
GO01				eS	**Sn**	**00 32 04.1**	**+0.4**
GO01				IAML		00 32 07.9	
	comp=N,462nm,0.3s						
GO01	**Chusmiza**	**1.38**	**64**	eP	**Pn**	**00 31 46.0**	**-0.1**
GO01				eS	**Sb**	**00 32 05.5**	**+0.7**
GO01				IAML		00 32 07.5	
	comp=Z,140nm,1.6s						
PB07	**IPOC Station P**	**1.55**	**158**	eP	**Pn**	**00 31 48.0**	**0.0**
PB07				eS	**Sn**	**00 32 08.7**	**+1.3**
PB07				IAML		00 32 10.0	
	comp=E,501nm,0.4s						
PB07	**IPOC Station P**	**1.55**	**158**	eP	**Pn**	**00 31 48.0**	**0.0**
PB07				eS	**Sn**	**00 32 08.6**	**+1.3**
PB07				IAML		00 32 10.2	
	comp=Z,518nm,0.3s						
PB12	**IPOC Station P**	**1.67**	**6**	eP	**Pn**	**00 31 49.4**	**-0.3**
PB12				eS	**Sb**	**00 32 12.4**	**-0.4**
PB12				IAML		00 32 14.4	
	comp=E,287nm,0.5s						
PB12	**IPOC Station P**	**1.67**	**6**	eP	**Pn**	**00 31 49.5**	**-0.1**
PB12				eS	**Sb**	**00 32 13.2**	**+0.5**
PB12				IAML		00 32 13.9	
	comp=Z,266nm,0.7s						
PB03	**IPOC Station P**	**1.89**	**158**	⇑eP	**Pn**	**00 31 52.8**	**+0.1**
PB03	**IPOC Station P**	**1.89**	**158**	eP	**Pn**	**00 31 52.8**	**+0.1**
PB03				eS	**Sb**	**00 32 18.2**	**-0.9**
PB03				IAML		00 32 22.6	
	comp=Z,233nm,0.2s						
PB09	**IPOC Station P**	**1.91**	**142**	⇑iP	**Pn**	**00 31 54.5**	**+1.5**
PB09				eS	**Sb**	**00 32 19.9**	**+0.2**
PB09				IAML		00 32 24.4	
	comp=E,381nm,0.3s						
PB09	**IPOC Station P**	**1.91**	**142**	eP	**Pn**	**00 31 54.5**	**+1.5**
PB09				eS	**Sb**	**00 32 20.3**	**+0.5**
PB09				IAML		00 32 24.0	
	comp=Z,396nm,0.6s						
AP01	**Chacalluta**	**1.91**	**5**	eS	**Sn**	**00 32 16.6**	**+0.4**
AP01				IAML		00 32 28.6	
	comp=Z,267nm,0.6s						
PB16	**IPOC Station P**	**2.16**	**26**	eP	**Pn**	**00 31 57.4**	**+0.6**
PB16				IAML		00 32 33.1	
	comp=Z,74nm,0.6s						
PB06	**IPOC Station P**	**2.56**	**160**	eP	**Pn**	**00 32 01.6**	**-0.4**
PB06				eS	**Sn**	**00 32 31.7**	**-0.7**
PB06				IAML		00 32 44.2	
	comp=Z,131nm,0.5s						
PB05	**IPOC Station P**	**2.57**	**174**	eP	**Pn**	**00 32 00.9**	**-1.0**
PB05	**IPOC Station P**	**2.57**	**174**	eP	**Pn**	**00 32 01.0**	**-1.0**
PB05				eS	Sn	00 32 16.5	-16
PB05				IAML		00 32 50.0	
	comp=Z,70nm,0.8s						
PB10	**IPOC Station P**	**3.21**	**181**	eP	**Pn**	**00 32 09.7**	**-1.0**
PB10				eS	**Sn**	**00 32 48.8**	**+0.6**
PB10				IAML		00 32 58.3	
	comp=Z,33nm,1.4s						
AF01	**San Pedro de A**	**3.42**	**141**	eP	Pb	00 32 29.8	+7.7
AF01				eP	Pn	00 32 31.7	+18
AF01				eS	**Sb**	**00 33 06.2**	**+2.8**

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*IDC **27** 01:03:52.7±0.9, 3°.41N×74°.12W, h0^{km}, mb3.4/7, mbtmp3.6/9, ML3.4/2, MS3.0/3, Error ellipse: s-maj=26.4km s-min=13.9km az=80.0*
*RSNC **27** 01:03:52.6±0.0, 3°N±1°×7°4W±°, h6^{km}±2^{km}, M3.8, mB5.0, mb4.6, ML3.6, MLv4.4, Mw(mB)4.3*
*CATAC **27** 01:03:54.9±0.4, 3°N±3°×7°4W±°, h1^{km}, M4.4/10, MLv4.4/10, Error ellipse: s-maj=7.4km s-min=4.3km az=128.1, confirmed*
ISC 27 01:03:53.4±0.6**, 3°.42N**±0°.02×**74°.16W**±0°.03**, h10^{km}, n53, σ1^{s}.56**/74**, mb3.2**/5**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	**La Uribe, Meta**	**0.28**	**231**	P	**Pg**	**01 03 58.1**	**-1.0**
URMC				S	**Sg**	**01 04 01.7**	**-1.2**
PRAC	**Prado**	**0.78**	**292**	P	**Pg**	**01 04 07.1**	**-1.3**
PRAC				S	**Sg**	**01 04 18.0**	**-0.6**
PRAC	**Prado**	**0.78**	**292**	P	**Pg**	**01 04 07.1**	**-1.3**
PRAC				S	**Sg**	**01 04 17.2**	**-1.4**
VILC	**Villavicencio,**	**0.83**	**34**	P	**Pg**	**01 04 08.9**	**-0.6**
VILC				S	**Sb**	**01 04 20.5**	**-0.8**
ORTC	**Ortega, Tolima**	**1.18**	**294**	P	**Pb**	**01 04 14.3**	**-1.7**
ORTC				S	**Sb**	**01 04 30.1**	**-1.3**
CHIC	**Chingaza**	**1.27**	**20**	P	**Pn**	**01 04 16.3**	**-1.4**
CHIC				S	**Sb**	**01 04 32.3**	**-2.0**
MACC	**Macarena, Meta**	**1.31**	**166**	P	**Pn**	**01 04 16.6**	**-1.2**
MACC				S	**Sg**	**01 04 34.5**	**-1.1**
ROSC	**El Rosal**	**1.42**	**354**	Pg	**Pb**	**01 04 19.6**	**-0.6**
	469nm,0.3s,baz=173,slow=4.8,SNR=502						
ROSC				Lg	Lg	01 04 38.6	
	408nm,0.3s,baz=188,slow=23,SNR=8.8						
BETC	**Betania**	**1.47**	**240**	P	**Pb**	**01 04 19.6**	**-1.4**
BETC				S	**Sb**	**01 04 39.0**	**-0.8**
ANIL	**Santa Ana**	**1.63**	**311**	P	**Pb**	**01 04 22.4**	**-1.4**
ANIL				S	**Sb**	**01 04 43.8**	**-0.7**
GARC	**Garzon, Huila**	**1.81**	**227**	P	**Pb**	**01 04 25.2**	**-1.6**
GARC				S	**Sb**	**01 04 48.1**	**-1.5**
RECRC	**Villamaria, Ca**	**1.93**	**322**	P	**Pb**	**01 04 27.8**	**-1.3**
RECRC				S	**Sb**	**01 04 52.6**	**-0.9**
NIZA	**Niza - Manizal**	**2.08**	**321**	P	**Pb**	**01 04 30.5**	**-1.0**
NIZA				S	**Sb**	**01 04 57.7**	**+0.2**
SPBC	**San Pablo de B**	**2.21**	**2**	P	**Pb**	**01 04 32.9**	**-0.8**
SPBC				S	**Sg**	**01 05 04.0**	**-0.7**
NORC	**Norcasia**	**2.24**	**342**	P	**Pn**	**01 04 31.5**	**+0.9**
NORC				S	**Sb**	**01 05 00.5**	**-1.3**
YOTC	**Yotoco, Valle**	**2.25**	**284**	P	**Pn**	**01 04 31.4**	**+0.6**
YOTC				S	**Sb**	**01 05 01.5**	**-0.6**
FLOC	**Florencia**	**2.36**	**219**	P	**Pb**	**01 04 34.3**	**-1.8**
FLOC				S	**Sb**	**01 05 04.9**	**-0.3**
FLOC	**Florencia**	**2.36**	**219**	P	**Pb**	**01 04 34.3**	**-1.8**
FLOC				S	**Sb**	**01 05 04.9**	**-0.3**
JAMC	**Jamundi, Valle**	**2.51**	**265**	P	**Pb**	**01 04 36.6**	**-2.2**
JAMC				S	**Sb**	**01 05 10.2**	**+0.3**
PLMC	**San Jos del P**	**2.58**	**305**	P	**Pn**	**01 04 36.5**	**+1.2**
PLMC				S	**Sb**	**01 05 11.6**	**0.0**
POPC	**Popayan, Colom**	**2.66**	**251**	P	**Pb**	**01 04 38.5**	**-2.8**
POPC				S	**Sb**	**01 05 14.8**	**+0.7**
RUSC	**La Rusia**	**2.68**	**24**	P	**Pb**	**01 04 39.4**	**-2.4**
RUSC				S	**Sb**	**01 05 13.2**	**-1.7**
RUSC	**La Rusia**	**2.68**	**24**	P	**Pb**	**01 04 39.5**	**-2.3**
CBOC	**Ciudad Bolivar**	**3.04**	**323**	P	**Pb**	**01 04 44.8**	**-3.0**
HELC	**Santa Helena**	**3.07**	**334**	P	**Pb**	**01 04 46.2**	**-2.2**
HELC				S	**Sn**	**01 05 21.8**	**+2.5**
HELC	**Santa Helena**	**3.07**	**334**	P	**Pb**	**01 04 44.9**	**-3.4**
PTBC	**PUERTO BERRIO,**	**3.11**	**355**	P	**Pn**	**01 04 43.6**	**+1.0**

PTLC	Puerto Leguiza	3.29	191	P	Pb	01 04 50.3	-1.7
BARC	Barichara	3.30	17	P	Pn	01 04 47.5	+2.2
CRUC	La Cruz	3.34	237	P	Pn	01 04 48.4	+2.3
BBAC	Balboa, Cauca	3.38	246	P	Pn	01 04 48.1	+1.6
BRJC	Barrancabermej	3.55	7	P	Pn	01 04 50.4	+1.8
GR1C	Gorgona, Isla	4.02	264	P	Pn	01 04 54.2	-0.9
PAMC	Pamplona, Colo	4.15	20	P	Pn	01 04 59.2	+1.8
UREC	San Jos de Ur	4.51	342	P	Pn	01 05 04.8	+2.9
TUMC	Tumaco	4.83	251	P	Pn	01 05 07.9	+1.7
OCAC	Ocana	4.86	10	P	Pn	01 05 09.2	+2.5
SDV	Santo Domingo	6.46	33	Pn	Pn	01 05 29.2	+0.4
	7.5nm,0.3s,baz=180,slow=5.6,SNR=23						
SDV				Sn	Sn	01 06 40.5	-2.4
	26nm,0.3s,baz=92,slow=23,SNR=7.4						
SDV				Lg	Lg	01 07 13.9	
	17nm,0.3s,baz=287,slow=20,SNR=5.9						
SDV				LR	LR	01 08 19.2	
	comp=Z,120nm,19.0s,baz=218,slow=41						
	13nm,0.3s						
SDV	Santo Domingo	6.46	33	P	Pn	01 05 30.4	+1.5
	961nm33nm,0.7s						
SJCC	San Jacinto, C	6.51	351	P	Pn	01 05 29.5	+0.1
	17nm,0.4s						
SGC2	Sao Gabriel da	8.01	116	P	Pn	01 05 49.6	-0.4
URIC	Uribia, Colomb	8.50	15	P	Pn	01 05 56.1	-0.6
ATAH	Atahualpa	11.31	202	Pn	Pn	01 06 36.7	+1.2
	0.3nm,0.3s,baz=350,slow=11,SNR=2.3						
ATAH				LR	LR	01 11 48.2	
	comp=Z,82nm,20.3s,baz=12,slow=42						
	2.3nm,0.5s						
SJG	San Juan	16.57	28	LR	LR	01 15 06.5	
	comp=Z,46nm,18.8s,baz=204,slow=41						
LPAZ	La Paz	20.47	163	P	Pn	01 08 33.5	-0.8
	0.8nm,0.7s,baz=338,slow=15,SNR=2.0						
LPAZ				Lg	Lg	01 14 38.5	
	0.1nm,0.3s,baz=56,slow=17,SNR=4.0						
	0.8nm,0.7s						
MDP	Montagnes des	21.53	85	P	P	01 08 42.1	-0.9
	18nm,1.1s,baz=276,slow=9.6,SNR=4.8						
	18nm,1.1s						
TXAR	Lajitas Array	38.05	316	P	P	01 11 13.9	+1.6
	0.3nm,0.9s,baz=134,slow=8.7,SNR=1.9						
	0.3nm,0.9s						
PDAR	Pinedale Array	50.26	326	P	P	01 12 52.1	+1.8
	0.2nm,0.6s,baz=122,slow=6.7,SNR=2.0						
	0.2nm,0.6s						
YKA	Yellowknife Ar	66.09	341	P	P	01 14 41.8	+1.4
	0.2nm,0.8s,baz=153,slow=6.3,SNR=8.0						
	0.2nm,0.8s						
TORD	Torodi Ar. Bea	75.46	77	P	P	01 15 40.2	+1.8
	0.6nm,0.7s,baz=280,slow=3.6,SNR=4.1						
	0.6nm,0.7s						
ILAR	Eielson Array	79.59	335	P	P	01 16 01.4	+0.8
	0.2nm,0.7s,baz=110,slow=5.9,SNR=2.2						
	0.2nm,0.7s						
ASAR	Alice Springs	146.23	231	PKPbc	PKPbc	01 23 34.1	-1.0
	0.5nm,0.5s,baz=111,slow=3.5,SNR=4.2						
WRA	Warramunga Arr	147.72	237	PKPbc	PKPbc	01 23 38.4	-1.1
	0.5nm,0.8s,baz=114,slow=2.9,SNR=1.9						

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*IDC **27** 01:13:28.8±2.7, 8°.59S×148°.07E, h106^{km}±18^{km}, mb3.4/7, mbtmp3.8/8, Error ellipse: s-maj=41.4km s-min=23.3km az=86.0*

ISC 27 01:13:28.9±1.1**, 8°.6S**±0°.1×**148°.1E**±0°.2**, h109**^{km}**, n10,** σ**0**^{s}.**78**/12**, mb3.6**/6**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	1.23	229	P	Pn	01 13 53.4	+0.9
	58nm,0.3s,baz=13,slow=6.7,SNR=30						
PMG				S	Sn	01 14 09.3	-1.1
	218nm,0.3s,baz=166,slow=19,SNR=11						
WRA	Warramunga Arr	17.45	228	P	P	01 17 24.7	-0.5
	2.5nm,0.6s,baz=53,slow=11,SNR=11						
WRA				pP	pP	01 17 44.6	-0.6
	1.7nm,0.6s,baz=56,slow=11,SNR=3.8						
ASAR	Alice Springs	20.23	221	P	P	01 17 55.7	+0.1
	1.8nm,0.7s,baz=53,slow=9.9,SNR=21						
	1.8nm,0.7s						
STKA	Stephens Creek	23.95	194	P	P	01 18 33.2	+0.2
	1.4nm,0.7s,baz=354,slow=10,SNR=3.1						
	1.4nm,0.7s						
CMAR	Chiang Mai Arr	55.44	299	P	P	01 22 53.8	+1.2
	0.4nm,0.3s,baz=114,slow=7.3,SNR=4.4						
	0.4nm,0.3s						
VNDA	Vanda	69.28	177	P	P	01 24 24.3	+0.5
	1.1nm,0.6s,baz=330,slow=5.6,SNR=5.5						
	1.1nm,0.6s						
MKAR	Makanchi Array	80.17	321	P	P	01 25 27.1	-0.2
	0.3nm,0.8s,baz=121,slow=5.4,SNR=2.6						
	0.3nm,0.8s						
ZALV	Zalesovo Beam	81.77	328	P	P	01 25 34.9	-0.6
	0.5nm,0.4s,baz=107,slow=6.2,SNR=2.2						
	0.5nm,0.4s						
ILAR	Eielson Array	87.42	23	P	P	01 26 03.1	-0.6
	0.2nm,0.6s,baz=250,slow=5.9,SNR=1.3						
	0.2nm,0.6s						
TORD	Torodi Ar. Bea	146.71	281	PKPbc	PKPbc	01 32 58.5	-0.7
	0.4nm,0.8s,baz=51,slow=4.4,SNR=2.6						

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*NEIC **27** 01:15:01.5±1.3, 21°.56S±0°.10×178°.0W±0°.2, h466^{km}±12^{km}, mb4.3/14, Error ellipse: s-maj=22.5km s-min=14.2km az=100.0*

*IDC **27** 01:15:02.0±8.3, 21°.21S×178°.13W, h475^{km}±93^{km}, mb3.1/6, mbtmp4.0/6, Error ellipse: s-maj=113.7km s-min=37.0km az=163.0*

ISC 27 01:14:59.7±0.7**, 21°.5S**±0°.2×**178°.0W**±0°.1**, h450**^{km}**, n27,** σ**1**^{s}.**19**/26**, mb4.1**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	7.98	74	P	P	01 16 56.4	+1.5
RTZ	Ruatahuna	17.62	193	P	P	01 18 36.4	-2.0
BKZ	Black Stump Fm	18.25	194	P	P	01 18 42.1	-2.7
BKZ				IAmb	IAmb	01 18 57.5	
	comp=Z,15nm,1.3s						
CAN	Canberra	31.95	237	P	P	01 20 48.5	+1.5
CAN				IAmb	IAmb	01 21 06.9	
	comp=Z,14nm,1.3s						
CTA	Charters Tower	33.37	266	P	P	01 20 59.7	+0.4
	comp=Z,3.8nm,0.9s,baz=107,slow=9.4,SNR=2.0						
	comp=Z,3.8nm,0.9s						
CTAO	Charters Tower	33.37	266	P	P	01 20 59.8	+0.6
TOO	Toolangi	35.30	235	P	P	01 21 15.0	-0.4
STKA	Stephens Creek	37.34	245	P	P	01 21 33.4	+1.0
	comp=Z,1.7nm,0.4s,baz=95,slow=12,SNR=4.7						
	comp=Z,1.7nm,0.4s						
STKA	Stephens Creek	37.34	245	P	P	01 21 33.3	+1.0
STKA				IAmb	IAmb	01 21 44.7	
	comp=Z,13nm,1.1s						
BBOO	Buckleboo	42.09	244	P	P	01 22 11.3	+0.5
BBOO				IAmb	IAmb	01 22 11.9	
	comp=Z,7.7nm,0.9s						
ASAR	Alice Springs	44.27	258	P	P	01 22 28.1	0.0
	comp=Z,1.6nm,0.6s,baz=101,slow=7.8,SNR=20						
	comp=Z,1.6nm,0.6s						
ASAR	Alice Springs	44.27	258	P	P	01 22 28.3	+0.2
WR8	Warramunga Arr	44.29	263	P	P	01 22 27.5	-0.7
WR8				IAmb	IAmb	01 22 39.8	
	comp=Z,17nm,1.5s						
WRA	Warramunga Arr	44.44	263	P	P	01 22 29.2	-0.2
	comp=Z,0.4nm,0.3s,baz=96,slow=8.7,SNR=13						
	comp=Z,0.4nm,0.3s						
WRA	Warramunga Arr	44.44	263	P	P	01 22 29.2	-0.2
FORT	Forrest	48.88	247	P	P	01 23 03.4	+0.3
FORT				IAmb	IAmb	01 23 04.1	
	comp=Z,5.7nm,0.7s						
KNRA	Kununurra	50.56	267	P	P	01 23 15.9	+0.2
MBWA	Marble Bar	57.61	258	P	P	01 24 05.4	-0.3
MBWA				IAmb	IAmb	01 24 40.8	
	comp=Z,22nm,1.2s						
CASY	Casey	63.07	205	P	P	01 24 43.9	+2.6
J05D	Fort Rock, OR	82.89	38	P	P	01 26 36.0	-0.2
J05D				IAmb	IAmb	01 26 37.0	
	comp=Z,6.5nm,1.3s						
TXAR	Lajitas Array	87.61	57	P	P	01 26 59.4	0.0
	comp=Z,0.4nm,0.8s,baz=237,slow=5.2,SNR=3.6						
	comp=Z,0.4nm,0.8s						
PDAR	Pinedale Array	89.69	43	P	P	01 27 07.9	-1.0
	comp=Z,0.6nm,0.8s,baz=221,slow=4.0,SNR=5.0						
	comp=Z,0.6nm,0.8s						
ARCES	ARCESS Array B	129.86	349	PKP	PKPdf	01 33 14.5	-1.8
	comp=Z,1.7nm,0.8s,baz=51,slow=1.1,SNR=3.5						
AKASG	Malin Array Be	143.84	330	PKP	PKPbc	01 33 40.5	-0.8
	comp=Z,1.5nm,0.4s,baz=47,slow=4.3,SNR=8.8						
BRTR	Keskin Array B	147.46	311	PKPbc	PKPbc	01 33 51.7	-0.8
	comp=Z,1.1nm,0.8s,baz=104,slow=2.3,SNR=4.4						
GERES	GERESS Array B	151.12	344	PKPbc	PKPbc	01 34 00.2	-0.8
	comp=Z,0.3nm,0.5s,baz=54,slow=2.3,SNR=4.3						
DAVOX	Davos/Dischmat	153.94	348	PKPbc	PKPbc	01 34 06.5	-0.8
	comp=Z,0.7nm,0.5s,baz=338,slow=11,SNR=1.7						

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*TIR **27** 01:21:04.6, 41°.60N×19°.62E, h36^{km}±1^{km}, Ml2.9/7*

*BEO **27** 01:21:05.5±0.4, 41°.53N×19°.59E, h12^{km}±3^{km}, ML2.7/11*

*PDG **27** 01:21:06.2±0.2, 41°.65N×19°.62E, h9^{km}, MD3.0/1, ML2.9/12, Error ellipse: s-maj=0.7km s-min=0.7km az=0.0*

*THE **27** 01:21:18.0, 41°N±30°×2°0E±2°0, h7^{km}±27^{km}, M2.1/4, MLh2.1/4*

ISC 27 01:21:04.7±1.0**, 41°.56N**±0°.02×**19°.55E**±0°.02**, h12**^{km}±8^{km}**, n90,** σ**1**^{s}.**14**/133**, 15C-21D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.32	131	⇑Pg	Pg	01 21 10.8	-0.3
TIR				Sg	Sg	01 21 14.4	-0.9
TIR				AML	AML	01 21 15.1	
	9.3nm,0.4s						
TIR				AML	AML	01 21 15.3	
	6.2nm,0.4s						
ULC	Ulcinj	0.47	331	⇓*i*Pg	Pg	01 21 13.9	0.0
ULC				*i* Sg	Sg	01 21 21.1	+1.0
SDA	Shkodra	0.50	356	⇓Pg	Pg	01 21 14.3	-0.1
SDA				Sg	Sb	01 21 22.9	+0.3
SDA				AML	AML	01 21 25.3	
	2.1nm,0.3s						
PHP	Peshkopia	0.68	79	Pg	Pg	01 21 16.8	-1.1
PHP				Sg	Sg	01 21 26.8	-0.1
PHP				AML	AML	01 21 32.4	
	2.3nm,0.4s						
DRME	Dracevica, Mon	0.69	337	*e*Pg	Pg	01 21 17.9	-0.1
DRME				*e*Sg	Sn	01 21 30.8	-0.1
DRME	Dracevica, Mon	0.69	337	⇓*i*Pg	Pg	01 21 17.8	-0.2
DRME				*e*Sg	Sg	01 21 28.4	+1.4
BUM	Brajici-Budva	0.89	327	⇓*i*Pg	Pg	01 21 22.0	+0.1
BUM				*i* Sg	Sb	01 21 35.7	+1.7
PDG	Podgorica	0.90	346	Pg	Pg	01 21 21.6	-0.5
PDG				Sg	Sg	01 21 34.3	+0.5
PDG	Podgorica	0.90	346	⇑P	Pg	01 21 22.2	+0.1
PDG				⇓S	Sg	01 21 34.8	+0.9
PDG	Podgorica	0.90	346	*e*Pg	Pg	01 21 21.4	-0.7
PDG				*e*Sg	Sn	01 21 36.9	+0.8
PDG	Podgorica	0.90	346	⇑*i*Pg	Pg	01 21 21.4	-0.7
PDG				*i* Sg	Sg	01 21 34.7	+0.9
OHR	Ohrid	1.04	115	*i* Pg	Pb	01 21 24.1	-0.6
PVY	Plav	1.08	16	*e*Pg	Pb	01 21 24.7	-0.7
PVY	Plav	1.08	16	⇓*i*Pg	Pb	01 21 24.0	-1.4
PVY				*i* Sg	Sb	01 21 39.7	+0.1
VLO	Vlora	1.09	182	Pg	Pb	01 21 25.9	+0.5
VLO				Sg	Sb	01 21 40.6	+1.0
VLO				AML	AML	01 21 46.9	
	2.6nm,0.2s						
VLO	Vlora	1.09	182	P	Pb	01 21 25.8	+0.3
CEME	Cevo	1.09	335	⇑*i*Pg	Pb	01 21 25.6	0.0
CEME				*e*Sg	Sn	01 21 41.8	+0.7
HCY	Herceg Novi	1.19	319	⇓*i*Pg	Pn	01 21 26.9	-0.3
HCY				*i* Sg	Sn	01 21 45.6	+2.3
NKME	Niksic	1.29	340	⇑*i*Pg	Pn	01 21 28.7	+0.1
NKME				*e*Sg	Sg	01 21 47.6	+1.4
KBN	Korca	1.32	134	Pn	Pn	01 21 29.2	+0.1
KBN				Sn	Sb	01 21 45.9	-0.5
KBN	Korca	1.32	134	P	Pn	01 21 29.6	+0.5
KBN				S	Sb	01 21 47.1	+0.7
BEY	Berane	1.34	11	*e*Pg	Pn	01 21 29.2	-0.1
IVA	Berane	1.34	11	⇑*i*Pg	Pn	01 21 29.0	-0.3
IVA				*i* Sg	Sg	01 21 48.4	+0.6
TREB	Trebinje	1.46	323	*e*Pn	Pn	01 21 30.7	-0.2
TREB	Trebinje	1.46	323	*e*Pg	Pn	01 21 31.8	+0.9
SKO	Skopje	1.47	73	*i* Pn	Pn	01 21 32.0	+0.9
SKO				*i* Sn	Sg	01 21 52.6	+0.5
BRY	Bratogost	1.54	331	⇓*i*Pg	Pn	01 21 32.9	+0.8
BRY				*i* Sg	Sg	01 21 56.2	+2.0
NEST	Nestorio	1.61	135	⇓Pn	Pn	01 21 34.2	+1.2
NEST				Sn	Sn	01 21 54.7	+0.9
NEST				AML	AML	01 22 01.2	
	0.2nm,0.3s						
NEST	Nestorio	1.61	135	P	Pn	01 21 34.1	+1.0
UPM	Unac-Piva	1.71	344	⇓*i*Pn	Pn	01 21 36.4	+1.8
UPM				*i* Sn	Sg	01 21 59.7	-0.1
SJES	Sjenica	1.73	10	*e*Pg	Pb	01 21 36.4	-0.1
SJES				*e*Sg	Sg	01 22 01.3	+0.9
KLINJ	Klinje	1.76	336	*e*Pn	Pn	01 21 36.5	+1.3
PLE	Pljevlja	1.78	356	*e*Pg	Pg	01 21 39.0	+0.2
PLE	Pljevlja	1.78	356	⇓*i*Pn	Pb	01 21 37.6	+0.3
PLE				*i* Sn	Sg	01 22 01.3	-0.5
PENT	Pentalofos	1.82	138	P	Pn	01 21 37.0	+1.1
KEK	Kerkira	1.85	174	P	Pn	01 21 35.5	-0.8
NOCI	Noci	2.03	249	Pn	Pn	01 21 37.5	-1.2
NOCI				Sn	Sn	01 22 07.2	+3.3
NOCI				AML	AML	01 22 15.0	
	0.6nm,0.5s						
SELS	Selova	2.03	34	*e*Pn	Pn	01 21 39.6	+0.9
SELS				*e*Sn	Sb	01 22 05.6	-1.1
RUDO	Rudo	2.06	356	*e*Pn	Pn	01 21 39.6	+0.4
RUDO	Rudo	2.06	356	*e*Pn	Pn	01 21 41.2	+2.0
IVAS	Ivanjica	2.07	12	*e*Pn	Pn	01 21 39.9	+0.6
IVAS				*e*Sn	Sb	01 22 07.4	-0.5
KZN	Kozani	2.10	126	P	Pn	01 21 38.9	-0.8
BARS	Barje	2.10	52	*e*Pn	Pn	01 21 40.4	+0.7
IGT	Igoumenitsa	2.11	163	Pn	Pn	01 21 40.6	+0.8
IGT				Sn	Sn	01 22 08.3	+2.4
IGT	Igoumenitsa	2.11	163	P	Pn	01 21 39.6	-0.2
IGT	Igoumenitsa	2.11	163	*e*Pn	Pn	01 21 40.4	+0.6
KPRO	Kipourio	2.11	139	P	Pn	01 21 41.1	+1.2
GOCS	Kraljevo Serbi	2.23	26	*e*Pn	Pn	01 21 43.5	+1.9
GOCS				*e*Sn	Sn	01 22 10.4	+1.3
VAY	Valandovo	2.28	95	*i* Pn	Pn	01 21 42.9	+0.7
VAY				*i* Sn	Sn	01 22 11.8	+1.5
BBLS	Lazi&#263i	2.31	357	*e*Pn	Pn	01 21 44.7	+2.0
MATE	Matera	2.33	248	⇑P	Pn	01 21 41.6	-1.2
PRMD	Pramanda	2.34	149	P	Pn	01 21 43.7	+0.6
BOSS	Bosilegrad	2.38	66	*e*Pn	Pn	01 21 44.0	+0.5
GRUS	Gruza	2.48	20	*e*Pn	Pn	01 21 46.2	+1.2
DIVS	Divibare	2.56	7	*e*Pn	Pn	01 21 47.3	+1.2
BOVS	Bovan	2.62	37	⇑P	Pn	01 21 47.4	+0.7
BOVS				⇓S	Sn	01 22 19.6	+1.1
BOVS	Bovan	2.62	37	*e*Pn	Pn	01 21 47.5	+0.7
BOVS				*e*Sn	Sn	01 22 17.7	-0.8
TRUS	Trudelj	2.74	13	*e*Pn	Pn	01 21 50.8	+2.3
ZAPS	Zavoj	2.86	52	*e*Pn	Pn	01 21 51.4	+1.3
ZAPS				*e*Sn	Sn	01 22 23.6	-0.9
LKD2	Lefkada island	2.89	163	P	Pn	01 21 49.4	-1.2
VTS	Vitosha	2.94	68	*e*Pn	Pn	01 21 52.1	+0.7
NYDR	Nydri-Lefkada	2.97	162	P	Pn	01 21 50.5	-1.2
TEKS	Tekeris	2.99	360	*e*Pn	Pn	01 21 52.2	+0.2
ZAGS	Zajecar	3.00	40	*e*Pn	Pn	01 21 53.4	+1.4
SRS	Serrai	3.08	97	*e*Pn	Pn	01 21 54.0	+0.9
TIP	Timpagrande	3.19	223	⇑P	Pn	01 21 53.7	-1.0
TIP				⇑S	Sn	01 22 32.5	-0.3
MDVR	Moldovita	3.59	25	⇓P	Pn	01 22 00.8	+0.5
MDVR				⇑S	Sn	01 22 43.0	+0.4
MDVR	Moldovita	3.59	25	*e*Pn	Pn	01 22 00.7	+0.5
FRGS	Fruska Gora	3.60	3	*e*Pn	Pn	01 22 00.6	+0.2
PLD	Plovdiv	3.93	80	*e*Pn	Pn	01 22 05.8	+1.0
KNYS	Krupa na Uni	4.08	326	*e*Pn	Pn	01 22 07.7	+0.8
BZS	Buzias	4.33	20	⇑P	Pn	01 22 10.5	+0.2
BZS				⇑S	Sn	01 22 59.3	-1.4
BZS	Buzias	4.33	20	*e*Pn	Pn	01 22 10.7	+0.4
GZR	Gura Zlata	4.50	30	⇓P	Pn	01 22 13.7	+1.1
GZR				⇓S	Sn	01 23 05.1	+0.1
AQU	L'Aquila	4.65	282	*e*Pn	Pn	01 22 13.9	-0.9
MORH	Mrgy, Hungar	4.70	352	*e*Pn	Pn	01 22 15.3	-0.1
MORH	Mrgy, Hungar	4.70	352	⇓P	Pn	01 22 15.5	0.0
MORH				⇑S	Sn	01 23 08.8	-1.1
SIRR	Siria	4.95	17	⇑P	Pn	01 22 19.7	+0.8
SIRR				⇓S	Sn	01 23 16.4	+0.3
SIRR	Siria	4.95	17	*e*Pn	Pn	01 22 20.4	+1.5
BOJS	Bojanci	5.03	323	*e*Pn	Pn	01 22 20.3	+0.3
BEHE	Becsehely	5.30	339	*e*Pn	Pn	01 22 22.8	-0.9
CEY	Cerknica	5.59	320	*e*Pn	Pn	01 22 27.9	+0.2
DRGR		5.71	22	⇓P	Pn	01 22 29.6	+0.3
DRGR				⇓S	Sn	01 23 33.8	-0.9
SOKA	Soboth	6.06	329	*i* Pn	Pn	01 22 31.7	-2.5
	0.4nm,0.3s						
OBKA	Obir	6.12	326	*i* Pn	Pn	01 22 31.7	-3.3
	0.2nm,0.2s						
OBKA				*e*Sn	Sn	01 23 41.9	-3.2
	1.1nm,0.3s						
PSZ	Piszkesteto	6.37	2	⇓P	Pn	01 22 37.6	-0.7
PSZ				⇓S	Sn	01 23 50.2	-0.8
ARSA	Arzberg	6.38	335	*i* Pn	Pn	01 22 35.4	-3.1
	0.3nm,0.2s						
ABTA	Abfaltersbach	7.25	318	*i* Pn	Pn	01 22 49.7	-0.7
	0.2nm,0.2s						
WTTA	Wattenberg	8.04	318	*i* Pn	Pn	01 23 01.2	-0.2
	0.4nm,0.2s						
WTTA				*i* Sn	Sn	01 24 28.1	-4.2
	0.9nm,0.5s						
WATA	Walderalm	8.12	318	*i* Pn	Pn	01 23 00.8	-1.7
	0.4nm,0.2s						

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*UPP **27** 01:21:11.9±0.5, 67°.84N×20°.23E, h0^{km}±3^{km}, ML2.0, Confirmed Induced event*

*HEL **27** 01:21:11.8±0.4, 67°.86N×20°.01E, h0^{km}, ML1.5, Suspected explosion*

*IDC **27** 01:21:14.0±1.5, 67°.80N×20°.57E, h0^{km}, mbtmp2.6/3, ML1.8/3, Error ellipse: s-maj=24.2km s-min=10.6km az=112.0*

ISC 27 01:21:11.4±0.8**, 67°.83N**±0°.02×**20°.34E**±0°.03**, h0**^{km}**, n29,** σ**1**^{s}.**30**/42**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.12	359	P	Pg	01 21 14.4	+0.7
KUA				S	Sg	01 21 16.3	+1.0
RATU	Laukkuluspa	0.28	268	P	Pg	01 21 16.7	-0.1
NIKU	Nikkaluokta	0.50	275	P	Pg	01 21 20.7	-0.2
LANU	Lannavaara	0.66	70	P	Pb	01 21 25.3	-0.5
LANU	Lannavaara	0.66	70	PG	Pb	01 21 25.3	-0.5
LANU				SG	Sb	01 21 35.7	+0.2
MASU	Masugnsbyn	0.74	120	P	Pb	01 21 26.6	-0.6
SALU	Saltoluokta	0.84	238	P	Pg	01 21 26.3	-1.1
SALU	Saltoluokta	0.84	238	*e*P	Pg	01 21 26.7	-0.7
KIF	Kilpisjarvi	1.19	8	*e*P	Pn	01 21 35.4	+0.2
KIF	Kilpisjarvi	1.19	8	PN	Pn	01 21 35.9	+0.7
KIF				SG	Sg	01 21 48.2	-1.4
KIF				MSG		01 21 48.9	
	comp=Z,5.3nm,0.2s						
PAJU	Pajala	1.34	126	P	Pb	01 21 37.5	+0.1
PAJU	Pajala	1.34	126	PG	Pb	01 21 37.5	+0.1
	baz=306						
PAJU				SG	Sn	01 21 57.7	+1.7
HEF	Hetta	1.37	64	PG	Pb	01 21 38.2	+0.2
	baz=253						
HEF				MSG		01 21 56.1	
	comp=Z,3.1nm,0.2s						
HEF				SG	Sn	01 21 58.0	+1.4
KLF	Kolari	1.52	112	PG	Pg	01 21 40.8	+0.4
	baz=299						
KLF				MSG		01 22 00.8	
	comp=Z,2.9nm,0.2s						
KLF				SN	Sn	01 22 03.3	+3.1
KTK1	Kautokeino	1.60	41	PN	Pg	01 21 42.5	+0.5
HARU	Harads	1.70	171	P	Pg	01 21 43.4	-0.4
KALU	Kalix	2.31	148	PG	Pb	01 21 53.1	-0.8
	baz=323						
KALU				SG	Sg	01 22 25.9	+0.3
TOF	Tornio	2.36	136	PG	Pb	01 21 54.0	-0.6
TOF				MSG		01 22 24.6	
	comp=Z,2.3nm,0.2s						
TOF				SG	Sg	01 22 27.2	+0.2
RNF	Rovaniemi	2.53	116	PB	Pb	01 21 57.0	-0.6
RNF				SG	Sg	01 22 31.7	-0.8
ARA0	ARCESS Array S	2.55	45	PG	Pb	01 21 57.2	-0.7
	baz=234						
ARA0				SB	Sb	01 22 31.2	+1.5
ARCES	ARCESS Array B	2.55	45	Pn	Pb	01 21 56.0	-1.9
	comp=Z,0.2nm,0.3s,baz=227,slow=14,SNR=18						
ARCES				Sn	Sb	01 22 29.3	-0.4
	comp=Z,0.8nm,0.3s,baz=228,slow=24,SNR=12						
	comp=Z,0.4nm,0.3s						
RAJF	Raja-Jooseppi	3.05	74	PB	Pb	01 22 05.4	-1.0
RAJF				SB	Sg	01 22 47.2	-2.1
KEV	Kevo	3.10	48	SN	Sb	01 22 42.6	-3.0
RANF	Ranua	3.13	123	SG	Sg	01 22 51.2	-0.6
VRF	Varrio	3.52	87	SN	Sb	01 22 54.4	-3.3
MSF	Maaselka	3.94	115	SG	Sg	01 23 18.8	+1.0
KU6	Riekki	4.17	111	PG	Pg	01 22 29.4	-1.8
FINES	FINESS Array B	6.87	156	Pn	Pn	01 22 55.2	+2.0
	comp=Z,0.1nm,0.3s,baz=348,slow=13,SNR=1.3						
FINES				Sn	Sn	01 24 11.9	0.0
	comp=Z,0.1nm,0.3s,baz=347,slow=24,SNR=2.6						
FINES				Lg	Lg	01 24 42.4	
	comp=Z,0.1nm,0.3s,baz=342,slow=29,SNR=1.6						
	comp=Z,1.4nm,0.9s						
NOA	NORSAR Array B	7.87	214	Pn	Pn	01 23 08.2	+1.2
	baz=31,slow=10,SNR=2.6						
NOA				Lg	Lg	01 25 15.7	
	baz=57,slow=23,SNR=4.2						
	comp=Z,0.2nm,0.7s						

IDC 27 01:21:58.7±2.4**, 4°.21S**×**150°.61E, h0**^{km}**, mb3.2**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=179.6km s-min=30.7km az=123.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.27	224	P	P	01 26 57.8	+0.2
	0.4nm,0.7s,baz=47,slow=10,SNR=1.7						
	0.4nm,0.7s						
ASAR	Alice Springs	25.18	218	P	P	01 27 25.4	-0.7
	0.6nm,1.0s,baz=49,slow=9.1,SNR=5.7						
	0.6nm,1.0s						
ILAR	Eielson Array	82.45	23	P	P	01 34 22.3	-0.4
	0.2nm,0.5s,baz=255,slow=5.3,SNR=4.2						
	0.2nm,0.5s						
TORD	Torodi Ar. Bea	148.05	288	PKPbc	PKPbc	01 41 48.0	+0.5
	0.5nm,1.0s,baz=48,slow=4.5,SNR=1.8						

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*RSNC **27** 01:37:27.5±2.6, 18°N±24°×6°0W±2°0, h0^{km}, M4.5, mB5.1, mb4.5, Mw(mB)4.5*

*IDC **27** 01:37:40.1±0.6, 16°.86N×60°.87W, h0^{km}, mb4.2/20, mbtmp4.2/22, ML3.9/2, MS3.8/28, Error ellipse: s-maj=17.8km s-min=13.8km az=9.0*

*TRN **27** 01:37:43.4, 16°.83N×60°.92W, h25^{km}, MD4.7, North-east of Gaudeloupe.*

*NEIC **27** 01:37:45.5±2.0, 16°.84N±0°.04×60°.91W±0°.07, h31^{km}±3^{km}, mb4.7/194, Mwr4.5/41, Error ellipse: s-maj=9.5km s-min=5.1km az=75.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.09; $M_{\theta\theta}$1.65; $M_{\phi\phi}$-2.74; $M_{r\theta}$2.24; $M_{\theta\phi}$-0.45; $M_{\phi r}$5.15; Fault plane solution: $M_0$6.12000×10^{15} NP1:ϕ_s146.30000°, δ15.63000°, λ31.38000°. NP2:ϕ_s25.87000°, δ81.93000°, λ103.43000°. Principal axes: T 5.3835, Plg51.0000°, Azm311.0000°; N 1.2703, Plg13.0000°, Azm204.0000°; P -6.6537, Plg36.0000°, Azm104.0000°;*

*NEIC **27** 01:37:45.5, 16°.82N×60°.91W, h30^{km}*

ISC 27 01:37:45.0±1.2**, 16°.83N**±0°.03×**60°.94W**±0°.05**, h32**^{km}±9^{km}**, n238,** σ**1**^{s}.**33**/147**, mb4.7**/109**, MS3.8**/24**, 1D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H05N1	Guadeloupe/Mar	0.52	192	Pn	Pb	01 37 55.6	-0.3
H05N1				Sn	Sn	01 38 04.6	+0.5
DSDZ	La Diserade, G	0.53	193	*e*P	Pb	01 37 55.8	-0.1
GDSD	La Dsirade Is	0.53	193		Pb	01 37 55.5	-0.5
ABD	La Joyeuse, An	0.63	236		Pb	01 37 57.1	-0.5
MAGL	Barre de l’ile	0.94	201		Pn	01 38 02.2	+0.2
DHSZ	Broadband at M	0.97	235	*e*P	Pn	01 38 02.3	0.0
DHSZ				*e*S	Sb	01 38 17.6	+2.0
GDHS	Morne Mazeau,	0.97	235		Pn	01 38 02.1	-0.3
CBE	Ff, Capester	0.99	220		Pn	01 38 03.0	+0.3
MMLZ	Guadeloupe Bro	1.05	222	*e*P	Pb	01 38 04.2	-0.4
MMLZ				*e*S	Sb	01 38 20.1	+2.0
ATGZ	Broadband at L	1.05	226	*e*P	Pb	01 38 04.2	-0.5
ANWB	Willy Bob	1.16	316		Pn	01 38 04.8	-0.3
ANWB	Willy Bob	1.16	316	*e*P	Pn	01 38 05.0	0.0
ANWB				*e*S	Sb	01 38 22.6	+1.3
TDBA	Terre de Bas,	1.18	214		Pb	01 38 06.1	-0.8
TBG	Guadaloupe-3	1.19	215	*e*P	Pb	01 38 06.8	-0.1
MBWH	Windy Hill	1.20	266	*e*P	Pb	01 38 06.4	-0.8
MBWH				*e*S	Sb	01 38 23.0	+0.5

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DWS    Wesley             1.30 196  eP     Pn     01 38 07.6 +0.6
DWS                                 eS     Sb     01 38 25.0 -0.4
DSLB   Salisbury          1.46 198  eP     Pn     01 38 10.1 +0.9
DSLB                                eS     Sb     01 38 29.4 -0.4
DLPL   La Plaine          1.52 191  eP     Pn     01 38 10.3 +0.3
DLPL                                eS     Sn     01 38 29.4 +0.8
SKI    Saint Kitts        1.79 286  eP     Pn     01 38 14.8 +1.0
SKI                                 eS     Sb     01 38 38.3 -1.0
SVN    Savane Anatole     1.99 186         Pn     01 38 16.4  0.0
CXM    Morne La Croix     2.02 186         Pn     01 38 16.9 -0.1
SEUS   St. Eustatius      2.06 289         Pn     01 38 19.1 +1.7
BIM    Bigot              2.30 183         Pn     01 38 21.3 +0.5
BIM    Bigot              2.30 183  eP     Pn     01 38 21.7 +0.9
BIM                                 eS     Sn     01 38 49.5 +1.4
SABA   Saba               2.34 290         Pn     01 38 23.2 +2.0
MPOM   Morne Pois Mar     2.37 178         Pn     01 38 22.3 +0.6
H05S1  Guadeloupe/Mar     2.39 178   Pn    Pn     01 38 22.6 +0.6
H05S1                                Sn    Sn     01 38 50.6 +0.3
SLBI   Saint Lucia, B     2.79 181  eP     Pn     01 38 28.4 +1.0
SLBI                                eS     Sn     01 39 02.5 +2.4
SLAC   Saint Lucia, A     2.92 179  eP     Pn     01 38 30.3 +1.1
SLAC                                eS     Sn     01 39 03.9 +0.7
MCLT   Moule a Chique     3.10 180  eP     Pn     01 38 33.0 +1.2
MCLT                                eS     Sn     01 39 08.8 +1.0
SVB    Belmont            3.55 185  eP     Pn     01 38 39.3 +1.4
SVB                                 eS     Sn     01 39 19.7 +0.9
GRGR   Grenville          4.72 189         Pn     01 38 55.5 +1.4
HUMP   Col San Antoni     4.86 286         Pn     01 38 57.5 +1.5
GCPR   Guaynabo City      5.12 287         Pn     01 39 01.0 +1.5
SJG    San Juan           5.13 285   Pn    Pn     01 39 01.1 +1.4
       36nm,0.3s,baz=104,slow=12,SNR=65
SJG                                  Sn    Sn     01 40 01.6 +3.8
       14nm,0.3s,baz=22,slow=20,SNR=5.7
SJG                                  LR    LR     01 41 14.2
       comp=Z,2µm,19.5s,baz=102,slow=41
       85nm,0.3s
SJG    San Juan           5.13 285         Pn     01 39 01.6 +2.0
OBIP   Obispado Ponce     5.54 283         Pn     01 39 07.1 +1.9
CRPR   Cabo Rojo, PR      6.00 282         Pn     01 39 12.6 +1.0
AGPR   Aguadilla, PR      6.10 286         Pn     01 39 14.5 +1.5
TRN    Trinidad (W)       6.16 184  eP     Pn     01 39 15.9 +2.0
TRN                                 eS     Sn     01 40 21.9 -1.3
SDDR   Presa de Saban    10.08 284         Pn     01 40 08.2 +0.5
URIC   Uribia, Colomb    11.86 246   P     Pn     01 40 28.9 -3.1
       8.1nm,1.0s
SDV    Santo Domingo     12.31 231   Pn    Pn     01 40 38.7 +0.4
       0.9nm,0.3s,baz=39,slow=7.1,SNR=8.6
SDV                                  Sn    Sn     01 42 52.2 -2.4
       0.3nm,0.3s,baz=49,slow=20,SNR=1.4
SDV                                  LR    LR     01 45 25.0
       comp=Z,198nm,21.8s,baz=48,slow=38
       9.1nm,0.8s
SDV    Santo Domingo     12.31 231  eP     Pn     01 40 41.9 +3.5
SDV    Santo Domingo     12.31 231   P     Pn     01 40 39.3 +1.0
       9.7nm,0.7s
MASC   Masc              13.04 287  i P    Pn     01 40 45.5 -2.6
MASC                                 IAmb  IAmb   01 41 01.1
       comp=Z,23nm,1.1s
QMBU   Quimbuelo         13.58 286  i P    Pn     01 40 50.8 -4.7
SMRC   Santa Marta, M    14.06 248   P     P      01 41 07.6 -1.9
       comp=Z,23nm,1.1s
MDP    Montagnes des     14.21 144   Pn    Pn     01 40 57.9 -6.2
       comp=Z,1.0nm,0.3s,baz=336,slow=17,SNR=18
MDP                                  Sn    Sn     01 43 19.7  -21
       comp=Z,2.2nm,0.3s,baz=242,slow=20,SNR=7.4
MDP                                  LR    LR     01 46 39.2
       comp=Z,179nm,20.0s,baz=340,slow=38
BOAV   Boa Vista         14.35 178         Pn     01 41 02.4 -3.7
BOAV   Boa Vista         14.35 178  eP     Pn     01 41 05.4 -0.7
RCC    Rio Carpintero    14.35 285  i P    Pn     01 41 06.5 +0.5
ARGC   Ariguani, Magd    14.68 244   P     Pn     01 41 11.5 +1.0
       comp=Z,39nm,0.7s
OCAC   Ocana             14.79 236   P     Pn     01 41 12.4 +0.3
       comp=Z,2µmcomp=Z,136nm,0.7s
PAMC   Pamplona, Colo    14.86 232   P     P      01 41 17.3 -1.6
       comp=Z,282nmcomp=Z,22nm,0.6s
CHIV   Chivirico         15.02 284   P     P      01 41 18.4 -1.6
CHIV                                 IAmb  IAmb   01 41 22.4
       comp=Z,29nm,0.8s
STH    Stony Hill        15.19 277  i P    Pn     01 41 19.3 +1.9
BARC   Barichara         15.71 231   P     P      01 41 27.0 -1.1
       comp=Z,28nm,0.7s
MTDJ   Mount Denham      15.89 277         Pn     01 41 27.8 +1.3
MTDJ                                 IAmb  IAmb   01 41 29.9
       comp=Z,45nm,0.9s
RUSC   La Rusia          16.11 229   P     P      01 41 32.4 -0.3
       comp=Z,459nmcomp=Z,33nm,1.8s
PTBC   PUERTO BERRIO,    16.71 234   P     Pn     01 41 36.3 -0.6
       comp=Z,16nm,0.9s
UREC   San Jos de Ur     16.86 239   P     Pn     01 41 38.7 -0.1
SPBC   San Pablo de B    16.99 231   P     P      01 41 43.0 +0.9
       comp=Z,12nm,0.7s
NORC   Norcasia          17.65 232   P     P      01 41 49.7 +0.3
       comp=Z,11nm,0.9s
APAC   Apartado, Choc    17.66 242   P     Pn     01 41 48.7 +0.1
       comp=Z,42nm,0.7s
ROSC   El Rosal          17.72 229   P     P      01 41 52.4 +1.9
       comp=Z,18nm,0.5s,baz=27,slow=14,SNR=8.0
ROSC                                 LR    LR     01 50 17.3
       comp=Z,375nm,18.4s,baz=49,slow=43
ROSC   El Rosal          17.72 229         P      01 41 50.7 +0.2
HELC   Santa Helena      17.76 235   P     Pn     01 41 49.2 -1.2
       comp=Z,11nm,0.6s
DBBC   Dabeiba           17.83 239   P     P      01 41 51.4 +0.1
CBOC   Ciudad Bolivar    18.34 235   P     P      01 41 54.9 -2.2
MGV    Manicaragua       18.70 289  eP     P      01 41 58.5 -2.3
MGV                                  IAmb  IAmb   01 42 03.2
       comp=Z,20nm,0.7s
MACA   Manacapuru-AM     19.87 179         Pn     01 42 14.7 -0.7
MACA   Manacapuru-AM     19.87 179  eP     P      01 42 14.3 +0.6
TEFE   Tefe              20.54 191  eP     P      01 42 21.8 +0.8
SOR    Soroa             21.58 289         P      01 42 31.3 -0.9
SOR                                  IAmb  IAmb   01 42 35.5
       comp=Z,34nm,0.8s
SOR    Soroa             21.58 289  i P    P      01 42 31.0 -1.1
ITTB   Itaituba          21.68 166  eP     P      01 42 34.2 +0.9
OTAV   Otavalo           23.86 228  eP     P      01 43 01.0 +4.8
JTS    Las Juntas de     24.22 258   LR    LR     01 50 46.5
       comp=Z,125nm,20.9s,baz=78,slow=32
NPGB   Novo Progresso    24.36 166  eP     P      01 43 01.4 +1.1
PRPB   Parauapebas       25.37 153  eP     P      01 43 10.4 +0.9
TEIG   Tepich            26.12 282         P      01 43 16.2 -0.2
TEIG                                 IAmb  IAmb   01 43 16.9
       comp=Z,17nm,0.8s
152A   Waverly Hall      26.65 311   IAmb  IAmb   01 43 23.1
       comp=Z,22nm,1.0s
TKL    Tuckaleechee C    27.65 317   LR    LR     01 53 55.1
       comp=Z,216nm,21.6s,baz=146,slow=35
VILB   Vilhena           29.60 179  eP     P      01 43 48.8 +1.4
WVT    Waverly           30.64 314         P      01 43 56.8 +0.4
SADO   Sadowa            31.79 335   LR    LR     01 55 04.8
       comp=Z,129nm,21.3s,baz=142,slow=33
N47A   Urbana            32.11 323   P     P      01 44 09.9 +0.6
PTLB   Pontes e Lacer    32.12 177  eP     P      01 44 09.5 -0.1
SIUC   Southern Illin    32.42 316   IAmb  IAmb   01 44 13.7
       comp=Z,11nm,0.8s
S44A   Carbondale        32.43 315   IAmb  IAmb   01 44 13.7
       comp=Z,12nm,0.8s
CMIG   Matias Romero     32.45 276   LR    LR     01 56 33.4
       comp=Z,105nm,21.5s,baz=94,slow=35
SIV    San Ignacio       32.61 180   LR    LR     01 57 46.4
       comp=Z,128nm,20.9s,baz=355,slow=37
WHAR   Wooly Hollow      33.43 309   IAmb  IAmb   01 44 21.6
       comp=Z,16nm,1.1s
X40A   Basin Creek Fa    33.50 308   IAmb  IAmb   01 44 22.9
       comp=Z,12nm,0.7s
LPAZ   La Paz            33.66 193   P     P      01 44 25.2 +1.4
       comp=Z,0.7nm,0.5s,baz=24,slow=12,SNR=2.2
LPAZ                                 LR    LR     01 59 09.3
       comp=Z,88nm,19.5s,baz=0.5,slow=38
       comp=Z,0.7nm,0.5s
CCM    Cathedral Cave    33.97 315   P     P      01 44 25.8 +0.2
MGMO   Mountain Grove    34.24 312   IAmb  IAmb   01 44 28.9
       comp=Z,7.5nm,0.9s
GLMI   Grayling          34.28 330   P     P      01 44 29.8 +1.6
BDFB   Brasilia          34.70 158   LR    LR     01 59 49.4
       comp=Z,95nm,19.9s,baz=331,slow=38
R40A   Maddies Statio    34.78 314   IAmb  IAmb   01 44 32.9
       comp=Z,6.0nm,0.7s
HHAR   Hobbs             35.06 310   IAmb  IAmb   01 44 56.2
       comp=Z,19nm,1.5s
P40A   Paris             35.26 316   IAmb  IAmb   01 44 37.4
       comp=Z,7.6nm,0.7s
P38A   Dawn              36.29 315   IAmb  IAmb   01 44 46.2
       comp=Z,12nm,0.7s
WHTX   Lake Whitney,     36.32 301   IAmb  IAmb   01 44 46.8
       comp=Z,13nm,0.7s
Z35A   Perchaven, San    36.54 304   IAmb  IAmb   01 44 49.1
       comp=Z,18nm,1.0s
N38A   Joes South For    36.69 317   IAmb  IAmb   01 44 53.9
       comp=Z,12nm,0.9s
W35A   Tecumseh          36.84 307   IAmb  IAmb   01 44 51.0
       comp=Z,16nm,0.9s
833A   Chaparral WMA,    37.15 295   IAmb  IAmb   01 44 53.1
       comp=Z,15nm,1.1s
PLPT   Palo Pinto        37.24 302   IAmb  IAmb   01 44 54.7
       comp=Z,16nm,0.9s
HNDO   Hondo             37.27 297   IAmb  IAmb   01 44 54.5
       comp=Z,21nm,1.1s
BRDY   Brady             37.41 300   IAmb  IAmb   01 44 55.3
       comp=Z,7.7nm,0.7s
KSU1   Kansas State U    38.17 313   IAmb  IAmb   01 45 01.5
       comp=Z,13nm,0.8s
SCHQ   Schefferville     38.20 354   P     P      01 45 01.4 -0.2
       comp=Z,4.4nm,0.6s,baz=175,slow=7.9,SNR=8.6
SCHQ                                 LR    LR     02 00 35.1
       comp=Z,96nm,19.3s,baz=154,slow=36
       comp=Z,4.4nm,0.6s
SCHQ   Schefferville     38.20 354   IAmb  IAmb   01 45 02.9
       comp=Z,72nm,0.8s
KAN01  Argonia South     38.22 309   IAmb  IAmb   01 45 43.1
       comp=Z,17nm,1.3s
OZNA   Ozona             39.11 298   IAmb  IAmb   01 45 09.7
       comp=Z,7.8nm,0.7s
R32A   Long Quarter,     39.40 311   IAmb  IAmb   01 45 12.8
       comp=Z,18nm,0.8s
SMWD   Samnorwood        39.43 305   IAmb  IAmb   01 45 12.8
       comp=Z,12nm,0.9s
POST   Post              39.89 302   IAmb  IAmb   01 45 16.5
       comp=Z,18nm,0.7s
BGNE   Belgrade          40.24 315         P      01 45 19.0 +0.1
CBKS   Cedar Bluff       40.29 311   IAmb  IAmb   01 45 20.2
       comp=Z,14nm,0.8s
AMTX   Amarillo          40.50 304   IAmb  IAmb   01 45 22.6
       comp=Z,11nm,1.1s
ODSA   Odessa            40.55 300   IAmb  IAmb   01 45 21.6
       comp=Z,14nm,0.9s
PH02   Texas Public H    40.85 305   IAmb  IAmb   01 45 25.0
       comp=Z,32nm,0.9s
TXAR   Lajitas Array     41.01 295   P     P      01 45 24.6 -1.0
       comp=Z,1.0nm,0.6s,baz=133,slow=8.5,SNR=20
TXAR                                 PcP   PcP    01 47 26.4 +1.2
       comp=Z,0.5nm,0.7s,baz=98,slow=4.1,SNR=3.6
       comp=Z,1.0nm,0.6s
MSTX   Muleshoe          41.14 303   IAmb  IAmb   01 45 27.1
       comp=Z,17nm,1.0s
EPLO   Experimental L    42.11 328   P     P      01 45 34.4 +0.2
EPLO                                 IAmb  IAmb   01 45 35.0
       comp=Z,10nm,0.8s
VHRN   Van Horn          42.35 297   IAmb  IAmb   01 45 37.3
       comp=Z,8.0nm,0.7s
AGMN   Agassiz Nation    42.39 325   P     P      01 45 36.2 -0.2
AGMN                                 IAmb  IAmb   01 45 36.9
       comp=Z,8.9nm,0.7s
KSCO   Kaye Shedlock'    42.47 310   IAmb  IAmb   01 45 37.8
       comp=Z,10nm,0.7s
CPUP   Villa Florida     43.05 175   P     P      01 45 40.7 -1.1
       comp=Z,1.6nm,0.9s,baz=359,slow=13,SNR=4.9
CPUP                                 LR    LR     02 06 43.3
       comp=Z,47nm,18.0s,baz=2.0,slow=40
       comp=Z,1.6nm,0.9s
CPUP   Villa Florida     43.05 175   IAmb  IAmb   01 45 41.0
       comp=Z,3.1nm,1.1s
ULM    Lac du Bonnet     43.56 328   P     P      01 45 45.0 -0.8
       comp=Z,7.5nm,0.6s,baz=123,slow=7.6,SNR=8.5
ULM                                  LR    LR     02 05 51.1
       comp=Z,108nm,18.9s,baz=38,slow=39
       comp=Z,7.5nm,0.6s
ULM    Lac du Bonnet     43.56 328   IAmb  IAmb   01 45 46.0
       comp=Z,8.7nm,0.7s
ANMO   Albuquerque       44.33 303   LR    LR     02 07 46.3
       comp=Z,139nm,18.6s,baz=127,slow=41
ANMO   Albuquerque       44.33 303   P     P      01 45 53.3 +0.8
TASM   ASL Pad, Albuq    44.33 303   IAmb  IAmb   01 45 53.4
       comp=Z,4.4nm,1.0s
TASM   ASL Pad, Albuq    44.33 303   IAmb  IAmb   01 45 53.4
       comp=Z,4.0nm,1.0s
121A   Cookes Peak, D    44.98 299   IAmb  IAmb   01 45 59.7
       comp=Z,11nm,0.9s
319A   Douglas           46.09 297   IAmb  IAmb   01 46 08.3
       comp=Z,11nm,0.9s
K22A   Casper            46.47 313   IAmb  IAmb   01 46 10.0
       comp=Z,6.9nm,0.9s
LPIG   La Paz            46.62 287   LR    LR     02 07 52.8
       comp=Z,83nm,18.5s,baz=65,slow=39
PV15   Paradox Valley    46.67 307   IAmb  IAmb   01 46 14.6
       comp=Z,5.6nm,0.8s
PV02   Paradox Valley    46.84 307   IAmb  IAmb   01 46 14.0
       comp=Z,11nm,0.9s
PV13   Radium Mtn., P    46.89 307   IAmb  IAmb   01 46 14.4
       comp=Z,12nm,1.1s
PV03   Paradox Valley    46.93 307   IAmb  IAmb   01 46 14.5
       comp=Z,5.4nm,0.9s
PV11   David Mesa, Pa    46.96 307   IAmb  IAmb   01 46 15.7
       comp=Z,7.5nm,1.0s
PV18   Skein Mesa, Pa    46.98 307   IAmb  IAmb   01 46 14.9
       comp=Z,12nm,0.9s
PV16   Nyswonger Mesa    47.00 307   IAmb  IAmb   01 46 22.5
       comp=Z,5.1nm,0.8s
PV20   West Nyswonger    47.04 307   IAmb  IAmb   01 46 15.3
       comp=Z,8.9nm,1.0s
PV19   Morning Glory     47.05 307   IAmb  IAmb   01 46 14.9
       comp=Z,5.0nm,0.9s
X18A   Snowflake         47.08 302   IAmb  IAmb   01 46 15.9
       comp=Z,8.9nm,0.9s
PV05   Paradox Valley    47.09 307   IAmb  IAmb   01 46 15.2
       comp=Z,5.7nm,0.9s
FRB    Frobisher Bay     47.16 355   LR    LR     02 08 17.9
       comp=Z,104nm,18.1s,baz=262,slow=39
TUC    Tucson            47.47 299   P     P      01 46 17.8 +0.6
TUC                                  IAmb  IAmb   01 46 18.7
       comp=Z,6.7nm,0.9s
RDMU   Red Mountain      48.04 310   IAmb  IAmb   01 46 23.6
       comp=Z,5.7nm,1.0s
X16A   Lo Mia Camp, P    48.28 301   IAmb  IAmb   01 46 24.6
       comp=Z,8.4nm,1.4s
P18A   Preston Nutter    48.31 308   IAmb  IAmb   01 46 26.7
       comp=Z,9.0nm,1.4s
BW06   Boulder Array     48.63 313   IAmb  IAmb   01 46 27.2
       comp=Z,6.2nm,0.8s
PD31   Pinedale Array    48.63 313   IAmb  IAmb   01 46 27.2
       comp=Z,6.7nm,0.9s
PDAR   Pinedale Array    48.63 313   P     P      01 46 26.2 +0.1
       comp=Z,6.7nm,0.9s,baz=114,slow=9.4,SNR=50
PDAR                                 LR    LR     02 06 16.0
       comp=Z,90nm,21.8s,baz=114,slow=35
       comp=Z,6.7nm,0.9s
PDAR   Pinedale Array    48.63 313   P     P      01 46 26.4 +0.2
P17A   Butcher Ranch,    48.65 308   IAmb  IAmb   01 46 28.1
       comp=Z,12nm,1.2s
BSUT   Blindstream Ca    48.91 309   IAmb  IAmb   01 46 30.2
       comp=Z,8.9nm,0.8s
TMUT   Trail Mountain    48.96 308   IAmb  IAmb   01 46 32.7
       comp=Z,5.1nm,0.8s
U15A   North Rim         49.27 304   IAmb  IAmb   01 46 33.3
       comp=Z,5.6nm,0.9s
Y14A   Wickenburg        49.50 300   IAmb  IAmb   01 46 34.5
       comp=Z,6.7nm,0.8s
TCUT   Toone Canyon      49.53 310   IAmb  IAmb   01 46 34.1
       comp=Z,9.0nm,0.8s
CTU    Camp Tracy        49.68 309   IAmb  IAmb   01 46 35.7
       comp=Z,9.3nm,0.9s
HWUT   Hardware Ranch    49.76 311   IAmb  IAmb   01 46 43.4
       comp=Z,6.8nm,0.8s
YHL    Hebgen Lake       50.36 315   IAmb  IAmb   01 46 57.8
       comp=Z,15nm,1.2s
DUG    Dugway, Tooele    50.36 309   IAmb  IAmb   01 46 41.0
       comp=Z,8.6nm,1.0s
BGU    Big Grassy Mou    50.68 309   IAmb  IAmb   01 46 43.2
       comp=Z,11nm,0.9s
HVU    Hansel Valley     50.68 311   IAmb  IAmb   01 46 42.9
       comp=Z,7.1nm,0.9s
PSUT   Pine Spring       50.84 306   IAmb  IAmb   01 46 45.3
       comp=Z,7.0nm,1.0s
SPR3   Spring Creek 3    51.29 307   IAmb  IAmb   01 46 48.6
       comp=Z,6.6nm,1.0s
DLMT   Dillon            51.47 315   IAmb  IAmb   01 46 49.5
       comp=Z,8.4nm,1.2s
H10N3  ASCENSION HYDR52.06 114   T     T      02 42 45.1
       baz=298,slow=75,SNR=69
H10N2  ASCENSION HYDR52.06 114   T     T      02 42 45.6
       baz=298,slow=75,SNR=79
H10N1  ASCENSION HYDR52.08 114   T     T      02 42 46.7
       baz=298,slow=75,SNR=76
ELK    Elko              52.28 309   LR    LR     02 11 12.0
       comp=Z,133nm,18.8s,baz=124,slow=38
PFO    Pinyon Flats O    52.34 300   LR    LR     02 13 45.9
       comp=Z,86nm,18.2s,baz=88,slow=41
H10S3  ASCENSION HYDR52.45 116   T     T      02 43 11.5
       baz=284,slow=74,SNR=87
H10S2  ASCENSION HYDR52.47 116   T     T      02 43 08.5
       baz=296,slow=74,SNR=73
ESDC   Sonseca Array     54.14  53   P     P      01 47 05.6 -1.7
       comp=Z,0.9nm,1.1s,baz=274,slow=7.3,SNR=3.1
       comp=Z,0.9nm,1.1s
NV11   Mina Array Sit    54.17 305   IAmb  IAmb   01 47 09.3
       comp=Z,5.3nm,0.9s
NVAR   Mina Array Bea    54.28 305   P     P      01 47 09.2 +0.7
       comp=Z,3.1nm,0.8s,baz=96,slow=6.3,SNR=20
NVAR                                 LR    LR     02 11 06.5
       comp=Z,151nm,21.8s,baz=97,slow=37
       comp=Z,3.1nm,0.8s
NEW    Newport           55.23 317   IAmb  IAmb   01 47 15.3
       comp=Z,4.8nm,0.8s
DBIC   Dimbokro          55.67  93   P     P      01 47 18.1 -0.5
       comp=Z,6.7nm,0.7s,baz=310,slow=6.7,SNR=12
       comp=Z,6.7nm,0.7s
DBIC   Dimbokro          55.67  93   IAmb  IAmb   01 47 18.9
       comp=Z,6.7nm,0.8s
POIN   Pond Inlet        56.73 354   P     P      01 47 25.1 -0.2
K05A   Summer Lake       56.78 310   IAmb  IAmb   01 47 27.9
       comp=Z,7.9nm,0.8s
ORV    Oroville          56.88 306   IAmb  IAmb   01 47 28.3
       comp=Z,6.3nm,0.9s
SUMG   Summit            57.25   8   P     P      01 47 30.2 +0.8
SUMG                                 IAmb  IAmb   01 47 32.4
       comp=Z,12nm,1.1s
WIFE   Three Sisters-    57.62 312   IAmb  IAmb   01 47 34.2
       comp=Z,7.7nm,0.9s
YKAW1  Yellowknife Wh    58.72 334   IAmb  IAmb   01 47 39.5
       comp=Z,3.5nm,0.8s
YKA    Yellowknife Ar    58.78 334   P     P      01 47 39.2 -0.6
       comp=Z,2.6nm,0.7s,baz=109,slow=6.6,SNR=53
YKA                                  LR    LR     02 14 12.5
       comp=Z,140nm,18.5s,baz=26,slow=37
       comp=Z,2.6nm,0.7s
YKAW3  Yellowknife Wh    58.81 334   IAmb  IAmb   01 47 40.1
       comp=Z,4.7nm,0.9s
TORD   Torodi Ar. Bea    60.41  84   P     P      01 47 50.9 -1.0
       comp=Z,6.4nm,0.8s,baz=304,slow=6.5,SNR=33
       comp=Z,6.4nm,0.8s
BMRD   Maredsous         61.74  42  dP     P      01 48 02.2 +1.9
TAM    Tamanrasset       62.37  73   P     P      01 48 06.3 +1.1
TAM                                  IAmb  IAmb   01 48 07.3
       comp=Z,9.1nm,1.0s
BBB    Bella Bella       62.90 320   LR    LR     02 16 23.6
       comp=Z,217nm,19.6s,baz=0.5,slow=37
KEST   Kesra             64.52  58   P     P      01 48 18.9 -0.2
       comp=Z,4.1nm,0.8s,baz=294,slow=8.2,SNR=3.9
       comp=Z,4.1nm,0.8s
DAVA   Damuels           64.85  45  eP     P      01 48 22.0 +0.8
       comp=Z,0.3nm,0.3s
FETA   Feichten          65.42  46  eP     P      01 48 26.1 +1.2
       comp=Z,1.9nm,1.0s
RETA   Reutte            65.46  45  eP     P      01 48 25.8 +0.8
       comp=Z,1.6nm,1.1s
SQTA   Sankt Quirin      65.75  45  eP     P      01 48 27.6 +0.6
       comp=Z,0.7nm,0.6s
NB2    NORSAR Subarra    66.78  30   P     P      01 48 34.5 +1.3
       comp=Z,9.2nm,1.7s,baz=265,slow=6.2
NOA    NORSAR Array B    66.78  30   P     P      01 48 34.0 +0.7
       comp=Z,1.8nm,1.0s,baz=262,slow=6.2,SNR=5.3
       comp=Z,1.8nm,1.0s
CLL    Collm             67.03  41  i P    P      01 48 35.5 +0.6
R32K   Eaglecrest        67.21 327   P     P      01 48 33.8 -2.2
GERES  GERESS Array B    67.44  44   P     P      01 48 37.6 -0.1
       comp=Z,0.5nm,0.8s,baz=314,slow=4.6,SNR=4.4
       comp=Z,0.5nm,0.8s
HFS    Hagfors           67.91  31   P     P      01 48 40.8 +0.5
       comp=Z,2.6nm,1.0s,baz=333,slow=5.4,SNR=1.9
       comp=Z,2.6nm,1.0s
INK    Inuvik            68.06 338   P     P      01 48 40.8 -0.3
INK                                  IAmb  IAmb   01 48 52.2
       comp=Z,6.4nm,1.1s
M30M   Minto, Yukon      68.69 331   IAmb  IAmb   01 48 46.8
       comp=Z,10nm,0.9s
MODS   Modra-Piesok      69.83  44  eP     P      01 48 54.0 +1.5
L27K   Beaver Creek,     71.02 332   IAmb  IAmb   01 49 01.5
       comp=Z,5.1nm,0.7s
L26K   Log Cabin Wild    71.71 332   IAmb  IAmb   01 49 05.6
       comp=Z,5.8nm,0.6s
STHS   Stebnicka Huta    72.36  43  eP     P      01 49 12.7 +4.8
ARCES  ARCESS Array B    73.13  22   P     P      01 49 12.5 +0.5
       comp=Z,0.7nm,0.7s,baz=259,slow=6.4,SNR=1.0
       comp=Z,0.7nm,0.7s
ARCES  ARCESS Array B    73.13  22   IAmb  IAmb   01 49 20.2
       comp=Z,29nm,1.5s
IL31                     73.20 333   IAmb  IAmb   01 49 12.8
       comp=Z,6.1nm,0.9s
ILAR   Eielson Array     73.20 333   P     P      01 49 12.4 -0.1
       comp=Z,2.3nm,0.8s,baz=112,slow=4.0,SNR=30
ILAR                                 LR    LR     02 22 50.1
       comp=Z,110nm,18.8s,baz=116,slow=37
       comp=Z,2.3nm,0.8s
FINES  FINESS Array B    73.96  30   P     P      01 49 16.8 -0.2
       comp=Z,2.1nm,0.7s,baz=308,slow=6.8,SNR=11
       comp=Z,2.1nm,0.7s
NEA2   Nenana            74.15 333   IAmb  IAmb   01 49 18.8
       comp=Z,8.7nm,0.7s
I23K   Minto, Yukon-K    74.22 334   IAmb  IAmb   01 49 52.4
       comp=Z,11nm,1.4s
TRF    Thorofare Moun    74.81 332   P     P      01 49 22.8 +0.6
E22K   Anaktuvuk Pass    74.85 337   IAmb  IAmb   01 49 31.4
       comp=Z,6.9nm,1.1s
BPAW   Bear Paw Mtn.     75.04 333   IAmb  IAmb   01 49 24.0
       comp=Z,7.5nm,0.9s
BURAR  Bucovina Array    75.21  44   P     P      01 49 25.7 +1.0
BRTR   Keskin Array B    82.86  51   P     P      01 50 06.0 -0.8
       comp=Z,1.0nm,0.9s,baz=272,slow=4.0,SNR=3.7
       comp=Z,1.0nm,0.9s
KBZ    Khabaz            88.16  45   P     P      01 50 33.4 +0.6
       comp=Z,1.6nm,0.9s,baz=280,slow=7.1,SNR=2.6
       comp=Z,1.6nm,0.9s
PPT    Papeete           93.70 253   LR    LR     02 28 01.4
       comp=Z,58nm,18.6s,baz=30,slow=32
LBTB   Lobatse           93.93 115   LR    LR     02 29 04.3
       comp=Z,54nm,18.9s,baz=7.0,slow=33
FURI   Furi              96.54  79   LR    LR     02 34 11.0
       comp=Z,31nm,18.7s,baz=338,slow=35
MA2    Magadan           99.61 344   LR    LR     02 40 13.4
       comp=Z,51nm,18.3s,baz=188,slow=38
ASAR   Alice Springs    164.50 242   PKPab PKPab  01 58 40.8 -0.4
       comp=Z,0.3nm,0.4s,baz=96,slow=3.5,SNR=2.4
```

IDC 27 01:38:56.8±2.5,48°.37N×154°.39E,h0km,mb3.5/2, mbtmp3.3/3,ML2.3/1,MS4.0/1,Error ellipse: s-maj=57.3km s-min=35.7km az=154.0,Kuril Islands

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Code   Station Name        Δ°   AZ°   Phase ID          Time      Res
                                      Op    ISC       h  m  s     ISC
PETK   Petropavlovsk-     5.19  23    Pn    Pn       01 40 15.2 -0.4
       0.5nm,0.3s,baz=190,slow=12,SNR=7.6
PETK                                  Sn    Sn       01 41 18.1 +1.9
       0.1nm,0.3s,baz=210,slow=20,SNR=1.2
       1.3nm,0.5s
H11N2  WAKE ISLAND Hy    30.30 156    T     T        02 16 45.8
       baz=344
H11N1  WAKE ISLAND Hy    30.32 156    T     T        02 16 46.4
       baz=344
H11N3  WAKE ISLAND Hy    30.32 156    T     T        02 16 45.9
       baz=344
H11S1  WAKE ISLAND Hy    31.42 157    T     T        02 18 05.7
       baz=345,slow=76,SNR=12
H11S3  WAKE ISLAND Hy    31.43 157    T     T        02 18 16.4
       baz=345,slow=76,SNR=15
H11S2  WAKE ISLAND Hy    31.44 157    T     T        02 18 21.8
       baz=345,slow=76,SNR=14
MKAR   Makanchi Array    46.98 297    P     P        01 47 29.1 -0.1
       0.5nm,0.6s,baz=63,slow=9.1,SNR=4.9
       0.5nm,0.6s
ARTI   Arti              54.51 317    LR    LR       02 14 46.3
       comp=Z,125nm,18.1s,baz=212,slow=39
TXAR   Lajitas Array     75.95  62    P     P        01 50 45.7 +0.1
       0.3nm,0.8s,baz=306,slow=5.3,SNR=1.9
       0.3nm,0.8s
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TRN 27 01:46:51.7,16°.83N×60°.93W,h21km,MD3.6,North-east of Guadeloupe.,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DSDZ	La Diserade, G	0.53	194	*e*P	Pn	01 47 04.7	+0.6
DSDZ				*e*S	Sn	01 47 13.4	+1.0
DHSZ	Broadband at M	0.97	235	*e*P	Pn	01 47 10.9	+0.7
DHSZ				*e*S	Sn	01 47 25.7	+2.4
MMLZ	Guadeloupe Bro	1.05	222	*e*P	Pn	01 47 13.5	+2.2
MMLZ				*e*S	Sn	01 47 28.3	+3.0
ATGZ	Broadband at L	1.05	226	*e*P	Pn	01 47 12.8	+1.6
ATGZ				*e*S	Sn	01 47 28.6	+3.2
ANWB	Willy Bob	1.17	316	*e*P	Pb	01 47 13.4	+0.3
TBG	Guadaloupe-3	1.19	215	*e*P	Pb	01 47 15.1	+1.6
TBG				*e*S	Sn	01 47 32.0	+3.3
MBWH	Windy Hill	1.21	266	*e*P	Pb	01 47 15.0	+1.2
MBWH				*e*S	Sn	01 47 32.2	+3.0
DWS	Wesley	1.31	196	*e*P	Pb	01 47 15.5	-0.1
DWS				*e*S	Sb	01 47 33.5	+1.7
DSLB	Salisbury	1.46	199	*e*P	Pb	01 47 19.2	+1.0
DSLB				*e*S	Sb	01 47 38.6	+2.2
DLPL	La Plaine	1.52	191	*e*P	Pb	01 47 19.6	+0.4
SKI	Saint Kitts	1.80	286	*e*P	Pb	01 47 24.0	+0.1
SKI				*e*S	Sb	01 47 47.2	+1.2
SVN	Savane Anatole	1.99	187	*e*P	Pb	01 47 25.8	-1.4
BIM	Bigot	2.31	183	*e*P	Pn	01 47 30.4	+1.9
BIM				*e*S	Sb	01 47 58.9	-1.7
SLBI	Saint Lucia, B	2.79	181	*e*P	Pn	01 47 37.5	+2.4
SLBI				*e*S	Sn	01 48 10.8	+2.5
SVB	Belmont	3.55	185	*e*P	Pn	01 47 47.9	+2.3
SVB				*e*S	Sn	01 48 29.3	+2.3

IDC ***27*** *01:49:23.8±3.4, 26°.06N×127°.87E, h0^{km}, mb3.7/6, mbtmp3.7/6, MS2.7/1, Error ellipse: s-maj=206.3km s-min=21.1km az=66.0*

JMA ***27*** *01:49:27.7±0.2, 26°.3N±0°.8×12°8E±°, h28^{km}±2^{km}, MV3.4/16, NEAR OKINAWAJIMA ISLAND*

ISC 27 01:49:24.5±1.4**, 26°.15N**±0°.04×**128°.47E**±0°.04**, h17**^{km}±9^{km}**, n20, σ1§18**/31**, mb3.7**/6**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNTH	Nagotoyohara	0.54	313	*i* P	Pg	01 49 35.6	+0.3
JNTH				*e*S	Sg	01 49 41.3	-1.2
JJT3	Tamagusuku3	0.61	270	P	Pb	01 49 37.8	+1.1
JJT3				*e*S	Sg	01 49 44.1	-0.7
JOW	Kunigami	0.70	346	P	Pb	01 49 39.0	+0.7
JOW				S	Sg	01 49 47.3	-0.3
JYRO	Yoronjima	0.87	359	P	Pb	01 49 41.8	+0.7
JYRO				*e*S	Sb	01 49 51.9	-0.6
JIH	Iheya	0.99	333	P	Pb	01 49 43.6	+0.5
JIH				*e*S	Sb	01 49 54.7	-1.2
JAGN	Aguni-jima	1.18	292	P	Pn	01 49 46.4	+0.2
JAGN				*e*S	Sb	01 49 59.5	-1.9
JOKE	Okinoerabujima	1.21	4	*e*P	Pn	01 49 46.8	+0.1
JOKE				*e*S	Sb	01 50 01.5	-0.8
JKE	Kume jima 2	1.52	277	P	Pn	01 49 50.3	-0.5
JTK	Tokunoshima	1.69	15	P	Pn	01 49 53.5	+0.3
JTK				*e*S	Sn	01 50 14.7	+0.3
JAMN	Amaminishikomi	2.18	17	*e*P	Pn	01 50 00.7	+0.8
JAMN				*e*S	Sn	01 50 25.3	-1.2
JAM	Amami Oshima	2.47	24	P	Pn	01 50 04.5	+0.6
JAM				*e*S	Sn	01 50 33.0	-0.7
JMZ	Minamidaito 2	2.50	97	P	Pn	01 50 04.2	-0.2
JMZ				*e*S	Sn	01 50 31.8	-2.8
JKDJ	Kitadaitoujima	2.56	94	P	Pn	01 50 05.1	0.0
JKDJ				*e*S	Sn	01 50 34.2	-1.6
KSRS	Korea Array	11.28	358	LR	LR	01 57 02.0	
	comp=Z,37nm,19.7s,baz=35,slow=40						
SONM	Songino Array	27.73	327	P	P	01 55 13.7	+1.6
	0.7nm,0.5s,baz=134,slow=9.9,SNR=4.3 0.7nm,0.5s						
MKAR	Makanchi Array	41.74	312	P	P	01 57 11.8	-0.9
	1.0nm,0.6s,baz=105,slow=10,SNR=14 1.0nm,0.6s						
ZALV	Zalesovo Beam	42.44	323	P	P	01 57 16.6	-1.5
	0.5nm,0.5s,baz=114,slow=9.7,SNR=2.4 0.5nm,0.5s						
WRA	Warramunga Arr	46.17	172	P	P	01 57 49.1	+0.7
	0.6nm,0.7s,baz=353,slow=7.9,SNR=2.5 0.6nm,0.7s						
ASAR	Alice Springs	49.80	173	P	P	01 58 19.1	+2.6
	0.5nm,1.0s,baz=351,slow=7.9,SNR=5.3 0.5nm,1.0s						
BVAR	Borovoye Array	50.47	318	P	P	01 58 20.9	-0.5
	0.8nm,0.4s,baz=105,slow=9.4,SNR=6.5 0.8nm,0.4s						

GII ***27*** *01:53:08.8±0.0, 28°.87N×51°.42E, h10^{km}, confirmed*

SGS ***27*** *01:53:09.7, 29°.22N×51°.48E, h7^{km}, Ml5.0*

GCMT ***27*** *01:53:10.9±0.4, 28°.82N±0°.05×51°.27E±0°.02, h12^{km}, MW4.7/67, Moment Tensor Solution. s8,c9; s67,c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.23±.06; $M_{\theta\theta}$-0.07±.06; $M_{\phi\phi}$1.29±.05; $M_{r\theta}$0.21±.33; $M_{\theta\phi}$0.45±.05; $M_{\phi r}$0.25±.18; Best double couple: $M_0$1.36800×10^{16} NP1:ϕ_s10.00000°, δ39.00000°, λ-101.00000°. NP2: ϕ_s203.00000°, δ52.00000°, λ-81.00000°. Principal axes: T 1.4580, Plg6.0000°, Azm287.0000°; N -0.1850, Plg7.0000°, Azm18.0000°; P -1.2780, Plg81.0000°, Azm154.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

TEH ***27*** *01:53:10.6, 28°.89N×51°.33E, h8^{km}±26^{km}*

NEIC ***27*** *01:53:11.8±1.8, 28°.87N±0°.06×51°.37E±0°.07, h10^{km}±1^{km}, mb5.2/266, Mww4.8/6, Error ellipse: s-maj=11.6km s-min=9.2km az=117.0*

MOS ***27*** *01:53:11.3±1.0, 28°.87N×51°.37E, h21^{km}, mb5.3/53, Error ellipse: s-maj=4.9km s-min=3.1km az=104.2*

THR ***27*** *01:53:11.1±0.0, 28°.90N×51°.36E, h10^{km}±266^{km}, ML4.8*

DSN ***27*** *01:53:13.2±0.4, 28°.83N×51°.45E, h15^{km}, mb5.2/4, ML4.6/20, Error ellipse: s-maj=6.9km s-min=4.3km az=37.0*

OMAN ***27*** *01:53:14.0±0.1, 28°.88N×51°.49E, h20^{km}, mb4.7/30, ml5.0/8, Error ellipse: s-maj=1.3km s-min=0.8km az=16.0*

IDC ***27*** *01:53:13.1±1.9, 28°.87N×51°.36E, h22^{km}±11^{km}, mb4.8/44, mbtmp4.9/49, ML4.0/6, MS4.0/41, Error ellipse: s-maj=11.4km s-min=8.9km az=178.0*

ISC 27 01:53:12.9±0.3**, 28°.88N**±0°.03×**51°.35E**±0°.03**, h21**^{km}±2^{km}**, h21**^{km}**:pP-P, n1202, σ1§22**/1189**, mb5.1**/307**, MS4.0**/51**, 76C-43D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DSBU	Dashti - Bushe	0.52	189	Pg	Pb	01 53 21.5	-1.8
KAZ2	Kazeron-Fars-I	0.78	20	Pg	Pb	01 53 25.4	-2.5
SHI	Shiraz	1.27	53	Pg	Pn	01 53 35.3	-0.3
SHI				Sg	Sb	01 53 54.2	+2.0
QIR1	Qir	1.54	105	Pg	Pb	01 53 40.7	-0.1
JHRM	Jahrom	1.99	100	Pn	Pb	01 53 47.1	-1.4
KHL1	Khalili_Fars	2.12	125	Pn	Pn	01 53 48.5	+1.4
KLNJ	Kolanjah	2.14	6	Pn	Pn	01 53 48.8	+1.1
KLNJ	Kolanjah	2.14	6	*e*Pn	Pn	01 53 49.2	+1.5
KLNJ				IAML		01 54 31.2	
	comp=Z,4μm,1.0s						
LMD1	Lamerd	2.21	133	Pn	Pn	01 53 50.0	+1.5
LMD1	Lamerd	2.21	133	*e*Pn	Pn	01 53 50.1	+1.6
LMD1				IAML		01 54 37.9	
	comp=Z,12μm,1.0s						
KFJS2	Khafji	2.65	259	P	Pn	01 53 55.5	+1.1
LAR1	LAR	2.92	114	Pn	Pn	01 53 59.4	+1.2
SAKB	Bahrain	2.98	194	P	Pn	01 54 01.0	+2.1
SAKB				S	Sn	01 54 37.4	+3.5
IBRJ	Brojen	3.02	359	Pn	Pn	01 54 01.2	+1.4
SHMA	Al-Shehemyia	3.03	187	P	Pn	01 54 01.2	+1.6
	SNR=57						
IRAM	Ramesheh	3.06	17	Pn	Pn	01 54 02.0	+1.8
WANAN	Al Wanan	3.22	233	P	Pn	01 54 03.7	+1.5
ZNGN	Zangian	3.26	353	Pn	Pn	01 54 04.3	+1.2
AMIS	Naft Sefid	3.31	328	Pn	Pn	01 54 04.5	+1.1
JHBN	Jahan bin	3.40	350	Pn	Pn	01 54 06.6	+1.6
ARIRA	AirJ	3.42	220	P	Pn	01 54 06.8	+1.7
BOQSS		3.47	211	P	Pn	01 54 08.1	+2.4
NHFOF	Ain Dar Gosp	3.77	210	P	Pn	01 54 11.5	+1.5
IMEH	Mehriz	3.78	48	Pn	Pn	01 54 11.7	+1.5
SMAN	Sihmah	3.97	228	P	Sn	01 54 51.1	-7.3
GTMR	Gotvand	4.07	332	*e*Pn	Pn	01 54 15.0	+1.0
GTMR				IAML		01 55 24.0	
	comp=Z,2μm,1.0s						
IZEF	Zefreh	4.09	12	Pn	Pn	01 54 15.9	+1.4
NASN	Na'in	4.11	17	*e*Pn	Pn	01 54 15.6	+0.8
NASN				IAML		01 55 43.6	
	comp=Z,360nm,1.0s						
TRNA	Turayna	4.12	182	P	Pn	01 54 16.1	+1.4
	SNR=38						
SHOFU	Shofu	4.13	200	P	Pn	01 54 16.1	+1.3
JRN	Qarnain Island	4.14	161	P	Pn	01 54 16.3	+1.4
	SNR=40						
SMRA	Abu-Samra	4.14	187	P	Pn	01 54 16.2	+1.2
	SNR=25						
IKLH	Kolahrood	4.43	2	Pn	Pn	01 54 20.3	+1.1
YZKH	Yazd	4.48	38	*e*Pn	Pn	01 54 21.5	+1.8
YZKH				IAML		01 56 13.5	
	comp=Z,330nm,1.0s						
BNDS	Bandar-Abbas	4.50	108	Pn	Pn	01 54 20.9	+0.8
BNDS	Bandar-Abbas	4.50	108	*e*Pn	Pn	01 54 21.0	+0.9
BNDS				IAML		01 56 27.3	
	comp=Z,670nm,1.0s						
GENO	Geno	4.50	108	Pn	Pn	01 54 21.0	+0.9
IBAF	Bafgh	4.54	52	Pn	Pn	01 54 22.6	+2.0
NHRD	Haradh	4.63	207	P	Pn	01 54 23.5	+1.8
KHGB	Koh Gabri	4.71	70	Pn	Pn	01 54 24.5	+1.6
ANAR	Anarak	4.76	25	Pn	Pn	01 54 24.4	+0.8
NGRK	Negar Kerman	4.76	79	Pn	Pn	01 54 25.5	+1.7
SHBH2	SHBH2	4.76	181	P	Pn	01 54 24.8	+1.3
SHBH2	SHBH2	4.76	181	S	Sn	01 55 21.5	+3.4
SLWR	Sila	4.80	176	P	Pn	01 54 25.4	+1.4
SLWR				S	Sn	01 55 20.8	+1.9
BTHS		4.83	185	P	Pn	01 54 25.8	+1.3
QAMS	Qamsar	4.85	0	Pn	Pn	01 54 26.0	+1.2
ZRDN	Zarand Kerman	4.96	64	Pn	Pn	01 54 27.9	+1.5
KHMZ	Khomeyn	4.99	347	*e*Pn	Pn	01 54 28.5	+1.7
KHMZ				IAML		01 55 31.8	
	comp=Z,390nm,1.0s						
RQBS	RQBS	5.00	253	P	Pn	01 54 26.6	-0.2
GHWR	Ruwais	5.08	164	P	Pn	01 54 29.1	+1.3
GHWR				S	Sn	01 55 27.5	+1.6
UMQ	Umm Al-Quwin	5.09	130	P	Pn	01 54 28.4	+0.5
UMQ				S	Sn	01 55 27.1	+1.0
SHME	Shamm	5.10	122	P	Pn	01 54 28.3	+0.1
	SNR=22						
SHME				S	Sn	01 55 25.4	-1.1
SHME	Shamm	5.10	122	*i* P	Pn	01 54 28.2	+0.1
	SNR=22						
SHME				S	Sn	01 55 25.7	-0.8
KRSH	Karshahi	5.12	7	Pn	Pn	01 54 29.8	+1.2
BANOM	Banah	5.29	123	P	Pn	01 54 31.1	+0.3
BANOM				S	Sn	01 55 29.9	-1.3
BANOM	Banah	5.29	123	*i* P	Pn	01 54 30.7	0.0
	SNR=182						
BANOM				S	Sn	01 55 29.3	-1.8
RMAH	Rumah	5.31	230	P	Pn	01 54 32.0	+0.9
SHBH1	SHBH1	5.34	178	P	Pn	01 54 32.4	+1.1
SHBH1	SHBH1	5.34	178	S	Sn	01 55 33.0	+0.8
AJN	Ajban	5.39	142	P	Pn	01 54 33.6	+1.6
	SNR=29						
AJN				P	Pn	01 54 33.7	+1.6
	SNR=15						
AJN				S	Sn	01 55 35.2	+1.7
AJN	Ajban	5.39	142	*i* P	Pn	01 54 33.2	+1.2
	SNR=29						
KRM1	Kerman Provinc	5.40	71	Pn	Pn	01 54 34.2	+1.7
NAZ	Nazwa, Dubai	5.46	134	P	Pn	01 54 34.1	+1.0
	SNR=60						
NAZ				S	Sn	01 55 34.9	-0.4
NAZ	Nazwa, Dubai	5.46	134	*i* P	Pn	01 54 32.9	-0.1
	SNR=60						
CHMN	Cheshme madani	5.49	78	Pn	Pn	01 54 35.4	+1.6
ISFB	Sefidab	5.51	8	Pn	Pn	01 54 35.2	+1.3
MASF	Masafi	5.53	128	P	Pn	01 54 34.3	+0.3
	SNR=70						
MASF				S	Sn	01 55 35.5	-1.4
ASUD	Al Ashush, Dub	5.53	139	P	Pn	01 54 35.7	+1.7
	SNR=28						
ASUD				S	Sn	01 55 37.6	+0.7
ASUD	Al Ashush, Dub	5.53	139	*i* P	Pn	01 54 34.9	+0.9
	SNR=81						
MSFE	Esma-Masafi	5.53	128	*i* P	Pn	01 54 34.1	0.0
	SNR=70						
MZWR	Madinat Zayed	5.58	155	P	Pn	01 54 36.1	+1.5
MZWR				S	Sn	01 55 39.3	+1.2
GHVR	GHOM	5.59	360	*e*Pn	Pn	01 54 36.6	+1.7
GHVR				IAML		01 56 14.5	
	comp=Z,530nm,1.0s						
FAQ	Al Faqa, Dubai	5.59	136	P	Pn	01 54 36.0	+1.1
	SNR=15						
FAQ				S	Sn	01 55 37.7	-0.9
FAQ	Al Faqa, Dubai	5.59	136	*i* P	Pn	01 54 35.2	+0.3
	SNR=15						
IDOB	Doab	5.60	332	Pn	Pn	01 54 36.7	+1.6
MDH	Madha	5.67	128	P	Pn	01 54 36.0	0.0
	SNR=28						
MDH				S	Sn	01 55 38.5	-1.9
MDH	Madha	5.67	128	*i* P	Pn	01 54 35.8	-0.1
	SNR=28						
KHNJ	Kahnooj	5.67	98	Pn	Pn	01 54 37.7	+1.6
ASAO	Ashtian	5.77	349	*e*Pn	Pn	01 54 39.4	+1.9
ASAO				IAML		01 56 12.4	
	comp=Z,430nm,1.0s						
UOSS	Minazif	5.84	131	P	Pn	01 54 38.5	+0.2
UOSS				S	Sn	01 55 41.8	-2.9
UOSS	Minazif	5.84	131		Pn	01 54 38.0	-0.3
UOSS	Minazif	5.84	131	*i* P	Pn	01 54 38.1	-0.2
	SNR=7.0						
HATD	Hatta, Dubai	5.87	132	P	Pn	01 54 39.2	+0.4
	SNR=54						
HATD				S	Sn	01 55 45.0	-0.5
HATD	Hatta, Dubai	5.87	132	*i* P	Pn	01 54 39.0	+0.2
	SNR=83						
ASHO	Ashiyiah	5.93	134	P	Pn	01 54 40.0	+0.5
	SNR=135						
ASHO				P	Pn	01 54 40.1	+0.6
	SNR=49						
ASHO				S	Sn	01 55 46.7	-0.1
ASHO	Ashiyiah	5.93	134	*i* P	Pn	01 54 39.8	+0.3
	SNR=137						
IQOM	Qom	5.95	358	Pn	Pn	01 54 40.9	+0.8
KHRJ	Al Kharj	6.00	214	P	Pn	01 54 47.5	+7.0
IVRN	Varamin	6.11	3	Pn	Pn	01 54 43.0	+1.0
MZR	Muzera	6.15	161	P	Pn	01 54 43.5	+0.8
	SNR=708						
MZR				S	Sn	01 55 54.1	+1.7
MZR	Muzera	6.15	161	*i* P	Pn	01 54 43.3	+0.7
	SNR=19						
TPRV	Parvadeh(Tabas	6.17	47	Pn	Pn	01 54 44.5	+1.6
ALNE	Al Ain	6.21	140	P	Pn	01 54 44.2	+0.8
	SNR=104						
ALNE	Al Ain	6.21	140	*i* P	Pn	01 54 43.9	+0.4
	SNR=104						
HAGD	Aghdareh	6.22	343	Pn	Pn	01 54 44.1	+0.4
KBAM	BAM	6.22	86	Pn	Pn	01 54 45.3	+1.6
ILBA	Ilam Banvizeh	6.46	318	Pn	Pn	01 54 47.4	+0.4
ILBA	Ilam Banvizeh	6.46	318	*e*Pn	Pn	01 54 46.8	-0.1
ILBA				IAML		01 56 14.3	
	comp=Z,170nm,1.0s						
KCHF	Cheshme Sefid,	6.52	327	Pn	Pn	01 54 48.7	+0.9
SOHO	SOHO	6.62	134	P	Pn	01 54 49.1	+0.1
SOHO				S	Sn	01 56 02.8	-1.1
SOHO	SOHO	6.62	134	*i* P	Pn	01 54 48.7	-0.3
	SNR=75						
ILAS	Lasjerd	6.63	11	Pn	Pn	01 54 50.4	+1.1
IDMV	Damavand	6.71	5	Pn	Pn	01 54 51.5	+1.1
DAMV	Damavand	6.75	4	*e*Pn	Pn	01 54 51.8	+0.7
DAMV				IAML		01 55 54.1	
	comp=Z,4.7nm,1.0s						
TNSJ	Nastanj	6.78	40	Pn	Pn	01 54 52.9	+1.7
IGHG	Ghaleghazi	6.80	324	Pn	Pn	01 54 53.4	+1.7
TKDS	Koohdasht(Taba	6.83	45	Pn	Pn	01 54 53.5	+1.4
IFIR	Firoozkooh	6.85	10	Pn	Pn	01 54 53.7	+1.3
TABS	Tabas	6.86	45	*e*Pn	Pn	01 54 53.8	+1.5
TABS				IAML		01 57 07.3	
	comp=Z,200nm,1.0s						
HGHA	Hamedan- Ghaye	6.92	343	Pn	Pn	01 54 54.3	+0.9
QABG	Abgarm-Qazvin	6.98	348	Pn	Pn	01 54 55.4	+1.3
GLG1	Gilan-e-Gharb	6.99	320	Pn	Pn	01 54 54.2	+0.1
CHTH	Charan	7.01	359	*e*Pn	Pn	01 54 55.4	+0.7
CHTH				IAML		01 56 59.7	
	comp=Z,3.9nm,1.0s						
UMZA	Um Al Zommool	7.03	150	P	Pn	01 54 55.1	+0.4
UMZA				S	Sn	01 56 11.5	-2.5
THKV	Tehran--Karaj	7.03	357	*e*Pn	Pn	01 54 56.3	+1.5
THKV				IAML		01 57 19.3	
	comp=Z,140nm,1.0s						
SNGE	Sanandaj	7.07	332	*e*Pn	Pn	01 54 55.7	+0.3
SNGE				IAML		01 55 32.1	
	comp=Z,6.9nm,1.0s						
IDHR	Dehrash	7.18	325	Pn	Pn	01 54 57.2	+0.4
ARQ	Araqi	7.21	139	P	Pn	01 54 57.4	+0.2
	SNR=224						
ARQ				S	Sn	01 56 17.8	-0.7
IALA	Alasht	7.29	9	Pn	Pn	01 55 00.2	+1.7
BSRN	Basiran	7.38	63	*e*Pn	Pn	01 55 01.0	+1.3
BSRN				IAML		01 57 26.8	
	comp=Z,140nm,1.0s						
IPRN	Peran	7.39	6	Pn	Pn	01 55 01.3	+1.6
IKOO	Kooshah	7.48	60	Pn	Pn	01 55 02.8	+1.7
RAYN	Ar Rayn	7.48	226		Pn	01 55 00.3	-0.6
RAYN	Ar Rayn	7.48	226	*i* P	Pn	01 55 00.4	-0.6
	SNR=71						
RAYN	Ar Rayn	7.48	226	P	Pn	01 55 00.6	-0.3
HOQ	Hoqain	7.51	133	P	Pn	01 55 01.0	-0.3
	SNR=28						
HOQ				S	Sn	01 56 23.1	-2.8
ITEG	Tejag	7.51	56	Pn	Pn	01 55 02.7	+1.2
IGZV	Ghazvin	7.55	353	Pn	Pn	01 55 03.2	+1.2
TAPT	Tabas- Tapeh t	7.76	38	Pn	Pn	01 55 06.2	+1.4
IGLO	Ghaloghah	7.89	15	Pn	Pn	01 55 08.6	+2.0
NHDN	Nehbandan	7.94	69	Pn	Pn	01 55 09.0	+1.7
BSY	Bisya	8.06	138	P	Pn	01 55 09.0	+0.1
	SNR=115						
BSY				S	Sn	01 56 37.0	-2.5
BIDO	Bidbid	8.09	130	P	Pn	01 55 08.8	-0.4
	SNR=7.4						
BIDO				S	Sn	01 56 36.6	-3.5
ZNJK	Zanjan	8.09	345	Pn	Pn	01 55 10.0	+0.5
ZNJK	Zanjan	8.09	345	*e*Pn	Pn	01 55 09.9	+0.5
SHRO	Shahrood	8.11	28	*e*Pn	Pn	01 55 10.6	+1.0
ZHSF	Zahedan	8.27	83	Pn	Pn	01 55 14.4	+2.6
ZHSF	Zahedan	8.27	83	*e*Pn	Pn	01 55 14.8	+3.0
IDAH	Dahanechah	8.27	60	Pn	Pn	01 55 14.1	+2.1
SMDO	Samad	8.36	132	P	Pn	01 55 13.0	0.0
	SNR=35						
SMDO				S	Sn	01 56 45.0	-1.8
WSAR	Wadi Sarin	8.62	129	LR	LR	01 59 20.6	
	comp=Z,5.6nm,18.1s,baz=321,slow=43						
WSAR	Wadi Sarin	8.62	129	P	Pn	01 55 15.9	-0.6
	SNR=19						
SRSL	SARDASHT	8.86	327	*e*Pn	Pn	01 55 20.4	+0.6
JMDO	Jabal Madar	8.89	135	P	Pn	01 55 20.0	-0.3
	SNR=28						
SHRT	Shahrakht	9.01	56	Pn	Pn	01 55 23.5	+1.6
SHRT	Shahrakht	9.01	56	*e*Pn	Pn	01 55 23.4	+1.6
IMND	Minoodasht	9.02	21	Pn	Pn	01 55 23.4	+1.4
IHSH	Hashtrud	9.08	339	Pn	Pn	01 55 24.0	+1.0
MAHB	Mahabad	9.19	330	Pn	Pn	01 55 24.9	+0.5
WBK	Wadi Bani Khal	9.28	131	P	Pn	01 55 24.8	-0.7
	SNR=19						
NGCH	Negor - Chabah	9.39	110	P	Pn	01 55 27.3	+0.3
	SNR=9.1						
NGCH				S	Sn	01 57 07.3	-4.8
	SNR=7.0						
MRVT	Maraveh tapeh	9.61	23	Pn	Pn	01 55 31.8	+1.6
MRVT	Maraveh tapeh	9.61	23	*e*Pn	Pn	01 55 31.7	+1.6
SRVN	Saravan	9.86	96	Pn	Pn	01 55 34.9	+1.2
SRVN	Saravan	9.86	96	*e*Pn	Pn	01 55 34.3	+0.7
ISFR	Sfrayin	9.88	33	Pn	Pn	01 55 35.6	+1.6
MHTO	MHTO	9.88	141	P	Pn	01 55 34.0	+0.2
	SNR=26						
JLN	Jalan Bani Buh	9.89	131	P	Pn	01 55 33.0	-0.9
	SNR=14						
IPAY	Payeh	9.92	38	Pn	Pn	01 55 36.4	+1.9
TBJM	Torbat-e-JAM	9.93	48	Pn	Pn	01 55 36.3	+1.8
BJRD	Bojnurd	10.15	28	*e*Pn	Pn	01 55 39.0	+1.4
JRKH	Jarkhoshk	10.34	45	Pn	Pn	01 55 42.3	+2.2
IKRD	Kardeh	10.45	39	Pn	Pn	01 55 43.9	+2.2
IMYA	Miami	10.48	42	Pn	Pn	01 55 43.8	+1.7
IEMG	Emamgholi	10.48	34	Pn	Pn	01 55 44.5	+2.2
DOK	Doka	10.52	165	P	Pn	01 55 41.5	-1.1
	SNR=52						
HRA	Herat	10.78	57		Pn	01 55 48.5	+2.2
WHFO	Wadi Hawf	11.13	168	P	Pn	01 55 49.0	-2.0
	SNR=70						
SHAO	Shalim	11.49	159	P	Pn	01 55 54.4	-1.4
	SNR=24						
SHAO	Shalim	11.49	159	*i* P	Pn	01 55 55.0	-0.9
	SNR=16						
DMTO	DMTO	11.59	163	P	Pn	01 55 55.0	-2.2
	SNR=161						
ABTO	Aybut	11.61	171	P	Pn	01 55 55.7	-1.8
	SNR=66						
RBK	Rabkut	11.62	166	P	Pn	01 55 56.0	-1.6
	SNR=13						
MARD	Mardin	12.21	316		Pn	01 56 03.2	-2.6
GURO	Guroymak-BITLI	12.37	324		Pn	01 56 06.2	-1.8
ASF	Jabal al Asfar	12.89	288	Pn	Pn	01 56 13.1	-1.9
	comp=Z,1.2nm,0.3s,baz=84,slow=7.7,SNR=18						
ASF				Sn	Sn	01 58 25.8	-12
	comp=Z,0.3nm,0.3s,baz=59,slow=19,SNR=1.4						
ASF				Lg	Lg	01 59 57.1	
	baz=312,slow=23						
ASF				LR	LR	02 02 28.0	
	comp=Z,1μm,18.1s,baz=63,slow=43 comp=Z,3.9nm,0.4s						
AKT	Akhty	12.92	348	*e*P	Pn	01 56 16.5	+1.1
AKT				*e*S	Sn	01 58 40.8	+2.3
AKT				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AKT				smax	smax		
	comp=E,8.0nm,0.2s						
AKT				smax	smax		
	comp=N,7.0nm,0.5s						
AKT				MLR	MLR		
	comp=Z,266nm,5.0s						
KARS	Kars	13.54	332		P	01 56 29.2	-3.7
KARS	Kars	13.54	332	P	P	01 56 29.2	-3.7
GHAJ	Ghor Haditha	13.88	284		Pn	01 56 28.6	+0.2
KSHT	Keshet	13.95	291	P	Pn	01 56 27.7	-1.8
HMDT	Nahal Hemdat	14.04	288	P	Pn	01 56 28.5	-2.2
DSI	Dead Sea	14.07	285	P	Pn	01 56 28.8	-2.2
GEM	Giv'at Ha'Em	14.12	292	P	Pn	01 56 29.8	-2.0
ZFRI	Zfri	14.16	281	P	Pn	01 56 30.6	-1.6
KOPT	Kop Dagi	14.26	324		Pn	01 56 36.8	+3.0
HRFI	Mount Harif	14.26	279	P	Pn	01 56 31.8	-1.9
YTIR	Yattir	14.27	284	P	Pn	01 56 32.3	-1.6
MMAI	Mount Meron Ar	14.29	291	Pn	Pn	01 56 32.7	-1.4
	comp=Z,1.9nm,0.3s,baz=100,slow=15,SNR=2.2						
MMAI				Sn	Sn	01 59 04.3	-7.8
	comp=Z,1.7nm,0.3s,baz=91,slow=23,SNR=2.5						
MMAI				Lg	Lg	02 00 49.2	
	comp=Z,7.7nm,0.3s,baz=108,slow=30,SNR=6.4						
MMAI				LR	LR	02 03 23.8	
	comp=Z,1μm,18.1s,baz=84,slow=43 comp=Z,7.4nm,0.5s						
PRNI	Paran	14.30	280	P	Pn	01 56 31.7	-2.4
EIL	Elat	14.34	277	Pn	Pn	01 56 32.3	-2.4
	comp=Z,0.9nm,0.3s,baz=128,slow=6.3,SNR=6.5						
EIL				Sn	Sn	01 59 03.0	-10
	comp=Z,0.9nm,0.3s,baz=3.8,slow=15,SNR=1.4						
EIL				Lg	Lg	02 00 46.9	
	comp=Z,0.5nm,0.3s,baz=340,slow=22,SNR=1.4						
EIL				LR	LR	02 03 02.6	
	comp=Z,2μm,21.0s,baz=90,slow=41						
EIL	Elat	14.34	277	P	Pn	01 56 32.8	-1.9
MBRI	Mt Berech	14.37	278	P	Pn	01 56 33.1	-2.1
MAK	Makhachkala	14.39	349	*e*P	Pn	01 56 34.6	-0.8
MAK				*e*S	Sn	01 59 13.0	-1.3
MAK				pmax	pmax		
	comp=Z,133nm,1.2s						
MAK				MLR	MLR		
	comp=Z,648nm,15.0s						
GAZ	Gaziantep	14.45	309		Pn	01 56 37.3	+1.0
AMAZ	Amatzia	14.46	285	P	Pn	01 56 34.6	-1.8
KRMI	Paran Flat	14.54	279	P	Pn	01 56 35.0	-2.5
ARPR	Arapgir-MALATY	14.83	317		Pn	01 56 41.8	+0.3
BCA	Borcka	14.84	330	⇓P	Pn	01 56 44.0	+2.5
NCK	Nalchik	15.86	339	⇑*i*P	P	01 56 57.0	-1.5
NEUR	Neytrino	15.96	336	*de*P	P	01 56 58.1	-1.6
NEUR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KBL	Kabul	16.07	65	P	P	01 57 00.4	-0.7
KBL	Kabul	16.07	65	P	P	01 56 59.9	-1.2
KBL	Kabul	16.07	65	P	P	01 56 59.9	-1.2
KBL				pmax	pmax		
	comp=Z,118nm,1.5s						
KBU	Kabul Universi	16.14	65	P	P	01 57 01.2	-0.6
BNN	Bunyan	16.25	312	P	Pn	01 57 01.3	+1.3
KBZ	Khabaz	16.30	338	Pn	P	01 57 02.2	-1.1

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       comp=Z,0.5nm,0.3s,baz=147,slow=8.0,SNR=29
KBZ                                LR     LR     02 03 56.9
       comp=Z,515nm,18.1s,baz=156,slow=40
       comp=Z,16nm,0.9s
KBZ    Khabaz              16.30 338d iP  Pn     01 57 01.7 +1.3
KBZ                                pmax   pmax
       comp=Z,42nm,0.9s
SHA1   Shidzhatmaz         16.39 337deP   Pn     01 57 03.2 +1.4
CSS    Mathiatis           16.45 296      Pn     01 57 02.5  0.0
SHAA   Shahritus           16.48  54      Pn     01 57 02.5 -0.3
SHAA                               IAmb   IAmb   01 57 07.9
       comp=Z,358nm,1.4s
KVAR   Kislovodsk Arr      16.57 338   Pn P      01 57 06.2 -0.2
       baz=74,slow=20
       comp=Z,14nm,0.9s
KIV    Kislovodsk          16.57 338   P  P      01 57 05.4 -1.1
KIV    Kislovodsk          16.57 338  ⇑P  P      01 57 06.0 -0.5
KIV    Kislovodsk          16.57 338  i P P      01 57 05.7 -0.7
       SNR=32
KIV    Kislovodsk          16.57 338  eP  Pn     01 57 03.0 -1.0
KIV                                   eS  Sn     02 00 05.5 -1.9
KIV                                pmax   pmax
       comp=Z,76nm,1.1s
KIV                                MLR    MLR
       comp=Z,138nm,14.0s
TOKA   Tokat               16.72 317   P  Pn     01 57 06.6 +0.7
VSLR   Vesyoloye           17.16 331ceP   Pn     01 57 11.5 +0.1
VSLR                               pmax   pmax
       comp=Z,57nm,1.0s
SOC    Sochi               17.39 331  eP  P      01 57 15.6 +0.1
SOC                                   eS  Sn     02 00 24.8 -2.4
SOC                                pmax   pmax
       comp=Z,56nm,0.7s
SOC                                MLR    MLR
       comp=Z,562nm,20.0s
GOF    Gofitskoye          17.45 340ceP   P      01 57 15.9 -0.1
GOF                                   eS  S      02 00 34.7 -1.7
KIRS   Kirsehir-Merke      17.68 310  ⇓P  P      01 57 18.8  0.0
LABN   Labinsk             17.86 335  eP  P      01 57 20.8 +0.1
LABN                               pmax   pmax
       comp=Z,53nm,0.9s
BR131  Keskin Array S      18.17 311   P  P      01 57 24.5 +0.3
       SNR=21
BR131  Keskin Array S      18.17 311c iP  Pn     01 57 23.8 -0.2
BRTR   Keskin Array B      18.17 311   P  Pn     01 57 23.6 -0.4
       comp=Z,0.7nm,0.3s,baz=135,slow=13,SNR=59
BRTR                               PcP    PcP    02 01 57.1 +0.3
       comp=Z,2.7nm,0.7s,baz=145,slow=3.2,SNR=4.8
BRTR                               ScP    ScP    02 05 30.7 -0.3
       comp=Z,1.0nm,0.7s,baz=118,slow=3.4,SNR=3.6
BRTR                               LR     LR     02 06 29.7
       comp=Z,569nm,20.6s,baz=124,slow=44
       comp=Z,17nm,0.9s
BRTR   Keskin Array B      18.17 311   P  Pn     01 57 23.7 -0.2
ANTO   Ankara              18.80 311   P  Pn     01 57 32.0 +0.4
ANTO   Ankara              18.80 311  ⇑P  Pn     01 57 32.3 +0.7
ANTO   Ankara              18.80 311   P  Pn     01 57 32.0 +0.4
ANTO                               pmax   pmax
       comp=Z,54nm,1.1s
ANTO   Ankara              18.80 311   P  P      01 57 31.4 +0.3
       comp=Z,26nm,1.1s
ANTO                               pP     pP     01 57 37.8 +0.8
       comp=Z,26nm,1.1s
ERBR   Yeremizino-Bor      18.87 336  eP  P      01 57 32.0 +0.3
ERBR                                  eS  Sn     02 01 03.1 +0.2
ERBR                               pmax   pmax
       comp=Z,68nm,1.2s
ATD    Arta Tunnel         19.00 206   P  Pn     01 57 35.3 +1.2
       comp=Z,0.1nm,0.3s,baz=350,slow=8.7,SNR=11
ATD                                LR     LR     02 05 41.6
       comp=Z,7.0nm,21.5s,baz=18,slow=39
ATD    Arta Tunnel         19.00 206   P  Pn     01 57 35.4 +1.2
       SNR=7.5
ATD    Arta Tunnel         19.00 206   P  Pn     01 57 35.0 +0.9
MANEM  Manem               19.05  58   IAmb IAmb 01 57 41.8
       comp=Z,104nm,0.8s
NIL    Nilore              19.31  70   P  P      01 57 36.7 +0.1
NIL    Nilore              19.31  70   P  P      01 57 36.7 +0.1
NIL                                pmax   pmax
       comp=Z,63nm,1.0s
ANN    Anapa               19.36 329  eP  P      01 57 37.0 -0.1
ANN                                   eS  S      02 01 15.8 +0.7
ANN                                pmax   pmax
       comp=Z,33nm,0.8s
ANN                                MLR    MLR
       comp=Z,455nm,19.0s
ISP    Isparta             19.52 303⇓eP   Pn     01 57 40.6 +0.2
ISP                                pmax   pmax
       comp=Z,26nm,1.0s
DRK    Karamyk             19.91  53   IAmb IAmb 01 57 51.4
       comp=Z,68nm,0.9s
CHM    Chimkent            19.95  43  eP  P      01 57 44.2 +0.6
CHM    Chimkent            19.95  43  eP  P      01 57 44.1 +0.6
IUG    Iuzhnay             20.11  44  eP  P      01 57 45.9 +0.5
       comp=Z,86nm,1.1s
IUG    Iuzhnay             20.11  44  eP  P      01 57 45.8 +0.5
IUG                                pmax   pmax
       comp=Z,86nm,1.1s
BRLS   Borolday            20.51  42  eP  P      01 57 47.1 -2.7
BRLS   Borolday            20.51  42  eP  P      01 57 47.0 -2.7
SAHE   Sakarya_HENDEK      20.58 311  ⇑P  Pn     01 57 52.0 -0.6
KK31   Karatay Array       20.95  42   P  P      01 57 54.5  0.0
KK31   Karatay Array       20.95  42   P  P      01 57 54.5  0.0
KK31                               pmax   pmax
       comp=Z,27nm,0.7s
KKAR   Karatay Array       20.95  42   P  P      01 57 54.5 +0.1
KKAR   Karatay Array       20.95  42   P  P      01 57 54.5 +0.1
SIM    Simferopol'         21.08 324  eP  P      01 57 55.7 -0.1
SIM                                pmax   pmax
       comp=Z,116nm,1.0s
SIM                                MLR    MLR
       comp=Z,274nm,21.0s
MANT   Manisa              21.21 303   P  P      01 57 57.9 +0.4
DZA    Taraz               21.32  44  eP  P      01 57 58.9 +0.4
DZA    Taraz               21.32  44  eP  P      01 57 58.8 +0.4
AB31   Akbulak array       21.39  16   P  P      01 57 59.5 +0.5
AB31   Akbulak array       21.39  16  eP  P      01 57 59.6 +0.5
ABKAR  Akbulak array       21.39  16   P  P      01 57 59.7 +0.7
ARSB   Arslanbob           21.55  49   IAmb IAmb 01 58 02.8
       comp=Z,146nm,1.1s
BALB   Balikesir           22.11 305   P  P      01 58 06.8 -0.1
BALB                               IAmb   IAmb   01 58 10.6
       comp=Z,56nm,0.9s
AKTO   Aktyubinsk          22.12  11   P  P      01 58 07.0 +0.1
       comp=Z,15nm,0.7s,baz=212,slow=10,SNR=40
AKTO                               LR     LR     02 09 01.7
       comp=Z,120nm,19.1s,baz=228,slow=43
       comp=Z,15nm,0.7s
AKTO   Aktyubinsk          22.12  11   P  P      01 58 07.0 +0.1
BAND   Balkesir-Ban        22.23 307  ⇑P  P      01 58 10.0 +1.8
EKS2   Erkin-Say           22.72  47   P  P      01 58 16.4 +2.9
       SNR=26
KSH    Kashi               22.90  56   P  P      01 58 13.0 -2.4
KSH                                sP     sP     01 58 24.5 +0.1
KSH                                S      S      02 02 18.3 -5.9
KSH                                pmax   pmax
       comp=Z,47nm,1.4s
KSH                                LR     LR
       comp=Z,560nm,13.1s
KSH                                LR     LR
       comp=Z,520nm,14.8s
KSH                                LR     LR
       comp=Z,480nm,10.3s
UCH    Uchtor              22.99  48   P  P      01 58 17.4 +0.7
       SNR=21
AAK    Ala-Archa           23.17  47   P  P      01 58 19.0 +0.7
       SNR=18
AAK    Ala-Archa           23.17  47   LR LR     02 07 53.9
       comp=Z,476nm,19.1s,baz=258,slow=38
AAK    Ala-Archa           23.17  47   P  P      01 58 19.2 +1.0
AAK                                IAmb   IAmb   01 58 26.9
       comp=Z,133nm,1.7s
AAK    Ala-Archa           23.17  47  i P P      01 58 19.4 +1.2
       SNR=24
AAK    Ala-Archa           23.17  47ceP   P      01 58 19.4 +1.2
AAK                                pmax   pmax
       comp=Z,72nm,1.6s
FURI   Furi                23.17 213   LR LR     02 06 43.6
       comp=Z,197nm,21.9s,baz=26,slow=35
IDI    Anoyia              23.28 293   P  P      01 58 22.1 +2.8
IDI    Anoyia              23.28 293   P  P      01 58 18.9 -0.3
       comp=Z,38nm,0.6s,baz=96,slow=8.4,SNR=29
IDI                                LR     LR     02 09 31.0
       comp=Z,73nm,21.5s,baz=100,slow=42
       comp=Z,38nm,0.6s
IDI    Anoyia              23.28 293   IAmb IAmb 01 58 34.7
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       comp=Z,162nm,1.5s
EZN    Ezine               23.30 305   P  P      01 58 21.0 +1.7
VRH    Novokhopyorsk       23.45 345  eP  P      01 58 18.0 -2.7
VRH                                   eS  S      02 02 32.0 -0.9
VRH                                pmax   pmax
       comp=Z,80nm,0.7s
VRH                                smax   smax
       comp=E,330nm,0.8s
KBK    Karagaybulak        23.47  48   P  P      01 58 23.4 +2.1
       SNR=19
USP    Ospenovka           23.48  46   P  P      01 58 22.5 +1.3
       SNR=24
CHMS   Chumysh             23.51  47   P  P      01 58 22.3 +0.8
       SNR=14
BELG   Belogornoye         23.66 354   P  P      01 58 22.6  0.0
       comp=E,52nm,0.9s,baz=164,slow=6.6,SNR=16
BELG                               PcP    PcP    02 02 06.5 -0.3
       comp=E,17nm,0.7s,baz=275,slow=4.4,SNR=2.7
BELG                               LR     LR     02 09 44.4
       comp=E,261nm,21.2s,baz=127,slow=42
       comp=E,52nm,0.9s
BELG   Belogornoye         23.66 354c iP  P      01 58 22.8 +0.1
BELG                               pmax   pmax
       comp=Z,13nm,1.0s
PSN    Preselentsi         23.71 315   P  P      01 58 24.4 +1.0
MFTR   Murfatlar           23.82 316  ⇓P  P      01 58 25.3 +1.0
VORD   Divnogorie          23.86 341  eP  P      01 58 24.4 -0.3
VORD                                  eS  S      02 02 37.3 -2.2
VORD                               pmax   pmax
       comp=Z,50nm,0.9s
VORD                               smax   smax
       comp=E,50nm,1.2s
JURR   Jurilovca           23.87 318  ⇑P  P      01 58 25.2 +0.4
ALN    Alexandroupoli      23.88 307   IAmb IAmb 01 58 27.8
       comp=Z,61nm,1.2s
NE56   Odesa               23.91 324   P  P      01 58 24.6 -0.5
PRD    Provadia            23.94 313   P  P      01 58 27.0 +1.5
TIRR   Tirgusor            23.98 317   P  P      01 58 26.5 +0.7
TIRR   Tirgusor            23.98 317  ⇓P  P      01 58 26.3 +0.5
TIRR   Tirgusor            23.98 317   P  P      01 58 26.5 +0.7
TIRR                               pmax   pmax
       comp=Z,18nm,0.8s
TKM2   Tokmak 2            24.02  48   P  P      01 58 27.6 +1.0
       SNR=20
BOOM   Boomskoye usch      24.05  49   IAmb IAmb 01 58 29.9
       comp=Z,68nm,1.0s
VSR    Storozhevoye        24.12 341  eP  P      01 58 24.7 -2.4
VSR                                   eS  S      02 02 43.2 -0.5
VSR                                pmax   pmax
       comp=Z,20nm,1.1s
VSR                                smax   smax
       comp=N,150nm,1.0s
TLCR                       24.14 318  ⇓P  P      01 58 27.9 +0.5
TLCR                       24.14 318   P  P      01 58 27.9 +0.5
ULHL   Ulahol              24.14  50   P  P      01 58 30.0 +2.3
       SNR=6.3
BTLS   Baital              24.15  42  eP  P      01 58 26.6 -0.9
BTLS                               pmax   pmax
       comp=Z,4.0nm,0.4s
ICOR   Ion Corvin          24.17 315  ⇑P  P      01 58 29.2 +1.6
TPGR   Topolog             24.19 317  ⇑P  P      01 58 28.5 +0.6
TLBR   Topalu              24.24 316  ⇑P  P      01 58 29.6 +1.3
RDO    Rodhopi             24.33 307   IAmb IAmb 01 58 31.7
       comp=Z,52nm,0.7s
PLTM   Poltava             24.35 333   P  P      01 58 29.1 -0.1
PURM   Purcari             24.36 322  ⇑P  P      01 58 29.9 +0.6
VORR   Voronezh            24.52 342  eP  P      01 58 28.6 -2.1
VORR                                  eS  S      02 02 53.2 +3.2
VORR                               pmax   pmax
       comp=Z,60nm,0.7s
VORR                               smax   smax
       comp=E,170nm,1.0s
CFR    Carcaliu            24.53 318  ⇓P  P      01 58 31.9 +0.9
CFR    Carcaliu            24.53 318   P  P      01 58 31.8 +0.9
KDZ    Kurdzhali           24.66 308   P  P      01 58 32.9 +0.8
DIM    Dimitrovgrad        24.66 309   P  P      01 58 33.3 +1.2
AMRR   Amara               24.71 316  ⇑P  P      01 58 34.0 +1.4
AMRR   Amara               24.71 316   P  P      01 58 33.9 +1.4
KDJ    Kajisay             24.73  51   IAmb IAmb 01 58 36.5
       comp=Z,35nm,0.8s
TATR   Tatarca             24.82 319  ⇓P  P      01 58 34.6 +1.1
SCHLR  Schela              24.88 318  ⇑P  P      01 58 35.2 +1.1
NEGRR  Negrea              24.89 318  ⇓P  P      01 58 35.3 +1.1
SZH    Strazhitsa          24.91 312   P  P      01 58 35.6 +1.2
VLDR   Vladesti            24.94 319  ⇑P  P      01 58 35.9 +1.2
IZVR   Izvoarele           24.95 318  ⇑P  P      01 58 36.5 +1.8
TNSS   Tian-Shan           24.96  49  eP  P      01 58 35.5 +0.1
TNSS   Tian-Shan           24.96  49  eP  P      01 58 35.4 +0.1
TARG   Taragay, Kyrgy      25.00  52   IAmb IAmb 01 58 41.5
       comp=Z,98nm,1.9s
TUDR                       25.04 318  ⇑P  P      01 58 36.9 +1.3
MDOK   Medeo               25.08  48  eP  P      01 58 36.5 +0.4
MDOK   Medeo               25.08  48  eP  P      01 58 36.5 +0.4
RZN    Rozhen              25.10 308   P  P      01 58 37.6 +1.3
VARL   Varlezi             25.11 319  ⇑P  P      01 58 37.5 +1.3
KIS    Kishinev            25.21 322  ⇓P  P      01 58 37.8 +0.7
KIS    Kishinev            25.21 322   P  P      01 58 37.8 +0.7
CHKK   Chushkaly           25.35  47  eP  P      01 58 38.6 +0.2
CHKK   Chushkaly           25.35  47  eP  P      01 58 38.6 +0.2
SGRR   Singureni           25.36 314  ⇓P  P      01 58 40.4 +2.0
PVL    Pavlikeni           25.38 311   P  P      01 58 40.0 +1.4
BAL3X  Bal3x, Balta        25.40 324   P  P      01 58 39.2 +0.5
SULR                       25.41 315  ⇑P  P      01 58 40.7 +1.8
LPSR   Galich'ya Gora      25.43 342  eP  P      01 58 37.8 -1.2
LPSR                                  eS  S      02 03 10.5 +5.9
LPSR                               pmax   pmax
       comp=Z,100nm,0.8s
LPSR                               smax   smax
       comp=N,110nm,1.4s
GHRR                       25.45 319  ⇑P  P      01 58 41.1 +1.9
ISR    Istrita             25.45 316  ⇑P  P      01 58 41.4 +2.0
ISR    Istrita             25.45 316   P  P      01 58 41.4 +2.0
ODBI   Odobesti            25.49 318  ⇑P  P      01 58 42.0 +2.3
PANC   Panciu              25.50 318  ⇑P  P      01 58 41.7 +2.0
PRZ    Przheval'sk         25.70  51   IAmb IAmb 01 58 44.8
       comp=Z,56nm,1.0s
MMB    Musomishta          25.73 307   P  P      01 58 43.4 +1.5
VRI    Vrincioaia          25.74 318  ⇑P  P      01 58 43.5 +1.5
VRI    Vrincioaia          25.74 318   P  P      01 58 43.4 +1.5
NEHR   Nehoiu              25.76 317  ⇑P  P      01 58 44.5 +2.3
PLOR   Plostina            25.78 318  ⇓P  P      01 58 44.4 +2.1
PLOR   Plostina            25.78 318   P  P      01 58 44.4 +2.1
PGB    Panagyurishte       25.80 309   P  P      01 58 44.2 +1.7
WUS    Wushi               25.80  54   IAmb IAmb 01 59 14.4
       comp=Z,70nm,1.7s
SATY   Saty                25.93  50  eP  P      01 58 44.3 +0.4
SATY   Saty                25.93  50  eP  P      01 58 44.2 +0.4
ITM    Ithomi              25.95 296   IAmb IAmb 01 58 46.5
       comp=Z,36nm,0.8s
IASR   Iasi                26.00 321  ⇑P  P      01 58 45.2 +1.0
MLR    Muntele Rosu        26.01 317   P  P      01 58 46.5 +2.0
       comp=Z,43nm,0.8s,baz=33,slow=4.2,SNR=41
MLR                                LR     LR     02 11 53.8
       comp=Z,686nm,18.7s,baz=96,slow=43
       comp=Z,43nm,0.8s
MLR    Muntele Rosu        26.01 317   IAmb IAmb 01 58 51.5
       comp=Z,52nm,0.9s
MLR    Muntele Rosu        26.01 317  ⇑P  P      01 58 46.8 +2.3
MLR    Muntele Rosu        26.01 317   P  P      01 58 46.8 +2.3
COVR   Voineasa-Covas      26.04 317  ⇑P  P      01 58 46.9 +2.2
HUMR   Humele              26.13 314  ⇓P  P      01 58 46.8 +1.4
TESR   Tescani             26.14 319  ⇑P  P      01 58 46.7 +1.2
SORM   Soroca              26.17 324   P  P      01 58 46.6 +0.9
LIT    Litokhoron          26.18 303   IAmb IAmb 01 58 47.2
       comp=Z,35nm,0.9s
ONER   Baraj Valea Uz      26.19 319  ⇑P  P      01 58 47.8 +1.8
TURR   Turia               26.26 318  ⇑P  P      01 58 48.6 +1.9
KKB    Krupnik             26.27 307   P  P      01 58 48.0 +1.2
UZB    Uzynbulak           26.38  50  eP  P      01 58 48.7 +0.8
       comp=Z,34nm,1.4s
UZB    Uzynbulak           26.38  50  eP  P      01 58 48.7 +0.8
UZB                                pmax   pmax
       comp=Z,33nm,1.4s
OZUR                       26.42 318  ⇑P  P      01 58 49.3 +1.3
MPEP   Malo Peshtene       26.43 311   P  P      01 58 49.3 +1.1
GIRR   Girov               26.47 320  ⇑P  P      01 58 49.6 +1.1
VTS    Vitosha             26.48 309   P  P      01 58 50.0 +1.2
VAY    Valandovo           26.49 306  i P P      01 58 49.8 +1.1
DOPR   Dopca               26.59 317  ⇑P  P      01 58 51.0 +1.4
SHLS   Shalkode            26.68  50  eP  P      01 58 53.8 +3.2
       comp=Z,24nm,1.0s
SHLS   Shalkode            26.68  50  eP  P      01 58 53.8 +3.2
SHLS                               pmax   pmax
       comp=Z,24nm,1.0s
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ARR    Arges               26.75 315  ⇑P  P      01 58 52.1 +1.0
VALD   Valchedram          26.77 311   P  P      01 58 52.9 +1.7
PDGK   Podgornoye          26.77  50   P  P      01 58 51.6 +0.2
TDK    Taldyqorghan        26.78  46  eP  P      01 58 51.9 +0.5
       comp=Z,69nm,1.2s
TDK    Taldyqorghan        26.78  46  eP  P      01 58 51.9 +0.5
TDK                                pmax   pmax
       comp=Z,69nm,1.2s
PRAR   RASCA               26.86 320  ⇑P  P      01 58 52.7 +0.7
BAIL   Bailesti            26.96 312  ⇑P  P      01 58 55.0 +2.0
TNR    Turnu Rosu          27.11 316  ⇓P  P      01 58 55.2 +0.9
TNR    Turnu Rosu          27.11 316   P  P      01 58 55.1 +0.9
MDB    Medias              27.28 317  ⇑P  P      01 58 57.3 +1.4
MDB    Medias              27.28 317   P  P      01 58 57.2 +1.4
AK07   Malin Array Si      27.35 328   P  P      01 58 55.6 -0.8
AK09   Malin Array Si      27.36 329   P  P      01 58 55.7 -0.8
AK10   Malin Array Si      27.37 329   P  P      01 58 55.8 -0.7
AK06   Malin Array Si      27.38 328   P  P      01 58 55.9 -0.7
AK08   Malin Array Si      27.39 329   P  P      01 58 55.9 -0.8
AK05   Malin Array Si      27.40 329   P  P      01 58 56.0 -0.8
AK02   Malin Array Si      27.43 329   P  P      01 58 56.2 -0.9
KMPD   K-Podol'skiy        27.43 323   P  P      01 58 55.9 -1.2
AK12   Malin Array Si      27.44 329   P  P      01 58 56.3 -0.9
AK01   Malin Array Si      27.45 329   P  P      01 58 56.6 -0.6
AKASG  Malin Array Be      27.45 329   P  P      01 58 56.5 -0.8
       comp=Z,3.4nm,0.4s,baz=133,slow=9.7,SNR=25
AKASG                              PcP    PcP    02 02 14.9 -0.5
       comp=Z,1.4nm,0.5s,baz=103,slow=1.9,SNR=4.8
AKASG                              LR     LR     02 13 55.6
       comp=Z,278nm,18.6s,baz=135,slow=45
       comp=Z,3.4nm,0.4s
AKASG  Malin Array Be      27.45 329   P  P      01 58 56.3 -0.9
AKASG  Malin Array Be      27.45 329  eP  P      01 58 56.5 -0.8
AKASG                              pmax   pmax
       comp=Z,8.0nm,0.6s
AKBB   Malin Array Si      27.45 329   IAmb IAmb 01 59 03.6
       comp=Z,33nm,0.9s
AKBB   Malin Array Si      27.45 329deP   P      01 58 56.6 -0.6
AKBB   Malin Array Si      27.45 329   P  P      01 58 56.4 -0.8
KIEV   Kiev                27.45 329   P  P      01 58 56.7 -0.5
KIEV                               IAmb   IAmb   01 59 03.6
       comp=Z,32nm,1.0s
KIEV   Kiev                27.45 329   P  P      01 58 56.7 -0.5
KIEV                               pmax   pmax
       comp=Z,32nm,1.0s
KIEV   Kiev                27.45 329   P  P      01 58 56.4 -0.9
       comp=Z,147nm,0.9s
AK14   Malin Array Si      27.45 328   P  P      01 58 56.5 -0.8
AK11   Malin Array Si      27.46 329   P  P      01 58 56.6 -0.7
AK03   Malin Array Si      27.47 329   P  P      01 58 57.0 -0.4
AK16   Malin Array Si      27.48 329   P  P      01 58 56.9 -0.6
AK04   Malin Array Si      27.49 329   P  P      01 58 56.9 -0.7
AK17   Malin Array Si      27.52 329   P  P      01 58 56.8 -1.0
AK18   Malin Array Si      27.54 329   P  P      01 58 57.2 -0.8
AK22   Malin Array Si      27.56 329   P  P      01 58 57.5 -0.7
AK19   Malin Array Si      27.56 329   P  P      01 58 57.3 -1.0
BURAR  Bucovina Array      27.57 320   P  P      01 58 59.0 +0.6
BURAR  Bucovina Array      27.57 320  ⇓P  P      01 58 59.7 +1.2
BURAR  Bucovina Array      27.57 320   P  P      01 58 59.7 +1.2
AK20   Malin Array Si      27.58 329   P  P      01 58 57.9 -0.5
LUBAR  Lubar, Ukraine      27.61 326   P  P      01 58 58.4 -0.4
OHR    Ohrid               27.70 304  i P P      01 59 00.9 +1.2
BOVS   Bovan               27.90 310  ⇑P  P      01 59 02.1 +0.8
MI29   MI29, Kamyanyy      27.90 327   P  P      01 59 00.8 -0.5
       comp=Z,102nm,0.7s
BORK   Borovoye            27.90  25   P  P      01 59 02.6 +1.3
BORK   Borovoye            27.90  25deP   P      01 59 02.2 +0.9
BORK                               pmax   pmax
       comp=Z,48nm,1.7s
BVA0   Borovoye Array      27.91  25  i P P      01 59 02.7 +1.3
BVAR   Borovoye Array      27.91  25   P  P      01 59 02.6 +1.2
       comp=Z,27nm,0.8s,baz=217,slow=7.1,SNR=50
BVAR                               PcP    PcP    02 02 16.9 +0.3
       comp=Z,7.6nm,0.7s,baz=199,slow=3.0,SNR=11
BVAR                               ScP    ScP    02 05 55.8 -0.4
       comp=Z,1.1nm,0.5s,baz=182,slow=3.8,SNR=5.3
BVAR                               LR     LR     02 11 46.1
       comp=Z,199nm,18.3s,baz=218,slow=40
       comp=Z,27nm,0.8s
GZR    Gura Zlata          27.92 314  ⇑P  P      01 59 01.8 +0.1
GZR    Gura Zlata          27.92 314   P  P      01 59 01.7 +0.1
HERR   Herculane           27.93 313  ⇑P  P      01 59 02.4 +0.8
ARTI   Arti                27.95   8   P  P      01 59 02.0 +0.3
       comp=Z,6.2nm,0.9s,baz=205,slow=4.2,SNR=8.5
ARTI                               PcP    PcP    02 02 16.1 -0.5
       comp=Z,4.0nm,0.8s,baz=284,slow=4.2,SNR=3.0
       comp=Z,6.2nm,0.9s
ARTI   Arti                27.95   8   P  P      01 59 01.8 +0.2
ARTI   Arti                27.95   8c iP  P      01 59 02.7 +1.0
ARTI                                             01 59 50.9
ARTI                               S      S      02 03 47.1 +2.8
ARTI                               SS     SnSn   02 05 02.5 +3.5
ARTI                               pmax   pmax
       comp=Z,14nm,1.3s
MI30   MI30,Zelenitsa      27.96 328   P  P      01 59 00.8 -1.0
       comp=Z,46nm,0.7s
CJR    Cluj-Napoca         28.04 317  ⇑P  P      01 59 03.4 +0.8
CJR    Cluj-Napoca         28.04 317   P  P      01 59 03.4 +0.8
KSV    Kosov               28.04 321   P  P      01 59 02.3 -0.3
DEV    Deva                28.06 315  ⇓P  P      01 59 03.3 +0.5
DEV    Deva                28.06 315   P  P      01 59 03.3 +0.5
MARR   Marisel-Cluj        28.30 317  ⇑P  P      01 59 06.3 +1.2
OBN    Obninsk             28.31 342   P  P      01 59 04.1 -0.7
       comp=Z,9.6nm,0.5s,baz=92,slow=14,SNR=3.6
       comp=Z,9.6nm,0.5s
OBN    Obninsk             28.31 342d iP  P      01 59 04.5 -0.3
OBN                                   e          01 59 09.0
OBN                                   e*PP pP    01 59 12.5 +1.3
OBN                                              01 59 52.0
OBN                                PPP    PPP    02 00 06.0
OBN                                              02 02 19.0
OBN                                   eS  S      02 03 48.3 -1.6
OBN                                SSS    SSS    02 05 34.0
OBN                                pmax   pmax
       comp=Z,25nm,1.7s
OBN                                MLR    MLR
       comp=Z,123nm,16.0s
MI28   Mi28,Pidlybu        28.33 328   P  P      01 59 03.5 -1.6
MDVR   Moldovita           28.34 312  ⇑P  P      01 59 06.4 +1.0
RAKU   Rahkiv              28.38 320   P  P      01 59 06.5 +0.8
BMR    Baia Mare           28.58 319  ⇑P  P      01 59 08.9 +1.4
BMR    Baia Mare           28.58 319   P  P      01 59 08.8 +1.4
MOS    Moscow              28.59 344  eP  P      01 59 06.3 -1.1
DRGR                       28.61 317  ⇑P  P      01 59 09.1 +1.3
DRGR                       28.61 317   P  P      01 59 09.0 +1.3
SVE    Sverdlovsk          28.70  11  eP  P      01 59 09.6 +1.3
SVE                                pmax   pmax
       comp=Z,14nm,1.0s
BZS    Buzias              28.75 314  ⇑P  P      01 59 09.8 +0.8
BZS    Buzias              28.75 314   P  P      01 59 09.7 +0.8
BANR   Banloc              28.96 313  ⇓P  P      01 59 11.6 +0.8
SIRR   Siria               29.01 315  ⇑P  P      01 59 13.0 +1.8
MEZ    Mezhgor'ye          29.01 320   P  P      01 59 11.6 +0.3
KORU   Korolevo            29.04 319   P  P      01 59 12.2 +0.7
TRSU   Trosnyk             29.11 319   P  P      01 59 12.9 +0.8
MORS   Morshin             29.14 322   P  P      01 59 12.2 -0.2
PDG    Podgorica           29.19 306  ⇓P  P      01 59 12.9 +0.1
BRIU   Brid                29.20 320   P  P      01 59 13.5 +0.6
BERU   Beregovo            29.36 319   P  P      01 59 15.0 +0.7
RNPP5  Staryi Chortor      29.37 327   P  P      01 59 13.8 -0.6
MUKU   Mukachevo           29.45 319   P  P      01 59 15.1  0.0
MUKU                               pP     sP     01 59 25.5 +1.5
RNPP8  Varash              29.46 327   P  P      01 59 14.6 -0.5
RUDO   Rudo                29.48 309  eP  P      01 59 15.2 -0.3
RNPP9  Sopachiv            29.49 327   P  P      01 59 14.1 -1.3
LODK   Lodwar              29.53 214   P  P      01 59 18.0 +1.8
KIRV   Kirov               29.73 358   P  P      01 59 17.4  0.0
       comp=Z,26nm,0.8s,baz=195,slow=5.6,SNR=12
       comp=Z,26nm,0.8s
KIRV   Kirov               29.73 358d iP  P      01 59 17.8 +0.4
UZHM   Uzhgorod            29.77 320   P  P      01 59 18.0 +0.1
MAKZ   Makanchi            29.82  45   P  P      01 59 19.5 +1.0
MAKZ   Makanchi            29.82  45   P  P      01 59 19.5 +1.0
KLINJ  Klinje              29.88 307  eP  P      01 59 18.8 -0.3
TREB   Trebinje            29.91 306  eP  P      01 59 18.3 -1.0
KURK   Kurchatov           29.95  36   P  P      01 59 20.7 +1.2
KURK   Kurchatov           29.95  36d iP  P      01 59 20.2 +0.7
KURK                               pmax   pmax
       comp=Z,7.0nm,1.0s
MK31   Makanchi Array      30.01  45d iP  P      01 59 20.5 +0.3
MK31                               pmax   pmax
       comp=Z,33nm,1.1s
MKAR   Makanchi Array      30.01  45   P  P      01 59 20.9 +0.7
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	comp=Z,14nm,0.9s,baz=237,slow=8.1,SNR=72						
MKAR				PcP	PcP	02 02 21.6	-0.3
	comp=Z,2.6nm,0.7s,baz=253,slow=2.7,SNR=4.8						
MKAR				ScP	ScP	02 06 02.8	-0.3
	comp=Z,1.6nm,0.9s,baz=221,slow=2.7,SNR=5.5						
MKAR				LR	LR	02 12 34.7	
	comp=Z,157nm,19.2s,baz=240,slow=39						
	comp=Z,14nm,0.9s						
MKAR	Makanchi Array	30.01	45	P	P	01 59 21.1	+0.9
KWP	Kalwaria Pacla	30.06	322	eP	P	01 59 21.5	+1.0
KWP	Kalwaria Pacla	30.06	322	P	P	01 59 21.1	+0.6
	comp=Z,49nm,0.8s						
TIP	Timpagrande	30.30	299	IAmb	IAmb	01 59 26.8	
	comp=Z,39nm,1.1s						
TIP	Timpagrande	30.30	299	⇑P	P	01 59 24.4	+1.6
TIP	Timpagrande	30.30	299	P	P	01 59 23.4	+0.6
	comp=Z,31nm,0.9s						
SEM	Semipalatinsk	30.63	37	eP	P	01 59 26.0	+0.2
SEM	Semipalatinsk	30.63	37	eP	P	01 59 26.0	+0.2
KECS	Kecovo	30.73	318	eP	P	01 59 28.0	+1.5
KECS				pmax	pmax		
	comp=Z,36nm,0.9s						
KECS	Kecovo	30.73	318	eP	P	01 59 28.0	+1.5
MNK	Minsk	30.74	333	i P	P	01 59 25.4	-1.1
	comp=E,10.0nm,0.9s						
MNK				i P	P	01 59 25.4	-1.1
	comp=N,12nm,1.1s						
MNK				i P	P	01 59 25.4	-1.1
	comp=Z,17nm,0.9s,baz=136						
MNK				i pP	sP	01 59 36.6	+1.2
MNK				i sP	pP	01 59 42.4	+10
MNK				i PP	PnPn	02 00 25.6	-0.9
MNK				i S	S	02 04 25.8	-2.5
MNK				i sS	sS	02 04 47.3	+8.6
MNK				i SS	SnSn	02 06 06.7	-0.3
MNK				i LR	LR	02 11 08.0	
MNK				i LRM	MLR	02 14 02.6	
	comp=Z,356nm,19.4s						
MNK	Minsk	30.74	333	i P	P	01 59 25.4	-1.1
MNK				i *PP	sP	01 59 36.6	+1.2
MNK				i		02 00 25.5	
MNK				i S	S	02 04 25.7	-2.5
MNK				i SS	SnSn	02 06 06.7	-0.3
MNK				pmax	pmax		
	comp=Z,17nm,0.9s						
MNK				pmax	pmax		
	comp=E,10.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,12nm,1.1s						
MNK				MLR	MLR		
	comp=Z,356nm,19.0s						
STHS	Stebnicka Huta	30.76	320	eP	P	01 59 27.9	+1.2
STHS	Stebnicka Huta	30.76	320	eP	P	01 59 27.8	+1.1
PSZ	Piszkesteto	30.82	317	⇑P	P	01 59 28.2	+0.8
PSZ	Piszkesteto	30.82	317	eP	P	01 59 27.7	+0.3
PSZ	Piszkesteto	30.82	317	P	P	01 59 28.1	+0.8
MORH	Mrgy, Hungar	30.89	313	eP	P	01 59 28.4	+0.5
MORH	Mrgy, Hungar	30.89	313	⇑P	P	01 59 28.7	+0.9
MORH	Mrgy, Hungar	30.89	313	P	P	01 59 28.2	+0.3
	comp=Z,13nm,1.5s						
CUC	Castrocucco	31.15	300	IAmb	IAmb	01 59 33.5	
	comp=Z,29nm,0.9s						
NIE	Niedzica	31.30	320	eP	P	01 59 32.2	+0.7
NIE	Niedzica	31.30	320	P	P	01 59 31.1	-0.4
BLY	Banja Luka	31.34	310	eP	P	01 59 30.5	-1.3
BLY	Banja Luka	31.34	310	⇓P	P	01 59 32.9	+1.1
NACGM	Naroch	31.48	333	eP	P	01 59 31.8	-1.1
	comp=Z,15nm,0.8s,baz=136						
LANS	Liptovska Anna	31.64	319	eP	P	01 59 35.9	+1.4
LANS	Liptovska Anna	31.64	319	eP	P	01 59 35.9	+1.4
SRO	Srobarova	31.74	316	eP	P	01 59 35.0	-0.3
SRO				pmax	pmax		
	comp=Z,18nm,1.0s						
SRO	Srobarova	31.74	316	eP	P	01 59 35.0	-0.3
ZSN	Zaisan	31.89	45	eP	P	01 59 37.1	+0.5
ZSN	Zaisan	31.89	45	eP	P	01 59 37.1	+0.5
VAE	Valguarnera	31.92	295	P	P	01 59 38.5	+1.4
	comp=Z,15nm,0.8s,baz=62,slow=4.0,SNR=8.1						
VAE				ScP	ScP	02 06 08.9	-0.7
	comp=Z,2.9nm,0.4s,baz=63,slow=4.5,SNR=1.9						
VAE				LR	LR	02 15 30.4	
	comp=Z,142nm,18.5s,baz=45,slow=42						
	comp=Z,15nm,0.8s						
MPLH	Magyarpolny	31.96	314	P	P	01 59 37.7	+0.4
	comp=Z,53nm,1.1s						
KNYS	Krupa na Uni	31.96	310	eP	P	01 59 37.7	+0.4
OJC	Ojcow	31.97	321	eP	P	01 59 37.9	+0.5
OJC	Ojcow	31.97	321	P	P	01 59 37.4	0.0
	comp=Z,63nm,0.9s						
IIGN	Ignalina	32.02	333	eP	P	01 59 38.4	+0.7
BEHE	Becsehely	32.19	313	eP	P	01 59 40.0	+0.7
ISAL	Salakas	32.22	333	eP	P	01 59 40.3	+0.9
PAOL	Paolisi	32.27	302	IAmb	IAmb	01 59 42.1	
	comp=Z,39nm,1.1s						
BEL	Belsk	32.29	324	eP	P	01 59 40.7	+0.6
SUW	Suwalki	32.42	329	eP	P	01 59 40.2	-1.0
SUW	Suwalki	32.42	329	eP	P	01 59 41.0	-0.2
KOGS	Kog	32.52	312	eP	P	01 59 42.7	+0.5
WMQ	Urumqi	32.56	53	eP	P	01 59 44.0	+1.3
WMQ				pP	sP	01 59 54.5	+2.5
WMQ				PP	PnPn	02 00 53.0	+2.7
WMQ				pmax	pmax		
	comp=Z,21nm,1.3s						
WMQ				LR	LR		
	comp=Z,780nm,19.5s						
WMQ				LR	LR		
	comp=Z,590nm,22.9s						
JAVC	Velka Javorina	32.57	317	eP	P	01 59 43.8	+1.1
JAVC				ePCP	PcP	02 02 30.1	+1.3
SMOL	Smolenice	32.57	316	eP	P	01 59 43.2	+0.6
SMOL				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MODS	Modra-Piesok	32.60	316	eP	P	01 59 43.2	+0.3
MODS	Modra-Piesok	32.60	316	eP	P	01 59 43.2	+0.3
MODS	Modra-Piesok	32.60	316	eP	PcP	02 02 29.4	+0.5
OKC	Ostrava-Krasne	32.73	319	eP	P	01 59 44.3	+0.3
OKC	Ostrava-Krasne	32.73	319	eP	P	01 59 44.3	+0.3
BOJS	Bojanci	32.87	310	i P	P	01 59 45.8	+0.5
BOJS				i PcP	PcP	02 02 29.9	+0.3
INTR	Introdacqua	32.94	304	IAmb	IAmb	01 59 48.3	
	comp=Z,24nm,0.7s						
RONA	Rosalia, Austr	32.94	314	i P	P	01 59 46.2	+0.3
	comp=Z,12nm,1.4s,SNR=6.5						
RONA				ePcP	PcP	02 02 30.4	+0.5
	comp=Z,7.1nm,1.1s						
KLMR	Klimovskoe	32.95	349	eP	P	01 59 43.6	-2.2
KLMR				S	S	02 04 57.9	-4.6
KLMR				pmax	pmax		
	comp=Z,50nm,1.0s						
STEB	Steborice	32.98	319	eP	P	01 59 46.6	+0.4
STEB				ex	x	02 02 30.0	
MORC	Moravsky Berou	33.05	319	IAmb	IAmb	01 59 48.0	
	comp=Z,22nm,0.8s						
MORC	Moravsky Berou	33.05	319	⇑P	P	01 59 47.4	+0.5
MORC	Moravsky Berou	33.05	319	eP	P	01 59 47.0	+0.2
MORC				ePCP	PcP	02 02 30.7	+0.6
MORC	Moravsky Berou	33.05	319	P	P	01 59 47.3	+0.5
PABE	Paberze	33.05	331	P	P	01 59 46.7	0.0
PABE				IAmb	IAmb	01 59 47.3	
	comp=Z,32nm,0.7s						
PABE	Paberze	33.05	331	eP	P	01 59 46.0	-0.7
ARSA	Arzberg	33.27	313	eP	P	01 59 49.3	+0.5
	comp=Z,6.0nm,0.9s						
ARSA				i PcP	PcP	02 02 31.4	+0.6
	comp=Z,2.7nm,0.6s,SNR=6.6						
ARSA	Arzberg	33.27	313	eP	PcP	02 02 31.4	+0.6
	comp=Z,2.7nm,0.6s,SNR=6.6						
CONA	Conrad Observa	33.30	315	i P	P	01 59 49.3	+0.2
	comp=Z,13nm,1.2s,SNR=5.6						
CONA				ePcP	PcP	02 02 30.4	-0.6
	comp=Z,2.0nm,0.9s						
AQU	L'Aquila	33.37	304	P	P	01 59 53.6	+3.9
AQU	L'Aquila	33.37	304	eP	P	01 59 52.5	+2.7
SOKA	Soboth	33.39	312	eP	P	01 59 50.3	+0.4
	comp=Z,5.1nm,1.0s						
SOKA				i PcP	PcP	02 02 31.7	+0.5
	comp=Z,15nm,1.2s,SNR=12						
SOKA	Soboth	33.39	312	eP	PcP	02 02 31.7	+0.5
	comp=Z,15nm,1.2s,SNR=12						
VRAC	Vranov	33.40	317	P	P	01 59 50.1	+0.2
	comp=Z,13nm,0.9s,baz=111,slow=8.5,SNR=29						
VRAC				PcP	PcP	02 02 31.5	+0.4
	comp=Z,2.6nm,0.8s,baz=180,slow=4.0,SNR=2.8						
	comp=Z,13nm,0.9s						
VRAC	Vranov	33.40	317	⇑P	P	01 59 50.9	+1.0
VRAC	Vranov	33.40	317	eP	P	01 59 50.5	+0.6
VRAC				ePCP	PcP	02 02 31.8	+0.7
CAMP	Campotosto	33.40	304	IAmb	IAmb	01 59 53.7	
	comp=Z,45nm,1.0s						
KRUC	Moravsky	33.42	317	eP	P	01 59 50.2	+0.2
KRUC				ePCP	PcP	02 02 31.7	+0.6
LJU	Ljubljana	33.52	311	i P	P	01 59 51.8	+0.8
KIBK	Kibwezi	33.56	205	P	P	01 59 53.3	+1.7
KIBK	Kibwezi	33.56	205	P	P	01 59 51.6	-0.1
KRLC	Kraliky	33.62	319	eP	P	01 59 52.1	+0.3
KRLC	Kraliky	33.62	319	eP	P	01 59 52.1	+0.3
OBKA	Obir	33.65	312	eP	P	01 59 52.6	+0.4
	comp=Z,12nm,1.6s						
OBKA				ePcP	PcP	02 02 33.0	+1.0
	comp=Z,3.5nm,0.9s						
FDMO	Fiordimonte	33.74	305	IAmb	IAmb	01 59 54.8	
	comp=Z,20nm,0.7s						
DPC	Dobruska-Polom	34.01	319	eP	P	01 59 55.3	+0.1
DPC				e		02 02 33.5	
DPC	Dobruska-Polom	34.01	319	eP	P	01 59 55.3	+0.1
DPC				ex	x	02 02 33.5	
DPC	Dobruska-Polom	34.01	319	P	P	01 59 55.3	+0.1
	comp=Z,26nm,0.9s						
CESX	Cesi	34.02	304	IAmb	IAmb	01 59 57.7	
	comp=Z,25nm,0.8s						
VSU	Vasula	34.13	337	eP	P	01 59 54.3	-1.7
VSU	Vasula	34.13	337c	eP	P	01 59 54.8	-1.2
VSU				pmax	pmax		
	comp=Z,40nm,1.7s						
OSTC	Ostas	34.16	319	eP	P	01 59 57.0	+0.5
OSTC				e		02 02 33.9	
OSTC	Ostas	34.16	319	eP	P	01 59 57.0	+0.5
OSTC				ex	x	02 02 33.9	
KSP	Ksiaz	34.24	320	eP	P	01 59 57.2	+0.1
KSP	Ksiaz	34.24	320	P	P	01 59 57.1	-0.1
	comp=Z,33nm,0.9s						
ROBS	Robic	34.25	311	i P	P	01 59 57.4	0.0
ROBS				i PcP	PcP	02 02 33.5	0.0
UPC	Upice	34.25	319	eP	P	01 59 57.6	+0.3
UPC	Upice	34.25	319	eP	P	01 59 57.6	+0.3
CHVC	Chvalec	34.26	319	eP	P	01 59 58.0	+0.6
CHVC	Chvalec	34.26	319	eP	P	01 59 58.0	+0.6
MOA	Molln	34.27	314	i P	P	01 59 57.8	+0.3
	comp=Z,14nm,0.8s,SNR=11						
MOA				ePcP	PcP	02 02 33.7	+0.1
	comp=Z,2.8nm,0.6s						
MYKA	Terra Mystica	34.28	312	eP	P	01 59 57.8	+0.2
	comp=Z,4.1nm,0.7s						
MYKA				i PcP	PcP	02 02 34.6	+0.9
	comp=Z,0.8nm,0.4s						
DGZ	Jazzator, Alta	34.35	43c	iP	P	01 59 59.5	+1.2
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CKRC	Cesky Krumlov	34.59	315	eP	P	01 59 59.7	-0.6
CKRC				e		02 02 34.6	
CKRC	Cesky Krumlov	34.59	315	eP	P	01 59 59.7	-0.6
CKRC				ex	x	02 02 34.6	
BIOA	Bad Ischl, Aus	34.62	313	i P	P	02 00 00.8	+0.2
	comp=Z,22nm,0.9s,SNR=18						
ZVC	Zvikov	34.89	316	eP	P	02 00 03.0	+0.2
PRU	Pruhonice	34.90	317	eP	P	02 00 02.6	-0.2
PRU	Pruhonice	34.90	317	eP	P	02 00 02.6	-0.2
ZAA0	Zalesovo Array	34.92	35	IAmb	IAmb	02 00 04.3	
	comp=Z,30nm,1.1s						
ZALV	Zalesovo Beam	34.92	35	P	P	02 00 03.2	+0.3
	comp=Z,8.5nm,0.5s,baz=251,slow=9.0,SNR=61						
ZALV				PcP	PcP	02 02 34.2	-1.0
	comp=Z,3.5nm,0.7s,baz=245,slow=3.5,SNR=3.5						
ZALV				ScP	ScP	02 06 18.3	-1.4
	comp=Z,0.8nm,0.6s,baz=213,slow=4.5,SNR=2.7						
	comp=Z,8.5nm,0.5s						
ZALV	Zalesovo Beam	34.92	35	P	P	02 00 03.4	+0.4
GERES	GERESS Array B	34.98	315	P	P	02 00 03.1	-0.5
	comp=Z,3.6nm,0.9s,baz=110,slow=7.3,SNR=30						
GERES				PcP	PcP	02 02 35.6	-0.1
	comp=Z,3.9nm,0.8s,baz=143,slow=3.6,SNR=13						
GERES				ScP	ScP	02 06 20.2	+0.1
	comp=Z,0.3nm,0.6s,baz=106,slow=2.1,SNR=3.1						
GERES				LR	LR	02 18 39.5	
	comp=Z,252nm,18.8s,baz=113,slow=44						
	comp=Z,3.6nm,0.9s						
GERES	GERESS Array B	34.98	315	eP	P	02 00 03.4	-0.3
GERES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
PALK	Pallekele	35.03	122	LR	LR	02 14 16.8	
	comp=Z,167nm,18.2s,baz=314,slow=36						
ABTA	Abfaltersbach	35.06	311	i P	P	02 00 04.2	-0.1
	comp=Z,14nm,0.9s,SNR=8.5						
ABTA				ePcP	PcP	02 02 36.2	+0.2
	comp=Z,5.9nm,1.0s						
ARBE	Arbavere	35.12	338	eP	P	02 00 04.0	-0.6
LESA	Schwarzleotal	35.15	313	i P	P	02 00 05.1	-0.1
	comp=Z,9.6nm,0.5s,SNR=6.5						
LESA				ePcP	PcP	02 02 36.0	-0.3
	comp=Z,5.5nm,0.5s						
KHC	Kasperske Hory	35.15	316c	eP	P	02 00 05.0	-0.1
KHC				pmax	pmax		
	comp=Z,19nm,1.0s						
KHC	Kasperske Hory	35.15	316	eP	P	02 00 05.5	+0.4
KHC				ex	x	02 02 36.2	
KHC				AMS	AMS	02 16 40.0	
	comp=Z,200nm,15.0s						
MBAR	Mbarara	35.33	218	LR	LR	02 13 46.1	
	comp=Z,147nm,20.5s,baz=30,slow=35						
MBAR	Mbarara	35.33	218	P	P	02 00 08.0	+0.9
MBAR	Mbarara	35.33	218c	eP	P	02 00 08.0	+0.9
MBAR				pmax	pmax		
	comp=Z,17nm,0.9s						
CTI	Castel Tesino	35.44	310	IAmb	IAmb	02 00 08.9	
	comp=Z,22nm,1.0s						
WET	Wettzell	35.59	315	eP	P	02 00 08.0	-0.9
	comp=Z,6.5nm,0.8s,baz=109,slow=8.8						
BRG	Berggiesshubel	35.60	319	eP	P	02 00 08.4	-0.5
	comp=Z,12nm,0.8s,baz=109,slow=8.8						
WTTA	Wattenberg	35.78	312	i P	P	02 00 10.8	+0.1
	comp=Z,35nm,0.9s,SNR=11						
WTTA				i PcP	PcP	02 02 38.4	+0.1
	comp=Z,2.9nm,0.5s,SNR=7.0						
WTTA	Wattenberg	35.78	312	eP	PcP	02 02 38.4	+0.1
	comp=Z,2.9nm,0.5s,SNR=7.0						
HSKC	Hora Svate Kat	35.80	318	eP	P	02 00 10.4	-0.2
WATA	Walderalm	35.84	312	i P	P	02 00 11.0	-0.2
	comp=Z,34nm,1.1s,SNR=13						
WATA				i PcP	PcP	02 02 38.7	+0.3
	comp=Z,4.8nm,0.5s,SNR=6.8						
WATA	Walderalm	35.84	312	eP	PcP	02 02 38.7	+0.3
	comp=Z,4.8nm,0.5s,SNR=6.8						
KEST	Kesra	35.95	292	P	P	02 00 14.2	+2.1
	comp=Z,26nm,0.9s,baz=97,slow=2.7,SNR=36						
KEST				PcP	PcP	02 02 40.0	+1.2
	comp=Z,7.8nm,1.0s,baz=143,slow=3.7,SNR=4.1						
KEST				LR	LR	02 18 05.0	
	comp=Z,227nm,20.1s,baz=22,slow=42						
	comp=Z,26nm,0.9s						
KEST	Kesra	35.95	292	P	P	02 00 14.9	+2.8
	SNR=7.7						
KEST	Kesra	35.95	292	IAmb	IAmb	02 00 16.3	
	comp=Z,21nm,0.8s						
SQTA	Sankt Quirin	36.05	312	i P	P	02 00 12.9	0.0
	comp=Z,5.9nm,0.4s,SNR=16						
SQTA				ePcP	PcP	02 02 39.5	+0.5
	comp=Z,16nm,1.1s						
PRMA	PARMA	36.06	307	IAmb	IAmb	02 00 15.3	
	comp=Z,63nm,1.2s						
SHL	Shillong	36.07	85	P	P	02 00 13.9	+0.5
	SNR=5.3						
SHL	Shillong	36.07	85	P	P	02 00 11.2	-2.3
SHL				IAmb	IAmb	02 00 12.3	
	comp=Z,14nm,0.6s						
SHL	Shillong	36.07	85	P	P	02 00 11.2	-2.3
SHL				pmax	pmax		
	comp=Z,14nm,0.6s						
ROTZ	Rotzenmuhle	36.22	316	eP	P	02 00 14.0	-0.2
	comp=Z,2.7nm,0.8s,baz=109,slow=8.8						
MEF	Metsahovi	36.24	337	eP	P	02 00 13.2	-1.0
FUR	Furstenfeldbru	36.28	313	eP	P	02 00 14.2	-0.5
	comp=Z,52nm,0.8s,baz=109,slow=8.8						
FETA	Feichten	36.31	311	i P	P	02 00 15.2	0.0
	comp=Z,27nm,1.0s,SNR=9.9						
FETA				ePcP	PcP	02 02 39.6	-0.2
	comp=Z,7.9nm,1.3s						
CLL	Collm	36.32	319	IAmb	IAmb	02 00 18.0	
	comp=Z,27nm,1.1s						
CLL	Collm	36.32	319	i P	P	02 00 15.3	+0.3
CLL				i		02 02 39.6	
CLL				pmax	pmax		
	comp=Z,20nm,0.9s						
CLL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CLL				MLR	MLR		
	comp=Z,300nm,17.0s						
CLL	Collm	36.32	319	eP	P	02 00 14.7	-0.3
	comp=Z,22nm,1.1s,baz=109,slow=8.8						
CLL	Collm	36.32	319	P	P	02 00 14.6	-0.4
	comp=Z,24nm,1.0s						
CLL	Collm	36.32	319	i P	P	02 00 15.3	+0.3
	comp=Z,20nm,0.9s						
CLL				i PcP	PcP	02 02 39.6	+0.1
	comp=Z,8.0nm,0.9s						
CLL				eS	S	02 06 07.0	+12
MANZ	Manzenberg	36.35	316	eP	P	02 00 15.1	-0.3
	comp=Z,2.0nm,0.9s,baz=109,slow=8.8						
RETA	Reutte	36.41	312	eP	P	02 00 15.0	-1.0
	comp=Z,1.6nm,0.4s						
RETA				i PcP	PcP	02 02 39.8	-0.1
	comp=Z,1.9nm,0.5s						
JOF	Joensuu	36.46	345	eP	P	02 00 15.3	-0.7
FINES	FINESS Array B	36.64	340	P	P	02 00 17.3	-0.3
	comp=Z,14nm,0.6s,baz=145,slow=9.4,SNR=83						
FINES				PcP	PcP	02 02 39.9	-0.3
	comp=Z,4.6nm,0.7s,baz=82,slow=4.0,SNR=4.1						
	comp=Z,14nm,0.6s						
FIA1	FINESS Array S	36.64	340	P	P	02 00 17.6	+0.1
FIA1				IAmb	IAmb	02 00 18.0	
	comp=Z,43nm,0.7s						
BRDH	Bariadhala	36.67	90	LR	LR	02 19 05.1	
	comp=Z,297nm,18.2s,baz=277,slow=42						
GRA1	Grafenberg Arr	36.79	316	IAmb	IAmb	02 00 19.9	
	comp=Z,28nm,0.8s						
GRF	Grafenberg Arr	36.79	316	eP	P	02 00 18.8	-0.3
	comp=Z,28nm,0.8s,baz=109,slow=8.8						
GRF				eL	L	02 17 13.7	
	comp=Z,270nm,21.8s						
DAVOX	Davos/Dischmat	36.81	311	P	P	02 00 19.3	-0.3
	comp=Z,11nm,0.7s,baz=114,slow=8.3,SNR=35						
DAVOX				PcP	PcP	02 02 41.3	0.0
	comp=Z,6.3nm,0.9s,baz=131,slow=4.7,SNR=3.5						
DAVOX				LR	LR	02 17 53.9	
	comp=Z,248nm,19.4s,baz=95,slow=40						
	comp=Z,11nm,0.7s						
MOX	Moxa	36.88	317	eL	L	02 17 50.5	
	comp=Z,198nm,20.2s						
UBR	Ueberruh	36.89	312	eP	P	02 00 19.3	-0.8
	baz=109,slow=8.8						
DAVA	Damuels	36.94	311	i P	P	02 00 20.3	-0.3
	comp=Z,35nm,0.5s,SNR=22						
DAVA				ePcP	PcP	02 02 42.1	+0.5
	comp=Z,7.4nm,0.5s						
NEUB	Neuenburg	36.99	318	eP	P	02 00 20.4	-0.3
	comp=Z,34nm,1.2s,baz=109,slow=8.8						
GOMU	GeErMu	37.12	67	P	P	02 00 23.8	+1.3
GOMU				pP	pP	02 00 27.0	-2.1
GOMU				sP	sP	02 00 31.0	-0.8
GOMU				pmax	pmax		
	comp=Z,20nm,1.1s						
KEF	Keuruu	37.56	340	eP	P	02 00 24.8	-0.7
FLTG	Flechtingen	37.73	320	eP	P	02 00 26.8	-0.1
	comp=Z,19nm,1.1s,baz=109,slow=8.8						
GORT1	Trebel	37.95	321	eP	P	02 00 29.3	+0.6
	comp=Z,74nm,1.2s,baz=109,slow=8.8						
ASSE	Asse, Remlinge	37.97	319	eP	P	02 00 29.0	0.0
	comp=Z,12nm,1.0s,baz=109,slow=8.8						
CLZ	Clausthal	38.04	319	eP	P	02 00 29.9	+0.2
	comp=Z,37nm,0.7s,baz=109,slow=8.8						
BSEG	Bad Segeberg	38.87	322	eP	P	02 00 36.8	+0.3
	comp=Z,16nm,1.1s,baz=109,slow=8.8						
VAF	Ylistaro	38.90	340	eP	P	02 00 36.0	-0.6
RETH	Rethem/Aller,	38.94	320	eP	P	02 00 38.0	+0.9
	comp=Z,25nm,0.9s,baz=109,slow=8.8						
KASTN	Kahler Asten	38.98	317	eP	P	02 00 37.9	+0.4
	comp=Z,23nm,1.2s,baz=109,slow=8.8						
WLF	Walferdange	39.94	314	P	P	02 00 45.6	0.0
WLF	Walferdange	39.94	314	dP	P	02 00 45.2	-0.3
	comp=Z,11nm,0.8s						
APA	Apatity	40.20	349	⇓eP	P	02 00 45.8	-1.6
APA				e		02 02 21.1	
APA				e		02 02 51.8	
APA				MLR	MLR		
	comp=Z,570nm,3.3s						
HFS	Hagfors	40.23	332	P	P	02 00 47.5	-0.4
	comp=Z,15nm,0.5s,baz=122,slow=9.7,SNR=108						
	comp=Z,15nm,0.5s						
MEM	Membach	40.27	315	dP	P	02 00 50.5	+2.2
RCHB	Rochefort	40.64	315	dP	P	02 00 51.3	0.0
	comp=Z,7.4nm,1.1s						
KNGR	Kungurtug, Tuv	40.77	45c	eP	P	02 00 55.3	+2.7
KNGR				pmax	pmax		
	comp=Z,36nm,1.1s						
BGES	Gesves	40.78	315	dP	P	02 00 53.4	+0.9
	comp=Z,7.0nm,0.9s						
DOU	Dourbes	41.02	314	dP	P	02 00 54.8	+0.3
GTA	Gaotai	41.03	62	P	P	02 00 56.0	+1.1
GTA				pmax	pmax		
	comp=Z,62nm,1.1s						
GTA				LR	LR		
	comp=Z,230nm,14.5s						
GTA				LR	LR		
	comp=Z,240nm,14.2s						
GTA				LR	LR		
	comp=Z,330nm,15.3s						
UCC	Uccle	41.33	315	dP	P	02 00 57.4	+0.4
	comp=Z,14nm,0.9s						
OSL	Oslo	41.39	330	eP	P	02 00 57.4	0.0
NC602	NORSAR Array S	41.46	332	eP	P	02 00 57.6	-0.3
TAM	Tamanrasset	41.49	272	P	P	02 01 00.1	+1.2
TAM				IAmb	IAmb	02 01 01.3	
	comp=Z,41nm,0.6s						
TAM	Tamanrasset	41.49	272	P	P	02 01 00.1	+1.2
TAM				pmax	pmax		
	comp=Z,41nm,0.6s						
NB201	NORSAR Array S	41.73	332	P	P	02 00 59.3	-0.9
KONO	Kongsberg	41.74	329	eP	P	02 00 59.2	-1.1
NB2	NORSAR Subarra	41.75	332	P	P	02 00 59.1	-1.3
	comp=Z,5.3nm,0.6s,baz=121,slow=8.6						
NB2				PCP	PcP	02 02 55.0	-1.4
	comp=Z,6.3nm,0.7s,baz=103,slow=4.3						
NB2	NORSAR Subarra	41.75	332	P	P	02 00 59.1	-1.3
	baz=121,slow=8.6						
NOA	NORSAR Array B	41.75	332	P	P	02 00 59.2	-1.2
	comp=Z,3.4nm,0.5s,baz=122,slow=8.3,SNR=46						
NOA				PP	PP	02 02 32.7	-4.3
	comp=Z,2.0nm,0.7s,baz=134,slow=11,SNR=5.2						
NOA				PcP	PcP	02 02 55.7	-0.8
	comp=Z,4.9nm,0.8s,baz=103,slow=3.9,SNR=6.8						
	comp=Z,3.4nm,0.5s						
TNCH	TengChong	42.01	84	P	P	02 01 03.0	-0.2
TNCH				pP	sP	02 01 11.8	-0.7
TNCH				pmax	pmax		
	comp=Z,140nm,2.3s						
NC204	NORSAR Array S	42.06	332	P	P	02 01 02.4	-0.6
EIBI	Ibiza	42.24	297	P	P	02 01 06.2	+1.5
CEST	Esterri de Car	42.32	303	IAmb	IAmb	02 01 07.8	
	comp=Z,54nm,1.0s						
SKAR	Skarslia	42.81	330	eP	P	02 01 09.6	+0.6
BLS5	Blasjo	43.07	328	eP	P	02 01 11.2	+0.1
VADS	Vadso	43.15	349	eP	P	02 01 11.9	+0.4
MOY	Mondy	43.15	44	eP	P	02 01 13.1	+1.1
MOY				pmax	pmax		
	comp=Z,48nm,1.9s						
DOMB	Dombas	43.16	332	eP	P	02 01 11.8	0.0
ODD1	Odda	43.20	329	eP	P	02 01 13.3	+1.1
KEV	Kevo	43.24	348	P	P	02 01 12.8	+0.5
KEV				IAmb	IAmb	02 01 38.4	
	comp=Z,108nm,1.7s						
KEV	Kevo	43.24	348	P	P	02 01 12.8	+0.5
KEV				pmax	pmax		
	comp=Z,108nm,1.7s						
ARA0	ARCESS Array S	43.34	347	eP	P	02 01 13.5	+0.4
ARCES	ARCESS Array B	43.34	347	P	P	02 01 13.4	+0.3
	comp=Z,9.9nm,0.8s,baz=148,slow=6.6,SNR=22						
ARCES				PP	PP	02 02 58.3	+4.5
	comp=Z,7.7nm,0.8s,baz=142,slow=10,SNR=4.1						
ARCES				ScP	ScP	02 06 51.8	+0.1
	comp=Z,1.9nm,0.9s,baz=127,slow=2.4,SNR=3.8						
ARCES				LR	LR	02 22 16.6	
	comp=Z,161nm,19.1s,baz=136,slow=40						
	comp=Z,9.9nm,0.8s						
ARCES	ARCESS Array B	43.34	347	P	P	02 01 13.1	0.0
KTK1	Kautokeino	43.38	346	eP	P	02 01 13.5	+0.1
NSS	Namsos	43.42	336	eP	P	02 01 13.7	-0.1
MOR8	Moi Rana	43.62	339	eP	P	02 01 15.1	-0.4
RAUS	Rausandaksla	43.92	339	eP	P	02 01 18.0	+0.2

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BER   Bergen           43.99 329  eP     P      02 01 18.7 +0.3
LEIR  Leirfjorden      44.00 339  eP     P      02 01 18.5  0.0
ECHE  Chera            44.01 298   P     P      02 01 20.9 +1.8
MOL   Molde            44.03 333  eP     P      02 01 18.9 +0.1
AKN   Aaknes           44.07 332  eP     P      02 01 19.5 +0.4
FAUS  Fauske           44.17 341  eP     P      02 01 19.8  0.0
STOK  Stokkvaagen      44.17 339  eP     P      02 01 19.9  0.0
LZDM  Lanzhou Array    44.31  67   P     P      02 01 22.3 +0.5
      comp=Z,7.4nm,0.6s,baz=261,slow=8.7,SNR=12
LZDM                               PcP   PcP    02 03 05.9  0.0
      comp=Z,1.7nm,0.4s,baz=256,slow=2.5,SNR=2.3
      comp=Z,7.4nm,0.6s
EMUR  La Murta         44.33 296   P     P      02 01 22.4 +0.8
ZAK   Zakamensk        44.33  46  eP     P      02 01 21.2 -0.3
ZAK                               e             02 03 03.3
ZAK                                pmax  pmax
      comp=Z,20nm,1.6s
ZAK                                pmax  pmax
      comp=Z,8.0nm,1.7s
VAGH  Vaagaholmen      44.34 339  eP     P      02 01 21.9 +0.8
PZH   PanZhiHua        44.41  81   P     P      02 01 24.3 +1.8
LZH   Lanzhou          44.42  67  eP     P      02 01 23.5 +1.0
LZH                                sP    sP     02 01 38.3 +6.5
LZH                                pmax  pmax
      comp=Z,32nm,1.0s
LZH                                LR    LR
      comp=Z,490nm,13.6s
LZH                                LR    LR
      comp=Z,210nm,12.2s
LZH                                LR    LR
      comp=Z,400nm,15.3s
CHTO  Chiang Mai       44.42  92   P     P      02 01 22.6 +0.1
CHTO  Chiang Mai       44.42  92   P     P      02 01 22.2 -0.3
CHTO  Chiang Mai       44.42  92   P     P      02 01 22.6 +0.1
CHTO                               pmax  pmax
      comp=Z,15nm,1.1s
JETT  Jettan, Norway   44.43 345  eP     P      02 01 22.2 +0.3
ETOB  Tobarra          44.52 297   P     P      02 01 24.6 +1.5
SUE   Sulen            44.53 330  eP     P      02 01 23.1 +0.3
CMAR  Chiang Mai Arr   44.55  93   P     P      02 01 23.1 -0.4
      comp=Z,2.8nm,0.9s,baz=289,slow=8.4,SNR=15
CMAR                               PcP   PcP    02 03 06.6  0.0
      comp=Z,4.4nm,0.8s,baz=286,slow=4.7,SNR=9.6
CMAR                               LR    LR     02 22 46.7
      comp=Z,159nm,21.5s,baz=290,slow=40
      comp=Z,2.8nm,0.9s
CMAR  Chiang Mai Arr   44.55  93  eP     P      02 01 23.6  0.0
CMAR                               pmax  pmax
      comp=Z,3.0nm,0.8s
STEI  Steigen          44.56 341  eP     P      02 01 23.1 +0.2
HAMF  Hammerfest       44.61 347  eP     P      02 01 23.8 +0.5
FOO   Floro            44.63 331  eP     P      02 01 24.0 +0.4
TLOR  Lorca, Murcia    44.70 296   P     P      02 01 26.0 +1.5
TLY   Talaya           44.77  44ceP     P      02 01 26.4 +1.5
TLY                                pmax  pmax
      comp=Z,23nm,1.6s
TRO   Tromso           44.83 345  eP     P      02 01 25.3 +0.2
LOF   Lofoten          45.17 341  eP     P      02 01 27.0 -0.7
ENIJ  Nijar            45.18 295   P     P      02 01 29.2 +0.9
GDLE  Glaisdale, N Y   45.23 319⇑eP     P      02 01 28.7 +0.2
GDLE                               IAmb  IAmb   02 01 30.4
      comp=Z,72nm,0.7s
STRD  Stroud           45.54 316  eP     P      02 01 30.9  0.0
STRD                               IAmb  IAmb   02 01 32.2
      comp=Z,50nm,0.7s
NRIK  Noril'sk         45.55  17   P     P      02 01 32.2 +1.4
      comp=Z,23nm,0.9s,baz=221,slow=4.9,SNR=38
      comp=Z,23nm,0.9s
NRIK  Noril'sk         45.55  17   P     P      02 01 32.0 +1.3
NRIK                               IAmb  IAmb   02 01 33.3
      comp=Z,42nm,1.1s
NRIK  Noril'sk         45.55  17d iP     P      02 01 32.0 +1.3
NRIK                               pmax  pmax
      comp=Z,32nm,0.9s
LBWR  Ladybower, Pea   45.55 318  eP     P      02 01 30.8 -0.2
LBWR                               IAmb  IAmb   02 01 33.5
      comp=Z,29nm,0.7s
HPK   Haverah Park     45.60 319⇑eP     P      02 01 31.4  0.0
HPK                                IAmb  IAmb   02 01 32.9
      comp=Z,31nm,0.7s
OLDB  Oldbury-Upon-S   45.76 315  eP     P      02 01 32.5 -0.2
MONM  Monmouth         45.94 316  eP     P      02 01 33.4 -0.7
MONM                               IAmb  IAmb   02 01 35.5
      comp=Z,30nm,0.7s
EDMD  Edmundbyers      45.97 320⇑eP     P      02 01 34.4 +0.1
EDMD                               IAmb  IAmb   02 01 36.3
      comp=Z,33nm,0.8s
WMELI Melilla          45.97 293   P     P      02 01 36.4 +1.8
EMLI  Melilla          45.97 293   P     P      02 01 36.6 +2.0
MCH1  Michaelchurch    46.08 316  eP     P      02 01 34.7 -0.5
MCH1                               IAmb  IAmb   02 01 36.8
      comp=Z,52nm,0.7s
SONM  Songino Array    46.09  50   P     P      02 01 36.2 +0.7
      comp=Z,9.8nm,0.9s,baz=267,slow=9.1,SNR=50
SONM                               PcP   PcP    02 03 11.3 -0.3
      comp=Z,2.1nm,0.8s,baz=254,slow=4.2,SNR=3.7
SONM                               LR    LR     02 23 30.6
      comp=Z,223nm,18.1s,baz=239,slow=39
      comp=Z,9.8nm,0.9s
SONM  Songino Array    46.09  50   IAmb  IAmb   02 01 37.5
      comp=Z,17nm,1.1s
HLM1  Long Mynd        46.09 317⇑eP     P      02 01 35.2 -0.1
HLM1                               IAmb  IAmb   02 01 36.7
      comp=Z,22nm,0.7s
EQTA  Presa de Quent   46.13 295   P     P      02 01 36.4 +0.3
ESDC  Sonseca Array    46.31 299   P     P      02 01 37.6 +0.3
      comp=Z,4.4nm,0.6s,baz=74,slow=7.4,SNR=129
ESDC                               PcP   PcP    02 03 12.2 -0.2
      comp=Z,1.2nm,0.7s,baz=49,slow=3.0,SNR=5.3
ESDC                               LR    LR     02 24 16.1
      comp=Z,138nm,18.0s,baz=82,slow=40
      comp=Z,4.4nm,0.6s
ESDC  Sonseca Array    46.31 299         P      02 01 37.5 +0.2
ELGU  Los Guajares,    46.32 295   P     P      02 01 38.0 +0.6
FOEL  Foel Wylfa       46.34 317⇑eP     P      02 01 37.4 +0.1
FOEL                               IAmb  IAmb   02 01 39.5
      comp=Z,41nm,0.7s
EDA   Edea             46.37 245   P     P      02 01 37.6 -0.4
EDA                                IAmb  IAmb   02 01 38.7
      comp=Z,18nm,0.8s
ULN   Ulaanbaatar      46.53  50   P     P      02 01 39.4 +0.4
ULN                                IAmb  IAmb   02 01 40.8
      comp=Z,29nm,1.1s
ULN   Ulaanbaatar      46.53  50   P     P      02 01 39.3 +0.3
ULN   Ulaanbaatar      46.53  50d iP     P      02 01 39.4 +0.4
ULN                                pmax  pmax
      comp=Z,24nm,1.0s
KESW  Keswick, Cumbr   46.58 319⇑eP     P      02 01 39.1 +0.1
KESW                               IAmb  IAmb   02 01 41.2
      comp=Z,60nm,0.8s
PAB   San Pablo        46.62 299   P     P      02 01 40.1 +0.3
PAB                                IAmb  IAmb   02 01 41.0
      comp=Z,20nm,0.9s
PAB   San Pablo        46.62 299   P     P      02 01 40.1 +0.3
PAB                                pmax  pmax
      comp=Z,19nm,0.9s
EGOR  Sierra Gorda,    46.67 295   P     P      02 01 40.2 -0.1
EKA   Eskdalemuir Ar   46.75 320   P     P      02 01 39.9 -0.5
      comp=Z,18nm,0.8s,baz=110,slow=8.1,SNR=28
EKA                                PcP   PcP    02 03 13.6  0.0
      comp=Z,4.0nm,0.9s,baz=77,slow=4.8,SNR=3.1
      comp=Z,18nm,0.8s
ESK   Eskdalemuir      46.77 320  eP     P      02 01 40.3 -0.3
EDI   Edinburgh        46.88 321  eP     P      02 01 41.5  0.0
EADA  Adamuz           46.93 297   P     P      02 01 42.9 +0.7
WME   Myndd Eilian     47.07 318  eP     P      02 01 43.1 +0.2
RSBS  Rosebush, Pemb   47.15 316⇑eP     P      02 01 43.7 +0.1
RSBS                               IAmb  IAmb   02 01 45.1
      comp=Z,21nm,0.7s
WPS   Cemaes, Angles   47.19 318⇑eP     P      02 01 43.9 +0.1
WPS                                IAmb  IAmb   02 01 46.0
      comp=Z,45nm,0.7s
EMIJ  Mijas            47.27 294   P     P      02 01 44.5 -0.3
NEWG  New Galloway     47.31 320  eP     P      02 01 44.7 -0.1
NEWG                               IAmb  IAmb   02 01 46.6
      comp=Z,10nm,0.6s
INVG  Invergeldie, C   47.45 322⇑eP     P      02 01 45.6 -0.4
INVG                               IAmb  IAmb   02 01 47.6
      comp=Z,39nm,0.8s
ECAB  El Cabril        47.60 297   P     P      02 01 48.5 +1.2
MDT   Midelt           47.74 289   LR    LR     02 26 36.9
      comp=Z,132nm,19.1s,baz=88,slow=42
ECEU  Ceuta            47.85 294   P     P      02 01 49.6 +0.3
MD01  Midelt array s   47.85 290   P     P      02 01 51.0 +1.4
MD31  MD31             47.85 290   IAmb  IAmb   02 01 51.6
      comp=Z,18nm,0.8s
IFR   Ifrane           48.03 290   P     P      02 01 52.9 +1.9
ESPR  Espera           48.09 295   P     P      02 01 50.8 -0.4
PBRG  Braganca         48.27 302  eP     P      02 01 52.8 +0.3
DSB   Dublin           48.29 317   P     P      02 01 52.9 +0.5
DSB   Dublin           48.29 317   P     P      02 01 52.6 +0.2
DSB   Dublin           48.29 317⇑eP     P      02 01 52.6 +0.2
DSB                                IAmb  IAmb   02 01 54.4
      comp=Z,36nm,0.7s
ILTH  Belurgan, Co L   48.36 318   P     P      02 01 53.7 +0.8
IWEX  Carrickbyrne,    48.44 316   P     P      02 01 54.3 +0.7
MVO   Moncorvo         48.53 301  eP     P      02 01 55.6 +1.0
MVO                              i IAmb  IAmb   02 01 56.2
      comp=Z,33nm,1.0s
TOA0  Torodi Ar. Sit   48.57 262   P     P      02 01 55.5 +0.4
      SNR=7.7
TORD  Torodi Ar. Bea   48.57 262   P     P      02 01 55.1  0.0
      comp=Z,37nm,0.8s,baz=52,slow=8.9,SNR=221
      comp=Z,37nm,0.8s
EMIN  Mina Concepcio   48.62 296   P     P      02 01 55.3 +0.1
GYA   Guiyang          48.67  79 ⇓P     P      02 01 55.8 -0.2
GYA                                pmax  pmax
      comp=Z,16nm,1.0s
EBAD  Badajoz          48.76 298   P     P      02 01 56.5 +0.2
BTO   Baotou           48.80  60  eP     P      02 01 56.8 +0.1
BTO                                pP    pP     02 02 01.5 -1.9
BTO                                sP    sP     02 02 03.8 -2.3
BTO                                pmax  pmax
      comp=Z,110nm,0.9s
BTO                                pmax  pmax
      comp=Z,540nm,7.5s
BTO                                LR    LR
      comp=Z,840nm,14.4s
BTO                                LR    LR
      comp=Z,520nm,14.2s
BTO                                LR    LR
      comp=Z,660nm,19.2s
XAN   Xi'an            48.83  69   P     P      02 01 56.8 -0.2
XAN                                pmax  pmax
      comp=Z,15nm,0.7s
XAN                                LR    LR
      comp=Z,400nm,18.0s
XAN                                LR    LR
      comp=Z,380nm,15.8s
XAN                                LR    LR
      comp=Z,430nm,16.1s
PBAR  Barrancos        48.85 297   P     P      02 01 57.6 +0.5
PBAR  Barrancos        48.85 297  eP     P      02 01 57.4 +0.3
PBAR                             i IAmb  IAmb   02 01 58.3
      comp=Z,49nm,0.9s
PMRV  Marv??o          48.98 299  eP     P      02 01 58.4 +0.4
MTE   Manteigas        48.99 300  eP     P      02 01 59.0 +0.8
MTE                              i IAmb  IAmb   02 02 07.8
      comp=Z,29nm,1.7s
PCBR  Castelo Branco   49.00 299  eP     P      02 01 58.8 +0.7
PCBR                             i IAmb  IAmb   02 01 59.8
      comp=Z,33nm,1.0s
PVRL  Vila Real        49.04 301  eP     P      02 01 59.4 +0.9
PVRL                             i IAmb  IAmb   02 02 03.0
      comp=Z,34nm,1.9s
POLO  Lamas de Olo     49.09 301  eP     P      02 01 59.7 +0.8
POLO                             i IAmb  IAmb   02 02 00.8
      comp=Z,20nm,1.1s
IDGL  Inch Island, C   49.17 319   P     P      02 01 59.4 +0.3
PESTR Estremoz         49.20 298   P     P      02 01 60.0 +0.3
PESTR Estremoz         49.20 298   P     P      02 01 59.3 -0.4
PESTR                              IAmb  IAmb   02 02 00.9
      comp=Z,14nm,0.8s
PESTR Estremoz         49.20 298  eP     P      02 01 59.8 +0.1
PESTR                            i IAmb  IAmb   02 02 00.7
      comp=Z,24nm,1.0s
MLSI  Meulaboh, Aceh   49.20 111   P     P      02 01 59.1 -0.8
      comp=Z,55nm,0.8s
PVIS  Viseu            49.23 300  eP     P      02 02 01.3 +1.4
LSZ   Lusaka           49.28 210   P     P      02 02 01.2 +0.7
LSZ                                IAmb  IAmb   02 02 02.9
      comp=Z,21nm,1.1s
LSZ   Lusaka           49.28 210   P     P      02 02 01.2 +0.7
LSZ                                pmax  pmax
      comp=Z,21nm,1.1s
PGAV  Gavieira, Arco   49.40 302  eP     P      02 02 02.5 +1.2
PGAV                             i IAmb  IAmb   02 02 07.3
      comp=Z,66nm,1.7s
PVAQ  Vaqueiros        49.49 296  eP     P      02 02 02.1 +0.2
PVAQ                             i IAmb  IAmb   02 02 08.6
      comp=Z,20nm,1.5s
PBEJ  Beja             49.52 297  eP     P      02 02 02.5 +0.4
PBEJ                             i IAmb  IAmb   02 02 03.9
      comp=Z,23nm,1.2s
PSARD Sardoal          49.55 299  eP     P      02 02 03.1 +0.7
PSARD                            i IAmb  IAmb   02 02 04.2
      comp=Z,37nm,1.0s
PARRA Arraiolos        49.55 298  eP     P      02 02 02.7 +0.4
PARRA                            i IAmb  IAmb   02 02 03.9
      comp=Z,17nm,1.8s
EVO   Evora            49.57 298   P     P      02 02 03.3 +0.8
EVO   Evora            49.57 298  eP     P      02 02 03.0 +0.5
EVO                              i IAmb  IAmb   02 02 04.4
      comp=Z,19nm,1.0s
PMTG  Montargil        49.66 298  eP     P      02 02 02.5 -0.6
PMTG                             i IAmb  IAmb   02 02 05.4
      comp=Z,18nm,2.1s
PTO   Porto            49.72 301  eP     P      02 02 05.0 +1.4
PTO                              i IAmb  IAmb   02 02 06.3
      comp=Z,54nm,1.5s
PCAS  Casmilo, Conde   49.76 300  eP     P      02 02 05.0 +1.1
PCAS                             i IAmb  IAmb   02 02 10.2
      comp=Z,46nm,2.1s
MOE   Montemor         49.83 298  eP     P      02 02 05.4 +0.9
MOE                              i IAmb  IAmb   02 02 06.1
      comp=Z,20nm,1.0s
HHC   Hu-ho-hao-te     49.94  59  eP     P      02 02 07.0 +1.6
HHC                                pmax  pmax
      comp=Z,22nm,0.8s
HHC                                pmax  pmax
      comp=Z,97nm,3.7s
HHC                                LR    LR
      comp=Z,230nm,16.1s
HHC                                LR    LR
      comp=Z,160nm,16.6s
HHC                                LR    LR
      comp=Z,140nm,16.9s
AVE   Averroes         49.95 291   P     P      02 02 06.5 +1.0
PSBE  So Bento         50.05 299  eP     P      02 02 07.3 +1.2
IGLA  Glengowla, Co    50.09 317   P     P      02 02 06.3 +0.1
PTEO  Sao Teotonio     50.26 296  eP     P      02 02 07.7 -0.1
TIO   Tiouine          50.34 288   P     P      02 02 10.1 +1.5
PFVI  Vila Bisbo       50.41 296   P     P      02 02 09.5 +0.6
PFVI  Vila Bisbo       50.41 296   IAmb  IAmb   02 02 10.0
      comp=Z,40nm,0.9s
PFVI  Vila Bisbo       50.41 296  eP     P      02 02 09.2 +0.4
VAL   Valentia         50.54 315   P     P      02 02 10.2 +0.6
BOD   Bodaibo          51.58  37  eP     P      02 02 17.0 -0.3
BOD                                pmax  pmax
      comp=Z,57nm,1.4s
LYN   LuoYang          51.62  67   P     P      02 02 19.0 +1.0
LYN                                pmax  pmax
      comp=Z,28nm,0.9s
SPITS Spitsbergen Ar   51.81 351   P     P      02 02 19.2 +0.4
      comp=Z,4.8nm,0.5s,baz=134,slow=9.6,SNR=18
SPITS                              LR    LR     02 28 48.5
      comp=Z,112nm,18.4s,baz=154,slow=41
      comp=Z,4.8nm,0.5s
PSI   Prapat           52.10 111   LR    LR     02 25 47.8
      comp=Z,82nm,20.5s,baz=262,slow=38
KSANE Kasane           52.86 212   IAmb  IAmb   02 02 29.6
      comp=Z,19nm,0.9s
KSANE Kasane           52.86 212 i P     P      02 02 28.8 +1.5
HNS   HongShan         52.86  63 ⇓P     P      02 02 27.5 +0.3
HNS                                pmax  pmax
      comp=Z,12nm,1.1s
XLT   XiLinHaoTe       52.94  55  eP     P      02 02 28.5 +0.7
XLT                                pmax  pmax
      comp=Z,11nm,1.2s
XLT                                LR    LR
      comp=Z,47nm,21.8s
XLT                                LR    LR
      comp=Z,250nm,17.7s
JMIC  Jan Mayen        53.26 339   LR    LR     02 27 08.6
      comp=Z,131nm,19.4s,baz=188,slow=38
BJI   Beijing          53.54  60   P     P      02 02 32.3 +0.2
BJI                                pmax  pmax
      comp=Z,5.0nm,0.9s
BJI                                LR    LR
      comp=Z,180nm,16.8s
ACRG  Accra            53.87 255   IAmb  IAmb   02 02 36.4
      comp=Z,28nm,1.3s
BROLN Tlhalogang       54.82 208 i P     P      02 02 41.7  0.0
HILR  Hailar Array B   54.91  48   P     P      02 02 42.7 +0.6
      comp=Z,13nm,0.8s,baz=258,slow=7.4,SNR=20
      comp=Z,13nm,0.8s
TIA   Tai'an           55.00  64   P     P      02 02 43.3 +0.4
TIA                                pmax  pmax
      comp=Z,25nm,0.8s
TIA                                pmax  pmax
      comp=Z,490nm,5.5s
PHDHD Phuduhudu        55.23 211   IAmb  IAmb   02 02 46.5
      comp=Z,22nm,1.1s
PHDHD Phuduhudu        55.23 211 i P     P      02 02 45.7 +1.1
XAUDM Khaudum          55.34 215   IAmb  IAmb   02 02 48.2
      comp=Z,19nm,1.1s
GMARE Gumare           55.65 214   IAmb  IAmb   02 02 49.8
      comp=Z,23nm,1.1s
KHWEE KHWEE            56.36 209   IAmb  IAmb   02 02 55.0
      comp=Z,54nm,1.4s
BORG  Borgarnes        56.91 331   LR    LR     02 28 45.9
      comp=Z,98nm,18.1s,baz=94,slow=38
DBIC  Dimbokro         57.32 259   P     P      02 02 59.9 +0.2
      comp=Z,91nm,0.8s,baz=80,slow=7.4,SNR=125
DBIC                               LR    LR     02 29 18.9
      comp=Z,313nm,18.7s,baz=72,slow=38
      comp=Z,91nm,0.8s
DBIC  Dimbokro         57.32 259   P     P      02 02 59.9 +0.2
NJ2   Nanjing          57.41  69  eP     P      02 03 01.8 +1.7
NJ2                                pP    sP     02 03 09.0 -0.6
NJ2                                pmax  pmax
      comp=Z,13nm,0.6s
LPHEP Lephephe         57.45 208   IAmb  IAmb   02 03 01.9
      comp=Z,32nm,1.1s
LPHEP Lephephe         57.45 208 i P     P      02 03 01.2 +0.8
GRTLG Ghanzi           57.79 214   IAmb  IAmb   02 03 05.3
      comp=Z,24nm,0.9s
GRTLG Ghanzi           57.79 214 i P     P      02 03 04.3 +1.4
PMAR  Madeira          57.84 292  eP     P      02 03 04.7 +1.3
PMAR                             i IAmb  IAmb   02 03 05.8
      comp=Z,171nm,1.0s
TIXI  Tiksi            58.95  21   P     P      02 03 10.4 +0.1
TIXI                               IAmb  IAmb   02 03 13.7
      comp=Z,46nm,1.7s
TIXI  Tiksi            58.95  21⇓eP     P      02 03 10.4 +0.1
TIXI                               pmax  pmax
      comp=Z,43nm,2.5s
LBTB  Lobatse          59.03 207   P     P      02 03 12.4 +1.0
LBTB  Lobatse          59.03 207   P     P      02 03 12.5 +1.0
LBTB                               pmax  pmax
      comp=Z,35nm,1.0s
ZEA   Zeya             59.11  42  eP     P      02 03 12.9 +1.2
ZEA                                pmax  pmax
      comp=Z,10.0nm,1.0s
ZEA                                MLR   MLR
      comp=Z,200nm,15.0s
SKOMA Sekoma           59.28 209 i P     P      02 03 13.7 +0.5
YAK   Yakutsk          59.51  32  eP     P      02 03 13.9 -0.4
YAK                               e*PP   sP     02 03 23.9 +0.1
YAK                               e             02 04 00.9
YAK                               e             02 05 23.3
YAK                               eS     S      02 11 20.7 -1.8
YAK                               e*SS   sS     02 11 40.8 +6.8
YAK                               e             02 13 00.0
YAK                               eSS    SS     02 15 19.1 +1.7
YAK                                pmax  pmax
      comp=Z,36nm,1.0s
YAK                                pmax  pmax
      comp=N,3.0nm,1.5s
YAK                                pmax  pmax
      comp=E,9.0nm,1.3s
YAK                                pmax  pmax
      comp=Z,492nm,6.7s
YAK                                smax  smax
      comp=N,178nm,4.2s
YAK                                smax  smax
      comp=E,108nm,4.0s
CN2   Changchun        59.64  54   P     P      02 03 15.5  0.0
CN2                                PcP   PcP    02 04 02.8 +0.3
CN2                                pmax  pmax
      comp=E,10.0nm,1.0s
KOOLE Kule             59.67 214 i P     P      02 03 16.9 +0.9
HEH   HeiHe            59.74  46  eP     P      02 03 16.0  0.0
HEH                                pmax  pmax
      comp=E,22nm,1.0s
MAKGR Makgori          60.06 208   P     P      02 03 18.7 +0.1
LKGWB Lokgwabe         60.14 212   P     P      02 03 18.4 -0.7
LKGWB Lokgwabe         60.14 212 i P     P      02 03 18.5 -0.7
MDSI  Maura Dua        60.59 114   P     P      02 03 20.8 -1.6
      comp=E,29nm,1.0s
BNX   BinXian          60.59  51 ⇑P     P      02 03 22.0  0.0
BNX                                pmax  pmax
      comp=E,20nm,0.9s
LWLI  Liwa             60.81 115   P     P      02 03 23.4 -0.7
KLSI                   61.16 114   P     P      02 03 24.6 -1.6
      comp=E,25nm,1.0s
KASI  Kota Agung       61.47 115   P     P      02 03 27.1 -1.2
      comp=E,28nm,0.8s
BOSA  Boshof           62.38 206   P     P      02 03 34.3  0.0
      comp=E,19nm,0.9s,baz=43,slow=7.9,SNR=20
      comp=E,19nm,0.9s
BOSA  Boshof           62.38 206   P     P      02 03 34.5 +0.3
BOSA                               IAmb  IAmb   02 03 35.6
      comp=Z,21nm,0.9s
BOSA  Boshof           62.38 206   P     P      02 03 34.6 +0.3
BOSA                               pmax  pmax
      comp=Z,21nm,0.9s
SUMG  Summit           62.68 340   P     P      02 03 37.1 +1.0
SUMG  Summit           62.68 340   P     P      02 03 36.9 +0.8
SUMG  Summit           62.68 340   P     P      02 03 36.9 +0.8
SUMG                               pmax  pmax
      comp=Z,33nm,1.0s
KSRS  Korea Array      63.06  60   P     P      02 03 38.2 -0.5
      comp=Z,11nm,0.8s,baz=281,slow=7.0,SNR=19
      comp=Z,11nm,0.8s
KSRS  Korea Array      63.06  60  eP     P      02 03 38.2 -0.5
KSRS                               pmax  pmax
      comp=Z,13nm,0.9s
USRK  Ussuriysk Ar.    64.13  52   P     P      02 03 44.9 -0.7
      comp=Z,5.1nm,0.8s,baz=263,slow=9.0,SNR=6.4
      comp=Z,5.1nm,0.8s
CNJI  Cibinong         64.62 115   P     P      02 03 50.6 +1.3
      comp=Z,780nmcomp=Z,35nm,1.1s
JNU   Nakatsue         66.73  64   LR    LR     02 34 37.2
      comp=Z,126nm,20.3s,baz=318,slow=37
TULEG Thule            68.67 347   IAmb  IAmb   02 04 15.2
      comp=Z,16nm,0.9s
TYV   Tymovskoe        68.96  43  eP     P      02 04 16.6 +0.1
TYV                                pmax  pmax
      comp=Z,14nm,1.0s
TYV                                pmax  pmax
      comp=Z,100nm,4.2s
SEY   Seymchan         69.49  29   P     P      02 04 20.5 +1.0
      comp=Z,28nm,0.9s,baz=278,slow=8.5,SNR=25
      comp=Z,28nm,0.9s
SEY   Seymchan         69.49  29⇓eP     P      02 04 20.7 +1.2
SEY                                pmax  pmax
      comp=Z,34nm,0.8s
MA2   Magadan          70.09  32   P     P      02 04 24.2 +0.9
MA2   Magadan          70.09  32deP     P      02 04 23.5 +0.2
MA2                                pmax  pmax
      comp=Z,28nm,0.8s
YSS   Yuzhno-Sakhali   70.41  47  eP     P      02 04 24.9 -0.5
YSS                                pmax  pmax
      comp=Z,20nm,0.8s
MPSI  Mapaga           71.12 100   P     P      02 04 30.2 -0.1
      comp=Z,4μmcomp=Z,854nmcomp=Z,37nm,1.1s
MJAR  Matsushiro Arr   71.12  58   P     P      02 04 29.7 -0.4
      comp=Z,4.1nm,0.8s,baz=286,slow=7.4,SNR=7.6
      comp=Z,4.1nm,0.8s
MJAR  Matsushiro Arr   71.12  58   IAmb  IAmb   02 04 32.7
      comp=Z,17nm,1.6s
MJA0  Matsu Arr-Jizo   71.15  58  eP     P      02 04 30.3 +0.1
MJA0                               pmax  pmax
      comp=Z,3.0nm,0.7s
ASAJ  Asahikawa        71.36  49   LR    LR     02 37 54.9
      comp=Z,135nm,19.5s,baz=253,slow=38
TOLI2 Tolitoli         71.50  99   P     P      02 04 31.8 -0.8
MMSI  Mamuju           71.82 104   P     P      02 04 34.1 -0.4
BILL  Bilibino         72.17  21   P     P      02 04 37.0 +1.2
BILL  Bilibino         72.17  21deP     P      02 04 36.8 +1.0
BILL                               pmax  pmax
      comp=Z,35nm,0.9s
DAV   Davao City (W)   72.82  91   LR    LR     02 41 03.5
      comp=Z,63nm,18.6s,baz=32,slow=39
KAPI  Kappang          73.74 105   P     P      02 04 43.9 -2.0
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KAPI	Kappang	73.74	105	*ce*P	P	02 04 45.4	-0.5
KAPI				pmax	pmax		
	comp=Z,25nm,1.8s						
WBSI	Waikabubak, Su	75.91	109	P	P	02 04 54.6	-3.9
ILON	Igloolik, Nuna	76.32	345	P	P	02 05 00.6	+0.8
ILON				IAmb	IAmb	02 05 01.1	
	comp=Z,20nm,0.8s						
FRB	Frobisher Bay	76.36	337	LR	LR	02 39 27.2	
	comp=Z,109nm,19.9s,baz=54,slow=36						
PETK	Petropavlovsk-	76.44	37	P	P	02 04 59.4	-1.5
	comp=Z,11nm,0.9s,baz=323,slow=3.7,SNR=5.2						
	comp=Z,11nm,0.9s						
SANI	Sanana	77.58	99	P	P	02 05 07.1	-0.8
	comp=Z,22nm,0.9s						
A21K	Barrow	78.16	9	P	P	02 05 11.5	+1.3
	baz=335						
A19K	Wainwright	78.49	11	P	P	02 05 13.2	+1.2
	baz=331						
A22K	Sinclair Lake	78.67	9	P	P	02 05 14.3	+1.3
	baz=337						
B20K	Meade River	79.28	10	P	P	02 05 17.8	+1.5
	baz=335						
A36M	Sachs Harbour	79.39	359	P	P	02 05 17.5	+0.7
	baz=3.0,SNR=105						
C16K	Lisburne Hills	79.39	13	IAmb	IAmb	02 05 18.3	
	comp=Z,20nm,1.0s						
C16K	Lisburne Hills	79.39	13	P	P	02 05 17.2	+0.2
	baz=328						
B22K	Teshekpuk Lake	79.48	8	P	P	02 05 18.6	+1.2
	baz=338						
C17K	DeLong Mountai	79.64	12	P	P	02 05 19.3	+1.0
	baz=330						
C19K	Lookout Ridge	79.71	11	IAmb	IAmb	02 05 21.0	
	comp=Z,17nm,0.9s						
C19K	Lookout Ridge	79.71	11	P	P	02 05 20.0	+1.2
	baz=333						
BATI	Baumata	79.76	108	LR	LR	02 45 34.5	
	comp=Z,201nm,18.1s,baz=275,slow=39						
BATI	Baumata	79.76	108	P	P	02 05 19.6	-0.3
C18K	Utukok River	79.85	12	IAmb	IAmb	02 05 21.2	
	comp=Z,38nm,0.8s						
C18K	Utukok River	79.85	12	P	P	02 05 20.3	+0.7
	baz=331						
KUQ	Kuujjuuaa	79.86	332	P	P	02 05 20.2	+0.5
KUQ				IAmb	IAmb	02 05 21.6	
	comp=Z,18nm,0.9s						
B21K	Ikpikpuk River	79.99	9	P	P	02 05 21.5	+1.3
	baz=337						
SOEI	Soe	80.03	107	IAmb	IAmb	02 05 32.4	
	comp=Z,42nm,1.0s						
SOEI	Soe	80.03	107	P	P	02 05 20.5	-1.0
	comp=Z,41nm,0.9s						
RDOG	Red Dog Mine	80.05	12	P	P	02 05 21.2	+0.6
	baz=330						
KRAI	Karang Ratu	80.29	99	P	P	02 05 22.3	-0.5
	comp=Z,14nm,0.7s						
C23K	Itkillik River	80.30	8	P	P	02 05 23.7	+1.8
	baz=341						
D17K	Noatak River	80.33	13	P	P	02 05 22.7	+0.6
	baz=330,SNR=26						
C21K	Knifeblade Rid	80.40	9	P	P	02 05 23.6	+1.1
	baz=337						
D19K	Kuna River	80.50	11	IAmb	IAmb	02 05 24.9	
	comp=Z,32nm,0.9s						
D19K	Kuna River	80.50	11	P	P	02 05 23.9	+0.8
	baz=334						
D20K	Etivluk River	80.54	10	IAmb	IAmb	02 05 25.2	
	comp=Z,43nm,1.1s						
D20K	Etivluk River	80.54	10	P	P	02 05 24.2	+1.0
	baz=335						
C24K	Franklin Bluff	80.62	7	IAmb	IAmb	02 05 26.1	
	comp=Z,37nm,0.9s						
C24K	Franklin Bluff	80.62	7	P	P	02 05 24.9	+1.3
	baz=342,SNR=17						
C26K	Camden Bay	80.79	6	P	P	02 05 25.9	+1.4
	baz=346						
D22K	Ayikyak River	80.94	9	IAmb	IAmb	02 05 27.7	
	comp=Z,36nm,0.9s						
D22K	Ayikyak River	80.94	9	P	P	02 05 26.7	+1.3
	baz=339						
E18K	Tukpahlearik C	81.04	12	IAmb	IAmb	02 05 27.4	
	comp=Z,23nm,0.8s						
E18K	Tukpahlearik C	81.04	12	P	P	02 05 26.4	+0.5
	baz=332						
E17K	Hotham Inlet	81.11	13	P	P	02 05 26.8	+0.5
	baz=331,SNR=19						
D23K	Nanushuk River	81.11	8	IAmb	IAmb	02 05 28.6	
	comp=Z,23nm,0.8s						
D23K	Nanushuk River	81.11	8	P	P	02 05 27.7	+1.4
	baz=341						
TNA	Tin City	81.12	15	P	P	02 05 27.8	+1.5
	baz=326						
D24K	Happy Valley	81.15	7	IAmb	IAmb	02 05 28.6	
	comp=Z,20nm,0.9s						
D24K	Happy Valley	81.15	7	P	P	02 05 28.0	+1.5
	baz=342						
C27K	Jago River	81.17	5	IAmb	IAmb	02 05 29.2	
	comp=Z,35nm,1.1s						
C27K	Jago River	81.17	5	P	P	02 05 27.9	+1.3
	baz=347						
D25K	Kavik River	81.24	6	IAmb	IAmb	02 05 29.2	
	comp=Z,21nm,0.9s						
D25K	Kavik River	81.24	6	P	P	02 05 28.2	+1.2
	baz=344						
SCHQ	Schefferville	81.25	329	P	P	02 05 27.1	-0.1
	comp=Z,19nm,0.9s,baz=68,slow=3.2,SNR=12						
SCHQ				LR	LR	02 42 45.3	
	comp=Z,85nm,20.3s,baz=296,slow=37						
	comp=Z,19nm,0.9s						
TOLK	Toolik Lake Re	81.55	8	P	P	02 05 30.0	+1.3
	baz=342						
F14K	Arctic Creek	81.56	15	P	P	02 05 29.5	+0.8
	baz=327						
E19K	Redstone River	81.59	11	P	P	02 05 29.6	+0.7
	baz=335						
GAMB	Gambell	81.62	18	P	P	02 05 29.8	+0.8
	baz=323						
F15K	North Star Dit	81.73	14	IAmb	IAmb	02 05 31.5	
	comp=Z,25nm,0.9s						
F15K	North Star Dit	81.73	14	P	P	02 05 30.6	+1.0
	baz=329						
D27M	Malcolm River	81.75	4	IAmb	IAmb	02 05 31.9	
	comp=Z,13nm,0.9s						
D27M	Malcolm River	81.75	4	P	P	02 05 30.9	+1.2
	baz=349						
E22K	Anaktuvuk Pass	81.75	9	IAmb	IAmb	02 05 31.7	
	comp=Z,18nm,0.9s						
E22K	Anaktuvuk Pass	81.75	9	P	P	02 05 30.6	+0.8
	baz=340,SNR=13						
F17K	Baldwin Pennin	81.78	13	IAmb	IAmb	02 05 31.4	
	comp=Z,17nm,0.8s						
F17K	Baldwin Pennin	81.78	13	P	P	02 05 30.6	+0.8
	baz=332						
D28M	Stokes Point	81.81	4	P	P	02 05 31.3	+1.4
	baz=351						
F18K	Selawik	81.94	12	P	P	02 05 31.2	+0.6
	baz=333,SNR=27						
C36M	Paulatuk	82.01	358	IAmb	IAmb	02 05 31.9	
	comp=Z,22nm,0.9s						
C36M	Paulatuk	82.01	358	P	P	02 05 31.0	0.0
	baz=4.0,SNR=17						
F19K	Shaleruckik Mo	82.06	11	IAmb	IAmb	02 05 32.3	
	comp=Z,24nm,0.9s						
F19K	Shaleruckik Mo	82.06	11	P	P	02 05 31.4	+0.1
	baz=334,SNR=21						
E23K	Chandalar	82.10	8	IAmb	IAmb	02 05 33.9	
	comp=Z,25nm,0.9s						
E23K	Chandalar	82.10	8	P	P	02 05 32.7	+1.1
	baz=342						
F20K	Avaraart Lake	82.20	10	IAmb	IAmb	02 05 33.5	
	comp=Z,24nm,0.8s						
F20K	Avaraart Lake	82.20	10	P	P	02 05 32.5	+0.5
	baz=336						
E24K	Your Creek	82.22	7	IAmb	IAmb	02 05 34.5	
	comp=Z,18nm,0.8s						
E24K	Your Creek	82.22	7	P	P	02 05 33.3	+1.1
	baz=342						
F22K	John River	82.30	9	P	P	02 05 34.0	+1.4
	baz=339						
F21K	Alatna River	82.38	9	P	P	02 05 34.2	+1.2
	baz=338						
G15K	Niukluk	82.47	14	P	P	02 05 34.3	+0.8
	baz=329						
E25K	Arctic Village	82.48	6	P	P	02 05 34.7	+1.2
	baz=345,SNR=49						
E28M	Babbage River	82.48	4	IAmb	IAmb	02 05 35.6	
	comp=Z,14nm,0.8s						
E28M	Babbage River	82.48	4	P	P	02 05 34.5	+1.0
	baz=350						
G16K	Koyuk River	82.48	14	IAmb	IAmb	02 05 35.5	
	comp=Z,26nm,0.9s						
G16K	Koyuk River	82.48	14	P	P	02 05 34.7	+1.1
	baz=331						
ANM	Nome	82.55	15	P	P	02 05 35.1	+1.2
	baz=328,SNR=16						
G17K	Kiwalik Mounta	82.73	13	P	P	02 05 35.3	+0.5
	baz=332						
E27K	Coleen River	82.75	5	IAmb	IAmb	02 05 37.1	
	comp=Z,20nm,0.9s						
E27K	Coleen River	82.75	5	P	P	02 05 35.9	+0.9
	baz=349						
G18K	Tagagawik	82.75	12	IAmb	IAmb	02 05 36.2	
	comp=Z,14nm,0.9s						
G18K	Tagagawik	82.75	12	P	P	02 05 35.0	0.0
	baz=334						
E29M	Blow River	82.79	3	IAmb	IAmb	02 05 37.1	
	comp=Z,20nm,1.0s						
E29M	Blow River	82.79	3	P	P	02 05 36.0	+0.9
	baz=352						
G19K	Purcell Mounta	82.81	11	P	P	02 05 35.9	+0.7
	baz=335						
F24K	Squaw Lake	82.82	7	IAmb	IAmb	02 05 37.7	
	comp=Z,13nm,0.8s						
F24K	Squaw Lake	82.82	7	P	P	02 05 36.6	+1.2
	baz=343						
COLD	Coldfoot	82.82	8	IAmb	IAmb	02 05 37.9	
	comp=Z,14nm,0.8s						
COLD	Coldfoot	82.82	8	P	P	02 05 36.5	+1.2
	baz=341,SNR=15						
PSA00	Pilbara Seismi	82.90	119	P	P	02 05 35.0	-1.4
F25K	Christian Rive	82.98	6	IAmb	IAmb	02 05 39.7	
	comp=Z,9.7nm,0.9s						
F25K	Christian Rive	82.98	6	P	P	02 05 37.4	+1.2
	baz=345,SNR=8.8						
F26K	Sheenjek River	83.03	6	IAmb	IAmb	02 05 39.4	
	comp=Z,9.9nm,0.8s						
F26K	Sheenjek River	83.03	6	P	P	02 05 37.6	+1.2
	baz=346,SNR=15						
G21K	Allakaket	83.04	10	P	P	02 05 37.1	+0.7
	baz=338						
INK	Inuvik	83.05	2	P	P	02 05 36.7	+0.4
	comp=Z,11nm,0.8s,baz=25,slow=7.6,SNR=44						
	comp=Z,11nm,0.8s						
INK	Inuvik	83.05	2	IAmb	IAmb	02 05 37.8	
	comp=Z,13nm,0.9s						
INK	Inuvik	83.05	2	P	P	02 05 36.9	+0.5
	baz=356,SNR=12						
H16K	Elim	83.17	14	P	P	02 05 38.0	+0.9
	baz=331,SNR=13						
BMAR	Burnt Mountain	83.25	6	P	P	02 05 38.9	+1.4
G23K	Bananza Creek	83.33	8	IAmb	IAmb	02 05 40.2	
	comp=Z,17nm,0.9s						
G23K	Bananza Creek	83.33	8	P	P	02 05 39.3	+1.3
	baz=341,SNR=11						
H17K	Granite Mounta	83.38	13	IAmb	IAmb	02 05 39.6	
	comp=Z,17nm,0.8s						
H17K	Granite Mounta	83.38	13	P	P	02 05 38.9	+0.7
	baz=333,SNR=12						
F28M	Old Crow	83.44	4	IAmb	IAmb	02 05 40.4	
	comp=Z,20nm,0.9s						
F28M	Old Crow	83.44	4	P	P	02 05 39.4	+0.9
	baz=350,SNR=17						
H18K	Honhosa River	83.48	12	IAmb	IAmb	02 05 40.3	
	comp=Z,15nm,0.9s						
H18K	Honhosa River	83.48	12	P	P	02 05 39.6	+0.9
	baz=334						
H19K	Roundabout Mou	83.48	11	P	P	02 05 39.2	+0.6
	baz=336						
BLKN	Baker Lake	83.65	346	IAmb	IAmb	02 05 40.9	
	comp=Z,18nm,1.1s						
G24K	Hadweenzic Riv	83.65	7	P	P	02 05 41.0	+1.4
	baz=344,SNR=25						
F30M	Barrier River	83.66	3	IAmb	IAmb	02 05 41.3	
	comp=Z,19nm,0.8s						
F30M	Barrier River	83.66	3	P	P	02 05 40.8	+1.2
	baz=354						
G25K	Bearman Lake	83.74	7	P	P	02 05 41.3	+1.3
	baz=345						
H20K	Anotleneega Mo	83.77	11	P	P	02 05 41.0	+0.7
	baz=337,SNR=18						
G26K	Porcupine Rive	83.79	6	IAmb	IAmb	02 05 42.7	
	comp=Z,16nm,1.0s						
G26K	Porcupine Rive	83.79	6	P	P	02 05 41.7	+1.5
	baz=347						
F31M	Tsiigehtchic	83.91	2	P	P	02 05 41.6	+0.8
	baz=356,SNR=16						
H22K	Ishtalitna Cre	83.93	9	P	P	02 05 42.6	+1.5
	baz=340,SNR=16						
H21K	Melozitna Rive	83.94	10	P	P	02 05 42.3	+1.2
	baz=339,SNR=15						
G27K	Doyon Strip	84.11	5	P	P	02 05 43.4	+1.4
	baz=349,SNR=24						
GCSA	Galena City Sc	84.12	12	P	P	02 05 42.8	+0.8
	baz=335						
I17K	Unalakleet	84.16	14	P	P	02 05 43.3	+1.1
	baz=332,SNR=12						
G29M	Pine Creek	84.25	4	IAmb	IAmb	02 05 47.0	
	comp=Z,14nm,0.9s						
G29M	Pine Creek	84.25	4	P	P	02 05 43.6	+0.9
	baz=352,SNR=7.0						
G30M	tAoh Zraii Nji	84.27	3	P	P	02 05 43.5	+0.7
	baz=353						
G31M	Satah River	84.41	2	P	P	02 05 44.2	+0.9
	baz=355,SNR=21						
H24K	Noodor Dome	84.44	8	P	P	02 05 44.4	+0.7
	baz=343						
I21K	Tanana	84.51	10	IAmb	IAmb	02 05 47.4	
	comp=Z,19nm,0.9s						
I21K	Tanana	84.51	10	P	P	02 05 45.0	+1.1
	baz=340,SNR=10						
J14K	Nanvaranak Lak	84.53	15	P	P	02 05 45.2	+1.1
	baz=330						
H27K	Steamboat Moun	84.68	5	P	P	02 05 46.2	+1.2
	baz=349						
J16K	Anvik River	84.71	14	P	P	02 05 46.1	+1.1
	baz=332						
EPYK	Eagle Plains	84.86	3	IAmb	IAmb	02 05 47.1	
	comp=Z,13nm,0.8s						
EPYK	Eagle Plains	84.86	3	P	P	02 05 46.5	+0.7
	baz=353,SNR=7.1						
I23K	Minto, Yukon-K	84.91	9	IAmb	IAmb	02 05 48.2	
	comp=Z,27nm,1.2s						
I23K	Minto, Yukon-K	84.91	9	P	P	02 05 47.0	+1.0
	baz=342,SNR=7.7						
H29M	Whitestone	84.92	4	P	P	02 05 46.7	+0.7
	baz=352,SNR=11						
J17K	VABM Dome	84.92	13	IAmb	IAmb	02 05 48.4	
	comp=Z,22nm,1.0s						
J17K	VABM Dome	84.92	13	P	P	02 05 47.0	+0.9
	baz=334,SNR=9.4						
K13K	Kusilvak Mount	84.97	16	IAmb	IAmb	02 05 48.2	
	comp=Z,24nm,1.0s						
K13K	Kusilvak Mount	84.97	16	P	P	02 05 47.4	+1.1
	baz=329						
J19K	Poorman	85.03	12	IAmb	IAmb	02 05 48.7	
	comp=Z,23nm,1.0s						
J19K	Poorman	85.03	12	P	P	02 05 47.6	+0.9
	baz=336						
J20K	Nowinta River	85.11	11	IAmb	IAmb	02 05 49.1	
	comp=Z,20nm,0.9s						
J20K	Nowinta River	85.11	11	P	P	02 05 48.2	+1.2
	baz=338						
POKR	Poker Plat Res	85.18	8	P	P	02 05 48.7	+1.3
	baz=344,SNR=8.4						
I27K	Kandik River	85.30	5	IAmb	IAmb	02 05 51.0	
	comp=Z,10nm,0.8s						
I27K	Kandik River	85.30	5	P	P	02 05 49.0	+1.0
	baz=349,SNR=8.8						
J18K	Innoko River	85.32	12	IAmb	IAmb	02 05 50.0	
	comp=Z,14nm,1.0s						
J18K	Innoko River	85.32	12	P	P	02 05 49.0	+0.9
	baz=336						
COLA	College	85.36	8	P	P	02 05 49.0	+0.7
COLA				IAmb	IAmb	02 05 49.8	
	comp=Z,21nm,0.9s						
COLA	College	85.36	8	*ce*P	P	02 05 49.1	+0.9
COLA				pmax	pmax		
	comp=Z,19nm,0.9s						
COLA	College	85.36	8	P	P	02 05 49.2	+1.0
	baz=343						
K15K	Wolf Creek Mou	85.38	15	P	P	02 05 49.6	+1.2
	baz=332						
I26K	Coal Creek Min	85.45	6	IAmb	IAmb	02 05 51.1	
	comp=Z,16nm,1.0s						
I26K	Coal Creek Min	85.45	6	P	P	02 05 49.7	+1.0
	baz=347						
NEA2	Nenana	85.48	9	IAmb	IAmb	02 05 55.2	
	comp=Z,9.1nm,0.9s						
NEA2	Nenana	85.48	9	P	P	02 05 49.1	+0.2
	baz=342						
H31M	Peel River	85.52	2	IAmb	IAmb	02 05 50.6	
	comp=Z,19nm,0.9s						
H31M	Peel River	85.52	2	P	P	02 05 49.8	+0.7
	baz=355						
FITZ	Fitzroy Crossi	85.55	113	P	P	02 05 49.8	-0.1
I28M	Miner Creek	85.58	5	IAmb	IAmb	02 05 50.9	
	comp=Z,18nm,0.8s						
I28M	Miner Creek	85.58	5	P	P	02 05 50.0	+0.6
	baz=350						
IL31		85.58	8	IAmb	IAmb	02 05 50.2	
	comp=Z,12nm,0.8s						
ILAR	Eielson Array	85.58	8	P	P	02 05 49.3	-0.1
	comp=Z,9.2nm,0.7s,baz=326,slow=4.2,SNR=101						
ILAR				PKKPbc	PKKPbc	02 23 51.8	-1.5
	comp=Z,1.5nm,0.9s,baz=198,slow=2.1,SNR=13						
	comp=Z,9.2nm,0.7s						
ILAR	Eielson Array	85.58	8	P	P	02 05 49.2	-0.2
ILAR	Eielson Array	85.58	8	*e*P	P	02 05 49.3	-0.1
ILAR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CCB	Clear Creek Bu	85.59	8	IAmb	IAmb	02 05 50.2	
	comp=Z,9.9nm,0.9s						
BPAW	Bear Paw Mtn.	85.68	10	P	P	02 05 50.7	+0.8
	baz=340,SNR=25						
CHUM	Lake Minchumin	85.68	10	P	P	02 05 51.1	+1.2
	baz=339						
K17K	Iditarod	85.69	13	P	P	02 05 51.1	+1.1
	baz=334						
WRH	Wood River Hil	85.72	8	IAmb	IAmb	02 05 52.4	
	comp=Z,15nm,1.0s						
I29M	Ogilvie Camp,	85.77	4	IAmb	IAmb	02 05 51.6	
	comp=Z,23nm,0.8s						
I29M	Ogilvie Camp,	85.77	4	P	P	02 05 50.8	+0.4
	baz=352,SNR=16						
K20K	Telida	85.89	11	P	P	02 05 52.1	+1.1
	baz=338						
M11K	Mekoryuk	85.89	18	P	P	02 05 52.8	+1.9
	baz=328						
J25K	Salcha River,	85.91	7	P	P	02 05 52.1	+1.1
	baz=345						
HDA	Harding Lake	85.92	8	IAmb	IAmb	02 05 51.5	
	comp=Z,13nm,0.7s						
HDA	Harding Lake	85.92	8	P	P	02 05 50.8	-0.3
	baz=344,SNR=10						
L15K	Ungalak Mounta	85.94	15	P	P	02 05 52.2	+1.1
	baz=332						
L14K	Kuka Creek	85.95	16	P	P	02 05 52.3	+1.1
	baz=331						
I30M	Mount Dempster	86.02	3	P	P	02 05 52.4	+0.7
	baz=353,SNR=19						
J26L	Joseph Creek	86.20	6	P	P	02 05 53.3	+0.7
	baz=347,SNR=26						
L17K	Donlin	86.22	13	P	P	02 05 53.5	+0.9
	baz=334						
MCK	McKinley	86.32	9	P	P	02 05 53.6	+0.5
	baz=342,SNR=11						
L16K	Owhat River	86.35	14	P	P	02 05 54.3	+1.1
	baz=333,SNR=11						
TRF	Thorofare Moun	86.40	10	IAmb	IAmb	02 06 07.3	
	comp=Z,24nm,1.0s						
TRF	Thorofare Moun	86.40	10	P	P	02 05 54.3	+0.6
	baz=341,SNR=5.0						
L18K	Granite Mounta	86.46	13	P	P	02 05 54.8	+1.0
	baz=336,SNR=5.7						
M13K	Dall Lake	86.60	16	P	P	02 05 55.0	+0.5
	baz=330						
PPLA	Purkeypile	86.63	11	IAmb	IAmb	02 05 57.0	
	comp=Z,16nm,0.8s						
PPLA	Purkeypile	86.63	11	P	P	02 05 54.8	+0.1
	baz=340						
M14K	Bethel	86.64	16	P	P	02 05 55.8	+1.2
	baz=331						
K24K	Donnelly Dome	86.64	8	P	P	02 05 55.1	+0.4
	baz=345,SNR=10						
J30M	Hart River	86.67	3	IAmb	IAmb	02 05 56.8	
	comp=Z,29nm,1.2s						
J30M	Hart River	86.67	3	P	P	02 05 56.0	+1.1
	baz=353,SNR=11						
SCRK	Sand Creek	86.67	7	P	P	02 05 56.2	+1.3
	baz=347,SNR=31						
RIDG	Independent Ri	86.81	7	P	P	02 05 56.2	+0.7
	baz=346						
L19K	White Mountain	86.84	12	IAmb	IAmb	02 05 58.1	
	comp=Z,21nm,1.0s						
L19K	White Mountain	86.84	12	P	P	02 05 56.6	+1.0
	baz=337						
DAWY	Dawson	86.98	5	P	P	02 05 57.2	+0.9
	baz=351,SNR=19						
M15K	Kasigluk River	86.99	15	P	P	02 05 57.6	+1.3
	baz=332						
M17K	Holitna River	87.06	13	P	P	02 05 58.0	+1.3
	baz=335,SNR=6.3						
M16K	Timber Creek	87.08	14	IAmb	IAmb	02 06 01.1	
	comp=Z,26nm,1.2s						
M16K	Timber Creek	87.08	14	P	P	02 05 58.1	+1.3
	baz=334						
DHY	Denali Highway	87.16	8	IAmb	IAmb	02 05 58.4	
	comp=Z,16nm,0.9s						
DHY	Denali Highway	87.16	8	P	P	02 05 57.8	+0.5
	baz=344,SNR=6.0						
L22K	Petersville	87.20	10	IAmb	IAmb	02 05 58.7	
	comp=Z,10nm,0.8s						
WAT1	Susitna Watana	87.23	9	P	P	02 05 58.4	+0.8
	baz=343						
M18K	Stony River	87.30	13	P	P	02 05 59.0	+1.1
	baz=336						
K29M	Barlow Dome	87.33	4	P	P	02 05 59.1	+1.0
	baz=352						
M20K	Styx River	87.42	11	P	P	02 05 59.4	+0.9
	baz=339						
N14K	Kuskokwak Cree	87.44	16	P	P	02 05 59.4	+0.9
	baz=331						
PAX	Paxson	87.49	8	P	P	02 05 59.6	+0.8
	baz=345						
WAT6	Susitna Watana	87.58	9	P	P	02 05 60.0	+0.6
	baz=343						
N15K	Kwethluk River	87.59	15	P	P	02 06 00.7	+1.4
	baz=333						
SKT	Skwentna	87.60	11	P	P	02 06 00.3	+1.0
	baz=340,SNR=5.0						
N16K	Nishlik Lake	87.62	14	P	P	02 06 00.6	+1.2
	baz=334						
MAYO	Mayo, Yukon	87.67	3	P	P	02 06 00.6	+1.0
	baz=354						
L26K	Log Cabin Wild	87.67	7	IAmb	IAmb	02 06 01.9	
	comp=Z,9.9nm,1.0s						
L26K	Log Cabin Wild	87.67	7	P	P	02 06 00.9	+1.3
	baz=347						
BCAR	Beaver Creek A	87.78	6	P	P	02 06 01.4	+1.2
L27K	Beaver Creek,	87.78	6	P	P	02 06 01.6	+1.4
	baz=348						
N17K	Nushagak Hills	87.91	14	P	P	02 06 01.9	+1.1
	baz=335						
L29M	L29M	88.02	4	P	P	02 06 02.6	+1.2
	baz=352						
N18K	Kilae Creek	88.03	13	P	P	02 06 02.3	+0.9
	baz=336						
M22K	Willow	88.03	10	P	P	02 06 02.3	+1.0
	baz=341						
FCC	Fort Churchill	88.07	343	IAmb	IAmb	02 06 03.5	
	comp=Z,12nm,1.1s						
HARP	HAARP	88.08	8	P	P	02 06 02.5	+0.9
	baz=346						
WRGLY	Wrigley	88.12	358	P	P	02 06 03.2	+1.5
	baz=4.5						
O14K	Tigyukauivet M	88.13	16	P	P	02 06 03.0	+1.2
	baz=332						
N19K	Bonanza Creek	88.18	12	P	P	02 06 03.3	+1.1
	baz=338						
SUA	Susitna One	88.21	10	P	P	02 06 03.2	+0.9
	baz=341						
M24K	Tolsona, Glenn	88.24	8	P	P	02 06 03.7	+1.2
	baz=345						
SML	Sawmill	88.25	9	P	P	02 06 03.4	+0.9
	baz=343						
YKAW1	Yellowknife Wh	88.25	353	IAmb	IAmb	02 06 04.3	
	comp=Z,20nm,1.1s						
YKA	Yellowknife Ar	88.25	354	P	P	02 06 03.0	+0.6
	comp=Z,12nm,0.9s,baz=0.6,slow=4.9,SNR=159						
YKA				PKKPbc	PKKPbc	02 23 45.4	-1.4
	comp=Z,0.3nm,0.8s,baz=202,slow=3.5,SNR=5.6						
	comp=Z,12nm,0.9s						
YKA	Yellowknife Ar	88.25	354	P	P	02 06 03.0	+0.6
M26K	Nabesna, AK	88.31	7	P	P	02 06 03.8	+1.0

	baz=348						
PMR	**Palmer**	**88.34**	**10**	P	**P**	**02 06 03.8**	**+1.0**
	baz=342						
M23K	**Glacier View**	**88.34**	**9**	P	**P**	**02 06 03.9**	**+1.1**
	baz=343						
SCM	**Sheep Creek Mo**	**88.36**	**9**	P	**P**	**02 06 03.9**	**+0.8**
	baz=344						
M27K	**Edge Creek, AK**	**88.47**	**6**	IAmb	IAmb	02 06 05.9	
	comp=Z,13nm,1.0s						
M27K	**Edge Creek, AK**	**88.47**	**6**	P	**P**	**02 06 04.6**	**+1.0**
	baz=348						
BVCY	**Beaver Creek**	**88.50**	**6**	P	**P**	**02 06 04.6**	**+1.0**
	baz=349						
O16K	**Kokwok River B**	**88.56**	**14**	P	**P**	**02 06 04.6**	**+0.8**
	baz=334						
KNK	**Knik Glacier**	**88.61**	**9**	P	**P**	**02 06 05.0**	**+0.9**
	baz=343						
O17K	**Koliganek Bris**	**88.61**	**14**	P	**P**	**02 06 05.1**	**+1.0**
	baz=335						
M30M	**Minto, Yukon**	**88.63**	**4**	P	**P**	**02 06 05.2**	**+0.9**
	baz=353						
M29M	**Somme Creek**	**88.66**	**5**	IAmb	IAmb	02 06 06.2	
	comp=Z,11nm,1.0s						
M29M	**Somme Creek**	**88.66**	**5**	P	**P**	**02 06 05.2**	**+0.8**
	baz=351						
RC01	**Rabbit Creek A**	**88.72**	**10**	P	**P**	**02 06 05.4**	**+0.8**
	baz=342						
O19K	**Port Alsworth**	**88.78**	**13**	P	**P**	**02 06 05.8**	**+0.9**
	baz=338						
KLU	**Klutina**	**88.87**	**8**	P	**P**	**02 06 06.2**	**+0.8**
	baz=345						
O18K	**Koktuh Hills**	**88.92**	**13**	P	**P**	**02 06 06.2**	**+0.6**
	baz=337						
P16K	**Nushagak River**	**89.09**	**15**	P	**P**	**02 06 07.2**	**+0.8**
	baz=335						
M31M	**Drury Creek, Y**	**89.12**	**3**	IAmb	IAmb	02 06 08.3	
	comp=Z,11nm,1.1s						
M31M	**Drury Creek, Y**	**89.12**	**3**	P	**P**	**02 06 07.5**	**+0.9**
	baz=355						
YUK3	**Moose Creek**	**89.17**	**6**	P	**P**	**02 06 08.0**	**+1.0**
	baz=350						
O20K	**Slope Mountain**	**89.20**	**12**	P	**P**	**02 06 08.1**	**+1.1**
	baz=339						
P17K	**Kvichak River**	**89.28**	**14**	P	**P**	**02 06 08.6**	**+1.3**
	baz=336						
GLI	**Glacier Island**	**89.31**	**9**	P	**P**	**02 06 07.6**	**+0.2**
	baz=344						
Q16K	**King Salmon**	**89.70**	**14**	P	**P**	**02 06 10.2**	**+1.0**
	baz=336						
SEW	**Seward**	**89.71**	**10**	P	**P**	**02 06 10.1**	**+0.9**
	baz=342						
N30M	**Aishikik Lake**	**89.73**	**4**	P	**P**	**02 06 10.5**	**+1.1**
	baz=353						
YUK4	**Talbot Arm**	**89.74**	**5**	P	**P**	**02 06 10.4**	**+0.7**
	baz=351						
N31M	**Braeburn, Yuko**	**89.78**	**3**	P	**P**	**02 06 10.5**	**+0.9**
	baz=354						
CTG	**Chitna Glacier**	**89.89**	**6**	P	**P**	**02 06 11.0**	**+0.8**
	baz=349						
YUK6	**Outpost Mounta**	**90.16**	**5**	P	**P**	**02 06 12.4**	**+0.7**
	baz=352						
N32M	**Quiet Lake**	**90.23**	**2**	P	**P**	**02 06 12.6**	**+0.9**
	baz=356						
HYT	**Haines Junctio**	**90.33**	**4**	IAmb	IAmb	02 06 14.6	
	comp=Z,21nm,0.9s						
HYT	**Haines Junctio**	**90.33**	**4**	P	**P**	**02 06 13.3**	**+1.0**
	baz=352						
O30N	**Mendenhall**	**90.47**	**4**	P	**P**	**02 06 13.3**	**+0.4**
	baz=354						
R16K	**Pilot Point**	**90.51**	**15**	P	**P**	**02 06 13.4**	**+0.4**
	baz=335						
O29M	**Mount Kennedy**	**90.78**	**5**	P	**P**	**02 06 15.1**	**+0.7**
	baz=351						
P33M	**Teslin, Yukon**	**91.17**	**2**	P	**P**	**02 06 16.6**	**+0.4**
	baz=356						
KDAK	**Kodiak Island**	**91.36**	**13**	P	**P**	**02 06 17.5**	**+0.5**
	comp=Z,17nm,0.8s,baz=3.2,slow=1.3,SNR=7.4						
	comp=Z,17nm,0.8s						
KDAK	**Kodiak Island**	**91.36**	**13**	P	**P**	**02 06 17.8**	**+0.8**
	baz=339						
P29M	**Windy Craggy**	**91.50**	**5**	P	**P**	**02 06 18.1**	**+0.4**
	baz=352						
PLBC	**Pleasant Camp**	**91.77**	**4**	P	**P**	**02 06 19.0**	**+0.1**
	baz=353						
TOAD	**Toad River Com**	**92.56**	**358**	P	**P**	**02 06 23.2**	**+0.6**
	baz=3.0						
WRA	**Warramunga Arr**	**93.56**	**111**	P	**P**	**02 06 26.9**	**-1.0**
	comp=Z,2.9nm,0.8s,baz=315,slow=4.0,SNR=12						
WRA				PKKPbc	**PKKPbc**	**02 23 33.0**	**0.0**
	comp=Z,0.5nm,0.6s,baz=112,slow=2.6,SNR=8.8						
	comp=Z,2.9nm,0.8s						
WRA	**Warramunga Arr**	**93.56**	**111**	IAmb	IAmb	02 06 27.2	
	comp=Z,0.8nm,1.4s						
WRA	**Warramunga Arr**	**93.56**	**111**	*e*P	**P**	**02 06 28.2**	**+0.4**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FFC	**Flin Flon**	**93.63**	**345**	P	**P**	**02 06 27.9**	**+0.4**
FFC				IAmb	IAmb	02 06 28.8	
	comp=Z,13nm,1.1s						
FFC	**Flin Flon**	**93.63**	**345**	P	**P**	**02 06 27.9**	**+0.4**
FFC				pmax	pmax		
	comp=Z,13nm,1.2s						
SADO	**Sadowa**	**93.93**	**327**	LR	LR	02 50 12.7	
	comp=Z,152nm,18.8s,baz=333,slow=36						
WRAK	**Wrangell Islan**	**94.99**	**2**	P	**P**	**02 06 33.7**	**0.0**
	baz=357						
ASAR	**Alice Springs**	**95.02**	**114**	P	**P**	**02 06 33.5**	**-1.0**
	comp=Z,5.6nm,0.7s,baz=304,slow=4.6,SNR=80						
ASAR				PKiKP	**PKiKP**	**02 11 15.8**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=283,slow=1.1,SNR=4.1						
ASAR				PKKPbc	**PKKPbc**	**02 23 29.4**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=109,slow=3.7,SNR=7.1						
ASAR				LR	LR	02 53 09.2	
	comp=Z,19nm,19.3s,baz=292,slow=38						
	comp=Z,5.6nm,0.7s						
ASAR	**Alice Springs**	**95.02**	**114**		**P**	**02 06 32.8**	**-1.7**
U33K	**Whale Pass**	**95.27**	**3**	P	**P**	**02 06 34.7**	**-0.2**
	baz=356						
CRAG	**Craig**	**95.91**	**3**	P	**P**	**02 06 37.4**	**-0.5**
	baz=356						
ULM	**Lac du Bonnet**	**96.03**	**340**	P	**P**	**02 06 37.8**	**-0.8**
	comp=Z,1.8nm,0.4s,baz=68,slow=5.4,SNR=2.3						
ULM				LR	LR	02 50 31.2	
	comp=Z,135nm,18.2s,baz=2.5,slow=36						
	comp=Z,1.8nm,0.4s						
MDP	**Montagnes des**	**99.72**	**281**	LR	LR	02 51 43.8	
	comp=Z,80nm,21.0s,baz=40,slow=35						
PDAR	**Pinedale Array**	**106.58**	**345**	PKKP		02 23 08.8	
	comp=Z,0.8nm,0.8s,baz=217,slow=4.4,SNR=6.5						
NVAR	**Mina Array Bea**	**112.35**	**351**	PKiKP	**PKiKP**	**02 11 47.8**	**0.0**
	comp=Z,0.9nm,0.8s,baz=333,slow=2.0,SNR=7.5						
BELA	**Belgrano 2**	**117.17**	**194**		**PKPdf**	**02 11 54.6**	**-0.8**
TXAR	**Lajitas Array**	**117.39**	**335**	PKP	**PKPdf**	**02 11 57.0**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=209,slow=1.4,SNR=6.4						
CPUP	**Villa Florida**	**117.65**	**254**	PKP	**PKPdf**	**02 11 56.4**	**-1.4**
	comp=Z,1.0nm,0.6s,baz=54,slow=5.1,SNR=5.5						
QSPA	**South Pole Qui**	**118.72**	**180**		**PKPdf**	**02 11 58.4**	**-0.3**
VNDA	**Vanda**	**122.39**	**166**	PKP	**PKPdf**	**02 12 04.8**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=251,slow=3.1,SNR=5.2						
LPAZ	**La Paz**	**123.26**	**269**	PKP	**PKPdf**	**02 12 09.4**	**-0.3**
	comp=Z,1.5nm,0.6s,baz=54,slow=4.8,SNR=4.4						
LPAZ	**La Paz**	**123.26**	**269**	*e*PKIKP	**PKiKP**	**02 12 10.0**	**+0.1**
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PLCA	**Paso Flores**	**131.64**	**240**	PKP	**PKiKP**	**02 12 25.0**	**-0.3**
	comp=Z,5.3nm,1.1s,baz=60,slow=2.6,SNR=4.3						
PLCA	**Paso Flores**	**131.64**	**240**	PKIKP	**PKiKP**	**02 12 25.0**	**-0.3**

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*IDC **27** 02:21:46.8±0.8, 35.°75N×117.°49W, h0^{km}, mb3.3/1, mbtmp3.2/5, ML3.5/4, Error ellipse: s-maj=18.4km s-min=5.7km az=75.0*

*NEIC **27** 02:21:47.2±1.8, 35.°774N±0.°010×117.°54W±0.°02, h5^{km}±1^{km}, Error ellipse: s-maj=2.8km s-min=2.2km az=281.0*

*PAS **27** 02:21:47.9±1.2, 35.°77N±0.°01×117.°60W±0.°02, h8^{km}±5^{km}, ML3.9/137, ML3.7/168(NEIC), Error ellipse: s-maj=2.2km s-min=1.6km az=103.0*

ISC 27 02:21:47.8±0.8**, 35.°76N**±0.°02×**117.°55W**±0.°02**, h10**^{km}±6^{km}**, n84, σ0^{s}.90**/71**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLC	**China Lake**	**0.07**	**327**		**Pg**	**02 21 49.5**	**-0.6**
CLC				IAML		02 21 51.1	
	comp=N,85µm,0.3s						
CLC				IAML		02 21 51.1	
	comp=E,36µm,0.2s						
GPO	**China Lake**	**0.14**	**219**		**Pg**	**02 21 50.9**	**-0.2**
GPO					**Sg**	**02 21 53.5**	**+0.1**
WSHM	**Spangler Hills**	**0.17**	**163**		**Pg**	**02 21 51.8**	**+0.3**
SRTC	**Snort**	**0.17**	**247**		**Pg**	**02 21 51.4**	**-0.2**
SRTC					**Sg**	**02 21 54.7**	**+0.5**
TOW	**Tower One**	**0.18**	**286**		**Pg**	**02 21 51.4**	**-0.3**
TOW					**Sg**	**02 21 54.5**	**+0.1**
RCWM	**Renegade Canyo**	**0.20**	**338**		**Pg**	**02 21 51.6**	**-0.5**
RCWM					**Sg**	**02 21 54.4**	**-0.7**
CCCA	**Chr Cany lake**	**0.28**	**147**		**Pb**	**02 21 54.4**	**-0.7**
WVPM	**Volcano Peak E**	**0.28**	**311**		**Pg**	**02 21 53.0**	**-0.7**
WVPM					**Sg**	**02 21 56.9**	**-0.7**
WNMM	**Nine Mile Cany**	**0.30**	**286**		**Pg**	**02 21 53.1**	**-0.7**
WNMM					**Sg**	**02 21 57.1**	**-0.7**
LRMC	**Laurel Mtn Rad**	**0.30**	**201**		**Pg**	**02 21 53.8**	**-0.2**
WCSM	**Coso Springs S**	**0.32**	**327**		**Pg**	**02 21 53.5**	**-0.8**
WCSM					**Sg**	**02 21 57.5**	**-1.0**
WRVM	**Rose V. Centra**	**0.37**	**312**		**Pg**	**02 21 54.4**	**-0.8**
WRVM					**Sg**	**02 21 59.2**	**-0.9**
MFS	**McCloud Flat S**	**0.43**	**326**		**Pg**	**02 21 55.6**	**-0.7**
MFS					**Sg**	**02 22 01.3**	**-0.9**
WBSM	**Bird Springs**	**0.53**	**245**		**Pg**	**02 21 57.3**	**-0.8**
WBSM					**Sg**	**02 22 04.2**	**-0.9**
DTP	**Desert Tortois**	**0.55**	**206**		**Pg**	**02 21 58.0**	**-0.5**
DTP					**Sg**	**02 22 05.3**	**-0.4**
WORM	**Onyx Ranch**	**0.56**	**264**		**Pg**	**02 21 57.8**	**-1.0**
WORM					**Sg**	**02 22 04.9**	**-1.4**
WHFM	**Hanning Flat**	**0.65**	**265**		**Pg**	**02 21 59.5**	**-1.0**
WHFM					**Sg**	**02 22 07.6**	**-1.4**
CCAC	**Calif City Air**	**0.71**	**212**		**Pg**	**02 22 01.1**	**-0.5**
CCAC					**Sg**	**02 22 10.9**	**-0.1**
WLHM	**Little Horse**	**0.73**	**303**		**Pg**	**02 22 00.7**	**-1.3**
WLHM					**Sg**	**02 22 10.0**	**-1.6**
ISA	**Isabella, Lake**	**0.76**	**263**		**Sg**	**02 22 10.7**	**-1.6**
ISA	**Isabella, Lake**	**0.76**	**263**	IAML		02 22 11.6	
	comp=N,2µm,0.7s						
ISA				IAML		02 22 11.7	
	comp=E,2µm,0.4s						
GSC	**Goldstone, Bar**	**0.76**	**127**		**Pb**	**02 22 02.7**	**-0.5**
CWC	**Cottonwood Cre**	**0.80**	**328**		**Pg**	**02 22 02.4**	**-0.9**
CWC					**Sg**	**02 22 12.9**	**-0.9**
CGO	**Cerro Gordo**	**0.81**	**346**		**Pg**	**02 22 02.5**	**-1.1**
GWY	**Greenwater Val**	**0.83**	**59**		**Sb**	**02 22 15.8**	**-0.1**
GWY	**Greenwater Val**	**0.83**	**59**		**Pb**	**02 22 03.9**	**-0.7**
GWY				IAML		02 22 18.8	
	comp=N,4µm,0.5s						
GWY				IAML		02 22 19.2	
	comp=E,4µm,0.5s						
HYS	**Haystack Butte**	**0.90**	**181**		**Pg**	**02 22 04.5**	**-0.6**
HYS					**Sg**	**02 22 16.5**	**-0.2**
FURC	**Furnace Creek,**	**0.90**	**38**		**Sb**	**02 22 17.0**	**-0.6**
FURC	**Furnace Creek,**	**0.90**	**38**		**Pb**	**02 22 05.2**	**-0.3**
FURC				IAML		02 22 28.4	
	comp=N,4µm,0.5s						
TPO	**Tropico Hills**	**1.04**	**212**		**Pg**	**02 22 06.9**	**-0.9**
TPO				IAML		02 22 27.1	
	comp=N,1µm,0.5s						
AMDNV	**Amargosa**	**1.24**	**56**		**Pg**	**02 22 10.3**	**-1.4**
GRAC	**Grapevine Rang**	**1.24**	**7**		**Pn**	**02 22 11.0**	**-0.3**
VES	**Vestal, Richgr**	**1.25**	**274**		**Pg**	**02 22 10.4**	**-1.4**
VES				IAML		02 22 32.6	
	comp=E,2µm,0.7s						
DSCC	**Desert Studies**	**1.33**	**117**		**Pn**	**02 22 11.4**	**-1.1**
TUQ	**Turquoise Moun**	**1.37**	**103**		**Pn**	**02 22 12.6**	**-0.5**
TIN	**Tinemaha, Big**	**1.40**	**337**	IAML		02 22 35.4	
	comp=E,1µm,0.5s						
TIN				IAML		02 22 40.1	
	comp=N,1µm,0.7s						
OSI	**Osito Audit: C**	**1.49**	**220**	IAML		02 22 40.3	
	comp=E,857nm,0.7s						
OSI				IAML		02 22 40.8	
	comp=N,720nm,0.7s						
MTPC	**Mountain Pass**	**1.65**	**99**	IAML		02 22 41.6	
	comp=E,515nm,0.4s						
MTPC				IAML		02 22 44.0	
	comp=N,548nm,0.3s						
PASC	**Pasadena Art C**	**1.67**	**198**		**Pn**	**02 22 16.7**	**-0.5**
PASC				IAML		02 22 44.1	
	comp=E,923nm,0.9s						
PASC				IAML		02 22 45.4	
	comp=N,787nm,0.5s						
EW2	**E Wide Canyon**	**2.04**	**152**		**Pn**	**02 22 22.1**	**-0.3**
SHPR	**Sheep Range**	**2.08**	**68**		**Pn**	**02 22 22.8**	**-0.2**
MLAC	**Mammoth, Mammo**	**2.13**	**331**		**Pb**	**02 22 26.8**	**+0.1**
MCSM	**Casa Diablo Ho**	**2.18**	**331**		**Pb**	**02 22 27.6**	**0.0**
MDPB	**Devils Postpil**	**2.23**	**327**		**Pn**	**02 22 25.7**	**+0.5**
MDPB				IAML		02 22 58.6	
	comp=E,351nm,0.3s						
MDPB				IAML		02 22 59.2	
	comp=N,390nm,0.3s						
TSCN	**Private Proper**	**2.29**	**265**		**Pb**	**02 22 27.8**	**-1.4**
PFO	**Pinyon Flats O**	**2.33**	**157**	Pn	**Pn**	**02 22 25.7**	**-0.6**
	comp=N,3.7nm,0.3s,baz=333,slow=12,SNR=47						
PFO				Pg	**Pb**	**02 22 27.8**	**-2.1**
	comp=N,7.9nm,0.3s,baz=342,slow=14,SNR=20						
PFO				Lg	Lg	02 23 00.9	
	comp=N,51nm,0.3s,baz=41,slow=19,SNR=13						
	comp=N,8.0nm,0.3s						
S11A	**Rachel**	**2.38**	**37**		**Pn**	**02 22 27.2**	**+0.2**
S11A				IAML		02 23 16.6	
	comp=N,700nm,0.7s						
PKD	**Bear Valley Ra**	**2.43**	**275**	IAML		02 23 18.1	
	comp=E,298nm,1.1s						
PKD				IAML		02 23 18.7	
	comp=N,245nm,0.8s						
IRM	**Iron Mountain**	**2.54**	**128**	IAML		02 23 10.1	
	comp=N,308nm,0.5s						
IRM				IAML		02 23 10.3	
	comp=E,383nm,0.4s						
NEE2	**Needles Airpor**	**2.60**	**112**		**Pn**	**02 22 29.1**	**-0.8**
NEE2				IAML		02 23 18.2	
	comp=N,547nm,0.8s						
NEE2				IAML		02 23 22.4	
	comp=E,502nm,0.7s						
BORC	**Borrego Spring**	**2.66**	**159**	IAML		02 23 15.1	
	comp=E,263nm,0.7s						
BORC				IAML		02 23 15.5	
	comp=N,232nm,0.8s						
RAMR	**Ramage Ranch**	**2.70**	**268**		**Pn**	**02 22 33.1**	**+1.7**
BC3	**Big Chuckawall**	**2.72**	**140**	IAML		02 23 18.1	
	comp=N,372nm,0.6s						
BC3				IAML		02 23 24.2	
	comp=E,233nm,0.6s						
NVAR	**Mina Array Bea**	**2.73**	**348**	Pn	**Pn**	**02 22 31.9**	**-0.1**
	comp=E,12nm,0.3s,baz=182,slow=15,SNR=152						
NVAR				Pg	**Pb**	**02 22 37.8**	**+0.9**
	comp=E,28nm,0.3s,baz=171,slow=13,SNR=36						
NVAR				Lg	Lg	02 23 13.1	
	comp=E,16nm,0.3s,baz=168,slow=30,SNR=5.6						
	comp=E,8.2nm,0.3s						
NVAR	**Mina Array Bea**	**2.73**	**348**		**Pn**	**02 22 32.1**	**+0.1**
CPE	**Camp Elliot**	**2.89**	**172**	IAML		02 23 22.0	
	comp=N,180nm,0.4s						
CPE				IAML		02 23 26.6	
	comp=E,156nm,0.6s						
BBGB	**Big Mountain B**	**2.94**	**287**		**Pn**	**02 22 34.5**	**-0.2**
RYN	**Ryan**	**2.96**	**345**		**Pn**	**02 22 35.4**	**+0.2**
HULI	**Fort Hunter Li**	**3.00**	**276**	IAML		02 23 30.5	
	comp=N,216nm,0.9s						
W13A	**Hualapai Mount**	**3.07**	**101**	IAML		02 23 29.2	
	comp=N,147nm,1.5s						
Q09A	**Carvers**	**3.08**	**5**	IAML		02 23 30.1	
	comp=N,355nm,0.7s						
BAR	**Barrett**	**3.16**	**166**	IAML		02 23 29.8	
	comp=E,121nm,0.6s						
BLYC	**Blythe**	**3.20**	**128**	IAML		02 23 31.8	
	comp=N,234nm,0.6s						
BLYC				IAML		02 23 33.7	
	comp=E,239nm,0.8s						
CMB	**Columbia Colle**	**3.21**	**316**	IAML		02 23 37.3	
	comp=N,160nm,0.8s						
CMB				IAML		02 23 39.6	
	comp=E,120nm,0.7s						
CBX	**Cerro Bola**	**3.52**	**168**	IAML		02 23 49.9	
	comp=N,222nm,1.2s						
GLA	**Glamis**	**3.52**	**139**	IAML		02 23 46.9	
	comp=N,234nm,0.7s						
MHC	**Mount Hamilton**	**3.65**	**297**	IAML		02 23 47.1	
	comp=E,159nm,0.8s						
MHC				IAML		02 23 55.9	
	comp=N,180nm,0.8s						
PNTR	**Pine Nut**	**3.70**	**334**	IAML		02 24 11.0	
	comp=N,109nm,0.9s						
PNTR				IAML		02 24 14.1	
	comp=E,76nm,1.3s						
PSUT	**Pine Spring**	**4.05**	**46**	IAML		02 24 03.5	
	comp=E,86nm,0.8s						
PSUT				IAML		02 24 08.2	
	comp=N,78nm,1.3s						
SPR3	**Spring Creek 3**	**4.13**	**37**	IAML		02 23 57.7	
	comp=E,71nm,0.8s						
SPR3				IAML		02 24 03.2	
	comp=N,60nm,1.1s						
Y14A	**Wickenburg**	**4.16**	**115**	IAML		02 24 05.7	
	comp=N,137nm,0.6s						
Y14A				IAML		02 24 08.2	
	comp=E,94nm,0.5s						
U15A	**North Rim**	**4.31**	**80**	IAML		02 24 13.7	
	comp=E,47nm,1.2s						
U15A				IAML		02 24 21.5	
	comp=N,45nm,1.0s						
PKCU	**Pink Cliffs**	**4.54**	**67**	IAML		02 24 13.3	
	comp=E,61nm,0.8s						
PKCU				IAML		02 24 27.2	
	comp=N,60nm,2.4s						
VTX	**Valle De La Tr**	**4.60**	**161**	IAML		02 24 16.3	
	comp=E,42nm,1.0s						
VTX				IAML		02 24 19.1	
	comp=N,46nm,0.9s						
ORV	**Oroville**	**4.91**	**322**	IAML		02 24 31.0	
	comp=E,42nm,2.0s						
TCRU	**Three Creeks R**	**4.97**	**54**	IAML		02 24 32.7	
	comp=E,45nm,1.1s						
TCRU				IAML		02 24 35.9	
	comp=N,39nm,1.5s						
WUAZ	**Wupatki**	**5.04**	**91**	IAML		02 24 32.0	
	comp=N,54nm,1.0s						
WUAZ				IAML		02 24 44.5	
	comp=N,50nm,1.4s						
X16A	**Lo Mia Camp, P**	**5.19**	**103**	IAML		02 24 42.7	
	comp=N,23nm,1.2s						
ELK	**Elko**	**5.30**	**19**	Pn	**Pn**	**02 23 07.8**	**+0.6**
	comp=N,0.8nm,0.3s,baz=208,slow=15,SNR=19						
ELK				Lg	Lg	02 24 33.0	
	comp=N,8.0nm,0.3s,baz=302,slow=22,SNR=18						
	comp=N,1.4nm,0.3s						
ELK	**Elko**	**5.30**	**19**	IAML		02 24 37.8	
	comp=N,45nm,0.7s						
ELK				IAML		02 24 37.9	
	comp=N,29nm,0.7s						
ANMO	**Albuquerque**	**9.10**	**92**	Pg	Pn	02 24 33.6	+34
	comp=N,0.2nm,0.3s,baz=279,slow=14,SNR=7.8						
ANMO				Lg	Lg	02 26 30.3	
	comp=N,0.1nm,0.3s,baz=218,slow=23,SNR=3.3						
PDAR	**Pinedale Array**	**9.34**	**39**	Pg	Pn	02 24 30.3	+28
	baz=242,slow=16,SNR=3.5						
PDAR				Lg	Lg	02 26 39.3	
	baz=220,slow=30,SNR=2.1						
TXAR	**Lajitas Array**	**13.35**	**115**	Pn	**Pn**	**02 24 59.4**	**+1.9**
	comp=N,0.1nm,0.3s,baz=300,slow=14,SNR=7.8						
	comp=N,0.2nm,0.4s						
ILAR	**Eielson Array**	**33.95**	**338**	P	**P**	**02 28 33.0**	**+1.9**
	comp=N,0.4nm,0.7s,baz=117,slow=6.2,SNR=4.3						
	comp=N,0.4nm,0.7s						

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*SOME **27** 02:24:20.7, 39.°40N×73.°28E, h15^{km}*

*KRNET **27** 02:24:24.1±0.1, 39.°40N×73.°63E, h9^{km}, mb3.0*

*NNC **27** 02:24:28.1±5.0, 39.°66N×73.°68E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=35.7km s-min=21.1km az=174.0*

ISC 27 02:24:25.5±1.5**, 39.°43N**±0.°07×**73.°60E**±0.°06**, h10**^{km}**, n21, σ2^{s}.36**/37**, 11C-13D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.59**	**353**	⇓*i*P	**Pg**	**02 24 36.0**	**-1.0**
SFK				⇓*i*S	**Sg**	**02 24 44.8**	**-0.1**
OHH	**Osh**	**1.26**	**330**	⇑*e*P	**Pn**	**02 24 48.9**	**-0.4**
OHH				⇑*e*S	**Sb**	**02 25 06.8**	**+1.0**
DRK	**Karamyk**	**1.40**	**273**	⇓*i*P	**Pn**	**02 24 50.8**	**-0.5**
DRK				⇓*i*S	**Sn**	**02 25 10.2**	**+0.2**
SALK	**Salom-Alik**	**1.46**	**7**	⇓*e*P	**Pn**	**02 24 51.9**	**-0.3**
SALK				⇓*e*S	**Sg**	**02 25 12.9**	**+0.2**
ARSB	**Arslanbob**	**1.95**	**346**	⇑*e*P	**Pb**	**02 25 00.7**	**-0.6**
ARSB				⇑*e*S	**Sb**	**02 25 27.3**	**+1.6**
BTK	**Batken**	**2.24**	**287**	⇑*e*P	**Pn**	**02 25 04.5**	**+1.8**
BTK				⇑*e*S	**Sb**	**02 25 34.2**	**+0.4**
ARLS	**Aral**	**2.49**	**13**	⇑*i*P	**Pb**	**02 25 08.1**	**-2.4**
ARLS				⇑*i*S	**Sb**	**02 25 40.2**	**-1.1**
GAR	**Garm**	**2.59**	**262**	⇑*i*P	**Pn**	**02 25 09.4**	**+1.8**
GAR				⇑*i*S	**Sb**	**02 25 42.4**	**-1.6**
ARK	**Arkit**	**2.68**	**333**	⇓*i*P	**Pn**	**02 25 10.8**	**+2.0**
ARK				⇓*i*S	**Sn**	**02 25 44.8**	**+3.5**
MNAS	**Manas**	**3.17**	**345**	⇓*i*P	**Pn**	**02 25 17.8**	**+2.2**
MNAS				⇓*i*S	**Sn**	**02 25 56.7**	**+3.2**
AAK	**Ala-Archa**	**3.28**	**12**	⇓Pg	**Pb**	**02 25 21.8**	**-2.1**
	3.2nm,0.7s						
AAK				⇑Lg	Lg	02 26 06.0	
	6.0nm,0.8s						
MRKS	**Merke**	**3.33**	**355**	Pg	**Pb**	**02 25 21.3**	**-3.4**
	4.4nm,0.4s						
MRKS				Lg	Lg	02 26 04.9	
	21nm,0.4s						
MRKS	**Merke**	**3.33**	**355**	*e*P	**Pb**	**02 25 21.3**	**-3.4**
	4.4nm,0.4s						
MRKS				*e*S	**Sb**	**02 26 04.9**	**-0.3**
	21nm,0.4s						
KST	**Kastek**	**4.03**	**25**	Pg	**Pb**	**02 25 37.5**	**+0.9**
	2.0nm,0.4s						
KST				Lg	Lg	02 26 33.0	
	10nm,0.8s						
KST	**Kastek**	**4.03**	**25**	*e*P	**Pb**	**02 25 37.5**	**+0.9**
	2.0nm,0.4s						
KST				*e*S	**Sg**	**02 26 33.0**	**-1.8**
	10nm,0.8s						
MTBS	**Maitube**	**4.27**	**29**	Pg	**Pb**	**02 25 41.6**	**+0.9**
	3.3nm,0.3s						
MTBS				Lg	Lg	02 26 40.1	
	4.4nm,0.4s						
MTBS	**Maitube**	**4.27**	**29**	*e*P	**Pb**	**02 25 41.6**	**+0.9**
	3.3nm,0.3s						
MTBS				*e*S	**Sg**	**02 26 40.1**	**-2.5**
	4.4nm,0.4s						
KK31	**Karatay Array**	**4.35**	**329**	Pn	**Pn**	**02 25 35.1**	**+3.4**
	0.9nm,0.3s,baz=136,slow=11,SNR=17						
KK31				⇓Sn	**Sn**	**02 26 24.4**	**+2.0**
	3.4nm,0.5s						
KK31				⇓Lg	Lg	02 26 40.0	
	8.3nm,0.7s,baz=130,slow=27,SNR=4.1						
BRLS	**Borolday**	**4.58**	**323**	Pg	**Pn**	**02 25 39.1**	**+4.2**
	1.0nm,0.2s						
BRLS				Lg	Lg	02 26 35.9	
	3.6nm,0.6s						
BRLS	**Borolday**	**4.58**	**323**	*e*P	**Pn**	**02 25 39.1**	**+4.2**
	1.0nm,0.2s						
BRLS				*e*S	**Sb**	**02 26 35.9**	**-5.4**
	3.6nm,0.6s						
KOTS	**Kotyrbulak**	**4.63**	**34**	*e*P	**Pb**	**02 25 47.8**	**+0.9**
	2.4nm,0.2s						
KOTS				*e*S	**Sg**	**02 26 50.2**	**-4.0**
	10nm,0.5s						

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*IDC **27** 02:26:22.1±0.9, 26.°29N×128.°39E, h0^{km}, mb4.0/18, mbtmp4.0/19, ML3.1/1, MS3.7/7, Error ellipse: s-maj=29.4km s-min=12.8km az=82.0*

*NEIC **27** 02:26:23.4±2.0, 26.°13N±0.°04×128.°42E±0.°08, h10^{km}±1^{km}, mb4.5/18, Error ellipse: s-maj=12.3km s-min=6.3km az=257.0*

*JMA **27** 02:26:25.1±0.5, 26°N±1°×12°8E±°, h19^{km}, MV3.7/16, NEAR OKINAWAJIMA ISLAND*

JMA Felt I J1 at NEAR OKINAWAJIMA ISLAND .

*NIED **27** 02:26:25.1, 26.°22N×128.°43E, h19^{km}, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}0.88; $M_{\theta\theta}$-0.58; $M_{\phi\phi}$-0.30; $M_{r\theta}$0.80; $M_{\theta\phi}$-0.38; $M_{\phi r}$0.93; Fault plane solution: $M_0$1.50000×10^{15} NP1: ϕ_s245.00000°, δ18.00000°, λ110.00000°. NP2: ϕ_s44.00000°, δ73.00000°, λ84.00000°.*

ISC 27 02:26:23.3±1.6**, 26.°15N**±0.°05×**128.°48E**±0.°04**, h13**^{km}±9^{km}**, n65, σ1^{s}.02**/69**, mb4.2**/28**, MS3.7**/7**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNTH	**Nagotoyohara**	**0.56**	**312**	P	**Pg**	**02 26 34.1**	**-0.2**
JNTH				*e*S	**Sg**	**02 26 41.2**	**-0.4**
JJT3	**Tamagusuku3**	**0.63**	**270**	P	**Pb**	**02 26 36.6**	**+0.5**
JJT3				*e*S	**Sb**	**02 26 45.7**	**+0.8**
JOW	**Kunigami**	**0.71**	**345**	Pn	**Pg**	**02 26 37.2**	**0.0**

	1µm,0.3s,baz=142,slow=21,SNR=839						
JOW				Sn	**Sg**	**02 26 46.2**	**-0.3**
	1µm,0.3s,baz=121,slow=25,SNR=14						
JOW	**Kunigami**	**0.71**	**345**		**Pg**	**02 26 37.4**	**+0.3**
JOW					**Sg**	**02 26 46.4**	**-0.1**
JOW	**Kunigami**	**0.71**	**345**	*e*P	**Pg**	**02 26 37.4**	**+0.3**
JYRO	**Yoronjima**	**0.88**	**358**	P	**Pb**	**02 26 40.5**	**+0.1**
JYRO				*e*S	**Sb**	**02 26 51.6**	**-0.4**
JIH	**Iheya**	**1.00**	**333**	*e*P	**Pb**	**02 26 42.1**	**-0.4**
JIH				*e*S	**Sg**	**02 26 56.0**	**+0.3**
JAGN	**Aguni-jima**	**1.20**	**292**	*e*P	**Pn**	**02 26 44.9**	**-0.9**
JOKE	**Okinoerabujima**	**1.21**	**4**	*e*P	**Pn**	**02 26 46.0**	**0.0**
JKE	**Kume jima 2**	**1.53**	**277**	*e*P	**Pn**	**02 26 49.6**	**-0.9**
JTK	**Tokunoshima**	**1.69**	**14**	*e*P	**Pn**	**02 26 51.8**	**-0.8**
JAMN	**Amaminishikomi**	**2.18**	**16**	*e*P	**Pn**	**02 27 00.5**	**+1.2**
JAM	**Amami Oshima**	**2.47**	**24**	*e*P	**Pn**	**02 27 03.8**	**+0.5**
JMZ	**Minamidaito 2**	**2.49**	**97**		**Pn**	**02 27 03.7**	**+0.1**
JMZ	**Minamidaito 2**	**2.49**	**97**	*e*P	**Pn**	**02 27 03.6**	**+0.1**
JMZ				*e*S	**Sn**	**02 27 31.4**	**-2.4**
JKDJ	**Kitadaitoujima**	**2.54**	**94**	*e*P	**Pn**	**02 27 04.5**	**+0.3**
JKDJ				*e*S	**Sn**	**02 27 32.9**	**-2.1**
JNU	**Nakatsue**	**7.26**	**16**	Pn	**Pn**	**02 28 09.7**	**+0.6**
	0.3nm,0.3s,baz=184,slow=14,SNR=2.3						
	12nm,0.8s						
JNU	**Nakatsue**	**7.26**	**16**		**Pn**	**02 28 09.8**	**+0.7**
TPUB	**Ta-pu**	**7.68**	**250**	Pn	**Pn**	**02 28 13.3**	**-1.7**
LZDM	**Lanzhou Array**	**23.32**	**301**	P	**P**	**02 31 29.6**	**-2.0**
	2.3nm,0.5s,baz=142,slow=10,SNR=4.9						
	2.3nm,0.5s						
SONM	**Songino Array**	**27.75**	**327**	P	**P**	**02 32 12.9**	**+1.1**
	1.3nm,0.5s,baz=141,slow=10,SNR=14						
SONM				LR	LR	02 44 38.9	
	comp=Z,68nm,19.2s,baz=260,slow=40						
	1.3nm,0.5s						
SONM	**Songino Array**	**27.75**	**327**	P	**P**	**02 32 11.6**	**-0.2**
CMAR	**Chiang Mai Arr**	**28.33**	**260**	P	**P**	**02 32 18.5**	**+1.3**
	0.7nm,0.4s,baz=65,slow=8.4,SNR=1.8						
	0.7nm,0.4s						
PEA0B	**Petropavlovsk-**	**34.65**	**31**	P	**P**	**02 33 13.4**	**+1.0**
PETK	**Petropavlovsk-**	**34.65**	**31**	P	**P**	**02 33 12.1**	**-0.2**
SEY	**Seymchan**	**40.03**	**17**	LR	LR	02 51 57.7	
	comp=Z,88nm,19.3s,baz=256,slow=38						
MKAR	**Makanchi Array**	**41.76**	**312**	P	**P**	**02 34 11.3**	**-1.1**
	2.2nm,0.6s,baz=100,slow=10,SNR=30						
	2.2nm,0.6s						
ZAA0	**Zalesovo Array**	**42.45**	**323**	P	**P**	**02 34 15.3**	**-2.5**
ZALV	**Zalesovo Beam**	**42.45**	**323**	P	**P**	**02 34 15.8**	**-2.0**
	1.4nm,0.7s,baz=101,slow=8.0,SNR=5.9						
	1.4nm,0.7s						
WB0	**Warramunga Arr**	**46.00**	**172**	P	**P**	**02 34 47.4**	**+0.9**
WB0				IAmb	IAmb	02 35 03.2	
	comp=Z,11nm,1.5s						
WRA	**Warramunga Arr**	**46.16**	**172**	P	**P**	**02 34 48.9**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=353,slow=8.2,SNR=6.0						
	comp=Z,0.8nm,0.7s						
WR8	**Warramunga Arr**	**46.20**	**172**	P	**P**	**02 34 49.4**	**+1.3**
WR8				IAmb	IAmb	02 34 51.3	
	comp=Z,10nm,1.2s						
NRIK	**Noril'sk**	**49.40**	**342**	LR	LR	02 56 36.0	
	comp=Z,45nm,18.2s,baz=73,slow=37						
KKAR	**Karatay Array**	**49.64**	**305**	P	**P**	**02 35 14.0**	**-0.7**
ASAR	**Alice Springs**	**49.80**	**173**	P	**P**	**02 35 17.4**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=3.4,slow=13,SNR=13						
	comp=Z,0.6nm,0.7s						
ASAR	**Alice Springs**	**49.80**	**173**	P	**P**	**02 35 17.8**	**+1.9**
BVAR	**Borovoye Array**	**50.49**	**318**	P	**P**	**02 35 20.6**	**-0.3**
	comp=Z,1.9nm,0.6s,baz=87,slow=10.0,SNR=6.9						
BVAR				LR	LR	02 58 38.8	
	comp=Z,89nm,18.2s,baz=64,slow=38						
	comp=Z,1.9nm,0.6s						
BORK	**Borovoye**	**50.53**	**318**	P	**P**	**02 35 20.2**	**-1.1**
BORK				IAmb	IAmb	02 35 33.8	
	comp=Z,2.9nm,0.6s						
CHGR	**Chuyangaron**	**50.83**	**300**	P	**P**	**02 35 23.7**	**-0.2**
CHGR				IAmb	IAmb	02 35 24.2	
	comp=Z,5.7nm,0.6s						
KBL	**Kabul**	**51.34**	**294**	P	**P**	**02 35 28.4**	**+0.4**
KBL				IAmb	IAmb	02 35 29.4	
	comp=Z,4.2nm,0.7s						
AB31	**Akbulak array**	**56.87**	**313**	P	**P**	**02 36 07.6**	**-0.2**
ABKAR	**Akbulak array**	**56.87**	**313**	P	**P**	**02 36 07.4**	**-0.3**
ARTI	**Arti**	**57.70**	**322**	LR	LR	03 03 42.0	
	comp=Z,109nm,18.3s,baz=42,slow=39						
ARTI	**Arti**	**57.70**	**322**	P	**P**	**02 36 13.2**	**-0.3**
ARTI				IAmb	IAmb	02 36 14.0	
	comp=Z,3.2nm,0.7s						
AKTO	**Aktyubinsk**	**58.05**	**315**	P	**P**	**02 36 16.5**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=139,slow=7.0,SNR=3.7						
	comp=Z,0.8nm,0.5s						
C18K	**Utukok River**	**58.76**	**24**	P	**P**	**02 36 22.6**	**+1.8**
C18K				IAmb	IAmb	02 36 33.1	
	comp=Z,5.7nm,1.2s						
E19K	**Redstone River**	**60.12**	**25**	P	**P**	**02 36 31.7**	**+1.6**
E19K				IAmb	IAmb	02 36 53.1	
	comp=Z,3.0nm,1.2s						
F30M	**Barrier River**	**68.26**	**24**	P	**P**	**02 37 25.1**	**+1.6**
KBZ	**Khabaz**	**69.39**	**309**	P	**P**	**02 37 31.4**	**+0.4**
	comp=Z,2.8nm,0.9s,baz=344,slow=3.2,SNR=5.6						
	comp=Z,2.8nm,0.9s						
FIA1	**FINESS Array S**	**73.05**	**331**	P	**P**	**02 37 51.7**	**-1.1**
FINES	**FINESS Array B**	**73.05**	**331**	P	**P**	**02 37 51.9**	**-0.9**
	comp=Z,3.3nm,0.8s,baz=59,slow=4.4,SNR=11						
	comp=Z,3.3nm,0.8s						
FINES	**FINESS Array B**	**73.05**	**331**	P	**P**	**02 37 51.7**	**-1.1**
AKASG	**Malin Array Be**	**75.74**	**320**	P	**P**	**02 38 07.6**	**-1.1**
	comp=Z,1.3nm,0.5s,baz=62,slow=6.3,SNR=3.5						
	comp=Z,1.3nm,0.5s						
BRTR	**Keskin Array B**	**77.26**	**308**	P	**P**	**02 38 17.7**	**0.0**
	comp=Z,0.6nm,0.7s,baz=72,slow=4.7,SNR=2.7						
	comp=Z,0.6nm,0.7s						
YKA	**Yellowknife Ar**	**78.51**	**25**	P	**P**	**02 38 24.9**	**+1.0**
	comp=Z,0.1nm,0.6s,baz=300,slow=6.4,SNR=2.3						
	comp=Z,0.1nm,0.6s						
HFS	**Hagfors**	**79.00**	**332**	P	**P**	**02 38 27.6**	**+0.8**
	comp=Z,1.4nm,0.9s,baz=86,slow=4.5,SNR=1.3						
	comp=Z,1.4nm,0.9s						
NC405	**NORSAR Array S**	**79.25**	**334**	P	**P**	**02 38 27.2**	**-1.0**
BUR08	**Bucovina Ar. S**	**79.44**	**318**	P	**P**	**02 38 29.2**	**-0.3**
BUR08				IAmb	IAmb	02 38 41.7	
	comp=Z,7.2nm,1.4s						
BURAR	**Bucovina Array**	**79.44**	**318**	P	**P**	**02 38 29.8**	**+0.2**
NB2	**NORSAR Subarra**	**79.49**	**334**	P	**P**	**02 38 28.9**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=53,slow=5.9						
NOA	**NORSAR Array B**	**79.49**	**334**	P	**P**	**02 38 30.2**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=52,slow=5.6,SNR=5.9						
NOA				LR	LR	03 15 33.7	
	comp=Z,34nm,18.4s,baz=0.0,slow=37						
	comp=Z,0.5nm,0.6s						
ILON	**Igloolik, Nuna**	**82.25**	**10**	P	**P**	**02 38 43.5**	**-0.5**
ILON				IAmb	IAmb	02 38 48.6	
	comp=Z,3.0nm,0.9s						
GERES	**GERESS Array B**	**85.40**	**323**	P	**P**	**02 39 01.0**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=56,slow=5.2,SNR=5.9						
	comp=Z,0.4nm,0.7s						
DAVOX	**Davos/Dischmat**	**88.70**	**323**	LR	LR	03 23 16.4	
	comp=Z,81nm,19.2s,baz=342,slow=39						
EKA	**Eskdalemuir Ar**	**88.94**	**335**	P	**P**	**02 39 17.0**	**-0.5**
	comp=Z,2.9nm,1.0s,baz=8.7,slow=4.8,SNR=2.1						
	comp=Z,2.9nm,1.0s						

KRSC 27 02:32:20.4±1.3,49°.80N×157°.07E,h54km±24km,Ml3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**1.68**	**355**	*e*P	Pn	02 32 49.6	+2.2
PAU				*e*S	Sn	02 33 10.0	+2.2
KDTR	**Khodutka, Kamc**	**2.11**	**17**	*e*P	Pn	02 32 56.0	+2.7
KDTR				*e*S	Sn	02 33 21.3	+2.9
ASAK	**Asacha**	**2.64**	**11**	*e*P	Pn	02 33 03.5	+2.8
MTVR	**Mutnovka**	**2.78**	**14**	*e*P	Pn	02 33 05.7	+3.1
MTVR				*e*S	Sn	02 33 38.0	+3.0
GRL	**Gorelyy**	**2.83**	**13**	*e*P	Pn	02 33 06.6	+3.3
GRL				*e*S	Sn	02 33 40.1	+3.9
KRMR	**Karymshinskiy**	**3.11**	**12**	*e*P	Pn	02 33 10.2	+3.3
APC	**Apacha**	**3.13**	**1**	*e*P	Pn	02 33 10.0	+2.8
DALK	**Dalny**	**3.41**	**17**	*e*P	Pn	02 33 14.2	+3.2
AVH	**Avacha**	**3.63**	**16**	*e*P	Pn	02 33 18.5	+4.4
KOK	**Koryaka**	**3.63**	**15**	*e*P	Pn	02 33 18.4	+4.1
SMAR	**Somma**	**3.64**	**17**	*e*P	Pn	02 33 16.1	+1.8
SDLR	**Sedlovina**	**3.67**	**17**	*e*P	Pn	02 33 17.6	+2.9
KRX	**Arik**	**3.70**	**15**	*e*P	Pn	02 33 19.0	+3.8
SPN	**Mys Shipunski**	**3.79**	**28**	*e*P	Pn	02 33 19.6	+3.4

WEL 27 03:14:38.6±1.3,35°S±29°×17°9E±3°4,h273km±37km, M3.5/10,ML3.4/10,MLv3.5/10,Error ellipse: s-maj=51.2km s-min=27.7km az=126.9,confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.02**	**190**	P	Pn	03 15 32.6	-0.1
WMGZ	**Waiomatatini S**	**3.26**	**188**	P	Pn	03 15 35.6	+0.4
WMGZ				S	S	03 16 22.1	+1.7
HAZ	**Te Kaha**	**3.31**	**197**	P	Pn	03 15 35.3	-0.4
HAZ				S	S	03 16 21.4	+0.1
PKGZ	**Pakihiroa**	**3.36**	**192**	P	Pn	03 15 36.5	+0.3
PUZ	**Puketiti**	**3.53**	**189**	P	Pn	03 15 37.6	-0.5
PUZ				S	S	03 16 25.2	-0.5
RUGZ	**Raukumara Rang**	**3.54**	**197**	P	Pn	03 15 37.8	-0.5
RUGZ				S	S	03 16 24.3	-1.7
TWGZ	**Tauwhareparae**	**3.68**	**192**	P	Pn	03 15 39.2	-0.6
TBAS	**Tolaga Bay Are**	**3.82**	**188**	P	Pn	03 15 42.4	+1.0
MWZ	**Matawai**	**3.92**	**197**	P	Pn	03 15 42.9	+0.4
MWZ				S	S	03 16 34.9	+1.3
CNGZ	**Carnagh Statio**	**3.94**	**189**	P	Pn	03 15 43.4	+0.7
TKGZ	**Te Karaka**	**3.96**	**193**	P	Pn	03 15 42.9	+0.1
URZ	**Urewera**	**3.97**	**202**	P	Pn	03 15 43.2	+0.2
URZ				S	S	03 16 36.5	+2.1
RIGZ	**Rimuhau**	**4.23**	**193**	P	Pn	03 15 46.5	+0.5
RIGZ				S	S	03 16 39.3	-0.6
SNGZ	**Shannon Statio**	**4.39**	**197**	P	Pn	03 15 47.4	-0.5
ARHZ	**Aropaoanui**	**4.94**	**198**	P	Pn	03 15 53.5	-0.7
ETVZ	**East Tongariro**	**5.25**	**209**	P	Pn	03 15 58.9	+0.9

VAO ***27*** *03:20:37.8±1.1,3°.39N×73°.94W,h4km±10km,mb4.5, Presumed earthquake*

IDC ***27*** *03:20:37.1±0.6,3°.39N×73°.99W,h0km,mb3.9/16, mbtmp4.0/18,ML3.9/2,MS3.6/19,Error ellipse: s-maj=17.1km s-min=10.5km az=77.0*

RSNC ***27*** *03:20:38.1±0.0,3°N±1°×7°4W±°,h16km±2km,M4.5,mB5.1, mb5.0,ML4.2,Mw4.4,Mw(mB)4.5*

NEIC ***27*** *03:20:39.7±2.2,3°.46N±0°.05×73°.99W±0°.08,h10km±1km, mb4.6/95,Error ellipse: s-maj=14.3km s-min=9.2km az=99.0*

CATAC ***27*** *03:20:42.3±0.8,3°N±5°×7°4W±°,h121km±11km,M4.9/10, mb4.7/2,mB5.0/1,MLv5.1/10,Mw(mB)4.3/1,Error ellipse: s-maj=16.9km s-min=4.8km az=123.9,confirmed*

ISC 27 03:20:38.2±0.4,3°.39N±0°.02×74°.13W±0°.02,h10km,n150, $\sigma 1^{s}67$/130,mb4.5/54,MS3.8/15,Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	**La Uribe, Meta**	**0.29**	**240**	P	**Pg**	**03 20 42.7**	**-1.4**
URMC				S	**Sg**	**03 20 46.1**	**-2.0**
PRAC	**Prado**	**0.82**	**293**	P	Pn	03 21 02.5	+6.5
PRAC	**Prado**	**0.82**	**293**	P	**Pg**	**03 20 51.8**	**-2.3**
PRAC				S	**Sg**	**03 21 02.3**	**-2.6**
VILC	**Villavicencio,**	**0.83**	**31**	P	**Pg**	**03 20 53.7**	**-0.6**
VILC				S	**Sg**	**03 21 05.5**	**+0.2**
ORTC	**Ortega, Tolima**	**1.23**	**295**	P	**Pn**	**03 20 59.0**	**-2.5**
ORTC				S	**Sb**	**03 21 15.6**	**-2.0**
MACC	**Macarena, Meta**	**1.27**	**167**	P	**Pn**	**03 21 01.2**	**-0.9**
MACC				S	**Sb**	**03 21 18.6**	**-0.1**
CHIC	**Chingaza**	**1.29**	**18**	P	**Pn**	**03 21 01.2**	**-1.5**
CHIC				S	**Sb**	**03 21 17.7**	**-1.9**
ROSC	**El Rosal**	**1.45**	**352**	Pg	**Pn**	**03 21 04.5**	**-0.4**
	1µm,0.3s,baz=138,slow=6.2,SNR=851						
ROSC				Lg	Lg	03 21 24.8	
	1µm,0.3s,baz=356,slow=23,SNR=12						
ROSC	**El Rosal**	**1.45**	**352**		**Pn**	**03 21 04.3**	**-0.6**
BETC	**Betania**	**1.49**	**242**	P	**Pn**	**03 21 04.5**	**-0.7**
BETC				S	**Sn**	**03 21 23.6**	**-1.1**
ANIL	**Santa Ana**	**1.68**	**311**	P	**Pn**	**03 21 07.0**	**-0.9**
ANIL				S	**Sn**	**03 21 28.6**	**-1.0**
GARC	**Garzon, Huila**	**1.82**	**229**	P	**Pn**	**03 21 10.1**	**+0.3**
GARC				S	**Sn**	**03 21 33.0**	**0.0**
RECRC	**Villamaria, Ca**	**1.98**	**322**	P	**Pn**	**03 21 12.1**	**-0.2**
RECRC				S	**Sn**	**03 21 37.2**	**-0.3**
NIZA	**Niza - Manizal**	**2.13**	**321**	P	**Pb**	**03 21 15.6**	**-1.5**
NIZA				S	**Sb**	**03 21 41.9**	**-1.8**
SPBC	**San Pablo de B**	**2.24**	**1**	P	**Pb**	**03 21 17.9**	**-1.0**
SPBC				S	**Sg**	**03 21 48.2**	**-2.2**
NORC	**Norcasia**	**2.28**	**341**	P	**Pn**	**03 21 16.6**	**+0.6**
NORC				S	**Sn**	**03 21 45.3**	**+1.1**
YOTC	**Yotoco, Valle**	**2.29**	**285**	P	**Pn**	**03 21 16.2**	**0.0**
YOTC				S	**Sn**	**03 21 45.6**	**+1.0**
FLOC	**Florencia**	**2.36**	**220**	P	**Pn**	**03 21 18.6**	**+1.5**
FLOC				S	**Sb**	**03 21 49.5**	**-0.5**
FLOC	**Florencia**	**2.36**	**220**	P	**Pb**	**03 21 19.1**	**-1.8**
FLOC				S	**Sb**	**03 21 49.2**	**-0.9**
JAMC	**Jamundi, Valle**	**2.55**	**266**	P	**Pn**	**03 21 21.5**	**+1.6**
JAMC				S	**Sb**	**03 21 54.3**	**-1.5**
PLMC	**San Jos del P**	**2.62**	**305**	P	**Pn**	**03 21 21.7**	**+0.9**
PLMC				S	**Sb**	**03 21 56.1**	**-1.6**
POPC	**Popayan, Colom**	**2.68**	**252**	P	**Pn**	**03 21 23.2**	**+1.5**
POPC				S	**Sb**	**03 21 59.3**	**-0.3**
RUSC	**La Rusia**	**2.69**	**23**	P	**Pn**	**03 21 24.0**	**+1.9**
RUSC				S	**Sb**	**03 21 57.9**	**-2.2**
RUSC	**La Rusia**	**2.69**	**23**	P	**Pb**	**03 21 24.5**	**-2.3**
RUSC				S	**Sb**	**03 22 00.0**	**-0.1**
CBOC	**Ciudad Bolivar**	**3.09**	**323**	P	**Pn**	**03 21 29.3**	**+2.0**
CBOC				S	**Sb**	**03 22 09.8**	**-1.5**
PTBC	**PUERTO BERRIO,**	**3.14**	**354**	P	**Pn**	**03 21 28.5**	**+0.7**
PTLC	**Puerto Leguiza**	**3.27**	**192**	P	**Pb**	**03 21 35.1**	**-1.3**
BARC	**Barichara**	**3.31**	**16**	P	**Pn**	**03 21 32.1**	**+1.7**
CRUC	**La Cruz**	**3.35**	**237**	P	**Pn**	**03 21 34.1**	**+3.0**
CRUC				S	**Sb**	**03 22 20.2**	**+1.1**
BBAC	**Balboa, Cauca**	**3.40**	**246**	P	**Pn**	**03 21 33.0**	**+1.4**
BRJC	**Barrancabermej**	**3.58**	**6**	P	**Pn**	**03 21 37.2**	**+3.4**
PIZC	**Pizarro, Choco**	**3.58**	**296**	P	**Pn**	**03 21 37.1**	**+3.2**
GCUF	**Volcan Galeras**	**3.87**	**236**	P	**Pn**	**03 21 41.1**	**+2.8**
GR1C	**Gorgona, Isla**	**4.05**	**265**	P	**Pn**	**03 21 40.4**	**0.0**
GR1C				S	**Sn**	**03 22 27.9**	**0.0**
DBBC	**Dabeiba**	**4.16**	**330**	P	**Pn**	**03 21 44.6**	**+2.8**
PAMC	**Pamplona, Colo**	**4.17**	**20**	P	**Pn**	**03 21 45.2**	**+2.8**
CMBC	**Cumbal**	**4.43**	**237**	P	**Pb**	**03 21 51.7**	**-4.7**
BONI	**La Bonita**	**4.48**	**229**	P	**Pn**	**03 21 48.1**	**+1.6**
TUMC	**Tumaco**	**4.85**	**251**	P	**Pn**	**03 21 52.8**	**+1.5**
APAC	**Apartado, Choc**	**5.10**	**331**	P	Pb	03 22 01.5	-6.1
CUSE	**Cuicocha Este**	**5.26**	**234**	P	Pn	03 22 02.4	+5.1
OTAV	**Otavalo**	**5.34**	**234**		**Pn**	**03 22 01.4**	**+2.9**
OTAV	**Otavalo**	**5.34**	**234**	P	**Pn**	**03 22 00.5**	**+2.0**
OTAV	**Otavalo**	**5.34**	**234**	*e*P	**Pn**	**03 22 00.7**	**+2.2**
PAC1	**Pacto, Paraso**	**5.60**	**236**	P	Pn	03 22 06.6	+4.8
ARGC	**Ariguani, Magd**	**6.42**	**359**	P	Pn	03 22 18.8	+5.8
SDV	**Santo Domingo**	**6.47**	**32**	Pn	**Pn**	**03 22 14.6**	**+0.8**
	15nm,0.3s,baz=144,slow=4.9,SNR=35						
SDV				Sn	**Sn**	**03 23 27.3**	**-0.4**
	75nm,0.3s,baz=357,slow=16,SNR=6.2						
SDV				Lg	Lg	03 23 58.7	
	62nm,0.3s,baz=66,slow=20,SNR=8.2						
SDV				LR	LR	03 25 26.4	
	comp=Z,978nm,19.7s,baz=220,slow=45						
	45nm,0.4s						
SDV	**Santo Domingo**	**6.47**	**32**		**Pn**	**03 22 13.9**	**+0.1**
SDV	**Santo Domingo**	**6.47**	**32**	*e*P	**Pn**	**03 22 13.4**	**-0.4**
SDV				*e*S	**Sn**	**03 23 27.1**	**-0.6**
SDV	**Santo Domingo**	**6.47**	**32**	P	**Pn**	**03 22 14.9**	**+1.2**
	2µm103nm,0.8s						
SJCC	**San Jacinto, C**	**6.54**	**351**	P	**Pn**	**03 22 14.2**	**-0.5**
SJCC				S	**Sn**	**03 23 29.7**	**+0.2**
URIC	**Uribia, Colomb**	**8.52**	**14**	P	**Pn**	**03 22 41.9**	**+0.1**
ATAH	**Atahualpa**	**11.29**	**202**	Pn	**Pn**	**03 23 21.4**	**+1.2**
	1.1nm,0.3s,baz=41,slow=11,SNR=6.6						
ATAH				Sn	**Sn**	**03 25 32.5**	**+5.7**
	baz=109,slow=16						
ATAH				LR	LR	03 28 33.4	
	comp=Z,471nm,21.4s,baz=15,slow=42						
	6.6nm,0.6s						
JTS	**Las Juntas de**	**12.74**	**303**	LR	LR	03 28 36.8	
	comp=Z,231nm,18.9s,baz=338,slow=37						
BOAV	**Boa Vista**	**13.62**	**94**		**Pn**	**03 23 48.7**	**-3.0**
BOAV	**Boa Vista**	**13.62**	**94**	*e*P	**Pn**	**03 23 47.0**	**-4.6**
BOAV				*e*S	**Sn**	**03 26 21.2**	**-2.0**
MACA	**Manacapuru-AM**	**14.93**	**116**	Pn	**Pn**	**03 24 06.9**	**-2.7**
SDDR	**Presa de Saban**	**15.74**	**10**		**Pn**	**03 24 20.1**	**-0.1**
SDDR				IAmb	IAmb	03 24 25.2	
	comp=Z,31nm,0.9s						
DR12	**Loma Pena Alta**	**15.99**	**17**		**Pn**	**03 24 23.2**	**-0.2**
SC01	**Santiago de lo**	**16.28**	**12**	P	**Pn**	**03 24 27.7**	**+0.6**
SC01				IAmb	IAmb	03 24 38.6	
	comp=Z,56nm,0.8s						
SJG	**San Juan**	**16.58**	**28**	LR	LR	03 31 31.7	
	comp=Z,318nm,21.5s,baz=190,slow=40						
ITTB	**Itaituba**	**19.93**	**113**	*e*P	**P**	**03 25 06.4**	**-4.1**
ITTB				*e*S	**S**	**03 28 52.3**	**-2.6**
LPAZ	**La Paz**	**20.43**	**163**	P	Pn	03 25 17.9	-0.8
	comp=Z,0.5nm,0.5s,baz=310,slow=2.7,SNR=5.4						
LPAZ				Lg	Lg	03 31 17.9	
	comp=Z,0.2nm,0.3s,baz=172,slow=18,SNR=4.0						
	comp=Z,0.5nm,0.5s						
VILB	**Vilhena**	**21.33**	**140**	*e*P	**P**	**03 25 25.0**	**-0.7**
VILB				*e*S	**S**	**03 29 22.6**	**-0.2**
NPGB	**Novo Progresso**	**21.41**	**119**	*e*P	**P**	**03 25 25.3**	**-1.2**
NPGB				*e*S	**S**	**03 29 23.1**	**-1.3**
MDP	**Montagnes des**	**21.49**	**85**	P	**P**	**03 25 27.7**	**+0.3**
	comp=Z,16nm,0.5s,baz=262,slow=9.2,SNR=40						
MDP				LR	LR	03 35 11.6	
	comp=Z,50nm,20.1s,baz=278,slow=41						
	comp=Z,16nm,0.5s						
PDRB	**Porto dos Gac**	**22.84**	**131**	*e*P	**P**	**03 25 40.8**	**-1.0**
PDRB				*e*S	**S**	**03 29 51.4**	**0.0**
SIV	**San Ignacio**	**23.19**	**147**	P	**P**	**03 25 44.8**	**-0.6**
	comp=Z,1.9nm,0.6s,baz=322,slow=12,SNR=7.4						
	comp=Z,1.9nm,0.6s						
PTLB	**Pontes e Lacer**	**23.89**	**142**		**P**	**03 25 53.2**	**+0.9**
CMIG	**Matias Romero**	**24.50**	**305**	LR	LR	03 35 21.1	
	comp=Z,81nm,21.5s,baz=126,slow=36						
BDFB	**Brasilia**	**32.02**	**127**	LR	LR	03 40 30.4	
	comp=Z,166nm,18.0s,baz=2.3,slow=37						
Z47A	**Carrollton**	**32.39**	**338**	P	**P**	**03 27 09.1**	**+0.8**
Y49A	**Blount Mountai**	**32.40**	**341**	P	**P**	**03 27 09.7**	**+1.3**
Y49A				IAmb	IAmb	03 27 14.5	
	comp=Z,5.3nm,0.7s						
TKL	**Tuckaleechee C**	**33.32**	**346**	LR	LR	03 41 53.3	
	comp=Z,76nm,18.2s,baz=170,slow=38						
T59A	**Double "B" Far**	**33.56**	**355**	P	**P**	**03 27 19.7**	**+1.2**
V48A	**Smith Brothers**	**34.26**	**341**	P	**P**	**03 27 26.1**	**+1.6**
WVT	**Waverly**	**34.95**	**340**	P	**P**	**03 27 30.9**	**+0.5**
WVT				IAmb	IAmb	03 27 33.8	
	comp=Z,8.0nm,0.7s						
X40A	**Basin Creek Fa**	**35.49**	**333**	IAmb	IAmb	03 27 38.4	
	comp=Z,3.7nm,0.7s						
LCAR	**Lake Charles**	**36.12**	**336**	IAmb	IAmb	03 27 43.5	
	comp=Z,11nm,1.2s						
BRDY	**Brady**	**36.32**	**323**	IAmb	IAmb	03 27 45.5	
	comp=Z,13nm,1.5s						
FCAR	**Ozark Folk Cen**	**36.37**	**335**	IAmb	IAmb	03 27 45.0	
	comp=Z,4.3nm,0.6s						
P51A	**Williamsport**	**36.83**	**348**	IAmb	IAmb	03 27 50.9	
	comp=Z,9.5nm,0.7s						
S44A	**Carbondale**	**36.85**	**340**	IAmb	IAmb	03 27 49.9	
	comp=Z,13nm,0.7s						
T42A	**Van Buren**	**36.93**	**337**	IAmb	IAmb	03 27 50.7	
	comp=Z,6.7nm,0.7s						
PLPT	**Palo Pinto**	**37.01**	**325**	IAmb	IAmb	03 27 51.8	
	comp=Z,5.0nm,0.7s						
HHAR	**Hobbs**	**37.49**	**333**	IAmb	IAmb	03 27 54.7	
	comp=Z,12nm,1.0s						
U38A	**Gravette**	**37.82**	**333**	IAmb	IAmb	03 27 57.1	
	comp=Z,6.5nm,0.9s						
Q44A	**Meyer Farm, Va**	**37.86**	**341**	IAmb	IAmb	03 27 58.2	
	comp=Z,14nm,0.9s						
M57A	**Sunshine Farm,**	**37.87**	**356**	IAmb	IAmb	03 28 00.3	
	comp=Z,15nm,0.7s						
CCM	**Cathedral Cave**	**37.89**	**338**	P	**P**	**03 27 55.4**	**-0.2**
P46A	**Rosedale**	**37.96**	**343**	IAmb	IAmb	03 28 00.1	
	comp=Z,18nm,0.8s						
TUL3	**Leonard**	**38.05**	**331**	IAmb	IAmb	03 27 60.0	
	comp=Z,12nm,0.7s						
TXAR	**Lajitas Array**	**38.09**	**316**	P	**P**	**03 27 58.1**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=135,slow=8.4,SNR=7.5						
TXAR				PcP	**PcP**	**03 30 15.5**	**+2.7**
	comp=Z,0.6nm,0.7s,baz=134,slow=6.6,SNR=5.0						
	comp=Z,0.3nm,0.5s						
R40A	**Maddies Statio**	**38.49**	**337**	IAmb	IAmb	03 28 02.9	
	comp=Z,8.2nm,0.7s						
POST	**Post**	**39.08**	**322**	IAmb	IAmb	03 28 09.9	
	comp=Z,5.9nm,0.8s						
VHRN	**Van Horn**	**39.88**	**316**	P	**P**	**03 28 12.7**	**+0.1**
N41A	**Harden Midland**	**40.09**	**340**	IAmb	IAmb	03 28 16.6	
	comp=Z,17nm,0.9s						
P38A	**Dawn**	**40.13**	**337**	P	**P**	**03 28 13.2**	**-1.2**
P38A				IAmb	IAmb	03 28 16.6	
	comp=Z,7.8nm,0.7s						
AMTX	**Amarillo**	**40.44**	**324**	P	**P**	**03 28 18.9**	**+1.7**
MNTX	**Cornudas Mount**	**40.70**	**317**	P	**P**	**03 28 19.4**	**+0.2**
SADO	**Sadowa**	**41.44**	**355**	LR	LR	03 46 40.9	
	comp=Z,75nm,20.3s,baz=190,slow=38						
JFWS	**Jewell Farm**	**41.89**	**342**	P	**P**	**03 28 28.6**	**-0.2**
MNTQ	**Montreal, Queb**	**41.94**	**1**	P	**P**	**03 28 32.4**	**+3.3**
TASM	**ASL Pad, Albuq**	**43.41**	**320**	IAmb	IAmb	03 28 55.5	
	comp=Z,3.0nm,1.0s						
TASM	**ASL Pad, Albuq**	**43.41**	**320**	IAmb	IAmb	03 28 55.5	
	comp=Z,3.5nm,1.0s						
TASM	**ASL Pad, Albuq**	**43.41**	**320**	IAmb	IAmb	03 28 46.9	
	comp=Z,2.1nm,0.7s						
PLCA	**Paso Flores**	**44.03**	**176**	P	**P**	**03 28 46.8**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=358,slow=4.4,SNR=3.5						
	comp=Z,1.2nm,0.6s						
PLCA	**Paso Flores**	**44.03**	**176**	IAmb	IAmb	03 28 48.0	
	comp=Z,14nm,1.5s						
SPMN	**Marine on St.**	**44.77**	**341**	IAmb	IAmb	03 28 54.0	
	comp=Z,7.9nm,0.7s						
ECSD	**EROS Data Cent**	**44.84**	**337**	IAmb	IAmb	03 28 54.6	
	comp=Z,7.4nm,0.9s						
RPN	**Rapa Nui**	**45.55**	**226**	LR	LR	03 44 25.3	
	comp=Z,50nm,19.4s,baz=256,slow=31						
ISCO	**Idaho Springs**	**46.11**	**326**	IAmb	IAmb	03 29 07.1	
	comp=Z,3.0nm,0.8s						
HMU	**Henry Mountain**	**47.97**	**321**	IAmb	IAmb	03 29 22.7	
	comp=Z,8.4nm,1.1s						
RSSD	**Black Hills**	**48.40**	**331**	P	**P**	**03 29 22.5**	**+1.8**
RSSD				IAmb	IAmb	03 29 24.2	
	comp=Z,6.3nm,0.9s						
AGMN	**Agassiz Nation**	**48.47**	**341**	IAmb	IAmb	03 30 01.4	
	comp=Z,12nm,1.4s						
SRU	**San Rafael Swe**	**48.54**	**322**	IAmb	IAmb	03 29 26.5	
	comp=Z,1.9nm,0.7s						
SZCU	**Shurtz Canyon**	**49.29**	**319**	P	**P**	**03 29 29.2**	**+1.5**
ULM	**Lac du Bonnet**	**50.18**	**342**	P	**P**	**03 29 34.5**	**+0.4**
	comp=Z,3.4nm,0.6s,baz=148,slow=9.4,SNR=3.9						
ULM				LR	LR	03 52 55.0	
	comp=Z,125nm,18.7s,baz=316,slow=39						
	comp=Z,3.4nm,0.6s						
ULM	**Lac du Bonnet**	**50.18**	**342**	IAmb	IAmb	03 29 35.4	
	comp=Z,5.0nm,0.8s						
PDAR	**Pinedale Array**	**50.30**	**326**	P	**P**	**03 29 36.8**	**+1.4**
	comp=Z,1.2nm,0.7s,baz=123,slow=8.2,SNR=15						
	comp=Z,1.2nm,0.7s						
PDAR	**Pinedale Array**	**50.30**	**326**	P	**P**	**03 29 36.9**	**+1.5**
TCUT	**Toone Canyon**	**50.31**	**324**	IAmb	IAmb	03 29 39.3	
	comp=Z,7.4nm,0.7s						
BGU	**Big Grassy Mou**	**51.17**	**322**	IAmb	IAmb	03 29 45.6	
	comp=Z,3.3nm,0.8s						
LOHW	**Long Hollow**	**51.43**	**326**	IAmb	IAmb	03 29 47.7	
	comp=Z,3.4nm,0.7s						
SCHQ	**Schefferville**	**51.62**	**5**	P	**P**	**03 29 45.3**	**+0.5**
	comp=Z,7.4nm,0.7s,baz=178,slow=6.1,SNR=8.3						
SCHQ				LR	LR	03 51 40.6	
	comp=Z,82nm,18.5s,baz=318,slow=36						
	comp=Z,7.4nm,0.7s						
SCHQ	**Schefferville**	**51.62**	**5**	P	**P**	**03 29 45.2**	**+0.3**
YMR	**Madison River**	**52.32**	**327**	IAmb	IAmb	03 29 54.9	
	comp=Z,3.9nm,0.7s						
YHL	**Hebgen Lake**	**52.55**	**327**	IAmb	IAmb	03 29 56.8	
	comp=Z,3.8nm,0.8s						
NVAR	**Mina Array Bea**	**53.22**	**317**	P	**P**	**03 29 58.6**	**+1.3**
	comp=Z,0.7nm,0.6s,baz=140,slow=7.0,SNR=6.5						
NVAR				LR	LR	03 56 03.7	
	comp=Z,76nm,19.1s,baz=321,slow=40						
	comp=Z,0.7nm,0.6s						
MFID	**Camas Ranch**	**54.31**	**323**	IAmb	IAmb	03 30 08.8	
	comp=Z,4.3nm,0.9s						
WVOR	**Wild Horse Val**	**55.49**	**321**	IAmb	IAmb	03 30 17.5	
	comp=Z,13nm,1.4s						
G08A	**Pilot Rock**	**57.22**	**324**	IAmb	IAmb	03 30 29.6	
	comp=Z,6.2nm,1.1s						
J05D	**Fort Rock, OR**	**57.57**	**321**	IAmb	IAmb	03 30 32.3	
	comp=Z,6.4nm,1.0s						
PINE	**Pine Mountain**	**57.64**	**321**	IAmb	IAmb	03 30 34.7	
	comp=Z,4.8nm,0.8s						
FRB	**Frobisher Bay**	**60.36**	**3**	LR	LR	03 57 01.0	
	comp=Z,84nm,19.4s,baz=270,slow=36						
ILON	**Igloolik, Nuna**	**66.07**	**357**	P	**P**	**03 31 25.5**	**+0.5**
ILON				IAmb	IAmb	03 31 28.2	
	comp=Z,9.8nm,1.4s						
YKA	**Yellowknife Ar**	**66.13**	**341**	P	**P**	**03 31 26.5**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=143,slow=5.5,SNR=18						
	comp=Z,0.3nm,0.5s						

DBIC	Dimbokro	69.04	84	P	P	03 31 44.1	-0.7
	comp=Z,2.7nm,0.7s,baz=271,slow=3.2,SNR=4.7						
	comp=Z,2.7nm,0.7s						
SUMG	Summit	72.52	11	P	P	03 32 06.2	+0.8
SUMG				IAmb	IAmb	03 32 19.9	
	comp=Z,4.0nm,0.9s						
ESDC	Sonseca Array	72.61	50	P	P	03 32 05.9	-0.4
	comp=Z,0.4nm,0.7s,baz=239,slow=7.9,SNR=2.8						
	comp=Z,0.4nm,0.7s						
TORD	Torodi Ar. Bea	75.43	77	P	P	03 32 22.2	-0.9
	comp=Z,0.6nm,0.4s,baz=294,slow=4.8,SNR=15						
	comp=Z,0.6nm,0.4s						
A36M	Sachs Harbour	75.47	346	P	P	03 32 21.7	-0.5
A36M				IAmb	IAmb	03 32 26.9	
	comp=Z,4.7nm,0.9s						
ILAR	Eielson Array	79.64	335	P	P	03 32 46.7	+1.1
	comp=Z,0.7nm,0.7s,baz=108,slow=3.7,SNR=16						
	comp=Z,0.7nm,0.7s						
NOA	NORSAR Array B	84.79	29	P	P	03 33 13.3	+0.6
	comp=Z,0.4nm,0.8s,baz=267,slow=5.1,SNR=2.0						
NOA				LR	LR	04 06 06.6	
	comp=Z,16nm,21.9s,baz=355,slow=32						
	comp=Z,0.4nm,0.8s						
HFS	Hagfors	85.99	30	P	P	03 33 19.3	+0.6
	comp=Z,1.0nm,0.8s,baz=243,slow=3.6,SNR=1.5						
HFS				LR	LR	04 05 54.3	
	comp=Z,36nm,21.1s,baz=268,slow=32						
	comp=Z,1.0nm,0.8s						
SPITS	Spitsbergen Ar	86.80	12	LR	LR	04 12 09.3	
	comp=Z,48nm,19.1s,baz=310,slow=36						
VRAC	Vranov	87.92	41	LR	LR	04 12 21.3	
	comp=Z,34nm,18.2s,baz=314,slow=35						
SUR	Sutherland	95.97	122	LR	LR	04 13 32.8	
	comp=Z,24nm,18.7s,baz=236,slow=33						
ASAR	Alice Springs	146.24	231	PKPbc	PKPdf	03 40 18.9	0.0
	comp=Z,1.6nm,0.4s,baz=119,slow=3.7,SNR=29						
WRA	Warramunga Arr	147.73	237	PKP	PKPdf	03 40 21.3	-0.2
	comp=Z,0.8nm,0.4s,baz=112,slow=1.9,SNR=9.9						
WRA				PKPbc	PKPbc	03 40 23.4	-0.9
	comp=Z,1.7nm,0.7s,baz=108,slow=2.5,SNR=7.9						

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*IDC **27** 03:21:10.6±1.2, 3°.56N×126°.81E, h0^{km}, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=100.2km s-min=17.3km az=70.0*

*DJA **27** 03:21:16.5±0.6, 4°N±12°×12°7E±°, h29^{km}±16^{km}, M4.1/10, mB5.1/1, mb4.4/4, MLv4.0/10, Mw(mB)4.5/1*

*NEIC **27** 03:21:19.8±2.0, 3°.4N±0°.1×126°.6E±0°.1, h61^{km}±5^{km}, mb4.3/6, Error ellipse: s-maj=20.5km s-min=12.5km az=221.0*

ISC 27 03:21:17.3±0.8**, 3°.56N**±0°.09×**126°.8E**±0°.1**, h48**^{km}**, n27, σ0^{s}.98**/27**, mb4.0**/9**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.23	276	P	Pn	03 21 38.1	-0.1
GAMI	Galela, Maluku	1.99	149	P	Pn	03 21 48.0	-0.6
TNTI	Ternate	2.83	168	Pn	Pn	03 21 59.9	-0.2
TNTI	Ternate	2.83	168	P	Pn	03 22 00.2	+0.1
GTOI	Gorontalo	4.74	232	P	Pn	03 22 27.4	+1.1
SANI	Sanana	5.62	188	P	Pn	03 22 38.1	-0.3
	0.1nm9.9nm,0.5s						
MRSI	Marisa	5.71	238	P	Pn	03 22 39.8	+0.3
LUWI	Luwuk	6.06	221		Pn	03 22 41.0	-3.5
TOLI2	Tolitoli	6.45	248		Pn	03 22 50.2	+0.5
FAKI	Fak Fak	8.46	139	Pn	Pn	03 23 18.9	+1.6
SOEI	Soe	13.46	191	Pn	Pn	03 24 25.4	-0.4
KNRA	Kununurra	19.21	174	P	P	03 25 36.7	-0.7
KNRA				IAmb	IAmb	03 25 38.6	
	comp=Z,43nm,1.4s						
FITZ	Fitzroy Crossi	21.55	183	P	P	03 26 01.9	-0.8
	comp=Z,3.8nm,0.8s,baz=0.7,slow=10,SNR=7.9						
	comp=Z,3.8nm,0.8s						
FITZ	Fitzroy Crossi	21.55	183	P	P	03 26 02.3	-0.4
FITZ				IAmb	IAmb	03 26 05.4	
	comp=Z,3.9nm,1.4s						
WRA	Warramunga Arr	24.51	163	P	P	03 26 31.6	-0.8
	comp=Z,6.7nm,0.8s,baz=342,slow=9.1,SNR=22						
	comp=Z,6.7nm,0.8s						
WRA	Warramunga Arr	24.51	163	P	P	03 26 29.5	-2.9
WR8	Warramunga Arr	24.57	162	P	P	03 26 31.8	-1.2
WR8				IAmb	IAmb	03 26 33.1	
	comp=Z,12nm,1.1s						
ASAR	Alice Springs	27.94	166	P	P	03 27 01.9	-1.5
	comp=Z,0.4nm,0.5s,baz=348,slow=8.7,SNR=7.9						
ASAR				PcP	PcP	03 30 18.7	+0.7
	comp=Z,0.3nm,0.9s,baz=3.2,slow=3.3,SNR=1.6						
	comp=Z,0.4nm,0.5s						
ASAR	Alice Springs	27.94	166	P	P	03 27 04.6	+1.3
BBOO	Buckleboo	37.23	167	P	P	03 28 23.8	-0.5
BBOO				IAmb	IAmb	03 28 55.9	
	comp=Z,20nm,1.4s						
STKA	Stephens Creek	37.96	159	P	P	03 28 30.3	-0.2
	comp=Z,0.8nm,0.4s,baz=326,slow=7.0,SNR=4.4						
	comp=Z,0.8nm,0.4s						
STKA	Stephens Creek	37.96	159	P	P	03 28 30.1	-0.4
SONM	Songino Array	47.47	341	P	P	03 29 47.3	-0.3
	comp=Z,0.3nm,0.6s,baz=148,slow=8.5,SNR=2.0						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	57.71	325	P	P	03 31 03.6	+0.4
	comp=Z,0.9nm,0.6s,baz=123,slow=8.1,SNR=10.0						
	comp=Z,0.9nm,0.6s						
MKAR	Makanchi Array	57.71	325	P	P	03 31 04.0	+0.8
BVAR	Borovoye Array	67.48	327	P	P	03 32 08.3	+0.1
	comp=Z,0.5nm,0.6s,baz=120,slow=8.5,SNR=2.4						
	comp=Z,0.5nm,0.6s						
ABKAR	Akbulak array	72.30	321	P	P	03 32 38.5	+0.7

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*NEIC **27** 03:32:11.3±0.8, 17°.35N±0°.10×68°.30W±0°.04, h10^{km}±2^{km}, ML2.6/8, Md3.6/7(RSPR), Error ellipse: s-maj=16.4km s-min=6.1km az=192.0*

*RSPR **27** 03:32:14.1, 17°.24N×68°.30W, h45^{km}±8^{km}, MD3.6/7*

*OSPL **27** 03:32:15.3±5.6, 17°.32N×68°.30W, h36^{km}±444^{km}, ML2.4, Presumed earthquake*

*SDD **27** 03:32:15.1±1.8, 17°.56N×68°.29W, h23^{km}±999^{km}, MD3.2, ML2.9, MW2.8, Presumed earthquake*

ISC 27 03:32:12.2±2.4**, 17°.38N**±0°.09×**68°.36W**±0°.03**, h24**^{km}±21^{km}**, n44, σ1^{s}.17**/55**, 19C-4D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HIDR	Higuey Centro	1.26	344	⇑ePg	Pn	03 32 34.2	-0.2
HIDR				⇑eSg	Sn	03 32 48.8	-1.7
HIDR				IAML		03 32 52.8	
	comp=N,230nm,0.2s						
CRPR	Cabo Rojo, PR	1.34	62		Sn	03 32 52.8	+0.2
CRPR	Cabo Rojo, PR	1.34	62	Pn	Pn	03 32 35.5	0.0
CRPR				IAML		03 32 53.0	
	comp=N,71nm,0.9s						
CRPR	Cabo Rojo, PR	1.34	62	⇑eP	Pn	03 32 35.5	0.0
CRPR	Cabo Rojo, PR	1.34	62	eS	Sn	03 32 52.8	+0.2
CRPR	Cabo Rojo, PR	1.34	62	⇑ePg	Pn	03 32 35.6	+0.1
CRPR				⇑eSg	Sn	03 32 52.7	0.0
CRPR				IAML		03 33 02.2	
	comp=N,44nm,2.0s						
CRPR	Cabo Rojo, PR	1.34	62	i P	Pn	03 32 35.6	+0.1
CRPR				eS	Sn	03 32 50.9	-1.7
CRPR				IAML		03 32 54.0	
	comp=Z,52nm,2.2s						
MLPR	Magueyes Islan	1.38	65	⇑eP	Pn	03 32 36.0	0.0
MLPR	Magueyes Islan	1.38	65	eS	Sn	03 32 53.7	+0.1
MLPR	Magueyes Islan	1.38	65	⇑ePg	Pn	03 32 36.2	+0.1
MLPR				⇑eSg	Sn	03 32 53.8	+0.1
MLPR				IAML		03 32 54.2	
	comp=N,157nm,0.3s						
PRSN	Puerto Rico Se	1.43	54	⇓ePg	Pn	03 32 36.9	+0.2
PRSN				⇑eSg	Sn	03 32 53.5	-1.2
PRSN				IAML		03 33 00.7	
	comp=N,1μm,0.3s						
LSP	Las Mesas	1.45	56		Pn	03 32 37.5	+0.5
LSP					Sn	03 32 55.5	+0.2
LSP	Las Mesas	1.45	56	⇑eP	Pn	03 32 37.5	+0.5
LSP	Las Mesas	1.45	56	eS	Sn	03 32 55.5	+0.2
GBPR	Guanica, Bosqu	1.53	67		Sn	03 32 56.9	-0.3
GBPR	Guanica, Bosqu	1.53	67	eS	Sn	03 32 56.9	-0.3
AGPR	Aguadilla, PR	1.61	47	Pn	Pn	03 32 39.5	+0.3
AGPR				IAML		03 33 05.9	
	comp=N,81nm,2.6s						
AGPR	Aguadilla, PR	1.61	47	⇑eP	Pn	03 32 39.7	+0.6
AGPR	Aguadilla, PR	1.61	47	eS	Sn	03 33 00.0	+0.8
AGPR	Aguadilla, PR	1.61	47	⇑ePg	Pn	03 32 38.8	-0.4
AGPR				⇑eSg	Sn	03 32 56.9	-2.3
AGPR				IAML		03 33 10.2	
	comp=N,387nm,0.3s						
AGPR	Aguadilla, PR	1.61	47	i P	Pn	03 32 40.4	+1.3
AGPR				eS	Sn	03 32 59.6	+0.5
AGPR				IAML		03 33 15.2	
	comp=Z,59nm,1.6s						
DR12	Loma Pena Alta	1.71	325	Pn	Pn	03 32 42.1	+1.5
HATOM	Hato Mayor del	1.71	325	⇓ePg	Pb	03 32 42.5	-0.5
HATOM				⇓eSg	Sn	03 33 02.1	+0.4
HATOM				IAML		03 33 03.2	
	comp=N,246nm,0.3s						
MIDR	Miches	1.73	338	⇑ePg	Pn	03 32 42.6	+1.8
MIDR				IAML		03 33 04.2	
	comp=N,31nm,0.5s						
OBIP	Obispado Ponce	1.79	68		Sn	03 33 03.5	-0.3
OBIP	Obispado Ponce	1.79	68		Pn	03 32 41.9	+0.3
OBIP	Obispado Ponce	1.79	68	⇑eP	Pn	03 32 42.0	+0.3
OBIP	Obispado Ponce	1.79	68	eS	Sn	03 33 03.5	-0.3
AOPR	Arecibo Observ	1.81	57		Sn	03 33 04.7	+0.6
AOPR	Arecibo Observ	1.81	57		Pn	03 32 42.3	+0.4
AOPR	Arecibo Observ	1.81	57	⇑eP	Pn	03 32 42.4	+0.4
AOPR	Arecibo Observ	1.81	57	eS	Sn	03 33 04.7	+0.6
AOPR	Arecibo Observ	1.81	57	⇑ePg	Pn	03 32 42.6	+0.7
AOPR				⇓eSg	Sn	03 33 04.4	+0.3
AOPR				IAML		03 33 06.7	
	comp=N,927nm,0.3s						
ECPR	Experimental S	2.12	63	⇑eP	Pn	03 32 46.8	+0.6
ECPR	Experimental S	2.12	63	eS	Sn	03 33 11.8	0.0
GCPR	Guaynabo City	2.35	66		Sn	03 33 17.3	-0.3
GCPR	Guaynabo City	2.35	66	eS	Sn	03 33 17.3	-0.3
HUMP	Col San Antoni	2.51	72		Pn	03 32 51.6	0.0
HUMP				IAML		03 33 22.3	
	comp=N,29nm,0.3s						
HUMP				IAML		03 33 22.6	
	comp=N,35nm,0.2s						
HUMP	Col San Antoni	2.51	72		Sn	03 33 20.6	-0.7
HUMP	Col San Antoni	2.51	72	⇑eP	Pn	03 32 51.8	+0.2
HUMP	Col San Antoni	2.51	72	eS	Sn	03 33 20.6	-0.7
PODR	Polo	2.90	286	i P	Pn	03 32 58.9	+1.8
PODR				eS	Sn	03 33 25.8	-5.5
LOBH	Bahia de las A	3.17	279	i P	Pn	03 33 02.6	+2.0
LONE3	El Aguacate, B	3.20	293	i P	Pn	03 33 03.6	+2.4

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*THE **27** 03:35:23.7, 40°N±1°×21°.2E±1°.0, h0^{km}±1^{km}, M2.6/13, MLh2.6/13*

*ATH **27** 03:35:23.4, 40°.41N×21°.22E, h12^{km}±1^{km}, ML2.6/7, Manual Solution by A.Fokaefs First location: 2019/12/27 03:36:34, This location: 2019/12/27 09:35:34 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

ISC 27 03:35:24.1±0.9**, 40°.43N**±0°.02×**21°.23E**±0°.02**, h10**^{km}±7^{km}**, n34, σ0^{s}.95**/50**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEST	Nestorio	0.14	265	P	Pg	03 35 26.9	-0.4
NEST				S	Sg	03 35 29.1	-0.4
NEST	Nestorio	0.14	265	P	Pg	03 35 27.1	-0.1
PENT	Pentalofos	0.24	197	P	Pg	03 35 29.5	+0.5
PENT				S	Sg	03 35 34.8	+2.5
PENT	Pentalofos	0.24	197	P	Pg	03 35 29.3	+0.3
PENT				S	Sg	03 35 32.9	+0.6
KBN	Korca	0.39	301	P	Pg	03 35 30.7	-1.1
KBN				S	Sg	03 35 36.1	-0.8
LMS2	Laimos Florina	0.41	351	P	Pg	03 35 31.9	-0.3
LMS2				S	Sg	03 35 38.1	+0.4
KZN	Kozani	0.43	106	P	Pg	03 35 31.1	-1.4
KZN				S	Sg	03 35 39.2	+0.9
KZN	Kozani	0.43	106	P	Pg	03 35 31.2	-1.3
KZN				S	Sg	03 35 38.3	0.0
KPRO	Kipourio	0.48	168	P	Pg	03 35 32.6	-0.9
KPRO				S	Sb	03 35 42.1	+0.2
KPRO	Kipourio	0.48	168	P	Pg	03 35 32.9	-0.6
KPRO				S	Sg	03 35 39.2	-0.6
OHR	Ohrid	0.76	335	i Pg	Pg	03 35 38.4	-0.3
OHR				i Sg	Sb	03 35 50.3	+0.4
JAN	Janina	0.82	201	P	Pg	03 35 39.2	-0.7
JAN	Janina	0.82	201	P	Pg	03 35 39.0	-0.9
PRMD	Pramanda	0.90	186	P	Pg	03 35 40.5	-0.9
LIT	Litokhoron	1.02	108	P	Pg	03 35 43.2	-0.4
LIT				S	Sn	03 35 59.5	+0.6
LIT	Litokhoron	1.02	108	P	Pg	03 35 43.0	-0.7
GRG	Griva	1.04	59	P	Pg	03 35 43.8	-0.2
THL	Klokotos Trika	1.05	145	P	Pg	03 35 43.6	-0.6
THL				S	Sn	03 36 01.3	+1.6
THL	Klokotos Trika	1.05	145	P	Pg	03 35 43.4	-0.8
THL				S	Sg	03 35 57.3	-0.6
TETR	Tetrakomo, Epi	1.08	178	P	Pg	03 35 44.4	-0.5
TETR	Tetrakomo, Epi	1.08	178	P	Pg	03 35 43.8	-1.0
IGT	Igoumenitsa	1.13	218	P	Pb	03 35 44.3	-1.4
IGT				S	Sn	03 36 02.3	+0.8
IGT	Igoumenitsa	1.13	218	P	Pb	03 35 44.0	-1.6
KEK	Kerkira	1.31	237	P	Pb	03 35 48.7	0.0
KEK				S	Sg	03 36 07.9	+1.8
KEK	Kerkira	1.31	237	P	Pn	03 35 47.3	-1.2
VLO	Vlora	1.32	272	P	Pn	03 35 48.6	-0.1
VAY	Valandovo	1.35	48	i Pn	Pb	03 35 49.4	-0.2
VAY				i Sn	Sg	03 36 10.2	+2.5
HORT	Hortiatis	1.44	83	P	Pn	03 35 49.7	-0.6
EVR	Evrytania	1.57	163	P	Pn	03 35 52.5	+0.3
EVR	Evrytania	1.57	163	P	Pn	03 35 52.2	0.0
LKD2	Lefkada island	1.69	195	P	Pb	03 35 55.7	+0.4
LKD2	Lefkada island	1.69	195	P	Pn	03 35 53.7	0.0
NYDR	Nydri-Lefkada	1.76	194	P	Pb	03 35 55.9	-0.6
NYDR	Nydri-Lefkada	1.76	194	P	Pn	03 35 54.9	+0.3

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*SOME **27** 03:56:38.8, 44°.28N×80°.00E, h10^{km}*

*NNC **27** 03:56:40.2±3.0, 44°.20N×79°.87E, h0^{km}, mb4.2, mpv2.7, Error ellipse: s-maj=21.7km s-min=9.0km az=67.0*

ISC 27 03:56:39.3±3.2**, 44°.24N**±0°.09×**80°.0E**±0°.1**, h5**^{km}±12^{km}**, n9, σ0^{s}.47**/17**, 3C-1D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNOS	Konyrlen	0.57	282	P	Pg	03 56 50.0	-0.4
	1.5nm,0.1s						
KNOS				S	Sg	03 56 58.1	+0.3
	4.9nm,0.2s						
PDGK	Podgornoye	0.97	201	⇓P	Pg	03 56 58.3	+0.3
	1.2nm,0.9s						
PDGK				⇑S	Sg	03 57 10.2	-0.4
	1.0nm,0.5s						
SHLS	Shalkode	1.14	199	eP	Pg	03 57 00.5	-0.7
	2.7nm,0.2s						
SHLS				eS	Sg	03 57 16.1	+0.1
	4.0nm,0.2s						
KPKS	Kokpek	1.21	230	P	Pg	03 57 02.2	-0.2
	0.4nm,0.1s						
KPKS				S	Sn	03 57 19.0	-0.7
	2.7nm,0.2s						
KPKS	Kokpek	1.21	230	eP	Pg	03 57 02.2	-0.2
	0.4nm,0.1s						
KPKS				eS	Sn	03 57 19.0	-0.7
	2.7nm,0.2s						
UZB	Uzynbulak	1.29	212	P	Pg	03 57 03.8	-0.2
	3.6nm,0.2s						
UZB				S	Sn	03 57 21.9	0.0
	3.7nm,0.1s						
UZB	Uzynbulak	1.29	212	eP	Pg	03 57 03.8	-0.2
	3.6nm,0.2s						
UZB				eS	Sn	03 57 21.9	0.0
	3.7nm,0.1s						
SATY	Saty	1.63	224	P	Pb	03 57 10.1	+0.1
	0.9nm,0.1s						
SATY				S	Sg	03 57 32.5	+0.7
	12nm,0.2s						
KNDC	Almaty	2.40	246	⇑Pg	Pn	03 57 19.8	+0.4
	19nm,0.3s						
KNDC				⇑Lg	Lg	03 57 50.0	
	7.6nm,0.4s						

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*IDC **27** 04:08:51.2±3.1, 43°.52S×74°.25W, h0^{km}, mb3.5/3, mbtmp3.5/4, ML3.6/1, MS3.3/3, Error ellipse: s-maj=87.2km s-min=44.5km az=161.0*

*GUC **27** 04:08:55.5±0.8, 43°.24S×74°.33W, h6^{km}±2^{km}, ML3.6*

ISC 27 04:08:55.0±1.6**, 43°.23S**±0°.03×**74°.34W**±0°.07**, h10**^{km}±11^{km}**, n26, σ1^{s}.11**/36**, MS3.0**/3**, 2C-2D, Southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO07	Milladeo Hill,	0.51	77	⇓iP	Pb	04 09 06.8	+0.8
GO07				i S	Sb	04 09 13.6	+0.2
LL07	Hotel Espejo d	0.75	58	⇓iP	Pb	04 09 10.8	+0.7
LL07				i S	Sb	04 09 21.5	+1.2
LL07				IAML		04 09 23.1	
	comp=N,8μm,0.3s						
LL06	Loncomilla	1.14	28	eP	Pg	04 09 16.1	-0.9
LL06				i S	Sg	04 09 32.6	+0.8
LL06				IAML		04 09 34.4	
	comp=E,5μm,0.3s						
VNTQ	Ventisquero	1.43	76	eP	Pn	04 09 20.5	-0.5
VNTQ				e		04 09 33.0	
VNTQ				i S	Sb	04 09 40.4	+0.5
TBIO	Turbio	1.47	78	⇑iP	Pn	04 09 21.2	-0.3
TBIO				i S	Sn	04 09 41.0	+0.3
PDRA	Piedra	1.51	76	⇑iP	Pn	04 09 21.9	-0.4
PDRA				i S	Sn	04 09 42.7	+0.7
PDRA				IAML		04 09 46.9	
	comp=N,815nm,0.2s						
LJUN	La Junta	1.56	120	eP	Pn	04 09 22.9	+0.1
LJUN				eS	Sn	04 09 43.9	+0.8
LJUN				IAML		04 09 48.6	
	comp=E,647nm,0.3s						
LL01	San Ignacio de	1.66	60	eP	Pn	04 09 24.8	+0.7
LL01				i S	Sb	04 09 47.2	+0.8
AY01	Puyuhuapi	1.71	135	eP	Pn	04 09 24.9	+0.1
AY01				eS	Sn	04 09 47.4	+0.7
AY01				IAML		04 09 57.0	
	comp=N,1μm,0.5s						
MGDN	Magdalena	1.74	144	eP	Pn	04 09 25.8	+0.6
MGDN				i S	Sn	04 09 48.5	+1.2
LL02	Futaleuf	1.82	90	eP	Pn	04 09 26.9	+0.5
LL02				i S	Sn	04 09 51.0	+1.4
LL05	Los Muermos	1.94	20	eP	Pn	04 09 28.8	+0.8
LL05				eS	Sn	04 09 53.9	+1.6
LL05				IAML		04 10 04.0	
	comp=N,774nm,0.3s						
ETRA	Estrella	2.08	160	eP	Pn	04 09 31.6	+1.8
ETRA				i S	Sn	04 09 57.4	+1.7
CUEV	Cuervo	2.13	156	eP	Pn	04 09 32.2	+1.5
CUEV				eS	Sb	04 09 59.9	-0.5
CUEV				IAML		04 10 05.6	
	comp=E,810nm,0.6s						
AYSN	Puerto Aysn	2.45	152	eP	Pb	04 09 40.6	+1.4
CHAC	Puerto Chacabu	2.47	153	eP	Pn	04 09 37.4	+2.2
CHAC				i S	Sb	04 10 08.8	-1.2
CHAC				IAML		04 10 20.1	
	comp=E,208nm,0.4s						
COYC	Coyhaique	2.85	146	eP	Pb	04 09 44.7	-1.2
PLCA	Paso Flores	3.77	50	Pn	Pn	04 09 54.1	+0.9
	comp=E,0.9nm,0.3s,baz=232,slow=15,SNR=30						
PLCA				Lg	Lg	04 10 47.3	
	comp=E,3.0nm,0.3s,baz=74,slow=3.7,SNR=4.2						
	comp=E,3.3nm,0.4s						
H03S1	Juan Fernandez	10.03	338	T	T	04 21 16.8	
	baz=160,slow=74,SNR=17						
H03S2	Juan Fernandez	10.04	338	T	T	04 21 15.7	
	baz=160,slow=74,SNR=16						
H03S3	Juan Fernandez	10.05	338	T	T	04 21 18.0	
	baz=160,slow=74,SNR=19						
CPUP	Villa Florida	21.83	45	P	P	04 13 45.8	-1.6
	comp=E,1.7nm,0.6s,baz=218,slow=12,SNR=11						
CPUP				LR	LR	04 22 57.1	
	comp=E,43nm,18.3s,baz=26,slow=38						
	comp=E,1.7nm,0.6s						
LPAZ	La Paz	27.37	13	LR	LR	04 27 57.6	
	comp=E,46nm,19.8s,baz=80,slow=42						
VNDA	Vanda	54.71	193	LR	LR	04 39 07.5	
	comp=E,50nm,18.6s,baz=6.5,slow=33						
TXAR	Lajitas Array	77.07	334	P	P	04 20 47.9	-0.3
	comp=E,0.2nm,0.8s,baz=140,slow=4.9,SNR=2.1						
	comp=E,0.2nm,0.8s						
TORD	Torodi Ar. Bea	89.00	71	P	P	04 21 48.3	-1.8
	comp=E,0.5nm,0.9s,baz=245,slow=3.0,SNR=2.7						
	comp=E,0.5nm,0.9s						

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*IDC **27** 04:11:00.7±5.2, 6°.56S×147°.41E, h100^{km}±56^{km}, mb3.0/3, mbtmp3.5/5, Error ellipse: s-maj=71.0km s-min=34.7km az=127.0*

ISC 27 04:10:54.8±1.3**, 6°.2S**±0°.1×**147°.1E**±0°.3**, h35**^{km}**, n6, σ2^{s}.03**/7**, mb3.3**/3**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.23	179	P	Pn	04 11 45.5	+2.5
	91nm,0.3s,baz=14,slow=8.3,SNR=79						
PMG				S	Sn	04 12 18.4	-1.9
	72nm,0.3s,baz=101,slow=22,SNR=7.3						
WRA	Warramunga Arr	18.46	221	P	P	04 15 07.0	-0.8
	0.3nm,0.3s,baz=46,slow=11,SNR=6.0						
ASAR	Alice Springs	21.53	215	P	P	04 15 39.7	-1.5
	0.7nm,0.5s,baz=50,slow=8.7,SNR=19						
	0.7nm,0.5s						
MKAR	Makanchi Array	77.67	320	P	P	04 22 49.1	+1.3
	0.1nm,0.4s,baz=126,slow=3.9,SNR=1.7						
	0.1nm,0.4s						
ILAR	Eielson Array	85.59	23	P	P	04 23 27.8	-1.5
	0.3nm,0.8s,baz=252,slow=3.5,SNR=4.1						
	0.3nm,0.8s						
TORD	Torodi Ar. Bea	145.20	284	PKPbc	PKPbc	04 30 29.5	0.0
	0.9nm,0.6s,baz=66,slow=5.1,SNR=10.0						

FUNV 27 04:20:26.3, 10°.34N×62°.33W, h1^{km}, MW3.7, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCRV	Puerto La Cruz	2.27	266	eP	Pn	04 21 03.9	-1.2
PCRV				eS	Sn	04 21 31.4	-2.4
TACV	Tcata	4.62	268	eP	Pn	04 21 36.7	-0.7
TACV				eS	Sn	04 22 27.3	-4.6
CACV	CAICARA DEL OR	4.99	237	eP	Pn	04 21 34.7	-7.6
CACV				eS	Sn	04 22 26.2	-14
BENV	Beln	5.20	266	eP	Pn	04 21 44.6	-0.7
BENV				eS	Sn	04 22 40.9	-5.2
TURV	Turiamo	5.42	272	eP	Pn	04 21 46.3	-2.0
TURV				eS	Sn	04 22 45.4	-6.0
MAPV	Macapo	6.05	266	eP	Pn	04 21 55.4	-1.6
MAPV				eS	Sn	04 23 00.5	-6.5
TEPV	Terepaima	6.76	267	eP	Pn	04 22 04.4	-2.4
TEPV				eS	Sn	04 23 18.1	-6.5

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*IDC **27** 04:21:58.8±0.9, 36°.87N×143°.72E, h0^{km}, mb3.6/12, mbtmp3.7/15, ML3.8/3, Error ellipse: s-maj=21.6km s-min=18.3km az=111.0*

*NEIC **27** 04:22:00.9±2.0, 36°.93N±0°.08×143°.7E±0°.1, h10^{km}±1^{km}, mb4.4/6, Error ellipse: s-maj=19.1km s-min=12.8km az=108.0*

*NIED **27** 04:22:02.6, 36°.98N×143°.61E, h47^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-2.62; M$_{\theta\theta}$1.57; M$_{\phi\phi}$1.05; M$_{r\theta}$-0.57; M$_{\theta\phi}$1.51; M$_{\phi r}$1.45; Fault plane solution: M$_{0}$3.13000×10^{14} NP1:ϕ_{s}72.00000°, δ45.00000°, λ-53.00000°. NP2:ϕ_{s}206.00000°, δ56.00000°, λ-120.00000°.*

*JMA **27** 04:22:02.6±0.3, 37°.0N±1°.0×14°4E±°, h47^{km}, MV3.7/28, FAR E OFF CENTRAL HONSHU*

ISC 27 04:22:03.9±0.7**, 36°.94N**±0°.05×**143°.64E**±0°.06**, h35**^{km}**, n48, σ1^{s}.39**/53**, mb3.8**/16**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.20	309	eP	Pn	04 22 37.4	-0.6
JIKH				eS	Sn	04 23 02.7	-1.2
JFK	Kawauchi	2.25	282	P	Pn	04 22 37.9	-0.7
JFK				S	Sn	04 23 04.2	-1.0
ONAJ	Iwakimizuishiy	2.28	275	eP	Pn	04 22 39.0	0.0
JMST	Minamisoumatoc	2.33	291	S	Sn	04 23 06.0	-1.1
JIO	Ouri	2.37	310	P	Pn	04 22 39.4	-0.8
JIO				eS	Sn	04 23 06.3	-1.6
JOTO	OTAMA OYAMA	2.71	284	P	Pn	04 22 45.7	+0.8
JOTO				S	Sn	04 23 17.0	+0.5
JMK	Ichinoseki	2.77	317	P	Pn	04 22 45.3	-0.5
JOM	Ohasama	3.13	325	P	Pn	04 22 51.1	+0.4
BSO1	Boso 1	3.14	224	P	Pn	04 22 50.1	-0.3
JYK	Kaneyama	3.26	308	P	Pn	04 22 52.6	+0.2
JAG	Ashikaga	3.40	263	P	Pn	04 22 54.6	+0.2
JRY	Ryogami san	3.93	258	eP	Pn	04 23 01.5	-0.2
JOD2	Odawara 2	4.05	247	P	Pn	04 23 03.9	+0.5

JOD2				eS	Sn	04 23 47.8	-1.7
MJAR	Matsushiro Arr	4.38	266	Pn	Pn	04 23 08.7	+0.8
	0.6nm,0.3s,baz=88,slow=15,SNR=14						
MJAR				Sn	Sn	04 24 00.7	+3.0
	0.2nm,0.3s,baz=92,slow=27,SNR=4.3						
	4.2nm,0.3s						
MJAR	Matsushiro Arr	4.38	266		Pn	04 23 08.3	+0.4
MAJO	Matsushiro	4.38	266	Pn	Pn	04 23 08.7	+0.7
JSD	Sado	4.42	286	Pn	Pn	04 23 08.2	-0.2
JOT	Ohata	4.87	336	eP	Pn	04 23 14.9	+0.3
JHJ2	Mitsune	4.94	221	Pn	Pn	04 23 14.2	-1.3
JHJ	Hachijo jima 2	4.95	221	Pn	Pn	04 23 14.4	-1.3
	35nm,0.3s,baz=88,slow=21,SNR=2.2						
JHJ				Sn	Sn	04 24 07.0	-4.7
	33nm,0.3s,baz=79,slow=24,SNR=1.5						
	162nm,0.5s						
ERM	Erimo	5.08	356	Pn	Pn	04 23 15.4	-2.1
JKA	Kamikawa-asahi	7.21	354		Pn	04 23 45.1	-1.6
ASAJ	Asahikawa	7.21	354	Pn	Pn	04 23 45.8	-0.9
	2.1nm,0.3s,baz=233,slow=7.4,SNR=6.6						
ASAJ				Sn	Sn	04 25 03.3	-4.1
	0.7nm,0.3s,baz=302,slow=25,SNR=1.6						
	5.8nm,0.4s						
MDJ	Mudanjiang	13.11	310	Pn	Pn	04 25 04.7	-2.7
HILR	Hailar Array B	21.38	314	P	P	04 26 47.5	-0.7
	2.4nm,0.6s,baz=114,slow=12,SNR=5.1						
	2.4nm,0.6s						
SEY	Seymchan	26.57	9	P	P	04 27 39.8	+1.5
	1.1nm,0.5s,baz=157,slow=7.7,SNR=1.8						
	1.1nm,0.5s						
H11N2	WAKE ISLAND Hy	26.59	124	T	T	04 54 37.8	
	baz=316						
H11N1	WAKE ISLAND Hy	26.60	124	T	T	04 54 37.8	
	baz=316						
H11N3	WAKE ISLAND Hy	26.61	124	T	T	04 54 36.6	
	baz=316						
SONM	Songino Array	29.32	304	P	P	04 28 04.4	+1.3
	0.5nm,0.6s,baz=88,slow=10,SNR=3.0						
	0.5nm,0.6s						
ZALV	Zalesovo Beam	43.30	312	P	P	04 30 03.1	+1.2
	0.3nm,0.3s,baz=102,slow=4.9,SNR=2.0						
	0.3nm,0.3s						
ZALV	Zalesovo Beam	43.30	312	P	P	04 30 02.5	+0.6
G18K	Tagagawik	43.83	30	P	P	04 30 07.0	+0.9
G18K				IAmb	IAmb	04 30 27.9	
	comp=Z,6.6nm,1.4s						
E19K	Redstone River	44.71	28	P	P	04 30 14.4	+1.3
E19K				IAmb	IAmb	04 30 36.6	
	comp=Z,3.7nm,1.3s						
MKAR	Makanchi Array	45.68	303	P	P	04 30 20.6	-0.6
	comp=Z,0.2nm,0.7s,baz=90,slow=7.4,SNR=2.1						
	comp=Z,0.2nm,0.7s						
ILAR	Eielson Array	48.62	32	P	P	04 30 43.4	-0.4
	comp=Z,0.3nm,0.8s,baz=278,slow=7.3,SNR=4.2						
	comp=Z,0.3nm,0.8s						
G30M	tAoh Zraii Nji	52.83	29	P	P	04 31 16.3	+0.7
WB0	Warramunga Arr	57.07	190	P	P	04 31 46.0	-0.5
WR8	Warramunga Arr	57.24	190	P	P	04 31 47.2	-0.6
WR8				IAmb	IAmb	04 32 29.5	
	comp=Z,13nm,1.5s						
WRA	Warramunga Arr	57.25	190	P	P	04 31 47.4	-0.5
	comp=Z,1.0nm,0.8s,baz=9.0,slow=6.9,SNR=4.8						
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	60.97	190	P	P	04 32 13.1	-0.5
	comp=Z,0.3nm,0.5s,baz=7.1,slow=7.6,SNR=4.7						
	comp=Z,0.3nm,0.5s						
BLKN	Baker Lake	68.77	24	P	P	04 33 03.7	-0.1
BLKN				IAmb	IAmb	04 33 10.2	
	comp=Z,6.7nm,1.4s						
SUMG	Summit	70.77	1	P	P	04 33 17.9	+1.4
HFS	Hagfors	74.90	337	P	P	04 33 41.5	+0.8
	comp=Z,0.6nm,0.6s,baz=38,slow=7.3,SNR=5.2						
	comp=Z,0.6nm,0.6s						
NOA	NORSAR Array B	74.95	338	P	P	04 33 41.9	+0.9
	comp=Z,0.3nm,0.6s,baz=49,slow=5.4,SNR=2.3						
	comp=Z,0.3nm,0.6s						
PDAR	Pinedale Array	76.45	46	P	P	04 33 51.2	+1.0
	comp=Z,0.2nm,0.6s,baz=274,slow=8.3,SNR=2.0						
	comp=Z,0.2nm,0.6s						
TXAR	Lajitas Array	88.75	54	P	P	04 34 54.8	+0.6
	comp=Z,0.5nm,0.6s,baz=290,slow=3.4,SNR=7.5						
	comp=Z,0.5nm,0.6s						
TXAR	Lajitas Array	88.75	54	P	P	04 34 54.7	+0.4

SJA ***27*** *04:44:16.4±0.6, 19°.14S×69°.42W, h108^{km}±3^{km}, ML4.0, MW3.9*

IDC ***27*** *04:44:17.4±1.0, 19°.19S×69°.46W, h107^{km}±7^{km}, mb3.4/5, mbtmp3.7/7, MS3.1/2, Error ellipse: s-maj=27.1km s-min=22.4km az=51.0*

GUC ***27*** *04:44:18.7±0.9, 19°.13S×69°.48W, h97^{km}±4^{km}, ML4.0*

VAO ***27*** *04:44:25.8±1.5, 18°.91S×68°.59W, h120^{km}±7^{km}, mb3.9, Presumed earthquake*

ISC 27 04:44:16.8±0.6**, 19°.13S**±0°.03×**69°.42W**±0°.05**, h100**^{km}±5^{km}**, n74, σ1^{s}.94**/95**, mb3.4**/3**, 4C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO01	Chusmiza	0.58	158	⇓iP	Pn	04 44 35.1	+1.3
GO01				i S	Sn	04 44 48.1	+1.7
GO01	Chusmiza	0.58	158	eP	Pn	04 44 35.0	+1.3
GO01				eS	Sn	04 44 48.5	+2.2
GO01				IAML		04 44 50.3	
	comp=Z,3μm,0.6s						
PB11	IPOC Station P	0.67	199	⇓iP	Pn	04 44 35.2	+1.1
PB11				i S	Sn	04 44 48.2	+1.1
PB11				IAML		04 44 49.0	
	comp=E,11μm,0.3s						
PB11	IPOC Station P	0.67	199	eP	Pn	04 44 34.5	+0.3
PB11				IAML		04 44 49.1	
	comp=Z,4μm,0.4s						
PX02	IPOC Station P	0.75	282	⇑iP	Pn	04 44 34.8	0.0
PX02				i S	Sn	04 44 48.0	-0.3
PB16	IPOC Station P	0.79	354	⇓iP	Pn	04 44 37.5	+1.8
PB16				i S	Sn	04 44 51.9	+2.1
PB16				IAML		04 44 53.2	
	comp=E,6μm,0.3s						
PB16	IPOC Station P	0.79	354	eP	Pn	04 44 36.7	+1.0
PB16				IAML		04 44 53.9	
	comp=Z,2μm,0.3s						
PB12	IPOC Station P	1.00	300	⇑iP	Pn	04 44 38.1	+0.8
PB12				eS	Sn	04 44 52.7	0.0
PB12				IAML		04 44 54.9	
	comp=E,5μm,0.4s						
PB12	IPOC Station P	1.00	300	eP	Pn	04 44 37.4	+0.1
PB12				IAML		04 44 58.1	
	comp=Z,2μm,0.2s						
PB08	IPOC Station P	1.04	166	⇓iP	Pn	04 44 39.7	+1.6
PB08				i S	Sn	04 44 55.8	+1.7
PB08	IPOC Station P	1.04	166	eP	Pn	04 44 39.0	+0.9
PB08				eS	Sn	04 44 55.7	+1.7
PB08				IAML		04 44 57.0	
	comp=Z,1μm,0.5s						
AP01	Chacalluta	1.15	311	eP	Pn	04 44 40.1	+1.3
AP01				i S	Sn	04 44 57.0	+1.5
AP01	Chacalluta	1.15	311	eP	Pn	04 44 40.2	+1.3
AP01				eS	Sn	04 44 58.5	+3.0
AP01				IAML		04 45 01.3	
	comp=Z,5μm,0.2s						
HMBC	Humberstone	1.23	201	⇑iP	Pn	04 44 40.9	+1.0
HMBC				i S	Sn	04 44 58.1	+0.8
HMBC				IAML		04 45 03.2	
	comp=N,3μm,0.4s						
HMBC	Humberstone	1.23	201	eP	Pn	04 44 40.9	+1.0
HMBC				eS	Sn	04 44 59.2	+1.8
HMBC				IAML		04 45 07.9	
	comp=Z,2μm,0.3s						
PX03	IPOC Station P	1.29	189	eP	Pn	04 44 40.8	+0.2
PX03				eS	Sn	04 44 59.3	+0.8
TA02	Huaiquique	1.32	210	eP	Pn	04 44 41.8	+0.9
TA02				eS	Sn	04 44 59.8	+0.7
TA02				IAML		04 45 02.5	
	comp=N,4μm,0.4s						
TA02	Huaiquique	1.32	210	eP	Pn	04 44 41.8	+0.9
TA02				eS	Sn	04 45 07.4	+8.3
TA02				IAML		04 45 08.1	
	comp=Z,1μm,0.1s						
PB18	Visviri	1.53	358	eP	Pn	04 44 47.5	+3.6
PB18				i S	Sn	04 45 06.6	+2.2
TA01	Diego Aracena	1.60	206	⇑iP	Pn	04 44 45.3	+1.0
TA01				eS	Sn	04 45 05.0	-0.1
TA01				IAML		04 45 11.7	
	comp=N,2μm,0.3s						
TA01	Diego Aracena	1.60	206	eP	Pn	04 44 44.5	+0.2
TA01				eS	Sn	04 45 06.4	+1.2
TA01				IAML		04 45 12.2	
	comp=Z,726nm,0.2s						
PATCX	Punta Patache	1.82	202	eP	Pn	04 44 47.8	+0.6
PATCX				i S	Sn	04 45 10.7	+0.4
PATCX				IAML		04 45 19.4	
	comp=E,2μm,0.7s						
PATCX	Punta Patache	1.82	202	eP	Pn	04 44 47.7	+0.6
PATCX				IAML		04 45 12.3	
	comp=Z,627nm,0.5s						
PB01	IPOC Station P	1.91	182	eP	Pn	04 44 49.5	+1.3
PB01				i S	Sn	04 45 13.8	+1.5
PB01				IAML		04 45 17.3	
	comp=E,1μm,0.2s						
PB01	IPOC Station P	1.91	182	eP	Pn	04 44 49.8	+1.6
PB01				eS	Sn	04 45 09.0	-3.2
PB01				IAML		04 45 24.1	
	comp=Z,632nm,0.2s						
PB02	IPOC Station P	2.23	191	eP	Pn	04 44 53.7	+1.2
PB02				eS	Sn	04 45 19.9	+0.2
PB02				IAML		04 45 30.0	
	comp=E,2μm,0.3s						
PB02	IPOC Station P	2.23	191	eP	Pn	04 44 53.3	+0.8
PB02				eS	Sn	04 45 22.3	+2.6
PB02				IAML		04 45 29.9	
	comp=Z,2μm,0.3s						
PB07	IPOC Station P	2.62	190	eP	Pn	04 44 59.2	+1.5
PB07				IAML		04 45 40.9	
	comp=N,931nm,0.2s						
PB07	IPOC Station P	2.62	190	eP	Pn	04 44 59.6	+1.9
PB07				eS	Sn	04 45 28.9	-0.2
PB07				IAML		04 45 38.7	
	comp=Z,790nm,0.5s						
PB09	IPOC Station P	2.66	176	eP	Pn	04 45 00.6	+2.4
PB09	IPOC Station P	2.66	176	eP	Pn	04 45 00.1	+1.9
PB09				IAML		04 45 44.9	
	comp=Z,299nm,0.4s						
PB03	IPOC Station P	2.92	186	eP	Pn	04 45 02.7	+1.0
PB03	IPOC Station P	2.92	186	eP	Pn	04 45 02.7	+1.0
PB03				eS	Sn	04 45 38.0	+1.7
PB03				IAML		04 45 46.8	
	comp=Z,504nm,0.2s						
LPAZ	La Paz	3.08	24	P	Pn	04 45 07.7	+3.5
	comp=Z,10nm,0.3s,baz=292,slow=3.4,SNR=208						
LPAZ				S	Sn	04 45 40.8	+0.2
	comp=Z,18nm,0.5s,baz=245,slow=1.6,SNR=4.5						
LPAZ	La Paz	3.08	24	eP	Pn	04 45 08.0	+3.8
LPAZ	La Paz	3.08	24	eP	Pn	04 45 07.5	+3.3
PB06	IPOC Station P	3.56	182	eP	Pn	04 45 11.8	+1.6
PB06	IPOC Station P	3.56	182	eP	Pn	04 45 11.3	+1.1
PB06				eS	Sn	04 45 57.9	+6.3
PB06				IAML		04 46 08.2	
	comp=Z,195nm,0.3s						
PB05	IPOC Station P	3.78	191	eP	Pn	04 45 13.8	+0.6
PB05	IPOC Station P	3.78	191	eP	Pn	04 45 14.0	+0.9
PB05				eS	Sn	04 45 38.1	-19
PB05				IAML		04 46 16.9	
	comp=Z,212nm,0.4s						
AF01	San Pedro de A	3.98	163	eP	Pn	04 45 20.5	+4.5
PB10	IPOC Station P	4.49	193	eP	Pn	04 45 23.3	+0.7
PB10				IAML		04 46 39.3	
	comp=Z,59nm,0.4s						
SIV	San Ignacio	8.55	70	P	Pn	04 46 16.8	-1.1
	comp=Z,7.1nm,0.4s,baz=259,slow=8.8,SNR=64						
SIV				S	Sn	04 47 48.3	-4.3
	comp=Z,1.4nm,0.5s,baz=323,slow=21,SNR=1.4						
SIV				LR	LR	04 50 24.6	
	comp=Z,35nm,20.5s,baz=302,slow=43						
PTLB	Pontes e Lacer	10.48	71	eP	Pn	04 46 42.2	-1.9
VILB	Vilhena	10.78	57	eP	Pn	04 46 47.0	-1.1
MURT	Porto Murtinho	11.36	105	eP	Pn	04 46 54.0	-1.9
BDQN	Bodoquena, MS	12.00	98	eP	Pn	04 47 02.6	-1.9
CPUP	Villa Florida	13.26	125	P	Pn	04 47 20.5	-0.6
	comp=Z,1.2nm,0.7s,baz=300,slow=11,SNR=3.8						
H03N1	Juan Fernandez	16.59	209	T	T	05 05 22.5	
	baz=32,slow=74						
H03N2	Juan Fernandez	16.60	209	T	T	05 05 25.3	
	baz=32						
H03N3	Juan Fernandez	16.61	209	T	T	05 05 24.3	
	baz=32,slow=74						
PTGB	Pitanga	17.03	112	eP	P	04 48 10.0	+0.8
ITAB	Concordia	17.81	120	eP	Pn	04 48 19.6	+1.3
NPGB	Novo Progresso	18.20	51	eP	P	04 48 20.9	-1.0
SNDB	Serra Nova Dou	18.84	70	eP	P	04 48 28.3	-0.8
BB19B	Bebedouro	19.72	99	eP	P	04 48 38.0	-0.6
ITTB	Itaituba	19.84	44	eP	P	04 48 38.9	-0.9
BDFB	Brasilia	20.72	84	P	Pn	04 48 51.5	-1.2
	comp=Z,2.5nm,0.4s,baz=268,slow=8.4,SNR=7.4						
	comp=Z,2.5nm,0.4s						
PLCA	Paso Flores	21.56	182	P	P	04 48 58.8	+0.6
	comp=Z,1.9nm,0.9s,baz=0.0,slow=16,SNR=3.3						
	comp=Z,1.9nm,0.9s						
PMNB	Patos De Minas	21.76	92	eP	P	04 48 59.5	-1.1
SMTB	Santa Maria do	23.48	67	eP	P	04 49 17.3	-0.5
JANB	Januaria	24.33	84	eP	P	04 49 24.9	-0.6
DIAM	Diamantina, MG	24.40	92	eP	P	04 49 26.1	0.0
SDBA	SAO DESIDERIO	24.50	78	eP	P	04 49 26.8	-0.2
TXAR	Lajitas Array	58.42	325	P	P	04 54 00.7	-1.5
	comp=Z,0.2nm,0.7s,baz=128,slow=6.3,SNR=2.6						
TXAR				LR	LR	05 20 56.8	
	comp=Z,73nm,19.8s,baz=324,slow=38						
	comp=Z,0.2nm,0.7s						
TORD	Torodi Ar. Bea	77.03	71	P	P	04 55 58.4	-1.0
	comp=Z,0.5nm,0.3s,baz=249,slow=4.6,SNR=9.7						
TORD				pP	pP	04 56 25.8	-0.8
	comp=Z,0.9nm,0.8s,baz=259,slow=5.2,SNR=3.5						
	comp=Z,0.5nm,0.3s						
YKA	Yellowknife Ar	88.80	341	P	P	04 57 00.2	+1.2
	comp=Z,0.9nm,0.8s,baz=141,slow=4.1,SNR=18						
YKA				pP	pP	04 57 27.3	+1.1
	comp=Z,0.2nm,0.6s,baz=142,slow=4.3,SNR=2.7						
	comp=Z,0.9nm,0.8s						
H11S2	WAKE ISLAND Hy	127.07	279	T	T	07 22 40.4	
	baz=101,slow=74,SNR=42						
H11S1	WAKE ISLAND Hy	127.08	279	T	T	07 22 36.3	
	baz=101,slow=74,SNR=19						
H11S3	WAKE ISLAND Hy	127.09	279	T	T	07 22 36.9	
	baz=101,slow=74,SNR=20						
H11N3	WAKE ISLAND Hy	127.09	281	T	T	07 22 45.4	
	baz=100,slow=74,SNR=12						
H11N2	WAKE ISLAND Hy	127.10	281	T	T	07 22 45.8	
	baz=100,slow=74,SNR=10.0						
H11N1	WAKE ISLAND Hy	127.11	281	T	T	07 22 46.8	
	baz=100,slow=74,SNR=5.3						
SONM	Songino Array	151.16	6	PKPbc	PKiKP	05 03 58.1	-1.0
	comp=Z,0.2nm,0.4s,baz=265,slow=1.1,SNR=3.9						
SONM				pPKPbc	pPKPbc	05 04 27.1	-0.1
	comp=Z,0.5nm,0.6s,baz=278,slow=2.0,SNR=3.0						

IDC ***27*** *04:53:44.8±0.6, 50°.39S×130°.51E, h0^{km}, mb4.8/9, mbtmp4.8/9, MS4.5/38, Error ellipse: s-maj=28.3km s-min=11.4km az=107.0*

GCMT ***27*** *04:53:46.7±0.2, 50°.36S±0°.01×130°.57E±0°.02, h12^{km}, MW5.1/115, Moment Tensor Solution. s59,c76; s115,c177; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.20±.12; $M_{\theta\theta}$6.52±.10; $M_{\phi\phi}$-5.32±.12; $M_{r\theta}$0.38±.30; $M_{\theta\phi}$2.10±.11; $M_{\phi r}$-1.31±.32; Best double couple: $M_0$6.47200×10^{16} NP1:ϕ_s36.00000°,δ78.00000°, λ-170.00000°. NP2:ϕ_s304.00000°,δ80.00000°, λ-12.00000°. Principal axes: T 6.8840, Plg1.0000°, Azm350.0000°; N -0.8250, Plg74.0000°, Azm84.0000°; P -6.0590, Plg16.0000°, Azm260.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***27*** *04:53:46.8, 50°.57S×130°.24E, h24^{km}, Moment Tensor Solution. Duration: 1^{s}.0 Moment tensor: Scale 10^{16} Nm; M_{rr}-0.59; $M_{\theta\theta}$4.94; $M_{\phi\phi}$-4.35; $M_{r\theta}$-2.95; $M_{\theta\phi}$2.06; $M_{\phi r}$-1.23; Fault plane solution: $M_0$6.03000×10^{16} NP1: ϕ_s306.14000°,δ66.21000°,λ9.85000°. NP2:ϕ_s212.13000°, δ81.00000°,λ155.90000°. Principal axes: T 6.7334, Plg23.0000°, Azm167.0000°; N -1.8391, Plg64.0000°, Azm13.0000°; P -4.8943, Plg10.0000°, Azm261.0000°;*

NEIC ***27*** *04:53:46.8, 50°.37S×130°.39E, h24^{km}*

NEIC ***27*** *04:53:46.8±2.3, 50°.36S±0°.08×130°.4E±0°.2, h10^{km}±1^{km}, mb5.0/33, Mww5.1/13, Error ellipse: s-maj=20.9km s-min=13.0km az=102.0*

ISC 27 04:53:47.0±0.3**, 50°.39S**±0°.06×**130°.47E**±0°.08**, h10**^{km}**, n168, σ1^{s}.54**/128**, mb5.1**/48**, MS4.5**/42**, 4C-6D, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOO	Toolangi	16.72	46		P	04 57 42.8	-0.7
BBOO	Buckleboo	18.05	15		Pn	04 57 54.8	-2.9
H01W1	Cape Leeuwin H	19.53	316	T	T	05 18 11.8	
	baz=144,slow=74,SNR=131						
H01W2	Cape Leeuwin H	19.53	316	T	T	05 18 12.5	
	baz=144,slow=74,SNR=169						
H01W3	Cape Leeuwin H	19.54	316	T	T	05 18 13.0	
	baz=144,slow=74,SNR=110						
FORT	Forrest	19.68	354		P	04 58 16.3	+0.2
NWAO	Narrogin (SRO)	20.00	326	P	P	04 58 18.4	-1.2
	20nm,1.0s,baz=179,slow=7.2,SNR=5.4						
NWAO				LR	LR	05 04 12.9	
	comp=Z,2μm,19.5s,baz=127,slow=31						
	20nm,1.0s						
NWAO	Narrogin (SRO)	20.00	326		P	04 58 20.8	+1.2
NWAO				IAmb	IAmb	04 58 22.0	
	comp=Z,95nm,1.5s						
CAN	Canberra	20.20	49		Pn	04 58 23.9	+0.2
STKA	Stephens Creek	20.27	28	P	P	04 58 21.2	-1.2
	comp=Z,30nm,1.0s,baz=188,slow=12,SNR=31						
STKA				S	Sn	05 02 11.8	-0.8
	comp=Z,2.8nm,1.0s,baz=160,slow=18,SNR=1.9						
STKA				LR	LR	05 04 53.2	
	comp=Z,1μm,20.6s,baz=197,slow=33						
	comp=Z,30nm,1.0s						
STKA	Stephens Creek	20.27	28		P	04 58 21.8	-0.7
STKA				IAmb	IAmb	04 58 24.7	
	comp=Z,115nm,0.9s						
MORW	Morawa	23.93	327	P	P	04 59 00.3	-0.8
MORW				IAmb	IAmb	04 59 03.0	
	comp=Z,65nm,1.2s						
INKA	Innaminka	23.94	23		P	04 59 00.3	-0.8
INKA				IAmb	IAmb	04 59 02.8	
	comp=Z,30nm,0.9s						
WHZ	Wether Hill Ro	25.23	94	P	P	04 59 12.6	-0.2
WHZ				IAmb	IAmb	04 59 15.7	
	comp=Z,52nm,1.0s						
ARMA	Armidale	25.48	46	P	P	04 59 17.9	+2.6
ASAR	Alice Springs	26.81	7	P	P	04 59 25.5	-1.8
	comp=Z,45nm,1.0s,baz=180,slow=8.8,SNR=127						
ASAR				PcP	PcP	05 02 48.6	-1.3
	comp=Z,3.0nm,0.8s,baz=186,slow=1.9,SNR=5.9						
ASAR				S	S	05 04 06.1	+2.7
	comp=Z,0.7nm,1.1s,baz=183,slow=13,SNR=1.8						
ASAR				LR	LR	05 09 00.6	
	comp=Z,2μm,20.2s,baz=182,slow=34						
	comp=Z,45nm,1.0s						
ASAR	Alice Springs	26.81	7	P	P	04 59 25.7	-1.6
AS31	Alice Springs	26.81	7	P	P	04 59 25.6	-1.7
VNDA	Vanda	29.68	167	P	P	04 59 51.7	-0.7
	comp=Z,16nm,0.8s,baz=319,slow=9.2,SNR=57						
VNDA				LR	LR	05 10 25.4	
	comp=Z,2μm,21.7s,baz=330,slow=34						
	comp=Z,16nm,0.8s						
VNDA	Vanda	29.68	167	P	P	04 59 52.2	-0.2
VNDA				IAmb	IAmb	04 59 58.6	
	comp=Z,21nm,0.8s						
PSA00	Pilbara Seismi	29.95	340	P	P	04 59 54.5	-0.8
PSA00				IAmb	IAmb	04 59 57.1	
	comp=Z,16nm,1.2s						
WR8	Warramunga Arr	30.54	7	P	P	04 59 58.5	-2.0
WRA	Warramunga Arr	30.54	7	P	P	04 59 58.3	-2.2
	comp=Z,31nm,1.1s,baz=190,slow=8.1,SNR=33						
WRA				PcP	PcP	05 02 56.3	-2.9
	comp=Z,1.3nm,0.8s,baz=252,slow=4.4,SNR=2.2						
	comp=Z,31nm,1.1s						
WRA	Warramunga Arr	30.54	7	P	P	04 59 57.9	-2.5
SBA	Scott Base	30.66	166	P	P	05 00 02.3	+1.3
SBA				IAmb	IAmb	05 00 04.5	
	comp=Z,22nm,1.0s						
WB0	Warramunga Arr	30.72	7	IAmb	IAmb	05 00 39.7	
	comp=Z,22nm,1.1s						
FITZ	Fitzroy Crossi	32.45	351	LR	LR	05 12 30.4	
	comp=Z,2μm,19.7s,baz=180,slow=35						
FITZ	Fitzroy Crossi	32.45	351	P	P	05 00 16.4	-0.8
CTA	Charters Tower	32.73	28	LR	LR	05 13 41.6	
	comp=Z,1μm,18.0s,baz=200,slow=37						
CTAO	Charters Tower	32.73	28	P	P	05 00 19.0	-0.7
CTAO				IAmb	IAmb	05 00 21.8	
	comp=Z,26nm,1.2s						
RTZ	Ruatahuna	34.65	88	P	P	05 00 35.5	-0.9
URZ	Urewera	34.94	88	LR	LR	05 13 19.6	
	comp=Z,1μm,18.9s,baz=218,slow=34						
MAW	Mawson	36.57	216	P	P	05 00 52.5	0.0
	comp=Z,5.8nm,0.9s,baz=97,slow=9.7,SNR=6.8						
MAW				LR	LR	05 12 57.8	
	comp=Z,324nm,18.7s,baz=84,slow=32						
	comp=Z,5.8nm,0.9s						
QSPA	South Pole Qui	39.73	180	P	P	05 01 19.5	+0.2
QSPA				IAmb	IAmb	05 01 20.8	
	comp=Z,77nm,1.8s						
DZM	Mont Dzumac	39.87	58	LR	LR	05 13 46.6	
	comp=Z,623nm,21.9s,baz=213,slow=30						
DZM	Mont Dzumac	39.87	58	eS	S	05 07 32.6	+7.1
	comp=Z,68nm,26.6s						
DZM				eSS	SS	05 10 17.3	-4.4
	comp=Z,98nm,32.8s						
DZM				eLR	LR	05 12 14.7	
	comp=Z,1μm,24.9s						
BATI	Baumata	40.46	350	LR	LR	05 18 06.7	
	comp=Z,2μm,19.7s,baz=188,slow=36						
SOEI	Soe	40.84	351	P	P	05 01 29.3	+0.4
SOEI				IAmb	IAmb	05 01 49.1	
	comp=Z,33nm,1.0s						
SOEI	Soe	40.84	351	P	P	05 01 29.5	+0.6
	comp=Z,32nm,1.1s						
EDFI	Ende, Flores	42.15	347	P	P	05 01 38.2	-1.4
	comp=Z,29nm,1.3s						
DBNI	Kabupaten Domp	42.96	342	P	P	05 01 46.6	+0.4
	comp=Z,19nm,1.1s						
TWSI	Taliwang, Sumb	43.03	340	P	P	05 01 46.9	+0.2
	comp=Z,24nm,1.1s						
PMG	Port Moresby	43.14	24	LR	LR	05 19 10.6	
	comp=Z,1μm,19.9s,baz=195,slow=35						
RAO	Raoul Island	43.88	81	LR	LR	05 16 29.3	
	comp=Z,453nm,19.9s,baz=148,slow=31						
SRBI	Singaraja	44.04	338	P	P	05 01 54.6	-0.2
	comp=Z,38nm,1.1s						
SYO	Syowa Base	44.51	211	⇑eP	P	05 01 57.4	-0.6
ABJI	Asem Bagus	44.56	337	P	P	05 01 59.7	+0.7
SNJI	Sawahan-Nganju	45.24	333	P	P	05 02 06.0	+1.4
	comp=Z,44nm,1.4s						
SJI	Sawahan	45.29	333	P	P	05 02 05.8	+0.9
	comp=Z,37nm,1.0s						
KAPI	Kappang	46.11	345	P	P	05 02 09.8	-1.5
KAPI	Kappang	46.11	345	P	P	05 02 10.0	-1.3
	comp=Z,18nm,1.2s						
KPJI	Karang Pucung	46.53	330	P	P	05 02 14.8	+0.2
	comp=Z,27nm,1.3s						
SPSI	Sidrap Palu	47.14	345	P	P	05 02 19.3	0.0
	comp=Z,22nm,1.1s						
ELIB	Princess Elisa	47.84	204	dP	P	05 02 24.9	+0.6
ELIB				dPcP	PcP	05 03 54.2	+1.3
JAY	Jayapura	48.49	14	LR	LR	05 22 25.9	
	comp=Z,1μm,21.8s,baz=199,slow=36						
MMSI	Mamuju	48.53	345	P	P	05 02 30.5	+0.4
	comp=Z,37nm,0.9s						
BBKI	Banjar Baru	48.59	339	P	P	05 02 30.9	+0.3
SRPI	Serui, Papua	48.59	8	P	P	05 02 38.2	+7.6
LUWI	Luwuk	49.60	350	P	P	05 02 38.8	+0.5
	comp=Z,40nm,1.3s						
KASI	Kota Agung	49.74	325	P	P	05 02 39.5	+0.1
	comp=Z,27nm,1.1s						
H04S1	CROZET ISLANDS	49.77	242	T	T	05 56 43.5	
	baz=124,slow=76,SNR=6.6						
H04S2	CROZET ISLANDS	49.77	242	T	T	05 56 43.2	
	baz=124,slow=76,SNR=13						
H04S3	CROZET ISLANDS	49.79	242	T	T	05 56 44.6	
	baz=124,slow=76,SNR=8.0						
KLSI		50.43	326	P	P	05 02 44.6	0.0
	comp=Z,31nm,1.4s						
MDSI	Maura Dua	50.81	325	P	P	05 02 48.4	+0.9
	comp=Z,34nm,1.2s						
MRSI	Marisa	51.20	349	P	P	05 02 48.9	-1.5
MPSI	Mapaga	51.34	346	P	P	05 02 50.6	-0.9
	comp=Z,25nm,0.9s						
BELA	Belgrano 2	51.67	184	P	P	05 02 52.9	-0.4
BELA				IAmb	IAmb	05 02 55.9	
	comp=Z,15nm,1.1s						
TOLI2	Tolitoli	51.97	348	P	P	05 02 54.8	-1.4
TOLI2				IAmb	IAmb	05 02 57.0	
	comp=Z,24nm,0.9s						
TROLL	Troll, Antarti	52.56	198	⇑P	P	05 02 60.0	-0.1
	comp=Z,479nm,0.7s						
SNAA	Sanae	53.85	197	⇑P	P	05 03 09.3	-0.2

	comp=Z,584nm,1.0s						
SNAA	**Sanae**	**53.85**	**197**	P	**P**	**05 03 09.5**	**0.0**
	comp=Z,27nm,0.9s,baz=147,slow=8.6,SNR=19						
SNAA				LR	LR	05 25 09.6	
	comp=Z,942nm,20.5s,baz=168,slow=35						
	comp=Z,27nm,0.9s						
SNAA	**Sanae**	**53.85**	**197**	P	**P**	**05 03 09.7**	**+0.2**
SBUM	**Sibu**	**54.92**	**338**	IAmb	IAmb	05 03 20.2	
	comp=Z,12nm,1.1s						
SBUM	**Sibu**	**54.92**	**338**	P	**P**	**05 03 17.8**	**0.0**
	comp=Z,11nm,1.3s						
SISI	**Saibi**	**55.67**	**321**	P	**P**	**05 03 24.3**	**+1.0**
	comp=Z,19nm,1.4s						
PPI	**Padang Panjang**	**55.95**	**323**	P	**P**	**05 03 25.7**	**+0.5**
	comp=Z,28nm,1.1s						
DAV	**Davao City (W)**	**57.38**	**354**	LR	LR	05 31 32.1	
	comp=Z,154nm,18.0s,baz=155,slow=40						
MNSI	**Mandailing Nat**	**57.41**	**322**	P	**P**	**05 03 35.6**	**0.0**
	comp=Z,32nm,0.8s						
GSI	**Gunungsitoli**	**58.67**	**321**	P	**P**	**05 03 45.5**	**+1.0**
	comp=Z,6µmcomp=Z,57nm,1.5s						
PSI	**Prapat**	**59.50**	**323**	LR	LR	05 26 41.8	
	comp=Z,242nm,20.5s,baz=128,slow=33						
IPM	**Ipoh**	**60.26**	**326**	P	**P**	**05 03 55.5**	**0.0**
RAR	**Rarotonga**	**61.12**	**89**	LR	LR	05 25 43.3	
	comp=Z,233nm,20.4s,baz=240,slow=31						
KULM	**Kulim**	**61.14**	**326**	P	**P**	**05 04 00.9**	**-0.5**
KULM	**Kulim**	**61.14**	**326**	P	**P**	**05 03 59.9**	**-1.6**
MLSI	**Meulaboh, Aceh**	**61.84**	**321**	P	**P**	**05 04 04.4**	**-1.8**
PMSA	**Palmer Station**	**64.62**	**173**	LR	LR	05 32 25.4	
	comp=Z,986nm,18.0s,baz=130,slow=36						
TGY	**Tagaytay City**	**64.76**	**350**	LR	LR	05 34 35.7	
	comp=Z,178nm,20.6s,baz=108,slow=38						
GUMO	**Guam**	**64.95**	**15**	LR	LR	05 33 26.5	
	comp=Z,322nm,19.6s,baz=198,slow=37						
TBI	**Tubuai**	**66.16**	**98**	*e*S	**S**	**05 13 19.1**	**-4.1**
	comp=Z,622nm,30.0s						
TBI				*e*LQ	LQ	05 21 13.6	
	comp=Z,493nm,20.8s						
TBI				*e*LR	LR	05 24 18.2	
	comp=Z,2µm,29.0s						
TBI				*e*LR	LR	05 24 22.0	
	comp=Z,825nm,27.0s						
PPT2	**Papeete2**	**70.29**	**94**	*e*S	**S**	**05 14 15.6**	**+2.8**
	comp=Z,87nm,25.5s						
PPT2				*e*LQ	LQ	05 23 11.4	
	comp=Z,318nm,24.0s						
PPT2				*e*LR	LR	05 26 17.5	
	comp=Z,513nm,32.0s						
PPT2				*e*LR	LR	05 26 17.7	
	comp=Z,560nm,23.0s						
PPT	**Papeete**	**70.31**	**94**	LR	LR	05 30 02.9	
	comp=Z,318nm,19.0s,baz=194,slow=31						
PALK	**Pallekele**	**71.73**	**307**	LR	LR	05 31 18.4	
	comp=Z,229nm,20.6s,baz=147,slow=31						
CMAR	**Chiang Mai Arr**	**73.97**	**329**	P	**P**	**05 05 22.8**	**+0.4**
	comp=Z,4.8nm,0.9s,baz=177,slow=5.5,SNR=19						
	comp=Z,4.8nm,0.9s						
CHTO	**Chiang Mai**	**74.30**	**329**	P	**P**	**05 05 22.2**	**-2.2**
RKT	**Rikitea**	**75.34**	**108**	*e*LR	LR	05 28 39.3	
	comp=Z,2µm,28.5s						
SUR	**Sutherland**	**76.86**	**235**	LR	LR	05 32 56.7	
	comp=Z,299nm,18.4s,baz=156,slow=31						
JOW	**Kunigami**	**76.91**	**358**	LR	LR	05 37 40.6	
	comp=Z,205nm,22.0s,baz=82,slow=34						
BOSA	**Boshof**	**77.39**	**240**	P	**P**	**05 05 40.1**	**-2.1**
	comp=Z,2.7nm,0.8s,baz=153,slow=9.0,SNR=3.9						
BOSA				LR	LR	05 34 45.5	
	comp=Z,99nm,18.2s,baz=190,slow=32						
	comp=Z,2.7nm,0.8s						
JCJ	**Chichijima**	**77.84**	**11**	LR	LR	05 38 30.7	
	comp=Z,165nm,19.6s,baz=158,slow=34						
KMI	**Kunming**	**79.09**	**335**	P	**P**	**05 05 53.3**	**+1.7**
KMI				S	**S**	**05 15 51.0**	**+0.1**
KMI				pmax	pmax		
	comp=Z,18nm,1.3s						
KMI				LR	LR		
	comp=Z,330nm,14.6s						
KMI				LR	LR		
	comp=Z,300nm,17.6s						
KMI				LR	LR		
	comp=Z,460nm,16.8s						
GYA	**Guiyang**	**79.37**	**338**	⇓P	**P**	**05 05 56.8**	**+3.9**
GYA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LBTB	**Lobatse**	**79.98**	**243**	LR	LR	05 34 57.3	
	comp=Z,436nm,18.4s,baz=146,slow=31						
PZH	**PanZhiHua**	**80.68**	**334**	P	**P**	**05 06 03.0**	**+3.0**
HYB	**Hyderabad**	**81.47**	**311**	*e*P	**P**	**05 06 04.1**	**-0.2**
HYB				*e*sP	**sP**	**05 06 08.5**	**+1.1**
SSE	**Sheshan**	**81.55**	**352**	P	**P**	**05 06 06.5**	**+2.2**
SSE				S	**SKSac**	**05 16 21.5**	**-2.1**
SSE				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SSE				LR	LR		
	comp=Z,410nm,15.6s						
SSE				LR	LR		
	comp=Z,310nm,16.3s						
NJ2	**Nanjing**	**82.72**	**350**	*e*P	**P**	**05 06 13.5**	**+3.0**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
TAOE	**Nuku Hiva Isla**	**82.86**	**95**	*e*LR	LR	05 32 07.2	
	comp=Z,688nm,22.8s						
JNU	**Nakatsue**	**83.15**	**0**	LR	LR	05 41 39.3	
	comp=Z,75nm,20.7s,baz=138,slow=35						
LSZ	**Lusaka**	**86.00**	**251**	LR	LR	05 38 17.5	
	comp=Z,215nm,20.0s,baz=144,slow=31						
LYN	**LuoYang**	**86.06**	**345**	*e*P	**P**	**05 06 29.3**	**+1.9**
LYN				pmax	pmax		
	comp=Z,11nm,0.6s						
LYN				pmax	pmax		
	comp=Z,260nm,8.3s						
XAN	**Xi'an**	**86.20**	**342**	P	**P**	**05 06 28.5**	**+0.4**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
RPN	**Rapa Nui**	**86.47**	**129**	LR	LR	05 36 16.2	
	comp=Z,186nm,21.1s,baz=228,slow=30						
MJAR	**Matsushiro Arr**	**86.83**	**6**	LR	LR	05 42 19.4	
	comp=Z,284nm,21.6s,baz=182,slow=34						
PLCA	**Paso Flores**	**87.40**	**164**	LR	LR	05 40 59.1	
	comp=Z,147nm,21.5s,baz=189,slow=32						
KSRS	**Korea Array**	**87.50**	**358**	LR	LR	05 43 18.0	
	comp=Z,69nm,21.6s,baz=190,slow=34						
HNS	**HongShan**	**88.52**	**348**	⇑P	**P**	**05 06 40.3**	**+1.2**
HNS				pmax	pmax		
	comp=Z,8.0nm,1.4s						
TSUM	**Tsumeb**	**89.09**	**241**	LR	LR	05 39 49.0	
	comp=Z,125nm,21.2s,baz=156,slow=31						
LZDM	**Lanzhou Array**	**89.17**	**339**	LR	LR	05 46 14.5	
	comp=Z,159nm,21.6s,baz=70,slow=35						
LZH	**Lanzhou**	**89.26**	**339**	*e*P	**P**	**05 06 44.5**	**+1.6**
LZH				pP	pwP	05 06 49.8	+0.5
LZH				sP	sP	05 06 53.5	+7.5
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
LZH				LR	LR		
	comp=Z,540nm,13.9s						
LZH				LR	LR		
	comp=Z,420nm,14.6s						
LZH				LR	LR		
	comp=Z,750nm,16.0s						
BI02	**San Fabin de**	**91.22**	**163**	P	**P**	**05 06 53.7**	**+1.3**
BI02				IAmb	IAmb	05 06 59.3	
	comp=Z,12nm,1.1s						
HHC	**Hu-ho-hao-te**	**92.36**	**346**	*e*P	**P**	**05 06 58.5**	**+1.3**
HHC				pmax	pmax		
	comp=Z,22nm,0.7s						
HHC				pmax	pmax		
	comp=Z,91nm,5.2s						
CN2	**Changchun**	**93.91**	**356**	P	**P**	**05 07 06.0**	**+1.9**
ASAJ	**Asahikawa**	**94.72**	**9**	LR	LR	05 48 05.8	
	comp=Z,236nm,21.9s,baz=176,slow=34						
MBAR	**Mbarara**	**95.75**	**262**	LR	LR	05 43 05.2	
	comp=Z,328nm,21.2s,baz=141,slow=31						
FURI	**Furi**	**97.92**	**274**	LR	LR	05 43 23.9	
	comp=Z,80nm,20.9s,baz=153,slow=30						
SONM	**Songino Array**	**100.02**	**344**	P	**Pdif**	**05 07 32.5**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=188,slow=4.1,SNR=4.0						
SONM	**Songino Array**	**100.02**	**344**	IAmb	IAmb	05 10 36.3	
	comp=Z,9.9nm,2.0s						
WMQ	**Urumqi**	**100.95**	**330**	*e*P	**Pdif**	**05 07 37.8**	**+1.8**
WMQ				LR	LR		
	comp=Z,180nm,24.3s						
BVAR	**Borovoye Array**	**114.80**	**325**	PKP	PKPdf	05 12 25.1	-1.6
	comp=Z,0.5nm,0.5s,baz=125,slow=2.3,SNR=3.6						
BRTR	**Keskin Array B**	**123.22**	**294**	PKP	**PKPdf**	**05 12 43.8**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=112,slow=6.5,SNR=2.3						
TORD	**Torodi Ar. Bea**	**124.34**	**247**	PKP	**PKPdf**	**05 12 45.4**	**-0.9**
	comp=Z,1.3nm,0.9s,baz=32,slow=1.8,SNR=6.2						
NVAR	**Mina Array Bea**	**131.12**	**76**	PKP	**PKPdf**	**05 12 59.1**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=208,slow=4.9,SNR=4.4						
ILAR	**Eielson Array**	**131.23**	**34**	PKP	**PKPdf**	**05 12 56.6**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=268,slow=3.7,SNR=5.5						
AKASG	**Malin Array Be**	**132.25**	**303**	PKP	**PKPdf**	**05 13 00.2**	**0.0**
	comp=Z,0.4nm,0.5s,baz=64,slow=3.1,SNR=1.6						
TXAR	**Lajitas Array**	**134.58**	**97**	PKP	**PKPdf**	**05 13 03.6**	**-1.8**
	comp=Z,0.5nm,0.8s,baz=194,slow=4.6,SNR=5.0						
FINES	**FINESS Array B**	**138.61**	**315**	PKP	**PKPdf**	**05 13 10.1**	**-1.6**
	comp=Z,2.7nm,0.9s,baz=66,slow=4.6,SNR=3.5						
GERES	**GERESS Array B**	**140.11**	**293**	PKP	**PKPdf**	**05 13 13.0**	**-1.9**
	comp=Z,0.8nm,0.9s,baz=180,slow=1.2,SNR=4.7						
SPITS	**Spitsbergen Ar**	**143.68**	**341**	PKhKP	PKPpre	05 13 16.6	
	comp=Z,2.2nm,0.7s,baz=180,slow=0.6,SNR=1.3						
YKA	**Yellowknife Ar**	**143.68**	**45**	PKP	PKPab	05 13 17.9	+0.5
	comp=Z,0.8nm,0.8s,baz=269,slow=3.7,SNR=13						
YKAW3	**Yellowknife Wh**	**143.69**	**45**		PKPbc	05 13 18.2	-0.2
HFS	**Hagfors**	**144.04**	**310**	PKP	**PKPab**	**05 13 19.5**	**+0.5**
	comp=Z,3.4nm,1.0s,baz=104,slow=4.6,SNR=4.3						
WLF	**Walferdange**	**144.93**	**291**	*d*PKPdf	**PKPdf**	**05 13 24.4**	**+1.0**
NB2	**NORSAR Subarra**	**145.43**	**312**	PKP	**PKPdf**	**05 13 23.0**	**-0.9**
	comp=Z,38nm,1.7s,baz=95,slow=4.3						
NOA	**NORSAR Array B**	**145.43**	**312**	PKPbc	**PKPdf**	**05 13 22.4**	**-1.4**
	comp=Z,3.6nm,0.9s,baz=96,slow=4.0,SNR=8.7						
BMRD	**Maredsous**	**146.00**	**291**	*d*PKP	**PKPab**	**05 13 27.2**	**+0.7**
UCC	**Uccle**	**146.43**	**292**	*d*PKP	**PKPab**	**05 13 29.1**	**+1.0**
ESDC	**Sonseca Array**	**146.55**	**269**	PKPbc	**PKPdf**	**05 13 27.4**	**+0.8**
	comp=Z,3.1nm,0.8s,baz=98,slow=1.8,SNR=22						
ESDC	**Sonseca Array**	**146.55**	**269**		**PKPdf**	**05 13 27.7**	**+1.1**
PBAR	**Barrancos**	**147.66**	**264**	*e*PKP	**PKPbc**	**05 13 30.7**	**-0.4**
ECSD	**EROS Data Cent**	**147.69**	**83**		**PKPdf**	**05 13 28.7**	**+0.4**
PCVE	**Castro Verde**	**147.97**	**263**	*e*PKP	**PKiKP**	**05 13 34.7**	**+0.8**
CCM	**Cathedral Cave**	**148.08**	**96**		**PKPbc**	**05 13 32.0**	**-0.3**
PBEJ	**Beja**	**148.10**	**263**	*e*PKP	**PKiKP**	**05 13 34.6**	**+0.5**
MORF	**Marmelete**	**148.16**	**262**	*e*PKP	**PKPdf**	**05 13 29.4**	**+0.1**
PFVI	**Vila Bisbo**	**148.17**	**261**	*e*PKP	**PKPdf**	**05 13 27.7**	**-1.5**
PTEO	**Sao Teotonio**	**148.35**	**262**	*e*PKP	**PKPab**	**05 13 36.5**	**+0.3**
EVO	**Evora**	**148.49**	**264**	*e*PKP	**PKiKP**	**05 13 35.4**	**+0.5**
PMRV	**Marv??o**	**148.61**	**266**	*e*PKP	**PKPbc**	**05 13 33.5**	**-0.1**
PARRA	**Arraiolos**	**148.67**	**264**	*e*PKP	**PKiKP**	**05 13 35.8**	**+0.6**
PCBR	**Castelo Branco**	**148.89**	**267**	*e*PKP	**PKiKP**	**05 13 36.0**	**+0.4**
PMTG	**Montargil**	**148.93**	**265**	*e*PKP	**PKPbc**	**05 13 35.1**	**+0.7**
PSARD	**Sardoal**	**149.19**	**266**	*e*PKP	**PKiKP**	**05 13 36.8**	**+0.5**
RES	**Resolute Bay**	**149.34**	**22**	PKPbc	**PKPbc**	**05 13 33.3**	**-1.0**
	comp=Z,10nm,0.9s,baz=260,slow=2.0,SNR=29						
POLO	**Lamas de Olo**	**149.93**	**269**	*e*PKP	**PKPdf**	**05 13 34.0**	**+1.9**
ULM	**Lac du Bonnet**	**150.78**	**72**	PKPbc	**PKPbc**	**05 13 37.8**	**-0.8**
	comp=Z,3.0nm,0.6s,baz=318,slow=2.3,SNR=3.9						
WCI	**Wyandotte Cave**	**151.32**	**101**		**PKPbc**	**05 13 39.7**	**-0.5**
EKA	**Eskdalemuir Ar**	**151.99**	**298**	PKPbc	**PKiKP**	**05 13 42.0**	**+0.5**
	comp=Z,8.4nm,1.1s,baz=100,slow=3.7,SNR=3.4						

TAP 27 04:54:54.5,24°.03N×122°.70E,h10km±1km,ML2.6,D

JMA 27 04:54:55.0±0.2,24°.1N±0°.9×122°.7E±0°.5,h13km±3km, MV2.3/11,NW OFF ISHIGAKIJIMA IS

ISC 27 04:54:53.9±1.1,24°.05N±0°.03×122°.68E±0°.02,h18km±4km, n51,σ0s.55/78,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS4	**EOS4**	**0.34**	**282**	*e*P	**Pb**	**04 55 01.5**	**+0.3**
EOS4				*e*S	**Sb**	**04 55 06.4**	**+0.2**
EOS3	**EOS3**	**0.41**	**305**	*e*P	**Pb**	**04 55 03.1**	**+0.5**
EOS3				*e*S	**Sb**	**04 55 09.1**	**+0.7**
JYNG	**Yonagunijimaku**	**0.47**	**31**	*e*S	**Sb**	**04 55 10.2**	**0.0**
YOJ	**Yonaguni jima**	**0.51**	**36**	*e*P	**Pb**	**04 55 04.1**	**-0.2**
YOJ				S	**Sb**	**04 55 11.3**	**-0.1**
YOJ	**Yonaguni jima**	**0.51**	**36**	P	**Pb**	**04 55 04.8**	**+0.5**
YOJ				*e*S	**Sb**	**04 55 12.1**	**+0.7**
EOS2	**EOS2**	**0.55**	**312**	*e*P	**Pn**	**04 55 06.0**	**-0.7**
EOS2				*e*S	**Sn**	**04 55 14.5**	**-0.9**
EWUT	**Wuta**	**0.91**	**296**	P	**Pb**	**04 55 11.3**	**+0.1**
EWUT				S	**Sb**	**04 55 22.9**	**-0.1**
ESAO	**Su ao**	**0.93**	**304**	*e*P	**Pn**	**04 55 11.9**	**-0.1**
ENA	**Nanau**	**0.94**	**294**	*e*P	**Pb**	**04 55 11.7**	**0.0**
ENA				S	**Sg**	**04 55 24.4**	**-0.1**
TWC	**Suao**	**0.94**	**306**	*e*P	**Pb**	**04 55 11.6**	**-0.1**
TWC				*e*S	**Sb**	**04 55 23.2**	**-0.6**
IRIF	**Iriomote-Funau**	**1.00**	**73**	P	**Pg**	**04 55 13.7**	**+0.3**
IRIF				*e*S	**Sn**	**04 55 27.1**	**+0.4**
NACB	**Ninganchiao**	**1.00**	**277**	*i* P	**Pg**	**04 55 13.5**	**+0.2**
HATJ	**Hateruma jima**	**1.03**	**90**	*e*P	**Pg**	**04 55 14.7**	**+0.8**
HATJ				*e*S	**Sg**	**04 55 28.6**	**+1.2**
NDS	**Dongshan**	**1.05**	**304**	*e*P	**Pg**	**04 55 14.6**	**+0.2**
SHUL	**Shoufeng**	**1.06**	**256**	S	**Sg**	**04 55 29.7**	**+1.4**
ETM	**Tongmen**	**1.09**	**266**	P	**Pb**	**04 55 14.3**	**+0.1**
ETLH	**Xiulin Townshi**	**1.11**	**278**	P	**Pg**	**04 55 15.3**	**-0.1**
ETLH				S	**Sg**	**04 55 30.5**	**+0.6**
LATG	**Datong**	**1.16**	**295**	P	**Pg**	**04 55 16.3**	**-0.1**
LATG				*e*S	**Sn**	**04 55 30.8**	**0.0**
LXIB	**Xiulin Townshi**	**1.16**	**269**	*i* P	**Pb**	**04 55 15.7**	**+0.2**
LXIB				*e*S	**Sg**	**04 55 32.8**	**+1.1**
ENTT	**Nioudou**	**1.17**	**300**	P	**Pg**	**04 55 16.3**	**-0.3**
TIPB	**Shuangxi**	**1.20**	**320**	P	**Pg**	**04 55 17.4**	**+0.2**
TIPB				S	**Sg**	**04 55 32.9**	**-0.1**
FUSB	**Fushanzhiwuyua**	**1.22**	**305**	*e*P	**Pg**	**04 55 17.6**	**0.0**
FUSB				S	**Sg**	**04 55 33.0**	**-0.5**
JKRS	**Kuro-shima**	**1.23**	**81**	*e*P	**Pg**	**04 55 17.8**	**+0.2**
JKRS				*e*S	**Sg**	**04 55 33.9**	**+0.2**
WARBT	**Fenglin Townsh**	**1.23**	**255**	*i* P	**Pn**	**04 55 16.0**	**-0.2**
WARBT				S	**Sn**	**04 55 32.9**	**+0.5**
NNSB	**Datong**	**1.24**	**288**	*e*P	**Pg**	**04 55 18.1**	**+0.1**
NNSB				*e*S	**Sg**	**04 55 33.7**	**-0.5**
NNS	**Nan Shan**	**1.25**	**288**	P	**Pg**	**04 55 18.2**	**0.0**
SXI1	**Grass Mountain**	**1.27**	**325**	*i* P	**Pg**	**04 55 18.3**	**-0.2**
HGSD	**Ruisui**	**1.28**	**244**	*e*S	**Sn**	**04 55 33.0**	**-0.6**
NWLT	**Wulai**	**1.29**	**304**	*i* P	**Pg**	**04 55 18.8**	**-0.1**
WHF	**Hehuan Shan**	**1.30**	**274**	P	**Pb**	**04 55 18.4**	**+0.3**
YHNB	**Yeheng**	**1.34**	**298**	*i* P	**Pg**	**04 55 19.7**	**-0.2**
YHNB				S	**Sb**	**04 55 35.9**	**+0.4**
NSK	**Sanguang**	**1.36**	**298**	*i* P	**Pg**	**04 55 19.8**	**-0.3**
EHY	**Hungye**	**1.36**	**247**	P	**Pn**	**04 55 18.2**	**+0.2**
EHY				S	**Sn**	**04 55 35.5**	**0.0**
JIJ	**Ishigaki jima**	**1.37**	**77**	*e*P	**Pg**	**04 55 19.6**	**-0.7**
JIJ				*e*S	**Sg**	**04 55 37.9**	**-0.4**
YULB	**Yu-li**	**1.43**	**243**	P	**Pn**	**04 55 19.4**	**+0.4**
YULB				*e*S	**Sb**	**04 55 37.8**	**-0.1**
WUSB	**Renai**	**1.43**	**268**	*e*P	**Pb**	**04 55 20.8**	**+0.7**
WUSB				*e*S	**Sg**	**04 55 39.3**	**-0.9**
VWDT	**VWDT**	**1.44**	**258**	P	**Pb**	**04 55 19.8**	**-0.4**
TWF1	**Yuli**	**1.45**	**242**	*e*P	**Pn**	**04 55 19.7**	**+0.4**
YM01	**YM01**	**1.49**	**317**	*e*P	**Pg**	**04 55 23.3**	**+0.7**
NFF	**Wufeng Townshi**	**1.54**	**292**	*e*P	**Pg**	**04 55 23.4**	**-0.2**
NFF				*e*S	**Sb**	**04 55 42.4**	**+1.3**
JISG	**Ishigakijimahi**	**1.58**	**70**	*e*P	**Pb**	**04 55 21.8**	**-0.7**
WHP	**Taichung City**	**1.60**	**278**	*e*P	**Pg**	**04 55 24.5**	**-0.3**
SSLB	**Suanglung**	**1.60**	**261**	*e*P	**Pb**	**04 55 23.6**	**+0.6**
WCS	**Beigang Elemen**	**1.62**	**271**	*e*P	**Pg**	**04 55 25.8**	**+0.7**
EHD	**Haiduan**	**1.62**	**237**	*e*P	**Pn**	**04 55 20.6**	**-1.1**
WHYT	**Xinyi Township**	**1.71**	**258**	*e*P	**Pb**	**04 55 25.2**	**+0.4**
TWGBT	**Beinan**	**1.92**	**230**	P	**Pb**	**04 55 27.6**	**-0.8**
TWGBT				*e*S	**Sn**	**04 55 49.1**	**-0.3**
TWG	**Pinlang**	**1.92**	**231**	*e*P	**Pb**	**04 55 27.5**	**-1.0**
TWG				*e*S	**Sn**	**04 55 49.0**	**-0.4**
WTP	**Ta-pu**	**2.06**	**247**	*e*P	**Pb**	**04 55 29.8**	**-1.0**
CHN1	**Nanshi**	**2.15**	**247**	*e*P	**Pb**	**04 55 32.3**	**-0.1**
CHN1				*e*S	**Sb**	**04 55 59.4**	**+0.5**
TWK	**Hsinying**	**2.16**	**249**	*e*S	**Sb**	**04 55 59.3**	**+0.4**

IDC 27 05:01:22.7±0.9,50°.30S×130°.73E,h0km,mb4.5/6, mbtmp4.5/6,Error ellipse: s-maj=50.6km s-min=18.0km az=95.0

NEIC 27 05:01:24.0±1.5,50°.27S±0°.10×130°.9E±0°.2,h10km±1km, mb4.6/20,Error ellipse: s-maj=20.7km s-min=16.2km az=247.0

ISC 27 05:01:23.7±0.6,50°.25S±0°.08×130°.9E±0°.1,h10km,n37, σ0s.60/31,mb4.5/11,Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAU	**Tasmania Unive**	**13.43**	**63**	Pn	**Pn**	**05 04 33.2**	**-1.0**
TOO	**Toolangi**	**16.41**	**45**	Pn	**Pn**	**05 05 13.3**	**-0.7**
BBOO	**Buckleboo**	**17.83**	**14**	P	**Pn**	**05 05 31.5**	**-0.3**
FORT	**Forrest**	**19.57**	**353**	P	**P**	**05 05 52.6**	**+1.0**
H01W1	**Cape Leeuwin H**	**19.64**	**315**	T	T	05 25 51.3	
	baz=145,slow=74,SNR=19						
H01W2	**Cape Leeuwin H**	**19.64**	**315**	T	T	05 25 53.2	
	baz=145,slow=74,SNR=27						
H01W3	**Cape Leeuwin H**	**19.65**	**315**	T	T	05 25 54.7	
	baz=145,slow=74,SNR=19						
CAN	**Canberra**	**19.88**	**48**	P	**P**	**05 05 54.9**	**-0.1**
CAN				IAmb	IAmb	05 06 03.5	
	comp=Z,42nm,1.3s						
STKA	**Stephens Creek**	**20.00**	**27**	P	Pn	05 05 58.9	+0.9
	comp=Z,8.4nm,0.7s,baz=184,slow=9.1,SNR=15						
	comp=Z,8.4nm,0.7s						
STKA	**Stephens Creek**	**20.00**	**27**		**P**	**05 05 56.7**	**+0.4**
STKA				IAmb	IAmb	05 06 03.7	
	comp=Z,35nm,0.7s						
NWAO	**Narrogin (SRO)**	**20.06**	**324**	P	**P**	**05 05 56.3**	**-0.7**
NWAO				IAmb	IAmb	05 06 31.1	
	comp=Z,42nm,1.5s						
INKA	**Innaminka**	**23.69**	**22**	P	**P**	**05 06 35.8**	**+0.3**
INKA				IAmb	IAmb	05 06 39.0	
	comp=Z,15nm,0.9s						
MORW	**Morawa**	**23.98**	**326**	P	**P**	**05 06 36.9**	**-1.3**
MORW				IAmb	IAmb	05 06 45.0	
	comp=Z,15nm,1.1s						
ASAR	**Alice Springs**	**26.63**	**6**	P	**P**	**05 07 03.2**	**+0.8**
	comp=Z,13nm,1.0s,baz=179,slow=9.4,SNR=61						
ASAR				PcP	**PcP**	**05 10 26.4**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=196,slow=2.1,SNR=5.7						
	comp=Z,13nm,1.0s						
ASAR	**Alice Springs**	**26.63**	**6**		**P**	**05 07 02.4**	**0.0**
AS31	**Alice Springs**	**26.64**	**6**		**P**	**05 07 02.8**	**+0.4**
VNDA	**Vanda**	**29.75**	**167**	P	**P**	**05 07 30.0**	**+0.3**
	comp=Z,8.2nm,1.0s,baz=317,slow=9.1,SNR=17						
	comp=Z,8.2nm,1.0s						
VNDA	**Vanda**	**29.75**	**167**	P	**P**	**05 07 29.9**	**+0.1**
VNDA				IAmb	IAmb	05 07 36.3	
	comp=Z,10.0nm,0.8s						
WR8	**Warramunga Arr**	**30.36**	**7**		**P**	**05 07 36.2**	**+0.5**
WRA	**Warramunga Arr**	**30.36**	**6**	P	**P**	**05 07 36.3**	**+0.7**
	comp=Z,6.3nm,1.0s,baz=189,slow=8.1,SNR=14						
	comp=Z,6.3nm,1.0s						
WRA	**Warramunga Arr**	**30.36**	**6**	P	**P**	**05 07 36.4**	**+0.7**
SBA	**Scott Base**	**30.73**	**166**	P	**P**	**05 07 39.1**	**+0.7**
SBA				IAmb	IAmb	05 07 42.2	
	comp=Z,12nm,1.1s						
RTZ	**Ruatahuna**	**34.34**	**88**	P	**P**	**05 08 11.5**	**+1.0**
MTN	**Manton Dam**	**37.30**	**0**	P	**P**	**05 08 36.2**	**+0.3**
H04S1	**CROZET ISLANDS**	**50.10**	**241**	T	T	06 04 28.5	
	baz=123						
H04S2	**CROZET ISLANDS**	**50.11**	**241**	T	T	06 04 32.6	
	baz=123						
H04S3	**CROZET ISLANDS**	**50.12**	**241**	T	T	06 04 32.6	
	baz=123						
BELA	**Belgrano 2**	**51.83**	**184**	P	**P**	**05 10 30.8**	**-0.4**
BELA				IAmb	IAmb	05 10 36.5	
	comp=Z,4.4nm,0.9s						
TOLI2	**Tolitoli**	**51.90**	**347**	P	**P**	**05 10 32.8**	**+0.4**
TOLI2				IAmb	IAmb	05 10 33.7	
	comp=Z,6.4nm,0.7s						
SNAA	**Sanae**	**54.07**	**196**	P	**P**	**05 10 47.8**	**-0.1**
	comp=Z,7.4nm,0.9s,baz=178,slow=13,SNR=10.0						
	comp=Z,7.4nm,0.9s						
SNAA	**Sanae**	**54.07**	**196**	P	**P**	**05 10 47.7**	**-0.2**
FUNA	**Funafuti**	**57.61**	**61**	P	**P**	**05 11 13.5**	**-0.4**
CMAR	**Chiang Mai Arr**	**74.01**	**328**	P	**P**	**05 13 00.0**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=185,slow=5.4,SNR=8.9						
	comp=Z,0.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**74.01**	**328**	P	**P**	**05 12 59.0**	**-0.4**
CHTO	**Chiang Mai**	**74.34**	**329**	P	**P**	**05 13 01.4**	**+0.1**
CHTO				IAmb	IAmb	05 13 08.9	
	comp=Z,7.3nm,1.4s						
NOA	**NORSAR Array B**	**145.56**	**312**	PKPbc	**PKPab**	**05 21 01.4**	**0.0**
	comp=Z,2.0nm,1.0s,baz=246,slow=3.3,SNR=4.6						
ESDC	**Sonseca Array**	**146.86**	**269**	PKPbc	**PKPbc**	**05 21 05.0**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=103,slow=2.1,SNR=5.2						

IDC 27 05:05:29.2±1.0,50°.38S×130°.86E,h0km,mb4.2/6, mbtmp4.2/6,Error ellipse: s-maj=61.9km s-min=19.1km az=93.0

NEIC 27 05:05:30.3±1.5,50°.4S±0°.1×130°.7E±0°.3,h10km±2km, mb4.2/11,Error ellipse: s-maj=29.2km s-min=16.2km az=108.0

ISC 27 05:05:30.3±0.7,50°.37S±0°.09×130°.8E±0°.1,h10km,n24, σ0s.87/21,mb4.4/8,Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAU	**Tasmania Unive**	**13.57**	**63**	Pn	**Pn**	**05 08 41.8**	**-1.0**
MGBR	**Mount Gambier**	**14.45**	**33**	Pn	**Pn**	**05 08 55.2**	**+0.5**
BBOO	**Buckleboo**	**17.97**	**15**		**P**	**05 09 41.4**	**+0.7**
BBOO				IAmb	IAmb	05 09 52.4	
	comp=Z,9.6nm,1.1s						
CASY	**Casey**	**19.01**	**205**		**P**	**05 09 50.2**	**-1.7**
CASY				IAmb	IAmb	05 10 32.5	
	comp=Z,22nm,1.5s						
H01W1	**Cape Leeuwin H**	**19.65**	**316**	T	T	05 29 54.5	
	baz=145,slow=74,SNR=12						
H01W2	**Cape Leeuwin H**	**19.65**	**316**	T	T	05 29 57.8	
	baz=145,slow=74,SNR=20						
H01W3	**Cape Leeuwin H**	**19.67**	**316**	T	T	05 29 56.0	
	baz=145,slow=74,SNR=9.7						
STKA	**Stephens Creek**	**20.15**	**28**	P	Pn	05 10 06.2	-0.2
	comp=Z,1.9nm,0.6s,baz=192,slow=11,SNR=4.7						
	comp=Z,1.9nm,0.6s						
STKA	**Stephens Creek**	**20.15**	**28**	P	**P**	**05 10 04.1**	**-0.5**
STKA				IAmb	IAmb	05 10 12.2	
	comp=Z,11nm,0.8s						
INKA	**Innaminka**	**23.84**	**22**	P	**P**	**05 10 42.9**	**-0.6**
INKA				IAmb	IAmb	05 10 47.1	
	comp=Z,4.0nm,0.9s						
ASAR	**Alice Springs**	**26.77**	**6**	P	**P**	**05 11 10.6**	**+0.4**
	comp=Z,2.9nm,0.8s,baz=174,slow=10.0,SNR=19						
ASAR				PcP	**PcP**	**05 14 32.6**	**-0.6**
	comp=Z,0.2nm,0.8s,baz=199,slow=2.0,SNR=1.5						
	comp=Z,2.9nm,0.8s						
ASAR	**Alice Springs**	**26.77**	**6**	P	**P**	**05 11 09.1**	**-1.2**
AS31	**Alice Springs**	**26.77**	**6**	P	**P**	**05 11 10.1**	**-0.2**
RPZ	**Rata Peaks**	**27.97**	**92**	P	**P**	**05 11 22.2**	**+1.4**
VNDA	**Vanda**	**29.66**	**167**	P	**P**	**05 11 35.9**	**+0.4**
	comp=Z,3.4nm,0.6s,baz=318,slow=9.0,SNR=13						
	comp=Z,3.4nm,0.6s						
VNDA	**Vanda**	**29.66**	**167**	P	**P**	**05 11 36.4**	**+0.9**
VNDA				IAmb	IAmb	05 11 37.5	
	comp=Z,3.8nm,0.7s						
WR8	**Warramunga Arr**	**30.49**	**7**	P	**P**	**05 11 42.6**	**-0.8**
WR8				IAmb	IAmb	05 12 13.3	
	comp=Z,12nm,1.2s						
WRA	**Warramunga Arr**	**30.49**	**7**	P	**P**	**05 11 42.9**	**-0.5**
	comp=Z,2.4nm,0.8s,baz=188,slow=8.1,SNR=6.0						
	comp=Z,2.4nm,0.8s						
WRA	**Warramunga Arr**	**30.49**	**7**	P	**P**	**05 11 43.4**	**+0.1**
TOLI2	**Tolitoli**	**51.99**	**347**	P	**P**	**05 14 38.9**	**-0.8**
TOLI2				IAmb	IAmb	05 14 51.3	
	comp=Z,8.5nm,1.4s						
SNAA	**Sanae**	**53.93**	**196**	P	**P**	**05 14 53.9**	**+0.5**
	comp=Z,2.6nm,0.6s,baz=160,slow=15,SNR=5.9						
	comp=Z,2.6nm,0.6s						
SNAA	**Sanae**	**53.93**	**196**	P	**P**	**05 14 53.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**74.06**	**329**	P	**P**	**05 17 07.7**	**+1.4**
	comp=Z,1.4nm,0.3s,baz=178,slow=4.5,SNR=4.6						
	comp=Z,1.4nm,0.3s						
SSLB	**Suanglung**	**74.34**	**351**	P	**P**	**05 17 07.5**	**-0.3**

BJI 27 05:09:59.0,37°.98N×142°.92E,h15km,mB5.2/19,mb4.7/68, Ms4.6/47,Ms7 4.4/49

IDC 27 05:10:00.2±0.5,37°.95N×142°.67E,h0km,mb4.3/29, mbtmp4.3/33,ML4.1/3,MS4.1/22,Error ellipse: s-maj=14.4km s-min=11.9km az=113.0

NIED 27 05:10:01.1,37°.94N×142°.77E,h29km,MW4.6,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-7.83; $M_{\theta\theta}$1.87; $M_{\phi\phi}$5.97; $M_{r\theta}$2.75; $M_{\theta\phi}$2.65; $M_{\phi r}$3.96; Fault plane solution: $M_0$8.96000×10^{15} NP1:ϕ_s22.00000°, δ29.00000°,λ-97.00000°. NP2:ϕ_s211.00000°,δ61.00000°, λ-86.00000°.

NEIC 27 05:10:02.0±1.1,37°.92N±0°.03×142°.71E±0°.09,h10km±1km, mb4.9/68 Error ellipse: s-maj=12.1km s-min=5.2km az=84.0

JMA 27 05:10:01.1±0.2,37°.9N±0°.4×142°.8E±0°.7,h29km±2km, MD4.8/33,MW4.6/33,SE OFF MIYAGI PREF

JMA Felt II J1 at SE OFF MIYAGI PREF .

ISC 27 05:10:02.2±0.4,37°.92N±0°.05×142°.74E±0°.05,h14km,n258, σ1s.58/215,mb4.8/79,MS4.2/33,2C-1D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.07	292	P	Pb	05 10 20.6	-2.0
JIKH	Ishinomakikobu	1.07	292	A	A	05 10 20.6	
	comp=N,21nm,1.4s,comp=E,26nm,0.8s						
JIO	Ouri	1.22	296	P	Pn	05 10 22.6	-2.1
JIO	Ouri	1.22	296	A	A	05 10 22.6	
	comp=N,39nm,0.7s,comp=E,29nm,1.2s						
JKMT	Kesennumamotoy	1.33	312	P	Pn	05 10 24.4	-2.0
JKMT	Kesennumamotoy	1.33	312	A	A	05 10 24.4	
	comp=N,32nm,0.7s,comp=E,19nm,0.7s						
OFUJ	Ofunato	1.43	324	P	Pn	05 10 25.6	-2.1
OFUJ	Ofunato	1.43	324	A	A	05 10 25.6	
	comp=N,14nm,0.9s,comp=E,17nm,1.3s						
JMST	Minamisoumatoc	1.48	263	A	A	05 10 26.8	
	comp=N,19nm,0.9s,comp=E,14nm,2.2s						
JMM	Marumori	1.54	269	*i* P	Pn	05 10 27.4	-1.7
JMK	Ichinoseki	1.57	311	*i* P	Pn	05 10 28.0	-1.7
JMK	Ichinoseki	1.57	311	A	A	05 10 28.0	
	comp=N,20nm,3.3s,comp=E,12nm,2.8s						
JFK	Kawauchi	1.58	250	*i* P	Pn	05 10 28.0	-1.8
JFK	Kawauchi	1.58	250	A	A	05 10 28.0	
	comp=N,22nm,1.0s,comp=E,12nm,0.7s						
JOFO	Osakifurukawao	1.59	296	A	A	05 10 28.3	
	comp=N,118nm,1.8s,comp=E,123nm,0.9s						
JOU	Okura	1.69	286	*i* P	Pn	05 10 30.2	-1.2
JOU	Okura	1.69	286	A	A	05 10 30.2	
	comp=N,52nm,0.9s,comp=E,54nm,0.6s						
ONAJ	Iwakimizuishiy	1.75	243	A	A	05 10 30.7	
	comp=N,18nm,1.4s,comp=E,28nm,0.3s						
JOM	Ohasama	1.92	324	P	Pn	05 10 33.2	-1.2
JOM	Ohasama	1.92	324	A	A	05 10 33.2	
	comp=N,13nm,1.2s,comp=E,15nm,0.7s						
JOTO	OTAMA OYAMA	1.94	260	A	A	05 10 33.5	
	comp=N,91nm,1.4s,comp=E,68nm,0.9s						
JYAR	Yonezawaarcadi	2.05	271	A	A	05 10 35.1	
	comp=N,64nm,1.0s,comp=E,59nm,1.3s						
JYK	Kaneyama	2.12	299	*e*P	Pn	05 10 36.0	-1.1
JYK	Kaneyama	2.12	299	A	A	05 10 36.0	
	comp=N,12nm,2.7s,comp=E,11nm,2.4s						
JYS	Shirataka	2.13	279	*e*P	Pn	05 10 36.3	-1.1
JYS	Shirataka	2.13	279	A	A	05 10 36.3	
	comp=N,19nm,2.1s,comp=E,17nm,2.1s						
JRG	Rokugo	2.21	312	*e*P	Pn	05 10 37.8	-0.6
JRG	Rokugo	2.21	312	A	A	05 10 37.8	
	comp=N,14nm,1.3s,comp=E,13nm,3.1s						
JSZI	Iwateshizukuis	2.29	323	A	A	05 10 38.2	
	comp=N,29nm,2.9s,comp=E,29nm,1.1s						
JKEN	Kujiedanarisaw	2.42	341	A	A	05 10 39.9	
	comp=N,12nm,2.1s,comp=E,13nm,2.0s						
JSB	Shiboa	2.44	248	A	A	05 10 40.7	
	comp=N,26nm,2.0s,comp=E,22nm,0.9s						
JFY	Yanaizu	2.46	259	A	A	05 10 41.1	
	comp=N,6.0nm,1.5s,comp=E,8.0nm,2.6s						
JYA	Atsumi	2.47	287	A	A	05 10 41.1	
	comp=N,20nm,0.9s,comp=E,19nm,1.2s						
JYW	Yuwa	2.55	310	A	A	05 10 42.2	
	comp=N,33nm,2.2s,comp=E,41nm,1.3s						
JANG	Nango	2.63	339	A	A	05 10 43.0	
	comp=N,6.0nm,1.6s,comp=E,6.0nm,2.6s						
JYT	Yasato	2.64	231	Pn	Pn	05 10 44.5	+0.1
JYT	Yasato	2.64	231	A	A	05 10 43.7	
	comp=N,11nm,1.0s,comp=E,12nm,0.4s						
JNTW	Noshirotokiwa	3.08	320	A	A	05 10 49.6	
	comp=N,43nm,2.2s,comp=E,39nm,3.3s						
JIW	Iwasaki	3.41	322	A	A	05 10 54.2	
	comp=N,7.0nm,1.3s,comp=E,6.0nm,1.6s						
JOG3	Oga3	3.48	306	A	A	05 10 48.9	
	comp=N,20nm,2.0s,comp=E,16nm,1.9s						
JAHD	Aomorihigashid	3.51	343	A	A	05 10 55.5	
	comp=N,12nm,2.0s,comp=E,10.0nm,1.4s						
JSD	Sado	3.54	273		Pn	05 10 56.5	-0.2
MJAR	Matsushiro Arr	3.87	251	Pn	Pn	05 11 02.1	+0.8
	comp=E,3.2nm,0.3s,baz=85,slow=16,SNR=41						
MJAR				Sn	Sn	05 11 47.1	+0.7
	comp=E,4.9nm,0.3s,baz=149,slow=20,SNR=5.0						
MJAR				LR	LR	05 12 47.1	
	comp=E,3µm,18.3s,baz=75,slow=44						
	comp=E,28nm,0.5s						
MJAR	Matsushiro Arr	3.87	251		Pn	05 11 02.9	+1.6
MAJO	Matsushiro	3.87	251		Pn	05 11 01.9	+0.6
MJB9	Matsu-Tunnel	3.87	251		Pn	05 11 02.4	+1.2
ERM	Erimo	4.10	4	Pn	Pn	05 11 03.9	-0.6
JSG	Sagara	4.90	230	Pn	Pn	05 11 13.3	-2.1
JGF	Kuroka	4.90	243		Pn	05 11 17.8	+2.3
INU	Inuyama	5.27	243		Pn	05 11 21.4	+1.0
JHJ2	Mitsune	5.36	207	Pn	Pn	05 11 21.0	-0.7
JHJ	Hachijo jima 2	5.36	208	Pn	Pn	05 11 21.2	-0.5
	comp=E,92nm,0.3s,baz=338,slow=21,SNR=11						
JHJ				Sn	Sn	05 12 18.1	-5.2
	comp=E,209nm,0.3s,baz=62,slow=22,SNR=12						
	comp=E,214nm,0.3s						
JKA	Kamikawa-asahi	6.19	359		Pn	05 11 33.2	0.0
ASAJ	Asahikawa	6.19	359	Pn	Pn	05 11 33.0	-0.1
	comp=E,4.2nm,0.3s,baz=248,slow=11,SNR=7.9						
ASAJ				Sn	Sn	05 12 40.6	-3.0
	comp=E,3.5nm,0.3s,baz=1.6,slow=30,SNR=4.6						
	comp=E,9.4nm,0.3s						
JMN	Monobe	8.32	242	Pn	Pn	05 12 02.4	0.0
YSS	Yuzhno-Sakhali	9.03	0		Pn	05 12 12.1	+0.1
USRK	Ussuriysk Ar.	10.25	311	Pn	Pn	05 12 30.6	+1.8
	comp=E,2.2nm,0.3s,baz=139,slow=11,SNR=32						
JNU	Nakatsue	10.78	247	Pn	Pn	05 12 38.1	+1.9
	comp=E,0.9nm,0.3s,baz=49,slow=12,SNR=7.2						
JNU				LR	LR	05 17 15.8	
	comp=E,1µm,18.2s,baz=56,slow=40						
JNU	Nakatsue	10.78	247		Pn	05 12 36.6	+0.4
JCJ	Chichijima	10.80	183	Pn	Pn	05 12 23.4	-13
	comp=E,22nm,0.3s,baz=272,slow=22,SNR=1.5						
JCJ				Sn	Sn	05 14 18.8	-18
	comp=E,15nm,0.3s,baz=270,slow=22,SNR=2.0						
KSRS	Korea Array	11.75	272	Pn	Pn	05 12 51.6	+2.2
	comp=E,0.6nm,0.3s,baz=88,slow=13,SNR=13						
KSRS				LR	LR	05 17 08.8	
	comp=E,783nm,18.8s,baz=80,slow=37						
KSAR	Wonju Array Be	11.78	272	Pn	Pn	05 12 49.7	-0.1
MDJ	Mudanjiang	11.93	308		Pn	05 12 50.2	-1.6
MDJ	Mudanjiang	11.93	308	P	Pn	05 12 54.0	+2.2
MDJ				S	Sn	05 15 15.8	+11
MDJ				pmax	pmax		
	comp=E,40nm,2.1s						
MDJ				LR	LR		
	comp=E,1µm,15.5s						
MDJ				LR	LR		
	comp=E,1µm,17.2s						
MDJ				LR	LR		
	comp=E,2µm,15.5s						
BNX	BinXian	13.83	309	⇑P	Pn	05 13 18.5	+0.8
BNX				pmax	pmax		
	comp=E,12nm,1.3s						
CN2	Changchun	14.33	300	P	Pn	05 13 23.5	-1.1
CN2				S	Sn	05 16 02.0	-1.3
CN2				LR	LR		
	comp=E,560nm,16.0s						
CN2				LR	LR		
	comp=E,710nm,16.0s						
CN2				LR	LR		
	comp=E,730nm,16.0s						
HEH	HeiHe	16.49	323	*e*P	Pn	05 13 49.5	-3.4
HEH				pmax	pmax		
	comp=E,5.0nm,0.9s						
HEH				LR	LR		
	comp=E,890nm,14.9s						
HEH				LR	LR		
	comp=E,900nm,11.3s						
HEH				LR	LR		
	comp=E,2µm,15.2s						
DL2	Dalian	16.57	280	P	Pn	05 13 55.3	+1.2
DL2				S	Sn	05 16 53.5	-4.4
DL2				pmax	pmax		
	comp=E,82nm,1.0s						
DL2				pmax	pmax		
	comp=E,560nm,3.6s						
DL2				LR	LR		
	comp=E,410nm,9.0s						
DL2				LR	LR		
	comp=E,490nm,11.4s						
DL2				LR	LR		
	comp=E,750nm,15.5s						
PEA0B	Petropavlovsk-	18.39	30	P	P	05 14 16.5	-0.1
PETK	Petropavlovsk-	18.39	30	P	Pn	05 14 17.3	+0.7
	comp=E,5.3nm,0.9s,baz=206,slow=9.4,SNR=2.7						
PETK				LR	LR	05 21 53.5	
	comp=E,256nm,18.2s,baz=216,slow=39						
PETK	Petropavlovsk-	18.39	30	P	Pn	05 14 18.0	+1.4
HILR	Hailar Array B	20.19	313	P	P	05 14 33.8	-2.5
	comp=E,7.4nm,0.5s,baz=112,slow=12,SNR=13						
HILR				LR	LR	05 22 34.4	
	comp=E,629nm,18.5s,baz=95,slow=38						
	comp=E,7.4nm,0.5s						
NJ2	Nanjing	20.40	260	*e*P	P	05 14 38.5	-0.2
NJ2				pmax	pmax		
	comp=E,10.0nm,0.5s						
NJ2				LR	LR		
	comp=E,560nm,12.8s						
NJ2				LR	LR		
	comp=E,1µm,14.2s						
NJ2				LR	LR		
	comp=E,1µm,15.2s						
BJI	Beijing	20.73	284	P	P	05 14 43.0	+0.8
BJI				pmax	pmax		
	comp=E,14nm,1.1s						
BJI				LR	LR		
	comp=E,220nm,14.7s						
BJI				LR	LR		
	comp=E,140nm,14.7s						
BJI				LR	LR		
	comp=E,200nm,15.1s						
BJT	Baijiatuau	20.74	284		P	05 14 41.0	-1.3
XLT	XiLinHaoTe	20.96	295	*e*P	P	05 14 42.0	-2.8
XLT				sP	sP	05 14 50.3	+0.2
XLT				PP	PnPn	05 15 04.3	+0.8
XLT				pmax	pmax		
	comp=E,34nm,0.7s						
XLT				pmax	pmax		
	comp=E,130nm,5.0s						
XLT				LR	LR		
	comp=E,460nm,11.9s						
XLT				LR	LR		
	comp=E,610nm,14.5s						
HNS	HongShan	22.17	277	⇓P	P	05 14 54.0	-3.7
HNS				pmax	pmax		
	comp=E,18nm,0.9s						
HNS				LR	LR		
	comp=E,160nm,12.6s						
HNS				LR	LR		
	comp=E,640nm,14.7s						
HNS				LR	LR		
	comp=E,620nm,15.5s						
MA2	Magadan	22.28	11	P	P	05 14 57.9	-0.8
	comp=E,6.7nm,0.5s,baz=190,slow=17,SNR=2.2						
MA2				LR	LR	05 24 33.1	
	comp=E,200nm,18.1s,baz=32,slow=39						
	comp=E,6.7nm,0.5s						
MA2	Magadan	22.28	11	P	P	05 14 58.7	+0.1
NACB	Ninganchiao	22.64	239	P	P	05 15 01.2	-1.7
NACB				IAmb	IAmb	05 15 06.9	
	comp=Z,34nm,1.1s						
TPUB	Ta-pu	23.88	239	P	P	05 15 15.3	-0.1
TPUB				IAmb	IAmb	05 15 24.2	
	comp=Z,56nm,1.0s						
TIY	Taiyuan	23.89	279	P	P	05 15 18.3	+2.8
TIY				sP	sP	05 15 23.0	+2.1
TIY				S	S	05 19 32.8	+1.5
TIY				pmax	pmax		
	comp=Z,37nm,0.5s						
TIY				pmax	pmax		
	comp=Z,160nm,3.8s						
TIY				LR	LR		
	comp=Z,320nm,13.6s						
TIY				LR	LR		
	comp=Z,340nm,11.5s						
TIY				LR	LR		
	comp=Z,380nm,15.3s						
HHC	Hu-ho-hao-te	24.21	287	*e*P	P	05 15 18.8	+0.4
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,220nm,5.6s						
HHC				LR	LR		
	comp=Z,220nm,12.3s						
HHC				LR	LR		
	comp=Z,620nm,12.3s						
HHC				LR	LR		
	comp=Z,800nm,13.0s						
WHN	Wuhan	24.53	261	P	P	05 15 21.0	-0.3
LYN	LuoYang	24.59	271	P	P	05 15 23.3	+1.4
LYN				pP	sP	05 15 27.0	-0.3
LYN				PP	PnPn	05 16 00.3	+7.2
LYN				pmax	pmax		
	comp=Z,73nm,0.9s						
LYN				pmax	pmax		
	comp=Z,260nm,5.4s						
LYN				LR	LR		
	comp=Z,920nm,14.1s						
LYN				LR	LR		
	comp=Z,770nm,13.7s						
LYN				LR	LR		
	comp=Z,840nm,14.1s						
BTO	Baotou	25.39	286	*e*P	P	05 15 29.3	+0.1
BTO				pP	pP	05 15 33.8	+0.8
BTO				sP	sP	05 15 36.3	+1.7
BTO				PP	PnPn	05 16 08.3	+4.2
BTO				S	S	05 19 55.0	-0.4
BTO				sS	pS	05 19 59.5	-0.1
BTO				SS	SnSn	05 20 56.0	+8.7
BTO				pmax	pmax		
	comp=Z,23nm,1.3s						
BTO				pmax	pmax		
	comp=Z,400nm,7.3s						
BTO				LR	LR		
	comp=Z,800nm,16.2s						
BTO				LR	LR		
	comp=Z,2µm,13.9s						
BTO				LR	LR		
	comp=Z,2µm,16.3s						
YAK	Yakutsk	25.45	346	P	P	05 15 28.9	-0.5
	comp=Z,11nm,0.4s,baz=129,slow=6.3,SNR=8.6						
YAK				LR	LR	05 26 19.9	
	comp=Z,322nm,19.3s,baz=138,slow=39						
	comp=Z,11nm,0.4s						
YAK	Yakutsk	25.45	346	P	P	05 15 28.1	-1.2
YAK				IAmb	IAmb	05 15 45.3	
	comp=Z,37nm,0.9s						
SEY	Seymchan	25.73	10	P	P	05 15 31.8	-0.1
	comp=Z,15nm,1.2s,baz=214,slow=8.5,SNR=4.1						
SEY				LR	LR	05 26 42.5	
	comp=Z,159nm,18.2s,baz=132,slow=39						
	comp=Z,15nm,1.2s						
XAN	Xi'an	27.55	272	P	P	05 15 47.5	-1.1
XAN				pmax	pmax		
	comp=Z,19nm,0.6s						
XAN				pmax	pmax		
	comp=Z,210nm,3.6s						
XAN				LR	LR		
	comp=Z,690nm,12.5s						
XAN				LR	LR		
	comp=Z,490nm,13.9s						
XAN				LR	LR		
	comp=Z,730nm,13.4s						
H11N2	WAKE ISLAND Hy	27.73	124	T	T	05 44 51.9	
	baz=316,slow=75,SNR=363						
H11N1	WAKE ISLAND Hy	27.74	124	T	T	05 44 57.7	
	baz=316,slow=75,SNR=406						
ULN	Ulaanbaatar	27.75	302		P	05 15 50.1	-0.3
ULN	Ulaanbaatar	27.75	302	P	P	05 15 46.2	-4.2
	comp=Z,61nm,1.1s						
H11N3	WAKE ISLAND Hy	27.75	124	T	T	05 44 57.4	
	baz=316,slow=75,SNR=364						
SONM	Songino Array	28.18	302	P	P	05 15 53.8	-0.4
	comp=Z,4.3nm,0.6s,baz=119,slow=8.7,SNR=35						
SONM				LR	LR	05 27 29.7	
	comp=Z,333nm,18.3s,baz=125,slow=37						
	comp=Z,4.3nm,0.6s						
SONM	Songino Array	28.18	302		P	05 15 54.0	-0.3
ENH	Enshi	28.46	264		P	05 15 56.5	-0.3
H11S1	WAKE ISLAND Hy	28.49	126	T	T	05 45 54.2	
	baz=318,slow=76,SNR=202						
H11S3	WAKE ISLAND Hy	28.50	126	T	T	05 45 50.7	
	baz=318,slow=76,SNR=404						
H11S2	WAKE ISLAND Hy	28.51	126	T	T	05 45 52.4	
	baz=318,slow=76,SNR=174						
LZH	Lanzhou	30.96	279	*e*P	P	05 16 19.5	+0.4
LZH				sP	sP	05 16 25.8	+1.3
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
LZH				LR	LR		
	comp=Z,490nm,13.6s						
LZH				LR	LR		
	comp=Z,210nm,12.2s						
LZH				LR	LR		
	comp=Z,400nm,15.3s						
LZDM	Lanzhou Array	31.11	279	P	P	05 16 19.8	-0.9
	comp=Z,1.2nm,0.3s,baz=116,slow=6.8,SNR=7.1						
LZDM				LR	LR	05 29 46.0	
	comp=Z,232nm,18.6s,baz=100,slow=38						
	comp=Z,1.2nm,0.3s						
GYA	Guiyang	32.41	260	⇑P	P	05 16 34.5	+2.7
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GTA	Gaotai	33.32	286	*e*P	P	05 16 39.3	-0.4
GTA				pP	pP	05 16 43.8	+0.2
GTA				pmax	pmax		
	comp=Z,17nm,1.2s						
GTA				LR	LR		
	comp=Z,360nm,15.6s						
GTA				LR	LR		
	comp=Z,690nm,17.4s						
GTA				LR	LR		
	comp=Z,810nm,16.4s						
QIZ	Qiongzhong	34.25	246	P	P	05 16 47.5	-0.3
QIZ				S	S	05 22 15.3	+0.9
QIZ				LR	LR		
	comp=Z,410nm,7.5s						
QIZ				LR	LR		
	comp=Z,400nm,14.7s						
QIZ				LR	LR		
	comp=Z,660nm,15.0s						
KMI	Kunming	36.14	261	P	P	05 17 02.5	-1.8
KMI				pmax	pmax		
	comp=Z,20nm,0.9s						
KMI				LR	LR		
	comp=Z,330nm,14.6s						
KMI				LR	LR		
	comp=Z,300nm,17.6s						
KMI				LR	LR		
	comp=Z,460nm,16.8s						
PZH	PanZhiHua	36.24	264	P	P	05 17 06.8	+1.8
GOMU	GeErMu	37.95	283	P	P	05 17 18.5	-1.3
GOMU				pP	pP	05 17 22.3	-1.4
GOMU				sP	sP	05 17 26.3	+1.1
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WMQ	Urumqi	41.38	296	*e*P	P	05 17 49.8	+1.9
WMQ				sP	sP	05 17 58.0	+4.6
WMQ				pmax	pmax		
	comp=Z,15nm,1.3s						
WMQ				LR	LR		
	comp=Z,94nm,24.0s						
C16K	Lisburne Hills	41.44	26		P	05 17 48.5	+0.6
FAKI	Fak Fak	41.78	196	P	P	05 17 51.1	-0.2
FAKI				IAmb	IAmb	05 18 35.8	
	comp=Z,36nm,1.0s						
ZAA0	Zalesovo Array	42.10	312		P	05 17 53.0	-0.6
ZAA0				IAmb	IAmb	05 18 03.2	
	comp=Z,23nm,0.9s						
ZALV	Zalesovo Beam	42.10	312	P	P	05 17 53.5	0.0
	comp=Z,5.7nm,0.6s,baz=88,slow=7.6,SNR=18						
ZALV				PcP	PcP	05 19 47.6	-0.4
	comp=Z,1.8nm,0.5s,baz=78,slow=3.6,SNR=3.2						
ZALV				LR	LR	05 36 04.4	
	comp=Z,331nm,18.5s,baz=103,slow=37						
	comp=Z,5.7nm,0.6s						
RDOG	Red Dog Mine	42.24	27	P	P	05 17 54.9	+0.4
CHTO	Chiang Mai	42.53	256	P	P	05 17 57.1	-0.4
CHTO	Chiang Mai	42.53	256	P	P	05 18 01.3	+3.8
CMAR	Chiang Mai Arr	42.74	255	P	P	05 18 00.3	+1.2
	comp=Z,0.7nm,0.3s,baz=49,slow=6.8,SNR=10.0						
	comp=Z,0.7nm,0.3s						
CMAR	Chiang Mai Arr	42.74	255		P	05 17 59.7	+0.5
NRIK	Noril'sk	42.91	335	P	P	05 17 59.2	-0.7
	comp=Z,1.2nm,0.3s,baz=108,slow=6.4,SNR=2.1						
NRIK				LR	LR	05 36 52.5	
	comp=Z,417nm,18.8s,baz=112,slow=38						
	comp=Z,1.2nm,0.3s						
NRIK	Noril'sk	42.91	335	P	P	05 18 00.8	+0.9
LUWI	Luwuk	42.93	210	P	P	05 17 59.3	-1.4
LUWI				IAmb	IAmb	05 18 38.9	
	comp=Z,28nm,1.0s						
LSA	Lhasa	43.18	275		P	05 18 01.6	-1.6
LSA				IAmb	IAmb	05 18 11.4	
	comp=Z,9.3nm,0.6s						
LSA	Lhasa	43.18	275	P	P	05 18 00.5	-2.7
MKAR	Makanchi Array	44.55	302	P	P	05 18 13.2	-0.3
	comp=Z,5.5nm,0.6s,baz=85,slow=9.0,SNR=48						
MKAR				PP	PcP	05 19 56.6	+0.2
	comp=Z,1.2nm,0.8s,baz=96,slow=10,SNR=1.4						
	comp=Z,5.5nm,0.6s						
MKAR	Makanchi Array	44.55	302		P	05 18 13.4	-0.1
MAKZ	Makanchi	44.75	302		P	05 18 15.6	+0.5
MAKZ				IAmb	IAmb	05 18 19.4	
	comp=Z,9.4nm,0.9s						
PPLA	Purkeypile	45.84	35	P	P	05 18 24.4	+0.8
KURK	Kurchatov	46.22	308		P	05 18 26.4	-0.2
E22K	Anaktuvuk Pass	46.33	28		P	05 18 28.3	+1.0
KTH	Kantishna Hill	46.42	34	P	P	05 18 27.9	-0.2
L22K	Petersville	46.49	36	P	P	05 18 28.3	-0.3
C23K	Itkillik River	46.94	26		P	05 18 32.8	+0.8
C23K				IAmb	IAmb	05 18 34.6	
	comp=Z,25nm,1.2s						
GHO	Glory Hole Cre	47.38	37	P	P	05 18 36.3	+0.7
SML	Sawmill	47.65	37	P	P	05 18 38.1	+0.3
CCB	Clear Creek Bu	47.79	33	P	P	05 18 39.0	+0.4
CCB				IAmb	IAmb	05 19 11.4	
	comp=Z,30nm,2.0s						
WUS	Wushi	48.11	295		P	05 18 41.9	+0.2
SCM	Sheep Creek Mo	48.13	37	P	P	05 18 42.3	+0.9
IL31		48.18	33		P	05 18 41.5	-0.1
IL31				IAmb	IAmb	05 19 26.9	
	comp=Z,11nm,1.3s						
ILAR	Eielson Array	48.18	33	P	P	05 18 42.2	+0.5
	comp=Z,2.5nm,0.9s,baz=270,slow=6.8,SNR=20						
	comp=Z,2.5nm,0.9s						
TARG	Taragay, Kyrgy	48.95	296		P	05 18 48.0	-0.5
TARG				IAmb	IAmb	05 18 58.6	
	comp=Z,16nm,0.8s						
BOOM	Boomskoye usch	50.03	297		P	05 18 56.0	-0.4
BOOM				IAmb	IAmb	05 19 00.7	
	comp=Z,9.0nm,0.7s						
BVAR	Borovoye Array	50.76	312	P	P	05 19 01.4	-0.2
	comp=Z,1.4nm,0.5s,baz=64,slow=6.6,SNR=7.1						
BVAR				PcP	PcP	05 20 18.6	+0.2
	comp=Z,1.9nm,0.7s,baz=68,slow=3.0,SNR=1.3						
	comp=Z,1.4nm,0.5s						
BORK	Borovoye	50.79	312	P	P	05 19 01.7	-0.1
BORK				IAmb	IAmb	05 19 11.1	
	comp=Z,10.0nm,0.8s						
AAK	Ala-Archa	51.00	298	LR	LR	05 42 39.6	
	comp=Z,167nm,18.6s,baz=108,slow=38						
AAK	Ala-Archa	51.00	298		P	05 19 03.8	+0.1
KSH	Kashi	51.01	294	P	P	05 19 08.8	+5.0
KSH				sP	sP	05 19 16.8	+7.5
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KSH				LR	LR		
	comp=Z,310nm,8.9s						
KSH				LR	LR		
	comp=Z,490nm,17.9s						
KSH				LR	LR		
	comp=Z,540nm,15.5s						
I29M	Ogilvie Camp,	51.75	32	P	P	05 19 08.5	-0.3
I29M				IAmb	IAmb	05 19 36.7	
	comp=Z,11nm,1.1s						
I30M	Mount Dempster	52.57	32		P	05 19 15.3	+0.3
KK31	Karatay Array	53.59	300		P	05 19 22.5	-0.3
KK31				IAmb	IAmb	05 19 32.2	
	comp=Z,18nm,1.0s						
KKAR	Karatay Array	53.59	300		P	05 19 22.5	-0.3
GAR	Garm	55.27	295	P	P	05 19 33.7	-1.5
S32K	Killisnoo	55.29	41	P	P	05 19 35.1	+0.2
NIL	Nilore	55.34	288	P	P	05 19 35.4	-0.3
ARTI	Arti	56.50	318		P	05 19 43.2	-0.3
WB0	Warramunga Arr	57.91	189		P	05 19 53.8	-0.1
WB0				IAmb	IAmb	05 19 54.5	
	comp=Z,16nm,0.7s						
FITZ	Fitzroy Crossi	57.99	199	P	P	05 19 55.6	+1.2
KBL	Kabul	58.08	291		P	05 19 54.9	-0.4
KBL				IAmb	IAmb	05 20 04.9	
	comp=Z,19nm,0.8s						
WRAB	Tennant Creek	58.08	189	P	P	05 19 54.7	-0.4
WRAB				IAmb	IAmb	05 19 55.7	
	comp=Z,15nm,0.8s						
WR0	Warramunga Arr	58.09	189	P	P	05 19 54.7	-0.4
WR0				IAmb	IAmb	05 19 55.8	
	comp=Z,15nm,0.8s						
WR8	Warramunga Arr	58.09	189		P	05 19 54.4	-0.7
WR8				IAmb	IAmb	05 19 55.4	
	comp=Z,15nm,0.7s						
WB2	Warramunga Arr	58.09	189	P	P	05 19 55.2	+0.1

WRA	Warramunga Arr	58.09	189	P	P	05 19 54.8	-0.3
	comp=Z,12nm,0.7s,baz=8.5,slow=7.0,SNR=34						
	comp=Z,12nm,0.7s						
WRA	Warramunga Arr	58.09	189	P	P	05 19 54.6	-0.5
AB31	Akbulak array	58.17	310		P	05 19 55.2	-0.3
AB31				IAmb	IAmb	05 20 04.7	
	comp=Z,12nm,0.7s						
ABKAR	Akbulak array	58.17	310	P	P	05 19 55.2	-0.3
SPITS	Spitsbergen Ar	59.86	349	P	P	05 20 07.2	+0.5
	comp=Z,9.9nm,1.0s,baz=96,slow=7.4,SNR=5.9						
SPITS				LR	LR	05 48 55.2	
	comp=Z,61nm,18.2s,baz=10,slow=39						
	comp=Z,9.9nm,1.0s						
RES	Resolute Bay	61.48	15		P	05 20 18.0	+0.2
RES				IAmb	IAmb	05 20 30.2	
	comp=Z,8.8nm,1.1s						
AS31	Alice Springs	61.82	189		P	05 20 20.5	-0.2
ASAR	Alice Springs	61.82	189	P	P	05 20 20.8	+0.1
	comp=Z,5.2nm,0.8s,baz=11,slow=6.1,SNR=28						
	comp=Z,5.2nm,0.8s						
ASAR	Alice Springs	61.82	189		P	05 20 20.2	-0.5
YKAW3	Yellowknife Wh	62.48	31	P	P	05 20 25.0	+0.4
YKAW3				IAmb	IAmb	05 22 26.8	
	comp=Z,13nm,1.6s						
YKA	Yellowknife Ar	62.51	31	P	P	05 20 25.1	+0.2
	comp=Z,1.1nm,0.8s,baz=301,slow=7.5,SNR=9.5						
	comp=Z,1.1nm,0.8s						
MBWA	Marble Bar	62.62	204	P	P	05 20 26.5	+0.4
PSA00	Pilbara Seismi	62.97	204	P	P	05 20 28.7	+0.3
PSA00				IAmb	IAmb	05 20 57.6	
	comp=Z,15nm,1.8s						
ARCES	ARCESS Array B	63.53	340	P	P	05 20 31.8	+0.2
	comp=Z,5.3nm,1.1s,baz=51,slow=6.1,SNR=6.3						
	comp=Z,5.3nm,1.1s						
DZM	Mont Dzumac	63.70	155	*e*LR	LR	05 39 30.5	
	comp=Z,202nm,21.7s						
TULEG	Thule	64.08	8	P	P	05 20 35.0	-0.2
BLKN	Baker Lake	68.16	24		P	05 21 01.7	+0.3
BLKN				IAmb	IAmb	05 21 12.8	
	comp=Z,7.8nm,1.0s						
FINES	FINESS Array B	68.52	333	P	P	05 21 03.8	0.0
	comp=Z,2.8nm,0.8s,baz=28,slow=8.9,SNR=6.4						
FINES				LR	LR	05 52 46.9	
	comp=Z,120nm,20.2s,baz=32,slow=38						
	comp=Z,2.8nm,0.8s						
STKA	Stephens Creek	69.45	181	P	P	05 21 10.1	+0.3
	comp=Z,2.3nm,0.7s,baz=348,slow=7.7,SNR=5.3						
	comp=Z,2.3nm,0.7s						
KBZ	Khabaz	71.12	311	P	P	05 21 20.1	+0.1
	comp=Z,2.1nm,0.8s,baz=83,slow=2.3,SNR=5.8						
	comp=Z,2.1nm,0.8s						
FFC	Flin Flon	72.39	33		P	05 21 27.5	0.0
FFC				IAmb	IAmb	05 21 29.2	
	comp=Z,20nm,1.5s						
NVAR	Mina Array Bea	73.61	54	P	P	05 21 35.9	+0.5
	comp=Z,0.7nm,0.2s,baz=284,slow=6.7,SNR=9.8						
	comp=Z,0.7nm,0.2s						
HFS	Hagfors	73.71	336	P	P	05 21 35.0	-0.2
	comp=Z,3.3nm,0.8s,baz=55,slow=5.6,SNR=7.5						
	comp=Z,3.3nm,0.8s						
NB2	NORSAR Subarra	73.77	338	P	P	05 21 35.3	-0.4
	comp=Z,17nm,1.2s,baz=40,slow=6.2						
NOA	NORSAR Array B	73.77	338	P	P	05 21 35.5	-0.2
	comp=Z,1.2nm,0.6s,baz=39,slow=6.0,SNR=7.1						
NOA				LR	LR	05 56 54.7	
	comp=Z,153nm,19.9s,baz=30,slow=38						
	comp=Z,1.2nm,0.6s						
AK03	Malin Array Si	74.22	323	P	P	05 21 37.5	-0.9
AKASG	Malin Array Be	74.23	323	P	P	05 21 38.0	-0.4
	comp=Z,1.8nm,0.5s,baz=46,slow=6.4,SNR=12						
AKASG				LR	LR	05 56 59.8	
	comp=Z,156nm,20.1s,baz=61,slow=38						
	comp=Z,1.8nm,0.5s						
AKBB	Malin Array Si	74.23	323	P	P	05 21 37.9	-0.6
AK01	Malin Array Si	74.25	323	P	P	05 21 37.8	-0.7
KIEV	Kiev	74.25	323	P	P	05 21 38.1	-0.4
KIEV				IAmb	IAmb	05 21 48.0	
	comp=Z,14nm,0.9s						
KIEV	Kiev	74.25	323	P	P	05 21 37.9	-0.6
	comp=Z,73nm,1.0s						
AK04	Malin Array Si	74.25	323	P	P	05 21 37.8	-0.8
AK09	Malin Array Si	74.26	323	P	P	05 21 37.9	-0.7
AK08	Malin Array Si	74.26	323	P	P	05 21 37.9	-0.7
AK22	Malin Array Si	74.27	323	P	P	05 21 37.9	-0.8
AK02	Malin Array Si	74.27	323	P	P	05 21 37.9	-0.8
AK21	Malin Array Si	74.27	323	P	P	05 21 37.9	-0.8
AK11	Malin Array Si	74.28	323	P	P	05 21 37.9	-0.8
AK10	Malin Array Si	74.29	323	P	P	05 21 38.0	-0.8
AK18	Malin Array Si	74.30	323	P	P	05 21 38.1	-0.7
AK05	Malin Array Si	74.30	323	P	P	05 21 38.1	-0.7
LUBAR	Lubar, Ukraine	75.46	323	P	P	05 21 44.6	-1.0
HWUT	Hardware Ranch	75.86	48		P	05 21 48.5	+0.2
HWUT				IAmb	IAmb	05 21 50.7	
	comp=Z,12nm,1.4s						
DUG	Dugway, Tooele	75.98	50	P	P	05 21 48.2	-0.7
PD31	Pinedale Array	76.29	46	P	P	05 21 50.7	-0.1
PD31				IAmb	IAmb	05 24 26.1	
	comp=Z,12nm,1.9s						
PDAR	Pinedale Array	76.29	46	P	P	05 21 51.3	+0.5
	comp=Z,1.0nm,0.7s,baz=268,slow=1.7,SNR=11						
	comp=Z,1.0nm,0.7s						
RDMU	Red Mountain	77.68	48	P	P	05 21 59.3	+0.7
RDMU				IAmb	IAmb	05 22 02.5	
	comp=Z,36nm,1.9s						
KWP	Kalwaria Pacla	78.02	325	*e*P	P	05 22 00.9	+0.9
BUR08	Bucovina Ar. S	78.25	322		P	05 22 01.8	+0.2
BURAR	Bucovina Array	78.26	322		P	05 22 02.0	+0.4
BURAR				IAmb	IAmb	05 22 12.2	
	comp=Z,8.0nm,0.8s						
OJC	Ojcow	78.88	327	*e*P	P	05 22 14.6	+10
BRTR	Keskin Array B	79.05	312	P	P	05 22 06.3	+0.2
	comp=Z,1.2nm,1.0s,baz=132,slow=1.8,SNR=4.0						
BRTR				LR	LR	06 00 03.1	
	comp=Z,80nm,19.1s,baz=137,slow=38						
	comp=Z,1.2nm,1.0s						
NIE	Niedzica	79.25	326	*e*P	P	05 22 15.6	+8.7
MLR	Muntele Rosu	79.38	320	LR	LR	06 00 09.8	
	comp=Z,142nm,19.3s,baz=87,slow=38						
RAR	Rarotonga	79.84	127	LR	LR	05 51 25.5	
	comp=Z,114nm,19.6s,baz=240,slow=31						
KSP	Ksiaz	79.89	329	*e*P	P	05 22 19.0	+8.7
STEB	Steborice	79.97	327	*e*P	P	05 22 19.5	+8.8
MORC	Moravsky Berou	80.18	327		P	05 22 12.1	+0.1
MORC				IAmb	IAmb	05 22 23.1	
	comp=Z,8.6nm,1.0s						
MORC	Moravsky Berou	80.18	327	*e*P	P	05 22 21.5	+10
DPC	Dobruska-Polom	80.26	328	*e*P	P	05 22 20.6	+8.2
KRLC	Kraliky	80.28	328	*e*P	P	05 22 21.1	+8.6
CLL	Collm	80.84	331	*i* P	P	05 22 17.0	+1.6
CLL				*i* P(2)		05 22 24.0	
	comp=Z,12nm,1.1s						
VRAC	Vranov	80.94	328	*e*P	P	05 22 25.9	+10
KRUC	Moravsky	81.21	328	*e*P	P	05 22 27.1	+10
HSKC	Hora Svate Kat	81.23	330	*e*P	P	05 22 28.3	+11
SRO	Srobarova	81.33	326	*e*P	P	05 22 27.2	+9.2
MODS	Modra-Piesok	81.36	327	*e*P	P	05 22 28.6	+10
ZVC	Zvikov	81.84	329	*e*P	P	05 22 35.6	+15
RONA	Rosalia, Austr	82.30	327	*e*PcP	PcP	05 22 32.0	+3.4
	comp=Z,9.1nm,1.3s						
CONA	Conrad Observa	82.31	327	*e*PcP	PcP	05 22 33.1	+4.5
	comp=Z,7.4nm,1.0s						
KHC	Kasperske Hory	82.33	329	*e*P	P	05 22 32.6	+9.2
GERES	GERESS Array B	82.50	329	P	P	05 22 23.8	-0.6
	comp=Z,0.4nm,0.5s,baz=38,slow=6.5,SNR=5.5						
	comp=Z,0.4nm,0.5s						
EKA	Eskdalemuir Ar	82.64	341	P	P	05 22 24.7	-0.1
	comp=Z,1.5nm,0.8s,baz=25,slow=5.9,SNR=2.3						
	comp=Z,1.5nm,0.8s						
ARSA	Arzberg	82.98	327	*e*PcP	PcP	05 22 30.0	-1.5
	comp=Z,0.2nm,0.5s						
MOA	Molln	83.05	328	*e*PcP	PcP	05 22 30.3	-1.5
	comp=Z,6.8nm,1.4s						
BIOA	Bad Ischl, Aus	83.44	328	*e*PcP	PcP	05 22 32.4	-1.1
	comp=Z,10nm,1.3s						
SOKA	Soboth	83.64	327	*e*P	P	05 22 29.6	-0.6
	comp=Z,11nm,1.2s						
OBKA	Obir	83.98	327	*e*P	P	05 22 31.0	-1.0
	comp=Z,0.1nm,0.3s						
LESA	Schwarzleotal	84.05	328	*e*P	P	05 22 32.4	0.0
	comp=Z,7.8nm,1.4s						
PPT2	Papeete2	84.11	117	*e*LR	LR	05 49 05.3	
	comp=Z,121nm,25.5s						
MYKA	Terra Mystica	84.27	327	*e*PcP	PcP	05 22 40.9	+3.7
	comp=Z,0.4nm,0.5s						
WATA	Walderalm	84.57	329	*e*PcP	PcP	05 22 44.0	+5.4
	comp=Z,2.3nm,0.5s						
RETA	Reutte	84.78	330	*e*P	P	05 22 36.4	+0.4
	comp=Z,14nm,1.4s						
SQTA	Sankt Quirin	84.81	329	*e*pP	P	05 22 37.5	+1.3
	comp=Z,0.1nm,0.3s						
DAVA	Damuels	85.29	330	*e*P	P	05 22 36.7	-2.0
	comp=Z,10nm,1.1s						
TAOE	Nuku Hiva Isla	85.37	105	*e*LR	LR	05 49 25.2	
	comp=Z,209nm,27.3s						
LPIG	La Paz	87.84	61	LR	LR	05 58 11.5	
	comp=Z,141nm,18.3s,baz=220,slow=33						
TBI	Tubuai	88.09	122	*e*LR	LR	05 50 51.2	
	comp=Z,491nm,27.0s						
TXAR	Lajitas Array	88.75	53	P	P	05 22 56.4	+0.7
	comp=Z,0.4nm,0.5s,baz=313,slow=2.5,SNR=8.9						
	comp=Z,0.4nm,0.5s						
KEST	Kesra	94.94	324	LR	LR	06 11 06.1	
	comp=Z,288nm,18.2s,baz=323,slow=39						
TORD	Torodi Ar. Bea	117.43	316	PKP	PKPdf	05 28 47.7	-0.3
	comp=Z,0.2nm,0.4s,baz=2.5,slow=3.4,SNR=2.2						
DBIC	Dimbokro	126.34	319	PKP	PKPdf	05 29 04.8	-0.3
	comp=Z,3.6nm,1.1s,baz=221,slow=3.8,SNR=3.0						
LPAZ	La Paz	145.34	60	PKPbc	PKPdf	05 29 41.2	+0.4
	comp=Z,4.5nm,0.8s,baz=358,slow=1.9,SNR=17						
H03N2	Juan Fernandez	146.06	95	T	T	08 12 55.6	
	baz=294,slow=76,SNR=8.0						
H03N3	Juan Fernandez	146.07	95	T	T	08 12 55.2	
	baz=294,slow=76,SNR=9.8						
H03N1	Juan Fernandez	146.08	95	T	T	08 12 55.8	
	baz=294,slow=76,SNR=9.0						

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*NEIC **27** 05:27:29.0±1.1, 17°.77N±0°.08×68°.65W±0°.01, h35^{km}±2^{km}, ML2.7/16, Md3.5/5(RSPR), Error ellipse: s-maj=13.6km s-min=3.1km az=179.0*

*RSPR **27** 05:27:30.0, 17°.78N×68°.42W, h120^{km}±1^{km}, MD3.5/5*

ISC 27 05:27:27.9±2.4**, 17°.8N**±0°.2×**68°.65W**±0°.09**, h95^{km}, n22, σ0^{s}94**/25**, 6C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DR12	Loma Pena Alta	1.18	324	Pn	Pn	05 27 49.6	-0.5
DR12				Sn	Sn	05 28 05.1	-1.6
CRPR	Cabo Rojo, PR	1.48	83		Pn	05 27 53.2	-0.4
CRPR					Sn	05 28 11.4	-1.6
CRPR	Cabo Rojo, PR	1.48	83	⇑*e*P	Pn	05 27 54.5	+0.9
CRPR	Cabo Rojo, PR	1.48	83	*e*S	Sn	05 28 13.5	+0.5
MLPR	Magueyes Islan	1.54	85	⇑*e*P	Pn	05 27 55.2	+0.9
MLPR	Magueyes Islan	1.54	85	*e*S	Sn	05 28 14.9	+0.6
AGPR	Aguadilla, PR	1.60	66	Pn	Pn	05 27 55.7	+0.7
AGPR				IAML		05 28 14.8	
	100nm,2.7s						
AGPR	Aguadilla, PR	1.60	66	⇑*e*P	Pn	05 27 56.3	+1.2
AGPR	Aguadilla, PR	1.60	66	*e*S	Sn	05 28 16.6	+0.9
AOPR	Arecibo Observ	1.88	74		Pn	05 27 58.1	-0.6
AOPR					Sn	05 28 21.1	-1.0
AOPR				IAML		05 29 12.2	
	comp=N,40nm,3.0s						
AOPR	Arecibo Observ	1.88	74	⇑*e*P	Pn	05 27 59.4	+0.8
AOPR	Arecibo Observ	1.88	74	*e*S	Sn	05 28 22.8	+0.7
UUPR	Utuado, UPR, P	1.89	77	Pn	Pn	05 27 59.6	+0.9
OBIP	Obispado Ponce	1.96	84		Pn	05 27 59.1	-0.6
OBIP	Obispado Ponce	1.96	84	⇑*e*P	Pn	05 28 00.0	+0.3
CELP	Cerrillos	1.99	83	Pn	Pn	05 28 00.4	+0.3
CELP				IAML		05 28 42.9	
	comp=N,34nm,2.9s						
ECPR	Experimental S	2.23	77	Pn	Pn	05 28 03.3	0.0
ECPR				IAML		05 28 34.5	
	comp=N,52nm,0.2s						
ECPR				IAML		05 29 11.0	
	comp=N,64nm,0.1s						
SC01	Santiago de lo	2.53	309	Pn	Pn	05 28 08.7	+1.5
SC01				IAML		05 28 50.3	
	comp=E,44nm,2.8s						
HUMP	Col San Antoni	2.68	83		Pn	05 28 09.2	-0.1
HUMP					Sn	05 28 39.8	-1.3
HUMP	Col San Antoni	2.68	83	IAML		05 28 45.5	
	comp=E,23nm,3.7s						
HUMP				IAML		05 29 41.6	
	comp=E,19nm,2.8s						
HUMP	Col San Antoni	2.68	83	⇑*e*P	Pn	05 28 09.3	+0.1
HUMP	Col San Antoni	2.68	83	*e*S	Sn	05 28 40.1	-1.0

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*UCR **27** 05:28:54.8±0.9, 11°.31N×86°.88W, h0^{km}±114^{km}, MW3.5*

*CATAC **27** 05:28:58.6±0.4, 11°N±2°×8°7W±°, h26^{km}±3^{km}, M3.4/36, MLv3.4/36, Error ellipse: s-maj=5.4km s-min=4.0km az=28.6, confirmed*

ISC 27 05:28:57.7±1.6**, 11°.41N**±0°.05×**86°.76W**±0°.04**, h17^{km}**±10^{km}**, n52, σ0^{s}76**/63**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	0.79	12	P	Pb	05 29 13.2	+0.1
COPN	Copaltepe	0.79	12	*e*P	Pb	05 29 13.2	+0.1
SABN	Sabanita	0.80	47	P	Pg	05 29 13.6	+0.2
NANN	Nandasmo	0.82	50	P	Pn	05 29 14.8	+0.2
NANN	Nandasmo	0.82	50	S	Sb	05 29 26.4	+1.9
MASN	Masaya	0.83	46	P	Pn	05 29 15.1	+0.3
MAS3	Al N del Volca	0.84	43	P	Pg	05 29 13.8	-0.3
MAS3				S	Sb	05 29 26.5	+1.5
UNAN	Cigeo UNAN	0.85	34	P	Pg	05 29 14.3	0.0
UNAN				S	Sb	05 29 27.4	+2.2
TISN	Laguna Tiscapa	0.88	33	P	Pg	05 29 14.6	-0.2
ALLN	Telcor Managua	0.88	33	P	Pb	05 29 15.0	+0.3
ALLN	Telcor Managua	0.88	33	S	Sg	05 29 26.8	+0.2
AMTN	Mateare	0.89	21	P	Pb	05 29 14.7	0.0
MGAN	Managua	0.89	34	P	Pb	05 29 15.0	+0.2
MGAN	Managua	0.89	34	S	Sg	05 29 26.4	-0.4
APQ2	Apoyeque	0.89	28	P	Pb	05 29 14.6	-0.3
APQ2				S	Sg	05 29 27.5	+0.6
APYN	Apoyeque	0.92	26	P	Pg	05 29 15.7	+0.2
APYN				S	Sg	05 29 26.7	-0.9
MOMN	Momotombo	1.02	12	P	Pb	05 29 16.6	-0.4
MOM2	El Cardon	1.06	15	P	Pb	05 29 17.3	-0.4
MOM2				S	Sb	05 29 31.9	+0.6
CNGA	Al SSO del Vol	1.08	3	P	Pb	05 29 17.6	-0.5
CNGN	Cerro Negro	1.09	3	P	Pb	05 29 17.6	-0.6
CNGN	Cerro Negro	1.09	3	S	Sg	05 29 33.2	+0.1
CNGN	Cerro Negro	1.09	3	*e*P	Pb	05 29 17.6	-0.6
MORN	Al O del Volca	1.10	83	P	Pb	05 29 18.0	-0.4
MORN				S	Sb	05 29 33.7	+1.2
LCRUZ	La Cruz	1.16	106	*e*P	Pn	05 29 18.9	-0.4
HOYN	Al Sur del Vol	1.19	357	P	Pn	05 29 19.1	-0.6
HERN	Volcan Telica	1.20	357	P	Pn	05 29 19.5	-0.3
POLN	Al Sur del Vol	1.24	358	P	Pn	05 29 20.1	-0.3
PKGN	Cerro Pekin	1.27	350	P	Pn	05 29 20.2	-0.7
PKGN				S	Sb	05 29 37.2	-0.3
CRIN	San Cristobal	1.32	348	P	Pn	05 29 20.6	-0.9
CRIN	San Cristobal	1.32	348	S	Sb	05 29 38.6	-0.2
LAPC	Finca la Perla	1.45	116	*e*P	Pn	05 29 23.2	-0.1
BOAB	BOACO BROADBAN	1.49	46	P	Pn	05 29 22.9	-0.9
CLARA	Aguas Claras	1.67	112	*e*P	Pb	05 29 27.4	-0.8
LIMN	Finca el Limon	1.69	13	P	Pn	05 29 26.1	-0.5
LIMN				S	Sn	05 29 47.1	-0.9
MATN	Matagalpa	1.72	28	P	Pn	05 29 25.5	-1.6
MATN	Matagalpa	1.72	28	S	Sn	05 29 47.6	-1.2
POTN	Potosi Cosigui	1.74	335	P	Pn	05 29 26.8	-0.5
POTN				S	Sn	05 29 48.9	-0.3
POTN	Potosi Cosigui	1.74	335	*e*P	Pn	05 29 26.8	-0.5
CSGN	Cosiguina Volc	1.74	334	P	Pn	05 29 26.8	-0.5
CSGN				S	Sn	05 29 48.0	-1.4
CSGN	Cosiguina Volc	1.74	334	*e*P	Pn	05 29 26.9	-0.5
CNCH	Conchagua	2.13	331	P	Pn	05 29 32.4	-0.4
CNCH	Conchagua	2.13	331	S	Sn	05 29 58.6	-0.4
RCON	San Juan de Ri	2.15	16	P	Pn	05 29 33.9	+0.9
LCND	La Caada	2.19	330	P	Pn	05 29 33.3	-0.1
RCPN	Sur Rio San Ju	2.21	17	P	Pn	05 29 34.0	+0.2
OCON	Estacion meteo	2.23	7	P	Pn	05 29 34.2	+0.1
RCVN	Varillal2	2.23	14	P	Pn	05 29 34.3	+0.1
YUSH	Yuscaran	2.53	358	P	Pn	05 29 38.5	+0.3
PACA	Pacayal	2.56	323	P	Pn	05 29 39.0	+0.4
TGUH	Tegucigalpa,Un	2.68	349	P	Pn	05 29 40.8	+0.4
TGUH				S	Sn	05 30 13.1	+0.5
SCLA	Alcaldia de Sa	2.98	320	P	Pn	05 29 45.6	+1.2
JAYA	Jayaque - finc	3.45	311	P	Pn	05 29 52.8	+1.8

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*IDC **27** 05:39:13.5±0.8, 50°.32S×130°.84E, h0^{km}, mb4.3/6, mbtmp4.3/6, MS3.7/19, Error ellipse: s-maj=52.6km s-min=18.6km az=95.0*

*NEIC **27** 05:39:15.1±1.4, 50°.27S±0°.10×130°.8E±0°.2, h10^{km}±1^{km}, mb4.7/26, Error ellipse: s-maj=23.8km s-min=15.8km az=283.0*

ISC 27 05:39:14.8±0.5**, 50°.25S**±0°.07×**130°.8E**±0°.1**, h10^{km}, n58, σ0^{s}64**/39**, mb4.5**/16**, MS3.7**/18**, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAU	Tasmania Unive	13.53	63	Pn	Pn	05 42 26.8	+0.2
TOO	Toolangi	16.49	45	Pn	Pn	05 43 05.4	-0.7
BBOO	Buckleboo	17.86	15	P	Pn	05 43 23.1	-0.2
CASY	Casey	19.11	205	P	P	05 43 37.1	-0.4
FORT	Forrest	19.55	353	P	P	05 43 41.3	-1.3
H01W1	Cape Leeuwin H	19.56	315	T	T	06 03 42.9	
	baz=144,slow=74,SNR=23						
H01W2	Cape Leeuwin H	19.56	315	T	T	06 03 39.8	
	baz=144,slow=74,SNR=32						
H01W3	Cape Leeuwin H	19.57	315	T	T	06 03 42.1	
	baz=144,slow=74,SNR=21						
NWAO	Narrogin (SRO)	19.99	325	LR	LR	05 49 31.7	
	comp=Z,257nm,21.7s,baz=282,slow=31						
STKA	Stephens Creek	20.05	28	P	P	05 43 48.5	+0.6
	3.4nm,0.7s,baz=179,slow=8.8,SNR=11						
STKA				LR	LR	05 50 32.4	
	comp=Z,155nm,18.9s,baz=186,slow=34						
	3.4nm,0.7s						
STKA	Stephens Creek	20.05	28	P	P	05 43 47.5	-0.5
STKA				IAmb	IAmb	05 43 55.1	
	comp=Z,26nm,0.7s						
INKA	Innaminka	23.73	22	P	P	05 44 27.1	+0.1
INKA				IAmb	IAmb	05 44 30.1	
	comp=Z,8.3nm,0.9s						
MORW	Morawa	23.91	327	P	P	05 44 27.5	-1.3
MORW				IAmb	IAmb	05 44 36.5	
	comp=Z,14nm,1.2s						
ASAR	Alice Springs	26.65	6	P	P	05 44 54.5	+0.8
	comp=Z,9.7nm,1.0s,baz=172,slow=9.5,SNR=59						
ASAR				PcP	PcP	05 48 17.6	+0.2
	comp=Z,0.7nm,0.7s,baz=186,slow=2.6,SNR=6.4						
ASAR				LR	LR	05 54 29.6	
	comp=Z,165nm,21.1s,baz=174,slow=34						
	comp=Z,9.7nm,1.0s						
ASAR	Alice Springs	26.65	6	P	P	05 44 53.1	-0.6
AS31	Alice Springs	26.65	6	P	P	05 44 53.5	-0.2
VNDA	Vanda	29.78	167	P	P	05 45 21.0	-0.1
	comp=Z,5.0nm,0.9s,baz=317,slow=8.4,SNR=14						
VNDA				LR	LR	05 56 15.0	
	comp=Z,97nm,19.9s,baz=336,slow=34						
	comp=Z,5.0nm,0.9s						
VNDA	Vanda	29.78	167	P	P	05 45 21.2	+0.1
VNDA				IAmb	IAmb	05 45 27.5	
	comp=Z,6.7nm,0.8s						
WR8	Warramunga Arr	30.37	7	P	P	05 45 26.8	-0.1
WR8				IAmb	IAmb	05 45 28.4	
	comp=Z,6.9nm,0.8s						
WRA	Warramunga Arr	30.37	7	P	P	05 45 27.3	+0.4
	comp=Z,3.4nm,0.9s,baz=189,slow=7.9,SNR=9.4						
WRA				PcP	PcP	05 48 26.7	+0.1
	comp=Z,0.7nm,0.7s,baz=193,slow=1.4,SNR=2.5						
	comp=Z,3.4nm,0.9s						
WRA	Warramunga Arr	30.37	7	P	P	05 45 27.8	+0.9
SBA	Scott Base	30.76	166	P	P	05 45 29.6	-0.2
SBA				IAmb	IAmb	05 45 32.9	
	comp=Z,7.6nm,1.1s						
FITZ	Fitzroy Crossi	32.34	351	LR	LR	05 57 38.7	
	comp=Z,218nm,21.6s,baz=171,slow=34						
CTA	Charters Tower	32.51	28	LR	LR	05 59 10.5	
	comp=Z,106nm,18.6s,baz=216,slow=37						
KNRA	Kununurra	34.52	357	P	P	05 46 03.5	+0.3
URZ	Urewera	34.75	88	LR	LR	05 58 28.1	
	comp=Z,118nm,19.3s,baz=274,slow=33						
MTN	Manton Dam	37.30	1	P	P	05 46 27.2	+0.2
MTN				IAmb	IAmb	05 46 39.6	
	comp=Z,50nm,1.4s						
BATI	Baumata	40.35	349	LR	LR	06 02 45.0	
	comp=Z,172nm,20.2s,baz=226,slow=35						
PMG	Port Moresby	42.93	24	LR	LR	06 04 27.5	
	comp=Z,108nm,19.7s,baz=194,slow=35						
JAGI	Jajag, Banyuwa	43.88	336	P	P	05 47 21.6	+0.2
JAGI				IAmb	IAmb	05 47 27.6	
	comp=Z,23nm,1.1s						
UGM	Wanagama	45.45	331	P	P	05 47 34.7	+0.7
SANVU	Saraoutou	45.49	53	P	P	05 47 33.5	-0.8
JAY	Jayapura	48.30	13	LR	LR	06 08 03.8	
	comp=Z,147nm,20.2s,baz=0.0,slow=36						
H04S1	CROZET ISLANDS	50.01	242	T	T	06 42 27.4	
	baz=124						
H04S2	CROZET ISLANDS	50.01	242	T	T	06 42 25.7	
	baz=124						
H04S3	CROZET ISLANDS	50.02	242	T	T	06 42 29.7	
	baz=124						
BELA	Belgrano 2	51.83	184	P	P	05 48 21.5	-0.8
BELA				IAmb	IAmb	05 48 35.3	
	comp=Z,6.6nm,1.3s						
TOLI2	Tolitoli	51.88	347	P	P	05 48 23.2	-0.1
TOLI2				IAmb	IAmb	05 48 24.8	
	comp=Z,5.6nm,0.7s						
SNAA	Sanae	54.04	196	P	P	05 48 38.4	-0.4
	comp=Z,5.5nm,0.9s,baz=199,slow=12,SNR=6.4						
SNAA				LR	LR	06 10 28.1	
	comp=Z,113nm,19.7s,baz=172,slow=35						
	comp=Z,5.5nm,0.9s						
SNAA	Sanae	54.04	196	P	P	05 48 38.1	-0.7
SNAA				IAmb	IAmb	05 48 40.3	
	comp=Z,28nm,1.5s						
SBUM	Sibu	54.86	337	P	P	05 48 45.9	+0.6
SBUM				IAmb	IAmb	05 48 48.0	
	comp=Z,7.6nm,1.5s						
KULM	Kulim	61.13	325	P	P	05 49 29.3	0.0
PMSA	Palmer Station	64.74	173	LR	LR	06 16 40.0	
	comp=Z,107nm,18.1s,baz=172,slow=35						
GUMO	Guam	64.76	15	LR	LR	06 19 14.8	
	comp=Z,28nm,18.5s,baz=98,slow=37						
ESPZ	Base Esperanza	66.53	176	P	P	05 50 04.0	-0.2
PPT	Papeete	70.12	94	LR	LR	06 14 24.2	
	comp=Z,58nm,21.8s,baz=5.5,slow=30						
PALK	Pallekele	71.80	307	LR	LR	06 18 00.1	
	comp=Z,33nm,18.7s,baz=136,slow=32						
CMAR	Chiang Mai Arr	73.95	329	P	P	05 50 51.6	+1.5
	comp=Z,0.6nm,0.4s,baz=156,slow=4.9,SNR=4.8						
CMAR				LR	LR	06 24 27.3	
	comp=Z,23nm,18.1s,baz=165,slow=37						
	comp=Z,0.6nm,0.4s						
CMAR	Chiang Mai Arr	73.95	329	P	P	05 50 50.7	+0.6
MG01	Puerto William	74.06	169	P	P	05 50 51.6	+1.2
COYC	Coyhaique	82.52	164	P	P	05 51 38.3	+0.9
COYC				IAmb	IAmb	05 51 41.9	
	comp=Z,23nm,1.4s						
KHWEE	KHWEE	82.68	245	P	P	05 51 38.3	-0.5
KHWEE				IAmb	IAmb	05 52 18.5	
	comp=Z,12nm,0.8s						
LSZ	Lusaka	86.23	251	LR	LR	06 26 55.6	
	comp=Z,38nm,18.2s,baz=52,slow=33						
KSRS	Korea Array	87.36	358	LR	LR	06 33 45.8	
	comp=Z,10nm,18.0s,baz=195,slow=37						
ASAJ	Asahikawa	94.55	9	LR	LR	06 33 00.9	
	comp=Z,43nm,20.8s,baz=168,slow=34						
YKA	Yellowknife Ar	143.44	45	PKP	PKPab	05 58 47.2	+2.7
	comp=Z,0.2nm,0.7s,baz=268,slow=4.0,SNR=5.5						
NOA	NORSAR Array B	145.47	312	PKPbc	PKPdf	05 58 51.9	0.0
	comp=Z,1.1nm,0.9s,baz=96,slow=3.9,SNR=3.6						
ESDC	Sonseca Array	146.75	269	PKPbc	PKPdf	05 58 55.3	+0.5
	comp=Z,0.3nm,0.7s,baz=95,slow=2.1,SNR=4.3						

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*IDC **27** 05:42:13.8±2.6, 17°.92S×178°.51W, h545^{km}±31^{km}, mb3.6/16, mbtmp4.4/16, Error ellipse: s-maj=31.3km s-min=11.9km az=149.0*

*NEIC **27** 05:42:16.0±1.5, 18°.02S±0°.10×178°.4W±0°.1, h566^{km}±8^{km}, mb4.5/52, Error ellipse: s-maj=17.8km s-min=12.6km az=122.0*

ISC 27 05:42:16.6±0.5**, 18°.1S**±0°.1×**178°.47W**±0°.08**, h579^{km}, n82, σ1^{s}06**/85**, mb4.3**/43**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.33	275	P	P	05 43 35.5	-0.7
AFI	Afiamalu	7.64	58	P	P	05 44 07.5	-4.5
NIUE	Niue	8.17	99	P	P	05 44 14.8	-2.1
MARNC	Mare, Loyalty	13.16	253	P	P	05 45 05.6	-1.6
PINNC	Pines Island,	13.96	249	P	P	05 45 16.0	+0.6
DZM	Mont Dzumac	14.72	252	P	P	05 45 24.7	+1.7
	15nm,0.6s,baz=78,slow=16,SNR=13						
DZM	Mont Dzumac	14.72	252	P	P	05 45 23.1	+0.2
URZ	Urewera	20.50	190	P	P	05 46 13.7	-2.0
	2.7nm,0.3s,baz=189,slow=16,SNR=1.6						

	2.7nm,0.3s						
QRZ	**Quartz Range**	**23.98**	**197**	P	**P**	**05 46 47.8**	**+1.0**
THZ	**Tophouse**	**24.76**	**196**	P	**P**	**05 46 52.8**	**-0.8**
LTZ	**Lake Taylor**	**25.88**	**196**	P	**P**	**05 47 02.6**	**-0.9**
EIDS	**Eidsvold**	**29.16**	**250**	P	**P**	**05 47 32.2**	**-0.1**
EIDS				IAmb	IAmb	05 47 33.1	
	comp=Z,26nm,1.1s						
ARMA	**Armidale**	**29.82**	**240**		**P**	**05 47 39.0**	**+0.9**
ARMA				IAmb	IAmb	05 47 39.6	
	comp=Z,11nm,0.8s						
CTAO	**Charters Tower**	**33.36**	**261**		**P**	**05 48 07.7**	**-0.5**
CTAO				IAmb	IAmb	05 48 08.6	
	comp=Z,16nm,0.7s						
CAN	**Canberra**	**33.57**	**233**	P	**P**	**05 48 10.1**	**+0.3**
CAN				IAmb	IAmb	05 48 11.3	
	comp=Z,14nm,1.0s						
PMG	**Port Moresby**	**34.42**	**280**		**P**	**05 48 17.3**	**+0.1**
TOO	**Toolangi**	**37.03**	**231**		**P**	**05 48 39.4**	**+0.9**
TOO				IAmb	IAmb	05 48 40.0	
	comp=Z,14nm,1.1s						
COEN	**Coen**	**37.05**	**271**		**P**	**05 48 39.0**	**+0.1**
STKA	**Stephens Creek**	**38.51**	**241**	P	**P**	**05 48 51.1**	**+0.6**
	comp=Z,15nm,0.6s,baz=88,slow=9.5,SNR=37						
	comp=Z,15nm,0.6s						
STKA	**Stephens Creek**	**38.51**	**241**		**P**	**05 48 51.1**	**+0.6**
INKA	**Innaminka**	**38.64**	**248**		**P**	**05 48 52.3**	**+0.8**
INKA				IAmb	IAmb	05 48 53.2	
	comp=Z,12nm,0.8s						
BBOO	**Buckleboo**	**43.28**	**241**		**P**	**05 49 28.3**	**0.0**
BBOO				IAmb	IAmb	05 49 29.1	
	comp=Z,27nm,0.8s						
WR8	**Warramunga Arr**	**44.40**	**260**		**P**	**05 49 36.0**	**-1.0**
WR8				IAmb	IAmb	05 49 38.6	
	comp=Z,11nm,0.8s						
WB0	**Warramunga Arr**	**44.52**	**260**		**P**	**05 49 36.8**	**-1.2**
WB0				IAmb	IAmb	05 49 37.7	
	comp=Z,17nm,0.6s						
WRAB	**Tennant Creek**	**44.54**	**260**	P	**P**	**05 49 37.1**	**-1.1**
WRAB				IAmb	IAmb	05 49 37.7	
	comp=Z,16nm,0.7s						
WRA	**Warramunga Arr**	**44.55**	**260**	P	**P**	**05 49 37.0**	**-1.2**
	comp=Z,16nm,0.7s,baz=91,slow=8.0,SNR=86						
WRA				PcP	**PcP**	**05 51 08.3**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=95,slow=3.4,SNR=2.3						
	comp=Z,16nm,0.7s						
WRA	**Warramunga Arr**	**44.55**	**260**	P	**P**	**05 49 36.7**	**-1.6**
AS31	**Alice Springs**	**44.69**	**254**		**P**	**05 49 39.1**	**-0.2**
ASAR	**Alice Springs**	**44.70**	**254**	P	**P**	**05 49 38.9**	**-0.5**
	comp=Z,91nm,0.6s,baz=88,slow=8.4,SNR=1302						
ASAR				PcP	**PcP**	**05 51 08.8**	**-0.4**
	comp=Z,3.6nm,0.7s,baz=96,slow=3.8,SNR=5.4						
ASAR				ScP	**ScP**	**05 54 09.5**	**+2.7**
	comp=Z,1.0nm,0.8s,baz=102,slow=3.9,SNR=4.6						
ASAR				S	**S**	**05 55 32.5**	**-2.2**
	comp=Z,0.7nm,1.1s,baz=88,slow=16,SNR=4.8						
ASAR	**Alice Springs**	**44.70**	**254**		**P**	**05 49 39.2**	**-0.2**
MTN	**Manton Dam**	**48.73**	**269**	P	**P**	**05 50 09.0**	**-0.8**
FORT	**Forrest**	**49.89**	**245**	P	**P**	**05 50 17.6**	**-0.4**
FORT				IAmb	IAmb	05 50 18.0	
	comp=Z,9.6nm,0.7s						
KNRA	**Kununurra**	**50.41**	**264**	P	**P**	**05 50 21.5**	**-0.6**
KNRA				IAmb	IAmb	05 50 22.1	
	comp=Z,21nm,0.7s						
FAKI	**Fak Fak**	**50.55**	**281**	P	**P**	**05 50 21.8**	**-1.3**
FITZ	**Fitzroy Crossi**	**52.95**	**261**	P	**P**	**05 50 40.0**	**-0.2**
SOEI	**Soe**	**56.01**	**270**		**P**	**05 51 03.0**	**+1.1**
PSA00	**Pilbara Seismi**	**57.81**	**256**	P	**P**	**05 51 13.2**	**-0.8**
PSA00				IAmb	IAmb	05 51 14.0	
	comp=Z,19nm,0.8s						
PSA00	**Pilbara Seismi**	**57.81**	**256**		**P**	**05 51 13.6**	**-0.4**
PSA00				IAmb	IAmb	05 51 14.0	
	comp=Z,9.7nm,0.9s						
MBWA	**Marble Bar**	**57.98**	**256**	P	**P**	**05 51 14.4**	**-0.7**
MBWA				IAmb	IAmb	05 51 14.7	
	comp=Z,11nm,0.8s						
NWAO	**Narrogin (SRO)**	**59.09**	**242**	P	**P**	**05 51 21.8**	**-0.6**
	comp=Z,4.8nm,0.7s,baz=63,slow=2.0,SNR=5.2						
	comp=Z,4.8nm,0.7s						
NWAO	**Narrogin (SRO)**	**59.09**	**242**	P	**P**	**05 51 22.2**	**-0.1**
NWAO				IAmb	IAmb	05 51 35.2	
	comp=Z,40nm,1.4s						
SBA	**Scott Base**	**60.27**	**184**	P	**P**	**05 51 31.9**	**+2.5**
MORW	**Morawa**	**60.37**	**246**	P	**P**	**05 51 30.5**	**-0.4**
MORW				IAmb	IAmb	05 51 33.2	
	comp=Z,22nm,1.2s						
GIRL	**Giralia**	**62.80**	**253**	P	**P**	**05 51 47.4**	**+0.6**
JAGI	**Jajag, Banyuwa**	**65.98**	**269**	P	**P**	**05 52 05.6**	**-1.5**
JAGI				IAmb	IAmb	05 52 06.0	
	comp=Z,26nm,0.8s						
UGM	**Wanagama**	**69.58**	**268**	P	**P**	**05 52 28.8**	**-0.2**
VES	**Vestal, Richgr**	**77.64**	**46**	P	**P**	**05 53 14.5**	**+0.4**
VES				IAmb	IAmb	05 53 35.0	
	comp=Z,17nm,1.3s						
ISA	**Isabella, Lake**	**77.96**	**46**	P	**P**	**05 53 16.3**	**+0.3**
CMB	**Columbia Colle**	**77.98**	**43**		**P**	**05 53 16.3**	**+0.2**
YUH	**Yuha Desert**	**78.19**	**50**	P	**P**	**05 53 17.9**	**+0.7**
YUH				IAmb	IAmb	05 53 18.6	
	comp=Z,9.7nm,1.1s						
PFO	**Pinyon Flats O**	**78.29**	**49**	P	**P**	**05 53 18.2**	**+0.3**
	comp=Z,2.1nm,0.7s,baz=245,slow=5.3,SNR=3.7						
	comp=Z,2.1nm,0.7s						
MDPB	**Devils Postpil**	**78.62**	**44**	P	**P**	**05 53 19.7**	**-0.1**
YBH	**Yreka Blue Hor**	**78.67**	**39**	P	**P**	**05 53 20.0**	**+0.3**
	comp=Z,0.1nm,0.5s,baz=190,slow=6.1,SNR=6.2						
NVAR	**Mina Array Bea**	**79.57**	**44**	P	**P**	**05 53 24.9**	**+0.2**
	comp=Z,2.9nm,0.7s,baz=222,slow=8.9,SNR=15						
	comp=Z,2.9nm,0.7s						
K05A	**Summer Lake**	**80.35**	**39**		**P**	**05 53 28.9**	**+0.3**
K05A				IAmb	IAmb	05 53 30.1	
	comp=Z,15nm,1.0s						
PINE	**Pine Mountain**	**80.94**	**38**		**P**	**05 53 32.0**	**+0.3**
PINE				IAmb	IAmb	05 53 33.2	
	comp=Z,9.4nm,0.9s						
M17K	**Holitna River**	**80.95**	**10**	P	**P**	**05 53 31.3**	**+0.2**
M17K				IAmb	IAmb	05 53 32.2	
	comp=Z,12nm,0.8s						
WVOR	**Wild Horse Val**	**81.55**	**40**		**P**	**05 53 34.6**	**-0.1**
WVOR				IAmb	IAmb	05 53 36.0	
	comp=Z,11nm,1.1s						
BELA	**Belgrano 2**	**82.03**	**173**	P	**P**	**05 53 36.9**	**+0.5**
PSUT	**Pine Spring**	**82.60**	**46**	P	**P**	**05 53 40.1**	**-0.1**
ELK	**Elko**	**82.80**	**43**	P	**P**	**05 53 40.8**	**-0.4**
	comp=Z,2.3nm,0.8s,baz=235,slow=5.0						
	comp=Z,2.3nm,0.8s						
G08A	**Pilot Rock**	**82.96**	**38**		**P**	**05 53 41.7**	**-0.1**
HAWA	**Hanford**	**83.25**	**37**	P	**P**	**05 53 43.0**	**0.0**
SEY	**Seymchan**	**83.90**	**347**	P	**P**	**05 53 44.4**	**-1.4**
	comp=Z,2.6nm,0.6s,baz=150,slow=6.9,SNR=5.7						
	comp=Z,2.6nm,0.6s						
HLID	**Hailey**	**84.78**	**41**		**P**	**05 53 51.2**	**+0.4**
NEW	**Newport**	**85.66**	**36**	P	**P**	**05 53 53.9**	**-0.9**
	comp=Z,2.0nm,0.7s,baz=206,slow=3.9,SNR=5.1						
	comp=Z,2.0nm,0.7s						
ILAR	**Eielson Array**	**86.04**	**13**	P	**P**	**05 53 54.2**	**-1.9**
	comp=Z,1.1nm,0.5s,baz=225,slow=5.3,SNR=33						
	comp=Z,1.1nm,0.5s						
TX31	**Lajitas Ar. Si**	**86.12**	**58**		**P**	**05 53 57.9**	**+0.4**
TX31				IAmb	IAmb	05 53 59.9	
	comp=Z,6.1nm,0.9s						
TXAR	**Lajitas Array**	**86.12**	**58**	P	**P**	**05 53 58.8**	**+1.3**
	comp=Z,3.5nm,0.8s,baz=216,slow=6.0,SNR=34						
	comp=Z,3.5nm,0.8s						
TXAR	**Lajitas Array**	**86.12**	**58**	P	**P**	**05 53 59.0**	**+1.5**
POKR	**Poker Plat Res**	**86.22**	**13**	P	**P**	**05 53 57.6**	**+0.6**
POKR				IAmb	IAmb	05 54 06.4	
	comp=Z,6.2nm,1.1s						
ANMO	**Albuquerque**	**86.23**	**52**	P	**P**	**05 53 58.6**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=226,slow=2.0,SNR=6.1						
	comp=Z,1.2nm,0.8s						
HHC	**Hu-ho-hao-te**	**87.33**	**314**	*e*P	**P**	**05 54 07.0**	**+4.1**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
PDAR	**Pinedale Array**	**87.50**	**43**	P	**P**	**05 54 03.5**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=226,slow=3.1,SNR=21						
	comp=Z,1.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**88.88**	**290**	P	**P**	**05 54 11.2**	**+0.8**
	comp=Z,1.4nm,0.5s,baz=109,slow=3.7,SNR=9.9						
	comp=Z,1.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**88.88**	**290**	P	**P**	**05 54 10.9**	**+0.5**
ELIB	**Princess Elisa**	**89.01**	**187**	*d*P	**P**	**05 54 10.2**	**-0.1**
	comp=Z,3.6nm,0.8s						
PZH	**PanZhiHua**	**89.17**	**298**	P	**P**	**05 54 13.8**	**+2.0**
INK	**Inuvik**	**92.04**	**15**	P	**P**	**05 54 22.5**	**-1.4**
	comp=Z,2.4nm,0.9s,baz=245,slow=3.7,SNR=6.9						
	comp=Z,2.4nm,0.9s						
YKA	**Yellowknife Ar**	**94.48**	**25**	P	**P**	**05 54 34.3**	**-0.9**
	comp=Z,0.5nm,0.9s,baz=253,slow=5.2,SNR=7.2						
	comp=Z,0.5nm,0.9s						
BRTR	**Keskin Array B**	**144.84**	**315**	PKP	**PKPdf**	**06 00 48.5**	**-0.3**
	comp=Z,3.4nm,1.0s,baz=90,slow=4.9,SNR=7.2						
GERES	**GERESS Array B**	**147.73**	**345**	PKPbc	**PKPbc**	**06 00 56.6**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=1.7,slow=5.4,SNR=3.4						

IDC 27 06:07:11.2±50.0**, 17°.14S**×**179°.02W, h0**^{km}**, mb4.1**/3**,**
mbtmp4.1/3**, Error ellipse: s-maj=912.8km**
s-min=162.0km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.50**	**240**	P	P	06 14 36.0	+0.7
	1.2nm,0.5s,baz=96,slow=9.2,SNR=4.1						
	1.2nm,0.5s						
WRA	**Warramunga Arr**	**44.20**	**259**	P	P	06 15 21.9	-0.5
	0.5nm,0.5s,baz=95,slow=8.6,SNR=6.6						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**44.44**	**254**	P	P	06 15 23.9	-0.4
	4.3nm,0.6s,baz=87,slow=8.3,SNR=109						
	4.3nm,0.6s						

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*NEIC **27** 06:13:00.2±1.2, 50°.09N±0°.07×178°.8E±0°.1, h10*^{km}*±2*^{km}*,*
mb3.8/16, ML3.6/10, ML3.3(AEIC), Error ellipse:
s-maj=13.6km s-min=11.0km az=222.0

*AEIC **27** 06:13:04.6±1.4, 50°.27N±0°.10×179°.1E±0°.1, h25*^{km}*±9*^{km}*,*
Error ellipse: s-maj=14.2km s-min=12.6km az=176.0

*IDC **27** 06:13:08.8±16.0, 50°.97N×179°.72E, h0*^{km}*, mb3.3/4,*
mbtmp3.4/4, MS3.8/2, Error ellipse: s-maj=310.5km
s-min=85.5km az=74.0

ISC 27 06:13:00.8±2.7**, 50°.2N**±0°.1×**178°.86E**±0°.07**, h4**^{km}±16^{km}**,**
n48, σ**1**^{s}**.00**/53**, mb3.7**/5**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**1.18**	**13**		**Pg**	**06 13 23.4**	**-0.1**
CESW	**Semis' Southwe**	**1.73**	**14**		**Pn**	**06 13 32.3**	**+0.7**
CERB	**Semis' Cerberu**	**1.77**	**16**		**Pn**	**06 13 33.3**	**+1.1**
CEPE	**Semis' Perret**	**1.81**	**16**		**Pn**	**06 13 33.6**	**+0.9**
GASW	**Gareloi Southw**	**2.12**	**42**		**Pn**	**06 13 37.5**	**+0.5**
GASW					**Sn**	**06 14 02.2**	**-1.5**
TASE	**Tanaga Southea**	**2.53**	**49**		**Sn**	**06 14 14.0**	**0.0**
TAFL	**Tanaga Flats**	**2.56**	**52**		**Pn**	**06 13 43.6**	**+0.7**
TAFL					**Sn**	**06 14 14.0**	**-0.4**
TAPA	**Tanaga Point A**	**2.63**	**52**		**Pn**	**06 13 44.6**	**+0.5**
TAPA					**Sn**	**06 14 15.8**	**-0.6**
KIMD	**Kanaga Island**	**2.90**	**57**		**Pn**	**06 13 48.1**	**+0.4**
KIMD					**Sn**	**06 14 21.4**	**-1.6**
KIWB	**Kanaga Island**	**3.00**	**56**		**Pn**	**06 13 49.1**	**+0.1**
KIWB				IAML		06 14 27.2	
	comp=N,94nm,0.4s						
KIWB				IAML		06 14 32.0	
	comp=E,82nm,1.0s						
KIKV	**Kanaga Island**	**3.00**	**55**		**Pn**	**06 13 49.8**	**+0.7**
KIKV					**Sn**	**06 14 24.2**	**-1.2**
KICM	**Kanaga Island**	**3.01**	**54**		**Pn**	**06 13 50.0**	**+0.9**
ADK	**Adak**	**3.26**	**58**		**Pn**	**06 13 52.6**	**0.0**
ADK				IAML		06 14 32.5	
	comp=E,127nm,0.8s						
ADK				IAML		06 14 32.5	
	comp=E,200nm,0.2s						
ADK	**Adak**	**3.26**	**58**		**Sn**	**06 14 30.0**	**-1.8**
ETKA	**Kagalaska Isla**	**3.40**	**59**		**Pn**	**06 13 54.6**	**0.0**
ETKA					**Sn**	**06 14 32.6**	**-2.7**
GSCK	**Great Sitkin C**	**3.61**	**58**		**Pn**	**06 13 57.9**	**+0.5**
GSMY	**Great Sitkin M**	**3.68**	**58**		**Pn**	**06 13 58.9**	**+0.5**
GSMY					**Sn**	**06 14 41.3**	**-0.9**
GSTR	**Great Sitkin T**	**3.70**	**58**	Pn	**Pn**	**06 13 59.0**	**+0.2**
GSIG	**Igitkin Island**	**3.73**	**60**		**Pn**	**06 13 59.7**	**+0.7**
ATKA	**Atka Island**	**4.79**	**63**		**Pn**	**06 14 13.2**	**-0.4**
ATKA				IAML		06 16 43.8	
	comp=N,60nm,1.0s						
ATKA				IAML		06 17 19.7	
	comp=E,48nm,1.1s						
NIKH	**Nikolski High**	**8.12**	**66**	Pn	**Pn**	**06 14 59.3**	**-0.1**
SPIA	**Saint Paul Isl**	**9.48**	**39**	Pn	**Pn**	**06 15 19.3**	**+1.3**
UNV	**Unalaska Valle**	**9.71**	**63**	Pn	**Pn**	**06 15 21.2**	**+0.1**
PET	**Petropavlovsk**	**12.86**	**290**		**Pn**	**06 16 01.4**	**-2.7**
PEA0B	**Petropavlovsk-**	**13.44**	**291**	Pn	**Pn**	**06 16 11.7**	**-0.4**
PETK	**Petropavlovsk-**	**13.44**	**291**	Pn	**Pn**	**06 16 11.1**	**-1.0**
ANM	**Nome**	**16.61**	**24**	Pn	**Pn**	**06 16 54.3**	**0.0**
K17K	**Iditarod**	**17.63**	**36**		**Pn**	**06 17 07.1**	**+0.1**
K17K				IAmb	IAmb	06 17 33.5	
	comp=Z,12nm,1.4s						
F15K	**North Star Dit**	**17.71**	**23**	P	**P**	**06 17 10.0**	**+1.1**
F15K				IAmb	IAmb	06 17 37.2	
	comp=Z,8.4nm,1.2s						
G16K	**Koyuk River**	**18.07**	**26**	P	**Pn**	**06 17 13.0**	**+0.6**
G16K				IAmb	IAmb	06 17 37.5	
	comp=Z,5.3nm,1.2s						
H17K	**Granite Mounta**	**18.47**	**29**	P	**P**	**06 17 17.1**	**-0.2**
H17K				IAmb	IAmb	06 17 56.1	
	comp=Z,7.6nm,1.4s						
J18K	**Innoko River**	**18.65**	**35**	P	**P**	**06 17 19.4**	**+0.1**
F17K	**Baldwin Pennin**	**19.16**	**25**	P	**P**	**06 17 24.9**	**+0.2**
F17K				IAmb	IAmb	06 18 08.7	
	comp=Z,4.5nm,1.1s						
C16K	**Lisburne Hills**	**19.70**	**17**	P	**P**	**06 17 30.2**	**-0.4**
C16K				IAmb	IAmb	06 17 44.6	
	comp=Z,7.1nm,1.2s						
J20K	**Nowinta River**	**20.00**	**36**	P	**P**	**06 17 33.6**	**-0.4**
J20K				IAmb	IAmb	06 17 36.1	
	comp=Z,8.0nm,1.2s						
PPLA	**Purkeypile**	**20.15**	**40**	P	**P**	**06 17 36.0**	**+0.1**
L22K	**Petersville**	**20.60**	**42**	P	**P**	**06 17 39.3**	**-1.3**
C18K	**Utukok River**	**20.88**	**21**	P	**P**	**06 17 43.7**	**+0.1**
KTH	**Kantishna Hill**	**20.95**	**39**	P	**P**	**06 17 44.5**	**+0.1**
G21K	**Allakaket**	**21.52**	**30**	P	**P**	**06 17 50.0**	**-0.4**
D20K	**Etivluk River**	**22.04**	**24**	P	**P**	**06 17 55.0**	**-1.0**
D20K				IAmb	IAmb	06 18 08.7	
	comp=Z,4.6nm,1.2s						
DHY	**Denali Highway**	**22.25**	**42**	P	**P**	**06 17 58.7**	**+0.2**
ILAR	**Eielson Array**	**23.07**	**38**	P	**P**	**06 18 06.0**	**-0.9**
	comp=Z,0.4nm,0.9s,baz=254,slow=11,SNR=4.6						
	comp=Z,0.4nm,0.9s						
INK	**Inuvik**	**29.25**	**34**	P	**P**	**06 19 04.3**	**+1.0**
	comp=Z,1.5nm,1.1s,baz=248,slow=8.3,SNR=2.1						
	comp=Z,1.5nm,1.1s						
JHJ	**Hachijo jima 2**	**33.36**	**254**	LR	LR	06 33 12.8	
	comp=Z,228nm,19.9s,baz=314,slow=35						
YKA	**Yellowknife Ar**	**37.10**	**45**	P	**P**	**06 20 11.7**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=282,slow=9.0,SNR=4.4						
	comp=Z,0.3nm,0.7s						
PDAR	**Pinedale Array**	**48.09**	**70**	P	**P**	**06 21 44.4**	**+2.8**
	comp=Z,0.4nm,0.6s,baz=305,slow=8.6,SNR=5.0						
	comp=Z,0.4nm,0.6s						
JAY	**Jayapura**	**61.89**	**224**	LR	LR	06 45 13.7	
	comp=Z,47nm,20.9s,baz=349,slow=31						

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*IDC **27** 06:18:18.4±1.1, 34°.18N×26°.23E, h0*^{km}*, mb3.9/12,*
mbtmp3.9/21, ML3.3/8, MS3.0/1, Error ellipse:
s-maj=21.7km s-min=13.4km az=13.0

*ISK **27** 06:18:21.1, 34°.28N×26°.23E, h11*^{km}*, ML3.4/27*

*ATH **27** 06:18:21.0±1.0, 34°.20N×26°.23E, h13*^{km}*±6*^{km}*, ML3.4/8,*
Manual Solution by N.Liadopoulou First location:
2019/12/27 06:19:44, This location: 2019/12/27 09:52:59
ML Amplitudes are expressed in micrometers, All
distances are expressed in degrees Latitude uncertainty: 3
km; Longitude uncertainty: 2 km

*AFAD **27** 06:18:23.7, 34°.41N×26°.27E, h6*^{km}*±6*^{km}*, ML3.2*

*THE **27** 06:18:25.6, 34°N±52°×2°6E±5°7, h11*^{km}*±34*^{km}*, MLh2.9/3*

ISC 27 06:18:19.8±1.5**, 34°.19N**±0°.05×**26°.23E**±0°.03**, h12**^{km}±9^{km}**,**
n100, σ**1**^{s}**.92**/128**, mb4.0**/11**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.92**	**359**	P	**Pn**	**06 18 38.9**	**+0.3**
ZKR	**Zakros**	**0.92**	**359**	Pg	**Pb**	**06 18 37.8**	**+0.1**
ZKR				Sg	**Sb**	**06 18 49.6**	**-0.3**
ZKR	**Zakros**	**0.92**	**359**	P	**Pn**	**06 18 38.5**	**-0.1**
ZKR				S	**Sn**	**06 18 51.1**	**-0.7**
NPS	**Neapolis**	**1.18**	**335**	P	**Pn**	**06 18 43.0**	**+0.8**
NPS	**Neapolis**	**1.18**	**335**	P	**Pn**	**06 18 43.2**	**+1.0**
NPS				S	**Sn**	**06 18 58.6**	**+0.3**
IDI	**Anoyia**	**1.55**	**315**	Pn	**Pn**	**06 18 48.2**	**+0.8**
	5.5nm,0.3s,baz=140,slow=7.5,SNR=26						
IDI				Sn	**Sg**	**06 19 10.9**	**+1.2**
	15nm,0.3s,baz=356,slow=16,SNR=8.5						
IDI	**Anoyia**	**1.55**	**315**	P	**Pg**	**06 18 49.3**	**-0.2**
IDI	**Anoyia**	**1.55**	**315**	Pn	**Pb**	**06 18 48.5**	**0.0**
IDI				Sn	**Sg**	**06 19 08.8**	**-1.0**
IDI	**Anoyia**	**1.55**	**315**	P	**Pb**	**06 18 48.8**	**+0.3**
IDI				S	**Sg**	**06 19 08.7**	**-1.0**
KARP	**Karpathos**	**1.55**	**29**	Pn	**Pg**	**06 18 49.1**	**-0.5**
KARP	**Karpathos**	**1.55**	**29**	P	**Pg**	**06 18 49.5**	**-0.1**
KARP				S	**Sg**	**06 19 08.6**	**-1.2**
GVD	**Gavdhos**	**1.88**	**291**	P	**Pb**	**06 18 54.4**	**+0.3**
GVD	**Gavdhos**	**1.88**	**291**	Pn	**Pn**	**06 18 53.9**	**+2.1**
GVD				Sn	**Sb**	**06 19 17.5**	**-0.1**
GVD	**Gavdhos**	**1.88**	**291**	P	**Pn**	**06 18 53.1**	**+1.3**
VAM	**Vamos**	**2.06**	**307**	P	**Pn**	**06 18 55.6**	**+1.3**
CHAN	**Chania**	**2.23**	**307**	P	**Pn**	**06 18 57.4**	**+0.8**
THR6	**Thira Island,**	**2.26**	**343**	P	**Pb**	**06 19 00.1**	**-0.5**
SNT5	**Nea Kammeni, S**	**2.31**	**343**	P	**Pn**	**06 18 59.6**	**+1.9**
ARG	**Arkhangelos**	**2.55**	**37**	P	**Pb**	**06 19 04.5**	**-0.9**
ARG	**Arkhangelos**	**2.55**	**37**	Pn	**Pn**	**06 19 02.9**	**+2.0**
ARG				Sn	**Sn**	**06 19 32.9**	**+1.0**
ARG	**Arkhangelos**	**2.55**	**37**	P	**Pn**	**06 19 02.2**	**+1.3**
MHLO	**Agia Marina, M**	**2.91**	**330**	P	**Pn**	**06 19 07.2**	**+1.4**
APE	**Apeiranthos**	**2.93**	**349**	P	**Pn**	**06 19 07.9**	**+1.7**
APE	**Apeiranthos**	**2.93**	**349**	Pn	**Pn**	**06 19 07.9**	**+1.7**
APE	**Apeiranthos**	**2.93**	**349**	P	**Pn**	**06 19 07.1**	**+0.9**
DALY	**Dalyan (Mula)**	**3.28**	**36**	Pn	**Pn**	**06 19 13.3**	**+2.3**
IZZE	**Mula-Seydike**	**3.32**	**47**	P	**Pn**	**06 19 13.4**	**+1.9**
IZZE				S	**Sn**	**06 19 51.3**	**+0.4**
IZZE				*i* IAML		06 19 55.0	
	comp=N,93nm,0.6s						
IZZE				*i* IAML		06 19 58.0	
	comp=E,90nm,0.5s						
MLSB	**Milas**	**3.34**	**22**	Pn	**Pn**	**06 19 13.1**	**+1.2**
YER	**Yerkesik**	**3.38**	**29**	P	**Pb**	**06 19 17.8**	**-1.8**
YER				S	**Sb**	**06 19 58.2**	**-2.5**
YER	**Yerkesik**	**3.38**	**29**	Pn	**Pn**	**06 19 14.1**	**+1.7**
AKAS	**Kas**	**3.43**	**53**	P	**Pn**	**06 19 15.0**	**+1.8**
AKAS				S	**Sn**	**06 19 53.8**	**-0.1**
AKAS				*i* IAML		06 19 59.0	
	comp=N,152nm,0.5s						
AKAS				*i* IAML		06 20 02.0	
	comp=E,83nm,0.4s						
AKAS	**Kas**	**3.43**	**53**	Pn	**Pn**	**06 19 15.5**	**+2.3**
SABU	**Mula-Dalaman**	**3.45**	**40**	P	**Pn**	**06 19 15.1**	**+1.7**
SABU				S	**Sn**	**06 19 51.0**	**-3.2**
MULA	**Mugla, Merkez-**	**3.50**	**29**	P	**Pn**	**06 19 13.8**	**-0.3**
MULA				S	**Sn**	**06 19 55.5**	**0.0**
MULA				*i* IAML		06 20 01.0	
	comp=E,55nm,0.6s						
VLI	**Veliai**	**3.68**	**314**	P	**Pn**	**06 19 17.6**	**+1.0**
CAME	**Cameli-Denizli**	**3.72**	**42**	Pn	**Pn**	**06 19 19.5**	**+2.4**
KNIK	**Mula-Seydike**	**3.80**	**45**	P	**Pn**	**06 19 20.5**	**+2.3**
KNIK				S	**Sn**	**06 20 03.9**	**+0.9**
CAEL	**Denizli, Camel**	**3.86**	**40**	P	**Pn**	**06 19 21.8**	**+2.7**
CAEL				S	**Sn**	**06 20 07.4**	**+3.0**
CAEL				*i* IAML		06 20 11.0	
	comp=E,101nm,0.6s						
CAEL				*i* IAML		06 20 17.0	
	comp=N,105nm,0.6s						
TAVA	**DENIZLI_Tavas**	**3.93**	**33**	P	**Pn**	**06 19 22.5**	**+2.5**
TAVA				S	**Sn**	**06 20 04.3**	**-1.8**
TAVA				*i* IAML		06 20 11.0	
	comp=N,31nm,0.5s						
TAVA				*i* IAML		06 20 15.0	
	comp=E,29nm,0.5s						
ELL	**Elmali**	**3.94**	**49**	P	**Pn**	**06 19 23.1**	**+2.9**
ELL				S	**Sn**	**06 20 06.5**	**+0.1**
ELL				*i* IAML		06 20 13.0	
	comp=N,42nm,0.7s						
ELL				*i* IAML		06 20 22.0	
	comp=E,36nm,0.8s						
ELL	**Elmali**	**3.94**	**49**	Pn	**Pn**	**06 19 22.9**	**+2.7**
AKUM	**Antalya-Kumluc**	**3.98**	**57**	P	**Pn**	**06 19 21.6**	**+1.0**
AKUM				S	**Sn**	**06 20 06.1**	**-1.1**
AKUM				*i* IAML		06 20 17.0	
	comp=E,32nm,0.6s						
AKUM				*i* IAML		06 20 18.0	
	comp=N,52nm,0.9s						
AYDB	**Zeytinkoy-Aydi**	**3.98**	**19**	Pn	**Pn**	**06 19 22.8**	**+2.0**
GOLH	**Golhisar**	**4.07**	**41**	P	**Pn**	**06 19 25.0**	**+3.1**
GOLH				S	**Sn**	**06 20 10.8**	**+1.2**
GOLH				*i* IAML		06 20 14.0	
	comp=N,67nm,1.0s						
GOLH				*i* IAML		06 20 18.0	
	comp=E,53nm,0.6s						
KARY	**Karystos**	**4.10**	**340**	P	**Pn**	**06 19 23.1**	**+0.8**
APMY	**Acipayam-Deniz**	**4.12**	**36**	Pn	**Pn**	**06 19 24.6**	**+2.0**
DNIZ	**Denizli-Tavas-**	**4.12**	**33**	P	**Pn**	**06 19 23.8**	**+1.2**
DNIZ				S	**Sn**	**06 20 13.7**	**+3.0**
DNIZ				*i* IAML		06 20 17.0	
	comp=N,53nm,0.5s						
DNIZ				*i* IAML		06 20 19.0	
	comp=E,94nm,0.4s						
NAZL	**Nazilli-Aydin**	**4.12**	**23**	Pn	**Pn**	**06 19 25.3**	**+2.7**
CHOS	**Chios island**	**4.19**	**358**	Pn	**Pn**	**06 19 25.5**	**+1.9**
DION	**Dionisos Attik**	**4.30**	**335**	P	**Pn**	**06 19 26.1**	**+1.1**
KORT	**Korkueli**	**4.37**	**49**	P	**Pn**	**06 19 28.9**	**+2.8**
KORT				S	**Sn**	**06 20 20.3**	**+3.2**
KORT				*i* IAML		06 20 27.0	
	comp=E,66nm,0.6s						
KORT				*i* IAML		06 20 28.0	
	comp=N,32nm,0.4s						
KORT	**Korkueli**	**4.37**	**49**	Pn	**Pn**	**06 19 29.3**	**+3.1**
PYL	**PYLOS**	**4.54**	**308**	P	**Pn**	**06 19 28.4**	**+0.1**
ITM	**Ithomi**	**4.60**	**312**	Pn	**Pn**	**06 19 31.0**	**+1.9**
ITM	**Ithomi**	**4.60**	**312**	P	**Pn**	**06 19 29.9**	**+0.7**
LTK	**Loutraki**	**4.65**	**326**	P	**Pn**	**06 19 31.0**	**+1.2**
VIL2	**Platees**	**4.67**	**330**	P	**Pn**	**06 19 30.2**	**+0.1**
KULA	**Kula-Manisa**	**4.74**	**24**	Pn	**Pn**	**06 19 33.1**	**+2.0**
GUR	**Goura**	**4.89**	**321**	P	**Pn**	**06 19 34.2**	**+1.0**
PASA	**Karahalli, USA**	**4.91**	**31**	P	**Pn**	**06 19 32.6**	**-0.9**
PASA				S	**Sn**	**06 20 27.8**	**-2.5**
PASA				*i* IAML		06 20 33.0	
	comp=E,27nm,0.5s						
GORD	**Gordes-Manisa**	**4.96**	**18**	Pn	**Pn**	**06 19 36.2**	**+2.0**
SIGR	**SIGRI**	**5.02**	**357**	Pn	**Pn**	**06 19 36.7**	**+1.8**
KLV	**Kalavryta, Ach**	**5.07**	**321**	P	**Pn**	**06 19 36.2**	**+0.6**
ALFC	**Alefka**	**5.34**	**78**	P	**Pn**	**06 19 40.1**	**+0.8**
SEDI	**Konya, Seydise**	**5.54**	**53**	P	**Pn**	**06 19 46.0**	**+3.8**
SEDI				S	**Sn**	**06 20 47.7**	**+1.8**
SEDI				*i* IAML		06 20 51.0	
	comp=N,36nm,0.9s						
SEDI				*i* IAML		06 20 51.0	
	comp=E,37nm,1.0s						
SEYD	**Seydisehir-KON**	**5.57**	**53**	Pn	**Pn**	**06 19 46.1**	**+3.5**
ANX	**Ano Chora**	**5.60**	**323**	P	**Pn**	**06 19 44.5**	**+1.6**
SDAG	**Sultandagi-AFY**	**5.68**	**40**	Pn	**Pn**	**06 19 47.7**	**+3.6**
HDMB	**Hadim**	**5.80**	**60**	Pn	**Pn**	**06 19 48.8**	**+3.0**
ASGA	**Asgata**	**5.83**	**82**	P	**Pn**	**06 19 46.8**	**+0.8**
MAKR	**Makrakomi, Fth**	**5.83**	**327**	P	**Pn**	**06 19 47.3**	**+1.2**
TVSB	**Tavsanli**	**5.85**	**25**	Pn	**Pn**	**06 19 49.4**	**+2.9**
CSS	**Mathiatis**	**5.91**	**81**	Pn	**Pn**	**06 19 50.9**	**+3.7**
CSS	**Mathiatis**	**5.91**	**81**	P	**Pn**	**06 19 48.4**	**+1.2**
VLS	**Valsamata**	**6.05**	**313**	P	**Pn**	**06 19 49.7**	**+0.6**
MVOU	**Mavrovouni**	**6.16**	**80**	P	**Pn**	**06 19 51.3**	**+0.7**
KONT	**Konya--Tatoy**	**6.22**	**51**	Pn	**Pn**	**06 19 54.9**	**+3.5**
LADK	**Ladik-KONYA**	**6.37**	**49**	Pn	**Pn**	**06 19 56.7**	**+3.1**
TETR	**Tetrakomo, Epi**	**6.50**	**324**	P	**Pn**	**06 19 56.9**	**+1.6**
MMAI	**Mount Meron Ar**	**7.74**	**96**	Pn	**Pn**	**06 20 12.6**	**+0.2**
	1.9nm,0.3s,baz=276,slow=13,SNR=1.7						
MMAI				Sn	**Sn**	**06 21 35.9**	**-4.2**
	2.0nm,0.3s,baz=310,slow=34,SNR=1.5						
	2.7nm,0.4s						
BRTR	**Keskin Array B**	**8.10**	**45**	Pn	**Pn**	**06 20 19.0**	**+1.6**
	0.3nm,0.3s,baz=217,slow=13,SNR=5.0						
BRTR				Sn	**Sn**	**06 21 47.1**	**-1.8**
	0.1nm,0.3s,baz=28,slow=12,SNR=3.5						
BRTR				LR	LR	06 24 37.7	
	comp=Z,93nm,19.6s,baz=238,slow=47						
	0.9nm,0.5s						
EIL	**Elat**	**8.67**	**119**	Pn	**Pn**	**06 20 23.9**	**-1.3**
	2.0nm,0.3s,baz=318,slow=3.7,SNR=11						
EIL				Sn	Sn	06 21 56.0	-6.9
	1.4nm,0.3s,baz=18,slow=5.3,SNR=3.6						
	4.1nm,0.4s						
ASF	**Jabal al Asfar**	**9.17**	**100**	Pn	**Pn**	**06 20 31.1**	**-0.8**
	0.4nm,0.3s,baz=263,slow=22,SNR=2.0						
ASF				Sn	**Sn**	**06 22 10.8**	**-4.3**
	0.3nm,0.3s,baz=107,slow=20,SNR=1.6						
	3.3nm,0.7s						
VAE	**Valguarnera**	**10.14**	**292**	Pn	**Pn**	**06 20 46.5**	**+1.3**
	1.8nm,0.3s,baz=105,slow=18,SNR=2.1						
VAE				Sn	**Sn**	**06 22 31.2**	**-7.7**
	1.1nm,0.3s,baz=243,slow=8.3,SNR=4.1						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	5.9nm,0.4s						
KBZ	**Khabaz**	**16.06**	**49**	Pn	**P**	**06 22 08.7**	**-0.1**
	0.1nm,0.3s,baz=231,slow=10,SNR=4.1						
	1.9nm,0.7s						
AKASG	**Malin Array Be**	**16.64**	**7**	Pn	**Pn**	**06 22 12.8**	**0.0**
	1.0nm,0.5s,baz=198,slow=11,SNR=7.1						
GERES	**GERESS Array B**	**17.35**	**331**	P	**Pn**	**06 22 22.3**	**+0.5**
	baz=135,slow=13,SNR=5.4						
	0.5nm,0.6s						
DAVOX	**Davos/Dischmat**	**17.64**	**320**	P	**Pn**	**06 22 25.2**	**-0.3**
	0.2nm,0.3s,baz=149,slow=16,SNR=4.1						
	1.2nm,0.7s						
ESDC	**Sonseca Array**	**24.68**	**292**	P	**P**	**06 23 41.3**	**+0.7**
	0.8nm,0.5s,baz=81,slow=9.1,SNR=11						
	0.8nm,0.5s						
HFS	**Hagfors**	**27.22**	**346**	P	**P**	**06 24 03.8**	**+0.5**
	1.1nm,0.5s,baz=134,slow=8.5,SNR=5.5						
	1.1nm,0.5s						
FINES	**FINESS Array B**	**27.27**	**360**	P	**P**	**06 24 02.8**	**-0.8**
	3.0nm,0.9s,baz=180,slow=11,SNR=4.2						
	3.0nm,0.9s						
NOA	**NORSAR Array B**	**28.56**	**345**	P	**P**	**06 24 16.4**	**+1.1**
	0.3nm,0.6s,baz=155,slow=9.3,SNR=1.9						
	0.3nm,0.6s						
EKA	**Eskdalemuir Ar**	**29.34**	**325**	P	**P**	**06 24 22.4**	**+0.3**
	2.8nm,0.9s,baz=112,slow=7.6,SNR=3.9						
	2.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**30.57**	**233**	P	**P**	**06 24 33.8**	**+0.3**
	0.5nm,0.5s,baz=36,slow=10,SNR=4.8						
	0.5nm,0.5s						
ARCES	**ARCESS Array B**	**35.40**	**360**	P	**P**	**06 25 14.1**	**-1.0**
	2.7nm,1.1s,baz=176,slow=8.6,SNR=6.9						
	2.7nm,1.1s						
BVAR	**Borovoye Array**	**36.39**	**45**	P	**P**	**06 25 24.4**	**+0.6**
	2.7nm,0.9s,baz=260,slow=8.5,SNR=8.2						
	2.7nm,0.9s						
MKAR	**Makanchi Array**	**43.58**	**56**	P	**P**	**06 26 25.5**	**+1.8**
	2.2nm,0.6s,baz=277,slow=6.3,SNR=15						
	2.2nm,0.6s						
ZALV	**Zalesovo Beam**	**45.05**	**45**	P	**P**	**06 26 36.2**	**+1.0**
	2.7nm,0.5s,baz=265,slow=9.1,SNR=9.5						
	2.7nm,0.5s						
SONM	**Songino Array**	**59.42**	**50**	P	**P**	**06 28 23.7**	**+1.4**
	0.6nm,0.7s,baz=279,slow=8.1,SNR=4.7						
	0.6nm,0.7s						
YKA	**Yellowknife Ar**	**78.64**	**343**	P	**P**	**06 30 21.6**	**+0.4**
	0.4nm,0.9s,baz=28,slow=4.7,SNR=4.5						
	0.4nm,0.9s						

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*SCB **27** 06:52:36.8±0.9, 17°.49S×63°.62W, h15km±4km, ML3.2/2, Error ellipse: s-maj=3.5km s-min=2.7km az=2.0*

*VAO **27** 06:52:40.3±0.4, 17°.68S×63°.61W, h10km, mb3.6, Presumed earthquake*

ISC 27 06:52:40.7±0.9**, 17°.66S**±0°.05×**63°.63W**±0°.05**, h10km, n21, σ1^{s}.25**/32**, Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AOEA	**Aiquile**	**1.61**	**251**	Pg	**Pn**	**06 53 08.5**	**-1.1**
AOEA				Sg	**Sn**	**06 53 31.7**	**+1.1**
AOEA				IAML		06 53 39.3	
	227nm,0.3s						
SOET	**ToroToro**	**2.13**	**257**	Pg	**Pn**	**06 53 17.0**	**+0.3**
SIV	**San Ignacio**	**2.96**	**56**	Pn	**Pn**	**06 53 27.4**	**-0.5**
MOCB	**Mochara**	**4.04**	**208**	Pn	**Pn**	**06 53 45.9**	**+2.8**
MOCB				Sn	**Sb**	**06 54 38.4**	**-3.1**
MOCB				IAML		06 54 51.9	
	30nm,0.5s						
SOEO	**Opoqueri**	**4.15**	**257**	Pn	**Pn**	**06 53 45.8**	**+1.2**
BBOE	**La Paz, Chanca**	**4.25**	**281**	Pn	**Pn**	**06 53 46.6**	**+0.5**
BBOJ	**La Paz, Jacaqu**	**4.41**	**278**	Pn	**Pn**	**06 53 48.8**	**+0.5**
LPAZ	**La Paz**	**4.52**	**287**	Pn	**Pn**	**06 53 49.8**	**-0.1**
LPAZ	**La Paz**	**4.52**	**287**	*e*P	**Pn**	**06 53 49.0**	**-0.8**
LPAZ				*e*S	**Sn**	**06 54 42.6**	**-0.2**
YJA	**Yavi**	**4.83**	**201**	Pn	**Pn**	**06 53 56.6**	**+2.7**
PTLB	**Pontes e Lacer**	**4.84**	**64**	Pn	**Pn**	**06 53 53.4**	**-0.2**
PTLB	**Pontes e Lacer**	**4.84**	**64**	*e*P	**Pn**	**06 53 53.2**	**-0.4**
PTLB				*e*S	**Sn**	**06 54 50.9**	**+1.1**
BBOD	**La Paz, Gloria**	**4.86**	**281**	Pn	**Pn**	**06 53 54.8**	**+0.3**
VILB	**Vilhena**	**5.73**	**36**	*e*P	**Pn**	**06 54 06.0**	**0.0**
VILB				*e*S	**Sn**	**06 55 10.8**	**-1.1**
BDQN	**Bodoquena, MS**	**7.07**	**114**	*e*P	**Pn**	**06 54 23.6**	**-0.7**
BDQN				*e*S	**Sn**	**06 55 44.4**	**-0.4**
SALV	**Santo Antonio**	**7.80**	**78**	*e*P	**Pn**	**06 54 33.9**	**-0.4**
SALV				*e*S	**Sn**	**06 56 00.3**	**-2.5**
AQDB	**Aquidauana**	**8.00**	**112**	*e*P	**Pn**	**06 54 36.8**	**-0.4**
AQDB				*e*S	**Sn**	**06 56 07.8**	**+0.1**
PP1B	**Ponte de Pedra**	**8.34**	**91**	*e*P	**Pn**	**06 54 41.4**	**-0.4**
PP1B				*e*S	**Sn**	**06 56 16.2**	**+0.1**
PDRB	**Porto dos Gac**	**8.98**	**49**	*e*P	**Pn**	**06 54 49.9**	**-0.7**
PDRB				*e*S	**Sn**	**06 56 33.5**	**+1.5**
ARAG	**Araguaiana, MT**	**11.49**	**82**	*e*P	**Pn**	**06 55 24.5**	**-0.5**
ARAG				*e*S	**Sn**	**06 57 35.0**	**+1.6**
MACA	**Manacapuru-AM**	**14.70**	**12**	*e*P	**Pn**	**06 56 09.3**	**+0.4**

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*BGR **27** 07:02:14.0, 37°.59N×40°.23E, h4km, mb5.1, Ms3.9*

*TIF **27** 07:02:24.8, 38°.36N×39°.12E, h6km±4km*

*BJI **27** 07:02:24.0, 38°.30N×39°.00E, h4km, mB5.4/15, mb5.2/63, Ms4.9/31, Ms7 4.7/32*

*IDC **27** 07:02:25.6±0.4, 38°.34N×39°.02E, h0km, mb4.7/31, mbtmp4.7/44, ML4.2/11, MS4.2/73, Error ellipse: s-maj=8.3km s-min=7.4km az=159.0*

*ISK **27** 07:02:25.4, 38°.35N×38°.99E, h4km, ML5.1/20*

*AFAD **27** 07:02:25.8, 38°.39N×39°.02E, h12km±2km, MW4.9*

*MED_RC **27** 07:02:26.0±0.5, 38°.44N×39°.03E, h20km±1km, MW4.9/28, Moment Tensor Solution.Mantle waves: s28,c30; Duration: 1^{s}.2 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.14±.10; M$_{\theta\theta}$-1.12±.12; M$_{\phi\phi}$0.97±.10; M$_{r\theta}$0.16±.18; M$_{\theta\phi}$2.36±.07; M$_{\phi r}$-0.39±.17; Best double couple: M$_0$2.62000×10^{16} NP1:φ$_s$258.00000°,δ81.00000°, λ-1.00000°. NP2:φ$_s$348.00000°,δ89.00000°, λ-171.00000°. Principal axes: T 2.5300, Plg6.0000°, Azm123.0000°; N 0.1600, Plg81.0000°, Azm353.0000°; P -2.7000, Plg7.0000°, Azm213.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=40s.*

*MOS **27** 07:02:26.0±1.1, 38°.33N×39°.02E, h12km, mb5.1/53, MS4.0/18 Error ellipse: s-maj=4.0km s-min=3.0km az=97.9*

*NEIC **27** 07:02:27.7±1.5, 38°.30N±0°.04×39°.03E±0°.06, h10km±1km, mb5.0/63, Mww4.9/10, Error ellipse: s-maj=7.9km s-min=6.8km az=218.0*

*GCMT **27** 07:02:27.7±0.3, 38°.34N±0°.02×38°.94E±0°.02, h17km±1km, MW4.9/106, Moment Tensor Solution. s18,c21; s106,c154; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.15±.09; M$_{\theta\theta}$-1.40±.09; M$_{\phi\phi}$1.25±.07; M$_{r\theta}$1.83±.33; M$_{\theta\phi}$1.98±.07; M$_{\phi r}$-1.61±.27; Best double couple: M$_0$3.21200×10^{16} NP1:φ$_s$246.00000°,δ50.00000°, λ-6.00000°. NP2:φ$_s$340.00000°,δ85.00000°, λ-140.00000°. Principal axes: T 2.5520, Plg23.0000°, Azm106.0000°; N 1.3250, Plg50.0000°, Azm346.0000°; P -3.8730, Plg31.0000°, Azm211.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **27** 07:02:27.7, 38°.30N×39°.03E, h12km*

*NEIC **27** 07:02:27.7, 38°.30N×39°.03E, h12km, Moment Tensor Solution. Duration: 1^{s}.4 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.18; M$_{\theta\theta}$-1.12; M$_{\phi\phi}$0.94; M$_{r\theta}$-0.56; M$_{\theta\phi}$1.44; M$_{\phi r}$-1.71; Fault plane solution: M$_0$2.53000×10^{16} NP1: φ$_s$259.51000°,δ56.87000°,λ16.38000°. NP2: φ$_s$160.38000°,δ76.34000°,λ145.78000°. Principal axes: T 2.8626, Plg34.0000°, Azm115.0000°; N -0.9397, Plg53.0000°, Azm321.0000°; P -1.9229, Plg13.0000°, Azm214.0000°;*

*DSN **27** 07:02:27.9±0.4, 38°.27N×38°.99E, h15km, mb5.2/18 Error ellipse: s-maj=11.7km s-min=5.1km az=43.0*

*MCSM **27** 07:02:27.6±0.3, 38°N±4°×3°9E±°, h11km±3km, mb4.9, mB5.2, MLv5.1, Mw(mB)4.6*

*GII **27** 07:02:28.1±0.0, 38°.32N×39°.06E, h10km, Mws5.0, confirmed*

*GFZ **27** 07:02:28.3, 38°.31N×39°.07E, h14km, MW4.8, Moment Tensor Solution. s58 Moment tensor: M$_{rr}$-0.13; M$_{\theta\theta}$-0.77; M$_{\phi\phi}$0.90; M$_{r\theta}$-0.03; M$_{\theta\phi}$1.45; M$_{\phi r}$0.40; Fault plane solution: NP1:φ$_s$345.00000°,δ89.00000°, λ167.00000°. NP2:φ$_s$75.00000°,δ77.00000°,λ1.00000°. Principal axes: T 1.8000, Plg10.0000°, Azm299.0000°; N -0.1500, Plg77.0000°, Azm162.0000°; P -1.6500, Plg9.0000°, Azm31.0000°;*

*PDG **27** 07:02:37.2, 38°.34N×38°.99E, h4km, mb4.9/3*

*NAO **27** 07:03:05.0, 42°.51N×38°.44E, h33km, MB4.1*

*GRAL **27** 07:03:21.8±0.3, 35°.17N×36°.37E, h49km±4km, MD4.2*

ISC 27 07:02:27.5±0.6**, 38°.36N**±0°.02×**39°.05E**±0°.02**, h11**km±3km**, n809, σ1^{s}.51**/854**, mb5.0**/165**, MS4.2**/85**, 56C-37D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAYA	**Malatya/Merkez**	**0.49**	**267**	P	**Pg**	**07 02 35.3**	**-1.9**
MAYA				S	**Sg**	**07 02 42.1**	**-1.7**
NARI	**Adyaman-Kaht**	**0.52**	**206**	P	**Pg**	**07 02 37.1**	**-0.6**
NARI				S	**Sg**	**07 02 44.8**	**+0.2**
KOVA	**Elazig, Kovanc**	**0.69**	**59**	P	**Pg**	**07 02 39.2**	**-1.7**
KOVA				S	**Sb**	**07 02 50.9**	**-0.4**
HANM	**anlurfa/Hi**	**0.79**	**190**	P	**Pg**	**07 02 42.1**	**-0.6**
HANM				S	**Sb**	**07 02 54.7**	**+0.9**
AZEY	**Adyaman-Merk**	**0.83**	**230**	P	**Pg**	**07 02 42.5**	**-1.1**
AZEY				S	**Sg**	**07 02 54.3**	**-0.2**
AKCD	**Akcadag**	**0.89**	**267**	P	**Pg**	**07 02 42.4**	**-2.3**
AKCD				S	**Sg**	**07 02 54.0**	**-2.3**
ARPR	**Arapgir-MALATY**	**0.93**	**323**	Pg	**Pg**	**07 02 42.6**	**-2.8**
ARPR				Sg	**Sg**	**07 02 56.3**	**-1.2**
ARPR	**Arapgir-MALATY**	**0.93**	**323**		**Pg**	**07 02 43.1**	**-2.2**
URFA	**Urfa**	**0.93**	**191**	Pg	**Pg**	**07 02 42.0**	**-3.4**
URFA				Sg	**Sg**	**07 02 56.4**	**-1.2**
DYBB	**Diyarbakir**	**0.95**	**115**	Pg	**Pg**	**07 02 44.5**	**-1.2**
DYBB				Sg	**Sb**	**07 02 59.4**	**+0.9**
HEKM	**Malatya_Hekimh**	**1.00**	**302**	P	**Pg**	**07 02 44.3**	**-2.6**
HEKM				S	**Sg**	**07 02 58.3**	**-1.6**
ATAB	**Bozova**	**1.07**	**214**	P	**Pb**	**07 02 47.0**	**-1.0**
ATAB				S	**Sb**	**07 03 02.3**	**+0.3**
ILIC	**ilic-Erzincan**	**1.16**	**341**	Pn	**Pb**	**07 02 47.1**	**-2.5**
ILIC				Sn	**Sb**	**07 03 03.4**	**-1.3**
SANL	**SANLIURFA_Merk**	**1.18**	**182**	P	**Pb**	**07 02 49.4**	**-0.5**
SANL				S	**Sb**	**07 03 05.2**	**-0.1**
AKCA	**Adyaman/G¶l**	**1.21**	**243**	P	**Pn**	**07 02 49.5**	**-1.0**
AKCA				S	**Sn**	**07 03 07.6**	**+0.6**
ERZN	**Erzincan**	**1.34**	**23**	Pn	**Pn**	**07 02 49.9**	**-2.3**
ERZN				Sn	**Sg**	**07 03 11.1**	**+0.5**
EUZM	**Uzumlu**	**1.44**	**20**	P	**Pn**	**07 02 52.5**	**-1.2**
EUZM				S	**Sn**	**07 03 12.8**	**+0.1**
SURC	**SANLIURFA_SURC**	**1.51**	**193**	P	**Pn**	**07 02 53.9**	**-0.7**
SURC				S	**Sb**	**07 03 15.1**	**+0.2**
GZT	**Gaziantep**	**1.54**	**230**	P	**Pn**	**07 02 54.1**	**-1.0**
GZT				S	**Sb**	**07 03 16.1**	**+0.3**
YEDI	**Yedisu-Bingol**	**1.59**	**47**	Pn	**Pn**	**07 02 55.6**	**-0.1**
NZIP	**Nizip/Gaziante**	**1.71**	**220**	P	**Pn**	**07 02 56.7**	**-0.6**
NZIP				S	**Sg**	**07 03 21.4**	**-0.9**
MARD	**Mardin**	**1.72**	**127**	P	**Pn**	**07 02 56.6**	**-0.8**
MARD				S	**Sb**	**07 03 20.5**	**-0.3**
MARD	**Mardin**	**1.72**	**127**		**Pn**	**07 02 56.7**	**-0.8**
KHMN	**Narli-Kahraman**	**1.78**	**238**	Pn	**Pn**	**07 02 56.9**	**-1.4**
KHMN				Sn	**Sn**	**07 03 20.2**	**-0.7**
KELT	**Kelkit**	**1.80**	**5**	P	**Pn**	**07 02 59.0**	**+0.4**
KELT				S	**Sb**	**07 03 23.2**	**0.0**
BTMN	**Batman**	**1.81**	**104**	P	**Pn**	**07 02 58.3**	**-0.3**
KARO	**Karliova-Bingo**	**1.83**	**58**	Pn	**Pn**	**07 02 59.2**	**+0.2**
GAZ	**Gaziantep**	**1.88**	**232**	Pn	**Pn**	**07 02 58.6**	**-1.0**
GAZ	**Gaziantep**	**1.88**	**232**		**Pn**	**07 02 58.6**	**-1.0**
KMRS	**Kahramanmaras**	**1.90**	**244**	Pn	**Pn**	**07 02 58.9**	**-1.0**
ECAT	**Cat-ERZURUM**	**1.95**	**50**	P	**Pn**	**07 03 01.7**	**+1.0**
MUSM	**Mu-Merkez**	**1.96**	**78**	P	**Pn**	**07 03 00.9**	**+0.1**
MUSM				S	**Sg**	**07 03 29.7**	**-0.9**
SUSE	**Susehri**	**1.96**	**341**	P	**Pn**	**07 03 02.0**	**+1.1**
SUSE				S	**Sb**	**07 03 27.8**	**-0.2**
ALUC	**Giresun/Alucra**	**2.00**	**354**	P	**Pb**	**07 03 02.7**	**-1.2**
ALUC				S	**Sg**	**07 03 32.2**	**+0.4**
KOPT	**Kop Dagi**	**2.00**	**34**	P	**Pn**	**07 03 02.4**	**+0.9**
KOPT	**Kop Dagi**	**2.00**	**34**		**Pn**	**07 03 02.1**	**+0.5**
CUAYA	**Sivas-Altinyay**	**2.02**	**297**	P	**Pn**	**07 03 01.8**	**+0.2**
CUAYA				S	**Sn**	**07 03 27.8**	**+0.9**
VRTB	**Varto-Mus**	**2.04**	**66**	P	**Pn**	**07 03 03.1**	**+1.1**
VRTB				S	**Sg**	**07 03 34.9**	**+1.7**
VRTB	**Varto-Mus**	**2.04**	**66**	Pn	**Pn**	**07 03 02.6**	**+0.6**
SARI	**SarD1z-Kayseri**	**2.07**	**272**	Pn	**Pn**	**07 03 01.5**	**-0.9**
MIDY	**Mardin/Midyat-**	**2.08**	**116**	P	**Pn**	**07 03 01.8**	**-0.6**
MIDY				S	**Sb**	**07 03 29.9**	**-1.4**
BAYB	**BAYBURT**	**2.12**	**26**	P	**Pn**	**07 03 04.0**	**+0.9**
SCER	**sogukcermik**	**2.12**	**316**	P	**Pn**	**07 03 03.9**	**+0.8**
SCER				S	**Sb**	**07 03 33.3**	**+0.8**
GUMT	**Gumushane**	**2.13**	**9**	Pn	**Pn**	**07 03 03.3**	**+0.2**
BAYT	**Aydıntepe-Bayb**	**2.20**	**22**	Pn	**Pn**	**07 03 04.4**	**+0.2**
KUZU	**Kuzuini**	**2.23**	**225**	P	**Pn**	**07 03 03.5**	**-0.9**
KUZU				S	**Sb**	**07 03 36.4**	**+1.0**
EMRE	**Erzurum,Aziziy**	**2.24**	**41**	P	**Pn**	**07 03 06.1**	**+1.3**
ANDN	**Andirin**	**2.27**	**251**	P	**Pn**	**07 03 04.0**	**-1.1**
ANDN				S	**Sg**	**07 03 39.3**	**-1.3**
GURO	**Guroymak-BITLI**	**2.35**	**84**	Pn	**Pn**	**07 03 05.8**	**-0.3**
GURO	**Guroymak-BITLI**	**2.35**	**84**		**Pn**	**07 03 05.8**	**-0.3**
SAIM	**ADANA**	**2.37**	**262**	P	**Pn**	**07 03 06.0**	**-0.4**
SAIM				S	**Sg**	**07 03 43.9**	**+0.2**
BNN	**Bunyan**	**2.56**	**282**	Pn	**Pn**	**07 03 08.8**	**-0.2**
BNN	**Bunyan**	**2.56**	**282**	Pn	**Pn**	**07 03 08.9**	**-0.2**
HASA	**Hatay-Hassa-Ha**	**2.59**	**233**	P	**Pn**	**07 03 08.2**	**-1.2**
HASA				S	**Sb**	**07 03 47.1**	**+1.2**
KOZT	**Kozan**	**2.70**	**252**	Pn	**Pn**	**07 03 09.7**	**-1.1**
KOPR	**Koprukoy-ERZUR**	**2.72**	**52**	Pn	**Pn**	**07 03 11.9**	**+0.6**
GUNE	**Kayseri**	**2.74**	**283**	P	**Pn**	**07 03 12.4**	**+0.9**
TOKT	**Tokat**	**2.76**	**316**	Pn	**Pn**	**07 03 11.5**	**-0.3**
TOKA	**Tokat**	**2.80**	**315**	P	**Pn**	**07 03 13.1**	**+0.8**
TOKA	**Tokat**	**2.80**	**315**		**Pn**	**07 03 13.1**	**+0.8**
MLAZ	**Malazgirt-MUS**	**2.84**	**73**	Pn	**Pn**	**07 03 13.8**	**+0.8**
RHAN	**Hatay/Reyhanl**	**2.86**	**224**	P	**Pn**	**07 03 12.2**	**-0.9**
RHAN				S	**Sb**	**07 03 56.2**	**+2.6**
TAHT	**Tahtakopru-Hat**	**3.02**	**230**	Pn	**Pn**	**07 03 14.6**	**-0.7**
CHOM	**Cayeli-Rize**	**3.04**	**25**	Pn	**Pn**	**07 03 16.1**	**+0.6**
YOZ	**Yozgat**	**3.18**	**295**	Pn	**Pn**	**07 03 17.2**	**-0.4**
CMRD	**Camardi-Nigde**	**3.28**	**259**	Pn	**Pn**	**07 03 18.8**	**-0.2**
KARA	**Karaisali**	**3.35**	**252**	Pn	**Pn**	**07 03 19.2**	**-0.6**
SENK	**Senkaya-Erzuru**	**3.37**	**48**	Pn	**Pn**	**07 03 21.1**	**+0.8**
KOZK	**Kozakli-Nevseh**	**3.38**	**286**	Pn	**Pn**	**07 03 19.8**	**-0.5**
KIZO	**Buyukkizoglu-L**	**3.50**	**318**	Pn	**Pn**	**07 03 21.9**	**-0.1**
NIG	**Nigde**	**3.51**	**267**	Pn	**Pn**	**07 03 21.9**	**-0.3**
YARM	**Yarimca-Ladik(**	**3.58**	**317**	Pn	**Pn**	**07 03 22.9**	**-0.1**
BCA	**Borcka**	**3.67**	**32**	Pn	**Pn**	**07 03 25.0**	**+0.8**
BCA	**Borcka**	**3.67**	**32**	⇑P	**Pn**	**07 03 24.9**	**+0.8**
GULA	**Gulagac**	**3.79**	**271**	Pn	**Pn**	**07 03 25.2**	**-0.7**
KARS	**Kars**	**3.85**	**53**	Pn	**Pn**	**07 03 30.0**	**+3.2**
KARS	**Kars**	**3.85**	**53**	P	**Pn**	**07 03 30.0**	**+3.2**
KAMT	**Kaman**	**4.29**	**285**	Pn	**Pn**	**07 03 32.9**	**+0.1**
BR104	**Keskin Array S**	**4.42**	**289**	P	**Pn**	**07 03 35.0**	**+0.3**
BR131	**Keskin Array S**	**4.43**	**290**	P	**Pn**	**07 03 35.2**	**+0.5**
	SNR=98						
BR131	**Keskin Array S**	**4.43**	**290**		**Pn**	**07 03 34.7**	**-0.1**
BR131	**Keskin Array S**	**4.43**	**290**	P	**Pn**	**07 03 34.7**	**-0.1**
BRTR	**Keskin Array B**	**4.43**	**290**	Pn	**Pn**	**07 03 35.4**	**+0.6**
	38nm,0.3s,baz=112,slow=13,SNR=224						
BRTR				Lg	Lg	07 04 44.6	
	4.5nm,0.3s,baz=118,slow=27,SNR=1.6						
BRTR				LR	LR	07 05 40.6	
	comp=Z,5μm,20.5s,baz=87,slow=44						
	191nm,0.6s						
BRTR	**Keskin Array B**	**4.43**	**290**		**Pn**	**07 03 35.0**	**+0.2**
BR105	**Keskin Array S**	**4.45**	**290**	P	**Pn**	**07 03 35.1**	**+0.1**
BR106	**Keskin Array S**	**4.45**	**290**	P	**Pn**	**07 03 35.1**	**+0.1**
BEIL	**Beino**	**4.45**	**212**	*e*P	**Pn**	**07 03 34.3**	**-0.7**
BGD	**Bogdanovka**	**4.55**	**49**	P	**Pb**	**07 03 45.8**	**-1.7**
BGD				S	**Sg**	**07 04 56.2**	**+2.6**
BGD	**Bogdanovka**	**4.55**	**49**	*e*P	**Pb**	**07 03 45.7**	**-1.7**
HWQ	**Hawqa**	**4.78**	**213**	*e*P	**Pn**	**07 03 38.3**	**-1.2**
ILGA	**Ilgaz**	**4.92**	**305**		**Pn**	**07 03 42.5**	**+0.9**
TKB	**Tkibuli**	**5.00**	**36**	P	**Pn**	**07 03 41.9**	**-0.6**
TKB				S	**Sg**	**07 05 05.2**	**-2.7**
TKB	**Tkibuli**	**5.00**	**36**	*e*P	**Pn**	**07 03 41.9**	**-0.6**
TRLG	**Trialeti**	**5.02**	**49**	P	**Pn**	**07 03 41.7**	**-1.2**
TRLG				S	**Sg**	**07 05 14.7**	**+6.1**
TRLG	**Trialeti**	**5.02**	**49**	*e*P	**Pn**	**07 03 41.6**	**-1.2**
ANTO	**Ankara**	**5.10**	**289**	P	**Pn**	**07 03 44.9**	**+1.1**
ANTO				S	**Sn**	**07 04 44.9**	**+2.2**
ANTO	**Ankara**	**5.10**	**289**		**Pn**	**07 03 45.2**	**+1.3**
ANTO	**Ankara**	**5.10**	**289**	⇑P	**Pn**	**07 03 45.4**	**+1.6**
ANTO	**Ankara**	**5.10**	**289**	P	**Pn**	**07 03 45.2**	**+1.3**
ANTO	**Ankara**	**5.10**	**289**	P	**Pn**	**07 03 44.0**	**+0.1**
	1.8nm3μm304nm,0.7s						
VSLR	**Vesyoloye**	**5.16**	**8**	*i* P	**Pn**	**07 03 45.4**	**+0.8**
ZAHL	**Zahle**	**5.17**	**211**	*e*P	**Pn**	**07 03 44.0**	**-0.9**
BHL	**Bhannes**	**5.22**	**213**	*e*P	**Pn**	**07 03 44.4**	**-1.3**
SOC	**Sochi**	**5.25**	**5**	*e*P	**Pn**	**07 03 45.5**	**-0.3**
SOC				*e*S	**Sn**	**07 04 46.3**	**0.0**
SOC				pmax	pmax		
	comp=Z,33nm,0.8s						
SOC				MLR	MLR		
	comp=Z,1μm,12.0s						
BZK	**Bozkurt**	**5.28**	**315**	Pn	**Pn**	**07 03 47.3**	**+0.9**
BZK	**Bozkurt**	**5.28**	**315**	⇑P	**Pn**	**07 03 49.0**	**+2.7**
GARIG	**Gari**	**5.42**	**37**	P	**Pn**	**07 03 48.3**	**0.0**
GARIG				S	**Sg**	**07 05 19.5**	**-1.8**
DQRL	**Deir Qamar**	**5.43**	**212**	*e*P	**Pn**	**07 03 47.1**	**-1.3**
RCY	**Rachaya**	**5.51**	**209**	*e*P	**Pn**	**07 03 48.9**	**-0.7**
TBLG	**Delisi**	**5.51**	**51**	P	**Pn**	**07 03 49.1**	**-0.4**
TBLG				S	**Sg**	**07 05 31.4**	**+7.0**
TBLG	**Delisi**	**5.51**	**51**	*e*P	**Pn**	**07 03 49.1**	**-0.4**
QRWL	**Qaraoun**	**5.52**	**211**	*e*P	**Pn**	**07 03 48.7**	**-1.0**
NEUR	**Neytrino**	**5.63**	**28**	*i* P	**Pn**	**07 03 53.0**	**+1.7**
SHBL	**Chebaa**	**5.67**	**209**	*e*P	**Pn**	**07 03 51.0**	**-0.9**
CSS	**Mathiatis**	**5.71**	**235**		**Pn**	**07 03 49.9**	**-2.4**
CSS	**Mathiatis**	**5.71**	**235**	P	**Pn**	**07 03 52.2**	**-0.1**
	comp=Z,1.0nmcomp=Z,3μmcomp=Z,218nm,0.7s						
CSS	**Mathiatis**	**5.71**	**235**	P	**Pn**	**07 03 49.8**	**-2.5**
NATI	**Neve Ativ**	**5.75**	**209**	P	**Pn**	**07 03 53.6**	**+0.8**
DGRG	**David-gareji**	**5.76**	**56**	P	**Pn**	**07 03 55.8**	**+2.8**
DGRG	**David-gareji**	**5.76**	**56**	*e*P	**Pn**	**07 03 55.7**	**+2.8**
GEM	**Giv'at Ha'Em**	**5.83**	**209**	P	**Pn**	**07 03 54.6**	**+0.8**
CIDE	**Kastamonu/Cide**	**5.86**	**309**	⇑P	**Pn**	**07 03 55.4**	**+1.2**
KSHT	**Keshet**	**5.97**	**207**	P	**Pn**	**07 03 56.5**	**+0.5**
SHA1	**Shidzhatmaz**	**6.03**	**26**	*ce*P	**Pn**	**07 03 59.6**	**+2.8**
MMC7	**Mount Meron ar**	**6.10**	**210**	P	**Pn**	**07 03 58.2**	**+0.5**
MMA0B	**Mount Meron ar**	**6.10**	**210**	P	**Pn**	**07 03 58.0**	**+0.3**
MMAI	**Mount Meron Ar**	**6.10**	**210**	Pn	**Pn**	**07 03 57.9**	**+0.2**
	comp=Z,41nm,0.4s,baz=28,slow=13,SNR=28						
MMAI				Pg	**Pb**	**07 04 16.1**	**+2.3**
	comp=Z,62nm,0.3s,baz=18,slow=15,SNR=5.4						
MMAI				Lg	Lg	07 05 37.9	
	comp=Z,32nm,0.3s,baz=72,slow=14,SNR=2.2						
MMAI				LR	LR	07 06 39.9	
	comp=Z,5μm,18.1s,baz=359,slow=42						
KBZ	**Khabaz**	**6.10**	**27**	Pn	**Pn**	**07 03 59.2**	**+1.6**
	comp=Z,1.3nm,0.3s,baz=222,slow=15,SNR=17						
KBZ				LR	LR	07 06 50.0	
	comp=Z,4μm,18.6s,baz=220,slow=43						
	comp=Z,6.9nm,0.5s						
KBZ	**Khabaz**	**6.10**	**27**	*ce*P	**Pn**	**07 03 59.5**	**+1.9**
HNTI	**Hanita**	**6.13**	**212**	P	**Pn**	**07 03 58.1**	**0.0**
NCK	**Nalchik**	**6.18**	**32**	*i* P	**Pn**	**07 04 01.7**	**+3.0**
KIV	**Kislovodsk**	**6.23**	**25**	P	**Pn**	**07 04 03.5**	**+4.1**
KIV	**Kislovodsk**	**6.23**	**25**		**Pn**	**07 04 01.2**	**+1.8**
KIV	**Kislovodsk**	**6.23**	**25**	⇑P	**Pn**	**07 04 01.4**	**+2.0**
KIV	**Kislovodsk**	**6.23**	**25**	*i* P	**Pn**	**07 04 01.5**	**+2.0**
	SNR=9.1						
KIV	**Kislovodsk**	**6.23**	**25**	*e*P	**Pn**	**07 04 01.4**	**+2.0**
KIV				pmax	pmax		
	comp=Z,53nm,1.1s						
KIV				MLR	MLR		
	comp=Z,819nm,9.0s						
KIV	**Kislovodsk**	**6.23**	**25**	P	**Pn**	**07 04 00.8**	**+1.4**
	comp=Z,0.5nmcomp=Z,1μmcomp=Z,168nm,1.2s						
VSHL	**Vashlovani**	**6.34**	**61**	P	**Pn**	**07 04 02.9**	**+1.9**
VSHL				S	Sg	07 06 23.3	+32
LABN	**Labinsk**	**6.41**	**11**	*e*P	**Pn**	**07 04 00.4**	**-1.3**
LABN				*e*S	**Sn**	**07 05 15.3**	**+0.5**
LABN				pmax	pmax		
	comp=Z,70nm,0.8s						
LABN				MLR	MLR		
	comp=Z,2μm,12.0s						
ASF	**Jabal al Asfar**	**6.42**	**197**	Pn	**Pn**	**07 04 01.8**	**-0.2**
	comp=Z,7.3nm,0.3s,baz=14,slow=12,SNR=50						
ASF				Pg	**Pb**	**07 04 23.2**	**+4.0**
	comp=Z,19nm,0.3s,baz=172,slow=23,SNR=4.4						
ASF				Lg	Lg	07 05 50.3	
	comp=Z,41nm,0.3s,baz=6.9,slow=22,SNR=3.3						
ASF				LR	LR	07 06 38.4	
	comp=Z,1μm,21.8s,baz=9.8,slow=40						
	comp=Z,92nm,1.0s						
BLGI	**Bet Lehem HaGe**	**6.43**	**210**	P	**Pn**	**07 04 03.5**	**+1.4**
MDUB	**Mudurnu**	**6.44**	**292**		**Pn**	**07 04 03.7**	**+1.4**
LGD	**Lagodekhi**	**6.51**	**56**	P	**Pb**	**07 04 19.7**	**-1.2**
LGD				S	**Sg**	**07 05 55.0**	**-1.6**
ANN	**Anapa**	**6.55**	**350**	*e*P	**Pn**	**07 04 04.0**	**+0.3**
ANN				pmax	pmax		
	comp=Z,43nm,0.9s						
ANN				MLR	MLR		
	comp=Z,1μm,12.0s						
MMLI	**Mount Malkishu**	**6.61**	**208**	P	**Pn**	**07 04 05.7**	**+1.1**
OFRI	**`Ofer**	**6.61**	**211**	P	**Pn**	**07 04 05.6**	**+0.9**
HMDT	**Nahal Hemdat**	**6.74**	**206**	P	**Pn**	**07 04 07.0**	**+0.7**
ISP	**Isparta**	**6.75**	**268**	Pn	**Pn**	**07 04 07.2**	**+0.6**
ISP	**Isparta**	**6.75**	**268**	*ce*P	**Pn**	**07 04 08.1**	**+1.5**
ISP				pmax	pmax		
	comp=Z,45nm,1.0s						
SAHE	**Sakarya_HENDEK**	**6.80**	**294**	⇑P	**Pn**	**07 04 08.9**	**+1.6**
BORA	**Eskisehir**	**6.86**	**286**		**Pn**	**07 04 08.1**	**+0.1**
SLTI	**Sal'it**	**6.93**	**209**	P	**Pn**	**07 04 09.9**	**+1.0**
SALP	**Salfit**	**7.02**	**208**	P	**Pn**	**07 04 11.3**	**+1.0**
UJAP	**Al Uja**	**7.03**	**206**	P	**Pn**	**07 04 11.2**	**+0.8**
YAL	**Yalta**	**7.15**	**331**	*e*P	**Pn**	**07 04 14.6**	**+2.7**
YAL				*e*S	**Sn**	**07 05 40.3**	**+7.3**
SUDU	**Sudak**	**7.20**	**336**	*e*P	**Pn**	**07 04 14.2**	**+1.6**
SUDU				*e*S	**Sn**	**07 05 39.2**	**+4.8**
ALU	**Alushta**	**7.22**	**333**	*e*P	**Pn**	**07 04 15.4**	**+2.5**
GOF	**Gofitskoye**	**7.33**	**23**	*ce*P	Pn	07 04 19.3	+4.8
AKT	**Akhty**	**7.36**	**62**	*e*P	**Pn**	**07 04 17.8**	**+2.8**
AKT				*e*S	**Sn**	**07 05 42.9**	**+4.3**
AKT				pmax	pmax		
	comp=Z,38nm,0.6s						
AKT				smax	smax		
	comp=E,21nm,0.9s						
AKT				smax	smax		
	comp=N,20nm,0.5s						
AKT				MLR	MLR		
	comp=Z,3μm,8.0s						
ERBR	**Yeremizino-Bor**	**7.43**	**8**	*e*P	**Pn**	**07 04 17.3**	**+1.5**
ERBR				*e*S	**Sn**	**07 05 42.1**	**+2.0**
ERBR				pmax	pmax		
	comp=Z,76nm,0.8s						
ERBR				MLR	MLR		
	comp=Z,1μm,13.0s						
ELL	**Elmali**	**7.44**	**260**	Pn	**Pn**	**07 04 17.5**	**+1.4**
ELL	**Elmali**	**7.44**	**260**	P	**Pn**	**07 04 17.5**	**+1.4**
SIM	**Simferopol'**	**7.55**	**332**	*e*P	**Pn**	**07 04 19.5**	**+2.0**
SIM				S	**Sn**	**07 05 50.2**	**+7.1**
SIM				pmax	pmax		
	comp=Z,6μm,1.3s						
SIM				smax	smax		
	comp=E,159nm,1.0s						
SIM				smax	smax		
	comp=N,169nm,1.1s						
GHAJ	**Ghor Haditha**	**7.60**	**203**		**Pn**	**07 04 18.6**	**+0.5**
GHAJ	**Ghor Haditha**	**7.60**	**203**	P	**Pn**	**07 04 18.9**	**+0.8**
MSBI	**Mazada**	**7.65**	**204**	P	**Pn**	**07 04 19.8**	**+0.9**
YTIR	**Yattir**	**7.69**	**206**	P	**Pn**	**07 04 20.0**	**+0.6**
AKAS	**Kas**	**7.82**	**257**		**Pn**	**07 04 21.8**	**+0.4**
MAK	**Makhachkala**	**7.90**	**52**	*e*P	**Pn**	**07 04 17.5**	**-4.7**
MAK				*e*S	**Sn**	**07 05 45.6**	**-6.0**
MAK				pmax	pmax		
	comp=Z,115nm,1.1s						
MAK				MLR	MLR		
	comp=Z,12μm,13.0s						
MANT	**Manisa**	**8.24**	**274**		**Pn**	**07 04 28.6**	**+1.4**
KZIT	**Kziot**	**8.36**	**209**	P	**Pn**	**07 04 29.3**	**+0.7**
PRNI	**Paran**	**8.65**	**204**	P	**Pn**	**07 04 32.7**	**0.0**
BALB	**Balikesir**	**8.79**	**282**	Pn	**Pn**	**07 04 35.9**	**+1.4**
HRFI	**Mount Harif**	**8.94**	**203**	P	**Pn**	**07 04 37.1**	**+0.5**
HRFI	**Mount Harif**	**8.94**	**203**	S	**Sn**	**07 06 18.2**	**+0.9**
KRMI	**Paran Flat**	**8.96**	**205**	P	**Pn**	**07 04 37.3**	**+0.4**
MBRI	**Mt Berech**	**9.20**	**203**	P	**Pn**	**07 04 40.3**	**+0.1**
EIL	**Elat**	**9.31**	**203**	Pn	**Pn**	**07 04 41.8**	**+0.2**
	comp=Z,1.4nm,0.3s,baz=132,slow=3.6,SNR=6.7						
EIL				Lg	Lg	07 07 21.1	
	comp=Z,6.2nm,0.3s,baz=293,slow=9.8,SNR=2.2						
EIL				LR	LR	07 08 43.1	
	comp=Z,3μm,20.9s,baz=9.5,slow=41						
	comp=Z,12nm,0.6s						
EIL	**Elat**	**9.31**	**203**	P	**Pn**	**07 04 41.9**	**+0.2**
KARP	**Karpathos**	**9.92**	**257**	Pn	**Pn**	**07 04 49.2**	**-0.9**
TIRR	**Tirgusor**	**10.05**	**311**		**Pn**	**07 04 52.0**	**+0.3**
TIRR	**Tirgusor**	**10.05**	**311**	⇑P	**Pn**	**07 04 53.4**	**+1.7**
TIRR	**Tirgusor**	**10.05**	**311**	P	**Pn**	**07 04 52.0**	**+0.3**
TIRR	**Tirgusor**	**10.05**	**311**	P	**Pn**	**07 04 52.2**	**+0.5**
	comp=Z,66nm,0.8s						
ICOR	**Ion Corvin**	**10.24**	**308**	⇓P	**Pn**	**07 04 56.4**	**+2.1**
TLCR		**10.24**	**315**	⇑P	**Pn**	**07 04 55.1**	**+0.7**

TLCR		10.24	315	P	Pn	07 04 55.0	+0.7
NE56	Odesa	10.26	327	P	Pn	07 04 55.1	+0.5
TPGR	Topolog	10.27	313	⇓P	Pn	07 04 55.6	+0.8
TLBR	Topalu	10.31	310	⇓P	Pn	07 04 56.7	+1.4
ALN	Alexandroupoli	10.35	288	Pn	Pn	07 04 55.6	-0.2
ALN	Alexandroupoli	10.35	288	P	Pn	07 04 55.6	-0.2
CFR	Carcaliu	10.62	313	⇓P	Pn	07 05 00.3	+0.8
CFR	Carcaliu	10.62	313	P	Pn	07 05 00.3	+0.8
RDO	Rodhopi	10.77	289	Pn	Pn	07 05 02.1	+0.5
VLDR	Vladesti	11.06	316	⇓P	Pn	07 05 06.9	+1.4
ISR	Istrita	11.53	310	⇓P	Pn	07 05 13.8	+1.8
ISR	Istrita	11.53	310	P	Pn	07 05 13.8	+1.8
ODBI	Odobesti	11.58	314	⇓P	Pn	07 05 13.6	+0.9
PANC	Panciu	11.59	314	⇓P	Pn	07 05 14.8	+1.9
IDI	Anoyia	11.76	259	Pn	Pn	07 05 15.2	0.0
	comp=Z,7.3nm,0.3s,baz=83,slow=13,SNR=34						
IDI				LR	LR	07 10 35.6	
	comp=Z,2µm,21.5s,baz=63,slow=42						
	comp=Z,24nm,0.5s						
IDI	Anoyia	11.76	259	Pn	Pn	07 05 15.4	+0.2
VRI	Vrincioaia	11.83	313	⇑P	Pn	07 05 18.1	+2.0
VRI	Vrincioaia	11.83	313	P	Pn	07 05 18.0	+2.0
NEHR	Nehoiu	11.84	311	⇑P	Pn	07 05 17.5	+1.3
PLOR	Plostina	11.86	313	⇓P	Pn	07 05 18.4	+1.8
PLOR	Plostina	11.86	313	P	Pn	07 05 18.4	+1.8
MLR	Muntele Rosu	12.08	310	Pn	Pn	07 05 20.3	+0.7
	comp=Z,0.7nm,0.3s,baz=50,slow=4.8,SNR=7.4						
MLR				LR	LR	07 10 57.9	
	comp=Z,1µm,19.7s,baz=126,slow=42						
	comp=Z,8.2nm,1.0s						
MLR	Muntele Rosu	12.08	310	Pn	Pn	07 05 20.5	+0.9
MLR	Muntele Rosu	12.08	310	⇓P	Pn	07 05 20.8	+1.2
COVR	Voineasa-Covas	12.12	312	⇑P	Pn	07 05 22.2	+2.1
TESR	Tescani	12.25	316	⇑P	Pn	07 05 24.1	+2.3
ONER	Baraj Valea Uz	12.29	314	⇑P	Pn	07 05 23.6	+1.2
TURR	Turia	12.34	313	⇑P	Pn	07 05 24.6	+1.4
SORM	Soroca	12.49	325	⇑P	Pn	07 05 25.4	+0.2
SORM	Soroca	12.49	325	P	Pn	07 05 25.3	+0.2
BOSR	Bodos	12.56	312	⇓P	Pn	07 05 27.5	+1.4
VORD	Divnogorie	12.61	1	*e*P	Pn	07 05 31.3	+4.6
VORD				pmax	pmax		
	comp=Z,40nm,0.9s						
VORD				MLR	MLR		
	comp=Z,670nm,12.0s						
DOPR	Dopca	12.66	311	⇓P	Pn	07 05 28.0	+0.5
VSR	Storozhevoye	12.86	0	*e*P	Pn	07 05 34.7	+4.6
VSR				pmax	pmax		
	comp=Z,30nm,0.7s						
VSR				MLR	MLR		
	comp=Z,810nm,13.0s						
VRH	Novokhopyorsk	12.98	7	*e*P	Pn	07 05 32.3	+0.5
VRH				pmax	pmax		
	comp=Z,50nm,0.7s						
VRH				MLR	MLR		
	comp=Z,1µm,12.0s						
PRAR	RASCA	13.01	318	⇑P	Pn	07 05 33.1	+1.0
VAY	Valandovo	13.01	288	*i* P	Pn	07 05 36.2	+4.0
VORR	Voronezh	13.32	0	*e*P	Pn	07 05 36.3	0.0
VORR				pmax	pmax		
	comp=Z,60nm,0.4s						
VORR				MLR	MLR		
	comp=Z,1µm,12.0s						
LOT	Lotru	13.40	307	⇓P	Pn	07 05 40.0	+2.4
ITM	Ithomi	13.60	270		Pn	07 05 41.4	+1.1
KMPD	K-Podol'skiy	13.68	322	P	P	07 05 41.8	-8.4
KMPD				P	Pn	07 05 41.4	+0.1
BURAR	Bucovina Array	13.70	317		Pn	07 05 41.8	+0.1
BURAR	Bucovina Array	13.70	317	⇓P	Pn	07 05 43.3	+1.6
BURAR	Bucovina Array	13.70	317	P	Pn	07 05 43.3	+1.6
BUR08	Bucovina Ar. S	13.73	317		Pn	07 05 41.1	-1.0
GZR	Gura Zlata	14.01	305	⇓P	Pn	07 05 47.5	+1.6
GZR	Gura Zlata	14.01	305	P	Pn	07 05 47.4	+1.6
HERR	Herculane	14.04	303	⇓P	Pn	07 05 47.1	+0.8
LUBAR	Lubar, Ukraine	14.10	329	P	Pn	07 05 46.3	-0.8
CJR	Cluj-Napoca	14.11	311	⇑P	Pn	07 05 48.3	+1.0
CJR	Cluj-Napoca	14.11	311	P	Pn	07 05 48.3	+1.0
BOVS	Bovan	14.12	297	⇑P	Pn	07 05 48.8	+1.5
AKASG	Malin Array Be	14.18	334	Pn	Pn	07 05 46.4	-1.7
	comp=Z,1.6nm,0.3s,baz=151,slow=12,SNR=11						
AKASG				Sn	Sn	07 08 19.9	-5.4
	baz=90,slow=28						
AKASG				LR	LR	07 11 52.7	
	comp=Z,318nm,20.4s,baz=150,slow=40						
	comp=Z,7.2nm,0.7s						
AKASG	Malin Array Be	14.18	334		Pn	07 05 45.1	-3.0
AKASG	Malin Array Be	14.18	334	*i* P	Pn	07 05 46.4	-1.7
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AKBB	Malin Array Si	14.18	334		Pn	07 05 46.4	-1.8
AKBB	Malin Array Si	14.18	334	*i* P	Pn	07 05 48.2	+0.1
KIEV	Kiev	14.18	334		Pn	07 05 46.2	-1.9
KIEV	Kiev	14.18	334	*i* P	Pn	07 05 46.1	-2.0
	SNR=6.2						
KIEV	Kiev	14.18	334	P	Pn	07 05 46.2	-1.9
LPSR	Galich'ya Gora	14.25	360	*e*P	Pn	07 05 50.3	+1.3
LPSR				pmax	pmax		
	comp=Z,100nm,0.9s						
LPSR				MLR	MLR		
	comp=Z,830nm,13.0s						
OHR	Ohrid	14.31	287	*i* P	P	07 05 58.3	+1.0
MARR	Marisel-Cluj	14.38	310	⇑P	Pn	07 05 53.3	+2.3
MDVR	Moldovita	14.47	302	⇓P	Pn	07 05 53.2	+1.0
DRGR		14.68	310	⇑P	Pn	07 05 57.3	+2.2
DRGR		14.68	310	P	Pn	07 05 57.2	+2.2
BZS	Buzias	14.84	305	⇑P	Pn	07 05 59.4	+2.2
BZS	Buzias	14.84	305	P	Pn	07 05 59.4	+2.2
SIRR	Siria	15.08	307	⇑P	Pn	07 06 02.3	+1.8
PVY	Plav	15.13	292	⇑*i*P	P	07 06 04.4	-2.0
IVA	Berane	15.23	293	⇑*i*P	P	07 06 05.2	-2.3
BELG	Belogornoye	15.26	20	Pn	Pn	07 06 01.9	-0.8
	comp=Z,0.5nm,0.3s,baz=30,slow=5.7,SNR=7.2						
BELG				LR	LR	07 12 47.3	
	comp=Z,350nm,19.2s,baz=237,slow=41						
	comp=Z,33nm,0.9s						
BELG	Belogornoye	15.26	20	*i* P	Pn	07 06 02.7	0.0
ULC	Ulcinj	15.56	290	⇑*i*P	Pn	07 06 08.5	+1.7
PDG	Podgorica	15.62	291	⇑P	P	07 06 09.7	-2.0
PDG	Podgorica	15.62	291	⇑*i*P	P	07 06 10.7	-1.0
DRME	Dracevica, Mon	15.64	290	⇑*i*P	P	07 06 10.7	-1.2
PLE	Pljevlja	15.68	295	⇓*i*P	P	07 06 10.8	-1.7
RAYN	Ar Rayn	15.78	158	P	Pn	07 06 08.3	-1.4
RAYN	Ar Rayn	15.78	158	P	Pn	07 06 11.2	+1.5
BUM	Brajici-Budva	15.87	291	⇑*i*P	P	07 06 13.6	-0.9
RNPP5	Staryi Chortor	15.87	328	P	Pn	07 06 11.9	+1.2
CEME	Cevo	15.88	292	⇑*i*P	P	07 06 14.2	-0.5
NKME	Niksic	15.89	292	⇑*i*P	P	07 06 13.3	-1.5
RNPP8	Varash	15.97	329	P	Pn	07 06 13.0	+1.1
UPM	Unac-Piva	16.00	294	⇓*i*P	Pn	07 06 14.3	+1.6
RNPP9	Sopachiv	16.01	329	P	Pn	07 06 13.3	+0.8
HCY	Herceg Novi	16.18	291	⇑*i*P	P	07 06 17.1	-0.8
BRY	Bratogost	16.21	293	⇓*i*P	P	07 06 17.2	-1.3
KWP	Kalwaria Pacla	16.25	319	*e*P	P	07 06 18.8	+0.1
KWP	Kalwaria Pacla	16.25	319	P	Pn	07 06 16.6	+1.0
	comp=Z,71nm,1.0s						
KECS	Kecovo	16.82	313	*e*P	P	07 06 28.3	+3.3
KECS	Kecovo	16.82	313	*e*P	P	07 06 28.3	+3.3
OBN	Obninsk	16.85	355	Pn	Pn	07 06 23.5	+0.3
	comp=Z,1.6nm,0.3s,baz=319,slow=23,SNR=5.5						
OBN				Sn	Sn	07 09 25.7	-4.4
	comp=Z,2.2nm,0.3s,baz=14,slow=21,SNR=1.3						
OBN				LR	LR	07 14 48.4	
	comp=Z,394nm,18.2s,baz=108,slow=44						
	comp=Z,19nm,0.6s						
OBN	Obninsk	16.85	355	Pn	Pn	07 06 24.0	+0.9
OBN	Obninsk	16.85	355	*d i*P	Pn	07 06 23.9	+0.8
OBN				*i* S	Sn	07 09 33.7	+3.5
OBN				pmax	pmax		
	comp=Z,39nm,1.0s						
OBN				MLR	MLR		
	comp=Z,483nm,15.0s						
SMRA	Abu-Samra	16.85	140	P	Pn	07 06 21.3	-2.1
	SNR=7.1						
SMRA				S	Sn	07 09 27.6	-3.0
STHS	Stebnicka Huta	16.90	317	*e*P	P	07 06 26.1	+0.2
STHS	Stebnicka Huta	16.90	317	*e*P	P	07 06 26.0	+0.2
PSZ	Piszkesteto	16.90	311	P	P	07 06 25.1	-0.8
PSZ	Piszkesteto	16.90	311	⇑P	P	07 06 26.1	+0.2
PSZ	Piszkesteto	16.90	311	*e*P	P	07 06 25.3	-0.6
PSZ	Piszkesteto	16.90	311	P	P	07 06 26.1	+0.2
MORH	Mrgy, Hungar	16.99	304	⇑P	P	07 06 26.1	-0.7
MORH	Mrgy, Hungar	16.99	304	P	Pn	07 06 25.1	+0.1
	comp=Z,660nmcomp=Z,30nm,1.4s						
TRNA	Turayna	17.06	139	P	Pn	07 06 23.6	-2.4
	SNR=8.0						
TRNA				S	Sn	07 09 32.0	-3.6
TIP	Timpagrande	17.41	280	P	Pn	07 06 30.9	+0.6
TIP				IAmb	IAmb	07 06 34.9	
	comp=Z,246nm,1.4s						
TIP	Timpagrande	17.41	280	⇓P	P	07 06 32.3	+0.7
TIP	Timpagrande	17.41	280	P	Pn	07 06 30.9	+0.6
	comp=Z,2µmcomp=Z,95nm,1.1s						
NIE	Niedzica	17.41	315	*e*P	Pn	07 06 30.4	0.0
NIE	Niedzica	17.41	315	P	Pn	07 06 30.8	+0.5
	comp=Z,11nm,1.5s						
MOS	Moscow	17.42	357	*e*P	Pn	07 06 28.1	-2.2
MOS				*e*S	Sn	07 09 35.8	-8.1
MOS				pmax	pmax		
	comp=Z,79nm,1.1s						
SLWR	Sila	17.85	139	P	Pn	07 06 33.3	-2.5
MNK	Minsk	17.85	338	*i* P	P	07 06 36.6	+0.2
	comp=E,43nm,1.1s						
MNK				*i* P	P	07 06 36.6	+0.2
	comp=N,490nm,15.0s						
MNK				*i* P	P	07 06 36.6	+0.2
	comp=Z,85nm,0.9s,baz=149						
MNK				*i* PP	PnPn	07 06 47.7	+1.3
MNK				*i* PPP	PPP	07 06 55.5	
MNK				*i* S	Sn	07 09 57.1	+2.5
MNK				*i* SS	SnSn	07 10 12.1	+4.0
MNK				*i* LR	LR	07 13 17.9	
MNK				*i* LRM	MLR	07 15 33.2	
	comp=N,571nm,16.7s						
MNK				*i* LRM	MLR	07 15 37.0	
	comp=Z,432nm,17.6s						
MNK				*i* LRM	MLR	07 16 12.3	
	comp=E,578nm,19.8s						
MNK	Minsk	17.85	338	*i* P	P	07 06 36.5	+0.2
MNK				*i* S	Sn	07 09 57.0	+2.5
MNK				pmax	pmax		
	comp=E,43nm,1.1s						
MNK				pmax	pmax		
	comp=Z,85nm,0.9s						
MNK				pmax	pmax		
	comp=N,490nm,15.0s						
MNK				MLR	MLR		
	comp=N,571nm,17.0s						
MNK				MLR	MLR		
	comp=Z,432nm,18.0s						
MNK				MLR	MLR		
	comp=E,578nm,20.0s						
MPLH	Magyarpolny	18.04	306	P	P	07 06 38.5	0.0
	comp=E,2µmcomp=E,114nm,1.1s						
AKTO	Aktyubinsk	18.09	42	P	Pn	07 06 37.3	-1.4
	comp=E,0.7nm,0.3s,baz=231,slow=11,SNR=28						
AKTO				LR	LR	07 15 25.6	
	comp=E,1µm,18.6s,baz=226,slow=43						
	comp=E,41nm,1.0s						
OJC	Ojcow	18.12	317	*e*P	Pn	07 06 38.9	-0.2
OJC	Ojcow	18.12	317	P	P	07 06 39.6	+0.2
	comp=E,34nm,2.3s						
NACGM	Naroch	18.53	337	*e*P	Pn	07 06 44.5	+0.6
	comp=Z,65nm,1.0s,baz=148						
AB31	Akbulak array	18.54	47	P	P	07 06 42.9	-1.0
AB31	Akbulak array	18.54	47	*i* P	P	07 06 41.7	-2.3
ABKAR	Akbulak array	18.54	47	P	P	07 06 43.0	-1.0
GHWR	Ruwais	18.56	137	P	P	07 06 42.4	-1.9
BEL	Belsk	18.58	322	*e*P	P	07 06 44.5	+0.1
KOGS	Kog	18.64	303	*i* P	Pn	07 06 46.4	+1.0
KOGS				*i*		07 06 48.3	
SMOL	Smolenice	18.64	310	*e*P	Pn	07 06 46.7	+1.3
JAVC	Velka Javorina	18.64	311	*e*P	Pn	07 06 46.7	+1.2
R9F13	Warsaw-Wawer	18.66	324	*e*P	P	07 06 45.2	-0.1
MODS	Modra-Piesok	18.67	309	*e*P	Pn	07 06 47.0	+1.2
MODS	Modra-Piesok	18.67	309	*e*P	Pn	07 06 47.0	+1.2
MAUC	Maruska	18.78	313	*e*P	Pn	07 06 48.1	+0.9
SHME	Shamm	18.93	125	P	P	07 06 47.6	-0.8
SHME	Shamm	18.93	125	P	P	07 06 47.6	-0.8
PAOL	Paolisi	19.02	286	P	Pn	07 06 50.2	+0.1
RONA	Rosalia, Austr	19.02	307	*i* Pn	Pn	07 06 50.4	+0.3
	comp=Z,563nm,2.9s,SNR=21						
SUW	Suwalki	19.06	330	*e*P	P	07 06 49.5	-0.1
SUW	Suwalki	19.06	330	P	P	07 06 49.5	-0.1
SUW	Suwalki	19.06	330	*e*P	P	07 06 49.3	-0.3
SUW	Suwalki	19.06	330	P	P	07 06 49.5	-0.1
IIGN	Ignalina	19.08	337	*e*P	P	07 06 49.6	-0.1
STEB	Steborice	19.09	314	*e*P	Pn	07 06 51.2	+0.4
BANOM	Banah	19.12	125	P	P	07 06 49.2	-1.3
BANOM	Banah	19.12	125	*i* P	P	07 06 49.6	-0.9
	SNR=7.5						
MORC	Moravsky Berou	19.14	314	P	Pn	07 06 51.5	0.0
MORC	Moravsky Berou	19.14	314	⇓P	Pn	07 06 51.6	+0.1
MORC	Moravsky Berou	19.14	314	*e*P	Pn	07 06 51.3	-0.2
MORC	Moravsky Berou	19.14	314	P	Pn	07 06 51.5	0.0
MORC				pmax	pmax		
	comp=Z,33nm,0.9s						
ISAL	Salakas	19.29	337	*e*P	P	07 06 52.0	-0.2
AJN	Ajban	19.29	131	P	P	07 06 52.8	+0.5
	SNR=11						
AJN	Ajban	19.29	131	*i* P	P	07 06 52.4	0.0
	SNR=9.9						
ARSA	Arzberg	19.36	305	P	Pn	07 06 54.5	+0.3
ARSA	Arzberg	19.36	305	*i* Pn	Pn	07 06 54.1	0.0
	comp=Z,172nm,3.0s,SNR=7.6						
CONA	Conrad Observa	19.38	307	*i* Pn	Pn	07 06 54.3	0.0
	comp=Z,60nm,1.1s,SNR=28						
NAZ	Nazwa, Dubai	19.39	129	P	P	07 06 53.1	-0.3
	SNR=18						
NAZ	Nazwa, Dubai	19.39	129	*i* P	P	07 06 53.5	+0.1
	SNR=18						
VAE	Valguarnera	19.45	275	P	Pn	07 06 55.5	+0.2
	comp=Z,13nm,0.6s,baz=58,slow=15,SNR=6.1						
VAE				LR	LR	07 15 17.8	
	comp=Z,352nm,18.5s,baz=141,slow=40						
ASUD	Al Ashush, Dub	19.45	130	P	P	07 06 54.2	+0.1
	SNR=13						
ASUD	Al Ashush, Dub	19.45	130	*i* P	P	07 06 53.8	-0.3
	SNR=13						
VRAC	Vranov	19.48	311	P	Pn	07 06 54.9	-0.6
	comp=Z,0.3nm,0.3s,baz=115,slow=10,SNR=12						
VRAC				S	S	07 10 35.1	+0.8
	comp=Z,1.0nm,0.4s,baz=26,slow=21,SNR=1.3						
VRAC				LR	LR	07 15 34.2	
	comp=Z,477nm,20.3s,baz=101,slow=40						
	comp=Z,12nm,1.0s						
VRAC	Vranov	19.48	311	⇑P	Pn	07 06 55.8	+0.3
VRAC	Vranov	19.48	311	*e*P	Pn	07 06 55.2	-0.3
KRUC	Moravsky	19.49	311	*e*P	Pn	07 06 55.1	-0.5
SOKA	Soboth	19.51	303	*e*P	Pn	07 06 55.5	-0.5
	comp=Z,111nm,3.2s						
FAQ	Al Faqa, Dubai	19.52	129	P	P	07 06 55.2	+0.3
	SNR=7.5						
FAQ	Al Faqa, Dubai	19.52	129	*i* P	P	07 06 54.9	0.0
	SNR=5.9						
INTR	Introdacqua	19.54	289	P	P	07 06 55.4	+0.3
INTR				IAmb	IAmb	07 07 05.7	
	comp=Z,99nm,1.1s						
RAFF	Raffo Rosso	19.54	274	P	P	07 06 54.6	-0.4
MDH	Madha	19.56	127	P	P	07 06 55.0	-0.3
	SNR=12						
MDH				P	P	07 06 55.0	-0.3
	SNR=12						
MDH	Madha	19.56	127	*i* P	P	07 06 54.8	-0.5
	SNR=12						
MZR	Muzera	19.66	137	P	P	07 06 56.4	0.0
	SNR=11						
MZR	Muzera	19.66	137	*i* P	P	07 06 56.3	-0.1
	SNR=18						
LJU	Ljubljana	19.68	301	*i* P	Pn	07 06 57.2	-0.6
LJU				*i*		07 07 00.5	
LJU				*e*S	Sn	07 10 46.0	+7.3
KRLC	Kraliky	19.72	314	*e*P	Pn	07 06 57.8	-0.6
KRLC	Kraliky	19.72	314	*e*P	Pn	07 06 57.8	-0.6
UOSS	Minazif	19.75	128	P	P	07 06 57.4	-0.1
UOSS	Minazif	19.75	128	P	P	07 06 56.8	-0.6
UOSS				IAmb	IAmb	07 07 05.5	
	comp=Z,101nm,1.0s						
UOSS	Minazif	19.75	128	*i* P	P	07 06 56.9	-0.5
	SNR=17						
OBKA	Obir	19.78	302	*e*P	Pn	07 06 58.7	-0.5
	comp=Z,205nm,2.7s						
HATD	Hatta, Dubai	19.80	128	P	P	07 06 57.7	-0.2
	SNR=20						
HATD	Hatta, Dubai	19.80	128	*i* P	P	07 06 57.8	-0.2
	SNR=31						
ASHO	Ashiyiah	19.85	128	P	P	07 06 58.3	-0.3
ASHO	Ashiyiah	19.85	128	*i* P	P	07 06 58.7	+0.1
	SNR=57						
AQU	L'Aquila	19.93	290	P	P	07 06 59.3	0.0
	comp=Z,1µmcomp=Z,170nm,1.0s						
PABE	Paberze	19.93	334	P	P	07 06 59.9	+0.7
PABE				IAmb	IAmb	07 07 04.8	
	comp=Z,260nm,1.9s						
PABE	Paberze	19.93	334	*e*P	P	07 06 58.9	-0.2
GUMA	Gualdo di Mace	20.02	292	P	P	07 06 60.0	-0.3
GUMA				IAmb	IAmb	07 07 16.4	
	comp=Z,80nm,0.9s						
DPC	Dobruska-Polom	20.11	314	*e*P	P	07 07 01.5	+0.3
DPC				MLR	MLR		
	comp=Z,700nm,14.5s						
DPC	Dobruska-Polom	20.11	314	*e*P	P	07 07 01.5	+0.3
DPC				AMS	AMS	07 16 20.0	
	comp=Z,700nm,14.5s						
DPC	Dobruska-Polom	20.11	314	P	P	07 07 00.8	-0.4
	comp=Z,626nmcomp=Z,57nm,1.2s						
ALNE	Al Ain	20.13	130	P	P	07 07 01.8	+0.2
	SNR=27						
ALNE	Al Ain	20.13	130	*i* P	P	07 07 01.5	0.0
	SNR=42						
NRCA	Norcia	20.17	291	P	P	07 07 01.8	-0.1
NRCA				IAmb	IAmb	07 07 11.7	
	comp=Z,65nm,0.9s						
FDMO	Fiordimonte	20.20	292	P	P	07 07 01.6	-0.6
FDMO				IAmb	IAmb	07 07 03.7	
	comp=Z,84nm,0.7s						
OSTC	Ostas	20.26	314	*e*P	P	07 07 03.1	+0.3
OSTC				MLR	MLR		
	comp=Z,700nm,15.2s						
OSTC	Ostas	20.26	314	*e*P	P	07 07 03.1	+0.3
OSTC				AMS	AMS	07 16 30.0	
	comp=Z,700nm,15.2s						
UPC	Upice	20.36	314	*e*P	P	07 07 04.8	+1.0
UPC	Upice	20.36	314	*e*P	P	07 07 04.8	+1.0
KSP	Ksiaz	20.36	315	*e*P	P	07 07 04.5	+0.7
KSP	Ksiaz	20.36	315	P	P	07 07 03.6	-0.2
	comp=Z,52nm,0.9s						
MOA	Molln	20.36	306	*i* P	Pn	07 07 05.1	-0.9
	comp=Z,148nm,1.3s,SNR=36						
CHVC	Chvalec	20.37	314	*e*P	P	07 07 04.6	+0.6
CHVC	Chvalec	20.37	314	*e*P	P	07 07 04.6	+0.6
MYKA	Terra Mystica	20.42	302	*i* P	Pn	07 07 05.7	-0.9
	comp=Z,3.1nm,0.5s,SNR=7.4						
CESX	Cesi	20.55	290		P	07 07 05.7	-0.3
CESX				IAmb	IAmb	07 07 15.5	
	comp=Z,83nm,1.1s						
SOHO	SOHO	20.55	129	P	P	07 07 05.7	-0.4
SOHO				P	P	07 07 05.7	-0.4
SOHO	SOHO	20.55	129	*i* P	P	07 07 06.0	0.0
	SNR=30						
MURB	Monte Urbino	20.63	292	P	P	07 07 07.8	+0.9
CKRC	Cesky Krumlov	20.66	308	*e*P	P	07 07 07.6	+0.4
CKRC	Cesky Krumlov	20.66	308	*e*P	P	07 07 07.6	+0.4
BIOA	Bad Ischl, Aus	20.71	305	*i* P	P	07 07 08.7	+1.0
	comp=Z,73nm,1.1s,SNR=28						
KBA	Koelnbreinsper	20.73	303	*e*P	P	07 07 09.0	+0.9
	comp=Z,56nm,1.0s						
STAL	STALIGIAL	20.95	301		P	07 07 10.2	-0.2
STAL				IAmb	IAmb	07 07 15.2	
	comp=Z,61nm,1.0s						
ZVC	Zvikov	20.96	310	*e*P	P	07 07 09.7	-0.7
PRU	Pruhonice	20.98	312	*e*P	P	07 07 11.3	+0.8
PRU	Pruhonice	20.98	312	*e*P	P	07 07 11.3	+0.8
GEC2	GERESS Array S	21.05	308		P	07 07 10.9	-0.5
GEC2				IAmb	IAmb	07 07 19.2	
	comp=Z,50nm,0.9s						
GERES	GERESS Array B	21.05	308	P	P	07 07 11.6	+0.1
	comp=Z,9.1nm,0.6s,baz=109,slow=10.0,SNR=111						
GERES				LR	LR	07 16 05.9	
	comp=Z,365nm,20.1s,baz=117,slow=39						
	comp=Z,9.1nm,0.6s						
PBUR	Paburge	21.06	333	*e*P	P	07 07 11.2	-0.1
PRA	Prague	21.07	312	*e*P	P	07 07 15.5	+3.9
PRA	Prague	21.07	312	*e*P	P	07 07 15.5	+3.9
ARQ	Araqi	21.14	130	P	P	07 07 12.4	0.0
	SNR=31						
GKP	Gorka Klasztor	21.18	322	*e*P	P	07 07 13.4	+0.8
PVCC	Panska Ves	21.19	313	*e*P	P	07 07 14.1	+1.3
PVCC	Panska Ves	21.19	313	*e*P	P	07 07 14.1	+1.3
ABTA	Abfaltersbach	21.20	302	*e*P	P	07 07 13.5	+0.4
	comp=Z,287nm,2.5s						
KHC	Kasperske Hory	21.22	309		P	07 07 12.7	-0.5
KHC	Kasperske Hory	21.22	309	*ce*P	P	07 07 13.7	+0.4
KHC				pmax	pmax		
	comp=Z,75nm,2.5s						
KHC	Kasperske Hory	21.22	309	*e*P	P	07 07 13.9	+0.6
KHC				*e*x	x	07 11 13.0	
KHC				AMS	AMS	07 17 30.0	
	comp=Z,600nm,11.9s						
KHC	Kasperske Hory	21.22	309	P	P	07 07 12.9	-0.4
	comp=Z,37nm,1.1s						
LESA	Schwarzleotal	21.26	304	*i* P	P	07 07 14.1	+0.3
	comp=Z,66nm,0.9s,SNR=12						
KIRV	Kirov	21.33	15	P	P	07 07 12.7	-1.5
	comp=Z,20nm,0.5s,baz=221,slow=4.5,SNR=9.0						
KIRV				LR	LR	07 16 27.6	
	comp=Z,516nm,18.8s,baz=209,slow=40						
	comp=Z,20nm,0.5s						
KIRV	Kirov	21.33	15	*i* P	P	07 07 14.0	-0.2
HOQ	Hoqain	21.43	128	P	P	07 07 15.5	-0.1
	SNR=23						
OSSC	Osservatorio P	21.58	293	P	P	07 07 17.2	+0.1
OSSC				IAmb	IAmb	07 07 23.8	
	comp=Z,51nm,1.0s						
VSU	Vasula	21.65	342	*e*P	P	07 07 17.8	+0.1
VSU	Vasula	21.65	342	*ce*P	P	07 07 20.3	+2.6
VSU				pmax	pmax		
	comp=Z,48nm,0.7s						
WET	Wettzell	21.66	308	*e*P	P	07 07 15.9	-2.0
	comp=Z,60nm,1.2s,baz=109,slow=9.5						
ZCCA	Zocca	21.85	295		P	07 07 19.6	-0.4
HSKC	Hora Svate Kat	21.88	312	*e*P	P	07 07 20.5	+0.2
WTTA	Wattenberg	21.90	303	*i* P	P	07 07 21.3	+0.6
	comp=Z,137nm,1.9s,SNR=19						
WATA	Walderalm	21.96	303	*i* P	P	07 07 21.6	+0.3
	comp=Z,137nm,1.6s,SNR=22						
BIDO	Bidbid	21.99	127	P	P	07 07 21.3	-0.3
	SNR=12						
BIDO				P	P	07 07 21.3	-0.3
	SNR=12						
BSY	Bisya	21.99	130	P	P	07 07 21.4	-0.2
	SNR=29						
ARTI	Arti	22.15	29	P	P	07 07 22.5	-0.7
	comp=Z,36nm,0.9s,baz=225,slow=8.1,SNR=16						
ARTI				LR	LR	07 18 17.4	
	comp=Z,592nm,18.5s,baz=218,slow=43						
	comp=Z,36nm,0.9s						
ARTI	Arti	22.15	29	P	P	07 07 22.5	-0.7
ARTI				IAmb	IAmb	07 07 28.9	
	comp=Z,57nm,0.7s						
ARTI	Arti	22.15	29	*c i*P	P	07 07 22.4	-0.7
ARTI						07 07 43.4	
ARTI				S	S	07 11 27.4	+0.5
ARTI				pmax	pmax		
	comp=Z,65nm,0.9s						
ARTI				MLR	MLR		
	comp=Z,537nm,15.0s						
SQTA	Sankt Quirin	22.18	302	*i* P	P	07 07 24.1	+0.5
	comp=Z,177nm,1.9s,SNR=18						
SMDO	Samad	22.28	128	P	P	07 07 24.7	-0.1
	SNR=41						
SMDO				P	P	07 07 24.7	-0.1
	SNR=41						
ROTZ	Rotzenmuhle	22.29	309	*e*P	P	07 07 24.8	+0.2
	comp=Z,34nm,0.9s,baz=109,slow=9.5						
FUR	Furstenfeldbru	22.37	305	*e*P	P	07 07 24.8	-0.8
	comp=Z,181nm,0.9s,baz=109,slow=9.5						
TANN	Tannenbergstha	22.37	311	*e*P	P	07 07 24.1	-1.5
	comp=Z,37nm,0.9s,baz=109,slow=9.5						
CLL	Collm	22.42	314	*i* P	P	07 07 26.3	+0.3
CLL				pmax	pmax		
	comp=Z,115nm,1.9s						
CLL				MLR	MLR		
	comp=Z,400nm,19.5s						
CLL	Collm	22.42	314	*e*P	P	07 07 24.1	-1.9
	comp=Z,27nm,1.0s,baz=109,slow=9.5						
CLL	Collm	22.42	314	P	P	07 07 26.1	+0.1
	comp=Z,34nm,1.5s						
CLL	Collm	22.42	314	*i* P	P	07 07 26.3	+0.3
	comp=Z,13nm,1.1s						
CLL				*i* x	x	07 07 28.5	
	comp=Z,115nm,1.9s						
CLL				*e*S	S	07 11 32.0	0.0
CLL				AMS	AMS	07 17 00.0	
	comp=Z,400nm,19.5s						
MANZ	Manzenberg	22.42	310	*e*P	P	07 07 26.0	-0.1

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           comp=Z,21nm,1.0s,baz=109,slow=9.5
FETA  Feichten          22.45 302 i P    P      07 07 26.7 +0.1
           comp=Z,494nm,3.1s,SNR=32
WSAR  Wadi Sarin        22.51 126   LR   LR     07 17 11.8
           comp=Z,4.5nm,20.4s,baz=334,slow=39
WSAR  Wadi Sarin        22.51 126   P    P      07 07 27.1  -0.1
           SNR=14
RUE   Ruedersdorf       22.52 317 eP     P      07 07 26.7  -0.4
KLMR  Klimovskoe        22.52   1 eP     P      07 07 26.6  -0.4
KLMR                                S    S      07 11 34.6 +0.9
KLMR                                pmax pmax
           comp=Z,257nm,1.4s
KLMR                                MLR  MLR
           comp=Z,704nm,12.0s
RETA  Reutte            22.54 303 i P    P      07 07 27.6 +0.2
           comp=Z,174nm,2.2s,SNR=20
PLN   Plauen            22.58 311 eP     P      07 07 27.1  -0.7
           comp=Z,13nm,1.0s,baz=109,slow=9.5
MTSE  Matsula           22.63 339 eP     P      07 07 28.1  -0.1
ARBE  Arbavere          22.70 343 eP     P      07 07 31.6 +2.7
NGCH  Negor - Chabah    22.73 118   P    P      07 07 30.8 +1.3
           SNR=7.1
JMDO  Jabal Madar       22.82 129   P    P      07 07 31.0 +0.5
           SNR=10
GRA1  Grafenberg Arr    22.86 309   P    P      07 07 30.9 +0.1
GRF   Grafenberg Arr    22.86 309   P    P      07 07 30.9 +0.1
GRF                                 pmax pmax
           comp=Z,134nm,0.8s
GRF   Grafenberg Arr    22.86 309 eP     P      07 07 29.9  -0.9
           comp=Z,146nm,0.9s,baz=109,slow=9.5
GRF                               eL     L      07 19 48.5
           comp=Z,314nm,19.2s
SHAA  Shahritus         22.90  83   P    P      07 07 31.9 +0.6
SHAA                                IAmb IAmb   07 07 43.6
           comp=Z,137nm,1.1s
MOX   Moxa              22.96 311 eP     P      07 07 32.3 +0.5
           comp=Z,40nm,1.0s,baz=109,slow=9.5
MOX                               eL     L      07 19 32.1
           comp=Z,507nm,19.0s
DAVOX Davos/Dischmat    22.97 301   LR   LR     07 19 01.7
           comp=Z,486nm,18.6s,baz=93,slow=43
DAVA  Damuels           23.07 302 i P    P      07 07 32.9  -0.2
           comp=Z,313nm,1.6s,SNR=24
WBK   Wadi Bani Khal    23.18 127   P    P      07 07 34.0  -0.2
           SNR=15
TUE   Stuetta           23.28 300   P    P      07 07 35.1  -0.2
           comp=Z,188nm,1.9s
SVE   Sverdlovsk        23.35  31 eP     P      07 07 36.1 +0.5
SVE                               eS     S      07 11 52.3 +4.2
SVE                                 pmax pmax
           comp=Z,107nm,1.3s
SVE                                 MLR  MLR
           comp=Z,959nm,18.0s
CHGR  Chuyangaron       23.52  80   P    P      07 07 38.0 +0.4
CHGR                                IAmb IAmb   07 07 45.6
           comp=Z,51nm,0.8s
CHGR  Chuyangaron       23.52  80   P    P      07 07 38.0 +0.4
CHGR                                pmax pmax
           comp=Z,51nm,0.8s
CHM   Chimkent          23.56  71 eP     P      07 07 38.2 +0.3
CHM   Chimkent          23.56  71 eP     P      07 07 38.1 +0.3
DOK   Doka              23.65 142   P    P      07 07 38.4  -0.6
BRLS  Borolday          23.73  69 eP     P      07 07 38.5  -1.1
BRLS  Borolday          23.73  69 eP     P      07 07 38.5  -1.1
MHTO  MHTO              23.79 131   P    P      07 07 40.3 +0.1
           SNR=9.9
JLN   Jalan Bani Buh    23.79 127   P    P      07 07 40.2  -0.1
JLN                                 P    P      07 07 40.2  -0.1
KEST  Kesra             23.81 273   P    P      07 07 40.4  -0.1
           comp=Z,142nm,0.9s,baz=69,slow=3.2,SNR=29
KEST                                LR   LR     07 17 55.4
           comp=Z,478nm,21.7s,baz=97,slow=39
           comp=Z,142nm,0.9s
KEST  Kesra             23.81 273   P    P      07 07 41.0 +0.5
           SNR=17
KEST                                P    P      07 07 41.0 +0.5
           SNR=17
STU   Stuttgart         23.87 306        P      07 07 39.9  -0.9
STU                                 IAmb IAmb   07 07 45.3
           comp=Z,46nm,0.9s
STU   Stuttgart         23.87 306 eP     P      07 07 40.5  -0.3
STU   Stuttgart         23.87 306   P    P      07 07 39.9  -0.9
STU                                 pmax pmax
           comp=Z,46nm,0.9s
STU   Stuttgart         23.87 306 eP     P      07 07 38.1  -2.7
           comp=Z,303nm,1.5s,baz=109,slow=9.5
IUG   Iuzhnay           23.88  71⇑iP     P      07 07 41.4 +0.2
           comp=Z,56nm,1.1s
IUG   Iuzhnay           23.88  71c iP    P      07 07 41.3 +0.2
IUG                                 pmax pmax
           comp=Z,56nm,1.1s
WHFO  Wadi Hawf         24.08 144   P    P      07 07 42.6  -0.5
CLZ   Clausthal         24.14 313 eP     P      07 07 41.5  -1.9
           comp=Z,33nm,0.7s,baz=109,slow=9.5
KK31  Karatay Array     24.23  69   P    P      07 07 44.6 +0.3
KK31  Karatay Array     24.23  69   P    P      07 07 44.6 +0.3
KK31                                pmax pmax
           comp=Z,66nm,0.9s
KKAR  Karatay Array     24.23  69   P    P      07 07 44.5 +0.3
KKAR  Karatay Array     24.23  69   P    P      07 07 44.6 +0.3
GTTG  Gottingen         24.26 312 eP     P      07 07 43.0  -1.4
           comp=Z,60nm,1.2s,baz=109,slow=9.5
CBOGS Bougous           24.30 276   P    P      07 07 45.2 +0.2
BFO   Black Forest      24.32 304   P    P      07 07 44.9  -0.2
BFO                                 IAmb IAmb   07 07 50.3
           comp=Z,116nm,1.9s
BFO   Black Forest      24.32 304   P    P      07 07 44.9  -0.2
BFO                                 pmax pmax
           comp=Z,116nm,1.9s
ABTO  Aybut             24.36 145   P    P      07 07 46.0 +0.3
DQM   DQM               24.37 134   P    P      07 07 45.8 +0.2
KBL   Kabul             24.37  90   P    P      07 07 48.2 +2.4
           SNR=13
KBL   Kabul             24.37  90   P    P      07 07 45.9   0.0
KBL   Kabul             24.37  90   P    P      07 07 45.9   0.0
KBL                                 pmax pmax
           comp=Z,20nm,1.1s
FINES FINESS Array B    24.48 345   P    P      07 07 46.7 +0.4
           comp=Z,5.7nm,0.7s,baz=146,slow=9.0,SNR=15
FINES                               LR   LR     07 19 40.1
           comp=Z,398nm,18.5s,baz=160,slow=42
           comp=Z,5.7nm,0.7s
FINES FINESS Array B    24.48 345   P    P      07 07 47.5 +1.2
FINES FINESS Array B    24.48 345 i P    P      07 07 49.7 +3.4
FINES                               pmax pmax
           comp=Z,12nm,0.6s
FIA1  FINESS Array S    24.48 345   P    P      07 07 47.7 +1.3
FIA1                                IAmb IAmb   07 07 57.1
           comp=Z,46nm,0.7s
RBK   Rabkut            24.65 143   P    P      07 07 48.2   0.0
SENIN Lac Senin/Sane    24.66 299   P    P      07 07 47.5  -1.0
SENIN                               IAmb IAmb   07 07 51.9
           comp=Z,26nm,0.8s
DMTO  DMTO              24.82 142   P    P      07 07 49.7   0.0
DZA   Taraz             24.83  69 eP     P      07 07 50.1 +0.4
           comp=Z,20nm,0.8s
DZA   Taraz             24.83  69 eP     P      07 07 50.1 +0.4
DZA                                 pmax pmax
           comp=Z,20nm,0.8s
BNI   Bardonecchia      24.96 296   P    P      07 07 50.9  -0.2
BNI   Bardonecchia      24.96 296   P    P      07 07 50.9  -0.2
BNI                                 pmax pmax
           comp=Z,116nm,1.1s
JOF   Joensuu           25.04 352 eP     P      07 07 51.5 +0.1
KASTN Kahler Asten      25.05 311 eP     P      07 07 50.7  -0.9
           comp=Z,86nm,0.9s,baz=109,slow=9.5
RETH  Rethem/Aller,     25.06 315 eP     P      07 07 50.9  -0.6
           comp=Z,55nm,1.3s,baz=109,slow=9.5
ECH   Echery            25.06 303   P    P      07 07 50.9  -0.9
ECH   Echery            25.06 303   P    P      07 07 50.9  -0.9
ECH                                 pmax pmax
           comp=Z,86nm,1.0s
CMAH  Djebel Manchou    25.10 276   P    P      07 07 54.2 +1.9
KEF   Keuruu            25.39 344 eP     P      07 07 54.4  -0.1
CBST  Bordj Sabath      25.40 276   P    P      07 07 56.0 +1.0
DRK   Karamyk           25.43  77   P    P      07 07 55.1  -0.4
DRK                                 IAmb IAmb   07 08 18.9
           comp=Z,28nm,1.0s
DRK   Karamyk           25.43  77   P    P      07 07 55.1  -0.4
DRK                                 pmax pmax
           comp=Z,28nm,1.0s
CNGR  Negrine           25.61 271   P    P      07 08 00.7 +3.9
CBBAR Babar             25.66 273   P    P      07 07 58.5 +1.0
CSGS  Sigus             25.77 275   P    P      07 07 58.8 +0.4
IBBN  Ibbenburen        25.81 313 eP     P      07 07 57.6  -0.8
           comp=Z,57nm,1.0s,baz=109,slow=9.5
BUG   Bochum--Univer    25.81 311 eP     P      07 07 57.1  -1.3
           comp=Z,88nm,0.9s,baz=109,slow=9.5
CASM  Ain Smara         25.91 276   P    P      07 08 01.0 +1.3
WLF   Walferdange       26.02 306 eP     P      07 07 58.1  -2.2
           comp=Z,46nm,1.0s,baz=109,slow=9.5
WLF   Walferdange       26.02 306 dP     P      07 07 59.0  -1.4
           comp=Z,32nm,1.0s
CTEI  Djebel Teioual    26.03 275   P    P      07 08 01.5 +0.7
BORK  Borovoye          26.06  46   P    P      07 08 01.3 +0.6
BORK  Borovoye          26.06  46ceP     P      07 08 01.5 +0.8
BORK                                pmax pmax
           comp=Z,17nm,0.9s
CTGD  Timgad            26.07 274   P    P      07 08 02.0 +0.9
COAT  Oued Athmania     26.08 276   P    P      07 08 01.7 +0.5
BVA0  Borovoye Array    26.09  46 i P    P      07 08 01.3 +0.3
BVAR  Borovoye Array    26.09  46   P    P      07 08 01.2 +0.2
           comp=Z,22nm,0.9s,baz=243,slow=6.5,SNR=30
BVAR                                LR   LR     07 19 59.1
           comp=Z,959nm,20.8s,baz=249,slow=40
           comp=Z,22nm,0.9s
BTNL  Ternell           26.26 308 dP     P      07 08 06.4 +3.8
           comp=Z,17nm,1.0s
BHOU  Houvegnez         26.27 308 dP     P      07 08 02.9 +0.1
           comp=Z,28nm,0.9s
MEM   Membach           26.34 308 dP     P      07 08 01.6  -1.7
           comp=Z,24nm,0.9s
EKS2  Erkin-Say         26.63  70   P    P      07 08 08.4 +2.2
           SNR=22
RCHB  Rochefort         26.71 307 dP     P      07 08 06.7 +0.1
           comp=Z,20nm,0.9s
BCLA  Clavier           26.73 308 dP     P      07 08 10.1 +3.3
           comp=Z,12nm,1.0s
BGES  Gesves            26.85 308 dP     P      07 08 10.4 +2.5
           comp=Z,11nm,1.0s
ATD   Arta Tunnel       26.93 172   LR   LR     07 17 25.9
           comp=Z,7.7nm,20.9s,baz=360,slow=34
CAZD  Ain Tagrout       26.98 276   P    P      07 08 09.7 +0.4
BMRD  Maredsous         27.03 307 dP     P      07 08 09.2  -0.3
           comp=Z,19nm,1.0s
HFS   Hagfors           27.05 332   P    P      07 08 09.6   0.0
           comp=Z,4.0nm,0.5s,baz=129,slow=16,SNR=17
HFS                                 LR   LR     07 21 10.3
           comp=Z,481nm,19.7s,baz=144,slow=42
           comp=Z,4.0nm,0.5s
DOU   Dourbes           27.10 307 dP     P      07 08 12.5 +2.4
           comp=Z,18nm,1.0s
USP   Ospenovka         27.14  68   P    P      07 08 11.2 +0.6
           SNR=8.5
AAK   Ala-Archa         27.16  70   P    P      07 08 12.6 +1.6
           SNR=15
AAK   Ala-Archa         27.16  70   LR   LR     07 20 46.2
           comp=Z,655nm,19.6s,baz=286,slow=40
AAK   Ala-Archa         27.16  70   P    P      07 08 12.8 +1.7
AAK   Ala-Archa         27.16  70   P    P      07 08 11.7 +0.7
AAK                                 IAmb IAmb   07 08 14.7
           comp=Z,42nm,1.4s
AAK   Ala-Archa         27.16  70 i P    P      07 08 12.7 +1.7
           SNR=17
AAK   Ala-Archa         27.16  70ceP     P      07 08 12.6 +1.6
AAK                                 pmax pmax
           comp=Z,41nm,1.4s
UCH   Uchtor            27.20  70   P    P      07 08 12.8 +1.2
           SNR=5.9
CTCHA Tamokra           27.31 277   P    P      07 08 12.0  -0.2
CHMS  Chumysh           27.33  69   P    P      07 08 13.8 +1.4
           SNR=17
UCC   Uccle             27.40 308 dP     P      07 08 15.5 +2.7
KBK   Karagaybulak      27.50  70   P    P      07 08 15.9 +1.9
           SNR=14
ATKB  Taksebt           27.66 277   P    P      07 08 15.8 +0.5
ABSD  Ouled Sidi Bra    27.93 275   P    P      07 08 16.8  -1.0
TKM2  Tokmak 2          27.96  69   P    P      07 08 19.8 +1.6
           SNR=15
NIL   Nilore            27.96  89   P    P      07 08 17.7  -0.4
NIL                                 IAmb IAmb   07 08 43.4
           comp=Z,18nm,1.0s
NIL   Nilore            27.96  89   P    P      07 08 17.7  -0.4
NIL                                 pmax pmax
           comp=Z,18nm,1.0s
AKET  Djebel Ketaf      28.01 276   P    P      07 08 18.2  -0.4
ADJB  Djebel Djouab     28.33 277   P    P      07 08 21.3  -0.1
KONO  Kongsberg         28.36 328   P    P      07 08 20.9  -0.4
KONO                                IAmb IAmb   07 09 02.4
           comp=Z,30nm,1.3s
KONO  Kongsberg         28.36 328 eP     P      07 08 24.1 +2.8
KONO  Kongsberg         28.36 328ceP     P      07 08 24.4 +3.1
KONO                                pmax pmax
           comp=Z,12nm,1.3s
ULHL  Ulahol            28.48  70   P    P      07 08 25.1 +2.2
           SNR=10
NB2   NORSAR Subarra    28.57 332   P    P      07 08 22.6  -0.7
           comp=Z,5.6nm,0.9s,baz=126,slow=10
NB2   NORSAR Subarra    28.57 332   P    P      07 08 22.6  -0.7
           baz=126,slow=10
NOA   NORSAR Array B    28.57 332   P    P      07 08 22.3  -1.0
           comp=Z,4.0nm,0.9s,baz=129,slow=9.2,SNR=10
NOA                                 LR   LR     07 22 07.1
           comp=Z,361nm,20.2s,baz=135,slow=41
           comp=Z,4.0nm,0.9s
KSH   Kashi             28.62  76   P    P      07 08 23.3  -0.7
KSH                                 pmax pmax
           comp=Z,6.0nm,0.8s
KSH                                 LR   LR
           comp=Z,560nm,10.6s
KSH                                 LR   LR
           comp=Z,510nm,13.4s
KSH                                 LR   LR
           comp=Z,600nm,17.9s
ABRIN Birine            28.72 276   P    P      07 08 24.5  -0.3
AAA   Alma-Ata          28.91  68 eP     P      07 08 26.9 +0.4
           comp=Z,25nm,0.7s
AAA   Alma-Ata          28.91  68 eP     P      07 08 26.9 +0.4
AAA                                 pmax pmax
           comp=Z,25nm,0.7s
CHKK  Chushkaly         28.93  67 eP     P      07 08 27.2 +0.6
CHKK  Chushkaly         28.93  67 eP     P      07 08 27.2 +0.6
TNSS  Tian-Shan         28.94  69 eP     P      07 08 27.4 +0.2
TNSS  Tian-Shan         28.94  69 eP     P      07 08 27.4 +0.2
AFDJ  Sidi Ladjel       29.21 276   P    P      07 08 29.1  -0.1
EDDR  Deurdeur          29.32 277   P    P      07 08 30.2   0.0
FURI  Furi              29.33 181   LR   LR     07 18 57.8
           comp=Z,373nm,19.0s,baz=6.0,slow=34
EHRZ  Djelida           29.35 277   P    P      07 08 30.9 +0.5
EARB  Arib              29.41 278   P    P      07 08 30.2  -0.7
APA   Apatity           29.44 356⇓eP     P      07 08 37.0 +6.2
APA                               e             07 09 23.7
APA                                 pmax pmax
           comp=Z,13nm,1.2s
APA                                 MLR  MLR
           comp=Z,610nm,11.4s
BLS5  Blasjo            29.57 326 eP     P      07 08 33.6 +1.5
EZEK  Zmalet El Emir    29.58 275   P    P      07 08 32.9 +0.4
EBGR  Bougara           29.66 276   P    P      07 08 33.0  -0.2
ODD1  Odda              29.75 327 eP     P      07 08 34.0 +0.2
TDK   Taldyqorghan      29.91  64 eP     P      07 08 35.7 +0.4
           comp=Z,11nm,0.7s
TDK   Taldyqorghan      29.91  64 eP     P      07 08 35.7 +0.4
TDK                                 pmax pmax
           comp=Z,11nm,0.7s
SATY  Saty              30.00  68 eP     P      07 08 36.8 +0.4
           comp=Z,24nm,1.4s
SATY  Saty              30.00  68 eP     P      07 08 36.7 +0.4
SATY                                pmax pmax
           comp=Z,24nm,1.4s
DOMB  Dombas            30.01 332 eP     P      07 08 36.7 +0.8
EADEB Ain Deheb         30.16 275   P    P      07 08 38.1 +0.4
EANR  'Ain N'Sour       30.21 277   P    P      07 08 38.6 +0.6
KURK  Kurchatov         30.42  53   P    P      07 08 40.9 +1.2
KURK                                P    P      07 08 40.9 +1.2
KURK  Kurchatov         30.42  53        P      07 08 40.6 +0.8
KURK  Kurchatov         30.42  53ceP     P      07 08 40.5 +0.8
KURK                                pmax pmax
           comp=Z,83nm,1.0s
UZB   Uzynbulak         30.45  68 eP     P      07 08 40.5 +0.3
UZB   Uzynbulak         30.45  68 eP     P      07 08 40.5 +0.3
BER   Bergen            30.55 327 eP     P      07 08 44.5 +3.9
NSS   Namsos            30.70 337 eP     P      07 08 43.0 +1.0
ESMB  Sidi M'hamed B    30.72 277   P    P      07 08 42.9 +0.4
SHLS  Shalkode          30.77  68 eP     P      07 08 46.0 +3.0
           comp=Z,24nm,1.9s
SHLS  Shalkode          30.77  68 eP     P      07 08 46.0 +3.0
SHLS                                pmax pmax
           comp=Z,24nm,1.9s
PDGK  Podgornoye        30.77  68   P    P      07 08 43.2 +0.1
MOL   Molde             30.89 332 eP     P      07 08 46.9 +3.2
OFRG  Douar Fergoug     31.16 277   P    P      07 08 46.9 +0.6
MOR8  Moi Rana          31.23 341 eP     P      07 08 49.7 +3.0
ODJA  Bouhanifia        31.36 277   P    P      07 08 49.2 +1.0
SEM   Semipalatinsk     31.41  54 eP     P      07 08 49.1 +0.3
           comp=Z,22nm,0.7s
SEM   Semipalatinsk     31.41  54 eP     P      07 08 49.0 +0.3
SEM                                 pmax pmax
           comp=Z,22nm,0.7s
STRD  Stroud            31.61 309 eP     P      07 08 52.5 +2.4
LBWR  Ladybower, Pea    31.63 312 eP     P      07 08 52.7 +2.4
LBWR                                IAmb IAmb   07 08 54.6
           comp=Z,25nm,1.0s
ARA0  ARCESS Array S    32.08 351 eP     P      07 08 57.2 +3.1
ARCES ARCESS Array B    32.08 351   P    P      07 08 53.8  -0.3
           comp=Z,3.4nm,0.8s,baz=150,slow=5.2,SNR=18
           comp=Z,3.4nm,0.8s
MCH1  Michaelchurch     32.15 309 eP     P      07 08 56.8 +1.9
HLM1  Long Mynd         32.16 310 eP     P      07 08 57.3 +2.3
HLM1                                IAmb IAmb   07 08 59.6
           comp=Z,33nm,0.8s
MAKZ  Makanchi          32.38  61   P    P      07 08 57.8 +0.8
MAKZ                                IAmb IAmb   07 09 02.1
           comp=Z,26nm,0.9s
MAKZ  Makanchi          32.38  61   P    P      07 08 57.8 +0.8
MAKZ                                pmax pmax
           comp=Z,26nm,1.0s
TAM   Tamanrasset       32.56 251   P    P      07 08 58.5  -0.4
TAM   Tamanrasset       32.56 251   P    P      07 08 58.5  -0.4
TAM                                 pmax pmax
           comp=Z,25nm,0.7s
MK31  Makanchi Array    32.59  61ceP     P      07 09 00.1 +1.2
MKAR  Makanchi Array    32.59  61   P    P      07 08 59.9 +1.0
           comp=Z,42nm,0.9s,baz=270,slow=6.9,SNR=169
MKAR                                LR   LR     07 23 58.9
           comp=Z,379nm,18.7s,baz=260,slow=40
           comp=Z,42nm,0.9s
MKAR  Makanchi Array    32.59  61   P    P      07 08 60.0 +1.1
MKAR  Makanchi Array    32.59  61 i P    P      07 09 00.2 +1.3
MKAR                                pmax pmax
           comp=Z,42nm,0.9s
OBBL  Beni Bahdel       32.61 276   P    P      07 08 59.7 +0.5
EKA   Eskdalemuir Ar    32.87 315   P    P      07 09 01.8 +0.6
           comp=Z,8.8nm,0.7s,baz=110,slow=7.9,SNR=18
EKA                                 LR   LR     07 25 06.1
           comp=Z,352nm,18.0s,baz=108,slow=41
           comp=Z,8.8nm,0.7s
DRUM  Mains of Drumt    32.91 318 eP     P      07 09 04.4 +2.9
DRUM                                IAmb IAmb   07 09 06.2
           comp=Z,29nm,0.8s
ESDC  Sonseca Array     33.22 286   P    P      07 09 03.5  -1.0
           comp=Z,22nm,0.8s,baz=66,slow=8.4,SNR=48
ESDC                                LR   LR     07 23 57.2
           comp=Z,241nm,19.0s,baz=82,slow=39
           comp=Z,22nm,0.8s
ESDC  Sonseca Array     33.22 286        P      07 09 02.9  -1.5
RSBS  Rosebush, Pemb    33.22 309 eP     P      07 09 06.4 +2.2
MCD   Coleburn Disti    33.50 319 eP     P      07 09 09.0 +2.3
MCD                                 IAmb IAmb   07 09 11.0
           comp=Z,24nm,0.6s
PAB   San Pablo         33.53 286   P    P      07 09 06.3  -1.0
PAB                                 IAmb IAmb   07 09 11.1
           comp=Z,14nm,0.9s
PAB   San Pablo         33.53 286   P    P      07 09 06.3  -1.0
PAB                                 pmax pmax
           comp=Z,14nm,0.9s
ZSN   Zaisan            34.33  60⇑iP     P      07 09 14.4 +0.4
           comp=Z,31nm,1.6s
ZSN   Zaisan            34.33  60c iP    P      07 09 14.4 +0.4
ZSN                                 pmax pmax
           comp=Z,31nm,1.6s
DSB   Dublin            34.36 311   P    P      07 09 16.5 +2.3
ILTH  Belurgan, Co L    34.44 312   P    P      07 09 16.7 +1.9
CLGH  Cloghs, Cushen    34.48 314 eP     P      07 09 17.3 +2.2
CLGH                                IAmb IAmb   07 09 20.9
           comp=Z,46nm,1.0s
IWEX  Carrickbyrne,     34.51 309   P    P      07 09 17.9 +2.5
ZALV  Zalesovo Beam     34.65  48   P    P      07 09 16.9 +0.2
           comp=Z,5.7nm,0.7s,baz=261,slow=8.1,SNR=27
ZALV                                LR   LR     07 25 32.4
           comp=Z,596nm,19.1s,baz=257,slow=40
           comp=Z,5.7nm,0.7s
PBRG  Braganca          34.89 290 epP    P      07 09 20.6 +1.6
LODK  Lodwar            34.93 186   P    P      07 09 19.8 +0.3
IDGL  Inch Island, C    35.27 314   P    P      07 09 24.8 +2.8
MDT   Midelt            35.68 275   LR   LR     07 25 35.0
           comp=Z,142nm,20.0s,baz=84,slow=39
PVRL  Vila Real         35.71 290 eP     P      07 09 25.4  -0.6
PVRL                              i IAmb IAmb   07 09 32.5
           comp=Z,36nm,1.6s
POLO  Lamas de Olo      35.75 290 eP     P      07 09 27.2 +0.9
POLO                              i IAmb IAmb   07 09 28.8
           comp=Z,17nm,1.2s
MTE   Manteigas         35.76 288 eP     P      07 09 25.4  -1.0
MTE                               i IAmb IAmb   07 09 28.7
           comp=Z,53nm,0.8s
MD01  Midelt array s    35.78 275        P      07 09 25.9  -0.9
MD31  MD31              35.78 275        P      07 09 26.2  -0.6
MD31                                IAmb IAmb   07 09 30.3
           comp=Z,17nm,1.0s
PCBR  Castelo Branco    35.83 287 eP     P      07 09 25.9  -1.0
PCBR                              i IAmb IAmb   07 09 31.6
           comp=Z,46nm,1.2s
PMRV  Marv??o           35.86 287 eP     P      07 09 27.0  -0.3
PMRV                              i IAmb IAmb   07 09 31.8
           comp=Z,40nm,1.6s
PBAR  Barrancos         35.90 284 eP     P      07 09 27.0  -0.6
PBAR                              i IAmb IAmb   07 09 32.1
           comp=Z,42nm,1.3s
PVIS  Viseu             35.95 289 eP     P      07 09 27.6  -0.6
DGZ   Jazzator, Alta    36.00  56 i P    P      07 09 29.9 +1.4
DGZ                                 pmax pmax
           comp=Z,89nm,1.0s
PESTR Estremoz          36.14 286 eP     P      07 09 28.5  -1.2
PESTR                             i IAmb IAmb   07 09 33.3
           comp=Z,46nm,1.2s
IGLA  Glengowla, Co     36.17 311   P    P      07 09 32.6 +2.9
PSARD Sardoal           36.40 287 eP     P      07 09 31.7  -0.2
PARRA Arraiolos         36.49 286 eP     P      07 09 31.2  -1.5
PARRA                             i IAmb IAmb   07 09 37.1
           comp=Z,29nm,1.7s
EVO   Evora             36.55 285 eP     P      07 09 34.0 +0.8
EVO                               i IAmb IAmb   07 09 35.5
           comp=Z,30nm,1.3s
PBEJ  Beja              36.56 284 eP     P      07 09 32.4  -0.9
PBEJ                              i IAmb IAmb   07 09 38.0
           comp=Z,47nm,1.5s
PMTG  Montargil         36.57 286 eP     P      07 09 32.4  -0.9
PMTG                              i IAmb IAmb   07 09 37.5
           comp=Z,35nm,1.4s
VAL   Valentia          36.61 308   P    P      07 09 35.7 +2.2
PVAQ  Vaqueiros         36.62 283 eP     P      07 09 32.8  -1.0
PVAQ                              i IAmb IAmb   07 09 34.0
           comp=Z,61nm,1.3s
WMQ   Urumqi            36.64  66 ⇑P     P      07 09 35.8 +1.8
WMQ                                 pmax pmax
           comp=Z,78nm,0.9s
WMQ                                 pmax pmax
           comp=Z,280nm,4.5s
WMQ                                 LR   LR
           comp=Z,1µm,15.1s
WMQ                                 LR   LR
           comp=Z,780nm,15.1s
WMQ                                 LR   LR
           comp=Z,480nm,15.7s
MOE   Montemor          36.80 285 eP     P      07 09 36.7 +1.4
MOE                               i IAmb IAmb   07 09 40.0
           comp=Z,48nm,1.3s
PCVE  Castro Verde      36.80 284 eP     P      07 09 34.5  -0.8
PCVE                              i IAmb IAmb   07 09 38.1
           comp=Z,75nm,1.0s
PBDV  Barranco-do-Ve    36.83 283 eP     P      07 09 35.1  -0.5
PBDV                              i IAmb IAmb   07 09 38.6
           comp=Z,110nm,1.1s
MESJ  Messejana         36.88 284 eP     P      07 09 35.3  -0.7
MESJ                                IAmb IAmb   07 09 35.6
           comp=Z,93nm,1.9s
MESJ  Messejana         36.88 284 eP     P      07 09 37.1 +1.1
MESJ                              i IAmb IAmb   07 09 41.8
           comp=Z,41nm,1.9s
PSBE  So Bento          36.89 287 eP     P      07 09 35.4  -0.7
PSBE                              i IAmb IAmb   07 09 42.2
           comp=Z,56nm,1.9s
PTEO  Sao Teotonio      37.35 284 eP     P      07 09 38.8  -1.2
MORF  Marmelete         37.36 284 eP     P      07 09 39.5  -0.7
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MORF				IAmb	IAmb	07 09 40.7	
	comp=Z,44nm,1.3s						
MORF	**Marmelete**	**37.36**	**284**	eP	**P**	**07 09 39.9**	**-0.3**
MORF				i IAmb	IAmb	07 09 40.5	
	comp=Z,74nm,1.5s						
MORF	**Marmelete**	**37.36**	**284**	eP	**P**	**07 09 39.5**	**-0.7**
PFVI	**Vila Bisbo**	**37.55**	**283**	eP	**P**	**07 09 42.9**	**+1.2**
AVE	**Averroes**	**37.70**	**277**		**P**	**07 09 42.6**	**-0.5**
MBAR	**Mbarara**	**39.52**	**193**	LR	LR	07 26 16.1	
	comp=Z,262nm,18.3s,baz=8.0,slow=36						
MBAR	**Mbarara**	**39.52**	**193**	P	**P**	**07 09 58.0**	**-0.5**
MBAR	**Mbarara**	**39.52**	**193**	i P	**P**	**07 09 58.7**	**+0.2**
MBAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NRIK	**Noril'sk**	**40.30**	**24**	P	**P**	**07 10 04.5**	**+0.1**
	comp=Z,5.5nm,0.8s,baz=247,slow=8.8,SNR=12						
NRIK				LR	LR	07 30 57.6	
	comp=Z,309nm,18.4s,baz=234,slow=42						
	comp=Z,5.5nm,0.8s						
NRIK	**Noril'sk**	**40.30**	**24**	P	**P**	**07 10 05.1**	**+0.8**
NRIK	**Noril'sk**	**40.30**	**24**	i P	**P**	**07 10 05.8**	**+1.5**
NRIK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
JMIC	**Jan Mayen**	**40.74**	**338**	LR	LR	07 27 25.4	
	comp=Z,132nm,18.6s,baz=82,slow=37						
SPITS	**Spitsbergen Ar**	**41.04**	**353**	P	**P**	**07 10 10.7**	**+0.4**
	comp=Z,17nm,0.9s,baz=139,slow=12,SNR=6.3						
SPITS				LR	LR	07 28 51.6	
	comp=Z,183nm,18.3s,baz=156,slow=39						
	comp=Z,17nm,0.9s						
TORD	**Torodi Ar. Bea**	**41.55**	**243**	P	**P**	**07 10 13.8**	**-1.4**
	comp=Z,6.5nm,0.9s,baz=42,slow=8.9,SNR=29						
	comp=Z,6.5nm,0.9s						
KBS	**Kingsbay**	**42.13**	**352**	ceP	**P**	**07 10 22.8**	**+3.5**
KBS				pmax	pmax		
	comp=Z,77nm,2.5s						
KNGR	**Kungurtug, Tuv**	**42.41**	**54**	i P	**P**	**07 10 24.9**	**+2.8**
KNGR				pmax	pmax		
	comp=Z,71nm,1.5s						
BORG	**Borgarnes**	**43.54**	**327**	LR	LR	07 30 41.1	
	comp=Z,98nm,20.2s,baz=104,slow=39						
GOMU	**GeErMu**	**43.85**	**75**	P	**P**	**07 10 33.8**	**-0.4**
GOMU				pP	pP	07 10 37.0	-1.1
GOMU				sP	sP	07 10 40.0	+0.4
GOMU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MOY	**Mondy**	**44.45**	**52**	eP	**P**	**07 10 40.7**	**+2.2**
MOY				pmax	pmax		
	comp=Z,57nm,2.3s						
DBG	**Daneborg**	**45.25**	**341**	i P	**P**	**07 10 42.6**	**-1.8**
DBG				IAmb	IAmb	07 10 44.2	
	comp=Z,5.7nm,1.2s						
PMAR	**Madeira**	**45.30**	**281**	eP	**P**	**07 10 45.0**	**-0.5**
DAG	**Danmarks Havn**	**45.73**	**344**	i P	**P**	**07 10 47.6**	**-0.5**
DAG				IAmb	IAmb	07 10 50.5	
	comp=Z,3.1nm,0.8s						
SHL	**Shillong**	**46.03**	**90**		**P**	**07 10 50.5**	**-0.9**
SHL	**Shillong**	**46.03**	**90**	P	**P**	**07 10 50.5**	**-0.9**
SHL				pmax	pmax		
	comp=Z,47nm,1.4s						
TLY	**Talaya**	**46.08**	**51**	ceP	**P**	**07 10 53.6**	**+2.3**
TLY				pmax	pmax		
	comp=Z,36nm,1.2s						
ZAK	**Zakamensk**	**46.09**	**53**	eP	**P**	**07 10 52.6**	**+1.1**
ZAK				pmax	pmax		
	comp=Z,22nm,1.1s						
GTA	**Gaotai**	**46.51**	**69**	P	**P**	**07 10 55.5**	**+0.5**
GTA				pP	pP	07 10 58.5	-0.4
GTA				pmax	pmax		
	comp=Z,31nm,1.4s						
GTA				LR	LR		
	comp=Z,250nm,15.3s						
GTA				LR	LR		
	comp=Z,350nm,15.3s						
GTA				LR	LR		
	comp=Z,390nm,14.9s						
BRDH	**Bariadhala**	**47.31**	**94**	LR	LR	07 33 47.8	
	comp=Z,277nm,19.3s,baz=300,slow=40						
NOR	**Nord**	**47.44**	**351**	i P	**P**	**07 11 02.2**	**+0.7**
NOR				IAmb	IAmb	07 11 07.1	
	comp=Z,8.5nm,1.0s						
SONM	**Songino Array**	**48.65**	**56**	P	**P**	**07 11 12.1**	**+0.7**
	comp=Z,8.3nm,0.8s,baz=284,slow=7.2,SNR=32						
SONM				PcP	**PcP**	**07 12 37.0**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=268,slow=4.0,SNR=2.4						
SONM				LR	LR	07 34 10.2	
	comp=Z,3μm,18.4s,baz=289,slow=39						
	comp=Z,8.3nm,0.8s						
SONM	**Songino Array**	**48.65**	**56**	P	**P**	**07 11 12.4**	**+0.9**
SONM				IAmb	IAmb	07 11 16.5	
	comp=Z,17nm,1.1s						
SONM	**Songino Array**	**48.65**	**56**	P	**P**	**07 11 12.4**	**+0.9**
SONM				pmax	pmax		
	comp=Z,17nm,1.1s						
PALK	**Pallekele**	**48.66**	**119**	LR	LR	07 34 07.5	
	comp=Z,184nm,18.9s,baz=318,slow=39						
PALK	**Pallekele**	**48.66**	**119**	P	**P**	**07 11 12.8**	**+1.0**
PALK	**Pallekele**	**48.66**	**119**	P	**P**	**07 11 12.2**	**+0.4**
PALK				IAmb	IAmb	07 11 16.9	
	comp=Z,28nm,1.1s						
PALK	**Pallekele**	**48.66**	**119**	P	**P**	**07 11 12.4**	**+0.6**
	comp=Z,13nm,1.3s						
PALK	**Pallekele**	**48.66**	**119**	i P	**P**	**07 11 12.2**	**+0.4**
PALK				pmax	pmax		
	comp=Z,29nm,1.1s						
ULN	**Ulaanbaatar**	**49.07**	**56**	P	**P**	**07 11 16.0**	**+1.3**
ULN	**Ulaanbaatar**	**49.07**	**56**	P	**P**	**07 11 15.5**	**+0.7**
ULN	**Ulaanbaatar**	**49.07**	**56**	P	**P**	**07 11 15.6**	**+0.9**
ULN	**Ulaanbaatar**	**49.07**	**56**	ceP	**P**	**07 11 15.9**	**+1.2**
ULN				pmax	pmax		
	comp=Z,64nm,1.1s						
SUMG	**Summit**	**50.17**	**337**	P	**P**	**07 11 24.2**	**+1.2**
SUMG				IAmb	IAmb	07 11 29.5	
	comp=Z,14nm,1.2s						
SUMG	**Summit**	**50.17**	**337**	P	**P**	**07 11 24.3**	**+1.2**
SUMG				pmax	pmax		
	comp=Z,14nm,1.2s						
SUMG	**Summit**	**50.17**	**337**	i P	**P**	**07 11 24.0**	**+0.9**
SUMG				IAmb	IAmb	07 11 26.1	
	comp=Z,11nm,1.0s						
LZDM	**Lanzhou Array**	**50.62**	**72**	P	**P**	**07 11 27.6**	**+0.6**
	comp=Z,14nm,0.8s,baz=285,slow=7.0,SNR=15						
LZDM				PcP	**PcP**	**07 12 44.8**	**+0.3**
	comp=Z,1.2nm,0.3s,baz=251,slow=4.4,SNR=1.9						
LZDM				LR	LR	07 36 59.8	
	comp=Z,509nm,19.0s,baz=300,slow=41						
	comp=Z,14nm,0.8s						
DBIC	**Dimbokro**	**50.66**	**243**	P	**P**	**07 11 25.4**	**-1.6**
	comp=Z,5.4nm,0.6s,baz=62,slow=6.9,SNR=12						
DBIC				LR	LR	07 36 29.8	
	comp=Z,111nm,18.0s,baz=48,slow=40						
	comp=Z,5.4nm,0.6s						
LZH	**Lanzhou**	**50.68**	**71**	eP	**P**	**07 11 28.0**	**+0.8**
LZH				pP	pP	07 11 31.5	+0.4
LZH				sP	sP	07 11 35.0	+2.3
LZH				pmax	pmax		
	comp=Z,63nm,1.1s						
LZH				LR	LR		
	comp=Z,650nm,14.4s						
LZH				LR	LR		
	comp=Z,580nm,15.1s						
LZH				LR	LR		
	comp=Z,750nm,17.4s						
BOD	**Bodaibo**	**50.86**	**42**	⇓iP	**P**	**07 11 27.7**	**-0.2**
BOD				pmax	pmax		
	comp=Z,40nm,0.9s						
NEEM	**North Greenlan**	**52.94**	**344**	i P	**P**	**07 11 46.2**	**+2.6**
NEEM				IAmb	IAmb	07 11 47.8	
	comp=Z,7.4nm,0.7s						
PZH	**PanZhiHua**	**53.31**	**83**	P	**P**	**07 11 46.8**	**0.0**
PZH				pmax	pmax		
	comp=Z,30nm,1.2s						
BTO	**Baotou**	**53.43**	**64**	eP	**P**	**07 11 46.5**	**-1.0**
BTO				pP	**pP**	**07 11 52.0**	**+0.5**
BTO				sP	**sP**	**07 11 53.5**	**+0.5**
BTO				PP	**PP**	**07 13 48.3**	**+0.6**
BTO				S	**S**	**07 19 15.0**	**-4.8**
BTO				sS	**pS**	**07 19 24.5**	**-0.1**
BTO				SS	**SS**	**07 22 53.5**	**-5.9**
BTO				pmax	pmax		
	comp=Z,80nm,0.9s						
BTO				pmax	pmax		
	comp=Z,620nm,6.6s						
BTO				LR	LR		
	comp=Z,760nm,12.8s						
BTO				LR	LR		
	comp=Z,580nm,14.4s						
BTO				LR	LR		
	comp=Z,1μm,15.4s						
TIXI	**Tiksi**	**54.06**	**23**	LR	LR	07 37 49.1	
	comp=Z,170nm,21.1s,baz=19,slow=39						
TIXI	**Tiksi**	**54.06**	**23**	i P	**P**	**07 11 52.2**	**+0.7**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
LSZ	**Lusaka**	**54.31**	**193**	LR	LR	07 35 14.3	
	comp=Z,272nm,20.4s,baz=9.0,slow=36						
HHC	**Hu-ho-hao-te**	**54.42**	**63**	eP	**P**	**07 11 54.5**	**-0.2**
HHC				pP	pP	07 11 58.8	+0.1
HHC				pmax	pmax		
	comp=Z,16nm,0.5s						
HHC				pmax	pmax		
	comp=Z,300nm,5.0s						
HHC				LR	LR		
	comp=Z,390nm,14.1s						
HHC				LR	LR		
	comp=Z,480nm,14.5s						
HHC				LR	LR		
	comp=Z,550nm,14.5s						
KMI	**Kunming**	**54.77**	**84**	P	**P**	**07 11 57.5**	**-0.1**
KMI				pmax	pmax		
	comp=Z,19nm,0.8s						
CHTO	**Chiang Mai**	**55.13**	**93**		**P**	**07 11 59.2**	**-0.8**
CHTO				IAmb	IAmb	07 12 00.0	
	comp=Z,11nm,0.8s						
CHTO	**Chiang Mai**	**55.13**	**93**	P	**P**	**07 11 59.1**	**-1.0**
	comp=Z,19nm,0.9s						
CHTO	**Chiang Mai**	**55.13**	**93**	P	**P**	**07 11 59.2**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,11nm,0.8s						
XAN	**Xi'an**	**55.32**	**71**	P	**P**	**07 12 01.5**	**+0.2**
XAN				pmax	pmax		
	comp=Z,33nm,1.1s						
XAN				pmax	pmax		
	comp=Z,360nm,5.2s						
XAN				LR	LR		
	comp=Z,640nm,15.3s						
XAN				LR	LR		
	comp=Z,600nm,16.8s						
XAN				LR	LR		
	comp=Z,750nm,17.2s						
CMAR	**Chiang Mai Arr**	**55.33**	**93**	P	**P**	**07 12 01.1**	**-0.4**
	comp=Z,8.4nm,0.7s,baz=300,slow=8.3,SNR=46						
CMAR				LR	LR	07 41 43.7	
	comp=Z,78nm,18.2s,baz=310,slow=43						
	comp=Z,8.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**55.33**	**93**		**P**	**07 12 00.2**	**-1.2**
HILR	**Hailar Array B**	**56.52**	**50**	P	**P**	**07 12 08.8**	**-0.8**
	comp=Z,6.9nm,0.8s,baz=282,slow=7.4,SNR=9.5						
HILR				LR	LR	07 39 15.4	
	comp=Z,482nm,18.2s,baz=0.0,slow=39						
	comp=Z,6.9nm,0.8s						
HIA	**Hailar**	**56.62**	**51**	P	**P**	**07 12 11.0**	**+0.7**
HIA				IAmb	IAmb	07 12 15.1	
	comp=Z,16nm,0.9s						
HIA	**Hailar**	**56.62**	**51**	P	**P**	**07 12 11.0**	**+0.7**
HIA				pmax	pmax		
	comp=Z,16nm,0.9s						
GYA	**Guiyang**	**57.16**	**81**	⇓P	**P**	**07 12 14.5**	**-0.1**
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
YAK	**Yakutsk**	**57.25**	**34**	LR	LR	07 41 10.3	
	comp=Z,534nm,18.2s,baz=293,slow=41						
YAK	**Yakutsk**	**57.25**	**34**	eP	**P**	**07 12 13.9**	**-0.7**
YAK				e		07 13 09.0	
YAK				e		07 14 21.6	
YAK				ePPP	PPP	07 15 40.0	
YAK				eS	**S**	**07 20 10.8**	**+0.8**
YAK				e		07 22 05.0	
YAK				eSS	**SS**	**07 24 02.0**	**+3.5**
YAK				pmax	pmax		
	comp=Z,15nm,1.2s						
YAK				pmax	pmax		
	comp=E,12nm,1.4s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,82nm,2.7s						
YAK				pmax	pmax		
	comp=N,46nm,3.5s						
YAK				pmax	pmax		
	comp=E,74nm,3.0s						
YAK				smax	smax		
	comp=N,173nm,3.6s						
YAK				smax	smax		
	comp=E,74nm,4.2s						
YAK				MLR	MLR		
	comp=Z,668nm,23.0s						
YAK				MLR	MLR		
	comp=E,403nm,21.0s						
YAK				MLR	MLR		
	comp=N,267nm,19.0s						
LYN	**LuoYang**	**57.72**	**69**	P	**P**	**07 12 19.3**	**+1.0**
LYN				pP	pP	07 12 22.8	+0.5
LYN				pmax	pmax		
	comp=N,24nm,1.3s						
LYN				LR	LR		
	comp=N,690nm,14.4s						
LYN				LR	LR		
	comp=N,830nm,14.4s						
LYN				LR	LR		
	comp=N,940nm,15.8s						
BJI	**Beijing**	**57.96**	**62**	P	**P**	**07 12 21.0**	**+1.1**
BJI				pmax	pmax		
	comp=N,7.0nm,1.1s						
BJI				LR	LR		
	comp=N,240nm,15.1s						
HNS	**HongShan**	**58.07**	**65**	⇑P	**P**	**07 12 21.3**	**+0.6**
HNS				pmax	pmax		
	comp=N,14nm,1.1s						
HNS				LR	LR		
	comp=N,460nm,15.9s						
HNS				LR	LR		
	comp=N,430nm,12.2s						
HNS				LR	LR		
	comp=N,480nm,14.7s						
ZEA	**Zeya**	**59.22**	**44**	eP	**P**	**07 12 30.2**	**+1.8**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ZEA				MLR	MLR		
	comp=E,200nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,16.0s						
TSUM	**Tsumeb**	**60.70**	**203**	LR	LR	07 40 14.1	
	comp=Z,356nm,19.8s,baz=4.0,slow=37						
HEH	**HeiHe**	**60.77**	**47**	eP	**P**	**07 12 39.8**	**+0.6**
HEH				pmax	pmax		
	comp=Z,14nm,1.1s						
WHN	**Wuhan**	**61.01**	**73**	P	**P**	**07 12 41.8**	**+0.7**
DL2	**Dalian**	**62.24**	**61**	P	**P**	**07 12 49.3**	**+0.1**
DL2				pmax	pmax		
	comp=Z,61nm,1.1s						
CN2	**Changchun**	**62.48**	**55**	P	**P**	**07 12 49.5**	**-1.3**
CN2				PP	**PP**	**07 15 08.5**	**+0.6**
CN2				S	**S**	**07 21 12.8**	**-5.1**
CN2				pmax	pmax		
	comp=Z,20nm,1.7s						
CN2				LR	LR		
	comp=Z,580nm,17.0s						
CN2				LR	LR		
	comp=Z,420nm,17.0s						
BNX	**BinXian**	**62.81**	**52**	⇓P	**P**	**07 12 53.0**	**0.0**
BNX				pmax	pmax		
	comp=Z,16nm,0.9s						
RES	**Resolute Bay**	**63.21**	**348**	LR	LR	07 42 46.3	
	comp=Z,104nm,18.1s,baz=30,slow=38						
NJ2	**Nanjing**	**63.60**	**69**	eP	**P**	**07 12 57.5**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LBTB	**Lobatse**	**64.29**	**194**	LR	LR	07 42 36.1	
	comp=Z,184nm,18.4s,baz=19,slow=38						
PSI	**Prapat**	**64.90**	**107**	LR	LR	07 43 37.1	
	comp=Z,121nm,19.0s,baz=278,slow=38						
PSI	**Prapat**	**64.90**	**107**	P	**P**	**07 13 05.4**	**-1.9**
SEY	**Seymchan**	**65.98**	**27**	LR	LR	07 47 46.4	
	comp=Z,514nm,18.1s,baz=312,slow=41						
SEY	**Seymchan**	**65.98**	**27**	eP	**P**	**07 13 13.8**	**+0.4**
SEY				pmax	pmax		
	comp=Z,22nm,1.2s						
USRK	**Ussuriysk Ar.**	**66.40**	**52**	P	**P**	**07 13 16.2**	**-0.2**
	comp=Z,4.1nm,0.7s,baz=34,slow=2.4,SNR=4.2						
	comp=Z,4.1nm,0.7s						
BILL	**Bilibino**	**66.81**	**19**		**P**	**07 13 19.1**	**+0.4**
BILL				IAmb	IAmb	07 13 24.4	
	comp=Z,11nm,0.8s						
BILL	**Bilibino**	**66.81**	**19**	i P	**P**	**07 13 20.2**	**+1.5**
BILL				pmax	pmax		
	comp=Z,13nm,0.9s						
KSRS	**Korea Array**	**67.26**	**60**	P	**P**	**07 13 22.1**	**0.0**
	comp=Z,16nm,0.9s,baz=296,slow=6.0,SNR=32						
KSRS				LR	LR	07 46 27.9	
	comp=Z,567nm,19.9s,baz=315,slow=39						
	comp=Z,16nm,0.9s						
MA2	**Magadan**	**67.42**	**31**	LR	LR	07 47 09.6	
	comp=Z,264nm,19.0s,baz=296,slow=40						
SCHQ	**Schefferville**	**67.70**	**323**	P	**P**	**07 13 23.9**	**-0.7**
	comp=Z,20nm,0.6s,baz=48,slow=5.4,SNR=45						
	comp=Z,20nm,0.6s						
BOSA	**Boshof**	**67.86**	**193**	P	**P**	**07 13 25.3**	**-0.6**
	comp=Z,6.2nm,1.1s,baz=327,slow=6.7,SNR=5.1						
BOSA				LR	LR	07 43 41.7	
	comp=Z,166nm,18.3s,baz=22,slow=36						
	comp=Z,6.2nm,1.1s						
PDSI	**Padang**	**68.50**	**109**	P	**P**	**07 13 29.0**	**-1.2**
TYV	**Tymovskoe**	**68.85**	**41**	eP	**P**	**07 13 32.9**	**+1.1**
TYV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TYV				pmax	pmax		
	comp=Z,200nm,5.3s						
YSS	**Yuzhno-Sakhali**	**71.18**	**45**	eP	**P**	**07 13 44.1**	**-2.1**
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
YSS				MLR	MLR		
	comp=Z,500nm,15.0s						
B22K	**Teshekpuk Lake**	**71.23**	**4**	P	**P**	**07 13 47.3**	**+1.2**
JNU	**Nakatsue**	**71.64**	**62**	LR	LR	07 49 38.4	
	comp=Z,455nm,19.9s,baz=313,slow=40						
SUR	**Sutherland**	**72.39**	**196**	LR	LR	07 44 46.5	
	comp=Z,159nm,19.8s,baz=6.5,slow=35						
ASAJ	**Asahikawa**	**72.78**	**47**	LR	LR	07 49 12.8	
	comp=Z,193nm,18.8s,baz=332,slow=39						
JOW	**Kunigami**	**73.32**	**69**	LR	LR	07 50 17.0	
	comp=Z,172nm,18.1s,baz=218,slow=39						
INK	**Inuvik**	**73.51**	**357**	LR	LR	07 51 52.2	
	comp=Z,100nm,18.6s,baz=242,slow=40						
MDSI	**Maura Dua**	**73.64**	**109**	P	**P**	**07 13 57.9**	**-3.4**
PETK	**Petropavlovsk-**	**74.58**	**33**	P	**P**	**07 14 05.5**	**-0.8**
	comp=Z,4.3nm,0.9s,baz=287,slow=5.9,SNR=2.1						
PETK				PKKPbc	**PKKPbc**	**07 33 32.9**	**+0.4**
	comp=Z,3.5nm,0.5s,baz=92,slow=4.5,SNR=8.1						
PETK				LR	LR	07 51 55.8	
	comp=Z,259nm,18.2s,baz=309,slow=40						
	comp=Z,4.3nm,0.9s						
MJAR	**Matsushiro Arr**	**74.60**	**56**	P	**P**	**07 14 06.9**	**+0.2**
	comp=Z,9.0nm,0.9s,baz=311,slow=6.1,SNR=9.9						
MJAR				LR	LR	07 50 11.1	
	comp=Z,451nm,18.6s,baz=317,slow=38						
	comp=Z,9.0nm,0.9s						
G21K	**Allakaket**	**75.01**	**5**	P	**P**	**07 14 09.1**	**+0.6**
G19K	**Purcell Mounta**	**75.08**	**7**	P	**P**	**07 14 09.4**	**+0.4**
G18K	**Tagagawik**	**75.18**	**7**		**P**	**07 14 11.1**	**+1.6**
H62A	**Milan**	**76.22**	**316**	P	**P**	**07 14 15.2**	**-0.7**
H62A				IAmb	IAmb	07 14 19.5	
	comp=Z,17nm,1.0s						
I30M	**Mount Dempster**	**76.69**	**358**		**P**	**07 14 18.5**	**+0.2**
I30M				IAmb	IAmb	07 14 26.2	
	comp=Z,8.1nm,0.9s						
VLDQ	**Val d'Or**	**77.08**	**322**		**P**	**07 14 21.4**	**+0.8**
VLDQ				IAmb	IAmb	07 14 24.9	
	comp=Z,13nm,0.8s						
ILAR	**Eielson Array**	**77.10**	**3**	P	**P**	**07 14 20.9**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=328,slow=3.5,SNR=9.4						
ILAR				LR	LR	07 53 11.5	
	comp=Z,115nm,19.2s,baz=262,slow=40						
	comp=Z,0.3nm,0.4s						
YKAW3	**Yellowknife Wh**	**77.22**	**348**		**P**	**07 14 21.3**	**+0.2**
YKA	**Yellowknife Ar**	**77.28**	**348**	P	**P**	**07 14 21.7**	**+0.2**
	comp=Z,2.1nm,0.9s,baz=334,slow=9.2,SNR=18						
YKA				LR	LR	07 49 43.6	
	comp=Z,184nm,18.1s,baz=358,slow=37						
	comp=Z,2.1nm,0.9s						
SADO	**Sadowa**	**80.26**	**320**	LR	LR	07 50 22.8	
	comp=Z,72nm,18.7s,baz=76,slow=36						
MPSI	**Mapaga**	**82.61**	**95**	P	**P**	**07 14 50.6**	**-0.5**
DAV	**Davao City (W)**	**82.94**	**87**	LR	LR	07 58 14.7	
	comp=Z,102nm,18.2s,baz=350,slow=40						
ULM	**Lac du Bonnet**	**83.26**	**333**	P	**P**	**07 14 54.3**	**+0.4**
	comp=Z,2.9nm,0.4s,baz=61,slow=4.9,SNR=4.5						
ULM				LR	LR	07 56 15.6	
	comp=Z,93nm,19.6s,baz=14,slow=39						
	comp=Z,2.9nm,0.4s						
KDAK	**Kodiak Island**	**83.72**	**6**	LR	LR	07 57 44.8	
	comp=Z,127nm,18.4s,baz=34,slow=40						
MDP	**Montagnes des**	**88.20**	**275**	LR	LR	07 56 08.0	
	comp=Z,54nm,18.2s,baz=57,slow=36						
TKL	**Tuckaleechee C**	**89.34**	**317**	LR	LR	07 55 46.9	
	comp=Z,105nm,18.1s,baz=41,slow=36						
SJG	**San Juan**	**90.29**	**293**	LR	LR	07 53 04.9	
	comp=Z,40nm,20.6s,baz=28,slow=34						
NEW	**Newport**	**91.19**	**344**	LR	LR	07 56 43.3	
	comp=Z,127nm,18.4s,baz=305,slow=36						
GUMO	**Guam**	**93.67**	**70**	LR	LR	08 02 02.1	
	comp=Z,76nm,19.7s,baz=5.5,slow=38						
PDAR	**Pinedale Array**	**94.37**	**337**	P	**P**	**07 15 48.9**	**+1.4**
	comp=Z,0.8nm,0.9s,baz=17,slow=4.4,SNR=4.6						
PDAR				LR	LR	07 59 00.8	
	comp=Z,127nm,19.7s,baz=358,slow=36						
	comp=Z,0.8nm,0.9s						
BDFB	**Brasilia**	**97.29**	**256**	LR	LR	08 02 35.5	
	comp=Z,175nm,18.7s,baz=48,slow=37						
FITZ	**Fitzroy Crossi**	**98.41**	**106**	LR	LR	08 05 44.9	
	comp=Z,40nm,18.1s,baz=332,slow=39						
YBH	**Yreka Blue Hor**	**98.57**	**346**	LR	LR	08 01 55.2	
	comp=Z,7.0nm,18.8s,baz=12,slow=36						
SDV	**Santo Domingo**	**99.61**	**289**	LR	LR	07 59 18.5	
	comp=Z,51nm,18.8s,baz=62,slow=34						
TXAR	**Lajitas Array**	**104.18**	**327**	Pdiff	**Pdif**	**07 16 31.9**	**+0.2**
	comp=Z,0.4nm,0.9s,baz=21,slow=5.3,SNR=3.5						
NVL	**N'lazarevskaya**	**110.57**	**189**	i PKIKP	**PKiKP**	**07 20 56.1**	**-2.7**
NVL				e		07 21 31.9	
NVL				ePPP	PPP	07 23 52.6	
NVL				eSS	SS	07 37 02.1	-2.0
NVL				eSSS	SSS	07 41 09.6	
NVL				pmax	pmax		
	comp=Z,27nm,2.0s						
NVL				MLR	MLR		
	comp=Z,654nm,22.0s						
CFA	**Coronel Fontan**	**121.44**	**253**	PKP	**PKPdf**	**07 21 20.6**	**-0.3**
	comp=Z,1.1nm,0.9s,baz=118,slow=3.6,SNR=3.9						
PLCA	**Paso Flores**	**127.02**	**244**	PKP	**PKPdf**	**07 21 31.1**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=87,slow=3.4,SNR=7.4						
DZM	**Mont Dzumac**	**132.35**	**86**	eLR	LR	08 03 40.9	
	comp=Z,100nm,22.4s						
URZ	**Urewera**	**147.29**	**103**	PKPbc	**PKPdf**	**07 22 09.0**	**+0.5**
	comp=Z,20nm,0.9s,baz=286,slow=3.9,SNR=5.3						
PPT2	**Papeete2**	**157.98**	**22**	eLR	LR	08 15 33.2	
	comp=Z,112nm,29.8s						
PPT2				eLR	LR	08 15 39.1	
	comp=Z,132nm,24.8s						
TBI	**Tubuai**	**163.37**	**28**	eLR	LR	08 18 09.6	
	comp=Z,768nm,39.0s						

ISK ***27*** *07:09:28.4, 38°.46N×39°.07E, h6^{km}, ML2.6/8*
AFAD ***27*** *07:09:28.1, 38°.40N×39°.00E, h7^{km}±3^{km}, ML2.6*
ISC 27 07:09:28.1±1.2**, 38°.41N**±0°.03×**39°.02E**±0°.03**, h7**^{km}±12^{km}**,**
n14, σ0ˢ.70/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAYA	**Malatya/Merkez**	**0.48**	**260**	P	**Pg**	**07 09 37.2**	**-0.2**
MAYA				i IAML	**Sg**	**07 09 44.0**	**+0.4**
	comp=N,1μm,0.2s						
MAYA				S	**Sg**	**07 09 44.0**	**+0.4**
MAYA				i IAML		07 09 45.0	
	comp=E,923nm,0.3s						
NARI	**Adyaman-Kaht**	**0.56**	**201**	P	**Pg**	**07 09 39.2**	**+0.1**
NARI				S	**Sg**	**07 09 46.3**	**-0.1**
NARI				i IAML		07 09 51.0	
	comp=N,204nm,0.8s						
NARI				i IAML		07 09 52.0	
	comp=E,116nm,0.9s						
KOVA	**Elazig, Kovanc**	**0.69**	**64**	P	**Pg**	**07 09 41.7**	**+0.3**
KOVA				S	**Sn**	**07 09 54.4**	**-1.0**
HANM	**anlurfa/Hi**	**0.84**	**188**	P	**Pg**	**07 09 44.8**	**+0.6**
HANM				S	**Sb**	**07 09 56.9**	**+0.4**
HANM				i IAML		07 09 59.0	
	comp=N,152nm,0.6s						
ARPR	**Arapgir-MALATY**	**0.87**	**322**	Pg	**Pg**	**07 09 44.7**	**-0.1**
ARPR				Sg	**Sb**	**07 09 57.7**	**+0.1**
AKCD	**Akcadag**	**0.87**	**263**	P	**Pg**	**07 09 44.3**	**-0.6**

AKCD				S	Sg	07 09 55.8	-0.5
AKCD				*i* IAML		07 09 58.0	
	comp=E,360nm,0.2s						
AKCD				*i* IAML		07 09 59.0	
	comp=N,442nm,0.5s						
HEKM	Malatya_Hekimh	0.95	300	P	Pg	07 09 46.0	-0.4
HEKM				S	Sb	07 10 00.1	0.0
HEKM				*i* IAML		07 10 04.0	
	comp=N,188nm,0.5s						
HEKM				*i* IAML		07 10 04.0	
	comp=E,232nm,0.4s						
URFA	Urfa	0.98	189	Pg	Pg	07 09 44.9	-2.1
DYBB	Diyarbakir	0.99	117	Pg	Pb	07 09 47.7	0.0
DYBB				Sg	Sb	07 10 01.7	+0.7
ILIC	ilic-Erzincan	1.10	341	Pg	Pg	07 09 49.0	-0.2
ILIC				Sg	Sb	07 10 04.5	+0.3
ERZN	Erzincan	1.29	25	Pn	Pn	07 09 52.5	-0.3
GAZ	Gaziantep	1.89	230	Pn	Pb	07 10 03.0	-0.1
KMRS	Kahramanmaras	1.91	242	Pn	Pb	07 10 03.2	-0.1
SARI	SarD1z-Kayseri	2.05	271	Pn	Pn	07 10 04.6	+1.4

*ISK **27** 07:11:31.4, 38°.37N×39°.05E, h2^{km}, ML3.6/22*

*AFAD **27** 07:11:32.0, 38°.36N×39°.03E, h7^{km}±3^{km}, MW3.8*

ISC 27 07:11:31.2±1.2, **38°.34N**±0°.03×**39°.13E**±0°.03, **h5**^{km}±11^{km}, **n31,** σ**1^{s}.19**/43, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NARI	Adyaman-Kaht	0.54	213	P	Pb	07 11 43.2	0.0
NARI				S	Sg	07 11 50.2	+1.6
MAYA	Malatya/Merkez	0.56	269	P	Pg	07 11 41.8	-0.1
MAYA				S	Sg	07 11 48.7	-0.4
HANM	anlurfa/Hi	0.78	195	P	Pn	07 11 48.1	-0.9
HANM				S	Sb	07 11 58.5	+0.2
AZEY	Adyaman-Merk	0.87	233	P	Pb	07 11 49.0	+0.1
AZEY				S	Sg	07 12 00.1	+0.8
DYBB	Diyarbakir	0.88	116	Pg	Pn	07 11 50.6	+0.2
DYBB				Sg	Sn	07 12 04.6	+0.9
AKCD	Akcadag	0.95	268	P	Pg	07 11 48.8	-0.6
AKCD				S	Sg	07 12 01.1	-0.7
ARPR	Arapgir-MALATY	0.98	321	Pg	Pg	07 11 49.3	-0.6
ARPR				Sg	Sb	07 12 03.3	-0.7
HEKM	Malatya_Hekimh	1.06	301	P	Pg	07 11 50.9	-0.7
HEKM				S	Sb	07 12 05.6	-1.0
ATAB	Bozova	1.09	218	P	Pn	07 11 53.1	-0.1
ATAB				S	Sb	07 12 07.1	-0.1
ILIC	ilic-Erzincan	1.20	339	Pn	Pg	07 11 53.9	-0.2
ILIC				Sn	Sn	07 12 10.4	-1.1
AKCA	Adyaman/G¶l	1.26	245	P	Pb	07 11 55.3	-0.2
AKCA				S	Sn	07 12 12.7	-0.3
ERZN	Erzincan	1.33	20	Pn	Pg	07 11 57.7	+1.0
ERZN				Sn	Sg	07 12 16.6	+2.7
KARO	Karliova-Bingo	1.79	57	Pn	Pg	07 12 04.7	-0.7
KHMN	Narli-Kahraman	1.83	239	Pn	Pb	07 12 04.3	-0.8
GAZ	Gaziantep	1.92	233	Pn	Pb	07 12 06.0	-0.7
KMRS	Kahramanmaras	1.95	245	Pn	Pb	07 12 05.7	-1.5
VRTB	Varto-Mus	2.00	65	Pn	Pg	07 12 08.3	-1.1
SARI	SarD1z-Kayseri	2.13	273	Pn	Pn	07 12 08.2	+0.5
BAYT	Aydıntepe-Bayb	2.20	21	Pn	Pb	07 12 09.8	-1.7
GURO	Guroymak-BITLI	2.29	84	Pn	Pb	07 12 12.1	-1.0
BNN	Bunyan	2.62	282	Pn	Pn	07 12 15.2	+0.8
KOPR	Koprukoy-ERZUR	2.68	51	Pn	Pb	07 12 17.5	-2.3
KOZT	Kozan	2.75	253	Pn	Pn	07 12 16.7	+0.7
TOKT	Tokat	2.82	315	Pn	Pn	07 12 18.3	+1.3
TAHT	Tahtakopru-Hat	3.06	231	Pn	Pn	07 12 21.7	+1.5
YOZ	Yozgat	3.24	295	Pn	Pn	07 12 24.3	+1.4
CMRD	Camardi-Nigde	3.34	260	Pn	Pn	07 12 25.5	+1.3
KARA	Karaisali	3.40	253	Pn	Pn	07 12 26.7	+1.7
BCA	Borcka	3.65	31	Pn	Pn	07 12 30.9	+2.6
GULA	Gulagac	3.85	272	Pn	Pn	07 12 32.6	+1.4
KAMT	Kaman	4.35	285	Pn	Pn	07 12 39.3	+1.2

*NNC **27** 07:14:27.4±2.0, 49°.96N×78°.55E, h0^{km}, mb3.1, mpv2.4, Error ellipse: s-maj=38.8km s-min=6.0km az=80.0, Suspected Mining explosion.*

*IDC **27** 07:14:34.9±4.3, 50°.05N×79°.34E, h0^{km}, mbtmp2.4/2, ML1.8/2, Error ellipse: s-maj=70.1km s-min=24.6km az=81.0*

ISC 27 07:14:29.6±1.1, **50°.46N**±0°.07×**79°.54E**±0°.08, **h0**^{km}**, n6,** σ**0^{s}.88**/7**, 1C-1D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	0.64	294	P	Pg	07 14 42.0	+0.2
	0.8nm,0.5s						
KURK				S	Sb	07 14 52.7	-0.3
	13nm,0.9s						
MAKZ	Makanchi	4.00	155	Pg	Pb	07 15 39.7	-1.2
	2.9nm,1.1s						
MAKZ				Lg	Lg	07 16 29.1	
	4.2nm,0.8s						
MK31	Makanchi Array	4.10	153	⇑Pg	Pb	07 15 41.9	-0.7
	0.8nm,0.6s,baz=317,slow=14,SNR=4.7						
MK31				⇓Lg	Lg	07 16 32.9	
	1.4nm,0.4s,baz=332,slow=27,SNR=9.0						
MKAR	Makanchi Array	4.10	153	Pn	Pn	07 15 34.4	+0.8
	0.1nm,0.3s,baz=0.6,slow=14,SNR=6.8						
MKAR				Pg	Pb	07 15 42.9	+0.2
	0.2nm,0.3s,baz=320,slow=17,SNR=5.4						
MKAR				Lg	Lg	07 16 34.5	
	0.6nm,0.3s,baz=330,slow=26,SNR=11						
	0.4nm,0.7s						
I46RU	ZALESOVO INFRA	4.77	41	I	I	07 47 50.0	
	baz=220,slow=336,SNR=1.5						
ZALV	Zalesovo Beam	4.77	41	Pn	Pb	07 15 53.5	-0.5
	0.3nm,0.3s,baz=231,slow=13,SNR=2.3						
	0.5nm,0.3s						

*NNC **27** 07:17:21.8±2.9, 49°.56N×81°.38E, h0^{km}, mb3.3, mpv3.0, Error ellipse: s-maj=56.4km s-min=12.6km az=54.0, Suspected Mining explosion.*

*IDC **27** 07:17:23.7±2.1, 49°.66N×82°.44E, h0^{km}, mbtmp2.7/2, ML2.7/1, Error ellipse: s-maj=68.1km s-min=14.7km az=100.0*

ISC 27 07:17:17.9±1.1, **50°.02N**±0°.07×**81°.98E**±0°.06, **h0**^{km}**, n9,** σ**0^{s}.94**/11**, 2C, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEM	Semipalatinsk	1.18	290	P	Pb	07 17 40.7	-0.6
	7.2nm,0.1s						
SEM				S	Sg	07 17 55.9	0.0
	11nm,0.1s						
KURK	Kurchatov	2.26	289	⇑Pn	Pb	07 17 59.1	-0.5
	3.3nm,0.7s						
KURK				Sn	Sb	07 18 28.8	+0.6
	7.7nm,0.6s						
ZSN	Zaisan	3.20	142	Pg	Pg	07 18 18.6	-0.6
	4.8nm,0.4s						
ZSN				Lg	Lg	07 19 00.2	
	9.2nm,0.4s						
MAKZ	Makanchi	3.21	180	Pg	Pn	07 18 10.4	+0.8
	0.8nm,0.3s						
MAKZ				Lg	Lg	07 18 48.7	
	3.5nm,0.7s						
MK31	Makanchi Array	3.23	176	Pg	Pn	07 18 11.5	+1.6
	0.5nm,0.2s,baz=0.3,slow=13,SNR=25						
MK31				⇑Lg	Lg	07 18 51.1	
	6.3nm,0.7s,baz=355,slow=28,SNR=11						
MKAR	Makanchi Array	3.23	176	Pn	Pn	07 18 11.1	+1.2
	1.2nm,0.3s,baz=360,slow=13,SNR=20						
MKAR				Sn	Sn	07 18 48.3	-0.9
	1.0nm,0.3s,baz=350,slow=25,SNR=14						
	1.7nm,0.3s						
ZALV	Zalesovo Beam	4.31	23	Pn	Pb	07 18 34.1	-0.3
	0.5nm,0.3s,baz=212,slow=14,SNR=1.5						
ZALV				Lg	Lg	07 19 49.0	
	0.4nm,0.3s,baz=199,slow=27,SNR=7.8						
I46RU	ZALESOVO INFRA	4.31	23	I	I	07 47 20.0	
	0.1nm,0.9s,baz=198,slow=327,SNR=3.1						
BRZS	Berezniki	6.00	273	Pg	Pb	07 19 02.8	-0.5
	2.1nm,0.3s						
BRZS				Lg	Lg	07 20 16.2	
	4.3nm,0.3s						

*HLW **27** 07:19:30.7, 34°.89N×33°.29E, h9^{km}±12^{km}, Ml3.7*

*ISK **27** 07:19:34.7, 34°.61N×33°.84E, h4^{km}, ML3.7/47*

*AFAD **27** 07:19:35.9, 34°.81N×34°.03E, h2^{km}±1^{km}, ML3.5*

*GRAL **27** 07:19:36.4±0.5, 34°.64N×33°.74E, h20^{km}±94^{km}, MD3.6*

*GII **27** 07:19:37.9±0.0, 34°.510N±0°.002×33°.897E±0°.001, h10^{km}, Mws3.6, confirmed*

*NIC **27** 07:19:37.3, 34°.73N×33°.80E, h10^{km}±2^{km}, Ml3.4/12*

*IDC **27** 07:19:38.4±1.6, 34°.51N×33°.63E, h40^{km}±21^{km}, mb3.5/8, mbtmp3.7/14, ML3.7/5, MS3.1/1, Error ellipse: s-maj=17.2km s-min=9.8km az=41.0*

ISC 27 07:19:35.2±1.1, **34°.60N**±0°.02×**33°.87E**±0°.02, **h9**^{km}±7^{km}, **n176,** σ**1^{s}.48**/206**, mb3.8**/10**, 1C-3D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAR1C	Larnaka City C	0.39	328	P	Pg	07 19 42.9	+0.2
LAR1C				S	Sg	07 19 47.5	-0.4
PARAL	Paralimni	0.42	20	⇓*i*P	Pb	07 19 44.5	-0.3
PARAL				S	Sg	07 19 49.5	+0.5
PARAL				AML	AML	07 19 55.7	
	27nm,0.6s						
PARAL				AML	AML	07 19 57.2	
	19nm,0.6s						
PAR1C	Paralimni Civi	0.44	12	P	Pb	07 19 44.9	-0.2
PAR1C				S	Sg	07 19 49.8	+0.1
MVOU	Mavrovouni	0.46	335	⇓*i*P	Pg	07 19 43.8	-0.4
MVOU				S	Sg	07 19 49.5	-0.6
MVOU				AML	AML	07 19 55.6	
	13nm,0.3s						
MVOU				AML	AML	07 19 55.7	
	11nm,0.6s						
ASGA	Asgata	0.54	290	⇑*i*P	Pg	07 19 45.5	-0.2
ASGA				S	Sg	07 19 52.6	-0.2
ASGA				AML	AML	07 19 59.4	
	9.1nm,0.7s						
ASGA				AML	AML	07 19 59.8	
	8.2nm,0.7s						
CSS	Mathiatis	0.57	310	Pg	Pg	07 19 45.6	-0.6
CSS				Sg	Sg	07 19 53.9	+0.1
CSS	Mathiatis	0.57	310	P	Pg	07 19 45.5	-0.8
CSS	Mathiatis	0.57	310	⇓*i*P	Pg	07 19 45.6	-0.6
CSS				S	Sg	07 19 53.2	-0.5
CSS				AML	AML	07 20 02.4	
	6.5nm,1.0s						
CSS				AML	AML	07 20 05.4	
	7.6nm,0.6s						
ATHAL	Athalassa	0.67	325	P	Pg	07 19 47.3	-0.8
ATHAL				S	Sg	07 19 55.1	-1.6
ATHAL				AML	AML	07 20 07.0	
	21nm,0.6s						
ATHAL				AML	AML	07 20 13.9	
	28nm,0.7s						
LFK	Lefkose	0.73	338	Pg	Pg	07 19 48.8	-0.5
XYLS	Xyliatos	0.79	302	P	Pg	07 19 49.5	-0.9
XYLS				S	Sg	07 20 00.4	-0.3
XYLS				AML	AML	07 20 06.2	
	8.7nm,0.5s						
XYLS				AML	AML	07 20 07.0	
	7.6nm,0.3s						
APOL	The Sanctuary	0.83	275	P	Pn	07 19 52.8	-0.2
APOL				S	Sb	07 20 03.5	+0.5
APOL				AML	AML	07 20 07.7	
	9.7nm,0.4s						
APOL				AML	AML	07 20 08.0	
	12nm,0.4s						
EREN	Erenkoy	0.96	15	P	Pg	07 19 54.0	+0.3
EREN				S	Sn	07 20 07.9	-0.7
EREN	Erenkoy	0.96	15	Pg	Pg	07 19 53.9	+0.3
EREN				Sg	Sn	07 20 07.9	-0.7
AKDN	Akdeniz- Kıbrı	1.01	314	Pg	Pg	07 19 54.5	-0.2
NATA	Nata	1.08	280	P	Pn	07 19 57.1	+0.6
NATA				S	Sn	07 20 11.6	0.0
NATA				AML	AML	07 20 26.6	
	7.9nm,0.5s						
NATA				AML	AML	07 20 32.4	
	8.8nm,0.8s						
ALFC	Alefka	1.18	298	P	Pb	07 19 57.9	+0.1
ALFC				S	Sg	07 20 13.6	+0.4
ALFC				AML	AML	07 20 18.4	
	4.5nm,0.5s						
ALFC				AML	AML	07 20 21.4	
	6.3nm,0.5s						
AKMS	Akamas	1.33	289	P	Pg	07 20 00.9	+0.3
AKMS				S	Sg	07 20 19.0	+1.1
AKMS				AML	AML	07 20 27.9	
	3.1nm,1.0s						
AKMS				AML	AML	07 20 27.9	
	3.6nm,0.5s						
AKK1	Akkuyu-Mersin	1.56	350	Pn	Pn	07 20 03.8	+0.7
AKK1				Sn	Sb	07 20 25.0	+0.9
TISA	Tisan-Mersin	1.57	354	Pn	Pb	07 20 04.0	-0.3
BECE	Buyukeceli-Mer	1.57	351	Pn	Pn	07 20 03.7	+0.4
GULN	MERSIN_Gulnar	1.60	351	P	Pn	07 20 03.0	-0.6
GULN				S	Sn	07 20 24.1	-0.3
KARG	Kargicak-Mersi	1.61	355	Pn	Pn	07 20 04.5	+0.8
BHL	Bhannes	1.64	115	*e*P	Pn	07 20 04.7	+0.5
OREN	Orenkoy-Mersin	1.64	348	Pn	Pn	07 20 04.5	+0.4
IKL	Isikli	1.64	355	Pn	Pn	07 20 04.8	+0.6
TEPK	Tepekoy-MERSIN	1.64	351	Pn	Pn	07 20 04.8	+0.6
BOZY	Bozyazi-Mersin	1.67	334	Pn	Pn	07 20 05.3	+0.7
DQRL	Deir Qamar	1.67	122	*e*P	Pn	07 20 05.1	+0.5
HWQ	Hawqa	1.75	100	*e*P	Pn	07 20 06.2	+0.5
HWQ				*e*S	Sn	07 20 28.6	+0.3
SILI	Silifke-Mersin	1.77	2	Pn	Pn	07 20 06.8	+0.9
SLFK	Silifke-Mersin	1.79	2	Pn	Pn	07 20 07.3	+1.1
ZAHL	Zahle	1.83	113	*e*P	Pn	07 20 07.2	+0.3
QRWL	Qaraoun	1.84	124	*e*P	Pn	07 20 07.5	+0.6
KEBE	Keben-Mersin	1.85	356	Pn	Pn	07 20 07.9	+0.8
HNTI	Hanita	1.86	144	P	Pn	07 20 08.0	+0.8
HNTI	Hanita	1.86	144	P	Pn	07 20 07.8	+0.6
HNTI	Hanita	1.86	144	S	Sn	07 20 31.4	+0.5
KIZK	Mersin	1.89	7	P	Pn	07 20 08.9	+1.3
KIZK				S	Sn	07 20 30.8	-0.8
KIZK	Mersin	1.89	7	Pn	Pn	07 20 08.7	+1.1
BEIL	Beino	1.91	91	*e*P	Pn	07 20 08.6	+0.7
BEIL				*e*S	Sn	07 20 31.9	-0.3
RCY	Rachaya	1.97	123	*e*P	Pn	07 20 09.2	+0.4
SHBL	Chebaa	2.00	128	*e*P	Pn	07 20 09.8	+0.6
OSC2	CSNet OBS 4	2.02	222	P	Pb	07 20 12.4	+0.4
OSC2				S	Sg	07 20 39.1	-1.0
OSC2				AML	AML	07 20 46.0	
	2.6nm,0.5s						
OSC2				AML	AML	07 20 49.2	
	3.0nm,0.6s						
MMC7	Mount Meron ar	2.02	141	P	Pn	07 20 10.3	+0.8
MMA0B	Mount Meron ar	2.03	141	P	Pn	07 20 10.1	+0.4
MMA0B	Mount Meron ar	2.03	141	S	Sn	07 20 35.9	+0.8
MMAI	Mount Meron Ar	2.03	141	P	Pn	07 20 10.7	+1.0
	39nm,0.3s,baz=336,slow=13,SNR=51						
MMAI				S	Sn	07 20 36.0	+0.9
	25nm,0.2s,baz=307,slow=27,SNR=7.5						
	16nm,0.3s						
GEM	Giv'at Ha'Em	2.04	132	P	Pn	07 20 10.6	+1.0
GEM	Giv'at Ha'Em	2.04	132	P	Pn	07 20 10.2	+0.6
GEM	Giv'at Ha'Em	2.04	132	S	Sn	07 20 35.9	+0.7
NATI	Neve Ativ	2.05	130	P	Pn	07 20 10.7	+1.0
NATI	Neve Ativ	2.05	130	P	Pn	07 20 10.5	+0.8
NATI	Neve Ativ	2.05	130	S	Sn	07 20 35.3	-0.1
BLGI	Bet Lehem HaGe	2.16	149	P	Pn	07 20 12.8	+1.4
BLGI	Bet Lehem HaGe	2.16	149	P	Pn	07 20 12.4	+1.1
BLGI	Bet Lehem HaGe	2.16	149	S	Sn	07 20 38.8	+0.6
OFRI	`Ofer	2.18	154	P	Pn	07 20 12.2	+0.5
OFRI	`Ofer	2.18	154	P	Pn	07 20 12.0	+0.4
OFRI	`Ofer	2.18	154	S	Sn	07 20 38.8	0.0
KSHT	Keshet	2.29	134	P	Pn	07 20 14.8	+1.7
KSHT	Keshet	2.29	134	S	Sn	07 20 42.4	+1.0
OSC1	CSNet OBS 1	2.41	244	P	Pn	07 20 16.1	+1.3
OSC1				S	Sb	07 20 47.9	-0.6
OSC1				AML	AML	07 21 05.0	
	0.6nm,0.4s						
OSC1				AML	AML	07 21 07.3	
	0.7nm,0.4s						
ALAN	Alanya-ANTALYA	2.46	323	Pn	Pn	07 20 16.6	+1.2
MMLI	Mount Malkishu	2.52	148	Pn	Pn	07 20 17.8	+1.6
MMLI	Mount Malkishu	2.52	148	P	Pn	07 20 17.5	+1.3
MMLI	Mount Malkishu	2.52	148	S	Sn	07 20 48.0	+0.9
SLTI	Sal'it	2.55	157	P	Pn	07 20 17.1	+0.4
SLTI	Sal'it	2.55	157	P	Pn	07 20 16.9	+0.3
SLTI	Sal'it	2.55	157	S	Sn	07 20 48.1	+0.3
TAHT	Tahtakopru-Hat	2.59	46	Pn	Pn	07 20 18.9	+1.6
HDMB	Hadim	2.61	335	Pn	Pn	07 20 18.8	+1.1
KRMN	Karaman	2.62	349	Pn	Pn	07 20 18.9	+1.2
YURE	YUREGIR	2.65	32	P	Pn	07 20 19.0	+1.0
YURE				S	Sn	07 20 48.1	-2.1
QRNJ	Al-Qirein	2.67	147	P	Pn	07 20 20.1	+1.8
HMDT	Nahal Hemdat	2.72	149	P	Pn	07 20 21.0	+2.0
HMDT	Nahal Hemdat	2.72	149	P	Pn	07 20 20.5	+1.5
HMDT	Nahal Hemdat	2.72	149	S	Sn	07 20 52.7	+0.7
KKBE	Karaman, Kazim	2.72	344	P	Pn	07 20 21.4	+2.3
KKBE				S	Sb	07 20 55.2	-2.3
KKBE				*i* IAML		07 20 57.0	
	comp=E,236nm,1.1s						
SALP	Salfit	2.76	156	P	Pn	07 20 20.8	+1.3
SALP	Salfit	2.76	156	P	Pn	07 20 20.4	+0.8
SALP	Salfit	2.76	156	S	Sn	07 20 53.3	+0.4
GULE	Gulek	2.78	15	P	Pn	07 20 21.9	+1.9
GULE				S	Sn	07 20 55.1	+1.4
GULE				*i* IAML		07 21 03.0	
	comp=N,230nm,0.6s						
GULE				*i* IAML		07 21 09.0	
	comp=E,335nm,0.6s						
RHAN	Hatay/Reyhanl	2.78	53	P	Pn	07 20 20.4	+0.6
RHAN				S	Sn	07 20 51.9	-1.7
RHAN				*i* IAML		07 21 14.0	
	comp=E,176nm,1.0s						
KERG	Konya-Eregli	2.82	4	P	Pn	07 20 22.2	+1.7
KERG				S	Sn	07 20 57.2	+2.6
KERG				*i* IAML		07 21 02.0	
	comp=E,184nm,0.7s						
KARA	Karaisali	2.83	20	Pn	Pn	07 20 21.5	+1.0
UJAP	Al Uja	2.96	153	Pn	Pn	07 20 24.2	+1.9
UJAP	Al Uja	2.96	153	P	Pn	07 20 24.0	+1.8
UJAP	Al Uja	2.96	153	S	Sn	07 20 58.3	+0.5
HSUJ	Al Zarqa	3.16	141	P	Pn	07 20 27.4	+2.3
YESY	Yesilyurt	3.18	358	Pn	Pn	07 20 27.1	+1.7
CMRD	Camardi-Nigde	3.19	16	Pn	Pn	07 20 27.2	+1.6
SEYD	Seydisehir-KON	3.25	330	Pn	Pn	07 20 27.8	+1.4
DSI	Dead Sea	3.28	157	P	Pn	07 20 28.4	+1.7
DSI	Dead Sea	3.28	157	P	Pn	07 20 28.1	+1.4
DSI	Dead Sea	3.28	157	S	Sn	07 21 05.9	+0.1
KOZT	Kozan	3.29	28	Pn	Pn	07 20 27.9	+1.1
YTIR	Yattir	3.39	162	P	Pn	07 20 30.2	+1.8
YTIR	Yattir	3.39	162	P	Pn	07 20 29.8	+1.4
YTIR	Yattir	3.39	162	S	Sn	07 21 09.2	+0.4
NIDE	Nigde/Merkez-G	3.47	12	P	Pn	07 20 32.1	+2.6
NIDE				S	Sn	07 21 12.4	+1.6
ASF	Jabal al Asfar	3.50	133	P	Pn	07 20 32.3	+2.4
	5.3nm,0.3s,baz=328,slow=6.8,SNR=28						
ASF				S	Sn	07 21 13.2	+1.6
	16nm,0.3s,baz=109,slow=7.9,SNR=3.8						
	16nm,0.3s						
ASF	Jabal al Asfar	3.50	133	P	Pn	07 20 31.2	+1.3
MSBI	Mazada	3.51	159	P	Pn	07 20 31.5	+1.7
MSBI	Mazada	3.51	159	S	Sn	07 21 11.7	+0.3
KONT	Konya--Tatoy	3.55	340	Pn	Pn	07 20 32.3	+1.8
NIG	Nigde	3.56	10	Pn	Pn	07 20 32.3	+1.6
GHAJ	Ghor Haditha	3.58	156	P	Pn	07 20 33.0	+2.2
GHAJ	Ghor Haditha	3.58	156	S	Sn	07 21 13.7	+0.4
SULT	Sultanhani-AKS	3.60	356	Pn	Pn	07 20 33.3	+2.1
LISJ	El Lisan	3.62	157	P	Pn	07 20 34.1	+2.9
KZIT	Kziot	3.71	173	P	Pn	07 20 34.0	+1.4
KZIT	Kziot	3.71	173	S	Sn	07 21 16.1	-0.3
KORT	Korkueli	3.73	311	Pn	Pn	07 20 34.9	+1.9
GAZ	Gaziantep	3.74	46	Pn	Pn	07 20 34.9	+1.8
GULA	Gulagac	3.75	4	Pn	Pn	07 20 35.1	+1.8
LADK	Ladik-KONYA	3.79	342	Pn	Pn	07 20 35.9	+2.0
KMRS	Kahramanmaras	3.80	39	Pn	Pn	07 20 35.5	+1.6
AKAS	Kas	3.84	296	Pn	Pn	07 20 36.9	+2.3
ELL	Elmali	3.87	305	Pn	Pn	07 20 36.9	+2.0
IDAN	Idan	3.94	162	P	Pn	07 20 37.3	+1.5
IDAN	Idan	3.94	162	S	Sn	07 21 22.4	+0.3
ZFRI	Zfri	4.18	164	P	Pn	07 20 40.8	+1.7
ZFRI	Zfri	4.18	164	P	Pn	07 20 40.2	+1.1
ZFRI	Zfri	4.18	164	S	Sn	07 21 28.1	0.0
ISP	Isparta	4.20	321	Pn	Pn	07 20 41.6	+2.1
ISP	Isparta	4.20	321	P	Pn	07 20 43.8	+4.3
ISP	Isparta	4.20	321	S	Sn	07 21 34.2	+5.4
SARI	SarD1z-Kayseri	4.32	28	Pn	Pn	07 20 43.2	+2.0
PRNI	Paran	4.34	167	P	Pn	07 20 42.8	+1.4
PRNI	Paran	4.34	167	P	Pn	07 20 43.0	+1.6
PRNI	Paran	4.34	167	S	Sn	07 21 32.6	+0.5
CAME	Cameli-Denizli	4.39	304	Pn	Pn	07 20 44.4	+2.3
SDAG	Sultandagi-AFY	4.51	329	Pn	Pn	07 20 46.2	+2.5
KRMI	Paran Flat	4.53	171	P	Pn	07 20 45.4	+1.5
KRMI	Paran Flat	4.53	171	S	Sn	07 21 36.6	-0.1
BNN	Bunyan	4.53	20	Pn	Pn	07 20 46.4	+2.3
HRFI	Mount Harif	4.66	167	P	Pn	07 20 47.2	+1.5
HRFI	Mount Harif	4.66	167	P	Pn	07 20 47.1	+1.4
HRFI	Mount Harif	4.66	167	S	Sn	07 21 40.0	+0.2
APMY	Acipayam-Deniz	4.68	309	Pn	Pn	07 20 48.4	+2.4
KAMT	Kaman	4.76	359	Pn	Pn	07 20 49.5	+2.3
SHUT	Suhut-Afyon	4.76	327	Pn	Pn	07 20 49.7	+2.5
DALY	Dalyan (Mula)	4.78	299	Pn	Pn	07 20 48.5	+1.1
MBRI	Mt Berech	4.87	169	P	Pn	07 20 50.4	+1.7
MBRI	Mt Berech	4.87	169	P	Pn	07 20 50.4	+1.7
MBRI	Mt Berech	4.87	169	S	Sn	07 21 45.9	+0.6
ARG	Arkhangelos	4.96	291	Pn	Pn	07 20 51.2	+1.4
EIL	Elat	5.00	169	P	Pn	07 20 52.0	+1.6
	3.8nm,0.3s,baz=271,slow=4.3,SNR=38						
EIL				S	Sn	07 21 46.6	-1.7
	84nm,0.5s,baz=130,slow=11,SNR=12						
EIL				LR	LR	07 22 58.5	
	comp=Z,216nm,19.8s,baz=337,slow=40						
	18nm,0.5s						
EIL	Elat	5.00	169	P	Pn	07 20 52.0	+1.6
EIL	Elat	5.00	169	S	Sn	07 21 48.4	+0.2
BR131	Keskin Array S	5.12	358	Pn	Pn	07 20 54.7	+2.6
BRTR	Keskin Array B	5.12	358	P	Pn	07 20 55.8	+3.7
	0.8nm,0.3s,baz=192,slow=15,SNR=16						
	3.0nm,0.4s						
SVRH	Sivrihisar-ESK	5.19	340	Pn	Pn	07 20 55.8	+2.8
HBST	Basata	5.42	172	P	Pn	07 20 56.8	+0.7
ZAF	Zafarana	5.42	192	P	Pn	07 20 54.6	-1.5
NUB	Nuweibaa	5.59	173	P	Pn	07 20 59.6	+1.1
HDHB	Dhahab	5.89	174	P	Pn	07 21 03.0	+0.4
HKAT	Jabal Katrina	6.06	179	P	Pn	07 21 04.8	-0.3
TR2	Tor 2	6.20	181	P	Pn	07 21 06.3	-0.5
IDI	Anoyia	7.40	278	P	Pn	07 21 21.0	-2.4
	20nm,0.7s,baz=131,slow=6.8,SNR=12						
IDI				S	Sn	07 22 41.2	-6.4
	17nm,0.6s,baz=25,slow=12,SNR=2.0						
AKASG	Malin Array Be	16.45	350	P	Pn	07 23 27.0	+1.1
	0.7nm,0.3s,baz=169,slow=10,SNR=6.0						
	0.3nm,0.3s						
GERES	GERESS Array B	20.63	320	P	P	07 24 14.4	-0.4
	1.1nm,0.4s,baz=116,slow=12,SNR=10						
	1.1nm,0.4s						
NACGM	Naroch	20.89	348	*e*P	P	07 24 17.4	-0.2
	comp=Z,19nm,0.8s,baz=163						
WTTA	Wattenberg	20.94	314	*e*Pn	Pn	07 24 21.2	+0.3
	comp=Z,9.9nm,1.2s						
WATA	Walderalm	21.01	314	*e*Pn	P	07 24 21.5	+2.5
	comp=Z,5.0nm,0.9s						
SQTA	Sankt Quirin	21.17	313	*e*Pn	P	07 24 23.3	+2.6
	comp=Z,0.7nm,0.5s						
FETA	Feichten	21.37	312	*e*pP	pP	07 24 24.7	-0.5
	comp=Z,3.9nm,1.0s						
RETA	Reutte	21.57	314	*e*pP	P	07 24 25.9	+0.9
	comp=Z,6.6nm,1.5s						
FINES	FINESS Array B	27.32	352	P	P	07 25 18.9	-1.1
	comp=Z,1.8nm,0.8s,baz=149,slow=9.3,SNR=4.5						
	comp=Z,1.8nm,0.8s						
HFS	Hagfors	28.73	339	P	P	07 25 29.9	-2.7
	comp=Z,1.8nm,0.8s,baz=160,slow=8.9,SNR=1.0						
	comp=Z,1.8nm,0.8s						
ARCES	ARCESS Array B	35.30	355	P	P	07 26 29.6	-0.5
	comp=Z,1.7nm,0.8s,baz=174,slow=6.1,SNR=7.3						
	comp=Z,1.7nm,0.8s						
TORD	Torodi Ar. Bea	36.10	242	P	P	07 26 35.5	-2.0
	comp=Z,1.3nm,1.0s,baz=50,slow=7.9,SNR=5.3						
	comp=Z,1.3nm,1.0s						
MKAR	Makanchi Array	38.11	56	P	P	07 26 55.2	+0.8
	comp=Z,0.5nm,0.8s,baz=251,slow=4.4,SNR=3.1						
	comp=Z,0.5nm,0.8s						
YKA	Yellowknife Ar	79.97	346	P	P	07 31 43.1	-1.1
	comp=Z,0.5nm,0.9s,baz=14,slow=5.2,SNR=5.3						
	comp=Z,0.5nm,0.9s						
ILAR	Eielson Array	80.96	0	P	P	07 31 49.4	-0.2
	comp=Z,0.3nm,0.9s,baz=322,slow=3.7,SNR=4.3						
	comp=Z,0.3nm,0.9s						

*IDC **27** 07:20:27.3±7.9, 19°.32S×69°.25W, h120^{km}±49^{km}, mb3.2/2, mbtmp3.6/4, Error ellipse: s-maj=82.8km s-min=43.5km az=60.0*

*GUC **27** 07:20:27.6±0.8, 19°.26S×69°.36W, h107^{km}±3^{km}, ML3.3*

ISC 27 07:20:26.5±1.1, **19°.29S**±0°.03×**69°.40W**±0°.07, **h112**^{km}±8^{km}, **n23,** σ**0^{s}.98**/37**, 5C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO01	Chusmiza	0.42	153	⇑*i*P	Pn	07 20 44.0	+0.2
GO01				*i* S	Sn	07 20 57.0	+0.5
PB11	IPOC Station P	0.53	207	⇑*i*P	Pn	07 20 44.4	+0.5
PB11				*i* S	Sn	07 20 57.3	+0.3
PB11				IAML		07 20 58.1	
	comp=E,2µm,0.2s						
PX02	IPOC Station P	0.82	293	*e*P	Pn	07 20 45.6	-0.6
PX02				*e*S	Sn	07 21 00.7	-0.4
PB08	IPOC Station P	0.88	165	⇑*i*P	Pn	07 20 48.0	+1.0
PB08				*i* S	Sn	07 21 03.6	+1.1
PB08				IAML		07 21 04.9	
	comp=E,1µm,0.3s						
PB16	IPOC Station P	0.96	354	⇑*i*P	Pn	07 20 48.6	+0.6
PB16				*e*S	Sn	07 21 04.6	+0.4
PB16				IAML		07 21 06.4	
	comp=N,870nm,0.4s						
PB12	IPOC Station P	1.11	307	⇑*i*P	Pn	07 20 49.3	+0.2
PB12				*i* S	Sn	07 21 06.0	-0.2
PB12				IAML		07 21 06.7	
	comp=E,890nm,0.3s						
PX03	IPOC Station P	1.13	191	*e*P	Pn	07 20 49.1	-0.3
PX03				*i* S	Sn	07 21 06.9	+0.3
TA02	Huaiquique	1.20	215	*e*P	Pn	07 20 50.3	+0.4
TA02				*i* S	Sn	07 21 08.3	+0.6
TA02				IAML		07 21 10.7	
	comp=N,2µm,0.1s						
AP01	Chacalluta	1.28	315	*e*P	Pn	07 20 51.5	+0.6
AP01				*i* S	Sn	07 21 10.0	+0.7
AP01				IAML		07 21 13.9	
	comp=E,1µm,0.2s						
TA01	Diego Aracena	1.47	210	*e*P	Pn	07 20 53.3	+0.3
TA01				*i* S	Sn	07 21 13.8	+0.6
TA01				IAML		07 21 19.2	
	comp=N,197nm,0.2s						
PATCX	Punta Patache	1.68	205	*e*P	Pn	07 20 56.3	+0.5
PATCX				*i* S	Sn	07 21 19.1	+1.2
PATCX				IAML		07 21 25.6	
	comp=N,194nm,0.3s						
PB18	Visviri	1.69	357	*e*P	Pn	07 20 58.2	+1.9
PB01	IPOC Station P	1.75	183	*e*P	Pn	07 20 57.5	+0.9
PB01				*i* S	Sn	07 21 20.2	+0.8
PB01				IAML		07 21 22.3	
	comp=N,477nm,0.2s						
PB02	IPOC Station P	2.07	193	*e*P	Pn	07 21 01.3	+0.7
PB02				*i* S	Sn	07 21 27.7	+1.0
PB02				IAML		07 21 32.3	
	comp=E,295nm,0.1s						
PB07	IPOC Station P	2.47	191	*e*P	Pn	07 21 06.4	+0.6
PB09	IPOC Station P	2.50	177	*e*P	Pn	07 21 07.4	+1.3
PB03	IPOC Station P	2.76	187	*e*P	Pn	07 21 09.9	+0.3
PB03				*i* S	Sn	07 21 41.2	-1.6
LPAZ	La Paz	3.22	22	P	Pn	07 21 17.5	+1.4
	comp=E,12nm,0.4s,baz=204,slow=6.2,SNR=135						
LPAZ				S	Sn	07 21 55.3	+1.1
	comp=E,4.0nm,0.6s,baz=205,slow=17,SNR=1.5						
PB06	IPOC Station P	3.40	183	*e*P	Pn	07 21 18.5	+0.4
PB05	IPOC Station P	3.62	192	*e*P	Pn	07 21 21.6	+0.6
SIV	San Ignacio	8.59	69	P	Pn	07 22 25.2	-2.8
	comp=E,1.8nm,0.6s,baz=258,slow=12,SNR=14						
BDFB	Brasilia	20.71	83	P	Pn	07 24 58.7	-3.0
	comp=E,1.1nm,0.5s,baz=264,slow=8.7,SNR=4.2						
	comp=E,1.1nm,0.5s						
TORD	Torodi Ar. Bea	77.06	71	P	P	07 32 06.7	-1.3
	comp=E,0.3nm,0.5s,baz=244,slow=5.9,SNR=4.3						
	comp=E,0.3nm,0.5s						

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*IDC **27** 07:23:01.7±1.9, 19°.86S×172°.12E, h0^{km}, mb4.1/7, mbtmp4.1/7, MS3.4/2, Error ellipse: s-maj=81.3km s-min=26.3km az=149.0*

*NEIC **27** 07:23:03.1±1.2, 19°.95S±0°.10×172°.2E±0°.1, h10^{km}±1^{km}, mb4.4/12, Error ellipse: s-maj=16.9km s-min=16.0km az=104.0*

ISC 27 07:23:02.7±0.6, 19°.96S±0°.08×172°.20E±0°.09, h10^{km}, n32, σ0ˢ.79/27, mb4.2/12, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINNC	Pines Island,	5.16	238	Pn	Pn	07 24 18.7	-1.3
DZM	Mont Dzumac	5.78	248	Pn	Pn	07 24 29.1	+0.5
SANVU	Saraoutou	6.54	312	Pn	Pn	07 24 39.3	+0.3
RAO	Raoul Island	12.89	138	Pn	Pn	07 26 05.9	-0.1
FUNA	Funafuti	13.23	32	Pn	Pn	07 26 09.2	-1.4
TOZ	Tahuroa Road	17.94	171		P	07 27 13.5	+0.6
TKNZ	Takaka Hill	21.02	178	P	P	07 27 47.2	+0.7
CTA	Charters Tower	24.37	265	LR	LR	07 36 10.8	
	comp=Z,85nm,18.8s,baz=106,slow=32						
RAR	Rarotonga	26.25	98	LR	LR	07 38 08.1	
	comp=Z,76nm,18.0s,baz=188,slow=34						
STKA	Stephens Creek	29.88	240	P	P	07 29 10.9	+0.3
	1.9nm,0.7s,baz=79,slow=11,SNR=5.3						
	1.9nm,0.7s						
STKA	Stephens Creek	29.88	240	P	P	07 29 10.3	-0.2
STKA				IAmb	IAmb	07 29 14.6	
	comp=Z,8.6nm,1.0s						
WR8	Warramunga Arr	35.39	263	P	P	07 29 58.4	-0.6
WR8				IAmb	IAmb	07 30 20.6	
	comp=Z,6.1nm,1.1s						
WRA	Warramunga Arr	35.54	263	P	P	07 29 59.6	-0.7
	comp=Z,2.5nm,0.7s,baz=100,slow=9.1,SNR=11						
	comp=Z,2.5nm,0.7s						
WRA	Warramunga Arr	35.54	263	P	P	07 29 59.3	-1.0
AS31	Alice Springs	35.68	257		P	07 30 01.4	0.0
AS31				IAmb	IAmb	07 30 02.1	
	comp=Z,2.0nm,0.9s						
ASAR	Alice Springs	35.68	257	P	P	07 30 01.4	0.0
	comp=Z,5.7nm,0.7s,baz=89,slow=9.0,SNR=87						
	comp=Z,5.7nm,0.7s						
ASAR	Alice Springs	35.68	257	P	P	07 30 00.5	-0.9
H11S2	WAKE ISLAND Hy	38.59	352	T	T	08 11 30.5	
	baz=171						
H11S3	WAKE ISLAND Hy	38.59	352	T	T	08 11 33.7	
	baz=171						
H11S1	WAKE ISLAND Hy	38.60	352	T	T	08 11 36.8	
	baz=171						
MTN	Manton Dam	39.95	274	P	P	07 30 36.7	-0.9
MTN				IAmb	IAmb	07 30 59.3	
	comp=Z,15nm,1.1s						
FITZ	Fitzroy Crossi	43.95	264	P	P	07 31 10.9	+0.6
PSA00	Pilbara Seismi	48.79	258	P	P	07 31 48.5	+0.2
PSA00				IAmb	IAmb	07 32 20.8	
	comp=Z,2.1nm,1.1s						
QSPA	South Pole Qui	70.10	180	P	P	07 34 15.0	-0.1
QSPA				IAmb	IAmb	07 34 26.2	
	comp=Z,4.2nm,0.9s						
CMAR	Chiang Mai Arr	81.35	293	P	P	07 35 21.0	+1.0
	comp=Z,0.7nm,0.3s,baz=120,slow=6.4,SNR=6.3						
	comp=Z,0.7nm,0.3s						
M16K	Timber Creek	83.98	14	P	P	07 35 34.1	+1.4
N18K	Kilae Creek	84.39	15	P	P	07 35 35.0	+0.1
K15K	Wolf Creek Mou	84.59	12	P	P	07 35 36.1	+0.3
SONM	Songino Array	89.48	322	P	P	07 36 00.3	+0.1
	comp=Z,0.5nm,0.6s,baz=149,slow=3.5,SNR=3.9						
	comp=Z,0.5nm,0.6s						
ILAR	Eielson Array	90.11	16	P	P	07 36 01.2	-1.3
	comp=Z,0.4nm,0.8s,baz=198,slow=4.7,SNR=2.5						
	comp=Z,0.4nm,0.8s						
TXAR	Lajitas Array	94.67	61	P	P	07 36 25.6	+1.1
	comp=Z,0.3nm,0.8s,baz=205,slow=5.5,SNR=3.6						
	comp=Z,0.3nm,0.8s						
GERES	GERESS Array B	146.40	334	PKPbc	PKPbc	07 42 44.0	0.0
	comp=Z,1.6nm,0.8s,baz=40,slow=4.4,SNR=12						

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*ISK **27** 07:23:33.7, 38°.40N×39°.01E, h8^{km}, ML3.3/18*

*AFAD **27** 07:23:33.9, 38°.38N×39°.00E, h7^{km}±3^{km}, MW3.5*

ISC 27 07:23:34.1±1.1, 38°.38N±0°.02×39°.01E±0°.02, h7^{km}±10^{km}, n28, σ0ˢ.75/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAYA	Malatya/Merkez	0.47	263	P	Pg	07 23 43.1	0.0
MAYA				S	Sg	07 23 49.9	+0.6
NARI	Adyaman-Kaht	0.54	202	P	Pg	07 23 44.9	+0.5
NARI				S	Sg	07 23 52.1	+0.6
KOVA	Elazig, Kovanc	0.70	63	P	Pg	07 23 47.6	-0.1
KOVA				S	Sn	07 24 01.2	-0.4
HANM	anlurfa/Hi	0.81	188	P	Pb	07 23 50.1	-0.3
HANM				S	Sb	07 24 02.5	+0.9
AZEY	Adyaman-Merk	0.83	227	P	Pb	07 23 50.9	0.0
AZEY				S	Sb	07 24 02.0	-0.3
TNCL	Tunceli-Merkez	0.84	29	P	Pg	07 23 50.0	-0.2
TNCL				S	Sb	07 24 02.5	0.0
AKCD	Akcadag	0.86	264	P	Pg	07 23 50.2	-0.4
AKCD				S	Sb	07 24 02.2	-1.0
ARPR	Arapgir-MALATY	0.89	323	Pg	Pg	07 23 50.5	-0.6
ARPR				Sg	Sb	07 24 03.5	-0.4
URFA	Urfa	0.95	189	Pg	Pg	07 23 49.9	-2.5
URFA				Sg	Sg	07 24 05.1	+0.3
HEKM	Malatya_Hekimh	0.96	301	P	Pg	07 23 52.2	-0.4
HEKM				S	Sb	07 24 06.6	+0.4
DYBB	Diyarbakir	0.99	116	Pg	Pb	07 23 53.4	-0.1
DYBB				Sg	Sb	07 24 07.5	+0.8
ATAB	Bozova	1.07	212	P	Pn	07 23 55.2	-0.3
ATAB				S	Sb	07 24 08.9	-0.3
ILIC	ilic-Erzincan	1.12	342	Pn	Pg	07 23 55.1	-0.5
ILIC				Sn	Sn	07 24 11.1	-0.9
AKCA	Adyaman/G¶l	1.20	241	P	Pg	07 23 56.4	-0.7
AKCA				S	Sn	07 24 14.9	+1.0
ERZN	Erzincan	1.32	24	Pn	Pn	07 23 58.7	-0.3
KHMN	Narli-Kahraman	1.77	237	Pn	Pn	07 24 05.5	+0.4
KARO	Karliova-Bingo	1.84	59	Pn	Pn	07 24 06.3	+0.1
GAZ	Gaziantep	1.87	230	Pn	Pn	07 24 07.1	+0.6
KMRS	Kahramanmaras	1.89	243	Pn	Pn	07 24 07.1	+0.4
SARI	SarD1z-Kayseri	2.04	271	Pn	Pb	07 24 10.6	-0.9
GURO	Guroymak-BITLI	2.38	85	Pn	Pn	07 24 14.1	+0.6
BNN	Bunyan	2.52	282	Pn	Pn	07 24 16.2	+0.6
KOZT	Kozan	2.68	251	Pn	Pn	07 24 18.2	+0.7
TOKT	Tokat	2.72	316	Pn	Pn	07 24 19.2	+1.0
KOPR	Koprukoy-ERZUR	2.73	53	Pn	Pn	07 24 18.9	+0.5
TAHT	Tahtakopru-Hat	3.02	229	Pn	Pn	07 24 22.8	+0.6
YOZ	Yozgat	3.14	295	Pn	Pn	07 24 25.3	+1.3
CMRD	Camardi-Nigde	3.26	258	Pn	Pn	07 24 26.6	+1.0

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*GCG **27** 07:46:54.1±0.9, 12°.84N×91°.33W, h15^{km}, MD4.5*

*CATAC **27** 07:46:57.8±0.6, 13°N±4°×9°1W±°, h1^{km}, M3.2/11, MLv3.2/11, Error ellipse: s-maj=8.6km s-min=6.6km az=24.5, confirmed*

*SNET **27** 07:47:03.0±4.5, 13°.28N×90°.87W, h9^{km}, ML3.2*

ISC 27 07:47:02.7±2.3, 13°.2N±0°.1×91°.00W±0°.08, h33^{km}, n35, σ0ˢ.99/36, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	1.15	56	P	Pn	07 47 21.5	-1.0
FAME	Alcaldia de Sa	1.15	56	S	Sn	07 47 38.3	+1.1
FG16	Alotenango, Sa	1.17	24	*i* P	Pn	07 47 22.8	-0.1
ESSG	Sabana Grande	1.19	8	*i* P	Pn	07 47 21.3	-1.8
STG5	El Palmar, Qui	1.25	344	*i* P	Pb	07 47 25.8	0.0
STG8	El Palmar, Qui	1.29	345	*i* P	Pb	07 47 26.6	0.0
NUBE	Las Nubes	1.38	59	*e*P	Pn	07 47 24.3	-1.4
NUBE	Las Nubes	1.38	59	*i* P	Pn	07 47 24.4	-1.4
NUBE	Las Nubes	1.38	59	P	Pn	07 47 24.4	-1.4
NUBE	Las Nubes	1.38	59	S	Sn	07 47 44.1	+1.1
SLOZ	Alcaldia de Sa	1.44	55	P	Pn	07 47 21.4	-5.2
CEVE	Cerro Verde	1.48	65	*e*P	Pn	07 47 26.5	-0.7
CEVE				*e*S	Sb	07 47 50.7	+2.4
SBLS	San Blas	1.48	64	*e*P	Pn	07 47 26.3	-1.0
RTR	El Retiro	1.49	62	*e*P	Pn	07 47 26.8	-0.5
SNJE	San Jose	1.51	64	*e*P	Pn	07 47 26.8	-0.8
JAYA	Jayaque - finc	1.58	73	*e*P	Pn	07 47 27.6	-0.9
JAYA				*e*S	Sb	07 47 52.0	+1.0
JAYA	Jayaque - finc	1.58	73	*e*P	Pn	07 47 27.6	-0.9
JAYA	Jayaque - finc	1.58	73	P	Pn	07 47 27.8	-0.7
JAYA	Jayaque - finc	1.58	73	S	Sb	07 47 51.3	+0.3
JUAM	Asuncion Mita	1.69	48	*e*P	Pn	07 47 29.8	-0.2
PMON	Piamonte	1.72	72	P	Pn	07 47 31.0	+0.6
APG	El Apazote	1.87	16	*i* P	Pn	07 47 32.6	0.0
MTO3	Montecristo	1.99	53	*i* P	Pn	07 47 34.1	-0.2
MTO3	Montecristo	1.99	53	P	Pn	07 47 33.8	-0.4
PAVA	Las Pavas	2.07	75	P	Pn	07 47 35.4	+0.2
ESQI	Esquipulas	2.10	50	*e*P	Pn	07 47 35.9	+0.2
ESQI	Esquipulas	2.10	50	P	Pn	07 47 35.8	+0.2
ESQI	Esquipulas	2.10	50	S	Sb	07 48 05.6	-0.5
ZAFR2	Estanzuela, Za	2.11	49	*i* P	Pb	07 47 38.2	-2.1
SCLA	Alcaldia de Sa	2.27	77	*e*P	Pn	07 47 36.5	-1.4
PACA	Pacayal	2.62	84	P	Pn	07 47 43.4	+0.6
SARH	Santa Rosa de	2.68	54	*e*P	Pn	07 47 44.0	+0.3
SARH	Santa Rosa de	2.68	54	P	Pn	07 47 43.6	0.0
LCND	La Caada	3.03	88	P	Pn	07 47 48.7	+0.3
CNCH	Conchagua	3.08	88	P	Pn	07 47 48.7	-0.5

IDC 27 07:52:34.9±1.8, 7°.11S×128°.81E, h0^{km}, mb3.5/2, mbtmp3.6/5, ML3.6/3, Error ellipse: s-maj=83.7km s-min=26.4km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.35	195	Pn	Pn	07 55 19.4	+1.0
	0.3nm,0.3s,baz=21,slow=12,SNR=17						
FITZ				Sn	Sn	07 57 12.9	-13
	0.9nm,0.3s,baz=186,slow=14,SNR=8.3						
	2.5nm,0.7s						
WRA	Warramunga Arr	13.84	158	Pn	Pn	07 55 54.3	+1.8
	0.3nm,0.3s,baz=332,slow=9.8,SNR=6.5						
WRA				Sn	Sn	07 58 15.0	-12
	0.9nm,0.3s,baz=340,slow=21,SNR=15						
	0.4nm,0.5s						
ASAR	Alice Springs	17.18	164	P	P	07 56 37.6	-0.5
	0.2nm,0.3s,baz=341,slow=11,SNR=35						
ASAR				S	Sn	07 59 34.8	-13
	0.6nm,0.7s,baz=329,slow=14,SNR=5.3						
	1.2nm,0.6s						
STKA	Stephens Creek	27.38	156	P	P	07 58 20.4	-1.6
	1.0nm,0.8s,baz=315,slow=5.7,SNR=2.0						
	1.0nm,0.8s						
MKAR	Makanchi Array	67.67	327	P	P	08 03 34.1	+0.2
	0.2nm,0.6s,baz=142,slow=7.1,SNR=4.2						
	0.2nm,0.6s						

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*ISK **27** 07:59:36.1, 38°.37N×38°.95E, h8^{km}, ML2.5/7*

*AFAD **27** 07:59:37.0, 38°.39N×39°.02E, h7^{km}±2^{km}, ML2.7*

ISC 27 07:59:36.5±1.2, 38°.36N±0°.03×39°.03E±0°.03, h8^{km}±12^{km}, n12, σ0ˢ.81/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAYA	Malatya/Merkez	0.48	266	P	Pg	07 59 46.6	+0.8
MAYA				S	Sb	07 59 53.9	-0.6
MAYA				*i* IAML		07 59 54.0	
	comp=N,808nm,0.2s						
MAYA				*i* IAML		07 59 54.0	
	comp=E,422nm,0.2s						
NARI	Adyaman-Kaht	0.52	204	P	Pb	07 59 48.5	+0.5
NARI				S	Sb	07 59 56.2	+0.5
KOVA	Elazig, Kovanc	0.70	60	P	Pg	07 59 50.7	+0.6
KOVA				S	Sg	07 59 58.4	-1.0
AKCD	Akcadag	0.87	266	P	Pg	07 59 53.6	+0.3
ARPR	Arapgir-MALATY	0.91	324	Pg	Pg	07 59 53.2	-0.9
ARPR				Sg	Sg	08 00 06.1	+0.1
URFA	Urfa	0.93	190	Pg	Pg	07 59 52.5	-1.9
URFA				Sg	Sg	08 00 07.5	+0.9
DYBB	Diyarbakir	0.96	115	Pg	Pb	07 59 56.3	+0.7
DYBB				Sg	Sn	08 00 10.8	+0.4
HEKM	Malatya_Hekimh	0.99	302	P	Pg	07 59 55.3	-0.2
ILIC	ilic-Erzincan	1.15	342	Pn	Pg	07 59 58.0	-0.6
ILIC				Sn	Sb	08 00 13.7	-0.2
ERZN	Erzincan	1.34	24	Pn	Pg	08 00 02.2	0.0
GAZ	Gaziantep	1.87	231	Pn	Pn	08 00 08.5	-0.4
KMRS	Kahramanmaras	1.89	244	Pn	Pn	08 00 08.7	-0.4

IDC 27 08:12:36.6±1.2, 6°.34N×125°.03E, h0^{km}, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=30.5km s-min=11.2km az=116.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.91	36	Pg	Pg	08 12 52.5	-1.5
	74nm,0.3s,baz=256,slow=8.3,SNR=4.8						
DAV				Lg	Lg	08 13 07.1	
	153nm,0.3s,baz=253,slow=19,SNR=5.9						
WRA	Warramunga Arr	27.67	161	P	P	08 18 27.4	+1.0
	0.7nm,0.8s,baz=334,slow=7.9,SNR=2.9						
	0.7nm,0.8s						
ASAR	Alice Springs	31.05	164	P	P	08 18 55.5	-1.0
	0.4nm,0.8s,baz=343,slow=8.3,SNR=6.5						
ASAR				PcP	PcP	08 21 51.4	-1.1
	0.4nm,0.9s,baz=342,slow=2.3,SNR=4.6						
	0.4nm,0.8s						
STKA	Stephens Creek	41.15	158	P	P	08 20 23.1	+0.3
	1.0nm,0.5s,baz=320,slow=7.9,SNR=4.9						
	1.0nm,0.5s						
MKAR	Makanchi Array	54.47	325	P	P	08 22 07.1	+1.1
	0.4nm,0.7s,baz=133,slow=6.1,SNR=7.1						
	0.4nm,0.7s						

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*IDC **27** 08:23:35.9±3.1, 5°.37S×146°.97E, h201^{km}±28^{km}, mb3.7/4, mbtmp4.3/6, MS3.0/2, Error ellipse: s-maj=30.7km s-min=22.5km az=111.0*

*NEIC **27** 08:23:38.0±2.5, 5°.50S±0°.08×146°.8E±0°.1, h216^{km}±8^{km}, mb4.2/18, Error ellipse: s-maj=18.7km s-min=11.2km az=91.0*

ISC 27 08:23:35.8±0.6, 5°.46S±0°.07×146°.78E±0°.09, h195^{km}, n40, σ1ˢ.80/41, mb4.2/15, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	3.45	10	Pn	Pn	08 24 34.4	+3.7
PMG	Port Moresby	3.94	174	P	Pn	08 24 38.4	+1.7
	41nm,0.3s,baz=333,slow=6.8,SNR=28						
PMG				S	Sn	08 25 23.4	-1.1
	58nm,0.4s,baz=214,slow=21,SNR=14						
PMG	Port Moresby	3.94	174	P	Pn	08 24 38.7	+2.0
COEN	Coen	9.16	203		Pn	08 25 47.1	+2.9
COEN	Coen	9.16	203	P	Pn	08 25 47.2	+2.9
	18nm,1.4s						
MTSU	Mount Surprise	12.82	191	P	P	08 26 34.4	-0.6
	11nm,0.8s						
TATA	Tatamba Isabel	13.26	103	P	P	08 26 39.4	-0.4
	27nm,2.1s						
FAKI	Fak Fak	14.71	279	Pn	Pn	08 26 54.1	-0.7
QIS	Mount Isa	16.54	204	P	Pn	08 27 18.3	+1.3
	7.8nm,0.8s						
WB0	Warramunga Arr	18.64	219	P	P	08 27 39.2	+0.2
WB0				IAmb	IAmb	08 27 45.5	
	comp=Z,8.0nm,0.8s						
WRAB	Tennant Creek	18.79	219	P	P	08 27 41.7	+1.0
	comp=Z,10nm,0.7s						
WRA	Warramunga Arr	18.80	219	P	P	08 27 41.7	+0.9
	comp=Z,9.0nm,0.8s,baz=36,slow=11,SNR=53						
WRA				S	S	08 30 59.5	-5.0
	comp=Z,1.1nm,0.8s,baz=57,slow=25,SNR=6.1						
WRA	Warramunga Arr	18.80	219	P	P	08 27 40.6	-0.3
KNRA	Kununurra	20.39	239	P	P	08 27 58.4	+0.5
AS31	Alice Springs	21.94	213		P	08 28 14.2	+0.2
AS31				IAmb	IAmb	08 28 25.8	
	comp=Z,3.1nm,0.6s						
ASAR	Alice Springs	21.94	213	P	P	08 28 14.8	+0.8
	comp=Z,2.6nm,0.4s,baz=43,slow=7.9,SNR=70						
ASAR				S	S	08 32 01.5	-0.9
	comp=Z,1.9nm,0.9s,baz=29,slow=20,SNR=5.2						
	comp=Z,2.6nm,0.4s						
ASAR	Alice Springs	21.94	213		P	08 28 14.5	+0.5
INKA	Innaminka	22.89	194	P	P	08 28 22.9	+0.2
FITZ	Fitzroy Crossi	24.16	237	P	P	08 28 35.5	+1.1
	comp=Z,15nm,0.7s						
DAV	Davao City (W)	24.54	300	LR	LR	08 39 01.3	
	comp=Z,46nm,19.1s,baz=169,slow=38						
ARMA	Armidale	25.24	170	P	P	08 28 46.6	+2.5
	comp=Z,9.7nm,2.8s						
STKA	Stephens Creek	26.72	190	P	P	08 28 59.0	+1.8
	comp=Z,0.3nm,0.3s,baz=4.7,slow=11,SNR=5.5						
	comp=Z,0.3nm,0.3s						
STKA	Stephens Creek	26.72	190	P	P	08 28 59.8	+2.5
	comp=Z,1.4nm,1.5s						
BKZ	Black Stump Fm	42.98	146	P	P	08 31 15.7	-0.3
MRZ	Mangatainoka R	43.53	148	P	P	08 31 19.4	-0.9
MRZ				IAmb	IAmb	08 32 00.8	
	comp=Z,17nm,0.9s						
CMAR	Chiang Mai Arr	52.80	298	LR	LR	08 57 19.7	
	comp=Z,9.3nm,18.1s,baz=215,slow=38						
SONM	Songino Array	63.83	331	P	P	08 33 48.0	+0.5
AKUT	Akutan	71.36	27	P	P	08 34 33.3	-1.0
VNDA	Vanda	72.46	177	P	P	08 34 39.4	-1.1
VNDA				IAmb	IAmb	08 34 40.1	
	comp=Z,4.6nm,1.4s						
AAK	Ala-Archa	80.81	315	P	P	08 35 29.5	+1.4
	comp=Z,3.5nm,0.3s,baz=107,slow=7.5,SNR=23						
	comp=Z,3.5nm,0.3s						
M20K	Styx River	81.27	25	P	P	08 35 30.6	+0.5
M20K				IAmb	IAmb	08 36 02.0	
	comp=Z,9.6nm,1.4s						
G18K	Tagagawik	81.33	20	P	P	08 35 28.3	-1.9
G18K				IAmb	IAmb	08 35 41.3	
	comp=Z,8.4nm,1.4s						
C18K	Utukok River	82.17	17	P	P	08 35 33.0	-1.6
C18K				IAmb	IAmb	08 35 36.6	
	comp=Z,7.6nm,1.5s						
E19K	Redstone River	82.68	19	P	P	08 35 35.9	-1.3
E19K				IAmb	IAmb	08 35 43.5	
	comp=Z,9.7nm,1.5s						
C19K	Lookout Ridge	82.91	17	P	P	08 35 37.3	-1.1
C19K				IAmb	IAmb	08 35 46.3	
	comp=Z,4.3nm,1.5s						
D19K	Kuna River	82.99	18	P	P	08 35 36.8	-2.0
TRF	Thorofare Moun	83.16	24	P	P	08 35 39.2	-0.8
TRF				IAmb	IAmb	08 36 20.9	
	comp=Z,15nm,1.5s						
M24K	Tolsona, Glenn	84.31	26	P	P	08 35 45.5	-0.1
ILAR	Eielson Array	85.08	23	P	P	08 35 46.0	-3.3
	comp=Z,1.0nm,0.7s,baz=257,slow=5.0,SNR=15						
	comp=Z,1.0nm,0.7s						
SIV	San Ignacio	145.16	128	PKPbc	PKPbc	08 42 48.8	-2.3
	comp=Z,3.4nm,0.7s,baz=238,slow=4.0,SNR=21						

GUC 27 08:27:19.1±0.8, 34°.95S×73°.78W, h27^{km}±5^{km}, ML3.6, 2C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	Hualane	1.52	93	*e*P	Pn	08 27 45.0	+0.4
GO05				*e*S	Sn	08 28 03.8	+0.3
BO03	Pichilemu	1.57	74	*i* P	Pn	08 27 45.1	-0.1
BO03				*e*S	Sn	08 28 04.7	+0.2
BO03				IAML		08 28 05.7	
	comp=E,998nm,0.2s						
BI05	Punta Hualpn	1.86	165	*e*P	Pn	08 27 46.7	-2.4
BI05				*e*S	Sn	08 28 09.7	-2.1
BI05				IAML		08 28 11.4	
	comp=N,868nm,0.5s						
VA05	Santo Domingo	2.21	55	*e*P	Pn	08 27 53.2	-0.7
VA05				*e*S	Sn	08 28 20.0	-0.4
VA05				IAML		08 28 22.2	
	comp=N,1µm,0.5s						
BO01	Tunca	2.29	77	*e*P	Pn	08 27 55.5	+0.3
BO01				*e*S	Sn	08 28 23.6	+1.1
BO01				IAML		08 28 25.2	
	comp=N,310nm,0.6s						
MT01	Popeta	2.36	63	*e*P	Pn	08 27 55.3	-0.7
MT01				*e*S	Sn	08 28 22.8	-1.2
MT01				IAML		08 28 25.0	
	comp=E,287nm,0.4s						
BO02	Sierra Bellavi	2.47	87	⇑*i*P	Pn	08 27 58.9	+1.2
BO02				*e*S	Sn	08 28 29.0	+1.9
MT09	Talagante	2.59	64	*e*P	Pn	08 27 59.1	-0.2
BO04	La Punta	2.79	71	*e*P	Pn	08 28 02.9	+0.9
BO04				*e*S	Sn	08 28 36.3	+1.5
BO04				IAML		08 28 37.6	
	comp=E,323nm,0.4s						
MT12	Pirque	2.94	67	*e*P	Pn	08 28 04.7	+0.6
MT12				*e*S	Sn	08 28 40.0	+1.5
MT05	Renca	2.96	59	*e*P	Pn	08 28 05.7	+1.3
MT05				*e*S	Sn	08 28 39.4	+0.2
ROCH	El Roble	3.03	50	*e*P	Pb	08 28 05.2	-7.3
ROCH				*e*P	Pn	08 28 05.0	-0.5
MT16	CCHEN	3.10	62	⇑*e*P	Pn	08 28 07.0	+0.7
MT16				*e*S	Sn	08 28 43.0	+0.5
MT16				IAML		08 28 46.9	
	comp=E,233nm,0.5s						
PEL	Peldehue	3.14	56	⇓*e*P	Pn	08 28 07.2	+0.4
VA06	Catapilco	3.15	42	*e*P	Pn	08 28 05.5	-1.4
VA06				*e*S	Sn	08 28 42.1	-1.6
MT10	Hacienda Santa	3.17	59	*e*P	Pn	08 28 08.0	+0.6
MT10				*e*S	Sn	08 28 45.4	+1.1
VA03	San Esteban	3.46	52	*e*P	Pn	08 28 11.3	0.0
VA03				*e*S	Sn	08 28 52.4	+0.9
CO02	Combarbal	4.40	33	*e*P	Pn	08 28 23.2	-1.1

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*IDC **27** 08:33:50.4±0.5, 2°.84N×127°.22E, h0^{km}, mb4.2/16, mbtmp4.2/16, MS3.1/8, Error ellipse: s-maj=25.4km s-min=9.3km az=72.0*

*DJA **27** 08:33:58.2±0.4, 3°N±5°×12°7E±°, h10^{km}, M4.5/13, mb4.7/7,* *mB5.1/3, MLv4.4/13, Mw(mB)4.5/3*

NEIC ***27*** *08:34:00.2±1.5, 2°.90N±0°.05×127°.3E±0°.1, h70km±5km, mb4.4/36, Error ellipse: s-maj=15.8km s-min=7.1km az=76.0*

ISC 27 08:33:57.9±0.4, **2°.93N**±0°.05×**127°.35E**±0°.08, **h49km, n88, σ1s.81**/88, **mb4.4**/32, **MS2.9**/6, **1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAMI	Galela, Maluku	1.17	158	P	Pn	08 34 20.5	+2.6
SGSI	Sangihe	1.97	293	P	Pn	08 34 30.2	+1.3
TNTI	Ternate	2.14	180		Pn	08 34 34.7	+3.5
TNTI	Ternate	2.14	180	P	Pn	08 34 34.7	+3.5
DAV	Davao City (W)	4.48	337	Sn	Sn	08 35 56.7	+2.5
	41nm,0.3s,baz=224,slow=23,SNR=1.5						
DAV	Davao City (W)	4.48	337	Pn	Pn	08 35 07.1	+3.8
GTOI	Gorontalo	4.90	242	P	Pn	08 35 12.5	+3.4
SWI	Sorong	5.42	134	P	Pn	08 35 20.4	+4.1
	0.3nm63nm,0.5s						
SIJI	Sorong	5.43	134	P	Pn	08 35 20.4	+4.0
	0.2nm2µm37nm,0.4s						
MRSI	Marisa	5.93	246	P	Pn	08 35 27.1	+3.9
LUWI	Luwuk	6.04	229	Pn	Pn	08 35 25.6	+0.9
LUWI	Luwuk	6.04	229	P	Pn	08 35 29.2	+4.5
	83nm,0.8s						
NLAI	Namlea	6.13	182	P	Pn	08 35 29.0	+3.0
	0.3nm1µm23nm,0.4s						
TOLI2	Tolitoli	6.81	255	Pn	Pn	08 35 36.3	+1.0
FAKI	Fak Fak	7.59	140	Pn	Pn	08 35 49.7	+3.6
FAKI	Fak Fak	7.59	140	P	Pn	08 35 50.1	+4.0
TGY	Tagaytay City	12.79	331	LR	LR	08 42 09.8	
	comp=Z,417nm,19.8s,baz=332,slow=39						
SOEI	Soe	12.97	194	Pn	Pn	08 36 58.2	-1.5
JAY	Jayapura	14.40	112	LR	LR	08 42 14.2	
	comp=Z,99nm,18.0s,baz=343,slow=35						
MTN	Manton Dam	16.11	167	Pn	Pn	08 37 41.6	+0.4
MTN				IAmb	IAmb	08 37 47.3	
	comp=Z,75nm,1.5s						
KNRA	Kununurra	18.54	176	P	P	08 38 10.4	-0.2
KNRA				IAmb	IAmb	08 38 13.6	
	comp=Z,31nm,1.2s						
GUMO	Guam	20.30	58	LR	LR	08 45 14.2	
	comp=Z,32nm,20.7s,baz=245,slow=33						
FITZ	Fitzroy Crossi	20.96	185	P	P	08 38 35.6	-1.3
	comp=Z,3.0nm,0.5s,baz=335,slow=5.9,SNR=15						
FITZ				S	S	08 42 24.8	-3.2
	comp=Z,2.1nm,0.8s,baz=125,slow=9.3,SNR=2.0						
	comp=Z,3.0nm,0.5s						
FITZ	Fitzroy Crossi	20.96	185	P	P	08 38 36.4	-0.5
TPUB	Ta-pu	21.27	343	P	P	08 38 38.6	-1.8
YHNB	Yeheng	22.37	346	P	P	08 38 49.8	-2.4
COEN	Coen	22.97	137	P	P	08 38 57.9	-0.6
PMG	Port Moresby	23.23	122	LR	LR	08 48 03.8	
	comp=Z,107nm,21.6s,baz=346,slow=37						
PMG	Port Moresby	23.23	122	P	P	08 39 00.7	-0.4
PMG				IAmb	IAmb	08 39 10.7	
	comp=Z,12nm,1.2s						
WB0	Warramunga Arr	23.59	163		P	08 39 03.1	-1.3
WB0				IAmb	IAmb	08 39 04.8	
	comp=Z,14nm,0.5s						
WRAB	Tennant Creek	23.73	163		P	08 39 04.5	-1.3
WRA	Warramunga Arr	23.74	163	P	P	08 39 04.7	-1.1
	comp=Z,6.8nm,0.4s,baz=334,slow=11,SNR=52						
WRA				S	S	08 43 16.5	-1.4
	comp=Z,0.7nm,0.8s,baz=243,slow=33,SNR=1.7						
	comp=Z,6.8nm,0.4s						
WRA	Warramunga Arr	23.74	163	P	P	08 39 03.8	-2.0
WR8	Warramunga Arr	23.80	163	P	P	08 39 05.4	-0.9
WR8				IAmb	IAmb	08 39 07.0	
	comp=Z,26nm,1.1s						
MBWA	Marble Bar	25.07	197		P	08 39 17.6	-0.4
MBWA				IAmb	IAmb	08 39 20.1	
	comp=Z,35nm,1.4s						
PSA00	Pilbara Seismi	25.43	196	P	P	08 39 21.4	+0.1
PSA00				IAmb	IAmb	08 39 21.9	
	comp=Z,15nm,0.8s						
PSA00	Pilbara Seismi	25.43	196		P	08 39 20.7	-0.5
PSA00				IAmb	IAmb	08 39 21.9	
	comp=Z,7.1nm,0.9s						
AS31	Alice Springs	27.19	167		P	08 39 36.3	-0.8
ASAR	Alice Springs	27.19	167	P	P	08 39 36.0	-1.1
	comp=Z,1.6nm,0.4s,baz=342,slow=7.8,SNR=50						
ASAR				PcP	PcP	08 42 56.1	-0.5
	comp=Z,0.7nm,0.5s,baz=350,slow=2.3,SNR=5.7						
ASAR				S	S	08 44 17.2	+4.4
	comp=Z,0.9nm,0.9s,baz=352,slow=23,SNR=4.7						
	comp=Z,1.6nm,0.4s						
ASAR	Alice Springs	27.19	167	P	P	08 39 36.2	-1.0
NJ2	Nanjing	30.06	345	*e*P	P	08 40 04.5	+2.0
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
JNU	Nakatsue	30.22	6	LR	LR	08 54 17.7	
	comp=Z,14nm,20.1s,baz=104,slow=40						
CMAR	Chiang Mai Arr	31.81	301	P	P	08 40 17.4	-0.8
	comp=Z,0.7nm,0.3s,baz=108,slow=9.5,SNR=4.6						
CMAR				S	S	08 45 26.0	+0.6
	comp=Z,0.8nm,0.3s,baz=102,slow=14,SNR=1.5						
	comp=Z,0.7nm,0.3s						
CMAR	Chiang Mai Arr	31.81	301	P	P	08 40 16.0	-2.3
INKA	Innaminka	33.11	158	P	P	08 40 26.6	-2.7
INKA				IAmb	IAmb	08 40 29.2	
	comp=Z,5.4nm,1.3s						
FORT	Forrest	33.52	179	P	P	08 40 31.8	-1.2
FORT				IAmb	IAmb	08 40 32.8	
	comp=Z,7.0nm,0.8s						
MORW	Morawa	33.61	198	P	P	08 40 33.2	-0.6
PZH	PanZhiHua	33.95	316	P	P	08 40 38.8	+1.9
KSRS	Korea Array	34.37	1	P	P	08 40 39.6	-0.5
	comp=Z,2.9nm,0.6s,baz=178,slow=8.9,SNR=9.1						
KSRS				LR	LR	08 53 45.7	
	comp=Z,9.7nm,20.9s,baz=155,slow=35						
	comp=Z,2.9nm,0.6s						
MJAR	Matsushiro Arr	34.92	15	P	P	08 40 43.3	-1.7
	comp=Z,1.0nm,0.6s,baz=192,slow=9.1,SNR=2.0						
MJAR				LR	LR	08 52 11.2	
	comp=Z,43nm,21.8s,baz=195,slow=31						
	comp=Z,1.0nm,0.6s						
HNS	HongShan	36.22	343	⇓P	P	08 40 56.8	+0.6
HNS				pmax	pmax		
	comp=Z,14nm,1.2s						
EIDS	Eidsvold	36.34	142	P	P	08 40 56.7	-0.6
BBOO	Buckleboo	36.49	168	P	P	08 40 57.8	-0.7
BBOO				IAmb	IAmb	08 40 57.8	
	comp=Z,5.0nm,0.6s						
NWAO	Narrogin (SRO)	36.92	194	P	P	08 41 01.5	-0.7
STKA	Stephens Creek	37.16	160	P	P	08 41 03.5	-0.8
	comp=Z,3.8nm,0.3s,baz=339,slow=8.3,SNR=48						
STKA				PcP	PcP	08 43 23.3	-0.4
	comp=Z,3.4nm,0.7s,baz=1.9,slow=3.6,SNR=6.2						
	comp=Z,3.8nm,0.3s						
STKA	Stephens Creek	37.16	160		P	08 41 03.7	-0.6
BJI	Beijing	38.31	346	P	P	08 41 14.0	+0.2
BJI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC	Hu-ho-hao-te	40.35	341	*e*P	P	08 41 33.3	+2.3
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,52nm,4.9s						
ARMA	Armidale	40.46	147	P	P	08 41 32.1	+0.1
USRK	Ussuriysk Ar.	41.31	5	P	P	08 41 38.0	-0.7
	comp=Z,5.3nm,0.7s,baz=180,slow=7.1,SNR=5.7						
	comp=Z,5.3nm,0.7s						
TOO	Toolangi	43.67	159	P	P	08 41 58.7	+0.6
TOO				IAmb	IAmb	08 42 12.0	
	comp=Z,6.6nm,1.4s						
PALK	Pallekele	46.65	277	LR	LR	09 02 47.6	
	comp=Z,19nm,18.3s,baz=88,slow=37						
ULN	Ulaanbaatar	48.07	342		P	08 42 33.0	+0.3
ULN				IAmb	IAmb	08 42 34.3	
	comp=Z,5.9nm,0.9s						
SONM	Songino Array	48.25	341	P	P	08 42 33.8	-0.3
	comp=Z,2.2nm,0.7s,baz=154,slow=8.6,SNR=11						
	comp=Z,2.2nm,0.7s						
SONM	Songino Array	48.25	341	P	P	08 42 35.0	+0.9
SONM				IAmb	IAmb	08 42 35.2	
	comp=Z,2.6nm,0.8s						
PETK	Petropavlovsk-	55.94	22	P	P	08 43 30.4	-0.6
	comp=Z,1.3nm,0.5s,baz=214,slow=7.3,SNR=5.6						
	comp=Z,1.3nm,0.5s						
PETK	Petropavlovsk-	55.94	22	P	P	08 43 30.7	-0.3
MKAR	Makanchi Array	58.57	325	P	P	08 43 49.3	-0.4
	comp=Z,0.6nm,0.5s,baz=117,slow=7.5,SNR=10						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	58.57	325	P	P	08 43 49.5	-0.2
MAKZ	Makanchi	58.75	325	P	P	08 43 51.3	+0.3
MAKZ				IAmb	IAmb	08 44 01.0	
	comp=Z,6.0nm,1.5s						
ZALV	Zalesovo Beam	61.58	333	P	P	08 44 09.4	-0.8
	comp=Z,1.1nm,0.5s,baz=142,slow=7.3,SNR=0.9						
	comp=Z,1.1nm,0.5s						
KURK	Kurchatov	62.75	327		P	08 44 18.5	+0.5
BVAR	Borovoye Array	68.33	327	P	P	08 44 52.9	-1.1
	comp=Z,1.8nm,0.6s,baz=132,slow=8.7,SNR=7.5						
	comp=Z,1.8nm,0.6s						
NRIK	Noril'sk	71.35	346	P	P	08 45 13.4	+1.1
	comp=Z,1.2nm,0.4s,baz=131,slow=6.2,SNR=6.6						
	comp=Z,1.2nm,0.4s						
NRIK	Noril'sk	71.35	346	P	P	08 45 13.9	+1.7
NRIK				IAmb	IAmb	08 45 20.3	
	comp=Z,3.4nm,0.8s						
AB31	Akbulak array	73.16	321	P	P	08 45 23.2	-0.3
ABKAR	Akbulak array	73.16	321	P	P	08 45 22.9	-0.5
AKTO	Aktyubinsk	74.67	322	P	P	08 45 32.3	0.0
	comp=Z,1.1nm,0.7s,baz=92,slow=3.7,SNR=2.5						
	comp=Z,1.1nm,0.7s						
C19K	Lookout Ridge	81.27	20	P	P	08 46 08.1	-0.5
C19K				IAmb	IAmb	08 46 23.6	
	comp=Z,8.3nm,1.5s						
D19K	Kuna River	81.64	21	P	P	08 46 10.6	0.0
E19K	Redstone River	81.74	22	P	P	08 46 12.1	+1.0
D20K	Etivluk River	82.23	21	P	P	08 46 13.5	-0.1
B20K	Meade River	82.32	20	P	P	08 46 13.8	-0.2
B20K				IAmb	IAmb	08 46 48.0	
	comp=Z,6.1nm,1.4s						
VNDA	Vanda	82.56	173	P	P	08 46 14.9	-0.2
	comp=Z,1.7nm,0.8s,baz=316,slow=5.5,SNR=6.3						
	comp=Z,1.7nm,0.8s						
VNDA	Vanda	82.56	173	P	P	08 46 14.9	-0.2
VNDA				IAmb	IAmb	08 46 15.7	
	comp=Z,2.9nm,1.1s						
TXAR	Lajitas Array	121.59	53	PKP	PKPdf	08 52 46.1	-1.0
	comp=Z,0.2nm,0.7s,baz=354,slow=3.3,SNR=2.1						
TORD	Torodi Ar. Bea	123.76	288	PKP	PKPdf	08 52 50.8	-0.7
	comp=Z,0.3nm,0.3s,baz=48,slow=1.7,SNR=2.7						
CFA	Coronel Fontan	147.91	154	PKPbc	PKPbc	08 53 38.0	-0.4
	comp=Z,1.2nm,0.5s,baz=206,slow=1.4,SNR=8.4						

TRN 27 08:36:24.9, 16°.86N×60°.91W, h25km, MD3.5, Far South-east of Barbuda., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DSDZ	La Diserade, G	0.57	196	*e*P	Pn	08 36 38.0	+0.6
DSDZ				*e*S	Sn	08 36 47.8	+1.9
DHSZ	Broadband at M	1.01	235	*e*P	Pb	08 36 44.1	+0.3
DHSZ				*e*S	Sn	08 37 00.4	+3.4
MMLZ	Guadeloupe Bro	1.10	222	*e*P	Pb	08 36 46.5	+1.3
MMLZ				*e*S	Sb	08 37 02.0	+3.0
ATGZ	Broadband at L	1.10	226	*e*P	Pb	08 36 46.1	+0.9
ATGZ				*e*S	Sb	08 37 01.9	+2.8
ANWB	Willy Bob	1.16	314	*e*P	Pb	08 36 47.0	+0.7
ANWB				*e*S	Sb	08 37 03.1	+2.2
TBG	Guadaloupe-3	1.23	215	*e*P	Pb	08 36 48.8	+1.3
TBG				*e*S	Sb	08 37 04.9	+1.9
MBWH	Windy Hill	1.24	265	*e*P	Pb	08 36 48.3	+0.7
MBWH				*e*S	Sb	08 37 04.5	+1.3
DWS	Wesley	1.35	197	*e*P	Pb	08 36 49.7	+0.3
DWS				*e*S	Sb	08 37 06.9	+0.6
DSLB	Salisbury	1.50	199	*e*P	Pb	08 36 52.3	+0.2
DSLB				*e*S	Sb	08 37 12.0	+1.3
SKI	Saint Kitts	1.81	285	*e*P	Pb	08 36 57.2	-0.3
SKI				*e*S	Sb	08 37 19.3	-0.5
BIM	Bigot	2.34	184	*e*P	Pn	08 37 03.4	+1.6
BIM				*e*S	Sb	08 37 32.4	-2.5
SLBI	Saint Lucia, B	2.83	181	*e*P	Pn	08 37 10.6	+2.1
SLBI				*e*S	Sn	08 37 43.4	+1.7
MCLT	Moule a Chique	3.14	181	*e*P	Pn	08 37 14.4	+1.6

NNC ***27*** *08:37:18.1±3.1, 52°.63N×76°.51E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=52.6km s-min=6.2km az=33.0, Suspected Mining explosion.*

IDC 27 08:37:29.3±1.1, **51°.66N×75°.45E, h0km, mbtmp2.7**/3, **ML1.8**/3, **3C-1D, Error ellipse: s-maj=27.2km s-min=9.2km az=30.0, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	2.21	114	Pg	Pn	08 38 00.5	-6.7
	2.1nm,0.8s						
KURK				Lg	Lg	08 38 32.9	
	8.0nm,0.9s						
BVA0	Borovoye Array	3.39	296	⇑Pg	Pn	08 38 26.7	+3.2
	2.9nm,0.9s,baz=111,slow=18,SNR=6.6						
BVA0				⇑Lg	Lg	08 39 16.0	
	8.8nm,1.1s,baz=102,slow=29,SNR=5.0						
BVAR	Borovoye Array	3.39	296	Pn	Pn	08 38 24.3	+0.8
	baz=110,slow=12,SNR=7.4						
BVAR				Pg	Pb	08 38 28.2	-2.0
	baz=116,slow=15,SNR=5.0						
BVAR				Sn	Sn	08 39 02.8	-1.6
	baz=203,slow=37,SNR=1.6						
BVAR				Lg	Lg	08 39 13.5	
	0.1nm,0.3s,baz=98,slow=29,SNR=6.3						
	1.5nm,0.8s						
ZALV	Zalesovo Beam	6.13	64	Pn	Pn	08 39 00.9	-0.1
	0.2nm,0.3s,baz=254,slow=13,SNR=5.6						
ZALV				Lg	Lg	08 40 42.7	
	0.2nm,0.3s,baz=246,slow=28,SNR=6.1						
	0.6nm,0.4s						
I46RU	ZALESOVO INFRA	6.13	64	I	I	09 13 20.0	
	baz=252,slow=355,SNR=5.7						
MK31	Makanchi Array	6.62	135	⇑Sn	Sn	08 40 20.7	-3.2
	0.5nm,0.6s,baz=323,slow=21,SNR=4.7						
MK31				⇓Lg	Lg	08 40 58.7	
	4.1nm,0.9s,baz=332,slow=24,SNR=5.3						
MKAR	Makanchi Array	6.62	135	Pn	Pn	08 39 07.4	-0.4
	baz=327,slow=10,SNR=2.6						
MKAR				Sn	Sn	08 40 21.9	-1.9
	0.1nm,0.3s,baz=313,slow=25,SNR=6.1						
MKAR				Lg	Lg	08 40 55.2	
	0.2nm,0.3s,baz=335,slow=26,SNR=7.5						
	0.4nm,0.8s						
AAK	Ala-Archa	9.05	184	Lg	Lg	08 42 11.3	
	0.2nm,0.3s,baz=38,slow=23,SNR=1.6						

KRSC ***27*** *08:57:42.1±3.0, 59°.11N×158°.50E, h16km±26km, Ml5.0*

IDC ***27*** *08:57:45.1±0.5, 58°.80N×158°.93E, h0km, mb4.1/25, mbtmp4.2/28, ML4.7/2, MS3.7/30, Error ellipse: s-maj=11.6km s-min=9.6km az=176.0*

MOS ***27*** *08:57:46.8±1.1, 58°.95N×158°.87E, h22km, mb4.7/34, MS3.8/4, Error ellipse: s-maj=9.6km s-min=4.6km az=98.8*

NEIC ***27*** *08:57:48.4±1.2, 58°.96N±0°.10×159°.0E±0°.1, h16km±5km, mb4.6/73, Error ellipse: s-maj=13.9km s-min=11.2km az=182.0*

NERS ***27*** *08:57:50.4, 59°.13N×158°.44E, h16km*

ISC 27 08:57:47.2±0.3, **58°.92N**±0°.04×**158°.97E**±0°.02, **h10km, n452, σ1s.07**/458, **mb4.6**/91, **MS3.8**/31, **10C, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALN	Palana	0.54	71	PN	Pg	08 57 57.1	-0.6
PALN				S	Sg	08 58 06.1	+1.3
PALN	Palana	0.54	71	*e*P	Pg	08 57 57.1	-0.6
PALN				*e*S	Sg	08 58 06.1	+1.3
OSSR	Ossora	2.14	79	PN	Pn	08 58 22.7	-0.1
OSSR				S	Sn	08 58 51.1	+1.8
OSSR	Ossora	2.14	79	*e*P	Pn	08 58 22.8	-0.1
OSSR				*e*S	Sn	08 58 51.2	+1.8
SRDR	Sredinnyy	2.64	171	PN	Pn	08 58 31.4	+1.6
SRDR	Sredinnyy	2.64	171	*e*P	Pn	08 58 31.5	+1.6
KLY	Klyuchi	2.77	160	PN	Pn	08 58 31.2	-0.3
KLY	Klyuchi	2.77	160	*e*P	Pn	08 58 31.3	-0.3
KOZ	Kozyrevsk	2.91	170	PN	Pn	08 58 31.3	-2.2
KOZ	Kozyrevsk	2.91	170	*e*P	Pn	08 58 31.3	-2.2
CIRR	Tsirk	2.97	160	PN	Pn	08 58 36.2	+1.8
CIRR	Tsirk	2.97	160	*e*P	Pn	08 58 36.3	+1.8
ESO	Esso	3.01	183	PN	Pn	08 58 31.3	-3.5
ESO	Esso	3.01	183	*e*P	Pn	08 58 31.3	-3.5
KIRR	Kirishev	3.07	165	PN	Pn	08 58 36.8	+1.0
KIRR	Kirishev	3.07	165	*e*P	Pn	08 58 36.8	+1.0
BZWR	Bezymyannyi-We	3.08	164	PN	Pn	08 58 38.7	+2.8
BZWR	Bezymyannyi-We	3.08	164	*e*P	Pn	08 58 38.8	+2.8
BZGR	Bezymyannyi-Gr	3.13	162	PN	Pn	08 58 39.4	+2.8
BZGR	Bezymyannyi-Gr	3.13	162	*e*P	Pn	08 58 39.5	+2.8
BZP	Bezymyannyi-Pe	3.13	164	PN	Pn	08 58 40.1	+3.4
BZP	Bezymyannyi-Pe	3.13	164	*e*P	Pn	08 58 40.2	+3.4
KMNR	Kamenistaya	3.25	167	PN	Pn	08 58 37.7	-0.5
KMNR	Kamenistaya	3.25	167	*e*P	Pn	08 58 37.7	-0.5
TILK	Tilichiki	3.94	64	PN	Pn	08 58 46.7	-0.9
TILK	Tilichiki	3.94	64	*e*P	Pn	08 58 46.8	-0.9
TLAR	Talaya	3.97	307	*e*P	Pn	08 58 46.9	-1.2
TLAR				Pgmax		08 59 05.4	
	430nm,0.9s						
TLAR				*e*Sg	Sb	08 59 47.1	+1.8
TLAR				Sgmax		09 00 11.4	
	1µm,0.7s						
TLAR				Sgmax		09 00 11.4	
	640nm,0.6s						
TLAR	Talaya	3.97	307	*e*PN	Pn	08 58 46.9	-1.2
GADL	Gadlja	4.00	284	*e*P	Pn	08 58 47.3	-1.1
GADL				*e*Pg	Pb	08 58 59.9	+2.3
GADL				Pgmax		08 59 07.7	
	310nm,1.1s						
GADL				*e*Sg	Sb	08 59 49.2	+3.3
GADL				Sgmax		09 00 05.2	
	4µm,1.0s						
GADL				Sgmax		09 00 05.2	
	940nm,0.6s						
GADL	Gadlja	4.00	284	*e*PN	Pn	08 58 47.3	-1.1
MA2	Magadan	4.26	282	Pn	Pn	08 58 51.5	-0.6
	3.4nm,0.3s,baz=107,slow=12,SNR=14						
MA2				Pg	Pb	08 59 05.5	+3.3
	13nm,0.3s,baz=89,slow=12,SNR=15						
MA2				Lg	Lg	08 59 58.8	
	18nm,0.3s,baz=2.3,slow=15,SNR=11						
MA2				LR	LR	09 00 33.9	
	comp=Z,802nm,18.0s,baz=104,slow=40						
	36nm,0.8s						
MA2	Magadan	4.26	282		Pn	08 58 52.0	-0.1
MA2	Magadan	4.26	282	*e*P	Pn	08 58 51.5	-0.6
MA2				*e*Pg	Pb	08 59 03.9	+1.7
MA2				Pgmax		08 59 09.9	
	220nm,0.8s						
MA2				*e*Sg	Sb	08 59 58.3	+4.7
MA2				Sgmax		09 00 03.9	
	930nm,0.9s						
MA2				Sgmax		09 00 03.9	
	140nm,0.7s						
MA2	Magadan	4.26	282	*ce*PN	Pn	08 58 50.4	-1.7
MA2				pmax	pmax		
	comp=Z,42nm,0.8s						
MA2	Magadan	4.26	282	P	Pn	08 58 51.8	-0.3
MGD	Magadan 1	4.35	289	*e*P	Pn	08 58 52.0	-1.3
MGD				Pmax		08 58 54.3	
	comp=Z,60nm,0.5s						
MGD				*e*Sg	Sb	08 59 57.8	+1.7
MGD				Sgmax		09 00 13.0	
	comp=Z,530nm,0.8s						
MGD				Sgmax		09 00 13.0	
	comp=Z,440nm,0.6s						
MGD	Magadan 1	4.35	289	*e*PN	Pn	08 58 52.0	-1.3
KMSK	Kamenskaya	5.03	42	PN	Pn	08 59 01.8	-0.7
KMSK	Kamenskaya	5.03	42	*e*P	Pn	08 59 01.9	-0.7
SEY	Seymchan	5.15	324	Pn	Pn	08 59 04.7	+0.4
	comp=Z,3.7nm,0.3s,baz=129,slow=14,SNR=19						
SEY				Pg	Pg	08 59 22.3	-3.4
	comp=Z,3.0nm,0.3s,baz=140,slow=19,SNR=10						
SEY				Lg	Lg	09 00 31.4	
	comp=Z,13nm,0.3s,baz=160,slow=14,SNR=6.5						
SEY				LR	LR	09 01 15.9	
	comp=Z,754nm,19.4s,baz=150,slow=40						
SEY	Seymchan	5.15	324	*e*P	Pn	08 59 04.3	+0.1
SEY				*e*Pg	Pb	08 59 21.7	+4.5
SEY				Pgmax		08 59 26.2	
	comp=Z,40nm,0.9s						
SEY				*e*Sg	Sb	09 00 24.2	+5.2
SEY				Sgmax		09 01 02.7	
	comp=Z,270nm,0.9s						
SEY				Sgmax		09 01 02.7	
	comp=Z,180nm,0.7s						
SEY	Seymchan	5.15	324	*e*PN	Pn	08 59 04.3	+0.1
TLON	Talon	5.35	283	*e*Pg	Pb	08 59 22.6	+2.0
TLON				*e*Sg	Sb	09 00 31.5	+6.8
TLON				Sgmax		09 00 39.5	
	comp=Z,2µm,0.9s						
TLON				Sgmax		09 00 39.5	
	comp=Z,420nm,0.7s						
PEA0B	Petropavlovsk-	5.87	188	Pn	Pn	08 59 15.1	+0.9
PEA0B	Petropavlovsk-	5.87	188	PN	Pn	08 59 15.1	+0.9
PETK	Petropavlovsk-	5.87	188	Pn	Pn	08 59 12.6	-1.5
	comp=Z,0.3nm,0.3s,baz=50,slow=16,SNR=4.0						
PETK				Pg	Pb	08 59 29.9	+0.3
	comp=Z,0.4nm,0.3s,baz=38,slow=17,SNR=5.6						
PETK				Lg	Lg	09 00 48.1	
	comp=Z,0.1nm,0.3s,baz=61,slow=43,SNR=1.3						
PETK				LR	LR	09 01 44.7	
	comp=Z,285nm,18.1s,baz=18,slow=42						
PETK	Petropavlovsk-	5.87	188	Pn	Pn	08 59 13.9	-0.2
SUUS	Susuman	6.54	311	*e*P	Pn	08 59 23.9	+0.5
SUUS				*e*Pg	Pg	08 59 50.8	-1.5
SUUS				*e*Sg	Sg	09 01 10.0	-6.9
SUUS				Sgmax		09 01 30.6	
	comp=Z,440nm,1.0s						
SUUS				Sgmax		09 01 30.6	
	comp=Z,100nm,0.8s						
SUUS	Susuman	6.54	311	*e*PN	Pn	08 59 23.9	+0.5
BILL	Bilibino	9.71	16	Pn	Pn	09 00 05.7	-1.0
BILL	Bilibino	9.71	16	*e*P	Pn	09 00 11.7	+5.0
BILL				*e*Sg		09 02 57.8	
BILL				Sgmax		09 03 21.4	
	comp=Z,360nm,1.7s						
BILL				Sgmax		09 03 21.4	
	comp=Z,170nm,1.8s						
BILL	Bilibino	9.71	16	*e*PN	Pn	09 00 11.7	+5.0
SHEM	Shemya Is, Ala	10.52	120	LR	LR	09 03 47.9	
	comp=Z,228nm,18.6s,baz=303,slow=35						
YAK	Yakutsk	14.71	295	Pn	Pn	09 01 15.2	+0.2
	comp=Z,3.1nm,0.3s,baz=305,slow=5.4,SNR=9.3						
YAK				Lg	Lg	09 05 32.2	
	comp=Z,2.4nm,0.3s,baz=142,slow=20,SNR=8.9						
	comp=Z,12nm,0.5s						
YAK	Yakutsk	14.71	295	Pn	Pn	09 01 16.2	+1.3
YAK	Yakutsk	14.71	295	*e*P	Pn	09 01 13.1	-1.8
YAK				*e*S	Sn	09 03 56.7	-1.0
YAK				pmax	pmax		
	comp=Z,45nm,1.4s						
YAK				pmax	pmax		
	comp=E,34nm,1.4s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.4s						
YAK				smax	smax		
	comp=E,127nm,4.6s						
YAK				smax	smax		
	comp=N,88nm,4.1s						
YAK				MLR	MLR		
	comp=Z,518nm,15.0s						
YAK				MLR	MLR		
	comp=E,366nm,16.0s						
GAMB	Gambell	14.79	58	P	Pn	09 01 14.8	-1.3
	baz=265						
SPIA	Saint Paul Isl	16.31	83	Pn	Pn	09 01 35.7	-0.3
SPIA	Saint Paul Isl	16.31	83	P	Pn	09 01 35.6	-0.4
	baz=289						
TNA	Tin City	16.62	53	P	Pn	09 01 39.5	-0.4
	baz=262						
P08K	Saint George I	16.87	84	P	Pn	09 01 43.2	0.0
	baz=291						
F14K	Arctic Creek	17.27	53	P	Pn	09 01 46.9	-1.2
	baz=264						
M11K	Mekoryuk	17.54	70	P	Pn	09 01 50.4	-0.9
	baz=281						
ANM	Nome	17.61	56	P	Pn	09 01 51.9	-0.4
	baz=268						
TIXI	Tiksi	17.63	328	LR	LR	09 09 39.8	
	comp=E,188nm,18.6s,baz=198,slow=40						
TIXI	Tiksi	17.63	328	*i* P	Pn	09 01 52.8	+0.4
ASAJ	Asahikawa	17.91	221	LR	LR	09 09 21.1	
	comp=E,65nm,18.7s,baz=7.5,slow=39						
F15K	North Star Dit	17.99	53	P	Pn	09 01 56.5	-0.5
	baz=265						
C16K	Lisburne Hills	18.13	44		Pn	09 01 58.3	-0.4
C16K	Lisburne Hills	18.13	44	P	Pn	09 01 58.0	-0.7
	baz=257						
G15K	Niukluk	18.20	55	P	Pn	09 01 59.2	-0.3
	baz=268						
ZEA	Zeya	18.22	267	*e*P	Pn	09 02 00.5	+0.6
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA				MLR	MLR		
	comp=E,100nm,15.0s						

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ZEA                               MLR   MLR
      comp=Z,300nm,14.0s
J14K  Nanvaranak Lak   18.47  62  P     P      09 02 02.8  0.0
      baz=275
NIKH  Nikolski High    18.84  94  P     P      09 02 07.7 +0.8
      baz=302
D17K  Noatak River     18.86  47  P     P      09 02 07.0  0.0
      baz=261
M13K  Dall Lake        18.92  69  P     P      09 02 07.8 +0.1
      baz=282
G16K  Koyuk River      18.92  54  P     P      09 02 07.5 -0.2
      baz=268
C17K  DeLong Mountai   18.96  44  P     P      09 02 07.8 -0.4
      baz=259
H16K  Elim             18.97  56  P     P      09 02 08.4 +0.3
      baz=271
RDOG  Red Dog Mine     18.98  46  P     P      09 02 08.1 -0.2
      baz=260
L14K  Kuka Creek       19.06  66  P     P      09 02 09.3 +0.1
      baz=280
E17K  Hotham Inlet     19.25  49  P     P      09 02 11.5 +0.2
      baz=264
F17K  Baldwin Pennin   19.43  51  P     P      09 02 13.4 +0.2
      baz=266
K15K  Wolf Creek Mou   19.46  63  P     P      09 02 14.0 +0.4
      baz=278
M14K  Bethel           19.52  68  P     P      09 02 14.8 +0.5
      baz=282
L15K  Ungalak Mounta   19.57  65  P     P      09 02 15.1 +0.2
      baz=280
G17K  Kiwalik Mounta   19.64  53  P     P      09 02 16.2 +0.6
      baz=270
I17K  Unalakleet       19.67  58  P     P      09 02 16.9 +1.0
I17K  Unalakleet       19.67  58  P     P      09 02 16.3 +0.4
      baz=274
C18K  Utukok River     19.71  44  P     P      09 02 16.7 +0.4
      baz=260
E18K  Tukpahlearik C   19.76  48  P     P      09 02 17.4 +0.5
      baz=264
J16K  Anvik River      19.76  60  P     P      09 02 17.2 +0.3
      baz=276
N14K  Kuskokwak Cree   19.84  70  P     P      09 02 18.5 +0.7
      baz=285
H17K  Granite Mounta   19.96  55        P      09 02 18.0 -1.1
H17K  Granite Mounta   19.96  55  P     P      09 02 18.9 -0.2
      baz=272
HEH   HeiHe            20.07 258 eP     P      09 02 19.5 -0.8
HEH                               pmax  pmax
      comp=Z,14nm,0.8s
HEH                               LR    LR
      comp=N,420nm,13.0s
HEH                               LR    LR
      comp=E,220nm,12.7s
HEH                               LR    LR
      comp=Z,490nm,13.9s
A19K  Wainwright       20.07  40  P     P      09 02 20.2  0.0
      baz=256
M15K  Kasigluk River   20.14  68  P     P      09 02 21.4 +0.4
      baz=283
O14K  Tigyukauivet M   20.23  72  P     P      09 02 22.3 +0.3
      baz=287
C19K  Lookout Ridge    20.36  43  P     P      09 02 23.0 -0.5
      baz=261
J17K  VABM Dome        20.43  60  P     P      09 02 24.6 +0.3
      baz=277
G18K  Tagagawik        20.46  52  P     P      09 02 25.1 +0.6
      baz=270
L16K  Owhat River      20.51  64  P     P      09 02 25.6 +0.5
      baz=281
N15K  Kwethluk River   20.56  69  P     P      09 02 25.7 +0.1
      baz=285
H18K  Honhosa River    20.61  54  P     P      09 02 26.8 +0.7
      baz=273
FALS  False Pass       20.75  85  P     P      09 02 28.7 +1.0
      baz=297
D19K  Kuna River       20.81  45  P     P      09 02 28.6 +0.3
      baz=264
F19K  Shaleruckik Mo   20.83  50  P     P      09 02 28.9 +0.5
      baz=269
K17K  Iditarod         20.88  61        P      09 02 29.8 +0.8
K17K                              IAmb  IAmb   09 02 42.3
      comp=Z,24nm,1.0s
K17K  Iditarod         20.88  61  P     P      09 02 29.5 +0.5
      baz=279
M16K  Timber Creek     20.89  66  P     P      09 02 29.4 +0.2
      baz=283
O15K  Ungalikthiuk R   20.96  72  P     P      09 02 30.2 +0.3
      baz=287
L17K  Donlin           20.98  63  P     P      09 02 30.8 +0.7
      baz=281
E19K  Redstone River   21.06  48        P      09 02 30.6 -0.4
E19K                              IAmb  IAmb   09 02 34.7
      comp=Z,16nm,0.9s
E19K  Redstone River   21.06  48  P     P      09 02 31.4 +0.4
      baz=268,SNR=14
S12K  Black Hills      21.08  82  P     P      09 02 31.7 +0.5
      baz=295
G19K  Purcell Mounta   21.10  52  P     P      09 02 32.1 +0.7
      baz=271
N16K  Nishlik Lake     21.12  68  P     P      09 02 31.9 +0.3
      baz=285
GCSA  Galena City Sc   21.26  55  P     P      09 02 33.3 +0.2
      baz=275
B20K  Meade River      21.35  41        P      09 02 33.7 -0.3
B20K                              IAmb  IAmb   09 02 54.6
      comp=Z,28nm,0.8s
B20K  Meade River      21.35  41  P     P      09 02 34.3 +0.3
      baz=261,SNR=21
D20K  Etivluk River    21.38  45  P     P      09 02 34.3 -0.1
      baz=265
H19K  Roundabout Mou   21.39  53  P     P      09 02 34.1 -0.4
      baz=273
J18K  Innoko River     21.48  59        P      09 02 35.5 -0.1
J18K  Innoko River     21.48  59  P     P      09 02 35.9 +0.4
      baz=278
M17K  Holitna River    21.53  65  P     P      09 02 36.5 +0.5
      baz=283
O16K  Kokwok River B   21.68  70  P     P      09 02 38.3 +0.6
      baz=287
L18K  Granite Mounta   21.70  62  P     P      09 02 38.4 +0.5
      baz=282
A21K  Barrow           21.76  37  P     P      09 02 38.5  0.0
      baz=258,SNR=11
N17K  Nushagak Hills   21.86  67  P     P      09 02 38.9 -0.7
      baz=285
J19K  Poorman          21.89  57  P     P      09 02 40.3 +0.5
J19K                              IAmb  IAmb   09 02 58.3
      comp=Z,27nm,1.4s
J19K  Poorman          21.89  57  P     P      09 02 40.0 +0.1
      baz=278
P16K  Nushagak River   21.90  71  P     P      09 02 39.9 -0.2
      baz=289
H20K  Anotleneega Mo   22.04  53  P     P      09 02 41.7 +0.2
      baz=275
SDPT  Sand Point       22.05  82  P     P      09 02 41.6  0.0
      baz=296
C21K  Knifeblade Rid   22.08  43  P     P      09 02 42.3 +0.4
      baz=266
USRK  Ussuriysk Ar.    22.11 240  P     P      09 02 41.0 -1.4
      comp=Z,4.8nm,0.7s,baz=47,slow=11,SNR=5.1
      comp=Z,4.8nm,0.7s
USRK  Ussuriysk Ar.    22.11 240  P     P      09 02 41.0 -1.4
O17K  Koliganek Bris   22.11  69  P     P      09 02 42.3  0.0
      baz=287
B21K  Ikpikpuk River   22.18  42  P     P      09 02 42.9  0.0
      baz=265
A22K  Sinclair Lake    22.23  39  P     P      09 02 43.6 +0.1
      baz=261
M18K  Stony River      22.26  64  P     P      09 02 44.4 +0.4
      baz=284
N18K  Kilae Creek      22.44  66  P     P      09 02 46.4 +0.5
      baz=286
J20K  Nowinta River    22.50  57        P      09 02 46.4 -0.1
J20K                              IAmb  IAmb   09 02 50.8
      comp=Z,21nm,0.9s
J20K  Nowinta River    22.50  57  P     P      09 02 46.8 +0.3
      baz=279
F21K  Alatna River     22.51  49  P     P      09 02 46.9 +0.3
      baz=272
G21K  Allakaket        22.53  50  P     P      09 02 47.4 +0.6
G21K                              IAmb  IAmb   09 02 50.4
      comp=Z,31nm,1.0s
G21K  Allakaket        22.53  50  P     P      09 02 47.6 +0.9
      baz=273,SNR=21
L19K  White Mountain   22.55  62  P     P      09 02 47.4 +0.3
      baz=283
P17K  Kvichak River    22.61  70  P     P      09 02 48.0 +0.4
      baz=289
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B22K  Teshekpuk Lake   22.66  40  P     P      09 02 48.4 +0.4
      baz=264
K20K  Telida           22.67  59  P     P      09 02 48.4 +0.1
      baz=281
Q16K  King Salmon      22.68  71  P     P      09 02 49.1 +0.8
      baz=290
CHNA  Chernabura Isl   22.73  82  P     P      09 02 50.1 +1.1
      baz=298
D22K  Ayikyak River    22.82  44  P     P      09 02 49.8  0.0
      baz=268
H21K  Melozitna Rive   22.89  53  P     P      09 02 50.6  0.0
      baz=276
N19K  Bonanza Creek    23.07  65  P     P      09 02 52.9 +0.4
      baz=286
E22K  Anaktuvuk Pass   23.13  46  P     P      09 02 53.4 +0.3
      baz=271
P18K  Big Mountain,    23.14  69  P     P      09 02 53.9 +0.7
      baz=289
R17L  Mt. Peulik Vol   23.20  74  P     P      09 02 53.9 +0.1
      baz=292
Q17K  Contact Creek    23.20  72  P     P      09 02 54.1 +0.2
      baz=291
I21K  Tanana           23.29  54  P     P      09 02 55.2 +0.6
      baz=278
CHUM  Lake Minchumin   23.35  57  P     P      09 02 55.7 +0.5
      baz=281,SNR=8.0
M20K  Styx River       23.41  62  P     P      09 02 56.2 +0.2
      baz=285
H22K  Ishtalitna Cre   23.45  52  P     P      09 02 55.9 -0.4
      baz=277
ACHA  Angle Creek He   23.50  72  P     P      09 02 56.6 -0.2
ACHA                              IAmb  IAmb   09 03 22.7
      comp=Z,21nm,1.4s
D23K  Nanushuk River   23.54  44  P     P      09 02 57.9 +0.7
D23K  Nanushuk River   23.54  44  P     P      09 02 56.7 -0.4
      baz=270
C23K  Itkillik River   23.58  42  P     P      09 02 57.5  0.0
      baz=268
PPLA  Purkeypile       23.60  59        P      09 02 58.2 +0.3
PPLA                              IAmb  IAmb   09 03 02.3
      comp=Z,23nm,1.0s
PPLA  Purkeypile       23.60  59  P     P      09 02 58.0 +0.1
      baz=283
COLD  Coldfoot         23.79  48        P      09 02 59.6  0.0
COLD                              IAmb  IAmb   09 03 02.0
      comp=Z,16nm,1.0s
COLD  Coldfoot         23.79  48  P     P      09 02 59.4 -0.2
      baz=275,SNR=13
BPAW  Bear Paw Mtn.    23.88  56        P      09 03 00.9 +0.4
BPAW                              IAmb  IAmb   09 03 04.5
      comp=Z,16nm,1.2s
BPAW  Bear Paw Mtn.    23.88  56  P     P      09 03 00.7 +0.1
      baz=281
G23K  Bananza Creek    23.90  50  P     P      09 03 00.3 -0.4
      baz=276
TOLK  Toolik Lake Re   23.95  45  P     P      09 03 01.0 -0.1
      baz=272
E23K  Chandalar        23.96  46  P     P      09 03 01.5 +0.2
E23K                              IAmb  IAmb   09 03 04.8
      comp=Z,25nm,1.1s
E23K  Chandalar        23.96  46  P     P      09 03 01.2  0.0
      baz=273,SNR=17
KTH   Kantishna Hill   24.02  58        P      09 03 03.0 +1.2
Q19K  Cape Douglas,    24.06  69  P     P      09 03 03.0 +0.8
      baz=291
SKT   Skwentna         24.12  61  P     P      09 03 03.9 +1.2
SKT                               IAmb  IAmb   09 03 09.5
      comp=Z,21nm,1.4s
SKT   Skwentna         24.12  61  P     P      09 03 03.9 +1.2
      baz=285
O20K  Slope Mountain   24.16  66  P     P      09 03 04.3 +1.1
      baz=289
R18K  Karluk           24.17  73  P     P      09 03 04.1 +0.9
      baz=293
D24K  Happy Valley     24.21  44  P     P      09 03 04.0 +0.6
      baz=271
C24K  Franklin Bluff   24.24  42  P     P      09 03 04.0 +0.2
      baz=270
CHIR  Chirikof Islan   24.31  77  P     P      09 03 05.4 +0.9
      baz=296
TRF   Thorofare Moun   24.32  58        P      09 03 05.8 +1.1
TRF                               IAmb  IAmb   09 03 08.9
      comp=Z,23nm,1.0s
TRF   Thorofare Moun   24.32  58  P     P      09 03 04.9 +0.1
      baz=283,SNR=7.9
L22K  Petersville      24.32  60  P     P      09 03 04.6 -0.1
L22K                              IAmb  IAmb   09 03 22.1
      comp=Z,15nm,1.3s
E24K  Your Creek       24.38  46  P     P      09 03 05.5 +0.4
      baz=274
I23K  Minto, Yukon-K   24.39  53  P     P      09 03 05.7 +0.6
I23K  Minto, Yukon-K   24.39  53  P     P      09 03 05.4 +0.3
      baz=280
HILR  Hailar Array B   24.43 265  P     P      09 03 05.4 -0.2
      comp=Z,1.7nm,0.7s,baz=144,slow=20,SNR=1.9
HILR                              LR    LR     09 13 28.9
      comp=Z,182nm,19.4s,baz=40,slow=39
      comp=Z,1.7nm,0.7s
CUT   Chulitna         24.58  60  P     P      09 03 07.3 +0.4
      baz=285
NEA2  Nenana           24.61  55  P     P      09 03 07.2 +0.1
      baz=281,SNR=7.6
SUA   Susitna One      24.62  62  P     P      09 03 07.2 -0.3
SUA                               IAmb  IAmb   09 03 13.5
      comp=Z,18nm,1.1s
SUA   Susitna One      24.62  62  P     P      09 03 07.7 +0.2
      baz=287
F24K  Squaw Lake       24.66  48  P     P      09 03 08.0 +0.4
      baz=276
SII   Sitkinak Islan   24.72  75  P     P      09 03 08.4 +0.2
      baz=295
Q20K  Shuyak Island    24.78  70  P     P      09 03 09.0 +0.3
      baz=292
SYI   Shuyak Island    24.79  70  P     P      09 03 09.3 +0.5
MCK   McKinley         24.85  57        P      09 03 10.5 +1.2
MCK   McKinley         24.85  57  P     P      09 03 10.5 +1.2
MCK                               pmax  pmax
      comp=Z,41nm,1.2s
MCK   McKinley         24.85  57  P     P      09 03 09.2 -0.2
      baz=283,SNR=12
H24K  Noodor Dome      24.88  52        P      09 03 09.7  0.0
H24K  Noodor Dome      24.88  52  P     P      09 03 09.6  0.0
      baz=280
OHAK  Old Harbor       24.89  73  P     P      09 03 09.9 +0.3
      baz=294
G24K  Hadweenzic Riv   24.91  49  P     P      09 03 10.5 +0.6
      baz=278
KDAK  Kodiak Island    25.01  71  LR    LR     09 12 31.7
      comp=Z,178nm,18.9s,baz=271,slow=35
KDAK  Kodiak Island    25.01  71  P     P      09 03 11.0 +0.2
      baz=294
WRH   Wood River Hil   25.05  55  P     P      09 03 11.1  0.0
COLA  College          25.07  54  P     P      09 03 11.5 +0.2
COLA                              IAmb  IAmb   09 03 14.1
      comp=Z,15nm,0.8s
COLA  College          25.07  54 i P    P      09 03 10.0 -1.2
COLA                              pmax  pmax
      comp=Z,101nm,5.3s
COLA  College          25.07  54  P     P      09 03 11.4 +0.2
      baz=282
D25K  Kavik River      25.07  43  P     P      09 03 11.3 -0.1
      baz=273
CCB   Clear Creek Bu   25.13  54  P     P      09 03 11.7 -0.1
BRSE  Bradley Lake S   25.17  66  P     P      09 03 12.3  0.0
      baz=290
POKR  Poker Plat Res   25.19  53  P     P      09 03 12.6 +0.2
      baz=281
WAT1  Susitna Watana   25.24  59  P     P      09 03 13.2 +0.3
      baz=285
PMR   Palmer           25.32  62  P     P      09 03 14.0 +0.4
      baz=288
GHO   Glory Hole Cre   25.36  61  P     P      09 03 14.8 +0.8
GHO                               IAmb  IAmb   09 03 30.5
      comp=Z,27nm,1.5s
O22K  Cooper Landing   25.40  64  P     P      09 03 14.2 -0.1
      baz=290
G25K  Bearman Lake     25.44  49  P     P      09 03 14.1 -0.5
      baz=279
E25K  Arctic Village   25.47  46        P      09 03 15.8 +0.8
E25K  Arctic Village   25.47  46  P     P      09 03 15.7 +0.8
      baz=276,SNR=20
IL31                   25.49  54        P      09 03 14.4 -0.6
ILAR  Eielson Array    25.49  54  P     P      09 03 14.8 -0.3
      comp=Z,6.6nm,0.8s,baz=270,slow=7.0,SNR=52
      comp=Z,6.6nm,0.8s
ILAR  Eielson Array    25.49  54  P     P      09 03 15.0 -0.1
ILAR  Eielson Array    25.49  54  P     P      09 03 15.0 -0.1
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F25K  Christian Rive   25.50  47  P     P      09 03 15.7 +0.4
F25K                              IAmb  IAmb   09 03 19.9
      comp=Z,12nm,0.9s
F25K  Christian Rive   25.50  47  P     P      09 03 15.4 +0.2
      baz=278,SNR=15
HDA   Harding Lake     25.54  55  P     P      09 03 16.0 +0.4
HDA                               IAmb  IAmb   09 03 18.1
      comp=Z,12nm,0.8s
HDA   Harding Lake     25.54  55  P     P      09 03 16.3 +0.7
      baz=283,SNR=7.1
C26K  Camden Bay       25.55  42  P     P      09 03 15.8 +0.2
      baz=273
SML   Sawmill          25.62  61  P     P      09 03 16.4  0.0
      baz=288
SEW   Seward           25.66  65  P     P      09 03 16.9 +0.3
      baz=290
WAT6  Susitna Watana   25.66  59  P     P      09 03 16.7 -0.2
      baz=286
KNK   Knik Glacier     25.68  62  P     P      09 03 16.6 -0.4
KNK                               IAmb  IAmb   09 03 30.0
      comp=Z,15nm,0.8s
KNK   Knik Glacier     25.68  62  P     P      09 03 16.4 -0.6
      baz=288
DHY   Denali Highway   25.69  58  P     P      09 03 17.1  0.0
DHY                               IAmb  IAmb   09 03 20.5
      comp=Z,12nm,0.8s
DHY   Denali Highway   25.69  58  P     P      09 03 17.0  0.0
      baz=286
M23K  Glacier View     25.90  61  P     P      09 03 18.4 -0.5
      baz=288
PWL   Port Wells       25.92  63  P     P      09 03 18.9 -0.2
      baz=290
F26K  Sheenjek River   26.06  47  P     P      09 03 20.5 +0.3
      baz=279,SNR=7.3
SCM   Sheep Creek Mo   26.07  60  P     P      09 03 20.6 +0.1
      baz=288
J25K  Salcha River,    26.16  54  P     P      09 03 20.9 -0.4
      baz=284
MJAR  Matsushiro Arr   26.17 220  P     P      09 03 20.2 -1.3
      comp=Z,6.4nm,1.0s,baz=12,slow=10,SNR=7.8
MJAR                              LR    LR     09 13 19.6
      comp=Z,58nm,20.9s,baz=25,slow=36
      comp=Z,6.4nm,1.0s
K24K  Donnelly Dome    26.19  56  P     P      09 03 21.3 -0.2
      baz=285
G26K  Porcupine Rive   26.32  48        P      09 03 21.6 -1.0
G26K  Porcupine Rive   26.32  48  P     P      09 03 23.1 +0.6
      baz=280,SNR=6.4
GLI   Glacier Island   26.48  62  P     P      09 03 23.5 -0.7
      baz=290
M24K  Tolsona, Glenn   26.50  60  P     P      09 03 23.5 -0.9
      baz=288
PAX   Paxson           26.55  57  P     P      09 03 24.1 -0.7
      baz=287
RIDG  Independent Ri   26.61  56  P     P      09 03 24.8 -0.5
RIDG                              IAmb  IAmb   09 03 27.1
      comp=Z,16nm,0.9s
RIDG  Independent Ri   26.61  56  P     P      09 03 24.1 -1.2
      baz=286,SNR=6.7
P23K  Montague Islan   26.65  64  P     P      09 03 25.8 +0.2
      baz=292
KLU   Klutina          26.81  61  P     P      09 03 26.9 -0.3
      baz=290
HARP  HAARP            26.86  59  P     P      09 03 27.2 -0.4
      baz=288
SCRK  Sand Creek       26.91  55        P      09 03 26.8 -1.3
SCRK  Sand Creek       26.91  55  P     P      09 03 27.5 -0.6
      baz=286
I26K  Coal Creek Min   26.91  52  P     P      09 03 27.4 -0.6
      baz=284
E27K  Coleen River     26.93  45  P     P      09 03 27.8 -0.3
      baz=280
J26L  Joseph Creek     26.95  54  P     P      09 03 27.7 -0.7
      baz=285
D27M  Malcolm River    27.00  43  P     P      09 03 28.6 -0.2
      baz=278
G27K  Doyon Strip      27.17  48  P     P      09 03 30.1 -0.2
      baz=282
EYAK  Cordova Ski Ar   27.22  63  P     P      09 03 30.8  0.0
      baz=291
H27K  Steamboat Moun   27.34  49  P     P      09 03 32.0 +0.1
      baz=284
I27K  Kandik River     27.46  51  P     P      09 03 33.7 +0.7
I27K                              IAmb  IAmb   09 03 36.3
      comp=Z,8.9nm,1.0s
I27K  Kandik River     27.46  51  P     P      09 03 33.2 +0.2
      baz=285
L26K  Log Cabin Wild   27.46  57  P     P      09 03 32.7 -0.2
      baz=288
BMRM  Bremner River    27.59  61  P     P      09 03 33.7 -0.4
      baz=291
E28M  Babbage River    27.61  44  P     P      09 03 34.1 -0.1
      baz=280,SNR=5.5
F28M  Old Crow         27.68  46  P     P      09 03 34.6 -0.2
      baz=282
D28M  Stokes Point     27.77  42  P     P      09 03 35.1 -0.4
      baz=280
M26K  Nabesna, AK      27.82  58  P     P      09 03 35.3 -0.8
      baz=290
L27K  Beaver Creek,    28.11  56  P     P      09 03 38.2 -0.5
      baz=289
MCARA McCarthy VSAT    28.16  60  P     P      09 03 39.3 +0.2
      baz=291
I28M  Miner Creek      28.18  51  P     P      09 03 39.1 -0.3
      baz=286
E29M  Blow River       28.24  44  P     P      09 03 39.6 -0.2
      baz=282
M27K  Edge Creek, AK   28.32  58  P     P      09 03 40.6 -0.2
      baz=290
CRQE  Cirque           28.36  61  P     P      09 03 41.3 +0.1
      baz=292
G29M  Pine Creek       28.54  47  P     P      09 03 42.3 -0.2
      baz=285
H29M  Whitestone       28.59  49  P     P      09 03 42.7 -0.2
      baz=286
DAWY  Dawson           28.81  53  P     P      09 03 45.9 +0.9
DAWY  Dawson           28.81  53  P     P      09 03 45.1 +0.1
      baz=289
I29M  Ogilvie Camp,    28.86  51  P     P      09 03 45.5 +0.1
      baz=287
CTG   Chitna Glacier   29.07  60  P     P      09 03 47.2 -0.3
      baz=293
EPYK  Eagle Plains     29.19  48  P     P      09 03 47.8 -0.5
      baz=287
F30M  Barrier River    29.20  45  P     P      09 03 48.5 +0.1
      baz=285
G30M  tAoh Zraii Nji   29.21  47  P     P      09 03 48.1 -0.4
      baz=286
KSRS  Korea Array      29.38 237  P     P      09 03 49.0 -1.2
      comp=Z,2.1nm,0.8s,baz=33,slow=8.9,SNR=5.2
KSRS                              LR    LR     09 16 42.6
      comp=Z,41nm,18.1s,baz=40,slow=39
      comp=Z,2.1nm,0.8s
KSRS  Korea Array      29.38 237  P     P      09 03 49.0 -1.2
YUK8  Steele Glacier   29.65  59  P     P      09 03 52.1 -0.7
      baz=293
O28M  Mount Upton      29.66  60  P     P      09 03 52.1 -0.8
      baz=294
K29M  Barlow Dome      29.67  53  P     P      09 03 52.3 -0.3
      baz=290
I30M  Mount Dempster   29.67  50        P      09 03 52.5 -0.2
I30M  Mount Dempster   29.67  50  P     P      09 03 52.2 -0.5
      baz=289
L29M  L29M             29.67  55  P     P      09 03 52.3 -0.3
      baz=291
M29M  Somme Creek      29.77  56  P     P      09 03 53.0 -0.6
      baz=292
INK   Inuvik           29.84  44        P      09 03 54.4 +0.4
INK                               IAmb  IAmb   09 03 56.0
      comp=Z,13nm,1.4s
INK   Inuvik           29.84  44  P     P      09 03 54.4 +0.4
INK                               pmax  pmax
      comp=Z,13nm,1.4s
INK   Inuvik           29.84  44  P     P      09 03 54.1 +0.1
      baz=286
J30M  Hart River       29.90  52  P     P      09 03 54.5 -0.3
      baz=290
G31M  Satah River      29.96  46  P     P      09 03 54.8 -0.2
      baz=288
F31M  Tsiigehtchic     30.00  45        P      09 03 55.4  0.0
F31M                              IAmb  IAmb   09 03 58.0
      comp=Z,6.5nm,0.9s
F31M  Tsiigehtchic     30.00  45  P     P      09 03 55.5 +0.1
      baz=287
H31M  Peel River       30.28  49  P     P      09 03 57.7 -0.3
      baz=289
N30M  Aishikik Lake    30.76  58  P     P      09 04 02.1 -0.1
      baz=294
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HYT	**Haines Junctio**	**30.84**	**59**	P	**P**	**09 04 02.3**	**-0.8**
	baz=295						
NRIK	**Noril'sk**	**30.91**	**319**	*i* P	**P**	**09 04 02.2**	**-1.3**
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
P29M	**Windy Craggy**	**31.26**	**61**	P	**P**	**09 04 05.7**	**-1.0**
	baz=297						
N31M	**Braeburn, Yuko**	**31.32**	**57**	P	**P**	**09 04 06.6**	**-0.6**
	baz=295						
P30M	**Million Dollar**	**31.39**	**60**	P	**P**	**09 04 07.4**	**-0.5**
	baz=297						
TLY	**Talaya**	**31.49**	**281**	*i* P	**P**	**09 04 09.2**	**+0.4**
TLY				pmax	pmax		
	comp=Z,7.0nm,1.1s						
O30N	**Mendenhall**	**31.49**	**58**	P	**P**	**09 04 08.3**	**-0.4**
	baz=296						
A36M	**Sachs Harbour**	**31.56**	**35**		**P**	**09 04 09.4**	**+0.4**
A36M				IAmb	IAmb	09 04 12.7	
	comp=Z,9.7nm,0.9s						
A36M	**Sachs Harbour**	**31.56**	**35**	P	**P**	**09 04 09.8**	**+0.8**
	baz=286,SNR=9.8						
M31M	**Drury Creek, Y**	**31.61**	**55**	P	**P**	**09 04 09.8**	**+0.1**
	baz=295						
JNU	**Nakatsue**	**31.90**	**228**	LR	LR	09 16 31.8	
	comp=Z,39nm,18.0s,baz=348,slow=35						
ULN	**Ulaanbaatar**	**32.06**	**273**	*ce*P	**P**	**09 04 14.1**	**+0.1**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SONM	**Songino Array**	**32.42**	**274**	P	**P**	**09 04 16.0**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=70,slow=8.4,SNR=4.8						
SONM				PcP	**PcP**	**09 07 03.5**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=56,slow=1.5,SNR=5.1						
SONM				LR	LR	09 17 58.8	
	comp=Z,190nm,18.9s,baz=57,slow=38						
	comp=Z,0.9nm,0.8s						
SKAG	**Skagway**	**32.43**	**60**	P	**P**	**09 04 17.2**	**+0.4**
	baz=298						
S31K	**Pelican**	**32.74**	**63**	P	**P**	**09 04 19.6**	**0.0**
	baz=300						
C36M	**Paulatuk**	**32.77**	**40**	P	**P**	**09 04 20.3**	**+0.5**
C36M	**Paulatuk**	**32.77**	**40**	P	**P**	**09 04 19.7**	**-0.1**
	baz=291,SNR=12						
R32K	**Eaglecrest**	**33.38**	**62**	P	**P**	**09 04 25.2**	**0.0**
	baz=300						
SIT	**Sitka**	**33.63**	**64**	P	**P**	**09 04 27.5**	**+0.2**
	baz=302						
HHC	**Hu-ho-hao-te**	**34.58**	**260**	*e*P	**P**	**09 04 36.3**	**+0.4**
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,100nm,5.3s						
HHC				LR	LR		
	comp=N,80nm,7.8s						
HHC				LR	LR		
	comp=E,220nm,7.7s						
HHC				LR	LR		
	comp=Z,320nm,11.0s						
S34M	**Telegraph Cree**	**35.10**	**61**	P	**P**	**09 04 40.2**	**0.0**
	baz=302						
CRAG	**Craig**	**35.52**	**65**	P	**P**	**09 04 43.3**	**-0.4**
	baz=304						
HNS	**HongShan**	**35.62**	**253**	⇑P	**P**	**09 04 48.0**	**+3.2**
HNS				LR	LR		
	comp=N,330nm,12.3s						
HNS				LR	LR		
	comp=E,380nm,12.3s						
HNS				LR	LR		
	comp=Z,370nm,12.6s						
T35M	**Bob Quinn**	**36.01**	**62**	P	**P**	**09 04 47.9**	**0.0**
	baz=304						
V35K	**Ketchikan**	**36.31**	**65**	P	**P**	**09 04 50.5**	**0.0**
	baz=305						
TOAD	**Toad River Com**	**37.20**	**56**	P	**P**	**09 04 58.8**	**+0.6**
	baz=304						
NJ2	**Nanjing**	**37.97**	**243**	*e*P	**P**	**09 05 05.5**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ZAA0	**Zalesovo Array**	**39.35**	**296**		**P**	**09 05 17.0**	**+0.8**
ZALV	**Zalesovo Beam**	**39.35**	**296**	P	**P**	**09 05 17.4**	**+1.2**
	comp=Z,1.0nm,0.3s,baz=76,slow=17,SNR=14						
ZALV				LR	LR	09 21 10.0	
	comp=Z,46nm,19.1s,baz=35,slow=36						
	comp=Z,1.0nm,0.3s						
ZALV	**Zalesovo Beam**	**39.35**	**296**		**P**	**09 05 15.9**	**-0.3**
ZALV	**Zalesovo Beam**	**39.35**	**296**	P	**P**	**09 05 15.9**	**-0.3**
YKAW3	**Yellowknife Wh**	**39.41**	**47**		**P**	**09 05 16.6**	**+0.1**
YKA	**Yellowknife Ar**	**39.45**	**47**	P	**P**	**09 05 17.1**	**+0.2**
	comp=Z,3.3nm,0.8s,baz=305,slow=8.8,SNR=29						
YKA				PcP	**PcP**	**09 07 24.7**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=310,slow=4.0,SNR=4.4						
	comp=Z,3.3nm,0.8s						
DGZ	**Jazzator, Alta**	**40.81**	**290**	*i* P	**P**	**09 05 27.5**	**-1.1**
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SPITS	**Spitsbergen Ar**	**41.27**	**349**	P	**P**	**09 05 32.5**	**+0.6**
	comp=Z,7.9nm,0.8s,baz=67,slow=8.5,SNR=4.3						
	comp=Z,7.9nm,0.8s						
GTA	**Gaotai**	**41.70**	**269**	*e*P	**P**	**09 05 35.5**	**-0.5**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.4s						
GTA				LR	LR		
	comp=N,290nm,15.6s						
GTA				LR	LR		
	comp=E,220nm,14.5s						
GTA				LR	LR		
	comp=Z,370nm,15.6s						
LZH	**Lanzhou**	**42.13**	**262**	*e*P	**P**	**09 05 39.5**	**-0.1**
LZH				sP	sP	09 05 45.3	+1.4
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH				LR	LR		
	comp=N,170nm,13.2s						
LZH				LR	LR		
	comp=E,370nm,13.6s						
LZH				LR	LR		
	comp=Z,400nm,15.1s						
LZDM	**Lanzhou Array**	**42.31**	**262**	P	**P**	**09 05 41.2**	**0.0**
	comp=Z,0.8nm,0.3s,baz=70,slow=6.5,SNR=3.9						
	comp=Z,0.8nm,0.3s						
KURK	**Kurchatov**	**44.34**	**296**		**P**	**09 05 55.2**	**-1.8**
KURK	**Kurchatov**	**44.34**	**296**	*ce*P	**P**	**09 05 56.9**	**-0.1**
KURK				pmax	pmax		
	comp=Z,24nm,1.3s						
BLKN	**Baker Lake**	**44.69**	**37**		**P**	**09 05 59.2**	**-0.5**
BLKN				IAmb	IAmb	09 06 01.7	
	comp=Z,11nm,0.9s						
WMQ	**Urumqi**	**44.73**	**283**	*e*P	**P**	**09 06 01.8**	**+1.5**
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
MK31	**Makanchi Array**	**45.31**	**290**	*ce*P	**P**	**09 06 04.6**	**-0.2**
MKAR	**Makanchi Array**	**45.31**	**290**	P	**P**	**09 06 03.9**	**-0.9**
	comp=Z,1.9nm,0.9s,baz=54,slow=4.9,SNR=9.6						
MKAR				LR	LR	09 25 37.1	
	comp=Z,108nm,18.1s,baz=334,slow=37						
	comp=Z,1.9nm,0.9s						
MAKZ	**Makanchi**	**45.45**	**290**	P	**P**	**09 06 05.2**	**-0.8**
MAKZ	**Makanchi**	**45.45**	**290**	P	**P**	**09 06 05.2**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.3s						
EDM	**Edmonton**	**45.91**	**57**		**P**	**09 06 10.2**	**+0.7**
EDM	**Edmonton**	**45.91**	**57**	P	**P**	**09 06 10.2**	**+0.7**
EDM				pmax	pmax		
	comp=Z,12nm,0.8s						
BVAR	**Borovoye Array**	**46.44**	**304**	P	**P**	**09 06 13.3**	**-0.4**
	comp=Z,3.4nm,0.8s,baz=58,slow=8.9,SNR=14						
BVAR				PcP	**PcP**	**09 07 47.5**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=37,slow=3.6,SNR=2.5						
BVAR				LR	LR	09 27 41.5	
	comp=Z,241nm,19.0s,baz=43,slow=39						
	comp=Z,3.4nm,0.8s						
BORK	**Borovoye**	**46.46**	**304**		**P**	**09 06 13.9**	**+0.1**
BORK				IAmb	IAmb	09 06 14.4	
	comp=Z,5.4nm,0.9s						
BORK	**Borovoye**	**46.46**	**304**	*ce*P	**P**	**09 06 14.1**	**+0.3**
BORK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
EPH	**Ephrata**	**47.20**	**66**	P	**P**	**09 06 19.7**	**0.0**
EPH				IAmb	IAmb	09 06 20.0	
	comp=Z,3.1nm,0.8s						
WAH2	**Wahluke Slope**	**47.64**	**67**	P	**P**	**09 06 23.7**	**+0.6**
ARTI	**Arti**	**48.89**	**313**	LR	LR	09 30 33.5	
	comp=Z,176nm,19.4s,baz=39,slow=40						
ARTI	**Arti**	**48.89**	**313**	*c i*P	**P**	**09 06 32.4**	**-0.2**
ARTI						09 08 22.9	
ARTI				S	**S**	**09 13 35.9**	**+0.1**
ARTI				SS	**SS**	**09 17 04.3**	**-1.4**
ARTI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
FCC	**Fort Churchill**	**49.39**	**41**		**P**	**09 06 36.5**	**+0.1**
FCC	**Fort Churchill**	**49.39**	**41**	P	**P**	**09 06 36.5**	**+0.1**
FCC				pmax	pmax		
	comp=Z,13nm,1.0s						
YBH	**Yreka Blue Hor**	**49.79**	**74**	LR	LR	09 27 17.3	
	comp=Z,5.2nm,18.1s,baz=324,slow=36						
KIRV	**Kirov**	**50.41**	**320**	LR	LR	09 28 54.0	
	comp=Z,80nm,20.6s,baz=30,slow=37						
KIRV	**Kirov**	**50.41**	**320**	*ce*P	**P**	**09 06 44.2**	**+0.1**
PZH	**PanZhiHua**	**50.87**	**256**	P	**P**	**09 06 50.0**	**+1.8**
KLMR	**Klimovskoe**	**51.64**	**327**	*e*P	**P**	**09 06 51.6**	**-1.7**
KLMR				pmax	pmax		
	comp=Z,15nm,1.3s						
AAK	**Ala-Archa**	**52.13**	**292**		**P**	**09 06 57.5**	**0.0**
AAK				IAmb	IAmb	09 06 58.5	
	comp=Z,6.0nm,0.9s						
AAK	**Ala-Archa**	**52.13**	**292**	*i* P	**P**	**09 06 56.9**	**-0.6**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YHH	**Holmes Hill**	**53.20**	**63**		**P**	**09 07 05.5**	**0.0**
YNE	**Yellowstone No**	**53.41**	**62**	P	**P**	**09 07 06.7**	**-0.3**
YNE				IAmb	IAmb	09 07 10.2	
	comp=Z,5.5nm,0.8s						
AKTO	**Aktyubinsk**	**53.54**	**309**	LR	LR	09 32 18.2	
	comp=Z,114nm,18.2s,baz=26,slow=39						
AB31	**Akbulak array**	**53.66**	**307**		**P**	**09 07 08.3**	**-0.2**
RLMT	**Red Lodge**	**53.67**	**61**		**P**	**09 07 09.9**	**+1.0**
RLMT				IAmb	IAmb	09 07 12.4	
	comp=Z,5.9nm,0.8s						
KK31	**Karatay Array**	**53.68**	**295**		**P**	**09 07 08.5**	**-0.2**
KK31	**Karatay Array**	**53.68**	**295**	P	**P**	**09 07 08.5**	**-0.2**
KK31				pmax	pmax		
	comp=Z,11nm,0.9s						
KKAR	**Karatay Array**	**53.68**	**295**		**P**	**09 07 08.6**	**-0.1**
KKAR	**Karatay Array**	**53.68**	**295**	P	**P**	**09 07 08.6**	**-0.1**
KSH	**Kashi**	**53.79**	**288**	P	**P**	**09 07 13.8**	**+4.1**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ELK	**Elko**	**54.21**	**69**	LR	LR	09 30 49.6	
	comp=Z,91nm,18.0s,slow=37						
ELK	**Elko**	**54.21**	**69**		**P**	**09 07 12.4**	**-0.4**
ELK	**Elko**	**54.21**	**69**	P	**P**	**09 07 12.5**	**-0.4**
ELK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
NVAR	**Mina Array Bea**	**54.49**	**73**	P	**P**	**09 07 15.6**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=305,slow=7.3,SNR=11						
	comp=Z,1.7nm,0.8s						
FINES	**FINESS Array B**	**54.54**	**334**	P	**P**	**09 07 14.2**	**-0.5**
	comp=Z,3.2nm,0.9s,baz=55,slow=7.2,SNR=4.5						
FINES				LR	LR	09 37 00.5	
	comp=Z,40nm,18.1s,baz=38,slow=43						
	comp=Z,3.2nm,0.9s						
BW06	**Boulder Array**	**55.35**	**63**	P	**P**	**09 07 20.2**	**-0.9**
BW06				IAmb	IAmb	09 07 23.9	
	comp=Z,5.6nm,1.2s						
PDAR	**Pinedale Array**	**55.35**	**63**	P	**P**	**09 07 21.6**	**+0.5**
	comp=Z,2.2nm,0.8s,baz=340,slow=2.2,SNR=17						
PDAR				LR	LR	09 33 00.9	
	comp=Z,79nm,19.1s,baz=323,slow=38						
	comp=Z,2.2nm,0.8s						
BELG	**Belogornoye**	**55.95**	**316**	*i* P	**P**	**09 07 25.2**	**+0.2**
BELG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PSUT	**Pine Spring**	**56.60**	**70**	P	**P**	**09 07 30.1**	**-0.1**
PSUT				IAmb	IAmb	09 07 39.1	
	comp=Z,3.0nm,0.7s						
RSSD	**Black Hills**	**56.80**	**59**		**P**	**09 07 31.9**	**+0.5**
RSSD	**Black Hills**	**56.80**	**59**	P	**P**	**09 07 31.9**	**+0.5**
RSSD				pmax	pmax		
	comp=Z,13nm,1.4s						
SRU	**San Rafael Swe**	**57.75**	**67**	P	**P**	**09 07 37.9**	**-0.3**
SRU				IAmb	IAmb	09 07 42.4	
	comp=Z,7.0nm,1.0s						
SRU	**San Rafael Swe**	**57.75**	**67**	P	**P**	**09 07 37.9**	**-0.3**
SRU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NB2	**NORSAR Subarra**	**57.77**	**342**	P	**P**	**09 07 35.6**	**-2.2**
	comp=Z,5.2nm,1.1s,baz=19,slow=7.4						
NOA	**NORSAR Array B**	**57.77**	**342**	P	**P**	**09 07 37.2**	**-0.7**
	comp=Z,1.9nm,0.8s,baz=19,slow=7.0,SNR=6.3						
NOA				LR	LR	09 35 58.6	
	comp=Z,27nm,18.1s,baz=305,slow=40						
	comp=Z,1.9nm,0.8s						
O20A	**White River Ci**	**58.02**	**65**		**P**	**09 07 40.2**	**+0.1**
O20A				IAmb	IAmb	09 07 43.0	
	comp=Z,6.7nm,0.8s						
LPSR	**Galich'ya Gora**	**58.73**	**322**	*e*P	**P**	**09 07 42.4**	**-2.2**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PV23	**Carpenter Ridg**	**58.99**	**66**	P	**P**	**09 07 47.0**	**0.0**
VRH	**Novokhopyorsk**	**59.00**	**319**	*e*P	**P**	**09 07 43.0**	**-3.4**
VRH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**59.00**	**254**	P	**P**	**09 07 46.4**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=12,slow=7.8,SNR=5.5						
CMAR				LR	LR	09 36 57.5	
	comp=Z,62nm,19.1s,baz=50,slow=40						
	comp=Z,0.7nm,0.3s						
VSR	**Storozhevoye**	**59.84**	**321**	*e*P	**P**	**09 07 49.5**	**-2.8**
VSR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
VORD	**Divnogorie**	**60.01**	**321**	*e*P	**P**	**09 07 51.5**	**-1.9**
VORD				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ECSD	**EROS Data Cent**	**60.31**	**54**		**P**	**09 07 55.5**	**-0.1**
SDCO	**Great Sand Dun**	**61.21**	**64**		**P**	**09 08 02.3**	**+0.1**
ANMO	**Albuquerque**	**63.03**	**67**	P	**P**	**09 08 14.2**	**-0.1**
ANMO				IAmb	IAmb	09 08 17.6	
	comp=Z,4.2nm,1.1s						
ANMO	**Albuquerque**	**63.03**	**67**	P	**P**	**09 08 14.3**	**-0.1**
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
AK21	**Malin Array Si**	**63.31**	**327**	P	**P**	**09 08 14.5**	**-1.2**
AK22	**Malin Array Si**	**63.32**	**327**	P	**P**	**09 08 14.6**	**-1.2**
AK04	**Malin Array Si**	**63.33**	**327**	P	**P**	**09 08 14.6**	**-1.2**
AKASG	**Malin Array Be**	**63.33**	**327**	P	**P**	**09 08 14.9**	**-0.9**
	comp=Z,2.6nm,0.7s,baz=28,slow=6.6,SNR=5.2						
AKASG				LR	LR	09 38 14.4	
	comp=Z,58nm,18.1s,baz=48,slow=38						
	comp=Z,2.6nm,0.7s						
AKASG	**Malin Array Be**	**63.33**	**327**	*i* P	**P**	**09 08 15.3**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKBB	**Malin Array Si**	**63.33**	**327**	*i* P	**P**	**09 08 15.2**	**-0.6**
AKBB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AK01	**Malin Array Si**	**63.34**	**327**	P	**P**	**09 08 15.4**	**-0.5**
AK20	**Malin Array Si**	**63.35**	**327**	P	**P**	**09 08 15.5**	**-0.5**
AK18	**Malin Array Si**	**63.36**	**327**	P	**P**	**09 08 15.5**	**-0.5**
AK11	**Malin Array Si**	**63.37**	**327**	P	**P**	**09 08 15.6**	**-0.5**
AK19	**Malin Array Si**	**63.37**	**327**	P	**P**	**09 08 15.6**	**-0.5**
AK02	**Malin Array Si**	**63.38**	**327**	P	**P**	**09 08 15.3**	**-0.8**
RNPP9	**Sopachiv**	**63.60**	**329**	P	**P**	**09 08 16.6**	**-1.0**
KIV	**Kislovodsk**	**64.82**	**314**	*e*P	**P**	**09 08 24.5**	**-1.4**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,42nm,17.0s						
KBZ	**Khabaz**	**64.94**	**314**	P	**P**	**09 08 27.1**	**+0.6**
	comp=Z,5.6nm,0.9s,baz=62,slow=3.2,SNR=10						
KBZ				LR	LR	09 40 27.3	
	comp=Z,91nm,20.3s,baz=12,slow=39						
	comp=Z,5.6nm,0.9s						
KBZ	**Khabaz**	**64.94**	**314**	*ce*P	**P**	**09 08 27.0**	**+0.6**
KBZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AKT	**Akhty**	**64.98**	**309**	*e*P	**P**	**09 08 26.1**	**-0.9**
AKT				*e*		09 08 58.4	
AKT				*e*S	**S**	**09 17 08.1**	**-0.5**
AKT				pmax	pmax		
	comp=Z,8.0nm,1.0s						
AKT				MLR	MLR		
	comp=Z,59nm,6.0s						
EKA	**Eskdalemuir Ar**	**65.20**	**349**	P	**P**	**09 08 28.2**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=101,slow=25,SNR=3.9						
	comp=Z,1.4nm,0.8s						
STHS	**Stebnicka Huta**	**66.63**	**331**	*e*P	**P**	**09 08 37.4**	**+0.1**
STHS	**Stebnicka Huta**	**66.63**	**331**	*e*P	**P**	**09 08 37.4**	**+0.1**
CLL	**Collm**	**66.69**	**338**	*i* P	**P**	**09 08 37.5**	**-0.2**
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CLL	**Collm**	**66.69**	**338**	*i* P	**P**	**09 08 37.5**	**-0.2**
	comp=Z,5.0nm,0.9s						
CLL				*e*(sP)	**sP**	**09 08 46.0**	**+3.9**
MORC	**Moravsky Berou**	**67.17**	**334**	*e*P	**P**	**09 08 41.2**	**+0.4**
LANS	**Liptovska Anna**	**67.31**	**332**	*e*P	**P**	**09 08 42.8**	**+1.1**
LANS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LANS	**Liptovska Anna**	**67.31**	**332**	*e*P	**P**	**09 08 42.8**	**+1.1**
U38A	**Gravette**	**67.31**	**57**		**P**	**09 08 41.9**	**0.0**
VRAC	**Vranov**	**67.83**	**334**	LR	LR	09 43 06.0	
	comp=Z,42nm,18.1s,baz=6.5,slow=40						
VRAC	**Vranov**	**67.83**	**334**	*e*P	**P**	**09 08 45.5**	**+0.6**
JAVC	**Velka Javorina**	**68.00**	**334**	*e*P	**P**	**09 08 47.4**	**+1.3**
KRUC	**Moravsky**	**68.10**	**334**	*e*P	**P**	**09 08 47.0**	**+0.3**
KHC	**Kasperske Hory**	**68.64**	**336**	*ce*P	**P**	**09 08 50.2**	**+0.1**
KHC				pmax	pmax		
	comp=Z,4.0nm,1.3s						
GERES	**GERESS Array B**	**68.89**	**336**	P	**P**	**09 08 52.0**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=15,slow=5.5,SNR=10						
	comp=Z,1.1nm,0.8s						
TXAR	**Lajitas Array**	**68.98**	**68**	P	**P**	**09 08 53.1**	**+0.6**
	comp=Z,1.9nm,1.0s,baz=309,slow=4.5,SNR=9.8						
	comp=Z,1.9nm,1.0s						
BRTR	**Keskin Array B**	**71.77**	**319**	LR	LR	09 43 16.1	
	comp=Z,26nm,18.9s,baz=12,slow=38						
ASF	**Jabal al Asfar**	**77.33**	**313**	LR	LR	09 50 35.9	
	comp=Z,65nm,18.0s,baz=26,slow=41						
EIL	**Elat**	**80.30**	**313**	LR	LR	09 49 31.0	
	comp=Z,54nm,18.4s,baz=40,slow=39						
ESDC	**Sonseca Array**	**80.74**	**347**	P	**P**	**09 09 59.8**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=359,slow=5.7,SNR=8.7						
	comp=Z,1.3nm,0.8s						
WRA	**Warramunga Arr**	**81.16**	**203**	P	**P**	**09 10 00.7**	**-1.9**
	comp=Z,2.3nm,1.0s,baz=16,slow=5.3,SNR=5.5						
	comp=Z,2.3nm,1.0s						
WRA	**Warramunga Arr**	**81.16**	**203**	*i* P	**P**	**09 10 03.7**	**+1.1**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**84.86**	**203**	P	**P**	**09 10 20.1**	**-1.6**
	comp=Z,1.3nm,0.9s,baz=11,slow=6.2,SNR=9.5						
	comp=Z,1.3nm,0.9s						
FURI	**Furi**	**97.31**	**301**	LR	LR	10 00 54.9	
	comp=Z,40nm,18.8s,baz=7.0,slow=39						
PLCA	**Paso Flores**	**144.25**	**82**	PKP	**PKPab**	**09 17 19.2**	**-1.2**
	comp=Z,1.0nm,0.7s,baz=22,slow=3.8,SNR=4.2						

SDD ***27*** *09:05:42.7±1.3, 18°.39N×69°.86W, h54^{km}±17^{km}, MD3.0, ML3.1, MW3.1, Presumed earthquake*

OSPL ***27*** *09:05:44.1±2.7, 18°.45N×69°.93W, h60^{km}±14^{km}, ML2.0, Presumed earthquake*

ISC 27 09:05:42.0±1.4**, 18°.47N**±0°.06×**69°.90W**±0°.04**, h62**^{km}±10^{km}**, n14, σ1s.02**/26**, 5C-7D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDD	**Santo Domingo**	**0.01**	**229**	*i* P	**Pn**	**09 05 51.7**	**+0.5**
SDD				*e*S	**Sn**	**09 05 59.2**	**+1.4**
DR08	**Loma La Naviza**	**0.51**	**347**	⇓*e*Pg	**Pn**	**09 05 54.0**	**-0.4**
DR08				⇓*e*Sg	**Sn**	**09 06 03.0**	**-0.3**
DR08				IAML		09 06 03.9	
	comp=N,2µm,0.1s						
HATOM	**Hato Mayor del**	**0.59**	**57**	⇑*e*Pg	**Pn**	**09 05 54.5**	**-0.7**
HATOM				⇑*e*Sg	**Sn**	**09 06 03.9**	**-1.0**
HATOM				IAML		09 06 05.2	
	comp=N,456nm,0.2s						
NADR	**Nagua**	**0.89**	**3**	⇓*e*Pg	**Pn**	**09 05 58.3**	**-0.4**
NADR				⇑*e*Sg	**Sn**	**09 06 11.8**	**+0.8**
NADR				IAML		09 06 13.9	
	comp=N,126nm,0.8s						
HIDR	**Higuey Centro**	**1.13**	**83**	⇓*e*Pg	**Pn**	**09 06 01.6**	**-0.3**
HIDR				⇓*e*Sg	**Sn**	**09 06 14.3**	**-2.4**
HIDR				IAML		09 06 22.3	
	comp=N,220nm,0.2s						
SC01	**Santiago de lo**	**1.23**	**321**	*i* P	**Pn**	**09 06 04.0**	**+0.8**
SC01				*e*S	**Sn**	**09 06 18.8**	**-0.3**
SC01				IAML		09 06 35.5	
	comp=Z,18nm,1.4s						
PODR	**Polo**	**1.34**	**257**	⇓*e*Pg	**Pn**	**09 06 03.9**	**-0.9**
PODR				⇓*e*Sg	**Sn**	**09 06 21.4**	**-0.5**
PODR				IAML		09 06 29.4	
	comp=N,467nm,0.3s						
PODR	**Polo**	**1.34**	**257**	*i* P	**Pn**	**09 06 04.0**	**-0.9**
PODR				*e*S	**Sn**	**09 06 21.8**	**-0.1**
SDDR	**Presa de Saban**	**1.41**	**292**	⇑*e*Pg	**Pn**	**09 06 06.3**	**+0.7**
SDDR				⇑*e*Sg	**Sn**	**09 06 23.1**	**-0.2**
SDDR				IAML		09 06 30.0	
	comp=N,574nm,0.3s						
LONE3	**El Aguacate, B**	**1.48**	**276**	*i* P	**Pn**	**09 06 05.8**	**-0.9**
LONE3				*e*S	**Sn**	**09 06 25.4**	**+0.2**
LONE3				IAML		09 06 25.9	
	comp=Z,18nm,2.4s						
LODU1	**El Espartillar**	**1.50**	**266**	*i* P	**Pn**	**09 06 06.6**	**-0.1**
LODU1				*e*S	**Sn**	**09 06 26.2**	**+0.9**
LODU1				IAML		09 06 43.0	
	comp=Z,30nm,2.1s						
LOBH	**Bahia de las A**	**1.75**	**250**	*i* P	**Pn**	**09 06 10.6**	**+0.4**
LOBH				*e*S	**Sn**	**09 06 30.2**	**-1.3**
LOBH				IAML		09 06 44.8	
	comp=Z,50nm,5.7s						
LOPP1	**Punta Rusia, P**	**1.84**	**319**	*e*S	**Sn**	**09 06 34.2**	**+0.5**
CRPR	**Cabo Rojo, PR**	**2.69**	**99**	*i* P	**Pn**	**09 06 25.3**	**+2.3**

IDC 27 09:24:47.1±1.3**, 24°.17N×92°.22E, h0**^{km}**, mb3.5**/3**, mbtmp3.5**/4**, MS3.5**/3**, Error ellipse: s-maj=33.0km s-min=13.6km az=102.0, India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRDH	**Bariadhala**	**1.58**	**200**	Pg	Pn	09 25 16.8	+0.4
	34nm,0.3s,baz=23,slow=5.1,SNR=4.9						
BRDH				Lg	Lg	09 25 36.6	
	274nm,0.3s,baz=171,slow=20,SNR=42						
CMAR	**Chiang Mai Arr**	**8.46**	**131**	Pn	Pn	09 26 52.2	+1.2
	0.7nm,0.3s,baz=314,slow=8.8,SNR=1.5						
PSI	**Prapat**	**22.21**	**162**	LR	LR	09 40 34.0	
	comp=Z,82nm,19.4s,baz=29,slow=42						
MKAR	**Makanchi Array**	**23.94**	**343**	P	P	09 30 02.2	-0.7
	0.5nm,0.6s,baz=172,slow=11,SNR=4.5						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**30.25**	**351**	P	P	09 31 00.4	+0.8
	0.7nm,0.6s,baz=204,slow=3.3,SNR=3.7						
	0.7nm,0.6s						
JNU	**Nakatsue**	**34.92**	**66**	LR	LR	09 47 03.4	
	comp=Z,104nm,18.1s,baz=167,slow=38						
ARTI	**Arti**	**40.51**	**332**	LR	LR	09 50 20.8	
	comp=Z,44nm,18.4s,baz=74,slow=38						
ASAR	**Alice Springs**	**62.42**	**137**	P	P	09 35 11.7	-0.5
	0.4nm,0.7s,baz=318,slow=6.3,SNR=7.7						
	0.4nm,0.7s						

IDC ***27*** *09:31:02.5±7.4, 37°.83N×72°.27E, h221^{km}±45^{km}, mb3.1/6, mbtmp3.8/10, Error ellipse: s-maj=73.4km s-min=32.3km az=176.0*

ISC 27 09:30:53.2±1.7**, 37°.3N**±0°.1×**72°.1E**±0°.1**, h150**^{km}**, n13, σ1s.76**/16**, mb3.5**/6**, 1C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.66**	**19**	P	**Pn**	**09 32 18.2**	**+2.9**
	4.0nm,0.3s,baz=168,slow=5.0,SNR=15						
AAK				S	**Sn**	**09 33 19.2**	**-0.5**
	5.3nm,0.3s,baz=327,slow=21,SNR=16						
AAK	**Ala-Archa**	**5.66**	**19**	Pn	**Pn**	**09 32 17.9**	**+2.5**
	0.9nm,0.4s						
AAK				Sn	**Sn**	**09 33 17.9**	**-1.7**
	6.8nm,0.7s						
KK31	**Karatay Array**	**5.92**	**349**	⇓Pn	**Pn**	**09 32 21.1**	**+2.3**
	0.8nm,0.2s,baz=167,slow=13,SNR=5.4						
KK31				⇑Sn	**Sn**	**09 33 24.0**	**-1.8**
	5.5nm,0.3s,baz=178,slow=26,SNR=10						
MKAR	**Makanchi Array**	**12.15**	**35**	P	**Pn**	**09 33 42.7**	**+1.4**
	0.2nm,0.5s,baz=195,slow=8.1,SNR=2.4						
BVAR	**Borovoye Array**	**15.77**	**356**	P	**P**	**09 34 26.8**	**-0.9**
	0.6nm,0.4s,baz=177,slow=10,SNR=5.1						
AKTO	**Aktyubinsk**	**16.55**	**327**	P	**Pn**	**09 34 37.6**	**+1.3**
	2.1nm,0.4s,baz=130,slow=10,SNR=8.7						
ZALV	**Zalesovo Beam**	**18.84**	**24**	P	**P**	**09 35 00.5**	**-0.9**
	3.4nm,0.6s,baz=220,slow=9.9,SNR=20						
FINES	**FINESS Array B**	**37.31**	**325**	P	**P**	**09 37 49.8**	**-0.6**
	2.5nm,0.9s,baz=116,slow=13,SNR=1.5						
	2.5nm,0.9s						
ARCES	**ARCESS Array B**	**40.74**	**337**	P	**P**	**09 38 18.1**	**-0.7**
	4.3nm,1.1s,baz=115,slow=8.2,SNR=5.7						
	4.3nm,1.1s						
HFS	**Hagfors**	**42.97**	**321**	P	**P**	**09 38 36.7**	**-0.4**
	1.0nm,0.4s,baz=101,slow=14,SNR=5.2						

	1.0nm,0.4s						
NOA	NORSAR Array B	44.26	322	P	P	09 38 46.4	-1.0
	0.2nm,0.5s,baz=110,slow=6.7,SNR=1.6						
	0.2nm,0.5s						
EKA	Eskdalemuir Ar	52.31	316	P	P	09 39 50.5	+1.5
	0.2nm,0.3s,baz=57,slow=7.7,SNR=1.4						
	0.2nm,0.3s						
YKA	Yellowknife Ar	80.41	3	P	P	09 42 45.4	-2.2
	0.1nm,0.5s,baz=350,slow=5.5,SNR=5.6						
	0.1nm,0.5s						

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*CATAC **27** 09:34:10.3±0.4, 11°N±3°×8°6W±°, h178km±3km, M3.0/24, MLv3.0/24, Error ellipse: s-maj=11.3km s-min=2.9km az=50.8, confirmed*

*UCR **27** 09:34:10.1±0.6, 11°.38N×85°.88W, h176km±8km, MW3.6*

ISC 27 09:34:09.7±1.8**, 11°.37N**±0°.07×**85°.82W**±0°.08**, h187**km±10km**, n58, σ0s.84**/64**, 2C, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORN	Al O del Volca	0.24	44	P	Pn	09 34 35.5	+0.9
MORN				S	Sn	09 34 55.5	+1.6
LCRUZ	La Cruz	0.34	147	eP	Pn	09 34 34.7	-0.1
NANN	Nandasmo	0.64	332	P	Pn	09 34 37.2	+1.3
NANN	Nandasmo	0.64	332	S	Sn	09 34 58.0	+1.5
SABN	Sabanita	0.67	330	P	Pn	09 34 35.9	-0.2
BUAI	Buenos Aires	0.69	136	eP	Pn	09 34 36.8	+0.5
LAPC	Finca la Perla	0.71	148	⇑eP	Pn	09 34 36.3	-0.1
ELI1	Hacienda Flor	0.77	160	P	Pn	09 34 37.3	+0.6
ELI1	Hacienda Flor	0.77	160	S	Sn	09 34 57.1	-0.5
UNAN	Cigeo UNAN	0.86	329	P	Pn	09 34 37.5	+0.3
UNAN				S	Sn	09 34 59.0	+0.3
MESS	Mesas	0.88	136	eP	Pn	09 34 37.8	+0.4
MGAN	Managua	0.88	332	P	Pn	09 34 37.6	+0.3
TISN	Laguna Tiscapa	0.88	330	P	Pn	09 34 37.8	+0.4
UPAL	Upala	0.92	121	P	Pn	09 34 38.0	+0.4
UPAL	Upala	0.92	121	S	Sn	09 34 58.7	-0.5
DELF	Filadelfia	0.95	164	eP	Pn	09 34 38.4	+0.6
CUI	Cuipilapa	0.96	138	eP	Pn	09 34 38.5	+0.6
APQ2	Apoyeque	0.96	329	P	Pn	09 34 38.3	+0.4
APQ2				S	Sn	09 34 59.5	-0.2
ELVJ	El Viejo (Barb	1.03	152	eP	Pn	09 34 38.7	+0.3
AMTN	Mateare	1.05	325	S	Sn	09 35 00.7	-0.2
BOAB	BOACO BROADBAN	1.08	8	P	Pn	09 34 38.7	-0.1
BOAB	BOACO BROADBAN	1.08	8	S	Sn	09 34 59.5	-1.9
COPN	Copaltepe	1.10	317	P	Pn	09 34 38.4	-0.5
COPN	Copaltepe	1.10	317	eP	Pn	09 34 38.4	-0.5
TIMP	Tierras Morena	1.11	135	eP	Pn	09 34 39.4	+0.3
TIMP				eS	Sn	09 35 00.9	-0.9
INVE	Universidad In	1.16	140	eP	Pn	09 34 39.8	+0.4
QUEB	Quebradon, Cot	1.17	129	eP	Pn	09 34 39.9	+0.3
MOM2	El Cardon	1.24	329	P	Pn	09 34 40.4	+0.4
MOM2				S	Sn	09 35 03.5	-0.2
MOMN	Momotombo	1.25	326	P	Pn	09 34 40.8	+0.6
JTS	Las Juntas de	1.37	141	P	Pn	09 34 41.3	+0.1
JTS	Las Juntas de	1.37	141	⇑eP	Pn	09 34 41.3	+0.1
JUNT	Juntas	1.37	142	eP	Pn	09 34 41.4	+0.2
CMARA	Lajas Hojancha	1.40	164	P	Pn	09 34 42.0	+0.5
CMARA	Lajas Hojancha	1.40	164	S	Sn	09 35 04.4	-1.8
CMARA	Lajas Hojancha	1.40	164	eP	Pn	09 34 42.0	+0.5
CEDE	Laguna Cedeo	1.41	129	eP	Pn	09 34 42.3	+0.8
ARE1	Arenal 1	1.41	130	eP	Pn	09 34 42.4	+0.9
VARE2	V. Arenal	1.41	130	eP	Pn	09 34 42.4	+0.8
CNGN	Cerro Negro	1.41	323	S	Sn	09 35 06.2	-0.2
CASO	Castillo	1.42	131	eP	Pn	09 34 42.3	+0.7
COVE	Coope Vega, Sa	1.54	115	P	Pn	09 34 42.9	+0.3
MATN	Matagalpa	1.55	356	P	Pn	09 34 41.6	-1.3
HOYN	Al Sur del Vol	1.57	321	S	Sn	09 35 08.9	-0.1
HERN	Volcan Telica	1.58	321	S	Sn	09 35 09.1	-0.1
POLN	Al Sur del Vol	1.60	323	S	Sn	09 35 09.5	+0.1
LIMN	Finca el Limon	1.76	342	P	Pn	09 34 45.2	+0.2
CRIN	San Cristobal	1.79	318	S	Sn	09 35 11.0	-1.7
TCS1	Tacares	1.99	131	P	Pn	09 34 48.3	+1.0
RCON	San Juan de Ri	2.13	351	P	Pn	09 34 49.5	+0.7
RCVN	Varillal2	2.23	351	P	Pn	09 34 50.6	+0.7
POTN	Potosi Cosigui	2.31	315	P	Pn	09 34 50.9	+0.3
POTN				S	Sn	09 35 22.2	-0.5
CSGN	Cosiguina Volc	2.33	313	S	Sn	09 35 22.2	-1.0
LCR2	La Lucha 2	2.41	132	S	Sn	09 35 24.0	-1.0
YUSH	Yuscaran	2.75	339	P	Pn	09 34 56.7	+0.8
OCHAL	Ojochal	3.11	136	P	Pn	09 35 01.9	+1.9
OCHAL	Ojochal	3.11	136	S	Sn	09 35 39.0	-0.4
DRK0	Durika	3.29	129	S	Sn	09 35 41.2	-2.3
DRK0	Durika	3.29	129	P	Pn	09 35 03.3	+1.0

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*SJA **27** 09:37:03.5±1.9, 19°.84S×70°.17W, h55km±21km, ML3.5, MW3.6*

*GUC **27** 09:37:05.0±0.9, 19°.83S×70°.18W, h38km±2km, ML3.7*

ISC 27 09:37:05.4±1.1**, 19°.84S**±0°.03×**70°.18W**±0°.05**, h32**km±9km**, n34, σ0s.96**/44**, 2C-7D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA02	Huaiquique	0.43	174	⇓iP	Pb	09 37 15.1	+0.2
TA02				eS	Sb	09 37 21.8	+0.4
TA02				IAML		09 37 23.2	
	comp=N,15µm,0.1s						
TA02	Huaiquique	0.43	174	iP	Pb	09 37 14.4	-0.4
TA02				IAML		09 37 23.5	
	comp=Z,4µm,0.1s						
PB11	IPOC Station P	0.50	81	⇓eP	Pb	09 37 15.9	-0.1
PB11				eS	Sb	09 37 23.4	+0.2
PB11				IAML		09 37 24.0	
	comp=N,18µm,0.2s						
PB11	IPOC Station P	0.50	81	iP	Pb	09 37 15.3	-0.7
PB11				IAML		09 37 24.0	
	comp=Z,6µm,0.3s						
TA01	Diego Aracena	0.72	180	⇓iP	Pn	09 37 19.1	-0.3
TA01				eS	Sn	09 37 29.0	-0.4
TA01				IAML		09 37 29.8	
	comp=E,7µm,0.2s						
PX03	IPOC Station P	0.76	138	eP	Pn	09 37 18.5	-1.5
PX03				eS	Sn	09 37 29.4	-1.0
PX03				IAML		09 37 30.1	
	comp=N,6µm,0.3s						
PX02	IPOC Station P	0.87	359	eP	Pn	09 37 20.1	-1.5
PX02				eS	Sn	09 37 31.5	-1.8
GO01	Chusmiza	0.94	80	⇑iP	Pn	09 37 22.9	0.0
GO01				eS	Sn	09 37 35.6	+0.2
GO01				IAML		09 37 35.8	
	comp=N,13µm,0.1s						
GO01	Chusmiza	0.94	80	iP	Pn	09 37 21.8	-1.0
GO01				IAML		09 37 36.5	
	comp=Z,2µm,0.1s						
PATCX	Punta Patache	0.97	179	⇓iP	Pn	09 37 22.6	-0.4
PATCX				eS	Sn	09 37 36.1	+0.3
PATCX				IAML		09 37 37.3	
	comp=E,1µm,0.3s						
PATCX	Punta Patache	0.97	179	iP	Pn	09 37 22.1	-0.9
PATCX				IAML		09 37 39.9	
	comp=Z,685nm,0.3s						
PB08	IPOC Station P	1.01	107	⇑iP	Pn	09 37 23.6	-0.1
PB12	IPOC Station P	1.23	353	⇓iP	Pn	09 37 26.3	-0.2
PB12				IAML		09 37 43.0	
	comp=E,3µm,0.2s						
PB12	IPOC Station P	1.23	353	iP	Pn	09 37 25.6	-0.9
PB12				IAML		09 37 43.4	
	comp=Z,1µm,0.3s						
PB01	IPOC Station P	1.36	152	eP	Pn	09 37 28.1	-0.1
PB01				eS	Sn	09 37 44.9	-0.3
PB01				IAML		09 37 45.6	
	comp=E,2µm,0.1s						
PB01	IPOC Station P	1.36	152	iP	Pn	09 37 27.4	-0.8
PB01				IAML		09 37 46.6	
	comp=Z,673nm,0.3s						
AP01	Chacalluta	1.47	354	eP	Pn	09 37 30.3	+0.6
AP01				eS	Sn	09 37 49.2	+1.3
AP01				IAML		09 37 52.5	
	comp=E,2µm,0.2s						
AP01	Chacalluta	1.47	354	iP	Pn	09 37 29.7	0.0
AP01				IAML		09 37 52.8	
	comp=Z,1µm,0.1s						
PB02	IPOC Station P	1.49	170	eP	Pn	09 37 30.1	0.0
PB02				IAML		09 37 56.0	
	comp=E,1µm,0.3s						
PB02	IPOC Station P	1.49	170	iP	Pn	09 37 29.9	-0.2
PB02				IAML		09 37 55.1	
	comp=Z,1µm,0.4s						
PB16	IPOC Station P	1.63	23	iP	Pn	09 37 32.8	+0.4
PB16	IPOC Station P	1.63	23	iP	Pn	09 37 32.0	-0.3
PB16				IAML		09 37 54.3	
	comp=Z,265nm,0.5s						
PB07	IPOC Station P	1.90	172	⇓eP	Pn	09 37 36.6	+0.9
PB07				IAML		09 38 05.3	
	comp=E,566nm,0.3s						
PB07	IPOC Station P	1.90	172	iP	Pn	09 37 36.2	+0.4
PB07				IAML		09 38 06.8	
	comp=Z,338nm,0.2s						
PB09	IPOC Station P	2.13	156	eP	Pn	09 37 40.5	+1.5
PB09				eS	Sn	09 38 06.5	+2.1
PB09				IAML		09 38 07.6	
	comp=E,459nm,0.3s						
PB09	IPOC Station P	2.13	156	iP	Pn	09 37 39.9	+0.9
PB09				IAML		09 38 10.8	
	comp=Z,402nm,0.3s						
PB03	IPOC Station P	2.23	170	⇓eP	Pn	09 37 41.7	+1.4
PB03	IPOC Station P	2.23	170	iP	Pn	09 37 41.1	+0.8
PB03				IAML		09 38 16.7	
	comp=Z,312nm,0.6s						
PB18	Visviri	2.33	17	eP	Pn	09 37 44.8	+2.7
PB06	IPOC Station P	2.91	169	eP	Pn	09 37 50.3	+0.7
PB06				IAML		09 38 41.5	
	comp=E,154nm,0.4s						
PB06	IPOC Station P	2.91	169	iP	Pn	09 37 49.8	+0.1
PB06				IAML		09 38 40.4	
	comp=Z,113nm,0.3s						
PB05	IPOC Station P	3.00	180	eP	Pn	09 37 50.6	-0.2
PB05	IPOC Station P	3.00	180	iP	Pn	09 37 50.0	-0.8
PB05				IAML		09 38 48.0	
	comp=Z,100nm,0.4s						
PB14	IPOC Station P	4.77	182	iP	Pn	09 38 14.0	-1.3
PB14				IAML		09 39 52.8	
	comp=Z,21nm,0.6s						

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*HEL **27** 09:40:16.1±0.2, 61°.07N×29°.91E, h0km, ML2.0, Suspected explosion*

*IDC **27** 09:40:18.8±2.1, 61°.13N×29°.75E, h0km, mbtmp3.2/3, ML2.3/3, Error ellipse: s-maj=19.4km s-min=10.6km az=158.0*

ISC 27 09:40:15.8±1.4**, 61°.12N**±0°.05×**29°.73E**±0°.07**, h0**km**, n24, σ1s.76**/35**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUF	Ruokolahti	0.48	310	PG	Pb	09 40 27.0	-0.3
RUF				SG	Sb	09 40 34.8	-0.1
RUF				MSG		09 40 34.8	
	comp=Z,24nm,0.2s						
VJF	Virojoki	1.21	242	PB	Pg	09 40 39.4	+0.3
	baz=60						
VJF				MSG		09 40 54.5	
	comp=Z,21nm,0.2s						
VJF				SN	Sn	09 40 57.3	+0.2
FIA0	FINESS Array S	1.79	282	PG	Pb	09 40 49.8	+0.3
	baz=100						
FIA0				MSG		09 41 12.3	
	comp=Z,6.5nm,0.2s						
FIA0				SN	Sg	09 41 15.6	+2.2
FINES	FINESS Array B	1.79	282	Pg	Pg	09 40 50.2	+0.1
	comp=Z,3.2nm,0.3s,baz=101,slow=14,SNR=97						
FINES				Lg	Lg	09 41 15.5	
	comp=Z,5.1nm,0.3s,baz=98,slow=26,SNR=32						
FINES				Rg	Rg	09 41 25.5	
	comp=Z,83nm,0.9s,baz=106,slow=20,SNR=19						
JOF	Joensuu	1.95	22	PB	Pn	09 40 50.6	+0.4
	baz=198						
JOF				SB	Sn	09 41 16.1	+0.7
PVF	Pernaja	1.98	255	PG	Pb	09 40 52.7	0.0
PVF				MSG		09 41 17.0	
	comp=Z,13nm,0.2s						
SUF	Sumiainen	2.33	315	PG	Pb	09 40 59.1	+0.4
	baz=133						
SUF				MSG		09 41 27.9	
	comp=Z,3.5nm,0.2s						
SUF				SG	Sg	09 41 30.7	0.0
NIF	Nilsia	2.45	339	PB	Pb	09 40 59.9	-0.8
	baz=157						
NIF				MSG		09 41 30.7	
	comp=Z,4.5nm,0.2s						
NIF				SB	Sb	09 41 32.1	+0.7
KEF	Keuruu	2.55	297	PB	Pb	09 41 01.6	-0.7
KEF				MSG		09 41 34.1	
	comp=Z,3.9nm,0.2s						
KEF				SG	Sb	09 41 35.2	+1.0
NUR	Nurmijarvi	2.56	258	PG	Pb	09 41 03.3	+0.7
NUR				MSG		09 41 33.8	
	comp=Z,4.5nm,0.2s						
MEF	Metsahovi	2.78	253	PG	Pb	09 41 06.4	+0.1
MEF				SB	Sb	09 41 38.6	-2.2
MEF				MSG		09 41 39.8	
	comp=Z,5.2nm,0.2s						
RMF	Romuvaara	3.11	2	PN	Pn	09 41 08.5	+2.4
MTSE	Matsula	3.83	234	SB	Sb	09 42 06.8	-4.3
VAF	Ylistaro	3.84	303	PN	Pn	09 41 19.6	+3.6
	baz=120						
VAF				SG	Sg	09 42 18.9	-0.1
RAF	Rauma	3.87	272	SB	Sb	09 42 12.2	0.0
OUF	Merijarvi	3.99	327	PG	Pb	09 41 28.9	+2.0
OBF0	Syolatti, Pyha	4.22	326	PG	Pg	09 41 34.1	-2.6
	baz=138						
OUL	Oulu	4.34	338	PG	Pb	09 41 34.8	+1.8
OUL				SG	Sg	09 42 31.9	-3.4
KU1	Kurvinen	4.46	359	PN	Pn	09 41 25.5	+0.8
KU2	Taivalkoski	4.66	352	PN	Pn	09 41 30.6	+3.2
I43RU	DUBNA INFRASON	5.87	135	I	I	10 15 40.0	
	comp=Z,0.1nm,0.7s,baz=326,slow=307,SNR=3.2						
HFS	Hagfors	7.95	270	Pn	Pn	09 42 13.5	+1.1
	comp=Z,0.1nm,0.3s,baz=79,slow=12,SNR=1.9						
HFS				Sn	Sn	09 43 41.6	-1.3
	comp=Z,0.3nm,0.3s,baz=83,slow=26,SNR=5.3						
HFS				Lg	Lg	09 44 24.7	
	comp=Z,0.5nm,0.3s,baz=83,slow=28,SNR=5.2						
	comp=Z,2.7nm,0.8s						
ARCES	ARCESS Array B	8.63	350	Pn	Pn	09 42 21.4	-0.4
	comp=Z,0.1nm,0.3s,baz=165,slow=14,SNR=5.6						
ARCES				Sn	Sn	09 43 57.1	-2.7
	comp=Z,0.1nm,0.3s,baz=169,slow=25,SNR=2.0						
ARCES				Lg	Lg	09 44 41.0	
	comp=Z,0.2nm,0.3s,baz=172,slow=27,SNR=6.1						
	comp=Z,1.7nm,0.9s						
NOA	NORSAR Array B	8.97	278	Pn	Pn	09 42 27.5	+1.0
	baz=94,slow=11,SNR=6.4						
NOA				Lg	Lg	09 44 56.9	
	baz=45,slow=25,SNR=4.1						
	comp=Z,0.3nm,0.6s						

IDC 27 09:48:01.1±1.2**, 65°.52S**×**179°.93E, h0**km**, mb4.0**/4**, mbtmp4.0**/5**, ML3.8**/1**, MS3.7**/12**, Error ellipse: s-maj=59.5km s-min=28.2km az=39.0, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	13.23	197	Pn	Pn	09 51 09.6	-0.3
	0.5nm,0.3s,baz=45,slow=17,SNR=25						
VNDA				LR	LR	09 55 02.0	
	comp=Z,279nm,21.8s,baz=20,slow=32						
	3.8nm,0.8s						
URZ	Urewera	27.36	355	LR	LR	10 02 29.8	
	comp=Z,160nm,21.2s,baz=160,slow=32						
RAO	Raoul Island	36.31	3	LR	LR	10 07 10.1	
	comp=Z,97nm,19.5s,baz=123,slow=32						
MAW	Mawson	39.91	212	LR	LR	10 11 03.4	
	comp=Z,116nm,18.8s,baz=150,slow=35						
SNAA	Sanae	43.05	179	LR	LR	10 13 27.3	
	comp=Z,100nm,19.3s,baz=176,slow=35						
DZM	Mont Dzumac	44.32	342	eLR	LR	10 08 37.2	
	138nm,23.5s						
RAR	Rarotonga	46.24	27	LR	LR	10 10 38.7	
	comp=Z,58nm,19.6s,baz=220,slow=29						
TBI	Tubuai	46.54	40	eLR	LR	10 09 01.1	
	569nm,32.2s						
H01W1	Cape Leeuwin H	48.84	275	T	T	10 49 52.8	
	baz=149,slow=76,SNR=36						
H01W2	Cape Leeuwin H	48.84	275	T	T	10 49 55.1	
	baz=149,slow=76,SNR=30						
H01W3	Cape Leeuwin H	48.85	275	T	T	10 49 53.7	
	baz=149,slow=76,SNR=36						
ASAR	Alice Springs	51.09	302	P	P	09 57 05.0	-0.3
	1.0nm,1.0s,baz=156,slow=7.0,SNR=9.2						
ASAR				LR	LR	10 16 25.5	
	comp=Z,50nm,18.3s,baz=116,slow=33						
	1.0nm,1.0s						
PPT2	Papeete2	52.01	38	eLR	LR	10 11 56.3	
	114nm,25.2s						
PPT	Papeete	52.03	38	LR	LR	10 16 11.1	
	comp=Z,36nm,18.2s,baz=280,slow=32						
WRA	Warramunga Arr	54.37	304	P	P	09 57 29.7	+0.2
	0.8nm,0.8s,baz=157,slow=7.5,SNR=2.8						
	0.8nm,0.8s						
RPN	Rapa Nui	57.67	85	LR	LR	10 16 22.4	
	comp=Z,72nm,20.6s,baz=270,slow=30						
H03S2	Juan Fernandez	64.10	115	T	T	11 08 40.0	
	baz=205,slow=74,SNR=14						
H03S1	Juan Fernandez	64.10	115	T	T	11 08 32.5	
	baz=205,slow=74,SNR=17						
H03S3	Juan Fernandez	64.11	115	T	T	11 08 36.5	
	baz=205,slow=74,SNR=12						
H03N3	Juan Fernandez	64.44	115	T	T	11 08 59.4	
	baz=219,slow=76,SNR=9.5						
H03N2	Juan Fernandez	64.45	115	T	T	11 09 00.2	
	baz=219,slow=76,SNR=39						
H03N1	Juan Fernandez	64.45	115	T	T	11 08 58.0	
	baz=219,slow=76,SNR=6.6						
SUR	Sutherland	81.08	198	LR	LR	10 32 18.6	
	comp=Z,56nm,21.8s,baz=171,slow=33						
LPAZ	La Paz	84.03	116	P	P	10 00 34.0	-0.1
	1.2nm,0.6s,baz=206,slow=6.0,SNR=7.2						
	1.2nm,0.6s						
BOSA	Boshof	84.15	202	LR	LR	10 35 43.8	
	comp=Z,54nm,19.1s,baz=197,slow=34						
BDFB	Brasilia	91.45	134	P	P	10 01 09.5	+0.2
	1.1nm,0.5s,baz=198,slow=6.4,SNR=1.6						
	1.1nm,0.5s						
LSZ	Lusaka	96.67	207	LR	LR	10 43 25.9	
	comp=Z,39nm,18.6s,baz=218,slow=34						

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*SJA **27** 09:52:43.6±0.7, 32°.13S×71°.93W, h22km±3km, ML3.4, MW3.8*

*GUC **27** 09:52:46.4±0.8, 32°.12S×71°.63W, h36km±3km, ML3.5*

ISC 27 09:52:48.0±5.7**, 32°.13S**±0°.02×**71°.84W**±0°.06**, h37**km±6km**, n60, σ2s.02**/84**, 4C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	0.63	133	⇓iP	Pn	09 52 57.7	-2.9
VA06				eS	Sn	09 53 06.0	-3.4
VA06				IAML		09 53 07.3	
	comp=E,7µm,0.4s						
CO04	Los Peladeros	0.74	83	⇓iP	Pn	09 52 59.4	-2.9
CO04				eS	Sn	09 53 08.8	-3.6
CO04				IAML		09 53 09.7	
	comp=N,11µm,0.1s						
VA01	Torpederas	0.90	169	eP	Pn	09 53 02.4	-1.9
VA01	Torpederas	0.90	169	eP	Pn	09 53 02.4	-1.9
VA01				eS	Sn	09 53 14.8	-1.3
VA01				IAML		09 53 16.2	
	comp=Z,516nm,0.3s						
ROCH	El Roble	1.09	140	⇑iP		09 53 05.2	
ROCH				⇑iP	Pn	09 53 05.1	-1.9
ROCH				eS	Sn	09 53 19.0	-2.0
ROCH				eS		09 53 19.1	
ROCH				IAML		09 53 20.0	
	comp=N,2µm,0.4s						
ROC1	El Roble	1.09	140	eP	Pn	09 52 49.6	-17
ROC1				eS	Sn	09 53 19.8	-1.3
CO02	Combarbal	1.17	38	eP	Pn	09 53 06.5	-1.6
CO02				eS	Sn	09 53 21.2	-1.6
CO02				IAML		09 53 22.1	
	comp=E,4µm,0.4s						
CO02	Combarbal	1.17	38	eP	Pn	09 53 06.5	-1.6
CO02				eS	Sn	09 53 21.6	-1.2
CO02				IAML		09 53 21.7	
	comp=Z,687nm,0.2s						
VA03	San Esteban	1.26	120	⇓iP	Pn	09 53 07.5	-1.7
VA03				eS	Sn	09 53 23.2	-1.8
VA03				IAML		09 53 25.4	
	comp=N,2µm,0.6s						
VA03	San Esteban	1.26	120	eS	Sn	09 53 24.3	-0.7
VA03				IAML		09 53 30.0	
	comp=Z,678nm,1.0s						
PEL	Peldehue	1.41	136	eP	Pn	09 53 10.2	-0.9
PEL				eS	Sn	09 53 27.8	-0.7
PEL				IAML		09 53 31.5	
	comp=N,800nm,0.7s						
PEL	Peldehue	1.41	136	eP	Pn	09 53 10.2	-0.9
PEL				eS	Sn	09 53 29.2	+0.8
PEL				IAML		09 53 31.1	
	comp=Z,553nm,0.4s						
CO06	Fray Jorge	1.46	7	eP	Pn	09 53 10.4	-1.5
MT05	Renca	1.56	144	eP	Pn	09 53 12.7	-0.7
MT05				eS	Sn	09 53 33.2	+0.8
MT05				IAML		09 53 35.7	
	comp=N,1µm,0.3s						
MT05	Renca	1.56	144	eP	Pn	09 53 12.9	-0.4
MT05				eS	Sn	09 53 34.2	+1.8
MT05				IAML		09 53 39.1	
	comp=Z,266nm,0.2s						
MT10	Hacienda Santa	1.58	136	iP	Pn	09 53 13.2	-0.5
MT10				eS	Sn	09 53 33.4	+0.4
MT10				IAML		09 53 36.2	
	comp=N,3µm,0.4s						
CO03	El Pedregal	1.62	38	⇓iP	Pn	09 53 13.6	-0.6
CO03				eS	Sn	09 53 34.4	+0.5
CO03	El Pedregal	1.62	38	eP	Pn	09 53 13.8	-0.4
CO03				eS	Sn	09 53 34.6	+0.7
CO03				IAML		09 53 37.9	
	comp=Z,292nm,0.7s						
MT16	CCHEN	1.71	140	eP	Pn	09 53 14.9	-0.4
MT16				eS	Sn	09 53 36.1	+0.2
MT16				IAML		09 53 45.8	
	comp=N,339nm,0.5s						
MT03	Universidad Ad	1.76	141	eP	Pn	09 53 15.7	-0.4
MT03				eS	Sn	09 53 38.1	+0.7
MT03				IAML		09 53 47.4	
	comp=E,1µm,0.3s						
MT03	Universidad Ad	1.76	141	eP	Pn	09 53 16.0	-0.1
MT03				eS	Sn	09 53 39.3	+1.9
MT03				IAML		09 53 43.7	
	comp=Z,474nm,0.5s						
MT09	Talagante	1.79	157	eP	Pn	09 53 16.6	0.0
MT09				eS	Sn	09 53 39.8	+1.7
MT09				IAML		09 53 44.8	
	comp=E,643nm,0.3s						
MT01	Popeta	1.80	164	⇑iP	Pn	09 53 15.7	-0.8
MT01	Popeta	1.80	164	eP	Pn	09 53 15.7	-0.8
MT01				eS	Sn	09 53 33.0	-5.1
MT01				IAML		09 53 44.2	
	comp=Z,290nm,0.6s						
MT04	Ro Olivares	1.92	132	eP	Pn	09 53 18.2	-0.2
MT04				eS	Sn	09 53 42.2	+0.8
MT04	Ro Olivares	1.92	132	eP	Pn	09 53 18.4	0.0
MT04				eS	Sn	09 53 43.6	+2.3
MT04				IAML		09 53 49.3	
	comp=Z,219nm,0.4s						
MT12	Pirque	1.93	146	eP	Pn	09 53 18.2	-0.2
MT12				eS	Sn	09 53 44.2	+2.7
MT12				IAML		09 53 51.0	
	comp=E,980nm,0.7s						
MT08	Bocatoma Ro	2.02	131	eP	Pn	09 53 20.1	+0.4
MT08				eS	Sn	09 53 45.7	+1.8
MT08	Bocatoma Ro	2.02	131	eP	Pn	09 53 20.2	+0.4
MT08				eS	Sn	09 53 46.0	+2.0
MT08				IAML		09 53 49.8	
	comp=Z,169nm,1.1s						
BO04	La Punta	2.12	151	eP	Pn	09 53 21.0	0.0
BO04				eS	Sn	09 53 49.2	+3.1
BO04				IAML		09 53 59.0	
	comp=E,306nm,0.6s						
GO04	Tololo Observa	2.15	25	eP	Pn	09 53 23.7	+2.1
GO04	Tololo Observa	2.15	25	eP	Pn	09 53 18.7	-2.8
GO04				eS	Sn	09 53 44.7	-2.3
GO04				IAML		09 53 59.4	
	comp=Z,461nm,0.5s						
RTLS	Leoncito	2.19	82	eP	Pn	09 53 24.2	+2.0
RTLS				eS	Sn	09 53 54.0	+5.8
RTLS				IAML		09 53 55.5	
	comp=Z,416nm,0.6s						
LMEL	Las Melosas	2.20	142	⇑iP	Pn	09 53 22.2	0.0
LMEL				eS	Sn	09 53 51.2	+3.0
LMEL				IAML		09 53 59.3	
	comp=N,462nm,0.1s						
LMEL	Las Melosas	2.20	142	eP	Pn	09 53 22.2	0.0
LMEL				eS	Sn	09 53 50.3	+2.1
LMEL				IAML		09 53 55.6	
	comp=Z,248nm,0.6s						
BO01	Tunca	2.34	164	eP	Pn	09 53 23.5	-0.4

BO01	**Tunca**	**2.34**	**164**	*e*P	**Pn**	**09 53 23.6**	**-0.4**
BO01				*e*S	Sn	09 53 59.1	+7.6
BO01				IAML		09 54 00.0	
	comp=Z,170nm,0.4s						
BO03	**Pichilemu**	**2.36**	**182**	*e*P	**Pn**	**09 53 22.7**	**-1.5**
BO03				*e*S	**Sn**	**09 53 50.3**	**-1.6**
BO03				IAML		09 54 07.2	
	comp=E,150nm,0.7s						
ARCO	**CERRO ARCO**	**2.56**	**107**	*e*P	Pn	09 53 30.6	+3.5
ARCO				*e*S	**Sn**	**09 53 59.0**	**+1.9**
ARCO				IAML		09 54 07.2	
	comp=Z,185nm,1.3s						
CO01	**Juntas del Tor**	**2.62**	**35**	*e*P	Pn	09 53 30.1	+2.0
CO01				*e*S	**Sn**	**09 54 02.9**	**+4.2**
CO01				IAML		09 54 05.7	
	comp=E,162nm,0.7s						
CO01	**Juntas del Tor**	**2.62**	**35**	*e*P	**Pn**	**09 53 24.6**	**-3.4**
CO01				*e*S	**Sn**	**09 54 02.5**	**+3.8**
CO01				IAML		09 54 06.4	
	comp=Z,138nm,0.7s						
AAGR	**Agrelo**	**2.72**	**111**	*e*P	Pn	09 53 32.6	+3.3
AAGR				*e*S	Sn	09 54 09.1	+8.2
AAGR				IAML		09 54 17.2	
	comp=Z,104nm,1.3s						
ZON	**Zonda**	**2.76**	**79**	*e*P	Pn	09 53 32.4	+2.7
ZON				*e*S	Sn	09 54 04.8	+2.9
ZON				IAML		09 54 18.5	
	comp=Z,85nm,1.0s						
BO02	**Sierra Bellavi**	**2.80**	**162**	*e*P	**Pn**	**09 53 30.0**	**-0.3**
BO02				*e*S	Sn	09 54 09.5	+6.6
BO02				IAML		09 54 15.3	
	comp=N,388nm,0.1s						
BO02	**Sierra Bellavi**	**2.80**	**162**	*e*P	**Pn**	**09 53 29.7**	**-0.7**
BO02				*e*S	**Sn**	**09 54 04.6**	**+1.7**
BO02				IAML		09 54 12.7	
	comp=Z,241nm,0.7s						
AROD	**Rodeo**	**2.82**	**47**	*e*P	Pn	09 53 33.2	+2.4
AROD				*e*S	**Sn**	**09 54 07.2**	**+3.3**
ACCO	**Cerro Coronel**	**2.83**	**58**	*e*P	Pn	09 53 33.8	+2.7
ACCO				*e*S	**Sn**	**09 54 07.4**	**+3.3**
SJA	**San Juan**	**2.86**	**79**	*e*P	Pn	09 53 17.8	-13
SJA				IAML		09 55 03.6	
	comp=Z,89nm,0.1s						
GO05	**Hualane**	**2.87**	**181**	*e*P	**Pn**	**09 53 29.7**	**-1.6**
GO05				*e*S	**Sn**	**09 54 11.8**	**+7.2**
GO05				IAML		09 54 19.0	
	comp=Z,69nm,1.1s						
RTLL	**Cerro Villicun**	**2.98**	**75**	*e*P	**Pn**	**09 53 33.2**	**+0.4**
RTLL				*e*S	Sn	09 54 10.2	+2.9
RTLL				IAML		09 54 25.5	
	comp=Z,93nm,0.4s						
ACDV	**Cuesta del Vie**	**3.04**	**51**	*e*P	Pn	09 53 37.2	+3.4
ACDV				*e*S	**Sn**	**09 54 12.3**	**+3.2**
ACDV				IAML		09 54 24.1	
	comp=Z,65nm,0.6s						
CFA	**Coronel Fontan**	**3.11**	**81**	*e*P	Pn	09 53 36.5	+1.9
CFA				*e*S	Sn	09 54 15.8	+5.3
CFA				IAML		09 54 32.6	
	comp=Z,35nm,0.5s						
LCO	**Las Campanas**	**3.26**	**18**	*e*P	**Pn**	**09 53 35.9**	**-1.0**
LCO				IAML		09 54 31.8	
	comp=Z,107nm,0.6s						
AC05	**El Transito**	**3.55**	**23**	*e*P	**Pn**	**09 53 41.3**	**+0.5**
AC05				*e*S	**Sn**	**09 54 23.5**	**+1.9**
AC05				IAML		09 54 44.2	
	comp=Z,84nm,0.9s						
RFA	**San Rafael**	**3.86**	**134**	*e*P	Pn	09 53 46.9	+2.0
RFA				*e*S	Sn	09 54 50.4	+21
RFA				IAML		09 54 58.9	
	comp=Z,26nm,0.7s						
AGUA	**GUANDACOL**	**3.91**	**48**	*e*P	Pn	09 53 49.0	+3.4
AGUA				*e*S	Sn	09 54 44.9	+15
AGUA				IAML		09 55 00.7	
	comp=Z,106nm,1.1s						
ACAN	**Cantantal**	**3.95**	**93**	*e*P	**Pn**	**09 53 46.7**	**+0.6**
ACAN				IAML		09 55 05.0	
	comp=Z,102nm,0.4s						
AVFE	**Valle Fertil**	**4.03**	**70**	*e*P	Pn	09 53 49.1	+1.9
AVFE				IAML		09 54 53.2	
	comp=Z,40nm,0.6s						
ACHE	**Chepes**	**4.52**	**79**	*e*P	Pn	09 53 56.0	+1.9
ACHE				*e*S	**Sn**	**09 54 44.5**	**-1.1**
BI02	**San Fabin de**	**4.54**	**174**	*e*P	**Pn**	**09 53 53.8**	**-0.5**
BI02				IAML		09 55 10.8	
	comp=Z,30nm,0.9s						

NNC ***27*** *09:56:00.2±2.1, 51°.60N×75°.34E, h0^{km}, mb2.9, mpv2.5, Error ellipse: s-maj=129.2km s-min=13.6km az=24.0, Suspected Mining explosion.*

IDC ***27*** *09:56:03.1±1.2, 51°.68N×75°.41E, h0^{km}, mbtmp2.7/3, ML2.0/3, Error ellipse: s-maj=37.5km s-min=8.8km az=34.0*

ISC 27 09:56:01.9±1.1**, 51°.7N**±0°.1×**75°.47E**±0°.07**, h0**^{km}**, n8,** σ**1s.27**/9**, 2C-2D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.23**	**116**	Pn	**Pn**	**09 56 40.1**	**+0.1**
	2.2nm,1.2s						
KURK				⇑Sn	**Sn**	**09 57 07.5**	**-0.7**
	13nm,1.0s						
BVA0	**Borovoye Array**	**3.37**	**295**	⇑Pg	**Pb**	**09 57 01.2**	**-1.3**
	2.7nm,0.8s,baz=113,slow=22,SNR=9.0						
BVA0				⇓Lg	Lg	09 57 44.6	
	13nm,0.8s,baz=110,slow=28,SNR=12						
BVAR	**Borovoye Array**	**3.37**	**295**	Pn	**Pn**	**09 56 57.6**	**+1.8**
	0.1nm,0.3s,baz=114,slow=14,SNR=11						
BVAR				Pg	**Pb**	**09 57 02.1**	**-0.4**
	0.1nm,0.3s,baz=116,slow=17,SNR=4.8						
BVAR				Sn	**Sn**	**09 57 34.9**	**-1.6**
	0.2nm,0.3s,baz=113,slow=25,SNR=5.4						
BVAR				Lg	Lg	09 57 46.3	
	0.3nm,0.3s,baz=109,slow=27,SNR=13						
	2.5nm,0.6s						
I46RU	**ZALESOVO INFRA**	**6.09**	**65**	I	I	10 31 50.0	
	baz=251,slow=356,SNR=5.3						
ZALV	**Zalesovo Beam**	**6.09**	**65**	Pn	**Pn**	**09 57 33.9**	**+0.9**
	0.2nm,0.3s,baz=253,slow=15,SNR=3.7						
	0.5nm,0.3s						
MAKZ	**Makanchi**	**6.51**	**137**	Lg	Lg	09 59 25.0	
	6.4nm,0.9s						
MK31	**Makanchi Array**	**6.66**	**135**	⇓Lg	Lg	09 59 28.0	
	4.4nm,0.8s,baz=317,slow=27,SNR=7.8						
MKAR	**Makanchi Array**	**6.66**	**135**	Pn	**Pn**	**09 57 40.7**	**-0.2**
	0.1nm,0.3s,baz=322,slow=9.1,SNR=2.2						
MKAR				Sn	**Sn**	**09 58 58.2**	**+0.8**
	0.2nm,0.3s,baz=323,slow=19,SNR=6.8						
MKAR				Lg	Lg	09 59 30.9	
	0.3nm,0.3s,baz=320,slow=27,SNR=8.0						
	0.2nm,0.6s						

GCG ***27*** *10:07:56.4±2.2, 14°.76N×89°.52W, h1^{km}±10^{km}, MD3.7, MW2.8*

SNET ***27*** *10:07:57.1±1.6, 14°.76N×89°.46W, h4^{km}, ML2.9*

CATAC ***27*** *10:07:57.2±0.2, 15°N±1°×9°0W±°, h1^{km}, M3.0/18, MLv3.0/18, Error ellipse: s-maj=3.0km s-min=2.4km az=106.4, confirmed*

ISC 27 10:07:57.0±1.1**, 14°.77N**±0°.02×**89°.49W**±0°.02**, h5**^{km}±10^{km}**, n61,** σ**0s.84**/71**, 2C-1D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAFR2	**Estanzuela, Za**	**0.23**	**144**	⇓*i*P	**Pg**	**10 08 00.6**	**-1.0**
ZAFR2				*i* S	**Sg**	**10 08 03.9**	**-0.8**
ESQI	**Esquipulas**	**0.25**	**145**	*e*P	**Pg**	**10 08 02.5**	**+0.4**
ESQI				*e*S	**Sg**	**10 08 07.3**	**+1.9**
ESQI	**Esquipulas**	**0.25**	**145**	S	**Sg**	**10 08 07.0**	**+1.6**
ESQI	**Esquipulas**	**0.25**	**145**	P	**Pg**	**10 08 02.4**	**+0.4**
MTO3	**Montecristo**	**0.39**	**161**	⇑*i*P	**Pg**	**10 08 04.5**	**-0.1**
MTO3	**Montecristo**	**0.39**	**161**	S	**Sg**	**10 08 10.3**	**+0.5**
MTO3	**Montecristo**	**0.39**	**161**	P	**Pg**	**10 08 04.6**	**-0.1**
JUAM	**Asuncion Mita**	**0.48**	**206**	*i* P	**Pg**	**10 08 05.4**	**-0.9**
JUAM				*i* S	**Sg**	**10 08 12.1**	**-0.4**
SARH	**Santa Rosa de**	**0.71**	**89**	⇑*i*P	**Pg**	**10 08 10.9**	**+0.2**
SARH				*i* S	**Sb**	**10 08 22.3**	**+0.3**
SARH	**Santa Rosa de**	**0.71**	**89**	P	**Pg**	**10 08 10.9**	**+0.2**
SARH	**Santa Rosa de**	**0.71**	**89**	S	**Sb**	**10 08 21.8**	**-0.2**
UNIC	**Universidad Ca**	**0.78**	**184**	S	**Sg**	**10 08 22.8**	**+0.5**
UNIC	**Universidad Ca**	**0.78**	**184**	P	**Pg**	**10 08 11.4**	**-0.7**
LLGN	**La Laguna**	**0.80**	**139**	P	**Pg**	**10 08 12.4**	**-0.1**
LOAL	**Lomas de Alarc**	**0.81**	**200**	P	**Pg**	**10 08 12.3**	**-0.4**
LOAL	**Lomas de Alarc**	**0.81**	**200**	S	**Sg**	**10 08 23.8**	**+0.5**
NUBE	**Las Nubes**	**0.91**	**198**	*i* P	**Pg**	**10 08 14.1**	**-0.4**
NUBE	**Las Nubes**	**0.91**	**198**	P	**Pg**	**10 08 13.9**	**-0.6**
NUBE	**Las Nubes**	**0.91**	**198**	S	**Sg**	**10 08 26.2**	**0.0**
CEVE	**Cerro Verde**	**0.94**	**188**	*e*P	**Pg**	**10 08 15.0**	**-0.2**
CEVE	**Cerro Verde**	**0.94**	**188**	P	**Pg**	**10 08 15.0**	**-0.2**
CEDA	**San Andres**	**0.96**	**174**	S	**Sg**	**10 08 28.5**	**+0.4**
APG	**El Apazote**	**0.97**	**284**	*i* P	**Pg**	**10 08 13.7**	**-1.9**
BOQS	**Boqueron**	**1.05**	**169**	*e*P	**Pg**	**10 08 17.5**	**+0.3**
FAME	**Alcaldia de Sa**	**1.05**	**209**	P	**Pg**	**10 08 16.1**	**-1.2**
FAME	**Alcaldia de Sa**	**1.05**	**209**	S	**Sg**	**10 08 31.2**	**+0.4**
PMON	**Piamonte**	**1.06**	**171**	P	**Pb**	**10 08 17.9**	**-0.2**
PMON	**Piamonte**	**1.06**	**171**	S	**Sb**	**10 08 32.8**	**+0.5**
UEES	**Universidad Ev**	**1.07**	**167**	P	**Pn**	**10 08 18.9**	**0.0**
UEES	**Universidad Ev**	**1.07**	**167**	S	**Sb**	**10 08 32.6**	**0.0**
FG16	**Alotenango, Sa**	**1.10**	**244**	*i* P	**Pn**	**10 08 21.8**	**+2.4**
JAYA	**Jayaque - finc**	**1.11**	**178**	*e*P	**Pg**	**10 08 17.9**	**-0.4**
JAYA				*e*S	**Sg**	**10 08 33.2**	**+0.4**
JAYA	**Jayaque - finc**	**1.11**	**178**	*i* P	**Pg**	**10 08 17.9**	**-0.4**
JAYA				*i* S	**Sg**	**10 08 32.8**	**+0.1**
JAYA	**Jayaque - finc**	**1.11**	**178**	P	**Pg**	**10 08 17.8**	**-0.6**
AVCB	**Coban**	**1.12**	**308**	*i* P	**Pg**	**10 08 18.1**	**-0.5**
AVCB				*i* S	**Sb**	**10 08 35.6**	**+1.4**
LOMA	**Loma Larga**	**1.16**	**164**	P	**Pg**	**10 08 19.3**	**0.0**
LOMA	**Loma Larga**	**1.16**	**164**	S	**Sb**	**10 08 35.0**	**-0.1**
PAVA	**Las Pavas**	**1.18**	**153**	P	**Pg**	**10 08 19.1**	**-0.6**
PAVA	**Las Pavas**	**1.18**	**153**	S	**Sb**	**10 08 36.5**	**+0.9**
LALI	**Alcalda de L**	**1.28**	**173**	*e*P	**Pg**	**10 08 20.9**	**-0.7**
LALI				*e*S	**Sb**	**10 08 38.7**	**+0.2**
LALI	**Alcalda de L**	**1.28**	**173**	*i* P	**Pb**	**10 08 21.8**	**+0.1**
LALI				*i* S	**Sb**	**10 08 39.1**	**+0.6**
LALI	**Alcalda de L**	**1.28**	**173**	P	**Pg**	**10 08 20.8**	**-0.9**
SCLA	**Alcaldia de Sa**	**1.29**	**145**	P	**Pg**	**10 08 21.3**	**-0.6**
SCLA	**Alcaldia de Sa**	**1.29**	**145**	S	**Sn**	**10 08 39.8**	**+0.3**
IZABA	**Izabal, Puerto**	**1.30**	**42**	*e*P	**Pg**	**10 08 21.7**	**-0.2**
IZABA	**Izabal, Puerto**	**1.30**	**42**	S	**Sb**	**10 08 39.7**	**+0.8**
IZABA	**Izabal, Puerto**	**1.30**	**42**	P	**Pg**	**10 08 21.5**	**-0.4**
UESV	**Universidad de**	**1.32**	**149**	P	**Pg**	**10 08 20.8**	**-1.5**
PQSS	**Presa 15 de Se**	**1.45**	**141**	P	**Pn**	**10 08 21.3**	**-2.7**
PQSS	**Presa 15 de Se**	**1.45**	**141**	S	**Sg**	**10 08 42.1**	**-1.6**
PACA	**Pacayal**	**1.72**	**139**	P	**Pn**	**10 08 28.5**	**+0.7**
SOKI	**Kika Raxquin**	**1.85**	**272**	*i* P	**Pn**	**10 08 30.6**	**+0.7**
HUEH	**Huehuetenango**	**2.02**	**286**	*e*P	**Pn**	**10 08 32.8**	**+0.8**
HUEH				*e*S	**Sb**	**10 08 59.9**	**-0.1**
HUEH	**Huehuetenango**	**2.02**	**286**	*i* P	**Pn**	**10 08 32.8**	**+0.8**
HUEH	**Huehuetenango**	**2.02**	**286**	P	**Pn**	**10 08 32.4**	**+0.4**
LCND	**La Caada**	**2.13**	**133**	P	**Pb**	**10 08 35.2**	**-0.9**
PETF	**Flores**	**2.17**	**350**	*i* P	**Pn**	**10 08 33.5**	**-0.3**
PETF	**Flores**	**2.17**	**350**	P	**Pn**	**10 08 33.5**	**-0.3**
CNCH	**Conchagua**	**2.19**	**132**	P	**Pb**	**10 08 36.3**	**-0.9**
TGUH	**Tegucigalpa,Un**	**2.26**	**108**	P	**Pb**	**10 08 38.5**	**0.0**
YUSH	**Yuscaran**	**2.69**	**107**	P	**Pn**	**10 08 41.3**	**+0.1**

KRSC ***27*** *10:21:02.2±1.2, 58°.88N×158°.67E, h24^{km}±11^{km}, Ml3.7*

NERS ***27*** *10:21:10.5, 58°.92N×158°.31E, h33^{km}*

ISC 27 10:21:03.8±0.9**, 58°.84N**±0°.06×**158°.83E**±0°.04**, h10**^{km}**, n14,** σ**1s.55**/20**, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALN	**Palana**	**0.64**	**67**	*e*P	**Pb**	**10 21 16.3**	**-0.7**
PALN				*e*S	**Sb**	**10 21 25.6**	**-0.4**
OSSR	**Ossora**	**2.23**	**78**	*e*P	**Pn**	**10 21 40.8**	**+0.2**
OSSR				*e*S	**Sn**	**10 22 09.0**	**+0.9**
SMKR	**Semkarok**	**2.67**	**147**	*e*P	**Pn**	**10 21 48.3**	**+1.4**
KOZ	**Kozyrevsk**	**2.85**	**168**	*e*P	**Pn**	**10 21 49.9**	**+0.7**
ESO	**Esso**	**2.93**	**181**	*e*P	**Pn**	**10 21 50.4**	**+0.1**
BZP	**Bezymyannyi-Pe**	**3.08**	**162**	*e*P	**Pn**	**10 21 52.4**	**-0.2**
KMNR	**Kamenistaya**	**3.19**	**166**	*e*P	**Pn**	**10 21 55.8**	**+1.8**
GADL	**Gadlja**	**3.94**	**285**	*e*Sg	**Sg**	**10 23 09.7**	**-0.6**
GADL				Sgmax		10 23 24.5	
	220nm,0.7s						
GADL				Sgmax		10 23 24.5	
	180nm,0.7s						
TLAR	**Talaya**	**3.96**	**308**	*e*P	Pb	10 22 07.1	-6.6
TLAR				*e*Pg	**Pg**	**10 22 20.8**	**+1.2**
TLAR				Pgmax		10 22 21.7	
	10.0nm,0.4s						
TLAR				*e*Sg	**Sg**	**10 23 08.4**	**-2.5**
TLAR				Sgmax		10 23 11.7	
	120nm,0.5s						
TLAR				Sgmax		10 23 11.7	
	100nm,0.5s						
MA2	**Magadan**	**4.21**	**283**	*e*Pg	**Pg**	**10 22 22.8**	**-1.5**
MA2				Pgmax		10 22 35.2	
	10.0nm,0.7s						
MA2				*e*Sg	**Sg**	**10 23 16.7**	**-2.1**
MA2				Sgmax		10 23 24.5	
	60nm,0.7s						
MA2				Sgmax		10 23 24.5	
	50nm,0.8s						
MGD	**Magadan 1**	**4.31**	**290**	*e*P	**Pn**	**10 22 11.2**	**+1.9**
MGD				*e*Sg	**Sg**	**10 23 19.8**	**-2.1**
MGD				Sgmax		10 23 31.1	
	70nm,0.5s						
SEY	**Seymchan**	**5.17**	**325**	*e*P	Pn	10 22 24.1	+3.0
SEY				*e*Pg	**Pg**	**10 22 43.1**	**+0.4**
SEY				*e*Sg	**Sg**	**10 23 49.6**	**0.0**
SEY				Sgmax		10 24 06.3	
	20nm,0.8s						
SEY				Sgmax		10 24 06.3	
	20nm,0.8s						
TLON	**Talon**	**5.29**	**284**	*e*S	**Sg**	**10 23 56.6**	**+3.1**
TLON				Sgmax		10 24 08.3	
	140nm,0.6s						
SUUS	**Susuman**	**6.54**	**312**	*e*Sg	**Sg**	**10 24 32.1**	**-1.3**
SUUS				Sgmax		10 24 41.3	
	20nm,0.7s						
SUUS				Sgmax		10 24 41.3	
	30nm,0.7s						

UPP ***27*** *10:21:33.3±2.6, 64°.56N×30°.97E, h0^{km}, ML1.7, Presumed earthquake*

HEL ***27*** *10:21:34.8±0.2, 64°.73N×30°.71E, h0^{km}, ML1.9, Suspected explosion*

KOLA ***27*** *10:21:35.2, 64°.69N×30°.94E, h0^{km}, ML2.0, Error ellipse: s-maj=30.5km s-min=12.1km az=160.0, Kostomuksha, Karelia*

IDC ***27*** *10:21:36.8±2.5, 64°.70N×30°.67E, h0^{km}, mbtmp3.0/4, ML1.9/4, Error ellipse: s-maj=38.3km s-min=8.8km az=101.0*

ISC 27 10:21:34.9±0.9**, 64°.78N**±0°.02×**30°.73E**±0°.04**, h0**^{km}**, n48,** σ**1s.37**/79**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.66**	**212**	PG	**Pg**	**10 21 46.4**	**-1.1**
	baz=36						
RMF				MSG		10 21 54.3	
	comp=Z,18nm,0.2s						
KU1	**Kurvinen**	**0.93**	**329**	PG	**Pg**	**10 21 52.4**	**-0.4**
KU1				SG	**Sg**	**10 22 04.7**	**-0.1**
KU6	**Riekki**	**1.30**	**345**	PG	**Pg**	**10 21 58.8**	**-1.0**
	baz=161						
KU6				MSG		10 22 15.2	
	comp=Z,6.9nm,0.2s						
KU6				SG	**Sg**	**10 22 16.6**	**0.0**
MSF	**Maaselka**	**1.34**	**329**	PG	**Pg**	**10 21 59.4**	**-1.2**
	baz=149						
MSF				SB	**Sg**	**10 22 17.3**	**-0.6**
KU2	**Taivalkoski**	**1.41**	**313**	PG	**Pn**	**10 22 00.8**	**-1.0**
KU2				SG	**Sg**	**10 22 19.6**	**-0.5**
OLKF	**Oulanka, Finla**	**1.65**	**341**	PG	**Pn**	**10 22 05.1**	**+0.1**
OLKF				MSG		10 22 25.1	
	comp=Z,9.2nm,0.2s						
OLKF				SN	**Sn**	**10 22 27.2**	**+0.4**
JOF	**Joensuu**	**1.88**	**172**	PG	**Pn**	**10 22 07.3**	**-1.0**
	baz=354						
JOF				SN	**Sn**	**10 22 32.4**	**-0.3**
NIF	**Nilsia**	**1.89**	**224**	PG	**Pn**	**10 22 08.3**	**-0.1**
NIF				MSG		10 22 30.0	
	comp=Z,8.3nm,0.2s						
NIF				SG	**Sn**	**10 22 32.4**	**-0.5**
RANF	**Ranua**	**2.07**	**309**	PG	**Pn**	**10 22 11.8**	**+1.0**
	baz=126						
RANF				SG	**Sn**	**10 22 38.4**	**+1.2**
OUL	**Oulu**	**2.08**	**281**	PG	**Pn**	**10 22 11.8**	**+0.8**
	baz=101						
OUL				SG	**Sn**	**10 22 38.1**	**+0.6**
KVDA	**Kovda**	**2.12**	**24**	P	**Pn**	**10 22 12.2**	**+0.8**
KVDA				S	**Sn**	**10 22 38.9**	**+0.5**
OBF4	**Vikkela, Lumij**	**2.41**	**273**	PG	**Pn**	**10 22 17.0**	**+1.5**
	baz=91						
OBF4				MSG		10 22 45.8	
	comp=Z,7.2nm,0.2s						
OBF4				SG	**Sb**	**10 22 48.3**	**-0.9**
OUF	**Merijarvi**	**2.62**	**264**	PB	**Pn**	**10 22 19.0**	**+0.6**
	baz=79						
OUF				MSG		10 22 51.8	
	comp=Z,8.2nm,0.2s						
OUF				SG	**Sb**	**10 22 54.2**	**-1.1**
RNF	**Rovaniemi**	**2.68**	**315**	PB	**Pn**	**10 22 20.6**	**+1.4**
RNF				SB	**Sb**	**10 22 56.0**	**-1.0**
OBF0	**Syolatti, Pyha**	**2.81**	**267**	PN	**Pn**	**10 22 21.1**	**+0.1**
OBF0				MSG		10 22 57.2	
	comp=Z,6.6nm,0.2s						
OBF0				SG	**Sb**	**10 23 01.4**	**+0.7**
SUF	**Sumiainen**	**2.90**	**227**	PB	**Pn**	**10 22 23.5**	**+1.3**
SUF				MSG		10 22 59.0	
	comp=Z,2.1nm,0.2s						
TOF	**Tornio**	**2.98**	**299**	PB	**Pn**	**10 22 26.4**	**+3.1**
TOF				MSG		10 23 02.6	
	comp=Z,1.7nm,0.2s						
TOF				SB	**Sb**	**10 23 04.4**	**-1.2**
APA0	**Apatity Array**	**2.99**	**17**	S	**Sn**	**10 23 02.2**	**+2.3**
APA	**Apatity**	**3.01**	**20**	S	**Sn**	**10 23 00.1**	**-0.3**
VRF	**Varrio**	**3.02**	**352**	PN	**Pn**	**10 22 24.9**	**+1.0**
	baz=174						
VRF				MSG		10 23 04.7	
	comp=Z,1.9nm,0.2s						
VRF				SG	**Sb**	**10 23 07.9**	**+1.1**
KALU	**Kalix**	**3.28**	**293**	P	**Pn**	**10 22 28.1**	**+0.7**
KALU				S	**Sn**	**10 23 09.9**	**+2.8**
KALU	**Kalix**	**3.28**	**293**	PN	**Pn**	**10 22 28.6**	**+1.2**
KALU				SG	**Sb**	**10 23 14.2**	**0.0**
LVZ	**Lovozero**	**3.51**	**25**	SN	**Sn**	**10 23 12.7**	**-0.2**
KLF	**Kolari**	**3.71**	**315**	PN	**Pn**	**10 22 34.6**	**+1.3**
KLF				SG	**Sb**	**10 23 29.5**	**+3.0**
KEF	**Keuruu**	**3.71**	**228**	PB	**Pn**	**10 22 35.2**	**+1.9**
KEF				SB	**Sn**	**10 23 20.2**	**+2.5**
RAJF	**Raja-Jooseppi**	**3.84**	**347**	PN	**Pn**	**10 22 35.8**	**+0.7**
PAJU	**Pajala**	**3.85**	**309**	P	**Pn**	**10 22 35.6**	**+0.3**
PAJU	**Pajala**	**3.85**	**309**	PN	**Pn**	**10 22 35.8**	**+0.4**
PAJU				SG	**Sb**	**10 23 33.2**	**+2.4**
SJUU	**Sjulsmark**	**3.92**	**285**	P	**Pn**	**10 22 36.5**	**+0.2**
FIA0	**FINESS Array S**	**3.96**	**214**	PN	**Pn**	**10 22 36.8**	**+0.1**
	baz=28						
FIA0				SG	**Sb**	**10 23 36.6**	**+2.9**
FINES	**FINESS Array B**	**3.96**	**214**	Pn	**Pn**	**10 22 37.1**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=37,slow=13,SNR=7.0						
FINES				Pg	**Pb**	**10 22 44.5**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=19,slow=17,SNR=6.9						
FINES				Lg	Lg	10 23 35.9	
	comp=Z,0.5nm,0.3s,baz=35,slow=29,SNR=8.5						
	comp=Z,1.6nm,0.9s						
ERTU	**Ertsjaerv**	**3.96**	**301**	P	**Pn**	**10 22 37.8**	**+1.0**
ERTU				S	**Sn**	**10 23 25.3**	**+1.5**
ERTU	**Ertsjaerv**	**3.96**	**301**	PN	**Pn**	**10 22 37.8**	**+1.0**
	baz=114						
ERTU				SG	**Sb**	**10 23 34.4**	**+0.5**
VAF	**Ylistaro**	**3.96**	**248**	PN	**Pn**	**10 22 37.7**	**+0.9**
VAF				SG	**Sb**	**10 23 37.2**	**+3.4**
BURU	**Burvik**	**4.02**	**271**	P	**Pn**	**10 22 36.9**	**-0.8**
BURU				S	**Sn**	**10 23 24.3**	**-1.0**
BURU	**Burvik**	**4.02**	**271**	SN	**Sn**	**10 23 24.6**	**-0.8**
HARU	**Harads**	**4.30**	**293**	P	**Pn**	**10 22 42.4**	**+1.0**
UMAU	**Umeaa**	**4.46**	**263**	PN	**Pn**	**10 22 42.7**	**-0.9**
HEF	**Hetta**	**4.61**	**325**	PN	**Pn**	**10 22 48.1**	**+2.4**
HEF				SG	**Sb**	**10 23 56.1**	**+3.7**
LANU	**Lannavaara**	**4.80**	**317**	P	**Pn**	**10 22 48.7**	**+0.3**
ARCES	**ARCESS Array B**	**5.19**	**339**	Pn	**Pn**	**10 22 53.9**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=155,slow=13,SNR=33						
ARCES				Sn	**Sn**	**10 23 52.0**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=158,slow=24,SNR=5.1						
ARCES				Lg	Lg	10 24 13.8	
	comp=Z,0.2nm,0.3s,baz=150,slow=31,SNR=6.5						
	comp=Z,0.5nm,0.3s						
ARCES	**ARCESS Array B**	**5.19**	**339**	P	**Pn**	**10 22 53.8**	**+0.1**
ARCES				S	**Sn**	**10 23 53.1**	**-1.1**
VADS	**Vadso**	**5.39**	**355**	P	**Pn**	**10 22 56.5**	**+0.1**
VADS				S	**Sn**	**10 23 58.0**	**-1.1**
RATU	**Laukkuluspa**	**5.43**	**309**	P	**Pn**	**10 22 57.6**	**+0.6**
NIKU	**Nikkaluokta**	**5.64**	**309**	P	**Pn**	**10 23 00.0**	**+0.2**
FAUS	**Fauske**	**6.80**	**300**	S	**Sn**	**10 24 31.6**	**-2.1**
HFS	**Hagfors**	**9.15**	**247**	Pn	**Pn**	**10 23 46.7**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=59,slow=14,SNR=1.2						
HFS				Lg	Lg	10 26 14.4	
	comp=Z,0.1nm,0.3s,baz=30,slow=22,SNR=1.0						
	comp=Z,2.4nm,1.0s						
NOA	**NORSAR Array B**	**9.64**	**256**	Pn	**Pn**	**10 23 53.2**	**-1.5**
	baz=52,slow=13,SNR=2.2						
	comp=Z,0.3nm,0.7s						

NEIC ***27*** *10:27:28.9±1.5, 4°.57N±0°.08×127°.7E±0°.1, h108^{km}±8^{km}, mb4.3/19, Error ellipse: s-maj=20.3km s-min=10.0km az=70.0*

IDC ***27*** *10:27:31.4±6.5, 4°.55N×127°.69E, h142^{km}±62^{km}, mb3.7/14, mbtmp4.1/14, Error ellipse: s-maj=37.4km s-min=11.7km az=77.0*

ISC 27 10:27:27.6±0.5**, 4°.58N**±0°.06×**127°.7E**±0°.1**, h104**^{km}**, n44,** σ**0s.73**/45**, mb4.1**/21**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**3.25**	**320**	S	**Sn**	**10 28 54.9**	**+0.1**
	126nm,0.4s,baz=257,slow=14,SNR=1.5						
DAV	**Davao City (W)**	**3.25**	**320**	Pn	**Pn**	**10 28 17.8**	**+1.0**
TNTI	**Ternate**	**3.79**	**185**	Pn	**Pn**	**10 28 25.3**	**+1.2**
LUWI	**Luwuk**	**7.44**	**222**	Pn	**Pn**	**10 29 13.5**	**+0.1**
TOLI2	**Tolitoli**	**7.71**	**244**		**Pn**	**10 29 17.6**	**+0.3**
FAKI	**Fak Fak**	**8.72**	**148**	Pn	**Pn**	**10 29 30.6**	**-0.4**
MTN	**Manton Dam**	**17.64**	**169**	P	**Pn**	**10 31 26.9**	**0.0**
MTN				IAmb	IAmb	10 31 50.0	
	comp=Z,32nm,1.2s						
KNRA	**Kununurra**	**20.15**	**177**	P	**P**	**10 31 54.6**	**+0.9**
KNRA				IAmb	IAmb	10 32 21.9	
	comp=Z,53nm,1.5s						
FITZ	**Fitzroy Crossi**	**22.62**	**185**	P	**P**	**10 32 19.6**	**-0.3**
WB0	**Warramunga Arr**	**25.07**	**165**	P	**P**	**10 32 42.4**	**-0.1**
WB0				IAmb	IAmb	10 32 44.9	
	comp=Z,7.7nm,0.9s						
WRA	**Warramunga Arr**	**25.23**	**165**	P	**P**	**10 32 43.9**	**0.0**
	comp=Z,2.5nm,0.7s,baz=344,slow=10.0,SNR=14						
	comp=Z,2.5nm,0.7s						
WRA	**Warramunga Arr**	**25.23**	**165**	P	**P**	**10 32 43.5**	**-0.4**
WR8	**Warramunga Arr**	**25.28**	**165**	P	**P**	**10 32 44.3**	**-0.1**
WR8				IAmb	IAmb	10 32 45.1	
	comp=Z,5.2nm,0.9s						
AS31	**Alice Springs**	**28.71**	**168**	P	**P**	**10 33 15.6**	**+0.4**
ASAR	**Alice Springs**	**28.72**	**168**	P	**P**	**10 33 15.6**	**+0.4**
	comp=Z,1.2nm,0.5s,baz=355,slow=7.8,SNR=39						
ASAR				PcP	**PcP**	**10 36 23.1**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=343,slow=2.3,SNR=7.6						
	comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**28.72**	**168**	P	**P**	**10 33 15.2**	**0.0**
KSRS	**Korea Array**	**32.73**	**0**	P	**P**	**10 33 50.3**	**+0.1**
	comp=Z,2.0nm,0.6s,baz=178,slow=11,SNR=7.9						
	comp=Z,2.0nm,0.6s						
FORT	**Forrest**	**35.16**	**179**	P	**P**	**10 34 11.7**	**+0.3**
FORT				IAmb	IAmb	10 34 12.1	
	comp=Z,4.7nm,0.7s						
BBOO	**Buckleboo**	**38.02**	**169**	P	**P**	**10 34 35.8**	**0.0**
BBOO				IAmb	IAmb	10 34 59.0	
	comp=Z,16nm,1.4s						
STKA	**Stephens Creek**	**38.59**	**161**	P	**P**	**10 34 40.2**	**-0.3**
	comp=Z,2.1nm,0.7s,baz=344,slow=7.3,SNR=7.9						
	comp=Z,2.1nm,0.7s						
STKA	**Stephens Creek**	**38.59**	**161**	P	**P**	**10 34 40.6**	**+0.1**
USRK	**Ussuriysk Ar.**	**39.64**	**5**	P	**P**	**10 34 49.8**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=171,slow=10,SNR=2.1						
	comp=Z,0.7nm,0.5s						
SHL	**Shillong**	**40.17**	**305**	P	**P**	**10 34 54.2**	**+0.2**
ARMA	**Armidale**	**41.66**	**148**	P	**P**	**10 35 06.7**	**+0.6**
ARMA				IAmb	IAmb	10 35 27.6	
	comp=Z,8.8nm,1.2s						
SONM	**Songino Array**	**46.82**	**340**	P	**P**	**10 35 47.4**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=140,slow=6.7,SNR=5.3						
	comp=Z,0.7nm,0.5s						
SONM	**Songino Array**	**46.82**	**340**	P	**P**	**10 35 48.3**	**+1.3**
SONM				IAmb	IAmb	10 35 49.4	
	comp=Z,0.9nm,0.8s						
PEA0B	**Petropavlovsk-**	**54.29**	**22**	P	**P**	**10 36 42.3**	**-0.6**
PETK	**Petropavlovsk-**	**54.29**	**22**	P	**P**	**10 36 43.7**	**+0.8**

	comp=Z,3.1nm,0.7s,baz=181,slow=7.5,SNR=6.1						
	comp=Z,3.1nm,0.7s						
PETK	Petropavlovsk-	54.29	22	P	P	10 36 42.9	-0.1
MKAR	Makanchi Array	57.42	325	P	P	10 37 06.0	+0.6
	comp=Z,1.8nm,0.6s,baz=120,slow=8.5,SNR=20						
	comp=Z,1.8nm,0.6s						
MKAR	Makanchi Array	57.42	325	P	P	10 37 06.1	+0.6
MAKZ	Makanchi	57.61	324	P	P	10 37 07.4	+0.6
MAKZ				IAmb	IAmb	10 37 07.8	
	comp=Z,1.9nm,0.7s						
ZALV	Zalesovo Beam	60.28	332	P	P	10 37 23.9	-1.1
	comp=Z,0.4nm,0.4s,baz=128,slow=9.5,SNR=2.9						
	comp=Z,0.4nm,0.4s						
BVAR	Borovoye Array	67.15	327	P	P	10 38 10.2	0.0
	comp=Z,1.1nm,0.6s,baz=116,slow=6.8,SNR=5.6						
	comp=Z,1.1nm,0.6s						
NRIK	Noril'sk	69.85	346	P	P	10 38 24.8	-1.8
	comp=Z,1.3nm,0.5s,baz=137,slow=0.9,SNR=3.9						
	comp=Z,1.3nm,0.5s						
AB31	Akbulak array	72.11	320	P	P	10 38 40.5	-0.2
ABKAR	Akbulak array	72.11	320	P	P	10 38 40.6	-0.1
ILAR	Eielson Array	83.93	25	P	P	10 39 44.9	-0.9
	comp=Z,1.7nm,1.1s,baz=267,slow=6.9,SNR=6.3						
	comp=Z,1.7nm,1.1s						
VNDA	Vanda	84.14	173	P	P	10 39 45.6	-1.0
	comp=Z,0.7nm,0.8s,baz=310,slow=3.7,SNR=3.6						
	comp=Z,0.7nm,0.8s						
VNDA	Vanda	84.14	173	P	P	10 39 47.1	+0.5
VNDA				IAmb	IAmb	10 39 56.1	
	comp=Z,4.5nm,1.5s						
KLU	Klutina	84.28	29	P	P	10 39 48.3	+0.6
F25K	Christian Rive	84.52	23	P	P	10 39 50.2	+1.4
F25K				IAmb	IAmb	10 39 52.5	
	comp=Z,3.6nm,1.4s						
BMAR	Burnt Mountain	84.93	23		P	10 39 52.4	+1.6
ARCES	ARCESS Array B	89.99	340	P	P	10 40 13.7	-1.4
	comp=Z,3.8nm,0.9s,baz=72,slow=4.0,SNR=5.4						
	comp=Z,3.8nm,0.9s						

*IDC **27** 10:32:34.1±1.1, 55°.65S×26°.67W, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=48.6km s-min=36.2km az=77.0*

*NEIC **27** 10:32:36.2±1.7, 55°.8S±0°.2×27°.0W±0°.1, h10km±1km, mb4.3/12, Error ellipse: s-maj=26.8km s-min=10.6km az=12.0*

ISC 27 10:32:37.8±0.8**, 55°.7S**±0°.1×**26°.9W**±0°.1**, h25km, n23, σ0s.86**/21**, mb4.2**/7**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	5.71	280	Pn	Pn	10 34 00.1	-0.8
SNAA	Sanae	18.99	157	P	P	10 36 55.5	-1.6
PMSA	Palmer Station	20.26	228	P	P	10 37 10.7	-0.2
BELA	Belgrano 2	22.43	184	P	P	10 37 34.1	-0.2
TRQA	Tornquist	29.35	292	P	P	10 38 38.1	-0.3
QSPA	South Pole Qui	34.55	180		P	10 39 25.1	+1.2
QSPA				IAmb	IAmb	10 39 37.3	
	comp=Z,7.2nm,1.5s						
LC02	Puerto Saavedr	35.03	279	P	P	10 39 29.1	+1.0
AC05	El Transito	40.85	293	P	P	10 40 16.6	-0.9
AC05				IAmb	IAmb	10 40 37.6	
	comp=Z,10nm,1.2s						
PB01	IPOC Station P	46.88	300	P	P	10 41 06.3	+0.3
PB01				IAmb	IAmb	10 41 07.4	
	comp=Z,4.0nm,0.8s						
VNDA	Vanda	46.93	183	P	P	10 41 06.3	+0.7
	comp=Z,0.7nm,0.7s,baz=170,slow=7.1,SNR=3.5						
	comp=Z,0.7nm,0.7s						
VNDA	Vanda	46.93	183	P	P	10 41 05.4	-0.1
PTLB	Pontes e Lacer	47.17	315	P	P	10 41 08.4	+0.3
PTLB				IAmb	IAmb	10 41 08.8	
	comp=Z,1.8nm,0.8s						
H10S2	ASCENSION HYDR	47.62	16	T	T	11 32 37.5	
	baz=186						
H10S3	ASCENSION HYDR	47.62	16	T	T	11 32 32.0	
	baz=34						
GO01	Chusmiza	47.91	301	P	P	10 41 15.5	+1.1
GO01				IAmb	IAmb	10 41 27.6	
	comp=Z,2.5nm,1.1s						
LPAZ	La Paz	50.32	305	P	P	10 41 33.8	+0.7
	comp=Z,1.6nm,0.8s,baz=150,slow=6.5,SNR=5.2						
	comp=Z,1.6nm,0.8s						
LPAZ	La Paz	50.32	305	P	P	10 41 31.8	-1.2
LPAZ				IAmb	IAmb	10 41 34.5	
	comp=Z,3.3nm,1.1s						
TORD	Torodi Ar. Bea	72.67	29	P	P	10 44 03.2	0.0
	comp=Z,0.5nm,0.5s,baz=200,slow=6.3,SNR=3.3						
	comp=Z,0.5nm,0.5s						
YKA	Yellowknife Ar	136.03	318	PKP	PKPdf	10 51 53.6	-1.4
	comp=Z,0.3nm,0.9s,baz=132,slow=0.9,SNR=3.4						
KBS	Kingsbay	136.35	10	PKPdf	PKPdf	10 51 55.9	+0.7
ILAR	Eielson Array	150.01	312	PKPbc	PKPbc	10 52 24.8	+0.3
	comp=Z,1.1nm,0.7s,baz=130,slow=3.6,SNR=21						
SONM	Songino Array	150.53	86	PKPbc	PKPbc	10 52 26.1	-0.3
	comp=Z,0.4nm,0.5s,baz=200,slow=5.4,SNR=4.5						
SONM	Songino Array	150.53	86		PKiKP	10 52 27.2	+0.1

IDC 27 10:40:51.0±3.5**, 30°.35N×67°.49E, h0km, mb3.4**/5**, mbtmp3.5**/5**, Error ellipse: s-maj=115.8km s-min=37.6km az=83.0, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	20.03	31	P	P	10 45 25.1	-0.4
	0.6nm,0.6s,baz=212,slow=11,SNR=5.0						
	0.6nm,0.6s						
BVAR	Borovoye Array	22.76	5	P	P	10 45 55.4	+0.7
	0.6nm,0.4s,baz=182,slow=7.3,SNR=5.0						
	0.6nm,0.4s						
ZALV	Zalesovo Beam	26.71	23	P	P	10 46 32.1	+0.3
	0.6nm,0.4s,baz=224,slow=10,SNR=3.8						
	0.6nm,0.4s						
ILAR	Eielson Array	81.46	14	P	P	10 53 09.0	-0.7
	0.5nm,1.1s,baz=330,slow=5.1,SNR=1.9						
	0.5nm,1.1s						
ASAR	Alice Springs	83.31	122	P	P	10 53 20.4	+0.3
	0.2nm,0.6s,baz=314,slow=5.2,SNR=1.6						
	0.2nm,0.6s						

*MEX **27** 10:52:09.7±0.7, 13°.79N×93°.22W, h8km±24km, MD4.0*

*IDC **27** 10:52:21.5±4.3, 15°.08N×92°.59W, h34km±8km, mb3.1/3, mbtmp3.2/5, ML3.1/2, Error ellipse: s-maj=104.2km s-min=14.1km az=17.0*

ISC 27 10:52:12.7±1.3**, 13°.95N**±0°.10×**93°.15W**±0°.05**, h30km**±5km**, n18, σ2s.40**/31**, mb3.6**/3**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.28	42	*e*P	Pn	10 52 32.3	-2.3
THIG				*e*S	Sb	10 52 49.4	-2.9
PATR	El Naranjo	1.46	37	*e*P	Pn	10 52 34.8	-2.5
PATR				*e*S	Sb	10 52 55.2	-2.5
CHUJ	Union Juarez	1.52	42	*e*P	Pn	10 52 35.5	-2.6
CHUJ				*e*S	Sb	10 52 56.7	-2.7
PAVE	Pavencul	1.55	37	*e*P	Pn	10 52 36.3	-2.3
PAVE				*e*S	Sb	10 52 57.8	-2.6
PCIG		1.74	358	*e*P	Pn	10 52 39.7	-1.3
PCIG				*e*S	Sn	10 53 01.6	-0.6
CCIG	Comitan	2.51	23	*e*P	Pn	10 52 52.9	+1.1
CCIG				*e*S	Sn	10 53 22.1	+0.6
APG	El Apazote	2.80	68	Pn	Pn	10 52 53.5	-2.4
	0.2nm,0.3s,baz=200,slow=14,SNR=30						
APG				Lg	Lg	10 53 28.0	
	0.5nm,0.3s,baz=93,slow=18,SNR=6.2						
TGIG		2.81	1	*e*P	Pn	10 52 55.7	0.0
TGIG				*e*S	Sn	10 53 29.3	+0.6
HUIG	Huatulco	3.38	303	*e*P	Pn	10 53 01.9	-1.7
HUIG				*e*S	Sn	10 53 38.8	-3.9
CMIG	Matias Romero	3.54	332	Pn	Pn	10 53 06.4	+0.6
	1.6nm,0.3s,baz=167,slow=13,SNR=32						
CMIG				Sn	Sn	10 53 42.9	-3.7
	1.6nm,0.3s,baz=89,slow=17,SNR=4.0						
	3.5nm,0.3s						
CMIG	Matias Romero	3.54	332	*e*P	Pn	10 53 05.5	-0.2
CMIG				*e*S	Sn	10 53 46.0	-0.6
PEIG	Puerto Escondi	4.36	298	*e*P	Pn	10 53 14.4	-2.7
PEIG				*e*S	Sn	10 54 02.1	-5.0
NEUV	Arroyo Zacate	4.53	326	*e*P	Pn	10 53 17.7	-1.6
TEIG	Tepich	7.79	36	Sn	Sn	10 55 21.3	-10
	baz=132,slow=24,SNR=3.0						
TXAR	Lajitas Array	18.14	329	P	Pn	10 56 21.6	-1.1
	baz=158,slow=8.4,SNR=2.8						
	0.4nm,1.0s						
NVAR	Mina Array Bea	33.01	322	P	P	10 58 49.1	+3.4
	0.4nm,0.7s,baz=123,slow=7.7,SNR=3.1						
NVAR				pP	sP	10 58 58.1	+1.6
	0.6nm,0.7s,baz=135,slow=7.5,SNR=4.1						
	0.4nm,0.7s						
YKA	Yellowknife Ar	50.82	347	P	P	11 01 10.8	+0.5
	0.2nm,0.7s,baz=156,slow=7.2,SNR=4.8						
YKA				pP	sP	11 01 21.0	-0.2
	0.5nm,0.6s,baz=156,slow=7.2,SNR=10						
	0.2nm,0.7s						
ILAR	Eielson Array	62.44	337	P	P	11 02 35.9	+3.0
	0.1nm,0.5s,baz=124,slow=7.7,SNR=1.3						
ILAR				pP	pwP	11 02 47.0	+1.4
	0.3nm,0.6s,baz=109,slow=7.2,SNR=3.0						
	0.1nm,0.5s						

*IDC **27** 10:53:16.0±1.2, 18°.48N×145°.35E, h482km±14km, mb3.2/15, mbtmp4.1/17, Error ellipse: s-maj=16.3km s-min=11.2km az=83.0*

*NEIC **27** 10:53:16.7±1.5, 18°.48N±0°.10×145°.2E±0°.1, h482km±8km, mb4.3/68, Error ellipse: s-maj=17.8km s-min=14.5km az=95.0*

ISC 27 10:53:16.2±0.4**, 18°.45N**±0°.06×**145°.17E**±0°.10**, h482km, n83, σ0s.87**/72**, mb4.2**/47**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DPSS	Saipan	3.25	169	P	P	10 54 27.4	-0.2
GUMO	Guam	4.84	183	P	P	10 54 41.7	+0.8
	22nm,0.3s,baz=35,slow=12,SNR=1.4						
GUMO				S	S	10 55 50.0	+0.3
	44nm,0.4s,baz=180,slow=19,SNR=5.4						
GUMO	Guam	4.84	183	P	P	10 54 41.9	+1.0
JGF	Kuroka	18.43	339	P	P	10 57 02.9	+1.5
MJAR	Matsushiro Arr	19.04	343	P	P	10 57 06.6	-0.3
	2.3nm,0.6s,baz=164,slow=10.0,SNR=5.8						
MJAR	Matsushiro Arr	19.04	343	P	P	10 57 06.8	-0.1
MJAR				IAmb	IAmb	10 57 08.4	
	comp=Z,8.2nm,1.4s						
MAJO	Matsushiro	19.04	343	P	P	10 57 07.2	+0.3
MJB9	Matsu-Tunnel	19.04	343	P	P	10 57 08.1	+1.2
SSLB	Suanglung	23.19	287	P	P	10 57 44.0	-0.7
KSRS	Korea Array	24.23	325	P	P	10 57 54.5	+0.8
	comp=Z,1.2nm,0.5s,baz=144,slow=9.1,SNR=5.9						
	comp=Z,1.2nm,0.5s						
KS19	Wonju Array Si	24.29	325	P	P	10 57 53.9	-0.4
KS19				IAmb	IAmb	10 58 13.6	
	comp=Z,28nm,1.4s						
FAKI	Fak Fak	24.75	212	P	P	10 57 57.8	-0.9
TOLI2	Tolitoli	29.49	237	P	P	10 58 40.2	-0.2
TOLI2				IAmb	IAmb	10 58 59.6	
	comp=Z,7.1nm,1.0s						
KKM	Kota Kinabalu	30.80	250	P	P	10 58 53.3	+1.4
KKM				IAmb	IAmb	10 58 59.7	
	comp=Z,16nm,1.0s						
COEN	Coen	32.26	184	P	P	10 59 03.6	-0.6
COEN				IAmb	IAmb	10 59 27.2	
	comp=Z,6.7nm,1.1s						
MTN	Manton Dam	34.04	205	P	P	10 59 19.4	+0.1
KAPI	Kappang	34.23	229	P	P	10 59 21.9	+1.0
KAPI				IAmb	IAmb	10 59 51.0	
	comp=Z,9.5nm,1.1s						
SBUM	Sibu	35.98	248	P	P	10 59 36.7	+1.0
SBUM				IAmb	IAmb	10 59 37.7	
	comp=Z,4.0nm,0.5s						
KNRA	Kununurra	37.56	207	P	P	10 59 49.3	+0.7
CTAO	Charters Tower	38.31	178		P	10 59 54.5	-0.2
CTAO				IAmb	IAmb	11 00 13.3	
	comp=Z,23nm,1.5s						
WB0	Warramunga Arr	39.42	196	P	P	11 00 03.2	-0.6
WR8	Warramunga Arr	39.58	196	P	P	11 00 04.8	-0.2
WR8				IAmb	IAmb	11 00 09.0	
	comp=Z,16nm,1.5s						
WRA	Warramunga Arr	39.60	196	P	P	11 00 05.5	+0.2
	comp=Z,1.0nm,0.6s,baz=19,slow=8.7,SNR=10						
WRA				ScP	ScP	11 05 01.7	-1.7
	comp=Z,0.7nm,0.7s,baz=13,slow=4.0,SNR=4.7						
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	39.60	196	P	P	11 00 05.3	+0.1
FITZ	Fitzroy Crossi	41.08	209	P	P	11 00 17.8	+0.7
SONM	Songino Array	43.02	322	P	P	11 00 33.3	+1.0
	comp=Z,0.7nm,0.7s,baz=143,slow=5.7,SNR=4.4						
	comp=Z,0.7nm,0.7s						
AS31	Alice Springs	43.28	195	P	P	11 00 34.4	-0.1
ASAR	Alice Springs	43.28	195	P	P	11 00 34.3	-0.1
	comp=Z,0.6nm,0.5s,baz=12,slow=6.9,SNR=20						
	comp=Z,0.6nm,0.5s						
ASAR	Alice Springs	43.28	195	P	P	11 00 34.1	-0.3
CM31	Chiang Mai Arr	43.75	278	P	P	11 00 36.5	-1.8
CMAR	Chiang Mai Arr	43.75	278	P	P	11 00 40.0	+1.8
	comp=Z,1.9nm,0.6s,baz=72,slow=6.7,SNR=13						
	comp=Z,1.9nm,0.6s						
DZM	Mont Dzumac	45.33	152	P	P	11 00 50.4	-0.1
DZM				IAmb	IAmb	11 01 13.9	
	comp=Z,22nm,1.3s						
MBWA	Marble Bar	46.59	213	P	P	11 00 60.0	0.0
MBWA				IAmb	IAmb	11 01 12.8	
	comp=Z,21nm,1.2s						
ARMA	Armidale	48.98	173	P	P	11 01 18.6	+0.6
ARMA				IAmb	IAmb	11 01 37.4	
	comp=Z,13nm,1.3s						
BILL	Bilibino	51.35	10	P	P	11 01 35.6	+0.9
AKUT	Akutan	51.66	35	P	P	11 01 37.0	-0.1
K13K	Kusilvak Mount	55.62	26	P	P	11 02 06.5	+1.3
K13K				IAmb	IAmb	11 02 20.1	
	comp=Z,12nm,1.0s						
O15K	Ungalikthiuk R	56.64	30	P	P	11 02 12.7	+0.4
O15K				IAmb	IAmb	11 02 34.9	
	comp=Z,37nm,1.4s						
N15K	Kwethluk River	56.88	29	P	P	11 02 14.9	+0.9
N15K				IAmb	IAmb	11 02 44.0	
	comp=Z,20nm,1.2s						
ZALV	Zalesovo Beam	57.91	323	P	P	11 02 20.8	-0.2
	comp=Z,0.5nm,0.3s,baz=108,slow=9.5,SNR=3.6						
	comp=Z,0.5nm,0.3s						
MKAR	Makanchi Array	58.27	314	P	P	11 02 24.7	+0.9
	comp=Z,1.0nm,0.6s,baz=91,slow=7.7,SNR=9.7						
	comp=Z,1.0nm,0.6s						
MAKZ	Makanchi	58.49	314	P	P	11 02 26.2	+1.0
C16K	Lisburne Hills	58.57	19	P	P	11 02 25.5	+0.2
H18K	Honhosa River	59.56	24	P	P	11 02 32.6	+0.5
G19K	Purcell Mounta	60.44	23	P	P	11 02 38.6	+0.7
D20K	Etivluk River	61.62	21	P	P	11 02 46.5	+0.8
D20K				IAmb	IAmb	11 02 46.7	
	comp=Z,4.9nm,0.5s						
NRIK	Noril'sk	61.67	340	P	P	11 02 45.6	-0.3
	comp=Z,2.2nm,0.6s,baz=112,slow=8.6,SNR=3.7						
	comp=Z,2.2nm,0.6s						
B21K	Ikpikpuk River	62.63	20	P	P	11 02 53.1	+0.9
B21K				IAmb	IAmb	11 02 54.1	
	comp=Z,6.8nm,1.1s						
D22K	Ayikyak River	63.01	21	P	P	11 02 56.0	+1.3
D22K				IAmb	IAmb	11 02 56.5	
	comp=Z,5.7nm,0.7s						
G23K	Bananza Creek	63.30	24		P	11 02 57.7	+1.0
G23K				IAmb	IAmb	11 03 05.3	
	comp=Z,9.5nm,0.6s						
H24K	Noodor Dome	63.92	25	IAmb	IAmb	11 03 29.9	
	comp=Z,6.2nm,0.6s						
TOLK	Toolik Lake Re	64.01	22	IAmb	IAmb	11 03 08.7	
	comp=Z,9.6nm,1.2s						
ILAR	Eielson Array	64.09	26	P	P	11 03 00.3	-1.4
	comp=Z,1.3nm,0.6s,baz=250,slow=6.0,SNR=25						
	comp=Z,1.3nm,0.6s						
ILAR	Eielson Array	64.09	26	P	P	11 03 00.7	-1.0
D25K	Kavik River	65.30	21	IAmb	IAmb	11 03 37.7	
	comp=Z,8.6nm,0.8s						
DRK	Karamyk	65.83	306	P	P	11 03 11.1	-2.5
BVAR	Borovoye Array	66.35	320	P	P	11 03 16.6	+0.4
	comp=Z,3.8nm,0.5s,baz=98,slow=7.7,SNR=20						
	comp=Z,3.8nm,0.5s						
H27K	Steamboat Moun	66.54	25	IAmb	IAmb	11 03 19.1	
	comp=Z,8.0nm,1.1s						
D27M	Malcolm River	67.17	22	IAmb	IAmb	11 03 22.8	
	comp=Z,3.7nm,0.6s						
A36M	Sachs Harbour	72.48	19	IAmb	IAmb	11 03 53.5	
	comp=Z,5.1nm,0.8s						
C36M	Paulatuk	73.17	22	IAmb	IAmb	11 03 56.7	
	comp=Z,3.4nm,0.6s						
AB31	Akbulak array	73.18	317		P	11 03 57.0	-0.1
AB31				IAmb	IAmb	11 03 57.5	
	comp=Z,2.5nm,0.5s						
BBB	Bella Bella	73.66	40	P	P	11 03 59.8	0.0
YKA	Yellowknife Ar	78.44	28	P	P	11 04 25.2	-0.9
	comp=Z,1.0nm,0.6s,baz=288,slow=5.9,SNR=33						
	comp=Z,1.0nm,0.6s						
YKA	Yellowknife Ar	78.44	28	P	P	11 04 25.6	-0.5
CMB	Columbia Colle	82.25	53	IAmb	IAmb	11 05 10.9	
	comp=Z,5.0nm,0.7s						
BMO	Blue Mountains	82.38	45	IAmb	IAmb	11 04 48.3	
	comp=Z,7.1nm,1.4s						
ARCES	ARCESS Array B	82.57	342	P	P	11 04 47.1	-0.4
	comp=Z,1.1nm,0.7s,baz=84,slow=8.6,SNR=7.8						
	comp=Z,1.1nm,0.7s						
ARCES	ARCESS Array B	82.57	342	P	P	11 04 47.4	-0.1
ARCES				IAmb	IAmb	11 05 05.0	
	comp=Z,12nm,1.4s						
PLID	Pearl Lake	83.18	45	P	P	11 04 51.0	-0.4
NVAR	Mina Array Bea	83.69	52	P	P	11 04 54.4	+0.3
	comp=Z,2.6nm,0.7s,baz=268,slow=5.9,SNR=23						
	comp=Z,2.6nm,0.7s						
SHPR	Sheep Range	86.69	53	P	P	11 05 08.2	-0.4
FINES	FINESS Array B	86.90	335	P	P	11 05 07.0	-1.8
	comp=Z,1.0nm,0.4s,baz=68,slow=5.1,SNR=8.4						
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	86.90	335	P	P	11 05 07.5	-1.4
PDAR	Pinedale Array	88.36	45	P	P	11 05 16.0	-0.4
	comp=Z,0.3nm,0.6s,baz=206,slow=0.9,SNR=4.7						
	comp=Z,0.3nm,0.6s						
PDAR	Pinedale Array	88.36	45	P	P	11 05 15.5	-0.9
SRU	San Rafael Swe	89.13	49	IAmb	IAmb	11 05 20.6	
	comp=Z,4.7nm,0.5s						
PV03	Paradox Valley	90.68	49	IAmb	IAmb	11 05 27.7	
	comp=Z,3.4nm,0.6s						
PV12	Saucer Basin,	90.69	49	IAmb	IAmb	11 05 29.5	
	comp=Z,4.7nm,0.6s						
PV01	Paradox Valley	90.93	49	IAmb	IAmb	11 05 47.0	
	comp=Z,7.3nm,1.5s						
HMBC	Humberstone	146.91	99		PKPbc	11 12 05.0	+0.2
LPAZ	La Paz	148.17	91	PKPbc	PKPbc	11 12 09.1	+0.2
	comp=Z,2.1nm,0.5s,baz=328,slow=4.1,SNR=9.1						
LPAZ	La Paz	148.17	91		PKPbc	11 12 09.3	+0.4

*THE **27** 11:06:04.0, 37°N±35°×2°9E±1°8, h0km±17km, M3.2/6, MLh3.2/6*

*ISK **27** 11:06:03.9, 36°.69N×28°.57E, h2km, ML3.2/21*

*IDC **27** 11:06:03.8±1.4, 36°.61N×28°.60E, h0km, mb3.6/3, mbtmp3.6/6, ML2.4/2, Error ellipse: s-maj=32.9km s-min=17.8km az=149.0*

*AFAD **27** 11:06:05.1, 36°.67N×28°.58E, h7km±5km, ML3.2*

*ATH **27** 11:06:05.2±0.4, 36°.66N×28°.59E, h9km±2km, ML3.2/7, Manual Solution by N.Liadopoulou First location: 2019/12/27 11:07:33, This location: 2019/12/27 11:18:51 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

ISC 27 11:06:04.6±1.1**, 36°.68N**±0°.02×**28°.57E**±0°.02**, h3km**±9km**, n78, σ1s.09**/104**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DALY	Dalyan (Mula)	0.16	27	Pg	Pg	11 06 07.6	-0.1
DALY				Sg	Sg	11 06 10.1	+0.3
SABU	Mula-Dalaman	0.35	66	P	Pg	11 06 11.0	-0.5
SABU				S	Sg	11 06 16.4	+0.2
SABU				*i* IAML		11 06 20.0	
	comp=N,2μm,0.6s						
RDI1	Rhodes Town Ha	0.36	231	P	Pb	11 06 12.2	-1.4
RDI1				S	Sb	11 06 19.2	-0.4
RODB	Rodos	0.36	230	P	Pb	11 06 13.1	-0.5
RODB				S	Sb	11 06 19.3	-0.4
YER	Yerkesik	0.51	334	P	Pg	11 06 14.2	-0.2
YER				S	Sg	11 06 22.3	+1.2
YER	Yerkesik	0.51	334	Pg	Pg	11 06 14.6	+0.2
YER				Sg	Sg	11 06 22.3	+1.2
ARG	Arkhangelos	0.58	218	P	Pg	11 06 16.0	+0.3
ARG				S	Sb	11 06 25.6	-0.5
ARG	Arkhangelos	0.58	218	Pg	Pg	11 06 16.1	+0.3
ARG				Sg	Sb	11 06 25.5	-0.5
ARG	Arkhangelos	0.58	218	P	Pg	11 06 15.9	+0.1
ARG				S	Sb	11 06 25.9	-0.1
IZZE	Mula-Seydike	0.58	114	P	Pb	11 06 16.2	-1.3
IZZE				S	Sb	11 06 25.4	-0.8
IZZE				*i* IAML		11 06 26.0	
	comp=N,4μm,0.5s						
IZZE				*i* IAML		11 06 26.0	
	comp=E,3μm,0.4s						
MULA	Mugla, Merkez-	0.61	341	P	Pb	11 06 16.9	-1.1
MULA				S	Sb	11 06 26.9	-0.1
CAME	Cameli-Denizli	0.65	66	Pg	Pg	11 06 16.9	-0.2
CAME				Sg	Sb	11 06 26.9	-1.3
DNZT	Denizli-Tavas-	0.70	31	P	Pb	11 06 18.7	-1.0
DNZT				S	Sb	11 06 29.1	-0.6
CAEL	Denizli, Camel	0.75	53	P	Pb	11 06 19.1	-1.3
CAEL				S	Sn	11 06 32.5	-1.8
CAEL				*i* IAML		11 06 41.0	
	comp=N,1000nm,0.8s						
CAEL				*i* IAML		11 06 46.0	
	comp=E,835nm,1.5s						
KNIK	Mula-Seydike	0.83	78	P	Pg	11 06 19.9	-0.6
KNIK				S	Sb	11 06 33.0	-0.3
RGE1	Gennadi, Rhode	0.83	218	P	Pb	11 06 20.9	-0.7
RGE1				S	Sb	11 06 33.0	-0.1
TAVA	DENIZLI_Tavas	0.83	19	P	Pg	11 06 20.0	-0.6
TAVA				S	Sb	11 06 32.8	-0.7
MLSB	Milas	0.88	315	Pg	Pg	11 06 21.5	-0.1
AKAS	Kas	0.95	118	P	Pn	11 06 24.0	-1.0
AKAS				S	Sn	11 06 39.7	+0.6
AKAS				*i* IAML		11 06 44.0	
	comp=N,1μm,0.9s						
AKAS				*i* IAML		11 06 45.0	
	comp=E,733nm,0.5s						
AKAS	Kas	0.95	118	Pg	Pb	11 06 23.2	-0.6
GOLH	Golhisar	0.97	55	P	Pb	11 06 23.0	-1.2
GOLH				S	Sn	11 06 38.7	-1.0
GOLH				*i* IAML		11 06 42.0	
	comp=N,467nm,0.4s						
GOLH				*i* IAML		11 06 43.0	
	comp=E,567nm,0.5s						
APMY	Acipayam-Deniz	0.99	36	Pg	Pb	11 06 23.3	-1.2
ELL	Elmali	1.08	86	Pg	Pb	11 06 25.1	-1.0
YKAV	Yalikavak-Bodr	1.12	294	Pn	Pb	11 06 26.1	-0.6
NAZL	Nazilli-Aydin	1.30	350	Pn	Pb	11 06 29.5	-0.3
KLNA	Kalymnos	1.31	283	P	Pb	11 06 29.8	0.0
KLNA				S	Sb	11 06 47.1	+0.1
AYDB	Zeytinkoy-Aydi	1.38	337	Pn	Pb	11 06 30.7	-0.4
KORT	Korkueli	1.47	77	P	Pg	11 06 34.2	+1.4
KORT				S	Sn	11 06 56.4	+4.4
KORT				*i* IAML		11 06 59.0	
	comp=E,284nm,0.6s						
KORT				*i* IAML		11 07 03.0	
	comp=N,217nm,0.6s						
KORT	Korkueli	1.47	77	Pn	Pg	11 06 32.6	-0.2
GCAM	G?zelcaml?	1.47	314	Pn	Pb	11 06 32.2	-0.5
AKUM	Antalya-Kumluc	1.48	103	P	Pg	11 06 33.9	+1.0
AKUM				S	Sn	11 06 56.8	+5.0
KARP	Karpathos	1.60	226	P	Pg	11 06 34.8	-0.6
KARP	Karpathos	1.60	226	Pn	Pb	11 06 34.3	-0.6
KARP	Karpathos	1.60	226	P	Pb	11 06 34.0	-0.8
KARP				S	Sn	11 06 53.9	-1.2
ODEM	Odemis-Izmir	1.64	346	Pn	Pn	11 06 34.5	0.0
ANTB	Antalya	1.69	82	Pn	Pb	11 06 35.7	-0.7
BASM	Basmaki-Afyon	1.71	43	Pn	Pb	11 06 35.5	-1.3
SMG	Samos	1.72	307	P	Pn	11 06 35.1	-0.3
SMG	Samos	1.72	307	P	Pn	11 06 35.2	-0.3
BUCA	Burdur, Bucak-	1.72	67	P	Pg	11 06 38.1	+0.4
BUCA				S	Sg	11 07 02.4	+2.4
BCK	Bucak	1.80	64	Pn	Pb	11 06 36.9	-1.4
KULA	Kula-Manisa	1.83	2	Pn	Pn	11 06 37.3	+0.1
ISP	Isparta	1.94	53	Pn	Pb	11 06 38.9	-1.7
ISP	Isparta	1.94	53	P	Pn	11 06 38.7	+0.1
SHUT	Suhut-Afyon	2.45	40	Pn	Pn	11 06 46.1	+0.5
ZKR	Zakros	2.46	231	P	Pb	11 06 49.1	-0.4
ZKR	Zakros	2.46	231	P	Pn	11 06 45.7	0.0
THERA	Ancient Thera,	2.51	264	P	Pn	11 06 46.5	+0.1
THR3	Thira Island,	2.56	265	P	Pn	11 06 47.6	+0.6
SNT5	Nea Kammeni, S	2.57	265	P	Pn	11 06 46.9	-0.2
THR6	Thira Island,	2.57	264	P	Pn	11 06 47.0	-0.1
THR9	Santorini-Faro	2.60	264	P	Pn	11 06 47.4	-0.2
CHOS	Chios island	2.62	311	P	Pn	11 06 47.7	-0.3
CHOS	Chios island	2.62	311	P	Pn	11 06 48.8	+0.8
NPS	Neapolis	2.78	240	P	Pn	11 06 50.0	-0.1
IDI	Anoyia	3.29	246	Pn	Pn	11 06 57.8	+0.7
	4.6nm,0.3s,baz=43,slow=18,SNR=18						
IDI				Sn	Sn	11 07 35.8	-0.9
	9.2nm,0.3s,baz=85,slow=17,SNR=7.7						

	14nm,0.3s						
IDI	Anoyia	3.29	246	P	Pn	11 06 57.2	+0.1
IDI	Anoyia	3.29	246	P	Pn	11 06 57.0	-0.1
SIGR	SIGRI	3.31	321	P	Pn	11 06 57.5	+0.1
AKMS	Akamas	3.48	117	P	Pn	11 06 59.2	-0.5
KARY	Karystos	3.56	294	P	Pn	11 07 00.6	-0.2
ALFC	Alefka	3.61	114	P	Pn	11 07 00.9	-0.6
VAM	Vamos	3.76	252	P	Pn	11 07 04.2	+0.6
NATA	Nata	3.77	119	P	Pn	11 07 03.2	-0.5
SKY	Skiros Island	3.87	306	P	Pn	11 07 05.7	+0.7
DION	Dionisos Attik	3.94	292	P	Pn	11 07 06.4	+0.3
DION	Dionisos Attik	3.94	292	P	Pn	11 07 06.1	0.0
GVD	Gavdhos	4.08	245	P	Pn	11 07 11.2	+3.3
GVD	Gavdhos	4.08	245	P	Pn	11 07 08.0	+0.1
LIA	Limnos Island	4.17	321	P	Pn	11 07 08.9	-0.2
CSS	Mathiatis	4.23	112	P	Pn	11 07 09.7	-0.4
ASGA	Asgata	4.25	115	P	Pn	11 07 10.0	-0.2
MVOU	Mavrovouni	4.44	110	P	Pn	11 07 11.9	-0.9
BRTR	Keskin Array B	5.02	51	Pn	Pn	11 07 22.1	+1.1
	0.6nm,0.3s,baz=237,slow=15,SNR=13						
BRTR				Sn	Sn	11 08 22.5	+2.9
	0.1nm,0.3s,baz=220,slow=24,SNR=4.2						
	1.0nm,0.4s						
MMAI	Mount Meron Ar	6.70	121	Pn	Pn	11 07 42.7	-1.4
	5.3nm,0.4s,baz=303,slow=13,SNR=14						
FINES	FINESS Array B	24.84	357	P	P	11 11 28.2	+0.3
	1.3nm,0.7s,baz=161,slow=13,SNR=3.5						
	1.3nm,0.7s						
ESDC	Sonseca Array	25.67	287	P	P	11 11 35.7	-0.1
	0.3nm,0.4s,baz=91,slow=9.5,SNR=2.4						
	0.3nm,0.4s						
TORD	Torodi Ar. Bea	33.59	233	P	P	11 12 45.6	-0.7
	0.4nm,0.3s,baz=34,slow=11,SNR=8.4						
	0.4nm,0.3s						

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*FUNV **27** 11:15:28.0, 10°.72N×61°.90W, h31^{km}, MW3.3*
*TRN **27** 11:15:29.8, 10°.73N×61°.82W, h38^{km}, MD3.3, North-west of Trinidad.*
ISC 27 11:15:27.7±1.4**, 10°.68N**±0°.05×**61°.99W**±0°.05**, h33^{km}**±4^{km}**, n13, σ0^{s}.74**/21**, Trinidad**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DMDM	Guralp CMG5TDE	0.43	88	eP	Pb	11 15 37.5	+0.3
DMDM				eS	Sb	11 15 43.6	-0.2
TRN	Trinidad (W)	0.58	93	eP	Pn	11 15 39.0	-0.5
TRN				eS	Sn	11 15 46.4	-1.4
TPP	Pointe-a-Pierr	0.64	124	eP	Pb	11 15 41.4	+0.9
GRFF	Grenada Fort F	1.38	10	eP	Pb	11 15 52.9	-0.1
GRFF				eS	Sn	11 16 07.6	-0.2
GRGR	Grenville	1.48	13	eP	Pn	11 15 52.2	+0.2
GRGR				eS	Sn	11 16 10.3	+0.1
GRW	Mount Saint Ca	1.50	12	eP	Pb	11 15 54.0	-1.0
GRW				eS	Sn	11 16 10.3	-0.6
GRHS	Sauteurs	1.57	13	eP	Pb	11 15 55.5	-0.6
GRSS	Sisters	1.65	13	eP	Pn	11 15 55.0	+0.7
GRSS				eS	Sn	11 16 15.3	+1.0
GCMP	Grenada, Carri	1.88	17	eP	Pn	11 15 57.6	+0.2
GCMP				eS	Sn	11 16 20.2	+0.3
PCRV	Puerto La Cruz	2.65	259	eP	Pn	11 16 07.9	-0.2
PCRV				eS	Sn	11 16 38.8	-0.3
SVB	Belmont	2.67	16	eP	Pn	11 16 09.9	+1.5
SVB				eS	Sn	11 16 39.5	-0.2
CACV	CAICARA DEL OR	5.46	236	eP	Pn	11 16 41.0	-5.7
CACV				eS	Sn	11 17 35.7	-13
BENV	Beln	5.56	263	eP	Pn	11 16 48.7	+0.5

IDC 27 11:21:36.1±3.9**, 30°.29N×67°.48E, h0^{km}, mb3.4**/5**, mbtmp3.5**/6**, ML3.8**/1**, MS3.1**/1**, Error ellipse: s-maj=129.8km s-min=60.5km az=123.0, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	13.55	23	Pn	Pn	11 24 50.2	+0.5
	0.4nm,0.3s,baz=201,slow=4.3,SNR=3.7						
	1.0nm,0.3s						
MKAR	Makanchi Array	20.09	31	P	P	11 26 11.7	+0.5
	0.5nm,0.6s,baz=206,slow=12,SNR=4.8						
	0.5nm,0.6s						
BVAR	Borovoye Array	22.82	5	P	P	11 26 40.6	+0.1
	0.9nm,0.6s,baz=184,slow=11,SNR=4.6						
BVAR				LR	LR	11 37 04.8	
	comp=Z,42nm,19.4s,baz=217,slow=41						
	0.9nm,0.6s						
ZALV	Zalesovo Beam	26.77	23	P	P	11 27 17.9	+0.5
	0.7nm,0.4s,baz=231,slow=9.4,SNR=4.3						
	0.7nm,0.4s						
ILAR	Eielson Array	81.52	14	P	P	11 33 54.7	-0.5
	0.2nm,0.6s,baz=351,slow=5.8,SNR=2.0						
	0.2nm,0.6s						
YKA	Yellowknife Ar	87.53	1	P	P	11 34 25.6	0.0
	0.1nm,0.6s,baz=349,slow=5.6,SNR=4.0						
	0.1nm,0.6s						

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*HEL **27** 11:39:41.7±0.2, 61°.21N×29°.62E, h0^{km}, ML1.6, Explosion*
*IDC **27** 11:39:43.9±3.4, 61°.19N×29°.40E, h0^{km}, mbtmp3.4/1, ML2.4/1, Error ellipse: s-maj=29.8km s-min=13.4km az=161.0*
ISC 27 11:39:40.0±1.3**, 61°.17N**±0°.05×**29°.64E**±0°.05**, h0^{km}, n20, σ1^{s}.23**/28**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUF	Ruokolahti	0.42	308	PG	Pg	11 39 48.8	+0.8
RUF				SG	Sg	11 39 53.4	0.0
VJF	Virojoki	1.20	239	PG	Pb	11 40 03.1	-0.5
VJF				MSG		11 40 18.5	
	comp=Z,7.0nm,0.2s						
VJF				SG	Sb	11 40 19.5	-0.1
FIA0	FINESS Array S	1.74	281	PG	Pb	11 40 12.3	-0.4
FIA0				MSG		11 40 33.0	
	comp=Z,2.9nm,0.2s						
FIA0				SB	Sn	11 40 33.9	-0.3
FINES	FINESS Array B	1.74	281	Pg	Pb	11 40 12.4	-0.3
	comp=Z,0.2nm,0.3s,baz=99,slow=16,SNR=7.5						
FINES				Lg	Lg	11 40 35.0	
	comp=Z,0.9nm,0.3s,baz=95,slow=28,SNR=16						
JOF	Joensuu	1.92	24	eP	Pg	11 40 16.2	-0.6
JOF	Joensuu	1.92	24	PG	Pb	11 40 15.7	-0.2
	baz=201						
JOF				SG	Sb	11 40 40.2	-0.2
PVF	Pernaja	1.95	253	PB	Pb	11 40 15.7	-0.6
	baz=66						
PVF				MSG		11 40 39.8	
	comp=Z,4.1nm,0.2s						
PVF				SG	Sg	11 40 42.0	-0.6
SUF	Sumiainen	2.27	315	PG	Pb	11 40 21.4	-0.3
SUF				MSG		11 40 47.8	
	comp=Z,2.3nm,0.2s						
SUF				SG	Sg	11 40 52.2	-0.5
NIF	Nilsia	2.39	340	PG	Pb	11 40 23.3	-0.5
	baz=158						
NIF				MSG		11 40 50.9	
	comp=Z,1.6nm,0.2s						
NIF				SG	Sb	11 40 54.0	+0.3
KEF	Keuruu	2.48	296	eP	Pn	11 40 23.3	+1.7
KEF	Keuruu	2.48	296	PB	Pb	11 40 24.6	-0.8
KEF				MSG		11 40 54.3	
	comp=Z,2.0nm,0.2s						
KEF				SB	Sb	11 40 56.1	-0.4
MEF	Metsahovi	2.75	252	eP	Pb	11 40 29.3	-0.6
MEF	Metsahovi	2.75	252	PG	Pb	11 40 29.7	-0.2
MEF				MSG		11 41 02.8	
	comp=Z,1.9nm,0.2s						
MEF				SG	Sg	11 41 07.1	-1.1
RMF	Romuvaara	3.06	2	MSG		11 41 10.6	
	comp=Z,0.7nm,0.2s						
RMF				SB	Sb	11 41 11.8	-1.4
TVF	Tvarminne	3.43	250	SG	Sg	11 41 26.9	-3.1
VAF	Ylistaro	3.77	303	eP	Pn	11 40 40.9	+1.6
VAF	Ylistaro	3.77	303	SG	Sg	11 41 38.7	-2.3
RAF	Rauma	3.83	271	eP	Pn	11 40 42.8	+2.8
I43RU	DUBNA INFRASON	5.94	135	I	I	12 15 50.0	
	comp=Z,0.1nm,0.6s,baz=323,slow=310,SNR=1.7						
ARCES	ARCESS Array B	8.57	350	Pn	Pn	11 41 46.5	+1.4
	baz=175,slow=11,SNR=1.9						
	comp=Z,1.9nm,0.9s						

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*NNC **27** 12:11:19.9±3.1, 41°.23N×76°.50E, h0^{km}, mb3.5, mpv3.0, Error ellipse: s-maj=21.0km s-min=17.9km az=21.0*
*KRNET **27** 12:11:22.1±0.1, 41°.31N×76°.54E, h24^{km}, mb2.4*
*SOME **27** 12:11:22.6, 41°.40N×76°.50E, h5^{km}*
ISC 27 12:11:21.9±1.8**, 41°.32N**±0°.06×**76°.58E**±0°.03**, h4^{km}**±12^{km}**, n20, σ0^{s}.65**/34**, 18C-4D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	Kajisay	0.93	29	⇑iP	Pg	12 11 40.2	+0.6
KDJ				⇑iS	Sb	12 11 53.3	-0.1
ULHL	Ulahol	0.96	345	⇑iP	Pg	12 11 39.9	-0.4
ULHL				⇑iS	Sg	12 11 53.2	+0.4
TARG	Taragay, Kyrgy	1.01	66	⇓iP	Pg	12 11 41.5	+0.3
TARG				⇓iS	Sb	12 11 55.6	-0.3
BOOM	Boomskoye usch	1.26	338	⇑iP	Pg	12 11 45.3	-0.8
BOOM				⇑iS	Sg	12 12 02.1	-0.4
TKM2	Tokmak 2	1.76	336	⇓iP	Pn	12 11 53.9	+0.5
TKM2				⇓iS	Sb	12 12 17.2	-0.2
ARLS	Aral	1.78	288	⇑iP	Pn	12 11 53.4	-0.2
ARLS				⇑iS	Sn	12 12 16.5	-0.2
PRZ	Przheval'sk	1.79	49	⇑eP	Pn	12 11 54.4	+0.7
PRZ				⇑eS	Sb	12 12 18.2	0.0
UCH	Uchtor	1.79	301	⇑iP	Pn	12 11 54.2	+0.2
UCH				⇑iS	Sn	12 12 17.5	0.0
KNDC	Almaty	1.92	8	⇑Pn	Pn	12 11 53.7	-1.7
	8.8nm,0.2s						
KNDC				⇑Sn	Sb	12 12 22.2	+0.4
	24nm,0.3s						
KOTS	Kotyrbulak	1.95	11	Pg	Pg	12 11 59.1	-0.2
	3.5nm,0.1s						
KOTS				Lg	Lg	12 12 25.5	
	17nm,0.2s						
KOTS	Kotyrbulak	1.95	11	eP	Pg	12 11 59.1	-0.2
	3.5nm,0.1s						
KOTS				eS	Sg	12 12 25.4	+0.8
	17nm,0.2s						
AAK	Ala-Archa	2.04	311	⇑iP	Pn	12 11 57.5	+0.3
AAK				⇑iS	Sn	12 12 23.6	+0.4
SALK	Salom-Alik	2.13	259	⇑eP	Pn	12 11 58.6	+0.2
SALK				⇑eS	Sn	12 12 25.0	-0.4
SATY	Saty	2.21	37	Pg	Pb	12 12 03.5	+1.1
	1.1nm,0.1s						
SATY				Lg	Lg	12 12 33.2	
	4.0nm,0.1s						
KRBS	Karabastau	2.47	345	Pg	Pb	12 12 07.7	+0.9
	3.8nm,0.3s						
KRBS				Lg	Lg	12 12 40.2	
	2.7nm,0.2s						
UZB	Uzynbulak	2.57	44	Pg	Pg	12 12 10.5	-0.6
	4.4nm,0.3s						
UZB				Lg	Lg	12 12 45.1	
	4.4nm,0.4s						
UZB	Uzynbulak	2.57	44	eP	Pg	12 12 10.5	-0.6
	4.4nm,0.3s						
UZB				eS	Sg	12 12 45.1	+0.5
	4.4nm,0.4s						
KPKS	Kokpek	2.65	35	Pg	Pg	12 12 11.7	-1.0
	0.2nm,0.1s						
KPKS				Lg	Lg	12 12 47.0	
	6.8nm,0.7s						
KPKS	Kokpek	2.65	35	eP	Pg	12 12 11.7	-1.0
	0.2nm,0.1s						
KPKS				eS	Sg	12 12 47.0	-0.1
	6.8nm,0.7s						
PDGK	Podgornoye	2.95	46	Pg	Pb	12 12 14.0	-1.0
	2.2nm,0.9s						
PDGK				Lg	Lg	12 12 54.7	
	2.8nm,0.6s						

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*NOU **27** 12:37:53.7, 32°.49S×178°.77W, h372^{km}, MLv4.6/10, South of Kermadec Islands*
*WEL **27** 12:38:22.7±0.8, 34°S±5°×18°0E±1°0, h178^{km}±21^{km}, M4.2/12, ML4.0/8, MLv4.2/12, Error ellipse: s-maj=14.0km s-min=5.5km az=110.5, confirmed*
ISC 27 12:38:21.3±1.6**, 33°.99S**±0°.08×**179°.5E**±0°.1**, h200^{km}, n40, σ1^{s}.88**/49**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	3.70	195	P	Pn	12 39 22.5	+3.3
MXZ	Matakaoa Point	3.70	195	P	Pn	12 39 22.5	+3.3
MXZ				S	Sn	12 40 05.3	+0.4
WMGZ	Waiomatatini S	3.92	193	P	Pn	12 39 23.9	+1.8
WMGZ				S	Sn	12 40 13.0	+3.0
HAZ	Te Kaha	4.01	200	P	Pn	12 39 24.6	+1.4
HAZ				S	Sn	12 40 10.8	-1.1
PKGZ	Pakihiroa	4.04	196	P	Pn	12 39 24.8	+1.3
PKGZ				S	Sn	12 40 15.6	+3.1
KUZ	Kuaotunu	4.14	227	P	Pn	12 39 26.2	+1.5
KUZ	Kuaotunu	4.14	227	P	Pn	12 39 26.3	+1.5
PUZ	Puketiti	4.20	194	P	Pn	12 39 26.1	+0.6
PUZ				S	Sn	12 40 16.3	+0.2
RUGZ	Raukumara Rang	4.24	200	P	Pn	12 39 27.1	+1.0
RUGZ				S	Sn	12 40 17.1	0.0
TWGZ	Tauwhareparae	4.36	196	P	Pn	12 39 30.0	+2.5
TWGZ				S	Sn	12 40 20.4	+0.6
MARZ	Manawahe	4.60	209	P	Pn	12 39 33.0	+2.4
CNGZ	Carnagh Statio	4.61	193	P	Pn	12 39 33.3	+2.7
MWZ	Matawai	4.62	200	P	Pn	12 39 31.1	+0.2
MWZ				S	Sn	12 40 25.4	-0.4
TKGZ	Te Karaka	4.64	196	P	Pn	12 39 30.9	-0.1
TKGZ				S	Sn	12 40 25.4	-0.7
WCZ	Waipu Caves	4.67	244	P	Pn	12 39 31.8	+0.4
MBAZ	Motutapu North	4.68	232	P	Pn	12 39 33.1	+1.6
URZ	Urewera	4.68	204	P	Pn	12 39 31.5	-0.1
URZ	Urewera	4.68	204	P	Pn	12 39 31.4	-0.1
MKAZ	Moumakai	4.72	228	P	Pn	12 39 34.1	+2.1
RAGZ	Rawiri	4.81	200	P	Pn	12 39 33.0	-0.2
TOZ	Tahuroa Road	4.96	220	P	Pn	12 39 37.8	+2.8
OUZ	Omahuta	5.03	254	P	Pn	12 39 35.7	-0.4
OUZ	Omahuta	5.03	254	P	Pn	12 39 35.7	-0.4
RTZ	Ruatahuna	5.05	203	P	Pn	12 39 36.7	+0.4
GLKZ	Green Lake	5.20	26	S	Sn	12 40 38.3	-0.6
KNZ	Kokohu	5.24	196	P	Pn	12 39 37.5	-1.1
KNZ				S	Sn	12 40 36.9	-2.8
TLZ	Tolley Road	5.39	215	P	Pn	12 39 42.9	+2.2
BKZ	Black Stump Fm	5.71	204	P	Pn	12 39 43.4	-1.4
BKZ	Black Stump Fm	5.71	204	P	Pn	12 39 43.3	-1.5
BKZ				S	Sn	12 40 46.0	-4.8
HIZ	Hauiti	5.88	218	P	Pn	12 39 49.2	+2.4
HIZ	Hauiti	5.88	218	P	Pn	12 39 49.3	+2.4
NGZ	Ngauruhoe	6.06	210	P	Pn	12 39 49.2	-0.2
PWZ	Pawanui	6.39	199	P	Pn	12 39 52.1	-1.4
PXZ	Pawanui	6.39	199	P	Pn	12 39 51.4	-2.1
VRZ	Vera Road	6.40	215	P	Pn	12 39 54.1	+0.5
TSZ	Takapari Road	6.69	204	P	Pn	12 39 54.9	-2.5
KHEZ	Kahui Hut	6.90	218	P	Pn	12 40 01.0	+0.9
BFZ	Birch Farm	7.17	200	P	Pn	12 40 01.0	-2.6
SNZO	South Karori	8.24	206	P	Pn	12 40 13.2	-4.3
KHZ	Kahutara	9.63	207	P	Pn	12 40 29.8	-5.8

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*BEO **27** 12:48:32.3±0.4, 41°.42N×19°.62E, h0^{km}±2^{km}, ML2.4/14*
*SKO **27** 12:48:32.5, 41°.42N×19°.47E, h3^{km}, ML2.7*
*TIR **27** 12:48:32.6, 41°.49N×19°.69E, h15^{km}, Ml2.8/4*
*PDG **27** 12:48:33.3±0.4, 41°.49N×19°.57E, h10^{km}±1^{km}, ML2.8/12, Error ellipse: s-maj=0.9km s-min=2.1km az=0.0*
ISC 27 12:48:32.5±1.0**, 41°.47N**±0°.02×**19°.58E**±0°.02**, h10^{km}**±8^{km}**, n56, σ1^{s}.02**/99**, 7C-17D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.24	119	Pg	Pg	12 48 37.5	+0.1
TIR				Sg	Sg	12 48 40.5	-0.3
TIR				AML	AML	12 48 41.1	
	13nm,0.2s						
TIR	Tirane	0.24	119	i Pg	Pg	12 48 37.6	+0.1
TIR				i Sg	Sg	12 48 42.1	+1.3
ULC	Ulcinj	0.56	333	⇓iPg	Pg	12 48 43.0	-0.4
ULC				i Sg	Sb	12 48 52.1	-0.4
SDA	Shkodra	0.59	354	Pg	Pg	12 48 44.0	+0.1
SDA				Sg	Sb	12 48 52.6	-0.7
SDA				AML	AML	12 48 57.7	
	0.7nm,0.3s						
PHP	Peshkopia	0.68	71	Pg	Pg	12 48 45.0	-0.6
PHP				Sg	Sg	12 48 52.8	-1.7
PHP				AML	AML	12 48 59.5	
	1.1nm,0.3s						
DRME	Dracevica, Mon	0.78	338	ePg	Pg	12 48 47.0	-0.6
DRME				eSg	Sn	12 49 00.1	-1.3
DRME	Dracevica, Mon	0.78	338	⇑iPg	Pg	12 48 46.9	-0.6
DRME				eSg	Sb	12 48 59.5	+0.6
BUM	Brajici-Budva	0.98	329	⇓iPg	Pg	12 48 51.1	-0.3
BUM				i Sg	Sn	12 49 05.7	-0.8
OHR	Ohrid	0.98	111	i Pg	Pg	12 48 50.8	-0.6
OHR				i Sg	Sn	12 49 07.0	+0.6
OHR				eLg	Lg	12 49 10.2	
	comp=N,212nm,0.6s						
OHR				eLg	Lg	12 49 10.5	
	comp=E,151nm,0.5s						
PDG	Podgorica	0.99	346	Pg	Pb	12 48 51.7	-0.2
PDG				Sg	Sn	12 49 06.1	-0.6
PDG	Podgorica	0.99	346	⇓P	Pn	12 48 53.3	+0.7
PDG				⇑S	Sn	12 49 06.6	-0.1
PDG	Podgorica	0.99	346	ePg	Pn	12 48 52.2	-0.4
PDG				eSg	Sn	12 49 06.4	-0.3
PDG	Podgorica	0.99	346	⇑iPg	Pb	12 48 51.9	0.0
PDG				i Sg	Sn	12 49 06.8	+0.1
VLO	Vlora	1.00	184	Pg	Pb	12 48 52.4	+0.5
VLO				Sg	Sb	12 49 06.1	+1.0
VLO				AML	AML	12 49 10.3	
	comp=E,2.3nm,0.2s						
PVY	Plav	1.16	14	ePg	Pb	12 48 54.1	-0.8
PVY				eSg	Sn	12 49 11.1	+0.1
PVY	Plav	1.16	14	⇓iPg	Pb	12 48 54.0	-0.8
PVY				i Sg	Sn	12 49 12.5	+1.5
CEME	Cevo	1.19	336	⇓iPg	Pb	12 48 54.4	-0.8
CEME				eSg	Sn	12 49 13.0	+1.4
HCY	Herceg Novi	1.27	321	⇓iPg	Pn	12 48 56.2	-0.2
HCY				i Sg	Sn	12 49 15.8	+2.2
NKME	Niksic	1.38	340	⇑iPg	Pb	12 48 58.4	-0.1
NKME				eSg	Sg	12 49 19.0	+2.0
BEY	Berane	1.42	9	ePg	Pb	12 48 58.8	-0.4
BEY				eSg	Sg	12 49 18.6	+0.3
IVA	Berane	1.42	9	⇓iPg	Pn	12 48 58.4	-0.2
IVA				i Sg	Sg	12 49 21.4	+3.1
SKO	Skopje	1.48	69	ePg	Pg	12 49 01.7	+0.8
SKO				i Sg	Sg	12 49 21.6	+1.5
TREB	Trebinje	1.55	324	ePg	Pn	12 49 00.2	0.0
TREB				eSg	Sg	12 49 22.9	+0.5
BRY	Bratogost	1.63	332	⇓iPn	Pb	12 49 02.2	-0.6
BRY				i Sn	Sg	12 49 26.1	+1.1
UPM	Unac-Piva	1.81	344	⇓iPn	Pb	12 49 05.3	-0.5
UPM				i Sn	Sg	12 49 31.3	+0.7
SJES	Sjenica	1.82	9	ePn	Pb	12 49 06.1	+0.1
SJES				eSn	Sg	12 49 30.1	-0.9
PLE	Pljevlja	1.87	356	ePg	Pb	12 49 06.7	-0.1
PLE				eSg	Sg	12 49 32.1	-0.5
PLE	Pljevlja	1.87	356	⇓iPn	Pb	12 49 06.8	-0.1
PLE				i Sn	Sg	12 49 32.2	-0.4
IGT	Igoumenitsa	2.01	163	ePn	Pn	12 49 06.4	-0.2
IGT				eSn	Sn	12 49 32.7	+0.9
NOCI	Noci	2.02	251	P	Pn	12 49 04.4	-2.3
SELS	Selova	2.09	32	ePn	Pn	12 49 08.4	+0.7
SELS				eSn	Sb	12 49 36.0	-0.6
BARS	Barje	2.14	50	i Pn	Pb	12 49 09.5	-1.9
BARS	Barje	2.14	50	ePn	Pn	12 49 09.2	+0.9
BARS				eSn	Sb	12 49 38.1	+0.1
IVAS	Ivanjica	2.15	11	ePn	Pn	12 49 09.1	+0.6
IVAS				eSn	Sb	12 49 37.4	-1.0
RUDO	Rudo	2.16	356	ePn	Pb	12 49 11.0	-0.7
RUDO				eSn	Sb	12 49 38.5	0.0
GRG	Griva	2.19	103	i Pn	Pn	12 49 09.6	+0.6
VAY	Valandovo	2.25	93	ePn	Pb	12 49 12.3	-1.0
VAY				eSn	Sb	12 49 39.1	-2.1
VAY				eLg	Lg	12 49 49.1	
	comp=E,13nm,0.5s						
VAY				eLg	Lg	12 49 49.8	
	comp=N,17nm,0.6s						
GOCS	Kraljevo Serbi	2.30	24	ePn	Pn	12 49 11.3	+0.6
GOCS				eSn	Sb	12 49 41.4	-1.4
MATE	Matera	2.32	250	⇓P	Pg	12 49 16.8	-0.2
BOSS	Bosilegrad	2.39	64	ePn	Pn	12 49 13.0	+1.2
BOSS				eSn	Sb	12 49 42.8	-2.5
BBLS	Lazi&#263i	2.40	357	ePn	Pn	12 49 13.5	+1.5
BBLS				eSn	Sb	12 49 44.6	-1.0
GRUS	Gruza	2.56	19	ePn	Pn	12 49 15.2	+1.1
GRUS				eSn	Sb	12 49 48.6	-1.5
DIVS	Divibare	2.65	6	ePn	Pn	12 49 16.2	+0.8
DIVS				eSn	Sn	12 49 49.0	+1.4
BOVS	Bovan	2.68	35	⇑P	Pn	12 49 16.6	+0.9
BOVS				⇓S	Sn	12 49 48.1	-0.1
BOVS	Bovan	2.68	35	ePn	Pn	12 49 16.8	+1.1
KKB	Krupnik	2.68	81	i Pn	Pn	12 49 17.5	+1.7
ZAPS	Zavoj	2.89	50	ePn	Pn	12 49 19.3	+0.6
ZAPS				eSn	Sn	12 49 54.6	+1.0
SRS	Serrai	3.04	95	ePn	Pn	12 49 21.1	+0.4
ZAGS	Zajecar	3.05	39	ePn	Pn	12 49 21.5	+0.6
TEKS	Tekeris	3.08	359	ePn	Pn	12 49 23.2	+1.9
BORS2	Bor- Borsko je	3.18	34	ePn	Pn	12 49 22.4	-0.2
MDVR	Moldovita	3.66	24	⇓P	Pn	12 49 29.8	+0.5
MDVR				⇓S	Sn	12 50 12.6	0.0
HERR	Herculane	3.99	30	⇑P	Pn	12 49 34.2	+0.4
BZS	Buzias	4.41	19	⇑P	Pn	12 49 40.4	+0.9
BZS				⇓S	Sn	12 50 30.9	+0.1
GZR	Gura Zlata	4.56	30	⇓P	Pn	12 49 43.3	+1.6
SIRR	Siria	5.03	17	⇓P	Pn	12 49 49.8	+1.8

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*ISN **27** 12:50:10.3±1.0, 36°.19N×45°.06E, h18^{km}±6^{km}, ML2.8*
*TEH **27** 12:50:11.3, 36°.22N×45°.11E, h6^{km}*
ISC 27 12:50:10.6±0.9**, 36°.20N**±0°.03×**45°.05E**±0°.05**, h10^{km}, n16, σ1^{s}.53**/21**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAHB	Mahabad	0.78	43	Pg	Pb	12 50 26.4	+0.1
MAHB				Sg	Sb	12 50 37.5	+0.5
IKRK	Kirkuk	0.98	216	ePg	Pg	12 50 29.0	-0.5
IKRK				eSg	Sg	12 50 41.0	-1.3
IKRK				AML	AML	12 50 45.5	
	comp=N,273nm,0.5s						
IKRK				AML	AML	12 50 57.4	
	comp=E,218nm,0.5s						
MSL	Mosul	1.58	278	ePn	Pn	12 50 39.0	+0.4
MSL				eSn	Sn	12 51 00.0	+0.9
IAZR	Azarshahr	1.66	27	Pg	Pg	12 50 41.9	-0.5
IDHR	Dehrash	1.85	143	Pn	Pb	12 50 45.4	+0.7
ISHB	Shabestar	2.13	12	Pn	Pb	12 50 49.8	+0.3
GLG1	Gilan-e-Gharb	2.20	161	Pn	Pb	12 50 50.4	-0.1
IGHG	Ghaleghazi	2.24	146	Pn	Pb	12 50 51.4	+0.1
IHRS	Heris	2.65	36	Pn	Pb	12 50 57.3	-1.0
ISRB	Sarab	2.65	51	Pn	Pb	12 50 56.4	-1.9
ILBA	Ilam Banvizeh	2.74	159	Pn	Pn	12 50 56.7	+2.0
ZNJK	Zanjan	2.97	80	Pn	Pb	12 51 01.0	-2.8
BHD	Baghdad	2.97	191	ePn	Pn	12 50 58.0	+0.2
BHD				eSn	Sn	12 51 34.0	+0.5
IBDR	Badra	3.17	166	ePn	Pn	12 51 01.0	+0.5
IBDR				eSn	Sn	12 51 38.0	-0.3
HGHA	Hamedan- Ghaye	3.18	102	Pn	Pb	12 51 04.2	-3.0
QABG	Abgarm-Qazvin	3.71	96	Pn	Pn	12 51 11.7	+3.4

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*HEL **27** 12:53:13.0±0.3, 60°.98N×29°.34E, h0^{km}, ML2.0, Suspected explosion*
*IDC **27** 12:53:15.0±2.0, 60°.94N×29°.13E, h0^{km}, mbtmp3.3/3, ML2.1/3, Error ellipse: s-maj=16.5km s-min=11.0km az=160.0*
ISC 27 12:53:10.9±1.1**, 61°.00N**±0°.04×**29°.27E**±0°.05**, h0^{km}, n28, σ1^{s}.71**/40**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUF	Ruokolahti	0.46	340	PG	Pb	12 53 22.2	+0.4
RUF				SG	Sb	12 53 28.2	-0.8
RUF				MSG		12 53 28.8	
	comp=Z,21nm,0.2s						
VJF	Virojoki	0.96	242	PG	Pn	12 53 31.1	-0.5
	baz=59						
VJF				MSG		12 53 43.1	
	comp=Z,77nm,0.2s						
FIA0	FINESS Array S	1.61	287	PG	Pg	12 53 42.0	+0.3
	baz=104						
FIA0				MSG		12 54 02.2	
	comp=Z,15nm,0.2s						
FIA0				SN	Sg	12 54 03.6	+1.1
FINES	FINESS Array B	1.61	287	Pg	Pg	12 53 42.6	+1.0
	comp=Z,1.5nm,0.3s,baz=111,slow=16,SNR=68						
FINES				Lg	Lg	12 54 04.1	
	comp=Z,4.9nm,0.3s,baz=106,slow=28,SNR=32						
PVF	Pernaja	1.73	256	PG	Pg	12 53 44.3	+0.2
	baz=77						

PVF				MSG		12 54 05.6	
	comp=Z,14nm,0.2s						
PVF				SN	Sg	12 54 09.5	+3.0
JOF	Joensuu	2.15	26	*e*P	Pg	12 53 52.0	-0.2
JOF	Joensuu	2.15	26	PG	Pg	12 53 51.9	-0.2
	baz=202						
JOF				SG	Sg	12 54 19.4	-0.7
ARBE	Arbavere	2.27	228	PG	Pg	12 53 54.3	0.0
SUF	Sumiainen	2.27	321	PG	Pg	12 53 54.4	0.0
SUF				MSG		12 54 21.4	
	comp=Z,5.2nm,0.2s						
SUF				SG	Sg	12 54 24.5	+0.6
HEL1	Helsinki	2.32	251	PG	Pb	12 53 54.0	+0.5
HEL1				MSG		12 54 22.2	
	comp=Z,6.2nm,0.2s						
NUR	Nurmijarvi	2.32	260	PB	Pb	12 53 53.8	+0.2
	baz=77						
NUR				MSG		12 54 22.4	
	comp=Z,8.1nm,0.2s						
HEL5	Espoo, Suvisaa	2.41	250	PB	Pb	12 53 55.0	0.0
HEL5				MSG		12 54 24.8	
	comp=Z,5.8nm,0.2s						
KEF	Keuruu	2.41	301	*e*P	Pb	12 53 55.9	+0.8
KEF	Keuruu	2.41	301	PG	Pb	12 53 55.8	+0.8
KEF				MSG		12 54 25.3	
	comp=Z,5.0nm,0.2s						
KEF				SG	Sb	12 54 27.2	+1.9
NIF	Nilsia	2.50	345	PG	Pb	12 53 57.4	+0.8
NIF				MSG		12 54 27.4	
	comp=Z,5.2nm,0.2s						
NIF				SG	Sb	12 54 29.7	+2.0
MEF	Metsahovi	2.53	254	*e*P	Pb	12 53 56.5	-0.5
MEF	Metsahovi	2.53	254	PN	Pb	12 53 56.3	-0.8
MEF				MSG		12 54 28.4	
	comp=Z,5.5nm,0.2s						
MEF				SB	Sb	12 54 28.8	+0.1
RMF	Romuvaara	3.25	5	PB	Pb	12 54 08.9	-0.4
RMF				SB	Sb	12 54 50.0	+0.7
KPF	Kankaanpaa	3.56	287	PB	Pb	12 54 15.3	+0.6
RAF	Rauma	3.66	274	*e*P	Pb	12 54 13.0	-3.2
RAF	Rauma	3.66	274	PN	Pb	12 54 13.1	-3.2
VAF	Ylistaro	3.73	306	*e*P	Pb	12 54 14.7	-2.7
VAF	Ylistaro	3.73	306	PB	Pb	12 54 14.9	-2.5
VAF				SB	Sb	12 55 03.8	+0.7
OBF0	Syolatti, Pyha	4.21	329	PG	Pg	12 54 30.4	-1.0
I43RU	DUBNA INFRASON	5.95	133	I	I	13 26 10.0	
	baz=324,slow=297,SNR=17						
HFS	Hagfors	7.72	270	Pn	Pn	12 55 06.2	+1.7
	comp=Z,0.1nm,0.3s,baz=79,slow=13,SNR=6.6						
HFS				Sn	Sn	12 56 29.4	-3.1
	comp=Z,0.1nm,0.3s,baz=82,slow=31,SNR=1.9						
HFS				Lg	Lg	12 57 15.6	
	comp=Z,0.2nm,0.3s,baz=89,slow=30,SNR=1.7						
	comp=Z,2.0nm,0.8s						
ARCES	ARCESS Array B	8.71	351	Pn	Pn	12 55 20.4	+2.4
	baz=165,slow=13,SNR=5.5						
ARCES				Sn	Sn	12 56 54.9	-1.9
	comp=Z,0.1nm,0.3s,baz=170,slow=25,SNR=2.0						
	comp=Z,2.5nm,0.9s						
NOA	NORSAR Array B	8.77	278	Pn	Pn	12 55 19.6	+0.9
	baz=96,slow=15,SNR=1.5						
NOA				Sn	Sn	12 56 53.2	-5.0
	baz=90,slow=19,SNR=1.1						
	comp=Z,0.5nm,0.8s						

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*CNRM **27** 12:55:53.9, 36°.27N×7°.83W, h53km, ML3.0*
*INMG **27** 12:55:54.8±1.3, 36°.43N×7°.83W, h9km±5km, ML1.8, Error ellipse: s-maj=6.3km s-min=3.7km az=43.0, #DIST_RANGE: LOCAL #IPMA_REGION: Golfo de Cadiz*
*IGIL **27** 12:55:55.1, 36°.43N×7°.87W, h7km, ML1.4*
*MDD **27** 12:55:55.1±0.8, 36°.46N×7°.78W, h14km±4km, mb_Lg2.7/12, Error ellipse: s-maj=5.7km s-min=3.7km az=22.0*
*SFS **27** 12:55:56.0, 36°.42N×7°.83W, h34km, ML2.6/8, ML2.6/8, MLv2.6/8*
ISC 27 12:55:53.3±1.2**, 36°.36N**±0°.03×**7°.78W**±0°.03**, h29**km±12km**,**
n53, σ1ˢ31/84**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBDV	Barranco-do-Ve	0.89	352	Sg	Sn	12 56 22.2	+0.4
PBDV				Pg	Pb	12 56 10.8	+0.6
PBDV	Barranco-do-Ve	0.89	352	*e*P	Pn	12 56 09.5	-0.4
PBDV				*e*S	Sn	12 56 22.3	+0.4
PBDV				*i* IAML		12 56 26.5	
PBDV				*i* IAML		12 56 27.6	
PBDV				*i* IAML		12 56 28.1	
EXAYA	Ayamonte	0.91	19	Sg	Sb	12 56 20.2	-2.1
PVAQ	Vaqueiros	1.04	3	*e*P	Pb	12 56 12.9	+0.2
PVAQ				*e*S	Sn	12 56 25.9	+0.3
PVAQ				*i* IAML		12 56 26.0	
PVAQ				*i* IAML		12 56 26.9	
PVAQ				*i* IAML		12 56 28.9	
PVAQ	Vaqueiros	1.04	3	P	Pb	12 56 13.0	+0.2
PVAQ	Vaqueiros	1.04	3	S	Sb	12 56 28.7	+2.7
PFVI	Vila Bisbo	1.14	313	Pn	Pn	12 56 13.0	-0.3
PFVI				Pg	Pb	12 56 13.2	-1.2
PFVI				Sg	Sn	12 56 27.6	-0.4
PFVI	Vila Bisbo	1.14	313	*e*P	Pn	12 56 13.6	+0.3
PFVI				*i* IAML		12 56 31.9	
PFVI				*i* IAML		12 56 32.5	
PFVI				*i* IAML		12 56 39.0	
MORF	Marmelete	1.17	324	*e*P	Pn	12 56 14.1	+0.3
MORF	Marmelete	1.17	324	*e*P	Pn	12 56 14.1	+0.3
MORF				*i* IAML		12 56 35.4	
MORF				*i* IAML		12 56 36.9	
MORF				*i* IAML		12 56 38.1	
EGRO	El Granado	1.19	11	Pg	Pb	12 56 15.0	-0.3
EGRO				Sg	Sn	12 56 29.0	-0.3
EGRO	El Granado	1.19	11	Pg	Pb	12 56 15.1	-0.3
EGRO				Pg	Pb	12 56 15.1	-0.3
EGRO				Sg	Sn	12 56 29.4	0.0
EGRO				Sg	Sb	12 56 29.7	-0.7
EGRO				*i* IVmb_Lg		12 56 36.1	
PCVE	Castro Verde	1.28	351	Pg	Pb	12 56 16.4	-0.5
PCVE				Sg	Sn	12 56 31.4	-0.2
PCVE	Castro Verde	1.28	351	*e*P	Pb	12 56 16.5	-0.4
PCVE				*e*S	Sn	12 56 32.0	+0.4
PCVE				*i* IAML		12 56 32.4	
PCVE				*i* IAML		12 56 32.4	
PCVE				*i* IAML		12 56 46.2	
PTEO	Sao Teotonio	1.40	328	*e*P	Pn	12 56 17.6	+0.7
MESJ	Messejana	1.52	347	*e*P	Pn	12 56 19.6	+1.1
MESJ				*e*S	Sn	12 56 37.6	+0.3
MESJ				IAML		12 56 39.0	
	comp=N,4.3nm,0.1s						
MESJ	Messejana	1.52	347	*e*P	Pn	12 56 19.7	+1.2
MESJ				*e*S	Sn	12 56 37.9	+0.6
MESJ				*i* IAML		12 56 46.0	
MESJ				*i* IAML		12 56 49.9	
MESJ				*i* IAML		12 56 50.0	
ESPR	Espera	1.63	71	Pn	Pb	12 56 23.0	+0.3
ESPR				Sn	Sn	12 56 41.1	+1.0
ESPR	Espera	1.63	71	Pn	Pn	12 56 21.2	+1.1
ESPR				Sn	Sn	12 56 41.8	+1.7
ESPR				*i* IVmb_Lg		12 56 43.6	
EMIN	Mina Concepcio	1.66	32	Pn	Pn	12 56 21.3	+0.8
EMIN				Sn	Sn	12 56 40.7	-0.1
EMIN				*i* IVmb_Lg		12 56 44.1	
EJIF	Jimena Fronter	1.87	87	Sn	Sb	12 56 48.9	-0.8
PBAR	Barrancos	1.90	18	Pn	Pn	12 56 24.8	+1.0
PBAR				Sn	Sn	12 56 45.4	-1.5
PBAR	Barrancos	1.90	18	*e*S	Sn	12 56 48.0	+1.2
PBAR				*i* IAML		12 56 57.8	
PBAR				*i* IAML		12 56 58.8	
PBAR				*i* IAML		12 57 00.8	
EVO	Evora	2.17	355	Pn	Pn	12 56 28.5	+0.9
EVO				Sn	Sn	12 56 52.7	-0.8
EVO	Evora	2.17	355	*e*P	Pn	12 56 28.6	+1.0
MOE	Montemor	2.20	348	*e*P	Pn	12 56 29.1	+1.1
MOE				*e*S	Sn	12 56 54.7	+0.4
MOE				*i* IAML		12 57 08.2	
MOE				*i* IAML		12 57 08.2	
PARRA	Arraiolos	2.46	355	*e*P	Pn	12 56 32.4	+1.0
PARRA				*e*S	Sn	12 57 00.3	-0.3
PARRA				*i* IAML		12 57 02.3	
PARRA				*i* IAML		12 57 02.6	
PARRA				*i* IAML		12 57 03.2	
EBAD	Badajoz	2.46	14	Pn	Pn	12 56 32.9	+1.3
EBAD				Sn	Sn	12 56 59.2	-1.5
EBAD	Badajoz	2.46	14	Pn	Pn	12 56 32.7	+1.2
EBAD				Sn	Sn	12 56 59.9	-0.9
EBAD				*i* IVmb_Lg		12 57 09.1	
ECAB	El Cabril	2.54	47	Pn	Pn	12 56 33.6	+0.9
ECAB				Sn	Sn	12 57 01.2	-1.5
ECAB	El Cabril	2.54	47	Pn	Pn	12 56 34.3	+1.6
ECAB				Sn	Sn	12 57 01.8	-0.9
ECAB				*i* IVmb_Lg		12 57 15.2	
PMTG	Montargil	2.72	353	*e*P	Pn	12 56 36.1	+1.0
PMTG				*e*S	Sn	12 57 06.9	-0.2
PMTG				*i* IAML		12 57 24.6	
PMTG				*i* IAML		12 57 24.6	
PMTG				*i* IAML		12 57 28.6	
PMAFR	Mafra	2.85	336	Pn	Pn	12 56 37.5	+0.6
PMRV	Marv??o	3.08	6	*e*P	Pn	12 56 41.0	+1.0
PSARD	Sardoal	3.25	355	*e*P	Pn	12 56 43.5	+1.1
CIBOR	Castaar de Ib	3.76	29	Pn	Pn	12 56 51.3	+1.9
CIBOR				Sn	Sn	12 57 31.1	-1.6
SRHM	Skhour des Reh	3.88	181	P	Pn	12 56 52.9	+1.7
SRHM	Skhour des Reh	3.88	181	S	Sn	12 57 41.5	+5.7
EPLA	Plasencia	3.93	19	Pn	Pn	12 56 52.3	+0.6
EPLA				Sn	Sn	12 57 35.0	-1.9
EPLA				*i* IVmb_Lg		12 57 36.4	
PSIM	Granatula de C	4.03	51	Pn	Pn	12 56 54.4	+1.3
PSIM				Sn	Sn	12 57 38.9	-0.5
PAB	San Pablo	4.18	39	Pn	Pn	12 56 56.8	+1.6
PAB				Sn	Sn	12 57 40.4	-2.7
PAB				*i* IVmb_Lg		12 57 44.1	
MD31	MD31	4.29	144	P	Pn	12 56 56.9	+0.2
MD31	MD31	4.29	144	S	Sn	12 57 44.7	-1.1
MDT	Midelt	4.40	143	P	Pn	12 56 58.7	+0.4
MDT	Midelt	4.40	143	S	Sn	12 57 47.7	-1.0
TISM	Timmit	4.76	166	P	Pn	12 57 02.3	-0.8
TISM	Timmit	4.76	166	S	Sn	12 57 55.8	-1.6
OUK	Oukaimeden	5.14	181	P	Pn	12 57 08.4	-0.4
OUK	Oukaimeden	5.14	181	S	Sn	12 58 05.2	-2.1
ETOB	Tobarra	5.45	63	Pn	Pn	12 57 13.5	+0.8
ETOB				Sn	Sn	12 58 12.7	-1.8
ETOB				*i* IVmb_Lg		12 58 27.5	
OUZM	OUZ	5.51	171	P	Pn	12 57 12.9	-0.6
OUZM	OUZ	5.51	171	S	Sn	12 58 16.8	+0.8
ETOR	Torete	6.32	43	Pn	Pn	12 57 26.1	+1.5
ETOR				Sn	Sn	12 58 32.2	-3.6
ETOR				*i* IVmb_Lg		12 58 37.6	

WEL 27 12:58:34.6±2.3**, 34°S**±24°×**18°0W**±2°4**, h215**km±50km**,**
M3.8/6**, mB4.6**/3**, ML3.6**/13**, MLv3.8**/6**, Mw(mB)3.8**/3**, Error ellipse: s-maj=40.4km s-min=18.6km az=45.0, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	3.96	203	P	Pn	12 59 37.5	+1.1
WMGZ				S	S	13 00 26.8	+2.0
PKGZ	Pakihiroa	4.12	206	P	Pn	12 59 37.1	-1.2
PKGZ				S	S	13 00 28.2	-0.2
HAZ	Te Kaha	4.14	210	P	Pn	12 59 37.4	-1.2
PUZ	Puketiti	4.24	203	P	Pn	12 59 39.6	-0.2
PUZ				S	S	13 00 31.5	+0.4
RUGZ	Raukumara Rang	4.36	209	P	Pn	12 59 41.5	0.0
TWGZ	Tauwhareparae	4.43	205	P	Pn	12 59 42.3	+0.1
CNGZ	Carnagh Statio	4.63	202	P	Pn	12 59 44.8	+0.1
TKGZ	Te Karaka	4.71	205	P	Pn	12 59 46.2	+0.6
MWZ	Matawai	4.74	208	P	Pn	12 59 45.8	-0.3
URZ	Urewera	4.85	212	P	Pn	12 59 47.3	0.0
RAGZ	Rawiri	4.92	208	P	Pn	12 59 48.4	0.0
MUGZ	Murupara	5.18	213	P	Pn	12 59 50.3	-1.3
SNGZ	Shannon Statio	5.20	207	P	Pn	12 59 52.5	+0.6
RTZ	Ruatahuna	5.20	211	P	Pn	12 59 52.1	+0.2
WCZ	Waipu Caves	5.25	249	P	Pn	12 59 51.7	-0.9
KNZ	Kokohu	5.29	204	P	Pn	12 59 52.2	-0.8
RAHZ	Arahi	5.41	208	P	Pn	12 59 55.4	+0.9
MTHZ	Maungataniwha	5.46	211	P	Pn	12 59 55.8	+0.6
OUZ	Omahuta	5.69	258	P	Pn	12 59 59.1	+1.1
BKZ	Black Stump Fm	5.87	211	P	Pn	13 00 00.1	-0.3

IDC 27 13:00:25.8±346.0**, 20°.89N**×**112°.74E, h0**km**, Error ellipse: s-maj=243.8km s-min=119.8km az=69.0, South China Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I39PW	PALAU INFRASON	24.91	119	I	I	15 31 30.0	
	baz=302,slow=311,SNR=0.9						
I34MN	SONGINO INFRAS	27.33	351	I	I	15 46 30.0	
	baz=168,slow=333,SNR=0.3						
I04AU	SHANNON INFRAS	55.28	176	I	I	18 41 30.0	
	baz=351,slow=300,SNR=2.3						
I53US	FAIRBANKS INFR	75.21	26	I	I	20 43 27.1	
	0.2nm,5.9s,baz=281,slow=322,SNR=1.6						

IDC 27 13:06:12.6±7.8**, 7°.74S**×**129°.21E, h263**km±83km**, mb3.4**/2**,**
mbtmp3.7/4**, MS3.2**/1**, Error ellipse: s-maj=73.0km s-min=32.7km az=62.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.86	198	P	Pn	13 08 41.4	-0.5
	1.0nm,0.3s,baz=27,slow=13,SNR=6.8						
FITZ				S	S	13 10 42.3	-1.3
	1.7nm,0.6s,baz=345,slow=16,SNR=1.4						
JAY	Jayapura	12.57	66	LR	LR	13 15 19.1	
	comp=Z,104nm,19.3s,baz=298,slow=44						
WRA	Warramunga Arr	13.11	158	P	Pn	13 08 58.2	-11
	0.5nm,0.5s,baz=333,slow=12,SNR=7.0						
WRA				S	S	13 11 24.1	-11
	0.4nm,0.4s,baz=333,slow=24,SNR=8.6						
ASAR	Alice Springs	16.46	165	P	Pn	13 09 49.5	-0.1
	0.3nm,0.6s,baz=348,slow=11,SNR=7.0						
ASAR				S	S	13 12 46.8	+0.2
	0.4nm,0.9s,baz=345,slow=26,SNR=5.0						
MKAR	Makanchi Array	68.42	327	P	P	13 16 46.5	+0.3
	0.6nm,0.5s,baz=140,slow=7.5,SNR=8.8						
	0.6nm,0.5s						
ILAR	Eielson Array	94.35	25	P	P	13 19 00.9	-1.1
	0.5nm,0.8s,baz=260,slow=6.6,SNR=4.6						
	0.5nm,0.8s						

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*GCG **27** 14:39:59.0±1.0, 13°.26N×90°.27W, h17km±10km, MD3.6*
*CATAC **27** 14:39:60.0±0.9, 13°N±4°×9°0W±°, h17km±4km, M3.1/7, MLv3.1/7, Error ellipse: s-maj=10.1km s-min=6.2km az=27.3, confirmed*
*SNET **27** 14:40:00.9±1.9, 13°.33N×90°.17W, h41km, ML3.0*
ISC 27 14:39:58.5±1.9**, 13°.21N**±0°.08×**90°.17W**±0°.05**, h20**km±8km**,**
n31, σ0ˢ60/37**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	0.65	14	P	Pn	14 40 12.2	-0.4
NUBE	Las Nubes	0.79	29	*e*P	Pn	14 40 14.5	-0.2
NUBE				*e*S	Sg	14 40 25.3	+0.7
NUBE	Las Nubes	0.79	29	*i* P	Pn	14 40 14.7	0.0
NUBE				*i* S	Sn	14 40 25.7	-0.3
NUBE	Las Nubes	0.79	29	S	Sb	14 40 23.9	-0.1
NUBE	Las Nubes	0.79	29	P	Pn	14 40 14.6	-0.1
CEVE	Cerro Verde	0.81	41	*e*P	Pn	14 40 15.1	-0.1
CEVE				*e*S	Sn	14 40 28.1	+1.4
CEVE	Cerro Verde	0.81	41	P	Pn	14 40 15.0	-0.1
SBLS	San Blas	0.82	40	*e*P	Pn	14 40 15.0	-0.3
JAYA	Jayaque - finc	0.83	58	*e*P	Pn	14 40 14.8	-0.4
JAYA				*e*S	Sb	14 40 25.7	+0.5
JAYA	Jayaque - finc	0.83	58	*i* P	Pn	14 40 14.9	-0.4
JAYA				*i* S	Sn	14 40 27.4	+0.3
JAYA	Jayaque - finc	0.83	58	P	Pn	14 40 14.9	-0.4
JAYA	Jayaque - finc	0.83	58	S	Sg	14 40 26.9	+0.9
SNJE	San Jose	0.85	40	*e*P	Pn	14 40 15.4	-0.2
LOAL	Lomas de Alarc	0.87	26	P	Pn	14 40 15.9	+0.2
LOAL	Lomas de Alarc	0.87	26	S	Sn	14 40 28.4	+0.5
PMON	Piamonte	0.97	59	*e*P	Pg	14 40 17.2	-0.3
PMON	Piamonte	0.97	59	P	Pg	14 40 17.7	+0.1
UNIC	Universidad Ca	0.98	38	P	Pg	14 40 17.4	-0.2
UNIC	Universidad Ca	0.98	38	S	Sg	14 40 30.5	-0.1
RBDL	Robledal	1.01	28	*e*P	Pg	14 40 18.1	-0.3
RBDL				*e*S	Sn	14 40 32.3	+0.7
UESV	Universidad de	1.41	72	S	Sb	14 40 42.4	+0.5
MTO3	Montecristo	1.42	34	*e*P	Pb	14 40 23.6	-0.9
MTO3	Montecristo	1.42	34	*i* P	Pb	14 40 24.3	-0.2
MTO3	Montecristo	1.42	34	P	Pb	14 40 23.7	-0.8
MTO3	Montecristo	1.42	34	S	Sn	14 40 41.7	0.0
SCLA	Alcaldia de Sa	1.49	71	*e*P	Pb	14 40 24.6	-0.9
TECA	Tecapa	1.65	80	*e*P	Pn	14 40 26.2	-0.4
STG8	El Palmar, Qui	1.68	317	*i* P	Pg	14 40 31.8	+0.8
APG	El Apazote	1.81	351	*i* P	Pb	14 40 29.7	-1.4
PACA	Pacayal	1.82	82	P	Pb	14 40 30.7	-0.5
PACA	Pacayal	1.82	82	S	Sb	14 40 54.6	+1.0

IDC 27 14:42:40.0±2.4**, 6°.46S**×**129°.32E, h0**km**, mb3.5**/1**,**
mbtmp3.4/3**, ML3.6**/2**, Error ellipse: s-maj=179.7km s-min=31.3km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.26	160	Pn	Pn	14 46 03.0	-0.4
	0.3nm,0.3s,baz=338,slow=13,SNR=7.8						
WRA				Sn	Sn	14 48 29.6	-13
	0.2nm,0.3s,baz=335,slow=22,SNR=4.5						
	0.3nm,0.7s						
ASAR	Alice Springs	17.67	166	P	Pn	14 46 48.0	+0.2
	0.2nm,0.3s,baz=353,slow=11,SNR=28						
ASAR				S	Sn	14 49 54.3	-11
	0.2nm,0.7s,baz=343,slow=25,SNR=1.5						
	0.4nm,0.4s						
MKAR	Makanchi Array	67.41	327	P	P	14 53 37.5	0.0
	0.2nm,0.4s,baz=116,slow=7.7,SNR=6.2						
	0.2nm,0.4s						

IDC 27 14:49:26.0±5.2**, 22°.58S**×**173°.40E, h0**km**, mb3.8**/3**,**
mbtmp3.7/3**, MS3.2**/6**, Error ellipse: s-maj=231.8km s-min=38.2km az=151.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.46	273	LR	LR	14 52 49.6	
	comp=Z,33nm,20.0s,baz=2.5,slow=32						
URZ	Urewera	15.95	169	LR	LR	14 58 32.3	
	comp=Z,56nm,20.1s,baz=341,slow=34						
CTA	Charters Tower	25.39	271	LR	LR	15 04 12.8	
	comp=Z,44nm,18.5s,baz=49,slow=35						
STKA	Stephens Creek	29.67	245	LR	LR	15 06 45.7	
	comp=Z,55nm,18.3s,baz=26,slow=35						
ASAR	Alice Springs	36.26	260	P	P	14 56 30.8	-0.4
	0.9nm,0.8s,baz=87,slow=9.1,SNR=11						
	0.9nm,0.8s						
WRA	Warramunga Arr	36.43	267	P	P	14 56 32.8	+0.1
	0.7nm,0.8s,baz=101,slow=8.6,SNR=1.4						
	0.7nm,0.8s						
MJAR	Matsushiro Arr	67.55	330	LR	LR	15 25 42.1	
	comp=Z,15nm,21.6s,baz=146,slow=32						
ILAR	Eielson Array	92.31	16	P	P	15 02 37.0	-0.6
	0.7nm,0.9s,baz=213,slow=4.5,SNR=4.1						
	0.7nm,0.9s						
CMIG	Matias Romero	97.93	75	LR	LR	15 37 47.4	
	comp=Z,80nm,19.6s,baz=216,slow=30						
GERES	GERESS Array B	149.23	333	PKPbc	PKPbc	15 09 16.9	+0.3
	0.3nm,0.5s,baz=44,slow=3.3,SNR=2.5						

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*TIR **27** 15:01:04.8, 41°.50N×19°.53E, h13km, Ml2.7/3*
*SKO **27** 15:01:05.3, 41°.52N×19°.48E, h9km, ML2.3*
*BEO **27** 15:01:06.1±0.4, 41°.52N×19°.65E, h4km±3km, ML2.0/12*
*PDG **27** 15:01:06.9±0.2, 41°.61N×19°.59E, h16km, ML2.5/11, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
ISC 27 15:01:05.8±1.0**, 41°.54N**±0°.02×**19°.58E**±0°.02**, h11**km±8km**,**
n49, σ0ˢ96/90**, 13C-10D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.28	131	Pg	Pg	15 01 11.4	-0.2
TIR				AML	AML	15 01 15.5	
	8.7nm,0.3s						
TIR				Sg	Sg	15 01 15.6	+0.1
TIR	Tirane	0.28	131	⇑*i*Pg	Pg	15 01 11.4	-0.2
TIR				*i* Sg	Sb	15 01 16.8	-0.9
ULC	Ulcinj	0.50	330	⇑*i*Pg	Pg	15 01 15.1	-0.5
ULC				*i* Sg	Sg	15 01 22.5	+0.3
SDA	Shkodra	0.52	353	Pg	Pg	15 01 15.7	-0.3
SDA				S	Sg	15 01 23.9	+1.0
SDA				AML	AML	15 01 26.5	
	0.5nm,0.3s						
PHP	Peshkopia	0.66	77	Pg	Pg	15 01 17.7	-1.0
PHP				Sg	Sb	15 01 28.5	-0.1
PHP				AML	AML	15 01 31.9	
	1.5nm,0.4s						
DRME	Dracevica, Mon	0.72	336	*e*Pg	Pg	15 01 19.5	-0.2
DRME				*e*Sg	Sb	15 01 31.0	+0.8
DRME	Dracevica, Mon	0.72	336	⇑*i*Pg	Pg	15 01 18.9	-0.8
DRME				*e*Sg	Sg	15 01 29.8	+0.7
BUM	Brajici-Budva	0.92	326	⇓*i*Pg	Pb	15 01 23.6	-0.3
BUM				*i* Sg	Sb	15 01 36.8	+0.6
PDG	Podgorica	0.93	345	⇓P	Pb	15 01 24.2	+0.3
PDG				⇑S	Sn	15 01 38.6	+0.5
PDG	Podgorica	0.93	345	*e*Pg	Pb	15 01 23.0	-0.9
PDG				*e*Sg	Sn	15 01 37.5	-0.6
PDG	Podgorica	0.93	345	⇓*i*Pg	Pb	15 01 23.7	-0.2
PDG				*i* Sg	Sg	15 01 36.7	+0.9
OHR	Ohrid	1.01	114	*i* Pg	Pb	15 01 25.2	-0.2
OHR				*i* Sg	Sn	15 01 40.2	0.0
OHR				*e*Lg	Lg	15 01 42.5	
	comp=N,64nm,0.5s						
OHR				*e*Lg	Lg	15 01 44.5	
	comp=E,52nm,0.5s						
PVY	Plav	1.09	15	*e*Pg	Pb	15 01 26.2	-0.7
PVY				*e*Sg	Sb	15 01 41.6	+0.4
PVY	Plav	1.09	15	⇑*i*Pg	Pb	15 01 25.9	-1.0
PVY				*i* Sg	Sg	15 01 42.0	+0.8
CEME	Cevo	1.13	334	⇓*i*Pg	Pb	15 01 26.7	-0.7
CEME				*e*Sg	Sn	15 01 43.3	+0.2
HCY	Herceg Novi	1.22	319	⇑*i*Pg	Pn	15 01 28.7	-0.2
HCY				*i* Sg	Sg	15 01 46.6	+1.4
NKME	Niksic	1.32	339	⇑*i*Pg	Pn	15 01 30.3	+0.1
NKME				*e*Sg	Sg	15 01 49.7	+1.4
BEY	Berane	1.36	10	*e*Pg	Pn	15 01 31.1	+0.3
BEY				*e*Sg	Sb	15 01 49.1	+0.4
IVA	Berane	1.36	10	⇓*i*Pg	Pn	15 01 30.7	-0.1
IVA				*i* Sg	Sg	15 01 50.6	+1.1
SKO	Skopje	1.46	72	*i* Pg	Pb	15 01 33.4	+0.4
SKO				*i* Sg	Sg	15 01 54.5	+1.8
TREB	Trebinje	1.50	323	*e*Pg	Pn	15 01 33.0	+0.4
TREB				*e*Sg	Sg	15 01 54.3	+0.3
BRY	Bratogost	1.57	331	⇑*i*Pg	Pn	15 01 34.0	+0.2
BRY				*i* Sg	Sb	15 01 56.0	+1.1
UPM	Unac-Piva	1.74	343	⇑*i*Pn	Pn	15 01 36.3	+0.1
UPM				*i* Sn	Sb	15 02 00.1	+0.2
SJES	Sjenica	1.75	9	*e*Pn	Pb	15 01 37.5	-0.5
SJES				*e*Sn	Sb	15 02 00.9	+0.9
SELS	Selova	2.03	34	*e*Pn	Pn	15 01 40.7	+0.7
SELS				*e*Sn	Sn	15 02 06.8	+1.4
NOCI	Noci	2.04	249	Pn	Pb	15 01 42.6	-0.4
NOCI				Sn	Sb	15 02 08.8	+0.4
IGT	Igoumenitsa	2.08	164	*e*Pn	Pn	15 01 41.7	+1.0
IGT				*e*Sn	Sb	15 02 07.9	-1.5
IVAS	Ivanjica	2.08	11	*e*Pn	Pn	15 01 40.9	+0.1
IVAS				*e*Sn	Sb	15 02 09.1	-0.5
RUDO	Rudo	2.09	356	*e*Pn	Pn	15 01 41.2	+0.4
BARS	Barje	2.10	52	*e*Pn	Pn	15 01 41.5	+0.6
BARS				*e*Sn	Sn	15 02 07.7	+0.7
BARS	Barje	2.10	52	*e*Pn	Pn	15 01 41.3	+0.4
BARS				*e*Sn	Sn	15 02 07.6	+0.6
GOCS	Kraljevo Serbi	2.24	25	*e*Pn	Pn	15 01 43.8	+0.8
GOCS				*e*Sn	Sn	15 02 12.1	+1.5
VAY	Valandovo	2.26	94	*e*Pn	Pn	15 01 44.3	+1.2
VAY				*e*Sn	Sn	15 02 12.2	+1.3
VAY				*e*Lg	Lg	15 02 18.5	
	comp=E,9.9nm,0.5s						
BBLS	Lazi&#263i	2.33	357	*e*Pn	Pb	15 01 46.5	-1.5
BBLS				*e*Sn	Sb	15 02 15.2	-1.6
MATE	Matera	2.35	249	⇓P	Pb	15 01 47.4	-0.8
BOSS	Bosilegrad	2.36	65	*e*Pn	Pn	15 01 44.1	-0.5
BOSS				*e*Sn	Sn	15 02 14.1	+0.5
GRUS	Gruza	2.50	19	*e*Pn	Pn	15 01 47.4	+1.0
GRUS				*e*Sn	Sn	15 02 18.7	+1.9
DIVS	Divibare	2.58	7	*e*Pn	Pn	15 01 48.2	+0.6
DIVS				*e*Sn	Sn	15 02 20.3	+1.3
BOVS	Bovan	2.62	36	⇓P	Pn	15 01 46.2	-1.9
BOVS				⇓S	Sn	15 02 18.0	-1.8
BOVS	Bovan	2.62	36	*e*Pn	Pn	15 01 48.3	+0.2
BOVS				*e*Sn	Sn	15 02 19.6	-0.3
ZAPS	Zavoj	2.85	51	*e*Pn	Pn	15 01 52.3	+1.0
ZAPS				*e*Sn	Sn	15 02 26.2	+0.6
ZAGS	Zajecar	3.00	40	*e*Pn	Pn	15 01 54.5	+1.2

ZAGS				eSn	Sn	15 02 29.5	+0.3
BLKB	Belogradchik	3.09	47	⇑S	Sn	15 02 28.7	-2.9
KUBS	Kucevo	3.26	27	ePn	Pn	15 01 55.9	-1.0
KUBS				eSn	Sn	15 02 35.8	+0.1
MDVR	Moldovita	3.60	25	⇑P	Pn	15 02 00.3	-1.3
HERR	Herculane	3.93	31	⇑P	Pn	15 02 04.0	-2.2
BZS	Buzias	4.34	19	⇓P	Pn	15 02 10.4	-1.3
GZR	Gura Zlata	4.50	30	⇓P	Pn	15 02 12.2	-1.9
SIRR	Siria	4.96	17	⇑P	Pn	15 02 19.6	-0.7

ISC 27 15:23:10.1±1.1,**44°.55N**±0°.02×**15°.51E**±0°.02,**h4**^{km}±11^{km}, **n21**,σ**0**^{s}.**63**/39,**Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UDBI	Udbina	0.19	97	i Pg	Pg	15 23 13.6	-0.2
UDBI				Sg	Sg	15 23 17.1	+0.9
PLIT	Plitvice	0.34	14	ePg	Pg	15 23 15.7	-0.9
PLIT				Sg	Sg	15 23 21.2	0.0
VIRC	Vir	0.41	232	ePg	Pg	15 23 17.5	-0.5
VIRC				Sg	Sg	15 23 24.1	+0.7
NVLJ	Novalja	0.45	272	ePg	Pg	15 23 18.1	-0.7
NVLJ				Sg	Sg	15 23 25.4	+0.7
RABC	Rab	0.55	291	ePg	Pg	15 23 20.9	+0.2
RABC				Sg	Sg	15 23 28.1	+0.2
DUGI	Dugi Otok	0.65	210	ePg	Pg	15 23 22.0	-0.5
DUGI				Sg	Sg	15 23 30.9	+0.1
MORI	Morici	0.70	168	ePg	Pg	15 23 22.9	-0.6
MORI				Sg	Sg	15 23 33.0	+0.5
KIJV	Kijevo	0.85	130	ePg	Pg	15 23 25.2	-1.1
KIJV				Sg	Sg	15 23 37.4	+0.1
ZIRJ	Zirje	0.90	174	ePg	Pg	15 23 26.5	-0.9
ZIRJ				Sg	Sg	15 23 39.5	+0.4
BOJS	Bojanci	0.97	349	i Pg	Pg	15 23 28.6	-0.1
BOJS				i Sg	Sb	15 23 41.6	-1.0
BOJS				IAML		15 23 50.3	
	comp=Z,5.7nm,0.3s						
OZLJ	Ozalj	1.06	359	ePg	Pg	15 23 29.8	-0.7
OZLJ				Sg	Sb	15 23 45.0	-0.3
GBRS	Gornja Briga	1.10	334	i Pg	Pn	15 23 32.3	0.0
GBRS				i Sg	Sb	15 23 46.4	+0.1
GCIS	Gornji Cirnik	1.32	4	i Pg	Pg	15 23 35.4	0.0
GCIS				i Sg	Sn	15 23 53.3	0.0
VISS	Visnje	1.34	340	i Pg	Pg	15 23 35.9	+0.2
VISS				i Sg	Sg	15 23 53.8	+0.7
MOSL	Moslavina	1.38	39	Sg	Sg	15 23 54.8	+0.3
PTJ	Puntijarka	1.40	13	Sg	Sg	15 23 55.2	+0.3
LEGS	Legarje	1.40	355	i Sg	Sg	15 23 56.2	+0.9
HVAR	Hvar	1.53	153	ePn	Pb	15 23 39.1	+0.1
HVAR				Sn	Sg	15 24 00.6	+1.3
RICI	Ricice	1.58	131	ePn	Pg	15 23 40.7	+0.4
RICI				Sn	Sg	15 24 01.9	+1.0
MAKA	Makarska	1.67	139	ePn	Pb	15 23 40.7	-0.6
MAKA				Sn	Sg	15 24 04.1	+0.4
LSTV	Lastovo	2.05	150	ePn	Pn	15 23 45.9	+0.7
LSTV				Sn	Sb	15 24 13.0	-0.5

WEL 27 15:24:18.4±1.1,**31°S**±17°×**17°9W**±4°5,**h305**^{km}±17^{km}, **mB4.5**/13,**ML4.5**/18,**MLv4.6**/10,**Mw(mB)3.7**/13,**Error ellipse: s-maj=62.1km s-min=8.1km az=109.3, confirmed,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	2.34	30	P	Pn	15 25 11.3	+2.7
GLKZ				S	S	15 25 47.2	-1.3
MXZ	Matakaoa Point	6.56	197	P	Pn	15 25 55.8	+1.4
WMGZ	Waiomatatini S	6.77	196	P	Pn	15 25 57.3	+0.3
HAZ	Te Kaha	6.88	200	P	Pn	15 25 58.8	+0.4
HAZ				S	S	15 27 20.4	+1.3
PKGZ	Pakihiroa	6.90	198	P	Pn	15 25 58.0	-0.6
PUZ	Puketiti	7.05	196	P	Pn	15 26 00.8	+0.3
PUZ				P	S	15 27 22.0	-1.0
RUGZ	Raukumara Rang	7.11	200	P	Pn	15 26 01.4	+0.2
TWGZ	Tauwhareparae	7.22	198	P	Pn	15 26 04.4	+1.9
TWGZ				P	S	15 27 28.6	+1.8
OPRZ	Ohinepanea	7.38	207	P	Pn	15 26 06.0	+1.6
CNGZ	Carnagh Statio	7.46	196	P	Pn	15 26 07.4	+2.1
MWZ	Matawai	7.49	200	P	Pn	15 26 04.5	-1.3
TKGZ	Te Karaka	7.50	198	P	Pn	15 26 05.5	-0.4
URZ	Urewera	7.55	202	P	Pn	15 26 04.0	-2.4
RAGZ	Rawiri	7.67	200	P	Pn	15 26 08.3	+0.2
RIGZ	Rimuhau	7.78	198	P	Pn	15 26 09.3	+0.1
MUGZ	Murupara	7.86	203	P	Pn	15 26 08.6	-1.7
RTZ	Ruatahuna	7.92	202	P	Pn	15 26 10.3	-0.7
SNGZ	Shannon Statio	7.96	200	P	Pn	15 26 09.7	-1.8
KNZ	Kokohu	8.10	197	P	Pn	15 26 12.4	-0.7
RAHZ	Arahi	8.16	201	P	Pn	15 26 13.3	-0.6
MHGZ	Mahia Peninsul	8.16	196	P	Pn	15 26 14.4	+0.5
TLZ	Tolley Road	8.21	210	P	Pn	15 26 16.6	+2.1
WHHZ	Waihua	8.27	199	P	Pn	15 26 15.5	+0.4
MRHZ	Matea Rd	8.30	204	P	Pn	15 26 14.2	-1.5
NMHZ	Naumai	8.41	201	P	Pn	15 26 15.2	-1.9
ARHZ	Aropaoanui	8.51	200	P	Pn	15 26 16.9	-1.3
BKZ	Black Stump Fm	8.57	203	P	Pn	15 26 17.5	-1.5
MCHZ	McNeill Hill	8.76	201	P	Pn	15 26 19.7	-1.6
KAHZ	Kahuranaki	9.03	199	P	Pn	15 26 24.0	-0.6
KRHZ	Kereru	9.05	202	P	Pn	15 26 22.3	-2.4
VRZ	Vera Road	9.21	210	P	Pn	15 26 27.1	+0.4
PXZ	Pawanui	9.26	199	P	Pn	15 26 25.4	-1.9
WPHZ	Waipukurau	9.41	201	P	Pn	15 26 27.6	-1.6
TSZ	Takapari Road	9.56	203	P	Pn	15 26 28.4	-2.6
MRZ	Mangatainoka R	10.22	203	P	Pn	15 26 35.6	-3.5
TMWZ	Te Maipa	10.53	200	P	Pn	15 26 40.3	-2.6
CAW	Cannon Point	10.80	204	P	Pn	15 26 42.7	-3.4
MSWZ	Moikau Station	11.01	202	P	Pn	15 26 44.6	-4.2

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*CATAC **27** 15:34:25.6±0.7,14°N±3°×9°3W±°,h8^{km}±4^{km},M4.2/13, MLv4.2/13,Error ellipse: s-maj=7.9km s-min=5.5km az=53.6,confirmed*

*MEX **27** 15:34:26.9±0.7,14°.13N×92°.96W,h10^{km},MD4.3*

*GCG **27** 15:34:27.3±1.7,14°.08N×92°.71W,h3^{km}±22^{km},MD4.2*

*IDC **27** 15:34:32.4±1.7,15°.51N×92°.43W,h0^{km},mb3.6/4, mbtmp3.5/7,ML3.4/2,MS3.2/4,Error ellipse: s-maj=40.6km s-min=11.0km az=26.0*

ISC 27 15:34:24.6±2.0,**14°.09N**±0°.06×**92°.94W**±0°.03,**h13**^{km}±13^{km}, **n82**,σ**2**^{s}.**14**/105,**mb3.7**/4,**MS3.1**/4,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.04	39	eP	Pb	15 34 44.0	-0.6
SMCA	Catarina	1.13	48	i P	Pb	15 34 46.0	-0.1
SMCA				i S	Sg	15 35 01.5	+0.2
PATR	El Naranjo	1.23	34	eP	Pn	15 34 45.7	-2.0
PATR				eS	Sb	15 35 01.6	-2.1
CHUJ	Union Juarez	1.28	39	eP	Pn	15 34 46.4	-2.1
CHUJ				eS	Sb	15 35 02.3	-3.0
RTAL	Retalhuleu	1.28	70	eP	Pn	15 34 47.5	-0.8
RTAL				eS	Sb	15 35 04.4	-0.7
RTAL	Retalhuleu	1.28	70	P	Pn	15 34 48.6	+0.3
RTAL	Retalhuleu	1.28	70	S	Sg	15 35 06.5	+0.5
PAVE	Pavencul	1.32	34	eP	Pn	15 34 47.0	-2.0
PAVE				eS	Sb	15 35 03.5	-2.9
STG2	El Palmar, Qui	1.56	77	i P	Pn	15 34 49.7	-2.5
STG2				i S	Sn	15 35 08.5	-3.8
STG5	El Palmar, Qui	1.57	78	i P	Pn	15 34 50.5	-1.9
STG8	El Palmar, Qui	1.58	77	i P	Pn	15 34 49.6	-3.0
PCIG		1.63	351	eP	Pn	15 34 51.6	-1.4
SOKI	Kika Raxquin	1.66	64	i P	Pn	15 34 54.8	+1.0
HUEH	Huehuetenango	1.85	49	eP	Pn	15 34 56.4	+0.1
HUEH				eS	Sn	15 35 19.3	-0.4
HUEH	Huehuetenango	1.85	49	i P	Pn	15 34 57.7	+1.3
HUEH	Huehuetenango	1.85	49	P	Pn	15 34 57.7	+1.3
HUEH	Huehuetenango	1.85	49	S	Sb	15 35 22.5	+0.8
ESSG	Sabana Grande	2.07	82	i P	Pb	15 35 01.0	-1.1
ESSG				i S	Sn	15 35 25.7	+0.9
QUIS	Sacapulas	2.15	56	i P	Pb	15 35 02.6	-1.0
CCIG	Comitan	2.31	20	eP	Pn	15 35 04.4	+1.8
CCIG				eS	Sn	15 35 33.3	+2.2
PCG5	San Vicente Pa	2.49	87	i P	Pn	15 35 03.6	-1.4
PCG5				i P	Pb	15 35 03.7	-5.7
PCG5				i S	Sn	15 35 28.8	-6.7
APG	El Apazote	2.56	69	Pn	Pn	15 35 07.7	+1.6
	0.7nm,0.3s,baz=216,slow=16,SNR=48						
APG				Lg	Lg	15 35 33.8	
	1.7nm,0.3s,baz=229,slow=20,SNR=8.6						
APG	El Apazote	2.56	69	i P	Pn	15 35 07.4	+1.2
TGBT	Tuxtla Gutierr	2.67	357	eS	Sn	15 35 36.4	-3.4
TGIG		2.68	356	eP	Pn	15 35 07.8	+0.2
TGIG				eS	Sn	15 35 38.0	-1.9
FAME	Alcaldia de Sa	2.85	95	P	Pn	15 35 11.6	+1.7
FAME	Alcaldia de Sa	2.85	95	S	Sn	15 35 42.9	-1.3
NUBE	Las Nubes	3.07	93	i P	Pn	15 35 13.8	+0.7
NUBE	Las Nubes	3.07	93	P	Pn	15 35 14.0	+0.9
NUBE	Las Nubes	3.07	93	S	Sn	15 35 52.6	+2.7
CEVE	Cerro Verde	3.23	94	P	Pn	15 35 17.4	+2.1
CEVE	Cerro Verde	3.23	94	S	Sn	15 35 55.9	+2.1
UNIC	Universidad Ca	3.29	91	P	Pn	15 35 18.2	+2.2
JAYA	Jayaque - finc	3.42	97	P	Pn	15 35 19.6	+1.7
JAYA	Jayaque - finc	3.42	97	S	Sn	15 36 00.1	+1.7
MTO3	Montecristo	3.48	85	P	Pn	15 35 20.6	+1.8
MTO3	Montecristo	3.48	85	S	Sn	15 36 01.1	+1.0
HUIG	Huatulco	3.49	299	eP	Pn	15 35 16.8	-1.9
HUIG				eS	Sn	15 35 58.0	-1.9
CMIG	Matias Romero	3.52	328	Pn	Pn	15 35 19.8	+0.7
	4.1nm,0.3s,baz=128,slow=7.7,SNR=17						
CMIG				Lg	Lg	15 36 00.7	
	12nm,0.3s,baz=37,slow=23,SNR=8.4						
	10nm,0.3s						
CMIG	Matias Romero	3.52	328	eP	Pn	15 35 18.5	-0.6
CMIG				eS	Sn	15 35 58.6	-2.1
PMON	Piamonte	3.54	96	S	Sn	15 36 04.9	+3.5
TECO	Alcaldia de Te	4.08	97	P	Pn	15 35 27.1	+0.3
PETF	Flores	4.08	46	eP	Pn	15 35 28.0	+1.1
TUIG	Tuzandepetl	4.17	340	eP	Pn	15 35 29.3	+1.3
PEIG	Puerto Escondi	4.48	296	eP	Pn	15 35 32.2	-0.2
PEIG				eS	Sn	15 36 20.0	-4.5
NEUV	Arroyo Zacate	4.53	323	eP	Pn	15 35 32.5	-0.5
NEUV				eS	Sn	15 36 25.3	-0.4
VHO	Vista Hermosa	4.71	310	eS	Sn	15 36 29.9	-0.3
SCIG	Sabancuy	5.13	19	eP	Pn	15 35 42.9	+1.7
SCIG				eS	Sn	15 36 38.7	-1.7
YOIG	Yosondua	5.22	302	eP	Pn	15 35 43.2	+0.5
YOIG				eS	Sn	15 36 42.3	-0.8
PNIG	Pinotepa	5.50	295	eP	Pn	15 35 46.5	+0.1
PNIG				eS	Sn	15 36 46.2	-3.4
TXIG	Tlaxiaco	5.61	305	eP	Pn	15 35 49.7	+1.6
TXIG				eS	Sn	15 36 52.6	-0.1
TOIG	Toxpalan	5.62	316	eP	Pn	15 35 48.6	+0.6
TOIG				eS	Sn	15 36 50.1	-2.5
HLIG	Huajuapan de L	5.97	309	eP	Pn	15 35 56.7	+3.6
HLIG				eS	Sn	15 36 60.0	-1.5
TPIG	Tehuac#an	6.04	316	eS	Sn	15 37 03.8	+0.6
FTIG	Fresnillo de T	6.27	308	eP	Pn	15 35 59.9	+2.8
FTIG				eS	Sn	15 37 07.1	-1.6
MGIG	Malinaltepec	6.31	300	eP	Pn	15 35 59.8	+2.1
MGIG				eS	Sn	15 37 06.5	-3.3
JAUV	Jalcomulco	6.42	325	eP	Pn	15 35 56.6	-2.4
JAUV				eS	Sn	15 37 09.8	-2.4
TLIG	Tlapa	6.42	303	eS	Sn	15 37 11.5	-0.9
LVIG	Laguna Verde	6.51	330	eS	Sn	15 37 12.3	-2.2
CRIG	Cruz Grande	6.52	295	eP	Pn	15 35 58.6	-1.8
CRIG				eS	Sn	15 37 11.3	-3.4
DAIG	Los Arroyos	7.09	295	eP	Pn	15 36 03.9	-4.4
DAIG				eS	Sn	15 37 30.5	+1.7
PPCL	Tochimilco	7.25	312	eP	Pn	15 36 16.9	+6.2
PPCL				eS	Sn	15 37 28.3	-4.9
PPPT	Popocatepetl	7.30	312	eP	Pn	15 36 14.2	+2.7
PPPT				eS	Sn	15 37 27.7	-6.9
PBXN	Popocatepetl	7.34	313	eP	Pn	15 36 18.4	+6.3
PBXN				eS	Sn	15 37 34.1	-1.6
PPM	Popocatepetl	7.36	313	eP	Pn	15 36 13.6	+1.2
PPM				eS	Sn	15 37 36.6	+0.5
MEIG	Mezcala	7.47	302	eP	Pn	15 36 10.9	-2.6
MEIG				eS	Sn	15 37 36.3	-1.8
CXUV	Coxquihui	7.50	324	eP	Pn	15 36 14.1	+0.2
CXUV				eS	Sn	15 37 38.2	-0.7
YAIG	Yautepec	7.55	310	eP	Pn	15 36 16.2	+1.5
YAIG				eS	Sn	15 37 41.6	+1.3
TEIG	Tepich	7.55	36	Pn	Pn	15 36 05.3	-9.3
	baz=311,slow=24,SNR=3.2						
TEIG				Sn	Sn	15 37 14.6	-26
	baz=132,slow=24,SNR=1.7						
TEIG				Lg	Lg	15 37 39.2	
	baz=127,slow=20,SNR=2.1						
PLIG	Platanillo	7.62	305	eP	Pn	15 36 18.3	+2.8
CAIG	El Cayaco	7.65	294	eP	Pn	15 36 17.3	+1.5
JTS	Las Juntas de	8.67	115	Pn	Pn	15 36 42.4	+12
	0.6nm,0.3s,baz=287,slow=19,SNR=4.0						
JTS				Sn	Sn	15 38 27.2	+19
	0.4nm,0.3s,baz=306,slow=19,SNR=1.4						
	15nm,0.9s						
TXAR	Lajitas Array	18.13	329	P	Pn	15 38 36.0	-0.4
	0.2nm,0.8s,baz=150,slow=13,SNR=13						
ROSC	El Rosal	20.52	115	LR	LR	15 49 21.9	
	comp=Z,52nm,19.7s,baz=58,slow=43						
TKL	Tuckaleechee C	23.00	19	LR	LR	15 49 05.6	
	comp=Z,36nm,20.4s,baz=268,slow=41						
PDAR	Pinedale Array	31.97	337	P	P	15 40 50.8	+0.1
	0.2nm,0.6s,baz=186,slow=11,SNR=2.3						
	0.2nm,0.6s						
SADO	Sadowa	32.75	18	LR	LR	15 56 15.7	
	comp=Z,97nm,19.4s,baz=321,slow=42						
NVAR	Mina Array Bea	33.03	322	P	P	15 41 03.0	+2.9
	0.3nm,0.3s,baz=141,slow=6.0,SNR=6.1						
	0.3nm,0.3s						
SCHQ	Schefferville	45.46	21	LR	LR	16 00 54.2	
	comp=Z,34nm,20.5s,baz=192,slow=36						
YKA	Yellowknife Ar	50.73	347	P	P	15 43 24.1	+0.2
	1.2nm,0.7s,baz=157,slow=6.9,SNR=17						
	1.2nm,0.7s						
ILAR	Eielson Array	62.40	337	P	P	15 44 49.0	+1.9
	0.5nm,0.7s,baz=120,slow=6.8,SNR=5.7						
	0.5nm,0.7s						
CMAR	Chiang Mai Arr	145.60	340	PKhKP	PKPpre	15 54 04.8	
	0.4nm,0.3s,baz=340,slow=4.5,SNR=4.6						

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*VIE **27** 16:38:51.7±0.5,51°.49N×16°.06E,h0^{km},mb2.7/8,ml2.7/7, Error ellipse: s-maj=3.7km s-min=3.4km az=52.0 80 km NW of Wroclaw Suspected Mining induced.*

*IPEC **27** 16:38:51.0±0.2,51°.54N×16°.27E,h1^{km},ML2.5/6,Error ellipse: s-maj=2.8km s-min=1.4km az=74.0*

*PRU **27** 16:38:53.5,51°.49N×16°.12E,h0^{km}*

ISC 27 16:38:49.6±0.9,**51°.62N**±0°.03×**16°.12E**±0°.03,**h0**^{km},**n34**, σ**1**^{s}.**01**/58,**Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.79	172	ePg	Pg	16 39 04.9	+0.2
KSP				eSg	Sg	16 39 14.7	-0.2
CHVC	Chvalec	1.04	182	ePG	Pg	16 39 09.9	+0.4
CHVC				eSG	Sn	16 39 25.9	-0.8
	comp=Z,71nm,0.6s						
OSTC	Ostas	1.07	177	ePG	Pg	16 39 10.5	+0.4
UPC	Upice	1.12	183	ePG	Pg	16 39 11.4	+0.3
DPC	Dobruska-Polom	1.28	174	ePG	Pg	16 39 14.0	-0.2
PIVO	Bartosovice	1.47	169	ePg	Pn	16 39 16.8	-0.6
	baz=353						
PIVO				eSg	Sg	16 39 34.0	-2.7
	87nm,0.4s,baz=353						
PVCC	Panska Ves	1.47	222	ePG	Pb	16 39 18.3	+0.5
RYBC	Ceska Rybna	1.82	181	ePn	Pn	16 39 22.2	0.0
	baz=4.1						
RYBC				eSg	Sn	16 39 45.5	-0.4
	26nm,0.1s,baz=4.1						
PRU	Pruhonice	1.92	212	ePG	Pb	16 39 25.4	-0.1
PRU				eSG	Sg	16 39 50.9	-0.4
CLL	Collm	1.98	262	i Pn	Pn	16 39 24.5	+0.2
	comp=Z,9.0nm,0.5s						
CLL				i Pg	Pg	16 39 27.9	+0.4
CLL				i x	x	16 39 31.9	
CLL				i x	x	16 39 43.4	
CLL				i Sg	Sg	16 39 55.6	+2.6
	comp=Z,29nm,0.5s						
HSKC	Hora Svate Kat	1.98	240	ePG	Pg	16 39 28.1	+0.6
STEB	Steborice	1.99	148	ePG	Pb	16 39 27.1	+0.4
	comp=Z,90nm,0.6s						
STEB				eSG	Sg	16 39 53.3	-0.3
MORC	Moravsky Berou	2.06	153	ePN	Pn	16 39 24.9	-0.6
MORC				eSG	Sn	16 39 51.9	0.0
MORC	Moravsky Berou	2.06	153	ePn	Pn	16 39 24.8	-0.7
	baz=336						
MORC				eSg	Sn	16 39 51.8	-0.1
	comp=Z,39nm,0.7s,baz=336						
OKC	Ostrava-Krasne	2.21	143	ePG	Pg	16 39 31.8	-0.1
VRAC	Vranov	2.34	172	ePn	Pn	16 39 29.3	0.0
	baz=355						
VRAC				eSg	Sb	16 40 01.0	-1.1
	comp=Z,31nm,0.5s,baz=355						
TREC	Trest	2.37	190	ePG	Pb	16 39 33.5	+0.4
ZVC	Zvikov	2.51	210	ePG	Pg	16 39 36.8	-0.9
MAUC	Maruska	2.51	154	ePG	Pg	16 39 37.1	-0.6
	comp=Z,76nm,0.8s						
MAUC				eSG	Sg	16 40 10.1	-0.2
KRUC	Moravsky	2.57	176	ePn	Pn	16 39 32.9	+0.4
	baz=358						
KRUC				eSg	Sb	16 40 08.8	+0.1
	comp=Z,14nm,0.5s,baz=358						
OJC	Ojcow	2.72	120	ePg	Pg	16 39 41.4	-0.4
OJC				eSg	Sg	16 40 16.9	0.0
KHC	Kasperske Hory	2.98	214	ePG	Pb	16 39 45.1	+1.5
KHC				eSG	Sg	16 40 23.9	-1.4
LANS	Liptovska Anna	3.27	138	ePG	Pg	16 39 52.2	-0.2
MODS	Modra-Piesok	3.34	167	ePG	Pg	16 39 53.3	-0.3
MODS				eSG	Sg	16 40 38.2	+1.4
BSD	Bornholm Skovb	3.57	349	i P	Pn	16 39 45.0	-1.2
BSD				i S	Sn	16 40 28.1	-1.0
BSD				IAML		16 40 33.4	
	comp=Z,0.5nm,0.1s						
CONA	Conrad Observa	3.70	183	i Pn	Pn	16 39 48.7	+0.6
	comp=Z,0.3nm,0.2s						
CONA				Sg	Sg	16 40 46.6	-2.0
	comp=Z,3.7nm,0.4s						
STHS	Stebnicka Huta	3.95	122	ePN	Pn	16 39 52.5	+1.1
STHS				ePG	Pg	16 40 06.1	+0.9
STHS				eSG	Sg	16 41 00.1	+3.7
MOA	Molln	3.96	198	i Pn	Pn	16 39 52.2	+0.5
	comp=Z,3.3nm,0.3s,SNR=14						
MOA				Sg	Sg	16 40 55.7	-1.3
	comp=Z,11nm,0.6s						
BIOA	Bad Ischl, Aus	4.25	203	i Pn	Pn	16 39 56.3	+0.6
	comp=Z,2.0nm,0.3s						
BIOA				Sg	Sg	16 41 07.2	+1.0
	comp=Z,12nm,0.6s						
LUNU	Lund	4.32	339	i P	Pn	16 39 55.5	-1.0
LUNU				i S	Sn	16 40 46.7	-0.8
ARSA	Arzberg	4.39	185	ePn	Pn	16 39 57.9	+0.3
	comp=Z,0.7nm,0.3s						
ARSA				Sg	Sg	16 41 11.8	+1.1
	comp=Z,7.7nm,0.7s						
DEL	Delary	5.03	346	i	Pn	16 40 05.7	-0.7
MYKA	Terra Mystica	5.26	199	Sg	Sg	16 41 38.2	-0.2
	comp=Z,4.9nm,0.6s						
ABTA	Abfaltersbach	5.42	207	ePn	Pn	16 40 12.6	+0.8
	comp=Z,0.7nm,0.4s						

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*IDC **27** 16:48:31.5±2.7,2°.01S×99°.58E,h0^{km},mb3.5/6, mbtmp3.5/6,MS2.7/1,Error ellipse: s-maj=128.0km s-min=21.3km az=55.0*

*DJA **27** 16:48:38.3±0.5,2°S±2°×10°0E±°,h13^{km}±5^{km},M4.0/22, mB5.4/2,mb4.0/9,MLv4.0/22,Mw(mB)4.8/2*

ISC 27 16:48:38.7±0.8,**1°.69S**±0°.05×**99°.91E**±0°.05,**h33**^{km},**n46**, σ**1**^{s}.**52**/35,**mb3.7**/5,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SISI	Saibi	0.89	294	P	Pb	16 48 55.6	-0.1
SISI				S	Sb	16 49 08.0	+0.7
PDSI	Padang	0.95	36	P	Pn	16 48 56.3	+0.6
PDSI				S	Sn	16 49 08.6	+0.4
PPSI	Pulau Pagai	1.08	174	P	Pb	16 48 58.5	-0.3
PPI	Padang Panjang	1.31	22	P	Pb	16 49 02.1	-0.8
KRJI	Kerinci	1.61	105	P	Pb	16 49 07.2	-0.6
PBSI	Pulau Batu	2.29	315	P	Pn	16 49 15.4	+1.2
BKNI	Bangkinang	2.30	30	P	Pn	16 49 16.3	+2.0
MNSI	Mandailing Nat	2.49	352	P	Pn	16 49 18.3	+1.4
MASI	Maura Aman, Be	2.74	122	P	Pn	16 49 22.4	+1.9
UBSI	University, Be	3.14	131	P	Pn	16 49 27.5	+1.7
KSI	Kapahiang	3.32	126	P	Pn	16 49 30.0	+1.6
GSI	Gunungsitoli	3.77	322	P	Pn	16 49 35.0	+0.4
MNAI	Manna	4.04	131	P	Pn	16 49 39.9	+1.6
PSI	Prapat	4.56	348	LR	LR	16 51 47.9	
	comp=Z,104nm,21.9s,baz=268,slow=42						
PSI	Prapat	4.56	348	P	Pn	16 49 44.9	-0.7
DSRI	Dabo	4.82	76	P	Pn	16 49 50.7	+1.7
MDSI	Maura Dua	5.09	123	P	Pn	16 49 55.1	+2.4
	0.1nm10nm,0.7s						
MYKOM	Kota Tinggi	5.24	49	P	Pn	16 49 56.5	+1.7
	0.1nm25nm,1.3s						
TPRI	Tanjung Pinang	5.29	61	P	Pn	16 49 56.8	+1.3
	0.3nm3µm36nm,0.6s						
LWLI	Liwa	5.30	129	P	Pn	16 49 57.5	+1.7
KCSI	Kotacane, Aceh	5.59	338	P	Pn	16 50 00.7	+1.0
TPTI		5.62	331	P	Pn	16 50 01.9	+1.9
	0.1nm14nm,1.6s						
KLSI		5.67	122	P	Pn	16 50 02.7	+2.1
	0.1nm13nm,1.2s						
KASI	Kota Agung	5.96	130	P	Pn	16 50 05.8	+1.1
	0.1nm12nm,0.9s						
IPM	Ipoh	6.22	10	P	Pn	16 50 11.2	+2.9
	0.1nm12nm,1.1s						
KULM	Kulim	6.97	6	P	Pn	16 50 20.9	+2.4
	0.0nm6.9nm,1.1s						
TPI	Tanjungpandan	7.81	98	P	Pn	16 50 32.1	+1.9
CMAR	Chiang Mai Arr	20.04	357	P	P	16 53 10.1	+1.0
	0.2nm,0.4s,baz=171,slow=10,SNR=1.6						
	0.2nm,0.4s						
H08S2	Diego Garcia H	27.94	257	T	T	17 23 03.4	
	baz=79,slow=74						
H08S3	Diego Garcia H	27.95	257	T	T	17 22 50.0	
	baz=79,slow=74						
H08S1	Diego Carcia H	27.96	257	T	T	17 23 03.2	
	baz=79						
H01W3	Cape Leeuwin H	35.59	160	T	T	17 33 37.5	
	baz=334						
H01W2	Cape Leeuwin H	35.60	160	T	T	17 33 34.1	
	baz=334						
H01W1	Cape Leeuwin H	35.61	160	T	T	17 33 36.1	
	baz=334						
WRA	Warramunga Arr	38.23	121	P	P	16 55 53.9	-2.1
	0.4nm,0.9s,baz=299,slow=9.4,SNR=5.4						
	0.4nm,0.9s						
ASAR	Alice Springs	39.51	126	P	P	16 56 05.5	-1.2
	0.2nm,0.5s,baz=300,slow=9.0,SNR=11						
	0.2nm,0.5s						
MKAR	Makanchi Array	50.70	344	P	P	16 57 34.6	-0.5
	0.5nm,0.6s,baz=156,slow=8.8,SNR=9.1						
	0.5nm,0.6s						
ZALV	Zalesovo Beam	56.84	349	P	P	16 58 19.0	-0.9
	0.4nm,0.3s,baz=157,slow=7.8,SNR=2.9						
	0.4nm,0.3s						
H04N2	CROZET ISLANDS	60.99	216	T	T	18 04 30.6	
	baz=58,slow=75,SNR=163						
H04N1	CROZET ISLANDS	61.00	216	T	T	18 04 31.0	
	baz=58,slow=75,SNR=150						
H04N3	CROZET ISLANDS	61.01	216	T	T	18 04 29.7	
	baz=58,slow=75,SNR=142						
H04S1	CROZET ISLANDS	61.28	216	T	T	18 04 47.2	
	baz=57,slow=75,SNR=6.6						
H04S3	CROZET ISLANDS	61.30	216	T	T	18 04 50.1	
	baz=57,slow=75,SNR=13						
H04S2	CROZET ISLANDS	61.30	216	T	T	18 04 50.8	
	baz=57,slow=75,SNR=4.6						
ARCES	ARCESS Array B	86.15	340	P	P	17 01 15.3	-0.9
	2.7nm,0.9s,baz=106,slow=3.3,SNR=1.7						
	2.7nm,0.9s						
TXAR	Lajitas Array	144.51	37	PKP	PKPab	17 08 10.9	0.0
	0.2nm,0.6s,baz=340,slow=2.3,SNR=1.9						

DJA 27 16:50:25.7±0.5,**10°S**±6°×**11°9E**±°,**h46**^{km}±8^{km},**M3.4**/10, **mb4.1**/3,**MLv3.0**/10,**Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	Waikabubak, Su	0.19	118	P	Pn	16 50 34.5	+0.9
WBSI				S	Sn	16 50 41.7	+2.5
WSI	Waingapu	1.07	96	P	Pn	16 50 44.3	0.0
WSI				S	Sn	16 50 58.4	+0.4
LBFI	Labuhan Bajo,	1.25	32	P	Pn	16 50 46.7	-0.1
DBNI	Kabupaten Domp	1.37	319	P	Pn	16 50 48.6	+0.1
PLAI	Plampang	1.60	297	P	Pn	16 50 51.5	0.0
TWSI	Taliwang, Sumb	2.44	289	P	Pn	16 51 03.9	+0.7
EDFI	Ende, Flores	2.57	72	P	Pn	16 51 04.9	0.0
BSSI	Bau Bau, Buton	3.61	20	P	Pn	16 51 19.4	+0.2
BKSI	Bulukumba	4.29	12	P	Pn	16 51 28.5	-0.1
JAGI	Jajag, Banyuwa	5.12	282	P	Pn	16 51 40.2	+0.3
	0.1nm18nm,1.6s						
GMJI	Gumukmas	5.85	282	P	Pn	16 51 49.0	-0.9
	26nm,1.1s						
KKSI	Kolaka, Sulawe	5.86	24	P	Pn	16 51 49.7	-0.4

IDC 27 17:15:49.2±11.0, 6°.14S×11°.26W, h0^{km}, mb3.7/3, mbtmp3.7/3, MS3.3/4, Error ellipse: s-maj=436.3km s-min=120.1km az=144.0, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	3.61	242	T	T	17 20 17.5	
	baz=62,slow=74,SNR=1133						
H10N1	ASCENSION HYDR	3.62	242	T	T	17 20 17.2	
	baz=62,slow=74,SNR=807						
H10N3	ASCENSION HYDR	3.63	242	T	T	17 20 18.9	
	baz=62,slow=74,SNR=1005						
H10S2	ASCENSION HYDR	4.37	230	T	T	17 21 15.1	
	baz=169,slow=74,SNR=323						
H10S3	ASCENSION HYDR	4.38	230	T	T	17 21 15.8	
	baz=51,slow=74,SNR=226						
DBIC	Dimbokro	14.24	27	LR	LR	17 23 00.5	
	comp=Z,58nm,19.3s,baz=245,slow=30						
TORD	Torodi Ar. Bea	23.08	34	P	P	17 20 56.7	0.0
	3.2nm,1.3s,baz=216,slow=10,SNR=6.0						
	3.2nm,1.3s						
TSUM	Tsumeb	30.93	117	LR	LR	17 33 22.9	
	comp=Z,22nm,19.0s,baz=12,slow=34						
MBAR	Mbarara	42.27	84	LR	LR	17 40 01.6	
	comp=Z,76nm,18.1s,baz=230,slow=34						
GERES	GERESS Array B	58.95	19	P	P	17 25 50.4	0.0
	1.1nm,1.0s,baz=210,slow=5.7,SNR=7.3						
	1.1nm,1.0s						
AKASG	Malin Array Be	66.49	27	P	P	17 26 40.5	0.0
	0.5nm,0.6s,baz=230,slow=7.0,SNR=1.3						
	0.5nm,0.6s						
TXAR	Lajitas Array	95.06	299	LR	LR	18 09 59.8	
	comp=Z,41nm,18.2s,baz=322,slow=34						

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*SOME **27** 17:55:37.2, 42°.95N×79°.88E, h20^{km}*
*NNC **27** 17:55:38.8±0.5, 43°.00N×79°.71E, h0^{km}, mb3.6, mpv2.4, Error ellipse: s-maj=3.4km s-min=2.2km az=108.0*
ISC 27 17:55:37.6±2.9, 42°.9N±0°.1×79°.7E±0°.1, h7^{km}±10^{km}, n10, σ0^{s}.61/20, 1C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	Shalkode	0.28	330	P	Pg	17 55 42.9	-0.3
	22nm,0.1s						
SHLS				S	Sg	17 55 47.1	+0.3
	28nm,0.2s						
SHLS	Shalkode	0.28	330	*e*P	Pg	17 55 42.9	-0.3
	22nm,0.1s						
SHLS				*e*S	Sg	17 55 47.1	+0.3
	28nm,0.2s						
PDGK	Podgornoye	0.43	344	P	Pg	17 55 46.1	+0.1
	0.8nm,0.4s						
PDGK				⇓S	Sg	17 55 51.5	-0.2
	1.3nm,0.3s						
UZB	Uzynbulak	0.52	297	P	Pb	17 55 49.2	+0.1
	2.2nm,0.1s						
UZB				S	Sb	17 55 57.8	+1.0
	5.5nm,0.1s						
UZB	Uzynbulak	0.52	297	*e*P	Pb	17 55 49.2	+0.1
	2.2nm,0.1s						
UZB				*e*S	Sb	17 55 57.9	+1.0
	5.5nm,0.1s						
KPKS	Kokpek	0.90	308	P	Pb	17 55 55.6	+0.1
	0.3nm,0.2s						
KPKS				S	Sn	17 56 08.8	-1.2
	13nm,0.3s						
KPKS	Kokpek	0.90	308	*e*P	Pb	17 55 55.6	+0.1
	0.3nm,0.2s						
KPKS				*e*S	Sn	17 56 08.8	-1.2
	13nm,0.3s						
SATY	Saty	0.93	279	P	Pn	17 55 57.1	-0.1
	0.6nm,0.1s						
SATY				S	Sn	17 56 11.4	+0.6
	4.6nm,0.1s						
KNOS	Konyrlen	1.48	347	P	Pn	17 56 05.0	+0.1
	0.4nm,0.1s						
KNOS				S	Sb	17 56 24.9	+0.3
	2.4nm,0.1s						
KNDC	Almaty	1.99	280	⇑Pn	Pb	17 56 14.2	0.0
	5.7nm,0.3s						
KNDC				⇓Sn	Sg	17 56 40.9	-0.7
	3.8nm,0.5s						

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*UPP **27** 18:00:17.3±0.1, 67°.05N×20°.97E, h0^{km}, ML2.0, Suspected explosion*
*IDC **27** 18:00:18.7±0.8, 67°.04N×21°.15E, h0^{km}, mbtmp3.4/4, ML1.6/4, Error ellipse: s-maj=16.7km s-min=7.3km az=114.0*
ISC 27 18:00:17.2±0.8, 67°.04N±0°.03×20°.93E±0°.03, h0^{km}, n20, σ0^{s}.97/25, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	Dundret	0.17	300	P	Pg	18 00 20.9	+0.6
DUNU				S	Sg	18 00 23.7	+1.2
MASU	Masugnsbyn	0.59	44	P	Pg	18 00 28.4	-0.1
ERTU	Ertsjaerv	0.70	134	P	Pg	18 00 30.4	-0.1
PAJU	Pajala	0.85	90	P	Pg	18 00 33.0	-0.5
HARU	Harads	0.88	179	P	Pg	18 00 34.0	0.0
RATU	Laukkuluspa	0.94	327	P	Pg	18 00 34.7	-0.6
KUA	Kurravaara	0.95	346	P	Pg	18 00 34.6	-0.7
SALU	Saltoluokta	1.01	291	P	Pg	18 00 36.2	-0.2
LANU	Lannavaara	1.09	21	P	Pg	18 00 37.2	-0.9
NIKU	Nikkaluokta	1.11	320	P	Pg	18 00 37.8	-0.5
KOVU	Salmi	1.23	346	P	Pg	18 00 39.8	-0.8
KALU	Kalix	1.53	139	P	Pb	18 00 45.4	-1.0
SJUU	Sjulsmark	1.56	170	P	Pb	18 00 46.2	-0.7
KIF	Kilpisjarvi	1.98	359	*e*P	Pb	18 00 53.7	-0.3
KTK1	Kautokeino	2.16	23	*e*P	Pb	18 00 56.5	-0.6
ARCES	ARCESS Array B	3.03	32	Pn	Pn	18 01 06.8	+0.5
	0.1nm,0.3s,baz=213,slow=13,SNR=19						
ARCES				Sn	Sn	18 01 44.2	+1.0
	0.4nm,0.3s,baz=215,slow=13,SNR=5.4						
FINES	FINESS Array B	6.05	156	Pn	Pn	18 01 49.0	+1.4
	0.1nm,0.3s,baz=348,slow=12,SNR=6.3						
FINES				Sn	Sn	18 02 58.8	+1.3
	0.2nm,0.3s,baz=343,slow=23,SNR=1.6						
FINES				Lg	Lg	18 03 22.6	
	0.2nm,0.3s,baz=336,slow=29,SNR=1.2						
	1.5nm,0.9s						
NOA	NORSAR Array B	7.37	220	Pn	Pn	18 02 06.1	+0.2
	baz=35,slow=10,SNR=1.7						
NOA				Sn	Sn	18 03 27.7	-2.5
	baz=37,slow=24,SNR=1.7						
NOA				Lg	Lg	18 04 11.6	
	baz=26,slow=21,SNR=2.0						
	0.8nm,1.0s						
HFS	Hagfors	7.64	208	Pn	Pn	18 02 09.8	+0.2
	0.1nm,0.3s,baz=33,slow=14,SNR=6.7						
HFS				Sn	Sn	18 03 35.3	-1.4
	0.1nm,0.3s,baz=34,slow=19,SNR=2.1						
HFS				Lg	Lg	18 04 20.6	
	0.1nm,0.3s,baz=28,slow=31,SNR=1.2						
	2.6nm,0.9s						
SPITS	Spitsbergen Ar	11.28	355	Pn	Pn	18 03 00.2	+1.0
	5.9nm,1.0s,baz=157,slow=17,SNR=1.2						

IDC 27 18:00:27.6±0.8, 67°.01N×21°.15E, h0^{km}, mbtmp3.2/5, ML2.0/5, Error ellipse: s-maj=14.2km s-min=7.6km az=107.0, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARCES	ARCESS Array B	3.01	31	Pn	Pn	18 01 15.7	-0.8
	0.3nm,0.3s,baz=217,slow=14,SNR=1.9						
ARCES				Sn	Sn	18 01 52.6	-0.6
	0.7nm,0.3s,baz=212,slow=23,SNR=9.6						
	1.2nm,0.2s						
FINES	FINESS Array B	5.99	157	Pn	Pn	18 01 57.7	+0.3
	0.1nm,0.3s,baz=348,slow=13,SNR=11						
FINES				Sn	Sn	18 03 07.7	+1.2
	0.2nm,0.3s,baz=336,slow=22,SNR=5.7						
FINES				Lg	Lg	18 03 34.9	
	0.2nm,0.3s,baz=342,slow=30,SNR=1.4						
	1.6nm,0.8s						
NOA	NORSAR Array B	7.41	221	Pn	Pn	18 02 14.7	-2.2
	baz=34,slow=10,SNR=5.9						
NOA				Sn	Sn	18 03 36.5	-5.0
	baz=23,slow=18,SNR=4.4						
	0.5nm,0.8s						
HFS	Hagfors	7.66	209	Pn	Pn	18 02 18.4	-1.9
	0.1nm,0.3s,baz=25,slow=13,SNR=9.1						
HFS				Sn	Sn	18 03 43.9	-3.8
	0.2nm,0.3s,baz=33,slow=24,SNR=6.6						
	1.3nm,0.7s						
SPITS	Spitsbergen Ar	11.31	355	Pn	Pn	18 03 09.2	-1.0
	baz=161,slow=19						
	4.6nm,0.9s						

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*IDC **27** 18:04:46.0±2.7, 6°.38S×11°.09W, h0^{km}, mb4.0/7, mbtmp3.9/8, ML3.2/1, MS3.7/49, Error ellipse: s-maj=118.8km s-min=53.3km az=108.0*
*NEIC **27** 18:04:47.9±1.7, 6°.35S±0°.10×11°.03W±0°.05, h10^{km}±1^{km}, mb5.0/12, Error ellipse: s-maj=16.7km s-min=7.8km az=7.0*
*GCMT **27** 18:04:59.9±0.3, 6°.19S±0°.04×11°.45W±0°.03, h20^{km}±1^{km}, MW4.9/88, Moment Tensor Solution. s14,c15; s88,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.45±.23; M$_{\theta\theta}$1.31±.14; M$_{\phi\phi}$2.14±.14; M$_{r\theta}$0.23±.33; M$_{\theta\phi}$-1.00±.07; M$_{\phi r}$-0.04±.25; Best double couple: M$_0$3.13600×10^{16} NP1:φ$_s$149.00000°, δ44.00000°, λ-87.00000°. NP2: φ$_s$324.00000°, δ46.00000°, λ-93.00000°. Principal axes: T 2.8120, Plg1.0000°, Azm56.0000°; N 0.6490, Plg2.0000°, Azm326.0000°; P -3.4610, Plg87.0000°, Azm177.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 27 18:04:47.6±0.6, 6°.38S±0°.10×11°.0W±0°.1, h10^{km}, n76, σ1^{s}.03/28, mb4.6/16, MS3.8/48, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASCN	Ascension	3.68	245	Pn	Pn	18 05 44.2	-0.3
H10N1	ASCENSION HYDR	3.75	247	T	T	18 09 26.6	
	baz=62,slow=74,SNR=2539						
H10N2	ASCENSION HYDR	3.75	247	T	T	18 09 26.5	
	baz=62,slow=74,SNR=3418						
H10N3	ASCENSION HYDR	3.77	247	T	T	18 09 28.4	
	baz=62,slow=74,SNR=280						
H10S2	ASCENSION HYDR	4.43	234	T	T	18 10 24.0	
	baz=170,slow=74,SNR=763						
H10S3	ASCENSION HYDR	4.44	235	T	T	18 10 24.8	
	baz=50,slow=74,SNR=45						
SHEL	Horse Pasture	10.82	152	Pn	Pn	18 07 22.5	-0.2
DBIC	Dimbokro	14.34	25	Pn	Pn	18 08 11.1	+0.3
	0.1nm,0.3s,baz=215,slow=12,SNR=3.9						
DBIC				LR	LR	18 12 54.0	
	comp=Z,397nm,18.1s,baz=206,slow=34						
	2.2nm,0.9s						
DBIC	Dimbokro	14.34	25		Pn	18 08 10.4	-0.4
TORD	Torodi Ar. Bea	23.14	33	P	P	18 09 54.4	+0.2
	3.8nm,1.1s,baz=225,slow=8.0,SNR=12						
	3.8nm,1.1s						
TORD	Torodi Ar. Bea	23.14	33	P	P	18 09 52.9	-1.3
TSUM	Tsumeb	30.59	117	LR	LR	18 22 25.8	
	comp=Z,114nm,18.2s,baz=286,slow=35						
BDFB	Brasilia	37.42	253	LR	LR	18 24 50.3	
	comp=Z,145nm,20.0s,baz=80,slow=32						
SUR	Sutherland	39.33	135	LR	LR	18 25 58.6	
	comp=Z,44nm,19.3s,baz=327,slow=32						
LSZ	Lusaka	39.43	106	LR	LR	18 27 15.9	
	comp=Z,74nm,18.3s,baz=306,slow=34						
MDT	Midelt	39.45	8	LR	LR	18 28 18.1	
	comp=Z,244nm,18.1s,baz=190,slow=36						
LBTB	Lobatse	39.61	122	LR	LR	18 27 36.2	
	comp=Z,46nm,18.1s,baz=289,slow=34						
BOSA	Boshof	40.78	127	LR	LR	18 26 38.1	
	comp=Z,40nm,22.0s,baz=302,slow=32						
MBAR	Mbarara	42.03	84	LR	LR	18 29 11.8	
	comp=Z,370nm,19.1s,baz=254,slow=35						
MDP	Montagnes des	43.11	284	LR	LR	18 27 59.5	
	comp=Z,22nm,18.2s,baz=290,slow=32						
KEST	Kesra	46.05	23	LR	LR	18 33 14.4	
	comp=Z,268nm,19.3s,baz=243,slow=37						
ESDC	Sonseca Array	46.28	8	P	P	18 13 13.8	+0.4
	0.2nm,0.6s,baz=216,slow=6.3,SNR=1.8						
ESDC				LR	LR	18 33 21.4	
	comp=Z,65nm,18.6s,baz=192,slow=37						
	0.2nm,0.6s						
LODK	Lodwar	47.30	79	P	P	18 13 23.1	+1.2
CPUP	Villa Florida	48.35	240	LR	LR	18 32 17.1	
	comp=Z,100nm,18.1s,baz=76,slow=34						
VAE	Valguarnera	49.66	27	LR	LR	18 34 39.8	
	comp=Z,176nm,18.9s,baz=214,slow=36						
BOAV	Boa Vista	50.20	278	P	P	18 13 44.7	+0.5
BOAV				IAmb	IAmb	18 13 55.5	
	comp=Z,13nm,1.1s						
HOPE	Hope Point	52.02	199	P	P	18 13 58.5	+1.4
INTR	Introdacqua	53.26	23	P	P	18 14 06.5	-0.1
INTR				IAmb	IAmb	18 15 41.5	
	comp=Z,36nm,1.9s						
PCRV	Puerto La Cruz	55.89	287	LR	LR	18 36 27.5	
	comp=Z,13nm,20.1s,slow=34						
DAVOX	Davos/Dischmat	56.08	17	P	P	18 14 27.2	+0.1
	comp=Z,7.2nm,1.2s,baz=190,slow=6.1,SNR=4.9						
DAVOX				LR	LR	18 38 35.7	
	comp=Z,160nm,19.7s,baz=263,slow=36						
	comp=Z,7.2nm,1.2s						
FETA	Feichten	56.55	18	*e*P	P	18 14 31.1	+0.7
	comp=Z,5.7nm,1.1s						
LPAZ	La Paz	56.72	255	LR	LR	18 38 31.6	
	comp=Z,50nm,18.6s,baz=98,slow=36						
EIL	Elat	56.83	48	LR	LR	18 39 55.2	
	comp=Z,111nm,18.0s,baz=184,slow=37						
SQTA	Sankt Quirin	56.87	18	*e*P	P	18 14 33.7	+1.0
	comp=Z,6.9nm,0.9s						
WTTA	Wattenberg	57.05	18	*e*P	P	18 14 35.1	+1.1
	comp=Z,11nm,1.3s						
WATA	Walderalm	57.09	18	*e*P	P	18 14 35.4	+1.2
	comp=Z,3.1nm,0.7s						
MMAI	Mount Meron Ar	58.94	45	LR	LR	18 41 15.3	
	comp=Z,33nm,18.8s,baz=232,slow=37						
CONA	Conrad Observa	59.03	21	*e*P	P	18 14 48.1	+0.3
	comp=Z,4.3nm,1.1s						
GEC2	GERESS Array S	59.09	19	P	P	18 14 46.8	-1.4
GEC2				IAmb	IAmb	18 15 05.6	
	comp=Z,15nm,1.4s						
GERES	GERESS Array B	59.09	19	P	P	18 14 47.8	-0.4
	comp=Z,2.1nm,1.0s,baz=191,slow=6.3,SNR=10						
GERES				LR	LR	18 41 56.7	
	comp=Z,106nm,18.1s,baz=265,slow=38						
	comp=Z,2.1nm,1.0s						
GRA1	Grafenberg Arr	59.09	17	P	P	18 14 46.2	-1.9
GRA1				IAmb	IAmb	18 14 49.2	
	comp=Z,42nm,1.9s						
ASF	Jabal al Asfar	59.56	47	LR	LR	18 41 05.3	
	comp=Z,82nm,19.4s,baz=220,slow=37						
SJG	San Juan	59.60	295	LR	LR	18 34 26.7	
	comp=Z,21nm,21.8s,baz=141,slow=30						
VRAC	Vranov	60.46	20	P	P	18 14 57.5	+0.1
	comp=Z,1.2nm,0.4s,baz=270,slow=4.0,SNR=3.3						
VRAC				LR	LR	18 41 59.3	
	comp=Z,101nm,19.1s,baz=235,slow=37						
	comp=Z,1.2nm,0.4s						
AC04	Llanos de Chal	60.69	241	P	P	18 14 58.4	-1.1
MLR	Muntele Rosu	61.29	29	LR	LR	18 42 14.3	
	comp=Z,91nm,20.8s,baz=246,slow=37						
SDV	Santo Domingo	61.34	284	LR	LR	18 40 32.9	
	comp=Z,20nm,18.1s,baz=64,slow=35						
BRTR	Keskin Array B	61.63	38	LR	LR	18 42 52.0	
	comp=Z,35nm,21.8s,baz=224,slow=37						
EKA	Eskdalemuir Ar	61.83	5	LR	LR	18 40 05.8	
	comp=Z,60nm,20.4s,baz=190,slow=34						
ROSC	El Rosal	64.19	278	LR	LR	18 43 05.1	
	comp=Z,75nm,18.7s,baz=209,slow=36						
NNA	Nana	65.12	260	LR	LR	18 42 03.3	
	comp=Z,102nm,21.7s,baz=99,slow=34						
SNAA	Sanae	65.42	177	LR	LR	18 37 37.4	
	comp=Z,55nm,19.4s,baz=357,slow=30						
KIEV	Kiev	66.57	27	P	P	18 15 37.2	-0.7
KIEV				IAmb	IAmb	18 15 49.7	
	comp=Z,52nm,2.0s						
AKASG	Malin Array Be	66.58	27	P	P	18 15 38.5	+0.5
	comp=Z,0.3nm,0.4s,baz=227,slow=7.4,SNR=5.7						
AKASG				LR	LR	18 46 18.6	
	comp=Z,66nm,19.3s,baz=241,slow=37						
	comp=Z,0.3nm,0.4s						
AKBB	Malin Array Si	66.58	27	P	P	18 15 37.6	-0.3
ATAH	Atahualpa	66.88	265	LR	LR	18 44 49.3	
	comp=Z,127nm,18.8s,baz=100,slow=36						
HFS	Hagfors	69.12	13	LR	LR	18 49 29.6	
	comp=Z,51nm,18.1s,baz=245,slow=39						
PMSA	Palmer Station	69.16	201	LR	LR	18 39 38.8	
	comp=Z,91nm,19.3s,baz=69,slow=30						
NOA	NORSAR Array B	69.42	11	LR	LR	18 46 23.8	
	comp=Z,29nm,20.1s,baz=280,slow=36						
BORG	Borgarnes	71.35	355	LR	LR	18 42 35.5	
	comp=Z,79nm,18.9s,baz=191,slow=32						
UOSS	Minazif	72.34	61	P	P	18 16 11.8	-2.4
UOSS				IAmb	IAmb	18 16 29.0	
	comp=Z,8.4nm,1.1s						
FINES	FINESS Array B	73.49	18	LR	LR	18 48 17.2	
	comp=Z,49nm,21.5s,baz=304,slow=36						
JTS	Las Juntas de	75.48	282	LR	LR	18 48 07.9	
	comp=Z,28nm,20.2s,baz=150,slow=34						
ARCES	ARCESS Array B	79.77	12	LR	LR	18 54 35.4	
	comp=Z,38nm,18.7s,baz=295,slow=38						
TKL	Tuckaleechee C	79.88	308	LR	LR	18 43 33.8	
	comp=Z,71nm,20.4s,baz=28,slow=29						
KIRV	Kirov	80.62	27	LR	LR	18 56 31.5	
	comp=Z,80nm,18.0s,baz=255,slow=38						
AKTO	Aktyubinsk	81.79	37	LR	LR	18 57 36.7	
	comp=Z,26nm,20.4s,baz=290,slow=39						
ARTI	Arti	84.09	32	P	P	18 17 20.1	+1.6
	comp=Z,1.1nm,0.5s,baz=252,slow=6.4,SNR=3.1						
ARTI				LR	LR	18 57 11.5	
	comp=Z,35nm,18.3s,baz=162,slow=37						
	comp=Z,1.1nm,0.5s						
ARTI	Arti	84.09	32	IAmb	IAmb	18 17 36.8	
	comp=Z,18nm,1.6s						
AAK	Ala-Archa	90.97	47	LR	LR	19 01 23.5	
	comp=Z,26nm,20.0s,baz=274,slow=37						
PALK	Pallekele	92.47	83	LR	LR	18 56 23.6	
	comp=Z,48nm,19.3s,baz=278,slow=34						
RPN	Rapa Nui	94.49	242	LR	LR	18 55 13.6	
	comp=Z,79nm,18.2s,baz=182,slow=32						
MKAR	Makanchi Array	96.86	44	LR	LR	19 06 50.2	
	comp=Z,26nm,18.2s,baz=330,slow=38						
ZALV	Zalesovo Beam	98.54	36	LR	LR	19 07 55.6	
	comp=Z,30nm,19.1s,baz=7.0,slow=38						
NRIK	Noril'sk	98.95	21	LR	LR	19 06 48.4	
	comp=Z,37nm,19.9s,baz=350,slow=38						
ASAR	Alice Springs	134.55	132	PKhKP	PKPpre	18 23 58.8	
	comp=Z,0.5nm,1.1s,baz=243,slow=3.0,SNR=2.5						
ASAR				PKP	PKPdf	18 24 06.4	-0.8
	comp=Z,0.5nm,1.1s,baz=251,slow=2.8,SNR=2.7						

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*THE **27** 18:07:52.0, 41°N±31°×2°0E±2°2, h1^{km}±22^{km}, M2.6/9, MLh2.6/9*
*TIR **27** 18:07:52.9, 41°.18N×19°.97E, h25^{km}±1^{km}, Ml2.6/8*
*BEO **27** 18:07:53.1±0.3, 41°.13N×20°.06E, h4^{km}±3^{km}, ML2.3/9*
*PDG **27** 18:07:53.0±0.5, 41°.14N×19°.90E, h14^{km}±1^{km}, ML2.8/11, Error ellipse: s-maj=0.8km s-min=1.6km az=0.0*
*SKO **27** 18:07:54.1, 41°.18N×19°.99E, h13^{km}, ML2.3*
ISC 27 18:07:53.3±0.9, 41°.14N±0°.02×19°.99E±0°.02, h11^{km}±7^{km}, n72, σ0^{s}.88/114, 14C-12D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.23	336	⇑Pg	Pg	18 07 58.3	+0.3
TIR				Sg	Sg	18 08 01.4	+0.1
TIR				AML	AML	18 08 01.8	
	5.9nm,0.2s						
TIR				AML	AML	18 08 02.1	
	4.7nm,0.2s						
TIR	Tirane	0.23	336	⇑*i*Pg	Pg	18 07 58.3	+0.3
TIR				*i* Sg	Sg	18 08 03.0	+1.7
OHR	Ohrid	0.61	92	*i* Pg	Pg	18 08 05.2	0.0
OHR				*i* Sg	Sb	18 08 15.1	+0.4
OHR				*e*Lg	Lg	18 08 17.5	
	comp=N,69nm,0.3s						
OHR				*e*Lg	Lg	18 08 19.6	
	comp=E,136nm,0.6s						
PHP	Peshkopia	0.64	32	Pg	Pg	18 08 04.4	-1.3
PHP				Sg	Sg	18 08 14.2	0.0
PHP				AML	AML	18 08 18.2	
	comp=E,1.5nm,0.3s						
PHP	Peshkopia	0.64	32	P	Pg	18 08 04.4	-1.3
PHP				S	Sg	18 08 13.6	-0.6
VLO	Vlora	0.77	209	Pg	Pb	18 08 08.8	+0.2
VLO				Sg	Sb	18 08 19.1	0.0
VLO				AML	AML	18 08 27.1	
	comp=E,7.1nm,0.4s						
VLO	Vlora	0.77	209	P	Pg	18 08 07.2	-0.9
KBN	Korca	0.79	130	Pg	Pg	18 08 06.4	-2.2
KBN				Sg	Sb	18 08 20.5	+0.6
KBN	Korca	0.79	130	P	Pb	18 08 09.8	+0.7
SDA	Shkodra	0.98	338	Pg	Pg	18 08 11.4	-0.8
SDA				Sg	Sg	18 08 24.3	-0.8
SDA				AML	AML	18 08 29.4	
	comp=E,0.6nm,0.2s						
ULC	Ulcinj	1.00	326	⇓*i*Pg	Pg	18 08 11.6	-0.9
ULC				*i* Sg	Sb	18 08 26.1	+0.4
NEST	Nestorio	1.08	132	Pn	Pg	18 08 13.8	-0.3
NEST				Sn	Sn	18 08 30.2	+0.7
NEST				AML	AML	18 08 35.4	
	comp=E,0.4nm,0.5s						
DRME	Dracevica, Mon	1.21	330	*e*Pg	Pb	18 08 15.7	-0.5
DRME				*e*Sg	Sb	18 08 30.9	-0.9
DRME	Dracevica, Mon	1.21	330	⇓*i*Pg	Pb	18 08 14.6	-1.6
DRME				*e*Sg	Sn	18 08 33.7	+1.2
PENT	Pentalofos	1.28	137	P	Pg	18 08 18.7	+0.7
SKO	Skopje	1.37	52	*i* Pg	Pn	18 08 18.6	+0.2
PDG	Podgorica	1.40	337	⇓Pg	Pb	18 08 19.1	-0.3
PDG				Sg	Sb	18 08 37.2	-0.2
PDG	Podgorica	1.40	337	⇓P	Pb	18 08 19.1	-0.3
PDG				⇓S	Sg	18 08 38.8	+0.3
PDG	Podgorica	1.40	337	*e*Pg	Pn	18 08 18.8	0.0
PDG				*e*Sg	Sg	18 08 39.2	+0.8
PDG	Podgorica	1.40	337	⇑*i*Pg	Pn	18 08 18.2	-0.6
PDG				*i* Sg	Sg	18 08 38.7	+0.3
BUM	Brajici-Budva	1.42	325	⇓*i*Pg	Pn	18 08 19.2	+0.1
BUM				*i* Sg	Sg	18 08 39.3	+0.3
KEK	Kerkira	1.43	186	P	Pn	18 08 19.0	-0.2
PVY	Plav	1.46	359	*e*Pg	Pn	18 08 19.8	+0.2
PVY				*e*Sg	Sg	18 08 40.2	+0.1
PVY	Plav	1.46	359	⇑*i*Pg	Pn	18 08 19.4	-0.2
PVY				*i* Sg	Sg	18 08 41.0	+0.9
KPRO	Kipourio	1.58	138	P	Pg	18 08 23.2	-0.4
KZN	Kozani	1.59	121	P	Pg	18 08 23.3	-0.4
CEME	Cevo	1.62	331	⇑*i*Pn	Pn	18 08 21.5	-0.3
CEME				*e*Sn	Sb	18 08 44.2	+0.5
IGT	Igoumenitsa	1.63	171	⇑Pn	Pb	18 08 22.7	-0.5
IGT				Sn	Sg	18 08 46.2	+0.7
IGT				AML	AML	18 08 52.8	
	comp=E,0.2nm,0.5s						
IGT	Igoumenitsa	1.63	171	P	Pb	18 08 22.5	-0.8
IGT	Igoumenitsa	1.63	171	*e*Pg	Pb	18 08 22.5	-0.8
IGT				*e*Sg	Sg	18 08 44.5	-1.0
HCY	Herceg Novi	1.72	320	⇓*i*Pn	Pn	18 08 23.2	0.0
HCY				*i* Sn	Sb	18 08 46.9	+0.4
BEY	Berane	1.73	358	*e*Pg	Pb	18 08 25.1	-0.1
BEY				*e*Sg	Sg	18 08 48.9	-0.1
IVA	Berane	1.73	358	*e*Pn	Pn	18 08 23.9	+0.5
IVA				*i* Sn	Sb	18 08 47.8	+0.8
NKME	Niksic	1.80	335	⇑*i*Pn	Pn	18 08 24.3	0.0
NKME				*e*Sn	Sb	18 08 48.9	0.0
PRMD	Pramanda	1.82	152	P	Pb	18 08 26.5	0.0
GRG	Griva	1.83	95	*e*Pn	Pn	18 08 25.3	+0.6
VAY	Valandovo	1.95	84	*e*Pn	Pn	18 08 27.7	+1.3
VAY				*e*Sn	Sn	18 08 52.5	+1.6
VAY				*e*Lg	Lg	18 09 00.5	
	comp=E,19nm,0.8s						
VAY				*e*Lg	Lg	18 09 05.7	
	comp=N,30nm,0.9s						
TREB	Trebinje	2.00	323	*e*Pg	Pb	18 08 29.1	-0.5
TREB				*e*Sg	Sg	18 08 56.7	-0.7
TETR	Tetrakomo, Epi	2.04	151	P	Pb	18 08 29.3	-1.2
BRY	Bratogost	2.07	329	⇓*i*Pn	Pn	18 08 27.5	-0.6
BRY				*i* Sn	Sb	18 08 55.5	-1.1
SJES	Sjenica	2.12	360	*e*Pn	Pn	18 08 29.6	+0.8
SJES				*e*Sn	Sn	18 08 56.5	+1.3
BARS	Barje	2.16	38	*e*Pn	Pn	18 08 29.4	+0.2
BARS	Barje	2.16	38	*e*Pn	Pn	18 08 29.5	+0.3
BARS				*e*Sn	Sn	18 08 56.2	+0.2
UPM	Unac-Piva	2.21	339	⇑*i*Pn	Pn	18 08 30.6	+0.5
UPM				*i* Sn	Sn	18 08 58.9	+1.3
SELS	Selova	2.24	22	*e*Pn	Pn	18 08 30.1	-0.3
SELS				*e*Sn	Sn	18 08 59.0	+1.0
NOCI	Noci	2.24	262	Pn	Pn	18 08 28.4	-2.0
NOCI				Sn	Sb	18 09 00.7	-0.9
NOCI				AML	AML	18 09 06.2	
	comp=N,0.2nm,0.4s						
BOSS	Bosilegrad	2.30	53	*e*Pn	Pn	18 08 29.6	-1.6
BOSS				*e*Sn	Sn	18 08 59.7	+0.2
THE	Thessaloniki	2.31	102	*e*Pn	Pn	18 08 31.8	+0.5
IVAS	Ivanjica	2.44	3	*e*Pn	Pn	18 08 32.6	-0.5
IVAS				*e*Sn	Sn	18 09 03.9	+1.0
KKB	Krupnik	2.46	72	*e*Pn	Pn	18 08 33.2	-0.1

RUDO	Rudo	2.52	350	*e*Pn	Pn	18 08 35.0	+0.8
RUDO				*e*Sn	Sn	18 09 06.8	+1.9
MATE	Matera	2.54	260	⇓P	Pn	18 08 35.7	+1.3
SRS	Serrai	2.72	89	*e*Pn	Pn	18 08 37.6	+0.7
BBLS	Lazi&#263i	2.76	351	*e*Pn	Pn	18 08 40.0	+2.5
BOVS	Bovan	2.80	26	⇓P	Pn	18 08 37.6	-0.4
BOVS				⇓S	Sn	18 09 11.3	-0.4
BOVS	Bovan	2.80	26	*e*Pn	Pn	18 08 38.1	+0.1
BOVS				*e*Sn	Sn	18 09 11.9	+0.2
GRUS	Gruza	2.80	11	*e*Pn	Pn	18 08 38.9	+0.9
ZAPS	Zavoj	2.90	42	*e*Pn	Pn	18 08 40.4	+1.0
ZAPS				*e*Sn	Sn	18 09 13.2	-1.1
DIVS	Divibare	2.96	0	*e*Pn	Pn	18 08 41.2	+1.0
DIVS				*e*Sn	Sn	18 09 18.3	+2.5
TRUS	Trudelj	3.10	6	*e*Pn	Pn	18 08 42.4	+0.3
ZAGS	Zajecar	3.15	31	*e*Pn	Pn	18 08 42.6	-0.1
ZAGS				*e*Sn	Sn	18 09 21.2	+1.0
TIP	Timpagrande	3.16	233	⇑P	Pn	18 08 44.0	+1.1
BLKB	Belogradchik	3.18	38	⇑S	Sn	18 09 20.5	-0.7
BORS2	Bor- Borsko je	3.31	26	*e*Pn	Pn	18 08 43.5	-1.5
TEKS	Tekeris	3.42	354	*e*Pn	Pn	18 08 48.1	+1.5
KUBS	Kucevo	3.50	20	*e*Pn	Pn	18 08 46.2	-1.4
MDVR	Moldovita	3.85	19	⇑P	Pn	18 08 52.2	-0.4
VRSS	Vrsac	4.10	13	*e*Pn	Pn	18 08 55.6	-0.3
HERR	Herculane	4.14	25	⇑P	Pn	18 08 56.1	-0.3
BZS	Buzias	4.63	14	⇑P	Pn	18 09 02.7	-0.5
GZR	Gura Zlata	4.71	25	⇑P	Pn	18 09 03.9	-0.5
SIRR	Siria	5.27	13	⇓P	Pn	18 09 11.7	-0.2

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*NNC **27** 18:15:46.6±7.3, 37°.82N×71°.73E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=57.4km s-min=45.6km az=170.0*

ISC 27 18:15:44.7±3.6, **37°.4N**±0°.2×**71°.7E**±0°.1, **h35**^{km}, **n11**, σ**1^s.32**/14, **3C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UCH	Uchtor	5.25	23	P	Pn	18 17 02.3	+1.3
	SNR=61						
EKS2	Erkin-Say	5.45	16	P	Pn	18 17 05.2	+1.6
	SNR=17						
AAK	Ala-Archa	5.61	22	P	Pn	18 17 07.2	+1.4
	SNR=42						
AAK	Ala-Archa	5.61	22	⇑P	Pn	18 17 06.6	+0.8
	3.9nm,0.4s						
AAK				S	Sn	18 18 08.5	-0.6
	16nm,0.8s						
KK31	Karatay Array	5.73	351	⇑P	Pn	18 17 09.3	+2.1
	4.8nm,0.2s,baz=160,slow=11,SNR=342						
KK31				S	Sn	18 18 12.3	+0.6
	37nm,0.5s,baz=175,slow=16,SNR=22						
KBK	Karagaybulak	5.77	25	P	Pn	18 17 09.6	+1.6
	SNR=5.9						
ULHL	Ulahol	5.93	35	P	Pn	18 17 10.2	-0.1
	SNR=9.0						
CHMS	Chumysh	6.02	22	P	Pn	18 17 12.1	+0.8
	SNR=15						
USP	Ospenovka	6.20	19	P	Pn	18 17 14.3	+0.6
	SNR=12						
TKM2	Tokmak 2	6.23	27	P	Pn	18 17 14.9	+0.6
	SNR=8.7						
AB31	Akbulak array	14.56	328	⇑P	Pn	18 19 07.0	-1.0
	0.8nm,0.3s,baz=173,slow=9.3,SNR=82						
AB31				⇓S	Sn	18 21 46.4	-1.6
	1.7nm,0.4s,baz=154,slow=22,SNR=13						

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*NEIC **27** 18:27:36.5±2.2, 15°.2S±0°.1×168°.0E±0°.1, h118^{km}±7^{km}, mb4.4/18, Error ellipse: s-maj=17.1km s-min=13.4km az=206.0*

*NOU **27** 18:27:38.6, 15°.26S×167°.44E, h118^{km}, MLv4.9/19, Vanuatu Islands*

*IDC **27** 18:27:39.5±9.4, 15°.44S×167°.88E, h145^{km}±69^{km}, mb3.7/4, mbtmp4.3/5, Error ellipse: s-maj=116.8km s-min=61.7km az=78.0*

ISC 27 18:27:37.6±1.4, **15°.30S**±0°.10×**167°.7E**±0°.2, **h118**^{km}, **n37**, σ**1^s.47**/42, **mb4.4**/12, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.54	254		Pn	18 27 56.5	+0.8
SANVU				Sn	Sn	18 28 09.5	+0.4
SANVU	Saraoutou	0.54	254	P	Pn	18 27 57.1	+1.5
SANVU	Saraoutou	0.54	254	S	Sn	18 28 09.9	+0.7
DVP	Devils Point	2.45	170	P	Pn	18 28 19.8	+3.1
DVP	Devils Point	2.45	170	S	Sn	18 28 50.4	+3.7
MARNC	Mare, Loyalty	6.16	178	Pn	Pn	18 29 05.1	-1.1
MARNC				Sn	Sn	18 30 11.8	-3.5
MARNC	Mare, Loyalty	6.16	178	P	Pn	18 29 06.1	-0.1
	0.4nm,0.9s						
YATNC	Mamie plateau,	6.77	187	P	Pn	18 29 15.8	+1.3
	40nm,0.7s						
DZM	Mont Dzumac	6.85	190	P	Pn	18 29 16.5	+0.9
	25nm,0.3s,baz=3.2,slow=18,SNR=68						
DZM				S	Sn	18 30 31.1	-1.1
	15nm,0.3s,baz=161,slow=23,SNR=15						
DZM	Mont Dzumac	6.85	190		Pn	18 29 16.1	+0.4
DZM				Sn	Sn	18 30 30.8	-1.4
DZM	Mont Dzumac	6.85	190	P	Pn	18 29 16.6	+0.9
	36nm,0.5s						
OUENC	Ouen Island, N	7.13	187	P	Pn	18 29 21.8	+2.4
	29nm,0.8s						
PINNC	Pines Island,	7.28	182	Pn	Pn	18 29 22.4	+1.0
PINNC				Sn	Sn	18 30 41.8	-0.7
PINNC	Pines Island,	7.28	182	P	Pn	18 29 23.1	+1.7
	70nm,2.6s						
EIDS	Eidsvold	18.54	235	P	P	18 31 46.6	+1.4
EIDS				IAmb	IAmb	18 31 48.0	
	comp=Z,9.8nm,0.7s						
CTA	Charters Tower	21.02	254	P	P	18 32 14.6	+2.5
	comp=Z,5.3nm,1.0s,baz=74,slow=15,SNR=2.0						
	comp=Z,5.3nm,1.0s						
RTZ	Ruatahuna	24.61	162	P	P	18 32 45.2	-1.8
RTZ				IAmb	IAmb	18 33 18.3	
	comp=Z,20nm,1.2s						
BKZ	Black Stump Fm	24.99	164	P	P	18 32 51.3	+0.8
BKZ				IAmb	IAmb	18 32 56.6	
	comp=Z,26nm,1.4s						
INKA	Innaminka	27.93	239	P	P	18 33 17.6	+0.7
MQZ	McQueen's Vall	28.62	173	P	P	18 33 22.8	0.0
STKA	Stephens Creek	28.98	231	P	P	18 33 26.9	+0.7
	comp=Z,0.9nm,0.3s,baz=47,slow=9.6,SNR=5.0						
	comp=Z,0.9nm,0.3s						
STKA	Stephens Creek	28.98	231	P	P	18 33 26.6	+0.4
PYZ	Puysegur Point	30.79	181	P	P	18 33 40.7	-1.3
WR8	Warramunga Arr	31.99	257	P	P	18 33 51.9	-1.0
WR8				IAmb	IAmb	18 34 18.3	
	comp=Z,13nm,1.4s						
WB0	Warramunga Arr	32.08	257	P	P	18 33 52.8	-0.9
WRA	Warramunga Arr	32.14	257	P	P	18 33 53.0	-1.2
	comp=Z,1.4nm,0.6s,baz=83,slow=7.8,SNR=14						
	comp=Z,1.4nm,0.6s						
AS31	Alice Springs	32.91	250	P	P	18 34 00.1	-0.8
AS31				IAmb	IAmb	18 34 01.3	
	comp=Z,2.4nm,0.4s						
ASAR	Alice Springs	32.91	250	P	P	18 34 00.3	-0.6
	comp=Z,3.2nm,0.4s,baz=77,slow=9.1,SNR=162						
	comp=Z,3.2nm,0.4s						
BBOO	Buckleboo	33.60	233	P	P	18 34 07.5	+0.7
BBOO				IAmb	IAmb	18 34 08.2	
	comp=Z,7.7nm,0.8s						
KNRA	Kununurra	37.53	264	P	P	18 34 39.9	-0.7
FORT	Forrest	39.41	240	P	P	18 34 56.0	-0.2
FORT				IAmb	IAmb	18 34 59.4	
	comp=Z,6.8nm,0.9s						
FITZ	Fitzroy Crossi	40.37	260	P	P	18 35 04.3	+0.1
PSA00	Pilbara Seismi	45.73	255	P	P	18 35 47.7	+0.3
PSA00	Pilbara Seismi	45.73	255	P	P	18 35 48.2	+0.8
PSA00				IAmb	IAmb	18 36 04.6	
	comp=Z,16nm,1.2s						
MBWA	Marble Bar	45.84	255	P	P	18 35 48.6	+0.3
MBWA				IAmb	IAmb	18 35 49.1	
	comp=Z,10nm,0.8s						
CM31	Chiang Mai Arr	75.60	294	P	P	18 39 08.8	-1.3
CM31				IAmb	IAmb	18 39 11.5	
	comp=Z,4.0nm,0.7s						
CMAR	Chiang Mai Arr	75.60	294	P	P	18 39 07.8	-2.3

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*IDC **27** 18:35:26.2±1.0, 23°.86N×126°.55E, h0^{km}, mb3.6/7, mbtmp3.7/8, ML3.7/1, MS3.1/2, Error ellipse: s-maj=34.9km s-min=19.7km az=73.0*

*JMA **27** 18:35:30.1±0.2, 24°N±2°×12°6E±°, h105^{km}±4^{km}, MV3.3/14, NEAR MIYAKOJIMA ISLAND*

ISC 27 18:35:27.8±2.1, **23°.91N**±0°.07×**126°.46E**±0°.05, **h12**^{km}±13^{km}, **n31**, σ**1^s.38**/39, **mb3.6**/7, **Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	Gusukube	1.28	312	*e*P	Pg	18 35 52.2	-0.2
JOGS				*e*S	Sn	18 36 08.6	0.0
JMJ2	Miyako jima3	1.32	309	P	Pb	18 35 52.5	0.0
JMJ2				S	Sb	18 36 09.2	-0.2
JMJ	Miyako jima 2	1.39	310	P	Pn	18 35 52.4	-0.6
JMJ	Miyako jima 2	1.39	310	P	Sn	18 36 09.7	-1.6
JIRB	Irabujima	1.49	308	*e*P	Pn	18 35 54.6	+0.3
JIRB				*e*S	Sn	18 36 13.1	-0.5
JIKM	Ikemajima	1.50	313	*e*P	Pn	18 35 54.9	+0.4
JIKM				*e*S	Sn	18 36 13.4	-0.4
JTJ	Tarama	1.76	295	*e*P	Pn	18 35 58.2	+0.2
JTJ				*e*S	Sn	18 36 18.4	-2.0
JISG	Ishigakijimahi	2.07	289	*e*P	Pn	18 36 02.4	0.0
JISG				*e*S	Sn	18 36 26.0	-2.1
JIJ	Ishigaki jima	2.16	283	*e*P	Pn	18 36 03.9	+0.3
JIJ				*e*S	Sn	18 36 28.5	-1.9
JKRS	Kuro-shima	2.26	279	*e*P	Pn	18 36 05.5	+0.5
JKRS				*e*S	Sn	18 36 31.2	-1.6
JKE	Kume jima 2	2.42	7	*e*P	Pn	18 36 06.7	-0.4
HATJ	Hateruma jima	2.43	274	*e*P	Pn	18 36 07.2	-0.1
HATJ				*e*S	Sn	18 36 33.6	-3.4
JJT3	Tamagusuku3	2.53	28	*e*P	Pn	18 36 08.1	-0.5
IRIF	Iriomote-Funau	2.53	280	*e*P	Pn	18 36 08.9	+0.3
IRIF				*e*S	Sn	18 36 37.4	-2.0
JOW	Kunigami	3.34	29	Sn	Sn	18 36 56.6	-2.8
	2.3nm,0.3s,baz=122,slow=29,SNR=1.1						
NACB	Ninganchiao	4.46	274	P	Pn	18 36 34.1	-1.0
YHNB	Yeheng	4.70	280	P	Pn	18 36 39.2	+0.6
JMZ	Minamidaito 2	4.73	65	P	Pn	18 36 35.2	-3.6
YULB	Yu-li	4.76	265	P	Pn	18 36 38.3	-1.1
SSLB	Suanglung	5.04	270	P	Pn	18 36 42.9	-0.3
TPUB	Ta-pu	5.38	265	P	Pn	18 36 47.9	0.0
JNU	Nakatsue	9.96	22	Pn	Pn	18 37 51.4	+0.6
	0.6nm,0.3s,baz=187,slow=5.4,SNR=8.3						
	5.2nm,0.8s						
KSRS	Korea Array	13.56	5	LR	LR	18 44 24.5	
	comp=Z,10nm,20.9s,baz=25,slow=40						
CMAR	Chiang Mai Arr	26.20	263	P	P	18 41 04.6	+2.1
	0.2nm,0.3s,baz=89,slow=9.0,SNR=2.1						
	0.2nm,0.3s						
MKAR	Makanchi Array	41.94	314	P	P	18 43 18.9	+0.5
	0.7nm,0.6s,baz=102,slow=9.1,SNR=9.6						
	0.7nm,0.6s						
ZALV	Zalesovo Beam	43.17	325	P	P	18 43 28.4	+0.2
	0.9nm,0.6s,baz=101,slow=7.5,SNR=4.5						
	0.9nm,0.6s						
WRA	Warramunga Arr	44.26	169	P	P	18 43 36.7	-0.6
	1.1nm,0.7s,baz=340,slow=7.0,SNR=7.2						
	1.1nm,0.7s						
ASAR	Alice Springs	47.84	171	P	P	18 44 05.3	-0.2
	0.4nm,0.6s,baz=347,slow=8.5,SNR=9.5						
	0.4nm,0.6s						
BVAR	Borovoye Array	50.97	320	P	P	18 44 30.4	+1.3
	0.4nm,0.5s,baz=102,slow=9.5,SNR=4.2						
	0.4nm,0.5s						
KDAK	Kodiak Island	65.33	36	LR	LR	19 18 01.9	
	comp=Z,90nm,18.0s,baz=143,slow=39						
YKA	Yellowknife Ar	81.29	24	P	P	18 47 44.8	+1.1
	0.3nm,0.9s,baz=311,slow=6.1,SNR=4.5						
	0.3nm,0.9s						

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*SJA **27** 18:50:41.8±1.9, 23°.28S×69°.53W, h105^{km}, ML4.2, MW4.1*

*IDC **27** 18:50:43.6±0.6, 23°.32S×69°.18W, h83^{km}±4^{km}, mb4.0/11, mbtmp4.2/16, MS3.0/1, Error ellipse: s-maj=18.7km s-min=14.3km az=64.0*

*GUC **27** 18:50:43.1±0.9, 23°.29S×69°.36W, h89^{km}±5^{km}, ML4.4*

*NEIC **27** 18:50:44.4, 23°.30S×69°.38W, h84^{km}*

*NEIC **27** 18:50:44.3±1.7, 23°.30S±0°.03×69°.38W±0°.04, h84^{km}±4^{km}, mb4.4/60, Mwr4.2/40, Mwr4.5(GUC), Error ellipse: s-maj=5.2km s-min=3.8km az=78.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-2.24; $M_{\theta\theta}$0.42; $M_{\phi\phi}$1.82; $M_{r\theta}$-0.48; $M_{\theta\phi}$-1.46; $M_{\phi r}$-0.51; Fault plane solution: $M_0$2.62000×10^{15} NP1:ϕ_s129.70000°, δ46.06000°, λ-116.69000°. NP2:ϕ_s345.62000°, δ49.96000°, λ-65.01000°. Principal axes: T 2.7404, Plg2.0000°, Azm58.0000°; N -0.2632, Plg19.0000°, Azm149.0000°; P -2.4772, Plg71.0000°, Azm322.0000°;*

*VAO **27** 18:50:54.2±0.7, 22°.79S×68°.47W, h119^{km}±6^{km}, mb4.4, Presumed earthquake*

ISC 27 18:50:42.8±0.5, **23°.36S**±0°.03×**69°.35W**±0°.03, **h78**^{km}±4^{km}, **n205**, σ**1^s.58**/214, **mb4.4**/30, **8C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB06	IPOC Station P	0.68	342		Pn	18 50 59.3	+1.1
PB06				Sn	Sn	18 51 10.8	+1.1
PB06	IPOC Station P	0.68	342	⇑*i*P	Pn	18 50 59.4	+1.1
PB06				*e*S	Sn	18 51 11.2	+1.5
PB06				IAML		18 51 12.1	
	comp=N,25µm,0.1s						
PB06	IPOC Station P	0.68	342	*i* P	Pn	18 50 58.7	+0.5
PB06				*e*S	Sn	18 51 11.4	+1.7
PB06				IAML		18 51 11.8	
	comp=Z,7µm,0.2s						
PB05	IPOC Station P	0.93	302		Pn	18 51 02.3	+1.3
PB05				Sn	Sn	18 51 16.1	+1.5
PB05	IPOC Station P	0.93	302	*e*P	Pn	18 51 02.3	+1.3
PB05				*e*S	Sn	18 51 16.3	+1.7
PB05				IAML		18 51 18.0	
	comp=E,6µm,0.4s						
PB05	IPOC Station P	0.93	302	*i* P	Pn	18 51 01.7	+0.7
PB05				*e*S	Sn	18 51 16.4	+1.7
PB05				IAML		18 51 17.6	
	comp=Z,4µm,0.8s						
PB10	IPOC Station P	1.12	262		Pn	18 51 05.0	+1.9
PB10				Sn	Sn	18 51 20.3	+1.9
PB10	IPOC Station P	1.12	262	⇓*i*P	Pn	18 51 04.9	+1.8
PB10				*e*S	Sn	18 51 21.2	+2.8
PB10	IPOC Station P	1.12	262	*i* P	Pn	18 51 04.3	+1.2
PB10				IAML		18 51 24.3	
	comp=Z,2µm,0.3s						
AF01	San Pedro de A	1.15	70		Pn	18 51 05.7	+1.9
AF01				Sn	Sn	18 51 22.3	+2.6
AF01	San Pedro de A	1.15	70	⇑*e*P	Pn	18 51 05.8	+1.9
AF01				*e*S	Sn	18 51 22.4	+2.8
AF01	San Pedro de A	1.15	70	*i* P	Pn	18 51 05.0	+1.2
AF01				IAML		18 51 27.9	
	comp=Z,13µm,0.2s						
PB03	IPOC Station P	1.35	344		Pn	18 51 07.2	+0.9
PB03				Sn	Sn	18 51 23.7	-0.3
PB03	IPOC Station P	1.35	344	⇓*i*P	Pn	18 51 07.3	+0.9
PB03				*e*S	Sn	18 51 25.0	+1.0
PB03				IAML		18 51 25.9	
	comp=E,6µm,0.4s						
PB03	IPOC Station P	1.35	344	*i* P	Pn	18 51 06.7	+0.4
PB03				*e*S	Sn	18 51 24.9	+0.9
PB03				IAML		18 51 26.6	
	comp=Z,6µm,0.5s						
PB09	IPOC Station P	1.56	4		Pn	18 51 10.5	+1.6
PB09				Sn	Sn	18 51 28.9	+0.3
PB09	IPOC Station P	1.56	4	⇑*i*P	Pn	18 51 10.5	+1.6
PB09				IAML		18 51 33.3	
	comp=E,6µm,0.1s						
PB09	IPOC Station P	1.56	4	*i* P	Pn	18 51 09.9	+0.9
PB09				IAML		18 51 36.7	
	comp=Z,5µm,0.4s						
PB14	IPOC Station P	1.59	217		Pn	18 51 10.7	+1.2
PB14				Sn	Sn	18 51 29.1	-0.5
PB14	IPOC Station P	1.59	217	⇑*e*P	Pn	18 51 11.2	+1.7
PB14	IPOC Station P	1.59	217	*i* P	Pn	18 51 10.6	+1.2
PB14				IAML		18 51 35.5	
	comp=Z,3µm,0.6s						
PB07	IPOC Station P	1.70	343		Pn	18 51 11.4	+0.6
PB07				Sn	Sn	18 51 29.9	-2.1
PB07	IPOC Station P	1.70	343	⇓*i*P	Pn	18 51 11.6	+0.8
PB07				*e*S	Sn	18 51 32.4	+0.4
PB07				IAML		18 51 34.0	
	comp=E,5µm,0.4s						
PB07	IPOC Station P	1.70	343	*i* P	Pn	18 51 10.9	+0.2
PB07				*e*S	Sn	18 51 30.2	-1.8
PB07				IAML		18 51 34.8	
	comp=Z,3µm,0.4s						
GO02	Mina Guanaco	1.81	187		Pn	18 51 14.7	+2.3
GO02				Sn	Sn	18 51 37.2	+2.4
GO02	Mina Guanaco	1.81	187	⇑*e*P	Pn	18 51 14.7	+2.3
GO02				IAML		18 51 44.4	
	comp=N,3µm,0.2s						
GO02	Mina Guanaco	1.81	187	*i* P	Pn	18 51 14.0	+1.6
GO02				IAML		18 51 47.7	
	comp=Z,3µm,0.8s						
PB02	IPOC Station P	2.09	346		Pn	18 51 16.3	+0.4
PB02				Sn	Sn	18 51 40.5	-0.7
PB02	IPOC Station P	2.09	346	⇓*i*P	Pn	18 51 16.5	+0.6
PB02				*e*S	Sn	18 51 42.0	+0.8
PB02				IAML		18 51 47.4	
	comp=E,5µm,0.4s						
PB02	IPOC Station P	2.09	346	*i* P	Pn	18 51 15.9	-0.1
PB02				IAML		18 51 50.3	
	comp=Z,4µm,0.6s						
PB01	IPOC Station P	2.31	357		Pn	18 51 19.3	+0.5
PB01				Sn	Sn	18 51 46.6	+0.2
PB01	IPOC Station P	2.31	357	*e*P	Pn	18 51 19.4	+0.5
PB01				*e*S	Sn	18 51 46.9	+0.5
PB01				IAML		18 51 50.3	
	comp=E,4µm,0.5s						
PB01	IPOC Station P	2.31	357	*i* P	Pn	18 51 18.9	+0.1
PB01				IAML		18 51 52.6	
	comp=Z,2µm,0.2s						
PATCX	Punta Patache	2.63	343		Pn	18 51 22.7	-0.5
TA01	Diego Aracena	2.88	344		Pn	18 51 25.5	-1.0
TA01	Diego Aracena	2.88	344	*e*P	Pn	18 51 25.6	-0.9
TA01				IAML		18 52 13.2	
	comp=E,1µm,0.3s						
TA01	Diego Aracena	2.88	344	*i* P	Pn	18 51 25.2	-1.3
TA01				IAML		18 52 10.0	
	comp=Z,771nm,0.8s						
SALTA		2.89	108	⇑*e*P	Pn	18 51 30.1	+3.0
SALTA		2.89	108	*i* P	Pn	18 51 30.7	+3.7
SALTA				IAML		18 52 12.1	
	comp=Z,93nm,0.5s						
AC01	Pan de Azucar	3.00	202		Pn	18 51 28.3	+0.2
AC01	Pan de Azucar	3.00	202	*i* P	Pn	18 51 27.8	-0.4
AC01				IAML		18 52 26.7	
	comp=Z,641nm,0.5s						
HMBC	Humberstone	3.10	351		Pn	18 51 28.8	-0.8
HMBC	Humberstone	3.10	351	*i* P	Pn	18 51 29.0	-0.7
HMBC				IAML		18 52 33.6	
	comp=N,2µm,0.4s						
PB08	IPOC Station P	3.21	3		Pn	18 51 31.4	+0.1
AC02	Maricunga	3.47	177		Pn	18 51 35.6	+0.6
AC02	Maricunga	3.47	177	*i* P	Pn	18 51 37.4	+2.5
AC02				IAML		18 52 42.0	
	comp=Z,740nm,0.6s						
PB11	IPOC Station P	3.59	355		Pn	18 51 35.3	-1.0
PB11	IPOC Station P	3.59	355	*e*P	Pn	18 51 35.4	-1.0
PB11				IAML		18 52 41.0	
	comp=N,1µm,0.6s						
GO01	Chusmiza	3.67	2		Pn	18 51 37.5	-0.2
GO01	Chusmiza	3.67	2	*e*P	Pn	18 51 37.5	-0.2
GO01	Chusmiza	3.67	2	*i* P	Pn	18 51 37.0	-0.7
GO01				IAML		18 52 40.6	
	comp=Z,467nm,0.8s						
YJA	Yavi	3.73	72	*e*P	Pn	18 51 42.2	+3.8
YJA	Yavi	3.73	72	*i* P	Pn	18 51 43.8	+5.3
YJA				IAML		18 52 35.2	
	comp=Z,11nm,1.9s						
SLA	San Lorenzo	3.77	112	*e*P	Pn	18 51 42.8	+4.1
AZAP	Zapla	4.02	103	*i* P	Pn	18 51 46.0	+3.8
AZAP				IAML		18 52 43.2	
	comp=Z,74nm,0.7s						
AC06	Mina Casimiro	4.08	193		Pn	18 51 42.7	-0.2
FSA	Cafayete	4.11	133	*i* P	Pn	18 51 47.8	+4.4
GO03	Copiapo	4.29	191		Pn	18 51 45.7	0.0
GO03	Copiapo	4.29	191	*i* P	Pn	18 51 45.4	-0.4
GO03				IAML		18 53 19.1	
	comp=Z,352nm,0.5s						
PB12	IPOC Station P	4.81	349		Pn	18 51 50.6	-2.2
TINO	Tinogasta	4.95	161	*i* P	Pn	18 51 57.4	+2.6
PB16	IPOC Station P	5.00	358		Pn	18 51 56.1	+0.2
PB16	IPOC Station P	5.00	358	*i* P	Pn	18 51 55.7	-0.2
PB16				IAML		18 53 07.8	
	comp=Z,128nm,0.9s						
AC04	Llanos de Chal	5.07	197	Pn	Pn	18 51 54.4	-1.9
AC05	El Transito	5.52	188		Pn	18 52 02.2	-0.3
PB18	Visviri	5.74	359		Pn	18 52 04.4	-1.6
LCO	Las Campanas	5.76	192		Pn	18 52 04.6	-1.3
CO01	Juntas del Tor	6.63	186		Pn	18 52 17.3	-0.4
CO05	La Serena	6.75	194	Pn	Pn	18 52 17.2	-2.0
GO04	Tololo Observa	6.91	190		Pn	18 52 19.4	-2.2
LPAZ	La Paz	7.13	9	P	Pn	18 52 25.5	+0.6
	comp=Z,1.9nm,0.3s,baz=177,slow=2.9,SNR=18						
LPAZ	La Paz	7.13	9		Pn	18 52 24.1	-0.8
LPAZ	La Paz	7.13	9	*e*P	Pn	18 52 26.1	+1.1
CO03	El Pedregal	7.55	189		Pn	18 52 28.1	-2.1
CO06	Fray Jorge	7.57	195		Pn	18 52 26.9	-3.5
CO02	Combarbal	7.95	190		Pn	18 52 32.8	-3.0
ZON	Zonda	8.18	176		Pn	18 52 38.2	-0.6
CFA	Coronel Fontan	8.28	173	P	Pn	18 52 39.8	-0.3
	comp=Z,8.9nm,0.4s,baz=341,slow=14,SNR=40						
CFA				S	Sn	18 54 06.1	-5.8
	comp=Z,3.2nm,0.5s,baz=13,slow=16,SNR=0.9						
VA06	Catapilco	9.33	190	Pn	Pn	18 52 51.2	-3.2
VA03	San Esteban	9.43	186		Pn	18 52 52.6	-3.3
MT08	Bocatoma Ro	10.07	183		Pn	18 53 00.7	-4.0
MT09	Talagante	10.48	188	Pn	Pn	18 53 07.1	-3.1
BO04	La Punta	10.65	186	Pn	Pn	18 53 08.5	-4.0
SIV	San Ignacio	10.70	48	P	Pn	18 53 10.4	-2.8
	comp=Z,14nm,0.3s,baz=250,slow=11,SNR=62						
SIV				S	Sn	18 55 00.8	-11
	comp=Z,1.8nm,0.3s,baz=295,slow=18,SNR=1.2						
CPUP	Villa Florida	11.31	108	P	Pn	18 53 19.0	-2.4
	comp=Z,1.8nm,0.4s,baz=288,slow=13,SNR=6.4						
CPUP	Villa Florida	11.31	108		Pn	18 53 17.1	-4.4
BO02	Sierra Bellavi	11.46	186	Pn	Pn	18 53 19.7	-3.9
BDQN	Bodoquena, MS	12.05	79	*e*P	Pn	18 53 29.2	-2.4
PTLB	Pontes e Lacer	12.43	53		Pn	18 53 32.9	-3.9
PTLB	Pontes e Lacer	12.43	53	*e*P	Pn	18 53 34.7	-2.1
AQDB	Aquidauana	12.99	80	*e*P	Pn	18 53 42.9	-1.4
ITQB	Itaqui	13.01	122	*e*P	P	18 53 49.6	-2.4
AMBA	Amambai (Brazi	13.22	91	*e*P	Pn	18 53 47.2	-0.2
BI02	San Fabin de	13.37	187		Pn	18 53 44.5	-4.8
VILB	Vilhena	13.51	42		Pn	18 53 47.3	-3.9
VILB	Vilhena	13.51	42	*e*P	Pn	18 53 50.1	-1.2
PP1B	Ponte de Pedra	14.71	70	*e*P	Pn	18 54 05.0	-1.9
SALV	Santo Antonio	14.84	62	*e*P	Pn	18 54 06.7	-1.9
TRCB	Terra Rica	15.40	91	*e*P	Pn	18 54 15.6	-0.1
CPSB	Cacapava Do Su	15.83	120	*e*P	P	18 54 23.1	-0.2
PTGB	Pitanga	15.85	98	*e*P	P	18 54 22.9	-0.8
TRQA	Tornquist	15.95	158	Pn	Pn	18 54 21.1	-1.4
TRQA	Tornquist	15.95	158	*e*P	P	18 54 35.0	+10
ITAB	Concordia	16.04	107	Pn	Pn	18 54 20.9	-2.8
ITAB	Concordia	16.04	107	*e*P	P	18 54 25.5	-0.2
C2SB	Chapadao do Su	16.07	77	*e*P	Pn	18 54 22.9	-1.3
PLTB	Pedras Altas	16.27	124	*e*P	P	18 54 31.5	+3.4
LDASE	Londrina, Braz	16.74	94	*e*P	Pn	18 54 31.4	-1.1
PDRB	Porto dos Gac	16.76	48	*e*P	Pn	18 54 31.4	-1.3
PCMB	Pacaembu	16.81	88	*e*P	P	18 54 33.2	-1.1
PLCA	Paso Flores	17.35	183	P	Pn	18 54 39.5	-0.4
	comp=Z,2.7nm,0.9s,baz=324,slow=9.8,SNR=3.7						
PLCA	Paso Flores	17.35	183	Pn	Pn	18 54 37.1	-2.8
PLCA	Paso Flores	17.35	183	*e*P	P	18 54 57.2	+17
CLDB	Colider	17.92	48	*e*P	P	18 54 44.1	-2.4
ITRB	Iturama	18.04	82	*e*P	P	18 54 45.9	-1.9
FRTB	Fartura	18.17	94	*e*P	Pn	18 54 48.5	-1.4
ARAG	Araguaiana, MT	18.19	68	*e*P	P	18 54 48.3	-1.2
BB19B	Bebedouro	19.41	87	*e*P	Pn	18 55 03.1	-1.7
SPB	Sao Paulo	20.11	95	*e*P	P	18 55 10.1	-0.2
PET01	Itanhaem-SP	20.22	97	*e*P	Pn	18 55 12.9	-1.2
TEFE	Tefe	20.25	14	*e*P	Pn	18 55 14.2	-0.3
IPMB	Ipameri, GO	20.48	79	*e*P	P	18 55 13.7	-0.8
SNDB	Serra Nova Dou	20.57	60	*e*P	P	18 55 12.4	-3.0
VAO	Valinhos	20.58	93		P	18 55 14.0	-1.6
VAO	Valinhos	20.58	93	*e*P	P	18 55 14.7	-0.9
NPGB	Novo Progresso	21.07	42	*e*P	P	18 55 19.0	-1.8
BDFB	Brasilia	21.51	73	P	P	18 55 24.8	-0.9
	comp=Z,4.1nm,0.4s,baz=262,slow=8.3,SNR=8.4						
	comp=Z,4.1nm,0.4s						
BDFB	Brasilia	21.51	73		P	18 55 24.3	-1.3
PARB	Paraibuna	21.78	95	*e*P	P	18 55 28.0	-0.4
BSCB	Bom Sucesso	22.87	89	*e*P	P	18 55 40.0	-0.1
ITTB	Itaituba	23.01	37	*e*P	P	18 55 39.0	-2.3
VAS01	Vassouras-RJ	23.90	93	*e*P	P	18 55 50.4	+0.9
JANB	Januaria	25.02	75	*e*P	P	18 55 58.9	-0.9
SMTB	Santa Maria do	25.34	59	*e*P	P	18 56 01.4	-1.2
PRPB	Parauapebas	25.41	51	*e*P	P	18 56 01.4	-1.9
SDBA	SAO DESIDERIO	25.64	69	*e*P	P	18 56 03.6	-1.8
BOAV	Boa Vista	27.00	20	P	P	18 56 15.9	-1.7

BOAV	**Boa Vista**	**27.00**	**20**	*e*P	**P**	**18 56 18.2**	**+0.6**
SDV	**Santo Domingo**	**32.07**	**358**	LR	LR	19 10 26.0	
	comp=Z,29nm,20.1s,baz=36,slow=37						
HOPE	**Hope Point**	**39.47**	**150**	P	**P**	**18 58 06.5**	**+1.3**
TEIG	**Tepich**	**47.09**	**335**	P	**P**	**18 59 07.3**	**+0.4**
CMIG	**Matias Romero**	**47.32**	**326**	P	**P**	**18 59 09.9**	**+1.1**
	comp=Z,1.5nm,0.3s,baz=186,slow=9.2,SNR=3.7						
	comp=Z,1.5nm,0.3s						
BELA	**Belgrano 2**	**56.98**	**172**	P	**P**	**19 00 20.2**	**+0.5**
BELA				IAmb	IAmb	19 00 43.5	
	comp=Z,4.4nm,1.2s						
SNAA	**Sanae**	**60.67**	**161**	⇑P	**P**	**19 00 45.8**	**+0.3**
	comp=Z,66nm,0.6s						
SNAA	**Sanae**	**60.67**	**161**	P	**P**	**19 00 46.2**	**+0.8**
	comp=Z,2.4nm,0.7s,baz=283,slow=9.9,SNR=5.6						
	comp=Z,2.4nm,0.7s						
SNAA	**Sanae**	**60.67**	**161**	P	**P**	**19 00 46.3**	**+0.8**
SLBS	**Sierra La Lagu**	**61.17**	**317**	P	**P**	**19 00 51.9**	**+2.4**
BRDY	**Brady**	**61.31**	**331**	P	**P**	**19 00 50.0**	**-0.2**
BRDY				IAmb	IAmb	19 00 51.2	
	comp=Z,2.7nm,0.6s						
TXAR	**Lajitas Array**	**61.92**	**326**	P	**P**	**19 00 55.5**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=154,slow=8.7,SNR=8.3						
	comp=Z,0.6nm,0.6s						
TXAR	**Lajitas Array**	**61.92**	**326**	P	**P**	**19 00 54.2**	**-0.3**
TROLL	**Troll, Antarti**	**62.38**	**161**	⇑P	**P**	**19 00 58.5**	**+1.4**
	comp=Z,243nm,0.6s						
PECS	**Pecos**	**63.67**	**327**	P	**P**	**19 01 06.6**	**+0.5**
PECS				IAmb	IAmb	19 01 39.1	
	comp=Z,3.2nm,0.8s						
SN07	**Snyder 07**	**63.69**	**331**	P	**P**	**19 01 06.0**	**-0.1**
VHRN	**Van Horn**	**63.77**	**326**		**P**	**19 01 06.9**	**+0.1**
MNTX	**Cornudas Mount**	**64.70**	**326**		**P**	**19 01 12.5**	**-0.2**
R40A	**Maddies Statio**	**64.99**	**340**	P	**P**	**19 01 13.6**	**-0.8**
R40A				IAmb	IAmb	19 01 52.1	
	comp=Z,5.8nm,1.2s						
SMWD	**Samnorwood**	**65.11**	**332**	P	**P**	**19 01 15.0**	**-0.3**
SMWD				IAmb	IAmb	19 01 16.4	
	comp=Z,6.8nm,0.9s						
QSPA	**South Pole Qui**	**66.84**	**180**		**P**	**19 01 28.0**	**+1.8**
QSPA				IAmb	IAmb	19 01 28.7	
	comp=Z,4.4nm,0.7s						
ABQ	**Albuquerque**	**67.83**	**328**	P	**P**	**19 01 34.1**	**+1.2**
ABQ				IAmb	IAmb	19 01 35.3	
	comp=Z,3.4nm,0.7s						
ANMO	**Albuquerque**	**67.83**	**328**	P	**P**	**19 01 34.2**	**+1.3**
ANMO				IAmb	IAmb	19 01 35.3	
	comp=Z,3.1nm,0.7s						
TASM	**ASL Pad, Albuq**	**67.83**	**328**	IAmb	IAmb	19 01 35.4	
	comp=Z,3.4nm,0.7s						
TASM	**ASL Pad, Albuq**	**67.83**	**328**	IAmb	IAmb	19 01 35.4	
	comp=Z,3.4nm,0.7s						
TASM	**ASL Pad, Albuq**	**67.83**	**328**	IAmb	IAmb	19 01 35.4	
	comp=Z,3.5nm,0.7s						
G62A	**West of Eustis**	**68.25**	**359**	P	**P**	**19 01 35.4**	**+0.3**
PKME	**Peaks-Kenny Pk**	**68.29**	**0**	P	**P**	**19 01 35.9**	**+0.6**
F64A	**Sherman**	**68.89**	**1**	P	**P**	**19 01 39.5**	**+0.5**
SDCO	**Great Sand Dun**	**69.64**	**330**		**P**	**19 01 45.3**	**+1.1**
SDCO				IAmb	IAmb	19 01 46.6	
	comp=Z,8.5nm,1.3s						
DBIC	**Dimbokro**	**69.66**	**73**	P	**P**	**19 01 44.3**	**-0.2**
	comp=Z,1.9nm,0.5s,baz=257,slow=4.3,SNR=5.4						
DBIC				pP	**PcP**	**19 02 06.0**	**-1.0**
	comp=Z,1.2nm,0.5s,baz=277,slow=5.6,SNR=2.1						
	comp=Z,1.9nm,0.5s						
DBIC	**Dimbokro**	**69.66**	**73**	P	**P**	**19 01 44.1**	**-0.3**
DBIC				IAmb	IAmb	19 02 16.8	
	comp=Z,5.1nm,0.8s						
X16A	**Lo Mia Camp, P**	**70.00**	**324**	IAmb	IAmb	19 01 49.4	
	comp=Z,5.5nm,1.2s						
D62A	**Allapoint, All**	**70.11**	**0**	P	**P**	**19 01 47.0**	**+0.5**
BATG	**Bathurst New B**	**70.36**	**2**	P	**P**	**19 01 47.2**	**-0.8**
LDAQ	**Lac Daran**	**71.01**	**359**	P	**P**	**19 01 52.7**	**+0.7**
PV01	**Paradox Valley**	**71.40**	**328**	P	**P**	**19 01 56.8**	**+2.0**
PV01				IAmb	IAmb	19 02 19.1	
	comp=Z,5.5nm,1.5s						
PV13	**Radium Mtn., P**	**71.54**	**328**	P	**P**	**19 01 56.9**	**+1.3**
U15A	**North Rim**	**71.97**	**325**	P	**P**	**19 02 00.0**	**+1.7**
KNB	**Kanab**	**72.69**	**325**	IAmb	IAmb	19 02 06.0	
	comp=Z,8.8nm,1.1s						
DRLN	**Deer Lake**	**73.05**	**8**	P	**P**	**19 02 04.7**	**+0.6**
MTPU	**Mount Pierson**	**73.13**	**326**	P	**P**	**19 02 06.1**	**+0.8**
CCUT	**Cedar City**	**73.38**	**325**	IAmb	IAmb	19 02 10.1	
	comp=Z,4.0nm,0.8s						
BSUT	**Blindstream Ca**	**74.33**	**328**	P	**P**	**19 02 14.1**	**+1.8**
PDAR	**Pinedale Array**	**75.52**	**331**	P	**P**	**19 02 19.6**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=129,slow=8.2,SNR=2.5						
	comp=Z,0.3nm,0.4s						
HWUT	**Hardware Ranch**	**75.54**	**329**	P	**P**	**19 02 20.0**	**+1.0**
HWUT				IAmb	IAmb	19 02 22.5	
	comp=Z,3.5nm,0.7s						
ULM	**Lac du Bonnet**	**76.96**	**343**	P	**P**	**19 02 26.6**	**0.0**
	comp=Z,4.0nm,0.5s,baz=152,slow=6.4,SNR=5.1						
	comp=Z,4.0nm,0.5s						
ULM	**Lac du Bonnet**	**76.96**	**343**	P	**P**	**19 02 26.3**	**-0.3**
ULM				IAmb	IAmb	19 02 26.7	
	comp=Z,4.4nm,0.5s						
RLMT	**Red Lodge**	**77.25**	**332**	P	**P**	**19 02 30.2**	**+1.5**
YNE	**Yellowstone No**	**77.48**	**332**	IAmb	IAmb	19 02 34.0	
	comp=Z,4.3nm,0.8s						
PAHR	**Pah Rah Range**	**78.20**	**323**		**P**	**19 02 35.6**	**+1.6**
PAHR				IAmb	IAmb	19 02 37.3	
	comp=Z,4.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**78.36**	**70**	P	**P**	**19 02 34.5**	**-0.7**
	comp=Z,3.4nm,0.6s,baz=266,slow=4.5,SNR=22						
TORD				pP	**pP**	**19 02 57.2**	**+0.2**
	comp=Z,6.5nm,0.7s,baz=261,slow=4.5,SNR=13						
	comp=Z,3.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**78.36**	**70**		**pP**	**19 02 57.5**	**+0.6**
TORD				IAmb	IAmb	19 02 58.5	
	comp=Z,4.2nm,0.8s						
HLID	**Hailey**	**78.40**	**328**	IAmb	IAmb	19 02 37.9	
	comp=Z,4.3nm,0.9s						
PLID	**Pearl Lake**	**80.29**	**328**		**P**	**19 02 46.5**	**+1.2**
PLID				IAmb	IAmb	19 02 47.5	
	comp=Z,4.7nm,0.8s						
GRTLG	**Ghanzi**	**82.28**	**110**	P	**P**	**19 02 57.3**	**+0.9**
MAW	**Mawson**	**82.68**	**163**	P	**P**	**19 02 58.0**	**+0.6**
	comp=Z,2.3nm,0.6s,baz=192,slow=9.3,SNR=6.4						
	comp=Z,2.3nm,0.6s						
BOSA	**Boshof**	**82.94**	**118**	P	**P**	**19 02 59.4**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=240,slow=3.8,SNR=1.4						
BOSA				pP	**pP**	**19 03 22.5**	**+1.1**
	comp=Z,3.3nm,1.1s,baz=203,slow=7.7,SNR=1.8						
	comp=Z,1.3nm,0.5s						
FCC	**Fort Churchill**	**84.34**	**347**	P	**P**	**19 03 06.0**	**+0.2**
YKA	**Yellowknife Ar**	**92.80**	**341**	P	**P**	**19 03 46.5**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=146,slow=3.7,SNR=23						
YKA				pP	**pP**	**19 04 08.4**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=144,slow=3.9,SNR=2.3						
YKA				sP	**sP**	**19 04 18.0**	**+1.7**
	comp=Z,0.7nm,0.8s,baz=145,slow=3.7,SNR=4.8						
	comp=Z,1.2nm,0.7s						
ASAR	**Alice Springs**	**128.08**	**207**	PKP	**PKPdf**	**19 09 40.9**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=132,slow=1.6,SNR=18						
ASAR				pPKP	**pPKPdf**	**19 10 03.5**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=122,slow=1.5,SNR=2.4						
WRA	**Warramunga Arr**	**131.15**	**210**	PKP	**PKPdf**	**19 09 47.2**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=156,slow=1.7,SNR=9.9						
BVAR	**Borovoye Array**	**137.54**	**35**	PKP	**PKPdf**	**19 09 57.6**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=321,slow=1.8,SNR=3.6						
ZALV	**Zalesovo Beam**	**143.80**	**26**	PKP	PKPbc	19 10 07.9	+1.5
	comp=Z,1.5nm,0.5s,baz=311,slow=4.1,SNR=9.2						
ZALV				pPKP	pPKPdf	19 10 30.5	-0.9
	comp=Z,1.6nm,0.7s,baz=291,slow=3.4,SNR=3.9						
MKAR	**Makanchi Array**	**147.36**	**37**	PKPbc	**PKPdf**	**19 10 15.5**	**+0.5**
	comp=Z,2.3nm,0.6s,baz=326,slow=1.6,SNR=25						
MKAR				pPKPbc	**pPKPbc**	**19 10 39.2**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=313,slow=3.0,SNR=4.4						
MKAR	**Makanchi Array**	**147.36**	**37**		**PKPdf**	**19 10 16.1**	**+1.1**
MJAR	**Matsushiro Arr**	**152.85**	**305**	PKPbc	**PKPbc**	**19 10 31.5**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=96,slow=0.7,SNR=1.9						
SONM	**Songino Array**	**155.34**	**7**	PKPbc	PKPdf	19 10 36.7	+10
	comp=Z,0.5nm,0.5s,baz=344,slow=2.5,SNR=2.5						
SONM				PKPab	**PKPab**	**19 10 51.7**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=1.8,slow=4.5,SNR=3.2						

IDC ***27*** *18:54:43.3±4.0, 2°.73S×101°.42E, h0km, mb3.5/5, mbtmp3.5/5, MS3.0/1, Error ellipse: s-maj=179.2km s-min=23.4km az=55.0*

DJA ***27*** *18:54:48.6±1.6, 3°S±3°×10°1E±°, h20km±15km, M4.0/17, mb4.3/7, MLv3.8/17*

ISC 27 18:54:49.2±0.9**, 3°.01S**±0°.07×**101°.16E**±0°.06**, h46**km**, n34, σ1s.43**/28**, mb3.5**/5**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.96**	**18**	P	**Pn**	**18 55 06.8**	**+0.4**
KRJI				S	**Sn**	**18 55 20.2**	**+1.2**
MASI	**Maura Aman, Be**	**1.09**	**97**	P	**Pn**	**18 55 07.9**	**-0.2**
PPSI	**Pulau Pagai**	**1.17**	**282**	P	**Pn**	**18 55 10.3**	**+1.1**
UBSI	**University, Be**	**1.34**	**124**	P	**Pn**	**18 55 11.7**	**+0.2**
KSI	**Kapahiang**	**1.57**	**114**	P	**Pn**	**18 55 15.2**	**+0.5**
PDSI	**Padang**	**2.20**	**342**	P	**Pn**	**18 55 23.4**	**+0.1**
MNAI	**Manna**	**2.24**	**127**	P	**Pn**	**18 55 23.6**	**-0.3**
SISI	**Saibi**	**2.66**	**309**	P	**Pn**	**18 55 30.5**	**+0.9**
MDSI	**Maura Dua**	**3.35**	**116**	P	**Pn**	**18 55 41.6**	**+2.5**
LWLI	**Liwa**	**3.52**	**125**	P	**Pn**	**18 55 44.9**	**+3.4**
KLSI		**3.94**	**115**	P	**Pn**	**18 55 50.4**	**+3.2**
PBSI	**Pulau Batu**	**4.11**	**316**	P	**Pn**	**18 55 49.9**	**+0.4**
KLI	**Kotabumi**	**4.12**	**117**	P	**Pn**	**18 55 51.8**	**+2.1**
KASI	**Kota Agung**	**4.16**	**127**	P	**Pn**	**18 55 50.7**	**+0.4**
DSRI	**Dabo**	**4.24**	**54**	P	**Pn**	**18 55 51.6**	**+0.2**
GSI	**Gunungsitoli**	**5.58**	**320**	P	**Pn**	**18 56 09.6**	**-0.2**
	0.1nm21nm,0.5s						
SNSI	**Sinabang, Aceh**	**7.23**	**318**	P	**Pn**	**18 56 30.6**	**-1.8**
	67nm,1.1s						
TPTI		**7.39**	**327**	P	**Pn**	**18 56 35.6**	**+1.1**
	0.1nm12nm,1.4s						
BBJI	**Bungbulang**	**7.83**	**125**	P	**Pn**	**18 56 39.8**	**-0.9**
	0.0nm7.9nm,1.4s						
PCJI	**Pacitan**	**11.22**	**118**	P	**Pn**	**18 57 27.3**	**+0.2**
	23nm,1.6s						
JAGI	**Jajag, Banyuwa**	**14.02**	**113**	P	**Pn**	**18 58 06.8**	**+1.5**
	14nm,0.9s						
KKM	**Kota Kinabalu**	**17.52**	**59**	P	**P**	**18 58 52.2**	**+1.1**
H08S2	**Diego Garcia H**	**28.90**	**260**	T	T	19 30 04.5	
	baz=82						
H08S3	**Diego Garcia H**	**28.91**	**260**	T	T	19 30 06.1	
	baz=82						
H08S1	**Diego Carcia H**	**28.92**	**260**	T	T	19 30 04.6	
	baz=82						
WRA	**Warramunga Arr**	**36.49**	**120**	P	**P**	**19 01 49.8**	**-0.6**
	0.3nm,0.6s,baz=304,slow=9.2,SNR=1.7						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**37.73**	**126**	P	**P**	**19 02 00.5**	**-0.4**
	0.4nm,0.7s,baz=299,slow=8.7,SNR=5.5						
	0.4nm,0.7s						
JOW	**Kunigami**	**39.57**	**40**	LR	LR	19 17 20.6	
	comp=Z,23nm,20.3s,baz=126,slow=35						
SONM	**Songino Array**	**50.84**	**5**	P	**P**	**19 03 44.6**	**-0.8**
	0.2nm,0.5s,baz=170,slow=8.5,SNR=1.6						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**52.31**	**344**	P	**P**	**19 03 54.5**	**-1.8**
	0.3nm,0.5s,baz=159,slow=6.9,SNR=5.3						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**58.37**	**349**	P	**P**	**19 04 38.8**	**-0.9**
	1.3nm,0.6s,baz=165,slow=6.2,SNR=6.0						
	1.3nm,0.6s						
H04N2	**CROZET ISLANDS**	**60.69**	**217**	T	T	20 10 13.9	
	baz=61						
H04N1	**CROZET ISLANDS**	**60.70**	**217**	T	T	20 10 18.8	
	baz=61						
H04N3	**CROZET ISLANDS**	**60.71**	**217**	T	T	20 10 12.9	
	baz=61						

IDC ***27*** *19:23:12.4±1.8, 20°.86N×38°.12E, h0km, mb3.8/7, mbtmp3.7/9, ML3.2/2, MS3.0/3, Error ellipse: s-maj=40.6km s-min=25.0km az=172.0*

NEIC ***27*** *19:23:12.7±2.8, 20°.8N±0°.1×38°.17E±0°.07, h10km±1km, mb4.0/8, Error ellipse: s-maj=19.5km s-min=5.3km az=149.0*

SGS ***27*** *19:23:13.6, 20°.66N×38°.52E, h7km, Ml3.0*

ISC 27 19:23:12.1±0.7**, 20°.71N**±0°.06×**38°.37E**±0°.05**, h10**km**, n41, σ1s.41**/42**, mb4.0**/9**, MS2.9**/3**, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHBS		**1.27**	**76**	P	**Pb**	**19 23 35.2**	**-0.9**
SHBS				S	**Sb**	**19 23 51.1**	**-1.4**
LBNS	**Jabal Laban**	**1.48**	**76**	P	**Pn**	**19 23 38.4**	**-0.3**
LBNS	**Jabal Laban**	**1.48**	**76**	S	**Sn**	**19 23 56.9**	**-1.2**
SADE2	**SADE2**	**1.48**	**93**	S	**Sn**	**19 23 57.6**	**-0.7**
SADE2				P	**Pn**	**19 23 38.8**	**0.0**
KHLS	**Khulais**	**1.59**	**33**	S	**Sg**	**19 24 03.8**	**+0.3**
KHLS				P	**Pn**	**19 23 41.6**	**+1.2**
KHLS2	**Khulais**	**1.88**	**35**	P	**Pb**	**19 23 47.5**	**+0.9**
GHMGH	**GHMGH**	**2.00**	**93**	S	**Sn**	**19 24 11.7**	**+0.5**
GHMGH	**GHMGH**	**2.00**	**93**	P	**Pn**	**19 23 47.0**	**+1.0**
FRAS	**Faraa**	**2.04**	**80**	P	**Pn**	**19 23 47.5**	**+0.8**
MDRAS	**Madrakah**	**2.05**	**48**	P	**Pb**	**19 23 49.0**	**-0.6**
MDRAS	**Madrakah**	**2.05**	**48**	S	**Sg**	**19 24 16.8**	**-1.3**
FDAS		**2.17**	**59**	P	**Pg**	**19 23 53.5**	**-0.3**
MDRK2	**MDRK2**	**2.37**	**48**	P	**Pg**	**19 23 57.2**	**-0.4**
WASQA	**WASQA**	**2.39**	**103**	P	**Pn**	**19 23 52.1**	**+0.8**
HAJR	**Hajar**	**2.50**	**29**	P	**Pn**	**19 23 51.1**	**-1.8**
QNFDS	**Al Qunfudhah**	**2.58**	**110**	S	**Sn**	**19 24 24.9**	**-0.5**
QNFDS				P	**Pn**	**19 23 53.9**	**-0.1**
QNF01	**Al Qunfudhah**	**3.03**	**115**	P	**Pn**	**19 24 00.4**	**+0.2**
QNF01	**Al Qunfudhah**	**3.03**	**115**	S	**Sn**	**19 24 36.5**	**-0.1**
RAYN	**Ar Rayn**	**7.19**	**66**	Pn	**Pn**	**19 24 58.4**	**+1.0**
EIL	**Elat**	**9.45**	**342**	Pn	**Pn**	**19 25 28.8**	**+0.5**
	0.4nm,0.3s,baz=172,slow=6.1,SNR=5.4						
	2.5nm,0.6s						
UOSS	**Minazif**	**16.98**	**72**		**P**	**19 27 11.9**	**+0.2**
UOSS				IAmb	IAmb	19 27 19.9	
	comp=Z,12nm,1.1s						
BRTR	**Keskin Array B**	**19.39**	**349**	P	**P**	**19 27 40.0**	**+1.6**
	baz=157,slow=7.8,SNR=3.1						
	comp=Z,0.8nm,0.9s						
BRTR	**Keskin Array B**	**19.39**	**349**	P	**P**	**19 27 35.8**	**-2.5**
MBAR	**Mbarara**	**22.45**	**200**	LR	LR	19 36 30.7	
	comp=Z,19nm,18.2s,baz=32,slow=36						
KIEV	**Kiev**	**30.79**	**349**	P	**P**	**19 29 26.2**	**-1.5**
KIEV				IAmb	IAmb	19 29 29.2	
	comp=Z,6.8nm,1.1s						
AKASG	**Malin Array Be**	**30.79**	**349**	P	**P**	**19 29 27.3**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=163,slow=7.0,SNR=4.1						
	comp=Z,0.3nm,0.4s						
AKBB	**Malin Array Si**	**30.79**	**349**	P	**P**	**19 29 26.8**	**-0.9**
GERES	**GERESS Array B**	**34.32**	**331**	LR	LR	19 44 20.2	
	comp=Z,45nm,18.3s,baz=283,slow=37						
TORD	**Torodi Ar. Bea**	**35.81**	**264**	P	**P**	**19 30 13.3**	**+1.3**
	comp=Z,1.2nm,1.1s,baz=76,slow=11,SNR=3.9						
	comp=Z,1.2nm,1.1s						
ESDC	**Sonseca Array**	**40.74**	**307**	P	**P**	**19 30 51.4**	**-1.9**
	comp=Z,0.4nm,0.7s,baz=150,slow=13,SNR=2.5						
	comp=Z,0.4nm,0.7s						
ESDC	**Sonseca Array**	**40.74**	**307**	P	**P**	**19 30 50.9**	**-2.5**
MAKZ	**Makanchi**	**43.86**	**43**	P	**P**	**19 31 20.4**	**+1.8**
MAKZ				IAmb	IAmb	19 31 30.2	
	comp=Z,3.0nm,1.2s						
MK31	**Makanchi Array**	**44.05**	**43**	P	**P**	**19 31 22.1**	**+1.9**
MK31				IAmb	IAmb	19 31 23.9	
	comp=Z,1.7nm,0.8s						
MKAR	**Makanchi Array**	**44.05**	**43**	P	**P**	**19 31 23.3**	**+3.1**
	comp=Z,1.1nm,0.7s,baz=245,slow=6.4,SNR=13						
	comp=Z,1.1nm,0.7s						
MKAR	**Makanchi Array**	**44.05**	**43**	P	**P**	**19 31 22.2**	**+2.0**
NOA	**NORSAR Array B**	**44.56**	**342**	P	**P**	**19 31 22.8**	**-1.3**
	comp=Z,1.9nm,0.9s,baz=138,slow=8.5,SNR=3.3						
	comp=Z,1.9nm,0.9s						
SHEL	**Horse Pasture**	**56.59**	**233**	P	**P**	**19 32 54.3**	**-1.2**
CMAR	**Chiang Mai Arr**	**56.83**	**81**	LR	LR	20 02 02.6	
	comp=Z,9.2nm,18.7s,baz=200,slow=41						
SONM	**Songino Array**	**60.28**	**46**	P	**P**	**19 33 23.6**	**+2.5**
	comp=Z,1.1nm,0.7s,baz=260,slow=7.4,SNR=8.4						
	comp=Z,1.1nm,0.7s						
SONM	**Songino Array**	**60.28**	**46**	P	**P**	**19 33 23.4**	**+2.4**
SONM				IAmb	IAmb	19 33 52.0	
	comp=Z,0.9nm,1.2s						
USRK	**Ussuriysk Ar.**	**78.37**	**47**	P	**P**	**19 35 14.1**	**+1.2**
	comp=Z,2.2nm,0.7s,baz=41,slow=5.3,SNR=4.7						
	comp=Z,2.2nm,0.7s						

MOS ***27*** *19:58:20.9±1.5, 42°.83N×147°.72E, h33km, mb4.5/1, Error ellipse: s-maj=21.2km s-min=9.9km az=127.4*

MOS Felt (III) at Malokuril'skoye.

IDC ***27*** *19:58:31.6±3.4, 45°.15N×146°.73E, h0km, mb3.7/12, mbtmp3.7/12, ML3.2/1, MS3.3/1, Error ellipse: s-maj=83.7km s-min=22.3km az=160.0*

NIED ***27*** *19:58:31.4, 43°.55N×147°.09E, h49km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.60; $M_{\theta\theta}$1.10; $M_{\phi\phi}$-1.69; $M_{r\theta}$2.63; $M_{\theta\phi}$-0.51; $M_{\phi r}$1.71; Fault plane solution: $M_0$3.50000×10^{14} NP1: ϕ_s153.00000°, δ26.00000°, λ12.00000°. NP2:ϕ_s52.00000°, δ85.00000°, λ115.00000°.*

SKHL ***27*** *19:58:31.6±0.3, 43°.80N×147°.20E, h75km±5km, mb5.1/4*

JMA ***27*** *19:58:31.4±0.2, 43°.6N±0°.8×14°7E±°, h49km±4km, MV3.7/33, E OFF HOKKAIDO*

ISC 27 19:58:29.9±1.5**, 43°.50N**±0°.09×**147°.30E**±0°.08**, h60**km±10km**, n39, σ1s.83**/51**, mb3.6**/12**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.50**	**317**	*e*P	Pn	19 58 49.8	+7.9
SHO				AMB	AMB	19 58 50.1	
	2μm,0.3s						
SHO				*e*S	**Sn**	**19 58 56.5**	**+5.9**
SHO				A	A	19 58 57.7	
	7μm,0.3s						
SHO				A	A	19 58 57.7	
	9μm,0.3s						
NEM2	**Nemuro 2**	**1.14**	**264**	P	**Pn**	**19 58 49.4**	**-0.4**
NEM2				*e*S	**Sn**	**19 59 02.4**	**-2.2**
NMR	**Nemuro--Hokkai**	**1.15**	**264**	*e*PN	**Pn**	**19 58 49.4**	**-0.6**
NMR				*i* S	**Sn**	**19 59 02.5**	**-2.4**
NMR	**Nemuro--Hokkai**	**1.15**	**264**	*e*P	**Pn**	**19 58 49.4**	**-0.6**
NMR				*i* S	**Sn**	**19 59 02.5**	**-2.4**
YUK	**Yuzh-Kuril'sk**	**1.17**	**298**	*e*PN	**Pn**	**19 58 48.8**	**-1.4**
YUK				pmax	pmax		
	comp=N,268nm,0.2s						
YUK				pmax	pmax		
	comp=Z,2μm,0.2s						
YUK				pmax	pmax		
	comp=E,198nm,0.1s						
YUK	**Yuzh-Kuril'sk**	**1.17**	**298**	*e*P	**Pn**	**19 58 48.8**	**-1.4**
YUK				AMB	AMB	19 58 49.1	
	comp=E,2μm,0.2s						
YUK				*i* S	**Sn**	**19 59 01.9**	**-3.4**
YUK				A	A	19 59 04.5	
	comp=E,1μm,0.2s						
YUK				A	A	19 59 04.5	
	comp=E,2μm,0.2s						
GLVR	**Golovnino**	**1.32**	**281**	*e*PN	**Pn**	**19 58 51.7**	**-0.4**
GLVR				pmax	pmax		
	comp=Z,714nm,0.1s						
GLVR	**Golovnino**	**1.32**	**281**	*e*P	**Pn**	**19 58 51.7**	**-0.4**
GLVR				AMB	AMB	19 58 52.2	
	comp=Z,710nm,0.3s						
GLVR				*i* S	**Sn**	**19 59 07.3**	**-1.4**
GLVR				A	A	19 59 07.6	
	comp=Z,2μm,0.3s						
GLVR				A	A	19 59 07.6	
	comp=Z,950nm,0.3s						
RUSJ	**Misakicho**	**1.60**	**293**	*e*PN	**Pn**	**19 58 55.6**	**-0.4**
JKHN	**Kushirohamanak**	**1.62**	**256**	P	**Pn**	**19 58 56.5**	**+0.3**
JKHN				*e*S	**Sn**	**19 59 14.9**	**-1.1**
JRA	**Rausu**	**1.64**	**286**	P	**Pn**	**19 58 56.0**	**-0.4**
JRA				*e*S	**Sn**	**19 59 14.4**	**-2.2**
JNSB	**Nemuroshibetsu**	**1.69**	**280**	P	**Pn**	**19 58 57.0**	**-0.1**
JNSB				*e*S	**Sn**	**19 59 16.2**	**-1.6**
KUR	**Kuril'sk**	**1.78**	**13**	*e*PN	**Pn**	**19 58 58.5**	**+0.1**
KUR				pmax	pmax		
	comp=N,100nm,0.2s						
KUR				pmax	pmax		
	comp=E,48nm,0.2s						
KUR				pmax	pmax		
	comp=Z,75nm,0.2s						
KUR	**Kuril'sk**	**1.78**	**13**	*e*P	**Pn**	**19 58 57.1**	**-1.3**
KUR				AMB	AMB	19 59 00.7	
	comp=Z,80nm,0.2s						
KUR				*i* S	**Sn**	**19 59 17.0**	**-2.9**
KUR				A	A	19 59 19.6	
	comp=Z,290nm,0.2s						
KUR				A	A	19 59 19.6	
	comp=Z,710nm,0.2s						
JNK	**Nakash**	**1.88**	**273**	*e*P	**Pn**	**19 58 59.4**	**-0.4**
JAK	**Akkeshi**	**1.97**	**256**	P	**Pn**	**19 59 01.0**	**0.0**
JAK				*e*S	**Sn**	**19 59 22.7**	**-1.8**
JTKR	**Abashiri--Toko**	**2.50**	**282**	P	**Pn**	**19 59 08.6**	**+0.4**
JAR	**Ashorobuto**	**2.58**	**267**	P	**Pn**	**19 59 09.8**	**+0.5**
JAR				*e*S	**Sn**	**19 59 38.4**	**-1.2**
JOB	**Onbets**	**2.60**	**258**	*e*P	**Pn**	**19 59 10.2**	**+0.6**
JOB				*e*S	**Sn**	**19 59 39.0**	**-1.1**
JMP	**Maruseppu**	**2.90**	**281**	*e*P	**Pn**	**19 59 14.3**	**+0.6**
JCH	**Churui**	**3.02**	**254**	*e*P	**Pn**	**19 59 15.5**	**+0.3**
JCH				*e*S	**Sn**	**19 59 48.8**	**-1.4**
JKA	**Kamikawa-asahi**	**3.46**	**282**	*e*P	**Pn**	**19 59 22.7**	**+1.4**
ASAJ	**Asahikawa**	**3.46**	**282**	Pn	**Pn**	**19 59 22.7**	**+1.4**
	comp=Z,2.2nm,0.3s,baz=110,slow=4.0,SNR=21						
ASAJ				Sn	**Sn**	**20 00 08.1**	**+7.0**
	comp=Z,1.5nm,0.3s,baz=341,slow=20,SNR=4.4						
YSS	**Yuzhno-Sakhali**	**4.72**	**319**	*e*PN	Pn	19 59 52.2	+14
TYV	**Tymovskoe**	**8.02**	**338**	*e*P	**Pn**	**20 00 22.8**	**-0.8**
SONM	**Songino Array**	**28.67**	**293**	P	**P**	**20 04 21.2**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=80,slow=7.5,SNR=3.7						
	comp=Z,0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**41.24**	**307**	P	**P**	**20 06 07.4**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=65,slow=11,SNR=1.5						
	comp=Z,0.2nm,0.4s						
ILAR	**Eielson Array**	**41.62**	**36**	P	**P**	**20 06 12.4**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=280,slow=8.7,SNR=7.5						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**44.80**	**298**	P	**P**	**20 06 37.6**	**0.0**
	comp=Z,0.6nm,0.5s,baz=80,slow=9.4,SNR=11						
	comp=Z,0.6nm,0.5s						
BVAR	**Borovoye Array**	**49.75**	**310**	P	**P**	**20 07 15.6**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=98,slow=6.8,SNR=2.4						
	comp=Z,0.3nm,0.3s						
BRDH	**Bariadhala**	**50.05**	**264**	LR	LR	20 31 02.4	
	comp=Z,30nm,19.4s,baz=60,slow=39						
YKA	**Yellowknife Ar**	**55.95**	**34**	P	**P**	**20 08 02.6**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=305,slow=7.7,SNR=4.8						
	comp=Z,0.2nm,0.6s						
FINES	**FINESS Array B**	**65.15**	**333**	P	**P**	**20 09 03.2**	**-0.9**
	comp=Z,1.9nm,0.6s,baz=50,slow=8.3,SNR=14						
	comp=Z,1.9nm,0.6s						
NB2	**NORSAR Subarra**	**69.88**	**339**	P	**P**	**20 09 33.5**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=31,slow=6.5						
NOA	**NORSAR Array B**	**69.88**	**339**	P	**P**	**20 09 33.6**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=33,slow=6.5,SNR=15						
	comp=Z,0.7nm,0.4s						
HFS	**Hagfors**	**69.96**	**337**	P	**P**	**20 09 33.8**	**-0.6**
	comp=Z,1.7nm,0.4s,baz=46,slow=6.4,SNR=22						
	comp=Z,1.7nm,0.4s						
KBZ	**Khabaz**	**70.05**	**312**	P	**P**	**20 09 36.0**	**+0.8**
	comp=Z,2.3nm,0.8s,baz=45,slow=8.6,SNR=2.3						
	comp=Z,2.3nm,0.8s						
AKASG	**Malin Array Be**	**71.85**	**324**	P	**P**	**20 09 46.2**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=42,slow=6.6,SNR=2.5						
	comp=Z,0.2nm,0.3s						
GERES	**GERESS Array B**	**79.43**	**331**	P	**P**	**20 10 29.4**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=82,slow=7.6,SNR=2.0						
	comp=Z,0.1nm,0.3s						

JMA ***27*** *20:12:11.4±0.4, 31°N±2°×13°9E±°, h0km, MV3.8/28, NEAR TORISHIMA IS*

IDC ***27*** *20:12:14.4±2.1, 31°.06N×139°.69E, h0km, mb3.6/4, mbtmp3.5/6, ML2.9/2, MS2.7/1, Error ellipse: s-maj=69.2km s-min=22.4km az=69.0*

ISC 27 20:12:20.4±1.3**, 30°.92N**±0°.08×**139°.36E**±0°.09**, h35**km**, n22, σ2s.03**/15**, mb3.7**/4**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTO1	**TONANKAI O.B.S**	**3.46**	**322**	*e*S	**Sn**	**20 13 53.8**	**+2.5**
JHMK	**Hamakita**	**4.11**	**341**	*e*S	**Sn**	**20 14 09.8**	**+2.4**
JIE	**Ise**	**4.12**	**328**	*e*S	**Sn**	**20 14 10.6**	**+2.8**
BSO4	**Boso 4**	**4.14**	**11**	*e*S	**Sn**	**20 14 08.1**	**0.0**
JKN2	**Miekihoku**	**4.21**	**323**	*e*P	**Pn**	**20 13 19.5**	**-2.6**
JKN2				*e*S	**Sn**	**20 14 09.3**	**-0.7**
JTNC	**Tanabenakahech**	**4.29**	**313**	*e*S	**Sn**	**20 14 12.2**	**+0.2**
JRY	**Ryogami san**	**5.09**	**356**	*e*P	**Pn**	**20 13 35.7**	**+1.4**
MJAR	**Matsushiro Arr**	**5.69**	**351**	Pn	**Pn**	**20 13 40.7**	**-1.7**
	0.1nm,0.3s,baz=161,slow=12,SNR=12						
MJAR				LR	LR	20 15 16.9	
	comp=Z,74nm,19.1s,baz=126,slow=33						
	2.1nm,0.6s						
JNU	**Nakatsue**	**7.53**	**289**	Pn	**Pn**	**20 14 10.6**	**+2.9**
	0.3nm,0.3s,baz=197,slow=17,SNR=1.5						
JNU				Sn	**Sn**	**20 15 29.1**	**-2.7**
	0.2nm,0.3s,baz=174,slow=21,SNR=1.2						
	2.2nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**27.20**	**108**	T	T	20 46 08.5	
	baz=300,slow=75,SNR=60						
H11N1	**WAKE ISLAND Hy**	**27.20**	**108**	T	T	20 45 56.0	
	baz=300,slow=75,SNR=79						
H11N3	**WAKE ISLAND Hy**	**27.22**	**108**	T	T	20 45 57.2	
	baz=300,slow=75,SNR=84						
H11S3	**WAKE ISLAND Hy**	**27.66**	**110**	T	T	20 46 52.5	

	baz=303,slow=75,SNR=33						
H11S1	**WAKE ISLAND Hy**	**27.66**	**110**	T	T	20 46 37.4	
	baz=303,slow=75,SNR=29						
H11S2	**WAKE ISLAND Hy**	**27.67**	**110**	T	T	20 46 36.8	
	baz=303,slow=75,SNR=27						
SONM	**Songino Array**	**30.27**	**313**	P	**P**	**20 18 27.5**	**-0.7**
	1.2nm,1.0s,baz=113,slow=7.8,SNR=5.0						
	1.2nm,1.0s						
MKAR	**Makanchi Array**	**46.17**	**307**	P	**P**	**20 20 40.7**	**-0.9**
	0.2nm,0.5s,baz=86,slow=8.0,SNR=4.8						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**50.80**	**186**	P	**P**	**20 21 17.8**	**+0.4**
	1.2nm,0.8s,baz=4.4,slow=7.6,SNR=4.9						
	1.2nm,0.8s						
ASAR	**Alice Springs**	**54.53**	**186**	P	**P**	**20 21 45.6**	**+0.7**
	0.8nm,0.9s,baz=358,slow=5.8,SNR=5.5						
	0.8nm,0.9s						
H03N2	**Juan Fernandez**	**147.61**	**105**	T	T	23 16 45.5	
	baz=281,slow=75,SNR=34						
H03N3	**Juan Fernandez**	**147.62**	**105**	T	T	23 16 46.6	
	baz=281,slow=75,SNR=31						
H03N1	**Juan Fernandez**	**147.63**	**105**	T	T	23 16 46.3	
	baz=281,slow=75,SNR=33						

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*IDC **27** 20:16:15.4±1.2, 27°.62N×54°.19E, h0^{km}, mb3.7/13, mbtmp3.7/13, Error ellipse: s-maj=29.8km s-min=21.1km az=4.0*

*TEH **27** 20:16:17.9, 27°.63N×54°.34E, h12^{km}±7^{km}*

*SGS **27** 20:16:18.0, 27°.91N×54°.63E, h32^{km}, Ml3.7*

*OMAN **27** 20:16:21.2±0.1, 27°.57N×54°.29E, h10^{km}, mb4.0/3, ml3.2/15, Error ellipse: s-maj=1.4km s-min=0.6km az=2.0*

ISC 27 20:16:17.6±0.5**, 27°.64N**±0°.04×**54°.31E**±0°.03**, h10**^{km}**, n83, σ2^{s}09**/100**, mb3.6**/11**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAR1	**LAR**	**0.07**	**62**	Pg	**Pg**	**20 16 20.3**	**+0.4**
LAR1				Sg	**Sg**	**20 16 22.8**	**+1.3**
KHL1	**Khalili_Fars**	**0.89**	**270**	Pg	**Pg**	**20 16 35.4**	**+0.5**
LMD1	**Lamerd**	**1.06**	**254**	Pg	**Pg**	**20 16 38.3**	**+0.3**
JHRM	**Jahrom**	**1.08**	**323**	Pg	**Pg**	**20 16 38.7**	**+0.3**
QIR1	**Qir**	**1.40**	**307**	Pg	**Pb**	**20 16 44.6**	**+0.8**
GENO	**Geno**	**1.67**	**98**	Pg	**Pb**	**20 16 48.2**	**-0.4**
SHME	**Shamm**	**2.28**	**134**	P	**Pb**	**20 16 58.0**	**-0.8**
BANOM	**Banah**	**2.47**	**133**	P	**Pb**	**20 17 00.1**	**-2.0**
BANOM				S	**Sb**	**20 17 31.5**	**-1.1**
SHI	**Shiraz**	**2.54**	**322**	Pn	**Pn**	**20 17 00.9**	**+1.8**
DSBU	**Dashti - Bushe**	**2.79**	**286**	Pn	**Pn**	**20 17 04.9**	**+2.5**
MASF	**Masafi**	**2.80**	**143**	P	**Pb**	**20 17 06.1**	**-1.7**
NAZ	**Nazwa, Dubai**	**2.91**	**155**	P	**Pb**	**20 17 08.2**	**-1.3**
NGRK	**Negar Kerman**	**2.92**	**46**	Pn	**Pn**	**20 17 06.3**	**+1.9**
MDH	**Madha**	**2.93**	**142**	P	**Pb**	**20 17 08.4**	**-1.6**
MDH				S	**Sb**	**20 17 44.7**	**-1.3**
KHNJ	**Kahnooj**	**3.02**	**83**	Pn	**Pn**	**20 17 07.0**	**+1.4**
UOSS	**Minazif**	**3.18**	**147**	P	**Pb**	**20 17 12.6**	**-1.6**
UOSS				S	**Sb**	**20 17 49.9**	**-3.0**
HATD	**Hatta, Dubai**	**3.25**	**149**	P	**Pb**	**20 17 13.4**	**-1.9**
KHGB	**Koh Gabri**	**3.32**	**34**	Pn	**Pn**	**20 17 11.7**	**+1.8**
ASHO	**Ashiyiah**	**3.34**	**151**	P	**Pb**	**20 17 13.3**	**-3.6**
SHMA	**Al-Shehemyia**	**3.48**	**240**	P	**Pn**	**20 17 14.7**	**+2.9**
SHMA				S	**Sn**	**20 17 56.0**	**+3.0**
CHMN	**Cheshme madani**	**3.60**	**51**	Pn	**Pn**	**20 17 15.3**	**+1.5**
IMEH	**Mehriz**	**3.75**	**4**	Pn	**Pn**	**20 17 17.3**	**+1.6**
ALNE	**Al Ain**	**3.80**	**160**	P	**Pn**	**20 17 19.6**	**+3.4**
ALNE				S	**Sn**	**20 18 04.4**	**+3.5**
KRM1	**Kerman Provinc**	**3.86**	**42**	Pn	**Pn**	**20 17 18.8**	**+1.5**
MZWR	**Madinat Zayed**	**3.88**	**186**	P	**Pn**	**20 17 20.7**	**+3.3**
MZWR				S	**Sn**	**20 18 07.1**	**+4.1**
GHWR	**Ruwais**	**3.88**	**200**	P	**Pn**	**20 17 20.0**	**+2.6**
GHWR				S	**Sn**	**20 18 06.4**	**+3.5**
KBAM	**BAM**	**3.94**	**67**	Pn	**Pn**	**20 17 20.1**	**+1.8**
TRNA	**Turayna**	**4.01**	**225**	P	**Pn**	**20 17 21.7**	**+2.6**
TRNA				S	**Sn**	**20 18 08.9**	**+2.7**
SOHO	**SOHO**	**4.02**	**150**	P	**Pn**	**20 17 22.9**	**+3.6**
IBAF	**Bafgh**	**4.09**	**15**	Pn	**Pn**	**20 17 22.2**	**+1.9**
SMRA	**Abu-Samra**	**4.25**	**228**	P	**Pn**	**20 17 25.0**	**+2.5**
	SNR=5.1						
SMRA				S	**Sn**	**20 18 14.1**	**+1.9**
SHBH2	**SHBH2**	**4.45**	**218**	P	**Pn**	**20 17 26.8**	**+1.6**
SHBH2	**SHBH2**	**4.45**	**218**	S	**Sn**	**20 18 19.3**	**+2.3**
MZR	**Muzera**	**4.68**	**189**	P	**Pn**	**20 17 31.3**	**+3.0**
ARQ	**Araqi**	**4.73**	**154**	P	**Pn**	**20 17 32.6**	**+3.5**
	SNR=14						
BOQSS		**4.75**	**249**	P	**Pn**	**20 17 30.1**	**+0.8**
BOQSS		**4.75**	**249**	S	**Sn**	**20 18 25.0**	**+0.5**
SHBH1	**SHBH1**	**4.79**	**212**	S	**Sn**	**20 18 25.4**	**+0.1**
SHBH1	**SHBH1**	**4.79**	**212**	P	**Pn**	**20 17 30.6**	**+0.8**
SHOFU	**Shofu**	**4.85**	**238**	S	**Sn**	**20 18 27.8**	**+0.8**
SHOFU				P	**Pn**	**20 17 31.5**	**+0.8**
HOQ	**Hoqain**	**4.86**	**145**	P	**Pn**	**20 17 34.4**	**+3.5**
HOQ				S	**Sn**	**20 18 30.3**	**+3.0**
NHFOF	**Ain Dar Gosp**	**4.95**	**247**	S	**Sn**	**20 18 30.7**	**+1.2**
NHFOF	**Ain Dar Gosp**	**4.95**	**247**	P	**Pn**	**20 17 34.1**	**+2.0**
UMZA	**Um Al Zommool**	**4.96**	**171**	P	**Pn**	**20 17 35.6**	**+3.3**
ARIRA	**AirJ**	**5.04**	**255**	S	**Sn**	**20 18 32.2**	**+0.6**
ARIRA	**AirJ**	**5.04**	**255**	P	**Pn**	**20 17 34.9**	**+1.7**
WANAN	**Al Wanan**	**5.24**	**263**	S	**Sn**	**20 18 35.3**	**-1.2**
WANAN	**Al Wanan**	**5.24**	**263**	P	**Pn**	**20 17 37.2**	**+1.2**
BIDO	**Bidbid**	**5.36**	**139**	P	**Pn**	**20 17 41.2**	**+3.5**
BSY	**Bisya**	**5.53**	**151**	P	**Pn**	**20 17 43.3**	**+3.2**
BSY				S	**Sn**	**20 18 46.3**	**+2.5**
NHRD	**Haradh**	**5.57**	**240**	S	**Sn**	**20 18 45.4**	**+0.7**
NHRD	**Haradh**	**5.57**	**240**	P	**Pn**	**20 17 43.0**	**+2.4**
SMDO	**Samad**	**5.68**	**143**	P	**Pn**	**20 17 45.5**	**+3.4**
SMDO				S	**Sn**	**20 18 50.2**	**+2.7**
TPRV	**Parvadeh(Tabas**	**5.75**	**20**	Pn	**Pn**	**20 17 45.2**	**+2.1**
SMAN	**Sihmah**	**5.76**	**257**	P	Pg	20 18 21.6	+14
WSAR	**Wadi Sarin**	**5.87**	**137**	P	**Pn**	**20 17 47.6**	**+2.9**
WSAR				S	**Sn**	**20 18 53.4**	**+1.3**
NHDN	**Nehbandan**	**6.25**	**52**	Pn	**Pn**	**20 17 51.8**	**+1.8**
NGCH	**Negor - Chabah**	**6.53**	**109**	P	**Pn**	**20 17 55.1**	**+1.4**
NGCH				S	**Sn**	**20 19 08.9**	**+0.7**
NGCH	**Negor - Chabah**	**6.53**	**109**	Pn	**Pn**	**20 17 54.6**	**+1.0**
WBK	**Wadi Bani Khal**	**6.55**	**139**	P	**Pn**	**20 17 56.2**	**+2.1**
	SNR=12						
WBK				S	**Sn**	**20 19 09.9**	**+1.0**
WBK	**Wadi Bani Khal**	**6.55**	**139**	Pn	**Pn**	**20 17 56.2**	**+2.1**
RMAH	**Rumah**	**7.03**	**253**	S	**Sn**	**20 19 18.6**	**-2.3**
RMAH				P	**Pn**	**20 18 01.4**	**+0.6**
KHRJ	**Al Kharj**	**7.07**	**239**	P	Pn	20 18 08.4	+7.1
KHRJ	**Al Kharj**	**7.07**	**239**	S	**Sn**	**20 19 26.1**	**+4.3**
JLN	**Jalan Bani Buh**	**7.16**	**139**	P	**Pn**	**20 18 04.2**	**+1.7**
MHTO	**MHTO**	**7.42**	**152**	P	**Pn**	**20 18 08.0**	**+2.1**
	SNR=10						
MHTO				S	**Sn**	**20 19 29.8**	**-0.4**
DOK	**Doka**	**8.98**	**181**	P	**Pn**	**20 18 29.1**	**+1.6**
WHFO	**Wadi Hawf**	**9.69**	**183**	P	**Pn**	**20 18 39.0**	**+1.8**
	SNR=29						
RBK	**Rabkut**	**10.09**	**181**	P	**Pn**	**20 18 43.7**	**+1.1**
ABTO	**Aybut**	**10.28**	**185**	P	**Pn**	**20 18 46.8**	**+1.5**
BRTR	**Keskin Array B**	**20.95**	**310**	P	**P**	**20 20 60.0**	**-0.9**
	0.6nm,0.7s,baz=127,slow=13,SNR=5.4						
	0.6nm,0.7s						
BVAR	**Borovoye Array**	**28.03**	**21**	P	**P**	**20 22 08.0**	**-0.8**
	0.8nm,0.7s,baz=213,slow=11,SNR=5.2						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**29.12**	**41**	P	**P**	**20 22 19.0**	**+0.4**
	0.1nm,0.5s,baz=232,slow=11,SNR=2.2						
	0.1nm,0.5s						
ZALV	**Zalesovo Beam**	**34.51**	**32**	P	**P**	**20 23 05.0**	**-0.8**
	0.5nm,0.4s,baz=248,slow=7.8,SNR=5.7						
	0.5nm,0.4s						
FINES	**FINESS Array B**	**38.72**	**339**	P	**P**	**20 23 40.0**	**-1.5**
	2.8nm,0.8s,baz=133,slow=11,SNR=5.2						
	2.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**41.89**	**93**	P	**P**	**20 24 08.7**	**+0.3**
	0.2nm,0.3s,baz=300,slow=8.0,SNR=1.8						
	0.2nm,0.3s						
HFS	**Hagfors**	**42.56**	**331**	P	**P**	**20 24 10.8**	**-2.6**
	3.4nm,0.9s,baz=132,slow=11,SNR=5.4						
	3.4nm,0.9s						
ARCES	**ARCESS Array B**	**45.14**	**346**	P	**P**	**20 24 34.2**	**+0.2**
	6.7nm,1.2s,baz=147,slow=8.8,SNR=5.2						
	6.7nm,1.2s						
ESDC	**Sonseca Array**	**49.19**	**300**	P	**P**	**20 25 04.4**	**-1.7**
	0.1nm,0.4s,baz=81,slow=7.3,SNR=2.1						
	0.1nm,0.4s						
TORD	**Torodi Ar. Bea**	**51.02**	**265**	P	**P**	**20 25 18.6**	**-1.6**
	0.9nm,0.6s,baz=60,slow=8.0,SNR=8.4						
	0.9nm,0.6s						
ILAR	**Eielson Array**	**86.42**	**9**	P	**P**	**20 29 01.3**	**+1.3**
	0.2nm,0.8s,baz=321,slow=4.5,SNR=5.5						
	0.2nm,0.8s						
YKA	**Yellowknife Ar**	**89.74**	**355**	P	**P**	**20 29 16.7**	**+0.8**
	0.1nm,0.5s,baz=3.0,slow=4.9,SNR=4.4						
	0.1nm,0.5s						
ASAR	**Alice Springs**	**92.14**	**116**	P	**P**	**20 29 26.7**	**-1.0**
	0.3nm,0.7s,baz=301,slow=5.1,SNR=5.1						
	0.3nm,0.7s						

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*IDC **27** 20:44:48.8±1.6, 30°.30S×177°.49W, h0^{km}, mb3.9/3, mbtmp3.9/4, ML3.3/1, Error ellipse: s-maj=41.3km s-min=25.1km az=114.0*

*NEIC **27** 20:44:52.9±1.8, 30°.31S±0°.07×177°.6W±0°.3, h20^{km}±12^{km}, mb4.5/6, Error ellipse: s-maj=39.2km s-min=9.3km az=94.0*

ISC 27 20:44:53.0±1.4**, 30°.28S**±0°.07×**177°.5W**±0°.2**, h33**^{km}**, n23, σ1^{s}16**/20**, mb4.4**/7**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.08**	**341**	Pn	**Pn**	**20 45 12.3**	**+0.4**
	468nm,0.3s,baz=89,slow=8.0,SNR=9.6						
RAO				Sn	**Sn**	**20 45 24.0**	**-1.8**
	2µm,0.3s,baz=326,slow=24,SNR=21						
RAO	**Raoul Island**	**1.08**	**341**		**Pn**	**20 45 12.3**	**+0.4**
RAO					**Sn**	**20 45 24.5**	**-1.3**
URZ	**Urewera**	**9.11**	**208**	Pn	**Pn**	**20 47 02.9**	**+0.7**
	0.3nm,0.3s,baz=330,slow=18,SNR=1.9						
URZ				Sn	**Sn**	**20 48 42.4**	**-1.2**
	1.0nm,0.3s,baz=224,slow=22,SNR=12						
	5.7nm,0.9s						
RTZ	**Ruatahuna**	**9.47**	**207**	Pn	**Pn**	**20 47 04.7**	**-2.5**
CTAO	**Charters Tower**	**34.19**	**279**	P	**P**	**20 51 36.1**	**+0.5**
CTAO				IAmb	IAmb	20 52 03.3	
	comp=Z,9.6nm,1.2s						
STKA	**Stephens Creek**	**34.91**	**257**	P	**P**	**20 51 43.6**	**+1.8**
	comp=Z,1.3nm,0.3s,baz=82,slow=5.9,SNR=6.2						
	comp=Z,1.3nm,0.3s						
STKA	**Stephens Creek**	**34.91**	**257**	P	**P**	**20 51 42.8**	**+1.1**
BBOO	**Buckleboo**	**39.40**	**254**	P	**P**	**20 52 21.4**	**+1.6**
BBOO				IAmb	IAmb	20 52 22.3	
	comp=Z,8.9nm,1.1s						
AS31	**Alice Springs**	**43.53**	**267**	P	**P**	**20 52 54.1**	**+0.2**
ASAR	**Alice Springs**	**43.53**	**267**	P	**P**	**20 52 54.0**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=107,slow=7.5,SNR=12						
	comp=Z,0.3nm,0.3s						
WR8	**Warramunga Arr**	**44.37**	**272**	P	**P**	**20 53 00.3**	**-0.2**
WR8				IAmb	IAmb	20 53 26.1	
	comp=Z,13nm,1.5s						
WRA	**Warramunga Arr**	**44.51**	**272**	P	**P**	**20 53 01.2**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=111,slow=8.1,SNR=13						
	comp=Z,1.0nm,0.4s						
WB0	**Warramunga Arr**	**44.53**	**272**	P	**P**	**20 53 01.7**	**-0.2**
WB0				IAmb	IAmb	20 53 36.6	
	comp=Z,11nm,1.4s						
H03S2	**Juan Fernandez**	**80.18**	**123**	T	T	22 26 35.7	
	baz=239,slow=74,SNR=16						
H03S1	**Juan Fernandez**	**80.19**	**123**	T	T	22 26 36.9	
	baz=239,slow=74,SNR=18						
H03S3	**Juan Fernandez**	**80.20**	**123**	T	T	22 26 35.3	
	baz=239,slow=74,SNR=19						
H03N3	**Juan Fernandez**	**80.37**	**123**	T	T	22 26 36.3	
	baz=243,slow=74,SNR=3.5						
H03N1	**Juan Fernandez**	**80.39**	**123**	T	T	22 26 40.8	
	baz=146,slow=74,SNR=4.3						
H10S2	**ASCENSION HYDR**	**137.65**	**154**	T	T	23 37 44.0	
	SNR=4.5						
FINES	**FINESS Array B**	**145.18**	**340**	PKPbc	**PKPdf**	**21 04 27.1**	**+0.7**
	comp=Z,2.5nm,0.6s,baz=73,slow=3.6,SNR=18						
NOA	**NORSAR Array B**	**148.69**	**352**	PKPbc	**PKPbc**	**21 04 36.0**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=18,slow=2.5,SNR=1.9						
HFS	**Hagfors**	**149.21**	**349**	PKPbc	**PKiKP**	**21 04 37.7**	**-1.0**
	comp=Z,1.6nm,0.8s,baz=108,slow=4.7,SNR=4.0						
AKASG	**Malin Array Be**	**151.46**	**323**	PKPbc	**PKiKP**	**21 04 44.0**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=46,slow=3.8,SNR=2.3						

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*TAP **27** 20:59:33.0, 24°.61N×121°.96E, h68^{km}, ML3.0, B*

*JMA **27** 20:59:32.6±0.1, 24°.6N±0°.3×122°.0E±0°.3, h71^{km}±1^{km}, MV2.2/9, TAIWAN REGION*

ISC 27 20:59:33.7±1.3**, 24°.63N**±0°.03×**122°.01E**±0°.02**, h66**^{km}±5^{km}**, n118, σ0^{s}79**/202**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.14**	**262**	*i* P	**Pn**	**20 59 43.5**	**-0.1**
TWC				*i* S	**Sn**	**20 59 50.9**	**+0.1**
ESAO	**Su ao**	**0.15**	**250**	P	**Pn**	**20 59 43.8**	**+0.1**
ESAO				S	**Sn**	**20 59 51.1**	**+0.2**
EGS		**0.23**	**343**	*e*P	**Pn**	**20 59 44.0**	**0.0**
NDS	**Dongshan**	**0.26**	**271**	*i* P	**Pn**	**20 59 44.3**	**+0.1**
NDS				S	**Sn**	**20 59 52.5**	**+0.6**
ILA	**Ilan**	**0.27**	**300**	P	**Pn**	**20 59 44.0**	**-0.3**
ILA				*e*S	**Sn**	**20 59 53.0**	**+1.1**
EWUT	**Wuta**	**0.28**	**229**	*i* P	**Pn**	**20 59 44.1**	**-0.2**
EWUT				S	**Sn**	**20 59 52.2**	**+0.2**
EOS2	**EOS2**	**0.29**	**135**	*e*P	**Pn**	**20 59 44.9**	**+0.7**
EOS2				*e*S	**Sn**	**20 59 53.3**	**+1.4**
ENA	**Nanau**	**0.31**	**230**	*i* P	**Pn**	**20 59 44.3**	**-0.3**
ENA				*i* S	**Sn**	**20 59 52.6**	**+0.1**
TWE	**Neicheng**	**0.32**	**287**	*i* P	**Pn**	**20 59 44.8**	**+0.2**
TWE				*i* S	**Sn**	**20 59 53.2**	**+0.7**
TIPB	**Shuangxi**	**0.38**	**335**	*i* P	**Pn**	**20 59 44.8**	**-0.3**
TIPB				*i* S	**Sn**	**20 59 52.9**	**-0.5**
TWB1	**Santiao Chiao**	**0.38**	**358**	*i* P	**Pn**	**20 59 44.7**	**-0.4**
TWB1				*i* S	**Sn**	**20 59 52.7**	**-0.7**
EAHA	**Aohua**	**0.38**	**219**	P	**Pn**	**20 59 44.8**	**-0.3**
EAHA				S	**Sn**	**20 59 53.9**	**+0.5**
ENTT	**Nioudou**	**0.40**	**272**	*e*P	**Pn**	**20 59 45.1**	**-0.1**
ENTT				S	**Sn**	**20 59 54.4**	**+0.7**
FUSB	**Fushanzhiwuyua**	**0.40**	**289**	*i* P	**Pn**	**20 59 45.4**	**0.0**
FUSB				S	**Sn**	**20 59 54.2**	**+0.4**
EOS3	**EOS3**	**0.44**	**140**	*e*P	**Pn**	**20 59 46.0**	**+0.6**
EOS3				*e*S	**Sn**	**20 59 55.6**	**+1.6**
LATG	**Datong**	**0.45**	**258**	*i* P	**Pn**	**20 59 45.6**	**-0.2**
LATG				S	**Sn**	**20 59 55.2**	**+0.6**
SXI1	**Grass Mountain**	**0.48**	**346**	P	**Pn**	**20 59 46.0**	**-0.1**
SXI1				S	**Sn**	**20 59 55.4**	**+0.3**
NWLT	**Wulai**	**0.48**	**288**	P	**Pn**	**20 59 45.8**	**-0.3**
NWF	**Wu-fen Shan**	**0.48**	**335**	P	**Pn**	**20 59 45.9**	**-0.3**
NWF				*i* S	**Sn**	**20 59 54.7**	**-0.5**
WFSB	**Wu-fen Shan**	**0.48**	**335**	P	**Pn**	**20 59 46.0**	**0.0**
WFSB				S	**Sn**	**20 59 54.8**	**-0.2**
TWA	**Mucha**	**0.52**	**313**	P	**Pn**	**20 59 46.1**	**-0.3**
TWA				S	**Sn**	**20 59 55.6**	**-0.1**
NHDH	**Xindian Distri**	**0.55**	**307**	P	**Pn**	**20 59 46.5**	**-0.2**
NHDH				S	**Sn**	**20 59 56.1**	**0.0**
TNOU	**National Taiwa**	**0.56**	**338**	*e*P	**Pn**	**20 59 46.4**	**-0.4**
TNOU				*e*S	**Sn**	**20 59 56.0**	**-0.4**
NHY	**Taipei**	**0.57**	**316**	*e*P	**Pn**	**20 59 47.9**	**+1.0**
NHY				*e*S	**Sn**	**20 59 57.9**	**+1.4**
YHNB	**Yeheng**	**0.57**	**274**	P	**Pn**	**20 59 46.5**	**-0.5**
YHNB	**Yeheng**	**0.57**	**274**	S	**Sn**	**20 59 56.7**	**-0.1**
YHNB	**Yeheng**	**0.57**	**274**	*i* P	**Pn**	**20 59 46.7**	**-0.4**
YHNB				*i* S	**Sn**	**20 59 56.5**	**-0.3**
EOS4	**EOS4**	**0.58**	**150**	*e*P	**Pn**	**20 59 46.6**	**0.0**
EOS4				*e*S	**Sn**	**20 59 56.5**	**+0.4**
ETL	**Fush Village**	**0.58**	**217**	*e*P	**Pn**	**20 59 46.4**	**-0.7**
ETL				*e*S	**Sn**	**20 59 56.9**	**+0.1**
TATO	**Taipei**	**0.58**	**306**	P	**Pn**	**20 59 46.8**	**-0.2**
TATO	**Taipei**	**0.58**	**306**	S	**Sn**	**20 59 56.4**	**-0.4**
NACB	**Ninganchiao**	**0.59**	**220**	P	**Pn**	**20 59 46.0**	**-1.1**
NACB	**Ninganchiao**	**0.59**	**220**	S	**Sn**	**20 59 56.3**	**-0.6**
NACB	**Ninganchiao**	**0.59**	**220**	P	**Pn**	**20 59 46.0**	**-1.1**
NACB				*e*S	**Sn**	**20 59 56.1**	**-0.7**
NSK	**Sanguang**	**0.59**	**275**	*i* P	**Pn**	**20 59 46.8**	**-0.4**
NSK				*i* S	**Sn**	**20 59 56.6**	**-0.5**
NNSB	**Datong**	**0.60**	**251**	*i* P	**Pn**	**20 59 47.0**	**-0.4**
NNSB				*i* S	**Sn**	**20 59 57.0**	**-0.3**
NNSH	**Datong**	**0.60**	**251**	*i* P	**Pn**	**20 59 46.8**	**-0.5**
NNSH				S	**Sn**	**20 59 56.8**	**-0.5**
NNS	**Nan Shan**	**0.60**	**252**	*i* P	**Pn**	**20 59 47.1**	**-0.3**
NNS				*i* S	**Sn**	**20 59 57.0**	**-0.5**
TAP	**Taipei**	**0.61**	**312**	*e*S	**Sn**	**20 59 57.3**	**0.0**
BACT	**New Taipei Cit**	**0.63**	**306**	*e*S	**Sn**	**20 59 58.3**	**+0.7**
ETLH	**Xiulin Townshi**	**0.64**	**229**	*e*P	**Pn**	**20 59 47.0**	**-0.7**
ETLH				*e*S	**Sn**	**20 59 57.7**	**-0.2**
YM01	**YM01**	**0.65**	**323**	P	**Pn**	**20 59 47.4**	**-0.4**
YM01				*e*S	**Sn**	**20 59 57.9**	**-0.3**
TWD	**Chiawan**	**0.66**	**214**	P	**Pn**	**20 59 47.1**	**-0.8**
TWD				*e*S	**Sn**	**20 59 57.7**	**-0.6**
YM08	**YM08**	**0.67**	**326**	*i* P	**Pn**	**20 59 47.6**	**-0.5**
YM08				*e*S	**Sn**	**20 59 57.6**	**-1.0**
ZUZH	**Zhuzihu**	**0.68**	**322**	*i* P	**Pn**	**20 59 47.6**	**-0.5**
ZUZH				*i* S	**Sn**	**20 59 57.6**	**-1.1**
ANP	**Anpu**	**0.71**	**322**	*e*S	**Sn**	**20 59 58.7**	**-0.7**
TWS1	**Kuangyinshan**	**0.71**	**312**	*i* P	**Pn**	**20 59 48.4**	**-0.1**
TWS1				*i* S	**Sn**	**20 59 59.6**	**+0.3**
NTST	**Danshui**	**0.73**	**317**	*e*S	**Sn**	**20 59 59.9**	**+0.1**
HWA	**Hwalien**	**0.74**	**209**	*e*P	**Pn**	**20 59 48.6**	**-0.3**
HWA				*e*S	**Sn**	**21 00 00.0**	**0.0**
KSHI	**Guanxi Townshi**	**0.77**	**281**	*e*P	**Pn**	**20 59 49.5**	**+0.3**
KSHI				*i* S	**Sn**	**21 00 00.7**	**+0.2**
FUSS	**Fushou**	**0.79**	**241**	P	**Pn**	**20 59 49.3**	**-0.4**
FUSS				S	**Sn**	**21 00 00.6**	**-0.8**
NFF	**Wufeng Townshi**	**0.81**	**270**	P	**Pn**	**20 59 49.3**	**-0.4**
NFF				S	**Sn**	**21 00 00.6**	**-0.8**
ETM	**Tongmen**	**0.81**	**215**	*i* P	**Pn**	**20 59 48.3**	**-1.4**
ETM				*e*S	**Sn**	**20 59 59.8**	**-1.6**
LXIB	**Xiulin Townshi**	**0.81**	**222**	*e*P	**Pn**	**20 59 48.5**	**-1.3**
LXIB				*e*S	**Sn**	**21 00 00.4**	**-1.3**
NCUH	**Zhongli**	**0.82**	**295**	*e*P	**Pn**	**20 59 49.6**	**-0.1**
NCUH				*e*S	**Sn**	**21 00 01.5**	**-0.1**
WHF	**Hehuan Shan**	**0.83**	**235**	*e*P	**Pn**	**20 59 49.7**	**-0.6**
WHF				S	**Sn**	**21 00 01.5**	**-1.0**
NJD	**Zhudong**	**0.84**	**277**	*e*P	**Pn**	**20 59 50.1**	**+0.1**
NJD				*e*S	**Sn**	**21 00 02.3**	**+0.2**
TEYL	**Yanliau Villag**	**0.84**	**206**	*e*P	**Pn**	**20 59 49.4**	**-0.7**
TWT	**Tachien**	**0.84**	**244**	P	**Pn**	**20 59 50.4**	**+0.1**
TWT				S	**Sn**	**21 00 02.4**	**0.0**
TDCB	**Techi**	**0.86**	**244**	*i* P	**Pn**	**20 59 50.1**	**-0.3**
TDCB				*i* S	**Sn**	**21 00 02.1**	**-0.5**
JYNG	**Yonagunijimaku**	**0.88**	**101**	*e*P	**Pn**	**20 59 50.1**	**-0.3**
LIOB	**Emei**	**0.90**	**271**	*e*P	**Pn**	**20 59 50.4**	**-0.4**
LIOB				S	**Sn**	**21 00 03.1**	**-0.4**
HSN1	**Hsinchu**	**0.91**	**280**	*e*S	**Sn**	**21 00 03.3**	**-0.3**
NSTT	**Nanjuang**	**0.91**	**270**	P	**Pn**	**20 59 50.5**	**-0.5**
NSTT				S	**Sn**	**21 00 03.0**	**-0.7**
SHUL	**Shoufeng**	**0.93**	**206**	*e*P	**Pn**	**20 59 50.5**	**-0.6**
SHUL				*e*S	**Sn**	**21 00 03.8**	**-0.2**
SBCB	**Hsinchu**	**0.94**	**280**	*e*S	**Sn**	**21 00 04.2**	**0.0**
NHW	**Xinwu Township**	**0.95**	**294**	*e*S	**Sn**	**21 00 04.6**	**+0.2**
HSN	**Hsinchu**	**0.96**	**281**	*e*S	**Sn**	**21 00 03.3**	**-1.4**
ESL	**Shilin**	**0.96**	**213**	*e*P	**Pn**	**20 59 49.9**	**-1.7**
OWD	**Renai**	**1.01**	**229**	*i* P	**Pn**	**20 59 51.7**	**-0.6**
OWD				S	**Sn**	**21 00 05.4**	**-0.7**
WHP	**Taichung City**	**1.03**	**250**	P	**Pn**	**20 59 52.8**	**+0.3**
WHP				S	**Sn**	**21 00 06.7**	**+0.3**
WUSB	**Renai**	**1.03**	**232**	*i* P	**Pn**	**20 59 52.1**	**-0.4**
WUSB				S	**Sn**	**21 00 06.0**	**-0.4**
WARBT	**Fenglin Townsh**	**1.07**	**212**	*e*P	**Pn**	**20 59 51.1**	**-1.9**
WARBT				*e*S	**Sn**	**21 00 05.0**	**-2.2**
EGFH	**Guangfu**	**1.09**	**209**	*e*P	**Pn**	**20 59 52.8**	**-0.4**
EGFH				*e*S	**Sn**	**21 00 05.8**	**-1.9**
NMLH	**Miaoli**	**1.11**	**266**	*e*P	**Pn**	**20 59 54.0**	**+0.5**
NMLH				*e*S	**Sn**	**21 00 07.7**	**-0.4**
DPDB	**Guoxing**	**1.15**	**239**	*e*P	**Pn**	**20 59 54.2**	**+0.2**
DPDB				*e*S	**Sn**	**21 00 10.1**	**+0.9**
WCS	**Beigang Elemen**	**1.15**	**241**	*e*P	**Pn**	**20 59 54.4**	**+0.5**
WCS				*e*S	**Sn**	**21 00 09.4**	**+0.4**
NSY	**Sanyi**	**1.15**	**260**	*e*S	**Sn**	**21 00 09.4**	**+0.3**
TWQ1	**Liyutan**	**1.16**	**256**	*e*P	**Pn**	**20 59 53.4**	**-0.7**
TWQ1				*e*S	**Sn**	**21 00 08.5**	**-0.7**
VWDT	**VWDT**	**1.18**	**222**	*i* P	**Pn**	**20 59 54.0**	**-0.3**
VWDT				*i* S	**Sn**	**21 00 08.7**	**-0.9**
HGSD	**Ruisui**	**1.25**	**205**	*e*P	**Pn**	**20 59 54.2**	**-1.0**
HGSD				*e*S	**Sn**	**21 00 11.3**	**-0.1**
SMLT	**Sun Moon Lake**	**1.25**	**234**	*e*P	**Pn**	**20 59 55.9**	**+0.5**
SMLT				*e*S	**Sn**	**21 00 12.3**	**+0.7**
TYC	**Yuchr**	**1.27**	**236**	*e*P	**Pn**	**20 59 56.0**	**+0.5**
TYC				*e*S	**Sn**	**21 00 12.4**	**+0.6**
SSLB	**Suanglung**	**1.27**	**229**	P	**Pn**	**20 59 55.6**	**0.0**
SSLB	**Suanglung**	**1.27**	**229**	S	**Sn**	**21 00 12.5**	**+0.5**
SSLB	**Suanglung**	**1.27**	**229**	*e*P	**Pn**	**20 59 55.3**	**-0.3**
SSLB				*e*S	**Sn**	**21 00 12.7**	**+0.7**
EHY	**Hungye**	**1.28**	**209**	*e*P	**Pn**	**20 59 53.7**	**-2.0**
EHY				*e*S	**Sn**	**21 00 09.1**	**-3.0**
EHYH	**Wanrong**	**1.28**	**208**	*e*P	**Pn**	**20 59 54.0**	**-1.7**
YULB	**Yu-li**	**1.39**	**208**	P	**Pn**	**20 59 56.8**	**-0.3**
YULB	**Yu-li**	**1.39**	**208**	*e*P	**Pn**	**20 59 55.3**	**-1.8**
WHYT	**Xinyi Township**	**1.40**	**229**	P	**Pn**	**20 59 58.0**	**+0.7**
WHYT				S	**Sn**	**21 00 16.1**	**+1.0**
WJS	**Zhushan**	**1.42**	**236**	*e*P	**Pn**	**20 59 58.3**	**+0.9**
WJS				*e*S	**Sn**	**21 00 16.7**	**+1.5**
WNT	**Mingjian**	**1.42**	**238**	*e*P	**Pn**	**20 59 57.1**	**-0.3**
WNT				*e*S	**Sn**	**21 00 15.7**	**+0.3**
TWF1	**Yuli**	**1.43**	**207**	*e*P	**Pn**	**20 59 56.3**	**-1.3**
WCHH	**Zhanghua**	**1.43**	**248**	*e*S	**Sn**	**21 00 14.9**	**-0.6**
YUS	**Yu-Shan**	**1.49**	**221**	*e*P	**Pn**	**20 59 58.3**	**-0.5**
YUS				*e*S	**Sn**	**21 00 17.4**	**-0.3**
ALS	**Alishan**	**1.56**	**225**	*e*P	**Pn**	**21 00 00.1**	**+0.4**
ALS				*e*S	**Sn**	**21 00 20.3**	**+1.1**
CHN5	**Tsauling**	**1.59**	**230**	*e*P	**Pn**	**21 00 00.3**	**+0.5**
CHN5				*e*S	**Sn**	**21 00 20.2**	**+0.7**
IRIF	**Iriomote-Funau**	**1.60**	**100**	*e*P	**Pn**	**20 59 59.5**	**-0.4**
IRIF				*e*S	**Sn**	**21 00 19.3**	**-0.3**
EHD	**Haiduan**	**1.64**	**207**	*e*P	**Pn**	**20 59 59.8**	**-0.7**
ELDTW	**Lidau**	**1.69**	**212**	*e*P	**Pn**	**21 00 00.2**	**-1.1**
WCKO	**Fanlu**	**1.74**	**227**	*e*P	**Pn**	**21 00 02.4**	**+0.6**
WCKO				*e*S	**Sn**	**21 00 24.4**	**+1.2**
CHN4	**Tsaushan**	**1.81**	**226**	*e*P	**Pn**	**21 00 03.6**	**+0.9**
CHN4				*e*S	**Sn**	**21 00 26.9**	**+2.1**
TPUB	**Ta-pu**	**1.82**	**224**	P	**Pn**	**21 00 03.2**	**+0.2**
TPUB	**Ta-pu**	**1.82**	**224**	S	**Sn**	**21 00 26.5**	**+1.4**
TPUB	**Ta-pu**	**1.82**	**224**	*e*P	**Pn**	**21 00 03.1**	**+0.1**
TPUB				*e*S	**Sn**	**21 00 26.2**	**+1.1**
STYH	**Taoyuan**	**1.84**	**218**	*e*P	**Pn**	**21 00 03.4**	**+0.3**
STYH				*e*S	**Sn**	**21 00 26.2**	**+0.8**
STYT	**Tauyuan**	**1.85**	**218**	*e*P	**Pn**	**21 00 03.9**	**+0.5**
STYT				*e*S	**Sn**	**21 00 27.3**	**+1.4**
JKRS	**Kuro-shima**	**1.87**	**102**	*e*P	**Pn**	**21 00 03.7**	**+0.2**
JKRS				*e*S	**Sn**	**21 00 26.2**	**+0.1**
WTP	**Ta-pu**	**1.87**	**223**	*e*P	**Pn**	**21 00 04.5**	**+0.9**
WTP				*e*S	**Sn**	**21 00 27.5**	**+1.1**
WSF	**Szhu**	**1.90**	**239**	*e*S	**Sn**	**21 00 26.7**	**-0.2**
TWK	**Hsinying**	**1.94**	**226**	*e*P	**Pn**	**21 00 05.0**	**+0.5**
TWK				*e*S	**Sn**	**21 00 29.3**	**+1.3**
JIJ	**Ishigaki jima**	**1.97**	**97**	*e*P	**Pn**	**21 00 04.5**	**-0.3**
JIJ				*e*S	**Sn**	**21 00 27.7**	**-0.7**
SNST	**Tainan City**	**1.97**	**225**	*e*S	**Sn**	**21 00 30.7**	**+2.2**
CHN1	**Nanshi**	**1.97**	**224**	*e*P	**Pn**	**21 00 05.9**	**+0.9**
CHN1				*e*S	**Sn**	**21 00 30.1**	**+1.4**
TWGBT	**Beinan**	**1.99**	**205**	P	**Pn**	**21 00 06.3**	**+1.1**
SGST	**Jiashian**	**2.02**	**220**	*e*P	**Pn**	**21 00 05.3**	**-0.2**
SGST				*e*S	**Sn**	**21 00 30.2**	**+0.5**
JISG	**Ishigakijimahi**	**2.10**	**91**	*e*P	**Pn**	**21 00 06.4**	**-0.2**
JISG				*e*S	**Sn**	**21 00 31.7**	**0.0**

IDC 27 21:24:24.4±2.4**, 9°.96N**×**125°.86E, h0**^{km}**, mb3.4**/4**, mbtmp3.4**/4**, MS3.3**/3**, Error ellipse: s-maj=102.7km s-min=24.1km az=57.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**18.96**	**77**	LR	LR	21 34 10.6	
	comp=Z,22nm,21.6s,baz=126,slow=31						
JCJ	**Chichijima**	**22.98**	**40**	LR	LR	21 36 58.4	
	comp=Z,95nm,21.4s,baz=75,slow=33						
CMAR	**Chiang Mai Arr**	**27.39**	**291**	P	P	21 30 13.1	+1.1
	0.6nm,0.7s,baz=103,slow=7.6,SNR=6.9						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**30.86**	**164**	P	P	21 30 43.1	+0.4
	0.6nm,0.9s,baz=330,slow=10,SNR=2.4						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**34.33**	**167**	P	P	21 31 12.6	-0.5
	0.3nm,0.8s,baz=350,slow=7.1,SNR=6.4						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**52.03**	**323**	P	P	21 33 34.8	-1.1
	0.3nm,0.7s,baz=128,slow=6.9,SNR=4.4						
	0.3nm,0.7s						
MA2	**Magadan**	**52.95**	**16**	LR	LR	21 56 26.9	
	comp=Z,80nm,18.8s,baz=108,slow=36						

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*BJI **27** 21:43:27.6, 51°.14N×176°.63E, h25^{km}, mB5.2/10, mb4.7/53*

*NEIC **27** 21:43:31.9, 51°.21N×175°.88E, h26^{km}*

*NEIC **27** 21:43:31.9, 50°.91N×176°.04E, h26^{km}, Moment Tensor Solution. Duration: 1^{s}6 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.46; $M_{\theta\theta}$0.10; $M_{\phi\phi}$0.36; $M_{r\theta}$0.44; $M_{\theta\phi}$-1.39; $M_{\phi r}$-0.47; Fault plane solution: $M_0$1.59000×10^{16} NP1: ϕ_s183.86000°, δ78.12000°, λ10.41000°. NP2: ϕ_s91.69000°, δ79.82000°, λ167.93000°. Principal axes: T 1.8119,* *Plg16.0000°, Azm48.0000°; N -0.6441, Plg74.0000°, Azm232.0000°; P -1.1678, Plg1.0000°, Azm138.0000°;*

*NEIC **27** 21:43:31.8±1.6, 51°.19N±0°.05×175°.88E±0°.05, h10^{km}±1^{km}, mb4.8/430, ML4.2/10, Mww4.7/17, ML4.2(AEIC) Error ellipse: s-maj=8.5km s-min=4.6km az=161.0*

*AEIC **27** 21:43:34.4±2.5, 50°.96N±0°.07×175°.78E±0°.07, h10^{km}±3^{km}, Error ellipse: s-maj=10.6km s-min=5.7km az=192.0*

*IDC **27** 21:43:36.6±0.5, 51°.24N×175°.82E, h49^{km}±3^{km}, mb4.1/33, mbtmp4.3/36, MS3.6/34, Error ellipse: s-maj=10.2km s-min=6.3km az=33.0*

ISC 27 21:43:33.9±0.5**, 51°.21N**±0°.06×**175°.91E**±0°.03**, h27**^{km}±2^{km}**, h27**^{km}**:pP-P, n712,** σ**0^{s}.92**/651**, mb4.8**/225**, MS3.6**/33**, 3D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSSA	Little Sitkin	1.79	64		Pn	21 44 03.0	+0.1
LSSA					Pb	21 44 03.3	-2.7
LSNW	Little Sitkin	1.80	64		Pn	21 44 03.2	+0.1
LSNW					Sn	21 44 24.8	-0.2
LSSE	Little Sitkin	1.81	65		Pn	21 44 03.6	+0.3
LSPA	Little Sitkin	1.82	65		Pn	21 44 03.7	+0.2
LSPA					Sn	21 44 26.9	+1.2
SHEM	Shemya Is, Ala	1.89	324	P	Pn	21 44 04.3	0.0
	115nm,0.4s,baz=101,slow=6.2,SNR=12						
SHEM				S	Sn	21 44 27.1	-0.1
	728nm,0.3s,baz=304,slow=19,SNR=44						
SHEM				LR	LR	21 44 51.5	
	comp=Z,443nm,21.5s,baz=286,slow=41						
SHEM	Shemya Is, Ala	1.89	324		Pn	21 44 04.0	-0.3
SHEM				Sn	Sn	21 44 27.5	+0.3
SMY	Shemya	1.89	324		Pn	21 44 03.7	-0.6
SMY				Sn	Sn	21 44 27.2	0.0
SMY				IAML		21 44 29.2	
	comp=N,2µm,0.5s						
SMY				IAML		21 44 36.2	
	comp=E,2µm,0.8s						
AMKA	Amchitka	2.14	84		Pn	21 44 06.1	-1.6
AMKA				Sn	Sn	21 44 30.0	-3.4
AMKA				IAML		21 44 34.3	
	comp=E,1µm,0.5s						
AMKA				IAML		21 44 36.7	
	comp=N,973nm,0.5s						
CESW	Semis' Southwe	2.39	72		Pn	21 44 11.5	+0.4
CEAP	Semis' Anvil P	2.42	69		Pn	21 44 12.2	+0.6
CERB	Semis' Cerberu	2.43	71		Pn	21 44 12.5	+0.7
CERB					Sn	21 44 41.5	+0.8
CEPE	Semis' Perret	2.46	71		Pn	21 44 12.7	+0.6
GAKI	Gareloi-Kavalg	3.33	82		Pn	21 44 23.6	-0.5
GAKI					Sn	21 45 01.2	-1.5
GANO	Gareloi North	3.36	77		Pn	21 44 24.5	-0.1
GANO					Sn	21 45 03.4	-0.1
GANE	Gareloi Northe	3.38	78		Pn	21 44 24.4	-0.4
GANE					Sn	21 45 03.9	-0.1
TASE	Tanaga Southea	3.83	78		Pn	21 44 31.1	0.0
TASE					Sn	21 45 14.4	-0.9
TAFL	Tanaga Flats	3.91	80		Pn	21 44 31.8	-0.3
TAPA	Tanaga Point A	3.97	79		Sn	21 45 17.9	-0.7
KIMD	Kanaga Island	4.32	80		Pn	21 44 37.4	-0.3
KIWB	Kanaga Island	4.38	79		Pn	21 44 38.2	-0.4
KIWB				IAML		21 45 28.1	
	comp=E,626nm,0.6s						
ADK	Adak	4.67	79		Pn	21 44 42.2	-0.3
ADK				IAML		21 45 38.9	
	comp=E,508nm,0.4s						
ADAG	Mount Adagdak	4.74	78		Pn	21 44 43.2	-0.2
ETKA	Kagalaska Isla	4.84	79		Pn	21 44 44.6	-0.3
GSCK	Great Sitkin C	5.01	78		Pn	21 44 46.9	-0.3
GSTD	Great Sitkin T	5.02	77		Pn	21 44 46.9	-0.6
GSMY	Great Sitkin M	5.08	77		Pn	21 44 47.3	-0.9
GSMY					Pn	21 44 47.5	-0.6
ATKA	Atka Island	6.24	77		Pn	21 45 03.8	-0.2
KOKL	Mount Kliuchef	6.24	76		Pn	21 45 03.8	-0.3
NIKH	Nikolski High	9.55	73	Pn	Pn	21 45 49.5	+0.2
NIKH	Nikolski High	9.55	73	P	Pn	21 45 47.6	-1.8
	baz=265						
SPIA	Saint Paul Isl	10.07	48	Pn	Pn	21 45 58.0	+1.5
OKTU	Okmok Mt. Tuli	10.07	71		Pn	21 45 57.2	+0.6
P08K	Saint George I	10.13	52	P	Pn	21 45 56.2	-1.1
	baz=244						
UNV	Unalaska Valle	11.04	69		Pn	21 46 10.8	+1.1
UNV	Unalaska Valle	11.04	69	P	Pn	21 46 08.4	-1.3
	baz=263						
PEA0B	Petropavlovsk-	11.35	287	Pn	Pn	21 46 14.3	+0.3
PETK	Petropavlovsk-	11.35	287	P	Pn	21 46 13.4	-0.6
	comp=E,5.1nm,0.5s,baz=102,slow=18,SNR=15						
PETK				S	Sn	21 48 13.2	-6.5
	comp=E,3.1nm,0.4s,baz=40,slow=18,SNR=6.0						
PETK				LR	LR	21 52 07.7	
	comp=E,104nm,18.4s,baz=145,slow=45						
PETK	Petropavlovsk-	11.35	287	Pn	Pn	21 46 13.6	-0.4
AKUT	Akutan	11.50	68	Pn	Pn	21 46 16.5	+0.4
FALS	False Pass	12.96	66	P	Pn	21 46 35.1	-0.8
	baz=262						
M11K	Mekoryuk	13.58	41	Pn	Pn	21 46 43.7	-0.8
M11K	Mekoryuk	13.58	41	P	Pn	21 46 43.8	-0.8
	baz=235						
S12K	Black Hills	13.86	62	Pn	Pn	21 46 48.0	-0.2
S12K	Black Hills	13.86	62	P	Pn	21 46 47.0	-1.3
	baz=260						
GAMB	Gambell	14.21	23	P	Pn	21 46 52.0	-1.0
	baz=213						
SDPT	Sand Point	14.70	64	Pn	Pn	21 46 59.1	-0.6
SDPT	Sand Point	14.70	64	P	Pn	21 46 58.6	-1.0
	baz=263						
M13K	Dall Lake	14.80	43	P	P	21 47 07.2	+0.6
M13K	Dall Lake	14.80	43	P	Pn	21 46 59.3	-1.7
	baz=241						
K13K	Kusilvak Mount	15.10	37	P	Pn	21 47 03.5	-1.5
	baz=233						
CHNA	Chernabura Isl	15.16	67	P	Pn	21 47 04.3	-1.5
	baz=266						
O14K	Tigyukauivet M	15.25	49	Pn	Pn	21 47 07.5	+0.5
O14K				IAmb	IAmb	21 47 32.5	
	comp=Z,56nm,1.1s						
O14K	Tigyukauivet M	15.25	49	P	Pn	21 47 05.3	-1.7
	baz=248						
N14K	Kuskokwak Cree	15.32	47	P	Pn	21 47 06.1	-1.8
	baz=245						
S14K	Fog Glacier	15.34	61	P	Pn	21 47 06.0	-2.3
	baz=261						
L14K	Kuka Creek	15.55	41	P	Pn	21 47 09.4	-1.5
	baz=239						
M14K	Bethel	15.56	44		P	21 47 15.4	+0.3
M14K				IAmb	IAmb	21 47 31.7	
	comp=Z,56nm,1.1s						
M14K	Bethel	15.56	44	P	Pn	21 47 09.8	-1.3
	baz=242						
O15K	Ungalikthiuk R	15.91	51		Pn	21 47 15.6	0.0
O15K				IAmb	IAmb	21 47 34.6	
	comp=Z,66nm,1.1s						
O15K	Ungalikthiuk R	15.91	51	P	Pn	21 47 14.3	-1.4
	baz=250						
J14K	Nanvaranak Lak	16.00	36	P	Pn	21 47 15.0	-1.7
	baz=233						
M15K	Kasigluk River	16.10	45	P	Pn	21 47 16.1	-1.9
	baz=244						
N15K	Kwethluk River	16.15	47	IAmb	IAmb	21 47 37.3	
	comp=Z,47nm,0.9s						
N15K	Kwethluk River	16.15	47	P	Pn	21 47 16.6	-2.0
	baz=247						
L15K	Ungalak Mounta	16.22	41	P	Pn	21 47 17.2	-2.3
	baz=240						
MA2	Magadan	16.47	310	P	Pn	21 47 22.9	+0.2
	comp=Z,5.4nm,0.4s,baz=93,slow=6.4,SNR=4.7						
MA2	Magadan	16.47	310	P	Pn	21 47 22.0	-0.7
	comp=Z,66nm,2.7s						
K15K	Wolf Creek Mou	16.52	39	P	P	21 47 25.8	0.0
K15K	Wolf Creek Mou	16.52	39	P	Pn	21 47 21.2	-2.1
	baz=238						
ANM	Nome	16.58	29		P	21 47 26.4	0.0
ANM	Nome	16.58	29	P	Pn	21 47 22.4	-1.7
	baz=225,SNR=5.4						
TNA	Tin City	16.61	24	P	P	21 47 27.4	+0.7
TNA	Tin City	16.61	24	P	Pn	21 47 22.7	-1.8
	baz=218						
P16K	Nushagak River	16.77	52	P	Pn	21 47 24.8	-1.7
	baz=254						
N16K	Nishlik Lake	16.87	47	P	Pn	21 47 26.0	-1.8
	baz=248						
O16K	Kokwok River B	16.89	50	P	Pn	21 47 26.4	-1.6
	baz=252						
F14K	Arctic Creek	16.97	26	P	Pn	21 47 28.3	-0.7
	baz=221						
M16K	Timber Creek	17.00	45	Pn	Pn	21 47 29.7	+0.2
M16K	Timber Creek	17.00	45	P	Pn	21 47 28.3	-1.1
	baz=246						
L16K	Owhat River	17.07	43		P	21 47 31.1	-0.8
L16K	Owhat River	17.07	43	P	Pn	21 47 28.9	-1.4
	baz=243						
SEY	Seymchan	17.23	322	P	Pn	21 47 31.1	-1.2
	comp=Z,2.1nm,0.6s,baz=114,slow=12,SNR=5.7						
R17L	Mt. Peulik Vol	17.29	57	P	Pn	21 47 31.3	-1.8
	baz=260						
G15K	Niukluk	17.29	29	P	Pn	21 47 32.4	-0.6
	baz=226						
PLK4	Peulik 4	17.29	57	Pn	Pn	21 47 33.2	0.0
PLK4				IAmb	IAmb	21 48 09.9	
	comp=Z,62nm,1.1s						
Q16K	King Salmon	17.35	54	P	Pn	21 47 32.8	-0.9
	baz=256						
J16K	Anvik River	17.41	37		P	21 47 36.2	+0.6
J16K	Anvik River	17.41	37	P	Pn	21 47 34.5	0.0
	baz=237						
O17K	Koliganek Bris	17.43	50	P	Pn	21 47 34.4	-0.3
	baz=252						
CHIR	Chirikof Islan	17.48	64	P	Pn	21 47 35.0	-0.4
	baz=267						
P17K	Kvichak River	17.59	52	P	Pn	21 47 36.3	-0.3
	baz=255						
F15K	North Star Dit	17.61	27	P	P	21 47 38.1	+0.3
F15K	North Star Dit	17.61	27	P	P	21 47 37.3	-0.5
	baz=224						
N17K	Nushagak Hills	17.62	48		P	21 47 37.7	-0.3
N17K	Nushagak Hills	17.62	48	P	Pn	21 47 36.7	-0.5
	baz=250						
H16K	Elim	17.63	32	P	Pn	21 47 37.2	0.0
	baz=231,SNR=8.5						
Q17K	Contact Creek	17.65	55	P	Pn	21 47 36.7	-0.9
	baz=259						
I17K	Unalakleet	17.71	35		P	21 47 41.0	+2.1
I17K	Unalakleet	17.71	35	P	Pn	21 47 38.0	-0.2
	baz=235						
L17K	Donlin	17.76	42	P	P	21 47 39.1	-0.4
	baz=244						
M17K	Holitna River	17.83	45	P	P	21 47 40.3	+0.1
M17K				IAmb	IAmb	21 47 56.1	
	comp=Z,55nm,0.8s						
M17K	Holitna River	17.83	45	P	Pn	21 47 39.6	-0.1
	baz=247						
K17K	Iditarod	18.03	40		P	21 47 42.5	0.0
K17K	Iditarod	18.03	40	P	P	21 47 41.9	-0.5
	baz=242						
J17K	VABM Dome	18.05	38		P	21 47 43.6	+0.9
J17K	VABM Dome	18.05	38	P	Pn	21 47 41.8	-0.6
	baz=239						
G16K	Koyuk River	18.09	30	P	P	21 47 43.5	+0.5
G16K	Koyuk River	18.09	30	P	Pn	21 47 42.5	-0.3
	baz=229						
P18K	Big Mountain,	18.23	52		P	21 47 45.1	+0.3
P18K	Big Mountain,	18.23	52	P	Pn	21 47 44.3	-0.4
	baz=256						
N18K	Kilae Creek	18.28	48		P	21 47 45.2	0.0
N18K	Kilae Creek	18.28	48	P	Pn	21 47 44.8	-0.5
	baz=251						
O18K	Koktuh Hills	18.36	51	P	Pn	21 47 46.5	+0.2
O18K				IAmb	IAmb	21 48 03.2	
	comp=Z,37nm,0.9s						
O18K	Koktuh Hills	18.36	51	P	P	21 47 45.5	-0.6
	baz=255						
L18K	Granite Mounta	18.48	43		Pn	21 47 47.8	+0.1
L18K	Granite Mounta	18.48	43	P	P	21 47 47.0	-0.5
	baz=246						
M18K	Stony River	18.58	45	P	P	21 47 48.4	-0.1
	baz=249						
H17K	Granite Mounta	18.60	33		Pn	21 47 49.2	+0.1
H17K	Granite Mounta	18.60	33	P	Pn	21 47 48.6	-0.5
	baz=234						
G17K	Kiwalik Mounta	18.70	31	P	Pn	21 47 50.2	-0.1
	baz=231						
OHAK	Old Harbor	18.88	59	P	P	21 47 49.9	-1.9
OHAK	Old Harbor	18.88	59	P	P	21 47 51.6	-0.2
	baz=265						
O19K	Port Alsworth	18.88	50	P	Pn	21 47 54.5	+2.0
O19K				IAmb	IAmb	21 48 08.6	
	comp=Z,49nm,0.8s						
O19K	Port Alsworth	18.88	50	P	Pn	21 47 52.0	-0.5
	baz=255						
Q19K	Cape Douglas,	18.93	54	P	P	21 47 50.3	-2.1
Q19K				IAmb	IAmb	21 48 07.8	
	comp=Z,127nm,1.0s						
Q19K	Cape Douglas,	18.93	54	P	P	21 47 52.0	-0.5
	baz=259						
N19K	Bonanza Creek	18.98	48	P	Pn	21 47 54.2	+0.5
N19K				IAmb	IAmb	21 48 10.3	
	comp=Z,34nm,0.8s						
N19K	Bonanza Creek	18.98	48	P	P	21 47 52.6	-0.4
	baz=253						
J18K	Innoko River	19.02	39	P	Pn	21 47 53.7	-0.4
J18K	Innoko River	19.02	39	P	Pn	21 47 53.6	-0.5
	baz=243						
F17K	Baldwin Pennin	19.12	28	P	Pn	21 47 55.3	0.0
F17K				IAmb	IAmb	21 48 13.8	
	comp=Z,44nm,0.9s						
F17K	Baldwin Pennin	19.12	28	P	Pn	21 47 54.7	-0.7
	baz=228						
L19K	White Mountain	19.26	44	P	P	21 47 56.2	+0.2
L19K	White Mountain	19.26	44	P	Pn	21 47 56.4	-0.8
	baz=249						
H18K	Honhosa River	19.27	34	P	Pn	21 47 56.9	-0.2
H18K	Honhosa River	19.27	34	P	Pn	21 47 56.2	-0.9
	baz=236						
P19K	Oil Pt	19.29	52	P	P	21 47 56.6	+0.3
P19K				IAmb	IAmb	21 48 01.1	
	comp=Z,71nm,1.0s						
P19K	Oil Pt	19.29	52	P	P	21 47 56.6	+0.3
	baz=258						
KDAK	Kodiak Island	19.32	58	P	P	21 47 53.3	-3.3
	comp=Z,11nm,0.8s,baz=217,slow=4.0,SNR=25						
KDAK	Kodiak Island	19.32	58	P	P	21 47 53.6	-2.9
KDAK				IAmb	IAmb	21 48 13.6	
	comp=Z,38nm,1.0s						
KDAK	Kodiak Island	19.32	58	P	P	21 47 56.7	+0.1
	baz=264						
E17K	Hotham Inlet	19.39	27	P	Pn	21 47 57.8	-0.9
	baz=226,SNR=12						
C16K	Lisburne Hills	19.39	21		Pn	21 47 57.6	-1.0
C16K	Lisburne Hills	19.39	21	P	P	21 47 57.1	-0.2
	baz=218						
ILSW	Iliamna Southw	19.40	51	P	Pn	21 47 58.2	-0.7
ILSW				IAmb	IAmb	21 48 15.1	
	comp=Z,50nm,0.9s						
D17K	Noatak River	19.50	24	P	P	21 47 58.2	-0.3
	baz=222,SNR=11						
Q20K	Shuyak Island	19.52	55	P	Pn	21 47 59.5	-0.7
	baz=262						
SYI	Shuyak Island	19.52	55	P	P	21 47 59.0	+0.2
SYI				IAmb	IAmb	21 48 23.9	
	comp=Z,36nm,1.0s						
GCSA	Galena City Sc	19.58	36	P	P	21 47 59.6	+0.3
	baz=239,SNR=5.8						
G18K	Tagagawik	19.60	32		Pn	21 48 00.1	-1.0
G18K	Tagagawik	19.60	32	P	P	21 47 59.3	-0.3
	baz=234						
RED	Redoubt Volcan	19.68	50		P	21 48 00.3	-0.4
RED				IAmb	IAmb	21 48 19.9	
	comp=Z,34nm,0.9s						
J19K	Poorman	19.69	39	P	P	21 48 00.8	+0.2
J19K	Poorman	19.69	39	P	P	21 48 00.3	-0.4
	baz=243						
F18K	Selawik	19.71	29	P	P	21 48 01.0	+0.2
	baz=230						
RDOG	Red Dog Mine	19.81	24	P	Pn	21 48 02.7	-0.8
RDOG				IAmb	IAmb	21 48 18.4	
	comp=Z,28nm,0.9s						
RDOG	Red Dog Mine	19.81	24	P	P	21 48 02.0	+0.1
	baz=222,SNR=6.1						
M20K	Styx River	19.93	46	P	Pn	21 48 04.1	-0.9
M20K				IAmb	IAmb	21 48 27.0	
	comp=Z,24nm,0.8s						
M20K	Styx River	19.93	46	P	P	21 48 03.7	+0.4
	baz=252						
K20K	Telida	20.04	41	P	P	21 48 05.0	+0.5
K20K				IAmb	IAmb	21 48 22.7	
	comp=Z,35nm,0.9s						
K20K	Telida	20.04	41	P	P	21 48 04.4	-0.1
	baz=247						
C17K	DeLong Mountai	20.06	23	P	Pn	21 48 05.3	-1.2
	baz=221						
H19K	Roundabout Mou	20.14	34	P	P	21 48 06.0	+0.5
SPCR	Spurr Chakacha	20.15	48	P	P	21 48 06.1	+0.4
	baz=255,SNR=11						
SPU	Mount Spurr	20.22	48	P	Pn	21 48 07.3	-1.2
SPU				IAmb	IAmb	21 48 25.4	
	comp=Z,51nm,0.9s						
CNPM	China Poot	20.26	53	P	P	21 48 05.8	-1.1
CNPM				IAmb	IAmb	21 48 11.4	
	comp=Z,43nm,1.1s						
G19K	Purcell Mounta	20.26	32	P	P	21 48 07.2	+0.4
G19K	Purcell Mounta	20.26	32	P	P	21 48 07.3	+0.4
	baz=236						
J20K	Nowinta River	20.35	39	IAmb	IAmb	21 48 22.4	
	comp=Z,22nm,0.6s						
J20K	Nowinta River	20.35	39	P	P	21 48 08.1	+0.3
	baz=244						
F19K	Shaleruckik Mo	20.44	30	P	P	21 48 09.2	+0.5
	baz=233						
BRLK	Bradley Lake	20.48	52	P	P	21 48 08.1	-1.1
BRLK				IAmb	IAmb	21 48 24.5	
	comp=Z,49nm,1.1s						
BRSE	Bradley Lake S	20.54	53	P	P	21 48 09.9	-0.1
	baz=260						
PPLA	Purkeypile	20.67	43	P	Pn	21 48 12.8	-1.1
PPLA				IAmb	IAmb	21 48 43.2	
	comp=Z,31nm,1.0s						
PPLA	Purkeypile	20.67	43	P	P	21 48 11.6	+0.2
	baz=250						
SKT	Skwentna	20.68	46		P	21 48 12.2	+0.8
SKT				IAmb	IAmb	21 48 27.7	
	comp=Z,47nm,1.0s						
SKT	Skwentna	20.68	46	P	P	21 48 10.8	-0.6
	baz=254,SNR=7.9						
C18K	Utukok River	20.68	24	P	P	21 48 11.8	+0.4
	baz=224						
H20K	Anotleneega Mo	20.69	35	P	P	21 48 11.1	-0.3
	baz=240						
SUA	Susitna One	20.90	48	P	P	21 48 14.5	+0.6
SUA				IAmb	IAmb	21 48 33.5	
	comp=Z,34nm,0.9s						
SUA	Susitna One	20.90	48	P	P	21 48 13.7	-0.2
	baz=256						
SLKM	Skilak Lake	20.94	51	P	P	21 48 14.2	0.0
SLKM				IAmb	IAmb	21 48 32.2	
	comp=Z,20nm,0.7s						
CHUM	Lake Minchumin	20.97	41	P	P	21 48 14.6	+0.1
	baz=248						
E19K	Redstone River	20.99	29	P	P	21 48 14.9	+0.2
	baz=232						
L22K	Petersville	21.18	45	P	P	21 48 16.9	+0.1
O22K	Cooper Landing	21.18	51	P	P	21 48 17.1	+0.4
O22K				IAmb	IAmb	21 48 37.5	
	comp=Z,62nm,0.7s						
O22K	Cooper Landing	21.18	51	P	P	21 48 16.6	-0.1
	baz=259						
F20K	Avaraart Lake	21.23	31	P	P	21 48 16.7	-0.4
	baz=236						
SEW	Seward	21.24	52	P	P	21 48 16.3	-1.2
SEW				IAmb	IAmb	21 48 38.4	
	comp=Z,40nm,1.0s						
SEW	Seward	21.24	52	P	P	21 48 17.4	0.0
	baz=261						
M22K	Willow	21.26	47	P	P	21 48 18.1	+0.5
	baz=256						
RC01	Rabbit Creek A	21.29	49		P	21 48 18.2	+0.3
RC01				IAmb	IAmb	21 48 34.1	
	comp=Z,21nm,0.8s						
RC01	Rabbit Creek A	21.29	49	P	P	21 48 18.3	+0.3
	baz=258,SNR=5.5						
CUT	Chulitna	21.36	45	P	P	21 48 19.9	+1.2
CUT				IAmb	IAmb	21 48 38.2	
	comp=Z,38nm,1.1s						
CUT	Chulitna	21.36	45	P	P	21 48 19.4	+0.6
	baz=254						
D19K	Kuna River	21.39	26		P	21 48 19.8	+0.8
D19K				IAmb	IAmb	21 48 36.3	
	comp=Z,35nm,1.1s						
D19K	Kuna River	21.39	26	P	P	21 48 19.1	0.0
	baz=229						
C19K	Lookout Ridge	21.41	24	P	P	21 48 20.1	+0.8
C19K	Lookout Ridge	21.41	24	P	P	21 48 19.1	-0.2
	baz=226						
KTH	Kantishna Hill	21.43	42	P	P	21 48 20.3	+0.7
KTH				IAmb	IAmb	21 48 36.9	
	comp=Z,63nm,1.2s						
H21K	Melozitna Rive	21.52	36	P	P	21 48 20.8	+0.4
H21K				IAmb	IAmb	21 48 39.0	
	comp=Z,30nm,1.2s						
H21K	Melozitna Rive	21.52	36	P	P	21 48 20.8	+0.4
	baz=243						
BPAW	Bear Paw Mtn.	21.60	41	P	P	21 48 22.8	+1.5
BPAW				IAmb	IAmb	21 48 37.9	
	comp=Z,25nm,0.9s						
BPAW	Bear Paw Mtn.	21.60	41	P	P	21 48 21.6	+0.3
	baz=249						
I21K	Tanana	21.62	38	P	P	21 48 21.8	+0.3
	baz=245						
TRF	Thorofare Moun	21.67	43	P	P	21 48 22.2	0.0
TRF	Thorofare Moun	21.67	43	P	P	21 48 22.5	+0.3
	baz=251						
PMR	Palmer	21.68	48	P	P	21 48 22.4	+0.3
	baz=257						
G21K	Allakaket	21.68	33	P	P	21 48 22.0	-0.2
G21K	Allakaket	21.68	33	P	P	21 48 22.5	+0.3
	baz=240						
E20K	Nigu River	21.80	28	P	P	21 48 23.8	+0.4
	baz=232						
GHO	Glory Hole Cre	21.82	47	P	P	21 48 23.9	+0.1
A19K	Wainwright	21.86	21	P	P	21 48 24.4	+0.5
	baz=221						
PWL	Port Wells	21.92	50	IAmb	IAmb	21 48 39.4	
	comp=Z,27nm,0.7s						
PWL	Port Wells	21.92	50	P	P	21 48 24.4	-0.3
	baz=260						
KNK	Knik Glacier	21.96	49	IAmb	IAmb	21 48 27.1	
	comp=Z,23nm,0.6s						
KNK	Knik Glacier	21.96	49	P	P	21 48 25.0	-0.2
	baz=258,SNR=7.5						
MLY	Manley	22.05	38	P	P	21 48 24.8	-1.3
MLY	Manley	22.05	38	P	P	21 48 26.7	+0.7
	baz=247						
F21K	Alatna River	22.06	32	P	P	21 48 26.4	+0.3
F21K				IAmb	IAmb	21 48 42.1	
	comp=Z,34nm,1.1s						
F21K	Alatna River	22.06	32	P	P	21 48 26.5	+0.3
	baz=238						
SML	Sawmill	22.10	48		P	21 48 26.6	-0.1
SML				IAmb	IAmb	21 48 41.7	
	comp=Z,49nm,1.0s						
SML	Sawmill	22.10	48	P	P	21 48 27.1	+0.4
	baz=258,SNR=8.3						
WAT1	Susitna Watana	22.24	45	P	P	21 48 28.4	+0.1
	baz=255						
P23K	Montague Islan	22.25	52	P	P	21 48 27.0	-1.2
P23K				IAmb	IAmb	21 48 45.9	
	comp=Z,80nm,1.1s						
MCK	McKinley	22.33	42	P	P	21 48 28.0	-1.1
MCK	McKinley	22.33	42	P	P	21 48 28.8	-0.3
	baz=252						
M23K	Glacier View	22.38	48	P	P	21 48 29.4	-0.2
	baz=258,SNR=6.9						
GLI	Glacier Island	22.52	50	P	P	21 48 29.2	-2.0
GLI				IAmb	IAmb	21 48 34.1	
	comp=Z,25nm,0.7s						
GLI	Glacier Island	22.52	50	P	P	21 48 30.2	-0.9
	baz=261						
WAT6	Susitna Watana	22.54	46	P	P	21 48 31.3	-0.3
	baz=256,SNR=8.0						
NEA2	Nenana	22.55	40	P	P	21 48 31.1	-0.4
NEA2				IAmb	IAmb	21 48 47.5	
	comp=Z,40nm,1.1s						
NEA2	Nenana	22.55	40	P	P	21 48 31.5	0.0
	baz=250,SNR=16						
SCM	Sheep Creek Mo	22.57	48	P	P	21 48 31.0	-0.8
SCM				IAmb	IAmb	21 48 56.8	
	comp=Z,27nm,0.8s						
SCM	Sheep Creek Mo	22.57	48	P	P	21 48 30.9	-0.9
	baz=259						
I23K	Minto, Yukon-K	22.63	39	P	P	21 48 31.8	-0.5
I23K	Minto, Yukon-K	22.63	39	P	P	21 48 32.1	-0.1
	baz=249,SNR=5.8						
F22K	John River	22.64	32	P	P	21 48 32.2	-0.1
	baz=240						
B20K	Meade River	22.66	24	P	P	21 48 31.5	-1.0
B20K	Meade River	22.66	24	P	P	21 48 31.9	-0.6
	baz=228						
Q23K	Middleton Isla	22.72	54	P	P	21 48 33.2	-0.1
	baz=266						

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HIN   Hinchinbrook I    22.74  52 P     P      21 48 33.7 +0.2
HIN                               IAmb  IAmb   21 48 49.1
      comp=Z,50nm,1.0s
C21K  Knifeblade Rid    22.75  27 P     P      21 48 33.4 -0.1
      baz=233
FID   Port Fidalgo      22.80  51 P     P      21 48 31.9 -2.2
FID                               IAmb  IAmb   21 48 46.2
      comp=Z,45nm,1.1s
H23K  Yukon River       22.82  37 P     P      21 48 34.6 +0.3
H23K  Yukon River       22.82  37 P     P      21 48 34.1 -0.2
      baz=247
DHY   Denali Highway    22.82  45 P     P      21 48 33.7 -0.8
DHY                               IAmb  IAmb   21 48 55.7
      comp=Z,20nm,1.0s
DHY   Denali Highway    22.82  45 P     P      21 48 33.8 -0.8
      baz=256,SNR=9.8
WRH   Wood River Hil    22.91  41 P     P      21 48 33.8 -1.4
G23K  Bananza Creek     23.01  35 P     P      21 48 35.8 -0.4
      baz=244
E22K  Anaktuvuk Pass    23.08  31 P     P      21 48 36.5 -0.5
E22K  Anaktuvuk Pass    23.08  31 P     P      21 48 37.1 +0.1
      baz=239
B21K  Ikpikpuk River    23.08  26 P     P      21 48 36.5 -0.4
B21K  Ikpikpuk River    23.08  26 P     P      21 48 36.7 -0.2
      baz=232
CCB   Clear Creek Bu    23.08  41 P     P      21 48 36.0 -1.0
EYAK  Cordova Ski Ar    23.13  51 P     P      21 48 36.9 -0.6
      baz=263
COLA  College           23.14  40 P     P      21 48 36.9 -0.6
      baz=251
M24K  Tolsona, Glenn    23.16  47       P      21 48 37.1 -0.8
M24K                              IAmb  IAmb   21 49 13.1
      comp=Z,48nm,0.8s
M24K  Tolsona, Glenn    23.16  47 P     P      21 48 37.3 -0.5
      baz=259
KLU   Klutina           23.17  49 P     P      21 48 37.4 -0.7
KLU                               IAmb  IAmb   21 49 16.7
      comp=Z,20nm,1.0s
KLU   Klutina           23.17  49 P     P      21 48 37.6 -0.4
      baz=261
COLD  Coldfoot          23.17  33 P     P      21 48 38.9 +1.0
COLD  Coldfoot          23.17  33 P     P      21 48 37.5 -0.4
      baz=243
DIV   Divide            23.19  50 P     P      21 48 37.4 -0.8
D22K  Ayikyak River     23.21  29 P     P      21 48 39.1 +0.9
D22K  Ayikyak River     23.21  29 P     P      21 48 38.0 -0.2
      baz=236
HDA   Harding Lake      23.37  41 P     P      21 48 39.4 -0.4
      baz=253
POKR  Poker Plat Res    23.39  40 P     P      21 48 40.0  0.0
POKR  Poker Plat Res    23.39  40 P     P      21 48 39.4 -0.6
      baz=251
H24K  Noodor Dome       23.46  38       P      21 48 40.7 -0.1
H24K                              IAmb  IAmb   21 48 56.7
      comp=Z,43nm,1.2s
H24K  Noodor Dome       23.46  38 P     P      21 48 39.7 -1.1
      baz=249
IL31                    23.50  41 P     P      21 48 40.4 -0.6
ILAR  Eielson Array     23.50  41 P     P      21 48 39.8 -1.3
      comp=Z,4.0nm,0.9s,baz=244,slow=8.7,SNR=28
ILAR                              LR    LR     22 00 10.0
      comp=Z,99nm,18.2s,baz=228,slow=42
      comp=Z,4.0nm,0.9s
ILAR  Eielson Array     23.50  41 P     P      21 48 40.0 -1.1
RAGM  Ragged Mountai    23.64  52 P     P      21 48 42.8 +0.2
RAGM                              IAmb  IAmb   21 49 11.8
      comp=Z,46nm,0.8s
PAX   Paxson            23.65  45 IAmb  IAmb   21 48 57.0
      comp=Z,44nm,1.0s
PAX   Paxson            23.65  45 P     P      21 48 41.7 -1.0
      baz=258,SNR=14
HARP  HAARP             23.68  47 P     P      21 48 42.4 -0.5
      baz=260
A21K  Barrow            23.69  22 P     P      21 48 42.3 -0.6
      baz=226
K24K  Donnelly Dome     23.70  43 IAmb  IAmb   21 48 56.2
      comp=Z,26nm,0.8s
K24K  Donnelly Dome     23.70  43 P     P      21 48 42.1 -1.1
      baz=256
KAIM  Kayak Island      23.73  53 P     P      21 48 42.8 -0.7
BMRM  Bremner River     23.73  50 P     P      21 48 43.0 -0.5
BMRM                              IAmb  IAmb   21 49 23.9
      comp=Z,22nm,0.9s
BMRM  Bremner River     23.73  50 P     P      21 48 42.6 -0.9
      baz=264
E23K  Chandalar         23.76  32 P     P      21 48 43.2 -0.5
      baz=242
N25K  Chitina, Valde    23.82  49       P      21 48 44.1 -0.2
N25K                              IAmb  IAmb   21 48 47.7
      comp=Z,14nm,0.7s
N25K  Chitina, Valde    23.82  49 P     P      21 48 43.4 -0.9
      baz=262
B22K  Teshekpuk Lake    23.85  25 P     P      21 48 43.9 -0.5
B22K  Teshekpuk Lake    23.85  25 P     P      21 48 42.7 -1.7
      baz=232
D23K  Nanushuk River    23.86  29 P     P      21 48 43.7 -0.9
      baz=239
A22K  Sinclair Lake     23.87  23 P     P      21 48 43.7 -0.9
      baz=229
G24K  Hadweenzic Riv    23.93  36 P     P      21 48 44.8 -0.4
      baz=248
TOLK  Toolik Lake Re    24.05  31 IAmb  IAmb   21 49 04.5
      comp=Z,13nm,0.8s
TOLK  Toolik Lake Re    24.05  31 P     P      21 48 46.0 -0.4
      baz=241
J25K  Salcha River,     24.08  41 P     P      21 48 46.0 -0.8
      baz=255
RIDG  Independent Ri    24.09  44 P     P      21 48 45.5 -1.3
      baz=257
F24K  Squaw Lake        24.11  34 P     P      21 48 46.6 -0.3
      baz=245
E24K  Your Creek        24.14  32 P     P      21 48 48.3 +1.1
E24K  Your Creek        24.14  32 P     P      21 48 47.0 -0.2
      baz=244
GLB   Gilahina Butte    24.17  49       P      21 48 47.3 -0.3
GLB                               IAmb  IAmb   21 49 02.1
      comp=Z,27nm,1.1s
PRP   Porcupine Dome    24.27  39 P     P      21 48 47.8 -0.8
PRP   Porcupine Dome    24.27  39 P     P      21 48 47.4 -1.2
      baz=253
VRDI  Verde Repeater    24.32  50 P     P      21 48 48.8 -0.3
VRDI                              IAmb  IAmb   21 48 50.3
      comp=Z,18nm,0.8s
C23K  Itkillik River    24.35  28 P     P      21 48 49.2 +0.2
      baz=237
DOT   Dot Lake          24.41  44 IAmb  IAmb   21 49 03.5
      comp=Z,14nm,0.9s
CRQM  Cirque            24.43  51 P     P      21 48 50.2 +0.1
MENT  Mentasta          24.43  46 IAmb  IAmb   21 49 07.2
      comp=Z,26nm,0.8s
CRQE  Cirque            24.45  51 P     P      21 48 50.0 -0.2
      baz=266
G25K  Bearman Lake      24.46  36 P     P      21 48 50.0 -0.1
      baz=249
SCRK  Sand Creek        24.51  43 P     P      21 48 49.6 -1.2
SCRK  Sand Creek        24.51  43 P     P      21 48 49.9 -0.9
      baz=258,SNR=9.7
D24K  Happy Valley      24.54  30 P     P      21 48 50.6 -0.1
D24K  Happy Valley      24.54  30 P     P      21 48 50.6 -0.1
      baz=241
MCARA McCarthy VSAT     24.54  50 IAmb  IAmb   21 49 06.9
      comp=Z,32nm,0.9s
MCARA McCarthy VSAT     24.54  50 P     P      21 48 50.5 -0.4
      baz=264,SNR=6.4
L26K  Log Cabin Wild    24.61  46 IAmb  IAmb   21 49 07.4
      comp=Z,22nm,0.8s
L26K  Log Cabin Wild    24.61  46 P     P      21 48 51.2 -0.4
      baz=260,SNR=11
M26K  Nabesna, AK       24.68  47 IAmb  IAmb   21 49 13.4
      comp=Z,14nm,0.9s
M26K  Nabesna, AK       24.68  47 P     P      21 48 51.7 -0.4
      baz=262
J26L  Joseph Creek      24.81  42 IAmb  IAmb   21 49 07.4
      comp=Z,12nm,0.8s
J26L  Joseph Creek      24.81  42 P     P      21 48 52.4 -1.0
      baz=257
C24K  Franklin Bluff    24.85  29 P     P      21 48 54.7 +1.1
C24K  Franklin Bluff    24.85  29 P     P      21 48 53.4 -0.2
      baz=240
F25K  Christian Rive    24.93  34 P     P      21 48 54.1 -0.2
      baz=248
YAH   Yahtse            25.09  52 P     P      21 48 56.9 +0.7
YAH                               IAmb  IAmb   21 49 12.4
      comp=Z,25nm,0.9s
GRNC  Granite Creek     25.11  51 P     P      21 48 56.6 +0.3
GRNC                              IAmb  IAmb   21 49 12.1
      comp=Z,38nm,0.8s
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E25K  Arctic Village    25.16  33 P     P      21 48 57.3 +0.9
E25K  Arctic Village    25.16  33 P     P      21 48 56.5 +0.1
      baz=247
I26K  Coal Creek Min    25.17  40 P     P      21 48 55.8 -0.7
      baz=256
BARN  Barnard Glacie    25.17  50 IAmb  IAmb   21 49 14.3
      comp=Z,40nm,0.9s
M27K  Edge Creek, AK    25.19  47 IAmb  IAmb   21 49 13.0
      comp=Z,27nm,0.9s
M27K  Edge Creek, AK    25.19  47 P     P      21 48 56.5 -0.4
      baz=263
BMAR  Burnt Mountain    25.25  35 P     P      21 48 58.5 +1.2
L27K  Beaver Creek,     25.30  46 P     P      21 48 58.5 +0.7
      baz=262
BCAR  Beaver Creek A    25.32  46 P     P      21 48 57.8 -0.2
CTG   Chitna Glacier    25.32  51 P     P      21 48 57.6 -0.5
      baz=267
CTGM  Chitina Glacie    25.32  51 IAmb  IAmb   21 49 16.2
      comp=Z,41nm,1.0s
K27K  Chicken           25.35  44 IAmb  IAmb   21 49 12.7
      comp=Z,17nm,1.0s
G26K  Porcupine Rive    25.39  36 IAmb  IAmb   21 49 00.9
      comp=Z,12nm,0.8s
G26K  Porcupine Rive    25.39  36 P     P      21 48 58.7 +0.3
      baz=252
D25K  Kavik River       25.39  30 P     P      21 48 58.9 +0.4
      baz=244
LOGN  Logan Glacier     25.48  51 P     P      21 48 59.4 -0.2
LOGN                              IAmb  IAmb   21 49 15.3
      comp=Z,46nm,1.1s
F26K  Sheenjek River    25.50  35       P      21 49 00.1 +0.6
F26K  Sheenjek River    25.50  35 P     P      21 48 59.9 +0.4
      baz=250
BVCY  Beaver Creek      25.66  47 P     P      21 49 00.5 -0.5
      baz=264
YUK3  Moose Creek       25.80  49 P     P      21 49 02.0 -0.5
      baz=266,SNR=10
PCA   Pinnacle          25.83  53 P     P      21 49 03.7 +1.1
PCA                               IAmb  IAmb   21 49 24.1
      comp=Z,52nm,1.2s
PINM  Pinnacle          25.83  53 P     P      21 49 02.2 -0.5
      baz=270
I27K  Kandik River      25.86  40 P     P      21 49 03.1 +0.2
I27K  Kandik River      25.86  40 P     P      21 49 02.8 -0.1
      baz=257
O28M  Mount Upton       25.88  51 P     P      21 49 02.9 -0.4
      baz=268
H27K  Steamboat Moun    26.05  39 P     P      21 49 04.1 -0.5
H27K  Steamboat Moun    26.05  39 P     P      21 49 04.6  0.0
      baz=256
YUK8  Steele Glacier    26.10  50 P     P      21 49 04.5 -0.8
      baz=268
C26K  Camden Bay        26.11  30 P     P      21 49 04.5 -0.5
      baz=245
G27K  Doyon Strip       26.15  37 P     P      21 49 06.1 +0.7
      baz=254
C27K  Jago River        26.37  31 P     P      21 49 08.2 +0.9
C27K  Jago River        26.37  31 P     P      21 49 08.0 +0.6
      baz=247
I28M  Miner Creek       26.52  41 IAmb  IAmb   21 49 24.8
      comp=Z,17nm,1.1s
I28M  Miner Creek       26.52  41 P     P      21 49 08.4 -0.4
      baz=259
DAWY  Dawson            26.52  44 IAmb  IAmb   21 49 23.4
      comp=Z,26nm,1.0s
DAWY  Dawson            26.52  44 P     P      21 49 08.9 +0.1
      baz=262,SNR=8.5
E27K  Coleen River      26.57  34 P     P      21 49 08.5 -0.7
      baz=252
YUK4  Talbot Arm        26.64  50 P     P      21 49 09.4 -0.7
      baz=268
O29M  Mount Kennedy     26.67  52 P     P      21 49 10.3  0.0
O29M  Mount Kennedy     26.67  52 P     P      21 49 09.9 -0.4
      baz=271
YUK6  Outpost Mounta    26.77  51 P     P      21 49 10.4 -1.0
      baz=270
M29M  Somme Creek       26.78  48 IAmb  IAmb   21 49 11.5
      comp=Z,10nm,0.6s
M29M  Somme Creek       26.78  48 P     P      21 49 11.1 -0.2
      baz=266
L29M  L29M              26.98  46 P     P      21 49 13.2 +0.2
      baz=265
F28M  Old Crow          27.03  36 P     P      21 49 13.3  0.0
      baz=255
YAK   Yakutsk           27.04 312 LR    LR     22 01 33.6
      comp=Z,69nm,18.1s,baz=90,slow=40
J29N  Klondike Camp     27.08  43 P     P      21 49 13.5 -0.4
      baz=263
P29M  Windy Craggy      27.11  54 P     P      21 49 14.4 +0.2
P29M                              IAmb  IAmb   21 49 54.2
      comp=Z,16nm,1.0s
P29M  Windy Craggy      27.11  54 P     P      21 49 14.1  0.0
      baz=273
D27M  Malcolm River     27.13  32 P     P      21 49 15.3 +1.0
D27M  Malcolm River     27.13  32 P     P      21 49 14.4 +0.1
      baz=251
I29M  Ogilvie Camp,     27.17  41 P     P      21 49 13.9 -0.7
I29M                              IAmb  IAmb   21 49 33.6
      comp=Z,11nm,0.9s
I29M  Ogilvie Camp,     27.17  41 P     P      21 49 14.2 -0.4
      baz=261
HYT   Haines Junctio    27.19  51       P      21 49 14.4 -0.6
HYT                               IAmb  IAmb   21 49 34.5
      comp=Z,13nm,0.8s
HYT   Haines Junctio    27.19  51 P     P      21 49 14.2 -0.8
      baz=270
H29M  Whitestone        27.30  39 P     P      21 49 15.3 -0.4
H29M  Whitestone        27.30  39 P     P      21 49 15.4 -0.4
      baz=259
K29M  Barlow Dome       27.32  45 P     P      21 49 15.2 -0.8
      baz=265
N30M  Aishikik Lake     27.39  50 P     P      21 49 18.1 +1.3
N30M                              IAmb  IAmb   21 49 36.1
      comp=Z,14nm,1.0s
N30M  Aishikik Lake     27.39  50 P     P      21 49 15.9 -0.8
      baz=270
E28M  Babbage River     27.43  34 P     P      21 49 17.3 +0.4
E28M  Babbage River     27.43  34 P     P      21 49 16.6 -0.3
      baz=253
M30M  Minto, Yukon      27.56  47 P     P      21 49 17.4 -0.8
M30M  Minto, Yukon      27.56  47 P     P      21 49 17.3 -0.8
      baz=268
G29M  Pine Creek        27.57  38 IAmb  IAmb   21 49 32.9
      comp=Z,12nm,0.9s
G29M  Pine Creek        27.57  38 P     P      21 49 18.7 +0.5
      baz=258
O30N  Mendenhall        27.89  51 P     P      21 49 20.8 -0.3
      baz=272
J30M  Hart River        27.90  43 P     P      21 49 21.3  0.0
J30M  Hart River        27.90  43 P     P      21 49 21.0 -0.4
      baz=264
E29M  Blow River        27.95  35 P     P      21 49 22.1 +0.6
I30M  Mount Dempster    27.95  42 P     P      21 49 21.3 -0.5
      baz=263
EPYK  Eagle Plains      27.98  39 IAmb  IAmb   21 49 36.2
      comp=Z,11nm,0.8s
EPYK  Eagle Plains      27.98  39 P     P      21 49 21.6 -0.2
      baz=261
G30M  tAoh Zraii Nji    28.28  38 P     P      21 49 24.9 +0.4
G30M  tAoh Zraii Nji    28.28  38 P     P      21 49 24.5  0.0
      baz=260
F30M  Barrier River     28.56  37 P     P      21 49 28.3 +1.3
F30M                              IAmb  IAmb   21 49 36.5
      comp=Z,12nm,1.1s
F30M  Barrier River     28.56  37 P     P      21 49 27.2 +0.3
      baz=259
M31M  Drury Creek, Y    28.67  48 P     P      21 49 28.3 +0.3
M31M  Drury Creek, Y    28.67  48 P     P      21 49 27.9 -0.2
      baz=271
H31M  Peel River        28.86  41 P     P      21 49 29.7  0.0
H31M  Peel River        28.86  41 P     P      21 49 29.4 -0.4
      baz=264
G31M  Satah River       29.03  38 IAmb  IAmb   21 49 45.8
      comp=Z,9.8nm,0.8s
G31M  Satah River       29.03  38 P     P      21 49 31.4 +0.3
      baz=262,SNR=6.1
P32M  Atlin             29.15  54 P     P      21 49 34.2 +1.8
P32M                              IAmb  IAmb   21 49 37.8
      comp=Z,19nm,1.1s
F31M  Tsiigehtchic      29.30  37 P     P      21 49 33.4 -0.2
      baz=262
INK   Inuvik            29.52  36 P     P      21 49 35.5 +0.1
INK   Inuvik            29.52  36 P     P      21 49 34.8 -0.7
      baz=260
P33M  Teslin, Yukon     29.54  52 P     P      21 49 35.8 -0.1
P33M  Teslin, Yukon     29.54  52 P     P      21 49 35.7 -0.1
      baz=276
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Q32M  Nakina River      29.97  55 P     P      21 49 40.1 +0.3
Q32M                              IAmb  IAmb   21 50 20.3
      comp=Z,12nm,1.1s
CRAG  Craig             30.16  62 P     P      21 49 41.0 -0.3
      baz=284
HEH   HeiHe             30.27 288 eP    P      21 49 40.3 -2.0
HEH                               pmax  pmax
      comp=Z,6.0nm,1.6s
MJAR  Matsushiro Arr    30.49 256 P     P      21 49 44.5 +0.1
      comp=Z,1.3nm,0.6s,baz=340,slow=21,SNR=1.7
MJAR                              LR    LR     21 59 58.8
      comp=Z,47nm,20.5s,baz=56,slow=32
      comp=Z,1.3nm,0.6s
R33M  Jennings River    30.57  54 P     P      21 49 45.8 +0.9
R33M  Jennings River    30.57  54 P     P      21 49 44.8 -0.2
      baz=278
BNX   BinXian           32.13 280 ⇓P    P      21 49 57.8 -0.9
BNX                               pmax  pmax
      comp=Z,10.0nm,1.1s
H11N2 WAKE ISLAND Hy    32.21 196 T     T      22 23 52.5
      baz=11,slow=76,SNR=13
H11N3 WAKE ISLAND Hy    32.22 196 T     T      22 23 53.3
      baz=11,slow=76,SNR=18
H11N1 WAKE ISLAND Hy    32.22 196 T     T      22 23 53.9
      baz=11,slow=76,SNR=18
A36M  Sachs Harbour     32.86  29 P     P      21 50 04.2 -0.5
      baz=263
C36M  Paulatuk          33.04  34 P     P      21 50 05.7 -0.7
      baz=268
H11S1 WAKE ISLAND Hy    33.44 196 T     T      22 25 23.0
      baz=10,slow=76,SNR=13
H11S3 WAKE ISLAND Hy    33.45 196 T     T      22 25 23.4
      baz=10,slow=76,SNR=12
H11S2 WAKE ISLAND Hy    33.45 196 T     T      22 25 26.0
      baz=10,slow=76,SNR=8.5
TOAD  Toad River Com    33.57  54 P     P      21 50 10.7 -0.5
      baz=283
WRGLY Wrigley           33.62  45 P     P      21 50 10.9 -0.5
      baz=278
KOTAN Kotaneelee Air    33.88  51 P     P      21 50 13.5 -0.4
      baz=282
BBB   Bella Bella       33.98  66 LR    LR     22 02 21.9
      comp=Z,64nm,21.6s,baz=236,slow=33
CN2   Changchun         34.30 278 P     P      21 50 19.3 +1.7
HILR  Hailar Array B    35.11 290 P     P      21 50 24.6 -0.1
      comp=Z,1.1nm,0.4s,baz=114,slow=9.9,SNR=3.7
      comp=Z,1.1nm,0.4s
KSRS  Korea Array       36.31 267 P     P      21 50 35.2 +0.3
      comp=Z,2.1nm,0.9s,baz=61,slow=10,SNR=4.5
KSRS                              LR    LR     22 03 59.6
      comp=Z,16nm,21.8s,baz=55,slow=34
      comp=Z,2.1nm,0.9s
JNU   Nakatsue          37.26 259 LR    LR     22 04 44.6
      comp=Z,31nm,21.1s,baz=52,slow=34
YKAW3 Yellowknife Wh    37.72  45 P     P      21 50 47.0 +0.3
YKA   Yellowknife Ar    37.74  45 P     P      21 50 46.9 +0.1
      comp=Z,2.6nm,0.8s,baz=286,slow=9.2,SNR=33
YKA                               LR    LR     22 08 36.7
      comp=Z,112nm,18.1s,baz=36,slow=40
      comp=Z,2.6nm,0.8s
YKA   Yellowknife Ar    37.74  45 P     P      21 50 46.4 -0.5
YKAW1 Yellowknife Wh    37.79  45 P     P      21 50 47.4 +0.1
LLLB  Lillooet          38.19  66 P     P      21 50 50.4 -0.5
H04A  Detroit Lake      40.88  74 P     P      21 51 14.3 +1.0
H04A                              IAmb  IAmb   21 51 29.2
      comp=Z,32nm,0.8s
I04A  Tendick Farm,     41.22  75 P     P      21 51 17.4 +1.3
I04A                              IAmb  IAmb   21 51 32.0
      comp=Z,35nm,0.8s
RES   Resolute Bay      41.26  24 LR    LR     22 10 53.7
      comp=Z,61nm,18.8s,baz=297,slow=40
RES   Resolute Bay      41.26  24 P     P      21 51 17.2 +1.3
WAH2  Wahluke Slope     41.37  70 P     P      21 51 18.1 +0.8
WAH2                              IAmb  IAmb   21 51 32.6
      comp=Z,22nm,0.6s
WIFE  Three Sisters-    41.44  75       P      21 51 18.8 +0.7
BBOR  Butler Butte      41.55  77 P     P      21 51 20.2 +1.2
BBOR                              IAmb  IAmb   21 51 35.5
      comp=Z,20nm,0.8s
HAWA  Hanford           41.58  70 IAmb  IAmb   21 51 34.9
      comp=Z,24nm,0.7s
D08A  Wollman Farm,     41.59  69 P     P      21 51 20.0 +0.8
D08A                              IAmb  IAmb   21 51 34.3
      comp=Z,14nm,0.8s
J04A  Umpqua Nationa    41.71  76       P      21 51 21.8 +1.5
NEW   Newport           42.03  67 LR    LR     22 08 28.6
      comp=Z,112nm,18.4s,baz=270,slow=36
KHMM  Horse Mountain    42.04  80 P     P      21 51 24.5 +1.5
KHMM                              IAmb  IAmb   21 51 51.0
      comp=Z,18nm,1.0s
PINE  Pine Mountain     42.11  74 P     P      21 51 24.8 +1.1
PINE                              IAmb  IAmb   21 51 39.5
      comp=Z,16nm,0.9s
BJI   Beijing           42.14 279 P     P      21 51 24.8 +1.2
BJI                               pmax  pmax
      comp=Z,3.0nm,0.9s
L04D  Klamath Falls     42.16  77       P      21 51 25.0 +1.1
YBH   Yreka Blue Hor    42.18  78 P     P      21 51 26.2 +2.1
YBH                               IAmb  IAmb   21 51 41.7
      comp=Z,31nm,0.9s
J05D  Fort Rock, OR     42.22  75 IAmb  IAmb   21 51 40.4
      comp=Z,32nm,0.8s
K04D  Chiloquin, OR     42.27  76 P     P      21 51 26.0 +1.2
KMRM  Mail Ridge        42.44  81 P     P      21 51 27.4 +1.2
KMRM                              IAmb  IAmb   21 51 42.9
      comp=Z,20nm,1.0s
G08A  Pilot Rock        42.49  71 P     P      21 51 27.6 +1.0
N02D  Trinity Center    42.62  79 P     P      21 51 30.2 +2.6
N02D                              IAmb  IAmb   21 51 44.8
      comp=Z,14nm,0.8s
K05A  Summer Lake       42.73  76       P      21 51 30.0 +1.3
M03C  McCloud           42.81  78       P      21 51 30.9 +1.7
M03C                              IAmb  IAmb   21 51 45.8
      comp=Z,30nm,0.8s
NRIK  Noril'sk          42.85 329 P     P      21 51 29.9 +0.8
      comp=Z,2.5nm,0.6s,baz=73,slow=9.5,SNR=5.2
      comp=Z,2.5nm,0.6s
O02D  Mt. Diablo Mer    43.03  80 P     P      21 51 32.8 +1.8
O02D                              IAmb  IAmb   21 51 47.8
      comp=Z,18nm,1.1s
DCMP  DeCamp, Califo    43.11  81 P     P      21 51 32.3 +0.8
DCMP                              IAmb  IAmb   21 51 53.0
      comp=Z,13nm,1.1s
F10A  Beach Ranch, E    43.16  70 P     P      21 51 31.8 -0.2
F10A                              IAmb  IAmb   21 51 53.4
      comp=Z,12nm,1.0s
JOW   Kunigami          43.30 254 LR    LR     22 05 33.4
      comp=Z,52nm,21.9s,baz=122,slow=30
HATC  Hat Creek Radi    43.48  78 P     P      21 51 35.9 +1.3
HOPS  Hopland Field     43.56  82 P     P      21 51 35.7 +0.5
O03E  Paynes Creek      43.57  79 P     P      21 51 35.8 +0.4
SONM  Songino Array     43.71 294 P     P      21 51 37.4 +0.9
      comp=Z,2.3nm,0.6s,baz=64,slow=8.2,SNR=18
SONM                              pP    pwP    21 51 50.1 +0.9
      comp=Z,2.0nm,0.7s,baz=58,slow=8.3,SNR=7.8
SONM                              PcP   PcP    21 53 22.9 -0.2
      comp=Z,1.1nm,0.8s,baz=33,slow=4.4,SNR=3.6
      comp=Z,2.3nm,0.6s
SONM  Songino Array     43.71 294 P     P      21 51 36.8 +0.3
BMO   Blue Mountains    43.72  71 IAmb  IAmb   21 51 52.1
      comp=Z,12nm,0.7s
ORV   Oroville          44.20  80 IAmb  IAmb   21 51 56.0
      comp=Z,9.3nm,0.8s
CVS   Carmenet Viney    44.34  82 P     P      21 51 42.6 +1.2
CVS                               IAmb  IAmb   21 51 43.7
      comp=Z,34nm,1.0s
PLID  Pearl Lake        44.36  70 P     P      21 51 42.7 +0.8
HHC   Hu-ho-hao-te      44.51 283 eP    P      21 51 43.8 +0.9
HHC                               pmax  pmax
      comp=Z,18nm,0.5s
HHC                               pmax  pmax
      comp=Z,180nm,5.2s
MSO   Missoula          44.62  67 P     P      21 51 42.8 -0.9
HNS   HongShan          44.64 277 ⇓P    P      21 51 45.0 +1.2
HNS                               pmax  pmax
      comp=Z,21nm,1.1s
BEKR  Beckworth         44.72  79 P     P      21 51 45.2 +0.6
BLKN  Baker Lake        44.86  38 P     P      21 51 44.9 -0.4
BLKN                              IAmb  IAmb   21 52 00.4
      comp=Z,8.5nm,1.0s
BPMT  Black Pine Rid    45.12  67 P     P      21 51 46.9 -0.9
GUMO  Guam              45.12 225 LR    LR     22 06 29.4
      comp=Z,44nm,20.7s,baz=75,slow=30
PAHR  Pah Rah Range     45.42  78       P      21 51 50.9 +0.7
NJ2   Nanjing           45.49 268 eP    P      21 51 51.5 +0.9
NJ2                               pmax  pmax
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      comp=Z,12nm,0.6s
LYMT  Lyon Mountain    45.49  66  P       P       21 51 50.5 -0.3
BTO   Baotou           45.60 283 eP       P       21 51 53.3 +1.7
BTO                               pP      pP      21 51 59.5 +1.5
BTO                               sP      sP      21 52 02.0 +1.5
BTO                               pmax    pmax
      comp=Z,79nm,1.0s
BTO                               pmax    pmax
      comp=Z,490nm,7.6s
PNTR  Pine Nut         45.66  79  P       P       21 51 52.8 +0.6
HRY   Holter Researc   45.90  66  P       P       21 51 53.1 -0.8
HLID  Hailey           46.16  71  IAmb    IAmb    21 52 11.8
      comp=Z,13nm,0.9s
BBGB  Big Mountain B   46.31  83  P       P       21 51 57.7 +0.5
POIN  Pond Inlet       46.41  23  P       P       21 51 57.4  0.0
POIN                              IAmb    IAmb    21 52 26.0
      comp=Z,6.1nm,1.0s
RYN   Ryan             46.60  79  P       P       21 52 00.4 +0.9
RYN                               IAmb    IAmb    21 52 16.1
      comp=Z,19nm,0.9s
BOZ   Bozeman (W)      46.64  67  IAmb    IAmb    21 52 13.8
      comp=Z,5.1nm,0.8s
PMPB  Monarch Peak     46.69  83  P       P       21 52 01.6 +1.4
NVAR  Mina Array Bea   46.86  79  P       P       21 52 03.0 +1.3
      comp=Z,6.2nm,0.8s,baz=290,slow=7.9,SNR=24
NVAR                              pP      pwP     21 52 16.3 +0.7
      comp=Z,16nm,0.8s,baz=294,slow=8.0,SNR=19
      comp=Z,6.2nm,0.8s
NVAR  Mina Array Bea   46.86  79  P       P       21 52 03.1 +1.5
MDPB  Devils Postpil   46.88  80  P       P       21 52 02.7 +0.9
MDPB                              IAmb    IAmb    21 52 18.4
      comp=Z,16nm,0.8s
FFC   Flin Flon        46.90  52          P       21 52 00.8 -0.7
NV11  Mina Array Sit   46.95  79          P       21 52 02.9 +0.6
NV11                              IAmb    IAmb    21 52 19.0
      comp=Z,17nm,1.1s
PKD   Bear Valley Ra   47.03  83  P       P       21 52 03.9 +1.1
PKD                               IAmb    IAmb    21 52 18.0
      comp=Z,17nm,0.8s
ILON  Igloolik, Nuna   47.19  28  P       P       21 52 03.7 +0.2
ILON                              IAmb    IAmb    21 52 04.6
      comp=Z,7.7nm,0.7s
YHL   Hebgen Lake      47.32  68  IAmb    IAmb    21 52 29.6
      comp=Z,13nm,1.2s
ELK   Elko             47.33  75  P       P       21 52 05.2 -0.1
      comp=Z,4.7nm,0.7s,baz=309,slow=8.9,SNR=19
ELK                               pP      pwP     21 52 19.6 +0.3
      comp=Z,22nm,0.8s,baz=308,slow=8.4,SNR=32
      comp=Z,4.7nm,0.7s
YHB   Horse Butte      47.37  68  IAmb    IAmb    21 52 20.6
      comp=Z,15nm,0.9s
LYN   LuoYang          47.85 275  P       P       21 52 10.0 +0.9
LYN                               pmax    pmax
      comp=Z,22nm,0.9s
YNE   Yellowstone No   47.91  67  P       P       21 52 09.4 -0.4
YNE                               IAmb    IAmb    21 52 26.6
      comp=Z,4.8nm,0.8s
MOOW  Moose Ponds      48.22  69  P       P       21 52 13.1 +1.0
CWC   Cottonwood Cre   48.25  81  P       P       21 52 13.6 +1.3
CWC                               IAmb    IAmb    21 52 28.2
      comp=Z,7.1nm,0.8s
RLMT  Red Lodge        48.27  66  IAmb    IAmb    21 52 27.2
      comp=Z,6.8nm,1.1s
FCC   Fort Churchill   48.44  44  IAmb    IAmb    21 52 29.2
      comp=Z,11nm,1.0s
BGU   Big Grassy Mou   48.55  73  P       P       21 52 15.1 +0.5
BGU                               IAmb    IAmb    21 52 41.3
      comp=Z,7.3nm,0.9s
MPMC  Manual Prospec   48.86  81  P       P       21 52 17.3 +0.2
MPMC                              IAmb    IAmb    21 52 32.4
      comp=Z,6.2nm,0.7s
CLC   China Lake       48.95  81  P       P       21 52 17.9 +0.2
CLC                               IAmb    IAmb    21 52 33.9
      comp=Z,12nm,0.8s
SPR3  Spring Creek 3   48.95  76          P       21 52 19.0 +1.1
SPR3                              IAmb    IAmb    21 52 33.4
      comp=Z,15nm,0.7s
LRMC  Laurel Mtn Rad   49.11  82  P       P       21 52 19.1 +0.1
LRMC                              IAmb    IAmb    21 52 33.9
      comp=Z,5.5nm,0.7s
DUG   Dugway, Tooele   49.13  74  P       P       21 52 19.7 +0.6
WSHM  Spangler Hills   49.15  81  P       P       21 52 20.4 +1.2
WSHM                              IAmb    IAmb    21 52 35.4
      comp=Z,14nm,0.8s
CCCA  Chr Cany lake    49.28  81  P       P       21 52 21.6 +1.4
GWY   Greenwater Val   49.28  80  IAmb    IAmb    21 52 35.9
      comp=Z,9.8nm,0.8s
WHN   Wuhan            49.34 270  P       P       21 52 20.8 +0.2
BW06  Boulder Array    49.50  69  IAmb    IAmb    21 52 37.5
      comp=Z,9.3nm,0.9s
PD31  Pinedale Array   49.50  69  IAmb    IAmb    21 52 37.5
      comp=Z,8.7nm,0.9s
PDAR  Pinedale Array   49.50  69  P       P       21 52 21.4 -0.6
      comp=Z,2.3nm,0.6s,baz=297,slow=3.2,SNR=13
PDAR                              pP      pwP     21 52 35.7 -0.4
      comp=Z,6.4nm,0.7s,baz=298,slow=3.2,SNR=20
PDAR                              LR      LR      22 13 34.8
      comp=Z,66nm,18.1s,baz=289,slow=36
      comp=Z,2.3nm,0.6s
PDAR  Pinedale Array   49.50  69  P       P       21 52 21.7 -0.3
PRN   Pahroc Range     49.51  78  P       P       21 52 22.3 +0.3
PSUT  Pine Spring      49.53  76  IAmb    IAmb    21 52 37.5
      comp=Z,17nm,0.7s
GSC   Goldstone, Bar   49.77  81  P       P       21 52 25.0 +1.1
BSUT  Blindstream Ca   50.15  72  P       P       21 52 27.5 +0.3
BSUT                              IAmb    IAmb    21 52 43.6
      comp=Z,7.5nm,0.6s
SPITS Spitsbergen Ar   50.27 355  P       P       21 52 27.4 +0.3
      comp=Z,6.6nm,0.4s,baz=40,slow=6.6,SNR=68
SPITS                             pP      pwP     21 52 40.9 +0.5
      comp=Z,6.2nm,0.4s,baz=58,slow=7.0,SNR=5.3
      comp=Z,6.6nm,0.4s
SPB2  Spitsbergen Ar   50.27 355  P       P       21 52 27.5 +0.4
SPB2                              IAmb    IAmb    21 52 50.2
      comp=Z,26nm,1.1s
XAN   Xi'an            50.40 277  P       P       21 52 28.0 -0.7
XAN                               pmax    pmax
      comp=Z,13nm,0.8s
XAN                               pmax    pmax
      comp=Z,360nm,5.0s
CCUT  Cedar City       50.45  77          P       21 52 29.4 +0.2
CCUT                              IAmb    IAmb    21 52 44.4
      comp=Z,11nm,0.8s
ELS   Elsinore Mount   50.47  83  P       P       21 52 29.0 -0.2
ELS                               IAmb    IAmb    21 52 44.2
      comp=Z,9.5nm,0.9s
TPUB  Ta-pu            50.57 258  P       P       21 52 29.7 -0.3
TMUT  Trail Mountain   50.66  74  P       P       21 52 31.3 +0.4
V12A  Nelson           50.71  79  P       P       21 52 31.7 +0.6
P17A  Butcher Ranch,   50.83  73  P       P       21 52 33.1 +1.1
P17A                              IAmb    IAmb    21 52 47.2
      comp=Z,18nm,0.7s
RDMU  Red Mountain     50.84  71  P       P       21 52 32.7 +0.5
MTPU  Mount Pierson    50.86  75          P       21 52 33.5 +1.0
MTPU                              IAmb    IAmb    21 52 48.0
      comp=Z,15nm,0.8s
LCMT  Little Creek M   50.87  77  P       P       21 52 32.9 +0.6
Q16A  Castle Valley    50.92  74          P       21 52 33.2 +0.5
Q16A                              IAmb    IAmb    21 52 48.0
      comp=Z,20nm,0.7s
P18A  Preston Nutter   51.03  73  P       P       21 52 34.6 +1.0
P18A                              IAmb    IAmb    21 52 48.9
      comp=Z,12nm,0.7s
PFO   Pinyon Flats O   51.09  83  LR      LR      22 10 58.5
      comp=Z,76nm,19.7s,baz=290,slow=32
KNB   Kanab            51.12  77  P       P       21 52 33.8 -0.5
KNB                               IAmb    IAmb    21 52 49.7
      comp=Z,17nm,0.8s
PKCU  Pink Cliffs      51.16  76  P       P       21 52 35.9 +1.2
PKCU                              IAmb    IAmb    21 52 50.3
      comp=Z,19nm,0.8s
SRU   San Rafael Swe   51.18  73  P       P       21 52 35.4 +0.7
IRM   Iron Mountain    51.55  81  P       P       21 52 36.9 -0.5
IRM                               IAmb    IAmb    21 52 53.0
      comp=Z,7.2nm,0.8s
ZALV  Zalesovo Beam    51.69 311  P       P       21 52 37.8 -0.2
      comp=Z,0.5nm,0.6s,baz=38,slow=7.5,SNR=4.1
ZALV                              PcP     PcP     21 53 51.4 +0.2
      comp=Z,0.8nm,0.7s,baz=343,slow=4.6,SNR=3.6
ZALV                              pPcP            21 54 05.5
      comp=Z,0.7nm,0.6s,baz=48,slow=4.4,SNR=3.7
ZALV                              LR      LR      22 16 01.5
      comp=Z,48nm,18.2s,baz=24,slow=38
      comp=Z,0.5nm,0.6s
W13A  Hualapai Mount   51.71  79          P       21 52 39.6 +0.9
W13A                              IAmb    IAmb    21 52 54.6
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      comp=Z,7.4nm,0.8s
CBX   Cerro Bola       51.83  84  P       P       21 52 41.3 +1.7
O20A  White River Ci   51.90  71  IAmb    IAmb    21 52 55.2
      comp=Z,18nm,0.7s
BLYC  Blythe           52.21  81  P       P       21 52 43.1 +0.9
BLYC                              IAmb    IAmb    21 52 58.0
      comp=Z,15nm,0.9s
LZH   Lanzhou          52.21 283 eP       P       21 52 43.8 +1.4
LZH                               sP      sP      21 52 51.3 -0.1
LZH                               pmax    pmax
      comp=Z,21nm,1.0s
LZDM  Lanzhou Array    52.38 283  P       P       21 52 43.8 -0.1
      comp=Z,1.4nm,0.4s,baz=348,slow=14,SNR=4.3
      comp=Z,1.4nm,0.4s
PV21  Cone Mtn., Par   52.47  73  IAmb    IAmb    21 53 02.9
      comp=Z,18nm,0.8s
GLA   Glamis           52.48  82  IAmb    IAmb    21 52 59.7
      comp=Z,15nm,0.8s
GTA   Gaotai           52.51 289  P       P       21 52 45.0 +0.5
GTA                               sP      pwP     21 52 58.5 +0.2
GTA                               pmax    pmax
      comp=Z,17nm,1.1s
ULM   Lac du Bonnet    52.51  54  P       P       21 52 43.1 -1.1
      comp=Z,3.6nm,0.6s,baz=299,slow=5.7,SNR=4.6
ULM                               LR      LR      22 16 08.6
      comp=Z,110nm,18.5s,baz=12,slow=37
      comp=Z,3.6nm,0.6s
PV22  Blue Mesa, Par   52.60  73  IAmb    IAmb    21 53 00.3
      comp=Z,23nm,0.8s
PV05  Paradox Valley   52.70  73  P       P       21 52 46.8 +0.7
PV05                              IAmb    IAmb    21 53 02.6
      comp=Z,16nm,0.7s
PV12  Saucer Basin,    52.73  73  P       P       21 52 47.0 +0.8
PV07  Paradox Valley   52.74  73  IAmb    IAmb    21 53 01.4
      comp=Z,17nm,0.8s
PV15  Paradox Valley   52.90  73  IAmb    IAmb    21 53 02.6
      comp=Z,18nm,0.8s
PV01  Paradox Valley   52.98  73  P       P       21 52 49.5 +1.3
WUAZ  Wupatki          52.98  77  IAmb    IAmb    21 53 03.5
      comp=Z,20nm,0.8s
X16A  Lo Mia Camp, P   53.67  78          P       21 52 52.7 -0.5
X16A                              IAmb    IAmb    21 53 09.3
      comp=Z,9.7nm,0.9s
SUMG  Summit           54.21  12  P       P       21 52 57.4 +0.5
SUMG                              IAmb    IAmb    21 53 24.2
      comp=Z,11nm,1.1s
W18A  Petrified Fore   54.25  77  P       P       21 52 58.1 +0.6
S22A  4UR Ranch, Cre   54.28  72  P       P       21 52 58.4 +0.7
S22A                              IAmb    IAmb    21 53 13.4
      comp=Z,14nm,0.8s
X18A  Snowflake        54.51  77  P       P       21 52 60.0 +0.6
X18A                              IAmb    IAmb    21 53 14.8
      comp=Z,16nm,0.8s
FRB   Frobisher Bay    54.86  29  LR      LR      22 17 29.1
      comp=Z,101nm,21.1s,baz=344,slow=37
OGNE  Ogallala         55.02  66  P       P       21 53 04.1 +1.2
OGNE                              IAmb    IAmb    21 53 19.6
      comp=Z,11nm,0.8s
SDCO  Great Sand Dun   55.08  71          P       21 53 04.0 +0.5
SDCO                              IAmb    IAmb    21 53 19.4
      comp=Z,9.4nm,0.9s
EYMN  Ely              56.20  54  P       P       21 53 11.2 +0.1
EYMN                              IAmb    IAmb    21 53 12.0
      comp=Z,12nm,0.9s
TASM  ASL Pad, Albuq   56.36  75  P       P       21 53 13.2 +0.5
TASM                              IAmb    IAmb    21 53 28.3
      comp=Z,9.1nm,0.9s
ANMO  Albuquerque      56.36  75  P       P       21 53 12.2 -0.5
      comp=Z,2.1nm,0.8s,baz=314,slow=8.4,SNR=7.3
      comp=Z,2.1nm,0.8s
ABQ   Albuquerque      56.37  75          P       21 53 12.9 +0.2
ABQ                               IAmb    IAmb    21 53 28.3
      comp=Z,9.1nm,0.9s
WMQ   Urumqi           56.59 300 eP       P       21 53 15.3 +1.3
WMQ                               pP      pP      21 53 19.5 -1.4
WMQ                               pmax    pmax
      comp=Z,12nm,0.9s
Y22A  Socorro          56.74  76          P       21 53 16.7 +1.4
TBO   Thunder Bay      56.79  52  P       P       21 53 15.1 -0.2
TBO                               IAmb    IAmb    21 53 38.2
      comp=Z,12nm,1.0s
SFJD  Kangerlussuaq    56.99  20  LR      LR      22 20 53.9
      comp=Z,54nm,18.2s,baz=340,slow=39
SFJD  Kangerlussuaq    56.99  20  P       P       21 53 16.1 -0.3
SFJD                              IAmb    IAmb    21 53 37.2
      comp=Z,13nm,0.9s
GYA   Guiyang          57.02 272 ⇓P       P       21 53 18.0 +0.7
GYA                               pmax    pmax
      comp=Z,16nm,1.0s
319A  Douglas          57.06  80          P       21 53 18.4 +0.8
319A                              IAmb    IAmb    21 53 34.1
      comp=Z,8.3nm,0.9s
121A  Cookes Peak, D   57.19  78  P       P       21 53 19.5 +0.9
121A                              IAmb    IAmb    21 53 35.0
      comp=Z,11nm,0.9s
MKAR  Makanchi Array   57.48 306  P       P       21 53 19.8 -0.5
      comp=Z,2.2nm,0.7s,baz=52,slow=7.7,SNR=26
MKAR                              pP      pwP     21 53 32.8 -0.4
      comp=Z,3.1nm,0.8s,baz=53,slow=7.6,SNR=12
MKAR                              LR      LR      22 21 00.0
      comp=Z,46nm,19.0s,baz=28,slow=39
      comp=Z,2.2nm,0.7s
RTBA  Rita Blanca      57.59  71  P       P       21 53 21.4 +0.1
RTBA                              IAmb    IAmb    21 53 36.2
      comp=Z,11nm,0.8s
MAKZ  Makanchi         57.63 306          P       21 53 20.8 -0.5
ARCES ARCESS Array B   57.63 348  P       P       21 53 21.1 +0.2
      comp=Z,1.6nm,0.4s,baz=26,slow=8.3,SNR=25
ARCES                             pP      pwP     21 53 34.6 +0.5
      comp=Z,2.9nm,0.6s,baz=31,slow=7.9,SNR=2.3
      comp=Z,1.6nm,0.4s
ARCES ARCESS Array B   57.63 348  P       P       21 53 20.9  0.0
ARCES                             IAmb    IAmb    21 53 27.0
      comp=Z,7.1nm,0.9s
LVZ   Lovozero         57.73 344  P       P       21 53 21.3 -0.4
LVZ                               IAmb    IAmb    21 53 25.9
      comp=Z,19nm,1.1s
G40A  Rib Lake         58.65  56  P       P       21 53 28.4 -0.1
G40A                              IAmb    IAmb    21 54 12.3
      comp=Z,12nm,1.1s
BVAR  Borovoye Array   58.81 317  P       P       21 53 29.1 -0.2
      comp=Z,4.1nm,0.6s,baz=42,slow=6.8,SNR=21
BVAR                              pP      pwP     21 53 43.0 +0.5
      comp=Z,3.5nm,0.7s,baz=46,slow=8.5,SNR=6.9
BVAR                              LR      LR      22 21 14.3
      comp=Z,93nm,18.1s,baz=52,slow=38
      comp=Z,4.1nm,0.6s
BORK  Borovoye         58.83 317          P       21 53 29.9 +0.5
BORK                              IAmb    IAmb    21 53 30.5
      comp=Z,5.1nm,0.7s
KUQ   Kuujjuuaa        59.06  34  P       P       21 53 31.3 +0.3
KUQ                               IAmb    IAmb    21 53 47.3
      comp=Z,10nm,0.7s
PZH   PanZhiHua        60.08 276  P       P       21 53 38.5 -0.1
PZH                               pmax    pmax
      comp=Z,10.0nm,0.9s
VHRN  Van Horn         60.12  77  P       P       21 53 40.0 +1.1
VHRN                              IAmb    IAmb    21 53 54.3
      comp=Z,13nm,0.8s
I42A  Draeger Farm,    60.27  56  P       P       21 53 39.6 +0.1
DAV   Davao City (W)   60.42 241  LR      LR      22 15 10.5
      comp=Z,237nm,20.4s,baz=14,slow=31
DKNS  Dickens          60.57  72  P       P       21 53 42.6 +0.8
POST  Post             60.64  73          P       21 53 42.7 +0.3
ODSA  Odessa           60.67  74  P       P       21 53 42.6  0.0
E46A  Sault Ste Mari   60.87  51          P       21 53 43.6  0.0
ARTI  Arti             61.03 326  LR      LR      22 20 56.8
      comp=Z,46nm,21.1s,baz=34,slow=37
ARTI  Arti             61.03 326          P       21 53 45.5 +1.0
WMOK  Wichita Mounta   61.10  70  P       P       21 53 45.9 +0.5
WMOK                              IAmb    IAmb    21 54 01.0
      comp=Z,12nm,0.9s
OK029 Liberty Lake     61.14  68  P       P       21 53 44.8 -0.9
OK029                             IAmb    IAmb    21 53 47.1
      comp=Z,12nm,0.8s
W35A  Tecumseh         61.93  68  P       P       21 53 51.6 +0.6
TXAR  Lajitas Array    61.95  77  P       P       21 53 52.0 +0.7
      comp=Z,5.6nm,0.9s,baz=302,slow=4.0,SNR=44
TXAR                              pP      pwP     21 54 05.7 +0.2
      comp=Z,17nm,0.8s,baz=306,slow=5.3,SNR=27
TXAR                              PKKPbc  PKKPdf  22 15 02.3  +25
      comp=Z,0.5nm,1.0s,baz=27,slow=1.4,SNR=3.5
      comp=Z,5.6nm,0.9s
TXAR  Lajitas Array    61.95  77  P       P       21 53 52.3 +1.0
WTFS  Witchita Falls   61.97  70  P       P       21 53 51.1 -0.2
ABTX  Abilene, Hawle   62.07  72  P       P       21 53 53.1 +1.1
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SCHQ  Schefferville    62.14  36  P       P       21 53 52.0 -0.1
      comp=Z,12nm,0.9s,baz=327,slow=6.5,SNR=15
      comp=Z,12nm,0.9s
OZNA  Ozona            62.38  74          P       21 53 54.7 +0.6
BOOM  Boomskoye usch   63.73 306  IAmb    IAmb    21 54 04.6
      comp=Z,8.0nm,1.2s
MIAR  Mount Ida        64.27  66  P       P       21 54 06.5  0.0
MIAR                              IAmb    IAmb    21 54 22.9
      comp=Z,17nm,1.1s
LSA   Lhasa            64.33 286          P       21 54 07.8 +0.3
LSA                               IAmb    IAmb    21 54 09.6
      comp=Z,5.0nm,0.5s
AAK   Ala-Archa        64.36 307  P       P       21 54 07.9 +0.7
      comp=Z,2.1nm,0.8s,baz=136,slow=3.6,SNR=11
      comp=Z,2.1nm,0.8s
AAK   Ala-Archa        64.36 307          P       21 54 07.5 +0.4
AAK                               IAmb    IAmb    21 54 08.5
      comp=Z,3.8nm,0.9s
PBMO  Poplar Bluff     64.46  63  IAmb    IAmb    21 54 22.4
      comp=Z,16nm,1.0s
SADO  Sadowa           64.53  50  LR      LR      22 22 43.5
      comp=Z,108nm,18.5s,baz=328,slow=36
FINES FINESS Array B   65.14 345  P       P       21 54 12.3 +0.7
      comp=Z,2.0nm,0.6s,baz=20,slow=7.4,SNR=14
      comp=Z,2.0nm,0.6s
PMG   Port Moresby     65.29 211  LR      LR      22 21 46.0
      comp=Z,37nm,19.1s,baz=308,slow=35
KSH   Kashi            65.88 303  P       P       21 54 21.0 +4.0
KSH                               sP      pwP     21 54 34.8 +4.7
KSH                               pmax    pmax
      comp=Z,7.0nm,1.0s
KK31  Karatay Array    65.98 309  IAmb    IAmb    21 54 18.5
      comp=Z,3.7nm,0.8s
KKAR  Karatay Array    65.98 309          P       21 54 17.6 +0.1
AB31  Akbulak array    65.99 320  IAmb    IAmb    21 54 33.4
      comp=Z,4.0nm,0.9s
ABKAR Akbulak array    65.99 320  P       P       21 54 18.1 +0.7
ARSB  Arslanbob        66.08 307  IAmb    IAmb    21 54 19.4
      comp=Z,4.2nm,1.0s
T47A  Sharon Grove     66.15  60          P       21 54 18.9 +0.2
WVT   Waverly          66.37  61  P       P       21 54 20.0 -0.1
WVT                               IAmb    IAmb    21 54 21.7
      comp=Z,7.1nm,0.9s
CLTN  Cedars of Leba   67.23  61  IAmb    IAmb    21 54 26.6
      comp=Z,9.5nm,0.8s
NC204 NORSAR Array S   67.24 352  P       P       21 54 25.7 +0.4
T50A  Nancy            67.35  59  P       P       21 54 26.4  0.0
NB2   NORSAR Subarra   67.43 352  P       P       21 54 26.9 +0.4
      comp=Z,1.5nm,0.6s,baz=11,slow=6.5
NOA   NORSAR Array B   67.43 352  P       P       21 54 27.2 +0.7
      comp=Z,3.5nm,0.8s,baz=11,slow=6.4,SNR=10
      comp=Z,3.5nm,0.8s
CHTO  Chiang Mai       67.44 272          P       21 54 26.9 -0.2
CHTO                              IAmb    IAmb    21 54 27.8
      comp=Z,8.0nm,0.9s
CM31  Chiang Mai Arr   67.71 272  P       P       21 54 29.1 +0.3
CM31                              IAmb    IAmb    21 54 29.6
      comp=Z,5.0nm,0.7s
CMAR  Chiang Mai Arr   67.71 272  P       P       21 54 28.7 -0.1
      comp=Z,4.0nm,0.7s,baz=26,slow=7.2,SNR=43
CMAR                              pP      pwP     21 54 41.6 -1.2
      comp=Z,2.8nm,0.8s,baz=25,slow=6.9,SNR=7.4
CMAR                              LR      LR      22 26 19.7
      comp=Z,9.2nm,19.1s,baz=60,slow=38
      comp=Z,4.0nm,0.7s
CMAR  Chiang Mai Arr   67.71 272          P       21 54 28.8  0.0
DRK   Karamyk          68.06 306  P       P       21 54 31.0 -0.1
DRK                               IAmb    IAmb    21 54 47.5
      comp=Z,4.0nm,0.5s
M57A  Sunshine Farm,   68.08  51          P       21 54 30.8 -0.1
HFS   Hagfors          68.09 351  P       P       21 54 30.8 +0.2
      comp=Z,1.7nm,0.4s,baz=26,slow=3.8,SNR=20
HFS                               pP      pwP     21 54 44.1 +0.2
      comp=Z,3.7nm,0.6s,baz=23,slow=1.9,SNR=3.4
      comp=Z,1.7nm,0.4s
SWET  Sewanee          68.09  61  IAmb    IAmb    21 54 31.6
      comp=Z,14nm,1.0s
SSPA  Standing Stone   68.24  52  P       P       21 54 31.8 -0.1
H62A  Milan            68.38  45  P       P       21 54 32.0 -0.6
TKL   Tuckaleechee C   68.94  59  P       P       21 54 36.2 -0.1
      comp=Z,5.3nm,0.8s,baz=294,slow=6.3,SNR=3.8
TKL                               LR      LR      22 24 11.0
      comp=Z,82nm,19.2s,baz=334,slow=35
      comp=Z,5.3nm,0.8s
TKL   Tuckaleechee C   68.94  59  IAmb    IAmb    21 54 50.4
      comp=Z,12nm,0.9s
GAR   Garm             69.18 307  IAmb    IAmb    21 54 38.6
      comp=Z,9.5nm,0.9s
BG3   Lake Jocassee    69.89  59  IAmb    IAmb    21 54 57.4
      comp=Z,10nm,0.9s
CHGR  Chuyangaron      70.02 307          P       21 54 43.3 +0.2
CHGR                              IAmb    IAmb    21 54 44.2
      comp=Z,15nm,1.0s
152A  Waverly Hall     70.66  62  P       P       21 54 46.9  0.0
152A                              IAmb    IAmb    21 55 00.4
      comp=Z,19nm,1.2s
GOGA  Godfrey          70.79  61  P       P       21 54 47.6 -0.1
GOGA                              IAmb    IAmb    21 54 47.9
      comp=Z,8.7nm,1.1s
TAOE  Nuku Hiva Isla   70.81 133 eLR      LR      22 16 16.3
      comp=Z,190nm,25.6s
SHAA  Shahritus        71.38 307          P       21 54 52.0 +0.7
SHAA                              IAmb    IAmb    21 55 25.2
      comp=Z,15nm,1.1s
KBL   Kabul            73.25 304          P       21 55 02.3 -0.4
KBL                               IAmb    IAmb    21 55 16.9
      comp=Z,7.0nm,0.8s
DZM   Mont Dzumac      73.43 189 eLR      LR      22 17 26.8
      comp=Z,77nm,21.9s
EKA   Eskdalemuir Ar   73.82 359  P       P       21 55 05.7 +0.2
      comp=Z,3.2nm,0.6s,baz=359,slow=5.3,SNR=13
      comp=Z,3.2nm,0.6s
AK21  Malin Array Si   74.56 339  P       P       21 55 09.5 -0.3
AK21                              pP      pP      21 55 14.8 -2.1
AKASG Malin Array Be   74.59 339  P       P       21 55 10.6 +0.6
      comp=Z,2.0nm,0.7s,baz=25,slow=4.7,SNR=5.2
AKASG                             pP      PcP     21 55 23.8 -0.4
      comp=Z,2.4nm,0.7s,baz=25,slow=5.6,SNR=4.3
      comp=Z,2.0nm,0.7s
AK01  Malin Array Si   74.61 339  P       P       21 55 09.7 -0.3
AK19  Malin Array Si   74.62 339  P       P       21 55 09.8 -0.3
AK11  Malin Array Si   74.63 339  P       P       21 55 09.8 -0.4
AK11                              pP      pP      21 55 15.3 -1.9
AK02  Malin Array Si   74.64 339  P       P       21 55 09.9 -0.3
AK17  Malin Array Si   74.65 339  P       P       21 55 09.9 -0.4
AK08  Malin Array Si   74.65 339  P       P       21 55 10.0 -0.3
RNPP8 Varash           74.72 341  P       P       21 55 11.0 +0.3
PPT2  Papeete2         74.88 146 eLR      LR      22 18 03.1
      comp=Z,115nm,26.8s
PPT2                             eLR      LR      22 18 13.5
      comp=Z,64nm,23.0s
CTA   Charters Tower   75.62 209  LR      LR      22 26 20.8
      comp=Z,31nm,19.8s,baz=36,slow=34
LUBAR Lubar, Ukraine   75.65 339  P       P       21 55 15.8 -0.3
BATI  Baumata          75.98 233  LR      LR      22 27 03.2
      comp=Z,28nm,18.8s,baz=272,slow=34
HRA   Herat            76.81 309  IAmb    IAmb    21 55 25.2
      comp=Z,6.0nm,1.1s
KBZ   Khabaz           77.03 327  LR      LR      22 32 42.5
      comp=Z,44nm,20.5s,baz=358,slow=38
DPC   Dobruska-Polom   77.34 347 eP       P       21 55 26.7 +1.0
STEB  Steborice        77.52 346 eP       P       21 55 31.3 +4.6
STEB                             ex       x       21 55 40.8
KRLC  Kraliky          77.54 346 eP       P       21 55 25.8 -1.0
LANS  Liptovska Anna   78.01 344 eP       P       21 55 31.5 +2.0
LANS                             e                21 55 46.5
BUR08 Bucovina Ar. S   78.36 340  IAmb    IAmb    21 55 49.7
      comp=Z,6.7nm,1.1s
BURAR Bucovina Array   78.39 340  P       P       21 55 32.8 +1.1
BURAR                             IAmb    IAmb    21 55 49.1
      comp=Z,5.1nm,0.9s
KHC   Kasperske Hory   78.90 348 eP       P       21 55 35.9 +1.5
KHC                              ex       x       21 55 49.8
GERES GERESS Array B   79.17 348  P       P       21 55 35.0 -0.9
      comp=Z,0.7nm,0.8s,baz=38,slow=7.1,SNR=5.6
      comp=Z,0.7nm,0.8s
WRA   Warramunga Arr   79.68 219  P       P       21 55 36.8 -2.0
      comp=Z,2.7nm,0.8s,baz=32,slow=6.3,SNR=14
      comp=Z,2.7nm,0.8s
WRA   Warramunga Arr   79.68 219  IAmb    IAmb    21 55 42.1
      comp=Z,0.4nm,1.1s
TBI   Tubuai           80.25 148 eLR      LR      22 20 36.4
      comp=Z,641nm,40.2s
ARSA  Arzberg          80.48 347 epP      P       21 55 45.0 +2.0
      comp=Z,2.9nm,0.7s
LESA  Schwarzleotal    80.69 349 epP      P       21 55 46.0 +1.8
      comp=Z,8.8nm,1.9s
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RETA	Reutte	80.86	350	eP	P	21 55 43.4	-1.7
	comp=Z,4.0nm,1.2s						
WATA	Walderalm	80.91	349	eP	P	21 55 46.7	+1.2
	comp=Z,4.7nm,0.7s						
WTTA	Wattenberg	80.98	349	epP	P	21 55 47.1	+1.2
	comp=Z,6.8nm,1.0s						
SQTA	Sankt Quirin	81.07	350	eP	P	21 55 45.9	-0.3
	comp=Z,7.0nm,1.6s						
SOKA	Soboth	81.11	347	epP	P	21 55 48.0	+1.5
	comp=Z,4.1nm,1.0s						
FETA	Feichten	81.32	350	epP	P	21 55 49.8	+2.2
	comp=Z,8.9nm,2.2s						
ABTA	Abfaltersbach	81.38	349	epP	P	21 55 49.8	+1.9
	comp=Z,6.9nm,1.2s						
FUORN	Ofenpass-Fuorn	81.77	350	P	P	21 55 51.2	+1.0
FUORN				IAmb	IAmb	21 56 07.7	
	comp=Z,5.5nm,0.8s						
ASAR	Alice Springs	83.20	218	P	P	21 55 56.6	-0.8
	comp=Z,3.1nm,0.8s,baz=23,slow=5.5,SNR=36						
ASAR				LR	LR	22 33 34.9	
	comp=Z,19nm,18.1s,baz=298,slow=36						
	comp=Z,3.1nm,0.8s						
MARD	Mardin	83.47	326	IAmb	IAmb	21 56 01.3	
	comp=Z,9.7nm,1.1s						
BRTR	Keskin Array B	83.62	332	P	P	21 56 00.6	+0.8
	comp=Z,2.3nm,0.8s,baz=51,slow=3.3,SNR=9.0						
BRTR				pP	pwP	21 56 14.0	+1.0
	comp=Z,1.8nm,0.7s,baz=53,slow=1.8,SNR=5.8						
	comp=Z,2.3nm,0.8s						
STKA	Stephens Creek	88.08	209	P	P	21 56 20.7	-0.7
	comp=Z,2.8nm,0.8s,baz=320,slow=5.9,SNR=5.4						
STKA				LR	LR	22 34 02.5	
	comp=Z,32nm,20.0s,baz=24,slow=34						
	comp=Z,2.8nm,0.8s						
ASF	Jabal al Asfar	89.47	326	LR	LR	22 43 03.1	
	comp=Z,19nm,18.1s,baz=47,slow=40						
SJG	San Juan	92.30	57	LR	LR	22 38 35.2	
	comp=Z,31nm,21.4s,baz=349,slow=36						
SDV	Santo Domingo	97.36	66	LR	LR	22 45 44.4	
	comp=Z,19nm,18.1s,baz=63,slow=38						
TORD	Torodi Ar. Bea	115.72	354	PKP	PKiKP	22 02 12.1	-1.7
	comp=Z,0.3nm,0.4s,baz=22,slow=2.3,SNR=4.8						
TORD				PKKPbc	PKKPbc	22 12 47.4	+3.4
	comp=Z,1.4nm,0.9s,baz=184,slow=2.6,SNR=6.3						
H03N2	Juan Fernandez	124.33	102	T	T	00 19 17.5	
	baz=314,slow=77,SNR=10						
H03N1	Juan Fernandez	124.34	102	T	T	00 19 19.0	
	baz=314,slow=77,SNR=11						
H03N3	Juan Fernandez	124.34	102	T	T	00 19 17.1	
	baz=314,slow=77,SNR=11						
MAW	Mawson	144.33	217	PKP	PKPab	22 03 03.2	-0.7
	comp=Z,10nm,0.6s,baz=97,slow=3.4,SNR=22						
BOSA	Boshof	148.48	304	PKPbc	PKPbc	22 03 17.5	-0.3
	comp=Z,4.4nm,0.9s,baz=34,slow=3.9,SNR=3.9						

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*MEX **27** 21:56:56.6±0.7, 15°.53N×92°.32W, h166km±8km, MD4.1*
*GCG **27** 21:56:57.6±0.5, 15°.48N×92°.19W, h148km±9km, MD3.7, ML3.5*
ISC 27 21:56:54.4±1.6**, 15°.43N**±0°.06×**92°.35W**±0°.06**, h170**km±10km**, n40, σ2.ˢ36**/65**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAVE	Pavencul	0.28	144	eP	Pn	21 57 18.0	+0.5
PAVE				eS	Sn	21 57 35.1	-0.2
PATR	El Naranjo	0.33	160	eP	Pn	21 57 17.8	+0.1
PATR				eS	Sn	21 57 34.6	-0.9
CHUJ	Union Juarez	0.40	145	eP	Pn	21 57 18.1	+0.1
CHUJ				eS	Sn	21 57 36.4	+0.4
THIG		0.52	171	eP	Pn	21 57 19.5	+1.4
THIG				eS	Sn	21 57 36.6	+0.3
SMCA	Catarina	0.62	155	eP	Pn	21 57 19.3	+0.7
HUEH	Huehuetenango	0.82	97	eP	Pn	21 57 20.4	+0.4
HUEH				eS	Sn	21 57 38.5	-1.2
CCIG	Comitan	0.88	13	eP	Pn	21 57 21.4	+1.1
CCIG				eS	Sn	21 57 39.5	-0.9
PCIG		0.88	288	eP	Pn	21 57 21.1	+0.9
PCIG				eS	Sn	21 57 39.2	-0.8
SOKI	Kika Raxquin	1.09	123	i P	Pn	21 57 24.1	+1.8
SOKI				IAML		21 57 51.9	
	comp=N,469nm,0.7s						
RTAL	Retalhuleu	1.10	145	eP	Pn	21 57 23.0	+1.1
RTAL				eS	Sn	21 57 44.0	+1.1
QUIS	Sacapulas	1.22	96	eS	Sn	21 57 44.0	-1.1
QUIS				IAML		21 57 45.3	
	comp=E,669nm,0.5s						
STG2	El Palmar, Qui	1.36	136	eP	Pn	21 57 22.3	-2.0
STG8	El Palmar, Qui	1.37	135	i P	Pn	21 57 22.5	-2.0
STG5	El Palmar, Qui	1.40	136	eP	Pn	21 57 22.8	-1.8
TGIG		1.54	331	eP	Pn	21 57 26.9	+1.0
TGIG				eS	Sn	21 57 49.6	-0.7
APG	El Apazote	1.87	103	i P	Pn	21 57 30.6	+1.1
APG				i S	Sn	21 57 56.1	-0.5
CMIG	Matias Romero	2.94	305	eP	Pn	21 57 43.0	+1.1
CMIG				eS	Sn	21 58 17.0	-1.8
HUIG	Huatulco	3.64	276	eP	Pn	21 57 51.2	+0.7
HUIG				eS	Sn	21 58 30.0	-4.4
NEUV	Arroyo Zacate	4.02	305	eP	Pn	21 57 56.3	+0.9
NEUV				eS	Sn	21 58 40.8	-2.3
VHO	Vista Hermosa	4.52	292	eS	Sn	21 58 48.9	-6.1
PEIG	Puerto Escondi	4.66	278	eP	Pn	21 58 04.9	+1.2
PEIG				eS	Sn	21 58 57.4	-0.5
YOIG	Yosondua	5.19	287	eP	Pn	21 58 14.6	+3.6
YOIG				eS	Sn	21 59 09.2	-1.7
TOIG	Toxpalan	5.24	301	eP	Pn	21 58 13.6	+2.2
TOIG				eS	Sn	21 59 08.9	-2.8
TXIG	Tlaxiaco	5.51	290	eP	Pn	21 58 17.6	+2.5
TXIG				eS	Sn	21 59 17.3	-1.1
PNIG	Pinotepa	5.64	281	eP	Pn	21 58 18.7	+2.1
PNIG				eS	Sn	21 59 18.2	-2.9
TPIG	Tehuac#an	5.65	303	eS	Sn	21 59 19.7	-1.7
HLIG	Huajuapan de L	5.75	295	eP	Pn	21 58 21.1	+2.9
HLIG				eS	Sn	21 59 19.7	-4.3
LVIG	Laguna Verde	5.77	318	eS	Sn	21 59 19.3	-4.8
JAUV	Jalcomulco	5.78	313	eP	Pn	21 58 19.0	+0.5
JAUV				eS	Sn	21 59 21.3	-3.2
FTIG	Fresnillo de T	6.07	295	eP	Pn	21 58 25.8	+3.5
FTIG				eS	Sn	21 59 30.3	-1.1
MGIG	Malinaltepec	6.30	287	eP	Pn	21 58 28.0	+2.6
MGIG				eS	Sn	21 59 34.0	-2.9
TLIG	Tlapa	6.33	290	eP	Pn	21 58 28.5	+2.7
CRIG	Cruz Grande	6.65	282	eP	Pn	21 58 32.3	+2.4
CXUV	Coxquihui	6.87	314	eP	Pn	21 58 34.3	+1.5
CXUV				eS	Sn	21 59 48.4	-1.9
PPM	Popocatepetl	7.01	302	eP	Pn	21 58 40.5	+5.4
PPM				eS	Sn	21 59 57.8	+3.6
DAIG	Los Arroyos	7.19	284	eP	Pn	21 58 39.4	+2.4
DAIG				eS	Sn	21 59 54.9	-3.1
YAIG	Yautepec	7.28	299	eP	Pn	21 58 42.4	+4.2
YAIG				eS	Sn	21 59 59.5	-0.6
MEIG	Mezcala	7.40	291	eP	Pn	21 58 42.7	+2.8
PLIG	Platanillo	7.46	294	eP	Pn	21 58 44.7	+4.1
CAIG	El Cayaco	7.78	283	eP	Pn	21 58 47.9	+3.2

IDC 27 22:03:31.0±11.0**, 5°.59S**×**128°.95E, h444**km±166km**, mb2.7**/1**, mbtmp3.9**/3**, Error ellipse: s-maj=128.3km s-min=65.1km az=74.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	15.20	160	P	P	22 06 44.7	+0.3
	2.1nm,0.3s,baz=339,slow=11,SNR=18						
ASAR	Alice Springs	18.59	166	P	P	22 07 19.6	-0.3
	1.4nm,0.5s,baz=342,slow=12,SNR=27						
MKAR	Makanchi Array	66.49	327	P	P	22 13 35.3	0.0
	0.2nm,0.4s,baz=114,slow=7.9,SNR=7.8						
	0.2nm,0.4s						

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*ISK **27** 22:11:59.8, 36°.47N×27°.25E, h4km, ML2.8/18*
*AFAD **27** 22:12:00.3, 36°.46N×27°.28E, h12km±1km, ML2.7*
*ATH **27** 22:12:00.4, 36°.44N×27°.28E, h22km±3km, ML2.7/5, Manual Solution by A.Agalos First location: 2019/12/27 22:13:46, This location: 2019/12/27 22:41:44 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **27** 22:12:01.1, 36°N±8°×2°7E±°, h18km±21km, M2.5/8, MLh2.5/8*
ISC 27 22:12:00.2±1.1**, 36°.46N**±0°.02×**27°.28E**±0°.02**, h18**km±3km**, n58, σ0.ˢ83**/84**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YAZI	Mula-Dat§a-	0.27	32	P	Pg	22 12 05.5	-0.8
YAZI				S	Sg	22 12 10.2	-0.1
YAZI				i IAML		22 12 11.0	
	comp=E,784nm,0.2s						
YAZI				i IAML		22 12 12.0	
	comp=N,736nm,0.2s						
DATC	Datca-Mugla	0.43	46	Pg	Pg	22 12 09.3	+0.2
DATC				Sg	Sb	22 12 15.9	+0.4
KLNA	Kalymnos	0.56	334	P	Pb	22 12 11.9	+0.5
KLNA				S	Sb	22 12 19.5	+0.6
BDRM	Kayabasi	0.62	12	P	Pg	22 12 12.6	0.0
BDRM				S	Sg	22 12 21.1	+0.1
BDRM				i IAML		22 12 23.0	
	comp=E,268nm,0.3s						
YKAV	Yalikavak-Bodr	0.67	0	Pg	Pb	22 12 13.3	0.0
YKAV				Sg	Sb	22 12 22.8	+0.7
ARG	Arkhangelos	0.73	109	P	Pb	22 12 14.5	+0.2
ARG				S	Sg	22 12 25.3	+1.1
ARG	Arkhangelos	0.73	109	Pg	Pg	22 12 14.9	+0.4
ARG				Sg	Sn	22 12 25.9	-0.3
ARG	Arkhangelos	0.73	109	P	Pb	22 12 14.0	-0.3
ARG				S	Sb	22 12 24.0	+0.1
TURN	Turunc	0.84	67	P	Pb	22 12 16.5	+0.3
TURN				S	Sg	22 12 28.2	+0.4
TURN				i IAML		22 12 33.0	
	comp=N,443nm,0.4s						
TURN				i IAML		22 12 33.0	
	comp=E,344nm,0.3s						
TURN	Turunc	0.84	67	Pg	Pb	22 12 16.3	0.0
TURN				Sg	Sn	22 12 29.5	+0.5
KARP	Karpathos	0.91	186	P	Pb	22 12 17.6	+0.1
KARP				S	Sg	22 12 30.4	+0.4
KARP	Karpathos	0.91	186	Pg	Pb	22 12 17.9	+0.4
KARP				Sg	Sn	22 12 31.2	+0.4
KARP	Karpathos	0.91	186	P	Pb	22 12 17.4	-0.1
KARP				S	Sb	22 12 29.8	+0.5
MLSB	Milas	0.93	25	Pg	Pb	22 12 17.9	+0.1
MLSB				Sg	Sn	22 12 31.2	0.0
YER	Yerkesik	1.05	50	P	Pg	22 12 20.6	0.0
YER				S	Sg	22 12 35.8	+1.2
YER	Yerkesik	1.05	50	Pg	Pn	22 12 20.4	+0.3
YER				Sg	Sg	22 12 36.6	+2.0
MULA	Mugla, Merkez-	1.16	46	P	Pb	22 12 22.2	+0.5
MULA				S	Sg	22 12 38.6	+0.8
MULA				i IAML		22 12 44.0	
	comp=N,94nm,0.6s						
MULA				i IAML		22 12 44.0	
	comp=E,169nm,0.6s						
DALY	Dalyan (Mula)	1.17	72	Pn	Pg	22 12 23.1	+0.3
DALY				Sn	Sg	22 12 39.7	+1.7
GCAM	G?zelcaml?	1.24	358	Pn	Pg	22 12 24.0	-0.2
SMG	Samos	1.30	344	P	Pn	22 12 23.7	+0.3
SMG	Samos	1.30	344	P	Pn	22 12 23.5	+0.1
SMG				S	Sb	22 12 41.0	+0.6
SABU	Mula-Dalaman	1.41	74	P	Pg	22 12 27.0	-0.4
SABU				S	Sg	22 12 45.3	-0.5
SABU				i IAML		22 12 52.0	
	comp=N,90nm,0.4s						
SABU				i IAML		22 12 56.0	
	comp=E,78nm,0.5s						
THR8	Santorini-Mono	1.45	269	P	Pb	22 12 26.4	-0.2
THR8	Santorini-Mono	1.45	269	P	Pb	22 12 26.4	-0.2
THERA	Ancient Thera,	1.46	267	P	Pn	22 12 25.2	-0.4
THERA	Ancient Thera,	1.46	267	P	Pn	22 12 25.1	-0.4
FETY	Fethiye	1.47	82	P	Pn	22 12 20.7	-5.1
FETY				S	Sn	22 12 39.8	-4.7
THR3	Thira Island,	1.51	269	P	Pn	22 12 26.9	+0.6
THR3	Thira Island,	1.51	269	P	Pn	22 12 26.7	+0.3
SNT5	Nea Kammeni, S	1.52	269	P	Pn	22 12 26.9	+0.5
SNT5	Nea Kammeni, S	1.52	269	P	Pn	22 12 26.4	-0.1
THR6	Thira Island,	1.52	267	P	Pn	22 12 26.5	+0.1
THR6	Thira Island,	1.52	267	P	Pn	22 12 26.6	+0.1
APE	Apeiranthos	1.53	294	P	Pn	22 12 26.5	-0.1
APE	Apeiranthos	1.53	294	P	Pn	22 12 26.4	-0.3
THR9	Santorini-Faro	1.55	267	P	Pb	22 12 27.9	-0.5
THR9	Santorini-Faro	1.55	267	P	Pn	22 12 26.8	-0.1
AYDB	Zeytinkoy-Aydi	1.57	18	Pn	Pg	22 12 29.8	-0.6
IZZE	Mula-Seydike	1.57	90	P	Pb	22 12 29.8	+1.0
IZZE				S	Sg	22 12 51.1	+0.1
IZZE				i IAML		22 13 00.0	
	comp=N,205nm,0.5s						
IZZE				i IAML		22 13 01.0	
	comp=E,115nm,0.4s						
ZKR	Zakros	1.59	213	Pn	Pb	22 12 30.1	+1.0
ZKR	Zakros	1.59	213	P	Pn	22 12 27.5	0.0
DNZT	Denizli-Tavas-	1.62	59	P	Pb	22 12 30.7	+1.0
DNZT				S	Sg	22 12 53.5	+0.8
TAVA	DENIZLI_Tavas	1.65	52	P	Pb	22 12 31.2	+1.0
TAVA				i IAML		22 12 59.0	
	comp=E,66nm,0.4s						
CAME	Cameli-Denizli	1.70	73	Pn	Pb	22 12 31.5	+0.5
NAZL	Nazilli-Aydin	1.71	28	Pn	Pb	22 12 30.9	-0.2
CAEL	Denizli, Camel	1.77	67	P	Pg	22 12 34.0	-0.3
CAEL				S	Sg	22 12 58.2	+0.9
CAEL				i IAML		22 13 10.0	
	comp=E,182nm,0.7s						
CAEL				i IAML		22 13 12.0	
	comp=N,136nm,0.9s						
NPS	Neapolis	1.80	229	P	Pn	22 12 30.1	-0.2
NPS	Neapolis	1.80	229	P	Pn	22 12 29.9	-0.5
KNIK	Mula-Seydike	1.89	77	P	Pb	22 12 35.5	+1.3
KNIK				S	Sg	22 13 00.0	-1.0
AKAS	Kas	1.89	96	P	Pb	22 12 34.4	+0.2
AKAS				S	Sg	22 13 00.8	-0.5
AKAS				i IAML		22 13 12.0	
	comp=N,89nm,0.9s						
AKAS				i IAML		22 13 15.0	
	comp=E,102nm,0.9s						
AKAS	Kas	1.89	96	Pn	Pb	22 12 34.5	+0.2
APMY	Acipayam-Deniz	1.91	57	Pn	Pb	22 12 35.1	+0.5
ODEM	Odemis-Izmir	1.93	19	Pn	Pb	22 12 34.5	-0.3
GOLH	Golhisar	1.99	66	P	Pb	22 12 36.9	+0.9
GOLH				S	Sg	22 13 03.0	-1.4
GOLH				i IAML		22 13 10.0	
	comp=N,82nm,0.6s						
GOLH				i IAML		22 13 12.0	
	comp=E,53nm,0.5s						
ELL	Elmali	2.14	81	Pn	Pb	22 12 38.1	-0.4
CHOS	Chios island	2.16	334	P	Pn	22 12 35.2	-0.1
IDI	Anoyia	2.26	240	P	Pn	22 12 36.8	0.0
KORT	Korkueli	2.53	77	Pn	Pb	22 12 43.4	-1.7

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*KRSC **27** 22:14:12.4±0.7, 58°.96N×158°.44E, h19km±8km, Ml3.8*
*NERS **27** 22:14:24.8, 58°.89N×158°.08E, h33km*
ISC 27 22:14:14.7±1.0**, 58°.95N**±0°.07×**158°.61E**±0°.03**, h10**km**, n14, σ2.ˢ46**/16**, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALN	Palana	0.71	78	eP	Pb	22 14 28.3	-0.8
PALN				eS	Sg	22 14 37.9	+0.1
OSSR	Ossora	2.31	81	eP	Pn	22 14 52.8	0.0
OSSR				eS	Sn	22 15 22.2	+1.0
BDR	Baidarnaya	2.77	149	eS	Sn	22 15 33.1	+0.5
SMKR	Semkarok	2.83	146	eS	Sn	22 15 35.5	+1.4
KOZ	Kozyrevsk	2.98	166	eP	Pn	22 15 01.7	-0.3
ESO	Esso	3.04	179	eP	Pn	22 15 02.3	-0.5
KMNR	Kamenistaya	3.33	164	eP	Pn	22 15 07.4	+0.6
TLAR	Talaya	3.80	308	eP	Pb	22 15 19.1	-2.8
TLAR				ePg	Pg	22 15 33.7	+6.2
TLAR				Pgmax		22 15 35.0	
	20nm,0.4s						
TLAR				eSg	Sg	22 16 20.5	+3.8
TLAR				Sgmax		22 16 35.6	
	160nm,0.6s						
GADL	Gadlja	3.81	284	eSg	Sg	22 16 20.3	+3.5
GADL				Sgmax		22 16 40.5	
	260nm,0.6s						
GADL				Sgmax		22 16 40.5	
	100nm,0.6s						
MA2	Magadan	4.07	282	eSg	Sg	22 16 27.9	+2.5
MA2				Sgmax		22 16 40.9	
	60nm,0.7s						
MGD	Magadan 1	4.16	289	eP	Pb	22 15 23.5	-4.5
MGD				eSg	Sg	22 16 28.7	+0.5
MGD				Sgmax		22 16 42.3	
	70nm,0.6s						
SEY	Seymchan	5.01	325	ePg	Pg	22 15 57.6	+7.0
SEY				eSg	Sg	22 17 02.0	+6.5
SEY				Sgmax		22 17 16.2	
	20nm,0.6s						
TLON	Talon	5.16	283	eSg	Sg	22 17 03.7	+3.6
SUUS	Susuman	6.38	311	eSg	Sg	22 17 45.2	+6.0
SUUS				Sgmax		22 17 59.4	
	30nm,0.8s						
SUUS				Sgmax		22 17 59.4	
	20nm,1.0s						

CNRM 27 22:14:28.4, 35°.93N×**10°.85W, h58**km**, ML4.2, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVAQ	Vaqueiros	2.92	59	P	Pn	22 15 11.7	-0.7
PVAQ	Vaqueiros	2.92	59	S	Sn	22 15 47.0	+0.8
OUK	Oukaimeden	5.33	151	P	Pn	22 15 46.0	+0.2
OUK	Oukaimeden	5.33	151	S	Sn	22 16 47.4	+1.3
TISM	Timmit	5.58	138	P	Pn	22 15 49.9	+1.1
TISM	Timmit	5.58	138	S	Sn	22 16 51.1	-0.5
MD31	MD31	5.89	120	P	Pn	22 15 52.9	-0.3
MD31	MD31	5.89	120	S	Sn	22 17 01.1	+1.6
AKLM	AKL	5.89	102	P	Pn	22 15 51.4	-1.8
AKLM	AKL	5.89	102	S	Sn	22 16 56.9	-2.6

IDC 27 22:26:40.8±3.0**, 1°.82N**×**127°.99E, h0**km**, mb3.2**/3**, mbtmp3.2**/3**, Error ellipse: s-maj=255.5km s-min=28.2km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.51	164	P	P	22 31 42.9	+0.6
	0.7nm,0.8s,baz=343,slow=9.8,SNR=1.8						
	0.7nm,0.8s						
ASAR	Alice Springs	25.98	168	P	P	22 32 14.5	-1.0
	0.2nm,0.9s,baz=352,slow=10,SNR=1.7						
	0.2nm,0.9s						
MKAR	Makanchi Array	59.83	325	P	P	22 36 48.5	+0.3
	0.3nm,0.5s,baz=119,slow=6.9,SNR=4.6						
	0.3nm,0.5s						

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*KRSC **27** 22:33:05.7±0.6, 59°.05N×158°.70E, h31km±3km, Ml3.6*
*NERS **27** 22:33:12.2, 58°.87N×158°.33E, h25km*
ISC 27 22:33:07.4±0.9**, 58°.97N**±0°.06×**158°.82E**±0°.05**, h10**km**, n12, σ1.ˢ85**/15**, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALN	Palana	0.60	78	eP	Pb	22 33 18.9	-1.1
PALN				eS	Sb	22 33 28.3	-0.3
OSSR	Ossora	2.20	81	eP	Pn	22 33 43.5	-0.5
OSSR				eS	Sn	22 34 10.7	-0.5
SRDR	Sredinnyy	2.71	169	eS	Sn	22 34 24.8	+1.0
SMKR	Semkarok	2.78	148	eP	Pn	22 33 52.1	+0.1
KLY	Klyuchi	2.84	159	eS	Sn	22 34 29.5	+2.5
KOZ	Kozyrevsk	2.98	169	eS	Sn	22 34 31.8	+1.5
TLAR	Talaya	3.88	307	eP	Pb	22 34 09.8	-6.1
TLAR				ePg	Pg	22 34 22.1	+0.4
TLAR				eSg	Sg	22 35 11.9	0.0
TLAR				Sgmax		22 35 29.7	
	60nm,0.7s						
GADL	Gadlja	3.91	283	eSg	Sg	22 35 10.7	-2.1
GADL				Sgmax		22 35 37.1	
	210nm,0.8s						
GADL				Sgmax		22 35 37.1	
	140nm,0.8s						
MA2	Magadan	4.18	282	eSg	Sg	22 35 20.3	-1.1
MA2				Sgmax		22 35 32.0	
	50nm,0.8s						
MA2				Sgmax		22 35 32.0	
	20nm,0.8s						
MGD	Magadan 1	4.26	288	eSg	Sg	22 35 21.0	-3.1
MGD				Sgmax		22 35 30.6	
	10.0nm,0.5s						
MGD				Sgmax		22 35 30.6	
	20nm,0.5s						
SEY	Seymchan	5.06	324	eP	Pg	22 34 49.4	+5.1
SEY				eSg	Sg	22 35 52.8	+3.0
SUUS	Susuman	6.45	311	eSg	Sg	22 36 36.5	+2.3

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*SOME **27** 22:34:50.5, 39°.43N×75°.73E, h20km*
*NNC **27** 22:34:51.7±2.6, 39°.56N×75°.78E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=17.2km s-min=15.7km az=163.0*
*KRNET **27** 22:35:01.2±0.1, 39°.77N×75°.62E, mb2.6*
ISC 27 22:35:00.7±1.6**, 39°.81N**±0°.08×**75°.66E**±0°.04**, h10**km**, n31, σ2.ˢ17**/49**, 16C-10D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	1.67	278	⇓iP	Pg	22 35 31.9	-0.9
SFK				⇓iS	Sg	22 35 54.1	-0.5
SALK	Salom-Alik	1.77	308	⇑eP	Pg	22 35 33.7	-1.0
SALK				⇑eS	Sg	22 35 57.3	-0.4
ARLS	Aral	2.29	334	⇓iP	Pb	22 35 41.7	-0.5
ARLS				⇓iS	Sb	22 36 11.4	+0.8
ULHL	Ulahol	2.47	10	⇑iP	Pb	22 35 45.0	-0.4
ULHL				⇑iS	Sb	22 36 16.7	+0.7
TARG	Taragay, Kyrgy	2.52	40	⇑iP	Pb	22 35 45.2	-1.0
TARG				⇑iS	Sb	22 36 17.3	-0.1
ARSB	Arslanbob	2.54	307	⇓eP	Pb	22 35 44.9	-1.6
ARSB				⇓eS	Sb	22 36 16.8	-1.1
UCH	Uchtor	2.57	341	⇑iP	Pb	22 35 45.7	-1.4
UCH				⇑iS	Sb	22 36 18.7	-0.3
KDJ	Kajisay	2.59	26	⇑eP	Pb	22 35 46.3	-1.0
KDJ				⇑iS	Sb	22 36 19.2	-0.1
BOOM	Boomskoye usch	2.69	4	⇑iP	Pb	22 35 47.8	-1.2
BOOM				⇑iS	Sb	22 36 21.8	-0.3
KBK	Karagaybulak	2.90	350	⇓iP	Pb	22 35 50.5	-2.1
KBK				⇓iS	Sb	22 36 26.4	-1.7
TKM2	Tokmak 2	3.11	359	⇓iP	Pb	22 35 53.6	-2.6
TKM2				⇓iS	Sn	22 36 31.7	+4.3
KST	Kastek	3.24	4	Pg	Pb	22 35 55.3	-3.1
	3.4nm,0.3s						
KST				Lg	Lg	22 36 41.8	
	5.6nm,0.5s						
KST	Kastek	3.24	4	eP	Pb	22 35 55.2	-3.1
	3.4nm,0.3s						
KST				eS	Sb	22 36 41.9	+3.9
	5.6nm,0.5s						
TNSS	Tian-Shan	3.37	16	Pg	Pb	22 35 58.3	-2.4
	0.2nm,0.0s						
TNSS				Lg	Lg	22 36 47.1	
	0.4nm,0.1s						
TNSS	Tian-Shan	3.37	16	eP	Pb	22 35 58.3	-2.4
	0.2nm,0.0s						
TNSS				eS	Sg	22 36 47.1	-1.8
	0.4nm,0.1s						
MTBS	Maitube	3.37	10	Pg	Pb	22 35 57.6	-2.9
	1.8nm,0.2s						
MTBS				Lg	Lg	22 36 46.2	
	5.3nm,0.3s						
MTBS	Maitube	3.37	10	eP	Pb	22 35 57.6	-2.9
	1.8nm,0.2s						
MTBS				eS	Sb	22 36 46.2	+4.6
	5.3nm,0.3s						
DGS	Degeres	3.43	1	Pg	Pb	22 35 58.6	-3.1
	2.2nm,0.5s						
DGS				Lg	Lg	22 36 47.8	
	3.3nm,0.6s						
MRKS	Merke	3.46	329	Pg	Pb	22 36 00.1	-2.1
	1.9nm,0.5s						
MRKS				Lg	Lg	22 36 50.2	
	4.4nm,0.5s						
MRKS	Merke	3.46	329	eP	Pb	22 36 00.1	-2.1
	1.9nm,0.5s						
MRKS				eS	Sg	22 36 50.2	-1.7
	4.4nm,0.5s						
MDOK	Medeo	3.51	17	Pg	Pb	22 36 01.1	-1.9
	0.9nm,0.4s						
MDOK				Lg	Lg	22 36 52.0	
	3.5nm,0.7s						
KNDC	Almaty	3.54	16	⇑Pg	Pn	22 35 55.5	-0.4
	4.8nm,0.3s						
KNDC				⇑Lg	Lg	22 36 49.8	
	5.3nm,0.6s						
MNAS	Manas	3.58	319	⇑eP	Pn	22 35 59.5	+3.0
MNAS				⇑eS	Sn	22 36 42.2	+3.2
KOTS	Kotyrbulak	3.59	17	Pg	Pb	22 36 02.4	-2.0
	1.3nm,0.2s						

KOTS				Lg	Lg	22 36 54.4	
	8.4nm,0.6s						
KOTS	Kotyrbulak	3.59	17	*e*P	Pb	22 36 02.4	-2.0
	1.3nm,0.2s						
KOTS				*e*S	Sg	22 36 54.5	-1.6
	8.4nm,0.6s						
SATY	Saty	3.85	32	Pg	Pb	22 36 05.8	-2.9
	0.5nm,0.1s						
SATY				Lg	Lg	22 36 59.7	
	2.1nm,0.2s						
KRBS	Karabastau	3.88	0	Pg	Pb	22 36 06.9	-2.4
	0.4nm,0.4s						
KRBS				Lg	Lg	22 37 02.4	
	4.3nm,0.4s						
KTBS	Karatobe	3.97	11	Pg	Pb	22 36 09.7	-1.2
	1.5nm,0.4s						
KTBS				Lg	Lg	22 37 06.3	
	0.3nm,0.2s						
SHLS	Shalkode	4.40	39	Pg	Pb	22 36 18.3	+0.2
	0.8nm,0.2s						
SHLS				Lg	Lg	22 37 21.3	
	6.3nm,0.5s						
SHLS	Shalkode	4.40	39	*e*P	Pb	22 36 18.3	+0.2
	0.8nm,0.2s						
SHLS				*e*S	Sg	22 37 21.3	-0.6
	6.3nm,0.5s						
PDGK	Podgornoye	4.54	38	Pg	Pb	22 36 17.3	-3.3
	5.1nm,1.4s						
PDGK				Lg	Lg	22 37 20.0	
	3.7nm,1.0s						

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*IDC **27** 23:41:49.9±0.9, 24°.16N×123°.72E, h0^{km}, mb3.6/8, mbtmp3.6/10, ML3.1/2, MS3.2/9, Error ellipse: s-maj=29.5km s-min=20.2km az=72.0*

*NIED **27** 23:41:52.4, 24°.14N×123°.82E, h18^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.22; $M_{\theta\theta}$1.46; $M_{\phi\phi}$-0.25; $M_{r\theta}$0.23; $M_{\theta\phi}$-0.94; $M_{\phi r}$0.31; Fault plane solution: $M_0$1.64000×10^{15} NP1: ϕ_s138.00000°, δ49.00000°, λ-54.00000°. NP2: ϕ_s270.00000°, δ52.00000°, λ-125.00000°.*

*JMA **27** 23:41:52.4±0.2, 24°.1N±0°.5×123°.8E±0°.4, h18^{km}±1^{km}, MD4.6/9, MV3.9/9, NEAR ISHIGAKIJIMA ISLAND*

JMA Felt II J1 at NEAR ISHIGAKIJIMA ISLAND.

*NEIC **27** 23:41:57.0±1.7, 24°.07N±0°.07×123°.50E±0°.07, h48^{km}±7^{km}, mb4.1/23, Error ellipse: s-maj=10.4km s-min=8.8km az=211.0*

ISC 27 23:41:51.8±0.8**, 24°.12N**±0°.04×**123°.71E**±0°.03**, h16**^{km}±5^{km}**, n95, σ1^{s}12**/78**, mb4.1**/21**, MS3.2**/7**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.10	125	*i* P	Pg	23 41 55.6	+0.4
HATJ				*i* S	Sg	23 41 58.3	+0.9
HATJ	Hateruma jima	0.10	125	A	A	23 41 55.6	
	comp=N,390nm,3.8s,comp=E,101nm,0.9s						
IRIF	Iriomote-Funau	0.22	4	*i* P	Pb	23 41 57.4	-0.1
IRIF				S	Sg	23 42 01.1	+0.9
IRIF	Iriomote-Funau	0.22	4	A	A	23 41 57.4	
	comp=N,102nm,1.5s,comp=E,62nm,2.2s						
JKRS	Kuro-shima	0.29	66	*i* P	Pg	23 41 57.5	-0.5
JKRS				*i* S	Sg	23 42 01.0	-1.3
JKRS	Kuro-shima	0.29	66	A	A	23 41 57.5	
	comp=N,226nm,1.7s,comp=E,219nm,0.4s						
JIJ	Ishigaki jima	0.46	58	*i* P	Pg	23 41 59.9	-1.2
JIJ				S	Sg	23 42 05.1	-2.2
JIJ	Ishigaki jima	0.46	58	A	A	23 41 59.9	
	comp=N,27nm,0.6s,comp=E,28nm,0.4s						
JISG	Ishigakijimahi	0.72	49	*i* P	Pg	23 42 04.4	-1.4
JISG				S	Sg	23 42 13.8	-1.6
JISG	Ishigakijimahi	0.72	49	A	A	23 42 04.4	
	comp=N,86nm,0.5s,comp=E,58nm,0.5s						
YOJ	Yonaguni jima	0.73	298	Pn	Pn	23 42 07.7	+0.3
YOJ				Sn	Sn	23 42 18.6	+0.3
YOJ	Yonaguni jima	0.73	298	P	Pn	23 42 08.0	+0.5
YOJ	Yonaguni jima	0.73	298	S	Sn	23 42 19.2	+0.9
YOJ	Yonaguni jima	0.73	298	P	Pn	23 42 07.8	+0.3
YOJ				*e*S	Sn	23 42 19.4	+1.1
YOJ	Yonaguni jima	0.73	298	A	A	23 42 07.8	
	comp=N,5.0nm,3.3s,comp=E,5.0nm,2.4s						
JYNG	Yonagunijimaku	0.78	296	P	Pn	23 42 08.8	+0.6
JYNG				*e*S	Sn	23 42 20.7	+1.2
JTJ	Tarama	1.04	60	P	Pb	23 42 10.1	-1.3
JTJ				S	Sg	23 42 23.6	-1.9
JTJ	Tarama	1.04	60	A	A	23 42 10.1	
	comp=N,64nm,1.4s,comp=E,56nm,1.6s						
JIRB	Irabujima	1.51	62	A	A	23 42 17.4	
	comp=N,14nm,4.7s,comp=E,17nm,1.7s						
JMJ2	Miyako jima3	1.60	67	A	A	23 42 18.7	
	comp=N,23nm,3.6s,comp=E,22nm,1.7s						
JMJ	Miyako jima 2	1.60	64	P	Pn	23 42 20.4	+1.0
JMJ	Miyako jima 2	1.60	64	S	Sn	23 42 40.5	+0.7
JIKM	Ikemajima	1.61	60	A	A	23 42 19.1	
	comp=N,18nm,0.6s,comp=E,40nm,0.7s						
JOGS	Gusukube	1.67	67	A	A	23 42 19.9	
	comp=N,25nm,1.9s,comp=E,23nm,2.9s						
NACB	Ninganchiao	1.94	272		Pb	23 42 26.3	-0.4
NACB	Ninganchiao	1.94	272	P	Pg	23 42 27.9	-1.1
TATO	Taipei	2.20	293	Pn	Pn	23 42 29.0	+1.3
TATO	Taipei	2.20	293	P	Pg	23 42 32.9	-1.1
YHNB	Yeheng	2.20	285	Pn	Pb	23 42 30.4	-1.0
YHNB	Yeheng	2.20	285	P	Pb	23 42 32.0	+0.7
YULB	Yu-li	2.33	252	Pn	Pn	23 42 30.6	+1.1
YULB	Yu-li	2.33	252	P	Pn	23 42 30.3	+0.8
YULB	Yu-li	2.33	252	S	Sb	23 43 01.0	-1.0
SSLB	Suanglung	2.55	263		Pb	23 42 35.1	-2.0
SSLB	Suanglung	2.55	263	P	Pb	23 42 36.8	-0.4
TWG	Pinlang	2.75	243	Pn	Pn	23 42 36.5	+1.3
TPUB	Ta-pu	2.94	255		Pb	23 42 41.4	-2.5
TPUB	Ta-pu	2.94	255	P	Pb	23 42 41.0	-2.9
JOW	Kunigami	4.93	56	Pn	Pn	23 43 06.1	+0.8
	comp=E,1.7nm,0.3s,baz=287,slow=10,SNR=1.4						
	comp=E,15nm,0.8s						
JOW	Kunigami	4.93	56	Pn	Pb	23 43 13.6	-4.2
JOW	Kunigami	4.93	56	P	Pn	23 43 07.3	+2.0
TGY	Tagaytay City	10.30	195	LR	LR	23 47 37.4	
	comp=E,47nm,19.7s,baz=222,slow=34						
KSRS	Korea Array	13.78	14	LR	LR	23 50 39.4	
	comp=E,44nm,18.6s,baz=205,slow=39						
MJAR	Matsushiro Arr	17.58	42	P	Pn	23 45 56.9	+0.7
	baz=258,slow=16,SNR=4.7						
	comp=E,0.5nm,0.5s						
GUMO	Guam	22.56	114	LR	LR	23 53 38.9	
	comp=E,39nm,21.4s,baz=91,slow=31						
CMAR	Chiang Mai Arr	23.74	261	LR	LR	23 58 00.4	
	comp=E,47nm,18.5s,baz=85,slow=41						
MKAR	Makanchi Array	40.01	315	P	P	23 49 26.0	+0.1
	comp=E,0.5nm,0.5s,baz=100,slow=8.6,SNR=8.4						
	comp=E,0.5nm,0.5s						
MKAR	Makanchi Array	40.01	315	P	P	23 49 25.3	-0.6
H11N1	WAKE ISLAND Hy	40.18	88	T	T	00 32 04.1	
	baz=283,slow=75,SNR=9.8						
H11N2	WAKE ISLAND Hy	40.18	88	T	T	00 32 04.0	
	baz=283,slow=75,SNR=10						
H11N3	WAKE ISLAND Hy	40.20	88	T	T	00 32 05.2	
	baz=283,slow=75,SNR=12						
MAKZ	Makanchi	40.22	315	P	P	23 49 27.1	-0.5
H11S3	WAKE ISLAND Hy	40.31	89	T	T	00 32 14.7	
	baz=284,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy	40.32	89	T	T	00 32 15.1	
	baz=284,slow=75,SNR=11						
H11S2	WAKE ISLAND Hy	40.33	89	T	T	00 32 13.4	
	baz=284,slow=75,SNR=7.6						
ZALV	Zalesovo Beam	41.58	326	P	P	23 49 39.7	+1.0
	comp=E,0.5nm,0.4s,baz=121,slow=8.9,SNR=4.3						
ZALV				LR	LR	00 08 07.2	
	comp=E,30nm,19.2s,baz=50,slow=38						
	comp=E,0.5nm,0.4s						
TARG	Taragay, Kyrgy	41.81	306	P	P	23 49 41.6	+0.2
WB0	Warramunga Arr	44.84	166	P	P	23 50 05.8	+0.4
WB0				IAmb	IAmb	23 50 12.4	
	comp=Z,1.2nm,0.7s						
WRA	Warramunga Arr	45.00	166	P	P	23 50 06.8	+0.2
	comp=Z,2.4nm,1.0s,baz=346,slow=8.8,SNR=5.5						
	comp=Z,2.4nm,1.0s						
WRA	Warramunga Arr	45.00	166	P	P	23 50 07.0	+0.3
WR8	Warramunga Arr	45.05	166	P	P	23 50 07.7	+0.6
WR8				IAmb	IAmb	23 50 09.4	
	comp=Z,4.1nm,1.1s						
TIXI	Tiksi	47.65	2	LR	LR	00 14 50.6	
	comp=Z,64nm,18.9s,baz=195,slow=42						
ASAR	Alice Springs	48.52	167	P	P	23 50 35.6	+1.4
	comp=Z,0.9nm,0.8s,baz=351,slow=8.1,SNR=8.3						
	comp=Z,0.9nm,0.8s						
ASAR	Alice Springs	48.52	167	P	P	23 50 35.1	+0.9
CTA	Charters Tower	49.12	152	LR	LR	00 10 20.5	
	comp=Z,22nm,21.5s,baz=190,slow=35						
BVAR	Borovoye Array	49.20	320	P	P	23 50 38.7	-0.5
	comp=Z,0.3nm,0.5s,baz=90,slow=9.4,SNR=2.4						
	comp=Z,0.3nm,0.5s						
AB31	Akbulak array	55.14	314	P	P	23 51 25.5	+2.1
AB31				IAmb	IAmb	23 51 39.9	
	comp=Z,2.0nm,0.9s						
ABKAR	Akbulak array	55.14	314	P	P	23 51 24.6	+1.2
EIDS	Eidsvold	55.88	150	P	P	23 51 28.3	-0.5
H24K	Noodor Dome	67.62	26	P	P	23 52 48.6	+1.0
H24K				IAmb	IAmb	23 53 01.1	
	comp=Z,2.0nm,1.2s						
ILAR	Eielson Array	68.21	27	P	P	23 52 51.0	-0.2
	comp=Z,0.2nm,0.5s,baz=271,slow=6.1,SNR=4.1						
	comp=Z,0.2nm,0.5s						
BMAR	Burnt Mountain	68.64	24	P	P	23 52 54.9	+1.0
L27K	Beaver Creek,	70.77	29	P	P	23 53 08.2	+1.0
L27K				IAmb	IAmb	23 53 25.2	
	comp=Z,3.2nm,1.1s						
BCAR	Beaver Creek A	70.79	29	P	P	23 53 08.7	+1.3
I28M	Miner Creek	70.92	26	P	P	23 53 10.5	+2.4
M27K	Edge Creek, AK	70.94	29	P	P	23 53 08.6	+0.3
G29M	Pine Creek	71.24	24	P	P	23 53 10.2	+0.2
G29M				IAmb	IAmb	23 53 16.5	
	comp=Z,3.2nm,1.1s						
F30M	Barrier River	71.85	23	P	P	23 53 15.0	+1.4
F30M				IAmb	IAmb	23 53 23.2	
	comp=Z,5.8nm,1.1s						
L29M	L29M	72.37	28	P	P	23 53 17.9	+1.0
L29M				IAmb	IAmb	23 53 27.2	
	comp=Z,3.5nm,1.0s						
I30M	Mount Dempster	72.41	26	P	P	23 53 17.8	+0.6
M29M	Somme Creek	72.43	29	P	P	23 53 18.2	+0.9
M29M				IAmb	IAmb	23 53 29.8	
	comp=Z,4.4nm,1.1s						
J30M	Hart River	72.64	26	P	P	23 53 18.6	0.0
J30M				IAmb	IAmb	23 53 31.6	
	comp=Z,1.7nm,1.1s						
FINES	FINESS Array B	72.67	330	P	P	23 53 18.2	-0.4
M30M	Minto, Yukon	73.12	29	P	P	23 53 22.2	+0.9
M30M				IAmb	IAmb	23 53 31.5	
	comp=Z,1.7nm,0.9s						
SKAG	Skagway	74.89	31	P	P	23 53 33.1	+1.4
ATD	Arta Tunnel	77.12	277	P	P	23 53 44.2	-1.0
ATD				IAmb	IAmb	23 53 58.9	
	comp=Z,3.3nm,0.8s						
BURAR	Bucovina Array	78.00	317	P	P	23 53 48.7	-0.9
MLR	Muntele Rosu	78.35	315	P	P	23 53 51.8	+0.1
MLR				IAmb	IAmb	23 53 54.6	
	comp=Z,1.2nm,0.6s						
HFS	Hagfors	78.75	331	LR	LR	00 35 00.3	
	comp=Z,49nm,19.6s,baz=282,slow=40						
NC405	NORSAR Array S	79.11	333	P	P	23 53 55.2	-0.1
NC303	NORSAR Array S	79.19	333	P	P	23 53 55.7	-0.1
NOA	NORSAR Array B	79.35	333	LR	LR	00 33 01.9	
	comp=Z,29nm,18.8s,baz=250,slow=39						
WHZ	Wether Hill Ro	80.42	150	P	P	23 54 01.9	-0.6
YKA	Yellowknife Ar	82.12	24	P	P	23 54 11.3	-0.1
	comp=Z,0.6nm,1.1s,baz=313,slow=5.7,SNR=5.8						
	comp=Z,0.6nm,1.1s						
GERES	GERESS Array B	84.35	321	P	P	23 54 24.5	+1.1
	comp=Z,0.4nm,0.7s,baz=22,slow=4.3,SNR=3.5						
	comp=Z,0.4nm,0.7s						

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*IDC **27** 23:54:51.8±1.0, 60°.42N×28°.89W, h0^{km}, mb3.7/8, mbtmp3.7/10, ML3.5/2, MS3.4/21, Error ellipse: s-maj=29.7km s-min=17.8km az=32.0*

ISC 27 23:54:53.4±0.9**, 60°.5N**±0°.1×**28°.9W**±0°.1**, h10**^{km}**, n28, σ1^{s}16**/11**, mb3.7**/7**, MS3.4**/18**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	Borgarnes	5.49	36	Pn	Pn	23 56 13.7	-1.3
	2.3nm,0.3s,baz=278,slow=4.7,SNR=16						
BORG				Sn	Sn	23 57 17.7	-0.4
	0.8nm,0.3s,baz=45,slow=21,SNR=14						
	19nm,0.8s						
SFJD	Kangerlussuaq	11.57	313	LR	LR	00 01 30.5	
	comp=Z,121nm,21.7s,baz=158,slow=34						
EKA	Eskdalemuir Ar	14.55	99	Pn	Pn	23 58 20.4	+1.4
	baz=294,slow=9.0						
	1.3nm,0.7s						
FRB	Frobisher Bay	18.62	297	LR	LR	00 05 27.7	
	comp=Z,107nm,19.3s,baz=82,slow=34						
NOA	NORSAR Array B	19.37	71	LR	LR	00 05 47.2	
	comp=Z,54nm,19.1s,baz=285,slow=34						
HFS	Hagfors	20.81	72	LR	LR	00 06 08.9	
	comp=Z,59nm,20.4s,baz=250,slow=32						
SCHQ	Schefferville	20.86	271	LR	LR	00 05 59.8	
	comp=Z,115nm,18.1s,baz=97,slow=32						
ESDC	Sonseca Array	25.98	132	P	P	00 00 26.6	+0.7
	1.6nm,0.9s,baz=329,slow=9.5,SNR=7.4						
ESDC				LR	LR	00 08 29.6	
	comp=Z,54nm,18.1s,baz=326,slow=32						
	1.6nm,0.9s						
FINES	FINESS Array B	26.01	64	LR	LR	00 09 35.3	
	comp=Z,16nm,21.1s,baz=332,slow=34						
DAVOX	Davos/Dischmat	26.30	104	LR	LR	00 11 19.6	
	comp=Z,47nm,18.6s,baz=281,slow=38						
GERES	GERESS Array B	26.73	97	LR	LR	00 10 19.3	
	comp=Z,95nm,19.1s,baz=290,slow=35						
VRAC	Vranov	27.85	93	LR	LR	00 11 04.0	
	comp=Z,54nm,18.7s,baz=282,slow=35						
MDT	Midelt	31.94	139	LR	LR	00 12 14.8	
	comp=Z,33nm,18.6s,baz=300,slow=33						
SADO	Sadowa	33.37	265	LR	LR	00 13 32.9	
	comp=Z,101nm,18.2s,baz=316,slow=34						
KEST	Kesra	34.76	118	LR	LR	00 15 51.4	
	comp=Z,38nm,19.0s,baz=26,slow=36						
ULM	Lac du Bonnet	37.78	285	LR	LR	00 16 41.8	
	comp=Z,68nm,20.3s,baz=12,slow=35						
YKA	Yellowknife Ar	38.12	311	P	P	00 02 12.1	+0.2
	0.5nm,0.8s,baz=49,slow=8.8,SNR=8.6						
	0.5nm,0.8s						
TKL	Tuckaleechee C	42.61	260	LR	LR	00 19 20.8	
	comp=Z,58nm,18.8s,baz=12,slow=34						
ILAR	Eielson Array	46.72	329	P	P	00 03 23.2	+1.3
	0.8nm,0.8s,baz=33,slow=6.9,SNR=13						
	0.8nm,0.8s						
MMAI	Mount Meron Ar	49.32	94	P	P	00 03 42.0	-0.5
	1.7nm,0.3s,baz=311,slow=9.2,SNR=3.0						
	1.7nm,0.3s						
PDAR	Pinedale Array	49.70	288	P	P	00 03 44.8	-0.6
	0.7nm,0.7s,baz=62,slow=7.6,SNR=7.9						
PDAR				LR	LR	00 22 59.5	
	comp=Z,56nm,18.9s,baz=344,slow=34						
	0.7nm,0.7s						
BVAR	Borovoye Array	49.87	51	P	P	00 03 46.9	+0.6
	0.9nm,0.8s,baz=330,slow=5.0,SNR=4.0						
BVAR				LR	LR	00 24 45.8	
	comp=Z,38nm,18.8s,baz=71,slow=36						
	0.9nm,0.8s						
TORD	Torodi Ar. Bea	52.30	141	P	P	00 04 03.1	-1.9
	0.9nm,0.8s,baz=342,slow=8.6,SNR=4.9						
	0.9nm,0.8s						
NVAR	Mina Array Bea	57.20	291	LR	LR	00 29 23.3	
	comp=Z,54nm,19.0s,baz=301,slow=36						
MDP	Montagnes des	58.15	208	LR	LR	00 23 42.0	
	comp=Z,27nm,20.0s,baz=318,slow=30						
MKAR	Makanchi Array	59.42	48	P	P	00 04 56.3	+0.6
	0.3nm,0.7s,baz=338,slow=9.2,SNR=3.9						
	0.3nm,0.7s						
PFO	Pinyon Flats O	60.26	286	LR	LR	00 29 58.3	
	comp=Z,64nm,20.3s,baz=306,slow=35						
LSZ	Lusaka	88.15	126	LR	LR	00 49 22.4	
	comp=Z,27nm,18.4s,baz=324,slow=37						

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*NDI **28** 00:08:45.5±3.0, 38°.60N×90°.13E, h17^{km}±73^{km}, ML4.0, MW4.0*

*IDC **28** 00:08:46.0±0.7, 38°.47N×90°.32E, h0^{km}, mb3.8/14, mbtmp3.8/19, ML3.8/5, MS3.1/6, Error ellipse: s-maj=19.7km s-min=12.1km az=37.0*

*NEIC **28** 00:08:47.8±1.8, 38°.52N±0°.04×90°.2E±0°.1, h10^{km}±1^{km}, mb4.1/17, Error ellipse: s-maj=19.0km s-min=4.1km az=254.0*

*NNC **28** 00:08:54.1±3.0, 38°.82N×89°.64E, h0^{km}, mb4.2, Error ellipse: s-maj=37.3km s-min=24.7km az=21.0*

ISC 28 00:08:47.5±0.4**, 38°.50N**±0°.05×**90°.12E**±0°.05**, h10**^{km}**, n78, σ1^{s}84**/86**, mb3.9**/14**, MS3.2**/3**, 4C-3D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOMU	GeErMu	4.39	120	Pn	Pn	00 09 53.8	-0.8
GOMU				Pg	Pb	00 10 06.0	+1.0
GOMU				Sn	Sn	00 10 48.5	+2.5
GOMU				Sg	Sb	00 11 01.5	+3.3
GOMU				smax	smax		
	comp=N,680nm,0.5s						
GOMU				smax	smax		
	comp=E,160nm,0.4s						
WMQ	Urumqi	5.62	342	Pn	Pn	00 10 12.8	+1.6
WMQ				Sn	Sn	00 11 16.0	+0.2
WMQ				smax	smax		
	comp=N,400nm,1.1s						
WMQ				smax	smax		
	comp=E,440nm,1.1s						
GTA	Gaotai	7.61	80	*e*P	Pn	00 10 37.5	-1.1
GTA				pmax	pmax		
	comp=Z,33nm,0.9s						
GTA				LR	LR		
	comp=N,860nm,10.9s						
GTA				LR	LR		
	comp=E,280nm,9.8s						
GTA				LR	LR		
	comp=Z,390nm,9.8s						
WUS	Wushi	8.81	291		Pn	00 10 56.0	+1.0
LSA	Lhasa	8.82	174	Pn	Pn	00 10 55.3	-0.3
PDGK	Podgornoye	9.38	304	Pn	Pn	00 11 04.0	+1.1
PDGK				Sn	Sn	00 12 46.6	-1.7
PRZ	Przheval'sk	9.77	298	Pn	Pn	00 11 09.5	+1.2
TARG	Taragay, Kyrgy	9.97	293		Pn	00 11 11.7	+0.5
MK31	Makanchi Array	10.09	328	⇓Pn	Pn	00 11 12.3	-0.2
	comp=Z,2.9nm,0.3s,baz=142,slow=14,SNR=276						
MK31				⇓Sn	Sn	00 13 04.3	-1.3
	comp=Z,10nm,0.7s,baz=138,slow=24,SNR=9.4						
MKAR	Makanchi Array	10.09	328	Pn	Pn	00 11 12.3	-0.1
	comp=Z,3.8nm,0.3s,baz=144,slow=14,SNR=48						
MKAR				Sn	Sn	00 13 04.0	-1.7
	comp=Z,1.4nm,0.3s,baz=137,slow=23,SNR=6.9						
MKAR				Lg	Lg	00 14 11.8	
	comp=Z,0.9nm,0.3s,baz=141,slow=28,SNR=5.4						
MKAR				LR	LR	00 15 17.1	
	comp=Z,45nm,21.1s,baz=147,slow=38						
	comp=Z,6.5nm,0.4s						
MKAR	Makanchi Array	10.09	328		Pn	00 11 11.5	-1.0
MAKZ	Makanchi	10.23	327		Pn	00 11 13.8	-0.7
KDJ	Kajisay	10.52	294		Pn	00 11 19.0	+0.4
KNDC	Almaty	11.02	299	⇓Pn	Pn	00 11 27.2	+2.0
	comp=Z,91nm,0.6s						
KNDC				⇑Sn	Sn	00 13 28.5	0.0
	comp=Z,15nm,0.9s						
KSH	Kashi	11.06	280	Pn	Pn	00 11 31.0	+5.2
KSH				Sn	Sn	00 13 38.3	+8.7
KSH				smax	smax		
	comp=N,58nm,0.9s						
KSH				smax	smax		
	comp=E,34nm,1.2s						
LZDM	Lanzhou Array	11.12	99	Pn	Pn	00 11 24.3	-2.5
	baz=271,slow=12						
LZDM				Lg	Lg	00 14 33.4	
	baz=295,slow=25						
	comp=E,1.6nm,0.3s						
LZH	Lanzhou	11.20	98	*e*P	Pn	00 11 27.5	-0.3
LZH				pP		00 11 35.8	
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
GTK	Tadong	11.22	187	*e*P	Pn	00 11 24.9	-3.3
GTK				*e*S	Sn	00 13 23.0	-11
GTK				IAML		00 13 33.6	
	comp=N,24nm,0.1s						
BOOM	Boomskoye usch	11.51	295	Pn	Pn	00 11 32.1	+0.1
FRU1	Bishkek	12.52	295	Pn	Pn	00 11 45.6	-0.2
AAK	Ala-Archa	12.58	294	Pn	Pn	00 11 49.4	+2.7
	comp=N,0.7nm,0.3s,baz=136,slow=11,SNR=12						
AAK				Lg	Lg	00 15 30.1	
	comp=N,0.1nm,0.3s,baz=193,slow=21,SNR=2.1						
AAK				LR	LR	00 17 12.7	
	comp=N,52nm,18.8s,baz=96,slow=40						
	comp=N,1.7nm,0.4s						
AAK	Ala-Archa	12.58	294		Pn	00 11 46.5	-0.1
AAK	Ala-Archa	12.58	294	Pn	Pn	00 11 47.8	+1.2
AAK				Sn	Sn	00 14 01.5	-5.3
MOKO	MOKOCHONG	12.70	162	*e*P	Pn	00 11 46.4	-2.0
MOKO				IAML		00 13 42.9	
	comp=N,10nm,0.3s						
MOKO				IAML		00 13 44.2	
	comp=E,26nm,0.6s						
MOKO				*e*S	Sn	00 13 56.6	-13
DDI	Dehra Dun	12.87	234	*e*P	Pn	00 11 46.1	-4.4
DDI				*e*S	Sn	00 13 59.6	-14
DDI				IAML		00 15 06.4	
	comp=N,24nm,0.2s						
SMLA	Simla	12.93	239	*e*P	Pn	00 11 48.9	-2.4
SMLA				IAML		00 13 24.0	
	comp=N,26nm,0.4s						
SMLA				*e*S	Sn	00 14 01.2	-14
SHL	Shillong	12.98	173	Pn	Pn	00 11 51.7	-0.6
SHL	Shillong	12.98	173	*e*P	Pn	00 11 50.6	-1.6
SHL				IAML		00 12 32.1	
	comp=N,18nm,0.1s						
SHL				IAML		00 12 33.2	
	comp=E,27nm,0.0s						
SHL				*e*S	Sn	00 14 03.9	-13
ARSB	Arslanbob	13.46	287	Pn	Pn	00 12 00.1	+1.5
IMP	Imphal	14.01	165	*e*P	Pn	00 12 03.0	-3.2
IMP				*e*S	Sn	00 14 40.8	-1.1
DRK	Karamyk	14.29	280		Pn	00 12 10.4	+0.3
NIL	Nilore	14.47	256		Pn	00 12 12.4	0.0
MANEM	Manem	14.57	272		Pn	00 12 15.5	+1.6
MORE	Moreh	14.66	165	Pn	Pn	00 12 15.4	+0.4
SONM	Songino Array	15.07	47	Pn	Pn	00 12 19.6	-1.0
	comp=E,0.2nm,0.3s,baz=235,slow=14,SNR=15						
SONM				Lg	Lg	00 16 40.8	
	comp=E,0.2nm,0.3s,baz=231,slow=28,SNR=9.0						
SONM				LR	LR	00 18 17.7	
	comp=E,118nm,20.0s,baz=250,slow=38						
	comp=E,2.1nm,0.7s						
SONM	Songino Array	15.07	47	Pn	Pn	00 12 21.0	+0.4
PZH	PanZhiHua	15.45	137	P	Pn	00 12 27.5	+1.8
GAR	Garm	15.46	278		Pn	00 12 22.5	-3.3
GAR				IAmb	IAmb	00 12 35.1	
	comp=Z,11nm,0.8s						
ULN	Ulaanbaatar	15.47	47		Pn	00 12 26.1	+0.3
ULN				IAmb	IAmb	00 12 32.4	
	comp=Z,3.8nm,0.6s						
KK31	Karatay Array	15.54	293		Pn	00 12 25.7	-0.9
KK31	Karatay Array	15.54	293	⇑P	Pn	00 12 28.4	+1.8
	comp=Z,0.8nm,0.6s,baz=99,slow=12,SNR=7.3						
KKAR	Karatay Array	15.54	293	Pn	Pn	00 12 26.2	-0.5
ZAA0	Zalesovo Array	15.87	348		Pn	00 12 30.1	-0.7
ZALV	Zalesovo Beam	15.87	348	Pn	Pn	00 12 29.9	-1.0
	comp=Z,0.3nm,0.3s,baz=171,slow=12,SNR=8.5						
	comp=Z,1.1nm,0.5s						
ZALV	Zalesovo Beam	15.87	348		Pn	00 12 30.8	-0.1
CHGR	Chuyangaron	16.39	277		Pn	00 12 35.0	-2.8
CHGR				IAmb	IAmb	00 12 47.2	
	comp=Z,20nm,0.8s						
HHC	Hu-ho-hao-te	16.67	75	*e*P	Pn	00 12 41.5	+0.2
HHC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,100nm,4.8s						
KMI	Kunming	17.09	138	P	Pn	00 12 46.3	-0.5
KMI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SHAA	Shahritus	17.35	274	Pn	Pn	00 12 48.9	-1.0
SHAA				IAmb	IAmb	00 12 58.6	
	comp=Z,18nm,0.7s						
KBL	Kabul	17.39	263		Pn	00 12 50.6	+0.1
KBL				IAmb	IAmb	00 13 08.2	
	comp=Z,8.6nm,0.7s						
BVA0	Borovoye Array	19.91	323	⇑P	Pn	00 13 23.3	+2.5
	comp=Z,1.8nm,0.7s,baz=120,slow=12,SNR=12						
BVAR	Borovoye Array	19.91	323	P	Pn	00 13 21.5	+0.6
	comp=Z,2.4nm,0.8s,baz=113,slow=11,SNR=8.6						
	comp=Z,2.4nm,0.8s						
BORK	Borovoye	19.96	323		P	00 13 20.0	+0.3
BORK				IAmb	IAmb	00 13 29.1	
	comp=Z,4.3nm,0.7s						
CMAR	Chiang Mai Arr	21.40	156	P	P	00 13 35.4	-0.1
	comp=Z,1.1nm,0.5s,baz=334,slow=10,SNR=7.7						
	comp=Z,1.1nm,0.5s						
HILR	Hailar Array B	23.85	53	P	P	00 14 00.9	+0.1
	comp=Z,0.1nm,0.3s,baz=246,slow=11,SNR=1.6						
	comp=Z,0.1nm,0.3s						

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AB31  Akbulak array     24.11 306          P       00 14 04.3 +1.1
AB31                              IAmb     IAmb    00 14 13.0
      comp=Z,3.2nm,1.0s
AB31  Akbulak array     24.11 306 ⇑P       P       00 14 06.1 +2.8
      comp=Z,1.3nm,0.7s,baz=102,slow=7.3,SNR=5.2
ABKAR Akbulak array     24.11 306 P        P       00 14 04.4 +1.2
KSRS  Korea Array       29.68  80 P        P       00 14 52.6 -0.9
      comp=Z,1.5nm,0.5s,baz=278,slow=8.7,SNR=6.0
KSRS                              LR       LR      00 27 22.4
      comp=Z,22nm,20.5s,baz=20,slow=38
      comp=Z,1.5nm,0.5s
NRIK  Noril'sk          30.93 358 LR       LR      00 28 09.1
      comp=Z,50nm,20.4s,baz=352,slow=38
BRTR  Keskin Array B    43.21 290 P        P       00 16 51.5 +2.5
      comp=Z,0.8nm,0.8s,baz=105,slow=4.3,SNR=2.3
      comp=Z,0.8nm,0.8s
HFS   Hagfors           51.03 321 P        P       00 17 50.0 +0.6
      comp=Z,1.1nm,0.5s,baz=93,slow=8.9,SNR=7.3
      comp=Z,1.1nm,0.5s
NC602 NORSAR Array S    51.95 322 P        P       00 17 56.4 +0.1
NB2   NORSAR Subarra    52.04 323 P        P       00 17 57.1 +0.1
      comp=Z,0.5nm,0.5s,baz=76,slow=7.4
NOA   NORSAR Array B    52.04 323 P        P       00 17 57.1 +0.1
      comp=Z,0.9nm,0.7s,baz=82,slow=6.8,SNR=4.7
      comp=Z,0.9nm,0.7s
VRAC  Vranov            52.09 307 LR       LR      00 43 36.2
      comp=Z,61nm,18.8s,baz=284,slow=40
I23K  Minto, Yukon-K    66.83  23 P        P       00 19 39.7 +0.7
ILAR  Eielson Array     67.85  23 P        P       00 19 45.4 -0.1
      comp=Z,0.9nm,0.8s,baz=309,slow=4.9,SNR=10
      comp=Z,0.9nm,0.8s
ILAR  Eielson Array     67.85  23 P        P       00 19 45.2 -0.3
ESDC  Sonseca Array     69.44 305 P        P       00 19 56.1 +0.1
      comp=Z,0.5nm,1.0s,baz=50,slow=7.4,SNR=3.0
      comp=Z,0.5nm,1.0s
G31M  Satah River       69.59  17 P        P       00 19 56.1 -0.2
G31M                              IAmb     IAmb    00 20 17.1
      comp=Z,3.2nm,1.2s
WB0   Warramunga Arr    71.30 136 P        P       00 20 08.1 +0.8
WRA   Warramunga Arr    71.41 136 P        P       00 20 06.7 -1.3
      comp=Z,1.2nm,0.8s,baz=336,slow=5.6,SNR=4.5
      comp=Z,1.2nm,0.8s
WRA   Warramunga Arr    71.41 136 P        P       00 20 07.4 -0.7
ASAR  Alice Springs     74.22 139 P        P       00 20 24.2 -0.5
      comp=Z,1.3nm,0.8s,baz=332,slow=5.8,SNR=16
      comp=Z,1.3nm,0.8s
YKA   Yellowknife Ar    77.40  11 P        P       00 20 41.5 -0.8
      comp=Z,0.2nm,0.6s,baz=331,slow=6.4,SNR=5.1
      comp=Z,0.2nm,0.6s
TORD  Torodi Ar. Bea    80.73 279 P        P       00 21 02.3 +1.0
      comp=Z,1.3nm,0.8s,baz=40,slow=6.4,SNR=8.5
      comp=Z,1.3nm,0.8s
STKA  Stephens Creek    84.84 138 P        P       00 21 21.1 -1.1
      comp=Z,0.9nm,0.4s,baz=338,slow=7.2,SNR=3.4
      comp=Z,0.9nm,0.4s
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*IDC **28** 01:00:35.2±1.8, 51°.50N×177°.27W, h0^{km}, mb3.3/7, mbtmp3.5/8, ML3.9/1, Error ellipse: s-maj=53.3km s-min=22.6km az=175.0*
*AEIC **28** 01:00:39.8±1.4, 51°.27N±0°.03×177°.06W±0°.05, h27^{km}±5^{km}, Error ellipse: s-maj=5.1km s-min=4.0km az=223.0*
*NEIC **28** 01:00:40.8±1.9, 51°.317N±0°.007×177°.10W±0°.05, h35^{km}±2^{km}, mb4.1/16, ML4.0/10, ML3.7(AEIC), Error ellipse: s-maj=5.1km s-min=3.0km az=275.0*
ISC 28 01:00:40.0±1.6, **51°.31N**±0°.07×**177°.08W**±0°.03, **h32**^{km}±11^{km}, **n65**, σ**0ˢ.92**/62, **mb3.9**/10, **Andreanof Islands**

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Code  Station Name       Δ°  AZ°    Phase ID            Time    Res
                                  Op       ISC       h  m  s   ISC
KIMD  Kanaga Island     0.46 348           Pn      01 00 50.4  0.0
KIMD                                       Sn      01 00 58.1 +0.6
KIWB  Kanaga Island     0.54 355           Sn      01 01 00.4 +0.9
KIWB  Kanaga Island     0.54 355           Pn      01 00 51.7 +0.2
KIWB                              IAML             01 01 00.9
      comp=N,36μm,0.4s
KIWB                              IAML             01 01 00.9
      comp=E,28μm,0.3s
KIKV  Kanaga Island     0.57 354           Pn      01 00 52.1 +0.2
KIKV                                       Sn      01 01 01.2 +1.0
KIRH  Kanaga Island     0.59 359           Pn      01 00 52.5 +0.4
KIRH                                       Sn      01 01 01.8 +1.1
KICM  Kanaga Island     0.61 353           Pn      01 00 52.8 +0.3
KICM                                       Sn      01 01 02.1 +0.9
KINC  Kanaga Island     0.62 357           Pn      01 00 53.0 +0.4
KINC                                       Sn      01 01 02.3 +0.8
ADK   Adak              0.62  23           Pn      01 00 52.6 -0.1
ADK                               Sn       Sn      01 01 01.7 +0.2
ADK                               IAML             01 01 01.9
      comp=E,8μm,0.5s
ADK                               IAML             01 01 02.4
      comp=E,8μm,0.6s
TAFL  Tanaga Flats      0.68 311           Pb      01 00 53.2 -0.2
TAFL                                       Sn      01 01 03.1 +0.3
ADAG  Mount Adagdak     0.73  24           Pn      01 00 54.7 +0.5
TASE  Tanaga Southea    0.79 312           Sn      01 01 05.9 +0.1
TAFP  Tanaga Falls P    0.81 317           Pb      01 00 55.3 -0.4
TANO  Tanaga North      0.89 313           Pb      01 00 57.0 +0.1
GSCK  Great Sitkin C    0.91  39           Pn      01 00 56.9 +0.4
GSTD  Great Sitkin T    0.95  38           Sn      01 01 10.3 +0.8
GSMY  Great Sitkin M    0.97  41           Pn      01 00 57.7 +0.3
GSIG  Igitkin Island    0.99  46           Pn      01 00 57.6 -0.1
GSTR  Great Sitkin T    1.01  39           Pb      01 00 58.7 -0.2
GSTR                              IAML             01 01 18.8
      comp=E,4μm,0.5s
GSTR                              IAML             01 01 19.5
      comp=N,5μm,0.8s
GAKI  Gareloi-Kavalg    1.11 283           Pn      01 00 59.0 -0.3
GAEA  Gareloi East      1.14 295           Pn      01 01 00.3 +0.5
GASW  Gareloi Southw    1.20 294           Pn      01 01 00.9 +0.3
ATKA  Atka Island       2.00  62           Pn      01 01 11.4 -0.1
ATKA                              IAML             01 01 43.0
      comp=E,494nm,0.6s
ATKA                              IAML             01 01 43.2
      comp=N,632nm,0.5s
KOWE  Korovin West      2.05  58           Pn      01 01 13.5 +1.3
KOKL  Mount Kliuchef    2.06  59           Pn      01 01 13.1 +0.7
KOFP  Korovin Flat P    2.09  61           Pn      01 01 13.2 +0.4
KOKV  Korovin Volcan    2.09  59           Pn      01 01 15.0 +2.1
CEPE  Semis' Perret     2.14 289           Pn      01 01 14.9 +1.5
CERB  Semis' Cerberu    2.14 288           Pn      01 01 15.1 +1.6
CESW  Semis' Southwe    2.17 287           Pn      01 01 15.3 +1.4
AMKA  Amchitka          2.27 273  Pn       Pn      01 01 15.3 +0.1
OHAK  Old Harbor       15.06  58  P        P       01 04 13.7 -1.5
KDAK  Kodiak Island    15.56  56  Pn       Pn      01 04 16.0 -0.7
      comp=N,0.5nm,0.3s,baz=265,slow=12,SNR=11
      comp=N,5.9nm,0.7s
KDAK  Kodiak Island    15.56  56  Pn       Pn      01 04 17.1 +0.4
CNPM  China Poot       16.73  51           Pn      01 04 32.0 +0.3
SKT   Skwentna         17.51  43  P        P       01 04 43.4 +1.0
SKT                               IAmb     IAmb    01 04 46.9
      comp=Z,14nm,1.2s
SLKM  Skilak Lake      17.53  48           Pn      01 04 42.3 +0.6
SLKM                              IAmb     IAmb    01 05 04.8
      comp=Z,46nm,1.4s
SEW   Seward           17.76  50  Pn       Pn      01 04 43.4 -1.0
L22K  Petersville      18.07  41           Pn      01 04 47.7 -0.7
KTH   Kantishna Hill   18.50  38  P        Pn      01 04 53.8 +0.3
KTH                               IAmb     IAmb    01 05 21.5
      comp=Z,10.0nm,1.1s
DHY   Denali Highway   19.72  42  P        P       01 05 06.9 +0.2
ILAR  Eielson Array    20.63  38  P        P       01 05 15.0 -1.4
      comp=Z,0.4nm,0.9s,baz=232,slow=9.0,SNR=6.8
      comp=Z,0.4nm,0.9s
SCRK  Sand Creek       21.47  41  P        P       01 05 25.1 -0.4
INK   Inuvik           26.90  34  P        P       01 06 15.7 -1.9
      comp=Z,0.2nm,0.3s,baz=250,slow=8.1,SNR=1.3
      comp=Z,0.2nm,0.3s
INK   Inuvik           26.90  34  IAmb     IAmb    01 06 36.6
      comp=Z,4.8nm,1.5s
H11N2 WAKE ISLAND Hy   33.95 208  T        T       01 43 42.8
      baz=18,slow=76,SNR=122
H11N3 WAKE ISLAND Hy   33.96 208  T        T       01 43 48.3
      baz=18,slow=76,SNR=107
H11N1 WAKE ISLAND Hy   33.97 208  T        T       01 43 44.1
      baz=18,slow=76,SNR=109
YKA   Yellowknife Ar   34.49  47  P        P       01 07 23.7 -0.9
      comp=Z,0.2nm,0.8s,baz=273,slow=12,SNR=1.9
      comp=Z,0.2nm,0.8s
H11S1 WAKE ISLAND Hy   35.16 207  T        T       01 45 20.2
      baz=17,slow=76,SNR=107
H11S2 WAKE ISLAND Hy   35.18 207  T        T       01 45 13.4
      baz=17,slow=76,SNR=64
H11S3 WAKE ISLAND Hy   35.18 207  T        T       01 45 13.8
      baz=17,slow=76,SNR=38
BCYI  Bear Canyon      42.12  74  P        P       01 08 29.9 +0.7
BCYI                              IAmb     IAmb    01 08 39.9
      comp=Z,6.2nm,1.4s
LKWY  Lake             43.78  72  P        P       01 08 45.3 +2.6
LKWY                              IAmb     IAmb    01 08 46.1
      comp=Z,3.2nm,0.6s
BW06  Boulder Array    45.30  73  P        P       01 08 55.7 +0.9
BW06                              IAmb     IAmb    01 09 13.3
      comp=Z,3.7nm,1.4s
PD31  Pinedale Array   45.30  73  P        P       01 08 56.2 +1.4
PD31                              IAmb     IAmb    01 09 13.3
      comp=Z,3.3nm,1.4s
PDAR  Pinedale Array   45.30  73  P        P       01 08 55.5 +0.7
      comp=Z,0.6nm,0.6s,baz=315,slow=3.1,SNR=8.6
      comp=Z,0.6nm,0.6s
SONM  Songino Array    47.64 298  P        P       01 09 12.1 -0.8
      comp=Z,0.4nm,0.5s,baz=46,slow=8.3,SNR=2.8
      comp=Z,0.4nm,0.5s
HHC   Hu-ho-hao-te     48.74 287  eP       P       01 09 22.3 +0.8
HHC                               pmax     pmax
      comp=Z,11nm,0.5s
HHC                               pmax     pmax
      comp=Z,210nm,6.3s
TXAR  Lajitas Array    57.60  82  P        P       01 10 27.3 +0.5
      comp=Z,0.1nm,0.5s,baz=323,slow=8.8,SNR=1.9
      comp=Z,0.1nm,0.5s
BVAR  Borovoye Array   61.63 321  P        P       01 10 52.8 -1.3
      comp=Z,0.4nm,0.3s,baz=44,slow=6.6,SNR=5.0
      comp=Z,0.4nm,0.3s
PZH   PanZhiHua        64.42 281  P        P       01 11 13.5 +0.3
H03N2 Juan Fernandez  120.09 107  T        T       03 31 10.9
      baz=317,slow=77,SNR=22
H03N1 Juan Fernandez  120.11 107  T        T       03 31 12.6
      baz=317,slow=77,SNR=31
H03N3 Juan Fernandez  120.11 107  T        T       03 31 27.1
      baz=317,slow=77,SNR=34
BOSA  Boshof          151.80 315  PKPbc    PKPbc   01 20 30.3 -1.0
      comp=Z,1.2nm,0.5s,baz=11,slow=1.1,SNR=6.5
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*IDC **28** 01:14:25.4±3.1, 34°.32S×179°.94W, h0^{km}, mb3.4/2, mbtmp3.6/3, ML4.0/1, MS3.1/1, Error ellipse: s-maj=73.1km s-min=46.2km az=114.0*
*WEL **28** 01:14:34.6±1.3, 35°S±16°×18°0W±1°6, h105^{km}±75^{km}, M3.9/8, ML3.7/12, MLv3.9/8, Error ellipse: s-maj=20.7km s-min=20.6km az=46.4, confirmed*
ISC 28 01:14:32.7±2.0, **34°.93S**±0°.09×**179°.4W**±0°.2, **h100**^{km}, **n30**, σ**0ˢ.70**/33, **South of Kermadec Islands**

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Code  Station Name       Δ°  AZ°    Phase ID            Time    Res
                                  Op       ISC       h  m  s   ISC
MXZ   Matakaoa Point    3.20 214  P        Pn      01 15 20.8 -0.3
MXZ                               S        Sn      01 15 58.0 -0.4
WMGZ  Waiomatatini S    3.37 210  P        Pn      01 15 24.5 +1.1
WMGZ                              S        Sn      01 16 03.4 +1.0
PKGZ  Pakihiroa         3.55 214  P        Pn      01 15 26.4 +0.6
PKGZ                              S        Sn      01 16 06.8 -0.1
HAZ   Te Kaha           3.60 218  P        Pn      01 15 27.2 +0.7
PUZ   Puketiti          3.65 210  P        Pn      01 15 27.4 +0.2
PUZ                               S        Sn      01 16 08.6 -0.6
RUGZ  Raukumara Rang    3.82 217  P        Pn      01 15 29.9 +0.4
TWGZ  Tauwhareparae     3.85 212  P        Pn      01 15 29.9  0.0
TWGZ                              S        Sn      01 16 13.7 -0.5
CNGZ  Carnagh Statio    4.02 207  P        Pn      01 15 32.7 +0.5
MWZ   Matawai           4.18 215  P        Pn      01 15 34.5 +0.1
URZ   Urewera           4.33 219  Pn       Pn      01 15 36.1 -0.2
      6.3nm,0.3s,baz=8.1,slow=7.1,SNR=60
URZ                               Sn       Sn      01 16 25.4 -0.3
      1.3nm,0.3s,baz=125,slow=23,SNR=1.3
      19nm,0.4s
URZ   Urewera           4.33 219  P        Pn      01 15 36.4 +0.1
URZ                               S        Sn      01 16 25.0 -0.7
RIGZ  Rimuhau           4.39 210  P        Pn      01 15 37.3 +0.2
PRGZ  Paritu Road       4.53 207  P        Pn      01 15 38.4 -0.6
SNGZ  Shannon Statio    4.63 213  P        Pn      01 15 41.1 +0.6
RTZ   Ruatahuna         4.67 217  P        Pn      01 15 40.8 -0.2
RAHZ  Arahi             4.86 214  P        Pn      01 15 44.7 +1.2
MTHZ  Maungataniwha     4.92 216  P        Pn      01 15 45.2 +0.8
TOZ   Tahuroa Road      4.95 234  P        Pn      01 15 46.0 +1.3
NMHZ  Naumai            5.13 215  P        Pn      01 15 47.7 +0.5
BKZ   Black Stump Fm    5.33 216  P        Pn      01 15 50.1 +0.1
KWHZ  Kaweka Forest     5.57 215  P        Pn      01 15 52.5 -0.7
OUZ   Omahuta           5.72 265  P        Pn      01 15 54.6 -0.5
PNHZ  Pukenui           6.07 214  P        Pn      01 15 58.4 -1.5
ASAR  Alice Springs    41.87 273  P        P       01 22 12.9 -0.3
      0.2nm,0.3s,baz=115,slow=8.6,SNR=1.9
      0.2nm,0.3s
WRA   Warramunga Arr   43.27 278  P        P       01 22 25.7 +1.1
      0.5nm,0.7s,baz=118,slow=8.2,SNR=1.6
      0.5nm,0.7s
VNDA  Vanda            43.48 186  LR       LR      01 39 00.1
      comp=Z,22nm,18.1s,baz=216,slow=34
H03N3 Juan Fernandez   79.20 123  T        T       02 55 05.4
      baz=231
H03N2 Juan Fernandez   79.20 123  T        T       02 55 04.2
      baz=231
H03N1 Juan Fernandez   79.22 123  T        T       02 55 07.4
      baz=231
FINES FINESS Array B  148.89 336  PKPbc    PKPab   01 34 11.6 -0.6
      1.5nm,0.8s,baz=62,slow=3.6,SNR=4.9
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*IDC **28** 01:40:15.5±1.1, 34°.33N×23°.54E, h0^{km}, mb3.7/8, mbtmp3.8/16, ML3.4/5, Error ellipse: s-maj=21.5km s-min=14.8km az=175.0*
*ATH **28** 01:40:21.1, 34°.56N×23°.44E, h15^{km}±5^{km}, ML3.1/6, Manual Solution by A.Agalos First location: 2019/12/28 01:41:49, This location: 2019/12/28 01:49:55 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 5 km; Longitude uncertainty: 3 km*
*THE **28** 01:40:25.5, 35°N±12°×2°4E±°, h16^{km}±16^{km}, M3.0/5, MLh3.0/5*
*GII **28** 01:40:27.6±0.0, 34°.225N±0°.002×24°.482E±0°.001, h1^{km}, Mws3.5, confirmed*
ISC 28 01:40:19.6±1.5, **34°.32N**±0°.07×**23°.61E**±0°.05, **h32**^{km}±10^{km}, **n103**, σ**2ˢ.13**/114, **mb3.7**/7, **Crete**

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Code  Station Name       Δ°  AZ°    Phase ID            Time    Res
                                  Op       ISC       h  m  s   ISC
GVD   Gavdhos           0.65  37  P        Pb      01 40 33.1 +0.4
GVD                               S        Sb      01 40 38.9 -2.7
GVD   Gavdhos           0.65  37  P        Pb      01 40 33.1 +0.4
GVD                               S        Sb      01 40 40.5 -1.0
VAM   Vamos             1.19  24  P        Pn      01 40 40.7 +0.6
VAM                               S        Sn      01 40 55.2  0.0
CHNB  Souda             1.23  18  P        Pn      01 40 41.4 +0.8
CHAN  Chania            1.25  16  P        Pn      01 40 41.5 +0.6
CHAN                              S        Sn      01 40 55.2 -1.5
IDI   Anoyia            1.43  47  Pn       Pn      01 40 45.2 +1.8
      5.6nm,0.3s,baz=219,slow=11,SNR=42
IDI                               Sn       Sn      01 41 03.0 +1.8
      9.2nm,0.3s,baz=245,slow=19,SNR=7.9
IDI   Anoyia            1.43  47  P        Pn      01 40 46.1 +2.7
IDI                               S        Sn      01 41 00.5 -0.7
IDI   Anoyia            1.43  47  P        Pn      01 40 46.1 +2.7
NPS   Neapolis          1.90  60  P        Pn      01 40 53.3 +3.5
NPS                               S        Sn      01 41 15.8 +3.1
NPS   Neapolis          1.90  60  P        Pn      01 40 53.5 +3.7
KTHA  Kythira Island    1.99 347  P        Pn      01 40 51.0  0.0
KTHA  Kythira Island    1.99 347  P        Pn      01 40 51.1  0.0
ZKR   Zakros            2.29  69  P        Pn      01 40 59.3 +4.1
MHLO  Agia Marina, M    2.46  15  P        Pn      01 40 57.2 -0.3
MHLO                              S        Sn      01 41 24.0 -2.4
MHLO  Agia Marina, M    2.46  15  P        Pn      01 40 57.7 +0.3
VLI   Veliai            2.46 347  P        Pn      01 40 57.2 -0.3
VLI                               S        Sn      01 41 24.3 -2.2
VLI   Veliai            2.46 347  P        Pn      01 40 57.6 +0.1
THR6  Thira Island,     2.51  35  P        Pn      01 40 59.2 +1.0
THR6  Thira Island,     2.51  35  P        Pn      01 40 59.1 +0.9
THERA Ancient Thera,    2.55  36  P        Pn      01 40 59.3 +0.5
PYL   PYLOS             2.99 330  P        Pn      01 41 03.1 -1.7
APE   Apeiranthos       3.16  29  P        Pn      01 41 08.0 +0.8
KARP  Karpathos         3.17  66  P        Pn      01 41 11.1 +3.9
ITM   Ithomi            3.17 335  P        Pn      01 41 06.6 -0.7
MET1  Methana Town,     3.26 357  P        Pn      01 41 08.4 -0.1
MET6  Megalochori,Me    3.28 356  P        Pn      01 41 08.8 +0.1
MET2  Kameni Chora,     3.30 356  P        Pn      01 41 08.7 -0.3
MET5  Makryloggos,Me    3.31 357  P        Pn      01 41 09.1 -0.1
VLY   Voula,Athens      3.53   2  P        Pn      01 41 12.1 -0.1
ATHU  Athens Univers    3.65   2  P        Pn      01 41 12.6 -1.3
LTK   Loutraki          3.74 352  P        Pn      01 41 14.4 -0.7
DION  Dionisos Attik    3.76   4  P        Pn      01 41 14.5 -0.9
STFN  Stefani           3.85 359  P        Pn      01 41 15.6 -1.1
VIL2  Platees           3.90 356  P        Pn      01 41 15.6 -1.7
KLV   Kalavryta, Ach    3.90 343  P        Pn      01 41 16.9 -0.5
RLS   Riolos of Patr    4.12 336  P        Pn      01 41 19.4 -0.9
VAE   Valguarnera       8.10 296  Pn       Pn      01 42 14.8 -0.3
      4.8nm,0.7s,baz=118,slow=17,SNR=1.7
VAE                               Sn       Sn      01 43 34.7  -11
      1.2nm,0.3s,baz=36,slow=22,SNR=2.3
BRTR  Keskin Array B    9.66  53  Pn       Pn      01 42 38.7 +2.1
      0.1nm,0.3s,baz=228,slow=13,SNR=4.4
      0.5nm,0.7s
KZIT  Kziot             9.71 108  P        Pn      01 42 39.3 +2.1
KZIT  Kziot             9.71 108  S        Sn      01 44 21.6 -3.5
SLTI  Sal'it            9.79  99  P        Pn      01 42 40.1 +1.9
SLTI  Sal'it            9.79  99  S        Sn      01 44 23.1 -4.0
AMAZ  Amatzia           9.90 103  P        Pn      01 42 41.4 +1.7
AMAZ  Amatzia           9.90 103  S        Sn      01 44 26.0 -3.7
MMAI  Mount Meron Ar    9.91  94  Pn       Pn      01 42 40.3 +0.3
      2.0nm,0.4s,baz=279,slow=9.6,SNR=1.3
MMAI                              Sn       Sn      01 44 29.0 -1.1
      4.0nm,0.3s,baz=277,slow=22,SNR=4.4
SALP  Salfit            9.96 100  P        Pn      01 42 42.4 +1.8
SALP  Salfit            9.96 100  S        Sn      01 44 27.9 -3.4
MMLI  Mount Malkishu   10.05  97  P        Pn      01 42 43.3 +1.4
MMLI  Mount Malkishu   10.05  97  S        Sn      01 44 29.5 -4.0
YTIR  Yattir           10.12 104  P        Pn      01 42 44.8 +2.0
YTIR  Yattir           10.12 104  S        Sn      01 44 31.7 -3.4
HMDT  Nahal Hemdat     10.18  98  P        Pn      01 42 45.3 +1.8
HMDT  Nahal Hemdat     10.18  98  S        Sn      01 44 33.4 -3.3
DSI   Dead Sea         10.26 102  P        Pn      01 42 46.4 +1.8
DSI   Dead Sea         10.26 102  S        Sn      01 44 35.3 -3.3
KRMI  Paran Flat       10.30 111  P        Pn      01 42 47.6 +2.4
KRMI  Paran Flat       10.30 111  S        Sn      01 44 36.2 -3.4
MSBI  Mazada           10.33 104  P        Pn      01 42 47.2 +1.6
MSBI  Mazada           10.33 104  S        Sn      01 44 36.5 -3.6
PRNI  Paran            10.42 109  P        Pn      01 42 49.0 +2.2
PRNI  Paran            10.42 109  S        Sn      01 44 39.3 -3.1
IDAN  Idan             10.43 106  P        Pn      01 42 49.2 +2.2
IDAN  Idan             10.43 106  S        Sn      01 44 39.0 -3.9
ZFRI  Zfri             10.47 108  P        Pn      01 42 49.0 +1.6
ZFRI  Zfri             10.47 108  S        Sn      01 44 39.5 -4.1
GHAJ  Ghor Haditha     10.50 103  P        Pn      01 42 49.8 +2.0
GHAJ  Ghor Haditha     10.50 103  S        Sn      01 44 40.1 -4.3
HRFI  Mount Harif      10.58 111  P        Pn      01 42 51.5 +2.5
HRFI  Mount Harif      10.58 111  S        Sn      01 44 43.4 -3.0
MBRI  Mt Berech        10.60 112  P        Pn      01 42 51.8 +2.5
MBRI  Mt Berech        10.60 112  S        Sn      01 44 44.1 -2.8
EIL   Elat             10.68 113  Pn       Pn      01 42 49.3 -1.1
      0.6nm,0.3s,baz=10.0,slow=17,SNR=14
EIL                               Sn       Sn      01 44 45.1 -3.8
      0.8nm,0.3s,baz=311,slow=16,SNR=6.1
      1.9nm,0.4s
EIL   Elat             10.68 113  P        Pn      01 42 52.7 +2.2
EIL   Elat             10.68 113  S        Sn      01 44 45.8 -3.1
ASF   Jabal al Asfar   11.33  97  Pn       Pn      01 43 00.2 +0.8
      0.1nm,0.3s,baz=304,slow=18,SNR=1.5
ASF                               Sn       Sn      01 45 00.7 -4.2
      0.2nm,0.3s,baz=307,slow=20,SNR=0.9
      2.3nm,0.9s
KEST  Kesra            11.78 281  Sn       Sn      01 45 03.9  -12
      baz=25,slow=19,SNR=1.1
ARSA  Arzberg          14.29 337  ePn      Pn      01 43 39.7 +0.1
      1.0nm,0.5s
RONA  Rosalia, Austr   14.46 340  ePn      Pn      01 43 41.8 -0.2
      2.4nm,0.5s
ABTA  Abfaltersbach    14.99 329  i Pn     Pn      01 43 52.4 +3.2
      4.7nm,0.9s
MOA   Molln            15.23 335  i Pn     Pn      01 43 55.5 +3.3
      1.7nm,0.5s
LESA  Schwarzleotal    15.47 331  i Pn     P       01 44 01.1 +1.5
      1.0nm,0.3s
WTTA  Wattenberg       15.77 329  ePn      P       01 44 03.7 +0.6
      3.5nm,0.9s
WATA  Walderalm        15.85 329  ePn      P       01 44 05.7 +1.7
      2.2nm,0.9s
VRAC  Vranov           15.86 343  Pn       Pn      01 44 00.3 -0.1
      0.2nm,0.3s,baz=174,slow=13,SNR=3.6
      1.8nm,0.7s
FETA  Feichten         15.99 326  i Pn     Pn      01 44 03.6 +1.4
      6.0nm,1.3s
CKRC  Cesky Krumlov    16.06 337  eP       Pn      01 44 05.3 +2.4
DAVOX Davos/Dischmat   16.21 324  Pn       Pn      01 44 06.7 +1.6
      0.2nm,0.3s,baz=158,slow=11,SNR=3.9
DAVOX                             Sn       Sn      01 46 51.8  -12
      0.1nm,0.3s,baz=184,slow=19,SNR=1.8
GERES GERESS Array B   16.28 336  Pn       Pn      01 44 07.4 +1.5
      baz=140,slow=10,SNR=12
      1.1nm,0.7s
RETA  Reutte           16.32 328  ePn      P       01 44 10.1 +1.0
      6.0nm,1.4s
KHC   Kasperske Hory   16.57 336  eP       Pn      01 44 11.3 +1.9
DAVA  Damuels          16.58 326  ePn      Pn      01 44 09.6 -0.1
      2.2nm,0.7s
ZVC   Zvikov           16.64 338  eP       Pn      01 44 10.4 +0.1
DPC   Dobruska-Polom   16.89 344  eP       Pn      01 44 14.4 +0.9
PRA   Prague           17.13 340  eP       Pn      01 44 17.3 +0.9
KVAR  Kislovodsk Arr   17.62  51  P        Pn      01 44 24.4 +1.7
      7.1nm,0.9s,baz=270,slow=18,SNR=4.2
ESDC  Sonseca Array    22.62 292  P        P       01 45 16.7 -1.1
      0.3nm,0.9s,baz=89,slow=8.8,SNR=1.3
      0.3nm,0.9s
HFS   Hagfors          26.63 349  P        P       01 45 54.4 -0.7
      2.0nm,0.8s,baz=161,slow=9.2,SNR=7.7
      2.0nm,0.8s
FINES FINESS Array B   27.19   3  P        P       01 45 60.0 -0.1
      4.3nm,1.0s,baz=187,slow=11,SNR=2.3
      4.3nm,1.0s
NOA   NORSAR Array B   27.91 347  P        P       01 46 06.4 -0.1
      0.5nm,0.7s,baz=149,slow=11,SNR=1.8
      0.5nm,0.7s
EKA   Eskdalemuir Ar   28.02 327  P        P       01 46 08.8 +1.2
      1.4nm,0.5s,baz=126,slow=8.5,SNR=7.5
      1.4nm,0.5s
TORD  Torodi Ar. Bea   28.97 229  P        P       01 46 16.8 +0.4
      0.5nm,0.5s,baz=36,slow=9.7,SNR=7.9
      0.5nm,0.5s
MKAR  Makanchi Array   45.30  56  P        P       01 48 35.1 +0.7
      0.4nm,0.3s,baz=268,slow=7.9,SNR=12
      0.4nm,0.3s
ZALV  Zalesovo Beam    46.51  46  P        P       01 48 43.5 -0.2
      0.3nm,0.3s,baz=264,slow=9.6,SNR=2.1
      0.3nm,0.3s
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*IDC **28** 01:48:36.6±1.2, 35°.65N×32°.01E, h56^{km}±15^{km}, mb3.6/11, mbtmp3.8/19, MS2.6/3, Error ellipse: s-maj=12.4km s-min=8.7km az=49.0*
*ISK **28** 01:48:37.7, 35°.66N×32°.06E, h31^{km}, ML3.6/31*
*AFAD **28** 01:48:37.6, 35°.74N×32°.19E, h42^{km}±1^{km}, MW3.7*
*NEIC **28** 01:48:38.0±1.9, 35°.62N±0°.07×32°.12E±0°.05, h67^{km}±11^{km}, mb4.2/13, Error ellipse: s-maj=10.9km s-min=5.5km az=193.0*
*NIC **28** 01:48:40.9, 35°.63N×32°.36E, h59^{km}±2^{km}, Ml3.3/13*
*GII **28** 01:48:41.0±0.0, 35°.513N±0°.002×32°.218E±0°.001, h40^{km}, Mws4.0, confirmed*
ISC 28 01:48:37.8±0.7, **35°.67N**±0°.02×**32°.16E**±0°.03, **h63**^{km}±7^{km}, **n191**, σ**1ˢ.45**/228, **mb4.0**/14, **8C**, **Cyprus region**

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Code  Station Name       Δ°  AZ°    Phase ID            Time    Res
                                  Op       ISC       h  m  s   ISC
ALFC  Alefka            0.63 145⇑iP        Pn      01 48 52.5 +1.0
ALFC                              S        Sn      01 49 02.7 +1.2
ALFC                              AML      AML     01 49 04.1
      7.1nm,0.1s
ALFC                              AML      AML     01 49 04.7
      13nm,0.4s
AKMS  Akamas            0.67 167⇑iP        Pn      01 48 53.7 +1.8
AKMS                              S        Sn      01 49 04.6 +2.3
AKMS                              AML      AML     01 49 05.6
      10nm,0.3s
AKMS                              AML      AML     01 49 06.0
      18nm,0.2s
BOZY  Bozyazi-Mersin    0.79  57  Pg       Pn      01 48 53.9 +0.5
BOZY                              Sg       Sn      01 49 05.4 +0.5
ALAN  Alanya-ANTALYA    0.89 353  Pg       Pn      01 48 54.4 -0.2
ALAN                              Sg       Sn      01 49 05.9 -1.1
TROD  Troodos           0.93 141⇑iP        Pn      01 48 56.4 +1.1
TROD                              S        Sn      01 49 08.4 +0.3
TROD                              AML      AML     01 49 11.8
      1.6nm,0.3s
TROD                              AML      AML     01 49 11.8
      1.9nm,0.4s
NATA  Nata              0.95 159⇑iP        Pn      01 48 57.8 +2.4
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NATA				AML	AML	01 49 23.1	
	7.8nm,1.0s						
NATA				AML	AML	01 49 23.2	
	5.6nm,0.3s						
XYLS	Xyliatos	0.98	132	⇑iP	Pn	01 48 56.6	+0.8
XYLS				S	Sn	01 49 09.2	0.0
XYLS				AML	AML	01 49 13.3	
	2.2nm,0.2s						
XYLS				AML	AML	01 49 14.0	
	3.2nm,0.2s						
ATHAL	Athalassa	1.14	117	⇑iP	Pn	01 48 58.9	+1.0
ATHAL				S	Sn	01 49 12.9	+0.2
ATHAL				AML	AML	01 49 25.7	
	4.4nm,0.7s						
ATHAL				AML	AML	01 49 31.3	
	4.2nm,0.6s						
APOL	The Sanctuary	1.15	150	P	Pn	01 49 00.1	+2.1
APOL				AML	AML	01 49 27.4	
	1.5nm,0.5s						
APOL				AML	AML	01 49 32.2	
	1.3nm,0.5s						
OREN	Orenkoy-Mersin	1.18	63	Pn	Pn	01 48 59.6	+1.2
OREN				Sn	Sn	01 49 15.1	+1.4
LFK	Lefkose	1.19	109	Pn	Pn	01 48 59.6	+1.1
LFK				Sn	Sn	01 49 15.6	+1.7
CSS	Mathiatis	1.19	126	Pn	Pn	01 48 59.2	+0.7
CSS				Sn	Sn	01 49 14.9	+0.9
CSS	Mathiatis	1.19	126		Pn	01 48 59.0	+0.5
CSS				Sn	Sn	01 49 13.6	-0.4
CSS	Mathiatis	1.19	126	P	Pn	01 48 59.2	+0.7
CSS	Mathiatis	1.19	126	⇑iP	Pn	01 48 59.0	+0.5
CSS				S	Sn	01 49 15.3	+1.4
CSS				AML	AML	01 49 27.1	
	1.2nm,0.5s						
CSS				AML	AML	01 49 28.2	
	1.1nm,0.8s						
AKK1	Akkuyu-Mersin	1.22	67	Pn	Pn	01 49 00.1	+1.3
AKK1				Sn	Sn	01 49 16.4	+1.9
AKK2	Akkuyu-Mersin	1.22	67	Pn	Pn	01 49 00.0	+1.1
GULN	MERSIN_Gulnar	1.23	65	P	Pn	01 49 00.3	+1.3
GULN				S	Sn	01 49 15.8	+0.9
BECE	Buyukeceli-Mer	1.24	67	Pn	Pn	01 49 00.5	+1.4
TEPK	Tepekoy-MERSIN	1.25	63	Pn	Pn	01 49 00.9	+1.5
ASGA	Asgata	1.26	134	P	Pn	01 49 00.7	+1.4
ASGA				S	Sn	01 49 15.3	-0.2
ASGA				AML	AML	01 49 24.4	
	1.4nm,0.5s						
ASGA				AML	AML	01 49 27.4	
	1.3nm,0.4s						
MNVG	Manavgat-Antal	1.27	332	Pn	Pn	01 48 59.8	+0.3
MNVG				Sn	Sn	01 49 15.2	-0.5
HDMB	Hadim	1.32	12	Pn	Pn	01 49 01.4	+1.0
TISA	Tisan-Mersin	1.33	68	Pn	Pn	01 49 01.6	+1.3
IKL	Isikli	1.36	65	Pn	Pn	01 49 02.2	+1.5
KARG	Kargicak-Mersi	1.37	67	Pn	Pn	01 49 02.4	+1.6
MVOU	Mavrovouni	1.37	118	⇑iP	Pn	01 49 01.2	+0.4
MVOU				S	Sn	01 49 17.1	-1.0
MVOU				AML	AML	01 49 27.3	
	1.6nm,0.4s						
MVOU				AML	AML	01 49 28.9	
	1.4nm,0.6s						
LAR1C	Larnaka City C	1.41	122	P	Pn	01 49 02.5	+1.2
LAR1C				S	Sn	01 49 19.1	+0.1
KEBE	Keben-Mersin	1.48	58	Pn	Pn	01 49 03.8	+1.4
SILI	Silifke-Mersin	1.59	64	Pn	Pn	01 49 05.7	+1.9
KEMT	Kemer-ANTALYA	1.60	306	Pn	Pn	01 49 03.3	-0.6
AKUM	Antalya-Kumluc	1.61	294	P	Pn	01 49 05.0	+1.0
AKUM				S	Sn	01 49 29.4	+5.6
PAR1C	Paralimni Civi	1.62	113	P	Pn	01 49 05.5	+1.4
SLFK	Silifke-Mersin	1.62	63	Pn	Pn	01 49 05.8	+1.6
KKBE	Karaman, Kazim	1.67	22	P	Pn	01 49 06.3	+1.3
KKBE				S	Sn	01 49 26.3	+0.8
PARAL	Paralimni	1.68	113	P	Pn	01 49 06.2	+1.2
PARAL				AML	AML	01 49 38.2	
	1.5nm,0.9s						
PARAL				AML	AML	01 49 42.4	
	0.8nm,1.0s						
ANTB	Antalya	1.73	316	Pn	Pn	01 49 05.7	+0.1
KRMN	Karaman	1.74	30	Pn	Pn	01 49 07.9	+1.9
SEYD	Seydisehir-KON	1.75	352	Pn	Pn	01 49 07.6	+1.5
KIZK	Mersin	1.80	63	P	Pn	01 49 08.4	+1.8
KIZK				S	Sn	01 49 29.6	+1.1
KIZK	Mersin	1.80	63	Pn	Pn	01 49 08.4	+1.8
SEDI	Konya, Seydise	1.81	350	P	Pn	01 49 08.9	+2.1
SEDI				S	Sn	01 49 30.6	+1.8
KORT	Korkueli	1.97	313	Pn	Pn	01 49 08.3	-0.8
BUCA	Burdur, Bucak-	2.10	323	P	Pn	01 49 11.5	+0.8
ELL	Elmali	2.11	301	Pn	Pn	01 49 11.1	+0.1
ELL	Elmali	2.11	301		Pn	01 49 12.3	+1.3
AKAS	Kas	2.15	286	P	Pn	01 49 10.9	-0.5
AKAS	Kas	2.15	286	Pn	Pn	01 49 11.4	0.0
AKAS	Kas	2.15	286		Pn	01 49 11.2	-0.2
BCK	Bucak	2.19	325	Pn	Pn	01 49 12.5	+0.5
KONT	Konya--Tatoy	2.27	4	P	Pn	01 49 14.3	+1.2
KONT	Konya--Tatoy	2.27	4	Pn	Pn	01 49 14.4	+1.2
OSC1	CSNet OBS 1	2.29	199	P	Pn	01 49 14.9	+1.7
OSC1				S	Sn	01 49 42.4	+2.2
OSC1				AML	AML	01 49 47.4	
	0.3nm,0.1s						
OSC1				AML	AML	01 49 49.7	
	0.2nm,0.2s						
KERG	Konya-Eregli	2.35	42	P	Pn	01 49 15.8	+1.5
KERG				S	Sn	01 49 42.8	+0.7
KNIK	Mula-Seydike	2.40	300	P	Pn	01 49 16.2	+1.4
KNIK				S	Sn	01 49 45.2	+2.1
DOGA	KONYA_Doganhis	2.46	351	P	Pn	01 49 17.5	+1.7
YESY	Yesilyurt	2.46	31	Pn	Pn	01 49 17.4	+1.7
ISP	Isparta	2.52	329		Pn	01 49 17.6	+1.1
LADK	Ladik-KONYA	2.53	4	Pn	Pn	01 49 17.5	+0.9
BAGO	Egridir - ISPA	2.56	335	P	Pn	01 49 19.7	+2.6
BAGO				S	Sn	01 49 49.5	+2.3
OSC2	CSNet OBS 4	2.59	178	P	Pn	01 49 20.0	+2.6
OSC2				S	Sn	01 49 51.2	+3.5
OSC2				AML	AML	01 49 58.5	
	0.3nm,0.3s						
OSC2				AML	AML	01 50 03.2	
	0.3nm,0.4s						
GOLH	Golhisar	2.61	307	P	Pn	01 49 19.9	+2.1
GOLH				S	Sn	01 49 51.3	+3.0
BRDR	BURDUR-Merkez	2.63	321	P	Pn	01 49 19.4	+1.4
GULE	Gulek	2.65	52	P	Pn	01 49 21.2	+2.8
GULE				S	Sn	01 49 53.1	+3.6
ALIN	Konya, Altinte	2.69	12	P	Pn	01 49 19.5	+0.7
YVAC	Isparta, Yalva	2.70	344	P	Pn	01 49 19.8	+0.9
SULT	Sultanhani-AKS	2.75	23	Pn	Pn	01 49 21.2	+1.6
KARA	Karaisali	2.82	55	Pn	Pn	01 49 22.5	+2.0
ASUZ	Hatay-Arsuz	3.01	77	P	Pn	01 49 25.5	+2.5
ASUZ				S	Sn	01 50 00.1	+2.2
UCKU	Afyonkarahisar	3.02	349	P	Pn	01 49 23.9	+0.6
CMRD	Camardi-Nigde	3.02	48	Pn	Pn	01 49 25.6	+2.2
YURE	YUREGIR	3.04	67	P	Pn	01 49 24.6	+1.2
KZIL	AFYON_Kizioren	3.04	329	P	Pn	01 49 25.0	+1.4
KZIL				S	Sn	01 49 59.5	+0.6
NIDE	Nigde/Merkez-G	3.13	41	P	Pn	01 49 26.5	+1.7
KURO	Afyon-Bolvadin	3.21	343	P	Pn	01 49 27.0	+1.1
ARG	Arkhangelos	3.32	281	Pn	Pn	01 49 27.3	0.0
TAHT	Tahtakopru-Hat	3.34	77	Pn	Pn	01 49 28.6	+1.0
BHL	Bhannes	3.37	120	eP	Pn	01 49 28.7	+0.5
CTIK	Konya-Celtik	3.38	353	P	Pn	01 49 28.9	+0.7
HWQ	Hawqa	3.41	113	eP	Pn	01 49 30.4	+1.8
DQRL	Deir Qamar	3.43	124	eP	Pn	01 49 29.3	+0.4
BEIL	Beino	3.49	108	eP	Pn	01 49 31.2	+1.5
YAHY	KAYSERI_Yahyal	3.53	46	P	Pn	01 49 31.9	+1.6
KKUL	Konya-Kulu	3.54	10	P	Pn	01 49 31.4	+0.9
ZAHL	Zahle	3.56	119	eP	Pn	01 49 32.0	+1.2
HNTI	Hanita	3.59	135	P	Pn	01 49 32.4	+1.4
HNTI	Hanita	3.59	135	S	Sn	01 50 12.5	+0.3
QRWL	Qaraoun	3.60	125	eP	Pn	01 49 32.3	+1.1
RHAN	Hatay/Reyhanl	3.65	79	P	Pn	01 49 34.4	+2.6
RHAN				S	Sn	01 50 15.9	+2.2
HASA	Hatay-Hassa-Ha	3.66	72	P	Pn	01 49 34.2	+2.1
HASA				S	Sn	01 50 14.0	0.0
SHBL	Chebaa	3.76	127	eP	Pn	01 49 34.9	+1.4
MMA0B	Mount Meron ar	3.77	134	P	Pn	01 49 34.7	+1.2
MMA0B	Mount Meron ar	3.77	134	S	Sn	01 50 17.0	+0.2
MMAI	Mount Meron Ar	3.77	134	P	Pn	01 49 35.0	+1.4
	10.0nm,0.2s,baz=321,slow=13,SNR=40						
MMAI				S	Sn	01 50 16.8	0.0
	12nm,0.2s,baz=283,slow=26,SNR=13						
GEM	Giv'at Ha'Em	3.80	129	P	Pn	01 49 35.4	+1.5
GEM	Giv'at Ha'Em	3.80	129	S	Sn	01 50 17.4	+0.1
NATI	Neve Ativ	3.81	128	P	Pn	01 49 35.3	+1.3
NATI	Neve Ativ	3.81	128	S	Sn	01 50 17.7	+0.2
OFRI	\`Ofer	3.84	142	P	Pn	01 49 35.6	+1.1
OFRI	\`Ofer	3.84	142	S	Sn	01 50 18.2	-0.2
BLGI	Bet Lehem HaGe	3.86	139	P	Pn	01 49 36.5	+1.7
BLGI	Bet Lehem HaGe	3.86	139	S	Sn	01 50 19.0	+0.1
ANDN	Andirin	3.87	59	P	Pn	01 49 35.3	+0.4
ANDN				S	Sn	01 50 18.5	-0.7
BBAL	Bala	3.94	11	P	Pn	01 49 36.9	+1.0
MANT	Manisa	4.03	315		Pn	01 49 37.3	+0.2
KSHT	Keshet	4.04	131	P	Pn	01 49 38.9	+1.6
KSHT	Keshet	4.04	131	S	Sn	01 50 23.6	+0.3
KARP	Karpathos	4.07	270	Pn	Pn	01 49 38.3	+0.7
AKPI	Kirsehir/Akpin	4.09	20	P	Pn	01 49 39.1	+1.1
SLTI	Sal'it	4.18	144	P	Pn	01 49 40.0	+0.9
SLTI	Sal'it	4.18	144	S	Sn	01 50 26.7	+0.1
MMLI	Mount Malkishu	4.21	139	P	Pn	01 49 41.6	+2.0
MMLI	Mount Malkishu	4.21	139	S	Sn	01 50 27.6	+0.1
BRTR	Keskin Array B	4.21	16	P	Pn	01 49 40.5	+0.8
	4.5nm,0.4s,baz=193,slow=16,SNR=49						
BRTR				S	Sn	01 50 27.4	-0.3
	2.7nm,0.5s,baz=176,slow=22,SNR=6.5						
BRTR				LR	LR	01 51 49.5	
	comp=Z,32nm,19.3s,baz=202,slow=45						
BR131	Keskin Array S	4.21	16		Pn	01 49 40.8	+1.1
BNN	Bunyan	4.33	42		Pn	01 49 42.8	+1.6
SALP	Salfit	4.39	144	P	Pn	01 49 43.6	+1.5
SALP	Salfit	4.39	144	S	Sn	01 50 32.1	+0.2
HMDT	Nahal Hemdat	4.41	140	P	Pn	01 49 44.5	+2.2
HMDT	Nahal Hemdat	4.41	140	S	Sn	01 50 32.8	+0.5
BORA	Eskisehir	4.41	343		Pn	01 49 42.1	-0.2
UJAP	Al Uja	4.62	142	P	Pn	01 49 46.8	+1.7
UJAP	Al Uja	4.62	142	S	Sn	01 50 38.2	+0.8
AMAZ	Amatzia	4.73	150	P	Pn	01 49 48.2	+1.6
AMAZ	Amatzia	4.73	150	S	Sn	01 50 40.4	+0.3
DSI	Dead Sea	4.89	146	P	Pn	01 49 50.7	+1.8
DSI	Dead Sea	4.89	146	S	Sn	01 50 44.3	+0.1
YTIR	Yattir	4.96	149	P	Pn	01 49 52.0	+2.2
YTIR	Yattir	4.96	149	S	Sn	01 50 46.3	+0.4
MSBI	Mazada	5.10	148	P	Pn	01 49 54.0	+2.3
MSBI	Mazada	5.10	148	S	Sn	01 50 49.7	+0.5
KZIT	Kziot	5.11	158	P	Pn	01 49 53.2	+1.4
KZIT	Kziot	5.11	158	S	Sn	01 50 49.0	-0.5
GHAJ	Ghor Haditha	5.20	146		Pn	01 49 55.9	+2.8
ASF	Jabal al Asfar	5.26	130	P	Pn	01 49 55.9	+1.8
	6.7nm,0.3s,baz=301,slow=5.9,SNR=28						
ASF				S	Sn	01 50 54.7	+1.3
	5.7nm,0.3s,baz=281,slow=21,SNR=1.4						
IDAN	Idan	5.49	151	P	Pn	01 49 58.7	+1.7
IDAN	Idan	5.49	151	S	Sn	01 50 58.5	-0.2
ZFRI	Zfri	5.70	153	P	Pn	01 50 01.2	+1.3
ZFRI	Zfri	5.70	153	S	Sn	01 51 03.6	-0.3
PRNI	Paran	5.82	155	P	Pn	01 50 02.4	+0.9
IDI	Anoyia	5.94	268	P	Pn	01 50 02.5	-0.8
	1.9nm,0.2s,baz=148,slow=7.6,SNR=35						
IDI				S	Sn	01 51 04.8	-5.3
	20nm,0.5s,baz=148,slow=12,SNR=10						
IDI	Anoyia	5.94	268	Pn	Pn	01 50 02.8	-0.5
IDI					Sn	01 51 08.2	-1.8
KRMI	Paran Flat	5.94	158	P	Pn	01 50 04.4	+1.1
KRMI	Paran Flat	5.94	158	S	Sn	01 51 09.7	-0.4
HRFI	Mount Harif	6.12	156	P	Pn	01 50 07.0	+1.3
HRFI	Mount Harif	6.12	156	S	Sn	01 51 14.3	0.0
MBRI	Mt Berech	6.30	158	P	Pn	01 50 09.4	+1.2
MBRI	Mt Berech	6.30	158	S	Sn	01 51 18.8	-0.1
EIL	Elat	6.43	158	P	Pn	01 50 11.0	+1.1
	27nm,0.4s,baz=324,slow=2.6,SNR=120						
EIL				S	Sn	01 51 20.4	-1.6
	8.8nm,0.3s,baz=350,slow=19,SNR=6.2						
EIL				LR	LR	01 52 46.8	
	comp=Z,41nm,21.1s,baz=357,slow=39						
EIL	Elat	6.43	158	P	Pn	01 50 11.1	+1.2
EIL	Elat	6.43	158	S	Sn	01 51 21.7	-0.2
MARD	Mardin	7.13	74		Pn	01 50 21.6	+2.0
ITM	Ithomi	8.38	283	Pn	Pn	01 50 37.0	+0.4
TIP	Timpagrande	12.73	291	Pn	Pn	01 51 33.5	-2.5
RAFF	Raffo Rosso	14.41	281	Pn	Pn	01 51 56.1	-2.3
KIEV	Kiev	15.17	353	P	P	01 52 11.8	-0.1
KIEV				IAmb	IAmb	01 52 12.8	
	comp=Z,6.2nm,0.7s						
AKASG	Malin Array Be	15.17	353	P	Pn	01 52 07.5	-0.6
	comp=Z,0.3nm,0.3s,baz=177,slow=9.8,SNR=9.7						
AKBB	Malin Array Si	15.17	353	P	P	01 52 12.4	+0.5
AKBB				IAmb	IAmb	01 52 12.8	
	comp=Z,7.0nm,0.6s						
GERES	GERESS Array B	18.91	320	P	P	01 52 53.2	-0.1
	comp=Z,0.4nm,0.4s,baz=117,slow=8.1,SNR=6.9						
KHC	Kasperske Hory	19.14	320	P	P	01 52 54.9	-0.9
WTTA	Wattenberg	19.19	313	i Pn	Pn	01 52 56.8	-1.2
	comp=Z,2.3nm,0.5s						
WATA	Walderalm	19.26	314	i Pn	P	01 52 56.9	-0.3
	comp=Z,5.9nm,1.2s						
SQTA	Sankt Quirin	19.42	313	ePn	P	01 52 59.1	+0.1
	comp=Z,4.3nm,1.0s						
FETA	Feichten	19.61	312	i Pn	Pn	01 53 03.7	+0.7
	comp=Z,6.6nm,1.1s						
OBN	Obninsk	19.68	8	LR	LR	02 02 11.7	
	comp=Z,62nm,19.8s,baz=354,slow=41						
RETA	Reutte	19.82	313	ePn	P	01 53 02.7	-0.4
	comp=Z,3.9nm,0.8s						
BELG	Belogornoye	20.00	29	P	P	01 53 05.4	+0.3
	comp=Z,4.9nm,0.9s,baz=198,slow=20,SNR=1.8						
	comp=Z,4.9nm,0.9s						
DAVOX	Davos/Dischmat	20.03	310	P	P	01 53 05.7	+0.1
	comp=Z,0.7nm,0.3s,baz=138,slow=12,SNR=2.8						
DAVA	Damuels	20.25	312	i Pn	P	01 53 07.3	-0.7
	comp=Z,2.4nm,0.5s						
BNI	Bardonecchia	21.48	304	P	P	01 53 23.6	+2.4
BNI				IAmb	IAmb	01 53 57.5	
	comp=Z,14nm,1.4s						
SENIN	Lac Senin/Sane	21.50	307	P	P	01 53 20.2	-1.3
SENIN				IAmb	IAmb	01 53 20.9	
	comp=Z,8.4nm,1.1s						
BFO	Black Forest	21.66	313	P	P	01 53 23.1	+0.2
FIA1	FINESS Array S	26.08	353	P	P	01 54 04.0	-1.1
FINES	FINESS Array B	26.08	353	P	P	01 54 04.0	-1.2
	comp=Z,4.0nm,0.9s,baz=165,slow=12,SNR=9.5						
	comp=Z,4.0nm,0.9s						
FINES	FINESS Array B	26.08	353	P	P	01 54 04.3	-0.9
HFS	Hagfors	27.23	340	P	P	01 54 13.2	-2.4
	comp=Z,3.7nm,1.0s,baz=141,slow=9.3,SNR=1.7						
	comp=Z,3.7nm,1.0s						
NOA	NORSAR Array B	28.69	339	P	P	01 54 27.1	-1.5
	comp=Z,1.0nm,0.8s,baz=150,slow=8.7,SNR=2.1						
	comp=Z,1.0nm,0.8s						
ESDC	Sonseca Array	28.75	289	P	P	01 54 28.7	-0.6
	comp=Z,0.3nm,0.8s,baz=78,slow=11,SNR=2.3						
	comp=Z,0.3nm,0.8s						
ARCES	ARCESS Array B	34.12	356	P	P	01 55 14.9	-1.2
	comp=Z,2.1nm,0.8s,baz=175,slow=10,SNR=6.9						
	comp=Z,2.1nm,0.8s						
ARCES	ARCESS Array B	34.12	356	IAmb	IAmb	01 55 16.1	
	comp=Z,22nm,1.4s						
MKAR	Makanchi Array	38.70	58	P	P	01 55 56.5	+1.0
	comp=Z,0.6nm,0.7s,baz=285,slow=5.5,SNR=6.4						
	comp=Z,0.6nm,0.7s						
MKAR	Makanchi Array	38.70	58	P	P	01 55 57.1	+1.7
SPB2	Spitsbergen Ar	43.14	355	P	P	01 56 31.8	+0.3
SPITS	Spitsbergen Ar	43.14	355	P	P	01 56 31.2	-0.3
	comp=Z,0.8nm,0.3s,baz=147,slow=8.2,SNR=12						
	comp=Z,0.8nm,0.3s						
NRIK	Noril'sk	45.02	24	P	P	01 56 48.3	+1.7
	comp=Z,3.5nm,0.7s,baz=297,slow=2.3,SNR=10						
	comp=Z,3.5nm,0.7s						
NRIK	Noril'sk	45.02	24	P	P	01 56 47.0	+0.4
NRIK				IAmb	IAmb	01 56 49.8	
	comp=Z,3.5nm,0.7s						
SONM	Songino Array	54.69	53	P	P	01 58 00.1	-0.4
	comp=Z,0.7nm,0.5s,baz=302,slow=8.5,SNR=4.5						
	comp=Z,0.7nm,0.5s						
SONM	Songino Array	54.69	53	IAmb	IAmb	01 58 34.3	
	comp=Z,2.0nm,1.3s						
LZH	Lanzhou	56.79	67	eP	P	01 58 13.0	-2.7
LZH				pP	pP	01 58 25.5	-6.2
LZH				pmax	pmax		
	comp=Z,39nm,1.1s						
HHC	Hu-ho-hao-te	60.54	59	eP	P	01 58 43.3	+1.7
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,99nm,6.2s						
YKA	Yellowknife Ar	78.58	345	P	P	02 00 31.0	-1.1
	comp=Z,0.1nm,0.6s,baz=24,slow=4.3,SNR=2.2						
	comp=Z,0.1nm,0.6s						

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*DJA **28** 01:59:37.0±1.0, 5˚N±2˚×12˚6E±˚, h19^{km}±9^{km}, M5.0/13, mB5.6/7, mb4.9/12, MLv5.0/13, Mw(mB)5.0/7*

*NEIC **28** 01:59:38.6±1.6, 5˚.23N±0˚.06×126˚.01E±0˚.07, h94^{km}±7^{km}, mb4.8/63, Error ellipse: s-maj=12.2km s-min=6.2km az=53.0*

*IDC **28** 01:59:38.6±1.1, 5˚.21N×125˚.73E, h104^{km}±9^{km}, mb4.1/25, mbtmp4.4/26, MS3.1/8, Error ellipse: s-maj=21.9km s-min=9.0km az=74.0*

ISC 28 01:59:38.4±0.6, **5˚.26N**±0˚.04×**126˚.03E**±0˚.07, **h100**^{km}±5^{km}, **n132**, σ1ˢ.**37**/113, **mb4.6**/61, **1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.64	198	P	Pn	02 00 05.8	-0.7
SGSI				S	Sn	02 00 27.8	0.0
DAV	Davao City (W)	1.85	346	P	Pn	02 00 08.5	-0.6
	551nm,0.3s,baz=88,slow=3.1,SNR=5.6						
DAV				S	Sn	02 00 33.7	+1.2
	676nm,0.3s,baz=223,slow=23,SNR=11						
DAV	Davao City (W)	1.85	346		Pn	02 00 08.7	-0.4
DAV	Davao City (W)	1.85	346	P	Pn	02 00 08.5	-0.6
DAV				S	Sn	02 00 32.6	+0.1
TNTI	Ternate	4.66	163		Pn	02 00 44.7	-1.8
TNTI	Ternate	4.66	163	P	Pn	02 00 45.0	-1.5
GTOI	Gorontalo	5.50	213	P	Pn	02 00 57.3	-0.6
	1.0nm3µm204nm,0.7s						
MRSI	Marisa	6.27	221	P	Pn	02 01 08.9	+0.5
TOLI2	Tolitoli	6.67	232		Pn	02 01 12.0	-1.8
LUWI	Luwuk	7.06	208		Pn	02 01 21.7	+2.6
LUWI	Luwuk	7.06	208	P	Pn	02 01 22.0	+2.9
SANI	Sanana	7.26	180	P	Pn	02 01 18.5	-3.4
APSI	Ampana	7.54	216	P	Pn	02 01 27.9	+2.3
	2µm203nm,1.4s						
MPSI	Mapaga	7.84	232	P	Pn	02 01 30.9	+1.1
	0.3nm5µm29nm,0.6s						
SIJI	Sorong	8.03	139	P	Pn	02 01 30.8	-1.5
NLAI	Namlea	8.51	173	P	Pn	02 01 36.3	-2.6
PCI	Palu	8.71	225	P	Pn	02 01 34.6	-7.0
KRAI	Karang Ratu	8.84	164	P	Pn	02 01 43.2	-0.3
	52nm,0.5s						
KKM	Kota Kinabalu	9.80	275	P	Pn	02 01 59.1	+2.5
	31nm,1.1s						
FAKI	Fak Fak	10.23	142	Pn	Pn	02 02 01.4	-0.9
TTSI	Tana Toraja	10.33	217	P	Pn	02 02 05.9	+2.3
	48nm,1.0s						
KKSI	Kolaka, Sulawe	10.34	205	P	Pn	02 02 24.1	+20
SPSI	Sidrap Palu	11.10	214	P	Pn	02 02 15.6	+1.5
	25nm,0.7s						
KAPI	Kappang	11.98	212		Pn	02 02 27.5	+1.6
KAPI	Kappang	11.98	212	P	Pn	02 02 27.8	+1.9
SBUM	Sibu	14.06	259	P	P	02 02 57.3	-0.5
SBUM	Sibu	14.06	259	P	P	02 02 57.7	-0.1
MMRI	Maumere	14.31	195	P	P	02 03 07.6	+7.0
BATI	Baumata	15.55	189	P	Pn	02 03 11.2	-0.9
	24nm,0.4s,baz=36,slow=17,SNR=5.7						
BATI	Baumata	15.55	189	P	P	02 03 19.1	+4.7
DBNI	Kabupaten Domp	15.69	209	P	P	02 03 15.0	-0.9
PLAI	Plampang	16.24	210	P	P	02 03 21.7	-0.3
GUMO	Guam	20.33	65	LR	LR	02 10 59.1	
	comp=Z,54nm,20.5s,baz=80,slow=33						
KNRA	Kununurra	20.98	173		P	02 04 14.0	+0.2
FITZ	Fitzroy Crossi	23.21	181		P	02 04 36.9	+0.1
IPM	Ipoh	24.93	269		P	02 04 53.8	+1.2
COEN	Coen	25.57	138		P	02 04 58.4	+0.1
WRA	Warramunga Arr	26.35	162	P	P	02 05 04.5	-0.7
	5.9nm,0.5s,baz=341,slow=10,SNR=48						
WRA				PcP	PcP	02 08 29.3	+0.3
	1.3nm,1.1s,baz=317,slow=3.2,SNR=1.0						
WRA				ScP	ScP	02 11 58.4	-1.5
	0.5nm,0.7s,baz=355,slow=2.5,SNR=2.2						
	5.9nm,0.5s						
WRA	Warramunga Arr	26.35	162	P	P	02 05 05.6	+0.4
MBWA	Marble Bar	26.98	193	P	P	02 05 11.1	+0.2
MBWA				IAmb	IAmb	02 05 16.3	
	comp=Z,83nm,1.5s						
PSI	Prapat	27.15	266	LR	LR	02 16 53.7	
	comp=Z,50nm,18.4s,baz=54,slow=38						
PSA00	Pilbara Seismi	27.35	193	P	P	02 05 14.2	0.0
PSA00	Pilbara Seismi	27.35	193	P	P	02 05 14.0	-0.2
PSA00				IAmb	IAmb	02 05 47.2	
	comp=Z,28nm,1.4s						
NJ2	Nanjing	27.49	347	eP	P	02 05 18.3	+3.0
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
JNU	Nakatsue	28.08	9	P	P	02 05 22.2	+1.5
	comp=Z,8.0nm,0.8s,baz=197,slow=14,SNR=1.0						
	comp=Z,8.0nm,0.8s						
GSI	Gunungsitoli	28.68	263	P	P	02 05 27.2	+1.0
GSI				IAmb	IAmb	02 05 28.1	
	comp=Z,22nm,0.8s						
JMN	Monobe	29.25	13	P	P	02 05 31.8	+0.8
CMAR	Chiang Mai Arr	29.52	299	P	P	02 05 32.3	-1.3
	comp=Z,1.0nm,0.3s,baz=122,slow=7.2,SNR=8.0						
CMAR				ScP	ScP	02 12 09.1	-0.6
	comp=Z,0.7nm,0.5s,baz=115,slow=4.0,SNR=6.4						
CMAR				LR	LR	02 18 21.6	
	comp=Z,18nm,18.6s,baz=180,slow=38						
	comp=Z,1.0nm,0.3s						
ASAR	Alice Springs	29.76	165	P	P	02 05 35.0	-0.6
	comp=Z,4.3nm,0.6s,baz=345,slow=7.2,SNR=93						
ASAR				PcP	PcP	02 08 37.9	+0.6
	comp=Z,2.5nm,0.7s,baz=0.4,slow=2.8,SNR=10						
ASAR				ScP	ScP	02 12 10.4	-0.1
	comp=Z,1.0nm,0.7s,baz=344,slow=2.7,SNR=5.8						
	comp=Z,4.3nm,0.6s						
ASAR	Alice Springs	29.76	165	P	P	02 05 35.3	-0.4
KSRS	Korea Array	32.09	3	P	P	02 05 56.7	+0.8
	comp=Z,1.9nm,0.6s,baz=187,slow=9.5,SNR=5.9						
KSRS				LR	LR	02 20 16.5	
	comp=Z,11nm,19.9s,baz=155,slow=38						
	comp=Z,1.9nm,0.6s						
CTA	Charters Tower	32.09	142	LR	LR	02 21 43.2	
	comp=Z,34nm,18.2s,baz=254,slow=41						
MJAR	Matsushiro Arr	33.08	18	P	P	02 06 04.8	+0.1
	comp=Z,1.6nm,0.7s,baz=182,slow=8.7,SNR=4.6						
MJAR				LR	LR	02 18 41.6	
	comp=Z,26nm,21.2s,baz=164,slow=34						
	comp=Z,1.6nm,0.7s						
HNS	HongShan	33.62	344	⇓P	P	02 06 12.0	+2.7
MORW	Morawa	35.46	195	P	P	02 06 25.1	-0.2
FORT	Forrest	35.89	177	IAmb	IAmb	02 06 30.4	
	comp=Z,26nm,1.2s						
HHC	Hu-ho-hao-te	37.73	342	eP	P	02 06 46.5	+1.9
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,66nm,6.0s						
CN2	Changchun	38.38	359	P	P	02 06 51.5	+1.6
SHL	Shillong	38.42	305	P	P	02 06 52.4	+1.7
NWAO	Narrogin (SRO)	38.89	192	P	P	02 06 54.6	+0.3
EIDS	Eidsvold	38.98	142	P	P	02 06 55.2	0.0
EIDS				IAmb	IAmb	02 06 56.1	
	comp=Z,16nm,0.8s						
BBOO	Buckleboo	39.04	167	IAmb	IAmb	02 06 56.7	
	comp=Z,15nm,0.8s						
USRK	Ussuriysk Ar.	39.13	7	P	P	02 06 57.3	+1.2
	comp=Z,2.7nm,0.4s,baz=178,slow=8.6,SNR=8.0						
	comp=Z,2.7nm,0.4s						
STKA	Stephens Creek	39.80	159	P	P	02 07 02.3	+0.4
	comp=Z,7.1nm,0.8s,baz=336,slow=7.1,SNR=14						
STKA				PcP	PcP	02 09 06.6	+0.4
	comp=Z,5.4nm,0.6s,baz=349,slow=6.2,SNR=5.6						
	comp=Z,7.1nm,0.8s						
STKA	Stephens Creek	39.80	159	P	P	02 07 02.1	+0.3
BNX	BinXian	40.34	1	⇑P	P	02 07 07.5	+1.4
BNX				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ARMA	Armidale	43.12	147	P	P	02 07 30.5	+1.3
ARMA				IAmb	IAmb	02 07 31.6	
	comp=Z,11nm,0.8s						
HILR	Hailar Array B	44.46	354	P	P	02 07 39.0	-0.5
	comp=Z,1.2nm,0.3s,baz=174,slow=15,SNR=4.2						
HILR				PcP	PcP	02 09 22.6	+1.2
	comp=Z,3.7nm,0.5s,baz=174,slow=3.7,SNR=7.8						
	comp=Z,1.2nm,0.3s						
PALK	Pallekele	45.09	275	LR	LR	02 28 06.0	
	comp=Z,28nm,18.4s,baz=114,slow=38						
SONM	Songino Array	45.63	342	P	P	02 07 47.5	-1.4
	comp=Z,0.4nm,0.4s,baz=163,slow=7.8,SNR=3.6						
SONM				PcP	PcP	02 09 25.8	+0.2
	comp=Z,1.9nm,0.7s,baz=157,slow=2.6,SNR=6.6						
SONM				LR	LR	02 27 25.5	
	comp=Z,43nm,18.1s,baz=192,slow=37						
	comp=Z,0.4nm,0.4s						
DZM	Mont Dzumac	47.99	126	P	P	02 08 08.8	+1.2

	comp=Z,4.9nm,0.6s,baz=251,slow=13,SNR=6.1						
	comp=Z,4.9nm,0.6s						
DZM	Mont Dzumac	47.99	126	P	P	02 08 09.1	+1.4
WMQ	Urumqi	51.08	325	*e*P	P	02 08 29.3	-1.5
WMQ				pP	pwP	02 08 56.5	-0.9
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
PETK	Petropavlovsk-	54.29	23	P	P	02 08 55.5	+1.3
	comp=Z,2.7nm,0.5s,baz=200,slow=3.9,SNR=5.2						
	comp=Z,2.7nm,0.5s						
MKAR	Makanchi Array	55.91	325	P	P	02 09 05.2	-0.9
	comp=Z,1.6nm,0.3s,baz=121,slow=7.4,SNR=66						
	comp=Z,1.6nm,0.3s						
MKAR	Makanchi Array	55.91	325		P	02 09 05.5	-0.5
MAKZ	Makanchi	56.10	325	P	P	02 09 06.8	-0.5
MAKZ				IAmb	IAmb	02 11 03.0	
	comp=Z,12nm,1.7s						
MAKZ	Makanchi	56.10	325	P	P	02 09 06.6	-0.7
MAKZ				PcP	PcP	02 10 04.8	+0.6
ZALV	Zalesovo Beam	58.92	333	P	P	02 09 25.1	-1.8
	comp=Z,1.6nm,0.4s,baz=116,slow=6.3,SNR=11						
	comp=Z,1.6nm,0.4s						
ZALV	Zalesovo Beam	58.92	333	P	P	02 09 25.2	-1.7
GAR	Garm	60.38	312		P	02 09 37.5	0.0
GAR				IAmb	IAmb	02 09 59.6	
	comp=Z,7.1nm,1.0s						
KKAR	Karatay Array	61.65	317	P	P	02 09 45.2	-0.6
BVAR	Borovoye Array	65.67	327	P	P	02 10 10.5	-1.5
	comp=Z,0.9nm,0.3s,baz=111,slow=7.9,SNR=9.9						
	comp=Z,0.9nm,0.3s						
BORK	Borovoye	65.71	327	P	P	02 10 12.5	+0.2
BORK	Borovoye	65.71	327	P	P	02 10 11.0	-1.3
BORK				pP	pP	02 10 35.5	-0.9
BORK				PcP	PcP	02 10 42.7	-0.1
KIWB	Kanaga Island	65.83	35	P	P	02 10 17.9	+4.8
NRIK	Noril'sk	68.78	346	P	P	02 10 30.4	-1.0
	comp=Z,3.2nm,0.6s,baz=117,slow=6.1,SNR=7.1						
	comp=Z,3.2nm,0.6s						
AB31	Akbulak array	70.53	321	P	P	02 10 41.9	-0.6
ARTI	Arti	73.36	328	P	P	02 10 57.0	-2.3
G19K	Purcell Mounta	79.91	24	IAmb	IAmb	02 11 40.6	
	comp=Z,8.1nm,0.8s						
D19K	Kuna River	79.95	21	IAmb	IAmb	02 11 38.5	
	comp=Z,17nm,1.4s						
H19K	Roundabout Mou	80.07	24	IAmb	IAmb	02 11 39.6	
	comp=Z,19nm,1.2s						
E19K	Redstone River	80.09	22	IAmb	IAmb	02 11 42.3	
	comp=Z,15nm,1.1s						
D20K	Etivluk River	80.54	21	IAmb	IAmb	02 11 42.3	
	comp=Z,16nm,1.4s						
B20K	Meade River	80.58	20	IAmb	IAmb	02 12 06.8	
	comp=Z,25nm,1.7s						
J20K	Nowinta River	80.85	26	IAmb	IAmb	02 11 44.2	
	comp=Z,41nm,1.7s						
H21K	Melozitna Rive	81.59	24	IAmb	IAmb	02 11 47.2	
	comp=Z,12nm,1.2s						
D22K	Ayikyak River	81.98	21	IAmb	IAmb	02 13 55.9	
	comp=Z,28nm,1.9s						
E22K	Anaktuvuk Pass	82.22	22	IAmb	IAmb	02 11 51.4	
	comp=Z,32nm,1.9s						
D23K	Nanushuk River	82.70	21	IAmb	IAmb	02 11 53.9	
	comp=Z,23nm,1.6s						
COLD	Coldfoot	82.76	23	P	P	02 11 53.3	+2.3
G23K	Bananza Creek	82.80	23	IAmb	IAmb	02 13 10.0	
	comp=Z,45nm,2.0s						
E23K	Chandalar	83.03	22	IAmb	IAmb	02 11 55.8	
	comp=Z,8.9nm,0.9s						
MCK	McKinley	83.11	27	P	P	02 11 53.6	+0.7
D24K	Happy Valley	83.38	21	IAmb	IAmb	02 11 57.0	
	comp=Z,5.9nm,0.8s						
CCB	Clear Creek Bu	83.63	26	IAmb	IAmb	02 12 26.2	
	comp=Z,38nm,2.0s						
F24K	Squaw Lake	83.67	23	IAmb	IAmb	02 11 59.2	
	comp=Z,35nm,1.8s						
G24K	Hadweenzic Riv	83.81	24	IAmb	IAmb	02 11 59.3	
	comp=Z,9.5nm,0.9s						
HDA	Harding Lake	84.00	26	P	P	02 11 57.5	+0.1
HDA				IAmb	IAmb	02 11 58.5	
	comp=Z,9.5nm,0.9s						
ILAR	Eielson Array	84.03	25	P	P	02 11 57.1	-0.5
	comp=Z,1.6nm,0.8s,baz=255,slow=5.1,SNR=18						
	comp=Z,1.6nm,0.8s						
F25K	Christian Rive	84.53	23	IAmb	IAmb	02 13 02.3	
	comp=Z,25nm,2.0s						
E25K	Arctic Village	84.56	22	IAmb	IAmb	02 12 03.1	
	comp=Z,8.2nm,1.0s						
VNDA	Vanda	85.02	173	P	P	02 12 02.6	+0.4
	comp=Z,1.2nm,0.5s,baz=327,slow=4.8,SNR=8.3						
	comp=Z,1.2nm,0.5s						
VNDA	Vanda	85.02	173	P	P	02 12 02.8	+0.5
VNDA	Vanda	85.02	173	P	P	02 12 03.1	+0.8
VNDA				sP	sP	02 12 38.4	+0.4
H27K	Steamboat Moun	86.21	24	IAmb	IAmb	02 13 26.1	
	comp=Z,26nm,1.9s						
F28M	Old Crow	86.74	22	IAmb	IAmb	02 12 12.8	
	comp=Z,5.1nm,0.8s						
E28M	Babbage River	86.76	21	IAmb	IAmb	02 13 41.6	
	comp=Z,18nm,1.8s						
G29M	Pine Creek	87.53	23	IAmb	IAmb	02 12 16.4	
	comp=Z,9.0nm,0.9s						
BRTR	Keskin Array B	88.52	310	P	P	02 12 17.5	-2.8
	comp=Z,0.6nm,0.7s,baz=98,slow=5.1,SNR=4.1						
	comp=Z,0.6nm,0.7s						
ARCES	ARCESS Array B	88.78	340	P	P	02 12 18.7	-2.0
	comp=Z,3.5nm,0.7s,baz=77,slow=5.2,SNR=9.5						
	comp=Z,3.5nm,0.7s						
ARCES	ARCESS Array B	88.78	340	P	P	02 12 19.7	-1.0
SPITS	Spitsbergen Ar	88.85	349	P	P	02 12 20.0	-1.0
	comp=Z,1.6nm,0.4s,baz=79,slow=7.5,SNR=9.7						
	comp=Z,1.6nm,0.4s						
FINES	FINESS Array B	90.16	332	P	P	02 12 25.9	-1.4
	comp=Z,1.2nm,0.5s,baz=62,slow=4.8,SNR=15						
	comp=Z,1.2nm,0.5s						
FINES	FINESS Array B	90.16	332	P	P	02 12 26.2	-1.0
HFS	Hagfors	96.35	332	P	P	02 12 54.3	-1.5
	comp=Z,3.0nm,1.0s,baz=86,slow=2.2,SNR=5.0						
	comp=Z,3.0nm,1.0s						
NOA	NORSAR Array B	97.11	334	P	P	02 12 57.6	-1.7
	comp=Z,0.6nm,0.6s,baz=54,slow=2.1,SNR=2.2						
	comp=Z,0.6nm,0.6s						
YKA	Yellowknife Ar	98.40	24	P	Pdif	02 13 05.1	+0.1
	comp=Z,0.5nm,0.7s,baz=299,slow=5.4,SNR=8.7						
	comp=Z,0.5nm,0.7s						
GERES	GERESS Array B	100.46	322	P	Pdif	02 13 14.6	0.0
	comp=Z,0.2nm,0.6s,baz=53,slow=5.4,SNR=2.4						
TXAR	Lajitas Array	121.20	51	PKP	PKiKP	02 18 21.3	+0.7
	comp=Z,0.5nm,0.6s,baz=326,slow=2.6,SNR=7.5						
TORD	Torodi Ar. Bea	121.78	289	PKP	PKPdf	02 18 21.5	-0.3
	comp=Z,2.5nm,0.6s,baz=32,slow=2.7,SNR=19						
DBIC	Dimbokro	129.57	283	PKP	PKiKP	02 18 37.0	-0.6
	comp=Z,1.7nm,0.6s,baz=76,slow=1.0,SNR=3.7						

GCG 28 02:28:06.5±0.4**,14°.60N×91°.69W,h61**^{km}±5^{km}**,MD3.5, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOKI	Kika Raxquin	0.35	52	*i* S	Sn	02 28 28.1	+2.4
STG8	El Palmar, Qui	0.36	114	*e*S	Sn	02 28 24.8	-0.8
ESSG	Sabana Grande	0.86	104	*e*S	Sn	02 28 35.6	+0.6
APG	El Apazote	1.25	71	*e*P	Pn	02 28 28.8	+0.6
PCG5	San Vicente Pa	1.33	107	*e*S	Sn	02 28 41.0	-5.1

IDC ***28*** *02:32:05.8±1.8, 4°.59N×124°.85E, h0^{km}, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=233.4km s-min=21.3km az=66.0*

DJA ***28*** *02:32:16.9±3.9, 6°N±40°×12°7E±°, h129^{km}±18^{km}, M4.2/7, mb4.1/3, MLv4.3/7*

ISC 28 02:32:14.6±1.4**,5°.6N**±0°.1×**127°.4E**±0°.2**,h100**^{km}**,n9,** σ**0^s.76**/8**,mb4.3**/5**,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	2.64	225	P	Pn	02 32 56.2	+0.6
GTOI	Gorontalo	6.57	222	P	Pn	02 33 48.1	-0.7
	0.1nm35nm,0.7s						
WRA	Warramunga Arr	26.25	165	P	P	02 37 41.7	+1.0
	0.2nm,0.4s,baz=332,slow=11,SNR=1.3						
	0.2nm,0.4s						
ASAR	Alice Springs	29.74	168	P	P	02 38 11.3	-0.5
	0.2nm,0.5s,baz=357,slow=9.4,SNR=4.2						
	0.2nm,0.5s						
MKAR	Makanchi Array	56.45	324	P	P	02 41 46.2	+0.1
	2.3nm,0.4s,baz=116,slow=7.7,SNR=36						
	2.3nm,0.4s						
ZALV	Zalesovo Beam	59.27	332	P	P	02 42 05.1	-0.5
	0.9nm,0.3s,baz=124,slow=6.6,SNR=7.0						
	0.9nm,0.3s						
ZALV	Zalesovo Beam	59.27	332	pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV	Zalesovo Beam	59.27	332	*i* P	P	02 42 04.9	-0.7
BVAR	Borovoye Array	66.16	326	P	P	02 42 51.5	0.0
	comp=Z,1.7nm,0.5s,baz=126,slow=6.8,SNR=9.7						
	comp=Z,1.7nm,0.5s						

KRSC ***28*** *02:34:25.9±1.4, 58°.96N×158°.49E, h17^{km}±13^{km}, Ml5.3*

MOS ***28*** *02:34:28.2±0.9, 58°.91N×158°.86E, h2^{km}, mb4.9/52, MS4.8/15, Error ellipse: s-maj=7.6km s-min=3.6km az=97.3*

IDC ***28*** *02:34:29.2±0.5, 58°.82N×158°.82E, h0^{km}, mb4.3/29, mbtmp4.3/35, ML3.7/5, MS4.3/71, Error ellipse: s-maj=11.2km s-min=9.2km az=169.0*

NERS ***28*** *02:34:30.3, 58°.80N×158°.65E, h10^{km}*

NEIC ***28*** *02:34:32.5±1.9, 58°.92N±0°.08×158°.8E±0°.2, h17^{km}±3^{km}, mb5.1/441, Error ellipse: s-maj=12.0km s-min=10.9km az=84.0*

GCMT ***28*** *02:34:32.5±0.2, 58°.83N±0°.03×159°.05E±0°.03, h12^{km}, MW4.9/103, Moment Tensor Solution. s30,c35; s103,c151; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.74±.06; M$_{\theta\theta}$-0.73±.07; M$_{\phi\phi}$-2.01±.06; M$_{r\theta}$-0.56±.32; M$_{\theta\phi}$-1.01±.05; M$_{\phi r}$-0.14±.21; Best double couple: M$_0$2.71100×10^{16} NP1:φ$_s$21.00000°, δ41.00000°, λ78.00000°. NP2:φ$_s$217.00000°, δ50.00000°, λ100.00000°. Principal axes: T 2.8280, Plg81.0000°, Azm182.0000°; N -0.2360, Plg8.0000°, Azm30.0000°; P -2.5950, Plg4.0000°, Azm300.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 02:34:31.5±0.5**,58°.86N**±0°.03×**158°.82E**±0°.02**,h13**^{km}±2^{km}**, h13**^{km}**:pP-P,n817,**σ**1^s.31**/616**,mb5.0**/292**,MS4.7**/97**, 16C-8D,Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALN	Palana	0.64	68	PN	Pg	02 34 41.1	-2.7
PALN				S	Sg	02 34 50.5	-1.8
PALN	Palana	0.64	68	*e*P	Pg	02 34 41.2	-2.7
OSSR	Ossora	2.23	78	PN	Pn	02 35 06.4	-1.6
OSSR				S	Sn	02 35 34.5	-0.8
OSSR	Ossora	2.23	78	*e*P	Pn	02 35 06.5	-1.6
OSSR				*e*S	Sn	02 35 36.6	+1.3
SRDR	Sredinnyy	2.59	169	PN	Pn	02 35 11.8	-1.3
SRDR	Sredinnyy	2.59	169	*e*P	Pn	02 35 12.0	-1.2
SMKR	Semkarok	2.69	147	PN	Pn	02 35 13.5	-1.0
SMKR	Semkarok	2.69	147	*e*P	Pn	02 35 12.5	-1.9
KLY	Klyuchi	2.74	158	PN	Pb	02 35 18.9	-1.3
KLY				S	Sb	02 35 55.4	+1.8
KLY	Klyuchi	2.74	158	*e*P	Pn	02 35 14.0	-1.1
KOZ	Kozyrevsk	2.87	168	PN	Pn	02 35 15.5	-1.3
KOZ	Kozyrevsk	2.87	168	*e*P	Pn	02 35 15.1	-1.7
KOZ				*e*S	Sn	02 35 51.5	+0.3
CIRR	Tsirk	2.94	158	PN	Pn	02 35 17.1	-0.9
ESO	Esso	2.94	181	PN	Pn	02 35 15.8	-2.1
ESO	Esso	2.94	181	*e*P	Pn	02 35 15.8	-2.1
LGNR	Loginova	2.96	159	PN	Pn	02 35 18.0	-0.4
LGNR	Loginova	2.96	159	*e*P	Pn	02 35 17.9	-0.5
KIRR	Kirishev	3.03	164	PN	Pn	02 35 19.8	+0.6
KIRR	Kirishev	3.03	164	*e*P	Pn	02 35 17.4	-1.8
BZWR	Bezymyannyi-We	3.04	162	PN	Pn	02 35 19.1	-0.3
BZWR	Bezymyannyi-We	3.04	162	*e*P	Pn	02 35 19.9	+0.5
ZLN	Zelenaya	3.04	159	PN	Pn	02 35 19.9	+0.5
BZP	Bezymyannyi-Pe	3.10	162	PN	Pn	02 35 20.7	+0.5
BZP	Bezymyannyi-Pe	3.10	162	*e*P	Pn	02 35 18.9	-1.2
KMNR	Kamenistaya	3.20	165	PN	Pn	02 35 21.8	+0.2
KMNR	Kamenistaya	3.20	165	*e*P	Pn	02 35 20.7	-0.9
KBG	Krutoberegovo	3.35	140	PN	Pn	02 35 24.8	+1.4
KBG	Krutoberegovo	3.35	140	*e*P	Pn	02 35 23.9	+0.5
KBTR	Krutoberegovo	3.42	139	PN	Pn	02 35 28.0	+3.6
KBTR	Krutoberegovo	3.42	139	*e*P	Pn	02 35 23.2	-1.3
KZV	Kizimen	3.84	167	PN	Pn	02 35 31.3	+0.9
KZV	Kizimen	3.84	167	*e*P	Pn	02 35 31.6	+1.2
GADL	Gadlja	3.93	285	*e*P	Pn	02 35 31.7	+0.2
GADL				*e*Pg	Pb	02 35 41.6	+1.0
GADL				Pgmax		02 35 49.4	
	300nm,0.6s						
GADL				*e*Sg	Sg	02 36 34.0	-3.6
GADL				Sgmax		02 37 02.0	
	5µm,0.9s						
GADL				Sgmax		02 37 02.0	
	3µm,0.9s						
GADL	Gadlja	3.93	285	*e*PN	Pn	02 35 31.7	+0.2
TLAR	Talaya	3.95	308	*e*P	Pn	02 35 32.4	+0.7
TLAR				*e*Pg	Pb	02 35 43.9	+3.0
TLAR				Pgmax		02 35 49.2	
	280nm,0.7s						
TLAR				*e*Sg	Sg	02 36 33.8	-4.3
TLAR				Sgmax		02 36 55.1	
	1µm,0.8s						
TLAR	Talaya	3.95	308	*e*PN	Pn	02 35 32.4	+0.7
TILK	Tilichiki	4.04	64	PN	Pn	02 35 32.0	-1.0
TILK	Tilichiki	4.04	64	*e*P	Pn	02 35 32.3	-0.7
MA2	Magadan	4.20	283	Pn	Pn	02 35 34.3	-0.8
	2.8nm,0.3s,baz=78,slow=15,SNR=9.9						
MA2				Lg	Lg	02 36 41.3	
	15nm,0.3s,baz=41,slow=17,SNR=7.1						
MA2				LR	LR	02 37 18.8	
	comp=Z,7µm,20.5s,baz=95,slow=40						
	13nm,0.4s						
MA2	Magadan	4.20	283		Pn	02 35 35.9	+0.8
MA2	Magadan	4.20	283	*e*P	Pn	02 35 35.4	+0.3
MA2				*e*Pg	Pb	02 35 46.8	+1.7
MA2				Pgmax		02 35 49.2	
	280nm,0.7s						
MA2				*e*Sg	Sg	02 36 42.6	-3.6
MA2				Sgmax		02 37 02.0	
	970nm,0.9s						
MA2				Sgmax		02 37 02.0	
	350nm,1.0s						
MA2	Magadan	4.20	283	*e*PN	Pn	02 35 35.4	+0.3
MA2	Magadan	4.20	283	P	Pn	02 35 35.7	+0.6
MGD	Magadan 1	4.30	290	*e*P	Pn	02 35 36.0	-0.5
MGD				*e*Sg	Sg	02 36 46.6	-2.7
MGD				Sgmax		02 37 05.9	
	230nm,0.8s						
MGD				Sgmax		02 37 05.9	
	550nm,0.8s						
MGD	Magadan 1	4.30	290	*e*PN	Pn	02 35 36.0	-0.5
KMSK	Kamenskaya	5.13	42	PN	Pn	02 35 46.6	-1.2
KMSK	Kamenskaya	5.13	42	*e*P	Pn	02 35 46.8	-1.0
SEY	Seymchan	5.16	325	Pn	Pn	02 35 47.4	-0.8
	1.3nm,0.3s,baz=142,slow=15,SNR=16						
SEY				Lg	Lg	02 37 13.0	
	5.0nm,0.3s,baz=202,slow=16,SNR=3.7						
SEY				LR	LR	02 38 01.2	
	comp=Z,7µm,20.7s,baz=148,slow=41						
	3.8nm,0.3s						
SEY	Seymchan	5.16	325	*e*P	Pn	02 35 48.7	+0.5
SEY				*e*Pg	Pg	02 36 05.8	-4.3
SEY				Pgmax		02 36 11.4	
	40nm,1.0s						
SEY				*e*Sg	Sg	02 37 15.8	-0.9
SEY				Sgmax		02 37 28.7	
	300nm,1.2s						
SEY				Sgmax		02 37 28.7	
	210nm,1.1s						
SEY	Seymchan	5.16	325	*e*PN	Pn	02 35 47.7	-0.5
SEY				pmax	pmax		
	comp=Z,55nm,0.9s						
GNL	Ganaly	5.20	186	PN	Pn	02 35 49.3	+0.3
GNL	Ganaly	5.20	186	*e*P	Pn	02 35 48.7	-0.3
TLON	Talon	5.28	284	*e*P	Pg	02 36 10.8	-1.7
TLON				*e*Sg	Sg	02 37 18.8	-2.1
TLON				Sgmax		02 37 42.2	
	comp=Z,2µm,0.9s						
TLON				Sgmax		02 37 42.2	
	comp=Z,600nm,0.9s						
KRX	Arik	5.51	181	*e*P	Pn	02 35 52.8	-0.5
KOK	Koryaka	5.58	181	*e*P	Pn	02 35 53.8	-0.4
AVH	Avacha	5.61	180	PN	Pn	02 35 56.0	+1.5
AVH	Avacha	5.61	180	*e*P	Pn	02 35 54.2	-0.4
PEA0B	Petropavlovsk-	5.80	187		Pn	02 35 58.4	+1.3
PEA0B	Petropavlovsk-	5.80	187	*i* PN	Pn	02 36 00.1	+3.0
PETK	Petropavlovsk-	5.80	187	Pn	Pn	02 35 56.1	-1.0
	comp=Z,1.0nm,0.3s,baz=43,slow=14,SNR=7.7						
PETK				Lg	Lg	02 37 32.0	
	comp=Z,0.3nm,0.3s,baz=8.4,slow=39,SNR=0.7						
PETK				LR	LR	02 38 28.6	
	comp=Z,4µm,19.8s,baz=8.6,slow=42						
	comp=Z,4.8nm,0.6s						
PETK	Petropavlovsk-	5.80	187		Pn	02 35 58.0	+0.9
PETK	Petropavlovsk-	5.80	187	PN	Pn	02 35 58.0	+0.9
PET	Petropavlovsk	5.85	181		Pb	02 36 15.9	+2.7
PET	Petropavlovsk	5.85	181	*i* PN	Pn	02 35 59.1	+1.3
SUUS	Susuman	6.52	312	*e*P	Pn	02 36 07.5	+0.5
SUUS				*e*Sg	Sg	02 37 59.9	-0.7
SUUS				Sgmax		02 38 15.6	
	comp=Z,380nm,0.9s						
SUUS				Sgmax		02 38 15.6	
	comp=Z,540nm,0.9s						
SUUS	Susuman	6.52	312	*e*PN	Pn	02 36 07.5	+0.5
BILL	Bilibino	9.79	17	*e*P	Pn	02 36 55.7	+4.0
BILL				*e*Sg		02 39 49.5	
BILL				Sgmax		02 39 54.5	
	comp=Z,40nm,1.1s						
BILL				Sgmax		02 39 54.5	
	comp=Z,120nm,1.1s						
BILL	Bilibino	9.79	17	*e*PN	Pn	02 36 55.7	+4.0
OKH	Okha	10.31	246	*de*PN	Pn	02 36 52.5	-6.4
OKH				pmax	pmax		
	comp=Z,200nm,8.6s						
OKH				MLR	MLR		
	comp=E,4µm,10.0s						
OKH				MLR	MLR		
	comp=Z,5µm,13.0s						
OKH				MLR	MLR		
	comp=N,6µm,12.0s						
SHEM	Shemya Is, Ala	10.55	119	LR	LR	02 40 22.6	
	comp=N,3µm,21.6s,baz=305,slow=34						
TYV	Tymovskoe	12.25	236	*e*PN	Pn	02 37 28.0	+2.5
TYV				pmax	pmax		
	comp=Z,11nm,1.3s						
TYV				pmax	pmax		
	comp=Z,200nm,2.8s						
TYV				MLR	MLR		
	comp=Z,2µm,18.0s						
YAK	Yakutsk	14.66	295	Pn	Pn	02 37 58.2	0.0
	comp=Z,27nm,0.4s,baz=88,slow=17,SNR=6.7						
YAK				LR	LR	02 44 13.0	
	comp=Z,3µm,19.2s,baz=102,slow=40						
YAK	Yakutsk	14.66	295	Pn	Pn	02 38 01.0	+2.8
YAK	Yakutsk	14.66	295	*e*P	Pn	02 37 59.5	+1.3
YAK				*e*S	Sn	02 40 37.4	-2.9
YAK				pmax	pmax		
	comp=Z,39nm,0.9s						
YAK				pmax	pmax		
	comp=N,14nm,1.3s						
YAK				pmax	pmax		
	comp=E,36nm,1.0s						
YAK				smax	smax		
	comp=E,424nm,6.3s						
YAK				smax	smax		
	comp=N,264nm,4.5s						
YAK				MLR	MLR		
	comp=Z,4µm,13.0s						
YAK				MLR	MLR		
	comp=E,3µm,15.0s						
YAK				MLR	MLR		
	comp=N,122nm,11.0s						
GAMB	Gambell	14.89	58	P	Pn	02 38 01.3	-0.1
	baz=264						
GRNR	Gornyy	15.18	248	⇓*i*P	P	02 38 07.9	-2.5
GRNR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
GRNR				MLR	MLR		
	comp=E,2µm,14.0s						
GRNR				MLR	MLR		
	comp=N,2µm,12.0s						
GRNR				MLR	MLR		
	comp=Z,3µm,14.0s						
KUR	Kuril'sk	15.19	211	*i* P	Pn	02 38 07.6	+2.2
YSS	Yuzhno-Sakhali	15.31	226	*e*P	Pn	02 38 06.5	-0.5
YSS				*e*S	Sn	02 40 55.4	-0.9
YSS				pmax	pmax		
	comp=Z,30nm,1.4s						
YSS				MLR	MLR		
	comp=Z,2µm,12.0s						
YSS				MLR	MLR		
	comp=N,1µm,10.0s						
SPIA	Saint Paul Isl	16.40	83	P	Pn	02 38 21.9	+0.9
	baz=289						
TNA	Tin City	16.72	52	P	Pn	02 38 25.9	+0.8
TNA	Tin City	16.72	52	P	Pn	02 38 25.2	+0.1
	baz=262						
F14K	Arctic Creek	17.37	53	P	Pn	02 38 33.5	+0.2
	baz=264						
M11K	Mekoryuk	17.63	70	P	Pn	02 38 36.2	-0.3
	baz=281						
TIXI	Tiksi	17.64	329	P	Pn	02 38 35.8	-0.7
	comp=N,0.2nm,0.3s,baz=126,slow=12,SNR=8.3						
TIXI				LR	LR	02 45 59.7	
	comp=N,2µm,21.4s,baz=160,slow=39						
	comp=N,3.6nm,0.3s						
TIXI	Tiksi	17.64	329		Pn	02 38 36.3	-0.2
TIXI	Tiksi	17.64	329	*i* P	Pn	02 38 36.3	-0.2
TIXI				pmax	pmax		
	comp=Z,19nm,1.5s						
ANM	Nome	17.71	56		Pn	02 38 36.7	-0.8
ANM	Nome	17.71	56	P	Pn	02 38 36.7	-0.8
ANM				pmax	pmax		
	comp=Z,72nm,1.6s						
ANM	Nome	17.71	56	P	P	02 38 38.2	-0.2
	baz=268,SNR=5.8						
ASAJ	Asahikawa	17.81	221	P	Pn	02 38 38.8	0.0
	comp=Z,0.2nm,0.3s,baz=355,slow=7.2,SNR=3.3						
ASAJ				LR	LR	02 45 48.6	
	comp=Z,520nm,18.3s,baz=55,slow=38						
	comp=Z,8.4nm,0.9s						
JKA	Kamikawa-asahi	17.81	221	P	Pn	02 38 38.8	0.0
JKA	Kamikawa-asahi	17.81	221	IAmb	IAmb	02 38 47.9	
	comp=Z,198nm,1.7s						
F15K	North Star Dit	18.09	52	P	P	02 38 44.6	+2.2
F15K	North Star Dit	18.09	52	P	Pn	02 38 42.3	+0.2
	baz=265						
ZEA	Zeya	18.14	267	*e*P	P	02 38 43.7	+0.6
ZEA				pmax	pmax		
	comp=E,200nm,3.6s						
ZEA				pmax	pmax		
	comp=Z,400nm,3.9s						
ZEA				pmax	pmax		
	comp=N,10.0nm,1.5s						
ZEA				pmax	pmax		
	comp=Z,100nm,1.4s						
ZEA				MLR	MLR		
	comp=E,2µm,13.0s						
ZEA				MLR	MLR		
	comp=N,1µm,16.0s						
ZEA				MLR	MLR		
	comp=Z,3µm,15.0s						
K13K	Kusilvak Mount	18.14	65	P	P	02 38 43.1	0.0
	baz=277						
C16K	Lisburne Hills	18.23	44	P	Pn	02 38 39.3	-4.6
C16K	Lisburne Hills	18.23	44	P	Pn	02 38 43.8	0.0
	baz=257						
G15K	Niukluk	18.30	55	P	P	02 38 45.5	+0.7
	baz=268						
J14K	Nanvaranak Lak	18.57	62	P	P	02 38 47.7	-0.1
J14K	Nanvaranak Lak	18.57	62	P	Pn	02 38 48.5	+0.5
	baz=275,SNR=7.5						
NIKH	Nikolski High	18.92	94	P	Pn	02 38 52.3	+0.1
	baz=301						
D17K	Noatak River	18.96	46	P	Pn	02 38 52.7	+0.1
	baz=261,SNR=7.3						
M13K	Dall Lake	19.02	69	P	Pn	02 38 53.1	-0.3
	baz=282						
G16K	Koyuk River	19.03	54	P	Pn	02 38 54.3	+0.8
G16K	Koyuk River	19.03	54	P	Pn	02 38 53.5	0.0
	baz=268						
C17K	DeLong Mountai	19.06	44	P	Pn	02 38 54.0	+0.1
	baz=259						
H16K	Elim	19.07	56	P	Pn	02 38 54.6	+0.6
	baz=271,SNR=7.9						
RDOG	Red Dog Mine	19.08	45	P	P	02 38 53.1	-0.3
RDOG	Red Dog Mine	19.08	45	P	Pn	02 38 54.2	+0.1
	baz=260						
L14K	Kuka Creek	19.16	66	P	Pn	02 38 55.4	+0.3
	baz=280						
E17K	Hotham Inlet	19.36	49	P	Pn	02 38 57.3	-0.1
	baz=264,SNR=14						
F17K	Baldwin Pennin	19.53	51	P	Pn	02 39 00.0	+0.5
F17K	Baldwin Pennin	19.53	51	P	Pn	02 38 59.1	-0.3
	baz=266						

K15K	Wolf Creek Mou	19.56	63	P	Pn	02 38 59.4	-0.5
K15K	Wolf Creek Mou	19.56	63	P	Pn	02 39 00.0	+0.2
	baz=278						
M14K	Bethel	19.62	68	P	Pn	02 39 00.3	-0.3
M14K				IAmb	IAmb	02 39 02.2	
	comp=Z,84nm,1.1s						
M14K	Bethel	19.62	68	P	Pn	02 39 00.3	-0.3
	baz=282,SNR=5.5						
L15K	Ungalak Mounta	19.67	65	P	Pn	02 39 01.0	-0.3
	baz=280,SNR=6.7						
UNV	Unalaska Valle	19.70	90	P	Pn	02 39 01.3	-0.4
	baz=299						
G17K	Kiwalik Mounta	19.74	53	P	P	02 39 01.2	+0.7
	baz=270,SNR=14						
I17K	Unalakleet	19.77	58		Pn	02 39 02.0	-0.4
I17K				IAmb	IAmb	02 39 05.8	
	comp=Z,92nm,1.4s						
I17K	Unalakleet	19.77	58	P	Pn	02 39 02.0	-0.4
	baz=274,SNR=17						
C18K	Utukok River	19.81	44	P	P	02 39 02.0	+0.7
	baz=260						
E18K	Tukpahlearik C	19.86	48	P	P	02 39 01.8	0.0
	baz=264						
J16K	Anvik River	19.86	60	P	Pn	02 39 02.8	-0.8
	baz=276,SNR=7.4						
N14K	Kuskokwak Cree	19.94	70	P	Pn	02 39 03.8	-0.6
	baz=284						
HEH	HeiHe	19.98	258	*e*P	P	02 39 03.3	+0.1
HEH				pmax	pmax		
	comp=Z,20nm,1.1s						
HEH				LR	LR		
	comp=Z,3µm,15.0s						
HEH				LR	LR		
	comp=Z,2µm,16.3s						
HEH				LR	LR		
	comp=Z,5µm,16.1s						
H17K	Granite Mounta	20.06	55	P	Pn	02 39 05.4	-0.4
	baz=272,SNR=17						
A19K	Wainwright	20.17	40	P	Pn	02 39 06.4	-0.7
	baz=256						
F18K	Selawik	20.18	50	P	P	02 39 06.1	+0.8
	baz=268,SNR=8.8						
M15K	Kasigluk River	20.24	67	P	P	02 39 06.9	+0.8
	baz=283						
O14K	Tigyukauivet M	20.32	72	IAmb	IAmb	02 39 09.5	
	comp=Z,64nm,0.9s						
O14K	Tigyukauivet M	20.32	72	P	P	02 39 07.5	+0.6
	baz=286						
J17K	VABM Dome	20.54	59	IAmb	IAmb	02 39 12.2	
	comp=Z,75nm,1.0s						
J17K	VABM Dome	20.54	59	P	P	02 39 09.4	+0.2
	baz=277,SNR=20						
G18K	Tagagawik	20.57	52	P	P	02 39 09.6	+0.1
G18K				IAmb	IAmb	02 39 12.3	
	comp=Z,93nm,1.3s						
G18K	Tagagawik	20.57	52	P	P	02 39 09.6	+0.1
	baz=270,SNR=29						
L16K	Owhat River	20.61	64	P	P	02 39 10.9	+0.9
L16K	Owhat River	20.61	64	P	P	02 39 09.4	-0.6
	baz=281,SNR=7.1						
N15K	Kwethluk River	20.65	69	IAmb	IAmb	02 39 13.9	
	comp=Z,147nm,1.2s						
N15K	Kwethluk River	20.65	69	P	P	02 39 10.2	-0.3
	baz=285						
H18K	Honhosa River	20.71	54	IAmb	IAmb	02 39 13.9	
	comp=Z,76nm,1.1s						
H18K	Honhosa River	20.71	54	P	P	02 39 11.7	+0.6
	baz=273						
FALS	False Pass	20.84	85	P	P	02 39 12.1	-0.4
	baz=297						
D19K	Kuna River	20.91	45	IAmb	IAmb	02 39 18.9	
	comp=Z,64nm,1.1s						
D19K	Kuna River	20.91	45	P	P	02 39 13.2	0.0
	baz=264						
F19K	Shaleruckik Mo	20.93	50	IAmb	IAmb	02 39 19.6	
	comp=Z,56nm,1.1s						
F19K	Shaleruckik Mo	20.93	50	P	P	02 39 14.0	+0.5
	baz=269						
K17K	Iditarod	20.98	61	IAmb	IAmb	02 39 16.8	
	comp=Z,88nm,1.1s						
K17K	Iditarod	20.98	61	P	P	02 39 15.1	+1.1
	baz=279						
M16K	Timber Creek	20.99	66	IAmb	IAmb	02 39 17.4	
	comp=Z,63nm,1.1s						
M16K	Timber Creek	20.99	66	P	P	02 39 14.8	+0.7
	baz=283,SNR=11						
O15K	Ungalikthiuk R	21.05	71	P	P	02 39 16.4	+1.6
O15K	Ungalikthiuk R	21.05	71	P	P	02 39 15.4	+0.6
	baz=287						
L17K	Donlin	21.08	63	P	P	02 39 15.7	+0.6
	baz=281						
E19K	Redstone River	21.16	48	IAmb	IAmb	02 39 22.5	
	comp=Z,64nm,1.1s						
E19K	Redstone River	21.16	48	P	P	02 39 16.3	+0.4
	baz=268						
S12K	Black Hills	21.17	82	P	P	02 39 16.5	+0.4
	baz=295						
G19K	Purcell Mounta	21.20	51	P	P	02 39 16.6	+0.2
	baz=271,SNR=20						
N16K	Nishlik Lake	21.21	67	P	P	02 39 17.6	+1.0
	baz=285,SNR=8.0						
GCSA	Galena City Sc	21.36	55	P	P	02 39 18.4	+0.4
	baz=275,SNR=7.0						
B20K	Meade River	21.45	41	IAmb	IAmb	02 39 20.8	
	comp=Z,71nm,0.9s						
B20K	Meade River	21.45	41	P	P	02 39 19.1	+0.1
	baz=261						
D20K	Etivluk River	21.48	44	IAmb	IAmb	02 39 24.0	
	comp=Z,94nm,1.4s						
D20K	Etivluk River	21.48	44	P	P	02 39 19.7	+0.3
	baz=265						
H19K	Roundabout Mou	21.49	53	IAmb	IAmb	02 39 21.7	
	comp=Z,76nm,1.1s						
H19K	Roundabout Mou	21.49	53	P	P	02 39 19.9	+0.4
	baz=273						
J18K	Innoko River	21.58	59	P	P	02 39 20.7	+0.2
J18K				IAmb	IAmb	02 39 22.9	
	comp=Z,88nm,1.2s						
J18K	Innoko River	21.58	59	P	P	02 39 21.1	+0.7
	baz=278,SNR=13						
M17K	Holitna River	21.63	65	P	P	02 39 21.8	+0.9
	baz=283						
F20K	Avaraart Lake	21.74	49	P	P	02 39 22.4	+0.3
	baz=270						
O16K	Kokwok River B	21.78	69	P	P	02 39 23.2	+0.6
	baz=287						
L18K	Granite Mounta	21.80	62	IAmb	IAmb	02 39 25.6	
	comp=Z,85nm,1.4s						
L18K	Granite Mounta	21.80	62	P	P	02 39 23.0	+0.1
	baz=282						
A21K	Barrow	21.86	37	P	P	02 39 23.2	-0.1
	baz=258,SNR=22						
N17K	Nushagak Hills	21.96	67	P	P	02 39 25.1	+0.5
	baz=285						
J19K	Poorman	21.99	57	P	P	02 39 24.3	-0.5
	baz=278						
P16K	Nushagak River	22.00	71	P	P	02 39 24.1	-0.9
	baz=288						
USRK	Ussuriysk Ar.	22.01	240	P	P	02 39 25.4	+0.2
	comp=Z,14nm,1.1s,baz=52,slow=12,SNR=13						
	comp=Z,14nm,1.1s						
SDPT	Sand Point	22.13	81	P	P	02 39 26.7	+0.3
	baz=296						
H20K	Anotleneega Mo	22.14	53	P	P	02 39 26.3	-0.2
	baz=275,SNR=17						
C21K	Knifeblade Rid	22.18	43	P	P	02 39 27.0	+0.2
	baz=266						
O17K	Koliganek Bris	22.21	69	P	P	02 39 27.6	+0.3
	baz=287						
S14K	Fog Glacier	22.21	79	P	P	02 39 27.1	-0.2
	baz=294						
B21K	Ikpikpuk River	22.28	42	IAmb	IAmb	02 39 31.8	
	comp=Z,95nm,1.2s						
B21K	Ikpikpuk River	22.28	42	P	P	02 39 27.8	0.0
	baz=265						
A22K	Sinclair Lake	22.33	38	P	P	02 39 28.4	+0.1
	baz=261						
M18K	Stony River	22.36	64	P	P	02 39 27.9	-0.9
	baz=284						
N18K	Kilae Creek	22.54	66	P	P	02 39 31.1	+0.3
	baz=286						
J20K	Nowinta River	22.61	56	P	P	02 39 31.4	0.0
	baz=278,SNR=36						
F21K	Alatna River	22.61	48	P	P	02 39 31.3	-0.2
	baz=272,SNR=14						
G21K	Allakaket	22.64	50	IAmb	IAmb	02 39 34.6	
	comp=Z,76nm,1.0s						
G21K	Allakaket	22.64	50	P	P	02 39 32.0	+0.3
	baz=273						
L19K	White Mountain	22.65	62	P	P	02 39 32.0	0.0
	baz=283						
P17K	Kvichak River	22.71	70	P	P	02 39 33.9	+1.4
P17K	Kvichak River	22.71	70	P	P	02 39 33.3	+0.8
	baz=289						
B22K	Teshekpuk Lake	22.76	40	P	P	02 39 32.4	-0.5
	baz=264						
Q16K	King Salmon	22.77	71	P	P	02 39 33.3	+0.1
	baz=290						
K20K	Telida	22.77	59	IAmb	IAmb	02 39 35.9	
	comp=Z,57nm,1.2s						
K20K	Telida	22.77	59	P	P	02 39 33.2	0.0
	baz=280						
MDJ	Mudanjiang	22.79	244	P	P	02 39 32.8	-0.7
MDJ				IAmb	IAmb	02 39 34.7	
	comp=Z,94nm,1.8s						
MDJ	Mudanjiang	22.79	244	P	P	02 39 33.0	-0.5
MDJ				pmax	pmax		
	comp=Z,28nm,2.1s						
MDJ				LR	LR		
	comp=Z,3µm,12.8s						
MDJ				LR	LR		
	comp=Z,3µm,12.7s						
MDJ				LR	LR		
	comp=Z,5µm,12.2s						
CHNA	Chernabura Isl	22.82	82	P	P	02 39 33.0	-0.8
	baz=297						
D22K	Ayikyak River	22.92	44	IAmb	IAmb	02 39 37.6	
	comp=Z,37nm,0.9s						
D22K	Ayikyak River	22.92	44	P	P	02 39 34.6	-0.1
	baz=268						
H21K	Melozitna Rive	22.99	53	P	P	02 39 35.3	-0.1
	baz=276						
BNX	BinXian	23.00	249	⇑P	P	02 39 34.5	-1.3
BNX				pP	pP	02 39 36.8	-2.6
BNX				PcP	PcP	02 43 25.0	+0.1
BNX				S	S	02 43 46.3	+0.5
BNX				sS	sS	02 43 51.8	-0.3
BNX				pmax	pmax		
	comp=Z,26nm,1.1s						
BNX				pmax	pmax		
	comp=Z,470nm,4.6s						
BNX				LR	LR		
	comp=Z,5µm,13.6s						
BNX				LR	LR		
	comp=Z,4µm,13.6s						
BNX				LR	LR		
	comp=Z,7µm,14.6s						
O18K	Koktuh Hills	23.10	68	P	P	02 39 37.1	+0.5
	baz=288,SNR=5.5						
F22K	John River	23.11	48	P	P	02 39 37.1	+0.4
	baz=272						
N19K	Bonanza Creek	23.16	65	P	P	02 39 37.4	+0.1
	baz=286						
BOD	Bodaibo	23.22	287	*e*P	P	02 39 37.1	-0.7
BOD				pmax	pmax		
	comp=Z,60nm,1.6s						
E22K	Anaktuvuk Pass	23.23	46	P	P	02 39 36.8	-1.2
E22K	Anaktuvuk Pass	23.23	46	P	P	02 39 38.0	+0.1
	baz=271						
P18K	Big Mountain,	23.23	69	IAmb	IAmb	02 39 40.9	
	comp=Z,111nm,1.4s						
P18K	Big Mountain,	23.23	69	P	P	02 39 38.3	+0.3
	baz=289						
R17L	Mt. Peulik Vol	23.29	74	P	P	02 39 38.6	0.0
	baz=292						
Q17K	Contact Creek	23.29	72	P	P	02 39 38.5	-0.3
	baz=291						
I21K	Tanana	23.39	54	P	P	02 39 39.6	+0.2
	baz=278,SNR=8.7						
O19K	Port Alsworth	23.42	67	P	P	02 39 40.3	+0.5
	baz=288						
CHUM	Lake Minchumin	23.45	57	P	P	02 39 40.7	+0.6
	baz=280,SNR=13						
M20K	Styx River	23.51	62	P	P	02 39 41.3	+0.4
	baz=284,SNR=8.6						
H22K	Ishtalitna Cre	23.55	52	P	P	02 39 41.1	0.0
	baz=277						
D23K	Nanushuk River	23.64	44	IAmb	IAmb	02 39 43.7	
	comp=Z,91nm,1.7s						
D23K	Nanushuk River	23.64	44	P	P	02 39 42.0	0.0
	baz=270						
C23K	Itkillik River	23.68	42	P	P	02 39 42.3	0.0
	baz=268,SNR=29						
PPLA	Purkeypile	23.70	59	P	P	02 39 43.3	+0.5
	baz=283,SNR=14						
COLD	Coldfoot	23.89	48		P	02 39 43.8	-0.6
COLD				IAmb	IAmb	02 39 45.7	
	comp=Z,70nm,1.2s						
COLD	Coldfoot	23.89	48	P	P	02 39 44.0	-0.4
	baz=275,SNR=23						
MLY	Manley	23.93	54	IAmb	IAmb	02 39 46.5	
	comp=Z,79nm,1.2s						
MLY	Manley	23.93	54	P	P	02 39 44.7	-0.1
	baz=279,SNR=11						
BPAW	Bear Paw Mtn.	23.98	56	P	P	02 39 45.0	-0.3
	baz=281,SNR=7.8						
G23K	Bananza Creek	24.00	50	IAmb	IAmb	02 39 46.6	
	comp=Z,37nm,1.0s						
G23K	Bananza Creek	24.00	50	P	P	02 39 44.4	-1.1
	baz=276,SNR=20						
ILSW	Iliamna Southw	24.05	67	IAmb	IAmb	02 39 48.5	
	comp=Z,89nm,1.4s						
TOLK	Toolik Lake Re	24.05	45	P	P	02 39 45.5	-0.4
	baz=272						
E23K	Chandalar	24.06	46	P	P	02 39 45.8	-0.3
	baz=273						
P19K	Oil Pt	24.11	67	P	P	02 39 47.0	+0.4
	baz=289						
SPCR	Spurr Chakacha	24.12	63	P	P	02 39 47.0	+0.3
	baz=287,SNR=6.2						
Q19K	Cape Douglas,	24.16	69	P	P	02 39 47.6	+0.7
	baz=291						
SPU	Mount Spurr	24.20	63	IAmb	IAmb	02 39 50.3	
	comp=Z,78nm,1.2s						
SKT	Skwentna	24.22	61	IAmb	IAmb	02 39 49.9	
	comp=Z,44nm,1.2s						
SKT	Skwentna	24.22	61	P	P	02 39 48.2	+0.7
	baz=285,SNR=6.9						
O20K	Slope Mountain	24.26	66	P	P	02 39 48.8	+0.8
	baz=289						
D24K	Happy Valley	24.31	44	IAmb	IAmb	02 39 50.7	
	comp=Z,61nm,1.1s						
D24K	Happy Valley	24.31	44	P	P	02 39 48.2	-0.1
	baz=271						
HILR	Hailar Array B	24.34	265	P	P	02 39 48.5	-0.2
	comp=Z,3.5nm,0.7s,baz=60,slow=8.8,SNR=5.7						
HILR				LR	LR	02 49 51.3	
	comp=Z,895nm,18.4s,baz=95,slow=38						
C24K	Franklin Bluff	24.34	42	P	P	02 39 48.5	-0.1
	baz=270						
TRF	Thorofare Moun	24.42	58	P	P	02 39 49.3	-0.2
	baz=283,SNR=26						
E24K	Your Creek	24.48	46	IAmb	IAmb	02 39 52.0	
	comp=Z,52nm,0.9s						
E24K	Your Creek	24.48	46	P	P	02 39 50.1	+0.2
	baz=274						
I23K	Minto, Yukon-K	24.49	53	IAmb	IAmb	02 40 16.3	
	comp=Z,72nm,1.6s						
I23K	Minto, Yukon-K	24.49	53	P	P	02 39 50.4	+0.6
	baz=280,SNR=7.5						
CUT	Chulitna	24.68	60	P	P	02 39 50.8	-0.8
	baz=285						
NEA2	Nenana	24.71	55	IAmb	IAmb	02 39 54.0	
	comp=Z,33nm,1.0s						
NEA2	Nenana	24.71	55	P	P	02 39 51.4	-0.5
	baz=281,SNR=16						
SUA	Susitna One	24.72	62	P	P	02 39 52.1	-0.1
	baz=287						
F24K	Squaw Lake	24.76	47	IAmb	IAmb	02 39 55.2	
	comp=Z,94nm,1.4s						
F24K	Squaw Lake	24.76	47	P	P	02 39 53.2	+0.8
	baz=276						
Q20K	Shuyak Island	24.88	69	P	P	02 39 53.6	+0.2
	baz=292						
M22K	Willow	24.93	61	P	P	02 39 54.1	+0.2
	baz=287						
MCK	McKinley	24.95	57	P	P	02 39 53.7	-0.4
	baz=283,SNR=30						
H24K	Noodor Dome	24.98	51	P	P	02 39 54.0	-0.4
	baz=280						
G24K	Hadweenzic Riv	25.01	49	IAmb	IAmb	02 39 58.0	
	comp=Z,56nm,1.1s						
G24K	Hadweenzic Riv	25.01	49	P	P	02 39 54.9	+0.3
	baz=278						
RND	Reindeer	25.06	57	IAmb	IAmb	02 40 18.4	
	comp=Z,46nm,1.3s						
KDAK	Kodiak Island	25.10	71	LR	LR	02 49 49.0	
	comp=Z,985nm,21.4s,baz=283,slow=37						
KDAK	Kodiak Island	25.10	71	P	P	02 39 56.4	+0.9
	baz=293						
WRH	Wood River Hil	25.15	55	IAmb	IAmb	02 39 57.3	
	comp=Z,51nm,0.9s						
COLA	College	25.17	54	P	P	02 39 56.4	+0.4
COLA				IAmb	IAmb	02 39 57.8	
	comp=Z,45nm,1.1s						
COLA	College	25.17	54	*i* P	P	02 39 54.9	-1.1
COLA				pmax	pmax		
	comp=Z,22nm,1.0s						
COLA	College	25.17	54	P	P	02 39 56.2	+0.2
	baz=282						
D25K	Kavik River	25.17	43	P	P	02 39 56.7	+0.6
	baz=273						
BRLK	Bradley Lake	25.19	66	IAmb	IAmb	02 39 56.5	
	comp=Z,60nm,1.2s						
CCB	Clear Creek Bu	25.23	54	IAmb	IAmb	02 39 58.5	
	comp=Z,45nm,1.4s						
BRSE	Bradley Lake S	25.27	66	P	P	02 39 57.1	+0.1
	baz=290						
POKR	Poker Plat Res	25.29	53	P	P	02 39 57.3	+0.1
	baz=281,SNR=5.3						
RC01	Rabbit Creek A	25.30	63	P	P	02 39 58.0	+0.8
	baz=288						
WAT1	Susitna Watana	25.34	58	P	P	02 39 57.6	0.0
	baz=285						
CN2	Changchun	25.37	248	P	P	02 39 58.0	-0.1
CN2				S	S	02 44 17.5	-6.5
CN2				sS	sS	02 44 37.3	+6.9
CN2				pmax	pmax		
	comp=Z,20nm,1.9s						
CN2				LR	LR		
	comp=Z,3µm,13.0s						
CN2				LR	LR		
	comp=Z,3µm,13.0s						
CN2				LR	LR		
	comp=Z,5µm,14.0s						
PMR	Palmer	25.42	61	P	P	02 39 58.8	+0.5
	baz=288						
G25K	Bearman Lake	25.54	49	P	P	02 39 59.6	+0.2
	baz=279						
E25K	Arctic Village	25.57	46	IAmb	IAmb	02 40 02.8	
	comp=Z,48nm,1.0s						
E25K	Arctic Village	25.57	46	P	P	02 39 59.2	-0.4
	baz=276,SNR=47						
ILAR	Eielson Array	25.59	54	P	P	02 39 59.0	-0.9
	comp=Z,11nm,0.8s,baz=269,slow=7.5,SNR=88						
	comp=Z,11nm,0.8s						
ILAR	Eielson Array	25.59	54	P	P	02 39 59.0	-0.9
F25K	Christian Rive	25.60	47	IAmb	IAmb	02 40 03.1	
	comp=Z,28nm,0.9s						
F25K	Christian Rive	25.60	47	P	P	02 40 00.4	+0.3
	baz=278,SNR=31						
HDA	Harding Lake	25.65	55	IAmb	IAmb	02 40 01.8	
	comp=Z,26nm,0.9s						
HDA	Harding Lake	25.65	55	P	P	02 40 00.6	+0.2
	baz=283,SNR=17						
C26K	Camden Bay	25.65	42	P	P	02 40 00.4	+0.1
	baz=273						
SML	Sawmill	25.72	61	IAmb	IAmb	02 40 07.2	
	comp=Z,40nm,1.1s						
SML	Sawmill	25.72	61	P	P	02 40 00.9	-0.2
	baz=288						
SEW	Seward	25.75	65	IAmb	IAmb	02 40 01.8	
	comp=Z,54nm,1.0s						
SEW	Seward	25.75	65	P	P	02 40 01.6	+0.3
	baz=290,SNR=5.0						
WAT6	Susitna Watana	25.76	59	P	P	02 40 01.8	+0.2
	baz=286,SNR=8.8						
KNK	Knik Glacier	25.79	62	P	P	02 40 01.0	-0.7
	baz=288						
DHY	Denali Highway	25.79	58	IAmb	IAmb	02 40 04.2	
	comp=Z,50nm,1.1s						
DHY	Denali Highway	25.79	58	P	P	02 40 01.5	-0.4
	baz=286,SNR=11						
FYU	Fort Yukon	25.92	49	IAmb	IAmb	02 40 06.0	
	comp=Z,63nm,1.2s						
PRP	Porcupine Dome	26.00	52	IAmb	IAmb	02 40 05.4	
	comp=Z,36nm,0.9s						
PRP	Porcupine Dome	26.00	52	P	P	02 40 03.0	-0.8
	baz=282,SNR=22						
M23K	Glacier View	26.00	61	P	P	02 40 03.7	0.0
	baz=288,SNR=5.5						
PWL	Port Wells	26.02	63	IAmb	IAmb	02 40 04.4	
	comp=Z,55nm,0.9s						
PWL	Port Wells	26.02	63	P	P	02 40 03.5	-0.3
	baz=289,SNR=5.8						
BMAR	Burnt Mountain	26.03	47	P	P	02 40 03.3	-0.6
MJB9	Matsu-Tunnel	26.07	220	IAmb	IAmb	02 40 09.0	
	comp=Z,54nm,1.3s						
MAJO	Matsushiro	26.07	220		P	02 40 04.5	-0.1
MAJO				IAmb	IAmb	02 40 08.1	
	comp=Z,55nm,1.3s						
MAJO	Matsushiro	26.07	220	*i* P	P	02 40 03.8	-0.7
MAJO				pmax	pmax		
	comp=Z,28nm,1.2s						
MJAR	Matsushiro Arr	26.07	220	P	P	02 40 03.7	-0.8
	comp=Z,22nm,1.1s,baz=12,slow=10.0,SNR=16						
	comp=Z,22nm,1.1s						
MJAR	Matsushiro Arr	26.07	220	P	P	02 40 04.1	-0.4
MJAR	Matsushiro Arr	26.07	220	P	P	02 40 04.1	-0.4
MJAR				pmax	pmax		
	comp=Z,26nm,1.5s						
C27K	Jago River	26.09	42	P	P	02 40 04.4	0.0
	baz=275						
CIT	Chita	26.14	275	*e*P	P	02 40 06.4	+1.4
CIT				*e*		02 40 48.2	
CIT				*e*		02 41 03.0	
CIT				*e*		02 43 31.4	
CIT				*e*		02 44 26.2	
CIT				*e*		02 45 52.8	
CIT				pmax	pmax		
	comp=Z,89nm,1.4s						
F26K	Sheenjek River	26.16	47	P	P	02 40 05.6	+0.6
	baz=279,SNR=20						
SCM	Sheep Creek Mo	26.17	60	P	P	02 40 05.7	+0.5
	baz=288,SNR=6.8						
J25K	Salcha River,	26.26	54	P	P	02 40 05.6	-0.5
	baz=284						
K24K	Donnelly Dome	26.29	56	P	P	02 40 05.9	-0.4
	baz=285						
G26K	Porcupine Rive	26.42	48	P	P	02 40 07.0	-0.3
	baz=280						
GLI	Glacier Island	26.59	62	P	P	02 40 08.1	-0.8
	baz=290						
M24K	Tolsona, Glenn	26.60	59	P	P	02 40 09.5	+0.4
	baz=288						
PAX	Paxson	26.65	57	P	P	02 40 07.7	-2.0
	baz=287						
RIDG	Independent Ri	26.71	55	IAmb	IAmb	02 40 10.7	
	comp=Z,38nm,1.0s						
RIDG	Independent Ri	26.71	55	P	P	02 40 08.4	-1.7
	baz=286,SNR=15						
KLU	Klutina	26.91	61	IAmb	IAmb	02 40 28.4	
	comp=Z,44nm,1.4s						
KLU	Klutina	26.91	61	P	P	02 40 10.4	-1.6
	baz=290						
SCRK	Sand Creek	27.01	55	P	P	02 40 10.8	-2.0
	baz=286,SNR=13						
I26K	Coal Creek Min	27.01	52	P	P	02 40 11.4	-1.3
	baz=284						
E27K	Coleen River	27.03	45	P	P	02 40 11.6	-1.3
	baz=280						
J26L	Joseph Creek	27.05	54	P	P	02 40 12.3	-0.9
	baz=285						
D27M	Malcolm River	27.10	43	P	P	02 40 12.3	-1.2
	baz=278,SNR=9.3						
DIV	Divide	27.11	61	IAmb	IAmb	02 40 20.9	
	comp=Z,71nm,1.6s						
G27K	Doyon Strip	27.27	48	P	P	02 40 15.0	0.0
	baz=282,SNR=19						
EYAK	Cordova Ski Ar	27.32	62	P	P	02 40 15.5	0.0
	baz=291						
H27K	Steamboat Moun	27.45	49	P	P	02 40 17.1	+0.4
	baz=284						
Q23K	Middleton Isla	27.46	65	P	P	02 40 16.5	-0.2
	baz=293						
N25K	Chitina, Valde	27.47	60	P	P	02 40 17.0	0.0
	baz=290						
L26K	Log Cabin Wild	27.56	57	P	P	02 40 18.1	+0.4
	baz=288						
I27K	Kandik River	27.56	51	P	P	02 40 17.9	+0.2
	baz=285						
BMRM	Bremner River	27.69	61	P	P	02 40 17.8	-1.1
	baz=291						
E28M	Babbage River	27.71	44	P	P	02 40 18.7	-0.3

	baz=280,SNR=12						
F28M	Old Crow	27.78	46	P	P	02 40 19.4	-0.2
	baz=282						
D28M	Stokes Point	27.87	42	P	P	02 40 20.3	0.0
	baz=280						
GLB	Gilahina Butte	27.88	60	IAmb	IAmb	02 40 43.5	
	comp=Z,53nm,1.4s						
M26K	Nabesna, AK	27.92	58	IAmb	IAmb	02 40 22.9	
	comp=Z,40nm,1.3s						
M26K	Nabesna, AK	27.92	58	P	P	02 40 21.3	+0.4
	baz=290						
L27K	Beaver Creek,	28.21	56	IAmb	IAmb	02 40 25.0	
	comp=Z,29nm,1.1s						
L27K	Beaver Creek,	28.21	56	P	P	02 40 23.3	-0.1
	baz=289,SNR=10						
BCAR	Beaver Creek A	28.22	56	P	P	02 40 23.8	+0.1
MCARA	McCarthy VSAT	28.26	60	P	P	02 40 24.5	+0.6
	baz=291						
I28M	Miner Creek	28.28	51	IAmb	IAmb	02 40 26.2	
	comp=Z,29nm,1.1s						
I28M	Miner Creek	28.28	51	P	P	02 40 24.3	+0.1
	baz=286						
E29M	Blow River	28.34	44	P	P	02 40 23.4	-1.2
	baz=282						
M27K	Edge Creek, AK	28.42	57	P	P	02 40 24.8	-0.7
	baz=290						
CRQE	Cirque	28.46	61	P	P	02 40 26.0	+0.1
	baz=292						
G29M	Pine Creek	28.64	47	P	P	02 40 26.7	-0.5
	baz=285,SNR=9.7						
H29M	Whitestone	28.69	49	P	P	02 40 28.0	+0.3
	baz=286,SNR=8.3						
JHJ	Hachijo jima 2	28.73	215	LR	LR	02 53 22.8	
	comp=Z,129nm,19.2s,baz=78,slow=40						
BVCY	Beaver Creek	28.85	57	P	P	02 40 29.1	0.0
	baz=291						
DAWY	Dawson	28.91	53	IAmb	IAmb	02 41 00.3	
	comp=Z,48nm,1.8s						
DAWY	Dawson	28.91	53	P	P	02 40 29.9	+0.1
	baz=289						
I29M	Ogilvie Camp,	28.96	50	P	P	02 40 30.4	+0.3
	baz=287,SNR=7.3						
CTG	Chitna Glacier	29.17	60	P	P	02 40 32.5	+0.3
	baz=293						
YUK3	Moose Creek	29.25	58	P	P	02 40 33.4	+0.4
	baz=292						
J29N	Klondike Camp	29.28	52	P	P	02 40 33.7	+0.7
	baz=289						
KSRS	Korea Array	29.28	237	P	P	02 40 32.5	-0.6
	comp=Z,4.8nm,1.0s,baz=30,slow=9.7,SNR=7.2						
	comp=Z,4.8nm,1.0s						
EPYK	Eagle Plains	29.29	48	P	P	02 40 32.8	-0.2
	baz=287,SNR=8.0						
F30M	Barrier River	29.30	45	P	P	02 40 33.2	+0.1
	baz=285,SNR=22						
KSAR	Wonju Array Be	29.31	237	P	P	02 40 32.6	-0.7
KSAR	Wonju Array Be	29.31	237	P	P	02 40 32.7	-0.7
G30M	tAoh Zraii Nji	29.31	47	P	P	02 40 33.4	+0.2
	baz=286						
YUK8	Steele Glacier	29.75	59	P	P	02 40 37.1	-0.3
	baz=293						
O28M	Mount Upton	29.77	60	P	P	02 40 37.2	-0.4
	baz=294						
K29M	Barlow Dome	29.77	53	P	P	02 40 36.7	-0.8
	baz=290						
I30M	Mount Dempster	29.77	50	IAmb	IAmb	02 40 38.5	
	comp=Z,46nm,1.9s						
I30M	Mount Dempster	29.77	50	P	P	02 40 38.0	+0.6
	baz=289,SNR=6.6						
L29M	L29M	29.77	55	IAmb	IAmb	02 40 44.7	
	comp=Z,53nm,1.8s						
L29M	L29M	29.77	55	P	P	02 40 37.9	+0.5
	baz=291						
M29M	Somme Creek	29.88	56	P	P	02 40 38.7	+0.3
	baz=292						
INK	Inuvik	29.94	44	P	P	02 40 38.3	-0.4
	baz=286,SNR=8.7						
J30M	Hart River	30.00	51	P	P	02 40 39.7	+0.2
	baz=290,SNR=8.7						
PINM	Pinnacle	30.02	61	P	P	02 40 39.9	+0.3
	baz=295						
G31M	Satah River	30.06	46	P	P	02 40 40.1	+0.3
	baz=288						
F31M	Tsiigehtchic	30.10	45	IAmb	IAmb	02 40 41.8	
	comp=Z,37nm,1.2s						
F31M	Tsiigehtchic	30.10	45	P	P	02 40 40.0	-0.2
	baz=287,SNR=13						
YUK4	Talbot Arm	30.22	58	P	P	02 40 41.1	-0.4
	baz=294						
H31M	Peel River	30.38	49	P	P	02 40 42.6	-0.1
	baz=289						
M30M	Minto, Yukon	30.54	55	IAmb	IAmb	02 40 58.5	
	comp=Z,53nm,1.9s						
M30M	Minto, Yukon	30.54	55	P	P	02 40 43.7	-0.5
	baz=293						
PNL	Peninsula	30.59	62	P	P	02 40 43.8	-0.8
	baz=296						
O29M	Mount Kennedy	30.69	60	P	P	02 40 45.3	-0.3
	baz=295						
NRIK	Noril'sk	30.91	319	LR	LR	02 55 04.1	
	comp=Z,578nm,19.2s,baz=76,slow=40						
HYT	Haines Junctio	30.94	59	P	P	02 40 47.6	-0.2
	baz=295						
DL2	Dalian	30.97	246	P	P	02 40 51.3	+3.2
DL2				S	S	02 46 00.5	+8.4
DL2				pmax	pmax		
	comp=Z,46nm,1.2s						
DL2				pmax	pmax		
	comp=Z,370nm,5.9s						
DL2				LR	LR		
	comp=Z,2µm,17.3s						
DL2				LR	LR		
	comp=Z,2µm,17.6s						
DL2				LR	LR		
	comp=Z,1µm,17.7s						
P29M	Windy Craggy	31.36	61	P	P	02 40 51.8	+0.4
	baz=297						
N31M	Braeburn, Yuko	31.42	57	P	P	02 40 51.7	-0.2
	baz=295						
P30M	Million Dollar	31.49	60	P	P	02 40 53.0	+0.4
	baz=296						
A36M	Sachs Harbour	31.65	35	P	P	02 40 54.1	+0.3
A36M				IAmb	IAmb	02 40 56.4	
	comp=Z,22nm,0.9s						
A36M	Sachs Harbour	31.65	35	P	P	02 40 54.1	+0.3
	baz=286,SNR=11						
M31M	Drury Creek, Y	31.72	55	P	P	02 40 55.0	+0.5
	baz=295						
JNU	Nakatsue	31.80	228	LR	LR	02 53 37.0	
	comp=Z,379nm,19.1s,baz=31,slow=36						
ULN	Ulaanbaatar	31.98	273	*ce*P	P	02 40 58.3	+1.2
ULN				pmax	pmax		
	comp=Z,13nm,2.1s						
PLBC	Pleasant Camp	32.06	61	P	P	02 40 57.6	+0.1
	baz=298						
WHY	Whitehorse	32.17	58	P	P	02 40 58.8	+0.2
	baz=297						
SONM	Songino Array	32.34	274	P	P	02 41 00.7	+0.4
	comp=Z,1.5nm,0.9s,baz=67,slow=7.1,SNR=5.8						
SONM				PcP	PcP	02 43 46.8	-0.9
	comp=Z,1.2nm,0.7s,baz=67,slow=2.9,SNR=4.5						
SONM				LR	LR	02 54 53.2	
	comp=Z,2µm,21.7s,baz=54,slow=38						
	comp=Z,1.5nm,0.9s						
SONM	Songino Array	32.34	274	IAmb	IAmb	02 41 08.6	
	comp=Z,6.1nm,1.5s						
ZAK	Zakamensk	32.37	280	*e*P	P	02 41 00.8	+0.3
ZAK				*e*		02 51 29.8	
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.6s						
ZAK				pmax	pmax		
	comp=Z,18nm,2.1s						
SKAG	Skagway	32.53	60	P	P	02 41 02.3	+0.7
	baz=298						
N32M	Quiet Lake	32.74	56	P	P	02 41 03.8	+0.4
	baz=297						
MOY	Mondy	32.78	283	*e*P	P	02 41 05.0	+1.0
MOY				pmax	pmax		
	comp=Z,23nm,2.0s						
S31K	Pelican	32.84	63	P	P	02 41 04.0	-0.4
	baz=300						
C36M	Paulatuk	32.87	40	P	P	02 41 04.5	0.0
C36M	Paulatuk	32.87	40	P	P	02 41 04.3	-0.1
	baz=291,SNR=21						
P32M	Atlin	33.19	59	P	P	02 41 06.7	-0.8
	baz=299						
P33M	Teslin, Yukon	33.29	58	P	P	02 41 07.5	-0.8
	baz=298						
R32K	Eaglecrest	33.48	62	P	P	02 41 07.8	-2.1
	baz=300						
HHC	Hu-ho-hao-te	34.49	260	*e*P	P	02 41 20.3	+1.3
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,90nm,4.0s						
HHC				LR	LR		
	comp=Z,2µm,13.9s						
HHC				LR	LR		
	comp=Z,2µm,13.3s						
HHC				LR	LR		
	comp=Z,3µm,13.6s						
R33M	Jennings River	34.51	58	IAmb	IAmb	02 41 21.9	
	comp=Z,29nm,1.3s						
R33M	Jennings River	34.51	58	P	P	02 41 19.1	+0.1
	baz=300						
WTLY	Watson Lake, Y	35.09	56	P	P	02 41 24.6	+0.7
	baz=301						
KNGR	Kungurtug, Tuv	35.17	284	*i* P	P	02 41 25.9	+1.1
KNGR				pmax	pmax		
	comp=Z,11nm,1.4s						
S34M	Telegraph Cree	35.20	60	P	P	02 41 25.7	+0.8
	baz=302						
TIA	Tai'an	35.28	249	P	P	02 41 26.0	+0.3
TIA				pmax	pmax		
	comp=Z,25nm,1.5s						
TIA				LR	LR		
	comp=Z,1µm,13.2s						
TIA				LR	LR		
	comp=Z,910nm,12.8s						
TIA				LR	LR		
	comp=Z,3µm,14.7s						
WRAK	Wrangell Islan	35.46	63	P	P	02 41 27.1	+0.1
	baz=304						
BTO	Baotou	35.46	261	*e*P	P	02 41 28.0	+0.7
BTO				pP	sP	02 41 32.5	-0.4
BTO				sP	pP	02 41 35.0	+3.7
BTO				S	S	02 47 00.8	-1.1
BTO				SS	SnSn	02 49 19.5	-1.6
BTO				pmax	pmax		
	comp=Z,27nm,1.7s						
BTO				pmax	pmax		
	comp=Z,890nm,5.1s						
BTO				LR	LR		
	comp=Z,3µm,11.5s						
BTO				LR	LR		
	comp=Z,2µm,17.2s						
BTO				LR	LR		
	comp=Z,3µm,17.5s						
HNS	HongShan	35.52	253	⇑P	P	02 41 28.0	+0.2
HNS				pmax	pmax		
	comp=Z,11nm,1.8s						
HNS				LR	LR		
	comp=Z,3µm,14.5s						
HNS				LR	LR		
	comp=Z,1µm,16.1s						
HNS				LR	LR		
	comp=Z,3µm,14.9s						
CRAG	Craig	35.62	65	P	P	02 41 28.8	+0.3
	baz=304						
WRGLY	Wrigley	35.73	49	IAmb	IAmb	02 41 31.7	
	comp=Z,27nm,1.4s						
WRGLY	Wrigley	35.73	49	P	P	02 41 30.5	+1.2
	baz=300						
T35M	Bob Quinn	36.11	61	IAmb	IAmb	02 41 36.5	
	comp=Z,23nm,0.9s						
T35M	Bob Quinn	36.11	61	P	P	02 41 33.6	+0.9
	baz=304						
V35K	Ketchikan	36.41	64	P	P	02 41 36.8	+1.7
	baz=305						
LIRD	Liard River Hi	36.62	56	P	P	02 41 38.3	+1.3
	baz=303						
TOAD	Toad River Com	37.30	56	P	P	02 41 44.5	+1.7
	baz=304,SNR=6.8						
SSE	Sheshan	37.61	239	P	P	02 41 44.8	-0.9
SSE				S	S	02 47 33.3	-1.4
SSE				pmax	pmax		
	comp=Z,14nm,0.7s						
SSE				pmax	pmax		
	comp=Z,140nm,4.5s						
SSE				LR	LR		
	comp=Z,340nm,10.5s						
SSE				LR	LR		
	comp=Z,360nm,11.1s						
NJ2	Nanjing	37.87	243	*e*P	P	02 41 49.0	+1.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NJ2				LR	LR		
	comp=Z,1µm,14.2s						
NJ2				LR	LR		
	comp=Z,1µm,14.2s						
NJ2				LR	LR		
	comp=Z,2µm,13.7s						
RES	Resolute Bay	38.29	24	LR	LR	02 58 22.0	
	comp=Z,174nm,20.8s,baz=354,slow=37						
LYN	LuoYang	38.88	252	P	P	02 41 56.8	+0.5
LYN				pmax	pmax		
	comp=Z,16nm,1.4s						
LYN				LR	LR		
	comp=Z,1µm,19.6s						
LYN				LR	LR		
	comp=Z,1µm,18.9s						
LYN				LR	LR		
	comp=Z,1µm,22.3s						
ZALV	Zalesovo Beam	39.30	296	P	P	02 42 00.7	+1.0
	comp=Z,0.5nm,0.3s,baz=64,slow=3.4,SNR=2.1						
	comp=Z,0.5nm,0.3s						
ZALV	Zalesovo Beam	39.30	296	P	P	02 41 59.9	+0.2
YKA	Yellowknife Ar	39.55	47	P	P	02 42 01.2	-0.3
	comp=Z,6.5nm,0.8s,baz=305,slow=8.8,SNR=56						
YKA				PcP	PcP	02 44 08.5	-0.1
	comp=Z,0.7nm,0.8s,baz=311,slow=4.2,SNR=5.7						
YKA				LR	LR	02 58 53.3	
	comp=Z,260nm,18.7s,baz=298,slow=37						
	comp=Z,6.5nm,0.8s						
BBB	Bella Bella	39.97	66	LR	LR	02 58 44.2	
	comp=Z,419nm,18.9s,baz=252,slow=36						
DGZ	Jazzator, Alta	40.76	290	*i* P	P	02 42 12.4	+0.4
DGZ				pmax	pmax		
	comp=Z,10.0nm,1.2s						
WHN	Wuhan	41.24	246	P	P	02 42 17.0	+1.1
SPITS	Spitsbergen Ar	41.32	349	P	P	02 42 16.3	+0.2
	comp=Z,9.9nm,0.8s,baz=3.9,slow=6.4,SNR=2.7						
SPITS				LR	LR	02 59 18.3	
	comp=Z,305nm,18.4s,baz=25,slow=36						
	comp=Z,9.9nm,0.8s						
GTA	Gaotai	41.62	269	P	P	02 42 19.3	+0.2
GTA				pmax	pmax		
	comp=Z,11nm,1.7s						
GTA				LR	LR		
	comp=Z,2µm,16.7s						
GTA				LR	LR		
	comp=Z,2µm,15.3s						
GTA				LR	LR		
	comp=Z,4µm,16.0s						
LZH	Lanzhou	42.05	262	*e*P	P	02 42 25.0	+2.3
LZH				sP	sP	02 42 34.0	+5.7
LZH				pmax	pmax		
	comp=Z,27nm,1.1s						
LZH				LR	LR		
	comp=Z,2µm,13.4s						
LZH				LR	LR		
	comp=Z,2µm,15.3s						
LZH				LR	LR		
	comp=Z,3µm,14.4s						
LZDM	Lanzhou Array	42.22	262	P	P	02 42 25.1	+0.8
	comp=Z,1.8nm,0.4s,baz=54,slow=7.6,SNR=4.3						
LZDM				LR	LR	03 02 30.1	
	comp=Z,537nm,18.8s,baz=45,slow=40						
	comp=Z,1.8nm,0.4s						
ZSN	Zaisan	43.53	289	*e*P	P	02 42 34.6	+0.1
ZSN	Zaisan	43.53	289	*e*P	P	02 42 34.5	+0.1
LLLB	Lillooet	43.95	64	P	P	02 42 39.4	+1.6
LLLB				IAmb	IAmb	02 42 40.4	
	comp=Z,57nm,1.7s						
CLRS	Cowichan Lake	44.10	68	P	P	02 42 40.3	+1.4
WMQ	Urumqi	44.67	283	*e*P	P	02 42 45.3	+1.6
WMQ				PcP	PcP	02 44 25.5	-0.5
WMQ				S	S	02 49 23.8	+4.3
WMQ				pmax	pmax		
	comp=Z,19nm,1.7s						
WMQ				LR	LR		
	comp=Z,580nm,9.9s						
WMQ				LR	LR		
	comp=Z,960nm,14.7s						
WMQ				LR	LR		
	comp=Z,550nm,16.3s						
BLKN	Baker Lake	44.79	37	P	P	02 42 43.5	-0.8
BLKN				IAmb	IAmb	02 42 45.4	
	comp=Z,20nm,0.9s						
MK31	Makanchi Array	45.26	290	*ce*P	P	02 42 48.5	+0.3
MKAR	Makanchi Array	45.26	290	P	P	02 42 47.9	-0.3
	comp=Z,1.7nm,0.8s,baz=52,slow=9.3,SNR=7.8						
MKAR				LR	LR	03 02 31.5	
	comp=Z,970nm,20.3s,baz=5.5,slow=37						
	comp=Z,1.7nm,0.8s						
MKAR	Makanchi Array	45.26	290	P	P	02 42 47.7	-0.6
MKAR	Makanchi Array	45.26	290	*ce*P	P	02 42 50.5	+2.3
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MAKZ	Makanchi	45.40	290	P	P	02 42 49.1	-0.3
MAKZ	Makanchi	45.40	290	P	P	02 42 49.1	-0.3
MAKZ				pmax	pmax		
	comp=Z,18nm,1.7s						
GUMO	Guam	46.38	199	LR	LR	02 59 17.3	
	comp=Z,138nm,19.9s,baz=42,slow=32						
BVAR	Borovoye Array	46.41	304	P	P	02 42 56.8	-0.4
	comp=Z,1.4nm,0.5s,baz=66,slow=6.0,SNR=12						
BVAR				LR	LR	03 04 26.2	
	comp=Z,2µm,19.2s,baz=46,slow=39						
	comp=Z,1.4nm,0.5s						
BORK	Borovoye	46.43	304	P	P	02 42 57.9	+0.5
BORK	Borovoye	46.43	304	*i* P	P	02 42 57.2	-0.2
BORK				pmax	pmax		
	comp=Z,18nm,1.6s						
GOMU	GeErMu	46.64	270	P	P	02 42 58.5	-1.2
GOMU				sP	sP	02 43 06.5	+1.2
GOMU				S	S	02 49 45.5	-3.1
GOMU				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GOMU				LR	LR		
	comp=Z,2µm,17.5s						
GOMU				LR	LR		
	comp=Z,1µm,17.5s						
GOMU				LR	LR		
	comp=Z,3µm,18.2s						
LTY	Liberty	46.85	67	IAmb	IAmb	02 43 02.8	
	comp=Z,24nm,1.3s						
EPH	Ephrata	47.30	66	IAmb	IAmb	02 43 05.8	
	comp=Z,20nm,1.2s						
MXC	Moxie City	47.52	67	IAmb	IAmb	02 43 08.1	
	comp=Z,21nm,1.2s						
ARCES	ARCESS Array B	47.59	340	LR	LR	03 06 51.0	
	comp=Z,207nm,19.1s,baz=19,slow=41						
APA	Apatity	47.67	335	⇓*e*P	P	02 43 13.5	+6.6
APA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
APA				MLR	MLR		
	comp=Z,1µm,5.1s						
SVE	Sverdlovsk	47.70	313	*e*P	P	02 43 08.3	+1.1
SVE				pmax	pmax		
	comp=Z,17nm,1.5s						
SVE				MLR	MLR		
	comp=Z,2µm,17.0s						
WAH2	Wahluke Slope	47.74	67	IAmb	IAmb	02 43 09.3	
	comp=Z,16nm,0.8s						
E07A	Sunnyside	47.75	67	IAmb	IAmb	02 43 09.8	
	comp=Z,22nm,1.2s						
NEW	Newport	47.81	64	LR	LR	03 02 57.1	
	comp=Z,432nm,19.8s,baz=313,slow=36						
NEW	Newport	47.81	64	IAmb	IAmb	02 44 39.1	
	comp=Z,44nm,2.0s						
D08A	Wollman Farm,	47.83	66	IAmb	IAmb	02 43 10.1	
	comp=Z,22nm,1.3s						
H04A	Detroit Lake	47.97	71	IAmb	IAmb	02 43 11.5	
	comp=Z,33nm,1.4s						
HAWA	Hanford	48.02	67	IAmb	IAmb	02 43 11.8	
	comp=Z,24nm,1.2s						
GYA	Guiyang	48.36	251	⇓P	P	02 43 13.5	+0.6
GYA				S	S	02 50 09.8	-3.0
GYA				pmax	pmax		
	comp=Z,24nm,1.1s						
GYA				pmax	pmax		
	comp=Z,310nm,3.1s						
GYA				LR	LR		
	comp=Z,660nm,17.0s						
GYA				LR	LR		
	comp=Z,1µm,12.9s						
GYA				LR	LR		
	comp=Z,960nm,13.4s						
TDK	Taldyqorghan	48.43	291	*e*P	P	02 43 13.1	0.0
TDK	Taldyqorghan	48.43	291	*e*P	P	02 43 13.1	0.0
WIFE	Three Sisters-	48.61	71	IAmb	IAmb	02 43 16.9	
	comp=Z,18nm,1.0s						
ARTI	Arti	48.88	313	LR	LR	03 07 07.9	
	comp=Z,2µm,18.1s,baz=36,slow=40						
ARTI	Arti	48.88	313	*c i*P	P	02 43 16.5	+0.2
ARTI						02 44 39.3	
ARTI						02 45 03.9	
ARTI				S	S	02 50 18.0	-1.1
ARTI				SS	SS	02 53 44.9	-4.1
ARTI				pmax	pmax		
	comp=Z,18nm,1.4s						
ARTI				MLR	MLR		
	comp=Z,2µm,16.0s						
LNOR	Lincton Mounta	48.99	67	IAmb	IAmb	02 43 19.5	
	comp=Z,19nm,1.4s						
BBOR	Butler Butte	49.05	72	IAmb	IAmb	02 43 20.4	
	comp=Z,19nm,1.1s						
PINE	Pine Mountain	49.23	70	IAmb	IAmb	02 43 21.9	
	comp=Z,27nm,1.0s						
SHLS	Shalkode	49.27	288	*e*P	P	02 43 18.2	-1.5
	comp=Z,12nm,1.1s						
SHLS	Shalkode	49.27	288	*e*P	P	02 43 18.1	-1.5
SHLS				pmax	pmax		
	comp=Z,12nm,1.1s						
F10A	Beach Ranch, E	49.42	66	IAmb	IAmb	02 43 22.5	
	comp=Z,19nm,1.1s						
J05D	Fort Rock, OR	49.46	71	IAmb	IAmb	02 43 23.8	
	comp=Z,26nm,1.1s						
UZB	Uzynbulak	49.49	289	*e*P	P	02 43 21.5	0.0
	comp=Z,13nm,1.4s						
UZB	Uzynbulak	49.49	289	*e*P	P	02 43 21.4	0.0
UZB				pmax	pmax		
	comp=Z,13nm,1.4s						
FCC	Fort Churchill	49.49	41	IAmb	IAmb	02 43 22.5	
	comp=Z,22nm,1.0s						
FFC	Flin Flon	49.63	49	P	P	02 43 21.6	-0.5
FFC				IAmb	IAmb	02 43 24.0	
	comp=Z,32nm,1.4s						
FFC	Flin Flon	49.63	49	P	P	02 43 21.6	-0.5
FFC				pmax	pmax		
	comp=Z,32nm,1.5s						
SATY	Saty	49.86	289	*e*P	P	02 43 24.2	0.0
	comp=Z,12nm,1.3s						
SATY	Saty	49.86	289	*e*P	P	02 43 24.2	0.0
SATY				pmax	pmax		
	comp=Z,12nm,1.3s						
YBH	Yreka Blue Hor	49.89	74	LR	LR	03 02 16.5	
	comp=Z,28nm,20.3s,baz=292,slow=33						
K05A	Summer Lake	50.05	71	IAmb	IAmb	02 43 28.3	
	comp=Z,22nm,1.1s						
JMIC	Jan Mayen	50.14	355	LR	LR	03 03 33.1	
	comp=Z,113nm,18.2s,baz=80,slow=35						
BMO	Blue Mountains	50.21	67	IAmb	IAmb	02 43 28.9	
	comp=Z,24nm,1.3s						
KIRV	Kirov	50.41	320	LR	LR	03 07 54.3	
	comp=Z,762nm,18.3s,baz=28,slow=40						
KIRV	Kirov	50.41	320	*ce*P	P	02 43 30.2	+2.3
MDOK	Medeo	50.45	290	*e*P	P	02 43 28.8	+0.1
MDOK	Medeo	50.45	290	*e*P	P	02 43 28.7	+0.1
N02D	Trinity Center	50.46	74	IAmb	IAmb	02 43 53.0	
	comp=Z,39nm,1.6s						
AAA	Alma-Ata	50.48	290	*e*P	P	02 43 28.9	+0.1
AAA	Alma-Ata	50.48	290	*e*P	P	02 43 28.9	+0.1
TNSS	Tian-Shan	50.59	290	*e*P	P	02 43 29.8	-0.3
TNSS	Tian-Shan	50.59	290	*e*P	P	02 43 29.7	-0.3
PLID	Pearl Lake	50.66	66	IAmb	IAmb	02 43 32.1	
	comp=Z,25nm,1.4s						
PZH	PanZhiHua	50.78	256	P	P	02 43 31.3	0.0
PZH				S	S	02 50 47.8	+1.2
PZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PZH				LR	LR		
	comp=Z,680nm,15.4s						
PZH				LR	LR		
	comp=Z,430nm,13.3s						
PZH				LR	LR		
	comp=Z,700nm,13.7s						
WUS	Wushi	50.85	287	IAmb	IAmb	02 43 33.5	
	comp=Z,47nm,1.9s						
EGMT	Eagleton	51.35	59	IAmb	IAmb	02 43 36.9	
	comp=Z,18nm,1.1s						

WVOR	**Wild Horse Val**	**51.37**	**70**	IAmb	IAmb	02 43 37.9	
	comp=Z,19nm,1.1s						
KMI	**Kunming**	**51.42**	**254**	P	**P**	**02 43 36.5**	**+0.3**
KMI				pmax	pmax		
	comp=Z,20nm,1.3s						
KMI				LR	LR		
	comp=Z,1µm,13.8s						
KMI				LR	LR		
	comp=Z,640nm,12.0s						
KMI				LR	LR		
	comp=Z,1µm,15.0s						
O03E	**Paynes Creek**	**51.42**	**74**	IAmb	IAmb	02 43 37.7	
	comp=Z,24nm,1.2s						
KLMR	**Klimovskoe**	**51.65**	**327**	*e*P	**P**	**02 43 35.4**	**-1.8**
KLMR				pmax	pmax		
	comp=Z,23nm,1.5s						
KLMR				MLR	MLR		
	comp=Z,1µm,17.0s						
MFID	**Camas Ranch**	**51.99**	**67**	IAmb	IAmb	02 43 42.1	
	comp=Z,21nm,1.2s						
AAK	**Ala-Archa**	**52.08**	**291**	P	**P**	**02 43 41.4**	**+0.5**
	comp=Z,5.0nm,0.9s,baz=26,slow=9.6,SNR=9.7						
AAK				LR	LR	03 05 22.5	
	comp=Z,189nm,18.6s,baz=33,slow=36						
	comp=Z,5.0nm,0.9s						
AAK	**Ala-Archa**	**52.08**	**291**	P	**P**	**02 43 41.4**	**+0.5**
AAK	**Ala-Archa**	**52.08**	**291**	*ce*P	**P**	**02 43 41.6**	**+0.7**
AAK				pmax	pmax		
	comp=Z,19nm,2.0s						
BOZ	**Bozeman (W)**	**52.32**	**63**	IAmb	IAmb	02 43 44.9	
	comp=Z,24nm,1.4s						
FRB	**Frobisher Bay**	**52.51**	**24**	LR	LR	03 09 41.5	
	comp=Z,84nm,18.3s,baz=331,slow=40						
SFJD	**Kangerlussuaq**	**52.58**	**14**	LR	LR	03 07 05.6	
	comp=Z,149nm,18.8s,baz=337,slow=37						
MPK	**Martis Peak**	**53.06**	**74**	IAmb	IAmb	02 43 50.8	
	comp=Z,46nm,1.5s						
QIZ	**Qiongzhong**	**53.16**	**243**	P	**P**	**02 43 49.8**	**+0.9**
QIZ				S	**S**	**02 51 21.5**	**+2.4**
QIZ				LR	LR		
	comp=Z,560nm,12.4s						
QIZ				LR	LR		
	comp=Z,760nm,13.2s						
QIZ				LR	LR		
	comp=Z,1µm,14.9s						
YHB	**Horse Butte**	**53.16**	**63**	IAmb	IAmb	02 43 51.3	
	comp=Z,30nm,1.5s						
YMR	**Madison River**	**53.33**	**63**	IAmb	IAmb	02 43 52.5	
	comp=Z,21nm,1.3s						
DZA	**Taraz**	**53.41**	**294**	*e*P	**P**	**02 43 50.7**	**+0.1**
DZA	**Taraz**	**53.41**	**294**	*e*P	**P**	**02 43 50.7**	**+0.1**
PNTR	**Pine Nut**	**53.44**	**73**	IAmb	IAmb	02 43 53.6	
	comp=Z,44nm,1.7s						
AKTO	**Aktyubinsk**	**53.52**	**309**	LR	LR	03 10 17.7	
	comp=Z,965nm,18.2s,baz=57,slow=40						
KK31	**Karatay Array**	**53.63**	**295**	IAmb	IAmb	02 43 53.6	
	comp=Z,18nm,1.1s						
KKAR	**Karatay Array**	**53.63**	**295**	P	**P**	**02 43 52.5**	**+0.4**
KKAR	**Karatay Array**	**53.63**	**295**	P	**P**	**02 43 52.6**	**+0.4**
AB31	**Akbulak array**	**53.64**	**306**	IAmb	IAmb	02 43 53.7	
	comp=Z,27nm,1.8s						
ABKAR	**Akbulak array**	**53.64**	**306**	P	**P**	**02 43 52.6**	**+0.5**
YMP	**Mirror Lake Pl**	**53.65**	**62**	IAmb	IAmb	02 43 55.3	
	comp=Z,23nm,1.3s						
H17A	**Grant Village**	**53.72**	**63**	IAmb	IAmb	02 43 56.9	
	comp=Z,18nm,1.2s						
KSH	**Kashi**	**53.73**	**288**	P	**P**	**02 43 57.8**	**+4.7**
KSH				pmax	pmax		
	comp=Z,12nm,1.5s						
KSH				LR	LR		
	comp=Z,1µm,13.7s						
KSH				LR	LR		
	comp=Z,940nm,16.1s						
KSH				LR	LR		
	comp=Z,2µm,13.1s						
RLMT	**Red Lodge**	**53.77**	**61**	IAmb	IAmb	02 43 56.0	
	comp=Z,30nm,1.1s						
ARSB	**Arslanbob**	**53.81**	**291**	IAmb	IAmb	02 43 56.0	
	comp=Z,42nm,2.0s						
LAO	**LASA Array**	**53.93**	**58**	P	**P**	**02 43 55.5**	**+1.1**
LAO				IAmb	IAmb	02 43 56.9	
	comp=Z,17nm,1.1s						
BRLS	**Borolday**	**54.01**	**295**	*e*P	**P**	**02 43 56.9**	**+1.9**
BRLS	**Borolday**	**54.01**	**295**	*e*P	**P**	**02 43 56.9**	**+1.9**
LOHW	**Long Hollow**	**54.31**	**63**	IAmb	IAmb	02 44 00.2	
	comp=Z,20nm,1.4s						
RYN	**Ryan**	**54.33**	**73**	IAmb	IAmb	02 44 00.1	
	comp=Z,40nm,1.7s						
FINES	**FINESS Array B**	**54.56**	**334**	P	**P**	**02 43 58.5**	**-0.2**
	comp=Z,2.2nm,0.8s,baz=31,slow=6.7,SNR=3.8						
	comp=Z,2.2nm,0.8s						
FINES	**FINESS Array B**	**54.56**	**334**	*i* P	**P**	**02 44 00.4**	**+1.7**
FINES				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NVAR	**Mina Array Bea**	**54.59**	**73**	P	**P**	**02 43 59.8**	**+0.3**
	comp=Z,5.4nm,0.8s,baz=303,slow=7.2,SNR=26						
NVAR				LR	LR	03 04 29.9	
	comp=Z,333nm,21.9s,baz=316,slow=33						
	comp=Z,5.4nm,0.8s						
NVAR	**Mina Array Bea**	**54.59**	**73**	P	**P**	**02 44 00.2**	**+0.7**
IUG	**Iuzhnay**	**54.59**	**294**	*e*P	**P**	**02 43 59.5**	**+0.1**
	comp=Z,21nm,1.4s						
IUG	**Iuzhnay**	**54.59**	**294**	*e*P	**P**	**02 43 59.4**	**+0.1**
IUG				pmax	pmax		
	comp=Z,21nm,1.4s						
NV11	**Mina Array Sit**	**54.66**	**73**	IAmb	IAmb	02 44 02.7	
	comp=Z,31nm,1.5s						
CHM	**Chimkent**	**54.66**	**295**	*e*P	**P**	**02 43 59.9**	**+0.1**
	comp=Z,6.4nm,0.7s						
CHM	**Chimkent**	**54.66**	**295**	*e*P	**P**	**02 43 59.8**	**+0.1**
CHM				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HWUT	**Hardware Ranch**	**55.41**	**66**	IAmb	IAmb	02 44 08.1	
	comp=Z,40nm,1.6s						
BW06	**Boulder Array**	**55.45**	**63**	IAmb	IAmb	02 44 07.2	
	comp=Z,48nm,2.0s						
PD31	**Pinedale Array**	**55.45**	**63**	IAmb	IAmb	02 44 07.2	
	comp=Z,44nm,1.9s						
PDAR	**Pinedale Array**	**55.45**	**63**	P	**P**	**02 44 05.8**	**+0.1**
	comp=Z,4.4nm,0.8s,baz=334,slow=2.8,SNR=30						
PDAR				LR	LR	03 10 34.9	
	comp=Z,160nm,20.1s,baz=334,slow=39						
	comp=Z,4.4nm,0.8s						
PDAR	**Pinedale Array**	**55.45**	**63**	P	**P**	**02 44 05.5**	**-0.1**
ULM	**Lac du Bonnet**	**55.46**	**49**	P	**P**	**02 44 06.0**	**+0.6**
	comp=Z,8.2nm,1.0s,baz=324,slow=8.5,SNR=6.9						
ULM				LR	LR	03 11 23.4	
	comp=Z,285nm,19.0s,baz=9.0,slow=40						
	comp=Z,8.2nm,1.0s						
ULM	**Lac du Bonnet**	**55.46**	**49**	IAmb	IAmb	02 44 07.1	
	comp=Z,36nm,1.5s						
ULM	**Lac du Bonnet**	**55.46**	**49**	P	**P**	**02 44 06.0**	**+0.6**
TCUT	**Toone Canyon**	**55.86**	**66**	IAmb	IAmb	02 44 12.2	
	comp=Z,15nm,1.2s						
DUG	**Dugway, Tooele**	**55.91**	**68**	IAmb	IAmb	02 44 11.5	
	comp=Z,17nm,1.2s						
BELG	**Belogornoye**	**55.95**	**316**	LR	LR	03 10 28.6	
	comp=Z,838nm,20.1s,baz=68,slow=39						
BELG	**Belogornoye**	**55.95**	**316**	*i* P	**P**	**02 44 09.0**	**+0.3**
BELG				pmax	pmax		
	comp=Z,6.0nm,1.2s						
CWC	**Cottonwood Cre**	**56.25**	**74**	IAmb	IAmb	02 44 14.1	
	comp=Z,35nm,1.6s						
S11A	**Rachel**	**56.47**	**72**	IAmb	IAmb	02 44 18.5	
	comp=Z,27nm,1.0s						
MOS	**Moscow**	**56.47**	**325**	*e*P	**P**	**02 44 14.6**	**+2.1**
MOS				MLR	MLR		
	comp=N,600nm,17.0s						
MOS				MLR	MLR		
	comp=Z,800nm,17.0s						
MPU	**Maple Canyon**	**56.61**	**67**	IAmb	IAmb	02 44 16.7	
	comp=Z,29nm,1.5s						
WCT	**Wildcat Mounta**	**56.70**	**73**	IAmb	IAmb	02 44 17.2	
	comp=Z,20nm,1.4s						
PSUT	**Pine Spring**	**56.70**	**70**	IAmb	IAmb	02 44 17.4	
	comp=Z,21nm,1.3s						
BORG	**Borgarnes**	**56.71**	**0**	LR	LR	03 08 41.5	
	comp=Z,94nm,18.9s,baz=350,slow=36						
EPLO	**Experimental L**	**56.76**	**48**	IAmb	IAmb	02 44 15.8	
	comp=Z,17nm,1.2s						
FURC	**Furnace Creek,**	**56.84**	**73**	IAmb	IAmb	02 44 18.3	
	comp=Z,28nm,1.1s						
RSSD	**Black Hills**	**56.90**	**59**	P	**P**	**02 44 16.0**	**0.0**
RSSD				IAmb	IAmb	02 44 18.1	
	comp=Z,19nm,1.1s						
RSSD	**Black Hills**	**56.90**	**59**	P	**P**	**02 44 16.0**	**0.0**
RSSD				pmax	pmax		
	comp=Z,19nm,1.1s						
K22A	**Casper**	**56.93**	**61**	IAmb	IAmb	02 44 18.1	
	comp=Z,37nm,1.6s						
CLC	**China Lake**	**56.98**	**74**	IAmb	IAmb	02 44 19.0	
	comp=Z,16nm,1.2s						
AGMN	**Agassiz Nation**	**57.02**	**50**	IAmb	IAmb	02 44 18.1	
	comp=Z,26nm,1.4s						
GWY	**Greenwater Val**	**57.15**	**73**	IAmb	IAmb	02 44 20.5	
	comp=Z,24nm,1.4s						
RDMU	**Red Mountain**	**57.16**	**65**	IAmb	IAmb	02 44 20.6	
	comp=Z,44nm,1.7s						
LRMC	**Laurel Mtn Rad**	**57.20**	**75**	IAmb	IAmb	02 44 20.4	
	comp=Z,34nm,1.6s						
WSHM	**Spangler Hills**	**57.20**	**74**	IAmb	IAmb	02 44 20.5	
	comp=Z,15nm,1.2s						
OBN	**Obninsk**	**57.32**	**325**	LR	LR	03 12 09.5	
	comp=Z,538nm,18.9s,baz=354,slow=39						
OBN	**Obninsk**	**57.32**	**325**	*e*P	**P**	**02 44 17.7**	**-0.8**
OBN				*e*		02 45 10.8	
OBN				*e*		02 46 25.0	
OBN				*e*PPP	PPP	02 47 43.7	
OBN				*e*S	**S**	**02 52 14.4**	**+0.4**
OBN				*e*SS	**SS**	**02 56 05.5**	**+3.1**
OBN				pmax	pmax		
	comp=Z,58nm,3.0s						
OBN				MLR	MLR		
	comp=Z,661nm,16.0s						
TMUT	**Trail Mountain**	**57.38**	**67**	IAmb	IAmb	02 44 22.3	
	comp=Z,14nm,1.0s						
MANEM	**Manem**	**57.38**	**290**	IAmb	IAmb	02 44 21.7	
	comp=Z,56nm,1.6s						
P17A	**Butcher Ranch,**	**57.46**	**67**	IAmb	IAmb	02 44 22.7	
	comp=Z,27nm,1.4s						
P18A	**Preston Nutter**	**57.58**	**66**	IAmb	IAmb	02 44 23.9	
	comp=Z,18nm,1.1s						
Q16A	**Castle Valley**	**57.69**	**67**	IAmb	IAmb	02 44 24.5	
	comp=Z,34nm,1.5s						
CCUT	**Cedar City**	**57.71**	**70**	IAmb	IAmb	02 44 24.7	
	comp=Z,20nm,1.2s						
CHGR	**Chuyangaron**	**57.73**	**292**	*i* P	**P**	**02 44 21.5**	**-0.3**
CHGR				pmax	pmax		
	comp=Z,15nm,0.8s						
GSC	**Goldstone, Bar**	**57.78**	**74**	IAmb	IAmb	02 44 24.8	
	comp=Z,22nm,1.2s						
NOA	**NORSAR Array B**	**57.81**	**342**	P	**P**	**02 44 20.9**	**-0.9**
	comp=Z,3.9nm,1.1s,baz=20,slow=7.1,SNR=3.6						
NOA				LR	LR	03 13 25.2	
	comp=Z,154nm,18.5s,baz=10.0,slow=40						
	comp=Z,3.9nm,1.1s						
NOA	**NORSAR Array B**	**57.81**	**342**	P	**P**	**02 44 21.0**	**-0.9**
SZCU	**Shurtz Canyon**	**57.81**	**70**	IAmb	IAmb	02 44 25.2	
	comp=Z,17nm,1.1s						
HFS	**Hagfors**	**58.25**	**340**	P	**P**	**02 44 24.3**	**-0.6**
	comp=Z,6.5nm,1.0s,baz=17,slow=11,SNR=3.3						
HFS				LR	LR	03 14 21.9	
	comp=Z,246nm,18.9s,baz=42,slow=41						
	comp=Z,6.5nm,1.0s						
V12A	**Nelson**	**58.42**	**72**	IAmb	IAmb	02 44 29.6	
	comp=Z,14nm,1.2s						
CHTO	**Chiang Mai**	**58.60**	**254**	P	**P**	**02 44 28.0**	**0.0**
CHTO	**Chiang Mai**	**58.60**	**254**	P	**P**	**02 44 28.0**	**0.0**
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LPSR	**Galich'ya Gora**	**58.73**	**322**	*e*P	**P**	**02 44 26.1**	**-2.3**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
F33A	**5 Mile Ranch,**	**58.83**	**52**	IAmb	IAmb	02 44 31.1	
	comp=Z,21nm,1.2s						
CMAR	**Chiang Mai Arr**	**58.91**	**253**	P	**P**	**02 44 30.2**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=19,slow=7.5,SNR=6.9						
CMAR				LR	LR	03 13 21.9	
	comp=Z,571nm,18.6s,baz=40,slow=40						
	comp=Z,0.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**58.91**	**253**	P	**P**	**02 44 30.5**	**+0.4**
CMAR	**Chiang Mai Arr**	**58.91**	**253**	*ce*P	**P**	**02 44 30.7**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
VRH	**Novokhopyorsk**	**58.99**	**319**	*e*P	**P**	**02 44 26.5**	**-3.7**
VRH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BRDH	**Bariadhala**	**59.09**	**263**	LR	LR	03 14 11.4	
	comp=Z,665nm,18.4s,baz=114,slow=40						
SHAA	**Shahritus**	**59.09**	**292**	IAmb	IAmb	02 44 33.1	
	comp=Z,134nm,1.8s						
U15A	**North Rim**	**59.12**	**70**	IAmb	IAmb	02 44 34.6	
	comp=Z,15nm,1.0s						
PV14	**Lion Creek, Pa**	**59.15**	**66**	IAmb	IAmb	02 44 34.3	
	comp=Z,17nm,1.0s						
PFO	**Pinyon Flats O**	**59.30**	**75**	LR	LR	03 09 51.7	
	comp=Z,167nm,18.1s,baz=307,slow=36						
PMD	**Palm Desert**	**59.31**	**75**	IAmb	IAmb	02 44 34.0	
	comp=Z,35nm,1.9s						
VORR	**Voronezh**	**59.43**	**321**	*e*P	**P**	**02 44 32.3**	**-1.0**
VORR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ISCO	**Idaho Springs**	**59.61**	**63**	IAmb	IAmb	02 44 38.3	
	comp=Z,16nm,1.1s						
NIL	**Nilore**	**59.69**	**286**		**P**	**02 44 35.6**	**+0.2**
NIL				IAmb	IAmb	02 44 36.3	
	comp=Z,16nm,1.1s						
NIL	**Nilore**	**59.69**	**286**	P	**P**	**02 44 35.6**	**+0.2**
NIL				pmax	pmax		
	comp=Z,16nm,1.1s						
VSR	**Storozhevoye**	**59.83**	**321**	*e*P	**P**	**02 44 34.6**	**-1.5**
VSR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
VORD	**Divnogorie**	**60.01**	**321**	*e*P	**P**	**02 44 33.8**	**-3.4**
VORD				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BLYC	**Blythe**	**60.15**	**74**	IAmb	IAmb	02 44 41.3	
	comp=Z,17nm,1.1s						
WUAZ	**Wupatki**	**60.30**	**70**	IAmb	IAmb	02 44 42.7	
	comp=Z,21nm,1.1s						
MNK	**Minsk**	**60.31**	**330**	*i* P	**P**	**02 44 38.6**	**-0.6**
MNK				*i*		02 45 24.2	
MNK				*i*		02 46 51.8	
MNK				*i* PPP	PPP	02 48 14.6	
MNK				*i* S	**S**	**02 52 53.2**	**+0.4**
MNK				*i* PS	**PnS**	**02 53 02.5**	**-3.1**
MNK				*i* SSS	SSS	02 59 32.0	
MNK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MNK				pmax	pmax		
	comp=E,14nm,0.9s						
MNK				pmax	pmax		
	comp=N,10.0nm,0.8s						
MNK				MLR	MLR		
	comp=N,670nm,18.0s						
MNK				MLR	MLR		
	comp=Z,953nm,16.0s						
MNK				MLR	MLR		
	comp=E,878nm,17.0s						
ECSD	**EROS Data Cent**	**60.41**	**54**	IAmb	IAmb	02 44 41.7	
	comp=Z,18nm,1.1s						
GLA	**Glamis**	**60.56**	**74**	IAmb	IAmb	02 44 44.0	
	comp=Z,24nm,1.2s						
S22A	**4UR Ranch, Cre**	**60.69**	**65**	IAmb	IAmb	02 44 45.6	
	comp=Z,23nm,1.3s						
Y14A	**Wickenburg**	**60.76**	**72**	IAmb	IAmb	02 44 45.5	
	comp=Z,12nm,1.1s						
SCHQ	**Schefferville**	**60.88**	**28**	LR	LR	03 12 44.3	
	comp=Z,255nm,20.4s,baz=336,slow=38						
KBL	**Kabul**	**61.06**	**289**	P	**P**	**02 44 44.1**	**-0.8**
KBL				IAmb	IAmb	02 44 45.0	
	comp=Z,37nm,1.9s						
KBL	**Kabul**	**61.06**	**289**	P	**P**	**02 44 44.2**	**-0.8**
KBL				pmax	pmax		
	comp=Z,37nm,1.9s						
SDCO	**Great Sand Dun**	**61.31**	**64**	IAmb	IAmb	02 44 49.5	
	comp=Z,18nm,1.2s						
113A	**Mohawk Valley,**	**61.32**	**74**	IAmb	IAmb	02 44 48.9	
	comp=Z,15nm,1.4s						
214A	**Organ Pipe Nat**	**62.45**	**73**	IAmb	IAmb	02 44 56.8	
	comp=Z,20nm,1.3s						
TASM	**ASL Pad, Albuq**	**63.13**	**67**	IAmb	IAmb	02 45 01.3	
	comp=Z,7.6nm,1.0s						
TASM	**ASL Pad, Albuq**	**63.13**	**67**	IAmb	IAmb	02 45 01.3	
	comp=Z,6.6nm,1.0s						
ANMO	**Albuquerque**	**63.13**	**67**	LR	LR	03 14 14.5	
	comp=Z,162nm,18.9s,baz=332,slow=38						
ANMO	**Albuquerque**	**63.13**	**67**	P	**P**	**02 44 59.0**	**+0.1**
ANMO	**Albuquerque**	**63.13**	**67**	*ce*P	**P**	**02 44 58.9**	**+0.1**
ANMO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TUC	**Tucson**	**63.17**	**72**	P	**P**	**02 44 60.0**	**+1.0**
TUC				IAmb	IAmb	02 45 01.0	
	comp=Z,22nm,1.8s						
TUC	**Tucson**	**63.17**	**72**	P	**P**	**02 45 00.0**	**+1.0**
TUC				pmax	pmax		
	comp=Z,22nm,1.8s						
AK03	**Malin Array Si**	**63.32**	**327**	P	**P**	**02 44 59.0**	**-0.6**
AK04	**Malin Array Si**	**63.34**	**327**	P	**P**	**02 44 59.1**	**-0.6**
AKASG	**Malin Array Be**	**63.34**	**327**	P	**P**	**02 44 59.2**	**-0.5**
	comp=Z,3.0nm,0.7s,baz=31,slow=7.1,SNR=8.1						
AKASG				LR	LR	03 15 42.0	
	comp=Z,529nm,19.3s,baz=20,slow=39						
	comp=Z,3.0nm,0.7s						
AKASG	**Malin Array Be**	**63.34**	**327**	IAmb	IAmb	02 45 07.9	
	comp=Z,4.1nm,1.1s						
AKASG	**Malin Array Be**	**63.34**	**327**	*ce*P	**P**	**02 44 59.4**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKBB	**Malin Array Si**	**63.34**	**327**	*ce*P	**P**	**02 44 59.1**	**-0.6**
AKBB				pmax	pmax		
	comp=Z,18nm,1.5s						
AKBB	**Malin Array Si**	**63.34**	**327**	P	**P**	**02 44 59.1**	**-0.6**
KIEV	**Kiev**	**63.35**	**327**	P	**P**	**02 44 59.3**	**-0.5**
KIEV	**Kiev**	**63.35**	**327**	P	**P**	**02 44 59.3**	**-0.5**
KIEV				pmax	pmax		
	comp=Z,46nm,2.0s						
KIEV	**Kiev**	**63.35**	**327**	P	**P**	**02 44 59.1**	**-0.7**
	comp=Z,43nm,2.1s						
AK01	**Malin Array Si**	**63.35**	**327**	P	**P**	**02 44 58.8**	**-1.0**
AK20	**Malin Array Si**	**63.36**	**327**	P	**P**	**02 44 58.7**	**-1.2**
AK11	**Malin Array Si**	**63.38**	**327**	P	**P**	**02 44 58.8**	**-1.1**
AK19	**Malin Array Si**	**63.38**	**327**	P	**P**	**02 44 58.9**	**-1.1**
AK02	**Malin Array Si**	**63.38**	**327**	P	**P**	**02 44 58.9**	**-1.1**
RNPP9	**Sopachiv**	**63.62**	**329**	P	**P**	**02 45 01.2**	**-0.3**
RNPP8	**Varash**	**63.70**	**329**	P	**P**	**02 45 01.5**	**-0.6**
Y22A	**Socorro**	**63.70**	**68**	IAmb	IAmb	02 45 05.5	
	comp=Z,14nm,1.1s						
MAK	**Makhachkala**	**63.80**	**310**	*c i*P	**P**	**02 44 59.6**	**-3.3**
MAK				*e*		02 47 26.4	
MAK				*e*PPP	PPP	02 48 54.7	
MAK				*e*S	**S**	**02 53 32.5**	**-4.7**
MAK				*e*SS	**SS**	**02 57 41.0**	**-3.4**
MAK				*e*SSS	SSS	03 00 42.1	
MAK				pmax	pmax		
	comp=Z,67nm,1.0s						
MAK				MLR	MLR		
	comp=Z,2µm,15.0s						
VLDQ	**Val d'Or**	**63.85**	**38**	P	**P**	**02 45 02.3**	**-0.8**
VLDQ				IAmb	IAmb	02 45 03.0	
	comp=Z,17nm,1.0s						
121A	**Cookes Peak, D**	**64.45**	**69**	IAmb	IAmb	02 45 10.6	
	comp=Z,20nm,1.2s						
LUBAR	**Lubar, Ukraine**	**64.45**	**327**	P	**P**	**02 45 06.8**	**-0.3**
HRA	**Herat**	**64.46**	**294**	P	**P**	**02 45 08.5**	**+0.9**
319A	**Douglas**	**64.67**	**71**	IAmb	IAmb	02 45 11.7	
	comp=Z,17nm,1.0s						
KVAR	**Kislovodsk Arr**	**64.81**	**314**	LR	LR	03 16 28.5	
	comp=Z,756nm,21.0s,baz=270,slow=39						
KIV	**Kislovodsk**	**64.81**	**314**	*e*P	**P**	**02 45 08.1**	**-1.5**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV	**Kislovodsk**	**64.81**	**314**	P	**P**	**02 45 09.2**	**-0.4**
KBZ	**Khabaz**	**64.93**	**314**	P	**P**	**02 45 10.2**	**0.0**
	comp=Z,5.1nm,0.9s,baz=40,slow=4.8,SNR=8.4						
KBZ				LR	LR	03 17 11.9	
	comp=Z,965nm,20.8s,baz=18,slow=40						
	comp=Z,5.1nm,0.9s						
KBZ	**Khabaz**	**64.93**	**314**	*ce*P	**P**	**02 45 11.6**	**+1.4**
KBZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AKT	**Akhty**	**64.96**	**309**	*e*P	**P**	**02 45 08.2**	**-2.5**
AKT				*e*S	**S**	**02 53 55.3**	**+3.4**
AKT				pmax	pmax		
	comp=Z,22nm,1.7s						
P38A	**Dawn**	**65.10**	**54**	IAmb	IAmb	02 45 12.4	
	comp=Z,19nm,1.3s						
EKA	**Eskdalemuir Ar**	**65.24**	**349**	P	**P**	**02 45 12.7**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=359,slow=6.8,SNR=3.4						
EKA				LR	LR	03 12 12.7	
	comp=Z,107nm,19.3s,baz=13,slow=35						
	comp=Z,2.0nm,0.8s						
AMTX	**Amarillo**	**65.42**	**63**	IAmb	IAmb	02 45 14.7	
	comp=Z,10nm,0.9s						
MSTX	**Muleshoe**	**65.67**	**64**	IAmb	IAmb	02 45 16.9	
	comp=Z,20nm,1.0s						
SMWD	**Samnorwood**	**65.91**	**62**	IAmb	IAmb	02 45 18.5	
	comp=Z,13nm,0.8s						
KWP	**Kalwaria Pacla**	**66.08**	**330**	*e*P	**P**	**02 45 13.5**	**-4.1**
T35A	**Sooner Cattle**	**66.08**	**58**	IAmb	IAmb	02 45 21.4	
	comp=Z,8.1nm,0.9s						
SADO	**Sadowa**	**66.22**	**41**	LR	LR	03 16 46.4	
	comp=Z,172nm,19.0s,baz=334,slow=38						
SOC	**Sochi**	**66.22**	**316**	*e*P	**P**	**02 45 16.3**	**-2.3**
SOC				*e*S	**S**	**02 54 02.8**	**-4.1**
SOC				*e*SS	**SS**	**02 58 29.5**	**+7.6**
SOC				*e*SSS	SSS	03 01 23.0	
SOC				pmax	pmax		
	comp=Z,30nm,1.0s						
SOC				MLR	MLR		
	comp=Z,355nm,14.0s						
OJC	**Ojcow**	**66.25**	**333**	*e*P	**P**	**02 45 19.1**	**+0.3**
OJC	**Ojcow**	**66.25**	**333**	P	**P**	**02 45 19.0**	**+0.3**
OJC	**Ojcow**	**66.25**	**333**	P	**P**	**02 45 19.0**	**+0.3**
MNTX	**Cornudas Mount**	**66.30**	**68**	IAmb	IAmb	02 45 21.9	
	comp=Z,18nm,1.2s						
KSP	**Ksiaz**	**66.47**	**335**	*e*P	**P**	**02 45 17.5**	**-2.6**
STHS	**Stebnicka Huta**	**66.64**	**331**	*e*P	**P**	**02 45 21.1**	**-0.2**
STHS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
STHS	**Stebnicka Huta**	**66.64**	**331**	*e*P	**P**	**02 45 21.1**	**-0.2**
CLL	**Collm**	**66.72**	**337**	IAmb	IAmb	02 46 15.2	
	comp=Z,13nm,1.4s						
CLL	**Collm**	**66.72**	**337**	*i* P	**P**	**02 45 21.4**	**-0.3**
CLL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CLL				MLR	MLR		
	comp=Z,400nm,16.2s						
R40A	**Maddies Statio**	**66.76**	**54**	IAmb	IAmb	02 45 22.8	
	comp=Z,15nm,1.1s						
NIE	**Niedzica**	**66.88**	**332**	*e*P	**P**	**02 45 20.4**	**-2.3**
DPC	**Dobruska-Polom**	**66.93**	**335**	*e*P	**P**	**02 45 23.1**	**0.0**
DPC				MLR	MLR		
	comp=Z,500nm,14.7s						
DPC	**Dobruska-Polom**	**66.93**	**335**	*e*P	**P**	**02 45 23.1**	**0.0**
DPC				AMS	AMS	03 21 50.0	
	comp=Z,500nm,14.7s						
OKC	**Ostrava-Krasne**	**67.00**	**334**	AMS	AMS	03 18 30.0	
	comp=Z,600nm,17.4s						
POST	**Post**	**67.01**	**64**	IAmb	IAmb	02 45 25.7	
	comp=Z,19nm,1.0s						
KRLC	**Kraliky**	**67.08**	**335**	*e*P	**P**	**02 45 24.5**	**+0.4**
KRLC	**Kraliky**	**67.08**	**335**	*e*P	**P**	**02 45 24.5**	**+0.4**
PVCC	**Panska Ves**	**67.14**	**336**	AMS	AMS	03 19 20.0	
	comp=Z,600nm,9.2s						
MORC	**Moravsky Berou**	**67.19**	**334**	P	**P**	**02 45 25.1**	**+0.4**
MORC				IAmb	IAmb	02 45 26.7	
	comp=Z,28nm,1.8s						
MORC	**Moravsky Berou**	**67.19**	**334**	*e*P	**P**	**02 45 25.3**	**+0.5**
MORC	**Moravsky Berou**	**67.19**	**334**	P	**P**	**02 45 25.2**	**+0.4**
MORC				pmax	pmax		
	comp=Z,28nm,1.8s						
BUR08	**Bucovina Ar. S**	**67.23**	**328**	IAmb	IAmb	02 46 37.4	
	comp=Z,31nm,1.8s						
TUL3	**Leonard**	**67.24**	**58**	IAmb	IAmb	02 45 26.5	
	comp=Z,18nm,1.0s						
VHRN	**Van Horn**	**67.24**	**68**	IAmb	IAmb	02 45 28.0	
	comp=Z,13nm,1.2s						
PECS	**Pecos**	**67.30**	**67**	IAmb	IAmb	02 45 28.5	
	comp=Z,25nm,1.6s						
LANS	**Liptovska Anna**	**67.33**	**332**	*e*P	**P**	**02 45 27.7**	**+2.1**
LANS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LANS	**Liptovska Anna**	**67.33**	**332**	*e*P	**P**	**02 45 27.7**	**+2.1**
W35A	**Tecumseh**	**67.39**	**59**	IAmb	IAmb	02 45 27.8	
	comp=Z,24nm,1.2s						
U38A	**Gravette**	**67.41**	**57**	IAmb	IAmb	02 45 27.1	
	comp=Z,18nm,1.0s						
PRA	**Prague**	**67.60**	**336**	AMS	AMS	03 19 30.0	
	comp=Z,700nm,17.8s						
E62A	**Clayton Lake**	**67.61**	**34**	P	**P**	**02 45 27.6**	**+0.2**
E62A				IAmb	IAmb	02 45 28.4	
	comp=Z,18nm,1.0s						
PRU	**Pruhonice**	**67.65**	**336**	*e*P	**P**	**02 45 27.8**	**+0.2**
PRU				MLR	MLR		
	comp=Z,600nm,13.8s						
PRU	**Pruhonice**	**67.65**	**336**	*e*P	**P**	**02 45 27.8**	**+0.2**
PRU				AMS	AMS	03 19 30.0	
	comp=Z,600nm,13.8s						

MGMO	Mountain Grove	67.72	55	IAmb	IAmb	02 45 28.8	
	comp=Z,14nm,1.1s						
FVM	French Village	67.79	53	IAmb	IAmb	02 45 29.4	
	comp=Z,20nm,1.2s						
MNHN	Monahans	67.85	66	IAmb	IAmb	02 45 30.9	
	comp=Z,19nm,1.4s						
VRAC	Vranov	67.85	334	LR	LR	03 20 02.2	
	comp=Z,451nm,19.5s,baz=27,slow=40						
VRAC	Vranov	67.85	334	eP	P	02 45 29.7	+0.8
JAVC	Velka Javorina	68.02	333	eP	P	02 45 31.6	+1.5
TREC	Trest	68.11	335	AMS	AMS	03 20 30.0	
	comp=Z,700nm,9.8s						
KRUC	Moravsky	68.12	334	eP	P	02 45 31.0	+0.4
T42A	Van Buren	68.32	54	IAmb	IAmb	02 45 32.7	
	comp=Z,16nm,1.1s						
SMOL	Smolenice	68.40	333	eP	P	02 45 33.7	+1.3
SMOL				pmax	pmax		
	comp=Z,8.0nm,1.4s						
MODS	Modra-Piesok	68.57	334	eP	P	02 45 33.8	+0.4
MODS				pmax	pmax		
	comp=Z,43nm,1.5s						
MODS	Modra-Piesok	68.57	334	eP	P	02 45 33.8	+0.4
BTNL	Ternell	68.66	342	dP	P	02 45 34.2	+0.2
KHC	Kasperske Hory	68.67	336	IAmb	IAmb	02 45 36.1	
	comp=Z,19nm,1.7s						
KHC	Kasperske Hory	68.67	336	ceP	P	02 45 34.4	+0.3
KHC				pmax	pmax		
	comp=Z,12nm,1.7s						
KHC	Kasperske Hory	68.67	336	eP	P	02 45 34.7	+0.6
KHC				AMS	AMS	03 20 20.0	
	comp=Z,600nm,14.9s						
PMG	Port Moresby	68.68	192	LR	LR	03 13 14.4	
	comp=Z,83nm,21.1s,baz=344,slow=34						
Z35A	Perchaven, San	68.75	61	IAmb	IAmb	02 45 35.8	
	comp=Z,17nm,0.9s						
CKRC	Cesky Krumlov	68.81	336	eP	P	02 45 29.1	-5.8
CKRC	Cesky Krumlov	68.81	336	eP	P	02 45 29.1	-5.8
PBMO	Poplar Bluff	68.81	54	IAmb	IAmb	02 45 37.4	
	comp=Z,12nm,1.1s						
FCAR	Ozark Folk Cen	68.85	55	IAmb	IAmb	02 45 35.8	
	comp=Z,18nm,1.4s						
GERES	GERESS Array B	68.92	336	P	P	02 45 35.8	+0.1
	comp=Z,1.1nm,0.7s,baz=24,slow=5.0,SNR=11						
GERES				LR	LR	03 20 42.7	
	comp=Z,354nm,18.9s,baz=36,slow=40						
	comp=Z,1.1nm,0.7s						
MLR	Muntele Rosu	68.99	326	LR	LR	03 19 55.5	
	comp=Z,544nm,18.0s,baz=54,slow=40						
TXAR	Lajitas Array	69.08	68	P	P	02 45 37.9	+0.9
TXAR	Lajitas Array	69.08	68	P	P	02 45 37.9	+0.9
TXAR	Lajitas Array	69.08	68	P	P	02 45 37.3	+0.3
	comp=Z,5.4nm,1.0s,baz=304,slow=3.8,SNR=35						
	comp=Z,5.4nm,1.0s						
SAND	Sanderson	69.30	66	IAmb	IAmb	02 45 40.1	
	comp=Z,15nm,1.1s						
CONA	Conrad Observa	69.31	334	i pP	P	02 45 39.4	+1.3
	comp=Z,18nm,1.6s						
MIAR	Mount Ida	69.36	57	IAmb	IAmb	02 45 40.2	
	comp=Z,18nm,1.1s						
DOU	Dourbes	69.38	343	dP	P	02 45 38.3	-0.1
RONA	Rosalia, Austr	69.43	334	eP	P	02 45 39.1	+0.3
	comp=Z,15nm,1.6s						
BRDY	Brady	69.66	63	IAmb	IAmb	02 45 42.7	
	comp=Z,26nm,1.7s						
GURO	Guroymak-BITLI	69.72	312	IAmb	IAmb	02 46 20.9	
	comp=Z,28nm,1.9s						
X40A	Basin Creek Fa	69.73	57	IAmb	IAmb	02 45 42.2	
	comp=Z,16nm,1.0s						
MOA	Molln	69.74	335	i P	P	02 45 41.1	+0.4
	comp=Z,12nm,1.5s						
WHTX	Lake Whitney,	69.78	62	IAmb	IAmb	02 45 42.6	
	comp=Z,19nm,1.0s						
JCT	Junction City	69.96	64	IAmb	IAmb	02 45 43.8	
	comp=Z,22nm,1.2s						
R50A	Paris	69.98	48	IAmb	IAmb	02 45 43.4	
	comp=Z,18nm,1.3s						
T47A	Sharon Grove	70.00	51	IAmb	IAmb	02 45 43.5	
	comp=Z,18nm,1.0s						
BIOA	Bad Ischl, Aus	70.02	336	eP	P	02 45 41.7	-0.7
	comp=Z,8.1nm,1.8s						
ARSA	Arzberg	70.03	334	epP	P	02 45 43.7	+1.2
	comp=Z,5.8nm,1.2s						
LPIG	La Paz	70.14	76	LR	LR	03 16 46.5	
	comp=Z,91nm,18.2s,baz=325,slow=36						
HYB	Hyderabad	70.24	271	eP	P	02 45 44.7	+0.5
HYB				esP	sP	02 45 52.3	+2.4
HYB				eS	S	02 54 56.4	+0.8
WLAR	White Oak Lake	70.29	57	IAmb	IAmb	02 45 46.9	
	comp=Z,22nm,1.1s						
WVT	Waverly	70.44	52	P	P	02 45 44.5	-0.6
WVT				IAmb	IAmb	02 45 46.3	
	comp=Z,16nm,1.1s						
WVT	Waverly	70.44	52	P	P	02 45 44.6	-0.6
WVT				pmax	pmax		
	comp=Z,16nm,1.1s						
DRIO	Del Rio	70.46	66	IAmb	IAmb	02 45 46.5	
	comp=Z,17nm,0.9s						
LESA	Schwarzleotal	70.48	336	eP	P	02 45 45.8	+0.5
	comp=Z,7.2nm,1.8s						
KBA	Koelnbreinsper	70.67	336	epP	pP	02 45 49.2	-1.6
	comp=Z,13nm,1.0s						
SOKA	Soboth	70.68	334	eP	P	02 45 47.4	+0.8
	comp=Z,8.2nm,1.3s						
WATA	Walderalm	70.79	337	i pP	P	02 45 48.7	+1.4
	comp=Z,11nm,1.5s						
RETA	Reutte	70.81	338	eP	P	02 45 42.9	-4.4
	comp=Z,7.6nm,2.0s						
WTTA	Wattenberg	70.85	337	i P	P	02 45 46.8	-0.9
	comp=Z,12nm,1.4s						
OBKA	Obir	70.95	335	i pP	P	02 45 49.4	+1.2
	comp=Z,15nm,0.9s						
SQTA	Sankt Quirin	70.97	337	i pP	P	02 45 49.7	+1.3
	comp=Z,13nm,1.7s						
MYKA	Terra Mystica	71.03	335	i pP	P	02 45 50.5	+1.8
	comp=Z,12nm,1.2s						
ABTA	Abfaltersbach	71.16	336	eP	P	02 45 47.6	-1.9
	comp=Z,8.2nm,1.0s						
FETA	Feichten	71.26	338	i P	P	02 45 50.4	+0.2
	comp=Z,7.4nm,1.2s						
DAVOX	Davos/Dischmat	71.66	338	LR	LR	03 23 33.3	
	comp=Z,227nm,18.2s,baz=30,slow=41						
BRTR	Keskin Array B	71.77	318	P	P	02 45 52.9	-0.4
	comp=Z,0.8nm,0.8s,baz=327,slow=6.4,SNR=5.0						
BRTR				LR	LR	03 20 00.8	
	comp=Z,195nm,20.9s,baz=41,slow=38						
	comp=Z,0.8nm,0.8s						
BRTR	Keskin Array B	71.77	318	i P	P	02 45 55.7	+2.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
HKT	Hockley	72.24	62	P	P	02 45 56.3	+0.3
HKT	Hockley	72.24	62	P	P	02 45 56.3	+0.3
HKT				pmax	pmax		
	comp=Z,45nm,1.7s						
PSI	Prapat	72.43	245	LR	LR	03 23 12.9	
	comp=Z,154nm,18.1s,baz=8.0,slow=40						
TKL	Tuckaleechee C	72.48	49	LR	LR	03 21 16.4	
	comp=Z,263nm,19.3s,baz=329,slow=39						
V53A	Saluda	72.85	49	IAmb	IAmb	02 46 00.2	
	comp=Z,44nm,1.8s						
Z47A	Carrollton	72.87	54	IAmb	IAmb	02 46 00.7	
	comp=Z,19nm,0.9s						
LRAL	Lakeview Retre	73.46	53	IAmb	IAmb	02 46 29.2	
	comp=Z,51nm,2.0s						
KMSC	Kings Mountain	73.89	48	IAmb	IAmb	02 46 06.8	
	comp=Z,28nm,1.5s						
UOSS	Minazif	75.21	294	P	P	02 46 12.7	-0.9
PALK	Pallekele	77.67	264	LR	LR	03 26 53.4	
	comp=Z,229nm,18.4s,baz=28,slow=40						
IDI	Anoyia	78.67	323	LR	LR	03 24 37.1	
	comp=Z,211nm,20.2s,baz=29,slow=38						
VAE	Valguarnera	79.55	332	LR	LR	03 27 03.2	
	comp=Z,403nm,19.2s,baz=350,slow=40						
ESDC	Sonseca Array	80.78	347	P	P	02 46 44.0	-0.4
	comp=Z,1.6nm,0.7s,baz=6.1,slow=4.9,SNR=17						
	comp=Z,1.6nm,0.7s						
ESDC	Sonseca Array	80.78	347		P	02 46 44.0	-0.4
DZM	Mont Dzumac	80.87	173	eLR	LR	03 12 05.4	
	comp=Z,209nm,21.4s						
WRA	Warramunga Arr	81.07	203	i P	P	02 46 45.4	-0.5
WRA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WRA	Warramunga Arr	81.07	203	P	P	02 46 44.7	-1.2
	comp=Z,3.3nm,1.0s,baz=20,slow=5.3,SNR=7.6						
	comp=Z,3.3nm,1.0s						
KEST	Kesra	82.39	335	LR	LR	03 29 44.5	
	comp=Z,348nm,18.2s,baz=13,slow=40						
TAOE	Nuku Hiva Isla	83.22	119	eLR	LR	03 13 03.3	
	comp=Z,504nm,22.8s						
CMIG	Matias Romero	83.68	67	LR	LR	03 24 07.4	
	comp=Z,99nm,21.1s,baz=324,slow=36						
ASAR	Alice Springs	84.77	203	P	P	02 47 04.2	-0.8
	comp=Z,2.6nm,0.9s,baz=12,slow=4.9,SNR=16						
ASAR				LR	LR	03 28 28.5	
	comp=Z,30nm,18.0s,baz=58,slow=38						
	comp=Z,2.6nm,0.9s						
RAR	Rarotonga	86.77	142	LR	LR	03 16 23.7	
	comp=Z,87nm,21.2s,baz=290,slow=29						
PPT2	Papeete2	87.06	132	eLR	LR	03 14 45.5	
	comp=Z,182nm,31.0s						
PPT2				eLR	LR	03 14 53.5	
	comp=Z,322nm,29.0s						
APG	El Apazote	87.58	65	LR	LR	03 30 28.8	
	comp=Z,8.4nm,18.6s,baz=178,slow=38						
STKA	Stephens Creek	91.53	195	P	P	02 47 36.7	-0.5
	comp=Z,1.5nm,0.3s,baz=357,slow=12,SNR=3.0						
STKA				LR	LR	03 34 00.3	
	comp=Z,66nm,18.0s,baz=25,slow=39						
	comp=Z,1.5nm,0.3s						
TBI	Tubuai	92.34	134	eLR	LR	03 17 23.9	
	comp=Z,994nm,33.2s						
ATD	Arta Tunnel	93.06	298	LR	LR	03 34 45.7	
	comp=Z,22nm,18.1s,baz=16,slow=39						
JTS	Las Juntas de	94.27	62	LR	LR	03 36 16.4	
	comp=Z,45nm,18.1s,baz=323,slow=39						
SJG	San Juan	94.92	42	LR	LR	03 35 21.9	
	comp=Z,44nm,19.5s,baz=316,slow=38						
FURI	Furi	97.27	301	LR	LR	03 38 48.4	
	comp=Z,322nm,18.1s,baz=16,slow=40						
URZ	Urewera	97.95	166	LR	LR	03 26 05.1	
	comp=Z,77nm,20.8s,baz=9.0,slow=32						
RKT	Rikitea	98.08	122	eLR	LR	03 19 50.1	
	comp=Z,759nm,21.8s						
MAW	Mawson	144.07	221	PKP	PKPbc	02 54 03.3	+0.2
	comp=Z,3.2nm,0.9s,baz=78,slow=9.3,SNR=3.6						
PLCA	Paso Flores	144.34	82	PKP	PKPab	02 54 04.3	-0.2
	comp=Z,3.1nm,0.9s,baz=321,slow=4.6,SNR=4.3						
TRQA	Tornquist	146.62	70		PKPbc	02 54 12.4	+0.4
TRQA	Tornquist	146.62	70	PKP2	PKPbc	02 54 12.4	+0.4
SYO	Syowa Base	152.67	223	⇓iPKPbc	PKiKP	02 54 30.6	+4.4
SYO	Syowa Base	152.67	223	⇑epPKPbc	pPKPbc	02 54 33.6	+3.2
SYO	Syowa Base	152.67	223	⇓ePKPab	PKPab	02 54 39.0	+2.1
NVL	N'lazarevskaya	161.89	216	ePKIKP	PKPdf	02 54 31.4	+0.9
NVL				e		02 59 02.8	
NVL				ePPP	PPP	03 02 45.3	
NVL				eSS	SS	03 19 21.7	+2.5
NVL				eSSS	SSS	03 25 37.0	
NVL				pmax	pmax		
	comp=Z,29nm,1.9s						

IDC 28 02:38:54.9±2.3**, 4°.77S**×**151°.85E, h0km, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=171.9km s-min=28.8km az=125.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.77	227	P	P	02 43 59.0	-0.1
	1.0nm,0.9s,baz=51,slow=9.7,SNR=4.0						
	1.0nm,0.9s						
ASAR	Alice Springs	25.55	221	P	P	02 44 25.7	+0.1
	0.4nm,0.8s,baz=57,slow=9.1,SNR=7.5						
	0.4nm,0.8s						
ILAR	Eielson Array	82.48	22	P	P	02 51 19.2	+0.1
	0.4nm,0.7s,baz=234,slow=6.2,SNR=6.3						
	0.4nm,0.7s						
TORD	Torodi Ar. Bea	149.40	288	PKPbc	PKPbc	02 58 46.5	-0.6
	0.2nm,0.6s,baz=62,slow=3.4,SNR=4.3						

*IDC **28** 02:46:14.5±2.3, 50°.26N×129°.57W, h0km, mb3.6/2, mbtmp3.4/9, ML3.2/7, MS3.2/1, Error ellipse: s-maj=34.5km s-min=12.3km az=81.0*

ISC 28 02:46:16.7±1.6**, 50°.36N**±0°.08×**129°.4W**±0°.2**, h10km, n15, σ1ˢ.56**/10**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BBB	Bella Bella	2.00	24	Pn	Pn	02 46 49.9	-0.5
	16nm,0.3s,baz=217,slow=5.8,SNR=115						
BBB				Sn	Sn	02 47 14.9	-0.5
	44nm,0.3s,baz=303,slow=23,SNR=70						
	32nm,0.3s						
NEW	Newport	8.30	100	Pn	Pn	02 48 17.4	+0.4
	0.4nm,0.3s,baz=301,slow=14,SNR=7.2						
NEW				LR	LR	02 51 51.2	
	comp=Z,134nm,18.4s,baz=226,slow=40						
	1.4nm,0.4s						
YBH	Yreka Blue Hor	9.80	149	Pn	Pn	02 48 35.3	-2.4
	0.1nm,0.3s,baz=333,slow=2.3,SNR=4.5						
	0.6nm,0.6s						
NVAR	Mina Array Bea	14.31	142	Pn	Pn	02 49 40.1	+0.6
	0.1nm,0.3s,baz=330,slow=14,SNR=2.2						
	0.4nm,0.8s						
YKA	Yellowknife Ar	14.60	28	Pn	Pn	02 49 42.0	-1.1
	baz=223,slow=12,SNR=4.5						
	0.2nm,0.9s						
PDAR	Pinedale Array	15.59	112	Pn	Pn	02 49 59.3	+2.7
	baz=305,slow=10,SNR=4.5						
	0.7nm,0.8s						
ILAR	Eielson Array	17.12	334	P	Pn	02 50 17.0	+1.2
	baz=151,slow=12,SNR=12						
	1.0nm,0.9s						
ULM	Lac du Bonnet	21.32	77	P	P	02 51 03.9	+0.4
	6.6nm,0.8s,baz=289,slow=13,SNR=4.4						
	6.6nm,0.8s						
TXAR	Lajitas Array	28.59	128	P	P	02 52 13.1	+0.1
	0.2nm,0.8s,baz=321,slow=12,SNR=1.6						
	0.2nm,0.8s						
H11N2	WAKE ISLAND Hy	58.33	263	T	T	03 59 07.5	
	baz=42,slow=75,SNR=24						
H11N3	WAKE ISLAND Hy	58.33	263	T	T	03 59 04.0	
	baz=42,slow=75,SNR=29						
H11N1	WAKE ISLAND Hy	58.34	263	T	T	03 59 11.8	
	baz=42,slow=75,SNR=30						
H11S1	WAKE ISLAND Hy	59.35	262	T	T	04 00 26.3	
	baz=46						
H11S2	WAKE ISLAND Hy	59.36	262	T	T	04 00 23.6	
	baz=46						
H11S3	WAKE ISLAND Hy	59.37	262	T	T	04 00 25.6	
	baz=46						

IDC 28 02:51:04.1±5.1**, 7°.12S**×**129°.53E, h209km**±50km**, mb3.6**/1**, mbtmp4.0**/5**, Error ellipse: s-maj=57.3km s-min=20.3km az=62.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BATI	Baumata	6.56	242	P	Pn	02 52 38.9	+0.1
	22nm,0.4s,baz=51,slow=19,SNR=1.9						
FITZ	Fitzroy Crossi	11.55	199	P	Pn	02 53 44.6	+1.5
	2.0nm,0.7s,baz=20,slow=11,SNR=16						
FITZ				S	S	02 55 49.4	-1.7
	1.5nm,0.3s,baz=342,slow=20,SNR=6.1						
WRA	Warramunga Arr	13.57	160	P	Pn	02 54 07.5	-1.0
	0.5nm,0.5s,baz=341,slow=13,SNR=10						
WRA				S	S	02 56 36.8	-2.4
	0.8nm,0.4s,baz=333,slow=25,SNR=5.8						
ASAR	Alice Springs	16.98	166	P	Pn	02 54 49.8	-0.1
	2.5nm,0.6s,baz=342,slow=9.9,SNR=57						
ASAR				S	S	02 57 56.1	+1.3
	0.4nm,0.4s,baz=359,slow=26,SNR=4.6						
MKAR	Makanchi Array	68.07	327	P	P	03 01 41.1	-0.1
	0.8nm,0.4s,baz=128,slow=7.2,SNR=18						
	0.8nm,0.4s						

*IDC **28** 03:24:51.0±1.9, 29°.95N×47°.67E, h0km, mb3.7/11, mbtmp3.7/14, ML2.7/3, Error ellipse: s-maj=40.7km s-min=19.1km az=162.0*

*OMAN **28** 03:24:53.8±1.1, 29°.82N×47°.67E, h10km, mb4.4/16, Error ellipse: s-maj=11.3km s-min=6.8km az=146.0*

*SGS **28** 03:24:53.6, 30°.15N×47°.51E, h6km, Ml4.2*

ISC 28 03:24:52.6±0.6**, 30°.01N**±0°.05×**47°.66E**±0°.06**, h10km, n51, σ1ˢ.19**/53**, mb3.7**/10**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KFJS2	Khafji	1.78	159	S	Sg	03 25 50.3	+0.4
KFJS2	Khafji	1.78	159	P	Pb	03 25 25.4	+0.1
WANAN	Al Wanan	3.19	167	P	Pn	03 25 44.8	+2.1
SMAN	Sihmah	3.84	174	P	Pg	03 26 11.8	+5.7
ARIRA	AirJ	3.92	164	P	Pn	03 25 54.6	+1.8
ARIRA	AirJ	3.92	164	S	Sn	03 26 40.7	+1.8
BOQSS		4.40	159	P	Pn	03 26 02.1	+2.6
BOQSS		4.40	159	S	Sn	03 26 52.5	+1.7
RMAH	Rumah	4.70	189	P	Pn	03 26 05.0	+1.4
SHMA	Al-Shehemyia	5.07	144	S	Sn	03 27 06.1	-1.2
NHRD	Haradh	5.41	167	P	Pn	03 26 14.8	+1.4
SMRA	Abu-Samra	5.95	151	P	Pn	03 26 22.0	+1.1
TRNA	Turayna	6.13	148	P	Pn	03 26 24.3	+1.0
TRNA				S	Sn	03 27 32.7	-0.8
KHRJ	Al Kharj	6.15	180	P	Pn	03 26 30.9	+7.3
RAYN	Ar Rayn	6.74	197	P	Pn	03 26 31.4	-0.4
RAYN				S	Sn	03 27 46.1	-2.6
SHBH1	SHBH1	7.35	151	P	Pn	03 26 41.5	+1.4
SHME	Shamm	8.47	116	P	Pn	03 26 55.7	+0.3
SHME				S	Sn	03 28 29.9	-1.2
BANOM	Banah	8.66	116	P	Pn	03 26 58.2	+0.1
ASUD	Al Ashush, Dub	8.68	126	P	Pn	03 26 59.2	+0.9
NAZ	Nazwa, Dubai	8.69	123	P	Pn	03 26 58.6	+0.2
	SNR=5.7						
MZR	Muzera	8.71	142	P	Pn	03 26 58.9	+0.2
	SNR=8.5						
MASF	Masafi	8.84	119	P	Pn	03 27 00.6	+0.1
MDH	Madha	8.98	119	P	Pn	03 27 02.3	-0.1
HATD	Hatta, Dubai	9.13	122	P	Pn	03 27 04.3	-0.2
ASHO	Ashiyiah	9.16	123	P	Pn	03 27 04.8	-0.1
	SNR=7.6						
ALNE	Al Ain	9.34	128	P	Pn	03 27 07.2	-0.1
	SNR=9.6						
ASF	Jabal al Asfar	9.47	286	Pn	Pn	03 27 09.7	+0.4
	0.1nm,0.3s,baz=101,slow=16,SNR=1.9						
ASF				Sn	Sn	03 28 56.0	+0.2
	0.2nm,0.3s,baz=78,slow=24,SNR=1.8						
ASF				Lg	Lg	03 29 46.4	
	0.2nm,0.3s,baz=82,slow=18,SNR=1.8						
	2.8nm,0.9s						
SOHO	SOHO	9.84	124	P	Pn	03 27 13.9	-0.2
ARQ	Araqi	10.34	128	P	Pn	03 27 20.9	-0.2
HOQ	Hoqain	10.74	124	P	Pn	03 27 26.1	-0.4
BSY	Bisya	11.20	128	P	Pn	03 27 31.9	-1.0
BIDO	Bidbid	11.37	122	P	Pn	03 27 34.5	-0.6
WSAR	Wadi Sarin	11.91	122	P	Pn	03 27 41.7	-0.8
JMDO	Jabal Madar	12.07	127	P	Pn	03 27 43.1	-1.7
DOK	Doka	12.78	151	P	Pn	03 27 52.9	-1.6
MHTO	MHTO	12.93	132	P	Pn	03 27 55.1	-1.5
DQM	DQM	13.45	136	P	Pn	03 28 01.8	-1.8
DMTO	DMTO	13.93	150	P	Pn	03 28 07.0	-3.1
	SNR=9.6						
BRTR	Keskin Array B	15.02	314	Pn	P	03 28 28.7	-1.9
	0.1nm,0.3s,baz=129,slow=14,SNR=5.2						
	0.6nm,0.7s						
IDI	Anoyia	19.86	291	P	Pn	03 29 25.1	-0.5
	0.3nm,0.3s,baz=150,slow=20,SNR=1.7						
	4.8nm,0.8s						
AKTO	Aktyubinsk	21.84	18	P	P	03 29 45.1	+0.1
	1.0nm,0.5s,baz=220,slow=6.7,SNR=5.2						
	1.0nm,0.5s						
AKASG	Malin Array Be	24.86	331	P	P	03 30 15.9	+0.8
	1.2nm,0.6s,baz=137,slow=8.6,SNR=6.4						
	1.2nm,0.6s						
BVAR	Borovoye Array	28.38	29	P	P	03 30 47.0	+0.2
	0.9nm,0.6s,baz=220,slow=8.8,SNR=3.7						
	0.9nm,0.6s						
MKAR	Makanchi Array	31.58	48	P	P	03 31 15.7	+0.4
	0.4nm,0.8s,baz=234,slow=6.9,SNR=2.2						
	0.4nm,0.8s						
FINES	FINESS Array B	34.51	342	P	P	03 31 40.4	-0.3
	1.3nm,0.7s,baz=152,slow=8.6,SNR=4.6						
	1.3nm,0.7s						
ZALV	Zalesovo Beam	35.90	38	P	P	03 31 52.5	-0.3
	0.9nm,0.4s,baz=258,slow=9.1,SNR=3.7						
	0.9nm,0.4s						
HFS	Hagfors	37.73	333	P	P	03 32 08.6	+0.3
	1.5nm,0.5s,baz=134,slow=13,SNR=10						
	1.5nm,0.5s						
NOA	NORSAR Array B	39.25	333	P	P	03 32 21.0	-0.1
	0.4nm,0.7s,baz=124,slow=8.4,SNR=1.1						
	0.4nm,0.7s						
ESDC	Sonseca Array	42.94	297	P	P	03 32 52.0	+0.2
	0.3nm,0.8s,baz=90,slow=9.0,SNR=1.7						
	0.3nm,0.8s						
TORD	Torodi Ar. Bea	45.59	259	P	P	03 33 12.4	-0.7
	1.2nm,0.7s,baz=49,slow=9.9,SNR=9.1						
	1.2nm,0.7s						
YKA	Yellowknife Ar	86.72	352	P	P	03 37 38.0	+1.5
	0.3nm,0.8s,baz=8.6,slow=5.5,SNR=4.8						
	0.3nm,0.8s						

*IDC **28** 03:27:00.4±1.3, 6°.52N×125°.17E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=34.5km s-min=9.0km az=116.0*

ISC 28 03:27:04.9±1.0**, 6°.7N**±0°.1×**125°.5E**±0°.4**, h35km, n6, σ1ˢ.38**/6**, mb3.5**/5**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.36	8	Pg	Pn	03 27 13.3	-0.4
	611nm,0.3s,baz=204,slow=1.3,SNR=22						
DAV				Lg	Lg	03 27 23.2	
	1μm,0.3s,baz=157,slow=24,SNR=10						
FITZ	Fitzroy Crossi	24.65	180	P	P	03 32 21.3	-1.1
	3.4nm,0.9s,baz=7.5,slow=7.2,SNR=9.2						
	3.4nm,0.9s						
WRA	Warramunga Arr	27.87	162	P	P	03 32 50.7	-0.8
	0.4nm,0.6s,baz=340,slow=9.2,SNR=1.5						
	0.4nm,0.6s						
ASAR	Alice Springs	31.28	165	P	P	03 33 20.9	-0.9
	0.2nm,0.3s,baz=340,slow=7.6,SNR=15						
	0.2nm,0.3s						
STKA	Stephens Creek	41.32	159	P	P	03 34 49.0	+1.7
	1.0nm,0.6s,baz=344,slow=11,SNR=3.3						
	1.0nm,0.6s						
MKAR	Makanchi Array	54.45	325	P	P	03 36 29.2	+0.4
	0.3nm,0.7s,baz=124,slow=7.2,SNR=1.8						
	0.3nm,0.7s						

*IDC **28** 03:31:50.4±1.6, 12°.12S×165°.84E, h0km, mb3.8/5, mbtmp3.7/6, ML3.4/1, MS3.6/7, Error ellipse: s-maj=45.5km s-min=27.9km az=108.0*

ISC 28 03:31:55.0±1.3**, 12°.2S**±0°.1×**165°.8E**±0°.3**, h30km, n12, σ0ˢ.66**/7**, mb3.5**/5**, MS3.5**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DZM	Mont Dzumac	9.88	177	Pn	Pn	03 34 15.1	-0.1
	0.3nm,0.3s,baz=0.0,slow=20,SNR=1.5						
DZM				Sn	Sn	03 36 05.4	+0.2
	0.2nm,0.3s,baz=325,slow=19,SNR=1.4						
	5.2nm,0.7s						
PMG	Port Moresby	18.54	277	LR	LR	03 43 14.1	
	comp=Z,144nm,20.0s,baz=116,slow=37						
CTA	Charters Tower	20.38	245	LR	LR	03 43 50.4	
	comp=Z,90nm,19.1s,baz=46,slow=35						
STKA	Stephens Creek	29.71	225	LR	LR	03 49 48.0	
	comp=Z,105nm,18.5s,baz=25,slow=36						
WRA	Warramunga Arr	31.20	252	P	P	03 38 11.7	-0.2
	0.3nm,0.6s,baz=83,slow=8.9,SNR=6.0						
	0.3nm,0.6s						
ASAR	Alice Springs	32.39	245	P	P	03 38 22.3	0.0
	0.4nm,0.7s,baz=68,slow=9.7,SNR=22						
ASAR				LR	LR	03 50 47.7	
	comp=Z,84nm,18.8s,baz=95,slow=35						
	0.4nm,0.7s						
GUMO	Guam	32.95	320	LR	LR	03 50 19.4	
	comp=Z,74nm,19.0s,baz=70,slow=34						
PPT	Papeete	43.36	103	LR	LR	03 54 27.3	
	comp=Z,51nm,18.6s,baz=1.5,slow=31						
ILAR	Eielson Array	84.53	18	P	P	03 44 24.4	-0.4
	0.2nm,0.8s,baz=238,slow=5.2,SNR=1.3						
	0.2nm,0.8s						
NVAR	Mina Array Bea	86.67	50	LR	LR	04 15 57.5	
	comp=Z,67nm,19.1s,baz=302,slow=30						
MKAR	Makanchi Array	94.38	317	P	P	03 45 11.6	-0.4
	1.6nm,0.9s,baz=97,slow=6.0,SNR=9.2						
	1.6nm,0.9s						
ZALV	Zalesovo Beam	94.50	324	P	P	03 45 13.5	+1.2
	0.2nm,0.3s,baz=106,slow=4.7,SNR=1.8						
	0.2nm,0.3s						

*ISK **28** 03:35:30.2, 34°.91N×34°.14E, h13km, ML2.8/12*

*GII **28** 03:35:32.6±0.0, 34°.90N±0°.03×33°.956E±0°.008, h18km, Mws2.4, confirmed*

*NIC **28** 03:35:33.1, 34°.93N×33°.95E, h7km, Ml2.1/11*

ISC 28 03:35:32.1±0.8**, 34°.93N**±0°.03×**34°.02E**±0°.03**, h17km**±5km**, n68, σ0ˢ.56**/82**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PARAL	Paralimni	0.07	15	P	Pg	03 35 35.2	-0.1
PARAL				S	Sg	03 35 37.8	+0.3
PARAL				AML	AML	03 35 38.1	
	9.4nm,0.4s						
PARAL				AML	AML	03 35 38.8	
	6.9nm,0.3s						
PAR1C	Paralimni Civi	0.11	341	P	Pg	03 35 35.6	-0.1
PAR1C				S	Sg	03 35 38.2	0.0
MVOU	Mavrovouni	0.33	285	P	Pg	03 35 38.6	-0.5
MVOU				S	Sg	03 35 43.4	-0.4
MVOU				AML	AML	03 35 43.8	
	1.2nm,0.3s						
MVOU				AML	AML	03 35 45.7	
	1.1nm,0.2s						
LAR1C	Larnaka City C	0.33	269	P	Pg	03 35 38.8	-0.3
LAR1C				S	Sb	03 35 44.0	-0.6
LFK	Lefkose	0.53	311	Pg	Pg	03 35 42.9	+0.2
LFK				Sg	Sb	03 35 51.7	+1.3
ATHAL	Athalassa	0.55	293	P	Pb	03 35 43.2	-0.2
ATHAL				S	Sb	03 35 51.3	+0.3
ATHAL				AML	AML	03 36 05.0	
	1.2nm,0.5s						
ATHAL				AML	AML	03 36 06.0	
	0.8nm,0.5s						
CSS	Mathiatis	0.57	273	P	Pg	03 35 42.5	-0.9
CSS	Mathiatis	0.57	273	P	Pg	03 35 42.7	-0.6
CSS	Mathiatis	0.57	273	P	Pg	03 35 42.4	-1.0
CSS				S	Sg	03 35 50.2	-0.7
CSS				AML	AML	03 35 57.8	
	0.3nm,0.5s						
CSS				AML	AML	03 36 00.4	
	0.3nm,0.7s						
ASGA	Asgata	0.65	257	P	Pb	03 35 44.8	-0.2
ASGA				S	Sb	03 35 53.6	-0.2
ASGA				AML	AML	03 36 03.2	
	0.3nm,0.3s						
ASGA				AML	AML	03 36 05.6	
	0.5nm,0.8s						
XYLS	Xyliatos	0.80	276	P	Pg	03 35 46.8	-0.9
XYLS				S	Sb	03 35 58.6	+0.4
XYLS				AML	AML	03 36 06.5	
	0.3nm,0.3s						
XYLS				AML	AML	03 36 07.0	
	0.3nm,0.5s						
AKDN	Akdeniz- Kıbrı	0.94	293	Pg	Pn	03 35 50.8	+0.3
TROD	Troodos	0.95	271	P	Pg	03 35 50.0	-0.5
TROD				S	Sb	03 36 02.9	+0.4
TROD				AML	AML	03 36 11.5	
	0.4nm,0.6s						
TROD				AML	AML	03 36 13.7	
	0.5nm,0.8s						
APOL	The Sanctuary	0.98	255	P	Pn	03 35 51.1	-0.1
APOL				S	Sn	03 36 05.3	+0.6
APOL				AML	AML	03 36 08.6	
	0.4nm,0.5s						
APOL				AML	AML	03 36 10.4	
	0.4nm,0.6s						
ALFC	Alefka	1.19	281	P	Pg	03 35 54.5	-0.6
ALFC				AML	AML	03 36 15.4	
	0.2nm,0.4s						
ALFC				AML	AML	03 36 16.0	
	0.2nm,0.3s						
NATA	Nata	1.20	263	P	Pg	03 35 55.3	0.0
NATA				S	Sn	03 36 11.7	+1.6
NATA				AML	AML	03 36 17.2	
	0.4nm,0.9s						
NATA				AML	AML	03 36 29.0	
	0.5nm,0.7s						
BECE	Buyukeceli-Mer	1.28	343	Pn	Pn	03 35 55.1	-0.1
IKL	Isikli	1.33	348	Pn	Pn	03 35 55.6	-0.4
IKL				Sn	Sb	03 36 14.2	+0.7
AKMS	Akamas	1.39	274	P	Pg	03 35 58.1	-0.7
AKMS				S	Sg	03 36 16.9	0.0
AKMS				AML	AML	03 36 23.7	
	0.2nm,0.9s						
AKMS				AML	AML	03 36 26.8	
	0.2nm,0.7s						
SILI	Silifke-Mersin	1.44	357	Pn	Pn	03 35 56.8	-0.6
KEBE	Keben-Mersin	1.53	351	Pn	Pn	03 35 58.3	-0.5
KIZK	Mersin	1.55	4	Pn	Pn	03 35 58.4	-0.6
GAZI	Gazipasa	1.90	314	Pn	Pn	03 36 04.9	+1.1
NATI	Neve Ativ	2.19	139	P	Pn	03 36 07.5	-0.2
NATI	Neve Ativ	2.19	139	P	Pn	03 36 07.9	+0.1
NATI	Neve Ativ	2.19	139	S	Sn	03 36 34.5	0.0
GEM	Giv'at Ha'Em	2.19	141	P	Pn	03 36 07.9	+0.1
	0.4nm,2.7s						
MMA0B	Mount Meron ar	2.23	149	P	Pn	03 36 08.5	+0.1
MMA0B	Mount Meron ar	2.23	149	S	Sn	03 36 35.5	0.0
TAHT	Tahtakopru-Hat	2.28	50	Pn	Pn	03 36 07.8	-1.2
KRMN	Karaman	2.32	345	Pn	Pn	03 36 09.7	0.0
HDMB	Hadim	2.38	329	Pn	Pn	03 36 11.1	+0.5
BLGI	Bet Lehem HaGe	2.40	156	P	Pn	03 36 11.0	+0.4
BLGI	Bet Lehem HaGe	2.40	156	P	Pn	03 36 10.8	+0.2
BLGI	Bet Lehem HaGe	2.40	156	S	Sn	03 36 39.7	+0.1
KSHT	Keshet	2.45	142	P	Pn	03 36 11.9	+0.5
KSHT	Keshet	2.45	142	S	Sn	03 36 41.5	+0.6
SHMJ	Saham	2.63	146	P	Pn	03 36 14.3	+0.4
MMLI	Mount Malkishu	2.75	154	Pn	Pn	03 36 14.2	-1.2
MMLI	Mount Malkishu	2.75	154	P	Pn	03 36 15.9	+0.5
MMLI	Mount Malkishu	2.75	154	S	Sn	03 36 48.2	0.0
SLTI	Sal'it	2.81	162	P	Pn	03 36 17.0	+0.7
SLTI	Sal'it	2.81	162	P	Pn	03 36 16.8	+0.4
HMDT	Nahal Hemdat	2.95	154	P	Pn	03 36 19.1	+0.8
HMDT	Nahal Hemdat	2.95	154	P	Pn	03 36 19.0	+0.8
HMDT	Nahal Hemdat	2.95	154	S	Sn	03 36 53.6	+0.4
SALP	Salfit	3.02	161	P	Pn	03 36 19.0	-0.2
SALP	Salfit	3.02	161	P	Pn	03 36 19.4	+0.3
AMAZ	Amatzia	3.47	167	P	Pn	03 36 25.7	+0.3
AMAZ	Amatzia	3.47	167	P	Pn	03 36 25.5	+0.1
AMAZ	Amatzia	3.47	167	S	Sn	03 37 06.3	+0.2
DSI	Dead Sea	3.54	161	P	Pn	03 36 27.1	+0.8
DSI	Dead Sea	3.54	161	P	Pn	03 36 26.4	+0.1
DSI	Dead Sea	3.54	161	S	Sn	03 37 07.6	-0.2
ASF	Jabal al Asfar	3.65	138	P	Pn	03 36 29.4	+1.4
YTIR	Yattir	3.67	165	P	Pn	03 36 28.8	+0.5
YTIR	Yattir	3.67	165	P	Pn	03 36 28.6	+0.4
YTIR	Yattir	3.67	165	S	Sn	03 37 11.2	0.0
KZIT	Kziot	4.03	175	P	Pn	03 36 33.1	+0.1
KZIT	Kziot	4.03	175	P	Pn	03 36 33.0	+0.1
KZIT	Kziot	4.03	175	S	Sn	03 37 19.5	-0.3
PRNI	Paran	4.64	169	P	Pn	03 36 41.7	+0.2
PRNI	Paran	4.64	169	P	Pn	03 36 41.6	+0.1
KRMI	Paran Flat	4.84	173	P	Pn	03 36 44.4	+0.3
KRMI	Paran Flat	4.84	173	P	Pn	03 36 44.5	+0.3
MBRI	Mt Berech	5.18	171	P	Pn	03 36 49.4	+0.5
MBRI	Mt Berech	5.18	171	P	Pn	03 36 49.3	+0.4
MBRI	Mt Berech	5.18	171	S	Sn	03 37 48.3	+0.1

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*ISK **28** 03:39:35.7, 34°.89N×34°.13E, h21^{km}, ML2.6/9*
*NIC **28** 03:39:38.6, 34°.94N×33°.94E, h7^{km}±1^{km}, Ml1.9/10*
ISC 28 03:39:36.6±1.2, **34°.91N**±0°.05×**34°.07E**±0°.05, **h19**^{km}±3^{km}, **n22, σ0ˢ.51**/33, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PARAL	Paralimni	0.09	342	P	Pg	03 39 40.8	+0.4
PARAL				S	Sg	03 39 43.4	+0.4
PARAL				AML	AML	03 39 43.6	
	3.3nm,0.3s						
PARAL				AML	AML	03 39 43.6	
	5.8nm,0.5s						
PAR1C	Paralimni Civi	0.14	327	P	Pg	03 39 41.1	+0.2
PAR1C				S	Sg	03 39 43.8	-0.1
LAR1C	Larnaka City C	0.38	272	P	Pg	03 39 44.3	-0.2
LAR1C				S	Sg	03 39 49.1	-0.8
MVOU	Mavrovouni	0.38	286	P	Pg	03 39 44.0	-0.6
MVOU				S	Sg	03 39 48.5	-1.4
MVOU				AML	AML	03 39 49.3	
	0.7nm,0.3s						
MVOU				AML	AML	03 39 51.2	
	0.6nm,0.4s						
LFK	Lefkose	0.57	310	Pg	Pg	03 39 48.6	+0.4
LFK				Sg	Sn	03 39 58.1	-0.6
ATHAL	Athalassa	0.60	293	S	Sb	03 39 56.1	-0.4
ATHAL				AML	AML	03 40 08.8	
	0.5nm,0.5s						
ATHAL				AML	AML	03 40 10.6	
	0.7nm,0.6s						
CSS	Mathiatis	0.61	275	P	Pb	03 39 48.1	-0.5
CSS				S	Sb	03 39 56.6	-0.2
CSS				AML	AML	03 40 03.4	
	0.1nm,0.8s						
CSS				AML	AML	03 40 05.3	
	0.1nm,0.6s						
ASGA	Asgata	0.69	260	P	Pg	03 39 50.5	+0.2
ASGA				S	Sg	03 40 00.2	+0.7
ASGA				AML	AML	03 40 07.1	
	0.2nm,0.6s						
ASGA				AML	AML	03 40 11.1	
	0.3nm,0.7s						
XYLS	Xyliatos	0.85	277	P	Pb	03 39 52.2	-0.5
XYLS				S	Sg	03 40 04.6	+0.1
XYLS				AML	AML	03 40 12.0	
	0.1nm,0.4s						
XYLS				AML	AML	03 40 15.3	
	0.1nm,0.5s						
TROD	Troodos	0.99	272	P	Pg	03 39 56.0	+0.1
TROD				S	Sb	03 40 08.2	+0.2
TROD				AML	AML	03 40 19.2	
	0.3nm,0.8s						
TROD				AML	AML	03 40 20.5	
	0.2nm,0.7s						
APOL	The Sanctuary	1.02	257	P	Pn	03 39 56.1	+0.3
APOL				S	Sn	03 40 10.0	+0.3
APOL				AML	AML	03 40 14.7	
	0.3nm,0.5s						
APOL				AML	AML	03 40 16.0	
	0.2nm,0.6s						
ALFC	Alefka	1.23	282	P	Pb	03 39 60.0	+0.7
ALFC				AML	AML	03 40 05.3	
	0.2nm,0.5s						
ALFC				AML	AML	03 40 08.6	
	0.1nm,0.3s						
NATA	Nata	1.24	264	P	Pg	03 40 00.8	+0.1
NATA				AML	AML	03 40 06.8	
	0.2nm,0.9s						
NATA				AML	AML	03 40 09.0	
	0.3nm,0.9s						
BECE	Buyukeceli-Mer	1.31	342	Pn	Pn	03 39 59.4	-0.5
IKL	Isikli	1.36	347	Pn	Pn	03 40 00.6	+0.1
AKMS	Akamas	1.43	275	P	Pb	03 40 03.4	+0.7
AKMS				S	Sb	03 40 20.8	+0.3
KEBE	Keben-Mersin	1.56	349	Pn	Pn	03 40 03.5	+0.1
KIZK	Mersin	1.57	2	Pn	Pn	03 40 03.4	0.0
GAZI	Gazipasa	1.95	313	Pn	Pn	03 40 09.2	+0.6
TAHT	Tahtakopru-Hat	2.26	49	Pn	Pn	03 40 12.6	-0.3
HDMB	Hadim	2.42	328	Pn	Pn	03 40 15.7	+0.4
MMLI	Mount Malkishu	2.71	155	Pn	Pn	03 40 18.9	-0.2

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*TIR **28** 04:00:28.2, 40°.66N×21°.32E, h17^{km}, Ml3.1/6*
*THE **28** 04:00:29.2, 41°N±1°×2°1E±°, h14^{km}±2^{km}, M2.8/13, MLh2.8/13*
*SKO **28** 04:00:29.2, 40°.66N×21°.25E, h15^{km}, ML3.0*
*ATH **28** 04:00:29.9, 40°.54N×21°.33E, h11^{km}±1^{km}, ML2.9/11, Manual Solution by F.Xalaris First location: 2019/12/28 04:01:41, This location: 2020/10/21 07:42:10 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*
ISC 28 04:00:29.2±0.9, **40°.61N**±0°.02×**21°.21E**±0°.02, **h16**^{km}±7^{km}, **n65, σ0ˢ.99**/94, **10C-5D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEST	Nestorio	0.23	212	⇓Pg	Pg	04 00 34.7	+0.1
NEST				Sg	Sb	04 00 38.9	-0.1
NEST				AML	AML	04 00 39.3	
	51nm,0.4s						
NEST	Nestorio	0.23	212	P	Pg	04 00 34.6	+0.1
NEST				S	Sg	04 00 38.6	+0.4
KBN	Korca	0.32	272	⇑Pg	Pg	04 00 36.2	+0.2
KBN				Sg	Sb	04 00 41.9	+0.3
KBN	Korca	0.32	272	P	Pg	04 00 36.1	+0.1
KBN				S	Sg	04 00 41.0	+0.3
PENT	Pentalofos	0.42	187	P	Pg	04 00 37.6	-0.1
PENT				S	Sg	04 00 42.6	-0.9
OHR	Ohrid	0.59	328	*i* Pg	Pg	04 00 40.9	+0.1
OHR				*i* Sg	Sb	04 00 50.9	+1.7
OHR				*e*Lg	Lg	04 00 51.6	
	comp=N,864nm,0.6s						
OHR				*e*Lg	Lg	04 00 51.8	
	comp=E,2µm,0.4s						
KPRO	Kipourio	0.67	170	P	Pg	04 00 41.0	-1.4
KPRO				S	Sn	04 00 53.7	-0.5
KPRO	Kipourio	0.67	170	P	Pg	04 00 41.2	-1.1
KPRO				S	Sg	04 00 49.2	-2.0
MSVA	Metsovo	0.84	181	P	Pg	04 00 45.5	-0.1
MSVA				S	Sg	04 00 56.0	-0.7
GRG	Griva	0.97	69	P	Pb	04 00 47.3	-0.3
GRG				S	Sg	04 01 01.0	+0.4
GRG	Griva	0.97	69	*i* Pg	Pg	04 00 47.9	-0.1
GRG				*i* Sg	Sn	04 01 01.9	+0.3
GRG	Griva	0.97	69	P	Pb	04 00 47.6	0.0
JAN	Janina	0.99	196	P	Pb	04 00 47.6	-0.4
JAN				S	Sn	04 01 02.3	+0.2
JAN	Janina	0.99	196	P	Pb	04 00 48.1	+0.1
JAN				S	Sg	04 01 01.7	+0.2
PRMD	Pramanda	1.08	185	P	Pb	04 00 49.1	-0.5
PRMD				S	Sn	04 01 05.9	+1.4
LIT	Litokhoron	1.10	117	P	Pb	04 00 49.3	-0.6
LIT				S	Sb	04 01 04.5	+0.5
LIT	Litokhoron	1.10	117	*i* Pg	Pb	04 00 49.8	-0.2
LIT				*i* Sg	Sn	04 01 06.4	+1.5
LIT	Litokhoron	1.10	117	P	Pb	04 00 49.7	-0.2
THL	Klokotos Trika	1.22	149	Pg	Pn	04 00 50.7	-0.7
THL				Sg	Sg	04 01 08.5	0.0
THL	Klokotos Trika	1.22	149	P	Pn	04 00 50.6	-0.9
THL				S	Sg	04 01 08.4	0.0
THL	Klokotos Trika	1.22	149	P	Pn	04 00 50.8	-0.7
PHP	Peshkopia	1.22	332	Pn	Pn	04 00 50.7	-0.9
PHP				Sn	Sg	04 01 08.4	-0.2
PHP				AML	AML	04 01 13.7	
	comp=E,1.8nm,0.3s						
PHP	Peshkopia	1.22	332	P	Pn	04 00 50.5	-1.1
VAY	Valandovo	1.25	55	*i* Pg	Pn	04 00 51.8	-0.1
VAY				*i* Sg	Sg	04 01 09.6	0.0
VAY				*e*Lg	Lg	04 01 11.2	
	comp=N,99nm,0.5s						
VAY				*e*Lg	Lg	04 01 12.0	
	comp=E,86nm,0.5s						
TIR	Tirane	1.25	306	Pn	Pg	04 00 53.2	-0.2
TIR				Sn	Sg	04 01 11.3	+1.5
TIR				AML	AML	04 01 14.2	
	comp=E,0.6nm,0.7s						
TIR	Tirane	1.25	306	*e*Pg	Pg	04 00 53.2	-0.2
TIR				*i* Sg	Sg	04 01 12.0	+2.2
TETR	Tetrakomo, Epi	1.27	178	P	Pn	04 00 52.2	-0.1
TETR	Tetrakomo, Epi	1.27	178	P	Pn	04 00 52.8	+0.5
IGT	Igoumenitsa	1.27	212	Pg	Pg	04 00 53.7	+0.1
IGT				Sg	Sg	04 01 12.8	+2.5
IGT	Igoumenitsa	1.27	212	P	Pn	04 00 52.5	+0.2
IGT	Igoumenitsa	1.27	212	P	Pb	04 00 53.4	+0.7
VLO	Vlora	1.31	264	Pg	Pg	04 00 55.1	+0.6
VLO				Sg	Sg	04 01 13.2	+1.6
VLO				AML	AML	04 01 20.4	
	comp=E,3.6nm,0.6s						
THE	Thessaloniki	1.34	89	Pn	Pn	04 00 52.0	-1.2
THE	Thessaloniki	1.34	89	P	Pn	04 00 52.5	-0.6
THE	Thessaloniki	1.34	89	*e*Pn	Pg	04 00 58.5	+3.5
THE	Thessaloniki	1.34	89	P	Pn	04 00 53.4	+0.3
SKO	Skopje	1.37	7	*e*Pg	Pg	04 00 55.7	+0.1
SKO				*i* Sg	Sg	04 01 12.6	-0.9
KEK	Kerkira	1.41	231	P	Pg	04 00 56.8	+0.5
HORT	Hortiatis	1.44	90	P	Pn	04 00 53.8	-0.8
HORT	Hortiatis	1.44	90	P	Pn	04 00 54.2	-0.4
AMPL	Ampelaki	1.69	180	P	Pn	04 00 58.7	+0.7
PLG	Polygyros	1.72	97	P	Pn	04 00 58.8	+0.3
AGG	Agios Georgios	1.81	151	P	Pn	04 00 59.2	-0.5
KKB	Krupnik	1.90	49	*i* P	Pn	04 01 01.6	+0.7
KKB	Krupnik	1.90	49	*e*Pn	Pn	04 01 01.6	+0.7
SDA	Shkodra	1.93	319	Pn	Pb	04 01 04.1	+0.2
SDA				Sn	Sg	04 01 30.3	-1.0
SDA				AML	AML	04 01 41.1	
	comp=E,0.3nm,0.3s						
OUR	Ouranopolis	2.13	97	P	Pn	04 01 04.3	+0.2
MMB	Musomishta	2.13	63	*i* P	Pb	04 01 07.0	-0.5
BARS	Barje	2.25	11	⇑*i*Pn	Pn	04 01 06.4	+0.7
PDG	Podgorica	2.33	322	Pn	Pb	04 01 09.5	-1.4
PDG				Sn	Sb	04 01 40.2	+0.8
PDG	Podgorica	2.33	322	⇓P	Pb	04 01 10.3	-0.6
PDG				⇓S	Sb	04 01 39.6	+0.2
TRAN	Tran	2.47	25	*i* P	Pg	04 01 15.3	-1.2
PLNA	Plana	2.50	41	*i* P	Pn	04 01 10.7	+1.5
VTS	Vitosha	2.51	37	*i* P	Pn	04 01 10.9	+1.4
BOVS	Bovan	3.04	7	⇓P	Pn	04 01 17.0	+0.4
BOVS				⇑S	Sn	04 01 51.8	-0.9
NOCI	Noci	3.16	275	Pn	Pn	04 01 18.9	+0.8
BLKB	Belogradchik	3.20	19	⇑S	Sn	04 01 54.6	-2.0
MPEP	Malo Peshtene	3.33	34	*i* P	Pg	04 01 32.5	-0.4
MATE	Matera	3.43	272	⇑P	Pb	04 01 28.0	-1.4
TIP	Timpagrande	3.71	249	⇑P	Pb	04 01 31.5	-2.9
PLVB	Pleven	3.76	41	⇑P	Pn	04 01 25.5	-0.9
HERR	Herculane	4.36	11	⇑P	Pn	04 01 35.3	+0.6
GZR	Gura Zlata	4.91	13	⇑P	Pn	04 01 43.1	+0.7
GZR				⇑S	Sn	04 02 37.5	-1.4
BZS	Buzias	5.01	3	⇓P	Pn	04 01 44.2	+0.6
MODS	Modra-Piesok	8.25	341	*e*PN	Pn	04 02 33.9	+5.8

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*IDC **28** 04:00:38.4±7.0, 58°.63S×25°.19W, h75^{km}±62^{km}, mb3.7/6, mbtmp4.0/7, ML4.0/1, Error ellipse: s-maj=32.2km s-min=26.9km az=56.0*
ISC 28 04:00:33.2±0.7, **58°.6S**±0°.1×**25°.1W**±0°.2, **h28**^{km}, **n22, σ2ˢ.33**/15, **mb3.9**/5, **4C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	14.02	157	⇑P	Pn	04 03 51.7	+2.1
	comp=Z,2.4nm,0.2s						
VNA3	Neumayer Olymp	14.22	159	⇑P	Pn	04 03 53.9	+1.5
	comp=Z,1.8nm,0.1s						
SNAA	Sanae	15.96	154	⇑P	Pn	04 04 17.9	+2.4
	comp=Z,66nm,0.5s						
SNAA	Sanae	15.96	154	P	Pn	04 04 17.8	+2.4
	comp=Z,0.6nm,0.3s,baz=49,slow=14,SNR=20						
SNAA				S	Sn	04 07 05.7	-5.6
	comp=Z,3.7nm,0.9s,baz=308,slow=19,SNR=2.6						
	comp=Z,2.4nm,0.5s						
TROLL	Troll, Antarti	17.47	151	⇑P	P	04 04 38.8	+3.3
	comp=Z,34nm,0.1s						
PLCA	Paso Flores	33.60	282	P	P	04 07 11.7	+0.9
	comp=Z,1.5nm,0.9s,baz=287,slow=9.4,SNR=1.5						
	comp=Z,1.5nm,0.9s						
H04S2	CROZET ISLANDS	45.54	110	T	T	04 59 16.7	
	baz=226,slow=75,SNR=2.9						
H04S3	CROZET ISLANDS	45.55	110	T	T	04 59 17.8	
	baz=226,slow=75,SNR=7.5						
H04S1	CROZET ISLANDS	45.56	110	T	T	04 59 17.7	
	baz=226,slow=75,SNR=6.6						
H10S2	ASCENSION HYDR	50.15	14	T	T	05 03 52.7	
	baz=188,slow=74,SNR=18						
H10S3	ASCENSION HYDR	50.16	13	T	T	05 03 53.0	
	baz=32,slow=74,SNR=15						
H10N1	ASCENSION HYDR	51.27	14	T	T	05 05 18.1	
	baz=180,slow=72,SNR=6.0						
H10N3	ASCENSION HYDR	51.27	14	T	T	05 05 16.8	
	baz=180,slow=72,SNR=15						
H10N2	ASCENSION HYDR	51.29	14	T	T	05 05 18.2	
	baz=180,slow=72,SNR=14						
LPAZ	La Paz	52.76	305	P	P	04 09 45.4	-0.8
	comp=Z,0.4nm,0.4s,baz=149,slow=5.9,SNR=2.1						
	comp=Z,0.4nm,0.4s						
DBIC	Dimbokro	67.05	22	P	P	04 11 23.4	-0.1
	comp=Z,1.3nm,0.5s,baz=200,slow=7.5,SNR=2.1						
	comp=Z,1.3nm,0.5s						
TORD	Torodi Ar. Bea	74.75	27	P	P	04 12 10.6	+0.3
	comp=Z,0.9nm,0.5s,baz=197,slow=5.2,SNR=14						
	comp=Z,0.9nm,0.5s						
STKA	Stephens Creek	89.20	169	P	P	04 13 25.4	-0.6
	comp=Z,0.9nm,0.4s,baz=213,slow=4.8,SNR=2.1						
	comp=Z,0.9nm,0.4s						
ASAR	Alice Springs	96.22	161	P	P	04 13 57.4	-1.3
	comp=Z,0.2nm,0.6s,baz=190,slow=5.0,SNR=4.8						
	comp=Z,0.2nm,0.6s						
YKA	Yellowknife Ar	138.79	315	PKP	PKPdf	04 19 54.3	-0.7
	comp=Z,0.6nm,0.7s,baz=142,slow=1.6,SNR=12						
SONM	Songino Array	149.69	89	PKPbc	PKPbc	04 20 19.0	-0.3
	comp=Z,0.3nm,0.4s,baz=245,slow=4.1,SNR=2.1						
ILAR	Eielson Array	152.61	308	PKPbc	PKPbc	04 20 24.3	-1.0
	comp=Z,1.2nm,0.7s,baz=116,slow=6.9,SNR=21						

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*IDC **28** 04:05:33.2±13.0, 59°.20S×23°.76W, h258^{km}±131^{km}, mb3.2/1, mbtmp3.9/2, Error ellipse: s-maj=99.3km s-min=43.4km az=99.0*
ISC 28 04:05:31.0±1.4, **59°.4S**±0°.2×**24°.8W**±0°.5, **h250**^{km}, **n13, σ1ˢ.82**/9, **4C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.20	155	⇑P	Pn	04 08 26.9	-2.1
	comp=Z,0.8nm,0.2s						
VNA3	Neumayer Olymp	13.39	159	⇑P	Pn	04 08 29.5	-1.9
	comp=Z,1.3nm,0.2s						
SNAA	Sanae	15.16	153	⇑P	P	04 08 53.2	+1.0
	comp=Z,25nm,0.4s						
SNAA	Sanae	15.16	153	P	Pn	04 08 53.3	+0.6
	comp=Z,1.6nm,0.5s,baz=318,slow=16,SNR=9.6						
SNAA				S	S	04 11 40.0	+0.6
	comp=Z,3.2nm,0.9s,baz=322,slow=18,SNR=2.1						
TROLL	Troll, Antarti	16.68	150	⇑P	Pn	04 09 13.3	+2.5
	comp=Z,17nm,0.1s						
H10S2	ASCENSION HYDR	50.93	13	T	T	05 08 27.9	
	baz=32,slow=74,SNR=8.3						
H10S3	ASCENSION HYDR	50.94	13	T	T	05 08 22.3	
	baz=188,slow=74,SNR=8.3						
H10N1	ASCENSION HYDR	52.05	13	T	T	05 09 45.9	
	baz=195						
H10N3	ASCENSION HYDR	52.05	13	T	T	05 09 50.0	
	baz=195						
H10N2	ASCENSION HYDR	52.07	13	T	T	05 09 53.6	
	baz=195						
TORD	Torodi Ar. Bea	75.43	27	P	P	04 16 46.1	-1.1
	comp=Z,0.5nm,0.5s,baz=195,slow=5.5,SNR=5.4						
	comp=Z,0.5nm,0.5s						
YKA	Yellowknife Ar	139.47	314	PKP	PKiKP	04 24 29.5	+0.2
	comp=Z,0.3nm,0.6s,baz=138,slow=1.6,SNR=5.1						
ILAR	Eielson Array	153.22	306	PKPbc	PKiKP	04 24 59.2	+1.7
	comp=Z,0.4nm,0.5s,baz=113,slow=6.0,SNR=9.6						

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*ATH **28** 04:08:11.8, 37°.17N×20°.40E, h6^{km}±2^{km}, ML3.6/13, Manual Solution by F.Xalaris First location: 2019/12/28 04:09:20, This location: 2020/10/21 07:34:36 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*IDC **28** 04:08:11.6±1.0, 37°.54N×20°.67E, h0^{km}, mb3.6/9, mbtmp3.6/20, ML3.3/8, Error ellipse: s-maj=16.0km s-min=14.3km az=161.0*
*THE **28** 04:08:14.4, 37°N±2°×2°1E±°, h3^{km}±3^{km}, M3.4/16, MLh3.4/16*
ISC 28 04:08:13.4±1.2, **37°.23N**±0°.04×**20°.44E**±0°.04, **h29**^{km}±9^{km}, **n86, σ1ˢ.53**/109, **mb3.7**/7, **4C-7D, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTHK	Lithakia	0.58	34	P	Pb	04 08 24.2	-0.8
LTHK				S	Sb	04 08 32.8	-0.2
ORTH	Orthonies,Zaky	0.66	18	P	Pb	04 08 26.2	-0.2
ORTH				S	Sb	04 08 35.8	+0.6
KYPS	Kipseli, Zakin	0.67	28	P	Pb	04 08 25.8	-0.7
KYPS				S	Sb	04 08 35.1	-0.3
CLEM	Kyllini,Ilia,G	0.86	40	P	Pn	04 08 29.8	+0.3
RTZL	Ratzakli, Kefa	0.89	17	P	Pb	04 08 29.7	-0.5
RTZL				S	Sb	04 08 40.9	-0.8
RTZL	Ratzakli, Kefa	0.89	17	P	Pb	04 08 29.8	-0.5
RTZL				S	Sn	04 08 42.9	+1.2
KFL1	Kefalonia,Entr	0.94	3	P	Pn	04 08 31.9	+1.3
ARG2	Argostoli	0.95	2	P	Pb	04 08 30.8	-0.4
ARG2				S	Sb	04 08 43.4	0.0
ARG2	Argostoli	0.95	2	P	Pn	04 08 31.2	+0.5
ARG2				S	Sn	04 08 44.5	+1.2
VLS	Valsamata	0.95	7	P	Pn	04 08 31.3	+0.4
VLS				S	Sb	04 08 43.5	-0.2
VLS	Valsamata	0.95	7	P	Pb	04 08 30.7	-0.7
VLS				S	Sn	04 08 44.5	+1.0
LCHA	Lechaina	0.97	43	P	Pn	04 08 32.5	+1.5
LXR1	Lixouri, Cepha	0.97	0	P	Pn	04 08 31.4	+0.4
LXR1				S	Sn	04 08 44.2	+0.4
ZARO	Zacharo	1.00	75	P	Pn	04 08 32.4	+1.0
DMLN	Damoulianata-K	1.01	357	P	Pn	04 08 31.9	+0.3
DMLN				S	Sn	04 08 45.6	+0.8
DMLN	Damoulianata-K	1.01	357	P	Pn	04 08 32.3	+0.7

PYL1	Pylos	1.05	107	P	Pb	04 08 32.8	-0.2
AMT	Artemida-Makis	1.06	73	P	Pb	04 08 33.0	-0.1
AMT				S	Sn	04 08 47.3	+1.3
PYL	PYLOS	1.10	107	P	Pb	04 08 33.2	-0.5
PYL				S	Sn	04 08 47.7	+0.8
PYL	PYLOS	1.10	107	P	Pb	04 08 33.2	-0.5
YRMI	Loutra Irminis	1.14	39	P	Pb	04 08 34.2	-0.2
RLS	Riolos of Patr	1.16	44	P	Pb	04 08 34.7	-0.2
RLS				S	Sn	04 08 50.5	+1.9
RLS	Riolos of Patr	1.16	44	P	Pb	04 08 34.5	-0.3
VSK1	VASILIKIADES	1.18	5	P	Pb	04 08 34.7	-0.5
VSK1				S	Sn	04 08 50.6	+1.5
ITM	Ithomi	1.19	92	P	Pb	04 08 35.3	-0.1
ITM				S	Sn	04 08 50.9	+1.6
ITM	Ithomi	1.19	92	P	Pb	04 08 35.1	-0.2
AXS	Araxos	1.22	37	P	Pb	04 08 35.5	-0.3
AXS				S	Sb	04 08 52.2	+1.0
AXS	Araxos	1.22	37	P	Pb	04 08 36.4	+0.6
EVGI	Lefkada island	1.40	7	P	Pb	04 08 38.2	-0.7
EVGI				S	Sb	04 08 57.2	+0.9
EVGI	Lefkada island	1.40	7	P	Pb	04 08 38.6	-0.3
AST1	Astakos	1.41	21	P	Pb	04 08 39.0	-0.1
AST1				S	Sb	04 08 56.1	-0.5
PATG	Patra B	1.44	45	P	Pb	04 08 40.8	+1.3
NYDR	Nydri-Lefkada	1.50	8	P	Pb	04 08 40.4	-0.1
KLV1	Kalavrita	1.55	58	P	Pb	04 08 41.1	-0.4
VLX	Vlachokerasia	1.56	84	P	Pb	04 08 40.4	-1.2
VLX				S	Sb	04 09 01.6	+0.7
VLX	Vlachokerasia	1.56	84	P	Pb	04 08 40.6	-1.0
LKD2	Lefkada island	1.57	6	P	Pb	04 08 42.3	+0.5
LKD2	Lefkada island	1.57	6	P	Pb	04 08 41.9	+0.2
KLV	Kalavryta, Ach	1.59	59	P	Pb	04 08 41.5	-0.6
KLV	Kalavryta, Ach	1.59	59	P	Pb	04 08 41.2	-0.9
TSLK	Tsoukalades, L	1.60	6	P	Pb	04 08 42.4	0.0
PVO	Paravola	1.63	32	P	Pb	04 08 42.8	0.0
EFP	Efpalio	1.67	44	P	Pb	04 08 43.0	-0.5
GUR	Goura	1.67	64	P	Pb	04 08 42.2	-1.4
VLI	Veliai	2.07	104	P	Pb	04 08 48.6	-1.6
TIP	Timpagrande	3.49	305	⇑P	Pn	04 09 08.3	+2.5
TIP				⇓S	Sn	04 09 46.0	-0.1
IDI	Anoyia	4.09	117	Pn	Pn	04 09 14.7	+0.7
	4.2nm,0.7s,baz=191,slow=3.5,SNR=11						
IDI				Sn	Sn	04 10 01.6	+0.8
	2.8nm,0.3s,baz=329,slow=22,SNR=9.0						
MATE	Matera	4.49	321	⇑P	Pn	04 09 20.3	+0.9
VAE	Valguarnera	4.81	275	Pn	Pn	04 09 29.3	+5.5
	16nm,0.7s,baz=221,slow=7.4,SNR=3.1						
VAE				Sn	Sn	04 10 15.6	-2.9
	1.2nm,0.3s,baz=194,slow=17,SNR=1.5						
PDG	Podgorica	5.27	350	⇑P	Pn	04 09 30.7	+0.6
PDG				⇑S	Sn	04 10 27.5	-2.4
BOVS	Bovan	6.47	8	⇓P	Pn	04 09 48.0	+1.4
HERR	Herculane	7.79	10	⇓P	Pn	04 10 06.4	+1.7
GZR	Gura Zlata	8.35	11	⇓P	Pn	04 10 14.5	+2.1
BZS	Buzias	8.43	6	⇓P	Pn	04 10 15.9	+2.4
KEST	Kesra	9.06	264	Pn	Pn	04 10 27.3	+5.1
	0.2nm,0.3s,baz=56,slow=17,SNR=4.2						
KEST				Sn	Sn	04 12 04.3	+1.1
	0.1nm,0.3s,baz=293,slow=15,SNR=2.6						
	2.7nm,0.7s						
MLR	Muntele Rosu	9.23	25	Pn	Pn	04 10 23.0	-1.6
	0.3nm,0.3s,baz=168,slow=17,SNR=3.4						
MLR				Sn	Sn	04 12 01.9	-5.6
	0.1nm,0.3s,baz=150,slow=18,SNR=0.6						
	0.8nm,0.4s						
MLR	Muntele Rosu	9.23	25	⇓P	Pn	04 10 27.8	+3.2
PLOR	Plostina	9.79	26	⇓P	Pn	04 10 36.4	+4.2
OBKA	Obir	10.26	337	ePn	Pn	04 10 41.5	+2.9
	1.9nm,0.6s						
SOKA	Soboth	10.26	339	i Pn	Pn	04 10 38.2	-0.5
	0.4nm,0.2s						
ARSA	Arzberg	10.65	342	ePn	Pn	04 10 46.8	+2.9
	0.6nm,0.3s						
ABTA	Abfaltersbach	11.18	331	ePn	Pn	04 10 54.4	+3.2
	0.9nm,0.4s						
MOA	Molln	11.54	339	i Pn	Pn	04 10 57.1	+1.0
	0.6nm,0.3s						
BIOA	Bad Ischl, Aus	11.59	337	ePn	Pn	04 10 58.9	+2.1
	0.9nm,0.3s						
LESA	Schwarzleotal	11.69	333	i Pn	Pn	04 10 59.8	+1.7
	1.1nm,0.3s						
WTTA	Wattenberg	11.95	330	ePn	Pn	04 11 04.4	+2.5
	0.6nm,0.5s						
WATA	Walderalm	12.03	330	ePn	Pn	04 11 05.4	+2.4
	0.3nm,0.2s						
SQTA	Sankt Quirin	12.09	329	ePn	Pn	04 11 04.0	+0.3
	0.7nm,0.2s						
FETA	Feichten	12.14	327	ePn	Pn	04 11 06.2	+1.8
	0.1nm,0.3s						
DAVOX	Davos/Dischmat	12.35	324	Pn	Pn	04 11 08.4	+1.1
	0.1nm,0.3s,baz=340,slow=23,SNR=3.6						
DAVOX				Sn	Sn	04 13 24.5	+0.7
	0.2nm,0.3s,baz=345,slow=20,SNR=2.0						
	0.7nm,0.5s						
GERES	GERESS Array B	12.61	339	Pn	Pn	04 11 09.3	-1.4
	baz=150,slow=13,SNR=1.6						
GERES				Sn	Sn	04 13 24.5	-5.5
	baz=151,slow=23,SNR=2.8						
	0.2nm,0.6s						
MMAI	Mount Meron Ar	12.95	105	Sn	Sn	04 13 27.8	-11
	1.2nm,0.3s,baz=258,slow=35,SNR=2.0						
EIL	Elat	14.26	118	Pn	Pn	04 11 33.7	+0.4
	0.2nm,0.3s,baz=319,slow=18,SNR=1.8						
EIL				Sn	Sn	04 13 59.2	-11
	0.3nm,0.3s,baz=176,slow=13,SNR=1.1						
	4.0nm,0.9s						
ASF	Jabal al Asfar	14.45	106	Pn	Pn	04 11 36.5	+0.6
	0.1nm,0.3s,baz=301,slow=19,SNR=1.9						
	2.6nm,1.0s						
AKASG	Malin Array Be	14.86	22	Pn	Pn	04 11 38.5	-2.8
	0.6nm,0.3s,baz=211,slow=8.9,SNR=1.7						
	0.1nm,0.3s						
KVAR	Kislovodsk Arr	18.16	61	P	Pn	04 12 20.5	-2.9
	1.4nm,0.3s,baz=270,slow=15,SNR=2.0						
ESDC	Sonseca Array	19.25	285	P	Pn	04 12 37.0	+0.4
	baz=93,slow=11,SNR=4.6						
	0.9nm,1.0s						
MDT	Midelt	20.95	265	P	Pn	04 12 57.8	+1.0
	1.5nm,0.7s,baz=23,slow=5.7,SNR=3.8						
	1.5nm,0.7s						
HFS	Hagfors	23.33	351	P	P	04 13 18.5	-0.3
	2.6nm,0.8s,baz=166,slow=7.9,SNR=5.9						
	2.6nm,0.8s						
EKA	Eskdalemuir Ar	24.17	326	P	P	04 13 28.1	+1.2
	5.4nm,1.0s,baz=124,slow=9.5,SNR=3.8						
	5.4nm,1.0s						
FINES	FINESS Array B	24.50	7	P	P	04 13 29.2	-0.5
	2.6nm,0.9s,baz=169,slow=16,SNR=1.8						
	2.6nm,0.9s						
NOA	NORSAR Array B	24.54	349	P	P	04 13 30.8	+0.6
	1.0nm,0.8s,baz=161,slow=10.0,SNR=1.9						
	1.0nm,0.8s						
TORD	Torodi Ar. Bea	29.25	220	P	P	04 14 19.3	+6.3
	0.5nm,0.8s,baz=42,slow=6.9,SNR=3.9						
	0.5nm,0.8s						
BVAR	Borovoye Array	37.78	49	P	P	04 15 26.6	-0.2
	0.4nm,0.7s,baz=258,slow=12,SNR=1.7						
	0.4nm,0.7s						
MKAR	Makanchi Array	45.86	58	P	P	04 16 32.2	-0.7
	0.3nm,0.5s,baz=282,slow=5.9,SNR=4.9						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	46.38	47	P	P	04 16 36.7	-0.1
	0.4nm,0.4s,baz=284,slow=5.8,SNR=2.1						
	0.4nm,0.4s						

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*IDC **28** 04:14:46.3±0.5, 55°.65S×26°.92W, h0^{km}, mb4.6/11, mbtmp4.5/12, ML3.9/1, MS3.9/21, Error ellipse: s-maj=24.3km s-min=15.8km az=65.0*

*NEIC **28** 04:14:48.4±1.3, 55°.67S±0°.04×27°.0W±0°.2, h10^{km}±1^{km}, mb5.0/45, Error ellipse: s-maj=19.5km s-min=6.6km az=81.0*

ISC 28 04:14:50.1±0.5**, 55°.67S**±0°.09×**27°.0W**±0°.1**, h25^{km}, n109, σ0^{s}.78**/75**, mb4.9**/26**, MS3.9**/21**, 4C-1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.65	280		Pn	04 16 12.1	-0.3
VNA1	Neumayer--Stat	17.10	159	⇑P	P	04 18 48.9	+0.3
	comp=Z,30nm,0.8s						
VNA3	Neumayer Olymp	17.31	161	⇑P	P	04 18 51.0	+0.1
	comp=Z,13nm,0.6s						
SNAA	Sanae	19.04	157	⇑P	P	04 19 09.4	-0.6
	comp=Z,335nm,0.8s						
SNAA	Sanae	19.04	157	P	Pn	04 19 09.9	-0.9
	comp=Z,0.3nm,0.3s,baz=317,slow=11,SNR=11						
	comp=Z,14nm,1.1s						
SNAA	Sanae	19.04	157		P	04 19 09.8	-0.2
PMSA	Palmer Station	20.24	228	P	Pn	04 19 23.9	-1.1
	comp=Z,27nm,0.6s,baz=35,slow=11,SNR=8.4						
PMSA				LR	LR	04 25 58.4	
	comp=Z,284nm,20.5s,baz=45,slow=33						
	comp=Z,27nm,0.6s						
PMSA	Palmer Station	20.24	228	IAmb	IAmb	04 19 28.0	
	comp=Z,87nm,1.3s						
TROLL	Troll, Antarti	20.53	154	⇑P	P	04 19 25.4	-1.0
	comp=Z,420nm,0.7s						
BELA	Belgrano 2	22.46	184		P	04 19 45.5	-1.4
MG02	Cerro Sombrero	24.59	259	P	P	04 20 07.0	-0.8
MG05	Puerto Natales	26.88	259	P	P	04 20 27.0	-1.6
MG05				IAmb	IAmb	04 21 03.3	
	comp=Z,61nm,1.4s						
TRQA	Tornquist	29.29	292		P	04 20 49.9	-0.3
TRQA				IAmb	IAmb	04 20 51.7	
	comp=Z,20nm,1.1s						
SYO	Syowa Base	31.80	141	⇓esP	P	04 21 13.2	+1.2
PLCA	Paso Flores	32.06	279	LR	LR	04 35 09.8	
	comp=Z,100nm,18.2s,baz=124,slow=38						
QSPA	South Pole Qui	34.58	180	LR	LR	04 36 42.0	
	comp=Z,184nm,18.7s,baz=193,slow=38						
QSPA	South Pole Qui	34.58	180	P	P	04 21 37.5	+1.0
QSPA				IAmb	IAmb	04 21 46.6	
	comp=Z,13nm,0.7s						
CPUP	Villa Florida	36.66	311		P	04 21 53.9	-0.6
CPUP	Villa Florida	36.66	311	P	P	04 21 54.0	-0.4
	comp=Z,7.2nm,0.9s,baz=151,slow=9.2,SNR=16						
CPUP				LR	LR	04 37 54.6	
	comp=Z,144nm,18.4s,baz=149,slow=38						
	comp=Z,7.2nm,0.9s						
ZON	Zonda	37.80	292	P	P	04 22 03.7	-0.6
VA03	San Esteban	37.85	289	P	P	04 22 05.4	+0.7
VA03				IAmb	IAmb	04 22 49.8	
	comp=Z,44nm,1.4s						
AMBA	Amambai (Brazi	38.72	316	eP	P	04 22 12.1	+0.2
CO02	Combarbal	39.30	290	P	P	04 22 16.8	-0.1
CO01	Juntas del Tor	39.78	292	P	P	04 22 21.0	-0.1
MAW	Mawson	40.38	144	P	P	04 22 25.5	+0.2
	comp=Z,6.7nm,0.7s,baz=228,slow=7.7,SNR=14						
MAW				LR	LR	04 38 25.2	
	comp=Z,119nm,19.7s,baz=263,slow=35						
	comp=Z,6.7nm,0.7s						
SUR	Sutherland	40.42	75	LR	LR	04 36 33.6	
	comp=Z,200nm,18.0s,baz=206,slow=32						
AC05	El Transito	40.79	293		P	04 22 29.6	+0.3
AC05				IAmb	IAmb	04 22 31.4	
	comp=Z,21nm,0.8s						
AQDB	Aquidauana	41.21	317		P	04 22 31.8	-0.8
AQDB	Aquidauana	41.21	317	eP	P	04 22 32.3	-0.3
BDQN	Bodoquena, MS	41.64	316	eP	P	04 22 35.4	-0.8
AC04	Llanos de Chal	41.71	293		P	04 22 37.0	+0.2
AC04				IAmb	IAmb	04 22 37.9	
	comp=Z,39nm,0.9s						
GO03	Copiapo	41.77	294	P	P	04 22 37.5	+0.2
GO03				IAmb	IAmb	04 22 38.0	
	comp=Z,18nm,0.8s						
AC02	Maricunga	41.82	296		P	04 22 39.8	+1.6
AC02				IAmb	IAmb	04 22 40.4	
	comp=Z,30nm,0.9s						
AC06	Mina Casimiro	42.02	294	P	P	04 22 39.0	-0.3
AC06				IAmb	IAmb	04 22 40.1	
	comp=Z,43nm,1.4s						
BDFB	Brasilia	43.10	330	P	P	04 22 48.3	+0.1
	comp=Z,1.6nm,0.8s,baz=249,slow=12,SNR=2.0						
BDFB				LR	LR	04 38 52.5	
	comp=Z,188nm,19.5s,baz=148,slow=34						
	comp=Z,1.6nm,0.8s						
GO02	Mina Guanaco	43.43	297		P	04 22 51.8	+0.7
GO02				IAmb	IAmb	04 22 52.6	
	comp=Z,23nm,0.8s						
ARAG	Araguaiana, MT	44.21	325	eP	P	04 22 58.1	+1.1
AF01	San Pedro de A	44.57	300	P	P	04 23 01.9	+1.6
SALV	Santo Antonio	45.38	319	eP	P	04 23 06.4	+0.1
PB09	IPOC Station P	46.07	300	P	P	04 23 13.1	+1.1
PB09				IAmb	IAmb	04 23 14.4	
	comp=Z,28nm,1.1s						
SBA	Scott Base	46.47	184	P	P	04 23 16.0	+1.8
PB01	IPOC Station P	46.83	300	P	P	04 23 19.1	+1.2
VNDA	Vanda	46.96	183	P	P	04 23 18.1	0.0
	comp=Z,10nm,0.8s,baz=188,slow=6.6,SNR=42						
VNDA				LR	LR	04 41 41.6	
	comp=Z,63nm,19.8s,baz=178,slow=34						
	comp=Z,10nm,0.8s						
VNDA	Vanda	46.96	183		P	04 23 19.3	+1.3
VNDA				IAmb	IAmb	04 23 20.7	
	comp=Z,9.4nm,0.7s						
PTLB	Pontes e Lacer	47.11	316		P	04 23 20.1	+0.1
PTLB				IAmb	IAmb	04 23 21.1	
	comp=Z,17nm,0.9s						
PTLB	Pontes e Lacer	47.11	316	eP	P	04 23 20.3	+0.3
SIV	San Ignacio	47.41	313	LR	LR	04 42 30.5	
	comp=Z,99nm,20.7s,baz=152,slow=35						
PB08	IPOC Station P	47.43	301	IAmb	IAmb	04 23 37.0	
	comp=Z,17nm,0.9s						
H04S2	CROZET ISLANDS	47.59	114	T	T	05 15 16.3	
	baz=230,slow=74						
H04S3	CROZET ISLANDS	47.60	114	T	T	05 15 09.7	
	baz=230						
H10S2	ASCENSION HYDR	47.60	17	T	T	05 14 44.6	
	baz=189						
H10S3	ASCENSION HYDR	47.61	17	T	T	05 14 48.3	
	baz=31						
H04S1	CROZET ISLANDS	47.61	114	T	T	05 15 10.7	
	baz=230,slow=74						
H10N1	ASCENSION HYDR	48.72	17	T	T	05 16 18.2	
	baz=188,slow=74						
H10N3	ASCENSION HYDR	48.72	17	T	T	05 16 11.2	
	baz=188						
H10N2	ASCENSION HYDR	48.74	17	T	T	05 16 12.8	
	baz=188,slow=74						
LBTB	Lobatse	48.78	73	LR	LR	04 41 16.3	
	comp=Z,79nm,18.8s,baz=211,slow=33						
TSUM	Tsumeb	49.39	61	LR	LR	04 41 30.0	
	comp=Z,122nm,20.1s,baz=154,slow=32						
NBPV	Pedro Velho	49.57	349	eP	P	04 23 32.2	-6.7
PDRB	Porto dos Gac	49.71	320	eP	P	04 23 39.9	-0.1
VILB	Vilhena	49.80	316	IAmb	IAmb	04 23 41.4	
	comp=Z,14nm,1.0s						
VILB	Vilhena	49.80	316	eP	P	04 23 40.7	0.0
LPAZ	La Paz	50.26	305	P	P	04 23 45.2	+0.3
	comp=Z,12nm,0.9s,baz=149,slow=4.7,SNR=34						
LPAZ				LR	LR	04 45 22.0	
	comp=Z,58nm,20.4s,baz=188,slow=36						
	comp=Z,12nm,0.9s						
LPAZ	La Paz	50.26	305	IAmb	IAmb	04 23 46.8	
	comp=Z,18nm,1.1s						
LPAZ	La Paz	50.26	305	eP	P	04 23 45.6	+0.7
NPGB	Novo Progresso	53.48	324	eP	P	04 24 07.5	-0.7
MATP	Matopo	54.05	73	LR	LR	04 45 17.5	
	comp=Z,90nm,18.5s,baz=253,slow=34						
LSZ	Lusaka	58.12	69	LR	LR	04 48 22.0	
	comp=Z,124nm,18.1s,baz=192,slow=35						
TEFE	Tefe	60.15	315	eP	P	04 24 54.7	-0.8
RPN	Rapa Nui	63.84	260	LR	LR	04 50 33.1	
	comp=Z,42nm,20.3s,baz=136,slow=34						
BOAV	Boa Vista	64.06	322	P	P	04 25 21.5	-0.2
BOAV				IAmb	IAmb	04 25 22.5	
	comp=Z,14nm,1.1s						
BOAV	Boa Vista	64.06	322	eP	P	04 25 21.5	-0.2
DBIC	Dimbokro	64.77	24	P	P	04 25 26.4	+0.2
	comp=Z,1.8nm,0.6s,baz=196,slow=7.4,SNR=3.6						
DBIC				LR	LR	04 47 02.1	
	comp=Z,134nm,21.1s,baz=190,slow=30						
	comp=Z,1.8nm,0.6s						
DBIC	Dimbokro	64.77	24	IAmb	IAmb	04 27 37.4	
	comp=Z,24nm,1.8s						
OTAV	Otavalo	69.55	303	P	P	04 25 58.9	+1.7
OTAV				IAmb	IAmb	04 26 00.6	
	comp=Z,16nm,1.5s						
OTAV	Otavalo	69.55	303	eP	P	04 25 58.6	+1.4
ROSC	El Rosal	71.73	309	IAmb	IAmb	04 26 11.9	
	comp=Z,9.9nm,1.0s						
ROSC	El Rosal	71.73	309	P	P	04 26 10.8	+0.4
	comp=Z,5.8nm,0.7s,baz=106,slow=22,SNR=2.1						
ROSC				LR	LR	04 59 00.9	
	comp=Z,87nm,20.6s,baz=109,slow=37						
	comp=Z,5.8nm,0.7s						
MBAR	Mbarara	71.87	63	LR	LR	04 54 15.6	
	comp=Z,80nm,21.6s,baz=206,slow=33						
TORD	Torodi Ar. Bea	72.67	29	P	P	04 26 15.8	+0.4
	comp=Z,1.9nm,0.7s,baz=201,slow=5.5,SNR=13						
	comp=Z,1.9nm,0.7s						
SDV	Santo Domingo	73.83	315	LR	LR	05 00 48.2	
	comp=Z,109nm,19.8s,baz=168,slow=37						
SDV	Santo Domingo	73.83	315	P	P	04 26 21.6	-1.0
SDV				IAmb	IAmb	04 26 33.8	
	comp=Z,12nm,1.1s						
FURI	Furi	84.02	65	LR	LR	05 03 08.2	
	comp=Z,140nm,19.4s,baz=246,slow=35						
SIUN	Universidad Ur	84.31	304	IAmb	IAmb	04 27 20.5	
	comp=Z,6.4nm,1.0s						
MTO3	Montecristo	87.09	301	IAmb	IAmb	04 27 34.5	
	comp=Z,7.1nm,0.9s						
TBI	Tubuai	87.42	231	eLR	LR	04 55 14.3	
	comp=Z,501nm,27.8s						
TEIG	Tepich	91.59	305	P	P	04 27 55.4	+0.8
STKA	Stephens Creek	92.25	170	P	P	04 27 58.8	+1.1
	comp=Z,1.0nm,0.4s,baz=129,slow=19,SNR=3.9						
	comp=Z,1.0nm,0.4s						
PPT2	Papeete2	92.50	234	eLR	LR	04 57 36.0	
	comp=Z,139nm,32.5s						
TAOE	Nuku Hiva Isla	95.41	246	eLR	LR	04 59 02.5	
	comp=Z,112nm,23.9s						
ASAR	Alice Springs	99.31	162	P	Pdif	04 28 28.7	-1.3
	comp=Z,1.3nm,0.7s,baz=183,slow=4.2,SNR=16						
ASAR				LR	LR	05 10 58.0	
	comp=Z,49nm,20.4s,baz=140,slow=34						
	comp=Z,1.3nm,0.7s						
FINES	FINESS Array B	123.99	28	PKP	PKiKP	04 33 44.4	-0.4
	comp=Z,1.4nm,0.8s,baz=147,slow=4.5,SNR=8.3						
CMAR	Chiang Mai Arr	125.08	110	PKP	PKPdf	04 33 47.1	-0.9
	comp=Z,1.6nm,0.3s,baz=230,slow=3.6,SNR=12						
ARCES	ARCESS Array B	130.55	22	PKP	PKiKP	04 33 56.9	-0.8
	comp=Z,9.1nm,1.0s,baz=312,slow=13,SNR=4.6						
BVAR	Borovoye Array	134.47	57	PKP	PKiKP	04 34 05.4	-0.7
	comp=Z,2.1nm,0.8s,baz=225,slow=1.9,SNR=8.0						
YKA	Yellowknife Ar	135.97	318	PKP	PKPdf	04 34 06.5	-0.8
	comp=Z,1.3nm,0.8s,baz=143,slow=1.6,SNR=17						
MKAR	Makanchi Array	136.65	71	PKP	PKiKP	04 34 10.2	-0.6
	comp=Z,0.5nm,0.6s,baz=240,slow=2.1,SNR=5.1						
ZALV	Zalesovo Beam	142.09	63	PKhKP	PKPpre	04 34 14.1	
	comp=Z,1.1nm,0.7s,baz=249,slow=2.9,SNR=5.8						
INK	Inuvik	145.59	321		PKPab	04 34 24.9	0.0
DAWY	Dawson	146.63	312		PKPbc	04 34 27.8	-0.2
BCAR	Beaver Creek A	147.34	310		PKPbc	04 34 30.3	+0.2
D27M	Malcolm River	148.43	322		PKiKP	04 34 33.7	-0.6
NRIK	Noril'sk	148.64	38	PKPbc	PKPbc	04 34 32.9	-0.3
	comp=Z,4.5nm,0.9s,baz=189,slow=2.8,SNR=5.7						
ILAR	Eielson Array	149.95	312		PKiKP	04 34 36.6	-0.9
ILAR	Eielson Array	149.95	312	PKPbc	PKPbc	04 34 36.4	-0.3
	comp=Z,14nm,0.9s,baz=125,slow=1.6,SNR=93						
SONM	Songino Array	150.58	86	PKPbc	PKiKP	04 34 39.0	-0.5
	comp=Z,7.6nm,0.8s,baz=220,slow=3.2,SNR=27						
SONM	Songino Array	150.58	86		PKiKP	04 34 39.0	-0.5
MCK	McKinley	150.62	310		PKiKP	04 34 38.7	-0.3
C23K	Itkillik River	151.85	322		PKiKP	04 34 41.4	+0.1

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*IDC **28** 04:30:02.7±8.4, 19°.74S×177°.70W, h548^{km}±86^{km}, mb3.3/5, mbtmp4.3/5, Error ellipse: s-maj=110.9km s-min=38.8km az=150.0*

ISC 28 04:30:03.0±2.0**, 19°.5S**±0°.7×**177°.8W**±0°.4**, h550^{km}, n8, σ0^{s}.53**/8**, mb4.1**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	33.80	263	P	P	04 36 00.6	+0.6
	4.9nm,0.5s,baz=87,slow=11,SNR=15						
	4.9nm,0.5s						
WRA	Warramunga Arr	44.95	261	P	P	04 37 29.5	-0.1
	3.1nm,0.3s,baz=97,slow=6.8,SNR=41						
	3.1nm,0.3s						
ASAR	Alice Springs	44.95	256	P	P	04 37 29.2	-0.4
	4.6nm,0.7s,baz=92,slow=7.6,SNR=91						
ASAR				PcP	PcP	04 38 58.5	-0.7
	0.3nm,0.5s,baz=107,slow=3.8,SNR=4.4						
	4.6nm,0.7s						
TXAR	Lajitas Array	86.36	57	P	P	04 41 48.0	+0.5
	0.2nm,0.7s,baz=245,slow=5.3,SNR=2.2						
	0.2nm,0.7s						
ILAR	Eielson Array	87.31	13	P	P	04 41 50.7	-0.4
	1.4nm,1.2s,baz=199,slow=5.1,SNR=3.0						
	1.4nm,1.2s						
AKASG	Malin Array Be	142.25	332	PKhKP	PKPpre	04 48 29.9	
	0.9nm,0.5s,baz=46,slow=4.4,SNR=2.5						
BRTR	Keskin Array B	146.32	314	PKPbc	PKPbc	04 48 43.0	+0.2
	0.4nm,0.4s,baz=134,slow=5.7,SNR=2.4						
GERES	GERESS Array B	149.31	345	PKPbc	PKiKP	04 48 50.7	-0.2
	0.4nm,1.0s,baz=11,slow=4.8,SNR=5.3						

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*KRSC **28** 04:31:58.0±2.1, 59°.02N×158°.37E, h14^{km}±19^{km}, Ml4.8*

*IDC **28** 04:32:02.5±0.7, 58°.27N×159°.59E, h0^{km}, mb3.6/14, mbtmp3.7/17, ML4.7/2, MS4.0/62, Error ellipse: s-maj=13.9km s-min=10.1km az=14.0*

*MOS **28** 04:32:04.7±1.9, 58°.78N×159°.06E, h19^{km}, mb4.4/11, MS4.2/6, Error ellipse: s-maj=11.7km s-min=5.1km az=96.2*

*NEIC **28** 04:32:04.9±1.6, 58°.92N±0°.06×159°.0E±0°.2, h10^{km}±1^{km}, mb4.4/12, Error ellipse: s-maj=19.7km s-min=7.0km az=243.0*

*NERS **28** 04:32:08.1, 59°.95N×158°.52E, h33^{km}*

ISC 28 04:32:04.5±0.4**, 58°.81N**±0°.03×**158°.88E**±0°.02**, h10^{km}, n158, σ2^{s}.25**/123**, mb4.0**/29**, MS4.0**/57**, 3D, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALN	Palana	0.63	63	PN	Pg	04 32 13.0	-3.7
PALN				S	Sg	04 32 25.0	0.0
PALN	Palana	0.63	63	eP	Pg	04 32 13.1	-3.7
PALN				eS	Sg	04 32 25.1	0.0
OSSR	Ossora	2.21	77	PN	Pn	04 32 39.5	-1.6
OSSR	Ossora	2.21	77	eP	Pn	04 32 39.5	-1.6
SMKR	Semkarok	2.63	147	PN	Pn	04 32 47.1	+0.1
SMKR				S	Sb	04 33 22.4	-1.7
SMKR	Semkarok	2.63	147	eP	Pn	04 32 47.1	+0.1
SMKR				eS	Sb	04 33 22.4	-1.7
KLY	Klyuchi	2.68	158	PN	Pn	04 32 48.2	+0.6
KLY	Klyuchi	2.68	158	eP	Pn	04 32 48.2	+0.6
KOZ	Kozyrevsk	2.81	169	PN	Pn	04 32 48.6	-0.8
KOZ	Kozyrevsk	2.81	169	eP	Pn	04 32 48.7	-0.8
CIRR	Tsirk	2.88	159	PN	Pn	04 32 49.1	-1.5
CIRR	Tsirk	2.88	159	eP	Pn	04 32 49.1	-1.5
ESO	Esso	2.89	182	PN	Pn	04 32 47.8	-2.8
ESO	Esso	2.89	182	eP	Pn	04 32 47.9	-2.8
KIRR	Kirishev	2.97	164	PN	Pn	04 32 49.8	-2.0
KIRR	Kirishev	2.97	164	eP	Pn	04 32 49.9	-2.0
BZWR	Bezymyannyi-We	2.98	162	PN	Pn	04 32 53.2	+1.2
BZWR	Bezymyannyi-We	2.98	162	eP	Pn	04 32 53.3	+1.2
BZP	Bezymyannyi-Pe	3.04	162	PN	Pn	04 32 53.0	+0.2
BZP	Bezymyannyi-Pe	3.04	162	eP	Pn	04 32 53.0	+0.2
KMNR	Kamenistaya	3.15	166	PN	Pn	04 32 54.4	+0.2
KMNR	Kamenistaya	3.15	166	eP	Pn	04 32 54.5	+0.2
KBTR	Krutoberegovo	3.36	139	PN	Pb	04 33 01.1	-3.0
KBTR	Krutoberegovo	3.36	139	eP	Pb	04 33 01.2	-3.0
KZV	Kizimen	3.79	168	PN	Pn	04 33 04.4	+1.4
KZV	Kizimen	3.79	168	eP	Pn	04 33 04.5	+1.4
GADL	Gadlja	3.98	286	eP	Pn	04 32 47.2	-18
GADL				eSg	Sg	04 34 09.8	-2.3
GADL				Sgmax		04 34 36.1	
	2µm,1.0s						
GADL				Sgmax		04 34 36.1	
	620nm,1.0s						
TLAR	Talaya	4.00	308	eP	Pn	04 33 05.3	-0.6
TLAR				ePg	Pg	04 33 19.3	-1.8
TLAR				Pgmax		04 33 25.1	
	150nm,0.6s						
TLAR				eS	Sn	04 33 53.7	+0.9
TLAR				eSg	Sg	04 34 10.2	-2.7
TLAR				Sgmax		04 34 32.2	
	380nm,1.0s						
TLAR				Sgmax		04 34 32.2	
	360nm,1.0s						
TLAR	Talaya	4.00	308	ePN	Pn	04 33 05.3	-0.6
TILK	Tilichiki	4.04	63	PN	Pn	04 33 05.1	-1.2
TILK	Tilichiki	4.04	63	eP	Pn	04 33 05.1	-1.2
MA2	Magadan	4.24	284	Pn	Pb	04 33 14.7	-4.4
	3.1nm,0.3s,baz=83,slow=14,SNR=6.8						
MA2				Pg	Pg	04 33 23.7	-2.0
	4.9nm,0.3s,baz=112,slow=13,SNR=9.5						
MA2				Sn	Sb	04 34 10.3	0.0
	6.2nm,0.3s,baz=136,slow=12,SNR=9.2						
MA2				LR	LR	04 34 52.9	
	comp=Z,3µm,21.0s,baz=99,slow=36						
	13nm,0.5s						

MA2	**Magadan**	**4.24**	**284**	Pn	**Pn**	**04 33 09.0**	**-0.2**
MA2	**Magadan**	**4.24**	**284**	*e*P	**Pn**	**04 33 10.0**	**+0.9**
MA2				*e*Pg	**Pg**	**04 33 24.8**	**-0.9**
MA2				Pgmax		04 33 26.6	
	50nm,0.6s						
MA2				*e*Sg	**Sg**	**04 34 16.6**	**-4.0**
MA2				Sgmax		04 34 22.3	
	340nm,0.7s						
MA2				Sgmax		04 34 22.3	
	110nm,0.7s						
MA2	**Magadan**	**4.24**	**284**	*e*PN	**Pn**	**04 33 10.0**	**+0.9**
MGD	**Magadan 1**	**4.34**	**290**	*e*P	**Pn**	**04 33 08.8**	**-1.7**
MGD				Pmax		04 33 09.0	
	10.0nm,0.3s						
MGD				*e*P	**Sb**	**04 34 17.1**	**+3.9**
MGD				*e*Sg	**Sg**	**04 34 18.9**	**-4.9**
MGD				Sgmax		04 34 29.7	
	160nm,0.6s						
MGD				Sgmax		04 34 29.7	
	220nm,0.6s						
MGD	**Magadan 1**	**4.34**	**290**	*e*PN	**Pn**	**04 33 08.8**	**-1.7**
SEY	**Seymchan**	**5.21**	**325**	Pn	Pb	04 33 30.2	-5.5
	2.7nm,0.5s,baz=126,slow=16,SNR=3.6						
SEY				Pg	**Pg**	**04 33 40.1**	**-4.2**
	0.9nm,0.3s,baz=5.5,slow=23,SNR=5.3						
SEY				Sn	**Sb**	**04 34 35.2**	**-3.1**
	2.0nm,0.3s,baz=165,slow=12,SNR=4.1						
SEY				Lg	Lg	04 34 55.9	
	4.9nm,0.3s,baz=16,slow=22,SNR=7.9						
SEY				LR	LR	04 35 34.6	
	comp=Z,3µm,20.4s,baz=158,slow=36						
SEY	**Seymchan**	**5.21**	**325**	*e*P	**Pn**	**04 33 21.9**	**-0.5**
SEY				*e*Pg	**Pg**	**04 33 42.1**	**-2.2**
SEY				Pgmax		04 33 42.8	
	10.0nm,0.7s						
SEY				*e*Sg	**Sg**	**04 34 48.6**	**-3.1**
SEY				Sgmax		04 35 26.9	
	140nm,1.0s						
SEY				Sgmax		04 35 26.9	
	70nm,0.9s						
SEY	**Seymchan**	**5.21**	**325**	*e*PN	**Pn**	**04 33 21.9**	**-0.5**
TLON	**Talon**	**5.33**	**285**	*e*Sg	**Sg**	**04 34 52.1**	**-3.2**
TLON				Sgmax		04 35 14.6	
	710nm,0.8s						
TLON				Sgmax		04 35 14.6	
	470nm,0.7s						
PEA0B	**Petropavlovsk-**	**5.75**	**187**	Pn	**Pn**	**04 33 29.9**	**0.0**
PEA0B	**Petropavlovsk-**	**5.75**	**187**	PN	**Pn**	**04 33 29.9**	**0.0**
PETK	**Petropavlovsk-**	**5.75**	**187**	Pn	Pn	04 33 22.2	-7.7
	0.1nm,0.3s,baz=32,slow=14,SNR=1.4						
PETK				Pg	Pb	04 33 38.7	-6.1
	0.3nm,0.3s,baz=7.3,slow=16,SNR=1.4						
PETK				Lg	Lg	04 34 51.0	
	0.5nm,0.3s,baz=13,slow=29,SNR=0.9						
PETK				LR	LR	04 36 02.0	
	comp=Z,1µm,20.9s,baz=360,slow=45						
PETK	**Petropavlovsk-**	**5.75**	**187**	Pn	**Pn**	**04 33 31.3**	**+1.4**
PET	**Petropavlovsk**	**5.80**	**181**	*e*PN	**Pb**	**04 33 42.6**	**-3.0**
PET				MLR	MLR		
	comp=Z,3µm,8.0s						
PET				MLR	MLR		
	comp=Z,4µm,8.0s						
SUUS	**Susuman**	**6.58**	**312**	*e*P	**Pn**	**04 33 38.2**	**-3.0**
SUUS				*e*Sg	**Sg**	**04 35 31.2**	**-4.3**
SUUS				Sgmax		04 35 48.9	
	comp=Z,190nm,1.0s						
SUUS				Sgmax		04 35 48.9	
	comp=Z,70nm,0.8s						
SUUS	**Susuman**	**6.58**	**312**	*e*PN	**Pn**	**04 33 38.2**	**-3.0**
BILL	**Bilibino**	**9.83**	**16**	*e*Sg		04 37 21.8	
BILL				Sgmax		04 37 32.6	
	comp=Z,60nm,1.7s						
BILL				Sgmax		04 37 32.6	
	comp=Z,20nm,1.5s						
BILL	**Bilibino**	**9.83**	**16**	*i* PN	**Pn**	**04 34 27.5**	**+1.8**
OKH	**Okha**	**10.32**	**246**	*de*PN	**Pn**	**04 34 29.4**	**-3.0**
OKH				MLR	MLR		
	comp=E,2µm,13.0s						
OKH				MLR	MLR		
	comp=Z,2µm,13.0s						
OKH				MLR	MLR		
	comp=N,2µm,13.0s						
SHEM	**Shemya Is, Ala**	**10.50**	**119**	LR	LR	04 38 05.7	
	comp=N,545nm,19.2s,baz=286,slow=37						
YAK	**Yakutsk**	**14.71**	**295**		**Pn**	**04 35 30.4**	**-2.0**
YAK	**Yakutsk**	**14.71**	**295**	*e*P	**P**	**04 35 37.6**	**-0.9**
YAK				pmax	pmax		
	comp=Z,13nm,0.8s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,12nm,1.4s						
YAK				MLR	MLR		
	comp=Z,954nm,11.0s						
YAK				MLR	MLR		
	comp=N,32nm,10.0s						
YAK				MLR	MLR		
	comp=E,587nm,11.0s						
YAK	**Yakutsk**	**14.71**	**295**	Pn	**P**	**04 35 40.8**	**+2.3**
	comp=E,2.3nm,0.3s,baz=101,slow=16,SNR=4.5						
YAK				LR	LR	04 41 57.7	
	comp=E,465nm,21.5s,baz=102,slow=39						
	comp=E,9.3nm,0.3s						
YSS	**Yuzhno-Sakhali**	**15.30**	**226**	*e*P	**Pn**	**04 35 39.4**	**-0.9**
YSS				*e*		04 38 32.3	
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,700nm,8.0s						
YSS				MLR	MLR		
	comp=N,600nm,12.0s						
TIXI	**Tiksi**	**17.70**	**329**	*i* P	**P**	**04 36 13.6**	**+2.1**
TIXI	**Tiksi**	**17.70**	**329**	LR	LR	04 43 32.4	
	comp=N,646nm,19.8s,baz=188,slow=38						
ASAJ	**Asahikawa**	**17.79**	**221**	LR	LR	04 43 24.0	
	comp=N,346nm,19.1s,baz=60,slow=39						
ZEA	**Zeya**	**18.17**	**268**	*e*P	P	04 36 27.2	+10
ZEA				MLR	MLR		
	comp=E,400nm,17.0s						
ZEA				MLR	MLR		
	comp=N,400nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,16.0s						
C18K	**Utukok River**	**19.83**	**44**		**P**	**04 36 33.8**	**-1.2**
HEH	**HeiHe**	**20.00**	**258**	*e*P	**Pn**	**04 36 38.5**	**-0.1**
HEH				pmax	pmax		
	comp=Z,14nm,1.4s						
HEH				LR	LR		
	comp=N,890nm,14.0s						
HEH				LR	LR		
	comp=E,710nm,17.1s						
HEH				LR	LR		
	comp=Z,1µm,13.6s						
C19K	**Lookout Ridge**	**20.48**	**43**	P	**P**	**04 36 40.6**	**-1.5**
C19K				IAmb	IAmb	04 37 14.2	
	comp=Z,29nm,1.3s						
J17K	**VABM Dome**	**20.54**	**59**	P	**P**	**04 36 42.8**	**+0.1**
J17K				IAmb	IAmb	04 37 18.3	
	comp=Z,36nm,1.4s						
B20K	**Meade River**	**21.47**	**41**		**P**	**04 36 51.7**	**-0.9**
B20K				IAmb	IAmb	04 37 07.1	
	comp=Z,16nm,0.9s						
USRK	**Ussuriysk Ar.**	**22.01**	**240**	P	**P**	**04 36 58.2**	**-0.4**
	comp=Z,3.5nm,0.9s,baz=10.0,slow=9.5,SNR=5.1						
	comp=Z,3.5nm,0.9s						
BNX	**BinXian**	**23.02**	**249**	⇓P	**P**	**04 37 10.8**	**+1.5**
BNX				pmax	pmax		
	comp=Z,9.0nm,1.6s						
PPLA	**Purkeypile**	**23.70**	**59**	P	**P**	**04 37 16.0**	**-0.3**
KDAK	**Kodiak Island**	**25.09**	**71**	LR	LR	04 47 22.2	
	comp=Z,427nm,20.0s,baz=274,slow=37						
ILAR	**Eielson Array**	**25.60**	**54**	P	**P**	**04 37 33.1**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=273,slow=8.2,SNR=8.3						
ILAR				LR	LR	04 48 54.4	
	comp=Z,278nm,19.8s,baz=280,slow=40						
	comp=Z,1.5nm,0.8s						
ILAR	**Eielson Array**	**25.60**	**54**	*e*P	**P**	**04 37 36.4**	**+3.0**
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MJA0	**Matsu Arr-Jizo**	**26.04**	**220**	*e*P	**P**	**04 37 42.1**	**+4.4**
MJA0				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MJAR	**Matsushiro Arr**	**26.05**	**220**	P	**P**	**04 37 36.5**	**-1.3**
	comp=Z,2.7nm,0.9s,baz=16,slow=9.7,SNR=5.9						
MJAR				LR	LR	04 48 01.6	
	comp=Z,247nm,19.4s,baz=28,slow=37						
	comp=Z,2.7nm,0.9s						
JHJ	**Hachijo jima 2**	**28.71**	**215**	LR	LR	04 51 24.4	
	comp=Z,78nm,18.4s,baz=324,slow=41						
KSRS	**Korea Array**	**29.28**	**237**	LR	LR	04 49 21.2	
	comp=Z,102nm,19.6s,baz=40,slow=35						
NRIK	**Noril'sk**	**30.97**	**319**	LR	LR	04 52 37.3	
	comp=Z,233nm,18.4s,baz=76,slow=39						
JNU	**Nakatsue**	**31.79**	**228**	LR	LR	04 51 52.5	
	comp=Z,241nm,18.7s,baz=36,slow=38						
SONM	**Songino Array**	**32.38**	**274**	P	**P**	**04 38 36.8**	**+2.7**
	comp=Z,0.2nm,0.4s,baz=63,slow=6.6,SNR=1.9						
SONM				LR	LR	04 52 17.5	
	comp=Z,692nm,18.4s,baz=48,slow=37						
	comp=Z,0.2nm,0.4s						
RES	**Resolute Bay**	**38.32**	**24**	LR	LR	04 57 42.7	
	comp=Z,155nm,19.1s,baz=319,slow=40						
ZALV	**Zalesovo Beam**	**39.35**	**296**	P	**P**	**04 39 37.9**	**+4.3**
	comp=Z,0.2nm,0.3s,baz=46,slow=4.2,SNR=1.3						
	comp=Z,0.2nm,0.3s						
YKA	**Yellowknife Ar**	**39.56**	**47**	P	**P**	**04 39 35.2**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=307,slow=9.2,SNR=5.9						
YKA				LR	LR	04 58 19.0	
	comp=Z,280nm,18.1s,baz=360,slow=40						
	comp=Z,0.6nm,0.8s						
BBB	**Bella Bella**	**39.96**	**66**	LR	LR	04 55 58.6	
	comp=Z,193nm,20.2s,baz=264,slow=36						
DGZ	**Jazzator, Alta**	**40.80**	**290**	*i* P	P	04 39 51.9	+6.0
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.5s						
SPITS	**Spitsbergen Ar**	**41.38**	**349**	LR	LR	04 56 51.6	
	comp=Z,141nm,18.3s,baz=16,slow=36						
GTA	**Gaotai**	**41.65**	**269**	*e*P	**P**	**04 39 53.0**	**+0.1**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.9s						
LZH	**Lanzhou**	**42.07**	**262**	*e*P	**P**	**04 39 59.0**	**+2.6**
LZH				pP	sP	04 40 07.5	+6.8
LZH				pmax	pmax		
	comp=Z,21nm,1.5s						
LZDM	**Lanzhou Array**	**42.24**	**262**	LR	LR	04 58 58.9	
	comp=Z,319nm,18.5s,baz=50,slow=38						
MK31	**Makanchi Array**	**45.30**	**290**	*i* P	**P**	**04 40 25.6**	**+3.5**
MKAR	**Makanchi Array**	**45.30**	**290**	P	**P**	**04 40 25.7**	**+3.6**
	comp=Z,0.5nm,0.8s,baz=60,slow=8.7,SNR=2.3						
MKAR				LR	LR	04 59 56.3	
	comp=Z,467nm,18.6s,baz=29,slow=36						
	comp=Z,0.5nm,0.8s						
MKAR	**Makanchi Array**	**45.30**	**290**	P	**P**	**04 40 24.2**	**+2.1**
MKAR	**Makanchi Array**	**45.30**	**290**	P	**P**	**04 40 24.2**	**+2.1**
GUMO	**Guam**	**46.34**	**199**	LR	LR	04 56 18.6	
	comp=Z,99nm,20.4s,baz=34,slow=32						
BVAR	**Borovoye Array**	**46.47**	**304**	P	**P**	**04 40 34.2**	**+3.0**
	comp=Z,1.0nm,0.7s,baz=56,slow=5.6,SNR=5.1						
	comp=Z,1.0nm,0.7s						
BORK	**Borovoye**	**46.48**	**304**	*i* P	**P**	**04 40 34.8**	**+3.5**
BORK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARCES	**ARCESS Array B**	**47.65**	**340**	LR	LR	05 04 26.6	
	comp=Z,63nm,18.4s,baz=342,slow=40						
ARTI	**Arti**	**48.93**	**314**	*d i*P	**P**	**04 40 53.2**	**+2.9**
ARTI				S	**S**	**04 47 57.3**	**+3.6**
ARTI				SS	**SS**	**04 51 22.4**	**-1.3**
ARTI				pmax	pmax		
	comp=Z,6.0nm,1.9s						
ARTI				MLR	MLR		
	comp=Z,598nm,16.0s						
ARTI	**Arti**	**48.93**	**314**	LR	LR	05 04 51.9	
	comp=Z,610nm,18.5s,baz=40,slow=40						
FCC	**Fort Churchill**	**49.51**	**41**	P	**P**	**04 40 55.3**	**+0.7**
FCC				IAmb	IAmb	04 41 02.3	
	comp=Z,4.8nm,1.1s						
FCC	**Fort Churchill**	**49.51**	**41**	P	**P**	**04 40 55.3**	**+0.7**
FCC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
FFC	**Flin Flon**	**49.64**	**49**	P	**P**	**04 40 56.6**	**+0.9**
FFC				IAmb	IAmb	04 41 29.9	
	comp=Z,4.7nm,1.2s						
FFC	**Flin Flon**	**49.64**	**49**	P	**P**	**04 40 56.6**	**+0.9**
FFC				pmax	pmax		
	comp=Z,5.0nm,1.3s						
YBH	**Yreka Blue Hor**	**49.87**	**74**	LR	LR	04 59 19.8	
	comp=Z,12nm,21.6s,baz=296,slow=33						
JMIC	**Jan Mayen**	**50.19**	**355**	LR	LR	05 00 46.7	
	comp=Z,66nm,18.9s,baz=84,slow=34						
KIRV	**Kirov**	**50.46**	**320**	LR	LR	05 05 48.9	
	comp=Z,324nm,19.4s,baz=32,slow=40						
AAK	**Ala-Archa**	**52.13**	**292**	LR	LR	05 04 28.7	
	comp=Z,169nm,18.6s,baz=38,slow=37						
AAK	**Ala-Archa**	**52.13**	**292**	*i* P	**P**	**04 41 18.5**	**+3.7**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
FRB	**Frobisher Bay**	**52.54**	**24**	LR	LR	05 07 56.5	
	comp=Z,132nm,18.1s,baz=314,slow=41						
SFJD	**Kangerlussuaq**	**52.62**	**14**	LR	LR	05 06 17.5	
	comp=Z,121nm,18.4s,baz=177,slow=39						
AKTO	**Aktyubinsk**	**53.58**	**309**	LR	LR	05 07 26.0	
	comp=Z,310nm,19.6s,baz=4.5,slow=39						
KK31	**Karatay Array**	**53.68**	**295**		**P**	**04 41 26.2**	**+0.1**
KK31	**Karatay Array**	**53.68**	**295**	P	**P**	**04 41 26.2**	**+0.1**
KK31				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KKAR	**Karatay Array**	**53.68**	**295**		**P**	**04 41 26.1**	**0.0**
KKAR	**Karatay Array**	**53.68**	**295**	P	**P**	**04 41 26.1**	**0.0**
AB31	**Akbulak array**	**53.69**	**307**	P	**P**	**04 41 26.1**	**+0.1**
ABKAR	**Akbulak array**	**53.69**	**307**	P	**P**	**04 41 26.1**	**0.0**
ELK	**Elko**	**54.30**	**69**	LR	LR	05 04 53.3	
	comp=Z,162nm,18.5s,baz=315,slow=36						
NVAR	**Mina Array Bea**	**54.58**	**73**	P	**P**	**04 41 31.2**	**-1.7**
	comp=Z,0.4nm,0.6s,baz=317,slow=8.3,SNR=3.7						
NVAR				LR	LR	05 02 26.6	
	comp=Z,116nm,21.6s,baz=334,slow=34						
	comp=Z,0.4nm,0.6s						
FINES	**FINESS Array B**	**54.62**	**334**	LR	LR	05 10 22.0	
	comp=Z,98nm,19.8s,baz=18,slow=42						
PDAR	**Pinedale Array**	**55.44**	**63**	P	**P**	**04 41 38.9**	**-0.2**
PDAR	**Pinedale Array**	**55.44**	**63**	P	**P**	**04 41 38.0**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=267,slow=3.0,SNR=4.1						
PDAR				LR	LR	05 08 33.5	
	comp=Z,90nm,18.6s,baz=328,slow=40						
	comp=Z,0.5nm,0.8s						
ULM	**Lac du Bonnet**	**55.47**	**49**	LR	LR	05 08 45.7	
	comp=Z,165nm,18.3s,baz=8.0,slow=40						
DUG	**Dugway, Tooele**	**55.90**	**68**	P	**P**	**04 41 40.1**	**-2.2**
DUG	**Dugway, Tooele**	**55.90**	**68**	P	**P**	**04 41 40.2**	**-2.2**
DUG				pmax	pmax		
	comp=Z,3.0nm,1.2s						
OBN	**Obninsk**	**57.38**	**325**	LR	LR	05 08 29.3	
	comp=Z,162nm,18.3s,baz=343,slow=38						
OBN	**Obninsk**	**57.38**	**325**	*e*P	**P**	**04 41 56.5**	**+4.1**
OBN				*e*		04 42 50.4	
OBN				*e*		04 44 04.9	
OBN				*e*PPP	PPP	04 45 18.0	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,226nm,16.0s						
SRU	**San Rafael Swe**	**57.84**	**67**	P	**P**	**04 41 57.3**	**+1.1**
SRU				IAmb	IAmb	04 42 10.1	
	comp=Z,5.8nm,1.1s						
SRU	**San Rafael Swe**	**57.84**	**67**	P	**P**	**04 41 57.3**	**+1.1**
SRU				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NOA	**NORSAR Array B**	**57.87**	**342**	LR	LR	05 08 23.6	
	comp=Z,53nm,19.4s,baz=345,slow=37						
HMU	**Henry Mountain**	**58.66**	**68**	P	**P**	**04 42 02.3**	**+0.2**
CMAR	**Chiang Mai Arr**	**58.92**	**254**	LR	LR	05 11 16.6	
	comp=Z,209nm,18.9s,baz=40,slow=40						
BRDH	**Bariadhala**	**59.11**	**263**	LR	LR	05 12 39.0	
	comp=Z,83nm,19.1s,baz=8.0,slow=41						
PFO	**Pinyon Flats O**	**59.28**	**75**	LR	LR	05 05 45.5	
	comp=Z,50nm,19.6s,baz=272,slow=34						
SCHQ	**Schefferville**	**60.91**	**28**	LR	LR	05 10 18.4	
	comp=Z,179nm,20.6s,baz=338,slow=38						
ANMO	**Albuquerque**	**63.12**	**67**	LR	LR	05 11 56.0	
	comp=Z,94nm,18.6s,baz=346,slow=38						
AKASG	**Malin Array Be**	**63.40**	**327**	LR	LR	05 13 15.5	
	comp=Z,159nm,19.1s,baz=35,slow=39						
MAK	**Makhachkala**	**63.86**	**310**	*e*P	**P**	**04 42 33.5**	**-3.3**
MAK				*e*S	**S**	**04 51 05.2**	**-6.6**
MAK				pmax	pmax		
	comp=Z,65nm,0.9s						
MAK				MLR	MLR		
	comp=Z,578nm,13.0s						
KVAR	**Kislovodsk Arr**	**64.86**	**314**	LR	LR	05 14 13.0	
	comp=Z,283nm,21.3s,baz=258,slow=39						
KBZ	**Khabaz**	**64.98**	**314**	P	**P**	**04 42 48.0**	**+3.9**
	comp=Z,1.7nm,0.8s,baz=145,slow=11,SNR=3.7						
KBZ				LR	LR	05 15 18.0	
	comp=Z,302nm,19.8s,baz=12,slow=40						
	comp=Z,1.7nm,0.8s						
SADO	**Sadowa**	**66.24**	**41**	LR	LR	05 12 40.0	
	comp=Z,158nm,20.2s,baz=330,slow=37						
LANS	**Liptovska Anna**	**67.38**	**332**	*e*P	P	04 43 08.6	+9.1
LANS				*e*		04 43 22.7	
VRAC	**Vranov**	**67.91**	**334**	LR	LR	05 17 35.3	
	comp=Z,170nm,19.3s,baz=20,slow=40						
MLR	**Muntele Rosu**	**69.05**	**327**	LR	LR	05 18 01.4	
	comp=Z,191nm,18.4s,baz=67,slow=40						
TXAR	**Lajitas Array**	**69.07**	**68**	P	**P**	**04 43 09.5**	**-1.0**
	comp=Z,0.8nm,1.1s,baz=305,slow=5.6,SNR=3.5						
	comp=Z,0.8nm,1.1s						
LPIG	**La Paz**	**70.12**	**76**	LR	LR	05 11 44.9	
	comp=Z,21nm,18.2s,baz=358,slow=34						
BRTR	**Keskin Array B**	**71.82**	**318**	P	**P**	**04 43 30.6**	**+3.4**
	comp=Z,0.4nm,0.8s,baz=20,slow=4.6,SNR=2.1						
BRTR				LR	LR	05 21 22.3	
	comp=Z,79nm,18.4s,baz=34,slow=41						
	comp=Z,0.4nm,0.8s						
PSI	**Prapat**	**72.44**	**245**	LR	LR	05 19 42.9	
	comp=Z,148nm,18.5s,baz=5.0,slow=39						
TKL	**Tuckaleechee C**	**72.49**	**49**	LR	LR	05 17 23.7	
	comp=Z,122nm,18.5s,baz=5.5,slow=38						
MMAI	**Mount Meron Ar**	**77.18**	**314**	LR	LR	05 23 29.6	
	comp=Z,123nm,18.6s,baz=2.5,slow=40						
ASF	**Jabal al Asfar**	**77.37**	**313**	LR	LR	05 24 38.1	
	comp=Z,137nm,18.3s,baz=25,slow=40						
PALK	**Pallekele**	**77.69**	**264**	LR	LR	05 24 56.9	
	comp=Z,86nm,18.2s,baz=46,slow=41						
IDI	**Anoyia**	**78.73**	**323**	LR	LR	05 22 10.4	
	comp=Z,111nm,21.0s,baz=300,slow=38						
CTA	**Charters Tower**	**79.29**	**192**	LR	LR	05 16 21.6	
	comp=Z,100nm,19.9s,baz=212,slow=34						
EIL	**Elat**	**80.34**	**313**	LR	LR	05 26 40.2	
	comp=Z,163nm,18.4s,baz=175,slow=40						
CMIG	**Matias Romero**	**83.67**	**67**	LR	LR	05 21 19.4	
	comp=Z,37nm,21.5s,baz=333,slow=35						
ASAR	**Alice Springs**	**84.73**	**203**	P	**P**	**04 44 36.9**	**-1.6**
	comp=Z,0.1nm,0.4s,baz=9.9,slow=5.1,SNR=5.4						
	comp=Z,0.1nm,0.4s						
RAR	**Rarotonga**	**86.71**	**142**	LR	LR	05 19 01.1	
	comp=Z,35nm,18.3s,baz=200,slow=33						
PPT	**Papeete**	**86.99**	**132**	LR	LR	05 14 43.3	
	comp=Z,66nm,21.3s,baz=4.5,slow=30						
ATD	**Arta Tunnel**	**93.11**	**298**	LR	LR	05 32 29.2	
	comp=Z,7.0nm,18.8s,baz=11,slow=39						

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*SDD **28** 05:01:57.3±1.3, 19°.77N×71°.10W, h23^{km}±19^{km}, MD3.3, ML3.2, MW3.3, Presumed earthquake*

*OSPL **28** 05:01:58.9±1.2, 19°.88N×70°.89W, h22^{km}±5^{km}, ML1.5, Presumed earthquake*

ISC 28 05:01:58.2±1.1**, 19°.77N**±0°.05×**71°.03W**±0°.04**, h24**^{km}±9^{km}**, n11, σ1^{s}.78**/20**, 9C-4D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUDR	**Luperon**	**0.14**	**29**	⇓*e*Pg	**Pb**	**05 02 01.8**	**-1.4**
LOPP1	**Punta Rusia, P**	**0.18**	**298**	*i* P	**Pn**	**05 02 04.3**	**-1.2**
LOPP1				*e*S	**Sb**	**05 02 10.2**	**+2.9**
LOPP1				IAML		05 02 12.1	
	comp=Z,61nm,0.3s						
SC01	**Santiago de lo**	**0.44**	**140**	⇓*e*Pg	**Pb**	**05 02 06.1**	**-1.3**
SC01				⇓*e*Sg	**Sb**	**05 02 13.6**	**-0.1**
SC01				IAML		05 02 19.1	
	comp=N,700nm,0.3s						
SC01	**Santiago de lo**	**0.44**	**140**	*i* P	**Pn**	**05 02 08.5**	**-0.5**
SC01				*e*S	**Sb**	**05 02 14.4**	**+0.7**
SC01				IAML		05 02 16.5	
	comp=Z,36nm,0.6s						
SDDR	**Presa de Saban**	**0.82**	**198**	⇑*e*Pg	**Pb**	**05 02 11.0**	**-2.8**
SDDR				⇑*e*Sg	**Sb**	**05 02 22.2**	**-2.2**
SDDR				IAML		05 02 29.2	
	comp=N,383nm,0.3s						
SDDR	**Presa de Saban**	**0.82**	**198**	*e*S	**Sn**	**05 02 28.0**	**+2.4**
SDDR				IAML		05 02 28.3	
	comp=Z,19nm,2.7s						
NADR	**Nagua**	**1.18**	**110**	⇑*e*Pg	**Pn**	**05 02 19.4**	**+0.3**
NADR				⇑*e*Sg	**Sn**	**05 02 33.3**	**-1.1**
NADR				IAML		05 02 41.9	
	comp=N,436nm,0.3s						
LONE3	**El Aguacate, B**	**1.22**	**200**	*i* P	**Pb**	**05 02 21.7**	**+1.0**
LONE3				*e*S	**Sb**	**05 02 37.9**	**+1.7**
DR08	**Loma La Naviza**	**1.24**	**130**	⇑*e*Pg	**Pn**	**05 02 19.5**	**-0.6**
DR08				⇑*e*Sg	**Sn**	**05 02 34.8**	**-1.3**
DR08				IAML		05 02 40.8	
	comp=N,1µm,0.2s						
HATOM	**Hato Mayor del**	**1.83**	**122**	⇓*e*Pg	**Pn**	**05 02 28.8**	**+0.6**
HATOM				⇑*e*Sg	**Sn**	**05 02 51.7**	**+1.0**
HATOM				IAML		05 02 53.7	
	comp=N,177nm,0.3s						
HIDR	**Higuey Centro**	**2.48**	**118**	⇑*e*Pg	**Pn**	**05 02 38.2**	**+1.2**
HIDR				⇑*e*Sg	**Sn**	**05 03 09.3**	**+2.8**
HIDR				IAML		05 03 11.5	
	comp=N,207nm,0.3s						

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*IDC **28** 05:22:20.3±0.7, 39°.54N×30°.18W, h0^{km}, mb4.0/20, mbtmp4.0/20, MS3.8/58, Error ellipse: s-maj=20.3km s-min=14.5km az=176.0*

*NEIC **28** 05:22:21.2±1.5, 39°.4N±0°.1×29°.9W±0°.1, h10^{km}±1^{km}, mb4.7/38, Error ellipse: s-maj=21.3km s-min=14.9km az=191.0*

*SVSA **28** 05:22:22.1±0.6, 39°.36N×29°.85W, h10^{km}, ML4.0(INMG), Error ellipse: s-maj=4.5km s-min=2.8km az=57.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia Atlntico N*

*GCMT **28** 05:22:23.2±0.3, 39°.50N±0°.05×29°.65W±0°.04, h15^{km}±1^{km}, MW4.8/69, Moment Tensor Solution. s12,c13; s69,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.44±.14; $M_{\theta\theta}$0.39±.10; $M_{\phi\phi}$1.05±.09; $M_{r\theta}$0.18±.26; $M_{\theta\phi}$0.33±.06; $M_{\phi r}$-1.19±.20; Best double couple: $M_0$1.76400×10^{16} NP1:ϕ_s211.00000°,δ26.00000°,λ-65.00000°. NP2: ϕ_s3.00000°,δ66.00000°,λ-102.00000°. Principal axes: T 1.5750, Plg20.0000°, Azm102.0000°; N 0.3780, Plg11.0000°, Azm8.0000°; P -1.9540, Plg67.0000°, Azm252.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 05:22:20.3±0.5**, 39°.08N**±0°.07×**29°.85W**±0°.05**, h10**^{km}**, n128, σ1^{s}.78**/93**, mb4.5**/39**, MS3.9**/59**, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**1.00**	**117**	*e*P	**Pn**	**05 22 39.6**	**-0.8**
PCED				*e*S	**Sg**	**05 22 52.5**	**-0.2**
PCED				*i* IAML		05 22 54.1	
PCED				*i* IAML		05 22 54.2	
PCED				*i* IAML		05 22 55.9	
CALA	**Caldeira**	**1.02**	**119**	*e*P	**Pn**	**05 22 40.3**	**-0.5**
CALA				*e*S	**Sb**	**05 22 53.9**	**+0.1**
CALA				*i* IAML		05 22 55.3	
CALA				*i* IAML		05 22 56.0	
CALA				*i* IAML		05 22 57.1	
PFCBR	**Castelo Branco**	**1.05**	**122**	*e*P	**Pn**	**05 22 40.5**	**-0.5**
PFCBR				*e*S	**Sb**	**05 22 54.1**	**-0.1**
PFCBR				*i* IAML		05 22 56.0	
PFCBR				*i* IAML		05 22 56.1	
PFCBR				*i* IAML		05 22 56.7	
HOR	**Horta**	**1.10**	**120**	*e*P	**Pb**	**05 22 40.8**	**-0.6**
HOR				*e*S	**Sb**	**05 22 55.4**	**-0.4**
HOR				*i* IAML		05 22 58.1	
HOR				*i* IAML		05 22 58.2	
HOR				*i* IAML		05 22 59.2	
PCAN	**Candelaria**	**1.23**	**120**	*e*P	**Pn**	**05 22 42.9**	**-0.7**
PCAN				*e*S	**Sb**	**05 22 58.7**	**-0.9**
PCAN				*i* IAML		05 23 01.1	
PCAN				*i* IAML		05 23 05.2	
PCAN				*i* IAML		05 23 09.2	
PICO	**Pico**	**1.25**	**117**	*e*P	**Pn**	**05 22 43.1**	**-0.9**
PICO				*e*S	**Sb**	**05 22 58.9**	**-1.4**
PICO				*i* IAML		05 23 01.3	
PICO				*i* IAML		05 23 03.4	
PICO				*i* IAML		05 23 03.8	
ROSA	**Rosais**	**1.30**	**106**	*e*P	**Pn**	**05 22 43.1**	**-1.5**
ROSA				*e*S	**Sb**	**05 22 58.9**	**-2.8**
ROSA				*i* IAML		05 23 00.5	
ROSA				*i* IAML		05 23 00.5	
ROSA				*i* IAML		05 23 06.4	
PPNO	**Prainha do Nor**	**1.38**	**116**	*e*S	**Sb**	**05 23 01.8**	**-2.1**

PPNO				*i* IAML		05 23 08.9	
PPNO				*i* IAML		05 23 11.6	
PSCRZ	**Santa Cruz da**	**1.43**	**89**	*e*P	**Pn**	**05 22 44.0**	**-2.3**
PSCRZ				*i* IAML		05 23 04.0	
PMAN	**Manadas**	**1.44**	**108**	*e*P	**Pn**	**05 22 44.9**	**-1.6**
PMAN				*e*S	**Sn**	**05 23 02.2**	**-3.3**
PMAN				*i* IAML		05 23 04.0	
PMAN				*i* IAML		05 23 04.2	
PMAN				*i* IAML		05 23 04.2	
ADH	**Angra Heroismo**	**2.08**	**101**	*e*P	**Pn**	**05 22 53.6**	**-1.7**
ADH				*e*S	**Sn**	**05 23 17.2**	**-4.1**
ADH				*i* IAML		05 23 18.3	
ADH				*i* IAML		05 23 20.9	
ADH				*i* IAML		05 23 21.4	
PAGU	**Agualva, Azore**	**2.10**	**98**	*e*P	**Pn**	**05 22 53.6**	**-2.0**
PAGU				*e*S	**Sn**	**05 23 17.1**	**-4.6**
PAGU				*i* IAML		05 23 19.6	
PAGU				*i* IAML		05 23 19.8	
PAGU				*i* IAML		05 23 20.3	
CMLA	**Cha da Macela**	**3.64**	**110**		**Pn**	**05 23 16.6**	**-0.1**
PMOZ	**Porto Moniz, M**	**12.00**	**117**	Pn	**Pn**	**05 25 13.5**	**+2.1**
MACI	**Morro de la Ar**	**15.47**	**130**	Pn	**P**	**05 26 01.9**	**-1.4**
MACI				IAmb	IAmb	05 26 10.5	
	comp=Z,60nm,1.2s						
PESTR	**Estremoz**	**17.31**	**84**	Pn	**Pn**	**05 26 20.9**	**-1.1**
ESDC	**Sonseca Array**	**20.00**	**80**	P	Pn	05 26 57.5	+2.7
	comp=Z,2.2nm,0.9s,baz=285,slow=9.5,SNR=9.9						
ESDC				LR	LR	05 33 08.2	
	comp=Z,452nm,19.9s,baz=279,slow=32						
	comp=Z,2.2nm,0.9s						
ESBB	**Sonseca Array**	**20.00**	**80**	P	**P**	**05 26 53.0**	**-0.1**
MD01	**Midelt array s**	**21.20**	**99**		**P**	**05 27 07.4**	**+1.2**
MDT	**Midelt**	**21.33**	**99**	P	**P**	**05 27 13.1**	**+5.5**
	comp=Z,4.8nm,1.4s,baz=283,slow=12,SNR=4.4						
MDT				LR	LR	05 33 30.9	
	comp=Z,182nm,20.5s,baz=308,slow=31						
	comp=Z,4.8nm,1.4s						
EKA	**Eskdalemuir Ar**	**24.13**	**39**	LR	LR	05 34 27.5	
	comp=Z,168nm,21.9s,baz=192,slow=30						
GBN	**Guysborough**	**24.18**	**295**	P	**P**	**05 27 35.6**	**-1.0**
HAL	**Halifax**	**25.62**	**293**	P	**P**	**05 27 46.2**	**-3.5**
BORG	**Borgarnes**	**26.19**	**8**	LR	LR	05 34 52.0	
	comp=Z,129nm,18.0s,baz=174,slow=29						
F64A	**Sherman**	**28.98**	**296**	P	**P**	**05 28 18.6**	**-1.4**
SCHQ	**Schefferville**	**29.33**	**315**	LR	LR	05 38 16.0	
	comp=Z,90nm,21.2s,baz=96,slow=33						
DAVOX	**Davos/Dischmat**	**29.83**	**62**	LR	LR	05 38 07.4	
	comp=Z,189nm,21.8s,baz=262,slow=32						
SFJD	**Kangerlussuaq**	**30.30**	**344**	LR	LR	05 37 29.9	
	comp=Z,168nm,18.3s,baz=172,slow=30						
KEST	**Kesra**	**31.15**	**84**	LR	LR	05 39 29.9	
	comp=Z,160nm,20.7s,baz=250,slow=33						
CLL	**Collm**	**32.12**	**53**	*e*S	**S**	**05 34 07.0**	**+7.2**
CLL				*e*SS	**SnSn**	**05 35 55.0**	**+5.4**
CLL				AMS	AMS	05 39 00.0	
	comp=Z,200nm,19.5s						
GERES	**GERESS Array B**	**32.43**	**58**	P	**P**	**05 28 51.6**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=272,slow=6.6,SNR=2.1						
GERES				LR	LR	05 40 23.1	
	comp=Z,73nm,19.6s,baz=261,slow=33						
	comp=Z,0.3nm,0.6s						
NB2	**NORSAR Subarra**	**33.48**	**35**	P	**P**	**05 28 59.4**	**0.0**
	comp=Z,17nm,1.4s,baz=248,slow=10						
NOA	**NORSAR Array B**	**33.48**	**35**	P	**P**	**05 28 58.8**	**-0.6**
	comp=Z,2.5nm,0.9s,baz=248,slow=9.0,SNR=4.2						
NOA				LR	LR	05 40 25.1	
	comp=Z,130nm,19.9s,baz=255,slow=33						
	comp=Z,2.5nm,0.9s						
FRB	**Frobisher Bay**	**33.64**	**330**	LR	LR	05 39 20.0	
	comp=Z,179nm,18.5s,baz=102,slow=31						
HFS	**Hagfors**	**34.31**	**38**	P	**P**	**05 29 06.9**	**+0.3**
	comp=Z,2.6nm,0.9s,baz=201,slow=7.7,SNR=1.5						
HFS				LR	LR	05 41 22.2	
	comp=Z,184nm,18.4s,baz=249,slow=34						
	comp=Z,2.6nm,0.9s						
VRAC	**Vranov**	**34.34**	**57**	LR	LR	05 43 29.4	
	comp=Z,77nm,18.2s,baz=248,slow=37						
VAE	**Valguarnera**	**34.52**	**78**	LR	LR	05 42 12.4	
	comp=Z,727nm,19.6s,baz=346,slow=34						
MODS	**Modra-Piesok**	**34.81**	**59**	*e*P	P	05 29 15.9	+4.8
OJC	**Ojcow**	**36.40**	**56**	P	**P**	**05 29 24.8**	**+0.1**
SADO	**Sadowa**	**36.66**	**295**	LR	LR	05 42 43.1	
	comp=Z,339nm,21.5s,baz=138,slow=34						
SJG	**San Juan**	**37.76**	**247**	LR	LR	05 41 21.3	
	comp=Z,109nm,21.2s,baz=72,slow=30						
TORD	**Torodi Ar. Bea**	**37.99**	**124**	P	P	05 29 44.7	+6.1
	comp=Z,1.0nm,0.9s,baz=335,slow=6.4,SNR=4.9						
	comp=Z,1.0nm,0.9s						
DBIC	**Dimbokro**	**39.36**	**139**	P	P	05 29 55.3	+5.3
	comp=Z,5.6nm,1.1s,baz=325,slow=12,SNR=4.1						
DBIC				LR	LR	05 44 40.4	
	comp=Z,194nm,20.1s,baz=356,slow=34						
	comp=Z,5.6nm,1.1s						
DBIC	**Dimbokro**	**39.36**	**139**	P	**P**	**05 29 52.3**	**+2.3**
MDP	**Montagnes des**	**39.63**	**217**	LR	LR	05 42 40.2	
	comp=Z,79nm,18.5s,baz=350,slow=31						
FINES	**FINESS Array B**	**40.52**	**38**	P	**P**	**05 29 59.0**	**-0.2**
	comp=Z,3.3nm,0.8s,baz=184,slow=25,SNR=5.6						
FINES				LR	LR	05 45 14.9	
	comp=Z,156nm,19.4s,baz=274,slow=34						
	comp=Z,3.3nm,0.8s						
FIA1	**FINESS Array S**	**40.52**	**38**		**P**	**05 29 59.1**	**0.0**
ARCES	**ARCESS Array B**	**41.98**	**26**	LR	LR	05 44 25.8	
	comp=Z,76nm,18.4s,baz=231,slow=32						
AKASG	**Malin Array Be**	**42.36**	**54**	P	**P**	**05 30 14.8**	**+0.4**
	comp=Z,2.5nm,0.7s,baz=277,slow=8.3,SNR=6.6						
AKASG				LR	LR	05 47 24.0	
	comp=Z,167nm,18.3s,baz=248,slow=36						
	comp=Z,2.5nm,0.7s						
TKL	**Tuckaleechee C**	**42.47**	**283**	LR	LR	05 45 48.0	
	comp=Z,175nm,19.7s,baz=60,slow=33						
IDI	**Anoyia**	**43.22**	**77**	LR	LR	05 47 02.7	
	comp=Z,86nm,19.9s,baz=300,slow=34						
L40A	**Anamosa**	**45.83**	**294**	P	**P**	**05 30 42.4**	**0.0**
L40A				IAmb	IAmb	05 30 43.3	
	comp=Z,8.2nm,0.8s						
N41A	**Harden Midland**	**46.00**	**292**		**P**	**05 30 43.8**	**+0.1**
SPMN	**Marine on St.**	**46.03**	**299**		**P**	**05 30 42.7**	**-1.2**
SPMN				IAmb	IAmb	05 30 44.0	
	comp=Z,7.6nm,0.9s						
OBN	**Obninsk**	**46.15**	**47**	LR	LR	05 50 01.0	
	comp=Z,113nm,18.9s,baz=34,slow=36						
ULM	**Lac du Bonnet**	**46.81**	**306**	LR	LR	05 50 11.5	
	comp=Z,144nm,18.2s,baz=14,slow=36						
SDV	**Santo Domingo**	**47.26**	**242**	LR	LR	05 46 59.6	
	comp=Z,83nm,21.9s,baz=10.0,slow=31						
R40A	**Maddies Statio**	**47.86**	**290**		**P**	**05 30 57.5**	**-0.8**
R40A				IAmb	IAmb	05 30 58.8	
	comp=Z,5.9nm,0.9s						
BRTR	**Keskin Array B**	**48.11**	**68**	P	**P**	**05 31 03.0**	**+2.6**
	comp=Z,1.0nm,0.9s,baz=254,slow=7.3,SNR=3.9						
BRTR				LR	LR	05 50 55.3	
	comp=Z,77nm,18.8s,baz=268,slow=36						
	comp=Z,1.0nm,0.9s						
MGMO	**Mountain Grove**	**48.28**	**288**	P	**P**	**05 31 00.7**	**-0.9**
MGMO				IAmb	IAmb	05 31 01.8	
	comp=Z,5.1nm,0.8s						
ECSD	**EROS Data Cent**	**49.07**	**298**	P	**P**	**05 31 07.5**	**-0.1**
ECSD				IAmb	IAmb	05 31 07.6	
	comp=Z,8.8nm,1.0s						
L34A	**Svendsen Farm,**	**49.50**	**296**	P	**P**	**05 31 09.8**	**-1.1**
X40A	**Basin Creek Fa**	**49.77**	**285**	P	**P**	**05 31 12.4**	**-0.6**
X40A				IAmb	IAmb	05 31 12.8	
	comp=Z,4.0nm,0.7s						
T35A	**Sooner Cattle**	**51.49**	**290**	P	**P**	**05 31 24.9**	**-1.1**
T35A				IAmb	IAmb	05 31 25.4	
	comp=Z,8.3nm,0.9s						
MMAI	**Mount Meron Ar**	**52.10**	**75**	LR	LR	05 55 30.6	
	comp=Z,36nm,20.3s,baz=303,slow=38						
KIRV	**Kirov**	**52.35**	**41**	LR	LR	05 53 26.7	
	comp=Z,102nm,18.1s,baz=297,slow=36						
ROSC	**El Rosal**	**52.70**	**241**	LR	LR	05 50 33.0	
	comp=Z,186nm,22.0s,baz=66,slow=32						
EIL	**Elat**	**53.30**	**79**	LR	LR	05 55 32.7	
	comp=Z,27nm,19.4s,baz=359,slow=37						
YKA	**Yellowknife Ar**	**53.91**	**325**	P	**P**	**05 31 41.3**	**-2.1**
	comp=Z,0.2nm,0.7s,baz=72,slow=6.8,SNR=2.8						
YKA				LR	LR	05 52 20.5	
	comp=Z,98nm,18.1s,baz=96,slow=34						
	comp=Z,0.2nm,0.7s						
BRDY	**Brady**	**55.83**	**285**	P	**P**	**05 31 57.0**	**-0.9**
JTS	**Las Juntas de**	**56.66**	**255**	LR	LR	05 52 32.6	
	comp=Z,104nm,21.0s,baz=76,slow=32						
BDFB	**Brasilia**	**57.03**	**201**	LR	LR	05 53 06.6	
	comp=Z,84nm,20.1s,baz=315,slow=32						
YNE	**Yellowstone No**	**57.53**	**304**	P	**P**	**05 32 08.7**	**-1.4**
ARTI	**Arti**	**57.64**	**41**	LR	LR	05 56 25.2	
	comp=Z,106nm,19.0s,baz=307,slow=36						
YMP	**Mirror Lake Pl**	**57.73**	**304**	P	**P**	**05 32 11.1**	**-0.5**
YMP				IAmb	IAmb	05 32 12.0	
	comp=Z,5.2nm,0.8s						
PD31	**Pinedale Array**	**58.19**	**301**	P	**P**	**05 32 13.4**	**-1.3**
PDAR	**Pinedale Array**	**58.19**	**301**	P	**P**	**05 32 12.8**	**-2.0**
	comp=Z,2.1nm,0.8s,baz=72,slow=7.8,SNR=18						
PDAR				LR	LR	05 56 54.8	
	comp=Z,165nm,18.3s,baz=78,slow=36						
	comp=Z,2.1nm,0.8s						
RDMU	**Red Mountain**	**59.16**	**299**	P	**P**	**05 32 21.2**	**-0.4**
RDMU				IAmb	IAmb	05 32 21.9	
	comp=Z,4.0nm,0.7s						
ANMO	**Albuquerque**	**59.60**	**292**	LR	LR	05 56 55.6	
	comp=Z,174nm,20.0s,baz=56,slow=35						
PV21	**Cone Mtn., Par**	**59.68**	**297**	P	**P**	**05 32 24.6**	**-0.6**
PV21				IAmb	IAmb	05 32 26.0	
	comp=Z,6.5nm,0.9s						
PV23	**Carpenter Ridg**	**59.75**	**297**	P	**P**	**05 32 25.7**	**0.0**
AKTO	**Aktyubinsk**	**59.92**	**48**	LR	LR	05 57 56.2	
	comp=Z,109nm,20.4s,baz=244,slow=36						
HWUT	**Hardware Ranch**	**60.04**	**301**	P	**P**	**05 32 26.0**	**-1.5**
HWUT				IAmb	IAmb	05 32 27.5	
	comp=Z,5.0nm,0.8s						
P18A	**Preston Nutter**	**60.06**	**299**	P	**P**	**05 32 27.0**	**-0.8**
P18A				IAmb	IAmb	05 32 28.1	
	comp=Z,4.0nm,0.9s						
CMIG	**Matias Romero**	**60.16**	**268**	LR	LR	05 55 16.3	
	comp=Z,124nm,21.2s,baz=51,slow=33						
TX31	**Lajitas Ar. Si**	**60.30**	**285**	P	**P**	**05 32 29.1**	**-0.3**
TXAR	**Lajitas Array**	**60.30**	**285**	P	**P**	**05 32 29.1**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=72,slow=7.0,SNR=23						
	comp=Z,1.2nm,0.7s						
NEW	**Newport**	**60.54**	**310**	LR	LR	05 56 42.0	
	comp=Z,229nm,20.6s,baz=58,slow=34						
PTLB	**Pontes e Lacer**	**60.77**	**213**	P	**P**	**05 32 34.6**	**+2.2**
PTLB				IAmb	IAmb	05 32 35.7	
	comp=Z,6.3nm,1.4s						
PLID	**Pearl Lake**	**61.30**	**306**	P	**P**	**05 32 35.1**	**-1.1**
DUG	**Dugway, Tooele**	**61.53**	**300**	P	**P**	**05 32 37.2**	**-0.5**
DUG				IAmb	IAmb	05 32 38.2	
	comp=Z,5.2nm,0.8s						
AB31	**Akbulak array**	**61.56**	**48**	P	**P**	**05 32 37.6**	**+0.1**
ABKAR	**Akbulak array**	**61.56**	**48**	P	**P**	**05 32 37.9**	**+0.4**
B08A	**Colville Reser**	**61.80**	**311**	P	**P**	**05 32 38.2**	**-1.0**
NRIK	**Noril'sk**	**62.62**	**21**	P	**P**	**05 32 44.4**	**+0.1**
	comp=Z,2.6nm,0.8s,baz=298,slow=14,SNR=4.3						
NRIK				LR	LR	05 57 26.9	
	comp=Z,22nm,21.6s,baz=328,slow=34						
	comp=Z,2.6nm,0.8s						
ELK	**Elko**	**62.89**	**302**	P	**P**	**05 32 45.7**	**-1.2**
ELK				IAmb	IAmb	05 32 47.5	
	comp=Z,3.8nm,0.9s						
BBB	**Bella Bella**	**64.79**	**318**	LR	LR	06 00 09.7	
	comp=Z,96nm,18.2s,baz=59,slow=35						
BVAR	**Borovoye Array**	**65.36**	**41**	P	**P**	**05 33 02.3**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=341,slow=3.6,SNR=3.7						
BVAR				LR	LR	06 00 40.1	
	comp=Z,79nm,18.0s,baz=311,slow=35						
	comp=Z,0.4nm,0.4s						
ILAR	**Eielson Array**	**65.44**	**335**	LR	LR	05 58 00.5	
	comp=Z,50nm,18.7s,baz=36,slow=33						
LPAZ	**La Paz**	**65.69**	**221**	P	**P**	**05 33 07.9**	**+2.1**
LPAZ				IAmb	IAmb	05 33 09.0	
	comp=Z,4.3nm,1.1s						
LPAZ	**La Paz**	**65.69**	**221**	P	**P**	**05 33 07.8**	**+2.1**
	comp=Z,1.7nm,0.9s,baz=24,slow=8.1,SNR=6.2						
	comp=Z,1.7nm,0.9s						
NVAR	**Mina Array Bea**	**66.10**	**301**	P	**P**	**05 33 07.2**	**-0.8**
	comp=Z,0.8nm,0.9s,baz=69,slow=5.3,SNR=4.4						
NVAR				LR	LR	06 02 08.4	
	comp=Z,102nm,18.6s,baz=66,slow=36						
	comp=Z,0.8nm,0.9s						
NNA	**Nana**	**67.06**	**231**	LR	LR	06 00 10.6	
	comp=Z,47nm,20.5s,baz=291,slow=34						
YBH	**Yreka Blue Hor**	**67.21**	**306**	LR	LR	06 01 27.4	
	comp=Z,14nm,18.6s,baz=78,slow=35						
PFO	**Pinyon Flats O**	**67.40**	**296**	LR	LR	06 02 37.7	
	comp=Z,159nm,18.3s,baz=76,slow=36						
FURI	**Furi**	**67.79**	**97**	LR	LR	06 03 07.3	
	comp=Z,130nm,19.9s,baz=335,slow=36						
MBAR	**Mbarara**	**67.93**	**110**	LR	LR	06 02 32.5	
	comp=Z,96nm,19.1s,baz=316,slow=35						
LPIG	**La Paz**	**68.11**	**284**	LR	LR	06 00 54.6	
	comp=Z,107nm,21.9s,baz=30,slow=34						
KK31	**Karatay Array**	**71.03**	**50**	P	**P**	**05 33 38.9**	**+0.5**
KKAR	**Karatay Array**	**71.03**	**50**	P	**P**	**05 33 38.9**	**+0.5**
ZAA0	**Zalesovo Array**	**71.67**	**34**	P	**P**	**05 33 41.3**	**-0.7**
ZAA0				IAmb	IAmb	05 33 42.8	
	comp=Z,4.7nm,1.1s						
ZALV	**Zalesovo Beam**	**71.67**	**34**	P	**P**	**05 33 41.7**	**-0.3**
	comp=Z,3.9nm,0.9s,baz=303,slow=8.3,SNR=14						
ZALV				LR	LR	06 04 52.0	
	comp=Z,58nm,19.4s,baz=318,slow=36						
	comp=Z,3.9nm,0.9s						
ZALV	**Zalesovo Beam**	**71.67**	**34**	P	**P**	**05 33 41.2**	**-0.7**
AAK	**Ala-Archa**	**73.65**	**48**	LR	LR	06 07 25.0	
	comp=Z,64nm,18.5s,baz=326,slow=37						
MKAR	**Makanchi Array**	**75.24**	**41**	P	**P**	**05 34 03.4**	**+0.1**
	comp=Z,5.3nm,0.8s,baz=312,slow=5.8,SNR=28						
MKAR				LR	LR	06 07 51.9	
	comp=Z,90nm,18.5s,baz=328,slow=36						
	comp=Z,5.3nm,0.8s						
KSH	**Kashi**	**76.48**	**50**	P	**P**	**05 34 12.3**	**+1.8**
KSH				pP	sP	05 34 16.5	+2.1
KSH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LSZ	**Lusaka**	**76.51**	**123**	LR	LR	06 07 37.5	
	comp=Z,88nm,19.6s,baz=322,slow=35						
WMQ	**Urumqi**	**80.05**	**41**	*e*P	**P**	**05 34 31.5**	**+1.3**
WMQ				pP	sP	05 34 34.3	+0.2
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
MATP	**Matopo**	**80.49**	**126**	LR	LR	06 12 02.7	
	comp=Z,69nm,18.2s,baz=292,slow=37						
LBTB	**Lobatse**	**82.16**	**131**	LR	LR	06 09 40.5	
	comp=Z,74nm,19.4s,baz=346,slow=34						
SONM	**Songino Array**	**85.11**	**28**	P	**P**	**05 34 56.9**	**+0.3**
	comp=Z,2.7nm,0.9s,baz=330,slow=6.2,SNR=9.5						
	comp=Z,2.7nm,0.9s						
SONM	**Songino Array**	**85.11**	**28**	P	**P**	**05 34 56.2**	**-0.3**
SONM				IAmb	IAmb	05 34 57.6	
	comp=Z,5.8nm,1.1s						
ULN	**Ulaanbaatar**	**85.32**	**27**	P	**P**	**05 34 57.4**	**-0.3**
ULN				IAmb	IAmb	05 34 58.9	
	comp=Z,5.6nm,0.9s						
GTA	**Gaotai**	**89.30**	**37**	*e*P	**P**	**05 35 16.5**	**-0.5**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**93.00**	**28**	*e*P	**P**	**05 35 32.3**	**-1.8**
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,5.6s						
BRDH	**Bariadhala**	**97.75**	**53**	LR	LR	06 24 28.7	
	comp=Z,68nm,18.3s,baz=342,slow=38						
PZH	**PanZhiHua**	**100.62**	**43**	P	**Pdif**	**05 36 08.3**	**-0.6**
ASAR	**Alice Springs**	**159.35**	**47**	PKPab	**PKPab**	**05 42 56.7**	**0.0**
	comp=Z,1.5nm,1.0s,baz=326,slow=4.2,SNR=7.5						

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*SVSA **28** 05:26:02.0±1.1, 39°.40N×29°.79W, h10km, ML3.6(INMG), Error ellipse: s-maj=16.4km s-min=6.8km az=48.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia Atlntico N*

*IDC **28** 05:26:02.1±3.2, 40°.14N×29°.96W, h0km, mb3.7/5, mbtmp3.7/6, ML3.5/1, Error ellipse: s-maj=121.8km s-min=28.1km az=176.0*

ISC 28 05:26:00.2±2.2**, 39°.2N**±0°.1×**29°.7W**±0°.1**, h10km**±13km**, n16, σ0s.99**/23**, mb4.0**/5**, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCED	**Cedros**	**0.94**	**125**	*e*P	**Pn**	**05 26 19.8**	**+0.4**
PCED				*e*S	**Sn**	**05 26 32.1**	**-0.8**
PCED				*i* IAML		05 26 33.4	
PCED				*i* IAML		05 26 33.6	
PCED				*i* IAML		05 26 33.7	
CALA	**Caldeira**	**0.97**	**127**	*e*P	**Pn**	**05 26 20.4**	**+0.5**
CALA				*e*S	**Sn**	**05 26 33.3**	**-0.4**
CALA				*i* IAML		05 26 34.5	
CALA				*i* IAML		05 26 37.5	
CALA				*i* IAML		05 26 38.0	
PFCBR	**Castelo Branco**	**1.00**	**130**	*e*P	**Pb**	**05 26 20.1**	**+0.6**
PFCBR				*e*S	**Sn**	**05 26 34.0**	**-0.2**
PFCBR				*i* IAML		05 26 35.4	
PFCBR				*i* IAML		05 26 35.5	
PFCBR				*i* IAML		05 26 36.1	
HOR	**Horta**	**1.04**	**128**	*e*P	**Pb**	**05 26 20.4**	**0.0**
HOR				*e*S	**Sn**	**05 26 34.9**	**-0.6**
HOR				*i* IAML		05 26 36.7	
HOR				*i* IAML		05 26 36.9	
HOR				*i* IAML		05 26 37.6	
PCAN	**Candelaria**	**1.17**	**127**	*e*P	**Pb**	**05 26 22.9**	**+0.3**
PCAN				*e*S	**Sn**	**05 26 38.2**	**-0.5**
PCAN				*i* IAML		05 26 40.5	
PCAN				*i* IAML		05 26 41.5	
PCAN				*i* IAML		05 26 42.0	
PICO	**Pico**	**1.19**	**124**	*e*P	**Pg**	**05 26 22.5**	**-0.6**
PICO				*e*S	**Sn**	**05 26 38.4**	**-0.8**
PICO				*i* IAML		05 26 40.6	
PICO				*i* IAML		05 26 40.7	
PICO				*i* IAML		05 26 41.4	
ROSA	**Rosais**	**1.21**	**111**	*e*P	**Pb**	**05 26 22.4**	**-0.9**
ROSA				*e*S	**Sn**	**05 26 38.1**	**-1.5**
ROSA				*i* IAML		05 26 39.5	
ROSA				*i* IAML		05 26 39.8	
ROSA				*i* IAML		05 26 40.6	
SRBC	**Serra Branca**	**1.29**	**95**	*e*P	**Pn**	**05 26 25.0**	**+0.8**
PPNO	**Prainha do Nor**	**1.31**	**122**	*e*S	**Sn**	**05 26 42.8**	**+0.6**
PPNO				*i* IAML		05 26 48.1	
PPNO				*i* IAML		05 26 48.7	
PMAN	**Manadas**	**1.36**	**113**	*e*S	**Sn**	**05 26 41.9**	**-1.3**
PMAN				*i* IAML		05 26 43.2	
PMAN				*i* IAML		05 26 43.3	
PMAN				*i* IAML		05 26 43.5	
ESDC	**Sonseca Array**	**19.86**	**80**	P	**Pn**	**05 30 36.0**	**+3.0**
	baz=286,slow=9.0,SNR=5.2						
	1.7nm,1.1s						
PDAR	**Pinedale Array**	**58.25**	**302**	P	**P**	**05 35 54.4**	**-0.6**
	0.6nm,1.0s,baz=50,slow=5.2,SNR=3.0						
	0.6nm,1.0s						
TXAR	**Lajitas Array**	**60.40**	**285**	P	**P**	**05 36 10.0**	**+0.1**
	0.2nm,0.7s,baz=56,slow=6.0,SNR=2.8						
	0.2nm,0.7s						
ZALV	**Zalesovo Beam**	**71.53**	**35**	P	**P**	**05 37 21.0**	**0.0**
	0.8nm,0.7s,baz=331,slow=5.6,SNR=3.5						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**75.10**	**41**	P	**P**	**05 37 42.2**	**-0.1**
	2.3nm,1.1s,baz=328,slow=4.3,SNR=5.6						
	2.3nm,1.1s						
SONM	**Songino Array**	**84.97**	**28**	P	**P**	**05 38 34.9**	**-0.8**
	0.7nm,0.7s,baz=311,slow=5.5,SNR=4.0						
	0.7nm,0.7s						

IDC 28 05:35:34.0±6.1**, 19°.63S**×**176°.09W, h0km, mb4.2**/2**, mbtmp4.2**/2**, Error ellipse: s-maj=324.8km s-min=46.4km az=149.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**46.47**	**256**	P	P	05 44 03.0	-0.2
	3.9nm,0.9s,baz=99,slow=7.7,SNR=34						
	3.9nm,0.9s						
WRA	**Warramunga Arr**	**46.50**	**261**	P	P	05 44 03.3	-0.2
	0.8nm,0.3s,baz=96,slow=6.6,SNR=13						
	0.8nm,0.3s						
BRTR	**Keskin Array B**	**147.55**	**315**	PKPbc	PKPbc	05 55 19.5	-1.2
	0.3nm,0.6s,baz=51,slow=5.0,SNR=1.5						
GERES	**GERESS Array B**	**149.81**	**347**	PKPbc	PKPbc	05 55 26.1	0.0
	0.4nm,0.8s,baz=357,slow=6.0,SNR=4.0						

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*NEIC **28** 05:57:02.3±2.4, 10°.8S±0°.1×78°.4W±0°.2, h59km±11km, mb4.3/10, Error ellipse: s-maj=28.6km s-min=11.8km az=57.0*

*IDC **28** 05:57:02.8±1.1, 10°.76S×78°.36W, h66km±6km, mb3.6/6, mbtmp3.9/9, MS3.3/12, Error ellipse: s-maj=25.8km s-min=7.3km az=57.0*

*VAO **28** 05:57:04.5±1.6, 10°.60S×77°.88W, h42km±13km, mb4.4, Presumed earthquake*

ISC 28 05:57:02.9±0.8**, 10°.59S**±0°.07×**78°.2W**±0°.1**, h57km, n78, σ2s.01**/73**, mb4.1**/10**, MS3.2**/8**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**1.91**	**137**	Pn	**Pn**	**05 57 33.4**	**+0.1**
NNA	**Nana**	**1.91**	**137**	P	**Pn**	**05 57 33.3**	**+0.1**
NNA				S	**Sn**	**05 57 56.1**	**-0.2**
NNA	**Nana**	**1.91**	**137**	P	**Pn**	**05 57 33.5**	**+0.3**
	477nm,0.3s,baz=318,slow=9.0,SNR=40						
NNA				S	**Sn**	**05 57 56.8**	**+0.6**
	520nm,0.3s,baz=221,slow=19,SNR=7.4						
ATAH	**Atahualpa**	**3.44**	**356**	P	**Pn**	**05 57 57.6**	**+3.3**
	151nm,0.4s,baz=174,slow=7.1,SNR=189						
ATAH				S	**Sn**	**05 58 38.6**	**+4.6**
	711nm,0.8s,baz=282,slow=24,SNR=5.9						
ATAH				LR	LR	05 59 01.6	
	comp=Z,177nm,18.7s,baz=200,slow=33						
MCRA	**Macar, Loja**	**6.42**	**344**	P	**Pn**	**05 58 34.2**	**-0.8**
	2µm69nm,0.8s						
MCRA				S	**Sn**	**05 59 39.9**	**-7.1**
	2µm69nm,0.8s						
COHC	**Cochancay**	**8.14**	**352**	Pn	**Pn**	**05 58 59.9**	**+1.5**
COHC	**Cochancay**	**8.14**	**352**	P	**Pn**	**05 59 01.1**	**+2.6**
	0.4nm,0.9s						
COHC				S	**Sn**	**06 00 20.9**	**-8.2**
	0.4nm,0.9s						
PPLP	**Puerto Lpez**	**9.34**	**344**	P	**Pn**	**05 59 15.1**	**+0.1**
	1µm73nm,0.6s						
PPLP				S	Sn	06 00 48.9	-10
	1µm73nm,0.6s						
SLOR	**San Lorenzo -**	**9.80**	**358**		**Pn**	**05 59 24.0**	**+2.4**
OTAV	**Otavalo**	**10.76**	**359**		**Pn**	**05 59 36.6**	**+1.9**
OTAV	**Otavalo**	**10.76**	**359**	*e*P	**Pn**	**05 59 36.2**	**+1.4**
OTAV	**Otavalo**	**10.76**	**359**	P	**Pn**	**05 59 38.3**	**+3.6**
	22nm,0.9s						
PAC1	**Pacto, Paraso**	**10.80**	**357**	P	**Pn**	**05 59 35.7**	**+0.7**
CUSE	**Cuicocha Este**	**10.82**	**359**	P	**Pn**	**05 59 39.5**	**+3.9**
PB12	**IPOC Station P**	**11.02**	**137**	Pn	**Pn**	**05 59 35.8**	**-2.1**
LPAZ	**La Paz**	**11.30**	**121**	Pn	**Pn**	**05 59 41.9**	**-0.3**
LPAZ	**La Paz**	**11.30**	**121**	P	**Pn**	**05 59 42.7**	**+0.4**
	0.6nm,0.7s,baz=297,slow=8.9,SNR=3.6						
LPAZ				LR	LR	06 04 34.9	
	comp=Z,135nm,20.8s,baz=286,slow=40						
PB16	**IPOC Station P**	**11.39**	**134**	Pn	**Pn**	**05 59 41.5**	**-2.1**
CMBC	**Cumbal**	**11.46**	**2**	P	**Pn**	**05 59 46.4**	**+2.1**
	7µm32nm,0.8s						
GCUF	**Volcan Galeras**	**11.76**	**4**	P	**Pn**	**05 59 49.8**	**+1.3**
	10nm,0.8s						
CRUC	**La Cruz**	**12.13**	**6**	P	**Pn**	**05 59 54.0**	**+0.5**
PB11	**IPOC Station P**	**12.28**	**139**	Pn	**Pn**	**05 59 53.0**	**-2.3**
FLOC	**Florencia**	**12.35**	**12**	P	**Pn**	**05 59 55.4**	**-0.7**
	423nm20nm,0.8s						
BBAC	**Balboa, Cauca**	**12.56**	**4**	P	**Pn**	**05 59 59.9**	**+0.8**
	10.0nm,1.6s						
TA01	**Diego Aracena**	**12.56**	**143**	Pn	**Pn**	**05 59 56.3**	**-2.6**
PB08	**IPOC Station P**	**12.88**	**139**	Pn	**Pn**	**06 00 02.0**	**-1.6**
POPC	**Popayan, Colom**	**13.12**	**7**	P	**Pn**	**06 00 08.0**	**+1.1**
	9.7nm,0.9s						
MACC	**Macarena, Meta**	**13.36**	**19**	P	**Pn**	**06 00 08.6**	**-1.3**
	38nm,0.8s						
URMC	**La Uribe, Meta**	**14.25**	**16**	P	**Pn**	**06 00 22.7**	**+0.7**
	677nm55nm,0.9s						
ORTC	**Ortega, Tolima**	**14.69**	**12**	P	**Pn**	**06 00 28.1**	**+0.4**
	21nm,1.0s						
TEFE	**Tefe**	**15.16**	**63**	*e*P	**Pn**	**06 00 31.1**	**-2.7**
VILC	**Villavicencio,**	**15.27**	**17**	P	**Pn**	**06 00 32.8**	**-2.4**
	567nm59nm,1.0s						
PLMC	**San Jos del P**	**15.50**	**7**	P	**P**	**06 00 41.4**	**-0.2**
	18nm,0.9s						
CHIC	**Chingaza**	**15.75**	**17**	P	**P**	**06 00 44.9**	**+0.3**
	15nm,0.8s						
ROSC	**El Rosal**	**15.80**	**14**	P	**P**	**06 00 45.5**	**+0.4**
	8.6nm,0.7s,baz=187,slow=8.2,SNR=8.3						
ROSC				LR	LR	06 07 42.1	
	comp=Z,164nm,21.4s,baz=178,slow=40						
ROSC	**El Rosal**	**15.80**	**14**	P	**P**	**06 00 46.3**	**+1.2**
ROSC				IAmb	IAmb	06 01 08.3	
	comp=Z,46nm,1.4s						
CBOC	**Ciudad Bolivar**	**16.48**	**8**	P	**Pn**	**06 00 51.3**	**+0.6**
	comp=Z,27nm,1.1s						
PTBC	**PUERTO BERRIO,**	**17.41**	**12**	P	**Pn**	**06 01 01.0**	**-1.1**
	comp=Z,24nm,1.0s						
SIV	**San Ignacio**	**17.49**	**110**	P	**P**	**06 01 03.7**	**+0.1**
	comp=Z,6.9nm,1.0s,baz=284,slow=10,SNR=21						
SIV				Lg	Lg	06 06 13.5	
	baz=2.8,slow=22,SNR=3.2						
SIV				LR	LR	06 07 42.9	

	comp=Z,92nm,18.2s,baz=292,slow=36						
VILB	Vilhena	17.76	99	P	P	06 01 07.0	+0.5
PAMC	Pamplona, Colo	18.62	17	P	P	06 01 16.5	0.0
MACA	Manacapuru-AM	18.86	68		P	06 01 19.0	+0.4
MACA				IAmb	IAmb	06 01 21.4	
	comp=Z,17nm,0.7s						
MACA	Manacapuru-AM	18.86	68	*e*P	P	06 01 18.1	-0.5
PTLB	Pontes e Lacer	19.17	107		P	06 01 22.6	+0.6
PTLB	Pontes e Lacer	19.17	107	*e*P	P	06 01 21.6	-0.3
SDV	Santo Domingo	20.75	21	P	P	06 01 40.0	+0.7
	comp=Z,15nm,1.0s,baz=216,slow=8.5,SNR=13						
SDV				LR	LR	06 11 31.8	
	comp=Z,104nm,19.7s,baz=272,slow=41						
	comp=Z,15nm,1.0s						
SDV	Santo Domingo	20.75	21		Pn	06 01 40.8	-1.4
SDV				IAmb	IAmb	06 01 42.2	
	comp=Z,17nm,1.1s						
SDV	Santo Domingo	20.75	21	*e*P	P	06 01 40.4	+1.1
PDRB	Porto dos Gac	21.07	95	*e*P	P	06 01 42.5	-0.2
BOAV	Boa Vista	21.80	55		P	06 01 51.3	+0.9
BOAV				IAmb	IAmb	06 01 53.3	
	comp=Z,15nm,1.3s						
BOAV	Boa Vista	21.80	55	*e*P	P	06 01 51.3	+0.9
JTS	Las Juntas de	21.81	342	LR	LR	06 09 09.9	
	comp=Z,57nm,19.9s,baz=200,slow=33						
H03N2	Juan Fernandez	22.76	182	T	T	06 26 02.7	
	baz=0.8,slow=75						
H03N1	Juan Fernandez	22.76	182	T	T	06 26 04.3	
	baz=0.8,slow=75						
H03N3	Juan Fernandez	22.77	182	T	T	06 26 01.1	
	baz=0.8,slow=75						
NPGB	Novo Progresso	22.82	83	*e*P	P	06 02 00.6	-0.8
ITTB	Itaituba	23.09	76	*e*P	P	06 02 03.9	-0.1
CPUP	Villa Florida	25.16	131	P	P	06 02 23.7	+0.7
CPUP				IAmb	IAmb	06 02 39.7	
	comp=Z,9.9nm,1.1s						
CPUP	Villa Florida	25.16	131	P	P	06 02 23.7	+0.7
	comp=Z,3.1nm,0.9s,baz=330,slow=10,SNR=7.6						
CPUP				pP	pP	06 02 38.2	+1.1
	comp=Z,4.6nm,1.0s,baz=303,slow=11,SNR=7.9						
CPUP				LR	LR	06 14 09.9	
	comp=Z,76nm,19.2s,baz=314,slow=41						
	comp=Z,3.1nm,0.9s						
AMBA	Amambai (Brazi	25.32	122	*e*P	P	06 02 25.9	+1.4
MDP	Montagnes des	29.82	60	LR	LR	06 15 39.5	
	comp=Z,114nm,18.1s,baz=273,slow=37						
SJG	San Juan	30.89	23	LR	LR	06 17 40.1	
	comp=Z,38nm,19.1s,baz=209,slow=40						
CMIG	Matias Romero	32.08	329	LR	LR	06 13 59.2	
	comp=Z,30nm,18.2s,baz=128,slow=32						
TXAR	Lajitas Array	46.69	329	P	P	06 05 25.6	-0.7
	comp=Z,0.4nm,0.7s,baz=142,slow=6.9,SNR=4.1						
TXAR				pP	pP	06 05 41.7	+0.6
	comp=Z,0.6nm,0.9s,baz=134,slow=7.2,SNR=3.6						
	comp=Z,0.4nm,0.7s						
KSCO	Kaye Shedlock'	54.34	337		P	06 06 25.2	+1.3
PDAR	Pinedale Array	60.35	334	pP	pP	06 07 21.6	-0.2
	comp=Z,0.1nm,0.5s,baz=150,slow=4.5,SNR=1.6						
NVAR	Mina Array Bea	61.48	325	pP	pP	06 07 30.1	+0.6
	comp=Z,0.6nm,0.7s,baz=127,slow=7.2,SNR=2.0						
ULM	Lac du Bonnet	62.52	347	pP	pP	06 07 38.2	+2.2
	comp=Z,1.8nm,0.6s,baz=135,slow=7.4,SNR=1.9						
DBIC	Dimbokro	74.98	80	P	P	06 08 39.2	+0.3
	comp=Z,2.4nm,0.8s,baz=341,slow=1.0,SNR=3.5						
DBIC				pP	pP	06 08 57.0	+2.2
	comp=Z,2.9nm,0.7s,baz=275,slow=5.7,SNR=4.1						
	comp=Z,2.4nm,0.8s						
DBIC	Dimbokro	74.98	80	P	P	06 08 39.1	+0.3
SNAA	Sanae	75.41	162	pP	pP	06 08 55.5	-0.7
	comp=Z,4.0nm,0.9s,baz=3.2,slow=23,SNR=2.3						
YKAW1	Yellowknife Wh	78.09	344	P	P	06 08 54.2	-1.2
YKAW1				IAmb	IAmb	06 09 25.2	
	comp=Z,3.5nm,1.4s						
YKA	Yellowknife Ar	78.13	344	P	P	06 08 54.2	-1.3
	comp=Z,0.3nm,0.6s,baz=148,slow=5.5,SNR=7.9						
YKA				pP	pP	06 09 13.1	+1.6
	comp=Z,0.2nm,0.8s,baz=117,slow=8.8,SNR=3.6						
	comp=Z,0.3nm,0.6s						
YKA	Yellowknife Ar	78.13	344	P	P	06 08 53.8	-1.8
SFJD	Kangerlussuaq	79.94	11	LR	LR	06 47 14.5	
	comp=Z,39nm,18.7s,baz=182,slow=38						
MDT	Midelt	82.20	55	LR	LR	06 43 37.3	
	comp=Z,17nm,20.4s,baz=284,slow=34						
TORD	Torodi Ar. Bea	82.70	75	P	P	06 09 21.3	+0.2
	comp=Z,0.4nm,0.7s,baz=246,slow=6.1,SNR=2.5						
TORD				pP	pP	06 09 39.8	+2.6
	comp=Z,1.9nm,1.0s,baz=278,slow=4.2,SNR=6.2						
	comp=Z,0.4nm,0.7s						
ASAR	Alice Springs	133.71	222	pPKP	pPKPdf	06 16 31.4	+0.4
	comp=Z,0.2nm,0.6s,baz=120,slow=1.6,SNR=4.5						

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*NEIC **28** 05:58:05.7±1.7, 15.°6S±0.°1×167.°8E±0.°1, h97^{km}±6^{km}, mb4.6/28, Error ellipse: s-maj=21.1km s-min=12.4km az=64.0*

*IDC **28** 05:58:05.1±2.8, 15.°62S×167.°72E, h90^{km}±23^{km}, mb3.9/17, mbtmp4.3/18, MS3.0/4, Error ellipse: s-maj=24.2km s-min=18.2km az=106.0*

*NOU **28** 05:58:08.0, 15.°81S×167.°48E, h42^{km}, MLv5.1/19, Vanuatu Islands*

ISC 28 05:58:06.0±0.4**, 15.°66S**±0.°06×**167.°68E**±0.°09**, h100**^{km}**, n85, σ1.^{s}15**/88**, mb4.4**/27**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.50	295		Pn	05 58 21.1	-0.6
SANVU	Saraoutou	0.50	295	P	Pn	05 58 20.5	-1.2
SANVU	Saraoutou	0.50	295	S	Sn	05 58 27.6	-6.0
DVP	Devils Point	2.11	167	P	Pn	05 58 40.4	+0.5
RTV	Rentapao	2.24	161	P	Pn	05 58 41.8	+0.2
MARNC	Mare, Loyalty	5.80	177	Pn	Pn	05 59 27.4	-2.1
MARNC	Mare, Loyalty	5.80	177	P	Pn	05 59 27.8	-1.7
KOUNC	Koumac, New Ca	5.83	213	P	Pn	05 59 30.7	+0.7
YATNC	Mamie plateau,	6.41	187	P	Pn	05 59 36.6	-1.2
DZM	Mont Dzumac	6.48	190	P	Pn	05 59 39.1	+0.2
	105nm,0.3s,baz=33,slow=14,SNR=258						
DZM				S	Sn	06 00 48.4	-3.0
	77nm,0.4s,baz=318,slow=24,SNR=8.0						
DZM				LR	LR	06 01 58.7	
	comp=Z,81nm,20.5s,baz=334,slow=36						
DZM	Mont Dzumac	6.48	190		Pn	05 59 38.6	-0.3
DZM	Mont Dzumac	6.48	190	P	Pn	05 59 38.8	-0.1
OUENC	Ouen Island, N	6.77	187	P	Pn	05 59 43.3	+0.6
PINNC	Pines Island,	6.92	182		Pn	05 59 45.1	+0.3
PINNC	Pines Island,	6.92	182	P	Pn	05 59 45.0	+0.3
HURO	Huro Makira	7.64	312	P	Pn	05 59 55.6	+1.1
NGOA	Tingoa Renbel	8.45	298	P	Pn	06 00 06.0	+0.4
SAVO	Savo Central	10.04	309	P	Pn	06 00 30.0	+2.7
TATA	Tatamba Isabel	10.56	312	P	Pn	06 00 36.3	+2.0
CTA	Charters Tower	20.85	255	P	P	06 02 40.6	+0.7
	5.0nm,0.9s,baz=73,slow=9.5,SNR=2.9						
CTA				LR	LR	06 09 29.4	
	comp=Z,34nm,19.3s,baz=141,slow=33						
	5.0nm,0.9s						
RTZ	Ruatahuna	24.29	162	P	P	06 03 15.1	+1.0
RAR	Rarotonga	31.33	105	LR	LR	06 15 33.6	
	comp=Z,27nm,18.8s,baz=160,slow=34						
WB0	Warramunga Arr	31.93	258	P	P	06 04 21.2	-1.2
WRA	Warramunga Arr	31.99	257	P	P	06 04 22.4	-0.5
	0.4nm,0.5s,baz=82,slow=7.6,SNR=2.1						
	0.4nm,0.5s						
WRA	Warramunga Arr	31.99	257	P	P	06 04 22.4	-0.5
AS31	Alice Springs	32.72	251	P	P	06 04 27.9	-1.4
ASAR	Alice Springs	32.72	251	P	P	06 04 28.8	-0.6
	1.4nm,0.7s,baz=79,slow=8.6,SNR=14						
ASAR				ScP	ScP	06 10 48.2	+0.4
	1.1nm,0.9s,baz=90,slow=3.6,SNR=6.4						
ASAR				LR	LR	06 17 33.4	
	comp=Z,36nm,18.1s,baz=100,slow=36						
	1.4nm,0.7s						
ASAR	Alice Springs	32.72	251	P	P	06 04 28.1	-1.2
KNRA	Kununurra	37.43	265	P	P	06 05 10.2	+0.4
KNRA				IAmb	IAmb	06 06 24.4	
	comp=Z,12nm,1.1s						
FITZ	Fitzroy Crossi	40.24	260	P	P	06 05 32.5	-0.7
JGF	Kuroka	58.52	331	P	P	06 07 51.6	-0.3
JGF				IAmb	IAmb	06 08 06.8	
	comp=Z,8.5nm,1.0s						
JMN	Monobe	58.74	327	P	P	06 07 54.2	+0.6
MJAR	Matsushiro Arr	58.91	332	P	P	06 07 54.0	-0.7
	comp=Z,1.3nm,0.5s,baz=182,slow=6.9,SNR=8.6						
	comp=Z,1.3nm,0.5s						
MJAR	Matsushiro Arr	58.91	332	P	P	06 07 53.5	-1.2
MJAR				IAmb	IAmb	06 08 04.1	
	comp=Z,2.6nm,1.1s						
MAJO	Matsushiro	58.91	332	P	P	06 07 53.5	-1.1
MAJO				IAmb	IAmb	06 07 54.6	
	comp=Z,7.8nm,1.1s						
JNU	Nakatsue	59.91	324	P	P	06 08 01.6	0.0
	comp=Z,5.6nm,0.6s,baz=52,slow=5.5,SNR=5.7						
	comp=Z,5.6nm,0.6s						
JNU	Nakatsue	59.91	324	P	P	06 08 01.0	-0.6
JNU				IAmb	IAmb	06 08 40.8	
	comp=Z,12nm,1.1s						
TPUB	Ta-pu	60.13	309	P	P	06 08 03.2	-0.1
JSD	Sado	60.13	333	P	P	06 08 02.6	-0.4
VNDA	Vanda	61.94	181	P	P	06 08 15.4	+0.7
	comp=Z,0.3nm,0.3s,baz=80,slow=9.8,SNR=2.8						
	comp=Z,0.3nm,0.3s						
VNDA	Vanda	61.94	181	P	P	06 08 15.2	+0.5
JKA	Kamikawa-asahi	63.75	340	P	P	06 08 28.1	+1.0
ASAJ	Asahikawa	63.75	340	P	P	06 08 28.9	+1.8
	comp=Z,18nm,0.9s,baz=234,slow=2.3,SNR=6.2						
	comp=Z,18nm,0.9s						
KSRS	Korea Array	64.73	326	P	P	06 08 33.8	+0.2
	comp=Z,1.0nm,0.5s,baz=139,slow=7.6,SNR=2.7						
	comp=Z,1.0nm,0.5s						
USRK	Ussuriysk Ar.	67.89	333	P	P	06 08 53.3	-0.4
	comp=Z,3.1nm,0.6s,baz=172,slow=5.8,SNR=5.2						
	comp=Z,3.1nm,0.6s						
PEA0B	Petropavlovsk-	69.03	354	P	P	06 08 59.5	-1.1
PETK	Petropavlovsk-	69.03	354	P	P	06 09 00.1	-0.5
	comp=Z,6.4nm,1.0s,baz=158,slow=5.4,SNR=2.0						
	comp=Z,6.4nm,1.0s						
QSPA	South Pole Qui	74.37	180	P	P	06 09 33.8	+1.1
CMAR	Chiang Mai Arr	75.69	294	P	P	06 09 42.5	+1.5
	comp=Z,0.8nm,0.6s,baz=137,slow=4.7,SNR=4.6						
	comp=Z,0.8nm,0.6s						
ACHA	Angle Creek He	79.65	19	P	P	06 10 00.8	-1.4
ACHA				IAmb	IAmb	06 12 19.1	
	comp=Z,11nm,1.2s						
ULN	Ulaanbaatar	83.12	324	P	P	06 10 21.5	+0.6
ULN				IAmb	IAmb	06 10 22.7	
	comp=Z,7.9nm,0.8s						
SONM	Songino Array	83.48	324	P	P	06 10 23.5	+0.8
	comp=Z,1.5nm,0.5s,baz=157,slow=10,SNR=11						
	comp=Z,1.5nm,0.5s						
SONM	Songino Array	83.48	324	P	P	06 10 22.9	+0.3
SONM				IAmb	IAmb	06 10 24.4	
	comp=Z,3.7nm,1.0s						
G16K	Koyuk River	83.93	12	P	P	06 10 24.3	0.0
G16K				IAmb	IAmb	06 13 09.2	
	comp=Z,5.1nm,1.1s						
KNK	Knik Glacier	84.33	20	P	P	06 10 26.4	-0.1
KNK				IAmb	IAmb	06 11 26.3	
	comp=Z,22nm,1.2s						
J20K	Nowinta River	84.81	16	P	P	06 10 29.7	+0.8
J20K				IAmb	IAmb	06 11 59.9	
	comp=Z,6.8nm,1.2s						
SCM	Sheep Creek Mo	85.00	20	P	P	06 10 29.5	-0.5
SCM				IAmb	IAmb	06 12 28.6	
	comp=Z,18nm,1.2s						
F17K	Baldwin Pennin	85.07	12	P	P	06 10 30.2	+0.1
F17K				IAmb	IAmb	06 12 19.3	
	comp=Z,4.5nm,1.1s						
G19K	Purcell Mounta	85.70	14	P	P	06 10 33.3	+0.1
BELA	Belgrano 2	85.77	175	P	P	06 10 32.8	-0.8
YAH	Yahtse	85.92	23	P	P	06 10 32.9	-1.8
E19K	Redstone River	86.77	13	P	P	06 10 38.9	+0.4
E19K				IAmb	IAmb	06 10 39.8	
	comp=Z,1.5nm,0.6s						
ILAR	Eielson Array	87.29	18	P	P	06 10 39.5	-1.6
	comp=Z,0.7nm,0.4s,baz=236,slow=5.2,SNR=28						
	comp=Z,0.7nm,0.4s						
NVAR	Mina Array Bea	87.58	49	P	P	06 10 43.6	+0.3
	comp=Z,0.2nm,0.6s,baz=250,slow=5.7,SNR=2.1						
	comp=Z,0.2nm,0.6s						
MKAR	Makanchi Array	98.14	316	P	P	06 11 31.3	-0.3
	comp=Z,0.8nm,0.7s,baz=88,slow=6.2,SNR=6.2						
MKAR				PKiKP	PKiKP	06 16 04.5	+0.4
	comp=Z,0.2nm,0.5s,baz=96,slow=1.4,SNR=4.3						
	comp=Z,0.8nm,0.7s						
YKA	Yellowknife Ar	98.19	27	P	P	06 11 30.7	-0.7
	comp=Z,0.6nm,0.9s,baz=256,slow=5.2,SNR=6.4						
	comp=Z,0.6nm,0.9s						
ZALV	Zalesovo Beam	98.37	324	P	P	06 11 32.2	-0.2
	comp=Z,1.3nm,0.8s,baz=106,slow=4.8,SNR=5.7						
	comp=Z,1.3nm,0.8s						
BVAR	Borovoye Array	106.72	321	PKiKP	PKiKP	06 16 19.5	0.0
	comp=Z,0.5nm,0.6s,baz=67,slow=3.7,SNR=1.7						
ARCES	ARCESS Array B	121.25	345	PKP	PKPdf	06 16 46.4	-0.3
	comp=Z,2.7nm,0.6s,baz=69,slow=1.4,SNR=25						
FINES	FINESS Array B	126.73	338	PKP	PKiKP	06 16 57.8	0.0
	comp=Z,0.8nm,0.4s,baz=87,slow=2.0,SNR=14						
NOA	NORSAR Array B	131.62	345	PKP	PKPdf	06 17 07.1	+0.4
	comp=Z,1.6nm,0.9s,baz=35,slow=2.0,SNR=2.7						
AKASG	Malin Array Be	131.72	326	PKP	PKPdf	06 17 07.0	-0.2
	comp=Z,0.8nm,0.4s,baz=50,slow=2.4,SNR=4.7						
HFS	Hagfors	131.72	343	PKP	PKPdf	06 17 06.7	-0.2
	comp=Z,0.8nm,0.7s,baz=11,slow=1.5,SNR=4.1						
BRTR	Keskin Array B	133.41	310	PKP	PKPdf	06 17 11.5	+0.6
	comp=Z,0.8nm,0.6s,baz=160,slow=5.1,SNR=4.9						
CONA	Conrad Observa	140.32	330	*i* PKiKP	PKiKP	06 17 26.0	+0.1
	comp=Z,1.5nm,0.5s						
GERES	GERESS Array B	140.65	333	PKP	PKPdf	06 17 24.3	+0.3
	comp=Z,0.7nm,0.8s,baz=12,slow=6.8,SNR=4.3						
LESA	Schwarzleotal	142.17	332	*e*PKP	PKPdf	06 17 25.9	-0.8
	comp=Z,1.4nm,0.3s						
WATA	Walderalm	142.72	333	*i* PKP	PKPdf	06 17 29.2	+1.4
	comp=Z,1.7nm,0.4s						
WTTA	Wattenberg	142.75	333	*e*PKiKP	PKiKP	06 17 30.4	-0.6
	comp=Z,0.8nm,0.3s						
RETA	Reutte	142.96	334	*e*PKP	PKPdf	06 17 28.3	+0.2
	comp=Z,0.2nm,0.3s						
SQTA	Sankt Quirin	142.97	333	*i* PKP	PKPdf	06 17 26.3	-1.9
	comp=Z,0.9nm,0.4s						
FETA	Feichten	143.33	333	*i* PKP	PKPbc	06 17 26.5	+0.3
	comp=Z,2.9nm,0.6s						
KEST	Kesra	152.18	320	PKPbc	PKiKP	06 17 51.4	+0.7
	comp=Z,7.5nm,0.6s,baz=141,slow=1.1,SNR=10						
ESDC	Sonseca Array	154.99	345	PKPbc	PKiKP	06 17 56.5	+0.2
	comp=Z,0.2nm,0.6s,baz=17,slow=3.9,SNR=1.7						
ESDC				PKPab	PKPab	06 18 11.8	-0.2
	comp=Z,1.0nm,0.8s,baz=13,slow=3.7,SNR=6.3						
TORD	Torodi Ar. Bea	166.19	261	PKP	PKPdf	06 17 59.8	-0.5
	comp=Z,0.3nm,0.6s,baz=58,slow=1.5,SNR=1.7						
TORD				PKPab	PKPab	06 19 02.8	+1.1
	comp=Z,0.3nm,0.8s,baz=46,slow=1.9,SNR=1.3						

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*MEX **28** 06:13:36.1±0.3, 14.°13N×92.°01W, h63^{km}±33^{km}, MD3.7*

*GCG **28** 06:13:36.0±0.3, 14.°43N×91.°60W, h83^{km}±7^{km}, MD3.7*

ISC 28 06:13:35.8±3.0**, 14.°3N**±0.°3×**91.°9W**±0.°2**, h68**^{km}±28^{km}**, n8, σ0.^{s}41**/16**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.34	37	*e*P	Pn	06 13 47.0	-0.1
RTAL				*e*S	Sn	06 13 55.6	+0.2
STG2	El Palmar, Qui	0.55	70	*i* P	Pn	06 13 48.9	-0.2
STG2				*i* S	Sn	06 13 59.4	+0.5
STG5	El Palmar, Qui	0.56	74	*i* P	Pn	06 13 48.7	-0.5
STG5				*i* S	Sn	06 13 58.5	-0.5
STG8	El Palmar, Qui	0.57	69	*i* P	Pn	06 13 49.6	+0.1
STG8				*i* S	Sn	06 14 00.1	+0.7
CHUJ	Union Juarez	0.86	347	*e*P	Pn	06 13 52.7	-0.1
CHUJ				*e*S	Sn	06 14 05.5	+0.2
PATR	El Naranjo	0.92	340	*e*P	Pn	06 13 53.0	-0.4
PATR				*e*S	Sn	06 14 06.2	-0.3
PAVE	Pavencul	0.98	344	*e*P	Pn	06 13 53.9	-0.3
PAVE				*e*S	Sn	06 14 08.0	+0.3
PCIG		1.93	319	*e*P	Pn	06 14 06.5	+0.1
PCIG				*e*S	Sn	06 14 30.0	+0.4

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*CATAC **28** 06:15:59.4±0.9, 8.°N±4.°×8.°3W±.°, h15^{km}±2^{km}, M2.9/7, MLv2.9/7, Error ellipse: s-maj=11.0km s-min=6.5km az=142.2, confirmed*

*UPA **28** 06:16:00.8±1.2, 8.°37N×82.°82W, h30^{km}±4^{km}, MW3.2*

ISC 28 06:16:01.3±0.9**, 8.°35N**±0.°04×**82.°77W**±0.°02**, h32**^{km}±6^{km}**, n40, σ1.^{s}19**/54**, 3C-5D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.06	335	⇑*e*P	Pb	06 16 05.6	-1.2
PTPM	Petroterminale	0.19	217	*e*P	Pb	06 16 06.6	-1.1
PTPM				*i* S	Sb	06 16 11.9	-0.1
CDITO	Canoas	0.24	334	P	Pb	06 16 07.1	-1.3
CDITO	Canoas	0.24	334	S	Sb	06 16 12.2	-0.9
BAGA3	Bagala, Chiriq	0.26	64	*e*P	Pb	06 16 08.5	0.0
BAGA3				*e*S	Sb	06 16 14.9	+1.5
LIMO3	Limones	0.27	201	*e*P	Pb	06 16 08.0	-0.6
LMNES	Limones	0.27	200	⇑*i*P	Pb	06 16 07.7	-0.9
DVD	David	0.32	75	*e*P	Pb	06 16 09.0	-0.3
DVD				*e*S	Sn	06 16 15.2	-0.1
LOCO3	Loma Colorada,	0.35	81	*e*P	Pb	06 16 09.4	-0.2
LOCO3				*e*S	Sn	06 16 16.5	+0.5
LOMA3	Las Lomas, Chi	0.38	78	*e*P	Pb	06 16 09.9	-0.2
CLLRA	Cordillera,	0.42	21	⇓*i*P	Pb	06 16 10.2	-0.5
PTAR3	Potrerillos Ar	0.43	38	*e*P	Pb	06 16 10.8	-0.1
MLIR3	Monte Lirio, C	0.44	352	*e*P	Pn	06 16 12.7	+1.2
MLIR3				*e*S	Sn	06 16 20.1	+1.6
BRU2	Volcan	0.44	9	⇓*i*P	Pb	06 16 10.5	-0.7
BRU2				*i* S	Sb	06 16 17.9	+0.1
BRU2	Volcan	0.44	9	P	Pb	06 16 10.5	-0.7
BRU2	Volcan	0.44	9	S	Sb	06 16 18.1	+0.2
SCLRA	Santa Clara, W	0.48	358	*e*P	Pb	06 16 11.5	-0.2
SCLRA				*e*S	Sn	06 16 19.7	+0.3
BQTLY	Boquete Panama	0.50	37	⇓*i*P	Pb	06 16 11.4	-0.6
BQTLY				*e*S	Sb	06 16 18.5	-0.9
BQSF3	Alto Boquete,	0.51	40	*e*P	Pb	06 16 11.4	-0.7
BQSF3				*e*S	Sb	06 16 19.5	0.0
LNBQ3	Los Naranjos,	0.54	36	*e*P	Pb	06 16 11.9	-0.7
PTJ1	Puerto Jimnez	0.56	289	P	Pb	06 16 11.7	-1.2
PTJ1	Puerto Jimnez	0.56	289	S	Sb	06 16 21.4	+0.7
PIRO	Carate, Puerto	0.57	275	*e*P	Pb	06 16 11.4	-1.6
PIRO	Carate, Puerto	0.57	275	P	Pb	06 16 11.3	-1.6
PIRO	Carate, Puerto	0.57	275	S	Sb	06 16 20.2	-0.7
RBALA	Bur	0.80	49	⇓*i*P	Pb	06 16 15.9	-0.9
RBALA				*e*S	Sn	06 16 27.5	+0.3
CHGR2	Aguacate	0.84	47	*e*P	Pb	06 16 13.6	-4.0
CHGR2				*e*S	Sb	06 16 28.4	-0.2
RMDIO	Remedios, Chir	0.93	98	*e*P	Pn	06 16 18.1	-0.1
RMDIO				*e*S	Sn	06 16 32.7	+2.3
DRK0	Durika	1.02	332	*e*P	Pn	06 16 18.2	-1.4
DRK0	Durika	1.02	332	P	Pn	06 16 18.2	-1.4
DRK0	Durika	1.02	332	S	Sn	06 16 33.8	+0.9
PDCAN	Manzana , Fuen	1.06	93	⇑*e*P	Pn	06 16 19.9	-0.1
KKNTU	Kakintº	1.06	63	⇓*i*P	Pn	06 16 19.5	-0.5
KKNTU				*e*S	Sn	06 16 34.0	+0.3
OCHAL	Ojochal	1.14	310	P	Pn	06 16 20.7	-0.4
OCHAL	Ojochal	1.14	310	S	Sb	06 16 37.3	+0.2
LCR2	La Lucha 2	1.84	318	P	Pn	06 16 32.0	+1.1
LCR2	La Lucha 2	1.84	318	S	Sn	06 16 56.1	+2.8
TRT2	Tortugero	2.39	336	S	Sb	06 17 11.6	-1.2
JTS	Las Juntas de	2.89	312	P	Pn	06 16 47.9	+2.7
JTS				S	Sn	06 17 20.3	+1.4
CMARA	Lajas Hojancha	3.10	302	P	Pn	06 16 48.1	-0.1

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*MOS **28** 06:16:55.3±0.8, 49.°80N×155.°79E, h75^{km}, mb4.4/6, Error ellipse: s-maj=28.8km s-min=5.0km az=71.6*

*KRSC **28** 06:16:56.9±2.2, 49.°80N×156.°65E, h61^{km}±25^{km}, Ml4.4*

*NEIC **28** 06:16:58.9±1.1, 50.°2N±0.°1×155.°6E±0.°2, h114^{km}±7^{km}, mb4.2/16, Error ellipse: s-maj=22.8km s-min=11.6km az=135.0*

*IDC **28** 06:16:59.5±2.1, 50.°23N×155.°45E, h112^{km}±18^{km}, mb3.6/12, mbtmp3.9/14, Error ellipse: s-maj=23.3km s-min=13.0km az=143.0*

ISC 28 06:16:57.7±0.6**, 50.°05N**±0.°08×**155.°68E**±0.°07**, h100**^{km}**, n97, σ1.^{s}27**/104**, mb4.1**/22**, 2C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.69	24	*e*PN	Pn	06 17 14.6	-0.4
SKR				*e*S	Sn	06 17 26.7	-1.3
SKR				pmax	pmax		
	comp=Z,712nm,0.8s						
SKR				smax	smax		
	comp=N,3µm,0.5s						
SKR				smax	smax		
	comp=E,2µm,0.5s						
PAU	Pauzhetka	1.59	26	PN	Pn	06 17 24.6	-0.4
PAU				S	Sn	06 17 45.7	-0.1
PAU	Pauzhetka	1.59	26	*e*P	Pn	06 17 24.6	-0.4
PAU				*e*S	Sn	06 17 45.7	-0.1
KDTR	Khodutka, Kamc	2.33	40	PN	Pn	06 17 34.4	0.0
KDTR				S	Sn	06 18 00.6	-2.0
KDTR	Khodutka, Kamc	2.33	40	*e*P	Pn	06 17 34.4	0.0
KDTR				*e*S	Sn	06 18 00.6	-2.0
ASAK	Asacha	2.72	30	PN	Pn	06 17 40.5	+0.8
ASAK	Asacha	2.72	30	*e*P	Pn	06 17 40.6	+0.8
MTVR	Mutnovka	2.90	32	PN	Pn	06 17 42.8	+0.6
MTVR	Mutnovka	2.90	32	*e*P	Pn	06 17 42.9	+0.6
GRL	Gorelyy	2.92	30	PN	Pn	06 17 43.4	+1.0
GRL				S	Sn	06 18 17.4	+0.5
GRL	Gorelyy	2.92	30	*e*P	Pn	06 17 43.5	+1.0
GRL				*e*S	Sn	06 18 17.5	+0.5
RUS	Russkaya	2.98	36	*e*S	Sn	06 18 17.8	-0.2
APC	Apacha	3.02	17	PN	Pn	06 17 45.7	+2.0
APC	Apacha	3.02	17	*e*P	Pn	06 17 45.7	+2.0
KRMR	Karymshinskiy	3.18	28	PN	Pn	06 17 46.8	+1.1
KRMR	Karymshinskiy	3.18	28	*e*P	Pn	06 17 46.8	+1.1
PEA0B	Petropavlovsk-	3.31	22	Pn	Pn	06 17 48.4	+0.9
PEA0B	Petropavlovsk-	3.31	22	PN	Pn	06 17 48.5	+0.9
PETK	Petropavlovsk-	3.31	22	P	Pn	06 17 48.1	+0.5
	comp=E,14nm,0.5s,baz=188,slow=13,SNR=50						
PETK				S	Sn	06 18 26.2	+0.2
	comp=E,9.2nm,0.5s,baz=176,slow=14,SNR=5.1						
PETK	Petropavlovsk-	3.31	22		Pn	06 17 47.9	+0.3
PET	Petropavlovsk	3.51	31	Pn	Pn	06 17 50.4	+0.2
PET	Petropavlovsk	3.51	31	*e*PN	Pn	06 17 51.7	+1.5
PET				*e*S	Sn	06 18 31.7	+0.9
PET				smax	smax		
	comp=N,135nm,0.5s						
PET				smax	smax		
	comp=E,74nm,0.4s						
DALK	Dalny	3.55	32	PN	Pn	06 17 51.8	+1.1
DALK				S	Sn	06 18 31.8	+0.1
DALK	Dalny	3.55	32	*e*P	Pn	06 17 51.9	+1.1
DALK				*e*S	Sn	06 18 31.9	+0.1
UGLR	Uglovaya	3.72	31	PN	Pn	06 17 55.3	+2.2
UGLR	Uglovaya	3.72	31	*e*P	Pn	06 17 55.3	+2.2
KOK	Koryaka	3.73	28	PN	Pn	06 17 55.7	+2.4
KOK	Koryaka	3.73	28	*e*P	Pn	06 17 55.8	+2.4
AVH	Avacha	3.74	29	PN	Pn	06 17 56.0	+2.6
AVH	Avacha	3.74	29	*e*P	Pn	06 17 56.1	+2.6
SMAR	Somma	3.76	30	PN	Pn	06 17 55.9	+2.2
SMAR	Somma	3.76	30	*e*P	Pn	06 17 56.0	+2.2
KRER	Koryakskii	3.78	29	PN	Pn	06 17 56.3	+2.3
KRER	Koryakskii	3.78	29	*e*P	Pn	06 17 56.4	+2.3
KRX	Arik	3.79	28	PN	Pn	06 17 55.5	+1.3
KRX	Arik	3.79	28	*e*P	Pn	06 17 55.5	+1.3
SDLR	Sedlovina	3.80	30	PN	Pn	06 17 54.8	+0.6
SDLR	Sedlovina	3.80	30	*e*P	Pn	06 17 54.9	+0.6
SPN	Mys Shipunski	4.08	40	PN	Pn	06 17 57.1	-0.8
SPN	Mys Shipunski	4.08	40	*e*P	Pn	06 17 57.1	-0.8
KZV	Kizimen	5.80	27	PN	Pn	06 18 24.4	+3.2
KZV	Kizimen	5.80	27	*e*P	Pn	06 18 24.5	+3.2
KBTR	Krutoberegovo	7.51	32	PN	Pn	06 18 43.9	-0.5
KBTR	Krutoberegovo	7.51	32	*e*P	Pn	06 18 43.9	-0.5
JKA	Kamikawa-asahi	10.71	241		Pn	06 19 29.0	+1.1
ASAJ	Asahikawa	10.71	241	P	Pn	06 19 29.8	+1.8
	comp=E,4.0nm,0.4s,baz=49,slow=12,SNR=5.7						
ERM	Erimo	11.83	232	Pn	Pn	06 19 43.2	+0.2
ERM	Erimo	11.83	232	PN	Pn	06 19 43.2	+0.2
AMKA	Amchitka	15.01	76	Pn	Pn	06 20 25.7	+1.3
ZEA	Zeya	17.87	293	*e*P	P	06 21 00.4	+1.5
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MJAR	Matsushiro Arr	18.48	230		P	06 21 05.3	-0.5
MJAR	Matsushiro Arr	18.48	230	P	P	06 21 05.3	-0.5
MJAR				pmax	pmax		
	comp=Z,8.0nm,1.4s						
YAK	Yakutsk	18.67	320	⇑*e*P	P	06 21 08.4	+0.8
YAK				pmax	pmax		
	comp=Z,17nm,0.6s						
BILL	Bilibino	18.79	12		P	06 21 08.4	-0.4
BILL	Bilibino	18.79	12	⇓*e*P	P	06 21 08.3	-0.6
BILL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SPIA	Saint Paul Isl	21.26	57	P	P	06 21 35.9	+0.4
JMN	Monobe	22.88	233	P	P	06 21 52.6	-0.1
JMN				IAmb	IAmb	06 22 26.9	
	comp=Z,39nm,1.5s						
HILR	Hailar Array B	23.06	283	P	P	06 21 53.1	-1.3
	comp=Z,0.7nm,0.4s,baz=77,slow=11,SNR=2.4						
	comp=Z,0.7nm,0.4s						
TIXI	Tiksi	24.86	340	P	P	06 22 09.6	-0.8
	comp=Z,3.7nm,0.3s,baz=46,slow=1.5,SNR=1.8						
	comp=Z,3.7nm,0.3s						
TIXI	Tiksi	24.86	340	P	P	06 22 08.7	-1.7

TIXI	Tiksi	24.86	340	i P	P	06 22 08.3	-2.1
TIXI				pmax	pmax		
	comp=Z,17nm,3.4s						
M13K	Dall Lake	25.14	50	P	P	06 22 12.3	-0.8
J14K	Nanvaranak Lak	25.39	45	P	P	06 22 15.6	+0.3
J14K				IAmb	IAmb	06 22 49.5	
	comp=Z,19nm,1.2s						
C18K	Utukok River	27.91	32	P	P	06 22 36.9	-1.1
C18K				IAmb	IAmb	06 22 38.3	
	comp=Z,3.7nm,1.1s						
D19K	Kuna River	28.94	33	P	P	06 22 45.5	-1.5
E22K	Anaktuvuk Pass	31.15	35	P	P	06 23 06.1	-0.5
E22K				IAmb	IAmb	06 23 14.5	
	comp=Z,8.1nm,1.5s						
H11N2	WAKE ISLAND Hy	31.55	159	T	T	06 56 21.0	
	baz=348,slow=74						
H11N1	WAKE ISLAND Hy	31.56	160	T	T	06 56 21.0	
	baz=348,slow=74						
H11N3	WAKE ISLAND Hy	31.56	159	T	T	06 56 25.9	
	baz=348						
COLA	College	32.51	41	⇓eP	P	06 23 18.6	+0.2
COLA				pmax	pmax		
	comp=Z,33nm,4.0s						
CCB	Clear Creek Bu	32.53	42	P	P	06 23 17.4	-1.2
CCB				IAmb	IAmb	06 23 27.1	
	comp=Z,4.3nm,1.2s						
H11S1	WAKE ISLAND Hy	32.69	160	T	T	06 57 44.3	
	baz=347,slow=76						
H11S3	WAKE ISLAND Hy	32.70	160	T	T	06 57 45.6	
	baz=347,slow=76						
H11S2	WAKE ISLAND Hy	32.70	160	T	T	06 57 51.0	
	baz=347,slow=76						
ILAR	Eielson Array	32.92	42	P	P	06 23 21.9	-0.1
ILAR	Eielson Array	32.92	42	eP	P	06 23 22.0	-0.1
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR	Eielson Array	32.92	42	P	P	06 23 21.6	-0.4
	comp=Z,0.9nm,0.7s,baz=265,slow=6.0,SNR=17						
	comp=Z,0.9nm,0.7s						
D25K	Kavik River	33.26	33	P	P	06 23 24.4	-0.7
D25K				IAmb	IAmb	06 23 25.2	
	comp=Z,3.4nm,0.6s						
A36M	Sachs Harbour	40.13	28	P	P	06 24 22.8	-0.3
A36M				IAmb	IAmb	06 24 25.4	
	comp=Z,3.6nm,0.9s						
MKAR	Makanchi Array	46.99	296	P	P	06 25 16.5	-2.0
	comp=Z,0.2nm,0.3s,baz=34,slow=5.7,SNR=5.0						
	comp=Z,0.2nm,0.3s						
MKAR	Makanchi Array	46.99	296	P	P	06 25 17.5	-0.9
MKAR	Makanchi Array	46.99	296	eP	P	06 25 17.6	-0.9
YKA	Yellowknife Ar	47.27	39	P	P	06 25 20.6	+0.2
	comp=Z,0.9nm,0.9s,baz=298,slow=8.2,SNR=10						
	comp=Z,0.9nm,0.9s						
BLKN	Baker Lake	53.14	31	P	P	06 26 03.8	-0.8
AB31	Akbulak array	57.63	309	P	P	06 26 35.7	-1.3
AB31				IAmb	IAmb	06 27 15.2	
	comp=Z,2.9nm,1.2s						
ABKAR	Akbulak array	57.63	309	P	P	06 26 37.1	0.0
NVAR	Mina Array Bea	59.45	65	P	P	06 26 50.4	+0.3
	comp=Z,0.8nm,0.6s,baz=293,slow=8.4,SNR=6.6						
	comp=Z,0.8nm,0.6s						
CHGR	Chuyangaron	59.59	295	⇑eP	P	06 26 50.1	-0.8
CHGR				pmax	pmax		
	comp=Z,12nm,1.7s						
PDAR	Pinedale Array	61.46	57	P	P	06 27 04.8	+1.1
	comp=Z,1.4nm,0.8s,baz=327,slow=1.7,SNR=15						
	comp=Z,1.4nm,0.8s						
FINES	FINESS Array B	61.77	335	P	P	06 27 04.3	-0.9
	comp=Z,6.6nm,1.1s,baz=35,slow=5.1,SNR=3.1						
	comp=Z,6.6nm,1.1s						
OBN	Obninsk	63.54	326	eP	P	06 27 17.8	+0.8
OBN				e*PP	pP	06 27 40.1	-1.4
OBN				e*SP	sP	06 27 53.4	+1.0
OBN				e		06 29 38.3	
OBN				ePPP	PPP	06 31 09.8	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,57nm,12.0s						
SCHQ	Schefferville	69.60	25	P	P	06 27 55.1	-0.5
	comp=Z,1.2nm,0.4s,baz=334,slow=5.3,SNR=7.0						
	comp=Z,1.2nm,0.4s						
WRA	Warramunga Arr	72.20	201	P	P	06 28 12.1	+0.4
	comp=Z,0.4nm,0.7s,baz=18,slow=6.0,SNR=1.6						
	comp=Z,0.4nm,0.7s						
TXAR	Lajitas Array	74.42	63	P	P	06 28 25.7	+0.8
	comp=Z,1.5nm,0.6s,baz=298,slow=5.3,SNR=29						
	comp=Z,1.5nm,0.6s						
ASAR	Alice Springs	75.89	201	P	P	06 28 34.4	+1.3
	comp=Z,0.2nm,0.5s,baz=10,slow=5.1,SNR=8.0						
	comp=Z,0.2nm,0.5s						
BOSA	Boshof	137.03	281	PKP	PKPdf	06 36 09.7	+0.9
	comp=Z,3.0nm,1.0s,baz=174,slow=11,SNR=1.7						
PLCA	Paso Flores	146.70	92	PKPbc	PKPdf	06 36 27.6	+2.1
	comp=Z,0.7nm,0.5s,baz=317,slow=19,SNR=1.5						

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*GCG **28** 06:29:46.9±1.7, 14°.07N×92°.92W, h0^{km}±16^{km}, MD4.2, ML3.6*

*MEX **28** 06:29:47.6±0.8, 14°.14N×93°.25W, h14^{km}±102^{km}, MD4.3*

*CATAC **28** 06:29:50.6±0.8, 14°N±4°×9°3W±°, h12^{km}±6^{km}, M3.4/7, MLv3.4/7, Error ellipse: s-maj=13.5km s-min=7.6km az=100.4, confirmed*

ISC 28 06:29:46.7±1.6**, 14°.11N**±0°.06×**93°.04W**±0°.03**, h25**^{km}±14^{km}**, n46, σ2^{s}.14**/64**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.09	43	eP	Pb	06 30 07.1	+0.2
THIG				eS	Sn	06 30 22.0	+1.2
SMCA	Catarina	1.20	51	i P	Pb	06 30 09.0	+0.3
PATR	El Naranjo	1.27	38	eP	Pn	06 30 08.9	-0.2
PATR				eS	Sb	06 30 26.2	0.0
CHUJ	Union Juarez	1.33	43	eP	Pn	06 30 09.6	-0.3
CHUJ				eS	Sb	06 30 28.0	0.0
PAVE	Pavencul	1.36	38	eP	Pn	06 30 10.3	-0.1
PAVE				eS	Sn	06 30 27.8	0.0
RTAL	Retalhuleu	1.37	72	eP	Pb	06 30 11.5	-0.2
RTAL				eS	Sb	06 30 28.4	-0.4
RTAL	Retalhuleu	1.37	72	P	Pb	06 30 11.5	-0.2
STG2	El Palmar, Qui	1.65	78	i P	Pn	06 30 13.0	-1.2
STG5	El Palmar, Qui	1.67	80	i P	Pn	06 30 13.6	-0.9
STG8	El Palmar, Qui	1.67	78	i P	Pn	06 30 13.1	-1.5
STG8				IAML		06 30 43.2	
	comp=N,703nm,0.4s						
HUEH	Huehuetenango	1.91	51	eP	Pb	06 30 20.2	-0.9
HUEH				eS	Sb	06 30 44.4	-0.3
HUEH	Huehuetenango	1.91	51	i P	Pb	06 30 20.7	-0.4
HUEH	Huehuetenango	1.91	51	P	Pb	06 30 20.7	-0.4
HUEH	Huehuetenango	1.91	51	S	Sn	06 30 42.9	+1.5
CCIG	Comitan	2.33	22	eP	Pb	06 30 28.1	0.0
CCIG				eS	Sb	06 30 57.9	+1.3
APG	El Apazote	2.65	70	i P	Pn	06 30 30.6	+2.5
APG				i S	Sb	06 31 04.6	-1.2
TGIG		2.66	358	eP	Pn	06 30 30.4	+2.4
TGIG				eS	Sn	06 31 00.8	+1.3
FAME	Alcaldia de Sa	2.95	95	P	Pn	06 30 34.9	+2.9
FAME	Alcaldia de Sa	2.95	95	S	Sn	06 31 07.1	+0.5
NUBE	Las Nubes	3.17	93	i P	Pn	06 30 37.0	+1.8
NUBE	Las Nubes	3.17	93	P	Pn	06 30 37.0	+1.8
NUBE	Las Nubes	3.17	93	S	Sn	06 31 12.8	+0.4
HUIG	Huatulco	3.39	299	eP	Pn	06 30 40.2	+2.2
HUIG				eS	Sn	06 31 17.6	+0.1
CMIG	Matias Romero	3.46	329	eP	Pn	06 30 42.5	+3.6
CMIG				eS	Sn	06 31 17.3	-1.9
JAYA	Jayaque - finc	3.52	97	S	Sn	06 31 20.2	-0.7
JAYA	Jayaque - finc	3.52	97	P	Pn	06 30 41.5	+1.5
MTO3	Montecristo	3.58	85	S	Sn	06 31 22.8	+0.3
MTO3	Montecristo	3.58	85	P	Pn	06 30 42.1	+1.2
PMON	Piamonte	3.64	96	S	Sn	06 31 23.9	+0.1
LALI	Alcalda de L	3.67	99	S	Sn	06 31 24.5	+0.1
PAVA	Las Pavas	4.00	95	S	Sn	06 31 33.0	+0.2
PAVA	Las Pavas	4.00	95	P	Pn	06 30 48.3	+1.7
PETF	Flores	4.14	47	eP	Pb	06 30 55.4	-3.5
PETF				eS	Sn	06 31 36.6	+0.6
TECO	Alcaldia de Te	4.18	97	S	Sn	06 31 36.9	-0.1
PEIG	Puerto Escondi	4.39	296	eP	Pn	06 30 54.1	+2.3
PEIG				eS	Sn	06 31 39.4	-2.8
NEUV	Arroyo Zacate	4.46	324	eP	Pn	06 30 55.1	+2.3
NEUV				eS	Sn	06 31 45.5	+1.5
VHO	Vista Hermosa	4.62	310	eS	Sn	06 31 47.9	-0.2
YOIG	Yosondua	5.13	303	eS	Sn	06 31 57.4	-3.4
SCIG	Sabancuy	5.15	20	eS	Sn	06 32 00.6	-0.3
PNIG	Pinotepa	5.41	295	eP	Pn	06 31 10.1	+4.3
PNIG				eS	Sn	06 32 06.6	-0.8
TXIG	Tlaxiaco	5.52	305	eP	Pn	06 31 09.0	+1.4
TXIG				eS	Sn	06 32 06.5	-4.0
TOIG	Toxpalan	5.54	316	eP	Pn	06 31 06.9	-0.8
TOIG				eS	Sn	06 32 03.7	-6.9
HLIG	Huajuapan de L	5.89	310	eS	Sn	06 32 14.1	-5.3
FTIG	Fresnillo de T	6.18	308	eS	Sn	06 32 22.2	-4.4
JAUV	Jalcomulco	6.35	326	eP	Pn	06 31 18.4	-0.4
JAUV				eS	Sn	06 32 28.5	-2.1
CXUV	Coxquihui	7.43	325	eP	Pn	06 31 38.4	+4.7
CXUV				eS	Sn	06 32 46.3	-11

IDC 28 06:39:52.6±17.0**, 21°.12S**×**179°.56E, h448**^{km}±210^{km}**, mb2.7**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=245.7km s-min=56.3km az=171.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.16	258	P	P	06 47 03.9	-0.7
	0.7nm,0.8s,baz=100,slow=7.8,SNR=14						
	0.7nm,0.8s						
WRA	Warramunga Arr	42.26	263	P	P	06 47 05.8	+0.4
	0.7nm,0.5s,baz=98,slow=8.2,SNR=14						
	0.7nm,0.5s						
TXAR	Lajitas Array	89.31	58	P	P	06 52 00.4	-0.1
	0.1nm,0.6s,baz=239,slow=4.5,SNR=2.3						
	0.1nm,0.6s						
HFS	Hagfors	139.75	349	PKhKP	PKPpre	06 58 23.5	
	0.8nm,0.3s,baz=20,slow=4.0,SNR=12						
BRTR	Keskin Array B	145.53	310	PKPbc	PKPdf	06 58 39.4	+0.3
	0.7nm,0.8s,baz=50,slow=4.5,SNR=2.2						

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*IDC **28** 07:06:17.0±0.5, 19°.07N×65°.26W, h0^{km}, mb4.2/19, mbtmp4.3/22, ML3.7/3, MS3.7/51, Error ellipse: s-maj=13.9km s-min=11.5km az=102.0*

*OSPL **28** 07:06:19.2±2.7, 18°.84N×65°.02W, h4^{km}±45^{km}, ML4.0, Presumed earthquake*

*RSPR **28** 07:06:22.7, 19°.11N×65°.27W, h17^{km}±14^{km}, MD4.2/12*

*NEIC **28** 07:06:22.4±1.5, 19°.08N±0°.05×65°.37W±0°.04, h27^{km}±5^{km}, mb4.8/41, ML4.4/36, Mwr4.4/23, ML4.4/12(RSPR), Error ellipse: s-maj=7.6km s-min=4.1km az=152.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-3.61; $M_{\theta\theta}$4.03; $M_{\phi\phi}$-0.42; $M_{r\theta}$-1.49; $M_{\theta\phi}$-1.27; $M_{\phi r}$2.95; Fault plane solution: $M_0$5.22000×10^{15} NP1: ϕ_s131.58000°, δ65.38000°, λ-62.82000°. NP2: ϕ_s260.64000°, δ36.03000°, λ-134.90000°. Principal axes: T 5.0099, Plg16.0000°, Azm202.0000°; N 0.4047, Plg25.0000°, Azm300.0000°; P -5.4146, Plg60.0000°, Azm82.0000°;*

*CATAC **28** 07:06:23.3±0.9, 19°N±4°×6°6W±°, h17^{km}±6^{km}, M4.8/7, mb4.9/5, mB5.2/2, MLv4.7/7, Mw(mB)4.6/2 Error ellipse: s-maj=8.6km s-min=3.5km az=11.3, confirmed*

*NEIC **28** 07:06:23.5, 19°.03N×65°.36W, h40^{km}*

ISC 28 07:06:21.1±0.3**, 19°.09N**±0°.04×**65°.44W**±0°.03**, h26**^{km}**, n296, σ2^{s}.00**/295**, mb4.6**/36**, MS3.8**/48**, 14C-1D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCPR	Guaynabo City	0.99	218		Pb	07 06 40.1	+0.5
GCPR				Sn	Sn	07 06 53.9	+1.4
GCPR	Guaynabo City	0.99	218	⇑eP	Pb	07 06 40.2	+0.6
GCPR	Guaynabo City	0.99	218	eS	Sn	07 06 54.1	+1.7
HUMP	Col San Antoni	1.02	202		Pn	07 06 40.5	+0.7
HUMP				IAML		07 06 59.2	
	7µm,0.2s						
HUMP				IAML		07 07 02.7	
	10µm,0.7s						
HUMP	Col San Antoni	1.02	202		Sn	07 06 54.7	+1.4
HUMP	Col San Antoni	1.02	202	⇑eP	Pn	07 06 40.4	+0.7
HUMP	Col San Antoni	1.02	202	eS	Sn	07 06 54.7	+1.4
ECPR	Experimental S	1.16	229	⇑eP	Pb	07 06 43.0	+0.4
ECPR	Experimental S	1.16	229	eS	Sb	07 06 59.6	+2.3
SJG	San Juan	1.18	215		Pb	07 06 43.3	+0.4
SJG				Sn	Sb	07 06 58.9	+1.1
SJG				IAML		07 07 06.9	
	5µm,0.6s						
SJG	San Juan	1.18	215	⇑eP	Pn	07 06 43.0	+1.0
SJG	San Juan	1.18	215	P	Pb	07 06 43.1	+0.2
SJG				S	Sb	07 06 59.3	+1.5
SJG	San Juan	1.18	215	eP	Pb	07 06 43.2	+0.2
SJG	San Juan	1.18	215	P	Pb	07 06 43.1	+0.2
SJG				S	Sb	07 06 58.9	+1.1
SJG	San Juan	1.18	215	Pn	Pn	07 06 43.0	+1.0
	217nm,0.3s,baz=54,slow=10.0,SNR=587						
SJG				Sn	Sb	07 06 59.1	+1.3
	657nm,0.3s,baz=338,slow=19,SNR=9.7						
SJG				LR	LR	07 07 14.5	
	comp=Z,2µm,20.5s,baz=21,slow=45						
SJG	San Juan	1.18	215	i P	Pn	07 06 43.0	+1.0
SJG				eS	Sb	07 06 59.2	+1.3
SJG				IAML		07 07 02.2	
	comp=Z,3µm,1.1s						
EMPR	Esperanza - Ma	1.20	239		Pb	07 06 44.4	+1.3
EMPR					Sb	07 07 00.8	+2.6
EMPR	Esperanza - Ma	1.20	239	IAML		07 07 09.6	
	comp=Z,12µm,0.4s						
EMPR	Esperanza - Ma	1.20	239	⇑eP	Pb	07 06 44.4	+1.3
EMPR	Esperanza - Ma	1.20	239	eS	Sb	07 07 00.8	+2.6
AOPR	Arecibo Observ	1.45	239		Pb	07 06 47.6	+0.2
AOPR					Sb	07 07 06.4	+1.0
AOPR	Arecibo Observ	1.45	239	⇓eP	Pb	07 06 47.6	+0.2
AOPR	Arecibo Observ	1.45	239	eS	Sb	07 07 06.4	+1.0
AOPR	Arecibo Observ	1.45	239	eP	Pb	07 06 47.3	-0.1
OBIP	Obispado Ponce	1.52	227		Pb	07 06 48.4	-0.2
OBIP				IAML		07 07 09.3	
	comp=N,4µm,0.7s						
OBIP	Obispado Ponce	1.52	227		Sb	07 07 08.4	+0.9
OBIP	Obispado Ponce	1.52	227	⇑eP	Pb	07 06 48.5	-0.2
OBIP	Obispado Ponce	1.52	227	eS	Sb	07 07 08.4	+0.9
AGPR	Aguadilla, PR	1.70	249	Pn	Pn	07 06 50.6	+1.5
AGPR				IAML		07 07 15.9	
	comp=N,3µm,0.4s						
AGPR				IAML		07 07 29.1	
	comp=N,3µm,0.5s						
AGPR	Aguadilla, PR	1.70	249	⇑eP	Pn	07 06 50.6	+1.5
AGPR	Aguadilla, PR	1.70	249	eS	Sb	07 07 12.2	-0.5
AGPR	Aguadilla, PR	1.70	249	P	Pn	07 06 51.0	+1.9
AGPR	Aguadilla, PR	1.70	249	S	Sb	07 07 12.5	-0.1
AGPR	Aguadilla, PR	1.70	249	i P	Pn	07 06 50.6	+1.5
AGPR				IAML		07 07 14.2	
	comp=Z,1µm,0.2s						
GBPR	Guanica, Bosqu	1.76	231		Pb	07 06 52.4	-0.3
GBPR	Guanica, Bosqu	1.76	231	⇑eP	Pb	07 06 52.4	-0.3
LSP	Las Mesas	1.81	240		Pn	07 06 52.5	+1.9
LSP	Las Mesas	1.81	240	⇑eP	Pn	07 06 52.5	+1.9
PRSN	Puerto Rico Se	1.83	242	⇑eP	Pb	07 06 53.1	-0.9
PRSN	Puerto Rico Se	1.83	242	eS	Sb	07 07 16.7	+0.2
MLPR	Magueyes Islan	1.89	234	⇑eP	Pn	07 06 53.7	+2.1
MLPR	Magueyes Islan	1.89	234	eS	Sb	07 07 17.7	-0.4
CRPR	Cabo Rojo, PR	1.92	236	Pn	Pn	07 06 54.0	+2.0
CRPR				IAML		07 07 25.7	
	comp=Z,3µm,0.5s						
CRPR				IAML		07 07 32.4	
	comp=Z,3µm,1.1s						
CRPR	Cabo Rojo, PR	1.92	236		Sb	07 07 18.2	-0.7
CRPR	Cabo Rojo, PR	1.92	236	⇑eP	Pn	07 06 54.2	+2.1
CRPR	Cabo Rojo, PR	1.92	236	eS	Sb	07 07 18.2	-0.7
CRPR	Cabo Rojo, PR	1.92	236	i P	Pn	07 06 54.3	+2.1
CRPR				eS	Sb	07 07 18.8	-0.1
CRPR				IAML		07 07 30.0	
	comp=Z,2µm,0.4s						
IDE	Isla Desecheo	2.05	250		Pn	07 06 55.6	+1.7
IDE					Sn	07 07 20.9	+2.2
IDE	Isla Desecheo	2.05	250	⇑eP	Pn	07 06 55.6	+1.7
IDE	Isla Desecheo	2.05	250	eS	Sn	07 07 20.9	+2.2
SABA	Saba	2.55	125		Pn	07 07 00.7	-0.2
SABA				IAML		07 07 56.9	
	comp=N,2µm,0.7s						
SABA	Saba	2.55	125	P	Pn	07 07 01.1	+0.2
SABA	Saba	2.55	125	S	Sb	07 07 40.5	+3.2
SEUS	St. Eustatius	2.83	124		Pn	07 07 04.9	+0.2
SEUS				IAML		07 07 53.2	
	comp=N,2µm,1.5s						
SEUS				IAML		07 08 04.8	
	comp=E,1µm,0.9s						
SEUS	St. Eustatius	2.83	124	P	Pn	07 07 06.3	+1.7
SEUS	St. Eustatius	2.83	124	S	Sb	07 07 43.3	-1.8
SKI	Saint Kitts	3.11	124	eP	Pn	07 07 08.5	0.0
SKI	Saint Kitts	3.11	124	eS	Sb	07 07 57.4	+4.1
DR12	Loma Pena Alta	3.74	266		Pn	07 07 19.9	+2.6
ANWB	Willy Bob	3.75	112		Pn	07 07 15.1	-2.2
ANWB	Willy Bob	3.75	112	P	Pn	07 07 15.6	-1.8
ANWB				S	Sn	07 08 04.7	+4.1
ANWB	Willy Bob	3.75	112	eP	Pn	07 07 15.3	-2.0
ANWB				eS	Sn	07 07 58.5	-2.2
ANWB	Willy Bob	3.75	112	P	Pn	07 07 14.4	-2.9
MBWH	Windy Hill	3.88	127	eS	Sn	07 08 04.4	+0.5
MLYT	Lee's Yard	3.89	127	eP	Pn	07 07 19.5	+0.2
MLYT				eS	Sn	07 08 03.9	-0.4
SDD	Santo Domingo	4.28	262		Pn	07 07 27.4	+2.7
SDD	Santo Domingo	4.28	262	P	Pn	07 07 26.9	+2.3
SDD	Santo Domingo	4.28	262	S	Sn	07 08 20.4	+6.6
DHSZ	Broadband at M	4.49	128	eP	Pn	07 07 27.9	+0.3
DHSZ	Broadband at M	4.49	128	eS	Sn	07 08 17.0	-1.9
GDHS	Morne Mazeau,	4.49	128		Pn	07 07 27.9	+0.4
ABD	La Joyeuse, An	4.58	124		Pn	07 07 28.6	-0.1
ABD				IAML		07 08 32.9	
	comp=N,446nm,0.8s						
ABD				IAML		07 08 47.1	
	comp=E,455nm,1.1s						
ATGZ	Broadband at L	4.63	129	eP	Pn	07 07 29.8	+0.3
MMLZ	Guadeloupe Bro	4.71	130	eP	Pn	07 07 31.4	+0.9
MMLZ	Guadeloupe Bro	4.71	130	eS	Sn	07 08 22.4	-1.8
CBE	Ff, Capester	4.74	129		Pn	07 07 30.7	-0.2
CBE	Ff, Capester	4.74	129	P	Pn	07 07 31.8	+0.8
TDBA	Terre de Bas,	4.86	131		Pn	07 07 33.1	+0.5
TDBA				IAML		07 09 10.5	
	comp=N,303nm,1.0s						
TDBA				IAML		07 09 11.4	
	comp=E,466nm,1.0s						
SC01	Santiago de lo	5.00	275		Pn	07 07 37.5	+2.9
SC01	Santiago de lo	5.00	275	P	Pn	07 07 40.8	+6.2
DSDZ	La Diserade, G	5.00	123	eP	Pn	07 07 35.4	+0.8
DSDZ	La Diserade, G	5.00	123	eS	Sn	07 08 30.6	-1.0
GDSD	La Dsirade Is	5.00	123		Pn	07 07 34.4	-0.3
H05N1	Guadeloupe/Mar	5.01	123	Pn	Pn	07 07 33.9	-0.8
H05N1				Sn	Sn	07 08 27.1	-4.8
MAGL	Barre de l’ile	5.05	128		Pn	07 07 35.8	+0.5
MAGL				IAML		07 08 56.4	
	comp=E,376nm,1.2s						
MAGL				IAML		07 09 07.1	
	comp=N,414nm,1.4s						
DWS	Wesley	5.28	131	eP	Pn	07 07 39.4	+1.0
DWS	Wesley	5.28	131	eS	Sn	07 08 37.2	-1.2
DSLB	Salisbury	5.29	133	eP	Pn	07 07 39.7	+1.1
DSLB	Salisbury	5.29	133	eS	Sn	07 08 36.7	-2.0
DLPL	La Plaine	5.48	132	eP	Pn	07 07 38.0	-3.2
LOPP1	Punta Rusia, P	5.48	279	i P	Pn	07 07 44.1	+2.9
SDDR	Presa de Saban	5.53	270		Pn	07 07 45.1	+3.2
SDDR	Presa de Saban	5.53	270	⇑eP	Pn	07 07 45.7	+3.8
SDDR	Presa de Saban	5.53	270	P	Pn	07 07 45.7	+3.8
SDDR				S	Sn	07 08 51.0	+6.3
SDDR	Presa de Saban	5.53	270	i P	Pn	07 07 45.5	+3.6
SDDR				i S	Sn	07 08 49.8	+5.1
SDDR	Presa de Saban	5.53	270	P	Pn	07 07 44.9	+3.0
	comp=N,3µmcomp=N,315nm,1.1s						
SDDR				S	Sn	07 08 48.9	+4.2
	comp=N,3µmcomp=N,315nm,1.1s						
SDDR	Presa de Saban	5.53	270	i P	Pn	07 07 45.9	+4.0
SDDR				eS	Sn	07 08 50.7	+6.0
GRTK	Grand Turk	5.86	295	S	Sn	07 08 48.3	-4.3
GRTK	Grand Turk	5.86	295	i P	Pn	07 07 45.4	-0.9
GRTK				IAmb	IAmb	07 08 14.2	
	comp=Z,210nm,1.4s						
GRTK				i S	Sn	07 08 47.7	-4.9
GRTK	Grand Turk	5.86	295	P	Pn	07 07 46.2	-0.1
	comp=Z,167nm,1.2s						
SVN	Savane Anatole	5.88	135	Pn	Pn	07 07 47.2	+0.5
SVN	Savane Anatole	5.88	135	eP	Pn	07 07 47.5	+0.8
CXM	Morne La Croix	5.90	136		Pn	07 07 47.2	+0.1
LOBH	Bahia de las A	6.01	259	i P	Pn	07 07 53.0	+4.6
BIM	Bigot	6.18	137		Pn	07 07 50.3	-0.5
BIM	Bigot	6.18	137	eP	Pn	07 07 48.8	-2.0
MPOM	Morne Pois Mar	6.38	136		Pn	07 07 52.9	-0.6
H05S1	Guadeloupe/Mar	6.40	136	Pn	Pn	07 07 54.3	+0.5
H05S1				Sn	Sn	07 09 01.5	-4.7
MCLT	Moule a Chique	6.88	140	eP	Pn	07 07 59.6	-0.7
SVB	Belmont	7.05	145	eP	Pn	07 08 02.5	-0.2
GCMP	Grenada, Carri	7.62	149	eP	Pn	07 08 10.6	0.0
BBGH	Gun Hill	8.18	135	eP	Pn	07 08 22.3	+4.0
MASC	Masc	8.35	279	P	Pn	07 08 20.6	0.0
MASC				S	Sn	07 09 52.3	-1.8
MASC	Masc	8.35	279	eP	Pn	07 08 19.1	-1.4
MASC				i P	Pn	07 08 19.8	-0.8
MASC				IAmb	IAmb	07 08 21.8	
	comp=Z,24nm,0.4s						
MASC				i S	Sn	07 09 48.9	-5.2
QMBU	Quimbuelo	8.90	279	P	Pn	07 08 27.1	-1.0
QMBU	Quimbuelo	8.90	279	i P	Pn	07 08 26.2	-1.9
QMBU				IAmb	IAmb	07 08 41.3	
	comp=Z,60nm,0.8s						
QMBU				i S	Sn	07 10 01.4	-6.2
MOAC	Moa	9.09	281	i P	Pn	07 08 29.3	-1.4
MOAC				IAmb	IAmb	07 08 45.9	
	comp=Z,63nm,0.7s						
MOAC				i S	Sn	07 10 05.3	-6.9
NMDO	Nuevo Mundo	9.10	281		Pn	07 08 29.4	-1.4
NMDO	Nuevo Mundo	9.10	281	P	Pn	07 08 29.1	-1.7
NMDO				S	Sn	07 10 08.9	-3.5
NMDO	Nuevo Mundo	9.10	281	i P	Pn	07 08 29.9	-0.9
NMDO				IAmb	IAmb	07 08 46.8	
	comp=Z,24nm,0.5s						
NMDO				i S	Sn	07 10 06.5	-5.9
DMDM	Guralp CMG5TDE	9.15	155	e	Pn	07 08 33.9	+2.3
GTBY	Guantanamo Bay	9.16	277	i P	Pn	07 08 30.5	-1.1
GTBY				IAmb	IAmb	07 08 57.5	
	comp=Z,53nm,1.3s						
GTBY				i S	Sn	07 10 09.4	-4.5
TRN	Trinidad (W)	9.26	155	eP	Pn	07 08 35.3	+2.3
URI	Uribia	9.69	222	P	Pn	07 08 39.1	+0.2
URI				S	Sn	07 10 24.6	-2.4
URIC	Uribia, Colomb	9.69	222	P	Pn	07 08 37.9	-1.0
	comp=Z,17nm,0.6s						
RCC	Rio Carpintero	9.71	277	i P	Pn	07 08 37.4	-1.8
RCC				IAmb	IAmb	07 08 54.6	
	comp=Z,18nm,1.0s						
RCC				i S	Sn	07 10 23.5	-4.0
PINC	Pinares de May	9.84	280	i P	Pn	07 08 38.5	-2.5
PINC				IAmb	IAmb	07 08 58.7	
	comp=Z,16nm,0.9s						
PINC				i S	Sn	07 10 23.9	-6.8
MARVS	Santiago de Cu	9.90	277	i P	Pn	07 08 40.1	-1.7
MARVS				IAmb	IAmb	07 09 01.9	
	comp=Z,29nm,0.8s						
MARVS				i S	Sn	07 10 28.2	-4.0
HLGC	Holguin	10.14	282	i P	Pn	07 08 44.9	-0.3
HLGC				IAmb	IAmb	07 09 04.5	
	comp=Z,26nm,0.7s						
HLGC				i S	Sn	07 10 35.6	-2.5
CHIV	Chivirico	10.38	277	Pn	Pn	07 08 47.4	-1.1
CHIV	Chivirico	10.38	277	P	Pn	07 08 46.6	-1.8
CHIV	Chivirico	10.38	277	i P	Pn	07 08 46.3	-2.1
CHIV				IAmb	IAmb	07 09 03.9	
	comp=Z,24nm,0.6s						
LMGC	Las Mercedes	10.94	277	i P	Pn	07 08 53.7	-2.4
LMGC				IAmb	IAmb	07 09 08.4	
	comp=Z,13nm,1.1s						
SDV	Santo Domingo	11.32	207	Pn	Pn	07 09 02.6	+1.0
	comp=Z,3.6nm,0.3s,baz=17,slow=6.6,SNR=17						
SDV				Sn	Sn	07 11 05.7	-1.8
	comp=Z,0.9nm,0.3s,baz=327,slow=9.5,SNR=1.2						
SDV				LR	LR	07 13 57.1	
	comp=Z,622nm,19.1s,baz=34,slow=40						
	comp=Z,4.9nm,0.3s						
SDV	Santo Domingo	11.32	207		Pn	07 09 02.4	+0.8
SDV	Santo Domingo	11.32	207	eP	Pn	07 09 06.0	+4.5
SDV	Santo Domingo	11.32	207	P	Pn	07 09 03.8	+2.3
	comp=Z,591nmcomp=Z,89nm,1.0s						
MTDJ	Mount Denham	11.49	268	Pn	Pn	07 09 04.4	+0.7
CCCC	Cccc	11.76	282	i P	Pn	07 08 59.7	-7.6
CCCC				IAmb	IAmb	07 09 15.7	
	comp=Z,18nm,0.9s						
CCCC				i S	Sn	07 11 01.9	-16
ARGC	Ariguani, Magd	12.52	224	P	Pn	07 09 18.9	+1.1
	comp=Z,29nm,0.7s						
SJCC	San Jacinto, C	13.12	227	P	Pn	07 09 29.0	+3.0
SJCC	San Jacinto, C	13.12	227	P	Pn	07 09 26.6	+0.5
OCAC	Ocana	13.22	216	P	Pn	07 09 26.1	-1.4
	comp=Z,2µmcomp=Z,191nm,0.7s						
PAMC	Pamplona, Colo	13.65	212	P	Pn	07 09 34.3	+0.8
	comp=Z,553nmcomp=Z,53nm,0.7s						

MGV	Manicaragua	13.94	285	iP	Pn	07 09 35.9	-1.2
MGV				IAmb	IAmb	07 09 48.6	
	comp=Z,11nm,1.4s						
BRJC	Barrancabermej	14.50	215	P	Pn	07 09 43.9	-0.9
	comp=Z,1µmcomp=Z,55nm,0.6s						
BARC	Barichara	14.53	212	P	Pn	07 09 46.7	+1.3
	comp=Z,959nmcomp=Z,74nm,0.8s						
UREC	San Jos de Ur	14.94	222	P	Pn	07 09 50.8	+0.1
RUSC	La Rusia	15.08	211	P	Pn	07 09 54.4	+1.3
	comp=Z,1µmcomp=Z,138nm,1.0s						
PTBC	PUERTO BERRIO,	15.25	216	P	Pn	07 09 54.1	-0.8
	comp=Z,575nmcomp=Z,32nm,1.0s						
CAMR	Camarioca	15.38	288	iP	Pn	07 09 57.5	+1.0
CAMR				IAmb	IAmb	07 10 13.1	
	comp=Z,43nm,1.3s						
APAC	Apartado, Choc	15.51	226	P	P	07 10 01.5	-1.0
	comp=Z,73nm,0.7s						
SPBC	San Pablo de B	15.79	213	P	Pn	07 10 01.8	-0.1
	comp=Z,515nmcomp=Z,34nm,1.1s						
061Z	Ochoppi	15.79	298	Pn	Pn	07 10 02.2	+0.4
061Z	Ochoppi	15.79	298	iP	Pn	07 10 01.8	-0.1
061Z				IAmb	IAmb	07 10 19.6	
	comp=Z,110nm,1.2s						
060A	Indiantown	15.83	303	Pn	Pn	07 10 03.7	+1.3
060A	Indiantown	15.83	303	iP	Pn	07 10 03.9	+1.6
060A				IAmb	IAmb	07 10 28.2	
	comp=Z,280nm,1.0s						
DBBC	Dabeiba	15.93	223	P	Pn	07 10 04.8	+1.1
CHIC	Chingaza	16.50	210	P	Pn	07 10 12.0	+0.7
	comp=Z,676nmcomp=Z,53nm,1.0s						
ROSC	El Rosal	16.60	213	Pn	Pn	07 10 13.8	+1.2
	comp=Z,5.1nm,0.3s,baz=73,slow=6.9,SNR=27						
ROSC				Sn	Sn	07 13 13.4	-3.1
	comp=Z,0.5nm,0.3s,baz=130,slow=21,SNR=1.1						
ROSC				LR	LR	07 17 40.6	
	comp=Z,483nm,18.3s,baz=49,slow=41						
	comp=Z,44nm,0.7s						
ROSC	El Rosal	16.60	213	Pn	Pn	07 10 14.0	+1.4
ROSC				IAmb	IAmb	07 10 19.5	
	comp=Z,48nm,0.8s						
CBOC	Ciudad Bolivar	16.70	219	P	Pn	07 10 14.7	+1.1
	comp=Z,37nm,1.2s						
VILC	Villavicencio,	16.93	209	P	Pn	07 10 16.9	+0.4
	comp=Z,723nmcomp=Z,57nm,0.6s						
DWPF	Disney Wildern	17.17	304	iP	P	07 10 24.0	+3.3
DWPF				IAmb	IAmb	07 10 52.4	
	comp=Z,99nm,2.5s						
BOAV	Boa Vista	17.28	163		Pn	07 10 21.3	+0.6
BOAV	Boa Vista	17.28	163	eP	P	07 10 23.7	+1.7
BOAV	Boa Vista	17.28	163	P	Pn	07 10 18.6	-2.1
	comp=Z,15nm,0.8s						
ANIL	Santa Ana	17.47	215	P	P	07 10 25.7	+1.3
	comp=Z,2µmcomp=Z,40nm,0.9s						
PLMC	San Jos del P	17.63	218	P	Pn	07 10 25.2	+0.1
	comp=Z,474nmcomp=Z,54nm,0.8s						
PRAC	Prado	17.85	212	P	Pn	07 10 27.4	-0.5
	comp=Z,25nm,1.5s						
ORTC	Ortega, Tolima	17.87	214	P	P	07 10 30.4	+1.8
	comp=Z,599nmcomp=Z,68nm,0.9s						
URMC	La Uribe, Meta	18.01	210	P	P	07 10 34.0	+3.8
	comp=Z,1µmcomp=Z,70nm,0.8s						
YOTC	Yotoco, Valle	18.41	217	P	P	07 10 35.2	+0.6
	comp=Z,20nm,0.7s						
MDP	Montagnes des	18.69	136	P	P	07 10 36.6	-1.0
	comp=Z,0.3nm,0.3s,baz=319,slow=15,SNR=2.4						
MDP				S	Sn	07 13 55.7	-11
	comp=Z,18nm,1.1s,baz=52,slow=17,SNR=1.8						
MDP				LR	LR	07 19 00.0	
	comp=Z,98nm,19.9s,baz=316,slow=41						
	comp=Z,17nm,0.8s						
MACC	Macarena, Meta	18.75	207	P	P	07 10 38.2	0.0
	comp=Z,482nmcomp=Z,33nm,1.0s						
SGC2	Sao Gabriel da	19.18	185	P	Pn	07 10 44.0	0.0
	comp=Z,27nm,0.8s						
JAMC	Jamundi, Valle	19.23	216	P	P	07 10 44.3	+0.6
	comp=Z,375nmcomp=Z,25nm,1.0s						
GARC	Garzon, Huila	19.47	212	P	Pn	07 10 49.2	+1.5
	comp=Z,3µmcomp=Z,18nm,0.6s						
POPC	Popayan, Colom	19.79	215	P	Pn	07 10 51.4	-0.1
	comp=Z,26nm,0.8s						
FLOC	Florencia	20.07	211	P	P	07 10 52.4	-0.4
	comp=Z,554nmcomp=Z,49nm,1.2s						
BBAC	Balboa, Cauca	20.53	216	P	P	07 10 59.5	+1.6
	comp=Z,46nm,0.8s						
JTS	Las Juntas de	20.78	248	P	P	07 11 02.0	+1.5
	comp=Z,22nm,0.9s,baz=32,slow=6.0,SNR=6.1						
JTS				LR	LR	07 19 02.5	
	comp=Z,93nm,18.8s,baz=68,slow=37						
	comp=Z,22nm,0.9s						
JTS	Las Juntas de	20.78	248	P	P	07 11 00.9	+0.4
JTS				IAmb	IAmb	07 11 07.5	
	comp=Z,26nm,0.9s						
JTS	Las Juntas de	20.78	248	P	P	07 11 01.2	+0.7
	comp=Z,533nmcomp=Z,31nm,1.0s						
PTLC	Puerto Leguiza	20.92	207	P	Pn	07 11 05.5	+0.9
	comp=Z,539nmcomp=Z,63nm,0.9s						
GCUF	Volcan Galeras	21.25	215	P	P	07 11 07.6	+1.6
	comp=Z,547nmcomp=Z,42nm,0.9s						
TGUH	Tegucigalpa,Un	21.51	260	P	P	07 11 09.0	+0.6
TGUH				IAmb	IAmb	07 11 31.1	
	comp=Z,49nm,1.2s						
TEIG	Tepich	21.53	277	P	P	07 11 09.9	+1.4
T57A	Hurt	21.56	329		P	07 11 09.4	+0.7
V55A	Taylorsville	21.73	323	P	P	07 11 11.4	+0.9
V55A				IAmb	IAmb	07 11 36.9	
	comp=Z,14nm,0.6s						
TULM	Tulcn-Chalpat	21.91	215	P	P	07 11 16.7	+3.6
	comp=Z,80nm,1.8s						
BG3	Lake Jocassee	22.16	319	P	P	07 11 17.3	+2.2
BG3				IAmb	IAmb	07 11 51.4	
	comp=Z,20nm,0.6s						
BLA	Blacksburg	22.31	327		P	07 11 18.6	+1.8
TEFE	Tefe	22.47	178	eP	P	07 11 20.5	+1.9
OTAV	Otavalo	22.67	216		P	07 11 22.1	+0.9
OTAV				IAmb	IAmb	07 11 38.2	
	comp=Z,58nm,1.4s						
OTAV	Otavalo	22.67	216	eP	P	07 11 22.9	+1.7
OTAV	Otavalo	22.67	216	P	P	07 11 23.4	+2.2
	comp=Z,26nm,1.4s						
TKL	Tuckaleechee C	23.11	319	LR	LR	07 21 29.5	
	comp=Z,75nm,18.2s,baz=128,slow=39						
PETF	Flores	23.32	269	P	P	07 11 29.1	+1.7
PETF				IAmb	IAmb	07 11 51.9	
	comp=Z,15nm,0.8s						
MTO3	Montecristo	23.36	262	P	P	07 11 29.2	+1.1
MTO3				IAmb	IAmb	07 11 51.6	
	comp=Z,21nm,0.9s						
SLOR	San Lorenzo -	23.50	214	P	P	07 11 30.8	+1.1
SLOR				IAmb	IAmb	07 11 36.6	
	comp=Z,21nm,1.1s						
SSPA	Standing Stone	23.98	336		P	07 11 33.0	-0.5
SSPA				IAmb	IAmb	07 12 01.8	
	comp=Z,17nm,0.8s						
S51A	Beattyville	24.34	323		P	07 11 36.6	-0.3
S51A				IAmb	IAmb	07 12 09.9	
	comp=Z,13nm,0.7s						
ITTB	Itaituba	25.20	157	eP	P	07 11 45.5	+0.7
R50A	Paris	25.21	323	P	P	07 11 45.1	+0.4
R50A				IAmb	IAmb	07 12 20.1	
	comp=Z,15nm,0.7s						
WCI	Wyandotte Cave	26.32	321	P	P	07 11 56.3	+1.5
MCRA	Macar, Loja	27.34	213	P	P	07 12 03.7	-0.6
	comp=Z,7.8nm,1.0s						
NPGB	Novo Progresso	27.81	158	eP	P	07 12 09.0	+0.6
SADO	Sadowa	28.04	339	LR	LR	07 22 19.5	
	comp=Z,228nm,21.0s,baz=158,slow=34						
CMIG	Matias Romero	28.04	271	LR	LR	07 23 03.3	
	comp=Z,83nm,19.5s,baz=90,slow=36						
ATAH	Atahualpa	29.02	207	LR	LR	07 25 43.1	
	comp=Z,349nm,21.4s,baz=8.6,slow=40						
TUL3	Leonard	31.53	308		P	07 12 42.4	+1.1
TUL3				IAmb	IAmb	07 12 57.8	
	comp=Z,12nm,0.8s						
W35A	Tecumseh	32.05	306		P	07 12 46.5	+0.7
W35A				IAmb	IAmb	07 13 02.1	
	comp=Z,15nm,0.9s						
VILB	Vilhena	32.26	170		P	07 12 47.6	-0.2
VILB	Vilhena	32.26	170	eP	P	07 12 48.3	+0.6
QUOK	Quay	32.32	308		P	07 12 49.1	+0.9
QUOK				IAmb	IAmb	07 13 04.7	
	comp=Z,10nm,0.8s						
SMTB	Santa Maria do	32.88	146	eP	P	07 12 53.3	0.0
PTLB	Pontes e Lacer	34.88	169		P	07 13 09.9	-0.6
PTLB	Pontes e Lacer	34.88	169	eP	P	07 13 10.1	-0.4
SIV	San Ignacio	35.13	173	LR	LR	07 28 11.3	
	comp=Z,216nm,18.8s,baz=300,slow=38						
LPAZ	La Paz	35.26	184	P	P	07 13 13.8	-0.7
	comp=Z,2.1nm,0.7s,baz=351,slow=11,SNR=7.1						
LPAZ				LR	LR	07 28 51.5	
	comp=Z,92nm,18.9s,baz=5.5,slow=38						
	comp=Z,2.1nm,0.7s						
LPAZ	La Paz	35.26	184		P	07 13 13.7	-0.8
LPAZ	La Paz	35.26	184	eP	P	07 13 13.5	-1.1
LPAZ	La Paz	35.26	184	P	P	07 13 11.9	-2.6
SCHQ	Schefferville	35.69	359	P	P	07 13 16.5	-0.7
	comp=Z,4.3nm,0.8s,baz=185,slow=7.5,SNR=5.4						
SCHQ				LR	LR	07 26 07.1	
	comp=Z,103nm,20.3s,baz=184,slow=33						
	comp=Z,4.3nm,0.8s						
SCHQ	Schefferville	35.69	359	P	P	07 13 17.9	+0.6
SALV	Santo Antonio	36.07	164	eP	P	07 13 20.0	-0.8
TXAR	Lajitas Array	36.18	294	P	P	07 13 23.3	+1.4
	comp=Z,1.4nm,0.8s,baz=114,slow=10,SNR=18						
TXAR				PcP	PcP	07 15 48.0	+0.9
	comp=Z,1.4nm,1.0s,baz=85,slow=3.4,SNR=4.5						
	comp=Z,1.4nm,0.8s						
SDBA	SAO DESIDERIO	37.28	146	eP	P	07 13 30.5	-0.7
PP1B	Ponte de Pedra	37.91	163	eP	P	07 13 36.3	-0.1
BDFB	Brasilia	38.54	152	P	P	07 13 41.1	-0.8
	comp=Z,1.5nm,0.6s,baz=350,slow=14,SNR=4.6						
BDFB				LR	LR	07 30 40.1	
	comp=Z,194nm,18.3s,baz=279,slow=38						
	comp=Z,1.5nm,0.6s						
ULM	Lac du Bonnet	39.40	329	P	P	07 13 48.1	-0.5
	comp=Z,2.5nm,0.6s,baz=126,slow=5.1,SNR=4.7						
ULM				LR	LR	07 29 02.3	
	comp=Z,135nm,21.9s,baz=190,slow=35						
	comp=Z,2.5nm,0.6s						
BDQN	Bodoquena, MS	40.21	167	eP	P	07 13 55.3	-0.3
AQDB	Aquidauana	40.47	166		P	07 13 57.7	-0.1
AQDB				IAmb	IAmb	07 13 59.7	
	comp=Z,25nm,1.1s						
AQDB	Aquidauana	40.47	166	eP	P	07 13 57.7	-0.1
PB07	IPOC Station P	40.80	186	P	P	07 13 58.2	-2.5
LPIG	La Paz	41.88	285	LR	LR	07 33 13.9	
	comp=Z,37nm,21.3s,baz=93,slow=38						
AMBA	Amambai (Brazi	42.99	166	eP	P	07 14 17.5	-0.9
BW06	Boulder Array	43.95	312		P	07 14 27.8	+1.4
PDAR	Pinedale Array	43.95	312	P	P	07 14 28.0	+1.6
PDAR	Pinedale Array	43.95	312	P	P	07 14 28.0	+1.6
	comp=Z,3.0nm,0.9s,baz=110,slow=9.0,SNR=18						
PDAR				PcP	PcP	07 16 12.7	+0.7
	comp=Z,1.0nm,0.8s,baz=170,slow=2.2,SNR=3.9						
	comp=Z,3.0nm,0.9s						
BSUT	Blindstream Ca	44.17	309	P	P	07 14 28.9	+0.6
FRB	Frobisher Bay	44.67	358	LR	LR	07 31 29.8	
	comp=Z,158nm,21.3s,baz=138,slow=34						
FCC	Fort Churchill	44.76	339		P	07 14 32.5	+0.3
CPUP	Villa Florida	45.83	170	P	P	07 14 39.0	-2.1
	comp=Z,12nm,0.8s,baz=350,slow=9.1,SNR=36						
CPUP				LR	LR	07 36 04.2	
	comp=Z,43nm,18.2s,baz=41,slow=39						
	comp=Z,12nm,0.8s						
CPUP	Villa Florida	45.83	170	P	P	07 14 39.0	-2.1
CPUP				IAmb	IAmb	07 14 41.0	
	comp=Z,14nm,0.9s						
SFJD	Kangerlussuaq	48.83	8	LR	LR	07 34 13.1	
	comp=Z,63nm,20.4s,baz=170,slow=34						
NVAR	Mina Array Bea	49.48	305	P	P	07 15 11.5	+1.8
	comp=Z,1.1nm,0.9s,baz=83,slow=6.9,SNR=6.0						
NVAR				LR	LR	07 38 58.0	
	comp=Z,64nm,18.2s,baz=133,slow=40						
	comp=Z,1.1nm,0.9s						
PSAL	Palomas, Salto	50.45	171	eP	P	07 15 15.5	-1.2
CPSB	Cacapava Do Su	50.55	167	eP	P	07 15 16.9	-0.5
NEW	Newport	50.68	317	LR	LR	07 38 09.1	
	comp=Z,86nm,19.5s,baz=84,slow=38						
BORG	Borgarnes	54.20	22	LR	LR	07 37 52.4	
	comp=Z,46nm,18.4s,baz=270,slow=35						
YKA	Yellowknife Ar	54.89	335	P	P	07 15 49.2	0.0
	comp=Z,2.5nm,0.8s,baz=112,slow=6.6,SNR=21						
YKA				LR	LR	07 38 00.4	
	comp=Z,101nm,21.1s,baz=352,slow=35						
	comp=Z,2.5nm,0.8s						
YKAW3	Yellowknife Wh	54.93	335	P	P	07 15 49.7	+0.2
SUMG	Summit	55.67	10	P	P	07 15 55.4	+0.2
MDT	Midelt	55.71	63	LR	LR	07 34 41.5	
	comp=Z,78nm,21.5s,baz=312,slow=31						
ESDC	Sonseca Array	56.27	55	P	P	07 15 59.0	-0.6
	comp=Z,0.8nm,0.9s,baz=272,slow=7.6,SNR=7.3						
ESDC				LR	LR	07 34 30.1	
	comp=Z,74nm,21.7s,baz=268,slow=30						
	comp=Z,0.8nm,0.9s						
RES	Resolute Bay	57.84	351	LR	LR	07 39 18.9	
	comp=Z,146nm,21.7s,baz=40,slow=34						
EKA	Eskdalemuir Ar	58.79	36	LR	LR	07 35 58.4	
	comp=Z,73nm,21.9s,baz=196,slow=30						
PLCA	Paso Flores	59.71	184	P	P	07 16 22.4	-1.2
	comp=Z,1.2nm,0.5s,baz=349,slow=7.1,SNR=7.5						
PLCA				LR	LR	07 45 29.2	
	comp=Z,126nm,18.9s,baz=14,slow=39						
	comp=Z,1.2nm,0.5s						
DBIC	Dimbokro	60.08	93	P	P	07 16 26.6	0.0
DBIC				IAmb	IAmb	07 16 27.4	
	comp=Z,10nm,1.0s						
DBIC	Dimbokro	60.08	93	P	P	07 16 26.0	-0.5
	comp=Z,5.3nm,0.8s,baz=299,slow=5.6,SNR=6.8						
DBIC				LR	LR	07 38 53.2	
	comp=Z,30nm,20.6s,baz=346,slow=33						
	comp=Z,5.3nm,0.8s						
RPN	Rapa Nui	62.62	224	LR	LR	07 42 11.4	
	comp=Z,33nm,18.6s,baz=60,slow=34						
INK	Inuvik	64.34	338		P	07 16 54.4	+0.2
TORD	Torodi Ar. Bea	64.44	84	P	P	07 16 54.8	-1.0
	comp=Z,2.4nm,1.0s,baz=298,slow=6.8,SNR=7.3						
	comp=Z,2.4nm,1.0s						
DAWY	Dawson	65.98	332	P	P	07 17 06.1	+1.0
DAWY				IAmb	IAmb	07 17 06.6	
	comp=Z,13nm,1.3s						
DAVOX	Davos/Dischmat	66.37	47	LR	LR	07 41 24.1	
	comp=Z,20nm,21.5s,baz=280,slow=32						
KEST	Kesra	66.99	59	LR	LR	07 42 55.5	
	comp=Z,48nm,20.7s,baz=249,slow=33						
NOA	NORSAR Array B	67.03	31	LR	LR	07 41 40.7	
	comp=Z,64nm,21.3s,baz=270,slow=32						
SCRK	Sand Creek	68.00	332	P	P	07 17 19.6	+1.6
SCRK				IAmb	IAmb	07 17 20.1	
	comp=Z,10nm,1.1s						
HFS	Hagfors	68.24	32	LR	LR	07 46 16.2	
	comp=Z,89nm,18.2s,baz=262,slow=35						
GERES	GERESS Array B	68.79	44	P	P	07 17 22.3	-0.9
	comp=Z,0.2nm,0.5s,baz=235,slow=3.5,SNR=2.2						
	comp=Z,0.2nm,0.5s						
ILAR	Eielson Array	69.26	333	P	P	07 17 25.8	+0.1
	comp=Z,2.8nm,0.8s,baz=102,slow=4.5,SNR=26						
ILAR				LR	LR	07 47 22.8	
	comp=Z,128nm,21.0s,baz=108,slow=36						
	comp=Z,2.8nm,0.8s						
ILAR	Eielson Array	69.26	333	P	P	07 17 26.2	+0.5
SPITS	Spitsbergen Ar	69.76	13	LR	LR	07 46 37.8	
	comp=Z,83nm,20.6s,baz=256,slow=35						
VRAC	Vranov	70.64	43	LR	LR	07 45 18.2	
	comp=Z,40nm,20.1s,baz=298,slow=33						
VAE	Valguarnera	70.76	56	LR	LR	07 47 11.4	
	comp=Z,77nm,18.2s,baz=229,slow=35						
ARCES	ARCESS Array B	72.61	22	P	P	07 17 45.9	0.0
	comp=Z,8.0nm,1.1s,baz=325,slow=6.2,SNR=5.3						
ARCES				LR	LR	07 43 53.0	
	comp=Z,39nm,22.0s,baz=198,slow=31						
	comp=Z,8.0nm,1.1s						
FINES	FINESS Array B	74.15	30	P	P	07 17 54.3	-0.8
	comp=Z,1.3nm,0.8s,baz=280,slow=8.0,SNR=1.2						
	comp=Z,1.3nm,0.8s						
AKASG	Malin Array Be	78.35	40	LR	LR	07 48 40.8	
	comp=Z,78nm,21.9s,baz=250,slow=32						
OBN	Obninsk	81.20	35	LR	LR	07 50 06.3	
	comp=Z,68nm,22.0s,baz=112,slow=32						
PMSA	Palmer Station	83.61	179	LR	LR	07 57 46.6	
	comp=Z,76nm,18.0s,baz=85,slow=37						
BRTR	Keskin Array B	84.73	50	P	P	07 18 53.4	0.0
	comp=Z,1.1nm,0.8s,baz=315,slow=2.8,SNR=4.9						
	comp=Z,1.1nm,0.8s						
KIRV	Kirov	86.06	28	LR	LR	07 54 08.2	
	comp=Z,32nm,19.9s,baz=320,slow=33						
BELG	Belogornoye	88.29	34	LR	LR	07 55 17.8	
	comp=Z,95nm,21.1s,baz=97,slow=33						
TIXI	Tiksi	88.96	356	LR	LR	07 57 22.4	
	comp=Z,68nm,21.9s,baz=18,slow=34						
EIL	Elat	89.33	59	LR	LR	07 57 41.5	
	comp=Z,35nm,19.6s,baz=345,slow=35						
NRIK	Noril'sk	89.72	9	LR	LR	07 59 57.9	
	comp=Z,25nm,21.3s,baz=334,slow=36						
ARTI	Arti	91.29	28	LR	LR	07 56 19.3	
	comp=Z,45nm,21.9s,baz=310,slow=33						
SEY	Seymchan	93.01	344	LR	LR	08 02 28.6	
	comp=Z,46nm,21.8s,baz=325,slow=36						
AKTO	Aktyubinsk	94.79	32	LR	LR	07 57 59.5	
	comp=Z,51nm,21.8s,baz=122,slow=33						
BVAR	Borovoye Array	98.66	25	LR	LR	07 59 53.1	
	comp=Z,62nm,21.8s,baz=325,slow=33						
SNAA	Sanae	99.83	163	LR	LR	08 08 55.9	
	comp=Z,27nm,18.9s,baz=141,slow=38						
MATP	Matopo	100.01	108	LR	LR	07 58 35.5	
	comp=Z,28nm,20.5s,baz=229,slow=31						
STKA	Stephens Creek	152.56	237	PKPbc	PKPbc	07 26 15.7	0.0
	comp=Z,3.6nm,0.8s,baz=100,slow=2.3,SNR=10.0						
ASAR	Alice Springs	161.42	252	PKP	PKPdf	07 26 20.5	+0.1
	comp=Z,0.7nm,0.9s,baz=104,slow=1.6,SNR=4.8						
ASAR				PKPab	PKPab	07 27 05.2	+0.5
	comp=Z,2.0nm,0.8s,baz=109,slow=4.4,SNR=14						

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*NEIC **28** 07:09:26.5±1.7, 44°.07N±0°.09×130°.0W±0°.2, h10^{km}±2^{km}, ML3.7/36, Error ellipse: s-maj=21.9km s-min=12.5km az=237.0*

*IDC **28** 07:09:30.4±4.0, 44°.24N×129°.37W, h0^{km}, mb3.1/2, mbtmp3.1/4, ML3.5/2, MS3.2/4, Error ellipse: s-maj=78.7km s-min=24.3km az=46.0*

ISC 28 07:09:31.7±2.2, **44°.2N**±0°.1×**129°.5W**±0°.2, **h13**^{km}**, n59,** σ**0**^{s}**.97**/51**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBM	Edson Butte	3.98	108	Pn	Pn	07 10 29.6	-2.8
KEBM				IAML		07 11 43.0	
	comp=N,76nm,4.2s						
KEBM				IAML		07 12 22.1	
	comp=E,127nm,3.5s						
I02E	Swisshome, OR	4.07	89	Pn	Pn	07 10 32.3	-1.3
I02E				IAML		07 11 56.9	
	comp=E,81nm,4.1s						
COR	Corvallis	4.46	83		Pn	07 10 39.0	0.0
COR				IAML		07 12 48.0	
	comp=E,50nm,4.6s						
COR				IAML		07 13 13.3	
	comp=E,51nm,4.2s						
I03D	Drain, OR	4.47	94		Pn	07 10 38.8	-0.4
K02D	Willamette Mer	4.50	107	Pn	Pn	07 10 38.0	-1.7
G03D	McMinnville, O	4.56	75	Pn	Pn	07 10 39.6	-0.8
G03D				IAML		07 12 24.3	
	comp=N,52nm,4.2s						
G03D				IAML		07 12 37.7	
	comp=E,50nm,3.1s						
RADR	Rader Ridge	4.60	59	Pn	Pn	07 10 40.0	-1.0
RADR				IAML		07 12 03.0	
	comp=E,77nm,1.7s						
BUCK	Buck Mountain	4.68	88	Pn	Pn	07 10 42.1	-0.1
BUCK				IAML		07 12 05.5	
	comp=N,58nm,3.9s						
BUCK				IAML		07 12 49.7	
	comp=E,53nm,3.0s						
H04D	Lebanon	4.86	84	Pn	Pn	07 10 43.9	-0.6
H04D				IAML		07 13 03.9	
	comp=E,41nm,4.2s						
H04D				IAML		07 13 16.5	
	comp=N,45nm,4.4s						
F04D	Rainier, OR	4.96	65		Pn	07 10 45.4	-0.5
WISH	Wishkah	4.97	52		Pn	07 10 45.6	-0.4
NLWA	Neilton Lookou	5.08	49		Pn	07 10 47.0	-0.5
C03A	Quillayute Air	5.09	41	Pn	Pn	07 10 47.1	-0.6
G04A	Mulino	5.11	76	Pn	Pn	07 10 46.4	-1.5
BBOR	Butler Butte	5.12	102	Pn	Pn	07 10 48.8	+0.5
I04A	Tendick Farm,	5.13	92	Pn	Pn	07 10 47.1	-1.2
H04A	Detroit Lake	5.26	82	Pn	Pn	07 10 50.2	+0.2
J04A	Umpqua Nationa	5.44	97	Pn	Pn	07 10 53.1	+0.4
WIFE	Three Sisters-	5.53	89	Pn	Pn	07 10 54.3	+0.3
L04D	Klamath Falls	5.61	108	Pn	Pn	07 10 56.0	+1.0
B04A	Port Angeles	5.69	45		Pn	07 10 55.8	-0.1
HOOD	Mount Hood Mea	5.70	76	Pn	Pn	07 10 56.0	-0.3
GNW	Green Mountain	5.75	52		Pn	07 10 56.3	-0.5
I05D	Terrebonne, OR	5.86	86		Pn	07 10 58.1	-0.3
G05A	Wamic	5.92	77		Pn	07 10 59.5	+0.4
CLRS	Cowichan Lake	5.93	37		Pn	07 10 58.7	-0.5
LON	Longmire	5.98	62		Pn	07 10 59.4	-0.6
D05A	Enumclaw	6.05	58		Pn	07 10 59.9	-1.0
J05D	Fort Rock, OR	6.05	96		Pn	07 10 59.4	-1.7
PINE	Pine Mountain	6.19	91		Pn	07 11 03.4	+0.4
G06A	Carlson Farm,	6.40	77		Pn	07 11 05.5	-0.2
LTY	Liberty	6.90	60		Pn	07 11 12.4	-0.2
MXC	Moxie City	6.91	67		Pn	07 11 12.3	-0.3
HAWA	Hanford	7.37	69		Pn	07 11 17.8	-1.2
WAH2	Wahluke Slope	7.44	66		Pn	07 11 20.2	+0.3
G08A	Pilot Rock	7.58	78		Pn	07 11 21.6	-0.5
EPH	Ephrata	7.61	62		Pn	07 11 21.8	-0.5
D08A	Wollman Farm,	7.95	65		Pn	07 11 26.4	-0.5
LNOR	Lincton Mounta	8.12	74	Pn	Pn	07 11 28.4	-0.9
LLLB	Lillooet	8.24	36	Pn	Pn	07 11 30.4	-0.5
C09A	Chrisman Ranch	8.61	61		Pn	07 11 35.0	-1.0
BMO	Blue Mountains	8.74	81		Pn	07 11 37.9	+0.1
F10A	Beach Ranch, E	8.87	74		Pn	07 11 39.5	-0.1
NEW	Newport	9.49	60	LR	LR	07 14 35.8	
	comp=N,86nm,19.7s,baz=256,slow=32						
NEW	Newport	9.49	60	Pn	Pn	07 11 46.6	-1.6
PLID	Pearl Lake	9.67	80		Pn	07 11 51.3	+0.6
NVAR	Mina Array Bea	10.20	121	Pn	Pn	07 11 59.8	+1.8
	comp=N,0.1nm,0.3s,baz=299,slow=14,SNR=2.0						
	comp=N,0.1nm,0.3s						
MSO	Missoula	11.23	71		Pn	07 12 11.1	-1.0
BCYI	Bear Canyon	11.55	84	Pn	Pn	07 12 16.9	+0.4
PDAR	Pinedale Array	14.55	89	Pn	Pn	07 12 60.0	+2.5
	baz=279,slow=16,SNR=2.1						
PDAR				LR	LR	07 18 27.8	
	comp=N,72nm,18.7s,baz=249,slow=37						
	comp=N,0.2nm,0.6s						
YKA	Yellowknife Ar	20.28	20	P	P	07 14 07.8	+1.0
	comp=N,0.6nm,1.0s,baz=216,slow=11,SNR=6.1						
	comp=N,0.6nm,1.0s						
ILAR	Eielson Array	22.81	341	P	P	07 14 33.6	-0.3
	comp=N,1.6nm,1.1s,baz=140,slow=10,SNR=5.1						
ILAR				LR	LR	07 21 45.1	
	comp=N,67nm,19.9s,baz=42,slow=32						
	comp=N,1.6nm,1.1s						
TKL	Tuckaleechee C	35.70	88	LR	LR	07 31 34.8	
	comp=N,66nm,20.4s,baz=144,slow=37						
H11N3	WAKE ISLAND Hy	57.70	267	T	T	08 21 43.8	
	baz=49,slow=75,SNR=162						
H11N2	WAKE ISLAND Hy	57.70	267	T	T	08 21 45.2	
	baz=49,slow=75,SNR=35						
H11N1	WAKE ISLAND Hy	57.71	267	T	T	08 21 44.3	
	baz=49,slow=75,SNR=43						
H11S1	WAKE ISLAND Hy	58.63	266	T	T	08 22 56.1	
	baz=48,slow=75,SNR=14						
H11S2	WAKE ISLAND Hy	58.64	266	T	T	08 22 56.3	
	baz=48,slow=75,SNR=12						
H11S3	WAKE ISLAND Hy	58.65	266	T	T	08 23 07.6	
	baz=48,slow=75,SNR=8.4						

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*IDC **28** 07:20:53.8±1.5, 3°.35N×74°.03W, h0^{km}, mb3.4/2, mbtmp3.6/3, ML3.2/1, Error ellipse: s-maj=29.6km s-min=16.3km az=86.0*

*RSNC **28** 07:20:56.7±0.0, 3°N±1°×7°4W±°, h4^{km}±2^{km}, M3.6, mb4.2, mB5.2, ML3.4, Mw(mB)4.5*

ISC 28 07:20:54.2±1.2, **3°.44N**±0°.02×**74°.15W**±0°.03, **h3**^{km}±9^{km}**, n43,** σ**1**^{s}**.70**/63**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URMC	La Uribe, Meta	0.29	230	P	Pg	07 21 01.1	+1.2
URMC				S	Sg	07 21 04.9	+1.1
PRAC	Prado	0.78	291	P	Pg	07 21 09.7	+0.4
PRAC				S	Sg	07 21 20.0	+0.6
VILC	Villavicencio,	0.81	34	P	Pb	07 21 10.9	-0.2
VILC				S	Sb	07 21 21.8	-0.7
ORTC	Ortega, Tolima	1.19	293	P	Pg	07 21 16.9	-0.1
ORTC				S	Sg	07 21 32.6	+0.1
CHIC	Chingaza	1.26	19	P	Pg	07 21 18.4	0.0
CHIC				S	Sg	07 21 30.7	-4.0
MACC	Macarena, Meta	1.32	167	P	Pn	07 21 19.5	-0.1
MACC				S	Sn	07 21 37.2	-0.6
ROSC	El Rosal	1.40	353	Pg	Pg	07 21 22.2	+1.1
	192nm,0.3s,baz=139,slow=11,SNR=204						
ROSC				Lg	Lg	07 21 41.6	
	240nm,0.3s,baz=108,slow=20,SNR=10						
ANIL	Santa Ana	1.63	310	P	Pn	07 21 24.2	+0.1
ANIL				S	Sn	07 21 45.6	-0.2
GARC	Garzon, Huila	1.83	227	P	Pb	07 21 28.0	-0.5

GARC				S	Sb	07 21 51.5	-0.4
RECRC	Villamaria, Ca	1.93	322	P	Pb	07 21 29.8	-0.6
RECRC				S	Sb	07 21 54.4	-0.7
NIZA	Niza - Manizal	2.08	321	P	Pb	07 21 32.6	-0.2
NIZA				S	Sb	07 21 59.0	-0.2
SPBC	San Pablo de B	2.20	2	P	Pb	07 21 35.1	+0.3
SPBC				S	Sg	07 22 05.1	0.0
YOTC	Yotoco, Valle	2.25	284	P	Pn	07 21 33.6	+1.0
YOTC				S	Sb	07 22 03.1	-1.0
FLOC	Florencia	2.38	219	P	Pb	07 21 36.9	-0.8
FLOC				S	Sb	07 22 07.2	-0.3
JAMC	Jamundi, Valle	2.53	265	P	Pb	07 21 38.6	-1.8
JAMC				S	Sg	07 22 13.9	-1.6
PLMC	San Jos del P	2.58	305	P	Pn	07 21 38.7	+1.7
PLMC				S	Sb	07 22 13.1	-0.2
RUSC	La Rusia	2.66	24	P	Pb	07 21 41.4	-1.5
RUSC				S	Sb	07 22 17.6	+1.4
POPC	Popayan, Colom	2.67	251	P	Pb	07 21 41.2	-1.7
POPC				S	Sb	07 22 16.6	+0.3
CBOC	Ciudad Bolivar	3.04	323	P	Pb	07 21 46.5	-2.7
CBOC				S	Sb	07 22 27.1	+0.3
PTBC	PUERTO BERRIO,	3.10	354	P	Pn	07 21 45.6	+1.5
PTBC				S	Sn	07 22 24.2	+2.5
BARC	Barichara	3.28	17	P	Pn	07 21 49.4	+2.6
PTLC	Puerto Leguiza	3.31	191	P	Pb	07 21 53.1	-0.5
CRUC	La Cruz	3.36	236	P	Pb	07 21 52.1	-2.6
CRUC				S	Sb	07 22 35.6	-0.5
BBAC	Balboa, Cauca	3.40	246	P	Pn	07 21 50.7	+2.3
BBAC				S	Sb	07 22 40.3	+3.2
BRJC	Barrancabermej	3.54	7	P	Pn	07 21 53.3	+3.2
PIZC	Pizarro, Choco	3.54	295	P	Pn	07 21 52.1	+1.9
GCUF	Volcan Galeras	3.87	236	P	Pb	07 22 00.2	-3.3
PAMC	Pamplona, Colo	4.14	20	P	Pn	07 22 02.3	+3.5
UREC	San Jos de Ur	4.50	342	P	Pn	07 22 06.5	+3.1
TULM	Tulcn-Chalpat	4.53	233	P	Pb	07 22 15.6	+0.9
OCAC	Ocana	4.84	10	P	Pn	07 22 11.6	+3.4
APAC	Apartado, Choc	5.05	332	P	Pn	07 22 16.3	+5.4
OTAV	Otavalo	5.34	234	P	Pn	07 22 20.9	+5.5
PAC1	Pacto, Paraso	5.61	236	P	Pn	07 22 21.5	+2.8
SDV	Santo Domingo	6.45	33	P	Pn	07 22 32.2	+1.9
	14nm,0.4s						
SDV	Santo Domingo	6.45	33	Pn	Pn	07 22 32.0	+1.7
	4.9nm,0.3s,baz=220,slow=7.9,SNR=17						
SDV				Sn	Sn	07 23 43.3	-1.2
	7.6nm,0.3s,baz=145,slow=12,SNR=7.8						
SDV				Lg	Lg	07 24 20.3	
	8.1nm,0.3s,baz=240,slow=20,SNR=4.1						
	8.8nm,0.3s						
SJCC	San Jacinto, C	6.50	351	P	Pn	07 22 30.7	-0.2
	7.8nm,0.6s						
SGC2	Sao Gabriel da	8.01	116	P	Pn	07 22 51.5	-0.1
URIC	Uribia, Colomb	8.48	14	P	Pn	07 22 59.2	+1.0
BOAV	Boa Vista	13.65	94	P	Pn	07 24 06.7	-2.2
TXAR	Lajitas Array	38.04	316	P	P	07 28 15.6	+1.3
	0.2nm,0.7s,baz=119,slow=10,SNR=3.6						
	0.2nm,0.7s						
TORD	Torodi Ar. Bea	75.45	77	P	P	07 32 39.3	-1.1
	0.4nm,0.5s,baz=287,slow=4.4,SNR=1.8						
	0.4nm,0.5s						
ASAR	Alice Springs	146.25	231	PKPbc	PKPbc	07 40 36.5	-0.7
	0.4nm,0.6s,baz=120,slow=3.7,SNR=7.2						

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*IDC **28** 07:23:34.5±2.0, 6°.25S×130°.23E, h132km±18km, mb3.9/17, mbtmp4.4/22, MS3.3/2, Error ellipse: s-maj=17.6km s-min=10.4km az=75.0*

*NEIC **28** 07:23:36.8±1.7, 6°.19S±0°.06×130°.29E±0°.06, h149km±7km, mb4.6/35, Error ellipse: s-maj=11.9km s-min=2.2km az=45.0*

*DJA **28** 07:23:36.9±0.1, 6°S±2°×13°0E±°, h159km±2km, M4.8/49, mb4.7/49, mB5.3/18, MLv5.2/21, Mw(mB)4.7/18*

ISC 28 07:23:36.0±0.3**, 6°.30S**±0°.04×**130°.25E**±0°.05**, h150**km**, n156, σ1s.72**/156**, mb4.6**/42**, 1C-1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.80	349	P	Pn	07 24 10.7	+1.8
BNDI	Bandanaira	1.80	349	P	Pn	07 24 10.7	+1.8
BNDI				S	Sn	07 24 36.5	+2.4
SAUI	Saumlaki	1.97	148		Pn	07 24 12.2	+1.3
SAUI	Saumlaki	1.97	148	P	Pn	07 24 13.3	+2.4
SAUI	Saumlaki	1.97	148	P	Pn	07 24 12.1	+1.3
SAUI				S	Sn	07 24 39.6	+2.0
MSAI	Masohi	3.21	336	P	Pn	07 24 27.2	+1.0
AAI	Ambon	3.31	322	P	Pn	07 24 29.5	+2.2
KRAI	Karang Ratu	3.49	328	P	Pn	07 24 32.3	+2.6
FAKI	Fak Fak	3.91	31		Pn	07 24 33.2	-2.0
FAKI	Fak Fak	3.91	31	P	Pn	07 24 33.6	-1.5
FAKI	Fak Fak	3.91	31	P	Pn	07 24 33.0	-2.1
KMPI	Kaimana, Papua	4.33	53	P	Pn	07 24 39.7	-0.9
NLAI	Namlea	4.37	314	P	Pn	07 24 44.9	+3.7
SIJI	Sorong	5.49	11	P	Pn	07 24 53.9	-2.1
SWI	Sorong	5.49	11	P	Pn	07 24 54.3	-1.8
SANI	Sanana	5.99	315	P	Pn	07 25 05.4	+2.7
SANI	Sanana	5.99	315	P	Pn	07 25 05.0	+2.3
	0.6nm2µm134nm,0.7s						
DRS	Darwin Rock St	6.13	174	P	Pn	07 25 05.1	+0.6
RKPI	Ransiki, Papua	6.16	40	P	Pn	07 25 04.1	-0.9
MWPI	Manokwari, Pap	6.54	35	P	Pn	07 25 10.3	+0.3
MTN	Manton Dam	6.56	172		Pn	07 25 10.8	+0.5
SOEI	Soe	6.84	240		Pn	07 25 15.5	+1.3
SOEI	Soe	6.84	240	P	Pn	07 25 16.8	+2.6
SOEI	Soe	6.84	240	P	Pn	07 25 16.3	+2.1
	1.4nm2µm103nm,0.6s						
SRPI	Serui, Papua	7.42	54	P	Pn	07 25 20.8	-1.0
BATI	Baumata	7.58	239	P	Pn	07 25 20.8	-3.2
	39nm,0.3s,baz=152,slow=3.7,SNR=4.1						
BATI				S	Sn	07 26 47.4	-1.4
	122nm,0.4s,baz=360,slow=22,SNR=11						
BATI	Baumata	7.58	239	P	Pn	07 25 26.3	+2.3
	0.7nm109nm,0.8s						
BAKI	Biak	7.74	49	P	Pn	07 25 26.7	+0.7
EDFI	Ende, Flores	8.83	253	P	Pn	07 25 44.8	+4.2
	16nm,0.4s						
KNRA	Kununurra	9.43	189		Pn	07 25 47.7	-0.9
SMPI	Sarmi	9.46	63	P	Pn	07 25 47.7	-1.3
	44nm,1.9s						
GTOI	Gorontalo	9.98	313	P	Pn	07 26 00.4	+4.5
	45nm,1.1s						
APSI	Ampana	10.11	302	P	Pn	07 25 59.4	+1.8
	48nm,1.0s						
BASI	Baing, Sumba	10.33	247	P	Pn	07 26 03.1	+2.6
	132nm,0.9s						
LBFI	Labuhan Bajo,	10.50	257	P	Pn	07 26 06.1	+3.4
	43nm,0.7s						
MRSI	Marisa	10.68	309	P	Pn	07 26 07.0	+1.9
	75nm,1.0s						
TTSI	Tana Toraja	10.88	287	P	Pn	07 26 12.0	+4.2
	39nm,0.9s						
WBSI	Waikabubak, Su	11.25	252	P	Pn	07 26 14.7	+2.0
	48nm,0.9s						
MMSI	Mamuju	11.86	287	P	P	07 26 23.0	-4.5
	50nm,0.8s						
TOLI2	Tolitoli	11.98	308	Pn	Pn	07 26 21.8	-0.3
TOLI2	Tolitoli	11.98	308	P	P	07 26 24.2	-4.6
DBNI	Kabupaten Domp	12.04	259	P	P	07 26 25.7	-3.8
	17nm,0.6s						
FITZ	Fitzroy Crossi	12.56	201		Pn	07 26 28.1	-1.5
FITZ	Fitzroy Crossi	12.56	201	P	Pn	07 26 27.6	-2.1
	24nm,0.4s,baz=16,slow=9.6,SNR=88						
FITZ				S	Sn	07 28 39.0	-10
	36nm,0.4s,baz=86,slow=15,SNR=8.2						
PLAI	Plampang	12.62	258	P	Pn	07 26 31.4	+1.0
PLAI	Plampang	12.62	258	P	Pn	07 26 30.3	-0.1
	27nm,0.5s						
TWSI	Taliwang, Sumb	13.47	259	P	P	07 26 42.0	-3.4
	2µm24nm,0.6s						
WB0	Warramunga Arr	13.98	164		Pn	07 26 45.1	-2.7
WRA	Warramunga Arr	14.13	164	P	Pn	07 26 47.6	-2.1
	7.7nm,0.5s,baz=348,slow=13,SNR=44						
WRA				S	Sn	07 29 15.5	-11
	20nm,0.5s,baz=328,slow=27,SNR=12						
WRA	Warramunga Arr	14.13	164		Pn	07 26 48.1	-1.6
WR8	Warramunga Arr	14.19	163	Pn	Pn	07 26 48.3	-2.1
KLNI	Mataram	14.19	261	P	P	07 26 52.5	-0.9
	3µm45nm,0.7s						
KHKI	Kahang-Kahang	14.66	261	P	P	07 26 58.5	-0.1
	48nm,0.6s						
COEN	Coen	14.82	122	Pn	P	07 26 58.9	-1.5
COEN	Coen	14.82	122	P	Pn	07 26 57.6	-0.8
IGBI	Denpasar	15.18	260	P	P	07 27 06.0	+1.7
	78nm,0.5s						
JAGI	Jajag, Banyuwa	16.11	261	Pn	P	07 27 13.4	-1.2
JAGI	Jajag, Banyuwa	16.11	261	P	P	07 27 14.3	-0.4
JAGI	Jajag, Banyuwa	16.11	261	P	P	07 27 13.9	-0.8
	54nm,1.1s						
KMMI	Kalianget	16.19	266	P	P	07 27 19.9	+4.4
	83nm,1.3s						
BLJI	Banyuglugur	16.59	264	P	Pn	07 27 22.5	+2.4
	156nm,0.7s						
GMJI	Gumukmas	16.78	262	P	Pn	07 27 23.5	+1.1
	20nm,0.5s						
QIS	Mount Isa	16.83	148	P	Pn	07 27 24.0	+1.0
PMG	Port Moresby	17.03	102	P	Pn	07 27 25.5	+0.1
	22nm,0.7s,baz=272,slow=5.1,SNR=9.6						
PMG	Port Moresby	17.03	102	P	Pn	07 27 25.7	+0.2
	35nm,0.8s						
AS31	Alice Springs	17.62	169		Pn	07 27 32.4	-0.1
AS31				IAmb	IAmb	07 28 13.5	
	comp=Z,6.0nm,0.4s						
ASAR	Alice Springs	17.62	169	P	Pn	07 27 31.9	-0.6
ASAR	Alice Springs	17.62	169	P	Pn	07 27 33.1	+0.6
	comp=Z,10nm,0.6s,baz=347,slow=9.0,SNR=91						
ASAR				S	S	07 30 38.0	-8.9
	comp=Z,3.7nm,0.7s,baz=340,slow=21,SNR=5.0						
ASAR				ScP	ScP	07 35 23.5	-0.9
	comp=Z,2.4nm,0.8s,baz=15,slow=3.8,SNR=4.6						
MBWA	Marble Bar	17.94	214		Pn	07 27 36.4	+0.2
MBWA				IAmb	IAmb	07 27 58.2	
	comp=Z,48nm,1.4s						
MBWA	Marble Bar	17.94	214	P	Pn	07 27 36.3	0.0
PSA00	Pilbara Seismi	18.22	213		Pn	07 27 39.5	0.0
PSA00				IAmb	IAmb	07 27 40.9	
	comp=Z,32nm,0.7s						
PSA00	Pilbara Seismi	18.22	213		Pn	07 27 39.1	-0.4
PSA00				IAmb	IAmb	07 27 40.8	
	comp=Z,8.4nm,0.7s						
PSA00	Pilbara Seismi	18.22	213	P	Pn	07 27 40.2	+0.7
SNJI	Sawahan-Nganju	18.41	264	P	Pn	07 27 41.0	-1.0
	comp=Z,50nm,0.7s						
KKM	Kota Kinabalu	18.62	311	P	Pn	07 27 42.9	-1.5
KKM				IAmb	IAmb	07 27 44.6	
	comp=Z,37nm,0.9s						
KKM	Kota Kinabalu	18.62	311	P	Pn	07 27 43.9	-0.4
	comp=Z,45nm,0.8s						
PCJI	Pacitan	19.01	263	P	P	07 27 45.5	-1.0
	comp=Z,51nm,1.7s						
UGM	Wanagama	19.64	264	P	Pn	07 27 54.2	-2.1
	comp=Z,44nm,2.2s						
SBUM	Sibu	19.99	295	P	Pn	07 27 57.7	-2.6
SBUM				IAmb	IAmb	07 28 01.4	
	comp=Z,14nm,0.8s						
SBUM	Sibu	19.99	295	P	Pn	07 27 58.4	-2.0
	comp=Z,20nm,0.8s						
CTA	Charters Tower	20.72	133	P	P	07 28 05.1	+0.2
	comp=Z,3.2nm,0.6s,baz=304,slow=14,SNR=3.1						
CTA				S	S	07 31 46.3	-1.9
	comp=Z,1.5nm,0.3s,baz=314,slow=8.8,SNR=1.5						
	comp=Z,3.2nm,0.6s						
CTAO	Charters Tower	20.72	133	P	Pn	07 28 06.0	-3.1
KPJI	Karang Pucung	21.19	266	P	P	07 28 11.6	+1.7
	comp=Z,48nm,0.7s						
BBJI	Bungbulang	22.46	266	P	P	07 28 24.1	+1.0
BBJI	Bungbulang	22.46	266	P	P	07 28 22.7	-0.4
	comp=Z,811nmcomp=Z,74nm,0.7s						
TPI	Tanjungpandan	22.79	278	P	P	07 28 27.1	+1.0
	comp=Z,20nm,0.7s						
CNJI	Cibinong	22.98	266	P	P	07 28 27.6	-0.2
	comp=Z,1µmcomp=Z,118nm,1.1s						
MEEK	Meekatharra	23.07	207	P	P	07 28 29.8	+1.3
INKA	Innaminka	23.54	156	P	P	07 28 33.0	+0.2
FORT	Forrest	24.44	185	P	P	07 28 42.8	+1.9
FORT				IAmb	IAmb	07 29 24.3	
	comp=Z,12nm,0.8s						
KLSI		25.45	272	P	P	07 28 52.8	+2.5
	comp=Z,19nm,0.7s						
MORW	Morawa	26.33	209	P	P	07 28 59.5	+1.5
BLDU	Ballidu	27.33	206	P	P	07 29 08.3	+1.3
STKA	Stephens Creek	27.57	159	P	P	07 29 10.0	+0.9
STKA	Stephens Creek	27.57	159	P	P	07 29 10.5	+1.4
	comp=Z,0.9nm,0.5s,baz=354,slow=6.8,SNR=4.9						
STKA				LR	LR	07 40 49.3	
	comp=Z,60nm,18.5s,baz=25,slow=38						
	comp=Z,0.9nm,0.5s						
NWAO	Narrogin (SRO)	29.13	203	P	P	07 29 23.2	+0.3
	comp=Z,6.2nm,0.9s,baz=121,slow=12,SNR=1.9						
	comp=Z,6.2nm,0.9s						
JOW	Kunigami	32.99	357	P	P	07 29 56.2	-0.6
	comp=Z,6.5nm,0.4s,baz=184,slow=15,SNR=1.8						
	comp=Z,6.5nm,0.4s						
JOW	Kunigami	32.99	357	P	P	07 29 56.7	-0.2
CM31	Chiang Mai Arr	39.48	309	P	P	07 30 51.8	-0.3
CM31				IAmb	IAmb	07 30 54.1	
	comp=Z,11nm,0.9s						
CMAR	Chiang Mai Arr	39.48	309	P	P	07 30 51.5	-0.6
CMAR	Chiang Mai Arr	39.48	309	P	P	07 30 53.2	+1.1
	comp=Z,6.4nm,0.7s,baz=137,slow=7.4,SNR=39						
CMAR				PcP	PcP	07 32 56.7	-0.4
	comp=Z,0.9nm,0.5s,baz=165,slow=2.7,SNR=5.7						
	comp=Z,6.4nm,0.7s						
NJ2	Nanjing	39.66	345	*e*P	P	07 30 56.0	+2.7
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CHTO	Chiang Mai	39.69	310	P	P	07 30 54.4	+0.6
CHTO				IAmb	IAmb	07 30 55.6	
	comp=Z,16nm,0.8s						
JMN	Monobe	39.96	5	P	P	07 30 56.3	+0.4
PZH	PanZhiHua	42.74	321	P	P	07 31 21.3	+2.5
MJAR	Matsushiro Arr	43.26	9	P	P	07 31 21.6	-1.1
	comp=Z,1.9nm,0.9s,baz=186,slow=9.5,SNR=4.6						
	comp=Z,1.9nm,0.9s						
KSRS	Korea Array	43.58	357	P	P	07 31 24.7	-0.5
	comp=Z,0.4nm,0.3s,baz=172,slow=8.6,SNR=1.8						
	comp=Z,0.4nm,0.3s						
HNS	HongShan	45.83	343	⇑P	P	07 31 43.0	0.0
HNS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BJI	Beijing	47.90	345	P	P	07 31 59.5	+0.4
BJI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LZDM	Lanzhou Array	48.87	331	P	P	07 32 06.9	-0.1
	comp=Z,0.6nm,0.3s,baz=194,slow=11,SNR=1.5						
	comp=Z,0.6nm,0.3s						
HHC	Hu-ho-hao-te	49.96	341	*e*P	P	07 32 20.0	+5.1
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,80nm,3.7s						
USRK	Ussuriysk Ar.	50.29	2	P	P	07 32 17.2	+0.1
	comp=Z,1.1nm,0.5s,baz=188,slow=5.6,SNR=4.1						
	comp=Z,1.1nm,0.5s						
PALK	Pallekele	51.23	284	P	P	07 32 24.8	0.0
	comp=Z,3.9nm,0.5s,baz=124,slow=7.3,SNR=2.0						
	comp=Z,3.9nm,0.5s						
GTA	Gaotai	53.48	331	*e*P	P	07 32 42.5	+1.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HILR	Hailar Array B	56.37	352	P	P	07 33 01.1	-0.4
	comp=Z,1.8nm,0.5s,baz=149,slow=10,SNR=3.6						
	comp=Z,1.8nm,0.5s						
ULN	Ulaanbaatar	57.68	342	P	P	07 33 11.8	+0.8
ULN				IAmb	IAmb	07 33 12.9	
	comp=Z,8.7nm,0.7s						
SONM	Songino Array	57.86	341	P	P	07 33 11.2	-1.0
	comp=Z,2.9nm,0.5s,baz=162,slow=7.6,SNR=4.8						
	comp=Z,2.9nm,0.5s						
WMQ	Urumqi	62.95	327	*e*P	P	07 33 48.3	+1.6
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
TARG	Taragay, Kyrgy	67.59	320	P	P	07 34 17.3	+0.2
MA2	Magadan	67.67	11	LR	LR	08 03 19.8	
	comp=Z,20nm,21.5s,baz=116,slow=35						
KSH	Kashi	67.67	317	P	P	07 34 19.3	+2.0
KSH				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MKAR	Makanchi Array	67.78	327	P	P	07 34 18.9	+1.2
	comp=Z,20nm,0.4s,baz=113,slow=8.4,SNR=295						
MAKZ	Makanchi	67.96	326		P	07 34 19.6	+0.7
BOOM	Boomskoye usch	69.17	320		P	07 34 27.9	+1.3
BOOM				IAmb	IAmb	07 34 28.9	
	comp=Z,10nm,0.8s						
TKM2	Tokmak 2	69.61	320	P	P	07 34 30.7	+1.4
	SNR=11						
MANEM	Manem	69.76	314	P	P	07 34 30.1	-0.4
MANEM				IAmb	IAmb	07 34 32.8	
	comp=Z,7.3nm,0.7s						
UCH	Uchtor	69.96	319	P	P	07 34 33.7	+1.9
	SNR=13						
AAK	Ala-Archa	70.17	320	P	P	07 34 34.0	+1.3
	SNR=8.1						
AAK	Ala-Archa	70.17	320	P	P	07 34 31.9	-0.8
AAK				IAmb	IAmb	07 34 35.2	
	comp=Z,6.7nm,0.6s						
USP	Ospenovka	70.47	320	P	P	07 34 35.8	+1.4
	SNR=13						
ARSB	Arslanbob	70.54	318		P	07 34 35.9	+0.9
EKS2	Erkin-Say	70.64	319	P	P	07 34 37.2	+1.7
	SNR=6.8						
ZAA0	Zalesovo Array	71.07	334	P	P	07 34 36.3	-1.4
ZAA0				IAmb	IAmb	07 34 38.4	
	comp=Z,5.8nm,0.8s						
ZALV	Zalesovo Beam	71.07	334	P	P	07 34 37.6	-0.1
	comp=Z,5.2nm,0.5s,baz=127,slow=5.2,SNR=26						
	comp=Z,5.2nm,0.5s						
ZALV	Zalesovo Beam	71.07	334	P	P	07 34 36.7	-1.0
GAR	Garm	71.35	315		P	07 34 40.3	+0.4
GAR				IAmb	IAmb	07 34 41.6	
	comp=Z,17nm,0.8s						
CHGR	Chuyangaron	72.03	314	P	P	07 34 43.2	-0.8
KK31	Karatay Array	72.98	319	P	P	07 34 48.7	-0.6
KKAR	Karatay Array	72.98	319		P	07 34 48.9	-0.5
VNDA	Vanda	73.11	173	P	P	07 34 51.2	+1.7
VNDA	Vanda	73.11	173	P	P	07 34 50.2	+0.7
	comp=Z,1.0nm,0.6s,baz=324,slow=7.0,SNR=5.6						
	comp=Z,1.0nm,0.6s						
MAW	Mawson	75.69	201	P	P	07 35 05.7	+1.2
	comp=Z,2.6nm,0.7s,baz=74,slow=9.0,SNR=4.4						
	comp=Z,2.6nm,0.7s						
BVAR	Borovoye Array	77.61	328	P	P	07 35 15.3	-0.2
	comp=Z,3.8nm,0.6s,baz=126,slow=7.5,SNR=12						
	comp=Z,3.8nm,0.6s						
BORK	Borovoye	77.65	328	P	P	07 35 15.9	+0.1
BORK				IAmb	IAmb	07 35 17.0	
	comp=Z,5.8nm,0.8s						
NRIK	Noril'sk	80.94	346	P	P	07 35 33.5	+0.2
	comp=Z,4.8nm,1.0s,baz=132,slow=2.3,SNR=6.6						
	comp=Z,4.8nm,1.0s						
AB31	Akbulak array	82.12	321		P	07 35 39.9	0.0
ABKAR	Akbulak array	82.12	321	P	P	07 35 40.1	+0.2
M16K	Timber Creek	86.33	27	P	P	07 36 00.5	-0.5
RAYN	Ar Rayn	87.69	294	P	P	07 36 08.6	+0.3
RAYN				IAmb	IAmb	07 36 10.3	
	comp=Z,6.6nm,0.9s						
C19K	Lookout Ridge	88.90	20	P	P	07 36 13.2	+0.2
D19K	Kuna River	89.19	20	P	P	07 36 14.2	-0.2
D19K				IAmb	IAmb	07 36 27.4	
	comp=Z,8.3nm,1.4s						
ELIB	Princess Elisa	89.23	197	*d*P	P	07 36 16.6	+1.8
BELA	Belgrano 2	95.53	183	P	P	07 36 44.3	+0.7
BELA				IAmb	IAmb	07 36 58.9	
	comp=Z,7.3nm,1.5s						
TORD	Torodi Ar. Bea	128.91	282	PKP	PKiKP	07 42 27.2	-0.4
	comp=Z,0.8nm,0.6s,baz=58,slow=3.4,SNR=4.4						
CPUP	Villa Florida	146.74	168	PKPbc	PKPab	07 43 01.4	-1.1
	comp=Z,2.4nm,0.8s,baz=175,slow=5.8,SNR=6.6						
LPAZ	La Paz	151.11	141	PKPbc	PKiKP	07 43 14.4	+0.6
	comp=Z,1.8nm,0.4s,baz=141,slow=16,SNR=15						

IDC 28 07:39:51.4±1.6**, 1°.12N×125°.76E, h0**km**, mb3.7**/4**, mbtmp3.8**/5**, ML3.3**/1**, Error ellipse: s-maj=117.3km s-min=22.3km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.10	180	P	Pn	07 44 16.8	+0.2
	0.1nm,0.3s,baz=10,slow=9.4,SNR=2.8						
	5.1nm,1.0s						
WRA	Warramunga Arr	22.56	159	P	P	07 44 53.3	0.0
	1.8nm,0.5s,baz=336,slow=11,SNR=14						
	1.8nm,0.5s						
ASAR	Alice Springs	25.88	163	P	P	07 45 25.2	+0.1
	0.5nm,0.4s,baz=340,slow=8.1,SNR=25						
	0.5nm,0.4s						
STKA	Stephens Creek	36.09	157	P	P	07 46 54.2	-0.8
	1.2nm,0.7s,baz=326,slow=13,SNR=3.0						
	1.2nm,0.7s						
MKAR	Makanchi Array	59.16	327	P	P	07 49 54.1	0.0
	0.3nm,0.4s,baz=116,slow=6.9,SNR=8.8						
	0.3nm,0.4s						

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*SNET **28** 07:45:20.6±3.0, 12°.92N×89°.05W, h30km, ML3.4*

*CATAC **28** 07:45:20.7±0.5, 13°N±3°×8°9W±°, h21km±3km, M3.5/18, MLv3.5/18, Error ellipse: s-maj=6.2km s-min=3.0km az=28.2, confirmed*

*GCG **28** 07:45:22.4±1.0, 12°.98N×89°.09W, h47km±16km, MD3.6, ML3.0*

ISC 28 07:45:20.8±1.5**, 12°.95N**±0°.06×**89°.02W**±0°.04**, h21**km±5km**, n64, σ0s.70**/74**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.61	332	*i* P	Pn	07 45 34.2	-0.1
LALI				*i* S	Sn	07 45 42.8	-0.8
LALI				IAML		07 45 44.0	
	comp=E,643nm,0.1s						
LALI	Alcalda de L	0.61	332	P	Pn	07 45 34.2	-0.1
LALI	Alcalda de L	0.61	332	S	Sn	07 45 43.2	-0.3
TECO	Alcaldia de Te	0.63	22	*e*P	Pn	07 45 34.4	-0.2
TECO				*e*S	Sn	07 45 43.8	-0.3
TECO	Alcaldia de Te	0.63	22	P	Pn	07 45 34.4	-0.2
COEG	Centro de Oper	0.68	12	*e*P	Pb	07 45 30.1	-4.1
SNVI	San Vicente	0.69	15	*e*P	Pn	07 45 35.3	-0.1
LOMA	Loma Larga	0.71	348	*i* P	Pb	07 45 34.7	+0.1
LOMA				*e*S	Sb	07 45 44.9	+0.9
LOMA	Loma Larga	0.71	348	P	Pb	07 45 34.7	+0.1
LOMA	Loma Larga	0.71	348	S	Sb	07 45 45.6	+1.5
UESV	Universidad de	0.72	18	*e*P	Pn	07 45 35.8	0.0
UESV	Universidad de	0.72	18	P	Pn	07 45 35.8	0.0
UESV	Universidad de	0.72	18	S	Sn	07 45 46.5	+0.2
PAVA	Las Pavas	0.77	6	*e*P	Pn	07 45 36.5	0.0
PAVA	Las Pavas	0.77	6	P	Pn	07 45 36.5	0.0
PAVA	Las Pavas	0.77	6	S	Sn	07 45 48.0	+0.5
UTEC	Universidad Te	0.77	347	*e*P	Pn	07 45 36.4	-0.2
UTEC	Universidad Te	0.77	347	P	Pn	07 45 36.5	-0.1
UTEC	Universidad Te	0.77	347	S	Sn	07 45 47.3	-0.2
IGN	Direccin Gen	0.78	349	P	Pn	07 45 36.6	0.0
IGN	Direccin Gen	0.78	349	S	Sn	07 45 47.6	0.0
SCLA	Alcaldia de Sa	0.80	21	*e*P	Pn	07 45 37.2	+0.2
SCLA				*e*S	Sn	07 45 48.8	+0.5
SCLA	Alcaldia de Sa	0.80	21	P	Pn	07 45 37.3	+0.4
SCLA	Alcaldia de Sa	0.80	21	S	Sn	07 45 49.3	+1.0
PQSS	Presa 15 de Se	0.81	34	*i* P	Pb	07 45 34.9	-1.3
PQSS				*e*S	Sb	07 45 46.6	-0.1
PMON	Piamonte	0.81	339	P	Pn	07 45 36.9	-0.2
PMON	Piamonte	0.81	339	S	Sn	07 45 48.4	-0.3
JAYA	Jayaque - finc	0.82	329	*e*P	Pb	07 45 36.8	+0.4
JAYA	Jayaque - finc	0.82	329	*i* P	Pb	07 45 36.9	+0.4
JAYA				*i* S	Sn	07 45 48.5	-0.3
JAYA	Jayaque - finc	0.82	329	P	Pb	07 45 36.9	+0.4
PACA	Pacayal	0.85	53	S	Sn	07 45 50.7	+1.0
PACA	Pacayal	0.85	53	P	Pn	07 45 38.2	+0.5
BLLM	Bellamira	0.91	57	*e*P	Pn	07 45 38.7	+0.2
CEDA	San Andres	0.93	337	*e*P	Pb	07 45 38.5	+0.2
SNJE	San Jose	1.08	328	*e*P	Pn	07 45 40.9	0.0
SNJE				*e*S	Sb	07 45 54.2	-0.5
RTR	El Retiro	1.12	327	*e*P	Pb	07 45 41.8	+0.1
UNIC	Universidad Ca	1.15	334	P	Pn	07 45 41.9	+0.1
LCND	La Caada	1.16	72	*e*P	Pn	07 45 41.9	0.0
CNCH	Conchagua	1.20	74	*e*P	Pn	07 45 42.5	0.0
CNCH	Conchagua	1.20	74	P	Pn	07 45 42.6	0.0
CNCH	Conchagua	1.20	74	S	Sn	07 45 59.6	+1.3
NUBE	Las Nubes	1.20	322	*i* P	Pn	07 45 42.4	-0.2
NUBE				*i* S	Sb	07 45 57.5	-0.7
NUBE	Las Nubes	1.20	322	P	Pn	07 45 42.3	-0.2
NUBE	Las Nubes	1.20	322	S	Sb	07 45 58.1	-0.1
LLGN	La Laguna	1.21	4	P	Pn	07 45 42.9	+0.2
LLGN	La Laguna	1.21	4	S	Sb	07 45 59.4	+0.9
LOAL	Lomas de Alarc	1.28	325	S	Sb	07 46 01.2	+0.9
FAME	Alcaldia de Sa	1.31	313	P	Pn	07 45 43.6	-0.4
CSGN	Cosiguina Volc	1.43	89	P	Pn	07 45 46.0	+0.5
CSGN				S	Sb	07 46 04.7	+0.2
POTN	Potosi Cosigui	1.48	88	P	Pn	07 45 46.3	+0.1
POTN				S	Sn	07 46 05.5	+0.7
MTO3	Montecristo	1.48	347	*i* P	Pn	07 45 46.5	+0.1
MTO3	Montecristo	1.48	347	*i* P	Pn	07 45 46.6	+0.1
MTO3	Montecristo	1.48	347	P	Pn	07 45 46.6	+0.1
MTO3	Montecristo	1.48	347	S	Sn	07 46 05.6	+0.3
MARCA	Marcala la Paz	1.54	38	*i* P	Pn	07 45 47.8	+0.6
MARCA	Marcala la Paz	1.54	38	P	Pn	07 45 47.5	+0.4
ESQI	Esquipulas	1.63	349	P	Pn	07 45 48.7	+0.2
SARH	Santa Rosa de	1.84	8	*i* P	Pn	07 45 52.1	+0.9

SARH	Santa Rosa de	1.84	8	P	Pn	07 45 52.1	+0.9
TGUH	Tegucigalpa,Un	2.03	57	P	Pn	07 45 54.2	+0.3
HERN	Volcan Telica	2.16	99	P	Pn	07 45 55.2	-0.4
HOYN	Al Sur del Vol	2.17	99	P	Pn	07 45 55.6	-0.2
POLN	Al Sur del Vol	2.17	98	P	Pn	07 45 55.6	-0.2
YUSH	Yuscaran	2.34	64	P	Pn	07 45 58.6	+0.4

IDC ***28*** *08:13:14.7±1.0, 2°.31N×128°.13E, h0km, mb3.9/7, mbtmp3.9/7, Error ellipse: s-maj=58.7km s-min=16.9km az=75.0*

ISC 28 08:13:21.4±1.0**, 2°.3N**±0°.1×**128°.2E**±0°.4**, h51km, n7, σ0^{s}.73**/7**, mb3.9**/6**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.39	187	P	P	08 17 54.9	+0.8
	2.6nm,0.9s,baz=12,slow=12,SNR=3.2 2.6nm,0.9s						
WRA	Warramunga Arr	22.89	165	P	P	08 18 21.3	+0.4
	1.8nm,0.5s,baz=344,slow=11,SNR=20 1.8nm,0.5s						
ASAR	Alice Springs	26.38	168	P	P	08 18 53.0	-0.1
	0.5nm,0.5s,baz=354,slow=8.2,SNR=13 0.5nm,0.5s						
MJAR	Matsushiro Arr	35.34	14	P	P	08 20 12.3	+0.4
	1.4nm,0.8s,baz=183,slow=5.9,SNR=2.2 1.4nm,0.8s						
STKA	Stephens Creek	36.27	161	P	P	08 20 19.4	-0.5
	1.6nm,0.4s,baz=355,slow=7.7,SNR=14 1.6nm,0.4s						
MKAR	Makanchi Array	59.57	325	P	P	08 23 20.4	+0.5
	1.3nm,0.4s,baz=116,slow=8.1,SNR=26 1.3nm,0.4s						
BVAR	Borovoye Array	69.32	327	P	P	08 24 22.6	-0.9
	0.6nm,0.6s,baz=131,slow=4.4,SNR=2.7 0.6nm,0.6s						

IDC ***28*** *08:17:59.4±4.8, 4°.30S×144°.54E, h124km±43km, mb3.5/5, mbtmp3.9/7, Error ellipse: s-maj=46.2km s-min=24.9km az=132.0*

ISC 28 08:17:57.5±1.4**, 4°.4S**±0°.1×**144°.4E**±0°.1**, h100km, n7, σ2^{s}.81**/9**, mb3.8**/5**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.66	151	P	Pn	08 19 21.9	+2.6
	10nm,0.4s,baz=333,slow=9.0,SNR=11						
PMG				S	Sn	08 20 20.5	-2.4
	3.3nm,0.3s,baz=331,slow=19,SNR=1.2						
WRA	Warramunga Arr	18.30	212	P	Pn	08 22 06.0	+1.0
	0.7nm,0.4s,baz=39,slow=12,SNR=12						
ASAR	Alice Springs	21.67	207	P	P	08 22 42.0	+1.6
	1.5nm,0.5s,baz=26,slow=10,SNR=22						
ASAR				S	S	08 26 29.5	-5.2
	0.7nm,0.9s,baz=27,slow=19,SNR=4.4 1.5nm,0.5s						
FITZ	Fitzroy Crossi	22.86	232	P	P	08 22 53.8	+1.1
	2.9nm,0.4s,baz=54,slow=9.8,SNR=15 2.9nm,0.4s						
STKA	Stephens Creek	27.46	185	P	P	08 23 34.3	0.0
	0.7nm,0.8s,baz=353,slow=15,SNR=1.4 0.7nm,0.8s						
VNDA	Vanda	73.65	176	P	P	08 29 19.7	-0.1
	1.1nm,0.6s,baz=343,slow=3.0,SNR=4.2 1.1nm,0.6s						
ILAR	Eielson Array	85.05	24	P	P	08 30 20.1	-1.7
	0.9nm,0.7s,baz=262,slow=5.0,SNR=11 0.9nm,0.7s						

NIED ***28*** *08:25:30.8, 44°.53N×149°.34E, h30km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.55; $M_{\theta\theta}$-1.62; $M_{\phi\phi}$-1.93; $M_{r\theta}$1.28; $M_{\theta\phi}$-1.94; $M_{\phi r}$2.14; Fault plane solution: $M_0$4.41000×10^{14} NP1: ϕ_s230.00000°, δ28.00000°, λ102.00000°. NP2: ϕ_s36.00000°, δ62.00000°, λ83.00000°.*

JMA ***28*** *08:25:30.8±1.1, 45°N±5°×14°9E±°, h30km, MV3.8/14, SE OFF ETOROFU*

IDC ***28*** *08:25:30.3±1.2, 45°.42N×149°.39E, h0km, mb3.6/9, mbtmp3.6/9, MS3.0/2, Error ellipse: s-maj=33.6km s-min=28.4km az=166.0*

SKHL ***28*** *08:25:33.5±0.8, 44°.50N×149°.00E, h42km±7km, mb4.4/3*

ISC 28 08:25:30.1±1.0**, 44°.41N**±0°.08×**149°.34E**±0°.09**, h36km, n32, σ1^{s}.94**/29**, mb3.4**/9**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.33	309	*e*P	Pn	08 25 52.6	+0.5
KUR				AMB	AMB	08 25 55.4	
	210nm,0.3s						
KUR				*e*S	Sn	08 26 05.9	-2.7
KUR				A	A	08 26 13.0	
	1μm,0.5s						
KUR				A	A	08 26 13.0	
	1μm,0.5s						
YUK	Yuzh-Kuril'sk	2.53	263	*e*P	Pn	08 26 08.9	+0.4
YUK				AMB	AMB	08 26 10.4	
	80nm,0.7s						
YUK				*e*S	Sn	08 26 35.5	-2.5
YUK				A	A	08 26 44.9	
	330nm,0.6s						
YUK				A	A	08 26 44.9	
	360nm,0.6s						
NEM2	Nemuro 2	2.80	249	*e*P	Pn	08 26 13.2	+0.9
NEM2				*e*S	Sn	08 26 43.4	-1.4
NMR	Nemuro--Hokkai	2.81	250	*e*P	Pn	08 26 13.9	+1.5
NMR				*e*S	Sn	08 26 42.7	-2.3
JRA	Rausu	3.07	263	*e*P	Pn	08 26 18.7	+2.7
JNK	Nakash	3.43	258	*e*P	Pn	08 26 22.7	+1.7
JNK				*e*S	Sn	08 27 01.4	+1.0
AKK	Akkeshi	3.54	248	*e*P	Pn	08 26 23.6	+1.1
AKK				*e*S	Sn	08 27 01.9	-1.2
JAK	Akkeshi	3.65	249	*e*P	Pn	08 26 24.9	+0.9
JAK				*e*S	Sn	08 27 07.2	+1.4
JTKR	Abashiri--Toko	3.93	265	*e*P	Pn	08 26 32.1	+4.3
JAR	Ashorobuto	4.18	257	*e*P	Pn	08 26 33.7	+2.4
JOB	Onbets	4.27	251	*e*P	Pn	08 26 35.0	+2.5
JCH	Churui	4.70	250	*e*P	Pn	08 26 40.0	+1.5
JCH				*e*S	Sn	08 27 31.9	+0.2
JKK2	Kamakawa 2	4.77	266	*e*P	Pn	08 26 45.6	+6.2
JNBK	Urakawa-nobuka	5.25	248	*e*P	Pn	08 26 46.9	+0.9
JANG	Nango	7.05	238	*e*P	Pn	08 27 10.7	-0.1
JANG				*e*S	Sn	08 28 23.6	-6.1
KSRS	Korea Array	17.58	254	LR	LR	08 35 24.7	
	comp=Z,14nm,19.5s,baz=65,slow=33						
H11N2	WAKE ISLAND Hy	28.63	144	T	T	09 02 21.8	
	baz=334,slow=75						
H11N1	WAKE ISLAND Hy	28.64	144	T	T	09 02 21.1	
	baz=334,slow=75						
H11N3	WAKE ISLAND Hy	28.65	144	T	T	09 02 20.7	
	baz=334,slow=75						
H11S1	WAKE ISLAND Hy	29.64	145	T	T	09 03 37.9	
	baz=335,slow=76						
H11S3	WAKE ISLAND Hy	29.65	145	T	T	09 03 34.6	
	baz=335,slow=76						
H11S2	WAKE ISLAND Hy	29.66	145	T	T	09 03 37.7	
	baz=335,slow=76						
ILAR	Eielson Array	40.02	37	P	P	08 33 01.4	+0.3
	0.4nm,0.9s,baz=275,slow=7.4,SNR=2.9 0.4nm,0.9s						
MKAR	Makanchi Array	45.67	298	P	P	08 33 48.4	+1.3
	0.6nm,0.8s,baz=66,slow=8.3,SNR=3.8 0.6nm,0.8s						
PMG	Port Moresby	53.60	183	LR	LR	08 55 09.7	
	comp=Z,48nm,21.4s,baz=327,slow=33						
YKA	Yellowknife Ar	54.37	35	P	P	08 34 51.4	-1.4
	0.2nm,0.8s,baz=298,slow=7.9,SNR=2.5 0.2nm,0.8s						
FINES	FINESS Array B	64.99	334	P	P	08 36 05.6	-0.3
	2.5nm,0.8s,baz=68,slow=12,SNR=3.6 2.5nm,0.8s						
NVAR	Mina Array Bea	65.89	59	P	P	08 36 12.7	+0.4
	0.1nm,0.3s,baz=321,slow=3.1,SNR=1.6 0.1nm,0.3s						
ASAR	Alice Springs	69.20	195	P	P	08 36 45.3	+12
	0.2nm,0.6s,baz=0.9,slow=7.0,SNR=1.5 0.2nm,0.6s						
NOA	NORSAR Array B	69.54	340	P	P	08 36 34.9	+0.2
	0.9nm,0.7s,baz=42,slow=4.9,SNR=1.8 0.9nm,0.7s						
HFS	Hagfors	69.68	338	P	P	08 36 35.6	0.0
	0.9nm,0.5s,baz=22,slow=4.7,SNR=5.7 0.9nm,0.5s						
TXAR	Lajitas Array	80.97	58	P	P	08 37 44.0	+2.9
	0.2nm,0.6s,baz=313,slow=5.6,SNR=5.1 0.2nm,0.6s						

RSNC 28 08:26:07.5±0.0**, 3°N**±2°×**8°0W**±°**, h29km**±**5km, M3.0, mB4.7, mb4.1, ML2.8, Mw(mB)3.9, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUMC	Tumaco	1.60	139	P	Pn	08 26 32.7	-1.2
TUMC				S	Sn	08 26 51.0	-2.6
MAPC	Malpelo	2.06	298	P	Pn	08 26 40.2	0.0
MAPC				S	Sn	08 27 03.2	-1.7
BBAC	Balboa, Cauca	2.73	112	P	Pn	08 26 47.9	-1.6
BBAC				S	Sn	08 27 13.2	-8.5
PAC1	Pacto, Paraso	2.93	160	P	Pn	08 26 53.4	+1.1
PAC1				S	Sn	08 27 19.1	-7.5
GCUF	Volcan Galeras	3.03	126	P	Pn	08 26 53.7	-0.3
GCUF				S	Sn	08 27 27.5	-2.0
CUSE	Cuicocha Este	3.05	153	P	Pn	08 26 53.8	-0.4
CUSE				S	Sn	08 27 26.1	-3.8
JAMC	Jamundi, Valle	3.11	87	P	Pn	08 26 52.9	-1.9
JAMC				S	Sn	08 27 26.3	-4.8
POPC	Popayan, Colom	3.14	99	P	Pn	08 26 53.3	-2.0
POPC				S	Sn	08 27 27.5	-4.4
CRUC	La Cruz	3.18	117	P	Pn	08 26 56.5	+0.5
CRUC				S	Sn	08 27 30.8	-2.4
YOTC	Yotoco, Valle	3.55	75	P	Pn	08 26 59.2	-1.7
YOTC				S	Sn	08 27 36.9	-5.1
PLMC	San Jos del P	3.95	62	P	Pn	08 27 04.2	-2.1
PLMC				S	Sn	08 27 49.4	-2.3
GARC	Garzon, Huila	4.37	101	P	Pn	08 27 12.9	+0.7
FLOC	Florencia	4.37	109	P	Pn	08 27 12.2	+0.2
ANIL	Santa Ana	4.60	72	P	Pn	08 27 16.4	+1.0
ORTC	Ortega, Tolima	4.61	79	P	Pn	08 27 16.0	+0.7
ORTC				S	Sn	08 28 07.5	-0.4
CBOC	Ciudad Bolivar	4.69	53	P	Pn	08 27 15.1	-1.4
PRAC	Prado	4.93	82	P	Pn	08 27 20.7	+1.0
MACC	Macarena, Meta	5.99	98	P	Pn	08 27 34.7	+0.4
	8.6nm,0.5s						
MACC				S	Sn	08 28 40.4	-1.7
	8.6nm,0.5s						
VILC	Villavicencio,	6.17	80	P	Pn	08 27 39.1	+2.3
	19nm,0.4s						
CHIC	Chingaza	6.24	75	P	Pn	08 27 39.1	+1.1
	531nm15nm,0.6s						
PTBC	PUERTO BERRIO,	6.34	57	P	Pn	08 27 40.1	+1.0

KRSC ***28*** *08:28:36.8±2.1, 58°.87N×158°.60E, h12km±11km, Ml3.7*

NERS ***28*** *08:28:40.2, 58°.73N×158°.42E, h0km*

ISC 28 08:28:36.5±0.9**, 58°.72N**±0°.04×**158°.65E**±0°.04**, h10km, n15, σ1^{s}.75**/22**, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALN	Palana	0.78	61	*e*P	Pb	08 28 51.1	-1.0
PALN				*e*S	Sb	08 29 00.5	-2.2
OSSR	Ossora	2.34	75	*e*P	Pb	08 29 17.8	-1.0
OSSR				*e*S	Sb	08 29 46.9	-0.8
SMKR	Semkarok	2.63	144	*e*P	Pb	08 29 22.5	-1.2
KLY	Klyuchi	2.65	155	*e*P	Pg	08 29 26.6	-0.6
KOZ	Kozyrevsk	2.75	166	*e*P	Pb	08 29 25.3	-0.5
ESO	Esso	2.81	179	*e*P	Pb	08 29 25.2	-1.5
BZP	Bezymyannyi-Pe	3.00	159	*e*P	Pb	08 29 29.2	-0.8
KMNR	Kamenistaya	3.10	163	*e*P	Pb	08 29 29.8	-1.9
GADL	Gadlja	3.89	287	*e*Sg	Sg	08 30 42.2	+0.9
GADL				Sgmax		08 30 55.3	
	180nm,0.7s						
GADL				Sgmax		08 30 55.3	
	110nm,0.7s						
TLAR	Talaya	3.97	310	*e*P	Pb	08 29 42.8	-3.7
TLAR				*e*Pg	Pg	08 29 52.2	-0.2
TLAR				*e*Sg	Sg	08 30 43.6	-0.2
TLAR				Sgmax		08 30 55.1	
	30nm,0.6s						
TLAR				Sgmax		08 30 55.1	
	90nm,0.6s						
MA2	Magadan	4.15	285	*e*Sg	Sg	08 30 50.1	+0.5
MA2				Sgmax		08 31 03.7	
	50nm,0.9s						
MA2				Sgmax		08 31 03.7	
	20nm,0.9s						
MGD	Magadan 1	4.26	292	*e*P	Pn	08 29 45.7	+4.3
MGD				*e*Sg	Sg	08 30 52.2	-1.1
MGD				Sgmax		08 31 12.3	
	20nm,0.5s						
MGD				Sgmax		08 31 12.3	
	60nm,0.5s						
SEY	Seymchan	5.22	327	*e*P	Pg	08 30 16.8	+0.4
SEY				*e*Sg	Sg	08 31 24.8	+0.9
SEY				Sgmax		08 31 38.2	
	10.0nm,0.6s						
SEY				Sgmax		08 31 38.2	
	10.0nm,0.6s						
TLON	Talon	5.24	286	*e*Sg	Sg	08 31 23.1	-1.3
TLON				Sgmax		08 31 32.5	
	60nm,0.6s						
SUUS	Susuman	6.55	313	*e*P	Sb	08 31 47.2	-1.5
SUUS				*e*Sg	Sg	08 32 08.3	+1.8
SUUS				Sgmax		08 32 26.1	
	30nm,0.8s						

DJA ***28*** *08:38:11.7±1.6, 5°N±3°×12°7E±°, h27km±16km, M4.8/11, mB4.9/4, mb4.9/7, MLv4.9/11, Mw(mB)4.2/4*

NEIC ***28*** *08:38:13.9±1.4, 5°.41N±0°.07×127°.1E±0°.1, h75km±7km, mb4.7/48, Error ellipse: s-maj=18.1km s-min=9.0km az=71.0*

IDC ***28*** *08:38:15.8±1.6, 5°.39N×127°.05E, h96km±13km, mb4.1/26, mbtmp4.4/28, MS3.5/19, Error ellipse: s-maj=23.1km s-min=9.9km az=73.0*

ISC 28 08:38:14.1±0.4**, 5°.30N**±0°.04×**127°.09E**±0°.08**, h84km, n126, σ1^{s}.37**/114**, mb4.6**/53**, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	2.24	224	P	Pn	08 38 48.3	-1.0
DAV	Davao City (W)	2.31	319		Pn	08 38 48.3	-2.0
DAV	Davao City (W)	2.31	319	P	Pn	08 38 48.8	-1.5
DAV				S	Sn	08 39 18.3	+0.3
DAV	Davao City (W)	2.31	319	P	Pn	08 38 47.0	-3.3
DAV	Davao City (W)	2.31	319	P	Pn	08 38 49.4	-0.9
	1μm,0.4s,baz=110,slow=3.5,SNR=32						
DAV				S	Sn	08 39 19.0	+1.0
	1μm,0.6s,baz=54,slow=23,SNR=12						
TNTI	Ternate	4.51	177		Pn	08 39 20.1	+0.1
GTOI	Gorontalo	6.17	221	P	Pn	08 39 42.4	-0.3
	0.3nm854nm80nm,0.7s						
MRSI	Marisa	7.03	227	P	Pn	08 39 54.8	+0.3
MRSI				S	Sn	08 41 11.2	-1.8
SANI	Sanana	7.39	189	P	Pn	08 39 56.2	-3.1
SWI	Sorong	7.40	146	P	Pn	08 39 56.7	-2.8
	0.2nm75nm,0.9s						
SIJI	Sorong	7.41	146	P	Pn	08 39 56.6	-3.1
TOLI2	Tolitoli	7.55	237	Pn	Pn	08 40 00.2	-1.4
LUWI	Luwuk	7.64	215	Pn	Pn	08 40 01.4	-1.4
LUWI	Luwuk	7.64	215	P	Pn	08 40 05.1	+2.3
NLAI	Namlea	8.48	180	P	Pn	08 40 13.3	-1.0
	56nm,0.4s						
KRAI	Karang Ratu	8.66	171	P	Pn	08 40 19.2	+2.5
FAKI	Fak Fak	9.65	148	Pn	Pn	08 40 28.3	-2.0
FAKI	Fak Fak	9.65	148	P	Pn	08 40 27.6	-2.7
TGY	Tagaytay City	10.64	326	LR	LR	08 45 21.8	
	comp=Z,500nm,19.1s,baz=254,slow=40						
BATI	Baumata	15.78	193	P	P	08 41 53.4	-0.5
	17nm,0.3s,baz=96,slow=20,SNR=1.3						
BATI				LR	LR	08 48 37.5	
	comp=Z,166nm,21.2s,baz=5.5,slow=39						
JAGI	Jajag, Banyuwa	18.81	223	P	Pn	08 42 28.0	-0.6
JAGI				IAmb	IAmb	08 42 48.7	
	comp=Z,35nm,1.0s						
TPUB	Ta-pu	18.95	341	P	P	08 42 26.7	-1.9
TPUB				IAmb	IAmb	08 42 35.1	
	comp=Z,84nm,1.3s						
YOJ	Yonaguni jima	19.45	349	P	P	08 42 33.3	-0.7
YHNB	Yeheng	20.02	345	P	P	08 42 39.6	-0.9
YHNB				IAmb	IAmb	08 42 56.8	
	comp=Z,76nm,1.5s						
KNRA	Kununurra	20.91	175		Pn	08 42 51.7	-1.5
KNRA				IAmb	IAmb	08 42 55.1	
	comp=Z,29nm,0.9s						
JOW	Kunigami	21.44	3	P	P	08 42 52.0	-3.6
JOW				IAmb	IAmb	08 43 26.4	
	comp=Z,31nm,1.0s						
JOW	Kunigami	21.44	3	LR	LR	08 53 35.3	
	comp=Z,70nm,19.5s,baz=158,slow=43						
FITZ	Fitzroy Crossi	23.30	183	P	P	08 43 15.7	+0.8
COEN	Coen	24.92	140	P	P	08 43 28.8	-0.7
WB0	Warramunga Arr	25.93	164		P	08 43 39.6	+1.0
WRA	Warramunga Arr	26.08	164	P	P	08 43 42.4	+2.3
	comp=Z,7.7nm,0.5s,baz=344,slow=10,SNR=39 comp=Z,7.7nm,0.5s						
WRA	Warramunga Arr	26.08	164	P	P	08 43 39.5	-0.6
WR8	Warramunga Arr	26.14	164		P	08 43 41.7	+1.1
WR8				IAmb	IAmb	08 44 00.2	
	comp=Z,15nm,0.8s						
PSA00	Pilbara Seismi	27.64	195	P	P	08 43 55.3	+1.3
PSA00				IAmb	IAmb	08 44 18.3	
	comp=Z,32nm,1.1s						
NJ2	Nanjing	27.71	345	*e*P	P	08 43 56.0	+1.5
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
JNU	Nakatsue	27.90	7	P	P	08 43 55.1	-1.2
	comp=Z,7.5nm,0.9s,baz=265,slow=8.2,SNR=4.5						
JNU				LR	LR	08 54 03.8	
	comp=Z,32nm,21.2s,baz=182,slow=34 comp=Z,7.5nm,0.9s						
JNU	Nakatsue	27.90	7	P	P	08 43 55.6	-0.7
JMN	Monobe	28.98	12	P	P	08 44 04.9	-1.0
JMN				IAmb	IAmb	08 44 34.9	
	comp=Z,42nm,1.4s						
AS31	Alice Springs	29.55	167		P	08 44 12.8	+1.7
ASAR	Alice Springs	29.55	167	P	P	08 44 11.4	+0.4
ASAR	Alice Springs	29.55	167	P	P	08 44 11.9	+0.9
	comp=Z,1.2nm,0.5s,baz=353,slow=7.6,SNR=29						
ASAR				PcP	PcP	08 47 14.2	-0.2
	comp=Z,0.7nm,0.5s,baz=349,slow=2.3,SNR=4.1 comp=Z,1.2nm,0.5s						
JHJ	Hachijo jima 2	30.10	22	LR	LR	08 55 38.5	
	comp=Z,95nm,21.2s,baz=267,slow=35						
CMAR	Chiang Mai Arr	30.43	298	P	P	08 44 18.9	0.0
	comp=Z,0.8nm,0.4s,baz=108,slow=7.2,SNR=5.3 comp=Z,0.8nm,0.4s						
CTA	Charters Tower	31.49	144	LR	LR	08 57 57.8	
	comp=Z,80nm,18.5s,baz=13,slow=37						
KSRS	Korea Array	32.01	1	P	P	08 44 33.3	+0.8
	comp=Z,0.8nm,0.5s,baz=180,slow=9.7,SNR=2.5						
KSRS				LR	LR	09 03 01.4	
	comp=Z,62nm,18.0s,baz=180,slow=46 comp=Z,0.8nm,0.5s						
PZH	PanZhiHua	32.10	314	P	P	08 44 35.3	+1.7
LYN	LuoYang	32.10	337	*e*P	P	08 44 36.8	+3.4
LYN				pmax	pmax		
	comp=Z,13nm,0.7s						
LYN				pmax	pmax		
	comp=Z,260nm,6.2s						
MJAR	Matsushiro Arr	32.72	17	P	P	08 44 38.7	-0.1
	comp=Z,1.1nm,0.7s,baz=185,slow=9.0,SNR=4.2 comp=Z,1.1nm,0.7s						
XAN	Xi'an	33.20	332	P	P	08 44 41.8	-1.2
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HNS	HongShan	33.89	342	⇓P	P	08 44 52.5	+3.6
HNS				pmax	pmax		
	comp=Z,19nm,0.9s						
INKA	Innaminka	35.40	159		P	08 45 02.4	+0.4
INKA				IAmb	IAmb	08 45 06.3	
	comp=Z,5.5nm,0.8s						
MORW	Morawa	35.79	197	P	P	08 45 06.5	+1.2
MORW				IAmb	IAmb	08 45 09.7	
	comp=Z,16nm,1.1s						
FORT	Forrest	35.89	179	P	P	08 45 06.8	+0.6
FORT				IAmb	IAmb	08 45 33.4	
	comp=Z,18nm,1.4s						
BJT	Baijiatuau	35.94	346		P	08 45 06.6	+0.1
BJI	Beijing	35.96	346	P	P	08 45 09.8	+3.2
BJI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
LZDM	Lanzhou Array	37.33	328	P	P	08 45 19.4	+0.6
	comp=Z,2.6nm,0.4s,baz=160,slow=9.1,SNR=5.7 comp=Z,2.6nm,0.4s						
HHC	Hu-ho-hao-te	38.03	341	*e*P	P	08 45 26.5	+2.1
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,170nm,5.4s						
EIDS	Eidsvold	38.38	144	P	P	08 45 27.0	-0.4
EIDS				IAmb	IAmb	08 45 44.4	
	comp=Z,9.9nm,1.0s						
BBOO	Buckleboo	38.85	168	P	P	08 45 32.8	+1.6
BBOO				IAmb	IAmb	08 45 47.6	
	comp=Z,20nm,1.4s						
USRK	Ussuriysk Ar.	38.98	6	P	P	08 45 33.2	+1.1
	comp=Z,2.3nm,0.4s,baz=167,slow=7.7,SNR=7.9 comp=Z,2.3nm,0.4s						
STKA	Stephens Creek	39.47	160		P	08 45 36.8	+0.4
STKA	Stephens Creek	39.47	160	P	P	08 45 37.6	+1.2
	comp=Z,10nm,0.7s,baz=334,slow=8.3,SNR=25						
STKA				LR	LR	09 04 59.7	
	comp=Z,57nm,18.5s,baz=360,slow=40 comp=Z,10nm,0.7s						
XLT	XiLinHaoTe	39.65	348	*e*P	P	08 45 41.8	+4.0
XLT				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ASAJ	Asahikawa	40.99	17	LR	LR	09 02 54.7	
	comp=Z,76nm,20.8s,baz=204,slow=36						
JKA	Kamikawa-asahi	40.99	17	P	P	08 45 48.7	-0.1
GTA	Gaotai	41.95	328	*e*P	P	08 45 58.0	+1.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				LR	LR		
	comp=N,210nm,17.1s						
GTA				LR	LR		
	comp=E,250nm,19.3s						
GTA				LR	LR		
	comp=Z,320nm,16.4s						
HILR	Hailar Array B	44.53	353	P	P	08 46 17.2	-0.2
	comp=Z,1.1nm,0.4s,baz=181,slow=9.6,SNR=2.2 comp=Z,1.1nm,0.4s						
ULN	Ulaanbaatar	45.75	341	P	P	08 46 26.9	-0.3
SONM	Songino Array	45.94	341	P	P	08 46 29.1	+0.4
	comp=Z,2.7nm,0.6s,baz=152,slow=6.7,SNR=4.0						
SONM				LR	LR	09 07 32.8	
	comp=Z,73nm,19.4s,baz=245,slow=38 comp=Z,2.7nm,0.6s						
SONM	Songino Array	45.94	341	P	P	08 46 28.9	+0.2
TOO	Toolangi	45.97	160	P	P	08 46 29.4	+0.5
DZM	Mont Dzumac	47.16	127	*e*LR	LR	09 00 03.1	
	comp=Z,142nm,26.6s						
WMQ	Urumqi	51.66	324	*e*P	P	08 47 14.5	+2.0
WMQ				LR	LR		
	comp=Z,200nm,22.5s						
PEA0B	Petropavlovsk-	53.85	22	P	P	08 47 28.5	+0.1
PETK	Petropavlovsk-	53.85	22	P	P	08 47 27.8	-0.5
PETK	Petropavlovsk-	53.85	22	P	P	08 47 28.1	-0.2
	comp=Z,6.3nm,0.8s,baz=217,slow=7.3,SNR=2.7 comp=Z,6.3nm,0.8s						
MKAR	Makanchi Array	56.49	324	P	P	08 47 47.4	-0.2
	comp=Z,6.4nm,0.7s,baz=126,slow=8.0,SNR=54						
MKAR				LR	LR	09 13 24.7	
	comp=Z,104nm,19.8s,baz=102,slow=37 comp=Z,6.4nm,0.7s						
MKAR	Makanchi Array	56.49	324		P	08 47 47.8	+0.3
YAK	Yakutsk	56.64	1	LR	LR	09 10 31.7	
	comp=Z,23nm,21.8s,baz=152,slow=34						
MAKZ	Makanchi	56.67	324		P	08 47 49.3	+0.5
MAKZ				IAmb	IAmb	08 47 49.8	
	comp=Z,7.2nm,0.8s						
MA2	Magadan	57.10	14	LR	LR	09 09 50.0	
	comp=Z,21nm,21.3s,baz=166,slow=33						
NIL	Nilore	57.27	307	P	P	08 47 53.6	+0.3
KDJ	Kajisay	57.43	318	P	P	08 47 54.9	+0.4
KDJ				IAmb	IAmb	08 48 20.1	
	comp=Z,6.4nm,1.0s						
ZAA0	Zalesovo Array	59.36	332		P	08 48 06.8	-0.6
ZALV	Zalesovo Beam	59.36	332	P	P	08 48 06.9	-0.6
	comp=Z,5.2nm,0.4s,baz=126,slow=6.8,SNR=26						
ZALV				LR	LR	09 15 14.7	
	comp=Z,52nm,19.2s,baz=159,slow=37 comp=Z,5.2nm,0.4s						
ZALV	Zalesovo Beam	59.36	332		P	08 48 06.7	-0.7
MANEM	Manem	59.67	311	P	P	08 48 10.4	+0.2
MANEM				IAmb	IAmb	08 48 18.8	
	comp=Z,10nm,1.0s						
BTK	Batken	61.11	313	P	P	08 48 19.1	-0.7
GAR	Garm	61.14	312		P	08 48 20.0	-0.1
KK31	Karatay Array	62.34	316		P	08 48 27.6	-0.3
KK31				IAmb	IAmb	08 48 28.7	

	comp=Z,4.3nm,0.8s						
KKAR	Karatay Array	62.34	316		P	08 48 27.8	-0.1
BVAR	Borovoye Array	66.21	327	P	P	08 48 53.0	+0.1
	comp=Z,5.6nm,0.6s,baz=124,slow=7.9,SNR=13						
	comp=Z,5.6nm,0.6s						
BORK	Borovoye	66.26	327		P	08 48 53.7	+0.4
BORK				IAmb	IAmb	08 49 06.8	
	comp=Z,8.5nm,0.8s						
TIXI	Tiksi	66.28	1	LR	LR	09 23 42.0	
	comp=Z,24nm,18.1s,baz=199,slow=41						
TIXI	Tiksi	66.28	1	P	P	08 48 52.9	-0.1
TIXI				IAmb	IAmb	08 49 34.4	
	comp=Z,10nm,1.1s						
NRIK	Noril'sk	69.00	346	P	P	08 49 10.6	+0.4
	comp=Z,2.7nm,0.6s,baz=144,slow=4.6,SNR=5.7						
	comp=Z,2.7nm,0.6s						
NRIK	Noril'sk	69.00	346	P	P	08 49 09.7	-0.5
NRIK				IAmb	IAmb	08 49 26.8	
	comp=Z,6.1nm,0.8s						
AB31	Akbulak array	71.17	320		P	08 49 23.7	-0.2
AB31				IAmb	IAmb	08 49 24.8	
	comp=Z,7.2nm,0.8s						
ABKAR	Akbulak array	71.17	320		P	08 49 23.5	-0.4
ARTI	Arti	73.90	327		P	08 49 39.4	-0.5
ARTI				IAmb	IAmb	08 50 01.5	
	comp=Z,7.0nm,0.7s						
KDAK	Kodiak Island	80.38	32	LR	LR	09 20 47.1	
	comp=Z,66nm,20.2s,baz=234,slow=32						
KBZ	Khabaz	82.17	313	P	P	08 50 24.4	-1.5
	comp=Z,3.9nm,0.9s,baz=156,slow=6.8,SNR=5.7						
	comp=Z,3.9nm,0.9s						
ILAR	Eielson Array	83.54	25	P	P	08 50 31.4	-1.2
	comp=Z,0.9nm,0.7s,baz=247,slow=5.4,SNR=12						
	comp=Z,0.9nm,0.7s						
VNDA	Vanda	84.93	173	P	P	08 50 40.5	+1.1
VNDA	Vanda	84.93	173	P	P	08 50 40.7	+1.3
	comp=Z,2.4nm,1.1s,baz=326,slow=3.2,SNR=3.7						
	comp=Z,2.4nm,1.1s						
I26K	Coal Creek Min	85.12	25	P	P	08 50 41.0	+0.4
VRDI	Verde Repeater	85.13	29	P	P	08 50 41.3	+0.3
PPT2	Papeete2	85.25	108	*e*LR	LR	09 17 43.4	
	comp=Z,49nm,24.0s						
MAW	Mawson	85.35	200	LR	LR	09 28 47.8	
	comp=Z,31nm,19.5s,baz=24,slow=36						
E27K	Coleen River	85.60	22	P	P	08 50 42.5	-0.6
K27K	Chicken	85.64	26	P	P	08 50 43.2	-0.1
K27K				IAmb	IAmb	08 51 18.3	
	comp=Z,9.5nm,1.4s						
I27K	Kandik River	85.75	25	P	P	08 50 43.0	-0.8
I27K				IAmb	IAmb	08 51 12.1	
	comp=Z,9.2nm,1.0s						
BCAR	Beaver Creek A	85.82	27	P	P	08 50 43.6	-0.7
TBI	Tubuai	86.08	114	*e*LR	LR	09 18 05.9	
	comp=Z,302nm,26.5s						
F28M	Old Crow	86.30	23	P	P	08 50 46.0	-0.4
F28M				IAmb	IAmb	08 50 48.7	
	comp=Z,11nm,1.5s						
E28M	Babbage River	86.33	22	P	P	08 50 46.6	0.0
FURI	Furi	87.63	279	LR	LR	09 27 32.5	
	comp=Z,20nm,21.1s,baz=152,slow=34						
SPITS	Spitsbergen Ar	89.02	349	P	P	08 50 59.4	+0.1
	comp=Z,1.2nm,0.5s,baz=85,slow=9.3,SNR=6.1						
	comp=Z,1.2nm,0.5s						
ARCES	ARCESS Array B	89.11	340	P	P	08 51 00.0	+0.2
	comp=Z,4.6nm,0.9s,baz=79,slow=6.3,SNR=8.5						
	comp=Z,4.6nm,0.9s						
BRTR	Keskin Array B	89.30	310	P	P	08 51 01.1	-0.4
	comp=Z,1.3nm,0.8s,baz=99,slow=3.9,SNR=4.5						
	comp=Z,1.3nm,0.8s						
FINES	FINESS Array B	90.63	332	P	P	08 51 06.1	-0.9
	comp=Z,1.9nm,0.6s,baz=69,slow=4.0,SNR=16						
	comp=Z,1.9nm,0.6s						
MLR	Muntele Rosu	94.02	316	LR	LR	09 38 43.2	
	comp=Z,107nm,18.2s,baz=74,slow=39						
HFS	Hagfors	96.80	332	P	P	08 51 35.1	-0.3
	comp=Z,1.6nm,0.7s,baz=144,slow=2.8,SNR=4.7						
	comp=Z,1.6nm,0.7s						
NOA	NORSAR Array B	97.55	334	P	P	08 51 36.6	-2.2
	comp=Z,1.1nm,0.9s,baz=67,slow=4.5,SNR=2.3						
	comp=Z,1.1nm,0.9s						
YKA	Yellowknife Ar	97.92	24	P	P	08 51 40.0	-0.4
	comp=Z,0.2nm,0.8s,baz=293,slow=5.3,SNR=2.9						
	comp=Z,0.2nm,0.8s						
TORD	Torodi Ar. Bea	122.76	289	PKP	PKiKP	08 57 01.9	+0.3
	comp=Z,2.1nm,0.8s,baz=60,slow=2.9,SNR=10						

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*TAP **28** 08:40:03.2, 24°.11N×122°.65E, h45^{km}, ML2.9, C*
*JMA **28** 08:40:03.1±0.2, 24°N±2°×122°.6E±0°.6, h34^{km}±4^{km},*
MV2.0/11, NW OFF ISHIGAKIJIMA IS
ISC 28 08:40:03.9±1.9**, 24°.06N**±0°.03×**122°.65E**±0°.02**, h38**^{km}±2^{km}**,**
n69, σ**1^{s}.19**/114**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	EOS4	0.31	282	*e*P	Pn	08 40 11.9	+0.2
EOS4				*e*S	Sn	08 40 18.7	+0.6
EOS3	EOS3	0.38	307	*e*P	Pn	08 40 12.9	+0.3
EOS3				*e*S	Sn	08 40 19.8	+0.6
JYNG	Yonagunijimaku	0.47	35	P	Pn	08 40 13.4	-0.8
JYNG				S	Sn	08 40 20.9	-0.5
YOJ	Yonaguni jima	0.52	39	*i* P	Pn	08 40 14.2	-0.6
YOJ				S	Sn	08 40 22.1	-0.4
YOJ	Yonaguni jima	0.52	39	P	Pn	08 40 14.3	-0.6
YOJ				*e*S	Sn	08 40 21.6	-0.9
EOS2	EOS2	0.52	313	*e*P	Pn	08 40 15.1	+0.3
EOS2				*e*S	Sn	08 40 24.1	+1.6
EAHA	Aohua	0.87	288	*e*P	Pn	08 40 20.5	+0.8
EWUT	Wuta	0.88	296	*e*S	Sn	08 40 31.5	+0.1
ENA	Nanau	0.91	294	*e*P	Pn	08 40 20.6	+0.4
ENA				*e*S	Sn	08 40 31.7	-0.3
TWC	Suao	0.91	307	*i* P	Pn	08 40 20.1	-0.1
TWC				S	Sn	08 40 31.6	-0.5
ETL	Fush Village	0.94	276	P	Pn	08 40 20.0	-0.7
ETL				S	Sn	08 40 32.0	-1.0
TWD	Chiawan	0.96	271	*e*P	Pn	08 40 19.8	-1.1
TWD				*e*S	Sn	08 40 31.6	-1.8
NACB	Ninganchiao	0.97	277	*i* P	Pn	08 40 20.3	-0.7
NACB				S	Sn	08 40 32.8	-0.8
IRIF	Iriomote-Funau	1.02	74	P	Pn	08 40 21.6	-0.2
IRIF				S	Sn	08 40 35.9	+1.1
SHUL	Shoufeng	1.03	255	*e*S	Sn	08 40 35.0	0.0
HATJ	Hateruma jima	1.06	90	*e*S	Sn	08 40 38.8	+3.2
ETM	Tongmen	1.06	265	P	Pn	08 40 21.5	-0.7
ETM				S	Sn	08 40 34.5	-1.3
ETLH	Xiulin Townshi	1.08	278	*i* P	Pn	08 40 22.0	-0.5
ETLH				S	Sn	08 40 35.6	-0.7
TWE	Neicheng	1.11	307	P	Pn	08 40 23.2	+0.2
LATG	Datong	1.13	295	P	Pn	08 40 23.3	0.0
LATG				*e*S	Sn	08 40 38.6	+0.9
LXIB	Xiulin Townshi	1.13	268	*i* P	Pn	08 40 22.7	-0.6
LXIB				S	Sn	08 40 36.9	-0.8
ESL	Shilin	1.14	258	*e*P	Pn	08 40 22.1	-1.2
ESL				*e*S	Sn	08 40 37.0	-0.8
ENTT	Nioudou	1.15	301	P	Pn	08 40 23.2	-0.2
TIPB	Shuangxi	1.18	321	*e*P	Pn	08 40 23.8	-0.1
TIPB				*e*S	Sn	08 40 37.4	-1.4
EGFH	Guangfu	1.18	251	P	Pn	08 40 24.9	+0.9
EGFH				S	Sn	08 40 38.8	0.0
FUSB	Fushanzhiwuyua	1.19	306	P	Pn	08 40 24.6	+0.5
FUSB				S	Sn	08 40 40.2	+1.0
WARBT	Fenglin Townsh	1.21	254	*e*P	Pn	08 40 23.4	-0.9
WARBT				S	Sn	08 40 38.6	-0.8
NNSB	Datong	1.21	288	*e*P	Pn	08 40 24.4	0.0
SXI1	Grass Mountain	1.25	326	P	Pn	08 40 24.8	-0.1
SXI1				S	Sn	08 40 40.3	-0.2
JKRS	Kuro-shima	1.25	82	P	Pn	08 40 25.9	+1.0
JKRS				*e*S	Sn	08 40 42.1	+1.6
HGSD	Ruisui	1.26	244	P	Pn	08 40 24.3	-0.7
HGSD				*e*S	Sn	08 40 39.6	-1.0
NWLT	Wulai	1.27	305	*e*P	Pn	08 40 25.6	+0.5
NWLT				*e*S	Sn	08 40 41.5	+0.6
WHF	Hehuan Shan	1.27	274	*e*P	Pn	08 40 24.7	-0.8
WHF				*e*S	Sn	08 40 40.8	-0.7
WFSB	Wu-fen Shan	1.28	322	*e*P	Pn	08 40 25.0	-0.3
WFSB				*e*S	Sn	08 40 42.0	+0.8
FUSS	Fushou	1.30	279	*e*P	Pn	08 40 25.9	+0.2
YHNB	Yeheng	1.31	298	P	Pn	08 40 26.0	+0.3
EHYH	Wanrong	1.32	245	*e*S	Sn	08 40 41.8	-0.4
NSK	Sanguang	1.33	298	P	Pn	08 40 26.1	+0.1
EHY	Hungye	1.33	246	*e*P	Pn	08 40 25.5	-0.6
TWA	Mucha	1.34	314	*e*P	Pn	08 40 25.2	-0.8
OWD	Renai	1.35	266	*i* P	Pn	08 40 26.1	-0.3
OWD				*e*S	Sn	08 40 42.2	-1.0
TDCB	Techi	1.38	278	P	Pn	08 40 27.1	+0.3
JIJ	Ishigaki jima	1.40	77	P	Pn	08 40 26.8	-0.1
JIJ				S	Sn	08 40 43.8	-0.2
WUSB	Renai	1.40	268	P	Pn	08 40 27.1	0.0
WUSB				*e*S	Sn	08 40 43.6	-0.8
YULB	Yu-li	1.41	242	P	Pn	08 40 26.7	-0.4
YULB				*e*S	Sn	08 40 43.9	-0.4
VWDT	VWDT	1.41	258	*e*P	Pn	08 40 27.2	+0.2
VWDT				S	Sn	08 40 43.7	-0.8
TWF1	Yuli	1.43	241	*e*P	Pn	08 40 27.3	0.0
TWF1				S	Sn	08 40 44.8	0.0
NFF	Wufeng Townshi	1.51	293	P	Pn	08 40 29.7	+1.2
NFF				*e*S	Sn	08 40 47.8	+0.8
FULB	Fuli	1.51	236	*e*S	Sn	08 40 46.8	-0.1
CHKT	Chengkung	1.52	231	*e*P	Pn	08 40 27.7	-0.8
CHKT				*e*S	Sn	08 40 45.5	-1.5
NTST	Danshui	1.55	315	*e*S	Sn	08 40 46.5	-1.4
WHP	Taichung City	1.57	278	*e*P	Pn	08 40 31.7	+2.4
WHP				*e*S	Sn	08 40 49.9	+1.4
WCS	Beigang Elemen	1.59	270	*e*P	Pn	08 40 29.9	+0.4
LIOB	Emei	1.60	292	*e*P	Pn	08 40 31.2	+1.5
JISG	Ishigakijimahi	1.60	71	P	Pn	08 40 29.5	-0.2
JISG				S	Sn	08 40 48.8	-0.4
SMLT	Sun Moon Lake	1.61	264	*e*P	Pn	08 40 30.4	+0.5
NCU	National Centr	1.61	305	*e*S	Sn	08 40 50.5	+1.1
TYC	Yuchr	1.65	265	*e*P	Pn	08 40 32.4	+2.1
TYC				*e*S	Sn	08 40 50.1	-0.1
WHYT	Xinyi Township	1.68	258	*e*P	Pn	08 40 31.9	+1.1
ELDTW	Lidau	1.73	240	*e*S	Sn	08 40 50.1	-2.3
TWGBT	Beinan	1.90	230	*e*P	Pn	08 40 32.6	-1.1
TWGBT				*e*S	Sn	08 40 55.7	-0.7
STYH	Taoyuan	1.93	243	*e*P	Pn	08 40 35.6	+1.3
STYH				*e*S	Sn	08 40 58.4	+1.1
WDLH	Douliu	1.97	260	*e*P	Pn	08 40 36.6	+1.9
WDLH				*e*S	Sn	08 41 02.5	+4.4
TPUB	Ta-pu	2.00	248	*e*P	Pn	08 40 36.7	+1.5
TPUB				*e*S	Sn	08 41 01.6	+2.6
CHN1	Nanshi	2.13	246	*e*P	Pn	08 40 38.9	+1.9
CHN1				*e*S	Sn	08 41 05.4	+3.2
TWK	Hsinying	2.13	249	*e*P	Pn	08 40 39.0	+1.9
TWK				*e*S	Sn	08 41 04.9	+2.6
LYUB	Lan-yu	2.27	206	*e*P	Pn	08 40 36.9	-2.0
MASBT	Mashibuluo	2.35	233	*e*S	Sn	08 41 11.2	+3.6
PHUB	P'eng-hu	2.87	260	*e*P	Pn	08 40 47.4	+0.2
PHUB				*e*S	Sn	08 41 20.2	-0.2

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*IDC **28** 08:48:59.4±0.8, 0°.64N×92°.64E, h0^{km}, mb4.2/13,*
mbtmp4.2/16, ML4.3/3, MS3.7/22, Error ellipse:
s-maj=23.5km s-min=16.8km az=46.0
*DJA **28** 08:49:00.4±0.4, 1°N±4°×9°3E±°, h10^{km}, M5.3/24, mb5.4/24,*
mB5.7/14, MLv5.5/13, Mw(mB)5.2/14, MwMwp4.5/1,
Mwp4.9/1
*NEIC **28** 08:49:01.5±1.2, 0°.62N±0°.09×92°.71E±0°.06, h10^{km}±1^{km},*
mb4.7/35, Error ellipse: s-maj=16.8km s-min=8.0km
az=205.0
*BKK **28** 08:49:15.6±1.0, 2°N±10°×9°3E±°, h10^{km}, M4.8/14,*
mB4.9/10, mb4.7/12, Mjma4.2/14, ML5.7/1, MLv5.6/1,
Mw(mB)4.2/10
ISC 28 08:49:00.8±0.5**, 0°.53N**±0°.06×**92°.73E**±0°.06**, h10**^{km}**, n147,**
σ**1^{s}.33**/128**, mb4.6**/49**, MS3.8**/23**, 2D, Off west coast of**
northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	4.05	62	P	Pn	08 50 03.2	+0.4
GSI	Gunungsitoli	4.90	81		Pn	08 50 15.6	+1.0
GSI	Gunungsitoli	4.90	81	P	Pn	08 50 15.8	+1.2
	3.1nm9μm580nm,1.1s						
GSI				S	Sn	08 51 07.4	-4.1
	3.1nm9μm580nm,1.1s						
TPTI		5.21	59	P	Pn	08 50 18.7	-0.1
	7μm514nm,0.8s						
MLSI	Meulaboh, Aceh	5.22	45	P	Pn	08 50 18.2	-0.8
	3.8nm528nm,0.9s						
PBSI	Pulau Batu	5.58	96	P	Pn	08 50 25.9	+2.0
	4.0nm8μm691nm,0.8s						
KCSI	Kotacane, Aceh	5.85	59	P	Pn	08 50 28.6	+1.0
	1.6nm6μm443nm,0.7s						
LHMI	Lhok Sumawe	6.29	42	Pn	Pn	08 50 34.1	+0.5
LHMI	Lhok Sumawe	6.29	42	P	Pn	08 50 35.2	+1.6
	2.7nm6μm460nm,0.9s						
TSI	Tuntungan	6.53	63	P	Pn	08 50 37.4	+0.4
	1.5nm375nm,0.7s						
CMBY	CAMPBELL BAY	6.55	10	*e*P	Pn	08 50 39.1	+1.8
CMBY				*e*S	Sn	08 51 56.1	+4.0
CMBY				IAML		08 51 58.7	
	comp=N,809nm,0.5s						
CMBY				IAML		08 51 59.6	
	comp=E,830nm,0.6s						
PSI	Prapat	6.59	70	Pn	Pn	08 50 38.1	+0.3
	comp=E,7.6nm,0.3s,baz=268,slow=6.9,SNR=31						
PSI				Sn	Sn	08 51 44.9	-8.3
	comp=E,1.8nm,0.3s,baz=307,slow=19,SNR=1.1						
PSI				LR	LR	08 53 32.9	
	comp=E,918nm,18.2s,baz=316,slow=41						
	comp=E,32nm,0.6s						
PSI	Prapat	6.59	70	P	Pn	08 50 38.5	+0.6
	comp=E,94nm,1.1s						
SISI	Saibi	6.62	106	P	Pn	08 50 40.0	+1.8
	comp=E,1.0nmcomp=E,3μmcomp=E,247nm,0.7s						
MNSI	Mandailing Nat	6.85	88	P	Pn	08 50 42.9	+1.5
	comp=E,501nm,0.4s						
PPI	Padang Panjang	7.73	97	P	Pn	08 50 55.6	+2.2
	comp=E,0.7nmcomp=E,3μmcomp=E,103nm,0.7s						
PDSI	Padang	7.86	100	P	Pn	08 50 56.1	+0.8
	comp=E,1.2nmcomp=E,5μmcomp=E,226nm,0.5s						
PPSI	Pulau Pagai	7.97	114	P	Pn	08 50 57.7	+0.9
	comp=E,4μmcomp=E,245nm,0.5s						
KRJI	Kerinci	9.11	107	P	Pn	08 51 14.4	+1.9
IPM	Ipoh	9.17	65		Pn	08 51 13.0	-0.1
IPM	Ipoh	9.17	65	P	Pn	08 51 13.1	-0.1
	comp=E,98nm,0.8s						
PKDT	Phuket	9.20	37	P	Pn	08 51 12.5	-1.2
	comp=E,1.2nmcomp=E,1.0nmcomp=E,0.5nmcomp=E,157nm,0.9s						
PKDT				S	Sn	08 52 43.9	-13
	comp=E,1.2nmcomp=E,1.0nmcomp=E,0.5nmcomp=E,157nm,0.9s						
KULM	Kulim	9.21	59		Pn	08 51 13.6	-0.3
KULM	Kulim	9.21	59	P	Pn	08 51 13.7	-0.1
	comp=E,825nmcomp=E,95nm,0.8s						
RNTT	Ranong	10.50	33	P	Pn	08 51 29.3	-2.1
	comp=E,0.4nmcomp=E,28nm,1.0s						
RNTT				S	Sn	08 53 14.6	-15
	comp=E,0.4nmcomp=E,28nm,1.0s						
PBA	Port Blair	11.06	0	Pn	Pn	08 51 39.7	+0.6
PBA	Port Blair	11.06	0	*e*P	Pn	08 51 37.7	-1.3
PBA				*e*S	Sn	08 53 32.4	-11
PBA				IAML		08 53 41.0	
	comp=N,152nm,0.6s						
PBA				IAML		08 53 50.5	
	comp=E,150nm,0.7s						
MYKOM	Kota Tinggi	11.19	83		Pn	08 51 40.8	0.0
MYKOM	Kota Tinggi	11.19	83	P	Pn	08 51 41.0	+0.1
	comp=E,48nm,1.2s						
MNAI	Manna	11.31	116	Pn	Pn	08 51 44.0	+1.4
MDSI	Maura Dua	12.47	114	P	Pn	08 52 00.4	+1.9
DGPR	DIGLIPUR	12.57	1	*e*P	Pn	08 51 58.2	-1.6
DGPR				*e*S	Sn	08 54 08.1	-12
DGPR				IAML		08 54 16.3	
	comp=N,98nm,0.4s						
DGPR				IAML		08 54 18.1	
	comp=E,98nm,0.2s						
LWLI	Liwa	12.58	116	P	Pn	08 52 00.8	+0.7
	comp=E,187nm,0.7s						
KLSI		13.06	114	P	Pn	08 52 06.9	+0.4
	comp=E,32nm,0.9s						
KASI	Kota Agung	13.20	117	P	P	08 52 25.5	+7.1
COCO	West Island	13.28	162	P	Pn	08 52 08.0	-1.4
	comp=E,51nm,1.1s						
PALK	Pallekele	13.74	299	Pn	Pn	08 52 14.9	-0.9
	comp=E,1.8nm,0.3s,baz=121,slow=13,SNR=6.6						
PALK				Sn	Sn	08 54 33.1	-16
	comp=E,8.2nm,0.3s,baz=48,slow=15,SNR=9.4						
PALK				LR	LR	08 56 40.1	
	comp=E,154nm,19.7s,baz=120,slow=34						
	comp=E,4.4nm,0.4s						
PALK	Pallekele	13.74	299	Pn	Pn	08 52 14.7	-1.2
PALK	Pallekele	13.74	299	P	Pn	08 52 14.8	-1.1
BBJI	Bungbulang	16.86	118	P	Pn	08 52 56.2	-1.0
	comp=E,47nm,0.9s						
CTJI	Waduk Cacaban	18.04	115	P	P	08 53 14.3	+2.1
UTTA	Uttaradit	18.76	24	P	P	08 53 19.2	-0.9
CM05	Chiang Mai Arr	18.78	19	P	P	08 53 19.7	-0.7
	comp=E,0.1nmcomp=E,188nmcomp=E,20nm,0.8s						
CM13	Chiang Mai Arr	18.79	18	P	P	08 53 19.4	-1.0
	comp=E,0.1nmcomp=E,179nmcomp=E,24nm,0.9s						
CM04	Chiang Mai Arr	18.79	19	P	P	08 53 19.5	-1.0
	comp=E,0.1nmcomp=E,224nmcomp=E,33nm,1.0s						
CM15	Chiang Mai Arr	18.82	19	P	P	08 53 20.3	-0.5
	comp=E,0.1nmcomp=E,998nmcomp=E,25nm,0.8s						
CM31	Chiang Mai Arr	18.83	19	P	P	08 53 19.9	-1.1
CM31				IAmb	IAmb	08 53 36.4	
	comp=Z,25nm,0.8s						
CM31	Chiang Mai Arr	18.83	19	P	P	08 53 20.5	-0.4
CMAR	Chiang Mai Arr	18.83	19	P	P	08 53 20.3	-0.6
	comp=Z,0.2nm,0.3s,baz=213,slow=12,SNR=21						
	comp=Z,5.7nm,1.0s						
CMAR	Chiang Mai Arr	18.83	19		P	08 53 19.8	-1.2
CM09	Chiang Mai Arr	18.84	19	P	P	08 53 19.9	-1.1
CHTO	Chiang Mai	19.17	18		P	08 53 24.0	-0.7
CHTO	Chiang Mai	19.17	18	P	P	08 53 18.9	-5.7
SBUM	Sibu	19.57	84		P	08 53 29.1	0.0
SBUM	Sibu	19.57	84	P	P	08 53 22.8	-6.3
H08S2	Diego Garcia H	21.75	248	T	T	09 16 21.9	
	baz=66						
H08S3	Diego Garcia H	21.76	248	T	T	09 16 08.5	
	baz=66						
H08S1	Diego Carcia H	21.77	248	T	T	09 16 09.5	
	baz=66						
SAIH	SAIHA	21.83	1	*e*P	P	08 53 54.0	+0.4
BRDH	Bariadhala	22.04	357	LR	LR	09 04 44.0	
	comp=Z,304nm,18.3s,baz=214,slow=43						
IMP	Imphal	24.19	3	*e*P	P	08 54 17.9	+0.2
QIZ	Qiongzhong	24.89	41	P	P	08 54 24.8	+0.7
QIZ				S	S	08 58 49.5	+2.1
QIZ				LR	LR		
	comp=N,500nm,17.2s						
QIZ				LR	LR		
	comp=E,590nm,17.7s						
QIZ				LR	LR		
	comp=Z,380nm,14.7s						
SHL	Shillong	24.91	358		P	08 54 23.1	-1.2
KMI	Kunming	26.30	21	P	P	08 54 41.0	+4.0
KMI				LR	LR		
	comp=N,150nm,11.7s						
KMI				LR	LR		
	comp=E,260nm,9.8s						
PZH	PanZhiHua	27.24	18	P	P	08 54 47.0	+1.6
LSA	Lhasa	29.05	357	P	P	08 55 01.5	-0.4
LSA				IAmb	IAmb	08 55 18.2	
	comp=Z,9.4nm,0.6s						
BATI	Baumata	32.57	110	LR	LR	09 09 10.3	
	comp=Z,114nm,21.9s,baz=60,slow=37						
DAV	Davao City (W)	33.39	78	LR	LR	09 09 53.8	
	comp=Z,74nm,20.8s,baz=200,slow=38						
XAN	Xi'an	36.63	23	P	P	08 56 06.8	-0.7
XAN				pP	pwP	08 56 18.8	+3.7
XAN				pmax	pmax		
	comp=Z,17nm,0.9s						
FITZ	Fitzroy Crossi	37.28	121	P	P	08 56 14.5	+1.2
NIL	Nilore	37.68	333	P	P	08 56 15.9	-0.6
NIL				IAmb	IAmb	08 56 16.8	
	comp=Z,25nm,1.3s						
LYN	LuoYang	38.55	27	*e*P	P	08 56 29.5	+5.7
LYN				sP	pwP	08 56 37.0	+5.6
LYN				pmax	pmax		
	comp=Z,25nm,0.8s						
GTA	Gaotai	39.24	9	*e*P	P	08 56 30.0	+0.4
GTA				sP	pwP	08 56 37.3	+0.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
NJ2	Nanjing	39.89	36	*e*P	P	08 56 36.5	+1.5
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
MANEM	Manem	41.64	335	P	P	08 56 49.4	-0.3
MANEM				IAmb	IAmb	08 56 50.9	
	comp=Z,16nm,1.0s						
KSH	Kashi	41.72	340	P	P	08 56 48.0	-2.1
KSH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HNS	HongShan	41.92	26	⇓P	P	08 56 53.0	+1.3
HNS				pmax	pmax		
	comp=Z,13nm,1.3s						
JOW	Kunigami	43.02	50	LR	LR	09 14 29.4	
	comp=Z,72nm,20.4s,baz=125,slow=36						
TARG	Taragay, Kyrgy	43.17	344		P	08 57 01.6	-0.7
TARG				IAmb	IAmb	08 57 03.3	
	comp=Z,10nm,1.2s						
DRK	Karamyk	43.23	336	P	P	08 57 02.5	-0.1
SHAA	Shahritus	43.28	331	P	P	08 57 01.5	-1.3
SHAA				IAmb	IAmb	08 57 19.3	
	comp=Z,13nm,0.7s						
WMQ	Urumqi	43.34	355	*e*P	P	08 57 05.8	+2.6
WMQ				LR	LR		
	comp=Z,170nm,19.7s						
GAR	Garm	43.45	334	P	P	08 57 03.0	-1.1
GAR				IAmb	IAmb	08 57 03.9	
	comp=Z,14nm,1.0s						
HHC	Hu-ho-hao-te	43.62	21	*e*P	P	08 57 08.5	+3.0
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,5.3s						
CHGR	Chuyangaron	43.68	333	P	P	08 57 04.9	-1.1
CHGR				IAmb	IAmb	08 57 05.5	
	comp=Z,16nm,1.3s						
PRZ	Przheval'sk	43.71	345	P	P	08 57 06.3	0.0
PRZ				IAmb	IAmb	08 57 08.7	
	comp=Z,18nm,1.1s						
HRA	Herat	44.13	323	P	P	08 57 09.8	-0.1
BOOM	Boomskoye usch	44.42	342	P	P	08 57 11.5	-0.5
WB0	Warramunga Arr	45.53	119	P	P	08 57 22.2	+1.1
WB0				IAmb	IAmb	08 57 23.0	
	comp=Z,5.7nm,0.8s						
WRA	Warramunga Arr	45.55	119	P	P	08 57 22.1	+0.9
	comp=Z,5.5nm,0.8s,baz=296,slow=8.6,SNR=17						
	comp=Z,5.5nm,0.8s						
WRAB	Tennant Creek	45.55	119	P	P	08 57 22.8	+1.6
WRAB				IAmb	IAmb	08 57 23.4	
	comp=Z,8.9nm,0.8s						
WR8	Warramunga Arr	45.69	119	P	P	08 57 23.6	+1.3
ASAR	Alice Springs	46.65	124	P	P	08 57 30.9	+1.1
	comp=Z,2.2nm,0.8s,baz=298,slow=8.0,SNR=22						
ASAR				PcP	PcP	08 59 04.5	+0.8
	comp=Z,0.7nm,1.0s,baz=294,slow=3.8,SNR=1.6						
ASAR				LR	LR	09 17 52.4	
	comp=Z,38nm,19.7s,baz=286,slow=37						
	comp=Z,2.2nm,0.8s						
AS31	Alice Springs	46.65	124	P	P	08 57 30.6	+0.8
KK31	Karatay Array	46.83	338		P	08 57 29.9	-1.0
KK31				IAmb	IAmb	08 57 31.2	
	comp=Z,9.2nm,1.1s						
KKAR	Karatay Array	46.83	338		P	08 57 30.1	-0.8
MKAR	Makanchi Array	46.98	350	P	P	08 57 31.2	-0.7
	comp=Z,3.2nm,0.8s,baz=173,slow=9.1,SNR=16						
	comp=Z,3.2nm,0.8s						
MKAR	Makanchi Array	46.98	350	P	P	08 57 30.8	-1.2
MAKZ	Makanchi	47.04	350	P	P	08 57 31.3	-1.2
MAKZ				IAmb	IAmb	08 57 32.4	
	comp=Z,8.1nm,1.4s						
JNU	Nakatsue	48.32	44	LR	LR	09 19 29.7	
	comp=Z,91nm,18.6s,baz=216,slow=38						
SONM	Songino Array	48.59	12	P	P	08 57 44.5	-0.1
	comp=Z,4.5nm,0.8s,baz=208,slow=8.4,SNR=5.4						
	comp=Z,4.5nm,0.8s						
SONM	Songino Array	48.59	12	P	P	08 57 44.9	+0.2
SONM				IAmb	IAmb	08 57 58.4	
	comp=Z,6.3nm,0.9s						
KSRS	Korea Array	49.01	37	P	P	08 57 48.0	+0.1
	comp=Z,0.5nm,0.6s,baz=232,slow=7.3,SNR=1.5						
KSRS				LR	LR	09 20 55.8	
	comp=Z,56nm,19.2s,baz=240,slow=39						
	comp=Z,0.5nm,0.6s						
ZAA0	Zalesovo Array	53.64	354	P	P	08 58 21.8	-0.5
ZAA0				IAmb	IAmb	08 58 22.4	
	comp=Z,7.5nm,1.2s						
ZALV	Zalesovo Beam	53.64	354	P	P	08 58 21.4	-0.9
	comp=Z,3.8nm,0.5s,baz=175,slow=7.4,SNR=16						
	comp=Z,3.8nm,0.5s						
ZALV	Zalesovo Beam	53.64	354	P	P	08 58 21.6	-0.8
INKA	Innaminka	53.94	125	P	P	08 58 25.7	+0.7
INKA				IAmb	IAmb	08 58 39.7	
	comp=Z,3.5nm,0.7s						
HILR	Hailar Array B	54.05	21	P	P	08 58 26.3	+0.8
	comp=Z,0.6nm,0.3s,baz=269,slow=11,SNR=3.6						
	comp=Z,0.6nm,0.3s						
BNX	BinXian	54.38	29	⇓P	P	08 58 33.3	+5.5
BNX				pmax	pmax		
	comp=Z,8.0nm,0.9s						

MJAR	**Matsushiro Arr**	**55.24**	**44**	LR	LR	09 22 30.7	
	comp=Z,79nm,20.9s,baz=240,slow=36						
BVAR	**Borovoye Array**	**55.53**	**344**	P	**P**	**08 58 33.9**	**-2.2**
	comp=Z,1.4nm,0.8s,baz=146,slow=8.0,SNR=6.1						
	comp=Z,1.4nm,0.8s						
BORK	**Borovoye**	**55.57**	**344**	P	**P**	**08 58 34.9**	**-1.5**
AB31	**Akbulak array**	**56.10**	**335**	P	**P**	**08 58 39.4**	**-0.9**
AB31				IAmb	IAmb	08 58 40.2	
	comp=Z,5.3nm,1.0s						
ABKAR	**Akbulak array**	**56.10**	**335**	P	**P**	**08 58 39.2**	**-1.0**
CTA	**Charters Tower**	**56.24**	**115**	LR	LR	09 22 33.5	
	comp=Z,38nm,21.5s,baz=242,slow=36						
CTAO	**Charters Tower**	**56.24**	**115**	P	**P**	**08 58 41.7**	**-0.1**
CTAO				IAmb	IAmb	08 58 56.0	
	comp=Z,11nm,1.0s						
ASAJ	**Asahikawa**	**61.93**	**39**	LR	LR	09 27 59.6	
	comp=Z,35nm,18.2s,baz=128,slow=38						
MBAR	**Mbarara**	**62.00**	**269**	LR	LR	09 21 53.9	
	comp=Z,32nm,20.5s,baz=284,slow=32						
EIL	**Elat**	**62.06**	**304**	LR	LR	09 24 50.5	
	comp=Z,86nm,20.0s,baz=171,slow=35						
ARTI	**Arti**	**62.18**	**339**	LR	LR	09 27 34.4	
	comp=Z,67nm,18.6s,baz=76,slow=37						
LSZ	**Lusaka**	**65.64**	**253**	LR	LR	09 24 15.8	
	comp=Z,66nm,20.4s,baz=122,slow=32						
MATP	**Matopo**	**66.14**	**247**	LR	LR	09 26 18.6	
	comp=Z,43nm,18.1s,baz=81,slow=34						
BRTR	**Keskin Array B**	**66.30**	**314**	P	**P**	**08 59 49.4**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=129,slow=7.5,SNR=9.8						
	comp=Z,2.0nm,0.7s						
YAK	**Yakutsk**	**67.37**	**18**	LR	LR	09 30 24.6	
	comp=Z,48nm,20.9s,baz=125,slow=37						
LBTB	**Lobatse**	**69.59**	**243**	LR	LR	09 26 59.9	
	comp=Z,85nm,19.8s,baz=36,slow=33						
LBTB	**Lobatse**	**69.59**	**243**	P	**P**	**09 00 10.5**	**-0.2**
BOSA	**Boshof**	**70.58**	**239**	P	**P**	**09 00 17.5**	**+0.6**
	comp=Z,4.0nm,0.9s,baz=76,slow=6.2,SNR=4.2						
BOSA				LR	LR	09 28 32.3	
	comp=Z,47nm,18.3s,baz=29,slow=34						
	comp=Z,4.0nm,0.9s						
IDI	**Anoyia**	**71.71**	**307**	P	**P**	**09 00 23.6**	**+0.1**
BURAR	**Bucovina Array**	**74.61**	**320**	P	**P**	**09 00 41.1**	**+0.8**
TIXI	**Tiksi**	**74.66**	**11**	P	**P**	**09 00 39.5**	**-0.5**
FINES	**FINESS Array B**	**78.56**	**333**	P	**P**	**09 01 01.4**	**-0.8**
	comp=Z,4.0nm,1.0s,baz=104,slow=5.9,SNR=3.9						
	comp=Z,4.0nm,1.0s						
ARSA	**Arzberg**	**80.94**	**318**	*i* P	**P**	**09 01 15.9**	**+0.3**
	comp=Z,3.1nm,0.9s						
SOKA	**Soboth**	**81.18**	**317**	*e*P	**P**	**09 01 16.6**	**-0.3**
	comp=Z,4.3nm,1.1s						
OBKA	**Obir**	**81.49**	**317**	*e*P	**P**	**09 01 19.4**	**+0.8**
	comp=Z,10nm,1.3s						
ARCES	**ARCESS Array B**	**81.68**	**341**	P	**P**	**09 01 18.3**	**-0.8**
	comp=Z,4.1nm,0.9s,baz=76,slow=4.9,SNR=2.0						
ARCES				LR	LR	09 39 41.5	
	comp=Z,56nm,20.6s,baz=110,slow=37						
	comp=Z,4.1nm,0.9s						
MYKA	**Terra Mystica**	**82.12**	**317**	*e*P	**P**	**09 01 22.8**	**+0.9**
	comp=Z,1.2nm,0.5s						
GERES	**GERESS Array B**	**82.38**	**319**	P	**P**	**09 01 23.0**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=96,slow=8.1,SNR=7.7						
	comp=Z,1.2nm,0.8s						
KBA	**Koelnbreinsper**	**82.38**	**317**	*e*P	**P**	**09 01 23.7**	**+0.3**
	comp=Z,17nm,0.8s						
LESA	**Schwarzleotal**	**82.88**	**318**	*e*P	**P**	**09 01 25.1**	**-0.7**
	comp=Z,4.0nm,1.1s						
WTTA	**Wattenberg**	**83.56**	**317**	*e*P	**P**	**09 01 29.2**	**-0.3**
	comp=Z,8.7nm,1.2s						
WATA	**Walderalm**	**83.61**	**317**	*i* P	**P**	**09 01 29.4**	**-0.4**
	comp=Z,7.9nm,1.5s						
SQTA	**Sankt Quirin**	**83.85**	**317**	*i* P	**P**	**09 01 31.3**	**+0.3**
	comp=Z,7.5nm,1.6s						
HFS	**Hagfors**	**84.08**	**330**	LR	LR	09 41 57.5	
	comp=Z,56nm,18.4s,baz=52,slow=38						
FETA	**Feichten**	**84.16**	**317**	*e*P	**P**	**09 01 33.2**	**+0.6**
	comp=Z,6.9nm,1.6s						
RETA	**Reutte**	**84.18**	**318**	*e*P	**P**	**09 01 32.5**	**0.0**
	comp=Z,1.9nm,0.6s						
DAVA	**Damuels**	**84.76**	**317**	*i* P	**P**	**09 01 36.1**	**+0.5**
	comp=Z,9.3nm,1.3s						
TXAR	**Lajitas Array**	**146.43**	**26**	PKPbc	**PKPdf**	**09 08 42.4**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=165,slow=0.4,SNR=13						

GCG 28 09:05:32.1±0.9**, 15°.16N**×**90°.66W, h0^{km}**±5^{km}**, MD3.6, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APG	**El Apazote**	**0.24**	**130**	*i* P	Pg	09 05 38.5	+1.7
APG				*i* S	Sg	09 05 43.6	+3.6
MTO3	**Montecristo**	**1.47**	**121**	*i* P	Pn	09 05 59.3	-0.7
MTO3				*i* S	Sn	09 06 21.6	+1.6
SARH	**Santa Rosa de**	**1.87**	**102**	*i* P	Pn	09 06 05.5	0.0

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*NOU **28** 09:13:45.3, 39°.86S×174°.12E, h123^{km}, MLv3.6/16, North Island, New Zealand*

*WEL **28** 09:13:46.9±0.8, 40°S±3°×17°4E±°, h115^{km}±6^{km}, M3.2/20, ML3.0/22, MLv3.2/20, Error ellipse: s-maj=4.9km s-min=3.6km az=143.0, confirmed*

ISC 28 09:13:43.6±1.7**, 39°.81S**±0°.04×**174°.09E**±0°.04**, h147^{km}**±10^{km}**, n88, σ1^{s}.21**/117**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LREZ	**Lake Rotokare**	**0.43**	**35**	P	**Pn**	**09 14 05.0**	**+0.6**
LREZ				S	**Sn**	**09 14 19.9**	**-0.2**
NMEZ	**Namu Road**	**0.43**	**338**	P	**Pn**	**09 14 04.8**	**+0.4**
NMEZ				S	**Sn**	**09 14 19.3**	**-0.8**
PREZ	**Palmer Road**	**0.47**	**7**	P	**Pn**	**09 14 05.0**	**+0.4**
PREZ				S	**Sn**	**09 14 19.8**	**-0.7**
KHEZ	**Kahui Hut**	**0.52**	**354**	P	**Pn**	**09 14 05.2**	**+0.3**
KHEZ	**Kahui Hut**	**0.52**	**354**	S	**Sn**	**09 14 20.3**	**-0.7**
KHEZ	**Kahui Hut**	**0.52**	**354**	P	**Pn**	**09 14 05.4**	**+0.5**
KHEZ				S	**Sn**	**09 14 19.5**	**-1.6**
NEZ	**North Egmont**	**0.54**	**1**	P	**Pn**	**09 14 05.6**	**+0.5**
NEZ				S	**Sn**	**09 14 20.7**	**-0.6**
NBEZ	**Newall Road No**	**0.57**	**342**	P	**Pn**	**09 14 05.7**	**+0.6**
NBEZ				S	**Sn**	**09 14 20.9**	**-0.4**
PKE	**Pukeiti**	**0.62**	**353**	P	**Pn**	**09 14 05.9**	**+0.4**
PKE				S	**Sn**	**09 14 21.5**	**-0.4**
DREZ	**Durham Road**	**0.63**	**8**	P	**Pn**	**09 14 05.9**	**+0.5**
DREZ				S	**Sn**	**09 14 21.4**	**-0.6**
WAZ	**Wanganui**	**0.69**	**86**	P	**Pn**	**09 14 06.9**	**+1.1**
WAZ				S	**Sn**	**09 14 23.1**	**+0.4**
MHEZ	**Mangahewa**	**0.76**	**14**	P	**Pn**	**09 14 07.0**	**+0.7**
MHEZ				S	**Sn**	**09 14 22.9**	**-0.5**
VRZ	**Vera Road**	**0.86**	**37**	P	**Pn**	**09 14 07.4**	**+0.4**
VRZ				S	**Sn**	**09 14 23.9**	**-0.9**
DUWZ	**D’Urville Isla**	**1.00**	**187**	P	**Pn**	**09 14 09.2**	**+1.1**
DUWZ				S	**Sn**	**09 14 26.0**	**-0.9**
OHWZ	**Ohakea**	**1.02**	**113**	P	**Pn**	**09 14 09.9**	**+1.6**
PKVZ	**Pokaka**	**1.10**	**62**	P	**Pn**	**09 14 09.9**	**+0.7**
PKVZ				S	**Sn**	**09 14 28.0**	**-0.6**
MTVZ	**Mangateitei**	**1.15**	**69**	P	**Pn**	**09 14 10.4**	**+0.8**
MTVZ				S	**Sn**	**09 14 28.8**	**-0.6**
KIW	**Kapiti Island**	**1.22**	**149**	P	**Pn**	**09 14 11.3**	**+1.2**
KIW				S	**Sn**	**09 14 28.3**	**-2.2**
TRVZ	**Turoa**	**1.24**	**66**	P	**Pn**	**09 14 11.6**	**+1.0**
TRVZ				S	**Sn**	**09 14 30.1**	**-1.0**
FWVZ	**Far West T-bar**	**1.26**	**64**	P	**Pn**	**09 14 11.7**	**+0.9**
FWVZ				S	**Sn**	**09 14 30.3**	**-1.2**
MAVZ	**Matarangi**	**1.26**	**65**	P	**Pn**	**09 14 12.1**	**+1.2**
MAVZ				S	**Sn**	**09 14 30.4**	**-1.3**
WNVZ	**Wahianoa**	**1.26**	**68**	P	**Pn**	**09 14 11.6**	**+0.9**
WNVZ				S	**Sn**	**09 14 30.1**	**-1.3**
WHVZ	**Whangaehu Hut**	**1.27**	**66**	P	**Pn**	**09 14 12.0**	**+1.1**
WHVZ				S	**Sn**	**09 14 30.4**	**-1.3**
COVZ	**Chateau Observ**	**1.28**	**62**	P	**Pn**	**09 14 12.0**	**+1.2**
COVZ				S	**Sn**	**09 14 30.7**	**-0.9**
TWVZ	**Taurewa**	**1.28**	**55**	P	**Pn**	**09 14 11.5**	**+0.6**
TWVZ				S	**Sn**	**09 14 30.7**	**-0.9**
OGWZ	**Otaki Gorge**	**1.30**	**141**	P	**Pn**	**09 14 12.1**	**+1.2**
OGWZ				S	**Sn**	**09 14 30.7**	**-1.1**
TUVZ	**Tukino**	**1.33**	**66**	P	**Pn**	**09 14 12.6**	**+1.2**
TUVZ				S	**Sn**	**09 14 31.8**	**-0.8**
NGZ	**Ngauruhoe**	**1.33**	**62**	P	**Pn**	**09 14 12.5**	**+1.1**
MOVZ	**Moawhango**	**1.35**	**73**	P	**Pn**	**09 14 12.0**	**+0.5**
SNVZ	**South Ngauruho**	**1.35**	**63**	P	**Pn**	**09 14 13.2**	**+1.5**
WTVZ	**West Tongariro**	**1.35**	**60**	P	**Pn**	**09 14 12.5**	**+0.9**
NNVZ	**North Ngauruho**	**1.36**	**61**	P	**Pn**	**09 14 12.5**	**+0.8**
OTVZ	**Oturere**	**1.38**	**63**	P	**Pn**	**09 14 12.9**	**+0.9**
KRVZ	**Karewarewa**	**1.40**	**60**	P	**Pn**	**09 14 13.1**	**+1.0**
TCW	**Tory Channel**	**1.41**	**174**	P	**Pn**	**09 14 13.5**	**+1.5**
POWZ	**Post Office Ro**	**1.41**	**115**	P	**Pn**	**09 14 13.4**	**+1.4**
NTVZ	**North Tongarir**	**1.42**	**60**	P	**Pn**	**09 14 13.6**	**+1.3**
MRZ	**Mangatainoka R**	**1.42**	**127**	P	**Pn**	**09 14 13.2**	**+1.1**
ETVZ	**East Tongariro**	**1.43**	**62**	P	**Pn**	**09 14 13.6**	**+1.3**
HIZ	**Hauiti**	**1.43**	**25**	P	**Pn**	**09 14 12.7**	**+0.5**
HIZ	**Hauiti**	**1.43**	**25**	S	**Sn**	**09 14 33.6**	**-0.5**
HIZ	**Hauiti**	**1.43**	**25**	P	**Pn**	**09 14 12.7**	**+0.5**
TMVZ	**Te Maari**	**1.43**	**61**	P	**Pn**	**09 14 13.9**	**+1.5**
TSZ	**Takapari Road**	**1.46**	**100**	P	**Pn**	**09 14 13.2**	**+0.6**
CAW	**Cannon Point**	**1.49**	**150**	P	**Pn**	**09 14 14.4**	**+1.5**
TKNZ	**Takaka Hill**	**1.49**	**215**	P	**Pn**	**09 14 14.1**	**+1.1**
KATZ	**Kakaramea**	**1.50**	**57**	P	**Pn**	**09 14 15.0**	**+1.8**
NNZ	**Nelson**	**1.50**	**201**	P	**Pn**	**09 14 14.4**	**+1.4**
HOWZ	**Holdsworth Sta**	**1.54**	**135**	P	**Pn**	**09 14 14.5**	**+1.2**
WEL	**Wellington**	**1.56**	**161**	P	**Pn**	**09 14 15.1**	**+1.5**
QRZ	**Quartz Range**	**1.56**	**229**	P	**Pn**	**09 14 14.4**	**+0.8**
QRZ	**Quartz Range**	**1.56**	**229**	S	**Sn**	**09 14 35.8**	**-0.9**
QRZ	**Quartz Range**	**1.56**	**229**	P	**Pn**	**09 14 14.5**	**+0.9**
RITZ	**Rihia Road**	**1.60**	**59**	P	**Pn**	**09 14 16.3**	**+2.2**
RATZ	**Rangitukua**	**1.61**	**55**	P	**Pn**	**09 14 15.9**	**+1.7**
TUWZ	**Tuamarina**	**1.62**	**184**	P	**Pn**	**09 14 15.7**	**+1.5**
PRWZ	**Pori Road**	**1.62**	**118**	P	**Pn**	**09 14 15.8**	**+1.6**
PNHZ	**Pukenui**	**1.63**	**94**	P	**Pn**	**09 14 15.5**	**+1.1**
DVHZ	**Dannevirke**	**1.67**	**108**	P	**Pn**	**09 14 15.6**	**+0.8**
TIWZ	**Tintock**	**1.68**	**126**	P	**Pn**	**09 14 16.2**	**+1.3**
WATZ	**Wairara**	**1.69**	**50**	P	**Pn**	**09 14 16.0**	**+1.0**
BHW	**Baring Head**	**1.70**	**160**	P	**Pn**	**09 14 16.4**	**+1.3**
MTW	**Mount Morrison**	**1.72**	**142**	P	**Pn**	**09 14 16.6**	**+1.2**
KRHZ	**Kereru**	**1.77**	**85**	P	**Pn**	**09 14 18.5**	**+2.6**
WPHZ	**Waipukurau**	**1.83**	**99**	P	**Pn**	**09 14 17.9**	**+1.3**
MSWZ	**Moikau Station**	**1.83**	**152**	P	**Pn**	**09 14 17.9**	**+1.3**
KWHZ	**Kaweka Forest**	**1.84**	**79**	P	**Pn**	**09 14 18.8**	**+2.0**
BFZ	**Birch Farm**	**1.87**	**118**	P	**Pn**	**09 14 17.9**	**+0.9**
BFZ	**Birch Farm**	**1.87**	**118**	P	**Sn**	**09 14 42.2**	**-0.4**
BFZ	**Birch Farm**	**1.87**	**118**	P	**Pn**	**09 14 18.0**	**+1.0**
MRNZ	**Matariki Terra**	**1.88**	**212**	P	**Pn**	**09 14 18.4**	**+1.2**
MRNZ				S	**Sn**	**09 14 42.7**	**-0.3**
KUTZ	**Kaahu Road**	**1.89**	**46**	P	**Pn**	**09 14 18.7**	**+1.4**
TMWZ	**Te Maipa**	**1.89**	**134**	P	**Pn**	**09 14 18.6**	**+1.3**
TMWZ				S	**Sn**	**09 14 40.6**	**-2.5**
BSWZ	**Blackbirch Sta**	**1.91**	**185**	P	**Pn**	**09 14 19.2**	**+1.8**
BSWZ				S	**Sn**	**09 14 41.8**	**-1.7**
CPWZ	**Castlepoint**	**1.95**	**125**	P	**Pn**	**09 14 19.8**	**+1.8**
BKZ	**Black Stump Fm**	**1.97**	**72**	P	**Pn**	**09 14 18.8**	**+0.5**
BKZ	**Black Stump Fm**	**1.97**	**72**	P	**Sn**	**09 14 43.0**	**-1.8**
BKZ	**Black Stump Fm**	**1.97**	**72**	P	**Pn**	**09 14 18.7**	**+0.4**
BKZ				S	**Sn**	**09 14 43.0**	**-1.8**
PRHZ	**Porangahau**	**2.01**	**104**	P	**Pn**	**09 14 19.9**	**+1.2**
MCHZ	**McNeill Hill**	**2.05**	**81**	P	**Pn**	**09 14 20.7**	**+1.6**
PXZ	**Pawanui**	**2.14**	**97**	P	**Pn**	**09 14 21.4**	**+1.1**
PXZ				S	**Sn**	**09 14 46.3**	**-2.1**
KAHZ	**Kahuranaki**	**2.15**	**90**	P	**Pn**	**09 14 21.5**	**+1.2**
KHZ	**Kahutara**	**2.63**	**189**	P	**Pn**	**09 14 27.3**	**+1.1**
KHZ	**Kahutara**	**2.63**	**189**	S	**Sn**	**09 14 57.1**	**-2.0**
URZ	**Urewera**	**2.82**	**58**	P	**Pn**	**09 14 28.3**	**-0.3**
OUZ	**Omahuta**	**4.60**	**355**	P	**Pn**	**09 14 54.3**	**+2.6**
JCZ	**Jackson Bay**	**5.81**	**221**	P	**Pn**	**09 15 08.3**	**+0.5**
ODZ	**Otahua Downs**	**5.82**	**205**	P	**Pn**	**09 15 08.0**	**+0.2**

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*GII **28** 09:19:14.4±0.0, 27°.200N±0°.006×33°.849E±0°.002, h1^{km}, Mws3.0, confirmed*

*HLW **28** 09:19:21.4, 27°.62N×34°.15E, h16^{km}±1^{km}, Ml2.7*

*SGS **28** 09:19:23.1, 27°.67N×34°.40E, h7^{km}, Ml1.6*

ISC 28 09:19:19.4±1.1**, 27°.55N**±0°.05×**34°.26E**±0°.04**, h12^{km}, n28, σ1^{s}.60**/30**, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TR1	**Tor 1**	**0.53**	**329**	P	**Pg**	**09 19 30.2**	**+0.3**
HHRG	**Al Ghardaqah**	**0.70**	**242**	P	**Pn**	**09 19 35.6**	**+0.6**
HHRG				S	**Sn**	**09 19 45.7**	**-0.1**
RSHS		**0.89**	**32**	P	**Pg**	**09 19 36.8**	**+0.3**
HKAT	**Jabal Katrina**	**1.00**	**346**	P	**Pb**	**09 19 38.4**	**-0.3**
HKAT				S	**Sg**	**09 19 50.6**	**-1.2**
KRABS	**KRABS**	**1.04**	**58**	S	**Sb**	**09 19 51.5**	**-1.4**
KRABS	**KRABS**	**1.04**	**58**	P	**Pb**	**09 19 39.3**	**0.0**
AYUS	**`Aynunah**	**1.10**	**54**	S	**Sb**	**09 19 53.2**	**-1.3**
AYUS	**`Aynunah**	**1.10**	**54**	P	**Pb**	**09 19 40.1**	**-0.1**
MWLHS	**Almuwaylih**	**1.13**	**80**	P	**Pb**	**09 19 41.2**	**+0.3**
BDAS	**Al Bad`**	**1.15**	**40**	P	**Pn**	**09 19 41.0**	**-0.4**
HDHB	**Dhahab**	**1.21**	**15**	P	**Pn**	**09 19 42.1**	**0.0**
HRDS	**Abu Rudays**	**1.44**	**324**	P	**Pn**	**09 19 44.8**	**-0.4**
GRB	**Gharib**	**1.49**	**299**	P	**Pn**	**09 19 45.0**	**-1.0**
WTBKS	**WTBKS**	**1.56**	**70**	P	**Pn**	**09 19 48.1**	**+1.1**
HAQS	**Haql**	**1.60**	**21**	P	**Sn**	**09 20 03.4**	**-4.9**
JLOS		**1.61**	**42**	P	**Pn**	**09 19 47.8**	**+0.1**
DESA	**DESA**	**1.69**	**91**	P	**Pb**	**09 19 50.2**	**-0.2**
HBST	**Basata**	**1.71**	**14**	P	**Pn**	**09 19 49.5**	**+0.4**
EIL	**Elat**	**2.20**	**16**	P	**Pb**	**09 19 58.9**	**-0.2**
EIL	**Elat**	**2.20**	**16**	S	**Sg**	**09 20 31.0**	**+0.9**
MBRI	**Mt Berech**	**2.31**	**14**	P	**Pn**	**09 19 59.1**	**+1.8**
MBRI	**Mt Berech**	**2.31**	**14**	S	**Sg**	**09 20 33.9**	**+0.2**
HRFI	**Mount Harif**	**2.57**	**15**	P	**Pn**	**09 20 03.7**	**+2.8**
HRFI	**Mount Harif**	**2.57**	**15**	S	**Sg**	**09 20 41.4**	**-0.6**
KRMI	**Paran Flat**	**2.59**	**9**	P	**Pn**	**09 20 02.2**	**+1.1**
KRMI	**Paran Flat**	**2.59**	**9**	S	**Sb**	**09 20 40.5**	**+2.8**
PRNI	**Paran**	**2.87**	**13**	P	**Pn**	**09 20 07.8**	**+2.8**
PRNI	**Paran**	**2.87**	**13**	S	**Sb**	**09 20 48.3**	**+2.7**

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*IDC **28** 09:47:43.8±0.9, 59°.89S×26°.46W, h0^{km}, mb4.1/6, mbtmp4.1/7, ML4.3/1, MS3.3/5, Error ellipse: s-maj=35.7km s-min=23.4km az=60.0*

*NEIC **28** 09:47:49.2±2.1, 59°.95S±0°.09×26°.4W±0°.2, h35^{km}±2^{km}, mb4.2/22, Error ellipse: s-maj=15.3km s-min=12.9km az=154.0*

ISC 28 09:47:47.6±0.6**, 59°.90S**±0°.10×**26°.3W**±0°.1**, h26^{km}, n43, σ1^{s}.07**/38**, mb4.2**/14**, MS3.2**/3**, 5C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.91**	**311**	Pn	**Pn**	**09 49 41.6**	**+0.9**
VNA1	**Neumayer--Stat**	**13.08**	**153**	⇑P	**Pn**	**09 50 50.9**	**-0.3**
	comp=Z,10nm,0.2s						
VNA3	**Neumayer Olymp**	**13.22**	**156**	⇑P	**Pn**	**09 50 52.4**	**-0.8**
	comp=Z,10nm,0.2s						
VNA2	**Neumayer--Watz**	**13.48**	**153**	⇑P	**Pn**	**09 50 56.6**	**-0.2**
	comp=Z,4.2nm,0.2s,baz=303,slow=16						
SNAA	**Sanae**	**15.06**	**151**	⇑P	**Pn**	**09 51 17.9**	**-0.5**
	comp=Z,114nm,0.4s						
SNAA	**Sanae**	**15.06**	**151**	Pn	**Pn**	**09 51 17.6**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=317,slow=14,SNR=21						
SNAA				Sn	Sn	09 53 48.3	-16
	comp=Z,0.5nm,0.3s,baz=289,slow=23,SNR=4.7						
SNAA				LR	LR	09 56 01.8	
	comp=Z,94nm,18.3s,baz=355,slow=33						
	comp=Z,5.9nm,0.5s						
SNAA	**Sanae**	**15.06**	**151**		**Pn**	**09 51 17.9**	**-0.5**
SNAA				IAmb	IAmb	09 51 22.2	
	comp=Z,6.3nm,0.6s						
TROLL	**Troll, Antarti**	**16.63**	**148**	⇑P	**Pn**	**09 51 38.9**	**+0.3**
	comp=Z,56nm,0.2s						
PMSA	**Palmer Station**	**17.99**	**238**	P	P	09 52 04.1	+8.3
	comp=Z,8.3nm,0.8s,baz=85,slow=11,SNR=5.3						
PMSA				LR	LR	09 57 32.5	
	comp=Z,76nm,21.7s,baz=32,slow=33						
PMSA	**Palmer Station**	**17.99**	**238**	P	**P**	**09 51 56.4**	**+0.6**
PMSA				IAmb	IAmb	09 51 57.4	
	comp=Z,32nm,1.1s						
BELA	**Belgrano 2**	**18.27**	**186**	P	**P**	**09 52 00.4**	**+1.6**
QSPA	**South Pole Qui**	**30.34**	**180**	LR	LR	10 05 46.3	
	comp=Z,59nm,19.6s,baz=186,slow=36						
QSPA	**South Pole Qui**	**30.34**	**180**	P	**P**	**09 53 57.2**	**+0.5**
QSPA				IAmb	IAmb	09 54 06.8	
	comp=Z,3.3nm,0.9s						
TRQA	**Tornquist**	**31.43**	**298**	P	**P**	**09 54 07.1**	**+0.7**
TRQA				IAmb	IAmb	09 54 16.5	
	comp=Z,4.2nm,1.1s						
PLCA	**Paso Flores**	**33.32**	**285**	P	**P**	**09 54 21.0**	**-2.0**
	comp=Z,0.9nm,0.7s,baz=136,slow=7.6,SNR=4.4						
	comp=Z,0.9nm,0.7s						
PLCA	**Paso Flores**	**33.32**	**285**	P	**P**	**09 54 21.0**	**-2.0**
PLCA				IAmb	IAmb	09 54 40.4	
	comp=Z,2.5nm,1.0s						
BO02	**Sierra Bellavi**	**38.15**	**291**	P	**P**	**09 55 05.0**	**+0.5**
BO02				IAmb	IAmb	09 55 18.8	
	comp=Z,4.7nm,0.9s						
LMEL	**Las Melosas**	**38.65**	**292**	P	**P**	**09 55 09.0**	**+0.2**
LMEL				IAmb	IAmb	09 55 13.3	
	comp=Z,5.0nm,0.9s						
MT09	**Talagante**	**39.08**	**292**	P	**P**	**09 55 12.0**	**-0.4**
MT01	**Popeta**	**39.13**	**291**	P	**P**	**09 55 12.0**	**-0.6**
CPUP	**Villa Florida**	**39.78**	**314**	P	**P**	**09 55 19.1**	**+1.1**
	comp=Z,1.0nm,0.5s,baz=158,slow=7.7,SNR=5.5						
CPUP				LR	LR	10 11 42.8	
	comp=Z,26nm,18.8s,baz=203,slow=36						
	comp=Z,1.0nm,0.5s						
CPUP	**Villa Florida**	**39.78**	**314**	P	**P**	**09 55 18.6**	**+0.6**
VA06	**Catapilco**	**40.23**	**292**	P	**P**	**09 55 22.8**	**+1.0**
CO01	**Juntas del Tor**	**41.85**	**296**	P	**P**	**09 55 35.8**	**+0.4**
CO01				IAmb	IAmb	09 55 39.1	
	comp=Z,7.9nm,1.1s						
SBA	**Scott Base**	**42.26**	**184**	P	**P**	**09 55 36.4**	**-1.6**
VNDA	**Vanda**	**42.74**	**183**	P	**P**	**09 55 43.7**	**+1.9**
	comp=Z,1.0nm,0.6s,baz=181,slow=5.8,SNR=4.3						
	comp=Z,1.0nm,0.6s						
VNDA	**Vanda**	**42.74**	**183**	P	**P**	**09 55 42.9**	**+1.1**
AC05	**El Transito**	**42.90**	**296**	P	**P**	**09 55 43.3**	**-0.5**
AC05				IAmb	IAmb	09 55 51.3	
	comp=Z,8.1nm,0.8s						
LCO	**Las Campanas**	**42.95**	**296**	P	**P**	**09 55 42.8**	**-1.5**
LCO				IAmb	IAmb	09 55 53.9	
	comp=Z,4.4nm,0.9s						
AC01	**Pan de Azucar**	**45.36**	**298**	P	**P**	**09 56 01.2**	**-2.2**
H04S2	**CROZET ISLANDS**	**45.65**	**110**	T	T	10 45 34.3	
	baz=224,slow=74,SNR=5.7						
H04S3	**CROZET ISLANDS**	**45.66**	**110**	T	T	10 45 33.7	
	baz=224,slow=74,SNR=5.7						
H04S1	**CROZET ISLANDS**	**45.66**	**110**	T	T	10 45 34.3	
	baz=224,slow=74,SNR=5.3						
PB01	**IPOC Station P**	**49.35**	**303**	P	**P**	**09 56 34.5**	**-0.1**
LBTB	**Lobatse**	**49.79**	**69**	P	**P**	**09 56 38.3**	**+0.3**
LBTB				IAmb	IAmb	09 57 03.3	
	comp=Z,3.1nm,1.1s						
LPAZ	**La Paz**	**53.04**	**307**	P	**P**	**09 57 02.5**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=172,slow=7.9,SNR=4.8						
	comp=Z,0.8nm,0.3s						
LPAZ	**La Paz**	**53.04**	**307**	P	**P**	**09 57 02.1**	**-0.8**
OTAV	**Otavalo**	**72.21**	**304**	P	**P**	**09 59 10.3**	**-0.4**
OTAV				IAmb	IAmb	09 59 28.5	
	comp=Z,2.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**76.21**	**28**	P	**P**	**09 59 34.1**	**+0.9**
	comp=Z,2.4nm,0.5s,baz=197,slow=5.9,SNR=18						
	comp=Z,2.4nm,0.5s						
ASAR	**Alice Springs**	**95.16**	**162**	P	**P**	**10 01 08.2**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=182,slow=4.3,SNR=12						
ASAR				LR	LR	10 41 20.6	
	comp=Z,35nm,20.4s,baz=154,slow=34						
	comp=Z,0.6nm,0.7s						
ASAR	**Alice Springs**	**95.16**	**162**	P	**P**	**10 01 07.0**	**-1.4**
YKA	**Yellowknife Ar**	**139.30**	**315**	PKP	**PKPdf**	**10 07 09.2**	**-1.4**
	comp=Z,0.3nm,0.8s,baz=128,slow=1.9,SNR=4.1						
ILAR	**Eielson Array**	**152.92**	**306**	PKPbc	**PKPbc**	**10 07 39.6**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=295,slow=0.9,SNR=4.3						

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*IDC **28** 09:54:31.8±3.2, 43°.01N×84°.79E, h0^{km}, mb3.6/2, mbtmp3.5/5, ML2.9/3, Error ellipse: s-maj=63.9km s-min=24.2km az=89.0*

*SOME **28** 09:54:34.0, 43°.57N×83°.97E, h10^{km}*

*NNC **28** 09:54:40.2±1.9, 43°.41N×83°.64E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=17.0km s-min=8.9km az=144.0*

ISC 28 09:54:43.6±1.8**, 43°.65N**±0°.07×**83°.42E**±0°.09**, h10^{km}, n38, σ2^{s}.02**/52**, 4C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**2.88**	**265**	Pn	**Pn**	**09 55 32.1**	**+2.4**
	9.0nm,0.5s						
PDGK				Pg	**Pg**	**09 55 38.0**	**-0.8**
	18nm,0.5s						
PDGK				Lg	Lg	09 56 19.7	
	75nm,0.3s						
SHLS	**Shalkode**	**2.92**	**262**	Pg	**Pn**	**09 55 29.2**	**-1.2**
	47nm,0.5s						
SHLS				Lg	Lg	09 56 09.5	
	456nm,0.3s						
SHLS	**Shalkode**	**2.92**	**262**	*e*P	**Pn**	**09 55 29.1**	**-1.2**
	47nm,0.5s						
SHLS				*e*S	**Sb**	**09 56 09.5**	**-2.3**
	456nm,0.3s						
KNOS	**Konyrlen**	**3.14**	**285**	Pg	**Pb**	**09 55 39.2**	**-0.5**
	10nm,0.2s						
KNOS				Lg	Lg	09 56 26.2	
	47nm,0.5s						
UZB	**Uzynbulak**	**3.24**	**263**	Pg	**Pb**	**09 55 41.1**	**-0.3**
	16nm,0.3s						
UZB				Lg	Lg	09 56 29.3	
	91nm,0.3s						
UZB	**Uzynbulak**	**3.24**	**263**	*e*P	**Pb**	**09 55 41.1**	**-0.3**
	16nm,0.3s						
UZB				*e*S	**Sg**	**09 56 29.3**	**+1.5**
	91nm,0.3s						
MK31	**Makanchi Array**	**3.24**	**346**	⇑Pn	**Pn**	**09 55 37.9**	**+3.3**
	1.3nm,0.3s,baz=157,slow=14,SNR=190						
MK31				⇓Pg	**Pg**	**09 55 46.7**	**+0.9**
	2.8nm,0.2s,baz=154,slow=17,SNR=25						
MK31				⇓Sn	**Sb**	**09 56 19.0**	**-1.9**
	4.9nm,0.3s,baz=157,slow=16,SNR=4.2						
MK31				⇑Lg	Lg	09 56 31.8	
	46nm,0.5s,baz=149,slow=30,SNR=15						
MKAR	**Makanchi Array**	**3.24**	**346**	Pn	**Pn**	**09 55 38.1**	**+3.5**
	1.7nm,0.3s,baz=158,slow=14,SNR=66						
MKAR				Pg	**Pg**	**09 55 47.0**	**+1.2**
	5.8nm,0.3s,baz=152,slow=17,SNR=29						
MKAR				Sn	**Sg**	**09 56 28.8**	**+1.0**
	11nm,0.3s,baz=153,slow=19,SNR=6.6						
	2.2nm,0.3s						
KPKS	**Kokpek**	**3.45**	**269**	Pg	**Pb**	**09 55 45.5**	**+0.7**
	0.3nm,0.6s						
KPKS				Lg	Lg	09 56 37.0	
	132nm,0.5s						
KPKS	**Kokpek**	**3.45**	**269**	*e*P	**Pb**	**09 55 45.5**	**+0.7**
	0.3nm,0.6s						
KPKS				*e*S	**Sg**	**09 56 37.0**	**+2.7**
	132nm,0.5s						
BLB	**Baldybastay**	**3.60**	**279**	Pg	**Pb**	**09 55 47.5**	**+0.1**
	7.9nm,0.1s						
BLB				Lg	Lg	09 56 40.7	
	88nm,0.5s						
SATY	**Saty**	**3.70**	**263**	Pg	**Pb**	**09 55 49.5**	**+0.3**
	22nm,0.3s						
SATY				Lg	Lg	09 56 44.2	
	127nm,0.5s						
KURS	**Kuram**	**3.82**	**269**	Pg	**Pb**	**09 55 52.7**	**+1.6**
	8.1nm,0.7s						
KURS				Lg	Lg	09 56 49.2	
	77nm,0.9s						
TDK	**Taldyqorghan**	**3.84**	**292**	Pg	**Pb**	**09 55 51.2**	**-0.3**
	47nm,1.0s						
TDK				Lg	Lg	09 56 47.0	
	116nm,1.3s						
TDK	**Taldyqorghan**	**3.84**	**292**	*e*P	**Pb**	**09 55 51.2**	**-0.3**
	47nm,1.0s						
TDK				*e*S	**Sg**	**09 56 47.0**	**0.0**
	116nm,1.3s						
KOTS	**Kotyrbulak**	**4.61**	**267**	Pg	**Pb**	**09 56 07.4**	**+2.7**
	15nm,0.5s						
KOTS				Lg	Lg	09 57 14.9	
	62nm,0.8s						
KOTS	**Kotyrbulak**	**4.61**	**267**	*e*P	**Pb**	**09 56 07.4**	**+2.7**
	15nm,0.5s						
KOTS				*e*S	**Sg**	**09 57 14.9**	**+3.3**
	62nm,0.8s						
CHKK	**Chushkaly**	**4.66**	**275**	Pg	**Pb**	**09 56 06.5**	**+1.0**
	3.5nm,0.4s						
CHKK				Lg	Lg	09 57 13.6	
	37nm,0.5s						
CHKK	**Chushkaly**	**4.66**	**275**	*e*P	**Pb**	**09 56 06.5**	**+1.0**
	3.5nm,0.4s						
CHKK				*e*S	**Sg**	**09 57 13.6**	**+0.3**
	37nm,0.5s						
MDOK	**Medeo**	**4.67**	**266**	Pg	**Pb**	**09 56 06.9**	**+1.3**
	3.8nm,0.5s						
MDOK				Lg	Lg	09 57 14.1	
	18nm,0.6s						
TNSS	**Tian-Shan**	**4.76**	**265**	Pg	**Pb**	**09 56 08.3**	**+0.9**
	1.3nm,0.4s						
TNSS				Lg	Lg	09 57 16.3	
	9.6nm,1.1s						
TNSS	**Tian-Shan**	**4.76**	**265**	*e*P	**Pb**	**09 56 08.3**	**+0.9**
	1.3nm,0.4s						
TNSS				*e*S	**Sg**	**09 57 16.4**	**-0.1**
	9.6nm,1.1s						
KTBS	**Karatobe**	**4.89**	**273**	Pg	**Pb**	**09 56 12.8**	**+3.4**

	3.6nm,0.7s						
KTBS				Lg	Lg	09 57 24.0	
	16nm,0.6s						
MTBS	Maitube	5.12	267	Pg	Pb	09 56 15.8	+2.5
	3.9nm,0.6s						
MTBS				Lg	Lg	09 57 29.5	
	40nm,0.8s						
MTBS	Maitube	5.12	267	*e*P	Pb	09 56 15.8	+2.5
	3.9nm,0.6s						
MTBS				*e*S	Sg	09 57 29.6	+1.6
	40nm,0.8s						
KUU	Kurty	5.13	275	Pg	Pb	09 56 15.8	+2.3
	6.2nm,0.2s						
KUU				Lg	Lg	09 57 29.3	
	24nm,0.5s						
KUU	Kurty	5.13	275	*e*P	Pb	09 56 15.8	+2.3
	6.2nm,0.2s						
KUU				*e*S	Sg	09 57 29.3	+1.0
	24nm,0.5s						
KST	Kastek	5.47	266	Pg	Pb	09 56 22.1	+2.8
	4.6nm,0.8s						
KST				Lg	Lg	09 57 40.8	
	29nm,0.9s						
KST	Kastek	5.47	266	*e*P	Pb	09 56 22.1	+2.8
	4.6nm,0.8s						
KST				*e*S	Sg	09 57 40.8	+1.6
	29nm,0.9s						
DGS	Degeres	5.58	268	Pg	Pb	09 56 23.6	+2.4
	4.2nm,0.6s						
DGS				Lg	Lg	09 57 43.0	
	35nm,0.9s						
KRBS	Karabastau	5.62	273	Pg	Pb	09 56 25.4	+3.6
	3.3nm,0.7s						
KRBS				Lg	Lg	09 57 45.5	
	10nm,1.3s						
AAK	Ala-Archa	6.61	264	⇑Pg	Pg	09 56 47.2	-2.9
	1.6nm,0.6s						
AAK				Lg	Lg	09 58 17.4	
	2.9nm,0.5s						
KK31	Karatay Array	9.42	271	⇓Lg	Lg	09 59 44.9	
	2.1nm,0.5s,baz=76,slow=25,SNR=4.9						
ZALV	Zalesovo Beam	10.35	5	Pn	Pn	09 57 09.6	-2.4
	0.3nm,0.3s,baz=186,slow=13,SNR=5.3						
ZALV				Sn	Sn	09 59 04.8	-3.2
	1.5nm,0.3s,baz=182,slow=26,SNR=13						
ZALV				Lg	Lg	10 00 18.7	
	0.1nm,0.3s,baz=181,slow=26,SNR=2.5						
	0.7nm,0.3s						
BVAR	Borovoye Array	12.75	322	Pn	Pn	09 57 47.4	+2.4
	baz=135,slow=14,SNR=4.8						
	0.5nm,0.4s						
AB31	Akbulak array	17.09	297	⇑P	Pn	09 58 41.2	-1.3
	2.7nm,1.1s,baz=110,slow=13,SNR=5.3						
NOA	NORSAR Array B	44.86	319	P	P	10 02 56.1	-1.7
	0.2nm,0.3s,baz=82,slow=6.6,SNR=4.1						
	0.2nm,0.3s						
TORD	Torodi Ar. Bea	75.09	274	P	P	10 06 22.3	-3.7
	0.2nm,0.4s,baz=42,slow=5.8,SNR=5.0						
	0.2nm,0.4s						

DJA 28 10:03:13.4±0.8, 8°S±4°×10°7E±°, h14km±7km, M3.8/11, mb4.3/3, MLv3.5/11, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBJI	Bungbulang	0.75	31	P	Pb	10 03 28.7	+0.4
BBJI				S	Sg	10 03 38.1	+0.2
CNJI	Cibinong	0.81	351	P	Pn	10 03 30.0	-0.4
CNJI				S	Sb	10 03 40.5	+0.5
SKJI	Sukabumi	1.30	328	P	Pb	10 03 37.7	0.0
KPJI	Karang Pucung	1.83	65	P	Pn	10 03 45.0	+0.6
CTJI	Waduk Cacaban	2.20	60	P	Pn	10 03 48.9	-0.6
UGM	Wanagama	3.24	87	P	Pn	10 04 03.5	-0.4
PCJI	Pacitan	3.88	92	P	Pn	10 04 12.6	-0.1
KLSI		4.23	323	P	Pn	10 04 17.0	-0.4
SNJI	Sawahan-Nganju	4.47	86	P	Pn	10 04 22.8	+1.9
EGSI	Enggano, Bengk	5.66	299	P	Pn	10 04 37.0	-0.1
	23nm,0.5s						
TWSI	Taliwang, Sumb	9.54	94	P	Pn	10 05 30.3	-0.2
	16nm,1.1s						

TEH ***28*** *10:20:26.6, 32°.99N×46°.62E, h9km±40km*
IDC ***28*** *10:20:26.6±0.7, 33°.05N×46°.70E, h0km, mb4.3/25, mbtmp4.3/34, ML3.3/7, MS3.1/8, Error ellipse: s-maj=15.7km s-min=11.0km az=177.0*
MOS ***28*** *10:20:26.9±1.2, 33°.06N×46°.67E, h14km, mb4.7/31, Error ellipse: s-maj=6.9km s-min=4.3km az=103.4*
ISN ***28*** *10:20:27.4±0.5, 32°.94N×46°.59E, h11km±2km, ML4.2*
THR ***28*** *10:20:28.4±0.0, 33°.02N×46°.66E, h10km±521km, ML4.4*
NEIC ***28*** *10:20:28.5±0.8, 33°.01N±0°.06×46°.67E±0°.09, h10km±1km, mb4.6/47, Error ellipse: s-maj=12.7km s-min=9.8km az=267.0*
OMAN ***28*** *10:20:35.5±0.1, 32°.60N×47°.08E, h10km, mb3.9/18, ms2.9/3, Error ellipse: s-maj=1.8km s-min=1.3km az=356.0*
NAO ***28*** *10:20:46.4, 34°.20N×44°.72E, h33km, MB4.4*

ISC 28 10:20:28.4±1.1, 32°.97N±0°.03×46°.65E±0°.03, h15km±7km, n315, σ1s.54/335, mb4.5/73, MS3.2/5, 23C-27D, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBDR	Badra	0.62	283	*e*Pg	Pg	10 20 39.0	-1.5
IBDR				*e*Sg	Sg	10 20 47.0	-1.8
IBDR				AML	AML	10 20 55.6	
	comp=E,12µm,0.6s						
IBDR				AML	AML	10 21 03.3	
	comp=N,12µm,0.5s						
ILBA	Ilam Banvizeh	0.75	331	Pg	Pb	10 20 41.4	-1.9
GLG1	Gilan-e-Gharb	1.30	332	Pg	Pn	10 20 51.9	-0.2
GLG1				Sg	Sn	10 21 10.0	+0.7
RAFI	Al-Rafai	1.32	200	*e*Pn	Pb	10 20 53.0	+0.1
RAFI				*e*Sn	Sg	10 21 12.0	+1.0
KCHF	Cheshme Sefid,	1.34	14	Pg	Pn	10 20 52.4	-0.4
KCHF				Sg	Sg	10 21 13.7	+1.8
IGHG	Ghaleghazi	1.36	357	Pg	Pn	10 20 53.1	0.0
IDOB	Doab	1.52	57	Pg	Pb	10 20 56.4	0.0
IDHR	Dehrash	1.74	353	Pg	Pb	10 21 00.0	-0.2
IBZA	Bozab	1.81	34	Pn	Pb	10 21 01.7	+0.4
BHD	Baghdad	1.93	280	*e*Pn	Pn	10 21 01.0	+0.3
BHD				*e*Sn	Sn	10 21 26.0	+1.3
SNQR	Sonqor, Kerman	2.05	23	Pn	Pn	10 21 04.4	+1.7
GTMR	Gotvand	2.14	103	*e*Pn	Pb	10 21 06.6	-0.2
GTMR				IAML		10 21 52.3	
	comp=Z,1µm,1.0s						
SNGE	Sanandaj	2.20	15	*e*Pn	Pn	10 21 06.5	+1.9
SNGE				IAML		10 21 40.8	
	comp=Z,2µm,1.0s						
AMIS	Naft Sefid	2.58	119	Pn	Pn	10 21 12.4	+2.6
HAGD	Aghdareh	2.78	48	Pn	Pn	10 21 13.5	+0.9
KHMZ	Khomeyn	2.88	74	*e*Pn	Pn	10 21 16.3	+2.4
KHMZ				IAML		10 22 01.8	
	comp=Z,560nm,1.0s						
IKRK	Kirkuk	3.09	322	*e*Pn	Pn	10 21 18.0	+1.3
IKRK				*e*Sn	Sn	10 21 55.0	+1.6
IKRK				AML	AML	10 22 09.2	
	comp=N,2µm,0.7s						
IKRK				AML	AML	10 22 14.8	
	comp=E,1µm,0.5s						
HGHA	Hamedan- Ghaye	3.11	35	Pn	Pn	10 21 18.9	+1.7
ASAO	Ashtian	3.22	60	*e*Pn	Pn	10 21 21.1	+2.3
ASAO				IAML		10 22 02.9	
	comp=Z,1µm,1.0s						
SRSL	SARDASHT	3.39	343	*e*Pn	Pn	10 21 22.9	+1.9
SRSL				IAML		10 22 23.7	
	comp=Z,920nm,1.0s						
JHBN	Jahan bin	3.47	101	Pn	Pn	10 21 24.3	+2.1
IPIR	Pirpir	3.58	93	Pn	Pn	10 21 26.2	+2.4
ZNGN	Zangian	3.65	102	Pn	Pn	10 21 27.3	+2.6
QABG	Abgarm-Qazvin	3.66	41	Pn	Pn	10 21 26.6	+1.9
MAHB	Mahabad	3.87	349	Pn	Pn	10 21 29.1	+1.6
QAMS	Qamsar	4.05	78	Pn	Pn	10 21 32.0	+2.0
ZNJK	Zanjan	4.05	24	Pn	Pn	10 21 32.0	+1.9
ZNJK	Zanjan	4.05	24	*e*Pn	Pn	10 21 32.2	+2.0
ZNJK				IAML		10 22 43.1	
	comp=Z,3.8nm,1.0s						
IQOM	Qom	4.12	62	Pn	Pn	10 21 32.5	+1.3
IKLH	Kolahrood	4.15	84	Pn	Pn	10 21 34.0	+2.4
GHVR	GHOM	4.16	67	*e*Pn	Pn	10 21 33.6	+2.2
GHVR				IAML		10 23 05.7	
	comp=Z,700nm,1.0s						
IHSH	Hashtrud	4.36	6	Pn	Pn	10 21 35.8	+1.4
MSL	Mosul	4.50	321	*e*Pn	Pn	10 21 37.0	+1.0
MSL				*e*Sn	Sn	10 22 28.0	-0.1
IGZV	Ghazvin	4.50	40	Pn	Pn	10 21 37.6	+1.3
JIR1	Jirandeh	4.54	34	Pn	Pn	10 21 38.2	+1.4
IHSB	Hasanabad	4.56	56	Pn	Pn	10 21 38.5	+1.5
THKV	Tehran--Karaj	4.57	49	*e*Pn	Pn	10 21 38.2	+1.0
THKV				IAML		10 23 12.2	
	comp=Z,130nm,1.0s						
KLNJ	Kolanjah	4.63	114	Pn	Pn	10 21 40.5	+2.2
KLNJ	Kolanjah	4.63	114	*e*Pn	Pn	10 21 40.7	+2.5
KLNJ				IAML		10 23 03.7	
	comp=Z,260nm,1.0s						
IVRN	Varamin	4.68	63	Pn	Pn	10 21 40.0	+1.4
KRSH	Karshahi	4.69	76	Pn	Pn	10 21 40.5	+1.6
IAZR	Azarshahr	4.73	354	Pn	Pn	10 21 40.9	+1.4
GIDE	GILAN DEYLAMAN	4.77	33	Pn	Pn	10 21 41.7	+1.7
GIDE	GILAN DEYLAMAN	4.77	33	*e*Pn	Pn	10 21 42.1	+2.1
GIDE				IAML		10 23 27.1	
	comp=Z,240nm,1.0s						
IZEF	Zefreh	4.78	89	Pn	Pn	10 21 42.2	+2.1
ISFB	Sefidab	4.86	72	Pn	Pn	10 21 42.4	+1.3
ISRB	Sarab	4.92	9	Pn	Pn	10 21 43.5	+1.5
IRAM	Ramesheh	4.99	102	Pn	Pn	10 21 45.0	+2.0
DAMV	Damavand	5.14	57	*e*Pn	Pn	10 21 45.8	+0.6
DAMV				IAML		10 23 08.8	
	comp=Z,4.4nm,1.0s						
IDMV	Damavand	5.16	58	Pn	Pn	10 21 46.4	+1.0
NASN	Na'in	5.18	90	*e*Pn	Pn	10 21 47.4	+1.6
NASN				IAML		10 23 06.9	
	comp=Z,71nm,1.0s						
ITBZ	Tabriz	5.27	356	Pn	Pn	10 21 47.5	+0.7
MZPU	Pul - Mazandar	5.33	48	Pn	Pn	10 21 49.6	+1.9
GAS1	Astara - Iran	5.69	18	Pn	Pn	10 21 54.1	+1.7
IFIR	Firoozkooh	5.71	60	Pn	Pn	10 21 54.2	+1.2
IPRN	Peran	5.72	54	Pn	Pn	10 21 55.1	+2.2
IMRD	Marand	5.78	353	Pn	Pn	10 21 55.8	+1.9
GRMI	Germi	5.91	9	Pn	Pn	10 21 57.1	+1.5
GRMI	Germi	5.91	9	*e*Pn	Pn	10 21 57.5	+1.9
GRMI				IAML		10 23 10.4	
	comp=Z,23nm,1.0s						
ANAR	Anarak	5.95	86	Pn	Pn	10 21 57.2	+1.1
IALA	Alasht	5.96	57	Pn	Pn	10 21 58.0	+1.6
DSBU	Dashti - Bushe	6.07	138	Pn	Pn	10 22 00.4	+2.7
MARD	Mardin	6.47	314		Pn	10 22 03.1	-0.1
GURO	Guroymak-BITLI	6.71	327		Pn	10 22 06.6	0.0
YZKH	Yazd	6.72	93	*e*Pn	Pn	10 22 07.7	+1.0
YZKH				IAML		10 23 57.9	
	comp=Z,32nm,1.0s						
IGLO	Ghaloghah	6.88	57	Pn	Pn	10 22 10.9	+1.9
IMEH	Mehriz	6.93	101	Pn	Pn	10 22 12.1	+2.3
IBAF	Bafgh	7.68	98	Pn	Pn	10 22 21.8	+1.9
ASF	Jabal al Asfar	8.27	267	Pn	Pn	10 22 29.0	+1.1
	comp=Z,1.0nm,0.3s,baz=54,slow=3.3,SNR=6.9						
ASF				Sn	Sn	10 23 57.5	-3.6
	comp=Z,0.5nm,0.3s,baz=296,slow=7.1,SNR=1.1						
ASF				Lg	Lg	10 24 45.2	
	comp=Z,2.7nm,0.3s,baz=246,slow=23,SNR=1.9						
ASF				LR	LR	10 25 60.0	
	comp=Z,53nm,21.8s,baz=28,slow=40						
	comp=Z,2.9nm,0.4s						
SHRO	Shahrood	8.30	66	*e*Pn	Pn	10 22 29.9	+1.6
SHRO				IAML		10 22 47.1	
	comp=Z,9.2nm,0.6s						
TNSJ	Nastanj	8.38	80	Pn	Pn	10 22 31.0	+1.5
TPRV	Parvadeh(Tabas	8.43	87	Pn	Pn	10 22 32.4	+2.2
TABS	Tabas	8.79	83	*e*Pn	Pn	10 22 35.9	+0.8
TABS				IAML		10 23 01.6	
	comp=Z,14nm,1.1s						
TKDS	Koohdasht(Taba	8.79	83	Pn	Pn	10 22 37.0	+1.9
GAZ	Gaziantep	8.80	301	Pn	Pn	10 22 35.6	+0.4
SMRA	Abu-Samra	8.97	155	P	Pn	10 22 41.1	+3.6
SMRA				S	Sn	10 24 18.2	-0.1
TRNA	Turayna	9.12	153	P	Pn	10 22 42.3	+2.7
TRNA				S	Sn	10 24 21.3	-0.8
MMAI	Mount Meron Ar	9.45	273	Pn	Pn	10 22 45.0	+1.0
	comp=Z,1.1nm,0.3s,baz=78,slow=14,SNR=1.1						
MMAI				Lg	Lg	10 25 24.7	
	comp=Z,2.6nm,0.3s,baz=90,slow=22,SNR=1.7						
	comp=Z,1.5nm,0.4s						
RAYN	Ar Rayn	9.46	186	P	Pn	10 22 47.1	+2.8
RAYN				S	Sn	10 24 30.2	-0.4
RAYN	Ar Rayn	9.46	186		Pn	10 22 46.7	+2.4
RAYN	Ar Rayn	9.46	186	P	Pn	10 22 46.3	+2.0
BNDS	Bandar-Abbas	9.93	121	*e*Pn	Pn	10 22 52.5	+1.7
BNDS				IAML_BB		10 23 00.8	
	comp=Z,630nm,1.0s						
MAK	Makhachkala	10.00	4	*e*P	Pn	10 22 49.4	-2.1
MAK				*e*S	Sn	10 24 42.7	-0.7
MAK				pmax	pmax		
	comp=Z,34nm,0.4s						
MAK				MLR	MLR		
	comp=Z,187nm,15.0s						
EIL	Elat	10.53	255	Pn	Pn	10 23 01.0	+2.2
	comp=Z,0.3nm,0.3s,baz=80,slow=6.1,SNR=2.0						
EIL				Lg	Lg	10 26 00.8	
	comp=Z,0.9nm,0.3s,baz=283,slow=19,SNR=1.9						
EIL				LR	LR	10 28 12.4	
	comp=Z,112nm,20.3s,baz=2.0,slow=44						
	comp=Z,2.7nm,0.7s						
BSRN	Basiran	10.59	92	*e*Pn	Pn	10 23 02.8	+3.0
BSRN				IAML		10 23 11.2	
	comp=Z,4.2nm,1.1s						
BANOM	Banah	10.95	127	P	Pn	10 23 05.3	+0.7
BANOM				S	Sn	10 25 02.8	-4.2
KBZ	Khabaz	11.14	346	Pn	Pn	10 23 08.1	+1.0
	comp=Z,0.1nm,0.3s,baz=148,slow=10,SNR=5.0						
	comp=Z,5.7nm,1.1s						
KBZ	Khabaz	11.14	346	⇓*e*P	Pn	10 23 07.5	+0.4
NAZ	Nazwa, Dubai	11.20	133	P	Pn	10 23 09.6	+1.6
SHA1	Shidzhatmaz	11.20	345	⇑*e*P	Pn	10 23 10.8	+2.7
CSS	Mathiatis	11.24	284	Pn	Pn	10 23 08.5	0.0
MASF	Masafi	11.24	130	P	Pn	10 23 11.2	+2.6
	SNR=12						
MASF				S	Sn	10 25 10.3	-3.7
MDH	Madha	11.38	130	P	Pn	10 23 13.1	+2.6
	SNR=8.6						
MDH				S	Sn	10 25 12.5	-4.8
KVAR	Kislovodsk Arr	11.40	345	Pn	Pn	10 23 11.6	+0.9
	baz=72,slow=3.2						
	comp=Z,3.7nm,0.5s						
KIV	Kislovodsk	11.40	345	*e*P	Pn	10 23 12.0	+1.2
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
KIV				MLR	MLR		
	comp=Z,34nm,13.0s						
SHRT	Shahrakht	11.44	83	*e*Pn	Pn	10 23 13.2	+1.9
SHRT				IAML		10 23 19.8	
	comp=Z,4.3nm,1.0s						
UOSS	Minazif	11.57	131	P	Pn	10 23 16.3	+3.2
UOSS				P	Pn	10 23 16.3	+3.2
UOSS				S	Sn	10 25 16.2	-5.9
UOSS				S	Sn	10 25 16.2	-5.9
UOSS	Minazif	11.57	131		Pn	10 23 14.2	+1.2
HATD	Hatta, Dubai	11.61	132	P	Pn	10 23 14.9	+1.3
HATD				S	Sn	10 25 18.8	-4.3
MZR	Muzera	11.62	147	P	Pn	10 23 16.7	+2.9
ASHO	Ashiyiah	11.66	133	P	Pn	10 23 16.0	+1.6
	SNR=13						
ASHO				S	Sn	10 25 20.7	-3.8
SOC	Sochi	11.91	335	*e*P	Pn	10 23 15.3	-2.3
SOC				*e*S	Sn	10 25 29.8	-0.4
SOC				pmax	pmax		
	comp=Z,24nm,1.0s						
SOC				MLR	MLR		
	comp=Z,164nm,16.0s						
ALNE	Al Ain	11.95	136	P	Pn	10 23 19.6	+1.3
SOHO	SOHO	12.36	133	P	Pn	10 23 24.8	+0.8
SOHO				P	Pn	10 23 24.8	+0.8
SOHO				S	Sn	10 25 37.6	-3.9
SOHO				S	Sn	10 25 37.6	-3.9
BR131	Keskin Array S	12.46	306	Pn	Pn	10 23 25.8	+0.5
BR131	Keskin Array S	12.46	306	P	Pn	10 23 25.8	+0.5
BRTR	Keskin Array B	12.46	306	Pn	Pn	10 23 26.9	+1.6
	comp=Z,0.1nm,0.3s,baz=108,slow=12,SNR=5.1						
BRTR				LR	LR	10 29 22.2	
	comp=Z,50nm,18.1s,baz=90,slow=43						
	comp=Z,1.1nm,0.8s						
ARQ	Araqi	12.95	135	P	Pn	10 23 33.7	+1.7
HRA	Herat	13.07	80	Pn	Pn	10 23 33.0	-0.8
HOQ	Hoqain	13.25	132	P	Pn	10 23 36.6	+0.6
BSY	Bisya	13.80	135	P	Pn	10 23 43.6	0.0
ANN	Anapa	13.81	331	*e*P	Pn	10 23 41.8	-1.8
ANN				*e*S	Sn	10 26 17.2	+0.6
ANN				pmax	pmax		
	comp=Z,18nm,0.6s						
SMDO	Samad	14.09	132	P	Pn	10 23 47.8	+0.1
WSAR	Wadi Sarin	14.33	130	P	Pn	10 23 51.0	+0.1
	SNR=7.2						
JMDO	Jabal Madar	14.63	133	P	Pn	10 23 54.4	-0.6
SRVN	Saravan	14.70	108	*e*Pn	P	10 23 59.5	-2.7
SRVN				IAML_BB		10 24 18.0	
	comp=Z,310nm,1.0s						
WBK	Wadi Bani Khal	15.00	130	P	Pn	10 23 58.5	-1.5
WBK				P	Pn	10 23 58.5	-1.5
MHTO	MHTO	15.61	137	P	Pn	10 24 08.6	+0.6
DOK	Doka	15.79	153	P	Pn	10 24 09.3	-1.0
	SNR=8.5						
DMTO	DMTO	16.93	152	P	Pn	10 24 24.0	-0.8
	SNR=6.6						
SHAA	Shahritus	18.12	69		Pn	10 24 39.3	-0.3
SHAA				IAmb	IAmb	10 25 06.3	
	comp=Z,37nm,1.1s						
IDI	Anoyia	18.16	283	P	P	10 24 41.6	+1.2
	comp=Z,1.2nm,0.3s,baz=99,slow=16,SNR=7.0						
	comp=Z,7.3nm,0.7s						
IDI	Anoyia	18.16	283	P	Pn	10 24 39.9	-0.3
VRH	Novokhopyorsk	18.58	350	*e*P	P	10 24 43.2	-1.5
VRH				pmax	pmax		
	comp=Z,30nm,0.6s						
KBL	Kabul	18.69	79		P	10 24 46.0	-0.3
KBL	Kabul	18.69	79	P	P	10 24 46.0	-0.3
KBL				pmax	pmax		
	comp=Z,12nm,1.1s						
CFR	Carcaliu	18.80	316	⇓P	Pn	10 24 48.2	+0.5
CFR	Carcaliu	18.80	316	⇓P	Pn	10 24 48.2	+0.5
VSR	Storozhevoye	19.04	345	*e*P	P	10 24 48.1	-1.8
VSR				pmax	pmax		
	comp=Z,30nm,0.9s						
AB31	Akbulak array	19.06	27		P	10 24 50.1	0.0
AB31				IAmb	IAmb	10 24 51.5	
	comp=Z,20nm,0.7s						
ABKAR	Akbulak array	19.06	27	P	P	10 24 50.5	+0.4
CHGR	Chuyangaron	19.10	66	P	P	10 24 50.4	-0.4
CHGR				IAmb	IAmb	10 24 54.3	
	comp=Z,23nm,0.6s						
CHGR	Chuyangaron	19.10	66	*i* P	P	10 24 51.3	+0.6
CHGR				pmax	pmax		
	comp=Z,22nm,0.7s						
AKTO	Aktyubinsk	19.37	22	P	P	10 24 53.8	+0.3
	comp=Z,20nm,0.5s,baz=203,slow=13,SNR=30						
AKTO				LR	LR	10 34 39.1	
	comp=Z,80nm,18.1s,baz=128,slow=44						
BELG	Belogornoye	19.43	2	P	P	10 24 53.4	-0.7
	comp=Z,25nm,0.7s,baz=6.4,slow=0.4,SNR=18						
BELG	Belogornoye	19.43	2	*c i*P	P	10 24 53.0	-1.0
BELG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VORR	Voronezh	19.46	346	*e*P	P	10 24 53.3	-1.2
VORR				pmax	pmax		
	comp=Z,73nm,0.4s						
VRI	Vrincioaia	20.00	316	⇓P	P	10 25 01.0	+0.6
VRI	Vrincioaia	20.00	316	⇓P	P	10 25 01.0	+0.6
NEHR	Nehoiu	20.02	314	⇓P	P	10 25 01.4	+0.7
PLOR	Plostina	20.04	316	⇑P	Pn	10 25 03.5	+0.9
PLOR	Plostina	20.04	316	⇑P	Pn	10 25 03.5	+0.9
GAR	Garm	20.05	66	P	P	10 25 01.7	+0.5
GAR				IAmb	IAmb	10 25 04.4	
	comp=Z,27nm,0.8s						
MLR	Muntele Rosu	20.27	314	P	P	10 25 04.1	+0.7
	comp=Z,1.6nm,0.3s,baz=145,slow=12,SNR=4.1						
	comp=Z,1.6nm,0.3s						
MLR	Muntele Rosu	20.27	314	⇑P	Pn	10 25 06.2	+0.8
MLR	Muntele Rosu	20.27	314	⇑P	Pn	10 25 06.2	+0.8
COVR	Voineasa-Covas	20.30	315	⇓P	Pn	10 25 06.0	+0.3
LPSR	Galich'ya Gora	20.40	346	*e*P	P	10 25 02.9	-1.8
LPSR				pmax	pmax		
	comp=Z,99nm,1.0s						
TESR	Tescani	20.41	317	⇑P	P	10 25 05.5	+0.7
ONER	Baraj Valea Uz	20.45	317	⇓P	P	10 25 06.3	+1.0
SORM	Soroca	20.48	323	⇓P	P	10 25 04.7	-0.9
SORM	Soroca	20.48	323	⇓P	P	10 25 04.7	-0.9
ITM	Ithomi	20.65	289	P	P	10 25 08.0	+0.5
ITM				IAmb	IAmb	10 25 32.1	
	comp=Z,26nm,0.8s						
DOPR	Dopca	20.85	315	⇑P	P	10 25 10.8	+1.2
MANEM	Manem	20.92	70	P	P	10 25 11.3	+0.5
MANEM				IAmb	IAmb	10 25 17.2	
	comp=Z,70nm,1.3s						
ARR	Arges	21.01	313	⇓P	P	10 25 13.2	+1.8
PRAR	RASCA	21.13	319	⇑P	P	10 25 13.4	+0.8
KK31	Karatay Array	21.28	55	P	P	10 25 14.7	+0.4
KK31				IAmb	IAmb	10 25 21.5	
	comp=Z,25nm,0.9s						
KK31	Karatay Array	21.28	55	P	P	10 25 14.7	+0.4
KK31				pmax	pmax		
	comp=Z,25nm,1.0s						
KKAR	Karatay Array	21.28	55	P	P	10 25 14.4	+0.1
KKAR	Karatay Array	21.28	55	P	P	10 25 14.4	+0.1
TNR	Turnu Rosu	21.37	313	⇑P	P	10 25 16.8	+1.6
TNR	Turnu Rosu	21.37	313	⇑P	P	10 25 16.8	+1.6
BURAR	Bucovina Array	21.84	318	P	P	10 25 20.4	+0.1
BURAR	Bucovina Array	21.84	318	⇓P	P	10 25 21.0	+0.7
BURAR	Bucovina Array	21.84	318	⇓P	P	10 25 21.0	+0.7
BUR08	Bucovina Ar. S	21.86	318	P	P	10 25 20.3	-0.3
AKASG	Malin Array Be	21.87	329	P	P	10 25 19.3	-1.2
	comp=Z,1.7nm,0.4s,baz=138,slow=11,SNR=12						
	comp=Z,1.7nm,0.4s						
AKASG	Malin Array Be	21.87	329	P	P	10 25 18.9	-1.6
AKBB	Malin Array Si	21.87	329	P	P	10 25 18.8	-1.7
AKBB				IAmb	IAmb	10 25 23.9	
	comp=Z,15nm,1.1s						
AKBB	Malin Array Si	21.87	329	*ce*P	P	10 25 20.2	-0.3
AKBB				pmax	pmax		
	comp=Z,15nm,1.0s						
KIEV	Kiev	21.87	329	P	P	10 25 18.8	-1.7
KIEV	Kiev	21.87	329	⇓P	P	10 25 18.8	-1.7
KIEV	Kiev	21.87	329	P	P	10 25 18.8	-1.7
KIEV				pmax	pmax		
	comp=Z,14nm,1.1s						
GZR	Gura Zlata	22.18	311	⇑P	P	10 25 25.1	+1.1
GZR	Gura Zlata	22.18	311	⇑P	P	10 25 25.1	+1.1
NIL	Nilore	22.23	81	P	P	10 25 24.6	0.0
NIL				IAmb	IAmb	10 25 28.0	
	comp=Z,30nm,1.2s						
NIL	Nilore	22.23	81	P	P	10 25 24.6	0.0
NIL				pmax	pmax		
	comp=Z,30nm,1.2s						
MARR	Marisel-Cluj	22.56	314	⇑P	P	10 25 28.6	+0.4
BZS	Buzias	23.02	311	⇑P	P	10 25 34.0	+1.2
BZS	Buzias	23.02	311	⇑P	P	10 25 34.0	+1.2
OBN	Obninsk	23.25	345	*e*P	P	10 25 34.2	-0.8
OBN				*e*PPP	PPP	10 26 06.8	
OBN				*e*		10 29 20.3	
OBN				pmax	pmax		
	comp=Z,40nm,1.2s						
OBN				MLR	MLR		
	comp=Z,85nm,17.0s						
MOS	Moscow	23.62	347	*e*P	P	10 25 39.8	+1.1
MOS				*e*		10 26 08.7	
AAK	Ala-Archa	23.93	58	LR	LR	10 37 02.1	
	comp=Z,67nm,19.3s,baz=278,slow=42						
AAK	Ala-Archa	23.93	58	⇑*e*P	P	10 25 42.8	+0.7
AAK				pmax	pmax		
	comp=Z,8.0nm,1.9s						
KSH	Kashi	24.47	66	P	P	10 25 45.3	-1.7
KSH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ARTI	Arti	24.79	16	P	P	10 25 49.3	-0.2
ARTI				IAmb	IAmb	10 26 01.6	
	comp=Z,12nm,0.7s						
ARTI	Arti	24.79	16	*d i*P	P	10 25 49.5	-0.1
ARTI						10 26 18.5	
ARTI				S	S	10 30 13.4	+2.1
ARTI				SS	SnSn	10 30 56.8	-1.5
ARTI				pmax	pmax		
	comp=Z,16nm,1.0s						
BOOM	Boomskoye usch	24.94	59	P	P	10 25 52.2	+0.9
BOOM				IAmb	IAmb	10 25 55.2	
	comp=Z,8.6nm,1.0s						
BOOM	Boomskoye usch	24.94	59	P	P	10 25 52.2	+0.9
BOOM				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KECS	Kecovo	25.00	316	*e*P	P	10 25 54.9	+3.4
KECS				pmax	pmax		
	comp=Z,20nm,1.2s						
KECS	Kecovo	25.00	316	*e*P	P	10 25 54.9	+3.4
MORH	Mrgy, Hungar	25.16	310	⇓P	P	10 25 54.4	+1.4
KIRV	Kirov	25.69	3	⇓*i*P	P	10 25 56.6	-1.0
SVE	Sverdlovsk	25.73	18	*e*P	P	10 25 59.0	+0.9

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LANS  Liptovska Anna   25.91 317 eP     P       10 26 01.6 +1.8
LANS                             pmax   pmax
      comp=Z,10.0nm,1.3s
LANS  Liptovska Anna   25.91 317 eP     P       10 26 01.6 +1.8
TARG  Taragay, Kyrgy   26.15  61        P       10 26 02.7 +0.1
TARG  Taragay, Kyrgy   26.15  61  P     P       10 26 02.7 +0.1
TARG                             pmax   pmax
      comp=Z,4.0nm,0.6s
OJC   Ojcow            26.25 319        P       10 26 02.9  0.0
OJC   Ojcow            26.25 319  P     P       10 26 02.9  0.0
BORK  Borovoye         26.29  33  P     P       10 26 03.3 +0.1
BORK  Borovoye         26.29  33⇓iP     P       10 26 03.7 +0.5
BORK                             pmax   pmax
      comp=Z,10.0nm,1.1s
BVAR  Borovoye Array   26.31  33  P     P       10 26 03.9 +0.5
      comp=Z,9.2nm,0.7s,baz=216,slow=8.4,SNR=27
BVAR                             PcP    PcP     10 29 29.6 +0.4
      comp=Z,1.3nm,0.6s,baz=255,slow=2.8,SNR=2.8
      comp=Z,9.2nm,0.7s
JAVC  Velka Javorina   26.83 315 eP     P       10 26 09.4 +1.2
MODS  Modra-Piesok     26.86 314 eP     P       10 26 10.7 +2.3
MODS  Modra-Piesok     26.86 314 eP     P       10 26 10.7 +2.3
RONA  Rosalia, Austr   27.20 312 i P    P       10 26 15.9 +4.3
      comp=Z,3.8nm,0.8s
MORC  Moravsky Berou   27.31 317 ⇓P     P       10 26 12.1 -0.4
MORC  Moravsky Berou   27.31 317 eP     P       10 26 13.1 +0.6
MORC  Moravsky Berou   27.31 317 ⇓P     P       10 26 12.1 -0.4
CONA  Conrad Observa   27.56 312 i pP   P       10 26 16.8 +1.9
      comp=Z,1.7nm,0.7s
VRAC  Vranov           27.66 315 eP     P       10 26 16.6 +1.0
KRUC  Moravsky         27.68 314 eP     P       10 26 16.3 +0.6
KLMR  Klimovskoe       28.28 353 eP     P       10 26 18.4 -2.6
KLMR                             pmax   pmax
      comp=Z,30nm,1.6s
BIOA  Bad Ischl, Aus   28.89 310 i P    P       10 26 27.4 +0.8
      comp=Z,1.0nm,0.2s
GERES GERESS Array B   29.24 313  P     P       10 26 30.3 +0.6
      comp=Z,0.4nm,0.5s,baz=104,slow=8.5,SNR=3.0
GERES                            PcP    PcP     10 29 37.2 +0.7
      comp=Z,0.4nm,0.6s,baz=143,slow=2.0,SNR=3.5
      comp=Z,0.4nm,0.5s
WTTA  Wattenberg       30.06 309 i pP   P       10 26 37.9 +0.8
      comp=Z,1.2nm,0.3s
WATA  Walderalm        30.12 309 epP    P       10 26 38.4 +0.7
      comp=Z,0.7nm,0.2s
SQTA  Sankt Quirin     30.33 308 i P    P       10 26 39.6 +0.2
      comp=Z,3.1nm,0.4s
MK31  Makanchi Array   30.36  52d iP    P       10 26 41.3 +1.7
MKAR  Makanchi Array   30.36  52  P     P       10 26 40.0 +0.4
      comp=Z,3.5nm,0.5s,baz=251,slow=7.4,SNR=26
MKAR                             LR     LR      10 40 40.8
      comp=Z,53nm,18.5s,baz=320,slow=40
      comp=Z,3.5nm,0.5s
MKAR  Makanchi Array   30.36  52  P     P       10 26 39.7 +0.1
MKAR  Makanchi Array   30.36  52ceP     P       10 26 41.0 +1.4
MKAR                             pmax   pmax
      comp=Z,5.0nm,0.6s
CLL   Collm            30.58 317 i P    P       10 26 42.6 +1.1
CLL                              pmax   pmax
      comp=Z,7.0nm,1.2s
CLL   Collm            30.58 317 i P    P       10 26 42.6 +1.1
      comp=Z,7.0nm,1.2s
FETA  Feichten         30.60 308 i P    P       10 26 42.2 +0.4
      comp=Z,0.9nm,0.6s
DAVA  Damuels          31.22 308 eP     P       10 26 47.5 +0.1
      comp=Z,0.2nm,0.2s
FINES FINESS Array B   31.44 341  P     P       10 26 48.6 -0.3
      comp=Z,2.9nm,0.4s,baz=147,slow=9.2,SNR=38
FINES                            PcP    PcP     10 29 42.1 +0.3
      comp=Z,3.3nm,0.9s,baz=98,slow=4.2,SNR=2.2
      comp=Z,2.9nm,0.4s
FINES FINESS Array B   31.44 341  P     P       10 26 48.8 -0.1
FIA1  FINESS Array S   31.44 341  P     P       10 26 48.6 -0.3
WMQ   Urumqi           33.63  59 eP     P       10 27 10.0 +1.5
WMQ                              pP     pP      10 27 14.3 +1.1
WMQ                              PP     PP      10 28 21.0 -3.5
WMQ                              pmax   pmax
      comp=Z,14nm,1.1s
ZAA0  Zalesovo Array   34.16  41  P     P       10 27 12.5 -0.2
ZALV  Zalesovo Beam    34.16  41  P     P       10 27 12.7 -0.1
      comp=Z,1.7nm,0.3s,baz=260,slow=10,SNR=13
ZALV                             LR     LR      10 43 50.6
      comp=Z,33nm,18.6s,baz=321,slow=41
      comp=Z,1.7nm,0.3s
ZALV  Zalesovo Beam    34.16  41  P     P       10 27 12.1 -0.7
DGZ   Jazzator, Alta   34.39  49⇑eP     P       10 27 15.9 +0.8
DGZ                              pmax   pmax
      comp=Z,4.0nm,0.6s
HFS   Hagfors          34.72 331  P     P       10 27 17.7 +0.1
      comp=Z,9.4nm,0.4s,baz=132,slow=8.6,SNR=70
      comp=Z,9.4nm,0.4s
HOMB  Homborsund       35.98 326 eP     P       10 27 28.8 +0.4
NB2   NORSAR Subarra   36.25 331  P     P       10 27 30.0 -0.7
      comp=Z,5.8nm,1.0s,baz=126,slow=9.3
NB2   NORSAR Subarra   36.25 331  P     P       10 27 30.0 -0.7
      baz=126,slow=9.3
NOA   NORSAR Array B   36.25 331  P     P       10 27 30.1 -0.7
      comp=Z,1.9nm,0.7s,baz=125,slow=8.6,SNR=7.7
      comp=Z,1.9nm,0.7s
SKAR  Skarslia         37.25 330 eP     P       10 27 40.4 +1.1
ODD1  Odda             37.61 328 eP     P       10 27 43.9 +1.5
NSS   Namsos           38.07 336 eP     P       10 27 46.5 +0.4
MOR8  Moi Rana         38.38 340 eP     P       10 27 48.6 -0.2
VADS  Vadso            38.42 351 eP     P       10 27 49.5 +0.6
KTK1  Kautokeino       38.45 347 eP     P       10 27 50.2 +0.9
ARA0  ARCESS Array S   38.49 348 eP     P       10 27 49.8 +0.2
ARCES ARCESS Array B   38.49 348  P     P       10 27 49.7 +0.1
      comp=Z,2.4nm,0.4s,baz=164,slow=9.5,SNR=40
      comp=Z,2.4nm,0.4s
ARCES ARCESS Array B   38.49 348  P     P       10 27 49.6  0.0
ARCES ARCESS Array B   38.49 348  P     P       10 27 49.6  0.0
ARCES                            pmax   pmax
      comp=Z,68nm,1.5s
RAUS  Rausandaksla     38.69 340 eP     P       10 27 51.3 +0.1
LEIR  Leirfjorden      38.74 339 eP     P       10 27 51.9 +0.2
STOK  Stokkvaagen      38.92 339 eP     P       10 27 53.5 +0.3
FAUS  Fauske           39.00 341 eP     P       10 27 54.3 +0.4
VAGH  Vaagaholmen      39.11 340 eP     P       10 27 55.7 +0.9
STEI  Steigen          39.41 342 eP     P       10 27 57.2 -0.1
JETT  Jettan, Norway   39.47 346 eP     P       10 27 58.2 +0.4
TRO   Tromso           39.84 345 eP     P       10 28 00.2 -0.6
SHL   Shillong         39.90  89  P     P       10 28 01.9 -0.3
SHL                              IAmb   IAmb    10 28 10.2
      comp=Z,12nm,1.0s
SHL   Shillong         39.90  89  P     P       10 28 01.9 -0.3
SHL                              pmax   pmax
      comp=Z,12nm,1.0s
ESDC  Sonseca Array    40.88 294  P     P       10 28 10.4 +0.5
      comp=Z,0.7nm,0.7s,baz=74,slow=8.9,SNR=4.5
      comp=Z,0.7nm,0.7s
KNGR  Kungurtug, Tuv   40.93  49⇓iP     P       10 28 13.1 +2.8
KNGR                             pmax   pmax
      comp=Z,15nm,0.9s
EKA   Eskdalemuir Ar   41.02 318  P     P       10 28 11.2 +0.4
      comp=Z,3.5nm,0.4s,baz=102,slow=8.8,SNR=27
      comp=Z,3.5nm,0.4s
EKB   Eskdalemuir      41.04 318  P     P       10 28 11.2 +0.2
ESK   Eskdalemuir      41.04 318  P     P       10 28 10.3 -0.7
ESK   Eskdalemuir      41.04 318  P     P       10 28 10.3 -0.7
ESK                              pmax   pmax
      comp=Z,63nm,1.4s
GTA   Gaotai           42.87  66 eP     P       10 28 26.3  0.0
GTA                              pP     pP      10 28 31.5 +0.4
GTA                              pmax   pmax
      comp=Z,3.0nm,1.1s
NRIK  Noril'sk         42.96  20  P     P       10 28 26.4  0.0
      comp=Z,5.6nm,0.8s,baz=227,slow=5.4,SNR=8.1
      comp=Z,5.6nm,0.8s
NRIK  Noril'sk         42.96  20  P     P       10 28 26.6 +0.1
NRIK                             IAmb   IAmb    10 28 27.9
      comp=Z,8.1nm,1.0s
NRIK  Noril'sk         42.96  20⇓iP     P       10 28 27.2 +0.7
NRIK                             pmax   pmax
      comp=Z,9.0nm,1.0s
TORD  Torodi Ar. Bea   45.42 255  P     P       10 28 47.9 +1.0
      comp=Z,2.5nm,0.9s,baz=38,slow=8.6,SNR=12
      comp=Z,2.5nm,0.9s
TORD  Torodi Ar. Bea   45.42 255  P     P       10 28 46.8 -0.1
TORD                             IAmb   IAmb    10 29 14.1
      comp=Z,3.0nm,0.5s
LZDM  Lanzhou Array    46.56  70  P     P       10 28 55.9 -0.2
      comp=Z,1.0nm,0.3s,baz=288,slow=11,SNR=3.9
      comp=Z,1.0nm,0.3s
SONM  Songino Array    46.72  53  P     P       10 28 56.6 -0.3
      comp=Z,1.0nm,0.4s,baz=270,slow=8.4,SNR=1.9
      comp=Z,1.0nm,0.4s
ULN   Ulaanbaatar      47.16  53  P     P       10 29 00.8 +0.4
ULN                              IAmb   IAmb    10 29 02.1
      comp=Z,6.0nm,0.8s
ULN   Ulaanbaatar      47.16  53⇓iP     P       10 29 01.2 +0.8
ULN                              pmax   pmax
      comp=Z,7.0nm,0.8s
SPITS Spitsbergen Ar   47.18 352  P     P       10 29 00.6 +0.6
      comp=Z,3.2nm,0.4s,baz=140,slow=9.8,SNR=32
      comp=Z,3.2nm,0.4s
PZH   PanZhiHua        47.82  83  P     P       10 29 07.5 +1.7
CHTO  Chiang Mai       48.65  93  P     P       10 29 11.7 -0.4
CHTO                             IAmb   IAmb    10 29 12.9
      comp=Z,5.2nm,0.8s
CHTO  Chiang Mai       48.65  93  P     P       10 29 11.7 -0.4
CHTO                             pmax   pmax
      comp=Z,5.0nm,0.8s
CMAR  Chiang Mai Arr   48.82  94  P     P       10 29 13.2 -0.1
      comp=Z,3.7nm,0.6s,baz=294,slow=8.6,SNR=19
      comp=Z,3.7nm,0.6s
CMAR  Chiang Mai Arr   48.82  94  P     P       10 29 13.8 +0.4
KMI   Kunming          49.17  84  P     P       10 29 17.3 +1.0
KMI                              pmax   pmax
      comp=Z,8.0nm,0.8s
HHC   Hu-ho-hao-te     51.45  61 eP     P       10 29 33.8 +0.6
HHC                              pmax   pmax
      comp=Z,13nm,0.6s
HHC                              pmax   pmax
      comp=Z,95nm,3.8s
HILR  Hailar Array B   55.24  49  P     P       10 30 00.9 +0.1
      comp=Z,8.6nm,0.6s,baz=276,slow=7.3,SNR=13
      comp=Z,8.6nm,0.6s
TIXI  Tiksi            56.65  22⇓eP     P       10 30 10.2 -0.3
TIXI                             pmax   pmax
      comp=Z,7.0nm,1.4s
YAK   Yakutsk          58.28  33⇓eP     P       10 30 22.4 +0.2
YAK                              pmax   pmax
      comp=Z,8.0nm,0.6s
NJ2   Nanjing          59.72  69 eP     P       10 30 32.3 -0.4
NJ2                              pmax   pmax
      comp=Z,6.0nm,0.5s
HEH   HeiHe            59.88  47 eP     P       10 30 33.8 +0.4
HEH                              pmax   pmax
      comp=Z,7.0nm,0.9s
BOSA  Boshof           64.52 201  P     P       10 31 06.0 +1.1
      comp=Z,3.7nm,0.8s,baz=11,slow=5.1,SNR=4.1
BOSA                             LR     LR      10 59 01.0
      comp=Z,25nm,18.4s,baz=23,slow=36
      comp=Z,3.7nm,0.8s
BOSA  Boshof           64.52 201  P     P       10 31 05.5 +0.7
BOSA  Boshof           64.52 201  P     P       10 31 05.6 +0.7
BOSA                             pmax   pmax
      comp=Z,19nm,1.5s
KSRS  Korea Array      64.57  61  P     P       10 31 04.5 -0.5
      comp=Z,1.8nm,0.5s,baz=288,slow=6.7,SNR=12
      comp=Z,1.8nm,0.5s
USRK  Ussuriysk Ar.    64.82  52  P     P       10 31 05.9 -0.8
      comp=Z,2.6nm,0.6s,baz=274,slow=2.8,SNR=6.1
      comp=Z,2.6nm,0.6s
SEY   Seymchan         67.83  28⇑eP     P       10 31 26.0 +0.4
SEY                              pmax   pmax
      comp=Z,22nm,2.0s
BILL  Bilibino         69.78  20⇓iP     P       10 31 38.0 +0.3
BILL                             pmax   pmax
      comp=Z,27nm,4.3s
ILON  Igloolik, Nuna   71.27 343  P     P       10 31 47.0 +0.3
ILON                             IAmb   IAmb    10 32 05.5
      comp=Z,7.0nm,1.2s
A36M  Sachs Harbour    75.18 357        P       10 32 10.0 +0.3
SCHQ  Schefferville    75.64 327  P     P       10 32 12.8  0.0
      comp=Z,1.9nm,0.6s,baz=89,slow=2.9,SNR=4.9
      comp=Z,1.9nm,0.6s
SCHQ  Schefferville    75.64 327  P     P       10 32 12.5 -0.3
C18K  Utukok River     76.60  10 IAmb   IAmb    10 32 22.2
      comp=Z,7.8nm,0.8s
D20K  Etivluk River    77.16   9 IAmb   IAmb    10 32 22.7
      comp=Z,9.4nm,1.1s
D25K  Kavik River      77.56   5 IAmb   IAmb    10 32 24.7
      comp=Z,4.8nm,1.0s
C36M  Paulatuk         77.76 357 IAmb   IAmb    10 32 28.0
      comp=Z,8.1nm,0.9s
E18K  Tukpahlearik C   77.82  10  P     P       10 32 25.4 +0.6
E18K                             IAmb   IAmb    10 32 29.4
      comp=Z,5.9nm,0.7s
E22K  Anaktuvuk Pass   78.26   7        P       10 32 27.8 +0.5
E22K                             IAmb   IAmb    10 32 31.1
      comp=Z,7.1nm,0.9s
E19K  Redstone River   78.27   9  P     P       10 32 27.7 +0.4
E19K                             IAmb   IAmb    10 32 30.9
      comp=Z,8.3nm,1.1s
E29M  Blow River       78.89   2 IAmb   IAmb    10 32 32.0
      comp=Z,11nm,1.2s
E27K  Coleen River     78.97   3 IAmb   IAmb    10 32 35.8
      comp=Z,5.8nm,0.8s
COLA  College          81.82   6⇑iP     P       10 32 44.0 -2.5
COLA                             pmax   pmax
      comp=Z,32nm,2.5s
ILAR  Eielson Array    82.01   6  P     P       10 32 46.5 -1.0
      comp=Z,0.8nm,0.7s,baz=339,slow=4.6,SNR=6.3
      comp=Z,0.8nm,0.7s
YKA   Yellowknife Ar   83.68 351  P     P       10 32 55.6 -0.6
      comp=Z,1.6nm,1.1s,baz=4.4,slow=5.6,SNR=6.7
      comp=Z,1.6nm,1.1s
YKA   Yellowknife Ar   83.68 351ceP     P       10 32 56.7 +0.5
YKA                              pmax   pmax
      comp=Z,2.0nm,1.0s
ASAR  Alice Springs   100.33 111  P     Pdif    10 34 13.8 -1.0
      comp=Z,0.3nm,0.9s,baz=305,slow=4.6,SNR=4.7
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*TEH **28** 10:23:27.8, 33°.03N×46°.66E, h8^{km}±34^{km}*
*ISN **28** 10:23:28.0±0.9, 32°.95N×46°.61E, h10^{km}±4^{km}, ML3.7*
*IDC **28** 10:23:28.1±2.2, 33°.29N×46°.55E, h0^{km}, mb3.8/11, mbtmp3.9/12, ML4.0/1, Error ellipse: s-maj=42.7km s-min=23.9km az=166.0*
ISC 28 10:23:28.3±1.3, **33°.04N**±0°.04×**46°.61E**±0°.03, **h10**^{km}±9^{km}, **n32**, σ1^{s}**24**/39, **mb3.8**/10, **Iran-Iraq border region**

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Code  Station Name      Δ°   AZ°    Phase ID          Time     Res
                                  Op     ISC        h  m  s   ISC
IBDR  Badra             0.57 277 ePg    Pb      10 23 40.0 -0.5
IBDR                             eSg    Sb      10 23 48.0 -0.7
IBDR                              AML   AML     10 23 54.9
      comp=E,5μm,0.3s
IBDR                              AML   AML     10 24 16.6
      comp=N,4μm,0.6s
ILBA  Ilam Banvizeh     0.68 330  Pg    Pg      10 23 41.1 -0.3
GLG1  Gilan-e-Gharb     1.22 332  Pg    Pg      10 23 51.7 -0.1
KCHF  Cheshme Sefid,    1.28  16  Pg    Pb      10 23 52.7  0.0
IGHG  Ghaleghazi        1.29 358  Pg    Pg      10 23 53.1  0.0
IGHG                              Sg    Sn      10 24 11.6 +1.6
RAFI  Al-Rafai          1.38 198 ePn    Pb      10 23 54.0 -0.1
RAFI                             eSn    Sg      10 24 13.0 +0.4
IDOB  Doab              1.51  60  Pg    Pb      10 23 56.3 -0.3
IDOB                              Sg    Sg      10 24 17.7 +0.7
IDHR  Dehrash           1.67 354  Pg    Pb      10 23 59.6 +0.4
IBZA  Bozab             1.77  36  Pg    Pb      10 24 01.0  0.0
BHD   Baghdad           1.89 278 ePn    Pb      10 24 02.0 -0.8
BHD                              eSn    Sb      10 24 27.0 +0.6
SNQR  Sonqor, Kerman    2.00  25  Pn    Pb      10 24 04.3 -0.7
HAGD  Aghdareh          2.75  49  Pn    Pn      10 24 13.6 +0.8
IKRK  Kirkuk            3.01 322 ePn    Pn      10 24 18.0 +1.9
IKRK                             eSn    Sb      10 24 56.0 -2.9
IKRK                              AML   AML     10 25 08.7
      comp=N,279nm,0.4s
IKRK                              AML   AML     10 25 11.6
      comp=E,233nm,0.4s
HGHA  Hamedan- Ghaye    3.07  37  Pn    Pn      10 24 19.0 +2.0
IPIR  Pirpir            3.62  94  Pn    Pn      10 24 25.9 +1.2
ZNJK  Zanjan            4.00  25  Pn    Pn      10 24 31.4 +1.5
IQOM  Qom               4.12  63  Pn    Pn      10 24 32.2 +0.6
IKLH  Kolahrood         4.18  85  Pn    Pn      10 24 33.7 +1.4
MSL   Mosul             4.42 320 ePn    Pn      10 24 38.0 +2.6
MSL                              eSn    Sn      10 25 29.0 +2.0
IGZV  Ghazvin           4.47  41  Pn    Pn      10 24 37.7 +1.4
AKTO  Aktyubinsk       19.31  22  P     P       10 27 52.4 -1.0
      comp=E,0.5nm,0.3s,baz=210,slow=12,SNR=4.6
      comp=E,3.9nm,0.6s
AKASG Malin Array Be   21.79 329  P     P       10 28 17.8 -2.5
      comp=E,0.3nm,0.3s,baz=138,slow=11,SNR=1.9
      comp=E,0.3nm,0.3s
BVAR  Borovoye Array   26.27  33  P     P       10 29 03.5 -0.1
      comp=E,1.2nm,0.5s,baz=221,slow=7.7,SNR=3.7
      comp=E,1.2nm,0.5s
MKAR  Makanchi Array   30.34  53  P     P       10 29 40.7 +0.6
      comp=E,0.8nm,0.5s,baz=254,slow=11,SNR=4.5
      comp=E,0.8nm,0.5s
FINES FINESS Array B   31.37 341  P     P       10 29 48.0 -0.8
      comp=E,2.0nm,0.6s,baz=145,slow=8.2,SNR=2.0
      comp=E,2.0nm,0.6s
ZALV  Zalesovo Beam    34.12  41  P     P       10 30 12.1 -1.0
      comp=E,0.5nm,0.4s,baz=256,slow=8.4,SNR=2.5
      comp=E,0.5nm,0.4s
HFS   Hagfors          34.65 331  P     P       10 30 17.0 -0.6
      comp=E,2.1nm,0.4s,baz=133,slow=6.8,SNR=12
      comp=E,2.1nm,0.4s
NOA   NORSAR Array B   36.17 331  P     P       10 30 29.4 -1.2
      comp=E,0.4nm,0.7s,baz=120,slow=7.8,SNR=1.5
      comp=E,0.4nm,0.7s
ARCES ARCESS Array B   38.41 348  P     P       10 30 48.8 -0.8
      comp=E,0.6nm,0.4s,baz=170,slow=9.8,SNR=5.7
      comp=E,0.6nm,0.4s
EKA   Eskdalemuir Ar   40.95 318  P     P       10 31 10.8 -0.1
      comp=E,0.8nm,0.5s,baz=100,slow=9.0,SNR=4.3
      comp=E,0.8nm,0.5s
TORD  Torodi Ar. Bea   45.41 255  P     P       10 31 48.6 +1.3
      comp=E,0.6nm,1.0s,baz=39,slow=7.4,SNR=2.4
      comp=E,0.6nm,1.0s
SPITS Spitsbergen Ar   47.11 352  P     P       10 31 59.9 -0.1
      comp=E,1.9nm,0.5s,baz=160,slow=9.0,SNR=6.1
      comp=E,1.9nm,0.5s
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*IDC **28** 10:24:59.7±1.5, 42°.16N×126°.02W, h0^{km}, mb4.0/5, mbtmp4.0/12, ML3.6/8, MS3.7/46, Error ellipse: s-maj=24.2km s-min=11.8km az=53.0*
*NEIC **28** 10:24:59.5±2.2, 42°.04N±0°.05×126°.11W±0°.03, h10^{km}±2^{km}, mb4.5/119, ML3.7/107, Error ellipse: s-maj=8.2km s-min=4.8km az=349.0*
ISC 28 10:24:59.2±0.8, **42°.05N**±0°.06×**126°.19W**±0°.08, **h11**^{km}, **n173**, σ1^{s}**43**/70, **mb4.5**/45, **MS3.7**/40, **Off coast of Oregon**

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Code  Station Name      Δ°   AZ°    Phase ID          Time     Res
                                  Op     ISC        h  m  s   ISC
KBO   Bosley Butte      1.47  83        Pn      10 25 24.5 -1.1
KBO                              IAML           10 25 47.1
      comp=E,736nm,0.4s
KEBM  Edson Butte       1.60  58        Pn      10 25 26.4 -1.0
KEBM                             Sn     Sn      10 25 45.3 -2.9
KEBM                             IAML           10 25 50.3
      comp=E,2μm,1.1s
KSXB  Camp Six Broad    1.74  96        Pn      10 25 28.2 -1.2
KSXB                             Sn     Sn      10 25 51.8 +0.2
KRPM  Rodgers           1.85 118        Pn      10 25 29.7 -1.2
KRPM                             Sn     Sn      10 25 54.0 -0.3
KRPM                             IAML           10 25 54.2
      comp=E,803nm,0.6s
KRPM                             IAML           10 25 59.8
      comp=N,576nm,1.1s
L02F  Cave Junction     1.95  87        Pn      10 25 31.6 -0.6
K02D  Willamette Mer    1.98  70        Pn      10 25 32.4 -0.3
JCC   Jacoby Creek,     2.04 126        Pn      10 25 32.3 -1.0
KHMM  Horse Mountain    2.19 122        Pn      10 25 34.9 -0.7
KHMM                             IAML           10 26 09.0
      comp=N,315nm,0.6s
KHMM                             IAML           10 26 10.8
      comp=E,352nm,1.3s
KMPM  Mount Pierce      2.25 135        Pn      10 25 35.4 -1.1
KMPM                             IAML           10 26 04.6
      comp=N,584nm,0.7s
KMPM                             IAML           10 26 04.7
      comp=E,646nm,1.0s
M02C  Callahan          2.58 104        Pn      10 25 41.2 +0.3
KMRM  Mail Ridge        2.61 133        Pn      10 25 41.1 -0.2
KMRM                             IAML           10 26 17.1
      comp=E,564nm,0.6s
KMRM                             IAML           10 26 17.9
      comp=N,224nm,0.7s
YBH   Yreka Blue Hor    2.62  96 Pn     Pn      10 25 42.2 +0.8
      comp=N,1.8nm,0.3s,baz=290,slow=9.3,SNR=80
YBH                              LR     LR      10 26 01.0
      comp=N,21nm,19.5s,baz=14,slow=24
YBH                              Sn     Sn      10 26 03.3  -10
      comp=N,0.6nm,0.3s,baz=256,slow=5.4,SNR=5.2
YBH   Yreka Blue Hor    2.62  96        Pn      10 25 42.1 +0.7
KHBM  Hayfork Bally     2.63 121        Pn      10 25 41.4 -0.4
KHBM                             IAML           10 26 13.8
      comp=E,380nm,0.4s
KHBM                             IAML           10 26 14.0
      comp=N,462nm,0.8s
I03D  Drain, OR         2.66  51        Pn      10 25 41.2 -0.8
I03D                             IAML           10 26 19.7
      comp=E,261nm,1.4s
I02E  Swisshome, OR     2.68  39        Pn      10 25 42.1 -0.2
BBOR  Butler Butte      2.73  71        Pn      10 25 43.6 +0.5
BBOR                             IAML           10 26 20.9
      comp=E,236nm,1.3s
N02D  Trinity Center    2.83 111        Pn      10 25 44.4 +0.1
N02D                             IAML           10 26 22.9
      comp=N,217nm,0.5s
N02D                             IAML           10 26 24.0
      comp=E,242nm,0.3s
L04D  Klamath Falls     2.90  85        Pn      10 25 46.3 +1.0
L04D                             IAML           10 26 34.8
      comp=E,265nm,1.2s
KCPM  Cahto Peak        3.08 139        Pn      10 25 47.0 -0.8
KCPM                             IAML           10 26 24.4
      comp=N,391nm,0.4s
M03C  McCloud           3.14 103 Pn     Pn      10 25 49.6 +0.9
M03C                             IAML           10 26 40.3
      comp=N,178nm,1.0s
M03C                             IAML           10 26 45.3
      comp=E,238nm,1.2s
O02D  Mt. Diablo Mer    3.18 125        Pn      10 25 49.3 +0.2
BUCK  Buck Mountain     3.18  46        Pn      10 25 49.4 +0.2
BUCK                             IAML           10 26 38.9
      comp=E,352nm,1.4s
BUCK                             IAML           10 26 40.7
      comp=N,270nm,1.6s
J04A  Umpqua Nationa    3.24  67        Pn      10 25 51.2 +1.1
I04A  Tendick Farm,     3.28  57        Pn      10 25 51.0 +0.5
I04A                             IAML           10 26 33.4
      comp=N,233nm,1.5s
I04A                             IAML           10 26 33.5
      comp=E,261nm,1.6s
COR   Corvallis         3.30  39        Pn      10 25 51.1 +0.3
K04D  Chiloquin, OR     3.34  79        Pn      10 25 51.7 +0.3
K04D                             IAML           10 27 06.4
      comp=E,342nm,1.6s
DCMP  DeCamp, Califo    3.36 139        Pn      10 25 50.4 -1.3
H04D  Lebanon           3.53  44 IAML           10 27 08.4
      comp=N,213nm,1.1s
O03E  Paynes Creek      3.75 116        Pn      10 25 57.5 +0.6
O03E                             IAML           10 26 49.4
      comp=E,158nm,0.5s
HATC  Hat Creek Radi    3.76 107 IAML           10 27 18.9
      comp=N,184nm,2.1s
HATC                             IAML           10 28 02.6
      comp=E,170nm,3.5s
WIFE  Three Sisters-    3.78  56 IAML           10 26 56.0
      comp=N,183nm,1.5s
WIFE                             IAML           10 26 59.9
      comp=E,176nm,1.5s
G03D  McMinnville, O    3.81  33        Pn      10 25 58.4 +0.6
G03D                             IAML           10 26 51.0
      comp=E,204nm,0.7s
J05D  Fort Rock, OR     3.86  70 IAML           10 27 19.3
      comp=E,91nm,1.9s
J05D                             IAML           10 27 26.9
      comp=N,100nm,4.9s
K05A  Summer Lake       3.98  78 IAML           10 27 24.7
      comp=E,69nm,1.9s
K05A                             IAML           10 27 48.9
      comp=N,75nm,3.8s
I05D  Terrebonne, OR    4.22  55 IAML           10 27 03.2
      comp=N,80nm,1.0s
I05D                             IAML           10 27 20.8
      comp=E,122nm,2.2s
PINE  Pine Mountain     4.23  64 IAML           10 27 15.2
      comp=N,56nm,2.2s
PINE                             IAML           10 28 01.1
      comp=E,64nm,4.4s
ORV   Oroville          4.34 123 IAML           10 27 00.1
      comp=E,152nm,0.5s
HOOD  Mount Hood Mea    4.64  44 IAML           10 27 23.6
      comp=N,120nm,1.2s
CVS   Carmenet Viney    4.67 141 IAML           10 27 00.3
      comp=E,58nm,2.4s
CVS                              IAML           10 27 52.0
      comp=N,42nm,3.0s
G05A  Wamic             4.77  46 IAML           10 27 27.7
      comp=E,98nm,3.9s
G06A  Carlson Farm,     5.14  50 IAML           10 27 41.3
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             comp=E,33nm,3.1s
G06A                                    IAML                10 27 54.8
             comp=N,31nm,1.7s
CMB    Columbia Colle       5.99 130              Pn        10 26 27.8  0.0
GNW    Green Mountain       6.01  22              Pn        10 26 27.6 -0.5
G08A   Pilot Rock           6.17  56              Pn        10 26 29.6 -0.7
E07A   Sunnyside            6.40  43              Pn        10 26 32.6 -0.7
HAWA   Hanford              6.46  45              Pn        10 26 33.3 -0.9
YPT    Yellepit             6.57  50              Pn        10 26 34.8 -0.8
WAH2   Wahluke Slope        6.68  43              Pn        10 26 38.2 +1.0
RYN    Ryan                 6.78 118              Pn        10 26 39.2 +0.5
LNOR   Lincton Mounta       6.87  53              Pn        10 26 40.5 +0.7
CLRS   Cowichan Lake        6.93  11    Pn        Pn        10 26 41.6 +1.0
NVAR   Mina Array Bea       7.03 118    Pn        Pn        10 26 43.7 +1.5
             comp=N,1.2nm,0.3s,baz=294,slow=14,SNR=13
             comp=N,1.2nm,0.3s
NVAR   Mina Array Bea       7.03 118              Pn        10 26 46.1 +3.9
EPH    Ephrata              7.09  39              Pn        10 26 44.1 +1.3
ELK    Elko                 8.34  95    Pn        Pn        10 27 03.1 +3.0
             comp=N,0.2nm,0.3s,baz=291,slow=14,SNR=24
ELK                                     LR        LR        10 30 37.4
             comp=N,1µm,18.6s,baz=284,slow=41
             comp=N,4.5nm,0.8s
NEW    Newport              8.92  43    Pn        Pn        10 27 09.3 +1.3
             comp=N,0.3nm,0.3s,baz=233,slow=14,SNR=7.3
NEW                                     Lg        Lg        10 29 32.2
             comp=N,0.1nm,0.3s,baz=174,slow=19,SNR=3.5
NEW                                     LR        LR        10 30 34.1
             comp=N,345nm,18.9s,baz=232,slow=38
             comp=N,1.1nm,0.6s
MSO    Missoula             9.98  57              Pn        10 27 24.8 +2.3
HVU    Hansel Valley       10.01  87              Pn        10 27 26.4 +3.4
BBB    Bella Bella         10.23 353    Pn        Pn        10 27 25.5 -0.3
             comp=N,0.4nm,0.3s,baz=89,slow=2.2,SNR=3.4
BBB                                     LR        LR        10 30 33.8
             comp=N,696nm,19.2s,baz=224,slow=33
             comp=N,65nm,1.0s
PFO    Pinyon Flats O      11.40 134    Pn        Pn        10 27 45.0 +3.0
             comp=N,0.1nm,0.3s,baz=325,slow=11,SNR=2.1
PFO                                     LR        LR        10 32 02.2
             comp=N,289nm,19.6s,baz=312,slow=37
             comp=N,3.3nm,1.0s
PDAR   Pinedale Array      12.32  81    Pn        Pn        10 27 57.4 +2.7
             comp=N,0.1nm,0.3s,baz=264,slow=13,SNR=17
PDAR                                    LR        LR        10 33 00.2
             comp=N,294nm,19.7s,baz=264,slow=40
             comp=N,3.6nm,0.9s
ISCO   Idaho Springs       15.71  91              Pn        10 28 39.0 -1.7
RSSD   Black Hills         16.31  75    Pn        Pn        10 28 46.8 -1.5
SDCO   Great Sand Dun      16.44  98              Pn        10 28 47.9 -2.2
DUN6   Lazy B Ranch        16.55 119              Pn        10 28 50.1 -1.2
DUN6                                    IAmb      IAmb      10 29 01.1
             comp=Z,52nm,1.3s
DGMT   Dagmar              16.74  60    IAmb      IAmb      10 28 59.8
             comp=Z,34nm,1.0s
TASM   ASL Pad, Albuq      16.97 108    IAmb      IAmb      10 29 04.6
             comp=Z,6.7nm,1.3s
TASM   ASL Pad, Albuq      16.97 108    IAmb      IAmb      10 29 00.4
             comp=Z,4.7nm,1.2s
TASM   ASL Pad, Albuq      16.97 108    IAmb      IAmb      10 29 04.7
             comp=Z,6.6nm,1.3s
ANMO   Albuquerque         16.98 108    Pn        P         10 28 59.6 +1.0
             comp=Z,0.2nm,0.3s,baz=308,slow=12,SNR=10
ANMO                                    LR        LR        10 36 36.1
             comp=Z,119nm,19.4s,baz=296,slow=41
             comp=Z,1.2nm,0.6s
T25A   Trinidad            17.47  99    IAmb      IAmb      10 29 08.9
             comp=Z,29nm,1.2s
R33M   Jennings River      17.62 352    IAmb      IAmb      10 29 10.6
             comp=Z,31nm,1.2s
KSCO   Kaye Shedlock'      18.16  92    IAmb      IAmb      10 29 13.4
             comp=Z,49nm,1.3s
P33M   Teslin, Yukon       18.64 350    IAmb      IAmb      10 29 25.6
             comp=Z,30nm,1.2s
RTBA   Rita Blanca         18.98  99    IAmb      IAmb      10 29 25.7
             comp=Z,26nm,1.2s
K30B   Basset              19.63  79              P         10 29 25.9 -1.7
K30B                                    IAmb      IAmb      10 29 32.3
             comp=Z,41nm,1.0s
SUSD   Miller              19.95  74    IAmb      IAmb      10 29 37.4
             comp=Z,22nm,1.1s
PH02   Texas Public H      20.01 101    IAmb      IAmb      10 29 46.0
             comp=Z,25nm,1.4s
FFC    Flin Flon           20.35  43    IAmb      IAmb      10 29 40.6
             comp=Z,21nm,1.1s
BGNE   Belgrade            20.91  82    IAmb      IAmb      10 29 45.5
             comp=Z,31nm,1.0s
R32A   Long Quarter,       21.25  91    IAmb      IAmb      10 29 49.4
             comp=Z,36nm,1.4s
SMWD   Samnorwood          21.39 100    IAmb      IAmb      10 29 50.8
             comp=Z,21nm,1.1s
POST   Post                21.47 107    IAmb      IAmb      10 29 53.9
             comp=Z,16nm,1.2s
YKA    Yellowknife Ar      21.61  15    P         P         10 29 50.7 +1.9
             comp=Z,14nm,1.1s,baz=210,slow=12,SNR=41
YKA                                     LR        LR        10 38 50.1
             comp=Z,114nm,19.4s,baz=238,slow=39
             comp=Z,14nm,1.1s
YKAW1  Yellowknife Wh      21.62  15    IAmb      IAmb      10 29 59.6
             comp=Z,28nm,0.9s
YKAW3  Yellowknife Wh      21.67  15    IAmb      IAmb      10 30 00.1
             comp=Z,22nm,0.9s
ECSD   EROS Data Cent      21.69  76    IAmb      IAmb      10 29 52.6
             comp=Z,23nm,0.9s
F33A   5 Mile Ranch,       21.80  70    IAmb      IAmb      10 29 54.9
             comp=Z,34nm,1.2s
TX31   Lajitas Ar. Si      22.18 118              P         10 29 55.1 -0.3
TX31                                    IAmb      IAmb      10 30 01.4
             comp=Z,19nm,1.4s
TXAR   Lajitas Array       22.18 118    P         P         10 29 58.0 +2.6
             comp=Z,6.5nm,1.1s,baz=295,slow=7.3,SNR=26
             comp=Z,6.5nm,1.1s
LPIG   La Paz              22.23 139    LR        LR        10 37 53.0
             comp=Z,156nm,20.0s,baz=326,slow=35
APMT   Aspermont           22.32 104    IAmb      IAmb      10 29 59.9
             comp=Z,12nm,1.3s
ULM    Lac du Bonnet       22.43  58    P         P         10 29 59.6 +1.9
             comp=Z,9.7nm,0.8s,baz=266,slow=10,SNR=8.9
ULM                                     LR        LR        10 39 10.6
             comp=Z,255nm,18.6s,baz=261,slow=38
             comp=Z,9.7nm,0.8s
ULM    Lac du Bonnet       22.43  58              P         10 29 57.0 -0.8
ULM                                     IAmb      IAmb      10 30 00.8
             comp=Z,26nm,1.2s
CROK   Carrier             22.47  95    P         P         10 29 57.7 -0.6
KSU1   Kansas State U      22.61  88    IAmb      IAmb      10 30 09.7
             comp=Z,25nm,1.1s
WMOK   Wichita Mounta      22.62 100    IAmb      IAmb      10 30 12.1
             comp=Z,14nm,1.1s
K29M   Barlow Dome         22.81 347    IAmb      IAmb      10 30 15.2
             comp=Z,11nm,1.1s
SAND   Sanderson           22.82 114    IAmb      IAmb      10 30 15.6
             comp=Z,12nm,0.9s
OZNA   Ozona               22.92 111    IAmb      IAmb      10 30 14.3
             comp=Z,10nm,1.1s
KDAK   Kodiak Island       22.95 322    LR        LR        10 36 32.5
             comp=Z,194nm,18.6s,baz=124,slow=30
ABTX   Abilene, Hawle      23.03 105    IAmb      IAmb      10 30 08.1
             comp=Z,25nm,1.3s
OK048  Pawnee Station      23.28  94    IAmb      IAmb      10 30 19.0
             comp=Z,16nm,1.0s
T35A   Sooner Cattle       23.41  93    IAmb      IAmb      10 30 11.5
             comp=Z,21nm,1.0s
FNO    Franklin            23.41  97    IAmb      IAmb      10 30 11.6
             comp=Z,7.8nm,0.9s
EPLO   Experimental L      23.72  60    IAmb      IAmb      10 30 13.8
             comp=Z,22nm,1.2s
DEOK   Depew               23.84  95    IAmb      IAmb      10 30 19.8
             comp=Z,21nm,1.1s
JCT    Junction City       24.11 110    IAmb      IAmb      10 30 20.1
             comp=Z,22nm,1.5s
DRIO   Del Rio             24.18 113    IAmb      IAmb      10 30 27.7
             comp=Z,9.7nm,0.8s
BRDY   Brady               24.21 107    IAmb      IAmb      10 30 20.1
             comp=Z,7.5nm,1.0s
H31M   Peel River          24.24 352    IAmb      IAmb      10 30 28.4
             comp=Z,20nm,1.1s
SPMN   Marine on St.       24.27  71    IAmb      IAmb      10 30 20.6
             comp=Z,18nm,1.0s
TUL3   Leonard             24.33  94    IAmb      IAmb      10 30 19.8
             comp=Z,18nm,1.1s
N38A   Joes South For      24.66  82    IAmb      IAmb      10 30 31.5
             comp=Z,22nm,1.2s
P38A   Dawn                24.75  85    IAmb      IAmb      10 30 24.4
             comp=Z,15nm,1.0s
U38A   Gravette            25.17  92    IAmb      IAmb      10 30 28.8
             comp=Z,16nm,1.2s
HHAR   Hobbs               25.56  92    IAmb      IAmb      10 30 33.5
             comp=Z,21nm,1.2s
ILAR   Eielson Array       25.65 340    P         P         10 30 29.2 +0.7
             comp=Z,0.9nm,0.9s,baz=133,slow=8.3,SNR=6.1
ILAR                                    LR        LR        10 38 08.1
             comp=Z,106nm,21.7s,baz=106,slow=31
             comp=Z,0.9nm,0.9s
G29M   Pine Creek          25.75 349    IAmb      IAmb      10 30 37.3
             comp=Z,15nm,0.9s
I40A   Norwalk             25.98  74    IAmb      IAmb      10 30 37.1
             comp=Z,10.0nm,0.8s
R40A   Maddies Statio      26.09  87    IAmb      IAmb      10 31 04.4
             comp=Z,7.9nm,1.1s
MGMO   Mountain Grove      26.48  89    IAmb      IAmb      10 30 51.9
             comp=Z,13nm,1.3s
INK    Inuvik              26.61 354    LR        LR        10 39 41.4
             comp=Z,188nm,20.9s,baz=150,slow=33
WHAR   Wooly Hollow        27.19  93    IAmb      IAmb      10 30 56.0
             comp=Z,15nm,1.1s
T42A   Van Buren           27.40  89    IAmb      IAmb      10 30 56.5
             comp=Z,7.3nm,0.9s
E27K   Coleen River        27.47 348    IAmb      IAmb      10 30 56.9
             comp=Z,15nm,1.4s
LCAR   Lake Charles        27.72  91    IAmb      IAmb      10 30 60.0
             comp=Z,8.0nm,1.2s
TKL    Tuckaleechee C      33.38  87    LR        LR        10 45 54.8
             comp=Z,194nm,20.1s,baz=314,slow=38
SADO   Sadowa              33.92  69    LR        LR        10 45 40.0
             comp=Z,175nm,18.5s,baz=311,slow=37
RES    Resolute Bay        35.67  14    LR        LR        10 45 42.3
             comp=Z,127nm,19.7s,baz=210,slow=35
FRB    Frobisher Bay       39.20  36    LR        LR        10 50 17.8
             comp=Z,137nm,19.0s,baz=272,slow=39
SCHQ   Schefferville       40.19  50    LR        LR        10 50 04.2
             comp=Z,169nm,19.9s,baz=308,slow=38
SFJD   Kangerlussuaq       46.65  32    LR        LR        10 52 19.0
             comp=Z,255nm,21.4s,baz=266,slow=35
JTS    Las Juntas de       47.96 119    LR        LR        10 55 09.8
             comp=Z,34nm,18.6s,baz=334,slow=38
PETK   Petropavlovsk-      50.20 310    LR        LR        10 54 06.2
             comp=Z,53nm,18.2s,baz=276,slow=35
TAOE   Nuku Hiva Isla      52.24 198    eLR       LR        10 49 04.4
             comp=Z,188nm,25.5s
SJG    San Juan            55.95  96    LR        LR        11 02 36.4
             comp=Z,30nm,18.1s,baz=272,slow=40
SPITS  Spitsbergen Ar      57.93   9    LR        LR        11 00 56.2
             comp=Z,58nm,18.8s,baz=296,slow=37
BORG   Borgarnes           58.62  29    LR        LR        11 00 57.2
             comp=Z,186nm,21.3s,baz=298,slow=37
SDV    Santo Domingo       58.76 108    LR        LR        11 02 22.2
             comp=Z,56nm,20.4s,baz=278,slow=38
ROSC   El Rosal            59.05 114    LR        LR        11 03 53.8
             comp=Z,21nm,21.8s,baz=48,slow=40
H11N3  WAKE ISLAND Hy      60.06 270    T         T         11 39 57.9
             baz=52,slow=75,SNR=85
H11N2  WAKE ISLAND Hy      60.06 270    T         T         11 39 58.0
             baz=52,slow=75,SNR=52
H11N1  WAKE ISLAND Hy      60.08 270    T         T         11 40 04.7
             baz=52,slow=75,SNR=71
PPT    Papeete             63.13 205    LR        LR        10 57 03.7
             comp=Z,62nm,21.6s,baz=54,slow=30
PPT2   Papeete2            63.15 205    eLR       LR        10 54 01.9
             comp=Z,150nm,25.8s
PPT2                                    eLR       LR        10 54 08.1
             comp=Z,147nm,26.0s
RKT    Rikitea             65.34 189    eLR       LR        10 55 11.6
             comp=Z,1µm,25.2s
ARCES  ARCESS Array B      66.80  10    LR        LR        11 05 04.6
             comp=Z,81nm,19.9s,baz=347,slow=36
TBI    Tubuai              68.53 203    eLR       LR        10 56 40.3
             comp=Z,609nm,26.2s
RAR    Rarotonga           70.19 213    LR        LR        10 59 14.1
             comp=Z,86nm,18.9s,baz=137,slow=29
RPN    Rapa Nui            70.57 164    LR        LR        11 01 41.4
             comp=Z,38nm,19.0s,baz=236,slow=31
NOA    NORSAR Array B      71.58  20    LR        LR        11 06 27.3
             comp=Z,84nm,19.0s,baz=325,slow=35
EKA    Eskdalemuir Ar      71.60  30    LR        LR        11 08 47.8
             comp=Z,156nm,18.4s,baz=28,slow=37
HFS    Hagfors             72.99  20    LR        LR        11 06 48.9
             comp=Z,42nm,19.9s,baz=332,slow=34
MDP    Montagnes des       74.39  97    LR        LR        11 12 24.2
             comp=Z,34nm,19.1s,baz=311,slow=38
JNU    Nakatsue            77.12 303    LR        LR        11 08 20.1
             comp=Z,33nm,20.9s,baz=22,slow=34
KIRV   Kirov               79.67   2    LR        LR        11 17 28.4
             comp=Z,30nm,18.3s,baz=322,slow=40
GUMO   Guam                80.26 279    LR        LR        11 08 24.3
             comp=Z,64nm,18.3s,baz=75,slow=32
ZALV   Zalesovo Beam       80.75 342    LR        LR        11 17 16.7
             comp=Z,27nm,18.0s,baz=346,slow=39
ARTI   Arti                81.86 357    LR        LR        11 16 56.6
             comp=Z,41nm,18.4s,baz=14,slow=38
HHC    Hu-ho-hao-te        82.34 320    eP        P         10 37 18.5 -2.6
HHC                                     pmax      pmax
             comp=Z,8.0nm,0.6s
HHC                                     pmax      pmax
             comp=Z,170nm,4.1s
GERES  GERESS Array B      82.84  25    LR        LR        11 15 09.9
             comp=Z,132nm,18.2s,baz=305,slow=36
VRAC   Vranov              83.33  23    LR        LR        11 14 10.7
             comp=Z,42nm,19.4s,baz=300,slow=36
DAVOX  Davos/Dischmat      83.34  29    LR        LR        11 16 04.5
             comp=Z,104nm,18.4s,baz=260,slow=37
BVAR   Borovoye Array      84.23 350    P         P         10 37 32.8 +2.4
             comp=Z,0.7nm,0.6s,baz=338,slow=3.2,SNR=5.5
BVAR                                    LR        LR        11 16 37.9
             comp=Z,36nm,21.7s,baz=344,slow=37
             comp=Z,0.7nm,0.6s
AKASG  Malin Array Be      85.17  15    LR        LR        11 14 45.5
             comp=Z,111nm,18.9s,baz=319,slow=35
AKTO   Aktyubinsk          87.83 357    LR        LR        11 19 18.0
             comp=Z,33nm,19.4s,baz=340,slow=37
MKAR   Makanchi Array      88.00 341    LR        LR        11 18 01.3
             comp=Z,38nm,21.5s,baz=338,slow=36
DZM    Mont Dzumac         89.05 239    eLR       LR        11 06 09.3
             comp=Z,65nm,22.1s
WMQ    Urumqi              89.27 336    eP        P         10 37 54.5 -0.8
WMQ                                     pmax      pmax
             comp=Z,10.0nm,0.7s
BDFB   Brasilia            91.82 109    LR        LR        11 22 46.1
             comp=Z,34nm,19.1s,baz=58,slow=38
PZH    PanZhiHua           98.69 318    P         P         10 38 38.8 -0.1
```

OSPL ***28*** *10:39:53.5±1.5, 19°.36N×64°.62W, h0*^{km}*±128*^{km}*, ML3.3, Presumed earthquake*

NEIC ***28*** *10:39:54.4±0.9, 19°.4N±0°.1×64°.81W±0°.06, h10*^{km}*±2*^{km}*, ML3.4/24, Md3.7/9(RSPR), Error ellipse: s-maj=17.1km s-min=9.7km az=1.0*

RSPR ***28*** *10:39:58.2, 19°.36N×64°.83W, h49*^{km}*±17*^{km}*, MD3.7/9*

ISC 28 10:39:58.4±1.7**, 19°.32N**±0°.09×**64°.98W**±0°.06**, h23**^{km}**, n70, σ1**^{s}**12**/66**, 4C-8D, Virgin Islands**

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Code   Station Name          Δ°  AZ°    Phase ID            Time      Res
                                        Op        ISC       h  m  s   ISC
HUMP   Col San Antoni       1.43 215              Pn        10 40 22.4 -0.5
HUMP                                              Sn        10 40 40.9  0.0
HUMP   Col San Antoni       1.43 215    IAML                10 40 48.7
             321nm,0.3s
HUMP                                    IAML                10 40 52.7
             368nm,0.2s
HUMP   Col San Antoni       1.43 215⇓ iP          Pn        10 40 22.7 -0.2
HUMP   Col San Antoni       1.43 215  eS          Sn        10 40 40.9  0.0
GCPR   Guaynabo City        1.45 226              Pn        10 40 22.4 -0.7
GCPR   Guaynabo City        1.45 226⇓ iP          Pn        10 40 22.7 -0.4
GCPR   Guaynabo City        1.45 226  eS          Sb        10 40 42.6 +0.1
SJG    San Juan             1.63 223              Pn        10 40 25.3 -0.3
SJG                                     IAML                10 40 49.3
             254nm,0.4s
SJG    San Juan             1.63 223⇓ iP          Pn        10 40 25.5 -0.1
SJG    San Juan             1.63 223  eS          Sb        10 40 48.0 +0.2
SJG    San Juan             1.63 223  eP          Pn        10 40 22.8 -2.8
SJG    San Juan             1.63 223  i P         Pn        10 40 25.3 -0.3
SJG                                     IAML                10 40 48.1
             comp=Z,123nm,0.4s
ECPR   Experimental S       1.64 233    Pn        Pn        10 40 25.5 -0.3
ECPR                                    IAML                10 40 55.7
             comp=Z,526nm,0.5s
ECPR                                    IAML                10 40 59.0
             comp=Z,540nm,0.3s
ECPR   Experimental S       1.64 233⇓ iP          Pn        10 40 25.9 +0.2
ECPR   Experimental S       1.64 233  eS          Sb        10 40 47.8 -0.3
EMPR   Esperanza - Ma       1.68 241              Sb        10 40 49.2 -0.2
EMPR   Esperanza - Ma       1.68 241    Pn        Pn        10 40 26.5 +0.1
EMPR                                    IAML                10 40 59.1
             comp=Z,406nm,0.7s
EMPR                                    IAML                10 40 59.9
             comp=Z,516nm,0.7s
EMPR   Esperanza - Ma       1.68 241⇑ eP          Pn        10 40 26.8 +0.4
EMPR   Esperanza - Ma       1.68 241  eS          Sb        10 40 49.2 -0.2
AOPR   Arecibo Observ       1.93 240              Pn        10 40 29.8 -0.1
AOPR   Arecibo Observ       1.93 240⇑ iP          Pn        10 40 29.7 -0.2
AOPR   Arecibo Observ       1.93 240  eS          Sn        10 40 54.7 +1.3
AOPR   Arecibo Observ       1.93 240  eP          Pn        10 40 29.5 -0.3
CELP   Cerrillos            1.95 231    Pn        Pn        10 40 30.0 -0.1
CELP                                    IAML                10 41 02.4
             comp=Z,169nm,0.8s
UUPR   Utuado, UPR, P       1.96 238    Pn        Pn        10 40 29.8 -0.3
OBIP   Obispado Ponce       1.99 231              Pn        10 40 30.8 +0.2
OBIP                                              Sn        10 40 56.7 +1.8
OBIP   Obispado Ponce       1.99 231⇑ iP          Pn        10 40 30.9 +0.2
OBIP   Obispado Ponce       1.99 231  eS          Sb        10 40 56.9 -1.4
AGPR   Aguadilla, PR        2.18 248    Pn        Pn        10 40 33.0 -0.3
AGPR                                    IAML                10 41 09.0
             comp=Z,183nm,0.4s
AGPR                                    IAML                10 41 12.0
             comp=Z,139nm,0.9s
AGPR   Aguadilla, PR        2.18 248⇑ eP          Pn        10 40 33.2  0.0
AGPR   Aguadilla, PR        2.18 248  eS          Sn        10 41 01.0 +1.4
AGPR   Aguadilla, PR        2.18 248  i P         Pn        10 40 33.2 -0.1
GBPR   Guanica, Bosqu       2.24 234              Pn        10 40 35.0 +1.0
GBPR   Guanica, Bosqu       2.24 234⇑ eP          Pn        10 40 35.0 +1.0
LSP    Las Mesas            2.29 241              Pn        10 40 35.2 +0.4
LSP                                               Sb        10 41 05.4 -1.5
LSP    Las Mesas            2.29 241⇑ eP          Pn        10 40 35.2 +0.4
LSP    Las Mesas            2.29 241  eS          Sb        10 41 05.4 -1.5
PRSN   Puerto Rico Se       2.32 242    Pn        Pn        10 40 35.4 +0.3
PRSN   Puerto Rico Se       2.32 242⇓ eP          Pn        10 40 35.9 +0.7
PRSN   Puerto Rico Se       2.32 242  eS          Sn        10 41 03.6 +0.7
SABA   Saba                 2.36 135    Pn        Pn        10 40 32.0 -3.8
SABA                                    IAML                10 41 32.6
             comp=N,276nm,0.6s
MLPR   Magueyes Islan       2.37 236⇓ iP          Pn        10 40 36.1 +0.3
MLPR   Magueyes Islan       2.37 236  eS          Sb        10 41 07.0 -2.1
CRPR   Cabo Rojo, PR        2.40 237    Pn        Pn        10 40 36.1 -0.2
CRPR                                    IAML                10 41 28.4
             comp=N,98nm,1.0s
CRPR   Cabo Rojo, PR        2.40 237⇓ eP          Pn        10 40 36.5 +0.3
CRPR   Cabo Rojo, PR        2.40 237  eS          Sn        10 41 05.9 +1.0
CRPR   Cabo Rojo, PR        2.40 237  i P         Pn        10 40 36.4 +0.2
IDE    Isla Desecheo        2.53 249              Pn        10 40 37.9 -0.2
IDE                                               Sn        10 41 10.3 +2.1
IDE    Isla Desecheo        2.53 249⇓ eP          Pn        10 40 37.9 -0.2
IDE    Isla Desecheo        2.53 249  eS          Sn        10 41 10.3 +2.1
SKI    Saint Kitts          2.91 132  eP          Pn        10 40 43.9 +0.7
ANWB   Willy Bob            3.45 118  eP          Pn        10 40 42.4 -8.2
MLYT   Lee's Yard           3.70 134  eP          Pn        10 40 52.5 -1.7
DR12   Loma Pena Alta       4.19 264    Pn        Pn        10 41 00.3 -0.7
ATGZ   Broadband at L       4.46 135  eP          Pn        10 41 03.9 -0.7
MMLZ   Guadeloupe Bro       4.54 135  eP          Pb        10 41 17.5 +0.2
DSLB   Salisbury            5.14 138  eP          Pn        10 41 13.5 -0.5
LOPP1  Punta Rusia, P       5.88 276  i P         Pn        10 41 23.2 -1.0
SDDR   Presa de Saban       5.97 268              Pn        10 41 26.0 +0.6
SDDR   Presa de Saban       5.97 268  i P         Pn        10 41 25.8 +0.4
SDDR                                  eS          Sn        10 42 33.5 +0.4
SDDR                                    IAML                10 42 40.9
             comp=Z,16nm,1.5s
LODU1  El Espartillar       6.22 262  i P         Pn        10 41 29.7 +0.9
LOBH   Bahia de las A       6.47 258  i P         Pn        10 41 32.4 +0.1
MASC   Masc                 8.75 277  eP          Pn        10 41 59.5 -4.1
MASC                                  eS          Sn        10 43 30.3  -11
MASC                                    IAmb      IAmb      10 43 50.5
             comp=N,118nm,1.6s
MASC                                    IAmb      IAmb      10 44 12.7
             comp=E,187nm,2.0s
QMBU   Quimbuelo            9.30 277  eP          Pn        10 42 05.7 -5.3
QMBU                                  eS          Sn        10 43 41.2  -14
MOAC   Moa                  9.47 280  eP          Pn        10 42 08.5 -5.0
NMDO   Nuevo Mundo          9.49 279    Pn        Pn        10 42 09.1 -4.6
NMDO   Nuevo Mundo          9.49 279  eP          Pn        10 42 08.5 -5.1
GTBY   Guantanamo Bay       9.56 275  eP          Pn        10 42 09.7 -5.0
RCC    Rio Carpintero      10.12 276  eP          Pn        10 42 16.9 -5.4
PINC   Pinares de May      10.23 278  eP          Pn        10 42 19.0 -4.9
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NEIC ***28*** *11:03:48.5±2.1, 42°.02N±0°.06×126°.1W±0°.1, h10*^{km}*±2*^{km}*, mb4.5/80, ML3.8/99, Error ellipse: s-maj=14.5km s-min=9.6km az=280.0*

GCMT ***28*** *11:03:50.5±0.2, 42°.05N±0°.01×126°.38W±0°.02, h17*^{km}*±1*^{km}*, MW4.9/102, Moment Tensor Solution. s32,c36; s102,c155; Duration: 0 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*0.05±.09;* $M_{\theta\theta}$*-2.44±.07;* $M_{\phi\phi}$*2.39±.08;* $M_{r\theta}$*-0.51±.20;* $M_{\theta\phi}$*0.91±.07;* $M_{\phi r}$*-0.23±.17; Best double couple:* M_0*2.64000×10*^{16} *NP1:*ϕ_s*146.00000°, δ78.00000°, λ-178.00000°. NP2:*ϕ_s*55.00000°, δ88.00000°, λ-12.00000°. Principal axes: T 2.5970, Plg7.0000°, Azm101.0000°; N 0.0850, Plg78.0000°, Azm228.0000°; P -2.6830, Plg10.0000°, Azm10.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***28*** *11:03:50.0±0.9, 42°.15N×125°.91W, h0*^{km}*, mb4.1/12, mbtmp4.0/19, ML3.5/8, MS4.0/66 Error ellipse: s-maj=19.4km s-min=8.5km az=38.0*

ISC 28 11:03:50.5±0.7**, 42°.02N**±0°.05×**125°.96W**±0°.08**, h11**^{km}**, n165, σ1**^{s}**47**/62**, mb4.4**/38**, MS4.0**/61**, Off coast of Oregon**

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Code   Station Name          Δ°  AZ°    Phase ID            Time      Res
                                        Op        ISC       h  m  s   ISC
KBO    Bosley Butte         1.30  81              Pn        11 04 13.7 -1.0
KBO                                     IAML                11 04 54.5
             comp=E,916nm,1.7s
KEBM   Edson Butte          1.47  54              Pn        11 04 15.9 -1.2
KEBM                                    Sn        Sn        11 04 35.1 -1.3
KSXB   Camp Six Broad       1.57  96              Pn        11 04 17.4 -1.0
KRPM   Rodgers              1.69 120              Pn        11 04 19.0 -1.0
KRPM                                    IAML                11 05 05.5
             comp=E,719nm,2.1s
KRPM                                    IAML                11 05 07.4
             comp=N,658nm,1.8s
L02F   Cave Junction        1.78  86              Pn        11 04 20.3 -0.9
K02D   Willamette Mer       1.83  68              Pn        11 04 21.1 -0.8
K02D                                    IAML                11 04 50.1
             comp=E,624nm,1.8s
JCC    Jacoby Creek,        1.89 129              Pn        11 04 21.2 -1.4
KHMM   Horse Mountain       2.03 124              Pn        11 04 23.7 -1.0
KHMM                                    IAML                11 04 58.2
             comp=N,383nm,1.6s
KHMM                                    IAML                11 05 10.3
             comp=E,380nm,1.6s
KMPM   Mount Pierce         2.12 138              Pn        11 04 24.4 -1.6
KMPM                                    IAML                11 04 54.4
             comp=E,756nm,1.4s
KMPM                                    IAML                11 04 57.4
             comp=N,583nm,0.7s
M02C   Callahan             2.41 104              Pn        11 04 30.3 +0.3
YBH    Yreka Blue Hor       2.44  96    Pn        Pn        11 04 31.1 +0.7
             comp=N,1.1nm,0.3s,baz=271,slow=7.8,SNR=94
YBH                                     LR        LR        11 05 00.3
             comp=N,65nm,20.8s,baz=278,slow=29
YBH                                     Sn        Sn        11 05 01.8 +1.5
             comp=N,0.5nm,0.3s,baz=212,slow=16,SNR=3.9
YBH    Yreka Blue Hor       2.44  96              Pn        11 04 31.3 +0.9
KHBM   Hayfork Bally        2.47 122              Pn        11 04 30.4 -0.5
KHBM                                    IAML                11 05 03.6
             comp=N,253nm,0.7s
KMRM   Mail Ridge           2.48 136              Pn        11 04 30.1 -0.7
KMRM                                    IAML                11 05 06.2
             comp=N,301nm,1.1s
KMRM                                    IAML                11 05 13.0
             comp=E,405nm,1.5s
I03D   Drain, OR            2.55  48              Pn        11 04 30.5 -1.2
I03D                                    IAML                11 05 06.6
             comp=E,270nm,1.8s
I03D                                    IAML                11 05 07.0
             comp=N,263nm,0.8s
BBOR   Butler Butte         2.58  69              Pn        11 04 32.6 +0.3
BBOR                                    IAML                11 05 10.6
             comp=E,350nm,1.8s
I02E   Swisshome, OR        2.60  36              Pn        11 04 31.7 -0.7
I02E                                    IAML                11 05 06.0
             comp=E,444nm,0.7s
I02E                                    IAML                11 05 10.9
             comp=N,403nm,0.6s
N02D   Trinity Center       2.66 112              Pn        11 04 33.7 +0.3
L04D   Klamath Falls        2.73  85              Pn        11 04 35.2 +0.9
L04D                                    IAML                11 05 37.0
             comp=E,237nm,1.5s
KCPM   Cahto Peak           2.95 141              Pn        11 04 36.3 -1.1
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KCPM				IAML		11 05 18.7	
	comp=N,414nm,0.9s						
O02D	**Mt. Diablo Mer**	**3.02**	**126**		**Pn**	**11 04 38.7**	**+0.3**
BUCK	**Buck Mountain**	**3.08**	**44**		**Pn**	**11 04 38.5**	**-0.6**
J04A	**Umpqua Nationa**	**3.09**	**66**		**Pn**	**11 04 40.9**	**+1.4**
I04A	**Tendick Farm,**	**3.15**	**55**		**Pn**	**11 04 40.3**	**+0.2**
I04A				IAML		11 05 23.2	
	comp=N,304nm,1.7s						
I04A				IAML		11 05 24.0	
	comp=E,347nm,1.8s						
COR	**Corvallis**	**3.21**	**36**		**Pn**	**11 04 40.3**	**-0.6**
DCMP	**DeCamp, Califo**	**3.24**	**141**		**Pn**	**11 04 39.4**	**-1.8**
H04D	**Lebanon**	**3.43**	**42**		**Pn**	**11 04 44.0**	**+0.1**
H04D				IAML		11 05 50.6	
	comp=N,208nm,1.6s						
O03E	**Paynes Creek**	**3.58**	**117**		**Pn**	**11 04 47.0**	**+0.9**
O03E				IAML		11 05 37.1	
	comp=E,109nm,1.0s						
WIFE	**Three Sisters-**	**3.66**	**55**		**Pn**	**11 04 47.7**	**+0.5**
WIFE				IAML		11 05 45.9	
	comp=N,217nm,1.0s						
WIFE				IAML		11 05 57.9	
	comp=E,209nm,1.5s						
J05D	**Fort Rock, OR**	**3.71**	**69**		**Pn**	**11 04 48.4**	**+0.6**
J05D				IAML		11 06 08.0	
	comp=E,145nm,3.1s						
J05D				IAML		11 06 16.5	
	comp=N,150nm,2.2s						
HOPS	**Hopland Field**	**3.74**	**143**	Pn	**Pn**	**11 04 46.6**	**-1.5**
G03D	**McMinnville, O**	**3.74**	**31**		**Pn**	**11 04 47.5**	**-0.6**
G03D				IAML		11 05 46.1	
	comp=E,202nm,1.1s						
G03D				IAML		11 05 48.5	
	comp=N,202nm,1.9s						
K05A	**Summer Lake**	**3.82**	**78**		**Pn**	**11 04 49.8**	**+0.4**
K05A				IAML		11 07 14.8	
	comp=E,103nm,4.9s						
K05A				IAML		11 07 17.4	
	comp=N,139nm,4.4s						
H04A	**Detroit Lake**	**3.83**	**45**		**Pn**	**11 04 48.8**	**-0.6**
H04A				IAML		11 05 36.6	
	comp=N,208nm,0.4s						
H04A				IAML		11 05 39.9	
	comp=E,199nm,0.4s						
PINE	**Pine Mountain**	**4.09**	**63**	IAML		11 06 45.9	
	comp=E,81nm,4.8s						
PINE				IAML		11 07 08.1	
	comp=N,83nm,4.3s						
I05D	**Terrebonne, OR**	**4.10**	**54**	IAML		11 06 10.5	
	comp=E,138nm,1.9s						
I05D				IAML		11 07 12.8	
	comp=N,122nm,4.9s						
MNRC	**McLaughlin Min**	**4.13**	**138**	IAML		11 06 41.0	
	comp=N,67nm,3.1s						
ORV	**Oroville**	**4.19**	**125**	IAML		11 05 49.3	
	comp=N,83nm,0.7s						
ORV				IAML		11 05 50.0	
	comp=E,101nm,0.7s						
SUTB	**Sutter Butte**	**4.23**	**130**	IAML		11 05 51.6	
	comp=E,130nm,0.4s						
SUTB				IAML		11 05 52.3	
	comp=N,84nm,0.5s						
G06A	**Carlson Farm,**	**5.03**	**48**	IAML		11 07 30.0	
	comp=E,38nm,4.6s						
G06A				IAML		11 07 42.9	
	comp=N,48nm,4.5s						
NVAR	**Mina Array Bea**	**6.87**	**119**	Pn	**Pn**	**11 05 33.5**	**+2.1**
	comp=N,1.0nm,0.3s,baz=297,slow=14,SNR=22						
NVAR				Sn	**Sn**	**11 06 52.1**	**+2.5**
	baz=315,slow=18						
	comp=N,3.3nm,0.6s						
ELK	**Elko**	**8.16**	**95**	Pn	**Pn**	**11 05 51.6**	**+2.5**
	comp=N,0.2nm,0.3s,baz=285,slow=12,SNR=21						
ELK				LR	LR	11 09 17.9	
	comp=N,2µm,21.0s,baz=304,slow=40						
	comp=N,3.9nm,0.7s						
NEW	**Newport**	**8.83**	**42**	Pn	**Pn**	**11 05 59.6**	**+1.6**
	comp=N,0.2nm,0.3s,baz=250,slow=12,SNR=3.8						
	comp=N,2.2nm,0.8s						
BBB	**Bella Bella**	**10.27**	**353**	Pn	**Pn**	**11 06 17.8**	**+0.1**
	comp=N,0.5nm,0.3s,baz=192,slow=13,SNR=3.1						
BBB				LR	LR	11 09 23.3	
	comp=N,1µm,19.7s,baz=190,slow=33						
	comp=N,48nm,1.0s						
PFO	**Pinyon Flats O**	**11.26**	**135**	Pn	**Pn**	**11 06 35.3**	**+3.9**
	comp=N,0.1nm,0.3s,baz=3.6,slow=15,SNR=1.7						
PFO				LR	LR	11 11 00.9	
	comp=N,213nm,18.6s,baz=308,slow=38						
	comp=N,1.8nm,0.8s						
PDAR	**Pinedale Array**	**12.15**	**81**	Pn	**Pn**	**11 06 46.8**	**+3.1**
	comp=N,0.1nm,0.3s,baz=260,slow=8.9,SNR=14						
PDAR				LR	LR	11 11 49.9	
	comp=N,605nm,19.9s,baz=256,slow=40						
	comp=N,2.2nm,0.9s						
HAYD	**Hayden**	**14.15**	**90**	P	**P**	**11 07 14.2**	**-4.4**
TUC	**Tucson**	**15.48**	**124**		**Pn**	**11 07 27.8**	**-1.1**
ISCO	**Idaho Springs**	**15.54**	**91**		**Pn**	**11 07 30.1**	**+0.2**
Q24A	**Divide**	**16.12**	**94**	Pn	**Pn**	**11 07 34.8**	**-2.5**
RSSD	**Black Hills**	**16.16**	**75**	Pn	**Pn**	**11 07 34.9**	**-2.7**
TASM	**ASL Pad, Albuq**	**16.80**	**108**	IAmb	IAmb	11 08 02.0	
	comp=Z,8.9nm,1.4s						
TASM	**ASL Pad, Albuq**	**16.80**	**108**	IAmb	IAmb	11 08 01.9	
	comp=Z,9.0nm,1.4s						
ANMO	**Albuquerque**	**16.81**	**108**	Pn	**P**	**11 07 47.9**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=301,slow=12,SNR=13						
ANMO				LR	LR	11 14 50.1	
	comp=Z,1µm,19.9s,baz=299,slow=39						
	comp=Z,1.4nm,0.6s						
319A	**Douglas**	**17.05**	**123**	IAmb	IAmb	11 08 00.9	
	comp=Z,40nm,1.3s						
T25A	**Trinidad**	**17.30**	**99**	IAmb	IAmb	11 07 58.4	
	comp=Z,60nm,1.4s						
KSCO	**Kaye Shedlock'**	**17.98**	**92**	IAmb	IAmb	11 08 03.8	
	comp=Z,18nm,0.8s						
P33M	**Teslin, Yukon**	**18.70**	**349**	IAmb	IAmb	11 08 21.5	
	comp=Z,57nm,1.4s						
MNTX	**Cornudas Mount**	**19.38**	**115**	IAmb	IAmb	11 08 25.0	
	comp=Z,22nm,1.4s						
K30B	**Basset**	**19.46**	**79**	IAmb	IAmb	11 08 22.4	
	comp=Z,32nm,1.0s						
MSTX	**Muleshoe**	**19.92**	**106**	IAmb	IAmb	11 08 40.0	
	comp=Z,22nm,1.5s						
VHRN	**Van Horn**	**20.21**	**117**	IAmb	IAmb	11 08 39.2	
	comp=Z,12nm,1.1s						
FFC	**Flin Flon**	**20.25**	**43**	IAmb	IAmb	11 08 33.0	
	comp=Z,40nm,1.1s						
AMTX	**Amarillo**	**20.27**	**103**	IAmb	IAmb	11 08 32.6	
	comp=Z,41nm,1.1s						
POST	**Post**	**21.30**	**107**	IAmb	IAmb	11 08 44.6	
	comp=Z,12nm,1.1s						
ECSD	**EROS Data Cent**	**21.53**	**75**	IAmb	IAmb	11 08 42.7	
	comp=Z,20nm,0.9s						
YKA	**Yellowknife Ar**	**21.59**	**14**	P	**P**	**11 08 40.0**	**0.0**
	comp=Z,18nm,1.1s,baz=210,slow=12,SNR=29						
YKA				PcP	**PcP**	**11 12 42.1**	**+0.6**
	comp=Z,0.3nm,0.9s,baz=210,slow=3.5,SNR=2.1						
YKA				LR	LR	11 16 52.6	
	comp=Z,412nm,20.1s,baz=208,slow=36						
	comp=Z,18nm,1.1s						
YKAW3	**Yellowknife Wh**	**21.65**	**14**	IAmb	IAmb	11 08 49.8	
	comp=Z,28nm,0.9s						
TX31	**Lajitas Ar. Si**	**22.02**	**118**	IAmb	IAmb	11 08 51.8	
	comp=Z,18nm,1.2s						
TXAR	**Lajitas Array**	**22.02**	**118**	P	**P**	**11 08 47.3**	**+2.3**
	comp=Z,6.8nm,1.1s,baz=302,slow=7.2,SNR=27						
TXAR				LR	LR	11 18 40.6	
	comp=Z,306nm,21.7s,baz=298,slow=40						
	comp=Z,6.8nm,1.1s						
AGMN	**Agassiz Nation**	**22.04**	**63**	IAmb	IAmb	11 08 48.4	
	comp=Z,45nm,1.4s						
LPIG	**La Paz**	**22.11**	**139**	LR	LR	11 16 05.3	
	comp=Z,298nm,21.2s,baz=333,slow=33						
APMT	**Aspermont**	**22.16**	**105**	IAmb	IAmb	11 08 50.3	
	comp=Z,17nm,1.3s						
ULM	**Lac du Bonnet**	**22.29**	**58**	P	**P**	**11 08 48.0**	**+0.3**
	comp=Z,5.4nm,0.8s,baz=258,slow=10,SNR=7.7						
ULM				LR	LR	11 17 51.1	
	comp=Z,269nm,20.1s,baz=258,slow=38						
	comp=Z,5.4nm,0.8s						
ULM	**Lac du Bonnet**	**22.29**	**58**	IAmb	IAmb	11 08 50.5	
	comp=Z,28nm,1.3s						
HPIG		**22.42**	**126**	IAmb	IAmb	11 08 58.8	
	comp=Z,25nm,1.5s						
KSU1	**Kansas State U**	**22.44**	**88**	IAmb	IAmb	11 08 55.1	
	comp=Z,42nm,1.4s						
SAND	**Sanderson**	**22.66**	**114**	IAmb	IAmb	11 08 58.7	
	comp=Z,28nm,1.5s						
OZNA	**Ozona**	**22.76**	**111**	IAmb	IAmb	11 08 58.5	
	comp=Z,17nm,1.4s						
K29M	**Barlow Dome**	**22.87**	**347**	IAmb	IAmb	11 09 01.0	
	comp=Z,16nm,1.1s						
KDAK	**Kodiak Island**	**23.07**	**322**	LR	LR	11 15 26.9	
	comp=Z,425nm,20.4s,baz=123,slow=30						
DAWY	**Dawson**	**23.41**	**345**	IAmb	IAmb	11 09 09.5	
	comp=Z,16nm,1.3s						
DRIO	**Del Rio**	**24.01**	**113**	IAmb	IAmb	11 09 17.4	
	comp=Z,12nm,0.9s						
BRDY	**Brady**	**24.05**	**108**	IAmb	IAmb	11 09 09.7	
	comp=Z,11nm,1.2s						
SPMN	**Marine on St.**	**24.12**	**71**	IAmb	IAmb	11 09 10.3	
	comp=Z,10nm,0.9s						
I29M	**Ogilvie Camp,**	**24.41**	**347**	IAmb	IAmb	11 09 17.9	
	comp=Z,7.4nm,0.9s						
P38A	**Dawn**	**24.58**	**85**	IAmb	IAmb	11 09 14.0	
	comp=Z,14nm,1.1s						
J26L	**Joseph Creek**	**24.68**	**342**	IAmb	IAmb	11 09 17.4	
	comp=Z,12nm,1.0s						
U38A	**Gravette**	**25.00**	**92**	IAmb	IAmb	11 09 19.9	
	comp=Z,12nm,1.0s						
EPYK	**Eagle Plains**	**25.12**	**350**	IAmb	IAmb	11 09 22.2	
	comp=Z,14nm,1.0s						
ILAR	**Eielson Array**	**25.73**	**339**	P	**P**	**11 09 20.2**	**-0.4**
	comp=Z,1.2nm,0.9s,baz=143,slow=9.1,SNR=14						
ILAR				LR	LR	11 16 55.8	
	comp=Z,132nm,21.7s,baz=132,slow=31						
	comp=Z,1.2nm,0.9s						
R40A	**Maddies Statio**	**25.92**	**87**	IAmb	IAmb	11 10 05.7	
	comp=Z,5.3nm,0.9s						
FCC	**Fort Churchill**	**25.98**	**39**	IAmb	IAmb	11 09 41.1	
	comp=Z,16nm,1.4s						
INK	**Inuvik**	**26.65**	**354**	LR	LR	11 19 29.6	
	comp=Z,507nm,18.0s,baz=152,slow=35						
F28M	**Old Crow**	**26.73**	**348**	IAmb	IAmb	11 09 40.9	
	comp=Z,11nm,1.3s						
CCM	**Cathedral Cave**	**26.76**	**87**	IAmb	IAmb	11 09 38.7	
	comp=Z,8.4nm,1.2s						
E22K	**Anaktuvuk Pass**	**29.59**	**341**	IAmb	IAmb	11 10 02.1	
	comp=Z,11nm,1.4s						
D23K	**Nanushuk River**	**29.97**	**342**	IAmb	IAmb	11 10 05.4	
	comp=Z,7.9nm,1.1s						
TKL	**Tuckaleechee C**	**33.21**	**87**	LR	LR	11 24 44.4	
	comp=Z,376nm,19.9s,baz=298,slow=38						
SADO	**Sadowa**	**33.77**	**69**	LR	LR	11 25 13.4	
	comp=Z,327nm,18.7s,baz=307,slow=38						
RES	**Resolute Bay**	**35.65**	**14**	LR	LR	11 24 43.0	
	comp=Z,223nm,20.6s,baz=215,slow=35						
CMIG	**Matias Romero**	**36.38**	**124**	LR	LR	11 26 50.7	
	comp=Z,180nm,21.5s,baz=290,slow=38						
FRB	**Frobisher Bay**	**39.12**	**36**	LR	LR	11 26 23.4	
	comp=Z,281nm,18.9s,baz=272,slow=35						
SCHQ	**Schefferville**	**40.08**	**50**	LR	LR	11 28 53.0	
	comp=Z,233nm,21.7s,baz=288,slow=38						
SFJD	**Kangerlussuaq**	**46.58**	**32**	LR	LR	11 32 36.5	
	comp=Z,348nm,21.6s,baz=276,slow=37						
JTS	**Las Juntas de**	**47.80**	**119**	LR	LR	11 35 49.6	
	comp=Z,70nm,18.6s,baz=314,slow=40						
SEY	**Seymchan**	**50.02**	**324**	LR	LR	11 33 10.7	
	comp=Z,202nm,18.1s,baz=132,slow=35						
PETK	**Petropavlovsk-**	**50.34**	**310**	LR	LR	11 31 02.2	
	comp=Z,111nm,20.6s,baz=64,slow=32						
MA2	**Magadan**	**51.79**	**320**	LR	LR	11 33 53.8	
	comp=Z,116nm,18.9s,baz=118,slow=35						
TAOE	**Nuku Hiva Isla**	**52.27**	**198**	*e*LR	LR	11 27 53.8	
	comp=Z,489nm,27.3s						
TIXI	**Tiksi**	**55.19**	**338**	LR	LR	11 37 01.5	
	comp=Z,123nm,18.7s,baz=21,slow=36						
SJG	**San Juan**	**55.78**	**96**	LR	LR	11 41 34.9	
	comp=Z,89nm,18.1s,baz=278,slow=41						
SPITS	**Spitsbergen Ar**	**57.93**	**9**	P	**P**	**11 13 42.3**	**+0.2**
	comp=Z,19nm,1.1s,baz=330,slow=5.5,SNR=4.2						
SPITS				LR	LR	11 39 10.5	
	comp=Z,145nm,18.2s,baz=316,slow=37						
	comp=Z,19nm,1.1s						
BORG	**Borgarnes**	**58.55**	**29**	LR	LR	11 39 11.9	
	comp=Z,337nm,20.8s,baz=298,slow=36						
SDV	**Santo Domingo**	**58.59**	**108**	LR	LR	11 42 44.8	
	comp=Z,84nm,19.1s,baz=262,slow=40						
ROSC	**El Rosal**	**58.89**	**114**	LR	LR	11 42 32.9	
	comp=Z,53nm,21.0s,baz=58,slow=39						
YAK	**Yakutsk**	**59.93**	**328**	LR	LR	11 39 43.9	
	comp=Z,125nm,18.1s,baz=74,slow=36						
H11N3	**WAKE ISLAND Hy**	**60.23**	**270**	T	T	12 18 53.9	
	baz=52,slow=75,SNR=82						
H11N2	**WAKE ISLAND Hy**	**60.23**	**270**	T	T	12 18 46.0	
	baz=52,slow=75,SNR=38						
H11N1	**WAKE ISLAND Hy**	**60.25**	**270**	T	T	12 18 50.8	
	baz=52,slow=75,SNR=58						
H11S1	**WAKE ISLAND Hy**	**61.13**	**269**	T	T	12 19 56.3	
	baz=52,slow=75,SNR=126						
H11S2	**WAKE ISLAND Hy**	**61.13**	**269**	T	T	12 20 02.1	
	baz=52,slow=75,SNR=81						
H11S3	**WAKE ISLAND Hy**	**61.15**	**269**	T	T	12 19 53.6	
	baz=52,slow=75,SNR=71						
PPT	**Papeete**	**63.18**	**205**	LR	LR	11 35 52.1	
	comp=Z,153nm,21.4s,baz=42,slow=30						
PPT2	**Papeete2**	**63.20**	**205**	*e*LR	LR	11 32 50.8	
	comp=Z,396nm,26.0s						
PPT2				*e*LR	LR	11 32 59.2	
	comp=Z,300nm,28.2s						
ASAJ	**Asahikawa**	**63.31**	**306**	LR	LR	11 38 43.1	
	comp=Z,36nm,21.8s,baz=70,slow=33						
RKT	**Rikitea**	**65.35**	**189**	*e*LR	LR	11 34 05.0	
	comp=Z,2µm,28.0s						
NRIK	**Noril'sk**	**66.23**	**348**	LR	LR	11 43 26.6	
	comp=Z,63nm,21.2s,baz=46,slow=36						
ARCES	**ARCESS Array B**	**66.79**	**11**	LR	LR	11 44 25.6	
	comp=Z,156nm,20.0s,baz=350,slow=36						
TBI	**Tubuai**	**68.58**	**203**	*e*LR	LR	11 35 22.0	
	comp=Z,891nm,29.0s						
TBI				*e*LR	LR	11 35 29.8	
	comp=Z,2µm,29.5s						
RAR	**Rarotonga**	**70.26**	**213**	LR	LR	11 38 12.4	
	comp=Z,140nm,21.0s,baz=56,slow=29						
MJAR	**Matsushiro Arr**	**70.46**	**302**	LR	LR	11 38 27.1	
	comp=Z,56nm,20.9s,baz=74,slow=30						
RPN	**Rapa Nui**	**70.50**	**164**	LR	LR	11 38 59.1	
	comp=Z,47nm,21.4s,baz=216,slow=30						
EKA	**Eskdalemuir Ar**	**71.54**	**30**	LR	LR	11 44 54.0	
	comp=Z,155nm,19.6s,baz=2.5,slow=34						
NOA	**NORSAR Array B**	**71.54**	**20**	P	**P**	**11 15 12.3**	**+1.2**
	comp=Z,1.7nm,1.0s,baz=330,slow=6.1,SNR=2.0						
NOA				LR	LR	11 45 29.7	
	comp=Z,132nm,20.5s,baz=325,slow=35						
	comp=Z,1.7nm,1.0s						
JHJ	**Hachijo jima 2**	**71.56**	**298**	LR	LR	11 41 22.5	
	comp=Z,68nm,21.7s,baz=112,slow=32						
HFS	**Hagfors**	**72.95**	**20**	LR	LR	11 46 14.4	
	comp=Z,167nm,20.2s,baz=302,slow=35						
MDP	**Montagnes des**	**74.22**	**97**	LR	LR	11 51 13.4	
	comp=Z,64nm,19.1s,baz=310,slow=38						
FINES	**FINESS Array B**	**74.42**	**14**	LR	LR	11 47 50.9	
	comp=Z,110nm,18.7s,baz=330,slow=36						
KSRS	**Korea Array**	**76.16**	**308**	LR	LR	11 44 29.7	
	comp=Z,38nm,21.0s,baz=55,slow=32						
JNU	**Nakatsue**	**77.27**	**303**	LR	LR	11 44 31.1	
	comp=Z,38nm,20.9s,baz=44,slow=32						
LPAZ	**La Paz**	**78.75**	**124**	P	**P**	**11 15 54.0**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=319,slow=7.7,SNR=2.0						
	comp=Z,0.8nm,0.7s						
SONM	**Songino Array**	**79.27**	**327**	P	**P**	**11 15 57.4**	**+1.5**
	comp=Z,0.9nm,0.4s,baz=65,slow=3.8,SNR=1.2						
	comp=Z,0.9nm,0.4s						
KIRV	**Kirov**	**79.68**	**2**	LR	LR	11 53 07.2	
	comp=Z,39nm,22.0s,baz=342,slow=37						
GUMO	**Guam**	**80.43**	**280**	LR	LR	11 43 03.7	
	comp=Z,140nm,22.0s,baz=80,slow=29						
ZALV	**Zalesovo Beam**	**80.82**	**342**	P	**P**	**11 16 04.1**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=1.4,slow=5.9,SNR=1.9						
ZALV				LR	LR	11 53 06.3	
	comp=Z,51nm,19.3s,baz=29,slow=37						
	comp=Z,0.4nm,0.3s						
ARTI	**Arti**	**81.89**	**358**	LR	LR	11 56 37.3	
	comp=Z,60nm,18.6s,baz=20,slow=39						
GERES	**GERESS Array B**	**82.79**	**26**	LR	LR	11 54 09.7	
	comp=Z,268nm,18.4s,baz=307,slow=36						
SIV	**San Ignacio**	**83.02**	**119**	LR	LR	11 57 54.3	
	comp=Z,32nm,19.6s,baz=318,slow=39						
ESDC	**Sonseca Array**	**83.14**	**41**	LR	LR	11 51 53.2	
	comp=Z,81nm,18.6s,baz=304,slow=35						
JOW	**Kunigami**	**83.19**	**300**	LR	LR	11 51 50.1	
	comp=Z,33nm,18.8s,baz=182,slow=35						
DAVOX	**Davos/Dischmat**	**83.28**	**29**	LR	LR	11 53 52.4	
	comp=Z,214nm,19.6s,baz=264,slow=36						
VRAC	**Vranov**	**83.28**	**24**	LR	LR	11 55 48.7	
	comp=Z,90nm,20.1s,baz=324,slow=38						
BVAR	**Borovoye Array**	**84.28**	**350**	P	**P**	**11 16 22.9**	**+0.9**
	comp=Z,1.3nm,0.8s,baz=46,slow=4.3,SNR=5.3						
BVAR				LR	LR	11 55 03.7	
	comp=Z,64nm,21.9s,baz=3.2,slow=36						
	comp=Z,1.3nm,0.8s						
AKASG	**Malin Array Be**	**85.15**	**16**	P	**P**	**11 16 25.9**	**-0.5**
	comp=Z,0.2nm,0.2s,baz=350,slow=4.2,SNR=4.9						
AKASG				LR	LR	11 53 57.8	
	comp=Z,178nm,20.8s,baz=334,slow=35						
	comp=Z,0.2nm,0.2s						
AKTO	**Aktyubinsk**	**87.86**	**357**	LR	LR	12 00 11.1	
	comp=Z,74nm,18.4s,baz=82,slow=38						
MKAR	**Makanchi Array**	**88.07**	**341**	P	**P**	**11 16 43.1**	**+2.2**
	comp=Z,0.4nm,0.9s,baz=15,slow=6.0,SNR=2.1						
MKAR				LR	LR	11 58 35.8	
	comp=Z,104nm,20.3s,baz=10,slow=37						
	comp=Z,0.4nm,0.9s						
DZM	**Mont Dzumac**	**89.18**	**239**	*e*LR	LR	11 44 39.0	
	comp=Z,73nm,23.6s						
BDFB	**Brasilia**	**91.65**	**110**	LR	LR	12 03 44.4	
	comp=Z,77nm,18.2s,baz=321,slow=39						
KEST	**Kesra**	**92.48**	**35**	LR	LR	11 58 54.2	
	comp=Z,55nm,20.3s,baz=301,slow=36						
AAK	**Ala-Archa**	**93.73**	**345**	LR	LR	12 02 20.5	
	comp=Z,52nm,19.9s,baz=24,slow=38						
KBZ	**Khabaz**	**94.05**	**8**	LR	LR	12 02 40.9	
	comp=Z,57nm,18.2s,baz=358,slow=38						
URZ	**Urewera**	**95.23**	**221**	LR	LR	11 53 10.9	
	comp=Z,77nm,18.9s,baz=36,slow=31						
BRTR	**Keskin Array B**	**96.55**	**16**	LR	LR	12 04 05.7	
	comp=Z,56nm,18.6s,baz=304,slow=38						
DAV	**Davao City (W)**	**98.78**	**288**	LR	LR	11 53 38.4	
	comp=Z,84nm,21.9s,baz=328,slow=30						

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*NEIC **28** 11:10:29.8±1.8, 3°.0N±0°.1×128°.6E±0°.1, h181^{km}±7^{km}, mb4.1/21, Error ellipse: s-maj=20.7km s-min=15.4km az=92.0*

*IDC **28** 11:10:29.7±4.8, 2°.99N×128°.56E, h191^{km}±50^{km}, mb3.3/8, mbtmp4.0/9, Error ellipse: s-maj=41.0km s-min=13.5km az=81.0*

*DJA **28** 11:10:35.3±0.4, 3°N±4°×12°8E±°, h179^{km}±3^{km}, M4.3/13, mb4.3/13, mB4.9/2, MLv4.3/10, Mw(mB)4.2/2, MwMwp5.3/2, Mwp5.5/2*

ISC 28 11:10:30.7±0.7**, 2°.96N**±0°.07×**128°.7E**±0°.1**, h200**^{km}**, n51, σ1^{s}18**/52**, mb4.0**/19**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.53**	**211**	Pn	**Pn**	**11 11 13.2**	**-1.7**
SGSI	**Sangihe**	**3.22**	**283**	P	**Pn**	**11 11 23.0**	**+0.1**
SANI	**Sanana**	**5.65**	**208**	P	**Pn**	**11 11 52.5**	**-0.9**
GTOI	**Gorontalo**	**6.11**	**248**	P	**Pn**	**11 12 00.1**	**+0.7**
	0.2nm11nm,0.5s						
NLAI	**Namlea**	**6.35**	**194**	P	**Pn**	**11 12 04.5**	**+2.0**
	0.4nm1µm97nm,0.7s						
LUWI	**Luwuk**	**7.11**	**236**	Pn	**Pn**	**11 12 10.9**	**-1.4**
LUWI	**Luwuk**	**7.11**	**236**	P	**Pn**	**11 12 12.0**	**-0.4**
SPSI	**Sidrap Palu**	**11.24**	**232**	P	**Pn**	**11 13 08.1**	**+2.1**
	14nm,0.8s						
BKSI	**Bulukumba**	**11.85**	**226**	P	**Pn**	**11 13 15.7**	**+1.9**
	23nm,0.7s						
SOEI	**Soe**	**13.37**	**199**	Pn	**Pn**	**11 13 32.5**	**-0.5**
SOEI	**Soe**	**13.37**	**199**	P	**P**	**11 13 35.3**	**-0.4**
	35nm,0.9s						
EDFI	**Ende, Flores**	**13.55**	**211**	P	**P**	**11 13 39.1**	**+1.4**
	15nm,0.8s						
BATI	**Baumata**	**13.99**	**201**	P	**P**	**11 13 41.1**	**-1.4**
	16nm,0.3s,baz=45,slow=2.9,SNR=2.5						
LBFI	**Labuhan Bajo,**	**14.34**	**218**	P	**P**	**11 13 47.9**	**+1.5**
	7µm95nm,1.1s						
DBNI	**Kabupaten Domp**	**15.37**	**222**	P	**P**	**11 13 59.6**	**+1.8**
WBSI	**Waikabubak, Su**	**15.56**	**216**	P	**P**	**11 13 58.5**	**-1.4**
	42nm,1.1s						
PLAI	**Plampang**	**15.97**	**223**	P	**Pn**	**11 14 05.6**	**+0.9**
	56nm,1.4s						
TWSI	**Taliwang, Sumb**	**16.52**	**225**	P	**Pn**	**11 14 12.9**	**+1.5**
	17nm,0.8s						
KHKI	**Kahang-Kahang**	**17.21**	**229**	P	**Pn**	**11 14 21.5**	**+2.0**
	7µm50nm,0.7s						
KNRA	**Kununurra**	**18.51**	**180**		**Pn**	**11 14 33.1**	**-1.7**
SNJI	**Sawahan-Nganju**	**19.96**	**238**	P	Pn	11 14 50.6	-1.7
FITZ	**Fitzroy Crossi**	**21.13**	**188**	P	**P**	**11 14 59.0**	**-1.1**
	2.4nm,0.5s,baz=11,slow=7.7,SNR=15						
	2.4nm,0.5s						
FITZ	**Fitzroy Crossi**	**21.13**	**188**	P	**P**	**11 14 59.2**	**-1.0**
WB0	**Warramunga Arr**	**23.27**	**166**	P	**P**	**11 15 20.6**	**0.0**
WB0				IAmb	IAmb	11 15 22.8	
	comp=Z,6.1nm,1.1s						
WRAB	**Tennant Creek**	**23.42**	**166**	P	**P**	**11 15 22.7**	**+0.7**
WRAB				IAmb	IAmb	11 15 25.7	
	comp=Z,5.0nm,1.1s						
WRA	**Warramunga Arr**	**23.43**	**166**	P	**P**	**11 15 22.5**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=344,slow=10.0,SNR=23						
	comp=Z,0.8nm,0.3s						
WRA	**Warramunga Arr**	**23.43**	**166**	P	**P**	**11 15 21.4**	**-0.7**
WB2	**Warramunga Arr**	**23.43**	**166**	P	**P**	**11 15 22.9**	**+0.8**
WR8	**Warramunga Arr**	**23.48**	**166**	P	**P**	**11 15 23.1**	**+0.6**
WR8				IAmb	IAmb	11 15 48.6	
	comp=Z,7.8nm,1.4s						
AS31	**Alice Springs**	**26.95**	**169**	P	**P**	**11 15 54.2**	**+0.4**
ASAR	**Alice Springs**	**26.95**	**169**	P	**P**	**11 15 54.0**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=355,slow=7.9,SNR=31						
ASAR				PcP	**PcP**	**11 19 10.1**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=342,slow=2.2,SNR=9.1						
ASAR				S	**S**	**11 20 14.2**	**-2.0**
	comp=Z,0.8nm,0.8s,baz=355,slow=23,SNR=4.4						
	comp=Z,0.7nm,0.5s						
ASAR	**Alice Springs**	**26.95**	**169**	P	**P**	**11 15 53.5**	**-0.3**
CM31	**Chiang Mai Arr**	**32.93**	**300**	P	**P**	**11 16 46.9**	**+0.3**
CM31				IAmb	IAmb	11 17 23.7	
	comp=Z,5.7nm,1.1s						
CMAR	**Chiang Mai Arr**	**32.93**	**300**	P	**P**	**11 16 46.7**	**+0.1**
MORW	**Morawa**	**34.07**	**200**	P	**P**	**11 16 55.2**	**-1.0**
KSRS	**Korea Array**	**34.34**	**359**	P	**P**	**11 16 58.5**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=178,slow=9.7,SNR=4.1						
	comp=Z,0.6nm,0.5s						
MJAR	**Matsushiro Arr**	**34.56**	**14**	P	**P**	**11 16 59.2**	**-1.2**
	comp=Z,1.4nm,0.4s,baz=189,slow=9.3,SNR=5.5						
	comp=Z,1.4nm,0.4s						
MJAR	**Matsushiro Arr**	**34.56**	**14**	P	**P**	**11 16 59.3**	**-1.1**
MAJO	**Matsushiro**	**34.56**	**14**	P	**P**	**11 16 59.3**	**-1.1**
MJB9	**Matsu-Tunnel**	**34.56**	**14**	P	**P**	**11 16 59.4**	**-1.0**
MJB9				IAmb	IAmb	11 17 23.1	
	comp=Z,11nm,1.1s						
BBOO	**Buckleboo**	**36.25**	**169**	P	**P**	**11 17 15.4**	**+0.6**
STKA	**Stephens Creek**	**36.76**	**161**	P	**P**	**11 17 20.4**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=343,slow=11,SNR=1.6						
	comp=Z,0.4nm,0.3s						
MK31	**Makanchi Array**	**59.30**	**325**	P	**P**	**11 20 10.9**	**-0.6**
MK31				IAmb	IAmb	11 20 13.1	
	comp=Z,2.2nm,1.1s						
MKAR	**Makanchi Array**	**59.30**	**325**	P	**P**	**11 20 10.7**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=112,slow=8.6,SNR=6.6						
	comp=Z,0.4nm,0.4s						
BVAR	**Borovoye Array**	**69.02**	**327**	P	**P**	**11 21 14.1**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=120,slow=5.4,SNR=4.1						
	comp=Z,0.6nm,0.5s						
C18K	**Utukok River**	**80.10**	**20**	P	**P**	**11 22 19.0**	**+0.9**
C19K	**Lookout Ridge**	**80.79**	**20**	P	**P**	**11 22 23.3**	**+1.6**
C19K				IAmb	IAmb	11 22 26.6	
	comp=Z,4.6nm,1.2s						
G19K	**Purcell Mounta**	**80.96**	**23**	P	**P**	**11 22 24.1**	**+1.5**
G19K				IAmb	IAmb	11 23 00.7	
	comp=Z,6.1nm,1.4s						
D19K	**Kuna River**	**81.14**	**21**	P	**P**	**11 22 24.7**	**+1.1**
D19K				IAmb	IAmb	11 22 27.3	
	comp=Z,6.8nm,1.5s						
E19K	**Redstone River**	**81.21**	**22**	P	**P**	**11 22 25.4**	**+1.5**
E19K				IAmb	IAmb	11 23 02.9	
	comp=Z,2.6nm,1.1s						
D20K	**Etivluk River**	**81.73**	**21**	P	**P**	**11 22 27.6**	**+0.9**
D20K				IAmb	IAmb	11 22 58.5	
	comp=Z,8.2nm,1.5s						

JMA 28 11:12:25.3±0.2**, 38°.3N**±1°.0×**14°5E**±°**, h48**^{km}**, MV3.8**/27**,**
FAR E OFF NORTH HONSHU, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.42**	**291**	*e*P	Pn	11 13 03.6	+1.2
JIKH	**Ishinomakikobu**	**2.44**	**272**	*e*P	Pn	11 13 03.6	+0.9
JIKH				*e*S	Sn	11 13 32.2	+0.9
JKMT	**Kesennumamotoy**	**2.49**	**284**	*e*P	Pn	11 13 04.7	+1.3
MIYJ	**Miyakonagasawa**	**2.52**	**303**	P	Pn	11 13 04.9	+1.1
MIYJ				*e*S	Sn	11 13 34.2	+1.0
JMK	**Ichinoseki**	**2.72**	**286**	*e*P	Pn	11 13 08.0	+1.5

JMK				eS	Sn	11 13 39.9	+1.9
JOM	Ohasama	2.83	297	eP	Pn	11 13 09.6	+1.6
JOM				eS	Sn	11 13 43.6	+2.7
JYK	Kaneyama	3.37	283	eP	Pn	11 13 16.8	+1.5
JYK				eS	Sn	11 13 56.6	+2.5
JOTO	OTAMA OYAMA	3.42	260	P	Pn	11 13 18.2	+2.0
JOTO				eS	Sn	11 13 57.6	+2.1
JCH	Churui	4.46	348	eS	Sn	11 14 19.2	-1.6
JRY	Ryogami san	5.05	246	eP	Pn	11 13 39.5	+1.0
JRY				eS	Sn	11 14 35.3	-0.2
NEM2	Nemuro 2	5.19	10	eP	Pn	11 13 37.9	-2.4
JTKR	Abashiri--Toko	5.74	355	eP	Pn	11 13 47.0	-0.9
JTKR				eS	Sn	11 14 48.3	-4.0

IDC 28 11:59:06.5±3.3**, 23°.47S×173°.33E, h0^{km}, mb4.0**/3**, mbtmp4.0**/4**, ML3.1**/1**, MS3.6**/3**, Error ellipse: s-maj=133.8km s-min=51.7km az=166.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.51	281	Pn	Pn	12 00 44.5	+0.8
	0.4nm,0.3s,baz=103,slow=18,SNR=1.5						
DZM				Sn	Sn	12 01 51.8	-7.0
	0.1nm,0.3s,baz=11,slow=22,SNR=1.2						
	6.9nm,1.0s						
URZ	Urewera	15.09	169	LR	LR	12 08 02.7	
	comp=Z,167nm,18.4s,baz=352,slow=36						
ASAR	Alice Springs	36.06	262	P	P	12 06 11.0	+0.9
	3.9nm,0.8s,baz=85,slow=8.4,SNR=42						
ASAR				LR	LR	12 20 58.0	
	comp=Z,92nm,18.2s,baz=34,slow=36						
	3.9nm,0.8s						
WRA	Warramunga Arr	36.33	268	P	P	12 06 11.1	-1.3
	0.7nm,0.7s,baz=105,slow=7.9,SNR=5.6						
	0.7nm,0.7s						
FITZ	Fitzroy Crossi	44.75	268	P	P	12 07 21.3	-0.8
	2.9nm,0.9s,baz=124,slow=3.6,SNR=1.7						
	2.9nm,0.9s						
TIXI	Tiksi	99.67	347	LR	LR	12 52 36.8	
	comp=Z,22nm,19.2s,baz=200,slow=32						
GERES	GERESS Array B	149.99	333	PKPbc	PKPbc	12 18 58.9	-0.1
	0.5nm,0.7s,baz=32,slow=5.2,SNR=3.1						

SKO ***28*** *12:05:40.9, 41°.78N×22°.29E, h26^{km}, ML2.5*
SOF ***28*** *12:05:41.3, 41°.75N±0°.01×22°.28E±0°.02, h15^{km}±2^{km}, MD2.6/4*
BEO ***28*** *12:05:42.0±0.5, 41°.83N×22°.26E, h2^{km}±3^{km}, ML2.1/8*
ISC 28 12:05:41.2±1.1**, 41°.79N**±0°.02×**22°.29E**±0°.02**, h9^{km}**±9^{km}**, n28, σ0^{s}75**/50**, 1C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.52	156	⇑iPg	Pg	12 05 51.1	-0.1
VAY				iSg	Sg	12 05 58.4	+0.4
VAY				eLg	Lg	12 05 58.4	
	comp=E,582nm,0.3s						
VAY				eLg	Lg	12 05 58.5	
	comp=N,602nm,0.3s						
KKB	Krupnik	0.63	85	iP	Pb	12 05 54.0	-0.4
KKB				iS	Sb	12 06 02.7	-0.6
KKB	Krupnik	0.63	85	iPg	Pg	12 05 53.7	+0.3
KKB				iSg	Sb	12 06 02.8	-0.5
SKO	Skopje	0.66	286	ePg	Pb	12 05 54.7	-0.1
SKO				iPg	Sg	12 06 03.9	+1.3
BOSS	Bosilegrad	0.72	11	ePg	Pg	12 05 54.5	-0.5
BOSS				eSg	Sg	12 06 03.2	-1.2
GRG	Griva	0.84	174	iPg	Pg	12 05 57.4	+0.1
GRG				iSg	Sg	12 06 08.4	+0.1
BARS	Barje	1.08	341	iPg	Pb	12 06 01.4	-0.7
BARS				iSg	Sb	12 06 15.8	-0.6
BARS	Barje	1.08	341	ePg	Pb	12 06 00.8	-1.3
BARS				eSg	Sb	12 06 15.4	-0.9
VTS	Vitosha	1.08	40	iP	Pg	12 06 02.2	+0.2
VTS				iS	Sb	12 06 16.9	+0.4
VTS	Vitosha	1.08	40	ePg	Pb	12 06 01.2	-1.0
VTS				eSg	Sg	12 06 16.0	-0.1
PLNA	Plana	1.09	51	iP	Pn	12 06 02.4	-0.3
PLNA				iS	Sn	12 06 17.6	-0.3
MMB	Musomishta	1.12	102	iP	Pb	12 06 02.4	-0.3
MMB				iS	Sg	12 06 17.8	+0.5
MMB	Musomishta	1.12	102	iPg	Pb	12 06 02.4	-0.3
MMB				iSg	Sg	12 06 17.5	+0.2
SRS	Serrai	1.19	124	iPg	Pb	12 06 03.1	-0.8
SRS	Serrai	1.19	124	ePg	Pb	12 06 03.7	-0.2
SRS				eSg	Sn	12 06 21.0	+0.7
THE	Thessaloniki	1.27	156	iPg	Pn	12 06 04.5	-0.6
THE				iSg	Sb	12 06 21.3	-0.3
BLSH	Balsha	1.29	34	iP	Pg	12 06 06.8	+0.8
BLSH				iS	Sg	12 06 24.7	+1.9
OHR	Ohrid	1.31	239	iPg	Pn	12 06 05.4	-0.3
OHR				iSg	Sn	12 06 23.1	-0.3
OHR				eLg	Lg	12 06 25.7	
	comp=N,16nm,0.3s						
OHR				eLg	Lg	12 06 28.5	
	comp=E,18nm,0.4s						
ZAPS	Zavoj	1.50	10	ePg	Pb	12 06 09.2	-0.1
ZAPS				eSg	Sn	12 06 27.9	-0.2
SELS	Selova	1.67	329	ePg	Pb	12 06 11.4	-0.7
SELS				eSg	Sg	12 06 34.1	-0.7
RZN	Rozhen	1.83	92	iP	Pb	12 06 15.0	0.0
BLKB	Belogradchik	1.85	9	ePg	Pb	12 06 14.4	-0.8
BLKB				eSg	Sg	12 06 39.7	-1.0
BOVS	Bovan	1.89	347	ePg	Pb	12 06 15.1	-0.8
BOVS				eSg	Sb	12 06 40.8	+1.2
ZAGS	Zajecar	2.02	359	ePn	Pb	12 06 17.2	-0.8
ZAGS				eSn	Sn	12 06 41.5	+0.8
IVAS	Ivanjica	2.38	319	ePn	Pn	12 06 21.3	+0.9
GRUS	Gruza	2.39	332	ePn	Pn	12 06 22.0	+1.5
KUBS	Kucevo	2.66	350	ePn	Pn	12 06 24.8	+0.6
TRUS	Trudelj	2.79	331	ePn	Pn	12 06 27.1	+1.0

IDC ***28*** *12:08:32.0±0.6, 6°.41S×130°.28E, h141^{km}±5^{km}, mb4.1/19, mbtmp4.5/20, MS3.5/4, Error ellipse: s-maj=16.9km s-min=9.2km az=67.0*
DJA ***28*** *12:08:32.8±0.1, 7°S±2°×13°0E±°, h154^{km}±2^{km}, M5.1/83, mb5.2/83, mB5.6/43, MLv5.7/23, Mw(mB)5.0/43*
NEIC ***28*** *12:08:33.4±1.7, 6°.41S±0°.07×130°.22E±0°.07, h148^{km}±7^{km}, mb4.9/35, Error ellipse: s-maj=10.6km s-min=9.5km az=208.0*
ISC 28 12:08:32.7±0.4**, 6°.50S**±0°.04×**130°.19E**±0°.04**, h147^{km}**±3^{km}**, h147^{km}:pP-P, n282, σ1^{s}32**/295**, mb4.8**/61**, 2C-1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.83	143		Pn	12 09 06.8	+1.0
SAUI	Saumlaki	1.83	143	P	Pn	12 09 07.4	+1.7
SAUI	Saumlaki	1.83	143	P	Pn	12 09 06.6	+0.9
SAUI				S	Sn	12 09 32.5	+1.4
BNDI	Bandanaira	1.99	352	P	Pn	12 09 09.2	+1.7
BNDI	Bandanaira	1.99	352	S	Sn	12 09 36.4	+2.2
BNDI	Bandanaira	1.99	352	P	Pn	12 09 08.6	+1.1
BNDI				S	Sn	12 09 35.9	+1.7
MSAI	Masohi	3.38	338	P	Pn	12 09 25.9	+1.1
AAI	Ambon	3.43	324	P	Pn	12 09 27.1	+1.6
KRAI	Karang Ratu	3.63	330	P	Pn	12 09 30.3	+2.2
FAKI	Fak Fak	4.11	30		Pn	12 09 32.4	-2.0
FAKI	Fak Fak	4.11	30	P	Pn	12 09 32.9	-1.4
FAKI	Fak Fak	4.11	30	P	Pn	12 09 32.5	-1.8
NLAI	Namlea	4.47	316	P	Pn	12 09 41.2	+2.1
KMPI	Kaimana, Papua	4.50	51	P	Pn	12 09 38.3	-1.1
SIJI	Sorong	5.70	11	P	Pn	12 09 53.0	-2.4
	8.3nm140nm,0.4s						
SWI	Sorong	5.70	11	P	Pn	12 09 53.0	-2.4
	7.5nm8µm265nm,0.6s						
DRS	Darwin Rock St	5.93	173	P	Pn	12 09 58.0	-0.5
SANI	Sanana	6.09	316	P	Pn	12 10 03.1	+2.4
SANI	Sanana	6.09	316	P	Pn	12 10 01.9	+1.2
	84nm,0.7s						
RKPI	Ransiki, Papua	6.36	39	P	Pn	12 10 03.3	-0.9
MTN	Manton Dam	6.37	172	P	Pn	12 10 03.4	-1.0
	comp=Z,407nm,0.4s						
MTN	Manton Dam	6.37	172		Pn	12 10 03.3	-1.0
KDU	Kakadu	6.54	160	P	Pn	12 10 05.4	-1.3
SOEI	Soe	6.70	241		Pn	12 10 09.4	+0.5
SOEI	Soe	6.70	241	P	Pn	12 10 09.7	+0.9
SOEI	Soe	6.70	241	S	Sn	12 11 24.7	+0.6
SOEI	Soe	6.70	241	P	Pn	12 10 09.5	+0.7
MWPI	Manokwari, Pap	6.74	35	P	Pn	12 10 08.7	-0.6
BATI	Baumata	7.43	240	P	Pn	12 10 19.1	+0.4
	comp=Z,1µm,0.4s,baz=117,slow=2.2,SNR=166						
BATI				S	Sn	12 11 39.8	-1.9
	comp=Z,627nm,0.5s,baz=141,slow=20,SNR=7.9						
BATI	Baumata	7.43	240	P	Pn	12 10 19.0	+0.4
SRPI	Serui, Papua	7.58	53	P	Pn	12 10 18.9	-1.7
	comp=Z,2.0nmcomp=Z,210nm,0.6s						
TNTI	Ternate	7.76	339	P	Pn	12 10 23.2	+0.3
	comp=Z,0.3nmcomp=Z,87nm,1.0s						
BAKI	Biak	7.92	48	P	Pn	12 10 25.9	+0.9
MMRI	Maumere	8.17	254		Pn	12 10 30.4	+2.0
MMRI	Maumere	8.17	254	P	Pn	12 10 30.6	+2.2
MMRI	Maumere	8.17	254	P	Pn	12 10 29.8	+1.4
	comp=Z,5µmcomp=Z,400nm,0.5s						
EDFI	Ende, Flores	8.72	255	P	Pn	12 10 36.3	+0.4
	comp=Z,3µmcomp=Z,331nm,0.9s						
WAMI	Wamena	8.87	73	P	Pn	12 10 40.0	+2.2
KNRA	Kununurra	9.22	189	P	Pn	12 10 40.6	-1.8
	comp=Z,234nm,0.7s						
KNRA	Kununurra	9.22	189		Pn	12 10 41.0	-1.4
SMPI	Sarmi	9.60	63	P	Pn	12 10 46.5	-1.0
	comp=Z,189nm,0.7s						
BSSI	Bau Bau, Buton	9.65	272	P	Pn	12 10 49.9	+1.7
	comp=Z,2µmcomp=Z,129nm,1.0s						
BKSI	Bulukumba	10.09	276	P	Pn	12 10 55.5	+1.5
	comp=Z,84nm,0.9s						
APSI	Ampana	10.17	303	P	Pn	12 10 57.5	+2.4
	comp=Z,1µmcomp=Z,146nm,1.0s						
BASI	Baing, Sumba	10.20	248	P	Pn	12 10 55.1	-0.4
WSI	Waingapu	10.29	252	P	Pn	12 10 55.2	-1.5
MMPI	Merauke	10.29	102	P	Pn	12 10 56.1	-0.6
LBFI	Labuhan Bajo,	10.40	258	P	Pn	12 10 58.4	+0.2
	comp=Z,3µmcomp=Z,200nm,0.7s						
KAPI	Kappang	10.49	278	P	Pn	12 11 01.2	+1.8
GENI	Genyem	10.67	69	P	Pn	12 11 01.0	-0.8
	comp=Z,148nm,0.6s						
SPSI	Sidrap Palu	10.68	283	P	Pn	12 11 03.5	+1.6
	comp=Z,49nm,0.8s						
MRSI	Marisa	10.77	310	P	Pn	12 11 04.9	+1.9
	comp=Z,1µmcomp=Z,194nm,0.8s						
TTSI	Tana Toraja	10.89	288	P	Pn	12 11 08.2	+3.6
	comp=Z,48nm,0.8s						
WBSI	Waikabubak, Su	11.14	253	P	Pn	12 11 06.7	-1.2
MMSI	Mamuju	11.87	288	P	Pn	12 11 21.0	+3.6
	comp=Z,1µmcomp=Z,64nm,0.8s						
DBNI	Kabupaten Domp	11.95	260	P	Pn	12 11 18.8	+0.3
	comp=Z,2µmcomp=Z,132nm,0.7s						
TOLI2	Tolitoli	12.06	309		Pn	12 11 19.6	-0.3
TOLI2	Tolitoli	12.06	309	P	Pn	12 11 22.7	+2.7
MPSI	Mapaga	12.32	303	P	Pn	12 11 25.6	+2.3
FITZ	Fitzroy Crossi	12.35	201	P	Pn	12 11 20.6	-3.1
	comp=Z,49nm,0.4s,baz=19,slow=9.5,SNR=143						
FITZ				S	Sn	12 13 27.7	-13
	comp=Z,106nm,0.3s,baz=97,slow=16,SNR=7.9						
FITZ	Fitzroy Crossi	12.35	201		Pn	12 11 20.3	-3.4
PLAI	Plampang	12.52	259	P	Pn	12 11 24.8	-1.1
PLAI	Plampang	12.52	259	P	Pn	12 11 24.4	-1.5
	comp=Z,4µmcomp=Z,286nm,0.5s						
TWSI	Taliwang, Sumb	13.38	260	P	Pn	12 11 34.5	-2.5
	comp=Z,2µmcomp=Z,135nm,0.5s						
WB0	Warramunga Arr	13.80	163		Pn	12 11 38.4	-4.0
WRAB	Tennant Creek	13.95	164		Pn	12 11 40.1	-4.0
WRA	Warramunga Arr	13.95	164	P	Pn	12 11 40.9	-3.4
	comp=Z,20nm,0.4s,baz=347,slow=13,SNR=179						
WRA				S	Sn	12 14 09.3	-10
	comp=Z,79nm,0.5s,baz=336,slow=24,SNR=8.3						
WRA	Warramunga Arr	13.95	164	Pn	Pn	12 11 38.7	-5.5
WB2	Warramunga Arr	13.96	164	Pn	Pn	12 11 40.7	-3.5
WR8	Warramunga Arr	14.01	163		Pn	12 11 40.9	-4.1
WR0	Warramunga Arr	14.03	163	Pn	Pn	12 11 41.2	-3.9
KLNI	Mataram	14.11	261	P	Pn	12 11 44.8	-1.4
	comp=Z,244nm,0.6s						
KHKI	Kahang-Kahang	14.58	262	P	Pn	12 11 52.2	+0.1
	comp=Z,91nm,0.6s						
COEN	Coen	14.76	121	P	Pn	12 11 53.8	-0.6
	comp=Z,251nm,0.8s						
COEN	Coen	14.76	121		Pn	12 11 51.1	-3.4
COEN	Coen	14.76	121	P	Pn	12 11 52.4	-2.0
DNP	Denpasar	15.01	261	P	Pn	12 11 59.0	+1.5
	comp=Z,290nm,0.4s						
IGBI	Denpasar	15.09	260	P	Pn	12 11 56.7	-1.8
	comp=Z,5µmcomp=Z,414nm,0.5s						
RTBI	Rangdo, Negare	15.24	262	P	Pn	12 12 00.2	-0.3
	comp=Z,111nm,0.8s						
BBKI	Banjar Baru	15.59	280	P	P	12 12 07.8	+2.0
	comp=Z,5µmcomp=Z,422nm,0.8s						
ABJI	Asem Bagus	15.89	264	P	P	12 12 10.0	+0.9
	comp=Z,161nm,0.9s						
JAGI	Jajag, Banyuwa	16.02	262	Pn	Pn	12 12 06.3	-3.7
JAGI	Jajag, Banyuwa	16.02	262	P	Pn	12 12 07.9	-2.1
JAGI	Jajag, Banyuwa	16.02	262	P	Pn	12 12 07.4	-2.6
	comp=Z,2µmcomp=Z,106nm,0.6s						
KMMI	Kalianget	16.12	267	P	P	12 12 13.9	+2.2
	comp=Z,138nm,1.0s						
BLJI	Banyuglugur	16.52	265	P	P	12 12 16.4	+0.4
QIS	Mount Isa	16.69	148	P	P	12 12 16.8	-1.1
	comp=Z,184nm,0.6s						
QIS	Mount Isa	16.69	148	P	P	12 12 16.9	-1.1
GMJI	Gumukmas	16.70	263	P	P	12 12 15.9	-2.2
	comp=Z,42nm,0.5s						
PKKI	Palangkaraya	16.71	284	P	Pn	12 12 19.0	+0.5
	comp=Z,3µmcomp=Z,356nm,0.7s						
PMG	Port Moresby	17.05	101	P	P	12 12 21.4	-0.4
	comp=Z,44nm,0.6s,baz=283,slow=2.6,SNR=29						
PMG				S	S	12 15 20.4	-12
	comp=Z,18nm,0.5s,baz=256,slow=20,SNR=7.9						
PMG				LR	LR	12 20 23.1	
	comp=Z,146nm,18.2s,baz=200,slow=42						
PMG	Port Moresby	17.05	101	P	Pn	12 12 22.7	+0.2
PMG	Port Moresby	17.05	101	P	Pn	12 12 23.4	+1.0
PMG	Port Moresby	17.05	101	P	Pn	12 12 23.5	+1.0
	comp=Z,101nm,1.1s						
AS31	Alice Springs	17.43	169		P	12 12 25.9	-0.2
ASAR	Alice Springs	17.43	169	P	P	12 12 26.4	+0.3
	comp=Z,102nm,0.5s,baz=352,slow=12,SNR=1139						
ASAR				S	S	12 15 30.6	-10
	comp=Z,21nm,0.7s,baz=350,slow=27,SNR=5.4						
ASAR	Alice Springs	17.43	169	P	P	12 12 26.1	0.0
MBWA	Marble Bar	17.75	214	P	P	12 12 29.7	+0.3
	comp=Z,135nm,0.8s						
MBWA	Marble Bar	17.75	214		P	12 12 30.2	+0.8
MBWA	Marble Bar	17.75	214	P	P	12 12 29.5	0.0
PSAC2	Pilbara Seismi	17.98	213	P	P	12 12 33.0	+0.9
	comp=Z,152nm,1.1s						
MTSU	Mount Surprise	17.98	131	P	P	12 12 32.9	+0.7
	comp=Z,54nm,0.6s						
MTSU	Mount Surprise	17.98	131	P	P	12 12 32.9	+0.7
PSAC1	Pilbara Seismi	18.00	213	P	P	12 12 33.6	+1.3
	comp=Z,233nm,0.7s						
PSA00	Pilbara Seismi	18.02	213	P	P	12 12 33.8	+1.3
	comp=Z,220nm,0.7s						
PSA00	Pilbara Seismi	18.02	213	P	P	12 12 33.6	+1.1
PSA00	Pilbara Seismi	18.02	213	P	P	12 12 33.6	+1.1
PSA00	Pilbara Seismi	18.02	213	P	P	12 12 33.5	+1.1
PSAB3	Pilbara Seismi	18.03	213	P	P	12 12 33.8	+1.2
	comp=Z,218nm,0.7s						
SJI	Sawahan	18.32	265	P	P	12 12 35.6	-0.4
	comp=Z,3µmcomp=Z,152nm,0.7s						
SNJI	Sawahan-Nganju	18.34	265	P	P	12 12 35.4	-0.8
	comp=Z,3µmcomp=Z,158nm,0.6s						
WRKA	Warakurna	18.52	185	P	P	12 12 39.1	+1.2
	comp=Z,34nm,0.7s						
NGJI	Ngawi	18.61	266	P	P	12 12 40.2	+1.1
	comp=Z,88nm,0.9s						
KKM	Kota Kinabalu	18.71	311	P	P	12 12 40.0	-0.2
KKM	Kota Kinabalu	18.71	311	P	P	12 12 40.0	-0.2
PCJI	Pacitan	18.93	264	P	P	12 12 40.2	-2.3
	comp=Z,2µmcomp=Z,181nm,0.7s						
UGM	Wanagama	19.56	265		P	12 12 50.8	+1.4
UGM	Wanagama	19.56	265	P	P	12 12 50.9	+1.5
UGM	Wanagama	19.56	265	P	P	12 12 50.4	+1.0
	comp=Z,87nm,1.0s						
SBUM	Sibu	20.03	296	P	P	12 12 55.6	+1.3
SBUM	Sibu	20.03	296	P	P	12 12 55.9	+1.6
SBUM	Sibu	20.03	296	P	P	12 12 55.5	+1.2
TV1H	Townsville Har	20.53	130	P	P	12 13 00.2	+0.5
CTA	Charters Tower	20.63	132	P	P	12 13 02.0	+1.3
	comp=Z,39nm,1.0s						
CTA	Charters Tower	20.63	132	P	P	12 13 00.9	+0.2
	comp=Z,70nm,0.9s,baz=299,slow=11,SNR=64						
	comp=Z,70nm,0.9s						
CTA	Charters Tower	20.63	132	P	P	12 13 01.7	+1.0
CTAO	Charters Tower	20.63	132		P	12 13 01.9	+1.1
CTAO	Charters Tower	20.63	132	P	P	12 13 01.7	+1.0
CTJI	Waduk Cacaban	20.87	267	P	P	12 13 01.4	-2.0
	comp=Z,43nm,0.7s						
KPJI	Karang Pucung	21.12	267	P	P	12 13 04.2	-1.9
	comp=Z,99nm,0.7s						
BBJI	Bungbulang	22.39	266	P	P	12 13 18.3	-1.1
BBJI	Bungbulang	22.39	266	P	P	12 13 17.0	-2.4
	comp=Z,955nmcomp=Z,102nm,0.8s						
TPI	Tanjungpandan	22.77	278	P	P	12 13 22.8	0.0
	comp=Z,82nm,0.8s						
MEEK	Meekatharra	22.86	208	P	P	12 13 24.5	+0.9
	comp=Z,40nm,0.9s						
MEEK	Meekatharra	22.86	208	P	P	12 13 23.7	+0.1
CNJI	Cibinong	22.91	267	P	P	12 13 22.6	-1.5
	comp=Z,2µmcomp=Z,258nm,1.0s						
DBJI	Dramaga	23.29	269	P	P	12 13 28.1	+0.4
	comp=Z,101nm,0.8s						
QLP	Quilpie	24.04	148	P	P	12 13 34.6	+0.3
	comp=Z,142nm,0.9s						
QLP	Quilpie	24.04	148	P	P	12 13 34.3	0.0
FORT	Forrest	24.23	184	P	P	12 13 36.3	+0.3
	comp=Z,27nm,0.6s						
FORT	Forrest	24.23	184	P	P	12 13 36.1	+0.1
FORT				IAmb	IAmb	12 14 12.1	
	comp=Z,22nm,0.7s						
XMI	Christmas Isla	24.55	259	P	P	12 13 39.3	+0.2
KLSI		25.40	273	P	P	12 13 47.8	+1.0
KASI	Kota Agung	25.57	271	P	P	12 13 48.1	-0.2
KMBL	Kambalda	25.93	196	P	P	12 13 52.1	+0.8
	comp=Z,15nm,0.9s						
MDSI	Maura Dua	25.97	273	P	P	12 13 52.3	+0.4
MORW	Morawa	26.12	209	P	P	12 13 53.5	+0.4
MORW				IAmb	IAmb	12 14 37.2	
	comp=Z,18nm,0.8s						
MORW	Morawa	26.12	209	P	P	12 13 53.4	+0.2
DSRI	Dabo	26.25	282	P	P	12 13 52.7	-1.7
	comp=Z,20nm,0.7s						
BBOO	Buckleboo	26.74	169	P	P	12 13 58.6	+0.1
	comp=Z,59nm,0.8s						
BBOO	Buckleboo	26.74	169	P	P	12 13 58.7	+0.1
BBOO				IAmb	IAmb	12 14 02.3	
	comp=Z,42nm,0.5s						
BBOO	Buckleboo	26.74	169	P	P	12 13 58.3	-0.3
BLDU	Ballidu	27.12	206	P	P	12 14 02.3	+0.2
STKA	Stephens Creek	27.40	159	P	P	12 14 04.7	+0.1
	comp=Z,243nm,0.9s						
STKA	Stephens Creek	27.40	159	P	P	12 14 04.2	-0.3
	comp=Z,33nm,0.4s,baz=341,slow=8.3,SNR=135						
STKA				LR	LR	12 25 55.4	
	comp=Z,67nm,18.1s,baz=27,slow=38						
STKA	Stephens Creek	27.40	159		P	12 14 04.5	0.0
STKA	Stephens Creek	27.40	159	P	P	12 14 04.9	+0.4
EIDS	Eidsvold	27.40	136	P	P	12 14 04.4	-0.3
KLBR	Kellerberrin	27.54	203	P	P	12 14 06.4	+0.7
	comp=Z,42nm,1.0s						
KLBR	Kellerberrin	27.54	203	P	P	12 14 06.5	+0.7
HTT	Hallett	27.99	164	P	P	12 14 10.2	+0.3
	comp=Z,8.7nm,0.6s						
HTT	Hallett	27.99	164	P	P	12 14 10.0	+0.1
MUN	Mundaring	28.51	205	P	P	12 14 15.5	+1.1
CMSA	Cobar Meteorol	28.82	152	P	P	12 14 17.7	+0.6
	comp=Z,138nm,0.8s						
CMSA	Cobar Meteorol	28.82	152	P	P	12 14 17.3	+0.2
NWAO	Narrogin (SRO)	28.92	203	P	P	12 14 18.6	+0.5
TATA	Tatamba Isabel	29.42	96	P	P	12 14 21.3	-1.4
NGOA	Tingoa Renbel	29.91	102	P	P	12 14 26.4	-0.6
PPI	Padang Panjang	30.33	280	P	P	12 14 31.2	+0.5
	comp=Z,50nm,0.9s						
IPM	Ipoh	31.09	290	P	P	12 14 37.7	+0.2
	comp=Z,18nm,0.8s						
ARMA	Armidale	31.17	142		P	12 14 39.2	+1.2
ARMA				IAmb	IAmb	12 14 39.4	
	comp=Z,14nm,0.8s						
ARMA	Armidale	31.17	142	P	P	12 14 38.7	+0.7
KULM	Kulim	31.73	291	P	P	12 14 41.7	-1.3
	comp=Z,15nm,0.8s						
MGBR	Mount Gambier	32.48	165		P	12 14 50.3	+1.0
PSI	Prapat	32.56	286	P	P	12 14 48.1	-2.3
	comp=Z,16nm,1.1s						
MGCD	Mangrove Creek	32.92	147	P	P	12 14 55.0	+1.9
GSI	Gunungsitoli	33.47	282	P	P	12 14 58.1	-0.1
GSI				IAmb	IAmb	12 14 59.3	
	comp=Z,34nm,1.1s						
GSI	Gunungsitoli	33.47	282	P	P	12 14 58.6	+0.4
	comp=Z,32nm,1.0s						
CAN	Canberra	33.49	151	P	P	12 14 59.4	+1.2
CAN	Canberra	33.49	151	P	P	12 14 59.4	+1.2
CAN	Canberra	33.49	151	P	P	12 14 59.4	+1.2
CNB	Canberra Magne	33.66	151	P	P	12 15 00.7	+1.0
KCSI	Kotacane, Aceh	33.87	286	P	P	12 15 01.1	-0.6
TOO	Toolangi	33.92	158	P	P	12 15 02.7	+0.9
	comp=Z,14nm,1.1s						
MLSI	Meulaboh, Aceh	35.39	287	P	P	12 15 12.0	-2.7
	comp=Z,53nm,1.3s						
SANVU	Saraoutou	37.35	107		P	12 15 31.8	+0.5
SANVU	Saraoutou	37.35	107	P	P	12 15 32.0	+0.7
SANVU	Saraoutou	37.35	107	P	P	12 15 31.8	+0.5
GLAD	Gladstone	37.84	158	P	P	12 15 36.3	+1.2
DZM	Mont Dzumac	38.25	118	P	P	12 15 38.7	-0.3
	comp=Z,14nm,0.9s,baz=253,slow=10,SNR=10						
	comp=Z,14nm,0.9s						
DZM	Mont Dzumac	38.25	118		P	12 15 39.0	+0.1
DZM				IAmb	IAmb	12 16 07.8	
	comp=Z,89nm,1.7s						
DZM	Mont Dzumac	38.25	118	P	P	12 15 39.2	+0.2
YATNC	Mamie plateau,	38.64	117	P	P	12 15 43.1	+1.0
OUENC	Ouen Island, N	38.71	118	P	P	12 15 43.3	+0.6
MOO	Moorlands	38.83	160	P	P	12 15 44.9	+1.5
	comp=Z,50nm,1.9s						
MOO	Moorlands	38.83	160	P	P	12 15 45.1	+1.7
TAU	Tasmania Unive	39.29	160		P	12 15 48.4	+1.2
TAU	Tasmania Unive	39.29	160	P	P	12 15 48.5	+1.4
CM31	Chiang Mai Arr	39.56	309		P	12 15 49.8	0.0
CM31				IAmb	IAmb	12 15 51.3	
	comp=Z,22nm,1.4s						
CMAR	Chiang Mai Arr	39.56	309	P	P	12 15 49.4	-0.4
	comp=Z,4.0nm,0.7s,baz=135,slow=7.4,SNR=43						
CMAR				ScP	ScP	12 21 29.6	+0.1
	comp=Z,0.8nm,0.8s,baz=149,slow=3.8,SNR=4.6						
	comp=Z,4.0nm,0.7s						
CHTO	Chiang Mai	39.77	310	P	P	12 15 51.4	-0.1
CHTO	Chiang Mai	39.77	310	P	P	12 15 51.2	-0.3
CHTO				pP	pP	12 16 23.9	+1.6
NJ2	Nanjing	39.84	345	eP	P	12 15 54.0	+2.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WHN	Wuhan	39.84	338	P	P	12 15 53.8	+1.9
KMI	Kunming	41.25	321	P	P	12 16 04.3	+0.4
KMI				pP	pP	12 16 36.8	+1.6
PZH	PanZhiHua	42.87	321	P	P	12 16 17.5	+0.7
MJAR	Matsushiro Arr	43.47	9	P	P	12 16 19.6	-1.7
	comp=Z,2.7nm,0.8s,baz=190,slow=9.1,SNR=7.0						
MJAR				pP	pP	12 16 50.5	-3.0
	comp=Z,2.0nm,0.8s,baz=181,slow=9.6,SNR=2.4						
	comp=Z,2.7nm,0.8s						
KSRS	Korea Array	43.78	357	P	P	12 16 23.3	-0.5
	comp=Z,0.6nm,0.6s,baz=175,slow=9.1,SNR=1.9						
KSRS				ScP	ScP	12 21 44.5	-1.5
	comp=Z,1.7nm,0.8s,baz=186,slow=3.6,SNR=5.8						
	comp=Z,0.6nm,0.6s						
XAN	Xi'an	45.07	335	P	P	12 16 32.8	-1.4
XAN				pP	pwP	12 17 11.5	+0.7
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HNS	HongShan	46.01	343	⇑P	P	12 16 41.3	-0.1
HNS				pmax	pmax		
	comp=Z,6.0nm,1.4s						
TIY	Taiyuan	47.00	341	P	P	12 16 47.5	-1.8
TIY				S	S	12 23 32.3	+2.5
TIY				pmax	pmax		
	comp=Z,170nm,5.5s						
SHL	Shillong	49.01	312	P	P	12 17 03.6	-1.4
SHL				IAmb	IAmb	12 17 06.1	
	comp=Z,13nm,0.8s						
LZDM	Lanzhou Array	49.02	331	P	P	12 17 04.5	-0.6
	comp=Z,1.1nm,0.4s,baz=131,slow=12,SNR=1.6						
	comp=Z,1.1nm,0.4s						
LZH	Lanzhou	49.06	332	eP	P	12 17 03.0	-2.2
LZH				pP	pP	12 17 38.0	+0.6
LZH				sP	sP	12 17 53.5	0.0
LZH				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HHC	Hu-ho-hao-te	50.13	342	eP	P	12 17 16.3	+3.1
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		

	comp=Z,73nm,4.4s						
JCZ	Jackson Bay	50.37	144	P	P	12 17 14.6	-0.4
USRK	Ussuriysk Ar.	50.49	2	P	P	12 17 14.0	-1.7
	comp=Z,1.0nm,0.5s,baz=193,slow=8.8,SNR=2.4						
USRK				pP	pP	12 17 46.8	-1.7
	comp=Z,3.4nm,0.9s,baz=172,slow=11,SNR=3.3						
	comp=Z,1.0nm,0.5s						
QRZ	Quartz Range	50.90	139	P	P	12 17 20.2	+1.3
PALK	Pallekele	51.23	285	P	P	12 17 20.2	-1.6
TUWZ	Tuamarina	52.13	139	P	P	12 17 28.2	+0.2
KHZ	Kahutara	52.36	140	P	P	12 17 29.6	0.0
SNZO	South Karori	52.57	138	P	P	12 17 31.1	-0.1
BKZ	Black Stump Fm	52.81	135	P	P	12 17 33.0	-0.1
BKZ				IAmb	IAmb	12 17 34.0	
	comp=Z,18nm,1.0s						
BKZ	Black Stump Fm	52.81	135	P	P	12 17 32.8	-0.3
URZ	Urewera	52.87	134	P	P	12 17 31.9	-1.6
	comp=Z,5.7nm,0.6s,baz=262,slow=1.6,SNR=5.3						
	comp=Z,5.7nm,0.6s						
URZ	Urewera	52.87	134	P	P	12 17 35.6	+2.1
BFZ	Birch Farm	53.31	137	P	P	12 17 36.8	+0.1
GTA	Gaotai	53.63	331	*e*P	P	12 17 39.8	+0.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ULN	Ulaanbaatar	57.85	342	P	P	12 18 09.6	+0.5
SONM	Songino Array	58.03	341	P	P	12 18 10.7	+0.4
	comp=Z,1.7nm,0.7s,baz=152,slow=6.5,SNR=2.8						
SONM				pP	pP	12 18 42.6	-1.1
	comp=Z,1.2nm,0.5s,baz=166,slow=7.4,SNR=1.9						
	comp=Z,1.7nm,0.7s						
SONM	Songino Array	58.03	341	P	P	12 18 10.4	+0.1
CASY	Casey	61.22	189	P	P	12 18 32.6	+0.9
CASY				IAmb	IAmb	12 20 07.7	
	comp=Z,76nm,1.7s						
WMQ	Urumqi	63.09	327	*e*P	P	12 18 47.8	+3.2
PEA0B	Petropavlovsk-	63.80	18	P	P	12 18 49.3	+0.3
PETK	Petropavlovsk-	63.80	18	P	P	12 18 48.9	-0.1
	comp=Z,2.8nm,0.5s,baz=159,slow=3.2,SNR=9.1						
	comp=Z,2.8nm,0.5s						
PETK	Petropavlovsk-	63.80	18	P	P	12 18 49.4	+0.4
MKAR	Makanchi Array	67.92	327	P	P	12 19 15.7	+0.2
	comp=Z,7.5nm,0.6s,baz=115,slow=8.2,SNR=103						
MKAR				pP	pP	12 19 49.9	+0.1
	comp=Z,4.1nm,0.7s,baz=129,slow=7.0,SNR=3.2						
MKAR				LR	LR	12 52 12.6	
	comp=Z,28nm,18.8s,baz=5.0,slow=39						
	comp=Z,7.5nm,0.6s						
MAKZ	Makanchi	68.10	326		P	12 19 16.7	0.0
MAKZ				IAmb	IAmb	12 19 57.4	
	comp=Z,38nm,1.9s						
MAKZ	Makanchi	68.10	326	P	P	12 19 16.6	-0.1
MAKZ				pP	pP	12 19 51.1	+0.2
YAK	Yakutsk	68.33	360	P	P	12 19 17.3	-0.4
	comp=Z,12nm,0.6s,baz=209,slow=10,SNR=4.2						
	comp=Z,12nm,0.6s						
YAK	Yakutsk	68.33	360	P	P	12 19 17.4	-0.3
YAK				IAmb	IAmb	12 19 59.7	
	comp=Z,18nm,0.9s						
CCD	Concordia, Ant	68.67	182	P	P	12 19 21.2	+1.0
CCD				PcP	PcP	12 19 44.4	+0.3
MANEM	Manem	69.86	314	IAmb	IAmb	12 19 29.4	
	comp=Z,10nm,0.8s						
ZAA0	Zalesovo Array	71.22	334	P	P	12 19 34.8	-0.9
ZALV	Zalesovo Beam	71.22	334	P	P	12 19 34.8	-0.9
	comp=Z,2.0nm,0.6s,baz=124,slow=5.0,SNR=11						
ZALV				pP	pP	12 20 09.8	-0.4
	comp=Z,2.3nm,0.9s,baz=123,slow=5.5,SNR=2.3						
	comp=Z,2.0nm,0.6s						
GAR	Garm	71.45	315	IAmb	IAmb	12 19 39.0	
	comp=Z,36nm,1.4s						
CHGR	Chuyangaron	72.14	314		P	12 19 41.8	+0.2
CHGR				IAmb	IAmb	12 19 42.4	
	comp=Z,33nm,1.3s						
VNDA	Vanda	72.92	173	P	P	12 19 45.8	+0.4
	comp=Z,10nm,0.6s,baz=320,slow=6.8,SNR=73						
	comp=Z,10nm,0.6s						
VNDA	Vanda	72.92	173	P	P	12 19 46.0	+0.7
VNDA				IAmb	IAmb	12 19 46.5	
	comp=Z,10nm,0.7s						
VNDA	Vanda	72.92	173	P	P	12 19 45.5	+0.2
VNDA				pP	pP	12 20 20.8	+0.8
KK31	Karatay Array	73.09	319	P	P	12 19 47.1	+0.1
KKAR	Karatay Array	73.09	319	P	P	12 19 47.4	+0.4
SBA	Scott Base	73.80	172	P	P	12 19 52.3	+1.8
SBA				IAmb	IAmb	12 19 52.5	
	comp=Z,10nm,0.7s						
SBA	Scott Base	73.80	172	P	P	12 19 52.0	+1.5
SBA				PcP	PcP	12 20 07.7	+2.3
SBA				pP	pP	12 20 27.2	+2.0
MAW	Mawson	75.48	201	P	P	12 20 01.1	+0.8
	comp=Z,3.7nm,0.7s,baz=63,slow=3.4,SNR=6.4						
	comp=Z,3.7nm,0.7s						
BVAR	Borovoye Array	77.75	328	P	P	12 20 13.0	-0.3
	comp=Z,1.3nm,0.7s,baz=141,slow=7.3,SNR=6.2						
BVAR				pP	pP	12 20 49.2	+0.8
	comp=Z,1.7nm,0.7s,baz=143,slow=5.2,SNR=3.3						
	comp=Z,1.3nm,0.7s						
BORK	Borovoye	77.80	328	P	P	12 20 13.4	-0.2
BORK	Borovoye	77.80	328	P	P	12 20 13.1	-0.5
BORK				pP	pP	12 20 49.4	+0.7
TIXI	Tiksi	78.00	360	P	P	12 20 14.0	-0.3
PPT	Papeete	78.78	107	LR	LR	12 49 34.6	
	comp=Z,56nm,20.8s,baz=166,slow=31						
NRIK	Noril'sk	81.13	346	P	P	12 20 31.3	0.0
	comp=Z,1.9nm,0.7s,baz=77,slow=3.1,SNR=4.9						
	comp=Z,1.9nm,0.7s						
ABKAR	Akbulak array	82.24	322	P	P	12 20 36.9	-0.6
QSPA	South Pole Qui	83.47	180	P	P	12 20 43.7	-0.1
QSPA				IAmb	IAmb	12 20 44.4	
	comp=Z,11nm,0.8s						
QSPA	South Pole Qui	83.47	180	P	P	12 20 43.4	-0.3
QSPA				PcP	PcP	12 20 48.1	+0.4
SYO	Syowa Base	84.19	201	⇑*e*P	P	12 20 47.0	-0.2
OHAK	Old Harbor	88.19	32	P	P	12 21 07.4	+0.5
ELIB	Princess Elisa	89.02	197	*d*P	P	12 21 11.9	+1.1
	comp=Z,3.0nm,0.6s						
ILAR	Eielson Array	92.82	25	P	P	12 21 26.1	-2.2
	comp=Z,0.9nm,0.7s,baz=270,slow=4.3,SNR=5.7						
	comp=Z,0.9nm,0.7s						
ILAR	Eielson Array	92.82	25	P	P	12 21 26.5	-1.8
BMAR	Burnt Mountain	94.12	23	P	P	12 21 34.3	0.0
BCAR	Beaver Creek A	94.85	27	P	P	12 21 37.6	-0.1
BELA	Belgrano 2	95.32	183	P	P	12 21 39.4	-0.2
BELA				IAmb	IAmb	12 21 40.0	
	comp=Z,2.8nm,0.6s						
SNAA	Sanae	96.19	193	P	P	12 21 43.5	-0.3
	comp=Z,1.6nm,1.0s,baz=45,slow=4.3,SNR=0.9						
	comp=Z,1.6nm,1.0s						
SNAA	Sanae	96.19	193	P	P	12 21 44.6	+0.8
PDAR	Pinedale Array	116.41	45	PKP	PKPdf	12 26 59.0	-0.6
	comp=Z,0.6nm,0.7s,baz=182,slow=1.2,SNR=7.0						
ULM	Lac du Bonnet	121.93	33	PKP	PKPdf	12 27 08.4	-1.2
	comp=Z,1.2nm,0.6s,baz=5.8,slow=3.8,SNR=4.5						
TXAR	Lajitas Array	124.51	59	PKP	PKPdf	12 27 15.1	-0.3
	comp=Z,0.6nm,0.7s,baz=312,slow=1.8,SNR=7.8						
TXAR				pPKP	pPKPdf	12 27 53.1	+0.9
	comp=Z,0.5nm,0.9s,baz=243,slow=0.3,SNR=3.0						
TORD	Torodi Ar. Bea	128.90	282	PKP	PKPdf	12 27 23.7	-0.3
	comp=Z,0.7nm,0.7s,baz=44,slow=2.9,SNR=4.3						
SCHQ	Schefferville	129.90	13	PKP	PKPdf	12 27 24.9	+0.2
	comp=Z,2.0nm,0.5s,baz=288,slow=9.6,SNR=6.2						
CPUP	Villa Florida	146.56	168	PKPbc	PKPbc	12 27 57.8	+0.2
	comp=Z,8.5nm,0.8s,baz=172,slow=1.6,SNR=28						
CPUP	Villa Florida	146.56	168		PKPbc	12 27 58.0	+0.4
LPAZ	La Paz	150.99	141	PKPbc	PKiKP	12 28 10.6	0.0
	comp=Z,4.9nm,0.4s,baz=254,slow=2.4,SNR=30						

*IDC **28** 12:24:38.3±0.7, 37°.61N×141°.96E, h0^{km}, mb4.0/19, mbtmp4.0/26, ML3.7/7, MS3.2/4, Error ellipse: s-maj=19.5km s-min=14.3km az=94.0*

*NIED **28** 12:24:43.3, 37°.62N×141°.86E, h37^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.40; $M_{\theta\theta}$-0.08; $M_{\phi\phi}$-4.31; $M_{r\theta}$1.44; $M_{\theta\phi}$-0.89; $M_{\phi r}$8.51; Fault plane solution: $M_0 9.70000\times10^{14}$ NP1: ϕ_s193.00000°, δ14.00000°, λ93.00000°. NP2: ϕ_s10.00000°, δ76.00000°, λ89.00000°.*

*JMA **28** 12:24:43.3±0.1, 37°.6N±0°.4×141°.9E±0°.8, h37^{km}±2^{km}, MD3.8/40, MV4.1/40, E OFF FUKUSHIMA PREF*

JMA Felt I J1 at E OFF FUKUSHIMA PREF .

*NEIC **28** 12:24:44.1±1.2, 37°.65N±0°.07×141°.95E±0°.07, h35^{km}±1^{km}, mb4.4/22, Error ellipse: s-maj=14.3km s-min=5.0km az=324.0*

ISC 28 12:24:43.8±0.8, **37°.62N**±0°.04×**141°.91E**±0°.07, **h35**^{km}±8^{km}, **n103**, σ**1^{s}15**/99, **mb4.2**/33, **17D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.78	333	⇓*i*P	Pn	12 24 57.6	-0.6
JIKH				⇓*e*S	Sn	12 25 07.0	-1.6
JIKH	Ishinomakikobu	0.78	333	A	A	12 24 57.6	
	comp=N,3.0nm,2.0s,comp=E,9.0nm,0.4s						
JMST	Minamisoumatoc	0.82	278	⇓*i*P	Pn	12 24 57.9	-0.9
JMST				⇓*e*S	Sn	12 25 08.3	-1.5
JMST	Minamisoumatoc	0.82	278	A	A	12 24 57.9	
	comp=N,6.0nm,0.3s,comp=E,5.0nm,0.8s						
JFK	Kawauchi	0.86	253	⇓P	Pn	12 24 58.4	-1.1
JFK				⇓S	Sn	12 25 09.0	-1.9
JFK	Kawauchi	0.86	253	A	A	12 24 58.4	
	comp=N,6.0nm,3.4s,comp=E,3.0nm,1.1s						
JMM	Marumori	0.92	286	⇓P	Pn	12 24 59.5	-0.8
JMM				⇓S	Sn	12 25 10.6	-1.6
JMM	Marumori	0.92	286	A	A	12 24 59.5	
	comp=N,3.0nm,0.3s,comp=E,5.0nm,0.3s						
JIO	Ouri	0.94	332	⇓P	Pn	12 25 00.0	-0.5
JIO				⇓S	Sn	12 25 11.4	-1.5
ONAJ	Iwakimizuishiy	1.03	240	⇓P	Pn	12 25 00.6	-1.2
ONAJ				⇓S	Sn	12 25 12.9	-2.1
ONAJ	Iwakimizuishiy	1.03	240	A	A	12 25 00.6	
	comp=N,8.0nm,0.3s,comp=E,10.0nm,0.3s						
JOU	Okura	1.24	307	⇓P	Pn	12 25 04.5	-0.1
JOU	Okura	1.24	307	A	A	12 25 04.5	
	comp=N,6.0nm,0.6s,comp=E,5.0nm,0.4s						
JKMT	Kesennumamotoy	1.24	344	⇓P	Pn	12 25 04.3	-0.3
JOTO	OTAMA OYAMA	1.26	268	P	Pn	12 25 04.9	+0.1
JOTO	OTAMA OYAMA	1.26	268	A	A	12 25 04.9	
	comp=N,6.0nm,1.4s,comp=E,7.0nm,0.5s						
JMK	Ichinoseki	1.44	338	⇓P	Pn	12 25 07.3	0.0
JYS	Shirataka	1.58	293	P	Pn	12 25 09.3	0.0
JFY	Yanaizu	1.77	264	⇓P	Pn	12 25 12.1	+0.1
JYK	Kaneyama	1.78	317	⇓P	Pn	12 25 12.3	+0.2
JSD	Sado	2.92	279		Pn	12 25 28.2	+0.5
JSD	Sado	2.92	279	P	Pn	12 25 28.3	+0.5
MJAR	Matsushiro Arr	3.15	251	Pn	Pn	12 25 31.5	+0.6
	comp=E,1.9nm,0.3s,baz=78,slow=17,SNR=68						
MJAR				Sn	Sn	12 26 13.3	+5.9
	comp=E,1.5nm,0.3s,baz=82,slow=28,SNR=6.1						
MJAR				LR	LR	12 27 01.9	
	comp=E,242nm,21.3s,baz=102,slow=45						
	comp=E,6.3nm,0.3s						
MJAR	Matsushiro Arr	3.15	251		Pn	12 25 32.4	+1.5
MAJO	Matsushiro	3.15	251		Pn	12 25 32.4	+1.4
MAJO	Matsushiro	3.15	251	P	Pn	12 25 32.4	+1.4
MJB9	Matsu-Tunnel	3.15	251		Pn	12 25 33.4	+2.4
JGF	Kuroka	4.18	243		Pn	12 25 46.9	+1.8
JGF	Kuroka	4.18	243	P	Pn	12 25 47.0	+1.8
ERM	Erimo	4.49	12		Pn	12 25 49.7	+0.3
INU	Inuyama	4.55	242		Pn	12 25 51.3	+1.1
INU	Inuyama	4.55	242	P	Pn	12 25 51.9	+1.8
JHJ2	Mitsune	4.81	201	Pn	Pn	12 25 54.6	+0.8
JHJ2	Mitsune	4.81	201	P	Pn	12 25 55.2	+1.4
JHJ	Hachijo jima 2	4.82	202	Pn	Pn	12 25 53.6	-0.2
	comp=E,35nm,0.3s,baz=90,slow=22,SNR=5.3						
JHJ				Sn	Sn	12 26 45.9	-2.5
	comp=E,42nm,0.3s,baz=112,slow=22,SNR=1.7						
	comp=E,115nm,0.2s						
ASAJ	Asahikawa	6.51	4	Pn	Pn	12 26 16.9	-0.2
	comp=E,1.4nm,0.3s,baz=205,slow=14,SNR=23						
ASAJ				Sn	Sn	12 27 31.9	+1.9
	comp=E,0.6nm,0.3s,baz=110,slow=29,SNR=1.5						
	comp=E,3.2nm,0.3s						
JKA	Kamikawa-asahi	6.51	4		Pn	12 26 17.9	+0.8
JMN	Monobe	7.60	242	Pn	Pn	12 26 34.2	+2.0
JMN	Monobe	7.60	242	P	Pn	12 26 34.5	+2.4
USRK	Ussuriysk Ar.	9.98	314	Pn	Pn	12 27 05.1	+0.6
	comp=E,0.3nm,0.3s,baz=121,slow=13,SNR=4.4						
	comp=E,1.8nm,0.6s						
JNU	Nakatsue	10.06	247	Pn	Pn	12 27 05.2	-0.7
	comp=E,0.4nm,0.3s,baz=41,slow=19,SNR=4.8						
	comp=E,4.6nm,0.7s						
JNU	Nakatsue	10.06	247	Pn	Pn	12 27 07.8	+1.9
KSRS	Korea Array	11.11	273	Pn	Pn	12 27 21.0	+0.9
	comp=E,0.2nm,0.3s,baz=87,slow=14,SNR=5.9						
	comp=E,0.9nm,0.5s						
JOW	Kunigami	15.76	231	LR	LR	12 33 47.8	
	comp=E,43nm,18.8s,baz=252,slow=35						
HILR	Hailar Array B	19.92	314	P	P	12 29 11.5	-0.8
	baz=116,slow=11						
	comp=E,1.9nm,0.4s						
HHC	Hu-ho-hao-te	23.67	287	*e*P	P	12 29 52.8	+0.6
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,98nm,4.8s						
YAK	Yakutsk	25.59	347	P	P	12 30 09.0	-0.3
	comp=Z,13nm,0.6s,baz=106,slow=2.1,SNR=4.2						
	comp=Z,13nm,0.6s						
YAK	Yakutsk	25.59	347	P	P	12 30 08.7	-0.6
YAK				IAmb	IAmb	12 30 10.0	
	comp=Z,12nm,0.6s						
ULN	Ulaanbaatar	27.36	303	P	P	12 30 25.4	-0.3
ENH	Enshi	27.78	264		P	12 30 28.7	-0.8
ENH				IAmb	IAmb	12 30 29.7	
	comp=Z,11nm,0.8s						
SONM	Songino Array	27.80	303	P	P	12 30 29.6	0.0
	comp=Z,2.4nm,0.7s,baz=108,slow=10,SNR=4.1						
	comp=Z,2.4nm,0.7s						
SONM	Songino Array	27.80	303	P	P	12 30 29.8	+0.3
H11N2	WAKE ISLAND Hy	28.11	122	T	T	13 00 03.7	
	baz=315,slow=75,SNR=69						
H11N1	WAKE ISLAND Hy	28.12	122	T	T	13 00 05.5	
	baz=315,slow=75,SNR=84						
H11N3	WAKE ISLAND Hy	28.13	122	T	T	13 00 05.1	
	baz=315,slow=75,SNR=79						
H11S1	WAKE ISLAND Hy	28.85	124	T	T	13 01 06.1	
	baz=317,slow=76,SNR=86						
H11S3	WAKE ISLAND Hy	28.85	125	T	T	13 00 58.6	
	baz=317,slow=76,SNR=97						
H11S2	WAKE ISLAND Hy	28.87	124	T	T	13 01 04.5	
	baz=317,slow=76,SNR=86						
GTA	Gaotai	32.77	286	*e*P	P	12 31 13.5	-0.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
PZH	PanZhiHua	35.56	264	P	P	12 31 39.8	+1.9
WMQ	Urumqi	40.93	296	*e*P	P	12 32 22.5	-0.4
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ZAA0	Zalesovo Array	41.82	312		P	12 32 29.6	-0.3
ZAA0				IAmb	IAmb	12 32 30.8	
	comp=Z,2.6nm,0.8s						
ZALV	Zalesovo Beam	41.82	312	P	P	12 32 29.8	0.0
	comp=Z,1.3nm,0.5s,baz=92,slow=7.6,SNR=11						
ZALV				PcP	PcP	12 34 24.9	-0.4
	comp=Z,0.6nm,0.6s,baz=96,slow=2.9,SNR=2.5						
ZALV				LR	LR	12 50 19.7	
	comp=Z,46nm,18.1s,baz=260,slow=37						
	comp=Z,1.3nm,0.5s						
ZALV	Zalesovo Beam	41.82	312	P	P	12 32 29.3	-0.6
CMAR	Chiang Mai Arr	42.03	255	P	P	12 32 32.0	-0.1
	comp=Z,0.2nm,0.4s,baz=53,slow=8.4,SNR=1.7						
	comp=Z,0.2nm,0.4s						
MKAR	Makanchi Array	44.15	302	P	P	12 32 48.5	-0.3
	comp=Z,2.2nm,0.7s,baz=87,slow=10.0,SNR=20						
	comp=Z,2.2nm,0.7s						
MKAR	Makanchi Array	44.15	302	P	P	12 32 48.8	-0.1
C19K	Lookout Ridge	44.26	26	P	P	12 32 50.0	+0.5
C19K				IAmb	IAmb	12 33 07.7	
	comp=Z,7.4nm,1.5s						
MAKZ	Makanchi	44.36	302	P	P	12 32 50.6	0.0
MAKZ				IAmb	IAmb	12 32 52.2	
	comp=Z,2.9nm,0.9s						
WUS	Wushi	47.65	295	P	P	12 33 16.9	+0.3
WUS				IAmb	IAmb	12 33 17.9	
	comp=Z,3.2nm,0.8s						
I23K	Minto, Yukon-K	47.73	32	P	P	12 33 16.9	+0.1
I23K				IAmb	IAmb	12 33 17.4	
	comp=Z,4.8nm,0.7s						
TARG	Taragay, Kyrgy	48.50	296		P	12 33 23.5	-0.1
TARG				IAmb	IAmb	12 33 25.3	
	comp=Z,3.2nm,0.9s						
ILAR	Eielson Array	48.79	33	P	P	12 33 25.9	+0.9
	comp=Z,0.3nm,0.8s,baz=271,slow=6.5,SNR=1.8						
	comp=Z,0.3nm,0.8s						
KDJ	Kajisay	48.83	297	P	P	12 33 25.4	-0.4
KDJ				IAmb	IAmb	12 33 31.2	
	comp=Z,5.1nm,1.1s						
E25K	Arctic Village	49.24	28	P	P	12 33 28.1	-0.3
E25K				IAmb	IAmb	12 33 41.3	
	comp=Z,4.3nm,1.4s						
BOOM	Boomskoye usch	49.59	297	P	P	12 33 31.6	-0.1
BOOM				IAmb	IAmb	12 33 32.8	
	comp=Z,2.5nm,0.8s						
BVAR	Borovoye Array	50.47	312	P	P	12 33 37.2	-0.8
	comp=Z,0.8nm,0.5s,baz=60,slow=8.7,SNR=2.5						
	comp=Z,0.8nm,0.5s						
KK31	Karatay Array	53.18	300	P	P	12 33 57.3	-1.0
KKAR	Karatay Array	53.18	300	P	P	12 33 57.6	-0.7
KNRA	Kununurra	54.44	196	P	P	12 34 08.3	+0.7
CHGR	Chuyangaron	55.77	295	P	P	12 34 17.2	-0.2
ARTI	Arti	56.29	318	P	P	12 34 20.1	-0.6
	comp=Z,6.0nm,0.5s,baz=98,slow=4.4,SNR=10						
	comp=Z,6.0nm,0.5s						
ARTI	Arti	56.29	318		P	12 34 20.4	-0.3
WB0	Warramunga Arr	57.52	188	P	P	12 34 29.2	-0.4
WRA	Warramunga Arr	57.70	188	P	P	12 34 29.9	-1.1
	comp=Z,1.1nm,0.6s,baz=4.3,slow=7.0,SNR=10						
	comp=Z,1.1nm,0.6s						
WRA	Warramunga Arr	57.70	188	P	P	12 34 30.4	-0.5
AB31	Akbulak array	57.87	310		P	12 34 31.4	-0.4
AB31				IAmb	IAmb	12 34 31.7	
	comp=Z,2.0nm,0.6s						
ABKAR	Akbulak array	57.87	310	P	P	12 34 31.3	-0.6
AS31	Alice Springs	61.42	188	P	P	12 34 56.5	0.0
ASAR	Alice Springs	61.42	188	P	P	12 34 56.2	-0.4
	comp=Z,1.0nm,0.7s,baz=7.3,slow=5.4,SNR=17						
ASAR				LR	LR	12 57 56.6	
	comp=Z,30nm,22.0s,baz=176,slow=32						
	comp=Z,1.0nm,0.7s						
ASAR	Alice Springs	61.42	188	P	P	12 34 56.5	-0.1
FIA1	FINESS Array S	68.48	332	P	P	12 35 41.8	-0.2
FINES	FINESS Array B	68.48	332	P	P	12 35 41.8	-0.2
	comp=Z,3.8nm,0.9s,baz=27,slow=7.6,SNR=4.4						
	comp=Z,3.8nm,0.9s						
FINES	FINESS Array B	68.48	332	P	P	12 35 42.0	0.0
KBZ	Khabaz	70.82	311	P	P	12 35 57.1	+0.4
	comp=Z,1.7nm,0.7s,baz=74,slow=7.4,SNR=2.8						
	comp=Z,1.7nm,0.7s						
HFS	Hagfors	73.72	336	P	P	12 36 13.5	-0.3
	comp=Z,0.7nm,0.3s,baz=46,slow=4.7,SNR=8.4						
	comp=Z,0.7nm,0.3s						
NB2	NORSAR Subarra	73.80	337	P	P	12 36 13.9	-0.4
	comp=Z,11nm,1.4s,baz=39,slow=6.5						
NOA	NORSAR Array B	73.80	337	P	P	12 36 14.0	-0.4
	comp=Z,0.8nm,0.7s,baz=24,slow=8.7,SNR=3.9						
	comp=Z,0.8nm,0.7s						
AKASG	Malin Array Be	74.08	322	P	P	12 36 15.4	-0.6
	comp=Z,1.4nm,0.5s,baz=48,slow=6.3,SNR=8.2						
	comp=Z,1.4nm,0.5s						
PDAR	Pinedale Array	76.97	46	P	P	12 36 33.7	+0.6
	comp=Z,0.2nm,0.5s,baz=294,slow=1.5,SNR=2.1						
	comp=Z,0.2nm,0.5s						
BRTR	Keskin Array B	78.76	312	P	P	12 36 43.4	+0.4
	comp=Z,0.7nm,0.7s,baz=32,slow=5.8,SNR=3.0						
	comp=Z,0.7nm,0.7s						
GERES	GERESS Array B	82.42	328	P	P	12 37 02.2	-0.2
	comp=Z,0.4nm,0.6s,baz=33,slow=5.3,SNR=3.3						
	comp=Z,0.4nm,0.6s						
TXAR	Lajitas Array	89.45	53	P	P	12 37 38.5	+1.0
	comp=Z,0.3nm,0.8s,baz=328,slow=4.5,SNR=2.6						
	comp=Z,0.3nm,0.8s						

*SJA **28** 13:01:32.8±1.9, 29°.80S×71°.59W, h10^{km}±16^{km}, ML3.5, MW3.2*

*GUC **28** 13:01:37.1±0.6, 29°.85S×71°.42W, h42^{km}±2^{km}, ML3.6*

ISC 28 13:01:34.4±3.5, **29°.83S**±0°.03×**71°.48W**±0°.05, **h8**^{km}±26^{km}, **n50**, σ**1^{s}38**/61, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO04	Tololo Observa	0.68	120	*e*P	Pn	13 01 49.9	-0.8
GO04				*e*S	Sb	13 01 59.1	+0.6
GO04				IAML		13 01 59.9	
	comp=E,10μm,0.4s						
GO04	Tololo Observa	0.68	120	*i* P	Pb	13 01 49.2	+0.4
GO04				*e*S	Sb	13 01 59.1	+0.6
GO04				IAML		13 02 00.8	
	comp=Z,2μm,0.2s						
CO06	Fray Jorge	0.85	189	*e*P	Pn	13 01 53.0	+0.3
CO06				*e*S	Sn	13 02 04.5	-0.8
LCO	Las Campanas	1.07	40	*e*P	Pb	13 01 55.4	+0.1
LCO	Las Campanas	1.07	40	*i* P	Pb	13 01 54.9	-0.4
LCO				IAML		13 02 09.8	
	comp=Z,2μm,0.3s						
CO01	Juntas del Tor	1.22	97	*i* P	Pb	13 01 57.9	+0.1
CO01				IAML		13 02 13.1	
	comp=N,3μm,0.4s						
CO01	Juntas del Tor	1.22	97	*i* P	Pn	13 01 57.2	-0.8
CO01				*e*S	Sb	13 02 12.2	-1.7
CO01				IAML		13 02 14.9	
	comp=Z,1μm,0.3s						
CO03	El Pedregal	1.22	146	*e*P	Pn	13 01 57.5	-0.4
CO03				*e*S	Sb	13 02 12.1	-1.6
CO03				IAML		13 02 12.9	
	comp=E,1μm,0.1s						
CO03	El Pedregal	1.22	146	*i* P	Pn	13 01 56.7	-1.1
CO03				*e*S	Sb	13 02 11.9	-1.8
CO03				IAML		13 02 16.5	
	comp=Z,311nm,0.3s						
CO02	Combarbal	1.43	163	*e*P	Pn	13 02 00.8	0.0
CO02				IAML		13 02 21.1	
	comp=E,2μm,0.5s						
CO02	Combarbal	1.43	163	*i* P	Pn	13 02 00.1	-0.7
CO02				*e*S	Sn	13 02 18.9	-1.0
CO02				IAML		13 02 22.0	
	comp=Z,453nm,0.3s						
AC05	El Transito	1.45	47	*e*P	Pb	13 02 01.6	-0.1
AC05				IAML		13 02 20.4	
	comp=E,974nm,0.2s						
AC05	El Transito	1.45	47	*i* P	Pn	13 02 00.9	-0.2
AC05				IAML		13 02 20.7	
	comp=Z,295nm,0.2s						
AC04	Llanos de Chal	1.66	13	*e*P	Pb	13 02 05.0	-0.3
AC04				IAML		13 02 31.7	
	comp=E,417nm,0.2s						
AC04	Llanos de Chal	1.66	13	*i* P	Pn	13 02 04.1	+0.2
AC04				*e*S	Sb	13 02 26.3	0.0
AC04				IAML		13 02 31.0	
	comp=Z,329nm,0.4s						
AROD	Rodeo	1.78	101	*i* P	Pb	13 02 07.6	+0.2
AROD				*e*S	Sb	13 02 29.1	-0.9
ACDV	Cuesta del Vie	2.08	100	*i* P	Pb	13 02 12.2	-0.3
ACDV				IAML		13 02 43.4	
	comp=Z,172nm,0.3s						
ACCO	Cerro Coronel	2.23	110	*i* P	Pb	13 02 15.0	-0.1
CO04	Los Peladeros	2.25	169	*e*P	Pn	13 02 12.9	+0.7
CO04				*i* S	Sn	13 02 40.5	+0.2
CO04				IAML		13 02 47.2	
	comp=N,662nm,0.4s						
GO03	Copiapo	2.49	26	*e*P	Pn	13 02 16.6	+1.3
GO03				IAML		13 02 53.7	
	comp=N,258nm,0.4s						
GO03	Copiapo	2.49	26	*i* P	Pn	13 02 16.6	+1.3
GO03				IAML		13 02 54.1	
	comp=Z,207nm,0.7s						
AGUA	GUANDACOL	2.63	83	*i* P	Pb	13 02 21.7	-0.1
AGUA				IAML		13 03 01.9	
	comp=Z,163nm,0.5s						
AC06	Mina Casimiro	2.66	22	*e*P	Pn	13 02 18.9	+1.3
AC06				IAML		13 03 01.3	
	comp=E,168nm,0.2s						
RTLS	Leoncito	2.72	137	*i* P	Pb	13 02 22.1	-1.4
RTLS				IAML		13 03 05.3	
	comp=Z,233nm,0.8s						
VA06	Catapilco	2.73	177	*e*P	Pn	13 02 19.8	+1.3
VA06				IAML		13 03 04.1	
	comp=E,384nm,0.4s						
VA03	San Esteban	3.03	165	*e*P	Pn	13 02 23.8	+1.0
VA03				*e*S	Sn	13 02 59.5	+0.1
VA03				IAML		13 03 07.9	
	comp=N,286nm,0.3s						
VA03	San Esteban	3.03	165	*i* P	Pn	13 02 23.4	+0.6
VA03				IAML		13 03 10.7	
	comp=Z,189nm,0.5s						
VCA	Vinchina	3.06	70	*i* P	Pb	13 02 26.8	-2.6
VCA				IAML		13 03 15.2	
	comp=Z,216nm,0.3s						
ROCH	El Roble	3.16	173	*e*P	Pn	13 02 25.9	+1.2
ROCH				IAML		13 03 17.3	
	comp=E,111nm,0.6s						
CFA	Coronel Fontan	3.31	123	*i* P	Pn	13 02 28.4	+1.8
CFA				IAML		13 03 20.0	
	comp=Z,58nm,0.6s						
PEL	Peldehue	3.37	169	*e*P	Pn	13 02 28.6	+1.1

PEL				IAML		13 03 23.3	
	comp=E,94nm,0.4s						
AVFE	**Valle Fertil**	**3.58**	**104**	*i* P	**Pn**	**13 02 32.3**	**+1.9**
AVFE				IAML		13 03 25.7	
	comp=Z,68nm,0.4s						
MT05	**Renca**	**3.60**	**170**	*e*P	**Pn**	**13 02 31.5**	**+0.8**
MT05	**Renca**	**3.60**	**170**	*i* P	**Pn**	**13 02 32.6**	**+1.9**
MT05				IAML		13 03 34.1	
	comp=Z,72nm,0.5s						
AC02	**Maricunga**	**3.64**	**35**	*e*P	**Pn**	**13 02 33.2**	**+1.7**
AC02	**Maricunga**	**3.64**	**35**	*i* P	**Pn**	**13 02 32.6**	**+1.1**
AC02				IAML		13 03 31.5	
	comp=Z,89nm,0.5s						
MT04	**Ro Olivares**	**3.74**	**162**	*i* P	**Pn**	**13 02 35.4**	**+2.6**
MT04				IAML		13 03 32.4	
	comp=Z,52nm,0.4s						
MT03	**Universidad Ad**	**3.74**	**167**	*i* P	**Pn**	**13 02 34.5**	**+1.8**
MT03				IAML		13 03 37.8	
	comp=Z,93nm,0.4s						
AC01	**Pan de Azucar**	**3.75**	**12**	*e*P	**Pn**	**13 02 32.4**	**-0.3**
AC01	**Pan de Azucar**	**3.75**	**12**	*i* P	**Pn**	**13 02 32.0**	**-0.7**
AC01				IAML		13 03 37.3	
	comp=Z,39nm,1.1s						
MT08	**Bocatoma Ro**	**3.81**	**161**	*i* P	**Pn**	**13 02 36.7**	**+3.0**
MT08				IAML		13 03 35.9	
	comp=Z,80nm,0.6s						
TINO	**Tinogasta**	**3.86**	**64**	*i* P	**Pn**	**13 02 36.5**	**+2.2**
ACLC	**CERRO LA CRUZ**	**3.97**	**85**	*i* P	**Pn**	**13 02 37.5**	**+1.7**
ACLC				IAML		13 03 39.3	
	comp=Z,40nm,0.4s						
MT01	**Popeta**	**4.03**	**177**	*i* P	**Pn**	**13 02 37.1**	**+0.7**
MT01				IAML		13 03 35.5	
	comp=Z,57nm,0.8s						
MT13	**San Alfonso**	**4.03**	**166**	*i* P	**Pn**	**13 02 39.8**	**+3.2**
MT13				IAML		13 03 47.0	
	comp=Z,57nm,0.6s						
LMEL	**Las Melosas**	**4.15**	**165**	*i* P	**Pn**	**13 02 41.0**	**+2.7**
LMEL				IAML		13 03 49.4	
	comp=Z,86nm,0.1s						
ACAN	**Cantantal**	**4.42**	**125**	*i* P	**Pn**	**13 02 44.1**	**+2.3**
ACAN				IAML		13 03 42.9	
	comp=Z,134nm,0.6s						
BO01	**Tunca**	**4.56**	**176**	*i* P	**Pn**	**13 02 45.1**	**+1.4**
BO01				IAML		13 04 00.8	
	comp=Z,29nm,0.7s						
GO02	**Mina Guanaco**	**4.95**	**20**	*i* P	**Pn**	**13 02 50.5**	**+1.1**
GO02				IAML		13 04 10.8	
	comp=Z,74nm,0.5s						
BO02	**Sierra Bellavi**	**4.98**	**173**	*i* P	**Pn**	**13 02 51.7**	**+2.1**
BO02				IAML		13 04 04.5	
	comp=Z,39nm,0.5s						

UCR 28 13:05:36.5±1.0**,9°.30N**×**83°.85W,h56**^{km}±4^{km}**,MW3.5, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDPE	**Pejibaye, P**	**0.31**	**117**	*e*P	Pn	13 05 45.8	-0.5
EDPE				*e*S	Sn	13 05 53.3	-0.1
PIEC	**Cerro El Cedra**	**0.34**	**341**	*e*P	Pn	13 05 46.4	-0.5
PIEC				*e*S	Sn	13 05 54.0	-0.4
PITB	**Pirrs, San**	**0.40**	**334**	*e*P	Pn	13 05 46.7	-0.7
PITB				*e*S	Sn	13 05 54.5	-0.6
PICV	**PH. Pirrs**	**0.47**	**313**	*e*P	Pn	13 05 47.4	-0.6
REPA	**Paraso**	**0.52**	**358**	*e*P	Pn	13 05 47.7	-0.9
REPA				*e*S	Sn	13 05 57.3	-0.1
ACOS	**Acosta**	**0.58**	**328**	*e*P	Pn	13 05 48.6	-0.7
ACOS				*e*S	Sn	13 05 57.8	-0.8
DRK0	**Durika**	**0.60**	**94**	*e*P	Pn	13 05 48.3	-1.2
DRK0				*e*S	Sn	13 05 57.8	-1.1
VINA	**Juan Vinas**	**0.60**	**10**	*e*P	Pn	13 05 49.2	-0.3
VINA				*e*S	Sn	13 05 59.1	+0.2
RAFA	**San Farael, Vo**	**0.65**	**3**	*e*P	Pn	13 05 50.2	-0.1
RAFA				*e*S	Sn	13 06 00.4	+0.1
LUJA	**Lujan**	**0.66**	**340**	*e*P	Pn	13 05 50.0	-0.2
ECI	**Escuela Centro**	**0.66**	**342**	*e*P	Pn	13 05 50.2	-0.1
ECI				*e*S	Sn	13 06 00.6	+0.3
SJS3	**Mercedes San J**	**0.66**	**342**	*e*P	Pn	13 05 50.4	+0.1
SJS3				*e*S	Sn	13 06 00.7	+0.4
SJS	**Escuela Geolog**	**0.67**	**342**	*e*P	Pn	13 05 50.3	0.0
SJS				*e*S	Sn	13 06 00.6	+0.3
VICA	**Volcano Irazu**	**0.68**	**0**	*e*P	Pn	13 05 50.5	-0.3
CORON	**Coronado**	**0.69**	**347**	*e*P	Pn	13 05 50.9	+0.3
CORON				*e*S	Sn	13 06 02.0	+1.2
VTCV	**VTCV, Calle Va**	**0.69**	**10**	*e*P	Pn	13 05 50.5	-0.1
CVTQ	**Turrialba Volc**	**0.70**	**6**	*e*P	Pn	13 05 49.5	-1.5
CVTQ				*e*S	Sn	13 06 01.9	+0.4
CVTV	**Tajo**	**0.70**	**8**	*e*P	Pn	13 05 50.0	-0.9
ABRB	**Las Abras (San**	**0.71**	**10**	*e*P	Pn	13 05 51.0	0.0
VTR0	**Volcan Turrial**	**0.72**	**7**	*e*P	Pn	13 05 47.7	-3.5
VTR0				*e*S	Sn	13 06 02.3	+0.5
CVIMO	**Finca Echandi**	**0.72**	**353**	*e*P	Pn	13 05 51.2	+0.1
CVIMO				*e*S	Sn	13 06 02.6	+0.9
HDC	**Heredia**	**0.74**	**339**	*e*P	Pn	13 05 51.2	-0.1
HDC				*e*S	Sn	13 06 02.2	+0.2
RESJ	**San Isidro (Tu**	**0.75**	**16**	*e*P	Pn	13 05 51.6	+0.3
LCOCO	**El Coco**	**0.83**	**20**	*e*P	Pn	13 05 52.5	+0.2
RVLA	**Villa Bonita**	**0.84**	**18**	*e*P	Pn	13 05 52.7	+0.3
EDAD	**Golfito**	**0.93**	**134**	*e*P	Pn	13 05 53.4	-0.2
PIRO	**Carate, Puerto**	**1.02**	**150**	*e*P	Pn	13 05 54.8	0.0
ALCO	**Alturas Coton,**	**1.06**	**109**	*e*P	Pn	13 05 54.4	-1.0
TRT2	**Tortugero**	**1.25**	**5**	*e*P	Pn	13 05 58.4	+0.6
VACR	**Volcan Arenal**	**1.42**	**325**	*e*P	Pn	13 06 01.1	+1.0
ARE1	**Arenal 1**	**1.44**	**323**	*e*P	Pn	13 06 00.7	+0.4
JEFFS	**S de V. Baru**	**1.44**	**116**	*e*P	Pn	13 06 00.0	-0.4
CEDE	**Laguna Cedeo**	**1.45**	**324**	*e*P	Pn	13 06 01.9	+1.4
PTPA	**Petro Terminal**	**1.46**	**138**	*e*P	Pn	13 06 01.9	+1.3
JTS	**Las Juntas de**	**1.47**	**312**	*e*P	Pn	13 06 00.9	+0.2
PBNVO	**Pueblo Nuevo,**	**1.69**	**104**	*e*P	Pn	13 06 03.8	+0.2
RBALA	**Bur**	**1.73**	**104**	*e*P	Pn	13 06 04.1	-0.1
CUI	**Cuipilapa**	**1.87**	**316**	*e*P	Pn	13 06 07.2	+1.0
JUD3	**Juan Diaz 3**	**1.88**	**297**	*e*P	Pn	13 06 06.8	+0.5
KKNTU	**Kakintº**	**2.07**	**103**	*e*P	Pn	13 06 09.6	+0.7
LAPC	**Finca la Perla**	**2.13**	**313**	*e*P	Pn	13 06 11.4	+1.6

IDC ***28*** *13:13:17.4±8.2, 4°.75S×153°.23E, h64*^{km}*±60*^{km}*, mb3.7/8, mbtmp4.0/9, ML2.1/1, MS3.1/4, Error ellipse: s-maj=75.8km s-min=28.3km az=101.0*

ISC 28 13:13:15.8±2.2**,4°.7S**±0°.3×**153°.3E**±0°.4**,h50**^{km}**,n16,** σ**1**^{s}**.07**/11**,mb3.9**/8**,MS3.0**/3**,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.67**	**232**	P	**Pn**	**13 15 06.6**	**+1.7**
	1.6nm,0.3s,baz=41,slow=14,SNR=8.2						
PMG				S	**Sn**	**13 16 28.6**	**-1.9**
	12nm,0.5s,baz=12,slow=20,SNR=7.2						
	4.6nm,0.4s						
CTA	**Charters Tower**	**16.76**	**204**	LR	LR	13 22 24.2	
	comp=Z,47nm,19.9s,baz=244,slow=33						
DZM	**Mont Dzumac**	**21.46**	**145**	LR	LR	13 24 38.5	
	comp=Z,50nm,18.7s,baz=99,slow=32						
WRA	**Warramunga Arr**	**23.87**	**229**	P	**P**	**13 18 24.8**	**-0.1**
	0.9nm,0.5s,baz=53,slow=9.9,SNR=12						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**26.55**	**223**	P	**P**	**13 18 49.1**	**-0.1**
	0.7nm,0.7s,baz=51,slow=9.4,SNR=18						
ASAR				LR	LR	13 28 47.8	
	comp=Z,44nm,19.1s,baz=10,slow=35						
	0.7nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**26.57**	**29**	T	T	13 46 31.5	
	baz=208						
H11S2	**WAKE ISLAND Hy**	**26.57**	**30**	T	T	13 46 31.5	
	baz=208						
H11S1	**WAKE ISLAND Hy**	**26.58**	**29**	T	T	13 46 29.1	
	baz=208						
KSRS	**Korea Array**	**48.13**	**333**	P	**P**	**13 21 50.8**	**0.0**
	0.6nm,0.6s,baz=141,slow=8.9,SNR=3.4						
	0.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**58.27**	**295**	P	**P**	**13 23 06.6**	**+0.8**
	0.8nm,0.7s,baz=121,slow=5.5,SNR=7.5						
	0.8nm,0.7s						
YAK	**Yakutsk**	**68.97**	**348**	LR	LR	13 52 42.3	
	comp=Z,19nm,20.7s,baz=93,slow=34						
MKAR	**Makanchi Array**	**80.57**	**319**	P	**P**	**13 25 23.5**	**+0.5**
	0.9nm,0.6s,baz=98,slow=7.1,SNR=12						
	0.9nm,0.6s						
ZALV	**Zalesovo Beam**	**81.34**	**326**	P	**P**	**13 25 26.0**	**-0.9**
	0.5nm,0.5s,baz=89,slow=9.5,SNR=2.8						
	0.5nm,0.5s						
NRIK	**Noril'sk**	**86.03**	**341**	P	**P**	**13 25 50.5**	**-0.1**
	1.4nm,0.5s,baz=164,slow=6.5,SNR=2.8						
	1.4nm,0.5s						
BVAR	**Borovoye Array**	**89.45**	**323**	P	**P**	**13 26 06.8**	**-0.5**
	2.7nm,0.6s,baz=102,slow=6.2,SNR=13						
	2.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**150.73**	**289**	PKPbc	**PKPbc**	**13 33 02.7**	**-0.9**
	1.4nm,0.7s,baz=65,slow=3.1,SNR=7.8						

RSNC 28 13:38:27.9±0.0**,2°N**±1°×**7°7W**±°**,h134**^{km}±2^{km}**,M3.3,mb3.9, ML2.9,Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POPC	**Popayan, Colom**	**0.28**	**74**	P	Pn	13 38 46.2	-0.6
POPC				S	Sn	13 38 59.9	-1.1
BBAC	**Balboa, Cauca**	**0.53**	**214**	P	Pn	13 38 47.5	-0.4
BBAC				S	Sn	13 39 02.3	-0.6
JAMC	**Jamundi, Valle**	**0.80**	**20**	P	Pn	13 38 49.7	0.0
JAMC				S	Sn	13 39 06.6	+0.3
CRUC	**La Cruz**	**0.89**	**180**	P	Pn	13 38 50.6	0.0
CRUC				S	Sn	13 39 07.9	+0.1
GCUF	**Volcan Galeras**	**1.29**	**198**	P	Pn	13 38 54.2	-0.4
GCUF				S	Sn	13 39 13.6	-1.2
GARC	**Garzon, Huila**	**1.48**	**101**	P	Pn	13 38 55.8	-0.5
GARC				S	Sn	13 39 17.2	-0.8
BETC	**Betania**	**1.52**	**82**	P	Pn	13 38 57.1	+0.5
BETC				S	Sn	13 39 19.3	+0.8
FLOC	**Florencia**	**1.56**	**124**	P	Pn	13 38 56.7	-0.3
FLOC				S	Sn	13 39 18.8	-0.4
YOTC	**Yotoco, Valle**	**1.63**	**22**	P	Pn	13 38 57.3	-0.6
YOTC				S	Sn	13 39 19.4	-1.4
CMBC	**Cumbal**	**1.74**	**210**	P	Pn	13 39 00.1	+0.6
CMBC				S	Sn	13 39 23.8	+0.1
TUMC	**Tumaco**	**1.89**	**250**	P	Pn	13 39 00.0	-0.7
TUMC				S	Sn	13 39 25.8	0.0
BONI	**La Bonita**	**2.08**	**196**	P	Pn	13 39 01.9	-1.4
BONI				S	Sn	13 39 29.7	-0.7
ORTC	**Ortega, Tolima**	**2.23**	**50**	P	Pn	13 39 04.9	0.0
ORTC				S	Sn	13 39 33.1	-0.3
PRAC	**Prado**	**2.41**	**59**	P	Pn	13 39 07.1	-0.1
PRAC				S	Sn	13 39 37.4	0.0
PLMC	**San Jos del P**	**2.52**	**15**	P	Pn	13 39 07.7	-0.9
PLMC				S	Sn	13 39 38.7	-1.2
PIZC	**Pizarro, Choco**	**2.52**	**351**	P	Pn	13 39 08.1	-0.5
PIZC				S	Sn	13 39 39.6	-0.3
ANIL	**Santa Ana**	**2.54**	**37**	P	Pn	13 39 08.2	-0.9
ANIL				S	Sn	13 39 38.5	-2.2
CUSE	**Cuicocha Este**	**2.58**	**214**	P	Pn	13 39 08.5	-1.3
CUSE				S	Sn	13 39 40.7	-1.3
OTAV	**Otavalo**	**2.67**	**214**	P	Pn	13 39 11.3	+0.4
OTAV				S	Sn	13 39 45.6	+1.7
PAC1	**Pacto, Paraso**	**2.85**	**220**	P	Pn	13 39 12.0	-0.9
PAC1				S	Sn	13 39 45.3	-2.3
CBOC	**Ciudad Bolivar**	**3.51**	**15**	P	Pn	13 39 21.0	-0.5
CBOC				S	Sn	13 40 02.0	-0.9
VILC	**Villavicencio,**	**3.64**	**63**	P	Pn	13 39 24.6	+1.4
VILC				S	Sn	13 40 08.3	+2.3
NORC	**Norcasia**	**3.72**	**34**	P	Pn	13 39 23.3	-0.8
NORC				S	Sn	13 40 06.9	-0.7
CHIC	**Chingaza**	**3.87**	**56**	P	Pn	13 39 27.1	+0.7
CHIC				S	Sn	13 40 11.2	-0.5
HELC	**Santa Helena**	**3.97**	**21**	P	Pn	13 39 27.6	-0.1
HELC				S	Sn	13 40 13.1	-0.9
PTAC	**Punta Ardita,**	**4.73**	**350**	P	Pn	13 39 36.5	-1.0
PTBC	**PUERTO BERRIO,**	**4.75**	**31**	P	Pn	13 39 36.6	-1.2
PTBC				S	Sn	13 40 28.6	-3.6
RUSC	**La Rusia**	**5.15**	**48**	P	Pn	13 39 43.5	0.0

IDC ***28*** *14:07:40.7±0.5, 44°.65S×37°.30E, h0*^{km}*, mb4.4/17, mbtmp4.4/19, ML3.8/2, MS4.0/39, Error ellipse: s-maj=20.7km s-min=13.7km az=55.0*

NEIC ***28*** *14:07:41.7±2.8, 44°.57S±0°.07×37°.4E±0°.2, h10*^{km}*±1*^{km}*, mb4.8/26, Error ellipse: s-maj=22.6km s-min=10.4km az=250.0*

GCMT ***28*** *14:07:44.7±0.3, 44°.46S±0°.04×37°.39E±0°.06, h19*^{km}*±1*^{km}*, MW4.9/78, Moment Tensor Solution. s17,c18; s78,c84; Duration: 0 Moment tensor: Scale* 10^{16}*Nm;* M_{rr}*-3.29±.22;* $M_{\theta\theta}$*1.52±.14;* $M_{\phi\phi}$*1.77±.16;* $M_{r\theta}$*0.55±.38;* $M_{\theta\phi}$*-0.02±.09;* $M_{\phi r}$*-0.25±.41; Best double couple:* M_0*2.57800×*10^{16} *NP1:*ϕ_s*174.00000°, δ41.00000°, λ-81.00000°. NP2:* ϕ_s*343.00000°, δ49.00000°, λ-97.00000°. Principal axes: T 1.7920, Plg4.0000°, Azm78.0000°; N 1.5720, Plg6.0000°, Azm348.0000°; P -3.3650, Plg83.0000°, Azm204.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 14:07:41.7±0.5**,44°.60S**±0°.08×**37°.3E**±0°.1**,h10**^{km}**,n83,** σ**1**^{s}**.41**/54**,mb4.7**/24**,MS4.0**/37**,Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**17.74**	**308**	P	**Pn**	**14 11 47.4**	**-1.4**
	0.5nm,0.3s,baz=124,slow=12,SNR=14						
SUR				S	Sn	14 14 51.6	-15
	5.7nm,1.1s,baz=118,slow=15,SNR=3.4						
SUR				LR	LR	14 17 09.5	
	comp=Z,329nm,20.4s,baz=150,slow=32						
	13nm,0.7s						
SUR	**Sutherland**	**17.74**	**308**	P	**Pn**	**14 11 47.0**	**-1.9**
SUR				IAmb	IAmb	14 11 52.3	
	comp=Z,185nm,1.9s						
BOSA	**Boshof**	**18.63**	**325**	P	**P**	**14 11 59.4**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=159,slow=11,SNR=7.6						
BOSA				LR	LR	14 17 52.2	
	comp=Z,598nm,19.5s,baz=196,slow=33						
	comp=Z,5.8nm,0.8s						
BOSA	**Boshof**	**18.63**	**325**	P	**P**	**14 11 59.3**	**-0.2**
LBTB	**Lobatse**	**21.74**	**330**	P	**P**	**14 12 32.9**	**-0.4**
	comp=Z,5.5nm,0.8s,baz=159,slow=8.9,SNR=6.4						
LBTB				LR	LR	14 19 37.1	
	comp=Z,482nm,20.4s,baz=158,slow=33						
	comp=Z,5.5nm,0.8s						
LBTB	**Lobatse**	**21.74**	**330**	P	**P**	**14 12 30.4**	**-2.8**
VOI	**Vohitsoka**	**23.94**	**22**		**P**	**14 12 56.8**	**+0.8**
VOI				IAmb	IAmb	14 13 04.5	
	comp=Z,21nm,1.0s						
LKGWB	**Lokgwabe**	**24.30**	**322**		**P**	**14 12 53.9**	**-5.5**
KHWEE	**KHWEE**	**24.62**	**333**	P	**P**	**14 12 59.9**	**-2.5**
KHWEE				IAmb	IAmb	14 13 21.4	
	comp=Z,32nm,1.1s						
MATP	**Matopo**	**25.19**	**340**	LR	LR	14 22 03.9	
	comp=Z,447nm,19.7s,baz=172,slow=34						
KOOLE	**Kule**	**25.73**	**321**		**P**	**14 13 11.9**	**-0.5**
MAW	**Mawson**	**26.71**	**158**	P	**P**	**14 13 19.5**	**-1.2**
	comp=Z,3.1nm,0.5s,baz=241,slow=10,SNR=9.8						
MAW				LR	LR	14 21 13.2	
	comp=Z,285nm,21.4s,baz=324,slow=30						
	comp=Z,3.1nm,0.5s						
OPO	**Ambohidratompo**	**27.23**	**21**	LR	LR	14 23 05.6	
	comp=Z,334nm,18.4s,baz=26,slow=34						
KSANE	**Kasane**	**28.60**	**335**		**P**	**14 13 36.4**	**-1.8**
KSANE				IAmb	IAmb	14 13 39.9	
	comp=Z,9.8nm,0.7s						
TSUM	**Tsumeb**	**30.21**	**321**	LR	LR	14 25 02.9	
	comp=Z,415nm,19.8s,baz=148,slow=34						
LSZ	**Lusaka**	**30.24**	**342**	LR	LR	14 24 50.5	
	comp=Z,359nm,18.7s,baz=151,slow=34						
SNAA	**Sanae**	**33.23**	**202**	P	**P**	**14 14 18.8**	**+0.2**
	comp=Z,2.5nm,0.3s,baz=49,slow=9.3,SNR=3.1						
SNAA				LR	LR	14 25 04.4	
	comp=Z,393nm,20.1s,baz=0.5,slow=32						
	comp=Z,2.5nm,0.3s						
SNAA	**Sanae**	**33.23**	**202**	P	**P**	**14 14 18.7**	**+0.2**
SNAA				IAmb	IAmb	14 14 25.1	
	comp=Z,8.8nm,1.0s						
MBAR	**Mbarara**	**44.20**	**351**	LR	LR	14 33 19.4	
	comp=Z,291nm,19.7s,baz=190,slow=35						
QSPA	**South Pole Qui**	**45.62**	**180**	LR	LR	14 33 24.9	
	comp=Z,224nm,21.8s,baz=250,slow=34						
QSPA	**South Pole Qui**	**45.62**	**180**	P	**P**	**14 16 01.8**	**-0.1**
QSPA				IAmb	IAmb	14 16 07.4	
	comp=Z,13nm,1.0s						
FURI	**Furi**	**53.26**	**2**	LR	LR	14 38 54.9	
	comp=Z,108nm,20.1s,baz=186,slow=35						
VNDA	**Vanda**	**53.50**	**167**	P	**P**	**14 17 02.2**	**+0.6**
	comp=Z,1.4nm,0.9s,baz=225,slow=5.2,SNR=4.8						
VNDA				LR	LR	14 37 46.7	
	comp=Z,301nm,21.7s,baz=220,slow=34						
	comp=Z,1.4nm,0.9s						
VNDA	**Vanda**	**53.50**	**167**	P	**P**	**14 17 01.2**	**-0.3**
PMSA	**Palmer Station**	**55.13**	**211**	LR	LR	14 36 00.9	
	comp=Z,94nm,19.7s,baz=156,slow=31						
H10S2	**ASCENSION HYDR**	**57.11**	**292**	T	T	15 19 22.3	
	baz=136,slow=74,SNR=110						
H10S3	**ASCENSION HYDR**	**57.13**	**292**	T	T	15 19 29.5	
	baz=84,slow=74,SNR=97						
NWAO	**Narrogin (SRO)**	**61.06**	**109**	LR	LR	14 38 23.4	
	comp=Z,67nm,18.5s,baz=14,slow=30						
DBIC	**Dimbokro**	**63.57**	**312**	P	**P**	**14 18 13.2**	**+0.7**
	comp=Z,6.4nm,0.8s,baz=172,slow=7.5,SNR=12						
DBIC				LR	LR	14 42 17.0	
	comp=Z,66nm,20.1s,baz=202,slow=33						
	comp=Z,6.4nm,0.8s						
DBIC	**Dimbokro**	**63.57**	**312**		**P**	**14 18 13.0**	**+0.4**
DBIC				IAmb	IAmb	14 18 13.9	
	comp=Z,7.1nm,0.8s						
PALK	**Pallekele**	**64.71**	**49**	LR	LR	14 40 44.9	
	comp=Z,87nm,18.3s,baz=220,slow=31						
TORD	**Torodi Ar. Bea**	**65.95**	**322**	P	**P**	**14 18 28.9**	**+0.9**
	comp=Z,3.9nm,0.8s,baz=150,slow=5.9,SNR=18						
TORD				LR	LR	14 46 19.4	
	comp=Z,62nm,20.4s,baz=180,slow=35						
	comp=Z,3.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**65.95**	**322**	P	**P**	**14 18 28.7**	**+0.7**
UOSS	**Minazif**	**71.32**	**18**	P	**P**	**14 19 00.1**	**-1.3**
UOSS				IAmb	IAmb	14 20 54.7	
	comp=Z,11nm,1.2s						
PLCA	**Paso Flores**	**73.26**	**229**	P	**P**	**14 19 13.2**	**+0.1**
	comp=Z,3.1nm,0.9s,baz=132,slow=5.7,SNR=7.9						
	comp=Z,3.1nm,0.9s						
PLCA	**Paso Flores**	**73.26**	**229**	P	**P**	**14 19 14.2**	**+1.1**
PLCA				IAmb	IAmb	14 19 14.4	
	comp=Z,8.5nm,1.1s						
EIL	**Elat**	**73.94**	**358**	LR	LR	14 49 42.8	
	comp=Z,69nm,20.4s,baz=184,slow=34						
CPUP	**Villa Florida**	**75.13**	**248**	P	**P**	**14 19 24.4**	**+0.3**
	comp=Z,4.9nm,0.9s,baz=117,slow=6.4,SNR=15						
	comp=Z,4.9nm,0.9s						
CPUP	**Villa Florida**	**75.13**	**248**		**P**	**14 19 24.1**	**-0.1**
CPUP				IAmb	IAmb	14 19 25.5	
	comp=Z,6.1nm,0.9s						
ASF	**Jabal al Asfar**	**76.40**	**360**	LR	LR	14 53 39.8	
	comp=Z,69nm,18.4s,baz=203,slow=36						
MMAI	**Mount Meron Ar**	**77.26**	**358**	LR	LR	14 52 43.7	
	comp=Z,86nm,20.2s,baz=160,slow=35						
STKA	**Stephens Creek**	**77.41**	**122**	P	**P**	**14 19 37.7**	**+0.7**
	comp=Z,6.3nm,0.8s,baz=242,slow=3.3,SNR=15						
STKA				LR	LR	14 47 39.9	
	comp=Z,56nm,19.7s,baz=206,slow=31						
	comp=Z,6.3nm,0.8s						
STKA	**Stephens Creek**	**77.41**	**122**		**P**	**14 19 37.4**	**+0.4**
AQDB	**Aquidauana**	**78.00**	**253**		**P**	**14 19 40.9**	**+0.4**
AQDB				IAmb	IAmb	14 19 42.1	
	comp=Z,8.1nm,0.9s						
ASAR	**Alice Springs**	**78.21**	**111**	P	**P**	**14 19 42.4**	**+0.7**
	comp=Z,5.4nm,0.8s,baz=224,slow=5.4,SNR=46						
ASAR				LR	LR	14 49 19.8	
	comp=Z,38nm,18.1s,baz=186,slow=32						
	comp=Z,5.4nm,0.8s						
ASAR	**Alice Springs**	**78.21**	**111**		**P**	**14 19 38.9**	**-2.7**
AS31	**Alice Springs**	**78.21**	**111**		**P**	**14 19 39.0**	**-2.7**
CO03	**El Pedregal**	**80.40**	**236**		**P**	**14 19 52.1**	**-1.4**
CO03				IAmb	IAmb	14 20 00.1	
	comp=Z,12nm,0.9s						
CO01	**Juntas del Tor**	**80.67**	**237**	P	**P**	**14 19 56.5**	**+1.3**
WRA	**Warramunga Arr**	**81.07**	**109**	P	**P**	**14 19 57.8**	**+0.6**
	comp=Z,4.1nm,0.9s,baz=217,slow=4.4,SNR=19						
	comp=Z,4.1nm,0.9s						
WRA	**Warramunga Arr**	**81.07**	**109**	P	**P**	**14 19 54.0**	**-3.2**
WR8	**Warramunga Arr**	**81.17**	**109**	P	**P**	**14 19 57.3**	**-0.5**
WR8				IAmb	IAmb	14 19 59.4	
	comp=Z,12nm,1.1s						
AC02	**Maricunga**	**82.34**	**240**		**P**	**14 20 03.3**	**-1.1**
AC02				IAmb	IAmb	14 20 06.9	
	comp=Z,9.9nm,0.9s						
BRDH	**Bariadhala**	**83.30**	**49**	LR	LR	14 52 19.1	
	comp=Z,98nm,19.3s,baz=7.5,slow=32						
PTLB	**Pontes e Lacer**	**83.82**	**255**		**P**	**14 20 11.0**	**-0.5**
KEST	**Kesra**	**83.89**	**337**	P	**P**	**14 20 13.3**	**+1.9**
	comp=Z,5.2nm,0.9s,baz=191,slow=5.2,SNR=2.2						
KEST				LR	LR	14 58 21.0	
	comp=Z,250nm,20.3s,baz=241,slow=36						
	comp=Z,5.2nm,0.9s						
BRTR	**Keskin Array B**	**84.00**	**357**	P	**P**	**14 20 12.6**	**+0.7**
	comp=Z,1.7nm,0.8s,baz=177,slow=7.2,SNR=10						
	comp=Z,1.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**84.13**	**57**	P	**P**	**14 20 13.8**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=214,slow=5.7,SNR=6.6						
CMAR				LR	LR	14 53 10.2	
	comp=Z,16nm,18.8s,baz=230,slow=32						
	comp=Z,1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**84.13**	**57**	P	**P**	**14 20 12.0**	**-1.0**
MDT	**Midelt**	**85.98**	**326**	LR	LR	14 58 31.2	
	comp=Z,154nm,18.9s,baz=196,slow=36						
KBZ	**Khabaz**	**88.08**	**4**	P	**P**	**14 20 32.8**	**+1.0**
	comp=Z,3.2nm,0.9s,baz=192,slow=4.7,SNR=7.2						
	comp=Z,3.2nm,0.9s						
CTA	**Charters Tower**	**88.79**	**117**	LR	LR	14 54 07.0	
	comp=Z,75nm,19.6s,baz=220,slow=31						
ESDC	**Sonseca Array**	**91.76**	**329**	P	**P**	**14 20 49.6**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=99,slow=3.0,SNR=2.2						
ESDC				LR	LR	15 02 43.6	
	comp=Z,158nm,18.4s,baz=149,slow=36						
	comp=Z,0.3nm,0.6s						
AAK	**Ala-Archa**	**92.98**	**27**	LR	LR	15 01 06.7	
	comp=Z,45nm,18.2s,baz=176,slow=34						
MDP	**Montagnes des**	**93.53**	**274**	LR	LR	15 00 50.2	
	comp=Z,51nm,18.2s,baz=88,slow=34						
DAVOX	**Davos/Dischmat**	**94.16**	**341**	LR	LR	15 05 39.9	
	comp=Z,121nm,18.1s,baz=214,slow=37						
AKASG	**Malin Array Be**	**95.18**	**355**	LR	LR	15 06 54.6	
	comp=Z,34nm,19.9s,baz=264,slow=37						
VRAC	**Vranov**	**95.26**	**347**	LR	LR	15 06 33.0	
	comp=Z,59nm,18.7s,baz=209,slow=37						
GERES	**GERESS Array B**	**95.33**	**345**	LR	LR	15 07 28.8	
	comp=Z,110nm,18.0s,baz=261,slow=38						
AKTO	**Aktyubinsk**	**96.34**	**13**	LR	LR	15 04 03.4	
	comp=Z,24nm,18.1s,baz=134,slow=35						
PMG	**Port Moresby**	**97.21**	**111**	LR	LR	15 00 05.7	
	comp=Z,46nm,21.0s,baz=30,slow=32						
DZM	**Mont Dzumac**	**99.01**	**133**	*e*LR	LR	14 54 09.1	
	comp=Z,101nm,24.9s						
MKAR	**Makanchi Array**	**99.27**	**29**	P	**Pdif**	**14 21 23.3**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=223,slow=5.9,SNR=2.0						
MKAR				LR	LR	15 03 01.5	
	comp=Z,27nm,18.2s,baz=14,slow=33						
	comp=Z,0.3nm,0.8s						
OBN	**Obninsk**	**99.34**	**360**	LR	LR	15 07 45.9	
	comp=Z,39nm,18.1s,baz=131,slow=36						
TBI	**Tubuai**	**112.10**	**173**	*e*LR	LR	15 00 10.7	
	comp=Z,374nm,37.5s						
PPT2	**Papeete2**	**117.80**	**173**	*e*LR	LR	15 03 20.4	
	comp=Z,120nm,35.5s						
TAOE	**Nuku Hiva Isla**	**126.75**	**183**	*e*LR	LR	15 07 24.2	
	comp=Z,113nm,21.9s						
TXAR	**Lajitas Array**	**145.67**	**257**	PKPbc	**PKPab**	**14 27 21.3**	**+0.3**
	comp=Z,6.3nm,0.8s,baz=140,slow=6.4,SNR=57						
TXAR	**Lajitas Array**	**145.67**	**257**		**PKPab**	**14 27 21.4**	**+0.4**
ULM	**Lac du Bonnet**	**148.26**	**297**	PKPbc	**PKPbc**	**14 27 27.5**	**+0.2**
	comp=Z,6.0nm,0.9s,baz=79,slow=4.2,SNR=8.3						
YKA	**Yellowknife Ar**	**155.84**	**328**	PKP	**PKPdf**	**14 27 35.4**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=7.2,slow=1.8,SNR=4.6						
YKA				PKPab	**pPKPab**	**14 28 03.0**	**-1.0**
	comp=Z,1.4nm,0.8s,baz=42,slow=4.0,SNR=18						
PDAR	**Pinedale Array**	**156.07**	**277**	PKP	**PKPdf**	**14 27 36.5**	**+0.4**
	comp=Z,0.6nm,0.9s,baz=108,slow=3.3,SNR=3.9						
PDAR				PKPab	**PKPab**	**14 28 04.2**	**+0.6**
	comp=Z,1.1nm,0.9s,baz=112,slow=6.4,SNR=4.9						
ILAR	**Eielson Array**	**159.64**	**5**	PKPab	**PKPab**	**14 28 18.8**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=332,slow=3.5,SNR=8.7						

MEX ***28*** *14:13:04.3±0.5, 13°.59N×93°.08W, h10*^{km}*, MD3.9*

GCG ***28*** *14:13:19.9±2.6, 14°.07N×91°.80W, h20*^{km}*±35*^{km}*, MD4.3, ML3.1, MW3.0*

ISC 28 14:12:54.0±1.9**,13°.62N**±0°.08×**93°.47W**±0°.03**,h13**^{km}±13^{km}**, n20,** σ**2**^{s}**.18**/33**,Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PATR	**El Naranjo**	**1.91**	**39**	*e*P	**Pg**	**14 13 31.0**	**+0.2**
PATR				*e*S	**Sb**	**14 13 52.4**	**-0.5**
CHUJ	**Union Juarez**	**1.97**	**42**	*e*P	**Pg**	**14 13 31.6**	**-0.3**
CHUJ				*e*S	**Sn**	**14 13 52.6**	**+0.5**
PAVE	**Pavencul**	**2.01**	**38**	*e*P	**Pg**	**14 13 32.5**	**-0.1**
PAVE				*e*S	**Sb**	**14 13 54.7**	**-0.9**
PCIG		**2.09**	**7**	*e*P	**Pg**	**14 13 36.9**	**+2.7**

PCIG				*e*S	Sg	14 14 01.1	-0.2
STG5	El Palmar, Qui	2.20	69	*i* P	Pb	14 13 32.2	-1.6
STG8	El Palmar, Qui	2.22	68	*i* P	Pb	14 13 32.8	-1.4
STG8				IAML		14 13 56.4	
	comp=E,810nm,0.3s						
CCIG	Comitan	2.95	26	*e*P	Pb	14 13 48.0	+1.4
CCIG				*e*S	Sb	14 14 21.4	-1.2
TGIG		3.16	6	*e*P	Pg	14 13 53.6	-1.1
TGIG				*e*S	Sb	14 14 27.1	-1.5
APG	El Apazote	3.22	64	*i* P	Pb	14 13 48.7	-2.6
HUIG	Huatulco	3.33	310	*e*P	Pg	14 13 58.4	+0.4
HUIG				*e*S	Sb	14 14 34.2	+0.7
NUBE	Las Nubes	3.59	85	*i* P	Pn	14 13 51.8	+2.2
CMIG	Matias Romero	3.72	339	*e*P	Pg	14 14 03.1	-2.2
CMIG				*e*S	Sb	14 14 44.4	-0.1
JAYA	Jayaque - finc	3.91	89	*i* P	Pn	14 13 55.9	+2.0
MTO3	Montecristo	4.06	78	*i* P	Pn	14 13 58.7	+2.6
PEIG	Puerto Escondi	4.28	304	*e*P	Pb	14 14 11.2	+2.1
PEIG				*e*S	Sb	14 14 58.6	-2.1
NEUV	Arroyo Zacate	4.65	331	*e*P	Pb	14 14 15.1	-0.5
NEUV				*e*		14 14 46.5	
YOIG	Yosondua	5.09	310	*e*P	Pb	14 14 24.9	+1.8
YOIG				*e*S	Sb	14 15 20.1	-4.2
PNIG	Pinotepa	5.28	302	*e*P	Pb	14 14 26.4	+0.2
PNIG				*e*S	Sb	14 15 23.3	-6.3
TXIG	Tlaxiaco	5.50	312	*e*P	Pb	14 14 31.3	+1.1
TXIG				*e*S	Sb	14 15 35.1	-1.2
TOIG	Toxpalan	5.64	323	*e*P	Pb	14 14 32.6	+0.1
TOIG				*e*S	Sb	14 15 36.0	-4.1

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*NEIC **28** 14:31:06.6±1.9, 13°.8S±0°.1×167°.3E±0°.2, h192^{km}±9^{km}, mb4.6/29, Error ellipse: s-maj=23.7km s-min=15.9km az=91.0*

*IDC **28** 14:31:09.7±2.9, 13°.87S×167°.21E, h212^{km}±25^{km}, mb3.8/16, mbtmp4.3/17, Error ellipse: s-maj=19.9km s-min=14.4km az=85.0*

ISC 28 14:31:07.8±0.6**, 13°.81S**±0°.06×**167°.2E**±0°.1**, h200^{km}, n63, σ1^{s}.10**/69**, mb4.3**/26**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	1.63	181		Pn	14 31 41.0	-1.7
DZM	Mont Dzumac	8.25	185	P	Pn	14 33 05.8	+1.4
	4.8nm,0.6s,baz=325,slow=20,SNR=12						
DZM				S	Sn	14 34 39.2	+1.8
	baz=324,slow=19						
RABL	Rabaul	17.67	301	P	P	14 34 57.1	-3.2
RABL				IAmb	IAmb	14 35 25.7	
	comp=Z,12nm,0.5s						
EIDS	Eidsvold	19.04	230	P	P	14 35 14.5	-0.6
EIDS				IAmb	IAmb	14 35 17.0	
	comp=Z,28nm,1.5s						
LHI	Lord Howe Isla	19.15	202	P	P	14 35 17.0	+0.9
PMG	Port Moresby	20.14	280	P	P	14 35 28.6	+1.7
	comp=Z,9.0nm,0.9s,baz=151,slow=10,SNR=4.0						
	comp=Z,9.0nm,0.9s						
CTA	Charters Tower	21.00	250	P	P	14 35 36.6	+0.6
	comp=Z,3.0nm,0.6s,baz=68,slow=10,SNR=6.3						
	comp=Z,3.0nm,0.6s						
CTAO	Charters Tower	21.00	250	P	P	14 35 36.2	+0.2
CTAO				IAmb	IAmb	14 36 05.0	
	comp=Z,18nm,1.5s						
ARMA	Armidale	21.91	218	P	P	14 35 46.6	+1.3
ARMA				IAmb	IAmb	14 35 47.8	
	comp=Z,17nm,0.8s						
RTZ	Ruatahuna	26.17	162	P	P	14 36 22.4	-1.5
BKZ	Black Stump Fm	26.55	164	P	P	14 36 25.6	-1.6
BKZ				IAmb	IAmb	14 37 00.6	
	comp=Z,28nm,1.5s						
INKA	Innaminka	28.29	236		P	14 36 43.3	+0.4
LTZ	Lake Taylor	29.20	172	P	P	14 36 49.7	-0.9
STKA	Stephens Creek	29.56	228	P	P	14 36 55.0	+0.9
	comp=Z,18nm,0.6s,baz=49,slow=8.9,SNR=75						
STKA				PcP	PcP	14 39 54.1	+0.2
	comp=Z,0.6nm,0.5s,baz=97,slow=5.4,SNR=3.8						
	comp=Z,18nm,0.6s						
STKA	Stephens Creek	29.56	228		P	14 36 54.7	+0.7
TOO	Toolangi	30.57	215	P	P	14 37 03.7	+0.9
DCZ	Deep Cove	31.55	180	P	P	14 37 10.9	-0.3
WR8	Warramunga Arr	31.87	254	P	P	14 37 11.8	-2.6
WR8				IAmb	IAmb	14 37 46.0	
	comp=Z,10nm,1.4s						
WB0	Warramunga Arr	31.95	255	P	P	14 37 13.7	-1.5
WB0				IAmb	IAmb	14 37 15.1	
	comp=Z,5.2nm,0.6s						
WRA	Warramunga Arr	32.02	254	P	P	14 37 15.1	-0.7
	comp=Z,2.9nm,0.7s,baz=85,slow=9.1,SNR=11						
WRA				PcP	PcP	14 40 00.6	-0.1
	comp=Z,0.5nm,0.5s,baz=87,slow=3.5,SNR=1.6						
	comp=Z,2.9nm,0.7s						
WRA	Warramunga Arr	32.02	254	P	P	14 37 12.9	-2.9
AS31	Alice Springs	32.97	248	P	P	14 37 23.0	-1.0
ASAR	Alice Springs	32.97	248	P	P	14 37 23.2	-0.8
	comp=Z,4.5nm,0.5s,baz=74,slow=9.5,SNR=53						
ASAR				PcP	PcP	14 40 03.3	-0.1
	comp=Z,0.9nm,0.7s,baz=79,slow=2.5,SNR=7.0						
	comp=Z,4.5nm,0.5s						
ASAR	Alice Springs	32.97	248	P	P	14 37 22.0	-2.0
MGBR	Mount Gambier	33.59	220	P	P	14 37 30.4	+1.2
MGBR				IAmb	IAmb	14 37 31.6	
	comp=Z,18nm,0.7s						
TAU	Tasmania Unive	33.70	207	P	P	14 37 30.5	+0.5
BBOO	Buckleboo	34.12	231	P	P	14 37 33.7	-0.1
BBOO				IAmb	IAmb	14 37 34.8	
	comp=Z,14nm,0.7s						
MTN	Manton Dam	35.12	267	P	P	14 37 43.8	+1.2
KNRA	Kununurra	37.21	262	P	P	14 37 59.5	-0.8
KNRA				IAmb	IAmb	14 38 27.9	
	comp=Z,30nm,1.5s						
FORT	Forrest	39.74	238	P	P	14 38 20.7	-0.5
FORT				IAmb	IAmb	14 38 21.8	
	comp=Z,8.9nm,0.7s						
FITZ	Fitzroy Crossi	40.15	258	P	P	14 38 24.1	-0.6
TOLI2	Tolitoli	48.34	284	P	P	14 39 28.5	-1.2
TOLI2				IAmb	IAmb	14 39 31.4	
	comp=Z,12nm,0.8s						
NWAO	Narrogin (SRO)	49.19	238	P	P	14 39 35.0	-1.0
NWAO				IAmb	IAmb	14 39 38.6	
	comp=Z,47nm,1.5s						
MORW	Morawa	49.63	244	P	P	14 39 37.9	-1.4
MORW				IAmb	IAmb	14 39 40.3	
	comp=Z,7.1nm,0.8s						
MJAR	Matsushiro Arr	57.08	332	P	P	14 40 33.3	0.0
	comp=Z,1.0nm,0.5s,baz=232,slow=12,SNR=10						
	comp=Z,1.0nm,0.5s						
MJAR	Matsushiro Arr	57.08	332	P	P	14 40 32.9	-0.4
KSRS	Korea Array	62.96	326	P	P	14 41 13.7	+0.5
	comp=Z,1.0nm,0.8s,baz=126,slow=6.2,SNR=3.3						
	comp=Z,1.0nm,0.8s						
VNDA	Vanda	63.77	181	P	P	14 41 17.9	-0.1
	comp=Z,1.0nm,0.7s,baz=1.2,slow=7.5,SNR=5.0						
	comp=Z,1.0nm,0.7s						
VNDA	Vanda	63.77	181	P	P	14 41 17.9	-0.1
CASY	Casey	64.36	202	P	P	14 41 20.4	-1.5
USRK	Ussuriysk Ar.	66.05	333	P	P	14 41 35.0	+1.9
	comp=Z,1.5nm,0.6s,baz=120,slow=8.0,SNR=3.0						
	comp=Z,1.5nm,0.6s						
PETK	Petropavlovsk-	67.15	354	P	P	14 41 41.5	+1.6
	comp=Z,6.2nm,0.9s,baz=162,slow=4.5,SNR=4.4						
	comp=Z,6.2nm,0.9s						
CMAR	Chiang Mai Arr	74.54	294	P	P	14 42 27.1	+1.9
	comp=Z,2.7nm,0.7s,baz=132,slow=4.8,SNR=25						
	comp=Z,2.7nm,0.7s						
SONM	Songino Array	81.74	324	P	P	14 43 03.9	-0.3
	comp=Z,0.8nm,0.4s,baz=110,slow=6.5,SNR=4.0						
	comp=Z,0.8nm,0.4s						
MAW	Mawson	82.72	202	P	P	14 43 08.6	-0.2
	comp=Z,1.7nm,0.4s,baz=116,slow=8.6,SNR=4.8						
	comp=Z,1.7nm,0.4s						
ILAR	Eielson Array	85.67	18	P	P	14 43 23.5	-0.2
	comp=Z,0.8nm,0.6s,baz=244,slow=5.0,SNR=19						
	comp=Z,0.8nm,0.6s						
ILAR	Eielson Array	85.67	18	P	P	14 43 23.3	-0.3
MKAR	Makanchi Array	96.51	316	P	P	14 44 15.2	+0.6
	comp=Z,1.6nm,0.6s,baz=86,slow=5.3,SNR=18						
	comp=Z,1.6nm,0.6s						
MKAR	Makanchi Array	96.51	316	P	P	14 44 14.9	+0.3
ZALV	Zalesovo Beam	96.63	324	P	P	14 44 14.8	-0.1
	comp=Z,1.4nm,0.7s,baz=121,slow=4.1,SNR=6.5						
	comp=Z,1.4nm,0.7s						
ARCES	ARCESS Array B	119.36	346	PKP	PKiKP	14 49 33.1	+0.3
	comp=Z,3.1nm,0.6s,baz=72,slow=1.8,SNR=22						
ARCES	ARCESS Array B	119.36	346		PKPdf	14 49 32.9	+0.1
FINES	FINESS Array B	124.86	338	PKP	PKiKP	14 49 44.1	+0.3
	comp=Z,1.4nm,0.4s,baz=70,slow=1.9,SNR=14						
NOA	NORSAR Array B	129.73	345	PKP	PKiKP	14 49 53.5	-0.2
	comp=Z,1.7nm,0.9s,baz=5.4,slow=2.6,SNR=3.7						
AKASG	Malin Array Be	129.95	326	PKP	PKPdf	14 49 53.5	-0.1
	comp=Z,1.3nm,0.7s,baz=42,slow=2.9,SNR=1.9						
CONA	Conrad Observa	138.50	331	*e*PKP	PKiKP	14 50 12.0	0.0
	comp=Z,0.1nm,0.2s						
GERES	GERESS Array B	138.81	333	PKP	PKiKP	14 50 12.1	-0.5
	comp=Z,0.6nm,0.7s,baz=336,slow=2.9,SNR=4.8						
LESA	Schwarzleotal	140.33	333	*e*PKP	PKiKP	14 50 15.7	0.0
	comp=Z,1.6nm,0.4s						
WTTA	Wattenberg	140.91	333	*e*PKiKP	PKiKP	14 50 17.6	+0.5
	comp=Z,8.8nm,1.1s						
ABTA	Abfaltersbach	140.92	332	*e*PKP	PKiKP	14 50 17.2	+0.3
	comp=Z,1.7nm,0.5s						
KEST	Kesra	150.47	322	PKPbc	PKiKP	14 50 37.7	+0.7
	comp=Z,9.4nm,0.7s,baz=127,slow=2.1,SNR=7.4						
ESDC	Sonseca Array	153.09	345	PKPbc	PKPbc	14 50 41.8	-0.3
	comp=Z,0.7nm,0.8s,baz=12,slow=2.6,SNR=5.9						
ESDC				PKPab	PKPab	14 50 54.2	0.0
	comp=Z,0.9nm,0.8s,baz=4.5,slow=3.2,SNR=4.5						
TORD	Torodi Ar. Bea	165.91	269	PKP	PKPdf	14 50 49.3	-0.4
	comp=Z,1.0nm,0.8s,baz=19,slow=1.7,SNR=5.0						
TORD				PKPab	PKPab	14 51 51.3	+0.5
	comp=Z,0.6nm,0.7s,baz=67,slow=3.8,SNR=2.3						

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*IDC **28** 14:40:51.6±0.8, 44°.83S×37°.13E, h0^{km}, mb3.9/8, mbtmp3.9/10, ML3.6/2, MS3.3/11, Error ellipse: s-maj=41.1km s-min=19.9km az=33.0*

ISC 28 14:40:53.2±0.8**, 44°.8S**±0°.2×**37°.0E**±0°.2**, h10^{km}, n23, σ0^{s}.75**/12**, mb3.9**/7**, MS3.3**/9**, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	Sutherland	17.71	309	P	Pn	14 44 59.1	-1.0
	0.5nm,0.3s,baz=140,slow=12,SNR=9.0						
SUR				LR	LR	14 50 33.1	
	comp=Z,52nm,19.5s,baz=152,slow=33						
	2.9nm,0.4s						
BOSA	Boshof	18.70	326	P	P	14 45 11.1	-0.7
	0.1nm,0.3s,baz=156,slow=18,SNR=1.2						
BOSA				LR	LR	14 50 30.4	
	comp=Z,87nm,18.9s,baz=204,slow=31						
	1.2nm,0.8s						
LBTB	Lobatse	21.83	331	LR	LR	14 53 07.9	
	comp=Z,71nm,18.4s,baz=172,slow=34						
MATP	Matopo	25.34	341	LR	LR	14 55 05.2	
	comp=Z,96nm,20.5s,baz=228,slow=34						
MAW	Mawson	26.57	158	LR	LR	14 54 34.0	
	comp=Z,55nm,20.5s,baz=341,slow=31						
LSZ	Lusaka	30.39	343	LR	LR	14 57 10.1	
	comp=Z,63nm,20.2s,baz=155,slow=32						
SNAA	Sanae	32.94	202	LR	LR	14 57 55.1	
	comp=Z,66nm,20.8s,baz=2.0,slow=31						
MBAR	Mbarara	44.39	351	LR	LR	15 05 57.6	
	comp=Z,62nm,21.8s,baz=206,slow=34						
QSPA	South Pole Qui	45.39	180	LR	LR	15 06 24.6	
	comp=Z,41nm,22.0s,baz=240,slow=34						
VNDA	Vanda	53.32	167	LR	LR	15 12 59.4	
	comp=Z,51nm,18.0s,baz=222,slow=36						
FURI	Furi	53.49	2	LR	LR	15 13 12.5	
	comp=Z,27nm,18.8s,baz=161,slow=36						
H10S2	ASCENSION HYDR	57.00	292	T	T	15 52 21.7	
	baz=137,slow=74,SNR=30						
H10S3	ASCENSION HYDR	57.02	292	T	T	15 52 31.7	
	baz=83,slow=74,SNR=26						
DBIC	Dimbokro	63.57	312	P	P	14 51 24.6	+0.6
	2.4nm,0.8s,baz=198,slow=6.1,SNR=3.6						
	2.4nm,0.8s						
TORD	Torodi Ar. Bea	66.00	322	P	P	14 51 40.2	+0.4
	1.0nm,0.7s,baz=151,slow=6.1,SNR=5.5						
	1.0nm,0.7s						
CPUP	Villa Florida	74.85	248	P	P	14 52 34.4	+0.4
	0.8nm,0.6s,baz=130,slow=3.5,SNR=3.5						
	0.8nm,0.6s						
STKA	Stephens Creek	77.47	122	P	P	14 52 48.4	-0.5
	1.3nm,0.7s,baz=143,slow=10,SNR=4.2						
	1.3nm,0.7s						
ASAR	Alice Springs	78.32	112	P	P	14 52 53.0	-0.8
	0.8nm,0.7s,baz=226,slow=4.7,SNR=9.2						
	0.8nm,0.7s						
WRA	Warramunga Arr	81.19	109	P	P	14 53 08.7	-0.7
	0.7nm,0.8s,baz=224,slow=4.7,SNR=5.5						
	0.7nm,0.8s						
BRTR	Keskin Array B	84.22	357	P	P	14 53 24.8	+0.2
	0.4nm,0.7s,baz=184,slow=6.8,SNR=2.7						
	0.4nm,0.7s						
CMAR	Chiang Mai Arr	84.44	57	P	P	14 53 27.1	+1.1
	0.2nm,0.3s,baz=191,slow=5.3,SNR=4.9						
	0.2nm,0.3s						
TXAR	Lajitas Array	145.41	257	PKPbc	PKPab	15 00 32.0	+0.4
	1.5nm,0.7s,baz=136,slow=5.8,SNR=15						
YKA	Yellowknife Ar	155.92	327	PKPab	PKPab	15 01 13.1	-0.4
	0.3nm,0.8s,baz=42,slow=4.5,SNR=5.7						

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*IDC **28** 15:11:30.9±15.0, 13°.50S×165°.77E, h0^{km}, mb3.9/3, mbtmp3.9/4, ML3.3/1, MS3.3/5, Error ellipse: s-maj=254.3km s-min=39.7km az=57.0*

ISC 28 15:11:30.3±2.8**, 13°.2S**±0°.2×**166°.5E**±0°.3**, h44^{km}, n10, σ0^{s}.93**/7**, mb3.7**/3**, MS3.5**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	2.33	163	P	Pn	15 12 06.8	+0.7
DVP	Devils Point	4.78	160	P	Pn	15 12 39.6	-0.2
DZM	Mont Dzumac	8.81	180	Pn	Pn	15 13 36.5	+1.3
	0.4nm,0.3s,baz=331,slow=19,SNR=1.6						
DZM				Sn	Sn	15 15 12.3	-1.0
	0.3nm,0.3s,baz=29,slow=9.9,SNR=1.5						
	7.3nm,1.0s						
PMG	Port Moresby	19.33	279	LR	LR	15 20 58.4	
	comp=Z,37nm,19.1s,baz=28,slow=30						
CTA	Charters Tower	20.55	248	LR	LR	15 23 12.5	
	comp=Z,75nm,18.9s,baz=46,slow=36						
STKA	Stephens Creek	29.44	227	P	P	15 17 29.9	0.0
	1.6nm,0.9s,baz=64,slow=10,SNR=4.2						
	1.6nm,0.9s						
WRA	Warramunga Arr	31.50	253	P	P	15 17 47.7	-0.6
	0.8nm,0.8s,baz=81,slow=8.5,SNR=3.4						
	0.8nm,0.8s						
ASAR	Alice Springs	32.54	247	P	P	15 17 57.6	+0.1
	1.1nm,0.6s,baz=72,slow=9.5,SNR=28						
ASAR				LR	LR	15 29 58.5	
	comp=Z,85nm,18.8s,baz=64,slow=35						
	1.1nm,0.6s						
FITZ	Fitzroy Crossi	39.58	258	LR	LR	15 33 41.1	
	comp=Z,74nm,20.3s,baz=50,slow=34						
BATI	Baumata	42.01	269	LR	LR	15 36 57.8	
	comp=Z,57nm,18.9s,baz=252,slow=37						

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*IDC **28** 15:24:03.4±17.0, 37°.08N×72°.37E, h187^{km}±123^{km}, mb3.1/2, mbtmp3.5/4, Error ellipse: s-maj=181.3km s-min=38.9km az=143.0*

*NNC **28** 15:24:06.8±10.0, 37°.78N×71°.61E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=114.5km s-min=56.9km az=147.0*

ISC 28 15:24:07.7±1.7**, 37°.5N**±0°.1×**72°.0E**±0°.1**, h200^{km}, n14, σ1^{s}.09**/16**, 2C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UCH	Uchtor	5.07	22	P	Pn	15 25 23.4	+0.1
	SNR=14						
EKS2	Erkin-Say	5.30	14	P	Pn	15 25 26.5	+0.6
	SNR=14						
AAK	Ala-Archa	5.44	20	P	Pn	15 25 28.4	+0.6
	SNR=18						
AAK	Ala-Archa	5.44	20	P	Pn	15 25 28.2	+0.4
	2.0nm,0.4s						
AAK				S	Sn	15 26 30.1	-1.1
	2.6nm,0.5s						
KBK	Karagaybulak	5.59	23	P	Pn	15 25 30.9	+1.2
	SNR=7.2						
KK31	Karatay Array	5.68	349	P	Pn	15 25 31.6	+0.9
	1.8nm,0.2s,baz=150,slow=10,SNR=119						
KK31				⇑S	Sn	15 26 34.3	-2.1
	4.0nm,0.2s,baz=170,slow=32,SNR=4.5						
CHMS	Chumysh	5.85	20	P	Pn	15 25 33.5	+0.6
	SNR=6.4						
TKM2	Tokmak 2	6.04	26	P	Pn	15 25 35.9	+0.3
	SNR=9.5						
AB31	Akbulak array	14.61	327	⇑P	P	15 27 26.3	+0.3
	0.9nm,0.6s,baz=139,slow=12,SNR=18						
BVAR	Borovoye Array	15.53	356	P	Pn	15 27 37.8	+1.7
	0.5nm,0.4s,baz=162,slow=10,SNR=7.4						
AKTO	Aktyubinsk	16.32	327	⇓P	Pn	15 27 47.1	+1.5
	2.2nm,0.7s						
ZALV	Zalesovo Beam	18.64	24	P	P	15 28 10.1	-0.1
	0.5nm,0.3s,baz=211,slow=11,SNR=4.2						
TORD	Torodi Ar. Bea	66.54	269	P	P	15 34 35.4	-1.1
	0.4nm,0.4s,baz=54,slow=6.5,SNR=5.5						
	0.4nm,0.4s						
YKA	Yellowknife Ar	80.17	3	P	P	15 35 54.8	-0.4
	0.2nm,0.6s,baz=347,slow=6.1,SNR=3.9						
	0.2nm,0.6s						

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*IDC **28** 15:31:21.5±4.2, 51°.89N×179°.92W, h51^{km}±37^{km}, mb3.6/22, mbtmp3.9/24, ML3.6/2, Error ellipse: s-maj=20.9km s-min=13.8km az=165.0*

*AEIC **28** 15:31:26.7±0.8, 51°.7N±0°.2×179°.74W±0°.06, h96^{km}±6^{km}, Error ellipse: s-maj=23.8km s-min=5.2km az=184.0*

*NEIC **28** 15:31:27.3±0.7, 51°.8N±0°.2×179°.77W±0°.06, h98^{km}±8^{km}, mb4.0/2, ML4.1/10, ML3.9(AEIC), Error ellipse: s-maj=27.0km s-min=4.8km az=184.0*

ISC 28 15:31:26.5±0.6**, 51°.82N**±0°.10×**179°.81W**±0°.04**, h102^{km}**±5^{km}**, n74, σ0^{s}.70**/76**, mb3.7**/22**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEPE	Semis' Perret	0.37	293		Pn	15 31 42.1	+0.5
CERB	Semis' Cerberu	0.37	288		Pn	15 31 42.3	+0.7
CERB					Sn	15 31 53.4	+0.4
CESW	Semis' Southwe	0.40	282		Pn	15 31 42.0	+0.2
CETU	Semis' Tuman	0.46	289		Pn	15 31 42.9	+0.8
GASW	Gareloi Southw	0.59	94		Pn	15 31 43.3	+0.2
GASW					Sn	15 31 55.5	-0.1
GANO	Gareloi North	0.62	90		Pn	15 31 43.4	0.0
GANO					Sn	15 31 55.9	-0.2
GANE	Gareloi Northe	0.64	90		Pn	15 31 43.7	+0.1
GANE					Sn	15 31 56.3	-0.1
GALAA	Gareloi Lava P	0.65	95		Pn	15 31 43.9	+0.3
GALAA					Sn	15 31 56.3	-0.1
GAEA	Gareloi East	0.66	93		Pn	15 31 44.0	+0.3
GAKI	Gareloi-Kavalg	0.68	113		Pn	15 31 43.7	-0.1
GAKI					Sn	15 31 56.2	-0.6
AMKA	Amchitka	0.71	232		Pn	15 31 43.9	-0.2
AMKA	Amchitka	0.71	232		Sn	15 31 56.2	-1.2
LSPA	Little Sitkin	1.01	278		Pn	15 31 48.2	+1.1
LSSE	Little Sitkin	1.01	277		Pn	15 31 48.2	+1.1
TANO	Tanaga North	1.05	84		Pn	15 31 48.1	+0.5
TANO					Sn	15 32 03.6	+0.2
TAFP	Tanaga Falls P	1.13	85		Pn	15 31 48.7	+0.2
TAFP					Sn	15 32 04.9	-0.3
TAPA	Tanaga Point A	1.24	90		Sn	15 32 07.2	-0.1
KIMD	Kanaga Island	1.60	91		Sn	15 32 14.6	-0.4
KICM	Kanaga Island	1.62	86		Pn	15 31 55.0	+0.7
KIWB	Kanaga Island	1.65	88		Pn	15 31 54.8	+0.2
KIWB				IAML		15 32 18.4	
	comp=N,2μm,0.6s						
KIWB				IAML		15 32 18.5	
	comp=E,2μm,0.5s						
KIWB	Kanaga Island	1.65	88		Sn	15 32 15.7	-0.4
KINC	Kanaga Island	1.67	85		Pn	15 31 55.3	+0.5
KIRH	Kanaga Island	1.68	86		Pn	15 31 55.4	+0.3
ADK	Adak	1.94	87	Pn	Pn	15 31 58.2	0.0
ADK				IAML		15 32 24.0	
	comp=E,1μm,0.4s						
ADK				IAML		15 32 24.2	
	comp=E,1μm,0.5s						
ADK	Adak	1.94	87		Sn	15 32 22.1	-0.4
ADAG	Mount Adagdak	1.99	84		Pn	15 31 59.2	+0.2
ETKA	Kagalaska Isla	2.11	88		Pn	15 32 00.5	0.0
GSSP	Great Sitkin S	2.26	82		Pn	15 32 02.9	+0.4
GSCK	Great Sitkin C	2.27	84		Pn	15 32 02.8	+0.3
GSTD	Great Sitkin T	2.28	83		Pn	15 32 02.8	0.0
GSMY	Great Sitkin M	2.33	83		Pn	15 32 03.5	+0.1
GSTR	Great Sitkin T	2.33	82		Pn	15 32 03.9	+0.5
GSTR	Great Sitkin T	2.33	82	IAML		15 32 35.3	
	comp=N,1μm,1.0s						
GSTR				IAML		15 32 46.7	
	comp=E,804nm,0.4s						
GSIG	Igitkin Island	2.41	85		Pn	15 32 04.3	-0.1
KOWE	Korovin West	3.47	79		Pn	15 32 19.0	+0.5
ATKA	Atka Island	3.49	82		Pn	15 32 19.2	+0.5
KOKL	Mount Kliuchef	3.50	80		Pn	15 32 19.3	+0.4
KOFP	Korovin Flat P	3.55	80		Pn	15 32 20.6	+1.0
UNV	Unalaska Valle	8.31	71	Pn	Pn	15 33 25.7	+1.7
SDPT	Sand Point	12.01	65	Pn	Pn	15 34 12.8	-1.1
PETK	Petropavlovsk-	13.77	284	P	Pn	15 34 30.5	-6.6
	comp=E,0.2nm,0.3s,baz=92,slow=21,SNR=1.5						
	comp=E,1.9nm,0.6s						
KDAK	Kodiak Island	16.72	58	P	Pn	15 35 11.1	-3.0
	comp=E,1.3nm,0.3s,baz=259,slow=10,SNR=22						
	comp=E,3.2nm,0.3s						
KDAK	Kodiak Island	16.72	58	Pn	Pn	15 35 13.2	-1.0
KDAK				IAmb	IAmb	15 35 31.3	
	comp=Z,6.7nm,0.8s						
KTH	Kantishna Hill	19.19	41		Pn	15 35 44.5	+0.6
KTH				IAmb	IAmb	15 35 45.1	
	comp=Z,14nm,1.1s						
ILAR	Eielson Array	21.30	40	P	P	15 36 02.9	-1.6
	comp=Z,0.3nm,0.6s,baz=233,slow=8.0,SNR=9.5						
	comp=Z,0.3nm,0.6s						
USRK	Ussuriysk Ar.	32.62	276	P	P	15 37 48.5	+0.3
	comp=Z,1.3nm,0.5s,baz=58,slow=12,SNR=2.3						
	comp=Z,1.3nm,0.5s						
H11N2	WAKE ISLAND Hy	33.68	203	T	T	16 13 52.4	
	baz=16,slow=76,SNR=4.5						
H11N3	WAKE ISLAND Hy	33.69	203	T	T	16 13 53.4	
	baz=16,slow=76,SNR=5.7						
H11N1	WAKE ISLAND Hy	33.70	203	T	T	16 13 54.3	
	baz=16,slow=76,SNR=5.4						
H11S1	WAKE ISLAND Hy	34.91	203	T	T	16 15 23.0	
	baz=15,slow=76,SNR=6.7						
H11S2	WAKE ISLAND Hy	34.92	203	T	T	16 15 25.2	
	baz=15,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	34.92	203	T	T	16 15 25.2	
	baz=15,slow=76,SNR=6.6						
YKA	Yellowknife Ar	35.38	47	P	P	15 38 12.6	+0.7
	comp=Z,0.2nm,0.5s,baz=283,slow=8.3,SNR=7.4						
	comp=Z,0.2nm,0.5s						
KSRS	Korea Array	39.01	269	P	P	15 38 43.0	+0.3
	comp=Z,1.0nm,0.7s,baz=57,slow=9.2,SNR=4.3						
	comp=Z,1.0nm,0.7s						
NVAR	Mina Array Bea	44.12	83	P	P	15 39 26.1	+1.3
	comp=Z,0.6nm,0.5s,baz=317,slow=8.3,SNR=3.6						
	comp=Z,0.6nm,0.5s						
SONM	Songino Array	45.89	296	P	P	15 39 38.1	-0.4
	comp=Z,1.1nm,0.5s,baz=70,slow=7.8,SNR=4.1						
	comp=Z,1.1nm,0.5s						
PDAR	Pinedale Array	46.77	72	P	P	15 39 45.9	+0.3
	comp=Z,0.5nm,0.5s,baz=305,slow=3.8,SNR=6.8						
	comp=Z,0.5nm,0.5s						
SPITS	Spitsbergen Ar	49.89	356	P	P	15 40 09.6	+0.8
	comp=Z,2.8nm,0.5s,baz=51,slow=6.6,SNR=21						
	comp=Z,2.8nm,0.5s						
ARCES	ARCESS Array B	57.54	350	P	P	15 41 04.4	-0.2
	comp=Z,6.6nm,1.1s,baz=359,slow=9.7,SNR=3.5						
	comp=Z,6.6nm,1.1s						
TXAR	Lajitas Array	59.20	81	P	P	15 41 17.6	+0.7
	comp=Z,0.5nm,0.8s,baz=318,slow=3.3,SNR=3.9						
	comp=Z,0.5nm,0.8s						
MKAR	Makanchi Array	59.27	308	P	P	15 41 16.6	-0.3
	comp=Z,0.4nm,0.3s,baz=46,slow=6.6,SNR=14						
MKAR				PcP	PcP	15 42 03.7	-0.5
	comp=Z,0.1nm,0.5s,baz=48,slow=4.3,SNR=1.3						
	comp=Z,0.4nm,0.3s						
BVAR	Borovoye Array	60.14	319	P	P	15 41 22.5	-0.4
	comp=Z,0.4nm,0.3s,baz=38,slow=7.0,SNR=3.1						
BVAR				PcP	PcP	15 42 07.5	-0.1
	comp=Z,0.3nm,0.4s,baz=67,slow=3.1,SNR=2.2						
	comp=Z,0.4nm,0.3s						
FINES	FINESS Array B	65.21	347	P	P	15 41 55.9	-0.4
	comp=Z,6.2nm,1.1s,baz=23,slow=10,SNR=4.8						
	comp=Z,6.2nm,1.1s						
NOA	NORSAR Array B	67.14	354	P	P	15 42 09.2	+0.4
	comp=Z,0.6nm,0.6s,baz=360,slow=3.0,SNR=1.5						
	comp=Z,0.6nm,0.6s						
HFS	Hagfors	67.87	353	P	P	15 42 13.5	+0.3
	comp=Z,3.6nm,0.9s,baz=22,slow=4.8,SNR=7.6						
	comp=Z,3.6nm,0.9s						
CMAR	Chiang Mai Arr	70.34	275	P	P	15 42 29.6	+0.4
	comp=Z,0.4nm,0.7s,baz=31,slow=7.8,SNR=4.6						
	comp=Z,0.4nm,0.7s						
AKASG	Malin Array Be	74.93	341	P	P	15 42 55.6	-0.3
	comp=Z,0.9nm,0.3s,baz=22,slow=6.6,SNR=5.0						
	comp=Z,0.9nm,0.3s						
GERES	GERESS Array B	79.05	351	P	P	15 43 18.3	-0.8
	comp=Z,0.3nm,0.5s,baz=12,slow=6.8,SNR=2.9						
	comp=Z,0.3nm,0.5s						

WRA	**Warramunga Arr**	**81.90**	**223**	P	**P**	**15 43 34.9**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=34,slow=6.2,SNR=2.4						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	**85.39**	**222**	P	**P**	**15 43 53.1**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=23,slow=5.4,SNR=11						
	comp=Z,0.7nm,0.8s						
ESDC	**Sonseca Array**	**88.81**	**3**	P	**P**	**15 44 08.7**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=354,slow=4.7,SNR=4.1						
	comp=Z,0.3nm,0.7s						
STKA	**Stephens Creek**	**89.96**	**212**	P	**P**	**15 44 14.8**	**+0.8**
	comp=Z,1.3nm,0.7s,baz=332,slow=13,SNR=3.6						
	comp=Z,1.3nm,0.7s						
LBTB	**Lobatse**	**146.97**	**314**	PKPbc	**PKPab**	**15 50 57.8**	**-1.0**
	comp=Z,1.9nm,0.5s,baz=348,slow=2.3,SNR=4.1						
BOSA	**Boshof**	**150.21**	**311**	PKPbc	**PKiKP**	**15 51 05.7**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=26,slow=3.7,SNR=1.6						

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*IDC **28** 15:35:27.1±0.9, 28°.87N×141°.96E, h0^{km}, mb3.6/6, mbtmp3.7/8, ML3.4/2, Error ellipse: s-maj=42.8km s-min=17.6km az=94.0*

ISC 28 15:35:30.8±0.8**, 28°.78N**±0°.07×**142°.0E**±0°.2**, h30^{km}, n12, σ1^s.91**/10**, mb3.5**/6**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.69**	**173**	Pn	**Pn**	**15 35 57.1**	**-1.3**
	22nm,0.3s,baz=283,slow=19,SNR=4.6						
JCJ				Sn	**Sb**	**15 36 20.6**	**-1.6**
	51nm,0.3s,baz=288,slow=20,SNR=5.9						
MJAR	**Matsushiro Arr**	**8.36**	**339**	Pn	**Pn**	**15 37 29.0**	**-1.0**
	0.1nm,0.3s,baz=163,slow=11,SNR=15						
MJAR				Sn	Sn	15 38 54.3	-9.0
	0.1nm,0.3s,baz=71,slow=9.8,SNR=4.2						
	1.4nm,0.5s						
ASAJ	**Asahikawa**	**15.31**	**2**	Pn	**Pn**	**15 39 01.7**	**-3.1**
	0.4nm,0.3s,baz=162,slow=20,SNR=7.4						
	9.9nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**24.42**	**106**	T	T	16 06 55.8	
	baz=297						
H11N1	**WAKE ISLAND Hy**	**24.42**	**106**	T	T	16 06 37.2	
	baz=297						
H11N3	**WAKE ISLAND Hy**	**24.43**	**106**	T	T	16 06 59.9	
	baz=297						
WRA	**Warramunga Arr**	**49.00**	**190**	P	**P**	**15 44 16.5**	**+1.7**
	1.2nm,0.5s,baz=6.2,slow=7.6,SNR=13						
	1.2nm,0.5s						
ASAR	**Alice Springs**	**52.72**	**189**	P	**P**	**15 44 44.9**	**+2.0**
	0.3nm,0.9s,baz=16,slow=8.4,SNR=7.1						
	0.3nm,0.9s						
ILAR	**Eielson Array**	**56.34**	**29**	P	**P**	**15 45 08.5**	**-0.2**
	0.3nm,0.6s,baz=275,slow=8.0,SNR=1.9						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**56.68**	**317**	P	**P**	**15 45 11.1**	**-0.1**
	0.2nm,0.4s,baz=99,slow=8.9,SNR=2.0						
	0.2nm,0.4s						
YKA	**Yellowknife Ar**	**70.76**	**29**	P	**P**	**15 46 43.9**	**-0.1**
	0.1nm,0.3s,baz=299,slow=7.0,SNR=5.3						
	0.1nm,0.3s						
NVAR	**Mina Array Bea**	**79.64**	**52**	P	**P**	**15 47 37.9**	**+2.1**
	0.5nm,0.5s,baz=289,slow=4.5,SNR=3.5						
	0.5nm,0.5s						

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*BJI **28** 15:36:35.3, 44°.53S×37°.02E, h16^{km}, mb5.1/22, Ms5.5/22, Ms7 5.2/22*

*NEIC **28** 15:36:35.8, 44°.61S×37°.08E, h12^{km}*

*NEIC **28** 15:36:35.8, 44°.71S×37°.08E, h12^{km}, Moment Tensor Solution. Duration: 3^s.4 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.28; $M_{\theta\theta}$2.12; $M_{\phi\phi}$0.16; $M_{r\theta}$-3.66; $M_{\theta\phi}$-0.16; $M_{\phi r}$0.70; Fault plane solution: $M_0$4.34000×10^{17} NP1: ϕ_s270.45000°, δ15.46000°, λ-99.05000°. NP2: ϕ_s99.83000°, δ74.74000°, λ-87.51000°. Principal axes: T 4.2536, Plg30.0000°, Azm188.0000°; N 0.1585, Plg2.0000°, Azm279.0000°; P -4.4121, Plg60.0000°, Azm13.0000°;*

*MOS **28** 15:36:35.2±1.3, 44°.66S×37°.09E, h10^{km}, mb5.5/34, MS5.2/11 Error ellipse: s-maj=16.7km s-min=7.3km az=91.1*

*IDC **28** 15:36:35.2±0.4, 44°.53S×37°.27E, h0^{km}, mb4.7/24, mbtmp4.7/26, ML4.4/2, MS5.1/61, Error ellipse: s-maj=16.1km s-min=9.2km az=56.0*

*NEIC **28** 15:36:35.8±1.9, 44°.61S±0°.10×37°.1E±0°.2, h10^{km}±1^{km}, mb5.5/122, Ms_20 5.3/141, Mww5.7/46, Error ellipse: s-maj=19.0km s-min=16.7km az=94.0*

*GFZ **28** 15:36:37.9, 44°.62S×37°.30E, h14^{km}, MW5.6, Moment Tensor Solution. s33 Moment tensor: M_{rr}-2.50; $M_{\theta\theta}$1.49; $M_{\phi\phi}$1.02; $M_{r\theta}$0.74; $M_{\theta\phi}$-1.30; $M_{\phi r}$-1.87; Fault plane solution: NP1: ϕ_s115.00000°, δ29.00000°, λ-117.00000°. NP2: ϕ_s326.00000°, δ64.00000°, λ-74.00000°. Principal axes: T 3.1500, Plg18.0000°, Azm45.0000°; N 0.1700, Plg13.0000°, Azm140.0000°; P -3.3200, Plg67.0000°, Azm264.0000°;*

*GCMT **28** 15:36:38.8±0.1, 44°.57S±0°.01×37°.30E±0°.01, h12^{km}, MW5.5/156, Moment Tensor Solution. s82,c128; s156,c313; Duration: 1^s.4 Moment tensor: Scale 10^{17} Nm; M_{rr}-2.54±.03; $M_{\theta\theta}$2.46±.02; $M_{\phi\phi}$0.08±.02; $M_{r\theta}$0.36±.07; $M_{\theta\phi}$-0.27±.02; $M_{\phi r}$-0.12±.08; Best double couple: $M_0$2.54400×10^{17} NP1: ϕ_s95.00000°, δ41.00000°, λ-93.00000°. NP2: ϕ_s278.00000°, δ49.00000°, λ-88.00000°. Principal axes: T 2.5180, Plg4.0000°, Azm7.0000°; N 0.0530, Plg2.0000°, Azm97.0000°; P -2.5690, Plg85.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 15:36:35.6±0.5**, 44°.66S**±0°.04×**37°.16E**±0°.05**, h5^{km}**±2^{km}**, h5^{km}:pP-P, n575, σ1^s.75**/482**, mb5.4**/157**, MS5.3**/134**, 22C-28D, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H04S3	**CROZET ISLANDS**	**10.53**	**107**	T	T	15 49 49.5	
	baz=278,slow=76,SNR=14						
H04S2	**CROZET ISLANDS**	**10.53**	**107**	T	T	15 49 52.0	
	baz=278,slow=76,SNR=12						
H04S1	**CROZET ISLANDS**	**10.54**	**107**	T	T	15 49 50.6	
	baz=278,slow=76,SNR=13						
GRHM	**Grahamstown, E**	**14.11**	**320**		**Pn**	**15 39 51.9**	**-4.2**
SUR	**Sutherland**	**17.68**	**308**	P	**Pn**	**15 40 42.6**	**0.0**
	2.0nm,0.3s,baz=130,slow=12,SNR=31						
SUR				S	Sn	15 43 45.4	-14
	4.2nm,0.7s,baz=186,slow=17,SNR=1.0						
SUR				LR	LR	15 46 15.8	
	comp=Z,6µm,20.4s,baz=136,slow=33						
	58nm,0.8s						
SUR	**Sutherland**	**17.68**	**308**	P	**P**	**15 40 43.3**	**-0.3**
SUR	**Sutherland**	**17.68**	**308**		**Pn**	**15 40 40.6**	**-2.0**
BOSA	**Boshof**	**18.61**	**325**	P	**Pn**	**15 40 54.4**	**+0.4**
	0.6nm,0.3s,baz=158,slow=12,SNR=22						
BOSA				S	**Sn**	**15 44 19.6**	**-2.9**
	3.5nm,0.8s,baz=80,slow=10,SNR=1.5						
BOSA				LR	LR	15 46 37.9	
	comp=Z,13µm,21.2s,baz=148,slow=32						
	27nm,0.9s						
BOSA	**Boshof**	**18.61**	**325**	P	**P**	**15 40 52.5**	**-1.4**
FOMA	**Nahampoana Res**	**21.19**	**25**	P	**P**	**15 41 19.4**	**-2.5**
FOMA				IAmb	IAmb	15 41 32.5	
	comp=Z,150nm,1.0s						
FOMA				IAMs_20	IAMs_20	15 47 49.7	
	comp=Z,13µm,19.0s						
LBTB	**Lobatse**	**21.73**	**331**	P	**P**	**15 41 28.3**	**+0.6**
	comp=Z,23nm,0.9s,baz=158,slow=11,SNR=14						
LBTB				S	**S**	**15 45 27.6**	**-1.1**
	comp=Z,3.5nm,0.8s,baz=211,slow=18,SNR=2.0						
LBTB				LR	LR	15 48 32.4	
	comp=Z,10µm,20.6s,baz=159,slow=33						
	comp=Z,23nm,0.9s						
LBTB	**Lobatse**	**21.73**	**331**		**P**	**15 41 28.5**	**+0.7**
LBTB				IAmb	IAmb	15 41 43.8	
	comp=Z,370nm,1.8s						
LBTB	**Lobatse**	**21.73**	**331**	P	**P**	**15 41 28.5**	**+0.7**
LBTB				pmax	pmax		
	comp=Z,370nm,1.8s						
SKOMA	**Sekoma**	**22.80**	**327**	*i* P	**P**	**15 41 36.3**	**-2.9**
LPHEP	**Lephephe**	**23.17**	**333**		**P**	**15 41 42.6**	**-0.5**
LPHEP				IAmb	IAmb	15 41 57.7	
	comp=Z,235nm,1.8s						
LPHEP	**Lephephe**	**23.17**	**333**	*i* P	**P**	**15 41 44.0**	**+0.9**
MREMI	**Moremi**	**23.43**	**337**	P	**P**	**15 41 46.4**	**+0.7**
MREMI				IAmb	IAmb	15 42 00.4	
	comp=Z,166nm,1.4s						
VOI	**Vohitsoka**	**24.04**	**22**	P	**P**	**15 41 52.4**	**+0.7**
	SNR=13						
VOI	**Vohitsoka**	**24.04**	**22**	P	**P**	**15 41 49.9**	**-1.8**
VOI				IAMs_20	IAMs_20	15 48 51.1	
	comp=Z,9µm,21.0s						
LKGWB	**Lokgwabe**	**24.27**	**322**		**P**	**15 41 50.7**	**-3.1**
LKGWB	**Lokgwabe**	**24.27**	**322**	*i* P	**P**	**15 41 51.3**	**-2.5**
SYO	**Syowa Base**	**24.45**	**178**	⇓*e*P	**P**	**15 41 53.4**	**-1.5**
SYO	**Syowa Base**	**24.45**	**178**	⇑*i*pP	pP	15 41 56.6	+0.9
KHWEE	**KHWEE**	**24.62**	**333**	P	**P**	**15 41 55.4**	**-1.6**
KHWEE				IAmb	IAmb	15 42 09.2	
	comp=Z,111nm,1.2s						
BROLN	**Tlhalogang**	**24.86**	**338**	*i* P	**P**	**15 41 57.2**	**-2.0**
KGCAE	**Kacgae**	**24.97**	**326**		**P**	**15 42 00.1**	**0.0**
KGCAE				IAmb	IAmb	15 42 25.1	
	comp=Z,163nm,1.2s						
KGCAE	**Kacgae**	**24.97**	**326**	*i* P	**P**	**15 41 59.4**	**-0.7**
MATP	**Matopo**	**25.21**	**341**	LR	LR	15 50 39.5	
	comp=Z,10µm,21.1s,baz=156,slow=34						
KOOLE	**Kule**	**25.70**	**322**		**P**	**15 42 06.7**	**0.0**
KOOLE	**Kule**	**25.70**	**322**	*i* P	**P**	**15 42 06.5**	**-0.2**
PHDHD	**Phuduhudu**	**26.55**	**333**	P	**P**	**15 42 13.3**	**-1.1**
MAW	**Mawson**	**26.70**	**158**	P	**P**	**15 42 17.7**	**+2.5**
	comp=Z,6.0nm,1.2s						
MAW	**Mawson**	**26.70**	**158**	P	**P**	**15 42 16.1**	**+0.9**
	comp=Z,7.7nm,0.8s,baz=307,slow=7.9,SNR=10						
MAW				LR	LR	15 50 08.4	
	comp=Z,6µm,21.4s,baz=322,slow=30						
	comp=Z,7.7nm,0.8s						
GRTLG	**Ghanzi**	**26.70**	**325**	P	**P**	**15 42 15.5**	**-0.3**
GRTLG				IAmb	IAmb	15 42 29.5	
	comp=Z,235nm,1.9s						
GRTLG	**Ghanzi**	**26.70**	**325**	*i* P	**P**	**15 42 14.4**	**-1.4**
ABPO	**Ambohimpanom**	**26.91**	**21**	P	**P**	**15 42 15.7**	**-2.1**
ABPO				IAmb	IAmb	15 42 30.6	
	comp=Z,199nm,1.6s						
ABPO	**Ambohimpanom**	**26.91**	**21**	IAMs_20	IAMs_20	15 51 23.1	
	comp=Z,8µm,18.0s						
ABPO	**Ambohimpanom**	**26.91**	**21**	P	**P**	**15 42 15.7**	**-2.1**
ABPO				pmax	pmax		
	comp=Z,199nm,1.7s						
ABPO				MLR	MLR		
	comp=Z,8µm,18.0s						
OPO	**Ambohidratompo**	**27.33**	**21**	LR	LR	15 51 52.0	
	comp=Z,6µm,18.0s,baz=352,slow=34						
WIN	**Windhoek**	**27.51**	**317**	P	**P**	**15 42 21.8**	**-1.4**
WIN				IAMs_20	IAMs_20	15 51 43.0	
	comp=Z,7µm,21.0s						
WIN	**Windhoek**	**27.51**	**317**	P	**P**	**15 42 21.8**	**-1.4**
WIN				pmax	pmax		
	comp=Z,27nm,1.0s						
WIN				MLR	MLR		
	comp=Z,7µm,21.0s						
RER	**Riviere de l'E**	**28.02**	**39**	IAMs_20	IAMs_20	15 50 34.3	
	comp=Z,7µm,19.0s						
ELIB	**Princess Elisa**	**28.16**	**189**	*d*P	**P**	**15 42 29.7**	**+1.2**
	comp=Z,14nm,1.3s						
KSANE	**Kasane**	**28.61**	**336**	P	**P**	**15 42 29.5**	**-3.4**
KSANE	**Kasane**	**28.61**	**336**	*i* P	**P**	**15 42 30.2**	**-2.7**
NVL	**N'lazarevskaya**	**29.00**	**197**	*e*P	**P**	**15 42 35.4**	**-0.3**
NVL				*e*		15 43 26.4	
NVL				*e*PPP	PPP	15 43 36.4	
NVL				*e*S	**S**	**15 47 27.8**	**+0.9**
NVL				*e*SS	**SnSn**	**15 48 52.6**	**+3.3**
NVL				pmax	pmax		
	comp=Z,72nm,1.6s						
NVL				MLR	MLR		
	comp=Z,4µm,17.0s						
TSUM	**Tsumeb**	**30.17**	**321**	LR	LR	15 53 48.5	
	comp=Z,9µm,20.4s,baz=148,slow=34						
TSUM	**Tsumeb**	**30.17**	**321**	P	**P**	**15 42 46.0**	**-0.8**
TSUM	**Tsumeb**	**30.17**	**321**	IAMs_20	IAMs_20	15 53 47.0	
	comp=Z,8µm,19.0s						
LSZ	**Lusaka**	**30.26**	**343**	LR	LR	15 53 36.4	
	comp=Z,7µm,19.2s,baz=168,slow=34						
LSZ	**Lusaka**	**30.26**	**343**	P	**P**	**15 42 47.7**	**+0.2**
LSZ	**Lusaka**	**30.26**	**343**	P	**P**	**15 42 46.5**	**-1.1**
LSZ				IAmb	IAmb	15 42 59.2	
	comp=Z,104nm,1.6s						
LSZ	**Lusaka**	**30.26**	**343**	IAMs_20	IAMs_20	15 53 15.5	
	comp=Z,7µm,20.0s						
LSZ	**Lusaka**	**30.26**	**343**	P	**P**	**15 42 46.5**	**-1.1**
LSZ				pmax	pmax		
	comp=Z,104nm,1.7s						
LSZ				MLR	MLR		
	comp=Z,7µm,20.0s						
TROLL	**Troll, Antarti**	**31.98**	**199**	⇑P	**P**	**15 43 03.9**	**+1.7**
	comp=Z,689nm,0.9s						
SNAA	**Sanae**	**33.13**	**202**	⇑P	**P**	**15 43 13.5**	**+1.2**
	comp=Z,250nm,0.7s						
SNAA	**Sanae**	**33.13**	**202**	P	**P**	**15 43 13.6**	**+1.4**
	comp=Z,8.4nm,0.8s,baz=93,slow=9.1,SNR=12						
SNAA				LR	LR	15 53 39.6	
	comp=Z,9µm,21.2s,baz=60,slow=31						
	comp=Z,8.4nm,0.8s						
SNAA	**Sanae**	**33.13**	**202**	P	**P**	**15 43 14.6**	**+2.3**
SNAA				IAMs_20	IAMs_20	15 53 28.3	
	comp=Z,9µm,21.0s						
SNAA	**Sanae**	**33.13**	**202**	⇓*e*P	**P**	**15 43 15.3**	**+3.0**
SNAA				pmax	pmax		
	comp=Z,34nm,1.3s						
VNA2	**Neumayer--Watz**	**34.03**	**204**	⇑P	**P**	**15 43 22.1**	**+2.0**
	comp=Z,20nm,0.8s,baz=58,slow=10						
VNA3	**Neumayer Olymp**	**34.84**	**204**	⇑P	**P**	**15 43 29.0**	**+1.9**
	comp=Z,13nm,0.9s						
MSEY	**Mahe Island**	**42.95**	**27**	P	**P**	**15 44 35.7**	**+0.1**
MSEY	**Mahe Island**	**42.95**	**27**	IAMs_20	IAMs_20	15 58 19.9	
	comp=Z,5µm,20.0s						
BELA	**Belgrano 2**	**42.96**	**197**	P	**P**	**15 44 34.6**	**-0.4**
MBAR	**Mbarara**	**44.23**	**351**	LR	LR	16 02 14.8	
	comp=Z,6µm,19.7s,baz=168,slow=35						
MBAR	**Mbarara**	**44.23**	**351**	P	**P**	**15 44 48.8**	**+2.8**
MBAR				S	**S**	**15 51 24.4**	**+4.2**
MBAR	**Mbarara**	**44.23**	**351**	P	**P**	**15 44 44.3**	**-1.7**
MBAR	**Mbarara**	**44.23**	**351**	P	**P**	**15 44 44.3**	**-1.7**
MBAR				pmax	pmax		
	comp=Z,47nm,1.8s						
QSPA	**South Pole Qui**	**45.56**	**180**	LR	LR	16 02 09.1	
	comp=Z,6µm,21.9s,baz=248,slow=34						
QSPA	**South Pole Qui**	**45.56**	**180**	P	**P**	**15 44 55.4**	**-0.7**
QSPA				IAmb	IAmb	15 45 02.0	
	comp=Z,44nm,1.1s						
QSPA	**South Pole Qui**	**45.56**	**180**	IAMs_20	IAMs_20	16 01 47.2	
	comp=Z,6µm,22.0s						
HOPE	**Hope Point**	**46.75**	**231**	P	**P**	**15 45 04.4**	**-0.9**
HOPE	**Hope Point**	**46.75**	**231**	P	**P**	**15 45 04.4**	**-0.9**
HOPE				pmax	pmax		
	comp=Z,138nm,1.4s						
LODK	**Lodwar**	**47.89**	**358**	P	**P**	**15 45 18.1**	**+3.3**
	SNR=22						
LODK	**Lodwar**	**47.89**	**358**	P	**P**	**15 45 15.3**	**+0.6**
LODK				IAmb	IAmb	15 45 28.2	
	comp=Z,70nm,1.6s						
LODK				IAMs_20	IAMs_20	16 02 51.2	
	comp=Z,3µm,22.0s						
FURI	**Furi**	**53.32**	**2**	LR	LR	16 08 49.0	
	comp=Z,2µm,19.0s,baz=176,slow=36						
FURI	**Furi**	**53.32**	**2**	IAMs_20	IAMs_20	16 07 59.1	
	comp=Z,2µm,20.0s						
VNDA	**Vanda**	**53.47**	**167**	P	**P**	**15 45 56.1**	**0.0**
	comp=Z,2.0nm,0.8s,baz=252,slow=8.7,SNR=11						
VNDA				LR	LR	16 06 41.9	
	comp=Z,7µm,21.8s,baz=220,slow=34						
	comp=Z,2.0nm,0.8s						
VNDA	**Vanda**	**53.47**	**167**	P	**P**	**15 45 55.9**	**-0.1**
VNDA	**Vanda**	**53.47**	**167**	P	**P**	**15 45 55.9**	**-0.1**
VNDA				pmax	pmax		
	comp=Z,17nm,1.5s						
EDA	**Edea**	**53.94**	**326**	P	**P**	**15 45 57.5**	**-2.7**
EDA				IAMs_20	IAMs_20	16 08 41.9	
	comp=Z,3µm,18.0s						
SBA	**Scott Base**	**53.97**	**168**	P	**P**	**15 45 59.9**	**+0.2**
SBA				IAmb	IAmb	15 46 11.4	
	comp=Z,70nm,1.4s						
SBA	**Scott Base**	**53.97**	**168**	P	**P**	**15 45 59.9**	**+0.2**
SBA				pmax	pmax		
	comp=Z,70nm,1.5s						
PMSA	**Palmer Station**	**55.01**	**211**	LR	LR	16 05 28.6	
	comp=Z,2µm,20.2s,baz=132,slow=31						
PMSA	**Palmer Station**	**55.01**	**211**	IAMs_20	IAMs_20	16 04 45.4	
	comp=Z,2µm,20.0s						
ATD	**Arta Tunnel**	**56.16**	**7**	LR	LR	16 09 07.2	
	comp=Z,93nm,19.2s,baz=178,slow=35						
ATD	**Arta Tunnel**	**56.16**	**7**	P	**P**	**15 46 18.6**	**+2.3**
ATD				S	**S**	**15 54 04.8**	**-1.2**
ATD	**Arta Tunnel**	**56.16**	**7**	P	**P**	**15 46 14.6**	**-1.6**
ATD				IAmb	IAmb	15 46 29.2	
	comp=Z,88nm,1.4s						
ATD				IAMs_20	IAMs_20	16 08 36.5	
	comp=Z,2µm,20.0s						
H10S2	**ASCENSION HYDR**	**57.02**	**292**	T	T	16 48 09.8	
	baz=137,slow=74,SNR=617						
H10S3	**ASCENSION HYDR**	**57.03**	**292**	T	T	16 48 11.0	
	baz=83,slow=74,SNR=562						
EFI	**East Falkland**	**59.49**	**226**	P	**P**	**15 46 39.1**	**-0.2**
EFI	**East Falkland**	**59.49**	**226**	IAMs_20	IAMs_20	16 06 01.0	
	comp=Z,3µm,22.0s						
EFI	**East Falkland**	**59.49**	**226**	P	**P**	**15 46 39.1**	**-0.2**
EFI				pmax	pmax		
	comp=Z,319nm,1.7s						
MUN	**Mundaring**	**61.03**	**108**	P	**P**	**15 46 52.0**	**+1.8**
	comp=Z,37nm,1.6s						
NWAO	**Narrogin (SRO)**	**61.16**	**109**	P	**P**	**15 46 51.6**	**+0.6**
	comp=Z,37nm,2.2s						
NWAO	**Narrogin (SRO)**	**61.16**	**109**	LR	LR	16 07 38.0	
	comp=Z,2µm,19.3s,baz=244,slow=30						
NWAO	**Narrogin (SRO)**	**61.16**	**109**	IAMs_20	IAMs_20	16 06 37.9	
	comp=Z,2µm,21.0s						
MG01	**Puerto William**	**62.17**	**219**	IAMs_20	IAMs_20	16 06 20.7	
	comp=Z,3µm,22.0s						
BLDU	**Ballidu**	**62.19**	**107**	P	**P**	**15 46 58.5**	**+0.5**
	comp=Z,31nm,1.5s						
KLBR	**Kellerberrin**	**62.31**	**108**	P	**P**	**15 47 00.1**	**+1.2**
	comp=Z,45nm,1.5s						
MORW	**Morawa**	**62.67**	**105**	P	**P**	**15 47 02.3**	**+1.0**
	comp=Z,50nm,1.4s						
MORW	**Morawa**	**62.67**	**105**	P	**P**	**15 47 00.6**	**-0.7**
ABTO	**Aybut**	**63.44**	**17**	P	**P**	**15 47 05.1**	**-1.2**
DBIC	**Dimbokro**	**63.52**	**312**	P	**P**	**15 47 06.9**	**0.0**
	comp=Z,18nm,0.7s,baz=162,slow=8.0,SNR=14						
DBIC				LR	LR	16 11 02.4	
	comp=Z,1µm,20.6s,baz=162,slow=33						
	comp=Z,18nm,0.7s						
DBIC	**Dimbokro**	**63.52**	**312**	P	**P**	**15 47 05.3**	**-1.6**
DBIC				IAmb	IAmb	15 47 09.0	
	comp=Z,29nm,0.9s						
DBIC	**Dimbokro**	**63.52**	**312**	P	**P**	**15 47 05.3**	**-1.6**
DBIC				pmax	pmax		
	comp=Z,29nm,0.9s						
RBK	**Rabkut**	**63.78**	**18**	P	**P**	**15 47 10.3**	**+1.7**
WHFO	**Wadi Hawf**	**64.09**	**18**	P	**P**	**15 47 12.8**	**+2.2**
DMTO	**DMTO**	**64.16**	**19**	P	**P**	**15 47 13.7**	**+2.8**
PALK	**Pallekele**	**64.84**	**49**	LR	LR	16 08 41.1	
	comp=Z,2µm,20.8s,baz=213,slow=30						
PALK	**Pallekele**	**64.84**	**49**	IAMs_20	IAMs_20	16 08 18.7	
	comp=Z,2µm,21.0s						
KMBL	**Kambalda**	**65.23**	**110**	P	**P**	**15 47 17.9**	**-0.2**
	comp=Z,22nm,1.9s						
TORD	**Torodi Ar. Bea**	**65.92**	**322**	P	**P**	**15 47 22.7**	**+0.2**
	comp=Z,11nm,0.6s,baz=153,slow=6.8,SNR=45						
TORD				LR	LR	16 15 23.9	
	comp=Z,1µm,19.2s,baz=148,slow=35						
TORD				PKP2bc	**P'P'bc**	**16 15 60.0**	**+2.6**
	comp=Z,0.8nm,1.0s,baz=315,slow=3.1,SNR=4.8						
	comp=Z,11nm,0.6s						
TORD	**Torodi Ar. Bea**	**65.92**	**322**	P	**P**	**15 47 20.0**	**-2.5**
MEEK	**Meekatharra**	**65.97**	**104**	P	**P**	**15 47 23.9**	**+0.9**
	comp=Z,47nm,1.2s						
RIB01	**Linhares ES**	**67.94**	**264**	*e*P	**P**	**15 47 35.9**	**+0.4**
MHTO	**MHTO**	**68.04**	**21**	P	**P**	**15 47 38.0**	**+2.1**
	SNR=9.2						
MHTO				S	**S**	**15 56 37.4**	**+1.8**
VAS01	**Vassouras-RJ**	**68.16**	**260**	*e*P	**P**	**15 47 38.5**	**+1.6**
RAYN	**Ar Rayn**	**68.27**	**8**	P	**P**	**15 47 38.4**	**+1.1**
RAYN				S	**S**	**15 56 36.4**	**-2.1**
RAYN	**Ar Rayn**	**68.27**	**8**	P	**P**	**15 47 37.5**	**+0.1**
RAYN	**Ar Rayn**	**68.27**	**8**	*i* P	**P**	**15 47 38.5**	**+1.1**
	SNR=7.1						
RAYN	**Ar Rayn**	**68.27**	**8**	P	**P**	**15 47 37.5**	**+0.1**
RAYN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BSFB	**Barra de Sao F**	**68.58**	**264**	*e*P	**P**	**15 47 41.2**	**+1.7**
EGSI	**Enggano, Bengk**	**68.66**	**76**	P	**P**	**15 47 40.4**	**+0.4**
	comp=Z,46nm,1.5s						
CNLB	**Canela**	**68.73**	**249**	*e*P	**P**	**15 47 42.4**	**+2.0**
SJMB	**Sao Joao De Ma**	**68.90**	**264**	*e*P	**P**	**15 47 42.2**	**+0.7**
MZR	**Muzera**	**68.96**	**16**	P	**P**	**15 47 43.5**	**+1.9**
	SNR=7.5						
MZR	**Muzera**	**68.96**	**16**	*i* P	**P**	**15 47 42.7**	**+1.0**
	SNR=6.9						
PARB	**Paraibuna**	**69.00**	**258**	*e*P	**P**	**15 47 44.5**	**+2.3**
GUA01	**Guaratinga, BA**	**69.33**	**267**	*e*P	**P**	**15 47 46.0**	**+1.8**
JMDO	**Jabal Madar**	**69.39**	**21**	P	**P**	**15 47 44.7**	**+0.4**
JLN	**Jalan Bani Buh**	**69.53**	**22**	P	**P**	**15 47 48.1**	**+3.0**
	SNR=6.7						
PET01	**Itanhaem-SP**	**69.53**	**256**	*e*P	**P**	**15 47 42.9**	**-2.4**
BSY	**Bisya**	**69.53**	**20**	P	**P**	**15 47 47.0**	**+1.8**
	SNR=12						
FORT	**Forrest**	**69.70**	**113**	P	**P**	**15 47 47.4**	**+1.0**
	comp=Z,32nm,1.4s						
FORT	**Forrest**	**69.70**	**113**	P	**P**	**15 47 42.1**	**-4.2**
CPSB	**Cacapava Do Su**	**69.74**	**247**	*e*P	**P**	**15 47 48.1**	**+1.5**
WBK	**Wadi Bani Khal**	**69.85**	**21**	P	**P**	**15 47 50.0**	**+2.8**
	SNR=5.5						
BSCB	**Bom Sucesso**	**69.93**	**260**	*e*P	**P**	**15 47 49.1**	**+1.1**
ARQ	**Araqi**	**69.94**	**19**	P	**P**	**15 47 49.0**	**+1.4**
SMDO	**Samad**	**70.04**	**20**	P	**P**	**15 47 50.0**	**+1.6**
	SNR=6.4						
PSAB3	**Pilbara Seismi**	**70.08**	**101**	P	**P**	**15 47 49.8**	**+1.0**
	comp=Z,51nm,1.8s						
PSA00	**Pilbara Seismi**	**70.09**	**101**	P	**P**	**15 47 50.5**	**+1.7**
	comp=Z,37nm,1.2s						
PSA00	**Pilbara Seismi**	**70.09**	**101**	P	**P**	**15 47 46.9**	**-1.9**
PSA00				IAmb	IAmb	15 47 50.8	
	comp=Z,77nm,1.8s						
PSAC1	**Pilbara Seismi**	**70.09**	**101**	P	**P**	**15 47 46.8**	**-2.1**
TRQA	**Tornquist**	**70.09**	**236**	IAMs_20	IAMs_20	16 12 07.6	
	comp=Z,1µm,21.0s						
PSAC2	**Pilbara Seismi**	**70.13**	**101**	P	**P**	**15 47 50.8**	**+1.6**
	comp=Z,39nm,1.5s						
VAO	**Valinhos**	**70.15**	**257**	P	**P**	**15 47 47.6**	**-1.7**
VAO				IAmb	IAmb	15 47 52.9	
	comp=Z,36nm,1.1s						
VAO	**Valinhos**	**70.15**	**257**	*e*P	**P**	**15 47 51.1**	**+1.8**
SMRA	**Abu-Samra**	**70.19**	**13**	P	**P**	**15 47 48.8**	**-0.3**
TRNA	**Turayna**	**70.24**	**14**	P	**P**	**15 47 50.8**	**+1.3**
GSI	**Gunungsitoli**	**70.34**	**67**	P	**P**	**15 47 49.8**	**-0.6**
GSI	**Gunungsitoli**	**70.34**	**67**	P	**P**	**15 47 52.8**	**+2.4**
GSI	**Gunungsitoli**	**70.34**	**67**	P	**P**	**15 47 51.4**	**+1.0**
	comp=Z,45nm,1.6s						
WSAR	**Wadi Sarin**	**70.36**	**21**	LR	LR	16 12 26.8	
	comp=Z,13nm,21.4s,baz=204,slow=31						
WSAR	**Wadi Sarin**	**70.36**	**21**	P	**P**	**15 47 52.0**	**+1.8**
	SNR=6.6						
HOQ	**Hoqain**	**70.36**	**20**	P	**P**	**15 47 52.0**	**+1.7**
	SNR=7.7						
ALNE	**Al Ain**	**70.46**	**18**	P	**P**	**15 47 51.9**	**+1.0**
	SNR=8.7						
ALNE	**Al Ain**	**70.46**	**18**	*i* P	**P**	**15 47 51.9**	**+1.0**
	SNR=6.9						
COYC	**Coyhaique**	**70.53**	**225**	P	**P**	**15 47 49.1**	**-2.1**
MDSI	**Maura Dua**	**70.60**	**77**	P	**P**	**15 47 52.2**	**+0.2**
	comp=Z,27nm,1.1s						
PDSI	**Padang**	**70.63**	**71**	P	**P**	**15 47 53.4**	**+1.2**
	comp=Z,26nm,1.1s						
SOHO	**SOHO**	**70.71**	**19**	P	**P**	**15 47 51.0**	**-1.3**
SOHO	**SOHO**	**70.71**	**19**	*i* P	**P**	**15 47 52.7**	**+0.3**
	SNR=7.1						
AJN	**Ajban**	**70.79**	**17**	P	**P**	**15 47 53.9**	**+1.1**
KLSI		**70.84**	**77**	P	**P**	**15 47 54.6**	**+1.1**
	comp=Z,30nm,1.8s						
ASUD	**Al Ashush, Dub**	**70.92**	**17**	P	**P**	**15 47 53.0**	**-0.6**
PPI	**Padang Panjang**	**70.92**	**71**	P	**P**	**15 47 54.6**	**+0.7**
	comp=Z,1µmcomp=Z,26nm,1.7s						
ITAB	**Concordia**	**70.93**	**250**	P	**P**	**15 47 51.7**	**-2.2**
ITAB				IAmb	IAmb	15 47 58.0	
	comp=Z,68nm,1.5s						
ITAB	**Concordia**	**70.93**	**250**	*e*P	**P**	**15 47 56.9**	**+2.9**
RCLB	**Rio Claro- Sao**	**70.93**	**257**	*e*P	**P**	**15 47 55.6**	**+1.6**
BBJI	**Bungbulang**	**70.93**	**81**	P	**P**	**15 47 53.8**	**-0.3**
	comp=Z,16nm,1.6s						
DIAM	**Diamantina, MG**	**70.94**	**263**	*e*P	**P**	**15 47 55.3**	**+1.0**
FAQ	**Al Faqa, Dubai**	**71.09**	**18**	P	**P**	**15 47 55.9**	**+1.2**
	SNR=6.7						
ASHO	**Ashiyiah**	**71.14**	**18**	P	**P**	**15 47 56.1**	**+1.1**
	SNR=15						
ASHO	**Ashiyiah**	**71.14**	**18**	*i* P	**P**	**15 47 55.4**	**+0.4**
	SNR=11						
HATD	**Hatta, Dubai**	**71.29**	**18**	P	**P**	**15 47 57.2**	**+1.4**
	SNR=12						
HATD	**Hatta, Dubai**	**71.29**	**18**	*i* P	**P**	**15 47 56.3**	**+0.4**
	SNR=10						
NAZ	**Nazwa, Dubai**	**71.34**	**18**	P	**P**	**15 47 58.0**	**+1.8**

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             SNR=8.2
NAZ   Nazwa, Dubai      71.34  18 i P        P        15 47 57.1 +1.0
             SNR=7.2
UOSS  Minazif           71.42  18   P        P        15 47 57.6 +1.0
UOSS  Minazif           71.42  18   P        P        15 47 55.3 -1.3
UOSS                                IAmb     IAmb     15 48 11.8
             comp=Z,58nm,1.4s
UOSS  Minazif           71.42  18   IAMs_20  IAMs_20  16 17 31.2
             comp=Z,2µm,19.0s
UOSS  Minazif           71.42  18 i P        P        15 47 57.1 +0.4
             SNR=9.3
UOSS                              i P        sP       15 47 57.7 +0.2
             SNR=9.4
AY01  Puyuhuapi         71.62 225   P        P        15 47 56.3 -1.5
AY01                                IAmb     IAmb     15 48 05.0
             comp=Z,40nm,1.1s
AY01                                IAMs_20  IAMs_20  16 13 20.8
             comp=Z,2µm,22.0s
MDH   Madha             71.78  18   P        P        15 47 57.9 -0.9
             SNR=6.0
MDH   Madha             71.78  18 i P        P        15 47 59.4 +0.5
             SNR=7.6
MSFE  Esma-Masafi       71.81  18 i P        P        15 47 59.7 +0.7
             SNR=5.7
MASF  Masafi            71.82  18   P        P        15 48 00.9 +1.8
             SNR=5.7
KPJI  Karang Pucung     71.93  82   P        P        15 47 59.3 -0.8
             comp=Z,19nm,1.9s
PSAL  Palomas, Salto    72.00 244 eP         P        15 48 02.7 +2.4
LL02  Futaleuf          72.08 227   P        P        15 47 58.9 -1.7
LL02                                IAMs_20  IAMs_20  16 13 37.0
             comp=Z,2µm,20.0s
KCSI  Kotacane, Aceh    72.13  66   P        P        15 48 01.1 -0.2
             comp=Z,528nmcomp=Z,24nm,1.3s
AUCAS Cummins Area S    72.27 121   P        P        15 48 02.6 +0.7
PSI   Prapat            72.35  67   LR       LR       16 12 16.4
             comp=Z,443nm,20.6s,baz=226,slow=30
PSI   Prapat            72.35  67   P        P        15 48 02.4 -0.3
HYB   Hyderabad         72.38  41 eP         P        15 48 02.4 -0.2
HYB                                 IVmB_BB           15 48 03.2
             comp=Z,395nm,2.8s
HYB                               ePcP       PcP      15 48 19.7 -0.8
HYB                               ePP        PP       15 50 42.9 -0.9
HYB                               eS         S        15 57 26.6 -0.1
HYB                               eSS        SS       16 02 05.5  0.0
HYB                                 IVMs_BB  IVMs_BB  16 17 34.3
             comp=Z,531nm,16.0s
SHME  Shamm             72.47  18   P        P        15 48 02.3 -0.6
BB19B Bebedouro         72.52 258 eP         P        15 48 05.6 +2.0
PTGB  Pitanga           72.54 252 eP         P        15 48 04.9 +1.2
PMNB  Patos De Minas    72.73 261 eP         P        15 48 06.4 +1.4
LDASE Londrina, Braz    72.77 254 eP         P        15 48 07.7 +2.6
TAU   Tasmania Unive    72.88 134   IAMs_20  IAMs_20  16 12 37.9
             comp=Z,2µm,20.0s
PCJI  Pacitan           72.92  85   P        P        15 48 05.0 -1.0
LL01  San Ignacio de    72.95 227   IAMs_20  IAMs_20  16 12 20.9
             comp=Z,2µm,22.0s
PLCA  Paso Flores       73.12 229   P        P        15 48 07.8 +0.9
             comp=Z,11nm,0.9s,baz=133,slow=5.9,SNR=18
PLCA                                LR       LR       16 17 17.0
             comp=Z,540nm,18.1s,baz=136,slow=33
             comp=Z,11nm,0.9s
PLCA  Paso Flores       73.12 229   P        P        15 48 05.0 -2.0
PLCA                                IAmb     IAmb     15 48 18.6
             comp=Z,68nm,1.4s
PLCA  Paso Flores       73.12 229   P        P        15 48 05.0 -2.0
PLCA                                pmax     pmax
             comp=Z,68nm,1.5s
PLCA  Paso Flores       73.12 229 eP         P        15 48 08.7 +1.7
NBTA  Tacaratu-PE       73.14 274 eP         P        15 48 07.5 +0.2
MOO   Moorlands         73.14 133   P        P        15 48 07.9 +0.9
             comp=Z,54nm,1.3s
BBOO  Buckleboo         73.46 120   P        P        15 48 09.7 +0.7
             comp=Z,84nm,1.4s
JANB  Januaria          73.55 265 eP         P        15 48 10.7 +0.9
SNJI  Sawahan-Nganju    73.62  85   P        P        15 48 10.5 +0.2
             comp=Z,56nm,1.5s
WRKA  Warakurna         73.62 109   P        P        15 48 10.9 +0.8
             comp=Z,21nm,1.2s
SJI   Sawahan           73.66  85   P        P        15 48 11.1 +0.6
             comp=Z,44nm,1.7s
NGJI  Ngawi             73.70  84   P        P        15 48 10.7 +0.1
             comp=Z,55nm,1.5s
AUMBR Murray Bridge     73.84 123   P        P        15 48 11.8 +0.7
EIL   Elat              74.00 358   LR       LR       16 18 37.7
             comp=Z,2µm,20.4s,baz=182,slow=34
ARPS  Mount Arapiles    74.20 126   P        P        15 48 14.5 +1.2
             comp=Z,46nm,1.4s
IPMB  Ipameri, GO       74.35 260 eP         P        15 48 16.4 +2.0
GMJI  Gumukmas          74.48  86   P        P        15 48 15.6 +0.5
             comp=Z,53nm,2.5s
ITRB  Iturama           74.70 257 eP         P        15 48 18.9 +2.4
AUJCS Jamestown Cent    74.76 122   P        P        15 48 17.1 +0.5
AUMTC Mt Clear Colle    74.78 128   P        P        15 48 18.5 +1.9
HTT   Hallett           74.79 122   P        P        15 48 17.5 +0.7
             comp=Z,17nm,1.7s
IPM   Ipoh              74.99  68   P        P        15 48 19.3 +1.2
IPM   Ipoh              74.99  68   P        P        15 48 18.0 -0.1
             comp=Z,24nm,1.6s
CPUP  Villa Florida     75.00 248   P        P        15 48 19.1 +1.0
             comp=Z,13nm,0.9s,baz=146,slow=5.9,SNR=31
CPUP                                LR       LR       16 15 11.8
             comp=Z,623nm,21.9s,baz=106,slow=31
             comp=Z,13nm,0.9s
CPUP  Villa Florida     75.00 248   P        P        15 48 16.2 -1.7
CPUP  Villa Florida     75.00 248   P        P        15 48 16.3 -1.7
CPUP                                pmax     pmax
             comp=Z,24nm,1.0s
LR04  Corral            75.27 228   IAMs_20  IAMs_20  16 15 05.5
             comp=Z,1µm,21.0s
KULM  Kulim             75.34  67   IAmb     IAmb     15 48 22.2
             comp=Z,80nm,1.4s
KULM  Kulim             75.34  67   P        P        15 48 21.1 +1.0
KULM  Kulim             75.34  67   P        P        15 48 20.2 +0.1
             comp=Z,784nmcomp=Z,42nm,1.5s
ABJI  Asem Bagus        75.37  87   P        P        15 48 20.5 +0.2
KMMI  Kalianget         75.70  86   P        P        15 48 22.5 +0.3
TOO   Toolangi          75.70 129   P        P        15 48 23.8 +1.7
AMBA  Amambai (Brazi    75.72 252 eP         P        15 48 23.6 +1.4
SDBA  SAO DESIDERIO     75.77 267 eP         P        15 48 20.1 -2.5
BDFB  Brasilia          75.78 262   P        P        15 48 24.5 +1.7
             comp=Z,13nm,1.1s,baz=132,slow=3.1,SNR=11
BDFB                                LR       LR       16 14 50.7
             comp=Z,982nm,21.6s,baz=144,slow=30
             comp=Z,13nm,1.1s
BDFB  Brasilia          75.78 262   IAmb     IAmb     15 48 26.3
             comp=Z,90nm,1.6s
KHKI  Kahang-Kahang     75.96  88   P        P        15 48 24.2 +0.5
             comp=Z,31nm,1.2s
KLNI  Mataram           76.27  88   P        P        15 48 25.3 -0.1
             comp=Z,1µmcomp=Z,57nm,1.7s
FITZ  Fitzroy Crossi    76.45 102   P        P        15 48 26.6 +0.1
             comp=Z,27nm,1.2s,baz=230,slow=7.7,SNR=8.6
FITZ                                LR       LR       16 17 46.2
             comp=Z,946nm,18.4s,baz=232,slow=32
             comp=Z,27nm,1.2s
ASF   Jabal al Asfar    76.46 360   LR       LR       16 22 35.1
             comp=Z,2µm,18.5s,baz=181,slow=36
MBO   M'Bour            76.56 306   IAMs_20  IAMs_20  16 20 07.3
             comp=Z,1µm,18.0s
TWSI  Taliwang, Sumb    76.61  89   P        P        15 48 26.8 -0.6
             comp=Z,1µmcomp=Z,55nm,1.4s
C2SB  Chapadao do Su    77.05 256 eP         P        15 48 32.8 +3.0
ML02  Panimavida        77.14 232   IAMs_20  IAMs_20  16 17 47.0
             comp=Z,1µm,19.0s
ACAN  Cantantal         77.15 237 eP         P        15 48 32.2 +1.9
PLAI  Plampang          77.19  90   P        P        15 48 31.5 +0.8
PLAI  Plampang          77.19  90   P        P        15 48 29.2 -1.5
MMAI  Mount Meron Ar    77.32 358   LR       LR       16 21 48.8
             comp=Z,2µm,20.2s,baz=172,slow=35
STKA  Stephens Creek    77.48 122   P        P        15 48 32.5 +0.4
STKA  Stephens Creek    77.48 122   P        P        15 48 32.0 -0.2
             comp=Z,30nm,1.0s,baz=220,slow=4.3,SNR=37
STKA                                LR       LR       16 16 02.6
             comp=Z,886nm,20.9s,baz=212,slow=31
             comp=Z,30nm,1.0s
STKA  Stephens Creek    77.48 122   P        P        15 48 31.9 -0.2
STKA  Stephens Creek    77.48 122   P        P        15 48 31.9 -0.2
STKA                                pmax     pmax
             comp=Z,273nm,1.2s
AAGR  Agrelo            77.55 236 eP         P        15 48 34.3 +1.6
DBNI  Kabupaten Domp    77.79  90   P        P        15 48 33.3 -0.8
             comp=Z,862nmcomp=Z,32nm,2.9s
LMEL  Las Melosas       77.81 234   IAMs_20  IAMs_20  16 17 49.0
             comp=Z,1µm,19.0s
AQDB  Aquidauana        77.86 253   IAmb     IAmb     15 48 37.3
             comp=Z,34nm,0.9s
AQDB  Aquidauana        77.86 253 eP         P        15 48 35.6 +1.3
ASAL  Salagasta         77.91 236 eP         P        15 48 35.9 +1.3
BO01  Tunca             77.93 233   IAmb     IAmb     15 48 41.7
             comp=Z,45nm,1.5s
MT13  San Alfonso       77.94 234   IAmb     IAmb     15 48 46.4
             comp=Z,58nm,1.4s
BO04  La Punta          77.95 234   IAmb     IAmb     15 48 37.0
             comp=Z,39nm,1.1s
MT08  Bocatoma Ro       77.99 235   IAmb     IAmb     15 48 38.4
             comp=Z,32nm,1.1s
MILA  Mila              78.09 131   P        P        15 48 38.4 +2.9
MT03  Universidad Ad    78.25 234   IAMs_20  IAMs_20  16 18 01.4
             comp=Z,1µm,19.0s
CFA   Coronel Fontan    78.25 237   LR       LR       16 16 31.9
             comp=Z,261nm,21.0s,baz=200,slow=31
MT16  CCHEN             78.30 234   IAmb     IAmb     15 48 39.3
             comp=Z,44nm,0.8s
MT16                                IAMs_20  IAMs_20  16 18 25.8
             comp=Z,1µm,20.0s
ASAR  Alice Springs     78.30 112   P        P        15 48 36.2 -0.6
             comp=Z,17nm,1.0s,baz=219,slow=5.3,SNR=65
ASAR                                PKiKP    PKiKP    15 54 14.1 +0.3
             comp=Z,0.3nm,0.8s,baz=151,slow=0.9,SNR=4.3
ASAR                                LR       LR       16 18 24.2
             comp=Z,1µm,19.5s,baz=230,slow=32
             comp=Z,17nm,1.0s
ASAR  Alice Springs     78.30 112   P        P        15 48 35.8 -1.1
MT09  Talagante         78.32 234   IAmb     IAmb     15 48 50.4
             comp=Z,57nm,1.4s
MURT  Porto Murtinho    78.36 251 eP         P        15 48 37.8 +0.7
ARAG  Araguaiana, MT    78.42 259 eP         P        15 48 39.5 +2.0
MT05  Renca             78.45 234   IAMs_20  IAMs_20  16 17 45.8
             comp=Z,1µm,22.0s
AUSP  Uspallata         78.50 236 eP         P        15 48 40.0 +1.9
ZON   Zonda             78.56 237   IAmb     IAmb     15 48 45.6
             comp=Z,43nm,1.2s
ZON   Zonda             78.56 237 eP         P        15 48 38.3 +0.2
ZON                               eP         sP       15 48 38.9 -0.1
ZON                               eP         pP       15 48 39.3 +0.5
PEL   Peldehue          78.60 235   IAMs_20  IAMs_20  16 17 32.6
             comp=Z,1µm,21.0s
PEL   Peldehue          78.60 235 eP         P        15 48 39.6 +1.3
BDQN  Bodoquena, MS     78.60 253 eP         P        15 48 39.0 +0.5
RTLS  Leoncito          78.75 236 eP         P        15 48 40.9 +1.4
VA03  San Esteban       78.79 235   IAmb     IAmb     15 48 42.0
             comp=Z,26nm,0.8s
VA03                                IAMs_20  IAMs_20  16 16 06.9
             comp=Z,1µm,21.0s
VA03  San Esteban       78.79 235 eP         P        15 48 40.7 +1.2
PP1B  Ponte de Pedra    79.26 256 eP         P        15 48 44.1 +2.0
CAN   Canberra          79.28 129   P        P        15 48 44.8 +2.7
CAN   Canberra          79.28 129   P        P        15 48 44.7 +2.7
AUMHS Melrose High S    79.30 130   P        P        15 48 44.0 +1.8
CSS   Mathiatis         79.32 357   IAMs_20  IAMs_20  16 23 40.8
             comp=Z,1µm,20.0s
AUDAR Daramalan Coll    79.41 129   P        P        15 48 45.2 +2.4
CNB   Canberra Magne    79.48 130   P        P        15 48 45.7 +2.5
YNG   Young             79.70 128   P        P        15 48 46.0 +1.7
EDFI  Ende, Flores      80.03  92   P        P        15 48 46.1 -0.4
SMTB  Santa Maria do    80.11 267 eP         P        15 48 48.2 +1.4
CMSA  Cobar Meteorol    80.16 125   P        P        15 48 48.3 +1.5
CO03  El Pedregal       80.26 236   IAmb     IAmb     15 48 54.9
             comp=Z,53nm,1.1s
IDI   Anoyia            80.35 350   LR       LR       16 28 14.0
             comp=Z,2µm,18.1s,baz=195,slow=39
BATI  Baumata           80.44  95   LR       LR       16 19 35.1
             comp=Z,375nm,19.2s,baz=254,slow=32
BATI  Baumata           80.44  95   P        P        15 48 49.3 +0.7
             comp=Z,23nm,1.4s
CO01  Juntas del Tor    80.53 237   IAmb     IAmb     15 48 57.7
             comp=Z,60nm,1.1s
SNDB  Serra Nova Dou    80.60 263 eP         P        15 48 51.5 +2.0
SALV  Santo Antonio     80.99 257 eP         P        15 48 53.7 +2.2
SBUM  Sibu              81.14  78   P        P        15 48 51.1 -1.2
SBUM                                IAmb     IAmb     15 48 54.4
             comp=Z,58nm,1.9s
SBUM  Sibu              81.14  78   P        P        15 48 53.5 +1.3
SBUM  Sibu              81.14  78   P        P        15 48 51.6 -0.6
             comp=Z,15nm,1.7s
WRA   Warramunga Arr    81.17 109   P        P        15 48 51.3 -1.1
             comp=Z,26nm,1.2s,baz=218,slow=4.7,SNR=32
             comp=Z,26nm,1.2s
WRA   Warramunga Arr    81.17 109   P        P        15 48 51.8 -0.6
WRA   Warramunga Arr    81.17 109   P        P        15 48 51.8 -0.6
WRA                                 pmax     pmax
             comp=Z,9.0nm,1.6s
WRAB  Tennant Creek     81.18 109   P        P        15 48 50.1 -2.3
WRAB                                IAmb     IAmb     15 48 59.0
             comp=Z,61nm,1.2s
WRAB  Tennant Creek     81.18 109   IAMs_20  IAMs_20  16 19 00.3
             comp=Z,2µm,20.0s
WRAB  Tennant Creek     81.18 109   P        P        15 48 53.2 +0.7
WRAB  Tennant Creek     81.18 109d iP        P        15 48 52.6 +0.1
WRAB                                pmax     pmax
             comp=Z,67nm,1.5s
KAPI  Kappang           81.23  88   P        P        15 48 52.2 -0.6
             comp=Z,20nm,1.5s
KAPI  Kappang           81.23  88 i P        P        15 48 51.8 -1.0
KAPI                                pmax     pmax
             comp=Z,78nm,1.6s
WR8   Warramunga Arr    81.27 109   IAmb     IAmb     15 48 54.5
             comp=Z,79nm,1.6s
BKSI  Bulukumba         81.28  89   P        P        15 48 52.2 -0.8
             comp=Z,1µmcomp=Z,59nm,1.7s
ELL   Elmali            81.29 354   IAmb     IAmb     15 48 56.3
             comp=Z,54nm,1.3s
WB0   Warramunga Arr    81.33 109   IAmb     IAmb     15 48 59.7
             comp=Z,57nm,1.2s
GAZ   Gaziantep         81.45   0   P        P        15 48 49.6 -3.8
AC05  El Transito       81.46 238   P        P        15 48 53.3 -0.7
AC05                                IAmb     IAmb     15 48 56.7
             comp=Z,46nm,1.2s
AC05                                IAMs_20  IAMs_20  16 27 22.6
             comp=Z,1µm,20.0s
LCO   Las Campanas      81.59 237   P        P        15 48 52.9 -1.9
LCO                                 IAmb     IAmb     15 48 57.4
             comp=Z,51nm,1.2s
LCO   Las Campanas      81.59 237   P        P        15 48 52.9 -1.9
LCO                                 pmax     pmax
             comp=Z,51nm,1.2s
HRA   Herat             81.91  21   IAmb     IAmb     15 48 57.8
             comp=Z,30nm,1.1s
ISP   Isparta           82.32 355   IAMs_20  IAMs_20  16 28 19.8
             comp=Z,2µm,21.0s
TTSI  Tana Toraja       82.65  87   P        P        15 49 01.1 +0.9
             comp=Z,1µmcomp=Z,21nm,1.6s
QLP   Quilpie           82.87 120   P        P        15 49 02.1 +0.9
GURO  Guroymak-BITLI    82.94   4   IAmb     IAmb     15 49 04.8
             comp=Z,38nm,1.3s
AULRC Lightning Ridg    83.04 125   P        P        15 49 03.6 +1.5
MANT  Manisa            83.13 353   IAmb     IAmb     15 49 05.6
             comp=Z,29nm,1.2s
ARPR  Arapgir-MALATY    83.38   1   IAMs_20  IAMs_20  16 27 46.3
             comp=Z,1µm,19.0s
BRDH  Bariadhala        83.43  49   LR       LR       16 21 13.6
             comp=Z,2µm,20.4s,baz=201,slow=32
KIRS  Kirsehir-Merke    83.46 357 ⇓P         P        15 49 04.2 +0.3
PRPB  Parauapebas       83.55 268 eP         P        15 49 06.9 +1.9
PTLB  Pontes e Lacer    83.69 255   P        P        15 49 04.6 -1.0
PTLB                                IAmb     IAmb     15 49 08.3
             comp=Z,29nm,0.9s
PTLB  Pontes e Lacer    83.69 255 eP         P        15 49 06.8 +1.3
GO02  Mina Guanaco      83.69 241   IAmb     IAmb     15 49 08.8
             comp=Z,40nm,1.1s
KEST  Kesra             83.89 338   P        P        15 49 07.3 +1.1
             comp=Z,16nm,1.0s,baz=66,slow=1.6,SNR=7.1
KEST                                LR       LR       16 27 16.4
             comp=Z,5µm,20.7s,baz=145,slow=36
             comp=Z,16nm,1.0s
KBL   Kabul             83.98  26   P        P        15 49 08.3 +1.5
             SNR=10
KBL   Kabul             83.98  26   P        P        15 49 06.7 -0.1
KBL   Kabul             83.98  26   P        P        15 49 06.7 -0.1
KBL                                 pmax     pmax
             comp=Z,97nm,2.0s
BR104 Keskin Array S    84.04 357   P        P        15 49 04.8 -2.0
             comp=Z,83nmcomp=Z,7.3nm,1.2s
BR131 Keskin Array S    84.06 357   P        P        15 49 03.9 -3.0
BR131 Keskin Array S    84.06 357   P        P        15 49 03.9 -3.0
BR131                               pmax     pmax
             comp=Z,14nm,1.1s
BRTR  Keskin Array B    84.06 357   P        P        15 49 07.2 +0.3
             comp=Z,4.6nm,0.8s,baz=180,slow=7.4,SNR=24
BRTR                                LR       LR       16 24 43.3
             comp=Z,692nm,21.8s,baz=162,slow=34
             comp=Z,4.6nm,0.8s
BRTR  Keskin Array B    84.06 357            P        15 49 06.4 -0.6
BRTR  Keskin Array B    84.06 357ceP         P        15 49 08.0 +1.1
BRTR                                pmax     pmax
             comp=Z,5.0nm,0.8s
BR106 Keskin Array S    84.07 357   P        P        15 49 06.0 -1.0
             comp=Z,86nmcomp=Z,8.7nm,1.0s
ANTO  Ankara            84.23 357   IAMs_20  IAMs_20  16 32 48.9
             comp=Z,1µm,19.0s
ANTO  Ankara            84.23 357 ⇓P         P        15 49 09.5 +1.8
ANTO  Ankara            84.23 357 ⇓P         P        15 49 09.5 +1.8
QIS   Mount Isa         84.24 113   P        P        15 49 09.1 +0.7
CM31  Chiang Mai Arr    84.27  57   P        P        15 49 10.0 +1.6
             SNR=6.1
CM31  Chiang Mai Arr    84.27  57   IAmb     IAmb     15 49 09.8
             comp=Z,40nm,1.6s
CMAR  Chiang Mai Arr    84.27  57   P        P        15 49 08.6 +0.2
             comp=Z,3.5nm,1.0s,baz=228,slow=5.4,SNR=19
CMAR                                LR       LR       16 22 13.7
             comp=Z,319nm,18.5s,baz=220,slow=33
             comp=Z,3.5nm,1.0s
CMAR  Chiang Mai Arr    84.27  57            P        15 49 07.1 -1.3
CMAR  Chiang Mai Arr    84.27  57ceP         P        15 49 08.6 +0.2
CMAR                                pmax     pmax
             comp=Z,3.0nm,1.0s
VAE   Valguarnera       84.31 342   LR       LR       16 28 20.2
             comp=Z,3µm,18.2s,baz=163,slow=37
KOPT  Kop Dagi          84.34   3            P        15 49 08.5 -0.1
KOPT                                IAmb     IAmb     15 49 30.4
             comp=Z,51nm,1.4s
BORA  Eskisehir         84.37 355   P        P        15 49 06.9 -1.6
BORA                                IAmb     IAmb     15 49 11.6
             comp=Z,35nm,1.3s
AF01  San Pedro de A    84.40 243   IAMs_20  IAMs_20  16 20 57.7
             comp=Z,1µm,20.0s
ARMA  Armidale          84.41 128   P        P        15 49 11.6 +2.4
CLDB  Colider           84.54 260 eP         P        15 49 11.4 +1.5
CHTO  Chiang Mai        84.55  57   P        P        15 49 08.8 -1.0
CHTO  Chiang Mai        84.55  57   P        P        15 49 10.1 +0.4
CHTO  Chiang Mai        84.55  57   P        P        15 49 08.2 -1.5
             comp=Z,16nm,1.3s
CHTO  Chiang Mai        84.55  57   P        P        15 49 08.8 -1.0
CHTO                                pmax     pmax
             comp=Z,25nm,1.5s
NIL   Nilore            84.56  30   P        P        15 49 11.0 +1.5
NIL   Nilore            84.56  30            P        15 49 09.1 -0.5
NIL   Nilore            84.56  30   P        P        15 49 09.1 -0.5
NIL                                 pmax     pmax
             comp=Z,67nm,1.2s
PB14  IPOC Station P    84.59 241   IAmb     IAmb     15 49 17.1
             comp=Z,68nm,1.7s
SIV   San Ignacio       84.63 253   LR       LR       16 22 45.8
             comp=Z,428nm,18.6s,baz=146,slow=33
PDRB  Porto dos Gac     84.68 259 eP         P        15 49 12.0 +1.3
MDUB  Mudurnu           84.91 355   IAmb     IAmb     15 49 13.9
             comp=Z,38nm,1.1s
KDU   Kakadu            84.93 103   P        P        15 49 12.8 +0.9
MPSI  Mapaga            85.06  85   P        P        15 49 10.7 -1.8
TIP   Timpagrande       85.46 344   IAMs_20  IAMs_20  16 28 32.1
             comp=Z,2µm,21.0s
PB06  IPOC Station P    85.46 243   IAmb     IAmb     15 49 22.6
             comp=Z,34nm,1.0s
PB05  IPOC Station P    85.75 242   IAmb     IAmb     15 49 23.7
             comp=Z,46nm,1.2s
SHL   Shillong          85.89  48   P        P        15 49 17.1 +0.5
             SNR=13
SHL   Shillong          85.89  48   IAmb     IAmb     15 49 17.9
             comp=Z,47nm,1.1s
MDT   Midelt            85.96 326   LR       LR       16 27 45.7
             comp=Z,1µm,18.3s,baz=140,slow=36
PB03  IPOC Station P    86.05 243   IAmb     IAmb     15 49 20.5
             comp=Z,34nm,1.3s
VILB  Vilhena           86.16 256   IAmb     IAmb     15 49 26.0
             comp=Z,46nm,1.5s
VILB  Vilhena           86.16 256 eP         P        15 49 19.5 +1.4
AKT   Akhty             86.28   8 eP         P        15 49 16.6 -1.4
AKT                               eS         SKSac    15 59 43.9 -0.6
AKT                                 pmax     pmax
             comp=Z,55nm,1.3s
BHW   Baring Head       86.31 150   IAMs_20  IAMs_20  16 26 46.5
             comp=Z,1µm,18.0s
SNZO  South Karori      86.33 149   IAMs_20  IAMs_20  16 27 51.2
             comp=Z,2µm,20.0s
PB07  IPOC Station P    86.37 243   IAmb     IAmb     15 49 22.1
             comp=Z,39nm,1.3s
CUC   Castrocucco       86.43 344   IAMs_20  IAMs_20  16 27 33.8
             comp=Z,1µm,21.0s
SHAA  Shahritus         86.50  24   IAmb     IAmb     15 49 21.2
             comp=Z,192nm,1.5s
NPGB  Novo Progresso    86.89 263 eP         P        15 49 23.2 +1.6
GO01  Chusmiza          87.42 245   IAmb     IAmb     15 49 27.6
             comp=Z,44nm,1.6s
NEUR  Neytrino          87.67   4 i P        P        15 49 25.5 +0.7
NEUR                                pmax     pmax
             comp=Z,12nm,1.6s
MAK   Makhachkala       87.72   8 eP         P        15 49 20.4 -4.4
MAK                               e                   15 59 44.9
MAK                               eSS        SS       16 05 52.8 -1.8
MAK                               eSSS       SSS      16 09 23.7
MAK                                 pmax     pmax
             comp=Z,83nm,0.9s
MAK                                 MLR      MLR
             comp=Z,1µm,17.0s
CHGR  Chuyangaron       87.81  25c iP        P        15 49 26.4 +0.9
CHGR                                pmax     pmax
             comp=Z,73nm,1.8s
SOC   Sochi             87.88   2 eP         P        15 49 26.1 +0.5
SOC                               ePPP       PPP      15 54 45.2
SOC                               eS         SKSac    15 59 55.3 +1.4
SOC                               eSS        SS       16 06 00.5 +3.5
SOC                                 pmax     pmax
             comp=Z,24nm,1.4s
NCK   Nalchik           87.95   5⇑eP         P        15 49 27.8 +1.9
NCK                                 pmax     pmax
             comp=Z,7.0nm,0.2s
SHA1  Shidzhatmaz       88.14   4d iP        P        15 49 27.9 +0.8
KBZ   Khabaz            88.15   4   P        P        15 49 27.9 +1.1
             comp=Z,6.2nm,0.9s,baz=215,slow=4.0,SNR=14
KBZ                                 LR       LR       16 27 46.2
             comp=Z,765nm,21.3s,baz=184,slow=35
             comp=Z,6.2nm,0.9s
KBZ   Khabaz            88.15   4d iP        P        15 49 27.7 +0.9
KBZ                                 pmax     pmax
             comp=Z,21nm,1.3s
PDG   Podgorica         88.17 347   IAMs_20  IAMs_20  16 34 11.9
             comp=Z,1µm,18.0s
KIV   Kislovodsk        88.36   4   P        P        15 49 27.0 -0.9
KIV                                 IAMs_20  IAMs_20  16 26 54.4
             comp=Z,970nm,22.0s
KIV   Kislovodsk        88.36   4   P        P        15 49 29.8 +1.8
KIV   Kislovodsk        88.36   4 eP         P        15 49 28.5 +0.5
KIV                               e                   15 59 57.1
KIV                               eSS        SS       16 06 06.0 +1.8
KIV                                 pmax     pmax
             comp=Z,22nm,1.1s
KIV                                 pmax     pmax
             comp=Z,40nm,3.7s
KVAR  Kislovodsk Arr    88.36   4   LR       LR       16 27 47.5
             comp=Z,557nm,20.0s,baz=83,slow=35
PLVB  Pleven            88.37 351 ⇓P         P        15 49 29.7 +1.8
GAR   Garm              88.48  25   IAmb     IAmb     15 49 34.7
             comp=Z,34nm,1.6s
PB16  IPOC Station P    88.59 246   IAmb     IAmb     15 49 38.5
             comp=Z,47nm,1.8s
LSA   Lhasa             88.87  45   P        P        15 49 26.8 -4.4
LSA                                 pmax     pmax
             comp=Z,12nm,1.3s
LSA   Lhasa             88.87  45   P        P        15 49 32.6 +1.4
CTA   Charters Tower    88.87 117   P        P        15 49 31.6 +0.5
CTA   Charters Tower    88.87 117   P        P        15 49 31.4 +0.3
             comp=Z,5.3nm,1.0s,baz=128,slow=7.2,SNR=3.2
CTA                                 LR       LR       16 24 12.3
             comp=Z,1µm,19.4s,baz=216,slow=32
             comp=Z,5.3nm,1.0s
CTAO  Charters Tower    88.87 117   IAMs_20  IAMs_20  16 23 01.4
             comp=Z,1µm,20.0s
LABN  Labinsk           88.97   3 eP         P        15 49 30.3 -0.4
LABN                              e*PP       PcP      15 49 33.3 +1.1
LABN                              eS         SKSac    15 59 59.4 -1.0
LABN                                pmax     pmax
             comp=Z,23nm,0.9s
LABN                                MLR      MLR
             comp=E,1µm,20.0s
LABN                                MLR      MLR
             comp=Z,1µm,22.0s
BOVS  Bovan             88.98 349 ⇓P         P        15 49 33.0 +2.3
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ITTB	Itaituba	89.02	265	eP	P	15 49 33.0	+1.2
TIRR	Tirgusor	89.07	354	IAMs_20	IAMs_20	16 31 23.8	
	comp=Z,1µm,20.0s						
ANN	Anapa	89.07	0	eP	P	15 49 32.2	+1.1
ANN				e*PP	pwP	15 49 35.6	-0.3
ANN				eS	SKSac	16 00 01.9	+1.0
ANN				eSS	SS	16 06 16.1	+1.9
ANN				pmax	pmax		
	comp=Z,35nm,1.0s						
ANN				MLR	MLR		
	comp=Z,709nm,18.0s						
ANN				MLR	MLR		
	comp=N,559nm,19.0s						
ANN				MLR	MLR		
	comp=E,522nm,14.0s						
TNCH	TengChong	89.11	53	P	P	15 49 33.0	+0.9
TNCH				S	S	16 00 21.8	+0.3
TNCH				SS	SS	16 06 18.5	+2.9
TNCH				pmax	pmax		
	comp=E,54nm,1.2s						
TNCH				LR	LR		
	comp=E,490nm,21.5s						
TNCH				LR	LR		
	comp=E,530nm,19.5s						
TNCH				LR	LR		
	comp=E,1µm,17.6s						
PB18	Visviri	89.11	246	IAMs_20	IAMs_20	16 24 30.7	
	comp=Z,889nm,21.0s						
LPAZ	La Paz	89.17	248	P	P	15 49 35.1	+1.8
	comp=Z,0.4nm,0.4s,baz=153,slow=4.5,SNR=4.7						
LPAZ				LR	LR	16 26 56.3	
	comp=Z,950nm,18.0s,baz=120,slow=34						
	comp=Z,0.4nm,0.4s						
LPAZ	La Paz	89.17	248	eP	P	15 49 35.0	+1.8
SIM	Simferopol'	89.26	358	eP	P	15 49 33.1	+1.1
SIM				e*PP	pwP	15 49 36.0	-0.8
SIM				S	S	16 00 22.0	+0.4
SIM				ePS	PnS	16 01 22.0	-4.5
SIM				pmax	pmax		
	comp=Z,26nm,1.0s						
GOF	Gofitskoye	89.48	4	ceP	P	15 49 33.1	0.0
CFR	Carcaliu	89.81	354	⇓P	P	15 49 35.4	+0.8
CFR	Carcaliu	89.81	354	⇓P	P	15 49 35.4	+0.8
URZ	Urewera	89.89	150	LR	LR	16 28 16.4	
	comp=Z,1µm,18.1s,baz=201,slow=34						
ERBR	Yeremizino-Bor	90.03	2	eP	P	15 49 35.5	-0.1
ERBR				e*PP	pwP	15 49 39.0	-1.4
ERBR				eS	SKSac	16 00 05.7	-0.9
ERBR				pmax	pmax		
	comp=Z,19nm,1.2s						
ERBR				MLR	MLR		
	comp=Z,673nm,20.0s						
ERBR				MLR	MLR		
	comp=E,1µm,21.0s						
ERBR				MLR	MLR		
	comp=N,1µm,20.0s						
MLR	Muntele Rosu	90.31	352	LR	LR	16 32 13.7	
	comp=N,1µm,20.0s,baz=188,slow=37						
MLR	Muntele Rosu	90.31	352	⇓P	P	15 49 38.7	+1.6
MLR	Muntele Rosu	90.31	352	⇓P	P	15 49 38.7	+1.6
MLR	Muntele Rosu	90.31	352	P	P	15 49 36.6	-0.5
	comp=N,22nm,1.5s						
ARR	Arges	90.32	351	⇓P	P	15 49 38.5	+1.4
VRI	Vrincioaia	90.61	353	⇑P	P	15 49 39.1	+0.7
VRI	Vrincioaia	90.61	353	⇑P	P	15 49 39.1	+0.7
VRI	Vrincioaia	90.61	353	P	P	15 49 37.4	-0.9
	comp=N,59nm,1.3s						
KSH	Kashi	90.79	29	P	P	15 49 38.0	-1.5
KSH				S	S	16 00 19.3	-17
KSH				SS	SS	16 06 31.0	-8.6
KSH				pmax	pmax		
	comp=N,7.0nm,0.9s						
KSH				LR	LR		
	comp=N,640nm,19.6s						
KSH				LR	LR		
	comp=N,820nm,20.6s						
KSH				LR	LR		
	comp=N,1µm,20.6s						
BZS	Buzias	90.94	349	⇑P	P	15 49 40.9	+1.1
BZS	Buzias	90.94	349	⇑P	P	15 49 40.9	+1.1
ONER	Baraj Valea Uz	91.10	353	⇑P	P	15 49 42.0	+1.3
OUZ	Omahuta	91.22	146	IAMs_20	IAMs_20	16 27 27.7	
	comp=Z,1µm,19.0s						
QIZ	Qiongzhong	91.49	65	P	P	15 49 42.8	-0.3
QIZ				S	S	16 00 43.8	+0.4
QIZ				LR	LR		
	comp=Z,840nm,17.7s						
QIZ				LR	LR		
	comp=Z,620nm,17.6s						
QIZ				LR	LR		
	comp=Z,1µm,21.2s						
KMI	Kunming	91.62	56	⇑P	P	15 49 45.0	+1.1
KMI				pmax	pmax		
	comp=Z,15nm,0.4s						
KMI				LR	LR		
	comp=Z,710nm,20.6s						
KMI				LR	LR		
	comp=Z,620nm,19.9s						
KMI				LR	LR		
	comp=Z,770nm,18.2s						
BIZ	Bicaz	91.73	352	⇓P	P	15 49 37.2	-6.4
ESDC	Sonseca Array	91.75	329	P	P	15 49 45.4	+1.5
	comp=Z,1.2nm,0.9s,baz=165,slow=3.7,SNR=5.5						
ESDC				LR	LR	16 31 56.6	
	comp=Z,3µm,18.1s,baz=140,slow=36						
	comp=Z,1.2nm,0.9s						
MORH	Mrgy, Hungar	91.96	347	⇑P	P	15 49 45.4	+0.9
MORH	Mrgy, Hungar	91.96	347	P	P	15 49 43.0	-1.5
KKAR	Karatay Array	92.31	24		P	15 49 46.2	-0.1
KKAR	Karatay Array	92.31	24	P	P	15 49 46.2	-0.1
BURAR	Bucovina Array	92.48	352		P	15 49 46.6	-0.5
BURAR	Bucovina Array	92.48	352	⇓P	P	15 49 49.6	+2.5
BURAR	Bucovina Array	92.48	352	⇓P	P	15 49 49.6	+2.5
BUR08	Bucovina Ar. S	92.52	352	IAmb	IAmb	15 49 50.1	
	comp=Z,24nm,1.4s						
OBKA	Obir	92.95	345	ePcP	PcP	15 49 50.4	+0.5
	comp=Z,22nm,1.8s						
SOKA	Soboth	93.02	345	i P	P	15 49 50.6	+1.0
	comp=Z,13nm,1.8s						
AAK	Ala-Archa	93.09	27	P	P	15 49 50.6	+0.4
	comp=Z,1.5nm,0.7s,baz=222,slow=7.0,SNR=5.5						
AAK				LR	LR	16 28 16.9	
	comp=Z,642nm,19.9s,baz=218,slow=33						
	comp=Z,1.5nm,0.7s						
AAK	Ala-Archa	93.09	27		P	15 49 48.2	-1.9
AAK	Ala-Archa	93.09	27	IAMs_20	IAMs_20	16 25 48.4	
	comp=Z,891nm,22.0s						
AAK	Ala-Archa	93.09	27	P	P	15 49 50.7	+0.6
AAK	Ala-Archa	93.09	27	d iP	P	15 49 50.4	+0.2
AAK				pmax	pmax		
	comp=Z,11nm,1.7s						
MYKA	Terra Mystica	93.24	344	ePcP	PcP	15 49 53.2	+2.0
	comp=Z,5.6nm,1.0s						
KMPD	K-Podol'skiy	93.31	353	P	P	15 49 50.2	-0.5
BNI	Bardonecchia	93.33	339	P	P	15 49 48.8	-2.3
BNI				IAmb	IAmb	15 49 57.6	
	comp=Z,26nm,1.4s						
BNI	Bardonecchia	93.33	339	P	P	15 49 48.8	-2.3
BNI				pmax	pmax		
	comp=Z,26nm,1.5s						
BNI				MLR	MLR		
	comp=Z,3µm,18.0s						
MDP	Montagnes des	93.40	274	LR	LR	16 25 12.0	
	comp=Z,715nm,21.9s,baz=130,slow=31						
PSZ	Piszkesteto	93.43	348	⇓P	P	15 49 52.7	+1.2
PSZ	Piszkesteto	93.43	348	⇓P	P	15 49 52.7	+1.2
ARSA	Arzberg	93.49	345	i PcP	PcP	15 49 53.6	+1.4
	comp=Z,10nm,1.4s						
ABTA	Abfaltersbach	93.58	343	i PcP	PcP	15 49 54.8	+2.1
	comp=Z,16nm,1.8s						
RONA	Rosalia, Austr	93.78	346	ePcP	PcP	15 49 55.4	+1.9
	comp=Z,6.9nm,1.3s						
DAV	Davao City (W)	93.79	84	LR	LR	16 29 48.0	
	comp=Z,178nm,18.5s,baz=270,slow=34						
FUORN	Ofenpass-Fuorn	93.94	342	IAmb	IAmb	15 50 04.0	
	comp=Z,37nm,1.7s						
FUORN				IAMs_20	IAMs_20	16 33 31.6	
	comp=Z,1µm,20.0s						
CONA	Conrad Observa	94.08	346	i PcP	PcP	15 49 56.5	+1.7
	comp=Z,11nm,1.4s						
DAVOX	Davos/Dischmat	94.18	342	LR	LR	16 35 16.8	
	comp=Z,2µm,19.3s,baz=146,slow=37						
LESA	Schwarzleotal	94.19	344	epP	pP	15 49 58.4	+2.8
	comp=Z,6.0nm,1.1s						
FETA	Feichten	94.22	342	i PcP	PcP	15 49 57.2	+1.6
	comp=Z,11nm,1.6s						
WTTA	Wattenberg	94.26	343	i P	P	15 49 54.1	-1.3
	comp=Z,11nm,2.0s						
BIOA	Bad Ischl, Aus	94.26	344	i PcP	PcP	15 49 57.3	+1.6
	comp=Z,11nm,1.4s						
MOA	Molln	94.29	345	i P	P	15 49 55.2	-0.1
	comp=Z,11nm,1.5s						
SQTA	Sankt Quirin	94.31	343	ePcP	PcP	15 49 57.9	+1.9
	comp=Z,6.7nm,1.4s						
RETA	Reutte	94.66	342	i PcP	PcP	15 49 58.6	+1.1
	comp=Z,14nm,1.4s						
LANS	Liptovska Anna	94.70	348	eP	P	15 49 59.6	+2.4
LANS	Liptovska Anna	94.70	348	eP	P	15 49 59.6	+2.4
GYA	Guiyang	94.96	57	⇓P	P	15 50 00.3	+1.2
GYA				SKS	SKSac	16 00 32.0	-3.4
GYA				S	S	16 01 10.8	-3.2
GYA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GYA				LR	LR		
	comp=Z,320nm,3.9s						
GYA				LR	LR		
	comp=Z,240nm,6.3s						
GYA				LR	LR		
	comp=Z,570nm,16.8s						
AKASG	Malin Array Be	95.22	355	P	P	15 49 59.5	+0.1
	comp=Z,0.2nm,0.3s,baz=187,slow=4.8,SNR=5.3						
AKASG				LR	LR	16 34 56.6	
	comp=Z,617nm,20.4s,baz=170,slow=37						
	comp=Z,0.2nm,0.3s						
AKASG	Malin Array Be	95.22	355	ceP	P	15 49 59.7	+0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKBB	Malin Array Si	95.22	355	i P	P	15 50 00.5	+1.0
VRAC	Vranov	95.29	347	LR	LR	16 35 07.2	
	comp=Z,676nm,22.0s,baz=160,slow=37						
GERES	GERESS Array B	95.36	345	P	P	15 50 01.1	+0.8
	comp=Z,0.2nm,0.6s,baz=198,slow=9.3,SNR=2.4						
GERES				LR	LR	16 36 13.8	
	comp=Z,1µm,19.3s,baz=158,slow=38						
	comp=Z,0.2nm,0.6s						
TGY	Tagaytay City	95.43	76	LR	LR	16 26 09.0	
	comp=Z,391nm,21.8s,baz=213,slow=31						
TEFE	Tefe	95.91	259	eP	P	15 50 05.5	+1.9
AKTO	Aktyubinsk	96.43	13	LR	LR	16 36 39.0	
	comp=Z,551nm,18.5s,baz=194,slow=37						
BELG	Belogornoye	97.09	6	LR	LR	16 34 26.8	
	comp=Z,2µm,21.5s,baz=180,slow=36						
BELG	Belogornoye	97.09	6	⇑eP	P	15 50 06.6	-1.3
BELG				pmax	pmax		
	comp=Z,4.0nm,1.2s						
PMG	Port Moresby	97.31	111	LR	LR	16 28 27.2	
	comp=Z,670nm,20.8s,baz=206,slow=32						
PMG	Port Moresby	97.31	111	IAMs_20	IAMs_20	16 28 16.3	
	comp=Z,775nm,19.0s						
JAY	Jayapura	97.84	101	LR	LR	16 29 52.4	
	comp=Z,551nm,21.4s,slow=33						
CLL	Collm	97.85	345	eSKSac	SKSac	16 00 48.0	-0.9
CLL				ePS	PS	16 03 05.0	+3.3
CLL				eSS	SS	16 08 24.0	+4.4
CLL				eSSSS		16 15 30.0	
CLL				AMS	AMS	16 35 00.0	
	comp=Z,1µm,21.0s						
CLL				AMS	AMS	16 38 00.0	
	comp=Z,1µm,18.1s						
NNA	Nana	98.02	245	LR	LR	16 30 59.7	
	comp=Z,584nm,19.9s,baz=140,slow=33						
WMQ	Urumqi	98.92	34	eP	P	15 50 15.5	-1.0
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
WMQ				LR	LR		
	comp=Z,500nm,22.9s						
WMQ				LR	LR		
	comp=Z,480nm,22.9s						
WMQ				LR	LR		
	comp=Z,480nm,21.1s						
DZM	Mont Dzumac	99.06	133	ePP	PP	15 54 12.3	-7.0
	comp=Z,65nm,27.2s						
DZM	Mont Dzumac	99.06	133	eSS	SS	16 08 41.7	+5.8
	comp=Z,125nm,25.8s						
DZM	Mont Dzumac	99.06	133	eLR	LR	16 22 26.6	
	comp=Z,2µm,23.9s						
MNK	Minsk	99.10	355	i P	Pdif	15 50 17.0	0.0
	comp=E,21nm,0.8s						
MNK				i P	Pdif	15 50 17.0	0.0
	comp=N,19nm,0.9s						
MNK				i P	Pdif	15 50 17.0	0.0
	comp=Z,7.0nm,0.7s,baz=173						
MNK				i PP	PP	15 54 25.4	+5.6
MNK				i PPP	PPP	15 56 33.3	
MNK				i SKS		16 00 08.2	
MNK				i S	SKSac	16 00 55.5	+0.5
MNK				i PS	PS	16 03 15.8	+0.5
MNK				i SS	SS	16 07 33.6	-63
MNK				i LQ	LQ	16 29 03.5	
MNK	Minsk	99.10	355	i P	Pdif	15 50 16.9	0.0
MNK				i		15 54 25.4	
MNK				i PPP	PPP	15 56 33.2	
MNK				i S	SKSac	16 00 55.5	+0.5
MNK				i PS	PS	16 03 15.7	+0.5
MNK				pmax	pmax		
	comp=N,19nm,0.9s						
MNK				pmax	pmax		
	comp=E,21nm,0.8s						
MNK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MNK				MLR	MLR		
	comp=Z,462nm,16.0s						
MNK				MLR	MLR		
	comp=E,975nm,17.0s						
MNK				MLR	MLR		
	comp=N,591nm,16.0s						
MKAR	Makanchi Array	99.38	30	P	Pdif	15 50 18.0	-0.4
	comp=N,0.5nm,0.7s,baz=229,slow=11,SNR=4.8						
MKAR				LR	LR	16 31 34.4	
	comp=N,434nm,20.9s,baz=238,slow=33						
	comp=N,0.5nm,0.7s						
MKAR	Makanchi Array	99.38	30	P	Pdif	15 50 14.5	-3.9
OBN	Obninsk	99.40	360	LR	LR	16 36 38.9	
	comp=N,380nm,20.6s,baz=107,slow=36						
OBN	Obninsk	99.40	360	eP	Pdif	15 50 20.1	+1.9
OBN				e		15 54 18.3	
OBN				ePPP	PPP	15 56 27.2	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
OBN				MLR	MLR		
	comp=Z,679nm,22.0s						
ENH	Enshi	99.43	57	IAMs_20	IAMs_20	16 32 57.5	
	comp=Z,712nm,19.0s						
RAO	Raoul Island	99.78	149	LR	LR	16 34 03.5	
	comp=Z,449nm,18.8s,baz=168,slow=34						
PABE	Paberze	100.41	352	IAMs_20	IAMs_20	16 34 31.9	
	comp=Z,1µm,21.0s						
LZH	Lanzhou	100.48	49	eP	Pdif	15 50 24.5	+0.7
LZH				pP	pwP	15 50 32.8	+4.2
LZH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LZH				LR	LR		
	comp=Z,440nm,21.0s						
LZH				LR	LR		
	comp=Z,690nm,20.1s						
LZH				LR	LR		
	comp=Z,760nm,20.4s						
GTA	Gaotai	100.89	44	eP	Pdif	15 50 26.0	+0.5
GTA				pmax	pmax		
	comp=Z,5.0nm,1.6s						
GTA				LR	LR		
	comp=Z,560nm,20.7s						
GTA				LR	LR		
	comp=Z,600nm,19.6s						
GTA				LR	LR		
	comp=Z,770nm,18.9s						
BVAR	Borovoye Array	101.40	20	P	Pdif	15 50 27.8	+0.6
	comp=Z,0.3nm,0.4s,baz=183,slow=8.5,SNR=2.5						
BORK	Borovoye	101.40	20	IAMs_20	IAMs_20	16 33 42.8	
	comp=Z,1µm,21.0s						
ARTI	Arti	102.25	12	IAMs_20	IAMs_20	16 36 46.9	
	comp=Z,910nm,22.0s						
ZALV	Zalesovo Beam	106.31	27	PP	PP	15 55 16.1	+2.1
	comp=Z,0.5nm,0.5s,baz=214,slow=6.6,SNR=3.9						
OTAV	Otavalo	108.14	252	IAMs_20	IAMs_20	16 38 46.2	
	comp=Z,604nm,19.0s						
SDV	Santo Domingo	108.84	264	IAMs_20	IAMs_20	16 35 17.2	
	comp=Z,656nm,20.0s						
BJT	Baijiatuau	110.13	53	IAMs_20	IAMs_20	16 38 29.4	
	comp=Z,595nm,19.0s						
APA	Apatity	111.93	358	⇓ePKIKP	PKiKP	15 55 00.1	-10
APA				pmax	pmax		
	comp=Z,11nm,1.2s						
APA				MLR	MLR		
	comp=Z,2µm,32.9s						
TBI	Tubuai	112.06	173	ePP	PP	15 55 40.6	-14
	comp=Z,113nm,26.5s						
TBI				eS	SKKSac	16 02 49.5	-10
	comp=Z,730nm,28.2s						
TBI				eSS	SS	16 11 30.6	-1.5
	comp=Z,3µm,24.5s						
TBI	Tubuai	112.06	173	eLQ	LQ	16 23 28.9	
	comp=Z,2µm,34.5s						
TBI				eLR	LR	16 28 27.1	
	comp=Z,7µm,36.8s						
TBI				eLR	LR	16 28 30.4	
	comp=Z,1µm,39.0s						
RKT	Rikitea	112.17	188	eSS	SS	16 11 34.4	+0.8
	comp=Z,5µm,29.5s						
RKT	Rikitea	112.17	188	eLR	LR	16 28 22.7	
	comp=Z,6µm,36.0s						
INCN	Inchon	114.79	61	IAMs_20	IAMs_20	16 41 43.8	
	comp=Z,825nm,20.0s						
PPT2	Papeete2	117.75	173	ePP	PP	15 56 31.6	-3.4
	comp=Z,66nm,25.2s						
PPT2				eS	SKSdf	16 02 42.7	+6.4
	comp=Z,314nm,25.2s						
PPT2				eSS	SS	16 12 41.8	-5.5
	comp=Z,690nm,26.5s						
PPT2	Papeete2	117.75	173	eLQ	LQ	16 25 53.5	
	comp=Z,689nm,41.0s						
PPT2				eLR	LR	16 30 59.6	
	comp=Z,1µm,21.2s						
PPT2				eLR	LR	16 31 00.5	
	comp=Z,1µm,39.0s						
HIA	Hailar	117.96	47	IAMs_20	IAMs_20	16 44 24.0	
	comp=Z,780nm,19.0s						
HILR	Hailar Array B	118.14	47	PKP	PKiKP	15 55 23.6	+0.6
	comp=Z,0.6nm,0.4s,baz=157,slow=2.2,SNR=4.6						
NRIK	Noril'sk	119.56	18	⇑iPKIKP	PKiKP	15 55 28.8	+3.7
VLA	Vladivostok	121.34	59	⇑iPKIKP	PKiKP	15 55 30.5	+1.2
MAJO	Matsushiro	121.70	68	⇓iPKIKP	PKiKP	15 55 30.6	+0.3
MJAR	Matsushiro Arr	121.70	68	PKP	PKPdf	15 55 30.0	-0.1
	comp=Z,3.1nm,1.1s,baz=237,slow=1.5,SNR=6.4						
HEH	HeiHe	122.62	50	ePKP	PKiKP	15 55 32.0	+0.4
ZEA	Zeya	124.34	46	ePKIKP	PKiKP	15 55 35.3	+0.4
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.9s						
ZEA				MLR	MLR		
	comp=E,200nm,18.0s						
ZEA				MLR	MLR		
	comp=N,300nm,17.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,18.0s						
TAOE	Nuku Hiva Isla	126.69	183	eSS	SS	16 14 47.5	+6.3
	comp=Z,353nm,25.6s						
TAOE	Nuku Hiva Isla	126.69	183	eLR	LR	16 35 16.6	
	comp=Z,2µm,22.1s						
YAK	Yakutsk	129.24	37	⇑ePKIKP	PKPdf	15 55 43.9	+0.2
K62A	Royalston	130.37	294	IAMs_20	IAMs_20	16 41 04.4	
	comp=Z,757nm,21.0s						
TIXI	Tiksi	132.15	25	IAMs_20	IAMs_20	17 05 12.9	
	comp=Z,781nm,20.0s						
TIXI	Tiksi	132.15	25	⇓iPKIKP	PKiKP	15 55 50.1	+0.1
T50A	Nancy	136.27	281	IAMs_20	IAMs_20	16 59 04.8	
	comp=Z,622nm,18.0s						
SEY	Seymchan	139.64	40	i PKIKP	PKPdf	15 56 03.5	+0.4
HKT	Hockley	140.38	265	⇓ePKIKP	PKPdf	15 56 04.9	-0.6
CCM	Cathedral Cave	141.26	279		PKPdf	15 56 02.5	-4.4
CCM	Cathedral Cave	141.26	279	PKIKP	PKPdf	15 56 02.5	-4.4
P40A	Paris	142.46	280		PKPdf	15 56 05.1	-3.9
I40A	Norwalk	143.13	288		PKPbc	15 56 07.0	0.0
TUL3	Leonard	143.49	273		PKPbc	15 56 09.5	+1.2
BILL	Bilibino	144.92	31		PKPdf	15 56 12.9	+0.4
BILL	Bilibino	144.92	31	d iPKIKP	PKPdf	15 56 12.8	+0.4
TXAR	Lajitas Array	145.54	257	PKPbc	PKPab	15 56 15.8	+0.6
	comp=Z,17nm,0.7s,baz=143,slow=5.3,SNR=114						
ECSD	EROS Data Cent	147.18	285		PKPdf	15 56 17.3	+0.2
FCC	Fort Churchill	147.46	313		PKPbc	15 56 19.9	+0.4
FCC	Fort Churchill	147.46	313	PKP2	PKPbc	15 56 19.9	+0.4
BLKN	Baker Lake	147.48	324		PKPbc	15 56 20.3	+0.9
ULM	Lac du Bonnet	148.18	297	PKPbc	PKPbc	15 56 21.2	-0.6
	comp=Z,18nm,0.6s,baz=98,slow=3.5,SNR=24						
ULM	Lac du Bonnet	148.18	297		PKPbc	15 56 21.7	-0.1
ULM	Lac du Bonnet	148.18	297	PKP2	PKPbc	15 56 21.7	-0.1
ANMO	Albuquerque	150.62	263		PKiKP	15 56 30.2	+0.9
ANMO	Albuquerque	150.62	263	PKIKP	PKiKP	15 56 30.2	+0.9
TUC	Tucson	152.23	255		PKPdf	15 56 27.5	+2.0
TUC	Tucson	152.23	255	PKIKP	PKPdf	15 56 27.5	+2.0
X16A	Lo Mia Camp, P	153.86	258		PKPdf	15 56 29.8	+1.8
YKA	Yellowknife Ar	155.83	328	PKP	PKPdf	15 56 28.3	-1.2
	comp=Z,1.1nm,0.9s,baz=15,slow=1.5,SNR=9.9						
YKA				PKPab	sPKPab	15 56 57.1	0.0
	comp=Z,3.3nm,0.8s,baz=42,slow=4.2,SNR=8.1						
YKA				PP	PP	16 00 33.5	-0.2
	comp=Z,0.2nm,0.8s,baz=62,slow=4.5,SNR=1.8						
PDAR	Pinedale Array	155.96	277	PKP	PKPdf	15 56 30.4	-0.3
	comp=Z,1.7nm,0.6s,baz=118,slow=3.4,SNR=16						
PDAR				PKPab	sPKPab	15 56 59.2	+0.5
	comp=Z,1.8nm,0.7s,baz=108,slow=4.8,SNR=8.3						
PDAR	Pinedale Array	155.96	277	PKPdf	PKPdf	15 56 31.1	+0.4
IRM	Iron Mountain	156.28	253	IAMs_20	IAMs_20	16 48 43.5	
	comp=Z,658nm,21.0s						
ILAR	Eielson Array	159.71	5	PKPab	PKPab	15 57 12.5	-0.5
	comp=Z,2.2nm,0.8s,baz=334,slow=3.9,SNR=14						
ILAR				PP	PP	16 00 56.1	+1.3
	comp=Z,0.4nm,1.1s,baz=322,slow=6.3,SNR=1.3						
NVAR	Mina Array Bea	160.65	260	PKP	PKPdf	15 56 36.9	+0.5
	comp=Z,1.0nm,0.7s,baz=3.8,slow=2.3,SNR=6.0						
NVAR				PKPab	sPKPab	15 57 19.2	+0.1
	comp=Z,2.0nm,0.9s,baz=132,slow=6.1,SNR=6.3						

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*NIED **28** 15:56:41.8, 28°.29N×129°.60E, h32^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.26; $M_{\theta\theta}$0.41; $M_{\phi\phi}$-0.16; $M_{r\theta}$1.86; $M_{\theta\phi}$-0.94; $M_{\phi r}$0.65; Fault plane solution: $M_0$2.19000×10^{15} NP1: ϕ_s163.00000°, δ27.00000°, λ-6.00000°. NP2: ϕ_s258.00000°, δ87.00000°, λ-117.00000°.*

*JMA **28** 15:56:41.8±0.1, 28°.3N±0°.7×129°.6E±0°.4, h32^{km}±1^{km}, MD3.9/26, MV4.0/26, NEAR AMAMI-OSHIMA ISLAND*

JMA Felt II J1 at NEAR AMAMI-OSHIMA ISLAND.

*IDC **28** 15:56:44.6±1.4, 28°.26N×129°.57E, h57^{km}±13^{km}, mb3.4/11, mbtmp3.7/14, MS2.9/2, Error ellipse: s-maj=22.4km s-min=8.2km az=113.0*

ISC 28 15:56:41.8±0.9, **28°.24N**±0°.04×**129°.60E**±0°.05, **h31**^{km}±6^{km}, **n57**, σ**1**^{s}**33**/59, **mb3.8**/12, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAM	Amami Oshima	0.17	2	i P	Pb	15 56 47.4	-0.5
JAM				eS	Sb	15 56 51.2	-0.7
JAM	Amami Oshima	0.17	2	A	A	15 56 47.4	
	comp=N,10.0nm,0.3s,comp=E,7.0nm,0.2s						
JZK	Kikaishima	0.34	77	i P	Pn	15 56 49.6	-0.9
JZK				eS	Sn	15 56 55.3	-1.1
JZK	Kikaishima	0.34	77	A	A	15 56 49.6	
	comp=N,34nm,0.9s,comp=E,28nm,1.3s						
JAMN	Amaminishikomi	0.37	271	i P	Pb	15 56 50.5	+0.1
JAMN				S	Sb	15 56 56.9	+0.7
JAMN	Amaminishikomi	0.37	271	A	A	15 56 50.5	
	comp=N,134nm,0.3s,comp=E,52nm,0.3s						
JTK	Tokunoshima	0.73	232	i P	Pb	15 56 55.5	-0.6
JTK				eS	Sb	15 57 04.7	-1.0
JTK	Tokunoshima	0.73	232	A	A	15 56 55.5	
	comp=N,8.0nm,0.4s,comp=E,7.0nm,0.3s						
JTAJ	Takarajima	0.97	339	i P	Pn	15 56 58.5	-0.8
JTAJ				eS	Sb	15 57 10.9	-1.8
JOKE	Okinoerabujima	1.26	226	i P	Pb	15 57 04.4	-0.6
JOKE				eS	Sb	15 57 20.7	-0.2
JYRO	Yoronjima	1.58	220	i P	Pn	15 57 08.7	+1.0
JNN	Nakanoshima	1.61	9	P	Pn	15 57 07.8	-0.3
JOW	Kunigami	1.83	220	P	Pn	15 57 11.8	+0.7
	comp=E,260nm,0.2s,baz=94,slow=16,SNR=149						
JOW				S	Sb	15 57 36.6	-0.5
	comp=E,616nm,0.2s,baz=120,slow=20,SNR=14						
JOW				LR	LR	15 57 42.9	
	comp=E,258nm,19.0s,baz=106,slow=32						
JOW	Kunigami	1.83	220	P	Pn	15 57 11.8	+0.7
JOW	Kunigami	1.83	220	P	Pn	15 57 11.8	+0.7
JOW	Kunigami	1.83	220	A	A	15 57 11.8	
	comp=N,2.0nm,0.3s,comp=E,4.0nm,1.0s						
JIH	Iheya	1.88	231	i P	Pn	15 57 12.6	+0.9
JIH				eS	Sn	15 57 35.9	+1.4
JYAK	Yakushimahirau	2.15	22	P	Pn	15 57 15.8	+0.4
JYAK				eS	Sn	15 57 41.0	0.0
JNTH	Nagotoyohara	2.21	220	P	Pn	15 57 17.0	+0.6

JKC	Kuchinoerabu	2.28	13	eP	Pn	15 57 18.1	+0.8
JMTN	Minamitane	2.43	28	P	Pn	15 57 19.6	+0.2
JJT3	Tamagusuku3	2.64	218	P	Pn	15 57 23.2	+0.9
JAGN	Aguni-jima	2.66	232	P	Pn	15 57 23.6	+1.0
JTN	Tanegashima 3	2.69	26	P	Pn	15 57 23.4	+0.4
JKDJ	Kitadaitoujima	2.74	146	eP	Pn	15 57 23.2	-0.4
JMZ	Minamidaito 2	2.81	149	P	Pn	15 57 26.5	+1.9
JMZ	Minamidaito 2	2.81	149	eP	Pn	15 57 23.0	-1.6
JKE	Kume jima 2	3.15	233	P	Pn	15 57 29.9	+0.7
JSU	Suzuyama	3.34	13	P	Pn	15 57 33.1	+1.2
JNU	Nakatsue	4.99	12	P	Pn	15 57 56.8	+2.2
	comp=E,33nm,0.5s,baz=189,slow=9.5,SNR=56						
JNU				S	Sn	15 58 52.2	+0.9
	comp=E,20nm,0.8s,baz=260,slow=19,SNR=1.6						
JNU				LR	LR	15 59 30.3	
	comp=E,91nm,19.5s,baz=182,slow=33						
JNU	Nakatsue	4.99	12	P	Pn	15 57 56.7	+2.1
JMJ	Miyako jima 2	5.15	229	P	Pn	15 57 57.1	+0.4
JTU	Tsushima	6.27	358	P	Pn	15 58 14.7	+2.6
JMN	Monobe	6.59	33	P	Pn	15 58 18.8	+2.2
YHNB	Yeheng	8.18	246	P	Pn	15 58 40.1	+1.6
NACB	Ninganchiao	8.25	242	P	Pn	15 58 39.5	+0.2
SSLB	Suanglung	8.95	242	P	Pn	15 58 47.0	-2.0
KSRS	Korea Array	9.30	352	P	Pn	15 58 55.5	+1.9
	comp=E,1.2nm,0.7s,baz=173,slow=14,SNR=5.7						
KSRS				LR	LR	16 02 42.5	
	comp=E,126nm,20.0s,baz=195,slow=39						
TPUB	Ta-pu	9.46	241	P	Pn	15 58 55.0	-1.0
INU	Inuyama	9.49	40	P	Pn	15 58 58.8	+2.5
JGF	Kuroka	9.86	40	P	Pn	15 59 03.8	+2.3
MJAR	Matsushiro Arr	11.02	39	P	Pn	15 59 21.2	+3.9
	comp=E,1.4nm,1.0s,baz=240,slow=14,SNR=1.8						
H11S3	WAKE ISLAND Hy	35.28	98	T	T	16 41 26.6	
	baz=291						
H11S1	WAKE ISLAND Hy	35.29	98	T	T	16 41 28.7	
	baz=291						
H11S2	WAKE ISLAND Hy	35.30	98	T	T	16 41 22.5	
	baz=291						
ZALV	Zalesovo Beam	41.42	321	P	P	16 04 23.6	-1.6
	comp=E,0.4nm,0.3s,baz=99,slow=8.9,SNR=2.7 comp=E,0.4nm,0.3s						
WRA	Warramunga Arr	48.12	174	P	P	16 05 17.9	-1.0
	comp=E,1.6nm,0.8s,baz=354,slow=8.3,SNR=7.5 comp=E,1.6nm,0.8s						
BVAR	Borovoye Array	49.62	317	P	P	16 05 29.8	-0.3
	comp=E,0.6nm,0.4s,baz=88,slow=10,SNR=3.2 comp=E,0.6nm,0.4s						
ASAR	Alice Springs	51.77	175	P	P	16 05 46.2	-0.4
	comp=E,0.5nm,0.6s,baz=8.9,slow=14,SNR=26 comp=E,0.5nm,0.6s						
ILAR	Eielson Array	62.10	29	P	P	16 07 00.2	+0.8
	comp=E,0.3nm,0.8s,baz=283,slow=7.8,SNR=7.8 comp=E,0.3nm,0.8s						
SPITS	Spitsbergen Ar	67.12	348	P	P	16 07 32.8	+0.9
	comp=E,12nm,1.1s,baz=56,slow=13,SNR=2.6						
FINES	FINESS Array B	71.72	331	P	P	16 08 00.3	-0.2
	comp=E,0.7nm,0.4s,baz=72,slow=5.7,SNR=11 comp=E,0.7nm,0.4s						
AKASG	Malin Array Be	74.80	320	P	P	16 08 16.9	-2.0
	comp=E,0.6nm,0.4s,baz=62,slow=6.2,SNR=3.4 comp=E,0.6nm,0.4s						
YKA	Yellowknife Ar	76.20	25	P	P	16 08 27.3	+0.6
	comp=E,0.1nm,0.6s,baz=302,slow=6.6,SNR=5.7 comp=E,0.1nm,0.6s						
BRTR	Keskin Array B	76.76	308	P	P	16 08 29.9	-0.7
	comp=E,0.4nm,0.7s,baz=79,slow=7.5,SNR=2.7 comp=E,0.4nm,0.7s						
HFS	Hagfors	77.61	333	P	P	16 08 34.9	+0.2
	comp=E,2.0nm,0.8s,baz=140,slow=1.1,SNR=5.2 comp=E,2.0nm,0.8s						
NOA	NORSAR Array B	78.05	334	P	P	16 08 36.8	-0.5
	comp=E,0.4nm,0.6s,baz=52,slow=5.8,SNR=1.4 comp=E,0.4nm,0.6s						

HEL 28 15:57:47.2±1.6, 69°.41N×30°.80E, h0km, ML1.3, Explosion, Norway-Murmansk border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAJF	Raja-Jooseppi	1.30	225	PG	Pg	15 58 09.7	-2.5
RAJF				SN	Sn	15 58 31.1	+0.4
KEV	Kevo	1.37	286	PG	Pg	15 58 11.7	-1.8
	baz=107						
KEV				SG	Sg	15 58 29.2	-2.1
VRF	Varrio	1.73	195	MSG		15 58 38.8	
	comp=Z,1.6nm,0.2s						
VRF				SN	Sn	15 58 41.5	+0.2
RNF	Rovaniemi	3.34	215	SG	Sg	15 59 31.5	-2.9

HEL 28 15:57:53.7±0.2, 67°.95N×25°.39E, h0km, ML1.0, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HEF	Hetta	0.79	306	SB	Sg	15 58 18.3	-0.8
HEF				MSG		15 58 18.3	
	comp=Z,1.3nm,0.2s						
KLF	Kolari	0.90	218	PG	Pg	15 58 09.6	-1.3
KLF				MSG		15 58 21.4	
	comp=Z,1.1nm,0.2s						
KLF				SB	Sg	15 58 21.5	-1.1
LANU	Lannavaara	1.28	276	PG	Pg	15 58 16.9	-1.3
LANU				SB	Sg	15 58 34.7	-0.1
KTK1	Kautokeino	1.33	324	SN	Sn	15 58 37.6	-0.2
RNF	Rovaniemi	1.37	169	PG	Pg	15 58 18.5	-1.4
RNF				SG	Sg	15 58 35.8	-1.8
ARA0	ARCESS Array S	1.59	2	PG	Pn	15 58 20.5	-2.6
ARA0				SG	Sn	15 58 42.8	-1.6
ERTU	Ertsjaerv	1.87	223	PG	Pn	15 58 27.5	+0.6
ERTU				SN	Sg	15 58 53.4	-0.4
KIF	Kilpisjarvi	2.00	304	MSG		15 58 53.6	
	comp=Z,0.7nm,0.2s						
KIF				SG	Sg	15 58 57.0	-0.7
RANF	Ranua	2.02	164	SG	Sn	15 58 55.5	+0.6
OLKF	Oulanka, Finla	2.27	134	MSG		15 59 00.8	
	comp=Z,0.4nm,0.2s						
OLKF				SG	Sb	15 59 03.2	-0.8
KU2	Taivalkoski	2.52	152	SG	Sb	15 59 10.6	-0.6
KU6	Riekki	2.62	135	MSG		15 59 10.9	
	comp=Z,0.3nm,0.2s						
KU6				SG	Sb	15 59 14.2	+0.1
OUL	Oulu	2.88	176	PG	Pb	15 58 46.0	+0.1
OUL				SB	Sb	15 59 19.1	-2.6

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*JMA **28** 16:01:54.6±0.1, 25°N±1°×122°.7E±0°.5, h23km±1km, MV2.1/10, NW OFF ISHIGAKIJIMA IS*

*TAP **28** 16:01:54.4, 24°.69N×122°.72E, h23km, ML2.7, C*

ISC 28 16:01:54.5±1.0, 24°.67N±0°.04×122°.71E±0°.03, h23km±11km, n53, σ0ˢ.45/84, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.31	134	P	Pb	16 02 01.3	-0.2
JYNG				eS	Sb	16 02 06.2	-0.1
YOJ	Yonaguni jima	0.34	126	P	Pb	16 02 01.9	-0.2
YOJ	Yonaguni jima	0.34	126	S	Sb	16 02 07.3	0.0
YOJ	Yonaguni jima	0.34	126	i P	Pb	16 02 02.1	-0.1
YOJ				i S	Sb	16 02 07.5	+0.2
YOJ	Yonaguni jima	0.34	126	P	Pb	16 02 02.1	-0.1
YOJ				eS	Sb	16 02 07.4	+0.2
EOS2	EOS2	0.50	240	eP	Pb	16 02 05.0	+0.5
EOS2				eS	Sn	16 02 13.5	-0.4
EOS3	EOS3	0.52	223	eP	Pb	16 02 04.5	-0.4
EOS3				eS	Sn	16 02 13.9	-0.5
EOS4	EOS4	0.65	213	i P	Pb	16 02 06.8	-0.2
EGS		0.72	284	i P	Pb	16 02 08.3	-0.2
TWB1	Santiao Chiao	0.73	298	i P	Pb	16 02 08.6	0.0
TWC	Suao	0.78	266	P	Pb	16 02 08.5	-1.0
TWC				S	Sb	16 02 18.8	-0.9
ESAO	Su ao	0.79	264	eP	Pb	16 02 09.6	0.0
ESAO				eS	Sb	16 02 19.8	-0.1
TIPB	Shuangxi	0.85	291	eP	Pb	16 02 10.4	-0.3
SXI1	Grass Mountain	0.86	300	eP	Pn	16 02 11.4	0.0
EWUT	Wuta	0.87	256	eP	Pb	16 02 10.7	-0.3
EWUT				eS	Sb	16 02 22.3	0.0
NDS	Dongshan	0.90	268	eP	Pb	16 02 11.6	+0.1
NDS				eS	Sb	16 02 22.7	-0.4
ENA	Nanau	0.91	255	P	Pb	16 02 11.1	-0.5
ENA				eS	Sb	16 02 22.4	-1.0
WFSB	Wu-fen Shan	0.93	296	eP	Pn	16 02 12.7	+0.5
EAHA	Aohua	0.94	249	eP	Pb	16 02 11.9	-0.3
EAHA				eS	Sb	16 02 23.9	-0.3
TWE	Neicheng	0.95	273	eP	Pb	16 02 12.1	-0.1
TWE				eS	Sb	16 02 24.2	-0.2
IRIF	Iriomote-Funau	0.99	109	P	Pb	16 02 12.7	-0.3
FUSB	Fushanzhiwuyua	1.02	275	eP	Pn	16 02 13.3	-0.2
FUSB				eS	Sn	16 02 27.3	+0.1
ENTT	Nioudou	1.04	269	eP	Pn	16 02 13.5	-0.2
ENTT				eS	Sb	16 02 27.1	+0.1
LATG	Datong	1.08	263	P	Pb	16 02 14.5	-0.1
LATG				S	Sb	16 02 27.9	-0.5
NWLT	Wulai	1.10	276	P	Pb	16 02 15.1	+0.2
NWLT				eS	Sb	16 02 28.8	0.0
NACB	Ninganchiao	1.12	244	P	Pn	16 02 15.0	+0.1
NACB	Ninganchiao	1.12	244	eP	Pn	16 02 14.8	-0.1
NACB				eS	Sn	16 02 29.9	+0.3
YM01	YM01	1.14	295	eP	Pb	16 02 15.3	-0.2
YM08	YM08	1.14	297	eP	Pn	16 02 15.1	0.0
TATO	Taipei	1.15	286	P	Pn	16 02 15.3	+0.1
TATO				eS	Sn	16 02 30.3	+0.1
ETLH	Xiulin Townshi	1.21	248	eP	Pb	16 02 16.8	+0.1
ETLH				eS	Sb	16 02 33.2	+1.2
YHNB	Yeheng	1.21	270	P	Pb	16 02 17.0	+0.2
YHNB	Yeheng	1.21	270	P	Pn	16 02 16.4	+0.2
YHNB				eS	Sn	16 02 31.7	-0.1
NSK	Sanguang	1.23	271	eP	Pb	16 02 17.0	-0.1
NSK				eS	Sn	16 02 32.2	-0.1
NNSB	Datong	1.23	259	eP	Pb	16 02 16.9	-0.3
NNSB				S	Sn	16 02 31.9	-0.4
NNSH	Datong	1.23	259	eP	Pb	16 02 17.2	+0.1
NNSH				eS	Sb	16 02 32.6	0.0
NNS	Nan Shan	1.23	260	eP	Pb	16 02 17.0	-0.3
NNS				eS	Sb	16 02 33.1	+0.3
JKRS	Kuro-shima	1.26	110	eP	Pn	16 02 17.1	+0.3
LXIB	Xiulin Townshi	1.34	242	eP	Pb	16 02 19.0	-0.2
LXIB				eS	Sb	16 02 37.1	+1.2
JIJ	Ishigaki jima	1.34	103	P	Pn	16 02 18.0	+0.1
KSHI	Guanxi Townshi	1.40	275	eP	Pb	16 02 20.6	+0.7
FUSS	Fushou	1.40	253	eP	Pb	16 02 20.3	+0.2
FUSS				eS	Sb	16 02 37.8	+0.2
WHF	Hehuan Shan	1.41	249	eP	Pb	16 02 20.5	0.0
WHF				eS	Sb	16 02 38.1	-0.1
ESL	Shilin	1.44	234	eP	Pb	16 02 20.2	-0.5
NFF	Wufeng Townshi	1.45	269	eP	Pb	16 02 21.3	+0.4
NFF				eS	Sb	16 02 39.4	+0.6
JISG	Ishigakijimahi	1.46	93	eP	Pn	16 02 19.6	+0.1
LIOB	Emei	1.54	270	eP	Pb	16 02 21.5	-0.8
LIOB				eS	Sb	16 02 41.8	+0.4
NSTT	Nanjuang	1.55	269	eP	Pb	16 02 22.7	+0.1
NSTT				eS	Sb	16 02 42.5	+0.7
OWD	Renai	1.56	243	eP	Pb	16 02 22.0	-0.9
OWD				eS	Sb	16 02 43.0	+0.6
WUSB	Renai	1.60	245	eP	Pb	16 02 23.3	-0.1
HGSD	Ruisui	1.66	225	eP	Pn	16 02 22.8	+0.7
SSLB	Suanglung	1.82	242	P	Pb	16 02 28.4	+1.2
TPUB	Ta-pu	2.33	235	P	Pb	16 02 34.9	-1.1

IDC 28 16:03:49.2±4.5, 11°.63S×169°.50E, h0km, mb3.7/3, mbtmp3.7/3, MS4.2/1, Error ellipse: s-maj=215.2km s-min=35.9km az=139.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	34.77	252	P	P	16 10 42.2	+0.5
	0.4nm,0.3s,baz=82,slow=8.6,SNR=7.9 0.4nm,0.3s						
ASAR	Alice Springs	35.86	246	P	P	16 10 50.5	-0.6
	1.1nm,0.5s,baz=77,slow=9.0,SNR=30 1.1nm,0.5s						
JOW	Kunigami	55.35	314	LR	LR	16 37 17.7	
	comp=Z,180nm,18.6s,baz=256,slow=36						
ILAR	Eielson Array	82.93	17	P	P	16 16 15.8	+0.1
	0.2nm,0.8s,baz=232,slow=4.4,SNR=1.3 0.2nm,0.8s						

IDC 28 16:23:12.0±2.8, 12°.25S×170°.07E, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=128.7km s-min=30.3km az=136.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	32.67	229	P	P	16 29 45.5	-0.5
	1.4nm,0.8s,baz=61,slow=19,SNR=2.3 1.4nm,0.8s						
WRA	Warramunga Arr	35.11	253	P	P	16 30 07.7	+0.2
	1.1nm,0.3s,baz=84,slow=8.6,SNR=18 1.1nm,0.3s						
ASAR	Alice Springs	36.12	247	P	P	16 30 16.1	-0.1
	1.7nm,0.5s,baz=73,slow=9.8,SNR=52 1.7nm,0.5s						
ILAR	Eielson Array	83.35	17	P	P	16 35 40.6	0.0
	0.3nm,0.5s,baz=234,slow=5.0,SNR=6.7 0.3nm,0.5s						

IDC 28 16:29:37.3±2.4, 1°.18N×126°.01E, h0km, mb3.4/4, mbtmp3.5/4, Error ellipse: s-maj=280.8km s-min=25.6km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.52	159	P	P	16 34 39.6	+0.7
	0.5nm,0.3s,baz=335,slow=9.6,SNR=11 0.5nm,0.3s						
ASAR	Alice Springs	25.86	163	P	P	16 35 11.0	+0.1
	0.2nm,0.6s,baz=345,slow=8.6,SNR=5.4 0.2nm,0.6s						
STKA	Stephens Creek	36.04	157	P	P	16 36 39.2	-1.4
	1.1nm,0.6s,baz=345,slow=8.8,SNR=4.4 1.1nm,0.6s						
MKAR	Makanchi Array	59.25	326	P	P	16 39 41.2	+0.5
	0.2nm,0.3s,baz=110,slow=7.3,SNR=4.1 0.2nm,0.3s						

IDC 28 16:30:54.4±1.5, 0°.05S×136°.00E, h0km, mb3.7/3, mbtmp3.6/5, ML3.6/1, Error ellipse: s-maj=44.4km s-min=23.9km az=74.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	5.30	118	Pn	Pn	16 32 15.7	+0.7
	13nm,0.9s						
JAY				Sn	Sn	16 33 14.7	-2.1
WRA	Warramunga Arr	19.84	185	P	P	16 35 25.5	-1.5
	0.2nm,0.3s,baz=3.2,slow=11,SNR=7.3 0.4nm,0.5s						
FITZ	Fitzroy Crossi	20.63	209	P	Pn	16 35 37.5	-0.3
	2.9nm,1.0s,baz=340,slow=16,SNR=1.7 2.9nm,1.0s						
ASAR	Alice Springs	23.57	185	P	P	16 36 06.5	-0.3
	1.5nm,0.8s,baz=8.2,slow=11,SNR=12 1.5nm,0.8s						
MKAR	Makanchi Array	66.04	323	P	P	16 41 43.0	-0.1
	0.8nm,0.5s,baz=105,slow=8.4,SNR=13 0.8nm,0.5s						

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*SOME **28** 16:42:39.2, 39°.85N×77°.17E, h15km*

*KRNET **28** 16:42:41.8±0.1, 39°.94N×77°.01E, mb3.9*

*NNC **28** 16:42:47.4±1.6, 40°.14N×77°.11E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=11.5km s-min=7.4km az=160.0*

ISC 28 16:42:43.0±1.5, 39°.95N±0°.07×77°.06E±0°.04, h10km, n69, σ2ˢ.22/109, 18C-31D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.87	17	⇓iP	Pb	16 43 16.8	-0.6
TARG				⇓iS	Sg	16 43 42.5	-0.6
KDJ	Kajisay	2.18	2	⇑eP	Pb	16 43 21.5	-1.2
KDJ				⇑iS	Sb	16 43 50.2	+0.4
ULHL	Ulahol	2.38	345	P	Pb	16 43 25.7	-0.3
	SNR=49						
ULHL	Ulahol	2.38	345	⇑eP	Pn	16 43 23.9	+1.6
ULHL				⇑iS	Sb	16 43 54.8	-0.7
SALK	Salom-Alik	2.64	292	⇑eP	Pn	16 43 27.1	+1.2
SALK				⇑eS	Sn	16 44 00.2	+2.1
BOOM	Boomskoye usch	2.68	342	⇓eP	Pn	16 43 28.1	+1.8
BOOM				⇓iS	Sb	16 44 01.8	-2.3
PRZ	Przheval'sk	2.73	21	⇓iP	Pb	16 43 29.5	-2.5
PRZ				⇓iS	Sb	16 44 04.1	-1.4
SFK	Sufi-Kurgan	2.73	272	⇑iP	Pn	16 43 28.1	+0.9
SFK				⇑iS	Sn	16 44 02.4	+2.0
ARLS	Aral	2.82	314	⇓eP	Pn	16 43 29.7	+1.4
ARLS				⇓iS	Sn	16 44 04.6	+2.2
UCH	Uchtor	2.98	321	P	Pb	16 43 34.0	-2.5
	SNR=64						
UCH	Uchtor	2.98	321	⇓eP	Pn	16 43 32.3	+1.5
UCH				⇓iS	Sn	16 44 09.2	+2.4
TNSS	Tian-Shan	3.09	358	Pg	Pg	16 43 41.1	-1.1
	4.9nm,0.2s						
TNSS				Lg	Lg	16 44 21.3	
	88nm,0.4s						
TNSS	Tian-Shan	3.09	358	eP	Pb	16 43 39.2	+1.0
	4.9nm,0.2s						
TNSS				eS	Sg	16 44 22.0	-0.2
	88nm,0.4s						
KBK	Karagaybulak	3.14	330	P	Pb	16 43 36.4	-2.6
	SNR=31						
KBK	Karagaybulak	3.14	330	⇓eP	Pn	16 43 34.5	+1.8
KBK				⇓iS	Sn	16 44 12.7	+2.4
TKM2	Tokmak 2	3.17	340	P	Pb	16 43 36.7	-2.8
	SNR=42						
TKM2	Tokmak 2	3.17	340	⇓iP	Pn	16 43 35.0	+1.9
TKM2				⇓iS	Sn	16 44 13.8	+2.7
KST	Kastek	3.20	345	Pg	Pg	16 43 43.1	-1.2
	21nm,0.4s						
KST				Lg	Lg	16 44 25.4	
	111nm,0.3s						
KST	Kastek	3.20	345	eP	Pb	16 43 41.7	+1.7
	21nm,0.4s						
KST				eS	Sg	16 44 26.4	+0.6
	111nm,0.3s						
MDOK	Medeo	3.21	360	Pg	Pb	16 43 41.8	+1.6
	13nm,0.2s						
MDOK				Lg	Lg	16 44 22.9	
	249nm,0.5s						
MTBS	Maitube	3.21	352	Pg	Pb	16 43 42.0	+1.8
	11nm,0.4s						
MTBS				Lg	Lg	16 44 23.5	
	116nm,0.3s						
MTBS	Maitube	3.21	352	eP	Pb	16 43 41.5	+1.3
	11nm,0.4s						
MTBS				eS	Sg	16 44 26.0	-0.3
	116nm,0.3s						
AAA	Alma-Ata	3.26	358	Pg	Pg	16 43 43.9	-1.5
	45nm,0.1s						
AAA				Lg	Lg	16 44 26.6	
	30nm,0.5s						
AAA	Alma-Ata	3.26	358	eP	Pb	16 43 42.7	+1.7
	45nm,0.1s						
AAA				eS	Sg	16 44 28.4	+0.7
	30nm,0.5s						
KNDC	Almaty	3.27	359	⇓Pn	Pg	16 43 44.3	-1.3
	20nm,0.3s						
KNDC				⇑Sn	Sg	16 44 28.3	+0.3
	279nm,0.6s						
SATY	Saty	3.27	18	Pg	Pb	16 43 42.8	+1.7
	56nm,0.5s						
SATY				Lg	Lg	16 44 24.9	
	198nm,0.4s						
KOTS	Kotyrbulak	3.28	1	Pg	Pb	16 43 43.3	+1.9
	21nm,0.2s						
KOTS				Lg	Lg	16 44 25.6	
	895nm,0.4s						
KOTS	Kotyrbulak	3.28	1	eP	Pb	16 43 43.2	+1.7
	21nm,0.2s						
KOTS				eS	Sg	16 44 28.6	+0.2
	895nm,0.4s						
AAK	Ala-Archa	3.31	325	P	Pb	16 43 38.7	-3.2
	SNR=39						
AAK	Ala-Archa	3.31	325	⇑iP	Pn	16 43 36.8	+1.8
AAK				⇑iS	Sn	16 44 16.8	+2.3
AAK	Ala-Archa	3.31	325	⇓Pn	Pb	16 43 38.7	-3.2
	4.8nm,0.4s						
AAK				Sn	Sg	16 44 27.9	-1.4
	26nm,0.6s						
ARSB	Arslanbob	3.39	295	⇓eP	Pn	16 43 37.8	+1.6
ARSB				⇓eS	Sn	16 44 18.2	+1.6
FRU1	Bishkek	3.39	328	⇓eP	Pn	16 43 38.0	+1.9
FRU1				⇓iS	Sn	16 44 19.3	+2.9
DGS	Degeres	3.43	344	Pg	Pb	16 43 45.9	+2.0
	32nm,0.5s						
DGS				Lg	Lg	16 44 30.2	
	98nm,0.4s						
CHMS	Chumysh	3.51	331	P	Pn	16 43 41.2	+3.6
	SNR=32						
CHMS	Chumysh	3.51	331	⇓iP	Pn	16 43 39.3	+1.7
CHMS				⇓iS	Sn	16 44 21.3	+2.1
UZB	Uzynbulak	3.52	24	Pg	Pg	16 43 48.2	-2.2
	29nm,0.3s						
UZB				Lg	Lg	16 44 33.8	
	70nm,0.5s						
UZB	Uzynbulak	3.52	24	eP	Pb	16 43 46.2	+0.7
	29nm,0.3s						
UZB				eS	Sg	16 44 34.2	-1.8
	70nm,0.5s						
KURS	Kuram	3.63	13	Pg	Pb	16 43 48.6	+1.2
	28nm,0.5s						
KURS				Lg	Lg	16 44 34.8	
	83nm,0.5s						
EKS2	Erkin-Say	3.67	319	P	Pn	16 43 43.7	+3.8
	SNR=34						
EKS2	Erkin-Say	3.67	319	⇓iP	Pn	16 43 41.5	+1.6
EKS2				⇓iS	Sn	16 44 25.3	+2.0
SHLS	Shalkode	3.68	29	Pg	Pg	16 43 53.6	+0.1
	80nm,0.4s						
SHLS				Lg	Lg	16 44 43.0	
	59nm,0.4s						
SHLS	Shalkode	3.68	29	eP	Pg	16 43 51.9	-1.6
	80nm,0.4s						
SHLS				eS	Sg	16 44 43.5	+2.4
	59nm,0.4s						
KPKS	Kokpek	3.72	19	Pg	Pb	16 43 49.8	+1.0
	0.3nm,0.1s						
KPKS				Lg	Lg	16 44 36.6	
	76nm,0.7s						
KPKS	Kokpek	3.72	19	eP	Pb	16 43 50.1	+1.3
	0.3nm,0.1s						
KPKS				eS	Sg	16 44 40.6	-1.8
	76nm,0.7s						
KTBS	Karatobe	3.77	356	Pg	Pb	16 43 52.3	+2.6
	8.9nm,0.4s						
KTBS				Lg	Lg	16 44 40.9	
	0.3nm,0.3s						
USP	Ospenovka	3.83	331	P	Pn	16 43 45.7	+3.7
	SNR=14						
USP	Ospenovka	3.83	331	⇑iP	Pn	16 43 43.7	+1.6
USP				⇑iS	Sn	16 44 29.1	+1.9
PDGK	Podgornoye	3.84	28	Pn	Pn	16 43 43.7	+1.5
	3.6nm,0.4s						
PDGK				Pg	Pb	16 43 52.2	+1.3
	34nm,0.4s						
PDGK				Sn	Sb	16 44 32.4	-5.0
	62nm,0.7s						
PDGK				Lg	Lg	16 44 44.2	
	68nm,0.7s						
KRBS	Karabastau	3.88	345	Pg	Pg	16 43 54.8	-2.6
	14nm,0.5s						
KRBS				Lg	Lg	16 44 45.1	
	120nm,0.5s						
CHKK	Chushkaly	3.90	359	Pg	Pg	16 43 55.9	-1.9
	14nm,0.2s						
CHKK				Lg	Lg	16 44 46.7	
	137nm,0.6s						
CHKK	Chushkaly	3.90	359	eP	Pb	16 43 53.8	+1.9
	14nm,0.2s						
CHKK				eS	Sg	16 44 47.3	-1.0
	137nm,0.6s						
SGDS	Sogindy	3.94	333	Pg	Pg	16 43 56.6	-2.0
	4.6nm,0.1s						
SGDS				Lg	Lg	16 44 47.9	
	44nm,0.3s						
KUU	Kurty	3.98	352	Pg	Pg	16 43 57.1	-2.1
	3.5nm,0.0s						
KUU				Lg	Lg	16 44 49.0	
	69nm,0.2s						
KUU	Kurty	3.98	352	eP	Pb	16 43 55.2	+2.0
	3.5nm,0.0s						
KUU				eS	Sg	16 44 49.3	-1.4
	69nm,0.2s						
MRKS	Merke	4.02	315	Pg	Pg	16 43 57.2	-2.8
	21nm,0.3s						
MRKS				Lg	Lg	16 44 49.5	
	44nm,0.3s						
MRKS	Merke	4.02	315	eP	Pb	16 43 55.5	+1.6
	21nm,0.3s						
MRKS				eS	Sg	16 44 50.3	-1.7
	44nm,0.3s						
MNAS	Manas	4.27	308	⇓eP	Pn	16 43 49.8	+1.6
MNAS				⇓iS	Sn	16 44 39.6	+1.4
BLB	Baldybastay	4.28	14	Pg	Pg	16 44 01.9	-3.0

	16nm,0.1s						
BLB				Lg	Lg	16 44 57.1	
	259nm,0.5s						
ARK	Arkit	4.28	297	⇑iP	Pn	16 43 49.9	+1.5
ARK				⇑iS	Sn	16 44 39.8	+1.3
ARXS	Arharly	4.30	7	Pg	Pg	16 44 02.7	-2.7
	7.8nm,0.2s						
ARXS				Lg	Lg	16 44 58.3	
	100nm,0.4s						
ARXS	Arharly	4.30	7	eP	Pb	16 44 00.7	+1.9
	7.8nm,0.2s						
ARXS				eS	Sg	16 44 58.9	-2.1
	100nm,0.4s						
KNOS	Konyrlen	4.68	19	Pg	Pg	16 44 09.1	-3.5
	18nm,0.3s						
KNOS				Lg	Lg	16 45 10.0	
	39nm,0.6s						
BTLS	Baital	5.55	337	Pg	Pg	16 44 24.7	-4.6
BTLS				Lg	Lg	16 45 36.3	
BTLS	Baital	5.55	337	eP	Pb	16 44 22.4	+2.4
	4.0nm,0.7s						
BTLS				eS	Sg	16 45 36.7	-4.6
	12nm,0.5s						
IUG	Iuzhnay	5.75	295	Pg	Pg	16 44 32.4	-0.7
	10nm,0.4s						
IUG				Lg	Lg	16 45 49.4	
	41nm,0.4s						
KK31	Karatay Array	5.84	305	⇓Pn	Pn	16 44 14.1	+4.5
	0.4nm,0.5s,baz=124,slow=12,SNR=7.3						
KK31				⇓Pg	Pb	16 44 27.5	+2.6
	3.0nm,0.4s,baz=125,slow=16,SNR=14						
KK31				⇑Sn	Sn	16 45 23.4	+6.8
	0.6nm,0.3s						
KK31				⇑Lg	Lg	16 45 49.6	
	3.0nm,0.4s,baz=130,slow=30,SNR=4.9						
BRLS	Borolday	6.24	302	Pg	Pg	16 44 40.0	-2.4
	4.7nm,0.6s						
BRLS				Lg	Lg	16 46 03.2	
	6.4nm,0.6s						
MK31	Makanchi Array	7.83	27	⇑Pn	Pn	16 44 36.7	-0.3
	0.4nm,0.5s,baz=201,slow=15,SNR=8.0						
MK31				⇓Pg	Pg	16 45 09.4	-3.5
	0.5nm,0.4s,baz=199,slow=12,SNR=4.0						
MK31				⇓Sn	Sn	16 46 07.7	+2.1
	1.0nm,0.5s						
MK31				⇓Lg	Lg	16 46 48.4	
	1.8nm,0.6s						

**IDC 28 16:42:59.1±2.9,30°.81S×177°.39W,h0km,mb3.4/2,
mbtmp3.6/3,ML3.1/1,Error ellipse: s-maj=67.4km
s-min=27.3km az=107.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.62	343	Pn	Pn	16 43 28.9	-0.1
	184nm,0.3s,baz=279,slow=19,SNR=2.8						
RAO				Sn	Sn	16 43 41.1	-9.4
	385nm,0.3s,baz=205,slow=23,SNR=6.9						
URZ	Urewera	8.71	210	Pn	Pn	16 45 06.9	+0.6
	0.2nm,0.3s,baz=56,slow=14,SNR=1.9						
URZ				Sn	Sn	16 46 44.7	-0.5
	0.3nm,0.3s,baz=5.4,slow=11,SNR=1.9						
	6.6nm,0.8s						
ASAR	Alice Springs	43.62	267	P	P	16 51 05.3	-0.2
	0.2nm,0.5s,baz=107,slow=7.4,SNR=12						
	0.2nm,0.5s						
WRA	Warramunga Arr	44.64	272	P	P	16 51 13.8	+0.1
	0.3nm,0.3s,baz=111,slow=8.3,SNR=2.6						
	0.3nm,0.3s						
FINES	FINESS Array B	145.71	340	PKPbc	PKPdf	17 02 38.2	-0.6
	0.6nm,0.3s,baz=46,slow=4.0,SNR=14						

**DJA 28 16:46:47.0±0.2,2°S±2°×12°0E±°,h10km,M3.7/13,mB5.7/1,
mb4.3/3,MLv3.3/13,Mw(mB)5.2/1,Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTSI	Tana Toraja	1.14	206	P	Pb	16 47 06.8	-2.1
TTSI				S	Sb	16 47 22.8	-1.0
PCI	Palu	1.20	336	P	Pb	16 47 08.7	-1.1
MMSI	Mamuju	1.56	244	P	Pb	16 47 15.9	-0.1
APSI	Ampana	1.72	51	P	Pn	16 47 15.5	-1.5
SPSI	Sidrap Palu	2.02	196	P	Pn	16 47 22.0	+0.9
SPSI				S	Sb	16 47 48.2	-0.8
PMSI	Majene	2.04	223	P	Pb	16 47 23.1	-1.1
MPSI	Mapaga	2.37	350	P	Pn	16 47 25.7	-0.3
KKSI	Kolaka, Sulawe	2.53	148	P	Pn	16 47 30.2	+2.1
LUWI	Luwuk	2.63	69	P	Pn	16 47 30.1	+0.5
LUWI				S	Sn	16 48 02.2	+0.6
MRSI	Marisa	2.95	33	P	Pn	16 47 34.3	+0.3
BKSI	Bulukumba	3.30	183	P	Pn	16 47 39.0	+0.3
GTOI	Gorontalo	3.76	46	P	Pn	16 47 45.1	0.0
MTKI	Muara Teweh, K	5.53	281	P	Pn	16 48 09.1	-0.3
	7μm29nm,0.4s						
EDFI	Ende, Flores	6.83	169	P	Pn	16 48 27.1	-0.4
	0.0nm8.8nm,1.9s						
WSI	Waingapu	7.61	180	P	Pn	16 48 34.6	-3.4

*SOME **28** 17:07:18.7,39°.87N×77°.07E,h10km*
*KRNET **28** 17:07:22.0±0.1,39°.73N×77°.32E,mb3.9*
*NNC **28** 17:07:23.1±1.6,40°.02N×77°.12E,h0km,mb4.0,mpv3.7,
Error ellipse: s-maj=11.3km s-min=8.6km az=162.0*
**ISC 28 17:07:23.0±1.5,39°.97N±0°.07×77°.17E±0°.04,h10km,n66,
σ1s.75/99,29C-13D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	Taragay, Kyrgy	1.82	15	⇑eP	Pb	17 07 55.4	-1.4
TARG				⇑eS	Sb	17 08 19.8	0.0
KDJ	Kajisay	2.16	0	⇑eP	Pb	17 08 00.4	-2.0
KDJ				⇑eS	Sb	17 08 28.5	-0.8
ULHL	Ulahol	2.38	343	P	Pb	17 08 05.2	-1.0
	SNR=22						
ULHL	Ulahol	2.38	343	⇑eP	Pb	17 08 03.9	-2.3
ULHL				⇑eS	Sb	17 08 34.6	-1.1
PRZ	Przheval'sk	2.68	20	⇑eP	Pn	17 08 07.1	+0.7
PRZ				⇑eS	Sn	17 08 39.9	+0.9
BOOM	Boomskoye usch	2.69	340	⇑eP	Pn	17 08 08.1	+1.6
BOOM				⇑eS	Sb	17 08 41.9	-2.5
SALK	Salom-Alik	2.72	291	⇑eP	Pn	17 08 07.4	+0.5
SALK				⇑eS	Sn	17 08 41.4	+1.4
SFK	Sufi-Kurgan	2.82	272	⇑eP	Pn	17 08 08.2	-0.2
SFK				⇑eS	Sn	17 08 42.1	-0.5
UCH	Uchtor	3.02	319	P	Pn	17 08 12.7	+1.3
	SNR=64						
TNSS	Tian-Shan	3.07	357	Pg	Pb	17 08 18.2	+0.2
	3.7nm,0.3s						
TNSS				Lg	Lg	17 09 01.0	
	53nm,0.5s						
TNSS	Tian-Shan	3.07	357	eP	Pb	17 08 18.2	+0.2
	3.7nm,0.3s						
TNSS				eS	Sg	17 09 01.0	-0.8
	53nm,0.5s						
KBK	Karagaybulak	3.17	329	P	Pn	17 08 15.1	+2.0
	SNR=24						
KBK	Karagaybulak	3.17	329	⇑eP	Pn	17 08 14.8	+1.7
KBK				⇑eS	Sn	17 08 53.5	+2.5
TKM2	Tokmak 2	3.18	339	P	Pn	17 08 15.6	+2.3
	SNR=26						
TKM2	Tokmak 2	3.18	339	⇓eP	Pn	17 08 15.1	+1.8
TKM2				⇓eS	Sn	17 08 53.8	+2.4
MDOK	Medeo	3.19	358	Pg	Pb	17 08 20.4	+0.4
	8.1nm,0.5s						
MDOK				Lg	Lg	17 09 04.6	
	192nm,0.6s						
KST	Kastek	3.21	344	Pg	Pb	17 08 19.2	-0.9
	14nm,0.7s						
KST				Lg	Lg	17 09 02.5	
	63nm,0.3s						
KST	Kastek	3.21	344	eP	Pb	17 08 19.2	-0.9
	14nm,0.7s						
KST				eS	Sg	17 09 02.5	-3.5
	63nm,0.3s						
MTBS	Maitube	3.21	350	Pg	Pb	17 08 20.6	+0.4
	6.6nm,0.3s						
MTBS				Lg	Lg	17 09 04.9	
	68nm,0.4s						
MTBS	Maitube	3.21	350	eP	Pb	17 08 20.6	+0.4
	6.6nm,0.3s						
MTBS				eS	Sg	17 09 04.9	-1.2
	68nm,0.4s						
SATY	Saty	3.23	16	Pg	Pb	17 08 21.1	+0.6
	44nm,0.5s						
SATY				Lg	Lg	17 09 05.7	
	164nm,0.5s						
KNDC	Almaty	3.25	357	⇑Pn	Pb	17 08 21.5	+0.6
	23nm,0.5s						
KNDC				⇑Lg	Lg	17 09 07.1	
	199nm,0.6s						
KOTS	Kotyrbulak	3.26	359	Pg	Pb	17 08 20.9	-0.3
	13nm,0.4s						
KOTS				Lg	Lg	17 09 05.7	
	768nm,0.5s						
KOTS	Kotyrbulak	3.26	359	eP	Pb	17 08 20.9	-0.3
	13nm,0.4s						
KOTS				eS	Sg	17 09 05.7	-2.2
	768nm,0.5s						
AAK	Ala-Archa	3.34	324	P	Pn	17 08 17.4	+1.9
	SNR=27						
AAK	Ala-Archa	3.34	324	⇓eP	Pn	17 08 17.3	+1.8
AAK				⇓eS	Sn	17 08 57.8	+2.4
AAK	Ala-Archa	3.34	324	Pn	Pn	17 08 17.2	+1.6
	6.8nm,0.6s						
AAK				Lg	Lg	17 09 05.8	
	36nm,0.7s						
OHH	Osh	3.40	281	⇑eP	Pn	17 08 16.6	+0.3
OHH				⇑eS	Sn	17 08 56.6	-0.2
FRU1	Bishkek	3.42	327	⇑eP	Pn	17 08 18.7	+2.1
FRU1				⇑eS	Sn	17 09 00.2	+3.0
DGS	Degeres	3.44	343	Pg	Pb	17 08 24.0	0.0
	26nm,0.6s						
DGS				Lg	Lg	17 09 10.8	
	70nm,0.4s						
ARSB	Arslanbob	3.46	294	⇓eP	Pn	17 08 18.0	+0.8
ARSB				⇓eS	Sn	17 08 58.8	+0.5
UZB	Uzynbulak	3.47	23	Pg	Pb	17 08 24.1	-0.5
	28nm,0.6s						
UZB				Lg	Lg	17 09 11.1	
	52nm,0.7s						
UZB	Uzynbulak	3.47	23	eP	Pb	17 08 24.1	-0.5
	28nm,0.6s						
UZB				eS	Sg	17 09 11.1	-3.2
	52nm,0.7s						
CHMS	Chumysh	3.53	330	P	Pn	17 08 20.1	+2.1
	SNR=21						
CHMS	Chumysh	3.53	330	⇓eP	Pn	17 08 19.9	+1.9
CHMS				⇓eS	Sn	17 09 02.1	+2.2
KURS	Kuram	3.60	12	Pg	Pb	17 08 26.5	-0.3
	18nm,0.6s						
KURS				Lg	Lg	17 09 15.2	
	59nm,0.6s						
SHLS	Shalkode	3.62	28	Pg	Pg	17 08 30.6	-1.8
	67nm,0.4s						
SHLS				Lg	Lg	17 09 21.9	
	43nm,0.4s						
SHLS	Shalkode	3.62	28	eP	Pg	17 08 30.6	-1.8
	67nm,0.4s						
SHLS				eS	Sg	17 09 21.9	+2.6
	43nm,0.4s						
KPKS	Kokpek	3.67	17	Pg	Pb	17 08 28.7	+0.6
	0.6nm,0.3s						
KPKS				Lg	Lg	17 09 19.1	
	46nm,0.5s						
KPKS	Kokpek	3.67	17	eP	Pb	17 08 28.7	+0.6
	0.6nm,0.3s						
KPKS				eS	Sg	17 09 19.1	-1.9
	46nm,0.5s						
EKS2	Erkin-Say	3.71	318	P	Pn	17 08 22.8	+2.2
	SNR=57						
EKS2	Erkin-Say	3.71	318	⇑eP	Pn	17 08 22.3	+1.7
EKS2				⇑eS	Sn	17 09 06.3	+1.9
KTBS	Karatobe	3.76	355	Pg	Pb	17 08 30.3	+0.7
	4.7nm,0.3s						
KTBS				Lg	Lg	17 09 21.6	
	0.2nm,0.1s						
PDGK	Podgornoye	3.78	27	Pn	Pn	17 08 21.9	+0.4
	3.2nm,0.5s						
PDGK				Pg	Pb	17 08 30.8	+0.9
	24nm,0.5s						
PDGK				Sn	Sn	17 09 08.2	+2.1
	49nm,0.7s						
PDGK				Lg	Lg	17 09 22.8	
	47nm,0.7s						
USP	Ospenovka	3.86	330	P	Pn	17 08 24.9	+2.4
	SNR=16						
USP	Ospenovka	3.86	330	⇓eP	Pn	17 08 24.3	+1.8
USP				⇓eS	Sn	17 09 09.8	+1.9
CHKK	Chushkaly	3.89	358	Pg	Pb	17 08 32.5	+0.8
	10nm,0.4s						
CHKK				Lg	Lg	17 09 25.5	
	95nm,0.5s						
CHKK	Chushkaly	3.89	358	eP	Pb	17 08 32.5	+0.8
	10nm,0.4s						
CHKK				eS	Sg	17 09 25.5	-2.3
	95nm,0.5s						
KRBS	Karabastau	3.89	344	Pg	Pb	17 08 31.9	+0.1
	18nm,0.5s						
KRBS				Lg	Lg	17 09 24.6	
	88nm,0.5s						
SGDS	Sogindy	3.97	332	Pg	Pb	17 08 33.4	+0.3
	2.4nm,0.2s						
SGDS				Lg	Lg	17 09 26.7	
	31nm,0.8s						
KUU	Kurty	3.97	351	Pg	Pb	17 08 34.2	+1.1
	2.8nm,0.1s						
KUU				Lg	Lg	17 09 28.3	
	48nm,0.5s						
KUU	Kurty	3.97	351	eP	Pb	17 08 34.2	+1.1
	2.8nm,0.1s						
KUU				eS	Sg	17 09 28.3	-2.3
	48nm,0.5s						
MRKS	Merke	4.07	314	Pg	Pb	17 08 33.4	-1.4
	14nm,0.6s						
MRKS				Lg	Lg	17 09 27.4	
	22nm,0.5s						
MRKS	Merke	4.07	314	eP	Pb	17 08 33.4	-1.4
	14nm,0.6s						
MRKS				eS	Sb	17 09 27.4	+3.4
	22nm,0.5s						
BLB	Baldybastay	4.24	13	Pg	Pb	17 08 38.8	+1.0
	21nm,0.5s						
BLB				Lg	Lg	17 09 35.8	
	181nm,0.5s						
ARXS	Arharly	4.27	6	Pg	Pb	17 08 40.2	+1.9
	4.5nm,0.4s						
ARXS				Lg	Lg	17 09 37.9	
	74nm,0.5s						
ARXS	Arharly	4.27	6	eP	Pb	17 08 40.2	+1.9
	4.5nm,0.4s						
ARXS				eS	Sg	17 09 37.9	-2.3
	74nm,0.5s						
MNAS	Manas	4.33	307	⇑eP	Pn	17 08 30.5	+1.5
MNAS				⇑eS	Sn	17 09 21.2	+1.6
KNOS	Konyrlen	4.63	18	Pg	Pb	17 08 46.5	+2.0
	8.4nm,0.6s						
KNOS				Lg	Lg	17 09 49.0	
	27nm,0.5s						
TDK	Taldyqorghan	5.11	10	Pg	Pb	17 08 54.9	+2.3
	7.6nm,0.1s						
TDK				Lg	Lg	17 10 03.3	
	125nm,0.5s						
TDK	Taldyqorghan	5.11	10	eP	Pb	17 08 54.9	+2.3
	7.6nm,0.1s						
TDK				eS	Sg	17 10 03.3	-3.9
	125nm,0.5s						
BTLS	Baital	5.57	337	Pg	Pb	17 09 03.7	+3.3
	3.5nm,0.5s						
BTLS				Lg	Lg	17 10 18.7	
	9.7nm,0.5s						
BTLS	Baital	5.57	337	eP	Pb	17 09 03.7	+3.3
	3.5nm,0.5s						
BTLS				eS	Sg	17 10 18.7	-3.2
	9.7nm,0.5s						
KK31	Karatay Array	5.90	304	Pn	Pn	17 08 52.9	+2.4
	0.4nm,0.6s,baz=116,slow=12,SNR=7.2						
KK31				⇓Pg	Pb	17 09 06.7	+0.8
	5.8nm,0.7s,baz=130,slow=15,SNR=20						
KK31				⇑Lg	Lg	17 10 26.8	
	3.1nm,0.5s,baz=120,slow=28,SNR=5.2						
MK31	Makanchi Array	7.77	27	⇓Pg	Pg	17 09 45.2	-6.6
	1.6nm,0.7s,baz=203,slow=12,SNR=3.6						
MK31				⇑Sn	Sn	17 10 44.0	-0.3
	1.7nm,0.7s						
MK31				⇑Lg	Lg	17 11 23.3	
	0.5nm,0.5s						
AB31	Akbulak array	15.36	313	⇓P	Pn	17 10 59.6	-0.2
	0.2nm,0.5s,baz=120,slow=11,SNR=4.0						

*KRNET **28** 17:10:15.7±0.1,39°.60N×77°.52E,mb3.1*
*SOME **28** 17:10:16.5,39°.85N×77°.08E,h10km*
*NNC **28** 17:10:17.2±1.5,39°.86N×77°.01E,h0km,mb3.7,mpv3.3,
Error ellipse: s-maj=9.9km s-min=9.5km az=116.0*
**ISC 28 17:10:14.0±2.1,39°.82N±0°.08×77°.13E±0°.05,h1km±17km,
n39,σ1s.01/60,17C-11D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	Taragay, Kyrgy	1.97	15	⇑iP	Pg	17 10 52.5	+0.7
TARG				⇑iS	Sg	17 11 19.4	+2.0
KDJ	Kajisay	2.31	1	⇑iP	Pg	17 10 58.0	-0.2
KDJ				⇑iS	Sg	17 11 28.9	+0.8
ULHL	Ulahol	2.51	345	⇑iP	Pg	17 11 01.9	-0.3
ULHL				⇑iS	Sg	17 11 35.7	+1.0
SALK	Salom-Alik	2.74	294	⇑eP	Pg	17 11 06.1	-0.5
SALK				⇑eS	Sg	17 11 42.6	+0.5
SFK	Sufi-Kurgan	2.79	275	⇓iP	Pb	17 11 06.2	+1.3
SFK				⇓iS	Sg	17 11 43.4	-0.4
BOOM	Boomskoye usch	2.81	342	⇑iP	Pb	17 11 06.3	+1.2
BOOM				⇑iS	Sg	17 11 43.1	-1.3
PRZ	Przheval'sk	2.83	19	⇑eP	Pb	17 11 03.9	-1.5
PRZ				⇑eS	Sb	17 11 39.3	-1.2
ARLS	Aral	2.94	315	⇑iP	Pb	17 11 08.9	+1.5
ARLS				⇑iS	Sg	17 11 47.7	-0.9
UCH	Uchtor	3.11	321	⇑iP	Pb	17 11 11.2	+0.8
UCH				⇑iS	Sg	17 11 52.0	-2.0
TNSS	Tian-Shan	3.21	358	Pg	Pg	17 11 15.8	+0.1
	1.9nm,0.2s						
TNSS				Lg	Lg	17 11 58.4	
	9.8nm,0.3s						
TNSS	Tian-Shan	3.21	358	eP	Pg	17 11 15.8	+0.1
	1.9nm,0.2s						
TNSS				eS	Sg	17 11 58.4	+1.1
	9.8nm,0.3s						
KBK	Karagaybulak	3.27	331	⇓eP	Pb	17 11 13.1	+0.1
KBK				⇓iS	Sb	17 11 55.0	+1.6
TKM2	Tokmak 2	3.30	340	⇓iP	Pb	17 11 13.2	-0.3
TKM2				⇓iS	Sb	17 11 55.0	+0.7
KST	Kastek	3.33	345	Pg	Pg	17 11 18.1	+0.2
	2.9nm,0.3s						
KST				Lg	Lg	17 12 02.5	
	13nm,0.2s						
KST	Kastek	3.33	345	eP	Pg	17 11 18.1	+0.2
	2.9nm,0.3s						
KST				eS	Sg	17 12 02.5	+1.3
	13nm,0.2s						
MDOK	Medeo	3.34	359	Pg	Pg	17 11 17.8	-0.2
	3.0nm,0.5s						
MDOK				Lg	Lg	17 12 01.9	
	34nm,0.6s						
MTBS	Maitube	3.34	351	Pg	Pg	17 11 18.2	0.0
	1.0nm,0.1s						
MTBS				Lg	Lg	17 12 02.7	
	14nm,0.3s						
MTBS	Maitube	3.34	351	eP	Pg	17 11 18.2	0.0
	1.0nm,0.1s						
MTBS				eS	Sg	17 12 02.7	+1.2
	14nm,0.3s						
SATY	Saty	3.37	16	Pg	Pg	17 11 18.1	-0.5
	9.9nm,0.4s						
SATY				Lg	Lg	17 12 02.5	
	26nm,0.4s						
KNDC	Almaty	3.39	358	⇑Pg	Pb	17 11 16.4	+1.4
	13nm,0.4s						
KNDC				⇓Lg	Lg	17 12 04.8	
	31nm,0.6s						
KOTS	Kotyrbulak	3.41	360	Pg	Pg	17 11 19.6	+0.2
	5.7nm,0.2s						
KOTS				Lg	Lg	17 12 04.9	
	98nm,0.4s						
KOTS	Kotyrbulak	3.41	360	eP	Pg	17 11 19.6	+0.2
	5.7nm,0.2s						
KOTS				eS	Sg	17 12 04.9	+1.4
	98nm,0.4s						
AAK	Ala-Archa	3.44	326	Pg	Pb	17 11 15.0	-0.8
	1.8nm,0.6s						
AAK				Lg	Lg	17 12 04.9	
	5.9nm,0.7s						
ARSB	Arslanbob	3.50	297	⇓eP	Pb	17 11 16.4	-0.4
ARSB				⇓eS	Sb	17 12 00.7	+0.9
DGS	Degeres	3.56	344	Pg	Pg	17 11 21.9	-0.5
	3.5nm,0.4s						
DGS				Lg	Lg	17 12 08.8	
	14nm,0.3s						
UZB	Uzynbulak	3.61	23	Pg	Pg	17 11 23.2	-0.1
	5.4nm,0.3s						
UZB				Lg	Lg	17 12 11.2	
	7.6nm,0.3s						
UZB	Uzynbulak	3.61	23	eP	Pg	17 11 23.2	-0.1
	5.4nm,0.3s						
UZB				eS	Sg	17 12 11.2	+1.1
	7.6nm,0.3s						
KURS	Kuram	3.74	12	Pg	Pg	17 11 25.0	-0.8
	5.8nm,0.6s						
KURS				Lg	Lg	17 12 14.3	
	8.7nm,0.6s						
KPKS	Kokpek	3.82	17	Pg	Pg	17 11 26.6	-0.6
	0.2nm,0.1s						
KPKS				Lg	Lg	17 12 16.7	
	12nm,0.4s						
KPKS	Kokpek	3.82	17	eP	Pg	17 11 26.6	-0.6
	0.2nm,0.1s						
KPKS				eS	Sg	17 12 16.7	-0.1
	12nm,0.4s						
KTBS	Karatobe	3.90	355	Pg	Pg	17 11 27.3	-1.4
KTBS				Lg	Lg	17 12 18.3	
USP	Ospenovka	3.97	331	⇓iP	Pb	17 11 22.7	-2.0
USP				⇓iS	Sb	17 12 11.4	-1.8
KRBS	Karabastau	4.02	345	Pg	Pg	17 11 29.9	-1.1
	4.7nm,0.5s						
KRBS				Lg	Lg	17 12 23.0	
	2.9nm,0.5s						
CHKK	Chushkaly	4.03	359	Pg	Pg	17 11 30.6	-0.6
	1.8nm,0.1s						
CHKK				Lg	Lg	17 12 24.0	
	30nm,0.3s						
CHKK	Chushkaly	4.03	359	eP	Pg	17 11 30.6	-0.6
	1.8nm,0.1s						
CHKK				eS	Sg	17 12 24.0	+0.5
	30nm,0.3s						
BLB	Baldybastay	4.39	13	Pg	Pg	17 11 36.6	-1.5
	3.6nm,0.2s						
BLB				Lg	Lg	17 12 34.1	
	18nm,0.4s						
ARXS	Arharly	4.42	7	Pg	Pg	17 11 37.5	-1.2
	1.3nm,0.3s						
ARXS				Lg	Lg	17 12 35.7	
	12nm,0.3s						
ARXS	Arharly	4.42	7	eP	Pg	17 11 37.5	-1.2
	1.3nm,0.3s						
ARXS				eS	Sg	17 12 35.7	-0.2
	12nm,0.3s						
KNOS	Konyrlen	4.78	18	Pg	Pg	17 11 45.0	-0.7
	2.3nm,0.4s						
KNOS				Lg	Lg	17 12 48.7	
	4.5nm,0.5s						

*IDC **28** 17:55:29.0±3.2,28°.19N×140°.19E,h437km±37km,mb3.0/9,
mbtmp3.7/10,Error ellipse: s-maj=73.0km s-min=14.1km
az=77.0*
*JMA **28** 17:55:30.2±0.3,28°N±2°×14°0E±°,h427km,MV3.1/15,W
OFF OGASAWARA*
**ISC 28 17:55:28.8±0.9,28°.29N±0°.09×140°.6E±0°.2,h450km,n16,
σ1s.25/18,mb3.2/9,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	1.81	131	S	S	17 57 14.4	-2.2
JCJ	Chichijima	1.81	131	S	S	17 57 02.9	-14
	46nm,0.4s,baz=289,slow=21,SNR=2.0						
JHH2	Haha-jima-NKT2	2.14	140	S	S	17 57 19.6	-0.3
JYT	Yasato	7.92	357	P	P	17 57 24.7	+1.5
JYT				S	S	17 58 56.2	-1.0
JAG	Ashikaga	8.17	353	P	P	17 57 26.8	+0.8
JAG				S	S	17 58 59.1	-3.0
JHO	Hitachi	8.30	360	P	P	17 57 28.9	+1.6
JHO				S	S	17 59 04.7	+0.1
MJAR	Matsushiro Arr	8.48	347	P	P	17 57 29.6	+0.3
	0.3nm,0.4s,baz=169,slow=11,SNR=4.9						
ZALV	Zalesovo Beam	47.69	319	P	P	18 03 22.4	-0.4
	0.3nm,0.3s,baz=103,slow=7.9,SNR=2.9						
	0.3nm,0.3s						
WRA	Warramunga Arr	48.34	188	P	P	18 03 28.2	+0.1
	0.2nm,0.4s,baz=5.4,slow=7.7,SNR=5.5						
	0.2nm,0.4s						

MKAR	Makanchi Array	48.66	309	P	P	18 03 29.3	-1.0
	0.5nm,0.9s,baz=81,slow=8.9,SNR=3.6						
	0.5nm,0.9s						
ASAR	Alice Springs	52.06	188	P	P	18 03 55.5	-0.1
	0.1nm,0.4s,baz=0.9,slow=5.4,SNR=13						
	0.1nm,0.4s						
BVAR	Borovoye Array	56.24	317	P	P	18 04 24.7	-0.2
	1.3nm,0.4s,baz=96,slow=8.1,SNR=8.2						
	1.3nm,0.4s						
KBZ	Khabaz	76.20	312	P	P	18 06 30.1	+0.4
	1.2nm,0.7s,baz=55,slow=12,SNR=5.2						
	1.2nm,0.7s						
FINES	FINESS Array B	76.27	333	P	P	18 06 30.6	+0.9
	2.9nm,0.9s,baz=66,slow=3.2,SNR=7.8						
	2.9nm,0.9s						
HFS	Hagfors	81.79	336	P	P	18 07 00.1	+0.9
	3.8nm,1.1s,baz=17,slow=7.5,SNR=5.8						
	3.8nm,1.1s						
BRTR	Keskin Array B	84.19	312	P	P	18 07 12.2	+0.2
	0.3nm,0.5s,baz=68,slow=5.1,SNR=1.6						
	0.3nm,0.5s						

IDC 28 18:08:48.5±3.0, 30°.71S×177°.36W, h0^{km}, mb3.4/2, mbtmp3.5/3, ML3.5/1, Error ellipse: s-maj=71.4km s-min=36.6km az=117.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	8.80	210	Pn	Pn	18 10 57.6	+0.7
	0.5nm,0.3s,baz=329,slow=23,SNR=0.8						
URZ				Sn	Sn	18 12 36.0	-0.8
	0.5nm,0.3s,baz=155,slow=20,SNR=1.7						
	3.8nm,0.7s						
ASAR	Alice Springs	43.64	267	P	P	18 16 55.4	+0.3
	0.2nm,0.5s,baz=107,slow=7.5,SNR=7.7						
	0.2nm,0.5s						
WRA	Warramunga Arr	44.66	272	P	P	18 17 02.8	-0.5
	0.2nm,0.3s,baz=111,slow=8.2,SNR=13						
	0.2nm,0.3s						
FINES	FINESS Array B	145.63	340	PKPbc	PKPdf	18 28 27.3	-0.8
	2.6nm,1.0s,baz=49,slow=5.3,SNR=11						

IDC ***28*** *18:25:37.3±0.5, 1°.57N×128°.26E, h0^{km}, mb4.5/22, mbtmp4.5/23, ML4.4/1, MS3.7/38, Error ellipse: s-maj=24.8km s-min=11.0km az=72.0*

MOS ***28*** *18:25:41.0±1.0, 1°.52N×128°.51E, h41^{km}, mb5.0/38, Error ellipse: s-maj=10.8km s-min=5.2km az=115.4*

NEIC ***28*** *18:25:44.4±1.8, 1°.47N±0°.05×128°.56E±0°.04, h55^{km}±6^{km}, mb5.0/117, Error ellipse: s-maj=9.0km s-min=2.5km az=217.0*

DJA ***28*** *18:25:44.8±0.2, 2°N±2°×12°9E±°, h39^{km}±4^{km}, M4.8/55, mb5.0/55, mB5.3/23, MLv5.0/22, Mw(mB)4.7/23, MwMwp4.4/1, Mwp4.8/1*

GCMT ***28*** *18:25:45.4±0.3, 1°.42N±0°.03×128°.43E±0°.02, h53^{km}±3^{km}, MW4.8/59, Moment Tensor Solution. s16,c18; s59,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.00±.19; $M_{\theta\theta}$-1.98±.10; $M_{\phi\phi}$0.98±.14; $M_{r\theta}$0.79±.08; $M_{\theta\phi}$-0.19±.09; $M_{\phi r}$0.78±.10; Best double couple: $M_0$2.02100×10^{16} NP1:ϕ_s303.00000°, δ45.00000°, λ151.00000°. NP2: ϕ_s54.00000°, δ70.00000°, λ49.00000°. Principal axes: T 1.8210, Plg48.0000°, Azm280.0000°; N 0.4030, Plg38.0000°, Azm70.0000°; P -2.2200, Plg15.0000°, Azm173.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 18:25:44.1±0.4, 1°.49N±0°.04×128°.54E±0°.04, h55^{km}±3^{km}, h55^{km}:pP-P, n401, σ1^{s}.31/378, mb4.9/122, MS3.9/38, 14C-13D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.37	239		Pn	18 26 06.7	-0.4
TNTI				Sn	Sn	18 26 24.2	0.0
TNTI	Ternate	1.37	239	P	Pn	18 26 07.2	+0.2
TNTI	Ternate	1.37	239	P	Pn	18 26 07.5	+0.5
TNTI				S	Sn	18 26 24.8	+0.6
SWI	Sorong	3.58	131	P	Pn	18 26 37.7	+0.4
SIJI	Sorong	3.59	131	P	Pn	18 26 37.7	+0.3
SGSI	Sangihe	3.72	306	P	Pn	18 26 39.9	+0.8
SANI	Sanana	4.34	216	P	Pn	18 26 47.0	-0.7
SANI	Sanana	4.34	216	P	Pn	18 26 46.8	-0.9
KRAI	Karang Ratu	4.78	182	P	Pn	18 26 54.7	+1.0
MSAI	Masohi	4.82	175	P	Pn	18 26 56.0	+1.8
NLAI	Namlea	4.91	197	P	Pn	18 26 55.9	+0.4
AAI	Ambon	5.15	184	P	Pn	18 26 59.7	+0.9
	0.7nm2μm178nm,0.9s						
GTOI	Gorontalo	5.59	261	P	Pn	18 27 07.4	+2.6
	1.0nm3μm294nm,0.8s						
FAKI	Fak Fak	5.74	140		Pn	18 27 07.2	+0.4
FAKI				Sn	Sn	18 28 07.1	-4.3
FAKI	Fak Fak	5.74	140	P	Pn	18 27 07.5	+0.7
FAKI	Fak Fak	5.74	140	P	Pn	18 27 06.8	0.0
MWPI	Manokwari, Pap	6.00	114	P	Pn	18 27 12.5	+2.1
	1.1nm211nm,1.1s						
BNDI	Bandanaira	6.12	167	P	Pn	18 27 13.1	+1.0
BNDI	Bandanaira	6.12	167	P	Pn	18 27 13.6	+1.5
	1.7nm389nm,1.2s						
DAV	Davao City (W)	6.28	332	Pn	Pn	18 27 13.5	-0.8
	38nm,0.3s,baz=81,slow=15,SNR=5.4						
DAV				Sn	Sn	18 28 33.0	+8.3
	35nm,0.3s,baz=274,slow=23,SNR=3.8						
DAV	Davao City (W)	6.28	332	Pn	Pn	18 27 15.3	+1.0
DAV	Davao City (W)	6.28	332	P	Pn	18 27 14.7	+0.4
LUWI	Luwuk	6.29	246		Pn	18 27 15.1	+0.7
LUWI				Sn	Sn	18 28 26.2	+1.2
LUWI	Luwuk	6.29	246	P	Pn	18 27 16.8	+2.4
LUWI	Luwuk	6.29	246	P	Pn	18 27 16.2	+1.8
RKPI	Ransiki, Papua	6.38	118	P	Pn	18 27 16.8	+1.2
	1.0nm1μm99nm,1.1s						
MRSI	Marisa	6.68	261	P	Pn	18 27 21.2	+1.5
	0.6nm2μm156nm,0.9s						
KMPI	Kaimana, Papua	7.27	135	P	Pn	18 27 28.6	+0.8
APSI	Ampana	7.29	251	P	Pn	18 27 29.2	+1.1
	3μm226nm,0.8s						
TOLI2	Tolitoli	7.77	267		Pn	18 27 35.0	+0.3
TOLI2	Tolitoli	7.77	267	P	Pn	18 27 35.3	+0.7
I39PW	PALAU INFRASON	8.48	45	I	I	19 20 50.0	
	baz=221,slow=302,SNR=0.3						
MPSI	Mapaga	8.72	263	P	Pn	18 27 49.4	+1.7
	1μm90nm,1.3s						
KKSI	Kolaka, Sulawe	8.89	231	P	Pn	18 27 51.0	+1.0
	43nm,0.4s						
PCI	Palu	9.02	255	P	Pn	18 27 52.9	+1.0
	1μm99nm,1.2s						
SAUI	Saumlaki	9.80	164	Pn	Pn	18 28 02.2	-0.3
SAUI	Saumlaki	9.80	164	P	Pn	18 28 02.9	+0.4
SAUI	Saumlaki	9.80	164	P	Pn	18 28 03.6	+1.1
TTSI	Tana Toraja	9.81	243	P	Pn	18 28 03.2	+0.5
SPSI	Sidrap Palu	10.31	238	P	Pn	18 28 10.5	+1.1
MMSI	Mamuju	10.49	247	P	Pn	18 28 12.4	+0.5
	38nm,0.7s						
SMPI	Sarmi	10.74	109	P	Pn	18 28 18.5	+3.2
BKSI	Bulukumba	10.79	231	P	Pn	18 28 17.9	+1.8
	811nm70nm,0.6s						
PMSI	Majene	10.82	243	P	Pn	18 28 19.2	+2.7
	1μm101nm,1.4s						
KAPI	Kappang	10.90	234		Pn	18 28 17.0	-0.6
KAPI	Kappang	10.90	234	P	Pn	18 28 20.0	+2.4
KAPI	Kappang	10.90	234	P	Pn	18 28 19.3	+1.7
	28nm,0.7s						
KAPI	Kappang	10.90	234	*d i*P	Pn	18 28 19.5	+1.9
BSSI	Bau Bau, Buton	11.05	227	P	Pn	18 28 24.1	+4.5
	85nm,0.7s						
TARAI	Tarakan	11.11	280	P	Pn	18 28 21.2	+0.8
MMRI	Maumere	11.86	212	Pn	Pn	18 28 29.2	-1.4
MMRI	Maumere	11.86	212	P	Pn	18 28 32.2	+1.5
	67nm,1.4s						
BKB	Balikpapan	11.96	257	Pn	Pn	18 28 31.3	-0.7
BKB	Balikpapan	11.96	257	P	Pn	18 28 33.8	+1.8
	70nm,0.6s						
EDFI	Ende, Flores	12.25	214	P	Pn	18 28 35.7	-0.4
	30nm,0.8s						
GENI	Genyem	12.31	109	P	Pn	18 28 37.5	+0.7
BATI	Baumata	12.59	203	LR	LR	18 33 55.2	
	comp=Z,708nm,21.0s,baz=17,slow=40						
BATI	Baumata	12.59	203	P	Pn	18 28 43.5	+2.8
	65nm,0.7s						
JAY	Jayapura	12.79	108	LR	LR	18 33 04.1	
	comp=Z,448nm,18.4s,baz=306,slow=34						
KKM	Kota Kinabalu	13.10	291		Pn	18 28 44.2	-3.5
KKM	Kota Kinabalu	13.10	291	P	Pn	18 28 49.4	+1.7
KKM	Kota Kinabalu	13.10	291	P	Pn	18 28 47.1	-0.6
	68nm,1.3s						
LBFI	Labuhan Bajo,	13.13	221	P	Pn	18 28 51.1	+3.1
	60nm,0.7s						
MTKI	Muara Teweh, K	13.86	260	P	Pn	18 28 57.1	-0.8
	28nm,0.7s						
DRS	Darwin Rock St	14.03	170	P	Pn	18 29 01.2	+1.0
MTN	Manton Dam	14.47	170		Pn	18 29 04.2	-1.8
BBKI	Banjar Baru	14.55	250	P	Pn	18 29 08.0	+0.9
	47nm,0.9s						
TGY	Tagaytay City	14.62	329	LR	LR	18 35 27.3	
	comp=Z,352nm,20.4s,baz=138,slow=41						
PLAI	Plampang	14.84	226	P	P	18 29 13.6	-1.9
PLAI	Plampang	14.84	226	P	Pn	18 29 12.9	+2.1
	41nm,0.8s						
TWSI	Taliwang, Sumb	15.44	229	P	P	18 29 20.9	-1.2
	45nm,0.9s						
KLNI	Mataram	15.84	231	P	P	18 29 27.3	+0.7
	894nm66nm,1.1s						
KHKI	Kahang-Kahang	16.19	233	P	P	18 29 31.7	+1.2
	716nm51nm,1.2s						
SBUM	Sibu	16.34	274		Pn	18 29 28.2	-1.8
SBUM	Sibu	16.34	274	P	P	18 29 32.8	+0.6
SBUM	Sibu	16.34	274	P	P	18 29 31.8	-0.4
KMMI	Kalianget	16.84	240	P	P	18 29 39.0	+1.3
	80nm,1.3s						
KNRA	Kununurra	17.06	179		Pn	18 29 38.0	-1.0
JAGI	Jajag, Banyuwa	17.43	235		Pn	18 29 42.8	-0.8
JAGI	Jajag, Banyuwa	17.43	235	P	P	18 29 46.7	+2.5
JAGI	Jajag, Banyuwa	17.43	235	P	P	18 29 46.2	+2.0
	61nm,1.0s						
GMJI	Gumukmas	17.91	237	P	P	18 29 52.2	+2.7
SJI	Sawahan	19.08	241	P	Pn	18 30 05.9	+2.2
	2μm99nm,0.8s						
SNJI	Sawahan-Nganju	19.11	241	P	Pn	18 30 05.8	+1.7
	88nm,1.0s						
MANU	Manus Island	19.15	101	P	P	18 30 01.5	-1.6
NGJI	Ngawi	19.18	242	P	Pn	18 30 06.7	+1.9
	2μm72nm,1.2s						
FITZ	Fitzroy Crossi	19.67	188	P	P	18 30 09.1	+0.3
	0.9nm,0.3s,baz=25,slow=9.3,SNR=14						
FITZ				LR	LR	18 38 37.7	
	comp=Z,296nm,21.0s,baz=14,slow=40						
	16nm,0.8s						
FITZ	Fitzroy Crossi	19.67	188	P	P	18 30 08.7	-0.1
PCJI	Pacitan	19.81	241	P	Pn	18 30 12.3	0.0
	104nm,1.1s						
SMRI	Semarang	19.95	245	P	P	18 30 10.2	-1.8
SMRI	Semarang	19.95	245	P	Pn	18 30 14.2	+0.1
	124nm,1.0s						
UGM	Wanagama	20.25	242	P	P	18 30 14.5	-0.7
UGM				IAmb	IAmb	18 30 30.0	
	comp=Z,69nm,1.3s						
UGM	Wanagama	20.25	242	P	Pn	18 30 19.5	+1.9
UGM	Wanagama	20.25	242	P	Pn	18 30 18.0	+0.4
	comp=Z,53nm,0.8s						
YOGI	Yogyakarta	20.41	243	P	Pn	18 30 21.9	+2.5
CTJI	Waduk Cacaban	21.08	246	P	P	18 30 25.8	+1.7
	comp=Z,75nm,1.4s						
COEN	Coen	21.11	137	P	P	18 30 24.0	-0.5
COEN	Coen	21.11	137	P	P	18 30 26.6	+2.1
TPI	Tanjungpandan	21.30	259	P	P	18 30 28.4	+1.9
KPJI	Karang Pucung	21.44	246	P	P	18 30 29.8	+1.9
	comp=Z,155nm,1.1s						
PMG	Port Moresby	21.47	121	P	P	18 30 31.8	+3.5
	comp=Z,14nm,0.9s,baz=294,slow=7.1,SNR=8.0						
PMG				LR	LR	18 40 21.9	
	comp=Z,259nm,21.9s,baz=310,slow=41						
	comp=Z,14nm,0.9s						
PMG	Port Moresby	21.47	121	P	P	18 30 28.3	0.0
PMG	Port Moresby	21.47	121	P	P	18 30 31.4	+3.1
PMG	Port Moresby	21.47	121	*d i*P	P	18 30 32.6	+4.3
PMG				pmax	pmax		
	comp=Z,27nm,1.1s						
WB0	Warramunga Arr	21.89	165	P	P	18 30 33.1	+0.4
WB0				IAmb	IAmb	18 30 38.8	
	comp=Z,97nm,0.9s						
WRAB	Tennant Creek	22.04	165	P	P	18 30 34.5	+0.2
WRAB				IAmb	IAmb	18 30 40.6	
	comp=Z,92nm,0.9s						
WRAB	Tennant Creek	22.04	165	P	P	18 30 35.8	+1.5
WRAB	Tennant Creek	22.04	165	*de*P	P	18 30 35.8	+1.5
WRAB				pmax	pmax		
	comp=Z,114nm,0.9s						
WRA	Warramunga Arr	22.05	165	P	P	18 30 35.5	+1.1
	comp=Z,64nm,0.9s,baz=344,slow=11,SNR=52						
	comp=Z,64nm,0.9s						
WRA	Warramunga Arr	22.05	165	P	P	18 30 33.7	-0.7
WRA	Warramunga Arr	22.05	165	*i* P	P	18 30 35.5	+1.1
WRA				pmax	pmax		
	comp=Z,67nm,0.9s						
WR8	Warramunga Arr	22.10	165	P	P	18 30 35.0	0.0
WR8				IAmb	IAmb	18 30 41.3	
	comp=Z,66nm,1.0s						
BBJI	Bungbulang	22.66	247	P	P	18 30 44.6	+3.5
BBJI	Bungbulang	22.66	247	P	P	18 30 42.7	+1.6
YULB	Yu-li	22.88	343	P	P	18 30 42.2	-1.1
YULB	Yu-li	22.88	343	P	P	18 30 44.8	+1.6
TPUB	Ta-pu	23.00	341	P	P	18 30 43.0	-1.5
TPUB				IAmb	IAmb	18 31 09.3	
	comp=Z,48nm,0.8s						
TPUB	Ta-pu	23.00	341	P	P	18 30 43.9	-0.6
SSLB	Suanglung	23.35	342	P	P	18 30 46.7	-1.2
SSLB				IAmb	IAmb	18 30 57.4	
	comp=Z,35nm,0.9s						
SSLB	Suanglung	23.35	342	P	P	18 30 49.7	+1.8
YOJ	Yonaguni jima	23.45	347	P	P	18 30 47.9	-0.9
YOJ	Yonaguni jima	23.45	347	P	P	18 30 47.9	-0.9
YOJ				pmax	pmax		
	comp=Z,296nm,1.7s						
NACB	Ninganchiao	23.53	344	P	P	18 30 48.3	-1.3
NACB				IAmb	IAmb	18 31 16.8	
	comp=Z,33nm,1.0s						
YHNB	Yeheng	24.06	344	P	P	18 30 53.4	-1.1
YHNB	Yeheng	24.06	344	P	P	18 30 54.3	-0.2
MBWA	Marble Bar	24.10	200	P	P	18 30 52.4	-2.4
MBWA				IAmb	IAmb	18 31 13.8	
	comp=Z,52nm,1.4s						
JMZ	Minamidaito 2	24.33	6	P	P	18 30 55.8	-1.0
QIS	Mount Isa	24.45	154	P	P	18 31 00.3	+2.3
PSA00	Pilbara Seismi	24.45	200	P	P	18 30 55.2	-2.7
PSA00	Pilbara Seismi	24.45	200	P	P	18 30 56.1	-1.9
PSA00				IAmb	IAmb	18 31 11.1	
	comp=Z,10nm,0.8s						
KLSI		24.57	255	P	P	18 31 00.2	+1.0
	comp=Z,41nm,1.0s						
MYKOM	Kota Tinggi	24.68	271	P	P	18 30 59.9	-0.3
MYKOM				IAmb	IAmb	18 31 02.8	
	comp=Z,39nm,1.0s						
MYKOM	Kota Tinggi	24.68	271	P	P	18 31 01.1	+0.9
	comp=Z,51nm,1.4s						
MTSU	Mount Surprise	24.93	142	P	P	18 31 04.7	+2.3
HKPS	Hong Kong Po S	24.96	327	P	P	18 31 03.1	+0.4
HKPS				IAmb	IAmb	18 31 28.5	
	comp=Z,80nm,1.2s						
KASI	Kota Agung	25.00	254	P	P	18 31 05.4	+2.3
	comp=Z,58nm,1.0s						
MDSI	Maura Dua	25.06	256	P	P	18 31 04.6	+1.0
JOW	Kunigami	25.20	359	LR	LR	18 39 53.0	
	comp=Z,271nm,20.8s,baz=120,slow=34						
JOW	Kunigami	25.20	359	P	P	18 31 04.9	+0.2
JOW				IAmb	IAmb	18 31 16.9	
	comp=Z,76nm,1.5s						
AS31	Alice Springs	25.54	169	P	P	18 31 07.6	-0.3
ASAR	Alice Springs	25.54	169	P	P	18 31 09.2	+1.2
	comp=Z,11nm,0.8s,baz=354,slow=7.7,SNR=39						
ASAR				LR	LR	18 42 12.5	
	comp=Z,340nm,20.2s,baz=18,slow=39						
	comp=Z,11nm,0.8s						
ASAR	Alice Springs	25.54	169		P	18 31 07.6	-0.4
MNAI	Manna	26.22	257	P	P	18 31 13.8	-0.4
MASI	Maura Aman, Be	26.69	260	P	P	18 31 19.6	+1.1
CTA	Charters Tower	27.60	142	P	P	18 31 28.9	+2.5
	comp=Z,17nm,1.1s,baz=311,slow=9.3,SNR=6.5						
CTA				LR	LR	18 43 58.6	
	comp=Z,373nm,18.6s,baz=314,slow=40						
	comp=Z,17nm,1.1s						
CTA	Charters Tower	27.60	142	P	P	18 31 28.7	+2.3
CTA	Charters Tower	27.60	142	P	P	18 31 29.0	+2.5
CTAO	Charters Tower	27.60	142	P	P	18 31 25.0	-1.5
CTAO				IAmb	IAmb	18 31 50.3	
	comp=Z,34nm,1.2s						
CTAO	Charters Tower	27.60	142	P	P	18 31 28.8	+2.3
CTAO	Charters Tower	27.60	142	P	P	18 31 25.0	-1.5
CTAO				pmax	pmax		
	comp=Z,34nm,1.3s						
IPM	Ipoh	27.64	277	P	P	18 31 26.6	-0.3
KULM	Kulim	28.09	278	P	P	18 31 31.1	+0.1
KULM				IAmb	IAmb	18 32 10.0	
	comp=Z,38nm,1.7s						
JCJ	Chichijima	28.63	26	P	P	18 31 34.5	-1.1
JSU	Suzuyama	29.91	3	P	P	18 31 46.6	-0.3
PATS	Pohnpei	30.15	79	P	P	18 31 47.6	-1.6
GSI	Gunungsitoli	30.96	270	P	P	18 31 54.4	-2.0
GSI				IAmb	IAmb	18 32 00.5	
	comp=Z,31nm,0.9s						
INKA	Innaminka	31.34	159	P	P	18 31 57.5	-2.1
JNU	Nakatsue	31.54	4	LR	LR	18 43 44.5	
	comp=Z,194nm,21.6s,baz=188,slow=34						
JNU	Nakatsue	31.54	4	P	P	18 32 01.0	-0.3
NJ2	Nanjing	31.74	344	*e*P	P	18 32 05.0	+2.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
LHMI	Lhok Sumawe	31.75	277	P	P	18 32 02.8	-0.6
WHN	Wuhan	31.88	336	P	P	18 32 06.5	+2.3
WHN				pmax	pmax		
	comp=Z,38nm,0.6s						
FORT	Forrest	32.09	181	P	P	18 32 05.8	-0.4
FORT				IAmb	IAmb	18 32 18.2	
	comp=Z,18nm,1.0s						
JMN	Monobe	32.46	8	P	P	18 32 09.6	+0.3
JMN				IAmb	IAmb	18 33 13.4	
	comp=Z,83nm,1.7s						
GYA	Guiyang	32.54	322	⇓P	P	18 32 12.5	+2.3
GYA				pmax	pmax		
	comp=Z,15nm,0.9s						
MORW	Morawa	32.66	201	P	P	18 32 09.5	-1.6
MORW				IAmb	IAmb	18 32 28.5	
	comp=Z,36nm,1.4s						
JHJ	Hachijo jima 2	33.19	17	LR	LR	18 44 47.4	
	comp=Z,37nm,19.8s,baz=196,slow=35						
JHJ2	Mitsune	33.19	17	P	P	18 32 15.2	-0.5
CM31	Chiang Mai Arr	33.57	302	P	P	18 32 18.2	-1.0
CMAR	Chiang Mai Arr	33.57	302	P	P	18 32 18.4	-0.8
	comp=Z,4.7nm,0.9s,baz=122,slow=6.7,SNR=6.0						
CMAR				LR	LR	18 45 49.4	
	comp=Z,53nm,21.3s,baz=105,slow=36						
CMAR	Chiang Mai Arr	33.57	302	P	P	18 32 18.9	-0.4
CMAR	Chiang Mai Arr	33.57	302	*i* P	P	18 32 21.3	+2.0
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CHTO	Chiang Mai	33.73	303	P	P	18 32 20.0	-0.7
CHTO				IAmb	IAmb	18 32 27.0	
	comp=Z,10nm,0.9s						
CHTO	Chiang Mai	33.73	303	P	P	18 32 20.0	-0.7
CHTO				pmax	pmax		
	comp=Z,11nm,0.9s						
BLDU	Ballidu	33.86	198	P	P	18 32 22.3	+0.7
ENH	Enshi	33.86	330	P	P	18 32 23.2	+1.6
ENH				sP	sP	18 32 43.2	+1.6
KMI	Kunming	34.23	315	P	P	18 32 27.3	+2.1
KMI				pmax	pmax		
	comp=Z,14nm,0.9s						
KMI				LR	LR		
	comp=Z,290nm,19.9s						
EIDS	Eidsvold	34.48	142	P	P	18 32 27.4	+0.4
EIDS				IAmb	IAmb	18 32 29.8	
	comp=Z,17nm,0.9s						
INU	Inuyama	34.60	12	P	P	18 32 27.1	-0.8
INU				IAmb	IAmb	18 32 42.4	
	comp=Z,26nm,1.2s						
INU	Inuyama	34.60	12	P	P	18 32 28.9	+1.0
BBOO	Buckleboo	34.85	169	P	P	18 32 28.8	-1.3
BBOO				IAmb	IAmb	18 32 53.6	
	comp=Z,33nm,1.4s						
BBOO	Buckleboo	34.85	169	P	P	18 32 31.3	+1.2
JGF	Kuroka	34.91	13	P	P	18 32 30.7	0.0
JGF	Kuroka	34.91	13	P	P	18 32 31.7	+1.0
STKA	Stephens Creek	35.42	161	P	P	18 32 36.7	+1.7
	comp=Z,19nm,0.8s,baz=337,slow=8.6,SNR=2.8						
STKA				LR	LR	18 48 52.6	
	comp=Z,217nm,20.1s,baz=346,slow=39						
	comp=Z,19nm,0.8s						
STKA	Stephens Creek	35.42	161	P	P	18 32 35.1	+0.1
STKA	Stephens Creek	35.42	161	P	P	18 32 36.7	+1.7
STKA	Stephens Creek	35.42	161	P	P	18 32 35.1	+0.1
STKA				pmax	pmax		
	comp=Z,107nm,0.9s						
KSAR	Wonju Array Be	35.78	359	P	P	18 32 38.7	+0.7
KSAR	Wonju Array Be	35.78	359	P	P	18 32 38.7	+0.7
KSRS	Korea Array	35.79	359	P	P	18 32 38.4	+0.3
	comp=Z,1.3nm,0.6s,baz=176,slow=9.7,SNR=7.2						
KSRS				LR	LR	18 46 24.9	
	comp=Z,156nm,21.1s,baz=180,slow=35						
	comp=Z,1.3nm,0.6s						
PZH	PanZhiHua	35.80	316	P	P	18 32 39.8	+1.2
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KS19	Wonju Array Si	35.84	359	P	P	18 32 38.4	-0.2
NWAO	Narrogin (SRO)	35.86	196	LR	LR	18 49 01.7	
	comp=Z,111nm,18.3s,baz=44,slow=39						
NWAO	Narrogin (SRO)	35.86	196	P	P	18 32 38.8	0.0
NWAO	Narrogin (SRO)	35.86	196	P	P	18 32 40.6	+1.8
NWAO	Narrogin (SRO)	35.86	196	P	P	18 32 38.8	0.0
NWAO				pmax	pmax		
	comp=Z,109nm,2.0s						
MAJO	Matsushiro	36.01	13	P	P	18 32 38.6	-1.5
MAJO				IAmb	IAmb	18 32 53.1	
	comp=Z,22nm,0.7s						
MAJO	Matsushiro	36.01	13	P	P	18 32 39.8	-0.2
MAJO	Matsushiro	36.01	13	*d i*P	P	18 32 40.2	+0.2
MAJO				pmax	pmax		
	comp=Z,20nm,0.7s						
MAJO	Matsushiro	36.01	13	P	P	18 32 39.6	-0.4
MJAR	Matsushiro Arr	36.01	13	P	P	18 32 39.4	-0.6
	comp=Z,12nm,0.7s,baz=182,slow=9.8,SNR=42						
MJAR				LR	LR	18 45 14.9	
	comp=Z,109nm,22.0s,baz=193,slow=33						
	comp=Z,12nm,0.7s						
MJAR	Matsushiro Arr	36.01	13	P	P	18 32 39.6	-0.4
MJAR	Matsushiro Arr	36.01	13	P	P	18 32 39.6	-0.4
MJAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MJB9	Matsu-Tunnel	36.01	13	P	P	18 32 39.5	-0.5
MJB9				IAmb	IAmb	18 32 54.1	
	comp=Z,21nm,0.7s						
HTT	Hallett	36.09	165	P	P	18 32 42.7	+1.9
JYT	Yasato	36.21	16	P	P	18 32 41.7	0.0
CMSA	Cobar Meteorol	36.66	155	P	P	18 32 47.5	+1.9
PBA	Port Blair	36.92	287	P	P	18 32 48.3	+0.3
XAN	Xi'an	37.22	333	P	P	18 32 51.0	+0.6
XAN				pP	sP	18 33 05.8	-4.7
XAN				sP	pP	18 33 11.0	+6.8
XAN				pmax	pmax		
	comp=Z,29nm,0.9s						
TNCH	TengChong	37.24	311	P	P	18 32 52.3	+1.4
TNCH				pmax	pmax		
	comp=Z,22nm,1.0s						
JSD	Sado	37.45	13	P	P	18 32 52.7	+0.4
JSD				IAmb	IAmb	18 33 25.6	
	comp=Z,29nm,1.2s						
HNS	HongShan	37.94	342	⇑P	P	18 32 56.8	+0.4
HNS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ARMA	Armidale	38.61	147	P	P	18 33 01.1	-1.2
ARMA				IAmb	IAmb	18 33 05.3	
	comp=Z,15nm,0.9s						
BJI	Beijing	39.99	345	P	P	18 33 13.8	+0.4
BJI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
H11S3	WAKE ISLAND Hy	41.04	63	T	T	19 17 46.3	
	baz=249,slow=75,SNR=49						
H11S2	WAKE ISLAND Hy	41.06	63	T	T	19 17 14.8	
	baz=249,slow=75,SNR=24						
H11S1	WAKE ISLAND Hy	41.06	63	T	T	19 17 16.8	
	baz=249,slow=75,SNR=8.0						
LZDM	Lanzhou Array	41.31	329	P	P	18 33 22.7	-2.2
	comp=Z,2.2nm,0.3s,baz=139,slow=12,SNR=5.5						
LZDM				LR	LR	18 51 52.8	
	comp=Z,59nm,18.0s,baz=65,slow=38						
	comp=Z,2.2nm,0.3s						
CAN	Canberra	41.32	154	P	P	18 33 23.2	-1.4
CAN				IAmb	IAmb	18 34 39.4	
	comp=Z,42nm,1.5s						
CAN	Canberra	41.32	154	P	P	18 33 23.2	-1.4
CAN				pmax	pmax		
	comp=Z,42nm,1.5s						
LZH	Lanzhou	41.34	329	⇑P	P	18 33 27.0	+2.1
LZH				pP	sP	18 33 40.5	-4.7
LZH				sP	pP	18 33 49.3	+10

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LZH                                 pmax    pmax
       comp=Z,40nm,1.1s
H11N1  WAKE ISLAND Hy 41.65  62     T       T       19 17 48.1
       baz=248,slow=75,SNR=33
H11N2  WAKE ISLAND Hy 41.66  62     T       T       19 17 48.8
       baz=248,slow=75,SNR=27
H11N3  WAKE ISLAND Hy 41.66  62     T       T       19 17 48.5
       baz=248,slow=75,SNR=53
TOO    Toolangi       41.92 160             P       18 33 27.3  -2.2
TOO    Toolangi       41.92 160     P       P       18 33 27.3  -2.2
TOO                                 pmax    pmax
       comp=Z,23nm,1.9s
HHC    Hu-ho-hao-te   42.09 341    eP       P       18 33 32.3  +1.4
HHC                                 pmax    pmax
       comp=Z,11nm,0.7s
HHC                                 pmax    pmax
       comp=Z,130nm,4.7s
CN2    Changchun      42.22 357     P       P       18 33 34.3  +2.5
USRK   Ussuriysk Ar.  42.64   4     P       P       18 33 34.7  -0.4
       comp=Z,3.5nm,0.8s,baz=157,slow=6.2,SNR=5.1
       comp=Z,3.5nm,0.8s
SHL    Shillong       42.66 307     P       P       18 33 36.0  +0.1
SHL                                 IAmb    IAmb    18 33 37.8
       comp=Z,45nm,0.9s
SHL    Shillong       42.66 307     P       P       18 33 36.0  +0.1
SHL                                 pmax    pmax
       comp=Z,45nm,0.9s
DZM    Mont Dzumac    43.78 125     P       P       18 33 44.0  -0.8
DZM                                 IAmb    IAmb    18 34 36.7
       comp=Z,93nm,1.8s
BNX    BinXian        44.08 359 ⇓   P       P       18 33 44.3  -2.4
BNX                                 pmax    pmax
       comp=Z,5.0nm,1.4s
ASAJ   Asahikawa      44.24  15     LR      LR      18 51 14.7
       comp=Z,143nm,20.6s,baz=159,slow=35
ASAJ   Asahikawa      44.24  15     P       P       18 33 49.6  +1.5
ASAJ                                pmax    pmax
       comp=Z,231nm,2.0s
JKA    Kamikawa-asahi 44.24  15     P       P       18 33 49.6  +1.5
LSA    Lhasa          45.27 312     P       P       18 33 55.0  -2.1
LSA                                 pmax    pmax
       comp=Z,21nm,0.8s
LSA    Lhasa          45.27 312     P       P       18 33 59.4  +2.3
LSA                                 pP      sP      18 34 13.9  -3.5
GTA    Gaotai         45.94 329     P       P       18 34 03.8  +2.0
GTA                                 pmax    pmax
       comp=Z,14nm,1.2s
GOMU   GeErMu         46.55 322     P       P       18 34 07.5  +0.5
GOMU                                pmax    pmax
       comp=Z,5.0nm,1.1s
PALK   Pallekele      48.02 278     LR      LR      18 55 29.7
       comp=Z,53nm,21.5s,baz=97,slow=38
PALK   Pallekele      48.02 278     P       P       18 34 17.9  -0.5
PALK                                IAmb    IAmb    18 34 40.1
       comp=Z,21nm,1.1s
PALK   Pallekele      48.02 278     P       P       18 34 17.9  -0.5
PALK                                pmax    pmax
       comp=Z,21nm,1.2s
HILR   Hailar Array B 48.47 352     LR      LR      18 55 29.2
       comp=Z,58nm,20.7s,baz=80,slow=37
ULN    Ulaanbaatar    49.80 341     P       P       18 34 32.0  +0.4
ULN                                 IAmb    IAmb    18 34 45.1
       comp=Z,15nm,0.9s
ULN    Ulaanbaatar    49.80 341c   iP       P       18 34 32.3  +0.7
ULN                                 pmax    pmax
       comp=Z,17nm,0.9s
ULN    Ulaanbaatar    49.80 341     P       P       18 34 32.4  +0.7
ULN                                 x       x       18 34 49.5
SONM   Songino Array  49.99 341     P       P       18 34 32.4  -0.6
       comp=Z,4.7nm,0.9s,baz=159,slow=9.2,SNR=14
       comp=Z,4.7nm,0.9s
SONM   Songino Array  49.99 341     P       P       18 34 33.3  +0.3
SONM   Songino Array  49.99 341     P       P       18 34 33.3  +0.3
SONM                                pmax    pmax
       comp=Z,7.0nm,1.0s
HYB    Hyderabad      51.59 291    eP       P       18 34 46.1  +0.7
MOY    Mondy          55.10 339    eP       P       18 35 11.7  +1.0
MOY                                 pmax    pmax
       comp=Z,13nm,1.9s
KNGR   Kungurtug, Tuv 55.54 337⇓   iP       P       18 35 13.6  -0.3
KNGR                                pmax    pmax
       comp=Z,15nm,1.1s
WMQ    Urumqi         55.59 325    eP       P       18 35 16.0  +1.7
WMQ                                 pP      pP      18 35 28.0  -0.8
WMQ                                 sP      sP      18 35 37.3  +2.4
WMQ                                 PP      PP      18 37 20.0  +1.1
WMQ                                 pmax    pmax
       comp=Z,19nm,0.9s
WMQ                                 LR      LR
       comp=Z,170nm,24.1s
PEA0B  Petropavlovsk- 56.84  21     P       P       18 35 23.5  +0.5
PEA0B  Petropavlovsk- 56.84  21     P       P       18 35 23.5  +0.5
PEA0B                               pmax    pmax
       comp=Z,101nm,1.5s
PETK   Petropavlovsk- 56.84  21     P       P       18 35 23.9  +1.0
       comp=Z,5.4nm,0.8s,baz=206,slow=3.5,SNR=5.3
PETK                                LR      LR      18 57 55.1
       comp=Z,31nm,21.9s,baz=170,slow=34
       comp=Z,5.4nm,0.8s
PETK   Petropavlovsk- 56.84  21     P       P       18 35 23.7  +0.7
PETK   Petropavlovsk- 56.84  21     P       P       18 35 24.0  +1.0
LBZ    Lake Benmore   58.83 146     P       P       18 35 36.8  -0.3
THZ    Tophouse       58.83 142     P       P       18 35 36.6  -0.6
ZSN    Zaisan         59.36 327    eP       P       18 35 41.0  +0.2
ZSN    Zaisan         59.36 327    eP       P       18 35 40.9  +0.2
DGZ    Jazzator, Alta 59.42 330⇑   iP       P       18 35 41.6  +0.3
DGZ                                 pmax    pmax
       comp=Z,11nm,1.4s
BKZ    Black Stump Fm 59.72 138     P       P       18 35 42.7  -0.7
RTZ    Ruatahuna      59.77 137     P       P       18 35 42.2  -1.6
SHLS   Shalkode       60.21 320    eP       P       18 35 45.1  -1.8
       comp=Z,7.4nm,1.1s
SHLS   Shalkode       60.21 320    eP       P       18 35 45.0  -1.8
SHLS                                pmax    pmax
       comp=Z,7.0nm,1.1s
YAK    Yakutsk        60.40   1     LR      LR      18 59 48.9
       comp=Z,62nm,21.7s,baz=134,slow=34
YAK    Yakutsk        60.40   1     P       P       18 35 47.8  +0.3
YAK    Yakutsk        60.40   1    eP       P       18 35 47.6  +0.1
YAK                                e*PP     pP      18 36 03.7  +1.3
YAK                                e                18 36 31.9
YAK                                e                18 38 01.2
YAK                                ePPP     PPP     18 39 25.0
YAK                                eS       S       18 43 58.7  +0.6
YAK                                e*SS     sS      18 44 26.4  +2.7
YAK                                e                18 45 32.8
YAK                                eSS      SS      18 47 58.6  +1.9
YAK                                 pmax    pmax
       comp=Z,13nm,0.9s
YAK                                 pmax    pmax
       comp=N,11nm,1.7s
YAK                                 pmax    pmax
       comp=E,11nm,1.5s
YAK                                 pmax    pmax
       comp=Z,247nm,6.5s
YAK                                 pmax    pmax
       comp=N,193nm,4.4s
YAK                                 pmax    pmax
       comp=E,154nm,3.0s
YAK                                 smax    smax
       comp=N,353nm,5.8s
YAK                                 smax    smax
       comp=E,256nm,3.8s
MK31   Makanchi Array 60.41 325     P       P       18 35 48.2  +0.3
MK31                                IAmb    IAmb    18 35 49.0
       comp=Z,6.2nm,0.6s
MK31   Makanchi Array 60.41 325     P       P       18 35 48.3  +0.3
MK31                                pmax    pmax
       comp=Z,6.0nm,0.6s
MKAR   Makanchi Array 60.41 325     P       P       18 35 48.5  +0.5
       comp=Z,10nm,0.5s,baz=116,slow=8.3,SNR=164
MKAR                                LR      LR      19 02 45.9
       comp=Z,78nm,19.2s,baz=120,slow=37
       comp=Z,10nm,0.5s
MKAR   Makanchi Array 60.41 325     P       P       18 35 48.2  +0.2
UZB    Uzynbulak      60.49 320    eP       P       18 35 48.6  -0.1
       comp=Z,16nm,1.7s
UZB    Uzynbulak      60.49 320    eP       P       18 35 48.6  -0.1
UZB                                 pmax    pmax
       comp=Z,16nm,1.7s
PRZ    Przheval'sk    60.57 319     P       P       18 35 49.4   0.0
PRZ                                 IAmb    IAmb    18 36 07.0
       comp=Z,12nm,0.7s
PRZ    Przheval'sk    60.57 319     P       P       18 35 49.4   0.0
PRZ                                 pmax    pmax
       comp=Z,13nm,0.7s
MAKZ   Makanchi       60.60 325     P       P       18 35 49.5  +0.3
MAKZ                                IAmb    IAmb    18 35 50.7
       comp=Z,20nm,1.1s
MAKZ   Makanchi       60.60 325     P       P       18 35 49.5  +0.3
MAKZ                                pmax    pmax
       comp=Z,20nm,1.2s
MAKZ   Makanchi       60.60 325     P       P       18 35 49.6  +0.3
MAKZ                                pP      pP      18 36 04.9  +1.0
TARG   Taragay, Kyrgy 60.61 318     P       P       18 35 50.4  +0.5
TARG   Taragay, Kyrgy 60.61 318     P       P       18 35 50.4  +0.5
TARG                                pmax    pmax
       comp=Z,7.0nm,1.0s
SATY   Saty           60.84 320    eP       P       18 35 51.1  -0.1
       comp=Z,6.3nm,0.8s
SATY   Saty           60.84 320    eP       P       18 35 51.0  -0.1
SATY                                pmax    pmax
       comp=Z,6.0nm,0.8s
KSH    Kashi          60.90 315     P       P       18 35 53.3  +1.7
KSH                                 pmax    pmax
       comp=Z,5.0nm,0.9s
KDJ    Kajisay        61.21 318     IAmb    IAmb    18 36 11.2
       comp=Z,12nm,1.0s
MDOK   Medeo          61.77 319    eP       P       18 35 57.4  -0.1
MDOK   Medeo          61.77 319    eP       P       18 35 57.3  -0.1
TNSS   Tian-Shan      61.78 319    eP       P       18 35 57.5  -0.3
TNSS   Tian-Shan      61.78 319    eP       P       18 35 57.5  -0.3
TDK    Taldyqorghan   61.78 322    eP       P       18 35 57.5  +0.2
       comp=Z,6.4nm,1.0s
TDK    Taldyqorghan   61.78 322    eP       P       18 35 57.5  +0.2
TDK                                 pmax    pmax
       comp=Z,6.0nm,1.0s
AAA    Alma-Ata       61.88 319    eP       P       18 35 58.2  +0.1
       comp=Z,8.6nm,1.1s
AAA    Alma-Ata       61.88 319    eP       P       18 35 58.1  +0.1
AAA                                 pmax    pmax
       comp=Z,9.0nm,1.1s
BOOM   Boomskoye usch 62.20 318     P       P       18 36 00.0  -0.3
BOOM                                IAmb    IAmb    18 36 25.1
       comp=Z,18nm,1.7s
BOOM   Boomskoye usch 62.20 318     P       P       18 36 00.0  -0.3
BOOM                                pmax    pmax
       comp=Z,18nm,1.7s
AAK    Ala-Archa      63.22 318     LR      LR      19 06 34.1
       comp=Z,96nm,21.0s,baz=90,slow=39
AAK    Ala-Archa      63.22 318     P       P       18 36 07.1   0.0
AAK                                 IAmb    IAmb    18 36 30.2
       comp=Z,16nm,1.6s
AAK    Ala-Archa      63.22 318⇓   eP       P       18 36 08.2  +1.1
AAK                                 pmax    pmax
       comp=Z,9.0nm,1.5s
MANEM  Manem          63.25 312     P       P       18 36 07.1  -0.5
MANEM                               IAmb    IAmb    18 36 32.5
       comp=Z,16nm,1.0s
ZAA0   Zalesovo Array 63.39 333     P       P       18 36 07.2  -0.6
ZALV   Zalesovo Beam  63.39 333     P       P       18 36 07.0  -0.8
       comp=Z,2.9nm,0.8s,baz=111,slow=6.5,SNR=15
ZALV                                LR      LR      19 05 23.6
       comp=Z,119nm,18.7s,baz=142,slow=38
       comp=Z,2.9nm,0.8s
ZALV   Zalesovo Beam  63.39 333     P       P       18 36 06.8  -1.0
ZALV   Zalesovo Beam  63.39 333    i P      P       18 36 07.0  -0.8
ZALV                                pmax    pmax
       comp=Z,2.0nm,0.4s
DRK    Karamyk        63.85 314     IAmb    IAmb    18 36 32.0
       comp=Z,11nm,0.7s
KBL    Kabul          64.31 308     P       P       18 36 13.4  -1.1
KBL                                 IAmb    IAmb    18 36 34.1
       comp=Z,11nm,0.8s
KBL    Kabul          64.31 308     P       P       18 36 13.4  -1.1
KBL                                 pmax    pmax
       comp=Z,11nm,0.8s
KURK   Kurchatov      64.59 327     P       P       18 36 15.8  +0.1
KURK                                sP      sP      18 36 37.5  +0.6
GAR    Garm           64.76 313     P       P       18 36 16.6  -0.7
GAR                                 IAmb    IAmb    18 36 40.9
       comp=Z,18nm,0.8s
DZA    Taraz          65.46 317    eP       P       18 36 21.6   0.0
DZA    Taraz          65.46 317    eP       P       18 36 21.5   0.0
CHGR   Chuyangaron    65.50 312     P       P       18 36 20.9  -1.1
CHGR                                IAmb    IAmb    18 36 46.2
       comp=Z,19nm,1.0s
CHGR   Chuyangaron    65.50 312⇑   eP       P       18 36 21.6  -0.4
CHGR                                pmax    pmax
       comp=Z,23nm,1.1s
SHAA   Shahritus      65.93 311     P       P       18 36 23.7  -1.1
SHAA                                IAmb    IAmb    18 37 30.0
       comp=Z,12nm,0.9s
IUG    Iuzhnay        66.07 316    eP       P       18 36 25.7   0.0
       comp=Z,12nm,1.0s
IUG    Iuzhnay        66.07 316    eP       P       18 36 25.6  -0.1
IUG                                 pmax    pmax
       comp=Z,12nm,1.0s
KK31   Karatay Array  66.09 317     P       P       18 36 24.7  -1.0
KK31                                IAmb    IAmb    18 36 47.4
       comp=Z,15nm,1.1s
KK31   Karatay Array  66.09 317     P       P       18 36 24.7  -1.0
KK31                                pmax    pmax
       comp=Z,15nm,1.2s
KKAR   Karatay Array  66.09 317     P       P       18 36 25.3  -0.3
KKAR   Karatay Array  66.09 317     P       P       18 36 25.3  -0.3
CHM    Chimkent       66.43 316    eP       P       18 36 28.0  +0.2
       comp=Z,5.5nm,0.5s
CHM    Chimkent       66.43 316    eP       P       18 36 28.0  +0.2
CHM                                 pmax    pmax
       comp=Z,5.0nm,0.5s
BRLS   Borolday       66.53 317⇑   iP       P       18 36 28.7  +0.3
BRLS   Borolday       66.53 317c   iP       P       18 36 28.7  +0.3
TIXI   Tiksi          70.05   0     LR      LR      19 07 50.8
       comp=Z,68nm,21.7s,baz=197,slow=36
TIXI   Tiksi          70.05   0     P       P       18 36 49.3  -0.6
TIXI   Tiksi          70.05   0⇑   eP       P       18 36 50.5  +0.6
TIXI                                pmax    pmax
       comp=Z,7.0nm,1.1s
BVAR   Borovoye Array 70.17 327     P       P       18 36 50.0  -1.0
       comp=Z,3.5nm,0.6s,baz=67,slow=5.2,SNR=14
BVAR                                LR      LR      19 08 41.5
       comp=Z,77nm,18.6s,baz=103,slow=37
       comp=Z,3.5nm,0.6s
BVAR   Borovoye Array 70.17 327     P       P       18 36 50.0  -1.0
BORK   Borovoye       70.22 327     P       P       18 36 50.6  -0.7
BORK                                IAmb    IAmb    18 37 07.2
       comp=Z,16nm,0.8s
BORK   Borovoye       70.22 327c   iP       P       18 36 50.8  -0.5
BORK                                pmax    pmax
       comp=Z,19nm,0.8s
BORK   Borovoye       70.22 327     P       P       18 36 51.3  +0.1
NRIK   Noril'sk       73.03 346     P       P       18 37 06.5  -1.3
       comp=Z,4.4nm,1.0s,baz=114,slow=3.2,SNR=3.9
NRIK                                LR      LR      19 12 44.2
       comp=Z,43nm,18.2s,baz=146,slow=39
       comp=Z,4.4nm,1.0s
NRIK   Noril'sk       73.03 346     P       P       18 37 06.5  -1.3
NRIK                                IAmb    IAmb    18 37 25.9
       comp=Z,20nm,1.5s
NRIK   Noril'sk       73.03 346⇑   eP       P       18 37 06.8  -1.0
NRIK                                pmax    pmax
       comp=Z,9.0nm,1.3s
UOSS   Minazif        73.37 295     P       P       18 37 09.6  -1.2
SPIA   Saint Paul Isl 73.51  30     P       P       18 37 10.3  -0.6
AB31   Akbulak array  75.02 321     P       P       18 37 19.2  -0.7
AB31                                IAmb    IAmb    18 37 43.1
       comp=Z,17nm,1.4s
ABKAR  Akbulak array  75.02 321     P       P       18 37 19.0  -0.8
AKTO   Aktyubinsk     76.53 322     LR      LR      19 16 02.3
       comp=Z,48nm,18.1s,baz=122,slow=40
ARTI   Arti           77.87 328     LR      LR      19 12 13.5
       comp=Z,50nm,19.6s,baz=66,slow=36
ARTI   Arti           77.87 328d   iP       P       18 37 35.0  -0.8
ARTI                                *PP     pP      18 37 49.2  -2.1
ARTI                                S       S       18 47 22.2  -2.3
ARTI                                pmax    pmax
       comp=Z,9.0nm,1.8s
ANM    Nome           78.56  24     P       P       18 37 39.2  -0.3
ANM                                 IAmb    IAmb    18 38 50.5
       comp=Z,29nm,1.4s
ANM    Nome           78.56  24     P       P       18 37 39.2  -0.3
ANM                                 pmax    pmax
       comp=Z,29nm,1.4s
C16K   Lisburne Hills 79.94  20     P       P       18 37 47.1  +0.1
C16K                                        pP      18 37 59.2  -3.4
C16K                                IAmb    IAmb    18 38 01.9
       comp=Z,25nm,1.3s
L16K   Owhat River    80.21  27     P       P       18 37 48.7  +0.2
L16K                                IAmb    IAmb    18 39 41.7
       comp=Z,63nm,1.8s
I17K   Unalakleet     80.28  25     P       P       18 37 50.2  +1.4
I17K                                IAmb    IAmb    18 38 04.5
       comp=Z,28nm,1.3s
VNDA   Vanda          81.00 173     P       P       18 37 54.0  +1.6
       comp=Z,0.9nm,0.6s,baz=321,slow=6.9,SNR=8.4
       comp=Z,0.9nm,0.6s
VNDA   Vanda          81.00 173     P       P       18 37 53.1  +0.6
VNDA   Vanda          81.00 173     P       P       18 37 53.1  +0.6
VNDA                                pmax    pmax
       comp=Z,5.0nm,1.2s
K17K   Iditarod       81.00  27     IAmb    IAmb    18 37 56.2
       comp=Z,14nm,0.9s
MAW    Mawson         82.30 201     P       P       18 37 59.3  -0.2
       comp=Z,1.9nm,0.7s,baz=27,slow=4.5,SNR=2.2
MAW                                 LR      LR      19 12 55.2
       comp=Z,51nm,19.7s,baz=80,slow=34
       comp=Z,1.9nm,0.7s
OHAK   Old Harbor     82.35  32     P       P       18 38 00.0  +0.1
PPT    Papeete        82.71 108     LR      LR      19 11 34.7
       comp=Z,36nm,20.1s,baz=302,slow=33
PPT2   Papeete2       82.71 108    eLR      LR      19 03 46.7
       comp=Z,129nm,25.5s
KDAK   Kodiak Island  82.81  32     P       P       18 38 02.5  +0.2
KDAK   Kodiak Island  82.81  32     P       P       18 38 02.5  +0.2
KDAK                                pmax    pmax
       comp=Z,310nm,1.9s
RAYN   Ar Rayn        83.02 293     P       P       18 38 03.4  -0.9
RAYN   Ar Rayn        83.02 293     P       P       18 38 03.4  -0.9
RAYN                                pmax    pmax
       comp=Z,5.0nm,0.8s
RAYN   Ar Rayn        83.02 293     P       P       18 38 03.8  -0.5
RAYN                                x       x       18 38 07.5
KIRV   Kirov          83.06 329     LR      LR      19 16 58.0
       comp=Z,86nm,21.0s,baz=76,slow=37
KIRV   Kirov          83.06 329⇑   eP       P       18 38 03.2  -0.4
J20K   Nowinta River  83.14  25             P       18 38 03.5  -0.5
J20K                                IAmb    IAmb    18 38 22.2
       comp=Z,15nm,1.1s
TBI    Tubuai         83.24 114    eS       S       18 48 09.0   -13
       comp=Z,340nm,42.0s
TBI    Tubuai         83.24 114    eLR      LR      19 04 14.3
       comp=Z,1µm,27.5s
BELG   Belogornoye    83.27 322⇑   eP       P       18 38 05.4  +0.6
BELG                                pmax    pmax
       comp=Z,5.0nm,1.0s
L22K   Petersville    84.38  27     P       P       18 38 11.3  +0.9
E22K   Anaktuvuk Pass 84.76  22     P       P       18 38 11.3  -1.0
E22K                                IAmb    IAmb    18 38 27.6
       comp=Z,22nm,1.5s
SML    Sawmill        85.44  28     P       P       18 38 15.8   0.0
KBZ    Khabaz         85.82 314     P       P       18 38 18.0  +0.1
       comp=Z,2.5nm,1.1s,baz=347,slow=1.9,SNR=3.5
       comp=Z,2.5nm,1.1s
KBZ    Khabaz         85.82 314⇓   eP       P       18 38 16.6  -1.3
KBZ                                 pmax    pmax
       comp=Z,7.0nm,1.5s
NEUR   Neytrino       85.95 313⇑   eP       P       18 38 19.9  +1.1
NEUR                                pmax    pmax
       comp=Z,7.0nm,1.5s
ILAR   Eielson Array  86.34  25     P       P       18 38 21.2  +1.2
       comp=Z,0.4nm,0.4s,baz=251,slow=5.0,SNR=12
       comp=Z,0.4nm,0.4s
GURO   Guroymak-BITLI 86.34 308     P       P       18 38 21.1  +0.2
MARD   Mardin         87.32 307     P       P       18 38 25.1  -0.5
MARD                                IAmb    IAmb    18 38 26.8
       comp=Z,8.4nm,0.7s
KOPT   Kop Dagi       87.55 310     IAmb    IAmb    18 38 29.8
       comp=Z,24nm,1.3s
KLMR   Klimovskoe     88.23 331    eP       P       18 38 26.4  -2.8
KLMR                               e*PP     pP      18 38 42.3  -2.6
KLMR                               e                18 41 54.2
KLMR                                pmax    pmax
       comp=Z,16nm,1.0s
BCAR   Beaver Creek A 88.53  27     P       P       18 38 30.4  -0.3
FURI   Furi           89.64 279     LR      LR      19 16 41.6
       comp=Z,23nm,21.7s,baz=44,slow=34
ANN    Anapa          89.75 315    eP       P       18 38 30.0  -6.7
ANN                                e*PP     pP      18 38 48.6  -3.8
ANN                                eSS      SS      18 55 27.6  +5.5
ANN                                 pmax    pmax
       comp=Z,35nm,0.9s
OBN    Obninsk        89.92 325⇓   eP       P       18 38 35.5  -1.8
OBN                                e                18 42 11.8
OBN                                 pmax    pmax
       comp=Z,42nm,2.4s
OBN                                 MLR     MLR
       comp=Z,69nm,16.0s
APA    Apatity        90.60 338⇓   eP       P       18 38 32.6  -7.6
APA                                 pmax    pmax
       comp=Z,11nm,1.2s
APA                                 MLR     MLR
       comp=Z,1µm,6.3s
ASF    Jabal al Asfar 90.61 302     LR      LR      19 27 03.4
       comp=Z,25nm,18.2s,baz=44,slow=41
SYO    Syowa Base     91.00 201⇓   eP       P       18 38 43.0  +1.0
TAOE   Nuku Hiva Isla 91.52  99    eLR      LR      19 08 02.9
       comp=Z,200nm,24.2s
BR131  Keskin Array S 92.83 310⇑   eP       P       18 38 50.9  -0.5
BRTR   Keskin Array B 92.83 310     P       P       18 38 50.6  -0.7
       comp=Z,1.7nm,1.0s,baz=100,slow=3.8,SNR=6.0
BRTR                                LR      LR      19 26 47.0
       comp=Z,17nm,18.2s,baz=88,slow=40
       comp=Z,1.7nm,1.0s
ARCES  ARCESS Array B 93.16 340     P       P       18 38 51.7  -0.3
       comp=Z,5.7nm,0.9s,baz=14,slow=5.6,SNR=3.7
       comp=Z,5.7nm,0.9s
FINES  FINESS Array B 94.65 332     P       P       18 38 59.2  +0.2
       comp=Z,1.4nm,0.8s,baz=44,slow=5.8,SNR=5.8
FINES                               LR      LR      19 25 17.7
       comp=Z,118nm,18.1s,baz=63,slow=38
       comp=Z,1.4nm,0.8s
FINES  FINESS Array B 94.65 332     P       P       18 38 58.2  -0.8
AKASG  Malin Array Be 94.76 321     LR      LR      19 24 55.6
       comp=Z,36nm,18.6s,baz=60,slow=38
RNPP8  Varash         96.75 322     P       P       18 39 08.3  -0.5
RNPP1  Kostyukhnivka  96.81 322     P       P       18 39 07.8  -1.3
MLR    Muntele Rosu   97.76 316     LR      LR      19 27 29.1
       comp=Z,53nm,20.6s,baz=100,slow=38
NVL    N'lazarevskaya 99.98 197    eP       Pdif    18 39 22.7  -0.1
NVL                                e                18 43 26.6
NVL                                ePPP     PPP     18 45 34.8
NVL                                eS       SKSac   18 49 55.9  -0.7
NVL                                eSS      SS      18 57 47.6  +1.6
NVL                                eSSS     SSS     19 01 37.7
NVL                                 pmax    pmax
       comp=Z,19nm,1.5s
NVL                                 MLR     MLR
       comp=Z,418nm,21.0s
YKA    Yellowknife Ar 100.77  25    P       Pdif    18 39 27.6  +1.1
       comp=Z,0.2nm,0.8s,baz=293,slow=5.4,SNR=4.0
YKA    Yellowknife Ar 100.77  25   i P      Pdif    18 39 28.6  +2.1
TORD   Torodi Ar. Bea 125.32 287    PKP     PKPdf   18 44 39.6  -0.3
       comp=Z,0.3nm,0.3s,baz=34,slow=3.5,SNR=3.6
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*IDC **28** 18:47:11.3±2.9, 21°.95S×173°.13E, h0km, mb4.1/4, mbtmp4.0/5, ML3.1/1, Error ellipse: s-maj=155.0km s-min=30.0km az=160.0*

*NEIC **28** 18:47:12.2±2.0, 22°.2S±0°.1×173°.30E±0°.09, h10km±1km, mb4.4/9, Error ellipse: s-maj=27.5km s-min=8.0km az=332.0*

ISC 28 18:47:15.1±0.9**, 22°.1S**±0°.2×**173°.2E**±0°.1**, h35km, n23, σ0s.85**/24**, mb4.3**/9**, Southeast of Loyalty Islands**

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Code   Station Name       Δ°  AZ°    Phase ID          Time       Res
                                     Op      ISC      h  m  s     ISC
PINNC  Pines Island,    5.37 264     Pn      Pn      18 48 33.2  +0.3
DZM    Mont Dzumac      6.29 269     Pn      Pn      18 48 46.3  +0.8
       0.4nm,0.3s,baz=116,slow=21,SNR=1.2
       4.2nm,0.9s
DZM    Mont Dzumac      6.29 269     Pn      Pn      18 48 45.9  +0.3
MSWZ   Moikau Station  19.30 175     P       P       18 51 37.6  +0.5
BBOO   Buckleboo       34.49 244     P       P       18 54 01.4  +1.4
WR8    Warramunga Arr  36.15 266             P       18 54 14.0  -0.4
WR8                                  IAmb    IAmb    18 54 18.7
       comp=Z,8.3nm,1.1s
AS31   Alice Springs   36.18 260             P       18 54 15.2  +0.5
ASAR   Alice Springs   36.18 260     P       P       18 54 15.2  +0.6
       comp=Z,5.4nm,0.9s,baz=82,slow=9.3,SNR=43
       comp=Z,5.4nm,0.9s
ASAR   Alice Springs   36.18 260             P       18 54 14.8  +0.1
WB0    Warramunga Arr  36.28 266             P       18 54 14.7  -0.9
WRA    Warramunga Arr  36.30 266     P       P       18 54 15.5  -0.2
       comp=Z,2.9nm,0.8s,baz=101,slow=8.8,SNR=10
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	comp=Z,2.9nm,0.8s						
WRA	Warramunga Arr	36.30	266	P	P	18 54 14.5	-1.2
FORT	Forrest	41.12	248	P	P	18 54 55.5	-0.5
FORT				IAmb	IAmb	18 55 05.4	
	comp=Z,9.6nm,1.1s						
FITZ	Fitzroy Crossi	44.73	266		P	18 55 24.9	-0.5
FITZ				IAmb	IAmb	18 55 27.9	
	comp=Z,5.0nm,0.9s						
MBWA	Marble Bar	49.52	261	P	P	18 56 02.1	-0.5
VNDA	Vanda	55.72	183	P	P	18 56 46.5	-1.2
VNDA				IAmb	IAmb	18 56 56.3	
	comp=Z,2.8nm,1.4s						
CMAR	Chiang Mai Arr	83.08	293	P	P	18 59 38.5	+0.8
	comp=Z,0.4nm,0.4s,baz=142,slow=4.2,SNR=5.8						
	comp=Z,0.4nm,0.4s						
CMAR	Chiang Mai Arr	83.08	293	P	P	18 59 37.7	0.0
PZH	PanZhiHua	84.40	301	P	P	18 59 43.0	-1.4
HHC	Hu-ho-hao-te	84.85	318	*e*P	P	18 59 45.3	-1.0
HHC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,67nm,4.4s						
HHC				LR	LR		
	comp=N,150nm,15.9s						
HHC				LR	LR		
	comp=E,170nm,15.1s						
HHC				LR	LR		
	comp=Z,150nm,15.3s						
NVAR	Mina Array Bea	87.97	47	P	P	19 00 03.4	+1.5
	comp=Z,0.5nm,0.8s,baz=232,slow=7.3,SNR=3.7						
	comp=Z,0.5nm,0.8s						
CLL	Collm	147.06	337	*e*PKPbc	PKPbc	19 06 54.0	-0.1
CLL				*i* (PKiKP)	PKiKP	19 06 57.2	+0.6
CLL				*e*x	x	19 07 20.0	
GERES	GERESS Array B	148.76	334	PKPbc	PKiKP	19 06 59.8	-0.5
	comp=Z,1.5nm,0.9s,baz=58,slow=3.3,SNR=3.5						

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*IDC **28** 18:49:50.3±0.6, 21°.88S×173°.36E, h0^{km}, mb4.4/14, mbtmp4.4/16, ML3.7/1, MS3.9/22, Error ellipse: s-maj=22.4km s-min=17.9km az=126.0*

*NEIC **28** 18:49:51.6±2.2, 21°.89S±0°.09×173°.35E±0°.09, h10^{km}±1^{km}, mb4.9/51, Error ellipse: s-maj=16.3km s-min=13.3km az=158.0*

*GCMT **28** 18:49:53.6±0.3, 21°.77S±0°.01×173°.60E±0°.02, h14^{km}±1^{km}, MW4.9/96, Moment Tensor Solution. s25,c27; s96,c125; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.29±.14; M$_{\theta\theta}$2.10±.13; M$_{\phi\phi}$-0.81±.10; M$_{r\theta}$0.40±.22; M$_{\theta\phi}$2.19±.09; M$_{\phi r}$-0.10±.21; Best double couple: M$_0$2.69100×10^{16} NP1:φ$_s$18.00000°,δ73.00000°,λ-168.00000°. NP2: φ$_s$285.00000°,δ79.00000°,λ-17.00000°. Principal axes: T 3.2940, Plg4.0000°, Azm332.0000°; N -1.2090, Plg70.0000°, Azm72.0000°; P -2.0890, Plg20.0000°, Azm241.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 18:49:55.1±0.4**, 21°.90S**±0°.07×**173°.35E**±0°.08**, h40^{km}, n191, σ1^{s}39**/165**, mb4.8**/47**, MS4.0**/20**, 11C-18D, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINNC	Pines Island,	5.51	262		Pn	18 51 14.2	-0.5
MSVF	Nonsavu	6.06	48	Pn	Pn	18 51 21.7	-0.6
DZM	Mont Dzumac	6.41	267	Pn	Pn	18 51 27.5	+0.4
	13nm,0.6s,baz=270,slow=20						
DZM				LR	LR	18 53 20.1	
	comp=Z,356nm,20.6s,baz=3.0,slow=33						
DZM	Mont Dzumac	6.41	267		Pn	18 51 26.7	-0.4
SANVU	Saraoutou	8.67	317		Pn	18 51 57.3	-0.7
RAO	Raoul Island	10.75	135	LR	LR	18 55 29.7	
	comp=Z,2μm,21.9s,baz=296,slow=32						
TOZ	Tahuroa Road	15.89	174		P	18 53 38.0	-0.9
URZ	Urewera	16.62	170	Pn	P	18 53 46.7	-0.5
	0.3nm,0.3s,baz=349,slow=6.2,SNR=4.6						
URZ				LR	LR	18 58 46.6	
	comp=Z,1μm,18.2s,baz=352,slow=32						
	27nm,1.0s						
RTZ	Ruatahuna	16.95	170		Pn	18 53 49.8	+0.5
MRZ	Mangatainoka R	18.80	175	P	P	18 54 09.8	-1.3
TCW	Tory Channel	19.27	178	P	P	18 54 16.7	+0.4
TUWZ	Tuamarina	19.48	179	P	Pn	18 54 19.8	-0.2
KHZ	Kahutara	20.46	180	P	P	18 54 28.9	-0.3
EIDS	Eidsvold	20.69	256		P	18 54 31.1	-0.8
ARMA	Armidale	21.24	242		P	18 54 36.4	-1.5
ARMA				IAmb	IAmb	18 54 46.9	
	comp=Z,41nm,1.4s						
OXZ	Oxford	21.39	183	P	P	18 54 39.0	-0.3
OXZ				IAmb	IAmb	18 54 45.3	
	comp=Z,44nm,1.3s						
RAR	Rarotonga	25.00	93	LR	LR	19 02 30.2	
	comp=Z,102nm,22.0s,baz=272,slow=30						
CAN	Canberra	25.13	233	P	P	18 55 16.8	+0.3
CAN				IAmb	IAmb	18 55 29.3	
	comp=Z,39nm,1.3s						
CTA	Charters Tower	25.35	269	LR	LR	19 04 47.3	
	comp=Z,371nm,18.6s,baz=86,slow=35						
CTAO	Charters Tower	25.35	269	P	P	18 55 18.6	0.0
CTAO				IAmb	IAmb	18 55 53.0	
	comp=Z,19nm,1.1s						
PMG	Port Moresby	28.06	292	LR	LR	19 04 36.5	
	comp=Z,256nm,19.5s,baz=124,slow=32						
PMG	Port Moresby	28.06	292	P	P	18 55 44.9	+2.0
	comp=Z,12nm,1.1s						
TOO	Toolangi	28.65	231	P	P	18 55 48.5	+0.3
COEN	Coen	29.74	280	P	P	18 55 57.1	-0.8
STKA	Stephens Creek	29.92	244	P	P	18 56 00.8	+1.5
	comp=Z,4.2nm,0.8s,baz=89,slow=12,SNR=9.1						
STKA				LR	LR	19 06 48.6	
	comp=Z,304nm,20.9s,baz=45,slow=34						
	comp=Z,4.2nm,0.8s						
STKA	Stephens Creek	29.92	244		P	18 55 59.4	0.0
MGBR	Mount Gambier	32.32	233	P	P	18 56 21.3	+0.8
BBOO	Buckleboo	34.70	244		P	18 56 41.6	+0.4
BBOO				IAmb	IAmb	18 56 43.2	
	comp=Z,22nm,1.0s						
WR8	Warramunga Arr	36.28	266	P	P	18 56 54.6	-0.4
WR8				IAmb	IAmb	18 56 55.6	
	comp=Z,14nm,0.9s						
AS31	Alice Springs	36.33	259		P	18 56 55.1	-0.4
ASAR	Alice Springs	36.34	259	P	P	18 56 56.1	+0.7
	comp=Z,23nm,0.8s,baz=80,slow=10.0,SNR=107						
ASAR				LR	LR	19 11 12.5	
	comp=Z,270nm,21.4s,baz=94,slow=35						
	comp=Z,23nm,0.8s						
ASAR	Alice Springs	36.34	259		P	18 56 55.3	-0.2
WB0	Warramunga Arr	36.41	266	P	P	18 56 55.9	-0.2
WB0				IAmb	IAmb	18 56 57.2	
	comp=Z,21nm,0.9s						
WRAB	Tennant Creek	36.42	266	P	P	18 56 56.0	-0.1
WRAB				IAmb	IAmb	18 56 56.7	
	comp=Z,15nm,1.0s						
WRA	Warramunga Arr	36.43	266	P	P	18 56 56.2	-0.1
	comp=Z,9.7nm,0.9s,baz=102,slow=8.5,SNR=26						
	comp=Z,9.7nm,0.9s						
JAY	Jayapura	37.12	297	LR	LR	19 11 32.3	
	comp=Z,151nm,21.1s,baz=338,slow=35						
H11S2	WAKE ISLAND Hy	40.67	350	T	T	19 40 43.4	
	baz=166,slow=74,SNR=7.6						
H11S3	WAKE ISLAND Hy	40.67	350	T	T	19 40 42.3	
	baz=166,slow=74,SNR=5.7						
H11S1	WAKE ISLAND Hy	40.69	350	T	T	19 40 44.3	
	baz=166						
MTN	Manton Dam	41.17	275	P	P	18 57 36.3	+0.2
MTN				IAmb	IAmb	18 58 39.8	
	comp=Z,34nm,1.4s						
FORT	Forrest	41.31	248		P	18 57 37.0	0.0
FORT				IAmb	IAmb	18 57 38.6	
	comp=Z,15nm,0.8s						
KNRA	Kununurra	42.55	270	P	P	18 57 46.8	-0.4
FITZ	Fitzroy Crossi	44.86	266	LR	LR	19 16 55.2	
	comp=Z,290nm,18.0s,baz=107,slow=36						
FITZ	Fitzroy Crossi	44.86	266	P	P	18 58 06.8	+1.0
FITZ				IAmb	IAmb	18 58 08.7	
	comp=Z,17nm,0.9s						
GUMO	Guam	45.00	319	LR	LR	19 15 11.5	
	comp=Z,248nm,21.7s,baz=118,slow=34						
BATI	Baumata	48.95	276	LR	LR	19 18 51.1	
	comp=Z,244nm,21.2s,baz=133,slow=36						
PSA00	Pilbara Seismi	49.48	260	P	P	18 58 41.2	-0.7
MBWA	Marble Bar	49.67	260	P	P	18 58 43.4	+0.1
NWAO	Narrogin (SRO)	50.50	245	LR	LR	19 18 19.0	
	comp=Z,273nm,21.6s,baz=172,slow=34						
MORW	Morawa	51.80	250	P	P	18 58 58.7	-0.6
DAV	Davao City (W)	54.96	296	LR	LR	19 24 16.2	
	comp=Z,46nm,18.2s,baz=330,slow=38						
VNDA	Vanda	55.95	183	P	P	18 59 30.6	+1.8
	comp=Z,2.6nm,1.0s,baz=350,slow=8.5,SNR=8.2						
VNDA				LR	LR	19 19 37.0	
	comp=Z,168nm,21.0s,baz=1.0,slow=32						
	comp=Z,2.6nm,1.0s						
VNDA	Vanda	55.95	183	P	P	18 59 30.0	+1.2
SBA	Scott Base	56.09	182	P	P	18 59 30.6	+0.8
CASY	Casey	59.28	205	P	P	18 59 52.6	+0.2
JHJ	Hachijo jima 2	63.40	329	LR	LR	19 26 39.6	
	comp=Z,35nm,19.0s,baz=123,slow=35						
JOW	Kunigami	65.20	316	LR	LR	19 26 48.0	
	comp=Z,98nm,20.2s,baz=144,slow=34						
MJAR	Matsushiro Arr	66.94	330	LR	LR	19 22 21.2	
	comp=Z,130nm,22.0s,baz=136,slow=29						
JNU	Nakatsue	68.09	322	LR	LR	19 24 06.4	
	comp=Z,48nm,21.6s,baz=115,slow=30						
QSPA	South Pole Qui	68.17	180	P	P	19 00 50.6	-0.5
SSLB	Suanglung	68.26	309	P	P	19 00 49.6	-2.6
RPN	Rapa Nui	69.52	112	LR	LR	19 24 08.2	
	comp=Z,81nm,20.7s,baz=226,slow=30						
KSRS	Korea Array	72.90	324	P	P	19 01 22.8	+2.8
	comp=Z,1.8nm,0.9s,baz=148,slow=5.0,SNR=5.6						
	comp=Z,1.8nm,0.9s						
NJ2	Nanjing	74.80	314	*e*P	P	19 01 32.0	+0.6
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
IPM	Ipoh	75.38	281	P	P	19 01 34.9	-0.3
USRK	Ussuriysk Ar.	75.90	331	P	P	19 01 39.5	+2.1
	comp=Z,2.9nm,0.8s,baz=101,slow=3.9,SNR=5.2						
	comp=Z,2.9nm,0.8s						
GSI	Gunungsitoli	77.31	277	P	P	19 01 44.5	-1.6
GSI				IAmb	IAmb	19 01 47.8	
	comp=Z,18nm,1.0s						
MAW	Mawson	77.41	202	P	P	19 01 46.4	+0.7
	comp=Z,3.0nm,1.0s,baz=68,slow=8.2,SNR=3.5						
	comp=Z,3.0nm,1.0s						
CN2	Changchun	78.75	327	P	P	19 01 55.3	+1.9
BELA	Belgrano 2	79.10	174	P	P	19 01 54.5	-0.4
BELA				IAmb	IAmb	19 01 59.4	
	comp=Z,9.9nm,1.0s						
BNX	BinXian	79.19	329	⇑P	P	19 02 00.3	+4.6
BNX				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ENH	Enshi	80.33	308	P	P	19 01 59.2	-3.1
ENH				IAmb	IAmb	19 02 10.5	
	comp=Z,19nm,1.2s						
HEH	HeiHe	82.52	332	*e*P	P	19 02 18.5	+5.1
HEH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN	Xi'an	82.75	311	P	P	19 02 15.0	-0.1
XAN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CM31	Chiang Mai Arr	83.09	293	P	P	19 02 14.6	-2.5
CM31				IAmb	IAmb	19 02 25.3	
	comp=Z,9.2nm,1.1s						
CMAR	Chiang Mai Arr	83.09	293	P	P	19 02 17.9	+0.8
	comp=Z,1.7nm,0.9s,baz=136,slow=3.8,SNR=8.5						
CMAR				LR	LR	19 39 47.9	
	comp=Z,20nm,20.2s,baz=95,slow=36						
	comp=Z,1.7nm,0.9s						
CMAR	Chiang Mai Arr	83.09	293	P	P	19 02 14.4	-2.8
CHTO	Chiang Mai	83.25	293	P	P	19 02 15.6	-2.4
CHTO				IAmb	IAmb	19 02 25.7	
	comp=Z,9.5nm,1.1s						
CHTO	Chiang Mai	83.25	293	P	P	19 02 17.4	-0.5
ELIB	Princess Elisa	84.17	189	*d*P	P	19 02 20.7	-1.2
	comp=Z,3.1nm,1.0s						
PZH	PanZhiHua	84.38	301	P	P	19 02 23.3	-0.4
HHC	Hu-ho-hao-te	84.75	318	*e*P	P	19 02 27.0	+1.8
HHC				pmax	pmax		
	comp=Z,2.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,4.5s						
HHC				LR	LR		
	comp=Z,150nm,16.3s						
HHC				LR	LR		
	comp=Z,150nm,16.1s						
HHC				LR	LR		
	comp=Z,250nm,16.6s						
CMB	Columbia Colle	86.12	46	IAmb	IAmb	19 02 44.5	
	comp=Z,7.8nm,1.1s						
TROLL	Troll, Antarti	86.12	183	⇑P	P	19 02 30.2	-1.5
	comp=Z,648nm,0.8s						
SEY	Seymchan	86.16	351	P	P	19 02 33.2	+1.6
	comp=Z,2.8nm,0.9s,baz=39,slow=7.2,SNR=4.5						
	comp=Z,2.8nm,0.9s						
ISA	Isabella, Lake	86.22	49	IAmb	IAmb	19 02 40.0	
	comp=Z,12nm,1.1s						
SNAA	Sanae	86.64	181	P	P	19 02 36.1	+2.0
	comp=Z,3.8nm,0.9s,baz=28,slow=16,SNR=4.1						
	comp=Z,3.8nm,0.9s						
SNAA	Sanae	86.64	181	P	P	19 02 35.3	+1.1
CLC	China Lake	86.92	49	IAmb	IAmb	19 02 43.3	
	comp=Z,6.6nm,1.1s						
LZH	Lanzhou	87.37	311	*e*P	P	19 02 45.5	+7.1
LZH				pP	sP	19 02 55.3	+1.3
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
NVAR	Mina Array Bea	87.73	47	P	P	19 02 41.1	+1.0
	comp=Z,0.9nm,0.7s,baz=223,slow=7.1,SNR=6.3						
	comp=Z,0.9nm,0.7s						
NVAR	Mina Array Bea	87.73	47	P	P	19 02 39.4	-0.7
J05D	Fort Rock, OR	88.35	42	P	P	19 02 41.8	-1.0
G08A	Pilot Rock	90.79	41		P	19 02 53.0	-1.2
G08A				IAmb	IAmb	19 03 00.1	
	comp=Z,5.5nm,1.0s						
ELK	Elko	90.93	46		P	19 02 53.2	-1.8
ELK				IAmb	IAmb	19 03 02.3	
	comp=Z,13nm,1.4s						
U15A	North Rim	90.99	51	P	P	19 02 54.1	-1.4
U15A				IAmb	IAmb	19 03 05.0	
	comp=Z,9.2nm,1.1s						
ILAR	Eielson Array	91.67	16	P	P	19 02 57.0	-0.6
	comp=Z,1.8nm,0.8s,baz=236,slow=6.2,SNR=12						
	comp=Z,1.8nm,0.8s						
SONM	Songino Array	91.67	322	P	P	19 02 58.6	+0.4
	comp=Z,0.7nm,0.5s,baz=130,slow=2.3,SNR=4.4						
	comp=Z,0.7nm,0.5s						
SONM	Songino Array	91.67	322	P	P	19 02 57.1	-1.1
H03S2	Juan Fernandez	91.70	128	T	T	20 44 24.3	
	baz=241,slow=74,SNR=7.6						
H03S1	Juan Fernandez	91.72	128	T	T	20 44 30.1	
	baz=241,slow=74,SNR=5.6						
H03S3	Juan Fernandez	91.72	128	T	T	20 44 26.2	
	baz=241,slow=74,SNR=5.3						
GTA	Gaotai	91.75	312	*e*P	P	19 03 04.5	+5.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.5s						
J26L	Joseph Creek	92.33	17	P	P	19 02 59.4	-1.4
J26L				IAmb	IAmb	19 03 06.2	
	comp=Z,8.1nm,1.0s						
I26K	Coal Creek Min	93.07	17	P	P	19 03 02.1	-2.0
I26K				IAmb	IAmb	19 03 09.4	
	comp=Z,8.4nm,1.0s						
TXAR	Lajitas Array	94.68	60	P	P	19 03 14.1	+1.5
	comp=Z,1.5nm,1.2s,baz=264,slow=1.3,SNR=5.2						
TXAR				LR	LR	19 37 16.6	
	comp=Z,52nm,21.2s,baz=256,slow=30						
	comp=Z,1.5nm,1.2s						
TXAR	Lajitas Array	94.68	60	P	P	19 03 12.9	+0.4
YKA	Yellowknife Ar	101.28	27	P	Pdif	19 03 41.1	-0.1
	comp=Z,0.3nm,0.8s,baz=261,slow=4.9,SNR=4.4						
WMQ	Urumqi	101.83	312	*e*P	Pdif	19 03 44.8	+0.6
MKAR	Makanchi Array	106.34	314	Pdiff	Pdif	19 04 07.5	+3.3
	comp=Z,0.9nm,0.8s,baz=99,slow=7.5,SNR=7.5						
BVAR	Borovoye Array	114.92	320	PKP	PKiKP	19 08 31.6	+0.3
	comp=Z,0.5nm,0.6s,baz=116,slow=0.9,SNR=3.7						
ARTI	Arti	121.75	324	PKP	PKiKP	19 08 47.2	+2.7
	comp=Z,2.2nm,0.8s,baz=239,slow=1.7,SNR=5.1						
ARTI	Arti	121.75	324		PKPdf	19 08 44.1	-0.2
AKTO	Aktyubinsk	122.63	317	PKP	PKiKP	19 08 49.0	+2.5
	comp=Z,1.8nm,0.7s,baz=112,slow=3.3,SNR=6.4						
IZVR	Izvoarele	143.34	318	⇓P	PKiKP	19 09 29.5	+1.1
TESR	Tescani	143.54	320	⇑P	PKiKP	19 09 28.9	0.0
BURAR	Bucovina Array	143.78	323	⇑P	PKiKP	19 09 29.5	+0.1
VRI	Vrincioaia	143.82	319	⇑P	PKiKP	19 09 29.7	+0.2
PLOR	Plostina	143.88	319	⇑P	PKiKP	19 09 29.5	-0.1
BISRR	Bisoca	143.99	319	PKP	PKPbc	19 09 24.0	-0.3
COVR	Voineasa-Covas	144.15	320	⇓P	PKiKP	19 09 30.3	+0.2
TURR	Turia	144.15	320	⇑P	PKiKP	19 09 29.7	-0.5
NEHR	Nehoiu	144.31	319	⇓P	PKiKP	19 09 31.0	+0.5
MLR	Muntele Rosu	144.49	319	⇑P	PKiKP	19 09 31.2	+0.2
BRIU	Brid	144.55	325	PKP	PKPbc	19 09 26.2	+0.3
DOPR	Dopca	144.57	320	⇓P	PKPdf	19 09 26.6	-0.7
BERU	Beregovo	144.81	325	PKP	PKPab	19 09 25.3	-1.3
OJC	Ojcow	144.92	330	*e*PKP	PKiKP	19 09 32.0	+0.5
OJC	Ojcow	144.92	330	PKP	PKPab	19 09 25.7	-1.3
NIE	Niedzica	145.23	329	*e*PKP	PKPdf	19 09 29.9	+1.6
NIE	Niedzica	145.23	329	PKP	PKPbc	19 09 26.2	-1.9
ARR	Arges	145.34	320	⇑P	PKiKP	19 09 33.1	+0.4
HUMR	Humele	145.56	318	⇑P	PKiKP	19 09 31.6	-1.4
LANS	Liptovska Anna	145.81	329	*e*	PKiKP	19 09 32.7	-0.8
KSP	Ksiaz	146.00	334	*e*PKP	PKiKP	19 09 35.3	+1.5
KSP	Ksiaz	146.00	334	PKP	PKPdf	19 09 28.4	-1.2
STEB	Steborice	146.04	331	*e*PKP	PKPab	19 09 30.8	-0.3
OSTC	Ostas	146.25	334	*e*PKP	PKPbc	19 09 31.1	-0.1
OSTC				*e*x	x	19 09 35.7	
MORC	Moravsky Berou	146.26	331	⇑P	PKPdf	19 09 30.1	0.0
MORC	Moravsky Berou	146.26	331	*e*PKIKP	PKiKP	19 09 33.8	-0.6
DPC	Dobruska-Polom	146.36	333	*e*PKP	PKPab	19 09 32.5	+0.1
DPC				*e*x	x	19 09 35.8	
DPC	Dobruska-Polom	146.36	333	PKP	PKPdf	19 09 29.2	-1.1
PLVB	Pleven	146.36	317	⇓P	PKiKP	19 09 34.5	-0.2
UPC	Upice	146.37	334	*e*PKP	PKPab	19 09 32.6	+0.2
KRLC	Kraliky	146.37	332	*e*PKP	PKPab	19 09 33.0	+0.5
GZR	Gura Zlata	146.42	321	⇓P	PKPab	19 09 33.2	+0.4
MAUC	Maruska	146.43	331	*e*PKP	PKPbc	19 09 32.0	+0.2
PSZ	Piszkesteto	146.44	327	⇓P	PKPbc	19 09 31.6	-0.3
EKA	Eskdalemuir Ar	146.51	356	PKPbc	PKPab	19 09 32.3	-0.4
	comp=Z,2.0nm,0.7s,baz=359,slow=3.5,SNR=5.4						
JAVC	Velka Javorina	146.86	330	*e*PKIKP	PKPab	19 09 33.9	-0.5
CLL	Collm	146.90	337	PKP	PKPdf	19 09 29.8	-1.3
CLL	Collm	146.90	337	*i* PKPbc	PKPab	19 09 34.3	-0.1
	comp=Z,7.0nm,1.0s						
CLL				*i* PKiKP	PKiKP	19 09 37.8	+2.2
	comp=Z,12nm,1.0s						
CLL				*i* PKPmax		19 09 40.4	
	comp=Z,39nm,1.5s						
BZS	Buzias	146.96	322	⇓P	PKPab	19 09 34.1	-0.7
VRAC	Vranov	147.02	332	⇓P	PKPbc	19 09 33.7	+0.2
VRAC	Vranov	147.02	332	*e*PKIKP	PKPab	19 09 34.9	-0.1
KRUC	Moravsky	147.29	332	*e*PKIKP	PKPab	19 09 35.4	-0.6
PRU	Pruhonice	147.37	334	*e*PKP	PKPab	19 09 35.9	-0.4
PRU				*e*x	x	19 09 39.7	
MODS	Modra-Piesok	147.39	330	*e*PKP	PKPbc	19 09 34.4	-0.1
KARP	Karpathos	147.55	302	PKP	PKPdf	19 09 31.8	-0.9
ZVC	Zvikov	147.94	334	*e*PKP	PKPbc	19 09 35.7	-0.2
ZVC				*e*x	x	19 09 41.2	
MPLH	Magyarpolny	148.12	328	PKP	PKPdf	19 09 32.1	-1.1
MORH	Mrgy, Hungar	148.20	326	⇓P	PKPbc	19 09 35.3	-1.4
MORH	Mrgy, Hungar	148.20	326	PKP	PKPdf	19 09 32.3	-1.1
RONA	Rosalia, Austr	148.34	330	*e*PKP	PKiKP	19 09 38.6	-0.2
	comp=Z,9.7nm,0.9s						
CONA	Conrad Observa	148.37	331	*e*PKP	PKiKP	19 09 39.0	+0.1
	comp=Z,22nm,1.7s						
CKRC	Cesky Krumlov	148.38	333	*e*PKP	PKPbc	19 09 36.5	-0.6
KHC	Kasperske Hory	148.43	334	*e*PKP	PKPbc	19 09 36.7	-0.6
KHC				*e*x	x	19 09 41.9	
KHC	Kasperske Hory	148.43	334	PKP	PKPdf	19 09 32.5	-1.3
GERES	GERESS Array B	148.61	334	PKPbc	PKPbc	19 09 37.0	-0.9
	comp=Z,4.2nm,0.8s,baz=46,slow=5.8,SNR=12						
ARSA	Arzberg	149.02	330	*i* PKP	PKPab	19 09 43.5	+0.4
	comp=Z,8.5nm,1.5s						
MOA	Molln	149.14	332	*i* PKP	PKPab	19 09 43.1	-0.4
	comp=Z,8.6nm,1.4s						
BIOA	Bad Ischl, Aus	149.53	332	*e*PKiKP	PKiKP	19 09 41.0	-0.2
	comp=Z,10nm,1.0s						
BTNL	Ternell	149.66	344	*d*PKPab	PKPab	19 09 44.5	-1.0
SOKA	Soboth	149.67	330	*i* PKP	PKPab	19 09 44.6	-1.2
	comp=Z,16nm,1.7s						
MEM	Membach	149.67	344	*d*PKPab	PKPab	19 09 44.6	-0.9
UCC	Uccle	149.90	346	*d*PKPab	PKPab	19 09 43.9	-2.5
KBA	Koelnbreinsper	150.13	332	*i* PKP	PKPab	19 09 45.8	-2.0
	comp=Z,18nm,1.4s						
LESA	Schwarzleotal	150.15	333	*i* PKP	PKPab	19 09 45.4	-2.4
	comp=Z,15nm,0.9s						
BMRD	Maredsous	150.26	345	*d*PKPab	PKPab	19 09 46.4	-1.5
MYKA	Terra Mystica	150.34	331	*i* PKP	PKPab	19 09 46.0	-2.5
	comp=Z,6.5nm,0.8s						
DOU	Dourbes	150.50	345	*d*PKPab	PKPab	19 09 46.7	-2.2
WLF	Walferdange	150.50	343	*d*PKP	PKPbc	19 09 42.1	-0.2
WLF				*d*PKPab	PKPab	19 09 47.2	-1.8
WATA	Walderalm	150.67	334	*i* PKP	PKPab	19 09 47.3	-2.7
	comp=Z,17nm,0.9s						
WTTA	Wattenberg	150.71	334	*i* PKP	PKPab	19 09 47.6	-2.5
	comp=Z,12nm,0.9s						
ABTA	Abfaltersbach	150.75	332	*i* PKP	PKiKP	19 09 46.6	+2.8
	comp=Z,11nm,0.9s						
RETA	Reutte	150.87	335	*i* PKP	PKPab	19 09 48.0	-2.6
	comp=Z,7.6nm,1.0s						
SQTA	Sankt Quirin	150.91	335	*i* PKP	PKPab	19 09 47.4	-3.5
	comp=Z,9.1nm,0.7s						
FETA	Feichten	151.26	335	*i* PKP	PKPab	19 09 48.9	-3.6
	comp=Z,11nm,0.9s						
DAVA	Damuels	151.37	336	*e*PKP	PKPab	19 09 49.4	-3.5
	comp=Z,15nm,1.6s						
ESDC	Sonseca Array	162.13	353	PKPab	PKPab	19 10 42.3	+3.2
	comp=Z,0.8nm,1.0s,baz=340,slow=3.6,SNR=4.7						
TORD	Torodi Ar. Bea	168.21	224	PKP	PKPdf	19 09 59.4	+1.2
	comp=Z,1.5nm,0.9s,baz=356,slow=2.4,SNR=4.3						
TORD				PKPab	PKPab	19 11 05.5	-1.0
	comp=Z,0.9nm,0.8s,baz=109,slow=4.4,SNR=3.8						

IDC 28 19:22:52.0±20.0**, 29°.98S**×**179°.99W, h0^{km}, mb3.6**/3**, mbtmp3.7**/4**, ML3.4**/1**, Error ellipse: s-maj=368.8km s-min=49.6km az=72.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.60	195	Pn	Pn	19 24 57.8	+0.1
	0.5nm,0.3s,baz=259,slow=4.6,SNR=8.9						
URZ				Sn	Sn	19 26 23.6	-12
	1.7nm,0.3s,baz=185,slow=22,SNR=12						
	9.8nm,0.9s						
STKA	Stephens Creek	32.90	257	P	P	19 29 28.5	+0.5
	1.2nm,0.5s,baz=98,slow=8.3,SNR=4.2						
	1.2nm,0.5s						
ASAR	Alice Springs	41.41	267	P	P	19 30 39.8	-0.7
	0.2nm,0.3s,baz=106,slow=7.4,SNR=9.0						
	0.2nm,0.3s						
WRA	Warramunga Arr	42.36	273	P	P	19 30 48.2	0.0
	0.2nm,0.3s,baz=111,slow=8.4,SNR=6.6						
	0.2nm,0.3s						

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*NEIC **28** 19:52:01.7±2.1, 19°.22N±0°.10×64°.49W±0°.06, h10^{km}±2^{km}, ML2.8/18, Md3.6/7(RSPR), Error ellipse: s-maj=17.1km s-min=9.5km az=9.0*

*RSPR **28** 19:52:09.9, 19°.33N×64°.89W, h34^{km}±9^{km}, MD3.6/7*

ISC 28 19:51:59.4±2.6**, 19°.4N**±0°.1×**64°.49W**±0°.09**, h12^{km}**±14^{km}**, n35, σ1^{s}69**/39**, 6C-4D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUMP	Col San Antoni	1.77	227		Pb	19 52 32.5	+0.6
HUMP					Sn	19 52 51.7	-0.8
HUMP	Col San Antoni	1.77	227	IAML		19 53 04.8	
	72nm,0.4s						
HUMP	Col San Antoni	1.77	227	⇓*i*P	Pg	19 52 33.1	-0.4
HUMP	Col San Antoni	1.77	227	*e*S	Sn	19 52 51.1	-1.3
GCPR	Guaynabo City	1.84	236		Pb	19 52 33.0	0.0
GCPR					Sn	19 52 51.7	-2.4
GCPR	Guaynabo City	1.84	236	⇑*e*P	Pb	19 52 33.2	+0.2
GCPR	Guaynabo City	1.84	236	*e*S	Sn	19 52 53.1	-1.0
SJG	San Juan	2.01	232		Pn	19 52 34.4	+1.3
SJG				IAML		19 53 12.5	
	55nm,0.6s						
SJG	San Juan	2.01	232	⇑*e*P	Pn	19 52 33.1	-0.1
SJG	San Juan	2.01	232	*e*S	Sn	19 52 55.6	-2.7
ECPR	Experimental S	2.06	240	Pn	Pb	19 52 35.8	-1.0
ECPR				IAML		19 53 04.2	
	143nm,0.3s						
ECPR				IAML		19 53 06.2	
	124nm,0.6s						
ECPR	Experimental S	2.06	240	⇓*i*P	Pb	19 52 36.3	-0.5
ECPR	Experimental S	2.06	240	*e*S	Sn	19 52 59.6	+0.1
SABA	Saba	2.10	146	Pn	Pn	19 52 35.1	+0.7
SABA				IAML		19 53 20.6	
	comp=N,129nm,1.2s						
CELP	Cerrillos	2.36	238	Pn	Pn	19 52 40.2	+2.2
CELP				IAML		19 53 20.5	
	comp=N,46nm,1.1s						
CELP				IAML		19 53 20.6	
	comp=N,41nm,0.5s						
AOPR	Arecibo Observ	2.37	245		Pn	19 52 39.6	+1.4
AOPR					Sn	19 53 06.2	-1.1

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
AOPR	Arecibo Observ	2.37	245	⇓eP	Pn	19 52 40.4	+2.2
AOPR	Arecibo Observ	2.37	245	eS	Sn	19 53 04.3	-3.0
UUPR	Utuado, UPR, P	2.39	243	Pn	Pn	19 52 39.9	+1.5
OBIP	Obispado Ponce	2.40	237		Pn	19 52 40.8	+2.2
OBIP					Sn	19 53 09.2	+1.2
OBIP				IAML		19 53 15.3	
	comp=N,42nm,0.6s						
OBIP	Obispado Ponce	2.40	237	⇓eP	Pb	19 52 41.4	-1.2
OBIP	Obispado Ponce	2.40	237	eS	Sn	19 53 09.4	+1.5
LSP	Las Mesas	2.73	245		Pb	19 52 46.6	-1.7
LSP					Sn	19 53 16.7	+0.5
LSP	Las Mesas	2.73	245	⇑eP	Pb	19 52 46.6	-1.7
LSP	Las Mesas	2.73	245	eS	Sn	19 53 16.7	+0.5
MLPR	Magueyes Islan	2.79	241	⇑eP	Pn	19 52 46.6	+2.6
MLPR	Magueyes Islan	2.79	241	eS	Sn	19 53 16.7	-0.9
CRPR	Cabo Rojo, PR	2.83	242		Pn	19 52 46.5	+2.0
CRPR					Sn	19 53 19.9	+1.4
CRPR	Cabo Rojo, PR	2.83	242	IAML		19 53 26.9	
	comp=N,38nm,1.4s						
CRPR				IAML		19 53 33.6	
	comp=N,37nm,1.2s						
CRPR	Cabo Rojo, PR	2.83	242	⇑eP	Pn	19 52 47.0	+2.6
CRPR	Cabo Rojo, PR	2.83	242	eS	Sn	19 53 17.9	-0.6
DR12	Loma Pena Alta	4.66	264	Pn	Pn	19 53 10.9	+1.1
SDDR	Presa de Saban	6.44	268		Pn	19 53 36.0	+1.8
SDDR	Presa de Saban	6.44	268	⇑eP	Pn	19 53 36.3	+2.1
SDDR	Presa de Saban	6.44	268	eS	Sn	19 54 44.6	-3.1

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*DNK **28** 20:04:22.7±2.9, 81°.16N×3°.01W, h32^{km}±21^{km}, ML1.8, Presumed earthquake*
*BER **28** 20:04:22.9±2.3, 81°.13N×3°.96W, h17^{km}±18^{km}, Mw3.6, ML3.0(NAO), Confirmed Earthquake*
*KOLA **28** 20:04:23.6, 81°.70N×0°.92E, h0^{km}, ML2.5, Error ellipse: s-maj=108.5km s-min=26.5km az=50.0, Arctic Ocean*
*FCIAR **28** 20:04:23.0, 80°.92N×3°.15W, h10^{km}, station ZFI2 has station magnitude of 3.50 station OMEGA has station magnitude of 3.60*
ISC 28 20:04:17.9±0.9, **81°.07N**±0°.06×**3°.95W**±0°.04, **h10**^{km}**, n33,** σ**2ˢ.59**/56, **North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOR	Nord	2.00	292	Pn	Pn	20 04 54.5	+2.8
NOR				Sn	Sn	20 05 16.7	-0.1
NOR	Nord	2.00	292	eP	Pn	20 04 54.1	+2.4
NOR				eS	Sn	20 05 16.8	+0.1
NOR	Nord	2.00	292	i P	Pn	20 04 54.0	+2.4
NOR				IAML		20 05 20.3	
	comp=Z,14nm,0.3s						
KBS	Kingsbay	3.50	120	Pn	Pn	20 05 14.0	+1.8
KBS				Sn	Sn	20 05 50.9	-2.7
KBS	Kingsbay	3.50	120	P	Pn	20 05 13.7	+1.5
KBS				S	Sn	20 05 50.4	-3.2
KBS	Kingsbay	3.50	120	eP	Pn	20 05 14.0	+1.8
KBS				eS	Sn	20 05 50.4	-3.2
KBS				IAML		20 05 56.3	
	comp=Z,7.4nm,0.3s						
KBS	Kingsbay	3.50	120	i P	Pn	20 05 14.2	+2.0
KBS				i S	Sn	20 05 50.0	-3.6
BRBB	Barentsburg B	4.42	123	Pn	Pn	20 05 28.6	+3.7
BRBB				Sn	Sn	20 06 16.6	+0.3
BRBB	Barentsburg B	4.42	123	P	Pn	20 05 27.9	+3.0
BRBB				S	Sn	20 06 16.1	-0.2
BRBB	Barentsburg B	4.42	123	eP	Pn	20 05 28.6	+3.7
BRBB				eS	Sn	20 06 16.6	+0.3
BRBA	Barentsburg A	4.45	123	Pn	Pn	20 05 29.1	+3.8
BRBA				Sn	Sn	20 06 16.0	-1.0
BRBA	Barentsburg A	4.45	123	eP	Pn	20 05 28.9	+3.6
BRBA				eS	Sn	20 06 16.3	-0.7
SPA0	Spitsbergen Ar	4.65	118	Pn	Pn	20 05 30.1	+2.0
	baz=317,slow=8.6						
SPA0				Sn	Sn	20 06 22.0	0.0
	baz=322,slow=22						
SPA0	Spitsbergen Ar	4.65	118	eP	Pn	20 05 30.1	+2.0
SPA0				eS	Sn	20 06 19.6	-2.4
SPA0	Spitsbergen Ar	4.65	118	Pn	Pn	20 05 30.1	+2.0
	baz=317,slow=8.6						
SPA0				IAML		20 05 32.1	
	comp=Z,17nm,0.2s						
SPA0				Sn	Sn	20 06 22.0	0.0
	baz=322,slow=22						
SPITS	Spitsbergen Ar	4.65	118	P	Pn	20 05 30.1	+2.0
DAG	Danmarks Havn	5.14	221	eP	Pn	20 05 38.2	+3.4
DAG				eS	Sn	20 06 32.1	-1.9
DAG	Danmarks Havn	5.14	221	i P	Pn	20 05 37.6	+2.9
DAG				i S	Sn	20 06 33.2	-0.8
DAG				IAML		20 06 48.8	
	comp=Z,4.4nm,0.4s						
HSPB	Hornsund (broa	5.48	128	Pn	Pn	20 05 42.7	+3.3
HSPB	Hornsund (broa	5.48	128	P	Pn	20 05 42.1	+2.7
HSPB	Hornsund (broa	5.48	128	eP	Pn	20 05 42.2	+2.8
HSPB				eS	Sn	20 06 40.6	-1.7
HSPB	Hornsund (broa	5.48	128	eP	Pn	20 05 42.7	+3.3
HSPB				IAML		20 05 43.4	
	comp=Z,10nm,0.3s						
HOPEN	Hopen	7.15	114	Pn	Pn	20 06 03.9	+1.5
HOPEN				Sn	Sn	20 07 20.0	-3.5
HOPEN	Hopen	7.15	114	eP	Pn	20 06 04.2	+1.8
HOPEN				IAML		20 06 06.7	
	comp=Z,4.0nm,0.3s						
HOPEN				eS	Sn	20 07 20.3	-3.2
DBG	Daneborg	7.58	215	Pn	Pn	20 06 11.7	+3.5
DBG				Sn	Sn	20 07 29.0	-5.0
DBG	Daneborg	7.58	215	eP	Pn	20 06 11.0	+2.8
DBG				eS	Sn	20 07 29.4	-4.6
DBG	Daneborg	7.58	215	i P	Pn	20 06 10.8	+2.5
DBG				i S	Sn	20 07 32.4	-1.6
DBG				IAML		20 07 42.9	
	comp=Z,1.3nm,0.3s						
ZFI2	Zemlya Franca-	7.92	66	eP	Pn	20 06 13.4	+0.6
ZFI2				eS	Sn	20 07 34.7	-7.6
	comp=Z,12nm,2.3s						
OMEGA	Omega	7.94	66	eP	Pn	20 06 13.5	+0.4
OMEGA				S	Sn	20 07 34.8	-8.1
	comp=Z,16nm,2.1s						
NEEM	North Greenlan	9.23	272	i P	Pn	20 06 32.0	+0.9
NEEM				i S	Sn	20 08 10.2	-4.7
NEEM				IAML		20 08 13.9	
	comp=Z,3.9nm,0.2s						
SUMG	Summit	11.30	241	i P	Pn	20 07 00.6	+1.2
SUMG				i S	Sn	20 08 56.0	-10
SUMG				IAML		20 09 04.8	
	comp=Z,1.3nm,0.2s						
SCO	Scoresbysund	11.41	212	eP	Pn	20 07 02.9	+2.3
TULEG	Thule	12.64	284	i P	Pn	20 07 16.8	-0.6
TULEG				i S	Sn	20 09 25.1	-13
TULEG				IAML		20 09 40.2	
	comp=Z,1.4nm,0.3s						

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*IDC **28** 20:10:22.6±1.3, 9°.46N×58°.08E, h0^{km}, mb3.7/8, mbtmp3.7/8, MS3.3/7, Error ellipse: s-maj=35.5km s-min=24.0km az=9.0*
ISC 28 20:10:25.3±1.3, **9°.5N**±0°.2×**58°.1E**±0°.2, **h17**^{km}**, n14,** σ**0ˢ.96**/8, **mb3.6**/7, **MS3.2**/6, **Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FURI	Furi	19.15	270	LR	LR	20 21 41.2	
	comp=Z,165nm,20.9s,baz=120,slow=35						
PALK	Pallekele	22.50	94	LR	LR	20 22 14.3	
	comp=Z,69nm,21.4s,baz=298,slow=32						
MBAR	Mbarara	29.00	251	LR	LR	20 28 17.8	
	comp=Z,73nm,18.5s,baz=70,slow=37						
AAK	Ala-Archa	36.04	21	LR	LR	20 33 06.6	
	comp=Z,59nm,18.5s,baz=118,slow=38						
BRTR	Keskin Array B	37.17	328	P	P	20 17 36.0	+0.3
	0.8nm,1.0s,baz=163,slow=10,SNR=3.8						
	0.8nm,1.0s						
LSZ	Lusaka	38.49	231	LR	LR	20 33 29.5	
	comp=Z,25nm,18.9s,baz=44,slow=36						
CMAR	Chiang Mai Arr	40.58	73	P	P	20 18 05.2	+0.8
	0.5nm,0.4s,baz=284,slow=6.9,SNR=5.5						
CMAR				LR	LR	20 34 40.8	
	comp=Z,14nm,18.1s,baz=350,slow=36						
	0.5nm,0.4s						
MKAR	Makanchi Array	42.53	25	P	P	20 18 18.9	-1.1
	0.7nm,0.9s,baz=276,slow=2.3,SNR=4.0						
	0.7nm,0.9s						
BVAR	Borovoye Array	44.56	11	P	P	20 18 37.2	+0.9
	0.3nm,0.6s,baz=211,slow=8.1,SNR=2.0						
	0.3nm,0.6s						
TSUM	Tsumeb	49.03	234	LR	LR	20 39 35.6	
	comp=Z,36nm,21.9s,baz=28,slow=36						
ZALV	Zalesovo Beam	49.26	21	P	P	20 19 12.2	-0.8
	1.3nm,0.9s,baz=213,slow=5.1,SNR=5.2						
	1.3nm,0.9s						
TORD	Torodi Ar. Bea	55.31	279	P	P	20 19 59.2	+0.6
	1.4nm,0.9s,baz=99,slow=7.2,SNR=6.4						
	1.4nm,0.9s						
ESDC	Sonseca Array	62.55	310	P	P	20 20 47.8	-0.8
	1.1nm,1.0s,baz=91,slow=7.3,SNR=5.2						
	1.1nm,1.0s						
ASAR	Alice Springs	81.02	116	P	P	20 22 39.4	-0.5
	0.9nm,0.9s,baz=274,slow=5.8,SNR=6.8						
	0.9nm,0.9s						

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*IDC **28** 20:39:01.7±9.2, 41°.60N×19°.50E, h0^{km}, mb3.5/3, mbtmp3.4/4, ML2.0/1, Error ellipse: s-maj=173.9km s-min=29.0km az=32.0*
*BEO **28** 20:39:03.9±0.5, 41°.50N×19°.56E, h1^{km}±3^{km}, ML2.6/15*
*TIR **28** 20:39:04.9, 41°.64N×19°.47E, h30^{km}±2^{km}, Ml2.9/3*
*SKO **28** 20:39:05.1, 41°.57N×19°.42E, h6^{km}, ML2.8*
*PDG **28** 20:39:05.3±0.1, 41°.63N×19°.52E, h10^{km}, ML2.6/11, Error ellipse: s-maj=0.8km s-min=0.8km az=90.0*
ISC 28 20:39:04.9±1.0, **41°.59N**±0°.02×**19°.49E**±0°.02, **h11**^{km}±7^{km}, **n84,** σ**1ˢ.05**/123, **19C-13D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.38	131	Pg	Pg	20 39 12.0	-0.4
TIR				Sg	Sg	20 39 17.3	0.0
TIR				AML	AML	20 39 18.3	
	5.5nm,0.4s						
TIR	Tirane	0.38	131	P	Pg	20 39 11.9	-0.4
TIR				Sg	Sg	20 39 17.6	+0.3
TIR				AML	AML	20 39 18.3	
	5.5nm,0.4s						
TIR	Tirane	0.38	131	i Pg	Pg	20 39 12.2	-0.1
TIR				i Sg	Sb	20 39 18.9	-0.5
ULC	Ulcinj	0.41	334	⇑iPg	Pg	20 39 12.7	-0.3
ULC				i Sg	Sg	20 39 19.4	+0.9
SDA	Shkodra	0.46	1	Pg	Pg	20 39 13.7	-0.2
SDA				Sg	Sg	20 39 20.7	+0.8
SDA	Shkodra	0.46	1	P	Pg	20 39 13.5	-0.4
SDA				Sg	Sb	20 39 21.3	-0.5
DRME	Dracevica, Mon	0.63	339	ePg	Pg	20 39 17.4	+0.2
DRME	Dracevica, Mon	0.63	339	⇑iPg	Pg	20 39 16.7	-0.5
DRME				eSg	Sb	20 39 26.4	-0.5
PHP	Peshkopia	0.72	82	Pg	Pg	20 39 17.9	-0.9
PHP				Sg	Sb	20 39 29.8	+0.4
PHP				AML	AML	20 39 31.2	
	1.9nm,0.2s						
PHP	Peshkopia	0.72	82	P	Pg	20 39 17.9	-0.9
PHP				Sg	Sb	20 39 30.1	+0.6
PHP				AML	AML	20 39 31.2	
	1.9nm,0.2s						
BUM	Brajici-Budva	0.83	328	⇓iPg	Pg	20 39 20.2	-0.8
BUM				i Sg	Sb	20 39 33.8	+1.1
PDG	Podgorica	0.85	348	Pg	Pg	20 39 20.7	-0.6
PDG				Sg	Sg	20 39 32.6	+0.1
PDG	Podgorica	0.85	348	⇑P	Pb	20 39 21.7	0.0
PDG				⇑S	Sg	20 39 32.5	+0.1
PDG	Podgorica	0.85	348	ePg	Pb	20 39 22.0	+0.3
PDG				eSg	Sb	20 39 33.6	+0.4
PDG	Podgorica	0.85	348	⇑iPg	Pg	20 39 20.3	-1.0
PDG				i Sg	Sb	20 39 33.9	+0.7
CEME	Cevo	1.04	336	⇑iPg	Pg	20 39 24.3	-0.6
CEME				eSg	Sn	20 39 40.3	+0.2
PVY	Plav	1.06	19	ePg	Pg	20 39 25.1	-0.2
PVY	Plav	1.06	19	⇑iPg	Pg	20 39 24.3	-1.0
PVY				i Sg	Sn	20 39 40.9	+0.2
OHR	Ohrid	1.10	116	i Pg	Pg	20 39 25.4	-0.6
OHR				i Sg	Sn	20 39 42.5	+1.0
OHR				eLg	Lg	20 39 44.7	
	comp=E,163nm,0.7s						
OHR				eLg	Lg	20 39 44.8	
	comp=N,165nm,0.6s						
VLO	Vlora	1.12	180	Pg	Pn	20 39 27.6	+1.0
VLO				Sg	Sn	20 39 42.3	+0.3
HCY	Herceg Novi	1.13	319	⇑iPg	Pg	20 39 25.9	-0.7
HCY				i Sg	Sn	20 39 43.8	+1.6
NKME	Niksic	1.24	341	⇓iPg	Pg	20 39 27.9	-0.8
NKME				eSg	Sn	20 39 47.3	+2.4
BEY	Berane	1.31	13	ePg	Pn	20 39 28.9	-0.4
IVA	Berane	1.31	13	⇓iPg	Pn	20 39 28.7	-0.6
IVA				i Sg	Sn	20 39 49.4	+2.6
KBN	Korca	1.38	134	Pn	Pb	20 39 31.0	+0.2
KBN				Sn	Sn	20 39 50.6	+2.1
KBN				AML	AML	20 39 57.4	
	comp=N,0.5nm,1.1s						
TREB	Trebinje	1.41	323	ePg	Pn	20 39 30.8	+0.4
TREB				eSg	Sg	20 39 51.2	+1.1
BRY	Bratogost	1.48	332	⇑iPg	Pb	20 39 32.6	0.0
BRY				i Sg	Sg	20 39 54.2	+1.5
SKO	Skopje	1.51	75	i Pg	Pb	20 39 32.9	0.0
SKO				i Sg	Sg	20 39 54.8	+1.4
SJES	Sjenica	1.71	12	ePg	Pb	20 39 36.8	+0.5
SJES				eSg	Sg	20 40 00.7	+1.0
PLE	Pljevlja	1.74	358	ePg	Pb	20 39 37.6	+0.7
PLE	Pljevlja	1.74	358	⇑iPn	Pn	20 39 36.2	+1.1
PLE				i Sn	Sg	20 40 00.4	-0.3
NOCI	Noci	2.00	247	Pn	Pn	20 39 38.0	-0.6
NOCI				Sn	Sb	20 40 06.1	0.0
NOCI	Noci	2.00	247	Pn	Pn	20 39 39.2	+0.6
NOCI				Sn	Sn	20 40 05.8	+2.1
SELS	Selova	2.02	36	ePn	Pn	20 39 40.1	+1.1
IVAS	Ivanjica	2.04	14	ePn	Pn	20 39 40.7	+1.4
BARS	Barje	2.12	54	⇑iPn	Pn	20 39 41.1	+0.9
BARS				eSn	Sb	20 40 09.9	+0.3
BARS	Barje	2.12	54	ePn	Pn	20 39 41.1	+0.9
IGT	Igoumenitsa	2.16	162	Pn	Pn	20 39 42.1	+1.3
IGT				Sn	Sb	20 40 11.0	+0.3
IGT	Igoumenitsa	2.16	162	ePg	Pn	20 39 41.3	+0.5
GOCS	Kraljevo Serbi	2.22	27	ePn	Pn	20 39 43.0	+1.3
BBLS	Lazi&#263i	2.27	359	ePn	Pb	20 39 44.8	-1.1
VAY	Valandovo	2.33	96	i Pn	Pn	20 39 44.2	+1.0
VAY				eSn	Sn	20 40 12.8	+0.9
VAY				eLg	Lg	20 40 14.1	
	comp=E,26nm,0.9s						
VAY				eLg	Lg	20 40 20.1	
	comp=N,56nm,0.8s						
BOSS	Bosilegrad	2.41	67	ePn	Pn	20 39 45.3	+1.1
GRUS	Gruza	2.46	21	ePn	Pn	20 39 45.6	+0.6
DIVS	Divibare	2.53	8	ePn	Pn	20 39 48.4	+2.4
BOVS	Bovan	2.62	38	⇑P	Pn	20 39 48.7	+1.6
BOVS				⇓S	Sn	20 40 19.4	+0.6
BOVS	Bovan	2.62	38	ePn	Pn	20 39 48.0	+0.9
TRUS	Trudelj	2.71	14	ePn	Pb	20 39 51.4	-2.0
KKB	Krupnik	2.74	84	⇓iPn	Pn	20 39 50.1	+1.4
KKB				eSn	Sn	20 40 24.4	+2.5
ZAPS	Zavoj	2.87	53	ePn	Pn	20 39 51.4	+0.8
VTS	Vitosha	2.97	69	ePg	Pn	20 39 53.3	+1.2
ZAGS	Zajecar	3.00	41	ePn	Pn	20 39 53.0	+0.6
BORS2	Bor- Borsko je	3.11	36	ePn	Pn	20 39 53.7	-0.2
KUBS	Kucevo	3.24	29	ePn	Pn	20 39 54.4	-1.3
FRGS	Fruska Gora	3.57	4	ePn	Pn	20 40 00.7	+0.5
MDVR	Moldovita	3.58	26	⇓P	Pn	20 40 01.0	+0.7
MDVR				⇓S	Sn	20 40 42.4	-0.2
MDVR	Moldovita	3.58	26	ePn	Pn	20 40 00.7	+0.3
HERR	Herculane	3.92	32	⇓P	Pn	20 40 06.1	+1.0
HERR				⇑S	Sn	20 40 51.9	+0.9
BZS	Buzias	4.31	20	⇑P	Pn	20 40 11.6	+1.3
BZS	Buzias	4.31	20	ePn	Pn	20 40 10.9	+0.6
GZR	Gura Zlata	4.49	31	⇓P	Pn	20 40 14.5	+1.6
GZR				⇑S	Sn	20 41 05.6	+0.5
GZR	Gura Zlata	4.49	31	ePn	Pn	20 40 13.3	+0.4
MORH	Mrgy, Hungar	4.66	353	⇑P	Pn	20 40 17.1	+1.9
ELND	Elena	4.92	72	⇓P	Pn	20 40 20.4	+1.6
SIRR	Siria	4.93	18	⇓P	Pn	20 40 20.3	+1.4
SIRR				⇑S	Sn	20 41 15.7	-0.2
LOT	Lotru	4.95	38	⇑P	Pn	20 40 20.6	+1.3
LOT				⇓S	Sn	20 41 17.0	+0.4
BOJS	Bojanci	4.97	323	ePn	Pn	20 40 19.3	-0.2
HUMR	Humele	4.98	52	⇑P	Pn	20 40 20.6	+1.0
ARR	Arges	5.31	43	⇓P	Pn	20 40 26.0	+1.7
CEY	Cerknica	5.53	320	ePn	Pn	20 40 27.5	+0.3
SOKA	Soboth	6.01	329	ePn	Pn	20 40 34.0	+0.3
	comp=N,0.1nm,0.2s						
OBKA	Obir	6.07	326	ePn	Pn	20 40 36.7	+2.2
	comp=N,0.5nm,0.2s						
ARSA	Arzberg	6.33	335	ePn	Pn	20 40 38.4	+0.3
	comp=N,1.7nm,0.5s						
KBA	Koelnbreinsper	7.03	323	ePn	Pn	20 40 48.2	+0.3
	comp=N,6.7nm,0.5s						
ABTA	Abfaltersbach	7.19	318	ePn	Pn	20 40 50.2	+0.2
	comp=N,0.1nm,0.1s						
MOA	Molln	7.28	331	ePn	Pn	20 40 52.5	+1.5
	comp=N,0.4nm,0.2s						
BIOA	Bad Ischl, Aus	7.38	328	ePn	Pn	20 40 54.0	+1.4
	comp=N,0.5nm,0.3s						
LESA	Schwarzleotal	7.59	322	ePn	Pn	20 40 55.5	0.0
	comp=N,0.6nm,0.3s						
WTTA	Wattenberg	7.98	318	ePn	Pn	20 41 01.8	+0.9
	comp=N,0.5nm,0.2s						
WATA	Walderalm	8.06	318	ePn	Pn	20 41 03.4	+1.5
	comp=N,0.7nm,0.3s						
GERES	GERESS Array B	8.32	333	Pn	Pn	20 41 05.0	-0.5
	baz=153,slow=14,SNR=1.8						
	comp=N,0.2nm,0.5s						
FINES	FINESS Array B	20.28	9	P	P	20 43 38.6	-1.6
	comp=N,1.5nm,0.9s,baz=182,slow=11,SNR=1.6						
	comp=N,1.5nm,0.9s						
ZALV	Zalesovo Beam	44.07	51	P	P	20 47 10.8	-1.8
	comp=N,0.5nm,0.3s,baz=282,slow=7.4,SNR=4.0						
	comp=N,0.5nm,0.3s						
MKAR	Makanchi Array	44.27	61	P	P	20 47 12.8	-1.5
	comp=N,0.3nm,0.5s,baz=280,slow=6.0,SNR=4.3						
	comp=N,0.3nm,0.5s						

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*IDC **28** 20:55:43.2±3.6, 20°.68S×70°.39W, h0^{km}, mb3.8/1, mbtmp3.6/2, ML3.2/1, MS1.9/1, Error ellipse: s-maj=121.3km s-min=44.9km az=105.0*
*SJA **28** 20:55:43.3±2.0, 19°.99S×70°.98W, h21^{km}±7^{km}, ML3.6, MW3.5*
*GUC **28** 20:55:46.1±0.9, 19°.95S×70°.95W, h25^{km}±6^{km}, ML3.6*
ISC 28 20:55:44.1±1.7, **19°.94S**±0°.03×**70°.98W**±0°.06, **h13**^{km}±11^{km}, **n38,** σ**0ˢ.95**/53, **7C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA02	Huaiquique	0.86	113	IAML		20 56 14.8	
	comp=N,5µm,0.2s						
TA02	Huaiquique	0.86	113	i P	Pb	20 56 01.0	+0.1
TA02				IAML		20 56 15.3	
	comp=Z,1µm,0.1s						
TA01	Diego Aracena	0.98	130	⇑iP	Pb	20 56 03.1	+0.2
TA01				i S	Sb	20 56 15.9	+0.2
TA01				IAML		20 56 16.9	
	comp=N,2µm,0.2s						
TA01	Diego Aracena	0.98	130	i P	Pb	20 56 02.4	-0.4
TA01				IAML		20 56 16.9	
	comp=Z,837nm,0.5s						
HMBC	Humberstone	1.08	109	⇓iP	Pb	20 56 04.7	0.0
HMBC				i S	Sb	20 56 19.0	+0.2
HMBC				IAML		20 56 20.9	
	comp=E,3µm,0.4s						
HMBC				IAML		20 56 21.0	
	comp=E,3µm,0.3s						
HMBC	Humberstone	1.08	109	i P	Pb	20 56 04.0	-0.7
HMBC				eS	Sn	20 56 20.0	+0.1
HMBC				IAML		20 56 21.1	
	comp=Z,2µm,0.3s						
PATCX	Punta Patache	1.17	139	⇑iP	Pn	20 56 06.1	-0.2
PATCX				i S	Sb	20 56 20.8	-0.7
PATCX				IAML		20 56 22.8	
	comp=N,1µm,0.3s						
PATCX	Punta Patache	1.17	139	i P	Pn	20 56 05.5	-0.8
PATCX				eS	Sb	20 56 20.7	-0.7
PATCX				IAML		20 56 27.9	
	comp=Z,745nm,0.3s						
PB11	IPOC Station P	1.26	82	⇓iP	Pb	20 56 08.1	+0.3
PB11				i S	Sn	20 56 24.2	-0.1
PB11				IAML		20 56 26.2	
	comp=N,4µm,0.4s						
PB11	IPOC Station P	1.26	82	i P	Pn	20 56 06.6	-0.8
PB11				eS	Sn	20 56 24.4	+0.1
PB11				IAML		20 56 25.8	
	comp=Z,4µm,0.3s						
PX03	IPOC Station P	1.35	110	eP	Pn	20 56 08.4	-0.3
PX03				i S	Sn	20 56 26.5	0.0
PX03				IAML		20 56 28.1	
	comp=N,4µm,0.2s						
PB12	IPOC Station P	1.45	25	⇑iP	Pb	20 56 11.4	+0.4
PB12				i S	Sg	20 56 31.7	+0.8
PB12				IAML		20 56 37.8	
	comp=E,762nm,0.5s						
PB12	IPOC Station P	1.45	25	i P	Pb	20 56 10.8	-0.2
PB12				eS	Sg	20 56 33.2	+2.3
PB12				IAML		20 56 35.6	
	comp=Z,422nm,0.8s						
AP01	Chacalluta	1.67	21	eP	Pb	20 56 14.4	-0.2
AP01				IAML		20 56 44.7	
	comp=E,2µm,0.5s						
AP01	Chacalluta	1.67	21	i P	Pb	20 56 14.3	-0.3
AP01				IAML		20 56 49.7	
	comp=Z,787nm,1.2s						
GO01	Chusmiza	1.70	81	⇑iP	Pn	20 56 14.9	+1.0
GO01				i S	Sb	20 56 37.8	+0.8
GO01				IAML		20 56 39.3	
	comp=N,4µm,0.3s						
GO01	Chusmiza	1.70	81	i P	Pn	20 56 14.4	+0.6
GO01				IAML		20 56 38.6	
	comp=Z,2µm,0.3s						
PB02	IPOC Station P	1.71	144	⇑iP	Pn	20 56 13.8	+0.1
PB02				i S	Sn	20 56 36.0	+0.5
PB02				IAML		20 56 43.9	
	comp=E,3µm,0.5s						
PB02	IPOC Station P	1.71	144	i P	Pn	20 56 13.3	-0.4
PB02				eS	Sb	20 56 37.6	+0.7
PB02				IAML		20 56 44.2	
	comp=Z,2µm,0.5s						
PB08	IPOC Station P	1.73	97	eP	Pn	20 56 14.9	+0.8
PB08				i S	Sb	20 56 37.3	-0.4
PB08				IAML		20 56 41.1	
	comp=N,712nm,0.5s						
PB08	IPOC Station P	1.73	97	i P	Pn	20 56 14.4	+0.3
PB08				eS	Sn	20 56 36.9	+0.6
PB08				IAML		20 56 39.0	
	comp=Z,572nm,0.6s						
PB01	IPOC Station P	1.78	129	⇑iP	Pn	20 56 15.2	+0.6
PB01				i S	Sn	20 56 37.4	+0.2
PB01				IAML		20 56 45.1	
	comp=N,889nm,0.6s						
PB01	IPOC Station P	1.78	129	i P	Pn	20 56 14.8	+0.1
PB01				eS	Sn	20 56 35.0	-2.1
PB01				IAML		20 56 42.4	
	comp=Z,693nm,0.8s						
PB07	IPOC Station P	2.06	150	IAML		20 56 57.5	
	comp=E,373nm,0.6s						
PB07	IPOC Station P	2.06	150	i P	Pn	20 56 18.2	-0.3
PB07				IAML		20 56 53.8	
	comp=Z,554nm,0.4s						
PB16	IPOC Station P	2.11	41	⇑iP	Pb	20 56 21.4	-1.2
PB16				i S	Sg	20 56 51.1	-1.0
PB16				IAML		20 57 01.3	
	comp=N,426nm,0.5s						
PB16	IPOC Station P	2.11	41	i P	Pn	20 56 20.8	+1.1
PB16				eS	Sg	20 56 52.3	+0.1
PB16				IAML		20 56 54.6	
	comp=Z,426nm,0.4s						
PB03	IPOC Station P	2.40	152	IAML		20 57 06.1	
	comp=E,227nm,0.7s						
PB03	IPOC Station P	2.40	152	i P	Pn	20 56 23.6	+0.4
PB03				IAML		20 57 07.7	
	comp=Z,212nm,0.4s						
PB09	IPOC Station P	2.46	139	IAML		20 57 10.4	
	comp=N,484nm,0.7s						
PB09	IPOC Station P	2.46	139	i P	Pn	20 56 25.1	+1.1
PB09				IAML		20 57 04.3	
	comp=Z,406nm,0.8s						
PB18	Visviri	2.73	32	IAML		20 57 31.7	
	comp=E,436nm,0.8s						
PB05	IPOC Station P	2.99	166	i P	Pn	20 56 30.4	-1.0
PB05				IAML		20 57 35.7	
	comp=Z,92nm,0.6s						
PB06	IPOC Station P	3.05	155	i P	Pn	20 56 32.5	+0.4
PB06				IAML		20 57 26.4	
	comp=Z,124nm,0.5s						
LPAZ	La Paz	4.53	37	Pn	Pb	20 56 59.7	-4.1
	comp=Z,0.6nm,0.3s,baz=206,slow=13,SNR=8.2						
LPAZ				Pg	Pg	20 57 10.7	-0.2
	comp=Z,1.0nm,0.3s,baz=206,slow=12,SNR=16						
LPAZ				LR	LR	20 58 32.0	
	comp=Z,11nm,18.9s,baz=314,slow=35						
	comp=Z,1.7nm,0.4s						

GO02	Mina Guanaco	5.36	166	*i* P	Pn	20 57 05.3	+1.3
GO02				IAML		20 58 39.2	
	comp=Z,27nm,0.8s						
TORD	Torodi Ar. Bea	78.68	72	P	P	21 07 46.3	-0.2
	comp=Z,0.5nm,0.6s,baz=259,slow=3.4,SNR=4.0						
	comp=Z,0.5nm,0.6s						
MKAR	Makanchi Array	145.45	33	PKPbc	PKPab	21 15 23.1	+1.1
	comp=Z,0.3nm,0.7s,baz=296,slow=4.6,SNR=2.1						

IDC 28 20:59:19.5±3.4, 5°.11S×134°.76E, h0^{km}, mb3.4/1, mbtmp3.2/3, ML3.3/2, MS3.2/1, Error ellipse: s-maj=151.1km s-min=33.9km az=79.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	12.11	245	LR	LR	21 07 40.8	
	comp=Z,106nm,19.1s,baz=212,slow=41						
WRA	Warramunga Arr	14.75	182	Pn	Pn	21 02 49.0	-0.6
	0.1nm,0.3s,baz=0.5,slow=13,SNR=4.7						
	0.2nm,0.4s						
ASAR	Alice Springs	18.47	182	P	Pn	21 03 37.2	+0.1
	0.1nm,0.3s,baz=6.2,slow=12,SNR=13						
	0.5nm,0.8s						
MKAR	Makanchi Array	69.35	324	P	P	21 10 29.1	0.0
	0.2nm,0.5s,baz=125,slow=7.6,SNR=2.2						
	0.2nm,0.5s						

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*NOU **28** 21:00:24.5, 18°.60S×177°.52W, h530^{km}, mb4.5/16, Fiji Islands Region*
*IDC **28** 21:00:26.3±3.8, 19°.52S×177°.95W, h404^{km}±37^{km}, mb3.6/13, mbtmp4.4/15, Error ellipse: s-maj=19.2km s-min=16.5km az=36.0*
*NEIC **28** 21:00:27.4±2.2, 19°.6S±0°.1×177°.8W±0°.1, h413^{km}±4^{km}, mb4.3/28, Error ellipse: s-maj=18.2km s-min=15.7km az=176.0*
ISC 28 21:00:25.6±0.4, 19°.58S±0°.09×177°.78W±0°.07, h400^{km}, n131, σ1^{s}09/127, mb4.2/29, 3C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.36	294		Pn	21 01 44.0	+2.8
MSVF	Nonsavu	4.36	294	P	Pn	21 01 46.0	+4.8
NIUE	Niue	7.43	87	P	Pn	21 02 14.2	+0.1
NIUE	Niue	7.43	87	P	Pn	21 02 14.7	+0.5
AFI	Afiamalu	8.05	46	P	Pn	21 02 18.6	-2.7
MARNC	Mare, Loyalty	13.43	259	P	P	21 03 20.9	0.0
MARNC	Mare, Loyalty	13.43	259	P	P	21 03 22.2	+1.3
PINNC	Pines Island,	14.11	255	P	P	21 03 30.2	+1.8
PINNC	Pines Island,	14.11	255	P	P	21 03 32.0	+3.6
DZM	Mont Dzumac	14.96	258	P	P	21 03 38.2	+0.4
	22nm,0.7s,baz=81,slow=18,SNR=16						
DZM	Mont Dzumac	14.96	258	P	P	21 03 39.3	+1.6
DZM	Mont Dzumac	14.96	258	P	P	21 03 39.4	+1.6
TOZ	Tahuroa Road	19.01	197	P	P	21 04 21.6	+1.0
URZ	Urewera	19.14	192	P	P	21 04 21.3	-0.4
	10nm,0.7s,baz=275,slow=4.7,SNR=9.0						
URZ	Urewera	19.14	192	P	P	21 04 21.4	-0.4
BKZ	Black Stump Fm	20.14	193	P	P	21 04 31.9	+0.7
QRZ	Quartz Range	22.74	199	P	P	21 04 55.0	+0.2
TATA	Tatamba Isabel	24.39	294	P	P	21 04 59.8	-10
JCZ	Jackson Bay	26.88	202	P	P	21 05 31.0	-0.9
EIDS	Eidsvold	29.30	253	P	P	21 05 53.8	+0.5
EIDS				IAmb	IAmb	21 05 53.9	
	comp=Z,8.2nm,1.1s						
ARMA	Armidale	29.66	243	P	P	21 05 56.8	+0.3
ARMA				IAmb	IAmb	21 06 23.0	
	comp=Z,23nm,1.5s						
CTA	Charters Tower	33.79	263	P	P	21 06 31.4	-0.8
	comp=Z,11nm,0.7s,baz=92,slow=9.1,SNR=11						
	comp=Z,11nm,0.7s						
CTAO	Charters Tower	33.79	263	P	P	21 06 31.9	-0.4
CTAO				IAmb	IAmb	21 06 32.7	
	comp=Z,12nm,0.8s						
PMG	Port Moresby	35.35	282	P	P	21 06 43.8	-1.6
	comp=Z,7.4nm,0.9s,baz=75,slow=4.5,SNR=5.9						
	comp=Z,7.4nm,0.9s						
TOO	Toolangi	36.61	233	P	P	21 06 55.3	-0.5
STKA	Stephens Creek	38.38	243	P	P	21 07 10.4	0.0
	comp=Z,3.1nm,0.5s,baz=89,slow=12,SNR=12						
	comp=Z,3.1nm,0.5s						
STKA	Stephens Creek	38.38	243	P	P	21 07 05.8	-4.6
HTT	Hallett	40.84	241	P	P	21 07 25.5	-5.0
BBOO	Buckleboo	43.14	243	P	P	21 07 47.8	-1.0
BBOO				IAmb	IAmb	21 07 53.0	
	comp=Z,12nm,1.2s						
GENI	Genyem	44.40	287	P	P	21 07 47.0	-12
WB0	Warramunga Arr	44.91	261	P	P	21 08 01.9	-1.0
WB0				IAmb	IAmb	21 08 02.4	
	comp=Z,9.5nm,0.5s						
AS31	Alice Springs	44.93	256		P	21 08 01.8	-1.3
ASAR	Alice Springs	44.93	256	P	P	21 08 02.2	-0.8
	comp=Z,9.3nm,0.6s,baz=90,slow=8.3,SNR=136						
ASAR				PcP	PcP	21 09 36.0	-0.6
	comp=Z,1.6nm,0.7s,baz=102,slow=5.1,SNR=5.3						
	comp=Z,9.3nm,0.6s						
WRA	Warramunga Arr	44.94	261	P	P	21 08 02.0	-1.0
	comp=Z,4.8nm,0.4s,baz=97,slow=6.6,SNR=63						
	comp=Z,4.8nm,0.4s						
WRA	Warramunga Arr	44.94	261	P	P	21 08 01.2	-1.9
MTN	Manton Dam	49.36	270	P	P	21 08 35.7	-1.1
MTN				IAmb	IAmb	21 08 36.2	
	comp=Z,23nm,1.3s						
FORT	Forrest	49.85	246	P	P	21 08 39.3	-0.9
FORT				IAmb	IAmb	21 08 40.9	
	comp=Z,5.7nm,0.6s						
KNRA	Kununurra	50.93	265	P	P	21 08 47.3	-1.0
KNRA				IAmb	IAmb	21 09 05.1	
	comp=Z,28nm,1.2s						
FITZ	Fitzroy Crossi	53.36	262	P	P	21 09 05.1	-0.9
	comp=Z,2.1nm,0.5s,baz=70,slow=5.8,SNR=7.9						
	comp=Z,2.1nm,0.5s						
FITZ	Fitzroy Crossi	53.36	262	P	P	21 09 05.6	-0.4
SOEI	Soe	56.68	271	P	P	21 09 29.7	0.0
MBWA	Marble Bar	58.26	257	P	P	21 09 39.2	-1.1
SBA	Scott Base	58.80	184	P	P	21 09 44.3	+1.3
SBA				IAmb	IAmb	21 09 46.7	
	comp=Z,6.7nm,0.7s						
VNDA	Vanda	58.84	185	P	P	21 09 44.5	+1.1
	comp=Z,1.8nm,0.6s,baz=356,slow=7.6,SNR=19						
	comp=Z,1.8nm,0.6s						
VNDA	Vanda	58.84	185		P	21 09 44.2	+0.8
KKM	Kota Kinabalu	69.72	284	P	P	21 10 53.3	-1.0
UGM	Wanagama	70.19	268	P	P	21 10 55.8	-1.3
QSPA	South Pole Qui	70.48	180	P	P	21 10 57.8	-0.1
QSPA				IAmb	IAmb	21 11 00.2	
	comp=Z,12nm,1.0s						
NVAR	Mina Array Bea	80.22	43	P	P	21 11 54.6	+1.3
	comp=Z,0.8nm,0.7s,baz=251,slow=6.5,SNR=5.4						
	comp=Z,0.8nm,0.7s						
BELA	Belgrano 2	80.44	173		P	21 11 53.4	-0.1
MAW	Mawson	82.50	200	P	P	21 12 04.3	+0.1
	comp=Z,2.4nm,0.8s,baz=122,slow=3.6,SNR=4.7						
	comp=Z,2.4nm,0.8s						
VHRN	Van Horn	85.97	56		P	21 12 23.4	+1.0
VHRN				IAmb	IAmb	21 12 25.9	
	comp=Z,4.6nm,0.8s						
BSUT	Blindstream Ca	86.28	45	P	P	21 12 24.1	+0.2
TXAR	Lajitas Array	86.39	57	P	P	21 12 26.0	+1.6
	comp=Z,2.4nm,0.7s,baz=221,slow=6.7,SNR=15						
	comp=Z,2.4nm,0.7s						
TXAR	Lajitas Array	86.39	57		P	21 12 25.6	+1.2
M27K	Edge Creek, AK	86.47	16	P	P	21 12 25.1	+1.1
ANMO	Albuquerque	86.67	51	P	P	21 12 25.9	+0.2
IL31		87.38	13	P	P	21 12 28.1	+0.1
IL31				IAmb	IAmb	21 12 43.9	
	comp=Z,6.4nm,1.4s						
ILAR	Eielson Array	87.38	13	P	P	21 12 27.4	-0.6
	comp=Z,0.3nm,0.4s,baz=212,slow=4.9,SNR=7.0						
ILAR				pP	pP	21 14 01.4	+2.2
	comp=Z,0.8nm,0.9s,baz=218,slow=5.3,SNR=4.1						
	comp=Z,0.3nm,0.4s						
ILAR	Eielson Array	87.38	13	P	P	21 12 27.1	-1.0
J25K	Salcha River,	87.56	13	P	P	21 12 28.2	-0.8
J25K				IAmb	IAmb	21 12 40.7	
	comp=Z,8.2nm,1.5s						
ELIB	Princess Elisa	87.58	186	*d*P	P	21 12 28.6	-0.7
	comp=Z,6.3nm,0.6s						
TROLL	Troll, Antarti	88.65	180	⇑P	P	21 12 33.5	-0.8
	comp=Z,190nm,0.7s						
VNA3	Neumayer Olymp	89.04	176	⇑P	P	21 12 33.6	-2.4
	comp=Z,14nm,0.7s						
VNA2	Neumayer--Watz	89.49	177	⇑P	P	21 12 36.6	-1.5
	comp=Z,6.5nm,0.6s,baz=168,slow=4.1						
CMAR	Chiang Mai Arr	90.00	289	P	P	21 12 42.0	+0.6
	comp=Z,1.5nm,0.9s,baz=98,slow=2.9,SNR=9.2						
	comp=Z,1.5nm,0.9s						
CMAR	Chiang Mai Arr	90.00	289	P	P	21 12 41.0	-0.4
CHTO	Chiang Mai	90.12	290	P	P	21 12 41.6	-0.4
CHTO				IAmb	IAmb	21 12 43.8	
	comp=Z,4.7nm,1.2s						
YKA	Yellowknife Ar	95.59	25	P	P	21 13 06.0	0.0
	comp=Z,0.4nm,0.8s,baz=245,slow=5.2,SNR=4.1						
	comp=Z,0.4nm,0.8s						
ZALV	Zalesovo Beam	109.91	321	PKiKP	PKiKP	21 18 08.1	-1.7
	comp=Z,0.6nm,0.4s,baz=147,slow=1.2,SNR=4.7						
MKAR	Makanchi Array	110.72	314	PKiKP	PKiKP	21 18 10.5	-1.1
	comp=Z,0.9nm,0.5s,baz=167,slow=0.6,SNR=31						
BVAR	Borovoye Array	118.51	320	PKP	PKPdf	21 18 25.2	-1.1
	comp=Z,3.0nm,0.3s,baz=114,slow=2.1,SNR=35						
KKAR	Karatay Array	118.83	309	PKPdf	PKPdf	21 18 26.2	-1.1
SPITS	Spitsbergen Ar	120.96	357	PKP	PKPdf	21 18 29.5	-0.9
	comp=Z,10nm,1.1s,baz=85,slow=1.9,SNR=4.4						
ARCES	ARCESS Array B	128.06	350	PKP	PKPdf	21 18 44.0	-0.2
	comp=Z,2.7nm,0.5s,baz=33,slow=1.6,SNR=27						
FINES	FINESS Array B	134.95	344	PKP	PKPdf	21 18 57.5	+0.2
	comp=Z,0.7nm,0.5s,baz=42,slow=3.8,SNR=12						
FINES	FINESS Array B	134.95	344	PKPdf	PKPdf	21 18 57.2	-0.1
GRTLG	Ghanzi	135.27	206	PKPdf	PKPdf	21 18 58.2	-1.1
NB2	NORSAR Subarra	138.09	353	PKP	PKPdf	21 19 04.8	+1.6
	comp=Z,0.3nm,0.5s,baz=15,slow=2.5						
HFS	Hagfors	138.66	351	PKP	PKPdf	21 19 04.7	+0.5
	comp=Z,1.7nm,0.9s,baz=46,slow=4.3,SNR=6.2						
AKASG	Malin Array Be	142.31	332	PKP	PKPdf	21 19 12.2	+1.2
	comp=Z,0.9nm,0.4s,baz=44,slow=3.4,SNR=5.4						
LODK	Lodwar	143.88	248		PKPab	21 19 13.2	-0.5
EKA	Eskdalemuir Ar	144.07	5	PKP	PKPbc	21 19 12.5	-0.5
	comp=Z,0.7nm,0.4s,baz=324,slow=3.1,SNR=5.8						
MBAR	Mbarara	145.58	238	PKPbc	PKPdf	21 19 18.7	+0.6
	comp=Z,3.5nm,0.5s,baz=134,slow=5.8,SNR=8.2						
MBAR	Mbarara	145.58	238		PKPdf	21 19 17.9	-0.2
BUR08	Bucovina Ar. S	146.34	332		PKPbc	21 19 20.1	-0.2
BR131	Keskin Array S	146.37	313		PKPdf	21 19 19.6	+1.0
BRTR	Keskin Array B	146.37	313	PKPbc	PKPdf	21 19 19.3	+0.6
	comp=Z,2.9nm,0.6s,baz=137,slow=4.5,SNR=18						
BRTR	Keskin Array B	146.37	313		PKPdf	21 19 19.1	+0.4
OSTC	Ostas	147.15	343	*e*PKP	PKPbc	21 19 23.2	+0.9
CLL	Collm	147.22	347		PKPdf	21 19 21.5	+2.0
UPC	Upice	147.25	344	*e*PKP	PKPbc	21 19 23.0	+0.5
STEB	Steborice	147.27	341	*e*PKP	PKPbc	21 19 22.0	-0.6
DPC	Dobruska-Polom	147.31	343	*e*PKP	PKPbc	21 19 22.8	0.0
KRLC	Kraliky	147.43	342	*e*PKP	PKPbc	21 19 23.1	0.0
MAUC	Maruska	147.75	341	*e*PKP	PKPbc	21 19 24.9	+1.0
PRU	Pruhonice	148.10	345	*e*PKP	PKPbc	21 19 24.9	+0.1
BORA	Eskisehir	148.43	316		PKPdf	21 19 24.4	+2.4
KRUC	Moravsky	148.45	342	*e*PKP	PKPbc	21 19 25.1	-0.6
ZVC	Zvikov	148.70	345	*e*PKP	PKPbc	21 19 27.0	+0.7
MODS	Modra-Piesok	148.80	340	*e*PKP	PKPbc	21 19 26.0	-0.6
KHC	Kasperske Hory	149.13	345	*e*PKP	PKPbc	21 19 27.3	-0.1
CKRC	Cesky Krumlov	149.24	344	*e*PKP	PKPbc	21 19 27.5	-0.2
GEC2	GERESS Array S	149.37	345		PKPbc	21 19 26.9	-1.2
GERES	GERESS Array B	149.37	345	PKPbc	PKPbc	21 19 28.2	+0.1
	comp=Z,3.8nm,0.8s,baz=20,slow=4.3,SNR=27						
CONA	Conrad Observa	149.63	342	*i* PKP	PKPbc	21 19 29.1	+0.4
	comp=Z,6.3nm,0.8s						
RONA	Rosalia, Austr	149.70	341	*i* PKiKP	PKPbc	21 19 29.7	+0.8
	comp=Z,8.7nm,0.6s,SNR=4.4						
MOA	Molln	150.15	344	*i* PKP	PKPbc	21 19 29.8	-0.1
	comp=Z,2.1nm,0.5s,SNR=4.2						
MOA	Molln	150.15	344	*i* P	PKPbc	21 19 29.8	-0.1
	comp=Z,2.1nm,0.5s,SNR=4.2						
ARSA	Arzberg	150.34	342	*i* PKP	PKPbc	21 19 30.1	-0.3
	comp=Z,1.6nm,0.8s						
BIOA	Bad Ischl, Aus	150.46	344	*i* PKP	PKPbc	21 19 30.2	-0.4
	comp=Z,2.4nm,0.5s,SNR=4.4						
BIOA	Bad Ischl, Aus	150.46	344	*i* P	PKPbc	21 19 30.2	-0.4
	comp=Z,2.4nm,0.5s,SNR=4.4						
RDO	Rodhopi	150.72	322	PKPbc	PKPbc	21 19 30.3	-1.0
LESA	Schwarzleotal	150.94	345	*i* PKP	PKPbc	21 19 31.2	-0.6
	comp=Z,4.2nm,0.5s,SNR=8.7						
LESA	Schwarzleotal	150.94	345	*i* P	PKPbc	21 19 31.2	-0.6
	comp=Z,4.2nm,0.5s,SNR=8.7						
SOKA	Soboth	151.00	342	*i* PKP	PKPbc	21 19 31.8	-0.2
	comp=Z,4.9nm,0.7s,SNR=6.9						
KBA	Koelnbreinsper	151.10	344	*i* PKP	PKPbc	21 19 32.2	-0.1
	comp=Z,9.3nm,0.5s						
WATA	Walderalm	151.28	347	*i* PKP	PKPbc	21 19 32.3	-0.3
	comp=Z,6.0nm,0.5s						
OBKA	Obir	151.29	342	*i* PKiKP	PKPbc	21 19 33.0	+0.4
	comp=Z,4.3nm,0.7s						
RETA	Reutte	151.30	348	*i* PKP	PKPbc	21 19 32.7	0.0
	comp=Z,2.8nm,0.5s						
WTTA	Wattenberg	151.33	347	*i* PKP	PKPbc	21 19 33.0	+0.2
	comp=Z,11nm,0.5s,SNR=6.2						
WTTA	Wattenberg	151.33	347	*i* P	PKPbc	21 19 33.0	+0.2
	comp=Z,11nm,0.5s,SNR=6.2						
MYKA	Terra Mystica	151.44	343	*i* PKP	PKPbc	21 19 32.2	-0.7
	comp=Z,6.2nm,0.6s						
SQTA	Sankt Quirin	151.47	347	*e*PKP	PKPbc	21 19 32.4	-0.6
	comp=Z,3.8nm,0.5s,SNR=10						
SQTA	Sankt Quirin	151.47	347	*e*P	PKPbc	21 19 32.4	-0.6
	comp=Z,3.8nm,0.5s,SNR=10						
ABTA	Abfaltersbach	151.62	345	*i* PKP	PKPbc	21 19 33.0	-0.4
	comp=Z,13nm,0.6s,SNR=17						
DAVA	Damuels	151.66	349	*i* PKiKP	PKPbc	21 19 34.0	+0.5
	comp=Z,3.5nm,0.5s						
FETA	Feichten	151.76	348	*e*PKP	PKPbc	21 19 33.7	0.0
	comp=Z,4.4nm,0.6s,SNR=5.7						
FETA	Feichten	151.76	348	*e*P	PKPbc	21 19 33.7	0.0
	comp=Z,4.4nm,0.6s,SNR=5.7						
FUORN	Ofenpass-Fuorn	152.23	348		PKPbc	21 19 34.6	-0.4
TUE	Stuetta	152.54	349		PKPbc	21 19 35.2	-0.3

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*UPA **28** 21:04:51.7±1.1, 9°.31N×78°.75W, h14^{km}±7^{km}, ML3.6, MW3.5*
*RSNC **28** 21:04:52.7±0.8, 9°N±4°×7°9W±°, h103^{km}±10^{km}, M2.7, mb4.2, ML2.4*
ISC 28 21:04:50.3±1.4, 9°.34N±0°.07×78°.71W±0°.03, h66^{km}±10^{km}, n16, σ1^{s}57/30, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNTA3	Canitas, Panam	0.22	237	*e*P	Pn	21 05 00.4	-0.1
CNTA3				*e*S	Sn	21 05 07.5	-0.6
TOTI	Torti	0.56	136	*e*P	Pn	21 05 03.6	+0.1
TOTI				AMP		21 05 03.8	
	comp=Z,7µm,0.1s						
TOTI				*e*S	Sn	21 05 12.3	-0.8
FLAM	Flamenco Islan	0.92	243	*e*P	Pn	21 05 07.8	+0.1
FLAM				AMP		21 05 08.5	
	comp=Z,2µm,0.1s						
FLAM				*e*S	Sn	21 05 20.4	-0.1
FRIJ	El Hiral	1.01	263	*e*P	Pn	21 05 09.5	+0.7
FRIJ				*e*S	Sn	21 05 23.0	+0.5
UPD2	Meteti	1.04	139	*e*P	Pn	21 05 09.7	+0.6
UPD2				*e*S	Sn	21 05 25.1	+1.9
CHOR3	La Chorrera	1.14	247	*e*P	Pn	21 05 11.1	+0.7
CHOR3				AMP		21 05 12.4	
	comp=Z,1µm,0.1s						
CHOR3				*e*S	Sn	21 05 25.4	+0.1
CAPC	Capurgana	1.51	118	P	Pn	21 05 15.1	-0.2
CAPC				S	Sn	21 05 36.3	+2.2
CHIT3	Chitre	2.18	231	*e*P	Pn	21 05 25.4	+1.1
AZU	Azuero	2.19	225	*e*P	Pn	21 05 25.5	+1.1
AZU				AMP		21 05 26.0	
	comp=Z,201nm,0.0s						
AZU				*e*S	Sn	21 05 47.5	-2.9
PTAC	Punta Ardita,	2.35	158	P	Pn	21 05 25.9	-0.8
PTAC				S	Sn	21 05 53.2	-1.3
LCBC	Los crdobas,	2.36	102	P	Pn	21 05 28.5	+1.8
APAC	Apartado, Choc	2.54	124	P	Pn	21 05 32.7	+3.4
APAC				S	Sn	21 06 00.8	+1.6
UREC	San Jos de Ur	3.51	116	P	Pn	21 05 41.2	-1.3
UREC				S	Sn	21 06 20.4	-2.5
SJCC	San Jacinto, C	3.52	81	P	Pn	21 05 43.6	+0.9
SJCC				S	Sn	21 06 20.4	-2.8
ARGC	Ariguani, Magd	4.43	83	P	Pn	21 05 55.9	+0.9
ARGC				S	Sn	21 06 43.6	-1.7
PTBC	PUERTO BERRIO,	5.04	123	P	Pn	21 06 04.0	+0.5
PTBC				S	Sn	21 06 59.2	-1.3

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*IDC **28** 21:15:44.9±1.3, 10°.24S×66°.20E, h0^{km}, mb3.9/8, mbtmp3.9/8, MS3.3/1, Error ellipse: s-maj=46.3km s-min=25.8km az=44.0*
ISC 28 21:15:46.9±1.4, 10°.2S±0°.3×66°.2E±0°.2, h10^{km}, n17, σ1^{s}20/10, mb4.0/8, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	6.71	68	T	T	21 24 20.1	
	baz=246,slow=76,SNR=137						
H08S3	Diego Garcia H	6.73	68	T	T	21 24 23.3	
	baz=246,slow=76,SNR=233						
H08S2	Diego Garcia H	6.73	68	T	T	21 24 22.9	
	baz=246,slow=76,SNR=144						
CMAR	Chiang Mai Arr	43.09	49	P	P	21 23 48.7	+1.2
	0.2nm,0.6s,baz=249,slow=11,SNR=4.4						
	0.2nm,0.6s						
H01W3	Cape Leeuwin H	50.02	127	T	T	22 18 13.4	
	baz=288,slow=75,SNR=16						
H01W2	Cape Leeuwin H	50.03	127	T	T	22 18 13.6	
	baz=288,slow=75,SNR=18						
H01W1	Cape Leeuwin H	50.04	127	T	T	22 18 14.7	
	baz=288,slow=75,SNR=13						
ASF	Jabal al Asfar	50.61	328	LR	LR	21 44 17.6	
	comp=Z,27nm,18.6s,baz=334,slow=34						
MKAR	Makanchi Array	58.55	13	P	P	21 25 43.0	-0.7
	0.7nm,0.6s,baz=212,slow=8.1,SNR=8.2						
	0.7nm,0.6s						
BVAR	Borovoye Array	63.10	3	P	P	21 26 13.4	-1.0
	0.8nm,0.7s,baz=166,slow=8.6,SNR=2.7						
	0.8nm,0.7s						
ASAR	Alice Springs	65.63	111	P	P	21 26 30.9	-0.9
	0.9nm,0.7s,baz=274,slow=6.0,SNR=8.2						
	0.9nm,0.7s						
ZALV	Zalesovo Beam	65.85	12	P	P	21 26 31.1	-1.3
	0.3nm,0.3s,baz=235,slow=5.2,SNR=4.2						
	0.3nm,0.3s						
WRA	Warramunga Arr	66.14	107	P	P	21 26 34.5	-0.6
	1.5nm,0.9s,baz=268,slow=6.1,SNR=4.0						
	1.5nm,0.9s						
HFS	Hagfors	81.53	336	P	P	21 28 04.5	+0.2
	2.6nm,0.7s,baz=115,slow=6.8,SNR=4.7						
	2.6nm,0.7s						
ESDC	Sonseca Array	81.62	313	P	P	21 28 05.2	-0.2
	1.0nm,0.9s,baz=98,slow=4.1,SNR=5.8						
	1.0nm,0.9s						
PDAR	Pinedale Array	147.37	354	PKPbc	PKPdf	21 35 31.1	+2.0
	1.0nm,0.9s,baz=90,slow=3.0,SNR=6.1						
NVAR	Mina Array Bea	151.62	7	PKPbc	PKPbc	21 35 42.7	+0.5
	1.3nm,0.7s,baz=307,slow=2.0,SNR=6.8						

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*MEX **28** 21:18:09.1±0.4, 13°.87N×93°.18W, h16^{km}±26^{km}, MD3.9*
*GCG **28** 21:18:11.4±1.4, 14°.03N×92°.79W, h0^{km}±24^{km}, MD4.1*
ISC 28 21:18:05.3±1.8, 13°.88N±0°.09×93°.06W±0°.04, h11^{km}±11^{km}, n18, σ1^{s}33/31, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.28	37	*e*P	Pn	21 18 31.5	+2.3
THIG				*e*S	Sn	21 18 47.6	+1.2
SMCA	Catarina	1.37	44	*e*P	Pg	21 18 32.0	+0.4
SMCA				*e*S	Sn	21 18 48.5	0.0
PATR	El Naranjo	1.47	33	*e*P	Pn	21 18 32.7	+0.6
PATR				*e*S	Sn	21 18 51.4	0.0
RTAL	Retalhuleu	1.48	64	*e*P	Pg	21 18 35.3	+1.7
RTAL				*e*S	Sg	21 18 51.7	-1.2
CHUJ	Union Juarez	1.52	37	*e*P	Pn	21 18 33.5	+0.7
CHUJ				*e*S	Sg	21 18 52.6	-1.7
PAVE	Pavencul	1.57	33	*e*P	Pn	21 18 34.2	+0.9
PAVE				*e*S	Sb	21 18 53.1	-1.3
STG2	El Palmar, Qui	1.73	71	*e*P	Pn	21 18 35.9	+0.4
STG2				*e*S	Sn	21 18 56.4	-1.3
STG8	El Palmar, Qui	1.76	71	*e*P	Pn	21 18 36.5	+0.6
PCIG		1.82	355	*e*P	Pn	21 18 36.6	0.0
PCIG				*e*S	Sn	21 18 51.0	-8.7
SOKI	Kika Raxquin	1.86	60	*e*P	Pg	21 18 41.4	+0.4
HUEH	Huehuetenango	2.08	46	*e*P	Pb	21 18 42.5	-0.8
HUEH				*e*S	Sn	21 19 07.2	+0.7
QUIS	Sacapulas	2.37	53	*e*P	Pb	21 18 48.4	+0.3
CCIG	Comitan	2.55	20	*e*P	Pn	21 18 48.5	+1.7
CCIG				*e*S	Sn	21 19 18.5	+0.4
APG	El Apazote	2.76	66	*i* P	Pb	21 18 53.4	-1.4
TGIG		2.88	359	*e*P	Pn	21 18 53.7	+2.4
TGIG				*e*S	Sn	21 19 26.0	-0.1
HUIG	Huatulco	3.49	303	*e*P	Pn	21 19 00.7	+1.1
HUIG				*e*S	Sn	21 19 38.6	-2.4
CMIG	Matias Romero	3.65	331	*e*P	Pn	21 19 02.9	+1.1
CMIG				*e*S	Sn	21 19 44.1	-0.6
PNIG	Pinotepa	5.49	298	*e*P	Pn	21 19 29.5	+2.3
PNIG				*e*S	Sn	21 20 29.0	-1.4

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*NEIC **28** 21:18:09.1±0.7, 12°.27N±0°.05×144°.8E±0°.1, h10^{km}±1^{km}, mb4.1/6, Error ellipse: s-maj=21.0km s-min=7.2km az=108.0*
*IDC **28** 21:18:13.8±2.0, 12°.34N×144°.81E, h54^{km}±18^{km}, mb3.5/7, mbtmp3.8/7, Error ellipse: s-maj=34.7km s-min=15.4km az=100.0*
ISC 28 21:18:11.6±0.7, 12°.24N±0°.08×144°.8E±0°.1, h35^{km}, n23, σ0^{s}75/24, mb3.8/11, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.34	3	P	Pn	21 18 34.6	+0.7
	147nm,0.4s,baz=45,slow=2.4,SNR=13						
GUMO				S	Sn	21 18 50.8	+0.2
	262nm,0.4s,baz=17,slow=22,SNR=22						
GUMO	Guam	1.34	3		Pn	21 18 33.9	0.0
GUMO				Sn	Sn	21 18 50.9	+0.3
PATS	Pohnpei	14.37	111	Pn	Pn	21 21 32.2	-0.5
SSLB	Suanglung	25.36	300	P	P	21 23 34.7	-1.0
WB0	Warramunga Arr	33.41	198	P	P	21 24 47.6	+0.5
WB0				IAmb	IAmb	21 24 48.8	
	comp=Z,4.2nm,0.8s						
WRA	Warramunga Arr	33.59	198	P	P	21 24 49.8	+1.1
	comp=Z,2.3nm,0.7s,baz=22,slow=9.7,SNR=19						
	comp=Z,2.3nm,0.7s						
WRA	Warramunga Arr	33.59	198	P	P	21 24 48.2	-0.5
AS31	Alice Springs	37.24	197	P	P	21 25 20.6	+0.5
AS31				IAmb	IAmb	21 25 23.4	
	comp=Z,0.7nm,0.6s						
ASAR	Alice Springs	37.24	197	P	P	21 25 21.4	+1.3
	comp=Z,0.7nm,0.6s,baz=17,slow=10,SNR=16						
	comp=Z,0.7nm,0.6s						
ASAR	Alice Springs	37.24	197	P	P	21 25 20.5	+0.4
CMAR	Chiang Mai Arr	44.55	284	P	P	21 26 21.4	+0.9
	comp=Z,0.7nm,0.6s,baz=79,slow=7.0,SNR=6.9						
	comp=Z,0.7nm,0.6s						
SHL	Shillong	51.47	293	P	P	21 27 13.9	-0.2
SHL				IAmb	IAmb	21 27 17.2	
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	62.41	317	P	P	21 28 30.6	-0.5
	comp=Z,0.3nm,0.4s,baz=93,slow=8.6,SNR=9.7						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	62.41	317	P	P	21 28 30.9	-0.2
ILAR	Eielson Array	69.82	25	P	P	21 29 17.4	-0.9
	comp=Z,0.3nm,0.6s,baz=246,slow=6.0,SNR=8.4						
	comp=Z,0.3nm,0.6s						
E24K	Your Creek	70.11	22	P	P	21 29 21.0	+0.9
E24K				IAmb	IAmb	21 29 50.5	
	comp=Z,1.9nm,1.2s						
KKAR	Karatay Array	70.28	312	P	P	21 29 21.7	+0.1
BMAR	Burnt Mountain	71.37	23	P	P	21 29 28.1	+0.3
ABKAR	Akbulak array	77.49	318	P	P	21 30 02.9	-0.7
YKA	Yellowknife Ar	84.09	27	P	P	21 30 39.7	+1.1
	comp=Z,0.2nm,0.6s,baz=286,slow=5.5,SNR=5.2						
	comp=Z,0.2nm,0.6s						
FINES	FINESS Array B	92.35	335	P	P	21 31 16.9	-1.3
	comp=Z,0.6nm,0.5s,baz=90,slow=5.9,SNR=6.1						
	comp=Z,0.6nm,0.5s						
DBIC	Dimbokro	144.45	300	PKP	PKPbc	21 37 44.1	+0.3
	comp=Z,1.7nm,0.6s,baz=358,slow=2.5,SNR=4.3						
DBIC	Dimbokro	144.45	300		PKPab	21 37 43.6	+0.1

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*IDC **28** 21:26:16.9±3.6, 37°.14N×29°.38E, h92^{km}±35^{km}, mb3.1/3, mbtmp3.4/5, MS2.9/2, Error ellipse: s-maj=51.9km s-min=24.2km az=134.0*
*ISK **28** 21:26:29.5, 37°.25N×31°.08E, h125^{km}±1^{km}, ML2.6/24*
*GII **28** 21:26:31.2±0.0, 36°.788N±0°.002×31°.193E±0°.001, h8^{km}, Mws2.9, confirmed*
*AFAD **28** 21:26:31.1, 37°.37N×31°.01E, h106^{km}, ML2.5*
ISC 28 21:26:28.6±1.0, 37°.22N±0°.03×31°.08E±0°.03, h129^{km}±6^{km}, n86, σ1^{s}58/110, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUCA	Burdur, Bucak-	0.43	285	P	Pn	21 26 47.8	+0.5

BUCA				S	Sn	21 26 59.7	-1.7
BUCA				*i* IAML		21 27 02.0	
	comp=N,96nm,0.6s						
BUCA				*i* IAML		21 27 03.0	
	comp=E,133nm,0.5s						
ANTB	Antalya	0.47	228	Pg	Pn	21 26 48.6	+1.3
MNVG	Manavgat-Antal	0.50	147	Pg	Pn	21 26 48.3	+0.8
MNVG				Sg	Sn	21 27 02.7	+0.9
SEDI	Konya, Seydise	0.59	66	P	Pn	21 26 48.7	+0.5
SEDI				S	Sn	21 27 02.2	-0.8
KORT	Korkueli	0.62	250	P	Pn	21 26 48.9	+0.5
KORT				*i* IAML		21 27 07.0	
	comp=N,128nm,0.5s						
KORT				*i* IAML		21 27 12.0	
	comp=E,145nm,0.5s						
KORT	Korkueli	0.62	250	Pg	Pn	21 26 49.6	+1.1
SEYD	Seydisehir-KON	0.63	72	Pg	Pn	21 26 49.3	+0.8
SEYD				Sg	Sn	21 27 03.7	+0.1
KEMT	Kemer-ANTALYA	0.74	215	Pg	Pn	21 26 50.0	+0.9
ISP	Isparta	0.75	324	Pg	Pn	21 26 49.9	+0.5
ISP				Sg	Sn	21 27 04.9	-0.2
BAGO	Egridir - ISPA	0.81	343	P	Pn	21 26 50.3	+0.5
BAGO				S	Sn	21 27 02.8	-3.2
BAGO				*i* IAML		21 27 07.0	
	comp=N,110nm,0.4s						
BRDR	BURDUR-Merkez	0.94	301	P	Pn	21 26 51.2	+0.2
BRDR				S	Sn	21 27 06.0	-2.0
BRDR				*i* IAML		21 27 08.0	
	comp=E,72nm,0.6s						
DOGA	KONYA_Doganhis	1.00	27	P	Pn	21 26 52.0	+0.5
DOGA				S	Sn	21 27 06.2	-2.9
ALAN	Alanya-ANTALYA	1.01	130	Pg	Pn	21 26 52.1	+0.7
ELL	Elmali	1.05	244	Pg	Pn	21 26 54.0	+2.0
YVAC	Isparta, Yalva	1.06	7	P	Pn	21 26 52.5	+0.4
YVAC				S	Sn	21 27 07.5	-2.5
AKUM	Antalya-Kumluc	1.07	214	P	Pn	21 26 53.2	+1.2
BASM	Basmaki-Afyon	1.08	311	Pg	Pn	21 26 52.8	+0.6
AFYN	Afyon-Dinar-K	1.15	337	P	Pn	21 26 52.8	-0.2
AFYN				*i* IAML		21 27 12.0	
	comp=N,83nm,0.5s						
AFYN				*i* IAML		21 27 12.0	
	comp=E,65nm,0.5s						
HDMB	Hadim	1.15	102	Pn	Pn	21 26 54.3	+1.2
GOLH	Golhisar	1.21	272	P	Pn	21 26 54.7	+1.1
GOLH				*i* IAML		21 27 21.0	
	comp=N,50nm,0.3s						
GOLH				*i* IAML		21 27 24.0	
	comp=E,54nm,0.6s						
SDAG	Sultandagi-AFY	1.23	354	Pn	Pn	21 26 54.3	+0.5
KONT	Konya--Tatoy	1.25	54	P	Pn	21 26 54.9	+1.0
KONT				S	Sn	21 27 10.6	-2.5
KONT	Konya--Tatoy	1.25	54	Pn	Pn	21 26 54.9	+1.0
KNIK	Mula-Seydike	1.26	253	P	Pn	21 26 56.1	+1.9
KNIK				S	Sn	21 27 14.6	+1.0
KNIK				*i* IAML		21 27 19.0	
	comp=N,77nm,0.3s						
KNIK				*i* IAML		21 27 19.0	
	comp=E,110nm,0.5s						
KZIL	AFYON_Kizioren	1.28	325	P	Pn	21 26 54.0	-0.3
KZIL				S	Sn	21 27 11.3	-2.6
INCE	Denizli-Bozkur	1.30	293	P	Pn	21 26 55.1	+0.7
INCE				S	Sn	21 27 11.5	-2.6
SHUT	Suhut-Afyon	1.40	343	Pn	Pn	21 26 56.2	+0.6
CAEL	Denizli, Camel	1.41	267	P	Pn	21 26 56.7	+1.0
CAEL				S	Sn	21 27 16.8	+0.4
LADK	Ladik-KONYA	1.42	46	Pn	Pn	21 26 56.4	+0.7
APMY	Acipayam-Deniz	1.44	281	Pn	Pn	21 26 57.2	+1.2
CAME	Cameli-Denizli	1.45	260	Pn	Pn	21 26 57.8	+1.6
KKBE	Karaman, Kazim	1.48	89	P	Pn	21 26 57.8	+1.3
KKBE				S	Sn	21 27 18.4	+0.6
KURO	Afyon-Bolvadin	1.52	356	P	Pn	21 26 56.9	0.0
AKAS	Kas	1.54	231	P	Pn	21 26 58.3	+1.1
AKAS				S	Sn	21 27 18.1	-0.9
AKAS	Kas	1.54	231	Pn	Pn	21 26 58.5	+1.3
KDHN	Kadinhani	1.54	32	P	Pn	21 26 57.8	+0.6
DNZT	Denizli-Tavas-	1.64	273	P	Pn	21 26 59.5	+1.2
DNZT				S	Sn	21 27 19.9	-1.1
DNZT				*i* IAML		21 27 25.0	
	comp=N,44nm,0.7s						
DNIZ	Denizli-Tavas-	1.68	285	P	Pn	21 26 59.8	+1.1
DNIZ				S	Sn	21 27 21.7	0.0
IZZE	Mula-Seydike	1.68	243	P	Pn	21 26 58.2	-0.5
IZZE				S	Sn	21 27 21.1	-0.5
AFYO	Afyonkarahisar	1.69	339	P	Pn	21 26 58.3	-0.5
AFYO				*i* IAML		21 27 34.0	
	comp=N,42nm,1.2s						
AFYO				*i* IAML		21 27 43.0	
	comp=E,50nm,1.3s						
PASA	Karahalli, USA	1.70	312	P	Pn	21 26 59.3	+0.4
PASA				S	Sn	21 27 18.2	-3.9
FETY	Fethiye	1.70	251	P	Pn	21 26 53.1	-5.8
BYAT	Afyon-Bayat	1.73	357	P	Pn	21 27 00.2	+0.9
BYAT				*i* IAML		21 27 24.0	
	comp=N,76nm,0.7s						
BYAT				*i* IAML		21 27 24.0	
	comp=E,70nm,0.3s						
SABU	Mula-Dalaman	1.74	258	P	Pn	21 27 00.1	+0.8
SABU				S	Sn	21 27 21.9	-0.9
KRMN	Karaman	1.74	91	Pn	Pn	21 27 01.0	+1.5
BNAZ	Uak-Banaz	1.74	327	P	Pn	21 26 59.8	+0.3
BNAZ				S	Sn	21 27 21.3	-1.9
BNAZ				*i* IAML		21 27 27.0	
	comp=N,46nm,0.8s						
TAVA	DENIZLI_Tavas	1.75	279	P	Pn	21 27 00.5	+1.0
TAVA				S	Sn	21 27 21.0	-2.2
TAVA				*i* IAML		21 27 25.0	
	comp=N,40nm,0.5s						
TAVA				*i* IAML		21 27 25.0	
	comp=E,40nm,0.4s						
ALIN	Konya, Altinte	1.79	52	P	Pn	21 27 01.1	+1.1
ALIN				S	Sn	21 27 20.0	-4.1
CHBY	Cihanbeyli	1.98	46	Pn	Pn	21 27 03.3	+1.0
DALY	Dalyan (Mula)	1.98	259	Pn	Pn	21 27 03.6	+1.4
TEVE	Tevekalti-Mers	2.05	112	Pn	Pn	21 27 05.4	+2.3
SULT	Sultanhani-AKS	2.17	62	Pn	Pn	21 27 06.4	+1.8
GULN	MERSIN_Gulnar	2.23	117	P	Pn	21 27 07.2	+1.9
KEBE	Keben-Mersin	2.25	109	Pn	Pn	21 27 07.9	+2.3
BECE	Buyukeceli-Mer	2.25	117	Pn	Pn	21 27 06.8	+1.2
IKL	Isikli	2.31	114	Pn	Pn	21 27 07.9	+1.6
SGAZ	Eskisehir, Sey	2.32	355	P	Pn	21 27 07.1	+0.6
SGAZ				S	Sn	21 27 32.1	-3.5
SGAZ	Eskisehir, Sey	2.32	355	P	Pn	21 27 07.0	+0.6
KKUL	Konya-Kulu	2.43	36	P	Pn	21 27 09.4	+1.4
BRTR	Keskin Array B	3.21	38	P	Pn	21 27 19.1	+1.1
	3.7nm,0.6s,baz=236,slow=16,SNR=34						
BRTR				S	Sn	21 27 59.6	+3.4
	0.9nm,0.4s,baz=208,slow=30,SNR=5.6						
BRTR				LR	LR	21 29 28.9	
	comp=Z,37nm,21.5s,baz=314,slow=45						
GEM	Giv'at Ha'Em	5.48	135	P	Pn	21 27 48.0	0.0
GEM	Giv'at Ha'Em	5.48	135	S	Sn	21 28 47.4	-2.6
MMA0B	Mount Meron ar	5.49	139	P	Pn	21 27 48.0	-0.2
MMA0B	Mount Meron ar	5.49	139	S	Sn	21 28 48.3	-2.0
MMAI	Mount Meron Ar	5.49	139	P	Pn	21 27 49.0	+0.8
	2.2nm,0.3s,baz=303,slow=12,SNR=20						
MMAI				S	Sn	21 28 48.9	-1.4
	4.9nm,0.3s,baz=169,slow=18,SNR=7.0						
OFRI	\`Ofer	5.59	144	P	Pn	21 27 49.5	-0.2
OFRI	\`Ofer	5.59	144	S	Sn	21 28 49.3	-3.5
MMLI	Mount Malkishu	5.95	142	P	Pn	21 27 54.5	0.0
MMLI	Mount Malkishu	5.95	142	S	Sn	21 28 58.5	-3.0
SALP	Salfit	6.15	145	P	Pn	21 27 57.0	-0.1
AMAZ	Amatzia	6.49	150	P	Pn	21 28 01.6	-0.1
AMAZ	Amatzia	6.49	150	S	Sn	21 29 11.8	-2.7
DSI	Dead Sea	6.66	147	P	Pn	21 28 04.5	+0.6
DSI	Dead Sea	6.66	147	S	Sn	21 29 15.8	-2.6
YTIR	Yattir	6.72	149	P	Pn	21 28 05.1	+0.2
YTIR	Yattir	6.72	149	S	Sn	21 29 17.1	-3.1
KZIT	Kziot	6.87	155	P	Pn	21 28 06.6	-0.2
KZIT	Kziot	6.87	155	S	Sn	21 29 20.4	-3.1
MSBI	Mazada	6.87	148	P	Pn	21 28 07.2	+0.5
PRNI	Paran	7.58	153	P	Pn	21 28 16.8	+0.4
HRFI	Mount Harif	7.88	154	P	Pn	21 28 20.3	-0.1
MBRI	Mt Berech	8.06	156	P	Pn	21 28 22.9	-0.1
OBN	Obninsk	18.29	10	LR	LR	21 38 47.7	
	comp=Z,138nm,18.2s,baz=22,slow=40						
TORD	Torodi Ar. Bea	35.54	235	P	P	21 32 55.4	-18
	0.1nm,0.5s,baz=34,slow=10,SNR=1.6 0.1nm,0.5s						
MKAR	Makanchi Array	38.63	59	P	P	21 33 40.8	+1.6
	0.4nm,0.5s,baz=268,slow=8.7,SNR=9.3 0.4nm,0.5s						
ZALV	Zalesovo Beam	40.10	48	P	P	21 33 52.3	+1.0
	0.3nm,0.4s,baz=265,slow=9.9,SNR=2.1 0.3nm,0.4s						

AFAD 28 21:26:53.1,38°.17N×31°.13E,h7^{km}±5^{km},ML1.7,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAGO	Egridir - ISPA	0.32	235	P	Pg	21 26 59.1	-0.3
BAGO				S	Sb	21 27 05.6	-1.1
DOGA	KONYA_Doganhis	0.43	99	P	Pg	21 27 02.3	+0.7
DOGA				S	Sg	21 27 08.0	+0.8
AFYN	Afyon-Dinar-K	0.50	281	P	Pg	21 27 03.1	+0.3
AFYN				S	Sg	21 27 10.4	+1.1
UCKU	Afyonkarahisar	0.52	27	P	Pb	21 27 04.4	-0.2
UCKU				S	Sg	21 27 06.3	-3.7
UCKU				*i* IAML		21 27 13.0	
	comp=E,44nm,0.6s						
UCKU				*i* IAML		21 27 14.0	
	comp=N,78nm,0.3s						
KURO	Afyon-Bolvadin	0.58	345	P	Pn	21 27 11.2	+3.3
KURO				S	Sn	21 27 17.7	0.0
BYAT	Afyon-Bayat	0.78	352	P	Pn	21 27 11.9	+1.3
BYAT				S	Sg	21 27 18.7	+0.4
KDHN	Kadinhani	0.85	66	P	Pg	21 27 08.6	-0.9
KDHN				S	Sg	21 27 14.2	-6.4
KDHN				*i* IAML		21 27 21.0	
	comp=E,27nm,0.4s						
KDHN				*i* IAML		21 27 24.0	
	comp=N,19nm,0.4s						
CTIK	Konya-Celtik	0.94	25	P	Pg	21 27 08.2	-3.0
CTIK				S	Sg	21 27 13.0	-11
CTIK				*i* IAML		21 27 23.0	
	comp=N,28nm,0.5s						
CTIK				*i* IAML		21 27 27.0	
	comp=E,27nm,0.4s						

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*IDC **28** 21:33:48.7±1.0,38°.09N×23°.51E,h0^{km},mb3.6/5, mbtmp3.5/8,ML3.4/2,MS3.0/1,Error ellipse: s-maj=27.5km s-min=17.3km az=132.0*

*ATH **28** 21:33:49.1,38°.22N×23°.37E,h12^{km}±1^{km},ML3.3/7, Manual Solution by S.Koutrakis First location: 2019/12/28 21:34:25, This location: 2019/12/28 22:11:22 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*

ISC 28 21:33:49.8±0.8**,38°.17N**±0°.03×**23°.39E**±0°.03**,h9**^{km}±5^{km}**,** **n24,**σ**1^{s}42**/34**,mb3.6**/4**,2C-1D,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIL2	Platees	0.10	291	P	Pg	21 33 51.9	-0.5
VIL2				S	Sg	21 33 53.8	-0.4
STFN	Stefani	0.12	89	P	Pg	21 33 52.9	+0.3
STFN				S	Sg	21 33 54.8	+0.2
MAGU	Magoula	0.14	134	P	Pg	21 33 53.4	+0.6
MAGU				S	Sg	21 33 56.0	+1.1
ATH	Athens Observa	0.33	128	P	Pb	21 33 56.8	-1.0
ATH				S	Sb	21 34 01.7	-1.4
LTK	Loutraki	0.37	246	P	Pg	21 33 57.4	+0.4
ATHU	Athens Univers	0.37	124	P	Pb	21 33 57.4	-1.2
ATHU				S	Sb	21 34 02.6	-1.9
PTL	Penteli	0.40	108	P	Pb	21 33 57.7	-1.3
PTL				S	Sb	21 34 03.2	-1.9
DION	Dionisos Attik	0.44	102	P	Pb	21 33 58.5	-1.2
DION				S	Sb	21 34 04.8	-1.5
VLY	Voula,Athens	0.45	135	P	Pb	21 33 58.9	-1.0
VLY				S	Sb	21 34 04.8	-1.9
MET5	Makryloggos,Me	0.55	183	P	Pb	21 34 01.1	-0.6
MET2	Kameni Chora,	0.56	185	P	Pb	21 34 01.0	-0.7
APE	Apeiranthos	2.03	122	⇑P	Pn	21 34 23.6	-0.5
IDI	Anoyia	3.12	157	Pn	Pn	21 34 39.7	+0.5
	9.4nm,0.5s,baz=213,slow=7.6,SNR=15						
VAY	Valandovo	3.21	349	*e*Pn	Pn	21 34 42.1	+1.8
VAY				*e*Sn	Sg	21 35 32.1	-0.6
OHR	Ohrid	3.55	327	*e*Pn	Pn	21 34 46.9	+1.8
OHR				*e*Sn	Sb	21 35 35.0	-1.0
PDG	Podgorica	5.30	325	⇑P	Pb	21 35 19.1	-3.4
LOZB	Loznitsa	5.73	24	⇓P	Pb	21 35 29.7	-0.2
MLR	Muntele Rosu	7.55	14	Pn	Pn	21 35 42.6	+2.4
	0.5nm,0.3s,baz=145,slow=12,SNR=5.0 3.0nm,0.5s						
BRTR	Keskin Array B	8.13	76	Pn	Pn	21 35 49.7	+1.6
	0.1nm,0.3s,baz=255,slow=14,SNR=4.4						
BRTR				LR	LR	21 39 34.5	
	comp=Z,104nm,18.9s,baz=262,slow=43 0.5nm,0.7s						
ESDC	Sonseca Array	21.31	283	P	P	21 38 39.4	+2.6
	0.7nm,1.0s,baz=77,slow=10,SNR=4.6 0.7nm,1.0s						
TORD	Torodi Ar. Bea	31.52	224	P	P	21 40 12.1	-0.1
	0.8nm,0.6s,baz=34,slow=9.9,SNR=6.7 0.8nm,0.6s						
DBIC	Dimbokro	40.48	226	P	P	21 41 28.6	-0.3
	1.8nm,0.7s,baz=53,slow=6.2,SNR=3.1 1.8nm,0.7s						
MKAR	Makanchi Array	43.37	59	P	P	21 41 52.0	-0.3
	0.3nm,0.4s,baz=273,slow=7.3,SNR=7.8 0.3nm,0.4s						
ZALV	Zalesovo Beam	44.01	48	P	P	21 41 56.5	-0.8
	0.8nm,0.6s,baz=266,slow=10,SNR=4.9 0.8nm,0.6s						

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*IDC **28** 21:34:03.5±0.7,38°.15N×23°.49E,h0^{km},mb4.0/14, mbtmp4.0/19,ML3.1/4,MS3.2/1,Error ellipse: s-maj=14.6km s-min=14.0km az=142.0*

*MOS **28** 21:34:03.8±1.1,38°.23N×23°.34E,h10^{km},mb4.5/16,Error ellipse: s-maj=7.5km s-min=4.8km az=80.5*

*ATH **28** 21:34:05.3,38°.24N×23°.39E,h6^{km}±1^{km},ML3.8/7,Manual Solution by S.Koutrakis First location: 2019/12/28 21:34:37, This location: 2019/12/28 21:44:18 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

*MED_RC **28** 21:34:05.0±0.6,38°.21N×23°.39E,h13^{km}±2^{km},MW4.4/12, Moment Tensor Solution.Mantle waves: s12,c12; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}-4.57±1.16; $M_{\theta\theta}$3.84±.60; $M_{\phi\phi}$0.73±.74; $M_{r\theta}$2.62±.75; $M_{\theta\phi}$-1.42±.73; $M_{\phi r}$-0.53±.66; Best double couple: $M_0$5.22000×10^{15} NP1:ϕ_s116.00000°,δ30.00000°, λ-82.00000°. NP2:ϕ_s286.00000°,δ60.00000°, λ-95.00000°. Principal axes: T 5.1100, Plg15.0000°, Azm20.0000°; N 0.2100, Plg4.0000°, Azm289.0000°; P -5.3200, Plg74.0000°, Azm184.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*THE **28** 21:34:05.7,38°N±1°×2°3E±°,h2^{km}±3^{km},M3.9/5,MLh3.9/5*

*NEIC **28** 21:34:06.3±1.4,38°.26N±0°.04×23°.41E±0°.06,h10^{km}±1^{km}, mb4.3/19,Error ellipse: s-maj=8.5km s-min=6.5km az=109.0*

*NAO **28** 21:34:18.5,39°.33N×22°.10E,h10^{km},MB4.2*

ISC 28 21:34:05.5±0.7**,38°.23N**±0°.03×**23°.39E**±0°.02**,h10**^{km}±4^{km}**,** **n188,**σ**1^{s}25**/211**,mb4.2**/33**,22C-28D,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VILL	Villia	0.09	223	P	Pg	21 34 07.3	-0.6
VILL				S	Sg	21 34 08.6	-1.1
VIL2	Platees	0.09	261	P	Pg	21 34 07.6	-0.4
VIL2				S	Sg	21 34 09.2	-0.7
STFN	Stefani	0.14	112	P	Pg	21 34 08.4	-0.2
STFN				S	Sg	21 34 10.2	-0.6
STFN	Stefani	0.14	112	P	Pg	21 34 08.3	-0.3
STFN				S	Sg	21 34 10.4	-0.5
MAGU	Magoula	0.18	146	P	Pg	21 34 09.0	-0.3
MAGU				S	Sg	21 34 11.2	-0.7
MAGU	Magoula	0.18	146	P	Pg	21 34 09.1	-0.2
MAGU				S	Sg	21 34 11.6	-0.3
ATH	Athens Observa	0.36	134	P	Pg	21 34 12.8	+0.1
ATH				S	Sg	21 34 17.5	0.0
ATHU	Athens Univers	0.41	129	P	Pg	21 34 12.8	-0.7
ATHU	Athens Univers	0.41	129	P	Pg	21 34 13.4	-0.1
ATHU				S	Sg	21 34 18.2	-0.7
PTL	Penteli	0.42	115	P	Pg	21 34 13.7	0.0
PTL				S	Sg	21 34 18.1	-1.1
PTL	Penteli	0.42	115	P	Pg	21 34 13.6	0.0
PTL				S	Sg	21 34 19.0	-0.2
DION	Dionisos Attik	0.46	109	P	Pg	21 34 14.2	-0.3
DION				S	Sg	21 34 20.8	+0.3
LKR	Lokris	0.52	325	P	Pg	21 34 15.4	-0.3
LKR				S	Sb	21 34 24.0	-0.3
ATAL	Atalanti	0.55	329	P	Pg	21 34 15.7	-0.4
ATAL				S	Sb	21 34 24.5	-0.6
AXAR	Agios Charalam	0.78	314	P	Pg	21 34 18.6	-2.0
AXAR				S	Sb	21 34 32.5	+0.5
NEO	Neokhori	1.09	353	P	Pb	21 34 26.1	-0.2
NEO				S	Sn	21 34 41.4	-0.5
AGG	Agios Georgios	1.15	314	P	Pn	21 34 27.5	-0.1
AGG				S	Sn	21 34 44.6	+1.2
ITM	Ithomi	1.56	228		Pb	21 34 34.1	-0.3
ITM				Sn	Sg	21 34 56.2	+0.6
LIT	Litokhoron	2.00	340	Pn	Pn	21 34 39.0	-0.2
LIT				Sn	Sn	21 35 03.7	-0.6
KEK	Kerkira	3.17	299		Pn	21 34 56.4	+1.1
IDI	Anoyia	3.17	157	Pn	Pn	21 34 54.3	-1.1
	20nm,0.4s,baz=320,slow=17,SNR=8.0						
IDI				Sn	Sn	21 35 30.4	-3.0
	6.8nm,0.3s,baz=218,slow=5.8,SNR=3.5						
IDI	Anoyia	3.17	157		Pn	21 34 55.9	+0.5
CAVK	Edirne/Enez-Ca	3.27	40	⇓P	Pn	21 34 55.7	-1.1
RDO	Rodhopi	3.36	29	Pn	Pn	21 34 57.7	-0.3
BALB	Balikesir	3.78	67		Pn	21 35 04.1	+0.3
KARP	Karpathos	4.04	130		Pn	21 35 07.9	+0.6
MANT	Manisa	4.08	85	Pn	Pn	21 35 08.6	+0.6
ARG	Arkhangelos	4.28	116		Pn	21 35 10.9	+0.2
ARG	Arkhangelos	4.28	116	P	Pn	21 35 10.9	+0.2
ELND	Elena	5.07	21	⇑P	Pn	21 35 21.8	+0.4
PLVB	Pleven	5.24	10	⇓P	Pn	21 35 24.6	+0.8
PDG	Podgorica	5.25	324	Pn	Pn	21 35 25.1	+1.1
TIP	Timpagrande	5.27	282		Pn	21 35 25.3	+0.9
ELL	Elmali	5.39	104		Pn	21 35 27.0	+0.9
ELL	Elmali	5.39	104	P	Pn	21 35 27.0	+0.9
BOVS	Bovan	5.55	347	⇑P	Pn	21 35 26.5	-1.6
ISP	Isparta	5.65	92	⇓*e*P	Pn	21 35 31.3	+1.7
CUC	Castrocucco	6.14	289		Pn	21 35 38.4	+2.1
ACER	Acerenza	6.30	296	Pn	Pn	21 35 39.4	+1.0
HUMR	Humele	6.41	10	⇑P	Pn	21 35 39.9	0.0
MDVR	Moldovita	6.67	350	⇓P	Pn	21 35 43.3	-0.2
HERR	Herculane	6.69	354	⇑P	Pn	21 35 43.1	-0.6
STFAR	Stefanesti-Arg	6.74	10	⇓P	Pn	21 35 45.1	+0.7
VAE	Valguarnera	7.14	267	Sn	Sn	21 37 11.6	+0.5
	1.7nm,0.3s,baz=319,slow=19,SNR=3.6						
GZR	Gura Zlata	7.18	357	⇑P	Pn	21 35 50.1	-0.3
GZR	Gura Zlata	7.18	357	⇑P	Pn	21 35 50.2	-0.3
ARR	Arges	7.20	7	⇑P	Pn	21 35 51.1	+0.4
RAFF	Raffo Rosso	7.22	265	Pn	Pn	21 35 52.2	+1.1
LOT	Lotru	7.22	2	⇓P	Pn	21 35 50.6	-0.6
ISR	Istrita	7.28	18	⇓P	Pn	21 35 53.2	+1.3
ISR	Istrita	7.28	18	⇓P	Pn	21 35 53.2	+1.3
PAOL	Paolisi	7.36	295	Pn	Pn	21 35 54.0	+1.0
BZS	Buzias	7.50	350	⇑P	Pn	21 35 54.6	-0.2
BZS	Buzias	7.50	350	⇑P	Pn	21 35 54.6	-0.2
MLR	Muntele Rosu	7.50	14	Pn	Pn	21 35 56.5	+1.5
	0.3nm,0.3s,baz=92,slow=13,SNR=3.1 11nm,0.7s						
MLR	Muntele Rosu	7.50	14	Pn	Pn	21 35 56.3	+1.3
MLR	Muntele Rosu	7.50	14	⇓P	Pn	21 35 56.3	+1.3
NEHR	Nehoiu	7.51	16	⇓P	Pn	21 35 56.2	+1.1
TPGR	Topolog	7.62	28	⇑P	Pn	21 35 56.1	-0.5
DEV	Deva	7.66	357	⇓P	Pn	21 35 57.3	+0.3
DEV	Deva	7.66	357	⇓P	Pn	21 35 57.3	+0.3
CFR	Carcaliu	7.80	26	⇓P	Pn	21 35 59.7	+0.8
CFR	Carcaliu	7.80	26	⇓P	Pn	21 35 59.7	+0.8
DOPR	Dopca	7.88	10	⇓P	Pn	21 36 00.8	+0.7
COVR	Voineasa-Covas	7.90	14	⇑P	Pn	21 36 01.6	+1.3
PLOR	Plostina	8.00	17	⇑P	Pn	21 36 02.4	+0.7
PLOR	Plostina	8.00	17	⇑P	Pn	21 36 02.4	+0.7
VRI	Vrincioaia	8.03	17	⇑P	Pn	21 36 01.9	-0.2
VRI	Vrincioaia	8.03	17	⇑P	Pn	21 36 01.9	-0.2
OZUR		8.06	12	⇑P	Pn	21 36 03.3	+0.7
TURR	Turia	8.06	13	⇑P	Pn	21 36 02.4	-0.2
BR131	Keskin Array S	8.13	76		Pn	21 36 05.2	+1.6
BR131	Keskin Array S	8.13	76	⇓*e*P	Pn	21 36 06.9	+3.3
BRTR	Keskin Array B	8.13	76	Pn	Pn	21 36 04.9	+1.3
	0.2nm,0.3s,baz=253,slow=13,SNR=11 0.7nm,0.5s						
BRTR	Keskin Array B	8.13	76		Pn	21 36 04.3	+0.7
INTR	Introdacqua	8.19	300		Pn	21 36 05.5	+1.1
ONER	Baraj Valea Uz	8.40	14	⇓P	Pn	21 36 07.8	+0.6
MARR	Marisel-Cluj	8.45	359	⇓P	Pn	21 36 08.2	+0.3
ILGA	Ilgaz	8.46	67	Pn	Pn	21 36 09.5	+1.3
TESR	Tescani	8.62	15	⇑P	Pn	21 36 10.7	+0.4
CAMP	Campotosto	8.74	303	Pn	Pn	21 36 12.9	+0.8
NRCA	Norcia	9.07	304		Pn	21 36 17.4	+0.9
FDMO	Fiordimonte	9.18	305	Pn	Pn	21 36 18.5	+0.5
CESX	Cesi	9.33	301	Pn	Pn	21 36 21.9	+1.9
BURAR	Bucovina Array	9.48	8	⇓P	Pn	21 36 23.0	+0.9
BURAR	Bucovina Array	9.48	8	⇓P	Pn	21 36 23.0	+0.9
BUR08	Bucovina Ar. S	9.51	7		Pn	21 36 22.9	+0.5
MURB	Monte Urbino	9.65	305	Pn	Pn	21 36 24.8	+0.3
PSZ	Piszkesteto	10.02	346	Pn	Pn	21 36 29.3	-0.1
PSZ	Piszkesteto	10.02	346	P	Pn	21 36 29.3	-0.1
SOKA	Soboth	10.45	327	*i* Pn	Pn	21 36 34.5	-0.9
	2.8nm,0.5s						
OBKA	Obir	10.54	325	*e*Pn	Pn	21 36 37.8	+1.2
	3.0nm,0.6s						
OSSC	Osservatorio P	10.60	304	Pn	Pn	21 36 38.8	+1.4
SABO	M.te Sabotino	10.62	320	Pn	Pn	21 36 37.5	-0.1
ARSA	Arzberg	10.71	330	Pn	Pn	21 36 38.5	-0.3
ARSA	Arzberg	10.71	330	*i* Pn	Pn	21 36 39.1	+0.3
	2.1nm,0.4s						
RONA	Rosalia, Austr	10.79	334	*e*Pn	Pn	21 36 41.9	+1.9
	1.5nm,0.4s						
MODS	Modra-Piesok	11.07	338	*e*P	Pn	21 36 46.4	+2.6
MODS				*e*		21 38 40.7	
MODS	Modra-Piesok	11.07	338	*e*PN	Pn	21 36 46.4	+2.6
MODS				*e*SN	Sn	21 38 40.6	-7.0
CONA	Conrad Observa	11.14	333	*e*Pn	Pn	21 36 47.8	+3.0
	1.5nm,0.6s						
MOA	Molln	11.70	328	*i* Pn	Pn	21 36 52.9	+0.5
	5.6nm,0.9s						
BIOA	Bad Ischl, Aus	11.84	326	*i* Pn	Pn	21 36 54.0	-0.4
	3.1nm,0.6s						
LESA	Schwarzleotal	12.08	323	*i* Pn	Pn	21 36 56.9	-0.8
	1.0nm,0.4s						
ANN	Anapa	12.40	54	*e*P	Pn	21 36 59.6	-2.3
ANN				*e*S	Sn	21 39 20.5	+0.4
ANN				pmax	pmax		
	comp=Z,16nm,0.8s						
CKRC	Cesky Krumlov	12.46	331	*e*P	Pn	21 37 04.0	+1.2
CKRC	Cesky Krumlov	12.46	331	*e*P	Pn	21 37 04.0	+1.2
WTTA	Wattenberg	12.48	320	*e*Pn	Pn	21 37 04.1	+0.9
	comp=Z,1.0nm,0.3s						
WATA	Walderalm	12.56	320	*i* Pn	Pn	21 37 04.5	+0.3
	comp=Z,2.0nm,0.4s						
SQTA	Sankt Quirin	12.67	319	*i* Pn	Pn	21 37 05.8	+0.1
	comp=Z,1.6nm,0.5s						
GERES	GERESS Array B	12.71	330	Pn	Pn	21 37 07.8	+1.4
	baz=145,slow=16,SNR=4.4						
GERES				LR	LR	21 43 26.7	
	comp=Z,104nm,19.8s,baz=230,slow=44 comp=Z,1.4nm,0.9s						
GERES	GERESS Array B	12.71	330	*e*P	Pn	21 37 08.7	+2.4
FETA	Feichten	12.80	317	*i* Pn	Pn	21 37 08.8	+1.3
	comp=Z,6.6nm,0.8s						
KHC	Kasperske Hory	12.99	330	⇓*e*P	Pn	21 37 10.0	-0.1
KHC				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KHC	Kasperske Hory	12.99	330	*e*P	Pn	21 37 10.5	+0.4
RETA	Reutte	13.08	319	*e*Pn	Pn	21 37 12.0	+0.7
	comp=Z,0.2nm,0.2s						
DAVA	Damuels	13.42	317	*i* Pn	Pn	21 37 17.3	+1.4
	comp=Z,3.4nm,0.5s						
BFO	Black Forest	14.88	318		Pn	21 37 37.7	+1.9
BFO	Black Forest	14.88	318	P	Pn	21 37 37.7	+1.9
CLL	Collm	14.99	334	*i* P	P	21 37 46.0	+3.2
CLL				pmax	pmax		
	comp=Z,14nm,1.5s						
CLL	Collm	14.99	334	*e*P	Pn	21 37 36.0	-1.3
CLL				*i* PP	P	21 37 46.0	+3.2
	comp=Z,14nm,1.5s						
KIV	Kislovodsk	15.62	62	*e*P	Pn	21 37 47.1	+1.3
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KBZ	Khabaz	15.72	63	Pn	Pn	21 37 48.0	+1.2
	comp=Z,0.1nm,0.3s,baz=288,slow=6.7,SNR=11 comp=Z,0.8nm,0.7s						
OBN	Obninsk	19.11	24	*e*P	Pn	21 38 30.6	+1.6
OBN				pmax	pmax		
	comp=Z,45nm,2.0s						
OBN				MLR	MLR		

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       comp=Z,88nm,14.0s
VSU    Vasula             20.37   5c iP      Pn      21 38 43.7 -0.3
VSU                                      pmax   pmax
       comp=Z,61nm,1.4s
ESBB   Sonseca Array      21.29 282   P      P       21 38 53.8 +1.7
ESDC   Sonseca Array      21.29 282   P      P       21 38 54.2 +2.0
       comp=Z,2.6nm,0.7s,baz=83,slow=10,SNR=17
       comp=Z,2.6nm,0.7s
ESDC   Sonseca Array      21.29 282   P      P       21 38 53.0 +0.9
PAB    San Pablo          21.60 282   P      P       21 38 57.0 +1.5
PAB                                   IAmb   IAmb    21 39 13.5
       comp=Z,11nm,1.2s
PAB    San Pablo          21.60 282   P      P       21 38 57.0 +1.5
PAB                                   pmax   pmax
       comp=Z,11nm,1.3s
TAM    Tamanrasset        21.70 230   P      P       21 38 57.4 +0.6
TAM                                   IAmb   IAmb    21 39 03.5
       comp=Z,8.6nm,0.5s
TAM    Tamanrasset        21.70 230   P      P       21 38 57.4 +0.6
TAM                                   pmax   pmax
       comp=Z,9.0nm,0.5s
BELG   Belogornoye        22.02  42c iP      P       21 39 02.2 +2.4
BELG                                  pmax   pmax
       comp=Z,8.0nm,1.0s
HFS    Hagfors            22.77 347   P      P       21 39 07.7 -0.1
       comp=Z,4.3nm,0.6s,baz=161,slow=9.4,SNR=7.5
       comp=Z,4.3nm,0.6s
FINES  FINESS Array B     23.30   3   P      P       21 39 14.5 +1.3
       comp=Z,1.1nm,0.7s,baz=166,slow=13,SNR=6.0
       comp=Z,1.1nm,0.7s
FINES  FINESS Array B     23.30   3   P      P       21 39 13.7 +0.5
NB2    NORSAR Subarra     24.08 345   P      P       21 39 19.9 -0.9
       comp=Z,9.6nm,1.0s,baz=158,slow=10
NOA    NORSAR Array B     24.08 345   P      P       21 39 21.1 +0.4
       comp=Z,5.6nm,0.9s,baz=156,slow=9.9,SNR=9.5
       comp=Z,5.6nm,0.9s
NOA    NORSAR Array B     24.08 345  eP      P       21 39 24.1 +3.3
NOA                                   pmax   pmax
       comp=Z,2.0nm,0.7s
NC204  NORSAR Array S     24.38 345   P      P       21 39 23.2 -0.4
EKA    Eskdalemuir Ar     24.73 322   P      P       21 39 27.1 +0.4
       comp=Z,6.2nm,0.9s,baz=125,slow=8.7,SNR=6.1
       comp=Z,6.2nm,0.9s
ESK    Eskdalemuir        24.74 322   P      P       21 39 25.2 -1.7
ESK    Eskdalemuir        24.74 322   P      P       21 39 25.2 -1.7
ESK                                   pmax   pmax
       comp=Z,51nm,1.3s
KLMR   Klimovskoe         24.81  19  eP      P       21 39 25.9 -1.5
KLMR                                 e               21 39 57.2
KLMR                                  pmax   pmax
       comp=Z,32nm,1.5s
ARTI   Arti               29.43  40          P       21 40 08.3 -0.7
ARTI                                  IAmb   IAmb    21 40 13.1
       comp=Z,8.4nm,1.0s
ARTI   Arti               29.43  40d iP      P       21 40 08.0 -1.0
ARTI                                  S      S       21 45 02.2 -0.6
ARTI                                  pmax   pmax
       comp=Z,6.0nm,1.0s
TORD   Torodi Ar. Bea     31.55 223   P      P       21 40 28.1 +0.1
       comp=Z,4.2nm,0.7s,baz=33,slow=10,SNR=14
       comp=Z,4.2nm,0.7s
TORD   Torodi Ar. Bea     31.55 223   P      P       21 40 25.4 -2.7
TORD                                  IAmb   IAmb    21 40 26.6
       comp=Z,3.1nm,0.9s
BORK   Borovoye           35.32  50⇓eP      P       21 41 03.6 +3.0
BORK                                  pmax   pmax
       comp=Z,14nm,3.6s
BVAR   Borovoye Array     35.36  50   P      P       21 41 01.1 +0.1
       comp=Z,0.5nm,0.5s,baz=299,slow=1.5,SNR=4.6
       comp=Z,0.5nm,0.5s
CHGR   Chuyangaron        35.57  75          P       21 41 02.7 -0.3
CHGR                                  IAmb   IAmb    21 41 04.4
       comp=Z,9.2nm,0.9s
CHGR   Chuyangaron        35.57  75⇑iP      P       21 41 03.6 +0.6
CHGR                                  pmax   pmax
       comp=Z,10.0nm,0.9s
KK31   Karatay Array      35.71  67          P       21 41 04.0  0.0
KK31   Karatay Array      35.71  67   P      P       21 41 04.0  0.0
KK31                                  pmax   pmax
       comp=Z,1.0nm,0.7s
KKAR   Karatay Array      35.71  67   P      P       21 41 04.3 +0.3
KKAR   Karatay Array      35.71  67   P      P       21 41 04.3 +0.3
GAR    Garm               36.36  74          P       21 41 09.6 -0.3
GAR                                   IAmb   IAmb    21 41 15.6
       comp=Z,11nm,1.0s
AAK    Ala-Archa          38.67  67   P      P       21 41 28.8 -0.6
AAK    Ala-Archa          38.67  67⇓iP      P       21 41 31.3 +1.9
AAK                                   pmax   pmax
       comp=Z,10.0nm,2.6s
BOOM   Boomskoye usch     39.75  67   P      P       21 41 37.9 -0.5
BOOM                                  IAmb   IAmb    21 41 41.4
       comp=Z,3.3nm,0.9s
BOOM   Boomskoye usch     39.75  67   P      P       21 41 37.9 -0.5
BOOM                                  pmax   pmax
       comp=Z,3.0nm,0.9s
DBIC   Dimbokro           40.51 226   P      P       21 41 44.3 -0.4
       comp=Z,6.4nm,0.8s,baz=52,slow=8.5,SNR=7.9
       comp=Z,6.4nm,0.8s
DBIC   Dimbokro           40.51 226   P      P       21 41 43.6 -1.1
DBIC                                  IAmb   IAmb    21 41 47.1
       comp=Z,11nm,1.1s
DBIC   Dimbokro           40.51 226   P      P       21 41 43.6 -1.1
DBIC                                  pmax   pmax
       comp=Z,11nm,1.1s
WUS    Wushi              42.43  68          P       21 41 59.8 -0.7
WUS                                   IAmb   IAmb    21 42 02.2
       comp=Z,3.3nm,0.8s
MAKZ   Makanchi           43.13  59   P      P       21 42 04.7 -1.3
MAKZ                                  IAmb   IAmb    21 42 06.0
       comp=Z,4.3nm,1.4s
MAKZ   Makanchi           43.13  59   P      P       21 42 04.7 -1.3
MAKZ                                  pmax   pmax
       comp=Z,4.0nm,1.4s
MK31   Makanchi Array     43.35  59⇓eP      P       21 42 08.9 +1.2
MKAR   Makanchi Array     43.35  59   P      P       21 42 07.8 +0.1
       comp=Z,1.1nm,0.4s,baz=270,slow=7.9,SNR=18
       comp=Z,1.1nm,0.4s
MKAR   Makanchi Array     43.35  59          P       21 42 07.6 -0.1
ZAA0   Zalesovo Array     43.98  48          P       21 42 11.5 -1.0
ZAA0                                  IAmb   IAmb    21 42 16.8
       comp=Z,5.4nm,0.8s
ZALV   Zalesovo Beam      43.98  48   P      P       21 42 12.4 -0.2
       comp=Z,5.3nm,0.8s,baz=276,slow=8.8,SNR=16
       comp=Z,5.3nm,0.8s
ZALV   Zalesovo Beam      43.98  48          P       21 42 11.9 -0.6
DGZ    Jazzator, Alta     46.18  54⇓eP      P       21 42 31.0 +0.6
DGZ                                   pmax   pmax
       comp=Z,21nm,5.6s
WMQ    Urumqi             47.76  62  eP      P       21 42 45.5 +2.8
WMQ                                   PP     PP      21 44 36.5 +2.3
WMQ                                   pmax   pmax
       comp=Z,14nm,1.1s
TIXI   Tiksi              58.81  21⇓eP      P       21 44 03.7 +0.3
TIXI                                  pmax   pmax
       comp=Z,18nm,3.0s
ULN    Ulaanbaatar        59.06  51⇓eP      P       21 44 06.4 +0.6
ULN                                   pmax   pmax
       comp=Z,10.0nm,3.3s
SCHQ   Schefferville      59.94 318   P      P       21 44 11.6 +0.1
       comp=Z,3.4nm,0.5s,baz=57,slow=4.1,SNR=12
       comp=Z,3.4nm,0.5s
KGCAE  Kacgae             60.77 181   P      P       21 44 17.8 +0.2
LBTB   Lobatse            62.94 178   P      P       21 44 31.7 -0.4
LBTB   Lobatse            62.94 178   P      P       21 44 31.7 -0.4
LBTB                                  pmax   pmax
       comp=Z,17nm,1.5s
YAK    Yakutsk            63.95  30ceP      P       21 44 37.5 -0.8
YAK                                   pmax   pmax
       comp=Z,8.0nm,0.7s
HHC    Hu-ho-hao-te       65.14  57  eP      P       21 44 46.0 -0.6
HHC                                   pmax   pmax
       comp=Z,5.0nm,0.5s
HHC                                   pmax   pmax
       comp=Z,110nm,4.6s
PZH    PanZhiHua          65.42  75   P      P       21 44 48.3 -0.4
CMAR   Chiang Mai Arr     67.64  84   P      P       21 45 01.9 -1.0
       comp=Z,0.6nm,0.5s,baz=300,slow=6.3,SNR=6.8
       comp=Z,0.6nm,0.5s
YKA    Yellowknife Ar     74.09 341   P      P       21 45 40.7 -0.6
       comp=Z,0.3nm,0.6s,baz=28,slow=5.3,SNR=4.9
       comp=Z,0.3nm,0.6s
YKA    Yellowknife Ar     74.09 341  eP      P       21 45 41.6 +0.3
YKA                                   pmax   pmax
       comp=Z,1.0nm,0.9s
KSRS   Korea Array        77.54  52   P      P       21 46 00.0 -1.4
       comp=Z,1.2nm,0.9s,baz=306,slow=4.5,SNR=3.2
       comp=Z,1.2nm,0.9s
ASAR   Alice Springs     119.94  98   PKP    PKPdf   21 52 54.5 -2.0
       comp=Z,0.2nm,0.3s,baz=309,slow=1.8,SNR=4.7
```

IDC 28 21:45:22.8±2.6, 12°.35N×144°.88E, h0^{km}, mb3.3/3, mbtmp3.3/3, MS2.4/1, Error ellipse: s-maj=124.5km s-min=18.2km az=93.0, South of Mariana Islands

```
Code   Station Name         Δ°  AZ°    Phase ID            Time      Res
                                      Op     ISC       h  m  s     ISC
GUMO   Guam                1.24 359   Pn     Pn      21 45 47.3 -0.1
       12nm,0.3s,baz=200,slow=19,SNR=2.0
GUMO                                  Sn     Sn      21 46 06.1 +1.3
       46nm,0.3s,baz=357,slow=21,SNR=8.2
DAV    Davao City (W)     19.73 256   LR     LR      21 57 14.2
       comp=Z,10nm,20.7s,baz=86,slow=36
WRA    Warramunga Arr     33.72 198   P      P       21 52 05.6 -0.5
       0.5nm,0.6s,baz=23,slow=9.7,SNR=5.0
       0.5nm,0.6s
ASAR   Alice Springs      37.37 197   P      P       21 52 37.8 +0.4
       0.3nm,0.6s,baz=18,slow=10,SNR=6.3
       0.3nm,0.6s
MKAR   Makanchi Array     62.39 317   P      P       21 55 47.4 -0.2
       0.1nm,0.5s,baz=98,slow=6.7,SNR=1.3
       0.1nm,0.5s
```

ROM 28 21:56:19.6±0.1, 40°.604N±0°.007×15°.785E±0°.009, h18^{km}±1^{km}, ML1.8/12, 3C-1D, Error ellipse: s-maj=1.0km s-min=0.3km az=136.0, Southern Italy

```
Code   Station Name         Δ°  AZ°    Phase ID            Time      Res
                                      Op     ISC       h  m  s     ISC
PZUN   Potenza             0.05  21   P      Pg      21 56 22.8 -0.1
PZUN                                  S      Sg      21 56 25.0 -0.2
PZUN                                  AML    AML
       comp=E,1345µm,0.3s
PZUN                                  AML    AML
       comp=N,1224µm,0.6s
PZUN                                  AML    AML
       comp=N,1234µm,0.6s
PZUN                                  AML    AML
       comp=E,1300µm,0.3s
PZUN                                  AML    AML
       comp=E,1345µm,0.2s
STN3   Satriano di Lu      0.13 234  ⇓P      Pg      21 56 24.1 +0.5
STN3                                  S      Sg      21 56 27.0 +0.6
STN3                                  AML    AML
       comp=E,28250µm,0.6s
STN3                                  AML    AML
       comp=E,28250µm,1.4s
STN3                                  AML    AML
       comp=N,26250µm,0.4s
ACER   Acerenza            0.22  33  ⇑P      Pg      21 56 25.1 +0.2
ACER                                  S      Sg      21 56 29.4 +0.9
ACER                                  AML    AML
       comp=N,324µm,1.2s
ACER                                  AML    AML
       comp=E,286µm,0.3s
PTRP   Pietrapertosa       0.23 111   P      Pg      21 56 25.2 +0.1
PTRP                                  S      Sg      21 56 29.3 +0.6
SLCN   Sala Consilina      0.24 209  ⇑P      Pb      21 56 25.3  0.0
SLCN                                  S      Sg      21 56 29.7 +0.5
SLCN                                  AML    AML
       comp=E,380µm,0.4s
SLCN                                  AML    AML
       comp=N,320µm,0.3s
SLC1   Sala Consilina      0.25 215   P      Pb      21 56 25.7 +0.2
SLC1                                  S      Sg      21 56 30.6 +1.2
MCEL   Monticello          0.28 177  ⇑P      Pg      21 56 25.4 -0.5
MCEL                                  S      Sb      21 56 30.7 +0.4
MCEL                                  AML    AML
       comp=E,123µm,1.3s
MCEL                                  AML    AML
       comp=N,140µm,1.2s
MCEL                                  AML    AML
       comp=E,120µm,0.9s
MCEL                                  AML    AML
       comp=N,156µm,1.2s
MCEL                                  AML    AML
       comp=E,123µm,0.7s
MCEL                                  AML    AML
       comp=E,120µm,1.1s
PALZ   Palazzo San Ge      0.36  21   P      Pg      21 56 27.4 +0.1
CMPR   Campora             0.47 232   P      Pg      21 56 28.7 -0.4
CMPR                                  S      Sb      21 56 36.1 +0.2
MRVN   Minervino Murg      0.55  34   P      Pg      21 56 30.2 -0.5
MRVN                                  S      Sb      21 56 39.1 +0.8
```

ROM 28 21:57:19.5±0.1, 40°.581N±0°.004×15°.784E±0°.008, h17^{km}±1^{km}, ML2.9/72, Error ellipse: s-maj=0.7km s-min=0.1km az=282.0

ISC 28 21:57:19.7±0.8, 40°.58N±0°.02×15°.80E±0°.02, h17^{km}±5^{km}, n44, σ0^{s}.84/64, 7C-1D, Southern Italy

```
Code   Station Name         Δ°  AZ°    Phase ID            Time      Res
                                      Op     ISC       h  m  s     ISC
PZUN   Potenza             0.07   5  ⇑P      Pg      21 57 22.4 -0.5
PZUN                                  S      Sg      21 57 25.5 +0.5
PZUN                                  AML    AML
       comp=N,28800µm,0.6s
PZUN                                  AML    AML
       comp=E,28100µm,0.3s
PZUN                                  AML    AML
       comp=N,30850µm,0.2s
PZUN                                  AML    AML
       comp=N,30850µm,1.8s
PZUN                                  AML    AML
       comp=N,28800µm,1.4s
PZUN                                  AML    AML
       comp=E,30000µm,0.3s
PTRP   Pietrapertosa       0.21 106  ⇓P      Pg      21 57 24.8 +0.1
PTRP                                  S      Sb      21 57 29.2 +0.5
PTRP                                  AML    AML
       comp=E,4040µm,1.1s
PTRP                                  AML    AML
       comp=N,4955µm,0.4s
SLCN   Sala Consilina      0.23 214  ⇑P      Pg      21 57 25.0 -0.1
SLCN                                  S      Sb      21 57 29.4  0.0
SLCN                                  AML    AML
       comp=E,14650µm,0.4s
SLCN                                  AML    AML
       comp=N,12000µm,0.4s
SLCN                                  AML    AML
       comp=N,12000µm,0.3s
SLCN                                  AML    AML
       comp=E,15250µm,0.9s
SLCN                                  AML    AML
       comp=N,13850µm,0.3s
ACER   Acerenza            0.23  28  ⇑P      Pg      21 57 24.8 -0.3
ACER                                  S      Sg      21 57 29.0 +0.2
ACER                                  AML    AML
       comp=E,8285µm,0.5s
ACER                                  AML    AML
       comp=N,10200µm,0.6s
ACER                                  AML    AML
       comp=E,8705µm,0.5s
ACER                                  AML    AML
       comp=E,8705µm,1.5s
ACER                                  AML    AML
       comp=E,8285µm,1.5s
ACER                                  AML    AML
       comp=N,10700µm,0.6s
MCEL   Monticello          0.26 180  ⇑P      Pg      21 57 25.1 -0.4
MCEL                                  S      Sb      21 57 30.1  0.0
MCEL                                  AML    AML
       comp=E,3820µm,0.7s
MCEL                                  AML    AML
       comp=E,3760µm,0.7s
MCEL                                  AML    AML
       comp=N,3430µm,0.7s
MCEL                                  AML    AML
       comp=N,3520µm,0.7s
PALZ   Palazzo San Ge      0.38  18   P      Pg      21 57 26.9 -0.7
PALZ                                  S      Sb      21 57 33.7 -0.1
PALZ                                  AML    AML
       comp=N,2020µm,0.8s
PALZ                                  AML    AML
       comp=N,2020µm,1.2s
PALZ                                  AML    AML
       comp=E,2315µm,0.5s
VULT   Monte Vulture       0.40 340  ⇑P      Pg      21 57 27.3 -0.7
VULT                                  S      Sb      21 57 33.9 -0.5
VULT                                  AML    AML
       comp=E,1555µm,0.4s
VULT                                  AML    AML
       comp=E,1465µm,1.1s
VULT                                  AML    AML
       comp=N,2375µm,0.6s
VULT                                  AML    AML
       comp=N,2385µm,0.6s
VULT                                  AML    AML
       comp=E,1465µm,1.1s
VULT                                  AML    AML
       comp=N,2375µm,0.6s
VULT                                  AML    AML
       comp=E,1465µm,0.9s
SIRI   Monte Sirino -      0.40 173   P      Pg      21 57 27.3 -0.7
SIRI                                  S      Sb      21 57 34.3  0.0
CMPR   Campora             0.46 236   P      Pg      21 57 28.4 -0.7
CMPR                                  S      Sb      21 57 35.7 -0.3
CMPR                                  AML    AML
       comp=N,1102µm,0.3s
CMPR                                  AML    AML
       comp=N,1102µm,1.7s
CMPR                                  AML    AML
       comp=E,1095µm,0.9s
MGR    Morigerati          0.48 203  ⇑P      Pg      21 57 28.8 -0.6
MGR                                   S      Sb      21 57 36.3 -0.3
MGR                                   AML    AML
       comp=N,1215µm,0.3s
MGR                                   AML    AML
       comp=N,1445µm,0.3s
MGR                                   AML    AML
       comp=E,1425µm,0.4s
MGR                                   AML    AML
       comp=E,1620µm,0.4s
MCRV   Calabrutti - M      0.52 293   P      Pg      21 57 29.7 -0.5
MCRV                                  S      Sb      21 57 38.1 +0.2
CRAC   Craco               0.53 114   P      Pg      21 57 29.8 -0.5
CRAC                                  S      Sb      21 57 39.5 +1.5
CRAC                                  AML    AML
       comp=N,5480µm,0.4s
CRAC                                  AML    AML
       comp=E,5395µm,0.4s
CRAC                                  AML    AML
       comp=E,5395µm,1.6s
MRVN   Minervino Murg      0.57  32   P      Pg      21 57 29.9 -1.1
MRVN                                  S      Sg      21 57 38.4 -0.2
MRVN                                  AML    AML
       comp=E,696µm,0.4s
MRVN                                  AML    AML
       comp=N,1218µm,0.3s
CAPA   Cerignola FG        0.58   1   P      Pg      21 57 30.4 -0.8
CAPA                                  AML    AML
       comp=E,798µm,1.6s
CAPA                                  AML    AML
       comp=N,686µm,0.8s
CAPA                                  AML    AML
       comp=N,398µm,0.9s
CAPA                                  AML    AML
       comp=E,378µm,1.0s
CAPA                                  AML    AML
       comp=E,798µm,0.4s
CAPA                                  AML    AML
       comp=N,686µm,1.2s
CUC    Castrocucco         0.59 179   P      Pg      21 57 30.3 -1.1
CUC                                   AML    AML
       comp=E,648µm,0.7s
CUC                                   AML    AML
       comp=E,624µm,0.7s
CUC                                   AML    AML
       comp=E,648µm,1.3s
CUC                                   AML    AML
       comp=E,624µm,1.3s
CUC                                   AML    AML
       comp=N,478µm,0.3s
CUC                                   AML    AML
       comp=N,467µm,0.3s
BULG   Bulgheria - Ca      0.60 213  ⇑P      Pg      21 57 31.0 -0.6
BULG                                  AML    AML
       comp=N,1365µm,0.7s
BULG                                  AML    AML
       comp=E,1070µm,0.8s
BULG                                  AML    AML
       comp=N,1330µm,0.7s
BULG                                  AML    AML
       comp=E,1108µm,0.8s
CAFE   Carife              0.62 317   P      Pg      21 57 31.3 -0.7
SGTA   Sant Agata di       0.65 329   P      Pg      21 57 31.4 -1.1
SGTA                                  AML    AML
       comp=N,546µm,1.1s
SGTA                                  AML    AML
       comp=N,496µm,1.3s
SGTA                                  AML    AML
       comp=N,546µm,0.9s
SGTA                                  AML    AML
       comp=E,930µm,0.4s
SGTA                                  AML    AML
       comp=E,934µm,0.4s
SGTA                                  AML    AML
       comp=N,496µm,0.7s
MATE   Matera              0.69  84   P      Pb      21 57 32.1 -1.2
MATE                                  S      Sg      21 57 43.4 +0.9
MATE                                  AML    AML
       comp=N,1510µm,0.3s
MATE                                  AML    AML
       comp=E,2125µm,0.3s
AMUR   Altamura            0.69  62   P      Pb      21 57 32.6 -0.7
AMUR                                  S      Sg      21 57 42.7 +0.1
AMUR                                  AML    AML
       comp=E,990µm,0.6s
AMUR                                  AML    AML
       comp=N,1105µm,0.7s
MTMR   Montemarano         0.69 299   P      Pg      21 57 32.7 -0.6
MMN    Mormanno            0.70 168   P      Pb      21 57 32.4 -1.2
ORI    Oriolo Calabro      0.72 136   P      Pn      21 57 35.1  0.0
ORI                                   S      Sn      21 57 46.3 +0.5
LTRZ   Laterza             0.78  88   P      Pb      21 57 34.1 -0.7
LTRZ                                  S      Sg      21 57 46.1 +0.9
LTRZ                                  AML    AML
       comp=E,1030µm,0.4s
LTRZ                                  AML    AML
       comp=N,814µm,0.6s
LTRZ                                  AML    AML
       comp=E,1030µm,1.6s
SALB   San Lorenzo Be      0.82 149   P      Pb      21 57 34.4 -1.2
SALB                                  AML    AML
       comp=E,647µm,1.6s
SALB                                  AML    AML
       comp=N,447µm,0.3s
MRB1   Monte Rocchett      0.83 311   P      Pn      21 57 36.1 -0.7
MOCO   Biccari - m.te      0.93 329   P      Pn      21 57 38.0 -0.1
NOCI   Noci                0.98  77   P      Pb      21 57 37.9 -0.5
NOCI                                  S      Sn      21 57 52.9 +0.5
NOCI                                  AML    AML
       comp=N,2300µm,0.9s
NOCI                                  AML    AML
       comp=E,1600µm,0.4s
PSB1   Pescosannita        0.99 311   P      Pg      21 57 39.2 +0.3
PAOL   Paolisi             1.04 296   P      Pg      21 57 40.4 +0.6
CET2   Cetraro             1.06 173   P      Pb      21 57 38.9 -0.7
CET2                                  AML    AML
       comp=E,366µm,0.7s
CET2                                  AML    AML
       comp=N,630µm,0.4s
TAR1   Taranto             1.13  92   P      Pn      21 57 40.7 -0.1
TAR1                                  S      Sg      21 57 58.1 +1.7
TAR1                                  AML    AML
       comp=E,390µm,0.3s
TAR1                                  AML    AML
       comp=N,443µm,1.2s
MSAG   Monte S. Angel      1.13   4   P      Pn      21 57 40.0 -1.0
MSAG                                  S      Sg      21 57 58.9 +2.4
MSAG                                  AML    AML
       comp=E,172µm,1.3s
MSAG                                  AML    AML
       comp=E,453µm,0.4s
MSAG                                  AML    AML
       comp=N,792µm,1.3s
MSAG                                  AML    AML
       comp=N,325µm,1.3s
MSAG                                  AML    AML
       comp=N,792µm,0.7s
MSAG                                  AML    AML
       comp=E,172µm,0.7s
MSAG                                  AML    AML
       comp=N,325µm,0.7s
CIGN   Sant'Elia a Pi      1.27 328   P      Pb      21 57 43.3 +0.1
BSSO   Busso               1.33 317   P      Pg      21 57 44.5 -0.8
```

CAR1	**CAROLEI**	**1.36**	**166**	P	**Pb**	**21 57 45.0**	**+0.1**
OBKA	**Obir**	**6.00**	**352**	*i* Pn	**Pn**	**21 58 47.1**	**-0.7**
	comp=N,1.4nm,0.4s						
SOKA	**Soboth**	**6.12**	**355**	*i* Pn	**Pn**	**21 58 49.3**	**-0.2**
	comp=N,0.3nm,0.3s						
MYKA	**Terra Mystica**	**6.25**	**346**	*i* Pn	**Pn**	**21 58 53.2**	**+2.1**
	comp=N,1.5nm,0.4s						
LESA	**Schwarzleotal**	**7.20**	**343**	*e*Pn	**Pn**	**21 59 04.2**	**-0.1**
	comp=N,0.8nm,0.3s						
BIOA	**Bad Ischl, Aus**	**7.28**	**348**	*i* Pn	**Pn**	**21 59 04.9**	**-0.4**
	comp=N,0.8nm,0.3s						
WTTA	**Wattenberg**	**7.33**	**337**	*i* Pn	**Pn**	**21 59 07.7**	**+1.6**
	comp=N,0.4nm,0.2s						
MOA	**Molln**	**7.35**	**352**	*i* Pn	**Pn**	**21 59 05.4**	**-0.9**
	comp=N,0.8nm,0.3s						
WATA	**Walderalm**	**7.41**	**337**	*e*Pn	**Pn**	**21 59 08.9**	**+1.7**
	comp=N,0.6nm,0.2s						

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*IDC **28** 21:59:08.1±1.1, 11°.15S×74°.31W, h0^{km}, mb3.4/4, mbtmp3.5/7, ML3.8/3, MS2.4/2, Error ellipse: s-maj=29.5km s-min=14.8km az=172.0*

ISC 28 21:59:13.4±0.9**, 11°.2S**±0°.1×**74°.28W**±0°.08**, h38^{km}, n8, σ0^{s}87**/9**, mb3.4**/3**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**2.62**	**253**	Pn	**Pn**	**21 59 52.8**	**-0.5**
	35nm,0.3s,baz=88,slow=7.4,SNR=44						
NNA				Sn	**Sn**	**22 00 24.7**	**+0.8**
	52nm,0.3s,baz=114,slow=19,SNR=9.7						
NNA				Lg	Lg	22 00 30.9	
	44nm,0.3s,baz=260,slow=7.9,SNR=6.3						
	85nm,0.2s						
ATAH	**Atahualpa**	**5.75**	**315**	Pn	**Pn**	**22 00 36.0**	**-0.5**
	3.3nm,0.3s,baz=107,slow=1.7,SNR=13						
ATAH				Sn	**Sn**	**22 01 42.3**	**+0.9**
	3.1nm,0.3s,baz=286,slow=19,SNR=4.3						
ATAH				LR	LR	22 02 41.9	
	comp=Z,28nm,20.9s,baz=117,slow=38						
	6.3nm,0.3s						
LPAZ	**La Paz**	**7.81**	**131**	Lg	Lg	22 03 19.6	
	0.7nm,0.3s,baz=206,slow=20,SNR=4.2						
LPAZ				LR	LR	22 04 21.9	
	comp=Z,27nm,18.2s,baz=80,slow=40						
SIV	**San Ignacio**	**13.68**	**112**	Pn	**Pn**	**22 02 24.6**	**-0.3**
	baz=296,slow=15,SNR=4.1						
SIV				Lg	Lg	22 06 26.2	
	0.1nm,0.3s,baz=26,slow=23,SNR=3.7						
	0.6nm,0.4s						
TXAR	**Lajitas Array**	**49.29**	**326**	P	**P**	**22 07 57.7**	**-1.1**
	0.3nm,0.8s,baz=146,slow=10,SNR=2.1						
	0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**79.17**	**74**	P	**P**	**22 11 15.6**	**+0.6**
	0.6nm,0.7s,baz=246,slow=4.0,SNR=9.3						
	0.6nm,0.7s						
YKA	**Yellowknife Ar**	**79.86**	**342**	P	**P**	**22 11 17.6**	**-0.1**
	0.1nm,0.6s,baz=143,slow=4.8,SNR=5.1						
	0.1nm,0.6s						
ESDC	**Sonseca Array**	**82.41**	**47**	P	**P**	**22 11 32.7**	**+0.9**
	0.2nm,0.5s,baz=244,slow=4.5,SNR=1.8						
	0.2nm,0.5s						

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*SOME **28** 22:29:30.3, 39°.03N×74°.57E, h10^{km}*

*IDC **28** 22:29:34.6±0.9, 38°.87N×74°.98E, h0^{km}, mb3.9/17, mbtmp3.9/22, ML3.3/5, MS3.4/7, Error ellipse: s-maj=19.0km s-min=15.4km az=156.0*

*NNC **28** 22:29:37.9±2.1, 39°.14N×74°.91E, h0^{km}, mb4.5, mpv4.2, Error ellipse: s-maj=15.4km s-min=9.5km az=169.0*

*NEIC **28** 22:29:38.6±2.1, 39°.03N±0°.06×74°.82E±0°.06, h10^{km}±1^{km}, mb4.4/24, Error ellipse: s-maj=11.9km s-min=6.7km az=149.0*

ISC 28 22:29:37.7±0.5**, 39°.04N**±0°.04×**74°.76E**±0°.03**, h10^{km}, n133, σ2^{s}13**/144**, mb4.2**/23**, MS3.3**/6**, 5C-5D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**2.33**	**282**		**Pn**	**22 30 18.2**	**+1.7**
MANEM	**Manem**	**2.85**	**239**		**Pn**	**22 30 25.1**	**+1.7**
UCH	**Uchtor**	**3.19**	**357**	P	**Pn**	**22 30 31.2**	**+2.9**
	SNR=32						
BTK	**Batken**	**3.21**	**290**	Pn	**Pn**	**22 30 30.2**	**+1.9**
ULHL	**Ulahol**	**3.39**	**19**	P	**Pb**	**22 30 38.3**	**+0.2**
	SNR=22						
GAR	**Garm**	**3.46**	**271**		**Pn**	**22 30 34.1**	**+2.4**
TARG	**Taragay, Kyrgy**	**3.55**	**40**		**Pn**	**22 30 34.8**	**+1.5**
BOOM	**Boomskoye usch**	**3.56**	**14**		**Pn**	**22 30 35.3**	**+2.1**
KDJ	**Kajisay**	**3.59**	**30**		**Pn**	**22 30 35.6**	**+2.0**
AAK	**Ala-Archa**	**3.60**	**357**	P	**Pn**	**22 30 36.9**	**+3.2**
	SNR=41						
AAK	**Ala-Archa**	**3.60**	**357**	Pn	**Pn**	**22 30 37.0**	**+3.2**
	4.6nm,0.3s,baz=169,slow=7.4,SNR=62						
AAK				Sn	**Sn**	**22 31 20.9**	**+4.7**
	2.7nm,0.3s,baz=279,slow=22,SNR=3.8						
AAK				LR	LR	22 31 46.2	
	comp=Z,14nm,20.6s,baz=186,slow=35						
	50nm,1.0s						
AAK	**Ala-Archa**	**3.60**	**357**		**Pn**	**22 30 36.2**	**+2.5**
AAK	**Ala-Archa**	**3.60**	**357**	⇑Pn	**Pn**	**22 30 36.8**	**+3.2**
	23nm,0.8s						
AAK				⇓Pg	**Pb**	**22 30 44.6**	**+3.1**
	52nm,0.8s						
AAK				Sn	**Sn**	**22 31 18.3**	**+2.0**
	26nm,0.8s						
AAK				⇓Lg	Lg	22 31 34.9	
	73nm,0.9s						
KBK	**Karagaybulak**	**3.61**	**2**	P	**Pn**	**22 30 36.8**	**+2.9**
	SNR=38						
EKS2	**Erkin-Say**	**3.69**	**349**	P	**Pn**	**22 30 39.3**	**+4.4**
	SNR=11						
FRU1	**Bishkek**	**3.76**	**359**		**Pn**	**22 30 38.0**	**+2.1**
MRKS	**Merke**	**3.88**	**343**	Pg	**Pb**	**22 30 44.6**	**-1.6**
	17nm,0.9s						
MRKS				Lg	Lg	22 31 36.3	
	36nm,0.8s						
MRKS	**Merke**	**3.88**	**343**	*e*P	**Pn**	**22 30 40.2**	**+2.7**
	17nm,0.9s						
MRKS				*e*S	**Sb**	**22 31 30.6**	**-2.5**
	36nm,0.8s						
TKM2	**Tokmak 2**	**3.93**	**9**	P	**Pn**	**22 30 41.1**	**+2.9**
	SNR=32						
CHMS	**Chumysh**	**3.95**	**360**	P	**Pn**	**22 30 41.4**	**+3.0**
	SNR=19						
WUS	**Wushi**	**4.04**	**56**		**Pn**	**22 30 40.6**	**+0.9**
KST	**Kastek**	**4.10**	**12**	Pg	**Pb**	**22 30 46.1**	**-4.0**
	26nm,0.7s						
KST				Lg	Lg	22 31 38.7	
	66nm,1.0s						
KST	**Kastek**	**4.10**	**12**	*e*P	**Pn**	**22 30 43.4**	**+2.8**
	26nm,0.7s						
KST				*e*S	**Sb**	**22 31 35.9**	**-3.8**
	66nm,1.0s						
USP	**Ospenovka**	**4.22**	**357**	P	Pn	22 30 48.0	+5.9
	SNR=12						
DGS	**Degeres**	**4.26**	**10**	Pg	Pn	22 30 48.5	+5.7
	24nm,0.7s						
DGS				Lg	Lg	22 31 43.2	
	41nm,0.9s						
MTBS	**Maitube**	**4.27**	**17**	Pg	**Pb**	**22 30 53.4**	**+0.4**
	41nm,1.1s						
MTBS				Lg	Lg	22 31 51.4	
	54nm,1.1s						
MTBS	**Maitube**	**4.27**	**17**	*e*P	**Pb**	**22 30 52.5**	**-0.5**
	41nm,1.1s						
MTBS				*e*S	**Sg**	**22 31 51.5**	**-3.4**
	54nm,1.1s						
TNSS	**Tian-Shan**	**4.32**	**22**	Pg	**Pb**	**22 30 54.5**	**+0.5**
	17nm,1.3s						
TNSS				Lg	Lg	22 31 53.6	
	21nm,1.2s						
TNSS	**Tian-Shan**	**4.32**	**22**	*e*P	**Pb**	**22 30 54.5**	**+0.5**
	17nm,1.3s						
TNSS				*e*S	**Sg**	**22 31 55.0**	**-1.4**
	21nm,1.2s						
CHGR	**Chuyangaron**	**4.39**	**267**		**Pn**	**22 30 46.4**	**+1.9**
SGDS	**Sogindy**	**4.41**	**359**	Pg	**Pb**	**22 30 55.6**	**+0.4**
	17nm,1.1s						
SGDS				Lg	Lg	22 31 55.4	
	24nm,0.8s						
PRZ	**Przheval'sk**	**4.41**	**38**		**Pn**	**22 30 47.2**	**+2.3**
MDOK	**Medeo**	**4.46**	**22**	Pg	**Pb**	**22 30 56.4**	**+0.1**
	20nm,0.7s						
MDOK				Lg	Lg	22 31 56.9	
	53nm,1.0s						
KNDC	**Almaty**	**4.49**	**21**	⇑Pg	**Pb**	**22 30 58.0**	**+1.3**
	114nm,0.8s						
KNDC				⇓Lg	Lg	22 31 59.3	
	139nm,1.1s						
KOTS	**Kotyrbulak**	**4.55**	**22**	Pg	**Pb**	**22 30 58.4**	**+0.7**
	26nm,0.6s						
KOTS				Lg	Lg	22 32 00.4	
	166nm,1.1s						
KOTS	**Kotyrbulak**	**4.55**	**22**	*e*P	**Pb**	**22 30 57.6**	**-0.1**
	26nm,0.6s						
KOTS				*e*S	**Sg**	**22 32 00.9**	**-2.9**
	166nm,1.1s						
DZA	**Taraz**	**4.64**	**327**	Pg	**Pb**	**22 31 01.6**	**+2.4**
	36nm,0.5s						
DZA				Lg	Lg	22 32 05.4	
	38nm,0.5s						
DZA	**Taraz**	**4.64**	**327**	*e*P	**Pb**	**22 30 56.9**	**-2.2**
	36nm,0.5s						
DZA				*e*S	**Sb**	**22 31 59.2**	**+4.2**
	38nm,0.5s						
KRBS	**Karabastau**	**4.70**	**8**	Pg	**Pb**	**22 31 02.5**	**+2.2**
	38nm,0.7s						
KRBS				Lg	Lg	22 32 07.7	
	8.2nm,0.6s						
IUG	**Iuzhnay**	**4.75**	**312**	Pg	**Pb**	**22 31 03.6**	**+2.6**
	79nm,1.3s						
IUG				Lg	Lg	22 32 09.8	
	150nm,1.4s						
SATY	**Saty**	**4.87**	**33**	Pg	**Pb**	**22 31 03.1**	**-0.1**
	36nm,0.7s						
SATY				Lg	Lg	22 32 08.0	
	57nm,1.2s						
KUU	**Kurty**	**4.99**	**13**	Pg	**Pb**	**22 31 06.2**	**+1.1**
	7.6nm,0.4s						
KUU				Lg	Lg	22 32 13.4	
	41nm,1.1s						
KUU	**Kurty**	**4.99**	**13**	*e*P	**Pb**	**22 31 05.1**	**0.0**
	7.6nm,0.4s						
KUU				*e*S	**Sg**	**22 32 13.4**	**-4.5**
	41nm,1.1s						
CHKK	**Chushkaly**	**5.09**	**19**	Pg	**Pb**	**22 31 08.2**	**+1.3**
	38nm,1.0s						
CHKK				Lg	Lg	22 32 17.4	
	28nm,0.6s						
CHKK	**Chushkaly**	**5.09**	**19**	*e*P	**Pb**	**22 31 08.6**	**+1.8**
	38nm,1.0s						
CHKK				*e*S	**Sg**	**22 32 18.9**	**-2.2**
	28nm,0.6s						
CHM	**Chimkent**	**5.10**	**312**	*e*P	Pn	22 31 02.0	+7.8
	30nm,0.2s						
CHM				*e*S	**Sb**	**22 32 08.1**	**-0.3**
	74nm,0.9s						
KURS	**Kuram**	**5.13**	**29**	Pg	**Pb**	**22 31 06.8**	**-0.8**
	37nm,0.5s						
KURS				Lg	Lg	22 32 14.4	
	36nm,1.1s						
KK31	**Karatay Array**	**5.17**	**323**		**Pn**	**22 30 57.4**	**+2.2**
KK31	**Karatay Array**	**5.17**	**323**	Pn	**Pn**	**22 30 57.9**	**+2.7**
	2.8nm,0.3s,baz=136,slow=13,SNR=56						
KK31				⇑Pg	**Pg**	**22 31 15.1**	**-1.6**
	7.0nm,0.4s,baz=133,slow=15,SNR=11						
KK31				⇓Sn	**Sn**	**22 31 57.7**	**+2.9**
	12nm,0.6s,baz=135,slow=26						
KK31				⇑Lg	Lg	22 32 21.6	
	14nm,0.5s,baz=128,slow=28,SNR=3.9						
KKAR	**Karatay Array**	**5.17**	**323**		**Pn**	**22 30 57.0**	**+1.8**
UZB	**Uzynbulak**	**5.21**	**37**	Pg	**Pb**	**22 31 08.8**	**-0.3**
	48nm,0.7s						
UZB				Lg	Lg	22 32 17.7	
	25nm,1.1s						
UZB	**Uzynbulak**	**5.21**	**37**	*e*P	**Pb**	**22 31 07.3**	**-1.8**
	48nm,0.7s						
UZB				*e*S	**Sb**	**22 32 17.1**	**+5.3**
	25nm,1.1s						
KPKS	**Kokpek**	**5.32**	**33**	Pg	**Pb**	**22 31 12.8**	**+2.1**
	32nm,0.8s						
KPKS				Lg	Lg	22 32 25.4	
	38nm,1.7s						
KPKS	**Kokpek**	**5.32**	**33**	*e*P	**Pb**	**22 31 09.3**	**-1.4**
	32nm,0.8s						
KPKS				*e*S	**Sb**	**22 32 21.2**	**+6.5**
	38nm,1.7s						
SHAA	**Shahritus**	**5.42**	**256**	Pn	**Pn**	**22 30 59.9**	**+1.3**
SHLS	**Shalkode**	**5.43**	**39**	Pg	**Pg**	**22 31 17.8**	**-4.0**
	56nm,1.0s						
SHLS				Lg	Lg	22 32 33.9	
	26nm,0.9s						
SHLS	**Shalkode**	**5.43**	**39**	*e*P	**Pb**	**22 31 17.1**	**+4.3**
	56nm,1.0s						
SHLS				*e*S	**Sg**	**22 32 34.3**	**+2.1**
	26nm,0.9s						
BRLS	**Borolday**	**5.45**	**319**	Pg	**Pb**	**22 31 16.6**	**+3.6**
	12nm,0.4s						
BRLS				Lg	Lg	22 32 31.9	
	18nm,0.7s						
BRLS	**Borolday**	**5.45**	**319**	*e*P	Pn	22 31 04.8	+5.9
	12nm,0.4s						
BRLS				*e*S	**Sb**	**22 32 12.6**	**-5.8**
	18nm,0.7s						
NIL	**Nilore**	**5.52**	**193**		**Pn**	**22 31 02.4**	**+2.4**
PDGK	**Podgornoye**	**5.58**	**38**	Pn	**Pn**	**22 31 03.2**	**+2.4**
	13nm,0.9s						
PDGK				Pg	**Pb**	**22 31 14.7**	**-0.5**
	62nm,0.7s						
PDGK				Lg	Lg	22 32 28.3	
	42nm,0.8s						
ARXS	**Arharly**	**5.65**	**23**	Pg	**Pb**	**22 31 18.4**	**+1.9**
	42nm,1.1s						
ARXS				Lg	Lg	22 32 35.0	
	49nm,1.2s						
ARXS	**Arharly**	**5.65**	**23**	*e*P	**Pb**	**22 31 17.3**	**+0.8**
	42nm,1.1s						
ARXS				*e*S	**Sg**	**22 32 34.9**	**-4.3**
	49nm,1.2s						
BLB	**Baldybastay**	**5.77**	**28**	Pg	**Pb**	**22 31 20.0**	**+1.5**
	56nm,1.6s						
BLB				Lg	Lg	22 32 37.3	
	31nm,0.5s						
BTLS	**Baital**	**6.02**	**355**	Pg	**Pb**	**22 31 22.8**	**+0.2**
	6.2nm,0.9s						
BTLS				Lg	Lg	22 32 41.7	
	4.6nm,1.0s						
BTLS	**Baital**	**6.02**	**355**	*e*P	**Pb**	**22 31 24.6**	**+2.0**
	6.2nm,0.9s						
KNOS	**Konyrlen**	**6.26**	**31**	Pg	**Pb**	**22 31 27.3**	**+0.5**
	18nm,1.1s						
KNOS				Lg	Lg	22 32 50.5	
	10nm,1.5s						
KBL	**Kabul**	**6.42**	**227**		**Pn**	**22 31 13.8**	**+1.3**
TDK	**Taldyqorghan**	**6.54**	**23**	Pg	**Pb**	**22 31 35.5**	**+3.9**
	63nm,0.9s						
MAKZ	**Makanchi**	**9.39**	**32**		**Pn**	**22 31 54.8**	**+1.8**
MK31	**Makanchi Array**	**9.51**	**33**	⇓P	**Pn**	**22 31 55.9**	**+1.2**
	2.0nm,0.6s,baz=208,slow=14,SNR=21						
MKAR	**Makanchi Array**	**9.51**	**33**	Pn	**Pn**	**22 31 55.2**	**+0.5**
	0.2nm,0.3s,baz=207,slow=14,SNR=17						
MKAR				LR	LR	22 34 58.7	
	comp=Z,31nm,18.6s,baz=212,slow=34						
	1.9nm,0.7s						
MKAR	**Makanchi Array**	**9.51**	**33**		**Pn**	**22 31 55.4**	**+0.7**
BVA0	**Borovoye Array**	**14.30**	**349**	P	**P**	**22 33 09.2**	**+1.8**
	5.0nm,1.0s,baz=156,slow=9.5,SNR=6.1						
BVAR	**Borovoye Array**	**14.30**	**349**	Pn	**Pn**	**22 32 60.0**	**-0.2**
	baz=156,slow=9.9,SNR=9.1						
BVAR				LR	LR	22 38 49.3	
	comp=Z,64nm,19.8s,baz=264,slow=38						
	0.5nm,0.5s						
BORK	**Borovoye**	**14.34**	**349**		**Pn**	**22 33 01.8**	**+1.2**
AB31	**Akbulak array**	**14.71**	**319**		**Pn**	**22 33 05.0**	**-0.8**
AB31	**Akbulak array**	**14.71**	**319**	P	**Pn**	**22 33 04.5**	**-1.3**
	2.8nm,0.6s,baz=127,slow=14,SNR=40						
ABKAR	**Akbulak array**	**14.71**	**319**		**Pn**	**22 33 05.0**	**-0.8**
ZAA0	**Zalesovo Array**	**16.41**	**21**		**Pn**	**22 33 27.0**	**-1.0**
ZALV	**Zalesovo Beam**	**16.41**	**21**	Pn	**Pn**	**22 33 26.5**	**-1.5**
	0.2nm,0.3s,baz=202,slow=11,SNR=8.6						
	1.1nm,0.6s						
ZALV	**Zalesovo Beam**	**16.41**	**21**		**Pn**	**22 33 27.3**	**-0.7**
AKTO	**Aktyubinsk**	**16.42**	**319**	Pn	**Pn**	**22 33 27.3**	**-0.9**
	0.3nm,0.3s,baz=125,slow=13,SNR=6.3						
	1.5nm,0.5s						
AKTO	**Aktyubinsk**	**16.42**	**319**	⇑P	**Pn**	**22 33 25.1**	**-3.1**
	3.8nm,0.9s						
GTA	**Gaotai**	**19.41**	**81**	*e*P	**P**	**22 34 03.5**	**-0.5**
GTA				sP	sP	22 34 12.3	+2.4
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARTI	**Arti**	**20.46**	**333**	P	**P**	**22 34 16.0**	**+0.7**
	comp=Z,3.1nm,0.7s,baz=156,slow=4.0,SNR=7.6						
	comp=Z,3.1nm,0.7s						
ARTI	**Arti**	**20.46**	**333**		**P**	**22 34 16.2**	**+1.0**
KBZ	**Khabaz**	**24.27**	**291**	P	**P**	**22 34 57.0**	**+2.1**
	comp=Z,2.1nm,0.9s,baz=146,slow=6.1,SNR=7.2						
	comp=Z,2.1nm,0.9s						
TNCH	**TengChong**	**24.43**	**118**	*e*P	**P**	**22 34 59.0**	**+2.3**
TNCH				pmax	pmax		
	comp=Z,13nm,1.3s						
SONM	**Songino Array**	**24.46**	**59**	P	**P**	**22 34 55.5**	**-1.3**
	comp=Z,1.9nm,0.8s,baz=259,slow=10,SNR=8.0						
	comp=Z,1.9nm,0.8s						
SONM	**Songino Array**	**24.46**	**59**	P	**P**	**22 34 56.8**	**0.0**
ULN	**Ulaanbaatar**	**24.90**	**59**		**P**	**22 35 00.3**	**-0.5**
CMAR	**Chiang Mai Arr**	**29.34**	**127**	LR	LR	22 47 12.4	
	comp=Z,19nm,20.2s,baz=335,slow=36						
BR131	**Keskin Array S**	**31.59**	**285**	P	**P**	**22 36 00.6**	**-0.1**
BR131				IAmb	IAmb	22 36 04.0	
	comp=Z,3.1nm,0.8s						
BRTR	**Keskin Array B**	**31.59**	**285**	P	**P**	**22 36 01.2**	**+0.5**
	comp=Z,2.2nm,0.7s,baz=94,slow=7.8,SNR=15						
	comp=Z,2.2nm,0.7s						
BRTR	**Keskin Array B**	**31.59**	**285**	P	**P**	**22 36 01.6**	**+0.9**
AKASG	**Malin Array Be**	**33.79**	**305**	P	**P**	**22 36 18.4**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=82,slow=6.8,SNR=5.8						
	comp=Z,0.4nm,0.4s						
AKASG	**Malin Array Be**	**33.79**	**305**	P	**P**	**22 36 19.1**	**-0.5**
AKBB	**Malin Array Si**	**33.79**	**305**	P	**P**	**22 36 20.4**	**+0.8**
AKBB				IAmb	IAmb	22 36 59.8	
	comp=Z,8.1nm,1.4s						
KIEV	**Kiev**	**33.80**	**305**	P	**P**	**22 36 20.4**	**+0.7**
KIEV				IAmb	IAmb	22 36 28.7	
	comp=Z,5.8nm,1.2s						
EIL	**Elat**	**33.94**	**266**	LR	LR	22 52 38.6	
	comp=Z,53nm,19.6s,baz=190,slow=41						
BORA	**Eskisehir**	**33.95**	**286**	P	**P**	**22 36 22.1**	**+0.9**
BORA				IAmb	IAmb	22 36 36.2	
	comp=Z,5.1nm,0.9s						
BURAR	**Bucovina Array**	**36.50**	**300**	P	**P**	**22 36 44.2**	**+1.1**
FIA1	**FINESS Array S**	**37.13**	**323**	P	**P**	**22 36 48.9**	**+0.8**
FINES	**FINESS Array B**	**37.13**	**323**	P	**P**	**22 36 47.6**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=111,slow=9.6,SNR=18						
	comp=Z,0.8nm,0.4s						
FINES	**FINESS Array B**	**37.13**	**323**	P	**P**	**22 36 48.7**	**+0.5**
ARCES	**ARCESS Array B**	**40.00**	**336**	P	**P**	**22 37 12.6**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=99,slow=7.5,SNR=7.9						
	comp=Z,1.8nm,0.6s						
ARCES	**ARCESS Array B**	**40.00**	**336**	P	**P**	**22 37 12.6**	**+0.4**
YAK	**Yakutsk**	**40.16**	**37**	LR	LR	22 56 05.3	
	comp=Z,42nm,21.8s,baz=281,slow=40						
KSRS	**Korea Array**	**41.29**	**75**	LR	LR	22 56 32.4	
	comp=Z,42nm,21.7s,baz=270,slow=39						
TIXI	**Tiksi**	**42.30**	**22**	P	**P**	**22 37 29.7**	**-1.3**
	comp=Z,0.9nm,0.2s,baz=295,slow=3.8,SNR=4.1						
	comp=Z,0.9nm,0.2s						
TIXI	**Tiksi**	**42.30**	**22**	P	**P**	**22 37 30.3**	**-0.7**
TIXI				IAmb	IAmb	22 37 53.3	
	comp=Z,7.9nm,1.5s						
HFS	**Hagfors**	**42.97**	**320**	P	**P**	**22 37 37.0**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=87,slow=9.1,SNR=8.3						
	comp=Z,2.5nm,0.6s						
GERES	**GERESS Array B**	**43.95**	**304**	P	**P**	**22 37 45.0**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=57,slow=9.8,SNR=5.7						
	comp=Z,0.4nm,0.6s						
KHC	**Kasperske Hory**	**43.98**	**304**	P	**P**	**22 37 45.3**	**+0.3**
KHC				IAmb	IAmb	22 37 47.9	
	comp=Z,6.1nm,1.5s						
NRCA	**Norcia**	**45.81**	**295**	P	**P**	**22 38 00.6**	**+0.9**
SENIN	**Lac Senin/Sane**	**48.75**	**302**	P	**P**	**22 38 22.9**	**+0.1**
SENIN				IAmb	IAmb	22 38 32.4	
	comp=Z,9.1nm,1.4s						
JGF	**Kuroka**	**49.03**	**73**	P	**P**	**22 38 24.7**	**-0.1**
ESDC	**Sonseca Array**	**58.90**	**298**	P	**P**	**22 39 38.7**	**+1.8**
	comp=Z,0.4nm,0.7s,baz=76,slow=7.1,SNR=3.1						
	comp=Z,0.4nm,0.7s						
C18K	**Utukok River**	**64.91**	**20**	P	**P**	**22 40 16.4**	**-0.4**
POIN	**Pond Inlet**	**66.95**	**351**	P	**P**	**22 40 29.7**	**-0.1**
TORD	**Torodi Ar. Bea**	**68.73**	**270**	P	**P**	**22 40 40.3**	**-1.6**
	comp=Z,1.4nm,0.8s,baz=35,slow=6.8,SNR=9.1						
	comp=Z,1.4nm,0.8s						
E29M	**Blow River**	**70.13**	**12**	P	**P**	**22 40 49.6**	**-0.2**
E29M				IAmb	IAmb	22 40 56.5	
	comp=Z,5.8nm,1.3s						
INK	**Inuvik**	**70.89**	**11**	P	**P**	**22 40 53.1**	**-1.2**
	comp=Z,1.8nm,0.8s,baz=343,slow=4.6,SNR=7.5						
INK				LR	LR	23 14 35.3	
	comp=Z,79nm,20.1s,baz=28,slow=38						
	comp=Z,1.8nm,0.8s						
INK	**Inuvik**	**70.89**	**11**	P	**P**	**22 40 53.7**	**-0.6**
INK				IAmb	IAmb	22 41 12.0	
	comp=Z,6.8nm,1.4s						
F30M	**Barrier River**	**71.18**	**12**	P	**P**	**22 40 55.8**	**-0.4**
F30M				IAmb	IAmb	22 41 02.5	
	comp=Z,9.0nm,1.4s						
ILAR	**Eielson Array**	**71.49**	**17**	P	**P**	**22 40 56.9**	**-1.3**
	comp=Z,0.6nm,0.9s,baz=329,slow=7.4,SNR=5.3						
	comp=Z,0.6nm,0.9s						
JAY	**Jayapura**	**73.16**	**108**	LR	LR	23 15 46.2	
	comp=Z,125nm,22.0s,baz=309,slow=38						
DBIC	**Dimbokro**	**77.77**	**269**	P	**P**	**22 41 36.5**	**+1.1**
	comp=Z,2.2nm,0.7s,baz=0.5,slow=5.0,SNR=4.3						
	comp=Z,2.2nm,0.7s						
DBIC	**Dimbokro**	**77.77**	**269**	P	**P**	**22 41 34.8**	**-0.5**
DBIC				IAmb	IAmb	22 42 18.2	
	comp=Z,7.9nm,1.3s						
YKA	**Yellowknife Ar**	**78.53**	**4**	P	**P**	**22 41 38.3**	**-0.4**
	comp=Z,1.1nm,1.0s,baz=344,slow=5.7,SNR=11						
	comp=Z,1.1nm,1.0s						
YKA	**Yellowknife Ar**	**78.53**	**4**	P	**P**	**22 41 37.9**	**-0.9**
ASAR	**Alice Springs**	**83.35**	**128**	P	**P**	**22 42 02.2**	**-2.9**
	comp=Z,0.3nm,0.6s,baz=312,slow=5.0,SNR=7.5						
	comp=Z,0.3nm,0.6s						

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*NEIC **28** 22:35:36.9±1.0, 17°.88N±0°.05×66°.86W±0°.05, h2^{km}±5^{km}, mb4.9/112, ML4.9/42, Mwr4.7/38, Mww4.8/11, ML4.7/13(RSPR), Mwr4.6/12(SLM), Error ellipse: s-maj=8.2km s-min=5.9km az=137.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.24; $M_{\theta\theta}$0.65; $M_{\phi\phi}$-0.42; $M_{r\theta}$0.19; $M_{\theta\phi}$1.09; $M_{\phi r}$-0.41; Fault plane solution: $M_0$1.31000×10^{16} NP1:ϕ_s15.52000°, δ75.25000°, λ-161.75000°. NP2:ϕ_s280.72000°, δ72.37000°, λ-15.49000°. Principal axes: T 1.3325, Plg2.0000°, Azm148.0000°; N -0.0464, Plg67.0000°, Azm53.0000°; P -1.2861, Plg23.0000°, Azm239.0000°;*

*IDC **28** 22:35:36.5±0.5, 17°.90N×66°.86W, h0^{km}, mb4.5/27, mbtmp4.5/31, ML3.9/4, MS3.9/51 Error ellipse: s-maj=11.9km s-min=7.7km az=171.0*

*NEIC **28** 22:35:37.8, 17°.94N×66°.87W, h7^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.00; $M_{\theta\theta}$0.88; $M_{\phi\phi}$-0.88; $M_{r\theta}$0.09; $M_{\theta\phi}$0.73; $M_{\phi r}$-0.04; Fault plane solution: $M_0$1.15000×10^{16} NP1:ϕ_s115.00000°, δ90.00000°, λ5.00000°. NP2:ϕ_s25.00000°, δ85.00000°, λ180.00000°. Principal axes: T 1.1479, Plg4.0000°, Azm340.0000°; N -0.0001, Plg85.0000°, Azm115.0000°; P -1.1479, Plg4.0000°, Azm250.0000°;*

*NEIC **28** 22:35:37.8, 17°.94N×66°.87W, h6^{km}*

*CATAC **28** 22:35:37.2±0.4, 18°N±3°×6°7W±°, h8^{km}±2^{km}, M5.0/9, mb5.0/9, mB5.5/5, MLv5.0/3, Mw(mB)5.0/5, MwMwp4.4/1, Mwp4.8/1, Error ellipse: s-maj=5.9km s-min=2.7km az=13.5, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.08; $M_{\theta\theta}$2.05; $M_{\phi\phi}$-0.97; $M_{r\theta}$-2.73; $M_{\theta\phi}$6.91; $M_{\phi r}$-1.84; Fault plane solution: $M_0$7.86092×10^{15} NP1: ϕ_s277.40666°, δ79.43251°, λ15.73750°. NP2: ϕ_s184.44830°, δ74.53616°, λ169.03076°. Principal axes: T 8.7175, Plg18.5550°, Azm141.5237°; N -2.1682, Plg71.1185°, Azm310.4631°; P -6.5493, Plg3.3742°, Azm50.3897°; confirmed*

*NEIC **28** 22:35:37, 17°.87N×66°.94W, h24^{km}, Moment Tensor Solution. Duration: 1^{s}3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.69; $M_{\theta\theta}$0.05; $M_{\phi\phi}$-0.73; $M_{r\theta}$0.51; $M_{\theta\phi}$2.00; $M_{\phi r}$-0.60; Fault plane solution: $M_0$2.26000×10^{16} NP1:ϕ_s6.38000°, δ79.80000°, λ-170.88000°. NP2:ϕ_s274.76000°, δ81.03000°, λ-10.33000°. Principal axes: T 1.6898, Plg1.0000°, Azm321.0000°; N 0.8770, Plg76.0000°, Azm54.0000°; P -2.5668, Plg14.0000°, Azm230.0000°;*

*NEIC **28** 22:35:37, 17°.87N×66°.84W, h24^{km}*

*OSPL **28** 22:35:37.3±0.4, 17°.86N×66°.90W, h19^{km}±5^{km}, ML4.4, Presumed earthquake*

*RSPR **28** 22:35:37.8, 17°.94N×66°.87W, h6^{km}, MD3.9/13*

*GCMT **28** 22:35:40.8±0.3, 18°.19N±0°.02×66°.66W±0°.02, h18^{km}±1^{km},* *MW4.8/83, Moment Tensor Solution. s13,c14; s83,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.10±.11; $M_{\theta\theta}$1.18±.11; $M_{\phi\phi}$-1.28±.09; $M_{r\theta}$-0.57±.22; $M_{\theta\phi}$1.80±.08; $M_{\phi r}$-0.09±.17; Best double couple: $M_0$2.25700×10^{16} NP1:ϕ_s196.00000°, δ77.00000°, λ173.00000°. NP2: ϕ_s288.00000°, δ83.00000°, λ13.00000°. Principal axes: T 2.2680, Plg14.0000°, Azm153.0000°; N -0.0210, Plg75.0000°, Azm314.0000°; P -2.2450, Plg5.0000°, Azm62.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*SSNC **28** 22:36:24.7±2.8, 18°.44N×70°.32W, h120km±185km, MD5.1, ML3.9*

ISC 28 22:35:36.8±1.0**, 17°.84N**±0°.03×**66°.87W**±0°.02**, h5**km±6km**, n626,** σ**1**^{s}**16**/602**, mb4.8**/87**, MS4.0**/49**, 3C-9D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.13	355		Pg	22 35 39.3	-0.2
GBPR	Guanica, Bosqu	0.13	355	⇓iP	Pg	22 35 39.3	-0.2
MLPR	Magueyes Islan	0.21	307	⇓iP	Pg	22 35 41.8	+0.8
MLPR	Magueyes Islan	0.21	307	eS	Sg	22 35 44.6	+0.9
CRPR	Cabo Rojo, PR	0.28	305		Pg	22 35 42.7	+0.4
CRPR				Sg	Sg	22 35 46.5	+0.5
CRPR	Cabo Rojo, PR	0.28	305	IAML		22 35 47.3	
	280μm,1.0s						
CRPR				IAML		22 35 48.4	
	232μm,0.6s						
CRPR	Cabo Rojo, PR	0.28	305	⇓iP	Pg	22 35 43.1	+0.8
CRPR	Cabo Rojo, PR	0.28	305	eS	Sg	22 35 46.5	+0.5
CRPR	Cabo Rojo, PR	0.28	305	i P	Pg	22 35 42.8	+0.5
CRPR				eS	Sg	22 35 46.5	+0.5
OBIP	Obispado Ponce	0.32	51		Pg	22 35 43.0	+0.1
OBIP				Sg	Sg	22 35 47.5	+0.4
OBIP	Obispado Ponce	0.32	51	⇓iP	Pg	22 35 43.1	+0.1
OBIP	Obispado Ponce	0.32	51	eS	Sg	22 35 47.3	+0.1
CELP	Cerrillos	0.36	50	Pg	Pg	22 35 43.8	0.0
CELP				IAML		22 35 49.4	
	96μm,0.6s						
LSP	Las Mesas	0.39	328		Pg	22 35 44.3	-0.1
LSP	Las Mesas	0.39	328	⇓iP	Pg	22 35 44.3	-0.1
UUPR	Utuado, UPR, P	0.43	19	Pg	Pg	22 35 44.5	-0.6
PRSN	Puerto Rico Se	0.46	325	Pg	Pg	22 35 45.3	-0.2
PRSN				IAML		22 35 53.3	
	181μm,0.3s						
PRSN				IAML		22 35 54.7	
	186μm,0.7s						
PRSN	Puerto Rico Se	0.46	325	⇑iP	Pg	22 35 45.4	-0.1
PRSN	Puerto Rico Se	0.46	325	eS	Sg	22 35 51.7	+0.2
AOPR	Arecibo Observ	0.51	12		Pg	22 35 45.9	-0.7
AOPR				Sg	Sg	22 35 51.9	-1.4
AOPR				IAML		22 35 55.4	
	comp=N,130μm,0.6s						
AOPR	Arecibo Observ	0.51	12	⇑iP	Pg	22 35 46.1	-0.6
AOPR	Arecibo Observ	0.51	12	eS	Sg	22 35 52.3	-1.0
AOPR	Arecibo Observ	0.51	12	eP	Pg	22 35 46.0	-0.7
AGPR	Aguadilla, PR	0.66	340		Pg	22 35 48.8	-0.7
AGPR				IAML		22 35 58.1	
	comp=N,70μm,0.5s						
AGPR				IAML		22 36 04.6	
	comp=N,44μm,0.7s						
AGPR	Aguadilla, PR	0.66	340	⇑iP	Pg	22 35 48.9	-0.7
AGPR	Aguadilla, PR	0.66	340	eS	Sg	22 35 57.2	-1.0
AGPR	Aguadilla, PR	0.66	340	P	Pg	22 35 48.8	-0.7
AGPR				S	Sg	22 35 57.7	-0.5
AGPR	Aguadilla, PR	0.66	340	i P	Pg	22 35 48.9	-0.7
AGPR				eS	Sg	22 35 57.4	-0.8
AGPR				IAML		22 36 07.7	
	comp=Z,24μm,1.1s						
ECPR	Experimental S	0.67	45	Pg	Pg	22 35 49.0	-0.7
ECPR				IAML		22 35 59.8	
	comp=Z,70μm,0.2s						
ECPR	Experimental S	0.67	45	⇑iP	Pg	22 35 49.7	-0.1
ECPR	Experimental S	0.67	45	eS	Sg	22 35 58.0	-0.5
EMPR	Esperanza - Ma	0.71	27		Sg	22 35 59.5	-0.1
EMPR	Esperanza - Ma	0.71	27	Pg	Pg	22 35 50.0	-0.4
EMPR				IAML		22 36 02.1	
	comp=Z,107μm,0.8s						
EMPR				IAML		22 36 03.7	
	comp=Z,111μm,0.7s						
EMPR	Esperanza - Ma	0.71	27	⇓iP	Pg	22 35 50.1	-0.3
EMPR	Esperanza - Ma	0.71	27	eS	Sg	22 35 59.5	-0.1
SJG	San Juan	0.73	69	Pg	Pg	22 35 50.5	-0.3
	comp=Z,1μm,0.3s,baz=255,slow=14,SNR=1503						
SJG				Lg	Lg	22 36 00.2	
	comp=Z,3μm,0.3s,baz=335,slow=15,SNR=24						
SJG				LR	LR	22 36 07.0	
	comp=Z,6μm,18.2s,baz=262,slow=43						
SJG	San Juan	0.73	69		Pg	22 35 50.5	-0.3
SJG				Sg	Sg	22 36 00.5	+0.1
SJG	San Juan	0.73	69	P	Pg	22 35 50.5	-0.3
SJG				S	Sg	22 36 00.7	+0.4
SJG	San Juan	0.73	69	eP	Pg	22 35 50.6	-0.3
SJG	San Juan	0.73	69	P	Pg	22 35 50.5	-0.3
SJG				S	Sg	22 36 00.6	+0.2
SJG	San Juan	0.73	69	i P	Pg	22 35 50.6	-0.3
SJG				eS	Sg	22 36 00.8	+0.4
SJG				IAML		22 36 01.9	
	comp=Z,14μm,0.7s						
IDE	Isla Desecheo	0.79	313		Pg	22 35 51.3	-0.7
IDE	Isla Desecheo	0.79	313	⇓iP	Pg	22 35 51.3	-0.7
GCPR	Guaynabo City	0.88	58		Pg	22 35 52.7	-0.9
GCPR				Sg	Sg	22 36 03.7	-1.3
GCPR				IAML		22 36 07.2	
	comp=N,27μm,1.0s						
GCPR	Guaynabo City	0.88	58	⇑iP	Pg	22 35 52.9	-0.8
GCPR	Guaynabo City	0.88	58	eS	Sg	22 36 04.2	-0.9
HUMP	Col San Antoni	1.01	73		Pg	22 35 55.1	-1.1
HUMP				Sg	Sg	22 36 08.6	-0.8
HUMP	Col San Antoni	1.01	73	⇑iP	Pg	22 35 55.4	-0.8
HUMP	Col San Antoni	1.01	73	eS	Sg	22 36 08.6	-0.8
DR12	Loma Pena Alta	2.57	292		Pn	22 36 19.5	+0.4
SDD	Santo Domingo	2.96	282		Pn	22 36 24.8	+0.3
SDD				IAML		22 37 21.8	
	comp=E,3μm,1.3s						
SDD	Santo Domingo	2.96	282	P	Pn	22 36 26.5	+2.0
SABA	Saba	3.46	93		Pn	22 36 31.9	+0.4
SABA				IAML		22 37 26.5	
	comp=N,3μm,0.7s						
SABA	Saba	3.46	93	⇓iP	Pn	22 36 32.0	+0.6
SABA	Saba	3.46	93	eS	Sn	22 37 11.2	-1.6
SABA	Saba	3.46	93	P	Pn	22 36 31.8	+0.4
SABA	Saba	3.46	93	S	Sn	22 37 13.3	+0.5
SEUS	St. Eustatius	3.72	95		Pn	22 36 34.7	-0.3
SEUS				IAML		22 37 26.9	
	comp=E,2μm,0.7s						
SEUS				IAML		22 37 33.1	
	comp=N,3μm,0.6s						
SEUS	St. Eustatius	3.72	95	S	Sn	22 37 19.9	+0.7
SEUS	St. Eustatius	3.72	95	P	Pn	22 36 35.0	+0.1
SKI	Saint Kitts	3.97	97	eP	Pn	22 36 37.8	-0.6
SC01	Santiago de lo	3.98	294		Pn	22 36 40.2	+1.6
SDDR	Presa de Saban	4.35	286		Pn	22 36 45.6	+2.0
SDDR				IAML		22 37 56.3	
	comp=N,2μm,0.8s						
SDDR	Presa de Saban	4.35	286	eP	Pn	22 36 47.0	+3.3
SDDR				eS	Sn	22 37 39.0	+4.2
SDDR				IAML		22 37 54.3	
	comp=N,2μm,0.8s						
SDDR				IAML		22 37 56.4	
	comp=N,2μm,0.4s						
SDDR	Presa de Saban	4.35	286	P	Pn	22 36 47.5	+3.9
SDDR				S	Sb	22 37 43.4	-3.2
MBWH	Windy Hill	4.60	103	eP	Pn	22 36 46.7	-0.4
MBWH	Windy Hill	4.60	103	eS	Sn	22 37 39.9	-1.0
MLYT	Lee's Yard	4.61	103	eP	Pn	22 36 46.8	-0.3
MLYT	Lee's Yard	4.61	103	eS	Sn	22 37 39.1	-1.9
ANWB	Willy Bob	4.84	91		Pn	22 36 50.3	-0.2
ANWB	Willy Bob	4.84	91	P	Pn	22 36 50.9	+0.5
ANWB				S	Sn	22 37 46.1	-0.8
ANWB	Willy Bob	4.84	91	eP	Pn	22 36 50.8	+0.3
ANWB	Willy Bob	4.84	91	e	Sn	22 37 49.1	+2.2
ANWB	Willy Bob	4.84	91	P	Pn	22 36 50.2	-0.2
DHSZ	Broadband at M	5.12	107	eP	Pn	22 36 54.5	+0.2
DHSZ	Broadband at M	5.12	107	e	Sn	22 37 50.4	-3.4
GDHS	Morne Mazeau,	5.12	107		Pn	22 36 54.2	-0.1
ATGZ	Broadband at L	5.22	109	eP	Pn	22 36 55.5	-0.1
ATGZ	Broadband at L	5.22	109	e	Sn	22 37 53.7	-2.4
MMLZ	Guadeloupe Bro	5.29	109	eP	Pn	22 36 57.1	+0.6
ABD	La Joyeuse, An	5.32	104		Pn	22 36 56.9	0.0
ABD				IAML		22 37 57.7	
	comp=N,490nm,0.6s						
ABD				IAML		22 38 27.9	
	comp=E,608nm,1.4s						
ABD	La Joyeuse, An	5.32	104	⇓iP	Pn	22 36 57.0	0.0
ABD	La Joyeuse, An	5.32	104	eS	Sn	22 37 56.5	-2.2
CBE	Ff, Capester	5.33	109		Pn	22 36 57.1	-0.1
CBE				IAML		22 38 07.5	
	comp=E,915nm,0.5s						
CBE	Ff, Capester	5.33	109	⇑eP	Pn	22 36 58.3	+1.1
CBE	Ff, Capester	5.33	109	eS	Sn	22 37 57.6	-1.5
CBE	Ff, Capester	5.33	109	P	Pn	22 36 58.2	+1.1
TBG	Guadaloupe-3	5.38	111	eP	Pn	22 36 57.2	-0.5
TDBA	Terre de Bas,	5.39	111		Pn	22 36 57.5	-0.4
TDBA				IAML		22 38 27.9	
	comp=N,384nm,0.8s						
TDBA				IAML		22 38 48.1	
	comp=E,426nm,1.1s						
GRTK	Grand Turk	5.43	313	P	Pn	22 36 57.7	-0.7
GRTK				S	Sn	22 38 01.6	+0.3
GRTK	Grand Turk	5.43	313	P	Pn	22 36 56.3	-2.1
	comp=E,562nm,0.7s						
MAGL	Barre de l'ile	5.67	109		Pn	22 37 01.5	-0.2
DSLB	Salisbury	5.74	114	eP	Pn	22 37 02.2	-0.6
DSDZ	La Diserade, G	5.75	104	eP	Pn	22 37 02.9	0.0
DSDZ	La Diserade, G	5.75	104	e	Sn	22 38 07.1	-2.3
GDSD	La Dsirade Is	5.75	104		Pn	22 37 02.4	-0.6
DWS	Wesley	5.78	112	eP	Pn	22 37 03.7	+0.3
DLPL	La Plaine	5.94	114	eP	Pn	22 36 51.8	-14
SVN	Savane Anatole	6.23	118	Pn	Pn	22 37 09.8	+0.2
SVN	Savane Anatole	6.23	118	eP	Pn	22 37 10.7	+1.2
CXM	Morne La Croix	6.25	118		Pn	22 37 09.0	-0.8
BIM	Bigot	6.48	120		Pn	22 37 11.6	-1.3
BIM	Bigot	6.48	120	eP	Pn	22 37 12.1	-0.8
BIM	Bigot	6.48	120	e	Sn	22 38 23.2	-4.1
MPOM	Morne Pois Mar	6.69	119		Pn	22 37 15.4	-0.4
SLBI	Saint Lucia, B	6.82	123	eP	Pn	22 37 16.5	-1.1
SLBI	Saint Lucia, B	6.82	123	eS	Sn	22 38 29.4	-6.3
MCLT	Moule a Chique	7.03	125	eP	Pn	22 37 26.8	+6.3
SVB	Belmont	7.07	129	eP	Pn	22 37 20.1	-0.9
SVB	Belmont	7.07	129	eS	Sn	22 38 34.8	-7.0
MASC	Masc	7.34	290	P	Pn	22 37 26.0	+1.3
MASC				S	Sn	22 38 48.0	-0.5
MASC	Masc	7.34	290	eP	Pn	22 37 25.7	+0.9
MASC				eS	Sn	22 38 43.8	-4.7
MASC				IAML		22 38 57.2	
	comp=N,83nm,0.5s						
MASC				IAML		22 38 59.9	
	comp=E,66nm,0.3s						
GRSS	Sisters	7.49	137	e	Pn	22 37 24.6	-2.2
GRHS	Sauteurs	7.53	137	e	Pn	22 37 24.5	-2.8
GRGR	Grenville	7.59	138	eP	Pn	22 37 26.7	-1.4
GRGR	Grenville	7.59	138	P	Pn	22 37 26.9	-1.3
	comp=E,87nm,0.8s						
URI	Uribia	7.86	220	P	Pn	22 37 31.6	-0.3
URIC	Uribia, Colomb	7.86	220	P	Pn	22 37 30.6	-1.3
	comp=E,28nm,0.8s						
QMBU	Quimbuelo	7.87	289	P	Pn	22 37 32.9	+0.8
QMBU	Quimbuelo	7.87	289	eP	Pn	22 37 32.9	+0.8
QMBU				eS	Sn	22 38 51.2	-10
QMBU				IAML		22 39 07.5	
	comp=N,94nm,0.5s						
QMBU				IAML		22 39 09.3	
	comp=E,104nm,0.5s						
GTBY	Guantanamo Bay	8.07	286	P	Pn	22 37 34.6	-0.2
GTBY				S	Sn	22 39 07.0	+0.4
GTBY	Guantanamo Bay	8.07	286	eP	Pn	22 37 34.2	-0.6
GTBY	Guantanamo Bay	8.07	286	P	Pn	22 37 34.4	-0.4
	comp=E,90nm,0.8s						
NMDO	Nuevo Mundo	8.13	291	Pn	Pn	22 37 36.0	+0.5
NMDO	Nuevo Mundo	8.13	291	P	Pn	22 37 36.0	+0.5
NMDO	Nuevo Mundo	8.13	291	eP	Pn	22 37 35.4	-0.2
MOAC	Moa	8.14	291	eP	Pn	22 37 36.6	+0.9
BBGH	Gun Hill	8.45	123	Pn	Pn	22 37 40.8	+0.8
BBGH	Gun Hill	8.45	123	S	Sn	22 39 16.9	+1.0
BBGH	Gun Hill	8.45	123	e	Pn	22 37 42.4	+2.4
BBGH	Gun Hill	8.45	123	P	Pn	22 37 42.8	+2.8
	comp=E,459nm,1.0s						
RCC	Rio Carpintero	8.63	286	eP	Pn	22 37 42.0	-0.3
DMDM	Guralp CMG5TDE	8.78	143	eP	Pn	22 37 51.1	+6.7
PINC	Pinares de May	8.83	289	eP	Pn	22 37 45.2	0.0
TRN	Trinidad (W)	8.90	143	eP	Pn	22 37 47.1	+1.0
TRN	Trinidad (W)	8.90	143	eS	Sn	22 39 20.2	-6.7
CHIV	Chivirico	9.28	285		Pn	22 37 49.5	-1.9
HOJ	Hope	9.41	272	i P	Pn	22 37 52.4	-0.8
STH	Stony Hill	9.47	273	⇑iP	Pn	22 37 53.1	-0.9
SDV	Santo Domingo	9.63	203	Pn	Pn	22 37 57.2	+0.9
	comp=E,5.1nm,0.3s,baz=34,slow=7.5,SNR=22						
SDV				LR	LR	22 41 40.2	
	comp=E,420nm,21.4s,baz=40,slow=38						
	comp=E,16nm,0.4s						
SDV	Santo Domingo	9.63	203		Pn	22 37 56.2	-0.1
SDV	Santo Domingo	9.63	203	eP	Pn	22 37 56.5	+0.1
SDV	Santo Domingo	9.63	203	P	Pn	22 37 57.2	+0.9
	comp=E,608nmcomp=E,66nm,0.7s						
SMRC	Santa Marta, M	9.74	228	P	Pn	22 37 52.4	-5.2
	comp=E,24nm,1.0s						
MTDJ	Mount Denham	10.16	274		Pn	22 38 02.1	-1.3
MTDJ	Mount Denham	10.16	274	⇑iP	Pn	22 38 03.1	-0.3
MTDJ	Mount Denham	10.16	274	eP	Pn	22 38 00.8	-2.7
MTDJ	Mount Denham	10.16	274	P	Pn	22 38 02.7	-0.8
	comp=E,81nm,0.7s						
ARGC	Ariguani, Magd	10.69	223	P	Pn	22 38 12.3	+1.6
	comp=E,1μmcomp=E,27nm,1.8s						
CCCC	Cccc	10.80	290	eP	Pn	22 38 07.3	-4.9
RUSC	La Rusia	13.34	208	P	Pn	22 38 46.0	-1.4
BBSR	BB Station	14.60	7	Pn	Pn	22 39 01.9	-2.1
ROSC	El Rosal	14.84	210	Pn	Pn	22 39 09.4	+1.6
	comp=E,3.1nm,0.3s,baz=345,slow=21,SNR=4.6						
ROSC				LR	LR	22 44 50.5	
	comp=E,793nm,21.6s,baz=2.6,slow=37						
	comp=E,6.0nm,0.4s						
ROSC	El Rosal	14.84	210	Pn	Pn	22 39 07.8	0.0
ANIL	Santa Ana	15.68	213	P	Pn	22 39 14.2	-4.7
	comp=E,2μmcomp=E,61nm,0.5s						
SOR	Soroa	15.92	291		Pn	22 39 21.7	+0.1
BOAV	Boa Vista	16.57	157		Pn	22 39 30.0	0.0
BOAV	Boa Vista	16.57	157	eP	P	22 39 33.2	+0.6
BOAV	Boa Vista	16.57	157	P	Pn	22 39 29.0	-1.0
	comp=E,14nm,1.5s						
DWPF	Disney Wildern	16.84	310	Pn	Pn	22 39 33.3	-0.2
DWPF				IAmb	IAmb	22 39 35.6	
	comp=Z,133nm,1.3s						
SIUN	Universidad Ur	17.71	259		Pn	22 39 41.7	-2.7
SIUN				IAmb	IAmb	22 39 51.4	
	comp=Z,12nm,0.9s						
BRU2	Volcan	17.82	242		Pn	22 39 44.5	-1.4
BRU2				IAmb	IAmb	22 39 50.0	
	comp=Z,95nm,1.2s						
FLOC	Florencia	18.32	209	P	P	22 39 52.6	+0.5
656A	Willston	18.35	312		Pn	22 39 50.4	-1.8
656A				IAmb	IAmb	22 39 53.2	
	comp=Z,104nm,1.2s						
HDC	Heredia	18.45	247	P	P	22 39 53.6	-0.1
HDC				IAmb	IAmb	22 39 59.4	
	comp=Z,74nm,1.0s						
MDP	Montagnes des	18.81	131	P	Pn	22 39 59.7	+1.8
	comp=Z,0.6nm,0.3s,baz=345,slow=11,SNR=4.1						
MDP				LR	LR	22 49 42.8	
	comp=Z,355nm,18.8s,baz=320,slow=45						
	comp=Z,11nm,0.7s						
456A	Hilliard	18.82	316	P	Pn	22 39 57.7	-0.2
456A				IAmb	IAmb	22 40 00.3	
	comp=Z,105nm,1.1s						
BOAB	BOACO BROADBAN	18.92	256		P	22 39 57.8	-0.8
Y60A	Bolivia	19.03	330	P	P	22 40 00.0	+0.3
Y60A				IAmb	IAmb	22 40 02.7	
	comp=Z,94nm,0.9s						
JTS	Las Juntas de	19.07	249	P	Pn	22 40 02.2	+1.1
	comp=Z,2.1nm,0.3s,baz=53,slow=4.8,SNR=18						
JTS				LR	LR	22 47 37.3	
	comp=Z,362nm,18.9s,baz=54,slow=38						
	comp=Z,36nm,0.8s						
JTS	Las Juntas de	19.07	249	P	Pn	22 40 00.8	-0.3
JTS				IAmb	IAmb	22 40 06.0	
	comp=Z,42nm,0.8s						
CSU	Charleston Sou	19.20	324	P	P	22 40 01.4	-0.1
NHSC	New Hope	19.34	324		P	22 40 03.1	0.0
GCUF	Volcan Galeras	19.46	213	P	Pn	22 40 08.3	+2.1
	comp=Z,20nm,0.9s						
JUD3	Juan Diaz 3	19.65	250		P	22 40 06.7	0.0
TGUH	Tegucigalpa,Un	19.98	262	P	P	22 40 09.7	-0.6
TGUH				IAmb	IAmb	22 40 19.7	
	comp=Z,50nm,1.1s						
TGUH	Tegucigalpa,Un	19.98	262	P	Pn	22 40 11.3	-0.7
	comp=Z,39nm,0.8s						
TULM	Tulcn-Chalpat	20.12	213	P	Pn	22 40 16.5	+2.4
TEIG	Tepich	20.38	280		P	22 40 12.8	-1.7
JSC	Jenkinsville	20.82	325	P	P	22 40 18.7	-0.5
OTAV	Otavalo	20.88	214		Pn	22 40 21.9	-1.0
OTAV				IAmb	IAmb	22 40 33.4	
	comp=Z,132nm,1.5s						
OTAV	Otavalo	20.88	214	eP	Pn	22 40 22.8	-0.1
GOGA	Godfrey	21.50	319	P	P	22 40 25.8	-0.7
GOGA				IAmb	IAmb	22 40 32.7	
	comp=Z,77nm,1.1s						
SLOR	San Lorenzo -	21.72	213	P	P	22 40 28.6	-1.0
MACA	Manacapuru-AM	21.74	163	P	P	22 40 29.5	+0.2
ESQI	Esquipulas	21.82	265	P	P	22 40 29.5	-0.8
ESQI				IAmb	IAmb	22 40 38.4	
	comp=Z,79nm,1.4s						
MTO3	Montecristo	21.88	264	P	P	22 40 30.6	-0.4
PETF	Flores	21.97	271	P	P	22 40 31.1	-0.7
CBN	Corbin Frederi	22.27	338	P	P	22 40 33.8	-1.0
BLA	Blacksburg	22.68	331		P	22 40 38.0	-1.3
SDMD	Soldier's Deli	23.17	340	P	P	22 40 43.9	-0.4
TKL	Tuckaleechee C	23.23	323	LR	LR	22 49 35.0	
	comp=Z,273nm,21.2s,baz=158,slow=36						
TKL	Tuckaleechee C	23.23	323		P	22 40 43.5	-1.5
CPCT	Cooper Cave	23.52	322	P	P	22 40 47.9	0.0
CPCT				IAmb	IAmb	22 41 10.5	
	comp=Z,31nm,0.6s						
TZTN	Tazewell	23.75	325	P	P	22 40 50.3	+0.2
TZTN				IAmb	IAmb	22 41 16.9	
	comp=Z,36nm,0.9s						
SSPA	Standing Stone	24.62	340		P	22 40 57.0	-1.2
SSPA				IAmb	IAmb	22 41 23.3	
	comp=Z,37nm,1.1s						
ITTB	Itaituba	24.65	153	eP	P	22 41 00.2	+1.5
BINY	Binghamton	25.49	344		P	22 41 06.1	+0.1
BINY				IAmb	IAmb	22 41 39.5	
	comp=Z,31nm,0.8s						
O53A	New Philadelph	25.54	334	P	P	22 41 05.9	-0.6
O53A				IAmb	IAmb	22 41 09.0	
	comp=Z,23nm,0.9s						
WVT	Waverly	25.99	319	P	P	22 41 10.2	-0.5
WVT				IAmb	IAmb	22 41 12.3	
	comp=Z,21nm,0.8s						
OXF	Oxford	26.07	314		P	22 41 10.1	-1.3
ACSO	Alum Creek Sta	26.30	331	P	P	22 41 12.9	-0.4
CMIG	Matias Romero	26.73	273	LR	LR	22 53 29.0	
	comp=Z,205nm,18.8s,baz=67,slow=40						
USIN	University of	27.08	322	P	P	22 41 19.4	-1.1
USIN				IAmb	IAmb	22 41 22.0	
	comp=Z,41nm,0.9s						
NPGB	Novo Progresso	27.22	154	eP	P	22 41 22.8	+1.0
ATAH	Atahualpa	27.31	206	LR	LR	22 53 06.2	
	comp=Z,404nm,21.9s,baz=42,slow=38						
LCAR	Lake Charles	28.12	315		P	22 41 29.3	-0.5
LCAR				IAmb	IAmb	22 41 31.3	
	comp=Z,25nm,1.4s						
SADO	Sadowa	28.75	342	LR	LR	22 54 19.5	
	comp=Z,236nm,18.1s,baz=177,slow=39						
CCM	Cathedral Cave	29.33	318		P	22 41 39.9	-0.6
CCM				IAmb	IAmb	22 41 41.7	
	comp=Z,21nm,0.8s						
CLDB	Colider	30.56	158	eP	P	22 41 52.5	+1.0
GLMI	Grayling	30.74	335		P	22 41 53.4	+0.5
PDRB	Porto dos Gac	30.93	160	eP	P	22 41 57.1	+2.2
FW06	Azle	31.41	305	P	P	22 41 59.6	+0.6
FW06				IAmb	IAmb	22 42 01.6	
	comp=Z,23nm,1.1s						
DEOK	Depew	31.76	310	P	P	22 42 01.4	-0.6
JFWS	Jewell Farm	31.91	327		P	22 42 02.5	-0.7
JCT	Junction City	32.45	299	P	P	22 42 07.4	-0.8
JCT				IAmb	IAmb	22 42 09.9	
	comp=Z,9.1nm,0.7s						
SMTB	Santa Maria do	32.66	143	eP	P	22 42 12.8	+2.7
SCIA	State Center	32.88	322	P	P	22 42 11.5	-0.3
SCIA				IAmb	IAmb	22 42 13.2	
	comp=Z,27nm,1.0s						
WMOK	Wichita Mounta	33.01	307	P	P	22 42 13.0	0.0
WMOK				IAmb	IAmb	22 42 14.2	
	comp=Z,16nm,0.7s						
SNDB	Serra Nova Dou	33.38	151	eP	P	22 42 18.5	+2.1
LPAZ	La Paz	33.94	182	P	P	22 42 23.8	+1.9
	comp=Z,0.8nm,0.4s,baz=9.8,slow=11,SNR=4.1						
LPAZ				LR	LR	22 57 53.2	
	comp=Z,331nm,18.4s,baz=338,slow=39						
	comp=Z,0.8nm,0.4s						
LPAZ	La Paz	33.94	182		P	22 42 22.6	+0.7
LPAZ	La Paz	33.94	182	eP	P	22 42 23.9	+2.1
PTLB	Pontes e Lacer	33.95	167	P	P	22 42 21.8	+0.6
SIV	San Ignacio	34.10	170	P	P	22 42 24.2	+1.5
	comp=Z,3.0nm,0.7s,baz=6.7,slow=8.8,SNR=16						
SIV				LR	LR	22 56 58.5	
	comp=Z,725nm,18.3s,baz=318,slow=38						
	comp=Z,3.0nm,0.7s						
POST	Post	34.57	303		P	22 42 26.2	-0.5
POST				IAmb	IAmb	22 42 28.2	
	comp=Z,24nm,0.8s						
SALV	Santo Antonio	35.29	161	eP	P	22 42 34.5	+1.6
PB18	Visviri	35.30	184	P	P	22 42 34.3	+0.7
CBKS	Cedar Bluff	35.40	313	P	P	22 42 32.9	-0.9
CBKS				IAmb	IAmb	22 42 35.3	
	comp=Z,20nm,0.8s						
TXAR	Lajitas Array	35.47	296	P	P	22 42 34.3	-0.2
	comp=Z,6.5nm,0.6s,baz=110,slow=9.3,SNR=70						
TXAR				PcP	PcP	22 45 04.2	0.0
	comp=Z,1.5nm,0.9s,baz=122,slow=4.5,SNR=3.4						
TXAR				ScP	ScP	22 48 51.8	+0.8
	comp=Z,2.2nm,0.7s,baz=117,slow=6.4,SNR=20						
TXAR				LR	LR	23 01 27.8	
	comp=Z,105nm,18.4s,baz=76,slow=44						
	comp=Z,6.5nm,0.6s						
TXAR	Lajitas Array	35.47	296		P	22 42 34.2	-0.4
TX31	Lajitas Ar. Si	35.47	296		P	22 42 34.4	-0.2
TX31				IAmb	IAmb	22 42 37.0	
	comp=Z,8.0nm,0.6s						
TBO	Thunder Bay	35.77	334		P	22 42 36.5	-0.3
TBO				IAmb	IAmb	22 42 38.7	
	comp=Z,27nm,1.1s						
ECSD	EROS Data Cent	35.98	322		P	22 42 38.2	-0.4
ECSD				IAmb	IAmb	22 42 39.8	
	comp=Z,26nm,0.8s						
PB16	IPOC Station P	36.05	184	P	P	22 42 39.7	-0.3
PB16				IAmb	IAmb	22 43 32.1	
	comp=Z,39nm,1.4s						
EYMN	Ely	36.14	332		P	22 42 39.6	-0.4
ARAG	Araguaiana, MT	36.49	155	eP	P	22 42 43.6	+0.4
HPIG		36.88	291		P	22 42 46.2	-0.6
HPIG				IAmb	IAmb	22 43 18.4	
	comp=Z,18nm,0.6s						
SCHQ	Schefferville	36.92	0	P	P	22 42 47.0	+0.6
	comp=Z,6.6nm,0.6s,baz=182,slow=7.0,SNR=17						
SCHQ				LR	LR	22 55 35.6	
	comp=Z,125nm,21.6s,baz=185,slow=32						
	comp=Z,6.6nm,0.6s						
SCHQ	Schefferville	36.92	0	P	P	22 42 46.8	+0.3
PP1B	Ponte de Pedra	37.14	161	eP	P	22 42 50.8	+2.1
GO01	Chusmiza	37.35	184	P	P	22 42 50.2	-0.8
MNTX	Cornudas Mount	37.39	299		P	22 42 50.4	-0.4
HMBC	Humberstone	38.00	185	P	P	22 42 55.8	-0.3
HMBC				IAmb	IAmb	22 43 11.8	
	comp=Z,15nm,0.6s						
BDFB	Brasilia	38.11	150	P	P	22 42 57.5	+0.5
	comp=Z,1.9nm,0.7s,baz=310,slow=14,SNR=4.6						
BDFB				LR	LR	22 58 58.6	
	comp=Z,625nm,19.3s,baz=335,slow=37						
	comp=Z,1.9nm,0.7s						
BDFB	Brasilia	38.11	150	P	P	22 42 57.4	+0.3
TA01	Diego Aracena	38.31	185	P	P	22 42 56.1	-2.5
TA01				IAmb	IAmb	22 43 30.8	
	comp=Z,19nm,1.0s						
EPLO	Experimental L	38.41	332		P	22 42 58.9	-0.3
EPLO				IAmb	IAmb	22 43 00.1	
	comp=Z,22nm,0.7s						
ANMO	Albuquerque	39.05	304	LR	LR	23 01 00.7	
	comp=Z,168nm,19.4s,baz=115,slow=39						
ANMO	Albuquerque	39.05	304	P	P	22 43 04.4	-0.6
NBTA	Tacaratu-PE	39.08	131	eP	P	22 43 08.1	+2.8
SDCO	Great Sand Dun	39.15	308		P	22 43 05.6	-0.3
SDCO				IAmb	IAmb	22 43 07.9	
	comp=Z,15nm,0.8s						
AQDB	Aquidauana	39.63	163	P	P	22 43 09.7	+0.1
ULM	Lac du Bonnet	39.80	331	P	P	22 43 09.9	-0.9
	comp=Z,16nm,0.7s,baz=130,slow=8.7,SNR=24						
ULM				LR	LR	23 00 25.3	
	comp=Z,134nm,18.6s,baz=140,slow=38						

	comp=Z,16nm,0.7s						
ULM	Lac du Bonnet	39.80	331		P	22 43 09.4	-1.4
ULM				IAmb	IAmb	22 43 11.1	
	comp=Z,16nm,0.8s						
ISCO	Idaho Springs	39.96	311		P	22 43 12.8	+0.1
MURT	Porto Murtinho	40.29	167	*e*P	P	22 43 16.0	+0.9
AMBA	Amambai (Brazi	42.15	164	*e*P	P	22 43 33.0	+2.6
DGMT	Dagmar	43.00	324		P	22 43 37.1	0.0
DGMT				IAmb	IAmb	22 43 39.0	
	comp=Z,30nm,0.8s						
P18A	Preston Nutter	43.27	309	P	P	22 43 40.1	+0.3
PD31	Pinedale Array	43.81	314		P	22 43 43.3	-0.8
PDAR	Pinedale Array	43.81	314	P	P	22 43 44.4	+0.3
	comp=Z,4.3nm,0.8s,baz=119,slow=8.3,SNR=35						
PDAR				PcP	PcP	22 45 30.3	-0.4
	comp=Z,1.1nm,0.6s,baz=117,slow=4.5,SNR=5.1						
PDAR				LR	LR	23 02 55.2	
	comp=Z,153nm,20.0s,baz=110,slow=37						
	comp=Z,4.3nm,0.8s						
PDAR	Pinedale Array	43.81	314	P	P	22 43 43.9	-0.2
RLMT	Red Lodge	44.52	317	P	P	22 43 49.4	-0.3
RLMT				IAmb	IAmb	22 43 51.3	
	comp=Z,15nm,1.0s						
PTGB	Pitanga	44.70	161	*e*P	P	22 43 53.5	+2.4
LOHW	Long Hollow	44.83	315	P	P	22 43 52.1	-0.1
LOHW				IAmb	IAmb	22 43 53.8	
	comp=Z,13nm,0.8s						
CPUP	Villa Florida	44.88	168	P	P	22 43 51.9	-0.5
	comp=Z,4.7nm,0.7s,baz=335,slow=7.2,SNR=8.2						
CPUP				LR	LR	23 03 32.2	
	comp=Z,268nm,18.2s,baz=348,slow=37						
	comp=Z,4.7nm,0.7s						
CPUP	Villa Florida	44.88	168		P	22 43 51.2	-1.2
CPUP				IAmb	IAmb	22 43 54.4	
	comp=Z,27nm,1.6s						
YNE	Yellowstone No	44.95	317		P	22 43 53.0	-0.1
FCC	Fort Churchill	45.47	340		P	22 43 56.3	-0.4
FFC	Flin Flon	45.57	332		P	22 43 56.5	-1.1
FFC				IAmb	IAmb	22 43 58.4	
	comp=Z,15nm,0.8s						
FRB	Frobisher Bay	45.88	359	LR	LR	23 00 57.8	
	comp=Z,128nm,21.1s,baz=195,slow=33						
IRM	Iron Mountain	45.90	300	P	P	22 44 00.6	-0.1
IRM				IAmb	IAmb	22 44 14.9	
	comp=Z,14nm,1.1s						
LRM	Limekiln Ridge	46.85	317	P	P	22 44 08.4	+0.2
PFO	Pinyon Flats O	46.92	300	LR	LR	23 07 08.7	
	comp=Z,94nm,19.0s,baz=90,slow=40						
PMAR	Madeira	47.12	62	*e*P	P	22 44 10.9	+0.5
ELK	Elko	47.25	309	LR	LR	23 07 34.0	
	comp=Z,223nm,18.5s,baz=122,slow=41						
HLID	Hailey	47.43	313		P	22 44 13.3	+0.6
HLID				IAmb	IAmb	22 44 15.3	
	comp=Z,8.9nm,0.8s						
JTMT	Jette	48.72	319	P	P	22 44 21.9	-0.6
NVAR	Mina Array Bea	49.09	306	P	P	22 44 26.6	+1.0
	comp=Z,7.7nm,1.0s,baz=95,slow=6.8,SNR=20						
NVAR				ScP	ScP	22 49 45.8	+0.5
	comp=Z,0.8nm,0.7s,baz=144,slow=5.1,SNR=6.0						
NVAR				LR	LR	23 07 33.1	
	comp=Z,246nm,18.4s,baz=100,slow=39						
	comp=Z,7.7nm,1.0s						
NVAR	Mina Array Bea	49.09	306	P	P	22 44 25.9	+0.3
BMO	Blue Mountains	49.79	314		P	22 44 30.5	-0.2
SFJD	Kangerlussuaq	50.25	8	LR	LR	23 03 29.7	
	comp=Z,80nm,20.9s,baz=190,slow=33						
EDM	Edmonton	50.38	326		P	22 44 34.8	-0.1
EDM				IAmb	IAmb	22 44 37.2	
	comp=Z,17nm,0.8s						
NEW	Newport	50.69	318	LR	LR	23 06 29.5	
	comp=Z,238nm,21.7s,baz=112,slow=37						
LNOR	Lincton Mounta	50.73	315	P	P	22 44 37.6	-0.2
LNOR				IAmb	IAmb	22 44 39.7	
	comp=Z,14nm,0.8s						
ILON	Igloolik, Nuna	52.34	353		P	22 44 49.2	-0.1
ILON				IAmb	IAmb	22 44 50.2	
	comp=Z,15nm,1.2s						
J04A	Umpqua Nationa	52.79	311		P	22 44 53.3	0.0
YBH	Yreka Blue Hor	52.97	309	LR	LR	23 08 02.5	
	comp=Z,8.5nm,21.8s,baz=97,slow=37						
PSBE	So Bento	54.36	54	*e*P	P	22 45 08.0	+3.2
MOE	Montemor	54.61	55	*e*P	P	22 45 09.5	+2.9
MOE				*i* IAmb	IAmb	22 45 14.2	
	comp=Z,35nm,1.6s						
PMTG	Montargil	54.76	54	*e*P	P	22 45 09.9	+2.3
PMTG				*i* IAmb	IAmb	22 45 13.6	
	comp=Z,19nm,1.6s						
NLWA	Neilton Lookou	54.84	316	P	P	22 45 08.1	0.0
EVO	Evora	54.88	55	*e*P	P	22 45 11.3	+2.9
PARRA	Arraiolos	54.88	55	*e*P	P	22 45 13.3	+4.9
PGAV	Gavieira, Arco	55.04	51	*e*P	P	22 45 12.2	+2.5
PVIS	Viseu	55.17	53	*e*P	P	22 45 13.3	+2.6
PVRL	Vila Real	55.37	52	*e*P	P	22 45 15.0	+3.0
PVRL				*i* IAmb	IAmb	22 45 19.6	
	comp=Z,22nm,1.7s						
PCBR	Castelo Branco	55.41	54	*e*P	P	22 45 14.9	+2.7
MTE	Manteigas	55.41	53	*e*P	P	22 45 15.0	+2.7
MTE				*i* IAmb	IAmb	22 45 20.1	
	comp=Z,19nm,1.8s						
PMRV	Marv??o	55.44	54	*e*P	P	22 45 15.1	+2.6
YKA	Yellowknife Ar	55.45	335	P	P	22 45 11.9	-0.2
	comp=Z,11nm,0.7s,baz=114,slow=6.6,SNR=161						
YKA				LR	LR	23 08 04.4	
	comp=Z,141nm,20.6s,baz=114,slow=35						
	comp=Z,11nm,0.7s						
PBAR	Barrancos	55.62	56	*e*P	P	22 45 16.9	+3.1
BORG	Borgarnes	55.85	22	LR	LR	23 07 48.1	
	comp=Z,41nm,18.8s,baz=231,slow=35						
MVO	Moncorvo	55.87	52	*e*P	P	22 45 18.6	+2.9
SUMG	Summit	57.12	10		P	22 45 24.6	+0.1
MD01	Midelt array s	57.35	62		P	22 45 26.0	-0.5
MD31	MD31	57.35	62	P	P	22 45 26.7	+0.3
MD31				IAmb	IAmb	22 45 40.7	
	comp=Z,14nm,1.6s						
MDT	Midelt	57.48	62	LR	LR	23 05 49.9	
	comp=Z,185nm,20.8s,baz=279,slow=32						
H10N3	ASCENSION HYDR	57.66	112	T	T	23 47 55.2	
	baz=295,slow=75,SNR=17						
H10N2	ASCENSION HYDR	57.66	112	T	T	23 47 52.2	
	baz=295,slow=75,SNR=24						
H10N1	ASCENSION HYDR	57.68	112	T	T	23 47 56.5	
	baz=295,slow=75,SNR=26						
PAB	San Pablo	57.79	54	P	P	22 45 29.9	+0.5
PAB				IAmb	IAmb	22 45 34.3	
	comp=Z,15nm,1.4s						
H10S3	ASCENSION HYDR	58.02	113	T	T	23 48 19.6	
	baz=288,slow=75,SNR=48						
H10S2	ASCENSION HYDR	58.04	113	T	T	23 48 18.7	
	baz=292,slow=75,SNR=31						
ESDC	Sonseca Array	58.10	54	P	P	22 45 32.5	+1.0
	comp=Z,8.8nm,0.8s,baz=269,slow=7.1,SNR=59						
	comp=Z,8.8nm,0.8s						
ESDC	Sonseca Array	58.10	54		P	22 45 32.2	+0.7
ESDC				IAmb	IAmb	22 45 36.0	
	comp=Z,8.4nm,1.1s						
PLCA	Paso Flores	58.38	183	LR	LR	23 13 09.4	
	comp=Z,119nm,21.4s,baz=348,slow=39						
BBB	Bella Bella	58.53	321	LR	LR	23 11 07.6	
	comp=Z,82nm,21.7s,baz=108,slow=36						
TOAD	Toad River Com	58.68	329	P	P	22 45 35.9	+0.8
	baz=108						
LIRD	Liard River Hi	59.27	329	P	P	22 45 40.1	+0.8
	baz=108						
WRGLY	Wrigley	59.40	334	P	P	22 45 40.6	+0.6
WRGLY				IAmb	IAmb	22 45 41.3	
	comp=Z,14nm,0.8s						
WRGLY	Wrigley	59.40	334	P	P	22 45 39.5	-0.5
	baz=112						
EKA	Eskdalemuir Ar	60.59	36	P	P	22 45 49.2	+0.8
	comp=Z,2.4nm,0.8s,baz=269,slow=5.9,SNR=4.1						
	comp=Z,2.4nm,0.8s						
T35M	Bob Quinn	60.76	326	P	P	22 45 49.9	+0.4
	baz=103						
WTLY	Watson Lake, Y	60.78	330	P	P	22 45 49.5	-0.2
	baz=106						
V35K	Ketchikan	61.17	324	P	P	22 45 51.7	-0.6
	baz=100						
DBIC	Dimbokro	61.37	92	P	P	22 45 54.2	-0.1
	comp=Z,5.8nm,0.7s,baz=312,slow=7.0,SNR=11						
DBIC				LR	LR	23 08 27.7	
	comp=Z,78nm,20.7s,baz=288,slow=32						
	comp=Z,5.8nm,0.7s						
DBIC	Dimbokro	61.37	92		P	22 45 53.9	-0.4
DBIC				IAmb	IAmb	22 45 55.0	
	comp=Z,5.4nm,0.7s						
S34M	Telegraph Cree	61.42	327	P	P	22 45 53.9	0.0
	baz=102						
R33M	Jennings River	61.67	328	P	P	22 45 56.0	+0.3
	baz=103						
WRAK	Wrangell Islan	61.78	325	P	P	22 45 56.8	+0.4
	baz=100						
CRAG	Craig	62.05	324	P	P	22 45 57.5	-0.6
	baz=99						
C36M	Paulatuk	62.11	340	P	P	22 45 58.3	0.0
	baz=115						
U33K	Whale Pass	62.15	325	P	P	22 45 58.8	0.0
	baz=100						
Q32M	Nakina River	62.23	328	P	P	22 45 59.6	-0.1
	baz=102						
P33M	Teslin, Yukon	62.76	329	P	P	22 46 02.7	-0.4
	baz=102						
P32M	Atlin	63.08	328	P	P	22 46 05.1	0.0
	baz=101						
N32M	Quiet Lake	63.09	330	P	P	22 46 04.9	-0.2
	baz=102						
S32K	Killisnoo	63.16	326	P	P	22 46 05.3	-0.3
	baz=99						
R32K	Eaglecrest	63.26	327	P	P	22 46 06.1	-0.2
	baz=99						
SIT	Sitka	63.50	325	P	P	22 46 07.8	0.0
	baz=98						
A36M	Sachs Harbour	63.59	343		P	22 46 08.2	0.0
A36M	Sachs Harbour	63.59	343	P	P	22 46 08.1	0.0
	baz=115,SNR=9.5						
WHY	Whitehorse	63.85	329	P	P	22 46 10.0	-0.3
	baz=100						
SKAG	Skagway	63.87	328	P	P	22 46 10.1	-0.1
	baz=99						
M31M	Drury Creek, Y	63.91	331	P	P	22 46 10.0	-0.5
	baz=102						
S31K	Pelican	64.11	326	P	P	22 46 12.0	+0.2
	baz=98						
PLBC	Pleasant Camp	64.39	328	P	P	22 46 13.3	-0.4
	baz=98						
N31M	Braeburn, Yuko	64.43	330	P	P	22 46 13.3	-0.7
	baz=100						
O30N	Mendenhall	64.46	329	P	P	22 46 14.4	+0.2
	baz=99						
H31M	Peel River	64.67	335	P	P	22 46 16.1	+0.7
	baz=103						
P30M	Million Dollar	64.78	329	P	P	22 46 16.4	+0.1
	baz=98						
F31M	Tsiigehtchic	64.83	337	P	P	22 46 16.3	-0.1
	baz=104						
G31M	Satah River	64.90	336	P	P	22 46 16.8	0.0
	baz=104,SNR=6.3						
INK	Inuvik	64.97	338	P	P	22 46 17.3	0.0
	comp=Z,14nm,0.7s,baz=101,slow=6.0,SNR=60						
	comp=Z,14nm,0.7s						
INK	Inuvik	64.97	338		P	22 46 16.9	-0.4
INK	Inuvik	64.97	338	P	P	22 46 17.4	+0.1
	baz=105,SNR=13						
N30M	Aishikik Lake	65.04	330	P	P	22 46 18.0	0.0
	baz=99						
M30M	Minto, Yukon	65.08	331	P	P	22 46 17.7	-0.6
	baz=99						
P29M	Windy Craggy	65.11	328	P	P	22 46 18.2	-0.2
	baz=97						
HYT	Haines Junctio	65.15	329	P	P	22 46 18.6	-0.2
	baz=98						
J30M	Hart River	65.23	334	P	P	22 46 19.0	-0.3
	baz=101						
I30M	Mount Dempster	65.37	334	P	P	22 46 20.1	-0.1
	baz=101						
YUK6	Outpost Mounta	65.58	329	P	P	22 46 21.0	-0.7
	baz=97						
O29M	Mount Kennedy	65.61	329	P	P	22 46 21.5	-0.3
	baz=97						
K29M	Barlow Dome	65.61	333	P	P	22 46 21.8	0.0
	baz=99						
F30M	Barrier River	65.63	337	P	P	22 46 21.9	+0.3
	baz=103						
G30M	tAoh Zraii Nji	65.66	336	P	P	22 46 21.6	-0.3
	baz=102						
EPYK	Eagle Plains	65.73	335		P	22 46 22.5	+0.1
EPYK	Eagle Plains	65.73	335	P	P	22 46 22.1	-0.3
	baz=101						
YUK4	Talbot Arm	65.77	330	P	P	22 46 22.4	-0.5
	baz=97						
L29M	L29M	65.77	332	P	P	22 46 22.7	0.0
	baz=98						
M29M	Somme Creek	65.83	331	P	P	22 46 22.6	-0.5
	baz=98						
TORD	Torodi Ar. Bea	65.92	83	P	P	22 46 23.8	-0.7
	comp=Z,2.4nm,0.8s,baz=294,slow=6.3,SNR=11						
	comp=Z,2.4nm,0.8s						
J29N	Klondike Camp	66.01	333	P	P	22 46 24.4	+0.1
	baz=99						
ACRG	Accra	66.09	92	P	P	22 46 24.9	-0.5
I29M	Ogilvie Camp,	66.20	334	P	P	22 46 26.1	+0.7
	baz=99						
YUK8	Steele Glacier	66.30	330	P	P	22 46 25.8	-0.5
	baz=96						
G29M	Pine Creek	66.35	336	P	P	22 46 26.4	+0.1
	baz=100						
H29M	Whitestone	66.36	335	P	P	22 46 25.9	-0.5
	baz=100						
PINM	Pinnacle	66.42	328	P	P	22 46 27.1	+0.1
	baz=95						
O28M	Mount Upton	66.45	329	P	P	22 46 27.4	0.0
	baz=96						
DAWY	Dawson	66.47	333	P	P	22 46 27.6	+0.5
	baz=98						
E29M	Blow River	66.57	338	P	P	22 46 28.0	+0.4
	baz=101						
YUK3	Moose Creek	66.68	330	P	P	22 46 28.8	+0.1
	baz=96						
I28M	Miner Creek	66.88	334	P	P	22 46 30.0	+0.2
	baz=98						
BVCY	Beaver Creek	66.93	331	P	P	22 46 30.2	+0.1
	baz=96						
CTG	Chitna Glacier	67.03	329	P	P	22 46 30.8	-0.1
	baz=95						
D28M	Stokes Point	67.05	339	P	P	22 46 31.1	+0.4
	baz=100						
F28M	Old Crow	67.17	337	P	P	22 46 31.5	0.0
	baz=99,SNR=6.7						
E28M	Babbage River	67.20	338	P	P	22 46 31.4	-0.3
	baz=100,SNR=6.8						
M27K	Edge Creek, AK	67.40	331	P	P	22 46 33.3	+0.1
	baz=95						
BCAR	Beaver Creek A	67.42	332		P	22 46 33.2	0.0
L27K	Beaver Creek,	67.44	332	P	P	22 46 33.5	+0.2
	baz=95						
I27K	Kandik River	67.60	334	P	P	22 46 34.3	0.0
	baz=96						
H27K	Steamboat Moun	67.63	335	P	P	22 46 34.5	0.0
	baz=97						
G27K	Doyon Strip	67.75	336	P	P	22 46 35.4	+0.1
	baz=97						
D27M	Malcolm River	67.82	338	P	P	22 46 35.3	-0.3
	baz=98						
CRQE	Cirque	67.87	329	P	P	22 46 35.5	-0.7
	baz=93						
MCARA	McCarthy VSAT	67.87	330	P	P	22 46 35.5	-0.6
	baz=93						
E27K	Coleen River	67.90	337	P	P	22 46 36.0	-0.2
	baz=97						
M26K	Nabesna, AK	67.92	331	P	P	22 46 36.4	-0.1
	baz=94						
L26K	Log Cabin Wild	68.12	331	P	P	22 46 37.6	0.0
	baz=94						
DAVA	Damuels	68.18	46	*e*pP	P	22 46 41.4	+2.9
	comp=Z,6.3nm,0.9s						
DAVOX	Davos/Dischmat	68.20	46	LR	LR	23 15 33.3	
	comp=Z,53nm,18.1s,baz=276,slow=35						
I26K	Coal Creek Min	68.21	334	P	P	22 46 38.4	+0.3
	baz=95						
J26L	Joseph Creek	68.32	333	P	P	22 46 38.9	0.0
	baz=94						
SCRK	Sand Creek	68.47	332		P	22 46 40.4	+0.5
SCRK	Sand Creek	68.47	332	P	P	22 46 40.4	+0.5
	baz=93,SNR=8.9						
FUORN	Ofenpass-Fuorn	68.48	46	P	P	22 46 41.3	+0.8
FUORN				IAmb	IAmb	22 46 51.1	
	comp=Z,7.9nm,0.9s						
KAIM	Kayak Island	68.50	328	P	P	22 46 40.4	+0.4
	baz=92						
G26K	Porcupine Rive	68.60	336	P	P	22 46 41.0	+0.5
	baz=95,SNR=5.3						
BMRM	Bremner River	68.62	329	P	P	22 46 40.4	-0.4
	baz=92						
N25K	Chitina, Valde	68.64	330	P	P	22 46 40.9	0.0
	baz=92						
RETA	Reutte	68.76	45	*i* pP	P	22 46 44.9	+2.9
	comp=Z,11nm,1.1s						
FETA	Feichten	68.77	46	*i* pP	P	22 46 44.5	+2.3
	comp=Z,5.4nm,0.7s						
NOA	NORSAR Array B	68.79	31	P	P	22 46 41.4	-0.5
	comp=Z,2.7nm,0.9s,baz=269,slow=6.4,SNR=5.1						
NOA				LR	LR	23 12 55.3	
	comp=Z,66nm,20.8s,baz=275,slow=33						
	comp=Z,2.7nm,0.9s						
KEST	Kesra	68.79	58	P	P	22 46 42.8	+0.5
	comp=Z,7.1nm,0.8s,baz=182,slow=3.7,SNR=6.7						
KEST				LR	LR	23 11 49.3	
	comp=Z,98nm,21.3s,baz=4.7,slow=32						
	comp=Z,7.1nm,0.8s						
KEST	Kesra	68.79	58	P	P	22 46 42.9	+0.5
F26K	Sheenjek River	68.80	336	P	P	22 46 41.7	-0.1
	baz=95						
C27K	Jago River	68.83	339	P	P	22 46 42.4	+0.5
	baz=96						
RIDG	Independent Ri	68.84	332	P	P	22 46 42.2	+0.1
	baz=93						
HARP	HAARP	68.93	331	P	P	22 46 42.8	+0.2
	baz=92						
BMAR	Burnt Mountain	68.95	336	P	P	22 46 43.0	+0.2
SQTA	Sankt Quirin	69.08	46	*e*pP	P	22 46 46.5	+2.5
	comp=Z,4.8nm,0.6s						
PAX	Paxson	69.09	331	P	P	22 46 44.1	+0.3
	baz=92						
J25K	Salcha River,	69.11	333	P	P	22 46 43.5	-0.3
	baz=92						
EYAK	Cordova Ski Ar	69.17	329	P	P	22 46 44.3	+0.1
	baz=90						
PRP	Porcupine Dome	69.21	334	P	P	22 46 44.7	+0.2
	baz=93,SNR=9.5						
K24K	Donnelly Dome	69.25	332	P	P	22 46 44.9	+0.2
	baz=92						
KLU	Klutina	69.27	330	P	P	22 46 45.3	+0.4
	baz=91						
C26K	Camden Bay	69.27	339	P	P	22 46 45.1	+0.5
	baz=95						
WATA	Walderalm	69.33	45	*e*pP	P	22 46 48.2	+2.6
	comp=Z,4.0nm,1.1s						
F25K	Christian Rive	69.37	336	P	P	22 46 45.7	+0.3
	baz=93						
E25K	Arctic Village	69.37	337	P	P	22 46 45.8	+0.5
	baz=94,SNR=9.2						
WTTA	Wattenberg	69.37	45	*i* pP	P	22 46 48.0	+2.1
	comp=Z,6.0nm,1.1s						
M24K	Tolsona, Glenn	69.40	330	P	P	22 46 46.2	+0.6
	baz=91						
Q23K	Middleton Isla	69.47	328	P	P	22 46 46.3	+0.3
	baz=90						
G25K	Bearman Lake	69.50	335	P	P	22 46 46.6	+0.5
	baz=93						
D25K	Kavik River	69.74	338	P	P	22 46 47.8	+0.2
	baz=93						
IL31		69.76	333		P	22 46 47.7	0.0
IL31				IAmb	IAmb	22 46 48.9	
	comp=Z,18nm,1.2s						
ILAR	Eielson Array	69.76	333	P	P	22 46 48.0	+0.3
	comp=Z,4.8nm,0.8s,baz=100,slow=4.2,SNR=32						
	comp=Z,4.8nm,0.8s						
ILAR	Eielson Array	69.76	333		P	22 46 47.5	-0.2
HDA	Harding Lake	69.78	333	P	P	22 46 48.3	+0.5
	baz=91						
SCM	Sheep Creek Mo	69.94	330	P	P	22 46 49.2	+0.2
SCM	Sheep Creek Mo	69.94	330	P	P	22 46 49.0	0.0
	baz=90						
DHY	Denali Highway	69.96	331	P	P	22 46 49.2	0.0
	baz=90						
CLL	Collm	69.99	41	*e*P	P	22 46 51.0	+1.6
CLL				*e*x	x	22 46 57.0	
CLL				AMS	AMS	23 06 00.0	
	comp=N,100nm,22.0s						
CLL				AMS	AMS	23 06 00.0	
	comp=E,100nm,19.0s						
P23K	Montague Islan	70.00	328	P	P	22 46 49.7	+0.4
	baz=89						
POKR	Poker Plat Res	70.00	334	P	P	22 46 49.5	+0.2
	baz=91						
ABTA	Abfaltersbach	70.01	46	*i* P	P	22 46 49.6	-0.1
	comp=E,7.6nm,1.1s						
HFS	Hagfors	70.01	32	P	P	22 46 49.4	+0.1
	comp=E,4.9nm,1.0s,baz=29,slow=3.4,SNR=4.5						
HFS				LR	LR	23 15 09.9	
	comp=E,123nm,19.1s,baz=262,slow=34						
	comp=E,4.9nm,1.0s						
G24K	Hadweenzic Riv	70.05	335	P	P	22 46 49.8	+0.4
	baz=91						
LESA	Schwarzleotal	70.06	45	*i* pP	P	22 46 52.1	+2.0
	comp=E,5.7nm,1.2s						
WAT6	Susitna Watana	70.13	331	P	P	22 46 50.6	+0.3
	baz=90						
M23K	Glacier View	70.13	330	P	P	22 46 50.3	+0.2
	baz=89						
H24K	Noodor Dome	70.19	334	P	P	22 46 50.5	+0.1
	baz=91						
F24K	Squaw Lake	70.23	336	P	P	22 46 50.9	+0.3
	baz=91						
SML	Sawmill	70.42	330	P	P	22 46 52.0	+0.1
	baz=89						
PWL	Port Wells	70.44	329	P	P	22 46 52.2	+0.1
	baz=88						
E24K	Your Creek	70.46	337	P	P	22 46 52.5	+0.4
	baz=91						
KNK	Knik Glacier	70.49	330	P	P	22 46 52.3	0.0
	baz=88						
WAT1	Susitna Watana	70.50	331	P	P	22 46 52.6	+0.3
	baz=89						
KBA	Koelnbreinsper	70.55	46	*e*pP	P	22 46 56.1	+2.9
	comp=E,4.7nm,0.8s						
C24K	Franklin Bluff	70.57	339	P	P	22 46 52.8	+0.2
	baz=91						
D24K	Happy Valley	70.60	338	P	P	22 46 53.8	+1.0
	baz=91						
GERES	GERESS Array B	70.62	44	P	P	22 46 53.1	-0.3
	comp=E,0.7nm,0.8s,baz=257,slow=10,SNR=6.1						
GERES				LR	LR	23 16 21.6	
	comp=E,90nm,19.1s,baz=276,slow=35						
	comp=E,0.7nm,0.8s						
MCK	McKinley	70.66	332	P	P	22 46 53.9	+0.6
	baz=89,SNR=5.1						
BIOA	Bad Ischl, Aus	70.69	45	*e*pP	P	22 46 57.7	+3.9
	comp=E,2.8nm,0.8s						
NEA2	Nenana	70.70	333	P	P	22 46 53.4	-0.1
	baz=89,SNR=7.3						
PMR	Palmer	70.80	330	P	P	22 46 54.4	+0.2
	baz=88						
I23K	Minto, Yukon-K	70.81	334	P	P	22 46 54.5	+0.4
	baz=89						
TOLK	Toolik Lake Re	70.87	337	P	P	22 46 54.6	+0.1
TOLK				IAmb	IAmb	22 47 51.1	
	comp=Z,35nm,2.0s						
TOLK	Toolik Lake Re	70.87	337	P	P	22 46 55.0	+0.4
	baz=90						
E23K	Chandalar	70.89	337	P	P	22 46 55.0	+0.3
	baz=90						
SEW	Seward	71.02	328	P	P	22 46 55.8	+0.3
	baz=87						
G23K	Bananza Creek	71.06	335	P	P	22 46 56.4	+0.6
	baz=89						
MOA	Molln	71.09	45	*e*pP	P	22 46 59.2	+2.9
	comp=Z,5.9nm,1.9s						
RC01	Rabbit Creek A	71.12	329	P	P	22 46 55.4	-0.7
	baz=87						
COLD	Coldfoot	71.12	336	P	P	22 46 56.6	+0.6
	baz=89,SNR=6.5						
O22K	Cooper Landing	71.14	329	P	P	22 46 56.4	+0.2
	baz=87						
C23K	Itkillik River	71.24	339	P	P	22 46 56.6	0.0
	baz=90,SNR=5.4						
M22K	Willow	71.27	330	P	P	22 46 57.3	+0.3
	baz=87						
TRF	Thorofare Moun	71.27	332	P	P	22 46 57.2	0.0
	baz=88,SNR=6.0						
D23K	Nanushuk River	71.27	338	P	P	22 46 56.9	0.0
	baz=89						
CUT	Chulitna	71.31	331	P	P	22 46 57.5	+0.3
	baz=87						
KTH	Kantishna Hill	71.55	332		P	22 46 59.0	+0.2
BPAW	Bear Paw Mtn.	71.55	333	P	P	22 46 59.3	+0.6
	baz=87						
SUA	Susitna One	71.58	330	P	P	22 46 59.2	+0.1
	baz=86						
H22K	Ishtalitna Cre	71.63	334	P	P	22 46 59.3	+0.2
	baz=87						
BRSE	Bradley Lake S	71.69	328	P	P	22 46 60.0	+0.3
	baz=86						

E22K	Anaktuvuk Pass	71.71	337	P	P	22 47 00.0	+0.4
	baz=88,SNR=8.1						
SOKA	Soboth	71.74	46	eP	P	22 47 00.8	+0.5
	comp=Z,7.9nm,1.6s						
F22K	John River	71.88	336	P	P	22 47 01.0	+0.4
	baz=87						
I21K	Tanana	71.92	334	P	P	22 47 01.5	+0.7
	baz=87						
SKT	Skwentna	71.92	330	P	P	22 47 01.2	+0.2
	baz=86						
D22K	Ayikyak River	72.00	338	P	P	22 47 01.8	+0.4
	baz=87						
ARSA	Arzberg	72.01	45	epP	P	22 47 03.3	+1.5
	comp=Z,5.2nm,1.6s						
CHUM	Lake Minchumin	72.15	332	P	P	22 47 01.9	-0.4
	baz=86						
CONA	Conrad Observa	72.15	44	eP	P	22 47 01.5	-1.3
	comp=Z,5.8nm,1.7s						
PPLA	Purkeypile	72.16	331	P	P	22 47 02.5	0.0
	baz=86						
B22K	Teshekpuk Lake	72.18	339	P	P	22 47 02.9	+0.5
	baz=87						
H21K	Melozitna Rive	72.23	334	P	P	22 47 03.4	+0.6
	baz=86						
SPCR	Spurr Chakacha	72.31	330	P	P	22 47 03.6	+0.3
	baz=85						
F21K	Alatna River	72.40	336	P	P	22 47 04.3	+0.5
	baz=86						
G21K	Allakaket	72.46	335	P	P	22 47 03.2	-0.8
	baz=86,SNR=9.6						
VRAC	Vranov	72.47	43	LR	LR	23 16 59.3	
	comp=Z,49nm,19.3s,baz=294,slow=34						
RONA	Rosalia, Austr	72.47	45	epP	P	22 47 07.4	+2.9
	comp=Z,4.4nm,0.7s						
VAE	Valguarnera	72.58	56	LR	LR	23 15 10.3	
	comp=Z,161nm,20.5s,baz=323,slow=33						
B21K	Ikpikpuk River	72.64	338	P	P	22 47 04.8	-0.3
	baz=86						
Q20K	Shuyak Island	72.64	327	P	P	22 47 05.3	0.0
	baz=84						
A22K	Sinclair Lake	72.66	340	P	P	22 47 05.6	+0.4
	baz=86						
M20K	Styx River	72.69	330	P	P	22 47 05.5	-0.1
	baz=85						
C21K	Knifeblade Rid	72.74	338	P	P	22 47 05.8	+0.1
	baz=85						
KDAK	Kodiak Island	72.83	326	LR	LR	23 19 19.7	
	comp=Z,108nm,20.7s,baz=90,slow=36						
KDAK	Kodiak Island	72.83	326	P	P	22 47 06.2	-0.2
	baz=84						
J20K	Nowinta River	72.93	333	P	P	22 47 06.6	-0.3
	baz=84,SNR=6.9						
P19K	Oil Pt	72.96	328	P	P	22 47 06.4	-0.8
	baz=84						
K20K	Telida	72.97	332	P	P	22 47 06.3	-0.9
	baz=84						
MODS	Modra-Piesok	73.04	44	eP	P	22 47 12.8	+4.9
H20K	Anotleneega Mo	73.11	334	P	P	22 47 07.3	-0.6
	baz=84						
A21K	Barrow	73.16	340	P	P	22 47 07.6	-0.5
	baz=84						
F20K	Avaraart Lake	73.28	336	P	P	22 47 08.6	-0.3
	baz=84						
O19K	Port Alsworth	73.44	329	P	P	22 47 09.9	-0.1
	baz=83						
N19K	Bonanza Creek	73.45	329	P	P	22 47 09.8	-0.4
	baz=83						
L19K	White Mountain	73.46	331	P	P	22 47 09.8	-0.4
	baz=83						
J19K	Poorman	73.59	333	P	P	22 47 10.3	-0.5
	baz=83						
H19K	Roundabout Mou	73.75	334	P	P	22 47 11.4	-0.4
	baz=83						
E19K	Redstone River	73.82	336	P	P	22 47 11.5	-0.6
	baz=83						
SII	Sitkinak Islan	73.84	325	P	P	22 47 12.0	-0.4
	baz=82						
R18K	Karluk	73.85	326	P	P	22 47 12.6	+0.2
	baz=82						
O18K	Koktuh Hills	73.93	328	P	P	22 47 12.9	-0.1
	baz=82						
G19K	Purcell Mounta	73.93	335	P	P	22 47 13.0	+0.2
	baz=82						
P18K	Big Mountain,	74.00	328	P	P	22 47 13.3	-0.1
	baz=82						
M18K	Stony River	74.01	330	P	P	22 47 13.0	-0.3
	baz=82						
D19K	Kuna River	74.01	337	P	P	22 47 13.1	-0.2
	baz=82						
GCSA	Galena City Sc	74.04	334	P	P	22 47 13.7	+0.3
	baz=82						
F19K	Shaleruckik Mo	74.11	336	P	P	22 47 13.6	-0.2
	baz=82						
J18K	Innoko River	74.14	332	P	P	22 47 14.0	-0.1
	baz=82						
N18K	Kilae Creek	74.15	329	P	P	22 47 14.4	+0.2
	baz=82						
ARCES	ARCESS Array B	74.26	21	P	P	22 47 14.9	+0.2
	comp=Z,4.8nm,0.8s,baz=324,slow=1.6,SNR=7.7						
	comp=Z,4.8nm,0.8s						
ARCES	ARCESS Array B	74.26	21	P	P	22 47 15.2	+0.5
L18K	Granite Mounta	74.31	331	P	P	22 47 15.1	0.0
	baz=82						
OJC	Ojcow	74.39	42	P	P	22 47 15.9	+0.1
C19K	Lookout Ridge	74.45	338	P	P	22 47 15.8	0.0
	baz=81						
Q17K	Contact Creek	74.50	327	P	P	22 47 16.0	-0.4
	baz=81						
H18K	Honhosa River	74.60	334	P	P	22 47 16.6	-0.1
	baz=81						
G18K	Tagagawik	74.60	335	P	P	22 47 16.8	0.0
	baz=81,SNR=5.9						
P17K	Kvichak River	74.65	328	P	P	22 47 16.8	-0.2
	baz=81						
CHIR	Chirikof Islan	74.75	324	P	P	22 47 17.3	-0.4
	baz=81						
A19K	Wainwright	74.78	339	P	P	22 47 17.5	-0.1
	baz=80						
M17K	Holitna River	74.79	330	P	P	22 47 17.6	-0.2
	baz=81						
N17K	Nushagak Hills	74.81	329	P	P	22 47 17.5	-0.5
	baz=81						
Q16K	King Salmon	74.84	327	P	P	22 47 18.0	-0.1
	baz=81						
R17L	Mt. Peulik Vol	74.85	326	P	P	22 47 17.9	-0.4
	baz=81						
O17K	Koliganek Bris	74.88	328	P	P	22 47 17.9	-0.5
	baz=81						
F18K	Selawik	74.89	336	P	P	22 47 18.3	0.0
	baz=80						
K17K	Iditarod	74.97	332	P	P	22 47 18.5	-0.3
	baz=80						
L17K	Donlin	75.07	331	P	P	22 47 19.0	-0.5
	baz=80						
C18K	Utukok River	75.10	338	P	P	22 47 19.7	+0.1
	baz=79,SNR=5.3						
J17K	VABM Dome	75.20	332	P	P	22 47 20.2	0.0
	baz=80						
H17K	Granite Mounta	75.29	334	P	P	22 47 20.7	0.0
	baz=80						
O16K	Kokwok River B	75.41	328	P	P	22 47 21.9	+0.4
	baz=80						
P16K	Nushagak River	75.46	328	P	P	22 47 21.6	-0.1
	baz=80						
G17K	Kiwalik Mounta	75.49	335	P	P	22 47 22.6	+0.8
	baz=79						
R16K	Pilot Point	75.51	326	P	P	22 47 22.6	+0.5
	baz=80						
M16K	Timber Creek	75.58	330	P	P	22 47 22.3	-0.2
	baz=79						
E17K	Hotham Inlet	75.64	336	P	P	22 47 23.2	+0.6
	baz=78,SNR=8.6						
L16K	Owhat River	75.69	331	P	P	22 47 23.1	+0.1
	baz=79						
I17K	Unalakleet	75.82	333	P	P	22 47 24.4	+0.7
	baz=78						
RDOG	Red Dog Mine	75.84	337	P	P	22 47 24.3	+0.5
	baz=78						
C17K	DeLong Mountai	75.85	338	P	P	22 47 24.0	+0.1
	baz=78						
J16K	Anvik River	75.90	332	P	P	22 47 24.5	+0.3
	baz=78						
FINES	FINESS Array B	75.90	30	P	P	22 47 24.2	0.0
	comp=Z,6.4nm,0.9s,baz=273,slow=4.3,SNR=12						
FINES				LR	LR	23 20 41.6	
	comp=Z,51nm,18.4s,baz=260,slow=36						
	comp=Z,6.4nm,0.9s						
FINES	FINESS Array B	75.90	30	P	P	22 47 24.0	-0.2
FIA1	FINESS Array S	75.90	30	P	P	22 47 23.7	-0.5
D17K	Noatak River	75.99	337	P	P	22 47 25.1	+0.5
	baz=77						
G16K	Koyuk River	76.20	335	P	P	22 47 26.3	+0.4
	baz=78						
N15K	Kwethluk River	76.29	329	P	P	22 47 26.7	+0.2
	baz=78						
H16K	Elim	76.32	334	P	P	22 47 27.4	+0.8
	baz=77						
O15K	Ungalikthiuk R	76.36	328	P	P	22 47 27.4	+0.5
	baz=78						
M15K	Kasigluk River	76.47	330	P	P	22 47 27.7	+0.2
	baz=78						
K15K	Wolf Creek Mou	76.52	331	P	P	22 47 27.7	0.0
	baz=77						
L15K	Ungalak Mounta	76.64	331	P	P	22 47 28.6	+0.2
	baz=77						
C16K	Lisburne Hills	76.68	338	P	P	22 47 29.3	+0.8
	baz=76						
S14K	Fog Glacier	76.83	325	P	P	22 47 29.2	-0.6
	baz=78						
G15K	Niukluk	76.99	334	P	P	22 47 30.8	+0.5
	baz=76						
TAOE	Nuku Hiva Isla	77.04	256	eLR	LR	23 11 17.5	
	comp=Z,122nm,24.0s						
F15K	North Star Dit	77.06	335	P	P	22 47 31.0	+0.2
	baz=76						
M14K	Bethel	77.07	330	P	P	22 47 30.8	0.0
	baz=77						
O14K	Tigyukauivet M	77.07	328	P	P	22 47 30.5	-0.4
	baz=77						
N14K	Kuskokwak Cree	77.13	329	P	P	22 47 31.0	-0.1
	baz=77						
CHNA	Chernabura Isl	77.16	324	P	P	22 47 31.5	0.0
	baz=77						
L14K	Kuka Creek	77.27	331	P	P	22 47 31.6	-0.3
	baz=76						
J14K	Nanvaranak Lak	77.33	332	P	P	22 47 31.9	-0.3
	baz=76						
SDPT	Sand Point	77.54	324	P	P	22 47 32.9	-0.7
	baz=77						
ANM	Nome	77.65	334	P	P	22 47 33.5	-0.6
	baz=75						
F14K	Arctic Creek	77.80	335	P	P	22 47 34.4	-0.5
	baz=74						
M13K	Dall Lake	77.82	330	P	P	22 47 34.3	-0.7
	baz=76						
K13K	Kusilvak Mount	78.04	331	P	P	22 47 36.0	-0.3
	baz=75						
TNA	Tin City	78.41	335	P	P	22 47 37.1	-1.1
	baz=73						
BURAR	Bucovina Array	78.41	44	P	P	22 47 38.6	-0.2
M11K	Mekoryuk	79.19	330	P	P	22 47 41.9	-0.7
	baz=73						
MLR	Muntele Rosu	79.42	46	LR	LR	23 21 47.5	
	comp=Z,68nm,19.5s,baz=259,slow=35						
AKASG	Malin Array Be	80.17	40	P	P	22 47 48.3	+0.2
	comp=Z,0.5nm,0.5s,baz=273,slow=5.0,SNR=4.5						
AKASG				LR	LR	23 19 01.8	
	comp=Z,96nm,21.8s,baz=272,slow=32						
	comp=Z,0.5nm,0.5s						
IDI	Anoyia	81.30	56	P	P	22 47 54.6	-0.1
BILL	Bilibino	86.14	342	P	P	22 48 19.3	+0.6
BILL				IAmb	IAmb	22 48 20.3	
	comp=Z,7.3nm,0.7s						
BRTR	Keskin Array B	86.56	49	P	P	22 48 21.5	-0.1
	comp=Z,1.7nm,0.8s,baz=265,slow=2.8,SNR=8.3						
BRTR				LR	LR	23 23 54.8	
	comp=Z,14nm,21.8s,baz=306,slow=34						
	comp=Z,1.7nm,0.8s						
KIRV	Kirov	87.79	28	LR	LR	23 24 31.3	
	comp=Z,37nm,20.7s,baz=301,slow=34						
PPT2	Papeete2	88.64	251	eLR	LR	23 16 36.7	
	comp=Z,113nm,25.8s						
PPT2				eLR	LR	23 16 47.4	
	comp=Z,89nm,24.5s						
TIXI	Tiksi	90.09	355	LR	LR	23 27 20.3	
	comp=Z,90nm,21.8s,baz=18,slow=34						
TIXI	Tiksi	90.09	355	P	P	22 48 37.7	+0.2
TBI	Tubuai	90.41	246	eLR	LR	23 17 27.9	
	comp=Z,317nm,24.5s						
TBI				eLR	LR	23 17 33.6	
	comp=Z,1µm,31.0s						
EIL	Elat	91.13	58	LR	LR	23 27 33.5	
	comp=Z,69nm,20.2s,baz=358,slow=34						
NRIK	Noril'sk	91.16	9	P	P	22 48 42.9	+0.4
	comp=Z,1.9nm,0.7s,baz=32,slow=3.1,SNR=3.9						
NRIK				LR	LR	23 29 39.1	
	comp=Z,56nm,19.5s,baz=356,slow=36						
	comp=Z,1.9nm,0.7s						
KBZ	Khabaz	91.36	43	P	P	22 48 45.6	+1.7
	comp=Z,2.4nm,1.1s,baz=285,slow=4.6,SNR=3.8						
KBZ				LR	LR	23 31 20.7	
	comp=Z,40nm,18.7s,baz=346,slow=37						
	comp=Z,2.4nm,1.1s						
ASF	Jabal al Asfar	91.77	55	LR	LR	23 32 48.1	
	comp=Z,16nm,18.1s,baz=258,slow=37						
SHEM	Shemya Is, Ala	92.26	328	LR	LR	23 34 33.9	
	comp=Z,89nm,18.1s,baz=12,slow=38						
SEY	Seymchan	93.82	343	P	P	22 48 55.6	+0.7
	comp=Z,1.6nm,0.3s,baz=26,slow=2.4,SNR=6.4						
	comp=Z,1.6nm,0.3s						
SUR	Sutherland	97.45	122	LR	LR	23 28 43.6	
	comp=Z,45nm,19.5s,baz=258,slow=33						
LBTB	Lobatse	99.51	113	LR	LR	23 26 32.1	
	comp=Z,40nm,20.6s,baz=268,slow=31						
PETK	Petropavlovsk-	99.56	335	LR	LR	23 37 31.0	
	comp=Z,92nm,19.9s,baz=115,slow=37						
HHC	Hu-ho-hao-te	121.59	1	eP	PKPdf	22 54 26.3	-5.8
NJ2	Nanjing	130.09	354	eP	PKiKP	22 54 49.3	0.0
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PZH	PanZhiHua	134.55	14	PKP	PKPdf	22 54 56.0	-1.2

SJA ***28*** *22:39:59.4±1.7, 33.°16S×70.°15W, h129^{km}±10^{km}, ML4.8, MW4.4*

GUC ***28*** *22:40:02.8±0.6, 33.°07S×70.°22W, h114^{km}±2^{km}, ML4.5*

NEIC ***28*** *22:40:02.7±0.7, 33.°08S±0.°05×70.°21W±0.°04, h110^{km}±4^{km}, mb4.5/13, ML4.5(GUC), Error ellipse: s-maj=7.3km s-min=4.1km az=155.0*

IDC ***28*** *22:40:03.4±0.7, 33.°07S×70.°04W, h111^{km}±5^{km}, mb3.9/8, mbtmp4.2/13, Error ellipse: s-maj=17.8km s-min=10.2km az=130.0*

ISC 28 22:40:02.6±0.5, **33.°10S**±0.°03×**70.°21W**±0.°03, **h113**^{km}±4^{km}, **n167**, σ**1.^{s}29**/208, **mb4.3**/15, **12C-5D**, **Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MT04	Ro Olivares	0.30	169	iP	Pn	22 40 18.7	-0.4
MT04				IAML		22 40 32.5	
	comp=E,13µm,0.5s						
MT04	Ro Olivares	0.30	169	iP	Pn	22 40 18.0	-1.1
MT04				eS	Sn	22 40 31.8	+0.4
MT04				IAML		22 40 33.5	
	comp=Z,6µm,0.6s						
MT10	Hacienda Santa	0.33	239	⇑iP	Pn	22 40 18.5	-0.5
MT10				eS	Sn	22 40 30.4	-1.0
MT10				IAML		22 40 32.2	
	comp=N,49µm,0.5s						
MT08	Bocatoma Ro	0.38	155		Pn	22 40 19.2	-0.2
MT08				Sn	Sn	22 40 32.5	+0.4
MT08	Bocatoma Ro	0.38	155	⇓iP	Pn	22 40 19.2	-0.2
MT08				eS	Sn	22 40 31.9	-0.1
MT08				IAML		22 40 34.1	
	comp=E,8µm,0.5s						
MT08	Bocatoma Ro	0.38	155	iP	Pn	22 40 18.5	-0.9
MT08				eS	Sn	22 40 32.4	+0.4
MT08				IAML		22 40 34.5	
	comp=Z,5µm,0.6s						
MT14	Cerro Cal¡n	0.40	224	⇑iP	Pn	22 40 19.0	-0.3
PEL	Peldehue	0.41	264		Pn	22 40 18.8	-0.5
PEL				Sn	Sn	22 40 31.1	-0.8
PEL	Peldehue	0.41	264	iP	Pn	22 40 18.6	-0.7
PEL				eS	Sn	22 40 30.8	-1.1
PEL				IAML		22 40 32.3	
	comp=N,19µm,0.2s						
PEL	Peldehue	0.41	264	eP	Pn	22 40 18.2	-1.1
PEL				eS	Sn	22 40 31.2	-0.6
MT16	CCHEN	0.42	219		Pn	22 40 19.2	-0.2
MT16	CCHEN	0.42	219	eP	Pn	22 40 19.1	-0.3
MT16				eS	Sn	22 40 31.6	-0.4
VA03	San Esteban	0.45	319		Pn	22 40 19.1	-0.6
VA03				Sn	Sn	22 40 31.6	-0.8
VA03	San Esteban	0.45	319	iP	Pn	22 40 19.0	-0.6
VA03				IAML		22 40 32.5	
	comp=N,26µm,0.2s						
VA03	San Esteban	0.45	319	eP	Pn	22 40 19.2	-0.4
VA03	San Esteban	0.45	319	iP	Pn	22 40 18.1	-1.5
VA03				eS	Sn	22 40 31.8	-0.5
VA03				IAML		22 40 33.6	
	comp=Z,13µm,0.5s						
MT03	Universidad Ad	0.47	213		Pn	22 40 19.4	-0.3
MT03	Universidad Ad	0.47	213	eP	Pn	22 40 19.4	-0.3
MT03				eS	Sn	22 40 31.9	-0.7
MT03	Universidad Ad	0.47	213	eP	Pn	22 40 19.4	-0.3
MT03				eS	Sn	22 40 32.7	+0.1
MT03				IAML		22 40 33.2	
	comp=Z,23µm,0.5s						
MT03	Universidad Ad	0.47	213	iP	Pn	22 40 18.6	-1.1
MT03				eS	Sn	22 40 32.4	-0.2
MT03				IAML		22 40 33.0	
	comp=Z,25µm,0.6s						
MT05	Renca	0.53	237		Pn	22 40 19.8	-0.3
MT05	Renca	0.53	237	⇑eP	Pn	22 40 19.7	-0.3
MT05	Renca	0.53	237	eP	Pn	22 40 19.3	-0.8
MT05				eS	Sn	22 40 33.4	+0.1
MT05				IAML		22 40 33.7	
	comp=Z,14µm,0.4s						
MT05	Renca	0.53	237	iP	Pn	22 40 19.0	-1.0
MT05				eS	Sn	22 40 33.1	-0.2
MT05				IAML		22 40 33.8	
	comp=Z,14µm,0.4s						
MT15	Las Vizcachas	0.55	207	eP	Pn	22 40 19.9	-0.3
MT15				eS	Sn	22 40 33.1	-0.4
MT15				IAML		22 40 35.7	
	comp=N,41µm,0.3s						
MT13	San Alfonso	0.64	186		Pn	22 40 21.0	0.0
MT13	San Alfonso	0.64	186	⇓iP	Pn	22 40 20.9	0.0
MT13				IAML		22 40 36.6	
	comp=E,27µm,0.4s						
MT13	San Alfonso	0.64	186	iP	Pn	22 40 20.2	-0.8
MT13				eS	Sn	22 40 35.8	+1.0
MT13				IAML		22 40 37.0	
	comp=Z,16µm,0.6s						
MT12	Pirque	0.69	205	eP	Pn	22 40 21.0	-0.3
MT12				IAML		22 40 41.9	
	comp=N,25µm,0.6s						
ROCH	El Roble	0.69	281	⇑iP	Pn	22 40 20.9	-0.5
ROCH				IAML		22 40 37.9	
	comp=N,8µm,0.2s						
ROC1	El Roble	0.69	280	eP	Pn	22 40 20.5	-1.0
LMEL	Las Melosas	0.74	180		Pn	22 40 21.6	-0.2
LMEL	Las Melosas	0.74	180	⇓eP	Pn	22 40 21.5	-0.3
LMEL				IAML		22 40 40.8	
	comp=N,9µm,0.2s						
LMEL	Las Melosas	0.74	180	iP	Pn	22 40 20.9	-1.0
LMEL				eS	Sn	22 40 37.7	+1.4
LMEL				IAML		22 40 40.4	
	comp=Z,5µm,0.4s						
MT09	Talagante	0.94	224		Pn	22 40 23.3	-0.3
MT09	Talagante	0.94	224	eP	Pn	22 40 23.2	-0.3
MT09				eS	Sn	22 40 38.9	-0.5
MT09				IAML		22 40 39.8	
	comp=E,31µm,0.3s						
BO04	La Punta	0.94	201		Pn	22 40 23.6	0.0
BO04	La Punta	0.94	201	eP	Pn	22 40 23.5	-0.1
BO04				IAML		22 40 40.7	
	comp=N,15µm,0.3s						
VA06	Catapilco	1.07	300		Pn	22 40 24.1	-0.6
VA06	Catapilco	1.07	300	⇑iP	Pn	22 40 24.0	-0.6
VA06				eS	Sn	22 40 40.1	-1.3
VA06				IAML		22 40 42.4	
	comp=E,16µm,0.4s						
AUSP	Uspallata	1.12	38	eP	Pn	22 40 25.4	-0.2
MT01	Popeta	1.16	229		Pn	22 40 25.1	-0.5
MT01	Popeta	1.16	229	⇑eP	Pn	22 40 25.0	-0.7
MT01				eS	Sn	22 40 41.9	-1.3
MT01				IAML		22 40 44.4	
	comp=E,6µm,0.2s						
MT01	Popeta	1.16	229	iP	Pn	22 40 24.4	-1.3
MT01				eS	Sn	22 40 42.5	-0.7
MT01				IAML		22 40 44.3	
	comp=Z,4µm,0.2s						
VA01	Torpederas	1.21	273		Pn	22 40 25.9	-0.4
VA01	Torpederas	1.21	273	eP	Pn	22 40 25.8	-0.4
VA01				eS	Sn	22 40 44.1	-0.1
VA01	Torpederas	1.21	273	iP	Pn	22 40 25.3	-1.0
VA01				IAML		22 40 47.8	
	comp=Z,2µm,0.9s						
CO04	Los Peladeros	1.24	328	⇑eP	Pn	22 40 26.1	-0.8
CO04				IAML		22 40 46.4	
	comp=E,14µm,0.2s						
ASAL	Salagasta	1.26	66	eP	Pn	22 40 27.2	+0.3
ASAL	Salagasta	1.26	66	iP	Pn	22 40 26.9	-0.1
ASAL				eS	Sn	22 40 46.3	+0.9
ASAL				IAML		22 40 49.5	
	comp=Z,0.3nm,0.4s						
VA05	Santo Domingo	1.30	245		Pn	22 40 27.0	-0.2
VA05	Santo Domingo	1.30	245	IAML		22 40 50.9	
	comp=N,12µm,0.4s						
BO01	Tunca	1.48	209		Pn	22 40 29.1	-0.3
BO01	Tunca	1.48	209	eP	Pn	22 40 29.0	-0.3
BO01				IAML		22 40 50.4	
	comp=E,5µm,0.4s						
BO01	Tunca	1.48	209	eP	Pn	22 40 27.9	-1.5
BO01	Tunca	1.48	209	iP	Pn	22 40 28.3	-1.1
BO01				eS	Sn	22 40 49.8	+0.1
BO01				IAML		22 40 51.2	
	comp=Z,2µm,0.4s						
RTLS	Leoncito	1.51	31	eP	Pn	22 40 29.9	-0.2
RTLS	Leoncito	1.51	31	iP	Pn	22 40 30.5	+0.4
RTLS				IAML		22 40 55.9	
	comp=Z,2µm,1.1s						
BO02	Sierra Bellavi	1.75	196		Pn	22 40 33.2	+0.5
BO02	Sierra Bellavi	1.75	196	eP	Pn	22 40 33.2	+0.5
BO02				IAML		22 40 58.3	
	comp=E,6µm,0.3s						
BO02	Sierra Bellavi	1.75	196	eP	Pn	22 40 33.0	+0.3
BO02	Sierra Bellavi	1.75	196	iP	Pn	22 40 32.9	+0.3
BO02				eS	Sn	22 40 56.7	+1.0
BO02				IAML		22 40 58.0	
	comp=Z,3µm,0.6s						
CO02	Combarbal	2.01	340		Pn	22 40 35.6	-0.5
CO02	Combarbal	2.01	340	eP	Pn	22 40 35.5	-0.6
CO02				IAML		22 41 03.5	
	comp=N,9µm,0.2s						
CO02	Combarbal	2.01	340	iP	Pn	22 40 34.8	-1.2
CO02				eS	Sn	22 41 02.0	+0.5
CO02				IAML		22 41 03.0	
	comp=Z,3µm,0.6s						
BO03	Pichilemu	2.02	226	eP	Pn	22 40 36.3	+0.4
BO03				IAML		22 41 06.7	
	comp=N,2µm,0.3s						
ZON	Zonda	2.02	40		Pn	22 40 35.7	-0.4
ZON	Zonda	2.02	40	iP	Pn	22 40 35.0	-1.0
ZON				IAML		22 41 02.7	
	comp=Z,406nm,0.9s						
RFA	San Rafael	2.20	139	eP	Pn	22 40 35.9	-2.5
RFA				eP	Pn	22 40 35.9	-2.5
RFA	San Rafael	2.20	139	iP	Pn	22 40 37.3	-1.1
RFA				iP		22 40 37.9	
RFA				IAML		22 41 08.7	
	comp=Z,240nm,0.9s						
CFA	Coronel Fontan	2.24	49	P	Pn	22 40 38.1	-0.7
	comp=Z,52nm,0.2s,baz=228,slow=9.8,SNR=804						
CFA				S	Sn	22 41 04.8	-1.8
	comp=Z,28nm,0.2s,baz=243,slow=19,SNR=9.2						
CFA	Coronel Fontan	2.24	49	iP	Pn	22 40 38.0	-0.8
CFA				eS	Sn	22 41 04.7	-1.8
CFA				IAML		22 41 06.6	
	comp=Z,396nm,1.1s						
CO03	El Pedregal	2.30	350		Pn	22 40 39.6	0.0
CO03	El Pedregal	2.30	350	eP	Pn	22 40 39.2	-0.4
CO03				eS	Sn	22 41 07.0	-1.0
CO03				IAML		22 41 08.7	
	comp=E,3µm,0.3s						
CO03	El Pedregal	2.30	350	eP	Pn	22 40 39.4	-0.2
CO03	El Pedregal	2.30	350	iP	Pn	22 40 38.9	-0.7
CO03				eS	Sn	22 41 07.2	-0.7
CO03				IAML		22 41 08.9	
	comp=Z,2µm,0.7s						
RTLL	Cerro Villicun	2.30	40	eP	Pn	22 40 39.2	-0.4
RTLL	Cerro Villicun	2.30	40	iP	Pn	22 40 38.6	-1.0
RTLL				IAML		22 41 08.1	
	comp=Z,1µm,0.8s						
GO05	Hualane	2.38	217	eP	Pn	22 40 39.6	-1.0

GO05				IAML		22 41 16.4	
	comp=E,1µm,0.4s						
GO05	Hualane	2.38	217	iP	Pn	22 40 39.1	-1.5
GO05				eS	Sn	22 41 04.8	-4.9
GO05				IAML		22 41 19.2	
	comp=Z,904nm,0.5s						
ACAN	Cantantal	2.67	73	eP	Pn	22 40 42.5	-1.9
ACAN	Cantantal	2.67	73	iP	Pn	22 40 43.7	-0.8
ACAN				eS	Sn	22 41 13.4	-3.2
ACAN				IAML		22 41 17.2	
	comp=Z,2µm,0.6s						
ACCO	Cerro Coronel	2.69	21	eP	Pn	22 40 43.2	-1.8
ACCO	Cerro Coronel	2.69	21	iP	Pn	22 40 45.0	0.0
ACCO				eS	Sn	22 41 17.5	0.0
CO06	Fray Jorge	2.71	333		Pn	22 40 44.6	-0.3
CO06	Fray Jorge	2.71	333	eP	Pn	22 40 44.5	-0.4
CO06				IAML		22 41 19.7	
	comp=N,2µm,0.8s						
EDS3	Malargue	2.74	166	eP	Pn	22 40 46.5	+1.1
EDS3	Malargue	2.74	166	iP	Pn	22 40 46.7	+1.3
ML02	Panimavida	2.83	200		Pn	22 40 46.1	-0.4
ML02	Panimavida	2.83	200	⇓eP	Pn	22 40 46.1	-0.4
ML02				IAML		22 41 20.6	
	comp=N,2µm,0.5s						
ML02	Panimavida	2.83	200	iP	Pn	22 40 45.7	-0.8
ML02				eS	Sn	22 41 11.7	-8.6
ML02				IAML		22 41 36.4	
	comp=Z,844nm,0.6s						
GO04	Tololo Observa	2.97	350		Pn	22 40 47.7	-0.8
GO04	Tololo Observa	2.97	350	eP	Pn	22 40 47.6	-0.8
GO04				IAML		22 41 27.6	
	comp=E,2µm,0.2s						
GO04	Tololo Observa	2.97	350	eP	Pn	22 40 47.6	-0.9
GO04	Tololo Observa	2.97	350	iP	Pn	22 40 47.1	-1.4
GO04				IAML		22 41 26.7	
	comp=Z,2µm,0.3s						
AROD	Rodeo	2.99	12	eP	Pn	22 40 46.5	-2.4
AROD	Rodeo	2.99	12	iP	Pn	22 40 49.7	+0.7
AROD				eS	Sn	22 41 25.0	+0.4
ACDV	Cuesta del Vie	3.07	18	eP	Pn	22 40 49.2	-0.6
CO01	Juntas del Tor	3.12	2		Pn	22 40 51.1	+0.5
CO01	Juntas del Tor	3.12	2	eP	Pn	22 40 50.9	+0.4
CO01	Juntas del Tor	3.12	2	iP	Pn	22 40 50.5	-0.1
CO01				iP	Pn	22 40 50.5	-0.1
CO01				eS	Sn	22 41 25.6	-1.8
CO01				IAML		22 41 31.1	
	comp=Z,242nm,0.7s						
BI02	San Fabin de	3.66	194		Pn	22 40 57.3	-0.2
BI02	San Fabin de	3.66	194	⇓eP	Pn	22 40 57.2	-0.2
BI02	San Fabin de	3.66	194	eP	Pn	22 40 55.2	-2.3
BI02	San Fabin de	3.66	194	iP	Pn	22 40 56.7	-0.8
BI02				iP	Pn	22 40 56.7	-0.8
BI02				IAML		22 41 43.1	
	comp=Z,245nm,0.5s						
MRA	San Martin	3.84	81	eP	Pn	22 40 57.9	-2.1
MRA	San Martin	3.84	81	IAML		22 42 02.9	
	comp=Z,256nm,0.8s						
AGUA	GUANDACOL	3.89	23	eP	Pn	22 41 00.5	-0.2
AGUA	GUANDACOL	3.89	23	iP	Pn	22 41 00.5	-0.2
AGUA				IAML		22 41 51.9	
	comp=Z,266nm,0.9s						
LCO	Las Campanas	4.10	354		Pn	22 41 02.2	-1.5
LCO	Las Campanas	4.10	354	iP	Pn	22 41 01.6	-2.0
LCO				IAML		22 41 50.5	
	comp=Z,756nm,0.3s						
AC05	El Transito	4.25	359		Pn	22 41 05.1	-0.5
AC05	El Transito	4.25	359	iP	Pn	22 41 04.3	-1.3
AC05				IAML		22 41 53.5	
	comp=Z,236nm,0.8s						
ACLC	CERRO LA CRUZ	4.61	38	eP	Pn	22 41 07.8	-2.5
AC04	Llanos de Chal	4.94	351		Pn	22 41 13.1	-1.6
TCA	Tanti	5.07	71	⇑eP	Pn	22 41 14.3	-2.2
TCA	Tanti	5.07	71	eP	Pn	22 41 14.1	-2.4
TCA	Tanti	5.07	71	iP	Pn	22 41 14.6	-1.9
AANI	Anillaco	5.12	34	eP	Pn	22 41 16.5	-0.7
GO03	Copiapo	5.49	360		Pn	22 41 20.2	-2.0
TINO	Tinogasta	5.51	25	eP	Pn	22 41 21.2	-1.4
AC06	Mina Casimiro	5.73	359		Pn	22 41 23.2	-2.2
AC02	Maricunga	6.32	9		Pn	22 41 31.8	-1.9
VA04	Juan Fernndez	7.24	263		Pn	22 41 44.5	-1.1
LR04	Corral	7.24	200		Pn	22 41 42.4	-3.3
PLCA	Paso Flores	7.62	182	P	Pn	22 41 50.3	-0.6
	comp=Z,3.3nm,0.5s,baz=357,slow=12,SNR=19						
PLCA	Paso Flores	7.62	182		Pn	22 41 49.5	-1.5
FSA	Cafayete	7.88	29	eP	Pn	22 41 51.2	-3.5
GO02	Mina Guanaco	7.93	4		Pn	22 41 51.3	-4.1
TRQA	Tornquist	8.32	129		Pn	22 41 58.6	-1.8
PB14	IPOC Station P	8.45	359		Pn	22 41 57.2	-5.3
CPUP	Villa Florida	13.06	62	P	Pn	22 43 01.9	-2.0
	comp=Z,1.4nm,0.7s,baz=218,slow=13,SNR=3.1						
PB12	IPOC Station P	14.43	360	Pn	Pn	22 43 21.1	-0.6
PB16	IPOC Station P	14.72	3	Pn	Pn	22 43 24.5	-1.3
LPAZ	La Paz	16.85	7	P	P	22 43 52.4	-0.1
	comp=Z,12nm,0.7s,baz=181,slow=8.4,SNR=13						
LPAZ	La Paz	16.85	7	P	Pn	22 43 51.8	-0.5
LPAZ				IAmb	IAmb	22 43 53.5	
	comp=Z,15nm,0.8s						
SIV	San Ignacio	18.94	28	P	P	22 44 14.2	-0.7
	comp=Z,8.4nm,0.6s,baz=184,slow=7.7,SNR=11						
EFI	East Falkland	20.56	158	P	P	22 44 31.9	-0.2
VILB	Vilhena	22.04	27	P	P	22 44 48.1	-0.1
VILB				IAmb	IAmb	22 45 19.3	
	comp=Z,15nm,0.8s						
SPB	Sao Paulo	22.13	70	P	P	22 44 48.7	-0.3
BDFB	Brasilia	26.57	54	P	P	22 45 29.1	-1.2
	comp=Z,6.7nm,0.8s,baz=222,slow=10.0,SNR=7.0						
BDFB				pP	pP	22 45 55.5	0.0
	comp=Z,4.1nm,0.9s,baz=264,slow=2.3,SNR=3.0						
	comp=Z,6.7nm,0.8s						
BDFB	Brasilia	26.57	54	P	P	22 45 29.0	-1.3
BELA	Belgrano 2	47.50	170	P	P	22 48 26.8	+1.1
BELA				IAmb	IAmb	22 48 28.1	
	comp=Z,4.6nm,0.9s						
VNA3	Neumayer Olymp	49.62	158	⇑P	P	22 48 43.5	+1.5
	comp=Z,5.8nm,0.7s						
VNA2	Neumayer--Watz	50.25	158	⇑P	P	22 48 47.9	+1.1
	comp=Z,2.4nm,0.6s,baz=291,slow=8.0						
SNAA	Sanae	51.84	158	⇑P	P	22 48 59.7	+1.0
	comp=Z,123nm,0.7s						
SNAA	Sanae	51.84	158	P	P	22 48 59.4	+0.7
	comp=Z,7.1nm,0.9s,baz=60,slow=1.8,SNR=14						
	comp=Z,7.1nm,0.9s						
SNAA	Sanae	51.84	158	P	P	22 48 59.4	+0.7
TROLL	Troll, Antarti	53.55	158	⇑P	P	22 49 12.0	+0.6
	comp=Z,182nm,0.6s						
TEIG	Tepich	55.77	339	P	P	22 49 27.2	-0.6
TEIG				IAmb	IAmb	22 49 29.0	
	comp=Z,7.0nm,0.8s						
QSPA	South Pole Qui	57.13	180	P	P	22 49 38.5	+1.4
TXAR	Lajitas Array	69.73	329	P	P	22 51 02.0	+1.6
	comp=Z,0.8nm,0.6s,baz=164,slow=9.7,SNR=8.1						
TXAR				pP	pP	22 51 28.8	-0.7
	comp=Z,0.6nm,0.7s,baz=153,slow=8.2,SNR=4.1						
	comp=Z,0.8nm,0.6s						
TXAR	Lajitas Array	69.73	329	P	P	22 51 00.8	+0.4
V48A	Smith Brothers	70.23	346	P	P	22 51 03.3	+0.1
V48A				IAmb	IAmb	22 51 04.2	
	comp=Z,6.2nm,0.9s						
WVT	Waverly	70.82	345	P	P	22 51 07.0	+0.2
WVT				IAmb	IAmb	22 51 07.9	
	comp=Z,9.1nm,0.7s						
LCAR	Lake Charles	71.55	342	P	P	22 51 11.6	+0.4
LCAR				IAmb	IAmb	22 51 12.4	
	comp=Z,5.9nm,0.8s						
DBIC	Dimbokro	73.44	70	P	P	22 51 23.0	+0.1
	comp=Z,2.8nm,0.6s,baz=269,slow=4.8,SNR=7.2						
	comp=Z,2.8nm,0.6s						
DBIC	Dimbokro	73.44	70	P	P	22 51 22.6	-0.3
MAW	Mawson	73.59	163	P	P	22 51 24.4	+1.4
	comp=Z,2.3nm,0.7s,baz=207,slow=5.3,SNR=5.3						
	comp=Z,2.3nm,0.7s						
TORD	Torodi Ar. Bea	82.46	69	P	P	22 52 13.3	+0.5
	comp=Z,3.3nm,0.8s,baz=274,slow=4.4,SNR=17						
TORD				pP	pP	22 52 42.5	-0.5
	comp=Z,1.1nm,0.8s,baz=272,slow=4.6,SNR=2.7						
	comp=Z,3.3nm,0.8s						
PDAR	Pinedale Array	83.67	332	P	P	22 52 19.2	+0.5
	comp=Z,0.4nm,0.7s,baz=107,slow=5.1,SNR=4.0						
	comp=Z,0.4nm,0.7s						
PDAR	Pinedale Array	83.67	332	P	P	22 52 18.6	-0.1
NVAR	Mina Array Bea	84.04	324	P	P	22 52 22.1	+1.4
	comp=Z,1.6nm,0.8s,baz=160,slow=4.9,SNR=6.4						
	comp=Z,1.6nm,0.8s						
BVAR	Borovoye Array	145.58	43	PKPbc	PKPab	22 59 28.9	+1.1
	comp=Z,2.0nm,0.6s,baz=297,slow=2.9,SNR=10.0						
BVAR				pPKPbc	pPKPab	22 59 57.3	-1.6
	comp=Z,1.2nm,0.6s,baz=285,slow=2.5,SNR=2.3						
ZALV	Zalesovo Beam	152.65	33	PKPbc	PKiKP	22 59 46.3	+0.8
	comp=Z,2.0nm,0.5s,baz=309,slow=2.6,SNR=13						
ZALV				pPKPbc	pPKPbc	23 00 15.9	-1.2
	comp=Z,2.1nm,0.6s,baz=297,slow=2.9,SNR=5.6						
MKAR	Makanchi Array	155.02	49	PKPbc	PKPdf	22 59 50.9	+9.1
	comp=Z,0.7nm,1.0s,baz=48,slow=1.8,SNR=3.6						
PZH	PanZhiHua	170.40	131	PKP	PKPdf	22 59 56.5	-1.1

IDC ***28*** *22:46:31.4±0.9, 30.°42S×177.°53W, h0km, mb4.4/3, mbtmp4.4/4, ML4.1/1, Error ellipse: s-maj=29.9km s-min=19.6km az=99.0*

NEIC ***28*** *22:46:34.3±0.8, 30.°37S±0.°05×177.°6W±0.°3, h11km±5km, mb4.4/10, Error ellipse: s-maj=31.7km s-min=5.2km az=82.0*

ISC 28 22:46:36.8±0.8**, 30.°43S**±0.°06×**177.°7W**±0.°2**, h33km, n34, σ1§18**/37**, mb4.4**/9**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.18	352	Pn	Pn	22 46 56.8	-0.2
	712nm,0.3s,baz=49,slow=20,SNR=16						
RAO				Sn	Sb	22 47 12.9	-0.7
	2µm,0.3s,baz=186,slow=22,SNR=11						
RAO	Raoul Island	1.18	352		Pn	22 46 56.6	-0.4
RAO					Sn	22 47 12.1	+0.2
URZ	Urewera	8.90	207	Pn	Pn	22 48 41.7	-1.3
	2.0nm,0.3s,baz=269,slow=2.7,SNR=8.6						
URZ				Sn	Sn	22 50 18.9	-3.2
	2.5nm,0.3s,baz=137,slow=20,SNR=8.9						
	3.8nm,0.3s						
EIDS	Eidsvold	27.96	273	P	P	22 52 25.9	+1.4
EIDS				IAmb	IAmb	22 52 37.2	
	comp=Z,14nm,1.2s						
CTAO	Charters Tower	34.03	279	P	P	22 53 18.6	+0.8
STKA	Stephens Creek	34.70	257	P	P	22 53 26.2	+2.6
	comp=Z,6.3nm,0.6s,baz=96,slow=15,SNR=12						
	comp=Z,6.3nm,0.6s						
BBOO	Buckleboo	39.18	254	P	P	22 54 02.6	+0.9
BBOO				IAmb	IAmb	22 54 14.8	
	comp=Z,6.7nm,0.9s						
COEN	Coen	39.50	286	P	P	22 54 05.8	+1.3
COEN				IAmb	IAmb	22 54 10.9	
	comp=Z,12nm,1.4s						
AS31	Alice Springs	43.34	267	P	P	22 54 36.8	+0.8
ASAR	Alice Springs	43.34	267	P	P	22 54 36.0	+0.1
	comp=Z,1.0nm,0.3s,baz=104,slow=7.0,SNR=38						
	comp=Z,1.0nm,0.3s						
ASAR	Alice Springs	43.34	267	P	P	22 54 35.9	0.0
WRA	Warramunga Arr	44.33	272	P	P	22 54 43.9	-0.1
	comp=Z,4.0nm,0.5s,baz=111,slow=8.2,SNR=34						
	comp=Z,4.0nm,0.5s						
WRA	Warramunga Arr	44.33	272	P	P	22 54 43.9	-0.1
WB0	Warramunga Arr	44.35	272	P	P	22 54 44.3	+0.2
WB0				IAmb	IAmb	22 54 55.5	
	comp=Z,5.5nm,1.0s						
FITZ	Fitzroy Crossi	52.59	270	P	P	22 55 48.3	+0.7
FITZ				IAmb	IAmb	22 56 12.1	
	comp=Z,5.0nm,1.5s						
QSPA	South Pole Qui	59.69	180	P	P	22 56 38.8	+1.1
SNAA	Sanae	78.12	178	P	P	22 58 34.6	+2.5
SNAA				IAmb	IAmb	22 58 56.1	
	comp=Z,4.8nm,1.1s						
HHC	Hu-ho-hao-te	96.42	314	eP	P	22 59 59.5	-3.0
MKAR	Makanchi Array	117.96	310	PKP	PKPdf	23 05 19.4	-0.4
	comp=Z,0.2nm,0.4s,baz=57,slow=5.3,SNR=8.5						
MKAR	Makanchi Array	117.96	310		PKPdf	23 05 18.9	-0.8
BVAR	Borovoye Array	126.58	316	PKP	PKPdf	23 05 36.0	-0.1
	comp=Z,0.7nm,0.5s,baz=151,slow=1.6,SNR=9.7						
ARCES	ARCESS Array B	138.66	348	PKP	PKPdf	23 05 57.6	-0.7
	comp=Z,3.3nm,0.9s,baz=345,slow=4.1,SNR=3.5						
FINES	FINESS Array B	145.25	340	PKPbc	PKPbc	23 06 09.6	-0.4
	comp=Z,4.1nm,0.3s,baz=52,slow=4.4,SNR=110						
FINES	FINESS Array B	145.25	340		PKPbc	23 06 09.8	-0.2
KBZ	Khabaz	145.31	304	PKPbc	PKPab	23 06 11.2	+0.2
	comp=Z,1.2nm,0.6s,baz=178,slow=4.4,SNR=6.0						
OBN	Obninsk	145.32	325	PKPbc	PKPbc	23 06 10.3	-0.1
	comp=Z,12nm,0.5s,baz=117,slow=6.8,SNR=4.3						
OBN	Obninsk	145.32	325		PKPbc	23 06 10.4	0.0
NB2	NORSAR Subarra	148.81	352	PKP	PKPbc	23 06 20.3	+0.1
	comp=Z,0.4nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	148.81	352	PKPbc	PKPbc	23 06 19.8	-0.4
	comp=Z,2.2nm,0.6s,baz=15,slow=4.2,SNR=7.0						
HFS	Hagfors	149.31	349	PKPbc	PKPbc	23 06 20.8	-0.6
	comp=Z,3.6nm,0.7s,baz=77,slow=3.8,SNR=11						
AKASG	Malin Array Be	151.46	323	PKPbc	PKPbc	23 06 26.6	-0.3
	comp=Z,0.7nm,0.3s,baz=49,slow=3.3,SNR=7.4						
BRTR	Keskin Array B	152.81	299	PKPbc	PKPbc	23 06 29.7	-0.8
	comp=Z,0.7nm,0.6s,baz=140,slow=4.9,SNR=8.1						
GERES	GERESS Array B	159.65	338	PKPab	PKPab	23 07 09.4	-1.0
	comp=Z,0.3nm,0.6s,baz=27,slow=3.6,SNR=3.7						
TORD	Torodi Ar. Bea	162.80	178	PKPab	PKPab	23 07 25.8	+1.0
	comp=Z,0.5nm,0.8s,baz=175,slow=3.0,SNR=2.7						

NOU ***28*** *22:49:08.8, 30.°60S×175.°76W, h43km, mb5.0/22, Kermadec Islands Region*

IDC ***28*** *22:49:13.8±0.5, 30.°49S×177.°60W, h0km, mb4.6/16, mbtmp4.5/17, ML4.3/1, MS4.1/16, Error ellipse: s-maj=19.5km s-min=15.5km az=88.0*

MOS ***28*** *22:49:14.4±0.9, 30.°50S×177.°65W, h9km, mb5.3/16, Error ellipse: s-maj=12.8km s-min=10.9km az=94.8*

NEIC ***28*** *22:49:16.0±2.1, 30.°39S±0.°07×177.°6W±0.°1, h10km±1km, mb5.2/50, Error ellipse: s-maj=18.7km s-min=10.8km az=76.0*

GCMT ***28*** *22:49:21.0±0.4, 30.°37S±0.°04×177.°32W±0.°03, h31km±1km, MW4.9/58, Moment Tensor Solution. s25,c32; s58,c74; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.55±.21; $M_{\theta\theta}$-0.11±.14; $M_{\phi\phi}$-2.44±.13; $M_{r\theta}$0.47±.16; $M_{\theta\phi}$-0.55±.09; $M_{\phi r}$1.86±.14; Best double couple: $M_0$3.19700×10^{16} NP1:ϕ_s192.00000°, δ27.00000°, λ88.00000°. NP2: ϕ_s14.00000°, δ63.00000°, λ91.00000°. Principal axes: T 3.1910, Plg72.0000°, Azm286.0000°; N 0.0150, Plg1.0000°, Azm193.0000°; P -3.2040, Plg18.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 22:49:18.6±0.3**, 30.°50S**±0.°04×**177.°53W**±0.°06**, h33km, n344, σ1§68**/320**, mb5.0**/67**, MS4.2**/16**, 16C-13D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.28	345	P	Pn	22 49 38.1	-2.0
GLKZ				S	Sn	22 49 53.9	-2.2
RAO	Raoul Island	1.29	345	Pn	Pn	22 49 39.0	-1.3
	2µm,0.3s,baz=166,slow=2.7,SNR=15						
RAO				Sn	Sn	22 49 53.9	-2.5
	2µm,0.3s,baz=296,slow=17,SNR=11						
RAO	Raoul Island	1.29	345	Pn	Pn	22 49 38.6	-1.7
RAO				Sn	Sn	22 49 54.1	-2.3
RAO	Raoul Island	1.29	345	P	Pn	22 49 39.0	-1.3
RIZ	Raoul Island	1.30	344	P	Pn	22 49 37.9	-2.5
MXZ	Matakaoa Point	7.85	205	P	Pn	22 51 05.7	-4.7
WMGZ	Waiomatatini S	8.04	204	P	Pn	22 51 10.3	-2.7
WMGZ				S	Sn	22 52 42.3	-0.4
PKGZ	Pakihiroa	8.20	205	P	Pn	22 51 10.8	-4.4
PKGZ				S	Sn	22 52 44.5	-2.2
HAZ	Te Kaha	8.21	207	P	Pn	22 51 11.5	-4.0
HAZ				S	Sn	22 52 48.8	+1.7
PUZ	Puketiti	8.32	204	P	Pn	22 51 12.0	-4.9
PUZ				S	Sn	22 52 47.4	-2.3
KUZ	Kuaotunu	8.39	220	P	Pn	22 51 21.2	+3.3
RUGZ	Raukumara Rang	8.44	207	P	Pn	22 51 14.7	-3.9
RUGZ				S	Sn	22 52 51.6	-1.2
TWGZ	Tauwhareparae	8.51	205	P	Pn	22 51 15.3	-4.2
TWGZ				S	Sn	22 52 51.0	-3.5
WCZ	Waipu Caves	8.70	229	P	Pn	22 51 28.7	+6.6
CNGZ	Carnagh Statio	8.71	203	P	Pn	22 51 17.3	-4.8
CNGZ				S	Sn	22 52 57.0	-2.2
TKGZ	Te Karaka	8.79	204	P	Pn	22 51 19.8	-3.6
TKGZ				S	Sn	22 52 57.4	-3.9
OPRZ	Ohinepanea	8.81	212	P	Pn	22 51 21.1	-2.6
MWZ	Matawai	8.82	206	P	Pn	22 51 19.9	-3.8
MWZ				S	Sn	22 53 00.8	-1.2
OUZ	Omahuta	8.82	235	P	Pn	22 51 28.7	+4.9
OUZ	Omahuta	8.82	235	P	Pn	22 51 28.6	+4.8
URZ	Urewera	8.92	208	Pn	Pn	22 51 20.4	-4.7
	1.9nm,0.3s,baz=128,slow=12,SNR=1.2						
URZ				Sn	Sn	22 52 58.8	-5.5
	11nm,0.3s,baz=164,slow=19,SNR=8.0						
URZ	Urewera	8.92	208	P	Pn	22 51 19.3	-5.7
SNGZ	Shannon Statio	9.28	206	P	Pn	22 51 27.9	-2.1
BKZ	Black Stump Fm	9.94	208	P	Pn	22 51 36.7	-2.5
HIZ	Hauiti	10.16	216	P	Pn	22 51 45.2	+3.0
ETVZ	East Tongariro	10.25	211	P	Pn	22 51 42.0	-1.5
BFZ	Birch Farm	11.35	205	P	Pn	22 51 57.2	-1.2
QRZ	Quartz Range	13.08	215	P	Pn	22 52 25.9	+3.8
NIUE	Niue	13.30	33	Pn	Pn	22 52 19.7	-5.4
NIUE	Niue	13.30	33	P	Pn	22 52 20.5	-4.6
PINNC	Pines Island,	15.56	297	P	Pn	22 52 56.4	+0.8
PINNC				IAmb	IAmb	22 52 57.0	
	comp=Z,155nm,1.4s						
RPZ	Rata Peaks	16.01	211	P	Pn	22 53 01.4	+0.2
OUENC	Ouen Island, N	16.13	296	P	P	22 53 12.2	+6.3
DZM	Mont Dzumac	16.63	297	Pn	Pn	22 53 08.3	-1.0
	comp=Z,1.1nm,0.3s,baz=75,slow=14,SNR=8.6						
	comp=Z,12nm,1.1s						
DZM	Mont Dzumac	16.63	297	eP	P	22 53 13.8	+2.3
	comp=Z,136nm,1.2s						
DZM				eLR	LR	22 57 10.0	
	comp=Z,2µm,23.8s						
DZM	Mont Dzumac	16.63	297		Pn	22 53 09.9	+0.6
DZM	Mont Dzumac	16.63	297	P	P	22 53 16.6	+5.1
ODZ	Otahua Downs	17.24	209	P	Pn	22 53 16.4	-0.4
AFI	Afiamalu	17.34	19	Pn	Pn	22 53 15.9	-2.4
AFI				IAmb	IAmb	22 53 18.9	
	comp=Z,298nm,1.9s						
AFI	Afiamalu	17.34	19	P	Pn	22 53 15.9	-2.4
AFI				pmax	pmax		
	comp=Z,298nm,1.9s						
JCZ	Jackson Bay	17.35	215	P	Pn	22 53 14.9	-3.3
RAR	Rarotonga	18.44	64	LR	LR	23 00 01.3	
	comp=Z,259nm,18.5s,baz=264,slow=35						
RAR	Rarotonga	18.44	64		P	22 53 29.4	-2.1
RAR	Rarotonga	18.44	64	P	P	22 53 29.4	-2.1
RAR				pmax	pmax		
	comp=Z,30nm,1.2s						
LHI	Lord Howe Isla	20.09	261	P	Pn	22 53 53.4	+2.1
	comp=Z,84nm,0.7s						
LHI	Lord Howe Isla	20.09	261		Pn	22 53 50.0	-1.4
LHI				IAmb	IAmb	22 53 54.3	
	comp=Z,61nm,0.7s						
LHI	Lord Howe Isla	20.09	261	P	Pn	22 53 53.7	+2.4
SANVU	Saraoutou	20.51	314	P	P	22 53 53.4	-0.6
TBI	Tubuai	25.98	81	eS	S	22 59 16.1	-0.7
	comp=Z,2µm,26.2s						
TBI				eLR	LR	23 01 13.8	
	comp=Z,929nm,26.2s						
TBI				eLR	LR	23 01 14.4	
	comp=Z,3µm,27.2s						
ARMA	Armidale	26.55	262	P	P	22 54 55.8	+2.2
	comp=Z,22nm,1.5s						
ARMA	Armidale	26.55	262		P	22 54 54.5	+0.9
ARMA	Armidale	26.55	262	P	P	22 54 57.1	+3.5
MGCD	Mangrove Creek	26.73	256	P	P	22 54 57.7	+2.6
	comp=Z,47nm,0.8s						
MGCD	Mangrove Creek	26.73	256	P	P	22 54 58.3	+3.2
CNB	Canberra Magne	28.13	251	P	P	22 55 09.7	+1.9
	comp=Z,20nm,0.7s						
CNB	Canberra Magne	28.13	251	P	P	22 55 10.2	+2.5
EIDS	Eidsvold	28.15	273	P	P	22 55 09.3	+1.4
	comp=Z,36nm,1.3s						
EIDS	Eidsvold	28.15	273	P	P	22 55 07.9	0.0
EIDS				IAmb	IAmb	22 55 11.5	
	comp=Z,26nm,0.8s						
EIDS	Eidsvold	28.15	273	P	P	22 55 10.1	+2.2
MILA	Mila	28.36	248	P	P	22 55 12.5	+2.8
CAN	Canberra	28.43	251	P	P	22 55 10.4	+0.1
CAN				IAmb	IAmb	22 55 25.5	
	comp=Z,29nm,1.1s						
CAN	Canberra	28.43	251	P	P	22 55 12.4	+2.0
CAN	Canberra	28.43	251	P	P	22 55 10.4	+0.1
CAN				pmax	pmax		
	comp=Z,29nm,1.1s						
PPT2	Papeete2	28.49	70	eP	P	22 55 15.0	+3.9
	comp=Z,93nm,29.8s						
PPT2				eS	S	22 59 58.8	+2.1
	comp=Z,126nm,26.0s						
PPT2				eLR	LR	23 02 19.7	
	comp=Z,466nm,25.2s						
PPT2				eLR	LR	23 02 26.4	
	comp=Z,568nm,24.5s						
PPT	Papeete	28.50	70	LR	LR	23 03 30.9	
	comp=Z,224nm,21.1s,baz=208,slow=30						
YNG	Young	28.94	253	P	P	22 55 17.0	+2.2
	comp=Z,28nm,1.0s						
TAU	Tasmania Unive	30.56	236	P	P	22 55 29.4	+0.3
TAU				IAmb	IAmb	22 56 04.4	
	comp=Z,70nm,1.6s						
TAU	Tasmania Unive	30.56	236	P	P	22 55 29.4	+0.3
TAU				pmax	pmax		
	comp=Z,70nm,1.6s						
TOO	Toolangi	31.30	247	P	P	22 55 37.4	+1.7
	comp=Z,5.6nm,0.9s						
TOO	Toolangi	31.30	247		P	22 55 36.2	+0.5
TOO	Toolangi	31.30	247	P	P	22 55 36.2	+0.5
TOO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMSA	Cobar Meteorol	31.45	259	P	P	22 55 38.3	+1.3
	comp=Z,37nm,1.0s						
CMSA	Cobar Meteorol	31.45	259	P	P	22 55 39.1	+2.1
QLP	Quilpie	33.71	267	P	P	22 55 58.1	+1.2
	comp=Z,40nm,0.6s						
QLP	Quilpie	33.71	267	P	P	22 55 58.3	+1.4
ARPS	Mount Arapiles	34.21	248	P	P	22 56 02.4	+1.3
	comp=Z,6.5nm,1.1s						
CTA	Charters Tower	34.22	279	P	P	22 56 02.6	+1.2
	comp=Z,18nm,0.7s						
CTA	Charters Tower	34.22	279	LR	LR	23 08 55.4	
	comp=Z,702nm,18.0s,baz=76,slow=35						
CTA	Charters Tower	34.22	279	P	P	22 56 02.9	+1.6
CTAO	Charters Tower	34.22	279		P	22 56 02.1	+0.7
CTAO				IAmb	IAmb	22 56 11.0	
	comp=Z,30nm,0.7s						
CTAO	Charters Tower	34.22	279	P	P	22 56 03.0	+1.6
CTAO	Charters Tower	34.22	279	P	P	22 56 02.1	+0.7
CTAO				pmax	pmax		
	comp=Z,30nm,0.7s						
STKA	Stephens Creek	34.85	257	P	P	22 56 08.3	+1.6
	comp=Z,396nm,0.9s						
STKA	Stephens Creek	34.85	257	P	P	22 56 07.6	+0.9
	comp=Z,52nm,0.7s,baz=104,slow=9.6,SNR=34						
STKA				LR	LR	23 09 08.7	
	comp=Z,446nm,18.5s,baz=61,slow=34						
	comp=Z,52nm,0.7s						
STKA	Stephens Creek	34.85	257		P	22 56 07.6	+0.9
STKA	Stephens Creek	34.85	257	d iP	P	22 56 08.6	+1.8
INKA	Innaminka	36.41	264		P	22 56 19.6	-0.5
MTSU	Mount Surprise	36.71	281	P	P	22 56 23.8	+0.9
	comp=Z,29nm,0.7s						
HTT	Hallett	36.86	254	P	P	22 56 25.1	+1.1
	comp=Z,19nm,1.0s,comp=Z,0.0nm						
HTT	Hallett	36.86	254	P	P	22 56 24.8	+0.7
RKT	Rikitea	38.51	89	eLR	LR	23 06 58.5	
	comp=Z,3µm,30.8s						
PMG	Port Moresby	39.02	295	LR	LR	23 09 53.2	
	comp=Z,281nm,20.5s,baz=150,slow=32						
PMG	Port Moresby	39.02	295	P	P	22 56 41.6	-0.7
BBOO	Buckleboo	39.33	254	P	P	22 56 44.4	-0.5
	comp=Z,47nm,0.7s						
BBOO	Buckleboo	39.33	254		P	22 56 44.1	-0.7
BBOO				IAmb	IAmb	22 56 46.5	
	comp=Z,30nm,0.7s						
COEN	Coen	39.69	286	P	P	22 56 48.8	+0.9
	comp=Z,19nm,0.8s						
COEN	Coen	39.69	286		P	22 56 48.1	+0.2
QIS	Mount Isa	39.73	274	P	P	22 56 48.6	+0.4
	comp=Z,18nm,0.7s						
TAOE	Nuku Hiva Isla	40.97	66	eLR	LR	23 08 10.9	
	comp=Z,383nm,25.3s						
AS31	Alice Springs	43.51	267	P	P	22 57 18.1	-1.2
ASAR	Alice Springs	43.51	267	P	P	22 57 18.3	-0.9
	comp=Z,17nm,0.7s,baz=104,slow=7.1,SNR=89						
ASAR				ScP	ScP	23 02 58.5	+2.6
	comp=Z,2.6nm,1.1s,baz=128,slow=4.3,SNR=5.1						
ASAR				S	S	23 03 53.2	+7.2
	comp=Z,0.9nm,0.9s,baz=98,slow=14,SNR=4.4						
ASAR				LR	LR	23 15 11.2	
	comp=Z,612nm,18.2s,baz=106,slow=36						
	comp=Z,17nm,0.7s						
ASAR	Alice Springs	43.51	267	P	P	22 57 18.2	-1.0
WRAB	Tennant Creek	44.50	272	P	P	22 57 26.2	-1.0
WRAB				IAmb	IAmb	22 57 31.5	
	comp=Z,26nm,0.7s						

WRAB	Tennant Creek	44.50	272	d iP	P	22 57 27.3	+0.1
WRAB				pmax	pmax		
	comp=Z,30nm,0.7s						
WRA	Warramunga Arr	44.51	272	P	P	22 57 26.3	-1.0
	comp=Z,26nm,0.6s,baz=111,slow=8.1,SNR=41						
WRA				ScP	ScP	23 03 05.5	+5.5
	comp=Z,0.3nm,0.7s,baz=115,slow=3.6,SNR=1.5						
WRA				S	S	23 04 02.5	+1.9
	comp=Z,3.2nm,0.9s,baz=109,slow=15,SNR=6.3						
	comp=Z,26nm,0.6s						
WRA	Warramunga Arr	44.51	272	P	P	22 57 26.1	-1.1
WRA	Warramunga Arr	44.51	272	P	P	22 57 26.1	-1.1
WRA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FORT	Forrest	46.41	255	P	P	22 57 41.2	-1.0
	comp=Z,19nm,0.6s						
FORT	Forrest	46.41	255	P	P	22 57 40.8	-1.4
FORT				IAmb	IAmb	22 57 48.4	
	comp=Z,12nm,0.6s						
WRKA	Warakurna	47.87	263	P	P	22 57 51.8	-1.9
	comp=Z,7.8nm,1.2s						
SBA	Scott Base	47.97	184	P	P	22 57 56.5	+2.9
SBA				IAmb	IAmb	22 58 05.1	
	comp=Z,40nm,1.5s						
SBA	Scott Base	47.97	184	P	P	22 57 56.5	+2.9
SBA				pmax	pmax		
	comp=Z,40nm,1.5s						
VNDA	Vanda	48.04	186	P	P	22 57 54.8	+0.6
	comp=Z,1.4nm,0.7s,baz=19,slow=6.7,SNR=9.3						
	comp=Z,1.4nm,0.7s						
VNDA	Vanda	48.04	186	P	P	22 57 55.2	+1.0
VNDA	Vanda	48.04	186	P	P	22 57 55.2	+1.0
VNDA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MTN	Manton Dam	50.40	279	P	P	22 58 11.9	-1.2
MTN				IAmb	IAmb	22 58 17.6	
	comp=Z,56nm,1.6s						
KNRA	Kununurra	51.12	274	P	P	22 58 17.7	-0.7
KMBL	Kambalda	51.38	253	P	P	22 58 18.5	-1.9
	comp=Z,11nm,1.5s						
FITZ	Fitzroy Crossi	52.77	270	P	P	22 58 30.1	-0.7
FITZ	Fitzroy Crossi	52.77	270	LR	LR	23 19 23.3	
	comp=Z,315nm,21.2s,baz=116,slow=34						
FITZ	Fitzroy Crossi	52.77	270	P	P	22 58 30.4	-0.3
KLBR	Kellerberrin	54.70	251	P	P	22 58 43.1	-1.6
	comp=Z,31nm,1.1s						
NWAO	Narrogin (SRO)	54.74	249	LR	LR	23 20 55.4	
	comp=Z,188nm,18.5s,baz=254,slow=35						
FAKI	Fak Fak	54.75	290	P	P	22 58 44.2	-1.2
CASY	Casey	55.24	208	P	P	22 58 48.1	0.0
MBWA	Marble Bar	56.62	264	P	P	22 58 56.7	-2.0
GUMO	Guam	56.84	315	LR	LR	23 21 23.1	
	comp=Z,78nm,19.3s,baz=120,slow=34						
MORW	Morawa	56.89	253	P	P	22 58 58.7	-1.8
MORW				IAmb	IAmb	23 00 46.6	
	comp=Z,68nm,1.8s						
SOEI	Soe	57.77	278	P	P	22 59 06.6	-0.5
SOEI				IAmb	IAmb	22 59 11.3	
	comp=Z,27nm,0.9s						
BATI	Baumata	58.06	277	LR	LR	23 24 47.1	
	comp=Z,693nm,18.4s,baz=144,slow=37						
RPN	Rapa Nui	59.02	105	LR	LR	23 21 12.4	
	comp=Z,62nm,18.4s,baz=244,slow=32						
QSPA	South Pole Qui	59.61	180	P	P	22 59 21.4	+2.3
DAV	Davao City (W)	66.03	295	LR	LR	23 29 02.6	
	comp=Z,22nm,18.3s,baz=217,slow=36						
TOLI2	Tolitoli	66.45	286	P	P	23 00 03.7	-1.4
TOLI2				IAmb	IAmb	23 00 10.1	
	comp=Z,22nm,1.5s						
BELA	Belgrano 2	69.63	172		P	23 00 24.5	+0.4
BELA				IAmb	IAmb	23 00 40.2	
	comp=Z,7.4nm,0.8s						
PCJI	Pacitan	69.78	272	P	P	23 00 25.6	-0.5
UGM	Wanagama	70.49	272	P	P	23 00 28.6	-1.8
MAW	Mawson	72.36	200	P	P	23 00 41.3	+0.5
	comp=Z,5.4nm,0.7s,baz=134,slow=5.4,SNR=9.0						
	comp=Z,5.4nm,0.7s						
KKM	Kota Kinabalu	72.97	288	P	P	23 00 43.5	-2.0
JOW	Kunigami	77.03	312	LR	LR	23 27 44.1	
	comp=Z,76nm,21.3s,baz=139,slow=30						
SYO	Syowa Base	77.11	193	⇑ epP	P	23 01 12.6	+4.4
SYO	Syowa Base	77.11	193	⇓ ePcP	PcP	23 01 17.6	-1.4
MDSI	Maura Dua	77.65	272	P	P	23 01 09.4	-2.8
	comp=Z,27nm,0.7s						
TROLL	Troll, Antarti	77.77	180	⇑ P	P	23 01 13.2	+1.0
	comp=Z,874nm,0.9s						
SNAA	Sanae	78.05	178	⇑ P	P	23 01 13.6	+0.1
	comp=Z,109nm,0.6s						
SNAA	Sanae	78.05	178	P	P	23 01 13.3	-0.2
	comp=Z,6.3nm,0.8s,baz=196,slow=10,SNR=9.9						
	comp=Z,6.3nm,0.8s						
SNAA	Sanae	78.05	178		P	23 01 13.7	+0.1
SNAA	Sanae	78.05	178	⇓ iP	P	23 01 14.5	+0.9
SNAA				pmax	pmax		
	comp=Z,29nm,1.7s						
VNA3	Neumayer Olymp	78.18	176	⇑ P	P	23 01 14.4	+0.1
	comp=Z,33nm,0.7s						
JGF	Kuroka	78.25	324	P	P	23 01 14.3	-0.8
JGF				IAmb	IAmb	23 01 29.3	
	comp=Z,54nm,1.7s						
MJAR	Matsushiro Arr	78.56	325	P	P	23 01 15.1	-1.6
	comp=Z,1.6nm,0.8s,baz=325,slow=13,SNR=5.5						
	comp=Z,1.6nm,0.8s						
MJAR	Matsushiro Arr	78.56	325	P	P	23 01 16.2	-0.5
MJAR				IAmb	IAmb	23 01 22.0	
	comp=Z,26nm,1.9s						
MJAR	Matsushiro Arr	78.56	325	P	P	23 01 16.2	-0.5
MJAR				pmax	pmax		
	comp=Z,26nm,2.0s						
VNA2	Neumayer--Watz	78.62	177	⇑ P	P	23 01 17.5	+0.8
	comp=Z,28nm,0.6s,baz=168,slow=5.0						
NVL	N'lazarevskaya	78.80	183	eP	P	23 01 18.0	+0.4
NVL				e		23 04 15.7	
NVL				ePPP	PPP	23 06 03.9	
NVL				eS	S	23 11 15.9	+3.2
NVL				eSS	SS	23 16 21.0	+4.5
NVL				eSSS	SSS	23 19 46.0	
NVL				pmax	pmax		
	comp=Z,11nm,0.9s						
NVL				MLR	MLR		
	comp=Z,827nm,23.0s						
VNA1	Neumayer--Stat	78.85	176	⇑ P	P	23 01 17.4	-0.4
	comp=Z,15nm,0.8s						
KSI	Kapahiang	79.44	272	P	P	23 01 19.5	-2.7
TPUB	Ta-pu	79.87	305	P	P	23 01 21.8	-2.4
SSLB	Suanglung	79.95	305	P	P	23 01 24.2	-0.4
H03S2	Juan Fernandez	80.07	123	T	T	00 30 57.8	
	baz=238,slow=74,SNR=28						
H03S1	Juan Fernandez	80.08	123	T	T	00 30 58.7	
	baz=238,slow=74,SNR=30						
H03S3	Juan Fernandez	80.09	123	T	T	00 30 47.8	
	baz=238,slow=74,SNR=31						
H03N3	Juan Fernandez	80.26	123	T	T	00 31 01.4	
	baz=241,slow=72,SNR=18						
H03N2	Juan Fernandez	80.27	123	T	T	00 31 02.9	
	baz=241,slow=72,SNR=24						
H03N1	Juan Fernandez	80.28	123	T	T	00 31 02.3	
	baz=241,slow=72,SNR=25						
PLCA	Paso Flores	82.14	133	P	P	23 01 37.5	+1.2
	comp=Z,1.6nm,0.9s,baz=185,slow=11,SNR=3.6						
PLCA				LR	LR	23 29 27.1	
	comp=Z,108nm,20.6s,baz=236,slow=29						
	comp=Z,1.6nm,0.9s						
ASAJ	Asahikawa	82.72	332	LR	LR	23 33 59.9	
	comp=Z,138nm,18.7s,baz=140,slow=32						
KSRS	Korea Array	84.69	319	P	P	23 01 50.1	+1.1
	comp=Z,1.3nm,0.7s,baz=134,slow=5.4,SNR=5.0						
	comp=Z,1.3nm,0.7s						
YSS	Yuzhno-Sakhali	85.01	334	eP	P	23 01 52.0	+1.6
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
KULM	Kulim	85.64	279	P	P	23 01 53.6	-0.8
KULM				IAmb	IAmb	23 01 55.5	
	comp=Z,18nm,1.0s						
PSI	Prapat	85.85	276	LR	LR	23 40 29.5	
	comp=Z,115nm,21.4s,baz=152,slow=36						
PFO	Pinyon Flats O	85.97	47	⇑ eP	P	23 01 57.8	+2.1
PFO				pmax	pmax		
	comp=Z,21nm,1.5s						
PEA0B	Petropavlovsk-	86.01	345	P	P	23 01 54.5	-0.7
PEA0B	Petropavlovsk-	86.01	345	P	P	23 01 54.5	-0.7
PEA0B				pmax	pmax		
	comp=Z,182nm,1.8s						
PETK	Petropavlovsk-	86.01	345	P	P	23 01 55.2	0.0
	comp=Z,15nm,0.9s,baz=117,slow=6.6,SNR=6.9						
	comp=Z,15nm,0.9s						
PETK	Petropavlovsk-	86.01	345	P	P	23 01 54.8	-0.4
GSI	Gunungsitoli	86.25	274	P	P	23 01 56.3	-1.2
GSI				IAmb	IAmb	23 02 13.2	
	comp=Z,24nm,0.9s						
GSI	Gunungsitoli	86.25	274	P	P	23 01 56.8	-0.7
	comp=Z,30nm,0.8s						
LRMC	Laurel Mtn Rad	86.44	45	P	P	23 01 58.7	+0.7
LRMC				IAmb	IAmb	23 02 01.7	
	comp=Z,12nm,1.2s						
BC3	Big Chuckawall	86.64	48		P	23 01 60.0	+1.0
BC3				IAmb	IAmb	23 02 02.5	
	comp=Z,22nm,1.5s						
O02D	Mt. Diablo Mer	86.72	39		P	23 01 59.6	+0.4
O02D				IAmb	IAmb	23 02 04.0	
	comp=Z,19nm,1.2s						
USRK	Ussuriysk Ar.	87.47	326	P	P	23 02 03.5	+0.9
	comp=Z,4.5nm,0.8s,baz=134,slow=5.5,SNR=6.7						
	comp=Z,4.5nm,0.8s						
NVAR	Mina Array Bea	88.04	42	P	P	23 02 07.5	+1.8
	comp=Z,2.7nm,0.8s,baz=225,slow=7.8,SNR=11						
	comp=Z,2.7nm,0.8s						
NVAR	Mina Array Bea	88.04	42	P	P	23 02 07.1	+1.3
WUAZ	Wupatki	90.43	48	P	P	23 02 18.2	+1.3
WUAZ				IAmb	IAmb	23 02 21.1	
	comp=Z,12nm,1.2s						
CN2	Changchun	90.47	323	P	P	23 02 17.3	+0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
X18A	Snowflake	90.75	50	P	P	23 02 19.5	+1.0
X18A				IAmb	IAmb	23 02 22.7	
	comp=Z,11nm,1.3s						
BNX	BinXian	90.82	325	⇑ P	P	23 02 17.3	-1.0
BNX				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TXAR	Lajitas Array	92.10	57	P	P	23 02 25.3	+0.5
	comp=Z,1.2nm,1.0s,baz=224,slow=3.5,SNR=6.2						
	comp=Z,1.2nm,1.0s						
HNS	HongShan	92.59	312	⇓ P	P	23 02 26.3	-0.4
HNS				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ANMO	Albuquerque	93.32	51	P	P	23 02 30.9	+0.4
ANMO	Albuquerque	93.32	51	⇓ eP	P	23 02 32.3	+1.8
ANMO				pmax	pmax		
	comp=Z,21nm,4.8s						
HVU	Hansel Valley	93.43	43	P	P	23 02 31.5	+0.8
HVU				IAmb	IAmb	23 02 33.3	
	comp=Z,15nm,1.6s						
HVU	Hansel Valley	93.43	43	P	P	23 02 31.5	+0.8
HVU				pmax	pmax		
	comp=Z,15nm,1.6s						
CMAR	Chiang Mai Arr	93.82	289	P	P	23 02 33.8	+0.9
	comp=Z,0.6nm,0.7s,baz=144,slow=2.9,SNR=5.5						
	comp=Z,0.6nm,0.7s						
CMAR	Chiang Mai Arr	93.82	289	P	P	23 02 32.6	-0.2
PZH	PanZhiHua	95.71	297	P	P	23 02 43.8	+2.3
PDAR	Pinedale Array	95.93	43	P	P	23 02 44.2	+1.9
	comp=Z,0.4nm,0.8s,baz=204,slow=3.3,SNR=3.9						
PDAR				PKKPbc	PKKPbc	23 19 29.1	-2.5
	comp=Z,0.3nm,0.6s,baz=9.7,slow=3.3,SNR=4.5						
	comp=Z,0.4nm,0.8s						
PDAR	Pinedale Array	95.93	43	P	P	23 02 43.4	+1.1
HHC	Hu-ho-hao-te	96.59	314	eP	P	23 02 46.0	+0.8
HHC				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,4.9s						
BTO	Baotou	97.43	313	eP	Pdif	23 02 50.0	+1.0
BTO				pP	pP	23 02 55.0	-3.2
BTO				sP	sP	23 02 57.0	-4.4
BTO				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BTO				pmax	pmax		
	comp=Z,620nm,6.4s						
ILAR	Eielson Array	97.93	13	P	P	23 02 50.5	0.0
	comp=Z,0.3nm,0.7s,baz=218,slow=5.1,SNR=6.5						
ILAR				PP	PP	23 06 40.4	-10
	comp=Z,1.4nm,1.1s,baz=212,slow=5.7,SNR=5.1						
	comp=Z,0.3nm,0.7s						
ILAR	Eielson Array	97.93	13	P	Pdif	23 02 50.8	+0.3
ILAR	Eielson Array	97.93	13	P	Pdif	23 02 50.8	+0.3
BILL	Bilibino	98.98	354	c eP	Pdif	23 02 58.5	+3.4
BILL				pmax	pmax		
	comp=Z,39nm,4.9s						
LZH	Lanzhou	99.11	306	eP	Pdif	23 02 55.0	-1.7
LZH				sP	pP	23 03 03.0	-2.9
LZH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WMQ	Urumqi	113.61	308	ePKP	PKiKP	23 07 54.5	+1.1
DGZ	Jazzator, Alta	115.68	314	⇓ iPKIKP	PKPdf	23 07 57.1	-0.2
MK31	Makanchi Array	118.15	310	d iPKIKP	PKPdf	23 08 01.2	-0.8
MKAR	Makanchi Array	118.15	310	PKP	PKPdf	23 08 01.3	-0.7
	comp=Z,1.2nm,0.5s,baz=206,slow=1.3,SNR=31						
ZALV	Zalesovo Beam	118.38	318	PKP	PKPdf	23 08 01.9	-0.1
	comp=Z,0.5nm,0.3s,baz=354,slow=1.5,SNR=5.4						
ZALV	Zalesovo Beam	118.38	318	PKIKP	PKPdf	23 08 02.0	-0.1
PRZ	Przheval'sk	119.67	304		PKiKP	23 08 05.7	+0.3
PRZ	Przheval'sk	119.67	304	PKIKP	PKiKP	23 08 05.7	+0.3
NRIK	Noril'sk	119.89	336	PKP	PKPdf	23 08 04.0	-0.6
	comp=Z,1.9nm,0.6s,baz=141,slow=2.5,SNR=4.5						
NRIK	Noril'sk	119.89	336		PKPdf	23 08 04.4	-0.2
NRIK	Noril'sk	119.89	336	⇑ iPKIKP	PKPdf	23 08 03.9	-0.7
TARG	Taragay, Kyrgy	119.90	303		PKPdf	23 08 05.4	-0.6
TARG	Taragay, Kyrgy	119.90	303	PKIKP	PKPdf	23 08 05.4	-0.6
KSH	Kashi	120.64	300	PKP	PKiKP	23 08 07.8	+0.5
ULHL	Ulahol	121.16	304	P	PKiKP	23 08 08.6	+0.3
	SNR=5.4						
BOOM	Boomskoye usch	121.43	304		PKPdf	23 08 08.3	-0.4
BOOM	Boomskoye usch	121.43	304	PKIKP	PKPdf	23 08 08.3	-0.4
TKM2	Tokmak 2	121.78	304	P	PKPdf	23 08 08.8	-0.5
	SNR=10.0						
UCH	Uchtor	122.40	303	P	PKiKP	23 08 11.5	+0.4
	SNR=10						
CHMS	Chumysh	122.40	304	P	PKPdf	23 08 10.2	-0.1
	SNR=8.2						
AAK	Ala-Archa	122.50	304	PKP	PKPdf	23 08 10.8	+0.1
	comp=Z,2.4nm,0.6s,baz=93,slow=1.8,SNR=10						
AAK	Ala-Archa	122.50	304		PKPdf	23 08 10.4	-0.2
USP	Ospenovka	122.64	304	P	PKPdf	23 08 10.7	-0.1
	SNR=6.3						
KBL	Kabul	124.63	293		PKPdf	23 08 15.1	0.0
KBL	Kabul	124.63	293	PKIKP	PKPdf	23 08 15.1	0.0
KKAR	Karatay Array	125.47	303		PKPdf	23 08 16.0	-0.2
KKAR	Karatay Array	125.47	303	PKIKP	PKPdf	23 08 16.0	-0.2
CHGR	Chuyangaron	125.56	298	d iPKIKP	PKPdf	23 08 16.7	+0.1
SHAA	Shahritus	126.11	296		PKPdf	23 08 17.9	+0.2
BVAR	Borovoye Array	126.76	316	PKP	PKPdf	23 08 18.3	0.0
	comp=Z,3.2nm,0.5s,baz=134,slow=2.2,SNR=28						
BORK	Borovoye	126.80	316		PKPdf	23 08 18.1	-0.2
BORK	Borovoye	126.80	316	d ePKIKP	PKPdf	23 08 18.2	-0.1
ARTI	Arti	133.53	321		PKiKP	23 08 32.1	-0.1
ARTI	Arti	133.53	321	i PKIKP	PKiKP	23 08 32.0	-0.3
ARTI						23 10 59.4	
ARTI				SS	SS	23 28 46.2	+3.3
H10S3	ASCENSION HYDR	137.46	155	T	T	01 42 56.0	
	baz=15,slow=74,SNR=16						
H10S2	ASCENSION HYDR	137.46	155	T	T	01 42 57.0	
	baz=205,slow=74,SNR=16						
KIRV	Kirov	137.63	325	⇓ ePKIKP	PKiKP	23 08 40.3	-0.2
H10N3	ASCENSION HYDR	138.54	154	T	T	01 44 33.5	
	baz=203,slow=75,SNR=27						
H10N1	ASCENSION HYDR	138.55	154	T	T	01 44 23.5	
	baz=203,slow=75,SNR=31						
H10N2	ASCENSION HYDR	138.56	154	T	T	01 44 35.9	
	baz=203,slow=75,SNR=20						
ARCES	ARCESS Array B	138.77	348	PKhKP	PKPpre	23 08 32.0	
	comp=Z,3.6nm,0.7s,baz=46,slow=3.5,SNR=12						
ARCES				PKP	PKPdf	23 08 39.7	-0.7
	comp=Z,3.1nm,0.5s,baz=89,slow=1.9,SNR=6.9						
BELG	Belogornoye	140.54	317	PKP	PKPdf	23 08 44.2	+0.2
	comp=Z,24nm,0.8s,baz=90,slow=3.6,SNR=3.8						
BELG	Belogornoye	140.54	317	⇓ ePKIKP	PKiKP	23 08 45.4	-1.2
KLMR	Klimovskoe	141.04	332	ePKIKP	PKPdf	23 08 44.1	-0.6
KLMR				pmax	pmax		
	comp=Z,23nm,1.5s						
AKT	Akhty	142.16	300	ePKIKP	PKPdf	23 08 45.4	-2.1
AKT				e		23 15 55.7	
AKT				pmax	pmax		
	comp=Z,20nm,1.6s						
LEIR	Leirfjorden	143.77	353	e	PKPbc	23 08 48.0	+0.9
VRH	Novokhopyorsk	144.39	317	ePKIKP	PKPab	23 08 48.8	-0.4
VRH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MOS	Moscow	144.65	326	i PKIKP	PKPab	23 08 49.0	-0.9
MOS				pmax	pmax		
	comp=Z,31nm,1.0s						
NCK	Nalchik	145.03	303	⇓ ePKIKP	PKPbc	23 08 51.1	-0.7
GOF	Gofitskoye	145.18	306	c ePKIKP	PKPbc	23 08 52.2	0.0
PUL	Pulkovo	145.25	335	c ePKIKP	PKPdf	23 08 52.7	+0.5
FIA1	FINESS Array S	145.38	340		PKPbc	23 08 51.7	-0.6
FINES	FINESS Array B	145.38	340	PKPbc	PKPbc	23 08 51.8	-0.4
	comp=Z,16nm,0.3s,baz=54,slow=4.2,SNR=176						
FINES	FINESS Array B	145.38	340		PKPbc	23 08 52.0	-0.3
FINES	FINESS Array B	145.38	340	PKIKP	PKPbc	23 08 52.0	-0.3
NSS	Namsos	145.43	353	eP	PKPbc	23 08 52.2	-0.2
LPSR	Galich'ya Gora	145.45	320	ePKIKP	PKPbc	23 08 52.3	-0.5
LPSR				pmax	pmax		
	comp=Z,56nm,0.8s						
OBN	Obninsk	145.48	325	PKPbc	PKPbc	23 08 52.8	+0.1
	comp=Z,64nm,0.6s,baz=348,slow=6.2,SNR=12						
OBN	Obninsk	145.48	325		PKPdf	23 08 52.4	-0.3
OBN	Obninsk	145.48	325	c iPKIKP	PKPdf	23 08 52.4	-0.3
OBN				e		23 12 14.7	
OBN				ePPP	PPP	23 15 25.8	
OBN				pmax	pmax		
	comp=Z,58nm,1.0s						
KBZ	Khabaz	145.50	304	PKPbc	PKPab	23 08 53.5	-0.1
	comp=Z,6.1nm,0.7s,baz=190,slow=3.7,SNR=17						
KBZ	Khabaz	145.50	304	c ePKIKP	PKPdf	23 08 53.1	0.0
KVAR	Kislovodsk Arr	145.61	304	PKPbc	PKPab	23 08 54.0	-0.1
	comp=Z,3.0nm,0.6s,baz=96,slow=23,SNR=8.0						
KIV	Kislovodsk	145.62	304		PKPdf	23 08 53.5	0.0
KIV	Kislovodsk	145.62	304	i PKP2	PKPdf	23 08 52.8	-0.7
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SHA1	Shidzhatmaz	145.67	304	c iPKIKP	PKPab	23 08 56.0	+1.5
VORR	Voronezh	145.68	319	ePKP2	PKPdf	23 08 51.4	-1.8
VORR				pmax	pmax		
	comp=Z,40nm,0.9s						
VSR	Storozhevoye	145.88	318	ePKHKP	PKPpre	23 08 50.9	
VSR				pmax	pmax		
	comp=Z,30nm,1.0s						
VORD	Divnogorie	145.91	317	ePKHKP	PKPpre	23 08 50.0	
VORD				pmax	pmax		
	comp=Z,30nm,1.0s						
GURO	Guroymak-BITLI	146.63	295		PKPdf	23 08 56.1	+0.6
ERBR	Yeremizino-Bor	146.80	308	i PKP2	PKPbc	23 08 56.9	-0.2
ERBR				pmax	pmax		
	comp=Z,36nm,0.8s						
LABN	Labinsk	146.88	306	i PKP2	PKPab	23 08 58.5	-0.3
LABN				pmax	pmax		
	comp=Z,28nm,0.9s						
MOL	Molde	147.75	356	eP	PKPbc	23 08 59.1	-0.1
KHAM	Kharkiv	148.07	317	PKP	PKPbc	23 09 00.0	-0.5
DOMB	Dombas	148.16	354	eP	PKPbc	23 09 00.3	-0.1
FOO	Floro	148.85	358	eP	PKPbc	23 09 02.4	+0.4
NB2	NORSAR Subarra	148.91	352	PKP	PKPbc	23 09 02.1	-0.3
	comp=Z,5.1nm,0.6s,baz=12,slow=2.7						
NOA	NORSAR Array B	148.91	352	PKPbc	PKPbc	23 09 02.1	-0.3
	comp=Z,6.0nm,0.6s,baz=13,slow=4.1,SNR=23						
ANN	Anapa	149.12	307	i PKP2	PKPbc	23 09 03.3	0.0
ANN				pmax	pmax		
	comp=Z,33nm,0.7s						
NC602	NORSAR Array S	149.16	351		PKPbc	23 09 02.3	-0.6
NC602	NORSAR Array S	149.16	351	eP	PKPbc	23 09 02.7	-0.2
HYA	Hoyanger	149.23	356	eP	PKiKP	23 09 04.2	0.0
SUE	Sulen	149.40	358	eP	PKPbc	23 09 04.0	+0.5
HFS	Hagfors	149.42	349	PKPbc	PKPbc	23 09 02.8	-0.7
	comp=Z,10nm,0.6s,baz=64,slow=3.4,SNR=37						
SKAR	Skarslia	149.56	354	eP	PKPbc	23 09 04.5	+0.5
MNK	Minsk	149.87	330	i PKHKP	PKPpre	23 09 04.1	
MNK				i		23 12 45.1	
MNK				i SS	SS	23 31 47.6	-4.6
MNK				pmax	pmax		
	comp=N,10.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,25nm,1.0s						
MNK				pmax	pmax		
	comp=E,6.0nm,0.8s						
ASK	Askoy	149.96	357	eP	PKiKP	23 09 05.4	-0.4
OSL	Oslo	150.04	352	eP	PKPbc	23 09 03.8	-1.3
ODD1	Odda	150.45	356	eP	PKiKP	23 09 06.8	-0.1
KONO	Kongsberg	150.45	353	eP	PKiKP	23 09 06.6	-0.2
BLS5	Blasjo	150.95	356	eP	PKiKP	23 09 08.1	+0.2
SIM	Simferopol'	151.32	309	i PKIKP	PKiKP	23 09 09.0	-0.1
SIM				e		23 09 16.4	
SIM				pmax	pmax		
	comp=Z,22nm,0.9s						
AKASG	Malin Array Be	151.62	323	PKPbc	PKPbc	23 09 08.8	-0.3
	comp=Z,4.7nm,0.4s,baz=48,slow=3.1,SNR=32						
AKBB	Malin Array Si	151.62	323	c iPKIKP	PKiKP	23 09 09.5	0.0
KIEV	Kiev	151.64	323		PKPbc	23 09 08.8	-0.3
KIEV	Kiev	151.64	323	PKIKP	PKPbc	23 09 08.8	-0.3
HOMB	Homborsund	151.92	353	eP	PKiKP	23 09 10.2	+0.4
MMAI	Mount Meron Ar	151.95	284	PKPbc	PKiKP	23 09 11.3	+0.4
	comp=Z,10nm,0.5s,baz=82,slow=6.0,SNR=8.7						
SUW	Suwalki	152.15	333	ePKP	PKPbc	23 09 10.2	0.0
BRTR	Keskin Array B	153.00	298	PKPbc	PKPbc	23 09 12.4	-0.3
	comp=Z,3.5nm,0.5s,baz=141,slow=5.1,SNR=38						
BRTR	Keskin Array B	153.00	298		PKPbc	23 09 12.1	-0.7
BRTR	Keskin Array B	153.00	298	PKIKP	PKPbc	23 09 12.1	-0.7
BEL	Belsk	154.75	333	ePKP	PKiKP	23 09 16.7	+0.8
KWP	Kalwaria Pacla	155.54	327	ePKP	PKPab	23 09 34.3	-0.1
STHS	Stebnicka Huta	156.37	328	ePKP2	PKPab	23 09 39.7	+1.7
STHS	Stebnicka Huta	156.37	328	ePKP	PKPab	23 09 39.7	+1.7
CHVC	Chvalec	157.50	337	ePKP2	PKPab	23 09 41.5	-1.4
CHVC	Chvalec	157.50	337	ePKPAB	PKPab	23 09 41.5	-1.4
UPC	Upice	157.59	337	ePKP2	PKPab	23 09 43.5	+0.3
UPC	Upice	157.59	337	ePKPAB	PKPab	23 09 43.5	+0.3
UPC				epPKP	pPKPab	23 09 50.1	-2.3
DPC	Dobruska-Polom	157.61	336	ePKP2	PKPab	23 09 43.8	+0.4
DPC	Dobruska-Polom	157.61	336	ePKPAB	PKPab	23 09 43.8	+0.4
DPC				epPKP	pPKPab	23 09 49.6	-3.0
CLL	Collm	157.78	342	i PKP2	PKPab	23 09 50.8	+6.8
CLL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VRAC	Vranov	158.38	334	ePKP	PKPab	23 09 46.9	+0.2
KRUC	Moravsky	158.66	334	ePKP	PKPab	23 09 47.6	-0.3
ZVC	Zvikov	159.10	338	ePKPAB	PKPab	23 09 49.5	-0.3
ZVC				ex	x	23 09 56.1	
KHC	Kasperske Hory	159.57	339	ePKP2	PKPab	23 09 52.2	+0.3
KHC	Kasperske Hory	159.57	339	ePKPAB	PKPab	23 09 52.2	+0.3
KHC				epPKP	pPKPab	23 09 58.5	-2.6
CKRC	Cesky Krumlov	159.60	337	ePKP2	PKPab	23 09 52.4	+0.4
CKRC	Cesky Krumlov	159.60	337	ePKPAB	PKPab	23 09 52.4	+0.4
CKRC				ex	x	23 09 58.0	
GERES	GERESS Array B	159.78	338	PKPab	PKPab	23 09 52.9	0.0
	comp=Z,1.0nm,0.6s,baz=30,slow=5.3,SNR=7.4						
CONA	Conrad Observa	159.79	333	ePKP	PKPab	23 09 51.9	-1.1
	comp=Z,9.6nm,1.9s						
RONA	Rosalia, Austr	159.80	332	ePKP	PKPab	23 09 53.2	+0.3
	comp=Z,3.4nm,0.7s						
MOA	Molln	160.45	336	i PKP	PKPab	23 09 55.3	-0.4
	comp=Z,9.3nm,1.4s						
ARSA	Arzberg	160.47	333	ePKP	PKPab	23 09 55.4	-0.4
	comp=Z,0.1nm,0.3s						
BIOA	Bad Ischl, Aus	160.80	337	ePKP	PKPab	23 09 57.1	-0.2
	comp=Z,7.6nm,1.4s						
SOKA	Soboth	161.13	332	i PKP	PKPab	23 09 58.7	-0.2
	comp=Z,8.4nm,1.2s						
LESA	Schwarzleotal	161.36	338	ePKP	PKPab	23 09 59.3	-0.5
	comp=Z,8.9nm,1.7s						
WATA	Walderalm	161.78	340	ePKP	PKPab	23 10 01.8	+0.1
	comp=Z,9.9nm,1.1s						
WTTA	Wattenberg	161.82	340	i PKP	PKPab	23 10 02.0	+0.1
	comp=Z,5.8nm,0.8s						
RETA	Reutte	161.87	342	i PKP	PKPab	23 10 02.2	+0.2
	comp=Z,6.2nm,0.9s						
SQTA	Sankt Quirin	161.99	340	i PKP	PKPab	23 10 02.6	0.0
	comp=Z,9.5nm,1.2s						
ABTA	Abfaltersbach	162.00	337	i PKP	PKPab	23 10 01.8	-0.8
	comp=Z,12nm,1.4s						
DAVA	Damuels	162.29	343	i PKP	PKPab	23 10 04.5	+0.6
	comp=Z,5.6nm,0.6s						
FETA	Feichten	162.31	341	ePKP	PKPab	23 10 04.3	+0.2
	comp=Z,6.9nm,1.3s						
TORD	Torodi Ar. Bea	162.72	177	PKP	PKPdf	23 09 17.8	-0.1
	comp=Z,1.6nm,1.1s,baz=132,slow=1.9,SNR=5.0						
TORD				PKPab	PKPab	23 10 06.5	+0.1
	comp=Z,4.4nm,0.8s,baz=174,slow=2.7,SNR=11						
DAVOX	Davos/Dischmat	162.76	343	PKPab	PKPab	23 10 06.5	+0.5
	comp=Z,4.1nm,0.6s,baz=246,slow=2.5,SNR=6.0						
ESDC	Sonseca Array	169.44	28	SKKPbc		23 18 46.8	
	comp=Z,1.0nm,1.1s,baz=107,slow=2.8,SNR=5.0						

DJA 28 23:01:52.7±0.5**, 8°S**±13°×**10°9E**±°**, h97**^{km}±8^{km}**, M3.0**/8**,**
mb4.0/3**, MLv2.5**/8**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KPJI	Karang Pucung	0.30	8	P	Pn	23 02 08.4	+1.4
KPJI				S	Sn	23 02 20.4	+2.9
CTJI	Waduk Cacaban	0.68	25	P	Pn	23 02 10.1	+0.4
BBJI	Bungbulang	1.24	278	P	Pn	23 02 15.8	+0.1
BBJI				S	Sn	23 02 33.6	+0.5
YOGI	Yogyakarta	1.41	98	P	Pn	23 02 18.1	+0.5
UGM	Wanagama	1.64	100	P	Pn	23 02 20.8	+0.2
CNJI	Cibinong	1.77	280	P	Pn	23 02 22.5	+0.2
PCJI	Pacitan	2.33	104	P	Pn	23 02 29.5	0.0
SNJI	Sawahan-Nganju	2.85	93	P	Pn	23 02 37.2	+0.7
JAGI	Jajag, Banyuwa	5.28	99	P	Pn	23 03 09.4	+0.2
	18nm,0.8s						
EDFI	Ende, Flores	12.72	96	P	Pn	23 04 49.7	-0.5
	6.9nm,1.2s						

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*JMA **28** 23:11:33.0±0.2, 24°.1N±0°.6×123°.8E±0°.4, h18^{km}±1^{km}, MV3.3/9, NEAR ISHIGAKIJIMA ISLAND*
JMA Felt I J1 at NEAR ISHIGAKIJIMA ISLAND.
ISC 28 23:11:32.8±1.0**, 24°.12N**±0°.06×**123°.81E**±0°.04**, h18**^{km}±3^{km}**, n14,** σ**0^{s}.72**/22**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.06	187	P	Pg	23 11 36.2	-0.1
HATJ				S	Sg	23 11 38.9	+0.4
JKRS	Kuro-shima	0.21	57	P	Pg	23 11 38.2	+0.2
JKRS				S	Sg	23 11 42.0	+0.4
IRIF	Iriomote-Funau	0.23	340	*i* P	Pb	23 11 38.0	-0.1
IRIF				*e*S	Sg	23 11 41.5	-0.4
JIJ	Ishigaki jima	0.39	51	P	Pg	23 11 40.5	-0.4
JIJ				S	Sg	23 11 45.6	-0.7
JISG	Ishigakijimahi	0.65	44	*i* P	Pb	23 11 45.1	-0.5
JISG				S	Sg	23 11 54.3	-0.1
YOJ	Yonaguni jima	0.81	295	P	Pb	23 11 48.2	-0.1
YOJ	Yonaguni jima	0.81	295	*e*P	Pb	23 11 48.4	0.0
YOJ				*e*S	Sg	23 11 59.4	0.0
JYNG	Yonagunijimaku	0.86	293	P	Pb	23 11 49.2	0.0
JYNG				*e*S	Sb	23 12 00.3	0.0
JTJ	Tarama	0.96	57	*e*P	Pb	23 11 51.0	0.0
JTJ				S	Sg	23 12 03.9	-0.3
NACB	Ninganchiao	2.03	272	P	Pn	23 12 07.2	+1.1
YHNB	Yeheng	2.29	284	P	Pb	23 12 11.9	-1.8
YULB	Yu-li	2.42	253	P	Pn	23 12 11.6	+0.1
SSLB	Suanglung	2.64	263	P	Pn	23 12 16.3	+1.8
TWGBT	Beinan	2.83	243	P	Pn	23 12 16.7	-0.4

IDC 28 23:14:25.2±2.7**, 6°.44S**×**130°.57E, h0**^{km}**, mb3.2**/1**, mbtmp3.7**/4**, ML4.0**/3**, Error ellipse: s-maj=108.6km s-min=30.8km az=78.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.54	202	Pn	Pn	23 17 24.6	-0.5
	1.5nm,0.3s,baz=21,slow=9.2,SNR=27						
FITZ				Sn	Sn	23 19 33.1	-13
	1.5nm,0.3s,baz=135,slow=18,SNR=8.0						
	2.8nm,0.3s						
WRA	Warramunga Arr	13.91	165	Pn	Pn	23 17 44.1	+0.4
	0.6nm,0.3s,baz=351,slow=12,SNR=13						
WRA				Sn	Sn	23 20 07.7	-11
	1.1nm,0.3s,baz=336,slow=24,SNR=9.2						
	0.7nm,0.4s						
ASAR	Alice Springs	17.42	170	Pn	Pn	23 18 29.9	+0.1
	0.3nm,0.3s,baz=343,slow=9.9,SNR=20						
ASAR				Sn	Sn	23 21 31.8	-13
	0.3nm,0.3s,baz=349,slow=27,SNR=7.7						
	0.7nm,0.6s						
MKAR	Makanchi Array	68.08	326	P	P	23 25 26.8	0.0
	0.2nm,0.6s,baz=113,slow=7.4,SNR=1.8						
	0.2nm,0.6s						

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*NOU **28** 23:19:46.8, 39°.17S×176°.44E, h88^{km}, MLv3.6/16, North Island, New Zealand*
*WEL **28** 23:19:48.8±0.8, 39°S±4°×17°6E±°, h64^{km}±6^{km}, M3.5/18, ML3.4/18, MLv3.5/18, Error ellipse: s-maj=5.2km s-min=3.9km az=3.0, confirmed*
ISC 28 23:19:46.7±1.4**, 39°.12S**±0°.03×**176°.38E**±0°.03**, h92**^{km}±6^{km}**, n148,** σ**1^{s}.02**/164**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKZ	Black Stump Fm	0.10	116	P	Pn	23 20 00.1	+0.3
BKZ	Black Stump Fm	0.10	116	S	Sn	23 20 09.1	-0.4
BKZ	Black Stump Fm	0.10	116	P	Pn	23 20 00.1	+0.3
BKZ				S	Sn	23 20 08.7	-0.8
MRHZ	Matea Rd	0.29	6	P	Pn	23 20 00.4	-0.1
MRHZ				S	Sn	23 20 08.8	-1.9
KWHZ	Kaweka Forest	0.30	174	P	Pn	23 20 01.4	+0.9
KWHZ				S	Sn	23 20 10.7	-0.1
KFHS	Kaweka Forest	0.32	168	P	Pn	23 20 01.3	+0.8
HATZ	Hinemaiaia	0.32	316	P	Pn	23 20 00.7	+0.1
HATZ				S	Sn	23 20 08.8	-2.0
NMHZ	Naumai	0.33	86	P	Pn	23 20 01.9	+1.2
NMHZ				S	Sn	23 20 12.0	+1.0
MCHZ	McNeill Hill	0.40	143	P	Pn	23 20 02.5	+1.5
MCHZ				S	Sn	23 20 13.1	+1.5
RITZ	Rihia Road	0.43	290	P	Pn	23 20 01.9	+0.7
RITZ				S	Sn	23 20 11.5	-0.5
MTHZ	Maungataniwha	0.45	53	P	Pn	23 20 01.9	+0.5
MTHZ				S	Sn	23 20 11.7	-0.6
TTHS	Turangi Tongar	0.46	287	P	Pn	23 20 01.9	+0.5
TTHS				S	Sn	23 20 11.3	-1.0
ARHZ	Aropaoanui	0.50	106	P	Pn	23 20 03.0	+1.3
ARHZ				S	Sn	23 20 13.9	+1.1
KRHZ	Kereru	0.52	181	P	Pn	23 20 02.8	+0.9
ETVZ	East Tongariro	0.52	268	P	Pn	23 20 02.7	+0.7
ETVZ				S	Sn	23 20 13.1	-0.3
TMVZ	Te Maari	0.53	271	P	Pn	23 20 02.7	+0.7
TMVZ				S	Sn	23 20 12.9	-0.6
RATZ	Rangitukua	0.54	298	P	Pn	23 20 02.5	+0.4
NTVZ	North Tongarir	0.55	272	P	Pn	23 20 02.9	+0.7
KATZ	Kakaramea	0.55	285	P	Pn	23 20 03.0	+0.7
OTVZ	Oturere	0.56	266	P	Pn	23 20 03.1	+0.8
ALRZ	Allen Road	0.56	357	P	Pn	23 20 02.3	+0.1
ALRZ				S	Sn	23 20 12.4	-1.3
MOVZ	Moawhango	0.56	240	P	Pn	23 20 02.9	+0.6
MOVZ				S	Sn	23 20 13.1	-0.8
WHTZ	Whakaora	0.56	324	P	Pn	23 20 02.9	+0.6
KRVZ	Karewarewa	0.57	273	P	Pn	23 20 03.2	+0.7
SNVZ	South Ngauruho	0.58	264	P	Pn	23 20 03.3	+0.8
SNVZ				S	Sn	23 20 13.6	-0.7
TUVZ	Tukino	0.58	255	P	Pn	23 20 03.4	+0.9
TUVZ				S	Sn	23 20 14.0	-0.3
RAHZ	Arahi	0.59	70	P	Pn	23 20 03.4	+1.0
NNVZ	North Ngauruho	0.59	269	P	Pn	23 20 03.5	+0.8
NGZ	Ngauruhoe	0.61	265	P	Pn	23 20 03.6	+0.8
WTVZ	West Tongariro	0.61	270	P	Pn	23 20 03.4	+0.7
PRRZ	Plateau Road	0.62	1	P	Pn	23 20 02.7	0.0
WPRZ	Whakapapatarin	0.63	344	P	Pn	23 20 02.7	-0.1
WHVZ	Whangaehu Hut	0.64	255	P	Pn	23 20 03.8	+0.8
WNVZ	Wahianoa	0.64	251	P	Pn	23 20 03.8	+0.8
MAVZ	Matarangi	0.65	257	P	Pn	23 20 04.0	+0.7
COVZ	Chateau Observ	0.66	263	P	Pn	23 20 03.8	+0.7
FWVZ	Far West T-bar	0.66	258	P	Pn	23 20 04.1	+0.8
WHHZ	Waihua	0.67	86	P	Pn	23 20 04.4	+1.3
TRVZ	Turoa	0.67	255	P	Pn	23 20 04.2	+0.8
RTZ	Ruatahuna	0.69	43	P	Pn	23 20 03.7	+0.3
MUGZ	Murupara	0.71	25	P	Pn	23 20 03.7	+0.1
TWVZ	Taurewa	0.73	274	P	Pn	23 20 04.4	+0.5
HRRZ	Handcock Road	0.74	354	P	Pn	23 20 04.0	+0.2
MTVZ	Mangateitei	0.75	249	P	Pn	23 20 05.0	+1.0
CKHZ	Cape Kidnapper	0.76	135	P	Pn	23 20 05.6	+1.6
KUTZ	Kaahu Road	0.77	325	P	Pn	23 20 04.6	+0.5
KAHZ	Kahuranaki	0.77	150	P	Pn	23 20 05.8	+1.6
RRRZ	Republican Roa	0.79	8	P	Pn	23 20 04.5	+0.1
PNHZ	Pukenui	0.80	190	P	Pn	23 20 05.4	+0.9
HSRZ	Hossack Road	0.82	353	P	Pn	23 20 05.0	+0.4
PKVZ	Pokaka	0.82	258	P	Pn	23 20 05.7	+1.1
SNGZ	Shannon Statio	0.82	66	P	Pn	23 20 05.7	+1.0
HLRZ	Highlands Stat	0.87	359	P	Pn	23 20 06.3	+1.1
TARZ	Mount Tarawera	0.89	6	P	Pn	23 20 06.0	+0.5
WPHZ	Waipukurau	0.94	177	P	Pn	23 20 07.1	+1.1
UTU	Utuhina	0.96	351	P	Pn	23 20 06.8	+0.7
PXZ	Pawanui	0.98	158	P	Pn	23 20 07.6	+1.3
MKRZ	Makatiti	0.99	4	P	Pn	23 20 07.2	+0.7
TSZ	Takapari Road	0.99	199	P	Pn	23 20 07.5	+1.0
KNZ	Kokohu	1.01	85	P	Pn	23 20 07.6	+0.9
OMRZ	Omania	1.02	360	P	Pn	23 20 07.1	+0.3
RAGZ	Rawiri	1.02	53	P	Pn	23 20 07.7	+0.8
TLZ	Tolley Road	1.03	320	P	Pn	23 20 07.7	+0.7
NGRZ	Ngongotaha	1.03	352	P	Pn	23 20 07.5	+0.5
URZ	Urewera	1.03	34	P	Pn	23 20 07.0	0.0
URZ	Urewera	1.03	34	P	Sn	23 20 21.4	-0.7
URZ	Urewera	1.03	34	P	Pn	23 20 07.1	+0.2
EDRZ	Edgecumbe	1.05	16	P	Pn	23 20 07.4	+0.2
KARZ	Kaharoa	1.11	354	P	Pn	23 20 08.5	+0.6
RIGZ	Rimuhau	1.16	69	P	Pn	23 20 09.3	+0.9
PRHZ	Porangahau	1.16	170	P	Pn	23 20 09.6	+1.1
MARZ	Manawahe	1.16	12	P	Pn	23 20 08.8	+0.3
DVHZ	Dannevirke	1.19	188	P	Pn	23 20 09.4	+0.7
MHGZ	Mahia Peninsul	1.19	92	P	Pn	23 20 10.0	+1.2
PRGZ	Paritu Road	1.19	81	P	Pn	23 20 09.9	+1.1
MWZ	Matawai	1.20	49	P	Pn	23 20 09.5	+0.7
WAZ	Wanganui	1.25	239	P	Pn	23 20 11.5	+2.0
VRZ	Vera Road	1.26	269	P	Pn	23 20 11.1	+1.5
OPRZ	Ohinepanea	1.28	6	P	Pn	23 20 10.2	+0.3
KMRZ	Kaimai	1.32	345	P	Pn	23 20 11.3	+0.9
TKGZ	Te Karaka	1.34	60	P	Pn	23 20 11.4	+0.9
ANWZ	Angora Road	1.34	177	P	Pn	23 20 11.7	+1.1
HIZ	Hauiti	1.34	297	P	Pn	23 20 11.8	+1.2
HIZ	Hauiti	1.34	297	S	Sn	23 20 29.5	+1.0
HIZ	Hauiti	1.34	297	P	Pn	23 20 11.8	+1.2
WHRZ	Whale Island	1.35	20	P	Pn	23 20 11.2	+0.5
POWZ	Post Office Ro	1.35	200	P	Pn	23 20 11.6	+0.8
OHWZ	Ohakea	1.36	217	P	Pn	23 20 12.6	+1.8
TGRZ	Tauranga	1.40	356	P	Pn	23 20 11.9	+0.6
PRWZ	Pori Road	1.46	192	P	Pn	23 20 13.1	+1.0
RUGZ	Raukumara Rang	1.54	42	P	Pn	23 20 13.3	+0.1
TOZ	Tahuroa Road	1.55	333	P	Pn	23 20 14.3	+1.0
BFZ	Birch Farm	1.56	184	P	Pn	23 20 13.9	+0.6
BFZ	Birch Farm	1.56	184	P	Sn	23 20 33.1	-0.4
BFZ	Birch Farm	1.56	184	P	Pn	23 20 13.9	+0.6
CNGZ	Carnagh Statio	1.56	66	P	Pn	23 20 14.5	+1.2
LREZ	Lake Rotokare	1.57	257	P	Pn	23 20 15.5	+2.1
TWGZ	Tauwhareparae	1.57	53	P	Pn	23 20 14.7	+1.2
MRZ	Mangatainoka R	1.65	202	P	Pn	23 20 15.0	+0.5
TIWZ	Tintock	1.69	193	P	Pn	23 20 15.7	+0.6
DREZ	Durham Road	1.69	267	P	Pn	23 20 17.6	+2.5
PREZ	Palmer Road	1.74	262	P	Pn	23 20 18.7	+3.0
HAZ	Te Kaha	1.75	39	P	Pn	23 20 15.5	-0.3
CPWZ	Castlepoint	1.79	184	P	Pn	23 20 17.4	+1.1
PUZ	Puketiti	1.81	55	P	Pn	23 20 14.5	-2.0
PKGZ	Pakihiroa	1.83	47	P	Pn	23 20 16.1	-0.8
MYRZ	Mayor Island	1.84	357	P	Pn	23 20 18.3	+1.3
KHEZ	Kahui Hut	1.84	264	P	Pn	23 20 19.5	+2.4
KHEZ	Kahui Hut	1.84	264	P	Pn	23 20 19.6	+2.6
PKE	Pukeiti	1.86	267	P	Pn	23 20 20.0	+2.7
HOWZ	Holdsworth Sta	1.89	200	P	Pn	23 20 17.7	+0.1
OGWZ	Otaki Gorge	1.93	208	P	Pn	23 20 18.4	+0.3
NBEZ	Newall Road No	1.96	265	P	Pn	23 20 21.1	+2.7
TMWZ	Te Maipa	2.02	191	P	Pn	23 20 19.4	+0.1
WMGZ	Waiomatatini S	2.06	51	P	Pn	23 20 20.2	+0.4
KIW	Kapiti Island	2.07	213	P	Pn	23 20 20.2	+0.2
MTW	Mount Morrison	2.14	198	P	Pn	23 20 20.6	-0.3
MXZ	Matakaoa Point	2.17	45	P	Pn	23 20 21.8	+0.5
MXZ	Matakaoa Point	2.17	45	P	Pn	23 20 22.2	+0.9
CAW	Cannon Point	2.22	207	P	Pn	23 20 21.7	-0.2
MKAZ	Moumakai	2.23	334	P	Pn	23 20 23.4	+1.3
TRWZ	Traveller	2.33	193	P	Pn	23 20 23.2	-0.2
KUZ	Kuaotunu	2.43	347	P	Pn	23 20 25.6	+0.9
KUZ	Kuaotunu	2.43	347	P	Pn	23 20 25.8	+1.1
MSWZ	Moikau Station	2.45	200	P	Pn	23 20 24.1	-0.8
WEL	Wellington	2.49	209	P	Pn	23 20 25.0	-0.4
DUWZ	D’Urville Isla	2.52	228	P	Pn	23 20 25.9	-0.1
SNZO	South Karori	2.53	210	P	Pn	23 20 25.1	-0.9
TCW	Tory Channel	2.63	217	P	Pn	23 20 26.9	-0.5
TUWZ	Tuamarina	2.96	218	P	Pn	23 20 31.6	-0.1
NNZ	Nelson	3.11	227	P	Pn	23 20 33.4	-0.3
BSWZ	Blackbirch Sta	3.22	216	P	Pn	23 20 34.4	-0.8
TKNZ	Takaka Hill	3.24	233	P	Pn	23 20 34.7	-0.8
QRZ	Quartz Range	3.41	239	P	Pn	23 20 38.1	+0.3
QRZ	Quartz Range	3.41	239	P	Pn	23 20 37.5	-0.4
MRNZ	Matariki Terra	3.58	229	P	Pn	23 20 39.4	-0.8
THZ	Tophouse	3.74	224	P	Pn	23 20 41.8	-0.5
KHZ	Kahutara	3.93	212	P	Pn	23 20 44.3	-0.5
KHZ	Kahutara	3.93	212	P	Pn	23 20 44.0	-0.8
DSZ	Denniston Nort	4.36	232	P	Pn	23 20 49.8	-0.9
GVZ	Greta Valley S	4.60	212	P	Pn	23 20 52.1	-1.8
LTZ	Lake Taylor	4.80	219	P	Pn	23 20 55.4	-1.2
AMCZ	Amberley	4.93	214	P	Pn	23 20 57.6	-0.8
INZ	Inchbonnie	5.19	225	P	Pn	23 21 00.6	-1.3
WVZ	Waitaha Valley	5.81	225	P	Pn	23 21 10.8	+0.5
FOZ	Fox Glacier	6.62	226	P	Pn	23 21 21.3	0.0
ODZ	Otahua Downs	7.29	214	P	Pn	23 21 28.6	-1.9
JCZ	Jackson Bay	7.54	227	P	Pn	23 21 33.7	-0.2

DJA 28 23:26:43.7±0.3**, 9°S**±7°×**11°2E**±°**, h72**^{km}±8^{km}**, M3.5**/12**, mb4.3**/3**, MLv3.1**/12**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	Pacitan	0.73	304	P	Pn	23 27 00.5	+1.4
PCJI				S	Sn	23 27 12.8	+2.3
SNJI	Sawahan-Nganju	0.82	358	P	Pn	23 27 01.1	+0.7
SNJI				S	Sn	23 27 13.4	+0.7
SJI	Sawahan	0.87	358	P	Pn	23 27 00.4	-0.4
NGJI	Ngawi	1.28	345	P	Pn	23 27 06.2	+0.4
UGM	Wanagama	1.43	299	P	Pn	23 27 08.4	+0.5
GMJI	Gumukmas	1.67	79	P	Pn	23 27 11.4	+0.4
BLJI	Banyuglugur	1.98	64	P	Pn	23 27 15.1	-0.1
JAGI	Jajag, Banyuwa	2.34	87	P	Pn	23 27 20.4	+0.4
ABJI	Asem Bagus	2.55	72	P	Pn	23 27 21.9	-0.9
KPJI	Karang Pucung	3.10	294	P	Pn	23 27 31.4	+1.1
KHKI	Kahang-Kahang	3.79	87	P	Pn	23 27 40.6	+1.0
BBJI	Bungbulang	4.25	285	P	Pn	23 27 46.6	+0.5
BLSI	Bandar Lampung	7.25	296	P	Pn	23 28 25.6	-1.5
	52nm,0.4s						

IDC 28 23:35:30.4±7.9**, 30°.60S**×**177°.50W, h0**^{km}**, mb3.5**/2**, mbtmp3.5**/2**, Error ellipse: s-maj=337.1km s-min=57.9km az=156.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.53	267	P	P	23 43 36.4	+0.4
	0.2nm,0.5s,baz=111,slow=7.9,SNR=2.0						
	0.2nm,0.5s						
WRA	Warramunga Arr	44.53	272	P	P	23 43 43.5	-0.5
	0.7nm,0.7s,baz=111,slow=8.1,SNR=4.8						
	0.7nm,0.7s						
FINES	FINESS Array B	145.47	340	PKPbc	PKPdf	23 55 08.8	-0.9
	1.8nm,0.7s,baz=49,slow=4.2,SNR=9.5						

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*NEIC **28** 23:35:59.5±0.7, 17°.89N±0°.03×66°.82W±0°.01, h5^{km}±5^{km}, mb3.8/4, ML3.9/36, ML3.7/14(RSPR), Mwr3.6/8(SLM), Error ellipse: s-maj=4.6km s-min=1.7km az=188.0*
*NEIC **28** 23:35:59.4, 17°.90N×66°.85W, h7^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.11; M$_{\theta\theta}$1.62; M$_{\phi\phi}$-1.73; M$_{r\theta}$0.66; M$_{\theta\phi}$3.01; M$_{\phi r}$0.14; Fault plane solution: M$_0$3.51000×10^{14} NP1:φ$_s$105.00000°, δ85.00000°, λ10.00000°. NP2:φ$_s$14.00000°, δ80.00000°, λ175.00000°. Principal axes: T 3.5099, Plg11.0000°, Azm330.0000°; N 0.0016, Plg79.0000°, Azm131.0000°; P -3.5114, Plg3.0000°, Azm239.0000°;*
*OSPL **28** 23:35:59.3±0.3, 17°.85N×66°.88W, h21^{km}±4^{km}, ML3.5, Presumed earthquake*
*RSPR **28** 23:35:59.5, 17°.90N×66°.85W, h7^{km}, MD3.1/14*
ISC 28 23:35:59.0±0.9**, 17°.88N**±0°.04×**66°.82W**±0°.02**, h10**^{km}±6^{km}**, n79,** σ**0^{s}.96**/89**, 6D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.11	329		Pg	23 36 01.6	-0.2
GBPR					Sg	23 36 03.1	-0.8
GBPR	Guanica, Bosqu	0.11	329	⇓*i*P	Pg	23 36 01.6	-0.2
GBPR	Guanica, Bosqu	0.11	329	*e*S	Sg	23 36 03.1	-0.8
MLPR	Magueyes Islan	0.23	293	⇑*i*P	Pg	23 36 03.9	0.0
MLPR	Magueyes Islan	0.23	293	*e*S	Sg	23 36 07.1	0.0
OBIP	Obispado Ponce	0.26	51		Pg	23 36 05.0	+0.6
OBIP				Sg	Sb	23 36 09.7	-0.6
OBIP	Obispado Ponce	0.26	51	⇓*i*P	Pg	23 36 05.0	+0.6
OBIP	Obispado Ponce	0.26	51	*e*S	Sb	23 36 09.7	-0.6
CELP	Cerrillos	0.30	49	Pg	Pg	23 36 05.7	+0.6
CELP				IAML		23 36 11.1	
	14μm,0.2s						
CRPR	Cabo Rojo, PR	0.31	295		Pg	23 36 05.2	0.0
CRPR				Sg	Sg	23 36 09.2	-0.1
CRPR	Cabo Rojo, PR	0.31	295	IAML		23 36 11.0	
	15μm,0.6s						
CRPR				IAML		23 36 11.2	
	12μm,0.6s						
CRPR	Cabo Rojo, PR	0.31	295	⇑*i*P	Pg	23 36 05.2	0.0
CRPR	Cabo Rojo, PR	0.31	295	*e*S	Sg	23 36 09.2	-0.1
CRPR	Cabo Rojo, PR	0.31	295	*i* P	Pg	23 36 05.1	-0.1
CRPR				*e*S	Sg	23 36 09.3	0.0
CRPR				IAML		23 36 09.6	
	comp=Z,15μm,0.4s						
UUPR	Utuado, UPR, P	0.39	14	Pg	Pg	23 36 06.6	0.0
LSP	Las Mesas	0.39	319		Pg	23 36 06.6	-0.1
LSP					Sg	23 36 12.5	+0.5
LSP	Las Mesas	0.39	319	⇓*i*P	Pg	23 36 06.6	-0.1
LSP	Las Mesas	0.39	319	*e*S	Sg	23 36 12.5	+0.5
PRSN	Puerto Rico Se	0.46	317	Pg	Pg	23 36 07.7	-0.3
PRSN				IAML		23 36 16.8	
	comp=Z,17μm,0.3s						
PRSN				IAML		23 36 17.1	
	comp=Z,18μm,0.3s						
PRSN	Puerto Rico Se	0.46	317		Sg	23 36 14.0	-0.1
PRSN	Puerto Rico Se	0.46	317	⇑*i*P	Pg	23 36 07.7	-0.3
PRSN	Puerto Rico Se	0.46	317	*e*S	Sg	23 36 14.0	-0.1
AOPR	Arecibo Observ	0.47	7		Pg	23 36 08.0	-0.2
AOPR				Sg	Sg	23 36 14.2	-0.2
AOPR				IAML		23 36 17.4	
	comp=N,9μm,0.7s						
AOPR	Arecibo Observ	0.47	7	⇑*i*P	Pg	23 36 08.1	-0.2
AOPR	Arecibo Observ	0.47	7	*e*S	Sg	23 36 14.3	-0.2
AOPR	Arecibo Observ	0.47	7	*e*P	Pg	23 36 08.1	-0.2
AOPR				*e*S	Sg	23 36 15.1	+0.6
ECPR	Experimental S	0.62	45	Pg	Pg	23 36 11.0	0.0
ECPR				IAML		23 36 20.6	
	comp=N,12μm,0.2s						
ECPR				IAML		23 36 22.9	
	comp=N,12μm,0.2s						
ECPR	Experimental S	0.62	45	⇓*i*P	Pg	23 36 11.1	0.0
ECPR	Experimental S	0.62	45	*e*S	Sg	23 36 19.7	+0.6
AGPR	Aguadilla, PR	0.65	335		Pg	23 36 11.1	-0.5
AGPR				IAML		23 36 20.3	
	comp=N,4μm,0.5s						
AGPR				IAML		23 36 25.0	
	comp=N,4μm,0.8s						
AGPR	Aguadilla, PR	0.65	335	⇑*i*P	Pg	23 36 11.1	-0.5
AGPR	Aguadilla, PR	0.65	335	*e*S	Sg	23 36 19.5	-0.7
AGPR	Aguadilla, PR	0.65	335	*i* P	Pg	23 36 11.1	-0.5
AGPR				*e*S	Sg	23 36 19.8	-0.4
AGPR				IAML		23 36 21.9	
	comp=Z,2μm,0.2s						
EMPR	Esperanza - Ma	0.66	25		Sg	23 36 20.4	0.0
EMPR	Esperanza - Ma	0.66	25	Pg	Pg	23 36 11.8	+0.1
EMPR				IAML		23 36 23.4	
	comp=Z,7μm,0.7s						
EMPR				IAML		23 36 23.9	
	comp=Z,6μm,0.5s						
EMPR	Esperanza - Ma	0.66	25	⇓*i*P	Pg	23 36 12.0	+0.3
EMPR	Esperanza - Ma	0.66	25	*e*S	Sg	23 36 20.4	0.0
SJG	San Juan	0.68	70		Pg	23 36 12.4	+0.3
SJG				Sg	Sg	23 36 21.6	+0.5
SJG	San Juan	0.68	70	⇓*i*P	Pg	23 36 12.5	+0.3
SJG	San Juan	0.68	70	*e*S	Sg	23 36 21.4	+0.4
SJG	San Juan	0.68	70	*e*P	Pg	23 36 12.4	+0.3
SJG	San Juan	0.68	70	*i* P	Pg	23 36 12.5	+0.3
SJG				*e*S	Sb	23 36 22.4	+0.1
SJG				IAML		23 36 22.8	
	comp=Z,2μm,0.2s						
IDE	Isla Desecheo	0.80	309		Pg	23 36 13.9	-0.7
IDE					Sg	23 36 25.1	0.0
IDE	Isla Desecheo	0.80	309	⇑*i*P	Pg	23 36 13.9	-0.7
IDE	Isla Desecheo	0.80	309	*e*S	Sg	23 36 25.1	0.0
GCPR	Guaynabo City	0.82	58		Pg	23 36 14.7	-0.1
GCPR				Sg	Sg	23 36 25.2	-0.4
GCPR	Guaynabo City	0.82	58	⇑*i*P	Pg	23 36 14.7	-0.1
GCPR	Guaynabo City	0.82	58	*e*S	Sg	23 36 25.1	-0.5
HUMP	Col San Antoni	0.96	74		Pg	23 36 17.1	-0.3
HUMP				Sg	Sb	23 36 30.4	-0.1
HUMP	Col San Antoni	0.96	74	IAML		23 36 31.7	
	comp=Z,2μm,0.3s						
HUMP				IAML		23 36 32.5	
	comp=Z,2μm,0.2s						
HUMP	Col San Antoni	0.96	74	⇑*i*P	Pg	23 36 17.4	-0.1
HUMP	Col San Antoni	0.96	74	*e*S	Sg	23 36 30.1	+0.1
DR12	Loma Pena Alta	2.60	291		Pn	23 36 42.2	+1.1
SDD	Santo Domingo	3.00	282	Pn	Pn	23 36 47.4	+0.8
SABA	Saba	3.42	94	Pn	Pn	23 36 52.4	+0.1
SABA				IAML		23 37 38.9	
	comp=N,203nm,0.6s						
SABA				IAML		23 37 57.4	
	comp=E,448nm,0.8s						
SC01	Santiago de lo	4.01	293		Pn	23 37 01.6	+1.0
SDDR	Presa de Saban	4.38	285		Pn	23 37 06.5	+0.8
SDDR				IAML		23 38 18.0	
	comp=E,135nm,0.9s						
SDDR				IAML		23 38 18.7	
	comp=E,120nm,0.7s						
MBWH	Windy Hill	4.56	104	*e*P	Pn	23 37 09.1	+1.0
MBWH	Windy Hill	4.56	104	*e*S	Sn	23 38 01.0	-0.2
ANWB	Willy Bob	4.80	92	*e*P	Pn	23 37 14.1	+2.8
ANWB	Willy Bob	4.80	92	*e*S	Sb	23 38 17.0	-4.1
DHSZ	Broadband at M	5.09	108	*e*P	Pn	23 37 13.5	-1.8
GDHS	Morne Mazeau,	5.09	108	Pn	Pn	23 37 14.7	-0.7
ATGZ	Broadband at L	5.18	109	*e*P	Pn	23 37 17.2	+0.6
ATGZ	Broadband at L	5.18	109	*e*S	Sn	23 38 15.8	-0.7
CBE	Ff, Capester	5.30	109	Pn	Pn	23 37 19.4	+1.1
CBE	Ff, Capester	5.30	109	*e*S	Sn	23 38 16.1	-3.3
MAGL	Barre de l’ile	5.63	109	Pn	Pn	23 37 24.5	+1.6
DSLB	Salisbury	5.71	114	*e*P	Pn	23 37 24.6	+0.7
DSLB	Salisbury	5.71	114	*e*S	Sn	23 38 26.2	-3.4
DLPL	La Plaine	5.91	115	*e*P	Pn	23 37 16.3	-10
BIM	Bigot	6.45	120	Pn	Pn	23 37 35.5	+1.4
BIM	Bigot	6.45	120	*e*P	Pn	23 37 32.4	-1.7
SDV	Santo Domingo	9.68	203	Pn	Pn	23 38 19.9	+1.3
WHTX	Lake Whitney,	31.01	303	P	P	23 42 17.4	+0.6
WMOK	Wichita Mounta	33.02	307	P	P	23 42 34.8	+0.2
WMOK				IAmb	IAmb	23 42 36.3	
	comp=Z,1.5nm,0.7s						
TX31	Lajitas Ar. Si	35.50	296	P	P	23 42 56.5	+0.3
TXAR	Lajitas Array	35.50	296	P	P	23 42 56.9	+0.7
ANMO	Albuquerque	39.06	304	P	P	23 43 27.5	+1.0
ANMO				IAmb	IAmb	23 43 51.6	
	comp=Z,2.7nm,1.5s						

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*IDC **28** 23:46:12.9±5.5, 36°.86S×177°.82E, h0^{km}, mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=262.1km s-min=62.5km az=171.0*
*NOU **28** 23:47:01.1, 37°.01S×176°.74E, h426^{km}, MLv3.9/14, North Island, New Zealand*
*WEL **28** 23:47:05.9±1.2, 37°S±5°×17°7E±°, h384^{km}±10^{km}, M2.9/25, MLv2.9/25, Error ellipse: s-maj=11.0km s-min=5.6km az=105.2, confirmed*
ISC 28 23:46:60.0±1.2**, 37°.00S**±0°.07×**176°.72E**±0°.09**, h425**^{km}±8^{km}**, n121,** σ**1^{s}.62**/136**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGRZ	Tauranga	0.82	206	P	P	23 47 54.7	+1.7
KUZ	Kuaotunu	0.84	287	P	P	23 47 54.7	+1.5
KUZ	Kuaotunu	0.84	287	P	P	23 47 54.7	+1.5
OPRZ	Ohinepanea	0.86	189	P	P	23 47 54.5	+1.4
WHRZ	Whale Island	0.88	167	P	P	23 47 55.1	+1.8
MARZ	Manawahe	0.99	182	P	P	23 47 55.3	+1.8
EDRZ	Edgecumbe	1.11	179	P	P	23 47 55.6	+1.6
HAZ	Te Kaha	1.14	132	P	P	23 47 55.3	+1.2
HAZ				S	S	23 48 35.8	-2.1
OMRZ	Omania	1.14	194	P	P	23 47 55.7	+1.6
TOZ	Tahuroa Road	1.22	232	P	P	23 47 56.6	+2.2
RUGZ	Raukumara Rang	1.23	142	P	P	23 47 55.3	+0.7
RUGZ				S	S	23 48 35.5	-3.4
MKAZ	Moumakai	1.25	265	P	P	23 47 56.5	+2.0
TARZ	Mount Tarawera	1.25	188	P	P	23 47 56.3	+1.8
WIAZ	Waiheke Island	1.29	279	P	P	23 47 56.6	+1.9
HLRZ	Highlands Stat	1.29	193	P	P	23 47 56.5	+1.8
URZ	Urewera	1.30	166	P	P	23 47 55.5	+0.9
URZ	Urewera	1.30	166	P	P	23 47 55.5	+0.9
URZ				S	S	23 48 36.5	-2.6
RRRZ	Republican Roa	1.35	187	P	P	23 47 56.3	+1.4

HSRZ	Hossack Road	1.37	196	P	P	23 47 56.7	+1.7
MXZ	Matakaoa Point	1.39	115	P	P	23 47 56.3	+1.3
MXZ	Matakaoa Point	1.39	115	P	P	23 47 56.5	+1.5
MXZ				S	S	23 48 38.7	-1.0
ETAZ	East Tamaki Re	1.43	271	P	P	23 47 57.3	+2.0
HRRZ	Handcock Road	1.44	194	P	P	23 47 56.8	+1.6
MBAZ	Motutapu North	1.48	278	P	P	23 47 57.5	+2.0
MUGZ	Murupara	1.48	178	P	P	23 47 56.6	+1.1
MWZ	Matawai	1.48	155	P	P	23 47 56.9	+1.5
MWZ				S	S	23 48 38.8	-1.7
PRRZ	Plateau Road	1.52	190	P	P	23 47 56.9	+1.2
TWGZ	Tauwhareparae	1.55	140	P	P	23 47 57.8	+2.0
WMGZ	Waiomatatini S	1.58	122	P	P	23 47 57.7	+1.8
WPRZ	Whakapapatarin	1.58	196	P	P	23 47 57.4	+1.5
ALRZ	Allen Road	1.59	191	P	P	23 47 57.3	+1.4
RAGZ	Rawiri	1.60	160	P	P	23 47 57.8	+1.8
PUZ	Puketiti	1.63	132	P	P	23 47 57.7	+1.5
TLZ	Tolley Road	1.63	215	P	P	23 47 58.1	+2.0
RTZ	Ruatahuna	1.63	173	P	P	23 47 57.4	+1.2
AWAZ	Awhitu Peninsu	1.66	267	P	P	23 47 58.5	+2.2
TKGZ	Te Karaka	1.70	148	P	P	23 47 58.3	+1.8
MRHZ	Matea Rd	1.85	187	P	P	23 47 58.6	+1.3
SNGZ	Shannon Statio	1.85	165	P	P	23 47 59.0	+1.8
MTHZ	Maungataniwha	1.86	177	P	P	23 47 58.5	+1.2
WATZ	Wairara	1.88	204	P	P	23 47 58.9	+1.5
CNGZ	Carnagh Statio	1.90	142	P	P	23 47 59.9	+2.4
RIGZ	Rimuhau	1.90	155	P	P	23 47 59.7	+2.1
RAHZ	Arahi	1.94	171	P	P	23 47 59.6	+1.9
RATZ	Rangitukua	2.01	202	P	P	23 47 59.6	+1.4
RITZ	Rihia Road	2.09	199	P	P	23 48 00.4	+1.7
NMHZ	Naumai	2.10	178	P	P	23 48 01.0	+2.2
HIZ	Hauiti	2.12	224	P	P	23 48 00.3	+1.5
HIZ	Hauiti	2.12	224	P	P	23 48 00.9	+2.1
WHHZ	Waihua	2.12	169	P	P	23 48 00.9	+2.1
PRGZ	Paritu Road	2.13	155	P	P	23 48 00.9	+2.0
KNZ	Kokohu	2.16	160	P	P	23 48 01.0	+2.0
BKZ	Black Stump Fm	2.17	185	P	P	23 48 00.2	+1.0
BKZ	Black Stump Fm	2.17	185	P	P	23 48 00.3	+1.1
WCZ	Waipu Caves	2.18	298	P	P	23 48 01.1	+1.7
NTVZ	North Tongarir	2.26	201	P	P	23 48 01.4	+1.6
KRVZ	Karewarewa	2.26	202	P	P	23 48 01.7	+1.8
TMVZ	Te Maari	2.26	200	P	P	23 48 01.2	+1.4
ARHZ	Aropaoanui	2.27	175	P	P	23 48 01.8	+2.1
ETVZ	East Tongariro	2.28	200	P	P	23 48 01.3	+1.3
WTVZ	West Tongariro	2.30	202	P	P	23 48 01.4	+1.3
NNVZ	North Ngauruho	2.30	202	P	P	23 48 01.5	+1.4
OTVZ	Oturere	2.32	201	P	P	23 48 01.5	+1.3
SNVZ	South Ngauruho	2.35	201	P	P	23 48 01.8	+1.4
NGZ	Ngauruhoe	2.35	202	P	P	23 48 01.7	+1.3
MHGZ	Mahia Peninsul	2.35	157	P	P	23 48 02.7	+2.4
COVZ	Chateau Observ	2.39	202	P	P	23 48 02.0	+1.4
TUVZ	Tukino	2.42	200	P	P	23 48 02.1	+1.2
FWVZ	Far West T-bar	2.44	202	P	P	23 48 02.3	+1.2
KWHZ	Kaweka Forest	2.44	185	P	P	23 48 02.4	+1.5
MAVZ	Matarangi	2.45	202	P	P	23 48 02.6	+1.4
MCHZ	McNeill Hill	2.45	180	P	P	23 48 02.9	+2.0
WHVZ	Whangaehu Hut	2.45	201	P	P	23 48 02.4	+1.2
TRVZ	Turoa	2.48	201	P	P	23 48 02.6	+1.2
WNVZ	Wahianoa	2.49	200	P	P	23 48 02.6	+1.2
MOVZ	Moawhango	2.53	197	P	P	23 48 02.3	+0.8
PKVZ	Pokaka	2.53	205	P	P	23 48 02.6	+1.1
MTVZ	Mangateitei	2.58	202	P	P	23 48 03.3	+1.4
VRZ	Vera Road	2.63	215	P	P	23 48 03.8	+1.6
KRHZ	Kereru	2.66	186	P	P	23 48 03.8	+1.4
CKHZ	Cape Kidnapper	2.67	174	P	P	23 48 04.6	+2.1
KAHZ	Kahuranaki	2.80	177	P	P	23 48 05.6	+2.2
PNHZ	Pukenui	2.94	188	P	P	23 48 05.8	+1.3
PXZ	Pawanui	3.03	178	P	P	23 48 07.3	+2.2
WPHZ	Waipukurau	3.07	184	P	P	23 48 07.2	+1.8
WAZ	Wanganui	3.07	206	P	P	23 48 06.8	+1.3
OUZ	Omahuta	3.09	304	P	P	23 48 07.2	+1.5
OUZ	Omahuta	3.09	304	P	P	23 48 07.2	+1.5
TSZ	Takapari Road	3.12	191	P	P	23 48 07.1	+1.3
KHEZ	Kahui Hut	3.13	222	P	P	23 48 08.3	+2.3
KHEZ	Kahui Hut	3.13	222	P	P	23 48 08.3	+2.3
PRHZ	Porangahau	3.27	181	P	P	23 48 09.0	+2.0
PRHZ				S	S	23 49 02.8	+1.1
DVHZ	Dannevirke	3.33	187	P	P	23 48 08.9	+1.4
DVHZ				S	S	23 49 02.0	-0.6
OHWZ	Ohakea	3.39	198	P	P	23 48 09.6	+1.6
OHWZ				S	S	23 49 03.3	-0.2
ANWZ	Angora Road	3.46	183	P	P	23 48 10.7	+2.1
ANWZ				S	S	23 49 04.5	-0.2
POWZ	Post Office Ro	3.47	192	P	P	23 48 09.9	+1.1
POWZ				S	S	23 49 05.1	+0.3
PRWZ	Pori Road	3.60	189	P	P	23 48 11.6	+1.7
BFZ	Birch Farm	3.70	186	P	P	23 48 12.3	+1.7
BFZ	Birch Farm	3.70	186	P	P	23 48 12.4	+1.7
MRZ	Mangatainoka R	3.77	193	P	P	23 48 12.2	+1.0
MRZ				S	S	23 49 08.2	-1.3
TIWZ	Tintock	3.83	190	P	P	23 48 13.7	+1.8
TIWZ				S	S	23 49 09.6	-1.0
CPWZ	Castlepoint	3.93	186	P	P	23 48 15.3	+2.6
OGWZ	Otaki Gorge	4.00	197	P	P	23 48 14.3	+0.9
OGWZ				S	S	23 49 11.9	-1.4
HOWZ	Holdsworth Sta	4.01	193	P	P	23 48 14.3	+0.9
HOWZ				S	S	23 49 11.8	-1.6
KIW	Kapiti Island	4.11	200	P	P	23 48 15.1	+0.8
KIW				S	S	23 49 12.8	-2.4
TMWZ	Te Maipa	4.16	189	P	P	23 48 16.4	+1.6
MTW	Mount Morrison	4.26	192	P	P	23 48 16.9	+1.2
CAW	Cannon Point	4.30	197	P	P	23 48 17.1	+1.0
DUWZ	D'Urville Isla	4.38	209	P	P	23 48 17.3	+0.4
MSWZ	Moikau Station	4.56	194	P	P	23 48 19.7	+1.1
SNZO	South Karori	4.58	199	P	P	23 48 19.8	+1.0
TCW	Tory Channel	4.62	204	P	P	23 48 19.7	+0.6
BHW	Baring Head	4.63	197	P	P	23 48 20.1	+0.8
QRZ	Quartz Range	5.03	219	P	P	23 48 23.6	+0.4
KHZ	Kahutara	5.94	203	P	P	23 48 33.5	+1.0
RPZ	Rata Peaks	7.98	211	P	P	23 48 56.7	+1.8
ODZ	Otahua Downs	9.26	208	P	P	23 49 10.7	+1.9
JCZ	Jackson Bay	9.29	218	P	P	23 49 10.1	+0.8
ASAR	Alice Springs	38.95	278	P	P	23 53 48.6	+0.9
	1.0nm,0.5s,baz=119,slow=7.8,SNR=32						
	1.0nm,0.5s						
WRA	Warramunga Arr	40.58	283	P	P	23 54 00.3	-0.6
	0.3nm,0.4s,baz=124,slow=7.5,SNR=6.5						
	0.3nm,0.4s						
FINES	FINESS Array B	149.40	332	PKPbc	PKPab	00 06 03.3	-2.1
	1.1nm,0.8s,baz=69,slow=5.5,SNR=3.7						

NEIC ***29*** *00:06:38.8±1.4, 17°.85N±0°.04×66°.83W±0°.02, h3^{km}±6^{km}, mb4.2/26, ML4.2/42, Md3.9/11(RSPR), Mwr3.9/9(SLM), Error ellipse: s-maj=6.6km s-min=1.7km az=201.0*

IDC ***29*** *00:06:38.6±0.9, 17°.87N×66°.83W, h0^{km}, mb4.0/10, mbtmp4.0/11, ML3.1/1, MS3.1/7, Error ellipse: s-maj=21.5km s-min=8.8km az=168.0*

OSPL ***29*** *00:06:39.1, 17°.85N×66°.88W, h23^{km}, ML3.9, Presumed earthquake*

NEIC ***29*** *00:06:39.6, 17°.92N×66°.84W, h7^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.40; M$_{\theta\theta}$5.87; M$_{\phi\phi}$-5.47; M$_{r\theta}$1.88; M$_{\theta\phi}$6.44; M$_{\phi r}$-1.48; Fault plane solution: M$_0$8.91000×10^{14} NP1:φ$_s$290.00000°, δ85.00000°, λ-15.00000°. NP2:φ$_s$21.00000°, δ75.00000°, λ-175.00000°. Principal axes: T 8.9152, Plg7.0000°, Azm337.0000°; N -0.0015, Plg74.0000°, Azm92.0000°; P -8.9137, Plg14.0000°, Azm245.0000°;*

RSPR ***29*** *00:06:39.7, 17°.92N×66°.84W, h7^{km}, MD3.9/11*

ISC 29 00:06:38.6±1.1, **17°.83N**±0°.04×**66°.83W**±0°.02, **h6**^{km}±7^{km}, **n132**, σ**1**^{s}**13**/137, **mb4.2**/21, **MS3.2**/5, **2C-9D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	Guanica, Bosqu	0.15	343		Pg	00 06 41.5	-0.2
GBPR	Guanica, Bosqu	0.15	343	⇓*i*P	Pg	00 06 41.5	-0.2
MLPR	Magueyes Islan	0.24	305	⇓*i*P	Pg	00 06 43.9	+0.4
MLPR	Magueyes Islan	0.24	305	*e*S	Sg	00 06 46.9	+0.2
OBIP	Obispado Ponce	0.30	45		Pg	00 06 44.8	+0.3
OBIP				Sg	Sg	00 06 48.5	0.0
OBIP	Obispado Ponce	0.30	45	⇓*i*P	Pg	00 06 44.9	+0.3
OBIP	Obispado Ponce	0.30	45	*e*S	Sg	00 06 48.8	+0.3
CRPR	Cabo Rojo, PR	0.32	304	Pg	Pg	00 06 45.0	+0.3
CRPR				IAML		00 06 51.0	
	43µm,0.5s						
CRPR				IAML		00 06 51.2	
	39µm,0.6s						
CRPR	Cabo Rojo, PR	0.32	304	Sg	Sg	00 06 49.1	+0.2
CRPR	Cabo Rojo, PR	0.32	304	⇑*i*P	Pg	00 06 45.1	+0.3
CRPR	Cabo Rojo, PR	0.32	304	*e*S	Sg	00 06 49.2	+0.2
CRPR	Cabo Rojo, PR	0.32	304	ASPG		00 06 44.7	
	comp=Z,12µm,0.3s						
CRPR				⇑*i*P	Pg	00 06 45.1	+0.3
CRPR				ATPG		00 06 47.0	
	comp=Z,40µm,0.3s						
CRPR				ASSG		00 06 48.9	
	comp=Z,144µm,0.3s						
CRPR				*e*S	Sg	00 06 49.3	+0.3
CRPR				IAML		00 06 49.6	
	comp=Z,36µm,0.5s						
CRPR				ATSG		00 06 50.3	
	comp=Z,479µm,0.3s						
CELP	Cerrillos	0.34	45	Pg	Pg	00 06 45.5	+0.2
CELP				IAML		00 06 51.0	
	comp=Z,29µm,0.2s						
LSP	Las Mesas	0.42	325		Pg	00 06 46.6	-0.2
LSP	Las Mesas	0.42	325	⇓*i*P	Pg	00 06 46.6	-0.2
UUPR	Utuado, UPR, P	0.43	14	Pg	Pg	00 06 46.5	-0.6
PRSN	Puerto Rico Se	0.49	322	Pg	Pg	00 06 47.6	-0.4
PRSN	Puerto Rico Se	0.49	322		Sg	00 06 54.5	+0.1
PRSN	Puerto Rico Se	0.49	322	⇑*i*P	Pg	00 06 47.7	-0.4
PRSN	Puerto Rico Se	0.49	322	*e*S	Sg	00 06 54.5	+0.1
AOPR	Arecibo Observ	0.52	8		Pg	00 06 47.9	-0.7
AOPR				Sg	Sg	00 06 53.7	-1.8
AOPR				IAML		00 06 58.9	
	comp=N,20µm,0.3s						
AOPR	Arecibo Observ	0.52	8	⇑*i*P	Pg	00 06 48.0	-0.7
AOPR	Arecibo Observ	0.52	8	*e*S	Sg	00 06 54.2	-1.2
AOPR	Arecibo Observ	0.52	8	*e*P	Pg	00 06 48.0	-0.7
ECPR	Experimental S	0.66	42	Pg	Pg	00 06 50.8	-0.5
ECPR				IAML		00 07 06.0	
	comp=N,15µm,0.2s						
ECPR				IAML		00 07 09.4	
	comp=N,17µm,0.2s						
ECPR	Experimental S	0.66	42	⇓*i*P	Pg	00 06 50.9	-0.4
ECPR	Experimental S	0.66	42	*e*S	Sg	00 06 59.4	-0.6
AGPR	Aguadilla, PR	0.69	337		Pg	00 06 51.0	-0.8
AGPR				IAML		00 07 00.3	
	comp=N,12µm,0.3s						
AGPR				IAML		00 07 04.7	
	comp=N,11µm,0.4s						
AGPR	Aguadilla, PR	0.69	337	⇑*i*P	Pg	00 06 51.1	-0.8
AGPR	Aguadilla, PR	0.69	337	*e*S	Sg	00 06 59.8	-1.0
AGPR	Aguadilla, PR	0.69	337	ASPG		00 06 50.6	
	comp=Z,33µm,0.2s						
AGPR				⇑*i*P	Pg	00 06 51.0	-0.8
AGPR				ATPG		00 06 51.6	
	comp=Z,139µm,0.2s						
AGPR				ASSG		00 06 59.3	
	comp=Z,38µm,0.3s						
AGPR				*e*S	Sg	00 06 59.7	-1.1
AGPR				ATSG		00 07 00.7	
	comp=Z,143µm,0.3s						
AGPR				IAML		00 07 01.9	
	comp=Z,5µm,0.3s						
EMPR	Esperanza - Ma	0.70	24		Sg	00 07 01.2	-0.1
EMPR	Esperanza - Ma	0.70	24	Pg	Pg	00 06 51.7	-0.5
EMPR				IAML		00 07 03.3	
	comp=Z,19µm,0.7s						
EMPR				IAML		00 07 03.8	
	comp=Z,15µm,0.9s						
EMPR	Esperanza - Ma	0.70	24	⇑*i*P	Pg	00 06 52.0	-0.2
EMPR	Esperanza - Ma	0.70	24	*e*S	Sg	00 07 01.2	-0.1
SJG	San Juan	0.71	67	Pg	Pg	00 06 52.3	+0.1
	comp=Z,245nm,0.3s,baz=265,slow=14,SNR=157						
SJG				Lg	Lg	00 07 01.3	
	comp=Z,1µm,0.3s,baz=348,slow=20,SNR=31						
SJG	San Juan	0.71	67		Pg	00 06 52.2	+0.1
SJG				Sg	Sg	00 07 01.7	+0.3
SJG				IAML		00 07 03.6	
	comp=Z,7µm,0.3s						
SJG	San Juan	0.71	67	⇓*i*P	Pg	00 06 52.4	+0.1
SJG	San Juan	0.71	67	*e*S	Sg	00 07 01.8	+0.3
SJG	San Juan	0.71	67	*e*P	Pg	00 06 52.2	+0.1
SJG	San Juan	0.71	67	*e*P	Pg	00 06 52.3	+0.1
SJG	San Juan	0.71	67	ASPG		00 06 51.9	
	comp=Z,3µm,0.3s						
SJG				⇓*i*P	Pg	00 06 52.2	+0.1
SJG				ATPG		00 06 52.9	
	comp=Z,8µm,0.3s						
SJG				ASSG		00 07 01.8	
	comp=Z,33µm,0.3s						
SJG				*e*S	Sg	00 07 02.2	+0.8
SJG				IAML		00 07 03.6	
	comp=Z,3µm,0.5s						
SJG				ATSG		00 07 03.9	
	comp=Z,134µm,0.3s						
IDE	Isla Desecheo	0.82	312		Pg	00 06 53.8	-0.7
IDE					Sg	00 07 04.7	-0.5
IDE	Isla Desecheo	0.82	312	⇑*i*P	Pg	00 06 53.8	-0.7
IDE	Isla Desecheo	0.82	312	*e*S	Sg	00 07 04.7	-0.5
GCPR	Guaynabo City	0.86	56		Pg	00 06 54.5	-0.6
GCPR				Sg	Sg	00 07 05.2	-1.0
GCPR	Guaynabo City	0.86	56	⇑*i*P	Pg	00 06 54.6	-0.5
GCPR	Guaynabo City	0.86	56	*e*S	Sg	00 07 05.6	-0.6
HUMP	Col San Antoni	0.98	71		Pg	00 06 56.8	-0.6
HUMP				Sg	Sg	00 07 10.1	-0.2
HUMP	Col San Antoni	0.98	71	⇓*i*P	Pg	00 06 56.9	-0.6
HUMP	Col San Antoni	0.98	71	*e*S	Sg	00 07 09.7	-0.6
DR12	Loma Pena Alta	2.60	292		Pn	00 07 22.0	+0.7
SDD	Santo Domingo	3.00	283	Pn	Pn	00 07 26.7	+0.1
SABA	Saba	3.43	93		Pn	00 07 33.4	+0.8
SABA				IAML		00 08 37.5	
	comp=E,797nm,0.7s						
SABA				IAML		00 08 44.7	
	comp=N,407nm,0.9s						
SABA	Saba	3.43	93	⇓*e*P	Pn	00 07 33.5	+0.9
SABA	Saba	3.43	93	*e*S	Sn	00 08 12.4	-1.1
SEUS	St. Eustatius	3.69	95	Pn	Pn	00 07 36.8	+0.7
SEUS				IAML		00 08 07.3	
	comp=E,312nm,0.1s						
SEUS				IAML		00 08 57.0	
	comp=N,352nm,0.8s						
SKI	Saint Kitts	3.94	97	*e*P	Pn	00 07 42.6	+3.1
SC01	Santiago de lo	4.02	294		Pn	00 07 41.9	+1.1
SDDR	Presa de Saban	4.38	286		Pn	00 07 46.7	+0.9
SDDR				IAML		00 09 00.8	
	comp=N,350nm,0.8s						
SDDR				IAML		00 09 07.2	
	comp=N,256nm,1.3s						
MBWH	Windy Hill	4.56	103	*e*P	Pn	00 07 49.0	+0.7
MBWH	Windy Hill	4.56	103	*e*S	Sn	00 08 41.1	-0.6
MLYT	Lee's Yard	4.57	103	*e*P	Pn	00 07 49.3	+1.0
MLYT	Lee's Yard	4.57	103	*e*S	Sn	00 08 43.5	+1.8
ANWB	Willy Bob	4.81	91	*e*P	Pn	00 07 52.8	+1.2
ANWB	Willy Bob	4.81	91	*e*S	Sn	00 08 46.7	-1.0
DHSZ	Broadband at M	5.09	107	*e*P	Pn	00 07 56.2	+0.8
DHSZ	Broadband at M	5.09	107	*e*S	Sn	00 08 52.3	-2.2
GDHS	Morne Mazeau,	5.09	107		Pn	00 07 55.6	+0.1
ATGZ	Broadband at L	5.18	109	*e*P	Pn	00 07 57.1	+0.4
ATGZ	Broadband at L	5.18	109	*e*S	Sn	00 08 53.4	-3.4
MMLZ	Guadeloupe Bro	5.25	109	*e*P	Pn	00 08 00.4	+2.7
ABD	La Joyeuse, An	5.28	104	Pn	Pn	00 07 58.4	+0.3
ABD				IAML		00 09 01.1	
	comp=N,171nm,1.0s						
ABD				IAML		00 10 44.4	
	comp=E,164nm,1.6s						
CBE	Ff, Capester	5.30	109		Pn	00 07 59.6	+1.3
CBE				IAML		00 09 26.2	
	comp=E,199nm,0.6s						
TBG	Guadaloupe-3	5.34	111	*e*P	Pn	00 07 57.9	-1.0
TDBA	Terre de Bas,	5.35	111	Pn	Pn	00 07 59.1	+0.1
TDBA				IAML		00 09 00.2	
	comp=E,131nm,1.1s						
TDBA				IAML		00 10 57.3	
	comp=N,104nm,1.1s						
MAGL	Barre de l'ile	5.63	109	Pn	Pn	00 08 03.0	+0.1
DSLB	Salisbury	5.71	114	*e*P	Pn	00 08 04.6	+0.7
DSDZ	La Diserade, G	5.72	104	*e*P	Pn	00 07 54.5	-10
H05N1	Guadeloupe/Mar	5.72	104	Pn	Pn	00 08 05.1	+0.9
BIM	Bigot	6.44	120	*e*P	Pn	00 08 14.2	+0.1
BIM	Bigot	6.44	120	*e*S	Sn	00 09 26.1	-1.8
H05S1	Guadeloupe/Mar	6.68	120	Pn	Pn	00 08 19.4	+2.1
SLBI	Saint Lucia, B	6.79	123	*e*P	Pn	00 08 17.7	-1.1
SLBI	Saint Lucia, B	6.79	123	*e*S	Sn	00 09 31.5	-4.9
SDV	Santo Domingo	9.63	203	Pn	Pn	00 08 58.6	+0.7
	comp=N,1.6nm,0.3s,baz=27,slow=6.4,SNR=7.9						
SDV				Sn	Sn	00 10 41.7	-4.9
	comp=N,0.5nm,0.3s,baz=324,slow=17,SNR=1.5						
SDV				LR	LR	00 12 42.5	
	comp=N,58nm,21.2s,baz=68,slow=38						
	comp=N,2.8nm,0.3s						
SDV	Santo Domingo	9.63	203		Pn	00 08 58.8	+0.8
MTDJ	Mount Denham	10.19	274	Pn	Pn	00 09 05.3	-0.3
BBSR	BB Station	14.61	7	Pn	Pn	00 10 03.2	-2.6
ROSC	El Rosal	14.84	210	Pn	P	00 10 17.2	+1.6
	comp=N,1.4nm,0.3s,baz=218,slow=23,SNR=5.6						
SOR	Soroa	15.95	291	Pn	Pn	00 10 25.2	+1.5
SOR				IAmb	IAmb	00 10 39.4	
	comp=Z,16nm,1.1s						
BOAV	Boa Vista	16.54	157	Pn	Pn	00 10 31.4	0.0
456A	Hilliard	18.86	316	P	P	00 10 58.7	-0.7
Y60A	Bolivia	19.06	330	P	P	00 11 01.5	-0.2
JTS	Las Juntas de	19.10	249	LR	LR	00 18 40.9	
	comp=Z,35nm,18.7s,baz=60,slow=38						
NHSC	New Hope	19.38	324		P	00 11 05.4	+0.3
V61A	Roper	19.87	336	P	P	00 11 09.7	-0.8
V61A				IAmb	IAmb	00 11 37.4	
	comp=Z,25nm,0.8s						
OTAV	Otavalo	20.89	214	P	P	00 11 19.7	-2.5
OTAV				IAmb	IAmb	00 11 52.6	
	comp=Z,9.8nm,1.2s						
HODGE	Hodges	21.38	323	P	P	00 11 26.4	-0.5
HODGE				IAmb	IAmb	00 11 34.2	
	comp=Z,12nm,1.2s						
GOGA	Godfrey	21.53	319	P	P	00 11 27.4	-1.1
KMSC	Kings Mountain	21.54	326	P	P	00 11 29.0	+0.4
KMSC				IAmb	IAmb	00 11 47.0	
	comp=Z,6.9nm,0.8s						
T57A	Hurt	22.01	333		P	00 11 33.8	+0.1
T57A				IAmb	IAmb	00 11 39.9	
	comp=Z,6.7nm,0.9s						
V55A	Taylorsville	22.02	327		P	00 11 33.7	-0.1
V55A				IAmb	IAmb	00 11 60.0	
	comp=Z,24nm,1.5s						
R58B	Mineral	22.27	336	P	P	00 11 36.4	-0.1
R58B				IAmb	IAmb	00 11 52.1	
	comp=Z,4.9nm,0.6s						
BLA	Blacksburg	22.71	331		P	00 11 40.8	-0.4
BLA				IAmb	IAmb	00 12 06.4	
	comp=Z,11nm,0.8s						
TKL	Tuckaleechee C	23.27	323	LR	LR	00 22 04.8	
	comp=Z,28nm,18.2s,baz=54,slow=40						
CPCT	Cooper Cave	23.55	322	P	P	00 11 49.4	-0.5
CPCT				IAmb	IAmb	00 12 12.3	
	comp=Z,7.2nm,0.6s						
S54A	Dingess, Beckl	23.60	330	P	P	00 11 49.2	-1.1
S54A				IAmb	IAmb	00 12 07.0	
	comp=Z,11nm,1.2s						
T50A	Nancy	24.84	324	P	P	00 12 02.4	+0.7
T50A				IAmb	IAmb	00 12 04.3	
	comp=Z,6.2nm,0.9s						
CMIG	Matias Romero	26.76	273	LR	LR	00 22 22.2	
	comp=Z,35nm,20.0s,baz=17,slow=35						
VILB	Vilhena	31.28	167	P	P	00 12 58.5	-1.1
WMOK	Wichita Mounta	33.04	307	P	P	00 13 14.1	-0.9
WMOK				IAmb	IAmb	00 13 16.2	
	comp=Z,2.8nm,0.8s						
SIV	San Ignacio	34.08	170	P	P	00 13 30.9	+6.8
	comp=Z,0.7nm,0.5s,baz=350,slow=11,SNR=3.7						
SIV				LR	LR	00 27 51.6	
	comp=Z,46nm,19.4s,baz=292,slow=37						
TXAR	Lajitas Array	35.51	296	P	P	00 13 37.4	+0.9
	comp=Z,1.1nm,0.6s,baz=110,slow=9.7,SNR=13						
TXAR				ScP	ScP	00 19 54.2	+1.6
	comp=Z,0.3nm,0.7s,baz=107,slow=4.5,SNR=4.2						
	comp=Z,1.1nm,0.6s						
TXAR	Lajitas Array	35.51	296	P	P	00 13 37.0	+0.5
TX31	Lajitas Ar. Si	35.51	296	P	P	00 13 37.4	+0.9
ECSD	EROS Data Cent	36.01	322	P	P	00 13 40.4	-0.1
ECSD				IAmb	IAmb	00 13 42.3	
	comp=Z,3.5nm,0.8s						
VHRN	Van Horn	36.91	298	P	P	00 13 49.2	+0.7
SCHQ	Schefferville	36.93	360	P	P	00 13 49.1	+0.9
	comp=Z,4.2nm,1.0s,baz=222,slow=12,SNR=2.1						
	comp=Z,4.2nm,1.0s						
SDCO	Great Sand Dun	39.19	308		P	00 14 07.0	-0.9
PDAR	Pinedale Array	43.85	314	P	P	00 14 46.8	+0.8
	comp=Z,0.7nm,0.8s,baz=116,slow=6.8,SNR=5.8						
	comp=Z,0.7nm,0.8s						
PDAR	Pinedale Array	43.85	314	P	P	00 14 46.4	+0.4
CPUP	Villa Florida	44.86	168	P	P	00 14 55.1	+1.3
	comp=Z,1.5nm,0.8s,baz=338,slow=11,SNR=5.2						
	comp=Z,1.5nm,0.8s						
CPUP	Villa Florida	44.86	168	P	P	00 14 54.1	+0.3
NVAR	Mina Array Bea	49.13	306	LR	LR	00 37 36.3	
	comp=Z,29nm,19.6s,baz=318,slow=38						
YKA	Yellowknife Ar	55.48	335	P	P	00 16 13.9	0.0
	comp=Z,1.3nm,0.7s,baz=114,slow=6.5,SNR=23						
	comp=Z,1.3nm,0.7s						
ESDC	Sonseca Array	58.08	54	P	P	00 16 34.5	+1.6
	comp=Z,1.2nm,0.9s,baz=267,slow=7.0,SNR=8.6						
	comp=Z,1.2nm,0.9s						
TORD	Torodi Ar. Bea	65.89	83	P	P	00 17 25.9	+0.1
	comp=Z,1.4nm,1.1s,baz=291,slow=3.7,SNR=4.2						
	comp=Z,1.4nm,1.1s						
ILAR	Eielson Array	69.79	333	P	P	00 17 49.6	+0.1
	comp=Z,1.0nm,1.0s,baz=97,slow=4.8,SNR=7.4						
	comp=Z,1.0nm,1.0s						
ILAR	Eielson Array	69.79	333	P	P	00 17 50.0	+0.5
ARCES	ARCESS Array B	74.26	21	P	P	00 18 18.0	+1.7
	comp=Z,7.8nm,1.0s,baz=339,slow=5.7,SNR=4.2						
ARCES				LR	LR	00 49 52.1	
	comp=Z,56nm,18.5s,baz=248,slow=35						
	comp=Z,7.8nm,1.0s						
FINES	FINESS Array B	75.90	30	P	P	00 18 27.2	+1.4
	comp=Z,2.3nm,0.9s,baz=241,slow=7.9,SNR=3.5						
	comp=Z,2.3nm,0.9s						

VAO ***29*** *00:11:04.7±1.2, 14°.77S×72°.31W, h108^{km}±7^{km}, mb4.5, Presumed earthquake*

IDC ***29*** *00:11:08.0±2.1, 14°.76S×71°.81W, h98^{km}±18^{km}, mb3.9/10, mbtmp4.2/15, MS3.1/2, Error ellipse: s-maj=23.1km s-min=12.6km az=39.0*

NEIC ***29*** *00:11:10.3±2.1, 14°.82S±0°.08×71°.9W±0°.1, h114^{km}±5^{km}, mb4.6/38, Error ellipse: s-maj=14.8km s-min=10.0km az=64.0*

ISC 29 00:11:09.8±0.4, **14°.81S**±0°.05×**71°.92W**±0°.06, **h124**^{km}, **n117**, σ**1**^{s}**42**/118, **mb4.4**/20, **Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB18	Visviri	3.62	140		Pn	00 12 07.8	+2.8
PB18				Sn	Sn	00 12 48.2	+0.7
AP01	Chacalluta	3.85	157		Pn	00 12 06.8	-0.6
AP01				Sn	Sn	00 12 51.2	-0.9
LPAZ	La Paz	3.94	112	P	Pn	00 12 11.4	+2.2
	33nm,0.4s,baz=292,slow=8.6,SNR=121						
LPAZ	La Paz	3.94	112	*e*P	Pn	00 12 08.7	-0.6
PB12	IPOC Station P	4.08	158		Pn	00 12 09.4	-1.2
PB16	IPOC Station P	4.20	147		Pn	00 12 13.5	+0.8
PB11	IPOC Station P	5.38	157		Pn	00 12 25.8	-2.3
GO01	Chusmiza	5.49	152		Pn	00 12 29.4	-0.5
NNA	Nana	5.55	300	P	Pn	00 12 28.7	-1.6
	44nm,0.3s,baz=138,slow=12,SNR=18						
NNA				S	Sn	00 13 27.0	-6.0
	118nm,0.3s,baz=19,slow=13,SNR=12						
NNA	Nana	5.55	300		Pn	00 12 28.2	-2.1
HMBC	Humberstone	5.77	161		Pn	00 12 30.5	-2.9
PB08	IPOC Station P	5.92	154		Pn	00 12 34.6	-1.0
TA01	Diego Aracena	5.96	164		Pn	00 12 33.0	-2.7
PB01	IPOC Station P	6.62	160		Pn	00 12 41.5	-3.2
PB09	IPOC Station P	7.40	160		Pn	00 12 53.3	-2.0
ATAH	Atahualpa	9.93	320	P	Pn	00 13 28.4	-1.3
	4.9nm,0.8s,baz=152,slow=17,SNR=2.8						
SIV	San Ignacio	10.53	98	P	Pn	00 13 35.4	-2.1
	4.1nm,0.5s,baz=286,slow=13,SNR=14						
SIV				S	Sn	00 15 32.2	-1.4
	4.8nm,0.6s,baz=350,slow=9.0,SNR=3.7						
SIV				LR	LR	00 18 33.2	
	comp=Z,66nm,19.6s,baz=291,slow=43						
VILB	Vilhena	11.53	82		Pn	00 13 48.1	-2.7
VILB	Vilhena	11.53	82	*e*P	Pn	00 13 48.2	-2.6
PTLB	Pontes e Lacer	12.36	95		Pn	00 14 00.7	-1.0
PTLB	Pontes e Lacer	12.36	95	*e*P	Pn	00 14 00.5	-1.2
TEFE	Tefe	13.33	33	*e*P	Pn	00 14 11.9	-2.4
PDRB	Porto dos Gac	15.13	80	*e*P	Pn	00 14 36.7	-0.5
CO01	Juntas del Tor	15.19	174	Pn	Pn	00 14 37.8	-0.3
MURT	Porto Murtinho	15.20	119	*e*P	Pn	00 14 36.7	-1.3
SALV	Santo Antonio	15.69	96	*e*P	P	00 14 45.4	-0.2
CO03	El Pedregal	15.99	176		Pn	00 14 46.9	-1.0
CO03				IAmb	IAmb	00 14 50.8	
	comp=Z,18nm,0.9s						
CLDB	Colider	16.20	78	*e*P	P	00 14 51.0	-0.3
OTAV	Otavalo	16.29	336	Pn	Pn	00 14 51.5	-0.5

AQDB	Aquidauana	16.45	112	Pn	Pn	00 14 52.8	-0.7
PP1B	Ponte de Pedra	16.60	102	eP	P	00 14 55.9	+0.1
CFA	Coronel Fontan	17.05	169	P	P	00 15 00.6	0.0
	comp=Z,1.9nm,0.7s,baz=351,slow=11,SNR=6.2						
CPUP	Villa Florida	17.81	132	P	P	00 15 08.7	-0.3
	comp=Z,6.5nm,0.8s,baz=309,slow=16,SNR=3.0						
CPUP	Villa Florida	17.81	132	P	Pn	00 15 09.3	-0.6
AMBA	Amambai (Brazi	17.93	119	eP	Pn	00 15 10.9	-0.5
NPGB	Novo Progresso	17.99	66	eP	Pn	00 15 10.7	-1.5
C2SB	Chapadao do Su	18.69	105	eP	Pn	00 15 18.8	-1.6
MT13	San Alfonso	18.91	176	P	Pn	00 15 22.4	-0.6
MT13				IAmb	IAmb	00 15 24.2	
	comp=Z,9.5nm,0.6s						
MT01	Popeta	18.98	178	P	P	00 15 22.2	+0.6
MT01				IAmb	IAmb	00 15 38.3	
	comp=Z,31nm,1.4s						
LMEL	Las Melosas	19.02	176	P	Pn	00 15 23.7	-0.6
ITTB	Itaituba	19.02	59	eP	P	00 15 21.8	-0.5
ARAG	Araguaiana, MT	19.43	95	eP	Pn	00 15 27.1	-2.0
BO02	Sierra Bellavi	19.92	177	P	P	00 15 32.5	+0.5
BO02				IAmb	IAmb	00 15 34.9	
	comp=Z,17nm,0.9s						
SNDB	Serra Nova Dou	20.27	84	eP	Pn	00 15 36.7	-2.1
BOAV	Boa Vista	20.49	34	P	P	00 15 38.5	+0.4
BOAV	Boa Vista	20.49	34	eP	P	00 15 36.5	-1.6
PSAL	Palomas, Salto	20.84	143	eP	P	00 15 40.7	-1.1
PTGB	Pitanga	21.10	121	eP	P	00 15 44.4	-0.4
ITRB	Iturama	21.15	106	eP	P	00 15 44.9	-0.4
BI02	San Fabin de	21.77	179	P	P	00 15 51.5	-0.2
ITAB	Concordia	22.19	127		P	00 15 55.3	-0.7
ITAB				IAmb	IAmb	00 15 58.2	
	comp=Z,16nm,0.7s						
ITAB	Concordia	22.19	127	eP	P	00 15 55.5	-0.5
IPMB	Ipameri, GO	22.96	101	eP	P	00 16 02.5	-1.3
BDFB	Brasilia	23.08	95	P	P	00 16 04.6	-0.5
	comp=Z,9.3nm,0.8s,baz=263,slow=12,SNR=17						
	comp=Z,9.3nm,0.8s						
BDFB	Brasilia	23.08	95		P	00 16 04.6	-0.5
BDFB				IAmb	IAmb	00 16 05.5	
	comp=Z,16nm,1.0s						
PRPB	Parauapebas	23.35	71	eP	P	00 16 07.7	+0.3
SDV	Santo Domingo	23.58	3	P	P	00 16 09.3	-0.3
	comp=Z,6.8nm,0.8s,baz=188,slow=14,SNR=4.5						
	comp=Z,6.8nm,0.8s						
SDV	Santo Domingo	23.58	3	eP	P	00 16 04.4	-5.2
CNLB	Canela	24.22	130	eP	P	00 16 14.7	-0.5
RCLB	Rio Claro- Sao	24.30	112	eP	P	00 16 16.4	+0.4
SMTB	Santa Maria do	24.53	79	eP	P	00 16 18.8	+0.7
PLCA	Paso Flores	25.85	178	P	P	00 16 30.1	+0.2
JANB	Januaria	26.68	94	eP	P	00 16 36.7	-0.9
DIAM	Diamantina, MG	27.29	101	eP	P	00 16 43.2	+0.1
MDP	Montagnes des	27.51	45	LR	LR	00 29 30.2	
	comp=Z,52nm,19.9s,baz=274,slow=40						
GUA01	Guaratinga, BA	30.95	98	eP	P	00 17 15.2	-0.2
CMC01	Camacan, BA	31.28	95	eP	P	00 17 17.7	-0.5
MTO3	Montecristo	33.76	329	P	P	00 17 41.6	+1.4
MTO3				IAmb	IAmb	00 17 43.4	
	comp=Z,6.8nm,0.8s						
NHSC	New Hope	48.30	351	P	P	00 19 40.1	+1.5
T57A	Hurt	51.99	353		P	00 20 07.6	+1.2
MIAR	Mount Ida	53.23	338	P	P	00 20 16.3	+0.8
MIAR				IAmb	IAmb	00 20 17.5	
	comp=Z,6.9nm,0.9s						
TXAR	Lajitas Array	53.53	325	P	P	00 20 19.4	+1.4
	comp=Z,1.0nm,0.8s,baz=145,slow=8.0,SNR=8.6						
	comp=Z,1.0nm,0.8s						
TXAR	Lajitas Array	53.53	325	P	P	00 20 19.2	+1.2
Q56A	Snyder Ridge,	54.00	353	P	P	00 20 23.0	+1.9
BRNJ	Basking Ridge	55.27	358	P	P	00 20 30.8	+0.6
M63A	Gales Ferry	55.93	360	P	P	00 20 35.1	+0.2
M63A				IAmb	IAmb	00 20 38.7	
	comp=Z,26nm,1.3s						
PAMR	Moraine State	55.98	353	P	P	00 20 37.2	+1.9
PAMR				IAmb	IAmb	00 20 38.1	
	comp=Z,12nm,0.8s						
BINY	Binghamton	56.85	356	P	P	00 20 42.3	+0.9
BINY				IAmb	IAmb	00 20 46.6	
	comp=Z,12nm,1.2s						
ERPA	Erie	57.13	353	P	P	00 20 44.7	+1.3
SADO	Sadowa	59.66	354	P	P	00 21 01.5	+0.6
SADO				IAmb	IAmb	00 21 02.5	
	comp=Z,11nm,0.7s						
BUKO	Buck Lake	60.35	354		P	00 21 06.7	+1.1
SDCO	Great Sand Dun	61.06	330		P	00 21 12.1	+1.1
SDCO				IAmb	IAmb	00 21 13.7	
	comp=Z,5.5nm,0.9s						
DRLN	Deer Lake	65.05	10	P	P	00 21 37.0	+0.3
TBO	Thunder Bay	65.06	347	P	P	00 21 37.1	+0.3
PDAR	Pinedale Array	66.91	331	P	P	00 21 50.5	+1.5
	comp=Z,0.9nm,0.7s,baz=126,slow=7.5,SNR=7.7						
	comp=Z,0.9nm,0.7s						
PDAR	Pinedale Array	66.91	331	P	P	00 21 50.4	+1.3
ULM	Lac du Bonnet	68.12	344	P	P	00 21 57.0	+0.8
	comp=Z,3.9nm,0.8s,baz=137,slow=5.1,SNR=6.3						
	comp=Z,3.9nm,0.8s						
NVAR	Mina Array Bea	68.48	322	P	P	00 21 59.8	+0.8
	comp=Z,0.9nm,0.7s,baz=157,slow=8.0,SNR=4.5						
	comp=Z,0.9nm,0.7s						
SNAA	Sanae	69.50	162	P	P	00 22 05.8	+1.2
	comp=Z,3.3nm,0.7s,baz=278,slow=9.6,SNR=13						
	comp=Z,3.3nm,0.7s						
SNAA	Sanae	69.50	162	P	P	00 22 06.2	+1.6
SNAA				IAmb	IAmb	00 22 07.2	
	comp=Z,4.1nm,0.7s						
PNTR	Pine Nut	69.68	322	P	P	00 22 07.8	+1.4
PNTR				IAmb	IAmb	00 22 10.2	
	comp=Z,5.4nm,0.9s						
MCMT	McKenzie Canyo	70.03	330	P	P	00 22 08.7	+0.3
TORD	Torodi Ar. Bea	77.98	73	P	P	00 22 54.3	-0.7
	comp=Z,1.6nm,0.8s,baz=273,slow=4.6,SNR=12						
	comp=Z,1.6nm,0.8s						
TORD	Torodi Ar. Bea	77.98	73	P	P	00 22 55.0	0.0
ESDC	Sonseca Array	83.19	46	P	P	00 23 23.8	+1.3
	comp=Z,3.0nm,0.8s,baz=254,slow=5.1,SNR=12						
	comp=Z,3.0nm,0.8s						
ESDC	Sonseca Array	83.19	46		P	00 23 23.9	+1.5
ESDC				IAmb	IAmb	00 23 24.8	
	comp=Z,3.1nm,0.9s						
YKA	Yellowknife Ar	83.97	342	P	P	00 23 26.8	+1.1
	comp=Z,2.8nm,0.8s,baz=142,slow=4.5,SNR=60						
	comp=Z,2.8nm,0.8s						
YKA	Yellowknife Ar	83.97	342	P	P	00 23 27.0	+1.3
YKAW3	Yellowknife Wh	84.02	342		P	00 23 26.9	+0.9
YKAW3				IAmb	IAmb	00 23 28.2	
	comp=Z,5.4nm,0.8s						
KOOLE	Kule	86.23	113	P	P	00 23 38.9	+0.7
KOOLE				IAmb	IAmb	00 23 40.6	
	comp=Z,11nm,0.9s						
SUMG	Summit	89.95	10		P	00 23 56.8	+1.7
BCAR	Beaver Creek A	94.28	335	P	P	00 24 15.7	+0.9
KBZ	Khabaz	117.99	48	PKP	PKiKP	00 29 42.9	+0.9
	comp=Z,0.8nm,0.6s,baz=267,slow=2.8,SNR=3.7						
ASAR	Alice Springs	134.17	214	PKP	PKiKP	00 30 15.1	0.0
	comp=Z,0.6nm,0.7s,baz=123,slow=2.1,SNR=9.2						
ASAR	Alice Springs	134.17	214		PKPdf	00 30 13.8	+0.1
WRA	Warramunga Arr	136.87	218	PKP	PKPdf	00 30 18.9	+0.1
	comp=Z,1.1nm,0.6s,baz=143,slow=2.0,SNR=9.0						
ZAA0	Zalesovo Array	136.90	20	PKPdf	PKiKP	00 30 19.1	-0.4
ZALV	Zalesovo Beam	136.90	20	PKhKP	PKPpre	00 30 12.9	
	comp=Z,1.1nm,0.7s,baz=354,slow=1.3,SNR=3.7						
ZALV				PKP	PKiKP	00 30 20.2	+0.7
	comp=Z,5.9nm,0.8s,baz=296,slow=2.4,SNR=10						
ZALV	Zalesovo Beam	136.90	20		PKiKP	00 30 19.2	-0.3
MKAR	Makanchi Array	141.53	29	PKhKP	PKPpre	00 30 22.1	
	comp=Z,0.8nm,0.7s,baz=318,slow=3.4,SNR=7.0						
HILR	Hailar Array B	144.06	347	PKP	PKPbc	00 30 29.4	+0.2
	comp=Z,1.7nm,0.6s,baz=52,slow=2.6,SNR=6.3						
MJAR	Matsushiro Arr	145.51	314	PKPbc	PKPab	00 30 35.0	+0.6
	comp=Z,7.0nm,0.9s,baz=76,slow=1.5,SNR=16						
MJAR	Matsushiro Arr	145.51	314		PKPab	00 30 34.7	+0.2
SONM	Songino Array	147.04	2	PKPbc	PKPab	00 30 39.2	-0.9
	comp=Z,7.6nm,0.7s,baz=326,slow=1.8,SNR=33						
SONM	Songino Array	147.04	2		PKPbc	00 30 38.2	-0.1
KSRS	Korea Array	151.38	326	PKP	PKPdf	00 30 45.0	+1.8
	comp=Z,2.1nm,0.8s,baz=52,slow=2.1,SNR=4.2						
KSRS				PKPbc	PKiKP	00 30 51.2	+1.4
	comp=Z,6.3nm,0.8s,baz=16,slow=1.9,SNR=18						
KSAR	Wonju Array Be	151.41	326	PKPbc	PKiKP	00 30 50.2	+0.3

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*NEIC **29** 00:34:00.7±0.9, 17.°86N±0.°04×66.°84W±0.°01, h9^{km}±9^{km}, ML3.8/32, ML3.5/8(RSPR), Mwr3.5/7(SLM), Error ellipse: s-maj=5.5km s-min=1.2km az=186.0*

*IDC **29** 00:34:01.2±1.6, 17.°95N×66.°85W, h0^{km}, mb3.4/3, mbtmp3.5/4, ML2.4/1, Error ellipse: s-maj=39.5km s-min=10.2km az=173.0*

*NEIC **29** 00:34:01.7, 17.°93N×66.°85W, h7^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.08; $M_{\theta\theta}$2.00; $M_{\phi\phi}$-1.92; $M_{r\theta}$0.30; $M_{\theta\phi}$1.59; $M_{\phi r}$-0.39; Fault plane solution: $M_0$2.57000×10^{14} NP1:ϕ_s295.00000°, δ85.00000°, λ-10.00000°. NP2:ϕ_s26.00000°, δ80.00000°, λ-175.00000°. Principal axes: T 2.5728, Plg3.0000°, Azm341.0000°; N -0.0011, Plg79.0000°, Azm89.0000°; P -2.5717, Plg11.0000°, Azm250.0000°;*

*RSPR **29** 00:34:01.7, 17.°93N×66.°85W, h6^{km}, MD3.4/8*

ISC 29 00:34:01.6±0.9**, 17.°92N**±0.°04×**66.°84W**±0.°02**, h11**^{km}±5^{km}**, n69, σ1.^{s}14**/74**, mb3.5**/3**, 1C-6D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	Guanica, Bosqu	0.07	328		Pg	00 34 03.5	-0.4
GBPR	Guanica, Bosqu	0.07	328	⇓iP	Pg	00 34 03.5	-0.4
MLPR	Magueyes Islan	0.20	285	⇑iP	Pg	00 34 05.7	-0.2
MLPR	Magueyes Islan	0.20	285	eS	Sg	00 34 09.2	+0.4
OBIP	Obispado Ponce	0.26	61	Pg	Pg	00 34 06.9	+0.1
OBIP				Sg	Sb	00 34 11.5	-1.3
OBIP	Obispado Ponce	0.26	61	⇓iP	Pg	00 34 07.0	+0.1
OBIP	Obispado Ponce	0.26	61	eS	Sg	00 34 11.3	+0.9
CRPR	Cabo Rojo, PR	0.27	289		Pg	00 34 06.8	-0.3
CRPR				Sg	Sg	00 34 10.9	+0.1
CRPR	Cabo Rojo, PR	0.27	289	IAML		00 34 11.4	
	19µm,0.6s						
CRPR				IAML		00 34 12.5	
	13µm,0.4s						
CRPR	Cabo Rojo, PR	0.27	289	⇓iP	Pg	00 34 07.0	-0.1
CRPR	Cabo Rojo, PR	0.27	289	eS	Sg	00 34 10.6	-0.3
CELP	Cerrillos	0.29	58	Pg	Pg	00 34 07.7	+0.1
CELP				IAML		00 34 13.2	
	6µm,0.3s						
LSP	Las Mesas	0.35	318		Pg	00 34 08.4	-0.2
LSP					Sb	00 34 13.7	-1.7
LSP	Las Mesas	0.35	318	⇓iP	Pg	00 34 08.4	-0.2
LSP	Las Mesas	0.35	318	eS	Sb	00 34 13.7	-1.7
UUPR	Utuado, UPR, P	0.35	19	Pg	Pg	00 34 08.5	-0.2
PRSN	Puerto Rico Se	0.41	316	Pg	Pg	00 34 09.5	-0.3
PRSN				IAML		00 34 22.9	
	12µm,0.3s						
PRSN	Puerto Rico Se	0.41	316	⇑iP	Pg	00 34 09.5	-0.3
PRSN	Puerto Rico Se	0.41	316	eS	Sb	00 34 15.6	-1.7
AOPR	Arecibo Observ	0.43	11		Pg	00 34 09.9	-0.3
AOPR				Sg	Sg	00 34 15.9	-0.1
AOPR				IAML		00 34 19.3	
	comp=N,7µm,0.6s						
AOPR	Arecibo Observ	0.43	11	⇑iP	Pg	00 34 10.0	-0.3
AOPR	Arecibo Observ	0.43	11	eS	Sg	00 34 16.1	+0.2
AOPR	Arecibo Observ	0.43	11	eP	Pg	00 34 10.0	-0.3
AGPR	Aguadilla, PR	0.60	335		Pg	00 34 12.8	-0.5
AGPR				IAML		00 34 27.6	
	comp=N,3µm,0.6s						
AGPR	Aguadilla, PR	0.60	335	⇑iP	Pg	00 34 12.9	-0.5
AGPR	Aguadilla, PR	0.60	335	eS	Sg	00 34 21.2	-0.2
ECPR	Experimental S	0.60	49	Pg	Pg	00 34 12.9	-0.5
ECPR	Experimental S	0.60	49	⇑iP	Pg	00 34 13.2	-0.2
ECPR	Experimental S	0.60	49	eS	Sb	00 34 21.9	-1.0
EMPR	Esperanza - Ma	0.63	28		Sb	00 34 23.4	-0.1
EMPR	Esperanza - Ma	0.63	28	Pg	Pb	00 34 13.9	-0.8
EMPR				IAML		00 34 25.8	
	comp=N,3µm,0.9s						
EMPR				IAML		00 34 28.5	
	comp=N,4µm,0.8s						
EMPR	Esperanza - Ma	0.63	28	⇑iP	Pb	00 34 14.1	-0.6
EMPR	Esperanza - Ma	0.63	28	eS	Sb	00 34 23.4	-0.1
SJG	San Juan	0.69	74	Pg	Pg	00 34 14.4	-0.5
	comp=N,68nm,0.3s,baz=260,slow=11,SNR=96						
SJG				Lg	Lg	00 34 23.9	
	comp=N,303nm,0.3s,baz=30,slow=20,SNR=33						
SJG	San Juan	0.69	74		Pg	00 34 14.3	-0.6
SJG				Sg	Sg	00 34 24.3	+0.4
SJG	San Juan	0.69	74	⇓iP	Pg	00 34 14.5	-0.5
SJG	San Juan	0.69	74	eS	Sb	00 34 24.7	-0.5
SJG	San Juan	0.69	74	eP	Pg	00 34 14.4	-0.5
IDE	Isla Desecheo	0.76	308		Pg	00 34 15.6	-0.8
IDE					Sb	00 34 26.4	-0.9
IDE	Isla Desecheo	0.76	308	⇑iP	Pg	00 34 15.6	-0.8
IDE	Isla Desecheo	0.76	308	eS	Sb	00 34 26.4	-0.9
GCPR	Guaynabo City	0.82	61		Pg	00 34 16.6	-0.9
GCPR				Sg	Sg	00 34 27.6	-0.5
GCPR	Guaynabo City	0.82	61	⇓iP	Pg	00 34 16.8	-0.6
GCPR	Guaynabo City	0.82	61	eS	Sg	00 34 28.3	+0.1
HUMP	Col San Antoni	0.97	77		Pg	00 34 19.0	-1.3
HUMP				Sg	Sg	00 34 32.6	-0.4
HUMP	Col San Antoni	0.97	77	IAML		00 34 35.0	
	comp=N,1µm,0.2s						
HUMP	Col San Antoni	0.97	77	⇑eP	Pg	00 34 19.1	-1.2
HUMP	Col San Antoni	0.97	77	eS	Sg	00 34 32.8	-0.2
DR12	Loma Pena Alta	2.56	290		Pn	00 34 43.2	0.0
SABA	Saba	3.44	94	Pn	Pn	00 34 54.7	-0.6
SABA				IAML		00 35 44.2	
	comp=N,206nm,1.1s						
SABA				IAML		00 36 29.1	
	comp=E,276nm,1.1s						
SC01	Santiago de lo	3.98	293	Pn	Pn	00 35 02.4	-0.3
SDDR	Presa de Saban	4.35	285		Pn	00 35 07.3	-0.5
SDDR				IAML		00 36 23.9	
	comp=E,101nm,1.1s						
SDDR				IAML		00 36 27.3	
	comp=E,104nm,0.9s						
MBWH	Windy Hill	4.59	104	eP	Pn	00 35 11.3	+0.2
MLYT	Lee's Yard	4.60	104	eP	Pn	00 35 09.9	-1.3
ANWB	Willy Bob	4.82	92	eP	Pn	00 35 19.0	+4.8
DHSZ	Broadband at M	5.12	108	eP	Pn	00 35 21.5	+3.1
DHSZ	Broadband at M	5.12	108	eS	Sn	00 36 17.1	-0.4
GDHS	Morne Mazeau,	5.12	108	Pn	Pn	00 35 16.9	-1.5
GDHS				IAML		00 36 22.0	
	comp=N,73nm,0.7s						
ATGZ	Broadband at L	5.22	110	eP	Pn	00 35 17.2	-2.5
ATGZ	Broadband at L	5.22	110	eS	Sn	00 36 11.4	-8.4
CBE	Ff, Capester	5.33	109	Pn	Pn	00 35 20.1	-1.2
CBE				IAML		00 37 06.2	
	comp=N,87nm,1.0s						
CBE				IAML		00 37 11.3	
	comp=E,78nm,1.1s						
MAGL	Barre de l'ile	5.67	109	Pn	Pn	00 35 24.8	-1.1
DSLB	Salisbury	5.75	115	eP	Pn	00 35 28.2	+1.2
DSLB	Salisbury	5.75	115	eS	Sn	00 36 29.8	-3.3
BIM	Bigot	6.49	121	eP	Pn	00 35 36.7	-0.5
SDV	Santo Domingo	9.71	203	Pn	Pn	00 36 22.5	+1.0
	comp=E,0.3nm,0.3s,baz=333,slow=11,SNR=3.9						
	comp=E,1.1nm,0.3s						
TXAR	Lajitas Array	35.46	296	P	P	00 40 58.9	+0.5
	comp=E,0.3nm,0.6s,baz=112,slow=10,SNR=5.5						
	comp=E,0.3nm,0.6s						
YKA	Yellowknife Ar	55.39	335	P	P	00 43 36.3	+0.7
	comp=E,0.3nm,0.6s,baz=110,slow=6.1,SNR=3.7						
	comp=E,0.3nm,0.6s						
ESDC	Sonseca Array	58.03	54	P	P	00 43 57.5	+2.6
	comp=E,0.4nm,0.8s,baz=262,slow=6.4,SNR=2.5						
	comp=E,0.4nm,0.8s						

IDC 29 00:43:01.6±2.0**, 16.°68S**×**177.°62W, h0**^{km}**, mb3.5**/5**, mbtmp3.5**/5**, Error ellipse: s-maj=124.8km s-min=26.7km az=153.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	45.61	258	P	P	00 51 23.3	-0.6
	1.2nm,1.0s,baz=96,slow=8.2,SNR=3.5						
	1.2nm,1.0s						
ASAR	Alice Springs	45.86	253	P	P	00 51 26.3	+0.3
	0.4nm,0.9s,baz=88,slow=8.5,SNR=5.6						
	0.4nm,0.9s						
ILAR	Eielson Array	84.53	13	P	P	00 55 36.2	+0.1
	0.2nm,0.6s,baz=190,slow=4.6,SNR=3.2						
	0.2nm,0.6s						
TXAR	Lajitas Array	84.70	57	P	P	00 55 38.9	+1.0
	0.5nm,0.7s,baz=223,slow=6.8,SNR=6.7						
	0.5nm,0.7s						
PDAR	Pinedale Array	85.95	43	P	P	00 55 42.9	-1.1
	0.3nm,0.8s,baz=281,slow=3.2,SNR=3.2						
	0.3nm,0.8s						

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*IDC **29** 00:47:10.6±0.7, 28.°34N×104.°96E, h0^{km}, mb4.1/19, mbtmp4.1/21, ML4.1/2, MS3.0/3, Error ellipse: s-maj=20.3km s-min=13.8km az=53.0*

*NEIC **29** 00:47:12.1±0.8, 28.°33N±0.°07×104.°89E±0.°10, h10^{km}±1^{km}, mb4.4/28, Error ellipse: s-maj=14.4km s-min=12.5km az=106.0*

*BJI **29** 00:47:13.0, 28.°38N×104.°97E, h13^{km}, mb4.0/16, ML4.2/15, Ms4.2/5, Ms7 4.0/3*

*MOS **29** 00:47:14.8±1.3, 28.°39N×105.°01E, h41^{km}, mb4.6/17, Error ellipse: s-maj=11.6km s-min=6.6km az=110.2*

ISC 29 00:47:13.2±0.4**, 28.°28N**±0.°05×**104.°92E**±0.°04**, h19**^{km}**, n102, σ1.^{s}40**/113**, mb4.2**/42**, 8C-5D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PZH	PanZhiHua	3.33	239	Pn	Pb	00 48 09.3	-2.4
PZH				smax	smax		
	comp=N,190nm,1.0s						
PZH				smax	smax		
	comp=E,150nm,1.0s						
ENH	Enshi	4.46	62		Pn	00 48 21.3	+1.6
ENH				Sn	Sn	00 49 10.3	-0.9
TNCH	TengChong	6.58	242	Pn	Pn	00 48 47.0	-2.0
TNCH				Pg	Pg	00 49 19.3	+0.2
TNCH				Sg	Sg	00 50 39.0	-5.3
TNCH				smax	smax		
	comp=N,150nm,1.0s						
TNCH				smax	smax		
	comp=E,90nm,0.9s						
TNCH				LR	LR		
	comp=N,510nm,3.8s						
TNCH				LR	LR		
	comp=E,360nm,4.2s						
TNCH				LR	LR		
	comp=Z,440nm,8.5s						
TNCH	TengChong	6.58	242	Pg	Pg	00 49 20.3	+1.2
TNCH				Sg	Sg	00 50 49.0	+4.7
TNCH				smax	smax		
	comp=N,150nm,0.6s						
TNCH				smax	smax		
	comp=E,63nm,0.5s						
XAN	Xi'an	6.69	30	Pn	Pn	00 48 50.8	+0.3
XAN				Sn	Sn	00 50 05.5	-0.7
XAN				smax	smax		
	comp=E,500nm,1.0s						
XAN				smax	smax		
	comp=E,510nm,1.1s						
XAN				LR	LR		
	comp=E,550nm,5.8s						
XAN				LR	LR		
	comp=E,950nm,5.5s						
XAN				LR	LR		
	comp=E,870nm,7.2s						
CNSH	ChangSha	7.07	89	Pn	Pn	00 48 57.3	+1.7
CNSH				Sn	Sn	00 50 11.8	-3.7
CNSH				smax	smax		
	comp=E,150nm,1.0s						
CNSH				smax	smax		
	comp=E,110nm,0.9s						
LZDM	Lanzhou Array	7.73	353	Pn	Pn	00 49 05.4	+0.5
	baz=163,slow=12						
LZDM				Sn	Sn	00 50 28.6	-3.5
	baz=147,slow=17						
LZDM				Lg	Lg	00 51 16.0	
	baz=155,slow=19						
	comp=E,3.1nm,0.3s						
LZH	Lanzhou	7.84	354	ePn	Pn	00 49 06.0	-0.4
LZH				LR	LR		
	comp=E,580nm,11.0s						
LZH				LR	LR		
	comp=E,640nm,8.2s						
LZH				LR	LR		
	comp=E,460nm,11.7s						
LYN	LuoYang	8.98	44	P	Pn	00 49 20.8	-1.1
LYN				LR	LR		
	comp=E,480nm,4.7s						
LYN				LR	LR		
	comp=E,830nm,5.5s						
LYN				LR	LR		
	comp=E,890nm,10.2s						
CM31	Chiang Mai Arr	11.21	211	Pn	Pn	00 49 52.3	-0.1
CMAR	Chiang Mai Arr	11.21	211	Pn	Pn	00 49 58.6	+6.2
	comp=E,0.2nm,0.3s,baz=18,slow=12,SNR=26						
CMAR				LR	LR	00 54 57.6	
	comp=E,65nm,21.4s,baz=20,slow=41						
CMAR	Chiang Mai Arr	11.21	211	Pn	Pn	00 49 52.9	+0.5
CMAR	Chiang Mai Arr	11.21	211	i P	Pn	00 49 58.7	+6.3
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTA	Gaotai	11.88	340	eP	Pn	00 50 04.0	+2.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
HNS	HongShan	12.26	40	⇑P	Pn	00 50 04.8	-1.9
HNS				S	Sn	00 52 20.5	-2.3
XLT	XiLinHaoTe	17.98	27	eP	P	00 51 23.3	+0.7
XLT				PP	PnPn	00 51 38.0	+4.8
XLT				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SONM	Songino Array	19.56	3	P	Pn	00 51 40.9	-0.4
	comp=Z,0.3nm,0.3s,baz=184,slow=11,SNR=11						
SONM				LR	LR	01 00 39.6	
	comp=Z,31nm,18.7s,baz=214,slow=42						
	comp=Z,3.5nm,0.7s						
SONM	Songino Array	19.56	3	P	P	00 51 38.6	-1.3
ULN	Ulaanbaatar	19.63	4	P	P	00 51 40.1	-0.6
ULN	Ulaanbaatar	19.63	4	⇓eP	Pn	00 51 44.0	+1.9
ULN				pmax	pmax		
	comp=Z,6.0nm,1.7s						
TJN	Taejon	20.58	61	P	P	00 51 50.4	-0.6
TJN	Taejon	20.58	61	P	P	00 51 50.4	-0.6
TJN				pmax	pmax		
	comp=Z,128nm,1.3s						
JOW	Kunigami	20.75	88		P	00 51 52.3	-0.6
WMQ	Urumqi	20.78	323	eP	Pn	00 51 59.3	+3.7
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
KS19	Wonju Array Si	21.31	59	P	P	00 51 58.5	-0.3
KS19				IAmb	IAmb	00 52 02.3	
	comp=Z,43nm,1.5s						
KSRS	Korea Array	21.34	59	P	P	00 51 58.8	-0.3
	comp=Z,5.6nm,0.8s,baz=246,slow=9.7,SNR=23						
KSRS				LR	LR	01 01 07.8	
	comp=Z,46nm,18.8s,baz=40,slow=39						
	comp=Z,5.6nm,0.8s						
JNU	Nakatsue	22.81	71	P	P	00 52 14.0	-1.0
	comp=Z,7.3nm,0.8s,baz=313,slow=3.4,SNR=4.0						
	comp=Z,7.3nm,0.8s						
JNU	Nakatsue	22.81	71	P	P	00 52 14.2	-0.8
JNU				IAmb	IAmb	00 52 25.4	
	comp=Z,29nm,1.4s						
KNGR	Kungurtug, Tuv	23.00	348	⇓iP	P	00 52 18.7	+1.9
KNGR				pmax	pmax		
	comp=Z,11nm,1.4s						
HILR	Hailar Array B	24.09	24	P	P	00 52 27.1	-0.4
	comp=Z,1.1nm,0.4s,baz=195,slow=10,SNR=2.7						
	comp=Z,1.1nm,0.4s						
WUS	Wushi	24.64	308		P	00 52 31.6	-1.1
WUS				IAmb	IAmb	00 52 34.9	
	comp=Z,4.1nm,0.8s						
BNX	BinXian	24.89	40	⇑P	P	00 52 35.0	+0.3
BNX				pmax	pmax		
	comp=Z,6.0nm,0.9s						
DGZ	Jazzator, Alta	25.23	333	⇑eP	P	00 52 39.5	+1.6
DGZ				pmax	pmax		
	comp=Z,12nm,1.0s						
JMN	Monobe	25.36	70	P	P	00 52 39.1	-0.1
JMN				IAmb	IAmb	00 52 47.1	
	comp=Z,26nm,1.2s						
MK31	Makanchi Array	25.61	322	deP	P	00 52 41.8	+0.5
MKAR	Makanchi Array	25.61	322	P	P	00 52 42.0	+0.7
	comp=Z,2.3nm,0.7s,baz=123,slow=12,SNR=19						
MKAR				PcP	PcP	00 56 12.8	+1.0
	comp=Z,0.5nm,0.7s,baz=112,slow=5.6,SNR=4.0						
	comp=Z,2.3nm,0.7s						
MKAR	Makanchi Array	25.61	322		P	00 52 40.5	-0.8
MAKZ	Makanchi	25.79	322		P	00 52 42.3	-0.6
MAKZ				IAmb	IAmb	00 52 46.3	
	comp=Z,4.4nm,0.9s						
MAKZ	Makanchi	25.79	322	P	P	00 52 42.3	-0.6
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TARG	Taragay, Kyrgy	25.82	308	P	P	00 52 43.1	-0.6
TARG				IAmb	IAmb	00 52 50.9	
	comp=Z,3.6nm,0.9s						
TARG	Taragay, Kyrgy	25.82	308	P	P	00 52 43.1	-0.6
TARG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KDJ	Kajisay	26.41	309	P	P	00 52 46.9	-1.9
KDJ	Kajisay	26.41	309	P	P	00 52 46.9	-1.9

KDJ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
USRK	Ussuriysk Ar.	26.84	46	P	P	00 52 51.8	-0.5
	comp=Z,4.4nm,0.6s,baz=259,slow=9.4,SNR=6.2						
	comp=Z,4.4nm,0.6s						
BOOM	Boomskoye usch	27.40	309	P	P	00 52 56.5	-1.1
BOOM	Boomskoye usch	27.40	309	P	P	00 52 56.5	-1.1
BOOM				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ZAA0	Zalesovo Array	29.57	336		P	00 53 15.8	-0.8
ZAA0				IAmb	IAmb	00 53 17.7	
	comp=Z,3.5nm,0.8s						
ZALV	Zalesovo Beam	29.57	336	P	P	00 53 17.0	+0.4
	comp=Z,2.8nm,0.6s,baz=135,slow=8.6,SNR=18						
ZALV				PcP	PcP	00 56 21.4	+0.2
	comp=Z,0.4nm,0.3s,baz=147,slow=2.9,SNR=1.3						
	comp=Z,2.8nm,0.6s						
ZALV	Zalesovo Beam	29.57	336		P	00 53 15.9	-0.8
BVAR	Borovoye Array	35.47	324	P	P	00 54 08.5	+0.3
	comp=Z,0.5nm,0.6s,baz=98,slow=5.1,SNR=3.9						
BVAR				PcP	PcP	00 56 37.5	+0.1
	comp=Z,0.8nm,0.6s,baz=132,slow=2.4,SNR=5.4						
	comp=Z,0.5nm,0.6s						
BORK	Borovoye	35.51	324	P	P	00 54 07.3	-1.3
BORK	Borovoye	35.51	324	⇑eP	P	00 54 08.8	+0.2
BORK				pmax	pmax		
	comp=Z,7.0nm,1.9s						
AB31	Akbulak array	40.11	314		P	00 54 47.5	0.0
AB31				IAmb	IAmb	00 54 51.9	
	comp=Z,6.1nm,1.4s						
ABKAR	Akbulak array	40.11	314	P	P	00 54 46.9	-0.6
NRIK	Noril'sk	42.33	351	P	P	00 55 06.0	+0.6
	comp=Z,5.8nm,0.7s,baz=137,slow=7.2,SNR=19						
	comp=Z,5.8nm,0.7s						
NRIK	Noril'sk	42.33	351		P	00 55 05.7	+0.2
NRIK				IAmb	IAmb	00 55 06.9	
	comp=Z,6.7nm,0.8s						
ARTI	Arti	43.19	324	P	P	00 55 11.7	-0.9
ARTI				IAmb	IAmb	00 55 49.0	
	comp=Z,3.7nm,1.0s						
ARTI	Arti	43.19	324	P	P	00 55 11.7	-0.9
ARTI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TIXI	Tiksi	45.39	10	P	P	00 55 28.8	-1.2
TIXI				IAmb	IAmb	00 55 29.9	
	comp=Z,4.3nm,0.5s						
TIXI	Tiksi	45.39	10	⇑iP	P	00 55 29.2	-0.8
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KNRA	Kununurra	49.42	149	P	P	00 56 01.3	-0.6
FITZ	Fitzroy Crossi	50.27	154	P	P	00 56 08.1	-0.3
FITZ				IAmb	IAmb	00 56 40.5	
	comp=Z,3.9nm,1.5s						
SHA1	Shidzhatmaz	51.52	305	⇑eP	P	00 56 19.2	+1.2
RAYN	Ar Rayn	53.21	279	P	P	00 56 30.8	+0.2
RAYN				IAmb	IAmb	00 56 34.5	
	comp=Z,5.7nm,1.2s						
RAYN	Ar Rayn	53.21	279	P	P	00 56 30.8	+0.2
RAYN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KLMR	Klimovskoe	53.80	327	eP	P	00 56 33.6	-0.6
KLMR				pmax	pmax		
	comp=Z,17nm,1.2s						
PMG	Port Moresby	55.40	126	⇓eP	P	00 56 47.4	+0.9
PMG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WRAB	Tennant Creek	55.74	146	P	P	00 56 49.3	+0.6
WRAB				IAmb	IAmb	00 56 50.4	
	comp=Z,5.8nm,0.7s						
WRAB	Tennant Creek	55.74	146	ceP	P	00 56 49.6	+0.8
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.6s						
WRA	Warramunga Arr	55.74	146	P	P	00 56 49.6	+0.8
	comp=Z,3.8nm,0.6s,baz=337,slow=8.1,SNR=35						
	comp=Z,3.8nm,0.6s						
WRA	Warramunga Arr	55.74	146	P	P	00 56 48.1	-0.7
WRA	Warramunga Arr	55.74	146	i P	P	00 56 49.7	+0.9
WRA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AS31	Alice Springs	58.72	149		P	00 57 10.4	+0.6
ASAR	Alice Springs	58.72	149	P	P	00 57 11.2	+1.4
	comp=Z,2.2nm,0.5s,baz=329,slow=6.9,SNR=44						
	comp=Z,2.2nm,0.5s						
ASAR	Alice Springs	58.72	149	P	P	00 57 09.7	-0.1
BR131	Keskin Array S	58.78	301	⇓eP	P	00 57 11.1	+0.7
BRTR	Keskin Array B	58.78	301	P	P	00 57 11.1	+0.7
	comp=Z,0.7nm,0.8s,baz=104,slow=5.2,SNR=4.3						
	comp=Z,0.7nm,0.8s						
AKASG	Malin Array Be	59.85	315	P	P	00 57 16.7	-0.6
	comp=Z,0.2nm,0.3s,baz=69,slow=6.8,SNR=2.8						
	comp=Z,0.2nm,0.3s						
MNK	Minsk	60.12	319	i P	P	00 57 20.2	+1.1
MNK				i		00 58 05.3	
MNK				i		00 59 31.2	
MNK				i PPP	PPP	01 00 55.9	
MNK				i S	S	01 05 32.2	+0.9
MNK				i		01 07 08.0	
MNK				i SS	SS	01 09 31.0	+3.1
MNK				pmax	pmax		
	comp=N,16nm,1.2s						
MNK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MNK				pmax	pmax		
	comp=E,14nm,0.9s						
MNK				MLR	MLR		
	comp=E,592nm,22.0s						
MNK				MLR	MLR		
	comp=N,231nm,17.0s						
MNK				MLR	MLR		
	comp=Z,89nm,18.0s						
ARCES	ARCESS Array B	60.12	337	P	P	00 57 18.8	-0.1
	comp=Z,4.1nm,0.8s,baz=85,slow=7.9,SNR=6.7						
	comp=Z,4.1nm,0.8s						
ARCES	ARCESS Array B	60.12	337	P	P	00 57 18.9	-0.1
FINES	FINESS Array B	60.31	327	P	P	00 57 20.1	-0.2
	comp=Z,2.6nm,0.8s,baz=84,slow=7.9,SNR=8.2						
	comp=Z,2.6nm,0.8s						
FINES	FINESS Array B	60.31	327	P	P	00 57 20.0	-0.3
FINES	FINESS Array B	60.31	327	i P	P	00 57 20.7	+0.4
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
F15K	North Star Dit	64.77	27	P	P	00 57 50.3	+0.3
B20K	Meade River	66.38	22	P	P	00 58 00.8	+0.4
HFS	Hagfors	66.51	327	P	P	00 58 01.1	-0.3
	comp=Z,2.9nm,0.8s,baz=66,slow=4.0,SNR=6.7						
	comp=Z,2.9nm,0.8s						
NB2	NORSAR Subarra	67.42	328	P	P	00 58 06.8	-0.4
	comp=Z,1.1nm,0.8s,baz=73,slow=6.9						
NOA	NORSAR Array B	67.42	328	P	P	00 58 06.9	-0.3
	comp=Z,0.9nm,0.7s,baz=73,slow=4.6,SNR=4.4						
	comp=Z,0.9nm,0.7s						
NC204	NORSAR Array S	67.56	329	P	P	00 58 07.8	-0.3
CLL	Collm	69.61	318	i P	P	00 58 23.9	+2.9
CLL				pmax	pmax		
	comp=Z,12nm,1.7s						
CLL	Collm	69.61	318	i P	P	00 58 23.9	+2.9
KHC	Kasperske Hory	70.02	316	⇑eP	P	00 58 24.5	+0.9
GERES	GERESS Array B	70.04	315	P	P	00 58 24.6	+0.8
	comp=Z,0.8nm,0.7s,baz=58,slow=8.0,SNR=8.0						
	comp=Z,0.8nm,0.7s						
GERES	GERESS Array B	70.04	315	eP	P	00 58 25.0	+1.2
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WTTA	Wattenberg	71.90	314	eP	P	00 58 36.2	+0.9
	comp=Z,1.1nm,0.5s						
ILAR	Eielson Array	72.08	25	P	P	00 58 35.3	-0.5
	comp=Z,0.4nm,0.5s,baz=296,slow=4.7,SNR=7.1						
	comp=Z,0.4nm,0.5s						
ILAR	Eielson Array	72.08	25	eP	P	00 58 35.2	-0.5
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SQTA	Sankt Quirin	72.19	314	eP	P	00 58 37.0	+0.1
	comp=Z,2.4nm,0.6s						
YKA	Yellowknife Ar	84.17	17	P	P	00 59 42.8	0.0
	comp=Z,0.8nm,0.7s,baz=324,slow=5.5,SNR=15						
	comp=Z,0.8nm,0.7s						
YKA	Yellowknife Ar	84.17	17	P	P	00 59 42.2	-0.6
YKA	Yellowknife Ar	84.17	17	eP	P	00 59 43.2	+0.4
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						

NIED **29** 00:52:08.9,40°.15N×142°.43E,h35^{km},MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-2.31; M$_{\theta\theta}$2.47; M$_{\phi\phi}$-0.16; M$_{r\theta}$7.80; M$_{\theta\phi}$-5.11; M$_{\phi r}$0.71; Fault plane solution: M$_0$9.65000×10^{14} NP1: ϕ_s167.00000°,δ33.00000°,λ-15.00000°. NP2: ϕ_s270.00000°,δ82.00000°,λ-122.00000°.

JMA **29** 00:52:08.9±0.1,40°.2N±0°.3×142°.4E±0°.7,h35^{km}±1^{km},MD3.9/40,MV4.0/40,NE OFF IWATE PREF

JMA Felt I J1 at NE OFF IWATE PREF .

IDC **29** 00:52:09.1±1.2,40°.08N×142°.36E,h41^{km}±7^{km},mb3.6/9,mbtmp3.8/10,ML3.6/1,MS3.4/1,Error ellipse: s-maj=31.2km s-min=19.9km az=86.0

NEIC **29** 00:52:11.5±1.5,40°.20N±0°.09×142°.5E±0°.2,h60^{km}±9^{km},mb4.2/8,Error ellipse: s-maj=22.1km s-min=8.4km az=116.0

ISC 29 00:52:09.5±0.8,40°.15N±0°.04×142°.38E±0°.06,h41^{km}±6^{km},n60,σ1^{s}64/57,mb4.0/15,7D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	0.45	242	P	Pn	00 52 19.2	-0.4
JTH				eS	Sn	00 52 26.4	-0.3
JKEN	Kujiedanarisaw	0.52	277	⇓iP	Pn	00 52 20.0	-0.5
JKEN				⇓S	Sn	00 52 27.7	-0.5
JKEN	Kujiedanarisaw	0.52	277	A	A	00 52 20.0	
	comp=N,14nm,0.8s,comp=E,9.0nm,0.8s						
JANG	Nango	0.70	289	⇓iP	Pn	00 52 22.6	-0.4
JANG				⇓S	Sn	00 52 32.1	-0.5
JANG	Nango	0.70	289	A	A	00 52 22.6	
	comp=N,7.0nm,0.6s,comp=E,6.0nm,0.6s						
MIYJ	Miyakonagasawa	0.71	217	P	Pn	00 52 22.6	-0.6
JKZ	Kuzumaki	0.82	259	P	Pn	00 52 24.9	+0.2
JKZ				S	Sn	00 52 36.2	+0.6
JOM	Ohasama	1.07	231	P	Pn	00 52 28.7	+0.6
JARK	Aomorirokkasho	1.15	318	⇓P	Pn	00 52 29.1	-0.1
JSZI	Iwateshizukuis	1.17	250	A	A	00 52 29.9	
	comp=N,10.0nm,0.6s,comp=E,11nm,0.6s						
JTM	Tenmabayashi	1.19	303	⇓P	Pn	00 52 30.0	+0.4
JTM				⇓eS	Sn	00 52 45.2	+0.7
OFUJ	Ofunato	1.20	207	P	Pn	00 52 29.9	+0.1
JAH	Hinai	1.34	272	P	Pn	00 52 32.8	+1.1
JAH				eS	Sn	00 52 50.2	+2.0
JMK	Ichinoseki	1.49	217	eP	Pn	00 52 34.5	+0.7
JRG	Rokugo	1.54	241	eP	Pn	00 52 36.0	+1.6
ERM	Erimo	1.96	17		Pn	00 52 39.5	-0.6
ERM				Sn	Sn	00 53 04.0	+0.5
JSD	Sado	3.84	238		Pn	00 53 07.1	+1.1
JKA	Kamikawa-asahi	3.97	2		Pn	00 53 08.2	+0.4
ASAJ	Asahikawa	3.97	2	P	Pn	00 53 08.9	+1.1
	comp=E,2.8nm,0.3s,baz=346,slow=33,SNR=12						
ASAJ				S	Sn	00 54 00.1	+7.0
	comp=E,30nm,0.7s,baz=131,slow=19,SNR=1.5						
ASAJ				LR	LR	00 54 20.5	
	comp=E,52nm,20.6s,baz=162,slow=32						
	comp=E,15nm,0.5s						
MJB9	Matsu-Tunnel	4.87	224		Pn	00 53 23.6	+3.4
MAJO	Matsushiro	4.87	224		Pn	00 53 23.0	+2.7
MAJO	Matsushiro	4.87	224	P	Pn	00 53 23.0	+2.7
MJAR	Matsushiro Arr	4.87	224	P	Pn	00 53 23.6	+3.4
	comp=E,16nm,0.6s,baz=32,slow=13,SNR=65						
MJAR				LR	LR	00 55 01.0	
	comp=E,84nm,21.7s,baz=354,slow=36						
MJAR	Matsushiro Arr	4.87	224		Pn	00 53 22.0	+1.8
MJAR	Matsushiro Arr	4.87	224	P	Pn	00 53 22.0	+1.8
JGF	Kuroka	6.03	223		Pn	00 53 39.1	+2.9
INU	Inuyama	6.40	223		Pn	00 53 44.4	+3.1
JOW	Kunigami	17.71	226	LR	LR	01 02 48.6	
	comp=E,111nm,18.4s,baz=150,slow=36						
MA2	Magadan	20.15	12	LR	LR	01 05 39.9	
	comp=E,24nm,20.4s,baz=121,slow=40						
SEY	Seymchan	23.59	11	LR	LR	01 05 44.5	
	comp=E,33nm,21.2s,baz=312,slow=34						
H11N2	WAKE ISLAND Hy	29.25	127	T	T	01 28 51.2	
	baz=319,slow=75,SNR=59						
H11N1	WAKE ISLAND Hy	29.26	127	T	T	01 28 54.9	
	baz=319,slow=75,SNR=72						
H11N3	WAKE ISLAND Hy	29.27	127	T	T	01 28 56.9	
	baz=319,slow=75,SNR=75						
H11S1	WAKE ISLAND Hy	30.07	129	T	T	01 30 06.0	
	baz=321,slow=76,SNR=40						
H11S3	WAKE ISLAND Hy	30.07	129	T	T	01 30 01.6	
	baz=321,slow=76,SNR=40						
H11S2	WAKE ISLAND Hy	30.08	129	T	T	01 30 07.7	
	baz=321,slow=76,SNR=30						
ZALV	Zalesovo Beam	40.44	310	P	P	00 59 43.5	-0.1
	comp=E,0.4nm,0.4s,baz=19,slow=9.2,SNR=1.9						
	comp=E,0.4nm,0.4s						
C18K	Utukok River	41.16	28	P	P	00 59 49.1	-0.4
C18K				IAmb	IAmb	00 59 55.4	
	comp=Z,4.9nm,1.1s						
G18K	Tagagawik	41.59	32	P	P	00 59 53.4	+0.3
G18K				IAmb	IAmb	01 00 14.2	
	comp=Z,4.7nm,1.2s						
MKAR	Makanchi Array	43.17	299	P	P	01 00 06.2	0.0
	comp=Z,0.5nm,0.7s,baz=86,slow=8.0,SNR=5.1						
MKAR				pP	pP	01 00 17.1	-0.5
	comp=Z,0.5nm,0.5s,baz=82,slow=9.9,SNR=4.2						
	comp=Z,0.5nm,0.7s						
MKAR	Makanchi Array	43.17	299	P	P	01 00 05.9	-0.3
MAKZ	Makanchi	43.38	300	P	P	01 00 08.0	+0.2
MAKZ				IAmb	IAmb	01 00 40.0	
	comp=Z,6.9nm,1.4s						
ILAR	Eielson Array	46.48	34	P	P	01 00 31.7	-0.4
	comp=Z,0.6nm,0.7s,baz=264,slow=6.4,SNR=7.4						
	comp=Z,0.6nm,0.7s						
BCAR	Beaver Creek A	48.91	36	P	P	01 00 51.1	0.0
BVAR	Borovoye Array	49.08	311	P	P	01 00 51.5	-1.0
	comp=Z,0.7nm,0.5s,baz=71,slow=7.5,SNR=5.4						
BVAR				pP	pP	01 01 04.0	0.0
	comp=Z,0.7nm,0.4s,baz=72,slow=10.0,SNR=5.1						
	comp=Z,0.7nm,0.5s						
INK	Inuvik	51.28	28	P	P	01 01 08.3	-0.6
ARTI	Arti	54.66	317	P	P	01 01 34.0	0.0
AB31	Akbulak array	56.54	309	P	P	01 01 47.8	+0.2
AB31				IAmb	IAmb	01 02 00.5	
	comp=Z,6.0nm,1.4s						
ABKAR	Akbulak array	56.54	309	P	P	01 01 47.5	-0.1
WB0	Warramunga Arr	60.07	189	P	P	01 02 11.0	-1.4
WRA	Warramunga Arr	60.25	189	P	P	01 02 12.5	-1.1
	comp=Z,1.2nm,0.7s,baz=9.7,slow=6.5,SNR=4.8						
	comp=Z,1.2nm,0.7s						
WRA	Warramunga Arr	60.25	189	P	P	01 02 11.6	-2.1
YKA	Yellowknife Ar	60.75	31	pP	pP	01 02 27.8	-0.4
	comp=Z,0.3nm,0.6s,baz=305,slow=7.5,SNR=5.5						
ASAR	Alice Springs	63.97	189	P	P	01 02 37.9	-0.7
	comp=Z,0.8nm,0.7s,baz=9.1,slow=6.5,SNR=6.6						
	comp=Z,0.8nm,0.7s						
ASAR	Alice Springs	63.97	189	P	P	01 02 36.2	-2.4
FINES	FINESS Array B	66.42	332	P	P	01 02 54.3	+0.3
	comp=Z,4.5nm,1.1s,baz=321,slow=11,SNR=2.2						
	comp=Z,4.5nm,1.1s						
HFS	Hagfors	71.56	336	P	P	01 03 26.2	+0.2
	comp=Z,3.1nm,1.0s,baz=38,slow=7.3,SNR=1.4						
HFS				pP	pP	01 03 38.5	+0.6
	comp=Z,3.1nm,0.9s,baz=38,slow=7.5,SNR=1.6						
	comp=Z,3.1nm,1.0s						
NB2	NORSAR Subarra	71.61	337	P	pP	01 03 39.1	+0.8
	comp=Z,0.7nm,0.7s,baz=38,slow=6.2						
NOA	NORSAR Array B	71.61	337	pP	pP	01 03 37.8	-0.5
	comp=Z,0.8nm,0.7s,baz=46,slow=9.1,SNR=2.4						
AKASG	Malin Array Be	72.30	322	P	P	01 03 29.7	-0.9
	comp=Z,0.4nm,0.5s,baz=44,slow=7.4,SNR=1.9						
AKASG				pP	pP	01 03 42.6	+0.1
	comp=Z,0.6nm,0.5s,baz=46,slow=6.9,SNR=2.0						
	comp=Z,0.4nm,0.5s						

NEIC **29** 01:06:00,17°.89N×66°.86W,h5^{km},Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.14; M$_{\theta\theta}$1.55; M$_{\phi\phi}$-1.41; M$_{r\theta}$0.22; M$_{\theta\phi}$1.66; M$_{\phi r}$-0.50; Fault plane solution: M$_0$2.29000×10^{16} NP1:ϕ_s22.00000°,δ80.00000°,λ-170.00000°. NP2:ϕ_s290.00000°,δ80.00000°,λ-10.00000°. Principal axes: T 2.2926, Plg0.0000°, Azm156.0000°; N -0.0013, Plg76.0000°, Azm65.0000°; P -2.2914, Plg14.0000°, Azm246.0000°;

NEIC **29** 01:06:00.1,17°.99N×66°.76W,h14^{km},Moment Tensor Solution. Duration: 1^{s}5 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.73; M$_{\theta\theta}$0.95; M$_{\phi\phi}$-1.68; M$_{r\theta}$-1.04; M$_{\theta\phi}$2.96; M$_{\phi r}$-0.61; Fault plane solution: M$_0$3.52000×10^{16} NP1: ϕ_s189.37000°,δ72.54000°,λ163.00000°. NP2: ϕ_s284.61000°,δ73.81000°,λ18.20000°. Principal axes: T 3.4185, Plg24.0000°, Azm147.0000°; N 0.1892, Plg66.0000°, Azm325.0000°; P -3.6077, Plg1.0000°, Azm57.0000°;

NEIC **29** 01:06:00.1,17°.89N×66°.86W,h14^{km}

RSPR **29** 01:06:00.1,17°.89N×66°.86W,h6^{km}

CATAC **29** 01:06:00.9±0.2,18°N±2°×6°7W±°,h10^{km},M5.2/16,mb5.1/16,mB5.5/7,MLv5.5/11,Mw(mB)4.9/7,Error ellipse: s-maj=4.7km s-min=2.7km az=15.5,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.68; M$_{\theta\theta}$0.25; M$_{\phi\phi}$-0.93; M$_{r\theta}$1.02; M$_{\theta\phi}$0.73; M$_{\phi r}$-0.16; Fault plane solution: M$_0$1.51960×10^{16} NP1:ϕ_s118.81363°,δ72.17064°,λ50.98489°. NP2:ϕ_s8.11201°,δ42.29723°,λ152.93710°. Principal axes: T 1.5630, Plg47.6910°, Azm347.4144°; N -0.0908, Plg36.8191°, Azm132.7461°; P -1.4722, Plg17.8495°, Azm236.6956°; confirmed

OSPL **29** 01:06:00.1±0.7,17°.83N×66°.90W,h14^{km}±13^{km},ML4.7,Presumed earthquake

IDC **29** 01:06:00.2±0.4,17°.88N×66°.84W,h0^{km},mb4.7/26,mbtmp4.7/30,ML4.1/3,MS4.2/58,Error ellipse: s-maj=11.1km s-min=7.1km az=161.0

MOS **29** 01:06:01.8±1.2,17°.87N×66°.91W,h18^{km},mb5.3/37,MS4.3/4,Error ellipse: s-maj=8.4km s-min=6.0km az=67.8

NEIC **29** 01:06:01.3,17°.89N×66°.82W,h5^{km}

NEIC **29** 01:06:02.1±2.8,17°.91N±0°.04×66°.81W±0°.05,h10^{km}±1^{km},mb5.1/522,ML5.0/39,Mwr4.9/31,Mww5.0/15,ML5.0(RSPR),Mwr4.8/7(SLM),Error ellipse: s-maj=8.9km s-min=6.4km az=128.0,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.23; M$_{\theta\theta}$0.49; M$_{\phi\phi}$-0.26; M$_{r\theta}$-0.69; M$_{\theta\phi}$2.27; M$_{\phi r}$-1.21; Fault plane solution: M$_0$2.70000×10^{16} NP1:ϕ_s184.66000°,δ85.19000°,λ152.53000°. NP2: ϕ_s277.16000°,δ62.64000°,λ5.42000°. Principal axes: T 2.9650, Plg23.0000°, Azm137.0000°; N -0.6450, Plg62.0000°, Azm356.0000°; P -2.3200, Plg15.0000°, Azm234.0000°;

INMG **29** 01:06:03.0±4.6,17°.84N×66°.70W,h10^{km},M4.9,mb4.8,#DIST_RANGE: DISTANT

PPT **29** 01:06:03.3±0.1,17°.92N×66°.73W,h10^{km},mb5.0/40,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0

RSNC **29** 01:06:03.8±0.0,18°N±12°×6°7W±1°2,h0^{km}±6^{km},M4.5,mb5.0,mB5.1,ML4.5,Mw(mB)4.5,MwMwp4.6,Mwp4.9

GCMT **29** 01:06:05.1±0.2,18°.07N±0°.01×66°.79W±0°.01,h12^{km},MW4.9/117,Moment Tensor Solution. s28,c37; s117,c184; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.24±.08; M$_{\theta\theta}$1.66±.07; M$_{\phi\phi}$-1.43±.07; M$_{r\theta}$-0.82±.20; M$_{\theta\phi}$2.40±.05; M$_{\phi r}$-1.42±.19; Best double couple: M$_0$3.27100×10^{16} NP1:ϕ_s288.00000°,δ61.00000°,λ2.00000°. NP2:ϕ_s197.00000°,δ89.00000°,λ151.00000°. Principal axes: T 3.5080, Plg21.0000°, Azm148.0000°; N -0.4790, Plg61.0000°, Azm14.0000°; P -3.0350, Plg19.0000°, Azm246.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 29 01:06:00.2±0.7,17°.80N±0°.03×66°.86W±0°.02,h4^{km}±4^{km},n1015,σ1^{s}52/768,mb5.0/318,MS4.3/60,41C-37D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLPR	Magueyes Islan	0.24	313	⇓iP	Pg	01 06 04.4	-0.5
MLPR	Magueyes Islan	0.24	313	eS	Sg	01 06 07.0	-1.1
CRPR	Cabo Rojo, PR	0.31	310	Pg	Pg	01 06 05.7	-0.5
CRPR				IAML		01 06 15.3	
	183μm,0.8s						
CRPR	Cabo Rojo, PR	0.31	310	⇑iP	Pg	01 06 05.8	-0.5
CRPR	Cabo Rojo, PR	0.31	310	eS	Sg	01 06 09.6	-0.8
CRPR	Cabo Rojo, PR	0.31	310	i P	Pg	01 06 05.8	-0.5
CRPR				eS	Sg	01 06 09.0	-1.4
CRPR				IAML		01 06 11.9	
	comp=Z,131μm,0.2s						
OBIP	Obispado Ponce	0.34	45		Pg	01 06 06.0	-0.8
OBIP	Obispado Ponce	0.34	45		Sg	01 06 11.0	-0.2
OBIP	Obispado Ponce	0.34	45	IAML		01 06 14.3	
	comp=N,146μm,0.7s						
OBIP	Obispado Ponce	0.34	45	⇓iP	Pg	01 06 06.0	-0.8
OBIP	Obispado Ponce	0.34	45	eS	Sg	01 06 11.0	-0.2
CELP	Cerrillos	0.38	45	Pg	Pg	01 06 06.7	-0.9
CELP				IAML		01 06 13.4	
	comp=N,187μm,0.7s						
LSP	Las Mesas	0.43	330		Pg	01 06 07.3	-1.2
LSP	Las Mesas	0.43	330	⇓eP	Pg	01 06 07.3	-1.2
UUPR	Utuado, UPR, P	0.47	16	Pg	Pg	01 06 07.5	-1.7
PRSN	Puerto Rico Se	0.49	327	⇑iP	Pg	01 06 08.4	-1.3
PRSN	Puerto Rico Se	0.49	327	eS	Sg	01 06 15.2	-1.0
AOPR	Arecibo Observ	0.55	10		Pg	01 06 08.9	-1.9
AOPR	Arecibo Observ	0.55	10		Sg	01 06 15.6	-2.4
AOPR	Arecibo Observ	0.55	10	IAML		01 06 20.9	
	comp=N,188μm,0.8s						
AOPR	Arecibo Observ	0.55	10	⇑iP	Pg	01 06 09.0	-1.9
AOPR	Arecibo Observ	0.55	10	eS	Sg	01 06 15.6	-2.4
AOPR	Arecibo Observ	0.55	10	eP	Pg	01 06 08.9	-1.9
ECPR	Experimental S	0.70	43	Pg	Pg	01 06 12.0	-1.6
ECPR				IAML		01 06 22.5	
	comp=N,87μm,0.6s						
ECPR				IAML		01 06 22.9	
	comp=N,92μm,0.6s						
ECPR	Experimental S	0.70	43	⇓iP	Pg	01 06 12.1	-1.6
ECPR	Experimental S	0.70	43	eS	Sg	01 06 21.4	-1.3
AGPR	Aguadilla, PR	0.70	340		Pg	01 06 11.9	-1.8
AGPR				IAML		01 06 22.4	
	comp=N,86μm,0.5s						
AGPR				IAML		01 06 29.4	
	comp=N,69μm,0.9s						
AGPR	Aguadilla, PR	0.70	340	⇑iP	Pg	01 06 11.9	-1.8
AGPR	Aguadilla, PR	0.70	340	eS	Sg	01 06 20.4	-2.5
AGPR	Aguadilla, PR	0.70	340	P	Pg	01 06 12.0	-1.8
AGPR				S	Sg	01 06 21.9	-1.0
AGPR	Aguadilla, PR	0.70	340	i P	Pg	01 06 11.8	-2.0
AGPR				eS	Sg	01 06 20.9	-2.0
AGPR				IAML		01 06 36.7	
	comp=Z,35μm,1.0s						
EMPR	Esperanza - Ma	0.74	25		Pg	01 06 13.0	-1.4
EMPR					Sg	01 06 22.8	-1.3
EMPR	Esperanza - Ma	0.74	25	⇓iP	Pg	01 06 13.0	-1.4
EMPR	Esperanza - Ma	0.74	25	eS	Sg	01 06 22.8	-1.3
SJG	San Juan	0.74	65	Pg	Pg	01 06 13.6	-0.8
	comp=Z,1μm,0.3s,baz=260,slow=14,SNR=727						
SJG				Lg	Lg	01 06 23.5	
	comp=Z,3μm,0.3s,baz=282,slow=19,SNR=14						
SJG	San Juan	0.74	65		Pg	01 06 13.4	-1.0
SJG				IAML		01 06 25.5	
	comp=Z,55μm,0.6s						
SJG	San Juan	0.74	65	P	Pg	01 06 13.5	-1.0
SJG	San Juan	0.74	65	⇑iP	Pg	01 06 13.2	-1.3
SJG	San Juan	0.74	65	P	Pg	01 06 13.5	-1.0
SJG				S	Sg	01 06 23.7	-0.4
SJG	San Juan	0.74	65	eP	Pg	01 06 13.5	-1.0
SJG	San Juan	0.74	65	P	Pg	01 06 13.3	-1.2
SJG				S	Sg	01 06 23.7	-0.4
SJG	San Juan	0.74	65	i P	Pg	01 06 13.5	-1.0
SJG				eS	Sg	01 06 23.9	-0.2
SJG				IAML		01 06 26.2	
	comp=Z,33μm,0.6s						
IDE	Isla Desecheo	0.82	315		Pg	01 06 14.3	-1.8
IDE	Isla Desecheo	0.82	315	⇓eP	Pg	01 06 14.3	-1.8
GCPR	Guaynabo City	0.89	56		Pg	01 06 15.8	-1.6
GCPR	Guaynabo City	0.89	56		Sg	01 06 27.1	-1.9
GCPR	Guaynabo City	0.89	56	IAML		01 06 31.8	
	comp=N,40μm,0.8s						
GCPR				IAML		01 06 37.0	
	comp=E,25μm,0.8s						
GCPR	Guaynabo City	0.89	56	⇑iP	Pg	01 06 15.8	-1.6
GCPR	Guaynabo City	0.89	56	eS	Sg	01 06 27.1	-1.9
HUMP	Col San Antoni	1.02	70		Pg	01 06 18.1	-1.7
HUMP	Col San Antoni	1.02	70		Sg	01 06 30.9	-2.1
HUMP	Col San Antoni	1.02	70	IAML		01 06 33.5	
	comp=E,37μm,0.6s						
HUMP				IAML		01 06 37.8	
	comp=E,34μm,0.5s						
HUMP	Col San Antoni	1.02	70	⇓eP	Pg	01 06 18.1	-1.7
HUMP	Col San Antoni	1.02	70	eS	Sg	01 06 30.9	-2.1
DR12	Loma Pena Alta	2.59	293		Pn	01 06 42.9	0.0
SMDR	Samana, DR	2.66	304	⇑eP	Pb	01 06 46.3	-2.1
SMDR	Samana, DR	2.66	304	eS	Sb	01 07 19.4	-2.1
SDD	Santo Domingo	2.98	283		Pn	01 06 49.8	+1.6
SDD	Santo Domingo	2.98	283	P	Pn	01 06 48.7	+0.5
SABA	Saba	3.45	92		Pn	01 06 55.1	+0.3
SABA	Saba	3.45	92		Sn	01 07 30.1	-6.2
SABA	Saba	3.45	92	IAML		01 07 42.7	
	comp=N,5μm,0.7s						
SABA	Saba	3.45	92	⇓eP	Pn	01 06 55.0	+0.1
SABA	Saba	3.45	92	eS	Sn	01 07 30.1	-6.2

SABA	Saba	3.45	92	P	Pn	01 06 54.7	-0.1
SEUS	St. Eustatius	3.71	94		Pn	01 06 58.8	+0.4
SEUS				IAML		01 08 03.4	
	comp=E,3µm,0.9s						
SEUS				IAML		01 08 10.8	
	comp=N,3µm,1.0s						
SEUS	St. Eustatius	3.71	94	P	Pn	01 06 57.9	-0.4
SKI	Saint Kitts	3.96	96	eP	Pn	01 07 02.6	+0.8
SC01	Santiago de lo	4.01	294		Pn	01 07 05.7	+3.2
SC01	Santiago de lo	4.01	294	P	Pn	01 07 06.5	+4.0
SC01				S	Sn	01 07 51.3	+1.4
SDDR	Presa de Saban	4.37	286		Pn	01 07 09.2	+1.8
SDDR				IAML		01 08 20.2	
	comp=N,4µm,1.0s						
SDDR				IAML		01 08 33.3	
	comp=N,4µm,1.2s						
SDDR	Presa de Saban	4.37	286⇑	eP	Pn	01 07 11.7	+4.2
SDDR	Presa de Saban	4.37	286	P	Pn	01 07 11.1	+3.7
SDDR				S	Sn	01 08 00.7	+1.9
SDDR	Presa de Saban	4.37	286	eP	Pn	01 07 07.3	-0.2
SDDR				eS	Sn	01 07 57.6	-1.2
SDDR	Presa de Saban	4.37	286	P	Pn	01 07 10.2	+2.8
SDDR				S	Sb	01 08 06.7	-4.0
MBWH	Windy Hill	4.58	103	eP	Pn	01 07 09.9	-0.5
MBWH	Windy Hill	4.58	103	eS	Sn	01 08 02.7	-1.5
MLYT	Lee's Yard	4.59	103	eP	Pn	01 07 09.9	-0.6
MLYT	Lee's Yard	4.59	103	eS	Sn	01 07 59.9	-4.4
ANWB	Willy Bob	4.84	91		Pn	01 07 14.1	+0.2
ANWB				IAML		01 08 48.9	
	comp=N,889nm,1.2s						
ANWB	Willy Bob	4.84	91	P	Pn	01 07 13.5	-0.4
ANWB				S	Sn	01 08 09.5	-0.8
ANWB	Willy Bob	4.84	91	eP	Pn	01 07 13.6	-0.4
ANWB	Willy Bob	4.84	91	eS	Sn	01 08 11.6	+1.2
ANWB	Willy Bob	4.84	91	P	Pn	01 07 13.4	-0.4
ANWB				S	Sn	01 08 14.5	+4.1
DHSZ	Broadband at M	5.11	107	eP	Pn	01 07 17.1	-0.4
DHSZ	Broadband at M	5.11	107	eS	Sn	01 08 13.3	-3.7
GDHS	Morne Mazeau,	5.11	107		Pn	01 07 16.7	-0.9
ATGZ	Broadband at L	5.20	108	eP	Pn	01 07 18.7	-0.1
ATGZ	Broadband at L	5.20	108	eS	Sn	01 08 17.6	-1.7
MMLZ	Guadeloupe Bro	5.27	109	eP	Pn	01 07 20.4	+0.7
MMLZ	Guadeloupe Bro	5.27	109	eS	Sn	01 08 19.3	-1.7
ABD	La Joyeuse, An	5.30	104		Pn	01 07 20.1	-0.1
ABD				IAML		01 08 52.5	
	comp=E,864nm,1.1s						
ABD				IAML		01 09 05.1	
	comp=N,766nm,1.6s						
ABD	La Joyeuse, An	5.30	104⇑	eP	Pn	01 07 20.2	-0.1
ABD	La Joyeuse, An	5.30	104	eS	Sn	01 08 17.3	-4.6
CBE	Ff, Capester	5.31	108		Pn	01 07 20.9	+0.5
CBE	Ff, Capester	5.31	108		Sn	01 08 21.0	-1.2
CBE	Ff, Capester	5.31	108	IAML		01 08 29.1	
	comp=N,2µm,0.5s						
CBE				IAML		01 08 30.3	
	comp=E,2µm,0.5s						
CBE	Ff, Capester	5.31	108⇑	eP	Pn	01 07 21.9	+1.4
CBE	Ff, Capester	5.31	108	P	Pn	01 07 20.3	-0.2
CBE				S	Sn	01 08 21.8	-0.4
TBG	Guadaloupe-3	5.36	110	eP	Pn	01 07 20.6	-0.4
TDBA	Terre de Bas,	5.37	110		Pn	01 07 21.1	-0.1
TDBA				IAML		01 08 46.6	
	comp=E,649nm,0.7s						
GRTK	Grand Turk	5.46	313		Pn	01 07 22.9	+0.5
GRTK	Grand Turk	5.46	313	P	Pn	01 07 21.2	-1.2
GRTK	Grand Turk	5.46	313	eP	Pn	01 07 22.2	-0.3
GRTK	Grand Turk	5.46	313	P	Pn	01 07 21.5	-0.9
	comp=E,9µmcomp=E,867nm,0.9s						
GRTK				S	Sn	01 08 23.5	-2.3
	comp=E,9µmcomp=E,867nm,0.9s						
DSLB	Salisbury	5.72	113	eP	Pn	01 07 25.1	-1.0
DSLB	Salisbury	5.72	113	eS	Sn	01 08 31.0	-1.2
DSDZ	La Diserade, G	5.74	104	eP	Pn	01 07 25.8	-0.4
DSDZ	La Diserade, G	5.74	104	eS	Sn	01 08 31.8	-0.7
GDSD	La Dsirade Is	5.74	104		Pn	01 07 25.4	-0.8
H05N1	Guadeloupe/Mar	5.74	104	Pn	Pn	01 07 25.6	-0.7
H05N1				Sn	Sn	01 08 29.3	-3.4
DWS	Wesley	5.76	112	eP	Pn	01 07 27.4	+0.9
DWS	Wesley	5.76	112	eS	Sn	01 08 32.5	-0.7
DLPL	La Plaine	5.92	114	eP	Pn	01 07 30.3	+1.6
SVN	Savane Anatole	6.21	117	eP	Pn	01 07 32.3	-0.4
CXM	Morne La Croix	6.22	118		Pn	01 07 32.3	-0.8
BIM	Bigot	6.45	120		Pn	01 07 35.1	-1.0
BIM	Bigot	6.45	120	eP	Pn	01 07 35.4	-0.7
BIM	Bigot	6.45	120	eS	Sn	01 08 47.7	-2.5
MPOM	Morne Pois Mar	6.66	119		Pn	01 07 39.4	+0.4
H05S1	Guadeloupe/Mar	6.69	119	Pn	Pn	01 07 38.9	-0.5
H05S1				Sn	Sn	01 08 52.6	-3.5
H05S1				T	T	01 14 17.2	
	SNR=18						
SLBI	Saint Lucia, B	6.79	123	eP	Pn	01 07 39.2	-1.6
SLBI	Saint Lucia, B	6.79	123	eS	Sn	01 08 54.6	-4.1
SLAC	Saint Lucia, A	6.93	123	eP	Pn	01 07 42.4	-0.2
MCLT	Moule a Chique	7.00	125	eP	Pn	01 07 43.3	-0.3
SVB	Belmont	7.04	129	eP	Pn	01 07 42.7	-1.4
SVB	Belmont	7.04	129	eS	Sn	01 08 59.2	-5.4
MASC	Masc	7.36	290	P	Pn	01 07 47.4	-1.2
MASC	Masc	7.36	290	eP	Pn	01 07 47.7	-0.9
MASC				eS	Sn	01 09 02.5	-10
GCMP	Grenada, Carri	7.45	134	eP	Pn	01 07 47.8	-1.9
GCMP	Grenada, Carri	7.45	134	eS	Sn	01 09 08.0	-6.7
GRSS	Sisters	7.46	136	eP	Pn	01 07 48.0	-1.9
GRSS	Sisters	7.46	136	eS	Sn	01 09 09.6	-5.4
GRHS	Sauteurs	7.49	137	eP	Pn	01 07 51.3	+0.9
GRHS	Sauteurs	7.49	137	eS	Sn	01 09 11.7	-4.2
GRW	Mount Saint Ca	7.53	137	eP	Pn	01 07 46.2	-4.8
GRGR	Grenville	7.55	138		Pn	01 07 52.2	+1.0
GRGR	Grenville	7.55	138	P	Pn	01 07 50.6	-0.6
GRGR				S	Sn	01 09 15.5	-1.9
GRGR	Grenville	7.55	138	eP	Pn	01 07 50.8	-0.4
GRGR	Grenville	7.55	138	eS	Sn	01 09 09.1	-8.4
GRFF	Grenada Fort F	7.56	138	eP	Pn	01 07 51.1	-0.2
GRFF	Grenada Fort F	7.56	138	eS	Sn	01 09 13.2	-4.5
URI	Uribia	7.84	220	P	Pn	01 07 57.2	+2.1
URIC	Uribia, Colomb	7.84	220	P	Pn	01 07 53.3	-1.8
	comp=E,34nm,0.7s						
URIC				S	Sn	01 09 19.2	-5.2
	comp=E,34nm,0.7s						
QMBU	Quimbuelo	7.89	289	P	Pn	01 07 56.8	+1.0
QMBU				S	Sn	01 09 25.4	-0.3
QMBU	Quimbuelo	7.89	289	eP	Pn	01 07 54.0	-1.8
GTBY	Guantanamo Bay	8.09	286	P	Pn	01 07 59.3	+0.7
GTBY	Guantanamo Bay	8.09	286	eP	Pn	01 07 57.7	-0.9
GTBY	Guantanamo Bay	8.09	286	P	Pn	01 07 57.6	-1.0
	comp=E,93nm,1.3s						
GTBY				S	Sn	01 09 29.7	-0.9
	comp=E,93nm,1.3s						
NMDO	Nuevo Mundo	8.15	291	P	Pn	01 08 02.7	+3.3
NMDO	Nuevo Mundo	8.15	291	eP	Pn	01 07 56.1	-3.3
MOAC	Moa	8.16	292	eP	Pn	01 07 51.0	-8.5
BBGH	Gun Hill	8.43	122	P	Pn	01 08 04.1	+0.9
BBGH	Gun Hill	8.43	122	eP	Pn	01 08 06.3	+3.1
BBGH	Gun Hill	8.43	122	eS	Sn	01 09 37.2	-1.6
RCC	Rio Carpintero	8.64	286	eP	Pn	01 08 05.1	-1.1
DMDM	Guralp CMG5TDE	8.74	143	eP	Pn	01 08 11.6	+4.1
DMDM	Guralp CMG5TDE	8.74	143	eS	Sn	01 09 42.2	-4.3
MARVS	Santiago de Cu	8.83	286	eP	Pn	01 08 07.8	-1.0
PINC	Pinares de May	8.85	289	eP	Pn	01 08 06.6	-2.5
TRN	Trinidad (W)	8.86	143	eP	Pn	01 08 11.0	+1.9
TRN	Trinidad (W)	8.86	143	eS	Sn	01 09 43.6	-6.0
HLGC	Holguin	9.21	291	eP	Pn	01 08 11.8	-2.2
CHIV	Chivirico	9.30	285	P	Pn	01 08 16.2	+1.1
CHIV	Chivirico	9.30	285	eP	Pn	01 08 11.5	-3.6
STH	Stony Hill	9.47	273	i P	Pn	01 08 16.4	-1.2
SDV	Santo Domingo	9.59	203	Pn	Pn	01 08 20.5	+1.1
	comp=E,3.9nm,0.3s,baz=30,slow=9.0,SNR=34						
SDV				Sn	Sn	01 09 57.2	-11
	comp=E,2.8nm,0.3s,baz=50,slow=7.9,SNR=1.8						
SDV				LR	LR	01 13 14.0	
	comp=E,700nm,19.0s,baz=40,slow=45						
	comp=E,40nm,0.5s						
SDV	Santo Domingo	9.59	203	eP	Pn	01 08 20.5	+1.1
SDV	Santo Domingo	9.59	203	P	Pn	01 08 20.6	+1.2
	comp=E,1µmcomp=E,130nm,0.9s						
SDV				S	Sn	01 10 02.7	-5.1
	comp=E,1µmcomp=E,130nm,0.9s						
MTDJ	Mount Denham	10.17	274		Pn	01 08 26.3	-0.9
MTDJ	Mount Denham	10.17	274	i P	Pn	01 08 24.1	-3.0
MTDJ	Mount Denham	10.17	274	P	Pn	01 08 26.2	-1.0
MTDJ	Mount Denham	10.17	274	eP	Pn	01 08 26.0	-1.1
MTDJ	Mount Denham	10.17	274	P	Pn	01 08 24.7	-2.4
	comp=E,1µmcomp=E,90nm,1.3s						

CCCC	Cccc	10.83	290	eP	Pn	01 08 28.0	-8.1
SJCC	San Jacinto, C	11.27	227	P	Pn	01 08 44.4	+2.2
CBCY	The Bluff, Cay	12.37	281	P	Pn	01 08 57.3	+0.1
CBCY	The Bluff, Cay	12.37	281	eP	Pn	01 08 52.6	-4.6
LCCY	Blossom Villag	12.66	281	eP	Pn	01 08 58.6	-2.6
BARC	Barichara	12.74	210	P	Pn	01 09 03.8	+1.3
	comp=E,2µmcomp=E,161nm,1.0s						
RUSC	La Rusia	13.31	208	P	Pn	01 09 10.3	-0.2
RUSC	La Rusia	13.31	208	P	Pn	01 09 08.9	-1.6
	comp=E,1µmcomp=E,95nm,1.3s						
FSCY	Frank Sound, G	13.67	279	P	Pn	01 09 16.0	+1.1
CAP2	Capurgana	13.68	230	P	Pn	01 09 18.0	+2.9
SPBC	San Pablo de B	13.98	211	P	Pn	01 09 18.1	-1.3
	comp=E,2µmcomp=E,103nm,1.1s						
DBBC	Dabeiba	14.07	222	P	Pn	01 09 19.3	-1.3
HELC	Santa Helena	14.31	217	P	Pn	01 09 25.5	+1.4
NORC	Norcasia	14.47	214	P	Pn	01 09 25.2	-0.8
	comp=E,527nmcomp=E,45nm,1.1s						
CAMR	Camarioca	14.57	293	P	Pn	01 09 28.0	+0.7
PRVC	Isla de Provid	14.65	255	P	Pn	01 09 28.5	+0.1
CHIC	Chingaza	14.72	208	P	Pn	01 09 27.8	-2.0
	comp=E,807nmcomp=E,86nm,0.9s						
ROSC	El Rosal	14.81	210	Pn	Pn	01 09 33.7	+2.8
	comp=E,5.8nm,0.3s,baz=8.6,slow=16,SNR=8.0						
ROSC				LR	LR	01 15 13.8	
	comp=E,1µm,21.5s,baz=3.6,slow=37						
ROSC	El Rosal	14.81	210		Pn	01 09 31.7	+0.8
ROSC	El Rosal	14.81	210	P	Pn	01 09 31.7	+0.8
CBOC	Ciudad Bolivar	14.86	218	P	Pn	01 09 30.1	-1.3
	comp=E,649nmcomp=E,49nm,1.0s						
CVER	Cruz Verde, Cu	14.97	209	P	P	01 09 37.1	-1.9
	comp=E,142nm,1.2s						
PTAC	Punta Ardita,	15.04	227	P	Pn	01 09 30.5	-3.2
	comp=E,62nm,1.1s						
VILC	Villavicencio,	15.16	207	P	Pn	01 09 33.5	-2.0
	comp=E,703nmcomp=E,80nm,0.6s						
SAIC	Isla e San And	15.26	252	P	P	01 09 44.0	+2.3
	comp=E,201nm,1.3s						
ANIL	Santa Ana	15.65	213	P	Pn	01 09 43.0	+0.9
	comp=E,990nmcomp=E,65nm,1.0s						
PLMC	San Jos del P	15.79	217	P	Pn	01 09 43.0	-0.7
	comp=E,790nmcomp=E,101nm,1.0s						
SOR	Soroa	15.94	291	P	Pn	01 09 46.7	+1.2
SOR	Soroa	15.94	291	P	Pn	01 09 46.7	+1.2
SOR				pmax	pmax		
	comp=Z,35nm,0.9s						
PRAC	Prado	16.06	210	P	Pn	01 09 46.7	-0.4
	comp=Z,805nmcomp=Z,78nm,1.1s						
ORTC	Ortega, Tolima	16.07	212	P	Pn	01 09 46.7	-0.5
	comp=Z,1µmcomp=Z,137nm,1.1s						
URMC	La Uribe, Meta	16.24	208	P	Pn	01 09 49.0	-0.4
	comp=Z,119nm,1.1s						
BOAV	Boa Vista	16.53	157		Pn	01 09 53.5	+0.4
BOAV	Boa Vista	16.53	157	eP	Pn	01 09 53.8	+0.7
BOAV	Boa Vista	16.53	157	P	Pn	01 09 51.4	-1.7
	comp=Z,470nmcomp=Z,18nm,0.9s						
YOTC	Yotoco, Valle	16.58	215	P	P	01 09 58.4	+1.9
	comp=Z,410nmcomp=Z,39nm,1.1s						
DWPF	Disney Wildern	16.88	310	P	Pn	01 09 58.1	+0.7
DWPF				IAmb	IAmb	01 09 59.6	
	comp=Z,327nm,1.6s						
MACC	Macarena, Meta	17.00	205	P	Pn	01 09 57.8	-1.4
	comp=Z,630nmcomp=Z,56nm,0.9s						
JAMC	Jamundi, Valle	17.40	215	P	Pn	01 10 05.1	+0.8
	comp=Z,33nm,0.9s						
SIUN	Universidad Ur	17.71	259	P	Pn	01 10 06.8	-1.1
SIUN				IAmb	IAmb	01 10 15.5	
	comp=Z,57nm,1.4s						
SGC2	Sao Gabriel da	17.84	180	P	P	01 10 10.6	+0.3
	comp=Z,577nmcomp=Z,42nm,0.9s						
POPC	Popayan, Colom	17.97	214	P	Pn	01 10 11.4	0.0
	comp=Z,557nmcomp=Z,61nm,1.0s						
FLOC	Florencia	18.29	209	P	P	01 10 16.2	+0.9
	comp=Z,821nmcomp=Z,70nm,1.3s						
656A	Willston	18.39	312	IAmb	IAmb	01 10 20.4	
	comp=Z,150nm,1.4s						
GR1C	Gorgona, Isla	18.42	218	P	P	01 10 18.9	+2.2
HDC	Heredia	18.45	247	eP	Pn	01 10 20.4	+3.3
PIRO	Carate, Puerto	18.55	242	IAmb	IAmb	01 10 25.7	
	comp=Z,142nm,1.3s						
BBAC	Balboa, Cauca	18.71	214	P	Pn	01 10 21.0	+0.6
	comp=Z,543nmcomp=Z,53nm,1.3s						
MDP	Montagnes des	18.78	131	P	Pn	01 10 21.9	+0.8
	comp=Z,1.1nm,0.3s,baz=315,slow=12,SNR=7.0						
MDP				LR	LR	01 20 06.0	
	comp=Z,755nm,18.8s,baz=314,slow=45						
	comp=Z,45nm,1.1s						
456A	Hilliard	18.86	316	IAmb	IAmb	01 10 28.6	
	comp=Z,86nm,0.8s						
BOAB	BOACO BROADBAN	18.91	256	IAmb	IAmb	01 10 26.9	
	comp=Z,113nm,1.1s						
JTS	Las Juntas de	19.06	249	P	Pn	01 10 26.7	+2.1
	comp=Z,1.6nm,0.3s,baz=56,slow=5.5,SNR=43						
JTS				LR	LR	01 18 00.9	
	comp=Z,660nm,18.9s,baz=49,slow=38						
	comp=Z,120nm,1.0s						
JTS	Las Juntas de	19.06	249	P	Pn	01 10 27.1	+2.5
JTS				IAmb	IAmb	01 10 29.6	
	comp=Z,135nm,1.0s						
JTS	Las Juntas de	19.06	249c	iP	Pn	01 10 27.8	+3.2
JTS				pmax	pmax		
	comp=Z,168nm,1.0s						
JTS	Las Juntas de	19.06	249	P	Pn	01 10 27.1	+2.5
	comp=Z,2µmcomp=Z,142nm,1.1s						
Y60A	Bolivia	19.07	330	P	P	01 10 22.6	-1.1
Y60A				IAmb	IAmb	01 10 28.2	
	comp=Z,140nm,1.1s						
PTLC	Puerto Leguiza	19.18	205	P	Pn	01 10 29.1	+3.1
	comp=Z,806nmcomp=Z,58nm,1.1s						
RGRS	Roger Stewart	19.24	324	IAmb	IAmb	01 10 36.2	
	comp=Z,135nm,0.7s						
Y58A	Scranton	19.72	327	P	P	01 10 29.7	-1.1
CNGN	Cerro Negro	19.86	257	P	Pn	01 10 35.4	+1.3
	comp=Z,14µmcomp=Z,1µm,1.1s						
V61A	Roper	19.88	336	P	P	01 10 32.9	+0.3
CMBC	Cumbal	19.92	214	P	Pn	01 10 37.5	+2.2
	comp=Z,111nm,0.9s						
TGUH	Tegucigalpa,Un	19.98	262	P	Pn	01 10 36.4	+0.8
TGUH				IAmb	IAmb	01 10 44.4	
	comp=Z,161nm,1.2s						
TGUH	Tegucigalpa,Un	19.98	262	P	Pn	01 10 37.0	+1.4
TIGA	Tifton	20.35	315	IAmb	IAmb	01 10 45.2	
	comp=Z,62nm,0.9s						
TEIG	Tepich	20.39	280	P	Pn	01 10 39.9	-0.4
	comp=Z,0.1nm,0.6s,baz=127,slow=20,SNR=9.7						
TEIG	Tepich	20.39	280	P	P	01 10 36.8	-1.5
BIRD	Birdtown, Kers	20.70	327	IAmb	IAmb	01 10 56.5	
	comp=Z,62nm,0.8s						
154A	Montrose	20.78	318	P	P	01 10 42.0	-0.5
OTAV	Otavalo	20.85	214	P	Pn	01 10 46.5	+0.3
OTAV	Otavalo	20.85	214	P	Pn	01 10 46.5	+0.3
OTAV				pmax	pmax		
	comp=Z,154nm,1.2s						
OTAV	Otavalo	20.85	214	eP	Pn	01 10 46.4	+0.3
352A	Blakely	21.29	313	P	P	01 10 48.7	+0.8
352A				IAmb	IAmb	01 10 53.3	
	comp=Z,76nm,1.0s						
TEFE	Tefe	21.29	174	eP	P	01 10 50.8	+2.8
GOGA	Godfrey	21.54	319	IAmb	IAmb	01 11 01.8	
	comp=Z,86nm,1.1s						
ESQI	Esquipulas	21.83	265	P	P	01 10 55.1	+1.2
152A	Waverly Hall	21.86	316	IAmb	IAmb	01 10 59.3	
	comp=Z,75nm,1.0s						
MTO3	Montecristo	21.88	264	IAmb	IAmb	01 11 06.8	
	comp=Z,53nm,1.1s						
PETF	Flores	21.98	271	P	P	01 10 56.3	+0.9
PETF				IAmb	IAmb	01 11 06.9	
	comp=Z,48nm,1.0s						
U56A	King	22.00	330	IAmb	IAmb	01 10 59.7	
	comp=Z,86nm,1.0s						
T57A	Hurt	22.02	333	IAmb	IAmb	01 11 00.3	
	comp=Z,101nm,1.1s						
V55A	Taylorsville	22.03	328	IAmb	IAmb	01 11 14.4	
	comp=Z,63nm,0.7s						
Y52A	Lilburn	22.21	319	IAmb	IAmb	01 11 08.0	
	comp=Z,44nm,1.1s						
R58B	Mineral	22.29	337	IAmb	IAmb	01 11 04.1	
	comp=Z,133nm,1.5s						
BRAL	Brewton	22.64	310	IAmb	IAmb	01 11 06.4	
	comp=Z,90nm,1.0s						
BLA	Blacksburg	22.72	331	IAmb	IAmb	01 11 11.4	
	comp=Z,81nm,0.9s						
V53A	Saluda	22.74	325	IAmb	IAmb	01 11 23.0	
	comp=Z,49nm,1.0s						
APG	El Apazote	22.81	266	LR	LR	01 19 02.5	
	comp=Z,68nm,20.4s,baz=74,slow=34						

U54A	Nelsons Funny	22.85	328	IAmb	IAmb	01 11 24.4	
	comp=Z,44nm,0.9s						
TKL	Tuckaleechee C	23.27	323	LR	LR	01 19 58.1	
	comp=Z,490nm,20.9s,baz=158,slow=36						
TKL	Tuckaleechee C	23.27	323	P	P	01 11 07.9	-1.1
TKL				IAmb	IAmb	01 11 34.7	
	comp=Z,60nm,1.2s						
TKL	Tuckaleechee C	23.27	323	P	P	01 11 07.9	-1.1
TKL				pmax	pmax		
	comp=Z,60nm,1.2s						
CPCT	Cooper Cave	23.56	322	IAmb	IAmb	01 11 35.1	
	comp=Z,40nm,0.7s						
S54A	Dingess, Beckl	23.61	330	IAmb	IAmb	01 11 16.0	
	comp=Z,71nm,1.2s						
LRAL	Lakeview Retre	23.62	314	IAmb	IAmb	01 11 32.0	
	comp=Z,71nm,1.4s						
P57A	Homestead Farm	23.68	338	IAmb	IAmb	01 11 18.3	
	comp=Z,78nm,1.8s						
CPNY	Central Park	23.71	347	IAmb	IAmb	01 11 30.8	
	comp=Z,84nm,1.5s						
N62A	Caumsett State	23.74	347	IAmb	IAmb	01 11 20.2	
	comp=Z,42nm,0.9s						
BRNJ	Basking Ridge	23.75	345	IAmb	IAmb	01 11 36.2	
	comp=Z,68nm,0.9s						
TZTN	Tazewell	23.79	325	IAmb	IAmb	01 11 26.9	
	comp=Z,52nm,1.1s						
W50A	Signal Mountai	23.86	320	IAmb	IAmb	01 11 18.2	
	comp=Z,39nm,0.9s						
M65A	Busby, Falmout	23.90	353	P	P	01 11 15.8	+0.8
	baz=171						
PAL	Palisades	23.91	347	IAmb	IAmb	01 11 40.5	
	comp=Z,54nm,1.1s						
M63A	Gales Ferry	23.94	350	IAmb	IAmb	01 11 37.2	
	comp=Z,58nm,0.9s						
WSPT	Westport, CT	23.94	348	IAmb	IAmb	01 11 43.2	
	comp=Z,37nm,0.6s						
Q54A	Coxs Mills	24.36	333	IAmb	IAmb	01 11 22.2	
	comp=Z,52nm,1.0s						
Z47A	Carrollton	24.45	313	IAmb	IAmb	01 11 23.6	
	comp=Z,48nm,0.8s						
N58A	Sunbury	24.48	342	IAmb	IAmb	01 11 48.2	
	comp=Z,51nm,1.1s						
X48A	Hartselle	24.49	317	IAmb	IAmb	01 11 23.9	
	comp=Z,82nm,2.0s						
MCWV	Mont Chateau	24.52	335	IAmb	IAmb	01 11 23.6	
	comp=Z,48nm,1.1s						
ITTB	Itaituba	24.61	152	eP	P	01 11 22.4	+0.5
S51A	Beattyville	24.62	327	IAmb	IAmb	01 11 49.9	
	comp=Z,38nm,0.8s						
SSPA	Standing Stone	24.66	340	P	P	01 11 23.0	+0.9
SSPA				IAmb	IAmb	01 11 45.3	
	comp=Z,76nm,1.2s						
T50A	Nancy	24.84	324	IAmb	IAmb	01 11 31.9	
	comp=Z,34nm,0.9s						
KSPA	Keystone Colle	24.88	344	IAmb	IAmb	01 11 54.1	
	comp=Z,72nm,1.4s						
P53A	Whipple	25.02	333	IAmb	IAmb	01 11 27.7	
	comp=Z,38nm,1.1s						
U49A	Red Boiling Sp	25.03	322	IAmb	IAmb	01 11 54.7	
	comp=Z,24nm,0.8s						
V48A	Smith Brothers	25.15	319	IAmb	IAmb	01 11 44.5	
	comp=Z,33nm,1.1s						
L59A	Walton	25.29	346	IAmb	IAmb	01 11 35.4	
	comp=Z,48nm,1.1s						
P52A	Corning	25.47	332	IAmb	IAmb	01 11 31.5	
	comp=Z,44nm,1.0s						
PLAL	Pickwick Lake	25.48	316	IAmb	IAmb	01 11 40.6	
	comp=Z,34nm,0.9s						
R50A	Paris	25.49	327	IAmb	IAmb	01 12 00.3	
	comp=Z,46nm,0.8s						
BINY	Binghamton	25.54	344	IAmb	IAmb	01 12 02.1	
	comp=Z,39nm,1.0s						
O53A	New Philadelph	25.58	334	IAmb	IAmb	01 11 38.2	
	comp=Z,41nm,1.1s						
P51A	Williamsport	25.78	330	IAmb	IAmb	01 11 34.3	
	comp=Z,52nm,1.0s						
L56A	Greenwood	25.92	342	IAmb	IAmb	01 11 47.8	
	comp=Z,42nm,1.0s						
WVT	Waverly	26.03	319	P	P	01 11 33.9	-0.7
WVT				IAmb	IAmb	01 11 44.6	
	comp=Z,26nm,0.8s						
WVT	Waverly	26.03	319	P	P	01 11 33.9	-0.7
WVT				pmax	pmax		
	comp=Z,26nm,0.8s						
PAOC	Oil Creek Stat	26.07	338	IAmb	IAmb	01 12 11.9	
	comp=Z,35nm,1.1s						
T47A	Sharon Grove	26.14	321	IAmb	IAmb	01 11 39.2	
	comp=Z,29nm,1.2s						
K57A	Scipio Center	26.17	344	IAmb	IAmb	01 11 50.9	
	comp=Z,72nm,1.3s						
WCI	Wyandotte Cave	26.51	324	P	P	01 11 39.0	+0.2
WCI				IAmb	IAmb	01 11 43.5	
	comp=Z,26nm,0.8s						
WCI	Wyandotte Cave	26.51	324	P	P	01 11 39.1	+0.2
WCI				pmax	pmax		
	comp=Z,26nm,0.9s						
143A	Socs Landing,	26.61	309	P	P	01 11 41.2	+1.3
N51A	Ashland	26.63	333	IAmb	IAmb	01 11 41.8	
	comp=Z,40nm,1.0s						
J57A	Williamstown	26.67	345	IAmb	IAmb	01 12 16.9	
	comp=Z,25nm,0.7s						
ERPA	Erie	26.70	338	IAmb	IAmb	01 12 18.5	
	comp=Z,30nm,0.7s						
M52A	Chesterland	26.73	335	IAmb	IAmb	01 11 42.8	
	comp=Z,36nm,1.0s						
CMIG	Matias Romero	26.74	273	LR	LR	01 23 52.5	
	comp=Z,360nm,18.7s,baz=69,slow=40						
O49A	Covington	26.94	329	IAmb	IAmb	01 11 44.7	
	comp=Z,60nm,1.5s						
USIN	University of	27.12	322	IAmb	IAmb	01 11 55.5	
	comp=Z,41nm,0.9s						
NPGB	Novo Progresso	27.18	154	eP	P	01 11 43.5	-1.6
ATAH	Atahualpa	27.27	206	P	P	01 11 49.1	+2.7
	comp=Z,18nm,1.0s,baz=6.7,slow=5.8,SNR=10.0						
ATAH				LR	LR	01 25 03.8	
	comp=Z,686nm,18.7s,baz=41,slow=42						
	comp=Z,18nm,1.0s						
BLO	Bloomington	27.31	325	IAmb	IAmb	01 12 24.8	
	comp=Z,21nm,0.7s						
M50A	Fremont	27.31	333	IAmb	IAmb	01 11 48.1	
	comp=Z,43nm,1.0s						
O48B	Farmland	27.40	329	IAmb	IAmb	01 11 48.6	
	comp=Z,29nm,1.1s						
G62A	West of Eustis	27.51	354	IAmb	IAmb	01 11 51.6	
	comp=Z,23nm,1.1s						
SIUC	Southern Illin	27.89	320	IAmb	IAmb	01 11 53.6	
	comp=Z,40nm,0.9s						
S44A	Carbondale	27.90	320	IAmb	IAmb	01 11 53.5	
	comp=Z,37nm,0.9s						
WHAR	Wooly Hollow	28.52	313	IAmb	IAmb	01 12 23.3	
	comp=Z,32nm,1.2s						
Q44A	Meyer Farm, Va	28.53	322	IAmb	IAmb	01 11 59.1	
	comp=Z,40nm,1.0s						
NATX	Nacogdoches	28.71	304	IAmb	IAmb	01 12 02.0	
	comp=Z,39nm,0.9s						
FCAR	Ozark Folk Cen	28.72	314	IAmb	IAmb	01 12 45.3	
	comp=Z,30nm,1.4s						
SADO	Sadowa	28.79	342	LR	LR	01 22 17.1	
	comp=Z,650nm,21.6s,baz=176,slow=34						
FVM	French Village	28.80	319	IAmb	IAmb	01 12 50.7	
	comp=Z,37nm,1.4s						
HKT	Hockley	29.04	300	P	P	01 12 01.8	+0.3
HKT	Hockley	29.04	300⇓	eP	P	01 12 01.8	+0.3
HKT				pmax	pmax		
	comp=Z,14nm,0.9s						
CCM	Cathedral Cave	29.36	318	P	P	01 12 04.3	-0.1
CCM				IAmb	IAmb	01 12 14.0	
	comp=Z,19nm,0.8s						
CCM	Cathedral Cave	29.36	318	P	P	01 12 04.3	-0.1
CCM				pmax	pmax		
	comp=Z,19nm,0.9s						
MGMO	Mountain Grove	29.51	316	IAmb	IAmb	01 12 07.5	
	comp=Z,25nm,0.9s						
HHAR	Hobbs	30.18	313	IAmb	IAmb	01 13 03.6	
	comp=Z,20nm,1.2s						
CLDB	Colider	30.52	158	eP	P	01 12 16.9	+2.1
P40A	Paris	30.75	320	IAmb	IAmb	01 12 17.9	
	comp=Z,24nm,0.9s						
N41A	Harden Midland	30.79	323	IAmb	IAmb	01 12 18.2	
	comp=Z,32nm,0.9s						
PDRB	Porto dos Gac	30.89	160	eP	P	01 12 17.6	-0.5
L42A	Oliver, Polo	31.00	326	IAmb	IAmb	01 12 20.7	
	comp=Z,34nm,1.0s						
WHTX	Lake Whitney,	31.01	303	IAmb	IAmb	01 12 21.6	
	comp=Z,20nm,1.0s						
VILB	Vilhena	31.26	167	P	P	01 12 22.0	+0.7
VILB				IAmb	IAmb	01 12 32.3	
	comp=Z,49nm,1.4s						

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VILB  Vilhena          31.26 167 eP    P     01 12 23.0 +1.7
P38A  Dawn             31.73 319  IAmb IAmb  01 12 27.8
      comp=Z,12nm,0.7s
W35A  Tecumseh         31.77 309  IAmb IAmb  01 12 27.3
      comp=Z,28nm,0.9s
L40A  Anamosa          31.89 324  IAmb IAmb  01 13 26.1
      comp=Z,29nm,1.0s
E46A  Sault Ste Mari   31.94 337  IAmb IAmb  01 12 29.3
      comp=Z,34nm,1.1s
PLPT  Palo Pinto       31.98 304  IAmb IAmb  01 12 34.2
      comp=Z,23nm,0.8s
X34A  Smith Ranch, M   32.26 307  IAmb IAmb  01 12 32.4
      comp=Z,18nm,1.0s
T35A  Sooner Cattle    32.30 312  IAmb IAmb  01 12 32.5
      comp=Z,23nm,0.9s
OK048 Pawnee Station   32.37 311  IAmb IAmb  01 12 32.9
      comp=Z,17nm,0.8s
JCT   Junction City    32.48 299  IAmb IAmb  01 12 52.1
      comp=Z,10nm,0.7s
SMTB  Santa Maria do   32.62 143 eP    P     01 12 34.2 +0.8
I40A  Norwalk          32.82 327  IAmb IAmb  01 12 35.8
      comp=Z,36nm,1.3s
WMOK  Wichita Mounta   33.04 307  IAmb IAmb  01 12 38.4
      comp=Z,11nm,0.7s
KAN01 Argonia South    33.29 312  IAmb IAmb  01 12 41.0
      comp=Z,26nm,1.0s
SNDB  Serra Nova Dou   33.34 151 eP    P     01 12 40.8 +1.2
NBPS  Pedro II - PI    33.40 129 eP    P     01 12 40.4 +0.2
G40A  Rib Lake         33.60 330  IAmb IAmb  01 12 43.6
      comp=Z,18nm,1.0s
OZNA  Ozona            33.70 299  IAmb IAmb  01 12 49.9
      comp=Z,16nm,0.9s
N35A  Tabor            33.76 319  IAmb IAmb  01 13 36.4
      comp=Z,30nm,1.2s
LPAZ  La Paz           33.90 182  P    P     01 12 46.6 +1.5
      comp=Z,9.8nm,1.1s,baz=356,slow=12,SNR=10.0
LPAZ                              LR   LR    01 28 17.1
      comp=Z,696nm,18.2s,baz=343,slow=39
      comp=Z,9.8nm,1.1s
LPAZ  La Paz           33.90 182  P    P     01 12 46.7 +1.5
LPAZ  La Paz           33.90 182 eP    P     01 12 46.8 +1.7
PTLB  Pontes e Lacer   33.91 167  P    P     01 12 45.3 +0.8
PTLB  Pontes e Lacer   33.91 167 eP    P     01 12 45.3 +0.8
SIV   San Ignacio      34.06 170  LR   LR    01 27 22.1
      comp=Z,2µm,18.4s,baz=344,slow=38
SN07  Snyder 07        34.11 303  IAmb IAmb  01 13 05.0
      comp=Z,14nm,0.9s
SMWD  Samnorwood       34.29 307  IAmb IAmb  01 12 58.6
      comp=Z,12nm,0.7s
R32A  Long Quarter,    34.54 313  IAmb IAmb  01 13 31.7
      comp=Z,22nm,1.0s
SPMN  Marine on St.    34.87 327  IAmb IAmb  01 12 53.9
      comp=Z,17nm,0.9s
MNHN  Monahans         35.16 299  IAmb IAmb  01 13 00.7
      comp=Z,13nm,0.6s
SALV  Santo Antonio    35.25 161 eP    P     01 12 56.8 +0.6
CBKS  Cedar Bluff      35.44 313  IAmb IAmb  01 12 59.4
      comp=Z,22nm,0.8s
TXAR  Lajitas Array    35.49 296  P    P     01 12 59.0 +0.7
      comp=Z,7.1nm,0.7s,baz=108,slow=10,SNR=41
TXAR                              PcP  PcP   01 15 28.2 +0.3
      comp=Z,2.1nm,0.8s,baz=120,slow=4.5,SNR=4.0
TXAR                              ScP  ScP   01 19 15.3 +0.5
      comp=Z,4.7nm,0.7s,baz=94,slow=4.3,SNR=38
TXAR                              LR   LR    01 32 09.5
      comp=Z,214nm,18.0s,baz=76,slow=44
      comp=Z,7.1nm,0.7s
TXAR  Lajitas Array    35.49 296  P    P     01 12 57.9 -0.5
MSTX  Muleshoe         35.88 304  IAmb IAmb  01 13 03.2
      comp=Z,26nm,0.9s
ECSD  EROS Data Cent   36.01 322  IAmb IAmb  01 13 04.0
      comp=Z,28nm,0.9s
PB12  IPOC Station P   36.35 186  P    P     01 13 05.7 +0.1
PB12                              IAmb IAmb  01 13 08.7
      comp=Z,17nm,0.5s
ARAG  Araguaiana, MT   36.45 155 eP    P     01 13 06.6 +0.1
SCHQ  Schefferville    36.96   0  P    P     01 13 10.6 +0.1
      comp=Z,16nm,0.8s,baz=191,slow=6.8,SNR=19
SCHQ                              LR   LR    01 27 51.7
      comp=Z,198nm,19.3s,baz=177,slow=36
      comp=Z,16nm,0.8s
PP1B  Ponte de Pedra   37.10 161 eP    P     01 13 13.6 +1.6
K30B  Basset           37.24 319  IAmb IAmb  01 13 34.9
      comp=Z,45nm,1.1s
GO01  Chusmiza         37.31 184  IAmb IAmb  01 13 16.7
      comp=Z,47nm,1.3s
PB11  IPOC Station P   37.43 184  IAmb IAmb  01 13 43.4
      comp=Z,38nm,1.0s
PB08  IPOC Station P   37.77 184  IAmb IAmb  01 13 25.0
      comp=Z,24nm,0.9s
SUSD  Miller           37.80 322  IAmb IAmb  01 13 28.0
      comp=Z,35nm,0.8s
BDFB  Brasilia         38.07 150  P    P     01 13 21.8 +1.4
      comp=Z,7.4nm,1.1s,baz=316,slow=10,SNR=5.4
BDFB                              LR   LR    01 29 22.4
      comp=Z,1µm,19.8s,baz=327,slow=37
      comp=Z,7.4nm,1.1s
BDFB  Brasilia         38.07 150  P    P     01 13 21.6 +1.2
BDFB  Brasilia         38.07 150  P    P     01 13 21.6 +1.2
BDFB                              pmax pmax
      comp=Z,14nm,0.9s
EPLO  Experimental L   38.45 332  IAmb IAmb  01 13 24.3
      comp=Z,22nm,0.9s
AGMN  Agassiz Nation   38.50 329  IAmb IAmb  01 13 26.8
      comp=Z,16nm,0.6s
PB01  IPOC Station P   38.69 184  IAmb IAmb  01 13 30.5
      comp=Z,32nm,0.9s
C2SB  Chapadao do Su   38.87 159 eP    P     01 13 28.8 +1.9
NBTA  Tacaratu-PE      39.05 131 eP    P     01 13 29.5 +1.0
ANMO  Albuquerque      39.07 304  LR   LR    01 34 05.6
      comp=Z,284nm,18.3s,baz=114,slow=43
ANMO  Albuquerque      39.07 304  P    P     01 13 29.4 +0.6
ANMO  Albuquerque      39.07 304⇑iP    P     01 13 30.0 +1.2
ANMO                              pmax pmax
      comp=Z,8.0nm,1.1s
TASM  ASL Pad, Albuq   39.08 304  IAmb IAmb  01 13 33.8
      comp=Z,9.3nm,1.2s
TASM  ASL Pad, Albuq   39.08 304  IAmb IAmb  01 13 31.4
      comp=Z,6.3nm,1.0s
PB07  IPOC Station P   39.40 184  IAmb IAmb  01 13 36.7
      comp=Z,21nm,0.7s
PB09  IPOC Station P   39.42 183  IAmb IAmb  01 14 03.5
      comp=Z,92nm,1.9s
ULM   Lac du Bonnet    39.84 331  P    P     01 13 33.1 -1.6
      comp=Z,18nm,1.0s,baz=128,slow=8.3,SNR=17
ULM                               LR   LR    01 30 57.8
      comp=Z,260nm,18.2s,baz=137,slow=38
      comp=Z,18nm,1.0s
ULM   Lac du Bonnet    39.84 331⇓eP    P     01 13 33.6 -1.1
IPMB  Ipameri, GO      40.01 152 eP    P     01 13 36.1 -0.5
MDND  Maddock          40.15 326  P    P     01 13 37.3 -0.1
MURT  Porto Murtinho   40.25 167 eP    P     01 13 40.4 +2.0
ITRB  Iturama          40.64 156 eP    P     01 13 42.0 +0.4
K22A  Casper           41.74 315  P    P     01 13 51.1 +0.4
PV02  Paradox Valley   41.76 308  IAmb IAmb  01 13 53.9
      comp=Z,44nm,1.0s
PV13  Radium Mtn., P   41.80 308  P    P     01 13 52.1 +0.7
PV13                              IAmb IAmb  01 13 54.3
      comp=Z,30nm,1.0s
PV12  Saucer Basin,    41.84 308  IAmb IAmb  01 13 54.4
      comp=Z,41nm,0.9s
PV11  David Mesa, Pa   41.88 308  IAmb IAmb  01 14 11.3
      comp=Z,26nm,0.9s
PV18  Skein Mesa, Pa   41.90 308  IAmb IAmb  01 13 55.3
      comp=Z,42nm,0.9s
PV16  Nyswonger Mesa   41.92 308  IAmb IAmb  01 13 55.0
      comp=Z,22nm,0.9s
PV20  West Nyswonger   41.97 308  IAmb IAmb  01 14 07.6
      comp=Z,35nm,0.8s
PV19  Morning Glory    41.97 308  IAmb IAmb  01 13 55.3
      comp=Z,36nm,1.0s
PV05  Paradox Valley   41.99 308  IAmb IAmb  01 13 55.0
      comp=Z,23nm,1.0s
O20A  White River Ci   42.00 311  P    P     01 13 54.5 +1.6
PV10  Paradox Valley   42.03 308  IAmb IAmb  01 13 55.6
      comp=Z,32nm,1.0s
PV23  Carpenter Ridg   42.03 308  IAmb IAmb  01 14 20.3
      comp=Z,38nm,1.1s
TUC   Tucson           42.04 299  P    P     01 13 55.4 +2.1
TUC   Tucson           42.04 299  P    P     01 13 55.4 +2.1
TUC                               pmax pmax
      comp=Z,9.0nm,1.2s
AMBA  Amambai (Brazi   42.11 164 eP    P     01 13 54.1 +0.4
BB19B Bebedouro        42.60 154 eP    P     01 13 57.8  0.0
DGMT  Dagmar           43.04 324  IAmb IAmb  01 14 03.2
      comp=Z,31nm,0.9s
PDAR  Pinedale Array   43.85 314  P    P     01 14 07.7 -0.2
      comp=Z,3.4nm,0.9s,baz=119,slow=7.5,SNR=29
PDAR                              PcP  PcP   01 15 54.2 -0.1
      comp=Z,1.9nm,0.6s,baz=127,slow=4.8,SNR=8.0
PDAR                              ScP  ScP   01 19 46.7 -0.4
      comp=Z,1.4nm,1.1s,baz=125,slow=4.4,SNR=3.5
      comp=Z,3.4nm,0.9s
PDAR  Pinedale Array   43.85 314  P    P     01 14 07.9 -0.1
AC02  Maricunga        44.43 183  IAmb IAmb  01 14 29.8
      comp=Z,15nm,0.9s
RLMT  Red Lodge        44.55 317  IAmb IAmb  01 14 25.4
      comp=Z,40nm,1.4s
TCUT  Toone Canyon     44.60 311  IAmb IAmb  01 14 39.8
      comp=Z,22nm,1.3s
PTGB  Pitanga          44.65 161 eP    P     01 14 15.6 +1.3
CTU   Camp Tracy       44.72 310  IAmb IAmb  01 14 17.5
      comp=Z,16nm,1.0s
CPUP  Villa Florida    44.84 168  P    P     01 14 14.9 -0.7
      comp=Z,16nm,0.7s,baz=351,slow=9.3,SNR=34
CPUP                              LR   LR    01 34 04.6
      comp=Z,586nm,18.1s,baz=354,slow=38
      comp=Z,16nm,0.7s
CPUP  Villa Florida    44.84 168  P    P     01 14 15.3 -0.3
CPUP                              IAmb IAmb  01 14 18.9
      comp=Z,17nm,0.8s
CPUP  Villa Florida    44.84 168  P    P     01 14 15.3 -0.3
CPUP                              pmax pmax
      comp=Z,17nm,0.9s
LOHW  Long Hollow      44.86 315  IAmb IAmb  01 14 18.0
      comp=Z,16nm,0.9s
SNOW  Snow King Moun   44.91 314  IAmb IAmb  01 14 18.7
      comp=Z,16nm,1.1s
FCC   Fort Churchill   45.51 340  P    P     01 14 20.2 -0.4
FCC   Fort Churchill   45.51 340  P    P     01 14 20.2 -0.4
FCC                               pmax pmax
      comp=Z,62nm,1.1s
FFC   Flin Flon        45.61 332  P    P     01 14 20.1 -1.4
FFC                               IAmb IAmb  01 14 23.3
      comp=Z,16nm,0.8s
FFC   Flin Flon        45.61 332  P    P     01 14 20.1 -1.4
FFC                               pmax pmax
      comp=Z,16nm,0.8s
BGU   Big Grassy Mou   45.72 310  IAmb IAmb  01 14 24.9
      comp=Z,15nm,0.9s
FRB   Frobisher Bay    45.92 359  LR   LR    01 31 21.7
      comp=Z,287nm,21.8s,baz=184,slow=33
EGMT  Eagleton         46.07 321  IAmb IAmb  01 14 34.7
      comp=Z,27nm,1.2s
SPR3  Spring Creek 3   46.19 307  IAmb IAmb  01 14 29.8
      comp=Z,12nm,1.0s
BOZ   Bozeman (W)      46.27 317  IAmb IAmb  01 14 29.5
      comp=Z,16nm,1.1s
DLMT  Dillon           46.82 316  IAmb IAmb  01 14 34.0
      comp=Z,18nm,1.0s
PFO   Pinyon Flats O   46.94 300  LR   LR    01 37 41.7
      comp=Z,210nm,18.2s,baz=100,slow=40
PFO   Pinyon Flats O   46.94 300⇑eP    P     01 14 35.5 +3.0
PFO                               pmax pmax
      comp=Z,65nm,4.5s
BCYI  Bear Canyon      47.00 315  IAmb IAmb  01 14 43.3
      comp=Z,30nm,1.3s
ELK   Elko             47.28 309  LR   LR    01 37 38.8
      comp=Z,443nm,18.1s,baz=118,slow=40
HLID  Hailey           47.46 313  IAmb IAmb  01 14 39.0
      comp=Z,16nm,1.1s
MFID  Camas Ranch      48.41 313  IAmb IAmb  01 14 45.9
      comp=Z,15nm,0.9s
CO03  El Pedregal      48.50 184  IAmb IAmb  01 14 47.6
      comp=Z,27nm,1.1s
PLID  Pearl Lake       49.00 315  IAmb IAmb  01 14 50.0
      comp=Z,14nm,0.9s
NV11  Mina Array Sit   49.01 306  IAmb IAmb  01 15 02.3
      comp=Z,26nm,1.3s
ZON   Zonda            49.10 182  IAmb IAmb  01 15 06.7
      comp=Z,20nm,1.1s
NVAR  Mina Array Bea   49.12 306  P    P     01 14 50.7 +1.3
      comp=Z,4.4nm,0.9s,baz=96,slow=6.7,SNR=19
NVAR                              ScP  ScP   01 20 09.6 +0.5
      comp=Z,1.1nm,0.8s,baz=172,slow=1.4,SNR=5.3
NVAR                              LR   LR    01 38 05.6
      comp=Z,501nm,18.1s,baz=94,slow=39
      comp=Z,4.4nm,0.9s
NVAR  Mina Array Bea   49.12 306  P    P     01 14 50.1 +0.6
CFA   Coronel Fontan   49.14 182  LR   LR    01 39 19.4
      comp=Z,284nm,18.2s,baz=336,slow=41
PSAL  Palomas, Salto   49.41 170 eP    P     01 14 51.1 -0.2
J08A  Circle Bar Ran   50.26 312  IAmb IAmb  01 14 59.8
      comp=Z,13nm,0.8s
SFJD  Kangerlussuaq    50.29   8  P    P     01 14 58.6 +1.1
SFJD  Kangerlussuaq    50.29   8  P    P     01 14 58.6 +1.1
SFJD                              pmax pmax
      comp=Z,52nm,1.3s
EDM   Edmonton         50.42 326  IAmb IAmb  01 15 10.1
      comp=Z,25nm,0.9s
BLKN  Baker Lake       50.50 344  IAmb IAmb  01 15 00.1
      comp=Z,21nm,1.1s
NEW   Newport          50.73 318  LR   LR    01 37 03.0
      comp=Z,443nm,20.4s,baz=112,slow=37
NEW   Newport          50.73 318  IAmb IAmb  01 15 02.7
      comp=Z,14nm,0.9s
LNOR  Lincton Mounta   50.77 315  IAmb IAmb  01 15 05.1
      comp=Z,14nm,0.8s
MT13  San Alfonso      51.36 184  P    P     01 15 07.6 +1.4
MT13                              IAmb IAmb  01 15 23.8
      comp=Z,28nm,0.9s
BO04  La Punta         51.63 184  IAmb IAmb  01 15 25.6
      comp=Z,27nm,1.1s
HAWA  Hanford          51.74 316  IAmb IAmb  01 15 16.7
      comp=Z,25nm,1.5s
E07A  Sunnyside        52.00 316  IAmb IAmb  01 15 39.0
      comp=Z,31nm,1.6s
EPH   Ephrata          52.05 317  IAmb IAmb  01 15 19.7
      comp=Z,14nm,1.2s
BO01  Tunca            52.06 184  IAmb IAmb  01 15 16.1
      comp=Z,21nm,0.9s
PINE  Pine Mountain    52.10 312  IAmb IAmb  01 15 46.6
      comp=Z,44nm,2.0s
ILON  Igloolik, Nuna   52.39 353  IAmb IAmb  01 15 14.3
      comp=Z,21nm,1.2s
LTY   Liberty          52.72 316  IAmb IAmb  01 15 18.7
      comp=Z,46nm,1.7s
WIFE  Three Sisters-   52.77 312  IAmb IAmb  01 15 19.6
      comp=Z,28nm,0.9s
YBH   Yreka Blue Hor   53.00 309  LR   LR    01 38 47.7
      comp=Z,13nm,21.7s,baz=94,slow=37
I04A  Tendick Farm,    53.14 312  IAmb IAmb  01 15 31.4
      comp=Z,17nm,1.1s
H04A  Detroit Lake     53.16 313  IAmb IAmb  01 15 33.0
      comp=Z,44nm,1.4s
BBOR  Butler Butte     53.17 311  IAmb IAmb  01 15 23.0
      comp=Z,51nm,2.0s
PSBE  So Bento         54.38  54 eP    P     01 15 28.6 +0.2
PSBE                             i IAmb IAmb 01 15 59.5
      comp=Z,34nm,2.0s
MOE   Montemor         54.63  55 eP    P     01 15 32.9 +2.6
MOE                              i IAmb IAmb 01 15 44.3
      comp=Z,24nm,1.5s
PCAS  Casmilo, Conde   54.66  53 eP    P     01 15 31.4 +0.9
PCAS                             i IAmb IAmb 01 15 38.4
      comp=Z,28nm,1.9s
MESJ  Messejana        54.68  56 eP    P     01 15 32.5 +1.9
MESJ                             i IAmb IAmb 01 15 33.2
      comp=Z,29nm,1.4s
PMTG  Montargil        54.78  54 eP    P     01 15 32.7 +1.4
PMTG                             i IAmb IAmb 01 15 41.5
      comp=Z,18nm,1.9s
PSARD Sardoal          54.88  54 eP    P     01 15 34.7 +2.7
PSARD                            i IAmb IAmb 01 15 35.8
      comp=Z,43nm,1.5s
EVO   Evora            54.90  55 eP    P     01 15 33.5 +1.3
EVO                              i IAmb IAmb 01 15 42.6
      comp=Z,18nm,1.1s
PARRA Arraiolos        54.90  55 eP    P     01 15 33.8 +1.6
PARRA                            i IAmb IAmb 01 15 42.6
      comp=Z,17nm,1.2s
PBEJ  Beja             54.97  56 eP    P     01 15 33.0 +0.2
PBEJ                             i IAmb IAmb 01 15 42.6
      comp=Z,18nm,2.5s
PGAV  Gavieira, Arco   55.06  51 eP    P     01 15 35.5 +2.0
PGAV                             i IAmb IAmb 01 15 37.4
      comp=Z,35nm,1.5s
PVIS  Viseu            55.19  52 eP    P     01 15 36.7 +2.3
PESTR Estremoz         55.25  55 eP    P     01 15 36.6 +1.8
PESTR                            i IAmb IAmb 01 15 37.3
      comp=Z,26nm,1.4s
POIN  Pond Inlet       55.27 356  IAmb IAmb  01 15 35.5
      comp=Z,18nm,1.1s
POLO  Lamas de Olo     55.34  52 eP    P     01 15 37.1 +1.6
POLO                             i IAmb IAmb 01 15 39.4
      comp=Z,16nm,2.1s
PVRL  Vila Real        55.39  52 eP    P     01 15 36.5 +0.8
PVRL                             i IAmb IAmb 01 15 53.6
      comp=Z,22nm,1.4s
PCBR  Castelo Branco   55.42  54 eP    P     01 15 38.8 +2.8
PCBR                             i IAmb IAmb 01 15 46.3
      comp=Z,18nm,1.7s
MTE   Manteigas        55.43  53 eP    P     01 15 38.5 +2.4
MTE                              i IAmb IAmb 01 15 46.3
      comp=Z,17nm,1.1s
YKAW1 Yellowknife Wh   55.43 335  IAmb IAmb  01 15 36.6
      comp=Z,12nm,0.8s
PMRV  Marv??o          55.45  54 eP    P     01 15 36.7 +0.4
PMRV                             i IAmb IAmb 01 15 54.8
      comp=Z,18nm,1.8s
YKA   Yellowknife Ar   55.49 335  P    P     01 15 35.1 -0.9
      comp=Z,11nm,0.8s,baz=114,slow=6.5,SNR=106
YKA                               PcP  PcP   01 16 36.0 -0.1
      comp=Z,1.2nm,0.7s,baz=115,slow=3.2,SNR=4.8
      comp=Z,11nm,0.8s
YKA   Yellowknife Ar   55.49 335  P    P     01 15 34.7 -1.4
YKAW3 Yellowknife Wh   55.52 335  IAmb IAmb  01 15 37.3
      comp=Z,16nm,0.9s
MVO   Moncorvo         55.89  52 eP    P     01 15 42.4 +3.0
MVO                              i IAmb IAmb 01 15 44.0
      comp=Z,24nm,2.2s
PBRG  Braganca         56.17  51 eP    P     01 15 41.4  0.0
PBRG                             i IAmb IAmb 01 15 43.8
      comp=Z,36nm,1.8s
SUMG  Summit           57.16  10  P    P     01 15 48.7 +0.3
SUMG  Summit           57.16  10  P    P     01 15 48.7 +0.3
SUMG                              pmax pmax
      comp=Z,57nm,1.1s
MD01  Midelt array s   57.36  62  P    P     01 15 51.1 +1.0
MD31  MD31             57.36  62  P    P     01 15 51.2 +1.1
MD31                              IAmb IAmb  01 15 53.5
      comp=Z,14nm,1.0s
MDT   Midelt           57.49  62  LR   LR    01 36 03.1
      comp=Z,344nm,20.5s,baz=284,slow=31
PAB   San Pablo        57.81  54  P    P     01 15 54.4 +1.3
PAB   San Pablo        57.81  54  P    P     01 15 54.4 +1.3
PAB                               pmax pmax
      comp=Z,10.0nm,1.1s
ESDC  Sonseca Array    58.11  54  P    P     01 15 55.5 +0.3
      comp=Z,7.8nm,0.7s,baz=266,slow=6.9,SNR=71
ESDC                              LR   LR    01 35 46.1
      comp=Z,276nm,21.9s,baz=266,slow=31
      comp=Z,7.8nm,0.7s
ESDC  Sonseca Array    58.11  54  P    P     01 15 56.5 +1.4
ESBB  Sonseca Array    58.12  54  P    P     01 15 56.0 +0.9
ESBB                              IAmb IAmb  01 16 05.6
      comp=Z,25nm,1.2s
PLCA  Paso Flores      58.34 183  P    P     01 15 57.5 +0.9
      comp=Z,8.7nm,0.8s,baz=356,slow=7.7,SNR=18
PLCA                              LR   LR    01 44 16.4
      comp=Z,290nm,19.8s,baz=15,slow=39
      comp=Z,8.7nm,0.8s
PLCA  Paso Flores      58.34 183  P    P     01 15 57.6 +1.1
PLCA                              IAmb IAmb  01 16 00.7
      comp=Z,12nm,0.9s
PLCA  Paso Flores      58.34 183  P    P     01 15 57.7 +1.1
PLCA                              pmax pmax
      comp=Z,12nm,0.9s
PLCA  Paso Flores      58.34 183 eP    P     01 15 57.4 +0.9
TOAD  Toad River Com   58.72 329  P    P     01 15 58.9 -0.1
      baz=108
TULEG Thule            58.77 359  IAmb IAmb  01 16 00.8
      comp=Z,20nm,1.1s
RES   Resolute Bay     58.91 352  LR   LR    01 42 21.7
      comp=Z,291nm,18.4s,baz=172,slow=37
LIRD  Liard River Hi   59.31 329  P    P     01 16 03.2 +0.1
      baz=108
WRGLY Wrigley          59.44 334  IAmb IAmb  01 16 05.6
      comp=Z,16nm,0.9s
WRGLY Wrigley          59.44 334  P    P     01 16 03.7 -0.2
      baz=112
EKA   Eskdalemuir Ar   60.62  36  P    P     01 16 11.9 -0.3
      comp=Z,2.1nm,0.6s,baz=277,slow=4.6,SNR=9.0
EKA                               LR   LR    01 40 14.7
      comp=Z,137nm,19.2s,baz=230,slow=34
      comp=Z,2.1nm,0.6s
RPN   Rapa Nui         60.76 224  LR   LR    01 38 41.4
      comp=Z,148nm,19.6s,baz=55,slow=32
T35M  Bob Quinn        60.80 326  P    P     01 16 12.6 -0.8
      baz=102
WTLY  Watson Lake, Y   60.82 330  P    P     01 16 13.1 -0.4
      baz=106
V35K  Ketchikan        61.21 324  P    P     01 16 15.6 -0.5
      baz=100
DBIC  Dimbokro         61.36  92  P    P     01 16 17.5 -0.4
      comp=Z,14nm,0.8s,baz=308,slow=6.7,SNR=20
DBIC                              LR   LR    01 42 08.6
      comp=Z,127nm,18.1s,baz=290,slow=35
      comp=Z,14nm,0.8s
DBIC  Dimbokro         61.36  92  P    P     01 16 17.5 -0.4
DBIC                              IAmb IAmb  01 16 19.3
      comp=Z,13nm,0.8s
S34M  Telegraph Cree   61.46 327  P    P     01 16 17.2 -0.6
      baz=102
R33M  Jennings River   61.71 328  P    P     01 16 19.3 -0.4
      baz=103
WRAK  Wrangell Islan   61.82 325  P    P     01 16 19.7 -0.5
      baz=100
CRAG  Craig            62.08 324  P    P     01 16 21.6 -0.4
      baz=99
C36M  Paulatuk         62.15 340  IAmb IAmb  01 16 22.1
      comp=Z,17nm,1.4s
C36M  Paulatuk         62.15 340  P    P     01 16 21.5 -0.7
      baz=115
U33K  Whale Pass       62.19 325  P    P     01 16 22.1 -0.6
      baz=100
Q32M  Nakina River     62.27 328  P    P     01 16 22.5 -1.0
      baz=102
P33M  Teslin, Yukon    62.80 329  P    P     01 16 26.1 -0.8
      baz=102
CLF   Chambon-Foret    63.05  45  P    P     01 16 30.5 +1.8
P32M  Atlin            63.12 328  P    P     01 16 27.9 -1.1
      baz=101
N32M  Quiet Lake       63.12 330  P    P     01 16 27.9 -1.1
      baz=102
S32K  Killisnoo        63.20 326  P    P     01 16 29.0 -0.4
      baz=99
R32K  Eaglecrest       63.30 327  P    P     01 16 29.8 -0.3
      baz=99
SIT   Sitka            63.54 325  P    P     01 16 31.4 -0.3
      baz=98
A36M  Sachs Harbour    63.63 343  P    P     01 16 31.5 -0.5
      baz=115,SNR=17
WHY   Whitehorse       63.89 329  P    P     01 16 34.1  0.0
      baz=100
M31M  Drury Creek, Y   63.95 331  IAmb IAmb  01 16 39.0
      comp=Z,24nm,1.4s
M31M  Drury Creek, Y   63.95 331  P    P     01 16 34.5 +0.1
      baz=101
S31K  Pelican          64.15 326  P    P     01 16 35.3 -0.4
      baz=98
PLBC  Pleasant Camp    64.43 328  P    P     01 16 37.1 -0.4
      baz=98
N31M  Braeburn, Yuko   64.47 330  P    P     01 16 37.4 -0.4
      baz=100
O30N  Mendenhall       64.50 329  P    P     01 16 36.7 -1.3
      baz=99
DOU   Dourbes          64.68  42 dP    P     01 16 45.8 +6.4
      comp=Z,4.9nm,1.2s
H31M  Peel River       64.71 335  IAmb IAmb  01 17 15.8
      comp=Z,19nm,1.1s
H31M  Peel River       64.71 335  P    P     01 16 39.0 -0.3
      baz=103
BMRD  Maredsous        64.80  42 dP    P     01 16 46.8 +6.6
      comp=Z,7.2nm,1.1s
P30M  Million Dollar   64.82 329  P    P     01 16 39.7 -0.5
      baz=98
F31M  Tsiigehtchic     64.87 337  IAmb IAmb  01 16 41.3
      comp=Z,16nm,1.1s
F31M  Tsiigehtchic     64.87 337  P    P     01 16 40.1 -0.1
      baz=104
MAYO  Mayo, Yukon      64.90 333  P    P     01 16 40.7 +0.1
      baz=101
G31M  Satah River      64.94 336  P    P     01 16 40.6 -0.1
      baz=104,SNR=9.3
INK   Inuvik           65.01 338  LR   LR    01 43 50.3
      comp=Z,262nm,21.9s,baz=114,slow=35
INK   Inuvik           65.01 338  P    P     01 16 40.4 -0.8
INK   Inuvik           65.01 338  P    P     01 16 40.4 -0.8
INK                               pmax pmax
      comp=Z,24nm,0.9s
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INK	Inuvik	65.01	338	P	P	01 16 40.6	-0.6
	baz=105,SNR=18						
N30M	Aishikik Lake	65.08	330	P	P	01 16 41.5	-0.4
	baz=99						
M30M	Minto, Yukon	65.12	331	IAmb	IAmb	01 17 01.9	
	comp=Z,20nm,1.3s						
M30M	Minto, Yukon	65.12	331	P	P	01 16 41.7	-0.4
	baz=99						
P29M	Windy Craggy	65.15	328	P	P	01 16 42.2	-0.1
	baz=97						
HYT	Haines Junctio	65.19	329	P	P	01 16 42.3	-0.4
	baz=98						
J30M	Hart River	65.27	334	IAmb	IAmb	01 17 04.4	
	comp=Z,21nm,1.4s						
J30M	Hart River	65.27	334	P	P	01 16 43.0	-0.1
	baz=101						
I30M	Mount Dempster	65.41	334	IAmb	IAmb	01 16 47.7	
	comp=Z,13nm,1.1s						
I30M	Mount Dempster	65.41	334	P	P	01 16 44.0	0.0
	baz=101						
MEM	Membach	65.61	42	*d*P	P	01 16 46.9	+1.5
	comp=Z,7.8nm,1.0s						
YUK6	Outpost Mounta	65.62	329	P	P	01 16 45.3	-0.3
	baz=97						
O29M	Mount Kennedy	65.65	329	P	P	01 16 45.3	-0.3
	baz=97						
K29M	Barlow Dome	65.65	333	P	P	01 16 45.7	+0.1
	baz=99						
F30M	Barrier River	65.67	337	P	P	01 16 45.3	-0.2
	baz=103						
G30M	tAoh Zraii Nji	65.70	336	IAmb	IAmb	01 16 51.5	
	comp=Z,13nm,0.8s						
G30M	tAoh Zraii Nji	65.70	336	P	P	01 16 45.5	-0.2
	baz=102						
EPYK	Eagle Plains	65.78	335	P	P	01 16 46.7	+0.4
	baz=101,SNR=5.6						
YUK4	Talbot Arm	65.81	330	P	P	01 16 45.5	-1.3
	baz=97						
L29M	L29M	65.81	332	P	P	01 16 46.3	-0.3
	baz=98						
M29M	Somme Creek	65.87	331	P	P	01 16 46.9	-0.1
	baz=98						
TORD	Torodi Ar. Bea	65.92	83	P	P	01 16 47.0	-1.0
	comp=Z,6.3nm,0.9s,baz=300,slow=5.0,SNR=32						
	comp=Z,6.3nm,0.9s						
J29N	Klondike Camp	66.05	333	P	P	01 16 48.0	-0.1
	baz=99						
ACRG	Accra	66.08	92	P	P	01 16 48.5	-0.5
I29M	Ogilvie Camp,	66.24	334	P	P	01 16 49.4	+0.2
	baz=99						
ECH	Echery	66.34	45	P	P	01 16 50.2	0.0
ECH				IAmb	IAmb	01 17 02.4	
	comp=Z,11nm,1.1s						
ECH	Echery	66.34	45	P	P	01 16 50.2	0.0
ECH				pmax	pmax		
	comp=Z,11nm,1.1s						
YUK8	Steele Glacier	66.34	330	P	P	01 16 50.0	-0.2
	baz=96						
G29M	Pine Creek	66.39	336	IAmb	IAmb	01 17 22.2	
	comp=Z,16nm,1.1s						
G29M	Pine Creek	66.39	336	P	P	01 16 50.4	+0.2
	baz=100						
H29M	Whitestone	66.40	335	P	P	01 16 50.4	+0.1
	baz=100						
PINM	Pinnacle	66.46	328	P	P	01 16 51.2	+0.4
	baz=95						
O28M	Mount Upton	66.49	329	P	P	01 16 51.3	+0.1
	baz=96						
DAWY	Dawson	66.50	333	P	P	01 16 50.6	-0.4
DAWY				IAmb	IAmb	01 16 54.8	
	comp=Z,19nm,1.2s						
DAWY	Dawson	66.50	333	P	P	01 16 51.4	+0.4
	baz=98,SNR=6.9						
E29M	Blow River	66.61	338	IAmb	IAmb	01 16 52.6	
	comp=Z,14nm,0.9s						
E29M	Blow River	66.61	338	P	P	01 16 51.5	0.0
	baz=101,SNR=14						
I28M	Miner Creek	66.92	334	P	P	01 16 53.1	-0.6
	baz=98						
BVCY	Beaver Creek	66.97	331	P	P	01 16 54.1	+0.2
	baz=96						
CTG	Chitna Glacier	67.07	329	P	P	01 16 54.4	-0.3
	baz=94						
D28M	Stokes Point	67.09	339	P	P	01 16 54.3	-0.2
	baz=100						
F28M	Old Crow	67.21	337	IAmb	IAmb	01 16 57.8	
	comp=Z,11nm,0.9s						
F28M	Old Crow	67.21	337	P	P	01 16 54.9	-0.5
	baz=99,SNR=9.4						
E28M	Babbage River	67.25	338	P	P	01 16 55.0	-0.6
	baz=99						
M27K	Edge Creek, AK	67.44	331	P	P	01 16 57.3	+0.2
	baz=95						
BCAR	Beaver Creek A	67.46	332	P	P	01 16 57.3	+0.3
L27K	Beaver Creek,	67.48	332	IAmb	IAmb	01 16 59.5	
	comp=Z,17nm,0.9s						
L27K	Beaver Creek,	67.48	332	P	P	01 16 57.3	+0.1
	baz=95						
I27K	Kandik River	67.64	334	P	P	01 16 58.5	+0.4
	baz=96						
H27K	Steamboat Moun	67.67	335	IAmb	IAmb	01 16 60.0	
	comp=Z,10nm,1.1s						
H27K	Steamboat Moun	67.67	335	P	P	01 16 58.4	+0.1
	baz=97						
G27K	Doyon Strip	67.79	336	IAmb	IAmb	01 17 00.3	
	comp=Z,8.3nm,0.9s						
G27K	Doyon Strip	67.79	336	P	P	01 16 59.2	+0.1
	baz=97						
D27M	Malcolm River	67.86	338	IAmb	IAmb	01 17 00.9	
	comp=Z,12nm,0.9s						
D27M	Malcolm River	67.86	338	P	P	01 16 59.4	-0.1
	baz=98						
CRQE	Cirque	67.91	329	P	P	01 16 59.5	-0.6
	baz=93						
MCARA	McCarthy VSAT	67.91	330	P	P	01 16 58.9	-1.0
	baz=93,SNR=5.6						
E27K	Coleen River	67.94	337	IAmb	IAmb	01 17 01.2	
	comp=Z,8.7nm,0.9s						
E27K	Coleen River	67.94	337	P	P	01 17 00.3	+0.3
	baz=97						
M26K	Nabesna, AK	67.96	331	P	P	01 17 00.7	+0.5
	baz=94						
L26K	Log Cabin Wild	68.16	331	P	P	01 17 01.5	0.0
	baz=94,SNR=10.0						
DAVA	Damuels	68.20	46	*i* pP	pP	01 17 03.6	+0.7
	comp=Z,3.8nm,0.6s						
I26K	Coal Creek Min	68.25	334	P	P	01 17 02.1	+0.2
	baz=95						
J26L	Joseph Creek	68.36	333	IAmb	IAmb	01 17 12.0	
	comp=Z,7.0nm,0.8s						
J26L	Joseph Creek	68.36	333	P	P	01 17 02.5	-0.3
	baz=94						
FUORN	Ofenpass-Fuorn	68.50	46	IAmb	IAmb	01 17 22.6	
	comp=Z,12nm,1.1s						
SCRK	Sand Creek	68.51	332	P	P	01 17 04.5	+0.7
	baz=93,SNR=15						
KAIM	Kayak Island	68.54	328	P	P	01 17 04.6	+0.7
	baz=91						
G26K	Porcupine Rive	68.64	336	IAmb	IAmb	01 17 07.0	
	comp=Z,12nm,0.9s						
G26K	Porcupine Rive	68.64	336	P	P	01 17 04.5	+0.1
	baz=95						
BMRM	Bremner River	68.66	329	P	P	01 17 04.6	0.0
	baz=92						
N25K	Chitina, Valde	68.68	330	P	P	01 17 05.1	+0.3
	baz=92						
RETA	Reutte	68.79	45	*i* pP	pP	01 17 07.0	+0.5
	comp=Z,5.1nm,0.6s						
FETA	Feichten	68.79	46	*i* pP	pP	01 17 07.1	+0.5
	comp=Z,5.8nm,0.6s						
KEST	Kesra	68.81	58	P	P	01 17 05.8	-0.3
	comp=Z,13nm,1.0s,baz=139,slow=2.6,SNR=10						
KEST				LR	LR	01 42 13.3	
	comp=Z,186nm,21.7s,baz=338,slow=32						
	comp=Z,13nm,1.0s						
NB2	NORSAR Subarra	68.82	31	P	P	01 17 06.0	+0.4
	comp=Z,1.8nm,0.7s,baz=269,slow=6.5						
NOA	NORSAR Array B	68.82	31	P	P	01 17 05.3	-0.4
	comp=Z,4.0nm,0.9s,baz=269,slow=6.3,SNR=9.0						
NOA				LR	LR	01 43 18.3	
	comp=Z,127nm,20.7s,baz=265,slow=33						
	comp=Z,4.0nm,0.9s						
F26K	Sheenjek River	68.84	336	IAmb	IAmb	01 17 07.7	
	comp=Z,25nm,1.6s						
F26K	Sheenjek River	68.84	336	P	P	01 17 05.8	+0.2
	baz=95						
C27K	Jago River	68.87	339	IAmb	IAmb	01 17 07.4	
	comp=Z,15nm,0.9s						
C27K	Jago River	68.87	339	P	P	01 17 05.7	0.0
	baz=96						
RIDG	Independent Ri	68.88	332	P	P	01 17 06.2	+0.2
	baz=92,SNR=7.2						
HARP	HAARP	68.97	331	P	P	01 17 07.1	+0.6
	baz=92						
BMAR	Burnt Mountain	68.99	336	P	P	01 17 06.4	-0.2
SQTA	Sankt Quirin	69.11	46	*e*pP	pP	01 17 08.6	+0.1
	comp=Z,4.6nm,0.6s						
PAX	Paxson	69.13	331	IAmb	IAmb	01 17 09.5	
	comp=Z,12nm,1.1s						
PAX	Paxson	69.13	331	P	P	01 17 07.9	+0.3
	baz=92						
J25K	Salcha River,	69.14	333	IAmb	IAmb	01 17 13.1	
	comp=Z,11nm,1.1s						
J25K	Salcha River,	69.14	333	P	P	01 17 07.7	+0.1
	baz=92						
EYAK	Cordova Ski Ar	69.21	329	P	P	01 17 07.6	-0.4
	baz=90						
PRP	Porcupine Dome	69.25	334	P	P	01 17 07.8	-0.6
	baz=93,SNR=14						
K24K	Donnelly Dome	69.29	332	P	P	01 17 07.5	-1.0
	baz=92,SNR=6.8						
KLU	Klutina	69.31	330	P	P	01 17 08.7	-0.1
	baz=91						
C26K	Camden Bay	69.31	339	P	P	01 17 08.6	+0.2
	baz=95						
WATA	Walderalm	69.35	45	*e*pP	pP	01 17 10.2	+0.2
	comp=Z,2.8nm,0.8s						
WTTA	Wattenberg	69.40	45	*e*pP	pP	01 17 10.1	-0.3
	comp=Z,3.4nm,0.7s						
F25K	Christian Rive	69.41	336	IAmb	IAmb	01 17 11.4	
	comp=Z,17nm,0.9s						
F25K	Christian Rive	69.41	336	P	P	01 17 09.2	0.0
	baz=93						
E25K	Arctic Village	69.41	337	IAmb	IAmb	01 17 10.9	
	comp=Z,12nm,0.9s						
E25K	Arctic Village	69.41	337	P	P	01 17 08.9	-0.3
	baz=94,SNR=9.5						
M24K	Tolsona, Glenn	69.44	330	P	P	01 17 09.0	-0.5
	baz=91						
CTI	Castel Tesino	69.50	47	P	P	01 17 10.8	+0.6
CTI	Castel Tesino	69.50	47	P	P	01 17 10.8	+0.6
CTI				pmax	pmax		
	comp=Z,45nm,1.9s						
Q23K	Middleton Isla	69.51	328	P	P	01 17 09.3	-0.5
	baz=90						
G25K	Bearman Lake	69.54	335	P	P	01 17 10.0	0.0
	baz=92						
EFI	East Falkland	69.61	174	*de*P	P	01 17 10.8	+0.4
EFI				pmax	pmax		
	comp=Z,269nm,2.6s						
D25K	Kavik River	69.78	338	P	P	01 17 11.3	-0.2
	baz=93,SNR=14						
IL31		69.80	333	IAmb	IAmb	01 17 13.0	
	comp=Z,15nm,1.1s						
ILAR	Eielson Array	69.80	333	P	P	01 17 11.2	-0.4
	comp=Z,7.3nm,0.9s,baz=104,slow=4.5,SNR=43						
ILAR				LR	LR	01 49 41.7	
	comp=Z,402nm,18.3s,baz=83,slow=38						
	comp=Z,7.3nm,0.9s						
ILAR	Eielson Array	69.80	333	P	P	01 17 10.1	-1.5
HDA	Harding Lake	69.82	333	IAmb	IAmb	01 17 18.1	
	comp=Z,18nm,1.3s						
HDA	Harding Lake	69.82	333	P	P	01 17 11.5	-0.3
	baz=91						
SCM	Sheep Creek Mo	69.98	330	P	P	01 17 12.8	-0.1
	baz=90						
DHY	Denali Highway	70.00	331	IAmb	IAmb	01 17 22.8	
	comp=Z,9.9nm,1.0s						
DHY	Denali Highway	70.00	331	P	P	01 17 12.8	-0.3
	baz=90						
CLL	Collm	70.01	41	*i* P	P	01 17 16.9	+3.8
CLL				pmax	pmax		
	comp=Z,21nm,1.8s						
CLL				MLR	MLR		
	comp=Z,300nm,19.2s						
CLL	Collm	70.01	41	*i* P	P	01 17 16.9	+3.8
	comp=Z,5.0nm,0.9s						
CLL				*i* x	x	01 17 21.9	
	comp=Z,7.0nm,1.2s						
CLL				AMS	AMS	01 39 00.0	
	comp=Z,300nm,19.2s						
CLL				AMS	AMS	01 44 00.0	
	comp=N,200nm,19.4s						
CLL				AMS	AMS	01 44 00.0	
	comp=E,200nm,18.9s						
ABTA	Abfaltersbach	70.03	46	P	P	01 17 13.0	-0.5
	comp=E,2.3nm,0.6s						
P23K	Montague Islan	70.04	328	P	P	01 17 13.3	+0.2
	baz=89						
POKR	Poker Plat Res	70.04	334	P	P	01 17 13.1	0.0
	baz=91,SNR=8.1						
HFS	Hagfors	70.04	32	P	P	01 17 14.2	+1.1
	comp=E,3.4nm,0.7s,baz=235,slow=5.2,SNR=5.9						
HFS				LR	LR	01 45 44.1	
	comp=E,180nm,19.1s,baz=274,slow=34						
	comp=E,3.4nm,0.7s						
G24K	Hadweenzic Riv	70.09	335	IAmb	IAmb	01 17 15.5	
	comp=Z,18nm,0.9s						
G24K	Hadweenzic Riv	70.09	335	P	P	01 17 13.5	+0.2
	baz=91						
LESA	Schwarzleotal	70.09	45	*e*pP	pP	01 17 15.2	+0.7
	comp=Z,0.8nm,0.3s						
WAT6	Susitna Watana	70.17	331	P	P	01 17 13.9	-0.2
	baz=90						
M23K	Glacier View	70.17	330	P	P	01 17 13.0	-0.9
	baz=89						
CCB	Clear Creek Bu	70.19	333	IAmb	IAmb	01 17 14.6	
	comp=Z,15nm,1.4s						
H24K	Noodor Dome	70.23	334	P	P	01 17 14.1	-0.2
	baz=90						
F24K	Squaw Lake	70.27	336	IAmb	IAmb	01 17 16.6	
	comp=Z,8.9nm,0.8s						
F24K	Squaw Lake	70.27	336	P	P	01 17 14.7	+0.2
	baz=91						
WRH	Wood River Hil	70.32	333	IAmb	IAmb	01 17 25.7	
	comp=Z,25nm,1.5s						
SML	Sawmill	70.46	330	P	P	01 17 15.8	+0.1
	baz=89						
PWL	Port Wells	70.48	329	P	P	01 17 15.1	-0.8
	baz=88						
E24K	Your Creek	70.50	337	IAmb	IAmb	01 17 18.0	
	comp=Z,14nm,0.9s						
E24K	Your Creek	70.50	337	P	P	01 17 15.7	-0.2
	baz=91						
WAT1	Susitna Watana	70.54	331	P	P	01 17 16.4	+0.2
	baz=89						
KHC	Kasperske Hory	70.54	43	⇓*e*P	P	01 17 16.9	+0.4
KHC				pmax	pmax		
	comp=Z,11nm,1.2s						
KHC	Kasperske Hory	70.54	43	*e*P	P	01 17 16.8	+0.3
KHC	Kasperske Hory	70.54	43	P	P	01 17 15.7	-0.8
	comp=Z,9.8nm,1.5s						
C24K	Franklin Bluff	70.61	339	P	P	01 17 16.6	+0.1
	baz=91,SNR=15						
D24K	Happy Valley	70.64	338	P	P	01 17 16.7	0.0
	baz=91						
GERES	GERESS Array B	70.65	44	P	P	01 17 18.5	+1.2
	comp=Z,1.5nm,0.7s,baz=280,slow=4.3,SNR=9.9						
	comp=Z,1.5nm,0.7s						
MCK	McKinley	70.70	332	IAmb	IAmb	01 17 22.1	
	comp=Z,16nm,1.0s						
MCK	McKinley	70.70	332	P	P	01 17 17.4	+0.2
	baz=89						
BIOA	Bad Ischl, Aus	70.71	45	*e*pP	pP	01 17 19.0	+0.7
	comp=Z,2.7nm,0.6s						
NEA2	Nenana	70.74	333	IAmb	IAmb	01 17 18.8	
	comp=Z,17nm,1.0s						
NEA2	Nenana	70.74	333	P	P	01 17 16.7	-0.6
	baz=89,SNR=5.6						
RICC	Richard	70.76	42	*e*P	P	01 17 22.5	+4.8
MYKA	Terra Mystica	70.82	46	*e*pP	pP	01 17 20.6	+1.5
	comp=Z,5.1nm,0.7s						
PMR	Palmer	70.84	330	P	P	01 17 17.4	-0.6
	baz=88						
I23K	Minto, Yukon-K	70.86	334	IAmb	IAmb	01 17 20.8	
	comp=Z,18nm,1.0s						
I23K	Minto, Yukon-K	70.86	334	P	P	01 17 18.1	+0.1
	baz=89,SNR=6.5						
TOLK	Toolik Lake Re	70.91	337	IAmb	IAmb	01 17 24.1	
	comp=Z,6.0nm,0.7s						
TOLK	Toolik Lake Re	70.91	337	P	P	01 17 18.0	-0.4
	baz=90						
ZVC	Zvikov	70.92	43	*e*P	P	01 17 21.2	+2.5
E23K	Chandalar	70.93	337	P	P	01 17 18.2	-0.4
	baz=90						
SEW	Seward	71.06	328	P	P	01 17 18.7	-0.6
	baz=87						
PRU	Pruhonice	71.09	42	*e*P	P	01 17 21.5	+1.7
PRU	Pruhonice	71.09	42	*e*P	P	01 17 21.5	+1.7
G23K	Bananza Creek	71.10	335	IAmb	IAmb	01 17 21.8	
	comp=Z,16nm,0.9s						
G23K	Bananza Creek	71.10	335	P	P	01 17 19.0	-0.6
	baz=89						
MOA	Molln	71.12	45	*i* pP	pP	01 17 22.1	+1.4
	comp=Z,1.2nm,0.5s						
RC01	Rabbit Creek A	71.16	329	P	P	01 17 19.6	-0.3
	baz=87						
COLD	Coldfoot	71.16	336	IAmb	IAmb	01 17 22.0	
	comp=Z,16nm,1.0s						
COLD	Coldfoot	71.16	336	P	P	01 17 19.7	-0.2
	baz=89,SNR=10						
O22K	Cooper Landing	71.18	329	P	P	01 17 20.0	-0.1
	baz=87						
C23K	Itkillik River	71.28	339	P	P	01 17 20.2	-0.3
	baz=89						
M22K	Willow	71.31	330	P	P	01 17 20.8	0.0
	baz=87						
TRF	Thorofare Moun	71.31	332	P	P	01 17 20.6	-0.4
	baz=88,SNR=7.9						
D23K	Nanushuk River	71.31	338	P	P	01 17 20.9	+0.2
	baz=89						
CUT	Chulitna	71.35	331	P	P	01 17 20.8	-0.2
	baz=87						
BPAW	Bear Paw Mtn.	71.59	333	P	P	01 17 22.3	-0.2
	baz=87						
SUA	Susitna One	71.62	330	P	P	01 17 22.4	-0.5
	baz=86						
H22K	Ishtalitna Cre	71.67	334	IAmb	IAmb	01 18 31.1	
	comp=Z,29nm,1.8s						
H22K	Ishtalitna Cre	71.67	334	P	P	01 17 22.9	-0.1
	baz=87						
BRSE	Bradley Lake S	71.73	328	P	P	01 17 23.2	-0.3
	baz=86						
E22K	Anaktuvuk Pass	71.75	337	P	P	01 17 23.6	+0.1
	baz=88,SNR=16						
SOKA	Soboth	71.77	46	*e*pP	pP	01 17 25.1	+0.4
	comp=Z,2.0nm,0.5s						
CAPN	Captain Cook N	71.87	329	P	P	01 17 24.2	+0.1
	baz=86						
F22K	John River	71.92	336	P	P	01 17 24.2	-0.2
	baz=87						
I21K	Tanana	71.96	334	P	P	01 17 24.2	-0.5
	baz=87,SNR=5.8						
SKT	Skwentna	71.96	330	P	P	01 17 24.8	0.0
	baz=86						
UPC	Upice	71.98	42	*e*P	P	01 17 26.5	+1.4
UPC	Upice	71.98	42	*e*P	P	01 17 26.5	+1.4
CHVC	Chvalec	72.00	42	*e*P	P	01 17 27.3	+2.0
CHVC	Chvalec	72.00	42	*e*P	P	01 17 27.3	+2.0
ARSA	Arzberg	72.03	45	*e*P	P	01 17 25.0	-0.6
	comp=Z,1.4nm,0.4s						
D22K	Ayikyak River	72.04	338	IAmb	IAmb	01 17 27.0	
	comp=Z,20nm,1.1s						
D22K	Ayikyak River	72.04	338	P	P	01 17 25.2	0.0
	baz=87						
CONA	Conrad Observa	72.18	44	*e*pP	pP	01 17 27.2	0.0
	comp=Z,1.1nm,0.5s						
CHUM	Lake Minchumin	72.19	332	P	P	01 17 25.8	-0.3
	baz=86						
DPC	Dobruska-Polom	72.19	42	*e*P	P	01 17 28.0	+1.5
DPC	Dobruska-Polom	72.19	42	*e*P	P	01 17 28.0	+1.5
HOM	Homer	72.19	328	P	P	01 17 25.4	-0.8
	baz=85						
PPLA	Purkeypile	72.20	331	P	P	01 17 26.4	+0.1
	baz=86						
B22K	Teshekpuk Lake	72.22	339	P	P	01 17 26.4	+0.2
	baz=87,SNR=12						
SPU	Mount Spurr	72.27	330	IAmb	IAmb	01 17 28.9	
	comp=Z,17nm,1.2s						
H21K	Melozitna Rive	72.27	334	P	P	01 17 26.6	0.0
	baz=86						
SPCR	Spurr Chakacha	72.34	330	P	P	01 17 26.8	-0.4
	baz=85,SNR=5.1						
KRUC	Moravsky	72.39	43	*e*P	P	01 17 28.2	+0.6
F21K	Alatna River	72.44	336	P	P	01 17 27.4	-0.2
	baz=86						
VRAC	Vranov	72.49	43	LR	LR	01 47 32.5	
	comp=Z,101nm,18.8s,baz=275,slow=34						
VRAC	Vranov	72.49	43	*e*P	P	01 17 28.4	+0.2
G21K	Allakaket	72.50	335	P	P	01 17 27.8	-0.1
	baz=86						
KRLC	Kraliky	72.52	42	*e*P	P	01 17 29.9	+1.5
KRLC	Kraliky	72.52	42	*e*P	P	01 17 29.9	+1.5
O20K	Slope Mountain	72.65	328	P	P	01 17 29.0	0.0
	baz=84						
Q20K	Shuyak Island	72.68	327	P	P	01 17 29.2	+0.1
	baz=84						
B21K	Ikpikpuk River	72.68	338	P	P	01 17 29.1	+0.2
	baz=86						
A22K	Sinclair Lake	72.70	340	P	P	01 17 29.2	+0.2
	baz=86						
M20K	Styx River	72.72	330	IAmb	IAmb	01 17 30.6	
	comp=Z,11nm,0.7s						
M20K	Styx River	72.72	330	P	P	01 17 29.1	-0.4
	baz=84						
C21K	Knifeblade Rid	72.78	338	P	P	01 17 28.8	-0.8
	baz=85						
KDAK	Kodiak Island	72.86	326	LR	LR	01 49 32.7	
	comp=Z,205nm,21.4s,baz=62,slow=36						
KDAK	Kodiak Island	72.86	326	P	P	01 17 29.3	-0.9
	baz=84						
J20K	Nowinta River	72.97	333	IAmb	IAmb	01 17 31.7	
	comp=Z,12nm,0.8s						
J20K	Nowinta River	72.97	333	P	P	01 17 30.5	-0.2
	baz=84,SNR=8.3						
P19K	Oil Pt	73.00	328	P	P	01 17 31.1	0.0
	baz=84						
K20K	Telida	73.01	332	P	P	01 17 30.8	-0.3
	baz=84						
MORC	Moravsky Berou	73.05	42	⇓P	P	01 17 33.5	+1.9
MORC	Moravsky Berou	73.05	42	*e*P	P	01 17 32.2	+0.7
MORC	Moravsky Berou	73.05	42	⇓P	P	01 17 33.5	+1.9
MODS	Modra-Piesok	73.06	44	*e*P	P	01 17 33.7	+2.1
MODS	Modra-Piesok	73.06	44	*e*P	P	01 17 33.7	+2.1
H20K	Anotleneega Mo	73.15	334	P	P	01 17 31.7	-0.1
	baz=84						
STEB	Steborice	73.17	42	*e*P	P	01 17 33.6	+1.4
A21K	Barrow	73.20	340	P	P	01 17 32.1	+0.1
	baz=84						
MAUC	Maruska	73.28	43	*e*P	P	01 17 33.8	+0.8
Q19K	Cape Douglas,	73.29	327	P	P	01 17 32.8	0.0
	baz=83						
OHAK	Old Harbor	73.31	325	P	P	01 17 32.6	-0.2
	baz=83						
F20K	Avaraart Lake	73.33	336	IAmb	IAmb	01 17 34.6	
	comp=Z,36nm,1.7s						
F20K	Avaraart Lake	73.33	336	P	P	01 17 32.6	-0.2
	baz=84						
E20K	Nigu River	73.37	337	P	P	01 17 32.5	-0.6
	baz=84						
D20K	Etivluk River	73.48	338	IAmb	IAmb	01 17 35.4	
	comp=Z,11nm,0.8s						
D20K	Etivluk River	73.48	338	P	P	01 17 33.1	-0.6
	baz=84						
O19K	Port Alsworth	73.48	329	P	P	01 17 34.1	+0.2
	baz=83						
N19K	Bonanza Creek	73.49	329	P	P	01 17 34.3	+0.3
	baz=83						
L19K	White Mountain	73.50	331	P	P	01 17 33.3	-0.6
	baz=83						
B20K	Meade River	73.52	339	IAmb	IAmb	01 17 35.6	
	comp=Z,19nm,0.9s						
B20K	Meade River	73.52	339	P	P	01 17 33.7	-0.1
	baz=83						
J19K	Poorman	73.63	333	P	P	01 17 34.3	-0.3
	baz=83						
H19K	Roundabout Mou	73.79	334	IAmb	IAmb	01 17 37.2	
	comp=Z,15nm,0.8s						
H19K	Roundabout Mou	73.79	334	P	P	01 17 35.3	-0.3
	baz=83						
E19K	Redstone River	73.86	336	IAmb	IAmb	01 17 37.5	
	comp=Z,24nm,1.4s						
E19K	Redstone River	73.86	336	P	P	01 17 35.4	-0.6
	baz=83						
SII	Sitkinak Islan	73.88	325	P	P	01 17 35.7	-0.5
	baz=82						
O18K	Koktuh Hills	73.97	328	P	P	01 17 36.4	-0.3
	baz=82						
G19K	Purcell Mounta	73.97	335	P	P	01 17 36.4	-0.2
	baz=82						
P18K	Big Mountain,	74.04	328	P	P	01 17 37.2	0.0
	baz=82						
M18K	Stony River	74.05	330	P	P	01 17 36.7	-0.5

	baz=82						
D19K	Kuna River	74.05	337	IAmb	IAmb	01 17 38.6	
	comp=Z,15nm,0.8s						
D19K	Kuna River	74.05	337	P	P	01 17 37.0	-0.1
	baz=82						
GCSA	Galena City Sc	74.08	334	P	P	01 17 37.1	-0.1
	baz=82						
F19K	Shaleruckik Mo	74.15	336	IAmb	IAmb	01 17 38.4	
	comp=Z,20nm,1.4s						
F19K	Shaleruckik Mo	74.15	336	P	P	01 17 36.3	-1.3
	baz=82						
J18K	Innoko River	74.18	332	P	P	01 17 36.2	-1.7
	baz=82						
N18K	Kilae Creek	74.19	329	P	P	01 17 36.4	-1.7
	baz=82						
ARCES	ARCESS Array B	74.30	21	P	P	01 17 39.4	+0.9
	comp=Z,12nm,0.9s,baz=284,slow=4.9,SNR=20						
	comp=Z,12nm,0.9s						
MORH	Mrgy, Hungar	74.30	46	⇑P	P	01 17 40.3	+1.4
MORH	Mrgy, Hungar	74.30	46	P	P	01 17 39.7	+0.8
	comp=Z,17nm,1.1s						
L18K	Granite Mounta	74.35	331	P	P	01 17 37.5	-1.4
	baz=82						
C19K	Lookout Ridge	74.49	338	IAmb	IAmb	01 17 41.5	
	comp=Z,11nm,0.9s						
C19K	Lookout Ridge	74.49	338	P	P	01 17 37.9	-1.8
	baz=81						
Q17K	Contact Creek	74.54	327	P	P	01 17 38.3	-1.9
	baz=81						
H18K	Honhosa River	74.64	334	P	P	01 17 38.9	-1.6
	baz=81						
G18K	Tagagawik	74.64	335	IAmb	IAmb	01 17 44.2	
	comp=Z,15nm,1.1s						
G18K	Tagagawik	74.64	335	P	P	01 17 39.2	-1.4
	baz=81						
P17K	Kvichak River	74.68	328	P	P	01 17 39.9	-0.9
	baz=81						
CHIR	Chirikof Islan	74.78	324	P	P	01 17 40.2	-1.3
	baz=81						
A19K	Wainwright	74.82	339	P	P	01 17 39.9	-1.5
	baz=80						
M17K	Holitna River	74.83	330	P	P	01 17 40.0	-1.6
	baz=81						
N17K	Nushagak Hills	74.84	329	P	P	01 17 40.2	-1.6
	baz=81						
R17L	Mt. Peulik Vol	74.89	326	P	P	01 17 41.0	-1.1
	baz=81						
O17K	Koliganek Bris	74.92	328	P	P	01 17 41.3	-0.9
	baz=80						
F18K	Selawik	74.93	336	P	P	01 17 41.1	-1.0
	baz=80						
K17K	Iditarod	75.01	332	P	P	01 17 41.3	-1.4
	baz=80						
L17K	Donlin	75.11	331	P	P	01 17 42.0	-1.3
	baz=80						
C18K	Utukok River	75.14	338	IAmb	IAmb	01 17 44.9	
	comp=Z,10nm,0.9s						
C18K	Utukok River	75.14	338	P	P	01 17 42.4	-1.1
	baz=79						
E18K	Tukpahlearik C	75.15	337	P	P	01 17 42.4	-1.0
	baz=80						
J17K	VABM Dome	75.24	332	P	P	01 17 42.8	-1.3
	baz=80						
H17K	Granite Mounta	75.33	334	P	P	01 17 43.6	-0.9
	baz=80						
O16K	Kokwok River B	75.45	328	P	P	01 17 44.5	-0.8
	baz=80						
STHS	Stebnicka Huta	75.48	42	eP	P	01 17 45.8	+0.1
STHS	Stebnicka Huta	75.48	42	eP	P	01 17 45.8	+0.1
P16K	Nushagak River	75.50	328	P	P	01 17 45.3	-0.2
	baz=80						
G17K	Kiwalik Mounta	75.53	335	P	P	01 17 45.3	-0.4
	baz=79						
F17K	Baldwin Pennin	75.58	336	P	P	01 17 45.9	0.0
	baz=79						
M16K	Timber Creek	75.62	330	P	P	01 17 46.3	+0.1
	baz=79						
N16K	Nishlik Lake	75.63	329	P	P	01 17 44.8	-1.6
	baz=79						
E17K	Hotham Inlet	75.68	336	P	P	01 17 45.6	-0.9
	baz=78						
L16K	Owhat River	75.73	331	IAmb	IAmb	01 17 50.0	
	comp=Z,17nm,1.1s						
L16K	Owhat River	75.73	331	P	P	01 17 46.2	-0.7
	baz=79						
I17K	Unalakleet	75.86	333	P	P	01 17 46.2	-1.4
	baz=78						
RDOG	Red Dog Mine	75.89	337	IAmb	IAmb	01 17 50.4	
	comp=Z,11nm,0.8s						
RDOG	Red Dog Mine	75.89	337	P	P	01 17 46.8	-0.8
	baz=78						
C17K	DeLong Mountai	75.89	338	P	P	01 17 47.2	-0.5
	baz=77						
FINES	FINESS Array B	75.93	30	P	P	01 17 48.5	+0.5
	comp=Z,9.4nm,0.9s,baz=236,slow=3.4,SNR=16						
	comp=Z,9.4nm,0.9s						
J16K	Anvik River	75.94	332	P	P	01 17 47.5	-0.5
	baz=78						
D17K	Noatak River	76.03	337	P	P	01 17 48.5	0.0
	baz=77						
G16K	Koyuk River	76.25	335	P	P	01 17 49.6	-0.1
	baz=77						
N15K	Kwethluk River	76.33	329	P	P	01 17 50.2	-0.2
	baz=78						
H16K	Elim	76.36	334	P	P	01 17 49.7	-0.7
	baz=77						
O15K	Ungalikthiuk R	76.40	328	P	P	01 17 50.4	-0.3
	baz=78						
BZS	Buzias	76.45	46	⇑P	P	01 17 53.0	+1.7
BZS	Buzias	76.45	46	⇑P	P	01 17 53.0	+1.7
EDA	Edea	76.49	90	P	P	01 17 51.3	-0.9
EDA				IAmb	IAmb	01 17 57.6	
	comp=Z,8.1nm,0.7s						
M15K	Kasigluk River	76.51	330	P	P	01 17 50.9	-0.4
	baz=78						
K15K	Wolf Creek Mou	76.56	331	P	P	01 17 51.2	-0.4
	baz=77						
L15K	Ungalak Mounta	76.68	331	P	P	01 17 51.6	-0.6
	baz=77						
C16K	Lisburne Hills	76.72	338	P	P	01 17 52.0	-0.3
	baz=75						
S14K	Fog Glacier	76.86	325	P	P	01 17 52.9	-0.7
	baz=78						
VSU	Vasula	76.87	33	⇓eP	P	01 17 54.1	+0.7
VSU				pmax	pmax		
	comp=Z,51nm,1.9s						
BOVS	Bovan	76.92	48	⇑P	P	01 17 55.4	+1.4
G15K	Niukluk	77.03	334	P	P	01 17 53.9	-0.3
	baz=76						
F15K	North Star Dit	77.10	335	P	P	01 17 53.8	-0.7
	baz=76						
M14K	Bethel	77.11	330	P	P	01 17 54.3	-0.4
	baz=77						
O14K	Tigyukauivet M	77.11	328	P	P	01 17 54.0	-0.7
	baz=77						
HERR	Herculane	77.16	47	⇓P	P	01 17 56.4	+1.1
N14K	Kuskokwak Cree	77.17	329	P	P	01 17 53.9	-1.1
	baz=77						
CHNA	Chernabura Isl	77.20	324	P	P	01 17 54.6	-0.6
	baz=77						
MARR	Marisel-Cluj	77.25	45	⇑P	P	01 17 57.4	+1.5
BMR	Baia Mare	77.29	44	⇑P	P	01 17 56.7	+0.7
BMR	Baia Mare	77.29	44	⇑P	P	01 17 56.7	+0.7
GZR	Gura Zlata	77.30	46	⇑P	P	01 17 56.6	+0.4
GZR	Gura Zlata	77.30	46	⇑P	P	01 17 56.6	+0.4
L14K	Kuka Creek	77.31	331	P	P	01 17 55.2	-0.6
	baz=76						
J14K	Nanvaranak Lak	77.37	332	P	P	01 17 53.3	-2.8
	baz=76						
CJR	Cluj-Napoca	77.57	45	⇓P	P	01 17 59.7	+2.0
CJR	Cluj-Napoca	77.57	45	⇓P	P	01 17 59.7	+2.0
RNPP5	Staryi Chortor	78.02	40	P	P	01 17 59.4	-0.6
K13K	Kusilvak Mount	78.08	331	P	P	01 18 00.3	+0.3
	baz=75						
MDB	Medias	78.22	45	⇓P	P	01 18 03.5	+2.2
MDB	Medias	78.22	45	⇓P	P	01 18 03.5	+2.2
MNK	Minsk	78.41	36	i P	P	01 18 01.1	-1.0
MNK				i		01 18 10.2	
MNK				i		01 20 57.9	
MNK				i PPP	PPP	01 22 45.8	
MNK				i S	S	01 27 57.2	-1.3
MNK				i		01 28 21.4	
MNK				i SS	SS	01 33 00.6	-0.2
MNK				i SSS	SSS	01 36 25.4	
MNK				pmax	pmax		
	comp=N,15nm,1.2s						
MNK				pmax	pmax		
	comp=E,9.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,17nm,0.9s						
MNK				MLR	MLR		
	comp=N,188nm,17.0s						
MNK				MLR	MLR		
	comp=E,268nm,18.0s						
MNK				MLR	MLR		
	comp=Z,123nm,15.0s						
BURAR	Bucovina Array	78.44	44	P	P	01 18 04.5	+2.0
BURAR	Bucovina Array	78.44	44	⇑P	P	01 18 04.3	+1.8
BURAR	Bucovina Array	78.44	44	⇑P	P	01 18 04.3	+1.8
ARR	Arges	78.58	46	⇓P	P	01 18 05.2	+1.9
DOPR	Dopca	78.95	45	⇑P	P	01 18 06.7	+1.4
HUMR	Humele	79.02	47	⇑P	P	01 18 07.2	+1.6
MLR	Muntele Rosu	79.44	46	IAmb	IAmb	01 18 19.6	
	comp=Z,18nm,0.8s						
MLR	Muntele Rosu	79.44	46	⇑P	P	01 18 10.1	+2.0
MLR	Muntele Rosu	79.44	46	⇑P	P	01 18 10.1	+2.0
MLR	Muntele Rosu	79.44	46	P	P	01 18 09.3	+1.2
	comp=Z,24nm,1.4s						
LUBAR	Lubar, Ukraine	79.50	41	P	P	01 18 06.9	-1.2
COVR	Voineasa-Covas	79.53	45	⇓P	P	01 18 11.0	+2.5
ONER	Baraj Valea Uz	79.53	45	⇓P	P	01 18 11.2	+2.7
MI30	MI30,Zelenitsa	79.55	40	P	P	01 18 08.5	+0.1
	comp=Z,42nm,1.2s						
TESR	Tescani	79.66	44	⇑P	P	01 18 11.1	+2.0
TESR	Tescani	79.66	44	P	P	01 18 08.2	-0.9
	comp=Z,11nm,1.1s						
VRI	Vrincioaia	79.88	45	⇑P	P	01 18 12.9	+2.6
VRI	Vrincioaia	79.88	45	⇑P	P	01 18 12.9	+2.6
ISR	Istrita	79.95	46	⇓P	P	01 18 13.2	+2.4
ISR	Istrita	79.95	46	⇓P	P	01 18 13.2	+2.4
ELND	Elena	80.05	48	⇑P	P	01 18 12.7	+1.4
AK19	Malin Array Si	80.06	40	P	P	01 18 11.3	+0.1
AK21	Malin Array Si	80.06	40	P	P	01 18 10.9	-0.3
AK22	Malin Array Si	80.08	40	P	P	01 18 11.3	0.0
KIEV	Kiev	80.19	40	P	P	01 18 13.0	+1.1
KIEV	Kiev	80.19	40	⇑P	P	01 18 12.6	+0.7
KIEV	Kiev	80.19	40	P	P	01 18 13.0	+1.1
KIEV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KIEV	Kiev	80.19	40	P	P	01 18 11.0	-0.8
	comp=Z,36nm,1.2s						
AKASG	Malin Array Be	80.19	40	P	P	01 18 12.2	+0.3
	comp=Z,2.3nm,0.7s,baz=271,slow=4.9,SNR=7.8						
AKASG				LR	LR	01 54 00.7	
	comp=Z,186nm,18.7s,baz=256,slow=36						
	comp=Z,2.3nm,0.7s						
AKASG	Malin Array Be	80.19	40	IAmb	IAmb	01 18 14.8	
	comp=Z,3.0nm,0.9s						
AKBB	Malin Array Si	80.19	40	⇑eP	P	01 18 12.3	+0.4
AKBB				pmax	pmax		
	comp=Z,11nm,1.1s						
AKBB	Malin Array Si	80.19	40	P	P	01 18 11.0	-0.9
SORM	Soroca	80.35	43	⇑P	P	01 18 13.2	+0.5
SORM	Soroca	80.35	43	⇑P	P	01 18 13.2	+0.5
LOZB	Loznitsa	80.44	48	⇑P	P	01 18 14.5	+1.1
MILM	Milestii Mici	80.98	44	⇑P	P	01 18 15.3	-0.9
MILM	Milestii Mici	80.98	44	⇑P	P	01 18 15.3	-0.9
CFR	Carcaliu	81.02	46	⇓P	P	01 18 17.1	+0.7
CFR	Carcaliu	81.02	46	⇓P	P	01 18 17.1	+0.7
UNV	Unalaska Valle	81.36	324	P	P	01 18 17.6	-0.5
	baz=72						
EFOR	EFORIE	81.67	46	⇓P	P	01 18 19.2	-0.7
PURM	Purcari	81.79	44	⇑P	P	01 18 21.9	+1.4
KLMR	Klimovskoe	82.33	28	eP	P	01 18 22.6	-0.4
KLMR				pmax	pmax		
	comp=Z,41nm,1.5s						
PMSA	Palmer Station	82.34	179	LR	LR	01 58 39.2	
	comp=Z,291nm,18.5s,baz=350,slow=38						
NIKH	Nikolski High	82.98	323	P	P	01 18 24.7	-1.9
	baz=70						
OBN	Obninsk	83.02	34	P	P	01 18 27.3	+0.6
OBN	Obninsk	83.02	34	⇓P	P	01 18 28.4	+1.7
OBN	Obninsk	83.02	34	ceP	P	01 18 27.6	+0.9
OBN				e		01 21 34.0	
OBN				eS	S	01 28 43.5	-3.1
OBN				eSS	SS	01 34 04.7	-4.6
OBN				pmax	pmax		
	comp=Z,38nm,1.3s						
OBN				MLR	MLR		
	comp=Z,175nm,19.0s						
MOS	Moscow	83.35	33	eP	P	01 18 26.7	-1.7
MOS				pmax	pmax		
	comp=Z,23nm,0.8s						
LPSR	Galich'ya Gora	85.26	36	eP	P	01 18 39.3	+1.1
LPSR				pmax	pmax		
	comp=Z,54nm,0.9s						
VORR	Voronezh	85.78	37	eP	P	01 18 42.2	+1.4
VORR				pmax	pmax		
	comp=Z,67nm,1.1s						
ANTO	Ankara	85.92	50	P	P	01 18 42.4	+0.5
ANTO				IAmb	IAmb	01 18 45.2	
	comp=Z,13nm,0.9s						
ANTO	Ankara	85.92	50	⇑P	P	01 18 43.4	+1.5
ANTO	Ankara	85.92	50	P	P	01 18 42.4	+0.5
ANTO				pmax	pmax		
	comp=Z,13nm,0.9s						
VSR	Storozhevoye	85.94	37	eP	P	01 18 40.1	-1.5
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BILL	Bilibino	86.18	342	P	P	01 18 42.5	0.0
BILL				IAmb	IAmb	01 18 46.4	
	comp=Z,17nm,1.1s						
BILL	Bilibino	86.18	342	⇑eP	P	01 18 42.6	0.0
BILL				pmax	pmax		
	comp=Z,27nm,1.5s						
BR105	Keskin Array S	86.57	49	P	P	01 18 45.4	+0.2
	comp=Z,79nmcomp=Z,11nm,1.0s						
BR131	Keskin Array S	86.58	49	IAmb	IAmb	01 18 48.0	
	comp=Z,13nm,1.1s						
BR131	Keskin Array S	86.58	49	c iP	P	01 18 46.3	+1.0
BRTR	Keskin Array B	86.58	49	P	P	01 18 46.0	+0.8
	comp=Z,7.7nm,1.0s,baz=269,slow=3.2,SNR=24						
BRTR				LR	LR	01 59 14.9	
	comp=Z,31nm,18.0s,baz=298,slow=37						
	comp=Z,7.7nm,1.0s						
BRTR	Keskin Array B	86.58	49	P	P	01 18 45.2	-0.1
BR104	Keskin Array S	86.59	49	P	P	01 18 45.7	+0.4
VRH	Novokhopyorsk	87.41	37	eP	P	01 18 48.9	+0.1
VRH				pmax	pmax		
	comp=Z,29nm,1.1s						
KIRV	Kirov	87.83	28	ceP	P	01 18 51.1	+0.5
PPT	Papeete	88.62	251	LR	LR	01 52 55.0	
	comp=Z,108nm,18.9s,baz=18,slow=32						
PPT2	Papeete2	88.63	251	eLR	LR	01 47 00.7	
	comp=Z,155nm,24.5s						
PPT2				eLR	LR	01 47 10.1	
	comp=Z,190nm,27.2s						
BELG	Belogornoye	90.11	34	deP	P	01 19 02.0	+0.5
BELG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TIXI	Tiksi	90.13	355	LR	LR	01 57 44.1	
	comp=Z,208nm,21.9s,baz=17,slow=34						
TIXI	Tiksi	90.13	355	P	P	01 19 01.9	+0.6
TIXI				IAmb	IAmb	01 19 04.9	
	comp=Z,9.4nm,1.1s						
TIXI	Tiksi	90.13	355	⇑eP	P	01 19 01.7	+0.5
TIXI				pmax	pmax		
	comp=Z,12nm,1.1s						
TBI	Tubuai	90.40	246	eLR	LR	01 47 58.2	
	comp=Z,491nm,23.5s						
TSUM	Tsumeb	90.70	110	LR	LR	01 51 55.6	
	comp=Z,184nm,21.5s,baz=286,slow=30						
KIV	Kislovodsk	91.15	43	eP	P	01 19 06.3	-0.4
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,78nm,20.0s						
EIL	Elat	91.15	58	LR	LR	01 58 40.9	
	comp=Z,143nm,21.1s,baz=346,slow=35						
NRIK	Noril'sk	91.20	9	P	P	01 19 06.8	+0.6
	comp=Z,4.6nm,1.0s,baz=22,slow=2.3,SNR=8.3						
NRIK				LR	LR	01 59 53.8	
	comp=Z,112nm,20.2s,baz=349,slow=36						
	comp=Z,4.6nm,1.0s						
SHA1	Shidzhatmaz	91.22	43	⇓eP	P	01 19 08.6	+1.3
KBZ	Khabaz	91.38	43	P	P	01 19 09.5	+1.8
	comp=Z,4.3nm,0.9s,baz=285,slow=2.8,SNR=10						
KBZ				LR	LR	02 00 47.4	
	comp=Z,73nm,19.3s,baz=323,slow=36						
	comp=Z,4.3nm,0.9s						
KBZ	Khabaz	91.38	43	ceP	P	01 19 09.7	+2.1
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ASF	Jabal al Asfar	91.78	56	LR	LR	01 58 16.5	
	comp=Z,27nm,19.5s,baz=243,slow=34						
NCK	Nalchik	91.94	43	⇓eP	P	01 19 12.7	+2.4
NCK				pmax	pmax		
	comp=Z,11nm,0.8s						
SHEM	Shemya Is, Ala	92.29	328	LR	LR	02 01 26.1	
	comp=Z,82nm,20.2s,baz=97,slow=36						
ARTI	Arti	93.05	27	LR	LR	01 55 20.6	
	comp=Z,73nm,20.6s,baz=327,slow=32						
ARTI	Arti	93.05	27	P	P	01 19 16.8	+1.7
ARTI						01 23 00.0	
ARTI				S	SKSac	01 29 50.6	+0.6
ARTI				SS	SS	01 36 35.4	+0.1
SVE	Sverdlovsk	93.72	26	eP	P	01 19 18.8	+0.6
SVE				pmax	pmax		
	comp=Z,12nm,1.0s						
SEY	Seymchan	93.86	343	LR	LR	02 05 51.6	
	comp=Z,130nm,19.7s,baz=335,slow=38						
SEY	Seymchan	93.86	343	⇓eP	P	01 19 20.9	+2.2
SEY				pmax	pmax		
	comp=Z,18nm,1.4s						
AKTO	Aktyubinsk	96.59	32	LR	LR	02 01 45.3	
	comp=Z,137nm,19.3s,baz=79,slow=35						
MA2	Magadan	97.03	342	LR	LR	02 06 38.1	
	comp=Z,140nm,19.4s,baz=70,slow=38						
SUR	Sutherland	97.42	122	LR	LR	01 58 34.7	
	comp=Z,85nm,19.0s,baz=284,slow=32						
RAR	Rarotonga	98.89	251	LR	LR	01 57 18.0	
	comp=Z,94nm,18.9s,baz=94,slow=31						
LSZ	Lusaka	99.23	103	LR	LR	01 57 27.3	
	comp=Z,93nm,20.4s,baz=280,slow=31						
YAK	Yakutsk	99.36	352	LR	LR	02 04 15.2	
	comp=Z,68nm,22.0s,baz=55,slow=35						
LBTB	Lobatse	99.49	113	LR	LR	01 56 56.7	
	comp=Z,72nm,20.8s,baz=282,slow=31						
PETK	Petropavlovsk-	99.60	335	LR	LR	02 07 45.7	
	comp=Z,104nm,20.0s,baz=65,slow=37						
BVAR	Borovoye Array	100.39	25	P	Pdif	01 19 49.7	+1.2
	comp=Z,0.7nm,0.8s,baz=259,slow=7.1,SNR=4.0						
MKAR	Makanchi Array	109.95	22	PKKP		01 36 02.3	
	comp=Z,0.9nm,0.8s,baz=67,slow=1.6,SNR=6.0						
WMQ	Urumqi	114.39	20	ePKP	PKiKP	01 24 40.8	-1.0
WMQ				LR	LR		
	comp=Z,120nm,18.5s						
MJAR	Matsushiro Arr	120.99	337	PKP	PKiKP	01 24 55.4	+0.7
	comp=Z,0.8nm,0.7s,baz=56,slow=0.4,SNR=4.2						
HHC	Hu-ho-hao-te	121.63	1	eP	PKPdf	01 24 55.0	-0.8
BTO	Baotou	121.82	3	ePKP	PKPdf	01 24 52.8	-3.4
BTO				PP	PP	01 26 29.5	+1.6
BTO				pmax	pmax		
	comp=Z,14nm,0.8s						
BTO				pmax	pmax		
	comp=Z,190nm,5.3s						
KSRS	Korea Array	123.30	346	PKP	PKPdf	01 24 58.6	-0.3
	comp=Z,1.9nm,0.8s,baz=64,slow=2.9,SNR=5.4						
HNS	HongShan	125.08	358	⇓PKP	PKiKP	01 25 04.0	+1.3
LZH	Lanzhou	125.69	9	eP	PKPdf	01 24 57.5	-6.3
LZH				pP	sPKPdf	01 25 07.5	+2.6
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
NJ2	Nanjing	130.13	354	eP	PKPdf	01 25 10.5	-1.6
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PZH	PanZhiHua	134.59	14	PKP	PKPdf	01 25 20.3	-0.6
CMAR	Chiang Mai Arr	141.36	22	PKP	PKPdf	01 25 33.8	+0.4
	comp=Z,0.7nm,0.5s,baz=339,slow=2.8,SNR=5.5						
CMAR				SKP	SKPdf	01 29 09.8	+0.7
	comp=Z,0.4nm,0.3s,baz=320,slow=5.0,SNR=4.5						
STKA	Stephens Creek	150.73	236	PKP	PKPdf	01 25 49.8	+0.9
	comp=Z,7.2nm,0.9s,baz=54,slow=3.5,SNR=12						
STKA				PKPbc	sPKPbc	01 25 56.0	+0.6
	comp=Z,7.2nm,0.9s,baz=62,slow=4.1,SNR=9.2						
ASAR	Alice Springs	159.73	250	PKP	PKPdf	01 26 00.8	-0.5
	comp=Z,2.9nm,1.1s,baz=88,slow=1.9,SNR=9.3						
ASAR				PKPab	PKPab	01 26 39.2	-0.8
	comp=Z,1.5nm,0.9s,baz=99,slow=3.8,SNR=5.7						
WRA	Warramunga Arr	159.83	261	PKP	PKPdf	01 26 00.7	-0.7
	comp=Z,4.1nm,1.0s,baz=81,slow=1.2,SNR=13						
WRA				PKPab	PKPab	01 26 39.1	-1.4
	comp=Z,1.4nm,0.9s,baz=98,slow=9.0,SNR=6.0						

NEIC ***29*** *01:07:41.8±1.3, 17.°89N±0.°03×66.°848W±0.°009, h10km±1km, ML3.5/18, Md2.4/13(RSPR), Error ellipse: s-maj=5.7km s-min=2.8km az=355.0*

RSPR ***29*** *01:07:41.7, 17.°91N×66.°85W, h5km, MD2.4/13*

ISC 29 01:07:41.3±1.5**, 17.°88N**±0.°06**×66.°84W**±0.°02**, h14km**±8km**, n47, σ0.s54**/48**, 9C-5D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.10	339		Pg	01 07 43.6	-0.8
GBPR	Guanica, Bosqu	0.10	339	⇓iP	Pg	01 07 43.6	-0.8
MLPR	Magueyes Islan	0.21	294	⇓eP	Pg	01 07 45.9	-0.1
MLPR	Magueyes Islan	0.21	294	eS	Sg	01 07 49.1	-0.2
OBIP	Obispado Ponce	0.28	54		Pg	01 07 47.6	+0.5
OBIP					Sg	01 07 51.9	+0.8
OBIP	Obispado Ponce	0.28	54	IAML		01 07 53.5	
	comp=N,3μm,0.2s						
OBIP	Obispado Ponce	0.28	54	⇓eP	Pg	01 07 47.6	+0.5
OBIP	Obispado Ponce	0.28	54	eS	Sg	01 07 51.9	+0.8
CRPR	Cabo Rojo, PR	0.28	296		Pg	01 07 47.4	+0.2
CRPR					Sg	01 07 51.7	+0.4
CRPR	Cabo Rojo, PR	0.28	296	IAML		01 07 52.0	
	comp=N,9μm,0.6s						
CRPR				IAML		01 07 53.0	
	comp=N,11μm,0.6s						
CRPR	Cabo Rojo, PR	0.28	296	⇑eP	Pg	01 07 47.4	+0.2
CRPR	Cabo Rojo, PR	0.28	296	eS	Sg	01 07 51.7	+0.4
CELP	Cerrillos	0.32	52	Pg	Pg	01 07 48.4	+0.6
CELP				IAML		01 07 54.2	
	comp=N,6μm,0.6s						
LSP	Las Mesas	0.37	322		Pg	01 07 48.9	0.0
LSP					Sg	01 07 54.8	+0.7
LSP	Las Mesas	0.37	322	⇑eP	Pg	01 07 48.9	0.0
LSP	Las Mesas	0.37	322	eS	Sg	01 07 54.8	+0.7
UUPR	Utuado, UPR, P	0.39	17	Pg	Pg	01 07 49.1	0.0
PRSN	Puerto Rico Se	0.44	319	⇑eP	Pg	01 07 49.9	-0.2
PRSN	Puerto Rico Se	0.44	319	eS	Sg	01 07 56.6	+0.6
AOPR	Arecibo Observ	0.47	10		Pg	01 07 50.5	-0.2
AOPR					Sg	01 07 57.1	+0.1
AOPR	Arecibo Observ	0.47	10	IAML		01 07 57.2	
	comp=N,6μm,0.8s						
AOPR	Arecibo Observ	0.47	10	⇑eP	Pg	01 07 50.5	-0.2
AOPR	Arecibo Observ	0.47	10	eS	Sg	01 07 57.1	+0.1
ECPR	Experimental S	0.63	46	⇓eP	Pg	01 07 53.5	-0.2
ECPR	Experimental S	0.63	46	eS	Sg	01 08 02.7	+0.7
AGPR	Aguadilla, PR	0.64	336	Pg	Pg	01 07 53.4	-0.4
AGPR				IAML		01 07 56.6	
	comp=N,2μm,0.8s						
AGPR				IAML		01 08 07.4	
	comp=N,5μm,0.8s						
AGPR	Aguadilla, PR	0.64	336	⇑eP	Pg	01 07 53.4	-0.4
AGPR	Aguadilla, PR	0.64	336	eS	Sg	01 08 02.2	0.0
EMPR	Esperanza - Ma	0.66	27		Pg	01 07 53.5	-0.7
EMPR					Sb	01 08 03.8	+0.1
EMPR	Esperanza - Ma	0.66	27	IAML		01 08 01.7	
	comp=N,6μm,0.9s						
EMPR				IAML		01 08 05.1	
	comp=N,6μm,0.8s						
EMPR	Esperanza - Ma	0.66	27	⇑eP	Pg	01 07 53.5	-0.7
EMPR	Esperanza - Ma	0.66	27	eS	Sb	01 08 03.8	+0.1
SJG	San Juan	0.70	71		Pg	01 07 55.5	+0.5
SJG	San Juan	0.70	71	IAML		01 08 05.7	
	comp=N,2μm,0.9s						
SJG				IAML		01 08 06.4	
	comp=N,2μm,0.3s						
SJG	San Juan	0.70	71	⇑eP	Pg	01 07 55.5	+0.5
SJG	San Juan	0.70	71	eS	Sb	01 08 05.3	+0.6
IDE	Isla Desecheo	0.78	310		Pg	01 07 56.3	-0.2
IDE					Sg	01 08 06.5	-0.3
IDE	Isla Desecheo	0.78	310	⇓eP	Pg	01 07 56.3	-0.2
IDE	Isla Desecheo	0.78	310	eS	Sg	01 08 06.5	-0.3
GCPR	Guaynabo City	0.84	59		Pg	01 07 57.1	-0.4
GCPR	Guaynabo City	0.84	59		Sg	01 08 08.4	-0.1
GCPR	Guaynabo City	0.84	59	⇑eP	Pg	01 07 56.9	-0.7
GCPR	Guaynabo City	0.84	59	eS	Sg	01 08 08.4	-0.1
HUMP	Col San Antoni	0.98	75		Pg	01 07 60.0	-0.3
HUMP				IAML		01 08 14.7	
	comp=N,1μm,0.5s						
HUMP				IAML		01 08 14.8	
	comp=N,1μm,0.3s						
HUMP	Col San Antoni	0.98	75		Sg	01 08 12.3	-0.8

HUMP	Col San Antoni	0.98	75	⇑eP	Pg	01 07 58.6	-1.6
HUMP	Col San Antoni	0.98	75	eS	Sg	01 08 12.3	-0.8

IDC ***29*** *01:13:22.5±1.8, 0°.30S×91°.28W, h0^{km}, mb4.0/6, mbtmp4.0/6, ML2.8/1, Error ellipse: s-maj=58.7km s-min=22.9km az=41.0*

NEIC ***29*** *01:13:24.8±1.8, 0°.52S±0°.05×91°.27W±0°.07, h10^{km}±1^{km}, mb4.5/53, Error ellipse: s-maj=12.4km s-min=6.6km az=242.0*

ISC 29 01:13:25.6±0.7**, 0°.48S**±0°.10×**91°.38W**±0°.08**, h23^{km}, n55, σ1^{s}53**/34**, mb4.5**/27**, Galapagos Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I20EC	Galapagos	1.01	97	Pn	Pn	01 13 43.9	-0.6
	baz=300,slow=18						
I20EC				Sn	Sn	01 14 02.7	+4.7
	baz=300,slow=21						
PAYG	Puerto Ayora	1.11	100		Pn	01 13 44.2	-1.6
MTO3	Montecristo	14.92	8		Pn	01 16 55.9	+0.4
ESQI	Esquipulas	15.08	8	Pn	Pn	01 16 57.9	+0.4
APG	El Apazote	15.41	3	Pn	Pn	01 16 59.6	-2.4
	baz=189,slow=13,SNR=1.8						
CMIG	Matias Romero	17.80	349	P	P	01 17 33.4	+0.8
	2.3nm,0.7s,baz=190,slow=6.4,SNR=5.1						
ROSC	El Rosal	17.84	73	Pn	Pn	01 17 30.5	-2.4
ROSC				IAmb	IAmb	01 17 49.5	
	comp=Z,41nm,1.4s						
JRQG	Juriquilla Cam	22.85	338	P	P	01 18 28.2	+0.6
PB18	Visviri	27.44	129	P	P	01 19 09.5	-1.2
PB18				IAmb	IAmb	01 19 33.1	
	comp=Z,19nm,1.3s						
HNDO	Hondo	30.78	346	P	P	01 19 39.7	+0.1
TRN	Trinidad (W)	31.79	69	eS	S	01 24 56.8	-1.1
TXAR	Lajitas Array	31.89	339	P	P	01 19 50.2	+0.7
	comp=Z,2.3nm,1.0s,baz=134,slow=7.3,SNR=1.8						
	comp=Z,2.3nm,1.0s						
TXAR	Lajitas Array	31.89	339	P	P	01 19 50.0	+0.6
TX31	Lajitas Ar. Si	31.89	339	P	P	01 19 49.8	+0.3
ODSA	Odessa	34.10	343	P	P	01 20 10.0	+1.2
POST	Post	34.70	345	P	P	01 20 14.7	+0.7
POST				IAmb	IAmb	01 20 16.6	
	comp=Z,13nm,1.2s						
PTLB	Pontes e Lacer	35.13	117	P	P	01 20 18.0	+0.2
MSTX	Muleshoe	35.90	344	P	P	01 20 25.4	+1.1
PBMO	Poplar Bluff	37.08	1	P	P	01 20 33.8	-0.4
X18A	Snowflake	38.93	335	P	P	01 20 51.3	+1.2
X18A				IAmb	IAmb	01 21 03.6	
	comp=Z,14nm,1.5s						
Q51A	Peebles	40.00	10	P	P	01 21 00.1	+1.5
Q51A				IAmb	IAmb	01 21 01.4	
	comp=Z,10nm,1.0s						
WUAZ	Wupatki	40.38	334		P	01 21 04.4	+2.3
WUAZ				IAmb	IAmb	01 21 05.8	
	comp=Z,14nm,1.1s						
PV20	West Nyswonger	41.89	339	IAmb	IAmb	01 21 17.9	
	comp=Z,11nm,1.0s						
PV23	Carpenter Ridg	42.01	339	IAmb	IAmb	01 21 18.4	
	comp=Z,12nm,0.9s						
O20A	White River Ci	43.25	341	IAmb	IAmb	01 21 33.2	
	comp=Z,9.6nm,1.2s						
WSHM	Spangler Hills	43.37	329	IAmb	IAmb	01 21 34.2	
	comp=Z,16nm,1.5s						
LRMC	Laurel Mtn Rad	43.38	328	IAmb	IAmb	01 21 29.5	
	comp=Z,8.3nm,1.1s						
GWY	Greenwater Val	43.40	330	IAmb	IAmb	01 21 29.5	
	comp=Z,7.1nm,1.0s						
P18A	Preston Nutter	43.49	339	IAmb	IAmb	01 21 35.2	
	comp=Z,9.4nm,1.2s						
ECSD	EROS Data Cent	44.27	355	IAmb	IAmb	01 21 35.0	
	comp=Z,9.6nm,0.9s						
PTCN	Pitcairn Islan	44.68	234	P	P	01 21 38.5	+1.4
TCUT	Toone Canyon	45.22	339		P	01 21 43.5	+2.1
HWUT	Hardware Ranch	45.71	339	IAmb	IAmb	01 21 48.0	
	comp=Z,12nm,1.4s						
NV11	Mina Array Sit	45.90	330	IAmb	IAmb	01 21 49.6	
	comp=Z,5.4nm,1.0s						
NVAR	Mina Array Bea	45.97	330	P	P	01 21 48.0	+0.7
	comp=Z,3.4nm,0.8s,baz=158,slow=8.5,SNR=13						
	comp=Z,3.4nm,0.8s						
PDAR	Pinedale Array	46.05	341	P	P	01 21 47.2	-0.7
	comp=Z,0.9nm,0.8s,baz=145,slow=5.4,SNR=5.4						
	comp=Z,0.9nm,0.8s						
HVU	Hansel Valley	46.30	338	IAmb	IAmb	01 21 52.4	
	comp=Z,5.3nm,1.1s						
ELK	Elko	46.42	335	IAmb	IAmb	01 21 53.4	
	comp=Z,3.2nm,0.8s						
FXWY	Fox Creek	47.31	341	IAmb	IAmb	01 22 00.1	
	comp=Z,5.4nm,1.1s						
HLID	Hailey	48.45	338		P	01 22 07.7	+1.2
HLID				IAmb	IAmb	01 22 10.0	
	comp=Z,8.4nm,1.3s						
MDND	Maddock	48.66	353		P	01 22 09.4	+1.6
BCYI	Bear Canyon	48.72	339	IAmb	IAmb	01 22 16.7	
	comp=Z,5.2nm,1.2s						
ULM	Lac du Bonnet	50.68	356	P	P	01 22 20.9	-2.3
	comp=Z,4.6nm,0.8s,baz=207,slow=12,SNR=5.0						
	comp=Z,4.6nm,0.8s						
ULM	Lac du Bonnet	50.68	356	IAmb	IAmb	01 22 24.6	
	comp=Z,8.3nm,1.0s						
FCC	Fort Churchill	59.11	358	IAmb	IAmb	01 23 24.8	
	comp=Z,7.0nm,1.1s						
YKA	Yellowknife Ar	65.21	348	P	P	01 24 03.8	-1.1
	comp=Z,1.4nm,0.9s,baz=157,slow=5.7,SNR=11						
	comp=Z,1.4nm,0.9s						
ILAR	Eielson Array	76.40	339	P	P	01 25 12.4	-0.5
	comp=Z,1.0nm,0.9s,baz=157,slow=3.6,SNR=6.7						
	comp=Z,1.0nm,0.9s						
BELA	Belgrano 2	82.88	170	P	P	01 25 47.0	-0.9
H11N3	WAKE ISLAND Hy	101.19	290	T	T	03 19 38.4	
	baz=86,slow=72,SNR=6.0						
H11N2	WAKE ISLAND Hy	101.20	290	T	T	03 19 36.1	
	baz=86,slow=72,SNR=7.0						
H11N1	WAKE ISLAND Hy	101.21	290	T	T	03 19 36.2	
	baz=86,slow=72,SNR=6.7						
H11S2	WAKE ISLAND Hy	101.45	289	T	T	03 20 01.0	
	baz=86,slow=74,SNR=80						
H11S1	WAKE ISLAND Hy	101.46	289	T	T	03 19 59.2	
	baz=86,slow=74,SNR=79						
H11S3	WAKE ISLAND Hy	101.47	289	T	T	03 20 01.5	
	baz=86,slow=74,SNR=52						
ASAR	Alice Springs	129.93	238	PKP	PKPdf	01 32 34.7	+0.3
	comp=Z,0.3nm,0.8s,baz=105,slow=2.1,SNR=3.4						

IDC ***29*** *01:21:13.6±0.4, 17°.83N×66°.82W, h0^{km}, mb4.4/24, mbtmp4.5/27, ML3.3/3, MS4.0/38, Error ellipse: s-maj=12.8km s-min=7.3km az=158.0*

NEIC ***29*** *01:21:14.6, 17°.88N×66°.83W, h5^{km}*

NEIC ***29*** *01:21:14.5, 17°.93N×66°.84W, h6^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.00; $M_{\theta\theta}$1.08; $M_{\phi\phi}$-1.08; $M_{r\theta}$0.34; $M_{\theta\phi}$0.91; $M_{\phi r}$-0.16; Fault plane solution: $M_0$1.46000×10^{16} NP1:ϕ_s295.00000°, δ90.00000°, λ-15.00000°. NP2:ϕ_s25.00000°, δ75.00000°, λ-180.00000°. Principal axes: T 1.4608, Plg11.0000°, Azm341.0000°; N 0.0001, Plg75.0000°, Azm115.0000°; P -1.4609, Plg11.0000°, Azm249.0000°;*

NEIC ***29*** *01:21:14.6, 17°.93N×66°.84W, h20^{km}*

NEIC ***29*** *01:21:14.6, 18°.03N×67°.05W, h20^{km}, Moment Tensor Solution. Duration: 1^{s}5 Moment tensor: Scale 10^{16}Nm; M_{rr}0.04; $M_{\theta\theta}$0.62; $M_{\phi\phi}$-0.66; $M_{r\theta}$0.27; $M_{\theta\phi}$1.90; $M_{\phi r}$-0.85; Fault plane solution: $M_0$2.20000×10^{16} NP1: ϕ_s277.59000°, δ69.75000°, λ-7.97000°. NP2:ϕ_s10.36000°, δ82.53000°, λ-159.56000°. Principal axes: T 2.0297, Plg9.0000°, Azm142.0000°; N 0.3035, Plg68.0000°, Azm30.0000°; P -2.3332, Plg20.0000°, Azm236.0000°;*

OSPL ***29*** *01:21:14.3±0.4, 17°.85N×66°.86W, h16^{km}±7^{km}, ML4.4, Presumed earthquake*

RSPR ***29*** *01:21:14.6, 17°.93N×66°.84W, h4^{km}, MD3.7/13*

MOS ***29*** *01:21:15.2±1.4, 17°.82N×66°.89W, h17^{km}, mb5.0/36, Error ellipse: s-maj=8.7km s-min=6.6km az=72.2*

NEIC ***29*** *01:21:15.3±2.6, 17°.88N±0°.03×66°.84W±0°.02, h10^{km}±1^{km}, mb5.0/379, ML4.8/36, Mwr4.7/25, Mww4.8/28, ML4.7/13(RSPR), Mwr4.7/12(SLM), Error ellipse: s-maj=5.2km s-min=2.9km az=8.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.10; $M_{\theta\theta}$0.84; $M_{\phi\phi}$-0.94; $M_{r\theta}$0.15; $M_{\theta\phi}$1.37; $M_{\phi r}$-0.22; Fault plane solution: $M_0$1.65000×10^{16} NP1:ϕ_s16.86000°, δ83.25000°, λ-175.09000°. NP2:ϕ_s286.28000°, δ85.13000°, λ-6.78000°. Principal axes: T 1.5807, Plg1.0000°, Azm332.0000°; N 0.1384, Plg82.0000°, Azm71.0000°; P -1.7190, Plg8.0000°, Azm241.0000°;*

INMG ***29*** *01:21:16.0±7.8, 17°.82N×66°.73W, h10^{km}, M4.6, mb4.8, #DIST_RANGE: DISTANT*

GCMT ***29*** *01:21:18.3±0.2, 18°.08N±0°.01×66°.75W±0°.01, h12^{km}, MW4.8/95, Moment Tensor Solution. s8,c9; s95,c142; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.06±.07; $M_{\theta\theta}$1.03±.07; $M_{\phi\phi}$-0.96±.06; $M_{r\theta}$-0.92±.17; $M_{\theta\phi}$1.65±.05; $M_{\phi r}$-0.58±.17; Best double couple: $M_0$2.16700×10^{16} NP1:ϕ_s288.00000°, δ72.00000°, λ16.00000°. NP2: ϕ_s193.00000°, δ75.00000°, λ161.00000°. Principal axes: T 2.4330, Plg24.0000°, Azm150.0000°; N -0.5270, Plg66.0000°, Azm336.0000°; P -1.9000, Plg2.0000°, Azm241.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

RSNC ***29*** *01:21:22.0±0.7, 17°N±4°×6°7W±°, h0^{km}, M4.6, mB5.2, mb4.9, Mw(mB)4.6*

ISC 29 01:21:14.0±0.9**, 17°.75N**±0°.03×**66°.87W**±0°.02**, h6**^{km}±5^{km}**, n524, σ2^{s}06**/361**, mb5.0**/238**, MS4.1**/38**, 26C-17D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	Guanica, Bosqu	0.23	357		Pg	01 21 16.3	-2.2
GBPR	Guanica, Bosqu	0.23	357	⇓iP	Pg	01 21 16.3	-2.2
MLPR	Magueyes Islan	0.28	322	⇑iP	Pg	01 21 19.0	-0.5
MLPR	Magueyes Islan	0.28	322	eS	Sg	01 21 22.3	-0.9
CRPR	Cabo Rojo, PR	0.35	318	Pg	Pg	01 21 20.1	-0.7
CRPR					Sg	01 21 24.1	-1.3
CRPR	Cabo Rojo, PR	0.35	318	IAML		01 21 25.1	
	163µm,0.9s						
CRPR				IAML		01 21 26.1	
	163µm,0.5s						
CRPR	Cabo Rojo, PR	0.35	318	⇓iP	Pg	01 21 20.4	-0.4
CRPR	Cabo Rojo, PR	0.35	318	eS	Sg	01 21 24.5	-0.9
CRPR	Cabo Rojo, PR	0.35	318	i P	Pg	01 21 20.1	-0.7
CRPR				eS	Sg	01 21 24.0	-1.4
CRPR				IAML		01 21 24.8	
	comp=Z,163µm,0.5s						
OBIP	Obispado Ponce	0.38	40	Pg	Pg	01 21 19.7	-1.8
OBIP				Sg	Sg	01 21 23.8	-2.8
OBIP	Obispado Ponce	0.38	40	⇑iP	Pg	01 21 19.9	-1.6
OBIP	Obispado Ponce	0.38	40	eS	Sg	01 21 23.9	-2.6
CELP	Cerrillos	0.42	40	Pg	Pg	01 21 20.3	-1.9
LSP	Las Mesas	0.48	334		Pg	01 21 21.6	-1.6
LSP	Las Mesas	0.48	334	⇓iP	Pg	01 21 21.6	-1.6
UUPR	Utuado, UPR, P	0.52	15	Pg	Pg	01 21 21.4	-2.7
UUPR				IAML		01 21 32.9	
	comp=Z,143µm,0.3s						
PRSN	Puerto Rico Se	0.54	330	⇑iP	Pg	01 21 22.7	-1.7
PRSN	Puerto Rico Se	0.54	330	eS	Sg	01 21 29.5	-1.9
AOPR	Arecibo Observ	0.61	10	Pg	Pg	01 21 22.9	-2.8
AOPR				Sg	Sg	01 21 29.1	-4.5
AOPR				IAML		01 21 35.4	
	comp=N,82µm,0.8s						
AOPR	Arecibo Observ	0.61	10	⇑iP	Pg	01 21 23.0	-2.8
AOPR	Arecibo Observ	0.61	10	eS	Sg	01 21 29.3	-4.4
AOPR	Arecibo Observ	0.61	10	eP	Pg	01 21 22.9	-2.8
ECPR	Experimental S	0.74	40	Pg	Pg	01 21 25.8	-2.6
ECPR				IAML		01 21 36.0	
	comp=N,56µm,0.3s						
ECPR				IAML		01 21 36.6	
	comp=N,51µm,0.2s						
ECPR	Experimental S	0.74	40	⇓iP	Pg	01 21 25.9	-2.4
ECPR	Experimental S	0.74	40	eS	Sg	01 21 34.5	-3.5
AGPR	Aguadilla, PR	0.75	342		Pg	01 21 26.1	-2.5
AGPR				IAML		01 21 35.5	
	comp=N,39µm,0.5s						
AGPR				IAML		01 21 49.0	
	comp=N,37µm,0.8s						
AGPR	Aguadilla, PR	0.75	342	⇑iP	Pg	01 21 26.1	-2.5
AGPR	Aguadilla, PR	0.75	342	eS	Sg	01 21 34.9	-3.4
AGPR	Aguadilla, PR	0.75	342	i P	Pg	01 21 26.1	-2.5
AGPR				eS	Sg	01 21 34.9	-3.4
AGPR				IAML		01 21 38.8	
	comp=Z,15µm,0.4s						
SJG	San Juan	0.77	62	Pg	Pg	01 21 27.3	-1.5
	comp=Z,967nm,0.3s,baz=259,slow=14,SNR=151						
SJG				Lg	Lg	01 21 35.8	
	comp=Z,3µm,0.3s,baz=332,slow=17,SNR=24						
SJG	San Juan	0.77	62	⇑iP	Pg	01 21 27.4	-1.5
SJG	San Juan	0.77	62	eS	Sg	01 21 37.3	-1.6
SJG	San Juan	0.77	62	eP	Pg	01 21 27.2	-1.7
SJG	San Juan	0.77	62	i P	Pg	01 21 27.2	-1.7
SJG				eS	Sg	01 21 36.9	-2.0
SJG				IAML		01 21 37.6	
	comp=Z,16µm,0.8s						
EMPR	Esperanza - Ma	0.79	24		Pg	01 21 26.8	-2.5
EMPR					Sg	01 21 36.3	-3.3
EMPR	Esperanza - Ma	0.79	24	IAML		01 21 38.4	
	comp=Z,56µm,1.2s						
EMPR	Esperanza - Ma	0.79	24	⇓iP	Pg	01 21 26.8	-2.5
EMPR	Esperanza - Ma	0.79	24	eS	Sg	01 21 36.3	-3.3
IDE	Isla Desecheo	0.86	318		Pg	01 21 29.0	-1.6
IDE					Sg	01 21 40.2	-1.6
IDE	Isla Desecheo	0.86	318	⇓iP	Pg	01 21 29.0	-1.6
IDE	Isla Desecheo	0.86	318	eS	Sg	01 21 40.2	-1.6
GCPR	Guaynabo City	0.93	53		Pg	01 21 29.6	-2.3
GCPR	Guaynabo City	0.93	53		Sg	01 21 40.4	-3.6
GCPR	Guaynabo City	0.93	53	⇑iP	Pg	01 21 29.6	-2.3
GCPR	Guaynabo City	0.93	53	eS	Sg	01 21 40.4	-3.6
HUMP	Col San Antoni	1.04	68		Pg	01 21 32.0	-2.0
HUMP	Col San Antoni	1.04	68		Sg	01 21 44.9	-2.7
HUMP	Col San Antoni	1.04	68	⇑iP	Pg	01 21 32.1	-2.0
HUMP	Col San Antoni	1.04	68	eS	Sg	01 21 44.9	-2.7
DR12	Loma Pena Alta	2.60	294		Pn	01 21 57.8	+1.0
SMDR	Samana, DR	2.69	305	⇑eP	Pb	01 22 02.1	-0.5
SMDR	Samana, DR	2.69	305	eS	Sb	01 22 36.1	+0.3
SABA	Saba	3.46	92		Pn	01 22 08.8	+0.3
SABA				IAML		01 23 25.0	
	comp=N,2µm,1.1s						
SABA	Saba	3.46	92		Sn	01 22 46.2	-3.5
SABA	Saba	3.46	92	eS	Sn	01 22 46.2	-3.5
SEUS	St. Eustatius	3.71	93		Pn	01 22 11.7	-0.2
SEUS				IAML		01 23 19.4	
	comp=E,2µm,0.9s						
SEUS				IAML		01 23 47.8	
	comp=N,2µm,1.2s						
SKI	Saint Kitts	3.96	95	eP	Pn	01 22 16.5	+1.1
SC01	Santiago de lo	4.03	295		Pn	01 22 19.2	+2.9
SDDR	Presa de Saban	4.38	287		Pn	01 22 25.1	+3.9
SDDR				IAML		01 23 46.6	
	comp=N,1µm,1.1s						
SDDR	Presa de Saban	4.38	287	⇑iP	Pb	01 22 28.5	-2.9
SDDR	Presa de Saban	4.38	287	eS	Sn	01 23 17.5	+5.0
SDDR	Presa de Saban	4.38	287	eP	Pn	01 22 25.3	+4.1
MBWH	Windy Hill	4.58	102	eP	Pn	01 22 23.7	-0.2
MBWH	Windy Hill	4.58	102	eS	Sn	01 23 17.4	-0.1
MLYT	Lee's Yard	4.58	102	eP	Pn	01 22 24.4	+0.4
MLYT	Lee's Yard	4.58	102	eS	Sn	01 23 17.3	-0.3
ANWB	Willy Bob	4.84	90		Pn	01 22 27.3	-0.2
ANWB				IAML		01 23 40.7	
	comp=N,686nm,1.5s						
ANWB				IAML		01 24 03.9	
	comp=N,605nm,1.3s						
ANWB	Willy Bob	4.84	90	eP	Pn	01 22 27.1	-0.4
ANWB	Willy Bob	4.84	90	eS	Sn	01 23 22.3	-1.6
DHSZ	Broadband at M	5.09	106	eP	Pn	01 22 30.9	-0.1
DHSZ	Broadband at M	5.09	106	eS	Sn	01 23 26.9	-3.2
GDHS	Morne Mazeau,	5.09	106		Pn	01 22 30.0	-1.0
ATGZ	Broadband at L	5.18	108	eP	Pn	01 22 27.9	-4.3
ATGZ	Broadband at L	5.18	108	eS	Sn	01 23 24.7	-7.7
MMLZ	Guadeloupe Bro	5.25	108	eP	Pn	01 22 32.4	-0.7
ABD	La Joyeuse, An	5.29	103		Pn	01 22 33.8	+0.1
ABD				IAML		01 23 57.2	
	comp=E,570nm,1.2s						
ABD				IAML		01 24 16.8	
	comp=N,521nm,1.6s						
CBE	Ff, Capester	5.30	108		Pn	01 22 32.8	-1.1
CBE				IAML		01 23 48.4	
	comp=N,765nm,0.5s						
CBE	Ff, Capester	5.30	108		Sn	01 23 34.9	-0.5
CBE	Ff, Capester	5.30	108	⇑eP	Pn	01 22 32.8	-1.1
CBE	Ff, Capester	5.30	108	eS	Sn	01 23 34.9	-0.5
TBG	Guadaloupe-3	5.34	110	eP	Pn	01 22 22.4	-12
GRTK	Grand Turk	5.50	314		Pn	01 22 36.0	-0.4
GRTK	Grand Turk	5.50	314	eP	Pn	01 22 35.6	-0.8
GRTK				eS	Sn	01 23 33.5	-6.5
MAGL	Barre de l'ile	5.64	108		Pn	01 22 38.8	+0.4
DSDZ	La Diserade, G	5.73	104	eP	Pn	01 22 39.7	+0.1
H05N1	Guadeloupe/Mar	5.74	103	Pn	Pn	01 22 39.0	-0.8
H05N1				Sn	Sn	01 23 42.4	-3.6
DWS	Wesley	5.75	111	eP	Pn	01 22 38.6	-1.3
H05S1	Guadeloupe/Mar	6.67	119	T	T	01 29 29.0	
	SNR=26						
SLBI	Saint Lucia, B	6.77	122	eP	Pn	01 22 54.4	+0.4
SLBI	Saint Lucia, B	6.77	122	eS	Sn	01 24 07.7	-3.8
SVB	Belmont	7.00	129	eP	Pn	01 22 56.6	-0.7
SVB	Belmont	7.00	129	eS	Sn	01 24 14.6	-2.7
MASC	Masc	7.38	290	eP	Pn	01 23 03.9	+1.6
MASC				eS	Sn	01 24 21.4	-5.0
GCMP	Grenada, Carri	7.41	134	eP	Pn	01 23 01.9	-1.0
URIC	Uribia, Colomb	7.79	220	P	Pn	01 23 08.6	+0.6
	comp=N,36nm,0.8s						
URIC				S	Sn	01 24 31.9	-4.7
	comp=N,36nm,0.8s						
QMBU	Quimbuelo	7.91	289	eP	Pn	01 23 08.6	-1.0
QMBU				eS	Sn	01 24 35.7	-3.8
GTBY	Guantanamo Bay	8.10	287	eP	Pn	01 23 11.3	-1.0
GTBY	Guantanamo Bay	8.10	287	P	Pn	01 23 12.1	-0.2
	comp=N,81nm,1.6s						
GTBY				S	Sn	01 24 43.5	-0.8
	comp=N,81nm,1.6s						
MOAC	Moa	8.18	292	eP	Pn	01 23 13.1	-0.2
BBGH	Gun Hill	8.40	122	eP	Pn	01 23 18.4	+2.0
RCC	Rio Carpintero	8.65	286	eP	Pn	01 23 18.9	-1.0
TRN	Trinidad (W)	8.82	142	eP	Pn	01 23 20.9	-1.3
MARVS	Santiago de Cu	8.84	286	eP	Pn	01 23 21.8	-0.7
PINC	Pinares de May	8.87	289	eP	Pn	01 23 20.6	-2.2
HOJ	Hope	9.41	273	i P	Pn	01 23 29.1	-1.3
STH	Stony Hill	9.47	274	⇑iP	Pn	01 23 30.3	-0.8
SDV	Santo Domingo	9.54	203	Pn	Pn	01 23 35.3	+3.1
	comp=N,2.1nm,0.3s,baz=32,slow=11,SNR=15						
SDV				Sn	Sn	01 25 15.0	-5.0
	comp=N,1.1nm,0.3s,baz=16,slow=16,SNR=1.2						
SDV				LR	LR	01 28 27.9	
	comp=N,611nm,18.1s,baz=44,slow=45						
	comp=N,12nm,0.4s						
SDV	Santo Domingo	9.54	203		Pn	01 23 34.9	+2.6
SDV	Santo Domingo	9.54	203	eP	Pn	01 23 34.8	+2.6
SDV	Santo Domingo	9.54	203	P	Pn	01 23 33.7	+1.5
	comp=N,61nm,0.8s						
SDV				S	Sn	01 25 16.1	-3.8
	comp=N,61nm,0.8s						
MTDJ	Mount Denham	10.16	274	Pn	Pn	01 23 40.4	-0.3
MTDJ	Mount Denham	10.16	274	i P	Pn	01 23 40.1	-0.6
MTDJ	Mount Denham	10.16	274	eP	Pn	01 23 39.6	-1.1
MTDJ	Mount Denham	10.16	274	P	Pn	01 23 40.7	0.0
	comp=N,39nm,0.6s						
CCCC	Cccc	10.84	290	eP	Pn	01 23 43.9	-5.9
OCAC	Ocana	11.35	214	P	Pn	01 23 55.7	-1.3
	comp=N,1µmcomp=N,128nm,0.6s						
OCAC				S	Sn	01 25 57.8	-6.5
	comp=N,1µmcomp=N,128nm,0.6s						
PAMC	Pamplona, Colo	11.80	210	P	Pn	01 24 03.8	+0.3
PAMC				S	Sn	01 26 08.7	-7.2
BRJC	Barrancabermej	12.64	213	P	Pn	01 24 14.0	-0.5
	comp=N,71nm,1.0s						
BARC	Barichara	12.69	210	P	Pn	01 24 15.7	+0.3
	comp=N,65nm,1.0s						
RUSC	La Rusia	13.26	208	P	Pn	01 24 22.7	-0.7
	comp=N,42nm,0.7s						
PTBC	PUERTO BERRIO,	13.38	215	P	Pn	01 24 23.4	-1.2
	comp=N,26nm,0.8s						
PTBC				S	Sn	01 26 48.2	-5.6
	comp=N,26nm,0.8s						
SPBC	San Pablo de B	13.93	211	P	Pn	01 24 31.3	-1.0
	comp=N,1µmcomp=N,35nm,0.7s						
ROSC	El Rosal	14.76	211	Pn	Pn	01 24 47.1	+3.3
	comp=N,0.9nm,0.3s,baz=31,slow=23,SNR=6.2						
ROSC				LR	LR	01 31 01.5	
	comp=N,1µm,19.5s,baz=357,slow=40						
	comp=N,6.8nm,0.5s						
CBOC	Ciudad Bolivar	14.81	218	P	P	01 24 49.3	-1.1
	comp=N,30nm,0.8s						
VILC	Villavicencio,	15.11	207	P	Pn	01 24 48.0	-0.4
	comp=N,531nmcomp=N,45nm,0.7s						
VILC				P	sP	01 24 49.9	-5.2
	comp=N,531nmcomp=N,45nm,0.7s						
PLMC	San Jos del P	15.74	217	P	P	01 24 59.8	-0.8
	comp=N,54nm,1.1s						
URMC	La Uribe, Meta	16.18	208	P	P	01 25 05.6	0.0
	comp=N,888nmcomp=N,61nm,1.1s						
BOAV	Boa Vista	16.48	157		Pn	01 25 07.0	+1.0
BOAV	Boa Vista	16.48	157	eP	P	01 25 10.0	+1.2
SIUN	Universidad Ur	17.70	259		Pn	01 25 20.3	-1.0
SIUN				IAmb	IAmb	01 25 29.0	
	comp=Z,18nm,1.2s						
BRU2	Volcan	17.78	242		Pn	01 25 23.1	+0.6
BRU2				IAmb	IAmb	01 25 27.3	
	comp=Z,170nm,1.5s						
BBAC	Balboa, Cauca	18.66	214	P	Pn	01 25 36.3	+3.0
MDP	Montagnes des	18.75	130	LR	LR	01 34 00.1	
	comp=Z,489nm,21.1s,baz=322,slow=41						
JTS	Las Juntas de	19.04	249	P	Pn	01 25 39.1	+1.3
	comp=Z,0.6nm,0.3s,baz=58,slow=6.1,SNR=12						
JTS				LR	LR	01 33 14.9	
	comp=Z,404nm,18.8s,baz=48,slow=38						
	comp=Z,44nm,1.1s						
JTS	Las Juntas de	19.04	249	c iP	Pn	01 25 41.0	+3.2
TEIG	Tepich	20.40	280		P	01 25 51.9	0.0
OTAV	Otavalo	20.80	214		Pn	01 25 60.0	+0.9
OTAV				IAmb	IAmb	01 26 04.9	
	comp=Z,49nm,1.1s						
OTAV	Otavalo	20.80	214	P	Pn	01 26 00.0	+0.9
OTAV				pmax	pmax		
	comp=Z,49nm,1.1s						
OTAV	Otavalo	20.80	214	eP	Pn	01 25 59.7	+0.6
JSC	Jenkinsville	20.90	325	IAmb	IAmb	01 26 14.4	
	comp=Z,58nm,1.2s						
TEFE	Tefe	21.23	174	eP	P	01 26 04.3	+3.4
352A	Blakely	21.32	313		P	01 26 01.0	-0.8
352A				IAmb	IAmb	01 26 08.9	
	comp=Z,79nm,1.1s						
T59A	Double "B" Far	21.34	336		P	01 26 01.0	-0.9
T59A				IAmb	IAmb	01 26 17.7	
	comp=Z,28nm,0.6s						
KMSC	Kings Mountain	21.59	326	IAmb	IAmb	01 26 22.5	
	comp=Z,47nm,1.1s						
PAULI	Pauline	21.61	325	IAmb	IAmb	01 26 11.3	
	comp=Z,42nm,0.8s						
MTO3	Montecristo	21.87	264	P	P	01 26 08.3	+0.3
152A	Waverly Hall	21.90	316	IAmb	IAmb	01 26 15.0	
	comp=Z,83nm,1.2s						
T57A	Hurt	22.07	333	IAmb	IAmb	01 26 16.1	
	comp=Z,59nm,1.0s						
V55A	Taylorsville	22.07	328	IAmb	IAmb	01 26 28.3	
	comp=Z,43nm,0.7s						
Y52A	Lilburn	22.25	319		P	01 26 10.1	-1.6
R58B	Mineral	22.34	337	IAmb	IAmb	01 26 28.9	
	comp=Z,80nm,1.2s						
CBN	Corbin Frederi	22.36	338	IAmb	IAmb	01 26 34.6	
	comp=Z,46nm,0.6s						
250A	Grady	22.55	313	IAmb	IAmb	01 26 21.8	
	comp=Z,99nm,1.2s						
S57A	Dark Hollow, R	22.59	334	IAmb	IAmb	01 26 33.5	
	comp=Z,22nm,0.6s						
BLA	Blacksburg	22.77	331	P	P	01 26 17.3	0.0
BLA	Blacksburg	22.77	331	P	P	01 26 17.3	0.0
BLA				pmax	pmax		
	comp=Z,372nm,2.0s						
V53A	Saluda	22.78	325	P	P	01 26 17.2	-0.3
V53A				IAmb	IAmb	01 26 31.7	
	comp=Z,31nm,0.9s						
APG	El Apazote	22.80	267	P	P	01 26 19.9	+1.9
	comp=Z,0.9nm,0.8s,baz=100,slow=14,SNR=9.0						
APG				LR	LR	01 34 16.3	
	comp=Z,44nm,20.4s,baz=73,slow=34						
U54A	Nelsons Funny	22.90	328	IAmb	IAmb	01 26 38.8	
	comp=Z,37nm,0.7s						
TKL	Tuckaleechee C	23.31	323		P	01 26 21.9	-1.0
TKL				IAmb	IAmb	01 26 45.7	
	comp=Z,35nm,1.1s						
TKL	Tuckaleechee C	23.31	323	P	P	01 26 21.9	-1.0
TKL				pmax	pmax		
	comp=Z,35nm,1.1s						
CPCT	Cooper Cave	23.60	322	IAmb	IAmb	01 26 46.0	
	comp=Z,30nm,0.6s						
MVL	Millersville	23.65	342	IAmb	IAmb	01 26 31.6	
	comp=Z,106nm,1.8s						
LRAL	Lakeview Retre	23.65	314	IAmb	IAmb	01 26 31.8	
	comp=Z,30nm,1.1s						
S54A	Dingess, Beckl	23.66	330	IAmb	IAmb	01 26 50.3	
	comp=Z,29nm,0.8s						

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Q56A  Snyder Ridge,     23.78 336  IAmb   IAmb   01 26 50.7
      comp=Z,26nm,0.7s
BRNJ  Basking Ridge     23.80 345  IAmb   IAmb   01 26 50.6
      comp=Z,54nm,0.9s
TZTN  Tazewell          23.83 325  IAmb   IAmb   01 26 35.7
      comp=Z,57nm,1.4s
WSPT  Westport, CT      24.00 348  IAmb   IAmb   01 26 32.9
      comp=Z,32nm,1.1s
SWET  Sewanee           24.30 319  IAmb   IAmb   01 26 37.5
      comp=Z,51nm,1.7s
Q54A  Coxs Mills        24.41 333  IAmb   IAmb   01 26 43.4
      comp=Z,27nm,1.1s
Z47A  Carrollton        24.49 313  IAmb   IAmb   01 26 38.2
      comp=Z,37nm,0.9s
ITTB  Itaituba          24.57 152 eP      P      01 26 36.5 +1.6
MCWV  Mont Chateau      24.57 335  IAmb   IAmb   01 26 38.4
      comp=Z,30nm,1.1s
S51A  Beattyville       24.67 327  IAmb   IAmb   01 27 02.6
      comp=Z,34nm,0.8s
SSPA  Standing Stone    24.71 340  P      P      01 26 36.2 +0.2
SSPA                               IAmb   IAmb   01 26 42.3
      comp=Z,63nm,1.1s
T50A  Nancy             24.89 324  IAmb   IAmb   01 26 43.5
      comp=Z,29nm,1.0s
KSPA  Keystone Colle    24.93 344  IAmb   IAmb   01 27 03.7
      comp=Z,88nm,1.7s
Q52A  Bidwell           25.04 331  IAmb   IAmb   01 26 49.0
      comp=Z,39nm,0.9s
V48A  Smith Brothers    25.19 319  IAmb   IAmb   01 26 46.4
      comp=Z,40nm,1.3s
O54A  Avella            25.23 335  IAmb   IAmb   01 26 45.6
      comp=Z,35nm,0.8s
L59A  Walton            25.34 346  IAmb   IAmb   01 27 14.7
      comp=Z,18nm,0.8s
P52A  Corning           25.52 332  IAmb   IAmb   01 26 48.0
      comp=Z,43nm,0.9s
R50A  Paris             25.53 327  IAmb   IAmb   01 26 54.3
      comp=Z,48nm,1.1s
BINY  Binghamton        25.59 344  IAmb   IAmb   01 26 49.2
      comp=Z,42nm,1.1s
Q51A  Peebles           25.60 329  IAmb   IAmb   01 27 16.3
      comp=Z,63nm,1.4s
P51A  Williamsport      25.82 330  IAmb   IAmb   01 26 51.4
      comp=Z,46nm,1.0s
WVT   Waverly           26.07 319  P      P      01 26 47.7 -0.7
WVT   Waverly           26.07 319  P      P      01 26 47.7 -0.7
WVT                                pmax   pmax
      comp=Z,17nm,0.8s
PAOC  Oil Creek Stat    26.12 338  IAmb   IAmb   01 27 22.2
      comp=Z,18nm,0.8s
WCI   Wyandotte Cave    26.56 324  P      P      01 26 53.4 +0.6
WCI                                IAmb   IAmb   01 26 59.9
      comp=Z,18nm,0.8s
WCI   Wyandotte Cave    26.56 324  P      P      01 26 53.4 +0.6
WCI                                pmax   pmax
      comp=Z,18nm,0.9s
N51A  Ashland           26.67 333  IAmb   IAmb   01 26 58.2
      comp=Z,35nm,1.2s
CMIG  Matias Romero     26.73 273  LR     LR     01 39 38.9
      comp=Z,226nm,18.7s,baz=67,slow=41
P48A  Milroy            26.98 327  IAmb   IAmb   01 27 33.9
      comp=Z,79nm,1.7s
O49A  Covington         26.99 330  IAmb   IAmb   01 27 01.2
      comp=Z,86nm,1.8s
NPGB  Novo Progresso    27.13 154 eP      P      01 26 59.8 +1.6
USIN  University of     27.16 322  IAmb   IAmb   01 27 02.6
      comp=Z,49nm,1.1s
ATAH  Atahualpa         27.22 206  LR     LR     01 38 43.4
      comp=Z,464nm,21.4s,baz=38,slow=38
O48B  Farmland          27.44 329  IAmb   IAmb   01 27 39.9
      comp=Z,16nm,0.7s
OLIL  Olney             27.93 323  IAmb   IAmb   01 27 06.5
      comp=Z,37nm,0.9s
SIUC  Southern Illin    27.93 320  IAmb   IAmb   01 27 06.6
      comp=Z,24nm,0.8s
S44A  Carbondale        27.94 320  IAmb   IAmb   01 27 06.5
      comp=Z,26nm,0.8s
K50A  Casco             28.32 335  IAmb   IAmb   01 27 12.9
      comp=Z,40nm,1.2s
AAM   Ann Arbor         28.36 333  IAmb   IAmb   01 27 14.4
      comp=Z,40nm,1.1s
WHAR  Wooly Hollow      28.55 313  IAmb   IAmb   01 27 26.0
      comp=Z,32nm,1.4s
Q44A  Meyer Farm, Va    28.57 322  IAmb   IAmb   01 27 16.2
      comp=Z,51nm,1.3s
SADO  Sadowa            28.84 342  LR     LR     01 39 47.7
      comp=Z,330nm,18.1s,baz=184,slow=39
HKT   Hockley           29.06 300⇑eP      P      01 27 16.1 +0.9
HKT                                pmax   pmax
      comp=Z,18nm,1.8s
CCM   Cathedral Cave    29.40 318         P      01 27 18.0 -0.2
CCM                                IAmb   IAmb   01 27 21.7
      comp=Z,16nm,1.0s
CCM   Cathedral Cave    29.40 318  P      P      01 27 18.0 -0.2
CCM                                pmax   pmax
      comp=Z,17nm,1.0s
MGMO  Mountain Grove    29.54 316  IAmb   IAmb   01 27 23.2
      comp=Z,23nm,1.1s
CLDB  Colider           30.47 158 eP      P      01 27 30.8 +2.9
435B  Jarrell           30.75 301  IAmb   IAmb   01 27 34.2
      comp=Z,23nm,0.7s
P40A  Paris             30.79 320  IAmb   IAmb   01 27 31.0
      comp=Z,13nm,0.9s
N41A  Harden Midland    30.83 323  IAmb   IAmb   01 27 34.6
      comp=Z,20nm,1.0s
PDRB  Porto dos Gac     30.84 160 eP      P      01 27 32.7 +1.5
NNA   Nana              31.14 199deP      P      01 27 35.5 +1.6
NNA                                pmax   pmax
      comp=Z,24nm,1.0s
VILB  Vilhena           31.21 167 eP      P      01 27 37.7 +3.4
LOOK  Love County       31.56 307  IAmb   IAmb   01 27 53.6
      comp=Z,20nm,0.9s
W35A  Tecumseh          31.80 309  IAmb   IAmb   01 27 42.3
      comp=Z,19nm,0.7s
DEOK  Depew             31.83 310  IAmb   IAmb   01 27 40.9
      comp=Z,24nm,0.8s
L40A  Anamosa           31.93 325  IAmb   IAmb   01 28 49.1
      comp=Z,16nm,0.9s
JFWS  Jewell Farm       31.99 327  IAmb   IAmb   01 27 41.8
      comp=Z,26nm,0.9s
PLPT  Palo Pinto        32.00 304  IAmb   IAmb   01 27 56.3
      comp=Z,15nm,0.8s
BRDY  Brady             32.06 301  IAmb   IAmb   01 27 53.6
      comp=Z,28nm,1.6s
QUOK  Quay              32.13 311  IAmb   IAmb   01 27 46.2
      comp=Z,23nm,0.9s
N38A  Joes South For    32.28 321  IAmb   IAmb   01 27 45.6
      comp=Z,20nm,1.0s
X34A  Smith Ranch, M    32.29 307  IAmb   IAmb   01 27 48.2
      comp=Z,15nm,0.8s
T35A  Sooner Cattle     32.33 312  IAmb   IAmb   01 27 55.5
      comp=Z,17nm,0.9s
OK048 Pawnee Station    32.41 311  IAmb   IAmb   01 27 56.4
      comp=Z,18nm,1.0s
SMTB  Santa Maria do    32.58 143 eP      P      01 27 45.8 -0.7
I40A  Norwalk           32.87 328  IAmb   IAmb   01 27 59.8
      comp=Z,14nm,1.0s
ABTX  Abilene, Hawle    33.00 303  IAmb   IAmb   01 27 51.5
      comp=Z,19nm,0.7s
WMOK  Wichita Mounta    33.06 307  IAmb   IAmb   01 27 53.6
      comp=Z,13nm,0.7s
OZNA  Ozona             33.72 299  IAmb   IAmb   01 28 02.2
      comp=Z,57nm,1.9s
LPAZ  La Paz            33.84 182  P      P      01 27 59.3 +1.2
      comp=Z,4.7nm,0.9s,baz=26,slow=3.8,SNR=7.5
LPAZ                               LR     LR     01 42 14.8
      comp=Z,351nm,20.7s,baz=332,slow=37
      comp=Z,4.7nm,0.9s
LPAZ  La Paz            33.84 182         P      01 27 58.4 +0.3
LPAZ  La Paz            33.84 182  P      P      01 27 58.4 +0.3
LPAZ                               pmax   pmax
      comp=Z,7.0nm,1.0s
LPAZ  La Paz            33.84 182 eP      P      01 27 59.4 +1.2
SIV   San Ignacio       34.01 170  LR     LR     01 42 35.3
      comp=Z,955nm,18.4s,baz=332,slow=38
SMWD  Samnorwood        34.32 307  IAmb   IAmb   01 28 05.6
      comp=Z,48nm,1.6s
I37A  Lemond, Waseca    34.42 325  IAmb   IAmb   01 28 02.9
      comp=Z,23nm,1.0s
R32A  Long Quarter,     34.58 313  IAmb   IAmb   01 28 08.2
      comp=Z,15nm,1.0s
POST  Post              34.62 303  IAmb   IAmb   01 28 10.7
      comp=Z,17nm,0.7s
L34A  Svendsen Farm,    34.88 320  IAmb   IAmb   01 28 25.2
      comp=Z,16nm,0.7s
MNHN  Monahans          35.18 299  IAmb   IAmb   01 28 12.8
      comp=Z,11nm,0.6s
SALV  Santo Antonio     35.20 161 eP      P      01 28 11.0 +1.8
TXAR  Lajitas Array     35.51 296  P      P      01 28 12.0  0.0
      comp=Z,7.4nm,0.6s,baz=109,slow=9.2,SNR=44
TXAR                               PcP    PcP    01 30 40.6 -0.8
      comp=Z,0.5nm,0.6s,baz=136,slow=4.5,SNR=3.4
TXAR                               ScP    ScP    01 34 27.1 -1.0
      comp=Z,1.8nm,0.7s,baz=122,slow=6.5,SNR=17
TXAR                               LR     LR     01 47 05.8
      comp=Z,187nm,18.1s,baz=81,slow=44
      comp=Z,7.4nm,0.6s
TXAR  Lajitas Array     35.51 296         P      01 28 12.2 +0.2
TX31  Lajitas Ar. Si    35.52 296  IAmb   IAmb   01 28 16.1
      comp=Z,9.5nm,0.7s
MSTX  Muleshoe          35.90 304  IAmb   IAmb   01 28 39.6
      comp=Z,25nm,1.2s
PB16  IPOC Station P    35.95 184  P      P      01 28 16.4 +0.1
PB16                               IAmb   IAmb   01 28 18.3
      comp=Z,34nm,1.4s
ECSD  EROS Data Cent    36.05 322  IAmb   IAmb   01 28 20.4
      comp=Z,35nm,1.2s
VHRN  Van Horn          36.92 298  IAmb   IAmb   01 28 28.3
      comp=Z,39nm,1.9s
SCHQ  Schefferville     37.02   0  P      P      01 28 24.2 -0.2
      comp=Z,9.3nm,0.7s,baz=170,slow=6.8,SNR=11
SCHQ                               LR     LR     01 41 01.8
      comp=Z,192nm,20.9s,baz=180,slow=32
      comp=Z,9.3nm,0.7s
SCHQ  Schefferville     37.02   0         P      01 28 24.2 -0.2
PP1B  Ponte de Pedra    37.05 161 eP      P      01 28 26.9 +1.9
F33A  5 Mile Ranch,     37.17 325  IAmb   IAmb   01 28 42.5
      comp=Z,30nm,1.5s
GO01  Chusmiza          37.25 184  IAmb   IAmb   01 28 29.2
      comp=Z,21nm,0.9s
K30B  Basset            37.28 319  IAmb   IAmb   01 28 41.7
      comp=Z,21nm,0.9s
PB08  IPOC Station P    37.72 184  IAmb   IAmb   01 28 33.8
      comp=Z,25nm,1.1s
HMBC  Humberstone       37.91 185  IAmb   IAmb   01 28 50.2
      comp=Z,14nm,0.6s
BDFB  Brasilia          38.02 150  P      P      01 28 35.1 +1.7
      comp=Z,1.9nm,0.7s,baz=321,slow=12,SNR=4.4
BDFB                               LR     LR     01 44 25.7
      comp=Z,790nm,20.6s,baz=335,slow=37
      comp=Z,1.9nm,0.7s
BDFB  Brasilia          38.02 150  P      P      01 28 35.2 +1.7
BDFB                               pmax   pmax
      comp=Z,9.0nm,1.0s
T25A  Trinidad          38.19 308  IAmb   IAmb   01 28 40.0
      comp=Z,51nm,1.8s
EPLO  Experimental L    38.50 332         P      01 28 36.6 -0.4
AGMN  Agassiz Nation    38.55 329  IAmb   IAmb   01 28 39.1
      comp=Z,13nm,0.6s
PB01  IPOC Station P    38.63 184  IAmb   IAmb   01 28 41.0
      comp=Z,24nm,1.0s
NBTA  Tacaratu-PE       39.02 131 eP      P      01 28 43.5 +1.8
ANMO  Albuquerque       39.10 304  LR     LR     01 49 28.7
      comp=Z,210nm,18.0s,baz=114,slow=43
ANMO  Albuquerque       39.10 304  P      P      01 28 43.0 +0.5
ANMO  Albuquerque       39.10 304d iP     P      01 28 43.6 +1.1
ANMO                               pmax   pmax
      comp=Z,9.0nm,1.5s
TASM  ASL Pad, Albuq    39.10 304  IAmb   IAmb   01 28 47.7
      comp=Z,6.0nm,1.1s
AQDB  Aquidauana        39.53 163         P      01 28 47.8 +1.9
ULM   Lac du Bonnet     39.88 331  P      P      01 28 45.0 -3.6
      comp=Z,7.2nm,0.7s,baz=129,slow=8.8,SNR=11
ULM   Lac du Bonnet     39.88 331⇓eP      P      01 28 46.6 -2.0
IPMB  Ipameri, GO       39.97 152 eP      P      01 28 51.8 +2.2
ISCO  Idaho Springs     40.03 311         P      01 28 50.9 +0.6
ISCO  Idaho Springs     40.03 311  P      P      01 28 50.9 +0.6
ISCO                               pmax   pmax
      comp=Z,7.0nm,0.7s
E28A  Huff              40.05 323         P      01 28 49.8 -0.3
E28A                               IAmb   IAmb   01 28 54.4
      comp=Z,54nm,1.2s
MDND  Maddock           40.19 326         P      01 28 50.6 -0.7
MDND                               IAmb   IAmb   01 28 55.9
      comp=Z,60nm,1.4s
MURT  Porto Murtinho    40.20 167 eP      P      01 28 52.6 +1.2
PB05  IPOC Station P    40.48 185  P      P      01 28 53.9  0.0
PB05                               IAmb   IAmb   01 28 56.3
      comp=Z,30nm,1.1s
PV15  Paradox Valley    41.63 308  P      P      01 29 04.0 +0.5
PV11  David Mesa, Pa    41.91 308  IAmb   IAmb   01 29 11.0
      comp=Z,28nm,1.0s
PV18  Skein Mesa, Pa    41.92 308  IAmb   IAmb   01 29 09.8
      comp=Z,24nm,0.7s
PV20  West Nyswonger    42.00 308  IAmb   IAmb   01 29 10.9
      comp=Z,24nm,0.9s
PV19  Morning Glory     42.00 308  IAmb   IAmb   01 29 09.9
      comp=Z,16nm,0.7s
PV05  Paradox Valley    42.02 308  IAmb   IAmb   01 29 11.3
      comp=Z,45nm,1.5s
O20A  White River Ci    42.03 311         P      01 29 06.9 +0.2
AMBA  Amambai (Brazi    42.06 164 eP      P      01 29 08.0 +1.2
PV23  Carpenter Ridg    42.06 308  IAmb   IAmb   01 29 12.0
      comp=Z,30nm,1.1s
BB19B Bebedouro         42.55 154 eP      P      01 29 13.6 +2.7
GO02  Mina Guanaco      42.73 184  P      P      01 29 13.3 +0.8
DGMT  Dagmar            43.08 324  IAmb   IAmb   01 29 19.7
      comp=Z,48nm,1.4s
LAO   LASA Array        43.37 321  IAmb   IAmb   01 29 21.1
      comp=Z,37nm,1.4s
BW06  Boulder Array     43.88 314  IAmb   IAmb   01 29 25.8
      comp=Z,35nm,1.9s
PD31  Pinedale Array    43.88 314  IAmb   IAmb   01 29 25.8
      comp=Z,35nm,1.9s
PDAR  Pinedale Array    43.88 314  P      P      01 29 21.4 -0.4
      comp=Z,2.3nm,0.7s,baz=116,slow=9.3,SNR=17
PDAR                               PcP    PcP    01 31 06.8 -1.1
      comp=Z,1.2nm,0.8s,baz=122,slow=5.1,SNR=6.2
PDAR                               LR     LR     01 48 42.4
      comp=Z,157nm,19.9s,baz=116,slow=38
      comp=Z,2.3nm,0.7s
BSUT  Blindstream Ca    43.98 310  P      P      01 29 23.0 +0.3
RLMT  Red Lodge         44.59 317  IAmb   IAmb   01 29 32.0
      comp=Z,30nm,1.6s
CPUP  Villa Florida     44.78 168  P      P      01 29 28.2 -0.4
      comp=Z,7.7nm,0.7s,baz=352,slow=9.6,SNR=28
CPUP                               LR     LR     01 49 17.7
      comp=Z,373nm,18.3s,baz=348,slow=38
      comp=Z,7.7nm,0.7s
CPUP  Villa Florida     44.78 168  P      P      01 29 28.3 -0.4
CPUP                               IAmb   IAmb   01 29 30.7
      comp=Z,12nm,0.9s
CPUP  Villa Florida     44.78 168  P      P      01 29 28.3 -0.4
CPUP                               pmax   pmax
      comp=Z,12nm,1.0s
SNOW  Snow King Moun    44.95 314  IAmb   IAmb   01 29 35.1
      comp=Z,22nm,1.2s
FCC   Fort Churchill    45.56 340  P      P      01 29 33.8 -0.7
FCC   Fort Churchill    45.56 340  P      P      01 29 33.8 -0.7
FCC                                pmax   pmax
      comp=Z,60nm,1.4s
FFC   Flin Flon         45.65 332  P      P      01 29 34.5 -0.8
FFC   Flin Flon         45.65 332  P      P      01 29 34.5 -0.8
FFC                                pmax   pmax
      comp=Z,12nm,1.1s
YHL   Hebgen Lake       45.74 316  IAmb   IAmb   01 29 42.5
      comp=Z,19nm,1.1s
BGU   Big Grassy Mou    45.75 310  IAmb   IAmb   01 29 37.9
      comp=Z,11nm,0.9s
HVU   Hansel Valley     45.81 311  IAmb   IAmb   01 29 41.5
      comp=Z,17nm,1.5s
FRB   Frobisher Bay     45.97 359  LR     LR     01 48 19.2
      comp=Z,127nm,20.6s,baz=189,slow=35
EGMT  Eagleton          46.11 321  IAmb   IAmb   01 29 44.2
      comp=Z,24nm,1.4s
BOZ   Bozeman (W)       46.31 317  IAmb   IAmb   01 29 45.9
      comp=Z,13nm,1.1s
DLMT  Dillon            46.85 316  IAmb   IAmb   01 29 50.4
      comp=Z,18nm,1.2s
PFO   Pinyon Flats O    46.97 300⇑eP      P      01 29 49.2 +3.0
PFO                                pmax   pmax
      comp=Z,76nm,6.2s
ELK   Elko              47.32 309  LR     LR     01 53 11.3
      comp=Z,268nm,18.2s,baz=125,slow=40
ELK   Elko              47.32 309  IAmb   IAmb   01 29 53.9
      comp=Z,13nm,1.4s
HLID  Hailey            47.50 313  IAmb   IAmb   01 29 54.7
      comp=Z,13nm,1.2s
MFID  Camas Ranch       48.44 313  IAmb   IAmb   01 30 01.6
      comp=Z,10nm,0.9s
NV11  Mina Array Sit    49.03 306  IAmb   IAmb   01 30 26.8
      comp=Z,18nm,1.1s
PLID  Pearl Lake        49.04 315  IAmb   IAmb   01 30 06.5
      comp=Z,38nm,1.8s
NVAR  Mina Array Bea    49.15 306  P      P      01 30 03.7 +0.5
      comp=Z,1.5nm,0.5s,baz=98,slow=6.7,SNR=13
NVAR                               LR     LR     01 53 01.9
      comp=Z,289nm,18.8s,baz=89,slow=39
      comp=Z,1.5nm,0.5s
NVAR  Mina Array Bea    49.15 306  P      P      01 30 03.1  0.0
BMO   Blue Mountains    49.86 314  IAmb   IAmb   01 30 11.8
      comp=Z,19nm,1.4s
WVOR  Wild Horse Val    50.19 311  IAmb   IAmb   01 30 16.5
      comp=Z,30nm,1.4s
J08A  Circle Bar Ran    50.29 312  IAmb   IAmb   01 30 16.1
      comp=Z,38nm,1.4s
NEW   Newport           50.76 318  LR     LR     01 52 36.4
      comp=Z,223nm,18.6s,baz=82,slow=37
LNOR  Lincton Mounta    50.80 315  IAmb   IAmb   01 30 19.9
      comp=Z,12nm,1.0s
G08A  Pilot Rock        51.11 314  IAmb   IAmb   01 30 34.7
      comp=Z,20nm,1.6s
LTY   Liberty           52.76 316  IAmb   IAmb   01 31 00.2
      comp=Z,31nm,1.7s
WIFE  Three Sisters-    52.81 312  IAmb   IAmb   01 30 35.4
      comp=Z,16nm,0.8s
L04D  Klamath Falls     52.81 310  IAmb   IAmb   01 30 35.4
      comp=Z,27nm,1.2s
J04A  Umpqua Nationa    52.86 311  IAmb   IAmb   01 30 35.9
      comp=Z,21nm,0.8s
YBH   Yreka Blue Hor    53.03 309  LR     LR     01 53 28.3
      comp=Z,13nm,21.9s,baz=96,slow=36
H04A  Detroit Lake      53.19 313  IAmb   IAmb   01 30 36.2
      comp=Z,9.0nm,0.7s
BBOR  Butler Butte      53.20 311  IAmb   IAmb   01 30 43.2
      comp=Z,50nm,1.9s
PCAS  Casmilo, Conde    54.70  53 eP      P      01 30 47.8 +3.5
PCAS                              i IAmb  IAmb   01 30 49.7
      comp=Z,33nm,1.9s
MESJ  Messejana         54.71  56 eP      P      01 30 48.6 +4.3
MESJ                              i IAmb  IAmb   01 30 51.0
      comp=Z,29nm,1.2s
PMTG  Montargil         54.81  54 eP      P      01 30 45.9 +0.8
PMTG                              i IAmb  IAmb   01 30 47.2
      comp=Z,18nm,1.7s
PSARD Sardoal           54.91  54 eP      P      01 30 48.0 +2.2
PSARD                             i IAmb  IAmb   01 30 50.2
      comp=Z,20nm,1.4s
EVO   Evora             54.93  55 eP      P      01 30 49.5 +3.6
EVO                               i IAmb  IAmb   01 30 51.8
      comp=Z,18nm,1.8s
PARRA Arraiolos         54.93  55 eP      P      01 30 46.2 +0.3
PARRA                             i IAmb  IAmb   01 30 49.6
      comp=Z,23nm,1.9s
PBEJ  Beja              55.01  56 eP      P      01 30 51.0 +4.5
PBEJ                              i IAmb  IAmb   01 31 02.1
      comp=Z,14nm,1.5s
PGAV  Gavieira, Arco    55.10  51 eP      P      01 30 48.0 +0.8
PGAV                              i IAmb  IAmb   01 30 54.5
      comp=Z,30nm,2.3s
PVIS  Viseu             55.23  52 eP      P      01 30 51.2 +3.0
POIN  Pond Inlet        55.33 356  IAmb   IAmb   01 30 51.9
      comp=Z,14nm,1.3s
POLO  Lamas de Olo      55.38  52 eP      P      01 30 52.7 +3.5
POLO                              i IAmb  IAmb   01 31 00.8
      comp=Z,9.9nm,2.2s
PVRL  Vila Real         55.43  52 eP      P      01 30 52.6 +3.1
PVRL                              i IAmb  IAmb   01 31 07.3
      comp=Z,34nm,1.7s
PCBR  Castelo Branco    55.46  54 eP      P      01 30 51.8 +2.1
PCBR                              i IAmb  IAmb   01 30 54.1
      comp=Z,27nm,1.7s
MTE   Manteigas         55.46  53 eP      P      01 30 52.2 +2.3
MTE                               i IAmb  IAmb   01 30 54.5
      comp=Z,32nm,1.5s
YKAW1 Yellowknife Wh    55.48 335  IAmb   IAmb   01 30 52.1
      comp=Z,25nm,1.4s
PMRV  Marv??o           55.49  54 eP      P      01 30 53.3 +3.3
PMRV                              i IAmb  IAmb   01 30 54.9
      comp=Z,16nm,1.3s
YKA   Yellowknife Ar    55.54 335  P      P      01 30 49.0 -0.9
      comp=Z,5.5nm,0.6s,baz=114,slow=6.6,SNR=78
YKA                                LR     LR     01 56 25.9
      comp=Z,164nm,18.8s,baz=106,slow=38
      comp=Z,5.5nm,0.6s
YKAW3 Yellowknife Wh    55.57 335  IAmb   IAmb   01 30 52.9
      comp=Z,13nm,0.9s
MVO   Moncorvo          55.93  52 eP      P      01 30 54.8 +1.6
MVO                               i IAmb  IAmb   01 30 58.3
      comp=Z,23nm,2.2s
SUMG  Summit            57.22  10  P      P      01 31 02.3 +0.1
SUMG  Summit            57.22  10  P      P      01 31 02.3 +0.1
SUMG                               pmax   pmax
      comp=Z,53nm,1.2s
MD01  Midelt array s    57.39  62         P      01 31 04.8 +1.0
MDT   Midelt            57.52  62  LR     LR     01 51 15.6
      comp=Z,250nm,20.3s,baz=293,slow=31
ESDC  Sonseca Array     58.15  54  P      P      01 31 09.4 +0.5
      comp=Z,7.3nm,0.7s,baz=268,slow=6.4,SNR=27
ESDC                               LR     LR     01 50 59.4
      comp=Z,163nm,21.9s,baz=266,slow=31
      comp=Z,7.3nm,0.7s
ESDC  Sonseca Array     58.15  54         P      01 31 09.1 +0.2
PLCA  Paso Flores       58.28 183  P      P      01 31 10.1 +0.5
      comp=Z,2.1nm,0.9s,baz=331,slow=4.7,SNR=5.5
      comp=Z,2.1nm,0.9s
PLCA  Paso Flores       58.28 183  IAmb   IAmb   01 31 16.5
      comp=Z,5.7nm,0.9s
PLCA  Paso Flores       58.28 183  P      P      01 31 10.1 +0.5
PLCA                               pmax   pmax
      comp=Z,6.0nm,1.0s
BBB   Bella Bella       58.60 321  LR     LR     01 57 59.1
      comp=Z,163nm,18.7s,baz=122,slow=38
RES   Resolute Bay      58.96 352  IAmb   IAmb   01 31 17.7
      comp=Z,21nm,1.7s
EKA   Eskdalemuir Ar    60.67  36  P      P      01 31 25.0 -0.9
      comp=Z,2.3nm,0.7s,baz=317,slow=3.5,SNR=4.7
      comp=Z,2.3nm,0.7s
RPN   Rapa Nui          60.72 224  LR     LR     01 53 34.2
      comp=Z,89nm,18.9s,baz=61,slow=32
DBIC  Dimbokro          61.36  92  P      P      01 31 31.4  0.0
      comp=Z,9.0nm,0.8s,baz=303,slow=6.9,SNR=15
DBIC                               LR     LR     01 55 41.7
      comp=Z,71nm,19.4s,baz=290,slow=34
      comp=Z,9.0nm,0.8s
C36M  Paulatuk          62.20 340  P      P      01 31 34.0 -2.0
C36M                               IAmb   IAmb   01 33 18.2
      comp=Z,22nm,1.9s
F31M  Tsiigehtchic      64.92 337  IAmb   IAmb   01 31 56.9
      comp=Z,22nm,1.4s
G31M  Satah River       64.99 336  IAmb   IAmb   01 31 55.5
      comp=Z,8.5nm,0.9s
F30M  Barrier River     65.72 337  IAmb   IAmb   01 32 01.4
      comp=Z,10nm,0.9s
TORD  Torodi Ar. Bea    65.93  83  P      P      01 32 01.0 -0.6
      comp=Z,3.1nm,0.7s,baz=298,slow=6.0,SNR=22
      comp=Z,3.1nm,0.7s
TORD  Torodi Ar. Bea    65.93  83  IAmb   IAmb   01 32 02.6
      comp=Z,2.6nm,0.9s
ACRG  Accra             66.08  92  P      P      01 32 02.1 -0.4
DAWY  Dawson            66.55 333  P      P      01 32 04.4 -0.3
E29M  Blow River        66.66 338  IAmb   IAmb   01 32 08.4
      comp=Z,6.7nm,0.7s
BCAR  Beaver Creek A    67.50 332  P      P      01 32 11.4 +0.6
H27K  Steamboat Moun    67.72 335  IAmb   IAmb   01 32 43.4
      comp=Z,22nm,1.6s
E27K  Coleen River      67.99 337  IAmb   IAmb   01 32 48.1
      comp=Z,23nm,1.9s
DAVA  Damuels           68.24  46 i pP    P      01 32 18.9 +2.9
      comp=Z,4.7nm,0.9s
J26L  Joseph Creek      68.41 333  IAmb   IAmb   01 32 21.4
      comp=Z,11nm,1.1s
SCRK  Sand Creek        68.56 332  P      P      01 32 18.1 +0.5
G26K  Porcupine Rive    68.69 336  IAmb   IAmb   01 32 21.5
      comp=Z,9.2nm,0.9s
RETA  Reutte            68.83  45 epP     P      01 32 22.4 +2.9
      comp=Z,1.3nm,0.3s
FETA  Feichten          68.84  46 i pP    P      01 32 22.0 +2.3
      comp=Z,4.0nm,0.6s
KEST  Kesra             68.84  58  P      P      01 32 20.2 +0.4
      comp=Z,5.0nm,0.8s,baz=264,slow=2.9,SNR=8.1
KEST                               LR     LR     01 57 46.8
      comp=Z,120nm,21.8s,baz=325,slow=32
      comp=Z,5.0nm,0.8s
NB2   NORSAR Subarra    68.87  31  P      P      01 32 21.4 +2.0
      comp=Z,1.6nm,0.7s,baz=268,slow=6.5
NOA   NORSAR Array B    68.87  31  P      P      01 32 18.9 -0.5
      comp=Z,2.0nm,0.7s,baz=268,slow=6.3,SNR=8.1
NOA                                LR     LR     01 58 52.0
      comp=Z,83nm,20.4s,baz=260,slow=33
      comp=Z,2.0nm,0.7s
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BMAR	Burnt Mountain	69.04	336	P	P	01 32 20.0	-0.3
SQTA	Sankt Quirin	69.15	46	*i* pP	P	01 32 24.3	+2.8
	comp=Z,5.3nm,0.8s						
J25K	Salcha River,	69.19	333	IAmb	IAmb	01 32 24.9	
	comp=Z,28nm,1.8s						
WTTA	Wattenberg	69.44	45	*e*pP	P	01 32 26.0	+2.5
	comp=Z,1.2nm,0.5s						
F25K	Christian Rive	69.46	336	IAmb	IAmb	01 32 26.0	
	comp=Z,9.2nm,0.8s						
E25K	Arctic Village	69.46	337	IAmb	IAmb	01 32 25.6	
	comp=Z,9.3nm,0.9s						
D25K	Kavik River	69.83	338	IAmb	IAmb	01 32 27.6	
	comp=Z,13nm,0.9s						
IL31		69.85	333	IAmb	IAmb	01 32 30.0	
	comp=Z,26nm,1.6s						
ILAR	Eielson Array	69.85	333	P	P	01 32 25.1	-0.2
	comp=Z,5.8nm,1.0s,baz=105,slow=4.8,SNR=30						
	comp=Z,5.8nm,1.0s						
ILAR	Eielson Array	69.85	333	P	P	01 32 24.9	-0.5
ILAR	Eielson Array	69.85	333	P	P	01 32 24.9	-0.5
HDA	Harding Lake	69.87	333	IAmb	IAmb	01 32 28.5	
	comp=Z,20nm,1.4s						
CLL	Collm	70.06	41	*e*Px	Px	01 32 28.0	
CLL				AMS	AMS	01 58 00.0	
	comp=Z,200nm,20.1s						
HFS	Hagfors	70.09	32	P	P	01 32 27.7	+0.8
	comp=Z,3.7nm,0.8s,baz=317,slow=3.0,SNR=2.7						
HFS				LR	LR	02 01 06.7	
	comp=Z,166nm,18.8s,baz=276,slow=34						
	comp=Z,3.7nm,0.8s						
CCB	Clear Creek Bu	70.24	333	P	P	01 32 27.5	-0.3
F24K	Squaw Lake	70.31	336	IAmb	IAmb	01 32 32.2	
	comp=Z,11nm,1.0s						
KHC	Kasperske Hory	70.59	43	*de*P	P	01 32 32.2	+1.9
KHC				pmax	pmax		
	comp=Z,17nm,3.5s						
KHC	Kasperske Hory	70.59	43	*e*P	P	01 32 32.7	+2.4
GERES	GERESS Array B	70.69	44	P	P	01 32 32.3	+1.3
	comp=Z,0.7nm,0.6s,baz=274,slow=5.1,SNR=9.9						
GERES				LR	LR	02 01 48.3	
	comp=Z,102nm,18.8s,baz=292,slow=34						
	comp=Z,0.7nm,0.6s						
BIOA	Bad Ischl, Aus	70.76	45	*e*pP	P	01 32 34.5	+3.2
	comp=Z,0.2nm,0.2s						
MYKA	Terra Mystica	70.86	46	*e*pP	P	01 32 35.2	+3.2
	comp=Z,4.8nm,0.8s						
CKRC	Cesky Krumlov	71.10	44	*e*P	P	01 32 35.3	+2.0
CKRC	Cesky Krumlov	71.10	44	*e*P	P	01 32 35.3	+2.0
PRU	Pruhonice	71.14	42	*e*P	P	01 32 36.1	+2.6
PRU	Pruhonice	71.14	42	*e*P	P	01 32 36.1	+2.6
MOA	Molln	71.16	45	*i* pP	P	01 32 36.8	+3.0
	comp=Z,1.3nm,0.6s						
COLD	Coldfoot	71.21	336	IAmb	IAmb	01 32 36.1	
	comp=Z,18nm,1.4s						
C23K	Itkillik River	71.33	339	IAmb	IAmb	01 32 36.7	
	comp=Z,23nm,1.2s						
H22K	Ishtalitna Cre	71.72	334	IAmb	IAmb	01 32 40.9	
	comp=Z,29nm,1.7s						
SOKA	Soboth	71.81	46	*e*pP	P	01 32 39.7	+1.9
	comp=Z,1.3nm,0.6s						
UPC	Upice	72.03	42	*e*P	P	01 32 41.6	+2.7
UPC	Upice	72.03	42	*e*P	P	01 32 41.6	+2.7
ARSA	Arzberg	72.08	45	*e*pP	P	01 32 41.6	+2.3
	comp=Z,2.0nm,0.7s						
D22K	Ayikyak River	72.09	338	IAmb	IAmb	01 32 47.7	
	comp=Z,17nm,1.1s						
OSTC	Ostas	72.15	42	*e*P	P	01 32 42.9	+3.3
OSTC	Ostas	72.15	42	*e*P	P	01 32 42.9	+3.3
DPC	Dobruska-Polom	72.24	42	*e*P	P	01 32 42.9	+2.7
DPC	Dobruska-Polom	72.24	42	*e*P	P	01 32 42.9	+2.7
SPU	Mount Spurr	72.32	330	IAmb	IAmb	01 32 49.2	
	comp=Z,28nm,1.4s						
KRUC	Moravsky	72.44	43	*e*P	P	01 32 41.2	-0.2
VRAC	Vranov	72.54	43	LR	LR	02 03 23.7	
	comp=Z,83nm,18.3s,baz=286,slow=35						
VRAC	Vranov	72.54	43	*e*P	P	01 32 42.1	+0.1
VAE	Valguarnera	72.63	55	LR	LR	02 00 36.4	
	comp=Z,166nm,21.3s,baz=330,slow=33						
J20K	Nowinta River	73.01	333	IAmb	IAmb	01 32 46.4	
	comp=Z,10nm,0.6s						
MORC	Moravsky Berou	73.09	42	⇑P	P	01 32 46.5	+1.2
MORC	Moravsky Berou	73.09	42	⇑P	P	01 32 46.5	+1.2
MODS	Modra-Piesok	73.10	44	*e*P	P	01 32 48.6	+3.2
MODS	Modra-Piesok	73.10	44	*e*P	P	01 32 48.6	+3.2
STEB	Steborice	73.22	42	*e*P	P	01 32 48.8	+2.8
F20K	Avaraart Lake	73.37	336	IAmb	IAmb	01 32 50.1	
	comp=Z,11nm,1.0s						
D20K	Etivluk River	73.53	338	IAmb	IAmb	01 32 49.6	
	comp=Z,8.4nm,0.8s						
L19K	White Mountain	73.55	331	IAmb	IAmb	01 32 50.5	
	comp=Z,18nm,1.2s						
H19K	Roundabout Mou	73.84	334	IAmb	IAmb	01 32 50.1	
	comp=Z,10nm,0.8s						
E19K	Redstone River	73.91	336	IAmb	IAmb	01 32 52.9	
	comp=Z,14nm,1.1s						
G19K	Purcell Mounta	74.02	335	IAmb	IAmb	01 32 54.0	
	comp=Z,24nm,1.6s						
F19K	Shaleruckik Mo	74.20	336	IAmb	IAmb	01 32 54.4	
	comp=Z,28nm,1.6s						
MORH	Mrgy, Hungar	74.35	46	⇑P	P	01 32 53.2	+0.5
ARCES	ARCESS Array B	74.35	21	P	P	01 32 52.7	+0.4
	comp=Z,5.4nm,0.7s,baz=286,slow=4.7,SNR=12						
	comp=Z,5.4nm,0.7s						
ARCES	ARCESS Array B	74.35	21	P	P	01 32 52.7	+0.4
ARCES				pmax	pmax		
	comp=Z,97nm,1.6s						
G18K	Tagagawik	74.69	335	IAmb	IAmb	01 32 56.9	
	comp=Z,11nm,1.1s						
C18K	Utukok River	75.19	338	IAmb	IAmb	01 33 00.5	
	comp=Z,43nm,1.9s						
E18K	Tukpahlearik C	75.20	337	IAmb	IAmb	01 33 00.3	
	comp=Z,19nm,1.5s						
H17K	Granite Mounta	75.37	334	IAmb	IAmb	01 33 01.7	
	comp=Z,30nm,1.6s						
FINES	FINESS Array B	75.98	30	P	P	01 33 02.6	+0.8
	comp=Z,6.8nm,1.0s,baz=277,slow=6.1,SNR=8.7						
	comp=Z,6.8nm,1.0s						
BZS	Buzias	76.50	46	⇑P	P	01 33 06.6	+1.6
BZS	Buzias	76.50	46	⇑P	P	01 33 06.6	+1.6
VSU	Vasula	76.92	33	⇑*e*P	P	01 33 11.0	+3.9
VSU				pmax	pmax		
	comp=Z,36nm,1.4s						
MARR	Marisel-Cluj	77.30	45	⇑P	P	01 33 11.6	+1.9
GZR	Gura Zlata	77.34	46	⇑P	P	01 33 10.6	+0.7
GZR	Gura Zlata	77.34	46	⇑P	P	01 33 10.6	+0.7
RNPP1	Kostyukhnivka	77.96	40	P	P	01 33 12.6	-0.5
MNK	Minsk	78.46	36	*i* P	P	01 33 14.8	-1.0
MNK				*i*		01 36 11.9	
MNK				*i* PPP	PPP	01 37 59.9	
MNK				*i* S	S	01 43 11.6	-0.7
MNK				*i*		01 43 35.4	
MNK				*i* SS	SS	01 48 15.7	+0.9
MNK				pmax	pmax		
	comp=E,9.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,10.0nm,0.9s						
MNK				MLR	MLR		
	comp=Z,111nm,13.0s						
MNK				MLR	MLR		
	comp=N,64nm,13.0s						
MNK				MLR	MLR		
	comp=E,149nm,18.0s						
BURAR	Bucovina Array	78.48	44	⇑P	P	01 33 18.0	+1.8
BURAR	Bucovina Array	78.48	44	⇑P	P	01 33 18.0	+1.8
DOPR	Dopca	78.99	45	⇑P	P	01 33 20.7	+1.7
MLR	Muntele Rosu	79.49	46	P	P	01 33 22.9	+1.1
MLR				IAmb	IAmb	01 33 45.9	
	comp=Z,28nm,1.2s						
MLR	Muntele Rosu	79.49	46	⇓P	P	01 33 23.2	+1.4
MLR	Muntele Rosu	79.49	46	P	P	01 33 22.9	+1.1
MLR				pmax	pmax		
	comp=Z,28nm,1.2s						
LUBAR	Lubar, Ukraine	79.54	41	P	P	01 33 22.6	+0.7
COVR	Voineasa-Covas	79.57	45	⇑P	P	01 33 24.0	+1.8
AK21	Malin Array Si	80.11	40	P	P	01 33 25.7	+0.8
AKASG	Malin Array Be	80.24	40	P	P	01 33 26.7	+1.1
	comp=Z,1.0nm,0.7s,baz=294,slow=4.0,SNR=2.9						
AKASG				LR	LR	02 04 48.9	
	comp=Z,107nm,21.9s,baz=249,slow=33						
	comp=Z,1.0nm,0.7s						
AKASG	Malin Array Be	80.24	40	IAmb	IAmb	01 33 28.8	
	comp=Z,2.4nm,0.9s						
AKASG	Malin Array Be	80.24	40	P	P	01 33 26.7	+1.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AKBB	Malin Array Si	80.24	40	⇑*e*P	P	01 33 28.9	+3.3
AKBB				pmax	pmax		
	comp=Z,23nm,2.7s						
SORM	Soroca	80.39	43	⇓P	P	01 33 25.5	-1.0
SORM	Soroca	80.39	43	⇓P	P	01 33 25.5	-1.0
KLMR	Klimovskoe	82.38	28	*e*P	P	01 33 36.1	-0.7
KLMR				pmax	pmax		
	comp=Z,27nm,1.3s						
OBN	Obninsk	83.06	34	⇑*e*P	P	01 33 41.7	+1.3
OBN				*e*		01 36 53.9	
OBN				*e*PPP	PPP	01 38 40.2	
OBN				pmax	pmax		
	comp=Z,38nm,1.7s						
OBN				MLR	MLR		
	comp=Z,152nm,17.0s						
LPSR	Galich'ya Gora	85.30	36	*e*P	P	01 33 51.8	-0.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VORR	Voronezh	85.83	37	*e*P	P	01 33 54.7	+0.2
VORR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ANTO	Ankara	85.97	50	⇑P	P	01 33 55.5	-0.1
ANTO	Ankara	85.97	50	⇑P	P	01 33 55.5	-0.1
ANTO	Ankara	85.97	50	P	P	01 33 56.6	+1.0
	comp=Z,6.9nm,1.1s						
VSR	Storozhevoye	85.99	37	*e*P	P	01 33 55.0	-0.3
VSR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BILL	Bilibino	86.23	342	P	P	01 33 55.4	-0.8
BILL	Bilibino	86.23	342	⇓*i*P	P	01 33 56.2	0.0
BILL				pmax	pmax		
	comp=Z,25nm,1.9s						
BR106	Keskin Array S	86.61	49	P	P	01 33 59.8	+0.9
	comp=Z,6.2nm,1.0s						
BR105	Keskin Array S	86.61	49	P	P	01 33 59.8	+0.9
	comp=Z,5.7nm,1.0s						
BR131	Keskin Array S	86.63	49	P	P	01 33 57.8	-1.2
BR131				IAmb	IAmb	01 34 01.1	
	comp=Z,5.8nm,0.9s						
BR131	Keskin Array S	86.63	49	P	P	01 33 57.8	-1.2
BR131				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BRTR	Keskin Array B	86.63	49	P	P	01 33 58.9	-0.1
	comp=Z,3.6nm,0.8s,baz=275,slow=3.5,SNR=16						
	comp=Z,3.6nm,0.8s						
BRTR	Keskin Array B	86.63	49	P	P	01 33 59.3	+0.3
BRTR	Keskin Array B	86.63	49	*i* P	P	01 34 00.4	+1.4
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BR104	Keskin Array S	86.63	49	P	P	01 33 59.7	+0.7
VRH	Novokhopyorsk	87.46	37	*e*P	P	01 34 02.2	-0.3
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIRV	Kirov	87.88	28	⇑*e*P	P	01 34 05.1	+0.8
PPT	Papeete	88.60	251	LR	LR	02 08 07.1	
	comp=Z,71nm,19.7s,baz=296,slow=32						
TIXI	Tiksi	90.18	355	P	P	01 34 15.0	+0.1
TIXI				IAmb	IAmb	01 34 17.5	
	comp=Z,5.5nm,0.8s						
TIXI	Tiksi	90.18	355	⇓*i*P	P	01 34 15.3	+0.3
TIXI				pmax	pmax		
	comp=Z,16nm,1.8s						
NRIK	Noril'sk	91.25	9	P	P	01 34 20.5	+0.5
	comp=Z,1.4nm,0.4s,baz=17,slow=2.9,SNR=7.5						
	comp=Z,1.4nm,0.4s						
NRIK	Noril'sk	91.25	9	IAmb	IAmb	01 34 25.6	
	comp=Z,12nm,1.5s						
NRIK	Noril'sk	91.25	9	⇓*i*P	P	01 34 21.7	+1.7
NRIK				pmax	pmax		
	comp=Z,9.0nm,1.5s						
KBZ	Khabaz	91.43	43	P	P	01 34 21.1	-0.3
	comp=Z,2.3nm,0.9s,baz=348,slow=5.5,SNR=5.4						
	comp=Z,2.3nm,0.9s						
KBZ	Khabaz	91.43	43	*ce*P	P	01 34 23.3	+2.0
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ASF	Jabal al Asfar	91.82	56	LR	LR	02 19 07.2	
	comp=Z,27nm,18.6s,baz=217,slow=38						
NCK	Nalchik	91.99	43	⇓*e*P	P	01 34 26.9	+2.9
NCK				pmax	pmax		
	comp=Z,3.0nm,0.4s						
SEY	Seymchan	93.91	343	⇑*e*P	P	01 34 35.5	+3.1
SEY				pmax	pmax		
	comp=Z,32nm,2.6s						
RAR	Rarotonga	98.86	251	LR	LR	02 11 03.2	
	comp=Z,69nm,21.0s,baz=91,slow=30						
LSZ	Lusaka	99.23	103	LR	LR	02 14 52.4	
	comp=Z,77nm,18.8s,baz=243,slow=32						
LBTB	Lobatse	99.47	113	LR	LR	02 16 47.9	
	comp=Z,52nm,18.1s,baz=270,slow=34						
WMQ	Urumqi	114.45	20	PKP	PKiKP	01 39 52.3	-3.0
WMQ				sPKP		01 40 09.0	
WMQ				PP	PP	01 40 57.0	+6.6
WMQ				PKS	PKSdf	01 43 32.8	+0.8
HHC	Hu-ho-hao-te	121.69	1	*e*P	PKPdf	01 40 09.0	-0.4
LZH	Lanzhou	125.74	9	*e*P	PKPdf	01 40 13.5	-3.9
LZH				pP	PKiKP	01 40 19.0	+1.2
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
NJ2	Nanjing	130.18	354	*e*P	PKPdf	01 40 25.3	-0.4
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PZH	PanZhiHua	134.64	14	PKP	PKPdf	01 40 34.0	-0.5
CMAR	Chiang Mai Arr	141.41	22	PKP	PKPdf	01 40 46.5	-0.4
	comp=Z,1.1nm,0.6s,baz=316,slow=3.4,SNR=6.6						
STKA	Stephens Creek	150.69	236	PKP	PKPdf	01 41 04.2	+2.0
	comp=Z,2.0nm,0.8s,baz=331,slow=1.7,SNR=4.7						
STKA				PKPbc	PKiKP	01 41 09.0	+0.6
	comp=Z,2.0nm,0.8s,baz=70,slow=3.5,SNR=3.7						
ASAR	Alice Springs	159.71	250	PKP	PKPdf	01 41 14.6	-0.2
	comp=Z,1.8nm,1.1s,baz=137,slow=2.6,SNR=6.0						
ASAR				PKPab	sPKPab	01 41 53.5	-1.3
	comp=Z,0.9nm,0.8s,baz=120,slow=4.5,SNR=5.8						
WRA	Warramunga Arr	159.81	260	PKP	PKPdf	01 41 15.9	+1.0
	comp=Z,1.4nm,1.0s,baz=88,slow=1.1,SNR=7.0						
WRA				PKPab	PKPab	01 41 52.9	-1.0
	comp=Z,0.8nm,0.6s,baz=95,slow=3.8,SNR=4.8						
WRA	Warramunga Arr	159.81	260	PKP2	PKPab	01 41 52.9	-1.0
WRA						02 41 15.9	

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*NEIC **29** 01:33:21.3±0.9, 17°.90N±0°.04×66°.866W±0°.007, h10^{km}±1^{km}, ML2.2/18, Md2.9/13(RSPR), Error ellipse: s-maj=7.3km s-min=2.5km az=359.0*

*RSPR **29** 01:33:21.7, 17°.93N×66°.88W, h7^{km}, MD2.9/13*

ISC 29 01:33:21.9±1.2**, 17°.92N**±0°.05×**66°.86W**±0°.02**, h7**^{km}±6^{km}**, n52, σ0^{s}.64**/52**, 2C-10D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	Guanica, Bosqu	0.06	343		Pg	01 33 23.4	-0.3
GBPR					Sg	01 33 24.5	-0.3
GBPR	Guanica, Bosqu	0.06	343	⇓*i*P	Pg	01 33 23.4	-0.3
GBPR	Guanica, Bosqu	0.06	343	*e*S	Sg	01 33 24.5	-0.3
MLPR	Magueyes Islan	0.18	286	⇑*i*P	Pg	01 33 25.4	-0.2
MLPR	Magueyes Islan	0.18	286	*e*S	Sg	01 33 28.3	+0.2
CRPR	Cabo Rojo, PR	0.25	290		Pg	01 33 26.7	-0.2
CRPR					Sg	01 33 30.6	+0.3
CRPR	Cabo Rojo, PR	0.25	290	IAML		01 33 31.0	
	928nm,0.2s						
CRPR				IAML		01 33 32.9	
	798nm,0.3s						
CRPR	Cabo Rojo, PR	0.25	290	⇓*e*P	Pg	01 33 26.7	-0.2
CRPR	Cabo Rojo, PR	0.25	290	*e*S	Sg	01 33 30.6	+0.3
OBIP	Obispado Ponce	0.27	63		Pg	01 33 27.5	+0.2
OBIP					Sg	01 33 32.1	+1.1
OBIP	Obispado Ponce	0.27	63	IAML		01 33 33.0	
	comp=N,87nm,0.2s						
OBIP	Obispado Ponce	0.27	63	⇑*e*P	Pg	01 33 27.5	+0.2
OBIP	Obispado Ponce	0.27	63	*e*S	Sg	01 33 32.1	+1.1
CELP	Cerrillos	0.31	60	Pg	Pg	01 33 28.1	+0.1
CELP				IAML		01 33 33.6	
	comp=N,212nm,0.5s						
LSP	Las Mesas	0.33	320		Pg	01 33 28.2	-0.2
LSP					Sg	01 33 33.4	+0.5
LSP	Las Mesas	0.33	320	⇓*e*P	Pg	01 33 28.2	-0.2
LSP	Las Mesas	0.33	320	*e*S	Sg	01 33 33.4	+0.5
UUPR	Utuado, UPR, P	0.36	22	Pg	Pg	01 33 28.8	-0.1
PRSN	Puerto Rico Se	0.40	318	⇓*e*P	Pg	01 33 29.4	-0.3
PRSN	Puerto Rico Se	0.40	318	*e*S	Sg	01 33 35.0	0.0
AOPR	Arecibo Observ	0.44	13		Pg	01 33 30.2	-0.3
AOPR					Sg	01 33 36.4	+0.2
AOPR	Arecibo Observ	0.44	13	IAML		01 33 39.5	
	comp=N,482nm,0.3s						
AOPR	Arecibo Observ	0.44	13	⇓*i*P	Pg	01 33 30.2	-0.3
AOPR	Arecibo Observ	0.44	13	*e*S	Sg	01 33 36.4	+0.2
AOPR	Arecibo Observ	0.44	13	*e*P	Pg	01 33 30.1	-0.3
AGPR	Aguadilla, PR	0.59	336	Pg	Pg	01 33 32.9	-0.5
AGPR				IAML		01 33 42.3	
	comp=N,169nm,1.3s						
AGPR				IAML		01 33 45.5	
	comp=N,120nm,0.6s						
AGPR	Aguadilla, PR	0.59	336	⇓*e*P	Pg	01 33 33.0	-0.5
AGPR	Aguadilla, PR	0.59	336	*e*S	Sg	01 33 41.7	+0.5
ECPR	Experimental S	0.62	50	Pg	Pg	01 33 33.4	-0.5
ECPR				IAML		01 33 43.2	
	comp=N,286nm,0.2s						
ECPR	Experimental S	0.62	50	⇓*e*P	Pg	01 33 33.3	-0.5
ECPR	Experimental S	0.62	50	*e*S	Sg	01 33 42.4	+0.5
EMPR	Esperanza - Ma	0.64	30		Sb	01 33 43.7	-0.8
EMPR	Esperanza - Ma	0.64	30	*e*S	Sb	01 33 43.7	-0.8
SJG	San Juan	0.70	74		Pg	01 33 35.4	0.0
SJG	San Juan	0.70	74	IAML		01 33 46.6	
	comp=N,56nm,0.9s						
SJG				IAML		01 33 53.5	
	comp=N,52nm,0.2s						
SJG	San Juan	0.70	74	⇑*e*P	Pg	01 33 35.4	0.0
SJG	San Juan	0.70	74	*e*S	Sg	01 33 45.2	+0.6
SJG	San Juan	0.70	74	*e*P	Pg	01 33 35.2	-0.3
IDE	Isla Desecheo	0.75	309		Pg	01 33 35.6	-0.7
IDE					Sg	01 33 45.6	-0.4
IDE	Isla Desecheo	0.75	309	⇓*e*P	Pg	01 33 35.6	-0.7
IDE	Isla Desecheo	0.75	309	*e*S	Sg	01 33 45.6	-0.4
GCPR	Guaynabo City	0.83	62		Sg	01 33 48.8	-0.1
GCPR	Guaynabo City	0.83	62		Pg	01 33 37.2	-0.7
GCPR	Guaynabo City	0.83	62	IAML		01 33 48.1	
	comp=N,38nm,1.8s						
GCPR	Guaynabo City	0.83	62	⇓*e*P	Pg	01 33 37.2	-0.7
GCPR	Guaynabo City	0.83	62	*e*S	Sg	01 33 48.8	-0.1
HUMP	Col San Antoni	0.99	77		Sg	01 33 52.9	-0.8
HUMP	Col San Antoni	0.99	77		Pg	01 33 39.2	-1.6
HUMP				IAML		01 33 58.0	
	comp=N,57nm,0.3s						
HUMP				IAML		01 33 58.0	
	comp=N,45nm,0.2s						
HUMP	Col San Antoni	0.99	77	⇓*e*P	Pg	01 33 38.9	-2.0
HUMP	Col San Antoni	0.99	77	*e*S	Sg	01 33 52.9	-0.8
ANWB	Willy Bob	4.84	92	*e*P	Pn	01 34 36.5	+1.3
DSLB	Salisbury	5.77	115	*e*P	Pn	01 34 42.5	-5.4

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*WEL **29** 01:34:10.3±0.3, 38°S±3°×17°7E±°, h34^{km}±5^{km}, M3.3/32, ML3.2/33, MLv3.3/32, Error ellipse: s-maj=4.4km s-min=3.5km az=0.2, confirmed*

*NOU **29** 01:34:10.0, 37°.96S×177°.37E, h44^{km}, MLv3.6/9, Off E. Coast of N. Island, N.Z.*

ISC 29 01:34:10.1±1.4**, 37°.93S**±0°.03×**177°.34E**±0°.03**, h57**^{km}±8^{km}**, n108, σ0^{s}.71**/115**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUGZ	Raukumara Rang	0.27	98	P	Pn	01 34 19.2	-0.6
RUGZ				S	Sn	01 34 26.2	-0.6
WHRZ	Whale Island	0.30	284	P	Pn	01 34 20.2	+0.2
URZ	Urewera	0.38	209	P	Pn	01 34 20.4	-0.2
URZ	Urewera	0.38	209	P	Pn	01 34 20.5	-0.1
URZ				S	Sn	01 34 28.6	+0.5
HAZ	Te Kaha	0.39	64	P	Pn	01 34 20.3	-0.4
HAZ				S	Sn	01 34 28.2	-0.1
WIZ	White Island	0.42	343	P	Pn	01 34 20.9	-0.1
MWZ	Matawai	0.43	160	P	Pn	01 34 21.2	0.0
MWZ				S	Sn	01 34 29.8	+0.6
EDRZ	Edgecumbe	0.51	249	P	Pn	01 34 22.0	0.0
MARZ	Manawahe	0.53	264	P	Pn	01 34 22.0	-0.2
TWGZ	Tauwhareparae	0.56	116	P	Pn	01 34 23.6	+1.0
RAGZ	Rawiri	0.57	174	P	Pn	01 34 22.9	+0.1
RAGZ				S	Sn	01 34 32.8	+0.9
PKGZ	Pakihiroa	0.59	84	P	Pn	01 34 22.8	-0.1
PKGZ				S	Sn	01 34 32.4	+0.3
OPRZ	Ohinepanea	0.63	277	P	Pn	01 34 23.1	-0.2
OPRZ				S	Sn	01 34 33.1	+0.2
TKGZ	Te Karaka	0.65	142	P	Pn	01 34 24.2	+0.7
MUGZ	Murupara	0.71	219	P	Pn	01 34 24.1	-0.3
MKRZ	Makatiti	0.72	253	P	Pn	01 34 25.3	+0.8
TARZ	Mount Tarawera	0.73	245	P	Pn	01 34 24.8	+0.2
PUZ	Puketiti	0.74	102	P	Pn	01 34 24.9	+0.3
RTZ	Ruatahuna	0.74	202	P	Pn	01 34 24.6	-0.2
LIRZ	Lichensteins R	0.76	264	P	Pn	01 34 25.1	+0.2
RRRZ	Republican Roa	0.77	238	P	Pn	01 34 25.0	-0.1
OMRZ	Omania	0.79	257	P	Pn	01 34 25.4	+0.1
HLRZ	Highlands Stat	0.84	247	P	Pn	01 34 26.2	+0.2
RIGZ	Rimuhau	0.84	157	P	Pn	01 34 26.6	+0.6
MXZ	Matakaoa Point	0.85	65	P	Pn	01 34 26.5	+0.4
MXZ	Matakaoa Point	0.85	65	P	Pn	01 34 26.4	+0.4
SNGZ	Shannon Statio	0.85	180	P	Pn	01 34 26.8	+0.7
WMGZ	Waiomatatini S	0.86	83	P	Pn	01 34 26.7	+0.6
KARZ	Kaharoa	0.87	264	P	Pn	01 34 26.3	-0.1
TGRZ	Tauranga	0.88	283	P	Pn	01 34 26.1	-0.4
CNGZ	Carnagh Statio	0.88	129	P	Pn	01 34 27.0	+0.5
NGRZ	Ngongotaha	0.93	259	P	Pn	01 34 27.3	+0.2
PRRZ	Plateau Road	0.94	232	P	Pn	01 34 27.1	-0.2
UTU	Utuhina	0.94	254	P	Pn	01 34 28.2	+0.9
HSRZ	Hossack Road	0.95	246	P	Pn	01 34 27.8	+0.5
MTHZ	Maungataniwha	1.00	203	P	Pn	01 34 28.0	-0.1
RAHZ	Arahi	1.01	191	P	Pn	01 34 28.6	+0.4
ALRZ	Allen Road	1.01	231	P	Pn	01 34 28.1	-0.1
PRGZ	Paritu Road	1.08	157	P	Pn	01 34 29.3	+0.1
MYRZ	Mayor Island	1.09	306	P	Pn	01 34 28.9	-0.3
WPRZ	Whakapapatarin	1.10	237	P	Pn	01 34 29.6	+0.2
KMRZ	Kaimai	1.11	274	P	Pn	01 34 29.1	-0.4
KNZ	Kokohu	1.12	167	P	Pn	01 34 29.5	-0.1
WHHZ	Waihua	1.15	184	P	Pn	01 34 30.6	+0.5
MRHZ	Matea Rd	1.16	218	P	Pn	01 34 30.0	-0.3
NMHZ	Naumai	1.24	200	P	Pn	01 34 32.1	+0.8
KUTZ	Kaahu Road	1.32	244	P	Pn	01 34 32.4	+0.1
ARHZ	Aropaoanui	1.36	191	P	Pn	01 34 33.5	+0.6
BKZ	Black Stump Fm	1.40	208	P	Pn	01 34 33.4	-0.1
BKZ	Black Stump Fm	1.40	208	P	Pn	01 34 33.3	-0.1
TOZ	Tahuroa Road	1.47	277	P	Pn	01 34 34.1	-0.2
TLZ	Tolley Road	1.48	254	P	Pn	01 34 34.2	-0.3
RITZ	Rihia Road	1.57	228	P	Pn	01 34 36.0	+0.3
MCHZ	McNeill Hill	1.60	198	P	Pn	01 34 37.1	+1.0
KWHZ	Kaweka Forest	1.66	205	P	Pn	01 34 37.6	+0.6
CKHZ	Cape Kidnapper	1.74	187	P	Pn	01 34 37.2	-0.7
TMVZ	Te Maari	1.75	227	P	Pn	01 34 38.3	+0.1
KUZ	Kuaotunu	1.75	312	P	Pn	01 34 37.4	-0.7
KUZ	Kuaotunu	1.75	312	P	Pn	01 34 37.5	-0.7
NTVZ	North Tongarir	1.75	228	P	Pn	01 34 38.7	+0.4
ETVZ	East Tongariro	1.76	226	P	Pn	01 34 38.5	+0.1
KRVZ	Karewarewa	1.77	228	P	Pn	01 34 40.6	+2.1
OTVZ	Oturere	1.80	226	P	Pn	01 34 39.2	+0.2
NNVZ	North Ngauruho	1.81	228	P	Pn	01 34 39.5	+0.4
WTVZ	West Tongariro	1.81	229	P	Pn	01 34 39.5	+0.4
SNVZ	South Ngauruho	1.83	226	P	Pn	01 34 39.7	+0.3
NGZ	Ngauruhoe	1.85	227	P	Pn	01 34 40.1	+0.5
KRHZ	Kereru	1.87	204	P	Pn	01 34 39.2	-0.7
TWVZ	Taurewa	1.88	232	P	Pn	01 34 40.3	+0.3
TUVZ	Tukino	1.88	224	P	Pn	01 34 40.2	+0.1
COVZ	Chateau Observ	1.90	227	P	Pn	01 34 41.7	+1.4
KAHZ	Kahuranaki	1.90	191	P	Pn	01 34 39.4	-0.8
MKAZ	Moumakai	1.92	295	P	Pn	01 34 40.3	-0.1
WHVZ	Whangaehu Hut	1.93	225	P	Pn	01 34 40.9	+0.2
FWVZ	Far West T-bar	1.93	226	P	Pn	01 34 41.5	+0.8
MOVZ	Moawhango	1.93	220	P	Pn	01 34 40.4	-0.3
MAVZ	Matarangi	1.93	226	P	Pn	01 34 41.1	+0.2
WNVZ	Wahianoa	1.95	224	P	Pn	01 34 41.1	0.0
TRVZ	Turoa	1.96	225	P	Pn	01 34 41.4	+0.2
HIZ	Hauiti	2.04	253	P	Pn	01 34 42.7	+0.6
HIZ	Hauiti	2.04	253	P	Pn	01 34 42.8	+0.6
MTVZ	Mangateitei	2.06	225	P	Pn	01 34 42.6	+0.1
PKVZ	Pokaka	2.07	228	P	Pn	01 34 43.1	+0.6
WIAZ	Waiheke Island	2.09	302	P	Pn	01 34 42.5	-0.3
PXZ	Pawanui	2.13	190	P	Pn	01 34 41.8	-1.5
ETAZ	East Tamaki Re	2.15	296	P	Pn	01 34 43.8	+0.2
PNHZ	Pukenui	2.17	204	P	Pn	01 34 42.5	-1.4
WPHZ	Waipukurau	2.25	198	P	Pn	01 34 45.3	+0.4
GRZ	Great Barrier	2.25	317	P	Pn	01 34 44.7	-0.3
MBAZ	Motutapu North	2.27	300	P	Pn	01 34 45.4	+0.2
AWAZ	Awhitu Peninsu	2.31	291	P	Pn	01 34 46.2	+0.4
EPAZ	Eden Park BICE	2.32	296	P	Pn	01 34 46.4	+0.6
HBAZ	Herne Bay Bore	2.34	297	P	Pn	01 34 46.7	+0.6
VRZ	Vera Road	2.35	239	P	Pn	01 34 47.1	+0.8
TSZ	Takapari Road	2.38	206	P	Pn	01 34 46.1	-0.7
PRHZ	Porangahau	2.40	193	P	Pn	01 34 45.9	-1.0

WTAZ	Waiatarua	2.42	293	P	Pn	01 34 47.8	+0.6
RVAZ	Riverhead Bore	2.49	297	P	Pn	01 34 48.5	+0.4
DVHZ	Dannevirke	2.54	201	P	Pn	01 34 48.0	-0.9
WAZ	Wanganui	2.59	225	P	Pn	01 34 50.5	+0.9
LREZ	Lake Rotokare	2.76	235	P	Pn	01 34 53.5	+1.6
DREZ	Durham Road	2.77	242	P	Pn	01 34 54.2	+2.2
BFZ	Birch Farm	2.88	197	P	Pn	01 34 52.7	-0.8
BFZ	Birch Farm	2.88	197	P	Pn	01 34 51.7	-1.8
KHEZ	Kahui Hut	2.94	241	P	Pn	01 34 56.0	+1.5
MRZ	Mangatainoka R	3.05	206	P	Pn	01 34 53.8	-2.1
QRZ	Quartz Range	4.72	231	P	Pn	01 35 18.1	-0.6
KHZ	Kahutara	5.35	212	P	Pn	01 35 25.2	-2.1

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*IDC **29** 01:44:23.6±0.6, 29°.36N×143°.09E, h0^{km}, mb4.1/16, mbtmp4.1/18, ML3.4/2, MS3.9/1, Error ellipse: s-maj=22.0km s-min=17.0km az=87.0*

*NEIC **29** 01:44:25.7±1.8, 29°.34N±0°.07×143°.1E±0°.2, h10^{km}±1^{km}, mb4.9/34, Error ellipse: s-maj=22.9km s-min=11.3km az=90.0*

ISC 29 01:44:26.9±0.6**, 29°.31N**±0°.09×**143°.11E**±0°.10**, h22**^{km}**, n75,** σ**0ˢ.99**/65**, mb4.7**/39**, 2C, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.35	200	Pn	Pn	01 44 50.2	-14
	41nm,0.3s,baz=288,slow=23,SNR=9.5						
JCJ				Sn	Sn	01 45 17.2	-15
	137nm,0.3s,baz=276,slow=22,SNR=19						
JCJ	Chichijima	2.35	200		Pn	01 45 03.2	-1.1
JGF	Kuroka	7.93	324	Pn	Pn	01 46 21.3	+0.4
MJAR	Matsushiro Arr	8.30	332	Pn	Pn	01 46 24.3	-1.7
	0.6nm,0.3s,baz=158,slow=11,SNR=40						
	3.2nm,0.4s						
MJAR	Matsushiro Arr	8.30	332		Pn	01 46 23.2	-2.8
MAJO	Matsushiro	8.30	332		Pn	01 46 24.1	-1.9
MJB9	Matsu-Tunnel	8.30	332		Pn	01 46 25.3	-0.7
JSD	Sado	9.59	336	Pn	Pn	01 46 40.7	-2.9
KSRS	Korea Array	15.04	307	Pn	Pn	01 47 59.0	+0.9
	0.1nm,0.3s,baz=115,slow=14,SNR=2.9						
	1.6nm,0.8s						
CN2	Changchun	20.19	320	*e*P	Pn	01 49 01.5	-0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BNX	BinXian	20.53	327	⇑P	Pn	01 49 05.5	-0.4
BNX				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NJ2	Nanjing	21.02	284	*e*P	P	01 49 07.8	-1.4
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
XLT	XiLinHaoTe	25.98	311	*e*P	P	01 49 59.3	+1.2
XLT				sP	sP	01 50 07.5	+3.6
XLT				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC	Hu-ho-hao-te	28.11	303	*e*P	P	01 50 17.5	+0.2
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,250nm,6.2s						
GYA	Guiyang	32.25	274	⇑P	P	01 50 56.0	+1.9
GYA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LZH	Lanzhou	33.55	292	*e*P	P	01 51 03.8	-1.6
LZH				pP	sP	01 51 10.3	-1.0
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
PZH	PanZhiHua	36.53	276	P	P	01 51 31.3	+0.2
TIXI	Tiksi	43.10	353	LR	LR	02 12 35.2	
	comp=Z,147nm,21.8s,baz=17,slow=39						
MTN	Manton Dam	43.48	197	P	P	01 52 28.5	-0.1
WMQ	Urumqi	45.98	304	*e*P	P	01 52 50.5	+2.0
WMQ				LR	LR		
	comp=Z,130nm,24.1s						
WB0	Warramunga Arr	49.51	191	P	P	01 53 15.0	-1.0
WB0				IAmb	IAmb	01 54 48.6	
	comp=Z,27nm,1.8s						
WR8	Warramunga Arr	49.68	191	P	P	01 53 16.4	-0.9
WRA	Warramunga Arr	49.69	191	P	P	01 53 17.7	+0.3
	comp=Z,1.3nm,0.7s,baz=10,slow=8.2,SNR=7.1						
	comp=Z,1.3nm,0.7s						
WRA	Warramunga Arr	49.69	191	IAmb	IAmb	01 53 23.2	
	comp=Z,1.2nm,1.8s						
MKAR	Makanchi Array	49.72	308	P	P	01 53 17.8	+0.4
	comp=Z,1.8nm,0.7s,baz=85,slow=9.1,SNR=17						
	comp=Z,1.8nm,0.7s						
MKAR	Makanchi Array	49.72	308	P	P	01 53 18.4	+1.0
MAKZ	Makanchi	49.93	308	P	P	01 53 19.9	+0.9
FITZ	Fitzroy Crossi	50.06	202	P	P	01 53 20.6	+0.5
	comp=Z,3.0nm,0.9s,baz=21,slow=14,SNR=1.9						
	comp=Z,3.0nm,0.9s						
FITZ	Fitzroy Crossi	50.06	202	IAmb	IAmb	01 53 59.6	
	comp=Z,21nm,2.0s						
NRIK	Noril'sk	50.90	338	P	P	01 53 26.1	+0.2
	comp=Z,2.6nm,0.8s,baz=108,slow=9.0,SNR=5.6						
	comp=Z,2.6nm,0.8s						
C19K	Lookout Ridge	51.40	23	P	P	01 53 30.7	+0.9
C19K				IAmb	IAmb	01 54 51.8	
	comp=Z,22nm,1.8s						
KDAK	Kodiak Island	52.11	38	P	P	01 53 34.9	-0.3
J20K	Nowinta River	52.19	30	P	P	01 53 36.5	+0.8
J20K				IAmb	IAmb	01 55 31.3	
	comp=Z,35nm,1.9s						
D20K	Etivluk River	52.30	24	P	P	01 53 37.0	+0.5
ASAR	Alice Springs	53.41	191	P	P	01 53 45.0	-0.2
	comp=Z,0.5nm,1.0s,baz=4.6,slow=5.9,SNR=6.0						
	comp=Z,0.5nm,1.0s						
KSH	Kashi	55.16	300	P	P	01 54 02.5	+4.5
KSH				pP	sP	01 54 05.0	+0.6
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ILAR	Eielson Array	55.39	29	P	P	01 53 58.4	-0.7
	comp=Z,2.4nm,0.7s,baz=260,slow=6.1,SNR=31						
	comp=Z,2.4nm,0.7s						
BVAR	Borovoye Array	56.98	317	P	P	01 54 10.0	-0.6
	comp=Z,1.2nm,0.6s,baz=93,slow=8.9,SNR=5.4						
	comp=Z,1.2nm,0.6s						
H27K	Steamboat Moun	57.68	28	IAmb	IAmb	01 54 17.5	
	comp=Z,6.5nm,0.8s						
KKAR	Karatay Array	58.47	305	P	P	01 54 22.1	+0.8
DAWY	Dawson	58.63	30	P	P	01 54 22.8	+0.7
EPYK	Eagle Plains	59.61	27	P	P	01 54 29.8	+1.0
EPYK				IAmb	IAmb	01 54 31.0	
	comp=Z,8.5nm,0.8s						
J30M	Hart River	59.92	29	IAmb	IAmb	01 54 35.5	
	comp=Z,15nm,1.6s						
CHGR	Chuyangaron	60.52	300		P	01 54 36.1	+0.5
ARTI	Arti	63.29	322	P	P	01 54 53.5	-0.2
ARTI				IAmb	IAmb	01 54 54.0	
	comp=Z,5.7nm,0.5s						
C36M	Paulatuk	63.89	23	P	P	01 54 57.8	+0.3
C36M				IAmb	IAmb	01 54 58.8	
	comp=Z,6.8nm,0.8s						
AB31	Akbulak array	64.14	314	P	P	01 54 59.5	0.0
ABKAR	Akbulak array	64.14	314	P	P	01 54 59.5	0.0
YKAW3	Yellowknife Wh	69.78	29	P	P	01 55 35.2	0.0
YKAW3				IAmb	IAmb	01 57 21.8	
	comp=Z,14nm,1.8s						
YKA	Yellowknife Ar	69.81	29	P	P	01 55 35.2	-0.1
	comp=Z,0.9nm,0.7s,baz=297,slow=6.9,SNR=16						
	comp=Z,0.9nm,0.7s						
YKAW1	Yellowknife Wh	69.87	29	P	P	01 55 35.7	0.0
YKAW1				IAmb	IAmb	01 57 18.3	
	comp=Z,16nm,1.9s						
ARCES	ARCESS Array B	71.72	341	P	P	01 55 47.4	+0.5
	comp=Z,5.0nm,0.8s,baz=51,slow=6.4,SNR=4.5						
	comp=Z,5.0nm,0.8s						
ARCES	ARCESS Array B	71.72	341	P	P	01 55 47.2	+0.4
PINE	Pine Mountain	74.32	48	P	P	01 56 04.0	+1.0
J05D	Fort Rock, OR	74.34	49	P	P	01 56 03.2	+0.2
J05D				IAmb	IAmb	01 58 28.9	
	comp=Z,15nm,1.6s						
O02D	Mt. Diablo Mer	74.63	52	P	P	01 56 06.1	+1.4
O02D				IAmb	IAmb	01 57 16.1	
	comp=Z,26nm,1.6s						
NEW	Newport	74.73	43	P	P	01 56 05.2	+0.2
NEW				IAmb	IAmb	01 56 06.8	
	comp=Z,15nm,1.6s						
K05A	Summer Lake	74.81	49	P	P	01 56 07.0	+1.2
K05A				IAmb	IAmb	01 57 54.0	
	comp=Z,26nm,1.8s						
BLKN	Baker Lake	75.94	23	P	P	01 56 11.2	-0.4
BLKN				IAmb	IAmb	01 58 43.7	
	comp=Z,18nm,1.8s						
FINES	FINESS Array B	76.32	334	P	P	01 56 12.8	-1.1
	comp=Z,4.2nm,1.0s,baz=66,slow=6.5,SNR=5.7						
	comp=Z,4.2nm,1.0s						
FINES	FINESS Array B	76.32	334	P	P	01 56 12.4	-1.4
ILON	Igloolik, Nuna	76.33	15	P	P	01 56 13.3	-0.5
PNTR	Pine Nut	77.32	52	P	P	01 56 20.9	+0.6
PNTR				IAmb	IAmb	01 57 34.5	
	comp=Z,27nm,1.9s						
MFID	Camas Ranch	77.80	47	P	P	01 56 23.3	+0.6
NVAR	Mina Array Bea	78.52	52	P	P	01 56 27.8	+0.8
	comp=Z,1.4nm,0.7s,baz=282,slow=7.7,SNR=8.7						
	comp=Z,1.4nm,0.7s						
LRM	Limekiln Ridge	78.71	44	P	P	01 56 28.6	+0.7
HFS	Hagfors	81.71	337	P	P	01 56 43.2	-0.3
	comp=Z,1.9nm,0.7s,baz=95,slow=5.2,SNR=4.1						
	comp=Z,1.9nm,0.7s						
NOA	NORSAR Array B	81.85	339	P	P	01 56 43.9	-0.3
	comp=Z,1.5nm,0.9s,baz=112,slow=9.1,SNR=1.7						
	comp=Z,1.5nm,0.9s						
PDAR	Pinedale Array	82.07	45	P	P	01 56 46.0	0.0
	comp=Z,0.7nm,0.6s,baz=245,slow=1.8,SNR=11						
	comp=Z,0.7nm,0.6s						
PDAR	Pinedale Array	82.07	45	P	P	01 56 46.0	0.0
PV18	Skein Mesa, Pa	84.95	49	IAmb	IAmb	01 57 02.4	
	comp=Z,7.0nm,0.9s						
BRTR	Keskin Array B	85.09	313	P	P	01 57 01.9	+0.5
	comp=Z,0.7nm,0.8s,baz=102,slow=2.9,SNR=3.9						
	comp=Z,0.7nm,0.8s						
TXAR	Lajitas Array	93.63	54	P	P	01 57 43.0	+0.9
	comp=Z,1.1nm,0.9s,baz=328,slow=4.4,SNR=9.0						
	comp=Z,1.1nm,0.9s						
LPAZ	La Paz	148.53	73	PKPbc	PKiKP	02 04 13.7	-1.3
	comp=Z,1.7nm,0.8s,baz=299,slow=5.5,SNR=5.4						
PLCA	Paso Flores	150.35	122	PKPbc	PKiKP	02 04 17.1	-0.2
	comp=Z,1.3nm,0.7s,baz=304,slow=3.4,SNR=3.4						

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*KRSC **29** 02:04:41.5±2.4, 58°.99N×158°.50E, h14^{km}±14^{km}, Ml3.9*

*IDC **29** 02:04:43.3±1.1, 58°.80N×159°.44E, h0^{km}, mb3.3/4, mbtmp3.3/7, ML3.8/2, Error ellipse: s-maj=25.6km s-min=19.1km az=176.0*

*NERS **29** 02:04:50.7, 58°.98N×158°.29E, h25^{km}*

ISC 29 02:04:43.5±0.7**, 58°.95N**±0°.05×**158°.70E**±0°.03**, h10**^{km}**, n22,** σ**2ˢ.13**/25**, mb3.3**/4**, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALN	Palana	0.67	77	*e*P	Pg	02 04 56.3	-0.1
PALN				*e*S	Sg	02 05 05.8	+0.6
OSSR	Ossora	2.27	81	*e*P	Pn	02 05 22.0	+1.0
OSSR				*e*S	Sn	02 05 50.9	+1.9
SMKR	Semkarok	2.80	147	*e*P	Pn	02 05 28.7	+0.3
KLY	Klyuchi	2.85	157	*e*P	Pb	02 05 32.6	-1.7
ESO	Esso	3.03	180	*e*P	Pn	02 05 30.9	-0.6
KMNR	Kamenistaya	3.31	165	*e*P	Pn	02 05 37.4	+2.1
KBTR	Krutoberegovo	3.53	139	*e*P	Pb	02 05 42.6	-3.4
TLAR	Talaya	3.84	307	*e*P	Pb	02 05 47.1	-4.2
TLAR				*e*Pg	Pg	02 05 58.4	+1.4
TLAR				*e*Sg	Sg	02 06 48.4	+1.7
TLAR				Sgmax		02 06 51.7	
	140nm,0.6s						
TLAR				Sgmax		02 06 51.7	
	30nm,0.6s						
GADL	Gadlja	3.85	284	*e*Sg	Sg	02 06 46.5	-0.4
GADL				Sgmax		02 07 03.2	
	290nm,0.6s						
GADL				Sgmax		02 07 03.2	
	160nm,0.6s						
KZV	Kizimen	3.94	167	*e*P	Pn	02 05 45.6	+1.5
MA2	Magadan	4.12	282	Pn	Pb	02 05 53.3	-2.6
	1.0nm,0.3s,baz=128,slow=12,SNR=1.8						
MA2				Lg	Lg	02 06 57.6	
	3.9nm,0.3s,baz=173,slow=21,SNR=5.7						
	4.2nm,0.5s						
MA2	Magadan	4.12	282	*e*P	Pg	02 05 56.0	-6.2
MA2				*e*Pg	Pb	02 06 03.0	+7.1
MA2				Pgmax		02 06 07.4	
	10.0nm,0.5s						
MA2				*e*Sg	Sg	02 06 57.5	+2.0
MA2				Sgmax		02 07 03.3	
	50nm,0.7s						
MA2				Sgmax		02 07 03.3	
	20nm,0.7s						
MGD	Magadan 1	4.21	289	*e*P	Pb	02 05 52.9	-4.6
MGD				*e*Sg	Sg	02 06 58.7	+0.3
MGD				Sgmax		02 07 06.8	
	70nm,0.5s						
SEY	Seymchan	5.04	325	Pn	Pb	02 06 03.5	-8.2
	0.5nm,0.3s,baz=132,slow=14,SNR=7.0						
SEY				Lg	Lg	02 07 25.1	
	1.1nm,0.3s,baz=180,slow=6.8,SNR=3.9						
	1.3nm,0.3s						
SEY	Seymchan	5.04	325	*e*P	Pb	02 06 03.5	-8.2
SEY				*e*Pg	Pg	02 06 23.1	+3.2
SEY				*e*Sg	Sg	02 07 28.7	+3.5
SEY				Sgmax		02 07 46.5	
	10.0nm,0.7s						
SEY				Sgmax		02 07 46.5	
	30nm,0.7s						
TLON	Talon	5.20	283	*e*Sg	Sg	02 07 31.6	+1.4
PETK	Petropavlovsk-	5.88	186	Pn	Pn	02 06 11.3	+0.7
	3.2nm,0.8s,baz=40,slow=15,SNR=5.1						
SUUS	Susuman	6.41	311	*e*P	Pg	02 06 51.2	+5.0
SUUS				*e*Sg	Sg	02 08 10.2	+1.1
SUUS				Sgmax		02 08 21.4	
	40nm,0.8s						
ILAR	Eielson Array	25.59	54	P	P	02 10 10.4	-1.9
	0.2nm,0.5s,baz=277,slow=9.8,SNR=6.6						
	0.2nm,0.5s						
YKA	Yellowknife Ar	39.53	47	P	P	02 12 14.0	+0.1
	0.3nm,0.9s,baz=300,slow=8.8,SNR=4.3						
	0.3nm,0.9s						
TXAR	Lajitas Array	69.11	68	P	P	02 15 50.7	+1.1
	0.4nm,0.9s,baz=325,slow=7.0,SNR=3.4						
	0.4nm,0.9s						
ASAR	Alice Springs	84.83	203	P	P	02 17 18.5	+0.6
	0.2nm,0.6s,baz=10,slow=5.2,SNR=5.7						
	0.2nm,0.6s						

IDC 29 02:09:56.9±7.2**, 19°.13S**×**176°.24W, h0**^{km}**, mb4.0**/2**, mbtmp4.0**/2**, Error ellipse: s-maj=318.3km s-min=68.5km az=146.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.45	260	P	P	02 18 25.9	-0.1
	0.7nm,0.3s,baz=96,slow=6.8,SNR=20						
	0.7nm,0.3s						
ASAR	Alice Springs	46.46	255	P	P	02 18 25.8	-0.3
	1.6nm,0.7s,baz=95,slow=7.7,SNR=25						
	1.6nm,0.7s						
BRTR	Keskin Array B	147.10	315	PKPbc	PKPbc	02 29 41.7	-0.7
	0.4nm,0.8s,baz=48,slow=2.1,SNR=1.8						

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*ASRS **29** 02:25:27.4±0.3, 50°N±2°×8°8E±°, h9^{km}, MLh4.1/16, Error ellipse: s-maj=3.8km s-min=2.6km az=161.0, confirmed*

*NNC **29** 02:25:30.5±1.8, 49°.98N×87°.97E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=18.9km s-min=5.1km az=104.0*

ISC 29 02:25:27.9±1.0**, 49°.97N**±0°.03×**88°.20E**±0°.03**, h9**^{km}±7^{km}**, n36,** σ**2ˢ.11**/64**, 6C-5D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUR	Chagan-Uzun	0.16	38	Pg	Pg	02 25 32.4	+0.9
CUR				Sg	Sg	02 25 35.6	+1.8
AKAR	Aktash	0.51	313	Pg	Pg	02 25 37.8	0.0
AKAR				Sg	Sb	02 25 45.0	-1.7
CHBI	Chibit, Altay	0.56	308	Pg	Pg	02 25 38.6	-0.2
CHBI				Sg	Sb	02 25 46.6	-1.6
DGZ	Jazzator, Alta	0.57	241	Pg	Pg	02 25 37.5	-1.4
DGZ				Sg	Sg	02 25 44.1	-2.3
ULGR	Ulagan, Altay	0.67	347	Pg	Pg	02 25 41.1	+0.3
ULGR				Sg	Sb	02 25 50.5	-0.8
TEL	Teeli	1.65	50	Pg	Pn	02 25 53.8	-3.4
TEL				Sg	Sn	02 26 16.6	-2.0
ELDR	Elanda	1.83	314	Pg	Pg	02 26 01.7	-1.3
ELDR				Sg	Sg	02 26 26.0	-0.7
YALR	Yailyu, Altay	1.84	349	Pg	Pg	02 26 02.5	-0.6
YALR				Sg	Sg	02 26 27.0	+0.1
ARTR	Artybash	1.92	343	Pg	Pg	02 26 03.8	-0.9
ARTR				Sg	Sg	02 26 29.1	-0.3
UKR	Ust'-Kan	2.39	295	Pg	Pb	02 26 10.9	-0.3
UKR				Sg	Sg	02 26 43.5	-1.2
GALT	Gorno-Altaysk,	2.44	325	Pg	Pg	02 26 13.2	-1.6
GALT				Sg	Sg	02 26 45.7	-0.7
ZSN	Zaisan	3.35	222	Pg	Pb	02 26 28.6	+1.1
	31nm,0.4s						
ZSN				Lg	Lg	02 27 11.6	
	260nm,0.6s						
DJO	Djoy, Khakassi	3.39	33	Pg	Pb	02 26 30.9	+2.7
DJO				Sg	Sg	02 27 16.9	+0.2
KALT2	Kaltan 2	3.48	351	Pg	Pb	02 26 28.6	-0.9
KALT2				Sg	Sg	02 27 16.6	-2.8
KALT1	Kaltan 1	3.48	352	Pg	Pg	02 26 32.8	-1.8
KALT1				Sg	Sb	02 27 13.6	+1.5
MALIN	Malinovka, Kuz	3.50	351	Pg	Pb	02 26 32.0	+2.0
MALIN				Sg	Sg	02 27 17.7	-2.5
ELT	Eltsovka	3.51	340	Pg	Pb	02 26 32.1	+1.9
ELT				Sg	Sb	02 27 15.1	+2.2
CERR	Cheremushki	3.52	34	Pg	Pb	02 26 33.3	+3.0
CERR				Sg	Sg	02 27 20.9	+0.1
VEH	Verkhnyaya Baz	3.54	21	Pg	Pb	02 26 33.3	+2.5
VEH				Sg	Sg	02 27 19.7	-1.8
KIYZ	Kiyzas, Kuzbas	3.60	356	Pg	Pb	02 26 32.7	+1.0
KIYZ				Sg	Sg	02 27 20.5	-3.0
LUZB	Luzhba, Kemero	3.72	6	Pg	Pg	02 26 36.8	-2.4
LUZB				Sg	Sg	02 27 25.1	-2.1
ARDR	Aradan	4.20	50	Pg	Pg	02 26 46.1	-2.1
ARDR				Sg	Sg	02 27 42.9	+0.4
ZAA0	Zalesovo Array	4.50	334	⇓Pn	Pn	02 26 38.5	+2.4
	0.7nm,0.7s						
ZAA0				⇓Pg	Pg	02 26 50.3	-3.6
	1.6nm,0.5s						
ZAA0				⇑Sn	Sn	02 27 33.0	+4.5
	1.9nm,0.3s						
ZAA0				⇓Lg	Lg	02 27 49.8	
	14nm,0.7s						
SALR	Pechorkino, Sa	4.71	342	Pn	Pn	02 26 42.8	+3.7
SALR				Pg	Pg	02 26 56.0	-2.0
SALR				Sg	Sg	02 27 58.3	-0.6
MK31	Makanchi Array	5.06	233	⇓Pn	Pn	02 26 47.5	+3.5
	20nm,0.6s,baz=56,slow=14,SNR=360						
MK31				⇑Sn	Sn	02 27 46.0	+3.4
	18nm,0.4s,baz=56,slow=25,SNR=8.9						
MK31				⇑Lg	Lg	02 28 07.0	
	33nm,0.5s,baz=51,slow=28,SNR=7.7						
SEM	Semipalatinsk	5.12	278	Pg	Pg	02 27 06.6	+0.6
	8.4nm,0.3s						
SEM				Lg	Lg	02 28 15.7	
	76nm,0.6s						
MAKZ	Makanchi	5.21	235	Pn	Pn	02 26 49.4	+3.3
MAKZ				Sg	Sg	02 28 11.1	-4.1
MAKZ	Makanchi	5.21	235	Pn	Pn	02 26 49.3	+3.2
	8.5nm,0.4s						
MAKZ				Sn	Sn	02 27 49.3	+3.0
	17nm,0.3s						
MAKZ				Lg	Lg	02 28 11.4	
	69nm,0.7s						
KAPS	Kapalarasan	7.59	235	Pg	Pg	02 27 47.5	-5.7
	4.0nm,0.3s						
KAPS				Lg	Lg	02 29 25.6	
	17nm,0.2s						
PDGK	Podgornoye	8.94	225	Pn	Pn	02 27 37.6	+0.3
	3.0nm,0.6s						
PDGK				Sn	Sn	02 29 19.5	+1.3
	14nm,0.7s						
PDGK				Lg	Lg	02 30 11.8	
	11nm,0.7s						
ARXS	Arharly	9.12	235	Pg	Pn	02 27 57.7	+18
ARXS				Lg	Lg	02 29 42.6	
KPKS	Kokpek	9.22	229	Pg	Pn	02 28 16.9	+36
	0.5nm,0.2s						
KPKS				Lg	Lg	02 30 15.7	
	16nm,0.6s						
UZB	Uzynbulak	9.30	226	Pg	Pn	02 28 20.6	+38
	4.7nm,0.3s						
UZB				Lg	Lg	02 30 22.5	
	7.5nm,1.1s						
BVA0	Borovoye Array	11.51	292	⇑Pn	Pn	02 28 12.3	0.0
	0.6nm,0.4s,baz=107,slow=14,SNR=22						
BVA0				⇑Sn	Sn	02 30 22.8	+1.9
	2.9nm,0.7s,baz=87,slow=19,SNR=4.3						
AAK	Ala-Archa	11.97	237	Pn	Pn	02 28 20.6	+1.8
	0.5nm,0.5s						
AAK				Sn	Sn	02 30 32.5	-0.1
	2.2nm,0.9s						
AAK				Lg	Lg	02 31 46.8	
	7.2nm,1.1s						
KK31	Karatay Array	13.96	247	⇓Pn	Pn	02 28 43.9	-1.9
	0.5nm,0.4s,baz=55,slow=12,SNR=19						
KK31				⇑Sn	Sn	02 31 22.1	+1.2
	3.8nm,0.9s,baz=56,slow=24,SNR=8.1						

IDC 29 02:28:47.9±7.5**, 32°.66S**×**179°.35E, h522**^{km}±104^{km}**, mb2.5**/2**, mbtmp3.4**/3**, Error ellipse: s-maj=143.8km s-min=45.8km az=4.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	5.88	197	P	P	02 30 24.7	+0.9
	1.8nm,0.3s,baz=32,slow=16,SNR=7.0						
URZ				S	S	02 31 42.2	-0.2
	6.9nm,0.5s,baz=175,slow=22,SNR=13						
ASAR	Alice Springs	40.80	271	P	P	02 35 43.8	0.0
	0.2nm,0.6s,baz=112,slow=7.9,SNR=5.9						
	0.2nm,0.6s						
WRA	Warramunga Arr	42.00	276	P	P	02 35 53.1	-0.3
	0.3nm,0.3s,baz=114,slow=7.9,SNR=4.8						
	0.3nm,0.3s						
FINES	FINESS Array B	146.41	337	PKPbc	PKPbc	02 47 28.6	-0.9
	1.6nm,0.9s,baz=43,slow=5.5,SNR=4.3						

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*OSPL **29** 02:30:56.7±0.3, 17°.83N×66°.93W, h24^{km}±4^{km}, ML2.9, Presumed earthquake*

*NEIC **29** 02:30:57.4±0.6, 17°.91N±0°.03×66°.87W±0°.01, h10^{km}±1^{km}, ML3.1/22, Md2.8/14(RSPR), Error ellipse: s-maj=5.2km s-min=2.7km az=359.0*

*RSPR **29** 02:30:57.2, 17°.91N×66°.88W, h7^{km}, MD2.8/14*

ISC 29 02:30:57.3±1.1**, 17°.90N**±0°.05×**66°.87W**±0°.02**, h11**^{km}±7^{km}**, n54,** σ**0ˢ.47**/60**, 5C-7D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.07	351		Pg	02 30 59.1	-0.5
GBPR	Guanica, Bosqu	0.07	351	⇓*i*P	Pg	02 30 59.1	-0.5
MLPR	Magueyes Islan	0.18	292	⇑*e*P	Pg	02 31 01.1	-0.1
MLPR	Magueyes Islan	0.18	292	*e*S	Sg	02 31 03.9	-0.1
CRPR	Cabo Rojo, PR	0.25	294		Pg	02 31 02.4	-0.2
CRPR					Sg	02 31 05.8	-0.2
CRPR	Cabo Rojo, PR	0.25	294	IAML		02 31 06.9	
	6µm,0.3s						
CRPR				IAML		02 31 08.9	
	8µm,0.3s						
CRPR	Cabo Rojo, PR	0.25	294	⇑*i*P	Pg	02 31 02.4	-0.2
CRPR	Cabo Rojo, PR	0.25	294	*e*S	Sg	02 31 05.8	-0.2
CRPR	Cabo Rojo, PR	0.25	294	*i* P	Pg	02 31 02.2	-0.3
CRPR				*e*S	Sg	02 31 06.6	+0.6
CRPR				IAML		02 31 07.8	
	comp=Z,5µm,0.3s						
OBIP	Obispado Ponce	0.28	60		Pg	02 31 03.2	+0.1
OBIP					Sg	02 31 07.8	+0.8
OBIP	Obispado Ponce	0.28	60	IAML		02 31 10.2	
	comp=N,953nm,0.4s						
OBIP	Obispado Ponce	0.28	60	⇓*i*P	Pg	02 31 03.2	+0.1
OBIP	Obispado Ponce	0.28	60	*e*S	Sg	02 31 07.8	+0.8
CELP	Cerrillos	0.32	58	Pg	Pg	02 31 04.0	+0.2
CELP				IAML		02 31 09.5	
	comp=N,2µm,0.4s						
CELP				IAML		02 31 11.3	
	comp=N,1µm,0.2s						
LSP	Las Mesas	0.34	323		Pg	02 31 04.0	-0.2
LSP					Sg	02 31 09.3	+0.5
LSP	Las Mesas	0.34	323	⇓*i*P	Pg	02 31 04.0	-0.2
LSP	Las Mesas	0.34	323	*e*S	Sg	02 31 09.3	+0.5
UUPR	Utuado, UPR, P	0.38	22	Pg	Pg	02 31 04.7	-0.1
PRSN	Puerto Rico Se	0.41	320	Pg	Pg	02 31 05.2	-0.2
PRSN	Puerto Rico Se	0.41	320	⇑*e*P	Pg	02 31 05.2	-0.2
PRSN	Puerto Rico Se	0.41	320	*e*S	Sg	02 31 11.3	+0.5
AOPR	Arecibo Observ	0.46	14		Pg	02 31 06.0	-0.3
AOPR					Sg	02 31 11.9	-0.4
AOPR	Arecibo Observ	0.46	14	IAML		02 31 12.9	
	comp=N,3µm,0.2s						
AOPR	Arecibo Observ	0.46	14	⇑*i*P	Pg	02 31 06.0	-0.3
AOPR	Arecibo Observ	0.46	14	*e*S	Sg	02 31 11.9	-0.4
AOPR	Arecibo Observ	0.46	14	*e*P	Pg	02 31 05.9	-0.3
AGPR	Aguadilla, PR	0.61	338		Pg	02 31 08.7	-0.5

AGPR				IAML		02 31 17.8	
	comp=N,831nm,0.4s						
AGPR				IAML		02 31 18.0	
	comp=N,1µm,0.3s						
AGPR	Aguadilla, PR	0.61	338	⇑eP	Pg	02 31 08.7	-0.5
AGPR	Aguadilla, PR	0.61	338	eS	Sg	02 31 17.1	-0.1
AGPR	Aguadilla, PR	0.61	338	iP	Pg	02 31 08.7	-0.5
AGPR				eS	Sg	02 31 17.4	+0.2
AGPR				IAML		02 31 20.2	
	comp=Z,544nm,0.1s						
ECPR	Experimental S	0.63	49	Pg	Pg	02 31 09.3	-0.3
ECPR				IAML		02 31 19.4	
	comp=Z,3µm,0.2s						
ECPR	Experimental S	0.63	49	⇑eP	Pg	02 31 09.3	-0.3
ECPR	Experimental S	0.63	49	eS	Sg	02 31 18.4	+0.4
EMPR	Esperanza - Ma	0.66	29	Pg	Pg	02 31 10.2	+0.2
EMPR				IAML		02 31 21.7	
	comp=Z,1µm,0.5s						
EMPR				IAML		02 31 22.5	
	comp=Z,977nm,0.5s						
EMPR	Esperanza - Ma	0.66	29		Sg	02 31 18.6	0.0
EMPR	Esperanza - Ma	0.66	29	⇑eP	Pg	02 31 10.3	+0.2
EMPR	Esperanza - Ma	0.66	29	eS	Sg	02 31 18.6	0.0
SJG	San Juan	0.71	73		Pg	02 31 10.9	-0.3
SJG				IAML		02 31 21.8	
	comp=Z,492nm,0.2s						
SJG	San Juan	0.71	73	⇓eP	Pg	02 31 10.3	-0.8
SJG	San Juan	0.71	73	eS	Sg	02 31 20.6	+0.1
SJG	San Juan	0.71	73	eP	Pg	02 31 10.8	-0.3
SJG	San Juan	0.71	73	iP	Pg	02 31 10.8	-0.3
SJG				eS	Sb	02 31 21.2	-0.4
SJG				IAML		02 31 21.7	
	comp=Z,281nm,0.2s						
IDE	Isla Desecheo	0.75	310		Pg	02 31 11.0	-0.9
IDE					Sg	02 31 21.8	+0.1
IDE	Isla Desecheo	0.75	310	⇓eP	Pg	02 31 11.0	-0.9
IDE	Isla Desecheo	0.75	310	eS	Sg	02 31 21.8	+0.1
GCPR	Guaynabo City	0.85	61		Pg	02 31 13.0	-0.6
GCPR					Sg	02 31 24.2	-0.5
GCPR	Guaynabo City	0.85	61	⇓eP	Pg	02 31 13.0	-0.6
GCPR	Guaynabo City	0.85	61	eS	Sg	02 31 24.2	-0.5
HUMP	Col San Antoni	1.00	76		Pg	02 31 15.5	-1.0
HUMP					Sg	02 31 29.6	+0.1
HUMP	Col San Antoni	1.00	76	IAML		02 31 36.3	
	comp=Z,331nm,0.2s						
HUMP	Col San Antoni	1.00	76	⇓eP	Pg	02 31 15.5	-1.0
HUMP	Col San Antoni	1.00	76	eS	Sg	02 31 29.6	+0.1
DR12	Loma Pena Alta	2.54	291		Pn	02 31 39.1	+0.4
ATGZ	Broadband at L	5.24	109	eP	Pn	02 32 16.4	+0.7

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*NEIC **29** 02:37:49.8±1.0, 17°.88N±0°.03×66°.815W±0°.007, h10^{km}±1^{km}, ML2.6/20, Md2.8/14(RSPR), Error ellipse: s-maj=5.3km s-min=2.7km az=353.0*

*RSPR **29** 02:37:50.0, 17°.88N×66°.83W, h7^{km}, MD2.8/14*

*OSPL **29** 02:37:50.0±0.3, 17°.84N×66°.85W, h22^{km}±3^{km}, ML2.6, Presumed earthquake*

ISC 29 02:37:50.4±1.2**, 17°.88N**±0°.05×**66°.81W**±0°.02**, h6**^{km}±11^{km}**, n53, σ0^{s}.78**/61**, 6C-8D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	Guanica, Bosqu	0.11	326		Pg	02 37 52.5	-0.3
GBPR					Sg	02 37 54.2	-0.3
GBPR	Guanica, Bosqu	0.11	326	⇓iP	Pg	02 37 52.5	-0.3
GBPR	Guanica, Bosqu	0.11	326	eS	Sg	02 37 54.2	-0.3
MLPR	Magueyes Islan	0.24	292	⇑eP	Pg	02 37 55.0	-0.2
MLPR	Magueyes Islan	0.24	292	eS	Sg	02 37 58.5	+0.2
OBIP	Obispado Ponce	0.26	50		Pg	02 37 55.5	+0.1
OBIP					Sg	02 37 59.8	+0.9
OBIP	Obispado Ponce	0.26	50	IAML		02 38 00.7	
	comp=N,771nm,0.5s						
OBIP	Obispado Ponce	0.26	50	⇓iP	Pg	02 37 55.5	+0.1
OBIP	Obispado Ponce	0.26	50	eS	Sg	02 37 59.8	+0.9
CELP	Cerrillos	0.29	49	Pg	Pg	02 37 56.3	+0.1
CELP				IAML		02 38 01.8	
	comp=N,815nm,0.2s						
CELP				IAML		02 38 02.7	
	comp=N,530nm,0.2s						
CRPR	Cabo Rojo, PR	0.31	294		Pg	02 37 56.1	-0.3
CRPR					Sg	02 38 00.7	+0.1
CRPR	Cabo Rojo, PR	0.31	294	IAML		02 38 02.3	
	comp=N,1µm,0.4s						
CRPR				IAML		02 38 02.6	
	comp=N,943nm,0.3s						
CRPR	Cabo Rojo, PR	0.31	294	⇑eP	Pg	02 37 56.1	-0.3
CRPR	Cabo Rojo, PR	0.31	294	eS	Sg	02 38 00.7	+0.1
CRPR	Cabo Rojo, PR	0.31	294	iP	Pg	02 37 56.2	-0.3
CRPR				eS	Sg	02 38 00.9	+0.3
CRPR				IAML		02 38 01.6	
	comp=Z,660nm,0.2s						
UUPR	Utuado, UPR, P	0.38	13	Pg	Pg	02 37 57.4	-0.5
LSP	Las Mesas	0.39	319		Pg	02 37 57.7	-0.4
LSP					Sg	02 38 03.8	+0.5
LSP	Las Mesas	0.39	319	⇓eP	Pg	02 37 57.7	-0.4
LSP	Las Mesas	0.39	319	eS	Sg	02 38 03.8	+0.5
PRSN	Puerto Rico Se	0.46	317	⇑eP	Pg	02 37 58.8	-0.6
PRSN	Puerto Rico Se	0.46	317	eS	Sg	02 38 05.9	+0.5
AOPR	Arecibo Observ	0.47	7		Pg	02 37 59.0	-0.5
AOPR					Sg	02 38 05.3	-0.3
AOPR	Arecibo Observ	0.47	7	⇓eP	Pg	02 37 59.0	-0.5
AOPR	Arecibo Observ	0.47	7	eS	Sg	02 38 05.3	-0.3
AOPR	Arecibo Observ	0.47	7	eP	Pg	02 37 59.0	-0.5
ECPR	Experimental S	0.61	44	Pg	Pg	02 38 01.7	-0.6
ECPR	Experimental S	0.61	44	⇓eP	Pg	02 38 01.6	-0.6
ECPR	Experimental S	0.61	44	eS	Sg	02 38 10.7	+0.4
AGPR	Aguadilla, PR	0.65	334		Pg	02 38 02.1	-0.9
AGPR				IAML		02 38 15.7	
	comp=Z,400nm,1.0s						
AGPR				IAML		02 38 23.5	
	comp=Z,229nm,0.8s						
AGPR	Aguadilla, PR	0.65	334	⇓eP	Pg	02 38 02.3	-0.7
AGPR	Aguadilla, PR	0.65	334	eS	Sg	02 38 10.8	-0.7
AGPR	Aguadilla, PR	0.65	334	iP	Pg	02 38 02.1	-0.9
AGPR				eS	Sg	02 38 11.1	-0.4
AGPR				IAML		02 38 14.0	
	comp=Z,3µm,0.2s						
EMPR	Esperanza - Ma	0.65	24		Pg	02 38 02.2	-0.8
EMPR					Sg	02 38 11.5	-0.1
EMPR	Esperanza - Ma	0.65	24	IAML		02 38 14.4	
	comp=Z,323nm,0.6s						
EMPR				IAML		02 38 14.9	
	comp=Z,407nm,0.4s						
EMPR	Esperanza - Ma	0.65	24	⇓eP	Pg	02 38 02.2	-0.8
EMPR	Esperanza - Ma	0.65	24	eS	Sg	02 38 11.5	-0.1
SJG	San Juan	0.67	70		Pg	02 38 03.0	-0.4
SJG	San Juan	0.67	70	⇑eP	Pg	02 38 02.8	-0.6
SJG	San Juan	0.67	70	eS	Sg	02 38 12.5	+0.4
SJG	San Juan	0.67	70	eP	Pg	02 38 02.9	-0.4
SJG	San Juan	0.67	70	iP	Pg	02 38 03.0	-0.4
SJG				eS	Sg	02 38 12.5	+0.4
SJG				IAML		02 38 14.5	
	comp=Z,90nm,0.2s						
IDE	Isla Desecheo	0.81	309		Pg	02 38 04.9	-1.0
IDE					Sg	02 38 16.1	-0.4
IDE	Isla Desecheo	0.81	309	⇑eP	Pg	02 38 04.9	-1.0
IDE	Isla Desecheo	0.81	309	eS	Sg	02 38 16.1	-0.4
GCPR	Guaynabo City	0.81	58		Pg	02 38 05.1	-1.0
GCPR					Sg	02 38 16.4	-0.3
GCPR	Guaynabo City	0.81	58	⇓eP	Pg	02 38 05.1	-1.0
GCPR	Guaynabo City	0.81	58	eS	Sg	02 38 16.4	-0.3
HUMP	Col San Antoni	0.95	74		Pg	02 38 07.6	-1.1
HUMP					Sg	02 38 19.5	-1.6
HUMP	Col San Antoni	0.95	74	IAML		02 38 26.4	
	comp=Z,112nm,0.2s						
HUMP	Col San Antoni	0.95	74	⇑eP	Pg	02 38 07.6	-1.1
HUMP	Col San Antoni	0.95	74	eS	Sg	02 38 19.5	-1.6
ANWB	Willy Bob	4.79	92	eP	Pn	02 39 06.4	+3.1
ATGZ	Broadband at L	5.18	109	eP	Pn	02 39 07.4	-1.2

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*NEIC **29** 02:59:38.4±1.6, 19°.75S±0°.09×177°.4W±0°.2, h550^{km}±12^{km}, mb4.3/16, Error ellipse: s-maj=22.7km s-min=9.0km az=62.0*

*IDC **29** 02:59:42.5±3.2, 19°.76S×177°.53W, h602^{km}±36^{km}, mb3.5/4, mbtmp4.4/6, Error ellipse: s-maj=36.0km s-min=22.8km az=165.0*

ISC 29 02:59:37.9±0.8**, 19°.7S**±0°.1×**177°.5W**±0°.1**, h550**^{km}**, n30, σ1^{s}.22**/33**, mb4.2**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	7.13	86	P	P	03 01 27.6	+0.4
RAO	Raoul Island	9.52	182	P	P	03 01 49.7	-1.1
SANVU	Saraoutou	15.23	284	P	P	03 02 50.0	+0.1
DZM	Mont Dzumac	15.23	258	P	P	03 02 52.6	+2.7
	8.1nm,0.7s,baz=76,slow=12,SNR=2.1						
DZM	Mont Dzumac	15.23	258	P	P	03 02 50.9	+0.9
DZM				IAmb	IAmb	03 03 00.8	
	comp=Z,18nm,1.1s						
URZ	Urewera	19.09	193	P	P	03 03 26.4	+0.9
	comp=Z,4.7nm,0.5s,baz=280,slow=1.7,SNR=5.9						
TOO	Toolangi	36.78	233	P	P	03 06 01.6	+2.1
TAU	Tasmania Unive	37.55	224	P	P	03 06 07.2	+1.5
COEN	Coen	38.05	272	P	P	03 06 10.3	+0.2
COEN				IAmb	IAmb	03 06 11.1	
	comp=Z,9.8nm,0.8s						
STKA	Stephens Creek	38.60	243	P	P	03 06 15.9	+1.5
	comp=Z,4.2nm,0.8s,baz=87,slow=10,SNR=10						
STKA				PcP	PcP	03 08 13.3	+0.7
	comp=Z,1.1nm,0.6s,baz=214,slow=3.6,SNR=3.8						
	comp=Z,4.2nm,0.8s						
STKA	Stephens Creek	38.60	243	P	P	03 06 14.4	+0.1
BBOO	Buckleboo	43.36	243	P	P	03 06 53.1	+1.0
WR8	Warramunga Arr	45.07	261	P	P	03 07 05.1	-0.4
WR8				IAmb	IAmb	03 07 06.0	
	comp=Z,4.6nm,0.9s						
AS31	Alice Springs	45.20	256	P	P	03 07 06.7	+0.2
ASAR	Alice Springs	45.20	256	P	P	03 07 06.8	+0.3
	comp=Z,6.2nm,0.8s,baz=86,slow=8.1,SNR=85						
ASAR				PcP	PcP	03 08 34.6	-0.4
	comp=Z,1.2nm,0.7s,baz=98,slow=4.2,SNR=7.2						
ASAR				S	S	03 13 03.5	-3.3
	comp=Z,0.5nm,0.9s,baz=86,slow=13,SNR=4.2						
	comp=Z,6.2nm,0.8s						
ASAR	Alice Springs	45.20	256	P	P	03 07 06.3	-0.3
WRA	Warramunga Arr	45.22	261	P	P	03 07 06.3	-0.3
	comp=Z,1.9nm,0.3s,baz=97,slow=6.6,SNR=25						
	comp=Z,1.9nm,0.3s						
WRA	Warramunga Arr	45.22	261	P	P	03 07 05.9	-0.8
FORT	Forrest	50.08	246	P	P	03 07 42.2	-0.6
FORT				IAmb	IAmb	03 07 43.6	
	comp=Z,6.2nm,0.7s						
KNRA	Kununurra	51.23	265	P	P	03 07 50.8	-0.6
KNRA				IAmb	IAmb	03 07 51.8	
	comp=Z,12nm,0.9s						
PSA00	Pilbara Seismi	58.35	256	P	P	03 08 40.3	-0.8
PSA00				IAmb	IAmb	03 09 18.1	
	comp=Z,12nm,1.4s						
PSA00	Pilbara Seismi	58.35	256	P	P	03 08 41.0	-0.1
PSA00				IAmb	IAmb	03 08 54.4	
	comp=Z,38nm,1.2s						
MBWA	Marble Bar	58.53	257	P	P	03 08 42.1	-0.2
MBWA				IAmb	IAmb	03 09 17.8	
	comp=Z,36nm,1.4s						
QSPA	South Pole Qui	70.36	180	P	P	03 09 55.1	-1.4
CMAR	Chiang Mai Arr	90.33	289	P	P	03 11 41.6	+0.5
	comp=Z,0.7nm,0.3s,baz=104,slow=5.5,SNR=6.0						
	comp=Z,0.7nm,0.3s						
BVAR	Borovoye Array	118.80	320	PKP	PKPdf	03 17 21.8	-1.9
	comp=Z,0.4nm,0.3s,baz=101,slow=3.5,SNR=4.9						
BURAR	Bucovina Array	146.61	332	PKPbc	PKPbc	03 18 18.2	0.0
BRTR	Keskin Array B	146.67	314	PKPbc	PKPdf	03 18 17.4	+1.3
	comp=Z,0.8nm,0.6s,baz=152,slow=3.0,SNR=5.9						
BRTR	Keskin Array B	146.67	314		PKPdf	03 18 17.2	+1.2
GERES	GERESS Array B	149.57	345	PKPbc	PKPbc	03 18 24.4	-1.2
	comp=Z,0.8nm,0.7s,baz=29,slow=3.0,SNR=7.4						

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*NEIC **29** 03:01:10.4±3.0, 24°.2S±0°.1×177°.1W±0°.1, h10^{km}±1^{km}, mb4.7/16, Error ellipse: s-maj=20.5km s-min=14.8km az=333.0*

*IDC **29** 03:01:17.6±8.9, 23°.80S×176°.99W, h82^{km}±85^{km}, mb3.6/5, mbtmp4.0/6, ML5.1/2, Error ellipse: s-maj=93.0km s-min=24.1km az=166.0*

ISC 29 03:01:09.0±0.6**, 24°.13S**±0°.07×**177°.04W**±0°.09**, h10**^{km}**, n36, σ2^{s}.05**/37**, mb4.5**/14**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	5.16	189	P	Pb	03 02 36.4	-2.9
	284nm,0.3s,baz=216,slow=19,SNR=5.7						
MSVF	Nonsavu	7.84	323	Pn	Pn	03 03 02.6	-0.6
NIUE	Niue	8.31	54		Pn	03 03 11.2	+1.6
NIUE				Sn	Sn	03 04 31.8	-12
AFI	Afiamalu	11.32	27	Pn	Pn	03 03 48.9	-2.0
MARNC	Mare, Loyalty	14.02	278	Pn	Pn	03 04 24.6	-3.1
URZ	Urewera	14.94	198	P	P	03 04 47.3	+1.4
	1.5nm,0.3s,baz=344,slow=7.4,SNR=6.4						
URZ				S	Sn	03 07 21.7	-4.1
	8.0nm,0.9s,baz=168,slow=24,SNR=6.2						
	3.3nm,0.3s						
HIZ	Hauiti	15.91	204	P	Pn	03 04 55.0	+2.1
HIZ				IAmb	IAmb	03 05 33.2	
	comp=Z,100nm,1.3s						
MSWZ	Moikau Station	18.40	199	P	P	03 05 25.6	+1.4
ARMA	Armidale	28.48	250	P	P	03 07 08.8	+4.2
ARMA				IAmb	IAmb	03 07 34.4	
	comp=Z,10.0nm,1.2s						
EIDS	Eidsvold	28.94	261	P	P	03 07 07.7	-0.8
EIDS				IAmb	IAmb	03 07 12.3	
	comp=Z,9.6nm,1.1s						
CAN	Canberra	31.39	241	P	P	03 07 31.5	+1.3
CAN				IAmb	IAmb	03 07 48.8	
	comp=Z,19nm,1.4s						
CTAO	Charters Tower	34.18	269	P	P	03 07 56.9	+2.2
CTAO				IAmb	IAmb	03 08 34.0	
	comp=Z,19nm,1.4s						
TOO	Toolangi	34.61	238	P	P	03 08 01.8	+3.5
STKA	Stephens Creek	37.15	249	P	P	03 08 23.1	+2.9
	comp=Z,1.4nm,0.4s,baz=102,slow=12,SNR=9.6						
	comp=Z,1.4nm,0.4s						
STKA	Stephens Creek	37.15	249	P	P	03 08 23.1	+2.9
BBOO	Buckleboo	41.84	247	P	P	03 09 00.4	+1.1
BBOO				IAmb	IAmb	03 09 15.3	
	comp=Z,11nm,1.2s						
AS31	Alice Springs	44.66	260	P	P	03 09 23.2	+1.0
ASAR	Alice Springs	44.66	260	P	P	03 09 23.4	+1.2
	comp=Z,0.8nm,0.4s,baz=93,slow=7.0,SNR=17						
ASAR				PcP	PcP	03 11 03.7	-1.2
	comp=Z,0.2nm,0.6s,baz=92,slow=3.2,SNR=2.5						
	comp=Z,0.8nm,0.4s						
ASAR	Alice Springs	44.66	260	P	P	03 09 21.9	-0.4
WR8	Warramunga Arr	44.94	265	P	P	03 09 24.5	0.0
WR8				IAmb	IAmb	03 09 55.3	
	comp=Z,8.1nm,1.4s						
WRA	Warramunga Arr	45.09	265	P	P	03 09 26.2	+0.6
	comp=Z,0.9nm,0.5s,baz=104,slow=8.2,SNR=7.4						
	comp=Z,0.9nm,0.5s						
WRA	Warramunga Arr	45.09	265	P	P	03 09 25.0	-0.6
FORT	Forrest	48.77	249	P	P	03 09 54.9	+0.7
FORT				IAmb	IAmb	03 10 03.6	
	comp=Z,8.5nm,1.1s						
KNRA	Kununurra	51.39	269	P	P	03 10 14.5	+0.2
MORW	Morawa	59.33	249	P	P	03 11 11.4	-0.1
CASY	Casey	61.09	206	P	P	03 11 25.1	+2.2
USRK	Ussuriysk Ar.	82.45	326	P	P	03 13 34.3	+2.9
	comp=Z,1.8nm,0.7s,baz=147,slow=8.1,SNR=2.9						
NVAR	Mina Array Bea	83.06	43	P	P	03 13 33.4	-1.7
	comp=Z,0.3nm,0.6s,baz=253,slow=5.9,SNR=2.8						
	comp=Z,0.3nm,0.6s						
SNAA	Sanae	84.37	178	P	P	03 13 41.2	0.0
SNAA				IAmb	IAmb	03 13 44.2	
	comp=Z,9.7nm,1.5s						
TXAR	Lajitas Array	88.27	57	P	P	03 14 00.4	-0.6
	comp=Z,0.6nm,0.8s,baz=206,slow=7.2,SNR=7.1						
	comp=Z,0.6nm,0.8s						
TXAR	Lajitas Array	88.27	57	P	P	03 14 00.8	-0.2
BVAR	Borovoye Array	122.40	319	PKP	PKPdf	03 20 01.2	-3.0
	comp=Z,0.3nm,0.4s,baz=120,slow=2.0,SNR=2.8						
HFS	Hagfors	143.25	351	PKhKP	PKPpre	03 20 36.6	
	comp=Z,4.1nm,0.9s,baz=64,slow=3.7,SNR=7.7						
AKASG	Malin Array Be	146.59	329	PKPbc	PKPdf	03 20 46.5	-2.4
	comp=Z,1.1nm,0.5s,baz=43,slow=4.2,SNR=6.5						
AKBB	Malin Array Si	146.59	329	PKPdf	PKPdf	03 20 48.1	-0.8
KIEV	Kiev	146.60	329	PKPdf	PKPdf	03 20 48.4	-0.6

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*OSPL **29** 03:35:01.0±0.5, 17°.96N×71°.51W, h39^{km}±4^{km}, ML2.5, Presumed earthquake*

*SDD **29** 03:35:02.0±1.4, 18°.05N×71°.54W, h45^{km}±48^{km}, MD2.9, ML2.8, MW2.9, Presumed earthquake*

ISC 29 03:35:01.7±1.7**, 18°.05N**±0°.05×**71°.60W**±0°.08**, h33**^{km}±5^{km}**, n9, σ0^{s}.95**/12**, 3C-1D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOBH	Bahia de las A	0.20	192	iP	Pn	03 35 07.6	-0.3
LOBH				eS	Sn	03 35 11.9	+1.4
LOBH				IAML		03 35 14.1	
	comp=Z,2µm,0.3s						
LODU1	El Espartillar	0.32	21	iP	Pn	03 35 09.2	-0.9
LODU1				eS	Sn	03 35 15.9	+0.6
LODU1				IAML		03 35 16.6	
	comp=Z,298nm,0.7s						
PODR	Polo	0.32	69	ePg	Pn	03 35 10.1	-0.1
PODR				IAML		03 35 21.5	
	comp=N,1µm,0.3s						
PODR	Polo	0.32	69	iP	Pn	03 35 09.9	-0.3
PODR				eS	Sn	03 35 15.7	+0.2
NEDR	Neiba UASD	0.46	22	⇑ePg	Pb	03 35 11.7	0.0
NEDR				IAML		03 35 24.9	
	comp=N,397nm,0.3s						
JIDR	Jimani	0.50	331	⇑ePg	Pb	03 35 12.2	-0.1
JIDR				IAML		03 35 23.0	
	comp=N,588nm,0.2s						
LONE3	El Aguacate, B	0.56	13	iP	Pn	03 35 13.0	-0.5
LONE3				eS	Sb	03 35 21.7	+0.3
LONE3				IAML		03 35 26.4	
	comp=Z,44nm,0.3s						
SDDR	Presa de Saban	0.97	18	⇓ePg	Pn	03 35 17.3	-1.7
SDDR				IAML		03 35 37.5	
	comp=N,243nm,0.3s						
REDR	Restauracion	1.12	10	⇑ePg	Pn	03 35 22.7	+1.6
REDR				IAML		03 35 43.7	
	comp=N,92nm,0.2s						

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*BER **29** 03:43:44.7±3.1, 78°.60N×5°.86E, h10^{km}, Mw3.3, ML2.2(NAO), Confirmed Earthquake*

*DNK **29** 03:43:46.1±3.0, 78°.86N×5°.82E, h38^{km}, ML1.0, Presumed earthquake*

*NAO **29** 03:43:47.9±1.8, 78°.52N×7°.14E, h4^{km}±17^{km}, ML2.2*

ISC 29 03:43:40.6±0.8**, 78°.81N**±0°.09×**5°.44E**±0°.04**, h10**^{km}**, n15, σ2^{s}.65**/28**, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	1.27	81	Pg	Pg	03 44 06.5	+1.5
KBS				Sg	Sb	03 44 19.9	-1.1
KBS	Kingsbay	1.27	81	eP	Pg	03 44 06.3	+1.4
KBS				eS	Sb	03 44 19.6	-1.3
KBS				IAML		03 44 20.6	
	comp=Z,60nm,0.4s						
KBS	Kingsbay	1.27	81	iP	Pg	03 44 06.2	+1.2
KBS				iS	Sb	03 44 19.6	-1.3
BRBB	Barentsburg B	1.91	108	Pb	Pb	03 44 13.7	-1.7
BRBB				Sb	Sn	03 44 33.6	-3.5
BRBB	Barentsburg B	1.91	108	P	Pb	03 44 13.7	-1.7
BRBB				S	Sn	03 44 33.6	-3.5
BRBA	Barentsburg A	1.92	109	Pb	Pb	03 44 15.5	-0.2
BRBA				Sb	Sn	03 44 34.7	-2.8
BRBA	Barentsburg A	1.92	109	P	Pb	03 44 15.5	-0.2
BRBA				S	Sn	03 44 34.7	-2.8
SPA0	Spitsbergen Ar	2.28	101	Pn	Pb	03 44 20.8	-1.0
	baz=279,slow=11						
SPA0				Sn	Sn	03 44 44.8	-1.6
	baz=276,slow=22						
SPA0	Spitsbergen Ar	2.28	101	Pn	Pb	03 44 20.8	-1.0
	baz=279,slow=11						
SPA0				Sn	Sn	03 44 44.8	-1.6
	baz=276,slow=22						
SPA0				IAML		03 44 48.9	
	comp=Z,11nm,0.4s						
DAG	Danmarks Havn	5.47	260	eP	Pn	03 45 05.4	+3.4
DAG				eS	Sn	03 46 02.2	-2.7
DAG	Danmarks Havn	5.47	260	iP	Pn	03 45 07.6	+5.6
DAG				iS	Sn	03 46 01.4	-3.5
DAG				IAML		03 46 07.5	
	comp=Z,1.2nm,0.2s						
DBG	Daneborg	7.42	246	eP	Pn	03 45 30.5	+1.9
DBG	Daneborg	7.42	246	iP	Pn	03 45 30.7	+2.0
DBG				iS	Sn	03 46 48.4	-4.3
DBG				IAML		03 46 57.2	
	comp=Z,0.2nm,0.2s						
ZFI2	Zemlya Franca-	7.59	55	eP	Pn	03 45 34.3	+3.2
ZFI2				eS	Sn	03 46 52.8	-4.1
OMEGA	Omega	7.61	55	eP	Pn	03 45 34.5	+3.2
OMEGA				eS	Sn	03 46 53.1	-4.3
	comp=Z,10.0nm,2.4s						

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*IDC **29** 03:47:37.7±1.3, 6°.45N×125°.26E, h0^{km}, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=37.6km s-min=8.7km az=109.0*

ISC 29 03:47:39.2±1.1**, 6°.49N**±0°.10×**125°.4E**±0°.3**, h10**^{km}**, n6, σ1^{s}.60**/6**, mb3.6**/5**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.61	20	Pg	Pg	03 47 50.8	-0.3
	129nm,0.3s,baz=232,slow=1.4,SNR=17						
DAV				Lg	Lg	03 48 00.9	
	174nm,0.3s,baz=293,slow=23,SNR=28						
DAV				LR	LR	03 48 27.4	
	comp=Z,316nm,19.1s,baz=162,slow=71						
FITZ	Fitzroy Crossi	24.43	179	P	P	03 52 56.0	-2.3
	3.5nm,0.9s,baz=342,slow=5.0,SNR=7.3						
	3.5nm,0.9s						
WRA	Warramunga Arr	27.71	162	P	P	03 53 28.3	+0.4
	0.7nm,0.8s,baz=334,slow=8.8,SNR=2.0						
	0.7nm,0.8s						
ASAR	Alice Springs	31.11	165	P	P	03 53 57.9	-0.2
	0.4nm,0.7s,baz=343,slow=7.2,SNR=8.3						
	0.4nm,0.7s						
STKA	Stephens Creek	41.18	159	P	P	03 55 25.4	+1.4
	0.7nm,0.4s,baz=318,slow=9.6,SNR=3.9						
	0.7nm,0.4s						
MKAR	Makanchi Array	54.53	325	P	P	03 57 07.9	+0.5
	0.4nm,0.7s,baz=122,slow=8.7,SNR=3.6						
	0.4nm,0.7s						

IDC 29 03:52:18.3±5.3**, 7°.80S**×**124°.33E, h204**^{km}±60^{km}**, mb3.2**/2**, mbtmp3.8**/6**, Error ellipse: s-maj=109.8km s-min=22.3km az=51.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	2.48	195	P	Pn	03 53 02.9	+0.6
	60nm,0.3s,baz=275,slow=2.4,SNR=22						
BATI				S	S	03 53 37.0	+0.7
	60nm,0.3s,baz=28,slow=24,SNR=10						
FITZ	Fitzroy Crossi	10.32	173	P	Pn	03 54 43.5	+1.9
	1.4nm,0.3s,baz=344,slow=8.3,SNR=11						
FITZ				S	S	03 56 34.0	-3.4
	2.5nm,0.9s,baz=243,slow=2.3,SNR=1.7						
WRA	Warramunga Arr	15.49	142	P	Pn	03 55 46.1	-0.2
	1.0nm,0.3s,baz=318,slow=12,SNR=14						
ASAR	Alice Springs	18.26	151	P	P	03 56 16.1	-0.6
	1.0nm,0.4s,baz=324,slow=8.7,SNR=25						
MKAR	Makanchi Array	65.94	330	P	P	04 02 43.5	+1.0
	0.3nm,0.7s,baz=142,slow=5.8,SNR=2.0						
	0.3nm,0.7s						
ZALV	Zalesovo Beam	69.93	336	P	P	04 03 06.0	-1.1
	0.5nm,0.3s,baz=136,slow=8.4,SNR=2.9						
	0.5nm,0.3s						

RSPR 29 03:55:42.4, 17°.91N×**66°.87W, h6**^{km}**, 4C-3D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	Guanica, Bosqu	0.07	355	⇓iP	Pg	03 55 44.2	+0.2
GBPR	Guanica, Bosqu	0.07	355	eS	Sg	03 55 45.3	+0.2
GBPR	Guanica, Bosqu	0.07	355	eS	Sg	03 55 51.8	+6.7
MLPR	Magueyes Islan	0.17	290	⇑eP	Pg	03 55 46.2	+0.4
MLPR	Magueyes Islan	0.17	290	eS	Sg	03 55 49.3	+1.2
MLPR	Magueyes Islan	0.17	290	⇓eP	Pg	03 55 52.8	+7.0
MLPR	Magueyes Islan	0.17	290	eS	Sg	03 55 55.9	+7.7
CRPR	Cabo Rojo, PR	0.24	293	⇑iP	Pg	03 55 47.7	+0.5
CRPR	Cabo Rojo, PR	0.24	293	eS	Sg	03 55 51.6	+1.1
CRPR	Cabo Rojo, PR	0.24	293	eS	Sg	03 55 58.8	+8.3
OBIP	Obispado Ponce	0.29	62	⇑eP	Pg	03 55 48.5	+0.5
OBIP	Obispado Ponce	0.29	62	⇓eP	Pn	03 55 53.9	+0.7
OBIP	Obispado Ponce	0.29	62	eS	Sb	03 55 58.0	+3.0
LSP	Las Mesas	0.33	323	⇑eP	Pg	03 55 49.2	+0.3
LSP	Las Mesas	0.33	323	eS	Sg	03 55 54.6	+1.3
LSP	Las Mesas	0.33	323	⇑eP	Pn	03 55 55.4	+1.6

LSP	**Las Mesas**	**0.33**	**323**	*e*S	Sb	03 56 01.3	+4.9

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*IDC **29** 03:57:42.5±4.3, 29°.13N×87°.47E, h0^{km}, mb3.8/3, mbtmp3.8/3, MS3.2/1, Error ellipse: s-maj=714.1km s-min=30.4km az=51.0*

*DMN **29** 03:57:50.9±0.0, 28°.83N×86°.79E, h40^{km}, Ml4.1/5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 29 03:57:52.3±2.9, 28°.7N±0°.2×86°.6E±0°.2, h84^{km}±29^{km}, n9, σ0^{s}.56/13, mb3.5/3, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUN	**Gumba**	**1.04**	**220**	Pg	**Pn**	**03 58 12.4**	**0.0**
	baz=221,slow=0.0						
GUN				Sg	**Sn**	**03 58 27.1**	**-0.3**
	936nm,0.2s,baz=221,slow=0.0						
KKN	**Kakani**	**1.50**	**233**	Pg	**Pn**	**03 58 18.4**	**+0.4**
	baz=233,slow=0.0						
KKN				Sg	**Sn**	**03 58 37.7**	**+0.2**
	289nm,0.2s,baz=233,slow=0.0						
PKIN	**Phulchoki**	**1.57**	**225**	Pg	**Pn**	**03 58 18.7**	**-0.2**
	baz=225,slow=0.0						
PKIN				Sg	**Sn**	**03 58 39.1**	**0.0**
	291nm,0.3s,baz=225,slow=0.0						
DMN	**Daman**	**1.74**	**231**	Pg	**Pn**	**03 58 21.2**	**+0.1**
	baz=231,slow=0.0						
DMN				Sg	**Sn**	**03 58 43.6**	**+0.6**
	217nm,0.3s,baz=231,slow=0.0						
DANN	**Dangsing**	**2.56**	**263**	Pg	**Pn**	**03 58 31.6**	**-0.4**
	baz=260,slow=0.0						
DANN				Sg	**Sn**	**03 59 01.6**	**-0.8**
	51nm,0.2s,baz=260,slow=0.0						
SONM	**Songino Array**	**24.48**	**33**	LR	LR	04 13 34.3	
	comp=Z,57nm,21.1s,baz=44,slow=40						
FINES	**FINESS Array B**	**51.21**	**328**	P	**P**	**04 06 47.5**	**+0.8**
	2.8nm,0.9s,baz=93,slow=8.4,SNR=5.1						
	2.8nm,0.9s						
WRA	**Warramunga Arr**	**66.79**	**131**	P	**P**	**04 08 34.4**	**-0.6**
	0.3nm,0.5s,baz=322,slow=5.9,SNR=4.8						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**69.16**	**134**	P	**P**	**04 08 49.5**	**-0.4**
	0.3nm,0.5s,baz=320,slow=6.1,SNR=9.0						
	0.3nm,0.5s						

DJA 29 04:04:52.2±1.3, 7°S±3°×10°6E±°, h19^{km}±12^{km}, M4.0/17, mB5.2/1, mb4.5/2, MLv3.7/17, Mw(mB)4.6/1, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBJI	**Serang**	**1.07**	**29**	P	Pb	04 05 11.2	-1.0
SBJI				S	Sb	04 05 25.9	+0.1
DBJI	**Dramaga**	**1.25**	**66**	P	Pn	04 05 14.7	0.0
DBJI				S	Sb	04 05 30.7	-0.2
TNG	**Tangerang**	**1.36**	**50**	P	Pn	04 05 15.9	-0.3
TNG				P	Pb	04 05 16.8	-0.3
TNG				S	Sb	04 05 34.4	+0.2
CNJI	**Cibinong**	**1.54**	**99**	P	Pn	04 05 18.5	-0.1
CNJI				S	Sn	04 05 37.7	-0.4
BLSI	**Bandar Lampung**	**1.72**	**348**	P	Pn	04 05 20.6	-0.5
KASI	**Kota Agung**	**1.88**	**324**	P	Pn	04 05 23.3	0.0
BBJI	**Bungbulang**	**2.07**	**101**	P	Pn	04 05 26.5	+0.4
KLSI		**2.51**	**340**	P	Pn	04 05 32.9	+0.9
LWLI	**Liwa**	**2.54**	**323**	P	Pn	04 05 32.9	+0.3
MDSI	**Maura Dua**	**2.92**	**331**	P	Pn	04 05 38.1	+0.4
KPJI	**Karang Pucung**	**3.32**	**95**	P	Pn	04 05 43.6	+0.5
EGSI	**Enggano, Bengk**	**3.71**	**297**	P	Pn	04 05 48.1	-0.5
MNAI	**Manna**	**3.76**	**315**	P	Pn	04 05 49.7	+0.5
TPI	**Tanjungpandan**	**4.74**	**26**	P	Pn	04 06 01.9	-0.8
UGM	**Wanagama**	**4.96**	**100**	P	Pn	04 06 05.7	0.0
MASI	**Maura Aman, Be**	**5.13**	**319**	P	Pn	04 06 08.1	-0.1
	2µm57nm,0.7s						
PCJI	**Pacitan**	**5.64**	**102**	P	Pn	04 06 15.7	+0.6

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*IDC **29** 04:21:55.7±1.2, 6°.39N×125°.25E, h0^{km}, mb3.6/5, mbtmp3.6/5, MS3.0/1, Error ellipse: s-maj=37.7km s-min=9.3km az=106.0*

ISC 29 04:21:57.0±1.1, 6°.41N±0°.09×125°.4E±0°.3, h10^{km}, n7, σ1^{s}.07/6, mb3.7/5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.68**	**15**	Pg	**Pg**	**04 22 10.2**	**-0.1**
	189nm,0.3s,baz=129,slow=2.8,SNR=15						
DAV				Lg	Lg	04 22 20.5	
	287nm,0.3s,baz=180,slow=20,SNR=5.5						
JOW	**Kunigami**	**20.50**	**7**	LR	LR	04 35 31.9	
	comp=Z,36nm,18.8s,baz=224,slow=40						
FITZ	**Fitzroy Crossi**	**24.35**	**179**	P	**P**	**04 27 16.0**	**+0.6**
	2.7nm,0.9s,baz=359,slow=7.5,SNR=9.5						
	2.7nm,0.9s						
WRA	**Warramunga Arr**	**27.62**	**162**	P	**P**	**04 27 46.3**	**+1.3**
	0.3nm,0.4s,baz=326,slow=10,SNR=5.7						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**31.02**	**165**	P	**P**	**04 28 14.1**	**-1.1**
	0.2nm,0.5s,baz=343,slow=7.3,SNR=8.2						
	0.2nm,0.5s						
STKA	**Stephens Creek**	**41.08**	**159**	P	**P**	**04 29 41.4**	**+0.3**
	0.7nm,0.5s,baz=345,slow=12,SNR=3.0						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**54.62**	**325**	P	**P**	**04 31 26.1**	**+0.1**
	0.6nm,0.8s,baz=127,slow=8.1,SNR=4.4						
	0.6nm,0.8s						

WEL 29 04:47:50.9±0.6, 33°S±11°×18°0W±2°6, h12^{km}, M4.2/9, mB4.9/7, ML4.2/17, MLv4.3/9, Mw(mB)4.2/7, Error ellipse: s-maj=35.9km s-min=4.7km az=111.5, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.90**	**27**	S	Sn	04 49 32.8	-3.6
WMGZ	**Waiomatatini S**	**5.21**	**195**	P	Pn	04 49 10.4	+1.8
WMGZ				S	Sn	04 50 11.6	+3.0
HAZ	**Te Kaha**	**5.31**	**200**	P	Pn	04 49 10.9	+1.0
HAZ				S	Sn	04 50 12.3	+1.3
PKGZ	**Pakihiroa**	**5.33**	**197**	P	Pn	04 49 13.8	+3.4
PKGZ				S	Sn	04 50 14.0	+2.3
PUZ	**Puketiti**	**5.49**	**195**	P	Pn	04 49 14.8	+2.3
PUZ				S	Sn	04 50 16.6	+1.1
RUGZ	**Raukumara Rang**	**5.53**	**200**	P	Pn	04 49 14.6	+1.4
RUGZ				S	Sn	04 50 16.1	-0.7
CNGZ	**Carnagh Statio**	**5.89**	**194**	P	Pn	04 49 20.8	+2.8
MWZ	**Matawai**	**5.92**	**200**	P	Pn	04 49 17.4	-1.0
MWZ				S	Sn	04 50 24.5	-1.7
TKGZ	**Te Karaka**	**5.93**	**197**	P	Pn	04 49 19.6	+1.1
TKGZ				S	Sn	04 50 25.7	-0.7
URZ	**Urewera**	**5.98**	**203**	P	Pn	04 49 19.7	+0.5
URZ				S	Sn	04 50 26.8	-0.8
RAGZ	**Rawiri**	**6.10**	**200**	P	Pn	04 49 21.8	+0.9
TOZ	**Tahuroa Road**	**6.20**	**216**	P	Pn	04 49 18.9	-3.3
RIGZ	**Rimuhau**	**6.21**	**197**	P	Pn	04 49 23.9	+1.6
RIGZ				S	Sn	04 50 33.0	-0.3
RTZ	**Ruatahuna**	**6.35**	**202**	P	Pn	04 49 24.2	-0.1
PRGZ	**Paritu Road**	**6.39**	**196**	P	Pn	04 49 26.9	+2.1
PRGZ				S	Sn	04 50 35.1	-2.5
SNGZ	**Shannon Statio**	**6.39**	**200**	P	Pn	04 49 25.2	+0.3
SNGZ				S	Sn	04 50 33.2	-4.5
KNZ	**Kokohu**	**6.53**	**197**	P	Pn	04 49 27.1	+0.4
MHGZ	**Mahia Peninsul**	**6.60**	**195**	P	Pn	04 49 27.9	+0.2
MTHZ	**Maungataniwha**	**6.61**	**202**	P	Pn	04 49 27.0	-0.8
MTHZ				S	Sn	04 50 39.1	-4.0
WHHZ	**Waihua**	**6.70**	**199**	P	Pn	04 49 28.8	-0.2
MRHZ	**Matea Rd**	**6.73**	**205**	P	Pn	04 49 29.3	-0.3
ARHZ	**Aropaoanui**	**6.94**	**200**	P	Pn	04 49 31.3	-1.0
HIZ	**Hauiti**	**7.12**	**215**	P	Pn	04 49 37.7	+2.8
MCHZ	**McNeill Hill**	**7.19**	**201**	P	Pn	04 49 35.3	-0.6
MCHZ				S	Sn	04 50 53.4	-4.1
TMVZ	**Te Maari**	**7.25**	**208**	P	Pn	04 49 36.2	-0.5
KWHZ	**Kaweka Forest**	**7.26**	**203**	P	Pn	04 49 35.5	-1.3
ETVZ	**East Tongariro**	**7.26**	**208**	P	Pn	04 49 36.5	-0.4
CKHZ	**Cape Kidnapper**	**7.28**	**199**	P	Pn	04 49 36.4	-0.6
KAHZ	**Kahuranaki**	**7.46**	**199**	P	Pn	04 49 38.0	-1.6
TSZ	**Takapari Road**	**7.99**	**203**	P	Pn	04 49 43.5	-3.3
ANWZ	**Angora Road**	**8.19**	**200**	P	Pn	04 49 45.4	-4.2
BFZ	**Birch Farm**	**8.46**	**200**	P	Pn	04 49 49.6	-3.7

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*NEIC **29** 04:55:03.9±1.6, 0°.09S±0°.07×123°.07E±0°.03, h112^{km}±7^{km}, mb4.3/18, Error ellipse: s-maj=10.6km s-min=3.8km az=176.0*

*IDC **29** 04:55:04.4±2.9, 0°.08N×123°.41E, h126^{km}±26^{km}, mb4.0/13, mbtmp4.3/14, MS2.6/2, Error ellipse: s-maj=36.2km s-min=11.7km az=68.0*

*DJA **29** 04:55:05.0±0.2, 0°S±3°×12°3E±°, h91^{km}±5^{km}, M4.8/22, mb4.8/13, mB5.6/6, MLv4.6/22, Mw(mB)5.1/6*

ISC 29 04:55:02.3±0.5, 0°.06S±0°.05×123°.06E±0°.05, h100^{km}, n72, σ2^{s}.04/77, mb4.2/21, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	**Gorontalo**	**0.70**	**356**	P	**Pn**	**04 55 23.7**	**+4.0**
GTOI				S	**Sn**	**04 55 38.5**	**+5.8**
LUWI	**Luwuk**	**1.01**	**197**		**Pn**	**04 55 25.1**	**+2.2**
LUWI				Sn	**Sn**	**04 55 40.8**	**+2.5**
LUWI	**Luwuk**	**1.01**	**197**	P	**Pn**	**04 55 24.9**	**+2.0**
LUWI	**Luwuk**	**1.01**	**197**	P	**Pn**	**04 55 25.0**	**+2.2**
LUWI				S	**Sn**	**04 55 40.8**	**+2.5**
KMSI	**Cibinong**	**1.12**	**55**	P	**Pn**	**04 55 27.1**	**+3.1**
KMSI				S	**Sn**	**04 55 43.9**	**+3.5**
MRSI	**Marisa**	**1.24**	**296**	P	**Pn**	**04 55 27.3**	**+1.9**
MRSI				S	**Sn**	**04 55 44.5**	**+1.5**
APSI	**Ampana**	**1.65**	**239**	P	**Pn**	**04 55 33.0**	**+2.7**
TOLI2	**Tolitoli**	**2.56**	**297**		**Pn**	**04 55 44.2**	**+2.0**
TOLI2	**Tolitoli**	**2.56**	**297**	P	**Pn**	**04 55 44.2**	**+2.0**
MPSI	**Mapaga**	**3.19**	**277**	P	**Pn**	**04 55 54.2**	**+3.6**
PCI	**Palu**	**3.33**	**255**	P	**Pn**	**04 55 55.9**	**+3.4**
SANI	**Sanana**	**3.53**	**124**	P	**Pn**	**04 55 54.6**	**-0.5**
SANI	**Sanana**	**3.53**	**124**	P	**Pn**	**04 55 54.4**	**-0.7**
KDI	**Kendari**	**3.89**	**187**	P	**Pn**	**04 56 01.8**	**+1.8**
KKSI	**Kolaka, Sulawe**	**4.32**	**199**	P	**Pn**	**04 56 07.7**	**+1.9**
TNTI	**Ternate**	**4.38**	**79**	Pn	**Pn**	**04 56 08.1**	**+1.4**
TNTI	**Ternate**	**4.38**	**79**	P	**Pn**	**04 56 08.5**	**+1.8**
TTSI	**Tana Toraja**	**4.39**	**228**	P	**Pn**	**04 56 09.4**	**+2.6**
MMSI	**Mamuju**	**4.90**	**238**	P	**Pn**	**04 56 15.9**	**+2.2**
SPSI	**Sidrap Palu**	**5.08**	**220**	P	**Pn**	**04 56 19.5**	**+3.3**
GAMI	**Galela, Maluku**	**5.09**	**68**	P	**Pn**	**04 56 18.5**	**+2.3**
	0.5nm10µm59nm,0.9s						
NLAI	**Namlea**	**5.12**	**128**	P	**Pn**	**04 56 18.1**	**+1.4**
	6µm149nm,0.7s						
PMSI	**Majene**	**5.37**	**230**	P	**Pn**	**04 56 22.3**	**+2.2**
	0.6nm106nm,1.1s						
KAPI	**Kappang**	**5.92**	**214**		**Pn**	**04 56 29.3**	**+1.7**
KAPI	**Kappang**	**5.92**	**214**	P	**Pn**	**04 56 29.8**	**+2.2**
KAPI	**Kappang**	**5.92**	**214**	P	**Pn**	**04 56 29.3**	**+1.7**
	0.2nm51nm,0.5s						
BKSI	**Bulukumba**	**5.99**	**209**	P	**Pn**	**04 56 30.6**	**+2.1**
	0.2nm53nm,0.6s						
MKS	**Makassar**	**6.25**	**215**	P	**Pn**	**04 56 35.5**	**+3.5**
BKB	**Balikpapan**	**6.28**	**259**	P	**Pn**	**04 56 35.4**	**+3.0**
	0.6nm6µm62nm,0.4s						
BSSI	**Bau Bau, Buton**	**6.56**	**203**	P	**Pn**	**04 56 39.3**	**+3.0**
	0.5nm141nm,0.7s						
EDFI	**Ende, Flores**	**8.74**	**189**	P	**Pn**	**04 57 09.4**	**+3.5**
KKM	**Kota Kinabalu**	**9.14**	**312**		Pn	04 57 17.1	+5.6
KKM	**Kota Kinabalu**	**9.14**	**312**	P	Pn	04 57 17.4	+6.0
FAKI	**Fak Fak**	**9.61**	**107**	Pn	**Pn**	**04 57 18.1**	**+0.3**
FAKI	**Fak Fak**	**9.61**	**107**	P	**Pn**	**04 57 18.0**	**+0.3**
FAKI	**Fak Fak**	**9.61**	**107**	P	**Pn**	**04 57 18.1**	**+0.3**
SJI	**Sawahan**	**13.60**	**236**	P	**P**	**04 58 15.5**	**-1.1**
KNRA	**Kununurra**	**16.50**	**160**		**Pn**	**04 58 48.5**	**+0.6**
KNRA				IAmb	IAmb	04 59 01.3	
	comp=Z,33nm,1.4s						
FITZ	**Fitzroy Crossi**	**18.10**	**172**	P	**P**	**04 59 07.4**	**+1.1**
	comp=Z,2.2nm,0.5s,baz=14,slow=7.8,SNR=9.2						
FITZ	**Fitzroy Crossi**	**18.10**	**172**	P	**P**	**04 59 07.2**	**+0.8**
WB0	**Warramunga Arr**	**22.51**	**151**		**P**	**04 59 53.2**	**-0.6**
WRA	**Warramunga Arr**	**22.63**	**151**	P	**P**	**04 59 54.0**	**-1.1**
	comp=Z,3.9nm,0.7s,baz=333,slow=10,SNR=11						
	comp=Z,3.9nm,0.7s						
WR8	**Warramunga Arr**	**22.72**	**151**		**P**	**04 59 55.5**	**-0.5**
WR8				IAmb	IAmb	04 59 56.8	
	comp=Z,7.6nm,0.6s						
TPUB	**Ta-pu**	**23.34**	**354**	P	**P**	**05 00 02.3**	**+0.3**
COEN	**Coen**	**24.23**	**126**	P	**P**	**05 00 10.5**	**+0.5**
COEN				IAmb	IAmb	05 00 12.2	
	comp=Z,4.9nm,0.8s						
YHNB	**Yeheng**	**24.64**	**356**	P	**P**	**05 00 14.4**	**+0.7**
YHNB				IAmb	IAmb	05 00 22.8	
	comp=Z,44nm,1.4s						
ASAR	**Alice Springs**	**25.71**	**157**	P	**P**	**05 00 23.9**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=342,slow=15,SNR=20						
ASAR				PcP	**PcP**	**05 03 51.0**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=346,slow=2.0,SNR=12						
ASAR				ScP	**ScP**	**05 07 18.6**	**-3.3**
	comp=Z,0.8nm,0.6s,baz=336,slow=2.6,SNR=7.0						
ASAR				LR	LR	05 10 54.7	
	comp=Z,12nm,18.0s,baz=204,slow=37						
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**25.71**	**157**	P	**P**	**05 00 23.8**	**+0.3**
QIS	**Mount Isa**	**26.01**	**143**	P	**P**	**05 00 26.8**	**+0.6**
CMAR	**Chiang Mai Arr**	**30.01**	**309**	P	**P**	**05 01 03.9**	**+2.1**
	comp=Z,1.1nm,0.6s,baz=125,slow=6.5,SNR=7.5						
CMAR				LR	LR	05 13 39.6	
	comp=Z,10nm,18.2s,baz=65,slow=37						
	comp=Z,1.1nm,0.6s						
INKA	**Innaminka**	**32.33**	**150**	P	**P**	**05 01 22.1**	**+0.1**
BBOO	**Buckleboo**	**34.80**	**161**	P	**P**	**05 01 42.9**	**-0.6**
BBOO				IAmb	IAmb	05 02 00.1	
	comp=Z,18nm,1.5s						
STKA	**Stephens Creek**	**36.17**	**153**	P	**P**	**05 01 54.7**	**-0.6**
	comp=Z,2.9nm,0.6s,baz=325,slow=8.7,SNR=8.7						
	comp=Z,2.9nm,0.6s						
STKA	**Stephens Creek**	**36.17**	**153**	P	**P**	**05 01 55.1**	**-0.1**
MJAR	**Matsushiro Arr**	**39.04**	**20**	P	**P**	**05 02 16.8**	**-2.6**
	comp=Z,1.7nm,0.6s,baz=187,slow=9.8,SNR=8.4						
	comp=Z,1.7nm,0.6s						
ARMA	**Armidale**	**40.60**	**141**	P	**P**	**05 02 34.3**	**+1.8**
ARMA				IAmb	IAmb	05 02 59.0	
	comp=Z,18nm,1.5s						
TOO	**Toolangi**	**42.68**	**153**	P	**P**	**05 02 49.7**	**+0.4**
TOO				IAmb	IAmb	05 03 10.5	
	comp=Z,3.1nm,1.1s						
SONM	**Songino Array**	**49.86**	**345**	P	**P**	**05 03 44.4**	**-1.1**
	comp=Z,1.2nm,0.5s,baz=159,slow=8.0,SNR=3.2						
	comp=Z,1.2nm,0.5s						
MKAR	**Makanchi Array**	**58.70**	**328**	P	**P**	**05 04 49.8**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=120,slow=8.4,SNR=30						
	comp=Z,1.0nm,0.3s						
MAKZ	**Makanchi**	**58.87**	**328**	P	**P**	**05 04 50.3**	**-0.4**
MAKZ				IAmb	IAmb	05 05 29.0	
	comp=Z,3.9nm,1.4s						
BVAR	**Borovoye Array**	**68.57**	**329**	P	**P**	**05 05 53.0**	**-1.2**
	comp=Z,1.0nm,0.6s,baz=134,slow=8.2,SNR=3.6						
	comp=Z,1.0nm,0.6s						
ABKAR	**Akbulak array**	**72.82**	**322**	P	**P**	**05 06 18.9**	**-1.2**
VNDA	**Vanda**	**80.17**	**172**	P	**P**	**05 06 59.5**	**-1.5**
	comp=Z,1.3nm,0.7s,baz=326,slow=7.5,SNR=7.1						
	comp=Z,1.3nm,0.7s						
VNDA	**Vanda**	**80.17**	**172**	P	**P**	**05 06 59.8**	**-1.3**
C18K	**Utukok River**	**84.89**	**21**	P	**P**	**05 07 26.2**	**+0.5**
C18K				IAmb	IAmb	05 08 06.7	
	comp=Z,3.2nm,1.4s						
C19K	**Lookout Ridge**	**85.55**	**21**	P	**P**	**05 07 30.3**	**+1.2**
C19K				IAmb	IAmb	05 07 31.3	
	comp=Z,2.4nm,0.7s						
ARCES	**ARCESS Array B**	**92.71**	**340**	P	**P**	**05 08 01.2**	**-1.7**
	comp=Z,5.1nm,0.9s,baz=76,slow=5.2,SNR=5.0						
	comp=Z,5.1nm,0.9s						
FINES	**FINESS Array B**	**93.41**	**331**	P	**P**	**05 08 04.2**	**-1.9**
	comp=Z,5.2nm,1.1s,baz=20,slow=6.1,SNR=3.7						
	comp=Z,5.2nm,1.1s						
SPB2	**Spitsbergen Ar**	**93.46**	**349**	P	**P**	**05 08 04.9**	**-1.2**
SPITS	**Spitsbergen Ar**	**93.46**	**349**	P	**P**	**05 08 04.8**	**-1.3**
	comp=Z,7.6nm,0.9s,baz=94,slow=10,SNR=6.0						
	comp=Z,7.6nm,0.9s						
HFS	**Hagfors**	**99.61**	**331**	P	**Pdif**	**05 08 31.9**	**-2.4**
	comp=Z,1.8nm,0.7s,baz=80,slow=12,SNR=4.3						
	comp=Z,1.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**120.48**	**285**	PKP	**PKPdf**	**05 13 41.8**	**-1.4**
	comp=Z,0.8nm,0.6s,baz=41,slow=3.3,SNR=6.0						

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*IDC **29** 05:02:05.0±2.2, 15°.83S×173°.18W, h0^{km}, mb3.9/5, mbtmp3.9/5, MS3.6/22, Error ellipse: s-maj=163.6km s-min=23.1km az=153.0*

ISC 29 05:02:10.6±2.0, 15°.5S±0°.8×173°.4W±0°.4, h35^{km}, n32, σ0^{s}.99/9, mb3.9/5, MS3.7/22, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**20.16**	**248**	LR	LR	05 13 20.8	
	comp=Z,164nm,21.9s,baz=42,slow=33						
DZM	**Mont Dzumac**	**20.16**	**248**	*e*LR	LR	05 12 09.8	
	298nm,26.4s						
PPT	**Papeete**	**22.95**	**99**	LR	LR	05 13 12.6	
	comp=Z,55nm,21.8s,baz=156,slow=30						
PPT2	**Papeete2**	**22.95**	**99**	*e*LR	LR	05 12 32.0	
	85nm,25.0s						
PPT2				*e*LR	LR	05 12 36.9	
	90nm,25.2s						
TBI	**Tubuai**	**23.90**	**113**	*e*LR	LR	05 13 02.3	
	300nm,46.0s						
URZ	**Urewera**	**24.21**	**198**	LR	LR	05 15 38.0	
	comp=Z,151nm,21.0s,baz=356,slow=34						
RKT	**Rikitea**	**36.99**	**108**	*e*LR	LR	05 19 18.1	
	687nm,33.2s						
CTA	**Charters Tower**	**38.62**	**257**	LR	LR	05 22 25.9	
	comp=Z,44nm,20.3s,baz=116,slow=32						
WRA	**Warramunga Arr**	**49.82**	**257**	P	**P**	**05 11 01.2**	**+0.7**
	0.8nm,0.7s,baz=98,slow=5.6,SNR=4.9						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**50.08**	**252**	P	**P**	**05 11 02.5**	**0.0**
	0.8nm,0.4s,baz=90,slow=7.4,SNR=16						
ASAR				LR	LR	05 30 24.3	
	comp=Z,83nm,21.6s,baz=102,slow=34						
	0.8nm,0.4s						
MJAR	**Matsushiro Arr**	**68.97**	**320**	LR	LR	05 35 37.8	
	comp=Z,65nm,21.5s,baz=124,slow=29						
PFO	**Pinyon Flats O**	**72.97**	**47**	LR	LR	05 36 49.3	
	comp=Z,72nm,20.7s,baz=232,slow=28						
LPIG	**La Paz**	**73.08**	**58**	LR	LR	05 36 28.0	
	comp=Z,64nm,19.7s,baz=223,slow=28						
YBH	**Yreka Blue Hor**	**73.65**	**37**	LR	LR	05 36 46.1	
	comp=Z,5.5nm,20.1s,baz=258,slow=28						
NVAR	**Mina Array Bea**	**74.38**	**42**	P	**P**	**05 13 46.0**	**+0.7**
	0.8nm,0.7s,baz=241,slow=7.9,SNR=6.6						
NVAR				LR	LR	05 39 40.9	
	comp=Z,69nm,21.0s,baz=251,slow=30						
	0.8nm,0.7s						
KDAK	**Kodiak Island**	**74.97**	**11**	LR	LR	05 41 40.7	
	comp=Z,39nm,18.5s,baz=204,slow=32						
MA2	**Magadan**	**80.21**	**342**	LR	LR	05 44 57.8	
	comp=Z,30nm,21.6s,baz=106,slow=32						
TXAR	**Lajitas Array**	**80.65**	**56**	P	**P**	**05 14 21.0**	**+0.6**
	1.3nm,1.0s,baz=224,slow=5.2,SNR=8.6						
	1.3nm,1.0s						
NEW	**Newport**	**80.76**	**34**	LR	LR	05 43 10.9	
	comp=Z,47nm,18.3s,baz=260,slow=30						
ANMO	**Albuquerque**	**80.85**	**50**	LR	LR	05 44 49.9	
	comp=Z,38nm,20.1s,baz=260,slow=32						
PDAR	**Pinedale Array**	**82.31**	**42**	P	**P**	**05 14 28.6**	**-0.4**
	0.8nm,0.8s,baz=204,slow=3.3,SNR=8.3						
PDAR				LR	LR	05 43 39.1	
	comp=Z,30nm,19.1s,baz=284,slow=30						
	0.8nm,0.8s						
ILAR	**Eielson Array**	**82.50**	**11**	LR	LR	05 42 13.0	
	comp=Z,57nm,21.2s,baz=86,slow=29						
CMIG	**Matias Romero**	**83.91**	**70**	LR	LR	05 46 56.4	
	comp=Z,16nm,18.1s,baz=34,slow=32						
MAW	**Mawson**	**87.74**	**199**	LR	LR	05 51 48.2	
	comp=Z,45nm,19.4s,baz=109,slow=34						
YAK	**Yakutsk**	**89.15**	**337**	LR	LR	05 47 38.3	
	comp=Z,16nm,21.4s,baz=120,slow=30						
YKA	**Yellowknife Ar**	**90.15**	**23**	LR	LR	05 51 38.2	
	comp=Z,47nm,18.7s,baz=50,slow=33						
ULM	**Lac du Bonnet**	**93.98**	**39**	LR	LR	05 53 16.2	
	comp=Z,51nm,20.2s,baz=244,slow=33						
TKL	**Tuckaleechee C**	**98.55**	**55**	LR	LR	05 53 42.3	
	comp=Z,34nm,18.6s,baz=9.5,slow=31						
BRTR	**Keskin Array B**	**146.18**	**321**	PKPbc	**PKPab**	**05 21 49.0**	**+0.5**
	1.9nm,0.8s,baz=66,slow=1.9,SNR=8.5						
GERES	**GERESS Array B**	**146.19**	**352**	PKPbc	**PKPab**	**05 21 47.8**	**-0.3**
	0.6nm,0.7s,baz=29,slow=5.6,SNR=6.4						
WTTA	**Wattenberg**	**148.00**	**354**	*e*PKP	**PKiKP**	**05 21 53.2**	**-1.3**
	1.4nm,0.5s						
ABTA	**Abfaltersbach**	**148.41**	**352**	*e*PKP	**PKiKP**	**05 21 53.7**	**-1.6**
	0.7nm,0.5s						

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*GCG **29** 05:15:58.4±1.2, 14°.19N×92°.08W, h43^{km}±37^{km}, MD3.8, MW2.9*

*MEX **29** 05:15:58.7±1.0, 14°.13N×92°.21W, h22^{km}±72^{km}, MD3.9*

ISC 29 05:15:56.3±2.3, 14°.13N±0°.09×92°.22W±0°.07, h31^{km}±14^{km}, n12, σ1^{s}.18/19, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMCA	**Catarina**	**0.74**	**11**	*i* P	**Pb**	**05 16 11.2**	**+0.5**
SMCA				*i* S	**Sb**	**05 16 21.0**	**+0.5**
CHUJ	**Union Juarez**	**0.96**	**6**	*e*P	**Pn**	**05 16 13.5**	**-0.5**
CHUJ				*e*S	**Sb**	**05 16 25.4**	**-1.8**
PATR	**El Naranjo**	**0.98**	**359**	*e*P	**Pn**	**05 16 14.2**	**+0.1**
PATR				*e*S	**Sb**	**05 16 26.5**	**-1.2**
PAVE	**Pavencul**	**1.06**	**2**	*e*P	**Pn**	**05 16 15.2**	**0.0**
PAVE				*e*S	**Sn**	**05 16 28.2**	**-0.7**
ESSG	**Sabana Grande**	**1.37**	**79**	*i* P	**Pn**	**05 16 20.1**	**+0.8**
FG16	**Alotenango, Sa**	**1.66**	**85**	*i* P	Pn	05 16 18.8	-4.7
PCIG		**1.84**	**328**	*e*P	**Pn**	**05 16 26.9**	**+1.2**
PCIG				*e*S	**Sn**	**05 16 47.7**	**-0.2**
APG	**El Apazote**	**1.91**	**63**	*i* P	**Pn**	**05 16 27.9**	**+1.0**
CCIG	**Comitan**	**2.14**	**2**	*e*P	**Pn**	**05 16 31.8**	**+1.7**
CCIG				*e*S	**Sn**	**05 16 56.8**	**+1.2**
NUBE	**Las Nubes**	**2.38**	**95**	*i* P	**Pn**	**05 16 33.8**	**+0.6**
JAYA	**Jayaque - finc**	**2.73**	**100**	*i* P	**Pn**	**05 16 38.2**	**+0.1**
JAYA				*i* S	**Sn**	**05 17 08.9**	**-1.2**
CMIG	**Matias Romero**	**3.91**	**319**	*e*P	**Pn**	**05 16 55.1**	**+0.9**
CMIG				*e*S	**Sn**	**05 17 36.9**	**-2.1**

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*IDC **29** 05:24:02.6±8.1, 21°.09S×178°.65W, h565^{km}±93^{km}, mb3.1/6, mbtmp4.1/7, Error ellipse: s-maj=44.5km s-min=21.9km az=58.0*

ISC 29 05:24:05.3±1.1, 21°.2S±0°.2×178°.8W±0°.2, h600^{km}, n9, σ1^{s}.44/10, mb3.6/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**17.38**	**191**	P	**P**	**05 27 33.1**	**-2.0**
	2.3nm,0.3s,baz=281,slow=1.9,SNR=6.5						
STKA	**Stephens Creek**	**36.82**	**245**	P	**P**	**05 30 25.2**	**+1.0**
	2.4nm,0.6s,baz=91,slow=11,SNR=5.6						
	2.4nm,0.6s						
ASAR	**Alice Springs**	**43.64**	**258**	P	**P**	**05 31 19.1**	**+0.5**
	2.6nm,0.5s,baz=98,slow=7.6,SNR=68						
ASAR				S	**S**	**05 37 04.7**	**-1.3**
	0.5nm,0.7s,baz=98,slow=17,SNR=4.2						
	2.6nm,0.5s						
WRA	**Warramunga Arr**	**43.77**	**263**	P	**P**	**05 31 19.8**	**+0.2**
	0.5nm,0.3s,baz=98,slow=6.8,SNR=7.2						
	0.5nm,0.3s						
VNDA	**Vanda**	**57.17**	**185**	P	**P**	**05 32 57.4**	**+1.7**
	0.8nm,0.6s,baz=12,slow=6.9,SNR=7.2						
	0.8nm,0.6s						
MJAR	**Matsushiro Arr**	**70.32**	**324**	P	**P**	**05 34 20.2**	**+0.4**
	1.2nm,0.6s,baz=155,slow=5.9,SNR=4.7						
	1.2nm,0.6s						
ILAR	**Eielson Array**	**89.14**	**13**	P	**P**	**05 35 57.5**	**0.0**
	0.3nm,0.5s,baz=210,slow=4.9,SNR=6.2						
	0.3nm,0.5s						
AKASG	**Malin Array Be**	**143.24**	**330**	PKP	**PKPdf**	**05 42 29.9**	**-2.1**
	1.7nm,0.5s,baz=45,slow=4.3,SNR=8.0						
TORD	**Torodi Ar. Bea**	**172.00**	**183**	PKPab	**PKPab**	**05 44 33.8**	**-0.2**
	0.4nm,0.8s,baz=166,slow=3.2,SNR=2.1						

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*GUC **29** 05:48:51.0±0.8, 24°.16S×66°.89W, h222^{km}±8^{km}, ML3.9*

*SJA **29** 05:48:51.4±0.7, 24°.02S×66°.90W, h213^{km}±7^{km}, ML3.5, MW3.5*

*IDC **29** 05:48:51.5±1.9, 23°.99S×66°.74W, h191^{km}±19^{km}, mb3.2/2, mbtmp3.4/8, Error ellipse: s-maj=27.0km s-min=19.1km az=102.0*

ISC 29 05:48:51.5±0.8, 24°.03S±0°.05×66°.90W±0°.05, h208^{km}±7^{km}, n34, σ1^{s}.33/52, 4C-1D, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALTA		**0.55**	**110**	⇓*i*P	**Pn**	**05 49 21.1**	**+0.7**
SALTA		**0.55**	**110**	*e*P	**Pn**	**05 49 21.1**	**+0.7**
SALTA				*e*P	**Pn**	**05 49 21.2**	**+0.7**
SALTA				*e*P	**Pn**	**05 49 21.2**	**+0.7**
SLA	**San Lorenzo**	**1.45**	**119**	*e*P	**Pn**	**05 49 26.8**	**+1.1**
SLA				*e*S	**S**	**05 49 51.5**	**-0.5**
AF01	**San Pedro de A**	**1.59**	**312**	*e*P	**Pn**	**05 49 28.7**	**+1.5**
AF01				*e*S	**S**	**05 49 56.9**	**+2.4**
YJA	**Yavi**	**2.25**	**35**	*e*P	**Pn**	**05 49 34.5**	**+0.8**
YJA				*e*S	**S**	**05 50 04.4**	**-1.7**
GO02	**Mina Guanaco**	**2.69**	**245**	⇑*e*P	**Pn**	**05 49 39.6**	**+1.1**
GO02				*e*S	**S**	**05 50 15.2**	**+0.6**
GO02				IAML		05 50 15.9	
	comp=N,272nm,0.3s						

PB06	**IPOC Station P**	**2.79**	**298**	⇑*i*P	**Pn**	**05 49 40.3**	**+0.9**
PB06				*e*S	**S**	**05 50 15.5**	**-0.7**
PB06				IAML		05 50 17.3	
	comp=N,171nm,0.3s						
PB06	**IPOC Station P**	**2.79**	**298**	*e*P	**Pn**	**05 49 40.3**	**+0.9**
PB06				*e*S	**S**	**05 50 15.9**	**-0.3**
PB06				IAML		05 50 17.2	
	comp=Z,111nm,0.6s						
PB09	**IPOC Station P**	**3.10**	**315**	*e*P	**Pn**	**05 49 44.4**	**+1.3**
PB09				IAML		05 50 23.9	
	comp=N,88nm,0.5s						
PB09	**IPOC Station P**	**3.10**	**315**	*e*P	**Pn**	**05 49 44.2**	**+1.1**
PB09				IAML		05 50 25.3	
	comp=Z,69nm,0.4s						
PB14	**IPOC Station P**	**3.25**	**259**	*e*P	**Pn**	**05 49 45.5**	**+0.7**
PB14	**IPOC Station P**	**3.25**	**259**	*e*P	**Pn**	**05 49 45.6**	**+0.7**
PB14				*e*S	**S**	**05 50 25.5**	**-0.6**
PB14				IAML		05 50 27.1	
	comp=Z,67nm,0.3s						
PB05	**IPOC Station P**	**3.25**	**291**	⇑*i*P	**Pn**	**05 49 45.5**	**+0.7**
PB05	**IPOC Station P**	**3.25**	**291**	*e*P	**Pn**	**05 49 45.4**	**+0.7**
PB05				*e*S	**S**	**05 50 25.3**	**-0.6**
PB05				IAML		05 50 29.9	
	comp=Z,38nm,0.3s						
PB03	**IPOC Station P**	**3.29**	**306**	*e*P	**Pn**	**05 49 45.8**	**+0.6**
PB03				*e*S	**S**	**05 50 25.6**	**-1.1**
PB03				IAML		05 50 28.1	
	comp=Z,116nm,0.4s						
PB10	**IPOC Station P**	**3.39**	**278**	⇑*e*P	**Pn**	**05 49 46.9**	**+0.7**
PB10	**IPOC Station P**	**3.39**	**278**	*e*P	**Pn**	**05 49 46.9**	**+0.7**
PB10				*e*S	**S**	**05 50 28.2**	**-0.3**
PB10				IAML		05 50 31.4	
	comp=Z,27nm,0.3s						
AC02	**Maricunga**	**3.44**	**215**	*e*P	**Pn**	**05 49 48.2**	**+0.9**
PB07	**IPOC Station P**	**3.59**	**309**	*e*P	**Pn**	**05 49 48.4**	**-0.4**
PB01	**IPOC Station P**	**3.82**	**321**	*e*P	**Pn**	**05 49 51.6**	**0.0**
PB01				*e*S	**S**	**05 50 37.1**	**-1.1**
PB01				IAML		05 50 39.6	
	comp=Z,45nm,0.5s						
PB02	**IPOC Station P**	**3.87**	**314**	*e*P	**Pn**	**05 49 52.3**	**+0.2**
PB02				*e*S	**S**	**05 50 37.4**	**-1.9**
PB02				IAML		05 50 38.0	
	comp=Z,94nm,0.4s						
PATCX	**Punta Patache**	**4.39**	**316**	*e*P	**Pn**	**05 49 58.4**	**-0.2**
PATCX				*e*S	**S**	**05 50 49.3**	**-1.7**
PATCX				IAML		05 50 53.4	
	comp=Z,28nm,0.7s						
PB08	**IPOC Station P**	**4.40**	**331**	*e*P	**Pn**	**05 49 59.8**	**+0.7**
PB08				*e*S	**S**	**05 50 51.3**	**-0.5**
PB08				IAML		05 50 57.3	
	comp=Z,27nm,0.8s						
HMBC	**Humberstone**	**4.65**	**323**	*e*P	**Pn**	**05 50 00.9**	**-1.1**
HMBC				*e*S	**S**	**05 50 55.1**	**-1.9**
HMBC				IAML		05 50 60.0	
	comp=Z,38nm,0.3s						
PB11	**IPOC Station P**	**4.96**	**328**	*e*P	Pn	05 49 52.7	-13
PB11				*e*S	**S**	**05 51 01.9**	**-2.3**
PB11				IAML		05 51 03.8	
	comp=Z,36nm,0.5s						
CFA	**Coronel Fontan**	**7.63**	**189**	P	**Pn**	**05 50 40.4**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=24,slow=18,SNR=7.5						
CFA				S	**S**	**05 52 01.1**	**-5.4**
	comp=Z,0.7nm,0.3s,baz=180,slow=16,SNR=7.5						
LPAZ	**La Paz**	**7.79**	**351**	P	**Pn**	**05 50 42.8**	**0.0**
	comp=Z,0.5nm,0.4s,baz=136,slow=5.6,SNR=7.2						
CPUP	**Villa Florida**	**8.96**	**107**	P	**Pn**	**05 50 56.5**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=283,slow=10,SNR=7.3						
SIV	**San Ignacio**	**9.70**	**35**	P	**Pn**	**05 51 04.9**	**-1.9**
	comp=Z,0.4nm,0.4s,baz=227,slow=13,SNR=5.7						
PLCA	**Paso Flores**	**16.93**	**190**	P	**Pn**	**05 52 37.0**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=334,slow=11,SNR=5.5						
BDFB	**Brasilia**	**19.61**	**68**	P	**P**	**05 53 04.3**	**-0.2**
	comp=Z,2.3nm,0.6s,baz=257,slow=12,SNR=7.5						
TORD	**Torodi Ar. Bea**	**76.50**	**69**	P	**P**	**06 00 19.0**	**0.0**
	comp=Z,0.4nm,0.6s,baz=263,slow=4.9,SNR=2.0						
	comp=Z,0.4nm,0.6s						
YKA	**Yellowknife Ar**	**94.19**	**340**	P	**P**	**06 01 47.9**	**+1.8**
	comp=Z,0.1nm,0.5s,baz=143,slow=4.4,SNR=4.8						
	comp=Z,0.1nm,0.5s						
MKAR	**Makanchi Array**	**146.49**	**40**	PKPbc	**PKiKP**	**06 08 09.8**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=310,slow=2.8,SNR=6.8						

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*IDC **29** 05:49:07.2±1.3, 17°.98N×66°.88W, h0^{km}, mb3.5/4, mbtmp3.6/5, ML2.8/1, MS3.1/1, Error ellipse: s-maj=26.8km s-min=9.3km az=178.0*

*NEIC **29** 05:49:07.8±1.4, 17°.90N±0°.03×66°.84W±0°.01, h10^{km}±1^{km}, mb4.4/22, ML4.0/32, Md3.6/9(RSPR), Mwr3.6/9(SLM), Error ellipse: s-maj=4.5km s-min=2.9km az=9.0*

*NEIC **29** 05:49:07.8, 17°.92N×66°.86W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.30; $M_{\theta\theta}$2.41; $M_{\phi\phi}$-2.11; $M_{r\theta}$0.19; $M_{\theta\phi}$2.46; $M_{\phi r}$-1.02; Fault plane solution: $M_0$3.51000×10^{14} NP1:ϕ_s23.00000°, δ80.00000°, λ-165.00000°. NP2:ϕ_s290.00000°, δ75.00000°, λ-10.00000°. Principal axes: T 3.5075, Plg4.0000°, Azm156.0000°; N 0.0007, Plg72.0000°, Azm54.0000°; P -3.5082, Plg18.0000°, Azm247.0000°;*

*RSPR **29** 05:49:07.8, 17°.93N×66°.86W, h5^{km}, MD3.5/9*

*OSPL **29** 05:49:07.2±0.3, 17°.83N×66°.92W, h25^{km}±4^{km}, ML3.5, Presumed earthquake*

ISC 29 05:49:07.5±0.9**, 17°.89N**±0°.04×**66°.84W**±0°.02**, h10**^{km}±6^{km}**, n101, σ1^{s}.11**/113**, mb4.3**/16**, 10C-4D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.10**	**337**		**Pg**	**05 49 09.3**	**-0.8**
GBPR	**Guanica, Bosqu**	**0.10**	**337**	⇓*e*P	**Pg**	**05 49 09.3**	**-0.8**
MLPR	**Magueyes Islan**	**0.21**	**293**	⇓*e*P	**Pg**	**05 49 11.7**	**-0.3**
MLPR	**Magueyes Islan**	**0.21**	**293**	*e*S	**Sg**	**05 49 14.9**	**0.0**
OBIP	**Obispado Ponce**	**0.27**	**55**		**Pg**	**05 49 13.4**	**+0.4**
OBIP				IAML		05 49 20.6	
	comp=N,8μm,0.7s						
OBIP	**Obispado Ponce**	**0.27**	**55**	⇓*e*P	**Pg**	**05 49 13.4**	**+0.4**
OBIP	**Obispado Ponce**	**0.27**	**55**	*e*S	**Sb**	**05 49 18.4**	**-0.8**
CRPR	**Cabo Rojo, PR**	**0.28**	**295**		**Pg**	**05 49 12.9**	**-0.3**
CRPR				Sg	**Sg**	**05 49 17.2**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.28**	**295**	IAML		05 49 17.8	
	comp=N,42μm,0.3s						
CRPR				IAML		05 49 19.2	
	comp=N,28μm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.28**	**295**	⇑*e*P	**Pg**	**05 49 13.0**	**-0.3**
CRPR	**Cabo Rojo, PR**	**0.28**	**295**	*e*S	**Sg**	**05 49 17.6**	**+0.5**
CRPR	**Cabo Rojo, PR**	**0.28**	**295**	*i* P	**Pg**	**05 49 13.0**	**-0.3**
CRPR				*e*S	**Sg**	**05 49 17.4**	**+0.3**
CRPR				IAML		05 49 17.6	
	comp=Z,41μm,0.3s						
CELP	**Cerrillos**	**0.31**	**53**	Pg	**Pg**	**05 49 14.1**	**+0.3**
CELP				Sg	**Sb**	**05 49 19.4**	**-1.0**
CELP				IAML		05 49 19.8	
	comp=Z,12μm,0.6s						
LSP	**Las Mesas**	**0.37**	**321**		**Pg**	**05 49 14.6**	**-0.3**
LSP	**Las Mesas**	**0.37**	**321**	⇓*e*P	**Pg**	**05 49 14.6**	**-0.3**
UUPR	**Utuado, UPR, P**	**0.38**	**17**	Pg	**Pg**	**05 49 14.9**	**-0.3**
UUPR				Sg	**Sg**	**05 49 20.4**	**+0.1**
PRSN	**Puerto Rico Se**	**0.44**	**319**	Pg	**Pg**	**05 49 15.8**	**-0.4**
PRSN				Sg	**Sg**	**05 49 22.4**	**+0.4**
PRSN	**Puerto Rico Se**	**0.44**	**319**	⇑*e*P	**Pg**	**05 49 15.7**	**-0.4**
PRSN	**Puerto Rico Se**	**0.44**	**319**	*e*S	**Sg**	**05 49 22.2**	**+0.2**
AOPR	**Arecibo Observ**	**0.47**	**10**		**Pg**	**05 49 16.3**	**-0.4**
AOPR				Sg	**Sg**	**05 49 22.7**	**-0.1**
AOPR				IAML		05 49 24.4	
	comp=N,10μm,0.4s						
AOPR	**Arecibo Observ**	**0.47**	**10**	⇑*e*P	**Pg**	**05 49 16.3**	**-0.4**
AOPR	**Arecibo Observ**	**0.47**	**10**	*e*S	**Sg**	**05 49 22.8**	**-0.1**
AOPR	**Arecibo Observ**	**0.47**	**10**	*e*P	**Pg**	**05 49 16.4**	**-0.4**
ECPR	**Experimental S**	**0.63**	**46**	Pg	**Pg**	**05 49 19.3**	**-0.4**
ECPR				Sg	**Sg**	**05 49 28.1**	**+0.2**
ECPR				IAML		05 49 30.4	
	comp=N,12μm,0.2s						
ECPR				IAML		05 49 32.4	
	comp=N,8μm,0.3s						
ECPR	**Experimental S**	**0.63**	**46**	⇑*e*P	**Pg**	**05 49 19.5**	**-0.1**
ECPR	**Experimental S**	**0.63**	**46**	*e*S	**Sb**	**05 49 29.0**	**-0.4**
AGPR	**Aguadilla, PR**	**0.63**	**336**		**Pg**	**05 49 19.1**	**-0.7**
AGPR				IAML		05 49 28.6	
	comp=N,8μm,0.4s						
AGPR				IAML		05 49 28.8	
	comp=N,8μm,0.4s						
AGPR	**Aguadilla, PR**	**0.63**	**336**	⇑*e*P	**Pg**	**05 49 19.2**	**-0.7**
AGPR	**Aguadilla, PR**	**0.63**	**336**	*e*S	**Sg**	**05 49 28.2**	**0.0**
AGPR	**Aguadilla, PR**	**0.63**	**336**	*i* P	**Pg**	**05 49 19.2**	**-0.6**
AGPR				*e*S	**Sg**	**05 49 27.9**	**-0.3**
AGPR				IAML		05 49 30.4	
	comp=Z,2μm,0.5s						
EMPR	**Esperanza - Ma**	**0.66**	**27**		**Sb**	**05 49 30.0**	**-0.3**
EMPR	**Esperanza - Ma**	**0.66**	**27**	Pg	**Pg**	**05 49 20.2**	**-0.1**
EMPR				IAML		05 49 32.9	
	comp=Z,6μm,0.5s						
EMPR				IAML		05 49 35.2	
	comp=Z,7μm,1.0s						
EMPR	**Esperanza - Ma**	**0.66**	**27**	⇑*e*P	**Pg**	**05 49 20.4**	**+0.1**
EMPR	**Esperanza - Ma**	**0.66**	**27**	*e*S	**Sb**	**05 49 30.0**	**-0.3**
SJG	**San Juan**	**0.69**	**71**	Pg	**Pg**	**05 49 20.9**	**0.0**
	comp=Z,84nm,0.3s,baz=257,slow=15,SNR=98						
SJG				Lg	Lg	05 49 30.4	
	comp=Z,509nm,0.3s,baz=15,slow=19,SNR=32						
SJG	**San Juan**	**0.69**	**71**		**Pg**	**05 49 20.7**	**-0.3**
SJG				Sg	**Sb**	**05 49 31.1**	**-0.2**
SJG	**San Juan**	**0.69**	**71**	⇑*e*P	**Pg**	**05 49 21.1**	**0.0**
SJG	**San Juan**	**0.69**	**71**	*e*S	**Sb**	**05 49 31.4**	**+0.1**
SJG	**San Juan**	**0.69**	**71**	*e*P	**Pg**	**05 49 20.9**	**0.0**
SJG	**San Juan**	**0.69**	**71**	*i* P	**Pg**	**05 49 21.0**	**0.0**
SJG				*e*S	**Sb**	**05 49 31.3**	**0.0**
SJG				IAML		05 49 31.3	
	comp=Z,1μm,0.3s						
IDE	**Isla Desecheo**	**0.78**	**310**		**Pg**	**05 49 21.8**	**-0.9**
IDE	**Isla Desecheo**	**0.78**	**310**	⇑*e*P	**Pg**	**05 49 21.8**	**-0.9**
GCPR	**Guaynabo City**	**0.83**	**60**		**Pg**	**05 49 23.0**	**-0.7**
GCPR				Sg	**Sg**	**05 49 34.3**	**-0.2**
GCPR	**Guaynabo City**	**0.83**	**60**	⇑*e*P	**Pg**	**05 49 23.2**	**-0.4**
GCPR	**Guaynabo City**	**0.83**	**60**	*e*S	**Sg**	**05 49 34.6**	**+0.1**
HUMP	**Col San Antoni**	**0.98**	**75**		**Pg**	**05 49 25.5**	**-0.8**
HUMP				Sg	**Sg**	**05 49 38.9**	**-0.2**
HUMP	**Col San Antoni**	**0.98**	**75**	Pg	**Pg**	**05 49 25.4**	**-1.0**
HUMP					**Sg**	**05 49 39.1**	**0.0**
HUMP				IAML		05 49 41.9	
	comp=Z,1μm,0.4s						
HUMP				IAML		05 49 44.2	
	comp=Z,1μm,0.4s						
HUMP	**Col San Antoni**	**0.98**	**75**	⇑*e*P	**Pg**	**05 49 25.7**	**-0.7**
HUMP	**Col San Antoni**	**0.98**	**75**	*e*S	**Sb**	**05 49 39.3**	**-0.2**
DR12	**Loma Pena Alta**	**2.57**	**291**	Pn	**Pn**	**05 49 49.9**	**+0.5**
SDD	**Santo Domingo**	**2.98**	**282**	Pn	**Pn**	**05 49 55.2**	**+0.5**
SABA	**Saba**	**3.44**	**94**	Pn	**Pn**	**05 50 01.6**	**+0.4**
SC01	**Santiago de lo**	**3.99**	**293**		**Pn**	**05 50 08.3**	**-0.5**
SDDR	**Presa de Saban**	**4.36**	**285**		**Pn**	**05 50 13.8**	**-0.1**
SDDR				IAML		05 51 20.9	
	comp=Z,120nm,0.8s						
SDDR				IAML		05 51 36.5	
	comp=Z,138nm,0.7s						
MBWH	**Windy Hill**	**4.58**	**104**	*e*P	**Pn**	**05 50 17.7**	**+0.8**
MLYT	**Lee's Yard**	**4.59**	**104**	*e*P	**Pn**	**05 50 19.5**	**+2.5**
MLYT				*e*S	**Sn**	**05 51 03.4**	**-7.0**
ANWB	**Willy Bob**	**4.82**	**92**	*e*P	**Pn**	**05 50 23.3**	**+3.1**
DHSZ	**Broadband at M**	**5.11**	**108**	*e*P	**Pn**	**05 50 24.9**	**+0.7**
DHSZ	**Broadband at M**	**5.11**	**108**	*e*S	**Sn**	**05 51 22.3**	**-0.9**
GDHS	**Morne Mazeau,**	**5.11**	**108**	Pn	**Pn**	**05 50 23.9**	**-0.3**
GDHS				IAML		05 51 29.0	
	comp=N,146nm,0.6s						
ATGZ	**Broadband at L**	**5.21**	**109**	*e*P	**Pn**	**05 50 26.0**	**+0.5**
ATGZ	**Broadband at L**	**5.21**	**109**	*e*S	**Sn**	**05 51 25.9**	**+0.3**
MMLZ	**Guadeloupe Bro**	**5.28**	**110**	*e*P	**Pn**	**05 50 30.4**	**+4.0**
CBE	**Ff, Capester**	**5.32**	**109**	Pn	**Pn**	**05 50 26.9**	**-0.2**
CBE				IAML		05 51 29.1	
	comp=N,117nm,0.5s						
CBE				IAML		05 51 40.5	
	comp=E,91nm,0.5s						
MAGL	**Barre de l'ile**	**5.66**	**109**	Pn	**Pn**	**05 50 31.8**	**+0.1**
DSLB	**Salisbury**	**5.74**	**114**	*e*P	**Pn**	**05 50 33.2**	**+0.4**
BIM	**Bigot**	**6.48**	**120**	Pn	**Pn**	**05 50 42.6**	**-0.4**
BIM	**Bigot**	**6.48**	**120**	*e*P	**Pn**	**05 50 44.3**	**+1.3**
BIM	**Bigot**	**6.48**	**120**	*e*S	**Sn**	**05 51 55.6**	**-1.4**
MPOM	**Morne Pois Mar**	**6.69**	**120**	Pn	**Pn**	**05 50 46.6**	**+0.8**
SDV	**Santo Domingo**	**9.68**	**203**	Pn	**Pn**	**05 51 28.6**	**+1.5**
	comp=E,0.9nm,0.3s,baz=2.5,slow=9.9,SNR=3.5						
	comp=E,3.0nm,0.4s						
SDV	**Santo Domingo**	**9.68**	**203**	Pn	**Pn**	**05 51 27.0**	**0.0**
MTDJ	**Mount Denham**	**10.18**	**274**	Pn	**Pn**	**05 51 33.3**	**-0.5**
OTAV	**Otavalo**	**20.93**	**214**	P	**P**	**05 53 50.9**	**-0.1**
V55A	**Taylorsville**	**21.97**	**327**	P	**P**	**05 54 04.2**	**+2.7**
V55A				IAmb	IAmb	05 54 17.5	
	comp=Z,13nm,1.4s						
R58B	**Mineral**	**22.22**	**336**	P	**P**	**05 54 03.1**	**-1.1**
BLA	**Blacksburg**	**22.66**	**331**	P	**P**	**05 54 10.0**	**+1.0**
BLA				IAmb	IAmb	05 54 53.3	
	comp=Z,29nm,1.5s						
TKL	**Tuckaleechee C**	**23.22**	**323**	LR	LR	06 03 50.7	
	comp=Z,42nm,19.1s,baz=46,slow=38						
S54A	**Dingess, Beckl**	**23.55**	**330**	P	**P**	**05 54 17.0**	**-1.2**
S54A				IAmb	IAmb	05 54 36.6	
	comp=Z,13nm,1.3s						
UCCT	**U. Connecticut**	**24.27**	**350**	P	**P**	**05 54 22.6**	**-2.3**
P53A	**Whipple**	**24.96**	**333**	P	**P**	**05 54 29.8**	**-1.3**
K62A	**Royalston**	**25.12**	**351**	P	**P**	**05 54 32.2**	**-0.4**
TXAR	**Lajitas Array**	**35.48**	**296**	P	**P**	**05 56 05.8**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=109,slow=9.6,SNR=11						
	comp=Z,0.4nm,0.5s						
TXAR	**Lajitas Array**	**35.48**	**296**	P	**P**	**05 56 03.8**	**-0.7**
TX31	**Lajitas Ar. Si**	**35.48**	**296**	P	**P**	**05 56 04.5**	**0.0**
PB16	**IPOC Station P**	**36.09**	**184**	P	**P**	**05 56 09.9**	**-0.4**
PB16				IAmb	IAmb	05 56 43.7	
	comp=Z,5.3nm,1.4s						
PB10	**IPOC Station P**	**41.31**	**185**	P	**P**	**05 56 52.0**	**-1.4**
FCC	**Fort Churchill**	**45.43**	**340**	P	**P**	**05 57 26.5**	**+0.2**
YKA	**Yellowknife Ar**	**55.42**	**335**	P	**P**	**05 58 41.6**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=120,slow=6.0,SNR=13						
	comp=Z,0.4nm,0.5s						
YKA	**Yellowknife Ar**	**55.42**	**335**	P	**P**	**05 58 42.4**	**+0.5**
YKAW3	**Yellowknife Wh**	**55.46**	**335**	P	**P**	**05 58 42.0**	**-0.1**
YKAW3				IAmb	IAmb	05 58 57.2	
	comp=Z,3.5nm,1.4s						
ESDC	**Sonseca Array**	**58.05**	**54**	P	**P**	**05 59 02.7**	**+1.6**
	comp=Z,0.6nm,0.8s,baz=261,slow=5.6,SNR=4.7						
	comp=Z,0.6nm,0.8s						
G31M	**Satah River**	**64.87**	**336**	P	**P**	**05 59 47.4**	**+0.8**
G31M				IAmb	IAmb	06 00 23.1	
	comp=Z,3.3nm,1.4s						
INK	**Inuvik**	**64.94**	**338**	P	**P**	**05 59 47.7**	**+0.8**
INK				IAmb	IAmb	06 00 20.6	
	comp=Z,3.5nm,1.4s						
F30M	**Barrier River**	**65.61**	**337**	P	**P**	**05 59 51.5**	**+0.1**
H29M	**Whitestone**	**66.34**	**335**	P	**P**	**05 59 57.1**	**+1.0**
H29M				IAmb	IAmb	06 00 06.7	
	comp=Z,3.8nm,1.4s						
E29M	**Blow River**	**66.54**	**338**	P	**P**	**05 59 58.0**	**+0.6**
E29M				IAmb	IAmb	06 00 40.6	
	comp=Z,5.9nm,1.5s						
E25K	**Arctic Village**	**69.34**	**337**	P	**P**	**06 00 16.3**	**+1.2**
E25K				IAmb	IAmb	06 00 28.9	
	comp=Z,4.2nm,1.5s						
ILAR	**Eielson Array**	**69.74**	**333**	P	**P**	**06 00 17.8**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=92,slow=5.6,SNR=4.8						
	comp=Z,0.2nm,0.5s						
B21K	**Ikpikpuk River**	**72.61**	**338**	P	**P**	**06 00 35.9**	**+1.1**
B21K				IAmb	IAmb	06 00 49.5	
	comp=Z,4.1nm,1.4s						
D19K	**Kuna River**	**73.98**	**337**	P	**P**	**06 00 43.0**	**+0.1**
D19K				IAmb	IAmb	06 00 59.8	
	comp=Z,6.1nm,1.4s						

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*IDC **29** 06:25:59.6±11.0, 19°.19S×177°.84W, h605^{km}±106^{km}, mb3.2/4, mbtmp4.3/5, Error ellipse: s-maj=117.4km s-min=68.2km az=125.0*

ISC 29 06:25:51.2±2.6**, 19°.3S**±0°.8×**177°.1W**±0°.5**, h550**^{km}**, n7, σ0^{s}.97**/9**, mb3.9**/4**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**15.68**	**257**	P	**P**	**06 29 09.0**	**+1.3**
	4.8nm,0.6s,baz=108,slow=17,SNR=1.4						
STKA	**Stephens Creek**	**39.11**	**243**	P	**P**	**06 32 31.2**	**-0.4**
	1.0nm,0.4s,baz=77,slow=8.9,SNR=5.6						
	1.0nm,0.4s						
WRA	**Warramunga Arr**	**45.65**	**261**	P	**P**	**06 33 22.2**	**-0.9**
	1.7nm,0.3s,baz=98,slow=7.0,SNR=44						
WRA				PcP	**PcP**	**06 34 50.7**	**+0.8**
	0.3nm,0.5s,baz=103,slow=2.9,SNR=1.8						
	1.7nm,0.3s						
ASAR	**Alice Springs**	**45.66**	**255**	P	**P**	**06 33 22.7**	**-0.5**
	1.7nm,0.4s,baz=86,slow=8.4,SNR=101						
ASAR				PcP	**PcP**	**06 34 50.8**	**+0.9**
	0.6nm,0.6s,baz=106,slow=4.0,SNR=6.7						
	1.7nm,0.4s						
FITZ	**Fitzroy Crossi**	**54.07**	**261**	P	**P**	**06 34 24.8**	**-0.1**
	2.2nm,0.4s,baz=76,slow=4.2,SNR=2.8						
	2.2nm,0.4s						
BRTR	**Keskin Array B**	**146.66**	**314**	PKPbc	**PKiKP**	**06 44 33.0**	**-1.0**
	0.5nm,0.6s,baz=53,slow=2.7,SNR=2.1						
GERES	**GERESS Array B**	**149.26**	**346**	PKPbc	**PKiKP**	**06 44 39.4**	**+0.5**
	0.3nm,0.6s,baz=17,slow=5.7,SNR=4.3						

RSPR 29 06:28:43.5, 17°.90N×66°.86W, h6^{km}, 5C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.07**	**348**	⇓*e*P	Pg	06 28 45.5	+0.2
GBPR	**Guanica, Bosqu**	**0.07**	**348**	*e*S	Sg	06 28 46.9	+0.3
MLPR	**Magueyes Islan**	**0.18**	**291**	⇓*e*P	Pg	06 28 47.6	+0.3
MLPR	**Magueyes Islan**	**0.18**	**291**	*e*S	Sg	06 28 51.3	+1.6
CRPR	**Cabo Rojo, PR**	**0.26**	**294**	⇑*e*P	Pg	06 28 49.0	+0.4
CRPR	**Cabo Rojo, PR**	**0.26**	**294**	*e*S	Sg	06 28 53.0	+1.0
OBIP	**Obispado Ponce**	**0.28**	**60**	⇑*e*P	Pg	06 28 49.5	+0.4
OBIP	**Obispado Ponce**	**0.28**	**60**	*e*S	Sg	06 28 54.4	+1.5
LSP	**Las Mesas**	**0.34**	**322**	⇑*e*P	Pg	06 28 50.4	+0.1
AOPR	**Arecibo Observ**	**0.45**	**13**	⇑*e*P	Pg	06 28 52.0	-0.3
GCPR	**Guaynabo City**	**0.84**	**61**	⇑*e*P	Pg	06 28 59.6	-0.2

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*RSPR **29** 06:28:49.9, 17°.92N×66°.88W, h6^{km}, MD2.9/13*

*OSPL **29** 06:28:49.7±0.3, 17°.87N×66°.91W, h20^{km}±4^{km}, ML3.0, Presumed earthquake*

*NEIC **29** 06:28:49.0±0.9, 17°.86N±0°.02×66°.86W±0°.01, h9^{km}±9^{km}, ML3.4/24, Md2.9/13(RSPR), Error ellipse: s-maj=3.7km s-min=1.6km az=165.0*

ISC 29 06:28:48.9±1.0**, 17°.86N**±0°.05×**66°.85W**±0°.02**, h12**^{km}±7^{km}**, n58, σ0^{s}.84**/64**, 8C-6D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.12**	**344**		**Pg**	**06 28 51.6**	**-0.3**
GBPR	**Guanica, Bosqu**	**0.12**	**344**	⇓*e*P	**Pg**	**06 28 51.6**	**-0.3**
MLPR	**Magueyes Islan**	**0.22**	**299**	⇑*e*P	**Pg**	**06 28 53.6**	**+0.1**
MLPR	**Magueyes Islan**	**0.22**	**299**	*e*S	**Sg**	**06 28 56.5**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.29**	**300**		**Pg**	**06 28 54.7**	**-0.1**
CRPR					**Sg**	**06 28 58.6**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.29**	**300**	IAML		06 28 59.2	
	10μm,0.2s						
CRPR				IAML		06 29 01.1	
	9μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.29**	**300**	⇓*e*P	**Pg**	**06 28 55.0**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.29**	**300**	*e*S	**Sg**	**06 28 59.0**	**+0.3**
CRPR	**Cabo Rojo, PR**	**0.29**	**300**	*i* P	**Pg**	**06 28 54.9**	**+0.1**
CRPR				*e*S	**Sg**	**06 28 58.8**	**0.0**
CRPR				IAML		06 28 59.1	
	comp=Z,10μm,0.2s						
OBIP	**Obispado Ponce**	**0.29**	**52**		**Pb**	**06 28 55.8**	**-0.4**
OBIP	**Obispado Ponce**	**0.29**	**52**	⇓*e*P	**Pb**	**06 28 55.7**	**-0.4**
OBIP	**Obispado Ponce**	**0.29**	**52**	*e*S	**Sb**	**06 29 01.2**	**+0.2**
CELP	**Cerrillos**	**0.33**	**50**	Pg	**Pb**	**06 28 56.4**	**-0.4**
CELP				IAML		06 29 01.9	
	comp=Z,3μm,0.5s						
LSP	**Las Mesas**	**0.39**	**324**		**Pg**	**06 28 56.5**	**-0.2**
LSP					**Sg**	**06 29 01.7**	**-0.1**
LSP	**Las Mesas**	**0.39**	**324**	⇓*e*P	**Pg**	**06 28 56.5**	**-0.2**
LSP	**Las Mesas**	**0.39**	**324**	*e*S	**Sg**	**06 29 01.7**	**-0.1**
UUPR	**Utuado, UPR, P**	**0.41**	**17**	Pg	**Pg**	**06 28 57.2**	**+0.2**
PRSN	**Puerto Rico Se**	**0.45**	**321**	Pg	**Pg**	**06 28 57.6**	**-0.3**
PRSN	**Puerto Rico Se**	**0.45**	**321**		**Sg**	**06 29 04.0**	**+0.1**
PRSN	**Puerto Rico Se**	**0.45**	**321**	⇑*e*P	**Pg**	**06 28 57.6**	**-0.3**
PRSN	**Puerto Rico Se**	**0.45**	**321**	*e*S	**Sg**	**06 29 04.0**	**+0.1**
AOPR	**Arecibo Observ**	**0.49**	**10**		**Pg**	**06 28 58.3**	**-0.2**
AOPR					**Sg**	**06 29 04.8**	**-0.3**
AOPR				IAML		06 29 07.7	
	comp=N,5μm,0.3s						
AOPR	**Arecibo Observ**	**0.49**	**10**	⇑*e*P	**Pg**	**06 28 58.4**	**-0.2**
AOPR	**Arecibo Observ**	**0.49**	**10**	*e*S	**Sg**	**06 29 04.7**	**-0.4**
AOPR	**Arecibo Observ**	**0.49**	**10**	*e*P	**Pg**	**06 28 58.4**	**-0.1**
ECPR	**Experimental S**	**0.65**	**45**	Pg	**Pg**	**06 29 01.7**	**+0.2**
ECPR				IAML		06 29 12.6	
	comp=N,4μm,0.2s						
ECPR	**Experimental S**	**0.65**	**45**	⇓*e*P	**Pg**	**06 29 01.6**	**+0.2**
ECPR	**Experimental S**	**0.65**	**45**	*e*S	**Sg**	**06 29 10.7**	**+0.7**
AGPR	**Aguadilla, PR**	**0.65**	**337**		**Pg**	**06 29 01.0**	**-0.6**
AGPR				IAML		06 29 12.7	
	comp=N,1μm,0.3s						
AGPR				IAML		06 29 13.0	
	comp=N,1μm,0.4s						
AGPR	**Aguadilla, PR**	**0.65**	**337**	⇑*e*P	**Pg**	**06 29 01.1**	**-0.6**
AGPR	**Aguadilla, PR**	**0.65**	**337**	*e*S	**Sg**	**06 29 09.7**	**-0.6**
AGPR	**Aguadilla, PR**	**0.65**	**337**	*i* P	**Pg**	**06 29 01.1**	**-0.5**
AGPR				*e*S	**Sg**	**06 29 09.5**	**-0.7**
AGPR				IAML		06 29 12.3	
	comp=Z,766nm,0.3s						
EMPR	**Esperanza - Ma**	**0.68**	**26**	Pg	**Pb**	**06 29 02.6**	**-0.2**
EMPR				IAML		06 29 14.1	
	comp=Z,2μm,0.6s						
EMPR				IAML		06 29 15.0	
	comp=Z,2μm,0.5s						
EMPR	**Esperanza - Ma**	**0.68**	**26**		**Sb**	**06 29 11.9**	**-0.3**
EMPR	**Esperanza - Ma**	**0.68**	**26**	⇑*e*P	**Pb**	**06 29 02.5**	**-0.2**
EMPR	**Esperanza - Ma**	**0.68**	**26**	*e*S	**Sb**	**06 29 11.9**	**-0.3**
SJG	**San Juan**	**0.71**	**69**		**Pb**	**06 29 03.2**	**0.0**
SJG				IAML		06 29 14.5	
	comp=Z,837nm,0.3s						
SJG	**San Juan**	**0.71**	**69**	Pg	**Pb**	**06 29 03.0**	**-0.2**
SJG	**San Juan**	**0.71**	**69**	⇓*e*P	**Pb**	**06 29 03.2**	**0.0**
SJG	**San Juan**	**0.71**	**69**	*e*S	**Sb**	**06 29 13.8**	**+0.8**
SJG	**San Juan**	**0.71**	**69**	*e*P	**Pb**	**06 29 03.2**	**0.0**
SJG	**San Juan**	**0.71**	**69**	*i* P	**Pb**	**06 29 03.2**	**0.0**
SJG				*e*S	**Sb**	**06 29 13.4**	**+0.5**
SJG				IAML		06 29 14.5	
	comp=Z,646nm,0.3s						
IDE	**Isla Desecheo**	**0.79**	**311**		**Pg**	**06 29 03.6**	**-0.7**
IDE	**Isla Desecheo**	**0.79**	**311**	⇑*e*P	**Pg**	**06 29 03.6**	**-0.7**
GCPR	**Guaynabo City**	**0.85**	**58**		**Pg**	**06 29 05.4**	**+0.1**
GCPR					**Sg**	**06 29 16.5**	**0.0**
GCPR	**Guaynabo City**	**0.85**	**58**	⇑*e*P	**Pg**	**06 29 05.4**	**+0.1**
GCPR	**Guaynabo City**	**0.85**	**58**	*e*S	**Sg**	**06 29 16.9**	**+0.4**
HUMP	**Col San Antoni**	**0.99**	**74**		**Pg**	**06 29 07.9**	**-0.1**
HUMP					**Sb**	**06 29 21.8**	**+0.8**
HUMP	**Col San Antoni**	**0.99**	**74**	IAML		06 29 26.3	
	comp=Z,574nm,0.3s						
HUMP				IAML		06 29 26.8	
	comp=Z,555nm,0.2s						
HUMP	**Col San Antoni**	**0.99**	**74**	⇑*e*P	**Pg**	**06 29 07.9**	**-0.1**
HUMP	**Col San Antoni**	**0.99**	**74**	*e*S	**Sb**	**06 29 21.6**	**+0.5**
DR12	**Loma Pena Alta**	**2.58**	**291**		**Pn**	**06 29 32.9**	**+2.2**
SABA	**Saba**	**3.44**	**93**	Pn	**Pn**	**06 29 41.2**	**-1.3**
ANWB	**Willy Bob**	**4.83**	**92**	*e*P	**Pn**	**06 30 05.6**	**+4.1**
ATGZ	**Broadband at L**	**5.21**	**109**	*e*P	**Pn**	**06 30 07.0**	**+0.3**
ATGZ	**Broadband at L**	**5.21**	**109**	*e*S	**Sn**	**06 31 03.6**	**-3.1**
DSLB	**Salisbury**	**5.73**	**114**	*e*P	**Pn**	**06 30 12.3**	**-1.6**
BIM	**Bigot**	**6.47**	**120**	*e*S	**Sn**	**06 31 38.4**	**+0.4**

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*VAO **29** 06:32:57.9±1.4, 21°.94S×70°.22W, h10^{km}, mb4.3, Presumed earthquake*

*IDC **29** 06:33:39.7±1.8, 21°.06S×67°.30W, h177^{km}±16^{km}, mb3.7/8, mbtmp4.2/13, Error ellipse: s-maj=18.7km s-min=13.5km az=77.0*

*NEIC **29** 06:33:40.9±2.3, 21°.11S±0°.06×67°.57W±0°.09, h205^{km}±6^{km}, mb4.1/10, ML4.2(GUC), Error ellipse: s-maj=12.2km s-min=8.3km az=83.0*

*SCB **29** 06:33:41.2±1.5, 21°.09S×67°.48W, h185^{km}±12^{km}, MB5.5, ML4.3/3, Error ellipse: s-maj=5.8km s-min=3.0km az=0.0*

*GUC **29** 06:33:42.4±0.7, 21°.05S×67°.66W, h205^{km}±5^{km}, ML4.2*

ISC 29 06:33:40.0±0.6**, 21°.09S**±0°.04×**67°.50W**±0°.04**, h191**^{km}±6^{km}**, n127, σ1^{s}.57**/147**, mb3.9**/9**, 10C-3D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCB	**Mochara**	**1.75**	**95**	Pg	**Pn**	**06 34 17.5**	**+1.8**
MOCB				Sg	**Sn**	**06 34 43.7**	**+0.3**
MOCB				IAML		06 34 44.5	
	2μm,0.3s						
PB09	**IPOC Station P**	**1.77**	**246**		**Pn**	**06 34 18.1**	**+2.4**
PB09				Sn	**Sn**	**06 34 45.0**	**+1.6**
PB09	**IPOC Station P**	**1.77**	**246**	⇑*i*P	**Pn**	**06 34 18.0**	**+2.4**
PB09				*e*S	**Sn**	**06 34 44.9**	**+1.6**
PB09				IAML		06 34 48.1	
	comp=E,936nm,0.4s						
PB09	**IPOC Station P**	**1.77**	**246**	Pg	**Pn**	**06 34 17.7**	**+2.1**
PB08	**IPOC Station P**	**1.81**	**301**		**Pn**	**06 34 17.9**	**+1.5**
PB08				Sn	**Sn**	**06 34 45.3**	**+0.7**

PB08	IPOC Station P	1.81	301	⇓*i*P	Pn	06 34 17.9	+1.5
PB08				*e*S	Sn	06 34 45.1	+0.6
PB08				IAML		06 34 46.5	
	comp=N,622nm,0.5s						
PB08	IPOC Station P	1.81	301	Pg	Pn	06 34 18.2	+1.8
PB01	IPOC Station P	1.86	271		Pn	06 34 17.7	+1.3
PB01				Sn	Sn	06 34 44.7	-0.1
PB01	IPOC Station P	1.86	271	*e*P	Pn	06 34 17.5	+1.0
PB01				*e*S	Sn	06 34 44.9	+0.1
PB01				IAML		06 34 46.5	
	comp=N,943nm,0.3s						
PB01	IPOC Station P	1.86	271	Pg	Pn	06 34 17.9	+1.4
PB01				Sg	Sn	06 34 45.2	+0.4
PB01				IAML		06 34 46.6	
	comp=N,757nm,0.3s						
AF01	San Pedro de A	1.95	199		Pn	06 34 20.8	+3.1
AF01	San Pedro de A	1.95	199	*e*P	Pn	06 34 20.6	+2.9
GO01	Chusmiza	2.13	311		Pn	06 34 21.0	+1.2
GO01	Chusmiza	2.13	311	⇑*i*P	Pn	06 34 20.9	+1.2
GO01				*e*S	Sn	06 34 51.6	+0.9
GO01	Chusmiza	2.13	311	Pg	Pn	06 34 21.1	+1.3
YJA	Yavi	2.14	121	⇓*e*P	Pn	06 34 21.7	+2.0
PB02	IPOC Station P	2.25	264		Pn	06 34 21.9	+1.2
PB02				Sn	Sn	06 34 51.9	-0.3
PB02	IPOC Station P	2.25	264	*e*P	Pn	06 34 21.8	+1.2
PB02				*e*S	Sn	06 34 51.9	-0.3
PB02	IPOC Station P	2.25	264	Pg	Pn	06 34 22.1	+1.5
PB02				Sg	Sn	06 34 52.3	+0.1
PB02				IAML		06 34 52.8	
	comp=N,2µm,0.4s						
PB03	IPOC Station P	2.30	245		Pn	06 34 22.9	+1.7
PB03	IPOC Station P	2.30	245	⇑*i*P	Pn	06 34 22.9	+1.7
PB03				*e*S	Sn	06 34 53.7	+0.3
PB03				IAML		06 34 55.0	
	comp=N,2µm,0.4s						
PB07	IPOC Station P	2.31	254		Pn	06 34 23.0	+1.6
PB07	IPOC Station P	2.31	254	⇓*i*P	Pn	06 34 22.7	+1.3
PB07				*e*S	Sn	06 34 53.4	-0.2
PB07				IAML		06 34 54.1	
	comp=N,3µm,0.4s						
PB11	IPOC Station P	2.42	303		Pn	06 34 23.2	+0.6
PB11	IPOC Station P	2.42	303	⇑*i*P	Pn	06 34 23.2	+0.6
PB11				*e*S	Sn	06 34 54.7	-1.1
PB11	IPOC Station P	2.42	303	Pg	Pn	06 34 23.5	+0.9
PATCX	Punta Patache	2.49	276		Pn	06 34 24.3	+0.9
PATCX	Punta Patache	2.49	276	*e*P	Pn	06 34 24.2	+0.9
PATCX				*e*S	Sn	06 34 56.4	-0.7
PATCX				IAML		06 34 59.4	
	comp=N,882nm,0.2s						
PB06	IPOC Station P	2.50	230		Pn	06 34 25.2	+1.7
PB06	IPOC Station P	2.50	230	⇑*i*P	Pn	06 34 25.3	+1.7
PB06				*e*S	Sn	06 34 58.3	+0.8
PB06				IAML		06 34 59.8	
	comp=E,2µm,0.4s						
PB06	IPOC Station P	2.50	230	Pg	Pn	06 34 25.7	+2.2
SOEO	Opoqueri	2.54	352	Pg	Pn	06 34 26.3	+1.9
TA01	Diego Aracena	2.56	281		Pn	06 34 24.4	+0.4
TA01	Diego Aracena	2.56	281	*e*P	Pn	06 34 24.4	+0.4
TA01				*e*S	Sn	06 34 56.7	-1.6
TA01				IAML		06 34 58.2	
	comp=E,801nm,0.3s						
TA02	Huaiquique	2.60	288	*e*P	Pn	06 34 25.0	+0.6
TA02				*e*S	Sn	06 34 57.8	-1.2
AOVT	TarijaAcel	2.64	100	Pg	Pn	06 34 26.3	+1.1
PB05	IPOC Station P	3.06	235		Pn	06 34 31.5	+1.5
PB05	IPOC Station P	3.06	235	⇑*i*P	Pn	06 34 31.5	+1.5
PB05				*e*S	Sn	06 35 08.3	-0.8
PB05				IAML		06 35 10.7	
	comp=E,576nm,0.2s						
SALTA		3.29	161	*e*P	Pn	06 34 36.3	+3.1
PB16	IPOC Station P	3.33	325		Pn	06 34 35.4	+1.7
PB16	IPOC Station P	3.33	325	⇑*i*P	Pn	06 34 35.3	+1.5
PB16				*e*S	Sn	06 35 15.4	-0.4
PB16	IPOC Station P	3.33	325	Pg	Pn	06 34 35.5	+1.7
SOET	ToroToro	3.36	29	Pg	Pn	06 34 34.3	+0.3
AOEA	Aiquile	3.60	37	Pg	Pn	06 34 37.3	+0.5
PB12	IPOC Station P	3.63	312		Pn	06 34 36.0	-1.0
PB12	IPOC Station P	3.63	312	⇑*e*P	Pn	06 34 36.1	-0.9
PB10	IPOC Station P	3.71	229		Pn	06 34 38.6	+0.8
PB10	IPOC Station P	3.71	229	⇑*e*P	Pn	06 34 38.7	+0.9
AP01	Chacalluta	3.81	315		Pn	06 34 38.4	-0.6
AP01	Chacalluta	3.81	315	⇑*e*P	Pn	06 34 38.3	-0.8
PB18	Visviri	3.96	331		Pn	06 34 43.4	+1.9
BBOE	La Paz, Chanca	4.28	354	Pg	Pn	06 34 47.5	+1.9
PB14	IPOC Station P	4.42	217		Pn	06 34 47.8	+0.8
PB14	IPOC Station P	4.42	217	Pg	Pn	06 34 48.2	+1.2
GO02	Mina Guanaco	4.48	205		Pn	06 34 49.1	+1.2
BBOD	La Paz, Gloria	4.55	347	Pg	Pn	06 34 51.1	+2.1
LPAZ	La Paz	4.82	353	P	Pn	06 34 53.6	+1.1
	comp=E,70nm,0.3s,baz=153,slow=6.3,SNR=683						
LPAZ	La Paz	4.82	353		Pn	06 34 53.7	+1.2
LPAZ	La Paz	4.82	353	Pg	Pn	06 34 53.8	+1.3
BBOB	La Paz, Bander	4.96	353	Pg	Pn	06 34 55.2	+1.0
AC01	Pan de Azucar	5.78	209		Pn	06 35 03.9	-0.3
AC02	Maricunga	5.91	194		Pn	06 35 07.5	+1.2
GO03	Copiapo	6.93	201		Pn	06 35 18.3	-1.0
AC04	Llanos de Chal	7.79	204		Pn	06 35 27.9	-2.5
SIV	San Ignacio	7.93	51	P	Pn	06 35 30.0	-2.4
	comp=E,54nm,0.4s,baz=239,slow=9.8,SNR=441						
SIV				S	Sn	06 36 46.8	-15
	comp=E,4.0nm,0.4s,baz=255,slow=14,SNR=1.1						
AC05	El Transito	8.11	198		Pn	06 35 33.5	-1.3
LCO	Las Campanas	8.40	200		Pn	06 35 36.6	-2.1
CO01	Juntas del Tor	9.15	194		Pn	06 35 48.6	+0.1
PTLB	Pontes e Lacer	9.73	56		Pn	06 35 54.1	-1.8
PTLB	Pontes e Lacer	9.73	56	*e*P	Pn	06 35 53.3	-2.5
CO03	El Pedregal	10.12	196		Pn	06 35 59.9	-1.0
CO06	Fray Jorge	10.24	200	Pn	Pn	06 35 59.6	-2.8
ZON	Zonda	10.46	186		Pn	06 36 04.7	-0.6
CFA	Coronel Fontan	10.49	183	P	Pn	06 36 05.5	-0.2
	comp=E,6.9nm,0.3s,baz=357,slow=12,SNR=68						
CFA				S	Sn	06 37 55.8	-6.8
	comp=E,1.2nm,0.4s,baz=253,slow=19,SNR=2.0						
CO02	Combarbal	10.55	197	Pn	Pn	06 36 05.0	-1.4
CPUP	Villa Florida	10.68	121	P	Pn	06 36 09.6	+1.5
	comp=E,0.7nm,0.4s,baz=312,slow=11,SNR=6.0						
CPUP	Villa Florida	10.68	121	Pn	Pn	06 36 10.2	+2.1
VILB	Vilhena	10.69	42		Pn	06 36 08.3	-0.1
VILB	Vilhena	10.69	42	*e*P	Pn	06 36 04.3	-4.0
AQDB	Aquidauana	11.06	89		Pn	06 36 15.2	+2.2
AQDB	Aquidauana	11.06	89	*e*P	Pn	06 36 11.3	-1.7
VA03	San Esteban	11.94	193		Pn	06 36 24.8	+0.4
SALV	Santo Antonio	12.33	67	*e*P	Pn	06 36 31.2	+1.8
MT05	Renca	12.58	193	Pn	Pn	06 36 33.8	+1.4
MT09	Talagante	13.01	193		Pn	06 36 36.9	-1.0
MT01	Popeta	13.15	194	Pn	Pn	06 36 38.8	-0.7
BO01	Tunca	13.62	193		Pn	06 36 44.7	-0.8
PDRB	Porto dos Gac	13.98	49	*e*P	Pn	06 36 48.4	-1.8
PTGB	Pitanga	14.67	107	*e*P	Pn	06 36 55.5	-3.2
ML02	Panimavida	15.01	192	P	Pn	06 37 02.0	-0.7
BI02	San Fabin de	15.86	191	P	P	06 37 11.9	-1.0
BI02				IAmb	IAmb	06 37 17.4	
	comp=Z,6.1nm,0.7s						
TRQA	Tornquist	17.57	165		Pn	06 37 32.8	-0.5
TRQA				IAmb	IAmb	06 37 38.8	
	comp=Z,10nm,1.1s						
TEFE	Tefe	17.70	9	*e*P	P	06 37 20.9	-12
BB19B	Bebedouro	17.71	93	*e*P	P	06 37 33.2	-0.1
SNDB	Serra Nova Dou	17.98	62	*e*P	P	06 37 35.4	-0.8
NPGB	Novo Progresso	18.25	42	*e*P	P	06 37 38.3	-1.0
BDFB	Brasilia	19.27	77	P	P	06 37 47.9	-2.4
	comp=Z,1.3nm,0.5s,baz=249,slow=9.9,SNR=5.8						
BDFB	Brasilia	19.27	77	P	P	06 37 50.0	-0.3
BDFB				IAmb	IAmb	06 37 56.0	
	comp=Z,9.2nm,1.4s						
PLCA	Paso Flores	19.75	187	P	P	06 37 56.2	+1.0
	comp=Z,2.7nm,0.8s,baz=15,slow=11,SNR=9.7						
PLCA	Paso Flores	19.75	187	P	P	06 37 55.0	-0.3
PLCA				IAmb	IAmb	06 38 02.0	
	comp=Z,6.3nm,1.2s						
ITTB	Itaituba	20.18	36	*e*P	P	06 37 57.5	-2.5
COHC	Cochancay	21.77	327	P	P	06 38 14.0	-2.7
SMTB	Santa Maria do	22.72	61	*e*P	P	06 38 25.6	-0.1
JANB	Januaria	22.83	79	*e*P	P	06 38 26.4	-0.4
BOAV	Boa Vista	24.32	17	*e*P	P	06 38 30.9	-9.4
BELA	Belgrano 2	58.97	172	P	P	06 43 17.4	-1.4
BELA				IAmb	IAmb	06 43 23.6	
	comp=Z,3.4nm,1.4s						
TX31	Lajitas Ar. Si	61.06	324	P	P	06 43 33.1	-0.7
TX31				IAmb	IAmb	06 44 03.7	
	comp=Z,4.4nm,1.4s						
TXAR	Lajitas Array	61.06	324	P	P	06 43 35.0	+1.2
	comp=Z,0.5nm,0.6s,baz=150,slow=9.0,SNR=10						
	comp=Z,0.5nm,0.6s						
TXAR	Lajitas Array	61.06	324	P	P	06 43 33.5	-0.3
SNAA	Sanae	62.23	161	P	P	06 43 42.5	+1.5
	comp=Z,2.3nm,0.9s,baz=328,slow=5.5,SNR=7.6						
	comp=Z,2.3nm,0.9s						
SNAA	Sanae	62.23	161	P	P	06 43 39.1	-1.9
PDAR	Pinedale Array	74.43	329	P	P	06 44 58.8	+1.5
	comp=Z,0.6nm,0.4s,baz=124,slow=8.6,SNR=15						
	comp=Z,0.6nm,0.4s						
PDAR	Pinedale Array	74.43	329	P	P	06 44 57.7	+0.5
ULM	Lac du Bonnet	75.34	342	P	P	06 45 02.2	+0.3
	comp=Z,3.8nm,0.5s,baz=137,slow=7.7,SNR=5.1						
	comp=Z,3.8nm,0.5s						
ULM	Lac du Bonnet	75.34	342	P	P	06 45 00.9	-1.0
TORD	Torodi Ar. Bea	75.98	70	P	P	06 45 06.5	+0.1
	comp=Z,3.6nm,0.4s,baz=258,slow=4.8,SNR=20						
	comp=Z,3.6nm,0.4s						
NVAR	Mina Array Bea	75.99	321	P	P	06 45 08.7	+2.4
	comp=Z,0.3nm,0.5s,baz=170,slow=7.7,SNR=5.2						
	comp=Z,0.3nm,0.5s						
ESDC	Sonseca Array	84.63	44	P	P	06 45 53.5	+1.5
	comp=Z,0.9nm,0.9s,baz=259,slow=5.7,SNR=5.3						
	comp=Z,0.9nm,0.9s						
YKA	Yellowknife Ar	91.25	340	P	P	06 46 24.8	+1.8
	comp=Z,2.2nm,0.7s,baz=140,slow=3.7,SNR=43						
	comp=Z,2.2nm,0.7s						
ASAR	Alice Springs	130.87	206	PKP	PKiKP	06 52 31.1	+0.9
	comp=Z,1.4nm,0.8s,baz=130,slow=1.9,SNR=28						
WRA	Warramunga Arr	133.96	209	PKP	PKiKP	06 52 37.4	+0.9
	comp=Z,1.1nm,0.6s,baz=154,slow=1.9,SNR=7.5						
ZALV	Zalesovo Beam	141.02	26	PKhKP	PKPpre	06 52 45.0	
	comp=Z,1.3nm,0.5s,baz=354,slow=4.3,SNR=3.6						
ZALV				PKP	PKiKP	06 52 49.3	-0.5
	comp=Z,1.5nm,0.5s,baz=333,slow=1.7,SNR=6.8						
MKAR	Makanchi Array	144.53	37	PKP	PKPdf	06 52 54.4	+0.8
	comp=Z,3.7nm,0.4s,baz=346,slow=2.8,SNR=51						
HILR	Hailar Array B	151.02	350	PKPbc	PKiKP	06 53 12.2	+1.7
	comp=Z,2.6nm,0.4s,baz=130,slow=2.3,SNR=6.3						
USRK	Ussuriysk Ar.	151.85	329	PKPbc	PKiKP	06 53 14.1	+1.7
	comp=Z,2.0nm,0.6s,baz=85,slow=4.7,SNR=2.6						
MJAR	Matsushiro Arr	152.83	310	PKPbc	PKiKP	06 53 15.3	+0.6
	comp=Z,0.6nm,0.5s,baz=74,slow=1.8,SNR=2.9						
SONM	Songino Array	152.87	9	PKPbc	PKiKP	06 53 16.3	+1.7
	comp=Z,0.7nm,0.6s,baz=268,slow=1.7,SNR=4.0						

DJA ***29*** *06:34:24.5±0.2, 3°N±3°×12°4E±°, h402^{km}±2^{km}, M4.6/52, mb4.6/52, mB5.2/17, MLv4.8/19, Mw(mB)4.5/17, MwMwp5.0/2, Mwp5.3/2*
NEIC ***29*** *06:34:25.0±1.6, 3°.16N±0°.08×123°.82E±0°.09, h409^{km}±10^{km}, mb4.5/32, Error ellipse: s-maj=12.5km s-min=11.1km az=84.0*
IDC ***29*** *06:34:26.8±1.8, 2°.99N×123°.69E, h434^{km}±22^{km}, mb3.8/8, mbtmp4.7/10, Error ellipse: s-maj=31.8km s-min=9.5km az=72.0*
ISC 29 06:34:24.5±0.4**, 3°.11N**±0°.05×**123°.86E**±0°.06**, h400**^{km}**, n123, σ1**^{s}**29**/130**, mb4.4**/30**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.76	71	P	Pn	06 35 19.4	+0.4
SGSI				S	S	06 36 03.1	+0.1
KMSI	Cibinong	2.52	177	P	Pn	06 35 24.9	+0.9
KMSI				S	S	06 36 14.2	+2.1
GTOI	Gorontalo	2.60	199	P	Pn	06 35 25.4	+0.8
GTOI				S	S	06 36 13.2	0.0
MRSI	Marisa	3.25	216	P	Pn	06 35 31.5	+1.7
TOLI2	Tolitoli	3.67	237		Pn	06 35 34.8	+1.3
GAMI	Galela, Maluku	4.12	108	P	Pn	06 35 38.0	+0.2
TNTI	Ternate	4.20	124		Pn	06 35 39.9	+1.4
TNTI	Ternate	4.20	124	P	Pn	06 35 39.4	+0.9
LUWI	Luwuk	4.27	195	Pn	Pn	06 35 40.0	+0.8
LUWI	Luwuk	4.27	195	P	Pn	06 35 39.5	+0.3
DAV	Davao City (W)	4.29	23		Pn	06 35 40.0	+0.6
APSI	Ampana	4.57	209	P	Pn	06 35 43.3	+1.1
MPSI	Mapaga	4.83	235	P	Pn	06 35 45.6	+0.8
SANI	Sanana	5.55	157	P	Pn	06 35 51.1	-1.2
PCI	Palu	5.67	225	P	Pn	06 35 53.8	+0.2
NLAI	Namlea	7.09	153	P	P	06 36 11.2	+1.4
	0.7nm123nm,0.6s						
TTSI	Tana Toraja	7.33	213	P	P	06 36 13.6	+1.1
	0.4nm1µm125nm,1.0s						
MMSI	Mamuju	7.60	221	P	Pn	06 36 14.9	-0.1
	0.3nm75nm,0.5s						
KRAI	Karang Ratu	7.83	145	P	P	06 36 20.3	+2.2
	4µm239nm,0.8s						
AAI	Ambon	8.02	147	P	P	06 36 22.0	+1.8
SPSI	Sidrap Palu	8.13	210	P	P	06 36 21.9	+0.5
	7µm237nm,0.7s						
KKM	Kota Kinabalu	8.16	291		P	06 36 22.3	+0.5
KKM	Kota Kinabalu	8.16	291	P	Pn	06 36 21.2	-0.3
	63nm,0.8s						
MSAI	Masohi	8.17	142	P	P	06 36 24.2	+2.3
PMSI	Majene	8.22	217	P	P	06 36 23.5	+1.1
	65nm,0.7s						
SWI	Sorong	8.38	118	P	P	06 36 24.8	+0.6
	1µm68nm,1.1s						
SIJI	Sorong	8.39	118	P	P	06 36 25.3	+1.0
	56nm,0.9s						
KAPI	Kappang	9.06	207		P	06 36 32.9	+1.2
KAPI	Kappang	9.06	207	P	P	06 36 32.6	+0.9
	45nm,1.0s						
BKSI	Bulukumba	9.18	204	P	Pn	06 36 34.1	+1.1
	92nm,1.1s						
MKS	Makassar	9.37	208	P	Pn	06 36 36.5	+1.2
	93nm,1.1s						
BNDI	Bandanaira	9.69	141	P	Pn	06 36 40.4	+1.4
BSSI	Bau Bau, Buton	9.79	200	P	Pn	06 36 41.1	+0.9
	67nm,1.1s						
MTKI	Muara Teweh, K	9.83	246	P	Pn	06 36 41.5	+0.9
	88nm,0.6s						
FAKI	Fak Fak	10.30	125		Pn	06 36 46.7	+0.6
FAKI	Fak Fak	10.30	125	P	Pn	06 36 46.5	+0.4
	1µm150nm,0.8s						
SBUM	Sibu	11.65	267	P	P	06 37 01.1	+0.7
SBUM	Sibu	11.65	267	P	P	06 37 01.4	+1.0
EDFI	Ende, Flores	11.98	190	P	Pn	06 37 07.6	+1.9
SOEI	Soe	12.79	178	P	Pn	06 37 14.8	-0.2
	43nm,0.9s						
BATI	Baumata	13.23	181	P	P	06 37 19.0	+1.2
	110nm,0.5s,baz=29,slow=1.7,SNR=15						
BATI				S	S	06 39 42.0	+0.7
	71nm,0.6s,baz=132,slow=17,SNR=5.4						
BATI	Baumata	13.23	181	P	P	06 37 19.0	+1.2
PLAI	Plampang	13.32	207	P	Pn	06 37 20.8	-0.3
	52nm,0.8s						
WBSI	Waikabubak, Su	13.43	199	P	Pn	06 37 21.7	-0.7
	98nm,0.9s						
TWSI	Taliwang, Sumb	13.68	211	P	Pn	06 37 24.4	-0.8
	45nm,0.9s						
KLNI	Mataram	13.83	214	P	Pn	06 37 26.8	-0.2
KHKI	Kahang-Kahang	14.06	216	P	P	06 37 28.3	+1.4
	49nm,0.7s						
SRBI	Singaraja	14.08	218	P	P	06 37 27.7	+0.7
	75nm,1.0s						
KMMI	Kalianget	14.12	224	P	P	06 37 29.5	+1.9
	61nm,0.8s						
ABJI	Asem Bagus	14.48	222	P	P	06 37 33.6	+2.2
	81nm,0.9s						
RTBI	Rangdo, Negare	14.54	218	P	P	06 37 34.3	+2.2
	126nm,0.9s						
IGBI	Denpasar	14.70	216	P	P	06 37 34.6	+0.8
BYJI	Banyuwangi	14.72	220	P	P	06 37 35.6	+1.6
	219nm,1.1s						
BLJI	Banyuglugur	14.88	223	P	P	06 37 37.0	+1.3
JAGI	Jajag, Banyuwa	15.04	220	P	P	06 37 40.0	+2.5
	76nm,0.7s						
GMJI	Gumukmas	15.36	223	P	P	06 37 43.3	+2.4
	32nm,0.7s						
SMPI	Sarmi	15.68	109	P	P	06 37 45.9	+1.4
	55nm,0.8s						
NGJI	Ngawi	16.17	230	P	P	06 37 51.0	+1.3
	58nm,0.8s						
SJI	Sawahan	16.18	228	P	P	06 37 50.6	+0.7
	3µm34nm,1.1s						
SNJI	Sawahan-Nganju	16.22	228	P	P	06 37 52.7	+2.3
	40nm,0.7s						
PCJI	Pacitan	16.92	228	P	P	06 37 58.1	+0.4
	41nm,0.8s						
TPI	Tanjungpandan	17.22	250	P	P	06 38 00.9	0.0
	15nm,0.6s						
MTN	Manton Dam	17.42	156		P	06 38 03.0	0.0
JAY	Jayapura	17.74	108	P	P	06 38 08.8	+2.4
	14nm,0.4s,baz=224,slow=14,SNR=12						
JAY	Jayapura	17.74	108	P	P	06 38 08.5	+2.1
	14nm,0.5s						
KPJI	Karang Pucung	18.16	235	P	P	06 38 11.3	+0.5
LEM	Lembang	18.99	239	P	P	06 38 20.3	+0.6
KNRA	Kununurra	19.29	166		P	06 38 21.3	-1.1
BBJI	Bungbulang	19.29	237	P	P	06 38 21.3	-1.2
	77nm,0.8s						
DBJI	Dramaga	19.60	241	P	P	06 38 26.2	+0.8
	41nm,0.8s						
DSRI	Dabo	19.61	260	P	P	06 38 25.3	-0.2
	26nm,1.1s						
CNJI	Cibinong	19.65	238	P	P	06 38 24.6	-1.2
	37nm,1.0s						
BTDF	Bukit Timah Da	20.15	265	P	P	06 38 30.9	+0.4
TPUB	Ta-pu	20.31	351	P	P	06 38 31.4	-0.4
KLSI		20.63	248	P	P	06 38 34.9	+0.1
	25nm,0.7s						
MDSI	Maura Dua	21.07	249	P	P	06 38 38.9	+0.1
FITZ	Fitzroy Crossi	21.15	175	P	P	06 38 39.2	-0.3
	14nm,0.3s,baz=358,slow=6.4,SNR=136						
	14nm,0.3s						
FITZ	Fitzroy Crossi	21.15	175	P	P	06 38 39.4	-0.1
KASI	Kota Agung	21.16	246	P	P	06 38 39.6	-0.1
	30nm,1.2s						
MBWA	Marble Bar	24.46	189	P	P	06 39 08.9	-0.5
MBWA				IAmb	IAmb	06 39 51.9	
	comp=Z,34nm,1.4s						
PSA00	Pilbara Seismi	24.85	189	P	P	06 39 12.0	-0.9
PSA00				IAmb	IAmb	06 39 47.0	
	comp=Z,19nm,1.1s						
WB0	Warramunga Arr	24.98	156	P	P	06 39 12.6	-1.5
WRAB	Tennant Creek	25.11	156	P	P	06 39 14.0	-1.3
WRAB				IAmb	IAmb	06 39 15.2	
	comp=Z,18nm,0.7s						
WRA	Warramunga Arr	25.12	156	P	P	06 39 13.9	-1.4
	comp=Z,9.4nm,0.4s,baz=336,slow=9.8,SNR=258						
WRA				S	S	06 43 04.7	-5.6
	comp=Z,1.5nm,0.9s,baz=327,slow=18,SNR=3.2						
	comp=Z,9.4nm,0.4s						
WRA	Warramunga Arr	25.12	156	P	P	06 39 12.9	-2.4
WR8	Warramunga Arr	25.19	156	P	P	06 39 14.7	-1.3
WR8				IAmb	IAmb	06 39 16.1	
	comp=Z,14nm,0.9s						
COEN	Coen	25.58	132	P	P	06 39 18.0	-1.5
GSI	Gunungsitoli	26.33	267	P	P	06 39 24.8	-1.4
GSI				IAmb	IAmb	06 39 25.5	
	comp=Z,15nm,0.7s						
GSI	Gunungsitoli	26.33	267	P	P	06 39 24.3	-1.9
AS31	Alice Springs	28.36	160	P	P	06 39 43.3	-0.7
ASAR	Alice Springs	28.36	160	P	P	06 39 43.2	-0.7
	comp=Z,8.1nm,0.5s,baz=336,slow=8.0,SNR=261						
ASAR				S	S	06 43 57.8	-3.4
	comp=Z,1.5nm,0.8s,baz=348,slow=20,SNR=6.9						
ASAR				ScP	ScP	06 45 44.5	-3.1
	comp=Z,0.8nm,0.6s,baz=321,slow=1.5,SNR=5.9						
	comp=Z,8.1nm,0.5s						
ASAR	Alice Springs	28.36	160	P	P	06 39 43.5	-0.4
NJ2	Nanjing	29.17	351	*e*P	P	06 39 51.5	+0.6
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
JCJ	Chichijima	29.60	35	P	P	06 39 53.7	-1.1
PZH	PanZhiHua	31.47	320	P	P	06 40 12.3	+1.0
CTAO	Charters Tower	31.86	137	P	P	06 40 14.9	+0.3
CTAO				IAmb	IAmb	06 40 57.2	
	comp=Z,25nm,1.5s						
JMN	Monobe	31.86	16	P	P	06 40 14.2	-0.2
MORW	Morawa	32.87	193	P	P	06 40 22.3	-0.8
MORW				IAmb	IAmb	06 41 03.9	
	comp=Z,28nm,1.4s						
FORT	Forrest	33.94	174	P	P	06 40 31.8	-0.4
FORT				IAmb	IAmb	06 40 32.6	
	comp=Z,10nm,0.7s						
INKA	Innaminka	34.72	153	P	P	06 40 38.9	0.0
BBOO	Buckleboo	37.55	163	P	P	06 41 02.1	-0.3
BBOO				IAmb	IAmb	06 41 03.0	
	comp=Z,17nm,0.7s						
LZH	Lanzhou	37.66	333	*e*P	P	06 41 05.0	+1.4
LZH				pmax	pmax		
	comp=Z,18nm,1.5s						
STKA	Stephens Creek	38.66	155	P	P	06 41 11.8	+0.2
	comp=Z,19nm,0.7s,baz=328,slow=8.4,SNR=42						
	comp=Z,19nm,0.7s						
STKA	Stephens Creek	38.66	155	P	P	06 41 11.8	+0.2
EIDS	Eidsvold	38.71	139	P	P	06 41 11.8	-0.3
EIDS				IAmb	IAmb	06 41 12.1	
	comp=Z,20nm,1.1s						
HHC	Hu-ho-hao-te	39.17	345	*e*P	P	06 41 16.5	+0.7
HHC				pmax	pmax		
	comp=Z,16nm,0.7s						
XLT	XiLinHaoTe	41.20	351	*e*P	P	06 41 32.3	+0.2
XLT				sP	sP	06 43 37.5	+4.6
XLT				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA	Gaotai	42.22	332	*e*P	P	06 41 40.8	+0.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
ARMA	Armidale	42.60	144	P	P	06 41 45.1	+1.5
ARMA				IAmb	IAmb	06 41 45.6	
	comp=Z,12nm,0.7s						
MGBR	Mount Gambier	43.49	161	P	P	06 41 50.9	+0.6
MGBR				IAmb	IAmb	06 42 30.2	
	comp=Z,43nm,1.3s						
JKA	Kamikawa-asahi	44.07	19	P	P	06 41 54.9	+0.1
JKA				IAmb	IAmb	06 42 20.6	
	comp=Z,43nm,1.3s						
CAN	Canberra	44.91	151	P	P	06 42 02.7	+1.1
CAN				IAmb	IAmb	06 42 03.1	
	comp=Z,17nm,0.6s						
TOO	Toolangi	45.19	156	P	P	06 42 04.8	+1.1
HILR	Hailar Array B	46.41	356	P	P	06 42 13.8	+0.9
	comp=Z,3.2nm,0.5s,baz=184,slow=11,SNR=7.0						
	comp=Z,3.2nm,0.5s						
SONM	Songino Array	47.03	344	P	P	06 42 17.8	0.0
	comp=Z,1.0nm,0.6s,baz=157,slow=8.0,SNR=4.2						
	comp=Z,1.0nm,0.6s						
DZM	Mont Dzumac	48.56	123	P	P	06 42 30.6	+0.8
DZM				IAmb	IAmb	06 43 08.1	
	comp=Z,38nm,1.3s						
MKAR	Makanchi Array	56.46	327	P	P	06 43 25.4	-1.0
	comp=Z,0.8nm,0.6s,baz=124,slow=7.6,SNR=11						
	comp=Z,0.8nm,0.6s						
THZ	Tophouse	63.01	141	P	P	06 44 10.4	-0.2
THZ				IAmb	IAmb	06 44 20.4	
	comp=Z,16nm,1.0s						
RTZ	Ruatahuna	64.15	136	P	P	06 44 17.6	-0.5
TIXI	Tiksi	68.52	2	P	P	06 44 44.8	+0.1
	comp=Z,1.9nm,0.4s,baz=162,slow=3.4,SNR=1.5						
	comp=Z,1.9nm,0.4s						
AB31	Akbulak array	70.83	321	P	P	06 44 57.7	-1.4
ABKAR	Akbulak array	70.83	321	P	P	06 44 57.6	-1.5
VNDA	Vanda	83.19	172	P	P	06 46 05.8	-0.7

ISU ***29*** *06:47:44, 40°.56N×72°.66E, h8^{km}*
KRNET ***29*** *06:47:46.4±0.1, 40°.51N×72°.66E, h15^{km}, mb2.6*
SOME ***29*** *06:47:46.0, 40°.47N×72°.65E, h10^{km}*
NNC ***29*** *06:47:48.1±3.3, 40°.57N×72°.64E, h0^{km}, mb3.1, mpv2.9, Error ellipse: s-maj=25.3km s-min=10.8km az=168.0*
ISC 29 06:47:45.2±1.2**, 40°.50N**±0°.03×**72°.70E**±0°.03**, h3**^{km}±11^{km}**, n21, σ0**^{s}**87**/36**, 17C-7D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSTA	Tashata	0.19	293	P	Pg	06 47 47.6	-1.3
TSTA				S	Sg	06 47 50.0	-1.3
FRG	Fergana	0.71	260	S	Sg	06 48 09.4	+1.3
SFK	Sufi-Kurgan	0.78	128	⇑*i*P	Pb	06 48 01.9	+0.3
SFK				⇑*i*S	Sb	06 48 13.6	+0.8
ARSB	Arslanbob	0.85	14	⇑*e*P	Pb	06 48 02.7	0.0
ARSB				⇑*e*S	Sb	06 48 14.7	+0.2
SALK	Salom-Alik	0.93	66	⇑*e*P	Pn	06 48 04.5	-0.9
SALK				⇑*e*S	Sn	06 48 18.0	-1.4
CHMI	Chimion	0.93	256	P	Pg	06 48 02.8	-0.3
CHMI				S	Sb	06 48 16.4	-0.5
DRK	Karamyk	1.24	214	⇑*e*P	Pn	06 48 09.6	-0.1
DRK				⇑*e*S	Sn	06 48 26.4	-0.7
ARK	Arkit	1.41	337	⇑*i*P	Pg	06 48 12.9	+0.7
ARK				⇑*i*S	Sn	06 48 31.6	+0.5
BTK	Batken	1.51	253	⇑*e*P	Pb	06 48 14.0	+0.1
BTK				⇑*e*S	Sg	06 48 34.8	+1.1
CHDK	Chadak	1.56	288	P	Pg	06 48 15.2	+0.2
CHDK				S	Sg	06 48 36.2	+1.0
ARLS	Aral	1.82	41	⇑*i*P	Pg	06 48 20.7	+0.5
ARLS				⇑*i*S	Sg	06 48 45.3	+1.5

MNAS	Manas	1.99	356	⇑iP	Pg	06 48 23.2	-0.1
MNAS				⇑iS	Sg	06 48 49.5	+0.4
UCH	Uchtor	2.20	38	⇓eP	Pg	06 48 26.8	-0.5
UCH				⇓iS	Sg	06 48 55.8	0.0
MRKS	Merke	2.27	10	Pg	Pg	06 48 28.4	-0.4
	12nm,0.4s						
MRKS				Lg	Lg	06 49 00.3	
	30nm,0.5s						
MRKS	Merke	2.27	10	eP	Pg	06 48 28.3	-0.4
	12nm,0.3s						
MRKS				eS	Sg	06 48 59.5	+1.3
	30nm,0.5s						
EKS2	Erkin-Say	2.30	20	⇓eP	Pb	06 48 27.9	+0.4
EKS2				⇓iS	Sg	06 48 57.6	-1.5
AAK	Ala-Archa	2.52	32	⇓Pg	Pg	06 48 33.6	+0.1
	1.5nm,0.5s						
AAK				⇑Lg	Lg	06 49 07.5	
	8.2nm,0.8s						
IUG	Iuzhnay	2.60	310	Pg	Pb	06 48 33.0	+0.5
	8.3nm,0.2s						
IUG				Lg	Lg	06 49 07.9	
	22nm,0.4s						
KK31	Karatay Array	3.07	328	⇓Pg	Pg	06 48 43.3	-0.7
	0.7nm,0.5s,baz=148,slow=15,SNR=5.2						
KK31				⇓Lg	Lg	06 49 22.4	
	0.7nm,0.3s,baz=142,slow=23,SNR=5.5						
BRLS	Borolday	3.31	321	Pg	Pb	06 48 44.3	-0.3
	0.4nm,0.2s						
BRLS				Lg	Lg	06 49 27.3	
	2.2nm,0.3s						
BRLS	Borolday	3.31	321	eP	Pb	06 48 44.3	-0.3
	0.2nm,0.2s						
BRLS				eS	Sb	06 49 27.2	+1.8
	2.8nm,0.3s						

IDC 29 06:52:49.6±1.1,51°.97N×74°.27E,h0^{km},mbtmp2.6/3, ML1.8/2,Error ellipse: s-maj=30.4km s-min=8.5km az=30.0,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BVAR	Borovoye Array	2.59	295	Pn	Pn	06 53 32.5	-0.3
	0.1nm,0.3s,baz=108,slow=9.3,SNR=11						
BVAR				Pg	Pb	06 53 36.1	-0.9
	0.1nm,0.3s,baz=108,slow=14,SNR=12						
BVAR				Sn	Sn	06 54 06.5	+1.5
	0.2nm,0.3s,baz=116,slow=26,SNR=14						
BVAR				Lg	Lg	06 54 09.9	
	0.2nm,0.3s,baz=116,slow=28,SNR=8.4						
BVAR				Rg	Rg	06 54 30.8	
	5.4nm,1.0s,baz=132,slow=29,SNR=5.9						
	2.7nm,0.8s						
I46RU	ZALESOVO INFRA	6.68	69	I	I	07 30 50.0	
	baz=255,slow=305,SNR=3.9						
ZALV	Zalesovo Beam	6.68	69	Pn	Pn	06 54 28.8	0.0
	0.6nm,0.6s,baz=259,slow=16,SNR=4.0						
ZALV				Sn	Sn	06 55 44.5	-1.1
	0.1nm,0.3s,baz=262,slow=22,SNR=3.1						
MKAR	Makanchi Array	7.37	132	Pn	Pn	06 54 37.8	-0.6
	baz=350,slow=16,SNR=2.2						
MKAR				Sn	Sn	06 56 01.0	-1.6
	baz=313,slow=23,SNR=2.4						
MKAR				Lg	Lg	06 56 36.6	
	0.1nm,0.3s,baz=321,slow=25,SNR=6.2						
	0.3nm,0.7s						

IDC 29 07:07:13.7±2.4,55°.50S×27°.40W,h0^{km},mb3.9/2, mbtmp4.0/3,ML4.3/1,Error ellipse: s-maj=130.1km s-min=29.5km az=62.0

ISC 29 07:07:19.0±2.1,56°.0S±0°.4×28°.8W±0°.6,h10^{km},n8,σ0^s.39/8, 4D,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA3	Neumayer Olymp	17.31	159	⇓P	P	07 11 22.2	+0.4
	comp=Z,3.9nm,0.7s						
VNA2	Neumayer--Watz	17.55	157	⇓P	P	07 11 24.9	+0.5
	comp=Z,2.0nm,0.5s,baz=315,slow=11						
SNAA	Sanae	19.12	155	⇓P	P	07 11 42.0	+0.2
	comp=Z,78nm,0.4s						
SNAA	Sanae	19.12	155	P	P	07 11 41.7	-0.1
	comp=Z,1.0nm,0.3s,baz=313,slow=12,SNR=44						
	comp=Z,3.2nm,0.4s						
TROLL	Troll, Antarti	20.66	153	⇓P	P	07 11 58.2	-0.4
	comp=Z,307nm,0.6s						
VNDA	Vanda	46.53	183	P	P	07 15 45.6	-0.2
	comp=Z,1.2nm,0.9s,baz=184,slow=9.5,SNR=4.9						
	comp=Z,1.2nm,0.9s						
LPAZ	La Paz	49.64	307	P	P	07 16 11.4	+0.1
	comp=Z,1.0nm,0.6s,baz=172,slow=6.7,SNR=2.2						
	comp=Z,1.0nm,0.6s						
ILAR	Eielson Array	149.44	312	PKPbc	PKPdf	07 27 02.2	0.0
	comp=Z,0.8nm,0.6s,baz=122,slow=3.1,SNR=10						

SSNC 29 07:42:28.8±1.2,18°.44N×73°.44W,h13^{km}±11^{km},MD3.5, ML2.3

OSPL 29 07:42:30.7±1.2,18°.62N×73°.45W,h5^{km}±6^{km},ML2.5, Presumed earthquake

ISC 29 07:42:29.8±2.9,18°.5N±0°.1×73°.56W±0°.08,h25^{km}±28^{km}, n13,σ0^s.46/19,Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASC	Masc	1.76	339	eP	Pn	07 42 58.7	0.0
MASC				eS	Sn	07 43 19.8	-0.5
MASC				IAML		07 43 20.3	
	comp=E,29nm,0.4s						
MASC				IAML		07 43 20.7	
	comp=N,18nm,0.4s						
MASC	Masc	1.76	339	i P	Pn	07 42 59.1	+0.3
MASC				eS	Sn	07 43 20.4	0.0
MASC				IAML		07 43 22.2	
	comp=Z,39nm,3.3s						
LOBH	Bahia de las A	1.94	110	i P	Pn	07 43 01.1	-0.1
LOBH				eS	Sn	07 43 24.9	0.0
LOBH				IAML		07 43 27.7	
	comp=Z,44nm,2.1s						
LODU1	El Espartillar	1.99	95	i P	Pn	07 43 02.3	+0.4
LODU1				IAML		07 43 31.0	
	comp=Z,47nm,1.9s						
LONE3	El Aguacate, B	2.00	87	i P	Pn	07 43 02.0	-0.1
GTBY	Guantanamo Bay	2.02	314	eP	Pn	07 43 02.9	+0.5
GTBY				eS	Sn	07 43 26.9	0.0
GTBY				IAML		07 43 33.0	
	comp=Z,21nm,0.4s						
GTBY				IAML		07 43 33.9	
	comp=Z,21nm,0.2s						
GTBY	Guantanamo Bay	2.02	314	i P	Pn	07 43 03.2	+0.9
GTBY				IAML		07 43 34.2	
	comp=Z,19nm,1.1s						
QMBU	Quimbuelo	2.04	325	eP	Pn	07 43 02.0	-0.7
QMBU				IAML		07 43 28.7	
	comp=N,13nm,0.3s						
QMBU				IAML		07 43 32.8	
	comp=E,18nm,0.2s						
NMDO	Nuevo Mundo	2.43	327	eP	Pn	07 43 08.4	+0.5
NMDO				IAML		07 43 42.1	
	comp=E,13nm,0.3s						
NMDO				IAML		07 43 42.6	
	comp=N,5.5nm,0.2s						
RCC	Rio Carpintero	2.49	306	eP	Pn	07 43 08.5	-0.3
RCC				eS	Sn	07 43 39.0	+0.5
RCC				eSg	Sb	07 43 44.1	0.0
RCC				IAML		07 43 46.3	
	comp=N,13nm,0.2s						
RCC				IAML		07 43 46.6	
	comp=E,8.6nm,0.2s						
MOAC	Moa	2.50	328	eP	Pn	07 43 08.9	0.0
MARVS	Santiago de Cu	2.65	304	eP	Pn	07 43 10.7	-0.3
PINC	Pinares de May	2.87	313	eP	Pn	07 43 13.4	-0.6

IDC 29 08:07:15.2±17.0,35°.69N×23°.49E,h0^{km},mb3.7/5, mbtmp3.7/5,Error ellipse: s-maj=339.3km s-min=40.7km az=28.0

THE 29 08:07:15.6,35°N±8°×2°3E±°,h4^{km}±13^{km},M3.0/7, MLh3.0/7

ATH 29 08:07:18.1,35°.14N×23°.25E,h11^{km}±2^{km},ML2.8/8, Manual Solution by F.Xalaris First location: 2019/12/29 08:08:35, This location: 2019/12/29 08:18:43 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km

ISC 29 08:07:16.2±1.8,35°.06N±0°.08×23°.13E±0°.06,h32^{km}±12^{km}, n28,σ1^s.64/36,mb3.7/5,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMMV	Iera Moni Meta	0.80	60	P	Pn	08 07 32.5	+1.2
IMMV				S	Sn	08 07 44.7	+2.5
IMMV	Iera Moni Meta	0.80	60	P	Pb	08 07 31.3	-0.4
IMMV				S	Sb	08 07 40.5	-1.7
GVD	Gavdhos	0.81	105	P	Pn	08 07 32.6	+1.2
GVD				S	Sn	08 07 46.8	+4.4
GVD	Gavdhos	0.81	105	P	Pn	08 07 32.5	+1.0
GVD				S	Sn	08 07 42.8	+0.4
CHNB	Souda	0.88	60	P	Pn	08 07 33.1	+0.8
CHNB				S	Sb	08 07 42.3	-2.0
KTHA	Kythira Island	1.20	357	P	Pn	08 07 37.2	+0.4
NPS1	Neapolis Lacon	1.45	358	P	Pb	08 07 43.5	+0.9
IDI	Anoyia	1.46	80	P	Pb	08 07 43.2	+0.5
IDI				S	Sb	08 08 03.6	+2.6
IDI	Anoyia	1.46	80	P	Pb	08 07 43.0	+0.3
IDI				S	Sb	08 08 01.1	+0.2
MNVA	Monemvasia	1.63	357	P	Pb	08 07 46.5	+0.9
VLI	Veliai	1.67	355	P	Pn	08 07 43.7	+0.6
VLI				S	Sb	08 08 06.7	-0.1
VLI	Veliai	1.67	355	P	Pb	08 07 46.3	+0.1
MHLO	Agia Marina, M	1.93	32	P	Pb	08 07 49.2	-1.5
NPS	Neapolis	2.04	84	P	Pb	08 07 51.7	-0.9
NPS	Neapolis	2.04	84	P	Pb	08 07 52.1	-0.5
PYL	PYLOS	2.15	329	P	Pb	08 07 55.5	+1.0
THERA	Ancient Thera,	2.31	55	P	Pn	08 07 54.2	+2.2
ITM	Ithomi	2.33	336	P	Pn	08 07 53.1	+0.7
ITM	Ithomi	2.33	336	P	Pb	08 07 57.7	+0.1
ZKR	Zakros	2.53	88	P	Pb	08 07 58.5	-2.4
MET6	Megalochori,Me	2.54	4	P	Pb	08 07 59.8	-1.2
APE	Apeiranthos	2.79	43	P	Pn	08 08 00.9	+2.2
ATHU	Athens Univers	2.95	10	P	Pn	08 08 03.1	+2.3
HFS	Hagfors	25.83	349	P	P	08 12 43.0	-1.4
	2.2nm,0.8s,baz=151,slow=10,SNR=4.5						
	2.2nm,0.8s						
FINES	FINESS Array B	26.47	3	P	P	08 12 48.0	-2.1
	2.3nm,0.9s,baz=189,slow=11,SNR=1.3						
	2.3nm,0.9s						
NOA	NORSAR Array B	27.10	347	P	P	08 12 54.5	-1.4
	0.8nm,0.8s,baz=158,slow=7.3,SNR=1.6						
	0.8nm,0.8s						
MKAR	Makanchi Array	45.21	56	P	P	08 15 29.5	-0.7
	0.3nm,0.5s,baz=270,slow=8.4,SNR=6.6						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	46.27	46	P	P	08 15 36.5	-1.9
	0.4nm,0.4s,baz=268,slow=10,SNR=2.9						
	0.4nm,0.4s						

CATAC 29 08:20:53.0±0.4,13°N±2°×9°0W±°,h26^{km}±2^{km},M3.5/21, MLv3.5/21,Error ellipse: s-maj=5.5km s-min=2.9km az=25.3,confirmed

SNET 29 08:20:54.3±1.3,13°.40N×89°.57W,h63^{km},ML3.4

GCG 29 08:20:54.7±0.7,13°.31N×89°.64W,h46^{km}±7^{km},MD3.9

ISC 29 08:20:53.7±1.5,13°.23N±0°.06×89°.62W±0°.04,h24^{km}±13^{km}, n95,σ0^s.65/114,El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.39	49	eP	Pn	08 21 03.6	-0.1
LALI				eS	Sn	08 21 10.5	+0.1
LALI	Alcalda de L	0.39	49	i P	Pn	08 21 03.7	-0.1
LALI	Alcalda de L	0.39	49	P	Pn	08 21 03.6	-0.1
JAYA	Jayaque - finc	0.45	21	eP	Pn	08 21 04.4	-0.5
JAYA				eS	Sn	08 21 11.8	-0.5
JAYA	Jayaque - finc	0.45	21	i P	Pn	08 21 04.4	-0.5
JAYA				i S	Sn	08 21 12.7	+0.4
JAYA	Jayaque - finc	0.45	21	P	Pn	08 21 04.5	-0.3
PMON	Piamonte	0.56	32	eP	Pn	08 21 05.8	-0.5
PMON				eS	Sn	08 21 14.3	-0.6
PMON	Piamonte	0.56	32	P	Pn	08 21 05.6	-0.7
PANCS	Alcalda de	0.57	48	eP	Pb	08 21 05.6	+0.4
PANCS				eS	Sn	08 21 14.3	-0.7
PANCS	Alcalda de	0.57	48	P	Pn	08 21 05.8	-0.6
CEVE	Cerro Verde	0.59	360	eP	Pn	08 21 06.2	-0.6
CEVE				eS	Sn	08 21 16.1	+0.2
CEVE	Cerro Verde	0.59	360	P	Pn	08 21 06.0	-0.8
LOMA	Loma Larga	0.60	47	P	Pb	08 21 05.2	-0.5
LOMA	Loma Larga	0.60	47	S	Sn	08 21 15.7	-0.1
BOQS	Boqueron	0.60	33	eP	Pn	08 21 06.4	-0.5
BOQS				eS	Sn	08 21 15.6	-0.4
SBLS	San Blas	0.60	360	eP	Pn	08 21 06.4	-0.6
UEES	Universidad Ev	0.61	37	eP	Pn	08 21 06.2	-0.7
UEES				eS	Sn	08 21 15.8	-0.2
UEES	Universidad Ev	0.61	37	P	Pn	08 21 06.4	-0.5
UEES	Universidad Ev	0.61	37	S	Sn	08 21 16.1	+0.1
CEDA	San Andres	0.61	21	eP	Pn	08 21 06.3	-0.6
CEDA	San Andres	0.61	21	S	Sn	08 21 16.3	+0.3
CEDA	San Andres	0.61	21	P	Pn	08 21 06.2	-0.6
UTEC	Universidad Te	0.62	41	eP	Pn	08 21 06.4	-0.6
UTEC	Universidad Te	0.62	41	P	Pn	08 21 06.4	-0.6
UTEC	Universidad Te	0.62	41	S	Sn	08 21 16.5	+0.2
PIC2	El Picacho	0.62	35	eP	Pn	08 21 06.7	-0.5
SNJE	San Jose	0.63	1	eP	Pn	08 21 06.8	-0.6
UESS	Universidad de	0.64	40	eP	Pn	08 21 06.7	-0.5
UESS				eS	Sn	08 21 16.6	-0.1
IGN	Direccin Gen	0.65	42	eP	Pn	08 21 06.9	-0.6
IGN	Direccin Gen	0.65	42	P	Pn	08 21 06.9	-0.6
IGN	Direccin Gen	0.65	42	S	Sn	08 21 17.5	+0.5
UDBS	Universidad Do	0.66	43	eP	Pn	08 21 07.1	-0.5
UDBS				eS	Sn	08 21 17.2	-0.1
UDBS	Universidad Do	0.66	43	P	Pn	08 21 07.2	-0.4
RTR	El Retiro	0.66	358	eP	Pn	08 21 07.2	-0.6
LFRS	El Faro	0.67	54	eP	Pn	08 21 07.2	-0.6
LFRS				eS	Sn	08 21 17.3	-0.3
NUBE	Las Nubes	0.69	347	eP	Pn	08 21 07.2	-0.8
NUBE	Las Nubes	0.69	347	i P	Pn	08 21 07.3	-0.8
NUBE				i S	Sn	08 21 17.5	-0.6
NUBE	Las Nubes	0.69	347	P	Pn	08 21 07.3	-0.8
QUEZ	Alcaldia de Qu	0.69	29	eP	Pn	08 21 07.6	-0.4
LFU	La Fuente	0.71	44	eP	Pn	08 21 08.0	-0.4
LFU				eS	Sn	08 21 18.4	-0.2
FAME	Alcaldia de Sa	0.72	328	P	Pb	08 21 07.1	-0.5
FAME	Alcaldia de Sa	0.72	328	S	Sn	08 21 17.9	-0.7
UNIC	Universidad Ca	0.75	5	eP	Pn	08 21 08.2	-0.6
UNIC	Universidad Ca	0.75	5	P	Pb	08 21 08.1	-0.1
UNIC	Universidad Ca	0.75	5	S	Sn	08 21 20.0	+0.5
LBRS	Las Brisas	0.75	48	eP	Pn	08 21 08.7	-0.2
LOAL	Lomas de Alarc	0.78	348	eP	Pn	08 21 08.9	-0.4
LOAL				eS	Sb	08 21 19.0	+0.1
LOAL	Lomas de Alarc	0.78	348	P	Pn	08 21 08.7	-0.5
LOAL	Lomas de Alarc	0.78	348	S	Sn	08 21 21.5	+1.3
PAVA	Las Pavas	0.82	54	eP	Pn	08 21 09.5	-0.3
PAVA	Las Pavas	0.82	54	P	Pn	08 21 09.6	-0.2
PAVA	Las Pavas	0.82	54	S	Sn	08 21 22.1	+0.9
SNVI	San Vicente	0.85	63	eP	Pb	08 21 09.7	-0.2
TECO	Alcaldia de Te	0.87	69	eP	Pb	08 21 09.5	-0.7
TECO				eS	Sb	08 21 21.4	-0.1
TECO	Alcaldia de Te	0.87	69	P	Pb	08 21 09.6	-0.6
TECO	Alcaldia de Te	0.87	69	S	Sn	08 21 22.4	0.0
RBDL	Robledal	0.88	356	eP	Pb	08 21 10.2	-0.2
RBDL				eS	Sn	08 21 22.4	-0.5
UESV	Universidad de	0.91	63	eP	Pn	08 21 10.3	-0.6
UESV				eS	Sb	08 21 22.8	+0.4
UESV	Universidad de	0.91	63	P	Pn	08 21 10.2	-0.7
UESV	Universidad de	0.91	63	S	Sn	08 21 23.6	+0.3
SCLA	Alcaldia de Sa	0.99	61	eP	Pn	08 21 11.5	-0.6
SCLA	Alcaldia de Sa	0.99	61	P	Pn	08 21 11.6	-0.4
SCLA	Alcaldia de Sa	0.99	61	S	Sn	08 21 26.5	+1.3
TECA	Tecapa	1.12	76	eP	Pn	08 21 13.1	-0.9
LLGN	La Laguna	1.14	35	eP	Pn	08 21 13.1	-1.1
LLGN	La Laguna	1.14	35	P	Pn	08 21 13.3	-0.9
LLGN	La Laguna	1.14	35	S	Sn	08 21 28.5	-0.6
MTO3	Montecristo	1.19	12	eP	Pn	08 21 14.0	-1.0
MTO3	Montecristo	1.19	12	i P	Pn	08 21 14.1	-0.8
MTO3	Montecristo	1.19	12	P	Pn	08 21 14.2	-0.8
MTO3	Montecristo	1.19	12	S	Sn	08 21 29.7	-0.8
PACA	Pacayal	1.28	79	eP	Pn	08 21 15.9	-0.3
PACA	Pacayal	1.28	79	P	Pn	08 21 16.1	-0.1
PACA	Pacayal	1.28	79	S	Sb	08 21 34.1	+0.7
LCY	Lacayo	1.30	81	eP	Pn	08 21 16.2	-0.3
RANC	El Ranchito	1.31	81	eP	Pn	08 21 15.9	-0.8
VSM	San Miguel	1.32	81	eP	Pn	08 21 16.7	-0.2
ESQI	Esquipulas	1.35	12	eP	Pn	08 21 16.5	-0.7
ESQI	Esquipulas	1.35	12	P	Pn	08 21 16.6	-0.5
ESQI	Esquipulas	1.35	12	S	Sn	08 21 34.2	-0.1
BLLM	Bellamira	1.36	81	eP	Pn	08 21 17.0	-0.3
ZAFR2	Estanzuela, Za	1.36	11	i P	Pb	08 21 21.7	+3.1
ESSG	Sabana Grande	1.64	314	i P	Pn	08 21 20.4	-0.7
LCND	La Caada	1.69	87	eP	Pn	08 21 21.0	-0.7
LCND	La Caada	1.69	87	P	Pn	08 21 21.2	-0.5
CNCH	Conchagua	1.74	88	eP	Pn	08 21 21.7	-0.8
CNCH	Conchagua	1.74	88	P	Pn	08 21 21.9	-0.6
CNCH	Conchagua	1.74	88	S	Sn	08 21 44.9	+0.9
SARH	Santa Rosa de	1.75	28	i P	Pn	08 21 22.3	-0.3
SARH				i S	Sn	08 21 43.7	-0.4
SARH	Santa Rosa de	1.75	28	S	Sn	08 21 44.6	+0.4
SARH	Santa Rosa de	1.75	28	P	Pn	08 21 22.4	-0.1
APG	El Apazote	1.94	335	i P	Pn	08 21 24.9	-0.5
CSGN	Cosiguina Volc	2.02	97	P	Pn	08 21 26.3	-0.1
CSGN				S	Sn	08 21 51.0	0.0
STG5	El Palmar, Qui	2.04	305	i P	Pb	08 21 31.4	+1.2
TGUH	Tegucigalpa,Un	2.42	70	P	Pn	08 21 31.1	-0.8

IDC 29 08:32:32.8±1.9,50°.85N×129°.95W,h0^{km},mb3.4/1, mbtmp3.5/7,ML3.3/6,MS3.5/12,Error ellipse: s-maj=26.2km s-min=14.0km az=82.0

ISC 29 08:32:33.0±1.1,51°.05N±0°.07×130°.07W±0°.09,h11^{km},n24, σ2^s.01/13,MS3.6/9,Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBB	Bella Bella	1.67	46	Pn	Pn	08 33 02.9	+0.9
	44nm,0.3s,baz=241,slow=11,SNR=181						
BBB				Sn	Sg	08 33 26.8	+0.3
	50nm,0.3s,baz=248,slow=13,SNR=4.8						
H02S2	DAWSON INLET T	2.62	326	Pn	Pn	08 33 14.1	-1.0
H02S2				Sn	Sn	08 33 44.0	-2.8
NEW	Newport	8.85	103	Pn	Pn	08 34 39.3	-1.4
	0.1nm,0.3s,baz=9.9,slow=13,SNR=1.8						
NEW				Lg	Lg	08 37 03.0	
	0.1nm,0.3s,baz=12,slow=16,SNR=2.3						
	0.7nm,0.5s						
YKA	Yellowknife Ar	14.21	30	Pn	Pn	08 35 53.7	-0.2
	0.2nm,0.3s,baz=229,slow=12,SNR=15						
YKA				Sn	Sn	08 38 30.9	-0.4
	0.1nm,0.3s,baz=217,slow=23,SNR=4.1						
YKA				Lg	Lg	08 40 06.9	
	baz=225,slow=30						
YKA				LR	LR	08 41 49.5	
	comp=Z,238nm,20.7s,baz=82,slow=39						
	1.9nm,1.0s						
NVAR	Mina Array Bea	15.11	142	Pn	Pn	08 36 07.3	+0.8
	0.1nm,0.3s,baz=333,slow=14,SNR=6.6						
NVAR				Lg	Lg	08 40 17.8	
	0.2nm,0.3s,baz=257,slow=18,SNR=4.5						
	0.4nm,0.7s						
PDAR	Pinedale Array	16.24	113	Pn	Pn	08 36 23.1	+2.0
	0.1nm,0.3s,baz=310,slow=14,SNR=29						
PDAR				LR	LR	08 43 04.4	
	comp=Z,47nm,19.9s,baz=314,slow=39						
	4.4nm,0.9s						
ILAR	Eielson Array	16.31	334	Pn	P	08 36 26.0	+1.3
	0.1nm,0.3s,baz=140,slow=10,SNR=12						
	1.9nm,1.0s						
INK	Inuvik	17.39	356	P	P	08 36 40.0	+3.5
	baz=165,slow=13,SNR=4.1						
INK				LR	LR	08 43 50.6	
	comp=Z,180nm,19.6s,baz=18,slow=38						
	1.3nm,1.0s						
RES	Resolute Bay	27.77	19	LR	LR	08 50 26.2	
	comp=Z,126nm,21.2s,baz=4.0,slow=38						
TXAR	Lajitas Array	29.34	128	P	P	08 38 35.9	+0.1
	0.4nm,0.8s,baz=317,slow=6.6,SNR=3.9						
TXAR				S	S	08 43 26.0	-3.1
	0.1nm,0.6s,baz=339,slow=24,SNR=1.6						
	0.4nm,0.8s						
TKL	Tuckaleechee C	36.36	97	LR	LR	08 54 44.0	
	comp=Z,141nm,20.5s,baz=320,slow=37						
SFJD	Kangerlussuaq	40.66	36	LR	LR	08 56 06.3	
	comp=Z,133nm,20.0s,baz=238,slow=35						
SEY	Seymchan	41.24	317	LR	LR	08 58 08.8	
	comp=Z,74nm,18.4s,baz=2.5,slow=37						
MA2	Magadan	43.27	313	LR	LR	08 56 48.3	
	comp=Z,46nm,20.8s,baz=114,slow=34						
YAK	Yakutsk	50.87	323	LR	LR	09 05 40.0	
	comp=Z,51nm,18.1s,baz=38,slow=39						
JTS	Las Juntas de	54.83	121	LR	LR	09 08 33.3	
	comp=Z,25nm,19.1s,baz=316,slow=40						
H11N2	WAKE ISLAND Hy	58.00	262	T	T	09 44 44.7	
	baz=41,slow=76,SNR=218						
H11N3	WAKE ISLAND Hy	58.00	262	T	T	09 44 40.8	
	baz=41,slow=76,SNR=257						
H11N1	WAKE ISLAND Hy	58.02	262	T	T	09 44 45.4	
	baz=41,slow=76,SNR=177						
H11S1	WAKE ISLAND Hy	59.03	261	T	T	09 46 06.5	
	baz=40,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy	59.05	261	T	T	09 46 05.2	
	baz=40,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	59.05	261	T	T	09 46 00.8	
	baz=40,slow=76,SNR=19						
SJG	San Juan	59.77	99	LR	LR	09 09 07.8	
	comp=Z,24nm,19.4s,baz=316,slow=37						
NOA	NORSAR Array B	64.03	20	LR	LR	09 11 20.6	
	comp=Z,58nm,18.3s,baz=350,slow=36						

GCG 29 08:48:49.3±1.2,14°.11N×89°.75W,h3^{km}±11^{km},MD3.6

SNET 29 08:48:49.1±1.0,14°.11N×89°.76W,h4^{km},ML2.6

CATAC 29 08:48:50.1±0.3,14°N±2°×9°0W±°,h7^{km}±1^{km},M2.6/12, MLv2.6/12,Error ellipse: s-maj=3.7km s-min=3.0km az=130.2,confirmed

ISC 29 08:48:50.2±0.9,14°.10N±0°.02×89°.73W±0°.03,h11^{km}±5^{km}, n53,σ0^s.75/61,Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RBDL	Robledal	0.04	70	eP	Pg	08 48 52.4	-0.2
RBDL				eS	Sg	08 48 54.0	-0.3
LOAL	Lomas de Alarc	0.11	207	P	Pg	08 48 53.3	+0.1
LOAL	Lomas de Alarc	0.11	207	S	Sg	08 48 55.6	+0.3
NUBE	Las Nubes	0.20	194	eP	Pg	08 48 54.7	+0.1
NUBE				eS	Sg	08 48 57.9	+0.2
NUBE	Las Nubes	0.20	194	i P	Pg	08 48 54.8	+0.1
NUBE				i S	Sg	08 48 58.2	+0.5
NUBE	Las Nubes	0.20	194	P	Pg	08 48 54.7	+0.1
UNIC	Universidad Ca	0.21	123	eP	Pg	08 48 54.8	+0.1
UNIC				eS	Sg	08 48 58.3	+0.5
UNIC	Universidad Ca	0.21	123	P	Pg	08 48 54.8	+0.1
RTR	El Retiro	0.21	158	eP	Pg	08 48 55.2	+0.3
SNJE	San Jose	0.26	152	eP	Pb	08 48 56.0	-1.1
SBLS	San Blas	0.28	158	eP	Pg	08 48 56.1	+0.1
CEVE	Cerro Verde	0.29	159	eP	Pg	08 48 56.4	+0.2
CEVE				eS	Sb	08 49 02.6	+0.2
CEVE	Cerro Verde	0.29	159	P	Pb	08 48 56.9	-0.7
CEVE	Cerro Verde	0.29	159	S	Sb	08 49 01.5	-1.0
FAME	Alcaldia de Sa	0.38	228	P	Pb	08 48 58.0	-0.9
CEDA	San Andres	0.44	132	eP	Pg	08 48 59.1	+0.2
CEDA	San Andres	0.44	132	S	Sb	08 49 06.0	-0.6
MTO3	Montecristo	0.47	50	eP	Pg	08 48 59.4	0.0
MTO3	Montecristo	0.47	50	i P	Pg	08 48 59.5	0.0
MTO3	Montecristo	0.47	50	P	Pg	08 48 59.5	0.0
MTO3	Montecristo	0.47	50	S	Sg	08 49 06.3	+0.6
QUEZ	Alcaldia de Qu	0.52	120	eP	Pb	08 49 00.6	-0.7
JAYA	Jayaque - finc	0.52	148	eP	Pg	08 49 00.5	+0.2
JAYA	Jayaque - finc	0.52	148	i P	Pg	08 49 00.6	+0.2
JAYA	Jayaque - finc	0.52	148	P	Pb	08 49 00.7	-0.7
JAYA	Jayaque - finc	0.52	148	S	Sg	08 49 07.4	+0.1
PMON	Piamonte	0.56	134	eP	Pb	08 49 01.5	-0.6
PMON	Piamonte	0.56	134	P	Pb	08 49 01.6	-0.4
PMON	Piamonte	0.56	134	S	Sg	08 49 09.4	+0.9
PIC2	El Picacho	0.58	127	eP	Pb	08 49 01.8	-0.7
ESQI	Esquipulas	0.59	39	eP	Pb	08 49 01.8	-0.9
ESQI	Esquipulas	0.59	39	P	Pg	08 49 01.6	-0.3
ESQI	Esquipulas	0.59	39	S	Sb	08 49 10.5	-0.7
ZAFR2	Estanzuela, Za	0.60	37	i P	Pn	08 49 06.9	+2.1
UEES	Universidad Ev	0.61	128	P	Pg	08 49 01.7	-0.4
UEES	Universidad Ev	0.61	128	S	Sb	08 49 11.2	-0.4
UDBS	Universidad Do	0.68	124	S	Sg	08 49 12.4	+0.1
UDBS	Universidad Do	0.68	124	P	Pb	08 49 03.6	-0.5
LBRS	Las Brisas	0.76	118	eP	Pg	08 49 04.9	0.0
LLGN	La Laguna	0.76	85	P	Pg	08 49 04.6	-0.4
LLGN	La Laguna	0.76	85	S	Sb	08 49 16.4	+0.3
PAVA	Las Pavas	0.86	116	eP	Pg	08 49 06.3	-0.6
PAVA	Las Pavas	0.86	116	P	Pg	08 49 06.6	-0.3
SCLA	Alcaldia de Sa	1.05	112	P	Pg	08 49 09.8	-0.6
SCLA	Alcaldia de Sa	1.05	112	S	Sb	08 49 24.8	+0.6
TECO	Alcaldia de Te	1.08	121	S	Sg	08 49 24.7	-0.3

APG	El Apazote	1.15	322	*i* P	Pb	08 49 11.3	-0.9
APG				*i* S	Sb	08 49 26.4	-0.9
SARH	Santa Rosa de	1.16	54	*i* P	Pn	08 49 12.4	0.0
SARH				*i* S	Sn	08 49 28.5	+0.2
SARH	Santa Rosa de	1.16	54	P	Pb	08 49 12.2	-0.1
PQSS	Presa 15 de Se	1.23	112	S	Sg	08 49 27.5	-2.4
PACA	Pacayal	1.50	114	P	Pn	08 49 16.6	-0.6
TGUH	Tegucigalpa,Un	2.38	91	P	Pn	08 49 29.7	+0.3
YUSH	Yuscaran	2.81	93	P	Pn	08 49 34.8	-0.4
YUSH				S	Sn	08 50 11.9	+2.8

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*RSPR **29** 09:03:29.9, 19°.35N×67°.80W, h8^{km}±21^{km}, MD3.5/6*

*NEIC **29** 09:03:29.7±0.8, 19°.23N±0°.05×67°.61W±0°.05, h10^{km}±9^{km}, ML2.7/24, Md3.5/6(RSPR), Error ellipse: s-maj=7.6km s-min=5.9km az=204.0*

ISC 29 09:03:29.6±1.7, **19°.30N**±0°.09×**67°.64W**±0°.06, **h21**^{km}**, n32,** σ**1^{s}.05**/34**, 7C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.97	149	Pg	Pn	09 03 46.9	-1.1
AGPR				IAML		09 03 58.8	
	191nm,0.5s						
AGPR				IAML		09 04 01.1	
	250nm,0.3s						
AGPR	Aguadilla, PR	0.97	149	⇑*e*P	Pb	09 03 47.6	0.0
PRSN	Puerto Rico Se	1.17	157	Pn	Pn	09 03 50.1	-0.7
LSP	Las Mesas	1.23	155		Pb	09 03 52.3	+0.1
LSP					Sb	09 04 08.7	+1.0
LSP	Las Mesas	1.23	155	⇑*e*P	Pb	09 03 52.3	+0.1
LSP	Las Mesas	1.23	155	*e*S	Sb	09 04 08.7	+1.0
AOPR	Arecibo Observ	1.27	138		Pb	09 03 51.9	-0.9
AOPR				IAML		09 04 20.0	
	comp=N,141nm,0.4s						
AOPR	Arecibo Observ	1.27	138	⇑*e*P	Pb	09 03 52.3	-0.5
EMPR	Esperanza - Ma	1.33	128	Pn	Pn	09 03 51.1	-1.8
EMPR				IAML		09 04 16.9	
	comp=N,180nm,1.3s						
UUPR	Utuado, UPR, P	1.36	140	Pn	Pb	09 03 53.5	-0.8
CRPR	Cabo Rojo, PR	1.38	159		Sn	09 04 11.2	0.0
CRPR	Cabo Rojo, PR	1.38	159	Pn	Pb	09 03 53.8	-0.8
CRPR				IAML		09 04 12.4	
	comp=N,142nm,1.0s						
CRPR				IAML		09 04 14.4	
	comp=N,165nm,0.6s						
CRPR	Cabo Rojo, PR	1.38	159	⇑*e*P	Pb	09 03 53.5	-1.2
CRPR	Cabo Rojo, PR	1.38	159	*e*S	Sb	09 04 12.5	+0.6
MLPR	Magueyes Islan	1.44	157	⇑*e*P	Pb	09 03 55.0	-0.7
MLPR	Magueyes Islan	1.44	157	*e*S	Sb	09 04 14.1	+0.6
ECPR	Experimental S	1.55	129	Pn	Pb	09 03 56.4	-1.3
ECPR				IAML		09 04 20.1	
	comp=N,116nm,0.5s						
ECPR				IAML		09 04 21.8	
	comp=N,116nm,0.2s						
ECPR	Experimental S	1.55	129	⇑*e*P	Pb	09 03 57.0	-0.6
ECPR	Experimental S	1.55	129	*e*S	Sb	09 04 18.2	+1.4
CELP	Cerrillos	1.58	140	Pn	Pb	09 03 56.9	-1.1
CELP				IAML		09 04 18.8	
	comp=N,91nm,0.4s						
OBIP	Obispado Ponce	1.59	142		Pb	09 03 56.6	-1.6
OBIP					Sn	09 04 16.5	+0.2
OBIP				IAML		09 04 19.1	
	comp=N,66nm,0.6s						
OBIP	Obispado Ponce	1.59	142	⇑*e*P	Pb	09 03 57.0	-1.3
OBIP	Obispado Ponce	1.59	142	*e*S	Sb	09 04 17.9	+0.1
DR12	Loma Pena Alta	1.73	253	Pn	Pb	09 04 00.0	-0.6
GCPR	Guaynabo City	1.77	124	Pn	Pb	09 03 59.7	-1.6
SJG	San Juan	1.84	130	Pn	Pn	09 04 00.1	+0.2
SJG				IAML		09 04 27.7	
	comp=N,54nm,0.5s						
SJG				IAML		09 04 29.1	
	comp=N,44nm,0.4s						
SJG	San Juan	1.84	130	*e*S	Sb	09 04 24.6	-0.4
HUMP	Col San Antoni	2.05	124	Pn	Pn	09 04 03.4	+0.6
HUMP	Col San Antoni	2.05	124	*e*S	Sb	09 04 30.7	-0.4
GDHS	Morne Mazeau,	6.35	117	Pn	Pn	09 05 03.0	+1.0
CBE	Ff, Capester	6.58	118	Pn	Pn	09 05 07.4	+2.1
MAGL	Barre de l'ile	6.92	118	Pn	Pn	09 05 11.7	+1.9

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*MOS **29** 09:12:11.3±0.9, 4°.68N×125°.29E, h10^{km}, mb5.2/57, MS4.7/8, Error ellipse: s-maj=9.4km s-min=4.8km az=112.9*

*BJI **29** 09:12:13.1, 4°.42N×125°.64E, h37^{km}, mB5.4/39, mb4.9/81, Ms5.0/80, Ms7 4.8/77*

*GFZ **29** 09:12:14.2, 4°.77N×125°.57E, h18^{km}, MW5.3, Moment Tensor Solution. s91 Moment tensor: M$_{rr}$0.83; M$_{\theta\theta}$-0.05; M$_{\phi\phi}$-0.77; M$_{r\theta}$0.15; M$_{\theta\phi}$0.10; M$_{\phi r}$-0.72; Fault plane solution: NP1:ϕ_s170.00000°, δ66.00000°, λ88.00000°. NP2:ϕ_s354.00000°, δ24.00000°, λ94.00000°. Principal axes: T 1.1200, Plg69.0000°, Azm76.0000°; N -0.0400, Plg2.0000°, Azm171.0000°; P -1.0700, Plg21.0000°, Azm261.0000°;*

*NEIC **29** 09:12:15.9±1.5, 4°.69N±0°.05×125°.40E±0°.06, h24^{km}±4^{km}, mb5.2/99, Mww5.4/32 Error ellipse: s-maj=8.7km s-min=7.0km az=122.0*

*NEIC **29** 09:12:15, 4°.69N×125°.40E, h26^{km}*

*NEIC **29** 09:12:15, 4°.69N×125°.50E, h26^{km}, Moment Tensor Solution. Duration: 2^{s}.5 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.14; M$_{\theta\theta}$0.00; M$_{\phi\phi}$-1.14; M$_{r\theta}$0.24; M$_{\theta\phi}$0.33; M$_{\phi r}$-0.79; Fault plane solution: M$_0$1.45000×10^{17} NP1: ϕ_s346.39000°, δ27.58000°, λ92.27000°. NP2: ϕ_s163.82000°, δ62.44000°, λ88.81000°. Principal axes: T 1.4012, Plg73.0000°, Azm71.0000°; N 0.0889, Plg1.0000°, Azm164.0000°; P -1.4901, Plg17.0000°, Azm255.0000°;*

*DJA **29** 09:12:17.5±0.2, 5°N±2°×12°5E±°, h24^{km}±1^{km}, M5.3/116, mb5.3/116, mB5.8/78, MLv5.5/14, Mw(mB)5.3/78, MwMwp5.2/59, Mwp5.4/59*

*GCMT **29** 09:12:17.0±0.1, 4°.72N±0°.01×125°.30E±0°.01, h21^{km}, MW5.4/126, Moment Tensor Solution. s122,c207; s126,c214; Duration: 1^{s}.3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.08±.02; M$_{\theta\theta}$0.15±.01; M$_{\phi\phi}$-1.23±.02; M$_{r\theta}$0.19±.03; M$_{\theta\phi}$0.20±.01; M$_{\phi r}$-1.25±.04; Best double couple: M$_0$1.72200×10^{17} NP1:ϕ_s352.00000°, δ21.00000°, λ91.00000°. NP2:ϕ_s172.00000°, δ69.00000°, λ90.00000°. Principal axes: T 1.6330, Plg66.0000°, Azm81.0000°; N 0.1740, Plg0.0000°, Azm172.0000°; P -1.8110, Plg24.0000°, Azm262.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **29** 09:12:19.8±1.8, 4°.68N×125°.47E, h62^{km}±15^{km}, mb4.6/34, mbtmp4.9/36, MS4.6/61 Error ellipse: s-maj=17.7km s-min=7.8km az=82.0*

ISC 29 09:12:16.0±0.4, **4°.68N**±0°.03×**125°.47E**±0°.04, **h27**^{km}±2^{km}**, h28**^{km}**:pP-P, n805,** σ**1^{s}.55**/832**, mb5.1**/191**, MS4.7**/95**, 23C-2D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	0.99	177	P	Pn	09 12 33.3	-0.9
SGSI				S	Sb	09 12 44.4	-2.9
DAV	Davao City (W)	2.38	3	P	Pb	09 12 57.6	-0.6
	1µm,0.7s,baz=189,slow=5.1,SNR=24						
DAV				S	Sb	09 13 25.0	-2.1
	1µm,0.4s,baz=260,slow=16,SNR=11						
DAV	Davao City (W)	2.38	3		Pn	09 12 52.9	-0.4
DAV	Davao City (W)	2.38	3	P	Pn	09 12 54.9	+1.7
DAV	Davao City (W)	2.38	3	P	Pb	09 12 56.9	-1.3
DAV	Davao City (W)	2.38	3	P	Pn	09 12 55.0	+1.7
TNTI	Ternate	4.32	154		Pn	09 13 19.5	-0.5
TNTI	Ternate	4.32	154	P	Pn	09 13 23.6	+3.6
TNTI	Ternate	4.32	154	P	Pn	09 13 21.6	+1.6
GTOI	Gorontalo	4.71	212	P	Pn	09 13 23.7	-1.7
MRSI	Marisa	5.46	220	P	Pn	09 13 34.9	-0.8
TOLI2	Tolitoli	5.87	233		Pn	09 13 37.5	-3.9
LUWI	Luwuk	6.29	205		Pn	09 13 47.6	+0.5
LUWI	Luwuk	6.29	205	P	Pn	09 13 49.3	+2.2
LUWI	Luwuk	6.29	205	P	Pn	09 13 48.2	+1.1
SANI	Sanana	6.71	176	P	Pn	09 13 54.7	+1.9
SANI	Sanana	6.71	176	P	Pn	09 13 51.5	-1.3
	0.8nm3µm226nm,0.9s						
APSI	Ampana	6.74	215	P	Pn	09 13 55.2	+1.9
PCI	Palu	7.90	226	P	Pn	09 14 09.9	+0.6
	1.0nm14µm182nm,1.0s						
SWI	Sorong	7.99	133	P	Pn	09 14 13.2	+2.8
	0.6nm7µm100nm,0.6s						
SIJI	Sorong	8.00	133	P	Pn	09 14 13.0	+2.5
TARAI	Tarakan	8.00	261	P	Pn	09 14 13.1	+2.6
NLAI	Namlea	8.03	168	P	Pn	09 14 12.0	+1.0
	4µm404nm,0.8s						
KRAI	Karang Ratu	8.47	160	P	Pn	09 14 19.9	+2.9
	5µm141nm,0.8s						
MSAI	Masohi	8.69	157	P	Pn	09 14 22.0	+1.9
	5µm8µm120nm,0.6s						
AAI	Ambon	8.75	162	P	Pn	09 14 23.7	+2.9
	2µm175nm,0.7s						
KKM	Kota Kinabalu	9.31	279		Pn	09 14 27.3	-1.4
KKM	Kota Kinabalu	9.31	279	P	Pn	09 14 30.0	+1.3
KKM	Kota Kinabalu	9.31	279	P	Pn	09 14 29.3	+0.6
	11µm3µm101nm,0.8s						
TTSI	Tana Toraja	9.53	216	P	Pn	09 14 32.5	+0.9
	2µm196nm,0.8s						
KKSI	Kolaka, Sulawe	9.59	204	P	Pn	09 14 33.0	+0.6
	4µm77nm,1.0s						
MMSI	Mamuju	9.83	222	P	Pn	09 14 35.7	0.0
	10µm89nm,1.0s						
FAKI	Fak Fak	10.14	138		Pn	09 14 42.5	+2.5
FAKI	Fak Fak	10.14	138	P	Pn	09 14 42.9	+2.9
FAKI	Fak Fak	10.14	138	P	Pn	09 14 42.9	+2.9
	6µm2µm133nm,1.6s						
MWPI	Manokwari, Pap	10.22	123	P	Pn	09 14 42.5	+1.5
	4µm193nm,1.0s						
SPSI	Sidrap Palu	10.30	214	P	Pn	09 14 43.0	+0.8
	6µm105nm,1.0s						
TGY	Tagaytay City	10.37	335	P	Pn	09 14 59.6	+16
	152nm,0.3s,baz=203,slow=16,SNR=3.3						
TGY				LR	LR	09 19 01.1	
	comp=Z,4µm,18.0s,baz=165,slow=39						
BKB	Balikpapan	10.40	236		Pn	09 14 40.9	-2.6
BKB	Balikpapan	10.40	236	P	Pn	09 14 44.5	+0.9
BKB	Balikpapan	10.40	236	P	Pn	09 14 42.9	-0.7
	10µm295nm,0.8s						
PMSI	Majene	10.44	219	P	Pn	09 14 45.9	+1.8
	6µm2µm108nm,1.1s						
RKPI	Ransiki, Papua	10.65	125	P	Pn	09 14 49.2	+2.2
	6µm8µm284nm,1.0s						
KAPI	Kappang	11.20	211		Pn	09 14 53.3	-1.2
KAPI	Kappang	11.20	211	P	Pn	09 14 55.9	+1.5
KAPI	Kappang	11.20	211	P	Pn	09 14 55.5	+1.1
	64nm,1.3s						
KAPI	Kappang	11.20	211	*i* P	Pn	09 14 52.8	-1.6
KAPI				pmax	pmax		
	comp=Z,102nm,1.2s						
BKSI	Bulukumba	11.28	208	P	Pn	09 14 56.9	+1.3
	comp=Z,61nm,1.2s						
MKS	Makassar	11.52	211	P	Pn	09 14 59.8	+1.0
	comp=Z,2µmcomp=Z,112nm,1.3s						
BSSI	Bau Bau, Buton	11.85	205	P	Pn	09 15 05.5	+2.2
	comp=Z,109nm,1.8s						
MTKI	Muara Teweh, K	11.95	242	P	Pn	09 15 05.4	+0.6
	comp=Z,6µmcomp=Z,154nm,0.9s						
BAKI	Biak	12.12	119	P	Pn	09 15 11.4	+4.3
	comp=Z,443nm,2.3s						
SRPI	Serui, Papua	12.57	121	P	Pn	09 15 16.4	+3.1
BBKI	Banjar Baru	13.35	233	P	Pn	09 15 25.1	+1.2
	comp=Z,221nm,1.2s						
PKKI	Palangkaraya	13.39	239	P	Pn	09 15 25.8	+1.4
SBUM	Sibu	13.41	261		Pn	09 15 25.2	+0.5
SBUM	Sibu	13.41	261	P	Pn	09 15 28.4	+3.7
SBUM	Sibu	13.41	261	P	Pn	09 15 26.5	+1.8
	comp=Z,3µmcomp=Z,1µmcomp=Z,80nm,1.4s						
MMRI	Maumere	13.62	194	P	Pn	09 15 30.7	+3.2
MMRI	Maumere	13.62	194	P	Pn	09 15 29.9	+2.4
	comp=Z,169nm,1.4s						
SZP	Santa	13.70	339	P	Pn	09 15 30.1	+1.4
EDFI	Ende, Flores	13.86	196	P	Pn	09 15 34.1	+3.1
	comp=Z,41nm,0.8s						
SOEI	Soe	14.39	185		Pn	09 15 36.1	-2.1
SOEI	Soe	14.39	185	P	P	09 15 41.9	-3.0
SOEI	Soe	14.39	185	P	Pn	09 15 40.6	+2.4
	comp=Z,2µmcomp=Z,168nm,0.8s						
STKI	Sintang	14.71	252	P	Pn	09 15 44.4	+1.9
	comp=Z,6µmcomp=Z,98nm,1.0s						
SMPI	Sarmi	14.79	116	P	P	09 15 47.1	-2.2
BATI	Baumata	14.90	187	P	P	09 15 48.3	-2.1
	comp=Z,143nm,0.6s,baz=113,slow=1.8,SNR=8.3						
BATI				S	Sn	09 18 34.4	+5.1
	comp=Z,9.1nm,0.3s,baz=215,slow=23,SNR=1.4						
BATI				LR	LR	09 21 43.0	
	comp=Z,3µm,20.7s,baz=336,slow=38						
BATI	Baumata	14.90	187	P	P	09 15 48.1	-2.3
	comp=Z,2µmcomp=Z,319nm,1.0s						
DBNI	Kabupaten Domp	14.91	209	P	Pn	09 15 47.4	+2.2
WSI	Waingapu	15.16	200	P	Pn	09 15 50.2	+1.8
	comp=Z,4µmcomp=Z,6µmcomp=Z,264nm,1.5s						
PLAI	Plampang	15.46	210	P	P	09 15 55.5	-1.1
PLAI	Plampang	15.46	210	P	Pn	09 15 54.4	+2.0
	comp=Z,4µmcomp=Z,4µmcomp=Z,239nm,1.4s						
WBSI	Waikabubak, Su	15.46	203	P	Pn	09 15 54.0	+1.5
	comp=Z,4µmcomp=Z,3µmcomp=Z,163nm,0.9s						
TWSI	Taliwang, Sumb	15.84	213	P	P	09 15 59.7	-1.2
	comp=Z,4µmcomp=Z,3µmcomp=Z,151nm,1.5s						
KLNI	Mataram	16.03	216	P	Pn	09 16 01.4	+1.7
	comp=Z,5µmcomp=Z,3µmcomp=Z,102nm,1.8s						
KHKI	Kahang-Kahang	16.27	217	P	P	09 16 05.5	-0.1
SRBI	Singaraja	16.29	219	P	P	09 16 06.2	+0.3
	comp=Z,3µmcomp=Z,152nm,1.1s						
KMMI	Kalianget	16.36	225	P	Pn	09 16 05.2	+1.2
	comp=Z,4µmcomp=Z,75nm,1.0s						
GENI	Genyem	16.37	116	P	P	09 16 06.3	-0.4
GENI	Genyem	16.37	116	P	P	09 16 06.5	-0.2
	comp=Z,6µmcomp=Z,5µmcomp=Z,214nm,2.3s						
ABJI	Asem Bagus	16.71	222	P	Pn	09 16 09.6	+1.2
	comp=Z,6µmcomp=Z,3µmcomp=Z,135nm,1.1s						
RTBI	Rangdo, Negare	16.75	219	P	P	09 16 10.4	-0.6
	comp=Z,6µmcomp=Z,4µmcomp=Z,134nm,1.1s						
JAY	Jayapura	16.82	115	P	P	09 16 12.0	+0.3
	comp=Z,29nm,0.9s,baz=305,slow=9.0,SNR=4.6						
JAY				S	S	09 19 21.5	-4.6
	comp=Z,12nm,0.9s,baz=252,slow=13,SNR=1.5						
JAY				LR	LR	09 21 45.3	
	comp=Z,3µm,19.4s,baz=329,slow=34						
JAY	Jayapura	16.82	115	P	P	09 16 13.1	+1.3
IGBI	Denpasar	16.91	218	P	P	09 16 13.3	+0.6
	comp=Z,6µmcomp=Z,5µmcomp=Z,189nm,1.9s						
BYJI	Banyuwangi	16.94	221	P	P	09 16 15.6	+2.5
	comp=Z,250nm,1.2s						
BLJI	Banyuglugur	17.11	224	P	P	09 16 15.0	+0.1
	comp=Z,6µmcomp=Z,3µmcomp=Z,130nm,1.1s						
JAGI	Jajag, Banyuwa	17.27	221		Pn	09 16 13.9	-1.5
JAGI	Jajag, Banyuwa	17.27	221	P	P	09 16 18.0	+1.3
JAGI	Jajag, Banyuwa	17.27	221	P	P	09 16 17.1	+0.4
	comp=Z,6µmcomp=Z,3µmcomp=Z,85nm,1.0s						
GMJI	Gumukmas	17.59	223	P	P	09 16 21.6	+1.3
	comp=Z,3µmcomp=Z,127nm,0.9s						
TBJI	Tambak Boyo	17.76	230	P	P	09 16 24.2	+2.1
	comp=Z,11µmcomp=Z,550nm,1.4s						
DRS	Darwin Rock St	17.84	162	P	P	09 16 24.5	+1.5
MTN	Manton Dam	18.30	162	P	Pn	09 16 28.5	+0.4
	comp=Z,54nm,0.9s						
MTN	Manton Dam	18.30	162		P	09 16 26.1	-1.9
NGJI	Ngawi	18.40	230	P	Pn	09 16 32.1	+2.7
	comp=Z,6µmcomp=Z,268nm,1.1s						
SJI	Sawahan	18.41	228	P	Pn	09 16 31.0	+1.4
	comp=Z,6µmcomp=Z,228nm,1.8s						
SNJI	Sawahan-Nganju	18.45	228	P	Pn	09 16 32.2	+2.1
	comp=Z,6µmcomp=Z,4µmcomp=Z,252nm,1.0s						
TWGBT	Beinan	18.52	347	P	P	09 16 29.4	-1.1
TWG	Pinlang	18.53	347	P	P	09 16 29.1	-1.5
SMRI	Semarang	18.99	232	P	Pn	09 16 39.9	+3.3
SMRI	Semarang	18.99	232	P	Pn	09 16 37.0	+0.4
	comp=Z,7µmcomp=Z,257nm,1.7s						
YULB	Yu-li	19.03	348	P	P	09 16 33.2	-2.9
YULB	Yu-li	19.03	348	P	Pn	09 16 37.3	+0.3
TPUB	Ta-pu	19.09	346	P	P	09 16 35.5	-1.3
TPUB	Ta-pu	19.09	346	P	P	09 16 36.0	-0.8
PCJI	Pacitan	19.15	228	P	Pn	09 16 38.3	-0.2
	comp=Z,6µmcomp=Z,3µmcomp=Z,121nm,1.2s						
TPI	Tanjungpandan	19.27	248	P	Pn	09 16 42.4	+2.4
	comp=Z,2µmcomp=Z,93nm,0.9s						
UGM	Wanagama	19.46	230	P	P	09 16 40.1	-0.9
UGM				IAmb	IAmb	09 16 58.7	
	comp=Z,284nm,1.3s						
UGM	Wanagama	19.46	230	P	Pn	09 16 42.5	+0.2
	comp=Z,185nm,1.3s						
SSLB	Suanglung	19.49	348	P	P	09 16 40.4	-0.8
SSLB	Suanglung	19.49	348	P	P	09 16 40.1	-1.0
YOGI	Yogyakarta	19.58	231	P	Pn	09 16 43.7	+0.1
	comp=Z,6µmcomp=Z,6µmcomp=Z,350nm,1.1s						
MMPI	Merauke	19.79	131	P	Pn	09 16 46.9	+0.8
CTJI	Waduk Cacaban	19.98	235	P	Pn	09 16 49.0	+0.7
	comp=Z,5µmcomp=Z,337nm,1.1s						
YHNB	Yeheng	20.26	349	P	Pn	09 16 51.9	+0.2
KPJI	Karang Pucung	20.37	234	P	Pn	09 16 52.9	0.0
	comp=Z,3µmcomp=Z,214nm,1.0s						
JCJI	Jatiwangi	20.45	237	P	Pn	09 16 55.3	+1.5
PPBI	Pangkal Pinang	20.48	251	P	Pn	09 16 53.8	-0.4
KNRA	Kununurra	20.49	171	P	P	09 16 52.1	+0.1
	comp=Z,173nm,1.0s						
KNRA	Kununurra	20.49	171		P	09 16 51.5	-0.5
KNRA				IAmb	IAmb	09 17 05.0	
	comp=Z,126nm,0.8s						
QIZ	Qiongzhong	20.88	314	P	P	09 16 57.3	+1.0
QIZ				S	S	09 20 50.8	+2.9
QIZ				pmax	pmax		
	comp=Z,33nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,750nm,8.5s						
QIZ				LR	LR		
	comp=Z,2µm,16.3s						
QIZ				LR	LR		
	comp=Z,1µm,16.4s						
QIZ				LR	LR		
	comp=Z,2µm,17.7s						
GUMO	Guam	21.08	64	LR	LR	09 24 26.9	
	comp=Z,2µm,19.4s,baz=240,slow=34						
QZH	Quanzhou	21.20	343	⇓*i*P	P	09 17 01.5	+1.8
QZH				S	S	09 20 52.5	-1.7
QZH				pmax	pmax		
	comp=Z,93nm,1.2s						
QZH				pmax	pmax		
	comp=Z,910nm,8.4s						
QZH				LR	LR		
	comp=Z,3µm,21.0s						
QZH				LR	LR		
	comp=Z,2µm,20.6s						
QZH				LR	LR		
	comp=Z,3µm,17.9s						
TPRI	Tanjung Pinang	21.25	260	P	P	09 17 02.4	+2.1
	comp=Z,224nm,1.0s						
BBJI	Bungbulang	21.49	236	P	P	09 17 04.9	+2.0
BBJI	Bungbulang	21.49	236	P	P	09 17 05.2	+2.3
	comp=Z,2µmcomp=Z,2µmcomp=Z,78nm,0.9s						
DSRI	Dabo	21.49	257	P	P	09 17 04.5	+1.6
	comp=Z,4µmcomp=Z,3µmcomp=Z,147nm,1.4s						
GZH	Guangzhou	21.73	328	P	P	09 17 09.5	+4.2
GZH				pP	sP	09 17 14.3	-1.6
GZH				S	Sn	09 21 13.0	-1.4
GZH				pmax	pmax		
	comp=Z,1µm,4.0s						
GZH				LR	LR		
	comp=Z,3µm,18.4s						
GZH				LR	LR		
	comp=Z,2µm,17.8s						
GZH				LR	LR		
	comp=Z,3µm,14.9s						
DBJI	Dramaga	21.77	239	P	P	09 17 08.0	+2.1
	comp=Z,167nm,2.3s						
MYKOM	Kota Tinggi	21.77	263	P	P	09 17 08.5	+2.6
MYKOM	Kota Tinggi	21.77	263	P	P	09 17 08.8	+2.9
	comp=Z,3µmcomp=Z,2µmcomp=Z,116nm,1.4s						
CNJI	Cibinong	21.84	237	P	P	09 17 09.1	+2.5
BTDF	Bukit Timah Da	21.91	262	P	P	09 17 10.3	+2.8
BTDF	Bukit Timah Da	21.91	262	P	P	09 17 11.8	+4.3
	comp=Z,108nm,1.0s						
PMBI	Palembang	22.02	250	P	P	09 17 09.7	+1.1
PMBI	Palembang	22.02	250	P	P	09 17 11.1	+2.5
SBJI	Serang	22.09	241	P	P	09 17 12.5	+3.2
	comp=Z,9µmcomp=Z,425nm,1.8s						
JOW	Kunigami	22.19	7	P	P	09 17 11.6	+1.3
	comp=Z,164nm,0.9s,baz=184,slow=8.6,SNR=22						
JOW				S	S	09 21 12.9	-0.5
	comp=Z,9.0nm,0.8s,baz=234,slow=23,SNR=1.3						
JOW				LR	LR	09 25 46.2	
	comp=Z,1µm,20.5s,baz=191,slow=36						
	comp=Z,164nm,0.9s						
JOW	Kunigami	22.19	7	P	P	09 17 10.3	+0.1
JOW	Kunigami	22.19	7	P	P	09 17 11.6	+1.3
BLSI	Bandar Lampung	22.53	244	P	P	09 17 17.0	+2.9
	comp=Z,4µmcomp=Z,195nm,0.5s						
FITZ	Fitzroy Crossi	22.64	180	P	P	09 17 16.0	+1.0
	comp=Z,35nm,0.9s,baz=357,slow=8.0,SNR=25						
FITZ				S	S	09 21 15.3	-6.2
	comp=Z,3.9nm,0.7s,baz=10.0,slow=17,SNR=1.2						
	comp=Z,35nm,0.9s						
FITZ	Fitzroy Crossi	22.64	180	P	P	09 17 14.0	-1.0
KLI	Kotabumi	22.67	246	P	P	09 17 18.1	+2.6
KLSI		22.71	246	P	P	09 17 18.1	+2.1
KLSI				pP	sP	09 17 27.5	+1.3
MANU	Manus Island	22.87	107	P	P	09 17 19.4	+1.7
MANU				IAmb	IAmb	09 17 32.8	
	comp=Z,118nm,1.5s						
MDSI	Maura Dua	23.14	247	P	P	09 17 22.4	+2.0
	comp=Z,3µmcomp=Z,257nm,1.1s						
KASI	Kota Agung	23.27	244	P	P	09 17 22.7	+1.0
	comp=Z,2µmcomp=Z,2µmcomp=Z,131nm,1.0s						
LWLI	Liwa	23.46	246	P	P	09 17 25.2	+1.5
	comp=Z,3µmcomp=Z,309nm,1.1s						
MNAI	Manna	24.22	249	P	P	09 17 30.9	+0.1
MNAI	Manna	24.22	249	P	P	09 17 32.4	+1.6
MNAI	Manna	24.22	249	P	P	09 17 32.8	+2.0
KSI	Kapahiang	24.31	250	P	P	09 17 34.1	+2.4
	comp=Z,4µmcomp=Z,323nm,1.1s						
IPM	Ipoh	24.37	271	P	P	09 17 30.5	-1.7
IPM				IAmb	IAmb	09 17 34.9	
	comp=Z,131nm,1.2s						
IPM	Ipoh	24.37	271	P	P	09 17 33.9	+1.7
IPM	Ipoh	24.37	271	P	P	09 17 32.9	+0.7
	comp=Z,2µmcomp=Z,105nm,1.8s						
IPM				pP	sP	09 17 42.0	-1.0
	comp=Z,2µmcomp=Z,105nm,1.8s						
MASI	Maura Aman, Be	24.48	252	P	P	09 17 35.2	+2.0
UBSI	University, Be	24.65	250	P	P	09 17 36.8	+2.1
	comp=Z,5µmcomp=Z,223nm,1.2s						
KULM	Kulim	24.73	272	P	P	09 17 35.0	-0.5
KULM				IAmb	IAmb	09 17 48.4	
	comp=Z,140nm,1.5s						
KULM	Kulim	24.73	272	P	P	09 17 38.0	+2.5
KULM	Kulim	24.73	272	P	P	09 17 37.0	+1.5
KULM				pP	sP	09 17 46.3	0.0
BKNI	Bangkinang	24.78	261	P	P	09 17 38.1	+2.1
BKNI	Bangkinang	24.78	261	P	P	09 17 38.0	+2.1
	comp=Z,3µmcomp=Z,233nm,0.8s						
KRJI	Kerinci	24.91	255	P	P	09 17 38.2	+1.0
	comp=Z,247nm,1.0s						
GULI	GuiLin	25.10	326	P	P	09 17 37.8	-0.9
GULI				S	S	09 22 03.0	+1.1
GULI				pmax	pmax		
	comp=Z,510nm,6.5s						
GULI				pmax	pmax		
	comp=Z,19nm,0.9s						
GULI				LR	LR		
	comp=Z,2µm,20.1s						
GULI				LR	LR		
	comp=Z,2µm,18.4s						
GULI				LR	LR		
	comp=Z,2µm,21.5s						
EGSI	Enggano, Bengk	25.22	247	P	P	09 17 39.7	-0.2
	comp=Z,236nm,1.0s						
COEN	Coen	25.52	137	P	P	09 17 43.1	+0.4
	comp=Z,42nm,1.2s						
COEN	Coen	25.52	137	P	P	09 17 42.5	-0.2
COEN				IAmb	IAmb	09 17 51.8	
	comp=Z,52nm,1.2s						
COEN	Coen	25.52	137	P	P	09 17 43.9	+1.3
PPI	Padang Panjang	25.56	259	P	P	09 17 44.1	+1.1
PPI				pP	pP	09 17 50.7	+0.2
PDSI	Padang	25.59	258	P	P	09 17 44.7	+1.4
PMG	Port Moresby	25.75	123	LR	LR	09 29 45.8	
	comp=Z,1µm,18.8s,baz=326,slow=41						
PMG	Port Moresby	25.75	123	P	P	09 17 45.4	+0.7
PMG				IAmb	IAmb	09 17 53.6	
	comp=Z,56nm,0.8s						
PMG	Port Moresby	25.75	123	P	P	09 17 46.3	+1.6
PMG	Port Moresby	25.75	123	P	P	09 17 46.8	+2.1
	comp=Z,3µmcomp=Z,2µmcomp=Z,73nm,1.3s						
PMG				pP	pP	09 17 52.6	0.0
	comp=Z,3µmcomp=Z,2µmcomp=Z,73nm,1.3s						
PMG	Port Moresby	25.75	123	*ce*P	P	09 17 44.4	-0.3
PMG				pmax	pmax		
	comp=Z,47nm,1.0s						
WB0	Warramunga Arr	25.83	160	P	P	09 17 44.6	-0.7
WRAB	Tennant Creek	25.97	161	P	P	09 17 46.1	-0.5
WRAB	Tennant Creek	25.97	161	P	P	09 17 45.8	-0.8
WRAB	Tennant Creek	25.97	161	*ce*P	P	09 17 46.5	-0.1
WRAB				pmax	pmax		
	comp=Z,62nm,1.0s						
WRA	Warramunga Arr	25.98	161	P	P	09 17 45.8	-0.9

	comp=Z,50nm,0.9s,baz=343,slow=9.9,SNR=64						
WRA				S	S	09 22 10.3	-5.5
	comp=Z,1.3nm,0.9s,baz=339,slow=15,SNR=1.1						
	comp=Z,50nm,0.9s						
WRA	Warramunga Arr	25.98	161	P	P	09 17 45.6	-1.1
WRA	Warramunga Arr	25.98	161	ceP	P	09 17 45.7	-0.9
WRA				pmax	pmax		
	comp=Z,39nm,0.6s						
WB1	Warramunga Ar.	25.99	161	P	P	09 17 46.0	-0.8
WR8	Warramunga Arr	26.04	160	P	P	09 17 47.0	-0.3
WR8				IAmb	IAmb	09 17 57.3	
	comp=Z,68nm,0.8s						
MNSI	Mandailing Nat	26.14	262	P	P	09 17 52.6	+4.3
CNSH	ChangSha	26.24	334	P	P	09 17 49.5	+0.5
CNSH				S	S	09 22 22.5	+2.7
CNSH				LR	LR		
	comp=Z,2µm,21.1s						
CNSH				LR	LR		
	comp=Z,1µm,18.2s						
CNSH				LR	LR		
	comp=Z,2µm,17.9s						
MBWA	Marble Bar	26.29	192	P	P	09 17 49.6	+0.2
	comp=Z,56nm,1.1s						
MBWA	Marble Bar	26.29	192	P	P	09 17 48.9	-0.6
MBWA				IAmb	IAmb	09 17 51.5	
	comp=Z,47nm,0.9s						
MBWA	Marble Bar	26.29	192	P	P	09 17 50.1	+0.6
PPSI	Pulau Pagai	26.49	254	P	P	09 17 52.2	+0.8
	comp=Z,121nm,1.0s						
PSI	Prapat	26.55	267	LR	LR	09 29 51.0	
	comp=Z,1µm,18.6s,baz=49,slow=40						
PSI	Prapat	26.55	267	P	P	09 17 54.0	+1.9
	comp=Z,2µmcomp=Z,46nm,1.0s						
SSE	Sheshan	26.58	352	P	P	09 17 53.5	+1.5
SSE				S	S	09 22 29.3	+4.2
SSE				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SSE				pmax	pmax		
	comp=Z,160nm,6.2s						
SSE				LR	LR		
	comp=Z,390nm,19.1s						
SSE				LR	LR		
	comp=Z,630nm,19.2s						
PSAC1	Pilbara Seismi	26.64	192	P	P	09 17 52.2	-0.4
	comp=Z,67nm,1.1s						
PSAC2	Pilbara Seismi	26.65	192	P	P	09 17 52.6	-0.1
	comp=Z,64nm,1.2s						
PSA00	Pilbara Seismi	26.67	192	P	P	09 17 52.1	-0.8
	comp=Z,79nm,1.3s						
PSA00	Pilbara Seismi	26.67	192	P	P	09 17 51.3	-1.5
PSA00				IAmb	IAmb	09 17 53.9	
	comp=Z,101nm,1.3s						
PSA00	Pilbara Seismi	26.67	192	P	P	09 17 52.5	-0.3
PSA00				IAmb	IAmb	09 17 53.9	
	comp=Z,37nm,1.1s						
PSA00	Pilbara Seismi	26.67	192	P	P	09 17 53.0	+0.1
PSAB3	Pilbara Seismi	26.68	192	P	P	09 17 52.9	-0.2
	comp=Z,79nm,1.1s						
TSI	Tuntungan	26.86	269	P	P	09 17 57.0	+2.2
	comp=Z,3µmcomp=Z,67nm,0.9s						
SISI	Saibi	27.02	258	P	P	09 17 57.1	+0.9
JSU	Suzuyama	27.09	9	P	P	09 17 55.3	-1.4
JSU	Suzuyama	27.09	9	P	P	09 17 55.2	-1.4
JCJ	Chichijima	27.41	34	LR	LR	09 28 33.0	
	comp=Z,822nm,20.5s,baz=234,slow=36						
JCJ	Chichijima	27.41	34	P	P	09 17 58.6	-1.0
PBSI	Pulau Batu	27.57	261	P	P	09 18 01.6	+0.5
	comp=Z,103nm,1.0s						
KCSI	Kotacane, Aceh	27.65	269	P	P	09 18 02.9	+1.0
	comp=Z,666nmcomp=Z,38nm,1.1s						
WHN	Wuhan	27.78	339	P	P	09 18 03.3	+0.5
WHN				LR	LR		
	comp=Z,6µm,16.1s						
WHN				LR	LR		
	comp=Z,3µm,12.7s						
WHN				LR	LR		
	comp=Z,3µm,21.5s						
NJ2	Nanjing	27.93	348	eP	P	09 18 06.5	+2.4
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,1µm,15.2s						
NJ2				LR	LR		
	comp=Z,2µm,16.1s						
NJ2				LR	LR		
	comp=Z,1µm,16.9s						
GSI	Gunungsitoli	28.05	264	P	P	09 18 04.7	-0.8
GSI	Gunungsitoli	28.05	264	P	P	09 18 07.1	+1.6
GSI	Gunungsitoli	28.05	264	P	P	09 18 06.2	+0.7
	comp=Z,93nm,1.1s						
RABL	Rabaul	28.09	108	P	P	09 18 06.5	+0.7
TPTI		28.26	268	P	P	09 18 08.6	+1.3
	comp=Z,33nm,1.4s						
QIS	Mount Isa	28.67	152	P	P	09 18 11.1	+0.3
JNU	Nakatsue	28.74	9	P	P	09 18 10.4	-1.0
	comp=Z,22nm,0.8s,baz=200,slow=4.9,SNR=10						
JNU				S	S	09 23 01.8	+2.5
	comp=Z,6.5nm,0.9s,baz=188,slow=14,SNR=2.2						
	comp=Z,22nm,0.8s						
JNU	Nakatsue	28.74	9	P	P	09 18 10.8	-0.6
JNU				IAmb	IAmb	09 18 22.8	
	comp=Z,33nm,0.9s						
JNU	Nakatsue	28.74	9	P	P	09 18 10.6	-0.8
MLSI	Meulaboh, Aceh	28.98	270	P	P	09 18 14.7	+1.0
	comp=Z,86nm,0.9s						
SNSI	Sinabang, Aceh	29.17	267	P	P	09 18 17.2	+1.8
	comp=Z,91nm,1.2s						
CMAR	Chiang Mai Arr	29.31	300	P	P	09 18 18.2	+1.6
	comp=Z,17nm,0.8s,baz=109,slow=7.1,SNR=53						
CMAR				ScP	ScP	09 24 59.5	-3.6
	comp=Z,0.5nm,0.5s,baz=109,slow=2.7,SNR=4.7						
CMAR				LR	LR	09 32 53.5	
	comp=Z,2µm,18.0s,baz=115,slow=42						
	comp=Z,17nm,0.8s						
CMAR	Chiang Mai Arr	29.31	300	P	P	09 18 15.0	-1.7
MTSU	Mount Surprise	29.32	141	P	P	09 18 17.7	+1.1
AS31	Alice Springs	29.35	164	P	P	09 18 16.4	-0.5
ASAR	Alice Springs	29.35	164	P	P	09 18 16.2	-0.7
	comp=Z,4.6nm,0.6s,baz=346,slow=7.8,SNR=94						
ASAR				S	S	09 23 07.4	-1.6
	comp=Z,1.2nm,0.9s,baz=332,slow=10,SNR=1.7						
ASAR				LR	LR	09 30 58.6	
	comp=Z,594nm,21.8s,baz=1.0,slow=38						
	comp=Z,4.6nm,0.6s						
ASAR	Alice Springs	29.35	164		P	09 18 15.8	-1.1
CHTO	Chiang Mai	29.46	301	P	P	09 18 17.8	-0.2
CHTO				IAmb	IAmb	09 18 21.9	
	comp=Z,61nm,1.0s						
CHTO	Chiang Mai	29.46	301	P	P	09 18 19.7	+1.8
CHTO	Chiang Mai	29.46	301	P	P	09 18 19.8	+1.8
	comp=Z,899nmcomp=Z,75nm,1.0s						
CHTO	Chiang Mai	29.46	301	P	P	09 18 17.8	-0.2
CHTO				pmax	pmax		
	comp=Z,61nm,1.0s						
ENH	Enshi	29.59	331	P	P	09 18 18.0	-1.0
ENH				IAmb	IAmb	09 18 20.4	
	comp=Z,52nm,1.0s						
ENH	Enshi	29.59	331	P	P	09 18 19.4	+0.4
WRKA	Warakurna	29.67	175	P	P	09 18 19.1	-0.6
	comp=Z,16nm,1.4s						
KMI	Kunming	29.82	315	P	P	09 18 22.5	+1.2
KMI				S	S	09 23 12.5	-4.3
KMI				pmax	pmax		
	comp=Z,35nm,1.1s						
KMI				LR	LR		
	comp=Z,730nm,15.2s						
KMI				LR	LR		
	comp=Z,2µm,16.6s						
KMI				LR	LR		
	comp=Z,2µm,17.7s						
JMN	Monobe	29.94	14		P	09 18 21.6	-0.5
JMN				IAmb	IAmb	09 18 35.5	
	comp=Z,50nm,1.0s						
JMN	Monobe	29.94	14	P	P	09 18 22.7	+0.7
JHJ	Hachijo jima 2	31.29	24	LR	LR	09 28 56.1	
	comp=Z,922nm,21.4s,baz=237,slow=32						
PZH	PanZhiHua	31.39	316	P	P	09 18 36.5	+1.4
PZH				S	S	09 23 38.0	-3.2
PZH				pmax	pmax		
	comp=Z,30nm,1.1s						
PZH				LR	LR		
	comp=Z,660nm,17.5s						
PZH				LR	LR		
	comp=Z,1µm,15.5s						
PZH				LR	LR		
	comp=Z,2µm,16.9s						
TV1H	Townsville Har	31.73	139	P	P	09 18 39.6	+1.7
MEEK	Meekatharra	31.83	192	P	P	09 18 38.8	0.0
CTA	Charters Tower	31.99	141	LR	LR	09 33 58.8	
	comp=Z,690nm,18.6s,baz=318,slow=41						
CTAO	Charters Tower	31.99	141		P	09 18 41.3	+1.1
CTAO				IAmb	IAmb	09 18 49.4	
	comp=Z,38nm,1.3s						
CTAO	Charters Tower	31.99	141	P	P	09 18 43.6	+3.4
CTAO	Charters Tower	31.99	141	P	P	09 18 41.3	+1.1
CTAO				pmax	pmax		
	comp=Z,38nm,1.3s						
LYN	LuoYang	32.08	340	P	P	09 18 40.5	-0.3
LYN				S	S	09 23 57.0	+5.6
LYN				pmax	pmax		
	comp=Z,23nm,1.5s						
LYN				LR	LR		
	comp=Z,2µm,16.7s						
LYN				LR	LR		
	comp=Z,1µm,11.2s						
LYN				LR	LR		
	comp=Z,2µm,16.1s						
TIA	Tai'an	32.31	347	P	P	09 18 42.0	-0.8
TIA				S	S	09 23 57.8	+2.8
TIA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TIA				LR	LR		
	comp=Z,560nm,20.6s						
TIA				LR	LR		
	comp=Z,1µm,17.2s						
TIA				LR	LR		
	comp=Z,820nm,13.7s						
INU	Inuyama	32.33	18		P	09 18 42.5	-0.6
INU	Inuyama	32.33	18	P	P	09 18 42.7	-0.3
JGF	Kuroka	32.67	18		P	09 18 45.1	-0.9
JGF				IAmb	IAmb	09 18 48.4	
	comp=Z,22nm,0.8s						
JGF	Kuroka	32.67	18	P	P	09 18 45.8	-0.2
KSAR	Wonju Array Be	32.68	4	P	P	09 18 46.1	0.0
KSAR	Wonju Array Be	32.68	4	P	P	09 18 46.1	0.0
KSRS	Korea Array	32.70	4	P	P	09 18 46.1	0.0
	comp=Z,19nm,0.7s,baz=182,slow=9.7,SNR=71						
	comp=Z,19nm,0.7s						
KS19	Wonju Array Si	32.74	4	P	P	09 18 46.1	-0.5
KS19				IAmb	IAmb	09 18 47.4	
	comp=Z,23nm,0.7s						
TNCH	TengChong	32.85	311	P	P	09 18 52.0	+4.0
TNCH				S	S	09 24 09.3	+5.2
TNCH				pmax	pmax		
	comp=Z,81nm,0.9s						
TNCH				pmax	pmax		
	comp=Z,300nm,4.0s						
TNCH				LR	LR		
	comp=Z,900nm,15.2s						
TNCH				LR	LR		
	comp=Z,610nm,15.2s						
TNCH				LR	LR		
	comp=Z,1µm,17.9s						
XAN	Xi'an	33.01	334	P	P	09 18 48.3	-0.8
XAN				S	S	09 24 05.5	-0.6
XAN				pmax	pmax		
	comp=Z,55nm,0.9s						
XAN				pmax	pmax		
	comp=Z,310nm,3.8s						
XAN				LR	LR		
	comp=Z,2µm,17.5s						
XAN				LR	LR		
	comp=Z,2µm,14.6s						
XAN				LR	LR		
	comp=Z,4µm,15.5s						
MAJO	Matsushiro	33.80	19		P	09 18 55.0	-0.9
MAJO				IAmb	IAmb	09 19 08.3	
	comp=Z,51nm,1.2s						
MAJO	Matsushiro	33.80	19	P	P	09 18 54.7	-1.2
MAJO	Matsushiro	33.80	19	i P	P	09 18 55.7	-0.2
MAJO				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MJAR	Matsushiro Arr	33.80	19	P	P	09 18 54.5	-1.3
	comp=Z,14nm,0.8s,baz=196,slow=9.2,SNR=44						
MJAR				PcP	PcP	09 21 34.3	-0.4
	comp=Z,1.6nm,0.8s,baz=211,slow=2.5,SNR=2.5						
MJAR				LR	LR	09 34 15.5	
	comp=Z,1µm,18.1s,baz=220,slow=39						
	comp=Z,14nm,0.8s						
MJAR	Matsushiro Arr	33.80	19		P	09 18 55.4	-0.5
MJAR	Matsushiro Arr	33.80	19	P	P	09 18 55.4	-0.5
MJAR				pmax	pmax		
	comp=Z,16nm,1.2s						
MJB9	Matsu-Tunnel	33.80	19	P	P	09 18 55.4	-0.5
MJB9				IAmb	IAmb	09 19 09.3	
	comp=Z,54nm,1.3s						
HNS	HongShan	34.02	345	⇑P	P	09 18 56.5	-1.2
HNS				S	S	09 24 25.0	+3.5
HNS				pmax	pmax		
	comp=Z,19nm,1.2s						
HNS				LR	LR		
	comp=Z,520nm,21.2s						
HNS				LR	LR		
	comp=Z,1µm,21.4s						
HNS				LR	LR		
	comp=Z,1µm,15.1s						
DL2	Dalian	34.25	355	P	P	09 18 59.5	-0.2
DL2				S	S	09 24 31.0	+6.0
DL2				pmax	pmax		
	comp=Z,51nm,1.0s						
DL2				pmax	pmax		
	comp=Z,540nm,5.5s						
DL2				LR	LR		
	comp=Z,1µm,16.7s						
DL2				LR	LR		
	comp=Z,1µm,19.5s						
DL2				LR	LR		
	comp=Z,2µm,17.1s						
MORW	Morawa	34.76	195	P	P	09 19 03.4	-0.8
MORW				IAmb	IAmb	09 19 22.3	
	comp=Z,31nm,1.2s						
JSD	Sado	35.19	18		P	09 19 06.8	-1.1
JSD				IAmb	IAmb	09 19 10.0	
	comp=Z,28nm,1.0s						
JSD	Sado	35.19	18	P	P	09 19 06.7	-1.1
FORT	Forrest	35.35	176	P	P	09 19 08.6	-0.7
FORT	Forrest	35.35	176		P	09 19 08.3	-1.0
FORT				IAmb	IAmb	09 19 16.2	
	comp=Z,35nm,1.3s						
INKA	Innaminka	35.44	156		P	09 19 09.6	-0.5
QLP	Quilpie	36.00	151	P	P	09 19 14.5	-0.5
	comp=Z,43nm,1.4s						
QLP	Quilpie	36.00	151	P	P	09 19 14.4	-0.5
KMBL	Kambalda	36.01	185	P	P	09 19 14.1	-0.9
	comp=Z,22nm,1.0s						
BLDU	Ballidu	36.08	193	P	P	09 19 14.7	-0.9
	comp=Z,26nm,1.6s						
BJT	Baijiatuau	36.17	348	P	P	09 19 15.6	-0.6
BJI	Beijing	36.19	348	P	P	09 19 15.0	-1.4
BJI				S	S	09 24 57.8	+3.0
BJI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BJI				LR	LR		
	comp=Z,290nm,19.3s						
BJI				LR	LR		
	comp=Z,460nm,19.4s						
BJI				LR	LR		
	comp=Z,350nm,15.1s						
TATA	Tatamba Isabel	36.62	111	P	P	09 19 23.3	+2.9
KLBR	Kellerberrin	36.81	191	P	P	09 19 21.5	-0.4
	comp=Z,47nm,0.8s						
SNY	Shenyang	37.03	358	⇓P	P	09 19 23.3	-0.2
SNY				S	S	09 25 08.3	+0.8
SNY				pmax	pmax		
	comp=Z,23nm,0.8s						
SNY				pmax	pmax		
	comp=Z,200nm,6.3s						
SNY				LR	LR		
	comp=Z,890nm,16.7s						
SNY				LR	LR		
	comp=Z,1µm,21.0s						
SNY				LR	LR		
	comp=Z,910nm,16.5s						
LZDM	Lanzhou Array	37.03	330	P	P	09 19 25.1	+1.1
	comp=Z,24nm,0.9s,baz=148,slow=11,SNR=23						
LZDM				LR	LR	09 36 53.9	
	comp=Z,2µm,19.0s,baz=115,slow=40						
	comp=Z,24nm,0.9s						
LZH	Lanzhou	37.06	330	⇑P	P	09 19 25.0	+0.9
LZH				S	S	09 25 07.0	-1.6
LZH				pmax	pmax		
	comp=Z,120nm,1.2s						
LZH				pmax	pmax		
	comp=Z,400nm,5.8s						
LZH				LR	LR		
	comp=Z,1µm,16.3s						
LZH				LR	LR		
	comp=Z,2µm,16.3s						
LZH				LR	LR		
	comp=Z,3µm,17.2s						
AUNRC	North Rockhamp	37.07	140	P	P	09 19 25.1	+1.0
BRDH	Bariadhala	37.27	302	LR	LR	09 38 52.5	
	comp=Z,910nm,18.7s,baz=151,slow=43						
MUN	Mundaring	37.51	193	P	P	09 19 26.9	-0.8
	comp=Z,34nm,1.5s						
HHC	Hu-ho-hao-te	38.12	343	eP	P	09 19 35.0	+2.1
HHC				S	S	09 25 27.5	+3.1
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,350nm,8.5s						
HHC				LR	LR		
	comp=Z,540nm,13.3s						
HHC				LR	LR		
	comp=Z,720nm,15.9s						
HHC				LR	LR		
	comp=Z,640nm,15.5s						
NWAO	Narrogin (SRO)	38.21	191	P	P	09 19 33.8	+0.2
BTO	Baotou	38.37	341	eP	P	09 19 39.3	+4.2
BTO				pP	sP	09 19 45.0	-1.4
BTO				sP	pP	09 19 48.0	+5.0
BTO				S	S	09 25 36.5	+8.2
BTO				sS	sS	09 25 43.8	+2.2
BTO				SS	SnSn	09 28 16.5	+1.4
BTO				pmax	pmax		
	comp=Z,16nm,1.0s						
BTO				pmax	pmax		
	comp=Z,530nm,5.9s						
BTO				LR	LR		
	comp=Z,2µm,23.5s						
BTO				LR	LR		
	comp=Z,2µm,22.7s						
BTO				LR	LR		
	comp=Z,3µm,24.3s						
BBOO	Buckleboo	38.62	166	P	P	09 19 36.7	-0.4
	comp=Z,92nm,1.4s						
BBOO	Buckleboo	38.62	166	P	P	09 19 36.7	-0.4
VLA	Vladivostok	38.70	8	i P	P	09 19 37.6	0.0
VLA				pmax	pmax		
	comp=Z,32nm,0.9s						
EIDS	Eidsvold	38.87	141	P	P	09 19 39.0	-0.3
	comp=Z,35nm,1.1s						
EIDS	Eidsvold	38.87	141	P	P	09 19 39.7	+0.4
CN2	Changchun	38.96	360	⇑P	P	09 19 42.5	+2.7
CN2				epP	sP	09 19 48.5	-2.1
CN2				eS	S	09 25 40.8	+4.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,400nm,4.0s						
CN2				LR	LR		
	comp=Z,600nm,11.0s						
CN2				LR	LR		
	comp=Z,400nm,11.0s						
CN2				LR	LR		
	comp=Z,400nm,13.0s						
WHYH	Whyalla	39.23	164	P	P	09 19 44.4	+2.3
STKA	Stephens Creek	39.47	158	P	P	09 19 44.1	-0.1
	comp=Z,257nm,0.8s						
STKA	Stephens Creek	39.47	158	P	P	09 19 44.4	+0.3
	comp=Z,30nm,0.9s,baz=332,slow=8.4,SNR=39						
STKA				S	S	09 25 33.2	-11
	comp=Z,3.0nm,1.0s,baz=295,slow=21,SNR=2.4						
	comp=Z,30nm,0.9s						
STKA	Stephens Creek	39.47	158		P	09 19 44.1	-0.1
STKA	Stephens Creek	39.47	158	P	P	09 19 44.5	+0.3
STKA	Stephens Creek	39.47	158	P	P	09 19 44.1	-0.1
STKA				pmax	pmax		
	comp=Z,204nm,0.9s						
AUJCS	Jamestown Cent	39.68	163	P	P	09 19 47.4	+1.4
USRK	Ussuriysk Ar.	39.77	7	P	P	09 19 46.9	+0.3
	comp=Z,20nm,0.8s,baz=187,slow=7.4,SNR=26						
	comp=Z,20nm,0.8s						
RKGY	Rocky Gully	39.89	191	P	P	09 19 48.6	+0.9
	comp=Z,111nm,1.1s						
AUCAS	Cummins Area S	39.92	167	P	P	09 19 50.1	+2.2
XLT	XiLinHaoTe	39.93	349	eP	P	09 19 49.0	+1.0
XLT				S	S	09 25 52.3	+0.7
XLT				pmax	pmax		
	comp=Z,14nm,1.0s						
XLT				LR	LR		
	comp=Z,75nm,15.7s						
XLT				LR	LR		
	comp=Z,660nm,14.9s						
XLT				LR	LR		
	comp=Z,730nm,18.7s						
MDJ	Mudanjiang	39.94	5	P	P	09 19 47.7	-0.3
MDJ				IAmb	IAmb	09 19 49.3	
	comp=Z,51nm,0.9s						
MDJ	Mudanjiang	39.94	5	P	P	09 19 48.3	+0.3
MDJ				PcP	PcP	09 21 52.0	-1.1
MDJ				S	S	09 25 55.5	+4.0
MDJ				pmax	pmax		
	comp=Z,72nm,0.9s						
MDJ				LR	LR		
	comp=Z,980nm,16.5s						
MDJ				LR	LR		
	comp=Z,830nm,17.2s						
MDJ				LR	LR		
	comp=Z,1µm,19.9s						
MDJ	Mudanjiang	39.94	5	P	P	09 19 47.6	-0.4
HTT	Hallett	39.99	162	P	P	09 19 48.8	+0.2
	comp=Z,19nm,0.9s						
HTT	Hallett	39.99	162	P	P	09 19 49.4	+0.8
CMSA	Cobar Meteorol	40.85	153	P	P	09 19 55.9	+0.2
	comp=Z,19nm,1.3s						
CMSA	Cobar Meteorol	40.85	153	P	P	09 19 56.3	+0.6
LSA	Lhasa	40.87	311	P	P	09 19 54.3	-2.2
LSA				S	S	09 26 02.8	-4.0
LSA				pmax	pmax		
	comp=Z,17nm,0.8s						
LSA				LR	LR		
	comp=Z,490nm,17.5s						
LSA				LR	LR		
	comp=Z,260nm,10.4s						
BNX	BinXian	40.93	2	⇑P	P	09 19 54.8	-1.4
BNX				pmax	pmax		
	comp=Z,16nm,1.3s						
TW1H	Toowoomba 1 Ha	41.00	143	P	P	09 19 58.5	+1.4
GTA	Gaotai	41.65	330	P	P	09 20 03.0	+0.7
GTA				S	S	09 26 18.0	+0.6
GTA				SS	SS	09 29 23.8	+0.6
GTA				pmax	pmax		
	comp=Z,29nm,1.5s						
GTA				LR	LR		
	comp=Z,1µm,20.0s						
GTA				LR	LR		
	comp=Z,670nm,15.6s						
GTA				LR	LR		
	comp=Z,1µm,17.1s						
AUMBR	Murray Bridge	41.68	163	P	P	09 20 05.4	+3.0
ASAJ	Asahikawa	42.07	18	P	P	09 20 06.3	+0.7
	comp=Z,16nm,0.4s,baz=231,slow=7.2,SNR=46						
ASAJ				LR	LR	09 39 17.4	
	comp=Z,1µm,18.9s,baz=218,slow=38						
	comp=Z,16nm,0.4s						
JKA	Kamikawa-asahi	42.07	18		P	09 20 06.3	+0.7
JKA				IAmb	IAmb	09 20 07.6	
	comp=Z,44nm,1.0s						
GOMU	GeErMu	42.17	322	P	P	09 20 07.8	+0.9
GOMU				S	S	09 26 27.0	+1.4
GOMU				pmax	pmax		
	comp=Z,13nm,1.4s						
GOMU				LR	LR		
	comp=Z,790nm,15.2s						
GOMU				LR	LR		
	comp=Z,980nm,18.2s						
GOMU				LR	LR		
	comp=Z,2µm,17.9s						
AUDCS	Dubbo College	42.81	151	P	P	09 20 12.4	+0.7
ARMA	Armidale	42.95	146	P	P	09 20 13.0	0.0
ARMA				IAmb	IAmb	09 20 22.8	
	comp=Z,51nm,1.2s						
ARMA	Armidale	42.95	146	P	P	09 20 14.3	+1.3
H11N1	WAKE ISLAND Hy	43.00	66	T	T	10 05 57.4	
	baz=255,slow=75,SNR=409						
H11N2	WAKE ISLAND Hy	43.01	66	T	T	10 05 58.4	
	baz=255,slow=75,SNR=336						

H11N3	**WAKE ISLAND Hy**	**43.02**	**66**	T	T	10 05 58.9	
	baz=255,slow=75,SNR=392						
MGBR	**Mount Gambier**	**44.47**	**163**	P	**P**	**09 20 25.5**	**+0.6**
MGBR				IAmb	IAmb	09 20 34.9	
	comp=Z,38nm,1.0s						
PALK	**Pallekele**	**44.59**	**276**	LR	LR	09 41 32.9	
	comp=Z,623nm,18.2s,baz=103,slow=39						
PALK	**Pallekele**	**44.59**	**276**	P	**P**	**09 20 25.0**	**-1.4**
PALK				IAmb	IAmb	09 20 52.2	
	comp=Z,37nm,1.2s						
PALK	**Pallekele**	**44.59**	**276**	P	**P**	**09 20 27.6**	**+1.2**
PALK	**Pallekele**	**44.59**	**276**	P	**P**	**09 20 25.0**	**-1.4**
PALK				pmax	pmax		
	comp=Z,37nm,1.3s						
YSS	**Yuzhno-Sakhali**	**44.68**	**17**	P	**P**	**09 20 27.0**	**+0.4**
YSS				IAmb	IAmb	09 20 30.8	
	comp=Z,17nm,0.7s						
YSS	**Yuzhno-Sakhali**	**44.68**	**17**	*e*P	**P**	**09 20 27.3**	**+0.7**
YSS				*e*S	**S**	**09 27 03.3**	**+1.9**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				pmax	pmax		
	comp=Z,200nm,3.4s						
YSS				MLR	MLR		
	comp=Z,900nm,11.0s						
YSS				MLR	MLR		
	comp=N,500nm,13.0s						
HILR	**Hailar Array B**	**44.98**	**355**	P	**P**	**09 20 28.1**	**-0.8**
	comp=N,2.0nm,0.4s,baz=160,slow=9.5,SNR=10						
HILR				LR	LR	09 39 16.6	
	comp=N,568nm,21.8s,baz=115,slow=36						
	comp=N,2.0nm,0.4s						
BRAT	**Ballarat**	**45.40**	**159**	P	**P**	**09 20 34.5**	**+2.2**
HEH	**HeiHe**	**45.44**	**2**	*e*P	**P**	**09 20 32.0**	**-0.6**
HEH				pmax	pmax		
	comp=N,37nm,0.9s						
HEH				pmax	pmax		
	comp=N,700nm,7.3s						
HEH				LR	LR		
	comp=N,550nm,15.6s						
HEH				LR	LR		
	comp=N,1µm,17.7s						
HEH				LR	LR		
	comp=N,920nm,15.8s						
AUMTS	**Mt Stromlo**	**45.52**	**153**	P	**P**	**09 20 35.6**	**+2.1**
CAN	**Canberra**	**45.52**	**153**	P	**P**	**09 20 34.1**	**+0.6**
CAN				IAmb	IAmb	09 20 43.7	
	comp=Z,27nm,0.8s						
CAN	**Canberra**	**45.52**	**153**	P	**P**	**09 20 34.9**	**+1.4**
CAN	**Canberra**	**45.52**	**153**	P	**P**	**09 20 34.1**	**+0.6**
CAN				pmax	pmax		
	comp=Z,27nm,0.8s						
CNB	**Canberra Magne**	**45.68**	**152**	P	**P**	**09 20 36.6**	**+1.8**
ULN	**Ulaanbaatar**	**45.84**	**343**	P	**P**	**09 20 35.9**	**0.0**
ULN	**Ulaanbaatar**	**45.84**	**343**	P	**P**	**09 20 35.2**	**-0.7**
ULN	**Ulaanbaatar**	**45.84**	**343**	*ce*P	**P**	**09 20 35.4**	**-0.5**
ULN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SANVU	**Saraoutou**	**45.91**	**117**	P	**P**	**09 20 38.3**	**+1.6**
TOO	**Toolangi**	**45.98**	**158**	P	**P**	**09 20 37.5**	**+0.5**
TOO	**Toolangi**	**45.98**	**158**	P	**P**	**09 20 37.5**	**+0.5**
TOO				pmax	pmax		
	comp=Z,14nm,1.2s						
SONM	**Songino Array**	**46.01**	**342**	P	**P**	**09 20 36.3**	**-0.9**
	comp=Z,4.6nm,0.8s,baz=155,slow=7.4,SNR=20						
SONM				PP	**PP**	**09 22 24.4**	**-1.0**
	comp=Z,2.2nm,0.9s,baz=160,slow=4.0,SNR=3.5						
SONM				LR	LR	09 43 00.9	
	comp=Z,514nm,19.4s,baz=156,slow=40						
	comp=Z,4.6nm,0.8s						
SONM	**Songino Array**	**46.01**	**342**	P	**P**	**09 20 37.2**	**-0.1**
SONM	**Songino Array**	**46.01**	**342**	P	**P**	**09 20 37.2**	**-0.1**
SONM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AUSMG	**Snowy Mountain**	**46.26**	**154**	P	**P**	**09 20 40.9**	**+1.6**
UGL	**Uglegorsk**	**46.44**	**15**	*e*P	**P**	**09 20 41.2**	**+0.8**
UGL				*e*S	**S**	**09 27 30.0**	**+3.4**
UGL				pmax	pmax		
	comp=Z,100nm,1.0s						
GRNR	**Gornyy**	**46.84**	**10**	⇑*i*P	**P**	**09 20 44.1**	**+0.5**
GRNR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,180nm,14.0s						
GRNR				MLR	MLR		
	comp=N,380nm,15.0s						
GRNR				MLR	MLR		
	comp=Z,720nm,21.0s						
HYB	**Hyderabad**	**47.62**	**289**	*e*P	**P**	**09 20 50.5**	**+0.3**
HYB				*e*sP	**sP**	**09 20 59.8**	**-1.3**
DZM	**Mont Dzumac**	**48.11**	**125**	LR	LR	09 41 03.1	
	comp=Z,298nm,19.1s,baz=13,slow=36						
DZM	**Mont Dzumac**	**48.11**	**125**	*e*P	P	09 21 01.2	+7.2
	comp=Z,152nm,1.4s						
DZM				*e*S	**S**	**09 27 49.1**	**-2.3**
	comp=Z,572nm,31.9s						
DZM				*e*SS	**SS**	**09 31 25.2**	**+4.3**
	comp=Z,821nm,26.8s						
DZM				*e*LQ	LQ	09 32 24.5	
	comp=Z,2µm,29.4s						
DZM				*e*LR	LR	09 34 26.8	
	comp=Z,692nm,30.7s						
DZM	**Mont Dzumac**	**48.11**	**125**	P	**P**	**09 20 54.2**	**+0.2**
TYV	**Tymovskoe**	**48.23**	**15**	*e*P	**P**	**09 20 55.0**	**+0.7**
TYV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TYV				pmax	pmax		
	comp=Z,200nm,5.0s						
ZEA	**Zeya**	**48.93**	**1**	*e*P	**P**	**09 20 58.6**	**-1.1**
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
ZEA				MLR	MLR		
	comp=N,400nm,19.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,17.0s						
ZAK	**Zakamensk**	**49.22**	**341**	*e*P	P	09 20 51.7	-10
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
TLY	**Talaya**	**50.24**	**342**	P	**P**	**09 21 09.2**	**-0.6**
IRK	**Irkutsk**	**50.56**	**343**	*e*P	**P**	**09 21 08.4**	**-3.7**
IRK				pmax	pmax		
	comp=Z,36nm,2.6s						
MOY	**Mondy**	**51.07**	**341**	*e*P	**P**	**09 21 15.7**	**-0.4**
MOY				pmax	pmax		
	comp=Z,33nm,1.6s						
WMQ	**Urumqi**	**51.23**	**325**	*e*P	**P**	**09 21 17.5**	**+0.1**
WMQ				pmax	pmax		
	comp=Z,31nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,260nm,4.9s						
WMQ				LR	LR		
	comp=Z,2µm,19.7s						
WMQ				LR	LR		
	comp=Z,740nm,15.1s						
WMQ				LR	LR		
	comp=Z,740nm,22.1s						
KNGR	**Kungurtug, Tuv**	**51.43**	**338**	*i* P	**P**	**09 21 18.9**	**+0.1**
KNGR				pmax	pmax		
	comp=Z,11nm,1.0s						
BOD	**Bodaibo**	**53.76**	**352**	*e*P	**P**	**09 21 34.2**	**-1.6**
BOD				pmax	pmax		
	comp=Z,25nm,1.6s						
PEA0B	**Petropavlovsk-**	**55.04**	**23**	*ce*P	**P**	**09 21 47.0**	**+1.8**
PETK	**Petropavlovsk-**	**55.04**	**23**	P	**P**	**09 21 46.0**	**+0.7**
	comp=Z,26nm,0.8s,baz=203,slow=6.6,SNR=44						
PETK				LR	LR	09 44 29.3	
	comp=Z,386nm,21.4s,baz=215,slow=35						
	comp=Z,26nm,0.8s						
PETK	**Petropavlovsk-**	**55.04**	**23**	P	**P**	**09 21 45.7**	**+0.4**
PETK	**Petropavlovsk-**	**55.04**	**23**	P	**P**	**09 21 46.0**	**+0.7**
DGZ	**Jazzator, Alta**	**55.16**	**331**	*i* P	**P**	**09 21 45.9**	**-0.4**
DGZ				pmax	pmax		
	comp=Z,19nm,1.1s						
PET	**Petropavlovsk**	**55.35**	**24**	*i* P	**P**	**09 21 48.5**	**+1.0**
PET				pmax	pmax		
	comp=Z,33nm,1.2s						
SHLS	**Shalkode**	**55.82**	**320**	*e*P	**P**	**09 21 48.8**	**-2.5**
	comp=Z,15nm,0.9s						
SHLS	**Shalkode**	**55.82**	**320**	*e*P	**P**	**09 21 48.7**	**-2.5**
SHLS				pmax	pmax		
	comp=Z,15nm,0.9s						
MK31	**Makanchi Array**	**56.06**	**325**	*ce*P	**P**	**09 21 53.0**	**+0.2**
MKAR	**Makanchi Array**	**56.06**	**325**	P	**P**	**09 21 52.4**	**-0.4**
	comp=Z,24nm,0.8s,baz=123,slow=7.0,SNR=138						
MKAR				LR	LR	09 47 26.2	
	comp=Z,629nm,22.0s,baz=124,slow=38						
	comp=Z,24nm,0.8s						
MKAR	**Makanchi Array**	**56.06**	**325**	P	**P**	**09 21 52.5**	**-0.3**
UZB	**Uzynbulak**	**56.09**	**320**	*e*P	**P**	**09 21 52.7**	**-0.6**
	comp=Z,16nm,1.1s						
UZB	**Uzynbulak**	**56.09**	**320**	*e*P	**P**	**09 21 52.6**	**-0.6**
UZB				pmax	pmax		
	comp=Z,16nm,1.1s						
PRZ	**Przheval'sk**	**56.17**	**319**		**P**	**09 21 53.6**	**-0.2**
PRZ				IAmb	IAmb	09 21 56.9	
	comp=Z,41nm,1.1s						
PRZ	**Przheval'sk**	**56.17**	**319**	P	**P**	**09 21 53.6**	**-0.2**
PRZ				pmax	pmax		
	comp=Z,41nm,1.1s						
MAKZ	**Makanchi**	**56.25**	**325**	P	**P**	**09 21 53.6**	**-0.5**
MAKZ	**Makanchi**	**56.25**	**325**	P	**P**	**09 21 53.6**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,42nm,1.0s						
NIL	**Nilore**	**56.35**	**308**		**P**	**09 21 54.9**	**-0.2**
NIL	**Nilore**	**56.35**	**308**	P	**P**	**09 21 54.9**	**-0.2**
NIL				pmax	pmax		
	comp=Z,94nm,1.3s						
SATY	**Saty**	**56.44**	**320**	*e*P	**P**	**09 21 55.3**	**-0.4**
	comp=Z,14nm,0.8s						
SATY	**Saty**	**56.44**	**320**	*e*P	**P**	**09 21 55.3**	**-0.4**
SATY				pmax	pmax		
	comp=Z,14nm,0.8s						
KSH	**Kashi**	**56.49**	**315**	P	**P**	**09 21 57.8**	**+1.8**
KSH				sP	sP	09 22 08.5	+0.9
KSH				pmax	pmax		
	comp=Z,13nm,1.7s						
KSH				AMB	AMB		
	comp=Z,270nm,5.8s						
KSH				LR	LR		
	comp=Z,770nm,17.5s						
KSH				LR	LR		
	comp=Z,930nm,18.2s						
KSH				LR	LR		
	comp=Z,740nm,15.1s						
YAK	**Yakutsk**	**57.31**	**2**	P	**P**	**09 22 00.7**	**-0.6**
	comp=Z,84nm,0.9s,baz=203,slow=3.9,SNR=35						
YAK				LR	LR	09 49 01.6	
	comp=Z,347nm,19.1s,baz=182,slow=38						
	comp=Z,84nm,0.9s						
YAK	**Yakutsk**	**57.31**	**2**	P	**P**	**09 22 00.6**	**-0.6**
YAK	**Yakutsk**	**57.31**	**2**	*e*P	**P**	**09 22 00.4**	**-0.8**
YAK				*e*S	**S**	**09 29 52.5**	**-3.1**
YAK				*e**SS	**pS**	**09 30 05.4**	**+0.3**
YAK				pmax	pmax		
	comp=Z,111nm,0.9s						
YAK				pmax	pmax		
	comp=N,54nm,1.3s						
YAK				pmax	pmax		
	comp=E,15nm,1.2s						
YAK				pmax	pmax		
	comp=Z,377nm,5.7s						
YAK				pmax	pmax		
	comp=E,343nm,4.4s						
YAK				pmax	pmax		
	comp=N,45nm,2.1s						
YAK				smax	smax		
	comp=E,465nm,4.4s						
YAK				smax	smax		
	comp=N,166nm,3.1s						
MDOK	**Medeo**	**57.37**	**319**	*e*P	**P**	**09 22 01.8**	**-0.5**
MDOK	**Medeo**	**57.37**	**319**	*e*P	**P**	**09 22 01.8**	**-0.5**
TNSS	**Tian-Shan**	**57.38**	**319**	*e*P	**P**	**09 22 01.9**	**-0.8**
TNSS	**Tian-Shan**	**57.38**	**319**	*e*P	**P**	**09 22 01.8**	**-0.8**
TDK	**Taldyqorghan**	**57.40**	**322**	*e*P	**P**	**09 22 02.1**	**-0.1**
	comp=N,12nm,0.7s						
TDK	**Taldyqorghan**	**57.40**	**322**	*e*P	**P**	**09 22 02.1**	**-0.1**
TDK				pmax	pmax		
	comp=Z,12nm,0.7s						
AAA	**Alma-Ata**	**57.48**	**319**	*e*P	**P**	**09 22 02.6**	**-0.4**
AAA	**Alma-Ata**	**57.48**	**319**	*e*P	**P**	**09 22 02.5**	**-0.4**
ULHL	**Ulahol**	**57.48**	**318**	P	**P**	**09 22 03.2**	**+0.1**
	SNR=20						
BOOM	**Boomskoye usch**	**57.79**	**318**	P	**P**	**09 22 04.9**	**-0.4**
BOOM	**Boomskoye usch**	**57.79**	**318**	P	**P**	**09 22 04.9**	**-0.4**
BOOM				pmax	pmax		
	comp=Z,13nm,1.1s						
MA2	**Magadan**	**58.10**	**15**	P	**P**	**09 22 05.8**	**-1.1**
	comp=Z,15nm,0.8s,baz=198,slow=4.7,SNR=5.7						
	comp=Z,15nm,0.8s						
MA2	**Magadan**	**58.10**	**15**	P	**P**	**09 22 07.2**	**+0.4**
MA2				IAmb	IAmb	09 22 20.8	
	comp=Z,30nm,0.9s						
MA2	**Magadan**	**58.10**	**15**	*ce*P	**P**	**09 22 07.5**	**+0.6**
MA2				pmax	pmax		
	comp=Z,37nm,1.3s						
MA2	**Magadan**	**58.10**	**15**	P	**P**	**09 22 07.4**	**+0.6**
	comp=Z,69nm,2.4s						
MA2				pP	**pP**	**09 22 10.1**	**-4.8**
	comp=Z,69nm,2.4s						
TKM2	**Tokmak 2**	**58.21**	**319**	P	**P**	**09 22 08.2**	**0.0**
	SNR=21						
KBK	**Karagaybulak**	**58.52**	**318**	P	**P**	**09 22 12.2**	**+1.8**
	SNR=10.0						
UCH	**Uchtor**	**58.63**	**317**	P	**P**	**09 22 10.7**	**-0.8**
	SNR=46						
CHMS	**Chumysh**	**58.80**	**318**	P	**P**	**09 22 12.0**	**-0.2**
	SNR=8.5						
AAK	**Ala-Archa**	**58.81**	**318**	P	**P**	**09 22 13.9**	**+1.5**
	SNR=6.2						
AAK	**Ala-Archa**	**58.81**	**318**	LR	LR	09 51 25.1	
	comp=Z,935nm,19.8s,baz=104,slow=40						
AAK	**Ala-Archa**	**58.81**	**318**	P	**P**	**09 22 12.1**	**-0.4**
AAK				IAmb	IAmb	09 22 19.5	
	comp=Z,30nm,1.4s						
AAK	**Ala-Archa**	**58.81**	**318**	*ce*P	**P**	**09 22 12.7**	**+0.3**
AAK				pmax	pmax		
	comp=Z,20nm,1.7s						
MANEM	**Manem**	**58.85**	**311**	P	**P**	**09 22 12.6**	**-0.3**
MANEM				IAmb	IAmb	09 22 35.0	
	comp=Z,40nm,1.0s						
USP	**Ospenovka**	**59.08**	**319**	P	**P**	**09 22 13.9**	**-0.2**
	SNR=26						
ZAA0	**Zalesovo Array**	**59.18**	**333**	P	**P**	**09 22 13.3**	**-1.1**
ZALV	**Zalesovo Beam**	**59.18**	**333**	P	**P**	**09 22 12.9**	**-1.5**
	comp=Z,3.8nm,0.6s,baz=120,slow=7.5,SNR=22						
ZALV				LR	LR	09 49 53.2	
	comp=Z,668nm,18.3s,baz=124,slow=38						
	comp=Z,3.8nm,0.6s						
ZALV	**Zalesovo Beam**	**59.18**	**333**	P	**P**	**09 22 12.7**	**-1.8**
ZALV	**Zalesovo Beam**	**59.18**	**333**	*i* P	**P**	**09 22 13.0**	**-1.5**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
EKS2	**Erkin-Say**	**59.30**	**318**	P	**P**	**09 22 17.6**	**+1.9**
	SNR=24						
ARSB	**Arslanbob**	**59.31**	**316**	P	**P**	**09 22 15.4**	**-0.4**
ARSB				IAmb	IAmb	09 22 18.1	
	comp=Z,29nm,1.2s						
ARSB	**Arslanbob**	**59.31**	**316**	P	**P**	**09 22 15.4**	**-0.4**
ARSB				pmax	pmax		
	comp=Z,29nm,1.2s						
DRK	**Karamyk**	**59.45**	**314**	P	**P**	**09 22 15.5**	**-1.5**
DRK				IAmb	IAmb	09 22 20.7	
	comp=Z,25nm,0.9s						
DRK	**Karamyk**	**59.45**	**314**	P	**P**	**09 22 15.5**	**-1.5**
DRK				pmax	pmax		
	comp=Z,25nm,0.9s						
KBL	**Kabul**	**59.95**	**307**	P	**P**	**09 22 19.8**	**-0.7**
KBL				IAmb	IAmb	09 22 33.5	
	comp=Z,20nm,0.9s						
KBL	**Kabul**	**59.95**	**307**	P	**P**	**09 22 19.8**	**-0.7**
KBL				pmax	pmax		
	comp=Z,20nm,1.0s						
GAR	**Garm**	**60.36**	**313**		**P**	**09 22 22.6**	**-0.5**
DZA	**Taraz**	**61.05**	**317**	*e*P	**P**	**09 22 27.3**	**-0.3**
	comp=Z,19nm,1.2s						
DZA	**Taraz**	**61.05**	**317**	*e*P	**P**	**09 22 27.3**	**-0.3**
DZA				pmax	pmax		
	comp=Z,19nm,1.2s						
CHGR	**Chuyangaron**	**61.10**	**312**	P	**P**	**09 22 27.8**	**-0.4**
CHGR	**Chuyangaron**	**61.10**	**312**	*i* P	**P**	**09 22 27.7**	**-0.4**
CHGR				pmax	pmax		
	comp=Z,50nm,1.5s						
SEY	**Seymchan**	**61.40**	**14**	P	**P**	**09 22 30.1**	**+0.5**
	comp=Z,4.1nm,0.5s,baz=188,slow=5.9,SNR=8.8						
SEY				LR	LR	09 49 41.7	
	comp=Z,162nm,19.3s,baz=212,slow=36						
	comp=Z,4.1nm,0.5s						
SEY	**Seymchan**	**61.40**	**14**	*ce*P	**P**	**09 22 31.0**	**+1.5**
SEY				pmax	pmax		
	comp=Z,15nm,1.0s						
IUG	**Iuzhnay**	**61.66**	**316**	*e*P	**P**	**09 22 31.5**	**-0.4**
	comp=Z,11nm,0.8s						
IUG	**Iuzhnay**	**61.66**	**316**	*e*P	**P**	**09 22 31.4**	**-0.4**
IUG				pmax	pmax		
	comp=Z,11nm,0.8s						
KK31	**Karatay Array**	**61.68**	**317**	P	**P**	**09 22 31.0**	**-0.9**
KK31				IAmb	IAmb	09 22 34.0	
	comp=Z,20nm,1.0s						
KK31	**Karatay Array**	**61.68**	**317**	P	**P**	**09 22 31.0**	**-0.9**
KK31				pmax	pmax		
	comp=Z,20nm,1.0s						
KKAR	**Karatay Array**	**61.68**	**317**	P	**P**	**09 22 31.1**	**-0.8**
KKAR	**Karatay Array**	**61.68**	**317**	P	**P**	**09 22 31.1**	**-0.8**
CHM	**Chimkent**	**62.02**	**316**	*e*P	**P**	**09 22 33.9**	**-0.2**
CHM	**Chimkent**	**62.02**	**316**	*e*P	**P**	**09 22 33.9**	**-0.2**
BRLS	**Borolday**	**62.12**	**317**	*e*P	**P**	**09 22 34.3**	**-0.6**
	comp=Z,11nm,1.4s						
BRLS	**Borolday**	**62.12**	**317**	*e*P	**P**	**09 22 34.2**	**-0.6**
BRLS				pmax	pmax		
	comp=Z,11nm,1.4s						
SHEM	**Shemya Is, Ala**	**62.29**	**31**	LR	LR	09 50 40.5	
	comp=Z,205nm,18.4s,baz=180,slow=37						
LBZ	**Lake Benmore**	**63.17**	**146**	P	**P**	**09 22 42.0**	**+0.3**
URZ	**Urewera**	**64.09**	**137**	LR	LR	09 51 29.4	
	comp=Z,514nm,18.9s,baz=304,slow=37						
BVAR	**Borovoye Array**	**65.84**	**327**	P	**P**	**09 22 58.6**	**-0.5**
	comp=Z,22nm,0.9s,baz=124,slow=7.4,SNR=48						
BVAR				LR	LR	09 55 19.8	
	comp=Z,398nm,18.4s,baz=110,slow=39						
	comp=Z,22nm,0.9s						
BORK	**Borovoye**	**65.89**	**327**		**P**	**09 22 58.7**	**-0.7**
BORK	**Borovoye**	**65.89**	**327**	*ce*P	**P**	**09 22 59.2**	**-0.2**
BORK				pmax	pmax		
	comp=Z,63nm,1.3s						
TIXI	**Tiksi**	**66.92**	**1**	LR	LR	09 52 40.7	
	comp=Z,999nm,21.7s,baz=200,slow=36						
TIXI	**Tiksi**	**66.92**	**1**	P	**P**	**09 23 03.8**	**-1.7**
TIXI				IAmb	IAmb	09 23 17.0	
	comp=Z,36nm,1.2s						
TIXI	**Tiksi**	**66.92**	**1**	*ce*P	**P**	**09 23 04.0**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,31nm,1.3s						
BILL	**Bilibino**	**68.97**	**15**	P	**P**	**09 23 17.8**	**-0.7**
BILL	**Bilibino**	**68.97**	**15**	*ce*P	**P**	**09 23 18.3**	**-0.2**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BILL				MLR	MLR		
	comp=Z,451nm,22.0s						
NRIK	**Noril'sk**	**69.22**	**347**	P	**P**	**09 23 19.3**	**-0.7**
	comp=Z,8.1nm,0.8s,baz=130,slow=6.7,SNR=14						
NRIK				LR	LR	09 55 08.4	
	comp=Z,635nm,19.5s,baz=152,slow=37						
	comp=Z,8.1nm,0.8s						
NRIK	**Noril'sk**	**69.22**	**347**	P	**P**	**09 23 19.8**	**-0.2**
NRIK				IAmb	IAmb	09 23 47.4	
	comp=Z,18nm,1.2s						
NRIK	**Noril'sk**	**69.22**	**347**	*i* P	**P**	**09 23 20.0**	**0.0**
NRIK				pmax	pmax		
	comp=Z,12nm,1.0s						
ABKAR	**Akbulak array**	**70.62**	**321**	P	**P**	**09 23 27.4**	**-1.7**
NIKH	**Nikolski High**	**71.77**	**35**	P	**P**	**09 23 36.5**	**+0.6**
	baz=253						
AKTO	**Aktyubinsk**	**72.14**	**322**	LR	LR	09 57 31.0	
	comp=Z,829nm,21.0s,baz=93,slow=38						
SPIA	**Saint Paul Isl**	**72.33**	**31**	P	**P**	**09 23 40.4**	**+1.2**
	baz=251						
SVE	**Sverdlovsk**	**72.50**	**329**	*e*P	**P**	**09 23 38.8**	**-1.4**
SVE				pmax	pmax		
	comp=Z,29nm,0.9s						
UNV	**Unalaska Valle**	**73.36**	**35**	P	**P**	**09 23 46.7**	**+1.4**
	baz=255						
ARTI	**Arti**	**73.55**	**328**	LR	LR	09 59 21.5	
	comp=Z,245nm,19.1s,baz=40,slow=38						
ARTI	**Arti**	**73.55**	**328**		**P**	**09 23 45.2**	**-1.3**
ARTI				IAmb	IAmb	09 23 46.9	
	comp=Z,15nm,0.8s						
ARTI	**Arti**	**73.55**	**328**	*c i*P	**P**	**09 23 43.9**	**-2.6**
ARTI				S	**S**	**09 33 14.3**	**-0.4**
ARTI				SS	**SS**	**09 37 52.8**	**-4.9**
ARTI				pmax	pmax		
	comp=Z,25nm,1.1s						
GAMB	**Gambell**	**74.05**	**24**	P	**P**	**09 23 50.7**	**+1.5**
	baz=247						
M11K	**Mekoryuk**	**75.33**	**28**	P	**P**	**09 23 58.1**	**+1.4**
	baz=253						
FALS	**False Pass**	**75.36**	**34**	P	**P**	**09 23 58.4**	**+1.4**
	baz=257						
TNA	**Tin City**	**76.21**	**23**	P	**P**	**09 24 03.3**	**+1.6**
	baz=250						
S12K	**Black Hills**	**76.30**	**34**	P	**P**	**09 24 04.0**	**+1.6**
	baz=258						
K13K	**Kusilvak Mount**	**76.49**	**27**	P	**P**	**09 24 04.4**	**+1.1**
	baz=254						
M13K	**Dall Lake**	**76.71**	**29**	P	**P**	**09 24 06.1**	**+1.6**
	baz=256						
F14K	**Arctic Creek**	**76.81**	**23**	P	**P**	**09 24 06.3**	**+1.2**
	baz=252						
ANM	**Nome**	**76.92**	**24**	P	**P**	**09 24 07.1**	**+1.3**
	baz=253						
SDPT	**Sand Point**	**77.12**	**34**	P	**P**	**09 24 07.7**	**+0.7**
	baz=260						
J14K	**Nanvaranak Lak**	**77.20**	**27**	P	**P**	**09 24 08.2**	**+0.9**
	baz=255						
L14K	**Kuka Creek**	**77.25**	**28**	P	**P**	**09 24 08.2**	**+0.7**
L14K				IAmb	IAmb	09 24 09.8	
	comp=Z,36nm,1.0s						
L14K	**Kuka Creek**	**77.25**	**28**	P	**P**	**09 24 08.7**	**+1.1**
	baz=256						
N14K	**Kuskokwak Cree**	**77.40**	**30**	P	**P**	**09 24 10.0**	**+1.6**
	baz=258						
M14K	**Bethel**	**77.45**	**29**	P	**P**	**09 24 10.5**	**+1.8**
	baz=257						
O14K	**Tigyukauivet M**	**77.47**	**30**	P	**P**	**09 24 10.0**	**+1.2**
	baz=258						
CHNA	**Chernabura Isl**	**77.53**	**35**	P	**P**	**09 24 10.6**	**+1.4**
	baz=260						
F15K	**North Star Dit**	**77.55**	**23**	P	**P**	**09 24 10.1**	**+0.9**
	baz=254						
G15K	**Niukluk**	**77.59**	**24**	P	**P**	**09 24 10.4**	**+0.9**
	baz=254						
AKT	**Akhty**	**77.73**	**311**	*e*P	**P**	**09 24 11.2**	**+0.3**
AKT				*e*		09 24 21.7	
AKT				pmax	pmax		
	comp=Z,19nm,1.1s						
S14K	**Fog Glacier**	**77.80**	**33**	P	**P**	**09 24 11.4**	**+0.5**
	baz=260						
L15K	**Ungalak Mounta**	**77.89**	**28**	P	**P**	**09 24 12.2**	**+1.1**
	baz=257						
K15K	**Wolf Creek Mou**	**78.00**	**27**	P	**P**	**09 24 12.6**	**+0.8**
K15K				IAmb	IAmb	09 24 13.5	
	comp=Z,28nm,1.1s						
K15K	**Wolf Creek Mou**	**78.00**	**27**	P	**P**	**09 24 12.3**	**+0.5**
	baz=257						
MAK	**Makhachkala**	**78.02**	**313**	*c i*P	P	09 24 06.9	-5.4
MAK				*e*S	**S**	**09 33 57.2**	**-7.3**
MAK				*e*SS	**SS**	**09 39 10.2**	**+4.2**
MAK				*e*SSS	SSS	09 42 28.0	
MAK				pmax	pmax		
	comp=Z,20nm,0.3s						
C16K	**Lisburne Hills**	**78.05**	**21**	P	**P**	**09 24 12.8**	**+0.9**
	baz=252						
M15K	**Kasigluk River**	**78.05**	**29**	P	**P**	**09 24 12.4**	**+0.3**
	baz=258						
O15K	**Ungalikthiuk R**	**78.18**	**30**	P	**P**	**09 24 13.5**	**+0.7**
	baz=259						
N15K	**Kwethluk River**	**78.23**	**29**	P	**P**	**09 24 14.4**	**+1.2**
	baz=259						
H16K	**Elim**	**78.24**	**25**	P	**P**	**09 24 13.8**	**+0.7**
	baz=256						
G16K	**Koyuk River**	**78.38**	**24**	P	**P**	**09 24 14.6**	**+0.8**
	baz=256						
J16K	**Anvik River**	**78.64**	**26**		**P**	**09 24 15.9**	**+0.6**
J16K				IAmb	IAmb	09 24 19.7	
	comp=Z,24nm,1.0s						
J16K	**Anvik River**	**78.64**	**26**	P	**P**	**09 24 16.3**	**+1.0**
	baz=258						
D17K	**Noatak River**	**78.70**	**22**	P	**P**	**09 24 16.2**	**+0.6**
	baz=255						
I17K	**Unalakleet**	**78.73**	**26**	P	**P**	**09 24 16.7**	**+1.0**
	baz=258						
KIRV	**Kirov**	**78.76**	**329**	LR	LR	10 01 08.9	
	comp=Z,641nm,21.0s,baz=101,slow=37						
KIRV	**Kirov**	**78.76**	**329**	*ce*P	**P**	**09 24 15.0**	**-1.0**
L16K	**Owhat River**	**78.83**	**28**	P	**P**	**09 24 16.6**	**+0.2**
L16K				IAmb	IAmb	09 24 18.3	
	comp=Z,37nm,1.1s						
L16K	**Owhat River**	**78.83**	**28**	P	**P**	**09 24 17.1**	**+0.7**
	baz=259						
RDOG	**Red Dog Mine**	**78.86**	**21**	P	**P**	**09 24 17.5**	**+1.1**

	baz=255						
C17K	DeLong Mountai	78.88	21	P	P	09 24 17.4	+0.8
	baz=254						
BELG	Belogornoye	78.89	322	*i* P	P	09 24 17.3	+0.4
BELG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
N16K	Nishlik Lake	78.94	29	P	P	09 24 18.1	+1.1
	baz=260						
M16K	Timber Creek	78.94	29	P	P	09 24 17.7	+0.6
M16K				IAmb	IAmb	09 24 18.5	
	comp=Z,24nm,0.8s						
M16K	Timber Creek	78.94	29	P	P	09 24 17.8	+0.8
	baz=260						
E17K	Hotham Inlet	79.01	22	P	P	09 24 18.0	+0.7
	baz=256						
F17K	Baldwin Pennin	79.08	23	P	P	09 24 18.3	+0.6
	baz=257						
P16K	Nushagak River	79.08	31	P	P	09 24 18.5	+0.7
	baz=261						
G17K	Kiwalik Mounta	79.10	24	P	P	09 24 18.2	+0.4
	baz=257,SNR=7.7						
O16K	Kokwok River B	79.12	30	P	P	09 24 18.5	+0.4
	baz=261						
H17K	Granite Mounta	79.28	25	P	P	09 24 19.7	+0.9
	baz=258						
J17K	VABM Dome	79.33	26		P	09 24 20.0	+0.9
J17K				IAmb	IAmb	09 24 20.8	
	comp=Z,15nm,0.8s						
J17K	VABM Dome	79.33	26	P	P	09 24 20.3	+1.2
	baz=259,SNR=9.6						
L17K	Donlin	79.45	28	P	P	09 24 20.4	+0.5
	baz=260						
E18K	Tukpahlearik C	79.55	22	P	P	09 24 20.6	+0.4
E18K				IAmb	IAmb	09 24 22.2	
	comp=Z,20nm,1.0s						
E18K	Tukpahlearik C	79.55	22	P	P	09 24 20.9	+0.7
	baz=257						
K17K	Iditarod	79.56	27	P	P	09 24 21.2	+0.9
	baz=260						
C18K	Utukok River	79.62	21	P	P	09 24 20.6	-0.1
C18K	Utukok River	79.62	21	P	P	09 24 21.3	+0.6
	baz=256						
O17K	Koliganek Bris	79.65	30	P	P	09 24 21.9	+1.0
	baz=262						
Q16K	King Salmon	79.72	31	P	P	09 24 22.0	+0.8
	baz=262						
N17K	Nushagak Hills	79.72	29	P	P	09 24 22.4	+1.1
	baz=261						
R17L	Mt. Peulik Vol	79.73	32	P	P	09 24 22.0	+0.6
	baz=263						
M17K	Holitna River	79.74	28	P	P	09 24 22.1	+0.7
	baz=261						
F18K	Selawik	79.74	23	P	P	09 24 21.7	+0.5
	baz=258						
P17K	Kvichak River	79.90	31	P	P	09 24 22.7	+0.4
	baz=262						
CHIR	Chirikof Islan	79.91	34	P	P	09 24 22.9	+0.5
	baz=264						
H18K	Honhosa River	79.97	25	P	P	09 24 23.1	+0.5
	baz=260						
G18K	Tagagawik	79.99	24		P	09 24 23.1	+0.5
G18K	Tagagawik	79.99	24	P	P	09 24 23.5	+0.9
	baz=259						
A19K	Wainwright	80.04	19	P	P	09 24 23.4	+0.6
	baz=256						
Q17K	Contact Creek	80.06	32	P	P	09 24 23.2	-0.1
	baz=263						
L18K	Granite Mounta	80.21	28	P	P	09 24 24.3	+0.4
	baz=262						
C19K	Lookout Ridge	80.30	21	P	P	09 24 24.8	+0.5
	baz=258						
N18K	Kilae Creek	80.38	29	P	P	09 24 25.2	+0.3
	baz=262						
J18K	Innoko River	80.39	26	P	P	09 24 25.4	+0.5
	baz=261						
F19K	Shaleruckik Mo	80.52	23	P	P	09 24 25.9	+0.5
	baz=260						
M18K	Stony River	80.52	28	P	P	09 24 26.2	+0.6
	baz=262,SNR=6.4						
GCSA	Galena City Sc	80.52	25	P	P	09 24 25.8	+0.3
	baz=261						
P18K	Big Mountain,	80.54	31	P	P	09 24 25.9	+0.1
	baz=263						
O18K	Koktuh Hills	80.61	30	P	P	09 24 26.4	+0.3
	baz=263						
G19K	Purcell Mounta	80.67	24	P	P	09 24 26.9	+0.6
	baz=260						
D19K	Kuna River	80.70	21	P	P	09 24 26.9	+0.5
	baz=259						
SII	Sitkinak Islan	80.79	34	P	P	09 24 27.0	-0.2
	baz=265						
H19K	Roundabout Mou	80.83	24	P	P	09 24 27.8	+0.7
	baz=261						
E19K	Redstone River	80.83	22	P	P	09 24 27.7	+0.5
	baz=260,SNR=34						
J19K	Poorman	80.95	26	P	P	09 24 28.3	+0.5
	baz=262						
L19K	White Mountain	81.06	28	P	P	09 24 29.2	+0.7
	baz=263						
N19K	Bonanza Creek	81.08	29	P	P	09 24 29.5	+0.8
	baz=264,SNR=8.8						
O19K	Port Alsworth	81.09	30	P	P	09 24 29.0	+0.4
	baz=264						
D20K	Etivluk River	81.28	21	P	P	09 24 30.1	+0.6
	baz=260						
Q19K	Cape Douglas,	81.30	31	P	P	09 24 30.6	+0.7
	baz=265						
B20K	Meade River	81.31	20	P	P	09 24 30.5	+0.9
	baz=260						
OHAK	Old Harbor	81.34	33	P	P	09 24 31.1	+1.1
	baz=265						
KBZ	Khabaz	81.42	313	P	P	09 24 30.1	-0.7
	comp=Z,2.1nm,0.8s,baz=63,slow=2.3,SNR=4.4						
	comp=Z,2.1nm,0.8s						
KBZ	Khabaz	81.42	313	*ce*P	P	09 24 28.4	-2.3
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
H20K	Anotleneega Mo	81.47	25	P	P	09 24 31.4	+0.8
	baz=263,SNR=20						
NEUR	Neytrino	81.55	313	*i* P	P	09 24 31.4	-0.3
NEUR				pmax	pmax		
	comp=Z,3.0nm,1.2s						
I20K	Naaghedeneel	81.55	25	P	P	09 24 32.3	+1.3
I20K	Naaghedeneel	81.55	25	P	P	09 24 31.7	+0.8
	baz=263						
K20K	Telida	81.56	27	P	P	09 24 31.9	+0.7
K20K				IAmb	IAmb	09 24 33.4	
	comp=Z,22nm,0.9s						
K20K	Telida	81.56	27	P	P	09 24 31.8	+0.7
	baz=264						
KVAR	Kislovodsk Arr	81.57	314	LR	LR	10 05 24.1	
	comp=Z,202nm,18.2s,baz=266,slow=39						
KIV	Kislovodsk	81.58	314	*e*P	P	09 24 29.4	-2.3
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
P19K	Oil Pt	81.58	30	P	P	09 24 32.0	+0.7
	baz=265						
J20K	Nowinta River	81.62	26	P	P	09 24 32.2	+0.8
	baz=264,SNR=10						
A21K	Barrow	81.72	19	P	P	09 24 32.4	+0.6
	baz=260,SNR=14						
KDAK	Kodiak Island	81.76	32	LR	LR	09 54 49.2	
	comp=Z,693nm,21.5s,baz=243,slow=31						
M20K	Styx River	81.84	28	P	P	09 24 33.5	+0.8
	baz=265						
O20K	Slope Mountain	81.92	30	P	P	09 24 33.6	+0.4
	baz=265						
Q20K	Shuyak Island	81.93	32	P	P	09 24 33.9	+0.8
	baz=266						
C21K	Knifeblade Rid	82.00	21	P	P	09 24 34.4	+1.1
	baz=262						
B21K	Ikpikpuk River	82.12	20	P	P	09 24 35.0	+1.1
	baz=262						
G21K	Allakaket	82.15	24	P	P	09 24 34.6	+0.5
	baz=264,SNR=26						
A22K	Sinclair Lake	82.20	19	P	P	09 24 34.8	+0.6
	baz=262						
E21K	Killik River	82.20	22	P	P	09 24 34.9	+0.5
	baz=263						
SPCR	Spurr Chakacha	82.22	29	P	P	09 24 35.1	+0.4
	baz=266						
F21K	Alatna River	82.24	23	P	P	09 24 35.5	+0.9
	baz=264,SNR=7.5						
H21K	Melozitna Rive	82.34	24	P	P	09 24 35.7	+0.5
	baz=264,SNR=11						
PPLA	Purkeypile	82.36	27	P	P	09 24 36.0	+0.5
	baz=265						
HOM	Homer	82.39	31	P	P	09 24 35.5	+0.1
	baz=266						
CHUM	Lake Minchumin	82.39	26	P	P	09 24 36.0	+0.6
	baz=265,SNR=12						
VRH	Novokhopyorsk	82.46	321	*e*P	P	09 24 32.5	-3.5
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SKT	Skwentna	82.60	28	P	P	09 24 36.1	-0.5
	baz=266,SNR=12						
B22K	Teshekpuk Lake	82.62	20	P	P	09 24 37.2	+0.7
	baz=263,SNR=19						
I21K	Tanana	82.64	25	P	P	09 24 37.3	+0.5
I21K	Tanana	82.64	25	P	P	09 24 37.2	+0.5
	baz=265,SNR=17						
D22K	Ayikyak River	82.72	21	P	P	09 24 37.6	+0.5
D22K	Ayikyak River	82.72	21	P	P	09 24 37.5	+0.4
	baz=264						
BRLK	Bradley Lake	82.78	30	P	P	09 24 37.1	-0.5
BRSE	Bradley Lake S	82.85	30	P	P	09 24 37.6	-0.3
	baz=267						
SUA	Susitna One	82.94	29	P	P	09 24 38.5	0.0
	baz=267,SNR=21						
E22K	Anaktuvuk Pass	82.96	22	P	P	09 24 38.5	0.0
	baz=265						
BPAW	Bear Paw Mtn.	82.99	26	P	P	09 24 38.9	+0.3
	baz=266,SNR=8.1						
CUT	Chulitna	83.22	28	P	P	09 24 39.5	-0.2
	baz=267						
M22K	Willow	83.25	28	P	P	09 24 40.1	+0.2
	baz=267,SNR=12						
TRF	Thorofare Moun	83.26	27	P	P	09 24 39.9	-0.3
	baz=267,SNR=13						
O22K	Cooper Landing	83.39	30	P	P	09 24 40.3	-0.4
	baz=268						
RC01	Rabbit Creek A	83.41	29	P	P	09 24 40.7	-0.1
	baz=268,SNR=14						
D23K	Nanushuk River	83.44	21	P	P	09 24 41.8	+1.0
	baz=266,SNR=18						
COLD	Coldfoot	83.51	23	P	P	09 24 41.7	+0.5
	baz=267,SNR=26						
SEW	Seward	83.51	30	P	P	09 24 41.7	+0.4
	baz=268,SNR=5.8						
C23K	Itkillik River	83.53	20	P	P	09 24 41.6	+0.3
	baz=266,SNR=16						
G23K	Bananza Creek	83.55	23	P	P	09 24 42.2	+0.7
	baz=267,SNR=13						
PMR	Palmer	83.72	29	P	P	09 24 42.0	-0.3
	baz=268,SNR=8.6						
SOC	Sochi	83.72	313	*e*P	P	09 24 40.4	-2.4
SOC				*e*		09 28 02.5	
SOC				*e*S	S	09 34 59.9	-4.1
SOC				*e*SS	SS	09 40 29.4	-1.8
SOC				*e*SSS	SSS	09 43 59.1	
SOC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
I23K	Minto, Yukon-K	83.75	25	P	P	09 24 43.2	+0.8
	baz=268,SNR=26						
E23K	Chandalar	83.78	22	P	P	09 24 43.4	+0.7
	baz=267						
TOLK	Toolik Lake Re	83.83	22	P	P	09 24 43.7	+0.8
	baz=267						
NEA2	Nenana	83.85	26	P	P	09 24 42.9	-0.1
	baz=268,SNR=17						
MCK	McKinley	83.88	26	P	P	09 24 42.6	-0.6
	baz=268,SNR=22						
KLMR	Klimovskoe	83.97	331	*e*P	P	09 24 41.0	-2.6
KLMR				pmax	pmax		
	comp=Z,49nm,1.5s						
VORD	Divnogorie	83.98	321	*e*P	P	09 24 41.0	-2.9
VORD				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WAT1	Susitna Watana	84.03	27	P	P	09 24 43.6	-0.4
	baz=269						
KNK	Knik Glacier	84.03	29	P	P	09 24 44.1	+0.1
	baz=269,SNR=6.3						
VSR	Storozhevoye	84.06	321	*e*P	P	09 24 41.2	-3.1
VSR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PWL	Port Wells	84.08	29	P	P	09 24 44.5	+0.2
	baz=269,SNR=20						
SML	Sawmill	84.10	28	P	P	09 24 44.6	+0.2
	baz=269,SNR=7.8						
D24K	Happy Valley	84.12	21	P	P	09 24 44.8	+0.5
	baz=268						
C24K	Franklin Bluff	84.19	20	P	P	09 24 45.2	+0.7
	baz=268						
E24K	Your Creek	84.21	22	P	P	09 24 45.3	+0.5
	baz=268						
MAW	Mawson	84.21	200	P	P	09 24 44.5	-0.1
	comp=Z,5.8nm,1.1s,baz=53,slow=4.6,SNR=7.0						
MAW				LR	LR	09 58 58.9	
	comp=Z,154nm,18.3s,baz=50,slow=33						
	comp=Z,5.8nm,1.1s						
H24K	Noodor Dome	84.39	24	P	P	09 24 46.3	+0.5
	baz=269						
M23K	Glacier View	84.39	28	P	P	09 24 46.2	+0.4
	baz=270,SNR=7.7						
WAT6	Susitna Watana	84.39	28	P	P	09 24 46.1	+0.1
	baz=269,SNR=12						
F24K	Squaw Lake	84.42	23	P	P	09 24 46.3	+0.4
	baz=269						
VNDA	Vanda	84.52	173	P	P	09 24 45.3	-0.8
	comp=Z,5.6nm,0.8s,baz=317,slow=5.6,SNR=18						
VNDA				LR	LR	10 01 42.3	
	comp=Z,233nm,19.8s,baz=330,slow=35						
	comp=Z,5.6nm,0.8s						
VNDA	Vanda	84.52	173	P	P	09 24 46.0	-0.1
VNDA	Vanda	84.52	173	P	P	09 24 46.0	-0.1
VNDA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
P23K	Montague Islan	84.54	30	P	P	09 24 46.9	+0.3
	baz=270						
POKR	Poker Plat Res	84.56	25	P	P	09 24 47.2	+0.6
	baz=270						
G24K	Hadweenzic Riv	84.56	24	P	P	09 24 46.7	+0.1
	baz=269						
DHY	Denali Highway	84.57	27	P	P	09 24 46.9	0.0
	baz=270						
SCM	Sheep Creek Mo	84.58	28	P	P	09 24 47.0	+0.1
SCM	Sheep Creek Mo	84.58	28	P	P	09 24 47.0	+0.1
SCM				pmax	pmax		
	comp=Z,56nm,1.2s						
SCM	Sheep Creek Mo	84.58	28	P	P	09 24 47.3	+0.4
	baz=270						
HDA	Harding Lake	84.76	26	P	P	09 24 46.1	-1.5
HDA	Harding Lake	84.76	26	P	P	09 24 47.2	-0.4
	baz=270,SNR=24						
IL31		84.79	25		P	09 24 46.2	-1.5
IL31				IAmb	IAmb	09 25 07.9	
	comp=Z,12nm,0.8s						
ILAR	Eielson Array	84.79	25	P	P	09 24 46.5	-1.2
	comp=Z,8.1nm,0.7s,baz=251,slow=4.6,SNR=111						
ILAR				LR	LR	10 08 20.6	
	comp=Z,94nm,19.0s,baz=268,slow=40						
	comp=Z,8.1nm,0.7s						
ILAR	Eielson Array	84.79	25		P	09 24 46.4	-1.4
ILAR	Eielson Array	84.79	25	P	P	09 24 46.4	-1.4
MOS	Moscow	84.95	325	*e*P	P	09 24 47.1	-1.6
MOS				*e*SS	SS	09 40 43.3	-5.3
MOS				MLR	MLR		
	comp=Z,600nm,19.0s						
D25K	Kavik River	85.00	21	P	P	09 24 48.9	+0.1
D25K				IAmb	IAmb	09 24 50.6	
	comp=Z,28nm,1.2s						
D25K	Kavik River	85.00	21	P	P	09 24 49.2	+0.4
	baz=270						
Q23K	Middleton Isla	85.08	31	P	P	09 24 49.1	-0.1
	baz=271						
G25K	Bearman Lake	85.11	23	P	P	09 24 49.5	+0.3
	baz=270						
M24K	Tolsona, Glenn	85.12	28	P	P	09 24 50.4	+0.8
	baz=271						
KLU	Klutina	85.25	29	P	P	09 24 50.8	+0.5
KLU				IAmb	IAmb	09 25 07.5	
	comp=Z,31nm,1.2s						
KLU	Klutina	85.25	29	P	P	09 24 50.9	+0.6
	baz=271						
F25K	Christian Rive	85.28	23	P	P	09 24 50.4	+0.2
F25K				IAmb	IAmb	09 25 03.0	
	comp=Z,16nm,1.0s						
F25K	Christian Rive	85.28	23	P	P	09 24 51.1	+0.8
	baz=271						
K24K	Donnelly Dome	85.28	26	P	P	09 24 50.7	+0.4
	baz=271,SNR=6.4						
E25K	Arctic Village	85.30	22	P	P	09 24 50.9	+0.6
	baz=271,SNR=14						
EYAK	Cordova Ski Ar	85.36	30	P	P	09 24 51.1	+0.4
	baz=271						
PRP	Porcupine Dome	85.36	25	P	P	09 24 51.0	+0.3
	baz=271						
PAX	Paxson	85.44	27	P	P	09 24 51.4	+0.3
	baz=271						
J25K	Salcha River,	85.44	26	P	P	09 24 50.8	-0.3
	baz=271						
C26K	Camden Bay	85.50	20	P	P	09 24 51.7	+0.5
	baz=271						
OBN	Obninsk	85.56	325	LR	LR	10 07 04.7	
	comp=Z,326nm,19.0s,baz=12,slow=38						
OBN	Obninsk	85.56	325	⇑*e*P	P	09 24 51.2	-0.6
OBN				*e*		09 28 04.1	
OBN				*e*PPP	PPP	09 29 59.5	
OBN				*i* S	SKSac	09 35 16.0	+0.8
OBN				pmax	pmax		
	comp=Z,14nm,1.0s						
OBN				MLR	MLR		
	comp=Z,306nm,19.0s						
OBN	Obninsk	85.56	325	P	P	09 24 51.9	+0.1
	comp=Z,37nm,1.4s						
HARP	HAARP	85.59	28	P	P	09 24 52.4	+0.6
	baz=272						
RIDG	Independent Ri	85.70	26	P	P	09 24 53.0	+0.7
	baz=272						
F26K	Sheenjek River	85.85	23	P	P	09 24 54.1	+1.1
	baz=272						
N25K	Chitina, Valde	85.88	29	P	P	09 24 54.1	+0.7
	baz=272						
BMRM	Bremner River	85.91	29	P	P	09 24 54.5	+1.0
	baz=272						
C27K	Jago River	85.93	21	P	P	09 24 54.2	+0.9
	baz=272,SNR=12						
G26K	Porcupine Rive	86.02	23	P	P	09 24 54.6	+0.8
	baz=273						
KAIM	Kayak Island	86.04	30	P	P	09 24 54.9	+0.8
	baz=273						
SCRK	Sand Creek	86.07	26	P	P	09 24 55.0	+0.7
	baz=273						
FURI	Furi	86.13	279	LR	LR	10 05 35.8	
	comp=Z,282nm,18.0s,baz=75,slow=37						
J26L	Joseph Creek	86.23	26	P	P	09 24 55.4	+0.4
	baz=273						
ASF	Jabal al Asfar	86.33	302	LR	LR	10 09 19.0	
	comp=Z,126nm,19.7s,baz=59,slow=40						
I26K	Coal Creek Min	86.36	25	P	P	09 24 56.6	+1.1
	baz=273						
L26K	Log Cabin Wild	86.40	27	P	P	09 24 56.1	+0.2
	baz=273						
APA	Apatity	86.50	337	*e*P	P	09 24 53.9	-2.3
APA				pmax	pmax		
	comp=Z,11nm,1.2s						
APA				MLR	MLR		
	comp=Z,1µm,6.8s						
PPT	Papeete	86.60	108	LR	LR	09 58 31.0	
	comp=Z,106nm,18.6s,baz=278,slow=32						
M26K	Nabesna, AK	86.60	28	P	P	09 24 57.1	+0.3
	baz=274						
PPT2	Papeete2	86.60	108	*e*P	P	09 24 57.6	-0.2
	comp=Z,129nm,24.5s						
PPT2	Papeete2	86.60	108	*e*PP	PP	09 28 12.0	-8.0
	comp=Z,63nm,22.2s						
PPT2				*e*S	S	09 35 31.0	-2.6
	comp=Z,181nm,25.8s						
PPT2				*e*SS	SS	09 41 16.2	+1.2
	comp=Z,322nm,29.8s						
PPT2				*e*LQ	LQ	09 48 52.0	
	comp=Z,606nm,26.8s						
PPT2				*e*LR	LR	09 52 24.6	
	comp=Z,457nm,26.0s						
PPT2				*e*LR	LR	09 52 26.8	
	comp=Z,358nm,29.8s						
MCARA	McCarthy VSAT	86.65	29	P	P	09 24 57.6	+0.6
	baz=274						
CRQE	Cirque	86.66	29	P	P	09 24 57.4	+0.2
	baz=274						
E27K	Coleen River	86.78	22	P	P	09 24 57.9	+0.2
	baz=275						
G27K	Doyon Strip	86.87	23	P	P	09 24 58.7	+0.7
	baz=275						
D27M	Malcolm River	86.92	21	P	P	09 24 59.1	+0.8
	baz=275						
H27K	Steamboat Moun	86.97	24	P	P	09 24 59.4	+0.9
	baz=275						
I27K	Kandik River	86.98	25	P	P	09 24 59.4	+0.7
	baz=275						
L27K	Beaver Creek,	87.09	27	P	P	09 24 59.5	+0.3
	baz=275						
M27K	Edge Creek, AK	87.12	28	P	P	09 25 00.1	+0.6
	baz=275						
TBI	Tubuai	87.32	114	*e*P	P	09 25 00.0	-1.0
	comp=Z,396nm,26.5s						
TBI	Tubuai	87.32	114	*e*PP	PP	09 28 21.0	-4.6
	comp=Z,233nm,23.2s						
TBI				*e*S	S	09 35 39.2	-0.9
	comp=Z,621nm,25.0s						
TBI				*e*SS	SS	09 41 31.0	+5.9
	comp=Z,956nm,29.0s						
TBI	Tubuai	87.32	114	*e*LR	LR	09 52 37.3	
	comp=Z,2µm,28.0s						
TBI				*e*LR	LR	09 52 45.5	
	comp=Z,1µm,27.0s						
F28M	Old Crow	87.48	22	P	P	09 25 00.8	-0.2
	baz=276,SNR=19						
CTG	Chitna Glacier	87.50	29	P	P	09 25 02.3	+0.9
	baz=275,SNR=5.3						
E28M	Babbage River	87.50	21	P	P	09 25 01.3	+0.2
	baz=276,SNR=16						
MMAI	Mount Meron Ar	87.54	303	LR	LR	10 08 07.7	
	comp=Z,218nm,21.2s,baz=72,slow=38						
BVCY	Beaver Creek	87.59	28	P	P	09 25 02.4	+0.7
	baz=276						
I28M	Miner Creek	87.69	25	P	P	09 25 03.3	+1.1
	baz=276						
D28M	Stokes Point	87.70	21	P	P	09 25 02.7	+0.8
	baz=277						
YUK3	Moose Creek	87.84	28	P	P	09 25 03.1	0.0
	baz=276						
O28M	Mount Upton	88.07	29	P	P	09 25 04.3	0.0
	baz=276						
DAWY	Dawson	88.08	26	P	P	09 25 03.9	0.0
	baz=277,SNR=6.2						
E29M	Blow River	88.13	22	P	P	09 25 03.8	-0.2
	baz=278						
EIL	Elat	88.16	299	LR	LR	10 11 07.5	
	comp=Z,204nm,19.5s,baz=12,slow=40						
YUK8	Steele Glacier	88.22	29	P	P	09 25 04.7	-0.3
	baz=276						
H29M	Whitestone	88.24	24	P	P	09 25 04.6	0.0
	baz=278						
G29M	Pine Creek	88.28	23	P	P	09 25 05.0	+0.2
	baz=278						
I29M	Ogilvie Camp,	88.38	25	P	P	09 25 05.2	-0.1
	baz=278						
BR104	Keskin Array S	88.45	310	P	P	09 25 06.0	-0.4
	comp=Z,3.9nm,0.9s						
BR131	Keskin Array S	88.45	310	*i* P	P	09 25 06.0	-0.4
BRTR	Keskin Array B	88.45	310	P	P	09 25 05.3	-1.1
	comp=Z,1.5nm,0.9s,baz=117,slow=4.3,SNR=7.2						
BRTR				PP	PP	09 28 38.6	+4.2
	comp=Z,2.4nm,0.8s,baz=101,slow=7.1,SNR=8.1						
BRTR				LR	LR	10 13 18.0	
	comp=Z,107nm,18.4s,baz=95,slow=41						
	comp=Z,1.5nm,0.9s						
BR106	Keskin Array S	88.47	310	P	P	09 25 06.1	-0.3
	comp=Z,4.2nm,1.1s						
J29N	Klondike Camp	88.54	26	P	P	09 25 06.2	+0.1
	baz=278						
M29M	Somme Creek	88.69	28	P	P	09 25 07.1	+0.1
	baz=278,SNR=5.3						
YUK4	Talbot Arm	88.75	29	P	P	09 25 07.7	+0.3
	baz=278						
L29M	L29M	88.76	27	P	P	09 25 07.4	+0.2
	baz=278,SNR=7.2						
EPYK	Eagle Plains	88.88	24	P	P	09 25 07.6	-0.1
	baz=279,SNR=9.0						
O29M	Mount Kennedy	88.92	30	P	P	09 25 08.4	+0.3
	baz=278						
K29M	Barlow Dome	88.92	26	P	P	09 25 08.2	+0.1
	baz=278						
YUK6	Outpost Mounta	88.94	29	P	P	09 25 08.2	-0.2
	baz=278						
G30M	tAoh Zraii Nji	88.97	23	P	P	09 25 08.0	-0.1
	baz=280						
F30M	Barrier River	89.03	22	P	P	09 25 08.5	+0.2
	baz=280						
ARCES	ARCESS Array B	89.13	340	P	P	09 25 08.9	+0.2
	comp=Z,7.3nm,0.8s,baz=80,slow=8.7,SNR=5.7						
ARCES				LR	LR	10 13 05.6	

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              comp=Z,176nm,19.4s,baz=78,slow=41
              comp=Z,7.3nm,0.8s
I30M   Mount Dempster     89.20  25    P       P         09 25 09.0  -0.3
              baz=280
SPITS  Spitsbergen Ar     89.31 349    P       P         09 25 08.1  -1.3
              comp=Z,6.6nm,0.8s,baz=83,slow=7.6,SNR=7.1
SPITS                                  LR      LR        10 10 24.5
              comp=Z,333nm,18.9s,baz=54,slow=39
              comp=Z,6.6nm,0.8s
J30M   Hart River         89.33  25    P       P         09 25 10.0  +0.1
              baz=280
HYT    Haines Junctio     89.37  29    P       P         09 25 10.1  -0.2
              baz=278
P29M   Windy Craggy       89.43  30    P       P         09 25 10.9  +0.5
              baz=278
M30M   Minto, Yukon       89.44  27    P       P         09 25 10.6  +0.2
              baz=279
N30M   Aishikik Lake      89.48  28    P       P         09 25 11.0  +0.4
              baz=279
MAYO   Mayo, Yukon        89.68  26    P       P         09 25 11.5   0.0
              baz=280
G31M   Satah River        89.74  23    P       P         09 25 10.8  -0.8
              baz=281
INK    Inuvik             89.74  21    P       P         09 25 10.6  -1.0
              comp=Z,6.7nm,1.1s,baz=314,slow=2.6,SNR=16
              comp=Z,6.7nm,1.1s
INK    Inuvik             89.74  21    P       P         09 25 11.3  -0.2
              baz=282
P30M   Million Dollar     89.75  30    P       P         09 25 11.0  -0.9
              baz=279
F31M   Tsiigehtchic       89.84  22    P       P         09 25 11.7  -0.4
              baz=282
H31M   Peel River         89.93  24    P       P         09 25 12.7  +0.1
              baz=281
O30N   Mendenhall         90.07  29    P       P         09 25 13.8  +0.5
              baz=280
N31M   Braeburn, Yuko     90.09  28    P       P         09 25 13.9  +0.4
              baz=280
PLBC   Pleasant Camp      90.15  30    P       P         09 25 13.8  +0.1
              baz=280
AK09   Malin Array Si     90.34 321    P       P         09 25 14.4  -0.4
AKASG  Malin Array Be     90.37 321    P       P         09 25 14.7  -0.1
              comp=Z,0.4nm,0.5s,baz=73,slow=3.6,SNR=1.5
AKASG                                  LR      LR        10 09 07.5
              comp=Z,257nm,19.7s,baz=68,slow=38
FINES  FINESS Array B     90.41 332    P       P         09 25 13.8  -1.1
              comp=Z,3.3nm,0.8s,baz=62,slow=5.5,SNR=7.8
              comp=Z,3.3nm,0.8s
M31M   Drury Creek, Y     90.61  27    P       P         09 25 15.3  -0.5
              baz=281
MNK    Minsk              90.62 325   iP       P         09 25 13.0  -3.0
MNK                                   i                  09 28 47.8
MNK                                   iPPP     PPP       09 30 45.4
MNK                                   iS       SKSac     09 35 44.1  -1.7
MNK                                   iPS      PS        09 37 17.8  -2.7
MNK                                   iSS      SS        09 42 11.8  +0.4
MNK                                   iSSS     SSS       09 45 48.7
MNK                                    pmax    pmax
              comp=Z,4.0nm,0.6s
MNK                                    pmax    pmax
              comp=N,8.0nm,0.7s
MNK                                    pmax    pmax
              comp=E,9.0nm,0.7s
MNK                                    MLR     MLR
              comp=N,828nm,24.0s
MNK                                    MLR     MLR
              comp=Z,284nm,20.0s
MNK                                    MLR     MLR
              comp=E,624nm,20.0s
R31K   City Hall, Gus     90.64  31    P       P         09 25 15.9  -0.1
              baz=280
SKAG   Skagway            90.67  30    P       P         09 25 15.9  -0.2
              baz=280
WHY    Whitehorse         90.67  29    P       P         09 25 15.8  -0.4
              baz=281
SIT    Sitka              91.10  33    P       P         09 25 17.7  -0.5
              baz=280
NACGM  Naroch             91.19 325   eP       P         09 25 20.4  +1.8
              baz=80
R32K   Eaglecrest         91.30  31    P       P         09 25 18.0  -1.1
              baz=281
N32M   Quiet Lake         91.44  28    P       P         09 25 19.6  -0.1
              baz=282
A36M   Sachs Harbour      91.45  17    P       P         09 25 18.6  -0.9
              baz=290
P32M   Atlin              91.45  30    P       P         09 25 19.8   0.0
              baz=282
U33K   Whale Pass         92.48  33    P       P         09 25 24.0  -0.5
              baz=282
CRAG   Craig              92.61  34    P       P         09 25 24.5  -0.7
              baz=282
C36M   Paulatuk           92.74  19    P       P         09 25 25.1  -0.4
              baz=291
WRAK   Wrangell Islan     92.84  33    P       P         09 25 26.5  +0.4
              baz=283
SYO    Syowa Base         92.86 201⇑eP       P         09 25 26.6  +0.7
R33M   Jennings River     92.86  30    P       P         09 25 26.8  +0.4
              baz=284
S34M   Telegraph Cree     93.14  31    P       P         09 25 27.5   0.0
              baz=284
MLR    Muntele Rosu       93.35 316    LR      LR        10 13 09.6
              comp=E,339nm,20.9s,baz=73,slow=39
V35K   Ketchikan          93.48  34    P       P         09 25 29.3  +0.1
              baz=283
WTLY   Watson Lake, Y     93.74  29    P       P         09 25 30.5  +0.1
              baz=286
T35M   Bob Quinn          93.83  32    P       P         09 25 31.1  +0.2
              baz=285
QSPA   South Pole Qui     94.58 180    LR      LR        10 10 43.9
              comp=E,237nm,18.3s,baz=356,slow=37
MBAR   Mbarara            94.77 270    LR      LR        10 07 23.8
              comp=E,247nm,18.3s,baz=78,slow=35
TAOE   Nuku Hiva Isla     95.03  98   eLR      LR        09 56 16.8
              comp=E,772nm,23.1s
WRGLY  Wrigley            95.16  25    P       P         09 25 37.1  +0.4
              baz=291
LIRD   Liard River Hi     95.25  29    P       P         09 25 37.8  +0.5
              baz=288
TOAD   Toad River Com     95.85  30    P       P         09 25 40.1   0.0
              baz=289
BBB    Bella Bella        96.29  36    LR      LR        10 00 09.1
              comp=E,101nm,21.4s,baz=268,slow=30
HFS    Hagfors            96.60 332    P       P         09 25 41.2  -2.1
              comp=E,3.5nm,0.9s,baz=62,slow=6.7,SNR=1.7
HFS                                    LR      LR        10 12 16.4
              comp=E,502nm,21.3s,baz=62,slow=37
              comp=E,3.5nm,0.9s
RES    Resolute Bay       97.10  10    LR      LR        10 16 02.8
              comp=E,120nm,18.2s,baz=3.0,slow=39
NOA    NORSAR Array B     97.38 333    P       P         09 25 46.0  -1.0
              comp=E,1.2nm,0.8s,baz=72,slow=4.4,SNR=3.2
NOA                                    LR      LR        10 14 14.2
              comp=E,493nm,19.5s,baz=55,slow=38
              comp=E,1.2nm,0.8s
NOA    NORSAR Array B     97.38 333    P       P         09 25 46.0  -1.0
MATP   Matopo             98.14 250    LR      LR        10 07 26.7
              comp=E,271nm,19.0s,baz=64,slow=34
LSZ    Lusaka             98.23 255    LR      LR        10 08 03.3
              comp=E,247nm,20.1s,baz=102,slow=34
VRAC   Vranov             98.61 321    LR      LR        10 15 27.6
              comp=E,237nm,18.2s,baz=76,slow=38
JMIC   Jan Mayen          98.64 346    LR      LR        10 18 11.3
              comp=E,221nm,18.0s,baz=50,slow=40
YKA    Yellowknife Ar     99.15  24    P       Pdif      09 25 54.6  -0.2
              comp=E,2.1nm,0.8s,baz=300,slow=5.6,SNR=34
YKA                                    LR      LR        10 13 47.6
              comp=E,147nm,19.9s,baz=277,slow=37
              comp=E,2.1nm,0.8s
CLL    Collm             100.14 324   eSdif    Sdif      09 37 38.0  +5.0
CLL                                   eSS      SS        09 44 36.0   +10
NVL    N'lazarevskaya    102.06 198   eP       Pdif      09 26 09.8  +2.3
NVL                                   e                  09 30 19.2
NVL                                   ePPP     PPP       09 32 28.5
NVL                                   eS       SKSac     09 36 49.3  +4.4
NVL                                   eSS      SS        09 44 56.7  +4.3
NVL                                   eSSS     SSS       09 48 49.6
NVL                                    pmax    pmax
              comp=Z,21nm,1.6s
NVL                                    MLR     MLR
              comp=Z,602nm,23.0s
SCHQ   Schefferville     119.82   8    PKP     PKPdf     09 31 03.2  -0.6
              comp=Z,2.9nm,0.6s,baz=37,slow=10,SNR=4.0
TORD   Torodi Ar. Bea    121.43 288    PKP     PKPdf     09 31 06.8  -1.2
              comp=Z,0.8nm,0.6s,baz=70,slow=1.8,SNR=4.5
TORD                                   PKKPab  PKKPbc    09 41 08.6  +0.2
              comp=Z,0.7nm,0.8s,baz=289,slow=5.3,SNR=3.9
TXAR   Lajitas Array     122.00  51    PKP     PKPdf     09 31 09.0  +0.1
              comp=Z,0.9nm,0.6s,baz=346,slow=3.2,SNR=13
TXAR   Lajitas Array     122.00  51    PKIKP   PKPdf     09 31 09.0  +0.1
PLCA   Paso Flores       141.32 160    PKP     PKPdf     09 31 45.8  +0.9
              comp=Z,2.1nm,0.9s,baz=41,slow=18,SNR=2.0
SDV    Santo Domingo     159.04  50   eP       PKPdf     09 32 11.1  -2.0
SPB    Sao Paulo         159.99 199   eP       PKPdf     09 32 11.4  -2.3
LPAZ   La Paz            162.36 132    PKP     PKPdf     09 32 16.4  -0.7
              comp=Z,1.2nm,0.9s,baz=273,slow=2.8,SNR=4.0
LPAZ                                   PKPab   PKPab     09 33 05.0  +0.7
              comp=Z,2.4nm,1.0s,baz=233,slow=5.3,SNR=2.5
PTLB   Pontes e Lacer    168.38 157   eP       PKPdf     09 32 19.6  -1.7
SALV   Santo Antonio     168.79 174   eP       PKPdf     09 32 20.0  -1.6
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KRNET ***29*** *09:13:08.9±0.1, 41°.36N×74°.77E, h15^{km}, mb3.2*
SOME ***29*** *09:13:10.1, 41°.42N×74°.78E, h10^{km}*
KNET ***29*** *09:13:11.0±1.1, 41°.54N×74°.89E, h0^{km}, ml2.4, Error ellipse: s-maj=6.3km s-min=2.1km az=12.0*
NNC ***29*** *09:13:11.0±1.4, 41°.45N×74°.71E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=9.3km s-min=5.9km az=9.0*
ISC 29 09:13:09.7±1.2**, 41°.41N**±0°.03×**74°.76E**±0°.02**, h1**^{km}±10^{km}**, n68, σ1^{s}15**/114**, 32C-27D, Kyrgyzstan**

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Code   Station Name         Δ°   AZ°    Phase ID            Time      Res
                                       Op      ISC       h  m  s     ISC
ARLS   Aral                0.56 324⇑iP       Pg        09 13 20.2  -0.2
ARLS                                ⇑iS       Sg        09 13 28.4  +0.8
UCH    Uchtor              0.84 347   P       Pg        09 13 25.9  +0.2
              79nm,0.1s,SNR=38
UCH                                  ⇓S       Sb        09 13 37.9  -1.3
              75nm,0.2s
UCH    Uchtor              0.84 347⇑eP       Pg        09 13 25.8   0.0
UCH                                 ⇑iS       Sb        09 13 38.1  -1.2
SALK   Salom-Alik          0.88 234⇑eP       Pg        09 13 25.4  -1.2
SALK                                ⇑eS       Sg        09 13 37.1  -1.0
AAK    Ala-Archa           1.24 351 ⇓P       Pb        09 13 33.1  -0.9
              17nm,0.1s,SNR=66
AAK                                  ⇑S       Sb        09 13 49.9  -0.8
              20nm,0.1s
AAK    Ala-Archa           1.24 351⇓iP       Pb        09 13 33.2  -0.9
AAK                                 ⇓eS       Sn        09 13 50.8  -1.1
AAK    Ala-Archa           1.24 351   P       Pb        09 13 32.8  -1.3
              2.4nm,0.3s
AAK                                   S       Sn        09 13 50.7  -1.2
              4.1nm,0.4s
KBK    Karagaybulak        1.25   6 ⇓P       Pb        09 13 33.6  -0.7
              68nm,0.1s,SNR=113
KBK                                  ⇓S       Sb        09 13 49.8  -1.1
              90nm,0.2s
KBK    Karagaybulak        1.25   6⇓iP       Pb        09 13 33.4  -0.9
KBK                                 ⇓iS       Sn        09 13 51.2  -1.0
ARSB   Arslanbob           1.34 267⇓iP       Pn        09 13 34.2  -1.5
ARSB                                ⇓eS       Sb        09 13 52.6  -0.9
ULHL   Ulahol              1.39  53 ⇓P       Pn        09 13 35.1  -1.3
              25nm,0.2s,SNR=81
ULHL                                 ⇓S       Sb        09 13 52.9  -1.9
              87nm,0.3s
ULHL   Ulahol              1.39  53⇑iP       Pn        09 13 35.3  -1.1
ULHL                                ⇑eS       Sg        09 13 54.6  +0.3
BOOM   Boomskoye usch      1.39  39⇑iP       Pn        09 13 35.4  -1.1
BOOM                                ⇑eS       Sg        09 13 54.7  +0.3
FRU1   Bishkek             1.40 356⇓iP       Pn        09 13 36.4  -0.1
FRU1                                ⇓iS       Sg        09 13 56.3  +1.6
EKS2   Erkin-Say           1.45 330 ⇓P       Pn        09 13 36.9  -0.3
              10.0nm,0.1s,SNR=65
EKS2                                 ⇓S       Sb        09 13 56.4  -0.1
              13nm,0.2s
EKS2   Erkin-Say           1.45 330⇑eP       Pn        09 13 36.7  -0.5
EKS2                                ⇑iS       Sg        09 13 57.0  +0.8
CHMS   Chumysh             1.59 360 ⇑P       Pb        09 13 39.3  -0.5
              16nm,0.1s,SNR=12
CHMS                                 ⇑S       Sg        09 14 00.5  -0.2
              12nm,0.1s
CHMS   Chumysh             1.59 360⇑iP       Pn        09 13 39.2  +0.2
CHMS                                ⇑iS       Sg        09 14 01.2  +0.5
TKM2   Tokmak 2            1.63  22   P       Pn        09 13 40.0  +0.2
              21nm,0.1s,SNR=66
TKM2                                 ⇓S       Sg        09 14 01.8  -0.4
              97nm,0.3s
TKM2   Tokmak 2            1.63  22⇑eP       Pn        09 13 40.0  +0.2
TKM2                                ⇑eS       Sg        09 14 02.7  +0.6
SFK    Sufi-Kurgan         1.69 215⇑iP       Pn        09 13 39.8  -0.8
SFK                                 ⇑eS       Sn        09 14 02.3  -0.7
OHH    Osh                 1.74 240⇑eP       Pn        09 13 40.9  -0.2
OHH                                 ⇑iS       Sn        09 14 03.9  -0.1
MRKS   Merke               1.75 320   P       Pb        09 13 42.2  -0.5
              30nm,0.2s
MRKS                                  S       Sb        09 14 05.7  +0.3
              54nm,0.2s
MRKS   Merke               1.75 320  eP       Pb        09 13 42.2  -0.5
              14nm,0.1s
MRKS                                 eS       Sb        09 14 05.4  +0.1
              62nm,0.2s
KST    Kastek              1.86  28   P       Pb        09 13 44.4  -0.2
              22nm,0.3s
KST                                   S       Sg        09 14 09.0  -0.4
              59nm,0.4s
KST    Kastek              1.86  28  eP       Pb        09 13 44.4  -0.2
              9.8nm,0.2s
KST                                  eS       Sg        09 14 09.0  -0.4
              69nm,0.5s
USP    Ospenovka           1.86 354 ⇓P       Pb        09 13 44.0  -0.6
              20nm,0.1s,SNR=68
USP                                  ⇓S       Sg        09 14 09.0  -0.7
              58nm,0.2s
USP    Ospenovka           1.86 354⇓iP       Pb        09 13 44.2  -0.4
USP                                 ⇓eS       Sg        09 14 09.8  +0.2
KDJ    Kajisay             1.95  68⇓iP       Pb        09 13 45.1  -1.0
KDJ                                 ⇓eS       Sg        09 14 11.6  -0.7
DGS    Degeres             1.98  22   Pg      Pb        09 13 46.5   0.0
              25nm,0.4s
DGS                                   Lg      Lg        09 14 14.3
              56nm,0.4s
MNAS   Manas               2.00 303⇑iP       Pn        09 13 46.0  +1.3
MNAS                                ⇑eS       Sb        09 14 12.9  +0.5
SGDS   Sogindy             2.04 357   Pg      Pb        09 13 47.7  +0.1
              9.4nm,0.1s
SGDS                                  Lg      Lg        09 14 14.8
              39nm,0.3s
MTBS   Maitube             2.12  35   Pg      Pb        09 13 49.0  +0.1
              14nm,0.2s
MTBS                                  Lg      Lg        09 14 17.3
              88nm,0.4s
MTBS   Maitube             2.12  35  eP       Pb        09 13 49.0  +0.1
              6.0nm,0.2s
MTBS                                 eS       Sg        09 14 17.1  -0.6
              88nm,0.4s
ARK    Arkit               2.13 281⇑iP       Pn        09 13 47.6  +1.0
ARK                                 ⇑eS       Sb        09 14 15.8  -0.4
TNSS   Tian-Shan           2.30  44   Pg      Pb        09 13 52.0  -0.2
              5.7nm,0.2s
TNSS                                  Lg      Lg        09 14 22.2
              7.8nm,0.4s
TNSS   Tian-Shan           2.30  44  eP       Pb        09 13 52.0  -0.2
              5.7nm,0.2s
TNSS                                 eS       Sg        09 14 22.2  -1.3
              9.5nm,0.2s
TARG   Taragay, Kyrgy      2.31  81⇓iP       Pn        09 13 50.1  +0.9
TARG                                ⇓eS       Sb        09 14 20.0  -1.5
KRBS   Karabastau          2.38  16   Pg      Pb        09 13 53.7  +0.3
              65nm,0.3s
KRBS                                  Lg      Lg        09 14 25.4
              126nm,0.6s
KNDC   Almaty              2.44  41 ⇑Pn      Pg        09 13 56.4  +0.1
              11nm,0.3s
KNDC                                 ⇑Sn      Sg        09 14 27.1  -0.8
              51nm,0.3s
MDOK   Medeo               2.44  43   Pg      Pb        09 13 54.4   0.0
              6.8nm,0.4s
MDOK                                  Lg      Lg        09 14 26.4
              24nm,0.5s
KOTS   Kotyrbulak          2.52  43   Pg      Pb        09 13 56.0  +0.1
              11nm,0.3s
KOTS                                  Lg      Lg        09 14 29.6
              129nm,0.4s
KOTS   Kotyrbulak          2.52  43  eP       Pb        09 13 56.3  +0.4
              11nm,0.2s
KOTS                                 eS       Sg        09 14 29.6  -1.1
              129nm,0.4s
KTBS   Karatobe            2.70  31   Pg      Pb        09 13 59.3  +0.4
              9.2nm,0.3s
KTBS                                  Lg      Lg        09 14 34.9
              0.4nm,0.4s
KUU    Kurty               2.74  25   Pg      Pb        09 13 60.0  +0.5
              4.2nm,0.1s
KUU                                   Lg      Lg        09 14 35.9
              31nm,0.5s
KUU    Kurty               2.74  25  eP       Pb        09 13 60.0  +0.5
              4.2nm,0.1s
KUU                                  eS       Sg        09 14 35.9  -1.8
              31nm,0.5s
PRZ    Przheval'sk         2.92  67⇓eP       Pn        09 13 58.6  +1.1
PRZ                                 ⇓iS       Sn        09 14 34.9  +1.6
CHKK   Chushkaly           2.94  33   Pg      Pb        09 14 03.2  +0.2
              10nm,0.5s
CHKK                                  Lg      Lg        09 14 41.7
              38nm,0.3s
CHKK   Chushkaly           2.94  33  eP       Pb        09 14 03.2  +0.2
              10nm,0.5s
CHKK                                 eS       Sg        09 14 41.7  -2.5
              38nm,0.3s
DRK    Karamyk             2.97 230⇑eP       Pn        09 13 58.8  +0.5
DRK                                 ⇑eS       Sn        09 14 35.2  +0.5
SATY   Saty                3.17  57   Pg      Pb        09 14 07.4  +0.5
              1.5nm,0.3s
SATY                                  Lg      Lg        09 14 48.6
              26nm,0.2s
KURS   Kuram               3.27  49   Pg      Pb        09 14 08.8  +0.3
              1.7nm,0.3s
KURS                                  Lg      Lg        09 14 51.2
              6.5nm,0.5s
KPKS   Kokpek              3.56  53   Pg      Pb        09 14 14.3  +0.9
              0.3nm,0.3s
KPKS                                  Lg      Lg        09 15 00.7
              18nm,0.4s
KPKS   Kokpek              3.56  53  eP       Pb        09 14 14.3  +0.9
              0.3nm,0.3s
KPKS                                 eS       Sg        09 15 00.7  -3.2
              18nm,0.4s
KK31   Karatay Array       3.58 300   Pg      Pb        09 14 14.7  +0.9
              1.4nm,0.3s,baz=124,slow=16,SNR=17
KK31                                 ⇑Lg      Lg        09 15 02.1
              4.6nm,0.4s,baz=122,slow=30,SNR=7.5
ARXS   Arharly             3.60  38   Pg      Pb        09 14 14.6  +0.4
              3.1nm,0.3s
ARXS                                  Lg      Lg        09 15 01.3
              31nm,0.3s
ARXS   Arharly             3.60  38  eP       Pb        09 14 14.6  +0.4
              3.1nm,0.3s
ARXS                                 eS       Sb        09 15 01.3  +3.0
              31nm,0.3s
UZB    Uzynbulak           3.61  60   Pg      Pb        09 14 15.7  +1.4
              2.8nm,0.2s
UZB                                   Lg      Lg        09 15 02.9
              13nm,0.5s
UZB    Uzynbulak           3.61  60  eP       Pb        09 14 15.8  +1.4
              2.8nm,0.2s
UZB                                  eS       Sg        09 15 02.9  -2.7
              13nm,0.5s
IUG    Iuzhnay             3.61 283   Pg      Pb        09 14 15.8  +1.3
              11nm,0.4s
IUG                                   Lg      Lg        09 15 02.9
              20nm,0.4s
BTLS   Baital              3.67 352   Pg      Pb        09 14 15.0  -0.3
              3.4nm,0.3s
BTLS                                  Lg      Lg        09 15 02.2
              3.0nm,0.5s
BTLS   Baital              3.67 352  eP       Pb        09 14 15.0  -0.3
              3.4nm,0.3s
BTLS                                 eS       Sb        09 15 01.9  +1.7
              3.0nm,0.5s
SHLS   Shalkode            3.90  62   Pg      Pg        09 14 25.6  +1.1
              2.7nm,0.2s
SHLS                                  Lg      Lg        09 15 19.7
              15nm,0.6s
SHLS   Shalkode            3.90  62  eP       Pg        09 14 25.6  +1.1
              0.8nm,0.1s
SHLS                                 eS       Sg        09 15 19.7  +4.8
              5.4nm,0.0s
PDGK   Podgornoye          3.99  60   Pg      Pg        09 14 26.2   0.0
              2.5nm,0.6s
PDGK                                  Lg      Lg        09 15 22.6
              5.7nm,0.6s
BRLS   Borolday            4.00 295   Pg      Pb        09 14 23.8  +2.8
              2.0nm,0.5s
BRLS                                  Lg      Lg        09 15 16.6
              5.9nm,0.4s
BRLS   Borolday            4.00 295  eP       Pb        09 14 23.8  +2.8
              0.2nm,0.1s
BRLS                                 eS       Sg        09 15 16.6  -1.6
              4.7nm,0.5s
KNOS   Konyrlen            4.38  46   Pg      Pb        09 14 29.1  +1.5
              1.5nm,0.4s
KNOS                                  Lg      Lg        09 15 26.1
              7.0nm,0.5s
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KRNET ***29*** *09:14:46.9±0.1, 41°.38N×74°.77E, h18^{km}, mb2.6*
SOME ***29*** *09:14:47.5, 41°.43N×74°.77E, h5^{km}*
NNC ***29*** *09:14:48.7±1.0, 41°.43N×74°.75E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=7.5km s-min=3.9km az=174.0*
KNET ***29*** *09:14:49.5±0.5, 41°.56N×74°.90E, h6^{km}±2^{km}, ml1.7, Error ellipse: s-maj=3.7km s-min=2.2km az=20.0*
ISC 29 09:14:46.1±1.2**, 41°.39N**±0°.03×**74°.76E**±0°.03**, h3**^{km}±11^{km}**, n39, σ0^{s}56**/68**, 25C-15D, Kyrgyzstan**

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Code   Station Name         Δ°   AZ°    Phase ID            Time      Res
                                       Op      ISC       h  m  s     ISC
ARLS   Aral                0.57 325⇓iP       Pb        09 14 58.1  -0.7
ARLS                                ⇓iS       Sb        09 15 06.0  -1.4
UCH    Uchtor              0.85 348 ⇓P       Pb        09 15 03.7  -0.2
              19nm,0.1s
UCH                                  ⇓S       Sb        09 15 15.6  -0.3
              25nm,0.2s
UCH    Uchtor              0.85 348⇑iP       Pb        09 15 03.6  -0.2
UCH                                 ⇑iS       Sb        09 15 15.3  -0.6
SALK   Salom-Alik          0.87 235⇑eP       Pb        09 15 03.3  -0.6
SALK                                ⇑eS       Sb        09 15 15.5  -0.5
AAK    Ala-Archa           1.26 351 ⇓P       Pn        09 15 10.9  +0.2
              5.7nm,0.1s
AAK                                  ⇓S       Sb        09 15 27.2   0.0
              6.2nm,0.1s
AAK    Ala-Archa           1.26 351⇑iP       Pn        09 15 10.8  +0.1
AAK                                 ⇑iS       Sn        09 15 28.0  -0.3
KBK    Karagaybulak        1.27   6 ⇑P       Pn        09 15 11.2  +0.3
              23nm,0.1s
KBK                                  ⇓S       Sb        09 15 27.6   0.0
              27nm,0.2s
KBK    Karagaybulak        1.27   6⇓iP       Pn        09 15 10.8  -0.1
KBK                                 ⇓iS       Sn        09 15 28.2  -0.4
ARSB   Arslanbob           1.34 268⇑eP       Pb        09 15 12.4  +0.5
ARSB                                ⇑eS       Sn        09 15 30.6  +0.5
ULHL   Ulahol              1.40  52 ⇓P       Pb        09 15 13.3  +0.3
              6.9nm,0.2s
ULHL                                 ⇓S       Sg        09 15 30.7  -0.4
              14nm,0.2s
ULHL   Ulahol              1.40  52⇑iP       Pg        09 15 12.7  -0.2
ULHL                                ⇑iS       Sb        09 15 31.4  +0.1
BOOM   Boomskoye usch      1.41  38⇑eP       Pb        09 15 13.1   0.0
BOOM                                ⇑iS       Sn        09 15 32.3  +0.4
EKS2   Erkin-Say           1.47 330⇑iP       Pg        09 15 14.2  +0.1
EKS2                                ⇑iS       Sn        09 15 34.0  +0.8
CHMS   Chumysh             1.61 360 ⇓P       Pg        09 15 16.8   0.0
              4.9nm,0.1s
CHMS                                 ⇓S       Sg        09 15 38.1  +0.5
              4.9nm,0.1s
CHMS   Chumysh             1.61 360⇑iP       Pg        09 15 16.7  -0.1
CHMS                                ⇑iS       Sg        09 15 38.2  +0.5
TKM2   Tokmak 2            1.65  22 ⇓P       Pg        09 15 17.8  +0.1
              6.3nm,0.1s
TKM2                                 ⇓S       Sg        09 15 39.1   0.0
              26nm,0.2s
TKM2   Tokmak 2            1.65  22⇑eP       Pg        09 15 17.4  -0.3
TKM2                                ⇑iS       Sg        09 15 39.4  +0.3
SFK    Sufi-Kurgan         1.68 215⇑eP       Pg        09 15 18.0  -0.2
SFK                                 ⇑eS       Sg        09 15 40.3  +0.4
MRKS   Merke               1.77 320   P       Pg        09 15 20.0   0.0
              9.0nm,0.2s
MRKS                                  S       Sg        09 15 43.5  +0.6
              15nm,0.2s
MRKS   Merke               1.77 320  eP       Pg        09 15 20.0   0.0
              4.2nm,0.1s
MRKS                                 eS       Sg        09 15 43.5  +0.6
              18nm,0.2s
KST    Kastek              1.88  28   P       Pg        09 15 22.4  +0.4
              2.7nm,0.2s
KST                                   S       Sg        09 15 47.6  +1.2
              17nm,0.4s
KST    Kastek              1.88  28  eP       Pg        09 15 22.4  +0.4
              2.7nm,0.2s
KST                                  eS       Sg        09 15 47.6  +1.2
              19nm,0.4s
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USP	Ospenovka	1.88	354	⇑P	Pg	09 15 21.8	-0.3
	5.2nm,0.1s						
USP				⇑S	Sg	09 15 47.3	+0.7
	15nm,0.2s						
KDJ	Kajisay	1.96	67	⇑eP	Pb	09 15 22.5	+0.1
KDJ				⇑eS	Sb	09 15 48.0	+0.7
DGS	Degeres	2.00	22	Pg	Pg	09 15 24.7	+0.3
	5.2nm,0.3s						
DGS				Lg	Lg	09 15 51.8	
	16nm,0.4s						
SGDS	Sogindy	2.06	357	Pg	Pg	09 15 25.8	+0.2
	3.6nm,0.1s						
SGDS				Lg	Lg	09 15 53.2	
	12nm,0.2s						
MTBS	Maitube	2.13	35	Pg	Pg	09 15 27.6	+0.7
	3.8nm,0.1s						
MTBS				Lg	Lg	09 15 56.6	
	25nm,0.4s						
MTBS	Maitube	2.13	35	eP	Pg	09 15 26.9	-0.1
	1.7nm,0.2s						
MTBS				eS	Sg	09 15 55.0	+0.3
	25nm,0.4s						
TNSS	Tian-Shan	2.31	44	Pg	Pg	09 15 29.9	-0.5
	1.4nm,0.2s						
TNSS				Lg	Lg	09 16 00.4	
	2.4nm,0.3s						
TNSS	Tian-Shan	2.31	44	eP	Pg	09 15 29.9	-0.5
	1.4nm,0.2s						
TNSS				eS	Sg	09 16 00.4	0.0
	2.4nm,0.3s						
KRBS	Karabastau	2.40	16	Pg	Pg	09 15 31.6	-0.5
	17nm,0.2s						
KRBS				Lg	Lg	09 16 03.6	
	36nm,0.4s						
MDOK	Medeo	2.45	43	Pg	Pg	09 15 33.9	+0.8
	1.6nm,0.2s						
MDOK				Lg	Lg	09 16 07.2	
	8.3nm,0.5s						
KOTS	Kotyrbulak	2.54	43	Pg	Pg	09 15 34.1	-0.6
	5.2nm,0.2s						
KOTS				Lg	Lg	09 16 07.5	
	34nm,0.4s						
KOTS	Kotyrbulak	2.54	43	eP	Pg	09 15 34.0	-0.6
	5.2nm,0.2s						
KOTS				eS	Sg	09 16 07.5	0.0
	34nm,0.3s						
KTBS	Karatobe	2.72	31	Pg	Pg	09 15 37.3	-0.9
	3.1nm,0.3s						
KTBS				Lg	Lg	09 16 13.2	
	0.6nm,0.4s						
KUU	Kurty	2.76	24	Pg	Pg	09 15 38.1	-0.8
	3.1nm,0.1s						
KUU				Lg	Lg	09 16 14.3	
	20nm,0.3s						
KUU	Kurty	2.76	24	eP	Pg	09 15 38.1	-0.8
	1.8nm,0.0s						
KUU				eS	Sg	09 16 14.4	-0.3
	5.0nm,0.1s						
CHKK	Chushkaly	2.96	33	Pg	Pg	09 15 41.8	-1.0
	13nm,0.2s						
CHKK				Lg	Lg	09 16 20.7	
	10nm,0.3s						
CHKK	Chushkaly	2.96	33	eP	Pg	09 15 41.4	-1.3
	0.3nm,0.1s						
CHKK				eS	Sg	09 16 20.1	-1.0
	14nm,0.2s						

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*HLW **29** 09:24:55.3, 26°.68N×34°.91E, h25^{km}±3^{km}, Ml2.8*
*GII **29** 09:24:55.9±0.0, 26°.968N±0°.003×34°.830E±0°.001, h1^{km}, Mws2.8, confirmed*
*SGS **29** 09:24:57.5, 26°.96N×35°.03E, h17^{km}, Ml2.3*
ISC 29 09:24:50.9±0.8**, 26°.66N**±0°.04×**34°.98E**±0°.05**, h10**^{km}**, n25,** σ**1^{s}42**/29**, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NQSR	New Quseer	0.84	230	P	Pn	09 25 10.8	+2.0
NSFG	Safaga	0.94	277	P	Pn	09 25 11.5	+1.3
MWLHS	Almuwaylih	1.19	23	S	Sb	09 25 25.8	-3.1
MWLHS	Almuwaylih	1.19	23	P	Pn	09 25 13.8	+0.3
WJHS		1.27	86	S	Sb	09 25 30.1	-1.1
WJHS				P	Pg	09 25 15.9	+0.7
DESA	DESA	1.35	51	S	Sb	09 25 32.3	-1.4
DESA				P	Pb	09 25 17.3	+0.9
NADB	Abo Dabab	1.38	198	P	Pg	09 25 18.5	+1.1
NADB				S	Sg	09 25 35.2	-0.1
HHRG	Al Ghardaqah	1.38	294	P	Pn	09 25 15.9	-0.3
KRABS	KRABS	1.46	9	P	Pn	09 25 17.4	+0.1
AYUS	`Aynunah	1.55	9	P	Pn	09 25 18.8	+0.3
TR1	Tor 1	1.63	326	P	Pn	09 25 20.5	+0.9
RSHS		1.65	354	P	Pn	09 25 20.1	+0.2
HKAT	Jabal Katrina	2.06	335	P	Pn	09 25 27.1	+1.4
HKAT				S	Sn	09 25 50.5	-1.1
HDHB	Dhahab	2.08	351	P	Pn	09 25 27.5	+1.6
HAGS	Hagol	2.27	180	P	Pb	09 25 31.3	-0.6
GRB	Gharib	2.53	310	P	Pn	09 25 33.9	+1.8
BRNS	Bernies	2.90	196	P	Pb	09 25 40.5	-2.2
EIL	Elat	3.00	359	P	Pn	09 25 40.5	+1.9
EIL	Elat	3.00	359	S	Sn	09 26 13.9	-0.7
MBRI	Mt Berech	3.13	359	P	Pn	09 25 42.1	+1.7
MBRI	Mt Berech	3.13	359	S	Sn	09 26 17.8	0.0
KRMI	Paran Flat	3.46	356	P	Pn	09 25 46.7	+1.8
KRMI	Paran Flat	3.46	356	S	Sn	09 26 25.4	-0.5
PRNI	Paran	3.68	0	P	Pn	09 25 50.3	+2.4
PRNI	Paran	3.68	0	S	Sn	09 26 31.1	-0.3

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*WEL **29** 09:41:47.4±0.8, 33°S±7°×17°8W±1°6, h236^{km}, mB4.3/6, ML4.1/8, MLv4.4/9, Mw(mB)3.4/6, Error ellipse: s-maj=21.9km s-min=4.4km az=109.9, confirmed*
*IDC **29** 09:41:48.1±2.6, 33°.30S×178°.59W, h0^{km}, mb4.2/2, mbtmp4.1/3, ML3.7/1, Error ellipse: s-maj=66.4km s-min=44.0km az=129.0*
ISC 29 09:41:49.7±1.4**, 33°.41S**±0°.08×**178°.2W**±0°.2**, h34**^{km}**, n22,** σ**1^{s}52**/37**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	4.14	3	P	Pn	09 42 48.3	-2.1
GLKZ				S	Sn	09 43 36.8	-0.9
MXZ	Matakaoa Point	5.05	214	P	Pn	09 43 04.1	+1.1
MXZ				S	Sn	09 44 00.6	+0.4
WMGZ	Waiomatatini S	5.22	212	P	Pn	09 43 06.1	+0.8
WMGZ				S	Sn	09 44 05.9	+1.7
PKGZ	Pakihiroa	5.41	214	P	Pn	09 43 07.2	-0.7
PKGZ				S	Sn	09 44 08.8	-0.1
HAZ	Te Kaha	5.46	216	P	Pn	09 43 10.1	+1.5
HAZ				S	Sn	09 44 12.0	+1.8
PUZ	Puketiti	5.50	211	P	Pn	09 43 09.4	+0.3
PUZ				S	Sn	09 44 11.0	-0.2
RUGZ	Raukumara Rang	5.67	216	P	Pn	09 43 12.0	+0.3
RUGZ				S	Sn	09 44 15.3	-0.4
TWGZ	Tauwhareparae	5.70	212	P	Pn	09 43 12.6	+0.6
TWGZ				S	Sn	09 44 17.4	+1.1
CNGZ	Carnagh Statio	5.86	209	P	Pn	09 43 15.6	+1.4
TKGZ	Te Karaka	5.98	212	P	Pn	09 43 16.4	+0.7
TKGZ				S	Sn	09 44 21.6	-1.4
MWZ	Matawai	6.04	214	P	Pn	09 43 17.1	+0.5
MWZ				S	Sn	09 44 22.4	-2.2
URZ	Urewera	6.18	217	Pn	Pn	09 43 18.8	+0.2
	2.1nm,0.3s,baz=18,slow=20,SNR=19						
URZ				Sn	Sn	09 44 25.6	-2.5
	4.6nm,0.3s,baz=162,slow=18,SNR=7.6						
	4.5nm,0.3s						
URZ	Urewera	6.18	217	P	Pn	09 43 18.6	+0.1
URZ				S	Sn	09 44 25.7	-2.4
RIGZ	Rimuhau	6.24	211	P	Pn	09 43 19.8	+0.5
RIGZ				S	Sn	09 44 28.1	-1.4
SNGZ	Shannon Statio	6.49	213	S	Sn	09 44 34.6	-1.0
WCZ	Waipu Caves	6.68	246	P	Pn	09 43 24.6	-0.8
OUZ	Omahuta	7.07	253	P	Pn	09 43 32.7	+2.1
BKZ	Black Stump Fm	7.19	215	S	Sn	09 44 50.3	-2.6
PXZ	Pawanui	7.73	210	P	Pn	09 43 40.5	+0.8
PXZ				S	Sn	09 45 01.5	-4.5
ASAR	Alice Springs	42.91	270	P	P	09 49 45.8	+0.5
	2.4nm,0.7s,baz=111,slow=7.3,SNR=54						
ASAR				PcP	PcP	09 51 37.6	+1.9
	0.4nm,0.8s,baz=107,slow=2.6,SNR=2.5						
	2.4nm,0.7s						
WRA	Warramunga Arr	44.17	275	P	P	09 49 55.8	+0.4
	2.2nm,0.7s,baz=116,slow=7.9,SNR=15						
	2.2nm,0.7s						
FINES	FINESS Array B	147.90	338	PKPbc	PKPab	10 01 33.3	+0.3
	1.4nm,0.8s,baz=25,slow=3.7,SNR=7.5						

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*IDC **29** 09:55:21.8±9.8, 32°.05S×179°.59W, h234^{km}±103^{km}, mb3.7/2, mbtmp4.1/3, Error ellipse: s-maj=101.9km s-min=44.2km az=1.0*
*WEL **29** 09:55:24.3±0.9, 33°S±19°×17°8W±3°0, h348^{km}±15^{km}, M4.4/7, mB4.2/1, ML4.4/2, MLv4.4/7, Mw(mB)3.3/1, Error ellipse: s-maj=45.0km s-min=9.1km az=121.0, confirmed*
ISC 29 09:55:23.4±1.7**, 31°.98S**±0°.07×**179°.5E**±0°.2**, h200**^{km}**, n30,** σ**2^{s}49**/50**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	5.66	190	P	Pn	09 56 47.9	+1.8
MXZ				S	Sn	09 57 53.7	+2.0
WMGZ	Waiomatatini S	5.90	189	P	Pn	09 56 48.3	-0.9
WMGZ				S	Sn	09 57 58.0	+0.8
HAZ	Te Kaha	5.94	194	P	Pn	09 56 50.7	+1.0
HAZ				S	Sn	09 58 01.6	+3.4
PKGZ	Pakihiroa	5.99	191	P	Pn	09 56 50.5	0.0
PKGZ				S	Sn	09 58 03.4	+3.9
RUGZ	Raukumara Rang	6.16	194	P	Pn	09 56 49.7	-3.1
RUGZ				S	Sn	09 58 00.7	-2.9
PUZ	Puketiti	6.17	189	P	Pn	09 56 51.8	-0.9
PUZ				S	Sn	09 58 04.8	+1.3
MWZ	Matawai	6.55	194	P	Pn	09 56 57.2	-0.5
MWZ				S	Sn	09 58 15.1	+2.5
URZ	Urewera	6.57	197	P	Pn	09 56 59.7	+1.7
	2.7nm,0.3s,baz=53,slow=20,SNR=9.1						
URZ				S	Sn	09 58 16.5	+3.5
	8.2nm,0.4s,baz=85,slow=21,SNR=10						
URZ	Urewera	6.57	197	P	Pn	09 56 59.6	+1.7
URZ				S	Sn	09 58 18.0	+5.0
TKGZ	Te Karaka	6.59	192	P	Pn	09 56 59.7	+1.5
TKGZ				S	Sn	09 58 15.5	+2.1
RAGZ	Rawiri	6.73	194	P	Pn	09 57 04.1	+4.0
RAGZ				S	Sn	09 58 18.6	+1.8
SNGZ	Shannon Statio	7.02	194	P	Pn	09 57 05.2	+1.4
SNGZ				S	Sn	09 58 26.1	+2.5
PRGZ	Paritu Road	7.06	191	P	Pn	09 57 00.8	-3.4
PRGZ				S	Sn	09 58 21.1	-3.4
KNZ	Kokohu	7.19	192	P	Pn	09 57 10.1	+4.2
KNZ				S	Sn	09 58 22.1	-5.4
MTHZ	Maungataniwha	7.20	197	P	Pn	09 57 10.8	+4.6
MTHZ				S	Sn	09 58 28.8	+1.0
NMHZ	Naumai	7.44	197	P	Pn	09 57 13.5	+4.1
NMHZ				S	Sn	09 58 35.6	+2.0
CKHZ	Cape Kidnapper	7.92	194	P	Pn	09 57 18.8	+3.4
CKHZ				S	Sn	09 58 44.1	-0.6
KRHZ	Kereru	8.07	198	P	Pn	09 57 18.5	+1.0
KRHZ				S	Sn	09 58 48.8	+0.5
PXZ	Pawanui	8.32	194	P	Pn	09 57 20.9	+0.3
PXZ				S	Sn	09 58 47.5	-6.7
PNHZ	Pukenui	8.37	198	P	Pn	09 57 22.1	+0.8
PNHZ				S	Sn	09 58 54.4	-1.0
TSZ	Takapari Road	8.57	199	P	Pn	09 57 26.2	+2.3
TSZ				S	Sn	09 58 59.8	-0.3
PRWZ	Pori Road	9.03	198	P	Pn	09 57 27.2	-2.7
PRWZ				S	Sn	09 59 10.3	-0.7
OGWZ	Otaki Gorge	9.49	201	P	Pn	09 57 34.3	-1.7
CAW	Cannon Point	9.79	200	P	Pn	09 57 38.1	-1.7
TCW	Tory Channel	10.13	203	P	Pn	09 57 43.4	-0.8
TCW				S	Sn	09 59 35.4	-2.0
TUWZ	Tuamarina	10.44	204	P	Pn	09 57 47.8	-0.3
TUWZ				S	Sn	09 59 44.2	-0.4
KHZ	Kahutara	11.46	203	P	Pn	09 57 59.3	-1.8
ASAR	Alice Springs	40.96	270	P	P	10 02 48.0	+1.3
	1.3nm,0.6s,baz=107,slow=7.5,SNR=44						
	1.3nm,0.6s						
WRA	Warramunga Arr	42.10	275	P	P	10 02 57.0	+1.0
	2.3nm,0.3s,baz=111,slow=8.2,SNR=49						
	2.3nm,0.3s						
FINES	FINESS Array B	145.85	338	PKPbc	PKPdf	10 14 32.9	-4.5
	3.9nm,0.9s,baz=48,slow=2.1,SNR=5.6						

GUC 29 10:02:48.2±0.7**, 24°.03S**×**67°.03W, h195**^{km}±8^{km}**, ML3.6, 11C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALTA		0.66	107	⇓eP	Pn	10 03 16.7	+0.6
GO02	Mina Guanaco	2.59	244	⇑eP	Pn	10 03 34.3	+1.2
GO02				eS	Sn	10 04 09.4	+1.3
PB06	IPOC Station P	2.68	299	⇑eP	Pn	10 03 35.3	+1.3
PB06				IAML		10 04 13.8	
	comp=E,145nm,0.1s						
PB09	IPOC Station P	3.02	317	⇑eP	Pn	10 03 39.3	+1.3
PB09				eS	Sn	10 04 17.8	+1.0
PB09				IAML		10 04 20.2	
	comp=E,53nm,0.5s						
PB14	IPOC Station P	3.13	258	⇑eP	Pn	10 03 40.4	+0.8
PB14				eS	Sn	10 04 18.7	-0.8
PB05	IPOC Station P	3.14	291	eP	Pn	10 03 40.2	+0.8
PB05				eS	Sn	10 04 18.1	-1.2
PB03	IPOC Station P	3.19	308	⇑eP	Pn	10 03 40.8	+0.7
PB03				eS	Sn	10 04 20.3	-0.2
PB10	IPOC Station P	3.27	278	⇑eP	Pn	10 03 41.8	+1.0
PB10				eS	Sn	10 04 22.5	+0.6
PB07	IPOC Station P	3.49	310	⇑eP	Pn	10 03 44.3	+0.6
PB07				eS	Sn	10 04 26.2	-0.8
PB01	IPOC Station P	3.74	322	⇑eP	Pn	10 03 46.8	+0.1
PB02	IPOC Station P	3.78	315	⇑eP	Pn	10 03 47.2	+0.1
AC01	Pan de Azucar	3.86	236	⇑eP	Pn	10 03 47.7	-0.4
PATCX	Punta Patache	4.30	317	eP	Pn	10 03 53.2	-0.5
PB08	IPOC Station P	4.34	333	⇑eP	Pn	10 03 55.2	+0.6
TA01	Diego Aracena	4.51	319	eP	Pn	10 03 56.2	-0.1

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*IDC **29** 10:22:04.0±1.1, 13°.65N×92°.87W, h0^{km}, mb4.0/7, mbtmp3.8/10, ML3.3/4, MS3.6/7, Error ellipse: s-maj=26.4km s-min=16.6km az=43.0*
*MEX **29** 10:22:05.7±0.5, 13°.65N×93°.09W, h10^{km}, MD4.2*
*NEIC **29** 10:22:07.0±1.6, 13°.85N±0°.06×92°.89W±0°.07, h10^{km}±2^{km}, mb4.3/44, Md4.2/34(MEX), Error ellipse: s-maj=11.1km s-min=10.5km az=128.0*
*GCG **29** 10:22:07.2±1.5, 13°.82N×92°.90W, h22^{km}±25^{km}, MD4.3*
*SNET **29** 10:22:12.0±1.2, 14°.06N×92°.60W, h100^{km}±18^{km}, ML3.7*
*CATAC **29** 10:22:23.8±0.9, 15°N±5°×9°2W±°, h96^{km}±6^{km}, M3.5/9, MLv3.5/9, Error ellipse: s-maj=14.5km s-min=6.9km az=51.3, confirmed*
ISC 29 10:22:05.0±1.6**, 13°.75N**±0°.04×**92°.86W**±0°.04**, h9**^{km}±9^{km}**, n144,** σ**2^{s}37**/153**, mb4.3**/17**, MS3.6**/8**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.29	27		Sg	10 22 46.2	-0.3
THIG		1.29	27	eP	Pg	10 22 28.4	-1.4
THIG				eS	Sg	10 22 46.2	-0.3
RTAL	Retalhuleu	1.37	56		Pg	10 22 31.2	-0.1
RTAL				Sn	Sg	10 22 49.9	+0.7
RTAL	Retalhuleu	1.37	56	eP	Pg	10 22 30.6	-0.7
RTAL				eS	Sb	10 22 47.4	-1.1
RTAL	Retalhuleu	1.37	56	eP	Pg	10 22 31.1	-0.1
RTAL				eS	Sb	10 22 46.4	-2.1
RTAL	Retalhuleu	1.37	56	S	Sg	10 22 50.3	+1.2
PATR	El Naranjo	1.49	24		Pb	10 22 31.6	-1.4
PATR	El Naranjo	1.49	24	eP	Pb	10 22 31.6	-1.4
PATR				eS	Sn	10 22 49.6	-2.4
CHUJ	Union Juarez	1.52	29	eP	Pb	10 22 32.2	-1.4
CHUJ				eS	Sg	10 22 52.6	-1.4
PAVE	Pavencul	1.58	25		Pb	10 22 32.8	-1.8
PAVE					Sb	10 22 53.4	-1.4
PAVE	Pavencul	1.58	25	eP	Pb	10 22 32.8	-1.8
PAVE				eS	Sb	10 22 53.4	-1.4
STG2	El Palmar, Qui	1.60	65	i P	Pn	10 22 33.0	-0.6
STG2				i S	Sb	10 22 54.3	-0.9
STG5	El Palmar, Qui	1.61	66	i P	Pn	10 22 32.9	-0.8
STG8	El Palmar, Qui	1.62	64	i P	Pn	10 22 33.5	-0.5
PCIG		1.97	350	eP	Pn	10 22 37.1	-1.6
PCIG				eS	Sn	10 22 56.9	-6.7
HUEH	Huehuetenango	2.04	40		Pb	10 22 41.5	-0.9
HUEH	Huehuetenango	2.04	40	eP	Pb	10 22 40.2	-2.2
HUEH				eS	Sn	10 23 03.1	-2.4
HUEH	Huehuetenango	2.04	40	eP	Pb	10 22 41.6	-0.8
HUEH				eS	Sn	10 23 04.2	-1.3
HUEH	Huehuetenango	2.04	40	i P	Pb	10 22 41.8	-0.7
HUEH	Huehuetenango	2.04	40	P	Pb	10 22 41.5	-0.9
HUEH	Huehuetenango	2.04	40	S	Sn	10 22 53.9	-12
FG16	Alotenango, Sa	2.34	77	i P	Pn	10 22 40.8	-3.1
CCIG	Comitan	2.61	15		Pb	10 22 50.8	-1.4
CCIG					Sb	10 23 24.9	+0.5
CCIG	Comitan	2.61	15	eP	Pb	10 22 50.8	-1.4
CCIG				eS	Sb	10 23 24.9	+0.5
APG	El Apazote	2.64	62	Pn	Pb	10 22 49.8	-2.9
	0.7nm,0.3s,baz=206,slow=15,SNR=39						
APG				Sn	Sb	10 23 23.2	-2.1
	1.6nm,0.3s,baz=143,slow=9.9,SNR=8.5						
APG	El Apazote	2.64	62	i P	Pb	10 22 49.7	-2.9
FAME	Alcaldia de Sa	2.77	88	S	Sn	10 23 17.7	-5.5
FAME	Alcaldia de Sa	2.77	88	P	Pb	10 22 53.6	-1.1
NUBE	Las Nubes	3.00	87	eP	Pn	10 22 54.1	+1.2
NUBE				eS	Sn	10 23 26.5	-2.6
NUBE	Las Nubes	3.00	87	i P	Pb	10 22 55.0	-3.7
NUBE	Las Nubes	3.00	87	P	Pn	10 22 54.8	+1.9
NUBE	Las Nubes	3.00	87	S	Sn	10 23 21.0	-8.1
SLOZ	Alcaldia de Sa	3.00	84	P	Pb	10 22 55.8	-2.9
TGIG		3.02	355		Pn	10 22 53.9	+0.8
TGIG		3.02	355	eP	Pn	10 22 53.9	+0.8
TGIG				eS	Sn	10 23 24.2	-5.3
RBDL	Robledal	3.11	83	eP	Pn	10 22 55.6	+1.2
CEVE	Cerro Verde	3.15	88	eP	Pn	10 22 56.2	+1.2
CEVE	Cerro Verde	3.15	88	P	Pb	10 22 58.4	-2.9
CEVE	Cerro Verde	3.15	88	S	Sn	10 23 26.4	-6.5
SBLS	San Blas	3.15	88	eP	Pb	10 22 57.4	-3.9
JAYA	Jayaque - finc	3.32	91	eP	Pn	10 22 58.9	+1.6
JAYA	Jayaque - finc	3.32	91	i P	Pn	10 22 59.3	+1.9
JAYA				i S	Sn	10 23 36.2	-0.8
JAYA	Jayaque - finc	3.32	91	P	Pn	10 22 59.4	+2.1
JAYA	Jayaque - finc	3.32	91	S	Sn	10 23 31.6	-5.4
PMON	Piamonte	3.45	90	P	Pb	10 23 03.3	-3.1
PMON	Piamonte	3.45	90	S	Sn	10 23 33.5	-6.6
LALI	Alcalda de L	3.45	94	S	Sn	10 23 36.5	-3.6
MTO3	Montecristo	3.46	79		Pn	10 23 00.0	+0.7
MTO3	Montecristo	3.46	79	eP	Pn	10 22 59.9	+0.6
MTO3	Montecristo	3.46	79	i P	Pn	10 23 00.7	+1.4
MTO3	Montecristo	3.46	79	P	Pn	10 23 00.3	+1.0
ESQI	Esquipulas	3.51	76		Pn	10 23 00.7	+0.8
ESQI	Esquipulas	3.51	76	eP	Pn	10 22 59.6	-0.3
ESQI	Esquipulas	3.51	76	P	Pn	10 23 00.2	+0.3
UEES	Universidad Ev	3.52	90	P	Pn	10 23 03.0	+3.0
UEES	Universidad Ev	3.52	90	S	Sn	10 23 36.1	-5.8
HUIG	Huatulco	3.73	303	eP	Pn	10 22 59.8	-3.0
HUIG				eS	Sn	10 23 36.1	-11
CMIG	Matias Romero	3.85	330	Pn	Pn	10 23 04.1	-0.4
	2.9nm,0.3s,baz=164,slow=14,SNR=55						
CMIG				Sn	Sn	10 23 46.8	-3.1
	6.7nm,0.3s,baz=113,slow=18,SNR=7.3						
	7.9nm,0.3s						
CMIG	Matias Romero	3.85	330		Pn	10 23 03.6	-0.9
CMIG	Matias Romero	3.85	330	eP	Pn	10 23 03.6	-0.9
CMIG				eS	Sn	10 23 45.8	-4.1
SCLA	Alcaldia de Sa	4.02	90	P	Pn	10 23 08.5	+1.7
PETF	Flores	4.27	42		Pn	10 23 12.2	+1.9
PEIG	Puerto Escondi	4.71	299	eP	Pn	10 23 13.3	-3.0
PEIG				eS	Sn	10 23 58.9	-12
NEUV	Arroyo Zacate	4.85	325		Pn	10 23 17.2	-1.0
NEUV	Arroyo Zacate	4.85	325	eP	Pn	10 23 17.2	-1.0
NEUV				eS	Sn	10 24 11.2	-3.3
OXIG	Oaxaca	4.98	312		Pn	10 23 20.7	+0.4
VHO	Vista Hermosa	4.98	312	eP	Pn	10 23 20.7	+0.4
VHO				eS	Sn	10 24 07.8	-10
TGUH	Tegucigalpa,Un	5.44	86	Pn	Pn	10 23 28.5	+2.1
YOIG	Yosondua	5.47	305		Pn	10 23 27.1	0.0
YOIG	Yosondua	5.47	305	eP	Pn	10 23 27.1	0.0
YOIG				eS	Sn	10 24 22.1	-8.2
TXIG	Tlaxiaco	5.87	307		Pn	10 23 32.9	+0.3
TXIG	Tlaxiaco	5.87	307	eP	Pn	10 23 32.9	+0.3
TXIG				eS	Sn	10 24 32.8	-7.4
TOIG	Toxpalan	5.92	317		Pn	10 23 34.4	+1.4
TOIG	Toxpalan	5.92	317	eP	Pn	10 23 34.4	+1.4
TOIG				eS	Sn	10 24 37.2	-3.8
HERN	Volcan Telica	5.98	100	Pn	Pn	10 23 36.5	+2.6
CNGN	Cerro Negro	6.13	101	Pn	Pn	10 23 37.8	+1.9
TEIG	Tepich	7.79	34	Pn	Pn	10 23 59.7	+1.1
	baz=131,slow=24,SNR=7.1						
TEIG				Sn	Sn	10 25 29.4	+2.3
	baz=311,slow=23,SNR=3.4						
TEIG	Tepich	7.79	34	Pn	Pn	10 23 58.6	-0.1
JUD3	Juan Diaz 3	8.00	116	Pn	Pn	10 24 04.1	+2.5
JTS	Las Juntas de	8.47	113	Pn	Pn	10 24 07.2	-0.8
	0.9nm,0.3s,baz=302,slow=16,SNR=4.8						
	2.7nm,0.7s						
PIRO	Carate, Puerto	10.75	119	Pn	Pn	10 24 42.9	+3.6
BRU2	Volcan	11.12	115	Pn	Pn	10 24 47.4	+2.8
SOR	Soroa	12.97	45	Pn	Pn	10 25 10.4	+0.7
735A	Kenedy	15.72	344	Pn	Pn	10 25 45.6	-1.2
735A				IAmb	IAmb	10 26 07.9	
	comp=Z,14nm,0.9s						
HNDO	Hondo	16.79	340		P	10 26 00.0	-2.7
DRIO	Del Rio	17.17	336		Pn	10 26 04.1	-1.2
JCT	Junction City	17.84	340	Pn	P	10 26 13.0	-1.3
SAND	Sanderson	18.26	334		P	10 26 19.4	+0.4
TX31	Lajitas Ar. Si	18.46	329		Pn	10 26 20.3	-1.0
TXAR	Lajitas Array	18.46	329	P	Pn	10 26 22.0	+0.7
	baz=145,slow=12,SNR=6.5						
	comp=Z,0.5nm,0.9s						
TXAR	Lajitas Array	18.46	329		Pn	10 26 20.8	-0.6
352A	Blakely	19.09	21		Pn	10 26 28.7	-0.1
352A				IAmb	IAmb	10 26 39.8	
	comp=Z,30nm,1.3s						
SGCY	Sterling City	19.60	339	P	Pn	10 26 35.0	-0.1
SGCY				IAmb	IAmb	10 26 53.5	
	comp=Z,14nm,0.9s						
FW06	Azle	19.61	348	P	Pn	10 26 33.8	-1.3
PLPT	Palo Pinto	19.62	346		Pn	10 26 35.3	+0.1
MNHN	Monahans	19.73	334	P	Pn	10 26 35.1	-1.5
ABTX	Abilene, Hawle	19.78	343	P	Pn	10 26 36.3	-0.9
ABTX				IAmb	IAmb	10 26 39.0	
	comp=Z,10nm,0.6s						
Z47A	Carrollton	19.85	12	P	Pn	10 26 36.9	-1.0
Z47A				IAmb	IAmb	10 26 38.8	
	comp=Z,7.9nm,0.7s						
Z35A	Perchaven, San	19.90	349	P	Pn	10 26 36.9	-1.6
Z35A				IAmb	IAmb	10 26 43.5	
	comp=Z,17nm,0.9s						
152A	Waverly Hall	20.25	20	P	Pn	10 26 40.8	-1.9
152A				IAmb	IAmb	10 26 45.8	
	comp=Z,22nm,1.4s						
VHRN	Van Horn	20.30	329	P	Pn	10 26 41.2	-2.2
APMT	Aspermont	20.58	342		Pn	10 26 44.8	-1.7
APMT				IAmb	IAmb	10 26 46.6	
	comp=Z,15nm,0.8s						
SN07	Snyder 07	20.60	341	P	Pn	10 26 44.9	-1.9
SN07				IAmb	IAmb	10 26 46.7	
	comp=Z,13nm,1.0s						
MIAR	Mount Ida	20.71	358	P	Pn	10 26 45.9	-2.2
MIAR				IAmb	IAmb	10 27 17.6	
	comp=Z,15nm,1.4s						
POST	Post	20.78	339		Pn	10 26 46.2	-2.8
POST				IAmb	IAmb	10 26 48.3	
	comp=Z,10nm,0.8s						
154A	Montrose	20.79	24	P	Pn	10 26 46.6	-2.3
CLNB	Carlsbad	21.01	333	P		10 26 51.0	
DKNS	Dickens	21.14	341	P	P	10 26 49.6	-0.8
DKNS				IAmb	IAmb	10 26 52.4	
	comp=Z,12nm,0.8s						
Y52A	Lilburn	21.56	20		P	10 26 55.0	+0.1
Y52A				IAmb	IAmb	10 26 56.5	
	comp=Z,13nm,1.0s						
WMOK	Wichita Mounta	21.57	347	P	P	10 26 54.9	-0.1
W35A	Tecumseh	21.62	351		P	10 26 56.5	+1.0
W35A				IAmb	IAmb	10 26 58.6	
	comp=Z,13nm,0.6s						
FNO	Franklin	21.80	350	P	P	10 26 57.1	-0.3
FNO				IAmb	IAmb	10 27 01.1	
	comp=Z,9.3nm,0.8s						
SMWD	Samnorwood	22.28	344	P	P	10 27 02.4	-0.3
SDV	Santo Domingo	22.32	100	P	P	10 27 07.6	+4.1
	comp=Z,2.3nm,0.7s,baz=291,slow=8.6,SNR=4.4						
U38A	Gravette	22.64	357		P	10 27 06.4	0.0
U38A				IAmb	IAmb	10 27 08.8	
	comp=Z,6.1nm,0.7s						
V53A	Saluda	23.63	21		P	10 27 16.4	-0.2
V53A				IAmb	IAmb	10 27 25.5	
	comp=Z,10nm,0.9s						
TZTN	Tazewell	24.18	19	P	P	10 27 21.6	-0.3
RTBA	Rita Blanca	24.27	340	P	P	10 27 23.7	+0.9
WCI	Wyandotte Cave	25.07	12	P	P	10 27 29.8	0.0
KSU1	Kansas State U	25.47	353		P	10 27 33.1	-0.4
BC3	Big Chuckawall	28.53	318	P	P	10 28 01.4	+0.2

BC3				IAmb	IAmb	10 28 04.7	
	comp=Z,3.9nm,0.9s						
PFO	Pinyon Flats O	29.16	317	LR	LR	10 39 43.1	
	comp=Z,123nm,18.1s,baz=14,slow=36						
PDAR	Pinedale Array	32.31	337	P	P	10 28 36.7	+2.0
	comp=Z,0.5nm,0.7s,baz=159,slow=1.8,SNR=5.2						
	comp=Z,0.5nm,0.7s						
NVAR	Mina Array Bea	33.34	322	P	P	10 28 45.5	+1.7
	comp=Z,0.7nm,0.7s,baz=129,slow=7.7,SNR=7.0						
NVAR				LR	LR	10 43 25.4	
	comp=Z,111nm,19.3s,baz=351,slow=38						
	comp=Z,0.7nm,0.7s						
YBH	Yreka Blue Hor	38.05	323	LR	LR	10 45 26.0	
	comp=Z,5.7nm,21.9s,baz=160,slow=37						
LPAZ	La Paz	38.58	140	P	P	10 29 29.2	-0.1
	comp=Z,1.3nm,0.7s,baz=327,slow=7.8,SNR=5.7						
	comp=Z,1.3nm,0.7s						
RPN	Rapa Nui	43.67	201	LR	LR	10 44 32.6	
	comp=Z,39nm,20.4s,baz=200,slow=31						
SCHQ	Schefferville	45.75	21	LR	LR	10 51 24.7	
	comp=Z,27nm,18.6s,baz=156,slow=38						
YKAW1	Yellowknife Wh	51.04	347		P	10 31 08.4	+1.1
YKA	Yellowknife Ar	51.08	347	P	P	10 31 08.3	+0.8
	comp=Z,3.5nm,0.9s,baz=158,slow=7.0,SNR=37						
	comp=Z,3.5nm,0.9s						
YKAW3	Yellowknife Wh	51.14	347		P	10 31 09.1	+1.0
YKAW3				IAmb	IAmb	10 31 10.5	
	comp=Z,7.0nm,0.9s						
BDFB	Brasilia	53.10	122	P	P	10 31 22.8	-0.7
	comp=Z,1.5nm,0.7s,baz=312,slow=9.2,SNR=3.1						
	comp=Z,1.5nm,0.7s						
BCAR	Beaver Creek A	59.93	337	P	P	10 32 12.7	+1.4
INK	Inuvik	60.44	344		P	10 32 15.9	+1.3
INK				IAmb	IAmb	10 32 18.7	
	comp=Z,4.8nm,0.9s						
F28M	Old Crow	61.84	341		P	10 32 25.8	+1.6
ILAR	Eielson Array	62.74	337	P	P	10 32 30.6	+0.3
	comp=Z,1.0nm,0.7s,baz=126,slow=5.3,SNR=10						
	comp=Z,1.0nm,0.7s						
ILAR	Eielson Array	62.74	337	P	P	10 32 31.1	+0.8
RND	Reindeer	62.90	335	P	P	10 32 32.8	+1.4
BMAR	Burnt Mountain	63.24	340	P	P	10 32 35.0	+1.4
PPT	Papeete	64.03	242	LR	LR	10 54 27.4	
	comp=Z,48nm,21.7s,baz=8.5,slow=30						
EKA	Eskdalemuir Ar	78.66	36	P	P	10 34 08.7	+1.3
	comp=Z,3.0nm,0.8s,baz=292,slow=2.2,SNR=3.8						
	comp=Z,3.0nm,0.8s						
NOA	NORSAR Array B	84.76	28	LR	LR	11 11 32.4	
	comp=Z,27nm,18.1s,baz=110,slow=35						
DBIC	Dimbokro	86.51	84	LR	LR	11 09 00.8	
	comp=Z,80nm,20.9s,baz=350,slow=33						
CMAR	Chiang Mai Arr	145.94	340	PKPbc	PKPab	10 41 45.8	-0.6
	comp=Z,2.1nm,0.9s,baz=335,slow=3.0,SNR=12						

*ISK **29** 10:28:27.4, 38°.89N×43°.43E, h14^{km}, ML2.6/9*
*AFAD **29** 10:28:27.4, 38°.85N×43°.58E, h15^{km}±2^{km}, ML2.1*
ISC 29 10:28:27.4±0.9**, 38°.87N**±0°.02×**43°.52E**±0°.04**, h14**^{km}±7^{km}**,**
n19, σ0ˢ.90/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.12	19	P	Pg	10 28 30.6	-0.5
VMUR				S	Sg	10 28 34.1	+0.5
TVAN	Van	0.35	195	P	Pg	10 28 34.5	-0.3
TVAN				*i* IAML		10 28 41.0	
	comp=N,674nm,0.4s						
TVAN				S	Sb	10 28 41.5	+0.4
OZAP	Van, Ozalp-Mer	0.42	119	P	Pg	10 28 35.6	-0.4
OZAP				*i* IAML		10 28 47.0	
	comp=N,231nm,1.1s						
OZAP				*i* IAML		10 28 48.0	
	comp=E,324nm,0.8s						
ADCV	BITLIS_Adilcev	0.62	264	P	Pb	10 28 40.1	-0.2
ADCV				*i* IAML	Sn	10 28 51.0	-0.9
	comp=E,141nm,0.3s						
ADCV				S	Sn	10 28 51.0	-0.9
ADCV				*i* IAML		10 28 52.0	
	comp=N,174nm,0.2s						
DYDN	Diyadin	0.68	11	P	Pg	10 28 40.6	-0.3
DYDN				S	Sb	10 28 51.5	+0.8
DYDN				*i* IAML		10 28 52.0	
	comp=N,101nm,0.2s						
DYDN				*i* IAML		10 28 52.0	
	comp=E,90nm,0.2s						
AKDM	Akdamar-Van	0.69	218	Pg	Pg	10 28 40.3	-0.6
DORK	Agr/Tutak/Do	0.77	312	P	Pg	10 28 42.1	-0.4
DORK				S	Sn	10 28 55.4	-0.2
MLAZ	Malazgirt-MUS	0.80	290	Pg	Pg	10 28 42.3	-0.8
MLAZ				Sg	Sg	10 28 52.8	-0.9
AGRB	Hanur-Agry	0.81	330	Pg	Pg	10 28 42.8	-0.5
AGRB				Sg	Sg	10 28 53.9	-0.1
KOTA	Agri, Merkez-K	0.96	345	P	Pb	10 28 45.8	-0.2
KOTA				S	Sn	10 29 00.9	+0.7
KOTA				*i* IAML		10 29 04.0	
	comp=N,20nm,0.3s						
KOTA				*i* IAML		10 29 05.0	
	comp=E,20nm,0.6s						
BLIS	Bitlis-Merkez	1.19	248	P	Pn	10 28 49.1	-0.7
BLIS				S	Sg	10 29 07.5	+1.6
PERV	Siirt/Pervari-	1.20	220	P	Pg	10 28 52.1	+1.5
GURO	Guroymak-BITLI	1.21	255	Pn	Pn	10 28 49.6	-0.4
GURO				Sn	Sn	10 29 05.6	-0.6
TASB	TASBURUN-IGDIR	1.24	26	Pn	Pg	10 28 51.1	-0.3
EATA	Eleskirt	1.27	321	P	Pg	10 28 52.1	+0.1
EATA				S	Sg	10 29 11.7	+3.2
EATA				*i* IAML		10 29 14.0	
	comp=N,33nm,0.3s						
EATA				*i* IAML		10 29 14.0	
	comp=E,50nm,0.5s						
CUKT	Cukurca	1.62	178	Pn	Pb	10 28 57.1	-0.1
KOPR	Koprukoy-ERZUR	1.71	311	Pn	Pn	10 28 56.5	-0.4
KARS	Kars	1.79	349	Pn	Pn	10 28 57.9	-0.1
SENK	Senkaya-Erzuru	1.91	332	Pn	Pn	10 28 59.6	-0.2

*IDC **29** 10:36:41.9±1.0, 15°.18S×70°.09W, h200^{km}±12^{km}, mb3.0/6, mbtmp3.6/10, Error ellipse: s-maj=43.6km s-min=14.6km az=23.0*
ISC 29 10:36:41.5±0.7**, 15°.2S**±0°.2×**70°.2W**±0°.1**, h200**^{km}**, n16,**
σ0ˢ.83/18**, mb3.3**/5**, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	2.23	119	P	Pn	10 37 24.2	+1.1
	45nm,0.3s,baz=300,slow=7.0,SNR=329						
LPAZ				S	Sn	10 37 55.4	-0.1
	56nm,0.8s,baz=199,slow=24,SNR=24						
NNA	Nana	7.24	295	P	Pn	10 38 24.4	-0.6
	3.2nm,0.4s,baz=121,slow=18,SNR=3.8						
SIV	San Ignacio	8.79	96	P	Pn	10 38 44.8	-0.4
	3.1nm,0.6s,baz=281,slow=10,SNR=20						
SIV				S	Sn	10 40 24.4	+0.6
	0.8nm,0.6s,baz=98,slow=14,SNR=2.1						
CPUP	Villa Florida	16.31	135	P	Pn	10 40 19.8	+0.2
	1.8nm,0.7s,baz=308,slow=11,SNR=6.7						
BDFB	Brasilia	21.35	94	P	P	10 41 13.0	-0.5
	1.2nm,0.4s,baz=264,slow=12,SNR=4.4						
	1.2nm,0.4s						
TXAR	Lajitas Array	54.84	324	P	P	10 45 51.7	+0.4
	0.4nm,0.6s,baz=153,slow=9.2,SNR=6.3						
	0.4nm,0.6s						
PDAR	Pinedale Array	68.09	330	P	P	10 47 20.5	+0.5
	0.2nm,0.5s,baz=131,slow=10,SNR=4.3						
	0.2nm,0.5s						
NVAR	Mina Array Bea	69.84	321	P	P	10 47 32.3	+1.5
	0.2nm,0.6s,baz=105,slow=4.6,SNR=2.7						
	0.2nm,0.6s						
TORD	Torodi Ar. Bea	76.46	72	P	P	10 48 08.8	-1.1
	0.5nm,0.6s,baz=248,slow=4.7,SNR=3.5						
	0.5nm,0.6s						
YKA	Yellowknife Ar	84.88	341	P	P	10 48 53.9	+0.5
	0.5nm,0.7s,baz=142,slow=4.5,SNR=11						
	0.5nm,0.7s						
ASAR	Alice Springs	134.78	212	PKP	PKPdf	10 55 35.4	-1.9
	0.2nm,0.6s,baz=132,slow=2.1,SNR=1.4						
ZALV	Zalesovo Beam	136.66	21	PKP	PKPdf	10 55 39.8	+0.1
	0.5nm,0.5s,baz=341,slow=3.1,SNR=3.7						
WRA	Warramunga Arr	137.58	215	PKP	PKPdf	10 55 42.1	-0.4
	0.2nm,0.4s,baz=138,slow=1.8,SNR=1.7						
HILR	Hailar Array B	144.79	349	PKP	PKPdf	10 55 54.5	-0.1
	2.9nm,0.5s,baz=355,slow=1.6,SNR=5.7						
MJAR	Matsushiro Arr	147.00	315	PKPbc	PKPbc	10 56 00.9	-0.1
	2.3nm,0.7s,baz=76,slow=2.1,SNR=9.2						
SONM	Songino Array	147.33	4	PKPbc	PKPbc	10 56 02.0	+0.2
	0.4nm,0.5s,baz=349,slow=2.2,SNR=3.8						

*ISK **29** 11:20:06.6, 40°.35N×42°.16E, h5^{km}, ML4.2/20*
*TIF **29** 11:20:06.1, 40°.32N×42°.17E, h1^{km}±1^{km}*
*IDC **29** 11:20:07.7±0.7, 40°.35N×42°.27E, h0^{km}, mb3.9/15, mbtmp3.9/24, ML3.9/5, MS3.5/22, Error ellipse: s-maj=12.4km s-min=9.3km az=154.0*
*MOS **29** 11:20:08.2±1.1, 40°.29N×42°.21E, h15^{km}, mb4.4/15, Error ellipse: s-maj=5.9km s-min=4.1km az=84.7*
*AFAD **29** 11:20:08.2, 40°.32N×42°.17E, h7^{km}±2^{km}, MW4.2*
*NEIC **29** 11:20:09.2±1.0, 40°.31N±0°.04×42°.09E±0°.05, h10^{km}±1^{km}, mb4.5/16, Error ellipse: s-maj=7.3km s-min=6.1km az=138.0*
*MCSM **29** 11:20:09.0±0.4, 40°N±4°×4°2E±°, h11^{km}±3^{km}, mb4.4, mB4.9, MLv4.0, Mw(mB)4.2*
ISC 29 11:20:08.3±1.0**, 40°.32N**±0°.02×**42°.13E**±0°.02**, h4**^{km}±7^{km}**,**
n249, σ1ˢ.61/280**, mb4.1**/38**, MS3.5**/14**, 22C-9D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SENK	Senkaya-Erzuru	0.30	34	Pg	Pg	11 20 13.1	-1.0
SENK				Sg	Sg	11 20 17.7	-0.3
KOPR	Koprukoy-ERZUR	0.39	213	Pg	Pg	11 20 15.8	0.0
KOPR				Sg	Sb	11 20 22.9	-1.3
EATA	Eleskirt	0.53	149	P	Pg	11 20 18.3	-0.2
EATA				S	Sg	11 20 26.7	+1.3
EATA				*i* IAML		11 20 33.0	
	comp=E,10μm,0.6s						
EATA				*i* IAML		11 20 36.0	
	comp=N,10μm,0.5s						
AKDA	Akdag	0.63	250	P	Pg	11 20 21.2	+0.9
AKDA				*i* IAML		11 20 31.0	
	comp=N,3μm,0.5s						
AKDA				S	Sb	11 20 31.7	+0.6
AKDA				*i* IAML		11 20 47.0	
	comp=E,2μm,0.6s						
GOLE	Ardahan-G¶le	0.63	34	P	Pg	11 20 20.1	-0.2
GOLE				S	Sg	11 20 29.7	+1.1
GOLE				*i* IAML		11 20 31.0	
	comp=E,2μm,0.4s						
GOLE				*i* IAML		11 20 34.0	
	comp=N,1μm,0.6s						
DDEM	Demirkent	0.65	333	P	Pg	11 20 20.9	+0.2
DDEM				S	Sb	11 20 31.3	-0.2
DDEM				*i* IAML		11 20 33.0	
	comp=N,8μm,0.4s						
DDEM				*i* IAML		11 20 33.0	
	comp=E,6μm,0.4s						
BOZK	Kars-Merkez-Bo	0.70	67	P	Pg	11 20 21.1	-0.6
BOZK				*i* IAML		11 20 39.0	
	comp=N,1μm,0.7s						
BOZK				*i* IAML		11 20 40.0	
	comp=E,1μm,0.9s						
ERZM	Erzurum	0.72	235	P	Pg	11 20 22.6	+0.6
ERZM				S	Sb	11 20 34.3	+0.5
DBAD	Bademkaya	0.78	335	P	Pg	11 20 23.2	0.0
DBAD				*i* IAML		11 20 35.0	
	comp=E,2μm,1.0s						
DBAD				S	Sb	11 20 35.0	-0.3
DBAD				*i* IAML		11 20 36.0	
	comp=N,2μm,0.7s						
EDAM	Erzurum-Paland	0.78	238	P	Pg	11 20 23.8	+0.5
EDAM				S	Sn	11 20 36.6	-1.8
EDAM	Erzurum-Paland	0.78	238	Pg	Pg	11 20 23.5	+0.2
EDAM				Sg	Sb	11 20 36.1	+0.5
KARS	Kars	0.79	66		Pg	11 20 25.2	+1.9
KARS					Sg	11 20 36.1	+2.5
EKONA	Konakl - Erz	0.88	233	P	Pb	11 20 26.8	+0.6
EKONA				S	Sn	11 20 41.3	+0.2
EKONA				*i* IAML		11 20 47.0	
	comp=N,1μm,0.7s						
EKONA				*i* IAML		11 20 47.0	
	comp=E,2μm,1.1s						
KRIK	Erzurum-spir	0.92	272	P	Pg	11 20 26.1	+0.1
KRIK				S	Sn	11 20 40.5	-1.4
KRIK				*i* IAML		11 20 46.0	
	comp=N,7μm,0.5s						
KRIK				*i* IAML		11 20 46.0	
	comp=E,4μm,0.7s						
AHAN	Ardahan-Merkez	0.93	24	P	Pg	11 20 25.9	-0.2
AHAN				S	Sb	11 20 40.6	+0.9
AHAN				*i* IAML		11 20 43.0	
	comp=N,9μm,0.5s						
AHAN				*i* IAML		11 20 43.0	
	comp=E,1μm,0.5s						
EMRE	Erzurum,Aziziy	0.93	252	P	Pb	11 20 26.9	-0.2
EMRE				*i* IAML		11 20 48.0	
	comp=E,1μm,0.8s						
EMRE				*i* IAML		11 20 50.0	
	comp=N,1μm,0.6s						
KOTA	Agri, Merkez-K	0.97	122	P	Pg	11 20 26.5	-0.3
KOTA				S	Sb	11 20 42.7	+1.7
KOTA				*i* IAML		11 20 43.0	
	comp=N,5μm,0.6s						
KOTA				*i* IAML		11 20 44.0	
	comp=E,4μm,0.5s						
AGRB	Hanur-Agry	0.99	138	Pg	Pg	11 20 26.8	-0.5
AGRB				Sg	Sg	11 20 41.4	+1.2
DBOC	Borcka	1.09	341	P	Pg	11 20 28.2	-0.9
DBOC				S	Sg	11 20 43.4	+0.2
DBOC				*i* IAML		11 20 46.0	
	comp=E,9μm,0.5s						
HOPA	Hopa-Artvin	1.19	334	Pn	Pb	11 20 30.1	-1.2
BCA	Borcka	1.19	341	Pn	Pb	11 20 29.8	-1.6
BCA				Sn	Sb	11 20 46.6	-0.6
BCA	Borcka	1.19	341	⇑P	Pb	11 20 29.4	-2.0
BCA				⇑S	Sb	11 20 44.7	-2.5
MLAZ	Malazgirt-MUS	1.22	165	Pn	Pb	11 20 30.7	-1.2
VRTB	Varto-Mus	1.27	205	Pn	Pn	11 20 32.6	-0.2
EPOS	Posof	1.27	21	P	Pn	11 20 31.8	-1.1
EPOS				*i* IAML		11 20 51.0	
	comp=N,6μm,0.8s						
EPOS				*i* IAML		11 20 52.0	
	comp=E,6μm,0.6s						
IZDR	Rize	1.28	292	P	Pn	11 20 32.0	-1.1
IZDR				S	Sn	11 20 50.2	-0.5
KOPT	Kop Dagi	1.29	257	Pn	Pn	11 20 33.0	-0.3
KOPT				Sn	Sn	11 20 51.2	+0.1
CHOM	Cayeli-Rize	1.30	307	Pn	Pn	11 20 32.7	-0.5
KARO	Karliova-Bingo	1.31	220	Pn	Pn	11 20 32.5	-0.9
BGD	Bogdanovka	1.46	49	P	Pn	11 20 34.6	-1.0
BGD				S	Sn	11 20 55.1	-0.2
BGD	Bogdanovka	1.46	49	*e*PG	Pn	11 20 34.6	-1.0
BGD				*e*S	Sn	11 20 55.1	-0.2
YEDI	Yedisu-Bingol	1.50	235	Pn	Pn	11 20 36.2	+0.1
BAYT	Aydıntepe-Bayb	1.52	274	Pn	Pn	11 20 36.4	0.0
TASB	TASBURUN-IGDIR	1.65	101	Pn	Pn	11 20 37.6	-0.4
BNGB	Bingl	1.73	221	Pn	Pn	11 20 39.6	+0.4
GURO	Guroymak-BITLI	1.77	183	Pn	Pn	11 20 39.9	+0.2
GURO	Guroymak-BITLI	1.77	183	Pn	Pn	11 20 39.9	+0.2
TRLG	Trialeti	1.93	50	P	Pn	11 20 42.2	+0.2
TRLG				S	Sn	11 21 07.7	+1.0
TRLG	Trialeti	1.93	50	*e*PN	Pn	11 20 42.2	+0.2
TRLG				*e*S	Sn	11 21 07.7	+1.0
ERZN	Erzincan	1.99	249	Pn	Pn	11 20 43.3	+0.5
KZRT	Kazreti	2.02	57	*e*PN	Pn	11 20 40.5	-2.7
KZRT				*e*S	Sn	11 21 10.2	+1.3
GUMT	Gumushane	2.03	275	Pn	Pn	11 20 43.6	+0.3
KZR	Kazreti	2.03	58	P	Pn	11 20 40.6	-2.7
KZR				S	Sn	11 21 10.2	+1.1
AKDM	Akdamar-Van	2.09	161	Pn	Pn	11 20 44.6	+0.4
ALIG	Mtskhetisjvari	2.12	32	P	Pn	11 20 44.8	+0.2
ALIG				S	Sb	11 21 14.6	+0.6
ALIG	Mtskhetisjvari	2.12	32	*e*PN	Pn	11 20 44.7	+0.2
ALIG				*e*S	Sb	11 21 14.6	+0.6
TKB	Tkibuli	2.13	17	P	Pn	11 20 45.5	+0.8
TKB				S	Sb	11 21 14.8	+0.5
TKB	Tkibuli	2.13	17	*e*PN	Pn	11 20 45.5	+0.8
TKB				*e*S	Sb	11 21 14.8	+0.5
TBLG	Delisi	2.43	54	P	Pn	11 20 49.1	+0.4
TBLG				S	Sb	11 21 25.9	+3.2
TBLG	Delisi	2.43	54	Pn	Pn	11 20 49.2	+0.5
TBLG	Delisi	2.43	54	*e*PN	Pn	11 20 49.0	+0.4
TBLG				*e*S	Sb	11 21 25.9	+3.2
GARIG	Gari	2.50	23	P	Pn	11 20 50.6	+0.9
DGRG	David-gareji	2.71	64	P	Pn	11 20 53.6	+1.1
DGRG	David-gareji	2.71	64	*e*PN	Pn	11 20 53.6	+1.1
GUDG	Gudauri	2.78	39	P	Pn	11 20 54.7	+0.9
GUDG	Gudauri	2.78	39	*e*PN	Pn	11 20 54.6	+0.9
DYBB	Diyarbakir	2.82	214	Pn	Pn	11 20 55.2	+1.0
ILIC	ilic-Erzincan	2.88	254	Pn	Pn	11 20 56.2	+1.3
NEUR	Neytrino	2.98	8	*i* PN	Pn	11 20 57.1	+0.7
ARPR	Arapgir-MALATY	3.17	249	Pn	Pn	11 20 58.9	-0.1
MARD	Mardin	3.18	200	Pn	Pn	11 20 59.1	0.0
SHTL	Shatili	3.26	43	P	Pn	11 21 01.4	+1.1
SHTL	Shatili	3.26	43	*e*PN	Pn	11 21 01.3	+1.1
NCK	Nalchik	3.36	18	*i* PN	Pn	11 21 02.7	+1.2
SHA1	Shidzhatmaz	3.44	6	*i* PN	Pn	11 21 04.0	+1.2
KBZ	Khabaz	3.46	9	Pn	Pn	11 21 03.8	+1.0
	4.5nm,0.3s,baz=186,slow=7.5,SNR=40						
KBZ				Lg	Lg	11 21 56.5	
	1.7nm,0.3s,baz=308,slow=18,SNR=1.2						
KBZ				LR	LR	11 22 25.5	
	comp=Z,420nm,19.8s,baz=286,slow=40						
	17nm,0.4s						
KBZ	Khabaz	3.46	9	c*e*PN	Pn	11 21 01.7	-1.1
VSLR	Vesyoloye	3.51	334	*i* PN	Pn	11 21 05.6	+2.0
KIV	Kislovodsk	3.66	6	Pn	Pn	11 21 05.5	-0.2
KIV	Kislovodsk	3.66	6	*e*PN	Pn	11 21 06.8	+1.1
KIV				pmax	pmax		
	comp=Z,98nm,1.0s						
KVAR	Kislovodsk Arr	3.66	6	Pn	Pn	11 21 06.1	+0.4
	baz=274,slow=16						
KVAR				Lg	Lg	11 22 02.6	
	baz=55,slow=13						
	comp=Z,16nm,0.4s						
SOC	Sochi	3.73	332	*e*PN	Pn	11 21 07.4	+0.9
SOC				*e*S	Sn	11 21 53.2	+2.3
SOC				*e*SS	SbSb	11 22 03.9	-1.3
SOC				*e*SSS	SSS	11 22 10.7	
SOC				pmax	pmax		
	comp=Z,151nm,0.9s						
SOC				MLR	MLR		
	comp=Z,254nm,10.0s						
TOKA	Tokat	4.32	272	Pn	Pn	11 21 14.7	-0.1
AKT	Akhty	4.40	73	*e*PN	Pn	11 21 13.6	-2.3
AKT				*e*		11 21 27.2	
AKT				*e*S	Sn	11 22 05.8	-1.8
AKT				*e*		11 22 19.1	
AKT				pmax	pmax		
	comp=Z,62nm,0.7s						
AKT				smax	smax		
	comp=N,77nm,0.8s						
AKT				smax	smax		
	comp=N,54nm,0.7s						
AKT				smax	smax		
	comp=E,74nm,0.7s						
LABN	Labinsk	4.45	347	*e*PN	Pn	11 21 18.4	+2.0
LABN				*e*S	Sn	11 22 14.2	+5.6
LABN				pmax	pmax		
	comp=Z,118nm,0.7s						
MAK	Makhachkala	4.81	55	⇑*i*PN	Pn	11 21 18.8	-2.7
MAK				*e*S	Sn	11 22 14.0	-3.6
MAK				pmax	pmax		
	comp=Z,21nm,0.3s						
MAK				MLR	MLR		
	comp=Z,1μm,8.0s						
GAZ	Gaziantep	4.96	232	Pn	Pn	11 21 22.1	-1.5
ERBR	Yeremizino-Bor	5.53	348	*e*P	Pn	11 21 31.7	+0.4
ERBR				*e*S	Sn	11 22 36.9	+1.6
ERBR				pmax	pmax		
	comp=Z,52nm,0.7s						
ANN	Anapa	5.67	324	*e*P	Pn	11 21 35.4	+2.3
ANN				*e*S	Sn	11 22 45.0	+6.4
ANN				pmax	pmax		
	comp=Z,59nm,0.7s						
BZK	Bozkurt	6.35	288	Pn	Pn	11 21 43.2	+0.7
ILGA	Ilgaz	6.44	279	Pn	Pn	11 21 40.3	-3.7
BR131	Keskin Array S	6.55	268	Pn	Pn	11 21 45.3	-0.1
BR131	Keskin Array S	6.55	268	*i* P	Pn	11 21 48.4	+3.0
BRTR	Keskin Array B	6.55	268	Pn	Pn	11 21 49.4	+3.9
	comp=Z,1.5nm,0.8s,baz=79,slow=13,SNR=8.8						
BRTR				LR	LR	11 24 49.3	
	comp=Z,314nm,20.5s,baz=73,slow=42						
BRTR	Keskin Array B	6.55	268	Pn	Pn	11 21 45.0	-0.4
BR105	Keskin Array S	6.56	268	Pn	Pn	11 21 45.4	-0.2
	comp=Z,0.1nmcomp=Z,180nmcomp=Z,14nm,0.9s						
SUDU	Sudak	6.97	313	*e*P	Pn	11 21 52.4	+1.4
SUDU				*e*S	Sn	11 23 11.2	+0.5
ANTO	Ankara	7.17	269	⇑P	Pn	11 22 00.3	+6.3
ANTO	Ankara	7.17	269	⇑P	Pn	11 22 00.3	+6.3
ALU	Alushta	7.19	310	*e*P	Pn	11 21 56.4	+2.4
ALU				*e*S	Sn	11 23 17.9	+1.9
YAL	Yalta	7.23	308	*e*P	Pn	11 21 56.5	+2.0
YAL				*e*S	Sn	11 23 17.7	+0.7
SIM	Simferopol'	7.51	311	*e*P	Pn	11 22 03.6	+5.2
SIM				*e*S	Sn	11 23 27.0	+3.1
SIM				pmax	pmax		
	comp=Z,38nm,0.7s						
SIM				smax	smax		
	comp=E,64nm,1.0s						
SIM				smax	smax		
	comp=N,120nm,0.8s						
ASF	Jabal al Asfar	9.16	209	Pn	Pn	11 22 22.8	+1.5
	comp=N,0.2nm,0.3s,baz=18,slow=9.6,SNR=1.7						
ASF				LR	LR	11 26 12.7	
	comp=N,132nm,18.0s,baz=20,slow=40						
	comp=N,2.8nm,0.7s						
AKAS	Kas	10.66	251	Pn	Pn	11 22 41.0	-0.7
VORD	Divnogorie	10.83	350	*e*P	Pn	11 22 43.5	-0.5
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TLCR		10.93	301	⇓P	Pn	11 22 45.9	+0.6
TLCR		10.93	301	⇓P	Pn	11 22 45.9	+0.6
TPGR	Topolog	11.08	299	⇑P	Pn	11 22 48.4	+1.0
VSR	Storozhevoye	11.10	350	*e*P	Pn	11 22 45.0	-2.6
VSR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CFR	Carcaliu	11.38	300	⇑P	Pn	11 22 52.3	+0.9
CFR	Carcaliu	11.38	300	⇑P	Pn	11 22 52.3	+0.9
EIL	Elat	12.14	211	LR	LR	11 27 41.8	
	comp=Z,159nm,20.6s,baz=166,slow=37						
LPSR	Galich'ya Gora	12.48	351	*e*P	Pn	11 23 03.3	-3.2
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VRI	Vrincioaia	12.55	301	⇓P	Pn	11 23 18.3	+11
SORM	Soroca	12.59	313	⇓P	Pn	11 23 07.0	-1.0
SORM	Soroca	12.59	313	⇓P	Pn	11 23 07.0	-1.0
PLOR	Plostina	12.59	301	⇑P	Pn	11 23 09.3	+1.2
PLOR	Plostina	12.59	301	⇑P	Pn	11 23 09.3	+1.2
BELG	Belogornoye	12.66	16	*i* P	Pn	11 23 09.7	+0.8
COVR	Voineasa-Covas	12.88	301	⇑P	Pn	11 23 13.8	+1.7
ONER	Baraj Valea Uz	12.93	303	⇑P	Pn	11 23 15.8	+3.0
MLR	Muntele Rosu	12.94	299	Pn	Pn	11 23 14.9	+2.0
	comp=Z,0.3nm,0.3s,baz=105,slow=20,SNR=4.9						
MLR				Sn	Sn	11 25 36.8	-0.6
	comp=Z,0.5nm,0.3s,baz=87,slow=18,SNR=1.8						
	comp=Z,1.3nm,0.3s						
MLR	Muntele Rosu	12.94	299	Pn	Pn	11 23 12.0	-0.9
AK07	Malin Array Si	13.66	323	Pn	Pn	11 23 22.5	-0.1
AK09	Malin Array Si	13.67	323	Pn	Pn	11 23 22.6	-0.1
AK10	Malin Array Si	13.67	323	Pn	Pn	11 23 22.7	0.0
AK06	Malin Array Si	13.69	323	Pn	Pn	11 23 22.9	0.0
AK08	Malin Array Si	13.69	323	Pn	Pn	11 23 23.0	0.0
AK05	Malin Array Si	13.71	323	Pn	Pn	11 23 23.2	0.0
AK02	Malin Array Si	13.73	323	Pn	Pn	11 23 23.5	-0.1
AK12	Malin Array Si	13.74	323	Pn	Pn	11 23 23.7	0.0
AK01	Malin Array Si	13.75	323	Pn	Pn	11 23 23.8	0.0
AKASG	Malin Array Be	13.75	323	Pn	Pn	11 23 23.3	-0.6
	comp=Z,2.8nm,0.4s,baz=137,slow=14,SNR=14						
AKASG				Sn	Sn	11 25 48.0	-9.0
	comp=Z,0.4nm,0.3s,baz=136,slow=24,SNR=4.6						
AKASG				LR	LR	11 29 58.3	
	comp=Z,150nm,18.1s,baz=138,slow=43						
AKASG	Malin Array Be	13.75	323	Pn	Pn	11 23 22.3	-1.5
AKASG	Malin Array Be	13.75	323	*i* P	Pn	11 23 23.6	-0.3
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
AKBB	Malin Array Si	13.75	323		Pn	11 23 22.5	-1.4
AKBB	Malin Array Si	13.75	323	P	Pn	11 23 22.5	-1.4
KIEV	Kiev	13.76	323		Pn	11 23 22.9	-1.0
KIEV	Kiev	13.76	323	⇑P	Pn	11 23 21.7	-2.2
KIEV	Kiev	13.76	323	⇑P	Pn	11 23 21.7	-2.2
AK14	Malin Array Si	13.76	323	Pn	Pn	11 23 23.7	-0.2
AK13	Malin Array Si	13.77	323	Pn	Pn	11 23 23.8	-0.2
AK16	Malin Array Si	13.79	323	Pn	Pn	11 23 24.1	-0.2
AK17	Malin Array Si	13.82	323	Pn	Pn	11 23 24.5	-0.2
AK20	Malin Array Si	13.88	323	Pn	Pn	11 23 24.9	-0.7
KMPD	K-Podol'skiy	13.88	312	Pn	Pn	11 23 25.5	-0.2
AK21	Malin Array Si	13.89	323	Pn	Pn	11 23 25.0	-0.7
LUBAR	Lubar, Ukraine	13.95	318	Pn	Pn	11 23 26.6	+0.1
BURAR	Bucovina Array	14.18	307	Pn	Pn	11 23 29.6	-0.2
BURAR	Bucovina Array	14.18	307	⇓P	Pn	11 23 30.4	+0.5
BURAR	Bucovina Array	14.18	307	⇓P	Pn	11 23 30.4	+0.5
BUR08	Bucovina Ar. S	14.21	307		Pn	11 23 28.7	-1.5

MI29	**MI29, Kamyanyy**	**14.22**	**320**	Pn	**Pn**	**11 23 30.4**	**+0.2**
	comp=Z,198nm,0.8s						
MI30	**MI30,Zelenitsa**	**14.27**	**322**	Pn	**Pn**	**11 23 30.1**	**-0.8**
	comp=Z,34nm,0.9s						
IDI	**Anoyia**	**14.52**	**255**	Pn	**Pn**	**11 23 35.8**	**+1.3**
	comp=Z,14nm,1.0s,baz=45,slow=10.0,SNR=2.3						
MI28	**Mi28,Pidlybu**	**14.64**	**321**	Pn	**Pn**	**11 23 35.9**	**0.0**
AKTO	**Aktyubinsk**	**15.03**	**42**	Pn	**Pn**	**11 23 39.2**	**-2.2**
	comp=Z,0.5nm,0.3s,baz=252,slow=10,SNR=9.2						
AKTO				LR	LR	11 32 06.3	
	comp=Z,113nm,18.4s,baz=312,slow=48						
STNU	**Starunia**	**15.09**	**310**	P	**Pn**	**11 23 42.0**	**-0.2**
MARR	**Marisel-Cluj**	**15.18**	**301**	⇓P	**Pn**	**11 23 44.1**	**+0.7**
OBN	**Obninsk**	**15.26**	**348**	⇑*e*P	**Pn**	**11 23 46.0**	**+1.7**
OBN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,82nm,8.0s						
AB31	**Akbulak array**	**15.45**	**49**		**Pn**	**11 23 44.7**	**-2.2**
ABKAR	**Akbulak array**	**15.45**	**49**		**Pn**	**11 23 45.0**	**-1.9**
RNPP5	**Staryi Chortor**	**15.70**	**319**	P	**Pn**	**11 23 49.9**	**-0.1**
RNPP8	**Varash**	**15.78**	**320**	P	**Pn**	**11 23 51.2**	**+0.1**
RNPP9	**Sopachiv**	**15.81**	**320**	P	**Pn**	**11 23 51.5**	**0.0**
RAYN	**Ar Rayn**	**16.98**	**169**		**Pn**	**11 24 05.4**	**-1.3**
RAYN	**Ar Rayn**	**16.98**	**169**	⇓P	**Pn**	**11 24 05.3**	**-1.4**
MNK	**Minsk**	**17.11**	**331**	*i* P	**Pn**	**11 24 07.5**	**-0.5**
	comp=E,14nm,0.7s						
MNK				*i* P	**Pn**	**11 24 07.5**	**-0.5**
	comp=N,18nm,0.9s						
MNK				*i* P	**Pn**	**11 24 07.5**	**-0.5**
	comp=Z,7.0nm,0.9s,baz=139						
MNK				*i* PP	**PnPn**	**11 24 17.3**	**-0.4**
MNK				*i* PPP	PPP	11 24 25.1	
MNK				*i* S	**Sn**	**11 27 18.7**	**+0.2**
MNK				*i* SS	**SnSn**	**11 27 33.4**	**+1.8**
MNK				*i* SSS	SSS	11 27 46.2	
MNK				*i* LQ	LQ	11 29 34.8	
MNK				*i* LR	LR	11 31 02.2	
MNK				*i* LRM	MLR	11 31 42.7	
	comp=E,75nm,15.8s						
MNK				*i* LRM	MLR	11 31 43.4	
	comp=N,57nm,11.4s						
MNK				*i* LRM	MLR	11 32 44.2	
	comp=Z,86nm,14.8s						
MNK	**Minsk**	**17.11**	**331**	*i* P	**Pn**	**11 24 07.5**	**-0.5**
MNK				*i* S	**Sn**	**11 27 18.7**	**+0.2**
MNK				pmax	pmax		
	comp=N,18nm,0.9s						
MNK				pmax	pmax		
	comp=E,14nm,0.7s						
MNK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MNK				MLR	MLR		
	comp=E,75nm,16.0s						
MNK				MLR	MLR		
	comp=N,57nm,11.0s						
MNK				MLR	MLR		
	comp=Z,86nm,15.0s						
STHS	**Stebnicka Huta**	**17.33**	**309**	*e*P	**P**	**11 24 16.6**	**+4.2**
NACGM	**Naroch**	**17.83**	**330**	*e*P	**Pn**	**11 24 17.4**	**+0.4**
	comp=Z,21nm,1.0s,baz=139						
KIRV	**Kirov**	**18.87**	**12**	P	**P**	**11 24 27.5**	**-1.7**
	comp=Z,8.8nm,0.4s,baz=210,slow=13,SNR=3.7						
KIRV				LR	LR	11 31 43.9	
	comp=Z,114nm,21.1s,baz=182,slow=37						
KIRV	**Kirov**	**18.87**	**12**	*ce*P	**Pn**	**11 24 30.8**	**+1.1**
ARTI	**Arti**	**19.29**	**28**	P	**P**	**11 24 33.1**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=228,slow=14,SNR=6.2						
ARTI				LR	LR	11 34 36.4	
	comp=Z,128nm,18.5s,baz=231,slow=45						
	comp=Z,3.5nm,0.8s						
ARTI	**Arti**	**19.29**	**28**		**P**	**11 24 32.4**	**-1.5**
ARTI	**Arti**	**19.29**	**28**	P	**P**	**11 24 34.0**	**+0.2**
ARTI				S	**S**	**11 28 13.8**	**+1.3**
CONA	**Conrad Observa**	**20.27**	**301**	*e*pP	pP	11 24 49.0	+2.4
	comp=Z,4.2nm,1.0s						
SHAA	**Shahritus**	**20.38**	**89**	P	**P**	**11 24 46.0**	**0.0**
SHAA				IAmb	IAmb	11 24 56.5	
	comp=Z,46nm,1.1s						
SVE	**Sverdlovsk**	**20.45**	**30**	*e*P	Pn	11 24 48.0	-0.6
SVE				pmax	pmax		
	comp=Z,21nm,1.1s						
SOKA	**Soboth**	**20.60**	**297**	*e*pP	pP	11 24 53.1	+2.9
	comp=Z,2.4nm,0.8s						
KLMR	**Klimovskoe**	**20.63**	**356**	*e*P	**P**	**11 24 46.9**	**-1.4**
KLMR				pmax	pmax		
	comp=Z,31nm,1.3s						
VSU	**Vasula**	**20.65**	**337**	*i* P	Pn	11 24 50.7	-0.2
VSU				pmax	pmax		
	comp=Z,65nm,2.1s						
CHGR	**Chuyangaron**	**20.90**	**86**		**P**	**11 24 51.3**	**-0.3**
CHGR				IAmb	IAmb	11 24 53.9	
	comp=Z,25nm,0.8s						
CHGR	**Chuyangaron**	**20.90**	**86**	*i* P	**P**	**11 24 52.5**	**+0.9**
CHGR				pmax	pmax		
	comp=Z,29nm,0.9s						
KK31	**Karatay Array**	**21.33**	**73**		**P**	**11 24 56.4**	**+0.3**
KK31				IAmb	IAmb	11 24 59.8	
	comp=Z,7.9nm,0.7s						
KK31	**Karatay Array**	**21.33**	**73**	P	**P**	**11 24 56.4**	**+0.3**
KK31				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KKAR	**Karatay Array**	**21.33**	**73**		**P**	**11 24 55.9**	**-0.2**
KKAR	**Karatay Array**	**21.33**	**73**	P	**P**	**11 24 55.9**	**-0.2**
CKRC	**Cesky Krumlov**	**21.47**	**303**	*e*P	**P**	**11 25 02.3**	**+4.7**
CKRC	**Cesky Krumlov**	**21.47**	**303**	*e*P	**P**	**11 25 02.3**	**+4.7**
ZVC	**Zvikov**	**21.69**	**304**	*e*P	**P**	**11 25 03.5**	**+3.5**
GAR	**Garm**	**21.71**	**84**		**P**	**11 25 00.3**	**0.0**
KBA	**Koelnbreinsper**	**21.80**	**298**	*e*P	**P**	**11 24 59.4**	**-2.0**
	comp=Z,11nm,1.3s						
GERES	**GERESS Array B**	**21.87**	**302**	P	**P**	**11 25 04.6**	**+2.6**
	comp=Z,1.5nm,0.7s,baz=97,slow=11,SNR=14						
	comp=Z,1.5nm,0.7s						
KHC	**Kasperske Hory**	**22.01**	**303**	*e*P	**P**	**11 25 07.9**	**+4.5**
KHC	**Kasperske Hory**	**22.01**	**303**	*e*P	**P**	**11 25 07.9**	**+4.5**
LESA	**Schwarzleotal**	**22.30**	**298**	*e*pP	pP	11 25 09.9	+1.4
	comp=Z,2.1nm,0.6s						
ABTA	**Abfaltersbach**	**22.33**	**297**	*e*pP	pP	11 25 10.4	+1.6
	comp=Z,3.2nm,0.7s						
TEOL	**Teolo**	**22.82**	**293**	P	**P**	**11 25 11.3**	**-0.8**
CLL	**Collm**	**22.93**	**308**		**P**	**11 25 14.0**	**+0.8**
CLL	**Collm**	**22.93**	**308**	*i* P	**P**	**11 25 16.8**	**+3.6**
CLL				pmax	pmax		
	comp=Z,20nm,1.5s						
CLL	**Collm**	**22.93**	**308**	*i* P	**P**	**11 25 16.8**	**+3.6**
	comp=Z,20nm,1.5s						
BORK	**Borovoye**	**22.98**	**47**		**P**	**11 25 13.2**	**-0.4**
BORK				IAmb	IAmb	11 25 26.4	
	comp=Z,5.9nm,0.7s						
BORK	**Borovoye**	**22.98**	**47**	*ce*P	**P**	**11 25 12.1**	**-1.5**
BORK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WTTA	**Wattenberg**	**22.98**	**298**	*e*pP	pP	11 25 16.2	+0.4
	comp=Z,5.1nm,1.0s						
BVAR	**Borovoye Array**	**23.01**	**47**	P	**P**	**11 25 13.4**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=239,slow=13,SNR=13						
BVAR				LR	LR	11 35 46.5	
	comp=Z,78nm,18.6s,baz=252,slow=41						
	comp=Z,1.3nm,0.8s						
WATA	**Walderalm**	**23.03**	**298**	*e*P	**P**	**11 25 10.3**	**-4.0**
	comp=Z,3.5nm,0.6s						
FIA1	**FINESS Array S**	**23.32**	**340**	P	**P**	**11 25 18.4**	**+1.3**
FINES	**FINESS Array B**	**23.32**	**340**	P	**P**	**11 25 17.9**	**+0.9**
	comp=Z,2.0nm,0.6s,baz=180,slow=8.6,SNR=14						
FINES				LR	LR	11 34 34.1	
	comp=Z,72nm,19.4s,baz=184,slow=37						
	comp=Z,2.0nm,0.6s						
FINES	**FINESS Array B**	**23.32**	**340**	P	**P**	**11 25 18.4**	**+1.3**
FINES	**FINESS Array B**	**23.32**	**340**	P	**P**	**11 25 18.4**	**+1.3**
DAVOX	**Davos/Dischmat**	**24.14**	**296**	P	**P**	**11 25 26.3**	**+0.9**
	comp=Z,7.7nm,0.8s,baz=111,slow=10,SNR=11						
	comp=Z,7.7nm,0.8s						
AAK	**Ala-Archa**	**24.28**	**74**	LR	LR	11 36 38.7	
	comp=Z,114nm,18.5s,baz=288,slow=41						
AAK	**Ala-Archa**	**24.28**	**74**	*ce*P	**P**	**11 25 26.4**	**-0.3**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
TUE	**Stuetta**	**24.49**	**295**	P	**P**	**11 25 30.2**	**+1.6**
TUE				IAmb	IAmb	11 25 35.1	
	comp=Z,12nm,1.1s						
TUE	**Stuetta**	**24.49**	**295**	P	**P**	**11 25 28.2**	**-0.4**
	comp=Z,35nm,0.8s						
KSH	**Kashi**	**25.88**	**81**	P	**P**	**11 25 42.5**	**+1.3**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KEST	**Kesra**	**26.14**	**270**	P	**P**	**11 25 42.8**	**-0.8**
	comp=Z,2.4nm,0.7s,baz=72,slow=6.4,SNR=2.4						
	comp=Z,2.4nm,0.7s						
HFS	**Hagfors**	**26.56**	**328**	P	**P**	**11 25 47.5**	**+0.6**
	comp=Z,3.5nm,0.7s,baz=133,slow=11,SNR=10						
HFS				LR	LR	11 36 05.1	
	comp=Z,116nm,18.2s,baz=142,slow=36						
	comp=Z,3.5nm,0.7s						
NOA	**NORSAR Array B**	**28.08**	**328**	LR	LR	11 38 38.8	
	comp=Z,57nm,21.3s,baz=285,slow=40						
MK31	**Makanchi Array**	**29.57**	**64**	P	**P**	**11 26 13.3**	**-0.7**
MK31	**Makanchi Array**	**29.57**	**64**	P	**P**	**11 26 13.3**	**-0.7**
MK31				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MKAR	**Makanchi Array**	**29.57**	**64**	P	**P**	**11 26 14.1**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=281,slow=7.3,SNR=6.0						
MKAR				LR	LR	11 39 41.1	
	comp=Z,91nm,18.2s,baz=288,slow=40						
	comp=Z,0.9nm,0.8s						
MKAR	**Makanchi Array**	**29.57**	**64**	P	**P**	**11 26 13.6**	**-0.4**
MKAR	**Makanchi Array**	**29.57**	**64**	*ce*P	**P**	**11 26 14.5**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ARCES	**ARCESS Array B**	**30.57**	**349**	LR	LR	11 40 57.0	
	comp=Z,166nm,18.7s,baz=172,slow=41						
FURI	**Furi**	**31.44**	**187**	LR	LR	11 38 58.7	
	comp=Z,99nm,18.2s,baz=190,slow=36						
ZALV	**Zalesovo Beam**	**31.56**	**50**	P	**P**	**11 26 30.5**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=263,slow=8.8,SNR=3.7						
	comp=Z,1.0nm,0.7s						
DGZ	**Jazzator, Alta**	**32.93**	**58**	*i* P	**P**	**11 26 43.0**	**-0.7**
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.5s						
WMQ	**Urumqi**	**33.68**	**69**	*e*P	**P**	**11 26 52.8**	**+2.6**
WMQ				pP	sP	11 26 55.8	+2.7
WMQ				pmax	pmax		
	comp=Z,13nm,1.1s						
ESDC	**Sonseca Array**	**35.01**	**284**	P	**P**	**11 27 03.1**	**+1.3**
	comp=Z,1.1nm,1.0s,baz=57,slow=11,SNR=5.5						
	comp=Z,1.1nm,1.0s						
NRIK	**Noril'sk**	**37.53**	**25**	LR	LR	11 46 44.6	
	comp=Z,71nm,20.3s,baz=235,slow=43						
NRIK	**Noril'sk**	**37.53**	**25**	*i* P	**P**	**11 27 24.2**	**+1.3**
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
GTA	**Gaotai**	**43.60**	**72**	*e*P	**P**	**11 28 13.8**	**+0.2**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TORD	**Torodi Ar. Bea**	**44.55**	**244**	P	**P**	**11 28 20.5**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=43,slow=8.0,SNR=6.3						
	comp=Z,1.0nm,0.8s						
SONM	**Songino Array**	**45.58**	**58**	P	**P**	**11 28 28.4**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=298,slow=9.2,SNR=3.0						
SONM				LR	LR	11 49 44.4	
	comp=Z,339nm,18.6s,baz=312,slow=39						
	comp=Z,0.5nm,0.7s						
ULN	**Ulaanbaatar**	**46.00**	**58**	P	**P**	**11 28 32.6**	**0.0**
ULN				IAmb	IAmb	11 28 34.3	
	comp=Z,4.5nm,0.9s						
ULN	**Ulaanbaatar**	**46.00**	**58**	*ce*P	**P**	**11 28 33.4**	**+0.8**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LZH	**Lanzhou**	**47.82**	**74**	*e*P	**P**	**11 28 48.3**	**+1.2**
LZH				pP	sP	11 28 53.0	+3.0
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
PZH	**PanZhiHua**	**50.75**	**87**	P	**P**	**11 29 10.8**	**+1.2**
HHC	**Hu-ho-hao-te**	**51.41**	**65**	*e*P	**P**	**11 29 14.0**	**-0.3**
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
CHTO	**Chiang Mai**	**52.91**	**96**	P	**P**	**11 29 24.4**	**-1.2**
CHTO				IAmb	IAmb	11 29 25.9	
	comp=Z,4.5nm,0.9s						
CHTO	**Chiang Mai**	**52.91**	**96**	P	**P**	**11 29 24.4**	**-1.2**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**53.12**	**97**	P	**P**	**11 29 26.0**	**-1.2**
	comp=Z,2.1nm,0.9s,baz=302,slow=7.7,SNR=16						
	comp=Z,2.1nm,0.9s						
CMAR	**Chiang Mai Arr**	**53.12**	**97**	P	**P**	**11 29 26.9**	**-0.3**
CMAR	**Chiang Mai Arr**	**53.12**	**97**	*ce*P	**P**	**11 29 27.0**	**-0.2**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
XLT	**XiLinHaoTe**	**53.26**	**60**	*e*P	P	11 29 22.8	-5.2
XLT				pP	pP	11 29 28.5	-1.6
XLT				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK	**Yakutsk**	**54.28**	**35**	LR	LR	11 57 24.0	
	comp=Z,62nm,19.9s,baz=303,slow=41						
YAK	**Yakutsk**	**54.28**	**35**	*e*P	**P**	**11 29 31.1**	**-3.9**
YAK				pmax	pmax		
	comp=Z,23nm,0.9s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,14nm,1.2s						
ZEA	**Zeya**	**56.15**	**45**	*e*P	P	11 29 42.0	-6.6
SEY	**Seymchan**	**63.13**	**29**	P	**P**	**11 30 37.1**	**+0.5**
	comp=E,3.7nm,0.6s,baz=297,slow=9.5,SNR=5.9						
SEY				LR	LR	11 59 54.1	
	comp=E,63nm,20.7s,baz=320,slow=38						
	comp=E,3.7nm,0.6s						
ILON	**Igloolik, Nuna**	**63.17**	**341**		**P**	**11 30 37.0**	**+0.2**
ILON				IAmb	IAmb	11 30 51.6	
	comp=Z,5.2nm,1.2s						
BILL	**Bilibino**	**64.17**	**20**	*i* P	**P**	**11 30 44.5**	**+1.1**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,45nm,8.0s						
KSRS	**Korea Array**	**64.22**	**62**	P	**P**	**11 30 43.7**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=306,slow=6.9,SNR=6.3						
	comp=Z,1.6nm,0.8s						
MA2	**Magadan**	**64.51**	**32**	LR	LR	12 03 14.5	
	comp=Z,72nm,18.1s,baz=142,slow=40						
LBTB	**Lobatse**	**66.80**	**196**	LR	LR	12 00 41.3	
	comp=Z,61nm,20.4s,baz=2.0,slow=36						
YKA	**Yellowknife Ar**	**75.84**	**349**	P	**P**	**11 31 54.9**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=14,slow=5.8,SNR=4.6						
	comp=Z,0.3nm,0.7s						
YKA	**Yellowknife Ar**	**75.84**	**349**	*i* P	**P**	**11 31 55.7**	**+0.6**
YKA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
NVL	**N'lazarevskaya**	**112.91**	**190**	*i* PKIKP	**PKiKP**	**11 38 44.9**	**-0.2**
NVL				*e*		11 39 33.3	
NVL				*e*PPP	PPP	11 41 55.6	
NVL				*e*SS	SS	11 55 18.9	+1.1
NVL				*e*SSS	SSS	11 59 30.9	
NVL				pmax	pmax		
	comp=Z,7.0nm,0.8s						

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*IDC **29** 11:20:52.0±4.0, 24°.02N×145°.31E, h0^{km}, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=196.7km s-min=27.2km az=83.0*

ISC 29 11:20:52.6±3.1**, 24°.1N**±0°.2×**145°.6E**±0°.9**, h10^{km}, n16, σ2^{s}.16**/13**, mb3.9**/4**, North Pacific Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**10.29**	**332**	*e*P	Pn	11 23 32.8	+13
JMKN	**Mikurajimanish**	**11.05**	**333**	*e*P	**Pn**	**11 23 34.1**	**+3.4**
JMYK	**Miyake Tsubota**	**11.22**	**333**	*e*P	**Pn**	**11 23 35.7**	**+2.7**
BSO1	**Boso 1**	**11.23**	**340**	*e*P	Pn	11 23 43.0	+10
BSO3	**Boso 3**	**11.52**	**339**	*e*P	Pn	11 23 42.5	+5.6
JIM2	**Oshima 3**	**11.84**	**334**	*e*P	**Pn**	**11 23 41.9**	**+0.3**
JIZS	**Izushimoda**	**12.06**	**333**	*e*P	**Pn**	**11 23 44.0**	**-0.6**
JOD2	**Odawara 2**	**12.45**	**335**	P	**Pn**	**11 23 48.7**	**-1.2**
SHZ3	**Shizuoka 3**	**12.64**	**331**	*e*P	**Pn**	**11 23 51.0**	**-1.6**
JYN	**Shimob**	**12.87**	**333**	*e*P	**Pn**	**11 23 53.9**	**-1.8**
JRY	**Ryogami san**	**13.18**	**336**	P	**Pn**	**11 23 58.0**	**-2.0**
MJAR	**Matsushiro Arr**	**13.91**	**334**	Pn	**Pn**	**11 24 06.0**	**-3.8**
	0.1nm,0.3s,baz=156,slow=14,SNR=6.4						
WRA	**Warramunga Arr**	**45.16**	**195**	P	**P**	**11 29 09.6**	**0.0**
	0.4nm,0.6s,baz=14,slow=8.1,SNR=4.7						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**48.85**	**194**	P	**P**	**11 29 37.6**	**-0.9**
	0.3nm,0.7s,baz=16,slow=9.2,SNR=5.9						
	0.3nm,0.7s						
BVAR	**Borovoye Array**	**62.30**	**319**	P	**P**	**11 31 15.4**	**+0.5**
	1.1nm,0.6s,baz=86,slow=7.4,SNR=6.1						
	1.1nm,0.6s						
FINES	**FINESS Array B**	**81.94**	**335**	P	**P**	**11 33 13.3**	**+1.0**
	2.5nm,0.8s,baz=64,slow=4.8,SNR=5.6						
	2.5nm,0.8s						

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*IPEC **29** 11:25:00.4±0.2, 51°.49N×16°.16E, h1^{km}, ML3.1/7, Error ellipse: s-maj=2.7km s-min=1.3km az=70.0*

*IDC **29** 11:25:00.7±0.7, 51°.49N×15°.98E, h0^{km}, mb3.5/2, mbtmp3.5/10, ML3.0/8, Error ellipse: s-maj=11.3km s-min=6.6km az=112.0*

*MCSM **29** 11:25:00.6±0.4, 51°N±2°×1°6E±°, h6^{km}±3^{km}, mb4.0, MLv3.5*

*DNK **29** 11:25:00.2±1.7, 51°.64N×15°.93E, h0^{km}±75^{km}, ML2.4, Presumed earthquake*

*BGR **29** 11:25:00.4±0.3, 51°.47N×16°.02E, h1^{km}, ML3.1/8, Error ellipse: s-maj=4.4km s-min=3.3km az=9.0*

*UPP **29** 11:25:01.8±3.1, 51°.59N×15°.40E, h0^{km}, ML2.0, Presumed earthquake*

*PRU **29** 11:25:01.7, 51°.46N×16°.10E, h20^{km}*

ISC 29 11:24:59.0±0.6**, 51°.56N**±0°.02×**16°.09E**±0°.02**, h0^{km}, n91, σ1^{s}.34**/154**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.73**	**170**	*e*Pg	**Pg**	**11 25 13.4**	**+0.4**
KSP				*e*Sg	**Sg**	**11 25 23.2**	**+0.7**
KSP	**Ksiaz**	**0.73**	**170**	*e*Pg	**Pg**	**11 25 13.4**	**+0.4**
KSP				*e*Sg	**Sg**	**11 25 21.0**	**-1.5**
KSP	**Ksiaz**	**0.73**	**170**	Pg	**Pg**	**11 25 13.3**	**+0.3**
KSP				Sg	**Sg**	**11 25 22.9**	**+0.5**
CHVC	**Chvalec**	**0.98**	**181**	*e*PG	**Pg**	**11 25 18.1**	**+0.5**
CHVC				*e*SG	**Sg**	**11 25 30.2**	**-0.1**
OSTC	**Ostas**	**1.01**	**176**	*e*PG	**Pg**	**11 25 18.6**	**+0.3**
OSTC				*e*SG	**Sg**	**11 25 31.1**	**-0.3**
UPC	**Upice**	**1.06**	**183**	*e*PG	**Pg**	**11 25 19.5**	**+0.3**
UPC				*e*SG	**Sg**	**11 25 32.6**	**-0.3**
	comp=Z,349nm,0.9s						
DPC	**Dobruska-Polom**	**1.22**	**173**	*e*PG	**Pg**	**11 25 22.2**	**-0.2**
DPC				*e*SG	**Sg**	**11 25 37.0**	**-1.2**
	comp=Z,170nm,0.8s						
DPC	**Dobruska-Polom**	**1.22**	**173**	Pg	**Pg**	**11 25 22.2**	**-0.2**
DPC				Sg	**Sg**	**11 25 37.5**	**-0.7**
PIVO	**Bartosovice**	**1.41**	**168**	*e*Pg	**Pn**	**11 25 25.3**	**-0.6**
	baz=350						
PIVO				*e*Sg	**Sg**	**11 25 42.1**	**-2.1**
	188nm,0.6s,baz=350						
PVCC	**Panska Ves**	**1.41**	**223**	*e*PG	**Pb**	**11 25 26.3**	**+0.1**
PVCC				*e*SG	**Sn**	**11 25 45.4**	**+0.2**
	comp=Z,587nm,0.9s						
BRG	**Berggiesshubel**	**1.52**	**244**	*e*Pg	**Pn**	**11 25 27.1**	**-0.2**
BRG				*e*Sg	**Sg**	**11 25 46.5**	**-1.1**
KRLC	**Kraliky**	**1.55**	**163**	*e*PG	**Pn**	**11 25 28.1**	**+0.2**
KRLC				*e*SG	**Sn**	**11 25 48.5**	**-0.2**
	comp=Z,240nm,0.7s						
RUE	**Ruedersdorf**	**1.70**	**304**	*e*Sg	**Sg**	**11 25 53.6**	**+0.1**
RYBC	**Ceska Rybna**	**1.76**	**181**	*e*Pn	**Pn**	**11 25 30.7**	**0.0**
	baz=2.0						
RYBC				*e*Sg	**Sn**	**11 25 53.1**	**-0.6**
	91nm,0.4s,baz=2.0						
FBE	**Freiberg**	**1.84**	**251**	*e*Pg	**Pb**	**11 25 32.8**	**-0.5**
FBE				*e*Sg	**Sn**	**11 25 56.1**	**+0.4**
GKP	**Gorka Klasztor**	**1.85**	**22**	*e*Sg	**Sg**	**11 26 03.6**	**+5.3**
PRU	**Pruhonice**	**1.86**	**213**	*e*PG	**Pb**	**11 25 33.4**	**-0.4**
HSKC	**Hora Svate Kat**	**1.93**	**241**	*e*PG	**Pb**	**11 25 35.2**	**+0.2**
HSKC				*e*SG	**Sg**	**11 26 01.3**	**+0.3**
	comp=Z,149nm,0.7s						
CLL	**Collm**	**1.95**	**264**	*e*Pg	**Pb**	**11 25 35.7**	**+0.4**
CLL				*e*Sg	**Sg**	**11 26 01.1**	**-0.5**
CLL	**Collm**	**1.95**	**264**	Pn	**Pn**	**11 25 33.3**	**0.0**
CLL	**Collm**	**1.95**	**264**	*i* Pn	**Pn**	**11 25 33.4**	**+0.1**
	comp=Z,17nm,0.7s						
CLL				*i* Pg	**Pg**	**11 25 36.6**	**+0.3**
CLL				*i* x	x	11 25 40.8	
CLL				*i* Sg	**Sg**	**11 26 02.4**	**+0.8**
	comp=Z,41nm,0.3s						
STEB	**Steborice**	**1.95**	**146**	*e*PG	**Pb**	**11 25 34.7**	**-0.6**
STEB				*e*SG	**Sb**	**11 26 00.3**	**+0.1**
	comp=Z,151nm,0.6s						
MORC	**Moravsky Berou**	**2.01**	**152**	*e*Pn	**Pn**	**11 25 34.0**	**-0.2**
	baz=333						
MORC				*e*Sg	**Sn**	**11 26 00.9**	**+0.8**
	comp=Z,186nm,1.6s,baz=333						
VRAC	**Vranov**	**2.28**	**172**	Pn	**Pn**	**11 25 38.3**	**+0.5**
	comp=Z,2.8nm,0.3s,baz=352,slow=17,SNR=20						
VRAC				Lg	Lg	11 26 10.0	
	comp=Z,5.8nm,0.3s,baz=55,slow=23,SNR=12						
	comp=Z,20nm,0.6s						
VRAC	**Vranov**	**2.28**	**172**	*e*Pn	**Pn**	**11 25 38.1**	**+0.2**
	baz=353						
VRAC				*e*Sg	**Sb**	**11 26 09.2**	**-0.5**
	comp=Z,132nm,1.0s,baz=353						
ABG1	**Leinawald**	**2.29**	**256**	*e*Pg	**Pg**	**11 25 43.3**	**+0.4**
ABG1				*e*Sg	**Sg**	**11 26 12.0**	**-0.5**
KRUC	**Moravsky**	**2.51**	**175**	*e*PN	**Pn**	**11 25 41.4**	**+0.4**
KRUC				*e*SG	**Sb**	**11 26 17.0**	**+0.6**
KRUC	**Moravsky**	**2.51**	**175**	*e*Pn	**Pn**	**11 25 41.3**	**+0.3**
	baz=356						
KRUC				*e*Sg	**Sb**	**11 26 16.9**	**+0.6**
	comp=Z,90nm,1.2s,baz=356						
OJC	**Ojcow**	**2.71**	**118**	*e*Pg	**Pg**	**11 25 51.0**	**+0.2**
OJC				*e*Sg	**Sg**	**11 26 27.1**	**+1.3**
OJC	**Ojcow**	**2.71**	**118**	*e*Pg	**Pg**	**11 25 50.9**	**+0.1**
OJC				*e*Sg	**Sg**	**11 26 25.4**	**-0.4**
OJC	**Ojcow**	**2.71**	**118**	Pn	**Pn**	**11 25 43.9**	**+0.2**
JAVC	**Velka Javorina**	**2.89**	**159**	*e*Pn	**Pn**	**11 25 46.5**	**+0.2**
	baz=340						
JAVC				*e*Sg	**Sb**	**11 26 28.2**	**+0.9**
	comp=Z,86nm,0.9s,baz=340						
KHC	**Kasperske Hory**	**2.92**	**214**	*e*PN	**Pn**	**11 25 46.7**	**0.0**
KHC				*e*PG	**Pb**	**11 25 53.1**	**+1.2**
KHC				*e*SG	**Sg**	**11 26 32.0**	**-0.7**
	comp=Z,53nm,0.8s						
KHC	**Kasperske Hory**	**2.92**	**214**	Pn	**Pn**	**11 25 46.9**	**+0.2**
CKRC	**Cesky Krumlov**	**2.98**	**203**	*e*PN	**Pn**	**11 25 48.2**	**+0.8**
CKRC				*e*PG	**Pb**	**11 25 54.2**	**+1.4**
CKRC				*e*SG	**Sg**	**11 26 33.1**	**-1.4**
	comp=Z,51nm,0.7s						
GERES	**GERESS Array B**	**3.12**	**210**	Pn	**Pn**	**11 25 49.9**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=31,slow=12,SNR=74						
GERES				Pg	**Pb**	**11 25 56.3**	**+0.9**
	comp=Z,0.8nm,0.3s,baz=31,slow=20,SNR=28						
GERES				Sn	**Sn**	**11 26 26.8**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=23,slow=25,SNR=8.4						
GERES				Lg	Lg	11 26 36.1	
	comp=Z,0.8nm,0.3s,baz=41,slow=29,SNR=7.2						
	comp=Z,5.3nm,0.4s						
LANS	**Liptovska Anna**	**3.24**	**137**	*e*PG	**Pg**	**11 26 00.8**	**-0.3**
MODS	**Modra-Piesok**	**3.28**	**166**	*e*PN	**Pn**	**11 25 53.1**	**+1.5**
MODS				*e*PG	**Pg**	**11 26 01.4**	**-0.5**
MODS				*e*SG	**Sg**	**11 26 43.4**	**-1.0**
NIE	**Niedzica**	**3.44**	**127**	*e*Pg	**Pg**	**11 26 04.6**	**-0.3**
NIE				*e*Sg	**Sg**	**11 26 50.5**	**+1.1**
NIE	**Niedzica**	**3.44**	**127**	Pn	**Pn**	**11 25 54.8**	**+1.0**
BSD	**Bornholm Skovb**	**3.63**	**349**	*i* P	**Pn**	**11 25 57.0**	**+0.8**
BSD				*i* S	**Sn**	**11 26 37.0**	**-2.8**
BSD				IAML		11 27 04.4	
	comp=Z,4.4nm,0.4s						
CONA	**Conrad Observa**	**3.64**	**182**	Pn	**Pn**	**11 25 57.4**	**+0.8**
	comp=Z,17nm,0.6s,SNR=7.9						
CONA				Sg	**Sg**	**11 26 55.1**	**-0.8**
	comp=Z,45nm,0.6s						
RONA	**Rosalia, Austr**	**3.87**	**178**	*e*Pn	**Pn**	**11 26 01.7**	**+2.0**
	comp=Z,4.9nm,0.4s						
RONA				Sg	**Sg**	**11 27 03.9**	**+0.7**
	comp=Z,28nm,0.6s						
MOA	**Molln**	**3.90**	**198**	*e*Pn	**Pn**	**11 26 00.8**	**+0.6**
	comp=Z,7.0nm,0.4s,SNR=13						
MOA				Sg	**Sg**	**11 27 03.6**	**-0.6**
	comp=Z,28nm,0.6s						
STHS	**Stebnicka Huta**	**3.93**	**121**	*e*PN	**Pn**	**11 26 00.2**	**-0.3**
STHS				*e*PG	**Pg**	**11 26 14.7**	**+0.5**
STHS				*e*SG	**Sg**	**11 27 04.8**	**-0.3**
KECS	**Kecovo**	**4.19**	**136**	*e*PN	**Pn**	**11 26 04.2**	**+0.2**
KECS				*e*PG	**Pg**	**11 26 19.7**	**+0.5**
KECS				*e*SG	**Sg**	**11 27 13.9**	**+0.5**
BIOA	**Bad Ischl, Aus**	**4.19**	**203**	*e*Pn	**Pn**	**11 26 05.2**	**+1.1**
	comp=Z,6.1nm,0.3s,SNR=5.7						
BIOA				*e*Sg	**Sg**	**11 27 13.3**	**-0.2**
	comp=Z,53nm,0.9s						
ARSA	**Arzberg**	**4.33**	**185**	*e*Pn	**Pn**	**11 26 07.8**	**+1.7**
	comp=Z,6.0nm,0.6s						
ARSA				*e*Sg	**Sg**	**11 27 21.0**	**+2.9**
	comp=Z,42nm,0.6s						
LUNU	**Lund**	**4.37**	**340**	P	**Pn**	**11 26 06.4**	**-0.1**
LUNU				S	**Sn**	**11 26 57.3**	**-0.8**
LUNU	**Lund**	**4.37**	**340**	*i* P	**Pn**	**11 26 06.2**	**-0.4**
LUNU				P	**Pn**	**11 26 06.4**	**-0.1**
LUNU				*i* S	**Sn**	**11 26 55.6**	**-2.5**

LUNU				S	Sn	11 26 57.3	-0.8
MPLH	Magyarpolny	4.50	167	Pn	Pn	11 26 08.8	+0.5
LESA	Schwarzleotal	4.70	210	*e*Pn	Pn	11 26 12.5	+1.3
	comp=Z,3.2nm,0.6s						
LESA				*e*Sg	Sg	11 27 28.9	-1.0
	comp=Z,8.6nm,0.5s						
KBA	Koelnbreinsper	4.83	203	*e*Pn	Pn	11 26 14.1	+1.0
	comp=Z,7.3nm,0.5s,SNR=7.7						
BJUU	Bjuv	4.87	339	P	Pn	11 26 13.2	-0.1
BJUU	Bjuv	4.87	339	P	Pn	11 26 13.2	-0.1
BJUU				*e*P	Pn	11 26 13.3	-0.1
BJUU				*i* P	Pb	11 26 15.4	-10
BJUU				*i* S	Sn	11 27 07.2	-3.2
SOKA	Soboth	4.94	188	*e*Pn	Pn	11 26 16.5	+2.0
	comp=Z,1.5nm,0.5s						
SOKA				Sg	Sg	11 27 33.7	-3.8
	comp=Z,7.3nm,0.6s						
DEL	Delary	5.09	346	P	Pn	11 26 16.6	+0.3
DEL	Delary	5.09	346	*i* P	Pn	11 26 16.3	-0.1
DEL				P	Pn	11 26 16.6	+0.3
DEL				IAML		11 27 16.4	
	comp=Z,3.0nm,0.4s						
WATA	Walderalm	5.16	217	*e*Pn	Pn	11 26 18.9	+1.5
	comp=Z,8.6nm,0.6s,SNR=5.3						
OBKA	Obir	5.16	192	Pg	Pg	11 26 37.3	-0.4
	comp=Z,6.3nm,0.7s						
WTTA	Wattenberg	5.19	216	*i* Pn	Pn	11 26 19.9	+1.9
	comp=Z,5.0nm,0.6s						
WTTA				Sn	Sn	11 27 21.7	+3.0
	comp=Z,9.0nm,1.1s						
SHIU	Shidnytsya	5.21	114	Pg	Pg	11 26 39.1	+0.4
ABTA	Abfaltersbach	5.36	207	*e*Pn	Pn	11 26 21.6	+1.3
	comp=Z,6.1nm,0.5s						
ABTA				*e*Sg	Sg	11 27 53.8	+2.7
	comp=Z,13nm,0.9s						
SQTA	Sankt Quirin	5.39	218	*e*Pn	Pn	11 26 22.6	+1.9
	comp=Z,3.2nm,0.4s,SNR=4.3						
VXJU	Vaexsjoe	5.41	353	P	Pn	11 26 22.1	+1.3
VXJU				S	Sn	11 27 20.7	-3.1
VXJU	Vaexsjoe	5.41	353	P	Pn	11 26 22.1	+1.3
VXJU				S	Sn	11 27 20.7	-3.1
MORH	Mrgy, Hungar	5.61	162	Pn	Pn	11 26 23.5	-0.1
	comp=Z,0.0nmcomp=Z,3.3nm,1.0s						
OSKU	Oskarshamn	5.64	0	P	Pn	11 26 25.0	+1.0
OSKU	Oskarshamn	5.64	0	P	Pn	11 26 25.0	+1.0
FETA	Feichten	5.74	220	*i* Pn	Pn	11 26 26.7	+1.2
	comp=Z,1.4nm,0.5s						
FETA				*e*Sn	Sb	11 27 51.9	+2.5
	comp=Z,4.0nm,0.5s						
GNOU	Gnosjoe	5.90	348	P	Pn	11 26 28.1	+0.6
GNOU	Gnosjoe	5.90	348	P	Pn	11 26 28.1	+0.6
DAVOX	Davos/Dischmat	6.28	223	Pn	Pn	11 26 33.0	0.0
	comp=Z,0.4nm,0.3s,baz=40,slow=18,SNR=1.9						
DAVOX				Lg	Lg	11 28 15.8	
	comp=Z,0.6nm,0.3s,baz=25,slow=7.6,SNR=3.1						
	comp=Z,2.1nm,0.6s						
NACGM	Naroch	7.24	58	*e*P	Pn	11 26 50.2	+4.3
	comp=Z,12nm,1.0s,baz=246						
MI30	MI30,Zelenitsa	7.65	91	Pn	Pn	11 26 50.2	-1.4
	comp=Z,0.2nmcomp=Z,18nm,1.0s						
AK20	Malin Array Si	8.17	91	Pn	Pn	11 26 59.4	+0.8
AK21	Malin Array Si	8.18	90	Pn	Pn	11 26 59.6	+0.8
AK22	Malin Array Si	8.20	91	Pn	Pn	11 26 59.9	+0.8
AK16	Malin Array Si	8.24	91	Pn	Pn	11 27 00.2	+0.6
AK12	Malin Array Si	8.28	91	Pn	Pn	11 27 01.1	+1.0
KIEV	Kiev	8.30	91	Pn	Pn	11 27 01.8	+1.4
	comp=Z,46nm,0.7s						
AK03	Malin Array Si	8.30	91	Pn	Pn	11 27 01.6	+1.1
AK03				Sn	Sn	11 28 36.3	+1.4
AKASG	Malin Array Be	8.31	91	Pn	Pn	11 26 59.7	-0.9
	comp=Z,1.2nm,0.3s,baz=282,slow=12,SNR=4.7						
AKASG				Sn	Sn	11 28 30.6	-4.5
	comp=Z,0.6nm,0.3s,baz=277,slow=22,SNR=1.9						
AKASG				Lg	Lg	11 29 26.7	
	comp=Z,0.3nm,0.3s,baz=283,slow=26,SNR=1.7						
	comp=Z,1.6nm,0.5s						
AKBB	Malin Array Si	8.31	91	Pn	Pn	11 27 01.7	+1.1
HFS	Hagfors	8.70	352	Pn	Pn	11 27 06.2	+0.4
	comp=Z,0.1nm,0.3s,baz=169,slow=10,SNR=1.2						
HFS				Sn	Sn	11 28 39.8	-4.7
	comp=Z,0.2nm,0.3s,baz=166,slow=25,SNR=1.9						
	comp=Z,2.8nm,0.9s						
FINES	FINESS Array B	11.32	25	Pn	Pn	11 27 41.0	-0.8
	comp=Z,0.2nm,0.3s,baz=217,slow=11,SNR=5.8						
	comp=Z,2.3nm,0.6s						
EKA	Eskdalemuir Ar	12.07	296	Pn	Pn	11 27 51.9	-0.1
	baz=98,slow=16						
	comp=Z,0.3nm,0.4s						
ARCES	ARCESS Array B	18.57	10	Pn	P	11 29 15.2	-1.9
	comp=Z,0.1nm,0.3s,baz=199,slow=10,SNR=7.5						
	comp=Z,1.7nm,0.7s						
CSS	Mathiatis	20.72	137	P	P	11 29 40.7	-0.1
TORD	Torodi Ar. Bea	40.05	202	P	P	11 32 36.1	+0.4
	comp=Z,0.7nm,0.8s,baz=26,slow=7.0,SNR=3.8						
	comp=Z,0.7nm,0.8s						
YKA	Yellowknife Ar	59.80	336	P	P	11 35 06.9	+1.5
	comp=Z,0.4nm,0.7s,baz=22,slow=6.6,SNR=4.0						
	comp=Z,0.4nm,0.7s						

*MOS **29** 11:25:21.5±0.9, 55°.12N×160°.91E, h123^{km}, mb4.0/8, Error ellipse: s-maj=9.9km s-min=4.5km az=77.3*

*KRSC **29** 11:25:21.2±0.8, 55°.03N×161°.09E, h108^{km}±17^{km}, Ml4.4, Felt [II] at kordon Kronoki.*

*NEIC **29** 11:25:23.5±0.9, 55°.15N±0°.09×160°.7E±0°.2, h119^{km}±7^{km}, mb4.4/40, Error ellipse: s-maj=14.6km s-min=12.5km az=105.0*

*IDC **29** 11:25:23.1±0.7, 55°.23N×160°.64E, h121^{km}±6^{km}, mb3.7/27, mbtmp4.1/29, MS2.9/1, Error ellipse: s-maj=12.6km s-min=7.8km az=143.0*

ISC 29 11:25:22.9±0.5**, 55°.09N**±0°.03×**160°.96E**±0°.03**, h122**^{km}±4^{km}**, n425, σ1^{s}05**/450**, mb4.2**/51**, 1C-1D, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZV	Kizimen	0.38	275	PN	Pn	11 25 38.9	-1.7
KZV	Kizimen	0.38	275	*e*P	Pn	11 25 38.9	-1.7
KMNR	Kamenistaya	0.79	329	PN	Pn	11 25 42.3	-0.9
KMNR	Kamenistaya	0.79	329	*e*P	Pn	11 25 42.3	-0.9
BZGR	Bezymyannyi-Gr	0.87	350	PN	Pn	11 25 42.8	-1.2
BZGR				S	Sn	11 25 58.2	-1.7
BZGR	Bezymyannyi-Gr	0.87	350	*e*P	Pn	11 25 42.8	-1.2
BZGR				*e*S	Sn	11 25 58.3	-1.7
BZWR	Bezymyannyi-We	0.92	344	PN	Pn	11 25 43.4	-1.1
BZWR	Bezymyannyi-We	0.92	344	*e*P	Pn	11 25 43.5	-1.1
KIRR	Kirishev	0.94	338	PN	Pn	11 25 43.5	-1.1
KIRR	Kirishev	0.94	338	*e*P	Pn	11 25 43.6	-1.1
ZLN	Zelenaya	0.94	355	PN	Pn	11 25 44.0	-0.6
ZLN	Zelenaya	0.94	355	*e*P	Pn	11 25 44.1	-0.6
CIRR	Tsirk	1.04	354	PN	Pn	11 25 45.3	-0.3
CIRR	Tsirk	1.04	354	*e*P	Pn	11 25 45.4	-0.3
KOZ	Kozyrevsk	1.15	328	PN	Pn	11 25 45.8	-0.8
KOZ				S	Sn	11 26 04.0	-0.6
KOZ	Kozyrevsk	1.15	328	*e*P	Pn	11 25 45.9	-0.8
KOZ				*e*S	Sn	11 26 04.0	-0.6
KLY	Klyuchi	1.24	352	PN	Pn	11 25 46.7	-0.8
KLY				S	Sn	11 26 05.5	-0.7
KLY	Klyuchi	1.24	352	*e*P	Pn	11 25 46.8	-0.8
KLY				*e*S	Sn	11 26 05.6	-0.7
SRDR	Sredinnyy	1.42	331	PN	Pn	11 25 48.6	-0.9
SRDR	Sredinnyy	1.42	331	*e*P	Pn	11 25 48.7	-0.9
KBG	Krutoberegovo	1.54	39	PN	Pn	11 25 50.1	-0.7
KBG				S	Sn	11 26 11.1	-0.9
KBG	Krutoberegovo	1.54	39	*e*P	Pn	11 25 50.1	-0.7
KBG				*e*S	Sn	11 26 11.1	-0.9
ESO	Esso	1.54	304	PN	Pn	11 25 50.1	-0.7
ESO				S	Sn	11 26 11.2	-0.9
ESO	Esso	1.54	304	*e*P	Pn	11 25 50.1	-0.7
ESO				*e*S	Sn	11 26 11.2	-0.9
KBTR	Krutoberegovo	1.54	42	PN	Pn	11 25 50.2	-0.6
KBTR				S	Sn	11 26 11.0	-1.2
KBTR	Krutoberegovo	1.54	42	*e*P	Pn	11 25 50.3	-0.6
KBTR				*e*S	Sn	11 26 11.0	-1.2
SPN	Mys Shipunski	2.06	196	PN	Pn	11 25 55.2	-2.0
SPN				S	Sn	11 26 20.1	-3.3
SPN	Mys Shipunski	2.06	196	*e*P	Pn	11 25 55.3	-2.0
SPN				*e*S	Sn	11 26 20.2	-3.3
KRX	Arik	2.20	219	PN	Pn	11 25 59.4	+0.4
KRX	Arik	2.20	219	*e*P	Pn	11 25 59.4	+0.4
AVH	Avacha	2.24	216	PN	Pn	11 26 00.0	+0.5
AVH	Avacha	2.24	216	*e*P	Pn	11 26 00.1	+0.5
GNL	Ganaly	2.25	233	PN	Pn	11 25 59.5	-0.1
GNL	Ganaly	2.25	233	*e*P	Pn	11 25 59.6	-0.1
KOK	Koryaka	2.25	218	PN	Pn	11 26 00.1	+0.4
KOK	Koryaka	2.25	218	*e*P	Pn	11 26 00.2	+0.4
UGLR	Uglovaya	2.26	215	PN	Pn	11 25 59.7	-0.1
UGLR	Uglovaya	2.26	215	*e*P	Pn	11 25 59.7	-0.1
DALK	Dalny	2.43	213	PN	Pn	11 26 01.5	-0.3
DALK	Dalny	2.43	213	*e*P	Pn	11 26 01.5	-0.3
INSR	Institute	2.45	215	PN	Pn	11 26 01.2	-0.9
INSR	Institute	2.45	215	*e*P	Pn	11 26 01.3	-0.9
PET	Petropavlovsk	2.47	214		Pn	11 26 02.4	+0.1
PET	Petropavlovsk	2.47	214	*e*PN	Pn	11 26 02.5	+0.1
PET				*e*S	Sn	11 26 33.4	+0.8
PET				pmax	pmax		
	comp=Z,201nm,0.6s						
PET				smax	smax		
	comp=N,347nm,0.7s						
PET				smax	smax		
	comp=E,227nm,0.5s						
PET	Petropavlovsk	2.47	214	*e*P	Pn	11 26 02.3	-0.1
PEA0B	Petropavlovsk-	2.76	225		Pn	11 26 06.3	+0.2
PEA0B	Petropavlovsk-	2.76	225	PN	Pn	11 26 05.4	-0.7
PETK	Petropavlovsk-	2.76	225	P	Pn	11 26 05.2	-0.9
	comp=E,20nm,0.5s,baz=66,slow=15,SNR=68						
PETK				S	Sn	11 26 40.1	+0.9
	comp=E,42nm,0.8s,baz=70,slow=20,SNR=5.6						
PETK	Petropavlovsk-	2.76	225		Pn	11 26 05.7	-0.4
KRMR	Karymshinskiy	2.81	218	PN	Pn	11 26 06.3	-0.4
KRMR	Karymshinskiy	2.81	218	*e*P	Pn	11 26 06.3	-0.4
BKI	Bering	2.88	86	PN	Pn	11 26 06.5	-1.1
BKI				S	Sn	11 26 38.1	-3.9
BKI	Bering	2.88	86	*e*P	Pn	11 26 06.5	-1.1
BKI				*e*S	Sn	11 26 38.2	-3.9
RUS	Russkaya	3.03	210	PN	Pn	11 26 08.5	-1.0
RUS	Russkaya	3.03	210	*e*P	Pn	11 26 08.5	-1.0
GRL	Gorelyy	3.06	215	PN	Pn	11 26 10.3	+0.2
GRL	Gorelyy	3.06	215	*e*P	Pn	11 26 10.4	+0.2
MTVR	Mutnovka	3.08	213	PN	Pn	11 26 10.5	+0.1
MTVR	Mutnovka	3.08	213	*e*P	Pn	11 26 10.6	+0.1
APC	Apacha	3.12	228	PN	Pn	11 26 09.9	-0.7
APC	Apacha	3.12	228	*e*P	Pn	11 26 10.0	-0.7
ASAK	Asacha	3.26	215	PN	Pn	11 26 12.7	0.0
ASAK	Asacha	3.26	215	*e*P	Pn	11 26 12.8	0.0
PAU	Pauzhetka	4.40	216	PN	Pn	11 26 27.3	-0.3
PAU	Pauzhetka	4.40	216	*e*P	Pn	11 26 27.4	-0.3
SKR	Severo-Kuril's	5.29	216	*e*PN	Pn	11 26 39.4	-0.3
SKR				pmax	pmax		
	comp=Z,16nm,0.2s						
SKR				MLR	MLR		
	comp=Z,6μm,20.0s						
MA2	Magadan	7.12	313	P	Pn	11 27 04.8	+0.6
	comp=Z,84nm,0.8s,baz=121,slow=9.9,SNR=31						
MA2				LR	LR	11 30 03.1	
	comp=Z,109nm,20.9s,baz=116,slow=41						
MA2	Magadan	7.12	313		Pn	11 27 03.4	-0.8
MA2	Magadan	7.12	313	PN	Pn	11 27 03.4	-0.8
SEY	Seymchan	9.02	334	P	Pn	11 27 30.4	+0.5
	comp=Z,3.1nm,0.7s,baz=153,slow=11,SNR=5.5						
BILL	Bilibino	13.24	9	*i* PN	Pn	11 28 26.0	+0.2
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
JKA	Kamikawa-asahi	16.13	235		P	11 29 03.5	+0.1
JKA				IAmb	IAmb	11 29 11.7	
	comp=Z,28nm,1.0s						
ASAJ	Asahikawa	16.13	235	P	P	11 29 03.5	+0.1
	comp=Z,11nm,0.8s,baz=76,slow=12,SNR=6.1						
SPIA	Saint Paul Isl	16.14	71	P	P	11 29 03.8	+0.6
	baz=275						
GAMB	Gambell	16.28	47	P	P	11 29 04.9	+0.1
	baz=251						
P08K	Saint George I	16.58	73	P	P	11 29 09.4	+1.2
	baz=278						
ERM	Erimo	17.53	229	P	P	11 29 18.4	-0.4
ERM	Erimo	17.53	229	P	P	11 29 18.4	-0.4
ERM				pmax	pmax		
	comp=Z,76nm,1.5s						
YAK	Yakutsk	17.59	306	P	P	11 29 17.6	-1.6
	comp=Z,29nm,0.7s,baz=29,slow=1.4,SNR=7.5						
YAK	Yakutsk	17.59	306	P	P	11 29 17.3	-2.0
YAK	Yakutsk	17.59	306	*e*P	P	11 29 17.7	-1.6
YAK				*e*S	S	11 32 31.4	-4.3
YAK				pmax	pmax		
	comp=Z,22nm,0.9s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,15nm,1.4s						
YAK				smax	smax		
	comp=E,97nm,3.2s						
YAK				smax	smax		
	comp=N,227nm,4.8s						
NIKH	Nikolski High	17.79	84	P	Pn	11 29 23.0	+0.4
	baz=289						
M11K	Mekoryuk	18.18	60	P	Pn	11 29 27.7	+0.6
M11K	Mekoryuk	18.18	60	P	Pn	11 29 26.8	-0.3
	baz=268						
TNA	Tin City	18.41	43	P	Pn	11 29 30.2	+0.4
TNA	Tin City	18.41	43	P	P	11 29 28.7	+0.5
	baz=251						
UNV	Unalaska Valle	18.86	80	P	Pn	11 29 35.5	+0.3
	baz=287						
F14K	Arctic Creek	19.02	44	P	P	11 29 35.8	+1.0
	baz=253						
K13K	Kusilvak Mount	19.04	55	P	Pn	11 29 37.1	-0.1
K13K				IAmb	IAmb	11 30 11.0	
	comp=Z,14nm,0.8s						
K13K	Kusilvak Mount	19.04	55	P	Pn	11 29 36.4	-0.8
	baz=265						
ANM	Nome	19.16	47	P	Pn	11 29 37.7	-0.9
	baz=257						
M13K	Dall Lake	19.60	60	P	Pn	11 29 42.8	-0.9
	baz=270						
J14K	Nanvaranak Lak	19.64	53	P	Pn	11 29 43.3	-0.8
J14K				IAmb	IAmb	11 29 44.0	
	comp=Z,22nm,1.1s						
J14K	Nanvaranak Lak	19.64	53	P	Pn	11 29 43.0	-1.1
	baz=264						
F15K	North Star Dit	19.75	44	P	Pn	11 29 44.6	-0.9
F15K				IAmb	IAmb	11 29 46.1	
	comp=Z,25nm,0.9s						
F15K	North Star Dit	19.75	44	P	Pn	11 29 44.4	-1.1
	baz=254,SNR=8.2						
G15K	Niukluk	19.82	46	P	Pn	11 29 45.0	-1.2
	baz=257						
L14K	Kuka Creek	19.94	57	P	Pn	11 29 46.7	-1.0
L14K				IAmb	IAmb	11 29 47.8	
	comp=Z,12nm,0.8s						
L14K	Kuka Creek	19.94	57	P	Pn	11 29 46.5	-1.2
	baz=268						
M14K	Bethel	20.29	59	P	Pn	11 29 50.6	-1.1
	baz=271						
FALS	False Pass	20.32	76	P	P	11 29 50.8	+1.9
	baz=286						
C16K	Lisburne Hills	20.37	36		P	11 29 50.3	+0.9
C16K				IAmb	IAmb	11 29 50.9	
	comp=Z,18nm,1.4s						
C16K	Lisburne Hills	20.37	36	P	P	11 29 50.9	+1.5
	baz=247						
N14K	Kuskokwak Cree	20.45	61	P	Pn	11 29 52.2	-1.3
	baz=273						
H16K	Elim	20.50	47	P	P	11 29 52.0	+1.2
	baz=260						
L15K	Ungalak Mounta	20.52	56	P	P	11 29 52.7	+1.6
	baz=269						
K15K	Wolf Creek Mou	20.53	54	P	P	11 29 53.0	+1.8
K15K				IAmb	IAmb	11 29 56.4	
	comp=Z,20nm,1.1s						
K15K	Wolf Creek Mou	20.53	54	P	P	11 29 52.3	+1.1
	baz=267						
G16K	Koyuk River	20.60	45	P	P	11 29 52.8	+0.9
	baz=258						
O14K	Tigyukauivet M	20.70	63	P	P	11 29 54.4	+1.3
	baz=275						
HEH	HeiHe	20.78	271	*e*P	P	11 29 53.3	-0.6
HEH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
S12K	Black Hills	20.86	73	P	P	11 29 57.1	+2.3
	baz=284						
M15K	Kasigluk River	20.91	59	P	P	11 29 56.5	+1.2
	baz=272						
D17K	Noatak River	20.95	39	P	P	11 29 56.3	+0.6
	baz=251,SNR=6.3						
J16K	Anvik River	21.03	52	P	P	11 29 58.0	+1.5
	baz=265						
I17K	Unalakleet	21.05	50	P	P	11 29 58.1	+1.3
	baz=264						
RDOG	Red Dog Mine	21.14	38	P	P	11 29 58.8	+1.2
	baz=251						
C17K	DeLong Mountai	21.19	37	P	P	11 29 59.6	+1.4
	baz=249						
E17K	Hotham Inlet	21.23	41	P	P	11 29 59.6	+0.9
	baz=254						
N15K	Kwethluk River	21.23	60		P	11 30 00.8	+2.0
N15K	Kwethluk River	21.23	60	P	P	11 30 00.1	+1.4
	baz=274						
F17K	Baldwin Pennin	21.28	43	P	P	11 30 00.4	+1.2
	baz=257						
G17K	Kiwalik Mounta	21.32	45	P	P	11 30 00.7	+1.0
	baz=260,SNR=8.0						
O15K	Ungalikthiuk R	21.45	63	P	P	11 30 02.6	+1.6
	baz=277						
L16K	Owhat River	21.48	56	P	P	11 30 02.0	+0.6
L16K				IAmb	IAmb	11 30 04.6	
	comp=Z,9.0nm,0.8s						
L16K	Owhat River	21.48	56	P	P	11 30 03.5	+2.1
	baz=270						
TIXI	Tiksi	21.51	333	P	P	11 30 00.5	-1.1
	comp=Z,2.9nm,0.3s,baz=112,slow=5.4,SNR=4.9						
	comp=Z,2.9nm,0.3s						
TIXI	Tiksi	21.51	333	P	P	11 30 01.9	+0.3
TIXI	Tiksi	21.51	333	P	P	11 30 01.9	+0.3
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
H17K	Granite Mounta	21.53	47	P	P	11 30 03.1	+1.2
	baz=262						
J17K	VABM Dome	21.73	51	P	P	11 30 05.3	+1.4
	baz=266						
M16K	Timber Creek	21.75	58	P	P	11 30 05.2	+1.0
	baz=273						
E18K	Tukpahlearik C	21.78	40	P	P	11 30 04.8	+0.3
	baz=255						
SDPT	Sand Point	21.82	73	P	P	11 30 06.6	+1.6
	baz=286						
N16K	Nishlik Lake	21.87	59	P	P	11 30 06.1	+0.6
	baz=274						
C18K	Utukok River	21.93	37		P	11 30 06.7	+0.5
C18K				IAmb	IAmb	11 30 08.2	
	comp=Z,18nm,0.8s						
C18K	Utukok River	21.93	37	P	P	11 30 06.5	+0.3
	baz=251						
F18K	Selawik	21.94	43	P	P	11 30 06.4	+0.2
	baz=258						
L17K	Donlin	22.04	55	P	P	11 30 08.1	+0.8
	baz=270						
K17K	Iditarod	22.05	53	P	P	11 30 08.4	+1.1
	baz=269						
S14K	Fog Glacier	22.09	71	P	P	11 30 08.9	+0.9
	baz=284						
G18K	Tagagawik	22.20	45	P	P	11 30 09.7	+0.8
	baz=261						
H18K	Honhosa River	22.21	47	P	P	11 30 10.3	+1.3
H18K				IAmb	IAmb	11 30 12.1	
	comp=Z,21nm,1.1s						
H18K	Honhosa River	22.21	47	P	P	11 30 10.0	+1.0
	baz=263						
O16K	Kokwok River B	22.28	62	P	P	11 30 10.9	+1.2
	baz=277						
P16K	Nushagak River	22.41	63	P	P	11 30 12.1	+1.1
	baz=278						
CHNA	Chernabura Isl	22.45	74	P	P	11 30 12.7	+1.2
	baz=287						
M17K	Holitna River	22.47	57	P	P	11 30 12.6	+1.0
	baz=273						
A19K	Wainwright	22.53	33	P	P	11 30 12.6	+0.5
	baz=248						
C19K	Lookout Ridge	22.63	36	P	P	11 30 14.0	+0.7
	baz=252						
N17K	Nushagak Hills	22.64	59	P	P	11 30 14.6	+1.3
	baz=275						
F19K	Shaleruckik Mo	22.72	43	P	P	11 30 15.1	+1.1
	baz=260						
O17K	Koliganek Bris	22.77	61	P	P	11 30 15.7	+1.2
	baz=277						
J18K	Innoko River	22.79	51	P	P	11 30 16.0	+1.3
	baz=269						
GCSA	Galena City Sc	22.80	48	P	P	11 30 15.6	+0.9
	baz=265,SNR=6.8						
L18K	Granite Mounta	22.80	55	P	P	11 30 16.4	+1.6
	baz=272						
R16K	Pilot Point	22.87	67	P	P	11 30 16.6	+1.1
	baz=282						
G19K	Purcell Mounta	22.87	44	P	P	11 30 16.0	+0.5
	baz=262						
D19K	Kuna River	22.97	38	P	P	11 30 16.9	+0.4
	baz=255						
E19K	Redstone River	23.05	41	P	P	11 30 18.1	+0.9
E19K				IAmb	IAmb	11 30 19.2	
	comp=Z,12nm,0.8s						
E19K	Redstone River	23.05	41	P	P	11 30 17.7	+0.5
	baz=259,SNR=14						
H19K	Roundabout Mou	23.05	46	P	P	11 30 17.9	+0.8
	baz=264						
BNX	BinXian	23.13	260	⇓P	P	11 30 17.3	-0.8
BNX				pmax	pmax		
	comp=Z,9.0nm,2.1s						
Q16K	King Salmon	23.14	64	P	P	11 30 19.3	+1.2
	baz=280						
P17K	Kvichak River	23.17	62	P	P	11 30 19.7	+1.3
	baz=279						
M18K	Stony River	23.23	56	P	P	11 30 20.3	+1.4
	baz=274,SNR=5.4						
N18K	Kilae Creek	23.27	58	P	P	11 30 20.5	+1.3
	baz=276						
J19K	Poorman	23.29	50	P	P	11 30 20.6	+1.1
	baz=268						
R17L	Mt. Peulik Vol	23.50	66	P	P	11 30 23.1	+1.7
	baz=282						
D20K	Etivluk River	23.56	38	P	P	11 30 22.8	+0.9
	baz=256						
Q17K	Contact Creek	23.62	64	P	P	11 30 24.2	+1.6
	baz=281						
L19K	White Mountain	23.66	55	P	P	11 30 24.1	+1.3
	baz=273						
H20K	Anotleneega Mo	23.70	46	P	P	11 30 23.8	+0.7
	baz=266,SNR=8.9						
O18K	Koktuh Hills	23.70	60	P	P	11 30 24.4	+1.2
	baz=278						
B20K	Meade River	23.72	35	P	P	11 30 24.3	+1.1
	baz=253						
P18K	Big Mountain,	23.76	62	P	P	11 30 24.7	+1.0
	baz=279						
I20K	Naaghedeneel	23.82	48	P	P	11 30 25.1	+0.9
	baz=268						
N19K	Bonanza Creek	23.94	58	P	P	11 30 26.3	+0.8
	baz=277						
J20K	Nowinta River	23.95	50	P	P	11 30 26.5	+1.1
	baz=269,SNR=12						
K20K	Telida	23.98	52	P	P	11 30 26.9	+1.3
	baz=271						
O19K	Port Alsworth	24.10	59	P	P	11 30 27.6	+0.9
	baz=278						
MJB9	Matsu-Tunnel	24.21	229	P	P	11 30 28.8	+0.8
MAJO	Matsushiro	24.21	229		P	11 30 28.9	+0.9
MAJO				IAmb	IAmb	11 30 33.5	
	comp=Z,5.8nm,0.7s						
MAJO	Matsushiro	24.21	229	P	P	11 30 28.9	+0.9
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MJAR	Matsushiro Arr	24.21	229	P	P	11 30 28.0	0.0
	comp=Z,0.9nm,0.5s,baz=18,slow=10,SNR=12						
	comp=Z,0.9nm,0.5s						
MJAR	Matsushiro Arr	24.21	229		P	11 30 28.8	+0.8
MJAR	Matsushiro Arr	24.21	229	P	P	11 30 28.8	+0.8
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
C21K	Knifeblade Rid	24.30	37	P	P	11 30 29.1	+0.5
	baz=258						
A21K	Barrow	24.32	32	P	P	11 30 29.0	+0.5
	baz=251						
CHIR	Chirikof Islan	24.34	70	P	P	11 30 30.4	+1.5
	baz=287						
G21K	Allakaket	24.36	44	P	P	11 30 30.0	+1.0
	baz=265						
F21K	Alatna River	24.44	42	P	P	11 30 30.8	+0.9
	baz=263						
E21K	Killik River	24.45	39	P	P	11 30 30.1	+0.2
	baz=260						
B21K	Ikpikpuk River	24.47	36	P	P	11 30 30.5	+0.5
	baz=257						
M20K	Styx River	24.49	55	P	P	11 30 31.0	+0.7
	baz=275						
H21K	Melozitna Rive	24.57	46	P	P	11 30 31.6	+0.6
	baz=267						
Q19K	Cape Douglas,	24.64	62	P	P	11 30 32.5	+0.8
	baz=281						

A22K	Sinclair Lake	24.72	33	P	P	11 30 32.6	+0.3
	baz=253						
P19K	Oil Pt	24.72	61	P	P	11 30 33.5	+1.1
	baz=280						
CHUM	Lake Minchumin	24.75	50	P	P	11 30 33.5	+0.8
	baz=272						
PPLA	Purkeypile	24.85	53	P	P	11 30 35.2	+1.4
PPLA				IAmb	IAmb	11 30 37.2	
	comp=Z,15nm,1.1s						
PPLA	Purkeypile	24.85	53	P	P	11 30 34.6	+0.9
	baz=274						
I21K	Tanana	24.90	47	P	P	11 30 34.9	+1.0
	baz=269						
SII	Sitkinak Islan	24.91	68	P	P	11 30 35.5	+1.3
	baz=286						
O20K	Slope Mountain	24.95	59	P	P	11 30 35.6	+1.0
	baz=280						
D22K	Ayikyak River	24.99	38	P	P	11 30 35.5	+0.7
	baz=260						
SPCR	Spurr Chakacha	25.00	57	P	P	11 30 36.0	+1.0
	baz=277						
B22K	Teshekpuk Lake	25.04	35	P	P	11 30 35.5	+0.4
	baz=256						
SPU	Mount Spurr	25.07	57	P	P	11 30 37.1	+1.5
SPU				IAmb	IAmb	11 30 39.8	
	comp=Z,12nm,1.1s						
H22K	Ishtalitna Cre	25.17	46	P	P	11 30 37.2	+0.7
	baz=268						
E22K	Anaktuvuk Pass	25.20	40	P	P	11 30 37.4	+0.7
	baz=263						
OHAK	Old Harbor	25.21	66	P	P	11 30 38.3	+1.5
	baz=285						
SKT	Skwentna	25.23	55	P	P	11 30 38.0	+0.9
	baz=276						
BPAW	Bear Paw Mtn.	25.33	50	P	P	11 30 39.0	+1.0
	baz=272						
Q20K	Shuyak Island	25.34	63	P	P	11 30 39.3	+1.3
	baz=283						
KDAK	Kodiak Island	25.44	65	P	P	11 30 38.9	0.0
	comp=Z,11nm,1.1s,baz=290,slow=7.7,SNR=8.0						
	comp=Z,11nm,1.1s						
KDAK	Kodiak Island	25.44	65	P	P	11 30 40.4	+1.5
	baz=284						
HILR	Hailar Array B	25.50	275	P	P	11 30 38.0	-1.6
	comp=Z,0.8nm,0.4s,baz=46,slow=8.3,SNR=2.3						
	comp=Z,0.8nm,0.4s						
HOM	Homer	25.51	60	P	P	11 30 41.0	+1.4
	baz=281						
CAPN	Captain Cook N	25.57	58	P	P	11 30 41.3	+1.3
	baz=279						
SUA	Susitna One	25.66	56	P	P	11 30 41.7	+0.6
	baz=278						
TRF	Thorofare Moun	25.68	51	P	P	11 30 41.8	+0.6
	baz=274						
COLD	Coldfoot	25.72	42	P	P	11 30 41.9	+0.6
	baz=266						
D23K	Nanushuk River	25.72	38	P	P	11 30 41.9	+0.5
	baz=262						
G23K	Bananza Creek	25.76	44	P	P	11 30 42.2	+0.4
	baz=268						
CUT	Chulitna	25.77	54	P	P	11 30 42.5	+0.6
	baz=276						
C23K	Itkillik River	25.88	36	P	P	11 30 43.1	+0.3
	baz=261						
M22K	Willow	25.92	55	P	P	11 30 43.9	+0.7
	baz=278						
BRSE	Bradley Lake S	25.95	60	P	P	11 30 44.7	+1.1
	baz=282						
E23K	Chandalar	26.01	41	P	P	11 30 44.9	+0.8
	baz=265,SNR=9.9						
I23K	Minto, Yukon-K	26.01	47	P	P	11 30 45.0	+1.0
	baz=272						
NEA2	Nenana	26.15	49	P	P	11 30 45.7	+0.4
	baz=273						
RC01	Rabbit Creek A	26.20	57	P	P	11 30 46.0	+0.3
	baz=280						
MCK	McKinley	26.26	51	P	P	11 30 46.9	+0.6
	baz=275						
D24K	Happy Valley	26.41	38	P	P	11 30 48.3	+0.8
	baz=264						
PMR	Palmer	26.41	55	P	P	11 30 48.5	+0.9
	baz=279						
E24K	Your Creek	26.43	41	P	P	11 30 48.5	+0.7
	baz=266						
SEW	Seward	26.51	59	P	P	11 30 49.1	+0.6
	baz=282						
WAT1	Susitna Watana	26.52	52	P	P	11 30 48.6	-0.1
	baz=277						
C24K	Franklin Bluff	26.52	37	P	P	11 30 49.7	+1.2
	baz=263,SNR=5.8						
H24K	Noodor Dome	26.61	46	P	P	11 30 49.9	+0.4
	baz=271						
F24K	Squaw Lake	26.63	42	P	P	11 30 49.7	+0.1
	baz=268						
SML	Sawmill	26.75	55	P	P	11 30 51.6	+0.8
	baz=279						
KNK	Knik Glacier	26.76	56	P	P	11 30 51.7	+0.9
	baz=280						
G24K	Hadweenzic Riv	26.77	44	P	P	11 30 51.6	+0.8
	baz=270						
POKR	Poker Plat Res	26.82	47	P	P	11 30 51.9	+0.6
	baz=273						
PWL	Port Wells	26.91	57	P	P	11 30 53.1	+0.9
	baz=281						
WAT6	Susitna Watana	26.92	53	P	P	11 30 52.9	+0.5
	baz=278						
DHY	Denali Highway	27.02	52	P	P	11 30 54.1	+0.8
	baz=277						
M23K	Glacier View	27.04	55	P	P	11 30 54.2	+0.9
	baz=280						
ILAR	Eielson Array	27.07	48	P	P	11 30 53.5	0.0
	comp=Z,3.6nm,0.8s,baz=272,slow=8.6,SNR=38						
ILAR				PcP	PcP	11 34 10.4	-0.7
	comp=Z,0.5nm,0.8s,baz=252,slow=3.1,SNR=3.2						
	comp=Z,3.6nm,0.8s						
HDA	Harding Lake	27.08	49	P	P	11 30 54.0	+0.4
	baz=275						
SCM	Sheep Creek Mo	27.22	55	P	P	11 30 55.4	+0.4
	baz=280						
D25K	Kavik River	27.29	38	P	P	11 30 55.8	+0.2
	baz=266						
G25K	Bearman Lake	27.31	44	P	P	11 30 56.1	+0.5
	baz=271						
F25K	Christian Rive	27.49	42	P	P	11 30 57.4	+0.1
	baz=270						
E25K	Arctic Village	27.53	41	P	P	11 30 58.7	+1.1
	baz=269,SNR=6.4						
P23K	Montague Islan	27.54	58	P	P	11 30 58.7	+1.0
	baz=283						
PRP	Porcupine Dome	27.60	46	P	P	11 30 58.8	+0.4
	baz=274,SNR=7.4						
K24K	Donnelly Dome	27.65	50	P	P	11 30 58.8	0.0
	baz=277						
M24K	Tolsona, Glenn	27.71	54	P	P	11 30 59.9	+0.5
	baz=280						
J25K	Salcha River,	27.74	48	P	P	11 30 59.3	-0.3
	baz=276						
C26K	Camden Bay	27.85	37	P	P	11 31 00.3	-0.1
	baz=266						
PAX	Paxson	27.90	52	P	P	11 31 01.4	+0.3
	baz=279						
BMAR	Burnt Mountain	27.90	42	P	P	11 31 02.2	+1.3
KLU	Klutina	27.94	55	P	P	11 31 01.8	+0.4
	baz=281						
F26K	Sheenjek River	28.06	42	P	P	11 31 02.3	0.0
	baz=271						
RIDG	Independent Ri	28.07	50	P	P	11 31 02.6	+0.1
	baz=278						
HARP	HAARP	28.13	53	P	P	11 31 03.3	+0.2
	baz=280						
Q23K	Middleton Isla	28.20	59	P	P	11 31 04.0	+0.5
	baz=285						
EYAK	Cordova Ski Ar	28.22	57	P	P	11 31 04.1	+0.4
	baz=283						
G26K	Porcupine Rive	28.22	43	P	P	11 31 03.9	+0.2
	baz=273						
C27K	Jago River	28.25	37	P	P	11 31 04.1	+0.1
	baz=268						
SCRK	Sand Creek	28.41	49	P	P	11 31 05.6	0.0
	baz=278,SNR=9.6						
J26L	Joseph Creek	28.53	48	P	P	11 31 05.8	-0.8
	baz=278						
N25K	Chitina, Valde	28.54	54	P	P	11 31 06.6	-0.2
	baz=282						
I26K	Coal Creek Min	28.61	47	P	P	11 31 06.9	-0.2
	baz=276						
BMRM	Bremner River	28.68	56	P	P	11 31 08.2	+0.3
	baz=283						
L26K	Log Cabin Wild	28.84	51	P	P	11 31 09.5	+0.1
	baz=280						
E27K	Coleen River	29.01	41	P	P	11 31 10.5	-0.3
	baz=273						
G27K	Doyon Strip	29.07	43	P	P	11 31 11.5	+0.2
	baz=275						
M26K	Nabesna, AK	29.12	53	P	P	11 31 12.4	+0.6
	baz=282						
H27K	Steamboat Moun	29.18	45	P	P	11 31 12.8	+0.5
	baz=276						
I27K	Kandik River	29.21	46	P	P	11 31 13.0	+0.4
	baz=277						
D27M	Malcolm River	29.21	38	P	P	11 31 13.3	+0.7
	baz=271						
MCARA	McCarthy VSAT	29.33	55	P	P	11 31 14.3	+0.7
	baz=284						
CRQE	Cirque	29.45	56	P	P	11 31 14.8	0.0
	baz=285						
L27K	Beaver Creek,	29.52	51	P	P	11 31 15.6	+0.3
	baz=282						
BCAR	Beaver Creek A	29.54	51		P	11 31 17.0	+1.5
M27K	Edge Creek, AK	29.64	52	P	P	11 31 16.0	-0.6
	baz=283						
F28M	Old Crow	29.70	42	P	P	11 31 17.0	+0.1
	baz=275						
E28M	Babbage River	29.75	40	P	P	11 31 17.5	+0.2
	baz=274						
I28M	Miner Creek	29.92	46	P	P	11 31 19.2	+0.2
	baz=279						
D28M	Stokes Point	30.00	38	P	P	11 31 19.6	+0.1
	baz=273						
BVCY	Beaver Creek	30.09	52	P	P	11 31 20.6	+0.2
	baz=283,SNR=5.9						
CTG	Chitna Glacier	30.22	55	P	P	11 31 20.9	-0.8
	baz=285						
E29M	Blow River	30.37	40	P	P	11 31 22.0	-0.7
	baz=276						
DAWY	Dawson	30.39	49	P	P	11 31 23.0	0.0
	baz=282						
YUK3	Moose Creek	30.43	53	P	P	11 31 23.5	0.0
	baz=285						
H29M	Whitestone	30.45	44	P	P	11 31 23.2	-0.3
	baz=279						
G29M	Pine Creek	30.49	43	P	P	11 31 24.3	+0.5
	baz=278,SNR=5.2						
I29M	Ogilvie Camp,	30.61	46	P	P	11 31 26.1	+1.1
	baz=280,SNR=7.7						
O28M	Mount Upton	30.82	55	P	P	11 31 26.9	-0.2
	baz=286						
YUK8	Steele Glacier	30.87	54	P	P	11 31 27.6	+0.1
	baz=286						
PINM	Pinnacle	30.98	56	P	P	11 31 28.7	+0.4
	baz=288						
EPYK	Eagle Plains	31.08	44	P	P	11 31 28.8	-0.2
	baz=280						
L29M	L29M	31.15	50	P	P	11 31 29.9	+0.2
	baz=284,SNR=7.7						
M29M	Somme Creek	31.17	52	P	P	11 31 30.5	+0.6
	baz=285						
K29M	Barlow Dome	31.25	49	P	P	11 31 31.2	+0.5
	baz=283						
F30M	Barrier River	31.25	41	P	P	11 31 31.1	+0.6
	baz=279						
YUK4	Talbot Arm	31.38	54	P	P	11 31 32.8	+1.0
	baz=286						
I30M	Mount Dempster	31.43	46	P	P	11 31 32.7	+0.5
	baz=282,SNR=9.9						
J30M	Hart River	31.59	47	P	P	11 31 33.9	+0.3
	baz=283						
YUK6	Outpost Mounta	31.62	54	P	P	11 31 34.6	+0.5
	baz=287						
O29M	Mount Kennedy	31.72	55	P	P	11 31 35.4	+0.7
	baz=288						
M30M	Minto, Yukon	31.88	51	P	P	11 31 36.7	+0.7
	baz=286						
G31M	Satah River	31.95	42	P	P	11 31 37.3	+0.8
	baz=281						
INK	Inuvik	31.99	40	P	P	11 31 37.5	+0.6
	baz=279						
MAYO	Mayo, Yukon	32.01	49	P	P	11 31 38.0	+0.9
	baz=285						
F31M	Tsiigehtchic	32.06	41	P	P	11 31 38.2	+0.8
	baz=280						
HYT	Haines Junctio	32.06	54	P	P	11 31 38.5	+0.7
	baz=288						
N30M	Aishikik Lake	32.06	53	P	P	11 31 38.7	+1.0
	baz=287						
H31M	Peel River	32.14	44	P	P	11 31 38.8	+0.5
	baz=283						
P29M	Windy Craggy	32.33	56	P	P	11 31 40.7	+0.6
	baz=290						
P30M	Million Dollar	32.54	55	P	P	11 31 42.7	+0.8
	baz=290						
N31M	Braeburn, Yuko	32.65	53	P	P	11 31 43.5	+0.7
	baz=288						
O30N	Mendenhall	32.73	54	P	P	11 31 43.9	+0.3
	baz=289						
PLBC	Pleasant Camp	33.05	56	P	P	11 31 46.3	+0.1
	baz=291						
M31M	Drury Creek, Y	33.06	51	P	P	11 31 46.5	+0.2
	baz=288,SNR=5.0						
WHY	Whitehorse	33.33	54	P	P	11 31 48.7	-0.1
	baz=290						
SKAG	Skagway	33.54	56	P	P	11 31 51.3	+0.8
	baz=291						
ULN	Ulaanbaatar	33.59	280	*i* P	P	11 31 52.0	+0.7
ULN				pmax	pmax		
	comp=Z,1.0nm,1.3s						
S31K	Pelican	33.66	59	P	P	11 31 52.7	+1.2
	baz=293						
SONM	Songino Array	33.98	281	P	P	11 31 54.3	-0.3
	comp=Z,0.4nm,0.5s,baz=68,slow=7.3,SNR=4.4						
SONM				PcP	PcP	11 34 29.2	-0.6
	comp=Z,0.7nm,0.6s,baz=86,slow=3.6,SNR=3.6						
SONM				ScP	ScP	11 38 03.0	0.0
	comp=Z,1.1nm,0.6s,baz=66,slow=1.9,SNR=6.1						
	comp=Z,0.4nm,0.5s						
N32M	Quiet Lake	33.99	52	P	P	11 31 55.5	+1.0
	baz=290						
A36M	Sachs Harbour	34.16	32	P	P	11 31 55.7	0.0
	baz=281						
P32M	Atlin	34.26	55	P	P	11 31 57.4	+0.6
	baz=292						
R32K	Eaglecrest	34.38	58	P	P	11 31 58.6	+0.8
	baz=294						
P33M	Teslin, Yukon	34.45	54	P	P	11 31 59.1	+0.7
	baz=292						
SIT	Sitka	34.48	60	P	P	11 31 58.8	+0.3
	baz=295						
S32K	Killisnoo	34.68	59	P	P	11 32 00.3	0.0
	baz=294						
C36M	Paulatuk	35.13	37	P	P	11 32 03.8	-0.3
	baz=286						
Q32M	Nakina River	35.19	56	P	P	11 32 04.1	-0.8
	baz=294						
HHC	Hu-ho-hao-te	35.22	267	*e*P	P	11 32 05.3	0.0
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
H11N2	WAKE ISLAND Hy	35.58	170	T	T	12 09 37.3	
	baz=355,slow=76,SNR=48						
H11N3	WAKE ISLAND Hy	35.60	170	T	T	12 09 45.7	
	baz=355,slow=76,SNR=57						
H11N1	WAKE ISLAND Hy	35.60	170	T	T	12 09 42.5	
	baz=355,slow=76,SNR=82						
R33M	Jennings River	35.63	55	P	P	11 32 08.2	-0.5
	baz=294						
T33K	Petersburg	35.76	59	P	P	11 32 10.0	+0.4
	baz=296						
U33K	Whale Pass	35.98	60	P	P	11 32 12.3	+0.8
	baz=297						
WRAK	Wrangell Islan	36.23	60	P	P	11 32 13.7	+0.1
	baz=297						
CRAG	Craig	36.28	61	P	P	11 32 14.3	+0.3
	baz=298						
WTLY	Watson Lake, Y	36.34	53	P	P	11 32 15.1	+0.5
	baz=294						
H11S1	WAKE ISLAND Hy	36.77	171	T	T	12 11 09.7	
	baz=352,slow=76,SNR=4.8						
H11S3	WAKE ISLAND Hy	36.79	171	T	T	12 11 07.1	
	baz=352,slow=76,SNR=3.6						
H11S2	WAKE ISLAND Hy	36.79	171	T	T	12 11 20.4	
	baz=352,slow=76,SNR=4.5						
T35M	Bob Quinn	37.01	58	P	P	11 32 20.6	+0.4
	baz=297						
V35K	Ketchikan	37.10	61	P	P	11 32 20.8	-0.2
	baz=299						
NJ2	Nanjing	37.41	250	*e*P	P	11 32 24.5	+0.7
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
LIRD	Liard River Hi	37.88	53	P	P	11 32 29.1	+1.6
	baz=297						
TOAD	Toad River Com	38.53	53	P	P	11 32 34.0	+1.0
	baz=298						
YKA	Yellowknife Ar	41.36	44	P	P	11 32 57.1	+0.8
	comp=Z,2.8nm,0.7s,baz=301,slow=8.6,SNR=43						
YKA				pP	pP	11 33 23.8	0.0
	comp=Z,0.5nm,0.6s,baz=298,slow=8.8,SNR=2.7						
YKA				PcP	PcP	11 34 52.7	+0.7
	comp=Z,0.2nm,0.7s,baz=298,slow=4.2,SNR=5.9						
	comp=Z,2.8nm,0.7s						
ZALV	Zalesovo Beam	42.15	301	P	P	11 33 01.0	-1.8
	comp=Z,0.3nm,0.3s,baz=70,slow=9.5,SNR=2.0						
ZALV				PcP	PcP	11 34 54.1	-0.7
	comp=Z,0.7nm,0.5s,baz=67,slow=3.7,SNR=2.8						
ZALV				ScP	ScP	11 38 33.5	-0.1
	comp=Z,0.4nm,0.3s,baz=56,slow=6.1,SNR=3.7						
	comp=Z,0.3nm,0.3s						
LZH	Lanzhou	42.89	268	*e*P	P	11 33 08.8	-0.4
LZH				pP	pP	11 33 31.3	-5.7
LZH				sP	sP	11 33 45.8	-5.0
LZH				pmax	pmax		
	comp=Z,21nm,1.5s						
DGZ	Jazzator, Alta	43.27	295	*i* P	P	11 33 12.8	+0.7
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SPITS	Spitsbergen Ar	45.25	350	P	P	11 33 26.0	-1.4
	comp=Z,7.8nm,1.0s,baz=63,slow=7.6,SNR=6.6						
	comp=Z,7.8nm,1.0s						
SPITS	Spitsbergen Ar	45.25	350	P	P	11 33 28.7	+1.3
SPITS				pmax	pmax		
	comp=Z,50nm,1.5s						
WMQ	Urumqi	46.81	288	*e*P	P	11 33 40.5	+0.4
WMQ				pP	pP	11 34 08.8	+0.5
WMQ				ScP	ScP	11 38 49.3	-3.8
WMQ				pmax	pmax		
	comp=Z,13nm,1.1s						
MKAR	Makanchi Array	47.77	295	P	P	11 33 44.4	-3.0
	comp=Z,0.6nm,0.5s,baz=47,slow=6.8,SNR=6.8						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	47.77	295	P	P	11 33 45.1	-2.2
MKAR	Makanchi Array	47.77	295	*e*P	P	11 33 47.8	+0.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
RSD	Rainshed	48.49	119	P	P	11 33 54.3	+1.0
NEW	Newport	48.49	62	P	P	11 33 54.3	+1.4
NEW				IAmb	IAmb	11 33 54.9	
	comp=Z,4.8nm,1.1s						
NEW	Newport	48.49	62	P	P	11 33 54.3	+1.4
NEW				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BVAR	Borovoye Array	49.56	307	P	P	11 33 58.6	-2.4
	comp=Z,1.3nm,0.5s,baz=59,slow=7.9,SNR=9.5						
BVAR				pP	pP	11 34 28.7	-0.7
	comp=Z,1.0nm,0.7s,baz=38,slow=7.3,SNR=2.7						
BVAR				PcP	PcP	11 35 19.8	-1.0
	comp=Z,0.9nm,0.4s,baz=48,slow=2.7,SNR=4.2						
BVAR				ScP	ScP	11 39 04.0	-0.5
	comp=Z,1.0nm,0.7s,baz=54,slow=5.8,SNR=5.2						
	comp=Z,1.3nm,0.5s						
PZH	PanZhiHua	51.18	261	P	P	11 34 14.8	+1.2
ARTI	Arti	52.38	317	*i* P	P	11 34 22.3	+0.3
ARTI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BCYI	Bear Canyon	53.06	64	P	P	11 34 28.6	+1.2
NVAR	Mina Array Bea	54.61	72	P	P	11 34 41.0	+2.2
	comp=Z,7.8nm,0.9s,baz=300,slow=7.5,SNR=47						
	comp=Z,7.8nm,0.9s						
NVAR	Mina Array Bea	54.61	72	P	P	11 34 41.1	+2.3
PDAR	Pinedale Array	56.13	62	P	P	11 34 51.1	+1.5
	comp=Z,2.7nm,0.7s,baz=331,slow=2.5,SNR=25						
PDAR				pP	pP	11 35 18.4	0.0
	comp=Z,0.6nm,0.6s,baz=297,slow=4.0,SNR=2.6						
	comp=Z,2.7nm,0.7s						
KK31	Karatay Array	56.37	298	P	P	11 34 50.5	-0.6
KK31				IAmb	IAmb	11 35 20.5	
	comp=Z,4.6nm,1.3s						
KK31	Karatay Array	56.37	298	P	P	11 34 50.5	-0.6
KK31				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KKAR	Karatay Array	56.37	298	P	P	11 34 50.4	-0.7
KKAR	Karatay Array	56.37	298	P	P	11 34 50.4	-0.7
AB31	Akbulak array	56.90	310		P	11 34 53.5	-1.1
AB31				IAmb	IAmb	11 35 24.6	
	comp=Z,4.0nm,1.1s						
ABKAR	Akbulak array	56.90	310	P	P	11 34 53.4	-1.2
RSSD	Black Hills	57.89	58		P	11 35 03.4	+1.4
RSSD	Black Hills	57.89	58	P	P	11 35 03.4	+1.4
RSSD				pmax	pmax		
	comp=Z,9.0nm,0.8s						
FIA1	FINESS Array S	58.49	336	P	P	11 35 04.4	-1.2
FINES	FINESS Array B	58.49	336	P	P	11 35 04.0	-1.6
	comp=Z,0.9nm,0.5s,baz=15,slow=7.9,SNR=5.3						
	comp=Z,0.9nm,0.5s						
FINES	FINESS Array B	58.49	336	P	P	11 35 04.2	-1.3
FINES	FINESS Array B	58.49	336	*i* P	P	11 35 04.3	-1.3
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CMAR	Chiang Mai Arr	59.10	258	P	P	11 35 09.4	-1.0
	comp=Z,0.4nm,0.5s,baz=43,slow=6.8,SNR=2.3						
CMAR				PcP	PcP	11 35 57.9	0.0
	comp=Z,1.0nm,0.5s,baz=25,slow=3.5,SNR=4.6						
	comp=Z,0.4nm,0.5s						
CHGR	Chuyangaron	60.34	296	*i* P	P	11 35 17.0	-1.8
CHGR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
OBN	Obninsk	61.11	327⇑	*e*P	P	11 35 24.6	+1.0
OBN				*e**PP	pP	11 35 58.6	+5.6
OBN				*e*		11 37 38.9	
OBN				*e*PPP	PPP	11 39 09.7	
OBN				*e*S	S	11 43 34.6	+1.9
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NOA	NORSAR Array B	61.77	344	P	P	11 35 27.7	-0.3
	comp=Z,0.6nm,0.7s,baz=23,slow=6.0,SNR=3.8						
	comp=Z,0.6nm,0.7s						
HFS	Hagfors	62.21	342	P	P	11 35 30.3	-0.6
	comp=Z,1.9nm,0.7s,baz=1.1,slow=7.4,SNR=4.1						
	comp=Z,1.9nm,0.7s						
TASM	ASL Pad, Albuq	63.56	66	P	P	11 35 42.7	+2.2
TASM				IAmb	IAmb	11 35 42.8	
	comp=Z,1.6nm,0.7s						
SCHQ	Schefferville	63.65	29	P	P	11 35 40.1	-0.4
	comp=Z,3.4nm,1.0s,baz=0.2,slow=12,SNR=3.8						
	comp=Z,3.4nm,1.0s						
AKASG	Malin Array Be	67.17	329	P	P	11 36 02.3	-0.8
	comp=Z,0.3nm,0.3s,baz=28,slow=7.0,SNR=1.9						
	comp=Z,0.3nm,0.3s						
KBZ	Khabaz	68.44	317	P	P	11 36 10.4	-0.8
	comp=Z,1.3nm,0.7s,baz=45,slow=11,SNR=3.8						
	comp=Z,1.3nm,0.7s						
KBZ	Khabaz	68.44	317	*i* P	P	11 36 10.6	-0.6
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SHA1	Shidzhatmaz	68.52	317	*i* P	P	11 36 11.0	-1.1
TXAR	Lajitas Array	69.41	68	P	P	11 36 19.2	+1.6
	comp=Z,4.2nm,0.6s,baz=299,slow=4.6,SNR=62						
	comp=Z,4.2nm,0.6s						
COEN	Coen	70.40	198	P	P	11 36 24.6	+1.0
BUR08	Bucovina Ar. S	71.08	330	P	P	11 36 27.7	+0.2
BUR08				IAmb	IAmb	11 36 41.0	
	comp=Z,10nm,1.5s						
BURAR	Bucovina Array	71.10	330	P	P	11 36 28.0	+0.3
GERES	GERESS Array B	72.86	338	P	P	11 36 37.4	-0.7
	comp=Z,0.3nm,0.6s,baz=21,slow=6.3,SNR=3.8						
	comp=Z,0.3nm,0.6s						
BR131	Keskin Array S	75.40	321	P	P	11 36 52.6	-0.4
BR131	Keskin Array S	75.40	321	P	P	11 36 52.7	-0.4
BR131				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BRTR	Keskin Array B	75.40	321	P	P	11 36 52.1	-1.0
	comp=Z,0.6nm,0.6s,baz=97,slow=1.9,SNR=3.6						
	comp=Z,0.6nm,0.6s						
BRTR	Keskin Array B	75.40	321	P	P	11 36 52.8	-0.4
BRTR	Keskin Array B	75.40	321	*e*P	P	11 36 54.2	+1.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WB0	Warramunga Arr	77.92	206	P	P	11 37 07.7	+0.6
WB0				IAmb	IAmb	11 37 10.9	
	comp=Z,10nm,1.4s						
WRAB	Tennant Creek	78.09	206	P	P	11 37 08.6	+0.6
WRAB				IAmb	IAmb	11 37 39.7	
	comp=Z,7.3nm,1.3s						
WRAB	Tennant Creek	78.09	206	P	P	11 37 08.6	+0.6
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.3s						

WRA	Warramunga Arr	78.10	206	P	P	11 37 07.7	-0.4
	comp=Z,0.5nm,0.5s,baz=22,slow=6.1,SNR=10						
	comp=Z,0.5nm,0.5s						
NRCA	Norcia	78.69	336	P	P	11 37 11.8	+0.5
MMAI	Mount Meron Ar	80.63	316	P	P	11 37 21.1	-0.9
	comp=Z,1.0nm,0.3s,baz=65,slow=6.8,SNR=1.6						
	comp=Z,1.0nm,0.3s						
AS31	Alice Springs	81.78	205	P	P	11 37 28.9	+1.1
ASAR	Alice Springs	81.78	205	P	P	11 37 28.7	+0.9
	comp=Z,0.9nm,0.6s,baz=17,slow=4.8,SNR=30						
	comp=Z,0.9nm,0.6s						
ESDC	Sonseca Array	84.73	348	P	P	11 37 43.0	0.0
	comp=Z,2.0nm,0.8s,baz=7.6,slow=4.8,SNR=13						
	comp=Z,2.0nm,0.8s						
ESDC	Sonseca Array	84.73	348	P	P	11 37 43.0	0.0
PLCA	Paso Flores	143.49	89	PKP	PKPbc	11 44 40.3	+0.3
	comp=Z,1.3nm,0.7s,baz=282,slow=3.5,SNR=6.4						

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*IDC **29** 11:59:17.4±4.2, 17°.98S×178°.16W, h519^{km}±45^{km}, mb3.4/17, mbtmp4.3/18, Error ellipse: s-maj=22.7km s-min=18.6km az=126.0*

*NEIC **29** 11:59:22.5±1.7, 17°.9S±0°.1×178°.3W±0°.1, h575^{km}±9^{km}, mb4.5/30, Error ellipse: s-maj=19.7km s-min=16.3km az=171.0*

ISC 29 11:59:23.8±0.5**, 18°.0S**±0°.1×**178°.33W**±0°.08**, h600^{km}, n77, σ1^{s}00**/79**, mb4.2**/31**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.50	58	P	P	12 01 16.4	-2.2
NIUE	Niue	8.04	99	P	P	12 01 20.3	-3.2
SANVU	Saraoutou	14.09	278	P	P	12 02 21.6	-2.1
DZM	Mont Dzumac	14.87	252	P	P	12 02 29.5	-1.4
	16nm,1.1s,baz=72,slow=3.2,SNR=2.2						
RAR	Rarotonga	17.77	103	P	P	12 02 56.1	-1.3
CTAO	Charters Tower	33.51	261	P	P	12 05 15.1	-0.4
CTAO				IAmb	IAmb	12 05 26.6	
	comp=Z,23nm,1.4s						
CAN	Canberra	33.71	233	P	P	12 05 17.4	+0.4
CAN				IAmb	IAmb	12 05 35.9	
	comp=Z,15nm,1.3s						
PMG	Port Moresby	34.55	280	P	P	12 05 24.8	+0.5
	comp=Z,15nm,0.8s,baz=94,slow=7.6,SNR=6.9						
	comp=Z,15nm,0.8s						
PMG	Port Moresby	34.55	280	P	P	12 05 24.2	-0.1
PMG				IAmb	IAmb	12 05 25.8	
	comp=Z,18nm,1.0s						
COEN	Coen	37.18	271	P	P	12 05 45.8	-0.1
COEN				IAmb	IAmb	12 05 47.0	
	comp=Z,6.2nm,0.8s						
STKA	Stephens Creek	38.65	241	P	P	12 05 58.6	+1.0
	comp=Z,0.6nm,0.4s,baz=90,slow=4.0,SNR=2.9						
	comp=Z,0.6nm,0.4s						
STKA	Stephens Creek	38.65	241	P	P	12 05 57.5	0.0
STKA				IAmb	IAmb	12 05 59.6	
	comp=Z,30nm,1.4s						
INKA	Innaminka	38.78	248	P	P	12 05 58.9	+0.2
JAY	Jayapura	43.01	286	P	P	12 06 32.8	+0.5
	comp=Z,19nm,0.8s,baz=63,slow=4.5,SNR=4.2						
	comp=Z,19nm,0.8s						
BBOO	Buckleboo	43.43	241	P	P	12 06 34.9	-0.3
BBOO				IAmb	IAmb	12 06 39.5	
	comp=Z,17nm,1.5s						
WR8	Warramunga Arr	44.54	260	P	P	12 06 42.7	-1.3
WRA	Warramunga Arr	44.69	260	P	P	12 06 44.2	-0.9
	comp=Z,1.7nm,0.5s,baz=96,slow=8.6,SNR=76						
WRA				PcP	PcP	12 08 14.5	+0.2
	comp=Z,0.5nm,0.9s,baz=90,slow=4.4,SNR=2.4						
	comp=Z,1.7nm,0.5s						
WRA	Warramunga Arr	44.69	260	P	P	12 06 43.7	-1.4
AS31	Alice Springs	44.84	254	P	P	12 06 45.5	-0.7
ASAR	Alice Springs	44.84	254	P	P	12 06 45.8	-0.5
	comp=Z,5.6nm,0.5s,baz=87,slow=9.4,SNR=173						
ASAR				PcP	PcP	12 08 14.8	-0.1
	comp=Z,0.9nm,0.8s,baz=88,slow=4.9,SNR=3.0						
	comp=Z,5.6nm,0.5s						
ASAR	Alice Springs	44.84	254	P	P	12 06 45.2	-1.1
MTN	Manton Dam	48.87	268	P	P	12 07 15.5	-1.1
MTN				IAmb	IAmb	12 07 43.0	
	comp=Z,30nm,1.5s						
FITZ	Fitzroy Crossi	53.09	261	P	P	12 07 46.7	-0.3
LUWI	Luwuk	60.20	279	P	P	12 08 36.9	+1.3
SBA	Scott Base	60.33	184	P	P	12 08 37.6	+2.3
SBA				IAmb	IAmb	12 08 38.8	
	comp=Z,10nm,1.2s						
VNDA	Vanda	60.35	185	P	P	12 08 36.9	+1.3
	comp=Z,1.1nm,0.8s,baz=20,slow=3.9,SNR=4.0						
	comp=Z,1.1nm,0.8s						
VNDA	Vanda	60.35	185	P	P	12 08 36.9	+1.3
TOLI2	Tolitoli	62.81	281	P	P	12 08 51.9	-0.7
TOLI2				IAmb	IAmb	12 08 55.3	
	comp=Z,40nm,1.3s						
JGF	Kuroka	67.86	322	P	P	12 09 23.8	+0.1
JGF				IAmb	IAmb	12 09 58.9	
	comp=Z,11nm,1.3s						
MJAR	Matsushiro Arr	68.03	323	P	P	12 09 24.6	-0.1
	comp=Z,3.6nm,0.6s,baz=158,slow=5.9,SNR=4.4						
	comp=Z,3.6nm,0.6s						
JSD	Sado	69.06	324	P	P	12 09 31.0	+0.2
JSD				IAmb	IAmb	12 10 06.1	
	comp=Z,18nm,1.4s						
UGM	Wanagama	69.72	268	P	P	12 09 34.3	-1.0
JKA	Kamikawa-asahi	71.40	331	P	P	12 09 45.3	+0.8
ASAJ	Asahikawa	71.40	331	P	P	12 09 46.0	+1.5
	comp=Z,11nm,1.0s,baz=113,slow=13,SNR=2.2						
	comp=Z,11nm,1.0s						
QSPA	South Pole Qui	72.05	180	P	P	12 09 49.0	+0.9
QSPA				IAmb	IAmb	12 09 52.9	
	comp=Z,12nm,1.4s						
SSLB	Suanglung	72.35	303	P	P	12 09 49.4	-1.0
SSLB				IAmb	IAmb	12 09 57.6	
	comp=Z,30nm,1.4s						
PEA0B	Petropavlovsk-	73.79	345	P	P	12 09 58.2	+0.2
PETK	Petropavlovsk-	73.79	345	P	P	12 09 58.7	+0.7
	comp=Z,5.1nm,0.7s,baz=109,slow=8.0,SNR=12						
	comp=Z,5.1nm,0.7s						
PETK	Petropavlovsk-	73.79	345	P	P	12 09 58.4	+0.4
KSRS	Korea Array	74.83	318	P	P	12 10 05.2	+1.1
	comp=Z,1.0nm,0.7s,baz=120,slow=6.4,SNR=5.7						
	comp=Z,1.0nm,0.7s						
PLK4	Peulik 4	77.54	12	P	P	12 10 19.2	+0.6
PLK4				IAmb	IAmb	12 10 30.6	
	comp=Z,40nm,1.3s						
OHAK	Old Harbor	77.81	14	P	P	12 10 20.6	+0.6
OHAK				IAmb	IAmb	12 10 20.8	
	comp=Z,36nm,1.3s						
N14K	Kuskokwak Cree	78.83	8	P	P	12 10 26.1	+0.8
NVAR	Mina Array Bea	79.44	44	P	P	12 10 31.1	+1.7
	comp=Z,0.7nm,0.7s,baz=225,slow=9.4,SNR=7.1						
	comp=Z,0.7nm,0.7s						
GHO	Glory Hole Cre	82.89	14	P	P	12 10 46.3	+0.1
GHO				IAmb	IAmb	12 10 47.8	
	comp=Z,16nm,1.0s						
IL31		85.97	13	P	P	12 11 01.0	-0.1
ILAR	Eielson Array	85.97	13	P	P	12 11 00.9	-0.2
	comp=Z,1.1nm,0.4s,baz=222,slow=4.9,SNR=44						
	comp=Z,1.1nm,0.4s						
ILAR	Eielson Array	85.97	13	P	P	12 11 01.2	+0.1
TXAR	Lajitas Array	85.98	58	P	P	12 11 03.8	+1.7
	comp=Z,0.5nm,0.9s,baz=225,slow=5.1,SNR=4.2						
	comp=Z,0.5nm,0.9s						
TXAR	Lajitas Array	85.98	58	P	P	12 11 03.5	+1.3
PDAR	Pinedale Array	87.37	43	P	P	12 11 09.5	+0.9
	comp=Z,0.5nm,0.6s,baz=232,slow=3.2,SNR=5.9						
	comp=Z,0.5nm,0.6s						
PDAR	Pinedale Array	87.37	43	P	P	12 11 09.7	+1.2
CMAR	Chiang Mai Arr	88.99	290	P	P	12 11 18.1	+1.7
	comp=Z,1.7nm,1.0s,baz=110,slow=4.7,SNR=5.4						
	comp=Z,1.7nm,1.0s						
F31M	Tsiigehtchic	91.26	16	P	P	12 11 26.1	+0.5
SONM	Songino Array	93.68	319	P	P	12 11 37.6	+0.1
	comp=Z,0.7nm,1.0s,baz=126,slow=3.7,SNR=3.8						
	comp=Z,0.7nm,1.0s						
YKA	Yellowknife Ar	94.39	25	P	P	12 11 40.5	+0.4
	comp=Z,0.2nm,0.6s,baz=245,slow=5.0,SNR=4.3						
	comp=Z,0.2nm,0.6s						
BVAR	Borovoye Array	116.97	321	PKP	PKiKP	12 17 01.1	-0.1
	comp=Z,0.7nm,0.5s,baz=76,slow=6.7,SNR=2.0						
BRTR	Keskin Array B	144.91	315	PKPbc	PKPab	12 17 54.8	-1.0
	comp=Z,1.4nm,0.5s,baz=70,slow=2.2,SNR=8.2						
OSTC	Ostas	145.51	344	*e*PKP	PKPab	12 17 57.2	-0.4
CHVC	Chvalec	145.52	344	*e*PKP	PKPab	12 17 57.2	-0.4
UPC	Upice	145.60	344	*e*PKP	PKPab	12 17 57.3	-0.7
STEB	Steborice	145.62	341	*e*PKP	PKPab	12 17 57.2	-0.8
DPC	Dobruska-Polom	145.66	343	*e*PKP	PKPab	12 17 57.5	-0.7
KRLC	Kraliky	145.78	343	*e*PKP	PKPab	12 17 57.8	-0.9
PRU	Pruhonice	146.46	345	*e*PKP	PKiKP	12 17 59.4	-1.3
ZVC	Zvikov	147.06	345	*e*PKP	PKiKP	12 18 01.0	-1.0
KHC	Kasperske Hory	147.49	345	*e*PKP	PKiKP	12 18 02.1	-0.9
KHC				*e*x	x	12 18 06.6	
CKRC	Cesky Krumlov	147.60	344	*e*PKP	PKiKP	12 18 02.6	-0.6
GERES	GERESS Array B	147.73	345	PKPbc	PKiKP	12 18 02.4	-1.2
	comp=Z,2.0nm,0.6s,baz=20,slow=4.3,SNR=22						
CONA	Conrad Observa	147.98	342	*e*PKP	PKiKP	12 18 03.7	-0.4
	comp=Z,2.2nm,0.7s						
LESA	Schwarzleotal	149.30	345	*e*PKP	PKiKP	12 18 06.8	0.0
	comp=Z,0.6nm,0.4s						
KBA	Koelnbreinsper	149.46	344	*i* PKP	PKiKP	12 18 06.9	-0.3
	comp=Z,1.4nm,0.5s						
WATA	Walderalm	149.64	347	*i* PKP	PKiKP	12 18 07.5	-0.1
	comp=Z,1.5nm,0.4s						
WTTA	Wattenberg	149.69	346	*i* PKP	PKiKP	12 18 07.7	0.0
	comp=Z,5.1nm,0.7s						
SQTA	Sankt Quirin	149.83	347	*i* PKP	PKiKP	12 18 07.8	-0.1
	comp=Z,1.5nm,0.3s						
ABTA	Abfaltersbach	149.97	345	*i* PKP	PKiKP	12 18 07.8	-0.4
	comp=Z,5.0nm,0.8s						
FETA	Feichten	150.12	348	*e*PKP	PKiKP	12 18 08.9	+0.3
	comp=Z,3.0nm,0.9s						

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*IDC **29** 12:03:47.9±0.6, 4°.72N×125°.46E, h0^{km}, mb4.4/19, mbtmp4.4/21, ML4.7/2, MS3.5/19, Error ellipse: s-maj=26.3km s-min=10.8km az=82.0*

*DJA **29** 12:03:48.6±0.4, 5°N±4°×12°5E±°, h10^{km}, M4.9/18, mb4.9/18, mB5.4/6, MLv4.9/12, Mw(mB)4.8/6*

*BJI **29** 12:03:49.9, 4°.69N×125°.62E, h22^{km}, mB5.2/6, mb4.6/32, Ms4.8/1, Ms7 4.4/1*

*NEIC **29** 12:03:50.6±1.6, 4°.68N±0°.03×125°.35E±0°.08, h10^{km}±1^{km}, mb4.7/44, Error ellipse: s-maj=13.2km s-min=4.2km az=89.0*

ISC 29 12:03:49.9±0.4**, 4°.65N**±0°.05×**125°.36E**±0°.07**, h10^{km}, n335, σ0^{s}99**/326**, mb4.6**/45**, MS3.5**/17**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	0.97	170	P	Pn	12 04 10.4	+0.8
DAV	Davao City (W)	2.42	5	Pn	Pn	12 04 28.9	-0.7
	92nm,0.3s,baz=243,slow=4.0,SNR=9.4						
DAV				Lg	Lg	12 05 01.1	
	90nm,0.3s,baz=256,slow=19,SNR=5.4						
	138nm,0.4s						
DAV	Davao City (W)	2.42	5	Pn	Pn	12 04 30.1	+0.5
DAV	Davao City (W)	2.42	5	P	Pn	12 04 23.6	-6.0
DAV	Davao City (W)	2.42	5	P	Pg	12 04 40.0	+3.6
TNTI	Ternate	4.34	152		Pn	12 04 58.0	+1.9
TNTI	Ternate	4.34	152	P	Pn	12 04 59.4	+3.4
GTOI	Gorontalo	4.62	211	P	Pn	12 04 59.8	-0.1
MRSI	Marisa	5.37	220	P	Pn	12 05 11.0	+0.9
TOLI2	Tolitoli	5.76	233		Pn	12 05 14.8	-0.8
LUWI	Luwuk	6.21	205		Pn	12 05 23.2	+1.5
LUWI	Luwuk	6.21	205	P	Pn	12 05 25.4	+3.6
	1.0nm3µm169nm,0.7s						
APSI	Ampana	6.65	214	P	Pn	12 05 31.2	+3.4
	3µm215nm,0.8s						
SANI	Sanana	6.68	175	P	Pn	12 05 28.5	+0.3
	0.2nm56nm,0.8s						
MPSI	Mapaga	6.93	232	P	Pn	12 05 31.5	-0.2
NLAI	Namlea	8.02	167	P	Pn	12 05 50.3	+3.6
SWI	Sorong	8.04	133	P	Pn	12 05 49.8	+2.8
	39nm,0.9s						
SIJI	Sorong	8.05	133	P	Pn	12 05 49.3	+2.2
	28nm,0.7s						
KRAI	Karang Ratu	8.47	159	P	Pn	12 05 56.4	+3.5
	41nm,0.7s						
MSAI	Masohi	8.70	156	P	Pn	12 05 59.0	+3.0
AAI	Ambon	8.75	161	P	Pn	12 06 01.4	+4.8
	86nm,0.6s						
KDI	Kendari	8.97	198	P	Pn	12 06 02.2	+2.5
KKM	Kota Kinabalu	9.21	279	Pn	Pn	12 06 03.6	+0.6
TTSI	Tana Toraja	9.43	216	P	Pn	12 06 08.7	+2.7
	1µm31nm,0.7s						
KKSI	Kolaka, Sulawe	9.51	203	P	Pn	12 06 09.8	+2.7
	28nm,0.5s						
FAKI	Fak Fak	10.19	137		Pn	12 06 17.6	+1.1
FAKI	Fak Fak	10.19	137	P	Pn	12 06 19.2	+2.7
SPSI	Sidrap Palu	10.21	213	P	Pn	12 06 19.0	+2.3
	26nm,1.0s						
BKSI	Bulukumba	11.20	208	P	Pn	12 06 32.7	+2.5
SBUM	Sibu	13.29	261	Pn	Pn	12 07 01.5	+2.7
SOEI	Soe	14.35	184		Pn	12 07 14.9	+1.4
BATI	Baumata	14.85	187	Pn	Pn	12 07 18.8	-1.4
	7.5nm,0.3s,baz=316,slow=1.9,SNR=19						
BATI				LR	LR	12 13 17.9	
	comp=Z,218nm,20.9s,baz=339,slow=38						
	6.9nm,0.4s						
JAY	Jayapura	16.91	115	LR	LR	12 13 12.6	
	comp=Z,194nm,20.6s,baz=338,slow=34						
JAGI	Jajag, Banyuwa	17.16	221		Pn	12 07 49.1	-1.0
MTN	Manton Dam	18.30	162		Pn	12 08 03.2	-0.9
TPUB	Ta-pu	19.10	347	P	P	12 08 11.2	-1.9
TPUB				IAmb	IAmb	12 08 33.9	
	comp=Z,109nm,1.5s						
SSLB	Suanglung	19.50	348	P	P	12 08 18.1	+0.7
KNRA	Kununurra	20.47	171	P	P	12 08 28.8	+0.8
KNRA				IAmb	IAmb	12 08 40.6	
	comp=Z,32nm,0.8s						
JOW	Kunigami	22.24	7	P	P	12 08 46.8	-0.2
IPM	Ipoh	24.25	271	P	P	12 09 06.9	-0.6
IPM				IAmb	IAmb	12 09 10.5	
	comp=Z,19nm,1.2s						
PMG	Port Moresby	25.83	123	P	P	12 09 23.0	+1.3
	comp=Z,11nm,0.8s,baz=323,slow=8.9,SNR=6.3						
PMG				LR	LR	12 19 45.6	
	comp=Z,128nm,18.4s,baz=322,slow=37						
PMG	Port Moresby	25.83	123	P	P	12 09 21.8	0.0
PMG				IAmb	IAmb	12 09 24.1	
	comp=Z,16nm,0.9s						
WB0	Warramunga Arr	25.84	160		P	12 09 21.5	-0.2
WRAB	Tennant Creek	25.98	160	P	P	12 09 22.9	-0.1
WRA	Warramunga Arr	25.98	160	P	P	12 09 23.1	0.0
	comp=Z,11nm,0.7s,baz=341,slow=9.6,SNR=27						
WRA				S	S	12 13 51.8	-2.1
	comp=Z,0.9nm,0.9s,baz=342,slow=17,SNR=2.7						
	comp=Z,11nm,0.7s						
WRA	Warramunga Arr	25.98	160	P	P	12 09 23.7	+0.6
WR8	Warramunga Arr	26.05	160		P	12 09 24.0	+0.3
WR8				IAmb	IAmb	12 09 41.6	
	comp=Z,17nm,0.8s						
MBWA	Marble Bar	26.23	192	P	P	12 09 24.9	-0.4
MBWA				IAmb	IAmb	12 09 27.6	
	comp=Z,17nm,0.8s						
PSI	Prapat	26.44	267	LR	LR	12 21 26.9	
	comp=Z,116nm,19.5s,baz=161,slow=40						
JCJ	Chichijima	27.50	34	LR	LR	12 20 09.4	
	comp=Z,48nm,20.2s,baz=98,slow=36						
GSI	Gunungsitoli	27.94	264	P	P	12 09 40.3	-0.5
NJ2	Nanjing	27.94	348	*e*P	P	12 09 43.5	+3.0
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
CM31	Chiang Mai Arr	29.23	300	P	P	12 09 51.0	-1.3
CM31				IAmb	IAmb	12 09 56.0	
	comp=Z,6.2nm,0.8s						
CMAR	Chiang Mai Arr	29.23	300	P	P	12 09 54.1	+1.9
	comp=Z,3.3nm,0.7s,baz=115,slow=7.3,SNR=26						
CMAR				LR	LR	12 24 19.9	
	comp=Z,98nm,18.1s,baz=110,slow=42						
	comp=Z,3.3nm,0.7s						
CMAR	Chiang Mai Arr	29.23	300	P	P	12 09 52.1	-0.2
AS31	Alice Springs	29.35	164		P	12 09 52.3	-1.0
ASAR	Alice Springs	29.35	164	P	P	12 09 52.8	-0.5
	comp=Z,0.6nm,0.3s,baz=341,slow=8.7,SNR=20						
ASAR				S	S	12 14 43.5	-3.5
	comp=Z,0.4nm,0.9s,baz=345,slow=14,SNR=1.7						
ASAR				LR	LR	12 22 34.3	
	comp=Z,77nm,20.0s,baz=30,slow=38						
	comp=Z,0.6nm,0.3s						
ASAR	Alice Springs	29.35	164	P	P	12 09 53.4	+0.1
CHTO	Chiang Mai	29.38	301	P	P	12 09 53.4	-0.2
CHTO				IAmb	IAmb	12 09 57.4	
	comp=Z,9.2nm,0.9s						
PZH	PanZhiHua	31.34	316	P	P	12 10 13.0	+2.0
JHJ	Hachijo jima 2	31.37	24	LR	LR	12 23 40.2	
	comp=Z,52nm,18.7s,baz=290,slow=38						
INU	Inuyama	32.40	18		P	12 10 19.6	-0.4
JGF	Kuroka	32.74	18		P	12 10 22.8	-0.2
JGF				IAmb	IAmb	12 10 23.6	
	comp=Z,8.4nm,0.8s						
KSRS	Korea Array	32.74	4	P	P	12 10 22.2	-0.7
	comp=Z,5.5nm,0.7s,baz=180,slow=9.9,SNR=23						
	comp=Z,5.5nm,0.7s						
XAN	Xi'an	33.00	334	P	P	12 10 25.3	0.0
XAN				pmax	pmax		
	comp=Z,12nm,0.6s						
MJAR	Matsushiro Arr	33.87	19	P	P	12 10 31.0	-1.9
	comp=Z,4.0nm,0.7s,baz=191,slow=9.0,SNR=17						
MJAR				LR	LR	12 25 51.8	
	comp=Z,83nm,18.2s,baz=190,slow=39						
	comp=Z,4.0nm,0.7s						
MJAR	Matsushiro Arr	33.87	19	P	P	12 10 32.8	-0.1
INKA	Innaminka	35.46	156	P	P	12 10 46.3	-0.4
LZDM	Lanzhou Array	37.00	330	LR	LR	12 27 02.6	
	comp=Z,106nm,19.3s,baz=235,slow=38						
LZH	Lanzhou	37.03	330	*e*P	P	12 11 01.8	+1.5
LZH				pP	pwP	12 11 13.8	+11
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC	Hu-ho-hao-te	38.12	343	*e*P	P	12 11 12.0	+2.7
HHC				pmax	pmax		
	comp=Z,18nm,0.7s						
NWAO	Narrogin (SRO)	38.15	191	LR	LR	12 27 39.3	
	comp=Z,29nm,20.1s,baz=86,slow=37						
SHL	Shillong	38.23	306	P	P	12 11 10.2	-0.4
SHL				IAmb	IAmb	12 11 33.8	
	comp=Z,14nm,1.0s						
BBOO	Buckleboo	38.61	165		P	12 11 12.9	-0.6
BBOO				IAmb	IAmb	12 11 22.5	
	comp=Z,21nm,1.1s						
STKA	Stephens Creek	39.48	158	P	P	12 11 21.2	+0.6
	comp=Z,13nm,0.9s,baz=335,slow=9.4,SNR=23						
	comp=Z,13nm,0.9s						
STKA	Stephens Creek	39.48	158	P	P	12 11 21.0	+0.3
USRK	Ussuriysk Ar.	39.82	7	P	P	12 11 23.0	-0.4
	comp=Z,5.8nm,0.7s,baz=188,slow=9.3,SNR=9.3						
	comp=Z,5.8nm,0.7s						
XLT	XiLinHaoTe	39.94	350	*e*P	P	12 11 26.0	+1.5
XLT				pP	sP	12 11 31.8	+3.2
XLT				sP	pP	12 11 35.8	+8.4
XLT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MDJ	Mudanjiang	39.98	5	P	P	12 11 24.3	-0.5
MDJ				pmax	pmax		
	comp=Z,15nm,1.2s						
MDJ	Mudanjiang	39.98	5	P	P	12 11 24.5	-0.3
MDJ				pmax	pmax		
	comp=Z,15nm,0.9s						
GTA	Gaotai	41.62	330	*e*P	P	12 11 39.5	+1.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ASAJ	Asahikawa	42.14	19	LR	LR	12 31 11.8	
	comp=Z,51nm,18.8s,baz=174,slow=39						
PALK	Pallekele	44.48	276	LR	LR	12 32 49.1	
	comp=Z,65nm,18.1s,baz=99,slow=39						
HEH	HeiHe	45.48	2	*e*P	P	12 12 08.5	-0.8
HEH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TOO	Toolangi	45.99	158	P	P	12 12 14.5	+0.9
SONM	Songino Array	46.01	342	P	P	12 12 13.1	-0.6
	comp=Z,0.6nm,0.7s,baz=157,slow=8.1,SNR=4.3						
SONM				LR	LR	12 31 50.1	
	comp=Z,80nm,19.9s,baz=250,slow=37						
	comp=Z,0.6nm,0.7s						
SONM	Songino Array	46.01	342	P	P	12 12 14.2	+0.5
WMQ	Urumqi	51.20	325	*e*P	P	12 12 52.8	-0.9
WMQ				PP	PP	12 14 52.0	+1.5
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PETK	Petropavlovsk-	55.12	23	P	P	12 13 22.0	-0.3
	comp=Z,7.9nm,0.8s,baz=186,slow=4.1,SNR=10.0						
	comp=Z,7.9nm,0.8s						
MKAR	Makanchi Array	56.03	326	P	P	12 13 28.8	-0.3
	comp=Z,2.3nm,0.5s,baz=123,slow=8.4,SNR=32						
	comp=Z,2.3nm,0.5s						
MKAR	Makanchi Array	56.03	326	P	P	12 13 28.6	-0.4
MAKZ	Makanchi	56.21	325		P	12 13 30.5	+0.2
AAK	Ala-Archa	58.77	318	LR	LR	12 42 30.5	
	comp=Z,82nm,18.5s,baz=100,slow=40						
ZALV	Zalesovo Beam	59.16	333	P	P	12 13 48.8	-2.1
	comp=Z,0.7nm,0.5s,baz=112,slow=6.8,SNR=3.6						
ZALV				LR	LR	12 41 11.7	
	comp=Z,66nm,18.1s,baz=72,slow=38						
	comp=Z,0.7nm,0.5s						
DRK	Karamyk	59.39	314	P	P	12 13 52.9	-0.3
GAR	Garm	60.30	313	P	P	12 13 59.6	+0.4
GAR				IAmb	IAmb	12 14 01.8	
	comp=Z,8.8nm,1.0s						
KK31	Karatay Array	61.63	317	P	P	12 14 06.7	-1.3
KK31				IAmb	IAmb	12 14 09.5	
	comp=Z,4.0nm,1.1s						
KKAR	Karatay Array	61.63	317	P	P	12 14 06.8	-1.3
BVAR	Borovoye Array	65.81	327	P	P	12 14 34.7	-0.7
	comp=Z,2.6nm,0.8s,baz=130,slow=6.4,SNR=9.3						
	comp=Z,2.6nm,0.8s						
BORK	Borovoye	65.86	327		P	12 14 35.2	-0.5
BORK				IAmb	IAmb	12 15 20.4	
	comp=Z,5.0nm,0.8s						
NRIK	Noril'sk	69.22	347	P	P	12 14 55.0	-1.7
	comp=Z,1.1nm,0.4s,baz=148,slow=11,SNR=3.6						
	comp=Z,1.1nm,0.4s						
AB31	Akbulak array	70.58	321	P	P	12 15 04.6	-0.8
ABKAR	Akbulak array	70.58	321	P	P	12 15 04.3	-1.1
NIKH	Nikolski High	71.86	35	P	P	12 15 13.5	+0.4
	baz=253						
SPIA	Saint Paul Isl	72.42	31	P	P	12 15 16.2	-0.1
	baz=250						
P08K	Saint George I	72.59	32	P	P	12 15 17.5	+0.1
	baz=251						
GAMB	Gambell	74.13	24	P	P	12 15 26.7	+0.5
	baz=247						
M11K	Mekoryuk	75.42	29	P	P	12 15 34.2	+0.4
	baz=253						
FALS	False Pass	75.46	34	P	P	12 15 34.2	+0.1
	baz=257						
TNA	Tin City	76.29	23	P	P	12 15 38.6	-0.1
	baz=250						
S12K	Black Hills	76.40	34	P	P	12 15 39.4	-0.1
	baz=258						
K13K	Kusilvak Mount	76.57	27	P	P	12 15 41.0	+0.6
	baz=254						
M13K	Dall Lake	76.79	29	P	P	12 15 42.0	+0.4
	baz=256						
F14K	Arctic Creek	76.89	23	P	P	12 15 42.4	+0.3
	baz=252						
ANM	Nome	77.00	24	P	P	12 15 43.1	+0.3
	baz=253						
SDPT	Sand Point	77.21	34	P	P	12 15 44.2	+0.1
	baz=260						
J14K	Nanvaranak Lak	77.28	27	P	P	12 15 44.9	+0.5
	baz=255						
L14K	Kuka Creek	77.33	28	P	P	12 15 44.9	+0.3
	baz=256						
N14K	Kuskokwak Cree	77.49	30	P	P	12 15 45.9	+0.3
	baz=258						
O14K	Tigyukauivet M	77.56	30	P	P	12 15 46.2	+0.2
	baz=258						
CHNA	Chernabura Isl	77.62	35	P	P	12 15 46.5	+0.1
	baz=260						
F15K	North Star Dit	77.62	23	P	P	12 15 46.7	+0.4
	baz=254						
G15K	Niukluk	77.67	24	P	P	12 15 46.6	+0.1
	baz=254						
S14K	Fog Glacier	77.89	33	P	P	12 15 47.6	-0.5
	baz=260						
L15K	Ungalak Mounta	77.97	28	P	P	12 15 48.3	+0.1
	baz=257						
K15K	Wolf Creek Mou	78.09	27	P	P	12 15 49.0	+0.1
	baz=257						
C16K	Lisburne Hills	78.12	21	P	P	12 15 49.2	+0.3
	baz=252						
M15K	Kasigluk River	78.14	29	P	P	12 15 49.4	+0.2
	baz=258						
O15K	Ungalikthiuk R	78.27	31	P	P	12 15 50.3	+0.4
	baz=259						
N15K	Kwethluk River	78.32	29	P	P	12 15 50.4	+0.2
	baz=259						
H16K	Elim	78.32	25	P	P	12 15 50.8	+0.6
	baz=256						
G16K	Koyuk River	78.46	24	P	P	12 15 51.5	+0.6
	baz=256						
J16K	Anvik River	78.72	26	P	P	12 15 52.9	+0.5
	baz=258						
D17K	Noatak River	78.77	22	P	P	12 15 53.3	+0.7
	baz=255						
I17K	Unalakleet	78.81	26	P	P	12 15 53.7	+0.9
	baz=258						
L16K	Owhat River	78.91	28	P	P	12 15 54.0	+0.5

	baz=259						
RDOG	Red Dog Mine	78.93	21	P	P	12 15 53.8	+0.4
	baz=255						
C17K	DeLong Mountai	78.95	21	P	P	12 15 54.0	+0.5
	baz=254						
N16K	Nishlik Lake	79.03	29	P	P	12 15 54.7	+0.5
	baz=260						
M16K	Timber Creek	79.03	29	P	P	12 15 54.5	+0.3
	baz=260						
E17K	Hotham Inlet	79.09	22	P	P	12 15 54.8	+0.5
	baz=256						
F17K	Baldwin Pennin	79.16	23	P	P	12 15 55.4	+0.7
	baz=257						
P16K	Nushagak River	79.17	31	P	P	12 15 55.5	+0.6
	baz=261						
G17K	Kiwalik Mounta	79.18	24	P	P	12 15 55.3	+0.4
	baz=257						
O16K	Kokwok River B	79.21	30	P	P	12 15 55.7	+0.6
	baz=261						
H17K	Granite Mounta	79.36	25	P	P	12 15 56.3	+0.4
	baz=258						
J17K	VABM Dome	79.42	26	P	P	12 15 56.3	+0.2
	baz=259						
L17K	Donlin	79.54	28	P	P	12 15 57.1	+0.2
	baz=260						
E18K	Tukpahlearik C	79.63	22	P	P	12 15 56.7	-0.6
E18K				IAmb	IAmb	12 16 01.9	
	comp=Z,3.6nm,0.7s						
E18K	Tukpahlearik C	79.63	22	P	P	12 15 57.8	+0.6
	baz=257						
K17K	Iditarod	79.64	27	P	P	12 15 57.1	-0.3
K17K	Iditarod	79.64	27	P	P	12 15 58.2	+0.8
	baz=260						
C18K	Utukok River	79.70	21	P	P	12 15 57.9	+0.1
	baz=256						
O17K	Koliganek Bris	79.74	30	P	P	12 15 58.3	+0.3
	baz=262						
N17K	Nushagak Hills	79.81	29	P	P	12 15 58.8	+0.4
	baz=261						
Q16K	King Salmon	79.81	31	P	P	12 15 58.6	+0.3
	baz=262						
F18K	Selawik	79.81	23	P	P	12 15 58.6	+0.4
	baz=258						
M17K	Holitna River	79.82	28	P	P	12 15 58.7	+0.3
	baz=261						
R17L	Mt. Peulik Vol	79.82	32	P	P	12 15 58.9	+0.3
	baz=263						
CHIR	Chirikof Islan	80.01	34	P	P	12 15 59.8	+0.2
	baz=264						
H18K	Honhosa River	80.05	25	P	P	12 15 59.6	0.0
	baz=260						
G18K	Tagagawik	80.07	24	P	P	12 15 59.5	-0.2
	baz=259						
A19K	Wainwright	80.11	19	P	P	12 16 00.3	+0.5
	baz=256						
L18K	Granite Mounta	80.30	28	P	P	12 16 00.8	-0.1
	baz=262						
C19K	Lookout Ridge	80.37	21	P	P	12 16 01.4	+0.1
C19K				IAmb	IAmb	12 16 02.9	
	comp=Z,6.2nm,1.0s						
C19K	Lookout Ridge	80.37	21	P	P	12 16 01.6	+0.2
	baz=258						
N18K	Kilae Creek	80.46	29	P	P	12 16 02.1	+0.1
	baz=262						
J18K	Innoko River	80.47	26	P	P	12 16 02.0	+0.1
	baz=261						
F19K	Shaleruckik Mo	80.59	23	P	P	12 16 03.0	+0.5
	baz=260						
M18K	Stony River	80.60	28	P	P	12 16 03.1	+0.5
	baz=262						
GCSA	Galena City Sc	80.60	25	P	P	12 16 03.0	+0.5
	baz=261						
P18K	Big Mountain,	80.63	31	P	P	12 16 03.0	+0.2
	baz=263						
O18K	Koktuh Hills	80.69	30	P	P	12 16 03.5	+0.3
	baz=263						
G19K	Purcell Mounta	80.74	24	P	P	12 16 03.5	+0.2
G19K				IAmb	IAmb	12 16 04.9	
	comp=Z,6.3nm,0.8s						
G19K	Purcell Mounta	80.74	24	P	P	12 16 03.8	+0.5
	baz=260						
D19K	Kuna River	80.77	21	P	P	12 16 03.3	-0.2
D19K				IAmb	IAmb	12 16 04.0	
	comp=Z,4.9nm,0.6s						
D19K	Kuna River	80.77	21	P	P	12 16 03.9	+0.5
	baz=259						
H19K	Roundabout Mou	80.90	24	P	P	12 16 04.5	+0.4
	baz=261						
E19K	Redstone River	80.91	22	P	P	12 16 04.6	+0.4
	baz=260						
J19K	Poorman	81.03	26	P	P	12 16 05.4	+0.5
	baz=262						
L19K	White Mountain	81.14	28	P	P	12 16 06.0	+0.5
	baz=263						
N19K	Bonanza Creek	81.16	29	P	P	12 16 06.2	+0.5
	baz=264						
O19K	Port Alsworth	81.18	30	P	P	12 16 06.1	+0.4
	baz=264						
D20K	Etivluk River	81.35	21	P	P	12 16 07.1	+0.6
	baz=260						
B20K	Meade River	81.38	20	P	P	12 16 06.5	-0.1
B20K				IAmb	IAmb	12 16 08.4	
	comp=Z,8.4nm,1.0s						
B20K	Meade River	81.38	20	P	P	12 16 07.4	+0.8
	baz=260						
Q19K	Cape Douglas,	81.39	31	P	P	12 16 07.4	+0.4
	baz=265						
OHAK	Old Harbor	81.43	33	P	P	12 16 07.7	+0.6
	baz=265						
H20K	Anotleneega Mo	81.55	25	P	P	12 16 08.2	+0.6
	baz=263						
I20K	Naaghedeneel	81.63	25	P	P	12 16 08.7	+0.7
	baz=263						
K20K	Telida	81.64	27	P	P	12 16 09.0	+0.8
	baz=264						
P19K	Oil Pt	81.67	30	P	P	12 16 08.9	+0.5
	baz=265						
J20K	Nowinta River	81.70	26	P	P	12 16 09.0	+0.6
	baz=264						
A21K	Barrow	81.79	19	P	P	12 16 09.0	+0.3
	baz=260,SNR=5.1						
KDAK	Kodiak Island	81.86	32	P	P	12 16 09.4	+0.1
	baz=266						
M20K	Styx River	81.92	28	P	P	12 16 10.3	+0.6
	baz=265						
O20K	Slope Mountain	82.01	30	P	P	12 16 10.3	+0.1
	baz=265						
Q20K	Shuyak Island	82.02	32	P	P	12 16 10.4	+0.2
	baz=266						
C21K	Knifeblade Rid	82.07	21	P	P	12 16 11.0	+0.7
	baz=262						
B21K	Ikpikpuk River	82.20	20	P	P	12 16 11.4	+0.5
	baz=262						
G21K	Allakaket	82.23	24	P	P	12 16 11.6	+0.4
	baz=264						
A22K	Sinclair Lake	82.27	19	P	P	12 16 12.0	+0.8
	baz=262						
E21K	Killik River	82.27	22	P	P	12 16 11.9	+0.5
	baz=263						
SPCR	Spurr Chakacha	82.30	29	P	P	12 16 12.1	+0.3
	baz=266						
F21K	Alatna River	82.31	23	P	P	12 16 12.3	+0.7
	baz=264						
H21K	Melozitna Rive	82.42	24	P	P	12 16 12.7	+0.5
	baz=264						
PPLA	Purkeypile	82.45	27	P	P	12 16 12.8	+0.3
	baz=265						
CHUM	Lake Minchumin	82.47	26	P	P	12 16 13.1	+0.6
	baz=265						
SKT	Skwentna	82.68	28	P	P	12 16 13.9	+0.2
	baz=266						
B22K	Teshekpuk Lake	82.69	20	P	P	12 16 14.0	+0.5
	baz=263						
I21K	Tanana	82.72	25	P	P	12 16 14.5	+0.7
	baz=265						
D22K	Ayikyak River	82.79	21	P	P	12 16 14.8	+0.7
	baz=264						
BRSE	Bradley Lake S	82.94	30	P	P	12 16 14.9	-0.1
	baz=267						
SUA	Susitna One	83.02	29	P	P	12 16 15.5	-0.1
	baz=267,SNR=5.8						
H22K	Ishtalitna Cre	83.03	24	P	P	12 16 16.1	+0.7
	baz=266						
E22K	Anaktuvuk Pass	83.04	22	P	P	12 16 16.1	+0.7
	baz=265						
BPAW	Bear Paw Mtn.	83.07	26	P	P	12 16 15.8	+0.2
	baz=266						
L22K	Petersville	83.07	28		P	12 16 15.7	0.0
CUT	Chulitna	83.30	28	P	P	12 16 17.0	+0.2
	baz=267						
M22K	Willow	83.34	28	P	P	12 16 16.9	-0.1
	baz=267,SNR=6.7						
TRF	Thorofare Moun	83.34	27	P	P	12 16 17.1	-0.1
	baz=267						
O22K	Cooper Landing	83.48	30	P	P	12 16 17.6	-0.1
	baz=268						
RC01	Rabbit Creek A	83.49	29	P	P	12 16 17.6	-0.2
	baz=268						
D23K	Nanushuk River	83.52	21	P	P	12 16 18.4	+0.6
	baz=266						
COLD	Coldfoot	83.59	23	P	P	12 16 19.1	+0.9
	baz=267,SNR=9.1						
SEW	Seward	83.60	30	P	P	12 16 18.7	+0.4
	baz=268						
C23K	Itkillik River	83.60	20	P	P	12 16 18.9	+0.6
	baz=266						
G23K	Bananza Creek	83.63	23	P	P	12 16 19.1	+0.6
	baz=267						
PMR	Palmer	83.80	29	P	P	12 16 19.5	+0.2
	baz=268						
I23K	Minto, Yukon-K	83.83	25	P	P	12 16 20.2	+0.8
	baz=268,SNR=7.2						
E23K	Chandalar	83.86	22	P	P	12 16 20.5	+0.8
	baz=267,SNR=11						
TOLK	Toolik Lake Re	83.90	22	P	P	12 16 20.5	+0.7
	baz=267						
NEA2	Nenana	83.93	26	P	P	12 16 20.4	+0.4
	baz=268						
MCK	McKinley	83.96	26		P	12 16 19.9	-0.3
MCK	McKinley	83.96	26	P	P	12 16 19.9	-0.3
	baz=268,SNR=6.6						
WAT1	Susitna Watana	84.11	27	P	P	12 16 21.0	0.0
	baz=269						
KNK	Knik Glacier	84.12	29	P	P	12 16 20.9	-0.2
	baz=269						
PWL	Port Wells	84.17	29	P	P	12 16 21.3	0.0
	baz=269,SNR=5.6						
SML	Sawmill	84.19	28	P	P	12 16 21.4	-0.1
	baz=269						
D24K	Happy Valley	84.20	21	P	P	12 16 21.9	+0.6
	baz=268,SNR=9.0						
C24K	Franklin Bluff	84.26	20	P	P	12 16 22.4	+0.8
	baz=268						
E24K	Your Creek	84.28	22	P	P	12 16 22.5	+0.6
	baz=268						
H24K	Noodor Dome	84.46	24	P	P	12 16 23.4	+0.7
	baz=269						
CCB	Clear Creek Bu	84.47	26		P	12 16 21.7	-1.1
CCB				IAmb	IAmb	12 16 23.2	
	comp=Z,7.1nm,1.1s						
M23K	Glacier View	84.48	28	P	P	12 16 22.9	+0.1
	baz=270						
WAT6	Susitna Watana	84.48	28	P	P	12 16 23.2	+0.1
	baz=269						
F24K	Squaw Lake	84.49	23	P	P	12 16 23.7	+0.8
	baz=269						
VNDA	Vanda	84.50	173	P	P	12 16 22.2	-0.4
	comp=Z,1.2nm,0.7s,baz=308,slow=4.3,SNR=7.3						
	comp=Z,1.2nm,0.7s						
VNDA	Vanda	84.50	173	P	P	12 16 22.0	-0.7
VNDA				IAmb	IAmb	12 16 33.2	
	comp=Z,5.0nm,1.1s						
P23K	Montague Islan	84.63	30	P	P	12 16 24.2	+0.5
	baz=270						
POKR	Poker Plat Res	84.64	25	P	P	12 16 24.0	+0.4
	baz=269						
G24K	Hadweenzic Riv	84.64	24	P	P	12 16 24.2	+0.6
	baz=269						
DHY	Denali Highway	84.65	27	P	P	12 16 24.4	+0.5
	baz=270						
SCM	Sheep Creek Mo	84.67	28	P	P	12 16 23.9	0.0
	baz=270						
HDA	Harding Lake	84.84	26	P	P	12 16 24.2	-0.5
	baz=270,SNR=6.1						
ILAR	Eielson Array	84.87	25	P	P	12 16 23.4	-1.4
	comp=Z,2.0nm,0.5s,baz=252,slow=5.2,SNR=37						
	comp=Z,2.0nm,0.5s						
ILAR	Eielson Array	84.87	25	P	P	12 16 23.5	-1.3
D25K	Kavik River	85.07	21	P	P	12 16 26.2	+0.4
	baz=270						
Q23K	Middleton Isla	85.16	31	P	P	12 16 26.5	+0.2
	baz=271						
G25K	Bearman Lake	85.19	23	P	P	12 16 26.6	+0.3
	baz=270						
M24K	Tolsona, Glenn	85.21	28	P	P	12 16 27.0	+0.4
	baz=271						
KLU	Klutina	85.34	29	P	P	12 16 27.5	+0.2
KLU	Klutina	85.34	29	P	P	12 16 27.5	+0.2
	baz=271						
F25K	Christian Rive	85.36	23	P	P	12 16 27.8	+0.5
	baz=271						
K24K	Donnelly Dome	85.36	26	P	P	12 16 27.9	+0.6
	baz=271						
E25K	Arctic Village	85.38	22	P	P	12 16 28.1	+0.8
	baz=271						
PRP	Porcupine Dome	85.44	25	P	P	12 16 28.2	+0.4
	baz=271						
EYAK	Cordova Ski Ar	85.44	30	P	P	12 16 27.7	0.0
	baz=271						
PAX	Paxson	85.52	27	P	P	12 16 28.1	-0.1
	baz=271						
J25K	Salcha River,	85.53	26	P	P	12 16 28.1	-0.1
	baz=271						
C26K	Camden Bay	85.58	20	P	P	12 16 28.5	+0.3
	baz=271						
HARP	HAARP	85.68	28	P	P	12 16 29.0	+0.1
	baz=272						
BMAR	Burnt Mountain	85.77	23	P	P	12 16 29.9	+0.7
RIDG	Independent Ri	85.78	26	P	P	12 16 29.6	+0.2
	baz=272						
F26K	Sheenjek River	85.93	22	P	P	12 16 30.8	+0.7
	baz=272						
N25K	Chitina, Valde	85.97	29	P	P	12 16 30.6	+0.2
	baz=272						
G26K	Porcupine Rive	86.10	23	P	P	12 16 31.2	+0.4
	baz=273						
KAIM	Kayak Island	86.13	30	P	P	12 16 31.1	0.0
	baz=273						
SCRK	Sand Creek	86.15	26	P	P	12 16 31.0	-0.3
	baz=273						
J26L	Joseph Creek	86.31	26	P	P	12 16 31.9	-0.2
	baz=273						
I26K	Coal Creek Min	86.44	25	P	P	12 16 32.6	+0.1
	baz=273						
L26K	Log Cabin Wild	86.48	27	P	P	12 16 33.0	+0.1
	baz=273						
M26K	Nabesna, AK	86.68	28	P	P	12 16 33.8	-0.1
	baz=274						
MCARA	McCarthy VSAT	86.74	29	P	P	12 16 34.2	+0.1
	baz=274						
CRQE	Cirque	86.74	29	P	P	12 16 34.3	0.0
	baz=274						
E27K	Coleen River	86.86	22	P	P	12 16 35.2	+0.6
	baz=275						
G27K	Doyon Strip	86.95	23	P	P	12 16 35.7	+0.6
	baz=275						
D27M	Malcolm River	87.00	21	P	P	12 16 35.8	+0.5
	baz=275						
H27K	Steamboat Moun	87.04	24	P	P	12 16 36.1	+0.6
	baz=275						
I27K	Kandik River	87.06	25	P	P	12 16 35.8	+0.1
	baz=275						
L27K	Beaver Creek,	87.17	27	P	P	12 16 36.2	-0.1
	baz=275						
M27K	Edge Creek, AK	87.21	28	P	P	12 16 36.1	-0.4
	baz=275						
F28M	Old Crow	87.56	22	P	P	12 16 37.9	-0.1
	baz=276						
E28M	Babbage River	87.58	21	P	P	12 16 38.0	-0.1
	baz=276						
CTG	Chitna Glacier	87.58	29	P	P	12 16 38.1	-0.3
	baz=275						
BVCY	Beaver Creek	87.67	28	P	P	12 16 38.4	-0.3
	baz=276						
I28M	Miner Creek	87.77	25	P	P	12 16 39.4	+0.2
	baz=276						
D28M	Stokes Point	87.78	21	P	P	12 16 39.3	+0.4
	baz=277						
DAWY	Dawson	88.16	26	P	P	12 16 41.0	0.0
	baz=277						
O28M	Mount Upton	88.16	29	P	P	12 16 40.9	-0.5
	baz=276						
PINM	Pinnacle	88.20	30	P	P	12 16 41.0	-0.3
	baz=276						
E29M	Blow River	88.20	22	P	P	12 16 40.7	-0.3
	baz=278						
H29M	Whitestone	88.32	24	P	P	12 16 41.5	-0.2
	baz=278						
G29M	Pine Creek	88.36	23	P	P	12 16 41.5	-0.4
	baz=278						
BRTR	Keskin Array B	88.39	310	LR	LR	13 00 44.2	
	comp=Z,7.7nm,20.7s,baz=7.5,slow=39						
I29M	Ogilvie Camp,	88.46	25	P	P	12 16 42.6	+0.2
	baz=278						
M29M	Somme Creek	88.78	28	P	P	12 16 44.1	+0.1
	baz=278						
YUK4	Talbot Arm	88.84	29	P	P	12 16 44.4	0.0
	baz=278						
L29M	L29M	88.84	27	P	P	12 16 43.7	-0.5
	baz=278						
EPYK	Eagle Plains	88.96	24	P	P	12 16 44.4	-0.3
	baz=279						
K29M	Barlow Dome	89.01	26	P	P	12 16 44.8	-0.3
	baz=278						
O29M	Mount Kennedy	89.01	30	P	P	12 16 45.0	-0.2
	baz=278						
YUK6	Outpost Mounta	89.03	29	P	P	12 16 44.8	-0.6
	baz=278						
F30M	Barrier River	89.11	22	P	P	12 16 45.1	-0.3
	baz=280						
ARCES	ARCESS Array B	89.12	340	P	P	12 16 43.5	-1.9
	comp=Z,8.4nm,1.0s,baz=77,slow=5.0,SNR=2.4						
	comp=Z,8.4nm,1.0s						
I30M	Mount Dempster	89.28	25	P	P	12 16 45.9	-0.5
	baz=280						
SPITS	Spitsbergen Ar	89.32	349	P	P	12 16 44.6	-1.6
	comp=Z,15nm,1.1s,baz=78,slow=8.0,SNR=1.8						
SPITS				LR	LR	13 00 51.1	
	comp=Z,49nm,18.5s,baz=94,slow=38						
	comp=Z,15nm,1.1s						
J30M	Hart River	89.41	25	P	P	12 16 46.9	0.0
	baz=280						
HYT	Haines Junctio	89.46	29	P	P	12 16 46.9	-0.3
	baz=278						
P29M	Windy Craggy	89.52	30	P	P	12 16 47.3	-0.1
	baz=278						
M30M	Minto, Yukon	89.53	27	P	P	12 16 47.2	-0.2
	baz=279						
N30M	Aishikik Lake	89.56	28	P	P	12 16 47.4	-0.2
	baz=279						
MAYO	Mayo, Yukon	89.76	26	P	P	12 16 48.3	-0.1
	baz=280						
INK	Inuvik	89.82	21	P	P	12 16 48.6	0.0
	baz=282						
G31M	Satah River	89.82	23	P	P	12 16 48.4	-0.2
	baz=281						
F31M	Tsiigehtchic	89.92	22	P	P	12 16 48.2	-0.8
	baz=282						
N31M	Braeburn, Yuko	90.18	28	P	P	12 16 50.5	0.0
	baz=280						
FINES	FINESS Array B	90.38	332	P	P	12 16 49.7	-1.6
	comp=Z,4.7nm,1.1s,baz=77,slow=5.8,SNR=4.1						
	comp=Z,4.7nm,1.1s						
S31K	Pelican	90.55	32	P	P	12 16 52.7	+0.5
	baz=280						
WHY	Whitehorse	90.76	29	P	P	12 16 53.3	0.0
	baz=281						
N32M	Quiet Lake	91.52	28	P	P	12 16 56.8	+0.1
	baz=282						
LSZ	Lusaka	98.11	255	LR	LR	12 56 05.4	
	comp=Z,25nm,20.6s,baz=154,slow=32						
YKA	Yellowknife Ar	99.23	24	P	Pdif	12 17 30.6	-1.2
	comp=Z,0.6nm,0.8s,baz=299,slow=5.7,SNR=9.4						
	comp=Z,0.6nm,0.8s						
TORD	Torodi Ar. Bea	121.33	288	PKP	PKPdf	12 22 43.3	-1.3
	comp=Z,0.4nm,0.6s,baz=95,slow=1.5,SNR=2.8						
TXAR	Lajitas Array	122.11	51	PKP	PKPdf	12 22 45.1	-0.7
	comp=Z,0.3nm,0.6s,baz=245,slow=0.9,SNR=6.2						

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*NEIC **29** 12:17:14.3±1.2, 18°.3S±0°.1×172°.25W±0°.08, h10^{km}±1^{km}, mb4.2/9, Error ellipse: s-maj=18.9km s-min=11.0km az=23.0*

*IDC **29** 12:17:16.9±1.4, 18°.61S×172°.88W, h0^{km}, mb4.0/5, mbtmp4.1/6, ML3.4/1, Error ellipse: s-maj=55.7km s-min=26.8km az=140.0*

ISC 29 12:17:17.3±0.8**, 18°.4S**±0°.1×**172°.3W**±0°.1**, h41^{km}, n26, σ1^{s}11**/19**, mb4.1**/9**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	2.33	108		Pn	12 17 52.3	-0.8
AFI	Afiamalu	4.44	6	Pn	Pn	12 18 21.1	-1.2
DZM	Mont Dzumac	20.32	256	P	P	12 21 48.0	-2.1
	0.1nm,0.3s,baz=69,slow=7.0,SNR=2.1						
	10nm,0.9s						
DZM	Mont Dzumac	20.32	256	P	P	12 21 48.6	-1.6
DZM				IAmb	IAmb	12 22 11.5	
	comp=Z,18nm,1.0s						
URZ	Urewera	21.90	203	P	P	12 22 06.7	-0.1
	comp=Z,5.2nm,0.7s,baz=52,slow=12,SNR=6.7						
	comp=Z,5.2nm,0.7s						
TOZ	Tahuroa Road	22.08	207	P	P	12 22 08.2	-0.6
CTAO	Charters Tower	39.14	261	P	P	12 24 41.6	+0.3
CTAO				IAmb	IAmb	12 25 08.3	
	comp=Z,5.8nm,0.9s						
STKA	Stephens Creek	43.59	243	P	P	12 25 17.5	-0.1
	comp=Z,2.4nm,0.9s,baz=107,slow=11,SNR=3.8						
	comp=Z,2.4nm,0.9s						
WR8	Warramunga Arr	50.14	259	P	P	12 26 09.9	+0.8
WR8				IAmb	IAmb	12 26 27.2	
	comp=Z,3.5nm,1.1s						
WRA	Warramunga Arr	50.29	259	P	P	12 26 10.6	+0.3
	comp=Z,3.0nm,0.8s,baz=96,slow=6.3,SNR=22						
	comp=Z,3.0nm,0.8s						
WRA	Warramunga Arr	50.29	259	P	P	12 26 10.5	+0.3
AS31	Alice Springs	50.30	254	P	P	12 26 10.8	+0.6
AS31				IAmb	IAmb	12 26 12.1	
	comp=Z,1.3nm,0.8s						
ASAR	Alice Springs	50.30	254	P	P	12 26 11.1	+0.8
	comp=Z,4.0nm,0.7s,baz=87,slow=8.4,SNR=69						
	comp=Z,4.0nm,0.7s						
ASAR	Alice Springs	50.30	254	P	P	12 26 10.8	+0.6
MTN	Manton Dam	54.62	267	P	P	12 26 43.5	+1.2
KNRA	Kununurra	56.25	263	P	P	12 26 55.9	+1.9
LRMC	Laurel Mtn Rad	74.43	44	P	P	12 28 51.8	+0.3
LRMC				IAmb	IAmb	12 29 11.9	
	comp=Z,1.9nm,1.2s						
H03S2	Juan Fernandez	82.68	123	T	T	14 00 33.8	
	baz=250,slow=75,SNR=12						
H03S1	Juan Fernandez	82.69	123	T	T	14 00 34.8	
	baz=250,slow=75,SNR=11						
H03S3	Juan Fernandez	82.69	123	T	T	14 00 33.4	
	baz=250,slow=75,SNR=11						
H03N2	Juan Fernandez	82.79	123	T	T	14 00 35.4	
	baz=252						
H03N3	Juan Fernandez	82.79	123	T	T	14 00 37.3	
	baz=252						
H03N1	Juan Fernandez	82.81	123	T	T	14 00 37.3	
	baz=252						
PDAR	Pinedale Array	83.74	41	P	P	12 29 51.1	+8.7
	comp=Z,0.2nm,0.7s,baz=241,slow=9.7,SNR=3.4						
	comp=Z,0.2nm,0.7s						
BRTR	Keskin Array B	149.11	319	PKPbc	PKPab	12 37 07.0	+1.0
	comp=Z,0.8nm,0.8s,baz=44,slow=4.6,SNR=3.0						
GERES	GERESS Array B	149.20	352	PKPbc	PKPab	12 37 07.2	+1.2
	comp=Z,1.0nm,1.1s,baz=354,slow=1.0,SNR=3.7						

DJA 29 12:45:38.8±0.4**, 9°S**±3°×**12°4E**±°**, h102^{km}**±4^{km}**, M3.5**/12**, mb3.5**/6**, MLv3.5**/12**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	0.99	187	P	Pn	12 46 00.3	+0.9
SOEI				S	Sn	12 46 15.3	+0.4
BATI	Baumata	1.60	207	P	Pn	12 46 06.9	+0.5
BATI				S	Sn	12 46 27.7	+0.3
MMRI	Maumere	2.13	273	P	Pn	12 46 13.2	0.0
EDFI	Ende, Flores	2.67	270	P	Pn	12 46 21.3	+1.0
BASI	Baing, Sumba	4.03	249	P	Pn	12 46 37.8	-0.6
WSI	Waingapu	4.14	257	P	Pn	12 46 39.8	-0.1
WBSI	Waikabubak, Su	5.01	260	P	Pn	12 46 49.7	-2.1
DBNI	Kabupaten Domp	6.02	272	P	Pn	12 47 05.7	+0.3
	0.0nm9.8nm,1.6s						
PLAI	Plampang	6.54	269	P	Pn	12 47 12.7	+0.3
	0.1nm13nm,1.0s						
TWSI	Taliwang, Sumb	7.42	270	P	Pn	12 47 23.8	-0.7
	0.1nm7.0nm,1.5s						

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*IDC **29** 13:08:42.5±2.4, 5°.82S×130°.57E, h0^{km}, mb3.8/1,* *mbtmp3.5/4, ML3.4/3, Error ellipse: s-maj=113.3km s-min=27.3km az=77.0*

*NEIC **29** 13:08:55.9±1.7, 6°.25S±0°.08×130°.5E±0°.1, h125km±15km, mb4.1/1, Error ellipse: s-maj=21.5km s-min=11.8km az=95.0*

*DJA **29** 13:08:57.0±0.2, 6°S±3°×13°1E±°, h138km±6km, M4.0/13, mb3.9/10, mB5.2/1, MLv4.1/13, Mw(mB)4.6/1*

ISC 29 13:08:55.4±0.8**, 6°.32S**±0°.06×**130°.56E**±0°.09**, h125**km**, n27, σ1s.98**/29**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.81	156	Pn	Pn	13 09 29.0	+2.1
SAUI	Saumlaki	1.81	156	P	Pn	13 09 30.7	+3.8
BNDI	Bandanaira	1.90	340	P	Pn	13 09 28.9	+1.0
BNDI				S	Sn	13 09 53.3	+0.6
MSAI	Masohi	3.37	331	P	Pn	13 09 47.9	+1.1
KRAI	Karang Ratu	3.68	324	P	Pn	13 09 53.5	+2.7
FAKI	Fak Fak	3.77	27	Pn	Pn	13 09 51.8	-0.3
FAKI	Fak Fak	3.77	27	P	Pn	13 09 51.6	-0.5
KMPI	Kaimana, Papua	4.10	50	P	Pn	13 09 57.5	+1.1
NLAI	Namlea	4.61	311	P	Pn	13 10 03.6	+0.4
SIJI	Sorong	5.46	7	P	Pn	13 10 13.5	-1.2
SWI	Sorong	5.46	7	P	Pn	13 10 13.6	-1.1
	0.2nm9.2nm,0.7s						
SANI	Sanana	6.22	313	P	Pn	13 10 26.3	+1.3
	0.1nm6.7nm,1.0s						
MTN	Manton Dam	6.51	175	Pn	Pn	13 10 30.1	+1.3
SOEI	Soe	7.10	241	Pn	Pn	13 10 36.8	-0.2
SOEI	Soe	7.10	241	P	Pn	13 10 39.3	+2.4
	0.1nm21nm,1.6s						
KNRA	Kununurra	9.47	191	Pn	Pn	13 11 09.0	+0.3
WBSI	Waikabubak, Su	11.54	253	P	Pn	13 11 38.8	+2.2
	37nm,1.1s						
FITZ	Fitzroy Crossi	12.65	202	Pn	Pn	13 11 50.0	-1.1
	0.4nm,0.3s,baz=26,slow=10,SNR=25						
FITZ				Sn	Sn	13 14 02.1	-8.4
	0.5nm,0.3s,baz=56,slow=15,SNR=6.2						
	1.4nm,0.4s						
WB0	Warramunga Arr	13.88	165	Pn	Pn	13 12 06.5	-0.4
WRA	Warramunga Arr	14.03	165	Pn	Pn	13 12 09.2	+0.3
	0.2nm,0.3s,baz=346,slow=14,SNR=14						
WRA				Sn	Sn	13 14 35.8	-8.2
	0.6nm,0.3s,baz=344,slow=21,SNR=9.4						
	0.3nm,0.5s						
WRA	Warramunga Arr	14.03	165		Pn	13 12 08.0	-0.9
WR8	Warramunga Arr	14.09	165	Pn	Pn	13 12 10.0	+0.4
COEN	Coen	14.55	122	P	P	13 12 18.9	+0.4
ASAR	Alice Springs	17.55	170	P	Pn	13 12 54.8	+2.5
	0.1nm,0.3s,baz=347,slow=10,SNR=9.6						
ASAR				S	S	13 16 01.2	-6.7
	0.3nm,0.5s,baz=354,slow=23,SNR=6.3						
	0.2nm,0.4s						
ASAR	Alice Springs	17.55	170	P	P	13 12 50.9	-0.8
MKAR	Makanchi Array	67.96	326	P	P	13 19 40.9	0.0
	0.6nm,0.5s,baz=121,slow=7.8,SNR=11						
	0.6nm,0.5s						
MAKZ	Makanchi	68.14	326	P	P	13 19 42.0	-0.1
MAKZ				IAmb	IAmb	13 20 01.4	
	comp=Z,4.1nm,1.4s						

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*IDC **29** 13:13:26.7±0.7, 18°.36N×145°.67E, h219km±7km, mb3.8/18, mbtmp4.3/21, Error ellipse: s-maj=15.7km s-min=7.6km az=97.0*

*NEIC **29** 13:13:28.1±0.8, 18°.36N±0°.08×145°.70E±0°.05, h222km±6km, mb4.4/79, Error ellipse: s-maj=11.6km s-min=7.1km az=173.0*

ISC 29 13:13:27.4±0.4**, 18°.35N**±0°.05×**145°.65E**±0°.09**, h222**km**, n114, σ0s.65**/120**, mb4.3**/56**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DPSS	Saipan	3.09	177	Pn	Pn	13 14 19.0	-0.3
GUMO	Guam	4.79	189	P	Pn	13 14 40.1	+0.2
	33nm,0.3s,baz=23,slow=13,SNR=9.0						
GUMO				S	S	13 15 35.3	-1.6
	82nm,0.4s,baz=6.0,slow=19,SNR=2.3						
GUMO	Guam	4.79	189		Pn	13 14 40.0	+0.2
JOW	Kunigami	18.11	301	P	P	13 17 22.1	-1.0
	19nm,1.0s,baz=108,slow=14,SNR=4.1						
JOW	Kunigami	18.11	301	P	P	13 17 23.3	+0.2
INU	Inuyama	18.59	337	P	P	13 17 28.2	+0.1
JGF	Kuroka	18.69	338	P	P	13 17 29.2	0.0
JGF				IAmb	IAmb	13 18 01.4	
	comp=Z,11nm,1.1s						
MJAR	Matsushiro Arr	19.28	342	P	P	13 17 36.6	+1.1
	comp=Z,2.0nm,0.5s,baz=168,slow=9.8,SNR=11						
MJAR	Matsushiro Arr	19.28	342	P	P	13 17 35.7	+0.2
MAJO	Matsushiro	19.28	342	P	P	13 17 35.9	+0.3
MAJO				IAmb	IAmb	13 17 37.9	
	comp=Z,5.5nm,0.7s						
MJB9	Matsu-Tunnel	19.28	342	P	P	13 17 36.1	+0.5
MANU	Manus Island	20.33	175	P	P	13 17 46.9	-0.1
JSD	Sado	20.66	343	P	P	13 17 50.5	+0.3
JSD				IAmb	IAmb	13 18 16.3	
	comp=Z,8.7nm,1.1s						
YHNB	Yeheng	23.43	290	P	P	13 18 17.6	+0.7
FAKI	Fak Fak	24.91	213	P	P	13 18 30.6	+0.2
FAKI				IAmb	IAmb	13 18 35.3	
	comp=Z,20nm,0.9s						
JKA	Kamikawa-asahi	25.82	355	P	P	13 18 38.8	+0.6
ASAJ	Asahikawa	25.82	355	P	P	13 18 39.1	+0.8
	comp=Z,7.7nm,0.7s,baz=188,slow=14,SNR=9.3						
	comp=Z,7.7nm,0.7s						
PMG	Port Moresby	27.62	177	P	P	13 18 54.5	0.0
	comp=Z,6.2nm,0.6s,baz=27,slow=4.5,SNR=4.3						
	comp=Z,6.2nm,0.6s						
PMG	Port Moresby	27.62	177	P	P	13 18 54.5	0.0
PMG				IAmb	IAmb	13 19 00.8	
	comp=Z,7.4nm,0.8s						
KKM	Kota Kinabalu	31.20	251	P	P	13 19 26.7	+0.4
MTN	Manton Dam	34.14	206	P	P	13 19 51.8	+0.2
BATI	Baumata	35.72	219	P	P	13 20 04.5	-0.7
	comp=Z,12nm,0.5s,baz=14,slow=4.2,SNR=4.0						
	comp=Z,12nm,0.5s						
PEA0B	Petropavlovsk-	35.94	12	P	P	13 20 07.3	+0.7
PETK	Petropavlovsk-	35.94	12	P	P	13 20 04.9	-1.8
	comp=Z,4.1nm,0.7s,baz=193,slow=7.1,SNR=6.1						
	comp=Z,4.1nm,0.7s						
PETK	Petropavlovsk-	35.94	12	P	P	13 20 07.2	+0.5
SBUM	Sibu	36.37	248	P	P	13 20 11.7	+1.0
KNRA	Kununurra	37.68	207	P	P	13 20 22.4	+0.7
KNRA				IAmb	IAmb	13 20 23.0	
	comp=Z,17nm,0.8s						
CTA	Charters Tower	38.20	179	P	P	13 20 26.3	+0.4
	comp=Z,6.4nm,1.1s,baz=9.8,slow=8.3,SNR=2.0						
	comp=Z,6.4nm,1.1s						
CTAO	Charters Tower	38.20	179	P	P	13 20 26.8	+0.8
CTAO				IAmb	IAmb	13 20 48.6	
	comp=Z,15nm,1.4s						
WB0	Warramunga Arr	39.45	197	P	P	13 20 36.8	+0.4
WB0				IAmb	IAmb	13 20 39.8	
	comp=Z,5.6nm,0.5s						
WR8	Warramunga Arr	39.60	197	P	P	13 20 37.9	+0.3
WR8				IAmb	IAmb	13 20 41.7	
	comp=Z,10nm,1.1s						
WRAB	Tennant Creek	39.62	197	P	P	13 20 38.0	+0.2
WRAB				IAmb	IAmb	13 20 39.5	
	comp=Z,13nm,1.2s						
WRA	Warramunga Arr	39.64	197	P	P	13 20 37.8	0.0
	comp=Z,3.2nm,0.5s,baz=17,slow=8.2,SNR=66						
WRA				PcP	PcP	13 22 39.2	-1.0
	comp=Z,0.5nm,0.5s,baz=16,slow=3.2,SNR=3.4						
	comp=Z,3.2nm,0.5s						
WRA	Warramunga Arr	39.64	197	P	P	13 20 37.9	0.0
FITZ	Fitzroy Crossi	41.21	210	P	P	13 20 51.4	+0.6
AS31	Alice Springs	43.30	196	P	P	13 21 07.9	+0.3
ASAR	Alice Springs	43.30	196	P	P	13 21 07.5	-0.1
	comp=Z,1.6nm,0.6s,baz=16,slow=8.9,SNR=40						
ASAR				PP	PcP	13 22 51.6	-0.8
	comp=Z,0.7nm,0.8s,baz=27,slow=8.8,SNR=3.4						
	comp=Z,1.6nm,0.6s						
UGM	Wanagama	43.38	236	P	P	13 21 08.5	+0.1
SONM	Songino Array	43.39	322	P	P	13 21 07.9	-0.2
	comp=Z,0.2nm,0.4s,baz=116,slow=6.6,SNR=1.9						
CMAR	Chiang Mai Arr	44.22	278	P	P	13 21 15.2	+0.2
	comp=Z,0.9nm,0.7s,baz=68,slow=7.8,SNR=6.0						
	comp=Z,0.9nm,0.7s						
SEY	Seymchan	44.79	4	P	P	13 21 19.1	+0.3
	comp=Z,2.5nm,0.9s,baz=198,slow=20,SNR=2.5						
	comp=Z,2.5nm,0.9s						
DZM	Mont Dzumac	45.03	152	P	P	13 21 22.0	+0.7
DZM				IAmb	IAmb	13 21 49.7	
	comp=Z,44nm,1.4s						
KULM	Kulim	45.78	259	P	P	13 21 27.5	+0.1
KULM				IAmb	IAmb	13 21 32.1	
	comp=Z,17nm,1.2s						
INKA	Innaminka	46.06	186		P	13 21 28.7	-0.5
MBWA	Marble Bar	46.76	214	P	P	13 21 34.3	-0.4
MBWA				IAmb	IAmb	13 21 57.9	
	comp=Z,23nm,1.3s						
ARMA	Armidale	48.82	173	P	P	13 21 50.7	+0.2
ARMA				IAmb	IAmb	13 22 13.3	
	comp=Z,12nm,1.2s						
STKA	Stephens Creek	50.09	184	P	P	13 21 59.0	-0.9
	comp=Z,1.3nm,0.6s,baz=357,slow=9.3,SNR=4.1						
	comp=Z,1.3nm,0.6s						
GSI	Gunungsitoli	50.09	256	P	P	13 22 00.5	+0.2
GSI				IAmb	IAmb	13 22 03.5	
	comp=Z,8.8nm,0.7s						
UNV	Unalaska Valle	50.97	34	P	P	13 22 06.2	-0.1
BILL	Bilibino	51.37	10	P	P	13 22 09.4	+0.4
BILL				IAmb	IAmb	13 22 10.1	
	comp=Z,10nm,1.2s						
AKUT	Akutan	51.48	34	P	P	13 22 09.8	-0.3
BBOO	Buckleboo	51.69	190	P	P	13 22 12.0	+0.2
BBOO				IAmb	IAmb	13 22 17.7	
	comp=Z,7.6nm,1.0s						
FORT	Forrest	51.69	199	P	P	13 22 12.6	+0.7
FORT				IAmb	IAmb	13 22 28.1	
	comp=Z,9.9nm,1.1s						
S12K	Black Hills	54.07	34	P	P	13 22 28.8	-0.2
MORW	Morawa	55.13	212	P	P	13 22 37.3	+0.4
MORW				IAmb	IAmb	13 22 45.0	
	comp=Z,26nm,1.3s						
L14K	Kuka Creek	56.08	27	P	P	13 22 43.9	+0.7
L14K				IAmb	IAmb	13 22 44.9	
	comp=Z,26nm,1.4s						
J14K	Nanvaranak Lak	56.35	25	P	P	13 22 45.7	+0.6
J14K				IAmb	IAmb	13 23 13.1	
	comp=Z,15nm,1.2s						
O15K	Ungalikthiuk R	56.49	30	P	P	13 22 46.8	+0.6
N15K	Kwethluk River	56.75	29	P	P	13 22 48.8	+0.8
NWAO	Narrogin (SRO)	57.77	208	P	P	13 22 55.5	+0.1
	comp=Z,7.7nm,0.8s,baz=20,slow=4.0,SNR=1.0						
	comp=Z,7.7nm,0.8s						
J16K	Anvik River	57.80	26	P	P	13 22 56.0	+0.8
ZALV	Zalesovo Beam	58.27	323	P	P	13 22 59.3	+0.6
MKAR	Makanchi Array	58.67	314	P	P	13 23 01.7	+0.1
	comp=Z,0.2nm,0.4s,baz=92,slow=8.4,SNR=2.3						
MKAR				pP	PcP	13 23 50.5	+1.4
	comp=Z,0.2nm,0.5s,baz=92,slow=7.5,SNR=2.0						
N18K	Kilae Creek	58.88	29	P	P	13 23 03.4	+0.6
N19K	Bonanza Creek	59.58	29	P	P	13 23 07.9	+0.2
N19K				IAmb	IAmb	13 23 14.2	
	comp=Z,14nm,1.5s						
C19K	Lookout Ridge	60.75	20	P	P	13 23 16.0	+0.6
C19K				IAmb	IAmb	13 23 17.0	
	comp=Z,5.4nm,0.8s						
D20K	Etivluk River	61.55	21	P	P	13 23 21.1	+0.4
D20K				IAmb	IAmb	13 23 21.6	
	comp=Z,7.4nm,0.5s						
H21K	Melozitna Rive	61.82	24	P	P	13 23 23.1	+0.5
H21K				IAmb	IAmb	13 23 27.0	
	comp=Z,8.9nm,1.4s						
B20K	Meade River	61.92	19	P	P	13 23 23.4	+0.3
B20K				IAmb	IAmb	13 23 24.3	
	comp=Z,5.6nm,0.7s						
GHO	Glory Hole Cre	62.42	29	P	P	13 23 26.4	-0.3
SML	Sawmill	62.70	29	P	P	13 23 28.4	-0.1
MCK	McKinley	62.87	27	P	P	13 23 29.4	-0.2
E22K	Anaktuvuk Pass	62.99	22	P	P	13 23 30.9	+0.6
E22K				IAmb	IAmb	13 23 31.6	
	comp=Z,4.2nm,0.8s						
SCM	Sheep Creek Mo	63.17	29	P	P	13 23 31.7	0.0
B22K	Teshekpuk Lake	63.22	19	P	P	13 23 31.9	+0.2
EYAK	Cordova Ski Ar	63.69	31	P	P	13 23 35.4	+0.4
C23K	Itkillik River	63.95	20	P	P	13 23 36.8	+0.3
C23K				IAmb	IAmb	13 23 37.8	
	comp=Z,9.2nm,1.0s						
ILAR	Eielson Array	63.98	26	P	P	13 23 35.2	-1.7
	comp=Z,1.5nm,0.5s,baz=259,slow=6.2,SNR=29						
ILAR				pP	pP	13 24 27.5	+0.7
	comp=Z,0.6nm,0.7s,baz=256,slow=5.6,SNR=2.5						
	comp=Z,1.5nm,0.5s						
PAX	Paxson	64.24	28	P	P	13 23 38.6	0.0
PAX				IAmb	IAmb	13 23 39.4	
	comp=Z,2.9nm,0.6s						
VRDI	Verde Repeater	64.90	30	P	P	13 23 43.2	+0.2
BMAR	Burnt Mountain	65.46	23	P	P	13 23 47.1	+0.8
GRNC	Granite Creek	65.67	31	P	P	13 23 48.3	+0.3
F26K	Sheenjek River	65.67	23	P	P	13 23 48.3	+0.6
F26K				IAmb	IAmb	13 23 49.1	
	comp=Z,3.1nm,0.7s						
BCAR	Beaver Creek A	65.91	28	P	P	13 23 49.4	0.0
BVAR	Borovoye Array	66.72	321	P	P	13 23 52.8	-1.8
	comp=Z,0.9nm,0.5s,baz=89,slow=7.5,SNR=7.4						
	comp=Z,0.9nm,0.5s						
F28M	Old Crow	67.27	24	P	P	13 23 58.3	+0.4
G31M	Satah River	69.39	25	P	P	13 24 10.8	-0.1
G31M				IAmb	IAmb	13 24 11.5	
	comp=Z,6.0nm,0.7s						
A36M	Sachs Harbour	72.43	19	P	P	13 24 29.0	0.0
A36M				IAmb	IAmb	13 24 29.7	
	comp=Z,5.4nm,0.8s						
ABKAR	Akbulak array	73.56	317	P	P	13 24 35.2	-0.9
WRGLY	Wrigley	74.20	28	P	P	13 24 40.1	+0.6
WRGLY				IAmb	IAmb	13 24 40.4	
	comp=Z,4.4nm,0.7s						
YKAW3	Yellowknife Wh	78.30	28	P	P	13 25 02.3	-0.3
YKA	Yellowknife Ar	78.32	28	P	P	13 25 02.2	-0.5
	comp=Z,1.2nm,0.7s,baz=290,slow=6.4,SNR=20						
YKA				pP	pP	13 25 53.6	-1.0
	comp=Z,0.2nm,0.8s,baz=282,slow=5.6,SNR=2.2						
	comp=Z,1.2nm,0.7s						
YKA	Yellowknife Ar	78.32	28	P	P	13 25 02.1	-0.6
WIFE	Three Sisters-	79.25	47	P	P	13 25 08.4	0.0
WIFE				IAmb	IAmb	13 25 10.0	
	comp=Z,4.3nm,0.8s						
B08A	Colville Reser	79.77	42	P	P	13 25 11.1	+0.2
B08A				IAmb	IAmb	13 25 11.8	
	comp=Z,4.4nm,0.8s						
RES	Resolute Bay	79.78	14	P	P	13 25 10.5	+0.1
NEW	Newport	81.20	42	P	P	13 25 18.9	+0.3
CMB	Columbia Colle	81.95	53	P	P	13 25 23.0	+0.3
CMB				IAmb	IAmb	13 25 23.9	
	comp=Z,4.3nm,0.8s						
ARCES	ARCESS Array B	82.81	342	P	P	13 25 25.1	-1.3
	comp=Z,5.9nm,1.1s,baz=63,slow=5.2,SNR=1.4						
	comp=Z,5.9nm,1.1s						
NVAR	Mina Array Bea	83.39	52	P	P	13 25 30.8	+0.4
	comp=Z,4.3nm,0.7s,baz=289,slow=6.5,SNR=41						
	comp=Z,4.3nm,0.7s						
NV11	Mina Array Sit	83.50	52	P	P	13 25 30.4	-0.5
BCYI	Bear Canyon	84.93	45	P	P	13 25 38.4	+0.4
LRM	Limekiln Ridge	85.03	43	P	P	13 25 38.8	+0.3
DLMT	Dillon	85.10	44	P	P	13 25 38.9	+0.2
DLMT				IAmb	IAmb	13 25 48.9	
	comp=Z,7.9nm,1.5s						
WCT	Wildcat Mounta	85.18	53	P	P	13 25 39.4	+0.2
PSUT	Pine Spring	86.65	51	P	P	13 25 46.1	-0.4
PSUT				IAmb	IAmb	13 25 47.2	
	comp=Z,3.4nm,0.7s						
DUG	Dugway, Tooele	86.81	49	P	P	13 25 46.7	-0.5
DUG				IAmb	IAmb	13 25 48.3	
	comp=Z,2.6nm,0.7s						
FINES	FINESS Array B	87.18	335	P	P	13 25 46.1	-2.1
	comp=Z,2.2nm,0.7s,baz=50,slow=2.4,SNR=6.1						
	comp=Z,2.2nm,0.7s						
FINES	FINESS Array B	87.18	335	P	P	13 25 46.3	-1.9
PDAR	Pinedale Array	88.11	45	P	P	13 25 52.6	-0.7
	comp=Z,0.4nm,0.3s,baz=286,slow=5.0,SNR=20						
	comp=Z,0.4nm,0.3s						
PDAR	Pinedale Array	88.11	45	P	P	13 25 52.8	-0.5
SRU	San Rafael Swe	88.86	49	P	P	13 25 56.5	-0.4
SRU				IAmb	IAmb	13 25 57.8	
	comp=Z,3.6nm,0.6s						
PV16	Nyswonger Mesa	90.33	49	P	P	13 26 03.5	-0.3
PV16				IAmb	IAmb	13 26 04.7	
	comp=Z,5.7nm,0.7s						
LPAZ	La Paz	147.71	92	PKPbc	PKPbc	13 32 47.9	+0.5
	comp=Z,0.5nm,0.4s,baz=272,slow=2.5,SNR=5.4						

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*DJA **29** 13:17:56.0±1.4, 5°N±14°×12°5E±°, h10km, M4.7/13, mB5.1/4, mb4.7/8, MLv4.7/13, Mw(mB)4.5/4*

*IDC **29** 13:17:56.3±0.6, 4°.60N×125°.37E, h0km, mb4.1/18, mbtmp4.1/19, ML4.1/1, MS3.3/8, Error ellipse: s-maj=24.8km s-min=11.5km az=80.0*

*NEIC **29** 13:17:58.8±1.4, 4°.70N±0°.05×125°.26E±0°.09, h10km±1km, mb4.7/39, Error ellipse: s-maj=14.7km s-min=9.2km az=267.0*

ISC 29 13:17:58.5±0.4**, 4°.63N**±0°.04×**125°.30E**±0°.08**, h10**km**, n95, σ1s.55**/85**, mb4.5**/42**, MS3.3**/6**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	0.96	166	P	Pb	13 18 18.9	+1.6
DAV	Davao City (W)	2.44	6	Pn	Pn	13 18 38.8	+0.4
	42nm,0.3s,baz=113,slow=15,SNR=5.3						
DAV				Sn	Sb	13 19 10.1	-2.6
	51nm,0.3s,baz=143,slow=20,SNR=4.8						
	119nm,0.3s						
DAV	Davao City (W)	2.44	6		Pn	13 18 37.9	-0.5
TNTI	Ternate	4.35	152		Pn	13 19 06.9	+2.2
TNTI	Ternate	4.35	152	P	Pn	13 19 06.8	+2.2
GTOI	Gorontalo	4.58	210	P	Pn	13 19 08.1	+0.3
MRSI	Marisa	5.32	219	P	Pn	13 19 19.4	+1.4
TOLI2	Tolitoli	5.71	232		Pn	13 19 23.6	+0.2
LUWI	Luwuk	6.17	204		Pn	13 19 31.1	+1.4
LUWI	Luwuk	6.17	204	P	Pn	13 19 34.0	+4.2
	2μm154nm,1.1s						
APSI	Ampana	6.60	214	P	Pn	13 19 39.5	+3.8
	0.5nm2μm135nm,0.6s						
SANI	Sanana	6.67	174	P	Pn	13 19 36.7	+0.1
	0.1nm18nm,0.5s						
MPSI	Mapaga	6.88	232	P	Pn	13 19 39.6	+0.2
SIJI	Sorong	8.08	132	P	Pn	13 19 56.9	+0.9
	17nm,0.8s						
KRAI	Karang Ratu	8.48	159	P	Pn	13 20 03.8	+2.4
FAKI	Fak Fak	10.22	137	Pn	Pn	13 20 26.8	+1.5
BKB	Balikpapan	10.23	235	Pn	Pn	13 20 22.6	-2.9
SOEI	Soe	14.33	184		P	13 21 29.2	+0.3
BATI	Baumata	14.83	186	Pn	P	13 21 35.6	+1.3
	7.9nm,0.3s,baz=343,slow=2.0,SNR=23						
BATI				LR	LR	13 27 15.7	
	comp=Z,152nm,21.1s,baz=348,slow=38						
JAY	Jayapura	16.95	114	LR	LR	13 28 06.8	
	comp=Z,85nm,18.1s,baz=96,slow=36						
MTN	Manton Dam	18.30	162		Pn	13 22 12.1	-0.5
KNRA	Kununurra	20.46	170	P	P	13 22 36.6	+0.2
KNRA				IAmb	IAmb	13 22 39.2	
	comp=Z,14nm,0.8s						
IPM	Ipoh	24.20	271		P	13 23 16.0	+0.5
IPM				IAmb	IAmb	13 23 18.2	
	comp=Z,12nm,1.0s						
COEN	Coen	25.60	136	P	P	13 23 28.2	0.0
COEN				IAmb	IAmb	13 23 34.6	
	comp=Z,14nm,1.4s						
WB0	Warramunga Arr	25.84	160		P	13 23 29.4	-0.9
WB0				IAmb	IAmb	13 23 34.6	
	comp=Z,17nm,0.6s						
PMG	Port Moresby	25.86	123	P	P	13 23 30.7	+0.1
	comp=Z,2.7nm,0.5s,baz=306,slow=8.7,SNR=3.1						
	comp=Z,2.7nm,0.5s						
PMG	Port Moresby	25.86	123	P	P	13 23 32.0	+1.4
PMG				IAmb	IAmb	13 23 58.6	
	comp=Z,9.0nm,0.9s						
WRAB	Tennant Creek	25.98	160	P	P	13 23 30.5	-1.1
WRAB				IAmb	IAmb	13 23 49.0	
	comp=Z,10nm,0.7s						
WRA	Warramunga Arr	25.98	160	P	P	13 23 30.3	-1.3
	comp=Z,5.6nm,0.8s,baz=340,slow=9.2,SNR=18						
WRA				S	S	13 27 56.0	-6.4
	comp=Z,0.5nm,0.8s,baz=336,slow=19,SNR=2.3						
	comp=Z,5.6nm,0.8s						
WRA	Warramunga Arr	25.98	160	P	P	13 23 31.6	0.0
WR8	Warramunga Arr	26.05	160		P	13 23 32.3	0.0
WR8				IAmb	IAmb	13 23 49.7	
	comp=Z,9.9nm,0.9s						
MBWA	Marble Bar	26.20	192	P	P	13 23 32.9	-0.6
MBWA				IAmb	IAmb	13 24 10.0	
	comp=Z,25nm,1.1s						
PSI	Prapat	26.38	267	LR	LR	13 35 25.4	
	comp=Z,68nm,19.5s,baz=87,slow=40						
GSI	Gunungsitoli	27.88	264		P	13 23 49.2	+0.4
GSI				IAmb	IAmb	13 23 53.4	
	comp=Z,14nm,0.9s						
NJ2	Nanjing	27.94	348	*e*P	P	13 23 54.3	+5.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
CMAR	Chiang Mai Arr	29.19	300	P	P	13 24 02.3	+1.9
	comp=Z,2.2nm,0.9s,baz=113,slow=8.9,SNR=13						
CMAR				LR	LR	13 37 24.6	
	comp=Z,21nm,18.2s,baz=115,slow=40						
	comp=Z,2.2nm,0.9s						
AS31	Alice Springs	29.35	164	P	P	13 24 01.3	-0.5
ASAR	Alice Springs	29.35	164	P	P	13 24 00.7	-1.1
	comp=Z,0.8nm,0.6s,baz=338,slow=8.8,SNR=8.4						
ASAR				S	S	13 28 52.3	-3.1
	comp=Z,0.6nm,1.2s,baz=350,slow=16,SNR=1.9						
ASAR				ScP	ScP	13 30 51.6	+1.3
	comp=Z,0.2nm,0.6s,baz=331,slow=3.2,SNR=2.4						
	comp=Z,0.8nm,0.6s						
ASAR	Alice Springs	29.35	164	P	P	13 24 01.6	-0.1
PZH	PanZhiHua	31.31	316	P	P	13 24 24.3	+5.0
KSRS	Korea Array	32.76	4	P	P	13 24 31.3	-0.4
	comp=Z,1.3nm,0.7s,baz=181,slow=9.5,SNR=5.9						
	comp=Z,1.3nm,0.7s						
MJAR	Matsushiro Arr	33.90	19	P	P	13 24 39.8	-1.9
	comp=Z,1.4nm,0.7s,baz=194,slow=9.4,SNR=7.5						
	comp=Z,1.4nm,0.7s						
MJAR	Matsushiro Arr	33.90	19	IAmb	IAmb	13 24 48.0	
	comp=Z,3.8nm,1.4s						
MORW	Morawa	34.66	194	P	P	13 24 47.8	-0.5
MORW				IAmb	IAmb	13 25 10.8	
	comp=Z,19nm,1.2s						
FORT	Forrest	35.31	176	P	P	13 24 53.5	-0.3
FORT				IAmb	IAmb	13 25 02.9	
	comp=Z,7.9nm,0.8s						
INKA	Innaminka	35.46	156	P	P	13 24 55.5	+0.3
LZH	Lanzhou	37.02	331	*e*P	P	13 25 11.0	+2.3
LZH				pP	pwP	13 25 28.5	+15
LZH				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC	Hu-ho-hao-te	38.12	343	*e*P	P	13 25 23.3	+5.5
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NWAO	Narrogin (SRO)	38.13	191	P	P	13 25 17.9	0.0
	comp=Z,23nm,1.2s,baz=17,slow=11,SNR=5.6						
	comp=Z,23nm,1.2s						
NWAO	Narrogin (SRO)	38.13	191	P	P	13 25 17.7	-0.2
BBOO	Buckleboo	38.61	165		P	13 25 21.6	-0.3
BBOO				IAmb	IAmb	13 25 30.6	
	comp=Z,8.4nm,0.9s						
EIDS	Eidsvold	38.94	141	P	P	13 25 24.3	-0.5
EIDS				IAmb	IAmb	13 26 06.7	
	comp=Z,22nm,1.4s						
STKA	Stephens Creek	39.48	158	P	P	13 25 29.0	-0.3
	comp=Z,5.9nm,0.8s,baz=338,slow=9.2,SNR=11						
	comp=Z,5.9nm,0.8s						
STKA	Stephens Creek	39.48	158		P	13 25 29.0	-0.3
USRK	Ussuriysk Ar.	39.85	8	P	P	13 25 31.5	-0.7
	comp=Z,2.1nm,0.7s,baz=208,slow=9.4,SNR=4.1						
	comp=Z,2.1nm,0.7s						
XLT	XiLinHaoTe	39.95	350	*e*P	P	13 25 38.3	+5.2
XLT				sP	pwP	13 25 53.8	+16
XLT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GTA	Gaotai	41.60	330	*e*P	P	13 25 48.3	+1.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ASAJ	Asahikawa	42.18	19	P	P	13 25 51.7	+0.3
	comp=Z,3.7nm,0.8s,baz=252,slow=20,SNR=1.2						
	comp=Z,3.7nm,0.8s						
JKA	Kamikawa-asahi	42.18	19	P	P	13 25 51.7	+0.3
JKA	Kamikawa-asahi	42.18	19	IAmb	IAmb	13 25 59.7	
	comp=Z,55nm,1.5s						
H11N1	WAKE ISLAND Hy	43.18	66	T	T	14 11 44.0	
	baz=255,slow=75,SNR=51						
H11N2	WAKE ISLAND Hy	43.19	66	T	T	14 11 43.6	
	baz=255,slow=75,SNR=37						
H11N3	WAKE ISLAND Hy	43.20	66	T	T	14 11 42.8	
	baz=255,slow=75,SNR=42						
PALK	Pallekele	44.42	276	LR	LR	13 46 55.4	
	comp=Z,29nm,18.2s,baz=98,slow=39						
YSS	Yuzhno-Sakhali	44.78	17	P	P	13 26 12.2	-0.1
YSS				IAmb	IAmb	13 26 52.7	
	comp=Z,29nm,1.4s						
HILR	Hailar Array B	45.02	355	P	P	13 26 14.8	+0.6
	comp=Z,0.8nm,0.4s,baz=167,slow=9.1,SNR=1.8						
	comp=Z,0.8nm,0.4s						
CAN	Canberra	45.55	153	P	P	13 26 19.2	+0.5
CAN				IAmb	IAmb	13 26 42.1	

	comp=Z,23nm,1.5s						
SONM	Songino Array	46.01	342	P	P	13 26 21.4	-0.8
	comp=Z,0.4nm,0.9s,baz=160,slow=8.4,SNR=1.5						
SONM				LR	LR	13 46 21.0	
	comp=Z,45nm,18.3s,baz=182,slow=37						
	comp=Z,0.4nm,0.9s						
SONM	Songino Array	46.01	342	IAmb	IAmb	13 26 26.8	
	comp=Z,1.1nm,1.2s						
PETK	Petropavlovsk-	55.16	23	P	P	13 27 31.0	0.0
	comp=Z,3.2nm,0.8s,baz=213,slow=7.6,SNR=6.9						
	comp=Z,3.2nm,0.8s						
PETK	Petropavlovsk-	55.16	23	P	P	13 27 31.2	+0.1
MKAR	Makanchi Array	56.01	326	P	P	13 27 37.4	0.0
	comp=Z,1.6nm,0.7s,baz=126,slow=8.1,SNR=16						
	comp=Z,1.6nm,0.7s						
MAKZ	Makanchi	56.20	325	P	P	13 27 38.2	-0.5
AAK	Ala-Archa	58.74	318	LR	LR	13 56 27.6	
	comp=Z,50nm,18.1s,baz=61,slow=39						
LBZ	Lake Benmore	63.22	145	P	P	13 28 27.0	-0.1
RAO	Raoul Island	64.01	126	P	P	13 28 32.2	-0.3
SNZO	South Karori	64.16	141	P	P	13 28 34.0	+0.7
BKZ	Black Stump Fm	64.20	138	P	P	13 28 34.3	+0.6
BVAR	Borovoye Array	65.80	327	P	P	13 28 42.8	-1.0
	comp=Z,0.9nm,0.7s,baz=131,slow=6.6,SNR=5.2						
	comp=Z,0.9nm,0.7s						
BORK	Borovoye	65.84	327		P	13 28 44.1	0.0
BORK				IAmb	IAmb	13 28 44.9	
	comp=Z,2.3nm,0.8s						
OPO	Ambohidratompo	80.25	250	LR	LR	14 02 50.5	
	comp=Z,15nm,20.2s,baz=124,slow=34						
P18K	Big Mountain,	80.67	31	P	P	13 30 12.2	+0.6
P18K				IAmb	IAmb	13 30 18.6	
	comp=Z,17nm,1.4s						
J19K	Poorman	81.07	26	P	P	13 30 14.5	+0.9
J19K				IAmb	IAmb	13 30 36.6	
	comp=Z,8.2nm,1.4s						
BRLK	Bradley Lake	82.91	30	P	P	13 30 22.8	-0.6
C23K	Itkillik River	83.64	20	P	P	13 30 27.1	+0.2
C23K				IAmb	IAmb	13 30 39.3	
	comp=Z,15nm,1.5s						
MCK	McKinley	84.00	26	P	P	13 30 28.3	-0.6
MCK				IAmb	IAmb	13 31 09.6	
	comp=Z,16nm,1.5s						
VNDA	Vanda	84.49	173	P	P	13 30 28.9	-2.1
	comp=Z,0.5nm,0.7s,baz=308,slow=8.0,SNR=6.0						
	comp=Z,0.5nm,0.7s						
VNDA	Vanda	84.49	173	P	P	13 30 31.1	0.0
ILAR	Eielson Array	84.91	25	P	P	13 30 32.0	-1.4
	comp=Z,0.5nm,0.5s,baz=250,slow=5.0,SNR=16						
	comp=Z,0.5nm,0.5s						
D27M	Malcolm River	87.03	21	P	P	13 30 43.8	-0.2
CTGM	Chitina Glacie	87.63	29	P	P	13 30 46.4	-0.7
BRTR	Keskin Array B	88.36	310	P	P	13 30 49.6	-1.5
	comp=Z,0.5nm,0.7s,baz=96,slow=2.9,SNR=2.4						
	comp=Z,0.5nm,0.7s						
HYT	Haines Junctio	89.50	29	P	P	13 30 56.1	+0.1
HYT				IAmb	IAmb	13 31 39.4	
	comp=Z,8.3nm,1.2s						
TORD	Torodi Ar. Bea	121.29	288	PKP	PKPdf	13 36 51.0	-1.9
	comp=Z,0.3nm,0.8s,baz=52,slow=3.4,SNR=1.4						
TXAR	Lajitas Array	122.16	51	PKP	PKPdf	13 36 54.2	-0.2
	comp=Z,0.2nm,0.6s,baz=286,slow=1.4,SNR=2.3						

NOU ***29*** *13:20:21.8, 39°.46S×178°.62E, h42^{km}, MLv4.0/12, Off E. Coast of N. Island, N.Z.*

WEL ***29*** *13:20:21.4±0.6, 39°S±3°×17°9E±°, h33^{km}, M3.4/25, mB5.5/1, ML3.4/24, MLv3.4/25, Mw(mB)5.0/1, Error ellipse: s-maj=5.8km s-min=4.1km az=106.8, confirmed*

ISC 29 13:20:14.8±1.6**, 39°.53S**±0°.03×**179°.05E**±0°.04**, h26**^{km}±16^{km}**, n141,** σ**2^{s}.32**/154**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MHGZ	Mahia Peninsul	0.97	293	P	Pb	13 20 33.9	+1.0
PRGZ	Paritu Road	1.09	303	P	Pb	13 20 35.5	+0.4
KNZ	Kokohu	1.19	295	P	Pb	13 20 36.7	+0.1
CNGZ	Carnagh Statio	1.24	328	P	Pb	13 20 38.5	+1.0
RIGZ	Rimuhau	1.30	309	P	Pb	13 20 38.9	+0.3
RIGZ				S	Sn	13 20 51.6	-2.3
TKGZ	Te Karaka	1.44	319	P	Pb	13 20 40.8	-0.1
TKGZ				S	Sn	13 20 55.1	-2.1
WHHZ	Waihua	1.48	287	P	Pb	13 20 41.5	-0.2
SNGZ	Shannon Statio	1.53	299	P	Pb	13 20 42.0	-0.4
SNGZ				S	Sn	13 20 57.4	-2.1
CKHZ	Cape Kidnapper	1.53	265	P	Pb	13 20 42.6	+0.1
CKHZ				S	Sn	13 20 58.6	-1.0
PUZ	Puketiti	1.58	337	P	Pb	13 20 43.1	-0.3
PUZ				S	Sn	13 20 58.5	-2.3
TWGZ	Tauwhareparae	1.59	328	P	Pb	13 20 43.5	0.0
TWGZ				S	Sn	13 20 59.9	-1.1
ARHZ	Aropaoanui	1.62	279	P	Pb	13 20 43.6	-0.3
ARHZ				S	Sn	13 21 00.1	-1.6
RAGZ	Rawiri	1.64	308	P	Pb	13 20 43.7	-0.8
RAGZ				S	Sn	13 20 59.8	-2.6
RAHZ	Arahi	1.65	291	P	Pb	13 20 43.9	-0.6
RAHZ				S	Sn	13 20 59.9	-2.5
MWZ	Matawai	1.69	315	P	Pn	13 20 44.2	+1.6
MWZ				S	Sn	13 21 00.1	-3.3
KAHZ	Kahuranaki	1.70	260	P	Pb	13 20 45.1	-0.3
PXZ	Pawanui	1.76	253	P	Pb	13 20 45.8	-0.6
WMGZ	Waiomatatini S	1.78	344	P	Pb	13 20 46.6	-0.2
NMHZ	Naumai	1.80	283	P	Pb	13 20 46.3	-0.8
MCHZ	McNeill Hill	1.83	272	P	Pb	13 20 46.7	-0.8
MCHZ				S	Sn	13 21 05.9	-0.9
PKGZ	Pakihiroa	1.83	335	P	Pb	13 20 46.6	-1.0
PKGZ				S	Sn	13 21 05.0	-1.9
MTHZ	Maungataniwha	1.85	291	P	Pn	13 20 46.5	+1.6
RTZ	Ruatahuna	1.85	299	P	Pn	13 20 46.6	+1.6
RUGZ	Raukumara Rang	1.90	325	P	Pn	13 20 47.3	+1.7
URZ	Urewera	1.98	309	P	Pn	13 20 48.4	+1.8
URZ	Urewera	1.98	309	P	Pn	13 20 48.4	+1.8
PRHZ	Porangahau	2.00	248	P	Pb	13 20 49.2	-1.3
BKZ	Black Stump Fm	2.02	280	P	Pn	13 20 49.0	+1.8
BKZ	Black Stump Fm	2.02	280	S	Sn	13 21 09.4	-2.3
BKZ	Black Stump Fm	2.02	280	P	Pn	13 20 49.0	+1.8
HAZ	Te Kaha	2.03	330	P	Pn	13 20 49.4	+2.0
KWHZ	Kaweka Forest	2.04	272	P	Pn	13 20 49.4	+1.9
MXZ	Matakaoa Point	2.05	343	P	Pb	13 20 50.7	-0.7
MXZ	Matakaoa Point	2.05	343	P	Pb	13 20 50.6	-0.7
MUGZ	Murupara	2.07	300	P	Pn	13 20 50.0	+2.2
KRHZ	Kereru	2.08	266	P	Pn	13 20 49.9	+1.9
WPHZ	Waipukurau	2.08	254	P	Pn	13 20 50.1	+2.1
MRHZ	Matea Rd	2.16	288	P	Pn	13 20 51.3	+2.0
ANWZ	Angora Road	2.19	244	P	Pn	13 20 51.9	+2.4
PNHZ	Pukenui	2.23	259	P	Pn	13 20 52.6	+2.4
EDRZ	Edgecumbe	2.30	307	P	Pn	13 20 53.4	+2.3
RRRZ	Republican Roa	2.31	300	P	Pn	13 20 53.3	+2.1
PRRZ	Plateau Road	2.31	296	P	Pn	13 20 53.6	+2.4
ALRZ	Allen Road	2.32	294	P	Pn	13 20 53.8	+2.4
WHRZ	Whale Island	2.33	315	P	Pb	13 20 54.3	-1.9
DVHZ	Dannevirke	2.35	250	P	Pn	13 20 54.1	+2.4
TARZ	Mount Tarawera	2.37	302	P	Pn	13 20 54.5	+2.4
HATZ	Hinemaiaia	2.39	285	P	Pn	13 20 55.0	+2.7
MARZ	Manawahe	2.42	309	P	Pn	13 20 55.0	+2.4
BFZ	Birch Farm	2.44	241	P	Pn	13 20 55.0	+2.0
TSZ	Takapari Road	2.44	257	P	Pn	13 20 55.0	+2.0
HRRZ	Handcock Road	2.44	297	P	Pn	13 20 55.4	+2.3
HLRZ	Highlands Stat	2.46	300	P	Pn	13 20 56.1	+2.7
WPRZ	Whakapapatarin	2.47	293	P	Pn	13 20 55.9	+2.5
HSRZ	Hossack Road	2.51	298	P	Pn	13 20 56.3	+2.3
RITZ	Rihia Road	2.54	282	P	Pb	13 20 57.5	-2.3
MOVZ	Moawhango	2.56	272	P	Pn	13 20 57.6	+2.9
PRWZ	Pori Road	2.58	246	P	Pn	13 20 57.3	+2.4
OPRZ	Ohinepanea	2.58	310	P	Pn	13 20 56.6	+1.7
ETVZ	East Tongariro	2.62	278	P	Pn	13 20 58.7	+3.1
TMVZ	Te Maari	2.63	278	P	Pn	13 20 58.7	+2.9
RATZ	Rangitukua	2.63	284	P	Pn	13 20 58.5	+2.8
TUVZ	Tukino	2.65	275	P	Pb	13 20 59.3	-2.4
NTVZ	North Tongarir	2.66	278	P	Pn	13 20 59.0	+2.9
KARZ	Kaharoa	2.66	304	P	Pn	13 20 57.8	+1.7
POWZ	Post Office Ro	2.67	250	P	Pn	13 20 59.1	+3.0
SNVZ	South Ngauruho	2.67	276	P	Pn	13 20 59.3	+3.0
WNVZ	Wahianoa	2.68	273	P	Pn	13 20 59.6	+3.1
NNVZ	North Ngauruho	2.70	277	P	Pn	13 20 59.7	+3.0
WHVZ	Whangaehu Hut	2.70	274	P	Pn	13 20 59.6	+2.9
NGZ	Ngauruhoe	2.70	276	P	Pn	13 20 59.7	+3.0
WATZ	Wairara	2.71	287	P	Pn	13 20 59.0	+2.3
MAVZ	Matarangi	2.72	274	P	Pn	13 20 60.0	+2.9
WTVZ	West Tongariro	2.72	278	P	Pn	13 20 60.0	+3.0
KUTZ	Kaahu Road	2.72	291	P	Pn	13 20 59.1	+2.2
TRVZ	Turoa	2.73	274	P	Pn	13 20 60.0	+2.9
FWVZ	Far West T-bar	2.73	275	P	Pn	13 21 00.1	+3.0
COVZ	Chateau Observ	2.74	276	P	Pn	13 21 00.1	+2.8
MTVZ	Mangateitei	2.78	272	P	Pn	13 21 00.7	+3.0
TGRZ	Tauranga	2.83	309	P	Pn	13 21 00.1	+1.7
TWVZ	Taurewa	2.84	278	P	Pn	13 21 01.1	+2.5
PKVZ	Pokaka	2.88	274	P	Pn	13 21 02.0	+2.9
TMWZ	Te Maipa	2.88	236	P	Pn	13 21 00.7	+1.6
MRZ	Mangatainoka R	2.89	246	P	Pn	13 21 01.0	+1.8
OHWZ	Ohakea	2.96	256	P	Pn	13 21 03.3	+3.3
TLZ	Tolley Road	2.99	293	P	Pn	13 21 02.8	+2.1
HOWZ	Holdsworth Sta	3.03	242	P	Pn	13 21 02.5	+1.4
WAZ	Wanganui	3.15	265	P	Pn	13 21 06.7	+4.0
MTW	Mount Morrison	3.16	238	P	Pn	13 21 04.1	+1.2
OGWZ	Otaki Gorge	3.24	245	P	Pn	13 21 05.6	+1.6
VRZ	Vera Road	3.35	276	P	Pn	13 21 08.3	+2.7
HIZ	Hauiti	3.42	286	P	Pn	13 21 08.9	+2.4
HIZ	Hauiti	3.42	286	P	Pn	13 21 09.0	+2.4
CAW	Cannon Point	3.43	241	P	Pn	13 21 08.0	+1.4
KIW	Kapiti Island	3.44	246	P	Pn	13 21 08.6	+1.9
MSWZ	Moikau Station	3.46	236	P	Pn	13 21 07.8	+0.8
LREZ	Lake Rotokare	3.60	270	P	Pn	13 21 12.6	+3.7
DREZ	Durham Road	3.78	274	P	Pn	13 21 15.3	+3.9
PREZ	Palmer Road	3.79	271	P	Pn	13 21 15.7	+4.0
KUZ	Kuaotunu	3.83	316	P	Pn	13 21 13.9	+1.9
KUZ	Kuaotunu	3.83	316	P	Pn	13 21 13.0	+1.0
MKAZ	Moumakai	3.90	307	P	Pn	13 21 14.9	+1.8
KHEZ	Kahui Hut	3.91	272	P	Pn	13 21 16.0	+2.7
KHEZ	Kahui Hut	3.91	272	P	Pn	13 21 17.2	+4.0
PKE	Pukeiti	3.94	273	P	Pn	13 21 17.3	+3.6
NMEZ	Namu Road	4.01	270	P	Pn	13 21 18.1	+3.6
TCW	Tory Channel	4.02	244	P	Pn	13 21 15.6	+1.0
NBEZ	Newall Road No	4.03	272	P	Pn	13 21 18.2	+3.5
WIAZ	Waiheke Island	4.12	310	P	Pn	13 21 18.2	+2.1
DUWZ	D’Urville Isla	4.13	250	P	Pn	13 21 17.8	+1.6
ETAZ	East Tamaki Re	4.14	307	P	Pn	13 21 18.6	+2.2
AWAZ	Awhitu Peninsu	4.25	304	P	Pn	13 21 20.7	+2.7
MBAZ	Motutapu North	4.28	309	P	Pn	13 21 20.4	+2.1
EPAZ	Eden Park BICE	4.31	307	P	Pn	13 21 21.7	+3.1
TUWZ	Tuamarina	4.33	242	P	Pn	13 21 20.1	+1.1
WTAZ	Waiatarua	4.38	305	P	Pn	13 21 22.6	+3.0
ABAZ	Army Bay	4.43	310	P	Pn	13 21 23.2	+2.8
RVAZ	Riverhead Bore	4.48	307	P	Pn	13 21 23.6	+2.6
BSWZ	Blackbirch Sta	4.50	239	P	Pn	13 21 21.7	+0.4
NNZ	Nelson	4.65	247	P	Pn	13 21 24.7	+1.4
TKNZ	Takaka Hill	4.89	250	P	Pn	13 21 28.2	+1.4
KHZ	Kahutara	5.07	234	P	Pn	13 21 31.6	+2.5
MRNZ	Matariki Terra	5.15	247	P	Pn	13 21 31.8	+1.5
QRZ	Quartz Range	5.16	253	P	Pn	13 21 31.1	+0.7
QRZ	Quartz Range	5.16	253	P	Pn	13 21 31.3	+0.9
THZ	Tophouse	5.18	243	P	Pn	13 21 30.9	+0.2
CTZ	Chatham Island	5.31	144	P	Pb	13 21 42.8	-4.0
CTZ	Chatham Island	5.31	144	P	Pb	13 21 42.6	-4.2
CTZ				S	Sn	13 22 40.0	+7.3
GVZ	Greta Valley S	5.69	231	P	Pn	13 21 40.2	+2.6
DSZ	Denniston Nort	5.94	246	P	Pn	13 21 41.8	+0.7
LTZ	Lake Taylor	6.06	235	P	Pn	13 21 44.0	+1.2
OUZ	Omahuta	6.12	313	P	Pn	13 21 46.6	+3.1
OUZ	Omahuta	6.12	313	P	Pn	13 21 46.3	+2.8
OKCZ	Okains Bay	6.14	225	P	Pn	13 21 46.3	+2.4
AKCZ	Akaroa Harbour	6.32	225	P	Pn	13 21 48.3	+2.0
MQZ	McQueen’s Vall	6.36	227	P	Pn	13 21 47.9	+1.2
INZ	Inchbonnie	6.57	239	P	Pn	13 21 50.1	+0.4
ARCZ	Arundel	7.36	231	P	Pn	13 22 03.3	+2.8
TMZ	Timaru	7.71	228	P	Pn	13 22 06.9	+1.6
ODZ	Otahua Downs	8.32	226	P	Pn	13 22 16.5	+2.8
ODZ	Otahua Downs	8.32	226	P	Pn	13 22 15.6	+2.0

UPP ***29*** *13:39:42.9±0.1, 67°.83N×20°.22E, h0^{km}, ML2.6, Confirmed Induced event*

HEL ***29*** *13:39:46.5±0.5, 67°.86N×20°.38E, h0^{km}, ML1.1, Suspected explosion*

ISC 29 13:39:43.4±1.0**, 67°.82N**±0°.03×**20°.22E**±0°.04**, h0**^{km}**, n20,** σ**0^{s}.88**/30**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.14	19	P	Pg	13 39 45.6	-0.5
KUA				S	Sg	13 39 47.5	-0.4
RATU	Laukkuluspa	0.24	271	P	Pg	13 39 47.6	-0.3
KOVU	Salmi	0.40	357	P	Pg	13 39 50.7	-0.4
LANU	Lannavaara	0.71	70	P	Pg	13 39 56.3	-0.6
LANU	Lannavaara	0.71	70	PG	Pb	13 39 58.6	0.0
LANU				SG	Sg	13 40 06.1	0.0
SALU	Saltoluokta	0.79	237	P	Pg	13 39 58.0	-0.5
HEF	Hetta	1.42	64	PG	Pn	13 40 10.2	-0.2
HEF				MSG		13 40 27.2	
	comp=Z,1.2nm,0.2s						
HEF				SG	Sg	13 40 28.6	-0.2
ERTU	Ertsjaerv	1.49	148	PG	Pb	13 40 13.3	+1.5
	baz=333						
ERTU				SG	Sn	13 40 33.2	+1.8
KLF	Kolari	1.56	111	PB	Pg	13 40 12.9	-0.2
KLF				MSG		13 40 31.9	
	comp=Z,1.1nm,0.2s						
KLF				SG	Sg	13 40 33.1	-0.1
KTK1	Kautokeino	1.64	42	PN	Pg	13 40 15.3	+0.6
KTK1				SN	Sg	13 40 37.3	+1.4
KALU	Kalix	2.33	146	PB	Pb	13 40 26.2	+0.1
KALU				SN	Sg	13 40 56.8	-1.3
TOF	Tornio	2.38	135	PB	Pb	13 40 27.2	+0.2
TOF				MSG		13 40 56.7	
	comp=Z,0.9nm,0.2s						
TOF				SB	Sg	13 40 58.8	-0.9
RNF	Rovaniemi	2.56	116	PN	Pb	13 40 29.8	-0.3
RNF				SN	Sb	13 41 02.6	+0.4
ARA0	ARCESS Array S	2.59	46	SG	Sb	13 41 02.6	-0.3
RAJF	Raja-Jooseppi	3.10	74	PG	Pg	13 40 42.3	-0.4
	baz=259						
RAJF				SB	Sb	13 41 17.9	+0.4
KEV	Kevo	3.14	49	SB	Sb	13 41 16.7	-2.1
RANF	Ranua	3.16	122	SG	Sg	13 41 23.0	-1.8
KU2	Taivalkoski	3.82	120	PB	Pb	13 40 52.4	+0.9
OLKF	Oulanka, Finla	3.90	108	SG	Sg	13 41 48.0	-0.4
MSF	Maaselka	3.97	115	SG	Sg	13 41 51.3	+0.4

IDC ***29*** *13:42:17.3±7.6, 26°.34S×179°.28W, h510^{km}±73^{km}, mb3.1/5, mbtmp4.1/6, Error ellipse: s-maj=54.5km s-min=44.3km az=59.0*

ISC 29 13:42:16.0±1.8**, 26°.3S**±0°.4×**179°.1W**±0°.2**, h500**^{km}**, n8,** σ**1^{s}.06**/8**, mb3.8**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	13.82	284	P	P	13 45 13.9	-0.1
	8.1nm,0.6s,baz=108,slow=17,SNR=6.0						
CTA	Charters Tower	32.36	274	P	P	13 48 05.0	+1.3
	4.1nm,1.1s,baz=84,slow=10,SNR=1.3						
	4.1nm,1.1s						
ASAR	Alice Springs	42.49	263	P	P	13 49 25.8	-1.2
	0.2nm,0.4s,baz=106,slow=8.0,SNR=17						
	0.2nm,0.4s						
WRA	Warramunga Arr	43.09	268	P	P	13 49 30.3	-1.3
	0.9nm,0.6s,baz=107,slow=7.9,SNR=13						
	0.9nm,0.6s						
FITZ	Fitzroy Crossi	51.48	267	P	P	13 50 34.8	-0.1
	5.9nm,1.2s,baz=106,slow=7.4,SNR=2.2						
	5.9nm,1.2s						
SNAA	Sanae	82.30	179	P	P	13 53 44.5	+0.2
	4.0nm,1.1s,baz=160,slow=5.7,SNR=3.5						
	4.0nm,1.1s						
HFS	Hagfors	145.01	349	PKPbc	PKPdf	14 00 54.6	-0.7
	3.0nm,0.8s,baz=45,slow=1.0,SNR=1.6						
BRTR	Keskin Array B	149.60	304	PKPbc	PKPbc	14 01 09.6	+0.6
	0.2nm,0.4s,baz=49,slow=2.8,SNR=1.9						

IDC ***29*** *13:45:26.3±0.6, 10°.68S×74°.78W, h0^{km}, mb3.8/13, mbtmp3.8/17, ML3.5/4, MS3.0/3, Error ellipse: s-maj=20.1km s-min=14.5km az=65.0*

NEIC ***29*** *13:45:33.5±1.3, 10°.88S±0°.08×74°.79W±0°.08, h53^{km}±7^{km}, mb4.6/34, Error ellipse: s-maj=12.9km s-min=10.0km az=55.0*

ISC 29 13:45:31.9±0.4**, 10°.82S**±0°.06×**74°.69W**±0°.07**, h38**^{km}**, n66,** σ**1^{s}.27**/62**, mb4.5**/25**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.41	241	Pn	Pn	13 46 07.9	-0.9
	34nm,0.3s,baz=58,slow=13,SNR=101						
NNA				Sn	Sn	13 46 37.1	0.0
	88nm,0.3s,baz=7.1,slow=16,SNR=16						
	131nm,0.3s						
NNA	Nana	2.41	241		Pn	13 46 07.7	-1.0
ATAH	Atahualpa	5.17	315	Pn	Pn	13 46 48.2	+1.0
	8.1nm,0.3s,baz=143,slow=14,SNR=31						
ATAH				Sn	Sn	13 47 52.6	+6.7
	2.8nm,0.3s,baz=203,slow=7.7,SNR=4.1						
LPAZ	La Paz	8.38	131	Pn	Pn	13 47 33.7	+2.3
	0.2nm,0.3s,baz=312,slow=6.8,SNR=5.0						
LPAZ				Lg	Lg	13 49 55.6	
	0.5nm,0.3s,baz=336,slow=20,SNR=6.0						
LPAZ				LR	LR	13 51 09.4	
	comp=Z,76nm,19.2s,baz=37,slow=40						
	0.7nm,0.4s						
LPAZ	La Paz	8.38	131		Pn	13 47 32.8	+1.4
PB18	Visviri	8.41	144	Pn	Pn	13 47 32.9	+1.2
SLOR	San Lorenzo -	10.71	339		Pn	13 48 01.8	-1.5
OTAV	Otavalo	11.60	341		Pn	13 48 17.1	+1.7
SIV	San Ignacio	14.21	113	Pn	Pn	13 48 49.6	-1.1
	0.1nm,0.3s,baz=290,slow=12,SNR=6.4						
SIV				Lg	Lg	13 52 55.2	
	0.1nm,0.3s,baz=230,slow=16,SNR=3.5						
SIV				LR	LR	13 54 06.6	
	comp=Z,29nm,20.6s,baz=273,slow=36						
	0.9nm,0.4s						
PTLB	Pontes e Lacer	15.83	109		Pn	13 49 12.1	+0.1
CO06	Fray Jorge	19.96	172	P	P	13 50 00.8	0.0
CO06				IAmb	IAmb	13 50 26.5	
	comp=Z,47nm,1.4s						
SDV	Santo Domingo	19.99	12	P	P	13 49 59.9	-1.6
	comp=Z,0.5nm,0.3s,baz=236,slow=11,SNR=5.3						
	comp=Z,3.7nm,0.5s						
SDV	Santo Domingo	19.99	12	P	Pn	13 50 02.4	-0.9
CFA	Coronel Fontan	21.53	165	P	P	13 50 19.3	+1.5
	comp=Z,1.4nm,0.8s,baz=346,slow=11,SNR=4.7						
	comp=Z,1.4nm,0.8s						
CPUP	Villa Florida	22.51	136	P	P	13 50 30.2	+1.8
	comp=Z,0.8nm,0.7s,baz=327,slow=14,SNR=3.4						
	comp=Z,0.8nm,0.7s						
CPUP	Villa Florida	22.51	136	P	P	13 50 29.0	+0.6
BDFB	Brasilia	26.40	103	LR	LR	14 02 25.8	
	comp=Z,72nm,21.0s,baz=40,slow=38						
ITAB	Concordia	26.78	131	P	P	13 51 09.3	+0.9
ITAB				IAmb	IAmb	13 51 49.9	
	comp=Z,12nm,1.2s						
CELP	Cerrillos	29.81	16	P	P	13 51 36.1	+0.7
PLCA	Paso Flores	30.02	174	P	P	13 51 37.1	-0.1
	comp=Z,1.0nm,0.7s,baz=346,slow=12,SNR=4.3						
	comp=Z,1.0nm,0.7s						
PLCA	Paso Flores	30.02	174	P	P	13 51 37.1	-0.1
UNM	Universidad Na	38.47	321	P	P	13 52 49.4	-1.4
Y52A	Lilburn	45.32	349	P	P	13 53 46.6	+0.4
Y52A				IAmb	IAmb	13 54 23.1	
	comp=Z,8.8nm,1.2s						
HNDO	Hondo	46.60	330	P	P	13 53 56.3	-0.1
CPCT	Cooper Cave	46.95	349	P	P	13 53 58.5	-0.5
CPCT				IAmb	IAmb	13 54 30.0	
	comp=Z,12nm,1.5s						
T57A	Hurt	47.75	355	P	P	13 54 05.0	-0.2
T57A				IAmb	IAmb	13 54 15.2	
	comp=Z,9.5nm,1.4s						
TXAR	Lajitas Array	48.73	326	P	P	13 54 12.1	-0.9
	comp=Z,0.3nm,0.5s,baz=141,slow=8.1,SNR=11						
	comp=Z,0.3nm,0.5s						
TXAR	Lajitas Array	48.73	326	P	P	13 54 11.9	-1.1
SIUC	Southern Illin	50.16	345	P	P	13 54 22.7	-1.0
SIUC				IAmb	IAmb	13 54 22.7	
	comp=Z,6.4nm,0.8s						
SMWD	Samnorwood	51.68	333	P	P	13 54 34.6	-0.7
SMWD				IAmb	IAmb	13 54 36.6	
	comp=Z,9.1nm,1.1s						
SDCO	Great Sand Dun	56.27	331	P	P	13 55 08.7	-0.3
113A	Mohawk Valley,	57.17	321	P	P	13 55 14.8	-0.3
D62A	Allapoint, All	57.86	5	P	P	13 55 19.9	+0.3
PV02	Paradox Valley	58.23	329	P	P	13 55 22.1	-0.6
Q16A	Castle Valley	60.03	328	P	P	13 55 34.8	-0.3
DRLN	Deer Lake	61.70	13	P	P	13 55 46.2	+0.2
PDAR	Pinedale Array	62.13	332	P	P	13 55 48.5	-0.9
	comp=Z,0.4nm,0.6s,baz=141,slow=3.9,SNR=4.4						
	comp=Z,0.4nm,0.6s						
PDAR	Pinedale Array	62.13	332	P	P	13 55 48.3	-1.1
HWUT	Hardware Ranch	62.22	329	P	P	13 55 49.0	-1.0
HWUT				IAmb	IAmb	13 55 49.6	
	comp=Z,3.4nm,0.9s						
MOOW	Moose Ponds	63.44	332	P	P	13 55 57.0	-1.1
ULM	Lac du Bonnet	63.57	345	P	P	13 55 57.5	-1.0
	comp=Z,3.0nm,0.7s,baz=158,slow=5.4,SNR=4.1						
	comp=Z,3.0nm,0.7s						
ULM	Lac du Bonnet	63.57	345	IAmb	IAmb	13 56 03.1	
	comp=Z,11nm,1.4s						
NVAR	Mina Array Bea	63.69	323	P	P	13 55 58.9	-0.9
	comp=Z,0.3nm,0.8s,baz=134,slow=4.9,SNR=3.6						
	comp=Z,0.3nm,0.8s						
NVAR	Mina Array Bea	63.69	323	P	P	13 55 59.1	-0.7
YNE	Yellowstone No	64.07	333	IAmb	IAmb	13 56 03.3	
	comp=Z,7.4nm,1.4s						
YHL	Hebgen Lake	64.48	332	IAmb	IAmb	13 56 06.0	
	comp=Z,4.3nm,1.0s						
MFID	Camas Ranch	65.70	328	IAmb	IAmb	13 56 14.4	
	comp=Z,9.7nm,1.4s						
DBIC	Dimbokro	71.64	79	P	P	13 56 50.8	+0.6
	comp=Z,2.1nm,0.7s,baz=231,slow=6.5,SNR=4.1						
	comp=Z,2.1nm,0.7s						
DBIC	Dimbokro	71.64	79	P	P	13 56 49.6	-0.6
DBIC				IAmb	IAmb	13 57 32.0	
	comp=Z,8.7nm,1.5s						
SNAA	Sanae	74.11	162	P	P	13 57 05.2	+1.3
	comp=Z,3.1nm,0.8s,baz=281,slow=8.1,SNR=7.4						
	comp=Z,3.1nm,0.8s						
SNAA	Sanae	74.11	162	P	P	13 57 04.1	+0.2
SNAA				IAmb	IAmb	13 57 05.8	
	comp=Z,3.6nm,0.8s						
YKA	Yellowknife Ar	79.36	342	P	P	13 57 31.8	-1.6
	comp=Z,0.5nm,0.8s,baz=144,slow=5.2,SNR=8.1						
	comp=Z,0.5nm,0.8s						
YKA	Yellowknife Ar	79.36	342	P	P	13 57 33.1	-0.3
TORD	Torodi Ar. Bea	79.45	74	P	P	13 57 34.8	-0.1
	comp=Z,1.6nm,0.8s,baz=252,slow=3.4,SNR=9.2						
	comp=Z,1.6nm,0.8s						
ESDC	Sonseca Array	82.43	47	P	P	13 57 51.4	+1.0
	comp=Z,0.3nm,0.5s,baz=246,slow=4.4,SNR=4.4						
	comp=Z,0.3nm,0.5s						
O28M	Mount Upton	87.85	333	P	P	13 58 16.9	-0.5
L29M	L29M	88.07	336	P	P	13 58 18.1	0.0
L29M				IAmb	IAmb	13 58 27.6	
	comp=Z,8.7nm,1.4s						
BCAR	Beaver Creek A	89.53	335	P	P	13 58 25.1	+0.2
J25K	Salcha River,	91.61	336	P	P	13 58 34.1	-0.6
J25K				IAmb	IAmb	13 58 49.7	
	comp=Z,5.0nm,1.4s						
D27M	Malcolm River	91.91	341	P	P	13 58 35.4	-0.5
D27M				IAmb	IAmb	13 58 49.0	
	comp=Z,3.4nm,1.4s						
ILAR	Eielson Array	92.28	336	P	P	13 58 38.1	+0.5
	comp=Z,0.2nm,0.7s,baz=116,slow=2.1,SNR=1.7						
	comp=Z,0.2nm,0.7s						
ILAR	Eielson Array	92.28	336	P	P	13 58 37.8	+0.2
OSSC	Osservatorio P	94.44	47	P	P	13 58 48.1	0.0
ZALV	Zalesovo Beam	133.98	17	PKP	PKiKP	14 04 45.5	-0.7
	comp=Z,0.4nm,0.3s,baz=300,slow=2.8,SNR=2.5						
SONM	Songino Array	143.09	359	PKhKP	PKPpre	14 05 04.8	
	comp=Z,0.2nm,0.5s,baz=8.1,slow=1.2,SNR=1.9						
KSRS	Korea Array	146.58	326	PKPbc	PKPdf	14 05 08.3	+0.1
	comp=Z,1.0nm,0.8s,baz=46,slow=5.2,SNR=2.9						

IDC ***29*** *13:48:13.9±1.0, 3°.34N×128°.43E, h0^{km}, mb3.5/8, mbtmp3.5/8, Error ellipse: s-maj=50.6km s-min=17.1km az=73.0*

DJA ***29*** *13:48:17.7±0.6, 3°N±5°×12°8E±°, h10^{km}, M4.1/10, mB4.7/1, mb4.3/4, MLv4.0/10, Mw(mB)4.0/1*

ISC 29 13:48:20.1±0.8**, 3°.38N**±0°.09×**128°.4E**±0°.1**, h45**^{km}**, n17,** σ**0^{s}.73**/14**, mb3.5**/8**, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.79	202	P	Pn	13 49 02.8	+0.5
SWI	Sorong	5.09	146	P	Pn	13 49 34.4	+0.4
	0.1nm12nm,0.9s						
SIJI	Sorong	5.10	146	P	Pn	13 49 34.5	+0.4
SANI	Sanana	5.91	204	P	Pn	13 49 46.6	+1.5
	0.1nm15nm,0.8s						
GTOI	Gorontalo	6.03	243	P	Pn	13 49 46.7	-0.2
	0.1nm18nm,0.8s						
MRSI	Marisa	7.07	246	P	Pn	13 50 01.3	+0.2

FITZ	Fitzroy Crossi	21.51	187	P	P	13 53 05.1	-0.3
	1.1nm,0.9s,baz=8.7,slow=13,SNR=0.9						
	1.1nm,0.9s						
WRA	Warramunga Arr	23.90	166	P	P	13 53 28.9	-1.0
	2.6nm,0.9s,baz=345,slow=9.1,SNR=13						
	2.6nm,0.9s						
ASAR	Alice Springs	27.41	169	P	P	13 54 00.8	-0.9
	0.4nm,0.9s,baz=346,slow=10,SNR=6.3						
	0.4nm,0.9s						
CMAR	Chiang Mai Arr	32.49	300	P	P	13 54 46.5	-0.2
	0.2nm,0.5s,baz=114,slow=9.0,SNR=1.9						
	0.2nm,0.5s						
MJAR	Matsushiro Arr	34.22	14	P	P	13 55 01.7	+0.1
	0.8nm,0.8s,baz=189,slow=9.6,SNR=2.5						
	0.8nm,0.8s						
STKA	Stephens Creek	37.24	161	P	P	13 55 27.0	-0.5
	1.2nm,0.5s,baz=339,slow=8.6,SNR=5.9						
	1.2nm,0.5s						
H11S3	WAKE ISLAND Hy	40.36	65	T	T	14 39 06.3	
	baz=253						
H11S2	WAKE ISLAND Hy	40.37	65	T	T	14 39 11.5	
	baz=253						
H11S1	WAKE ISLAND Hy	40.37	65	T	T	14 39 08.2	
	baz=253						
SONM	Songino Array	48.17	340	P	P	13 56 56.1	-0.1
	0.1nm,0.3s,baz=165,slow=7.4,SNR=1.4						
	0.1nm,0.3s						
MKAR	Makanchi Array	58.80	325	P	P	13 58 14.8	+0.9
	0.2nm,0.3s,baz=124,slow=7.2,SNR=4.9						
	0.2nm,0.3s						

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*IDC **29** 13:49:56.6±1.0, 13.°58N×144.°66E, h103^{km}±30^{km}, mb3.4/5, mbtmp3.7/5, Error ellipse: s-maj=107.3km s-min=10.6km az=86.0*

*NEIC **29** 13:49:57.7±0.5, 13.°5N±0.°1×144.°75E±0.°08, h106^{km}±3^{km}, mb4.4/20, Error ellipse: s-maj=16.5km s-min=10.3km az=204.0*

ISC 29 13:49:57.1±0.8**, 13.°50N**±0.°09×**144.°8E**±0.°1**, h107**^{km}±7^{km}**, n29, σ0.^{s}55**/29**, mb4.3**/13**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.12	42	P	Pn	13 50 11.9	0.0
	1µm,0.3s,baz=270,slow=1.1,SNR=337						
GUMO				S	Sn	13 50 23.7	+0.6
	1µm,0.3s,baz=307,slow=20,SNR=12						
DPSS	Saipan	1.99	29	Pn	Pn	13 50 23.6	-6.2
PATS	Pohnpei	14.87	115	Pn	Pn	13 53 20.7	-1.2
JSG	Sagara	21.91	345	P	P	13 54 41.4	-0.3
TATO	Taipei	24.74	301	P	P	13 55 07.3	-1.4
TATO				IAmb	IAmb	13 55 29.7	
	comp=Z,60nm,1.4s						
COEN	Coen	27.32	183	P	P	13 55 32.7	+0.6
COEN				IAmb	IAmb	13 55 55.3	
	comp=Z,7.6nm,1.1s						
JEW	Eniwo	29.38	355	P	P	13 55 50.0	-0.1
MTN	Manton Dam	29.46	208	P	P	13 55 50.9	-0.2
MTN				IAmb	IAmb	13 56 05.1	
	comp=Z,26nm,1.4s						
KNRA	Kununurra	33.03	209	P	P	13 56 22.8	+0.4
WB0	Warramunga Arr	34.60	197	P	P	13 56 36.1	+0.1
WB0				IAmb	IAmb	13 57 16.7	
	comp=Z,3.5nm,1.1s						
WR8	Warramunga Arr	34.75	197	P	P	13 56 37.4	+0.1
WR8				IAmb	IAmb	13 57 01.8	
	comp=Z,7.9nm,1.4s						
WRAB	Tennant Creek	34.77	197	P	P	13 56 37.6	+0.1
WRAB				IAmb	IAmb	13 56 44.3	
	comp=Z,8.2nm,1.4s						
WRA	Warramunga Arr	34.78	197	P	P	13 56 37.8	+0.2
	comp=Z,0.9nm,0.6s,baz=18,slow=8.6,SNR=7.3						
	comp=Z,0.9nm,0.6s						
WRA	Warramunga Arr	34.78	197	P	P	13 56 37.7	+0.2
BJT	Baijiatuau	36.45	322	P	P	13 56 51.3	-0.3
FITZ	Fitzroy Crossi	36.64	212	P	P	13 56 52.9	-0.5
	comp=Z,1.6nm,0.8s,baz=34,slow=15,SNR=1.6						
	comp=Z,1.6nm,0.8s						
FITZ	Fitzroy Crossi	36.64	212	P	P	13 56 53.5	+0.1
FITZ				IAmb	IAmb	13 57 00.0	
	comp=Z,3.4nm,1.4s						
AS31	Alice Springs	38.44	196	P	P	13 57 09.1	+0.5
ASAR	Alice Springs	38.44	196	P	P	13 57 08.5	-0.1
	comp=Z,0.2nm,0.4s,baz=16,slow=7.0,SNR=14						
	comp=Z,0.2nm,0.4s						
ASAR	Alice Springs	38.44	196	P	P	13 57 08.8	+0.2
INKA	Innaminka	41.18	185	P	P	13 57 31.1	0.0
DZM	Mont Dzumac	41.24	149	P	P	13 57 32.1	+0.2
STKA	Stephens Creek	45.22	184	P	P	13 58 03.4	-0.3
	comp=Z,1.2nm,0.5s,baz=355,slow=11,SNR=5.2						
	comp=Z,1.2nm,0.5s						
STKA	Stephens Creek	45.22	184	P	P	13 58 03.2	-0.4
STKA				IAmb	IAmb	13 58 44.3	
	comp=Z,15nm,1.2s						
TOO	Toolangi	50.80	179	P	P	13 58 47.0	+0.4
TOO				IAmb	IAmb	13 58 48.5	
	comp=Z,4.6nm,1.4s						
C19K	Lookout Ridge	65.58	19	P	P	14 00 29.9	+0.8
D19K	Kuna River	65.77	20	P	P	14 00 31.6	+1.2
D19K				IAmb	IAmb	14 01 15.7	
	comp=Z,7.8nm,1.5s						
BVAR	Borovoye Array	69.95	322	P	P	14 00 56.8	0.0
	comp=Z,0.2nm,0.5s,baz=98,slow=7.9,SNR=2.1						
	comp=Z,0.2nm,0.5s						
YAH	Yahtse	70.20	30	P	P	14 00 58.6	+0.2

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*IDC **29** 13:53:24.2±2.4, 4.°41N×125.°36E, h0^{km}, mb3.5/4, mbtmp3.6/5, ML4.3/1, Error ellipse: s-maj=122.8km s-min=22.1km az=89.0*

*NEIC **29** 13:53:26.6±0.9, 4.°42N±0.°08×125.°3E±0.°2, h10^{km}±2^{km}, mb4.3/6, Error ellipse: s-maj=35.0km s-min=5.8km az=111.0*

ISC 29 13:53:25.9±0.9**, 4.°42N**±0.°07×**125.°4E**±0.°2**, h10**^{km}**, n15, σ0.^{s}60**/13**, mb4.0**/7**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	2.65	5	Pn	Pn	13 54 09.0	+0.4
	58nm,0.3s,baz=184,slow=19,SNR=2.1						
DAV				Sn	Sn	13 54 40.4	-0.5
	35nm,0.3s,baz=307,slow=20,SNR=1.7						
	139nm,0.4s						
DAV	Davao City (W)	2.65	5		Pn	13 54 09.7	+1.0
DAV				Sn	Sn	13 54 40.1	-0.7
TOLI2	Tolitoli	5.63	234	Pn	Pn	13 54 50.1	+0.3
FITZ	Fitzroy Crossi	22.37	179	P	P	13 58 24.4	-0.1
	1.3nm,0.6s,baz=354,slow=9.2,SNR=6.7						
	1.3nm,0.6s						
WRAB	Tennant Creek	25.76	160	P	P	13 58 56.8	-0.3
WRAB				IAmb	IAmb	13 59 07.8	
	comp=Z,6.6nm,1.2s						
WRA	Warramunga Arr	25.77	160	P	P	13 58 56.1	-1.0
	comp=Z,1.2nm,0.8s,baz=339,slow=9.2,SNR=7.6						
	comp=Z,1.2nm,0.8s						
WR8	Warramunga Arr	25.83	160	P	P	13 58 58.0	+0.3
WR8				IAmb	IAmb	13 59 22.1	
	comp=Z,3.4nm,0.9s						
ASAR	Alice Springs	29.13	164	P	P	13 59 26.7	-0.5
	comp=Z,0.1nm,0.5s,baz=344,slow=8.7,SNR=5.3						
	comp=Z,0.1nm,0.5s						
MAJO	Matsushiro	34.08	19	P	P	14 00 10.6	-0.1
MJB9	Matsu-Tunnel	34.09	19	P	P	14 00 10.6	-0.1
MJB9				IAmb	IAmb	14 00 15.7	
	comp=Z,7.1nm,1.4s						
STKA	Stephens Creek	39.26	158	P	P	14 00 55.4	+0.5
	comp=Z,0.9nm,0.7s,baz=336,slow=13,SNR=4.4						
	comp=Z,0.9nm,0.7s						
STKA	Stephens Creek	39.26	158	IAmb	IAmb	14 01 09.0	
	comp=Z,19nm,1.5s						
H11N1	WAKE ISLAND Hy	43.21	66	T	T	14 47 09.9	
	baz=254,slow=75,SNR=7.5						
H11N2	WAKE ISLAND Hy	43.22	66	T	T	14 47 10.7	
	baz=254,slow=75,SNR=6.9						
H11N3	WAKE ISLAND Hy	43.23	66	T	T	14 47 11.5	
	baz=254,slow=75,SNR=7.6						

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*MOS **29** 13:58:56.6±0.9, 5.°43S×151.°79E, h12^{km}, mb5.0/33, Error ellipse: s-maj=10.4km s-min=7.5km az=98.1*

*IDC **29** 13:59:00.1±3.0, 5.°39S×151.°82E, h28^{km}±19^{km}, mb4.3/21, mbtmp4.5/23, ML3.6/2, MS4.0/46, Error ellipse: s-maj=17.3km s-min=11.6km az=99.0*

*BJI **29** 13:59:00.5, 5.°44S×152.°26E, h61^{km}, mB5.3/12, mb4.9/58, Ms4.9/8, Ms7 4.6/10*

*NEIC **29** 13:59:02.4±1.3, 5.°50S±0.°07×151.°77E±0.°09, h35^{km}±1^{km}, mb5.1/150, Error ellipse: s-maj=15.2km s-min=12.3km az=108.0*

*GCMT **29** 13:59:03.4±0.3, 5.°75S±0.°02×151.°85E±0.°03, h37^{km}±1^{km}, MW4.9/61, Moment Tensor Solution. s41,c54; s61,c81; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.67±.19; $M_{\theta\theta}$-2.58±.11; $M_{\phi\phi}$-0.08±.12; $M_{r\theta}$1.34±.11; $M_{\theta\phi}$-0.50±.10; $M_{\phi r}$-0.67±.14; Best double couple: $M_0$3.05700×10^{16} NP1:ϕ_s244.00000°, δ35.00000°, λ64.00000°. NP2: ϕ_s95.00000°, δ59.00000°, λ107.00000°. Principal axes: T 3.1720, Plg71.0000°, Azm44.0000°; N -0.2270, Plg15.0000°, Azm266.0000°; P -2.9420, Plg13.0000°, Azm173.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **29** 13:59:05.5±1.5, 6.°S±6.°×15.°2E±.°, h73^{km}±11^{km}, M5.1/20, mb4.9/20, mB5.0/4, MLv5.4/1, Mw(mB)4.4/4*

ISC 29 13:59:03.5±0.8**, 5.°48S**±0.°04×**151.°77E**±0.°04**, h51**^{km}±6^{km}**, n374, σ1.^{s}29**/309**, mb5.0**/129**, MS4.2**/55**, 17C-4D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	5.56	308		Pn	14 00 23.6	-0.2
PMG	Port Moresby	6.01	229	Pn	Pn	14 00 29.5	-0.4
	25nm,0.3s,baz=50,slow=9.2,SNR=100						
PMG				Sn	Sn	14 01 36.1	-1.3
	78nm,0.3s,baz=12,slow=20,SNR=9.9						
	308nm,0.8s						
PMG	Port Moresby	6.01	229		Pn	14 00 28.6	-1.3
PMG	Port Moresby	6.01	229	P	Pn	14 00 31.4	+1.5
PMG	Port Moresby	6.01	229	S	Sn	14 01 39.7	+2.3
PMG	Port Moresby	6.01	229	P	Pn	14 00 30.9	+1.0
PMG	Port Moresby	6.01	229	S	Sn	14 01 39.9	+2.5
PMG	Port Moresby	6.01	229	P	Pn	14 00 31.2	+1.3
PMG	Port Moresby	6.01	229	*ce*P	Pn	14 00 30.5	+0.6
PMG				pmax	pmax		
	comp=Z,340nm,1.0s						
TATA	Tatamba Isabel	8.48	110	P	Pn	14 01 02.9	-0.9
TATA	Tatamba Isabel	8.48	110	S	Sn	14 02 38.1	-0.2
SAVO	Savo Central	8.77	115	P	Pn	14 01 07.8	0.0
NGOA	Tingoa Renbel	10.18	127	P	Pn	14 01 28.0	+0.9
JAY	Jayapura	11.42	285	LR	LR	14 05 42.5	
	comp=Z,968nm,18.6s,baz=96,slow=35						
GENI	Genyem	11.92	283	P	Pn	14 01 54.1	+3.2
	comp=Z,62nm,1.7s						
COEN	Coen	11.94	225		Pn	14 01 49.8	-1.4
COEN	Coen	11.94	225	P	Pn	14 01 50.9	-0.3
PATS	Pohnpei	13.87	28	Pn	Pn	14 02 17.3	-0.2
MTSU	Mount Surprise	14.53	209	P	Pn	14 02 27.5	+1.2
CTA	Charters Tower	15.48	200	Pn	Pn	14 02 38.2	-0.5
	comp=Z,0.5nm,0.3s,baz=19,slow=13,SNR=15						
CTA				LR	LR	14 08 15.0	
	comp=Z,801nm,19.5s,baz=28,slow=36						
	comp=Z,9.5nm,0.8s						
CTAO	Charters Tower	15.48	200	Pn	Pn	14 02 36.6	-2.0
CTAO	Charters Tower	15.48	200	P	Pn	14 02 41.3	+2.7
CTAO	Charters Tower	15.48	200	P	Pn	14 02 36.6	-2.0
CTAO				pmax	pmax		
	comp=Z,14nm,0.8s						
QIS	Mount Isa	19.09	217	P	P	14 03 22.8	+0.7
FAKI	Fak Fak	19.63	277	P	P	14 03 28.0	-0.1
EIDS	Eidsvold	19.79	182		P	14 03 28.9	-0.8
EIDS	Eidsvold	19.79	182	P	P	14 03 30.0	+0.3
GUMO	Guam	20.14	340	LR	LR	14 10 10.3	
	comp=Z,99nm,19.5s,baz=127,slow=33						
SAUI	Saumlaki	20.48	262	P	P	14 03 37.6	+0.4
SAUI				IAmb	IAmb	14 03 43.5	
	comp=Z,68nm,0.7s						
SAUI	Saumlaki	20.48	262	P	P	14 03 37.6	+0.4
	comp=Z,102nm,0.8s						
SIJI	Sorong	20.97	282	P	P	14 03 43.4	+0.8
SWI	Sorong	20.98	282	P	P	14 03 42.3	-0.4
	comp=Z,33nm,1.0s						
MTN	Manton Dam	21.63	249		P	14 03 48.9	-0.8
DRS	Darwin Rock St	21.73	250	P	P	14 03 51.8	+1.1
DZM	Mont Dzumac	21.76	141	P	P	14 03 49.8	-1.3
	comp=Z,5.3nm,0.6s,baz=321,slow=19,SNR=5.6						
DZM				LR	LR	14 11 36.4	
	comp=Z,864nm,19.6s,baz=344,slow=35						
	comp=Z,5.3nm,0.6s						
DZM	Mont Dzumac	21.76	141	*e*P	P	14 03 55.5	+4.4
	comp=Z,105nm,29.9s						
DZM				*e*S	S	14 07 42.2	-7.1
	comp=Z,460nm,24.4s						
DZM				*e*LR	LR	14 09 04.7	
	comp=Z,1µm,22.9s						
DZM	Mont Dzumac	21.76	141	IAmb	IAmb	14 04 03.2	
	comp=Z,96nm,1.9s						
WB0	Warramunga Arr	22.08	228		P	14 03 54.2	-0.3
WB0				IAmb	IAmb	14 04 07.0	
	comp=Z,38nm,0.8s						
WR8	Warramunga Arr	22.12	228		P	14 03 54.4	-0.4
QLP	Quilpie	22.18	198	P	P	14 03 56.7	+1.2
WRAB	Tennant Creek	22.21	228	P	P	14 03 55.3	-0.6
WRAB	Tennant Creek	22.21	228	P	P	14 03 54.9	-1.0
WRAB	Tennant Creek	22.21	228	*ce*P	P	14 03 55.1	-0.8
WRAB				pmax	pmax		
	comp=Z,70nm,1.7s						
WRA	Warramunga Arr	22.23	228	P	P	14 03 55.6	-0.4
	comp=Z,26nm,0.8s,baz=51,slow=11,SNR=61						
WRA				PcP	PcP	14 07 50.6	-0.5
	comp=Z,1.7nm,0.8s,baz=49,slow=2.6,SNR=3.6						
WRA				ScP	ScP	14 11 26.7	+2.1
	comp=Z,1.2nm,0.8s,baz=54,slow=2.9,SNR=5.5						
	comp=Z,26nm,0.8s						
WRA	Warramunga Arr	22.23	228	P	P	14 03 54.8	-1.2
WRA	Warramunga Arr	22.23	228		ScP	14 11 27.4	+2.9
WRA	Warramunga Arr	22.23	228	*ce*P	P	14 03 55.7	-0.4
WRA				pmax	pmax		
	comp=Z,21nm,0.6s						
GC1S	Gold Coast 1 S	22.62	176	P	P	14 04 02.1	+2.0
INKA	Innaminka	24.50	204		P	14 04 18.1	0.0
KNRA	Kununurra	24.75	244		P	14 04 20.6	0.0
ARMA	Armidale	24.81	180	P	P	14 04 20.8	-0.2
ARMA				IAmb	IAmb	14 04 35.9	
	comp=Z,41nm,1.3s						
AS31	Alice Springs	24.96	222		P	14 04 22.3	-0.1
ASAR	Alice Springs	24.96	222	P	P	14 04 21.8	-0.6
	comp=Z,29nm,0.7s,baz=47,slow=9.4,SNR=148						
ASAR				PcP	PcP	14 07 57.4	+0.5
	comp=Z,1.3nm,0.8s,baz=43,slow=2.6,SNR=3.3						
ASAR				S	S	14 08 41.2	-1.5
	comp=Z,1.4nm,0.8s,baz=54,slow=13,SNR=4.4						
ASAR				ScP	ScP	14 11 34.0	+2.1
	comp=Z,0.6nm,0.7s,baz=40,slow=2.8,SNR=4.3						
ASAR				LR	LR	14 13 59.1	
	comp=Z,329nm,21.5s,baz=86,slow=36						
	comp=Z,29nm,0.7s						
ASAR	Alice Springs	24.96	222		P	14 04 22.1	-0.3
ASAR	Alice Springs	24.96	222	P	P	14 04 22.1	-0.3
CMSA	Cobar Meteorol	26.54	192	P	P	14 04 38.3	+1.7
SOEI	Soe	27.58	259	P	P	14 04 46.3	+0.1
SOEI				IAmb	IAmb	14 05 18.7	
	comp=Z,51nm,0.8s						
SOEI	Soe	27.58	259	P	P	14 04 49.2	+2.9
STKA	Stephens Creek	27.94	199	P	P	14 04 48.6	-0.5
	comp=Z,3.4nm,0.6s,baz=25,slow=10,SNR=11						
STKA				LR	LR	14 16 17.7	
	comp=Z,445nm,18.3s,baz=24,slow=37						
	comp=Z,3.4nm,0.6s						
STKA	Stephens Creek	27.94	199	P	P	14 04 48.4	-0.7
STKA				IAmb	IAmb	14 05 30.0	
	comp=Z,39nm,0.9s						
STKA	Stephens Creek	27.94	199	P	P	14 04 48.4	-0.7
STKA				pmax	pmax		
	comp=Z,39nm,0.9s						
BATI	Baumata	28.23	259	P	P	14 04 52.0	+0.1
	comp=Z,62nm,0.8s,baz=89,slow=5.6,SNR=16						
BATI				LR	LR	14 18 28.5	
	comp=Z,617nm,20.9s,baz=103,slow=41						
BATI	Baumata	28.23	259	P	P	14 04 52.4	+0.5
FITZ	Fitzroy Crossi	28.43	242	P	P	14 04 53.0	-0.6
	comp=Z,56nm,0.8s,baz=73,slow=8.8,SNR=81						
FITZ				LR	LR	14 18 07.4	
	comp=Z,303nm,18.1s,baz=82,slow=40						
FITZ	Fitzroy Crossi	28.43	242	P	P	14 04 53.1	-0.6
DAV	Davao City (W)	28.95	295	LR	LR	14 16 15.5	
	comp=Z,427nm,18.5s,baz=122,slow=36						
HTT	Hallett	30.27	202	P	P	14 05 09.8	-0.1
BBOO	Buckleboo	30.89	206	P	P	14 05 14.8	-0.5
BBOO	Buckleboo	30.89	206	P	P	14 05 16.4	+1.1
FORT	Forrest	33.62	219	P	P	14 05 38.5	-0.7
JCJ	Chichijima	33.68	344	LR	LR	14 17 43.0	
	comp=Z,273nm,21.8s,baz=136,slow=33						
PLAI	Plampang	33.88	262	P	P	14 05 39.6	-2.1
MBWA	Marble Bar	34.74	240	P	P	14 05 49.0	-0.1
MBWA				IAmb	IAmb	14 05 52.0	
	comp=Z,50nm,1.4s						
MBWA	Marble Bar	34.74	240	P	P	14 05 49.4	+0.3
TGY	Tagaytay City	36.25	303	LR	LR	14 18 24.9	
	comp=Z,202nm,21.5s,baz=188,slow=32						
JAGI	Jajag, Banyuwa	37.45	263	P	P	14 06 10.0	-2.3
JAGI				IAmb	IAmb	14 06 11.1	
	comp=Z,21nm,0.8s						
JAGI	Jajag, Banyuwa	37.45	263	P	P	14 06 10.0	-2.3
TAU	Tasmania Unive	37.48	185	P	P	14 06 12.1	-0.1
TAU	Tasmania Unive	37.48	185	P	P	14 06 12.1	-0.1
TAU				pmax	pmax		
	comp=Z,108nm,1.7s						
MEEK	Meekatharra	37.98	233	P	P	14 06 16.7	0.0
JOW	Kunigami	39.36	326	LR	LR	14 19 39.7	
	comp=Z,349nm,21.9s,baz=119,slow=32						
URZ	Urewera	39.94	148	LR	LR	14 20 51.0	
	comp=Z,575nm,19.3s,baz=27,slow=33						
URZ	Urewera	39.94	148	P	P	14 06 34.8	+2.0
TKNZ	Takaka Hill	40.16	155	P	P	14 06 35.1	+0.4
TCW	Tory Channel	40.88	154	P	P	14 06 40.8	+0.3
BSWZ	Blackbirch Sta	41.12	155	P	P	14 06 42.3	-0.2
MORW	Morawa	41.12	231	P	P	14 06 45.4	+2.5
MORW				IAmb	IAmb	14 07 36.1	
	comp=Z,30nm,1.2s						
MORW	Morawa	41.12	231	P	P	14 06 43.1	+0.3
YULB	Yu-li	41.33	315	P	P	14 06 44.7	+0.2
YULB				IAmb	IAmb	14 06 46.6	
	comp=Z,16nm,0.7s						
BLDU	Ballidu	41.36	229	P	P	14 06 46.3	+1.6
NACB	Ninganchiao	41.63	316	P	P	14 06 47.0	0.0
NACB	Ninganchiao	41.63	316	P	P	14 06 45.2	-1.8
SSLB	Suanglung	41.83	315	P	P	14 06 46.9	-1.8
JSG	Sagara	41.94	343	P	P	14 06 46.0	-3.3
YHNB	Yeheng	42.11	317		P	14 06 51.9	+0.9
YHNB				IAmb	IAmb	14 06 52.8	
	comp=Z,28nm,0.9s						
NWAO	Narrogin (SRO)	42.18	225	LR	LR	14 25 18.5	
	comp=Z,320nm,19.0s,baz=64,slow=37						
MUN	Mundaring	42.42	227	P	P	14 06 54.1	+0.7
JNU	Nakatsue	43.20	334	P	P	14 06 58.3	-1.4
	comp=Z,12nm,0.9s,baz=149,slow=5.9,SNR=3.5						
JNU				LR	LR	14 23 27.8	
	comp=Z,112nm,19.3s,baz=188,slow=34						
	comp=Z,12nm,0.9s						
JNU	Nakatsue	43.20	334	IAmb	IAmb	14 07 15.1	
	comp=Z,48nm,1.3s						
MJAR	Matsushiro Arr	43.69	344	P	P	14 07 01.7	-1.8
	comp=Z,2.4nm,0.8s,baz=165,slow=8.8,SNR=9.3						
MJAR				PcP	PP	14 08 48.0	+2.0
	comp=Z,1.1nm,0.8s,baz=157,slow=4.4,SNR=4.4						
MJAR				LR	LR	14 23 29.2	
	comp=Z,188nm,18.9s,baz=172,slow=34						
	comp=Z,2.4nm,0.8s						
MJAR	Matsushiro Arr	43.69	344		P	14 07 04.2	+0.7
BBJI	Bungbulang	43.87	265	P	P	14 07 04.2	-1.2
BBJI	Bungbulang	43.87	265	P	P	14 07 03.7	-1.7
	comp=Z,25nm,0.7s						
JSD	Sado	45.08	345	P	P	14 07 11.4	-3.2
KASI	Kota Agung	47.04	268	P	P	14 07 31.8	+1.3
MDSI	Maura Dua	47.41	269	P	P	14 07 31.0	-2.3
	comp=Z,7.1nm,1.0s						
QIZ	Qiongzhong	47.94	302	P	P	14 07 39.0	+1.7
QIZ				S	S	14 14 34.5	+2.9
QIZ				LR	LR		
	comp=Z,340nm,15.7s						
QIZ				LR	LR		
	comp=Z,410nm,18.8s						
QIZ				LR	LR		
	comp=Z,490nm,22.0s						
KSRS	Korea Array	48.15	334	P	P	14 07 38.2	-0.4
	comp=Z,2.1nm,0.8s,baz=148,slow=6.4,SNR=6.8						
KSRS				PcP	PcP	14 09 03.6	-1.8
	comp=Z,1.4nm,0.8s,baz=167,slow=3.7,SNR=3.1						
KSRS				LR	LR	14 26 25.6	
	comp=Z,83nm,21.6s,baz=140,slow=34						
	comp=Z,2.1nm,0.8s						
NJ2	Nanjing	48.73	322	*e*P	P	14 07 44.5	+1.3
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
ASAJ	Asahikawa	50.05	351	LR	LR	14 27 02.4	
	comp=Z,106nm,21.8s,baz=202,slow=34						
PPI	Padang Panjang	51.52	274	P	P	14 08 02.7	-2.0
	comp=Z,15nm,0.9s						
USRK	Ussuriysk Ar.	52.56	342	P	P	14 08 11.2	-0.6
	comp=Z,2.4nm,0.8s,baz=161,slow=10,SNR=2.9						
	comp=Z,2.4nm,0.8s						
PSI	Prapat	53.42	278	LR	LR	14 33 49.2	
	comp=Z,96nm,20.7s,baz=157,slow=39						
ENH	Enshi	53.87	314	IAmb	IAmb	14 08 23.4	
	comp=Z,21nm,1.0s						
GYA	Guiyang	54.00	308	⇓P	P	14 08 25.0	+2.1
GYA				pmax	pmax		
	comp=Z,11nm,0.6s						
LYN	LuoYang	54.39	320	P	P	14 08 25.5	+0.1
LYN				pmax	pmax		
	comp=Z,19nm,0.5s						
LYN				LR	LR		
	comp=Z,350nm,15.2s						
LYN				LR	LR		
	comp=Z,480nm,9.8s						
LYN				LR	LR		
	comp=Z,490nm,14.4s						
CN2	Changchun	54.50	337	*e*P	P	14 08 30.0	+3.9
CN2				*e*pP	pP	14 08 43.0	+2.7
CN2				*e*S	S	14 16 05.0	+3.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,400nm,6.0s						
CN2				LR	LR		
	comp=Z,300nm,13.0s						
CN2				LR	LR		
	comp=Z,400nm,13.0s						
CN2				LR	LR		
	comp=Z,400nm,14.0s						
HNS	HongShan	54.88	324	⇓P	P	14 08 29.3	+0.4
HNS				pmax	pmax		
	comp=Z,10.0nm,1.4s						
HNS				LR	LR		
	comp=Z,300nm,11.0s						
HNS				LR	LR		
	comp=Z,250nm,11.2s						
HNS				LR	LR		
	comp=Z,400nm,11.9s						
BNX	BinXian	55.43	339	⇑P	P	14 08 32.3	-0.5
BNX				pmax	pmax		
	comp=Z,7.0nm,1.1s						
XAN	Xi'an	56.41	317	P	P	14 08 39.5	-0.6
XAN				pmax	pmax		
	comp=Z,14nm,1.3s						
KMI	Kunming	56.52	305	P	P	14 08 42.8	+1.6
KMI				pmax	pmax		
	comp=Z,19nm,0.9s						
CMAR	Chiang Mai Arr	57.24	296	P	P	14 08 46.5	+0.3
	comp=Z,3.4nm,0.8s,baz=109,slow=7.2,SNR=29						
CMAR				LR	LR	14 33 30.3	
	comp=Z,55nm,19.0s,baz=120,slow=36						
	comp=Z,3.4nm,0.8s						
CMAR	Chiang Mai Arr	57.24	296		P	14 08 46.2	0.0
CMAR	Chiang Mai Arr	57.24	296	*ce*P	P	14 08 46.5	+0.3
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CHTO	Chiang Mai	57.36	296		P	14 08 46.7	-0.3
CHTO				IAmb	IAmb	14 08 48.3	
	comp=Z,21nm,1.6s						
CHTO	Chiang Mai	57.36	296	P	P	14 08 46.6	-0.4
	comp=Z,7.8nm,1.3s						
CHTO	Chiang Mai	57.36	296	P	P	14 08 46.7	-0.3
CHTO				pmax	pmax		
	comp=Z,21nm,1.6s						
CHTO	Chiang Mai	57.36	296	P	P	14 08 47.1	+0.1
CHTO				pP	pP	14 08 57.5	-3.9
CHTO				sP	sP	14 09 01.6	-5.9
CHTO				PcP	PcP	14 09 39.3	-1.3
TRH	Trail	57.44	63	P	P	14 08 48.4	+0.4
PZH	PanZhiHua	57.93	306	P	P	14 08 54.0	+3.0
PPT2	Papeete2	58.51	107	*e*LQ	LQ	14 23 39.8	
	comp=Z,331nm,34.2s						
PPT2				*e*LR	LR	14 26 05.6	
	comp=Z,152nm,24.0s						

Sta	Name	Dist	Azi	Phase	ISC phase	Time	Res
PPT2				eLR	LR	14 26 06.2	
	comp=Z,172nm,24.8s						
PETK	Petropavlovsk-	58.58	4	LR	LR	14 28 53.2	
	comp=Z,179nm,21.0s,baz=172,slow=31						
XLT	XiLinHaoTe	58.74	330	eP	P	14 08 56.0	-0.3
XLT				pP	pP	14 09 09.8	-0.9
XLT				sP	sP	14 09 18.3	+1.6
XLT				pmax	pmax		
	comp=Z,19nm,0.8s						
HHC	Hu-ho-hao-te	59.00	325	eP	P	14 09 02.3	+4.1
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,200nm,11.4s						
HHC				LR	LR		
	comp=Z,250nm,16.1s						
HHC				LR	LR		
	comp=Z,180nm,18.0s						
HHC				LR	LR		
	comp=Z,370nm,16.1s						
TBI	Tubuai	59.22	114	eP	P	14 09 00.9	+1.0
	comp=Z,192nm,26.0s						
TBI				eS	S	14 17 04.0	-0.4
	comp=Z,216nm,28.5s						
TBI				eSS	SS	14 21 06.5	+6.8
	comp=Z,268nm,28.2s						
TBI				eLQ	LQ	14 23 56.5	
	comp=Z,1µm,30.2s						
TBI				eLR	LR	14 26 22.9	
	comp=Z,1µm,27.2s						
HEH	HeiHe	59.37	342	eP	P	14 08 59.5	-0.9
BTO	Baotou	59.73	324	eP	P	14 09 04.8	+1.5
BTO				pmax	pmax		
	comp=Z,17nm,0.8s						
BTO				pmax	pmax		
	comp=Z,560nm,9.3s						
LZH	Lanzhou	61.01	317	eP	P	14 09 12.5	+0.4
LZH				pP	pP	14 09 29.8	+3.2
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
LZH				LR	LR		
	comp=Z,370nm,10.6s						
LZH				LR	LR		
	comp=Z,450nm,11.3s						
SHEM	Shemya Is, Ala	61.01	15	LR	LR	14 34 27.7	
	comp=Z,164nm,18.2s,baz=112,slow=35						
LZDM	Lanzhou Array	61.04	316	P	P	14 09 11.3	-1.3
	comp=Z,2.5nm,0.3s,baz=131,slow=4.0,SNR=2.3						
	comp=Z,2.5nm,0.3s						
MA2	Magadan	64.85	359	LR	LR	14 37 48.6	
	comp=Z,72nm,19.2s,baz=190,slow=36						
MA2	Magadan	64.85	359	i P	P	14 09 37.2	+0.2
MA2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BRDH	Bariadhala	65.06	298	LR	LR	14 36 10.0	
	comp=Z,61nm,21.7s,baz=153,slow=34						
GTA	Gaotai	65.46	318	P	P	14 09 42.0	+0.5
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
SHL	Shillong	65.77	301		P	14 09 43.3	-0.5
SHL				IAmb	IAmb	14 09 44.4	
	comp=Z,18nm,1.1s						
SHL	Shillong	65.77	301	P	P	14 09 43.3	-0.5
SHL				pmax	pmax		
	comp=Z,18nm,1.1s						
ULN	Ulaanbaatar	66.03	329		P	14 09 44.8	-0.2
ULN	Ulaanbaatar	66.03	329	P	P	14 09 44.1	-1.0
	comp=Z,37nm,0.9s						
ULN	Ulaanbaatar	66.03	329	ceP	P	14 09 45.2	+0.1
ULN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ULN	Ulaanbaatar	66.03	329	P	P	14 09 45.3	+0.2
ULN				pP	pP	14 09 56.4	-3.4
SONM	Songino Array	66.35	328	P	P	14 09 47.1	0.0
	comp=Z,3.4nm,0.4s,baz=139,slow=5.0,SNR=38						
SONM				LR	LR	14 39 11.5	
	comp=Z,160nm,19.9s,baz=98,slow=36						
	comp=Z,3.4nm,0.4s						
SONM	Songino Array	66.35	328		P	14 09 47.0	0.0
SONM	Songino Array	66.35	328	P	P	14 09 47.1	0.0
SONM				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GOMU	GeErMu	67.46	313	P	P	14 09 54.0	-0.7
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TAOE	Nuku Hiva Isla	67.56	97	eLR	LR	14 30 23.3	
	comp=Z,189nm,28.3s						
SEY	Seymchan	68.22	0	P	P	14 09 58.3	-0.1
	comp=Z,2.2nm,0.9s,baz=180,slow=19,SNR=4.1						
SEY				LR	LR	14 38 41.8	
	comp=Z,63nm,19.9s,baz=162,slow=35						
	comp=Z,2.2nm,0.9s						
SEY	Seymchan	68.22	0	i P	P	14 09 58.9	+0.5
SEY				pmax	pmax		
	comp=Z,4.0nm,1.1s						
YAK	Yakutsk	69.44	349	LR	LR	14 39 34.7	
	comp=Z,60nm,20.8s,baz=125,slow=35						
YAK	Yakutsk	69.44	349	i P	P	14 10 05.3	-0.7
YAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ZAK	Zakamensk	69.54	329	eP	P	14 10 06.6	-0.4
ZAK				pmax	pmax		
	comp=Z,18nm,1.0s						
SPIA	Saint Paul Isl	69.65	21	P	P	14 10 08.8	+1.5
CCD	Concordia, Ant	71.46	187	P	P	14 10 19.0	+0.3
MOY	Mondy	71.47	329	eP	P	14 10 19.1	+0.3
MOY				pmax	pmax		
	comp=Z,16nm,0.9s						
PALK	Pallekele	72.03	279	LR	LR	14 47 19.9	
	comp=Z,42nm,18.0s,baz=103,slow=40						
VNDA	Vanda	72.19	178	P	P	14 10 23.1	+0.6
	comp=Z,1.1nm,0.9s,baz=343,slow=5.5,SNR=6.4						
	comp=Z,1.1nm,0.9s						
VNDA	Vanda	72.19	178	P	P	14 10 22.6	0.0
VNDA	Vanda	72.19	178	P	P	14 10 22.6	0.0
VNDA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KNGR	Kungurtug, Tuv	72.69	327	i P	P	14 10 27.3	+1.2
KNGR				pmax	pmax		
	comp=Z,14nm,0.9s						
BILL	Bilibino	74.06	6		P	14 10 34.4	+0.8
BILL	Bilibino	74.06	6	ceP	P	14 10 35.1	+1.4
BILL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WMQ	Urumqi	75.55	318	eP	P	14 10 43.0	+0.1
WMQ				pmax	pmax		
	comp=Z,12nm,1.5s						
WMQ				LR	LR		
	comp=Z,66nm,22.5s						
HYB	Hyderabad	75.75	289	⇑eP	P	14 10 44.6	+0.1
SII	Sitkinak Islan	75.84	28	P	P	14 10 44.4	+0.2
OHAK	Old Harbor	76.62	27	P	P	14 10 48.5	-0.1
L16K	Owhat River	76.75	22	P	P	14 10 49.5	+0.3
L16K				IAmb	IAmb	14 11 45.5	
	comp=Z,42nm,1.8s						
P18K	Big Mountain,	76.99	25	P	P	14 10 50.0	-0.7
Q19K	Cape Douglas,	77.40	26	P	P	14 10 52.6	-0.3
DGZ	Jazzator, Alta	78.01	323	i P	P	14 10 56.5	-0.2
DGZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TIXI	Tiksi	78.43	353	LR	LR	14 47 26.4	
	comp=Z,64nm,18.8s,baz=199,slow=37						
TIXI	Tiksi	78.43	353	ceP	P	14 11 00.8	+2.4
TIXI				pmax	pmax		
	comp=Z,8.0nm,2.5s						
ZSN	Zaisan	78.73	320	eP	P	14 11 00.8	+0.1
ZSN	Zaisan	78.73	320	eP	P	14 11 00.7	+0.1
CNPM	China Poot	78.77	26	P	P	14 11 00.7	+0.1
MK31	Makanchi Array	80.16	319	ceP	P	14 11 08.5	+0.1
MKAR	Makanchi Array	80.16	319	P	P	14 11 07.6	-0.8
	comp=Z,4.9nm,0.8s,baz=106,slow=6.6,SNR=26						
MKAR				LR	LR	14 46 51.0	
	comp=Z,88nm,20.2s,baz=130,slow=36						
	comp=Z,4.9nm,0.8s						
MKAR	Makanchi Array	80.16	319		P	14 11 07.3	-1.1
MKAR	Makanchi Array	80.16	319	ceP	P	14 11 08.3	-0.1
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MAKZ	Makanchi	80.37	319		P	14 11 08.8	-0.7
MAKZ	Makanchi	80.37	319	P	P	14 11 08.8	-0.7
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MAKZ	Makanchi	80.37	319	P	P	14 11 09.1	-0.4
WUS	Wushi	80.62	313	P	P	14 11 11.2	+0.1
WUS				PcP	PcP	14 11 18.0	+0.2
WUS				pP	pP	14 11 22.4	-3.7
WUS				sP	sP	14 11 26.9	-5.1
SHLS	Shalkode	80.98	315	eP	P	14 11 11.4	-1.7
SHLS	Shalkode	80.98	315	eP	P	14 11 11.3	-1.7
ZALV	Zalesovo Beam	81.15	327	P	P	14 11 11.5	-1.9
	comp=Z,3.3nm,0.4s,baz=116,slow=6.2,SNR=22						
ZALV				LR	LR	14 46 57.5	
	comp=Z,126nm,20.3s,baz=80,slow=36						
	comp=Z,3.3nm,0.4s						
ZALV	Zalesovo Beam	81.15	327	i P	P	14 11 11.8	-1.7
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.4s						
HIN	Hinchinbrook I	81.27	26	P	P	14 11 14.3	+0.3
UZB	Uzynbulak	81.29	315	eP	P	14 11 14.6	-0.1
	comp=Z,10nm,1.5s						
UZB	Uzynbulak	81.29	315	eP	P	14 11 14.6	-0.1
UZB				pmax	pmax		
	comp=Z,11nm,1.5s						
PRZ	Przheval'sk	81.55	314	IAmb	IAmb	14 11 17.9	
	comp=Z,22nm,1.1s						
SATY	Saty	81.70	315	eP	P	14 11 17.0	+0.1
SATY	Saty	81.70	315	eP	P	14 11 16.9	+0.1
MCK	McKinley	81.88	23	IAmb	IAmb	14 11 21.3	
	comp=Z,11nm,0.9s						
M24K	Tolsona, Glenn	82.20	25	P	P	14 11 19.4	+0.5
TDK	Taldyqorghan	82.22	317	eP	P	14 11 19.6	+0.2
	comp=Z,8.1nm,0.8s						
TDK	Taldyqorghan	82.22	317	eP	P	14 11 19.5	+0.2
TDK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KDJ	Kajisay	82.33	314	P	P	14 11 20.1	-0.1
KDJ				IAmb	IAmb	14 11 21.8	
	comp=Z,17nm,0.9s						
KDJ	Kajisay	82.33	314	P	P	14 11 20.1	-0.1
KDJ				pmax	pmax		
	comp=Z,17nm,0.9s						
KSH	Kashi	82.60	311	P	P	14 11 22.8	+1.2
KSH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MDOK	Medeo	82.69	315	eP	P	14 11 22.0	0.0
MDOK	Medeo	82.69	315	eP	P	14 11 22.0	0.0
TNSS	Tian-Shan	82.73	314	eP	P	14 11 22.3	-0.3
TNSS	Tian-Shan	82.73	314	eP	P	14 11 22.2	-0.3
CCB	Clear Creek Bu	82.77	22	IAmb	IAmb	14 14 08.0	
	comp=Z,27nm,1.8s						
AAA	Alma-Ata	82.79	315	eP	P	14 11 22.5	0.0
AAA	Alma-Ata	82.79	315	eP	P	14 11 22.4	0.0
HDA	Harding Lake	82.97	23	IAmb	IAmb	14 11 22.5	
	comp=Z,27nm,1.8s						
ILAR	Eielson Array	83.17	22	P	P	14 11 21.3	-2.5
	comp=Z,4.1nm,0.8s,baz=256,slow=5.5,SNR=38						
	comp=Z,4.1nm,0.8s						
ILAR	Eielson Array	83.17	22	P	P	14 11 22.0	-1.8
ILAR	Eielson Array	83.17	22	P	P	14 11 22.0	-1.8
BOOM	Boomskoye usch	83.31	314	IAmb	IAmb	14 11 26.4	
	comp=Z,9.6nm,0.7s						
NIL	Nilore	83.51	305	P	P	14 11 25.4	-0.9
NIL				IAmb	IAmb	14 11 26.6	
	comp=Z,13nm,0.8s						
NIL	Nilore	83.51	305	P	P	14 11 25.5	-0.9
NIL				pmax	pmax		
	comp=Z,13nm,0.8s						
TKM2	Tokmak 2	83.66	314	P	P	14 11 26.9	-0.2
	SNR=13						
KURK	Kurchatov	83.67	322	P	P	14 11 26.2	-0.5
J25K	Salcha River,	83.67	23	IAmb	IAmb	14 11 27.9	
	comp=Z,6.9nm,0.6s						
BARN	Barnard Glacie	83.70	27	P	P	14 11 27.5	+0.5
L26K	Log Cabin Wild	83.78	25	IAmb	IAmb	14 12 07.2	
	comp=Z,31nm,1.8s						
CHMS	Chumysh	84.28	314	P	P	14 11 30.2	+0.1
	SNR=8.2						
UCH	Uchtor	84.28	313	P	P	14 11 31.5	+0.8
	SNR=14						
AAK	Ala-Archa	84.39	314	P	P	14 11 31.2	+0.4
	SNR=9.9						
AAK	Ala-Archa	84.39	314	LR	LR	14 49 05.1	
	comp=Z,71nm,20.0s,baz=84,slow=36						
AAK	Ala-Archa	84.39	314		P	14 11 30.1	-0.6
AAK				IAmb	IAmb	14 11 31.8	
	comp=Z,8.1nm,0.9s						
AAK	Ala-Archa	84.39	314	ceP	P	14 11 31.2	+0.4
AAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AAK	Ala-Archa	84.39	314	P	P	14 11 31.1	+0.3
BCAR	Beaver Creek A	84.45	25	P	P	14 11 31.1	+0.6
SGDS	Sogindy	84.47	314	eP	P	14 11 31.0	-0.1
QSPA	South Pole Qui	84.49	180	P	P	14 11 30.4	-0.3
QSPA				IAmb	IAmb	14 11 40.5	
	comp=Z,8.6nm,0.9s						
USP	Ospenovka	84.52	314	P	P	14 11 31.6	+0.3
	SNR=16						
MAW	Mawson	84.55	203	P	P	14 11 30.2	-0.6
	comp=Z,1.8nm,0.6s,baz=93,slow=8.0,SNR=6.7						
MAW				LR	LR	14 46 15.8	
	comp=Z,117nm,21.1s,baz=103,slow=34						
	comp=Z,1.8nm,0.6s						
EKS2	Erkin-Say	84.91	314	P	P	14 11 34.0	+0.7
	SNR=16						
BMAR	Burnt Mountain	85.23	20	P	P	14 11 35.3	+0.9
HYT	Haines Junctio	85.51	28	IAmb	IAmb	14 11 50.8	
	comp=Z,14nm,1.1s						
DAWY	Dawson	85.82	24	P	P	14 11 37.8	+0.5
NRIK	Noril'sk	86.27	341	P	P	14 11 36.6	-2.7
	comp=Z,3.3nm,0.8s,baz=91,slow=5.4,SNR=5.9						
NRIK				LR	LR	14 52 08.9	
	comp=Z,85nm,18.0s,baz=126,slow=37						
	comp=Z,3.3nm,0.8s						
NRIK	Noril'sk	86.27	341	IAmb	IAmb	14 14 14.0	
	comp=Z,22nm,1.9s						
NRIK	Noril'sk	86.27	341	i P	P	14 11 39.5	+0.1
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
U33K	Whale Pass	86.29	33	P	P	14 11 40.4	+0.7
M30M	Minto, Yukon	86.41	26	P	P	14 11 40.8	+0.5
M30M				IAmb	IAmb	14 13 07.9	
	comp=Z,27nm,1.8s						
DZA	Taraz	86.72	313	eP	P	14 11 42.4	+0.2
	comp=Z,6.0nm,0.6s						
DZA	Taraz	86.72	313	eP	P	14 11 42.3	+0.1
DZA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
F28M	Old Crow	86.96	21	P	P	14 11 43.6	+0.8
KK31	Karatay Array	87.35	314	IAmb	IAmb	14 11 45.9	
	comp=Z,7.4nm,1.1s						
KKAR	Karatay Array	87.35	314		P	14 11 44.9	-0.4
KKAR	Karatay Array	87.35	314	P	P	14 11 44.9	-0.4
M31M	Drury Creek, Y	87.36	27	P	P	14 11 45.4	+0.5
IUG	Iuzhnay	87.54	313	eP	P	14 11 46.3	0.0
	comp=Z,5.8nm,1.1s						
IUG	Iuzhnay	87.54	313	eP	P	14 11 46.3	0.0
IUG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CHGR	Chuyangaron	87.64	309	IAmb	IAmb	14 11 49.5	
	comp=Z,13nm,1.0s						
CHGR	Chuyangaron	87.64	309	i P	P	14 11 46.4	-0.4
CHGR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
EPYK	Eagle Plains	87.68	22	P	P	14 11 47.4	+1.1
EPYK				IAmb	IAmb	14 13 15.7	
	comp=Z,18nm,1.4s						
BRLS	Borolday	87.82	313	eP	P	14 11 47.6	+0.1
	comp=Z,4.0nm,1.2s						
BRLS	Borolday	87.82	313	eP	P	14 11 47.6	+0.1
BRLS				pmax	pmax		
	comp=Z,4.0nm,1.2s						
CHM	Chimkent	87.88	313	eP	P	14 11 47.9	+0.1
CHM	Chimkent	87.88	313	eP	P	14 11 47.9	+0.1
BBB	Bella Bella	88.25	37	LR	LR	14 43 22.7	
	comp=Z,78nm,21.8s,baz=242,slow=30						
G31M	Satah River	88.78	22	P	P	14 11 51.9	+0.5
BVAR	Borovoye Array	89.17	323	P	P	14 11 51.6	-2.0
	comp=Z,6.2nm,0.7s,baz=100,slow=5.6,SNR=29						
BVAR				LR	LR	14 54 23.9	
	comp=Z,55nm,18.2s,baz=70,slow=37						
	comp=Z,6.2nm,0.7s						
BORK	Borovoye	89.21	323		P	14 11 52.5	-1.3
BORK				IAmb	IAmb	14 11 54.2	
	comp=Z,7.2nm,0.9s						
BORK	Borovoye	89.21	323	ceP	P	14 11 51.9	-1.9
BORK				pmax	pmax		
	comp=Z,17nm,1.7s						
INK	Inuvik	89.45	21	LR	LR	14 45 46.3	
	comp=Z,95nm,21.7s,baz=331,slow=31						
INK	Inuvik	89.45	21	IAmb	IAmb	14 12 03.4	
	comp=Z,8.9nm,1.1s						
MCCM	Marconi Confer	89.70	52	P	P	14 11 56.5	+0.2
I03D	Drain, OR	90.05	46	P	P	14 11 58.3	+0.3
YBH	Yreka Blue Hor	90.27	48	LR	LR	14 44 41.3	
	comp=Z,7.5nm,21.9s,baz=277,slow=30						
O03E	Paynes Creek	90.78	50	IAmb	IAmb	14 12 03.9	
	comp=Z,11nm,1.1s						
GNW	Green Mountain	90.91	42	IAmb	IAmb	14 12 03.2	
	comp=Z,9.7nm,0.9s						
ORV	Oroville	90.93	51	IAmb	IAmb	14 12 04.4	
	comp=Z,5.6nm,0.9s						
WIFE	Three Sisters-	91.19	46	P	P	14 12 03.7	+0.2
CMB	Columbia Colle	91.64	52	IAmb	IAmb	14 12 07.4	
	comp=Z,7.7nm,1.2s						
PINE	Pine Mountain	91.80	46	P	P	14 12 06.5	+0.2
PNTR	Pine Nut	92.35	51	IAmb	IAmb	14 12 11.1	
	comp=Z,9.0nm,0.9s						
PAHR	Pah Rah Range	92.57	51	IAmb	IAmb	14 12 12.1	
	comp=Z,7.5nm,1.0s						
MDPB	Devils Postpil	92.64	53	IAmb	IAmb	14 12 12.3	
	comp=Z,7.1nm,1.1s						
SYO	Syowa Base	92.69	200	⇓eP	P	14 12 11.0	+1.4
SYO	Syowa Base	92.69	200	⇑ePcP	PcP	14 12 12.1	+1.8
HAWA	Hanford	93.03	44	IAmb	IAmb	14 12 13.7	
	comp=Z,9.9nm,1.1s						
EPH	Ephrata	93.06	43	IAmb	IAmb	14 12 13.0	
	comp=Z,10.0nm,0.9s						
RYN	Ryan	93.15	52	IAmb	IAmb	14 12 14.5	
	comp=Z,8.1nm,1.0s						
NVAR	Mina Array Bea	93.31	52	P	P	14 12 14.1	+0.6
	comp=Z,5.9nm,0.8s,baz=269,slow=5.3,SNR=46						
NVAR				LR	LR	14 50 19.0	
	comp=Z,183nm,18.6s,baz=283,slow=33						
	comp=Z,5.9nm,0.8s						
NVAR	Mina Array Bea	93.31	52	P	P	14 12 13.7	+0.3
CWC	Cottonwood Cre	93.34	54	IAmb	IAmb	14 12 15.3	
	comp=Z,7.5nm,1.2s						
G08A	Pilot Rock	93.34	45	IAmb	IAmb	14 12 15.2	
	comp=Z,11nm,1.1s						
WVOR	Wild Horse Val	93.36	48	IAmb	IAmb	14 12 15.1	
	comp=Z,12nm,1.1s						
YPT	Yellepit	93.39	44	IAmb	IAmb	14 12 15.1	
	comp=Z,13nm,1.2s						
NV11	Mina Array Sit	93.43	52	IAmb	IAmb	14 12 15.8	
	comp=Z,9.5nm,0.9s						
J08A	Circle Bar Ran	93.54	47	IAmb	IAmb	14 12 15.8	
	comp=Z,8.5nm,0.9s						
CLC	China Lake	93.68	55	IAmb	IAmb	14 13 37.5	
	comp=Z,5.3nm,0.9s						
QSM	Queen of Sheba	94.28	54	IAmb	IAmb	14 12 19.6	
	comp=Z,5.9nm,1.0s						
GWY	Greenwater Val	94.46	54	IAmb	IAmb	14 12 22.1	
	comp=Z,6.6nm,1.2s						
PFO	Pinyon Flats O	94.47	57	LR	LR	14 46 40.7	
	comp=Z,125nm,21.3s,baz=270,slow=30						
BMO	Blue Mountains	94.48	46	IAmb	IAmb	14 12 19.7	
	comp=Z,11nm,1.1s						
WCT	Wildcat Mounta	94.53	54	IAmb	IAmb	14 12 20.9	
	comp=Z,8.8nm,1.0s						
F10A	Beach Ranch, E	94.60	44	IAmb	IAmb	14 12 20.0	
	comp=Z,8.2nm,0.9s						
SHOC	Shoshone, Teco	94.76	55	IAmb	IAmb	14 12 21.8	
	comp=Z,8.6nm,0.9s						
NEW	Newport	94.79	42	LR	LR	14 50 52.4	
	comp=Z,128nm,18.4s,baz=253,slow=33						
NEW	Newport	94.79	42	IAmb	IAmb	14 12 20.8	
	comp=Z,8.8nm,1.1s						
AB31	Akbulak array	95.30	319	IAmb	IAmb	14 12 21.2	
	comp=Z,4.2nm,1.0s						
PLID	Pearl Lake	95.42	45	IAmb	IAmb	14 12 24.0	
	comp=Z,5.9nm,1.0s						
IRM	Iron Mountain	95.59	56	IAmb	IAmb	14 12 37.4	
	comp=Z,7.6nm,1.3s						
ELK	Elko	95.81	50	LR	LR	14 49 25.0	
	comp=Z,120nm,20.2s,baz=280,slow=32						
ARTI	Arti	96.40	326	LR	LR	14 55 29.7	
	comp=Z,201nm,21.8s,baz=90,slow=35						
ARTI	Arti	96.40	326	P	P	14 12 24.7	-2.2
ARTI						14 16 18.3	
ARTI				S	SKSac	14 23 01.2	+2.0
ARTI				SS	SS	14 30 14.5	-2.4
SPR3	Spring Creek 3	96.44	51	IAmb	IAmb	14 12 29.8	
	comp=Z,6.6nm,1.0s						
YKA	Yellowknife Ar	96.50	28	P	P	14 12 26.8	-0.4
	comp=Z,0.5nm,0.8s,baz=273,slow=5.1,SNR=8.9						
YKA				LR	LR	14 50 11.8	
	comp=Z,78nm,21.7s,baz=64,slow=32						
	comp=Z,0.5nm,0.8s						
YKA	Yellowknife Ar	96.50	28	ceP	P	14 12 27.2	0.0
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
HLID	Hailey	96.51	47	IAmb	IAmb	14 12 39.1	
	comp=Z,17nm,2.0s						
AKTO	Aktyubinsk	96.58	320	LR	LR	14 57 12.2	
	comp=Z,111nm,19.3s,baz=246,slow=36						
PSUT	Pine Spring	96.80	52	IAmb	IAmb	14 12 33.4	
	comp=Z,4.0nm,0.9s						
CCUT	Cedar City	97.16	53	IAmb	IAmb	14 12 33.5	
	comp=Z,5.0nm,1.0s						
KNB	Kanab	97.58	54	IAmb	IAmb	14 12 35.5	
	comp=Z,7.5nm,1.1s						
HVU	Hansel Valley	97.69	49	IAmb	IAmb	14 12 35.1	
	comp=Z,7.9nm,1.0s						
YHL	Hebgen Lake	98.83	46	IAmb	IAmb	14 12 42.4	
	comp=Z,6.1nm,1.1s						
YMR	Madison River	98.99	46	IAmb	IAmb	14 12 41.1	
	comp=Z,4.3nm,1.0s						
P17A	Butcher Ranch,	99.24	51	IAmb	IAmb	14 13 13.2	
	comp=Z,3.9nm,0.8s						
HMU	Henry Mountain	99.25	53	IAmb	IAmb	14 12 42.1	
	comp=Z,6.2nm,1.0s						
H17A	Grant Village	99.28	46	IAmb	IAmb	14 12 43.9	
	comp=Z,5.0nm,0.9s						
NVL	N'lazarevskaya	99.38	192	eP	Pdif	14 12 38.9	-1.1
NVL				e		14 16 42.4	
NVL				ePPP	PPP	14 18 49.0	
NVL				eS	SKSac	14 23 13.2	-0.7
NVL				eSS	SS	14 30 59.0	+1.6
NVL				eSSS	SSS	14 34 48.1	
NVL				pmax	pmax		
	comp=Z,11nm,1.0s						
NVL				MLR	MLR		
	comp=Z,381nm,21.0s						
LKWY	Lake	99.40	46	IAmb	IAmb	14 12 46.0	
	comp=Z,10nm,1.4s						
LPIG	La Paz	99.44	67	LR	LR	14 50 26.2	
	comp=Z,82nm,20.5s,baz=238,slow=31						
PDAR	Pinedale Array	100.06	48	P	Pdif	14 12 43.2	-0.7
	comp=Z,3.0nm,0.8s,baz=277,slow=4.7,SNR=22						
PDAR				LR	LR	14 52 24.0	
	comp=Z,64nm,20.2s,baz=270,slow=32						
ARCES	ARCESS Array B	107.21	343	PKiKP	PKiKP	14 17 21.7	-1.9
	comp=Z,6.1nm,1.1s,baz=66,slow=2.3,SNR=5.3						
MNK	Minsk	113.62	328	i PKIKP	PKiKP	14 17 34.5	-1.6
MNK				i		14 18 26.6	
MNK				i PPP	PPP	14 20 50.2	
MNK				i		14 24 46.7	
MNK				i SS	SS	14 34 15.7	+3.6
MNK				i SSS	SSS	14 38 29.0	
MNK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,11nm,0.8s						
MNK				pmax	pmax		
	comp=E,22nm,1.0s						
MNK				MLR	MLR		
	comp=N,434nm,25.0s						
MNK				MLR	MLR		
	comp=E,435nm,26.0s						
MNK				MLR	MLR		
	comp=Z,121nm,15.0s						
AKASG	Malin Array Be	114.44	324	PKP	PKPdf	14 17 36.3	-1.4
	comp=Z,0.8nm,0.5s,baz=69,slow=2.1,SNR=5.0						
AKASG	Malin Array Be	114.44	324	c iPKIKP	PKiKP	14 17 37.9	+0.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	Keskin Array B	114.98	311	PKP	PKiKP	14 17 38.6	-0.7
	comp=Z,1.1nm,0.7s,baz=154,slow=3.2,SNR=6.2						
HFS	Hagfors	116.92	338	PKP	PKPdf	14 17 41.2	-1.1
	comp=Z,2.7nm,0.9s,baz=52,slow=5.7,SNR=1.5						
NOA	NORSAR Array B	117.19	340	PKP	PKPdf	14 17 41.6	-1.2
	comp=Z,0.7nm,0.7s,baz=46,slow=1.9,SNR=2.0						
PLCA	Paso Flores	119.85	144	PKP	PKPdf	14 17 48.5	-0.2
	comp=Z,1.0nm,0.7s,baz=225,slow=10.0,SNR=4.3						
STEB	Steborice	121.28	327	ePKPDF	PKPdf	14 17 51.0	0.0
KRLC	Kraliky	121.73	328	ePKIKP	PKPdf	14 17 51.8	-0.1
KRLC	Kraliky	121.73	328	ePKPDF	PKPdf	14 17 51.8	-0.1
OSTC	Ostas	121.76	328	ePKIKP	PKiKP	14 17 52.4	+0.3
OSTC	Ostas	121.76	328	ePKPDF	PKiKP	14 17 52.4	+0.3

CLL	**Collm**	**122.94**	**330**		**PKPdf**	**14 17 53.9**	**-0.3**
CLL	**Collm**	**122.94**	**330**	*i* PKIKP	**PKPdf**	**14 17 54.0**	**-0.1**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CLL	**Collm**	**122.94**	**330**	*i* PKPdf	**PKPdf**	**14 17 54.0**	**-0.1**
	comp=Z,4.0nm,0.8s						
CLL				L	L	15 10 00.0	
	comp=Z,100nm,18.4s						
PRU	**Pruhonice**	**122.96**	**329**	*e*PKIKP	**PKPdf**	**14 17 53.5**	**-0.7**
PRU	**Pruhonice**	**122.96**	**329**	*e*PKPDF	**PKPdf**	**14 17 53.5**	**-0.7**
CONA	**Conrad Observa**	**123.44**	**326**	*e*PKP	**PKPdf**	**14 17 55.2**	**-0.1**
	comp=Z,2.5nm,0.6s						
ZVC	**Zvikov**	**123.47**	**328**	*e*PKPDF	**PKPdf**	**14 17 55.1**	**-0.1**
CKRC	**Cesky Krumlov**	**123.78**	**327**	*e*PKIKP	**PKPdf**	**14 17 55.7**	**-0.2**
CKRC	**Cesky Krumlov**	**123.78**	**327**	*e*PKPDF	**PKPdf**	**14 17 55.7**	**-0.2**
KHC	**Kasperske Hory**	**123.98**	**328**		**PKiKP**	**14 17 56.5**	**0.0**
KHC	**Kasperske Hory**	**123.98**	**328***c*	*i*PKIKP	**PKiKP**	**14 17 56.5**	**0.0**
KHC				pmax	pmax		
	comp=Z,10.0nm,2.5s						
KHC	**Kasperske Hory**	**123.98**	**328**	*e*PKPDF	**PKPdf**	**14 17 56.0**	**-0.3**
GERES	**GERESS Array B**	**124.08**	**328**	PKP	**PKPdf**	**14 17 56.1**	**-0.4**
	comp=Z,3.0nm,0.6s,baz=56,slow=2.5,SNR=35						
MOA	**Molln**	**124.37**	**327**	*i* PKP	**PKPdf**	**14 17 56.7**	**-0.3**
	comp=Z,0.4nm,0.3s						
SOKA	**Soboth**	**124.61**	**325**	*e*PKP	**PKPdf**	**14 17 56.6**	**-1.0**
	comp=Z,1.7nm,0.6s						
LESA	**Schwarzleotal**	**125.48**	**327**	*i* PKP	**PKPdf**	**14 17 58.6**	**-0.6**
	comp=Z,3.3nm,0.5s						
ABTA	**Abfaltersbach**	**125.98**	**326**	*e*PKP	**PKPdf**	**14 17 59.3**	**-0.9**
	comp=Z,2.9nm,0.6s,SNR=5.7						
WATA	**Walderalm**	**126.13**	**327**	*e*PKP	**PKPdf**	**14 17 59.9**	**-0.6**
	comp=Z,1.5nm,0.5s						
WTTA	**Wattenberg**	**126.14**	**327**	*i* PKP	**PKPdf**	**14 18 00.5**	**-0.2**
	comp=Z,3.1nm,0.5s,SNR=6.0						
EKA	**Eskdalemuir Ar**	**126.37**	**342**	PKP	**PKPdf**	**14 18 00.1**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=34,slow=3.4,SNR=5.5						
SQTA	**Sankt Quirin**	**126.40**	**327**	*e*PKP	**PKPdf**	**14 18 01.0**	**0.0**
	comp=Z,2.4nm,0.5s						
RETA	**Reutte**	**126.47**	**328**	*e*PKP	**PKiKP**	**14 18 01.4**	**-0.1**
	comp=Z,1.4nm,0.5s						
FETA	**Feichten**	**126.78**	**328**	*e*PKP	**PKPdf**	**14 18 01.7**	**-0.2**
	comp=Z,2.9nm,0.6s,SNR=6.8						
DAVOX	**Davos/Dischmat**	**127.39**	**328**	PKP	**PKPdf**	**14 18 02.8**	**-0.3**
	comp=Z,2.9nm,0.4s,baz=48,slow=14,SNR=11						
BMRD	**Maredsous**	**127.46**	**334**	*d*PKP	**PKiKP**	**14 18 03.5**	**+0.1**
LPAZ	**La Paz**	**134.99**	**119**	PKP	**PKPdf**	**14 18 18.5**	**-0.3**
	comp=Z,2.2nm,0.8s,baz=270,slow=3.0,SNR=5.3						
CPUP	**Villa Florida**	**137.63**	**140**	PKP	**PKPdf**	**14 18 20.6**	**-2.1**
	comp=Z,2.0nm,0.9s,baz=191,slow=1.8,SNR=5.8						
ESDC	**Sonseca Array**	**139.53**	**331**	PKhKP	PKPpre	14 18 19.9	
	comp=Z,0.5nm,0.8s,baz=31,slow=2.5,SNR=4.0						
ESDC				PP	**PP**	**14 21 18.6**	**-1.4**
	comp=Z,0.5nm,0.9s,baz=44,slow=6.0,SNR=3.5						
TORD	**Torodi Ar. Bea**	**149.53**	**287**	PKPbc	**PKPbc**	**14 18 47.6**	**-0.7**
	comp=Z,30nm,0.7s,baz=73,slow=2.8,SNR=83						
BDFB	**Brasilia**	**151.29**	**137**	PKPbc	**PKPbc**	**14 18 52.5**	**-0.1**
	comp=Z,9.8nm,0.7s,baz=228,slow=2.2,SNR=20						
DBIC	**Dimbokro**	**156.73**	**274**	PKP	**PKPdf**	**14 18 54.1**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=60,slow=3.8,SNR=3.3						
DBIC				PKPab	**PKPab**	**14 19 23.8**	**+0.1**
	comp=Z,8.8nm,0.9s,baz=112,slow=4.0,SNR=8.3						

*SJA **29** 14:06:17.9±1.7,24°28S×68°97W,h119km±13km,ML3.6, MW3.6*

*NEIC **29** 14:06:19.2±1.7,24°32S±0°06×68°92W±0°04, h108km±15km,ML4.0/38,ML3.9(GUC),Error ellipse: s-maj=9.1km s-min=3.3km az=152.0*

*GUC **29** 14:06:20.0±0.5,24°27S×69°00W,h105km±2km,ML3.9*

ISC 29 14:06:19.1±1.2**,24°29S**±0°04×**68°98W**±0°06**, h117**km±15km**,n56,**σ**0s76**/61**,3C,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**1.03**	**212**		**Pn**	**14 06 41.5**	**0.0**
GO02	**Mina Guanaco**	**1.03**	**212**	⇑*i*P	**Pn**	**14 06 41.8**	**+0.3**
GO02				*e*S	**Sn**	**14 06 58.2**	**-0.2**
GO02				IAML		14 06 59.4	
	comp=N,4μm,0.3s						
GO02	**Mina Guanaco**	**1.03**	**212**	*i* P	**Pn**	**14 06 41.0**	**-0.5**
GO02				*e*S	**Sn**	**14 06 58.3**	**-0.2**
GO02				IAML		14 06 59.3	
	comp=Z,3μm,0.3s						
PB14	**IPOC Station P**	**1.34**	**255**		**Pn**	**14 06 45.0**	**+0.2**
PB14				IAML		14 07 12.9	
	comp=E,1μm,0.5s						
PB14	**IPOC Station P**	**1.34**	**255**	*e*P	**Pn**	**14 06 45.2**	**+0.4**
PB14				*e*S	**Sn**	**14 07 03.9**	**-0.4**
PB14	**IPOC Station P**	**1.34**	**255**	*i* P	**Pn**	**14 06 44.7**	**-0.1**
PB14				*e*P		14 06 45.5	
PB14				*e*S	**Sn**	**14 07 05.0**	**+0.8**
PB14				IAML		14 07 15.2	
	comp=Z,502nm,0.2s						
AF01	**San Pedro de A**	**1.52**	**29**		**Pn**	**14 06 46.5**	**-0.3**
AF01	**San Pedro de A**	**1.52**	**29**	⇑*i*P	**Pn**	**14 06 46.8**	**-0.1**
AF01				IAML		14 07 10.0	
	comp=E,6μm,0.2s						
AF01	**San Pedro de A**	**1.52**	**29**	*i* P	**Pn**	**14 06 46.2**	**-0.7**
AF01				IAML		14 07 14.8	
	comp=Z,2μm,0.7s						
PB10	**IPOC Station P**	**1.63**	**298**		**Pn**	**14 06 48.7**	**+0.8**
PB10	**IPOC Station P**	**1.63**	**298**	*e*P	**Pn**	**14 06 49.1**	**+1.3**
PB10	**IPOC Station P**	**1.63**	**298**	*i* P	**Pn**	**14 06 48.7**	**+0.8**
PB10				*e*S	**Sn**	**14 07 09.1**	**-0.7**
PB10				IAML		14 07 15.4	
	comp=Z,298nm,0.4s						
PB06	**IPOC Station P**	**1.67**	**341**		**Pn**	**14 06 48.5**	**+0.1**
PB06				IAML		14 07 16.6	
	comp=N,1μm,0.2s						
PB06				IAML		14 07 18.9	
	comp=E,868nm,0.2s						
PB06	**IPOC Station P**	**1.67**	**341**	*e*P	**Pn**	**14 06 48.5**	**+0.1**
PB06				IAML		14 07 16.6	
PB06	**IPOC Station P**	**1.67**	**341**	*i* P	**Pn**	**14 06 48.2**	**-0.3**
PB06				*e*S	**Sn**	**14 07 11.7**	**+0.9**
PB06				IAML		14 07 15.9	
	comp=Z,750nm,0.2s						
PB05	**IPOC Station P**	**1.81**	**322**		**Pn**	**14 06 51.1**	**+0.8**
PB05				IAML		14 07 20.0	
	comp=E,626nm,0.8s						
PB05				IAML		14 07 21.6	
	comp=N,720nm,0.3s						
PB05	**IPOC Station P**	**1.81**	**322**	*e*P	**Pn**	**14 06 51.1**	**+0.8**
PB05				IAML		14 07 21.6	
	comp=N,611nm,0.2s						
PB05	**IPOC Station P**	**1.81**	**322**	*i* P	**Pn**	**14 06 50.5**	**+0.3**
PB05				IAML		14 07 22.4	
	comp=Z,353nm,0.2s						
AC01	**Pan de Azucar**	**2.36**	**218**		**Pn**	**14 06 57.9**	**+1.0**
AC01	**Pan de Azucar**	**2.36**	**218**	*e*P	**Pn**	**14 06 57.8**	**+0.8**
AC01				IAML		14 07 35.5	
	comp=E,932nm,0.1s						
AC01	**Pan de Azucar**	**2.36**	**218**	*i* P	**Pn**	**14 06 56.6**	**-0.4**
AC01				IAML		14 07 31.9	
	comp=Z,186nm,0.3s						
SALTA		**2.41**	**89**	*e*P	**Pn**	**14 06 58.5**	**+0.4**
SALTA		**2.41**	**89**	IAML		14 07 34.6	
	comp=Z,27nm,1.9s						
PB09	**IPOC Station P**	**2.49**	**354**		**Pn**	**14 06 59.4**	**+0.5**
PB09				IAML		14 07 37.0	
	comp=E,413nm,0.6s						
PB09				IAML		14 07 39.1	
	comp=N,548nm,0.6s						
PB09	**IPOC Station P**	**2.49**	**354**	*e*P	**Pn**	**14 07 00.1**	**+1.2**
PB09				IAML		14 07 39.2	
	comp=N,459nm,0.2s						
AC02	**Maricunga**	**2.54**	**183**		**Pn**	**14 07 00.8**	**+1.1**
AC02	**Maricunga**	**2.54**	**183**	⇑*e*P	**Pn**	**14 07 01.0**	**+1.2**
AC02				IAML		14 07 46.1	
	comp=E,254nm,0.2s						
AC02	**Maricunga**	**2.54**	**183**	*i* P	**Pn**	**14 07 00.6**	**+0.9**
AC02				IAML		14 08 04.1	
	comp=Z,252nm,0.8s						
PB07	**IPOC Station P**	**2.68**	**342**		**Pn**	**14 07 01.8**	**+0.5**
PB07				IAML		14 07 43.1	
	comp=N,531nm,0.6s						
PB07				IAML		14 07 47.9	
	comp=E,563nm,0.6s						
PB07	**IPOC Station P**	**2.68**	**342**	*e*P	**Pn**	**14 07 01.9**	**+0.6**
PB07				IAML		14 07 43.4	
	comp=E,408nm,0.2s						
PB02	**IPOC Station P**	**3.07**	**344**		**Pn**	**14 07 06.7**	**+0.3**
PB02				IAML		14 07 57.0	
	comp=N,523nm,0.2s						
PB02	**IPOC Station P**	**3.07**	**344**	*e*P	**Pn**	**14 07 06.9**	**+0.5**
PB02				IAML		14 07 54.8	
	comp=E,706nm,0.3s						
PB01	**IPOC Station P**	**3.26**	**352**		**Pn**	**14 07 08.9**	**+0.1**
PB01				IAML		14 07 56.8	
	comp=N,418nm,0.3s						
PB01	**IPOC Station P**	**3.26**	**352**	*e*P	**Pn**	**14 07 09.5**	**+0.6**
GO03	**Copiapo**	**3.48**	**199**	*e*P	**Pn**	**14 07 11.3**	**-0.4**
GO03	**Copiapo**	**3.48**	**199**	*i* P	**Pn**	**14 07 10.9**	**-0.7**
GO03				IAML		14 08 22.9	
	comp=Z,126nm,0.3s						
PATCX	**Punta Patache**	**3.62**	**342**		**Pn**	**14 07 13.0**	**-0.5**
PATCX				IAML		14 08 08.8	
	comp=N,273nm,0.5s						
PATCX				IAML		14 08 18.2	
	comp=E,296nm,0.4s						
PATCX	**Punta Patache**	**3.62**	**342**	*e*P	**Pn**	**14 07 15.1**	**+1.6**
PATCX	**Punta Patache**	**3.62**	**342**	*i* P	**Pn**	**14 07 14.4**	**+0.8**
PATCX				IAML		14 08 16.9	
	comp=Z,164nm,0.5s						
TA01	**Diego Aracena**	**3.87**	**343**		**Pn**	**14 07 16.6**	**-0.2**
TA01				IAML		14 08 16.6	
	comp=E,219nm,0.5s						
TA01				IAML		14 08 18.2	
	comp=N,236nm,0.6s						
TA01	**Diego Aracena**	**3.87**	**343**	*i* P	**Pn**	**14 07 16.4**	**-0.4**
TA01				IAML		14 08 16.3	
	comp=Z,115nm,0.7s						
TINO	**Tinogasta**	**3.97**	**162**	*i* P	**Pn**	**14 07 19.6**	**+1.4**
HMBC	**Humberstone**	**4.08**	**348**		**Pn**	**14 07 19.3**	**-0.5**
HMBC				IAML		14 08 22.8	
	comp=N,240nm,0.5s						
PB08	**IPOC Station P**	**4.13**	**358**		**Pn**	**14 07 20.2**	**-0.5**
PB08	**IPOC Station P**	**4.13**	**358**	*i* P	**Pn**	**14 07 20.2**	**-0.5**
PB08				IAML		14 08 32.4	
	comp=Z,66nm,0.2s						
VCA	**Vinchina**	**4.49**	**171**	*i* P	**Pn**	**14 07 26.4**	**+1.2**
VCA				IAML		14 08 29.4	
	comp=Z,30nm,0.6s						
PB11	**IPOC Station P**	**4.55**	**352**		**Pn**	**14 07 25.0**	**-1.1**
PB11	**IPOC Station P**	**4.55**	**352**	*i* P	**Pn**	**14 07 24.7**	**-1.4**
PB11				IAML		14 08 35.4	
	comp=Z,90nm,0.3s						
GO01	**Chusmiza**	**4.60**	**358**	*i* P	**Pn**	**14 07 26.6**	**-0.5**
GO01				IAML		14 08 40.2	
	comp=Z,51nm,0.8s						
AC05	**El Transito**	**4.67**	**194**		**Pn**	**14 07 27.3**	**-0.4**
AC05				IAML		14 08 33.0	
	comp=N,161nm,0.6s						
AC05				IAML		14 08 33.1	
	comp=E,122nm,0.6s						
AC05	**El Transito**	**4.67**	**194**	*i* P	**Pn**	**14 07 27.4**	**-0.3**
AC05				IAML		14 08 32.5	
	comp=Z,67nm,0.4s						
LCO	**Las Campanas**	**4.95**	**198**		**Pn**	**14 07 30.1**	**-1.4**
LCO				IAML		14 08 45.6	
	comp=Z,136nm,0.6s						
LCO				IAML		14 08 51.5	
	comp=Z,89nm,0.5s						
AGUA	**GUANDACOL**	**5.20**	**175**	*i* P	**Pn**	**14 07 35.5**	**+0.7**
AGUA				IAML		14 08 43.9	
	comp=Z,34nm,0.8s						
CO06	**Fray Jorge**	**6.78**	**200**		**Pn**	**14 07 54.7**	**-1.4**
LPAZ	**La Paz**	**8.00**	**6**		**Pn**	**14 08 12.8**	**-0.4**
PTLB	**Pontes e Lacer**	**12.77**	**48**		**Pn**	**14 09 16.1**	**-0.3**

*WEL **29** 14:16:52.2±0.7,33°S±5°×17°8W±1°3,h12km,mB5.2/11, ML4.9/19,MLv5.0/18,Mw(mB)4.6/11,Error ellipse: s-maj=17.9km s-min=3.2km az=108.8,confirmed*

*IDC **29** 14:16:52.9±0.9,32°88S×178°46W,h0km,mb4.4/9, mbtmp4.5/11,ML4.9/2,MS3.8/17,Error ellipse: s-maj=32.5km s-min=22.2km az=140.0*

*NEIC **29** 14:16:54.3±0.6,32°87S±0°08×178°4W±0°1,h7km±5km, mb4.9/19,Error ellipse: s-maj=19.0km s-min=10.1km az=110.0*

*NOU **29** 14:17:05.1,33°71S×178°44W,h68km,mb4.7/10,South of Kermadec Islands*

ISC 29 14:16:57.0±0.5**,32°99S**±0°05×**178°23W**±0°08**,h34**km**, n132,**σ**1s80**/133**,mb4.8**/21**,MS3.9**/17**,4D,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.73**	**4**	P	**Pn**	**14 17 50.1**	**-2.1**
GLKZ				S	**Sn**	**14 18 32.6**	**-2.2**
RAO	**Raoul Island**	**3.74**	**4**	Pn	**Pn**	**14 17 50.1**	**-2.2**
	152nm,0.3s,baz=56,slow=17,SNR=2.6						
RAO				Sn	**Sn**	**14 18 30.9**	**-4.2**
	162nm,0.3s,baz=280,slow=23,SNR=3.7						
	344nm,0.3s						
RAO	**Raoul Island**	**3.74**	**4**		**Pn**	**14 17 50.1**	**-2.2**
RAO				Sn	**Sn**	**14 18 32.8**	**-2.3**
RIZ	**Raoul Island**	**3.74**	**4**	P	**Pn**	**14 17 50.9**	**-1.4**
RIZ				S	**Sn**	**14 18 33.5**	**-1.8**
MXZ	**Matakaoa Point**	**5.37**	**211**		**Pn**	**14 18 13.2**	**-1.6**
MXZ	**Matakaoa Point**	**5.37**	**211**	P	**Pn**	**14 18 13.1**	**-1.6**
MXZ	**Matakaoa Point**	**5.37**	**211**	P	**Pn**	**14 18 11.7**	**-3.0**
MXZ				S	**Sn**	**14 19 12.3**	**-3.0**
WMGZ	**Waiomatatini S**	**5.54**	**209**	P	**Pn**	**14 18 15.5**	**-1.6**
WMGZ				S	**Sn**	**14 19 19.7**	**+0.1**
PKGZ	**Pakihiroa**	**5.72**	**211**	P	**Pn**	**14 18 17.1**	**-2.5**
PKGZ				S	**Sn**	**14 19 22.7**	**-1.4**
HAZ	**Te Kaha**	**5.76**	**213**	P	**Pn**	**14 18 18.4**	**-1.7**
HAZ				S	**Sn**	**14 19 24.9**	**-0.1**
PUZ	**Puketiti**	**5.82**	**208**	P	**Pn**	**14 18 17.7**	**-3.3**
PUZ				S	**Sn**	**14 19 25.1**	**-1.4**
RUGZ	**Raukumara Rang**	**5.98**	**213**	P	**Pn**	**14 18 21.6**	**-1.6**
RUGZ				S	**Sn**	**14 19 30.2**	**-0.4**
TWGZ	**Tauwhareparae**	**6.03**	**210**	P	**Pn**	**14 18 21.6**	**-2.2**
TWGZ				S	**Sn**	**14 19 30.0**	**-1.6**
CNGZ	**Carnagh Statio**	**6.20**	**207**	P	**Pn**	**14 18 24.2**	**-1.9**
KUZ	**Kuaotunu**	**6.22**	**231**	P	**Pn**	**14 18 26.6**	**+0.1**
KUZ	**Kuaotunu**	**6.22**	**231**	P	**Pn**	**14 18 26.8**	**+0.3**
WHRZ	**Whale Island**	**6.24**	**218**	P	**Pn**	**14 18 27.5**	**+0.9**
WHRZ				S	**Sn**	**14 19 37.0**	**+0.3**
TKGZ	**Te Karaka**	**6.30**	**209**	P	**Pn**	**14 18 25.0**	**-2.6**
MWZ	**Matawai**	**6.35**	**212**	P	**Pn**	**14 18 25.0**	**-3.3**
MWZ				S	**Sn**	**14 19 37.0**	**-2.6**
OPRZ	**Ohinepanea**	**6.45**	**220**	P	**Pn**	**14 18 29.7**	**+0.2**
OPRZ				S	**Sn**	**14 19 41.5**	**-0.4**
URZ	**Urewera**	**6.48**	**215**	Pn	**Pn**	**14 18 27.8**	**-2.2**
	15nm,0.3s,baz=246,slow=3.6,SNR=42						
URZ				Sn	**Sn**	**14 19 39.5**	**-3.3**
	23nm,0.3s,baz=143,slow=21,SNR=12						
	38nm,0.4s						
URZ	**Urewera**	**6.48**	**215**	P	**Pn**	**14 18 28.4**	**-1.6**
URZ	**Urewera**	**6.48**	**215**	P	**Pn**	**14 18 28.2**	**-1.8**
URZ				S	**Sn**	**14 19 39.0**	**-3.7**
MARZ	**Manawahe**	**6.49**	**218**	P	**Pn**	**14 18 30.1**	**0.0**
TGRZ	**Tauranga**	**6.53**	**222**	P	**Pn**	**14 18 31.0**	**+0.4**
RAGZ	**Rawiri**	**6.54**	**212**	P	**Pn**	**14 18 28.3**	**-2.5**
RIGZ	**Rimuhau**	**6.57**	**209**	P	**Pn**	**14 18 28.7**	**-2.5**
PRGZ	**Paritu Road**	**6.71**	**207**	P	**Pn**	**14 18 29.7**	**-3.4**
KARZ	**Kaharoa**	**6.74**	**220**	P	**Pn**	**14 18 33.7**	**+0.1**
WCZ	**Waipu Caves**	**6.80**	**242**	P	**Pn**	**14 18 34.5**	**+0.1**
SNGZ	**Shannon Statio**	**6.80**	**211**	P	**Pn**	**14 18 33.2**	**-1.3**
MUGZ	**Murupara**	**6.82**	**215**	P	**Pn**	**14 18 33.9**	**-0.7**
RTZ	**Ruatahuna**	**6.83**	**213**		**Pn**	**14 18 32.9**	**-1.9**
RTZ	**Ruatahuna**	**6.83**	**213**	P	**Pn**	**14 18 32.7**	**-2.1**
RRRZ	**Republican Roa**	**6.84**	**217**	P	**Pn**	**14 18 34.0**	**-0.9**
ETAZ	**East Tamaki Re**	**6.87**	**233**	P	**Pn**	**14 18 38.6**	**+3.3**
KNZ	**Kokohu**	**6.87**	**208**	P	**Pn**	**14 18 31.9**	**-3.5**
MHGZ	**Mahia Peninsul**	**6.90**	**206**	P	**Pn**	**14 18 32.2**	**-3.5**
TOZ	**Tahuroa Road**	**6.97**	**226**		**Pn**	**14 18 35.5**	**-1.2**
TOZ	**Tahuroa Road**	**6.97**	**226**	P	**Pn**	**14 18 36.4**	**-0.3**
PRRZ	**Plateau Road**	**7.02**	**217**	P	**Pn**	**14 18 36.4**	**-1.0**
RAHZ	**Arahi**	**7.03**	**211**	P	**Pn**	**14 18 36.5**	**-1.0**
MTHZ	**Maungataniwha**	**7.08**	**213**	P	**Pn**	**14 18 37.3**	**-1.0**
WHHZ	**Waihua**	**7.10**	**210**	P	**Pn**	**14 18 37.7**	**-0.7**
OUZ	**Omahuta**	**7.14**	**250**	P	**Pn**	**14 18 41.3**	**+2.3**
OUZ	**Omahuta**	**7.14**	**250**	P	**Pn**	**14 18 40.9**	**+1.9**
MRHZ	**Matea Rd**	**7.27**	**215**	P	**Pn**	**14 18 38.7**	**-2.2**
NMHZ	**Naumai**	**7.30**	**212**	P	**Pn**	**14 18 40.2**	**-1.0**
ARHZ	**Aropaoanui**	**7.36**	**210**	P	**Pn**	**14 18 39.9**	**-2.1**
TLZ	**Tolley Road**	**7.36**	**222**	P	**Pn**	**14 18 42.5**	**+0.4**
BKZ	**Black Stump Fm**	**7.50**	**213**		**Pn**	**14 18 40.8**	**-3.2**
BKZ	**Black Stump Fm**	**7.50**	**213**	P	**Pn**	**14 18 42.0**	**-2.0**
BKZ	**Black Stump Fm**	**7.50**	**213**	P	**Pn**	**14 18 42.1**	**-1.9**
CKHZ	**Cape Kidnapper**	**7.66**	**208**	P	**Pn**	**14 18 42.9**	**-3.2**
RITZ	**Rihia Road**	**7.66**	**217**	P	**Pn**	**14 18 45.2**	**-0.9**
KAHZ	**Kahuranaki**	**7.85**	**209**	P	Pn	14 18 43.8	-5.0
HIZ	**Hauiti**	**7.87**	**224**	P	**Pn**	**14 18 48.9**	**-0.1**
HIZ	**Hauiti**	**7.87**	**224**	P	**Pn**	**14 18 50.8**	**+1.7**
NGZ	**Ngauruhoe**	**7.94**	**217**	P	**Pn**	**14 18 48.9**	**-1.2**
KRHZ	**Kereru**	**7.94**	**212**	P	**Pn**	**14 18 47.5**	**-2.5**
MOVZ	**Moawhango**	**8.04**	**216**	P	**Pn**	**14 18 48.8**	**-2.6**
PXZ	**Pawanui**	**8.06**	**208**	P	**Pn**	**14 18 48.2**	**-3.4**
PKVZ	**Pokaka**	**8.15**	**218**	P	**Pn**	**14 18 52.7**	**-0.3**
WPHZ	**Waipukurau**	**8.26**	**210**	P	**Pn**	**14 18 51.9**	**-2.5**
TSZ	**Takapari Road**	**8.46**	**212**	P	**Pn**	**14 18 53.9**	**-3.3**
CTZ	**Chatham Island**	**10.80**	**174**	Pn	**Pn**	**14 19 27.3**	**-1.9**
CTZ	**Chatham Island**	**10.80**	**174**	P	**Pn**	**14 19 27.5**	**-1.7**
KHZ	**Kahutara**	**11.44**	**212**	P	**Pn**	**14 19 35.8**	**-2.1**
ODZ	**Otahua Downs**	**14.80**	**212**	P	**Pn**	**14 20 21.5**	**-2.3**
JCZ	**Jackson Bay**	**15.00**	**219**	P	**Pn**	**14 20 24.5**	**-2.0**
DZM	**Mont Dzumac**	**17.39**	**305**	Pn	**Pn**	**14 20 54.7**	**-2.4**
SANVU	**Saraoutou**	**21.90**	**319**	P	**P**	**14 21 47.0**	**-0.2**
SANVU				IAmb	IAmb	14 21 52.5	
	comp=Z,28nm,1.0s						
CAN	**Canberra**	**27.15**	**256**	P	**P**	**14 22 37.4**	**+0.2**
CAN				IAmb	IAmb	14 23 00.1	
	comp=Z,26nm,1.5s						
TAU	**Tasmania Unive**	**28.74**	**240**	P	**P**	**14 22 51.4**	**+0.2**
TOO	**Toolangi**	**29.85**	**251**	P	**P**	**14 23 02.0**	**+0.8**
PPT	**Papeete**	**29.99**	**66**	LR	LR	14 36 04.6	
	comp=Z,128nm,18.2s,baz=247,slow=38						
STKA	**Stephens Creek**	**33.79**	**261**	P	**P**	**14 23 35.8**	**0.0**
	comp=Z,1.3nm,0.7s,baz=56,slow=7.3,SNR=3.0						
STKA				LR	LR	14 36 44.7	
	comp=Z,410nm,18.0s,baz=58,slow=36						
	comp=Z,1.3nm,0.7s						
STKA	**Stephens Creek**	**33.79**	**261**	P	**P**	**14 23 35.5**	**-0.3**
CTA	**Charters Tower**	**34.11**	**283**	P	**P**	**14 23 39.1**	**+0.4**
	comp=Z,6.9nm,0.7s,baz=120,slow=12,SNR=7.7						
CTA				LR	LR	14 36 02.2	
	comp=Z,160nm,18.8s,baz=68,slow=34						
	comp=Z,6.9nm,0.7s						
CTAO	**Charters Tower**	**34.11**	**283**	P	**P**	**14 23 37.9**	**-0.8**
CTAO				IAmb	IAmb	14 23 52.5	
	comp=Z,41nm,1.4s						
INKA	**Innaminka**	**35.62**	**267**		**P**	**14 23 51.1**	**-0.5**
BBOO	**Buckleboo**	**38.15**	**257**	P	**P**	**14 24 11.9**	**-1.2**
BBOO				IAmb	IAmb	14 24 21.8	
	comp=Z,40nm,1.9s						
PMG	**Port Moresby**	**39.60**	**298**	LR	LR	14 39 54.4	
	comp=Z,161nm,18.2s,baz=153,slow=35						
ASAR	**Alice Springs**	**42.84**	**270**	P	**P**	**14 24 51.3**	**-0.8**
	comp=Z,7.3nm,0.7s,baz=114,slow=8.3,SNR=7.0						
ASAR				LR	LR	14 42 17.7	
	comp=Z,89nm,18.0s,baz=106,slow=36						
	comp=Z,7.3nm,0.7s						
WR8	**Warramunga Arr**	**43.92**	**275**	P	**P**	**14 25 00.2**	**-0.6**
WR8				IAmb	IAmb	14 25 15.1	
	comp=Z,13nm,0.8s						
WRAB	**Tennant Creek**	**44.06**	**275**	P	**P**	**14 25 01.1**	**-0.7**
WRAB				IAmb	IAmb	14 25 14.8	
	comp=Z,42nm,1.5s						
WRA	**Warramunga Arr**	**44.06**	**275**	P	**P**	**14 25 00.6**	**-1.3**
	comp=Z,8.5nm,0.6s,baz=117,slow=7.9,SNR=22						
	comp=Z,8.5nm,0.6s						
WRA	**Warramunga Arr**	**44.06**	**275**	P	**P**	**14 25 01.0**	**-0.9**
WB0	**Warramunga Arr**	**44.10**	**275**	P	**P**	**14 25 01.5**	**-0.7**
WB0				IAmb	IAmb	14 25 14.3	
	comp=Z,38nm,1.2s						
FORT	**Forrest**	**45.25**	**258**	P	**P**	**14 25 09.7**	**-1.6**
FORT				IAmb	IAmb	14 25 27.9	
	comp=Z,15nm,1.1s						
JAY	**Jayapura**	**48.95**	**300**	LR	LR	14 44 45.8	
	comp=Z,75nm,19.0s,baz=335,slow=34						
FITZ	**Fitzroy Crossi**	**52.21**	**272**	LR	LR	14 47 44.8	
	comp=Z,220nm,18.6s,baz=126,slow=36						
CASY	**Casey**	**52.77**	**209**	P	**P**	**14 26 08.5**	**+0.2**
CASY				IAmb	IAmb	14 26 26.0	
	comp=Z,13nm,1.1s						
OVEH	**Oceanview Est**	**56.12**	**26**	P	**P**	**14 26 33.0**	**-0.4**
OVEH				IAmb	IAmb	14 28 17.8	
	comp=Z,241nm,1.4s						
QSPA	**South Pole Qui**	**57.13**	**180**	P	**P**	**14 26 42.7**	**+2.7**
QSPA				IAmb	IAmb	14 26 53.6	
	comp=Z,13nm,0.9s						
BATI	**Baumata**	**57.83**	**279**	LR	LR	14 51 18.6	
	comp=Z,99nm,19.4s,baz=164,slow=36						
TROLL	**Troll, Antarti**	**75.29**	**180**	⇓P	**P**	**14 28 37.5**	**+1.2**
	comp=Z,242nm,0.9s						
SNAA	**Sanae**	**75.58**	**178**	⇓P	P	14 28 48.5	+11
	comp=Z,88nm,0.9s						
SNAA	**Sanae**	**75.58**	**178**	LR	LR	14 57 40.9	
	comp=Z,153nm,21.7s,baz=177,slow=32						
VNA3	**Neumayer Olymp**	**75.74**	**176**	⇓P	**P**	**14 28 39.9**	**+1.1**
	comp=Z,16nm,0.8s						
VNA2	**Neumayer--Watz**	**76.17**	**177**	⇓P	**P**	**14 28 42.7**	**+1.5**
	comp=Z,10nm,0.8s,baz=156,slow=6.7						
MJAR	**Matsushiro Arr**	**80.26**	**326**	P	**P**	**14 29 03.1**	**-1.1**
	comp=Z,1.1nm,1.0s,baz=158,slow=5.1,SNR=3.4						
	comp=Z,1.1nm,1.0s						
PLCA	**Paso Flores**	**80.89**	**133**	LR	LR	15 02 13.6	
	comp=Z,63nm,18.6s,baz=214,slow=34						
JNU	**Nakatsue**	**81.36**	**319**	LR	LR	15 01 42.2	
	comp=Z,34nm,19.1s,baz=68,slow=33						
KSRS	**Korea Array**	**86.19**	**320**	P	**P**	**14 29 34.9**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=131,slow=5.2,SNR=5.5						
KSRS				LR	LR	15 02 27.9	
	comp=Z,25nm,21.7s,baz=60,slow=32						
	comp=Z,1.6nm,0.8s						
TRQA	**Tornquist**	**87.75**	**135**	P	**P**	**14 29 44.3**	**+1.7**
TRQA				IAmb	IAmb	14 31 36.7	
	comp=Z,31nm,1.9s						
PETK	**Petropavlovsk-**	**88.27**	**346**	P	**P**	**14 29 45.6**	**+1.2**
	comp=Z,6.4nm,0.9s,baz=165,slow=6.4,SNR=4.3						
	comp=Z,6.4nm,0.9s						
PETK	**Petropavlovsk-**	**88.27**	**346**	P	**P**	**14 29 45.1**	**+0.8**
USRK	**Ussuriysk Ar.**	**89.21**	**327**	P	**P**	**14 29 49.8**	**+0.8**
	comp=Z,2.0nm,0.7s,baz=138,slow=7.3,SNR=2.3						
	comp=Z,2.0nm,0.7s						
NVAR	**Mina Array Bea**	**90.27**	**43**	P	**P**	**14 29 56.7**	**+2.3**
	comp=Z,0.7nm,0.8s,baz=253,slow=5.5,SNR=4.7						
	comp=Z,0.7nm,0.8s						
NVAR	**Mina Array Bea**	**90.27**	**43**	P	**P**	**14 29 56.1**	**+1.7**
PINE	**Pine Mountain**	**92.57**	**38**	P	**P**	**14 30 06.0**	**+1.1**
CMAR	**Chiang Mai Arr**	**94.07**	**289**	LR	LR	15 14 39.5	
	comp=Z,16nm,19.3s,baz=165,slow=37						
ATAH	**Atahualpa**	**94.33**	**101**	LR	LR	15 07 23.1	
	comp=Z,39nm,18.4s,baz=273,slow=32						
LPAZ	**La Paz**	**97.26**	**115**	LR	LR	15 07 44.3	
	comp=Z,27nm,18.5s,baz=286,slow=31						
NEW	**Newport**	**97.58**	**36**	LR	LR	15 08 13.4	
	comp=Z,90nm,19.1s,baz=230,slow=32						
CPUP	**Villa Florida**	**98.53**	**129**	LR	LR	15 10 13.5	
	comp=Z,51nm,18.2s,baz=248,slow=32						
MKAR	**Makanchi Array**	**119.27**	**309**	PKP	**PKiKP**	**14 35 44.8**	**+2.5**
	comp=Z,0.3nm,0.7s,baz=46,slow=4.2,SNR=1.7						
BVAR	**Borovoye Array**	**128.10**	**314**	PKP	**PKiKP**	**14 36 00.2**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=95,slow=1.8,SNR=3.6						
ARCES	**ARCESS Array B**	**141.07**	**347**	PKP	**PKPdf**	**14 36 21.7**	**-1.0**
	comp=Z,9.5nm,1.0s,baz=52,slow=2.3,SNR=4.2						
KBZ	**Khabaz**	**146.33**	**301**	PKPbc	**PKPdf**	**14 36 33.1**	**+0.4**
	comp=Z,2.6nm,0.9s,baz=92,slow=3.4,SNR=5.1						
FINES	**FINESS Array B**	**147.49**	**338**	PKPbc	**PKPbc**	**14 36 37.4**	**+0.7**
	comp=Z,12nm,0.7s,baz=48,slow=3.5,SNR=28						
NB2	**NORSAR Subarra**	**151.27**	**350**	PKP	**PKiKP**	**14 36 47.2**	**+0.5**
	comp=Z,2.4nm,0.7s,baz=18,slow=2.6						
NOA	**NORSAR Array B**	**151.27**	**350**	PKPbc	**PKiKP**	**14 36 47.2**	**+0.5**
	comp=Z,3.9nm,0.7s,baz=14,slow=4.1,SNR=4.2						
HFS	**Hagfors**	**151.73**	**347**	PKPbc	**PKiKP**	**14 36 47.7**	**+0.1**
	comp=Z,9.0nm,0.8s,baz=134,slow=4.3,SNR=9.1						
MMAI	**Mount Meron Ar**	**151.86**	**279**	PKPbc	**PKiKP**	**14 36 48.8**	**-0.1**
	comp=Z,7.9nm,0.8s,baz=6.9,slow=4.8,SNR=3.1						
NACGM	**Naroch**	**151.92**	**329**	*e*PKiKP	**PKiKP**	**14 36 49.3**	**+1.2**
	comp=Z,10.0nm,0.7s,baz=49						
AKASG	**Malin Array Be**	**153.19**	**319**	PKPbc	**PKiKP**	**14 36 51.5**	**+0.6**
	comp=Z,0.6nm,0.4s,baz=59,slow=1.9,SNR=4.9						
BRTR	**Keskin Array B**	**153.56**	**294**	PKPbc	**PKiKP**	**14 36 52.5**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=133,slow=3.6,SNR=9.8						
CLL	**Collm**	**159.93**	**339**	*e*PKPab	**PKPab**	**14 37 32.0**	**+0.5**
TORD	**Torodi Ar. Bea**	**160.25**	**180**	PKPab	**PKPab**	**14 37 35.8**	**+2.1**
	comp=Z,2.0nm,1.1s,baz=157,slow=2.4,SNR=4.8						
GERES	**GERESS Array B**	**161.81**	**334**	PKPab	**PKPab**	**14 37 39.3**	**-0.6**
	comp=Z,1.0nm,0.9s,baz=46,slow=5.8,SNR=6.7						

*IDC **29** 14:20:35.5±4.5,7°05S×129°56E,h148km±43km,mb3.5/7, mbtmp4.0/9,Error ellipse: s-maj=44.4km s-min=17.7km az=63.0*

*DJA **29** 14:20:36.8±0.2,7°S±3°×12°9E±°,h171km±7km,M4.3/17, mb4.1/15,mB4.9/5,MLv4.5/17,Mw(mB)4.2/5*

*NEIC **29** 14:20:37.2±2.5, 7°.20S±0°.08×129°.58E±0°.10, h172km±9km, mb4.2/6, Error ellipse: s-maj=13.9km s-min=11.9km az=75.0*

ISC 29 14:20:35.1±0.6, **7°.24S**±0°.05×**129°.43E**±0°.06, **h150**km, **n56**, σ**1s.94**/58, **mb3.9**/9, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.99	112		Pn	14 21 12.4	+2.3
SAUI	Saumlaki	1.99	112	P	Pn	14 21 13.7	+3.6
SAUI	Saumlaki	1.99	112	P	Pn	14 21 13.5	+3.4
BNDI	Bandanaira	2.74	10	P	Pn	14 21 21.6	+2.4
BNDI	Bandanaira	2.74	10	P	Pn	14 21 20.8	+1.6
AAI	Ambon	3.74	341	P	Pn	14 21 34.7	+2.7
KRAI	Karang Ratu	4.03	345	P	Pn	14 21 38.8	+3.0
FAKI	Fak Fak	5.13	33	Pn	Pn	14 21 49.5	-0.8
FAKI	Fak Fak	5.13	33	P	Pn	14 21 49.5	-0.8
FAKI	Fak Fak	5.13	33	P	Pn	14 21 49.3	-1.0
	0.3nm1µm19nm,1.2s						
DRS	Darwin Rock St	5.36	164	P	Pn	14 21 56.1	+2.8
KMPI	Kaimana, Papua	5.54	50	P	Pn	14 21 56.6	+0.8
SOEI	Soe	5.69	244	Pn	Pn	14 22 01.3	+3.5
SOEI	Soe	5.69	244	P	Pn	14 22 01.7	+3.9
SOEI	Soe	5.69	244	P	Pn	14 22 01.3	+3.5
	0.4nm27nm,1.0s						
MTN	Manton Dam	5.81	163		Pn	14 22 01.1	+1.7
BATI	Baumata	6.42	242	P	Pn	14 22 10.5	+3.1
	19nm,0.4s,baz=84,slow=1.7,SNR=8.4						
BATI				S	Sn	14 23 17.7	-2.0
	44nm,0.6s,baz=87,slow=4.0,SNR=8.7						
BATI	Baumata	6.42	242	P	Pn	14 22 10.8	+3.4
	0.4nm24nm,0.4s						
SIJI	Sorong	6.59	16	P	Pn	14 22 08.3	-1.4
SWI	Sorong	6.59	16	P	Pn	14 22 09.0	-0.7
RKPI	Ransiki, Papua	7.40	40	P	Pn	14 22 20.7	+0.1
EDFI	Ende, Flores	7.81	258	P	Pn	14 22 30.4	+4.3
	0.1nm22nm,1.8s						
KNRA	Kununurra	8.41	184		Pn	14 22 34.9	+0.9
WSI	Waingapu	9.35	254	P	Pn	14 22 47.8	+1.2
WBSI	Waikabubak, Su	10.21	256	P	Pn	14 22 59.2	+1.1
	43nm,1.1s						
DBNI	Kabupaten Domp	11.09	263	P	Pn	14 23 10.5	+1.0
	9.4nm,1.8s						
FITZ	Fitzroy Crossi	11.41	199	P	Pn	14 23 13.6	-0.1
	2.6nm,0.3s,baz=22,slow=10,SNR=27						
FITZ				S	Sn	14 25 13.1	-6.7
	13nm,0.8s,baz=144,slow=11,SNR=10						
FITZ	Fitzroy Crossi	11.41	199		Pn	14 23 13.7	0.0
FITZ					Sn	14 25 17.1	-2.8
PLAI	Plampang	11.65	261	P	Pn	14 23 18.3	+1.4
PLAI	Plampang	11.65	261	P	Pn	14 23 17.2	+0.3
	25nm,1.5s						
WB0	Warramunga Arr	13.35	159		Pn	14 23 37.6	-1.3
WRAB	Tennant Creek	13.49	160		Pn	14 23 39.2	-1.4
WRA	Warramunga Arr	13.49	160	P	Pn	14 23 39.1	-1.6
	1.0nm,0.3s,baz=318,slow=17,SNR=38						
WRA				S	Sn	14 26 01.0	-9.2
	2.1nm,0.5s,baz=194,slow=24,SNR=6.3						
WRA	Warramunga Arr	13.49	160		Pn	14 23 39.3	-1.4
WR8	Warramunga Arr	13.56	159		Pn	14 23 40.5	-1.0
COEN	Coen	15.06	117		Pn	14 24 01.1	+0.7
COEN	Coen	15.06	117	P	Pn	14 24 00.8	+0.4
QIS	Mount Isa	16.50	144	P	Pn	14 24 18.8	+0.7
AS31	Alice Springs	16.89	166	P	P	14 24 23.4	+1.1
AS31				IAmb	IAmb	14 25 09.3	
	comp=Z,3.4nm,0.7s						
ASAR	Alice Springs	16.89	166	P	Pn	14 24 25.1	+2.4
	comp=Z,6.1nm,0.7s,baz=339,slow=9.1,SNR=174						
ASAR				S	S	14 27 27.0	-3.6
	comp=Z,2.2nm,0.8s,baz=346,slow=24,SNR=5.1						
ASAR	Alice Springs	16.89	166	P	P	14 24 23.8	+1.5
STKA	Stephens Creek	27.01	157	P	P	14 26 04.5	+1.3
	comp=Z,1.8nm,0.6s,baz=326,slow=10,SNR=4.2						
	comp=Z,1.8nm,0.6s						
STKA	Stephens Creek	27.01	157	P	P	14 26 03.3	+0.1
STKA				IAmb	IAmb	14 26 43.5	
	comp=Z,49nm,1.5s						
CMAR	Chiang Mai Arr	39.45	311	P	P	14 27 51.0	0.0
	comp=Z,0.4nm,0.4s,baz=125,slow=8.1,SNR=5.8						
	comp=Z,0.4nm,0.4s						
MJAR	Matsushiro Arr	44.32	10	P	P	14 28 28.7	-1.5
	comp=Z,0.6nm,0.5s,baz=193,slow=9.2,SNR=5.3						
	comp=Z,0.6nm,0.5s						
MRZ	Mangatainoka R	52.83	136	P	P	14 29 34.5	-0.7
SONM	Songino Array	58.49	342	P	P	14 30 16.1	+0.5
	comp=Z,0.3nm,0.4s,baz=167,slow=8.2,SNR=3.5						
	comp=Z,0.3nm,0.4s						
SONM	Songino Array	58.49	342	IAmb	IAmb	14 30 17.0	
	comp=Z,2.0nm,1.3s						
MKAR	Makanchi Array	68.12	327	P	P	14 31 19.2	+0.4
	comp=Z,1.4nm,0.5s,baz=118,slow=7.8,SNR=23						
	comp=Z,1.4nm,0.5s						
MKAR	Makanchi Array	68.12	327	P	P	14 31 19.1	+0.3
MAKZ	Makanchi	68.30	327	P	P	14 31 20.6	+0.7
MAKZ				IAmb	IAmb	14 31 29.5	
	comp=Z,6.4nm,1.4s						
ZALV	Zalesovo Beam	71.55	334	P	P	14 31 39.0	-0.6
	comp=Z,1.4nm,0.6s,baz=131,slow=4.3,SNR=5.1						
	comp=Z,1.4nm,0.6s						
BVAR	Borovoye Array	77.97	328	P	P	14 32 16.1	-0.4
	comp=Z,1.0nm,0.8s,baz=120,slow=5.8,SNR=4.3						
	comp=Z,1.0nm,0.8s						
AB31	Akbulak array	82.34	322	P	P	14 32 40.1	0.0
AB31				IAmb	IAmb	14 32 41.9	
	comp=Z,5.0nm,1.4s						
ABKAR	Akbulak array	82.34	322	P	P	14 32 40.2	+0.1
LPAZ	La Paz	150.87	143	PKPbc	PKPbc	14 40 12.4	+0.7
	comp=Z,0.9nm,0.4s,baz=213,slow=0.4,SNR=8.1						

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*KRSC **29** 14:39:26.0±1.3, 51°.94N×153°.95E, h408km±18km, Ml4.8*
*MOS **29** 14:39:26.4±0.9, 51°.95N×153°.69E, h400km, mb4.1/15, Error ellipse: s-maj=9.7km s-min=4.7km az=65.9*
*NEIC **29** 14:39:27.8±1.8, 52°.05N±0°.05×153°.6E±0°.2, h395km±5km, mb4.4/189, Error ellipse: s-maj=14.3km s-min=6.7km az=108.0*
*IDC **29** 14:39:27.8±0.7, 52°.09N×153°.57E, h395km±6km, mb3.5/26, mbtmp4.4/33, Error ellipse: s-maj=9.6km s-min=7.7km az=145.0*

ISC 29 14:39:27.6±0.4, **51°.96N**±0°.04×**153°.78E**±0°.04, **h401**km±4km, **n532**, σ**1s.73**/499, **mb4.3**/123, **12C-4D**, **Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.95	130	ePN	Pn	14 40 19.8	-3.5
SKR				eS	S	14 41 04.3	-4.0
SKR				pmax	pmax		
	comp=Z,157nm,0.5s						
SKR				smax	smax		
	comp=E,177nm,0.5s						
SKR				smax	smax		
	comp=N,171nm,0.6s						
PAU	Pauzhetka	1.95	104	PN	Pn	14 40 22.3	-1.0
PAU	Pauzhetka	1.95	104	eP	Pn	14 40 22.3	-1.0
APC	Apacha	2.28	64	PN	Pn	14 40 24.2	-1.1
APC				S	S	14 41 09.7	-2.4
APC	Apacha	2.28	64	eP	Pn	14 40 24.3	-1.1
APC				eS	S	14 41 09.8	-2.4
ASAK	Asacha	2.58	79	PN	Pn	14 40 27.3	-0.2
ASAK				S	S	14 41 14.6	-1.5
ASAK	Asacha	2.58	79	eP	Pn	14 40 27.3	-0.2
ASAK				eS	S	14 41 14.7	-1.5
PEA0B	Petropavlovsk-	2.66	63		Pn	14 40 27.4	-0.7
PEA0B	Petropavlovsk-	2.66	63	PN	Pn	14 40 27.3	-0.7
PEA0B				S	S	14 41 15.1	-2.0
PETK	Petropavlovsk-	2.66	63	P	Pn	14 40 27.1	-1.0
	comp=N,39nm,0.5s,baz=237,slow=3.0,SNR=271						
PETK				S	S	14 41 17.1	0.0
	comp=N,39nm,0.9s,baz=231,slow=30,SNR=5.5						
PETK	Petropavlovsk-	2.66	63		Pn	14 40 26.6	-1.4
GRL	Gorelyy	2.71	76	PN	Pn	14 40 28.8	+0.3
GRL	Gorelyy	2.71	76	eP	Pn	14 40 28.9	+0.3
MTVR	Mutnovka	2.76	77	PN	Pn	14 40 28.9	-0.1
MTVR	Mutnovka	2.76	77	eP	Pn	14 40 29.0	-0.1
KRMR	Karymshinskiy	2.81	70	PN	Pn	14 40 28.5	-0.6
KRMR				S	S	14 41 18.6	-0.5
KRMR	Karymshinskiy	2.81	70	eP	Pn	14 40 28.5	-0.6
KRMR				eS	S	14 41 18.7	-0.5
RUS	Russkaya	2.95	79	eS	S	14 41 16.4	-4.8
GNL	Ganaly	3.07	54	PN	Pn	14 40 30.7	-0.7
GNL	Ganaly	3.07	54	eP	Pn	14 40 30.8	-0.7
INSR	Institute	3.15	68	eS	S	14 41 22.0	-2.2
PET	Petropavlovsk	3.17	68		Pn	14 40 30.1	-2.0
PET	Petropavlovsk	3.17	68	P	Pn	14 40 31.9	-0.2
PET	Petropavlovsk	3.17	68	S	S	14 41 24.1	-0.3
PET	Petropavlovsk	3.17	68	ePN	Pn	14 40 31.9	-0.2
PET				eS	S	14 41 23.5	-0.9
PET				pmax	pmax		
	comp=Z,169nm,0.6s						
PET				smax	smax		
	comp=N,306nm,0.6s						
PET				smax	smax		
	comp=E,331nm,0.7s						
PET	Petropavlovsk	3.17	68	eP	Pn	14 40 29.9	-2.2
PET				eS	S	14 41 20.7	-3.7
DALK	Dalny	3.23	69	PN	Pn	14 40 32.0	-0.6
DALK				S	S	14 41 22.0	-3.3
DALK	Dalny	3.23	69	eP	Pn	14 40 32.0	-0.6
DALK				eS	S	14 41 22.0	-3.3
KOK	Koryaka	3.25	64	PN	Pn	14 40 32.8	-0.1
KOK				S	S	14 41 24.4	-1.5
KOK	Koryaka	3.25	64	eP	Pn	14 40 32.9	-0.1
KOK				eS	S	14 41 24.5	-1.5
KRX	Arik	3.28	63	PN	Pn	14 40 33.1	-0.1
KRX				S	S	14 41 26.1	-0.4
KRX	Arik	3.28	63	eP	Pn	14 40 33.1	-0.1
KRX				eS	S	14 41 26.2	-0.4
AVH	Avacha	3.29	65	PN	Pn	14 40 33.1	-0.2
AVH				S	S	14 41 25.0	-1.6
AVH	Avacha	3.29	65	eP	Pn	14 40 33.1	-0.2
AVH				eS	S	14 41 25.0	-1.6
UGLR	Uglovaya	3.32	66	PN	Pn	14 40 33.8	+0.2
UGLR	Uglovaya	3.32	66	eP	Pn	14 40 33.8	+0.2
SPN	Mys Shipunski	3.98	71	PN	Pn	14 40 37.4	-2.0
SPN				S	S	14 41 30.6	-7.1
SPN	Mys Shipunski	3.98	71	eP	Pn	14 40 37.5	-2.0
SPN				eS	S	14 41 30.6	-7.1
ESO	Esso	4.92	34	PN	Pn	14 40 49.5	+0.9
ESO	Esso	4.92	34	eP	Pn	14 40 49.5	+0.9
KZV	Kizimen	5.01	48	PN	Pn	14 40 50.0	+0.3
KZV				S	S	14 41 54.9	-1.6
KZV	Kizimen	5.01	48	eP	Pn	14 40 50.0	+0.3
KZV				eS	S	14 41 55.0	-1.6
KMNR	Kamenistaya	5.39	43	PN	Pn	14 40 55.0	+1.4
KMNR	Kamenistaya	5.39	43	eP	Pn	14 40 55.0	+1.4
KOZ	Kozyrevsk	5.46	39	PN	Pn	14 40 54.7	+0.6
KOZ	Kozyrevsk	5.46	39	eP	Pn	14 40 54.8	+0.6
KIRR	Kirishev	5.57	42	PN	Pn	14 40 56.2	+0.7
KIRR	Kirishev	5.57	42	eP	Pn	14 40 56.2	+0.7
SRDR	Sredinnyy	5.59	36	PN	Pn	14 40 56.9	+1.3
SRDR	Sredinnyy	5.59	36	eP	Pn	14 40 56.9	+1.3
BZP	Bezymyannyi-Pe	5.62	43	PN	Pn	14 40 56.7	+0.6
BZP	Bezymyannyi-Pe	5.62	43	eP	Pn	14 40 56.8	+0.6
BZWR	Bezymyannyi-We	5.64	42	PN	Pn	14 40 56.8	+0.5
BZWR	Bezymyannyi-We	5.64	42	eP	Pn	14 40 56.9	+0.5
ZLN	Zelenaya	5.80	43	PN	Pn	14 40 59.9	+1.9
ZLN	Zelenaya	5.80	43	eP	Pn	14 40 60.0	+1.9
KLY	Klyuchi	5.94	40	PN	Pn	14 41 00.5	+1.2
KLY				S	S	14 42 14.1	-0.2
KLY	Klyuchi	5.94	40	eP	Pn	14 41 00.6	+1.2
KLY				eS	S	14 42 14.1	-0.2
SMKR	Semkarok	6.46	41	PN	Pn	14 41 06.6	+1.5
SMKR	Semkarok	6.46	41	eP	Pn	14 41 06.6	+1.5
KBG	Krutoberegovo	6.78	47	PN	Pn	14 41 06.9	-1.7
KBG				S	S	14 42 23.5	-7.7
KBG	Krutoberegovo	6.78	47	eP	Pn	14 41 06.9	-1.7
KBG				eS	S	14 42 23.5	-7.7
KBTR	Krutoberegovo	6.81	48	PN	Pn	14 41 07.3	-1.5
KBTR				S	S	14 42 23.7	-8.0
KBTR	Krutoberegovo	6.81	48	eP	Pn	14 41 07.4	-1.5
KBTR				eS	S	14 42 23.7	-8.0
TYV	Tymovskoe	7.04	265	ePN	P	14 41 12.6	+0.4
TYV				eS	S	14 42 34.8	-1.9
TYV				pmax	pmax		
	comp=Z,20nm,0.6s						
TYV				pmax	pmax		
	comp=Z,200nm,4.1s						
TYV				smax	smax		
	comp=N,19nm,1.8s						
TYV				smax	smax		
	comp=E,28nm,1.8s						
TYV				smax	smax		
	comp=N,200nm,3.0s						
TYV				smax	smax		
	comp=E,100nm,3.0s						
TYV	Tymovskoe	7.04	265	eP	P	14 41 12.3	+0.2
KUR	Kuril'sk	7.79	212	ePN	Pn	14 41 19.4	-0.7
KUR				eS	S	14 42 54.1	+1.9
KUR				pmax	pmax		
	comp=Z,64nm,0.7s						
KUR				smax	smax		
	comp=N,50nm,0.3s						
KUR				smax	smax		
	comp=E,19nm,0.2s						
MA2	Magadan	7.82	349	P	Pn	14 41 19.3	-0.9
	comp=E,26nm,0.7s,baz=163,slow=8.8,SNR=24						
MA2				S	S	14 42 50.1	-2.4
	comp=E,34nm,1.0s,baz=22,slow=21,SNR=7.0						
MA2	Magadan	7.82	349		P	14 41 19.9	-0.7
MA2	Magadan	7.82	349	P	P	14 41 20.6	0.0
MA2	Magadan	7.82	349	S	S	14 42 52.7	+0.2
MA2	Magadan	7.82	349	cePN	P	14 41 20.3	-0.3
MA2				pmax	pmax		
	comp=Z,78nm,2.5s						
BKI	Bering	7.95	61	PN	Pn	14 41 21.6	-0.1
BKI				S	S	14 42 49.4	-5.9
BKI	Bering	7.95	61	eP	Pn	14 41 21.7	-0.1
BKI				eS	S	14 42 49.5	-5.9
PALN	Palana	7.96	24	PN	P	14 41 21.5	-0.6
PALN	Palana	7.96	24	eP	P	14 41 21.6	-0.6
UGL	Uglegorsk	8.00	253	⇓iPN	P	14 41 23.7	+0.9
UGL				pmax	pmax		
	comp=Z,290nm,0.8s						
YSS	Yuzhno-Sakhali	8.75	239		Pn	14 41 31.3	+0.2
YSS	Yuzhno-Sakhali	8.75	239	P	P	14 41 31.8	+0.6
YSS	Yuzhno-Sakhali	8.75	239	κePN	P	14 41 31.8	+0.6
YSS				eS	S	14 43 11.4	-1.1
YSS				pmax	pmax		
	comp=Z,120nm,0.6s						
YSS				pmax	pmax		
	comp=Z,300nm,2.0s						
YSS	Yuzhno-Sakhali	8.75	239	eP	P	14 41 31.6	+0.4
OSSR	Ossora	8.99	32	PN	P	14 41 34.5	+1.0
OSSR	Ossora	8.99	32	eP	P	14 41 34.6	+1.0
SHO	Shikotan	9.34	213	PN	Pn	14 41 41.4	+3.6
SHO	Shikotan	9.34	213	eP	Pn	14 41 41.4	+3.6
YUK	Yuzh-Kuril'sk	9.54	217	ePN	P	14 41 37.8	-2.1
YUK				eS	S	14 43 21.8	-7.1
YUK				pmax	pmax		
	comp=N,65nm,0.2s						
YUK				pmax	pmax		
	comp=Z,334nm,0.2s						
RUSJ	Misakicho	9.71	219	ePN	P	14 41 40.7	-1.2
GLVR	Golovnino	9.92	217	ePN	P	14 41 41.6	-2.5
GLVR				eS	S	14 43 29.5	-7.2
GLVR				pmax	pmax		
	comp=Z,203nm,0.4s						
GLVR				pmax	pmax		
	comp=N,141nm,0.3s						
GLVR				pmax	pmax		
	comp=E,85nm,0.3s						
NMR	Nemuro--Hokkai	10.16	215	ePN	P	14 41 40.9	-5.9
JKA	Kamikawa-asahi	10.83	228		P	14 41 54.6	+0.3
ASAJ	Asahikawa	10.84	228	P	Pn	14 41 55.7	+1.4
	comp=E,245nm,0.8s,baz=56,slow=6.9,SNR=107						
GRNR	Gornyy	10.92	271	ePN	Pn	14 41 56.2	+1.1
TILK	Tilichiki	10.92	34	PN	Pn	14 41 57.4	+2.4
TILK	Tilichiki	10.92	34	eP	Pn	14 41 57.4	+2.4
SEY	Seymchan	11.03	357	P	Pn	14 41 56.6	+0.5
	comp=E,31nm,0.8s,baz=166,slow=9.9,SNR=87						
SEY	Seymchan	11.03	357	cePN	Pn	14 41 56.9	+0.8
SEY				pmax	pmax		
	comp=Z,82nm,1.7s						
ERM	Erimo	12.30	220		P	14 42 09.2	-1.2
ERM	Erimo	12.30	220	P	P	14 42 09.3	-1.2
ERM	Erimo	12.30	220	PN	P	14 42 09.2	-1.2
JEM	Erimo	12.30	220	P	P	14 42 09.3	-1.1
KMSK	Kamenskaya	12.47	28	PN	Pn	14 42 13.5	+1.5
KMSK	Kamenskaya	12.47	28	eP	Pn	14 42 13.5	+1.5
ZEA	Zeya	16.09	287	eP	P	14 42 51.3	-0.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
YAK	Yakutsk	16.44	317	P	P	14 42 54.8	-0.3
	comp=Z,9.4nm,0.3s,baz=97,slow=4.9,SNR=5.9						
YAK				S	S	14 45 43.4	-3.4
	comp=Z,20nm,0.8s,baz=34,slow=22,SNR=16						
YAK	Yakutsk	16.44	317		P	14 42 54.4	-0.7
YAK				IAmb	IAmb	14 43 09.5	
	comp=Z,18nm,0.7s						
YAK	Yakutsk	16.44	317	eP	P	14 42 54.4	-0.7
YAK				eS	S	14 45 43.8	-3.1
YAK				pmax	pmax		
	comp=Z,18nm,1.1s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.4s						
YAK				smax	smax		
	comp=N,85nm,1.3s						
YAK				smax	smax		
	comp=E,54nm,1.0s						
USRK	Ussuriysk Ar.	16.46	250	P	P	14 42 54.6	-0.9
	comp=E,8.5nm,0.6s,baz=55,slow=14,SNR=15						
BILL	Bilibino	17.23	16		P	14 43 03.5	+0.1
BILL				IAmb	IAmb	14 43 07.8	
	comp=Z,19nm,0.6s						
BILL	Bilibino	17.23	16	ceP	P	14 43 03.0	-0.4
BILL				pmax	pmax		
	comp=Z,37nm,1.3s						
JSD	Sado	17.67	224		P	14 43 08.7	+0.3
JSD	Sado	17.67	224	P	P	14 43 09.2	+0.7
BNX	BinXian	18.38	261	⇑P	P	14 43 15.0	-0.8
BNX				pmax	pmax		
	comp=Z,15nm,1.3s						
MJB9	Matsu-Tunnel	18.96	222	P	P	14 43 21.0	-1.0
MAJO	Matsushiro	18.96	222		P	14 43 20.9	-1.1
MAJO	Matsushiro	18.96	222	P	P	14 43 22.6	+0.5
MAJO	Matsushiro	18.96	222	i P	P	14 43 21.6	-0.5
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.4s						
MJAR	Matsushiro Arr	18.96	222	P	P	14 43 21.7	-0.3
	comp=Z,19nm,0.9s,baz=23,slow=9.4,SNR=59						
MJAR	Matsushiro Arr	18.96	222		P	14 43 20.9	-1.2
MJAR				IAmb	IAmb	14 43 25.1	
	comp=Z,17nm,1.4s						
MJAR	Matsushiro Arr	18.96	222	P	P	14 43 20.9	-1.2
MJAR				pmax	pmax		
	comp=Z,17nm,1.4s						
JGF	Kuroka	20.12	222		P	14 43 32.4	-0.6
JGF				IAmb	IAmb	14 43 35.4	
	comp=Z,8.5nm,0.6s						
JGF	Kuroka	20.12	222	P	P	14 43 32.8	-0.2
INU	Inuyama	20.48	222	P	P	14 43 35.9	-0.3
INU				IAmb	IAmb	14 43 39.0	
	comp=Z,27nm,1.0s						
INU	Inuyama	20.48	222	P	P	14 43 36.6	+0.4
JSG	Sagara	20.59	219	P	P	14 43 37.5	+0.3
SPIA	Saint Paul Isl	21.32	62	P	P	14 43 44.7	+1.1
	baz=272						
GAMB	Gambell	21.52	43	P	P	14 43 47.1	+1.8
GAMB	Gambell	21.52	43	P	P	14 43 46.4	+1.1
	baz=253						
HILR	Hailar Array B	21.55	277	P	P	14 43 45.3	-0.5
	comp=Z,3.0nm,0.4s,baz=73,slow=9.9,SNR=10						
	comp=Z,3.0nm,0.4s						
P08K	Saint George I	21.73	63	P	P	14 43 47.6	+0.3
	baz=274						
NIKH	Nikolski High	22.63	73	P	P	14 43 57.2	+1.7
	baz=283						
TIXI	Tiksi	22.65	340		P	14 43 55.4	0.0
TIXI	Tiksi	22.65	340	ceP	P	14 43 55.1	-0.3
TIXI				pmax	pmax		
	comp=Z,34nm,0.7s						
JMN	Monobe	23.21	226	P	P	14 44 01.3	+0.2
KSRS	Korea Array	23.24	242	P	P	14 44 02.8	+1.5
	comp=Z,3.1nm,0.6s,baz=41,slow=9.7,SNR=15						
	comp=Z,3.1nm,0.6s						
M11K	Mekoryuk	23.48	53	P	P	14 44 04.4	+1.3
	baz=267						
TNA	Tin City	23.60	40	P	P	14 44 05.5	+1.5
TNA	Tin City	23.60	40	P	P	14 44 05.4	+1.3
	baz=254						
UNV	Unalaska Valle	23.82	70	P	P	14 44 07.6	+1.5
	baz=282						
F14K	Arctic Creek	24.21	41	P	P	14 44 10.7	+1.1
	baz=256						
K13K	Kusilvak Mount	24.34	50	P	P	14 44 11.9	+1.2
	baz=265						
ANM	Nome	24.40	43		P	14 44 12.8	+1.5
ANM				IAmb	IAmb	14 44 13.8	
	comp=Z,17nm,0.8s						
ANM	Nome	24.40	43	P	P	14 44 12.8	+1.5
ANM				pmax	pmax		
	comp=Z,17nm,0.8s						
ANM	Nome	24.40	43	P	P	14 44 12.7	+1.5
	baz=259,SNR=5.1						
M13K	Dall Lake	24.90	53	P	P	14 44 17.5	+1.8
	baz=270						
J14K	Nanvaranak Lak	24.93	48	P	P	14 44 17.4	+1.4
	baz=264						
F15K	North Star Dit	24.95	41	P	P	14 44 17.4	+1.3
	baz=257						
G15K	Niukluk	25.05	42	P	P	14 44 19.1	+2.1
	baz=259						
L14K	Kuka Creek	25.25	51	P	P	14 44 20.5	+1.7
	baz=268						
FALS	False Pass	25.39	66	P	P	14 44 21.3	+1.2
	baz=282						
C16K	Lisburne Hills	25.41	35		P	14 44 20.9	+0.8
C16K				IAmb	IAmb	14 44 22.0	
	comp=Z,24nm,1.1s						
C16K	Lisburne Hills	25.41	35	P	P	14 44 21.1	+1.0
	baz=251,SNR=13						
M14K	Bethel	25.59	53	P	P	14 44 22.7	+0.8
	baz=270						
N14K	Kuskokwak Cree	25.74	54	P	P	14 44 24.8	+1.6
	baz=272						
H16K	Elim	25.75	44	P	P	14 44 24.6	+1.4
	baz=262,SNR=6.1						
G16K	Koyuk River	25.82	42	P	P	14 44 24.9	+1.1
	baz=260						
L15K	Ungalak Mounta	25.83	50	P	P	14 44 25.6	+1.6
	baz=269						
K15K	Wolf Creek Mou	25.83	49	P	P	14 44 25.5	+1.4
	baz=267						
O14K	Tigyukauivet M	25.98	56	P	P	14 44 26.6	+1.2
O14K				IAmb	IAmb	14 44 52.6	
	comp=Z,26nm,1.1s						
O14K	Tigyukauivet M	25.98	56	P	P	14 44 26.3	+0.9
	baz=274						
S12K	Black Hills	25.99	64	P	P	14 44 26.6	+1.1
	baz=281						
D17K	Noatak River	26.05	36	P	P	14 44 27.2	+1.3
	baz=255,SNR=20						
RDOG	Red Dog Mine	26.21	36	IAmb	IAmb	14 44 29.4	
	comp=Z,14nm,0.9s						
RDOG	Red Dog Mine	26.21	36	P	P	14 44 28.2	+0.8
	baz=254,SNR=5.7						
M15K	Kasigluk River	26.21	53	P	P	14 44 29.0	+1.6
	baz=271						
C17K	DeLong Mountai	26.23	35	P	P	14 44 28.5	+0.9
	baz=253						
XLT	XiLinHaoTe	26.27	267	eP	P	14 44 28.0	-0.2
XLT				pP	pP	14 45 35.5	-1.5
XLT				pmax	pmax		
	comp=Z,6.0nm,0.9s						
J16K	Anvik River	26.32	47	P	P	14 44 29.9	+1.6
	baz=266						
I17K	Unalakleet	26.32	45	IAmb	IAmb	14 44 30.4	
	comp=Z,8.7nm,0.7s						
I17K	Unalakleet	26.32	45	P	P	14 44 30.2	+1.9
	baz=265						
E17K	Hotham Inlet	26.37	38	P	P	14 44 30.0	+1.3
	baz=257,SNR=28						
F17K	Baldwin Pennin	26.46	40	P	P	14 44 30.7	+1.3
	baz=259,SNR=26						
N15K	Kwethluk River	26.53	54	P	P	14 44 31.9	+1.7
	baz=273						
G17K	Kiwalik Mounta	26.54	42	P	P	14 44 31.6	+1.3
	baz=262						
O15K	Ungalikthiuk R	26.73	56	P	P	14 44 33.4	+1.3
	baz=275						
H17K	Granite Mounta	26.77	43	IAmb	IAmb	14 44 35.7	
	comp=Z,10nm,0.8s						
H17K	Granite Mounta	26.77	43	P	P	14 44 33.9	+1.6
	baz=264						
L16K	Owhat River	26.79	50	P	P	14 44 33.6	+1.1
	baz=270						
E18K	Tukpahlearik C	26.91	38	P	P	14 44 34.8	+1.3
	baz=258						
SDPT	Sand Point	26.94	65	P	P	14 44 35.5	+1.6

	baz=282						
C18K	Utukok River	26.98	35	P	P	14 44 34.4	+0.2
	baz=255						
J17K	VABM Dome	27.01	47	P	P	14 44 35.7	+1.3
	baz=267						
M16K	Timber Creek	27.05	52	P	P	14 44 35.6	+0.7
	baz=272						
F18K	Selawik	27.11	40	P	P	14 44 36.4	+1.1
	baz=261,SNR=5.8						
N16K	Nishlik Lake	27.17	53	P	P	14 44 37.5	+1.6
	baz=273						
S14K	Fog Glacier	27.27	62	P	P	14 44 37.9	+0.9
	baz=281						
K17K	Iditarod	27.34	48	IAmb	IAmb	14 44 40.6	
	comp=Z,36nm,1.5s						
K17K	Iditarod	27.34	48	P	P	14 44 38.1	+0.7
	baz=270						
L17K	Donlin	27.34	49	P	P	14 44 38.7	+1.3
	baz=271						
G18K	Tagagawik	27.41	41	P	P	14 44 38.9	+0.9
	baz=263,SNR=52						
H18K	Honhosa River	27.45	43	P	P	14 44 39.6	+1.3
	baz=265						
A19K	Wainwright	27.47	32	P	P	14 44 39.3	+0.9
	baz=252						
CHNA	Chernabura Isl	27.56	65	P	P	14 44 40.7	+1.3
	baz=284						
O16K	Kokwok River B	27.57	55	P	P	14 44 40.9	+1.4
	baz=276						
C19K	Lookout Ridge	27.66	34	P	P	14 44 40.9	+0.7
	baz=256						
P16K	Nushagak River	27.68	56	P	P	14 44 41.8	+1.3
	baz=277						
M17K	Holitna River	27.77	51	P	P	14 44 42.4	+1.2
	baz=273,SNR=6.9						
F19K	Shaleruckik Mo	27.89	39	P	P	14 44 43.1	+0.9
	baz=262						
N17K	Nushagak Hills	27.95	53	P	P	14 44 44.1	+1.4
	baz=275						
D19K	Kuna River	28.05	36	P	P	14 44 44.6	+1.1
	baz=259						
GCSA	Galena City Sc	28.05	44	P	P	14 44 44.5	+1.0
	baz=267,SNR=5.8						
O17K	Koliganek Bris	28.06	54	P	P	14 44 45.5	+1.8
	baz=276						
J18K	Innoko River	28.07	47	P	P	14 44 45.4	+1.5
	baz=270						
G19K	Purcell Mounta	28.08	41	IAmb	IAmb	14 44 45.5	
	comp=Z,22nm,0.8s						
G19K	Purcell Mounta	28.08	41	P	P	14 44 44.8	+0.9
	baz=264,SNR=22						
L18K	Granite Mounta	28.09	49	P	P	14 44 45.7	+1.7
	baz=272						
E19K	Redstone River	28.19	38	P	P	14 44 46.0	+1.2
	baz=262						
H19K	Roundabout Mou	28.28	42	P	P	14 44 47.0	+1.4
	baz=266						
Q16K	King Salmon	28.42	57	P	P	14 44 48.2	+1.3
	baz=278						
P17K	Kvichak River	28.46	56	P	P	14 44 48.4	+1.2
	baz=278						
M18K	Stony River	28.54	51	P	P	14 44 49.4	+1.5
	baz=274,SNR=5.4						
J19K	Poorman	28.57	45	IAmb	IAmb	14 44 49.9	
	comp=Z,16nm,1.1s						
J19K	Poorman	28.57	45	P	P	14 44 49.2	+1.1
	baz=270,SNR=5.3						
N18K	Kilae Creek	28.57	52	P	P	14 44 49.9	+1.7
	baz=275						
D20K	Etivluk River	28.63	35	P	P	14 44 50.0	+1.3
	baz=260						
B20K	Meade River	28.71	33	P	P	14 44 50.2	+1.0
	baz=257						
Q17K	Contact Creek	28.88	57	P	P	14 44 52.3	+1.1
	baz=280						
H20K	Anotleneega Mo	28.93	42	P	P	14 44 52.5	+1.1
	baz=267						
L19K	White Mountain	28.96	49	P	P	14 44 53.1	+1.5
	baz=273						
O18K	Koktuh Hills	29.00	54	P	P	14 44 53.3	+1.3
	baz=277						
P18K	Big Mountain,	29.05	55	P	P	14 44 53.7	+1.2
P18K				IAmb	IAmb	14 44 54.7	
	comp=Z,13nm,0.8s						
P18K	Big Mountain,	29.05	55	P	P	14 44 53.9	+1.4
	baz=278						
A21K	Barrow	29.20	30	P	P	14 44 54.6	+1.0
	baz=255,SNR=15						
J20K	Nowinta River	29.22	45	P	P	14 44 55.4	+1.6
	baz=270						
N19K	Bonanza Creek	29.24	52	IAmb	IAmb	14 44 56.9	
	comp=Z,15nm,0.8s						
N19K	Bonanza Creek	29.24	52	P	P	14 44 55.6	+1.3
	baz=276						
K20K	Telida	29.27	47	P	P	14 44 55.8	+1.5
	baz=272						
C21K	Knifeblade Rid	29.36	35	P	P	14 44 56.3	+1.3
	baz=261						
O19K	Port Alsworth	29.40	53	P	P	14 44 57.0	+1.6
	baz=277						
CHIR	Chirikof Islan	29.52	62	P	P	14 44 58.0	+1.4
	baz=284						
G21K	Allakaket	29.55	40	IAmb	IAmb	14 44 59.1	
	comp=Z,23nm,0.8s						
G21K	Allakaket	29.55	40	P	P	14 44 58.2	+1.4
	baz=267,SNR=21						
F21K	Alatna River	29.61	39	IAmb	IAmb	14 44 59.4	
	comp=Z,15nm,0.6s						
F21K	Alatna River	29.61	39	P	P	14 44 58.5	+1.2
	baz=266,SNR=12						
A22K	Sinclair Lake	29.65	31	P	P	14 44 58.9	+1.4
	baz=258						
R18K	Karluk	29.76	59	P	P	14 45 00.2	+1.5
	baz=282						
M20K	Styx River	29.79	50	IAmb	IAmb	14 45 02.0	
	comp=Z,30nm,1.5s						
M20K	Styx River	29.79	50	P	P	14 45 00.1	+1.1
	baz=275						
H21K	Melozitna Rive	29.80	42	IAmb	IAmb	14 45 01.0	
	comp=Z,21nm,0.7s						
H21K	Melozitna Rive	29.80	42	P	P	14 45 00.1	+1.2
	baz=269						
Q19K	Cape Douglas,	29.93	56	P	P	14 45 01.2	+1.0
	baz=280						
P19K	Oil Pt	30.02	54	P	P	14 45 02.1	+1.1
	baz=279						
B22K	Teshekpuk Lake	30.02	33	P	P	14 45 01.7	+0.9
	baz=260,SNR=32						
CHUM	Lake Minchumin	30.03	46	P	P	14 45 01.7	+0.8
	baz=273,SNR=5.9						
D22K	Ayikyak River	30.07	36	P	P	14 45 02.4	+1.1
	baz=264						
SII	Sitkinak Islan	30.13	60	P	P	14 45 03.0	+1.1
	baz=284						
I21K	Tanana	30.14	43	IAmb	IAmb	14 45 04.4	
	comp=Z,31nm,1.3s						
I21K	Tanana	30.14	43	P	P	14 45 03.3	+1.4
	baz=271,SNR=8.9						
PPLA	Purkeypile	30.14	48	P	P	14 45 03.4	+1.3
	baz=274						
O20K	Slope Mountain	30.25	53	P	P	14 45 04.3	+1.3
	baz=279						
SPCR	Spurr Chakacha	30.30	51	P	P	14 45 05.2	+1.7
	baz=277						
E22K	Anaktuvuk Pass	30.31	37	P	P	14 45 04.5	+1.1
	baz=266,SNR=37						
SONM	Songino Array	30.37	281	P	P	14 45 04.7	+0.5
	comp=Z,0.2nm,0.4s,baz=67,slow=9.2,SNR=1.9						
SONM				PcP	PcP	14 47 52.1	-0.3
	comp=Z,0.2nm,0.5s,baz=45,slow=2.2,SNR=3.6						
SONM				ScP	ScP	14 50 56.3	+0.5
	comp=Z,0.8nm,0.7s,baz=102,slow=2.2,SNR=5.7						
SPU	Mount Spurr	30.38	51	IAmb	IAmb	14 45 07.0	
	comp=Z,16nm,1.0s						
H22K	Ishtalitna Cre	30.39	42	P	P	14 45 05.6	+1.5
	baz=270						
OHAK	Old Harbor	30.45	59	P	P	14 45 05.6	+0.9
OHAK	Old Harbor	30.45	59	P	P	14 45 05.9	+1.2
	baz=283						
SKT	Skwentna	30.53	49	P	P	14 45 06.8	+1.4
	baz=276						
BPAW	Bear Paw Mtn.	30.60	45	P	P	14 45 06.9	+0.9
	baz=273						
Q20K	Shuyak Island	30.62	56	P	P	14 45 07.0	+0.8
	baz=282						
KDAK	Kodiak Island	30.70	58	P	P	14 45 07.4	+0.5
	baz=283						
HHC	Hu-ho-hao-te	30.74	266	*e*P	P	14 45 09.0	+1.4
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HOM	Homer	30.81	54	P	P	14 45 08.4	+0.7
	baz=280						
L22K	Petersville	30.83	48	IAmb	IAmb	14 45 09.8	
	comp=Z,19nm,0.6s						
CAPN	Captain Cook N	30.87	52	P	P	14 45 10.1	+1.8
	baz=279						
COLD	Coldfoot	30.88	39		P	14 45 09.4	+1.0
COLD	Coldfoot	30.88	39	P	P	14 45 09.3	+1.0
	baz=269,SNR=36						
C23K	Itkillik River	30.90	34	P	P	14 45 10.0	+1.5
	baz=264						
G23K	Bananza Creek	30.94	40	P	P	14 45 09.8	+0.8
	baz=270,SNR=8.8						
TRF	Thorofare Moun	30.96	46	IAmb	IAmb	14 45 11.1	
	comp=Z,13nm,0.6s						
TRF	Thorofare Moun	30.96	46	P	P	14 45 10.8	+1.5
	baz=275,SNR=5.6						
SUA	Susitna One	30.97	50	IAmb	IAmb	14 45 10.9	
	comp=Z,23nm,1.2s						
SUA	Susitna One	30.97	50	P	P	14 45 10.3	+1.1
	baz=278						
CUT	Chulitna	31.07	48	P	P	14 45 11.1	+1.1
	baz=277,SNR=6.2						
E23K	Chandalar	31.13	37	P	P	14 45 11.8	+1.2
	baz=268						
TOLK	Toolik Lake Re	31.18	36	IAmb	IAmb	14 45 12.7	
	comp=Z,22nm,0.7s						
TOLK	Toolik Lake Re	31.18	36	P	P	14 45 11.9	+1.0
	baz=267,SNR=18						
M22K	Willow	31.22	50	P	P	14 45 12.2	+0.9
	baz=278						
BRSE	Bradley Lake S	31.25	54	P	P	14 45 12.7	+1.1
	baz=281						
I23K	Minto, Yukon-K	31.25	43	IAmb	IAmb	14 45 13.6	
	comp=Z,14nm,0.7s						
I23K	Minto, Yukon-K	31.25	43	P	P	14 45 12.8	+1.3
	baz=273,SNR=10						
NEA2	Nenana	31.41	44	IAmb	IAmb	14 45 15.0	
	comp=Z,22nm,1.3s						
NEA2	Nenana	31.41	44	P	P	14 45 14.0	+1.1
	baz=274						
D24K	Happy Valley	31.48	35	P	P	14 45 14.7	+1.3
	baz=267						
RC01	Rabbit Creek A	31.50	51	P	P	14 45 14.7	+1.0
	baz=279						
MCK	McKinley	31.54	46	IAmb	IAmb	14 45 16.1	
	comp=Z,19nm,0.9s						
MCK	McKinley	31.54	46	P	P	14 45 15.0	+1.0
	baz=276,SNR=7.9						
C24K	Franklin Bluff	31.56	34	P	P	14 45 15.5	+1.4
	baz=266						
E24K	Your Creek	31.56	37	P	P	14 45 15.6	+1.3
	baz=269						
JOW	Kunigami	31.60	227	P	P	14 45 15.8	+0.8
RND	Reindeer	31.61	46	IAmb	IAmb	14 45 15.9	
	comp=Z,12nm,0.6s						
O22K	Cooper Landing	31.61	52	P	P	14 45 15.4	+0.7
	baz=280						
PMR	Palmer	31.71	50	P	P	14 45 16.6	+1.1
	baz=279						
F24K	Squaw Lake	31.78	38	P	P	14 45 17.0	+0.9
	baz=270						
GHO	Glory Hole Cre	31.78	49	IAmb	IAmb	14 45 18.4	
	comp=Z,14nm,0.9s						
WAT1	Susitna Watana	31.81	47	P	P	14 45 16.7	+0.3
	baz=278						
SEW	Seward	31.81	53	P	P	14 45 17.8	+1.4
	baz=281						
H24K	Noodor Dome	31.83	42	IAmb	IAmb	14 45 19.5	
	comp=Z,20nm,1.1s						
H24K	Noodor Dome	31.83	42	P	P	14 45 18.1	+1.5
	baz=273,SNR=9.5						
CCB	Clear Creek Bu	31.95	44	IAmb	IAmb	14 45 19.8	
	comp=Z,24nm,1.1s						
G24K	Hadweenzic Riv	31.96	40	P	P	14 45 19.6	+2.0
	baz=272						
SML	Sawmill	32.06	49	P	P	14 45 19.6	+1.0
	baz=279,SNR=11						
KNK	Knik Glacier	32.06	50	P	P	14 45 19.4	+0.8
	baz=280,SNR=11						
POKR	Poker Plat Res	32.06	43	IAmb	IAmb	14 45 22.2	
	comp=Z,12nm,0.7s						
POKR	Poker Plat Res	32.06	43	P	P	14 45 20.1	+1.5
	baz=275						
WAT6	Susitna Watana	32.21	48	P	P	14 45 21.0	+0.9
	baz=278						
PWL	Port Wells	32.22	51	IAmb	IAmb	14 45 22.6	
	comp=Z,39nm,1.2s						
PWL	Port Wells	32.22	51	P	P	14 45 20.8	+0.8
	baz=281						
DHY	Denali Highway	32.31	47	IAmb	IAmb	14 45 22.7	
	comp=Z,30nm,1.4s						
DHY	Denali Highway	32.31	47	P	P	14 45 21.6	+0.7
	baz=278,SNR=8.5						
IL31		32.33	44	IAmb	IAmb	14 45 22.8	
	comp=Z,23nm,0.9s						
ILAR	Eielson Array	32.33	44	P	P	14 45 21.6	+0.8
	comp=Z,13nm,0.8s,baz=270,slow=9.0,SNR=105						
	comp=Z,13nm,0.8s						
ILAR	Eielson Array	32.33	44		P	14 45 21.9	+1.1
ILAR	Eielson Array	32.33	44	P	P	14 45 21.9	+1.1
HDA	Harding Lake	32.34	44	IAmb	IAmb	14 45 24.4	
	comp=Z,13nm,1.0s						
HDA	Harding Lake	32.34	44	P	P	14 45 21.4	+0.5
	baz=276,SNR=11						
M23K	Glacier View	32.34	49	P	P	14 45 22.3	+1.3
	baz=280,SNR=5.3						
D25K	Kavik River	32.35	35	P	P	14 45 22.4	+1.3
	baz=269						
G25K	Bearman Lake	32.50	40	P	P	14 45 24.0	+1.8
	baz=273						
SCM	Sheep Creek Mo	32.52	49	P	P	14 45 23.8	+1.1
	baz=280,SNR=6.1						
F25K	Christian Rive	32.64	38	IAmb	IAmb	14 45 26.4	
	comp=Z,16nm,1.1s						
F25K	Christian Rive	32.64	38	P	P	14 45 25.4	+1.9
	baz=272						
E25K	Arctic Village	32.65	37	IAmb	IAmb	14 45 26.4	
	comp=Z,22nm,0.8s						
E25K	Arctic Village	32.65	37	P	P	14 45 25.4	+1.8
	baz=272,SNR=25						
PRP	Porcupine Dome	32.83	42	P	P	14 45 26.5	+1.2
	baz=276,SNR=34						
P23K	Montague Islan	32.84	52	P	P	14 45 26.2	+0.9
	baz=283						
C26K	Camden Bay	32.88	34	P	P	14 45 26.5	+1.0
	baz=269						
K24K	Donnelly Dome	32.92	45	IAmb	IAmb	14 45 27.4	
	comp=Z,32nm,1.0s						
K24K	Donnelly Dome	32.92	45	P	P	14 45 26.4	+0.5
	baz=278,SNR=8.3						
J25K	Salcha River,	32.99	44	IAmb	IAmb	14 45 28.5	
	comp=Z,20nm,1.3s						
J25K	Salcha River,	32.99	44	P	P	14 45 27.6	+1.0
	baz=277						
M24K	Tolsona, Glenn	33.01	48	IAmb	IAmb	14 45 29.0	
	comp=Z,22nm,0.9s						
M24K	Tolsona, Glenn	33.01	48	P	P	14 45 28.5	+1.7
	baz=280						
BMAR	Burnt Mountain	33.06	39		P	14 45 28.9	+1.8
PAX	Paxson	33.18	47	P	P	14 45 29.6	+1.3
	baz=280						
F26K	Sheenjek River	33.21	38	P	P	14 45 30.4	+2.0
	baz=274						
KLU	Klutina	33.24	49	P	P	14 45 30.4	+1.6
	baz=282						
C27K	Jago River	33.30	34	P	P	14 45 30.7	+1.6
	baz=271						
RIDG	Independent Ri	33.34	45	P	P	14 45 30.6	+1.0
	baz=279						
G26K	Porcupine Rive	33.40	39	P	P	14 45 31.8	+1.8
	baz=275						
HARP	HAARP	33.43	48	P	P	14 45 32.0	+1.7
	baz=281						
Q23K	Middleton Isla	33.49	53	P	P	14 45 30.6	-0.2
	baz=284						
EYAK	Cordova Ski Ar	33.52	51	P	P	14 45 32.8	+1.7
EYAK	Cordova Ski Ar	33.52	51	P	P	14 45 32.1	+1.0
	baz=283						
SCRK	Sand Creek	33.68	45		P	14 45 32.9	+0.4
SCRK				IAmb	IAmb	14 45 33.9	
	comp=Z,45nm,1.3s						
SCRK	Sand Creek	33.68	45	P	P	14 45 33.0	+0.5
	baz=279,SNR=22						
J26L	Joseph Creek	33.78	44	P	P	14 45 34.5	+1.1
	baz=279						
I26K	Coal Creek Min	33.84	42	P	P	14 45 35.3	+1.6
	baz=278						
N25K	Chitina, Valde	33.84	49	IAmb	IAmb	14 45 36.0	
	comp=Z,11nm,0.6s						
N25K	Chitina, Valde	33.84	49	P	P	14 45 35.5	+1.5
	baz=282						
BMRM	Bremner River	33.98	50	IAmb	IAmb	14 45 38.0	
	comp=Z,26nm,0.8s						
BMRM	Bremner River	33.98	50	P	P	14 45 36.6	+1.6
	baz=283						
L26K	Log Cabin Wild	34.13	46	P	P	14 45 37.6	+1.3
	baz=281						
E27K	Coleen River	34.13	37	P	P	14 45 37.7	+1.5
	baz=275						
G27K	Doyon Strip	34.25	39	IAmb	IAmb	14 45 40.9	
	comp=Z,15nm,0.8s						
G27K	Doyon Strip	34.25	39	P	P	14 45 39.4	+2.1
	baz=277,SNR=16						
D27M	Malcolm River	34.28	35	IAmb	IAmb	14 45 39.9	
	comp=Z,30nm,1.1s						
D27M	Malcolm River	34.28	35	P	P	14 45 38.4	+0.9
	baz=274						
KAIM	Kayak Island	34.32	52	P	P	14 45 39.0	+1.1
	baz=285						
H27K	Steamboat Moun	34.38	40	P	P	14 45 40.5	+2.2
	baz=278						
M26K	Nabesna, AK	34.41	47	IAmb	IAmb	14 45 42.0	
	comp=Z,34nm,1.1s						
M26K	Nabesna, AK	34.41	47	P	P	14 45 40.6	+1.9
	baz=282						
I27K	Kandik River	34.43	42	P	P	14 45 41.0	+2.2
	baz=279						
NRIK	Noril'sk	34.61	325	P	P	14 45 39.5	-0.7
	comp=Z,2.2nm,0.6s,baz=108,slow=8.7,SNR=6.7						
	comp=Z,2.2nm,0.6s						
NRIK	Noril'sk	34.61	325		P	14 45 40.3	0.0
NRIK	Noril'sk	34.61	325	*i* P	P	14 45 40.4	+0.2
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MCARA	McCarthy VSAT	34.63	49	IAmb	IAmb	14 45 46.0	
	comp=Z,15nm,0.9s						
MCARA	McCarthy VSAT	34.63	49	P	P	14 45 42.1	+1.6
	baz=284						
CRQE	Cirque	34.75	50	P	P	14 45 42.4	+0.8
	baz=285,SNR=6.3						
L27K	Beaver Creek,	34.80	46	P	P	14 45 43.8	+1.9
	baz=282						
BCAR	Beaver Creek A	34.82	46		P	14 45 44.0	+1.9
F28M	Old Crow	34.84	38	IAmb	IAmb	14 45 44.6	
	comp=Z,15nm,0.7s						
F28M	Old Crow	34.84	38	P	P	14 45 44.1	+1.9
	baz=277,SNR=20						
E28M	Babbage River	34.85	36	IAmb	IAmb	14 45 44.8	
	comp=Z,16nm,0.9s						
E28M	Babbage River	34.85	36	P	P	14 45 43.9	+1.6
	baz=276,SNR=20						
M27K	Edge Creek, AK	34.93	47	P	P	14 45 44.9	+1.8
	baz=283,SNR=15						
D28M	Stokes Point	35.06	35	P	P	14 45 45.1	+1.1
	baz=276						
I28M	Miner Creek	35.15	42	P	P	14 45 46.5	+1.6
	baz=280						
BVCY	Beaver Creek	35.38	47	P	P	14 45 48.6	+1.8
	baz=284,SNR=11						
E29M	Blow River	35.48	36	P	P	14 45 49.5	+1.9
	baz=278						
CTG	Chitna Glacier	35.52	49	P	P	14 45 49.7	+1.5
	baz=286,SNR=8.0						
H29M	Whitestone	35.64	40	IAmb	IAmb	14 45 51.8	
	comp=Z,16nm,0.8s						
H29M	Whitestone	35.64	40	P	P	14 45 50.4	+1.5
	baz=281,SNR=11						
DAWY	Dawson	35.65	44	P	P	14 45 49.9	+0.8
	baz=283						
G29M	Pine Creek	35.66	39	P	P	14 45 50.5	+1.5
	baz=280						
LOGN	Logan Glacier	35.72	50	IAmb	IAmb	14 45 52.6	
	comp=Z,30nm,1.2s						
YUK3	Moose Creek	35.72	48	P	P	14 45 51.5	+1.5
	baz=285						
I29M	Ogilvie Camp,	35.83	42	P	P	14 45 52.3	+1.7
	baz=282,SNR=13						
J29N	Klondike Camp	36.06	43	P	P	14 45 54.1	+1.5
	baz=283						
O28M	Mount Upton	36.12	50	P	P	14 45 54.7	+1.4
	baz=287						
YUK8	Steele Glacier	36.17	49	P	P	14 45 55.1	+1.4
	baz=286						
EPYK	Eagle Plains	36.27	40	IAmb	IAmb	14 45 56.8	
	comp=Z,18nm,0.9s						
EPYK	Eagle Plains	36.27	40	P	P	14 45 56.0	+1.8
	baz=282,SNR=8.7						
PINM	Pinnacle	36.28	51	P	P	14 45 56.2	+1.7
	baz=287						
F30M	Barrier River	36.39	37	P	P	14 45 57.5	+2.4
	baz=281						
L29M	L29M	36.42	45	P	P	14 45 57.7	+2.1
	baz=285,SNR=25						
M29M	Somme Creek	36.45	46	IAmb	IAmb	14 45 59.0	
	comp=Z,16nm,0.7s						
M29M	Somme Creek	36.45	46	P	P	14 45 57.9	+2.0
	baz=286,SNR=11						
K29M	Barlow Dome	36.50	44	P	P	14 45 58.1	+1.8
	baz=284,SNR=6.1						
I30M	Mount Dempster	36.65	42	P	P	14 45 59.2	+1.7
	baz=284,SNR=25						
YUK4	Talbot Arm	36.67	48	P	P	14 45 59.4	+1.6
	baz=287						
J30M	Hart River	36.83	43	P	P	14 46 00.4	+1.3
	baz=284,SNR=9.9						
YUK6	Outpost Mounta	36.92	49	P	P	14 46 01.0	+1.0
	baz=288						
O29M	Mount Kennedy	37.02	50	P	P	14 46 01.9	+1.3
	baz=288						
INK	Inuvik	37.09	36		P	14 46 02.4	+1.4
INK	Inuvik	37.09	36	P	P	14 46 02.4	+1.4
INK				pmax	pmax		
	comp=Z,24nm,0.5s						
INK	Inuvik	37.09	36	P	P	14 46 02.3	+1.4
	baz=282,SNR=25						
G31M	Satah River	37.10	38	P	P	14 46 02.4	+1.3
	baz=283,SNR=6.6						
M30M	Minto, Yukon	37.16	46	P	P	14 46 03.3	+1.6
	baz=287,SNR=6.7						
F31M	Tsiigehtchic	37.19	37	IAmb	IAmb	14 46 04.0	
	comp=Z,23nm,0.7s						
F31M	Tsiigehtchic	37.19	37	P	P	14 46 03.3	+1.5
	baz=283,SNR=15						
MAYO	Mayo, Yukon	37.27	44	P	P	14 46 04.4	+1.8
	baz=286,SNR=14						
H31M	Peel River	37.34	40	P	P	14 46 04.6	+1.5
	baz=284						
N30M	Aishikik Lake	37.35	48	P	P	14 46 05.3	+1.9
	baz=288						
HYT	Haines Junctio	37.36	49	IAmb	IAmb	14 46 07.0	
	comp=Z,23nm,0.8s						
HYT	Haines Junctio	37.36	49	P	P	14 46 05.3	+1.8
	baz=288,SNR=10						
P29M	Windy Craggy	37.63	51	P	P	14 46 07.7	+2.1
	baz=290						
P30M	Million Dollar	37.84	50	P	P	14 46 09.5	+2.1
	baz=290						
N31M	Braeburn, Yuko	37.94	47	P	P	14 46 10.1	+1.9
	baz=289,SNR=17						
O30N	Mendenhall	38.03	49	P	P	14 46 10.4	+1.5
	baz=289,SNR=13						
M31M	Drury Creek, Y	38.34	46	IAmb	IAmb	14 46 14.7	
	comp=Z,17nm,0.7s						
M31M	Drury Creek, Y	38.34	46	P	P	14 46 12.3	+0.9
	baz=289,SNR=9.9						
PLBC	Pleasant Camp	38.35	51	P	P	14 46 12.5	+1.0
	baz=291,SNR=7.4						
LZH	Lanzhou	38.44	266	*e*P	P	14 46 13.5	+0.8
WHY	Whitehorse	38.63	48	P	P	14 46 15.7	+1.8
	baz=290,SNR=12						
A36M	Sachs Harbour	39.03	29	P	P	14 46 18.0	+1.1
	baz=284,SNR=33						
N32M	Quiet Lake	39.28	47	IAmb	IAmb	14 46 22.0	
	comp=Z,11nm,0.8s						
N32M	Quiet Lake	39.28	47	P	P	14 46 20.7	+1.5
	baz=291						
P33M	Teslin, Yukon	39.75	48	IAmb	IAmb	14 46 25.8	
	comp=Z,19nm,1.1s						
P33M	Teslin, Yukon	39.75	48	P	P	14 46 24.7	+1.7
	baz=292,SNR=8.2						
SIT	Sitka	39.77	54	P	P	14 46 23.2	+0.1
	baz=294						
S32K	Killisnoo	39.98	53	P	P	14 46 24.8	+0.1

	baz=294						
C36M	**Paulatuk**	**40.14**	**33**	P	**P**	**14 46 27.3**	**+1.4**
	baz=288,SNR=6.6						
Q32M	**Nakina River**	**40.49**	**50**	P	**P**	**14 46 31.0**	**+1.8**
	baz=294						
R33M	**Jennings River**	**40.93**	**49**	IAmb	IAmb	14 46 36.4	
	comp=Z,18nm,1.1s						
R33M	**Jennings River**	**40.93**	**49**	P	**P**	**14 46 34.9**	**+2.3**
	baz=294						
U33K	**Whale Pass**	**41.28**	**54**	P	**P**	**14 46 36.8**	**+1.6**
	baz=296						
S34M	**Telegraph Cree**	**41.47**	**51**	P	**P**	**14 46 38.9**	**+2.1**
	baz=296						
WRAK	**Wrangell Islan**	**41.53**	**54**	P	**P**	**14 46 39.7**	**+2.5**
	baz=296						
WTLY	**Watson Lake, Y**	**41.63**	**47**	IAmb	IAmb	14 46 41.3	
	comp=Z,13nm,0.9s						
WTLY	**Watson Lake, Y**	**41.63**	**47**	P	**P**	**14 46 40.4**	**+2.3**
	baz=295						
T35M	**Bob Quinn**	**42.31**	**52**	P	**P**	**14 46 46.1**	**+2.6**
	baz=297						
WRGLY	**Wrigley**	**42.63**	**42**	P	**P**	**14 46 47.8**	**+1.8**
WRGLY				IAmb	IAmb	14 46 49.2	
	comp=Z,15nm,1.2s						
WRGLY	**Wrigley**	**42.63**	**42**	P	**P**	**14 46 48.5**	**+2.5**
	baz=295						
LIRD	**Liard River Hi**	**43.17**	**47**	P	**P**	**14 46 53.0**	**+2.8**
	baz=297						
TOAD	**Toad River Com**	**43.82**	**48**	P	**P**	**14 46 58.1**	**+2.7**
	baz=298,SNR=14						
MKAR	**Makanchi Array**	**45.10**	**293**	P	**P**	**14 47 05.6**	**0.0**
	comp=Z,0.5nm,0.4s,baz=59,slow=6.6,SNR=18						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**45.10**	**293**	*ce*P	**P**	**14 47 05.5**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
RES	**Resolute Bay**	**45.77**	**20**		**P**	**14 47 10.9**	**+0.6**
RES	**Resolute Bay**	**45.77**	**20**	P	**P**	**14 47 10.9**	**+0.6**
RES				pmax	pmax		
	comp=Z,12nm,1.0s						
PZH	**PanZhiHua**	**46.39**	**257**	P	**P**	**14 47 17.3**	**+1.4**
YKAW3	**Yellowknife Wh**	**46.52**	**40**	IAmb	IAmb	14 47 18.5	
	comp=Z,14nm,0.7s						
YKA	**Yellowknife Ar**	**46.55**	**40**	P	**P**	**14 47 17.8**	**+1.3**
	comp=Z,13nm,0.8s,baz=302,slow=7.8,SNR=176						
YKA				ScP	**ScP**	**14 51 59.1**	**+2.1**
	comp=Z,0.4nm,0.9s,baz=297,slow=5.1,SNR=4.0						
	comp=Z,13nm,0.8s						
YKAW1	**Yellowknife Wh**	**46.61**	**40**	IAmb	IAmb	14 47 19.2	
	comp=Z,15nm,0.9s						
SPITS	**Spitsbergen Ar**	**47.56**	**349**	P	**P**	**14 47 23.4**	**-0.6**
	comp=Z,11nm,0.8s,baz=56,slow=6.5,SNR=16						
	comp=Z,11nm,0.8s						
BVAR	**Borovoye Array**	**48.00**	**306**	P	**P**	**14 47 27.4**	**-0.3**
	comp=Z,3.2nm,0.6s,baz=57,slow=8.3,SNR=23						
BVAR				ScP	**ScP**	**14 52 02.3**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=46,slow=6.2,SNR=3.5						
	comp=Z,3.2nm,0.6s						
BORK	**Borovoye**	**48.02**	**306**		**P**	**14 47 27.7**	**-0.1**
BORK	**Borovoye**	**48.02**	**306**	*ce*P	**P**	**14 47 28.1**	**+0.3**
BORK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARTI	**Arti**	**51.64**	**315**	P	**P**	**14 47 54.6**	**0.0**
ARTI	**Arti**	**51.64**	**315**	*d i*P	**P**	**14 47 54.4**	**-0.2**
ARTI						14 49 01.0	
ARTI				*PP	**pP**	**14 49 14.0**	**-1.6**
ARTI				SS	**SKiKP**	**14 58 26.5**	**-8.0**
ARTI				pmax	pmax		
	comp=Z,38nm,3.7s						
AAK	**Ala-Archa**	**52.04**	**293**	*i* P	**P**	**14 47 57.5**	**-0.4**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BLKN	**Baker Lake**	**52.13**	**31**		**P**	**14 47 58.4**	**+0.4**
BLKN				IAmb	IAmb	14 47 59.3	
	comp=Z,26nm,0.8s						
ILON	**Igloolik, Nuna**	**52.36**	**22**	IAmb	IAmb	14 47 59.8	
	comp=Z,9.1nm,0.7s						
EDM	**Edmonton**	**52.48**	**49**	IAmb	IAmb	14 48 03.0	
	comp=Z,15nm,0.7s						
ARCES	**ARCESS Array B**	**53.09**	**340**	P	**P**	**14 48 04.2**	**-0.7**
	comp=Z,3.5nm,0.8s,baz=40,slow=7.6,SNR=9.0						
	comp=Z,3.5nm,0.8s						
ARCES	**ARCESS Array B**	**53.09**	**340**	IAmb	IAmb	14 48 05.2	
	comp=Z,20nm,1.3s						
CMAR	**Chiang Mai Arr**	**54.16**	**253**	P	**P**	**14 48 14.2**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=45,slow=6.8,SNR=3.1						
CMAR				PcP	**PcP**	**14 49 12.2**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=8.7,slow=4.0,SNR=5.2						
	comp=Z,0.3nm,0.7s						
SUMG	**Summit**	**55.47**	**4**	P	**P**	**14 48 22.0**	**-0.2**
SUMG	**Summit**	**55.47**	**4**	P	**P**	**14 48 22.0**	**-0.2**
SUMG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AB31	**Akbulak array**	**55.50**	**308**		**P**	**14 48 21.5**	**-0.8**
MSO	**Missoula**	**56.34**	**56**		**P**	**14 48 29.6**	**+1.1**
PLID	**Pearl Lake**	**56.44**	**58**		**P**	**14 48 30.9**	**+1.6**
FFC	**Flin Flon**	**56.52**	**42**		**P**	**14 48 30.4**	**+1.1**
FFC				IAmb	IAmb	14 48 31.6	
	comp=Z,12nm,0.8s						
FFC	**Flin Flon**	**56.52**	**42**	P	**P**	**14 48 30.5**	**+1.1**
FFC				pmax	pmax		
	comp=Z,12nm,0.8s						
FCC	**Fort Churchill**	**56.70**	**35**	IAmb	IAmb	14 48 31.6	
	comp=Z,12nm,0.6s						
CHGR	**Chuyangaron**	**57.71**	**293**	IAmb	IAmb	14 48 38.7	
	comp=Z,11nm,1.0s						
CHGR	**Chuyangaron**	**57.71**	**293**	*i* P	**P**	**14 48 37.0**	**-1.0**
CHGR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
DLMT	**Dillon**	**58.03**	**56**	IAmb	IAmb	14 48 43.7	
	comp=Z,16nm,1.5s						
YHB	**Horse Butte**	**59.17**	**56**	IAmb	IAmb	14 48 51.0	
	comp=Z,9.7nm,0.9s						
FINES	**FINESS Array B**	**59.53**	**334**	P	**P**	**14 48 49.0**	**-0.8**
	comp=Z,1.4nm,0.5s,baz=40,slow=6.9,SNR=17						
	comp=Z,1.4nm,0.5s						
FINES	**FINESS Array B**	**59.53**	**334**	*ce*P	**P**	**14 48 48.2**	**-1.6**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NVAR	**Mina Array Bea**	**59.74**	**65**	P	**P**	**14 48 53.9**	**+1.9**
	comp=Z,0.9nm,0.6s,baz=298,slow=6.8,SNR=6.5						
	comp=Z,0.9nm,0.6s						
DGMT	**Dagmar**	**59.96**	**49**	IAmb	IAmb	14 48 55.6	
	comp=Z,22nm,1.1s						
LAO	**LASA Array**	**60.27**	**51**	IAmb	IAmb	14 48 58.7	
	comp=Z,8.9nm,0.8s						
OBN	**Obninsk**	**61.28**	**324**⇑	*e*P	**P**	**14 49 02.2**	**+0.6**
OBN				*e**PP	**pP**	**14 50 28.3**	**+2.3**
OBN				*e*		14 51 25.0	
OBN				*e*PPP	PPP	14 52 58.0	
OBN				*e*S	S	14 57 12.2	+23
OBN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
PDAR	**Pinedale Array**	**61.41**	**56**	P	**P**	**14 49 04.7**	**+1.7**
	comp=Z,3.7nm,0.7s,baz=319,slow=1.9,SNR=34						
	comp=Z,3.7nm,0.7s						
PDAR	**Pinedale Array**	**61.41**	**56**	P	**P**	**14 49 04.2**	**+1.2**
ULM	**Lac du Bonnet**	**62.34**	**43**	P	**P**	**14 49 08.9**	**+0.3**
	comp=Z,2.7nm,0.6s,baz=318,slow=9.2,SNR=4.1						
	comp=Z,2.7nm,0.6s						
ULM	**Lac du Bonnet**	**62.34**	**43**	P	**P**	**14 49 09.0**	**+0.3**
RSSD	**Black Hills**	**63.20**	**52**		**P**	**14 49 15.4**	**+0.8**
RSSD				IAmb	IAmb	14 49 16.9	
	comp=Z,10.0nm,0.9s						
RSSD	**Black Hills**	**63.20**	**52**	P	**P**	**14 49 15.4**	**+0.8**
RSSD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NB2	**NORSAR Subarra**	**63.44**	**341**	P	**P**	**14 49 14.8**	**-0.9**
	comp=Z,3.8nm,0.9s,baz=23,slow=6.9						
NOA	**NORSAR Array B**	**63.44**	**341**	P	**P**	**14 49 14.7**	**-1.0**
	comp=Z,1.7nm,0.7s,baz=24,slow=6.5,SNR=4.6						
	comp=Z,1.7nm,0.7s						
HFS	**Hagfors**	**63.73**	**339**	P	**P**	**14 49 16.4**	**-1.1**
	comp=Z,2.5nm,0.6s,baz=79,slow=3.2,SNR=8.0						
	comp=Z,2.5nm,0.6s						
HMU	**Henry Mountain**	**64.26**	**61**	IAmb	IAmb	14 49 24.4	
	comp=Z,6.2nm,0.8s						
PV10	**Paradox Valley**	**64.86**	**59**	IAmb	IAmb	14 49 29.0	
	comp=Z,13nm,1.1s						
AKASG	**Malin Array Be**	**67.47**	**325**	P	**P**	**14 49 40.1**	**-1.1**
	comp=Z,1.0nm,0.5s,baz=32,slow=6.2,SNR=5.1						
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**67.47**	**325**	*ce*P	**P**	**14 49 42.2**	**+0.9**
KIV	**Kislovodsk**	**67.51**	**313**	*e*P	**P**	**14 49 42.1**	**+0.3**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KBZ	**Khabaz**	**67.59**	**313**	P	**P**	**14 49 41.2**	**-0.9**
	comp=Z,2.0nm,0.9s,baz=62,slow=4.1,SNR=4.7						
	comp=Z,2.0nm,0.9s						
KBZ	**Khabaz**	**67.59**	**313**	*ce*P	**P**	**14 49 42.1**	**0.0**
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SCHQ	**Schefferville**	**68.35**	**24**	P	**P**	**14 49 46.3**	**-0.4**
	comp=Z,13nm,0.7s,baz=340,slow=5.0,SNR=37						
	comp=Z,13nm,0.7s						
SCHQ	**Schefferville**	**68.35**	**24**	IAmb	IAmb	14 49 47.0	
	comp=Z,107nm,0.6s						
VLDQ	**Val d'Or**	**71.13**	**34**		**P**	**14 50 02.5**	**-1.0**
EKA	**Eskdalemuir Ar**	**71.37**	**346**	P	**P**	**14 50 04.1**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=18,slow=5.1,SNR=5.2						
	comp=Z,1.0nm,0.5s						
P38A	**Dawn**	**71.66**	**49**	IAmb	IAmb	14 50 08.2	
	comp=Z,9.4nm,0.7s						
P40A	**Paris**	**72.42**	**48**	IAmb	IAmb	14 50 12.8	
	comp=Z,11nm,0.7s						
WMOK	**Wichita Mounta**	**72.97**	**55**	P	**P**	**14 50 14.9**	**+0.4**
WMOK	**Wichita Mounta**	**72.97**	**55**	P	**P**	**14 50 15.0**	**+0.4**
WMOK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FNO	**Franklin**	**73.26**	**54**	IAmb	IAmb	14 50 18.3	
	comp=Z,8.6nm,0.7s						
R40A	**Maddies Statio**	**73.32**	**49**	IAmb	IAmb	14 50 17.7	
	comp=Z,7.5nm,1.0s						
WB0	**Warramunga Arr**	**73.41**	**199**	P	**P**	**14 50 17.2**	**+0.2**
WB0				IAmb	IAmb	14 50 18.3	
	comp=Z,5.8nm,0.8s						
WR8	**Warramunga Arr**	**73.57**	**199**	IAmb	IAmb	14 50 19.2	
	comp=Z,5.4nm,0.7s						
WRAB	**Tennant Creek**	**73.58**	**199**	P	**P**	**14 50 18.5**	**+0.5**
WRAB				IAmb	IAmb	14 50 19.3	
	comp=Z,7.4nm,0.9s						
WRAB	**Tennant Creek**	**73.58**	**199**	*ce*P	**P**	**14 50 18.1**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,10.0nm,1.7s						
WRA	**Warramunga Arr**	**73.59**	**199**	P	**P**	**14 50 18.6**	**+0.5**
	comp=Z,4.2nm,0.5s,baz=13,slow=6.1,SNR=45						
	comp=Z,4.2nm,0.5s						
WRA	**Warramunga Arr**	**73.59**	**199**	IAmb	IAmb	14 50 19.3	
	comp=Z,0.4nm,0.9s						
GERES	**GERESS Array B**	**73.96**	**334**	P	**P**	**14 50 19.3**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=44,slow=7.9,SNR=4.7						
	comp=Z,0.3nm,0.5s						
TXAR	**Lajitas Array**	**74.61**	**62**	P	**P**	**14 50 25.9**	**+1.9**
	comp=Z,1.1nm,0.9s,baz=306,slow=4.9,SNR=11						
	comp=Z,1.1nm,0.9s						
TXAR	**Lajitas Array**	**74.61**	**62**	P	**P**	**14 50 26.0**	**+1.9**
T42A	**Van Buren**	**74.88**	**49**	IAmb	IAmb	14 50 26.6	
	comp=Z,4.1nm,0.8s						
FCAR	**Ozark Folk Cen**	**75.33**	**50**	IAmb	IAmb	14 50 29.0	
	comp=Z,3.9nm,0.7s						
WHAR	**Wooly Hollow**	**75.73**	**50**	IAmb	IAmb	14 50 31.7	
	comp=Z,7.1nm,0.9s						
AS31	**Alice Springs**	**77.29**	**199**	IAmb	IAmb	14 50 40.8	
	comp=Z,3.2nm,0.6s						
ASAR	**Alice Springs**	**77.29**	**199**	P	**P**	**14 50 40.1**	**+1.3**
	comp=Z,9.0nm,0.7s,baz=11,slow=5.1,SNR=193						
	comp=Z,9.0nm,0.7s						
ASAR	**Alice Springs**	**77.29**	**199**		**P**	**14 50 39.6**	**+0.7**
ASAR	**Alice Springs**	**77.29**	**199**	P	**P**	**14 50 39.6**	**+0.7**
T50A	**Nancy**	**77.70**	**44**	IAmb	IAmb	14 50 42.4	
	comp=Z,9.1nm,0.9s						
INKA	**Innaminka**	**80.18**	**192**	IAmb	IAmb	14 50 56.4	
	comp=Z,4.6nm,0.8s						
STKA	**Stephens Creek**	**84.16**	**190**	P	**P**	**14 51 15.1**	**+0.6**
	comp=Z,2.6nm,0.6s,baz=317,slow=6.8,SNR=8.8						
	comp=Z,2.6nm,0.6s						
ESDC	**Sonseca Array**	**86.70**	**343**	P	**P**	**14 51 25.9**	**-1.2**
	comp=Z,0.4nm,0.7s,baz=14,slow=3.9,SNR=2.5						
	comp=Z,0.4nm,0.7s						
CPUP	**Villa Florida**	**145.29**	**54**	PKPbc	**PKPbc**	**14 58 19.0**	**+0.3**
	comp=Z,0.9nm,0.4s,baz=254,slow=3.1,SNR=5.2						
PLCA	**Paso Flores**	**147.89**	**87**	PKPbc	**PKPbc**	**14 58 26.5**	**+0.9**
	comp=Z,4.5nm,0.7s,baz=267,slow=3.1,SNR=12						

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*WEL **29** 14:56:24.3±0.9, 33˚S±7˚×17˚8W±1˚8, h12^{km}, M4.1/11, mB4.6/5, ML4.1/13, MLv4.2/11, Mw(mB)3.7/5, Error ellipse: s-maj=25.3km s-min=4.3km az=110.4, confirmed*

*IDC **29** 14:56:24.5±3.1, 33˚.37S×178˚.58W, h0^{km}, mb4.0/2, mbtmp4.0/3, ML3.8/1, Error ellipse: s-maj=70.3km s-min=36.2km az=117.0*

*NEIC **29** 14:56:26.7±0.3, 33˚.62S±0˚.10×178˚.51W±0˚.06, h10^{km}±1^{km}, mb4.3/8, Error ellipse: s-maj=17.9km s-min=4.1km az=155.0*

ISC 29 14:56:26.0±1.0**, 33˚.53S**±0˚.08×**178˚.3W**±0˚.1**, h10**^{km}**, n40,** σ1^{s}**41**/48**, mb4.1**/6**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.27**	**5**	P	Pn	14 57 27.5	-3.6
GLKZ				S	Sn	14 58 11.3	-10
RAO	**Raoul Island**	**4.28**	**5**	Pn	**Pn**	**14 57 31.6**	**+0.3**
MXZ	**Matakaoa Point**	**4.86**	**213**	Pn	**Pn**	**14 57 37.7**	**-1.5**
WMGZ	**Waiomatatini S**	**5.03**	**211**	P	**Pn**	**14 57 42.8**	**+1.3**
WMGZ				S	**Sn**	**14 58 42.7**	**+3.1**
PKGZ	**Pakihiroa**	**5.21**	**213**	P	**Pn**	**14 57 42.6**	**-1.5**
PKGZ				S	**Sn**	**14 58 44.8**	**+0.6**
HAZ	**Te Kaha**	**5.26**	**216**	P	**Pn**	**14 57 46.8**	**+2.1**
HAZ				S	**Sn**	**14 58 46.8**	**+1.4**
PUZ	**Puketiti**	**5.31**	**210**	P	**Pn**	**14 57 46.1**	**+0.7**
PUZ				S	**Sn**	**14 58 47.8**	**+1.2**
RUGZ	**Raukumara Rang**	**5.48**	**215**	P	**Pn**	**14 57 48.6**	**+0.8**
RUGZ				S	**Sn**	**14 58 51.0**	**0.0**
TWGZ	**Tauwhareparae**	**5.51**	**212**	P	**Pn**	**14 57 50.0**	**+1.8**
TWGZ				S	**Sn**	**14 58 53.1**	**+1.4**
CNGZ	**Carnagh Statio**	**5.68**	**209**	P	**Pn**	**14 57 50.4**	**0.0**
TKGZ	**Te Karaka**	**5.79**	**211**	P	**Pn**	**14 57 53.1**	**+1.2**
TKGZ				S	**Sn**	**14 58 58.6**	**+0.2**
MWZ	**Matawai**	**5.85**	**214**	P	**Pn**	**14 57 53.9**	**+1.2**
MWZ				S	**Sn**	**14 59 00.4**	**+0.5**
URZ	**Urewera**	**5.99**	**217**	Pn	**Pn**	**14 57 55.1**	**+0.5**
	2.3nm,0.3s,baz=267,slow=4.6,SNR=15						
URZ				Sn	**Sn**	**14 59 02.9**	**-0.4**
	2.5nm,0.3s,baz=266,slow=3.9,SNR=7.3						
	6.6nm,0.3s						
URZ	**Urewera**	**5.99**	**217**	P	**Pn**	**14 57 55.3**	**+0.6**
URZ				S	**Sn**	**14 59 02.1**	**-1.2**
RAGZ	**Rawiri**	**6.03**	**214**	P	**Pn**	**14 57 56.7**	**+1.3**
RIGZ	**Rimuhau**	**6.05**	**210**	P	**Pn**	**14 57 56.1**	**+0.6**
SNGZ	**Shannon Statio**	**6.30**	**212**	P	**Pn**	**14 57 60.0**	**+1.0**
MUGZ	**Murupara**	**6.33**	**217**	P	**Pn**	**14 58 00.7**	**+1.4**
RTZ	**Ruatahuna**	**6.33**	**215**	Pn	**Pn**	**14 57 57.7**	**-1.8**
RTZ	**Ruatahuna**	**6.33**	**215**	P	**Pn**	**14 58 00.2**	**+0.7**
WCZ	**Waipu Caves**	**6.48**	**246**	P	Pb	14 58 11.7	-7.1
RAHZ	**Arahi**	**6.52**	**213**	P	**Pn**	**14 58 03.2**	**+1.2**
TOZ	**Tahuroa Road**	**6.53**	**228**	Pn	**Pn**	**14 58 00.8**	**-1.3**
OUZ	**Omahuta**	**6.87**	**254**	P	**Pn**	**14 58 09.5**	**+2.7**
BKZ	**Black Stump Fm**	**7.00**	**215**	Pn	**Pn**	**14 58 07.1**	**-1.5**
BKZ	**Black Stump Fm**	**7.00**	**215**	P	**Pn**	**14 58 08.8**	**+0.3**
BFZ	**Birch Farm**	**8.34**	**210**		**Pn**	**14 58 24.7**	**-2.3**
TMWZ	**Te Maipa**	**8.85**	**210**	P	**Pn**	**14 58 32.3**	**-1.6**
RAR	**Rarotonga**	**20.52**	**58**	P	**P**	**15 01 06.1**	**+1.7**
RABL	**Rabaul**	**40.09**	**310**	P	**P**	**15 04 01.4**	**-0.5**
RABL				IAmb	IAmb	15 04 07.5	
	comp=Z,22nm,1.3s						
AS31	**Alice Springs**	**42.74**	**270**	P	**P**	**15 04 22.1**	**-1.7**
ASAR	**Alice Springs**	**42.74**	**270**	P	**P**	**15 04 22.1**	**-1.6**
	comp=Z,1.4nm,0.6s,baz=110,slow=7.3,SNR=32						
	comp=Z,1.4nm,0.6s						
ASAR	**Alice Springs**	**42.74**	**270**	P	**P**	**15 04 21.7**	**-2.0**
WR8	**Warramunga Arr**	**43.88**	**276**	P	**P**	**15 04 31.6**	**-1.2**
WR8				IAmb	IAmb	15 04 43.8	
	comp=Z,4.1nm,1.1s						
WRAB	**Tennant Creek**	**44.01**	**276**	P	**P**	**15 04 32.7**	**-1.2**
WRAB				IAmb	IAmb	15 04 32.8	
	comp=Z,2.5nm,0.9s						
WRA	**Warramunga Arr**	**44.02**	**276**	P	**P**	**15 04 32.3**	**-1.7**
	comp=Z,1.3nm,0.5s,baz=116,slow=7.9,SNR=19						
	comp=Z,1.3nm,0.5s						
WB0	**Warramunga Arr**	**44.05**	**276**	P	**P**	**15 04 33.0**	**-1.3**
WB0				IAmb	IAmb	15 04 41.2	
	comp=Z,9.6nm,1.5s						
KNRA	**Kununurra**	**50.72**	**277**	P	**P**	**15 05 25.4**	**-0.9**
FITZ	**Fitzroy Crossi**	**52.13**	**272**	P	**P**	**15 05 35.6**	**-1.2**
FINES	**FINESS Array B**	**147.96**	**338**	PKPbc	**PKPdf**	**15 16 09.4**	**+1.8**
	comp=Z,3.0nm,0.9s,baz=46,slow=4.0,SNR=5.7						

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*KRSC **29** 15:12:39.6±1.6, 59˚.01N×158˚.55E, h30^{km}±14^{km}, Ml4.3*

*IDC **29** 15:12:42.1±0.6, 58˚.85N×159˚.08E, h0^{km}, mb3.7/18, mbtmp3.7/22, ML4.1/3, MS3.1/4, Error ellipse: s-maj=14.9km s-min=11.1km az=1.0*

*MOS **29** 15:12:44.9±0.8, 58˚.87N×159˚.00E, h32^{km}, mb4.2/4, Error ellipse: s-maj=12.6km s-min=5.1km az=95.7*

*NERS **29** 15:12:44.3, 59˚.00N×158˚.67E, h1^{km}*

*NEIC **29** 15:12:45.1±0.7, 58˚.82N±0˚.08×159˚.0E±0˚.2, h16^{km}±4^{km}, mb4.1/27, Error ellipse: s-maj=13.2km s-min=11.8km az=79.0*

ISC 29 15:12:43.9±0.4**, 58˚.84N**±0˚.04×**159˚.03E**±0˚.03**, h10**^{km}**, n110,** σ1^{s}**61**/123**, mb3.9**/32**, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALN	**Palana**	**0.55**	**63**	PN	**Pg**	**15 12 54.8**	**+0.3**
PALN				S	**Sb**	**15 13 03.9**	**+0.5**
PALN	**Palana**	**0.55**	**63**	*e*P	**Pg**	**15 12 54.8**	**+0.3**
PALN				*e*S	**Sb**	**15 13 03.9**	**+0.5**
OSSR	**Ossora**	**2.12**	**77**	PN	**Pn**	**15 13 19.4**	**0.0**
OSSR	**Ossora**	**2.12**	**77**	*e*P	**Pn**	**15 13 19.4**	**0.0**
SRDR	**Sredinnyy**	**2.56**	**171**	PN	**Pn**	**15 13 25.6**	**+0.2**
SRDR	**Sredinnyy**	**2.56**	**171**	*e*P	**Pn**	**15 13 25.7**	**+0.2**
SMKR	**Semkarok**	**2.62**	**149**	PN	**Pn**	**15 13 26.8**	**+0.6**
SMKR	**Semkarok**	**2.62**	**149**	*e*P	**Pn**	**15 13 26.9**	**+0.6**
KLY	**Klyuchi**	**2.68**	**160**	PN	**Pn**	**15 13 27.4**	**+0.4**
KLY	**Klyuchi**	**2.68**	**160**	*e*P	**Pn**	**15 13 27.5**	**+0.4**
KOZ	**Kozyrevsk**	**2.83**	**170**	PN	**Pn**	**15 13 28.6**	**-0.5**
KOZ	**Kozyrevsk**	**2.83**	**170**	*e*P	**Pn**	**15 13 28.7**	**-0.5**
ESO	**Esso**	**2.93**	**184**	PN	**Pn**	**15 13 28.8**	**-1.7**
ESO	**Esso**	**2.93**	**184**	*e*P	**Pn**	**15 13 28.8**	**-1.7**
BZWR	**Bezymyannyi-We**	**2.99**	**164**	PN	**Pn**	**15 13 32.7**	**+1.2**
BZWR	**Bezymyannyi-We**	**2.99**	**164**	*e*P	**Pn**	**15 13 32.8**	**+1.2**
KMNR	**Kamenistaya**	**3.16**	**168**	PN	**Pn**	**15 13 33.5**	**-0.2**
KMNR	**Kamenistaya**	**3.16**	**168**	*e*P	**Pn**	**15 13 33.6**	**-0.2**
KBG	**Krutoberegovo**	**3.26**	**141**	PN	**Pn**	**15 13 36.8**	**+1.8**
KBG	**Krutoberegovo**	**3.26**	**141**	*e*P	**Pn**	**15 13 36.9**	**+1.8**
KBTR	**Krutoberegovo**	**3.34**	**141**	PN	**Pn**	**15 13 38.2**	**+2.1**
KBTR	**Krutoberegovo**	**3.34**	**141**	*e*P	**Pn**	**15 13 38.2**	**+2.1**
KZV	**Kizimen**	**3.80**	**169**	PN	**Pn**	**15 13 44.0**	**+1.4**
KZV	**Kizimen**	**3.80**	**169**	*e*P	**Pn**	**15 13 44.0**	**+1.4**
TILK	**Tilichiki**	**3.95**	**63**	PN	**Pn**	**15 13 44.2**	**-0.3**
TILK	**Tilichiki**	**3.95**	**63**	*e*P	**Pn**	**15 13 44.3**	**-0.3**
GADL	**Gadlja**	**4.04**	**285**	*e*P	**Pb**	**15 13 56.9**	**+1.8**
GADL				*e*Sg	**Sb**	**15 14 46.8**	**+2.8**
GADL				Sgmax		15 15 13.8	
	1µm,0.8s						
GADL				Sgmax		15 15 13.8	
	660nm,0.8s						
GADL	**Gadlja**	**4.04**	**285**	*e*PN	**Pb**	**15 13 56.9**	**+1.8**
TLAR	**Talaya**	**4.04**	**307**	*e*P	**Pn**	**15 13 45.0**	**-0.8**
TLAR				*e*Pg	**Pb**	**15 13 56.3**	**+1.1**
TLAR				Pgmax		15 14 04.4	
	50nm,0.8s						
TLAR				*e*Sg	**Sb**	**15 14 46.7**	**+2.6**
TLAR				Sgmax		15 14 53.4	
	410nm,0.6s						
TLAR				Sgmax		15 14 53.4	
	260nm,0.5s						
TLAR	**Talaya**	**4.04**	**307**	*e*PN	**Pn**	**15 13 45.0**	**-0.8**
MA2	**Magadan**	**4.31**	**283**	Pn	**Pn**	**15 13 50.5**	**+1.1**
	2.7nm,0.3s,baz=113,slow=11,SNR=13						
MA2				Lg	Lg	15 14 55.6	
	8.3nm,0.3s,baz=188,slow=19,SNR=6.9						
MA2				LR	LR	15 15 40.1	
	comp=Z,224nm,19.4s,baz=128,slow=41						
	7.4nm,0.4s						
MA2	**Magadan**	**4.31**	**283**		**Pn**	**15 13 50.0**	**+0.6**
MA2	**Magadan**	**4.31**	**283**	*e*P	**Pn**	**15 13 50.3**	**+0.9**
MA2				*e*Pg	**Pb**	**15 13 59.7**	**0.0**
MA2				Pgmax		15 14 07.5	
	40nm,0.7s						
MA2				*e*Sg	**Sb**	**15 14 55.6**	**+3.9**
MA2				Sgmax		15 15 18.0	
	200nm,0.8s						
MA2				Sgmax		15 15 18.0	
	60nm,0.6s						
MA2	**Magadan**	**4.31**	**283**	*e*PN	**Pn**	**15 13 50.3**	**+0.9**
MGD	**Magadan 1**	**4.41**	**289**	*e*P	**Pn**	**15 13 49.7**	**-1.0**
MGD				Pmax		15 13 56.0	
	20nm,0.3s						
MGD				*e*S	**Sn**	**15 14 38.8**	**-3.2**
MGD				*e*Sg	**Sb**	**15 14 56.4**	**+2.0**
MGD				Sgmax		15 15 14.1	
	110nm,0.6s						
MGD				Sgmax		15 15 14.1	
	220nm,0.6s						
MGD	**Magadan 1**	**4.41**	**289**	*e*PN	**Pn**	**15 13 49.7**	**-1.0**
KMSK	**Kamenskaya**	**5.07**	**41**	PN	**Pn**	**15 13 58.5**	**-1.3**
KMSK	**Kamenskaya**	**5.07**	**41**	*e*P	**Pn**	**15 13 58.5**	**-1.3**
SEY	**Seymchan**	**5.23**	**324**	Pn	**Pn**	**15 14 02.3**	**+0.2**
	1.0nm,0.3s,baz=130,slow=16,SNR=14						
SEY				Lg	Lg	15 15 24.5	
	4.9nm,0.3s,baz=197,slow=18,SNR=5.2						
SEY				LR	LR	15 16 12.7	
	comp=Z,154nm,18.2s,baz=134,slow=40						
	1.9nm,0.3s						
SEY	**Seymchan**	**5.23**	**324**	*e*P	**Pn**	**15 14 02.2**	**+0.2**
SEY				*e*Pg	**Pb**	**15 14 18.5**	**+3.2**
SEY				Pgmax		15 14 23.9	
	10.0nm,0.8s						
SEY				*e*Sg	**Sb**	**15 15 25.1**	**+7.0**
SEY				Sgmax		15 15 45.4	
	70nm,0.8s						
SEY				Sgmax		15 15 45.4	
	50nm,0.9s						
TLON	**Talon**	**5.39**	**284**	*e*Sg	**Sb**	**15 15 29.9**	**+7.1**
TLON				Sgmax		15 15 48.6	
	570nm,1.0s						
TLON				Sgmax		15 15 48.6	
	110nm,1.0s						
KRX	**Arik**	**5.50**	**182**	PN	**Pn**	**15 14 06.8**	**+0.9**
KRX	**Arik**	**5.50**	**182**	*e*P	**Pn**	**15 14 06.8**	**+0.9**
KOK	**Koryaka**	**5.57**	**182**	PN	**Pn**	**15 14 07.9**	**+1.1**
KOK	**Koryaka**	**5.57**	**182**	*e*P	**Pn**	**15 14 08.0**	**+1.1**
PEA0B	**Petropavlovsk-**	**5.80**	**188**	Pn	**Pn**	**15 14 10.3**	**+0.4**
PEA0B	**Petropavlovsk-**	**5.80**	**188**	PN	**Pn**	**15 14 10.3**	**+0.4**
PETK	**Petropavlovsk-**	**5.80**	**188**	Pn	**Pn**	**15 14 09.8**	**-0.1**
	3.7nm,0.9s,baz=45,slow=15,SNR=27						
SUUS	**Susuman**	**6.62**	**311**	*e*P	**Pn**	**15 14 24.6**	**+3.5**
SUUS				*e*Pg	**Pg**	**15 14 47.4**	**-3.0**
SUUS				*e*Sg	**Sg**	**15 16 09.0**	**-7.0**
SUUS				Sgmax		15 16 19.9	
	80nm,0.8s						
SUUS				Sgmax		15 16 19.9	
	140nm,0.8s						
SUUS	**Susuman**	**6.62**	**311**	*e*PN	**Pn**	**15 14 24.6**	**+3.5**
YAK	**Yakutsk**	**14.76**	**295**	Pn	**Pn**	**15 16 12.1**	**-0.3**
	0.6nm,0.3s,baz=289,slow=2.4,SNR=4.1						
YAK				Lg	Lg	15 20 24.5	
	1.7nm,0.3s,baz=185,slow=3.1,SNR=2.1						
YAK				LR	LR	15 22 32.0	
	comp=Z,47nm,20.4s,baz=141,slow=40						
	2.4nm,0.3s						
YAK	**Yakutsk**	**14.76**	**295**		**Pn**	**15 16 12.7**	**+0.3**
C18K	**Utukok River**	**19.75**	**44**	P	**P**	**15 17 14.0**	**+0.5**
C19K	**Lookout Ridge**	**20.40**	**43**	P	**P**	**15 17 21.4**	**+0.8**
C19K				IAmb	IAmb	15 17 22.7	
	comp=Z,5.1nm,0.8s						
D19K	**Kuna River**	**20.84**	**45**	P	**P**	**15 17 26.1**	**+0.7**
D19K				IAmb	IAmb	15 17 43.3	
	comp=Z,8.9nm,1.4s						
F19K	**Shaleruckik Mo**	**20.86**	**50**	P	**P**	**15 17 26.0**	**+0.5**
B20K	**Meade River**	**21.39**	**41**	P	**P**	**15 17 31.9**	**+0.8**
B20K				IAmb	IAmb	15 18 06.2	
	comp=Z,8.2nm,1.0s						
D20K	**Etivluk River**	**21.41**	**44**	P	**P**	**15 17 31.9**	**+0.4**
D20K				IAmb	IAmb	15 18 11.6	
	comp=Z,7.2nm,1.3s						
F21K	**Alatna River**	**22.54**	**48**	P	**P**	**15 17 44.3**	**+0.6**
F21K				IAmb	IAmb	15 17 46.3	
	comp=Z,5.2nm,1.1s						
G21K	**Allakaket**	**22.56**	**50**	P	**P**	**15 17 44.6**	**+0.8**
G21K				IAmb	IAmb	15 17 47.9	
	comp=Z,7.1nm,0.8s						
C23K	**Itkillik River**	**23.62**	**42**	P	**P**	**15 17 55.4**	**+0.8**
C23K				IAmb	IAmb	15 17 58.7	
	comp=Z,6.6nm,0.8s						
E23K	**Chandalar**	**23.99**	**46**	P	**P**	**15 17 58.6**	**+0.4**
E23K				IAmb	IAmb	15 18 00.8	
	comp=Z,7.3nm,1.1s						
E24K	**Your Creek**	**24.41**	**46**	P	**P**	**15 18 02.5**	**+0.3**
E24K				IAmb	IAmb	15 18 06.4	
	comp=Z,6.3nm,0.8s						
HILR	**Hailar Array B**	**24.45**	**265**	P	**P**	**15 18 02.4**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=74,slow=11,SNR=2.0						
	comp=Z,1.2nm,0.5s						

F24K	Squaw Lake	24.69	47	P	P	15 18 05.5	+0.9
F24K				IAmb	IAmb	15 18 09.5	
	comp=Z,3.1nm,0.8s						
D25K	Kavik River	25.11	43	P	P	15 18 08.6	+0.2
ILAR	Eielson Array	25.51	54	P	P	15 18 11.4	-0.6
	comp=Z,1.2nm,0.7s,baz=271,slow=7.5,SNR=16						
	comp=Z,1.2nm,0.7s						
ILAR	Eielson Array	25.51	54	P	P	15 18 11.7	-0.3
C27K	Jago River	26.03	42	P	P	15 18 17.1	+0.5
MJAR	Matsushiro Arr	26.13	221	P	P	15 18 18.1	+0.2
	comp=Z,2.9nm,0.9s,baz=19,slow=9.7,SNR=9.4						
	comp=Z,2.9nm,0.9s						
MJAR	Matsushiro Arr	26.13	221	P	P	15 18 17.6	-0.3
MJAR	Matsushiro Arr	26.13	221	P	P	15 18 17.6	-0.3
MJAR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
D27M	Malcolm River	27.03	43	P	P	15 18 26.3	+0.5
D27M				IAmb	IAmb	15 18 33.8	
	comp=Z,4.1nm,1.2s						
H29M	Whitestone	28.62	49	P	P	15 18 40.7	+0.8
H29M				IAmb	IAmb	15 18 41.4	
	comp=Z,4.4nm,1.4s						
KSRS	Korea Array	29.36	237	P	P	15 18 46.9	+0.1
	comp=Z,1.0nm,0.8s,baz=29,slow=8.6,SNR=5.1						
	comp=Z,1.0nm,0.8s						
I30M	Mount Dempster	29.70	50	P	P	15 18 49.6	0.0
I30M				IAmb	IAmb	15 18 52.0	
	comp=Z,8.2nm,1.5s						
SONM	Songino Array	32.45	274	P	P	15 19 15.1	+1.0
	comp=Z,0.3nm,0.5s,baz=46,slow=8.3,SNR=2.0						
SONM				LR	LR	15 33 13.4	
	comp=Z,67nm,21.0s,baz=148,slow=38						
	comp=Z,0.3nm,0.5s						
SONM	Songino Array	32.45	274	P	P	15 19 14.3	+0.2
SONM	Songino Array	32.45	274	P	P	15 19 14.3	+0.2
SONM				pmax	pmax		
	comp=Z,2.0nm,1.3s						
YKA	Yellowknife Ar	39.48	47	P	P	15 20 14.5	+0.6
	comp=Z,0.6nm,0.8s,baz=305,slow=8.8,SNR=7.0						
	comp=Z,0.6nm,0.8s						
MKAR	Makanchi Array	45.36	290	P	P	15 21 02.0	0.0
	comp=Z,0.4nm,0.8s,baz=52,slow=6.0,SNR=3.0						
	comp=Z,0.4nm,0.8s						
MKAR	Makanchi Array	45.36	290	P	P	15 21 02.0	0.0
BVAR	Borovoye Array	46.51	304	P	P	15 21 10.8	-0.1
	comp=Z,1.3nm,0.8s,baz=57,slow=7.9,SNR=5.9						
	comp=Z,1.3nm,0.8s						
FCC	Fort Churchill	49.43	41	P	P	15 21 33.7	+0.3
FCC				IAmb	IAmb	15 22 05.2	
	comp=Z,1.6nm,0.9s						
FCC	Fort Churchill	49.43	41	P	P	15 21 33.7	+0.3
FCC				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BPMT	Black Pine Rid	50.76	63	P	P	15 21 44.0	-0.1
AB31	Akbulak array	53.73	307	P	P	15 22 06.3	+0.6
AB31				IAmb	IAmb	15 22 19.2	
	comp=Z,4.9nm,1.4s						
ABKAR	Akbulak array	53.73	307	P	P	15 22 06.1	+0.4
KKAR	Karatay Array	53.74	295	P	P	15 22 06.2	+0.3
KKAR	Karatay Array	53.74	295	P	P	15 22 06.2	+0.3
NVAR	Mina Array Bea	54.49	73	P	P	15 22 09.9	-1.8
	comp=Z,0.5nm,0.7s,baz=315,slow=4.8,SNR=3.1						
	comp=Z,0.5nm,0.7s						
FINES	FINESS Array B	54.63	334	P	P	15 22 11.5	-0.6
	comp=Z,3.4nm,0.9s,baz=20,slow=12,SNR=1.7						
	comp=Z,3.4nm,0.9s						
PDAR	Pinedale Array	55.36	63	P	P	15 22 17.9	+0.1
	comp=Z,0.4nm,0.8s,baz=302,slow=2.8,SNR=4.7						
	comp=Z,0.4nm,0.8s						
PDAR	Pinedale Array	55.36	63	P	P	15 22 17.8	-0.1
CMAR	Chiang Mai Arr	59.01	254	P	P	15 22 41.9	-1.7
	comp=Z,0.2nm,0.3s,baz=43,slow=6.0,SNR=1.8						
	comp=Z,0.2nm,0.3s						
AKASG	Malin Array Be	63.41	327	P	P	15 23 12.6	-0.5
	comp=Z,0.8nm,0.7s,baz=32,slow=7.0,SNR=2.3						
	comp=Z,0.8nm,0.7s						
EKB	Eskdalemuir	65.28	349	P	P	15 23 25.1	-0.2
BURAR	Bucovina Array	67.33	328	P	P	15 23 39.3	+0.6
GERES	GERESS Array B	68.97	336	P	P	15 23 48.9	0.0
	comp=Z,0.3nm,0.5s,baz=48,slow=5.9,SNR=2.4						
	comp=Z,0.3nm,0.5s						
TXAR	Lajitas Array	68.98	68	P	P	15 23 49.1	-0.2
	comp=Z,0.7nm,1.0s,baz=350,slow=4.9,SNR=3.9						
	comp=Z,0.7nm,1.0s						
WHAR	Wooly Hollow	69.20	56	P	P	15 23 50.6	+0.2
LRAL	Lakeview Retre	73.38	53	P	P	15 24 15.4	-0.4
ESDC	Sonseca Array	80.83	347	P	P	15 24 55.8	-1.8
	comp=Z,0.4nm,0.7s,baz=351,slow=5.6,SNR=3.3						
	comp=Z,0.4nm,0.7s						
WRAB	Tennant Creek	81.08	203	P	P	15 24 59.1	+0.2
WRAB	Tennant Creek	81.08	203	P	P	15 24 59.1	+0.2
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.5s						
WRA	Warramunga Arr	81.09	203	P	P	15 24 58.7	-0.2
	comp=Z,0.6nm,0.7s,baz=15,slow=5.6,SNR=4.8						
	comp=Z,0.6nm,0.7s						
AS31	Alice Springs	84.80	203	P	P	15 25 18.1	0.0
ASAR	Alice Springs	84.80	203	P	P	15 25 17.9	-0.2
	comp=Z,0.4nm,0.5s,baz=13,slow=5.2,SNR=18						
	comp=Z,0.4nm,0.5s						
ASAR	Alice Springs	84.80	203	P	P	15 25 17.7	-0.4
ASAR	Alice Springs	84.80	203	P	P	15 25 17.7	-0.4

JMA ***29*** *15:32:07.6±0.2, 35°.7N±0°.7×12°9E±°, h27^{km}±3^{km},*
MV3.5/28, S KOREAN PENINSULA REG
KMA ***29*** *15:32:08.0±0.0, 35°.56N×128°.91E, h20^{km}, Error ellipse:*
s-maj=0.5km s-min=0.4km az=114.0
KEA ***29*** *15:32:12.1, 35°.53N×128°.77E, h18^{km}, ML3.2/1*
ISC 29 15:32:09.1±1.0, **35°.53N**±0°.02×**128°.94E**±0°.03, **h23**^{km}±6^{km},
n46, σ**1^{s}97**/63, **South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSNA0	Miryangsannae	0.06	14	P	Pb	15 32 11.7	-1.6
	SNR=3530						
MIYA	Miryang-si	0.16	257	P	Pb	15 32 12.7	-1.4
	SNR=1493						
GGDA	Gangdong	0.18	77	P	Pb	15 32 17.9	+3.6
	SNR=148						
MLGA	Mulgeum	0.22	167	P	Pb	15 32 14.1	-0.7
	SNR=1657						
KSUSN	Ulsan	0.23	41	P	Pb	15 32 13.8	-1.2
	SNR=1549						
GSNA	Gyeongjusannae	0.24	15	P	Pb	15 32 13.6	-1.5
	SNR=605						
KSDAG	Daegu	0.24	353	P	Pb	15 32 13.5	-1.7
KSDAG				S	Sb	15 32 17.1	-2.2
CGDA	Cheongdo	0.26	302	P	Pb	15 32 13.6	-1.7
	SNR=574						
UNCA	Ungchon	0.26	103	P	Pb	15 32 14.6	-0.7
	SNR=642						
JUCA	Juchon	0.30	197	P	Pb	15 32 15.2	-0.8
	SNR=1487						
JNYA	Jinyeong	0.30	216	P	Pb	15 32 15.1	-0.9
	SNR=356						
KSBUS	Busan	0.31	153	P	Pb	15 32 15.7	-0.5
	SNR=1499						
JEJB	Jeongja	0.43	75	P	Pb	15 32 17.3	-0.7
	SNR=367						
JEJB				P	Pb	15 32 17.3	-0.7
	SNR=367						
YOCB	Yeongcheon	0.45	2	P	Pb	15 32 16.7	-1.7
	SNR=387						
YOCB				P	Pb	15 32 16.7	-1.7
	SNR=387						
YOCB				S	Sb	15 32 22.8	-1.9
YOCB				S	Sb	15 32 22.8	-1.9
KSMAS	Masan	0.46	220	P	Pb	15 32 17.7	-0.9
	SNR=217						
GDDB	Gadeokdo	0.54	190	P	Pb	15 32 19.2	-0.7
	SNR=855						
GDDB				P	Pb	15 32 19.2	-0.7
	SNR=855						
YGAA	Yongam	0.57	305	P	Pb	15 32 18.6	-1.8
	SNR=250						
EURB	Uiryeong-eup	0.57	249	P	Pb	15 32 19.1	-1.3
	SNR=146						
GIGA	Gigye	0.58	22	P	Pb	15 32 19.2	-1.4
	SNR=348						
KSHAC	HAPCHEON	0.62	273	P	Pb	15 32 19.8	-1.6
	SNR=354						
YALB	Yaro	0.64	288	P	Pb	15 32 19.8	-1.8
	SNR=947						
YALB				P	Pb	15 32 19.8	-1.8
	SNR=947						
GACA	Gaecheon	0.66	231	P	Pb	15 32 20.8	-1.2
	SNR=205						
KSCIG	Chilgok	0.68	319	P	Pb	15 32 20.5	-1.8
	SNR=546						
KSCIG				P	Pb	15 32 20.5	-1.8
	SNR=546						
KSCIG				P	Pb	15 32 20.5	-1.8
	SNR=291						
KSCIG				P	Pb	15 32 20.5	-1.8
	SNR=291						
HACA	Hapcheon Acc B	0.69	261	P	Pb	15 32 21.1	-1.4
	SNR=272						
KUJA	Jangpyeong	0.69	203	P	Pb	15 32 21.7	-0.9
	SNR=86						
GUWB	Gunwi	0.71	337	P	Pb	15 32 21.1	-1.7
	SNR=3639						
GUWB				P	Pb	15 32 21.1	-1.7
	SNR=3639						
HMGA	Homigot	0.75	43	P	Pb	15 32 22.5	-1.0
	SNR=43						
KSPHA	Pohang	0.75	28	P	Pb	15 32 22.3	-1.2
	SNR=489						
KSPHA				P	Pb	15 32 22.3	-1.2
	SNR=489						
KSTOY	TONGYEONG	0.80	211	P	Pb	15 32 23.3	-1.0
	SNR=146						
KSTOY				P	Pb	15 32 23.3	-1.0
	SNR=146						
KSJIN	Jinju	0.83	244	P	Pb	15 32 23.4	-1.4
	SNR=195						
KSKCH	Geochang	0.83	276	P	Pb	15 32 23.3	-1.6
	SNR=1507						
KSKCH				P	Pb	15 32 23.3	-1.6
	SNR=1507						
EUSB	Uiseong	0.85	346	P	Pb	15 32 23.5	-1.7
	SNR=296						
KSCHS	CHEONGSONG	0.87	8	P	Pb	15 32 20.6	-5.0
	SNR=427						
KSCHS	CHEONGSONG	0.87	8	P	Pb	15 32 24.0	-1.6
	SNR=217						
KSSAC	SANCHEONG	0.87	262	P	Pb	15 32 24.0	-1.6
	SNR=160						
JTU	Tsushima	1.07	159	P	Pn	15 32 28.3	-0.4
JTU				*e*S	Sn	15 32 43.0	+0.1
JTSM	Tsushimamitsus	1.24	163	*e*P	Pn	15 32 30.8	-0.3
JTSM				*e*S	Sb	15 32 47.9	+0.5
JII	Iki	1.85	159	*e*P	Pn	15 32 39.8	+0.4
JHGM	Hagimishima	1.95	112	*e*P	Pn	15 32 40.4	-0.5
JTY	Toyota	2.16	125	*e*P	Pn	15 32 43.0	-0.7
JTY				*e*S	Sn	15 33 09.0	-0.7
JGT2	ShimaneMisato	2.96	98	*e*P	Pn	15 32 53.6	-1.0
JHT	Toyohira	2.98	106	*e*P	Pn	15 32 54.2	-0.9
WOSN	Wonsan	3.83	342	Sg	Sb	15 34 07.6	+5.8
PYAG	Pyongyang	4.33	325	Sg	Sb	15 34 21.9	+5.5
PYS	Pyongsong	4.45	327	Sg	Sb	15 34 23.5	+3.7
HHU	Hamhung	4.53	346	Pg	Pb	15 33 30.1	+2.2
HHU				Sg	Sb	15 34 27.9	+5.9
HHU				AML	AML		
	comp=N,39nm,0.4s						
HHU				AML	AML		
	comp=E,55nm,0.5s						
HHU				AML	AML		
	comp=Z,25nm,0.3s						

IDC 29 15:41:23.4±6.4, **5°.45S**×**151°.88E, h44**^{km}±53^{km}, **mb3.4**/4,
mbtmp3.7/5, **ML1.6**/1, **Error ellipse: s-maj=74.2km**
s-min=33.1km az=117.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.11	230	P	Pn	15 42 52.9	+1.8
	0.9nm,0.3s,baz=40,slow=9.7,SNR=5.8						
PMG				S	Sn	15 43 59.6	-0.1
	12nm,0.3s,baz=200,slow=10,SNR=7.9						
	5.6nm,0.7s						
WRA	Warramunga Arr	22.33	228	P	P	15 46 16.9	-0.6
	2.0nm,0.7s,baz=52,slow=9.9,SNR=15						
	2.0nm,0.7s						
ASAR	Alice Springs	25.05	222	P	P	15 46 43.8	0.0
	2.0nm,0.8s,baz=54,slow=8.7,SNR=42						
	2.0nm,0.8s						
SONM	Songino Array	66.39	328	P	P	15 52 08.3	+0.4
	0.3nm,0.5s,baz=134,slow=6.2,SNR=2.9						
	0.3nm,0.5s						
ILAR	Eielson Array	83.11	22	P	P	15 53 43.1	-1.1
	0.2nm,0.6s,baz=263,slow=6.3,SNR=4.5						
	0.2nm,0.6s						
TORD	Torodi Ar. Bea	149.62	287	PKPbc	PKPbc	16 01 09.5	+0.3
	1.4nm,0.6s,baz=64,slow=2.8,SNR=8.0						

BJI ***29*** *16:24:42.3, 6°.17S×154°.72E, h19^{km}, mB5.2/3, mb4.7/39,*
Ms5.0/1, Ms7 4.6/1
NEIC ***29*** *16:24:45.7±1.5, 6°.33S±0°.08×154°.97E±0°.08, h35^{km}±1^{km},*
mb4.8/58, Error ellipse: s-maj=14.6km s-min=13.4km
az=134.0
IDC ***29*** *16:24:46.8±0.5, 6°.26S×154°.87E, h50^{km}±4^{km}, mb4.2/21,*
mbtmp4.4/24, MS3.6/28, Error ellipse: s-maj=15.9km
s-min=11.3km az=107.0
DJA ***29*** *16:24:51.2±2.6, 6°S±9°×15°5E±1°8, h86^{km}±16^{km}, M5.0/17,*
mb4.9/17, mB5.6/4, Mw(mB)5.1/4
ISC 29 16:24:47.4±0.4, **6°.21S**±0°.05×**154°.76E**±0°.05, **h50**^{km}±3^{km},
h50^{km}**:pP-P, n175,** σ**1^{s}28**/166, **mb4.8**/67, **MS3.6**/26, **1C-1D,**
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TATA	Tatamba Isabel	5.45	114	P	Pn	16 26 07.2	+1.1
TATA	Tatamba Isabel	5.45	114	S	Sn	16 27 11.7	+4.1
SAVO	Savo Central	5.80	121	P	Pn	16 26 13.4	+2.5
NGOA	Tingoa Renbel	7.46	136	P	Pn	16 26 36.7	+3.1
PMG	Port Moresby	8.17	247	P	Pn	16 26 44.8	+1.4
	136nm,0.6s,baz=42,slow=7.5,SNR=58						
PMG				S	Sn	16 28 17.8	+3.3
	82nm,0.8s,baz=177,slow=22,SNR=9.3						
PMG				LR	LR	16 29 47.4	
	comp=Z,510nm,21.5s,baz=22,slow=36						
PMG	Port Moresby	8.17	247		Pn	16 26 44.1	+0.6
PMG	Port Moresby	8.17	247	S	Sn	16 28 16.8	+2.3
PMG	Port Moresby	8.17	247	P	Pn	16 26 45.2	+1.8
PMG	Port Moresby	8.17	247	S	Sn	16 28 17.0	+2.5
PMG	Port Moresby	8.17	247	P	Pn	16 26 44.8	+1.4
	2μm253nm,0.8s						
MANU	Manus Island	8.46	299	Pn	Pn	16 26 50.3	+3.0
PATS	Pohnpei	13.44	15	Pn	Pn	16 27 55.9	+0.5
PATS	Pohnpei	13.44	15	P	Pn	16 27 56.9	+1.4
COEN	Coen	13.75	235		Pn	16 27 59.5	-0.3
COEN	Coen	13.75	235	P	Pn	16 28 00.4	+0.6
MTSU	Mount Surprise	15.63	220	P	Pn	16 28 26.0	+1.5
CTA	Charters Tower	16.08	210	P	Pn	16 28 30.2	0.0
	6.9nm,0.9s,baz=22,slow=14,SNR=7.8						
CTA				LR	LR	16 34 24.5	
	comp=Z,225nm,18.5s,baz=34,slow=36						
CTA	Charters Tower	16.08	210	P	Pn	16 28 31.0	+0.7
CTAO	Charters Tower	16.08	210		Pn	16 28 30.6	+0.4
CTAO	Charters Tower	16.08	210	P	Pn	16 28 30.9	+0.7
EIDS	Eidsvold	19.37	190	P	P	16 29 07.2	-1.9
DZM	Mont Dzumac	19.39	146	P	P	16 29 08.1	-1.3
	15nm,0.8s,baz=330,slow=14,SNR=6.9						
DZM	Mont Dzumac	19.39	146	*e*S	S	16 32 30.8	-16
	168nm,25.6s						
DZM				*e*LR	LR	16 33 32.4	
	364nm,25.7s						
DZM	Mont Dzumac	19.39	146	IAmb	IAmb	16 29 16.2	
	comp=Z,120nm,1.8s						
DZM	Mont Dzumac	19.39	146	P	Pn	16 29 10.7	-0.3
QIS	Mount Isa	20.48	224	P	P	16 29 22.3	+1.1
GUMO	Guam	21.99	334	LR	LR	16 38 12.3	
	comp=Z,50nm,20.2s,baz=134,slow=36						
FAKI	Fak Fak	22.67	277		P	16 29 46.1	+1.3
FAKI				IAmb	IAmb	16 29 48.0	
	comp=Z,21nm,0.7s						
FAKI	Fak Fak	22.67	277	P	P	16 29 46.3	+1.5
WB0	Warramunga Arr	23.95	234	P	P	16 29 57.4	+0.3
WR8	Warramunga Arr	23.96	233		P	16 29 57.4	+0.2
SIJI	Sorong	24.03	282	P	P	16 29 58.8	+0.8
	comp=Z,16nm,0.7s						
SWI	Sorong	24.04	282	P	P	16 29 59.3	+1.2
	comp=Z,27nm,0.9s						
WRAB	Tennant Creek	24.07	234	P	P	16 29 58.0	-0.2
WRAB	Tennant Creek	24.07	234	P	P	16 29 58.2	-0.1
WRA	Warramunga Arr	24.08	234	P	P	16 29 58.6	+0.2
	comp=Z,5.0nm,0.6s,baz=56,slow=9.5,SNR=41						
WRA				PcP	PcP	16 33 38.0	-1.0
	comp=Z,1.1nm,0.5s,baz=60,slow=2.5,SNR=5.6						
	comp=Z,5.0nm,0.6s						
WRA	Warramunga Arr	24.08	234	P	P	16 29 57.9	-0.5
MTN	Manton Dam	24.20	252		P	16 30 00.1	+0.6
MTN				IAmb	IAmb	16 30 01.5	
	comp=Z,28nm,1.2s						
ARMA	Armidale	24.26	187	P	P	16 29 57.6	-2.4
ARMA				IAmb	IAmb	16 30 20.9	
	comp=Z,42nm,1.8s						
ARMA	Armidale	24.26	187	P	P	16 30 00.5	+0.5
INKA	Innaminka	25.21	210		P	16 30 07.8	-0.8
INKA				IAmb	IAmb	16 30 22.8	
	comp=Z,15nm,0.7s						
KRAI	Karang Ratu	26.43	275	P	P	16 30 20.0	+0.2
AS31	Alice Springs	26.52	227	P	P	16 30 20.3	-0.3
ASAR	Alice Springs	26.52	227	P	P	16 30 20.0	-0.6
	comp=Z,2.3nm,0.6s,baz=56,slow=9.1,SNR=79						
ASAR				PcP	PcP	16 33 43.4	-1.1
	comp=Z,2.9nm,0.7s,baz=54,slow=2.5,SNR=11						
ASAR				LR	LR	16 40 02.2	
	comp=Z,183nm,21.7s,baz=111,slow=34						
	comp=Z,2.3nm,0.6s						
ASAR	Alice Springs	26.52	227	P	P	16 30 20.3	-0.3
CMSA	Cobar Meteorol	26.59	197	P	P	16 30 22.1	+1.1
KNRA	Kununurra	27.17	248	P	P	16 30 26.3	-0.1
KNRA				IAmb	IAmb	16 31 10.0	
	comp=Z,72nm,1.6s						
STKA	Stephens Creek	28.35	204	P	P	16 30 35.7	-1.1
	comp=Z,2.2nm,0.7s,baz=42,slow=9.1,SNR=4.9						
STKA				PcP	PcP	16 33 48.0	-0.6
	comp=Z,1.6nm,0.6s,baz=359,slow=4.6,SNR=3.6						
STKA				LR	LR	16 41 20.9	
	comp=Z,182nm,21.3s,baz=21,slow=35						
	comp=Z,2.2nm,0.7s						
STKA	Stephens Creek	28.35	204		P	16 30 35.0	-1.7
STKA				IAmb	IAmb	16 31 07.2	
	comp=Z,25nm,0.8s						
STKA	Stephens Creek	28.35	204	P	P	16 30 37.6	+0.9
SOEI	Soe	30.39	261	P	P	16 30 54.8	-0.5
FITZ	Fitzroy Crossi	30.76	245	LR	LR	16 43 54.5	
	comp=Z,164nm,20.0s,baz=62,slow=37						
FITZ	Fitzroy Crossi	30.76	245	P	P	16 30 57.9	-0.5
FITZ	Fitzroy Crossi	30.76	245	P	P	16 30 57.7	-0.6
BBOO	Buckleboo	31.68	211	P	P	16 31 05.7	-0.6
BBOO				IAmb	IAmb	16 31 14.3	
	comp=Z,35nm,1.6s						
BBOO	Buckleboo	31.68	211	P	P	16 31 07.2	+1.0
DAV	Davao City (W)	31.96	294	LR	LR	16 43 54.6	
	comp=Z,57nm,18.7s,baz=348,slow=36						
LUWI	Luwuk	32.32	278	P	P	16 31 12.8	+0.7
LUWI	Luwuk	32.32	278	P	P	16 31 12.3	+0.2
	comp=Z,42nm,1.1s						
MMRI	Maumere	32.33	264	P	P	16 31 12.7	+0.5
TOLI2	Tolitoli	34.69	281	P	P	16 31 33.5	+0.8
TOLI2				IAmb	IAmb	16 31 47.3	
	comp=Z,13nm,1.0s						
TOLI2	Tolitoli	34.69	281	P	P	16 31 32.9	+0.2
PCI	Palu	35.24	277	P	P	16 31 38.8	+1.3
MPSI	Mapaga	35.40	279	P	P	16 31 37.7	-1.1
	comp=Z,28nm,0.8s						
PLAI	Plampang	36.75	264	P	P	16 31 49.0	-1.4
MBWA	Marble Bar	37.02	243	P	P	16 31 51.6	-0.9
MBWA				IAmb	IAmb	16 32 35.9	
	comp=Z,31nm,1.3s						
TAU	Tasmania Unive	37.14	189	P	P	16 31 54.4	+1.2
URZ	Urewera	37.80	151	P	P	16 32 00.6	+1.6
RTZ	Ruatahuna	38.02	151	P	P	16 31 59.9	-1.1
RTZ				IAmb	IAmb	16 32 03.5	
	comp=Z,21nm,0.8s						
BKZ	Black Stump Fm	38.23	152	P	P	16 32 03.2	+0.6
KLNI	Mataram	38.40	264	P	P	16 32 03.0	-1.4
	comp=Z,25nm,1.2s						
JAGI	Jajag, Banyuwa	40.33	264	P	P	16 32 19.4	-1.0
JAGI				IAmb	IAmb	16 32 33.6	
	comp=Z,18nm,0.7s						
KKM	Kota Kinabalu	40.35	287	P	P	16 32 21.9	+1.2
KKM	Kota Kinabalu	40.35	287	P	P	16 32 21.6	+0.9
JHJ	Hachijo jima 2	41.62	341	LR	LR	16 48 38.6	
	comp=Z,93nm,20.8s,baz=187,slow=34						
JOW	Kunigami	41.68	323	LR	LR	16 48 27.7	
	comp=Z,50nm,18.7s,baz=86,slow=34						
SNJI	Sawahan-Nganju	42.70	265	P	P	16 32 39.2	-0.9
	comp=Z,35nm,2.6s						
KLBR	Kellerberrin	42.81	229	P	P	16 32 39.0	-1.6
MORW	Morawa	43.03	233	P	P	16 32 41.5	-0.9
TWGBT	Beinan	43.79	312	P	P	16 32 49.0	+0.5
NWAO	Narrogin (SRO)	43.84	228	LR	LR	16 50 33.3	
	comp=Z,132nm,21.5s,baz=54,slow=35						
NWAO	Narrogin (SRO)	43.84	228	P	P	16 32 48.3	-0.5
YULB	Yu-li	43.98	313	P	P	16 32 48.8	-1.3
YULB				IAmb	IAmb	16 33 10.4	
	comp=Z,17nm,0.9s						
NACB	Ninganchiao	44.25	314	P	P	16 32 52.6	+0.5
TPUB	Ta-pu	44.41	313	P	P	16 32 53.1	-0.4
TPUB	Ta-pu	44.41	313	P	P	16 32 54.0	+0.5
SSLB	Suanglung	44.47	313	P	P	16 32 55.1	+1.1
YHNB	Yeheng	44.71	315	P	P	16 32 56.8	+0.8
JNU	Nakatsue	45.22	331	LR	LR	16 47 57.3	
	comp=Z,49nm,19.4s,baz=146,slow=31						
MJAR	Matsushiro Arr	45.27	341	P	P	16 32 59.1	-1.0
	comp=Z,0.7nm,0.7s,baz=173,slow=9.1,SNR=4.2						
MJAR				PcP	PcP	16 34 37.8	-1.6
	comp=Z,1.4nm,0.9s,baz=134,slow=4.9,SNR=4.5						
MJAR				LR	LR	16 52 09.3	
	comp=Z,81nm,19.5s,baz=126,slow=36						
	comp=Z,0.7nm,0.7s						
KSRS	Korea Array	50.14	332	P	P	16 33 37.8	-0.1
	comp=Z,2.3nm,0.8s,baz=141,slow=6.6,SNR=7.4						
	comp=Z,2.3nm,0.8s						
NJ2	Nanjing	51.17	320	*e*P	P	16 33 47.3	+1.6
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ASAJ	Asahikawa	51.28	349	LR	LR	16 53 14.4	
	comp=Z,51nm,20.9s,baz=78,slow=33						
USRK	Ussuriysk Ar.	54.22	340	P	P	16 34 08.3	+0.3
	comp=Z,3.0nm,1.0s,baz=155,slow=11,SNR=3.5						
	comp=Z,3.0nm,1.0s						
PDSI	Padang	54.42	273	P	P	16 34 08.5	-1.6
PPI	Padang Panjang	54.54	274	P	P	16 34 09.5	-1.4
IPM	Ipoh	54.69	280	P	P	16 34 11.8	-0.3
IPM				IAmb	IAmb	16 34 13.3	
	comp=Z,9.4nm,0.8s						
KULM	Kulim	55.21	281	P	P	16 34 15.7	-0.2
KULM				IAmb	IAmb	16 34 30.1	
	comp=Z,20nm,1.2s						
KULM	Kulim	55.21	281	P	P	16 34 15.6	-0.2
PPT2	Papeete2	55.45	107	*e*LR	LR	16 50 17.7	
	comp=Z,47nm,22.2s						
TBI	Tubuai	56.20	114	*e*LR	LR	16 50 37.9	
	comp=Z,559nm,26.8s						
CN2	Changchun	56.39	335	*e*P	P	16 34 27.8	+4.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BNX	BinXian	57.20	337	⇑P	P	16 34 29.8	+0.4
BNX				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GSI	Gunungsitoli	57.57	275	P	P	16 34 31.5	-1.2
GSI	Gunungsitoli	57.57	275	P	P	16 34 30.6	-2.0
	comp=Z,22nm,0.8s						
BJI	Beijing	58.15	326	P	P	16 34 34.5	-1.6
BJI				pmax	pmax		
	comp=Z,3.0nm,1.9s						
XAN	Xi'an	58.98	316	P	P	16 34 42.0	-0.2
XAN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PETK	Petropavlovsk-	59.15	2	P	P	16 34 43.5	+0.6
	comp=Z,6.2nm,0.7s,baz=185,slow=8.9,SNR=11						
PETK				LR	LR	16 56 10.1	
	comp=Z,81nm,21.6s,baz=131,slow=32						
	comp=Z,6.2nm,0.7s						
KMI	Kunming	59.39	304	P	P	16 34 47.3	+2.0
KMI				pmax	pmax		
	comp=Z,20nm,1.0s						
CM31	Chiang Mai Arr	60.24	295	P	P	16 34 51.2	+0.2
CMAR	Chiang Mai Arr	60.24	295	P	P	16 34 52.5	+1.5
	comp=Z,14nm,0.8s,baz=117,slow=5.2,SNR=122						
CMAR				LR	LR	16 59 22.5	
	comp=Z,13nm,21.0s,baz=65,slow=34						
	comp=Z,14nm,0.8s						
CMAR	Chiang Mai Arr	60.24	295		P	16 34 52.4	+1.4
CHTO	Chiang Mai	60.35	296	P	P	16 34 52.4	+0.6
CHTO				IAmb	IAmb	16 34 53.8	
	comp=Z,13nm,1.0s						
CHTO	Chiang Mai	60.35	296	P	P	16 34 51.7	-0.1
	comp=Z,13nm,1.0s						
CHTO	Chiang Mai	60.35	296	P	P	16 34 52.7	+0.9
CHTO				pP	pP	16 35 03.2	-2.1

CHTO				sP	sP	16 35 07.9	-2.9
XLT	XiLinHaoTe	60.87	329	eP	P	16 34 54.8	-0.2
XLT				pP	pP	16 35 04.5	-4.3
XLT				sP	sP	16 35 08.5	-6.0
XLT				pmax	pmax		
	comp=Z,12nm,0.8s						
HEH	HeiHe	61.02	340	eP	P	16 34 55.8	+0.1
HHC	Hu-ho-hao-te	61.33	324	eP	P	16 35 03.0	+4.9
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HILR	Hailar Array B	63.34	335	P	P	16 35 11.6	+0.3
	comp=Z,3.2nm,0.6s,baz=146,slow=8.6,SNR=6.0						
	comp=Z,3.2nm,0.6s						
LZH	Lanzhou	63.60	315	eP	P	16 35 16.5	+3.0
LZH				pP	pP	16 35 28.0	+0.6
LZH				pmax	pmax		
	comp=Z,14nm,1.3s						
LZDM	Lanzhou Array	63.63	315	P	P	16 35 14.6	+0.7
	comp=Z,2.9nm,0.4s,baz=111,slow=6.3,SNR=2.2						
	comp=Z,2.9nm,0.4s						
TAOE	Nuku Hiva Isla	64.52	97	eLR	LR	16 54 28.3	
	comp=Z,94nm,23.9s						
MA2	Magadan	65.65	358	P	P	16 35 26.6	+0.4
GTA	Gaotai	68.01	317	eP	P	16 35 43.0	+1.2
GTA				sP	pP	16 35 56.8	+0.9
GTA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
ULN	Ulaanbaatar	68.22	328	P	P	16 35 43.4	+0.4
SONM	Songino Array	68.55	327	P	P	16 35 45.3	+0.3
	comp=Z,2.4nm,0.9s,baz=147,slow=5.1,SNR=12						
SONM				pP	pP	16 36 00.1	+1.0
	comp=Z,0.6nm,0.5s,baz=141,slow=4.8,SNR=3.2						
SONM				LR	LR	17 07 19.5	
	comp=Z,23nm,18.1s,baz=254,slow=37						
	comp=Z,2.4nm,0.9s						
SONM	Songino Array	68.55	327	IAmb	IAmb	16 35 46.5	
	comp=Z,4.3nm,1.2s						
SHL	Shillong	68.70	300	P	P	16 35 45.6	-0.8
CCD	Concordia, Ant	71.14	188	P	P	16 36 00.6	-0.2
CCD				pP	pP	16 36 12.3	-2.3
VNDA	Vanda	71.37	178	P	P	16 36 01.1	-0.5
	comp=Z,1.3nm,0.8s,baz=345,slow=7.6,SNR=5.9						
	comp=Z,1.3nm,0.8s						
VNDA	Vanda	71.37	178	IAmb	IAmb	16 36 19.4	
	comp=Z,18nm,1.9s						
VNDA	Vanda	71.37	178	P	P	16 36 01.4	-0.2
VNDA				sP	pP	16 36 15.7	0.0
BILL	Bilibino	74.52	4	P	P	16 36 21.0	+0.6
BILL				IAmb	IAmb	16 36 24.7	
	comp=Z,11nm,0.8s						
BILL	Bilibino	74.52	4	P	P	16 36 20.9	+0.6
WMQ	Urumqi	78.09	317	eP	P	16 36 45.5	+4.3
WMQ				pmax	pmax		
	comp=Z,12nm,1.1s						
RDOG	Red Dog Mine	79.82	15	P	P	16 36 50.6	+0.5
RDOG				IAmb	IAmb	16 36 52.0	
	comp=Z,6.6nm,0.8s						
MKAR	Makanchi Array	82.67	319	P	P	16 37 05.5	-0.2
	comp=Z,3.2nm,0.7s,baz=98,slow=5.8,SNR=34						
MKAR				pP	pP	16 37 20.8	+0.7
	comp=Z,1.4nm,0.6s,baz=91,slow=7.6,SNR=5.2						
	comp=Z,3.2nm,0.7s						
MKAR	Makanchi Array	82.67	319	P	P	16 37 05.6	-0.1
ILAR	Eielson Array	82.73	22	P	P	16 37 04.3	-1.3
	comp=Z,1.5nm,0.8s,baz=238,slow=5.1,SNR=17						
ILAR				pP	pP	16 37 20.1	+0.1
	comp=Z,1.0nm,0.6s,baz=239,slow=4.9,SNR=4.8						
ILAR				LR	LR	17 09 43.3	
	comp=Z,80nm,19.8s,baz=243,slow=33						
	comp=Z,1.5nm,0.8s						
MAKZ	Makanchi	82.88	319	P	P	16 37 05.9	-0.9
MAKZ				IAmb	IAmb	16 37 07.9	
	comp=Z,6.3nm,0.9s						
MAKZ	Makanchi	82.88	319	P	P	16 37 07.1	+0.3
D22K	Ayikyak River	83.17	17	IAmb	IAmb	16 37 24.3	
	comp=Z,6.3nm,1.0s						
J25K	Salcha River,	83.21	22	IAmb	IAmb	16 37 09.1	
	comp=Z,9.4nm,1.2s						
ZAA0	Zalesovo Array	83.40	326		P	16 37 07.8	-1.5
ZALV	Zalesovo Beam	83.40	326	P	P	16 37 08.0	-1.2
	comp=Z,4.2nm,0.8s,baz=106,slow=5.3,SNR=19						
ZALV				pP	pP	16 37 24.4	+0.7
	comp=Z,1.3nm,0.6s,baz=108,slow=4.9,SNR=3.4						
	comp=Z,4.2nm,0.8s						
ZALV	Zalesovo Beam	83.40	326	P	P	16 37 08.6	-0.7
QSPA	South Pole Qui	83.76	180	P	P	16 37 10.3	-0.7
QSPA				IAmb	IAmb	16 37 12.2	
	comp=Z,10nm,0.9s						
QSPA	South Pole Qui	83.76	180	P	P	16 37 10.6	-0.5
QSPA				sP	pP	16 37 25.8	+0.3
TARG	Taragay, Kyrgy	84.45	313	IAmb	IAmb	16 37 27.7	
	comp=Z,8.4nm,1.5s						
KDJ	Kajisay	85.00	313	IAmb	IAmb	16 37 22.7	
	comp=Z,6.1nm,0.9s						
MAW	Mawson	85.03	203	P	P	16 37 17.0	-0.2
	comp=Z,7.3nm,0.6s,baz=100,slow=5.9,SNR=24						
MAW				pP	pwP	16 37 32.2	+0.8
	comp=Z,3.6nm,0.6s,baz=123,slow=5.7,SNR=3.9						
MAW				LR	LR	17 14 16.6	
	comp=Z,28nm,18.1s,baz=119,slow=35						
	comp=Z,7.3nm,0.6s						
KSH	Kashi	85.33	310	P	P	16 37 20.8	+1.3
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BOOM	Boomskoye usch	85.97	313	IAmb	IAmb	16 37 27.0	
	comp=Z,4.9nm,0.8s						
KURK	Kurchatov	86.08	322	P	P	16 37 21.8	-1.0
KURK				sP	pP	16 37 36.6	-0.7
F28M	Old Crow	86.59	20	P	P	16 37 24.7	-0.3
F28M				IAmb	IAmb	16 37 27.3	
	comp=Z,7.3nm,1.1s						
BBB	Bella Bella	87.04	37	LR	LR	17 12 41.4	
	comp=Z,44nm,18.1s,baz=242,slow=33						
NRIK	Noril'sk	87.92	341	P	P	16 37 30.1	-1.2
	comp=Z,5.0nm,0.7s,baz=120,slow=4.2,SNR=15						
	comp=Z,5.0nm,0.7s						
NRIK	Noril'sk	87.92	341	IAmb	IAmb	16 37 30.7	
	comp=Z,5.7nm,0.7s						
INK	Inuvik	89.07	21	LR	LR	17 16 35.2	
	comp=Z,27nm,21.2s,baz=282,slow=35						
NVAR	Mina Array Bea	91.42	52	P	P	16 37 49.0	+0.3
	comp=Z,2.7nm,0.7s,baz=252,slow=6.4,SNR=12						
NVAR				pP	pP	16 38 02.7	-0.7
	comp=Z,2.5nm,0.8s,baz=254,slow=6.2,SNR=6.4						
NVAR				LR	LR	17 11 23.5	
	comp=Z,44nm,20.7s,baz=298,slow=31						
	comp=Z,2.7nm,0.7s						
BVAR	Borovoye Array	91.53	323	P	P	16 37 47.0	-1.6
	comp=Z,2.9nm,0.7s,baz=101,slow=4.8,SNR=18						
BVAR				LR	LR	17 20 03.7	
	comp=Z,21nm,20.3s,baz=29,slow=36						
	comp=Z,2.9nm,0.7s						
NV11	Mina Array Sit	91.54	52	P	P	16 37 48.4	-0.8
NV11				IAmb	IAmb	16 38 04.6	
	comp=Z,3.5nm,1.0s						
BORK	Borovoye	91.58	323	P	P	16 37 47.0	-1.8
BORK				IAmb	IAmb	16 37 48.1	
	comp=Z,2.6nm,0.8s						
PFO	Pinyon Flats O	92.38	57	LR	LR	17 14 54.7	
	comp=Z,36nm,18.1s,baz=274,slow=33						
RPN	Rapa Nui	92.43	117	LR	LR	17 11 13.6	
	comp=Z,19nm,20.5s,baz=150,slow=30						
NEW	Newport	93.33	42	LR	LR	17 12 53.6	
	comp=Z,113nm,21.2s,baz=283,slow=31						
ELK	Elko	94.01	50	LR	LR	17 14 18.1	
	comp=Z,37nm,19.5s,baz=309,slow=32						
YKA	Yellowknife Ar	95.76	28	P	P	16 38 08.1	+0.2
	comp=Z,1.0nm,0.8s,baz=271,slow=5.2,SNR=14						
YKA				pP	pP	16 38 21.6	-0.9
	comp=Z,2.9nm,1.1s,baz=270,slow=5.3,SNR=7.1						
	comp=Z,1.0nm,0.8s						
ELIB	Princess Elisa	95.91	194	dP	P	16 38 07.3	-1.3
	comp=Z,4.2nm,1.4s						
LPIG	La Paz	96.99	67	LR	LR	17 16 17.8	
	comp=Z,36nm,19.1s,baz=42,slow=32						
PDAR	Pinedale Array	98.35	48	P	P	16 38 19.7	-0.6
	comp=Z,0.3nm,0.7s,baz=279,slow=4.8,SNR=3.0						
PDAR				LR	LR	17 18 59.1	
	comp=Z,26nm,18.8s,baz=292,slow=33						
	comp=Z,0.3nm,0.7s						
GERES	GERESS Array B	126.26	329	PKP	PKiKP	16 43 45.6	+0.4
	comp=Z,0.2nm,0.4s,baz=68,slow=2.6,SNR=2.4						
BDFB	Brasilia	148.69	134	PKPbc	PKPbc	16 44 28.8	-1.5
	comp=Z,2.4nm,0.6s,baz=197,slow=4.0,SNR=3.9						
BDFB				pPKPbc	pPKPbc	16 44 43.8	-1.4
	comp=Z,1.7nm,0.5s,baz=129,slow=6.2,SNR=2.8						
TORD	Torodi Ar. Bea	152.59	287	PKPbc	PKPbc	16 44 38.3	-1.2
	comp=Z,2.2nm,0.7s,baz=57,slow=3.0,SNR=11						
TORD				pPKPbc	sPKPdf	16 44 52.3	-0.5
	comp=Z,4.5nm,0.8s,baz=70,slow=3.0,SNR=11						
DBIC	Dimbokro	159.74	272	PKPab	PKPab	16 45 20.8	0.0
	comp=Z,5.1nm,0.8s,baz=114,slow=6.6,SNR=7.2						

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*IDC **29** 17:03:49.8±1.1, 17°.80N×66°.82W, h0^{km}, mb3.5/6, mbtmp3.5/7, ML2.6/1, MS3.2/2, Error ellipse: s-maj=24.8km s-min=9.4km az=160.0*

*NEIC **29** 17:03:49.9±1.2, 17°.84N±0°.02×66°.84W±0°.01, h4^{km}±10^{km}, ML3.7/14, Md3.4/10(RSPR), Mwr3.5/9(SLM), Error ellipse: s-maj=3.4km s-min=1.7km az=167.0*

*NEIC **29** 17:03:50.4, 17°.90N×66°.86W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.19; $M_{\theta\theta}$1.86; $M_{\phi\phi}$-1.66; $M_{r\theta}$-0.44; $M_{\theta\phi}$1.35; $M_{\phi r}$-1.21; Fault plane solution: $M_0$2.57000×10^{14} NP1:ϕ_s27.00000°, δ86.00000°, λ-150.00000°. NP2:ϕ_s295.00000°, δ60.00000°, λ-5.00000°. Principal axes: T 2.5704, Plg17.0000°, Azm157.0000°; N -0.0002, Plg60.0000°, Azm35.0000°; P -2.5702, Plg24.0000°, Azm255.0000°;*

*RSPR **29** 17:03:50.5, 17°.90N×66°.86W, h4^{km}, MD3.4/10*

ISC 29 17:03:50.1±1.3**, 17°.82N**±0°.05×**66°.84W**±0°.02**, h5**^{km}±9^{km}**, n62, σ0^{s}97**/63**, mb3.5**/6**, 8C-6D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.15	347		Pg	17 03 52.3	-1.0
GBPR	Guanica, Bosqu	0.15	347	⇓eP	Pg	17 03 52.3	-1.0
MLPR	Magueyes Islan	0.24	307	⇓eP	Pg	17 03 54.6	-0.2
MLPR	Magueyes Islan	0.24	307	eS	Sg	17 03 58.0	0.0
OBIP	Obispado Ponce	0.31	46		Pg	17 03 56.2	0.0
OBIP					Sg	17 04 01.0	+0.7
OBIP	Obispado Ponce	0.31	46	IAML		17 04 02.0	
	comp=N,6μm,0.5s						
OBIP	Obispado Ponce	0.31	46	⇓eP	Pg	17 03 56.2	0.0
OBIP	Obispado Ponce	0.31	46	eS	Sg	17 04 01.0	+0.7
CRPR	Cabo Rojo, PR	0.31	305		Pg	17 03 55.9	-0.3
CRPR					Sg	17 04 00.4	+0.1
CRPR	Cabo Rojo, PR	0.31	305	IAML		17 04 01.0	
	comp=N,13μm,0.3s						
CRPR				IAML		17 04 03.2	
	comp=N,17μm,0.8s						
CRPR	Cabo Rojo, PR	0.31	305	⇓eP	Pg	17 03 55.9	-0.3
CRPR	Cabo Rojo, PR	0.31	305	eS	Sg	17 04 00.4	+0.1
LSP	Las Mesas	0.42	326		Pg	17 03 57.7	-0.6
LSP	Las Mesas	0.42	326	⇓eP	Pg	17 03 57.7	-0.6
PRSN	Puerto Rico Se	0.48	324	⇑eP	Pg	17 03 58.8	-0.7
PRSN	Puerto Rico Se	0.48	324	eS	Sg	17 04 05.8	0.0
AOPR	Arecibo Observ	0.53	9		Pg	17 03 59.2	-1.0
AOPR					Sg	17 04 06.2	-1.0
AOPR	Arecibo Observ	0.53	9	IAML		17 04 11.5	
	comp=N,8μm,0.4s						
AOPR	Arecibo Observ	0.53	9	⇑eP	Pg	17 03 59.2	-1.0
AOPR	Arecibo Observ	0.53	9	eS	Sg	17 04 06.2	-1.0
AOPR	Arecibo Observ	0.53	9	eP	Pg	17 03 59.2	-1.0
ECPR	Experimental S	0.67	43	⇑eP	Pg	17 04 02.4	-0.6
ECPR	Experimental S	0.67	43	eS	Sg	17 04 11.9	+0.1
AGPR	Aguadilla, PR	0.69	338		Pg	17 04 02.2	-1.1
AGPR	Aguadilla, PR	0.69	338	⇑eP	Pg	17 04 02.2	-1.1
AGPR	Aguadilla, PR	0.69	338	eS	Sg	17 04 11.3	-1.1
EMPR	Esperanza - Ma	0.71	25		Pg	17 04 03.2	-0.6
EMPR					Sg	17 04 13.1	0.0
EMPR	Esperanza - Ma	0.71	25	IAML		17 04 15.9	
	comp=N,5μm,0.5s						
EMPR	Esperanza - Ma	0.71	25	⇑eP	Pg	17 04 03.2	-0.6
EMPR	Esperanza - Ma	0.71	25	eS	Sg	17 04 13.1	0.0
SJG	San Juan	0.72	66	Pg	Pg	17 04 03.8	-0.1
	comp=N,111nm,0.3s,baz=260,slow=15,SNR=97						
SJG				Lg	Lg	17 04 13.2	
	comp=N,525nm,0.3s,baz=17,slow=14,SNR=39						
SJG	San Juan	0.72	66	IAML		17 04 15.8	
	comp=N,2μm,0.5s						
SJG				IAML		17 04 17.9	
	comp=N,2μm,0.3s						
SJG	San Juan	0.72	66	⇑eP	Pg	17 04 03.7	-0.1
SJG	San Juan	0.72	66	eS	Sg	17 04 13.8	+0.6
SJG	San Juan	0.72	66	eP	Pg	17 04 03.8	-0.1
IDE	Isla Desecheo	0.82	313		Pg	17 04 04.9	-1.0
IDE					Sg	17 04 16.8	+0.2
IDE	Isla Desecheo	0.82	313	⇑eP	Pg	17 04 04.9	-1.0
IDE	Isla Desecheo	0.82	313	eS	Sg	17 04 16.8	+0.2
GCPR	Guaynabo City	0.87	56		Pg	17 04 06.3	-0.5
GCPR					Sg	17 04 17.6	-0.5
GCPR	Guaynabo City	0.87	56	⇑eP	Pg	17 04 06.3	-0.5
GCPR	Guaynabo City	0.87	56	eS	Sg	17 04 17.6	-0.5
HUMP	Col San Antoni	1.00	71		Pg	17 04 08.5	-0.7
HUMP					Sb	17 04 23.1	-0.1
HUMP	Col San Antoni	1.00	71	IAML		17 04 24.1	
	comp=N,1μm,0.3s						
HUMP				IAML		17 04 27.1	
	comp=N,2μm,0.2s						
HUMP	Col San Antoni	1.00	71	⇓eP	Pg	17 04 08.5	-0.7
HUMP	Col San Antoni	1.00	71	eS	Sb	17 04 23.1	-0.1
DR12	Loma Pena Alta	2.59	292		Pn	17 04 33.0	+0.3
MBWH	Windy Hill	4.57	103	eP	Pn	17 05 00.7	+0.8
DHSZ	Broadband at M	5.09	107	eP	Pn	17 05 07.6	+0.5
DHSZ	Broadband at M	5.09	107	eS	Sn	17 06 05.1	-1.2
ATGZ	Broadband at L	5.19	109	eP	Pn	17 05 08.4	0.0
ATGZ	Broadband at L	5.19	109	eS	Sn	17 06 07.2	-1.4
DSLB	Salisbury	5.71	114	eP	Pn	17 05 16.1	+0.5
BIM	Bigot	6.45	120	eP	Pn	17 05 23.9	-1.8
BIM	Bigot	6.45	120	eS	Sn	17 06 37.4	-2.3
SDV	Santo Domingo	9.62	203	Pn	Pn	17 06 11.2	+1.8
	comp=N,0.6nm,0.3s,baz=348,slow=11,SNR=2.4						
SDV				Sn	Sn	17 07 54.3	-3.8
	comp=N,1.2nm,0.3s,baz=322,slow=23,SNR=2.5						
	comp=N,1.4nm,0.3s						
CMIG	Matias Romero	26.75	273	LR	LR	17 20 30.4	
	comp=N,52nm,21.3s,baz=336,slow=37						
TXAR	Lajitas Array	35.50	296	P	P	17 10 47.8	-0.3
	comp=N,0.4nm,0.5s,baz=113,slow=10,SNR=2.3						
	comp=N,0.4nm,0.5s						
PDAR	Pinedale Array	43.84	314	P	P	17 11 59.4	+1.8
	comp=N,0.2nm,0.6s,baz=146,slow=8.0,SNR=1.8						
	comp=N,0.2nm,0.6s						
CPUP	Villa Florida	44.85	168	P	P	17 12 04.9	-0.5
	comp=N,1.2nm,0.9s,baz=346,slow=11,SNR=4.0						
CPUP				LR	LR	17 30 07.6	
	comp=N,24nm,18.4s,baz=242,slow=35						
	comp=N,1.2nm,0.9s						
YKA	Yellowknife Ar	55.48	335	P	P	17 13 25.4	-0.2
	comp=N,0.6nm,0.7s,baz=114,slow=6.6,SNR=9.9						
	comp=N,0.6nm,0.7s						
ESDC	Sonseca Array	58.09	54	P	P	17 13 45.2	+0.6
	comp=N,0.3nm,0.6s,baz=263,slow=7.3,SNR=1.8						
	comp=N,0.3nm,0.6s						
ILAR	Eielson Array	69.79	333	P	P	17 15 02.6	+1.4
	comp=N,0.3nm,0.7s,baz=93,slow=4.5,SNR=5.6						
	comp=N,0.3nm,0.7s						

GUC 29 17:04:28.4±0.7**, 24°.07S**×**66°.92W, h210**^{km}±9^{km}**, ML3.5, 2C-2D, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALTA		0.56	106	⇓eP	Pn	17 04 57.1	-0.5
SLA	San Lorenzo	1.45	117	⇓eP	Pn	17 05 02.7	-0.1
AF01	San Pedro de A	1.60	314	eP	Pn	17 05 04.2	-0.1
GO02	Mina Guanaco	2.66	245	eP	Pn	17 05 15.5	+0.4
PB06	IPOC Station P	2.79	299	⇑iP	Pn	17 05 16.3	-0.1
PB06				IAML		17 05 53.5	
	comp=E,115nm,0.1s						
PB09	IPOC Station P	3.11	316	eP	Pn	17 05 20.3	+0.2
PB09				IAML		17 06 01.5	
	comp=E,43nm,0.1s						
PB14	IPOC Station P	3.22	259	eP	Pn	17 05 21.7	+0.2
PB14				IAML		17 06 02.7	
	comp=E,39nm,0.3s						
PB05	IPOC Station P	3.24	291	⇑eP	Pn	17 05 21.3	-0.3
PB10	IPOC Station P	3.37	279	eP	Pn	17 05 22.9	0.0
PB07	IPOC Station P	3.59	310	eP	Pn	17 05 25.1	-0.7
PB01	IPOC Station P	3.83	321	eP	Pn	17 05 27.7	-0.9
PB02	IPOC Station P	3.87	314	eP	Pn	17 05 28.2	-0.9
AC01	Pan de Azucar	3.92	237	eP	Pn	17 05 28.9	-0.7
PATCX	Punta Patache	4.40	317	eP	Pn	17 05 34.6	-1.0
GO03	Copiapo	4.61	220	eP	Pn	17 05 37.6	-0.5
HMBC	Humberstone	4.67	323	eP	Pn	17 05 37.2	-1.8

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*IDC **29** 17:24:07.7±4.2, 6°.94S×129°.64E, h155^{km}±45^{km}, mb3.6/5, mbtmp4.1/10, Error ellipse: s-maj=41.1km s-min=21.9km az=39.0*

*DJA **29** 17:24:07.3±0.2, 7°S±2°×13°0E±°, h162^{km}±6^{km}, M4.5/22, mb4.2/22, mB5.0/5, MLv4.7/16, Mw(mB)4.3/5*

ISC 29 17:24:06.2±0.7**, 7°.03S**±0°.06×**129°.71E**±0°.06**, h150**^{km}**, n34, σ2^{s}37**/37**, mb3.8**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.84	121	P	Pn	17 24 42.9	+3.4
BNDI	Bandanaira	2.50	5	P	Pn	17 24 48.7	+1.4
KRAI	Karang Ratu	3.91	340	P	Pn	17 25 07.7	+2.4
FAKI	Fak Fak	4.80	32	P	Pn	17 25 14.4	-2.6
KMPI	Kaimana, Papua	5.20	50	P	Pn	17 25 21.4	-0.9
SOEI	Soe	6.03	243	P	Pn	17 25 35.5	+2.1
	0.5nm92nm,0.6s						
SIJI	Sorong	6.31	14	P	Pn	17 25 34.7	-2.4
SWI	Sorong	6.32	14	P	Pn	17 25 34.6	-2.6
BATI	Baumata	6.76	242	P	Pn	17 25 45.3	+2.2
	79nm,0.5s,baz=102,slow=5.2,SNR=30						
BATI				S	Sn	17 26 54.6	-4.4
	54nm,0.3s,baz=348,slow=22,SNR=10						
BATI	Baumata	6.76	242	P	Pn	17 25 45.0	+1.9
	0.4nm100nm,0.6s						
RKPI	Ransiki, Papua	7.06	39	P	Pn	17 25 45.9	-1.2
MWPI	Manokwari, Pap	7.44	36	P	Pn	17 25 51.3	-0.9
	0.5nm95nm,0.9s						
MMRI	Maumere	7.57	257	P	Pn	17 25 56.1	+2.2
	0.3nm47nm,1.0s						
EDFI	Ende, Flores	8.12	257	P	Pn	17 26 04.2	+2.8
	11nm,0.9s						
BAKI	Biak	8.62	48	P	Pn	17 26 09.5	+1.6
	124nm,0.9s						
WSI	Waingapu	9.67	254	P	Pn	17 26 22.2	+0.3
LBFI	Labuhan Bajo,	9.83	261	P	Pn	17 26 27.1	+3.0
	19nm,1.0s						
WBSI	Waikabubak, Su	10.53	255	P	Pn	17 26 33.9	+0.5
DBNI	Kabupaten Domp	11.39	262	P	Pn	17 26 46.4	+1.8
	6.7nm,1.5s						
FITZ	Fitzroy Crossi	11.70	199	P	Pn	17 26 48.8	+0.2
	3.8nm,0.3s,baz=21,slow=8.4,SNR=36						
FITZ				S	Sn	17 28 51.9	-6.0
	14nm,0.4s,baz=192,slow=4.2,SNR=10						
PLAI	Plampang	11.95	261	P	Pn	17 26 51.7	-0.2
	17nm,0.9s						
TWSI	Taliwang, Sumb	12.82	262	P	Pn	17 27 04.5	+1.4
	11nm,1.1s						
KLNI	Mataram	13.56	263	P	Pn	17 27 14.4	+1.8
	10nm,1.2s						
WRA	Warramunga Arr	13.60	161	P	Pn	17 27 14.9	+1.7
	1.3nm,0.4s,baz=320,slow=17,SNR=20						
WRA				S	Sn	17 29 37.2	-6.7
	3.8nm,0.4s,baz=336,slow=26,SNR=11						
GMJI	Gumukmas	16.17	265	P	Pn	17 27 45.6	+0.5
	22nm,1.2s						
ASAR	Alice Springs	17.03	167	P	Pn	17 27 58.7	+3.1
	1.2nm,0.5s,baz=334,slow=8.5,SNR=36						
ASAR				S	S	17 30 57.6	-7.2
	0.9nm,0.8s,baz=346,slow=25,SNR=4.2						
PMG	Port Moresby	17.43	99	P	Pn	17 28 02.2	+1.8
	5.7nm,0.7s,baz=148,slow=23,SNR=6.1						
PMG				S	S	17 31 09.7	-3.7
	2.3nm,0.5s,baz=224,slow=14,SNR=1.9						
SNJI	Sawahan-Nganju	17.81	266	P	Pn	17 28 06.2	+1.1
CMAR	Chiang Mai Arr	39.53	310	P	P	17 31 23.1	+0.4
	1.0nm,0.6s,baz=136,slow=7.1,SNR=16						
	1.0nm,0.6s						
SONM	Songino Array	58.38	342	P	P	17 33 46.0	+0.1
	0.6nm,0.6s,baz=163,slow=6.6,SNR=5.3						
	0.6nm,0.6s						
MKAR	Makanchi Array	68.09	327	P	P	17 34 50.4	+0.7
	1.5nm,0.3s,baz=116,slow=8.0,SNR=48						
	1.5nm,0.3s						
ZALV	Zalesovo Beam	71.48	334	P	P	17 35 10.1	-0.2
	1.0nm,0.5s,baz=134,slow=6.8,SNR=7.3						
	1.0nm,0.5s						
BVAR	Borovoye Array	77.93	328	P	P	17 35 47.3	-0.2
	0.9nm,0.7s,baz=123,slow=5.3,SNR=4.0						
	0.9nm,0.7s						
TORD	Torodi Ar. Bea	128.53	281	PKP	PKPdf	17 42 57.5	+1.1
	0.4nm,0.7s,baz=31,slow=2.2,SNR=1.5						

IDC 29 17:30:44.7±2.0**, 0°.47N**×**126°.12E, h0**^{km}**, mb3.4**/3**, mbtmp3.6**/4**, Error ellipse: s-maj=122.0km s-min=27.5km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.45	181	P	Pn	17 35 01.6	-0.5
	2.6nm,0.9s,baz=14,slow=12,SNR=1.9						
WRA	Warramunga Arr	21.82	159	P	P	17 35 37.5	-1.3
	0.8nm,0.5s,baz=337,slow=10,SNR=4.0						
	0.8nm,0.5s						
ASAR	Alice Springs	25.15	163	P	P	17 36 12.8	+0.9
	0.6nm,0.4s,baz=343,slow=11,SNR=8.1						
	0.6nm,0.4s						
MKAR	Makanchi Array	59.90	327	P	P	17 40 52.4	-0.2
	0.3nm,0.6s,baz=125,slow=7.2,SNR=2.3						
	0.3nm,0.6s						

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*VAO **29** 17:32:12.3±1.2, 36°.99S×71°.27W, h10^{km}, mb4.3, Presumed earthquake*

*SJA **29** 17:32:17.9±1.6, 37°.48S×71°.51W, h137^{km}±14^{km}, ML3.6, MW3.7*

*GUC **29** 17:32:19.4±0.5, 37°.52S×71°.48W, h135^{km}±8^{km}, ML3.8*

*IDC **29** 17:32:19.3±2.3, 37°.38S×71°.35W, h115^{km}±20^{km}, mb3.2/4, mbtmp3.7/7, Error ellipse: s-maj=40.5km s-min=17.8km az=100.0*

ISC 29 17:32:19.0±0.8**, 37°.52S**±0°.03×**71°.40W**±0°.07**, h125**^{km}±7^{km}**, n53, σ1^{s}41**/62**, mb3.3**/3**, 1D, Southern Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CANA	Caviahue	0.46	144	iP	Pn	17 32 38.7	+1.2
CANA				IAML		17 32 56.1	
	comp=Z,289nm,0.8s						
BI02	San Fabin de	0.86	7	eP	Pn	17 32 41.5	+1.2
BI02	San Fabin de	0.86	7	iP	Pn	17 32 40.8	+0.5
BI02				IAML		17 33 08.0	
	comp=Z,280nm,0.3s						
LC01	Cunco	1.43	195	eP	Pn	17 32 46.5	+0.6
LC01				IAML		17 33 10.4	
	comp=E,296nm,0.2s						
LC02	Puerto Saavedr	2.02	230	eP	Pn	17 32 53.0	+0.2
GO06	Curarrehue	2.07	182	eP	Pn	17 32 54.7	+1.1
GO06				IAML		17 33 23.6	
	comp=N,120nm,0.7s						
GO06	Curarrehue	2.07	182	iP	Pn	17 32 54.1	+0.5
GO06				⇓eS	Sn	17 33 21.5	+1.3
GO06				IAML		17 33 22.7	
	comp=Z,155nm,0.8s						
BI04	Isla Mocha	2.16	245	eP	Pn	17 32 54.5	0.0
BI04				IAML		17 33 26.3	
	comp=E,1μm,0.2s						
LR03	Panguipulli	2.24	199	eP	Pn	17 32 55.9	+0.3
LR03				IAML		17 33 25.1	
	comp=E,1μm,0.4s						
LR03	Panguipulli	2.24	199	iP	Pn	17 32 55.6	-0.1
LR03				eS	Sn	17 33 25.7	+1.9
LR03				IAML		17 33 26.8	
	comp=Z,766nm,0.5s						
GO05	Hualane	2.54	350	eP	Pn	17 33 00.5	+1.0
GO05				IAML		17 33 34.5	
	comp=E,359nm,0.5s						
GO05	Hualane	2.54	350	iP	Pn	17 33 00.1	+0.6
GO05				eS	Sn	17 33 28.8	-1.8
GO05				IAML		17 33 33.4	
	comp=Z,223nm,0.5s						
LR02	Universidad Au	2.71	212	eP	Pn	17 33 02.2	+0.7
BO02	Sierra Bellavi	2.76	11	eP	Pn	17 33 03.7	+1.2
BO02				eS	Sn	17 33 36.9	+1.0
BO02				IAML		17 33 44.9	
	comp=E,293nm,0.3s						
BO02	Sierra Bellavi	2.76	11	iP	Pn	17 33 03.2	+0.7
BO02				eS	Sn	17 33 35.7	-0.2
BO02				IAML		17 33 41.5	
	comp=Z,157nm,0.4s						
LR04	Corral	2.84	213	eP	Pn	17 33 02.6	-0.8
LR04	Corral	2.84	213	iP	Pn	17 33 02.2	-1.1
LR04				eS	Sn	17 33 37.3	-0.3
LR04				IAML		17 33 38.5	
	comp=Z,568nm,0.2s						

BO03	Pichilemu	3.05	351	*e*P	Pn	17 33 06.5	+0.4
BO03				IAML		17 33 43.6	
	comp=N,332nm,0.4s						
BO01	Tunca	3.13	5	*e*P	Pn	17 33 07.5	+0.4
BO01				IAML		17 33 47.9	
	comp=N,106nm,0.3s						
BO01	Tunca	3.13	5	*i* P	Pn	17 33 06.9	-0.2
BO01				IAML		17 33 49.7	
	comp=Z,64nm,0.5s						
PLCA	Paso Flores	3.28	169	P	Pn	17 33 10.7	+1.6
	comp=Z,6.1nm,0.4s,baz=334,slow=10,SNR=35						
PLCA				S	Sn	17 33 40.3	-7.6
	comp=Z,5.0nm,0.4s,baz=349,slow=17,SNR=4.8						
PLCA	Paso Flores	3.28	169	*i* P	Pn	17 33 10.0	+0.9
PLCA				IAML		17 34 10.2	
	comp=Z,20nm,0.6s						
PLCA	Paso Flores	3.28	169	*e*P	Pn	17 33 10.7	+1.6
BO04	La Punta	3.58	11	*e*P	Pn	17 33 13.8	+0.6
BO04				IAML		17 33 59.5	
	comp=E,88nm,0.4s						
RFA	San Rafael	3.63	42	*i* P	Pn	17 33 14.7	+0.9
RFA				IAML		17 34 23.2	
	comp=Z,27nm,1.1s						
MT01	Popeta	3.65	2	*e*P	Pn	17 33 14.5	+0.5
MT01				IAML		17 33 56.6	
	comp=N,188nm,0.3s						
MT01	Popeta	3.65	2	*i* P	Pn	17 33 13.3	-0.7
MT01				*e*S	Sn	17 33 54.6	-1.9
MT01				IAML		17 33 57.4	
	comp=Z,197nm,0.3s						
LMEL	Las Melosas	3.79	15	*e*P	Pn	17 33 17.1	+1.1
LMEL	Las Melosas	3.79	15	*i* P	Pn	17 33 16.7	+0.7
LMEL				IAML		17 34 10.3	
	comp=Z,68nm,0.4s						
VA05	Santo Domingo	3.85	357	*e*P	Pn	17 33 16.8	+0.1
MT13	San Alfonso	3.87	14	*e*P	Pn	17 33 18.0	+1.0
MT13	San Alfonso	3.87	14	*i* P	Pn	17 33 17.6	+0.6
MT13				IAML		17 34 08.7	
	comp=Z,84nm,0.7s						
MT15	Las Vizcachas	3.98	11	*e*P	Pn	17 33 18.8	+0.4
MT03	Universidad Ad	4.08	11	*i* P	Pn	17 33 19.6	-0.2
MT03				IAML		17 34 10.0	
	comp=Z,83nm,0.5s						
MT05	Renca	4.15	8	*i* P	Pn	17 33 20.4	-0.3
MT05				IAML		17 34 15.9	
	comp=Z,80nm,0.3s						
MT04	Ro Olivares	4.23	14	*i* P	Pn	17 33 21.8	-0.1
MT04				IAML		17 34 42.1	
	comp=Z,47nm,0.6s						
VA01	Torpederas	4.49	357	*i* P	Pn	17 33 24.6	-0.5
VA01				IAML		17 34 25.3	
	comp=Z,327nm,0.9s						
VA03	San Esteban	4.79	9	*i* P	Pn	17 33 29.2	-0.2
VA03				IAML		17 34 27.8	
	comp=Z,112nm,0.1s						
ASAL	Salagasta	5.34	24	*i* P	Pn	17 33 38.3	+1.6
CFA	Coronel Fontan	6.45	25	P	Pn	17 33 50.6	-0.9
	comp=Z,7.0nm,0.4s,baz=214,slow=12,SNR=63						
CFA				S	Sn	17 35 00.3	-3.5
	comp=Z,10.0nm,0.6s,baz=94,slow=16,SNR=19						
CPUP	Villa Florida	16.32	51	P	Pn	17 35 59.9	-1.0
	comp=Z,1.1nm,0.4s,baz=192,slow=11,SNR=7.1						
ITAB	Concordia	19.20	63	*e*P	P	17 36 32.9	-0.2
AMBA	Amambai (Brazi	20.27	49	*e*P	P	17 36 43.9	-0.7
PTGB	Pitanga	20.85	58	*e*P	P	17 36 50.2	-0.8
LPAZ	La Paz	21.34	9	P	P	17 36 57.1	+0.3
	comp=Z,1.0nm,0.7s,baz=188,slow=10.0,SNR=9.8						
	comp=Z,1.0nm,0.7s						
PP1B	Ponte de Pedra	24.59	41	*e*P	P	17 37 28.2	+0.7
ITRB	Iturama	25.52	52	*e*P	P	17 37 36.0	+0.1
PDRB	Porto dos Gac	28.96	31	*e*P	P	17 38 07.0	+0.3
TXAR	Lajitas Array	73.05	331	P	P	17 43 35.4	+0.1
	comp=Z,0.4nm,0.7s,baz=163,slow=8.1,SNR=2.9						
	comp=Z,0.4nm,0.7s						
TORD	Torodi Ar. Bea	84.94	69	P	P	17 44 41.2	+0.8
	comp=Z,0.4nm,0.7s,baz=228,slow=4.7,SNR=2.5						
	comp=Z,0.4nm,0.7s						
NVAR	Mina Array Bea	87.06	325	P	P	17 44 51.8	+1.3
	comp=Z,0.3nm,0.5s,baz=83,slow=1.2,SNR=3.7						
	comp=Z,0.3nm,0.5s						
BVAR	Borovoye Array	149.39	47	PKPbc	PKiKP	17 51 54.1	+0.4
	comp=Z,0.5nm,0.5s,baz=343,slow=4.5,SNR=1.9						
MKAR	Makanchi Array	158.49	56	PKPab	PKPab	17 52 37.1	+0.4
	comp=Z,0.3nm,0.5s,baz=292,slow=2.5,SNR=5.1						

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*AFAD **29** 17:36:39.0, 42°.30N×22°.55E, h15^{km}, MW4.1*
*MCSM **29** 17:36:49.8±1.0, 42°N±8°×2°4E±°, h10^{km}, mb3.9, MLv4.2*
*SOF **29** 17:36:51.5, 41°.96N±0°.01×23°.47E±0°.01, h17^{km}±2^{km}, MD3.8/10*
*THE **29** 17:36:52.0, 42°N±1°×2°3E±°, h3^{km}±1^{km}, M3.5/20, MLh3.5/20*
*ATH **29** 17:36:52.7, 41°.87N×23°.41E, h9^{km}±4^{km}, ML3.5/7, Manual Solution by A.Agalos First location: 2019/12/29 17:38:26, This location: 2019/12/29 17:46:20 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 4 km; Longitude uncertainty: 1 km*
*ISK **29** 17:36:53.0, 41°.91N×23°.35E, h78^{km}, ML4.0/25*
*SKO **29** 17:36:53.7, 41°.93N×23°.39E, h5^{km}, ML3.3*
*BEO **29** 17:36:53.1±0.3, 41°.97N×23°.46E, h14^{km}±2^{km}, ML3.6/19*
*PRU **29** 17:37:00.0, 42°.20N×23°.22E, h10^{km}*
ISC 29 17:36:52.6±0.8**, 41°.93N**±0°.01×**23°.45E**±0°.01**, h16**^{km}±6^{km}**, n208, σ1^{s}.46**/290**, 25C-15D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.26	249	P	Pg	17 36 58.0	-0.3
KKB				S	Sg	17 37 02.1	-0.1
KKB	Krupnik	0.26	249	*i* Pg	Pg	17 36 58.1	-0.1
KKB				*i* Sg	Sg	17 37 02.1	-0.1
KKB	Krupnik	0.26	249	⇑*i*Pg	Pg	17 36 58.1	-0.1
KKB				*i* Sg	Sg	17 37 02.5	+0.3
MMB	Musomishta	0.45	150	P	Pg	17 37 01.1	-0.5
MMB				S	Sg	17 37 06.6	-1.1
MMB	Musomishta	0.45	150	*i* Pg	Pg	17 37 01.1	-0.5
MMB				*i* Sg	Sg	17 37 07.5	-0.2
MMB	Musomishta	0.45	150	⇑*i*Pg	Pg	17 37 01.1	-0.5
MMB				*i* Sg	Sg	17 37 07.6	-0.1
PLNA	Plana	0.54	358	*i* Pg	Pg	17 37 02.7	-0.7
PLNA				*i* Sg	Sg	17 37 09.2	-1.5
VTS	Vitosha	0.70	347	P	Pg	17 37 05.1	-1.3
VTS				S	Sg	17 37 14.4	-1.3
VTS	Vitosha	0.70	347	*i* Pg	Pg	17 37 05.1	-1.3
VTS				*i* Sg	Sg	17 37 14.2	-1.5
VTS	Vitosha	0.70	347	*e*Pg	Pg	17 37 05.2	-1.2
VTS				*e*Sg	Sg	17 37 14.2	-1.5
SOF	Sofia	0.74	356	*i* Pg	Pg	17 37 06.4	-0.7
SOF				*i* Sg	Sg	17 37 16.9	-0.1
PGB	Panagyurishte	0.79	43	*i* Pg	Pg	17 37 06.9	-1.1
PGB				*i* Sg	Sg	17 37 17.6	-0.9
SRS	Serrai	0.82	172	P	Pg	17 37 07.9	-0.7
SRS				S	Sb	17 37 20.1	+0.8
SRS	Serrai	0.82	172	⇑*i*Pg	Pg	17 37 08.0	-0.5
SRS				*i* Sg	Sb	17 37 20.4	+1.1
SRS	Serrai	0.82	172	*e*Pg	Pg	17 37 08.1	-0.5
SRS				*e*Sg	Sb	17 37 20.4	+1.1
SRS	Serrai	0.82	172	P	Pg	17 37 07.6	-1.0
SRS				S	Sg	17 37 18.2	-1.3
KNT	Kendrikon	0.88	208	P	Pg	17 37 09.1	-0.5
KNT				S	Sg	17 37 20.9	-0.2
VAY	Valandovo	0.90	227	⇑*i*Pg	Pb	17 37 09.9	+0.1
VAY				*i* Sg	Sb	17 37 22.7	+1.2
VAY				*e*Lg	Lg	17 37 24.6	
	comp=N,3µm,1.0s						
VAY				*e*Lg	Lg	17 37 25.5	
	comp=E,2µm,0.6s						
BLSH	Balsha	0.93	352	*i* Pg	Pb	17 37 10.3	0.0
BLSH				*i* Sg	Sg	17 37 22.9	0.0
DRA2	DRAMA	0.94	146	P	Pb	17 37 10.0	-0.4
DRA2				S	Sb	17 37 22.0	-0.5
PLD	Plovdiv	0.99	77	P	Pb	17 37 09.7	-1.6
PLD				S	Sb	17 37 23.7	-0.4
PLD	Plovdiv	0.99	77	Pg	Pn	17 37 12.9	+1.1
PLD	Plovdiv	0.99	77	*e*Pg	Pb	17 37 10.1	-1.2
PLD				*e*Sg	Sb	17 37 23.6	-0.5
RZN	Rozhen	0.99	104	P	Pb	17 37 09.5	-2.0
RZN				S	Sb	17 37 24.2	-0.2
TRAN	Tran	1.08	327	*i* Pg	Pb	17 37 12.3	-0.5
TRAN				*i* Sg	Sg	17 37 27.1	-0.4
KAVA	Kavala	1.23	139	P	Pn	17 37 14.6	-0.5
KAVA				S	Sb	17 37 32.0	+0.9
KAVA	Kavala	1.23	139	P	Pn	17 37 15.3	+0.2
KAVA				S	Sb	17 37 31.0	0.0
GRG	Griva	1.25	219	P	Pn	17 37 15.7	+0.3
GRG				S	Sg	17 37 33.3	+0.1
GRG	Griva	1.25	219	*i* Pg	Pn	17 37 15.9	+0.5
GRG				*i* Sg	Sg	17 37 34.0	+0.8
GRG	Griva	1.25	219	P	Pn	17 37 15.7	+0.3
GRG				S	Sb	17 37 31.5	-0.2
THE	Thessaloniki	1.35	196	P	Pn	17 37 16.7	0.0
THE				S	Sg	17 37 36.8	+0.6
THE	Thessaloniki	1.35	196	*i* Pg	Pn	17 37 17.0	+0.3
THE				*i* Sg	Sg	17 37 36.6	+0.4
THE	Thessaloniki	1.35	196	P	Pn	17 37 17.2	+0.5
HORT	Hortiatis	1.36	191	P	Pn	17 37 17.5	+0.6
HORT				S	Sg	17 37 36.5	0.0
HORT	Hortiatis	1.36	191	P	Pn	17 37 17.1	+0.2
MPEP	Malo Peshtene	1.44	9	*i* Pg	Pb	17 37 19.1	+0.2
MPEP				*i* Sg	Sg	17 37 38.5	-0.5
KDZ	Kurdzhali	1.45	101	P	Pn	17 37 18.3	+0.3
KDZ				S	Sn	17 37 37.7	+1.0
KDZ	Kurdzhali	1.45	101	Pn	Pb	17 37 19.3	+0.2
KDZ				Sn	Sb	17 37 38.5	+1.3
THS1	Thassos, Thass	1.47	144	P	Pn	17 37 19.1	+0.8
ZAPS	Zavoj	1.47	336	*e*Pg	Pb	17 37 19.7	+0.2
ZAPS				*e*Sg	Sg	17 37 40.1	+0.1
XANC	Avdira	1.48	130	P	Pn	17 37 19.4	+0.9
BARS	Barje	1.50	307	*i* Pg	Pb	17 37 19.7	-0.2
BARS				*i* Sg	Sg	17 37 41.1	+0.2
BARS	Barje	1.50	307	*e*Pg	Pb	17 37 19.8	-0.2
BARS				*e*Sg	Sg	17 37 39.8	-1.1
PLG	Polygyros	1.56	180	P	Pn	17 37 20.1	+0.5
PLG				S	Sg	17 37 42.3	-0.5
PLG	Polygyros	1.56	180	P	Pn	17 37 19.8	+0.2
DIM	Dimitrovgrad	1.59	85	P	Pn	17 37 19.7	-0.3
DIM				S	Sn	17 37 41.6	+1.4
THAS	Thassos island	1.64	144	P	Pn	17 37 20.7	+0.1
THAS	Thassos island	1.64	144	P	Pn	17 37 20.6	0.0
THAS				S	Sb	17 37 43.1	+0.5
OUR	Ouranopolis	1.65	166	P	Pn	17 37 21.1	+0.4
OUR	Ouranopolis	1.65	166	Pn	Pn	17 37 20.9	+0.1
OUR	Ouranopolis	1.65	166	P	Pn	17 37 21.1	+0.4
PVL	Pavlikeni	1.74	46	*i* P	Pn	17 37 22.5	+0.4
PVL				*i* S	Sb	17 37 45.9	+0.2
RDO	Rodhopi	1.75	116	P	Pn	17 37 22.7	+0.4
RDO	Rodhopi	1.75	116	Pn	Pb	17 37 24.2	-0.1
RDO	Rodhopi	1.75	116	P	Pb	17 37 24.3	0.0
VALD	Valchedram	1.75	360	*i* P	Pn	17 37 22.9	+0.6
VALD				S	Sg	17 37 49.4	+0.3
BLKB	Belogradchik	1.78	342	⇑S	Sn	17 37 46.2	+1.2
BLKB	Belogradchik	1.78	342	*e*Pg	Pb	17 37 25.5	+0.7
BLKB				*e*Sg	Sg	17 37 48.6	-1.4
LIT	Litokhoron	1.97	202	P	Pn	17 37 24.9	-0.4
LIT	Litokhoron	1.97	202	*e*Pn	Pn	17 37 26.5	+1.2
LIT	Litokhoron	1.97	202	P	Pn	17 37 25.3	+0.1
ELND	Elena	2.05	60	⇓P	Pb	17 37 30.6	+1.1
KZN	Kozani	2.06	218	P	Pn	17 37 25.4	-1.1
ZAGS	Zajecar	2.08	335	*e*Pn	Pn	17 37 28.4	+1.7
ZAGS				*e*Sn	Sn	17 37 53.8	+1.5
BAIL	Bailesti	2.09	358	⇑P	Pb	17 37 29.6	-0.4
BOVS	Bovan	2.13	324	⇑P	Pn	17 37 28.1	+0.7
BOVS				⇓S	Sn	17 37 54.7	+1.2
BOVS	Bovan	2.13	324	*e*Pn	Pn	17 37 28.1	+0.7
ALEX	Alexandroupoli	2.14	119	P	Pn	17 37 29.7	+2.2
SMTH	Samothraki Isl	2.15	132	P	Pn	17 37 27.8	+0.1
SMTH	Samothraki Isl	2.15	132	P	Pn	17 37 28.4	+0.8
SELS	Selova	2.15	308	*e*Pn	Pn	17 37 28.4	+0.7
SELS				*e*Sn	Sn	17 37 55.4	+1.4
OHR	Ohrid	2.15	248	*e*Pn	Pb	17 37 30.8	-0.4
OHR				*e*Sn	Sb	17 37 56.5	-1.1
OHR				*e*Lg	Lg	17 38 02.0	
	comp=E,101nm,0.7s						
OHR				*e*Lg	Lg	17 38 03.9	
	comp=N,75nm,0.5s						
VLAD	Vladila	2.18	18	⇑P	Pb	17 37 31.9	+0.3
ALN	Alexandroupoli	2.21	117	P	Pn	17 37 28.8	+0.3
ALN	Alexandroupoli	2.21	117	Pn	Pn	17 37 29.8	+1.3
ALN	Alexandroupoli	2.21	117	P	Pn	17 37 29.1	+0.6
ZIMR		2.23	39	⇑P	Pb	17 37 33.2	+0.8
SFL1	Soufli	2.27	108	P	Pn	17 37 31.8	+2.5
SZH	Strazhitsa	2.29	54	P	Pn	17 37 29.8	+0.1
ENEZ	Enez	2.36	120	Pn	Pn	17 37 32.3	+1.7
NEST	Nestorio	2.36	231	P	Pn	17 37 31.6	+0.9
PUNG	Punghina	2.37	351	⇑P	Pb	17 37 33.4	-1.5
CAVK	Edirne/Enez-Ca	2.40	120	P	Pb	17 37 35.7	+0.4
CAVK				S	Sg	17 38 07.9	-1.7
CAVK	Edirne/Enez-Ca	2.40	120	⇓P	Pb	17 37 36.2	+1.0
BORS2	Bor- Borsko je	2.40	335	*e*Pn	Pn	17 37 30.8	-0.3
BORS2				*e*Sn	Sn	17 38 00.0	-0.1
CRAR	CRAIOVA	2.40	6	⇓P	Pb	17 37 34.5	-0.9
LIA	Limnos Island	2.42	147	P	Pn	17 37 31.8	+0.4
ENZZ	Sultanice-Enez	2.42	122	Pn	Pn	17 37 32.6	+1.2
GOCS	Kraljevo Serbi	2.50	311	*e*Pn	Pn	17 37 32.6	0.0
GOCS				*e*Sn	Sn	17 38 03.7	+0.9
UKOP	Uzunkopru-Edir	2.52	108	Pn	Pn	17 37 33.7	+0.9
KPRO	Kipourio	2.53	219	P	Pn	17 37 33.7	+0.7
GADA	Gvkgeada	2.54	132	Pn	Pn	17 37 34.7	+1.6
GOAD	anakkale-G¶	2.57	133	P	Pb	17 37 37.1	-1.1
GOAD				S	Sg	17 38 14.0	-1.2
ERIK	Erikli-Kesan	2.63	118	Pn	Pn	17 37 35.2	+0.9
KESN	Edirne-Kesan	2.67	113	P	Pb	17 37 42.5	+2.3
KESN				S	Sb	17 38 16.4	+3.6
GOKT	Kean, EDRN	2.71	117	P	Pn	17 37 36.4	+1.0
GOKT				S	Sg	17 38 20.2	+0.5
LOZB	Loznitsa	2.73	57	⇓P	Pb	17 37 40.7	-0.3
KIRK	Kırklareli	2.73	92	P	Pn	17 37 35.7	0.0
KIRK				S	Sg	17 38 18.8	-1.5
SRE	Strehaia	2.73	356	⇓P	Pn	17 37 38.6	+2.9
GELI	Tayfur-Gelibol	2.75	123	Pn	Pn	17 37 36.5	+0.5
RAZG	Razgrad	2.78	53	⇑P	Pb	17 37 40.9	-1.0
RMGR	Halanga-Turnu	2.78	349	⇓P	Pn	17 37 38.9	+2.6
BEY	Berane	2.79	291	*e*Pn	Pn	17 37 38.2	+1.5
KUBS	Kucevo	2.80	333	*e*Pn	Pn	17 37 35.9	-0.7
KUBS				*e*Sn	Sn	17 38 09.8	-0.2
GRUS	Gruza	2.80	315	*e*Pn	Pn	17 37 37.3	+0.6
GRUS				*e*Sn	Sn	17 38 10.6	+0.5
DJES	Djerdap	2.81	346	⇑P	Pn	17 37 38.7	+1.9
DJES	Djerdap	2.81	346	*e*Pn	Pn	17 37 37.2	+0.4
DJES				*e*Sn	Sn	17 38 09.8	-0.6
HUMR	Humele	2.82	23	⇓P	Pn	17 37 39.6	+2.7
SVIS	Svilajnac	2.85	326	*e*Pn	Pn	17 37 37.8	+0.5
BOZC	Bozcaada	2.88	136	Pn	Pn	17 37 38.9	+1.2
SJES	Sjenica	2.89	298	*e*Pn	Pn	17 37 38.5	+0.5
SJES				*e*Sn	Sn	17 38 12.7	+0.3
CNKL	anakkale-Mer	2.90	129	P	Pb	17 37 43.1	-0.8
CNKL				S	Sg	17 38 25.5	-0.3
IVAS	Ivanjica	2.93	305	*e*Pn	Pn	17 37 38.8	+0.3
IVAS				*e*Sn	Sn	17 38 14.6	+1.2
LPK	Lapseki	2.95	121	Pn	Pn	17 37 40.3	+1.6
ARMN	Kirklareli, Me	2.97	90	P	Pn	17 37 38.6	-0.4
ARMN				S	Sg	17 38 25.7	-2.4
EZN	Ezine	3.03	133	Pn	Pn	17 37 41.2	+1.4
LAPS	Lapseki, ANA	3.06	122	P	Pn	17 37 41.1	+0.9
LAPS				S	Sg	17 38 28.5	-2.4
RKY	Sarkoy-Tekirda	3.07	113	Pn	Pn	17 37 42.3	+1.9
MDVR	Moldovita	3.12	337	⇑P	Pn	17 37 42.0	+1.0
MDVR	Moldovita	3.12	337	*e*Pn	Pn	17 37 41.3	+0.3
MURA	Muratl, TEK	3.13	103	P	Pn	17 37 42.3	+1.2
MURA				S	Sg	17 38 32.0	-1.1
GAZK	Gazikoy-TEKIRD	3.15	111	Pn	Pn	17 37 43.5	+2.1
PRD	Provadia	3.17	66	*i* P	Pg	17 37 54.2	+0.8
PRD				*i* S	Sb	17 38 28.2	+1.3
TRUS	Trudelj	3.19	317	*e*Pn	Pn	17 37 42.2	+0.1
BAYC	CANAKKALE_Bayr	3.21	132	P	Pn	17 37 44.1	+1.7
BAYC				S	Sg	17 38 32.8	-3.0
BIGA	Biga-Canakkale	3.25	119	Pn	Pn	17 37 44.5	+1.7
SIGR	SIGRI	3.28	145	Pn	Pn	17 37 44.3	+1.1
KRBG	Karabiga-Canak	3.29	117	Pn	Pn	17 37 45.1	+1.8
PLE	Pljevlja	3.30	296	*e*Pn	Pn	17 37 45.1	+1.4
DIVS	Divibare	3.33	312	*e*Pn	Pn	17 37 43.8	-0.2
DIVS				*e*Sn	Sn	17 38 23.6	+0.3
CANM	Can-anakkale	3.34	124	Pn	Pn	17 37 45.1	+1.1
IGT	Igoumenitsa	3.37	226	*e*Pn	Pn	17 37 46.7	+2.2
IGT				*e*Sn	Sn	17 38 25.3	+1.2
MADA	Marmara adas	3.37	112	P	Pn	17 37 45.4	+0.9
MADA				S	Sg	17 38 37.8	-3.1
CICN	Ciocanesti	3.46	48	⇑P	Pb	17 37 50.4	-3.0
GZR	Gura Zlata	3.49	352	⇑P	Pn	17 37 48.9	+2.7
GZR	Gura Zlata	3.49	352	*e*Pn	Pn	17 37 46.1	-0.1
AVAS	Avala Beograd	3.49	323	*e*Pn	Pn	17 37 46.2	0.0
LOT	Lotru	3.52	4	Pn	Pn	17 37 47.5	+0.8
PLAR	PLOIESTI	3.52	31	⇓P	Pn	17 37 49.9	+3.4
VRSS	Vrsac	3.54	335	*e*Pn	Pn	17 37 47.0	+0.2
VRSS				*e*Sn	Sn	17 38 26.6	-1.7
BBLS	Lazi&#263i	3.54	304	*e*Pn	Pn	17 37 47.9	+1.0
YAYO	Edremit-Balk	3.60	129	Pn	Pn	17 37 48.9	+1.3
SLVT	Silivri	3.64	100	Pn	Pn	17 37 49.6	+1.4
BUHA	Balikesir, Bur	3.67	130	P	Pn	17 37 51.1	+2.5
BUHA				S	Sg	17 38 47.2	-3.4
GONE	Gonen-Balikesi	3.72	119	Pn	Pn	17 37 50.7	+1.4
BALY	Balya	3.85	123	P	Pn	17 37 52.5	+1.4
BALY				S	Sb	17 38 50.5	+4.1
CTKS	Kestanelik-??a	3.86	99	Pn	Pn	17 37 53.1	+2.0
TEKS	Tekeris	3.88	314	*e*Pn	Pn	17 37 51.2	-0.3
DKL	Dikili	3.89	136	Pn	Pn	17 37 52.6	+1.0
ISR	Istrita	3.90	34	Pn	Pn	17 37 51.1	-0.7
BZS	Buzias	3.91	341	⇑P	Pn	17 37 52.8	+0.8
BZS	Buzias	3.91	341	*e*Pn	Pn	17 37 52.6	+0.7
DEV	Deva	3.97	354	⇑P	Pn	17 37 54.0	+1.3
MLR	Muntele Rosu	3.99	26	Pn	Pn	17 37 54.5	+1.4
MLR	Muntele Rosu	3.99	26	⇑P	Pn	17 37 56.1	+3.0
MLR	Muntele Rosu	3.99	26	*e*Pn	Pn	17 37 54.3	+1.2
MLR	Muntele Rosu	3.99	26	Pn	Pn	17 37 52.8	-0.3
BLKS	Balkesir-Sus	4.00	120	P	Pn	17 37 54.8	+1.7
BLKS				S	Sb	17 38 51.5	+0.9
BKES	Balkesir-Mer	4.05	121	P	Pn	17 37 54.5	+0.7
BKES				S	Sb	17 38 54.0	+1.9
NEHR	Nehoiu	4.06	30	⇑P	Pn	17 37 57.4	+3.5
BGKT	Bogazkoy	4.07	99	Pn	Pn	17 37 55.9	+1.9
BALB	Balikesir	4.07	123	Pn	Pn	17 37 55.2	+1.1
FRGS	Fruska Gora	4.17	322	*e*Pn	Pn	17 37 56.0	+0.5
FRGS				*e*Sn	Sn	17 38 41.3	-2.5
DOPR	Dopca	4.27	18	⇓P	Pn	17 37 58.6	+1.7
KAVV	Kandilli-Istan	4.30	100	Pn	Pn	17 37 58.9	+1.6
ARMT	Armutlu	4.30	107	Pn	Pn	17 37 58.9	+1.6
COVR	Voineasa-Covas	4.39	26	⇑P	Pn	17 38 00.8	+2.3
TIRR	Tirgusor	4.42	54	Pn	Pn	17 37 58.6	-0.3
OZUR		4.49	21	⇓P	Pn	17 38 01.8	+1.9
TURR	Turia	4.52	23	⇓P	Pn	17 38 02.6	+2.3
SIRR	Siria	4.52	344	⇑P	Pn	17 38 02.2	+2.0
SIRR	Siria	4.52	344	*e*Pn	Pn	17 38 01.2	+0.9
PLOR	Plostina	4.55	29	⇓P	Pn	17 38 03.4	+2.7
VRI	Vrincioaia	4.59	30	⇓P	Pn	17 38 04.0	+2.7
VRI	Vrincioaia	4.59	30	Pn	Pn	17 38 02.2	+1.0
TPGR	Topolog	4.65	49	⇑P	Pn	17 38 05.5	+3.4
MARR	Marisel-Cluj	4.75	357	⇑P	Pn	17 38 04.6	+1.1
CJR	Cluj-Napoca	4.78	1	⇓P	Pn	17 38 06.6	+2.7
ONER	Baraj Valea Uz	4.88	25	⇑P	Pn	17 38 07.8	+2.5
MORH	Mrgy, Hungar	5.50	323	⇑P	Pn	17 38 14.0	+0.2
MORH	Mrgy, Hungar	5.50	323	*e*Pn	Pn	17 38 13.7	-0.1
MORH	Mrgy, Hungar	5.50	323	Pn	Pn	17 38 13.7	-0.1
	comp=N,0.1nmcomp=N,12nm,1.4s						
KORU	Korolevo	6.23	358	Pn	Pn	17 38 24.2	+0.5
BRIU	Brid	6.41	357	Pn	Pn	17 38 28.3	+2.1
MUKU	Mukachevo	6.54	356	Pn	Pn	17 38 29.7	+1.7
MEZ	Mezhgor'ye	6.58	0	Pn	Pn	17 38 29.6	+1.0
MEZ				Sn	Sn	17 39 46.1	+2.9
MPLH	Magyarpolny	6.72	323	Pn	Pn	17 38 29.9	-0.6
	comp=N,0.2nmcomp=N,31nm,0.9s						
KECS	Kecovo	6.88	343	*e*PN	Pn	17 38 32.7	+0.1
KECS				*e*SN	Sn	17 39 51.4	+1.0
KMPD	K-Podol'skiy	6.96	17	Pn	Pn	17 38 35.6	+1.9
KMPD				Pn	Pn	17 38 33.3	-0.4
SOKA	Soboth	7.67	311	*e*Sn	Sn	17 40 06.5	-3.8
	comp=N,2.6nm,0.3s						
ARSA	Arzberg	7.76	316	*e*Pn	Pn	17 38 47.0	+2.3
	comp=N,1.6nm,0.4s						
ARSA				*e*Sn	Sn	17 40 07.7	-4.6
	comp=N,3.0nm,0.4s						
MODS	Modra-Piesok	7.78	328	*e*SN	Sn	17 40 09.0	-3.6
OBKA	Obir	7.86	309	*e*Sn	Sn	17 40 12.5	-2.3
	comp=N,5.0nm,0.5s						
CONA	Conrad Observa	8.05	321	*e*Pn	Pn	17 38 50.5	+1.7
	comp=N,0.9nm,0.4s						
CONA				*e*Sn	Sn	17 40 17.6	-1.9
	comp=N,3.2nm,0.6s						
MYKA	Terra Mystica	8.46	307	*i* Sn	Sn	17 40 27.8	-1.7
	comp=N,1.3nm,0.3s						
MOA	Molln	8.80	315	*e*Sn	Sn	17 40 36.1	-1.7
	comp=N,3.5nm,0.6s						
BIOA	Bad Ischl, Aus	9.04	313	*e*Pn	Pn	17 39 02.2	-0.1
	comp=N,1.6nm,0.4s						
BIOA				*e*Sn	Sn	17 40 42.0	-1.7
	comp=N,3.7nm,0.5s						
ABTA	Abfaltersbach	9.19	305	*e*Pn	Pn	17 39 10.3	+5.8
	comp=N,2.1nm,0.5s						
ABTA				*e*Sn	Sn	17 40 46.0	-1.5
	comp=N,1.8nm,0.5s						
LESA	Schwarzleotal	9.43	309	*e*Pn	Pn	17 39 13.8	+6.1
	comp=N,2.1nm,0.4s						
LESA				*e*Sn	Sn	17 40 51.0	-2.3
	comp=N,7.1nm,0.5s						
AK06	Malin Array Si	9.52	23	Pn	Pn	17 39 09.8	+0.9
AK10	Malin Array Si	9.55	23	Pn	Pn	17 39 09.2	0.0
AK05	Malin Array Si	9.55	23	Pn	Pn	17 39 08.9	-0.4
AK09	Malin Array Si	9.57	23	Pn	Pn	17 39 10.1	+0.5
WTTA	Wattenberg	9.96	306	*e*Pn	Pn	17 39 20.0	+4.8
	comp=N,3.0nm,0.4s						
WTTA				*i* Sn	Sn	17 41 06.3	-0.3
	comp=N,2.2nm,0.4s						
KHC	Kasperske Hory	9.98	319	*e*SN	Sn	17 41 02.5	-4.3
WATA	Walderalm	10.03	307	*e*Pn	Pn	17 39 20.4	+4.4
	comp=N,1.6nm,0.4s						
WATA				*e*Sn	Sn	17 41 08.5	+0.2
	comp=N,0.8nm,0.3s						
SQTA	Sankt Quirin	10.20	305	*i* Pn	Pn	17 39 22.8	+4.4
	comp=N,4.3nm,0.5s						
FETA	Feichten	10.41	304	*e*Pn	Pn	17 39 25.5	+4.3
	comp=N,0.7nm,0.3s						

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*UPP **29** 17:46:48.0±0.1, 67°.84N×20°.22E, h0^{km}, ML2.7, Confirmed Induced event*
*HEL **29** 17:46:50.8±0.7, 67°.83N×20°.29E, h0^{km}, ML0.9, Suspected explosion*
ISC 29 17:46:48.2±1.0**, 67°.84N**±0°.04×**20°.18E**±0°.05**, h0**^{km}**, n14, σ1^{s}.16**/20**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.13	27	P	Pg	17 46 50.5	-0.1
KUA				S	Sg	17 46 51.9	-0.3
RATU	Laukkuluspa	0.23	266	P	Pg	17 46 52.7	+0.2
KOVU	Salmi	0.38	359	P	Pg	17 46 55.4	-0.2
LANU	Lannavaara	0.71	72	S	Sg	17 47 10.6	-0.5
LANU	Lannavaara	0.71	72	SG	Sg	17 47 10.6	-0.5
SALU	Saltoluokta	0.79	235	P	Pg	17 47 03.0	-0.3
HEF	Hetta	1.42	65	PG	Pn	17 47 14.6	-0.6
HEF				MSG		17 47 32.5	
	comp=Z,0.8nm,0.2s						
HEF				SN	Sn	17 47 37.6	+2.9
ERTU	Ertsjaerv	1.51	148	P	Pn	17 47 16.1	-0.3
ERTU	Ertsjaerv	1.51	148	PB	Pn	17 47 16.5	0.0
ERTU				SN	Sn	17 47 39.4	+2.7
KLF	Kolari	1.57	111	PG	Pn	17 47 17.1	-0.2
KLF				MSG		17 47 36.7	
	comp=Z,0.7nm,0.2s						
KLF				SG	Sg	17 47 38.9	+0.2
KTK1	Kautokeino	1.63	42	PG	Pg	17 47 19.2	-0.1
KTK1				SN	Sg	17 47 41.8	+1.3
TOF	Tornio	2.40	135	MSG		17 48 01.0	
	comp=Z,0.5nm,0.2s						
TOF				SB	Sb	17 48 02.7	+0.4
RNF	Rovaniemi	2.58	116	PN	Pb	17 47 33.3	-2.0
RNF				SB	Sb	17 48 07.6	+0.1
KEV	Kevo	3.14	49	SB	Sb	17 48 23.6	+0.2

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*NEIC **29** 17:55:23.8±2.3, 22°.33S±0°.05×68°.85W±0°.06, h117^{km}±7^{km}, mb4.3/2, ML4.2(GUC), Error ellipse: s-maj=8.5km s-min=7.3km az=131.0*
*SJA **29** 17:55:23.6±1.5, 22°.29S×68°.88W, h111^{km}±17^{km}, ML4.1, MW4.1*
*IDC **29** 17:55:24.8±1.0, 22°.30S×68°.59W, h101^{km}±7^{km}, mb3.3/5, mbtmp3.7/9, Error ellipse: s-maj=24.6km s-min=18.8km az=36.0*
*GUC **29** 17:55:25.2±0.7, 22°.31S×68°.86W, h108^{km}±3^{km}, ML4.2*
ISC 29 17:55:23.7±0.6**, 22°.32S**±0°.04×**68°.79W**±0°.04**, h104**^{km}±5^{km}**, n84, σ1^{s}.44**/93**, mb3.7**/4**, 11C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.67**	**321**		**Pn**	**17 55 41.2**	**-0.2**
PB09	**IPOC Station P**	**0.67**	**321**	⇑*i*P	**Pn**	**17 55 42.4**	**+1.0**
PB09				*i* S	**Sn**	**17 55 55.8**	**+1.2**
PB09				IAML		17 55 57.6	
	comp=N,6μm,0.2s						
PB09	**IPOC Station P**	**0.67**	**321**	*i* P	**Pn**	**17 55 42.2**	**+0.9**
PB09				*e*S	**Sn**	**17 55 55.0**	**+0.4**
PB09				IAML		17 55 57.4	
	comp=Z,4μm,0.2s						
PB06	**IPOC Station P**	**0.82**	**242**		**Pn**	**17 55 43.6**	**+0.9**
PB06	**IPOC Station P**	**0.82**	**242**	⇑*i*P	**Pn**	**17 55 43.6**	**+0.9**
PB06				*i* S	**Sn**	**17 55 57.6**	**+0.5**
PB06				*i* S		17 55 57.8	
PB06				IAML		17 55 58.7	
	comp=E,4μm,0.3s						
PB06	**IPOC Station P**	**0.82**	**242**	*i* P	**Pn**	**17 55 43.7**	**+0.9**
PB06				*e*S	**Sn**	**17 55 57.7**	**+0.6**
PB06				IAML		17 56 03.1	
	comp=Z,2μm,0.2s						
AF01	**San Pedro de A**	**0.85**	**138**		**Pn**	**17 55 44.9**	**+1.7**
AF01	**San Pedro de A**	**0.85**	**138**	⇓*i*P	**Pn**	**17 55 45.1**	**+1.9**
AF01				*i* S	**Sn**	**17 56 00.1**	**+2.3**
AF01				IAML		17 56 01.6	
	comp=E,12μm,0.6s						
AF01	**San Pedro de A**	**0.85**	**138**	*i* P	**Pn**	**17 55 44.5**	**+1.3**
AF01				IAML		17 56 21.5	
	comp=Z,5μm,0.6s						
PB07	**IPOC Station P**	**1.18**	**300**		**Pn**	**17 55 46.8**	**+0.3**
PB07	**IPOC Station P**	**1.18**	**300**	⇑*i*P	**Pn**	**17 55 47.2**	**+0.7**
PB07				*i* S	**Sn**	**17 56 04.2**	**+0.5**
PB07				IAML		17 56 05.3	
	comp=E,12μm,0.4s						
PB07	**IPOC Station P**	**1.18**	**300**	*i* P	**Pn**	**17 55 47.2**	**+0.7**
PB07				*e*S	**Sn**	**17 56 03.9**	**+0.2**
PB07				IAML		17 56 05.8	
	comp=Z,6μm,0.4s						
PB05	**IPOC Station P**	**1.41**	**247**		**Pn**	**17 55 49.7**	**+0.6**
PB05	**IPOC Station P**	**1.41**	**247**	⇑*i*P	**Pn**	**17 55 49.8**	**+0.6**
PB05				*e*S	**Sn**	**17 56 08.8**	**+0.3**
PB05				IAML		17 56 12.7	
	comp=E,2μm,0.6s						
PB05	**IPOC Station P**	**1.41**	**247**	*i* P	**Pn**	**17 55 50.0**	**+0.8**
PB05				*e*S	**Sn**	**17 56 05.8**	**-2.7**
PB05				IAML		17 56 17.8	
	comp=Z,1μm,0.6s						
PB01	**IPOC Station P**	**1.42**	**333**		**Pn**	**17 55 49.5**	**+0.2**
PB01	**IPOC Station P**	**1.42**	**333**	⇑*i*P	**Pn**	**17 55 50.0**	**+0.7**
PB01				*i* S	**Sn**	**17 56 09.6**	**+1.0**
PB01				IAML		17 56 11.8	
	comp=E,6μm,0.5s						
PB01	**IPOC Station P**	**1.42**	**333**	*i* P	**Pn**	**17 55 50.1**	**+0.7**
PB01				*e*S	**Sn**	**17 56 09.7**	**+1.0**
PB01				IAML		17 56 11.9	
	comp=Z,4μm,0.2s						
PB02	**IPOC Station P**	**1.43**	**314**		**Pn**	**17 55 49.9**	**+0.5**
PB02	**IPOC Station P**	**1.43**	**314**	⇑*i*P	**Pn**	**17 55 50.1**	**+0.7**
PB02				*i* S	**Sn**	**17 56 09.2**	**+0.4**
PB02				IAML		17 56 10.2	
	comp=E,8μm,0.3s						
PB02	**IPOC Station P**	**1.43**	**314**	*i* P	**Pn**	**17 55 49.9**	**+0.5**
PB02				*e*S	**Sn**	**17 56 09.4**	**+0.5**
PATCX	**Punta Patache**	**1.96**	**319**		**Pn**	**17 55 56.2**	**+0.2**
PATCX	**Punta Patache**	**1.96**	**319**	⇑*i*P	**Pn**	**17 55 56.1**	**+0.2**
PATCX				*i* S	**Sn**	**17 56 20.6**	**0.0**
PATCX				IAML		17 56 26.1	
	comp=E,5μm,0.3s						
PB10	**IPOC Station P**	**2.02**	**233**		**Pn**	**17 55 57.9**	**+1.2**
PB10	**IPOC Station P**	**2.02**	**233**	*e*P	**Pn**	**17 55 57.5**	**+0.9**
PB10				IAML		17 56 31.6	
	comp=N,557nm,0.6s						
PX03	**IPOC Station P**	**2.06**	**337**	*e*P	**Pn**	**17 55 56.5**	**-0.7**
TA01	**Diego Aracena**	**2.17**	**323**		**Pn**	**17 55 58.5**	**-0.1**
PB08	**IPOC Station P**	**2.19**	**351**		**Pn**	**17 56 00.5**	**+1.2**
HMBC	**Humberstone**	**2.27**	**333**		**Pn**	**17 55 59.7**	**-0.4**
HMBC	**Humberstone**	**2.27**	**333**	⇑*e*P	**Pn**	**17 56 00.0**	**0.0**
HMBC				IAML		17 56 36.6	
	comp=N,3μm,0.2s						
TA02	**Huaiquique**	**2.39**	**328**	*e*P	**Pn**	**17 56 01.0**	**-0.4**
GO01	**Chusmiza**	**2.66**	**352**		**Pn**	**17 56 06.5**	**+1.0**
GO01	**Chusmiza**	**2.66**	**352**	⇑*e*P	**Pn**	**17 56 06.6**	**+1.0**
GO01				IAML		17 56 52.6	
	comp=N,2μm,0.1s						
GO01	**Chusmiza**	**2.66**	**352**	*i* P	**Pn**	**17 56 06.3**	**+0.7**
GO01				IAML		17 56 46.0	
	comp=Z,695nm,0.9s						
PB11	**IPOC Station P**	**2.67**	**342**		**Pn**	**17 56 04.9**	**-0.4**
PB11	**IPOC Station P**	**2.67**	**342**	⇑*e*P	**Pn**	**17 56 05.2**	**-0.1**
PB11	**IPOC Station P**	**2.67**	**342**	*i* P	**Pn**	**17 56 04.7**	**-0.6**
PB11				IAML		17 56 51.3	
	comp=Z,861nm,0.7s						
PB14	**IPOC Station P**	**2.74**	**212**		**Pn**	**17 56 06.5**	**+0.2**
PB14	**IPOC Station P**	**2.74**	**212**	*e*P	**Pn**	**17 56 08.4**	**+2.1**
PB14	**IPOC Station P**	**2.74**	**212**	*i* P	**Pn**	**17 56 07.7**	**+1.4**
PB14				IAML		17 56 51.2	
	comp=Z,319nm,0.6s						
GO02	**Mina Guanaco**	**2.93**	**194**		**Pn**	**17 56 09.2**	**+0.4**
GO02	**Mina Guanaco**	**2.93**	**194**	*e*P	**Pn**	**17 56 08.0**	**-0.9**
GO02				IAML		17 57 11.1	
	comp=E,536nm,0.5s						
SALTA		**2.95**	**131**	⇑*e*P	**Pn**	**17 56 12.7**	**+3.4**
SALTA		**2.95**	**131**	*i* P	**Pn**	**17 56 13.0**	**+3.7**
SALTA				IAML		17 56 54.1	
	comp=Z,57nm,0.9s						
PB12	**IPOC Station P**	**3.96**	**338**		**Pn**	**17 56 20.4**	**-2.1**
PB12	**IPOC Station P**	**3.96**	**338**	*i* P	**Pn**	**17 56 20.6**	**-1.8**
PB12				IAML		17 57 20.9	
	comp=Z,444nm,0.6s						
PB16	**IPOC Station P**	**4.02**	**350**		**Pn**	**17 56 21.9**	**-1.8**
PB16	**IPOC Station P**	**4.02**	**350**	*i* P	**Pn**	**17 56 24.2**	**+0.5**
PB16				IAML		17 57 39.8	
	comp=Z,222nm,0.5s						
AC01	**Pan de Azucar**	**4.16**	**203**		**Pn**	**17 56 25.2**	**+0.1**
AC01	**Pan de Azucar**	**4.16**	**203**	*i* P	**Pn**	**17 56 23.4**	**-1.7**
AC01				IAML		17 57 26.8	
	comp=Z,293nm,0.8s						
PB18	**Visviri**	**4.75**	**352**	Pn	Pn	17 56 39.9	+6.4
GO03	**Copiapo**	**5.42**	**194**		**Pn**	**17 56 40.5**	**-1.6**
GO03	**Copiapo**	**5.42**	**194**	*i* P	**Pn**	**17 56 41.1**	**-1.0**
GO03				IAML		17 58 14.9	
	comp=Z,107nm,1.1s						
LPAZ	**La Paz**	**6.03**	**6**	P	**Pn**	**17 56 53.4**	**+2.4**
	comp=Z,5.5nm,0.3s,baz=204,slow=5.1,SNR=32						
LPAZ	**La Paz**	**6.03**	**6**		**Pn**	**17 56 48.1**	**-2.9**
AC05	**El Transito**	**6.63**	**191**		**Pn**	**17 56 55.5**	**-3.2**
LCO	**Las Campanas**	**6.89**	**194**		**Pn**	**17 56 59.4**	**-2.9**
CO01	**Juntas del Tor**	**7.72**	**188**	Pn	**Pn**	**17 57 14.4**	**+0.8**
CFA	**Coronel Fontan**	**9.27**	**177**	P	**Pn**	**17 57 32.3**	**-2.1**
	comp=Z,2.2nm,0.3s,baz=354,slow=13,SNR=5.3						
SIV	**San Ignacio**	**9.63**	**51**	P	**Pn**	**17 57 37.6**	**-1.8**
	comp=Z,4.5nm,0.5s,baz=241,slow=8.9,SNR=31						
SIV				S	**Sn**	**17 59 21.0**	**-4.8**
	comp=Z,1.7nm,0.6s,baz=300,slow=19,SNR=1.9						
CPUP	**Villa Florida**	**11.19**	**113**	P	**Pn**	**17 57 59.6**	**-0.9**
	comp=Z,1.6nm,0.7s,baz=285,slow=13,SNR=8.0						
CPUP				S	**Sn**	**18 00 02.0**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=101,slow=20,SNR=0.7						
AQDB	**Aquidauana**	**12.33**	**84**	Pn	**Pn**	**17 58 17.5**	**+1.8**
H03N1	**Juan Fernandez**	**14.23**	**217**	T	T	18 13 07.0	
	baz=37,slow=72,SNR=15						
H03N2	**Juan Fernandez**	**14.24**	**217**	T	T	18 13 25.8	
	baz=37,slow=72,SNR=4.2						
H03N3	**Juan Fernandez**	**14.25**	**217**	T	T	18 13 33.4	
	baz=37,slow=72,SNR=5.9						
TRQA	**Tornquist**	**16.75**	**161**		**Pn**	**17 59 12.2**	**+0.2**
TRQA				IAmb	IAmb	17 59 18.8	
	comp=Z,6.8nm,0.7s						
PLCA	**Paso Flores**	**18.42**	**184**	P	**Pn**	**17 59 33.2**	**+0.9**
	comp=Z,1.3nm,0.9s,baz=32,slow=11,SNR=3.6						
BDFB	**Brasilia**	**20.73**	**75**	P	**P**	**17 59 54.7**	**-1.4**
	comp=Z,0.9nm,0.4s,baz=214,slow=11,SNR=3.3						
	comp=Z,0.9nm,0.4s						
BELA	**Belgrano 2**	**57.93**	**172**	P	**P**	**18 05 03.5**	**-1.1**
BELA				IAmb	IAmb	18 05 06.7	
	comp=Z,3.3nm,0.6s						
TXAR	**Lajitas Array**	**61.36**	**325**	P	**P**	**18 05 30.5**	**+1.6**
	comp=Z,0.2nm,0.6s,baz=145,slow=7.9,SNR=1.8						
	comp=Z,0.2nm,0.6s						
PDAR	**Pinedale Array**	**74.87**	**330**	P	**P**	**18 06 54.8**	**+1.5**
	comp=Z,0.2nm,0.4s,baz=148,slow=8.8,SNR=3.9						
	comp=Z,0.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**77.53**	**70**	P	**P**	**18 07 09.6**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=255,slow=4.8,SNR=9.2						
TORD				pP	**pP**	**18 07 34.0**	**-2.1**
	comp=Z,1.1nm,0.8s,baz=247,slow=4.9,SNR=4.2						
	comp=Z,0.6nm,0.5s						
YKA	**Yellowknife Ar**	**91.99**	**341**	P	**P**	**18 08 21.9**	**+1.6**
	comp=Z,0.7nm,0.7s,baz=144,slow=3.7,SNR=13						
YKA				pP	**pP**	**18 08 48.5**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=143,slow=3.6,SNR=3.9						
	comp=Z,0.7nm,0.7s						
H11S2	**WAKE ISLAND Hy**	**128.09**	**276**	T	T	20 34 32.9	
	baz=104,slow=75,SNR=17						
H11S1	**WAKE ISLAND Hy**	**128.09**	**277**	T	T	20 34 34.8	
	baz=104,slow=75,SNR=8.3						
H11S3	**WAKE ISLAND Hy**	**128.10**	**276**	T	T	20 34 11.9	
	baz=104,slow=75,SNR=6.7						
H11N3	**WAKE ISLAND Hy**	**128.19**	**278**	T	T	20 34 41.9	
	baz=103						
H11N2	**WAKE ISLAND Hy**	**128.20**	**278**	T	T	20 34 30.8	
	baz=103						
H11N1	**WAKE ISLAND Hy**	**128.20**	**278**	T	T	20 34 42.9	
	baz=103						
ASAR	**Alice Springs**	**129.24**	**207**	PKP	**PKiKP**	**18 14 22.2**	**+0.8**
	comp=Z,0.6nm,0.9s,baz=123,slow=1.5,SNR=9.4						
WRA	**Warramunga Arr**	**132.31**	**210**	PKP	**PKiKP**	**18 14 26.6**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=140,slow=1.8,SNR=1.4						
ZALV	**Zalesovo Beam**	**142.64**	**26**	PKP	**PKiKP**	**18 14 46.1**	**-1.3**
	comp=Z,0.6nm,0.6s,baz=303,slow=1.6,SNR=4.0						
MKAR	**Makanchi Array**	**146.22**	**37**	PKPbc	**PKPab**	**18 14 53.0**	**0.0**
	comp=Z,1.0nm,0.8s,baz=287,slow=3.3,SNR=8.2						
MKAR				pPKPbc	**pPKPdf**	**18 15 20.3**	**+0.1**
	comp=Z,0.7nm,0.9s,baz=315,slow=2.1,SNR=3.3						
SONM	**Songino Array**	**154.25**	**7**	PKPbc	**PKiKP**	**18 15 12.7**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=4.3,slow=5.8,SNR=1.9						

IDC 29 17:59:00.5±3.4**,22°.77S**×**175°.91W,h0^{km},mb3.5**/3**,**
mbtmp3.5/3**,Error ellipse: s-maj=175.4km**
s-min=37.6km az=148.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**45.94**	**259**	P	P	18 07 25.5	0.0
	0.4nm,0.8s,baz=89,slow=7.5,SNR=4.2						
ASAR				PcP	PcP	18 09 02.0	-0.6
	0.1nm,0.5s,baz=87,slow=3.4,SNR=4.7						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**46.25**	**264**	P	P	18 07 28.6	+0.6
	0.1nm,0.3s,baz=97,slow=7.3,SNR=1.5						
	0.1nm,0.3s						
ILAR	**Eielson Array**	**90.10**	**12**	P	P	18 12 03.5	+1.6
	0.2nm,0.4s,baz=214,slow=5.5,SNR=6.5						
	0.2nm,0.4s						
SPITS	**Spitsbergen Ar**	**124.23**	**357**	PKP	PKPdf	18 17 59.9	-0.5
	7.8nm,0.9s,baz=82,slow=10,SNR=5.1						
AKASG	**Malin Array Be**	**145.93**	**331**	PKPbc	PKPdf	18 18 38.6	-2.5
	0.7nm,0.4s,baz=44,slow=4.1,SNR=5.1						

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*IDC **29** 18:17:47.2±1.7, 30°.58N×142°.16E, h0^{km}, mb3.8/7, mbtmp3.9/9, ML3.4/2, MS2.6/1, Error ellipse: s-maj=55.5km s-min=18.0km az=76.0*

*JMA **29** 18:17:49.0±0.2, 30°.6N±0°.7×14°2E±°, h60^{km}, MV4.0/20, NEAR TORISHIMA IS*

*NEIC **29** 18:17:50.6±2.2, 30°.59N±0°.08×142°.4E±0°.2, h29^{km}±8^{km}, mb4.3/14, Error ellipse: s-maj=21.4km s-min=9.7km az=74.0*

ISC 29 18:17:49.2±0.9**,30°.62N**±0°.05×**142°.4E**±0°.1**,h24^{km},n48,**
σ**1^{s}44**/50**,mb4.1**/13**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**3.33**	**318**	*e*P	**Pn**	**18 18 39.8**	**+0.1**
JHJ2	**Mitsune**	**3.34**	**319**	Pn	**Pn**	**18 18 39.2**	**-0.7**
CBIJ	**Chichi jima**	**3.52**	**184**	*e*P	**Pn**	**18 18 42.6**	**+0.2**
CBIJ				*e*S	**Sn**	**18 19 22.8**	**-0.4**
JCJ	**Chichijima**	**3.52**	**184**	Pn	**Pn**	**18 18 42.7**	**+0.3**
JMKN	**Mikurajimanish**	**4.06**	**324**	*e*S	**Sn**	**18 19 34.9**	**-1.7**
BSO1	**Boso 1**	**4.21**	**343**	*e*P	**Pn**	**18 18 52.5**	**+1.2**
BSO1				*e*S	**Sn**	**18 19 40.2**	**+0.7**
BSO3	**Boso 3**	**4.48**	**339**	*e*S	**Sn**	**18 19 47.2**	**+0.7**
JOD2	**Odawara 2**	**5.42**	**330**	*e*P	**Pn**	**18 19 08.9**	**+0.4**
JRY	**Ryogami san**	**6.15**	**332**	*e*P	**Pn**	**18 19 19.8**	**+1.3**
JHO	**Hitachi**	**6.18**	**346**	*e*P	**Pn**	**18 19 19.0**	**+0.1**
JAG	**Ashikaga**	**6.31**	**337**	*e*P	**Pn**	**18 19 21.4**	**+0.7**
JAG				*e*S	**Sn**	**18 20 28.9**	**-3.1**
JGF	**Kuroka**	**6.55**	**321**	Pn	**Pn**	**18 19 23.2**	**-0.8**
MJAR	**Matsushiro Arr**	**6.88**	**330**	Pn	**Pn**	**18 19 29.7**	**+1.1**
	0.4nm,0.3s,baz=161,slow=11,SNR=71						
MJAR				Sn	**Sn**	**18 20 44.8**	**-1.4**
	0.2nm,0.3s,baz=164,slow=19,SNR=6.5						
MJAR				LR	LR	18 21 49.0	
	comp=Z,47nm,20.0s,baz=142,slow=36						
	4.4nm,0.5s						
MJAR	**Matsushiro Arr**	**6.88**	**330**		**Pn**	**18 19 29.1**	**+0.5**
MAJO	**Matsushiro**	**6.88**	**330**		**Pn**	**18 19 30.3**	**+1.7**
MJB9	**Matsu-Tunnel**	**6.89**	**330**		**Pn**	**18 19 29.5**	**+0.8**
JMK	**Ichinoseki**	**8.38**	**353**	*e*P	**Pn**	**18 19 49.4**	**+0.4**
JMK				*e*S	**Sn**	**18 21 16.5**	**-6.3**
JSU	**Suzuyama**	**10.32**	**278**	Pn	**Pn**	**18 20 16.3**	**+0.5**
ERM	**Erimo**	**11.39**	**3**	Pn	**Pn**	**18 20 29.0**	**-1.3**
JKA	**Kamikawa-asahi**	**13.47**	**0**	Pn	**Pn**	**18 20 59.1**	**+0.3**
ASAJ	**Asahikawa**	**13.48**	**0**	Pn	**Pn**	**18 20 59.2**	**+0.4**
	0.3nm,0.3s,baz=218,slow=12,SNR=1.8						
	12nm,1.1s						
YULB	**Yu-li**	**20.15**	**254**	P	**P**	**18 22 19.3**	**-2.5**
YULB				IAmb	IAmb	18 22 32.6	
	comp=Z,45nm,1.4s						
SSLB	**Suanglung**	**20.27**	**256**	P	**P**	**18 22 21.7**	**-1.5**
SSLB				IAmb	IAmb	18 22 39.0	
	comp=Z,19nm,1.2s						
TPUB	**Ta-pu**	**20.74**	**255**	P	**P**	**18 22 26.7**	**-1.6**
H11S3	**WAKE ISLAND Hy**	**25.08**	**113**	T	T	18 49 39.6	
	baz=304						
H11S1	**WAKE ISLAND Hy**	**25.08**	**113**	T	T	18 49 41.3	
	baz=304						
H11S2	**WAKE ISLAND Hy**	**25.09**	**113**	T	T	18 49 44.3	
	baz=304						
SONM	**Songino Array**	**32.42**	**312**	P	**P**	**18 24 18.4**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=112,slow=7.7,SNR=5.0						
	comp=Z,0.5nm,0.6s						
SONM	**Songino Array**	**32.42**	**312**	P	**P**	**18 24 19.2**	**+1.8**
CMAR	**Chiang Mai Arr**	**41.15**	**263**	P	**P**	**18 25 30.4**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=73,slow=7.4,SNR=5.2						
	comp=Z,0.4nm,0.7s						
MTN	**Manton Dam**	**44.56**	**196**	P	**P**	**18 25 58.5**	**-0.9**
MKAR	**Makanchi Array**	**48.47**	**307**	P	**P**	**18 26 30.9**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=88,slow=8.2,SNR=9.8						
	comp=Z,0.6nm,0.6s						
MKAR	**Makanchi Array**	**48.47**	**307**	P	**P**	**18 26 30.7**	**+0.9**
MAKZ	**Makanchi**	**48.69**	**307**	P	**P**	**18 26 32.4**	**+0.9**
MAKZ				IAmb	IAmb	18 26 58.5	
	comp=Z,2.4nm,1.1s						
WR8	**Warramunga Arr**	**50.86**	**190**	P	**P**	**18 26 49.1**	**+0.9**
WR8				IAmb	IAmb	18 27 12.8	
	comp=Z,9.2nm,1.4s						
WRA	**Warramunga Arr**	**50.87**	**190**	P	**P**	**18 26 49.3**	**+1.1**
	comp=Z,2.4nm,0.6s,baz=6.6,slow=7.5,SNR=27						
	comp=Z,2.4nm,0.6s						
WRA	**Warramunga Arr**	**50.87**	**190**	P	**P**	**18 26 47.7**	**-0.5**
FITZ	**Fitzroy Crossi**	**51.06**	**201**	P	**P**	**18 26 50.6**	**+1.0**
FITZ				IAmb	IAmb	18 27 06.4	
	comp=Z,2.4nm,1.4s						
AS31	**Alice Springs**	**54.59**	**190**	P	**P**	**18 27 15.2**	**-0.5**
ASAR	**Alice Springs**	**54.59**	**190**	P	**P**	**18 27 17.0**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=358,slow=5.2,SNR=26						
	comp=Z,0.6nm,0.6s						
ASAR	**Alice Springs**	**54.59**	**190**	P	**P**	**18 27 15.4**	**-0.3**
BVAR	**Borovoye Array**	**55.65**	**316**	P	**P**	**18 27 23.1**	**0.0**
	comp=Z,0.6nm,0.5s,baz=63,slow=9.9,SNR=3.0						
	comp=Z,0.6nm,0.5s						
ARSB	**Arslanbob**	**55.86**	**302**	P	**P**	**18 27 26.3**	**+1.2**
ARSB				IAmb	IAmb	18 27 53.7	
	comp=Z,2.6nm,1.1s						
KK31	**Karatay Array**	**57.26**	**304**	P	**P**	**18 27 35.3**	**+0.6**
KK31				IAmb	IAmb	18 27 38.5	
	comp=Z,1.8nm,1.0s						
KKAR	**Karatay Array**	**57.26**	**304**	P	**P**	**18 27 35.6**	**+0.8**
CHGR	**Chuyangaron**	**59.38**	**299**	P	**P**	**18 27 50.1**	**+0.4**
AB31	**Akbulak array**	**62.83**	**313**	P	**P**	**18 28 13.5**	**+0.6**
AB31				IAmb	IAmb	18 28 17.3	
	comp=Z,3.3nm,1.4s						
FINES	**FINESS Array B**	**74.90**	**334**	P	**P**	**18 29 28.7**	**+1.0**
	comp=Z,3.6nm,0.9s,baz=90,slow=6.9,SNR=4.4						
	comp=Z,3.6nm,0.9s						

DJA 29 18:21:05.0±0.4**,4°N**±3°×**9°6E**±°**,h92^{km}**±4^{km}**,M3.6**/10**,**
mb4.2/5**,MLv3.3**/10**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**0.26**	**19**	P	Pn	18 21 20.3	+1.8
MLSI				S	Sn	18 21 29.8	+1.3
TPTI		**1.14**	**131**	P	Pn	18 21 27.4	+0.9
TPTI				S	Sn	18 21 41.5	-1.2
LHMI	**Lhok Sumawe**	**1.35**	**27**	P	Pn	18 21 31.1	+2.1
KCSI	**Kotacane, Aceh**	**1.53**	**109**	P	Pn	18 21 31.7	+0.4
SNSI	**Sinabang, Aceh**	**1.60**	**180**	P	Pn	18 21 32.6	+0.4
GSI	**Gunungsitoli**	**2.98**	**155**	P	Pn	18 21 51.1	+0.8
KULM	**Kulim**	**4.50**	**74**	P	Pn	18 22 10.9	+0.1
PBSI	**Pulau Batu**	**4.50**	**154**	P	Pn	18 22 11.4	+0.6
IPM	**Ipoh**	**4.71**	**84**	P	Pn	18 22 14.3	+0.5
BKNI	**Bangkinang**	**5.97**	**128**	P	Pn	18 22 30.7	-0.3
MNAI	**Manna**	**10.64**	**141**	P	Pn	18 23 33.9	-0.7
	61nm,1.2s						
MDSI	**Maura Dua**	**11.53**	**137**	P	Pn	18 23 46.3	-0.4
	5.3nm,1.8s						
TPI	**Tanjungpandan**	**13.18**	**121**	P	Pn	18 24 07.7	-0.9
CHTO	**Chiang Mai**	**14.93**	**10**	P	Pn	18 24 30.4	-0.8
PALK	**Pallekele**	**15.87**	**282**	P	Pn	18 24 42.4	-0.9

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*IDC **29** 18:24:40.2±0.5, 52°.84S×11°.57E, h0^{km}, mb4.8/14, mbtmp4.8/15, ML4.3/1, MS4.6/39, Error ellipse: s-maj=17.6km s-min=15.0km az=72.0*

*MOS **29** 18:24:40.4±1.7, 52°.84S×11°.30E, h10^{km}, mb5.3/12, Error ellipse: s-maj=25.7km s-min=10.9km az=85.4*

*NEIC **29** 18:24:41.5, 52°.87S×11°.38E, h22^{km}*

*NEIC **29** 18:24:41.5, 52°.87S×11°.38E, h22^{km}, Moment Tensor Solution. Duration: 1^{s}9 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.18; $M_{\theta\theta}$7.77; $M_{\phi\phi}$-5.59; $M_{r\theta}$-0.98; $M_{\theta\phi}$0.28; $M_{\phi r}$1.25; Fault plane solution: $M_0$7.13000×10^{16} NP1: ϕ_s224.85000°, δ72.97000°, λ-170.49000°. NP2: ϕ_s132.04000°, δ80.91000°, λ-17.25000°. Principal axes: T 7.8672, Plg5.0000°, Azm179.0000°; N -1.8460, Plg71.0000°, Azm285.0000°; P -6.0212, Plg19.0000°, Azm87.0000°;*

*NEIC **29** 18:24:41.7±2.1, 52°.86S±0°.05×11°.3E±0°.2, h10^{km}±1^{km}, mb5.2/40, Mww5.2/11 Error ellipse: s-maj=21.9km s-min=8.9km az=91.0*

*GCMT **29** 18:24:43.7±0.1, 52°.90S±0°.01×11°.70E±0°.02, h12^{km}, MW5.2/136, Moment Tensor Solution. s79,c107; s136,c222; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.18±.01; $M_{\theta\theta}$0.81±.01; $M_{\phi\phi}$-0.63±.01; $M_{r\theta}$0.03±.03; $M_{\theta\phi}$0.17±.01; $M_{\phi r}$0.06±.03; Best double couple: $M_0$0.74500×10^{17} NP1:ϕ_s128.00000°, δ84.00000°, λ-4.00000°. NP2:ϕ_s219.00000°, δ86.00000°, λ-174.00000°. Principal axes: T 0.8330, Plg2.0000°, Azm353.0000°; N -0.1760, Plg83.0000°, Azm248.0000°; P -0.6570, Plg7.0000°, Azm84.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*GFZ **29** 18:24:43.1, 52°.94S×11°.43E, h16^{km}, MW5.2, Moment Tensor Solution. s16 Moment tensor: M_{rr}-1.03; $M_{\theta\theta}$7.88; $M_{\phi\phi}$-6.85; $M_{r\theta}$-0.84; $M_{\theta\phi}$-0.49; $M_{\phi r}$1.07; Fault plane solution: NP1:ϕ_s137.00000°, δ87.00000°, λ-10.00000°. NP2:ϕ_s227.00000°, δ79.00000°, λ-17.00000°. Principal axes: T 7.9900, Plg6.0000°, Azm182.0000°; N -0.9400, Plg79.0000°, Azm302.0000°; P -7.0500, Plg10.0000°, Azm91.0000°;*

ISC 29 18:24:41.4±0.3**,52°.85S**±0°.06×**11°.51E**±0°.08**,h10^{km},n178,**
σ**1^{s}81**/134**,mb5.2**/32**,MS4.6**/42**,8C-3D,Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVL	**N'lazarevskaya**	**17.98**	**180**	*e*P	**Pn**	**18 28 51.2**	**+0.2**
NVL				*e*S	**Sn**	**18 32 12.9**	**+1.7**
NVL				pmax	pmax		
	comp=Z,328nm,1.5s						
NVL				MLR	MLR		
	comp=Z,3μm,16.0s						
TROLL	**Troll, Antarti**	**19.62**	**188**	⇑P	**P**	**18 29 10.5**	**+0.8**
	comp=Z,206μm,2.5s						
ELIB	**Princess Elisa**	**19.85**	**169**	*d*P	**P**	**18 29 13.1**	**+0.8**
	comp=Z,54nm,1.6s						
SNAA	**Sanae**	**19.92**	**193**	⇑P	**P**	**18 29 13.7**	**+0.7**
	comp=Z,27μm,2.0s						
SNAA	**Sanae**	**19.92**	**193**	P	**P**	**18 29 13.3**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=19,slow=10,SNR=72						
SNAA				S	S	18 32 41.3	-15
	comp=Z,0.8nm,0.4s,baz=235,slow=10,SNR=1.2						
SNAA				LR	LR	18 35 10.7	
	comp=Z,2μm,21.5s,baz=22,slow=32						
	comp=Z,95nm,1.1s						
SNAA	**Sanae**	**19.92**	**193**		**P**	**18 29 11.8**	**-1.0**
SNAA				IAmb	IAmb	18 29 15.3	
	comp=Z,217nm,1.2s						
SNAA	**Sanae**	**19.92**	**193**	*i* P	**P**	**18 29 13.6**	**+0.7**
SNAA				pmax	pmax		
	comp=Z,137nm,1.1s						
VNA1	**Neumayer--Stat**	**19.97**	**199**	⇑P	**Pn**	**18 29 14.4**	**-0.6**
	comp=Z,241nm,1.1s						
VNA2	**Neumayer--Watz**	**20.02**	**198**	⇑P	**P**	**18 29 13.8**	**-0.1**
	comp=Z,736nm,1.0s,baz=24,slow=13						
VNA3	**Neumayer Olymp**	**20.72**	**199**	⇑P	**P**	**18 29 21.7**	**+0.1**
	comp=Z,503nm,1.1s						
SYO	**Syowa Base**	**20.85**	**152**	⇑*i*Pn	**P**	**18 29 23.2**	**+0.3**
SYO	**Syowa Base**	**20.85**	**152**	⇓*i*pP	pP	18 29 24.7	-0.3
SYO	**Syowa Base**	**20.85**	**152**	⇓*i*P	Pn	18 29 26.0	+0.7
SUR	**Sutherland**	**21.54**	**22**	P	**P**	**18 29 31.9**	**+1.1**
	comp=Z,152nm,1.1s,baz=194,slow=6.4,SNR=24						
SUR				S	S	18 33 18.2	-11
	comp=Z,8.4nm,1.0s,baz=206,slow=15,SNR=2.1						
SUR				LR	LR	18 35 46.0	
	comp=Z,1μm,21.9s,baz=191,slow=31						
	comp=Z,152nm,1.1s						
SUR	**Sutherland**	**21.54**	**22**		**P**	**18 29 30.6**	**-0.2**
GRHM	**Grahamstown, E**	**22.30**	**35**	P	**P**	**18 29 38.1**	**-0.6**
GRHM				IAmb	IAmb	18 30 00.7	
	comp=Z,99nm,1.1s						
BOSA	**Boshof**	**26.27**	**28**	P	**P**	**18 30 18.6**	**+1.7**
	comp=Z,3.5nm,0.7s,baz=195,slow=9.7,SNR=8.4						
BOSA				LR	LR	18 38 35.4	
	comp=Z,1μm,21.8s,baz=200,slow=32						
	comp=Z,3.5nm,0.7s						
BOSA	**Boshof**	**26.27**	**28**		**P**	**18 30 14.6**	**-2.2**
BOSA				IAmb	IAmb	18 30 29.0	
	comp=Z,74nm,1.6s						
BOSA	**Boshof**	**26.27**	**28**	P	**P**	**18 30 14.6**	**-2.2**
BOSA				pmax	pmax		
	comp=Z,74nm,1.7s						
H04S2	**CROZET ISLANDS**	**26.45**	**93**	T	T	18 58 09.9	
	baz=242,slow=76,SNR=175						
H04S3	**CROZET ISLANDS**	**26.45**	**93**	T	T	18 58 16.5	
	baz=242,slow=76,SNR=161						
H04S1	**CROZET ISLANDS**	**26.46**	**93**	T	T	18 58 15.9	
	baz=242,slow=76,SNR=520						
H04N3	**CROZET ISLANDS**	**26.70**	**92**	T	T	18 58 31.9	
	baz=233,slow=74,SNR=72						
H04N1	**CROZET ISLANDS**	**26.71**	**92**	T	T	18 58 28.9	
	baz=233,slow=74,SNR=59						
H04N2	**CROZET ISLANDS**	**26.72**	**92**	T	T	18 58 32.6	
	baz=233,slow=74,SNR=55						
MAW	**Mawson**	**28.41**	**141**	P	**P**	**18 30 36.5**	**+1.0**
	comp=Z,5.7nm,1.9s						
MAW	**Mawson**	**28.41**	**141**	P	**P**	**18 30 36.6**	**+1.1**
	comp=Z,14nm,1.0s,baz=279,slow=8.5,SNR=17						
MAW				LR	LR	18 39 22.9	
	comp=Z,1μm,21.8s,baz=288,slow=31						
	comp=Z,14nm,1.0s						
LBTB	**Lobatse**	**29.77**	**26**	LR	LR	18 41 18.9	
	comp=Z,762nm,18.3s,baz=193,slow=34						
LBTB	**Lobatse**	**29.77**	**26**		**P**	**18 30 49.0**	**+0.9**
LBTB				IAmb	IAmb	18 30 51.1	
	comp=Z,66nm,1.9s						
LBTB	**Lobatse**	**29.77**	**26**	P	**P**	**18 30 49.0**	**+0.9**
LBTB				pmax	pmax		
	comp=Z,66nm,1.9s						
BELA	**Belgrano 2**	**30.00**	**198**		**P**	**18 30 49.6**	**0.0**
KOOLE	**Kule**	**30.54**	**16**		**P**	**18 30 55.6**	**+0.6**
KGCAE	**Kacgae**	**31.05**	**19**		**P**	**18 30 59.2**	**-0.3**
KGCAE				IAmb	IAmb	18 31 08.0	
	comp=Z,75nm,1.7s						
LPHEP	**Lephephe**	**31.41**	**26**		**P**	**18 30 59.3**	**-3.4**
TSUM	**Tsumeb**	**33.92**	**10**	LR	LR	18 43 14.9	
	comp=Z,3μm,19.4s,baz=190,slow=33						

TSUM	**Tsumeb**	**33.92**	**10**	P	**P**	**18 31 21.9**	**-2.7**
MATP	**Matopo**	**34.93**	**29**	LR	LR	18 44 35.7	
	comp=Z,984nm,18.4s,baz=194,slow=34						
QSPA	**South Pole Qui**	**37.38**	**180**	LR	LR	18 46 20.6	
	comp=Z,2µm,20.4s,baz=224,slow=35						
QSPA	**South Pole Qui**	**37.38**	**180**	P	**P**	**18 31 54.6**	**+0.6**
PMSA	**Palmer Station**	**38.44**	**222**	LR	LR	18 45 31.3	
	comp=Z,337nm,19.6s,baz=92,slow=32						
LSZ	**Lusaka**	**39.75**	**26**	LR	LR	18 46 30.0	
	comp=Z,890nm,21.2s,baz=197,slow=33						
LSZ	**Lusaka**	**39.75**	**26**		**P**	**18 32 14.6**	**+0.3**
LSZ	**Lusaka**	**39.75**	**26**	P	**P**	**18 32 14.6**	**+0.3**
LSZ				pmax	pmax		
	comp=Z,39nm,1.6s						
VNDA	**Vanda**	**48.59**	**172**	P	**P**	**18 33 25.2**	**+0.9**
	comp=Z,49nm,0.9s,baz=228,slow=8.0,SNR=150						
VNDA				LR	LR	18 52 38.8	
	comp=Z,2µm,21.3s,baz=191,slow=34						
	comp=Z,49nm,0.9s						
VNDA	**Vanda**	**48.59**	**172**		**P**	**18 33 24.8**	**+0.5**
VNDA	**Vanda**	**48.59**	**172**	P	**P**	**18 33 24.8**	**+0.5**
VNDA				pmax	pmax		
	comp=Z,69nm,1.0s						
H10S2	**ASCENSION HYDR**	**48.64**	**325**	T	T	19 25 40.8	
	baz=158,slow=74,SNR=20						
H10S3	**ASCENSION HYDR**	**48.65**	**325**	T	T	19 25 49.5	
	baz=62,slow=74,SNR=23						
SBA	**Scott Base**	**48.67**	**173**		**P**	**18 33 23.6**	**-1.3**
SBA	**Scott Base**	**48.67**	**173**	P	**P**	**18 33 23.6**	**-1.3**
SBA				pmax	pmax		
	comp=Z,70nm,1.2s						
TRQA	**Tornquist**	**51.38**	**256**		**P**	**18 33 46.7**	**+0.7**
TRQA				IAmb	IAmb	18 33 51.1	
	comp=Z,56nm,1.9s						
TRQA	**Tornquist**	**51.38**	**256**	P	**P**	**18 33 46.7**	**+0.7**
TRQA				pmax	pmax		
	comp=Z,56nm,1.9s						
CPSB	**Cacapava Do Su**	**51.52**	**269**	*e*P	**P**	**18 33 48.8**	**+1.7**
SJMB	**Sao Joao De Ma**	**53.00**	**289**	*e*P	**P**	**18 33 59.3**	**+1.0**
AY01	**Puyuhuapi**	**53.21**	**243**	P	**P**	**18 33 58.8**	**-0.7**
AY01				IAmb	IAmb	18 34 01.3	
	comp=Z,44nm,1.4s						
PSAL	**Palomas, Salto**	**53.56**	**265**	*e*P	**P**	**18 34 01.9**	**-0.4**
LL02	**Futaleuf**	**53.59**	**245**		**P**	**18 34 01.1**	**-1.2**
LL02				IAmb	IAmb	18 34 03.9	
	comp=Z,32nm,1.4s						
MBAR	**Mbarara**	**54.49**	**24**	LR	LR	18 56 25.8	
	comp=Z,1µm,18.1s,baz=190,slow=35						
MBAR	**Mbarara**	**54.49**	**24**	P	**P**	**18 34 09.5**	**+0.2**
MBAR	**Mbarara**	**54.49**	**24**	P	**P**	**18 34 09.5**	**+0.2**
MBAR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
PLCA	**Paso Flores**	**54.52**	**248**	P	**P**	**18 34 09.6**	**+0.4**
	comp=Z,2.7nm,0.9s,baz=139,slow=8.3,SNR=4.0						
PLCA				LR	LR	18 53 02.5	
	comp=Z,214nm,21.9s,baz=129,slow=31						
	comp=Z,2.7nm,0.9s						
PLCA	**Paso Flores**	**54.52**	**248**		**P**	**18 34 05.8**	**-3.4**
PLCA				IAmb	IAmb	18 34 10.9	
	comp=Z,37nm,1.9s						
PLCA	**Paso Flores**	**54.52**	**248**	*e*P	**P**	**18 34 10.7**	**+1.5**
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PTGB	**Pitanga**	**54.83**	**275**	*e*P	**P**	**18 34 13.4**	**+1.7**
KIBK	**Kibwezi**	**54.95**	**33**	P	**P**	**18 34 11.9**	**-0.7**
KIBK				IAmb	IAmb	18 34 18.1	
	comp=Z,19nm,1.0s						
CPUP	**Villa Florida**	**56.82**	**269**	P	**P**	**18 34 26.3**	**+0.4**
	comp=Z,7.6nm,1.0s,baz=124,slow=7.9,SNR=17						
CPUP				LR	LR	18 54 30.9	
	comp=Z,296nm,21.6s,baz=128,slow=32						
	comp=Z,7.6nm,1.0s						
CPUP	**Villa Florida**	**56.82**	**269**	P	**P**	**18 34 23.8**	**-2.0**
CPUP				IAmb	IAmb	18 34 32.6	
	comp=Z,22nm,0.9s						
CPUP	**Villa Florida**	**56.82**	**269**	P	**P**	**18 34 23.8**	**-2.0**
CPUP				pmax	pmax		
	comp=Z,22nm,0.9s						
ITRB	**Iturama**	**57.60**	**280**	*e*P	**P**	**18 34 33.7**	**+2.3**
IPMB	**Ipameri, GO**	**57.66**	**283**	*e*P	**P**	**18 34 33.2**	**+1.3**
JANB	**Januaria**	**57.70**	**289**	*e*P	**P**	**18 34 33.6**	**+1.4**
BDFB	**Brasilia**	**59.38**	**285**	P	**P**	**18 34 45.4**	**+1.4**
	comp=Z,12nm,0.9s,baz=140,slow=3.3,SNR=19						
BDFB				LR	LR	18 54 38.0	
	comp=Z,276nm,21.8s,baz=218,slow=30						
	comp=Z,12nm,0.9s						
BDFB	**Brasilia**	**59.38**	**285**	P	**P**	**18 34 42.2**	**-1.7**
BDFB				IAmb	IAmb	18 34 49.5	
	comp=Z,18nm,1.0s						
BDFB	**Brasilia**	**59.38**	**285**	P	**P**	**18 34 42.3**	**-1.7**
BDFB				pmax	pmax		
	comp=Z,19nm,1.0s						
LODK	**Lodwar**	**59.57**	**28**	P	**P**	**18 34 41.3**	**-3.9**
BDQN	**Bodoquena, MS**	**60.87**	**274**	*e*P	**P**	**18 34 54.6**	**+0.6**
DBIC	**Dimbokro**	**60.91**	**341**	P	**P**	**18 34 53.8**	**-0.4**
	comp=Z,5.4nm,0.8s,baz=187,slow=9.4,SNR=7.6						
DBIC				LR	LR	18 56 11.9	
	comp=Z,939nm,20.0s,baz=184,slow=31						
	comp=Z,5.4nm,0.8s						
DBIC	**Dimbokro**	**60.91**	**341**	P	**P**	**18 34 50.4**	**-3.8**
ARAG	**Araguaiana, MT**	**61.57**	**282**	*e*P	**P**	**18 35 01.0**	**+2.2**
CO01	**Juntas del Tor**	**61.83**	**257**	P	**P**	**18 34 57.0**	**-3.7**
PP1B	**Ponte de Pedra**	**61.93**	**278**	*e*P	**P**	**18 35 03.0**	**+1.8**
AC02	**Maricunga**	**63.57**	**260**	P	**P**	**18 35 12.7**	**0.0**
AC02				IAmb	IAmb	18 35 18.0	
	comp=Z,20nm,1.1s						
SALV	**Santo Antonio**	**63.73**	**278**	*e*P	**P**	**18 35 14.8**	**+1.5**
SMTB	**Santa Maria do**	**64.57**	**290**	*e*P	**P**	**18 35 19.9**	**+1.1**
GO02	**Mina Guanaco**	**65.09**	**261**	P	**P**	**18 35 21.1**	**-1.3**
FURI	**Furi**	**65.73**	**30**	LR	LR	19 04 02.9	
	comp=Z,679nm,18.1s,baz=192,slow=36						
PTLB	**Pontes e Lacer**	**66.16**	**276**	P	**P**	**18 35 28.3**	**-0.7**
PTLB				IAmb	IAmb	18 35 36.0	
	comp=Z,14nm,0.8s						
PTLB	**Pontes e Lacer**	**66.16**	**276**	*e*P	**P**	**18 35 29.7**	**+0.7**
TORD	**Torodi Ar. Bea**	**66.27**	**350**	P	**P**	**18 35 28.6**	**-1.0**
	comp=Z,11nm,1.1s,baz=180,slow=7.1,SNR=21						
	comp=Z,11nm,1.1s						
TORD	**Torodi Ar. Bea**	**66.27**	**350**	P	**P**	**18 35 30.1**	**+0.5**
SIV	**San Ignacio**	**66.90**	**274**	LR	LR	19 00 53.4	
	comp=Z,493nm,19.5s,baz=114,slow=32						
PDRB	**Porto dos Gac**	**67.71**	**280**	*e*P	**P**	**18 35 39.9**	**+0.9**
CLDB	**Colider**	**67.74**	**282**	*e*P	**P**	**18 35 40.6**	**+1.5**
PB01	**IPOC Station P**	**68.13**	**264**	P	**P**	**18 35 37.7**	**-3.9**
PB01				IAmb	IAmb	18 35 48.5	
	comp=Z,27nm,1.4s						
PB08	**IPOC Station P**	**68.62**	**265**	IAmb	IAmb	18 35 53.1	
	comp=Z,33nm,1.6s						
VILB	**Vilhena**	**68.74**	**277**	P	**P**	**18 35 44.6**	**-0.8**
VILB				IAmb	IAmb	18 36 04.9	
	comp=Z,13nm,0.7s						
VILB	**Vilhena**	**68.74**	**277**	*e*P	**P**	**18 35 48.0**	**+2.6**
PB11	**IPOC Station P**	**69.21**	**265**	IAmb	IAmb	18 35 50.5	
	comp=Z,23nm,1.0s						
ATD	**Arta Tunnel**	**69.53**	**33**	LR	LR	19 03 41.6	
	comp=Z,12nm,21.5s,baz=192,slow=34						
H01W2	**Cape Leeuwin H**	**69.88**	**121**	T	T	19 52 57.1	
	baz=219						
H01W3	**Cape Leeuwin H**	**69.90**	**121**	T	T	19 52 55.0	
	baz=219						
H01W1	**Cape Leeuwin H**	**69.90**	**121**	T	T	19 53 02.4	
	baz=219						
PB16	**IPOC Station P**	**70.21**	**266**	IAmb	IAmb	18 36 09.7	
	comp=Z,41nm,1.7s						
NPGB	**Novo Progresso**	**70.53**	**285**	*e*P	**P**	**18 35 57.9**	**+1.5**
LPAZ	**La Paz**	**70.95**	**268**	P	**P**	**18 36 01.0**	**+1.2**
	comp=Z,25nm,0.9s,baz=124,slow=4.4,SNR=70						
LPAZ				LR	LR	19 04 31.9	
	comp=Z,219nm,19.5s,baz=102,slow=34						
	comp=Z,25nm,0.9s						
ITTB	**Itaituba**	**72.90**	**286**	*e*P	**P**	**18 36 12.3**	**+1.7**
MDP	**Montagnes des**	**78.87**	**294**	LR	LR	19 07 07.6	
	comp=Z,204nm,18.3s,baz=129,slow=32						
NNA	**Nana**	**79.56**	**264**	LR	LR	19 11 16.0	
	comp=Z,84nm,18.1s,baz=156,slow=35						
BOAV	**Boa Vista**	**81.15**	**286**	P	**P**	**18 36 56.1**	**-1.0**
PALK	**Pallekele**	**83.47**	**69**	LR	LR	19 06 28.5	
	comp=Z,348nm,19.9s,baz=208,slow=30						
ATAH	**Atahualpa**	**84.31**	**266**	LR	LR	19 13 30.1	
	comp=Z,169nm,20.1s,baz=172,slow=35						
EIL	**Elat**	**84.69**	**20**	LR	LR	19 13 40.3	
	comp=Z,939nm,20.2s,baz=184,slow=35						
STKA	**Stephens Creek**	**85.08**	**139**	P	**P**	**18 37 17.4**	**+0.1**
	comp=Z,10nm,0.8s,baz=184,slow=4.9,SNR=18						
	comp=Z,10nm,0.8s						
STKA	**Stephens Creek**	**85.08**	**139**		**P**	**18 37 17.6**	**+0.4**
STKA	**Stephens Creek**	**85.08**	**139**	*e*P	**P**	**18 37 17.7**	**+0.4**
STKA				pmax	pmax		
	comp=Z,11nm,0.9s						
MDT	**Midelt**	**86.46**	**346**	LR	LR	19 13 03.0	
	comp=Z,408nm,18.5s,baz=180,slow=34						
UOSS	**Minazif**	**86.68**	**40**		**P**	**18 37 25.8**	**+0.8**
UOSS				IAmb	IAmb	18 37 35.2	
	comp=Z,14nm,1.1s						
ASF	**Jabal al Asfar**	**87.52**	**21**	LR	LR	19 14 15.4	
	comp=Z,250nm,22.0s,baz=197,slow=34						
MMAI	**Mount Meron Ar**	**88.01**	**20**	LR	LR	19 15 23.2	
	comp=Z,748nm,20.8s,baz=189,slow=35						
KEST	**Kesra**	**88.24**	**358**	LR	LR	19 15 41.4	
	comp=Z,316nm,18.9s,baz=208,slow=35						
URZ	**Urewera**	**88.40**	**169**	LR	LR	19 17 25.5	
	comp=Z,556nm,18.4s,baz=200,slow=36						
ASAR	**Alice Springs**	**88.88**	**129**	P	**P**	**18 37 36.0**	**+0.1**
	comp=Z,7.5nm,0.9s,baz=205,slow=4.7,SNR=46						
	comp=Z,7.5nm,0.9s						
ASAR	**Alice Springs**	**88.88**	**129**	P	**P**	**18 37 35.1**	**-0.8**
AS31	**Alice Springs**	**88.88**	**129**	P	**P**	**18 37 35.7**	**-0.2**
VAE	**Valguarnera**	**90.00**	**2**	LR	LR	19 16 59.2	
	comp=Z,290nm,18.8s,baz=226,slow=35						
OTAV	**Otavalo**	**90.17**	**270**	*e*P	**P**	**18 37 44.3**	**+1.8**
ROSC	**El Rosal**	**91.30**	**276**	LR	LR	19 15 39.0	
	comp=Z,360nm,19.2s,baz=167,slow=34						
WRA	**Warramunga Arr**	**92.27**	**128**	P	**P**	**18 37 51.6**	**-0.1**
	comp=Z,1.8nm,0.9s,baz=196,slow=3.1,SNR=8.9						
	comp=Z,1.8nm,0.9s						
WRA	**Warramunga Arr**	**92.27**	**128**	*e*P	**P**	**18 37 52.2**	**+0.5**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SDV	**Santo Domingo**	**92.30**	**282**	LR	LR	19 15 42.3	
	comp=Z,140nm,21.2s,baz=118,slow=33						
ESDC	**Sonseca Array**	**93.13**	**348**	P	**P**	**18 37 56.7**	**+1.7**
	comp=Z,1.9nm,1.1s,baz=175,slow=3.5,SNR=7.3						
ESDC				LR	LR	19 18 29.4	
	comp=Z,355nm,18.2s,baz=185,slow=35						
	comp=Z,1.9nm,1.1s						
BRTR	**Keskin Array B**	**94.18**	**17**	LR	LR	19 22 31.6	
	comp=Z,171nm,18.6s,baz=203,slow=37						
SJG	**San Juan**	**97.03**	**291**	LR	LR	19 15 53.9	
	comp=Z,113nm,21.4s,baz=164,slow=32						
RAO	**Raoul Island**	**97.83**	**172**	LR	LR	19 17 24.4	
	comp=Z,205nm,21.5s,baz=120,slow=32						
MLR	**Muntele Rosu**	**98.75**	**10**	LR	LR	19 26 08.6	
	comp=Z,422nm,19.3s,baz=192,slow=37						
SOC	**Sochi**	**99.08**	**20**	*e*P	**Pdif**	**18 38 21.4**	**-0.5**
SOC				*e*PPP	PPP	18 44 29.8	
SOC				*e*S	**SKSac**	**18 48 59.5**	**0.0**
SOC				*e*SS	**SS**	**18 56 49.6**	**+8.1**
SOC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
DAVOX	**Davos/Dischmat**	**99.27**	**359**	LR	LR	19 23 14.9	
	comp=Z,138nm,18.7s,baz=179,slow=35						
KBZ	**Khabaz**	**99.93**	**23**	LR	LR	19 24 59.7	
	comp=Z,405nm,18.1s,baz=199,slow=36						
KIV	**Kislovodsk**	**100.09**	**22**	*e*P	**Pdif**	**18 38 27.1**	**+0.6**
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,239nm,20.0s						
MAK	**Makhachkala**	**100.36**	**26**	*e*P	**Pdif**	**18 38 21.5**	**-6.0**
MAK				*e*SS	SS	18 56 54.3	-4.9
MAK				*e*SSS	SSS	19 00 45.4	
MAK				pmax	pmax		
	comp=Z,73nm,1.2s						
DZM	**Mont Dzumac**	**102.27**	**156**	*e*LR	LR	19 12 04.1	
	comp=Z,449nm,23.4s						
TBI	**Tubuai**	**102.33**	**198**	*e*SS	SS	18 57 24.5	-0.2
	comp=Z,1µm,28.2s						
TBI	**Tubuai**	**102.33**	**198**	*e*LR	LR	19 11 53.4	
	comp=Z,2µm,31.0s						
CLL	**Collm**	**103.80**	**1**	*e*Pdif	**Pdif**	**18 38 46.0**	**+3.4**
CLL				*e*PS	**PS**	**18 52 18.0**	**+7.9**
CLL				*e*SS	SS	18 57 53.0	+6.3
CLL				L	L	19 23 00.0	
	comp=Z,200nm,19.6s						
MNK	**Minsk**	**107.85**	**10**	*i* P	**Pdif**	**18 38 59.8**	**-0.8**
MNK				*i*		18 43 28.3	
MNK				*i* PPP	PPP	18 45 44.3	
MNK				*i*		18 50 19.7	
MNK				*i* PS	**PS**	**18 52 51.4**	**-0.6**
MNK				*i* SS	SS	18 58 41.0	-0.9
MNK				*i* SSS	SSS	19 02 43.4	
MNK				pmax	pmax		
	comp=Z,16nm,0.7s						
MNK				pmax	pmax		
	comp=N,14nm,0.8s						
MNK				pmax	pmax		
	comp=E,13nm,0.8s						
MNK				MLR	MLR		
	comp=Z,209nm,17.0s						
MNK				MLR	MLR		
	comp=E,259nm,22.0s						
MNK				MLR	MLR		
	comp=N,339nm,23.0s						
PPT2	**Papeete2**	**107.96**	**199**	*e*LR	LR	19 14 32.4	
	comp=N,253nm,34.0s						
PPT2				*e*LR	LR	19 14 40.1	
	comp=N,331nm,22.8s						
PZH	**PanZhiHua**	**110.80**	**73**	PKP	**PKiKP**	**18 43 12.5**	**-1.9**
MKAR	**Makanchi Array**	**116.14**	**46**	PKP	**PKPdf**	**18 43 23.4**	**-0.4**
	comp=N,0.5nm,0.8s,baz=257,slow=2.5,SNR=3.5						
WMQ	**Urumqi**	**116.35**	**52**	*e*PKP	**PKiKP**	**18 43 24.8**	**+0.4**
WMQ				sPKP		18 43 40.5	
BORK	**Borovoye**	**116.38**	**35**	*i* PKIKP	**PKPdf**	**18 43 24.2**	**+0.2**
BVAR	**Borovoye Array**	**116.38**	**35**	PKP	**PKPdf**	**18 43 23.1**	**-0.9**
	comp=N,1.3nm,0.8s,baz=225,slow=0.4,SNR=6.0						
BVAR				PKKPab	**PKKPbc**	**18 53 53.3**	**+0.9**
	comp=N,0.6nm,0.6s,baz=19,slow=4.9,SNR=4.2						
LZH	**Lanzhou**	**119.10**	**68**	*e*P	**PKPdf**	**18 43 25.0**	**-5.0**
LZH				pP	sPKPdf	18 43 37.5	+4.1
LZH				pmax	pmax		
	comp=Z,22nm,1.5s						
ZALV	**Zalesovo Beam**	**122.57**	**42**	PKP	**PKPdf**	**18 43 35.6**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=248,slow=1.6,SNR=4.1						
ZALV	**Zalesovo Beam**	**122.57**	**42**	*e*PKIKP	**PKPdf**	**18 43 35.5**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NJ2	**Nanjing**	**124.99**	**82**	*e*P	**PKiKP**	**18 43 41.8**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HNS	**HongShan**	**126.24**	**74**	⇑PKP	**PKiKP**	**18 43 44.3**	**+0.4**
HHC	**Hu-ho-hao-te**	**126.75**	**69**	*e*P	**PKPdf**	**18 43 42.0**	**-2.5**
TXAR	**Lajitas Array**	**127.79**	**270**	PKP	**PKPdf**	**18 43 47.0**	**+0.2**
	comp=Z,4.4nm,1.1s,baz=143,slow=2.5,SNR=16						
TXAR	**Lajitas Array**	**127.79**	**270**		**PKPdf**	**18 43 47.1**	**+0.3**
SONM	**Songino Array**	**128.49**	**59**	PKP	**PKiKP**	**18 43 48.3**	**+0.1**
	comp=Z,0.8nm,0.9s,baz=194,slow=3.0,SNR=4.2						
SONM	**Songino Array**	**128.49**	**59**	*e*PKIKP	**PKiKP**	**18 43 49.9**	**+1.6**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ANMO	**Albuquerque**	**133.40**	**273**	*i* PKIKP	**PKPdf**	**18 43 57.7**	**+0.3**
CN2	**Changchun**	**136.60**	**74**	*e*P	**PKPdf**	**18 44 00.5**	**-2.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MJAR	**Matsushiro Arr**	**139.75**	**92**	PKP	**PKPdf**	**18 44 10.1**	**+1.2**
	comp=Z,2.5nm,1.1s,baz=204,slow=2.7,SNR=5.5						
MJAR				PKKPab		18 52 22.5	
	comp=Z,1.5nm,1.0s,baz=174,slow=1.3,SNR=4.1						
MJA0	**Matsu Arr-Jizo**	**139.77**	**92**	*e*PKIKP	**PKiKP**	**18 44 11.3**	**-0.1**
MJA0				pmax	pmax		
	comp=Z,3.0nm,1.1s						
PDAR	**Pinedale Array**	**140.21**	**280**	PKP	**PKPdf**	**18 44 09.6**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=104,slow=1.3,SNR=10						
PDAR	**Pinedale Array**	**140.21**	**280**	PKPdf	**PKPdf**	**18 44 10.2**	**+0.4**
NVAR	**Mina Array Bea**	**142.86**	**268**	PKhKP	PKPpre	18 44 11.3	
	comp=Z,1.7nm,0.9s,baz=81,slow=3.6,SNR=7.1						
MSO	**Missoula**	**145.04**	**283**		**PKPdf**	**18 44 18.5**	**+0.3**
PLID	**Pearl Lake**	**145.37**	**279**		**PKPab**	**18 44 19.9**	**+0.9**
GRNR	**Gornyy**	**146.58**	**71**	⇑*i*PKP2	**PKPbc**	**18 44 23.0**	**+1.0**
GRNR				pmax	pmax		
	comp=Z,7.0nm,1.3s						
YAK	**Yakutsk**	**146.74**	**49**	PKPbc	**PKPbc**	**18 44 21.7**	**-0.4**
	comp=Z,6.5nm,0.4s,baz=207,slow=1.1,SNR=7.7						
YAK	**Yakutsk**	**146.74**	**49**	*e*PKP2	**PKPbc**	**18 44 22.4**	**+0.3**
YAK				*e*		18 47 48.8	
YAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,473nm,5.5s						
YAK				pmax	pmax		
	comp=N,182nm,3.7s						
YAK				pmax	pmax		
	comp=E,165nm,4.0s						
TIXI	**Tiksi**	**147.40**	**31**	PKPbc	**PKPbc**	**18 44 23.3**	**-0.4**
	comp=E,9.5nm,0.9s,baz=36,slow=1.8,SNR=11						
TIXI	**Tiksi**	**147.40**	**31**	*i* PKP2	**PKPbc**	**18 44 22.9**	**-0.8**
YKA	**Yellowknife Ar**	**150.48**	**310**	PKPbc	**PKPbc**	**18 44 31.6**	**-0.1**
	comp=E,8.7nm,1.0s,baz=88,slow=1.6,SNR=30						
PETK	**Petropavlovsk-**	**159.74**	**76**	PKPab	**PKPab**	**18 45 17.9**	**-0.5**
	comp=E,2.5nm,0.9s,baz=256,slow=5.8,SNR=1.5						
ILAR	**Eielson Array**	**163.75**	**326**	PKPab	**PKPab**	**18 45 36.9**	**+1.3**
	comp=E,4.0nm,1.0s,baz=31,slow=3.0,SNR=16						

IDC **29** *18:49:46.2±0.9, 21°.91S×173°.58E, h0^{km}, mb4.0/9, mbtmp4.0/11, ML3.1/2, MS4.0/24, Error ellipse: s-maj=26.9km s-min=23.3km az=116.0*

GCMT **29** *18:49:52.0±0.4, 22°.07S±0°.04×173°.52E±0°.03, h13^{km}±1^{km}, MW4.8/84, Moment Tensor Solution. s12,c13; s84,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.00±.20; $M_{\theta\theta}$0.81±.12; $M_{\phi\phi}$1.19±.12; $M_{r\theta}$-0.91±.35; $M_{\theta\phi}$0.85±.06; $M_{\phi r}$0.46±.29; Best double couple: $M_0$2.14500×10^{16} NP1:ϕ_s199.00000°, δ45.00000°, λ-121.00000°. NP2: ϕ_s60.00000°, δ52.00000°, λ-63.00000°. Principal axes: T 1.8840, Plg4.0000°, Azm131.0000°; N 0.5170, Plg21.0000°, Azm222.0000°; P -2.4050, Plg68.0000°, Azm32.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 29 18:49:46.9±0.6**, 21°.9S**±0°.1×**173°.70E**±0°.10**, h10^{km}, n56, σ1^{s}.44**/28**, mb4.0**/9**, MS4.1**/22**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.73**	**268**	Pn	**Pn**	**18 51 23.3**	**-2.6**
	0.2nm,0.3s,baz=287,slow=20,SNR=3.0						
	4.7nm,1.0s						
DZM	**Mont Dzumac**	**6.73**	**268**	*e*P	Pn	18 51 32.1	+6.2
	414nm,26.2s						
DZM				*e*LR	LR	18 53 04.1	
	3µm,24.1s						
RAO	**Raoul Island**	**10.50**	**136**	LR	LR	18 55 36.9	
	comp=Z,2µm,18.9s,baz=326,slow=33						
URZ	**Urewera**	**16.52**	**171**	Pn	**Pn**	**18 53 39.0**	**+0.2**
	0.2nm,0.3s,baz=349,slow=5.2,SNR=2.2						
URZ				LR	LR	18 58 33.4	
	comp=Z,647nm,21.4s,baz=351,slow=32						
	11nm,1.0s						
RAR	**Rarotonga**	**24.68**	**93**	LR	LR	19 02 40.7	
	comp=Z,236nm,21.9s,baz=269,slow=31						
CTA	**Charters Tower**	**25.67**	**269**	LR	LR	19 05 10.4	
	comp=Z,701nm,18.1s,baz=74,slow=36						
STKA	**Stephens Creek**	**30.19**	**244**	LR	LR	19 07 06.1	
	comp=Z,252nm,20.2s,baz=104,slow=34						
TBI	**Tubuai**	**33.98**	**100**	*e*S	**S**	**19 01 52.1**	**-4.0**
	171nm,27.5s						
TBI				*e*LR	LR	19 05 37.9	
	607nm,28.0s						
TBI				*e*LR	LR	19 05 39.7	
	2µm,26.8s						
PPT2	**Papeete2**	**34.78**	**89**	*e*S	**S**	**19 02 07.3**	**-1.5**
	85nm,27.2s						
PPT2				*e*LR	LR	19 06 01.2	
	687nm,26.2s						
PPT2				*e*LR	LR	19 06 08.7	
	495nm,28.5s						
PPT	**Papeete**	**34.79**	**89**	LR	LR	19 07 32.3	
	comp=Z,212nm,21.4s,baz=197,slow=31						
ASAR	**Alice Springs**	**36.64**	**259**	P	**P**	**18 56 53.4**	**-0.5**
	4.7nm,1.1s,baz=88,slow=7.9,SNR=19						
	4.7nm,1.1s						
WRA	**Warramunga Arr**	**36.74**	**266**	P	**P**	**18 56 55.0**	**+0.2**
	2.1nm,1.0s,baz=101,slow=9.0,SNR=7.0						
	2.1nm,1.0s						
JAY	**Jayapura**	**37.42**	**296**	LR	LR	19 11 53.8	
	comp=Z,316nm,20.4s,baz=186,slow=36						
H11S2	**WAKE ISLAND Hy**	**40.76**	**350**	T	T	19 40 48.0	
	baz=171,slow=76,SNR=6.9						
H11S3	**WAKE ISLAND Hy**	**40.77**	**350**	T	T	19 40 49.2	
	baz=171,slow=76,SNR=6.1						
H11S1	**WAKE ISLAND Hy**	**40.78**	**350**	T	T	19 40 49.1	
	baz=171,slow=76,SNR=5.6						
FITZ	**Fitzroy Crossi**	**45.17**	**266**	LR	LR	19 17 10.3	
	comp=Z,497nm,18.1s,baz=114,slow=36						
GUMO	**Guam**	**45.24**	**319**	LR	LR	19 14 56.7	
	comp=Z,250nm,21.1s,baz=133,slow=34						
TAOE	**Nuku Hiva Isla**	**46.18**	**81**	*e*LR	LR	19 11 16.0	
	427nm,24.5s						
RKT	**Rikitea**	**47.23**	**102**	*e*LR	LR	19 11 52.8	
	4µm,37.0s						
BATI	**Baumata**	**49.27**	**275**	LR	LR	19 18 39.5	
	comp=Z,469nm,21.9s,baz=163,slow=35						
VNDA	**Vanda**	**55.92**	**183**	P	**P**	**18 59 25.9**	**+1.2**
	1.3nm,1.1s,baz=337,slow=7.7,SNR=2.7						
VNDA				LR	LR	19 19 32.4	
	comp=Z,81nm,20.9s,baz=350,slow=32						
	1.3nm,1.1s						
JHJ	**Hachijo jima 2**	**63.60**	**328**	LR	LR	19 26 21.8	
	comp=Z,32nm,19.2s,baz=159,slow=35						
JOW	**Kunigami**	**65.45**	**316**	LR	LR	19 27 06.9	
	comp=Z,62nm,19.8s,baz=28,slow=34						
MJAR	**Matsushiro Arr**	**67.14**	**330**	P	**P**	**19 00 41.4**	**+0.5**
	0.9nm,0.8s,baz=145,slow=4.6,SNR=4.0						
	0.9nm,0.8s						
QSPA	**South Pole Qui**	**68.13**	**180**	LR	LR	19 25 34.1	
	comp=Z,98nm,21.7s,baz=42,slow=32						
RPN	**Rapa Nui**	**69.20**	**112**	LR	LR	19 22 57.6	
	comp=Z,218nm,20.7s,baz=222,slow=29						
ASAJ	**Asahikawa**	**71.65**	**337**	LR	LR	19 26 59.5	
	comp=Z,120nm,21.3s,baz=183,slow=31						
KSRS	**Korea Array**	**73.12**	**323**	P	**P**	**19 01 18.1**	**+0.5**
	0.7nm,0.8s,baz=162,slow=5.1,SNR=2.5						
	0.7nm,0.8s						
PETK	**Petropavlovsk-**	**76.02**	**350**	LR	LR	19 32 43.1	
	comp=Z,127nm,20.1s,baz=142,slow=34						
PSI	**Prapat**	**76.97**	**278**	LR	LR	19 37 47.7	
	comp=Z,118nm,19.4s,baz=130,slow=38						
MAW	**Mawson**	**77.48**	**202**	P	**P**	**19 01 43.0**	**+0.7**
	4.1nm,1.1s,baz=95,slow=7.7,SNR=5.0						
	4.1nm,1.1s						
MA2	**Magadan**	**83.38**	**348**	LR	LR	19 34 10.0	
	comp=Z,101nm,20.2s,baz=156,slow=32						
CMAR	**Chiang Mai Arr**	**83.41**	**293**	P	**P**	**19 02 16.6**	**+1.6**
	3.7nm,1.1s,baz=123,slow=3.8,SNR=19						
	3.7nm,1.1s						
SNAA	**Sanae**	**86.60**	**181**	LR	LR	19 40 38.3	
	comp=Z,62nm,18.1s,baz=167,slow=35						
LPIG	**La Paz**	**86.88**	**63**	LR	LR	19 33 36.3	
	comp=Z,86nm,20.5s,baz=28,slow=30						
NVAR	**Mina Array Bea**	**87.53**	**47**	P	**P**	**19 02 38.0**	**+2.6**
	0.7nm,0.9s,baz=244,slow=7.0,SNR=4.8						
	0.7nm,0.9s						
ILAR	**Eielson Array**	**91.62**	**16**	P	**P**	**19 02 53.2**	**-0.5**
	0.8nm,1.0s,baz=207,slow=4.8,SNR=4.3						
	0.8nm,1.0s						
PLCA	**Paso Flores**	**93.73**	**137**	LR	LR	19 35 26.5	
	comp=Z,99nm,20.2s,baz=224,slow=29						
PDAR	**Pinedale Array**	**95.43**	**46**	LR	LR	19 40 28.5	
	comp=Z,39nm,19.4s,baz=80,slow=32						
PALK	**Pallekele**	**95.44**	**276**	LR	LR	19 48 40.9	
	comp=Z,58nm,19.1s,baz=194,slow=37						
AKASG	**Malin Array Be**	**140.10**	**325**	PKP	**PKPdf**	**19 09 14.3**	**-1.3**
	0.2nm,0.2s,baz=63,slow=0.4,SNR=1.4						
BRTR	**Keskin Array B**	**141.76**	**307**	PKP	**PKiKP**	**19 09 20.8**	**-1.2**
	0.3nm,0.5s,baz=18,slow=5.0,SNR=3.9						
EKA	**Eskdalemuir Ar**	**146.57**	**357**	PKPbc	**PKPdf**	**19 09 26.4**	**-0.5**
	1.1nm,0.7s,baz=14,slow=3.2,SNR=1.5						
RONA	**Rosalia, Austr**	**148.53**	**330**	*e*PKP	**PKiKP**	**19 09 35.0**	**-0.6**
	2.4nm,0.6s						
CONA	**Conrad Observa**	**148.56**	**331**	*i* PKP	**PKPab**	**19 09 36.7**	**-0.8**
	1.7nm,0.6s,SNR=4.3						
GERES	**GERESS Array B**	**148.78**	**334**	PKPbc	**PKiKP**	**19 09 34.5**	**-1.6**
	3.3nm,0.9s,baz=32,slow=4.5,SNR=17						
BIOA	**Bad Ischl, Aus**	**149.72**	**333**	*e*PKP	**PKiKP**	**19 09 38.7**	**+0.7**
	0.6nm,0.3s						
SOKA	**Soboth**	**149.87**	**330**	*i* PKP	**PKiKP**	**19 09 39.2**	**+0.8**
	4.5nm,1.1s,SNR=5.3						
LESA	**Schwarzleotal**	**150.33**	**334**	*e*PKP	**PKiKP**	**19 09 40.1**	**+0.8**
	2.6nm,0.5s						
WATA	**Walderalm**	**150.85**	**335**	*e*PKP	**PKiKP**	**19 09 41.7**	**+1.2**
	3.6nm,0.7s,SNR=5.6						
WTTA	**Wattenberg**	**150.88**	**334**	*e*PKP	**PKiKP**	**19 09 41.3**	**+0.7**
	6.4nm,1.1s,SNR=4.3						
ABTA	**Abfaltersbach**	**150.93**	**333**	*e*PKP	**PKiKP**	**19 09 40.1**	**-0.5**
	2.3nm,0.6s						
SQTA	**Sankt Quirin**	**151.09**	**335**	*e*PKP	**PKiKP**	**19 09 41.1**	**+0.1**
	2.4nm,0.4s						
FETA	**Feichten**	**151.44**	**335**	*e*PKP	**PKiKP**	**19 09 43.4**	**+1.7**
	4.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**168.40**	**222**	PKPab	**PKPab**	**19 11 04.7**	**+1.1**

1.1nm,0.9s,baz=78,slow=3.6,SNR=4.6

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*IDC **29** 19:00:50.0±10.0, 22.°25S×179.°26W, h520km±95km, mb3.1/7, mbtmp3.9/7, Error ellipse: s-maj=76.1km s-min=37.3km az=119.0*

ISC 29 19:00:57.1±1.6**, 22.°3S**±0.°4×**179.°5W**±0.°3**, h600**km**, n15, σ0.s84**/16**, mb3.6**/7**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.79	246	P	P	19 07 07.5	0.0
	1.4nm,0.9s,baz=103,slow=14,SNR=3.2						
	1.4nm,0.9s						
ASAR	Alice Springs	42.81	259	P	P	19 08 03.5	-0.3
	2.1nm,0.8s,baz=88,slow=7.4,SNR=32						
ASAR				PcP	PcP	19 09 41.7	+0.7
	0.6nm,0.6s,baz=107,slow=3.7,SNR=7.4						
	2.1nm,0.8s						
WRA	Warramunga Arr	43.04	264	P	P	19 08 04.5	-1.1
	0.9nm,0.6s,baz=97,slow=6.9,SNR=14						
	0.9nm,0.6s						
MJAR	Matsushiro Arr	70.90	325	P	P	19 11 14.3	-0.6
	1.1nm,0.6s,baz=153,slow=5.5,SNR=5.5						
	1.1nm,0.6s						
CMAR	Chiang Mai Arr	89.46	290	P	P	19 12 53.5	+1.9
	1.1nm,0.8s,baz=133,slow=2.9,SNR=11						
	1.1nm,0.8s						
ILAR	Eielson Array	90.40	13	P	P	19 12 54.8	-0.1
	0.2nm,0.7s,baz=206,slow=5.2,SNR=4.0						
	0.2nm,0.7s						
SONM	Songino Array	96.25	319	P	P	19 13 22.6	+0.4
	0.2nm,0.6s,baz=111,slow=2.0,SNR=2.0						
	0.2nm,0.6s						
BVAR	Borovoye Array	119.59	319	PKP	PKiKP	19 18 39.5	0.0
	1.0nm,0.3s,baz=99,slow=1.0,SNR=14						
ARCES	ARCESS Array B	130.46	349	PKP	PKiKP	19 19 00.6	-0.1
	5.7nm,1.1s,baz=17,slow=1.3,SNR=4.8						
FINES	FINESS Array B	137.12	342	PKhKP	PKPpre	19 19 01.4	
	4.4nm,1.0s,baz=104,slow=12,SNR=1.9						
FINES				PKP	PKiKP	19 19 14.7	+0.4
	5.5nm,0.9s,baz=20,slow=4.4,SNR=4.3						
AKASG	Malin Array Be	143.91	329	PKP	PKPdf	19 19 24.1	-0.8
	1.3nm,0.3s,baz=44,slow=4.0,SNR=12						
EKA	Eskdalemuir Ar	146.93	4	PKPbc	PKPbc	19 19 32.7	-0.2
	0.3nm,0.3s,baz=10,slow=3.0,SNR=3.7						
BRTR	Keskin Array B	147.01	309	PKPbc	PKiKP	19 19 34.0	-1.5
	0.8nm,0.6s,baz=159,slow=4.8,SNR=5.3						
MMAI	Mount Meron Ar	147.48	297	PKPbc	PKiKP	19 19 36.2	-0.4
	1.2nm,0.3s,baz=116,slow=5.0,SNR=1.7						
GERES	GERESS Array B	151.55	342	PKPbc	PKiKP	19 19 45.0	+0.4
	0.4nm,0.4s,baz=65,slow=1.7,SNR=5.6						

IDC 29 19:21:34.0±4.0**, 3.°42S×152.°03E, h0**km**, mb3.6**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=148.2km s-min=35.4km az=109.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.83	225	P	P	19 26 50.4	+1.4
	0.8nm,0.3s,baz=50,slow=9.9,SNR=9.1						
	0.8nm,0.3s						
ASAR	Alice Springs	26.69	219	P	P	19 27 14.6	-0.4
	0.3nm,0.9s,baz=46,slow=9.4,SNR=4.1						
	0.3nm,0.9s						
ZALV	Zalesovo Beam	79.58	326	P	P	19 33 44.0	+1.1
	0.4nm,0.3s,baz=102,slow=6.1,SNR=2.3						
	0.4nm,0.3s						
TORD	Torodi Ar. Bea	149.13	290	PKPbc	PKPdf	19 41 22.6	+1.3
	0.2nm,0.5s,baz=77,slow=2.6,SNR=1.4						

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*IDC **29** 19:54:56.3±2.6, 44.°87N×85.°45E, h0km, mbtmp3.3/5, ML2.9/5, Error ellipse: s-maj=23.5km s-min=19.7km az=127.0*

*SOME **29** 19:54:59.8, 45.°12N×85.°27E, h20km*

*NNC **29** 19:55:01.4±1.7, 44.°95N×85.°20E, h6km±8km, mb4.1, mpv3.9, Error ellipse: s-maj=12.4km s-min=6.1km az=106.0*

ISC 29 19:54:60.0±1.6**, 44.°95N**±0.°06×**85.°23E**±0.°07**, h10**km**, n30, σ2.s81**/36**, 3C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	Zaisan	2.52	354	Pg	Pn	19 55 42.5	+1.6
	31nm,0.3s						
ZSN				Lg	Lg	19 56 14.1	
	147nm,0.2s						
ZSN	Zaisan	2.52	354	*e*P	Pn	19 55 42.5	+1.6
	3.5nm,0.2s						
ZSN				*e*S	Sn	19 56 13.6	+1.9
	147nm,0.2s						
MK31	Makanchi Array	2.76	313	Pn	Pn	19 55 45.5	+1.2
	1.0nm,0.3s,baz=138,slow=14,SNR=526						
MK31				⇓Pg	Pb	19 55 52.1	+2.6
	8.7nm,0.3s,baz=131,slow=17,SNR=31						
MK31				⇑Lg	Lg	19 56 29.8	
	52nm,0.4s,baz=127,slow=30,SNR=16						
MKAR	Makanchi Array	2.76	313	Pn	Pn	19 55 45.9	+1.5
	1.7nm,0.3s,baz=128,slow=15,SNR=83						
MKAR				Pg	Pb	19 55 51.8	+2.3
	12nm,0.3s,baz=127,slow=17,SNR=65						
MKAR				Sn	Sb	19 56 22.4	-1.0
	18nm,0.3s,baz=133,slow=27,SNR=3.6						
MKAR				Lg	Lg	19 56 28.9	
	69nm,0.3s,baz=128,slow=29,SNR=11						
	5.2nm,0.2s						
MAKZ	Makanchi	2.94	310	Pn	Pn	19 55 48.3	+1.5
	4.4nm,0.5s						
MAKZ				Pg	Pb	19 55 54.5	+2.1
	9.2nm,0.3s						
MAKZ				Lg	Lg	19 56 33.7	
	39nm,0.3s						
KAPS	Kapalarasan	4.17	277	Pg	Pb	19 56 17.5	+4.0
	11nm,0.4s						
KAPS				Lg	Lg	19 57 14.0	
	175nm,0.3s						
KNOS	Konyrlen	4.36	264	Pg	Pg	19 56 21.2	-2.3
	13nm,0.4s						
KNOS				Lg	Lg	19 57 19.8	
	54nm,0.3s						
PDGK	Podgornoye	4.44	251	Pn	Pn	19 56 09.3	+1.8
	1.0nm,0.5s						
PDGK				Pg	Pg	19 56 22.9	-2.0
	17nm,0.9s						
PDGK				Lg	Lg	19 57 24.4	
	62nm,0.7s						
SHLS	Shalkode	4.53	249	Pg	Pb	19 56 17.6	-2.0
	18nm,0.3s						
SHLS				Lg	Lg	19 57 14.0	
	77nm,0.5s						
SHLS	Shalkode	4.53	249	*e*P	Pb	19 56 17.9	-1.7
	5.8nm,0.1s						
SHLS				*e*S	Sb	19 57 14.0	-0.2
	69nm,0.3s						
UZB	Uzynbulak	4.83	250	Pg	Pb	19 56 26.8	+2.2
	16nm,0.3s						
UZB				Lg	Lg	19 57 29.9	
	22nm,0.5s						
UZB	Uzynbulak	4.83	250	*e*P	Pb	19 56 27.2	+2.6
	3.0nm,0.1s						
UZB				*e*S	Sg	19 57 29.8	-5.1
	20nm,0.3s						
TDK	Taldyqorghan	4.84	273	Pg	Pb	19 56 29.2	+4.3
	30nm,0.7s						
TDK				Lg	Lg	19 57 35.2	
	348nm,0.8s						
TDK	Taldyqorghan	4.84	273	*e*P	Pg	19 56 30.4	-2.3
	27nm,0.2s						
TDK				*e*S	Sg	19 57 35.2	-0.2
	373nm,0.8s						
BLB	Baldybastay	4.91	262	Pg	Pb	19 56 30.6	+4.6
	58nm,0.2s						
BLB				Lg	Lg	19 57 35.9	
	149nm,0.4s						
KPKS	Kokpek	4.94	255	Pg	Pb	19 56 28.8	+2.3
	3.1nm,0.1s						
KPKS				Lg	Lg	19 57 32.8	
	33nm,0.4s						
KPKS	Kokpek	4.94	255	*e*P	Pb	19 56 30.9	+4.4
	2.3nm,0.1s						
KPKS				*e*S	Sg	19 57 36.2	-2.1
	48nm,0.4s						
SATY	Saty	5.27	251	Pg	Pb	19 56 36.7	+4.4
	8.3nm,0.2s						
SATY				Lg	Lg	19 57 46.8	
	44nm,0.2s						
KURS	Kuram	5.28	256	Pg	Pg	19 56 38.6	-2.5
	9.2nm,0.4s						
KURS				Lg	Lg	19 57 49.6	
	22nm,0.5s						
ARXS	Arharly	5.34	265	Pg	Pb	19 56 38.6	+5.2
	9.2nm,0.4s						
ARXS				Lg	Lg	19 57 49.6	
	38nm,0.5s						
ARXS	Arharly	5.34	265	*e*P	Pb	19 56 38.5	+5.2
	6.7nm,0.2s						
ARXS				*e*S	Sg	19 57 49.6	-1.8
	59nm,0.4s						
KOTS	Kotyrbulak	6.09	257	Pg	Pb	19 56 52.5	+6.2
	10nm,0.3s						
KOTS				Lg	Lg	19 58 13.9	
	38nm,0.4s						
MDOK	Medeo	6.16	256	Pg	Pg	19 56 54.2	-3.7
	6.8nm,0.2s						
MDOK				Lg	Lg	19 58 16.4	
	16nm,0.4s						
KNDC	Almaty	6.20	257	⇓Pg	Pb	19 56 50.4	+2.4
	9.0nm,0.4s						
KNDC				⇑Lg	Lg	19 58 19.1	
	40nm,0.6s						
AAK	Ala-Archa	8.11	257	Pn	Pn	19 56 59.2	+1.4
	0.1nm,0.3s,baz=90,slow=8.1,SNR=1.8						
AAK				Pg	Pb	19 57 26.5	+6.0
	0.3nm,0.3s,baz=49,slow=11,SNR=6.4						
AAK				Lg	Lg	19 59 18.1	
	0.3nm,0.3s,baz=302,slow=21,SNR=1.5						
	0.3nm,0.3s						
AAK	Ala-Archa	8.11	257	Pg	Pg	19 57 31.2	-3.9
	2.0nm,0.8s						
AAK				Lg	Lg	19 59 18.1	
	6.2nm,0.9s						
ZALV	Zalesovo Beam	9.02	358	Pn	Pn	19 57 08.1	-2.0
	0.6nm,0.3s,baz=179,slow=13,SNR=12						
ZALV				Sn	Sn	19 58 46.2	-5.4
	1.2nm,0.3s,baz=171,slow=26,SNR=8.0						
ZALV				Lg	Lg	19 59 43.9	
	0.5nm,0.3s,baz=183,slow=26,SNR=5.2						
	1.8nm,0.4s						
KK31	Karatay Array	10.76	265	⇑Pn	Pn	19 57 38.8	+4.7
	0.4nm,0.5s,baz=70,slow=15,SNR=4.7						
KK31				Lg	Lg	20 00 40.9	
	2.1nm,0.6s,baz=70,slow=25,SNR=5.7						
BVAR	Borovoye Array	12.65	315	Pn	Pn	19 57 59.4	-0.4
	baz=117,slow=11,SNR=4.6						
	0.6nm,0.3s						
SONM	Songino Array	14.88	71	Pn	Pn	19 58 27.1	-3.3
	0.1nm,0.3s,baz=276,slow=13,SNR=2.0						
SONM				Lg	Lg	20 02 51.3	
	0.1nm,0.3s,baz=267,slow=32,SNR=3.5						
	0.2nm,0.7s						

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*NEIC **29** 20:00:48.4±2.5, 9.°3N±0.°2×57.°8E±0.°1, h10km±2km, mb4.2/9, Error ellipse: s-maj=29.8km s-min=18.1km az=176.0*

*IDC **29** 20:00:48.8±0.8, 9.°56N×57.°98E, h0km, mb3.9/16, mbtmp3.9/16, MS3.4/13, Error ellipse: s-maj=20.8km s-min=18.3km az=180.0*

ISC 29 20:00:51.1±0.8**, 9.°5N**±0.°1×**57.°9E**±0.°1**, h17**km**, n41, σ1.s30**/30**, mb4.1**/19**, MS3.4**/12**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATD	Arta Tunnel	14.90	279	LR	LR	20 09 17.7	
	comp=Z,4.3nm,18.8s,baz=73,slow=34						
RAYN	Ar Rayn	18.25	321	P	Pn	20 05 01.6	-2.2
FURI	Furi	18.95	270	LR	LR	20 12 06.2	
	comp=Z,267nm,20.4s,baz=66,slow=36						
PALK	Pallekele	22.70	94	LR	LR	20 12 39.1	
	comp=Z,110nm,21.3s,baz=278,slow=31						
KIBK	Kibwezi	23.00	240	P	P	20 05 49.4	-6.0
LODK	Lodwar	23.16	256	P	P	20 05 52.8	-4.3
LODK				IAmb	IAmb	20 06 13.6	
	comp=Z,12nm,1.3s						
MBAR	Mbarara	28.82	251	LR	LR	20 18 51.3	
	comp=Z,154nm,18.4s,baz=72,slow=37						
OPO	Ambohidratompo	29.85	201	LR	LR	20 15 52.5	
	comp=Z,33nm,19.8s,baz=160,slow=30						
BRDH	Bariadhala	34.88	64	LR	LR	20 22 40.1	
	comp=Z,67nm,18.7s,baz=150,slow=38						
KK31	Karatay Array	35.22	16	P	P	20 07 45.1	+0.5
KK31				IAmb	IAmb	20 07 53.3	
	comp=Z,2.7nm,0.8s						
KKAR	Karatay Array	35.22	16	P	P	20 07 45.3	+0.8
KBZ	Khabaz	36.47	342	P	P	20 07 55.8	+0.5
	comp=Z,1.7nm,0.9s,baz=246,slow=5.6,SNR=3.9						
	comp=Z,1.7nm,0.9s						
BR131	Keskin Array S	37.02	328	P	P	20 08 01.3	+1.1
BR131				IAmb	IAmb	20 08 09.3	
	comp=Z,4.4nm,1.1s						
BRTR	Keskin Array B	37.02	328	P	P	20 08 01.0	+0.9
	comp=Z,1.5nm,0.9s,baz=126,slow=8.3,SNR=6.7						
	comp=Z,1.5nm,0.9s						
BRTR	Keskin Array B	37.02	328	P	P	20 07 59.4	-0.8
LSZ	Lusaka	38.37	230	LR	LR	20 24 16.7	
	comp=Z,43nm,19.4s,baz=32,slow=37						
AB31	Akbulak array	39.63	2	P	P	20 08 21.5	-0.4
ABKAR	Akbulak array	39.63	2	P	P	20 08 21.5	-0.4
CMAR	Chiang Mai Arr	40.75	73	P	P	20 08 31.5	-0.1
	comp=Z,2.6nm,1.1s,baz=273,slow=8.2,SNR=12						
CMAR				LR	LR	20 25 59.8	
	comp=Z,18nm,18.1s,baz=260,slow=37						
	comp=Z,2.6nm,1.1s						
CMAR	Chiang Mai Arr	40.75	73	P	P	20 08 29.6	-1.9
AKTO	Aktyubinsk	40.77	0	P	P	20 08 31.0	-0.3
	comp=Z,3.7nm,0.9s,baz=192,slow=6.1,SNR=7.8						
	comp=Z,3.7nm,0.9s						
CHTO	Chiang Mai	40.80	72	P	P	20 08 31.6	-0.3
CHTO				IAmb	IAmb	20 08 45.5	
	comp=Z,6.2nm,1.4s						
MAKZ	Makanchi	42.44	25	P	P	20 08 45.6	+0.5
MKAR	Makanchi Array	42.56	25	P	P	20 08 45.2	-0.8
	comp=Z,0.4nm,0.7s,baz=203,slow=9.0,SNR=3.1						
	comp=Z,0.4nm,0.7s						
BVAR	Borovoye Array	44.54	11	P	P	20 09 02.4	+0.5
	comp=Z,0.7nm,0.6s,baz=194,slow=3.7,SNR=2.2						
	comp=Z,0.7nm,0.6s						
LBTB	Lobatse	46.57	222	LR	LR	20 27 48.5	
	comp=Z,27nm,18.7s,baz=38,slow=35						
ARTI	Arti	46.74	0	P	P	20 09 19.5	+0.3
	comp=Z,2.9nm,0.8s,baz=239,slow=3.0,SNR=3.6						
	comp=Z,2.9nm,0.8s						
ZAA0	Zalesovo Array	49.27	21	P	P	20 09 37.6	-1.2
ZAA0				IAmb	IAmb	20 09 50.9	
	comp=Z,3.1nm,0.9s						
ZALV	Zalesovo Beam	49.27	21	P	P	20 09 38.0	-0.9
	comp=Z,1.8nm,0.8s,baz=232,slow=7.3,SNR=11						
ZALV				LR	LR	20 30 58.7	
	comp=Z,51nm,18.6s,baz=72,slow=37						
	comp=Z,1.8nm,0.8s						
ZALV	Zalesovo Beam	49.27	21	P	P	20 09 37.4	-1.4
BOSA	Boshof	49.30	219	P	P	20 09 40.4	+0.8
	comp=Z,2.6nm,1.1s,baz=56,slow=3.6,SNR=1.7						
BOSA				LR	LR	20 28 35.6	
	comp=Z,25nm,18.9s,baz=102,slow=34						
	comp=Z,2.6nm,1.1s						
GERES	GERESS Array B	53.78	325	P	P	20 10 13.8	+1.0
	comp=Z,0.1nm,0.5s,baz=93,slow=7.2,SNR=1.6						
	comp=Z,0.1nm,0.5s						
DAVOX	Davos/Dischmat	55.02	321	LR	LR	20 38 01.0	
	comp=Z,34nm,18.1s,baz=306,slow=40						
TORD	Torodi Ar. Bea	55.10	279	P	P	20 10 24.4	+1.6
	comp=Z,1.7nm,0.9s,baz=80,slow=7.2,SNR=8.6						
	comp=Z,1.7nm,0.9s						
SONM	Songino Array	55.83	38	P	P	20 10 28.0	+0.2
	comp=Z,0.3nm,0.6s,baz=251,slow=4.4,SNR=2.2						
	comp=Z,0.3nm,0.6s						
DBIC	Dimbokro	62.09	273	P	P	20 11 13.3	+1.7
	comp=Z,3.0nm,0.9s,baz=69,slow=5.7,SNR=4.2						
	comp=Z,3.0nm,0.9s						
ESDC	Sonseca Array	62.35	310	P	P	20 11 13.2	+0.1
	comp=Z,1.4nm,0.9s,baz=88,slow=5.7,SNR=9.6						
	comp=Z,1.4nm,0.9s						
KSRS	Korea Array	68.45	54	LR	LR	20 42 24.0	
	comp=Z,23nm,19.2s,baz=90,slow=36						
WRA	Warramunga Arr	80.72	112	P	P	20 13 04.7	+0.6
	comp=Z,1.2nm,1.0s,baz=285,slow=5.3,SNR=4.0						
	comp=Z,1.2nm,1.0s						
ASAR	Alice Springs	81.23	116	P	P	20 13 06.1	-0.6
	comp=Z,1.0nm,0.9s,baz=286,slow=5.3,SNR=6.6						
ASAR				LR	LR	20 43 52.5	
	comp=Z,47nm,20.9s,baz=60,slow=32						
	comp=Z,1.0nm,0.9s						
PDAR	Pinedale Array	126.70	348	PKP	PKPdf	20 19 53.7	-0.7
	comp=Z,0.4nm,0.8s,baz=339,slow=3.5,SNR=3.9						

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*AFAD **29** 20:02:16.8, 38.°19N×26.°37E, h12km±1km, ML2.5*

*ISK **29** 20:02:16.3, 38.°15N×26.°34E, h14km, ML2.4/18*

*THE **29** 20:02:17.2, 38°N±9°×2°6E±°, h12km±10km, M2.5/6, MLh2.5/6*

ISC 29 20:02:16.7±0.9**, 38.°19N**±0.°03×**26.°36E**±0.°03**, h15**km±7km**, n33, σ0.s70**/46**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZEYE	Izmir, Urla-Ze	0.13	67	P	Pg	20 02 20.1	-0.2
ZEYE				S	Sg	20 02 22.3	-0.4
ZEYE				*i* IAML		20 02 23.0	
	comp=N,1µm,0.3s						
ZEYE				*i* IAML		20 02 23.0	
	comp=E,922nm,0.4s						
CHOS	Chios island	0.31	310	P	Pg	20 02 23.6	+0.4
CHOS				S	Sg	20 02 28.4	+0.7
CHOS	Chios island	0.31	310	Pg	Pg	20 02 23.7	+0.5
CHOS				Sg	Sb	20 02 28.9	0.0
GMLD	Gumuldur	0.46	104	Pg	Pg	20 02 25.4	-0.4
GMLD				Sg	Sg	20 02 32.0	0.0
KARB	zmir-Karabur	0.48	5	P	Pg	20 02 25.6	-0.6
KARB				*i* IAML		20 02 36.0	
	comp=E,188nm,0.2s						
BLCB	Balcova	0.57	70	P	Pg	20 02 27.7	-0.3
BLCB				S	Sg	20 02 34.9	-0.8
BLCB	Balcova	0.57	70	Pg	Pg	20 02 27.5	-0.5
SMG	Samos	0.61	141	P	Pb	20 02 29.3	+0.1
SMG				S	Sb	20 02 38.1	+0.5
GCAM	G?zelcaml?	0.85	125	Pg	Pg	20 02 32.8	-0.4
GCAM				Sg	Sb	20 02 45.2	+0.9
ZEDA	zmir-Bergama	0.96	36	P	Pg	20 02 34.4	-0.9
ZEDA				S	Sb	20 02 47.9	+0.3
DKL	Dikili	0.98	26	Pg	Pb	20 02 35.8	+0.4
DDIM	Aydin, Didim	1.01	136	P	Pn	20 02 36.9	+0.5
DDIM				S	Sb	20 02 49.7	+0.6
DDIM				*i* IAML		20 03 10.0	
	comp=E,144nm,2.2s						
DDIM				*i* IAML		20 03 19.0	
	comp=N,165nm,2.4s						
PRK	Paraskevi	1.06	357	P	Pb	20 02 36.3	-0.4
PRK				S	Sb	20 02 50.2	-0.1
SIGR	SIGRI	1.09	339	P	Pb	20 02 36.9	-0.4
SIGR				S	Sb	20 02 50.9	-0.5
SIGR	SIGRI	1.09	339	Pn	Pb	20 02 37.8	+0.5
AYVA	Ayvalik	1.15	13	P	Pb	20 02 38.0	-0.3
AYVA				*i* IAML		20 03 13.0	
	comp=E,85nm,2.4s						
AYDB	Zeytinkoy-Aydi	1.24	101	Pn	Pb	20 02 39.9	+0.1
IZMR	zmir-demi	1.26	92	P	Pb	20 02 40.1	0.0
IZMR				S	Sb	20 02 56.3	+0.1
APE	Apeiranthos	1.30	211	P	Pn	20 02 39.2	-1.1
APE	Apeiranthos	1.30	211	Pn	Pn	20 02 39.5	-0.8
KOCA	Canakkale, Ayv	1.32	353	P	Pn	20 02 41.0	+0.4
KOCA				S	Sb	20 02 55.8	-2.3
KOCA				*i* IAML		20 03 06.0	
	comp=N,139nm,2.0s						
KOCA				*i* IAML		20 03 18.0	
	comp=E,106nm,1.6s						
SOMA	Soma-Manisa	1.34	43	Pn	Pn	20 02 40.9	+0.1
ODEM	Odemis-Izmir	1.36	86	Pn	Pb	20 02 41.8	-0.1
BUHA	Balikesir, Bur	1.43	23	P	Pn	20 02 42.5	+0.4
YAYO	Edremit-Balk	1.53	21	Pn	Pb	20 02 44.6	-0.1
NAZL	Nazilli-Aydin	1.55	98	Pn	Pn	20 02 44.3	+0.6
EZNE	Ezine-Canakkal	1.56	0	Pn	Pn	20 02 44.9	+0.9
GORD	Gordes-Manisa	1.60	63	Pn	Pb	20 02 45.5	-0.5
EZN	Ezine	1.64	359	Pn	Pn	20 02 45.9	+1.0
KULA	Kula-Manisa	1.84	79	Pn	Pn	20 02 48.8	+0.9
YER	Yerkesik	1.86	124	Pn	Pn	20 02 48.5	+0.4
BALB	Balikesir	1.88	39	Pn	Pn	20 02 49.4	+1.2
CANM	Can-anakkale	1.90	16	Pn	Pn	20 02 50.1	+1.5

IDC 29 20:04:49.5±2.4**, 1.°98N×126.°71E, h0**km**, mb3.3**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=198.7km s-min=28.0km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.03	161	P	P	20 09 56.5	0.0
	0.8nm,0.4s,baz=340,slow=10,SNR=9.8						
	0.8nm,0.4s						
ASAR	Alice Springs	26.43	165	P	P	20 10 28.1	-0.1
	0.1nm,0.3s,baz=344,slow=9.4,SNR=6.2						
	0.1nm,0.3s						
MKAR	Makanchi Array	58.98	326	P	P	20 14 51.1	+0.1
	0.4nm,0.8s,baz=131,slow=6.8,SNR=2.5						
	0.4nm,0.8s						

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*CATAC **29** 20:17:01.6±0.4, 13°N±2°×9°0W±°, h27km±2km, M3.4/20, MLv3.4/20, Error ellipse: s-maj=5.7km s-min=2.6km az=27.0, confirmed*

*GCG **29** 20:17:02.8±0.8, 13.°51N×90.°05W, h45km±11km, MD3.8, ML3.2*

*SNET **29** 20:17:02.0±1.0, 13.°44N×90.°03W, h46km±12km, ML3.4*

ISC 29 20:17:03.8±1.3**, 13.°44N**±0.°05×**89.°95W**±0.°03**, h31**km±11km**, n79, σ1.s04**/85**, 1C-3D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	0.41	351	P	Pn	20 17 12.3	-1.3
FAME	Alcaldia de Sa	0.41	351	S	Sn	20 17 20.1	-0.1
NUBE	Las Nubes	0.49	19	⇓*i*P	Pn	20 17 13.9	-0.9
NUBE				*e*S	Sn	20 17 22.9	+0.5
NUBE	Las Nubes	0.49	19	*e*P	Pn	20 17 13.9	-0.9
NUBE				*e*S	Sn	20 17 22.7	+0.3
NUBE	Las Nubes	0.49	19	P	Pn	20 17 14.0	-0.8
CEVE	Cerro Verde	0.50	39	*e*P	Pn	20 17 14.5	-0.6
CEVE	Cerro Verde	0.50	39	P	Pn	20 17 14.5	-0.6
CEVE	Cerro Verde	0.50	39	S	Sn	20 17 24.3	+1.5
SBLS	San Blas	0.51	38	⇓*i*P	Pn	20 17 14.5	-0.6
JAYA	Jayaque - finc	0.53	66	*e*P	Pb	20 17 14.5	-0.3
JAYA	Jayaque - finc	0.53	66	*e*P	Pb	20 17 14.5	-0.3
JAYA	Jayaque - finc	0.53	66	P	Pb	20 17 14.5	-0.3
JAYA	Jayaque - finc	0.53	66	S	Sn	20 17 24.4	+1.0
SNJE	San Jose	0.54	38	⇓*i*P	Pn	20 17 14.9	-0.6
RTR	El Retiro	0.54	33	*e*P	Pn	20 17 14.9	-0.7
ESSJ	San Jos, E	0.55	283	*e*P	Pn	20 17 19.3	+3.8
LOAL	Lomas de Alarc	0.58	16	*e*P	Pn	20 17 15.3	-0.7
LOAL	Lomas de Alarc	0.58	16	S	Sn	20 17 25.7	+1.2
LOAL	Lomas de Alarc	0.58	16	P	Pn	20 17 15.3	-0.7
LALI	Alcalda de L	0.61	85	*e*S	Sb	20 17 24.9	+0.4
LALI	Alcalda de L	0.61	85	S	Sn	20 17 25.5	+0.4
LALI	Alcalda de L	0.61	85	P	Pb	20 17 15.2	-0.9
CEDA	San Andres	0.65	56	*e*P	Pn	20 17 16.4	-0.5
CEDA	San Andres	0.65	56	P	Pn	20 17 16.2	-0.7
CEDA	San Andres	0.65	56	S	Sn	20 17 27.4	+1.2
UNIC	Universidad Ca	0.66	36	S	Sn	20 17 27.6	+1.0
UNIC	Universidad Ca	0.66	36	P	Pb	20 17 16.3	-0.7
PMON	Piamonte	0.67	66	*e*P	Pb	20 17 16.5	-0.7
PMON	Piamonte	0.67	66	S	Sn	20 17 27.9	+1.1
PMON	Piamonte	0.67	66	P	Pb	20 17 16.6	-0.6
BOQS	Boqueron	0.71	65	*e*P	Pb	20 17 17.3	-0.6
RBDL	Robledal	0.72	21	*e*P	Pb	20 17 17.0	-0.9
UEES	Universidad Ev	0.74	68	P	Pb	20 17 17.6	-0.7
UEES	Universidad Ev	0.74	68	S	Sn	20 17 29.3	+0.8
PANCS	Alcalda de	0.77	77	P	Pn	20 17 18.4	-0.2
PANCS	Alcalda de	0.77	77	S	Sb	20 17 29.3	+0.4
UTEC	Universidad Te	0.77	70	S	Sn	20 17 30.1	+0.9
LOMA	Loma Larga	0.78	75	P	Pb	20 17 16.9	-2.0
LOMA	Loma Larga	0.78	75	S	Sb	20 17 29.7	+0.3
IGN	Direccin Gen	0.80	70	S	Sn	20 17 31.1	+1.1
IGN	Direccin Gen	0.80	70	P	Pb	20 17 18.7	-0.7
UDBS	Universidad Do	0.82	70	P	Pn	20 17 18.8	-0.5
UDBS	Universidad Do	0.82	70	S	Sn	20 17 31.4	+1.1
LFU	La Fuente	0.87	69	*e*P	Pn	20 17 19.6	-0.4
PCG5	San Vicente Pa	0.88	332	*e*P	Pb	20 17 21.3	+0.6
PCG5				*e*S	Sn	20 17 35.4	+3.4
LFRS	El Faro	0.88	78	⇑*e*P	Pb	20 17 19.8	-0.8
LFRS				*e*S	Sn	20 17 32.8	+0.8
LBRS	Las Brisas	0.93	71	*e*P	Pn	20 17 20.4	-0.4
FG16	Alotenango, Sa	0.99	327	*e*P	Pb	20 17 24.3	+1.7
PAVA	Las Pavas	1.02	74	P	Pn	20 17 21.7	-0.4
PAVA	Las Pavas	1.02	74	S	Sb	20 17 37.1	+1.0
MTO3	Montecristo	1.11	31	*e*P	Pn	20 17 21.9	-1.6
MTO3	Montecristo	1.11	31	*e*P	Pn	20 17 22.2	-1.2
MTO3	Montecristo	1.11	31	S	Sn	20 17 38.5	+0.6

MTO3	Montecristo	1.11	31	P	Pn	20 17 22.2	-1.2
TECO	Alcaldia de Te	1.14	85	P	Pn	20 17 22.8	-0.9
TECO	Alcaldia de Te	1.14	85	S	Sn	20 17 38.7	+0.5
UESV	Universidad de	1.15	80	S	Sn	20 17 39.3	+0.9
UESV	Universidad de	1.15	80	P	Pn	20 17 23.4	-0.3
LLGN	La Laguna	1.21	53	P	Pn	20 17 23.3	-1.4
LLGN	La Laguna	1.21	53	S	Sn	20 17 40.7	+0.6
SCLA	Alcaldia de Sa	1.21	77	*e*P	Pn	20 17 24.2	-0.5
SCLA	Alcaldia de Sa	1.21	77	P	Pn	20 17 24.0	-0.7
SCLA	Alcaldia de Sa	1.21	77	S	Sb	20 17 41.9	+0.4
ESQI	Esquipulas	1.26	28	S	Sn	20 17 41.8	+0.4
ESQI	Esquipulas	1.26	28	P	Pn	20 17 24.3	-1.1
ESSG	Sabana Grande	1.27	318	*e*S	Sn	20 17 38.2	-3.5
ESSG				IAML		20 17 39.1	
	comp=E,515nm,0.2s						
PACA	Pacayal	1.58	89	S	Sn	20 17 50.6	+1.3
PACA	Pacayal	1.58	89	P	Pn	20 17 29.9	+0.1
APG	El Apazote	1.64	342	*i* P	Pn	20 17 29.2	-1.5
STG5	El Palmar, Qui	1.67	305	*e*P	Pb	20 17 32.7	-1.2
STG8	El Palmar, Qui	1.69	307	*e*P	Pb	20 17 34.0	-0.5
STG8				*e*S	Sb	20 17 57.8	+2.3
SARH	Santa Rosa de	1.76	41	*e*P	Pn	20 17 31.6	-0.7
SARH	Santa Rosa de	1.76	41	P	Pn	20 17 31.6	-0.7
SARH	Santa Rosa de	1.76	41	S	Sn	20 17 54.2	+0.5
CNCH	Conchagua	2.06	94	P	Pn	20 17 36.0	-0.4
CNCH	Conchagua	2.06	94	S	Sn	20 18 02.1	+0.8
CSGN	Cosiguina Volc	2.37	101	P	Pn	20 17 40.4	-0.3
CSGN				S	Sn	20 18 09.1	+0.3
PKGN	Cerro Pekin	2.99	104	P	Pn	20 17 48.9	-0.2
PKGN				S	Sn	20 18 24.3	+0.3
YUSH	Yuscaran	3.06	80	P	Pn	20 17 48.9	-1.3

IDC 29 20:32:15.6±2.3**, 0°.67N×126°.57E, h0km, mb3.7**/3**, mbtmp3.7**/3**, Error ellipse: s-maj=230.1km s-min=23.7km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.86	160	P	P	20 37 09.3	-0.7
	1.1nm,0.5s,baz=338,slow=11,SNR=12						
	1.1nm,0.5s						
ASAR	Alice Springs	25.22	164	P	P	20 37 43.9	+0.5
	1.1nm,0.4s,baz=344,slow=11,SNR=20						
	1.1nm,0.4s						
MKAR	Makanchi Array	59.98	326	P	P	20 42 23.9	-0.1
	0.3nm,0.4s,baz=126,slow=7.0,SNR=12						
	0.3nm,0.4s						

IDC 29 20:45:44.7±1.3**, 14°.10N×122°.11E, h0km, mb3.4**/4**, mbtmp3.4**/4**, Error ellipse: s-maj=26.1km s-min=14.2km az=13.0, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	1.13	270	Pg	Pn	20 46 08.1	+0.2
	188nm,0.3s,baz=82,slow=7.1,SNR=25						
TGY				Lg	Lg	20 46 20.1	
	123nm,0.3s,baz=60,slow=16,SNR=3.9						
WRA	Warramunga Arr	35.91	160	P	P	20 52 46.8	-0.1
	0.4nm,0.8s,baz=340,slow=9.1,SNR=1.6						
	0.4nm,0.8s						
SONM	Songino Array	36.08	342	P	P	20 52 47.4	-0.9
	0.6nm,0.6s,baz=159,slow=9.7,SNR=5.0						
	0.6nm,0.6s						
ASAR	Alice Springs	39.27	163	P	P	20 53 15.0	-0.3
	0.3nm,0.6s,baz=342,slow=7.6,SNR=6.7						
	0.3nm,0.6s						
MKAR	Makanchi Array	46.53	323	P	P	20 54 14.8	+0.7
	0.2nm,0.6s,baz=113,slow=8.0,SNR=2.8						
	0.2nm,0.6s						

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*IDC **29** 21:11:08.2±1.1, 13°.62N×145°.17E, h122km±7km, mb3.0/5, mbtmp3.4/5, Error ellipse: s-maj=40.0km s-min=13.3km az=88.0*

*NEIC **29** 21:11:09.9±0.8, 13°.6N±0°.1×144°.9E±0°.2, h127km±3km, mb3.9/5, Error ellipse: s-maj=25.7km s-min=12.7km az=116.0*

ISC 29 21:11:09.5±0.8**, 13°.61N**±0°.10×**145°.0E**±0°.1**, h130**km±7km**, n18, σ0s.77**/19**, mb3.4**/8**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.11	260	P	Pn	21 11 27.4	+0.3
	2µm,0.3s,baz=90,slow=1.0,SNR=138						
GUMO				S	Sn	21 11 39.9	-0.5
	846nm,0.3s,baz=182,slow=20,SNR=23						
DPSS	Saipan	1.80	26	Pn	Pn	21 11 41.9	+0.8
DPSS				Sn	Sn	21 12 04.9	-0.3
PATS	Pohnpei	14.74	116		P	21 14 34.0	-0.3
WB0	Warramunga Arr	34.76	198	P	P	21 17 48.9	+1.2
WB0				IAmb	IAmb	21 17 58.0	
	comp=Z,5.0nm,1.2s						
WR8	Warramunga Arr	34.91	197	P	P	21 17 49.0	+0.1
WRA	Warramunga Arr	34.95	198	P	P	21 17 49.3	+0.1
	comp=Z,0.5nm,0.9s,baz=19,slow=8.1,SNR=1.8						
	comp=Z,0.5nm,0.9s						
WRA	Warramunga Arr	34.95	198	IAmb	IAmb	21 17 56.5	
	comp=Z,0.4nm,1.1s						
ASAR	Alice Springs	38.60	196	P	P	21 18 20.3	+0.1
	comp=Z,0.2nm,0.6s,baz=9.6,slow=8.2,SNR=4.9						
	comp=Z,0.2nm,0.6s						
ASAR	Alice Springs	38.60	196	P	P	21 18 19.8	-0.3
MKAR	Makanchi Array	61.55	316	P	P	21 21 13.7	+0.7
	comp=Z,0.1nm,0.2s,baz=101,slow=7.5,SNR=1.8						
	comp=Z,0.1nm,0.2s						
MKAR	Makanchi Array	61.55	316	P	P	21 21 13.0	0.0
ILAR	Eielson Array	68.50	25	P	P	21 21 56.0	-1.6
	comp=Z,0.7nm,1.0s,baz=256,slow=6.1,SNR=6.0						
	comp=Z,0.7nm,1.0s						
ILAR	Eielson Array	68.50	25	P	P	21 21 58.0	+0.4
BVAR	Borovoye Array	69.98	322	P	P	21 22 06.5	-0.4
	comp=Z,0.3nm,0.5s,baz=102,slow=6.1,SNR=2.2						
	comp=Z,0.3nm,0.5s						
BORK	Borovoye	70.02	322	P	P	21 22 05.9	-1.3
BORK				IAmb	IAmb	21 22 06.6	
	comp=Z,3.8nm,1.4s						
AB31	Akbulak array	76.60	318	P	P	21 22 46.0	+0.2
AB31				IAmb	IAmb	21 23 01.0	
	comp=Z,0.8nm,0.8s						
ABKAR	Akbulak array	76.60	318	P	P	21 22 45.6	-0.3
LPAZ	La Paz	147.92	99	PKPbc	PKPdf	21 30 39.0	+0.9
	comp=Z,0.9nm,0.6s,baz=222,slow=1.9,SNR=5.4						

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*IDC **29** 21:21:04.2±4.9, 20°.61S×178°.47W, h616km±60km, mb2.8/6, mbtmp3.8/7, Error ellipse: s-maj=38.1km s-min=27.8km az=173.0*

ISC 29 21:21:02.6±0.8**, 20°.6S**±0°.2×**178°.5W**±0°.2**, h600km, n12, σ1s.17**/13**, mb3.4**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	18.06	191	P	P	21 24 38.7	+0.1
	3.0nm,0.5s,baz=348,slow=14,SNR=1.7						
URZ				S	S	21 27 22.0	-12
	9.5nm,1.1s,baz=147,slow=13,SNR=1.5						
ASAR	Alice Springs	44.06	257	P	P	21 28 19.8	+0.7
	1.7nm,0.7s,baz=96,slow=7.5,SNR=24						
ASAR				PcP	PcP	21 29 51.5	+0.6
	0.2nm,0.7s,baz=95,slow=3.3,SNR=4.2						
	1.7nm,0.7s						
WRA	Warramunga Arr	44.14	262	P	P	21 28 20.1	+0.4
	0.5nm,0.4s,baz=98,slow=7.6,SNR=8.9						
	0.5nm,0.4s						
MJAR	Matsushiro Arr	69.98	324	P	P	21 31 15.6	+0.5
	0.5nm,0.5s,baz=156,slow=5.9,SNR=4.8						
	0.5nm,0.5s						
TXAR	Lajitas Array	87.47	58	P	P	21 32 48.2	+0.4
	0.6nm,1.1s,baz=239,slow=4.5,SNR=2.3						
	0.6nm,1.1s						
ILAR	Eielson Array	88.46	13	P	P	21 32 51.8	+0.3
	0.3nm,0.5s,baz=217,slow=5.0,SNR=6.5						
	0.3nm,0.5s						
PDAR	Pinedale Array	89.31	43	P	P	21 32 57.6	+1.3
	0.2nm,0.5s,baz=238,slow=5.6,SNR=2.4						
	0.2nm,0.5s						
BVAR	Borovoye Array	118.82	320	PKP	PKiKP	21 38 43.5	-0.1
	0.5nm,0.4s,baz=142,slow=1.1,SNR=5.1						
AKASG	Malin Array Be	142.83	331	PKP	PKPdf	21 39 26.1	-2.4
	1.5nm,0.5s,baz=45,slow=4.1,SNR=6.6						
EKA	Eskdalemuir Ar	145.09	5	PKPbc	PKPbc	21 39 32.2	-1.1
	3.7nm,0.9s,baz=21,slow=4.9,SNR=2.8						
BRTR	Keskin Array B	146.53	312	PKPbc	PKiKP	21 39 38.3	-1.8
	0.4nm,0.6s,baz=54,slow=2.9,SNR=2.5						
GERES	GERESS Array B	150.12	344	PKPbc	PKiKP	21 39 46.7	-0.5
	0.1nm,0.4s,baz=27,slow=3.3,SNR=3.5						

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*IDC **29** 21:45:03.8±2.3, 33°.02S×178°.40W, h0km, mb3.9/2, mbtmp3.9/3, ML3.7/1, Error ellipse: s-maj=62.9km s-min=34.3km az=124.0*

*NEIC **29** 21:45:05.7±1.0, 33°.2S±0°.1×178°.2W±0°.2, h10km±1km, mb4.6/10, Error ellipse: s-maj=25.9km s-min=21.7km az=134.0*

ISC 29 21:45:08.5±0.9**, 33°.2S**±0°.1×**178°.3W**±0°.1**, h32km, n20, σ0s.76**/21**, mb4.5**/8**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.32	215	Pn	Pn	21 46 39.9	+0.5
	1.8nm,0.3s,baz=7.1,slow=16,SNR=11						
URZ				Sn	Sn	21 47 51.4	+0.9
	2.2nm,0.3s,baz=18,slow=20,SNR=7.9						
	4.5nm,0.3s						
RTZ	Ruatahuna	6.66	214	Pn	Pn	21 46 44.1	-0.1
BKZ	Black Stump Fm	7.33	214	Pn	Pn	21 46 53.1	-0.3
BBOO	Buckleboo	38.07	258	P	P	21 52 23.8	-0.4
BBOO				IAmb	IAmb	21 53 00.7	
	comp=Z,18nm,1.1s						
COEN	Coen	39.88	289	P	P	21 52 39.7	+0.2
COEN				IAmb	IAmb	21 53 21.4	
	comp=Z,12nm,1.4s						
ASAR	Alice Springs	42.80	270	P	P	21 53 02.7	-0.8
	comp=Z,0.7nm,0.6s,baz=107,slow=7.7,SNR=11						
	comp=Z,0.7nm,0.6s						
ASAR	Alice Springs	42.80	270	P	P	21 53 03.1	-0.4
WR8	Warramunga Arr	43.90	275	P	P	21 53 11.5	-0.9
WRA	Warramunga Arr	44.04	275	P	P	21 53 12.4	-1.1
	comp=Z,1.3nm,0.5s,baz=117,slow=8.3,SNR=11						
	comp=Z,1.3nm,0.5s						
WRA	Warramunga Arr	44.04	275	P	P	21 53 12.7	-0.8
WB0	Warramunga Arr	44.08	275	P	P	21 53 12.8	-1.0
WB0				IAmb	IAmb	21 53 51.2	
	comp=Z,12nm,1.4s						
MORW	Morawa	55.56	255	P	P	21 54 40.8	-0.3
QSPA	South Pole Qui	56.95	180	P	P	21 54 50.1	-0.5
QSPA				IAmb	IAmb	21 55 06.3	
	comp=Z,6.3nm,1.4s						
TOLI2	Tolitoli	66.62	288	P	P	21 55 57.7	+1.5
TOLI2				IAmb	IAmb	21 56 04.7	
	comp=Z,10nm,1.0s						
PLCA	Paso Flores	80.80	133	P	P	21 57 19.1	0.0
PLCA				IAmb	IAmb	21 57 35.6	
	comp=Z,4.8nm,1.2s						
N17K	Nushagak Hills	94.95	10	P	P	21 58 28.1	+1.1
FIA1	FINESS Array S	147.64	338		PKPbc	22 04 48.4	-0.5
FINES	FINESS Array B	147.64	338	PKPbc	PKPbc	22 04 48.2	-0.6
	comp=Z,5.0nm,0.8s,baz=35,slow=3.4,SNR=14						
BRTR	Keskin Array B	153.60	294	PKPbc	PKPbc	22 05 03.8	-0.3
	comp=Z,0.2nm,0.5s,baz=118,slow=1.5,SNR=1.8						
BRTR	Keskin Array B	153.60	294		PKiKP	22 05 04.0	-0.1

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*CATAC **29** 22:06:00.2±1.0, 13°N±6°×9°0W±°, h29km±5km, M2.8/7, MLv2.8/7, Error ellipse: s-maj=13.6km s-min=9.1km az=23.6, confirmed*

*GCG **29** 22:06:01.0±0.5, 13°.42N×89°.98W, h57km±10km, MD3.4*

ISC 29 22:06:01.3±2.6**, 13°.3N**±0°.2×**89°.91W**±0°.07**, h58km, n20, σ1s.68**/23**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	0.55	350	P	Pn	22 06 12.1	-1.6
FAME	Alcaldia de Sa	0.55	350	S	Sn	22 06 20.8	-1.9
JAYA	Jayaque - finc	0.57	52	*e*P	Pn	22 06 13.4	-0.7
JAYA				*e*S	Sn	22 06 23.3	-0.1
JAYA	Jayaque - finc	0.57	52	P	Pn	22 06 13.6	-0.5
CEVE	Cerro Verde	0.60	28	P	Pn	22 06 14.1	-0.4
NUBE	Las Nubes	0.61	12	*e*P	Pn	22 06 13.6	-1.0
NUBE				*e*S	Sn	22 06 23.1	-1.2
NUBE	Las Nubes	0.61	12	P	Pn	22 06 13.6	-1.0
CEDA	San Andres	0.71	45	S	Sn	22 06 26.8	+0.7
PMON	Piamonte	0.71	55	P	Pn	22 06 15.8	+0.1
PMON	Piamonte	0.71	55	S	Sn	22 06 27.8	+1.6
UEES	Universidad Ev	0.78	58	S	Sn	22 06 30.0	+2.5
LOMA	Loma Larga	0.80	64	S	Sn	22 06 29.0	+0.8
LOMA	Loma Larga	0.80	64	P	Pn	22 06 16.8	0.0
PCG5	San Vicente Pa	1.02	334	*e*P	Pn	22 06 21.5	+1.8
PCG5				*e*S	Sn	22 06 37.1	+3.9
COEG	Centro de Oper	1.05	72	S	Sn	22 06 31.0	-3.0
TECO	Alcaldia de Te	1.13	78	S	Sn	22 06 37.9	+2.3
MTO3	Montecristo	1.22	26	*e*P	Pn	22 06 21.7	-0.6
MTO3	Montecristo	1.22	26	P	Pn	22 06 21.8	-0.6
MTO3	Montecristo	1.22	26	S	Sn	22 06 38.4	+0.3
ESSG	Sabana Grande	1.40	321	*e*P	Pn	22 06 23.1	-1.6

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*IDC **29** 22:34:25.4±0.8, 10°.80S×162°.86E, h0km, mb4.0/11, mbtmp4.0/13, ML4.0/1, MS3.3/2, Error ellipse: s-maj=25.3km s-min=18.9km az=120.0*

*NEIC **29** 22:34:31.1±1.9, 11°.0S±0°.1×162°.92E±0°.05, h35km±2km, mb4.3/11, Error ellipse: s-maj=19.9km s-min=6.8km az=162.0*

ISC 29 22:34:30.4±0.6**, 10°.91S**±0°.10×**162°.9E**±0°.1**, h34km, n38, σ1s.01**/30**, mb4.1**/16**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	6.16	137		Pn	22 35 58.0	-1.0
DZM	Mont Dzumac	11.61	163	Pn	Pn	22 37 14.1	+0.3
	4.9nm,0.6s,baz=328,slow=19						
PMG	Port Moresby	15.56	274	LR	LR	22 43 40.1	
	comp=Z,73nm,19.9s,baz=124,slow=36						
CTA	Charters Tower	18.43	238	P	P	22 38 42.2	-0.8
	0.3nm,0.3s,baz=76,slow=17,SNR=1.2						
	2.3nm,0.2s						
COEN	Coen	19.49	259	P	P	22 38 53.2	-1.5
STKA	Stephens Creek	28.67	220	P	P	22 40 25.1	+0.9
	1.7nm,0.7s,baz=17,slow=11,SNR=1.6						
	1.7nm,0.7s						
STKA	Stephens Creek	28.67	220	P	P	22 40 23.9	-0.3
WR8	Warramunga Arr	28.77	248	P	P	22 40 26.7	+1.5
WR8				IAmb	IAmb	22 40 42.6	
	comp=Z,8.9nm,1.5s						
WB0	Warramunga Arr	28.82	249	P	P	22 40 26.2	+0.5
WB0				IAmb	IAmb	22 40 45.8	
	comp=Z,8.1nm,1.4s						
WRA	Warramunga Arr	28.91	248	P	P	22 40 26.4	-0.1
	comp=Z,0.5nm,0.7s,baz=78,slow=8.6,SNR=2.0						
	comp=Z,0.5nm,0.7s						
WRA	Warramunga Arr	28.91	248	P	P	22 40 25.5	-1.0
H11S2	WAKE ISLAND Hy	29.46	7	T	T	23 11 13.6	
	baz=188,slow=76,SNR=165						
H11S3	WAKE ISLAND Hy	29.46	7	T	T	23 11 13.7	
	baz=188,slow=76,SNR=147						
H11S1	WAKE ISLAND Hy	29.47	7	T	T	23 11 18.1	
	baz=188,slow=76,SNR=125						
ASAR	Alice Springs	30.37	242	P	P	22 40 39.5	+0.1
	comp=Z,0.5nm,0.6s,baz=58,slow=10,SNR=8.2						
	comp=Z,0.5nm,0.6s						
H11N1	WAKE ISLAND Hy	30.69	7	T	T	23 12 45.9	
	baz=188,slow=76,SNR=81						
H11N3	WAKE ISLAND Hy	30.69	7	T	T	23 12 46.3	
	baz=188,slow=76,SNR=105						
H11N2	WAKE ISLAND Hy	30.70	7	T	T	23 12 47.2	
	baz=188,slow=76,SNR=98						
FITZ	Fitzroy Crossi	36.71	254	LR	LR	22 54 45.1	
	comp=Z,62nm,21.1s,baz=151,slow=33						
PPT	Papeete	46.45	104	P	P	22 42 55.2	+0.8
	comp=Z,12nm,0.8s,baz=230,slow=4.7,SNR=1.4						
	comp=Z,12nm,0.8s						
PETK	Petropavlovsk-	63.92	357	P	P	22 44 58.5	-1.3
	comp=Z,2.7nm,0.8s,baz=172,slow=5.7,SNR=2.3						
	comp=Z,2.7nm,0.8s						
PETK	Petropavlovsk-	63.92	357	P	P	22 45 00.5	+0.8
VNDA	Vanda	66.60	180	P	P	22 45 17.6	+0.8
	comp=Z,0.6nm,0.8s,baz=54,slow=8.7,SNR=7.9						
	comp=Z,0.6nm,0.8s						
VNDA	Vanda	66.60	180	P	P	22 45 16.0	-0.8
VNDA				IAmb	IAmb	22 45 54.5	
	comp=Z,3.2nm,1.4s						
SONM	Songino Array	76.92	325	P	P	22 46 19.6	+0.1
	comp=Z,0.8nm,0.9s,baz=156,slow=4.0,SNR=4.3						
	comp=Z,0.8nm,0.9s						
SONM	Songino Array	76.92	325	P	P	22 46 19.4	0.0
SONM				IAmb	IAmb	22 46 24.2	
	comp=Z,2.5nm,1.2s						
K17K	Iditarod	79.29	17	P	P	22 46 33.2	+1.1
ILAR	Eielson Array	84.30	19	P	P	22 46 58.5	+0.1
	comp=Z,0.5nm,0.6s,baz=241,slow=4.6,SNR=9.8						
	comp=Z,0.5nm,0.6s						
ILAR	Eielson Array	84.30	19	P	P	22 46 59.8	+1.4
I28M	Miner Creek	87.04	21	P	P	22 47 12.8	+0.6
I28M				IAmb	IAmb	22 47 41.4	
	comp=Z,4.1nm,1.4s						
D25K	Kavik River	87.42	16	P	P	22 47 14.7	+0.8
D25K				IAmb	IAmb	22 47 32.6	
	comp=Z,3.6nm,1.3s						
NVAR	Mina Array Bea	88.09	50	P	P	22 47 19.0	+1.0
	comp=Z,0.5nm,0.7s,baz=282,slow=2.8,SNR=1.7						
	comp=Z,0.5nm,0.7s						
NVAR	Mina Array Bea	88.09	50	P	P	22 47 16.5	-1.5
G29M	Pine Creek	88.50	20	P	P	22 47 20.7	+1.7
G29M				IAmb	IAmb	22 47 27.3	
	comp=Z,7.0nm,1.4s						
MKAR	Makanchi Array	91.52	317	P	P	22 47 34.6	+1.0
	comp=Z,1.3nm,0.8s,baz=110,slow=4.7,SNR=9.9						
	comp=Z,1.3nm,0.8s						
MKAR	Makanchi Array	91.52	317	P	P	22 47 33.8	+0.2
YKA	Yellowknife Ar	96.15	28	P	P	22 47 52.7	-1.7
	comp=Z,0.4nm,0.9s,baz=263,slow=5.8,SNR=4.2						
	comp=Z,0.4nm,0.9s						
BVAR	Borovoye Array	100.13	322	P	Pdif	22 48 12.1	-0.4
	comp=Z,0.5nm,0.8s,baz=164,slow=1.0,SNR=2.3						

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*WEL **29** 22:44:51.4±0.8, 42°S±3°×17°4E±°, h12km±7km, M3.0/18, ML3.0/8, MLv3.0/18, Error ellipse: s-maj=4.8km s-min=3.5km az=81.8, confirmed*

*NOU **29** 22:44:57.6, 41°.38S×173°.85E, h0km, MLv3.6/5, South Island, New Zealand*

ISC 29 22:44:51.8±0.9**, 41°.61S**±0°.02×**174°.24E**±0°.02**, h19**km±2km**, n62, σ0s.73**/69**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDNS	Seddon	0.09	234	P	Pg	22 44 55.5	+0.1
SDNS				S	Sg	22 44 58.7	+0.8
SEDS	Seddon Fire St	0.14	243	P	Pg	22 44 55.9	0.0
SEDS				S	Sg	22 44 59.2	+0.5
CMWZ	Cape Campbell	0.14	187	P	Pg	22 44 56.1	+0.1
WDFS	Ward Fire Stat	0.23	199	P	Pb	22 44 57.2	+0.1
WDFS				S	Sg	22 45 01.9	+1.0
MGCS	Blenheim Marlb	0.24	295	P	Pg	22 44 57.4	0.0
MGCS				S	Sg	22 45 01.8	+0.6
TUWZ	Tuamarina	0.28	309	P	Pb	22 44 58.8	+0.5
BSWZ	Blackbirch Sta	0.29	249	P	Pg	22 44 58.1	-0.1
BSWZ				S	Sb	22 45 02.9	+0.2
BWRS	Waikakaho Road	0.30	304	P	Pg	22 44 58.5	+0.1
BWRS				S	Sb	22 45 03.3	+0.1
QCCS	Picton Queen C	0.37	334	P	Pg	22 44 59.3	-0.2
QCCS				S	Sg	22 45 04.6	-0.1
KEKS	Kekerengu Vall	0.39	209	P	Pg	22 45 00.2	+0.2
GLOS	29 km south-we	0.40	231	P	Pg	22 45 00.0	-0.1
TCW	Tory Channel	0.40	4	P	Pg	22 44 60.0	-0.1
HAVS	Havelock	0.48	315	P	Pg	22 45 01.4	-0.1
MKVS	Makara Village	0.49	46	P	Pg	22 45 01.7	0.0
WNKS	Wellington Kar	0.50	50	P	Pg	22 45 01.8	-0.1
WNHS	Wellington Hig	0.51	53	P	Pg	22 45 02.1	+0.1
WEL	Wellington	0.52	51	P	Pb	22 45 02.2	0.0
BHW	Baring Head	0.52	67	P	Pb	22 45 02.2	0.0
NNZ	Nelson	0.76	301	P	Pb	22 45 06.2	-0.1
MSWZ	Moikau Station	0.79	76	P	Pb	22 45 07.1	+0.3
CAW	Cannon Point	0.80	51	P	Pb	22 45 07.1	0.0
DUWZ	D'Urville Isla	0.84	344	P	Pb	22 45 07.7	-0.1
KIW	Kapiti Island	0.91	34	P	Pb	22 45 08.7	-0.2
KHZ	Kahutara	0.96	213	P	Pb	22 45 10.0	+0.2
THZ	Tophouse	1.01	261	P	Pb	22 45 10.4	-0.3
MTW	Mount Morrison	1.05	65	P	Pb	22 45 11.1	-0.3
OGWZ	Otaki Gorge	1.06	42	P	Pb	22 45 11.5	-0.1
TRWZ	Traveller	1.11	79	P	Pn	22 45 11.7	-0.7
TKNZ	Takaka Hill	1.12	301	P	Pb	22 45 12.6	0.0
MRNZ	Matariki Terra	1.13	280	P	Pn	22 45 12.8	+0.1
HOWZ	Holdsworth Sta	1.20	54	P	Pn	22 45 13.3	-0.3
TMWZ	Te Maipa	1.34	69	P	Pn	22 45 14.8	-0.8
MRZ	Mangatainoka R	1.39	47	P	Pn	22 45 16.2	0.0
TIWZ	Tintock	1.50	57	P	Pn	22 45 17.2	-0.5
QRZ	Quartz Range	1.51	301	P	Pb	22 45 18.9	-0.3
QRZ	Quartz Range	1.51	301	P	Pb	22 45 18.9	-0.3
GVZ	Greta Valley S	1.62	213	P	Pn	22 45 18.7	-0.7
OHWZ	Ohakea	1.62	31	P	Pn	22 45 18.4	-1.0
CPWZ	Castlepoint	1.64	65	P	Pg	22 45 25.2	+1.9
POWZ	Post Office Ro	1.68	44	P	Pn	22 45 19.7	-0.6
PRWZ	Pori Road	1.68	52	P	Pn	22 45 20.1	-0.2
BFZ	Birch Farm	1.78	59	P	Pn	22 45 20.3	-1.3
DSZ	Denniston Nort	1.83	265	P	Pn	22 45 23.5	+1.2
LTZ	Lake Taylor	1.87	231	P	Pn	22 45 22.6	-0.2
WAZ	Wanganui	1.94	17	P	Pb	22 45 27.2	+0.7
DVHZ	Dannevirke	1.96	49	P	Pn	22 45 23.2	-0.9
TSZ	Takapari Road	2.03	41	P	Pn	22 45 24.7	-0.3
PNHZ	Pukenui	2.26	42	P	Pn	22 45 27.6	-0.5
PREZ	Palmer Road	2.27	358	P	Pb	22 45 32.3	+0.2
OKCZ	Okains Bay	2.28	202	P	Pn	22 45 26.8	-1.7
KHEZ	Kahui Hut	2.32	356	P	Pb	22 45 33.6	+0.5
KHEZ	Kahui Hut	2.32	356	P	Pb	22 45 32.5	-0.6
INZ	Inchbonnie	2.35	241	P	Pn	22 45 29.6	+0.1
NBEZ	Newall Road No	2.36	353	P	Pb	22 45 33.9	+0.3
MQZ	McQueen's Vall	2.40	209	P	Pn	22 45 27.7	-2.4
AKCZ	Akaroa Harbour	2.46	203	P	Pn	22 45 29.2	-1.8
MOVZ	Moawhango	2.49	28	P	Pb	22 45 35.3	-0.6
VRZ	Vera Road	2.52	9	P	Pb	22 45 34.3	-2.0
WTVZ	West Tongariro	2.70	23	P	Pb	22 45 40.1	+0.6
BKZ	Black Stump Fm	2.99	36	P	Pb	22 45 45.9	+1.4
HIZ	Hauiti	3.13	9	P	Pb	22 45 46.3	-0.5
RPZ	Rata Peaks	3.15	227	P	Pb	22 45 47.8	+0.6

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*IDC **29** 22:57:33.2±2.2, 33°.00S×178°.30W, h0km, mb3.8/2, mbtmp3.9/3, ML3.0/1, Error ellipse: s-maj=62.7km s-min=33.0km az=129.0*

*WEL **29** 22:57:36.5±0.9, 33°S±7°×17°8W±1°8, h33km, mB4.7/5, ML4.3/12, MLv4.3/7, Mw(mB)4.0/5, Error ellipse: s-maj=25.0km s-min=4.1km az=109.7, confirmed*

ISC 29 22:57:36.5±1.7**, 33°.0S**±0°.1×**178°.2W**±0°.3**, h34km, n25, σ1s.29**/39**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.69	3	P	Pn	22 58 30.1	-1.0
GLKZ				S	Sn	22 59 12.9	-0.5
MXZ	Matakaoa Point	5.42	211	P	Pn	22 58 54.5	-0.4
MXZ				S	Sn	22 59 56.3	+0.2
WMGZ	Waiomatatini S	5.60	209	P	Pn	22 58 58.8	+1.5
PKGZ	Pakihiroa	5.78	211	P	Pn	22 58 59.4	-0.4
PKGZ				S	Sn	23 00 04.6	-0.3
HAZ	Te Kaha	5.82	214	P	Pn	22 59 01.2	+0.9
HAZ				S	Sn	23 00 08.5	+2.7
PUZ	Puketiti	5.88	209	P	Pn	22 59 00.6	-0.6
PUZ				S	Sn	23 00 06.2	-1.1
RUGZ	Raukumara Rang	6.04	213	P	Pn	22 59 04.3	+0.8
RUGZ				S	Sn	23 00 11.5	0.0
TWGZ	Tauwhareparae	6.08	210	P	Pn	22 59 06.6	+2.6
TWGZ				S	Sn	23 00 11.3	-1.1
CNGZ	Carnagh Statio	6.25	207	P	Pn	22 59 08.6	+2.3
MWZ	Matawai	6.41	212	P	Pn	22 59 08.2	-0.3
MWZ				S	Sn	23 00 19.9	-0.5
URZ	Urewera	6.54	215	Pn	Pn	22 59 09.7	-0.5
	0.3nm,0.3s,baz=60,slow=8.1,SNR=3.4						
URZ				Sn	Sn	23 00 22.9	-0.7
	1.9nm,0.3s,baz=30,slow=20,SNR=2.0						
	6.5nm,0.3s						
URZ	Urewera	6.54	215	P	Pn	22 59 09.1	-1.1
URZ				S	Sn	23 00 22.9	-0.7
RIGZ	Rimuhau	6.62	209	P	Pn	22 59 12.3	+0.9
SNGZ	Shannon Statio	6.86	211	P	Pn	22 59 14.6	0.0
SNGZ				S	Sn	23 00 30.8	-0.7
RTZ	Ruatahuna	6.88	214	P	Pn	22 59 15.2	+0.2
MHGZ	Mahia Peninsul	6.95	206	P	Pn	22 59 14.9	-1.0
RAHZ	Arahi	7.08	212	P	Pn	22 59 19.8	+2.1
RAHZ				S	Sn	23 00 36.6	-0.5
MTHZ	Maungataniwha	7.14	213	P	Pn	22 59 20.1	+1.5
MTHZ				S	Sn	23 00 36.2	-2.3
OUZ	Omahuta	7.20	249	P	Pn	22 59 23.2	+4.0
BKZ	Black Stump Fm	7.55	213	P	Pn	22 59 23.8	-0.4
BKZ				S	Sn	23 00 46.8	-1.9
CKHZ	Cape Kidnapper	7.71	209	P	Pn	22 59 25.9	-0.4
CKHZ				S	Sn	23 00 49.4	-2.9

ASAR	Alice Springs	42.89	270	P	P	23 05 32.6	+0.7
	0.4nm,0.4s,baz=108,slow=7.5,SNR=7.4						
	0.4nm,0.4s						
WRA	Warramunga Arr	44.11	275	P	P	23 05 42.7	+0.9
	0.9nm,0.4s,baz=116,slow=8.1,SNR=10						
	0.9nm,0.4s						
FINES	FINESS Array B	147.48	338	PKPbc	PKPab	23 17 17.9	-0.3
	4.2nm,0.8s,baz=57,slow=2.1,SNR=14						
HFS	Hagfors	151.71	347	PKPbc	PKiKP	23 17 28.3	+1.2
	1.5nm,0.8s,baz=14,slow=3.0,SNR=0.8						

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*UCR **29** 23:03:41.6±0.9, 9°.83N×84°.66W, h41^{km}±2^{km}, MW4.5, Fault plane solution: NP1:φs121.30000°, δ50.00000°, λ0.00000°.*

*CATAC **29** 23:03:41.1±0.3, 10°N±2°×8°5W±°, h23^{km}±2^{km}, M4.5/19, MLv4.5/19, Error ellipse: s-maj=5.7km s-min=2.3km az=41.4, confirmed*

*UPA **29** 23:03:45.0±6.2, 10°.16N×84°.16W, h3^{km}±72^{km}, MW4.1*

ISC 29 23:03:42.9±0.9, **9°.83N**±0°.02×**84°.65W**±0°.02, **h32**^{km}±6^{km}, **n159**, σ**1^{s}23**/169, **34C-47D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARZA	Esparza	0.16	355	eP	Pn	23 03 48.5	-0.8
ARZA				eS	Sb	23 03 54.5	+1.3
ROBF	Roble, Puntare	0.17	332	⇓eP	Pn	23 03 48.9	-0.5
BITO	Garabito Jaco	0.21	171	⇑eP	Pn	23 03 49.1	-0.8
BITO				eS	Sb	23 03 55.5	+1.6
ENAS	Puntarenas	0.23	310	⇓eP	Pn	23 03 49.5	-0.6
PAQE	Paquera	0.28	268	⇓eP	Pn	23 03 49.7	-1.0
ATEO	Atenas	0.31	61	⇓eP	Pb	23 03 50.1	-0.6
PALD	Palmares	0.31	44	eP	Pb	23 03 50.3	-0.5
RAMO	San Ramon	0.32	36	eP	Pb	23 03 50.4	-0.5
PURI	Puriscal	0.34	87	eP	Pb	23 03 50.6	-0.6
NARAN	Naranjo de Ala	0.38	45	eP	Pb	23 03 51.4	-0.4
SARCI	Sarchi	0.40	49	eP	Pb	23 03 51.7	-0.3
TCS1	Tacares	0.41	59	P	Pb	23 03 51.8	-0.3
TCS1	Tacares	0.41	59	⇓eP	Pb	23 03 51.6	-0.6
TCS1				eS	Sb	23 04 00.0	+1.6
GREC	Grecia	0.42	54	eP	Pb	23 03 51.8	-0.5
ZARE	Zarcero	0.44	36	eP	Pb	23 03 52.4	-0.3
CAO2	Cobano, Puntar	0.47	253	⇓eP	Pb	23 03 52.0	-0.9
POAS	San Pedro de P	0.47	59	eP	Pb	23 03 52.5	-0.7
SANTA	Santa Ana	0.47	77	⇓eP	Pb	23 03 51.9	-1.2
BELE	Belen	0.48	72	⇓eP	Pb	23 03 52.2	-1.1
ACOS	Acosta	0.48	94	eP	Pb	23 03 52.0	-1.3
PICV	PH. Pirrs	0.49	114	⇑eP	Pb	23 03 52.0	-1.4
VPL1	V. Platanar	0.51	34	eP	Pb	23 03 52.9	-1.0
VPS8	V Poas	0.54	49	⇓eP	Pb	23 03 53.4	-0.9
HEME	Heredia, Merce	0.54	72	⇓eP	Pn	23 03 54.1	-0.4
QUEU	Ciudad Quesada	0.54	24	eP	Pn	23 03 53.9	-0.5
PAVB	Pavas, San Jos	0.54	78	eP	Pn	23 03 52.8	-1.7
JUNT	Juntas	0.54	326	⇑eP	Pn	23 03 53.1	-1.4
JTS	Las Juntas de	0.55	327	⇑P	Pn	23 03 53.1	-1.4
JTS				S	Sb	23 04 01.6	-0.3
JTS	Las Juntas de	0.55	327	⇑eP	Pn	23 03 53.1	-1.4
VPS5	V. Poas	0.55	49	eP	Pn	23 03 53.2	-1.7
HDC	Heredia	0.56	72	⇓eP	Pn	23 03 53.5	-1.3
MEXI	Barrio Mexico	0.57	79	eP	Pn	23 03 53.5	-1.5
CENT	San Jose	0.57	80	eP	Pn	23 03 54.4	-0.6
LUJA	Lujan	0.58	80	eP	Pn	23 03 53.5	-1.6
AMPA	Desamparados	0.59	83	eP	Pn	23 03 53.4	-1.8
SJS	Escuela Geolog	0.60	79	eP	Pn	23 03 53.9	-1.5
LUPE	Guadalupe	0.60	79	⇓eP	Pn	23 03 53.5	-1.9
ECI	Escuela Centro	0.60	80	⇓eP	Pn	23 03 54.0	-1.4
SJS3	Mercedes San J	0.60	80	⇓eP	Pn	23 03 54.1	-1.3
CASO	Castillo	0.61	353	⇑eP	Pn	23 03 54.4	-1.0
SVQ2	Quepos	0.62	129	eP	Pn	23 03 53.6	-1.9
QUEP	Quepos	0.62	129	S	Sb	23 04 03.7	-0.3
QUEP	Quepos	0.62	129	⇑P	Pn	23 03 53.8	-1.7
QUEP	Quepos	0.62	129	eP	Pn	23 03 53.9	-1.7
ARE1	Arenal 1	0.63	354	⇑eP	Pn	23 03 55.0	-0.7
VARE2	V. Arenal	0.63	354	⇑eP	Pn	23 03 55.1	-0.7
FORC	Fortuna	0.63	359	⇑eP	Pn	23 03 54.9	-0.9
VACR	Volcan Arenal	0.64	358	⇑eP	Pn	23 03 55.0	-0.9
PITB	Pirrs, San	0.64	105	eP	Pn	23 03 54.3	-1.7
RAZU	San Marcos de	0.64	105	⇓eP	Pn	23 03 54.2	-1.8
LCR2	La Lucha 2	0.65	98	eS	Sb	23 04 03.8	-1.0
TRIO	Tres Rios	0.66	83	eP	Pn	23 03 54.4	-1.7
CEDE	Laguna Cedeo	0.66	356	⇑eP	Pn	23 03 55.4	-0.7
CORON	Coronado	0.66	77	⇓eP	Pn	23 03 55.1	-1.1
CHIK	Chiripa	0.66	338	⇑eP	Pn	23 03 55.1	-1.1
ARTO	Ro Cuarto	0.67	40	⇓eP	Pn	23 03 55.1	-1.1
TABAC	Tabacon	0.68	351	⇑eP	Pn	23 03 55.6	-0.7
REZ	Monterrey de S	0.70	356	eP	Pn	23 03 56.0	-0.7
TILA	Tilaran	0.71	334	⇑eP	Pn	23 03 55.5	-1.3
PIEC	Cerro El Cedra	0.72	107	⇓eP	Pn	23 03 55.2	-1.9
TAGO	Cartago	0.72	87	⇓eP	Pn	23 03 55.5	-1.5
ITAL	Pital	0.72	31	eP	Pn	23 03 55.9	-1.1
CVIMO	Finca Echandi	0.73	74	⇓eP	Pn	23 03 56.0	-1.2
CNAS	Canas	0.74	324	⇑eP	Pn	23 03 57.0	-0.1
INVE	Universidad In	0.76	328	⇑eP	Pn	23 03 56.3	-1.2
REPA	Paraso	0.77	90	eP	Pn	23 03 56.1	-1.7
CMARA	Lajas Hojancha	0.78	284	S	Sn	23 04 08.6	+0.1
CMARA	Lajas Hojancha	0.78	284	⇓P	Pn	23 03 56.1	-1.7
CMARA	Lajas Hojancha	0.78	284	⇓eP	Pn	23 03 56.0	-1.8
VICA	Volcano Irazu	0.81	79	⇓eP	Pn	23 03 57.2	-1.4
QUEB	Quebradon, Cot	0.82	343	⇑eP	Pn	23 03 57.3	-1.1
TIMP	Tierras Morena	0.83	334	⇑eP	Pn	23 03 57.3	-1.2
PCAYA	Pacayas	0.83	84	eP	Pn	23 03 57.5	-1.2
INDI	Punta indio, G	0.84	273	⇓eP	Pn	23 03 56.4	-2.1
RAFA	San Farael, Vo	0.84	81	⇓eP	Pn	23 03 57.6	-1.3
PLVR	Palo Verde	0.86	307	⇑eP	Pn	23 03 57.5	-1.4
SARA	Sarapiqu	0.88	45	⇓eP	Pn	23 03 57.8	-1.2
CVTQ	Turrialba Volc	0.89	79	⇓eP	Pn	23 03 58.7	-0.9
VINA	Juan Vinas	0.90	86	⇓eP	Pn	23 03 58.1	-1.3
VTUN	Crater Central	0.90	78	⇓eP	Pn	23 03 58.7	-1.0
VTR0	Volcan Turrial	0.90	78	⇓eP	Pn	23 03 58.7	-1.1
CVTR	Volcan Turrial	0.90	78	⇓eP	Pn	23 03 58.7	-1.1
ELVJ	El Viejo (Barb	0.90	313	eP	Pn	23 03 59.1	-0.4
CVTV	Tajo	0.91	79	⇓eP	Pn	23 03 58.9	-0.9
COVE	Coope Vega, Sa	0.92	16	S	Sn	23 04 11.7	-0.1
COVE	Coope Vega, Sa	0.92	16	⇑P	Pn	23 03 58.5	-1.2
VTCV	VTCV, Calle Va	0.93	80	⇓eP	Pn	23 03 58.9	-1.0
JUD3	Juan Diaz 3	0.93	291	eP	Pn	23 03 58.3	-1.6
PILE	Guapiles	0.94	66	⇓eP	Pn	23 03 59.0	-0.8
ABRB	Las Abras (San	0.94	79	⇓eP	Pn	23 03 59.5	-0.7
MOTZ	Rio Naranjo	0.95	334	⇑eP	Pn	23 03 59.3	-0.7
TURIB	Turrialba	0.96	85	eP	Pn	23 03 58.9	-1.4
CUI	Cuipilapa	0.96	329	⇑eP	Pn	23 03 59.4	-1.0
COLC	Colonia	0.99	327	⇑eP	Pn	23 03 59.7	-1.0
SACU	Santa Cruz	1.01	295	eP	Pn	23 04 00.1	-0.8
RESJ	San Isidro (Tu	1.02	79	⇓eP	Pn	23 04 00.4	-0.6
HORNC	Hornillas	1.02	330	⇑eP	Pn	23 04 00.0	-1.1
CARI	Cariari	1.05	59	⇓eP	Pn	23 04 00.8	-0.7
MESS	Mesas	1.05	330	⇑eP	Pn	23 04 00.6	-0.9
ZEDO	Perez Zeledon	1.07	116	eP	Pn	23 04 00.5	-1.3
DELF	Filadelfia	1.08	305	eP	Pn	23 04 00.9	-0.9
RVLA	Villa Bonita	1.09	75	⇓eP	Pn	23 04 01.5	-0.5
LCOCO	El Coco	1.11	77	⇓eP	Pn	23 04 01.6	-0.7
ERIA	Liberia	1.11	316	eP	Pn	23 04 01.7	-0.6
UPAL	Upala	1.12	342	S	Sn	23 04 17.2	+0.5
UPAL	Upala	1.12	342	⇑P	Pn	23 04 01.6	-0.8
UPAL	Upala	1.12	342	⇑eP	Pn	23 04 01.5	-0.9
GPS2	Hotel Rincn d	1.15	323	eP	Pn	23 04 01.8	-1.1
TRT2	Tortugero	1.16	51	S	Sn	23 04 18.3	+0.6
TRT2	Tortugero	1.16	51	⇓P	Pn	23 04 02.0	-0.9
TRT2	Tortugero	1.16	51	⇓eP	Pn	23 04 01.8	-1.1
ALIBA	Liberia Airpor	1.16	311	eP	Pn	23 04 02.3	-0.7
IRES	Siquirres	1.16	77	⇓eP	Pn	23 04 02.5	-0.5
VRLE	La Escondida,	1.18	324	⇑eP	Pn	23 04 02.3	-1.1
VORI	VORI	1.20	325	eP	Pn	23 04 02.5	-1.2
ELI1	Hacienda Flor	1.20	313	P	Pn	23 04 03.0	-0.5
ELI1	Hacienda Flor	1.20	313	S	Sn	23 04 19.6	+0.9
ELI1	Hacienda Flor	1.20	313	eP	Pn	23 04 02.7	-0.8
LAPC	Finca la Perla	1.21	321	⇑eP	Pn	23 04 02.5	-1.2
SAJE	San Jernim	1.23	113	eP	Pn	23 04 02.6	-1.4
OCHAL	Ojochal	1.23	126	S	Sn	23 04 18.9	-0.6
OCHAL	Ojochal	1.23	126	⇑P	Pn	23 04 01.8	-2.1
BUAI	Buenos Aires	1.24	327	⇑eP	Pn	23 04 03.1	-1.0
PEJA	Penjamo Buenos	1.24	329	eP	Pn	23 04 03.3	-0.8
EDPE	Pejibaye, P	1.26	122	eP	Pn	23 04 02.7	-1.7
TAAN	Batan	1.31	79	eP	Pn	23 04 04.7	-0.3
DRK0	Durika	1.50	112	eP	Pn	23 04 05.9	-1.9
DRK0				eS	Sn	23 04 25.0	-1.3
DRK0	Durika	1.50	112	⇓P	Pn	23 04 05.8	-1.9
DRK0	Durika	1.50	112	⇓eP	Pn	23 04 05.7	-2.1
LCRUZ	La Cruz	1.57	322	eP	Pn	23 04 07.5	-1.1
PTJ1	Puerto Jimnez	1.85	134	eP	Pn	23 04 13.9	+1.4
PTJ1				eS	Sb	23 04 42.4	+3.5
PIRO	Carate, Puerto	1.92	137	eP	Pn	23 04 13.7	+0.3
PIRO	Carate, Puerto	1.92	137	P	Pn	23 04 13.5	+0.1
MORN	Al O del Volca	1.97	330	P	Pn	23 04 13.6	-0.6
ALCO	Alturas Coton,	2.00	116	eP	Pn	23 04 12.8	-1.8
MLIR3	Monte Lirio, C	2.08	120	eP	Pb	23 04 21.9	+1.9
MLIR3				eS	Sn	23 04 44.0	+3.5
CDITO	Canoas	2.16	125	S	Sn	23 04 41.9	-0.4
BRU2	Volcan	2.19	118	eP	Pn	23 04 16.6	-0.7
BRU2				eS	Sn	23 04 43.2	-0.2
BRU2	Volcan	2.19	118	⇓P	Pn	23 04 15.8	-1.5
BRU2	Volcan	2.19	118	eP	Pn	23 04 15.2	-2.1
LESP3	La Esperanza,	2.32	127	eP	Pb	23 04 24.7	+0.6
NADN	Granada	2.34	325	S	Sn	23 04 47.6	+0.8
PTAR3	Potrerillos Ar	2.41	118	eP	Pn	23 04 21.9	+1.6
PTAR3				eS	Sn	23 04 48.5	-0.3
LNBQ3	Los Naranjos,	2.42	115	eP	Pn	23 04 20.9	+0.6
BQSF3	Alto Boquete,	2.44	116	eP	Pn	23 04 25.3	+4.6
BAGA3	Bagala, Chiriq	2.50	123	eP	Pn	23 04 26.0	+4.6
NANN	Nandasmo	2.54	326	S	Sn	23 04 52.7	+0.7
PSOM3	Paja de Sombre	2.57	116	eP	Pn	23 04 22.3	-0.1
PSOM3				eS	Sn	23 04 54.8	+2.2
DVD	David	2.58	122	eP	Pb	23 04 27.6	-0.9
SABN	Sabanita	2.58	325	P	Pn	23 04 21.9	-0.7
LOCO3	Loma Colorada,	2.62	122	eP	Pb	23 04 28.5	-0.7
CHGR2	Aguacate	2.63	109	eP	Pn	23 04 22.8	-0.4
CHGR2				eS	Sn	23 04 55.7	+1.6
BOAB	BOACO BROADBAN	2.79	339	S	Sn	23 04 59.6	+1.7
BOAB	BOACO BROADBAN	2.79	339	⇑P	Pn	23 04 24.1	-1.3
COPN	Copaltepe	3.01	321	⇓P	Pn	23 04 27.3	-1.2
MATN	Matagalpa	3.33	338	P	Pn	23 04 30.9	-2.0
CNGN	Cerro Negro	3.33	323	⇑P	Pn	23 04 32.2	-0.7
LIMN	Finca el Limon	3.63	333	⇓P	Pn	23 04 36.0	-1.0
PKGN	Cerro Pekin	3.63	321	P	Pn	23 04 37.0	0.0
PKGN				S	Sn	23 05 19.7	+1.0

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*UPP **29** 23:17:09.3±0.1, 67°.19N×20°.69E, h0^{km}, ML2.5, Suspected explosion*

*HEL **29** 23:17:10.3±0.7, 67°.14N×20°.55E, h0^{km}, ML1.2, Suspected explosion*

ISC 29 23:17:09.6±0.9, **67°.19N**±0°.03×**20°.71E**±0°.04, **h0**^{km}, **n18**, σ**0^{s}79**/25, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.09	222	P	Pg	23 17 11.2	0.0
DUNU				S	Sg	23 17 12.3	0.0
RATU	Laukkuluspa	0.77	327	P	Pg	23 17 23.7	-0.7
KUA	Kurravaara	0.79	350	P	Pg	23 17 24.0	-0.6
ERTU	Ertsjaerv	0.86	137	P	Pg	23 17 25.6	-0.5
ERTU	Ertsjaerv	0.86	137	PG	Pg	23 17 25.5	-0.6
LANU	Lannavaara	1.00	29	SG	Sb	23 17 43.2	-0.2
KOVU	Salmi	1.06	349	P	Pg	23 17 29.4	-0.6
KLF	Kolari	1.27	86	PG	Pg	23 17 33.2	-0.7
KLF				SG	Sg	23 17 50.4	+0.2
KLF				MSG		23 17 50.5	
	comp=Z,1.5nm,0.2s						
HEF	Hetta	1.66	41	PB	Pn	23 17 40.5	+0.5
HEF				MSG		23 18 02.1	
	comp=Z,1.6nm,0.2s						
HEF				SB	Sg	23 18 03.6	+0.6
KALU	Kalix	1.70	140	P	Pn	23 17 40.6	+0.2
KALU	Kalix	1.70	140	PG	Pn	23 17 40.7	+0.2
KALU				SN	Sg	23 18 05.2	+1.0
SJUU	Sjulsmark	1.72	168	P	Pn	23 17 40.7	-0.1
TOF	Tornio	1.82	126	PG	Pb	23 17 43.1	-0.6
TOF				MSG		23 18 05.2	
	comp=Z,1.4nm,0.2s						
TOF				SG	Sg	23 18 08.2	+0.3
KTK1	Kautokeino	2.06	26	SN	Sb	23 18 14.9	+0.8
RNF	Rovaniemi	2.17	103	PN	Pb	23 17 48.5	-1.2
RNF				SB	Sb	23 18 17.8	+0.8
TRO	Tromso	2.55	346	SB	Sb	23 18 29.4	+1.5
RANF	Ranua	2.69	113	PB	Pb	23 17 57.7	-1.0
	baz=297						
RANF				SB	Sb	23 18 33.6	+1.5
KEV	Kevo	3.47	39	SG	Sg	23 19 02.0	+1.0

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*CNRM **29** 23:50:31.8, 39°.15N×11°.83W, h63^{km}*

*IGIL **29** 23:50:33.8, 39°.35N×11°.69W, h31^{km}, ML2.7*

*MDD **29** 23:50:33.0±0.6, 39°.35N×11°.69W, h40^{km}, mb_Lg3.3/33, Error ellipse: s-maj=4.7km s-min=2.9km az=78.0*

*INMG **29** 23:50:35.7±1.2, 39°.34N×11°.74W, h27^{km}, ML2.5, Error ellipse: s-maj=4.0km s-min=1.8km az=86.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Canhao da Nazare*

ISC 29 23:50:31.6±2.0, **39°.32N**±0°.04×**11°.7W**±0°.1, **h35**^{km}, **n98**, σ**1^{s}78**/156, **1C-3D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMAFR	Mafra	1.88	101	S	Sn	23 51 24.6	+1.0
PMAFR				P	Pn	23 51 02.3	+1.2
PMAFR	Mafra	1.88	101	eP	Pn	23 51 03.5	+2.3
PMAFR				eS	Sn	23 51 24.1	+0.5
PMAFR				i IAML		23 51 25.5	
PMAFR				i IAML		23 51 25.9	
PMAFR				i IAML		23 51 26.9	
LIS	Lisbon	2.04	106	eP	Pn	23 51 04.3	+1.0
LIS	Lisbon	2.04	106	eS	Sn	23 51 29.4	+1.9
LIS				i IAML		23 51 30.4	
LIS				i IAML		23 51 30.4	
LIS				i IAML		23 51 30.5	
PSBE	So Bento	2.22	84	eP	Pn	23 51 08.8	+2.9
PSBE				eS	Sn	23 51 32.2	+0.1
PSBE				i IAML		23 51 35.3	
PSBE				i IAML		23 51 36.6	
PSBE				i IAML		23 51 36.7	
PCAS	Casmilo, Conde	2.54	72	⇓iP	Pn	23 51 12.2	+2.0
PCAS				eS	Sn	23 51 39.5	-0.5
PCAS				i IAML		23 51 40.9	
PCAS				i IAML		23 51 41.5	
PCAS				i IAML		23 51 41.6	
PMTG	Montargil	2.67	94	eP	Pn	23 51 14.0	+1.9
PMTG				eS	Sn	23 51 42.9	-0.3
PMTG				i IAML		23 51 43.8	
PMTG				i IAML		23 51 45.8	
PMTG				i IAML		23 51 48.1	
MOE	Montemor	2.69	106	⇓eP	Pn	23 51 14.2	+1.8
MOE				eS	Sn	23 51 43.2	-0.6
MOE				i IAML		23 51 47.1	
MOE				i IAML		23 51 47.1	
MOE				i IAML		23 51 47.2	
PSARD	Sardoal	2.71	83	eP	Pn	23 51 14.6	+1.9
PSARD				eS	Sn	23 51 43.7	-0.6
PSARD				i IAML		23 51 45.0	
PSARD				i IAML		23 51 45.2	
PSARD				i IAML		23 51 49.7	
PARRA	Arraiolos	2.85	99	⇓eP	Pn	23 51 16.4	+1.8
PARRA				eS	Sn	23 51 47.5	-0.2
PARRA				i IAML		23 51 48.6	
PARRA				i IAML		23 51 48.8	
PARRA				i IAML		23 51 50.0	
PTEO	Sao Teotonio	2.90	127	eP	Pn	23 51 16.6	+1.4
PTEO				eS	Sn	23 51 47.8	-1.1
PTEO				i IAML		23 51 50.2	
PTEO				i IAML		23 51 50.4	
PTEO				i IAML		23 51 51.0	
EVO	Evora	2.94	104	S	Sn	23 51 49.9	-0.1
EVO				P	Pn	23 51 16.6	+0.8
EVO	Evora	2.94	104	⇑eP	Pn	23 51 17.6	+1.7
EVO				eS	Sn	23 51 49.5	-0.4
EVO				i IAML		23 51 51.7	
EVO				i IAML		23 51 52.0	
EVO				i IAML		23 51 53.0	
PTO	Porto	2.95	51	eP	Pn	23 51 17.4	+1.5
PTO				eS	Sn	23 51 49.2	-1.0
PTO				i IAML		23 51 50.4	
PTO				i IAML		23 51 51.3	
PTO				i IAML		23 51 52.7	
MESJ	Messejana	3.07	118	eP	Pn	23 51 18.9	+1.3
MESJ				eS	Sn	23 51 51.7	-1.3
MESJ				IAML		23 51 54.6	
	comp=N,13nm,0.1s						
MESJ	Messejana	3.07	118	eP	Pn	23 51 19.1	+1.5
MESJ				eS	Sn	23 51 51.8	-1.2
MESJ				i IAML		23 51 54.7	
MESJ				i IAML		23 51 55.0	
MESJ				i IAML		23 51 56.4	
MORF	Marmelete	3.10	130	eP	Pn	23 51 19.2	+1.2
MORF				eS	Sn	23 51 52.6	-1.3
MORF				IAML		23 51 54.9	
	comp=E,41nm,0.1s						
MORF	Marmelete	3.10	130	eP	Pn	23 51 19.3	+1.2
MORF				eS	Sn	23 51 52.7	-1.2
MORF				i IAML		23 51 54.8	
MORF				i IAML		23 51 55.1	
MORF				i IAML		23 51 55.8	
PFVI	Vila Bisbo	3.12	134	P	Pn	23 51 18.5	+0.3
PFVI				S	Sn	23 51 51.0	-3.3
PFVI	Vila Bisbo	3.12	134	eP	Pn	23 51 19.3	+1.1
PFVI				eS	Sn	23 51 51.1	-3.1
PFVI				i IAML		23 51 56.5	
PFVI				i IAML		23 51 56.7	
PFVI				i IAML		23 52 01.2	
PESTR	Estremoz	3.19	97	P	Pn	23 51 20.4	+1.2
PESTR				S	Sn	23 51 55.4	-0.7
PESTR	Estremoz	3.19	97	eP	Pn	23 51 22.6	+3.3
PESTR				eS	Sn	23 51 54.8	-1.3
PESTR				i IAML		23 51 57.9	
PESTR				i IAML		23 51 58.7	
PESTR				i IAML		23 51 59.4	
PESTR	Estremoz	3.19	97	P	Pn	23 51 21.1	+1.8
PESTR	Estremoz	3.19	97	S	Sn	23 51 59.6	+3.5
PVIS	Viseu	3.20	63	eP	Pn	23 51 21.0	+1.6
PVIS				eS	Sn	23 51 55.4	-0.9
PBEJ	Beja	3.23	112	eP	Pn	23 51 21.8	+2.0
PBEJ				eS	Sn	23 51 56.2	-0.9
PBEJ				i IAML		23 51 58.6	
PBEJ				i IAML		23 51 59.3	
PBEJ				i IAML		23 52 00.7	
PCBR	Castelo Branco	3.26	80	eP	Pn	23 51 21.9	+1.7
PCBR				eS	Sn	23 51 56.2	-1.6
PCBR				i IAML		23 51 58.6	
PCBR				i IAML		23 51 58.8	
PCBR				i IAML		23 51 58.9	
PCVE	Castro Verde	3.30	120	P	Pn	23 51 22.1	+1.4
PCVE				S	Sn	23 51 56.5	-2.2
PCVE	Castro Verde	3.30	120	eP	Pn	23 51 22.8	+2.1
PCVE				eS	Sn	23 51 57.5	-1.1
PCVE				i IAML		23 51 58.3	
PCVE				i IAML		23 51 59.0	
PCVE				i IAML		23 52 00.3	
PMRV	Marv??o	3.30	87	eP	Pn	23 51 22.4	+1.6
PMRV				eS	Sn	23 51 57.2	-1.6
PMRV				i IAML		23 51 58.4	
PMRV				i IAML		23 51 58.6	
PMRV				i IAML		23 52 00.5	
MTE	Manteigas	3.34	70	eP	Pn	23 51 23.0	+1.7
MTE				eS	Sn	23 51 58.4	-1.4
MTE				i IAML		23 52 01.4	
MTE				i IAML		23 52 02.2	
MTE				i IAML		23 52 03.1	
PVRL	Vila Real	3.58	56	eP	Pn	23 51 26.4	+1.7
PVRL				eS	Sn	23 52 04.3	-1.4
PVRL				i IAML		23 52 08.9	
PVRL				i IAML		23 52 09.9	
POLO	Lamas de Olo	3.59	54	eP	Pn	23 51 26.6	+1.9
POLO				eS	Sn	23 52 04.0	-1.9
POLO				i IAML		23 52 05.8	
POLO				i IAML		23 52 07.5	
POLO				i IAML		23 52 14.0	
PBDV	Barranco-do-Ve	3.59	124	P	Pn	23 51 25.7	+1.0
PBDV				S	Sn	23 52 04.4	-1.5
PBDV	Barranco-do-Ve	3.59	124	eP	Pn	23 51 26.8	+2.1
PBDV				eS	Sn	23 52 04.4	-1.5
PBDV				i IAML		23 52 08.0	
PBDV				i IAML		23 52 08.1	
PBDV				i IAML		23 52 08.2	
EZAM	Zamans	3.60	38	P	Pn	23 51 25.1	+0.2
EZAM				S	Sn	23 52 03.7	-2.6
EZAM				i IVmb_Lg		23 52 06.2	
PVAQ	Vaqueiros	3.64	121	eP	Pn	23 51 27.0	+1.7
PVAQ				eS	Sn	23 52 05.5	-1.5
PVAQ				i IAML		23 52 07.8	
PVAQ				i IAML		23 52 08.6	
PVAQ				i IAML		23 52 08.6	
PVAQ	Vaqueiros	3.64	121	P	Pn	23 51 26.1	+0.8
PVAQ	Vaqueiros	3.64	121	S	Sn	23 52 08.6	+1.6
PCAB	Cabril	3.65	48	eP	Pn	23 51 27.0	+1.4
PCAB				eS	Sn	23 52 05.9	-1.4
PCAB				i IAML		23 52 07.3	
PCAB				i IAML		23 52 07.5	
PCAB				i IAML		23 52 08.0	
EBAD	Badajoz	3.65	97	P	Pn	23 51 27.0	+1.5
EBAD				S	Sn	23 52 04.7	-2.7
EBAD	Badajoz	3.65	97	P	Pn	23 51 26.8	+1.2
EBAD				S	Sn	23 52 05.3	-2.1
EBAD				i IVmb_Lg		23 52 09.1	
PGAV	Gavieira, Arco	3.68	43	eP	Pn	23 51 27.7	+1.6
PGAV				eS	Sn	23 52 06.9	-1.4
PGAV				i IAML		23 52 08.3	
PGAV				i IAML		23 52 08.4	
PGAV				i IAML		23 52 10.8	
EGRO	El Granado	3.73	117	P	Pn	23 51 27.6	+1.0
EGRO				S	Sn	23 52 06.9	-2.3
EGRO	El Granado	3.73	117	P	Pn	23 51 28.1	+1.5
EGRO				S	Sn	23 52 08.1	-1.1
EGRO				i IVmb_Lg		23 52 11.4	
ELOB	Lobios	3.73	46	P	Pn	23 51 28.1	+1.4
ELOB				S	Sn	23 52 07.4	-2.0
ELOB				i IVmb_Lg		23 52 09.7	
PBAR	Barrancos	3.78	106	P	Pn	23 51 28.7	+1.4
PBAR				S	Sn	23 52 08.3	-2.3
PBAR	Barrancos	3.78	106	eP	Pn	23 51 29.4	+2.1
PBAR				eS	Sn	23 52 09.3	-1.3
PBAR				i IAML		23 52 10.2	
PBAR				i IAML		23 52 11.1	
PBAR				i IAML		23 52 11.8	
EXAYA	Ayamonte	3.94	121	P	Pn	23 51 31.0	+1.5
EXAYA				S	Sn	23 52 13.9	-0.7
MVO	Moncorvo	3.98	61	eP	Pn	23 51 32.0	+1.8
MVO				eS	Sn	23 52 13.3	-2.4
MVO				i IAML		23 52 15.4	
MVO				i IAML		23 52 16.2	
MVO				i IAML		23 52 16.9	
EMAZ	Mazaricos	4.15	28	P	Pn	23 51 33.0	+0.6
EMAZ				S	Sn	23 52 16.0	-3.5
EMAZ				i IVmb_Lg		23 52 17.0	
EMIN	Mina Concepcio	4.20	110	P	Pn	23 51 34.2	+1.1
EMIN				S	Sn	23 52 17.9	-3.0
EMIN	Mina Concepcio	4.20	110	P	Pn	23 51 34.9	+1.8
EMIN				S	Sn	23 52 18.8	-2.1
EMIN				i IVmb_Lg		23 52 25.7	
STS	Santiago	4.26	32	P	Pn	23 51 35.7	+1.8
STS				S	Sn	23 52 19.2	-3.1
EPLA	Plasencia	4.36	78	P	Pn	23 51 37.0	+1.7
EPLA				S	Sn	23 52 21.8	-3.1
EPLA				i IVmb_Lg		23 52 26.5	
EAGO	Agolada(Pontev	4.39	37	P	Pn	23 51 36.5	+0.7
EAGO				S	Sn	23 52 22.0	-3.7
EAGO				i IVmb_Lg		23 52 22.9	
PBRG	Braganca	4.48	55	eP	Pn	23 51 38.1	+1.1
PBRG				eS	Sn	23 52 25.2	-2.8
PBRG				i IAML		23 52 29.2	
PBRG				i IAML		23 52 29.7	
PBRG				i IAML		23 52 31.2	
EJUZ	Juzbado, Salam	4.75	66	P	Pn	23 51 41.6	+0.9
EJUZ				S	Sn	23 52 31.4	-3.2
CIBOR	Castaar de Ib	4.83	84	P	Pn	23 51 43.0	+1.3
CIBOR				S	Sn	23 52 33.3	-3.1
ECAB	El Cabril	5.03	102	P	Pn	23 51 46.3	+1.7
ECAB				S	Sn	23 52 39.6	-1.9
ECAB	El Cabril	5.03	102	P	Pn	23 51 46.2	+1.6
ECAB				S	Sn	23 52 39.6	-1.9
ECAB				i IVmb_Lg		23 52 42.0	
ESPR	Espera	5.18	116	S	Sn	23 52 42.6	-2.6
ESPR				P	Pn	23 51 49.0	+2.4
ESPR	Espera	5.18	116	P	Pn	23 51 48.7	+2.0
ESPR				S	Sn	23 52 43.2	-1.9
EPON	Pontenova	5.24	39	P	Pn	23 51 48.8	+1.4
EPON				i IVmb_Lg		23 52 03.7	
EPON				S	Sn	23 52 42.6	-4.0
EADA	Adamuz	5.65	100	P	Pn	23 51 54.3	+1.2
EADA				S	Sn	23 52 53.6	-3.0
EADA	Adamuz	5.65	100	P	Pn	23 51 54.5	+1.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
EADA				S	Sn	23 52 53.9	-2.7
EADA				*i* IVmb_Lg		23 52 57.8	
PAB	San Pablo	5.66	85	P	Pn	23 51 54.5	+1.3
PAB				S	Sn	23 52 53.3	-3.6
PAB				*i* IVmb_Lg		23 52 56.2	
GUD	Guadarrama	5.91	75	P	Pn	23 51 57.4	+0.8
GUD				S	Sn	23 52 59.8	-3.3
GUD				*i* IVmb_Lg		23 53 02.3	
ESDC	Sonseca Array	5.96	84	P	Pn	23 51 58.7	+1.4
ESDC				S	Sn	23 53 01.0	-3.2
ESDC				*i* IVmb_Lg		23 53 04.0	
ESBB	Sonseca Array	5.96	84	P	Pn	23 51 58.8	+1.6
ESBB				S	Sn	23 53 01.0	-3.3
EMIJ	Mijas	6.09	115	P	Pn	23 52 00.4	+1.3
EMIJ				S	Sn	23 53 07.6	0.0
PSIM	Granatula de C	6.16	92	P	Pn	23 52 02.0	+1.9
PSIM				S	Sn	23 53 05.7	-3.7
EGOR	Sierra Gorda,	6.33	108	P	Pn	23 52 04.8	+2.2
EGOR				S	Sn	23 53 13.5	-0.2
EGOR	Sierra Gorda,	6.33	108	P	Pn	23 52 04.1	+1.5
EGOR				S	Sn	23 53 12.0	-1.8
EGOR				*i* IVmb_Lg		23 56 27.0	
ELGU	Los Guajares,	6.79	109	P	Pn	23 52 10.7	+2.0
ELGU				S	Sn	23 53 24.7	0.0
EQES	Quesada	6.89	100	P	Pn	23 52 11.9	+1.7
EQES				S	Sn	23 53 24.7	-2.7
EQES				*i* IVmb_Lg		23 53 42.4	
AVE	Averroes	6.92	149	P	Pn	23 52 10.3	-0.1
AVE				S	Sn	23 53 25.9	-2.0
PMPST	Porto Santo, M	7.29	213	*e*P	Pn	23 52 15.9	+0.3
PMPST				*e*S	Sn	23 53 28.4	-8.7
ELAN	Lanestosa	7.31	55	P	Pn	23 52 16.7	+0.8
ELAN				*i* IVmb_Lg		23 52 38.1	
ELAN				S	Sn	23 53 33.1	-4.5
ETOR	Torete	7.51	75	P	Pn	23 52 19.6	+1.0
ETOR				S	Sn	23 53 38.9	-3.7
ETOR				*i* IVmb_Lg		23 53 54.5	
IFR	Ifrane	7.82	136	P	Pn	23 52 23.3	+0.3
IFR				S	Sn	23 53 45.1	-5.3
AKLM	AKL	7.87	125	P	Pn	23 52 21.6	-2.0
AKLM	AKL	7.87	125	S	Sn	23 53 49.5	-2.0
ETOB	Tobarra	7.90	92	P	Pn	23 52 24.6	+0.6
ETOB				S	Sn	23 53 48.0	-4.1
ETOB				*i* IVmb_Lg		23 58 30.9	
ECHE	Chera	8.27	85	P	Pn	23 52 30.4	+1.4
ECHE				S	Sn	23 53 55.4	-5.7
ECHE				*i* IVmb_Lg		23 55 41.1	
MD31	MD31	8.52	137	P	Pn	23 52 32.5	0.0
MD31	MD31	8.52	137	S	Sn	23 54 07.0	-0.4
MDT	Midelt	8.64	137	P	Pn	23 52 33.7	-0.4
MDT	Midelt	8.64	137	S	Sn	23 54 09.8	-0.6
OUK	Oukaimeden	8.67	158	P	Pn	23 52 33.4	-1.4
OUK	Oukaimeden	8.67	158	S	Sn	23 54 09.8	-1.6
TISM	Timmit	8.69	149	P	Pn	23 52 33.9	-0.9
TISM	Timmit	8.69	149	S	Sn	23 54 10.8	-0.7
TIO	Tiouine	9.11	155	P	Pn	23 52 41.0	+0.3
TIO				S	Sn	23 54 13.1	-9.1
TIO	Tiouine	9.11	155	P	Pn	23 52 39.5	-1.2
TIO	Tiouine	9.11	155	S	Sn	23 54 20.3	-1.9
OUZM	OUZ	9.30	153	P	Pn	23 52 42.7	-0.5
OUZM	OUZ	9.30	153	S	Sn	23 54 26.0	-0.7

IDC ***29*** *23:53:10.9±0.8, 50°.37S×131°.06E, h0^{km}, mb4.3/11, mbtmp4.3/11, MS3.9/29, Error ellipse: s-maj=42.4km s-min=15.1km az=98.0*

NEIC ***29*** *23:53:13.6±1.9, 50°.4S±0°.1×130°.8E±0°.2, h10^{km}±1^{km}, mb4.5/14, Error ellipse: s-maj=25.9km s-min=8.8km az=129.0*

ISC 29 23:53:12.8±0.6**, 50°.39S**±0°.09×**130°.8E**±0°.2**, h10**^{km}**, n62, σ1^{s}.03**/31**, mb4.4**/15**, MS3.9**/29**, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOO	Toolangi	16.59	45	P	P	23 57 09.0	+1.2
BBOO	Buckleboo	18.00	15		Pn	23 57 23.4	+0.5
BBOO				IAmb	IAmb	23 57 43.9	
	comp=Z,46nm,1.3s						
H01W1	Cape Leeuwin H	19.66	316	T	T	00 17 60.0	
	baz=145,slow=74,SNR=177						
H01W2	Cape Leeuwin H	19.66	316	T	T	00 17 60.0	
	baz=145,slow=74,SNR=174						
H01W3	Cape Leeuwin H	19.67	316	T	T	00 17 60.0	
	baz=145,slow=74,SNR=193						
NWAO	Narrogin (SRO)	20.11	325	LR	LR	00 03 30.2	
	comp=Z,323nm,21.7s,baz=129,slow=31						
STKA	Stephens Creek	20.18	28	P	P	23 57 46.7	-0.6
	comp=Z,6.8nm,0.9s,baz=199,slow=12,SNR=7.4						
STKA				LR	LR	00 04 19.7	
	comp=Z,263nm,20.9s,baz=197,slow=33						
	comp=Z,6.8nm,0.9s						
STKA	Stephens Creek	20.18	28		P	23 57 48.3	+1.0
STKA				IAmb	IAmb	23 57 51.1	
	comp=Z,32nm,0.8s						
INKA	Innaminka	23.87	22	P	P	23 58 26.8	+0.6
INKA				IAmb	IAmb	23 58 28.0	
	comp=Z,11nm,0.9s						
ASAR	Alice Springs	26.79	6	P	P	23 58 52.1	-0.7
	comp=Z,8.8nm,0.8s,baz=179,slow=8.9,SNR=56						
ASAR				PcP	PcP	00 02 13.2	-2.5
	comp=Z,0.5nm,1.0s,baz=188,slow=2.7,SNR=2.0						
ASAR				LR	LR	00 08 37.4	
	comp=Z,338nm,19.5s,baz=187,slow=35						
	comp=Z,8.8nm,0.8s						
ASAR	Alice Springs	26.79	6	P	P	23 58 53.0	+0.1
AS31	Alice Springs	26.79	6	P	P	23 58 53.2	+0.3
AS31				IAmb	IAmb	23 58 53.8	
	comp=Z,4.2nm,0.8s						
VNDA	Vanda	29.64	167	P	P	23 59 17.8	-0.1
	comp=Z,2.6nm,1.0s,baz=314,slow=8.5,SNR=8.3						
VNDA				LR	LR	00 09 50.8	
	comp=Z,334nm,21.1s,baz=328,slow=34						
	comp=Z,2.6nm,1.0s						
VNDA	Vanda	29.64	167	P	P	23 59 18.1	+0.3
MBWA	Marble Bar	30.45	339	P	P	23 59 26.4	+1.0
WR8	Warramunga Arr	30.52	7	P	P	23 59 26.0	-0.1
WR8				IAmb	IAmb	23 59 26.4	
	comp=Z,7.3nm,0.9s						
WB2	Warramunga Arr	30.52	7	P	P	23 59 27.1	+1.1
WRA	Warramunga Arr	30.52	7	P	P	23 59 25.1	-0.9
	comp=Z,3.8nm,0.9s,baz=190,slow=7.7,SNR=14						
	comp=Z,3.8nm,0.9s						
WRA	Warramunga Arr	30.52	7	P	P	23 59 25.8	-0.2
WB0	Warramunga Arr	30.69	7	P	P	23 59 27.2	-0.4
WB0				IAmb	IAmb	23 59 37.8	
	comp=Z,7.3nm,0.9s						
FITZ	Fitzroy Crossi	32.48	351	P	P	23 59 42.7	-0.6
	comp=Z,2.9nm,1.0s,baz=157,slow=8.2,SNR=2.2						
FITZ				LR	LR	00 12 07.5	
	comp=Z,354nm,19.4s,baz=176,slow=35						
	comp=Z,2.9nm,1.0s						
CTA	Charters Tower	32.64	28	LR	LR	00 12 32.7	
	comp=Z,129nm,18.9s,baz=212,slow=36						
RTZ	Ruatahuna	34.46	88	P	P	00 00 01.8	+1.2
URZ	Urewera	34.75	88	LR	LR	00 12 45.1	
	comp=Z,248nm,19.0s,baz=244,slow=34						
MAW	Mawson	36.68	216	P	P	00 00 19.9	+0.7
	comp=Z,1.5nm,0.4s,baz=81,slow=16,SNR=4.2						
MAW				LR	LR	00 12 33.9	
	comp=Z,82nm,18.7s,baz=64,slow=32						
	comp=Z,1.5nm,0.4s						
MTN	Manton Dam	37.44	1	P	P	00 00 25.7	-0.5
MTN				IAmb	IAmb	00 00 49.3	
	comp=Z,12nm,1.2s						
DZM	Mont Dzumac	39.71	58	*e*LR	LR	00 12 19.5	
	comp=Z,160nm,24.0s						
QSPA	South Pole Qui	39.73	180	LR	LR	00 16 25.7	
	comp=Z,357nm,19.5s,baz=349,slow=35						
BATI	Baumata	40.49	349	P	P	00 00 52.5	+0.8
	comp=Z,6.7nm,0.3s,baz=148,slow=3.7,SNR=3.7						
BATI				LR	LR	00 17 43.3	
	comp=Z,324nm,19.5s,baz=186,slow=36						
	comp=Z,6.7nm,0.3s						
PMG	Port Moresby	43.06	24	P	P	00 01 12.0	-0.7
	comp=Z,3.4nm,0.3s,baz=199,slow=15,SNR=1.3						
PMG				LR	LR	00 18 46.7	
	comp=Z,226nm,19.2s,baz=208,slow=36						
	comp=Z,3.4nm,0.3s						
JAY	Jayapura	48.44	13	LR	LR	00 22 03.1	
	comp=Z,216nm,21.0s,baz=182,slow=36						
H04S1	CROZET ISLANDS	49.94	242	T	T	00 56 19.1	
	baz=125,slow=76,SNR=3.9						
H04S2	CROZET ISLANDS	49.94	242	T	T	00 56 22.1	
	baz=125,slow=76,SNR=6.0						
H04S3	CROZET ISLANDS	49.95	242	T	T	00 56 20.4	
	baz=125,slow=76,SNR=5.8						
SNAA	Sanae	53.90	196	P	P	00 02 36.1	+0.4
	comp=Z,2.1nm,0.6s,baz=160,slow=9.2,SNR=18						
SNAA				LR	LR	00 24 54.2	
	comp=Z,186nm,18.5s,baz=158,slow=35						
	comp=Z,2.1nm,0.6s						
SNAA	Sanae	53.90	196	P	P	00 02 36.3	+0.6
SNAA				IAmb	IAmb	00 02 57.5	
	comp=Z,12nm,1.3s						
PSI	Prapat	59.61	322	LR	LR	00 27 32.6	
	comp=Z,62nm,18.8s,baz=114,slow=35						
RAR	Rarotonga	60.93	89	LR	LR	00 26 47.9	
	comp=Z,47nm,19.1s,baz=267,slow=33						
TBI	Tubuai	65.97	98	*e*LR	LR	00 24 01.4	
	comp=Z,507nm,30.8s						
TBI				*e*LR	LR	00 24 20.8	
	comp=Z,882nm,25.0s						
PPT2	Papeete2	70.10	94	*e*LR	LR	00 26 07.7	
	comp=Z,87nm,22.5s						
PPT2				*e*LR	LR	00 26 18.8	
	comp=Z,85nm,24.5s						
PPT	Papeete	70.12	94	LR	LR	00 29 37.3	
	comp=Z,64nm,21.1s,baz=275,slow=31						
OPO	Ambohidratompo	71.87	263	LR	LR	00 31 11.7	
	comp=Z,24nm,18.2s,baz=342,slow=32						
PALK	Pallekele	71.88	307	LR	LR	00 30 55.0	
	comp=Z,37nm,18.9s,baz=134,slow=31						
CMAR	Chiang Mai Arr	74.07	329	P	P	00 04 49.0	+0.2
	comp=Z,0.5nm,0.4s,baz=170,slow=5.3,SNR=5.3						
CMAR				LR	LR	00 36 31.1	
	comp=Z,42nm,20.4s,baz=170,slow=35						
	comp=Z,0.5nm,0.4s						
RKT	Rikitea	75.16	108	*e*LR	LR	00 28 37.0	
	comp=Z,2µm,36.2s						
SUR	Sutherland	77.02	235	LR	LR	00 31 00.4	
	comp=Z,58nm,19.4s,baz=150,slow=29						
LBTB	Lobatse	80.14	243	LR	LR	00 35 28.7	
	comp=Z,65nm,18.1s,baz=155,slow=32						
MATP	Matopo	82.01	248	LR	LR	00 35 04.1	
	comp=Z,68nm,18.6s,baz=157,slow=31						
TAOE	Nuku Hiva Isla	82.67	95	*e*LR	LR	00 32 04.6	
	comp=Z,152nm,25.1s						
JHJ	Hachijo jima 2	83.53	8	LR	LR	00 39 52.7	
	comp=Z,58nm,20.2s,baz=102,slow=34						
LSZ	Lusaka	86.18	251	LR	LR	00 37 14.1	
	comp=Z,36nm,19.8s,baz=138,slow=31						
MJAR	Matsushiro Arr	86.81	6	LR	LR	00 41 44.9	
	comp=Z,56nm,20.2s,baz=162,slow=34						
PLCA	Paso Flores	87.35	164	LR	LR	00 39 22.2	
	comp=Z,47nm,21.9s,baz=208,slow=32						
LZDM	Lanzhou Array	89.24	338	P	P	00 06 09.1	+0.3
	comp=Z,0.6nm,0.3s,baz=134,slow=4.2,SNR=1.7						
	comp=Z,0.6nm,0.3s						
TSUM	Tsumeb	89.25	240	LR	LR	00 43 57.3	
	comp=Z,24nm,18.5s,baz=148,slow=34						
ASAJ	Asahikawa	94.69	9	LR	LR	00 47 11.3	
	comp=Z,90nm,21.2s,baz=167,slow=34						
MBAR	Mbarara	95.94	262	LR	LR	00 42 33.5	
	comp=Z,71nm,20.8s,baz=130,slow=31						
TXAR	Lajitas Array	134.39	96	PKP	PKPdf	00 12 28.9	-2.0
	comp=Z,0.1nm,0.7s,baz=298,slow=3.5,SNR=1.9						
PDAR	Pinedale Array	138.87	77	PKP	PKPdf	00 12 36.2	-2.7
	comp=Z,0.2nm,0.6s,baz=316,slow=2.1,SNR=2.2						
YKA	Yellowknife Ar	143.55	45	PKP	PKPbc	00 12 44.5	+0.8
	comp=Z,0.4nm,0.8s,baz=265,slow=3.7,SNR=4.9						
ESDC	Sonseca Array	146.74	269	PKPbc	PKPbc	00 12 54.0	-0.4
	comp=Z,0.8nm,0.8s,baz=84,slow=2.2,SNR=5.4						
ESDC	Sonseca Array	146.74	269		PKPbc	00 12 55.0	+0.5

IDC ***30*** *00:06:37.3±0.7, 2°.41S×140°.29E, h0^{km}, mb3.7/8, mbtmp3.8/9, ML4.1/1, Error ellipse: s-maj=20.9km s-min=7.5km az=15.0*

DJA ***30*** *00:06:38.6±0.6, 2°S±6°×14°0E±°, h10^{km}, M4.6/5, mb4.8/2, MLv4.5/5*

ISC 30 00:06:40.0±0.7**, 2°.5S**±0°.1×**140°.42E**±0°.05**, h24**^{km}**, n19, σ1^{s}.40**/19**, mb3.8**/8**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	0.28	244	P	Pb	00 06 46.4	-0.2
GENI				S	Sb	00 06 51.6	+0.5
JAY	Jayapura	0.29	99	Pg	Pb	00 06 46.4	-0.4
	2µm,0.3s,baz=276,slow=13,SNR=3056						
JAY				Lg	Lg	00 06 50.6	
	956nm,0.3s,baz=97,slow=23,SNR=6.1						
JAY	Jayapura	0.29	99	P	Pb	00 06 46.3	-0.5
JAY				S	Sb	00 06 51.6	+0.1
WAMI	Wamena	2.21	230	P	Pn	00 07 16.5	+1.3
SRPI	Serui, Papua	4.22	278	P	Pn	00 07 42.6	-0.2
FAKI	Fak Fak	8.17	267	P	Pn	00 08 36.6	-0.6
WRA	Warramunga Arr	18.35	198	P	P	00 10 52.9	-0.1
	0.6nm,0.3s,baz=20,slow=12,SNR=13						
	2.2nm,0.8s						
FITZ	Fitzroy Crossi	21.24	222	P	P	00 11 26.4	+1.9
	2.2nm,0.5s,baz=45,slow=13,SNR=9.0						
FITZ				S	S	00 15 14.8	-4.9
	2.2nm,0.8s,baz=48,slow=17,SNR=2.1						
	2.2nm,0.5s						
ASAR	Alice Springs	22.00	196	P	P	00 11 32.6	0.0
	2.1nm,0.7s,baz=30,slow=11,SNR=25						
	2.1nm,0.7s						
H11N1	WAKE ISLAND Hy	34.09	49	T	T	00 49 28.2	
	baz=229,slow=76,SNR=7.2						
H11N2	WAKE ISLAND Hy	34.10	49	T	T	00 49 23.7	
	baz=229,slow=76,SNR=9.4						
H11N3	WAKE ISLAND Hy	34.10	49	T	T	00 49 24.8	
	baz=229,slow=76,SNR=6.4						
CMAR	Chiang Mai Arr	45.81	299	P	P	00 15 00.7	+0.4
	0.8nm,0.7s,baz=116,slow=8.7,SNR=7.1						
	0.8nm,0.7s						
MKAR	Makanchi Array	70.65	322	P	P	00 17 54.5	+0.8
	1.4nm,1.0s,baz=118,slow=9.8,SNR=6.3						
	1.4nm,1.0s						
ZALV	Zalesovo Beam	72.59	329	P	P	00 18 04.6	-0.6
	0.3nm,0.4s,baz=111,slow=7.9,SNR=2.0						
	0.3nm,0.4s						
VNDA	Vanda	75.87	175	P	P	00 18 24.2	+0.3
	0.8nm,1.0s,baz=347,slow=9.5,SNR=1.5						
	0.8nm,1.0s						
BVAR	Borovoye Array	80.09	325	P	P	00 18 48.2	+0.4
	0.5nm,0.5s,baz=109,slow=6.8,SNR=3.9						
	0.5nm,0.5s						
ILAR	Eielson Array	84.91	24	P	P	00 19 12.7	0.0
	0.4nm,0.7s,baz=255,slow=3.6,SNR=2.6						
	0.4nm,0.7s						
DBIC	Dimbokro	145.14	278	PKPbc	PKPdf	00 26 16.6	0.0
	2.4nm,0.5s,baz=102,slow=4.5,SNR=6.2						

SNET ***30*** *00:14:27.9±1.0, 13°.08N×88°.49W, h67^{km}, ML3.7*

GCG ***30*** *00:14:27.3±0.7, 12°.95N×88°.47W, h54^{km}±22^{km}, MD4.3, ML3.6*

CATAC ***30*** *00:14:27.5±0.2, 13°N±2°×8°8W±°, h39^{km}±3^{km}, M4.1/43, MLv4.1/43, Error ellipse: s-maj=4.2km s-min=1.3km az=30.0, confirmed*

ISC 30 00:14:27.5±1.2**, 12°.94N**±0°.05×**88°.43W**±0°.03**, h62**^{km}±10^{km}**, n108, σ0^{s}.81**/123**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCY	Lacayo	0.50	16	*e*P	Pn	00 14 39.8	+0.1
PACA	Pacayal	0.54	11	*e*P	Pn	00 14 40.3	+0.2
PACA				*e*S	Sn	00 14 50.8	+1.4
PACA	Pacayal	0.54	11	P	Pn	00 14 40.4	+0.2
LCND	La Caada	0.65	55	*e*P	Pn	00 14 41.0	-0.1
LCND	La Caada	0.65	55	P	Pn	00 14 41.0	-0.1
LCND	La Caada	0.65	55	S	Sn	00 14 51.5	+0.3
CNCH	Conchagua	0.67	60	S	Sn	00 14 52.0	0.0
CNCH	Conchagua	0.67	60	P	Pn	00 14 41.5	-0.2
TECO	Alcaldia de Te	0.69	330	P	Pn	00 14 41.2	-0.5
TECO	Alcaldia de Te	0.69	330	S	Sn	00 14 52.6	+0.5
PQSS	Presa 15 de Se	0.69	350	S	Sn	00 14 51.2	-1.0
UESV	Universidad de	0.78	334	S	Sn	00 14 55.0	+0.9
UESV	Universidad de	0.78	334	P	Pn	00 14 42.5	-0.3
SNVI	San Vicente	0.78	330	*e*P	Pn	00 14 42.3	-0.7
SCLA	Alcaldia de Sa	0.81	339	P	Pn	00 14 43.0	-0.3
SCLA	Alcaldia de Sa	0.81	339	S	Sn	00 14 55.7	+0.9
CSGN	Cosiguina Volc	0.85	87	P	Pn	00 14 43.7	-0.1
CSGN				S	Sn	00 14 56.2	+0.4
POTN	Potosi Cosigui	0.91	86	P	Pn	00 14 44.4	+0.1
POTN				S	Sn	00 14 57.1	+0.3
PAVA	Las Pavas	0.91	328	P	Pn	00 14 44.1	-0.5
PAVA	Las Pavas	0.91	328	S	Sn	00 14 57.7	+0.5
LFRS	El Faro	0.92	318	*e*P	Pn	00 14 44.2	-0.4
PANCS	Alcalda de	0.99	313	P	Pn	00 14 45.1	-0.5
PANCS	Alcalda de	0.99	313	S	Sn	00 14 58.3	-0.5
LALI	Alcalda de L	1.02	302	*e*P	Pn	00 14 44.9	-1.0
LALI				*e*S	Sn	00 14 58.4	-1.1
LALI	Alcalda de L	1.02	302	*i* P	Pn	00 14 45.1	-0.8
LALI				*e*S	Sn	00 14 58.2	-1.3
LALI				IAML		00 15 01.7	
	comp=E,444nm,0.3s						
LALI	Alcalda de L	1.02	302	P	Pn	00 14 45.0	-0.9
LALI	Alcalda de L	1.02	302	S	Sn	00 14 59.0	-0.5
UDBS	Universidad Do	1.04	318	P	Pn	00 14 45.7	-0.5
UDBS	Universidad Do	1.04	318	S	Sn	00 15 00.0	-0.1
IGN	Direccin Gen	1.05	317	S	Sn	00 15 00.5	+0.1
UTEC	Universidad Te	1.06	315	P	Pn	00 14 46.2	-0.4
UTEC	Universidad Te	1.06	315	S	Sn	00 15 00.6	0.0
UEES	Universidad Ev	1.10	315	S	Sn	00 15 01.7	+0.1
UEES	Universidad Ev	1.10	315	P	Pn	00 14 46.6	-0.4
PMON	Piamonte	1.15	312	S	Sn	00 15 03.0	+0.3
PMON	Piamonte	1.15	312	P	Pn	00 14 47.7	0.0
JAYA	Jayaque - finc	1.22	306	*e*P	Pn	00 14 47.7	-0.9
JAYA	Jayaque - finc	1.22	306	P	Pn	00 14 48.3	-0.3
JAYA	Jayaque - finc	1.22	306	S	Sn	00 15 04.3	-0.1
CEDA	San Andres	1.27	313	S	Sn	00 15 05.0	-0.4
MARCA	Marcala la Paz	1.27	18	*i* P	Pn	00 14 49.1	-0.2
MARCA	Marcala la Paz	1.27	18	S	Sn	00 15 04.9	-0.7
MARCA	Marcala la Paz	1.27	18	P	Pn	00 14 49.0	-0.3
LLGN	La Laguna	1.31	338	P	Pn	00 14 49.2	-0.7
LLGN	La Laguna	1.31	338	S	Sn	00 15 05.0	-1.5
CRIN	San Cristobal	1.37	100	P	Pn	00 14 50.8	+0.3
CRIN	San Cristobal	1.37	100	S	Sn	00 15 09.0	+1.2
PKGN	Cerro Pekin	1.45	100	P	Pn	00 14 51.1	-0.4
PKGN				S	Sn	00 15 09.7	+0.2
CEVE	Cerro Verde	1.46	307	P	Pn	00 14 51.7	-0.1
CEVE	Cerro Verde	1.46	307	S	Sn	00 15 10.4	+0.2
UNIC	Universidad Ca	1.50	314	S	Sn	00 15 11.5	+0.5
UNIC	Universidad Ca	1.50	314	P	Pn	00 14 51.9	-0.4
TGUH	Tegucigalpa,Un	1.58	45	P	Pn	00 14 53.2	-0.3
TGUH				S	Sn	00 15 13.3	+0.2
TEL3	Telica 3	1.59	103	P	Pn	00 14 53.1	-0.4
HERN	Volcan Telica	1.60	102	S	Sn	00 15 13.3	0.0
HERN	Volcan Telica	1.60	102	P	Pn	00 14 53.1	-0.5
ALEN	Leon	1.60	107	P	Pn	00 14 53.1	-0.4
ALEN	Leon	1.60	107	S	Sn	00 15 12.4	-0.8
HOYN	Al Sur del Vol	1.60	102	S	Sn	00 15 13.6	+0.2
POLN	Al Sur del Vol	1.61	100	P	Pn	00 14 53.0	-0.6
POLN				S	Sn	00 15 13.6	+0.1
NUBE	Las Nubes	1.62	306	*e*P	Pn	00 14 53.7	-0.3
NUBE				*e*S	Sn	00 15 13.7	-0.4
NUBE	Las Nubes	1.62	306	S	Sn	00 15 14.1	0.0
NUBE	Las Nubes	1.62	306	P	Pn	00 14 53.8	-0.2
LOAL	Lomas de Alarc	1.68	309	P	Pn	00 14 54.5	-0.3
LOAL	Lomas de Alarc	1.68	309	S	Sn	00 15 15.4	0.0
MTO3	Montecristo	1.71	328	*i* P	Pn	00 14 54.7	-0.6
MTO3	Montecristo	1.71	328	S	Sn	00 15 16.3	+0.1
MTO3	Montecristo	1.71	328	P	Pn	00 14 54.8	-0.5
CNGA	Al SSO del Vol	1.75	104	P	Pn	00 14 55.0	-0.6
CNGA				S	Sn	00 15 17.3	+0.4
CNGN	Cerro Negro	1.75	104	S	Sn	00 15 17.3	+0.4
CNGN	Cerro Negro	1.75	104	P	Pn	00 14 54.8	-0.8
FAME	Alcaldia de Sa	1.78	300	P	Pn	00 14 55.5	-0.6
FAME	Alcaldia de Sa	1.78	300	S	Sn	00 15 17.4	-0.3
ESQI	Esquipulas	1.84	331	P	Pn	00 14 56.6	-0.3
ESQI	Esquipulas	1.84	331	S	Sn	00 15 19.5	+0.3
YUSH	Yuscaran	1.85	57	S	Sn	00 15 19.6	+0.1
YUSH	Yuscaran	1.85	57	P	Pn	00 14 56.6	-0.4
SARH	Santa Rosa de	1.85	350	*e*P	Pn	00 14 57.3	+0.2
SARH	Santa Rosa de	1.85	350	S	Sn	00 15 19.8	+0.3
SARH	Santa Rosa de	1.85	350	P	Pn	00 14 57.3	+0.2
COPN	Copaltepe	1.95	113	P	Pn	00 14 57.1	-1.2
MOM2	El Cardon	1.97	104	P	Pn	00 14 58.1	-0.4
MOM2				S	Sn	00 15 22.7	+0.6
LIMN	Finca el Limon	2.02	86	P	Pn	00 14 58.6	-0.7
LIMN				S	Sn	00 15 23.8	+0.2
OCON	Estacion meteo	2.02	70	P	Pn	00 14 59.2	-0.2
AMTN	Mateare	2.08	109	P	Pn	00 14 59.9	-0.1
AMTN	Mateare	2.08	109	S	Sn	00 15 25.0	+0.2
APQ3	Volcan Apoyequ	2.12	108	P	Pn	00 15 00.6	0.0
APQ3				S	Sn	00 15 25.8	-0.1
APYN	Apoyeque	2.15	109	P	Pn	00 15 01.0	0.0
APQ2	Apoyeque	2.19	109	P	Pn	00 15 01.6	+0.1
APQ2				S	Sn	00 15 28.0	+0.5
RCFN	Al S de San Ju	2.24	74	P	Pn	00 15 01.9	-0.5
RCFN				S	Sn	00 15 29.2	+0.1
ALLN	Telcor Managua	2.25	110	S	Sn	00 15 28.9	-0.1
TISN	Laguna Tiscapa	2.26	110	P	Pn	00 15 01.2	-1.3
UNAN	Cigeo UNAN	2.27	111	P	Pn	00 15 02.4	-0.2
UNAN				S	Sn	00 15 29.1	-0.4
RCVN	Varillal2	2.27	73	S	Sn	00 15 29.5	-0.4
RCVN	Varillal2	2.27	73	P	Pn	00 15 02.1	-0.7
MGAN	Managua	2.27	110	P	Pn	00 15 02.6	-0.1
MGAN	Managua	2.27	110	S	Sn	00 15 28.9	-0.8
RCON	San Juan de Ri	2.28	76	P	Pn	00 15 02.5	-0.5
RCON	San Juan de Ri	2.28	76	S	Sn	00 15 30.8	+0.7
MAS3	Al N del Volca	2.38	112	P	Pn	00 15 03.7	-0.5
MAS3				S	Sn	00 15 32.1	-0.3
FG16	Alotenango, Sa	2.42	304	*e*P	Pn	00 15 10.0	+5.1
FG16				IAML		00 15 51.7	
	comp=N,1µm,0.3s						
MASN	Masaya	2.42	113	S	Sn	00 15 33.9	+0.6
MATN	Matagalpa	2.44	90	S	Sn	00 15 33.6	-0.3
NANN	Nandasmo	2.47	113	S	Sn	00 15 35.2	+0.8
NANN	Nandasmo	2.47	113	P	Pn	00 15 06.7	+1.4
ESSG	Sabana Grande	2.74	302	*i* P	Pn	00 15 08.8	-0.4
STG5	El Palmar, Qui	3.19	298	*e*P	Pn	00 15 19.6	+4.3
STG5				*e*S	Sn	00 15 58.6	+6.4
STG8	El Palmar, Qui	3.21	298	*e*P	Pn	00 15 20.1	+4.4
STG8				IAML		00 16 09.0	
	comp=N,305nm,0.3s						

IDC ***30*** *00:20:48.3±1.1, 5°.95S×150°.56E, h0^{km}, mb3.7/7, mbtmp3.8/8, ML2.5/1, MS3.1/1, Error ellipse: s-maj=45.5km s-min=20.5km az=111.0*

NEIC ***30*** *00:20:56.3±1.3, 6°.0S±0°.1×150°.2E±0°.1, h35^{km}±2^{km}, mb4.1/9, Error ellipse: s-maj=28.8km s-min=5.7km az=140.0*

ISC 30 00:20:56.4±0.7**, 6°.0S**±0°.1×**150°.2E**±0°.1**, h52**^{km}**, n26, σ0^{s}.97**/28**, mb3.7**/8**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	2.62	48		Pn	00 21 37.2	+0.9
PMG	Port Moresby	4.57	221	Pn	Pn	00 22 03.7	+0.6
	14nm,0.3s,baz=30,slow=11,SNR=24						
PMG				Sn	Sn	00 22 54.0	-0.9
	13nm,0.3s,baz=266,slow=21,SNR=8.7						
	45nm,0.5s						
CTA	Charters Tower	14.56	195	Pn	Pn	00 24 21.1	+1.5
	0.1nm,0.3s,baz=22,slow=13,SNR=5.3						
CTA				LR	LR	00 28 52.3	
	comp=Z,71nm,20.6s,baz=39,slow=33						
WB0	Warramunga Arr	20.61	227	P	P	00 25 32.0	+0.4
WB0				IAmb	IAmb	00 25 40.0	
	comp=Z,11nm,0.7s						
WR8	Warramunga Arr	20.66	226	P	P	00 25 32.3	+0.2
WR8				IAmb	IAmb	00 25 43.6	
	comp=Z,6.7nm,0.7s						
WRA	Warramunga Arr	20.77	227	P	P	00 25 33.5	+0.2
	comp=Z,2.2nm,0.5s,baz=53,slow=11,SNR=23						
	comp=Z,2.2nm,0.5s						
WRA	Warramunga Arr	20.77	227	P	P	00 25 32.8	-0.4
KNRA	Kununurra	23.15	244	P	P	00 25 59.2	+0.7
KNRA				IAmb	IAmb	00 26 27.2	
	comp=Z,11nm,1.0s						
AS31	Alice Springs	23.58	220	P	P	00 26 02.3	-0.4
ASAR	Alice Springs	23.58	220	P	P	00 26 03.0	+0.3
	comp=Z,0.6nm,0.4s,baz=56,slow=9.3,SNR=22						
ASAR				PcP	PcP	00 29 47.4	+0.6
	comp=Z,0.5nm,0.8s,baz=27,slow=2.3,SNR=2.7						
	comp=Z,0.6nm,0.4s						
ASAR	Alice Springs	23.58	220	P	P	00 26 02.5	-0.2
ARMA	Armidale	24.37	177	P	P	00 26 10.0	+0.1
FITZ	Fitzroy Crossi	26.84	241	P	P	00 26 32.7	+0.4
FITZ				IAmb	IAmb	00 26 52.6	
	comp=Z,1.4nm,0.8s						
STKA	Stephens Creek	27.02	196	P	P	00 26 32.1	-1.6
	comp=Z,3.1nm,0.8s,baz=352,slow=9.6,SNR=4.4						
	comp=Z,3.1nm,0.8s						
STKA	Stephens Creek	27.02	196	P	P	00 26 32.2	-1.6

SONM	**Songino Array**	**65.96**	**329**	P	**P**	**00 31 38.8**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=131,slow=4.4,SNR=2.2						
	comp=Z,0.2nm,0.5s						
SONM	**Songino Array**	**65.96**	**329**	P	**P**	**00 31 38.8**	**+1.3**
SONM				IAmb	IAmb	00 32 04.8	
	comp=Z,2.6nm,1.4s						
MKAR	**Makanchi Array**	**79.52**	**320**	P	**P**	**00 32 57.5**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=95,slow=6.4,SNR=2.5						
	comp=Z,0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**80.70**	**327**	P	**P**	**00 33 02.8**	**-1.2**
	comp=Z,0.3nm,0.4s,baz=103,slow=6.4,SNR=2.1						
	comp=Z,0.3nm,0.4s						
ILAR	**Eielson Array**	**84.20**	**23**	P	**P**	**00 33 20.0**	**-1.9**
	comp=Z,0.7nm,0.9s,baz=268,slow=5.3,SNR=4.9						
	comp=Z,0.7nm,0.9s						
ILAR	**Eielson Array**	**84.20**	**23**	P	**P**	**00 33 20.7**	**-1.3**
GEC2	**GERESS Array S**	**123.65**	**327**	PKPdf	**PKiKP**	**00 39 49.8**	**+1.0**
GERES	**GERESS Array B**	**123.65**	**327**	PKP	**PKiKP**	**00 39 49.0**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=58,slow=3.7,SNR=4.4						
TORD	**Torodi Ar. Bea**	**148.17**	**285**	PKPbc	**PKPbc**	**00 40 37.9**	**+0.2**
	comp=Z,1.9nm,0.5s,baz=82,slow=3.1,SNR=21						
BDFB	**Brasilia**	**151.96**	**140**	PKPbc	**PKPbc**	**00 40 46.4**	**-0.6**
	comp=Z,2.2nm,0.7s,baz=172,slow=8.4,SNR=5.2						
BDFB	**Brasilia**	**151.96**	**140**	PKPdf	**PKPdf**	**00 40 39.4**	**-1.1**

IDC 30 00:25:51.7±3.2,35°.25S×105°.61W,h0^{km},mb3.7/4, mbtmp3.7/4,MS3.7/12,Error ellipse: s-maj=91.2km s-min=45.7km az=13.0,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**8.70**	**338**	LR	LR	00 30 34.0	
	comp=Z,439nm,20.1s,baz=118,slow=32						
H03S2	**Juan Fernandez**	**22.01**	**94**	T	T	00 53 29.8	
	baz=257,slow=76						
H03S1	**Juan Fernandez**	**22.02**	**94**	T	T	00 53 27.9	
	baz=257,slow=76						
H03S3	**Juan Fernandez**	**22.02**	**94**	T	T	00 53 28.4	
	baz=257,slow=76						
ATAH	**Atahualpa**	**37.52**	**48**	LR	LR	00 44 34.9	
	comp=Z,123nm,18.4s,baz=245,slow=30						
LPAZ	**La Paz**	**38.38**	**70**	P	P	00 33 15.4	-0.1
	3.8nm,1.3s,baz=212,slow=9.5,SNR=5.0						
LPAZ				LR	LR	00 46 22.4	
	comp=Z,61nm,18.6s,baz=234,slow=32						
	3.8nm,1.3s						
JTS	**Las Juntas de**	**49.33**	**27**	LR	LR	00 50 20.4	
	comp=Z,107nm,20.1s,baz=141,slow=30						
ROSC	**El Rosal**	**49.55**	**43**	LR	LR	00 51 54.0	
	comp=Z,111nm,20.2s,baz=236,slow=32						
SDV	**Santo Domingo**	**54.93**	**44**	LR	LR	00 55 26.9	
	comp=Z,38nm,21.7s,baz=220,slow=32						
URZ	**Urewera**	**60.25**	**242**	LR	LR	00 58 48.8	
	comp=Z,68nm,18.6s,baz=106,slow=33						
MDP	**Montagnes des**	**63.88**	**62**	LR	LR	01 01 03.9	
	comp=Z,170nm,18.7s,baz=147,slow=33						
TXAR	**Lajitas Array**	**64.26**	**2**	P	P	00 36 29.0	+0.3
	0.1nm,0.4s,baz=178,slow=8.6,SNR=3.3						
	0.1nm,0.4s						
SJG	**San Juan**	**64.95**	**42**	LR	LR	01 03 35.1	
	comp=Z,43nm,18.7s,baz=195,slow=35						
NVAR	**Mina Array Bea**	**74.25**	**350**	P	P	00 37 31.1	+0.6
	0.5nm,0.6s,baz=172,slow=7.2,SNR=2.7						
	0.5nm,0.6s						
PDAR	**Pinedale Array**	**77.72**	**357**	P	P	00 37 49.6	-0.7
	1.0nm,1.1s,baz=151,slow=6.4,SNR=4.6						
	1.0nm,1.1s						
CTA	**Charters Tower**	**92.48**	**243**	LR	LR	01 18 34.4	
	comp=Z,56nm,18.5s,baz=44,slow=34						
SUR	**Sutherland**	**96.03**	**137**	LR	LR	01 13 18.1	
	comp=Z,24nm,21.6s,baz=227,slow=30						
ASAR	**Alice Springs**	**98.71**	**233**	LR	LR	01 18 02.4	
	comp=Z,51nm,19.0s,baz=114,slow=32						
SONM	**Songino Array**	**153.15**	**308**	PKPbc	PKPbc	00 45 51.2	0.0
	0.6nm,0.7s,baz=67,slow=3.7,SNR=2.9						

*HLW **30** 00:27:52.8,24°.19N×36°.43E,h18^{km}±16^{km},Ml3.8*

*IDC **30** 00:27:54.2±1.8,24°.40N×36°.08E,h0^{km},mb3.7/5, mbtmp3.6/9,ML3.2/4,MS2.0/1,Error ellipse: s-maj=34.9km s-min=20.4km az=117.0*

ISC 30 00:27:54.7±1.3,24°.3N±0°.1×36°.19E±0°.10,h10^{km},n22, σ1^{s}06/22,mb3.6/4,Red Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAGS	**Hagol**	**1.10**	**276**	P	**Pb**	**00 28 14.8**	**-1.1**
NADB	**Abo Dabab**	**1.87**	**305**	P	**Pn**	**00 28 26.3**	**-0.5**
NADB				S	**Sn**	**00 28 51.0**	**+0.5**
BRNS	**Bernies**	**1.94**	**258**	P	**Pn**	**00 28 26.6**	**-1.2**
NQSR	**New Quseer**	**2.53**	**317**	P	**Pn**	**00 28 35.7**	**-0.2**
KASR	**Kasr**	**2.91**	**258**	P	**Pn**	**00 28 40.5**	**-0.7**
NEDF	**New Edfo**	**3.01**	**283**	P	**Pn**	**00 28 42.9**	**+0.4**
NAHD	**NAHD**	**3.15**	**262**	P	**Pn**	**00 28 44.1**	**-0.4**
NSKD	**New Sinn el Ka**	**3.53**	**261**	P	**Pn**	**00 28 49.4**	**-0.3**
HHRG	**Al Ghardaqah**	**3.77**	**322**	P	Pn	00 28 50.1	-2.9
HMSM	**Jabal Masmas**	**4.18**	**252**	P	**Pn**	**00 28 58.0**	**-0.5**
ASHG	**Umm Shaghir**	**4.27**	**257**	P	**Pn**	**00 28 60.0**	**+0.1**
GRB	**Gharib**	**5.02**	**323**	P	**Pn**	**00 29 10.3**	**+0.1**
EIL	**Elat**	**5.50**	**349**	Pn	**Pn**	**00 29 16.0**	**-0.7**
	0.2nm,0.3s,baz=121,slow=6.5,SNR=6.2						
EIL				LR	LR	00 30 33.4	
	comp=Z,16nm,21.1s,baz=182,slow=30						
EIL				Lg	Lg	00 30 43.1	
	1.0nm,0.3s,baz=292,slow=21,SNR=4.0						
	3.7nm,0.7s						
HDK1	**Dakhla**	**6.29**	**283**	P	**Pn**	**00 29 28.6**	**+0.9**
ASF	**Jabal al Asfar**	**7.90**	**4**	Pn	**Pn**	**00 29 47.6**	**-2.2**
	0.4nm,0.3s,baz=165,slow=12,SNR=8.6						
ASF				Lg	Lg	00 31 54.4	
	0.5nm,0.3s,baz=336,slow=20,SNR=3.6						
	0.9nm,0.3s						
MMAI	**Mount Meron Ar**	**8.74**	**356**	Pn	**Pn**	**00 30 01.1**	**-0.3**
	0.8nm,0.3s,baz=160,slow=15,SNR=1.5						
MMAI				Lg	Lg	00 32 21.9	
	0.4nm,0.3s,baz=170,slow=27,SNR=1.1						
	1.0nm,0.4s						
BRTR	**Keskin Array B**	**15.56**	**353**	Pn	**Pn**	**00 31 36.1**	**+1.7**
	0.1nm,0.3s,baz=163,slow=10,SNR=2.5						
	0.4nm,0.7s						
AKASG	**Malin Array Be**	**26.94**	**350**	P	**P**	**00 33 34.0**	**-2.1**
	0.2nm,0.4s,baz=159,slow=8.8,SNR=1.7						
	0.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**34.40**	**258**	P	**P**	**00 34 41.5**	**-0.9**
	0.4nm,0.7s,baz=56,slow=9.2,SNR=5.7						
	0.4nm,0.7s						
ESDC	**Sonseca Array**	**37.03**	**304**	P	**P**	**00 35 05.5**	**+0.7**
	1.1nm,1.1s,baz=93,slow=8.4,SNR=6.8						
	1.1nm,1.1s						
MKAR	**Makanchi Array**	**42.97**	**47**	P	**P**	**00 35 55.1**	**+1.0**
	1.2nm,0.8s,baz=256,slow=9.6,SNR=4.9						
	1.2nm,0.8s						
DBIC	**Dimbokro**	**43.04**	**253**	P	**P**	**00 35 56.1**	**+1.2**
	1.8nm,0.8s,baz=72,slow=7.0,SNR=1.6						
	1.8nm,0.8s						

*NOU **30** 00:28:44.2,22°.77S×169°.47E,h0^{km},MLv4.2/10, Southeast of Loyalty Islands*

*IDC **30** 00:28:52.7±4.0,20°.15S×167°.88E,h0^{km},mb3.4/2, mbtmp3.4/3,ML2.9/1,Error ellipse: s-maj=85.2km s-min=37.6km az=111.0*

ISC 30 00:28:46.9±2.0,22°.7S±0°.2×169°.4E±0°.1,h23^{km},n11, σ1^{s}17/12,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.78**	**313**	P	**Pn**	**00 29 16.8**	**+0.4**
PINNC	**Pines Island,**	**1.83**	**273**	P	**Pn**	**00 29 17.2**	**+0.3**
OUENC	**Ouen Island, N**	**2.40**	**277**	P	**Pn**	**00 29 25.2**	**+0.3**
YATNC	**Mamie plateau,**	**2.43**	**285**	P	**Pn**	**00 29 25.9**	**+0.6**
YATNC	**Mamie plateau,**	**2.43**	**285**	S	**Sb**	**00 29 57.9**	**-1.7**
DZM	**Mont Dzumac**	**2.83**	**283**	Pn	**Pn**	**00 29 31.1**	**+0.3**
	3.0nm,0.3s,baz=90,slow=19,SNR=25						
DZM				Sn	**Sn**	**00 30 04.0**	**-0.3**
	13nm,0.3s,baz=69,slow=23,SNR=6.9						
	7.4nm,0.4s						
DZM	**Mont Dzumac**	**2.83**	**283**	P	**Pn**	**00 29 31.1**	**+0.3**
DZM	**Mont Dzumac**	**2.83**	**283**	S	**Sn**	**00 30 06.9**	**+2.6**
ASAR	**Alice Springs**	**32.61**	**261**	P	**P**	**00 35 17.8**	**+0.6**
	0.5nm,0.7s,baz=86,slow=9.0,SNR=5.7						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**32.75**	**268**	P	**P**	**00 35 17.3**	**-1.1**
	0.5nm,1.0s,baz=90,slow=8.5,SNR=1.5						
	0.5nm,1.0s						
GERES	**GERESS Array B**	**147.59**	**330**	PKP	**PKPab**	**00 48 31.2**	**-0.4**
	0.2nm,0.5s,baz=35,slow=3.6,SNR=3.7						

*IDC **30** 00:32:49.6±0.6,27°.79N×142°.83E,h0^{km},mb4.2/27, mbtmp4.2/31,ML3.7/4,MS3.5/6,Error ellipse: s-maj=18.9km s-min=13.2km az=75.0*

*BJI **30** 00:32:49.3,27°.76N×142°.84E,h13^{km},mB5.1/11,mb4.5/40, Ms4.4/6,Ms7 4.1/8*

*NIED **30** 00:32:52.8,27°.97N×142°.74E,h34^{km},MW4.3,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.16; $M_{\theta\theta}$0.27; $M_{\phi\phi}$-1.43; $M_{r\theta}$-0.81; $M_{\theta\phi}$-0.63; $M_{\phi r}$3.04; Fault plane solution: $M_0$3.47000×10^{15} NP1: ϕ_s226.00000°,δ18.00000°,λ147.00000°. NP2: ϕ_s348.00000°,δ80.00000°,λ74.00000°.*

*JMA **30** 00:32:52.8±0.1,28°N±1°×14°3E±°,h34^{km},MV4.3/10, NEAR CHICHIJIMA ISLAND*

*NEIC **30** 00:32:52.7±1.1,27°.81N±0°.06×142°.80E±0°.09,h14^{km}±1^{km}, mb4.9/85,Error ellipse: s-maj=13.2km s-min=7.3km az=121.0*

ISC 30 00:32:53.5±0.4,27°.85N±0°.04×142°.76E±0°.07,h22^{km},n158, σ1^{s}17/157,mb4.8/77,MS3.7/5,2D,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**0.91**	**214**	P	**Pb**	**00 33 10.7**	**+0.1**
JCJ	**Chichijima**	**0.91**	**214**	Pn	Pb	00 32 59.1	-12
	341nm,0.3s,baz=49,slow=11,SNR=136						
JCJ				Sn	Sb	00 33 09.2	-13
	645nm,0.3s,baz=180,slow=20,SNR=11						
JCJ	**Chichijima**	**0.91**	**214**		**Pb**	**00 33 10.0**	**-0.6**
JCJ				Sn	**Sn**	**00 33 25.3**	**+1.8**
JHJ2	**Mitsune**	**5.82**	**335**	Pn	**Pn**	**00 34 19.4**	**+0.8**
JHJ	**Hachijo jima 2**	**5.84**	**335**	Pn	**Pn**	**00 34 18.8**	**0.0**
	8.1nm,0.3s,baz=85,slow=12,SNR=2.1						
JHJ				Sn	**Sn**	**00 35 20.4**	**-4.7**
	17nm,0.3s,baz=76,slow=19,SNR=2.3						
	154nm,0.8s						
JMYK	**Miyake Tsubota**	**6.77**	**337**	*e*S	**Sn**	**00 35 46.3**	**-1.7**
BSO1	**Boso 1**	**6.95**	**348**	P	**Pn**	**00 34 33.4**	**-0.1**
BSO1				*e*S	**Sn**	**00 35 49.1**	**-2.4**
JSG	**Sagara**	**7.84**	**331**	Pn	**Pn**	**00 34 46.3**	**+0.1**
JOD2	**Odawara 2**	**8.02**	**338**	*e*S	**Sn**	**00 36 17.8**	**-1.0**
INU	**Inuyama**	**8.93**	**328**	Pn	**Pn**	**00 34 58.9**	**-2.3**
JGF	**Kuroka**	**8.99**	**331**	Pn	**Pn**	**00 35 02.9**	**+0.9**
MJAR	**Matsushiro Arr**	**9.48**	**337**	Pn	**Pn**	**00 35 08.3**	**-0.4**
	0.3nm,0.3s,baz=158,slow=11,SNR=13						
MJAR				Sn	**Sn**	**00 36 49.9**	**-4.7**
	0.1nm,0.3s,baz=150,slow=23,SNR=2.9						
	1.8nm,0.4s						
MAJO	**Matsushiro**	**9.48**	**337**		**Pn**	**00 35 09.2**	**+0.4**
MJB9	**Matsu-Tunnel**	**9.48**	**337**		**Pn**	**00 35 09.5**	**+0.7**
JSD	**Sado**	**10.83**	**341**	Pn	**Pn**	**00 35 25.4**	**-1.8**
JNU	**Nakatsue**	**11.51**	**300**	LR	LR	00 39 41.7	
	comp=Z,198nm,18.3s,baz=86,slow=36						
JOW	**Kunigami**	**12.92**	**269**	LR	LR	00 40 25.9	
	comp=Z,223nm,20.2s,baz=107,slow=35						
ERM	**Erimo**	**14.13**	**1**	Pn	**Pn**	**00 36 10.0**	**-2.3**
KSRS	**Korea Array**	**15.72**	**311**	Pn	**P**	**00 36 37.1**	**-0.3**
	0.4nm,0.3s,baz=121,slow=11,SNR=4.8						
KSRS				LR	LR	00 42 22.4	
	comp=Z,101nm,18.5s,baz=100,slow=36						
JKA	**Kamikawa-asahi**	**16.23**	**360**	Pn	**Pn**	**00 36 40.4**	**+0.3**
ASAJ	**Asahikawa**	**16.23**	**360**	Pn	**Pn**	**00 36 40.1**	**+0.1**
	0.5nm,0.3s,baz=210,slow=14,SNR=1.0						
	2.1nm,0.4s						
USRK	**Ussuriysk Ar.**	**18.46**	**335**	Pn	**Pn**	**00 37 08.6**	**+0.7**
	0.3nm,0.3s,baz=159,slow=12,SNR=2.2						
	1.1nm,0.5s						
NACB	**Ninganchiao**	**19.37**	**264**	P	**P**	**00 37 16.4**	**-1.4**
YHNB	**Yeheng**	**19.44**	**265**	P	**P**	**00 37 18.4**	**-0.3**
YHNB				IAmb	IAmb	00 37 27.8	
	comp=Z,167nm,1.9s						
YULB	**Yu-li**	**19.85**	**262**	P	**P**	**00 37 24.1**	**+1.0**
SSLB	**Suanglung**	**20.04**	**263**		**P**	**00 37 26.4**	**+1.3**
TPUB	**Ta-pu**	**20.46**	**262**	P	**P**	**00 37 30.3**	**+0.6**
TPUB				IAmb	IAmb	00 37 36.9	
	comp=Z,127nm,1.8s						
NJ2	**Nanjing**	**21.12**	**287**	*e*P	**P**	**00 37 38.5**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
BNX	**BinXian**	**21.61**	**330**	⇓P	**P**	**00 37 40.8**	**-1.1**
BNX				pmax	pmax		
	comp=Z,10.0nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**23.49**	**105**	T	T	01 02 26.7	
	baz=297,slow=75,SNR=22						
H11N1	**WAKE ISLAND Hy**	**23.49**	**105**	T	T	01 02 37.9	
	baz=297,slow=75,SNR=13						
H11N3	**WAKE ISLAND Hy**	**23.51**	**105**	T	T	01 02 43.6	
	baz=297,slow=75,SNR=14						
H11S3	**WAKE ISLAND Hy**	**23.85**	**108**	T	T	01 03 32.1	
	baz=296,slow=74,SNR=8.7						
H11S1	**WAKE ISLAND Hy**	**23.86**	**108**	T	T	01 03 25.1	
	baz=296,slow=74,SNR=3.5						
H11S2	**WAKE ISLAND Hy**	**23.87**	**108**	T	T	01 03 27.5	
	baz=296,slow=74,SNR=3.1						
WHN	**Wuhan**	**24.92**	**283**	P	**P**	**00 38 21.0**	**+6.0**
HILR	**Hailar Array B**	**27.94**	**327**	P	**P**	**00 38 43.2**	**+1.1**
	comp=Z,1.0nm,0.4s,baz=126,slow=10.0,SNR=3.8						
	comp=Z,1.0nm,0.4s						
HHC	**Hu-ho-hao-te**	**28.67**	**305**	*e*P	**P**	**00 38 51.0**	**+2.1**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,5.2s						
FAKI	**Fak Fak**	**32.23**	**200**	P	**P**	**00 39 19.5**	**-0.8**
FAKI				IAmb	IAmb	00 39 27.4	
	comp=Z,23nm,1.1s						
LZH	**Lanzhou**	**33.84**	**294**	*e*P	**P**	**00 39 34.0**	**-0.5**
LZH				pP	pP	00 39 40.3	-0.1
LZH				pmax	pmax		
	comp=Z,19nm,1.6s						
TOLI2	**Tolitoli**	**33.91**	**222**	P	**P**	**00 39 34.7**	**-0.4**
TOLI2				IAmb	IAmb	00 39 41.0	
	comp=Z,11nm,0.8s						
LZDM	**Lanzhou Array**	**33.95**	**294**	P	**P**	**00 39 34.7**	**-1.0**
	comp=Z,1.4nm,0.4s,baz=128,slow=6.4,SNR=5.7						
	comp=Z,1.4nm,0.4s						
SONM	**Songino Array**	**34.53**	**315**	P	**P**	**00 39 40.5**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=123,slow=8.1,SNR=6.0						
SONM				LR	LR	00 54 24.8	
	comp=Z,106nm,18.8s,baz=128,slow=37						
	comp=Z,0.7nm,0.4s						
SONM	**Songino Array**	**34.53**	**315**	P	**P**	**00 39 41.0**	**+0.7**
LUWI	**Luwuk**	**34.56**	**217**	P	**P**	**00 39 39.3**	**-1.4**
KMI	**Kunming**	**35.81**	**275**	P	**P**	**00 39 51.3**	**-0.5**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH	**PanZhiHua**	**36.40**	**278**	P	**P**	**00 39 58.5**	**+1.9**
GTA	**Gaotai**	**37.25**	**299**	*e*P	**P**	**00 40 03.5**	**-0.2**
GTA				sP	pwP	00 40 14.0	+1.1
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BKB	**Balikpapan**	**38.15**	**225**	P	**P**	**00 40 10.6**	**-0.8**
TNCH	**TengChong**	**39.56**	**276**	⇓P	**P**	**00 40 23.8**	**+0.4**
TNCH				pP	pP	00 40 28.0	-1.3
TNCH				sP	sP	00 40 31.0	-0.7
TNCH				S	**S**	**00 46 24.5**	**-0.6**
TNCH				pmax	pmax		
	comp=Z,23nm,0.7s						
TNCH				pmax	pmax		
	comp=Z,110nm,3.5s						
TNCH				LR	LR		
	comp=Z,200nm,4.2s						
TNCH				LR	LR		
	comp=Z,210nm,5.0s						
TNCH				LR	LR		
	comp=Z,210nm,13.8s						
GOMU	**GeErMu**	**41.15**	**294**	P	**P**	**00 40 36.0**	**-0.6**
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**41.18**	**267**	P	**P**	**00 40 36.6**	**0.0**
	comp=Z,0.4nm,0.4s,baz=71,slow=5.3,SNR=5.0						
CMAR				PcP	**PcP**	**00 42 36.5**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=60,slow=3.0,SNR=4.8						
CMAR				LR	LR	00 58 20.5	
	comp=Z,44nm,18.9s,baz=70,slow=37						
	comp=Z,0.4nm,0.4s						
SOEI	**Soe**	**41.45**	**208**	P	**P**	**00 40 35.9**	**-3.1**
SOEI				IAmb	IAmb	00 41 16.2	
	comp=Z,22nm,1.1s						
COEN	**Coen**	**41.56**	**179**	P	**P**	**00 40 39.1**	**-0.6**
MTN	**Manton Dam**	**42.00**	**197**	P	**P**	**00 40 42.2**	**-1.0**
MTN				IAmb	IAmb	00 40 42.9	
	comp=Z,13nm,0.7s						
KNRA	**Kununurra**	**45.35**	**199**	P	**P**	**00 41 09.3**	**-0.8**
KNRA				IAmb	IAmb	00 42 52.2	
	comp=Z,36nm,1.6s						
GAMB	**Gambell**	**46.22**	**26**	P	**P**	**00 41 18.2**	**+1.6**
WMQ	**Urumqi**	**46.55**	**305**	*e*P	**P**	**00 41 19.0**	**-0.6**
WMQ				pmax	pmax		
	comp=Z,17nm,1.5s						
WMQ				LR	LR		
	comp=Z,110nm,18.7s						
CTA	**Charters Tower**	**47.78**	**176**	P	**P**	**00 41 28.6**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=355,slow=15,SNR=3.7						
	comp=Z,1.5nm,0.6s						
CTAO	**Charters Tower**	**47.78**	**176**	P	**P**	**00 41 28.7**	**-0.5**
WB0	**Warramunga Arr**	**48.03**	**191**		**P**	**00 41 30.3**	**-0.8**
WB0				IAmb	IAmb	00 41 47.6	
	comp=Z,9.1nm,0.8s						
WR8	**Warramunga Arr**	**48.20**	**190**		**P**	**00 41 31.4**	**-1.0**
WR8				IAmb	IAmb	00 41 46.5	
	comp=Z,7.3nm,0.8s						
WRAB	**Tennant Creek**	**48.20**	**191**	P	**P**	**00 41 32.1**	**-0.4**
WRA	**Warramunga Arr**	**48.21**	**191**	P	**P**	**00 41 31.6**	**-0.9**
	comp=Z,4.1nm,0.4s,baz=12,slow=8.3,SNR=44						
	comp=Z,4.1nm,0.4s						
WRA	**Warramunga Arr**	**48.21**	**191**	P	**P**	**00 41 31.4**	**-1.2**
FITZ	**Fitzroy Crossi**	**48.60**	**202**	P	**P**	**00 41 35.1**	**-0.4**
ZAA0	**Zalesovo Array**	**49.26**	**319**	P	**P**	**00 41 40.6**	**+0.3**
ZALV	**Zalesovo Beam**	**49.26**	**319**	P	**P**	**00 41 40.7**	**+0.4**
	comp=Z,5.9nm,0.9s,baz=100,slow=7.7,SNR=21						
ZALV				PcP	**PcP**	**00 43 02.8**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=108,slow=3.6,SNR=1.2						
ZALV				LR	LR	01 03 00.1	
	comp=Z,72nm,18.1s,baz=92,slow=37						
	comp=Z,5.9nm,0.9s						
PBA	**Port Blair**	**49.41**	**261**	P	**P**	**00 41 42.4**	**+0.4**
F15K	**North Star Dit**	**49.78**	**25**	P	**P**	**00 41 44.3**	**+0.1**
F15K				IAmb	IAmb	00 42 14.0	
	comp=Z,34nm,1.6s						
K15K	**Wolf Creek Mou**	**49.91**	**30**	P	**P**	**00 41 45.5**	**+0.3**
N15K	**Kwethluk River**	**50.01**	**33**	P	**P**	**00 41 46.7**	**+0.7**
MKAR	**Makanchi Array**	**50.39**	**309**	P	**P**	**00 41 49.0**	**-0.1**
	comp=Z,2.3nm,0.7s,baz=95,slow=9.0,SNR=19						
MKAR				PcP	**PcP**	**00 43 06.6**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=83,slow=4.8,SNR=2.5						
	comp=Z,2.3nm,0.7s						
MKAR	**Makanchi Array**	**50.39**	**309**	P	**P**	**00 41 48.8**	**-0.3**
MAKZ	**Makanchi**	**50.61**	**309**	P	**P**	**00 41 50.0**	**-0.8**
GSI	**Gunungsitoli**	**50.62**	**247**	P	**P**	**00 41 49.6**	**-1.6**
GSI				IAmb	IAmb	00 41 52.1	
	comp=Z,18nm,0.9s						
ASAR	**Alice Springs**	**51.93**	**190**	P	**P**	**00 41 59.5**	**-1.3**
	comp=Z,0.9nm,0.6s,baz=12,slow=6.4,SNR=11						
	comp=Z,0.9nm,0.6s						
NRIK	**Noril'sk**	**52.13**	**338**	P	**P**	**00 42 02.3**	**+0.6**
	comp=Z,0.9nm,0.4s,baz=56,slow=5.4,SNR=2.0						
	comp=Z,0.9nm,0.4s						
PRZ	**Przheval'sk**	**53.40**	**304**		**P**	**00 42 11.6**	**-0.2**
PRZ				IAmb	IAmb	00 42 13.5	
	comp=Z,9.5nm,0.8s						
B20K	**Meade River**	**53.96**	**22**	P	**P**	**00 42 16.0**	**+0.8**
BOOM	**Boomskoye usch**	**55.21**	**304**		**P**	**00 42 24.8**	**-0.2**
B22K	**Teshekpuk Lake**	**55.28**	**22**	P	**P**	**00 42 25.8**	**+1.0**
B22K				IAmb	IAmb	00 43 26.0	
	comp=Z,19nm,1.6s						
KSH	**Kashi**	**55.63**	**301**	P	**P**	**00 42 31.0**	**+3.0**
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AAK	**Ala-Archa**	**56.25**	**304**	P	**P**	**00 42 32.6**	**+0.2**
SCM	**Sheep Creek Mo**	**56.40**	**32**	P	**P**	**00 42 32.4**	**-0.6**
ILAR	**Eielson Array**	**56.80**	**29**	P	**P**	**00 42 35.0**	**-0.8**
	comp=Z,1.4nm,1.0s,baz=252,slow=6.0,SNR=7.2						
	comp=Z,1.4nm,1.0s						
ARSB	**Arslanbob**	**57.57**	**303**	P	**P**	**00 42 42.2**	**+0.4**
BVAR	**Borovoye Array**	**57.83**	**317**	P	**P**	**00 42 44.1**	**+0.9**
	comp=Z,6.8nm,0.5s,baz=93,slow=7.6,SNR=41						
	comp=Z,6.8nm,0.5s						
BORK	**Borovoye**	**57.88**	**317**		**P**	**00 42 44.2**	**+0.7**
BORK				IAmb	IAmb	00 42 45.1	
	comp=Z,6.7nm,0.6s						
SCRK	**Sand Creek**	**58.02**	**30**	P	**P**	**00 42 44.6**	**+0.1**
SCRK				IAmb	IAmb	00 44 37.9	
	comp=Z,14nm,1.6s						
GLB	**Gilahina Butte**	**58.07**	**33**	P	**P**	**00 42 45.8**	**+1.0**
GLB				IAmb	IAmb	00 43 32.9	
	comp=Z,31nm,1.6s						
J26L	**Joseph Creek**	**58.22**	**29**	P	**P**	**00 42 45.7**	**-0.1**
J26L				IAmb	IAmb	00 44 20.1	
	comp=Z,24nm,1.8s						
CRQM	**Cirque**	**58.40**	**34**	P	**P**	**00 42 46.3**	**-1.0**
K27K	**Chicken**	**58.86**	**30**	P	**P**	**00 42 51.1**	**+0.8**
K27K				IAmb	IAmb	00 44 13.4	
	comp=Z,23nm,1.8s						
L27K	**Beaver Creek,**	**58.98**	**31**	P	**P**	**00 42 51.6**	**+0.5**
L27K				IAmb	IAmb	00 44 12.4	
	comp=Z,30nm,1.9s						
BCAR	**Beaver Creek A**	**59.00**	**31**	P	**P**	**00 42 53.2**	**+1.9**
KK31	**Karatay Array**	**59.06**	**306**		**P**	**00 42 52.3**	**+0.4**
KK31				IAmb	IAmb	00 42 53.1	
	comp=Z,31nm,1.9s						
KKAR	**Karatay Array**	**59.06**	**306**		**P**	**00 42 52.3**	**+0.3**
MANEM	**Manem**	**59.32**	**299**		**P**	**00 42 55.1**	**+0.9**
MANEM				IAmb	IAmb	00 42 55.8	
	comp=Z,11nm,1.1s						
D27M	**Malcolm River**	**59.39**	**24**	P	**P**	**00 42 54.5**	**+0.6**
STKA	**Stephens Creek**	**59.41**	**181**	P	**P**	**00 42 53.6**	**-0.7**
	comp=Z,1.7nm,0.8s,baz=350,slow=14,SNR=2.9						
	comp=Z,1.7nm,0.8s						
STKA	**Stephens Creek**	**59.41**	**181**	P	**P**	**00 42 53.4**	**-1.0**
GAR	**Garm**	**60.04**	**301**		**P**	**00 42 58.8**	**-0.1**
GAR				IAmb	IAmb	00 43 00.3	
	comp=Z,6.4nm,0.7s						
DAWY	**Dawson**	**60.04**	**30**	P	**P**	**00 42 58.4**	**0.0**
DAWY				IAmb	IAmb	00 43 19.7	
	comp=Z,7.3nm,1.3s						
E29M	**Blow River**	**60.50**	**25**	P	**P**	**00 43 03.5**	**+2.1**
E29M				IAmb	IAmb	00 45 01.4	
	comp=Z,16nm,1.9s						
BBOO	**Buckleboo**	**60.67**	**186**	P	**P**	**00 43 01.9**	**-1.1**
CHGR	**Chuyangaron**	**61.00**	**301**		**P**	**00 43 05.1**	**-0.4**
HYT	**Haines Junctio**	**61.15**	**33**	P	**P**	**00 43 05.6**	**-0.6**
G31M	**Satah River**	**61.97**	**26**	P	**P**	**00 43 11.9**	**+0.5**
SHAA	**Shahritus**	**62.06**	**300**		**P**	**00 43 13.3**	**+0.6**
SHAA				IAmb	IAmb	00 43 13.9	
	comp=Z,9.5nm,0.9s						
INK	**Inuvik**	**62.13**	**25**	P	**P**	**00 43 13.0**	**+0.6**
INK				IAmb	IAmb	00 43 17.3	
	comp=Z,22nm,2.0s						
F31M	**Tsiigehtchic**	**62.13**	**26**	P	**P**	**00 43 13.2**	**+0.7**
F31M				IAmb	IAmb	00 45 15.3	
	comp=Z,27nm,1.8s						
ARTI	**Arti**	**64.25**	**322**		**P**	**00 43 26.9**	**+0.2**
AB31	**Akbulak array**	**64.94**	**314**		**P**	**00 43 31.8**	**+0.5**
AB31				IAmb	IAmb	00 43 32.7	
	comp=Z,9.3nm,0.6s						
ABKAR	**Akbulak array**	**64.94**	**314**		**P**	**00 43 31.8**	**+0.5**
AKTO	**Aktyubinsk**	**65.85**	**316**	P	**P**	**00 43 37.5**	**+0.2**
	comp=Z,5.3nm,0.7s,baz=95,slow=4.9,SNR=17						
	comp=Z,5.3nm,0.7s						
HRA	**Herat**	**67.55**	**298**	P	**P**	**00 43 49.0**	**+0.4**
KIRV	**Kirov**	**68.35**	**326**	P	**P**	**00 43 53.9**	**+0.9**
	comp=Z,7.3nm,0.5s,baz=168,slow=6.6,SNR=3.7						
	comp=Z,7.3nm,0.5s						
YKAW3	**Yellowknife Wh**	**71.20**	**29**	P	**P**	**00 44 10.1**	**-0.3**
YKAW3				IAmb	IAmb	00 45 31.5	
	comp=Z,18nm,1.9s						
RES	**Resolute Bay**	**71.20**	**14**	P	**P**	**00 44 11.6**	**+1.4**
YKA	**Yellowknife Ar**	**71.23**	**29**	P	**P**	**00 44 10.6**	**0.0**
	comp=Z,0.7nm,0.8s,baz=294,slow=6.5,SNR=8.3						
	comp=Z,0.7nm,0.8s						
YKAW1	**Yellowknife Wh**	**71.29**	**29**	P	**P**	**00 44 11.1**	**+0.1**
ARCES	**ARCESS Array B**	**72.99**	**341**	P	**P**	**00 44 21.9**	**+0.8**
	comp=Z,12nm,1.2s,baz=69,slow=6.6,SNR=5.4						
	comp=Z,12nm,1.2s						
ARCES	**ARCESS Array B**	**72.99**	**341**	P	**P**	**00 44 23.2**	**+2.2**
NNZ	**Nelson**	**74.35**	**156**	P	**P**	**00 44 28.5**	**-0.7**
BLKN	**Baker Lake**	**77.39**	**22**	P	**P**	**00 44 46.0**	**-0.4**
BLKN				IAmb	IAmb	00 44 58.3	
	comp=Z,29nm,2.0s						
BMO	**Blue Mountains**	**77.41**	**46**		**P**	**00 44 46.9**	**-0.1**
FINES	**FINESS Array B**	**77.49**	**334**	P	**P**	**00 44 47.1**	**+0.1**
	comp=Z,2.2nm,0.5s,baz=66,slow=4.8,SNR=22						
	comp=Z,2.2nm,0.5s						
KBZ	**Khabaz**	**77.87**	**313**	P	**P**	**00 44 50.4**	**+1.0**
	comp=Z,3.5nm,0.8s,baz=108,slow=2.8,SNR=14						
	comp=Z,3.5nm,0.8s						
MFID	**Camas Ranch**	**79.01**	**47**		**P**	**00 44 56.1**	**+0.2**
MFID				IAmb	IAmb	00 45 11.9	

	comp=Z,14nm,1.7s						
OVMT	Ovando	79.03	42	P	P	00 44 55.7	-0.4
NVAR	Mina Array Bea	79.65	52	P	P	00 44 59.6	-0.2
	comp=Z,0.9nm,0.6s,baz=271,slow=5.4,SNR=4.9						
	comp=Z,0.9nm,0.6s						
LRM	Limekiln Ridge	79.97	43	P	P	00 45 01.2	-0.1
BCYI	Bear Canyon	80.12	45	P	P	00 45 02.6	+0.5
BCYI				IAmb	IAmb	00 45 44.1	
	comp=Z,17nm,2.0s						
YHL	Hebgen Lake	81.23	44	P	P	00 45 08.6	+0.4
YHL				IAmb	IAmb	00 45 16.6	
	comp=Z,27nm,2.0s						
RLMT	Red Lodge	82.25	43	P	P	00 45 14.1	+0.6
RLMT				IAmb	IAmb	00 46 17.0	
	comp=Z,23nm,2.0s						
MARD	Mardin	82.30	308		P	00 45 14.4	+0.7
MARD				IAmb	IAmb	00 47 18.6	
	comp=Z,18nm,1.5s						
AKASG	Malin Array Be	82.31	324	P	P	00 45 12.7	-0.6
	comp=Z,1.1nm,0.5s,baz=52,slow=5.4,SNR=4.8						
	comp=Z,1.1nm,0.5s						
DUG	Dugway, Tooele	82.54	48	P	P	00 45 15.1	+0.2
HFS	Hagfors	82.93	337	P	P	00 45 15.6	-0.7
	comp=Z,3.2nm,0.8s,baz=86,slow=5.9,SNR=6.7						
	comp=Z,3.2nm,0.8s						
NOA	NORSAR Array B	83.10	338	P	P	00 45 16.3	-1.0
	comp=Z,0.8nm,0.7s,baz=35,slow=5.4,SNR=1.9						
	comp=Z,0.8nm,0.7s						
PDAR	Pinedale Array	83.31	45	P	P	00 45 18.4	-0.7
	comp=Z,1.1nm,1.0s,baz=270,slow=1.5,SNR=5.2						
	comp=Z,1.1nm,1.0s						
RAYN	Ar Rayn	85.31	294		P	00 45 29.6	+0.3
RAYN				IAmb	IAmb	00 45 30.7	
	comp=Z,7.8nm,0.8s						
BRTR	Keskin Array B	85.86	313	P	P	00 45 32.5	+0.7
	comp=Z,1.3nm,0.8s,baz=104,slow=2.5,SNR=6.1						
	comp=Z,1.3nm,0.8s						
BRTR	Keskin Array B	85.86	313	P	P	00 45 32.1	+0.2
PV23	Carpenter Ridg	85.97	48	P	P	00 45 32.6	0.0
PV23				IAmb	IAmb	00 46 00.2	
	comp=Z,15nm,1.1s						
PV10	Paradox Valley	85.99	48	P	P	00 45 32.4	-0.2
PV14	Lion Creek, Pa	86.00	48	P	P	00 45 32.6	-0.2
PV14				IAmb	IAmb	00 45 42.5	
	comp=Z,20nm,1.8s						
PV19	Morning Glory	86.06	48	P	P	00 45 33.3	+0.3
PV19				IAmb	IAmb	00 45 35.9	
	comp=Z,8.3nm,0.9s						
PV16	Nyswonger Mesa	86.10	48	P	P	00 45 32.8	-0.4
PV16				IAmb	IAmb	00 46 01.1	
	comp=Z,18nm,1.7s						
PV18	Skein Mesa, Pa	86.14	49	P	P	00 45 33.1	-0.3
PV18				IAmb	IAmb	00 47 24.3	
	comp=Z,24nm,1.8s						
PV13	Radium Mtn., P	86.25	49	P	P	00 45 33.8	-0.1
PV13				IAmb	IAmb	00 45 38.1	
	comp=Z,15nm,1.7s						
BURAR	Bucovina Array	86.26	323	P	P	00 45 33.7	+0.1
EPLO	Experimental L	87.95	33	P	P	00 45 42.0	+0.3
GERES	GERESS Array B	91.12	329	P	P	00 45 55.6	-1.1
	comp=Z,0.3nm,0.6s,baz=47,slow=4.5,SNR=2.6						
	comp=Z,0.3nm,0.6s						
TXAR	Lajitas Array	94.74	53	P	P	00 46 14.6	+0.8
	comp=Z,0.9nm,1.0s,baz=222,slow=1.7,SNR=4.1						
	comp=Z,0.9nm,1.0s						
TORD	Torodi Ar. Bea	124.46	312	PKP	PKPdf	00 51 50.5	-1.2
	comp=Z,0.4nm,0.8s,baz=29,slow=1.7,SNR=2.0						
LPAZ	La Paz	149.23	75	PKPbc	PKPbc	00 52 42.0	+0.1
	comp=Z,1.5nm,0.5s,baz=316,slow=4.6,SNR=4.2						

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*NNC **30** 00:52:28.4±2.9, 35°.77N×77°.64E, h0^{km}, mb4.4, mpv4.6, Error ellipse: s-maj=30.9km s-min=17.3km az=140.0*

*IDC **30** 00:52:28.0±0.7, 35°.78N×77°.44E, h0^{km}, mb3.9/21, mbtmp3.9/25, ML3.7/4, MS3.3/4, Error ellipse: s-maj=19.8km s-min=12.9km az=41.0*

*NEIC **30** 00:52:30.2±1.7, 35°.81N±0°.08×77°.6E±0°.1, h10^{km}±1^{km}, mb4.1/32, Error ellipse: s-maj=15.4km s-min=12.7km az=122.0*

ISC 30 00:52:30.0±0.4**, 35°.80N**±0°.04×**77°.55E**±0°.05**, h10^{km}, n113, σ1^{s}.67**/125**, mb4.1**/36**, MS3.2**/3**, 3C-5D, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHRM	DHARAMSHALA	3.69	197	*e*P	Pb	00 53 36.2	+0.8
DHRM				*e*S	Sb	00 54 18.2	-2.0
DHRM				IAML		00 54 30.9	
	comp=E,361nm,1.1s						
DHRM				IAML		00 54 43.8	
	comp=N,364nm,0.8s						
KSH	Kashi	3.92	342	Pn	Pn	00 53 31.0	+0.7
KSH				Sn	Sn	00 54 20.0	+3.6
KSH				smax	smax		
	comp=N,340nm,0.6s						
KSH				smax	smax		
	comp=E,510nm,0.7s						
NIL	Nilore	4.13	240		Pn	00 53 35.0	+1.7
SMLA	Simla	4.67	184	*e*P	Pb	00 53 49.2	-2.7
SMLA				*e*S	Sn	00 54 41.2	+6.4
SMLA				IAML		00 54 54.9	
	comp=N,584nm,0.5s						
SMLA				IAML		00 54 58.6	
	comp=E,548nm,1.0s						
MANEM	Manem	5.03	292		Pn	00 53 46.8	+1.0
DDI	Dehra Dun	5.48	175	*e*P	Pb	00 54 00.0	-5.8
DDI				*e*S	Sn	00 54 59.8	+5.0
DDI				IAML		00 55 27.8	
	comp=E,266nm,0.7s						
DDI				IAML		00 55 32.2	
	comp=N,221nm,0.8s						
DRK	Karamyk	5.86	311		Pn	00 53 58.5	+1.4
KDJ	Kajisay	6.33	358		Pn	00 54 04.8	+1.2
ULHL	Ulahol	6.52	351	P	Pn	00 54 09.7	+3.6
	SNR=17						
ARSB	Arslanbob	6.57	328		Pn	00 54 07.8	+0.9
GAR	Garm	6.58	301		Pn	00 54 07.2	+0.3
PRZ	Przheval'sk	6.71	5		Pn	00 54 09.8	+1.0
BOOM	Boomskoye usch	6.80	350		Pn	00 54 11.2	+1.2
BTK	Batken	6.81	311	Pn	Pn	00 54 12.2	+2.2
UCH	Uchtor	6.84	341	P	Pn	00 54 14.2	+3.4
	SNR=26						
KBL	Kabul	7.08	262		Pn	00 54 13.8	-0.1
KBK	Karagaybulak	7.14	344	P	Pn	00 54 18.3	+3.7
	SNR=30						
AAK	Ala-Archa	7.23	342	P	Pn	00 54 19.7	+3.8
	SNR=23						
AAK	Ala-Archa	7.23	342	Pn	Pn	00 54 19.7	+3.8
	comp=N,5.0nm,0.3s,baz=157,slow=7.9,SNR=77						
AAK				Lg	Lg	00 56 16.2	
	comp=N,1.1nm,0.3s,baz=186,slow=21,SNR=2.0						
AAK				LR	LR	00 57 34.2	
	comp=N,155nm,18.9s,baz=146,slow=42						
	comp=N,8.7nm,0.4s						
AAK	Ala-Archa	7.23	342		Pn	00 54 16.3	+0.4
AAK	Ala-Archa	7.23	342	⇑P	Pn	00 54 17.3	+1.4
	comp=N,20nm,0.7s						
TKM2	Tokmak 2	7.27	349	P	Pn	00 54 19.9	+3.5
	SNR=18						
CHGR	Chuyangaron	7.27	296		Pn	00 54 15.6	-0.8
FRU1	Bishkek	7.36	343		Pn	00 54 18.3	+0.8
EKS2	Erkin-Say	7.45	338	P	Pn	00 54 24.1	+5.2
	SNR=6.0						
CHMS	Chumysh	7.51	344	P	Pn	00 54 23.4	+3.8
	SNR=21						
PDGK	Podgornoye	7.67	11	⇑P	Pn	00 54 22.3	+0.4
	comp=N,26nm,0.6s						
PDGK				⇓S	Sn	00 55 52.6	+3.7
	comp=N,59nm,0.7s						
SHAA	Shahritus	7.77	286		Pn	00 54 22.5	-0.7
USP	Ospenovka	7.82	343	P	Pn	00 54 27.1	+3.2
	SNR=10						
KK31	Karatay Array	9.10	325		Pn	00 54 41.4	0.0
KK31	Karatay Array	9.10	325	P	Pn	00 54 42.7	+1.4
	comp=N,4.3nm,0.5s,baz=136,slow=11,SNR=54						
KK31				⇓S	Sn	00 56 26.3	+2.5
	comp=N,11nm,0.8s,baz=158,slow=24,SNR=4.3						
KKAR	Karatay Array	9.10	325		Pn	00 54 42.2	+0.8
WMQ	Urumqi	11.18	41	*e*P	Pn	00 55 13.0	+3.1
WMQ				S	Sn	00 57 16.0	+1.0
WMQ				pmax	pmax		
	comp=Z,21nm,1.1s						
MAKZ	Makanchi	11.49	15		Pn	00 55 14.4	+0.3
MAKZ	Makanchi	11.49	15	P	Pn	00 55 13.3	-0.8
	comp=Z,8.3nm,0.5s						
MAKZ				S	Sn	00 57 21.2	-1.3
	comp=Z,7.9nm,0.8s						
MK31	Makanchi Array	11.55	16	Pn	Pn	00 55 13.8	-1.1
MK31	Makanchi Array	11.55	16	P	Pn	00 55 15.0	+0.1
	comp=Z,2.0nm,0.4s,baz=199,slow=13,SNR=27						
MK31				⇓S	Sn	00 57 23.0	-0.9
	comp=Z,9.1nm,0.6s,baz=188,slow=24,SNR=8.5						
MKAR	Makanchi Array	11.55	16	Pn	Pn	00 55 15.2	+0.3
	comp=Z,0.9nm,0.3s,baz=202,slow=14,SNR=27						
MKAR				Sn	Sn	00 57 19.6	-4.3
	comp=Z,1.5nm,0.3s,baz=197,slow=23,SNR=12						
	comp=Z,3.1nm,0.6s						
MKAR	Makanchi Array	11.55	16		Pn	00 55 14.8	-0.2
GTK	Tadong	12.65	129	*e*S	Sn	00 57 46.9	-4.4
GTK				IAML		00 57 47.0	
	comp=N,16nm,0.8s						
GOMU	GeErMu	13.99	83	P	Pn	00 55 50.5	+1.9
BVA0	Borovoye Array	17.95	346	⇓P	Pn	00 56 39.9	+0.3
	comp=N,5.3nm,0.8s,baz=147,slow=11,SNR=24						
BVAR	Borovoye Array	17.95	346	P	P	00 56 40.5	+0.4
	comp=N,0.1nm,0.3s,baz=154,slow=12,SNR=19						
	comp=N,3.0nm,0.6s						
BORK	Borovoye	17.98	346	P	Pn	00 56 40.0	0.0
GTA	Gaotai	18.00	72	*e*P	P	00 56 42.5	+1.6
GTA				pP	sP	00 56 45.8	-1.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
AB31	Akbulak array	18.62	322	P	P	00 56 47.6	0.0
AB31				IAmb	IAmb	00 56 52.5	
	comp=Z,7.0nm,0.7s						
AB31	Akbulak array	18.62	322	⇑P	P	00 56 47.5	0.0
	comp=Z,3.6nm,0.5s						
ABKAR	Akbulak array	18.62	322	P	P	00 56 47.8	+0.3
ZAA0	Zalesovo Array	18.85	13	P	P	00 56 49.8	-0.2
ZALV	Zalesovo Beam	18.85	13	P	P	00 56 49.0	-0.9
	comp=Z,0.2nm,0.3s,baz=197,slow=8.8,SNR=9.0						
	comp=Z,1.4nm,0.5s						
ZALV	Zalesovo Beam	18.85	13	P	P	00 56 48.5	-1.5
AKTO	Aktyubinsk	20.34	322	P	P	00 57 05.8	-0.5
	comp=Z,5.1nm,0.6s,baz=113,slow=9.4,SNR=17						
	comp=Z,5.1nm,0.6s						
AKTO	Aktyubinsk	20.34	322	⇓P	P	00 57 06.1	-0.1
	comp=Z,9.0nm,1.4s						
LZDM	Lanzhou Array	21.18	82	P	P	00 57 17.3	+1.5
	comp=Z,0.9nm,0.3s,baz=317,slow=6.1,SNR=1.9						
	comp=Z,0.9nm,0.3s						
LZH	Lanzhou	21.28	81	*e*P	P	00 57 19.5	+2.7
LZH				sP	sP	00 57 26.5	+3.4
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
PZH	PanZhiHua	22.64	107	P	P	00 57 31.8	+0.4
ARTI	Arti	24.35	334	P	P	00 57 48.0	+0.1
SONM	Songino Array	24.49	52	P	P	00 57 50.4	+1.1
	comp=Z,2.4nm,0.6s,baz=245,slow=9.8,SNR=18						
SONM				LR	LR	01 08 52.1	
	comp=Z,76nm,19.4s,baz=48,slow=40						
	comp=Z,2.4nm,0.6s						
SONM	Songino Array	24.49	52	P	P	00 57 49.6	+0.2
ULN	Ulaanbaatar	24.91	52	P	P	00 57 52.4	-0.9
ULN				IAmb	IAmb	00 58 00.3	
	comp=Z,4.2nm,1.1s						
CHTO	Chiang Mai	25.36	126	P	P	00 57 57.1	-0.3
CHTO				IAmb	IAmb	00 58 03.5	
	comp=Z,3.1nm,0.9s						
CMAR	Chiang Mai Arr	25.62	127	P	P	00 57 59.8	+0.1
	comp=Z,2.2nm,0.3s,baz=325,slow=8.9,SNR=13						
	comp=Z,2.2nm,0.3s						
CMAR	Chiang Mai Arr	25.62	127	P	P	00 57 59.1	-0.6
HHC	Hu-ho-hao-te	27.05	69	*e*P	P	00 58 13.0	+0.3
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,170nm,5.5s						
PALK	Pallekele	28.54	173	LR	LR	01 09 17.5	
	comp=Z,46nm,18.9s,baz=360,slow=35						
RAYN	Ar Rayn	30.27	255	P	P	00 58 42.2	+0.8
RAYN				IAmb	IAmb	00 58 44.8	
	comp=Z,1.4nm,0.7s						
NRIK	Noril'sk	34.05	6	P	P	00 59 14.3	+0.3
	comp=Z,0.6nm,0.3s,baz=162,slow=9.6,SNR=1.6						
	comp=Z,0.6nm,0.3s						
BRTR	Keskin Array B	34.67	290	P	P	00 59 19.1	-0.8
	comp=Z,0.2nm,0.3s,baz=97,slow=6.3,SNR=5.3						
	comp=Z,0.2nm,0.3s						
BRTR	Keskin Array B	34.67	290	P	P	00 59 20.1	+0.2
AKASG	Malin Array Be	37.52	309	P	P	00 59 43.2	-0.7
	comp=Z,0.3nm,0.3s,baz=80,slow=7.9,SNR=4.7						
	comp=Z,0.3nm,0.3s						
AKASG	Malin Array Be	37.52	309	P	P	00 59 43.0	-0.9
AKBB	Malin Array Si	37.52	309	P	P	00 59 43.2	-0.7
AKBB				IAmb	IAmb	01 00 01.4	
	comp=Z,2.2nm,0.9s						
KIEV	Kiev	37.52	309	P	P	00 59 43.3	-0.7
KIEV				IAmb	IAmb	01 00 01.4	
	comp=Z,2.0nm,0.9s						
MNK	Minsk	38.74	315	*i* P	P	00 59 52.9	-1.3
	comp=E,20nm,1.1s						
MNK				*i* P	P	00 59 52.9	-1.3
	comp=N,17nm,1.2s						
MNK				*i* P	P	00 59 52.9	-1.3
	comp=Z,6.0nm,1.0s,baz=98						
MNK				*i* PP	PP	01 01 21.8	-0.9
MNK				*i* PPP	PPP	01 01 41.1	
MNK				*i* S	S	01 05 51.0	-0.1
MNK				*i* SS	SS	01 08 42.2	+0.7
MNK				*i* SSS	SSS	01 09 00.5	
MNK				*i* LQ	LQ	01 13 00.2	
MNK				*i* LR	LR	01 15 57.3	
MNK				*i* LRM	MLR	01 17 38.0	
	comp=E,815nm,3.4s						
MNK				*i* LRM	MLR	01 18 11.0	
	comp=Z,954nm,4.0s						
MNK				*i* LRM	MLR	01 18 43.9	
	comp=N,1µm,4.7s						
BURAR	Bucovina Array	40.10	304	P	P	01 00 06.2	+0.5
LVZ	Lovozero	40.15	336	P	P	01 00 05.5	-0.2
LVZ				IAmb	IAmb	01 00 19.1	
	comp=Z,12nm,1.0s						
FIA1	FINESS Array S	41.06	325	P	P	01 00 13.3	0.0
FINES	FINESS Array B	41.06	325	P	P	01 00 13.1	-0.3
	comp=Z,2.1nm,0.3s,baz=113,slow=9.1,SNR=39						
	comp=Z,2.1nm,0.3s						
FINES	FINESS Array B	41.06	325	P	P	01 00 13.3	-0.1
ARCES	ARCESS Array B	43.86	336	P	P	01 00 36.2	+0.1
	comp=Z,2.7nm,0.6s,baz=102,slow=7.9,SNR=18						
	comp=Z,2.7nm,0.6s						
ARCES	ARCESS Array B	43.86	336	P	P	01 00 36.2	+0.1
HFS	Hagfors	46.88	322	P	P	01 00 59.2	-0.9
	comp=Z,2.9nm,0.6s,baz=92,slow=11,SNR=8.9						
	comp=Z,2.9nm,0.6s						
GERES	GERESS Array B	47.63	307	P	P	01 01 05.1	-1.2
	comp=Z,0.2nm,0.6s,baz=90,slow=6.2,SNR=3.4						
	comp=Z,0.2nm,0.6s						
KHC	Kasperske Hory	47.66	307	P	P	01 01 06.9	+0.4
KHC				IAmb	IAmb	01 01 09.3	
	comp=Z,3.2nm,1.1s						
NC405	NORSAR Array S	47.88	323	P	P	01 01 07.8	-0.1
NC303	NORSAR Array S	48.05	323	P	P	01 01 09.5	+0.3
NB201	NORSAR Array S	48.08	323	P	P	01 01 09.2	-0.3
NB2	NORSAR Subarra	48.12	323	P	P	01 01 09.2	-0.6
	comp=Z,1.1nm,0.6s,baz=91,slow=7.9						
NOA	NORSAR Array B	48.12	323	P	P	01 01 09.0	-0.8
	comp=Z,1.4nm,0.6s,baz=90,slow=7.6,SNR=6.6						
NOA				LR	LR	01 23 00.1	
	comp=Z,41nm,18.0s,baz=335,slow=38						
	comp=Z,1.4nm,0.6s						
NC204	NORSAR Array S	48.34	324	P	P	01 01 11.2	-0.3
KONO	Kongsberg	48.95	321	P	P	01 01 15.2	-0.9
SPITS	Spitsbergen Ar	49.41	346	P	P	01 01 19.5	0.0
	comp=Z,3.5nm,0.8s,baz=123,slow=10,SNR=1.1						
	comp=Z,3.5nm,0.8s						
FUORN	Ofenpass-Fuorn	50.33	304	P	P	01 01 27.9	+0.6
FUORN				IAmb	IAmb	01 01 34.9	
	comp=Z,2.6nm,1.1s						
TUE	Stuetta	50.98	304	P	P	01 01 32.0	0.0
SENIN	Lac Senin/Sane	52.38	305	P	P	01 01 41.8	-0.7
SENIN				IAmb	IAmb	01 01 42.8	
	comp=Z,3.5nm,1.1s						
BNI	Bardonecchia	53.16	303	P	P	01 01 48.1	0.0
BNI				IAmb	IAmb	01 02 00.5	
	comp=Z,1.9nm,1.0s						
EKA	Eskdalemuir Ar	56.43	317	P	P	01 02 11.1	-0.5
	comp=Z,1.5nm,0.7s,baz=78,slow=7.4,SNR=5.0						
	comp=Z,1.5nm,0.7s						
CEST	Esterri de Car	57.66	302	P	P	01 02 19.9	-0.7
CEST				IAmb	IAmb	01 02 28.3	
	comp=Z,4.0nm,1.1s						
ESDC	Sonseca Array	62.42	301	P	P	01 02 52.2	-1.1
	comp=Z,0.3nm,0.7s,baz=67,slow=6.3,SNR=5.0						
	comp=Z,0.3nm,0.7s						
RES	Resolute Bay	69.68	358	P	P	01 03 39.0	-0.3
	comp=Z,0.5nm,0.6s,baz=4.8,slow=10,SNR=1.7						
	comp=Z,0.5nm,0.6s						
TOLK	Toolik Lake Re	70.17	17	P	P	01 03 42.3	-0.2
TOLK				IAmb	IAmb	01 03 55.7	
	comp=Z,1.6nm,0.8s						
POIN	Pond Inlet	70.47	352	P	P	01 03 44.3	+0.2
POIN				IAmb	IAmb	01 03 57.4	
	comp=Z,2.5nm,1.1s						
TORD	Torodi Ar. Bea	71.02	273	P	P	01 03 47.0	-1.4
	comp=Z,0.5nm,0.6s,baz=54,slow=7.5,SNR=4.8						
	comp=Z,0.5nm,0.6s						
BMAR	Burnt Mountain	72.28	16	P	P	01 03 54.5	-0.8
ILAR	Eielson Array	73.90	18	P	P	01 04 03.4	-1.4
	comp=Z,0.5nm,0.8s,baz=339,slow=6.7,SNR=4.3						
	comp=Z,0.5nm,0.8s						
ILAR	Eielson Array	73.90	18	P	P	01 04 04.0	-0.8
G31M	Satah River	74.76	12	P	P	01 04 09.3	-0.5
SKT	Skwentna	74.82	22	P	P	01 04 08.9	-1.4
SKT				IAmb	IAmb	01 04 13.9	
	comp=Z,6.2nm,1.1s						
O18K	Koktuh Hills	75.26	25	P	P	01 04 13.2	+0.3
BCAR	Beaver Creek A	76.58	17	P	P	01 04 20.5	+0.1
WRA	Warramunga Arr	77.21	126	P	P	01 04 24.9	+0.6
	comp=Z,0.7nm,0.9s,baz=313,slow=5.3,SNR=4.6						
	comp=Z,0.7nm,0.9s						
ASAR	Alice Springs	79.60	129	P	P	01 04 37.0	-0.6
	comp=Z,0.4nm,0.7s,baz=314,slow=5.3,SNR=5.9						
	comp=Z,0.4nm,0.7s						
YKA	Yellowknife Ar	81.56	6	P	P	01 04 46.3	-1.2
	comp=Z,0.7nm,0.7s,baz=339,slow=5.4,SNR=9.1						
	comp=Z,0.7nm,0.7s						

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*IDC **30** 00:56:32.5±1.0, 28°.46N×43°.72W, h0^{km}, mb3.7/12, mbtmp3.7/12, MS3.5/4, Error ellipse: s-maj=31.3km s-min=19.7km az=178.0*

ISC 30 00:56:34.4±0.9**, 28°.5N**±0°.2×**43°.7W**±0°.1**, h12^{km}, n21, σ0^{s}.88**/12**, mb3.7**/11**, MS3.5**/4**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SADO	Sadowa	32.45	310	LR	LR	01 14 25.0	
	comp=Z,76nm,20.3s,baz=340,slow=33						
ESDC	Sonseca Array	34.52	61	P	P	01 03 22.6	0.0
	0.2nm,0.7s,baz=272,slow=5.9,SNR=1.6						
	0.2nm,0.7s						
DBIC	Dimbokro	42.63	113	LR	LR	01 19 12.8	
	comp=Z,43nm,20.6s,baz=340,slow=32						
TORD	Torodi Ar. Bea	44.83	100	P	P	01 04 47.7	-0.9
	1.4nm,0.7s,baz=310,slow=7.4,SNR=8.4						
	1.4nm,0.7s						
H10N2	ASCENSION HYDR	45.80	138	T	T	01 53 41.8	
	baz=323,slow=75,SNR=48						
H10N3	ASCENSION HYDR	45.81	138	T	T	01 53 41.9	
	baz=323,slow=75,SNR=32						
H10N1	ASCENSION HYDR	45.82	138	T	T	01 53 43.2	
	baz=323,slow=75,SNR=44						
H10S3	ASCENSION HYDR	46.60	139	T	T	01 54 43.1	
	baz=322,slow=74,SNR=65						
H10S2	ASCENSION HYDR	46.62	139	T	T	01 54 45.9	
	baz=258,slow=74,SNR=62						
LPAZ	La Paz	50.38	211	P	P	01 05 32.8	+0.5
	1.2nm,1.0s,baz=24,slow=10.0,SNR=3.9						
	1.2nm,1.0s						
TXAR	Lajitas Array	51.97	286	P	P	01 05 43.2	-0.5
	0.3nm,0.8s,baz=81,slow=7.8,SNR=3.1						
	0.3nm,0.8s						
ANMO	Albuquerque	53.01	294	LR	LR	01 25 59.2	
	comp=Z,44nm,19.6s,baz=334,slow=33						
PDAR	Pinedale Array	54.12	304	P	P	01 05 59.3	-0.2
	1.0nm,0.7s,baz=92,slow=8.4,SNR=12						
	1.0nm,0.7s						
YKA	Yellowknife Ar	56.37	328	P	P	01 06 14.5	-0.7
	0.3nm,0.7s,baz=85,slow=7.4,SNR=3.4						
	0.3nm,0.7s						
AKASG	Malin Array Be	57.98	46	P	P	01 06 25.8	-0.9
	0.8nm,0.6s,baz=279,slow=6.3,SNR=3.0						
	0.8nm,0.6s						
NVAR	Mina Array Bea	61.49	300	LR	LR	01 32 46.0	
	comp=Z,45nm,20.1s,baz=282,slow=35						
BRTR	Keskin Array B	63.22	57	P	P	01 07 02.7	-0.2
	0.4nm,0.7s,baz=263,slow=5.7,SNR=1.7						
	0.4nm,0.7s						
KBZ	Khabaz	68.63	51	P	P	01 07 39.0	+1.6
	0.8nm,0.7s,baz=255,slow=12,SNR=1.6						
	0.8nm,0.7s						
ILAR	Eielson Array	69.97	334	P	P	01 07 46.1	+0.8
	0.5nm,0.9s,baz=77,slow=5.1,SNR=4.2						
	0.5nm,0.9s						
AKTO	Aktyubinsk	75.52	40	P	P	01 08 19.0	+0.5
	1.6nm,0.7s,baz=334,slow=5.6,SNR=6.5						
	1.6nm,0.7s						
BVAR	Borovoye Array	80.75	34	P	P	01 08 48.6	+1.0
	0.4nm,0.7s,baz=321,slow=3.7,SNR=2.9						
	0.4nm,0.7s						

IDC 30 01:22:55.1±11.0**, 22°.29S×178°.30W, h650^{km}**±255^{km}**, mb2.7**/3**, mbtmp3.9**/4**, Error ellipse: s-maj=262.4km s-min=62.3km az=73.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	16.40	193	P	P	01 26 14.6	+0.7
	4.9nm,0.9s,baz=37,slow=9.3,SNR=1.5						
URZ				S	S	01 28 54.6	-0.9
	5.5nm,0.9s,baz=71,slow=18,SNR=2.1						
STKA	Stephens Creek	36.79	246	P	P	01 29 11.1	+0.1
	1.4nm,0.6s,baz=69,slow=8.6,SNR=3.1						
	1.4nm,0.6s						
ASAR	Alice Springs	43.87	259	P	P	01 30 07.3	+0.3
	1.3nm,0.8s,baz=96,slow=7.2,SNR=13						
	1.3nm,0.8s						
WRA	Warramunga Arr	44.11	264	P	P	01 30 08.6	-0.2
	0.3nm,0.3s,baz=96,slow=8.4,SNR=13						
	0.3nm,0.3s						

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*IDC **30** 01:24:55.9±1.2, 29°.43N×104°.71E, h0^{km}, mb3.5/5, mbtmp3.5/7, ML3.9/2, Error ellipse: s-maj=63.5km s-min=18.1km az=70.0*

*NEIC **30** 01:24:57.7±1.9, 29°.5N±0°.1×104°.7E±0°.1, h10^{km}±2^{km}, mb4.4/11, Error ellipse: s-maj=24.0km s-min=15.2km az=233.0*

ISC 30 01:24:57.1±1.0**, 29°.5N**±0°.1×**104°.7E**±0°.1**, h10^{km}, n23, σ1^{s}.01**/24**, mb4.2**/12**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENH	Enshi	4.28	78	Pn	Pn	01 26 02.1	-0.3
LZDM	Lanzhou Array	6.53	353	Pn	Pn	01 26 34.1	+0.7
	baz=171,slow=13						
LZDM				Sn	Sn	01 27 46.2	-1.9
	baz=168,slow=21						
LZDM				Lg	Lg	01 28 23.6	
	baz=173,slow=29						
	5.3nm,0.3s						
SONM	Songino Array	18.40	4	P	P	01 29 14.2	+1.8
	0.1nm,0.3s,baz=186,slow=11,SNR=2.1						
	0.2nm,0.4s						
MKAR	Makanchi Array	24.54	321	P	P	01 30 18.0	+1.1
	0.3nm,0.4s,baz=131,slow=9.8,SNR=7.1						
	0.3nm,0.4s						
MKAR	Makanchi Array	24.54	321	P	P	01 30 17.5	+0.7
MAKZ	Makanchi	24.72	321	P	P	01 30 19.5	+1.0
ZALV	Zalesovo Beam	28.40	335	P	P	01 30 52.0	+0.4
	0.4nm,0.5s,baz=124,slow=8.9,SNR=2.0						
	0.4nm,0.5s						
AB31	Akbulak array	39.12	313	P	P	01 32 22.9	-1.7
ABKAR	Akbulak array	39.12	313	P	P	01 32 22.9	-1.7
WB0	Warramunga Arr	56.73	146	P	P	01 34 40.0	-1.3
WB0				IAmb	IAmb	01 34 42.0	
	comp=Z,3.8nm,1.1s						
WRA	Warramunga Arr	56.85	146	P	P	01 34 41.8	-0.4
	comp=Z,0.7nm,0.8s,baz=330,slow=7.3,SNR=3.0						
	comp=Z,0.7nm,0.8s						
ASAR	Alice Springs	59.85	149	P	P	01 35 03.4	+0.3
	comp=Z,0.5nm,0.8s,baz=338,slow=7.7,SNR=5.1						
	comp=Z,0.5nm,0.8s						
ASAR	Alice Springs	59.85	149	P	P	01 35 04.2	+1.1
B20K	Meade River	65.37	22	P	P	01 35 39.5	+0.2
D19K	Kuna River	65.52	24	P	P	01 35 40.5	+0.2
B22K	Teshekpuk Lake	66.46	21	P	P	01 35 46.6	+0.3
B22K				IAmb	IAmb	01 35 51.2	

	comp=Z,5.5nm,1.4s						
D22K	Ayikyak River	67.25	23	P	P	01 35 51.5	+0.1
D22K				IAmb	IAmb	01 35 55.7	
	comp=Z,3.8nm,1.3s						
E23K	Chandalar	68.62	23	P	P	01 36 00.6	+0.4
E23K				IAmb	IAmb	01 36 10.4	
	comp=Z,3.6nm,1.4s						
BMAR	Burnt Mountain	70.61	22	P	P	01 36 13.3	+0.9
PRP	Porcupine Dome	71.24	24	P	P	01 36 17.1	+0.8
PRP				IAmb	IAmb	01 36 43.0	
	comp=Z,1.3nm,0.9s						
H27K	Steamboat Moun	72.27	23	P	P	01 36 22.5	+0.1
H27K				IAmb	IAmb	01 36 24.8	
	comp=Z,6.5nm,1.2s						
F30M	Barrier River	73.31	20	P	P	01 36 28.1	-0.4
F30M				IAmb	IAmb	01 36 40.2	
	comp=Z,6.6nm,1.4s						
YKA	Yellowknife Ar	83.12	17	P	P	01 37 23.0	+0.2
	comp=Z,0.2nm,0.6s,baz=309,slow=4.3,SNR=5.6						
	comp=Z,0.2nm,0.6s						

*OSPL **30** 01:45:36.5±0.3, 17.°85N×66.°90W, h18^{km}±5^{km}, ML3.1, Presumed earthquake*
*RSPR **30** 01:45:36.5, 17.°92N×66.°87W, h5^{km}, MD3.1/12*
*NEIC **30** 01:45:36.1±1.2, 17.°87N±0.°03×66.°85W±0.°01, h10^{km}±2^{km}, ML3.4/16, Md3.1/12(RSPR), Error ellipse: s-maj=5.3km s-min=3.0km az=14.0*
ISC 30 01:45:36.6±1.1, **17.°90N**±0.°05×**66.°85W**±0.°02, **h9**^{km}±7^{km}, **n46**, σ**0^{s}55**/57, **4C-6D**, **Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	Guanica, Bosqu	0.09	340		Pg	01 45 38.3	-0.5
GBPR	Guanica, Bosqu	0.09	340	⇓iP	Pg	01 45 38.3	-0.5
MLPR	Magueyes Islan	0.20	292	⇑iP	Pg	01 45 40.5	-0.2
MLPR	Magueyes Islan	0.20	292	eS	Sg	01 45 43.6	+0.1
CRPR	Cabo Rojo, PR	0.27	294		Pg	01 45 41.8	-0.2
CRPR					Sg	01 45 45.8	+0.1
CRPR				IAML		01 45 46.5	
	comp=E,10µm,0.3s						
CRPR				IAML		01 45 48.4	
	comp=N,7µm,0.4s						
CRPR	Cabo Rojo, PR	0.27	294	⇑eP	Pg	01 45 41.9	-0.2
CRPR	Cabo Rojo, PR	0.27	294	eS	Sg	01 45 45.9	+0.2
CRPR	Cabo Rojo, PR	0.27	294	iP	Pg	01 45 41.8	-0.2
CRPR				eS	Sg	01 45 45.5	-0.2
CRPR				IAML		01 45 46.2	
	comp=Z,9µm,0.3s						
OBIP	Obispado Ponce	0.27	57	Pg	Pg	01 45 42.1	0.0
OBIP				Sg	Sg	01 45 46.8	+1.0
OBIP				IAML		01 45 48.6	
	comp=N,3µm,0.4s						
OBIP				IAML		01 45 48.9	
	comp=E,3µm,0.4s						
OBIP	Obispado Ponce	0.27	57	⇓iP	Pg	01 45 42.4	+0.3
OBIP	Obispado Ponce	0.27	57	eS	Sg	01 45 47.2	+1.4
LSP	Las Mesas	0.36	321		Pg	01 45 43.4	-0.3
LSP	Las Mesas	0.36	321	⇓iP	Pg	01 45 43.4	-0.3
PRSN	Puerto Rico Se	0.43	319		Pg	01 45 44.5	-0.4
PRSN					Sg	01 45 50.9	+0.3
PRSN	Puerto Rico Se	0.43	319	⇑iP	Pg	01 45 44.5	-0.4
PRSN	Puerto Rico Se	0.43	319	eS	Sg	01 45 50.9	+0.3
AOPR	Arecibo Observ	0.46	11	Pg	Pg	01 45 45.0	-0.5
AOPR				Sg	Sg	01 45 51.3	-0.3
AOPR				IAML		01 45 53.6	
	comp=N,4µm,0.3s						
AOPR	Arecibo Observ	0.46	11	⇑iP	Pg	01 45 45.2	-0.4
AOPR	Arecibo Observ	0.46	11	eS	Sg	01 45 51.6	0.0
AOPR	Arecibo Observ	0.46	11	eP	Pg	01 45 45.2	-0.4
AGPR	Aguadilla, PR	0.62	336	⇑iP	Pg	01 45 48.1	-0.6
AGPR	Aguadilla, PR	0.62	336	eS	Sg	01 45 56.8	0.0
AGPR	Aguadilla, PR	0.62	336	iP	Pg	01 45 48.0	-0.6
AGPR				eS	Sg	01 45 56.7	-0.1
AGPR				IAML		01 45 58.2	
	comp=Z,688nm,0.3s						
ECPR	Experimental S	0.63	48	⇓iP	Pg	01 45 48.4	-0.3
ECPR	Experimental S	0.63	48	eS	Sg	01 45 57.7	+0.8
EMPR	Esperanza - Ma	0.65	28		Pg	01 45 49.5	+0.2
EMPR					Sb	01 45 58.9	-0.6
EMPR	Esperanza - Ma	0.65	28	⇑eP	Pg	01 45 49.5	+0.2
EMPR	Esperanza - Ma	0.65	28	eS	Sb	01 45 58.9	-0.6
SJG	San Juan	0.70	72	Pg	Pg	01 45 49.6	-0.5
SJG				IAML		01 46 00.8	
	comp=Z,1µm,0.3s						
SJG	San Juan	0.70	72	⇓iP	Pg	01 45 49.9	-0.2
SJG	San Juan	0.70	72	eS	Sb	01 46 00.5	-0.3
SJG	San Juan	0.70	72	eP	Pg	01 45 49.8	-0.2
SJG	San Juan	0.70	72	iP	Pg	01 45 50.0	-0.2
SJG				eS	Sb	01 46 00.2	-0.6
SJG				IAML		01 46 00.7	
	comp=Z,672nm,0.2s						
IDE	Isla Desecheo	0.77	310		Pg	01 45 50.6	-0.8
IDE					Sg	01 46 01.8	+0.3
IDE	Isla Desecheo	0.77	310	⇑eP	Pg	01 45 50.6	-0.8
IDE	Isla Desecheo	0.77	310	eS	Sg	01 46 01.8	+0.3
GCPR	Guaynabo City	0.84	60	Pg	Pg	01 45 52.0	-0.7
GCPR				Sg	Sg	01 46 02.9	-0.8
GCPR	Guaynabo City	0.84	60	⇑eP	Pg	01 45 52.2	-0.5
GCPR	Guaynabo City	0.84	60	eS	Sg	01 46 03.7	+0.1
HUMP	Col San Antoni	0.98	75	Pg	Pg	01 45 54.6	-1.0
HUMP				Sg	Sg	01 46 07.7	-0.6
HUMP				IAML		01 46 13.1	
	comp=E,484nm,0.3s						
HUMP	Col San Antoni	0.98	75	⇓eP	Pg	01 45 54.5	-1.0
HUMP	Col San Antoni	0.98	75	eS	Sg	01 46 08.1	-0.2
DR12	Loma Pena Alta	2.56	291		Pn	01 46 19.3	+0.8
SC01	Santiago de lo	3.98	293	Pn	Pn	01 46 39.2	+1.3
SC01				IAML		01 47 44.8	
	comp=E,104nm,2.6s						
ATGZ	Broadband at L	5.22	109	eP	Pn	01 46 54.8	-0.1
CBE	Ff, Capester	5.33	109	Pn	Pn	01 46 56.4	-0.1

*CATAC **30** 01:54:27.4±0.8, 9°N±11°×8°1W±°, h37^{km}±13^{km}, M3.4/9, MLv3.4/9, Error ellipse: s-maj=24.6km s-min=4.2km az=2.1, confirmed*
*UPA **30** 01:54:28.6±1.0, 9.°07N×80.°63W, h21^{km}±6^{km}, MD4.0*
ISC 30 01:54:27.5±1.2, **9.°10N**±0.°05×**80.°65W**±0.°03, **h29**^{km}±12^{km}, **n26**, σ**0^{s}85**/42, **Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAFE3	Santa Fe, Vera	0.71	216	eP	Pb	01 54 41.7	+0.3
CALO3	Calobre, Verag	0.79	194	eP	Pb	01 54 42.8	+0.1
CALO3				eS	Sn	01 54 54.0	+0.5
CRIS3	El Cristo, Coc	0.84	178	eP	Pn	01 54 41.9	-1.4
CHOR3	La Chorrera	0.90	103	eP	Pn	01 54 44.4	+0.4
CHOR3				eS	Sn	01 54 56.5	+0.5
FRIJ	El Hiral	0.92	82	eP	Pn	01 54 44.7	+0.3
FRIJ				eS	Sn	01 54 56.2	-0.4
GAMB1	Gamboa	0.93	88	iP	Pn	01 54 44.6	+0.1
GAMB1				iS	Sn	01 54 56.4	-0.4
STIA3	Santiago, Vera	1.04	198	eP	Pn	01 54 46.7	+0.6
STIA3				eS	Sb	01 55 00.2	0.0
MESA3	La Mesa, Verag	1.08	209	eP	Pn	01 54 47.2	+0.5
MESA3				eS	Sb	01 55 01.2	-0.2
UPA	Univ. de Panam	1.11	96	eP	Pb	01 54 48.0	0.0
UPA				eS	Sb	01 55 02.2	+0.2
FLAM	Flamenco Islan	1.11	99	eP	Pn	01 54 47.8	+0.8
FLAM				eS	Sb	01 55 02.5	+0.2
TABO3	Taboga, Panama	1.12	105	eP	Pn	01 54 47.8	+0.6
TABO3				eS	Sn	01 55 01.9	+0.2
CHIT3	Chitre	1.16	169	eP	Pn	01 54 47.7	+0.1
CHIT3				eS	Sn	01 55 02.6	+0.2
RSUS3	Rio de Jesus,	1.22	205	eP	Pn	01 54 49.1	+0.6
RSUS3				eS	Sn	01 55 04.6	+0.7
AZU	Azuero	1.35	164	eP	Pn	01 54 50.3	0.0
AZU				eS	Sn	01 55 06.9	-0.3
NANC3	Nancito, Chiri	1.37	232	eP	Pb	01 54 52.6	+0.1
GMAL	Guarumal, Vera	1.45	204	eP	Pn	01 54 51.4	-0.2
GMAL				eS	Sn	01 55 08.2	-1.4
GMAL				eS	Sb	01 55 10.8	-1.0
MARI3	Mariato, Verag	1.48	193	eP	Pn	01 54 52.6	+0.5
CACAO	El Cacao, Vera	1.75	187	eP	Pn	01 54 57.6	+1.7
LNBQ3	Los Naranjos,	1.80	260	eP	Pb	01 55 00.1	+0.3
LOMA3	Las Lomas, Chi	1.84	249	eP	Pn	01 54 58.5	+1.4
BRU2	Volcan	2.04	262	eP	Pn	01 55 00.8	+0.9
BRU2				eS	Sn	01 55 24.0	-0.6
BRU2	Volcan	2.04	262	P	Pn	01 55 00.6	+0.7
CDITO	Canoas	2.26	257	P	Pn	01 55 04.1	+1.2
DRK0	Durika	2.57	274	P	Pn	01 55 06.9	-0.4
DRK0	Durika	2.57	274	S	Sn	01 55 36.0	-1.6
UPD2	Meteti	2.66	102	eP	Pn	01 55 09.6	+1.2
UPD2				eS	Sb	01 55 44.3	-2.4

*GCG **30** 02:06:25.6±0.3, 14.°94N×92.°29W, h97^{km}±4^{km}, MD4.4, ML3.1*
*MEX **30** 02:06:27.4±1.2, 14.°45N×92.°73W, h15^{km}±69^{km}, MD4.0*
ISC 30 02:06:24.2±2.6, **14.°5N**±0.°1×**92.°77W**±0.°07, **h16**^{km}±12^{km}, **n12**, σ**1^{s}31**/17, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMCA	Catarina	0.79	60	iP	Pg	02 06 39.5	0.0
SMCA				eS	Sg	02 06 50.5	+0.6
PATR	El Naranjo	0.84	38	eP	Pg	02 06 40.6	0.0
PATR				eS	Sg	02 06 50.1	-1.6
CHUJ	Union Juarez	0.90	45	eP	Pb	02 06 41.3	-0.4
CHUJ				eS	Sg	02 06 53.8	0.0
PAVE	Pavencul	0.93	38	eP	Pb	02 06 42.1	-0.1
PAVE				eS	Sb	02 06 53.9	-0.6
PCIG		1.31	341	eP	Pn	02 06 48.4	+0.4
PCIG				eS	Sn	02 07 03.5	-1.7
STG2	El Palmar, Qui	1.35	91	eP	Pn	02 06 43.1	-5.6
STG2				iS	Sb	02 06 56.9	-10
STG8	El Palmar, Qui	1.38	90	eP	Pn	02 06 43.8	-5.3
STG8				iS	Sb	02 06 57.7	-10
STG8				IAML		02 06 59.6	
	comp=E,421nm,0.2s						
STG5	El Palmar, Qui	1.38	92	eP	Pn	02 06 43.4	-5.6
CCIG	Comitan	1.92	19	eP	Pn	02 06 58.9	+2.4
CCIG				eS	Sn	02 07 19.7	-0.6
APG	El Apazote	2.30	76	eP	Pn	02 07 02.0	+0.2
TGIG		2.33	352	eP	Pn	02 07 04.7	+2.7
TGIG				eS	Sn	02 07 30.5	+0.1
CMIG	Matias Romero	3.31	322	eP	Pn	02 07 16.2	+0.7
CMIG				eS	Sn	02 07 53.3	-1.3

*IDC **30** 02:19:55.8±2.6, 7.°69S×119.°30E, h263^{km}±22^{km}, mb3.3/8, mbtmp3.9/10, Error ellipse: s-maj=58.4km s-min=11.2km az=58.0*
*DJA **30** 02:19:57.5±0.3, 8°S±4°×11°9E±°, h265^{km}±4^{km}, M4.3/18, mB5.1/6, mb4.2/7, MLv4.2/18, Mw(mB)4.4/6*
ISC 30 02:19:56.4±0.7, **7.°70S**±0.°07×**119.°51E**±0.°06, **h267**^{km}±7^{km}, **n52**, σ**1^{s}23**/60, **mb3.6**/8, **Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBNI	Kabupaten Domp	1.43	236	P	Pn	02 20 36.7	+0.8
DBNI				S	S	02 21 07.9	+0.8
BSSI	Bau Bau, Buton	1.82	32	P	Pn	02 20 40.0	+1.1
BSSI	Bau Bau, Buton	1.82	32	P	Pn	02 20 39.3	+0.4
WBSI	Waikabubak, Su	1.93	184	P	Pn	02 20 40.0	+0.2
WBSI				S	S	02 21 11.9	-2.4
PLAI	Plampang	2.05	237	P	Pn	02 20 41.5	+0.7
PLAI				S	S	02 21 15.2	-0.7
PLAI	Plampang	2.05	237	P	Pn	02 20 41.5	+0.7
PLAI				S	S	02 21 15.4	-0.5
WSI	Waingapu	2.11	158	P	Pn	02 20 42.3	+1.0
WSI	Waingapu	2.11	158	P	Pn	02 20 40.9	-0.4
WSI				S	S	02 21 14.9	-1.9
EDFI	Ende, Flores	2.40	116	P	Pn	02 20 45.0	+0.9
EDFI	Ende, Flores	2.40	116	P	Pn	02 20 45.2	+1.1
EDFI				S	S	02 21 20.8	-1.0
KAPI	Kappang	2.68	5	P	Pn	02 20 48.4	+1.7
BASI	Baing, Sumba	2.72	157	P	Pn	02 20 48.4	+1.4
BASI	Baing, Sumba	2.72	157	P	Pn	02 20 48.5	+1.4
TWSI	Taliwang, Sumb	2.80	248	P	Pn	02 20 48.2	+0.3
TWSI	Taliwang, Sumb	2.80	248	P	Pn	02 20 47.3	-0.6
MMRI	Maumere	2.85	109	P	Pn	02 20 49.1	+0.6
MMRI	Maumere	2.85	109	P	Pn	02 20 50.0	+1.5
KLNI	Mataram	3.46	258	P	Pn	02 20 55.8	+0.9
KLNI	Mataram	3.46	258	P	Pn	02 20 56.1	+1.2
IGBI	Denpasar	4.46	255	P	Pn	02 21 06.7	+0.3
IGBI	Denpasar	4.46	255	P	Pn	02 21 07.6	+1.2
RTBI	Rangdo, Negare	4.59	260	P	Pn	02 21 09.0	+1.1
RTBI	Rangdo, Negare	4.59	260	P	Pn	02 21 09.4	+1.5
BATI	Baumata	4.80	122	P	Pn	02 21 12.0	+1.6
	40nm,0.3s,baz=154,slow=3.8,SNR=6.1						
BATI				S	S	02 22 06.7	-2.9
	41nm,0.3s,baz=288,slow=9.7,SNR=2.3						
BATI	Baumata	4.80	122	P	Pn	02 21 11.8	+1.4
BATI	Baumata	4.80	122	P	Pn	02 21 11.9	+1.5
SOEI	Soe	5.13	114	P	Pn	02 21 15.3	+0.9
	0.5nm4µm141nm,0.8s						
SOEI	Soe	5.13	114	P	Pn	02 21 15.1	+0.7
	0.5nm4µm141nm,0.8s						
JAGI	Jajag, Banyuwa	5.36	261	P	Pn	02 21 17.4	+0.3
	0.3nm13nm,0.5s						
JAGI	Jajag, Banyuwa	5.36	261	P	Pn	02 21 17.5	+0.3
	0.3nm13nm,0.5s						
GMJI	Gumukmas	6.04	264	P	Pn	02 21 25.7	+0.3
GMJI	Gumukmas	6.04	264	P	Pn	02 21 26.6	+1.2
	0.1nm15nm,1.7s						
SJI	Sawahan	7.68	269	P	Pn	02 21 47.0	+1.1
SNJI	Sawahan-Nganju	7.68	269	P	Pn	02 21 47.2	+1.1
SNJI	Sawahan-Nganju	7.68	269	P	Pn	02 21 47.9	+1.8
PCJI	Pacitan	8.27	266	P	Pn	02 21 53.1	-0.2
PCJI	Pacitan	8.27	266	P	Pn	02 21 52.9	-0.4
UGM	Wanagama	8.91	268	P	Pn	02 22 00.4	-0.9
	44nm,1.4s						
UGM	Wanagama	8.91	268	P	Pn	02 22 00.5	-0.9
	44nm,1.4s						
MSAI	Masohi	10.32	66	P	Pn	02 22 20.5	+1.6
	29nm,0.4s						
FITZ	Fitzroy Crossi	11.94	151	S	S	02 24 53.3	+1.3
	4.3nm,0.4s,baz=188,slow=18,SNR=7.9						
EGSI	Enggano, Bengk	17.28	277	P	P	02 23 40.4	0.0
	14nm,2.4s						
WRA	Warramunga Arr	18.83	132	P	P	02 23 58.0	+0.9
	0.7nm,0.3s,baz=303,slow=12,SNR=13						
ASAR	Alice Springs	21.04	141	P	P	02 24 21.6	+1.3
	1.0nm,0.3s,baz=314,slow=8.5,SNR=23						
ASAR				S	S	02 28 00.5	+3.5
	1.1nm,0.9s,baz=329,slow=23,SNR=4.7						
	1.0nm,0.3s						
STKA	Stephens Creek	31.65	142	P	P	02 25 55.3	+0.1
	1.2nm,0.5s,baz=319,slow=11,SNR=2.1						
	1.2nm,0.5s						
SONM	Songino Array	56.50	349	P	P	02 29 10.6	-0.6
	0.5nm,0.5s,baz=168,slow=7.1,SNR=3.8						
	0.5nm,0.5s						
HILR	Hailar Array B	57.01	0	P	P	02 29 14.3	-0.3
	0.6nm,0.4s,baz=148,slow=8.5,SNR=1.9						
	0.6nm,0.4s						
MKAR	Makanchi Array	63.54	332	P	P	02 29 58.2	-0.5
	0.6nm,0.6s,baz=152,slow=7.0,SNR=7.3						
	0.6nm,0.6s						
ZALV	Zalesovo Beam	68.02	339	P	P	02 30 25.6	-1.4
	1.2nm,0.4s,baz=146,slow=5.5,SNR=1.8						
	1.2nm,0.4s						
BVAR	Borovoye Array	73.40	332	P	P	02 30 58.9	-0.5
	0.2nm,0.4s,baz=145,slow=5.3,SNR=2.0						
	0.2nm,0.4s						
SEY	Seymchan	74.78	15	P	P	02 31 06.7	-0.4
	2.9nm,1.2s,baz=164,slow=10.0,SNR=2.4						
	2.9nm,1.2s						
TORD	Torodi Ar. Bea	118.72	281	PKP	PKPdf	02 38 12.4	-1.5
	0.2nm,0.7s,baz=91,slow=3.2,SNR=4.5						

*IDC **30** 02:45:42.8±10.0, 11.°59S×166.°24E, h63^{km}±110^{km}, mb3.7/7, mbtmp4.0/8, ML3.6/1, MS3.4/1, Error ellipse: s-maj=91.0km s-min=32.1km az=145.0*
*NEIC **30** 02:45:42.3±1.7, 11.°64S±0.°10×166.°4E±0.°2, h64^{km}±8^{km}, mb4.3/12, Error ellipse: s-maj=26.0km s-min=13.8km az=79.0*
ISC 30 02:45:41.8±0.9, **11.°63S**±0.°08×**166.°4E**±0.°2, **h59**^{km}, **n24**, σ**1^{s}25**/27, **mb4.0**/12, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	3.87	168		Pn	02 46 40.1	+1.2
SANVU				Sn	Sn	02 47 22.9	-0.3
DZM	Mont Dzumac	10.38	180	P	Pn	02 48 10.3	+2.2
	0.5nm,0.3s,baz=323,slow=20,SNR=2.1						
DZM				S	Sn	02 50 00.2	-2.8
	4.4nm,0.7s,baz=37,slow=20,SNR=1.4						
	9.0nm,0.9s						
DZM	Mont Dzumac	10.38	180	Pn	Pn	02 48 10.1	+2.0
CTA	Charters Tower	21.10	244	LR	LR	02 57 10.4	
	comp=Z,85nm,18.1s,baz=42,slow=33						
ARMA	Armidale	23.18	214	P	P	02 50 44.5	+0.9
ARMA				IAmb	IAmb	02 51 25.1	
	comp=Z,24nm,1.4s						
STKA	Stephens Creek	30.46	225	P	P	02 51 49.8	+0.7
	comp=Z,2.0nm,0.6s,baz=55,slow=11,SNR=4.3						
	comp=Z,2.0nm,0.6s						
STKA	Stephens Creek	30.46	225	P	P	02 51 49.4	+0.4
LTZ	Lake Taylor	31.45	172	P	P	02 51 57.2	-0.5
WR8	Warramunga Arr	31.74	251	P	P	02 51 59.3	-1.1
WR8				IAmb	IAmb	02 52 26.1	
	comp=Z,7.6nm,1.4s						
WB0	Warramunga Arr	31.80	251	P	P	02 51 59.9	-1.1
WB0				IAmb	IAmb	02 52 29.4	
	comp=Z,4.7nm,1.1s						
WRAB	Tennant Creek	31.87	251	P	P	02 52 00.0	-1.6
WRAB				IAmb	IAmb	02 52 05.4	
	comp=Z,2.4nm,0.9s						
WRA	Warramunga Arr	31.88	251	P	P	02 52 00.7	-1.0
	comp=Z,1.2nm,0.8s,baz=83,slow=9.3,SNR=8.2						
	comp=Z,1.2nm,0.8s						
WRA	Warramunga Arr	31.88	251	P	P	02 51 59.8	-1.9
AS31	Alice Springs	33.10	244	P	P	02 52 11.4	-1.0
ASAR	Alice Springs	33.10	244	P	P	02 52 11.2	-1.2
	comp=Z,1.0nm,0.6s,baz=72,slow=9.1,SNR=22						
ASAR				pP	pP	02 52 25.8	+0.3
	comp=Z,0.8nm,0.8s,baz=71,slow=9.2,SNR=4.1						
	comp=Z,1.0nm,0.6s						
KNRA	Kununurra	36.75	259	P	P	02 52 43.9	0.0
KNRA				IAmb	IAmb	02 53 05.0	
	comp=Z,23nm,1.5s						
FITZ	Fitzroy Crossi	39.84	256	P	P	02 53 09.0	-0.8
MBWA	Marble Bar	45.61	252	P	P	02 53 57.0	+0.4
CMAR	Chiang Mai Arr	72.92	294	P	P	02 57 06.5	+1.2
	comp=Z,1.4nm,0.6s,baz=108,slow=6.1,SNR=7.1						
CMAR				pP	pP	02 57 21.0	-0.1
	comp=Z,0.9nm,0.8s,baz=124,slow=3.9,SNR=2.3						
	comp=Z,1.4nm,0.6s						
QSPA	South Pole Qui	78.38	180	P	P	02 57 34.9	-0.9
SONM	Songino Array	79.51	324	P	P	02 57 42.1	-0.2
	comp=Z,0.4nm,0.5s,baz=112,slow=3.9,SNR=1.8						
	comp=Z,0.4nm,0.5s						
ILAR	Eielson Array	83.87	18	P	P	02 58 04.8	+0.1
	comp=Z,0.6nm,1.0s,baz=234,slow=4.3,SNR=4.3						
	comp=Z,0.6nm,1.0s						
MKAR	Makanchi Array	94.38	317	P	P	02 58 54.4	-0.8
	comp=Z,0.4nm,0.5s,baz=94,slow=5.9,SNR=5.9						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	94.38	317	P	P	02 58 54.1	-1.1

*IDC **30** 02:46:32.9±13.0, 23.°85S×177.°18W, h115^{km}±104^{km}, mb3.9/5, mbtmp4.3/6, ML4.4/1, Error ellipse: s-maj=65.7km s-min=29.3km az=42.0*
*NEIC **30** 02:46:34.3±1.5, 24.°1S±0.°1×177.°3W±0.°2, h117^{km}±7^{km}, mb4.3/21, Error ellipse: s-maj=23.3km s-min=14.0km az=108.0*
ISC 30 02:46:32.2±0.6, **23.°98S**±0.°09×**177.°4W**±0.°1, **h100**^{km}, **n40**, σ**1^{s}25**/40, **mb4.3**/13, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	5.27	185	Pn	Pn	02 47 49.2	+0.6
NIUE	Niue	8.48	56	Pn	Pn	02 48 34.3	+2.1
URZ	Urewera	14.99	197	P	Pn	02 50 01.4	+2.7
	1.5nm,0.3s,baz=324,slow=11,SNR=7.4						
URZ				S	Sn	02 52 34.1	-10
	4.6nm,0.5s,baz=274,slow=21,SNR=6.0						
	4.3nm,0.3s						
RTZ	Ruatahuna	15.36	197		Pn	02 50 05.0	+1.5
BKZ	Black Stump Fm	16.01	198	Pn	Pn	02 50 11.0	-0.6
BKZ				IAmb	IAmb	02 50 21.9	
	comp=Z,11nm,1.1s						
MSWZ	Moikau Station	18.45	198	P	P	02 50 38.0	-1.9
THZ	Tophouse	19.50	202	P	Pn	02 50 54.6	+1.0
THZ				IAmb	IAmb	02 51 15.1	
	comp=Z,11nm,0.9s						
KHZ	Kahutara	19.87	200		P	02 50 54.1	-1.3
KHZ				IAmb	IAmb	02 51 03.5	
	comp=Z,16nm,1.0s						
FOZ	Fox Glacier	22.17	205	P	P	02 51 19.3	-0.6
WHZ	Wether Hill Ro	24.87	205	P	P	02 51 45.2	-0.3
WHZ				IAmb	IAmb	02 52 07.9	
	comp=Z,9.5nm,1.0s						
CTA	Charters Tower	33.88	269	P	P	02 53 07.5	+1.9
	comp=Z,6.1nm,0.3s,baz=91,slow=10,SNR=16						
	comp=Z,6.1nm,0.3s						
STKA	Stephens Creek	36.92	248	P	P	02 53 33.1	+1.6
	comp=Z,2.2nm,0.5s,baz=102,slow=12,SNR=6.4						
	comp=Z,2.2nm,0.5s						
STKA	Stephens Creek	36.92	248	P	P	02 53 33.4	+1.9
COEN	Coen	38.50	278	P	P	02 53 45.8	+0.8
COEN				IAmb	IAmb	02 53 53.8	
	comp=Z,2.6nm,0.8s						
BBOO	Buckleboo	41.62	247	P	P	02 54 10.2	-0.5
BBOO				IAmb	IAmb	02 54 12.4	
	comp=Z,12nm,0.9s						
AS31	Alice Springs	44.39	260	P	P	02 54 32.9	-0.2
ASAR	Alice Springs	44.39	260	P	P	02 54 33.2	+0.1
	comp=Z,0.6nm,0.3s,baz=91,slow=6.6,SNR=22						
ASAR				PcP	PcP	02 56 14.7	-0.8
	comp=Z,0.8nm,0.6s,baz=97,slow=3.5,SNR=5.8						
	comp=Z,0.6nm,0.3s						
WR8	Warramunga Arr	44.64	265	P	P	02 54 34.6	-0.5
WR8				IAmb	IAmb	02 54 55.5	
	comp=Z,6.0nm,0.9s						
WB0	Warramunga Arr	44.79	266	P	P	02 54 36.0	-0.3
WB0				IAmb	IAmb	02 54 47.1	
	comp=Z,5.9nm,0.9s						
WRA	Warramunga Arr	44.79	265	P	P	02 54 35.8	-0.6
	comp=Z,0.6nm,0.3s,baz=97,slow=6.6,SNR=20						
WRA				PcP	PcP	02 56 15.9	-0.9
	comp=Z,0.6nm,0.5s,baz=103,slow=2.7,SNR=2.2						
	comp=Z,0.6nm,0.3s						
WRA	Warramunga Arr	44.79	265	P	P	02 54 35.6	-0.8
KNRA	Kununurra	51.09	269	P	P	02 55 24.2	-0.7
KNRA				IAmb	IAmb	02 55 30.0	
	comp=Z,6.3nm,1.1s						
FITZ	Fitzroy Crossi	53.21	265	P	P	02 55 40.5	-0.1
MORW	Morawa	59.10	249	P	P	02 56 22.7	+0.3
CASY	Casey	61.09	206	P	P	02 56 34.7	-0.6
QSPA	South Pole Qui	66.11	180	P	P	02 57 09.0	+0.5
QSPA				IAmb	IAmb	02 57 35.6	
	comp=Z,2.7nm,1.0s						
BELA	Belgrano 2	76.05	172	P	P	02 58 07.1	-1.1
BELA				IAmb	IAmb	02 58 08.2	
	comp=Z,3.3nm,0.7s						
SNAA	Sanae	84.53	178	P	P	02 58 52.7	-1.1
	comp=Z,0.7nm,0.5s,baz=204,slow=10,SNR=7.6						
	comp=Z,0.7nm,0.5s						
SNAA	Sanae	84.53	178	P	P	02 58 52.3	-1.5
B22K	Teshekpuk Lake	95.59	8	P	P	02 59 44.4	-1.2
BVAR	Borovoye Array	122.08	319	PKP	PKPdf	03 05 13.2	-1.6
	comp=Z,0.4nm,0.3s,baz=107,slow=1.9,SNR=3.0						
ARCES	ARCESS Array B	132.43	349	PKP	PKPdf	03 05 31.7	-2.4
	comp=Z,7.0nm,1.0s,baz=69,slow=3.7,SNR=4.1						
HFS	Hagfors	143.05	351	PKhKP	PKPpre	03 05 49.1	
	comp=Z,5.6nm,1.0s,baz=112,slow=1.6,SNR=5.0						
MARD	Mardin	144.82	301	PKPbc	PKPbc	03 05 56.3	-0.9
AKASG	Malin Array Be	146.31	329	PKPbc	PKPdf	03 05 59.4	-0.4
	comp=Z,1.7nm,0.4s,baz=44,slow=4.2,SNR=12						
AKBB	Malin Array Si	146.31	329	PKPdf	PKPdf	03 05 59.6	-0.1
BRTR	Keskin Array B	149.52	308	PKPbc	PKPdf	03 06 08.4	+2.8
	comp=Z,0.4nm,0.6s,baz=149,slow=4.7,SNR=2.0						
MMAI	Mount Meron Ar	149.92	295	PKPbc	PKPbc	03 06 11.1	-0.2
	comp=Z,1.6nm,0.4s,baz=66,slow=4.9,SNR=2.2						
BURAR	Bucovina Array	150.34	328	PKPbc	PKPbc	03 06 11.7	-0.1
TORD	Torodi Ar. Bea	169.19	175	PKPab	PKPab	03 07 40.6	0.0
	comp=Z,0.7nm,0.8s,baz=158,slow=2.0,SNR=3.4						

*LDG **30** 02:58:01.7±0.1, 43.°12N×0.°48W, h2^{km}, Md2.0/2, Ml2.6/14, Error ellipse: s-maj=1.7km s-min=1.4km az=146.0*
*STR **30** 02:58:01.3±0.0, 43.°08N±0.°08×0.°52W±0.°05, h2^{km}, MLv1.9/14, LOCSAT earthModelID pyrenees_taup-2.11 preliminary*
*MDD **30** 02:58:02.2±0.2, 43.°08N×0.°53W, h0^{km}±1^{km}, mb_Lg2.1/44, Error ellipse: s-maj=2.0km s-min=1.0km az=5.0*
ISC 30 02:58:00.3±0.8, **43.°14N**±0.°02×**0.°51W**±0.°02, **h10**^{km}±6^{km}, **n51**, σ**1^{s}23**/98, **Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
REYF	Montagne du Re	0.11	130	Pg	Pg	02 58 03.2	0.0
REYF				Sg	Sg	02 58 04.7	-0.7

ATE	Arette	0.15	248	Pg	Pg	02 58 04.2	+0.4
ATE				Sg	Sg	02 58 06.7	+0.6
ETSF	Etsaut	0.25	188	*e*Pg	Pg	02 58 05.1	-0.3
ETSF				*e*Sg	Sg	02 58 08.4	-0.4
URDF	Urds	0.30	348	Pg	Pb	02 58 08.4	+0.6
URDF				Sg	Sb	02 58 14.2	+1.4
ORDF	Ordiarp	0.32	283	Pg	Pb	02 58 07.6	-0.5
ORDF				Sg	Sb	02 58 13.3	0.0
CANF	Canfranc	0.38	181	Pg	Pg	02 58 07.6	-0.2
CANF				Sg	Sg	02 58 12.5	-0.4
IRAF	Chalets d'Irat	0.40	255	Pg	Pb	02 58 08.9	-0.7
IRAF				Sg	Sb	02 58 15.5	-0.3
LABF	Labassere	0.44	102	Pg	Pg	02 58 08.6	-0.3
LABF				Sg	Sb	02 58 16.1	-0.7
VIEF	Viey	0.47	123	Pg	Pg	02 58 09.3	-0.2
VIEF				Sg	Sg	02 58 15.6	-0.1
SJPF	Ste Jean	0.52	267	*e*Pg	Pb	02 58 11.1	-0.5
SJPF				*e*Sg	Sb	02 58 18.8	-0.4
OSSF	Osses	0.56	282	Pg	Pb	02 58 11.3	-0.9
EPF	Esparros	0.63	100	*e*Pg	Pb	02 58 12.6	-0.9
EPF				*e*Sg	Sg	02 58 20.8	-0.1
	25nm,0.3s						
EORO	Oroz-Betelu	0.64	247	Pg	Pb	02 58 13.5	-0.1
EORO				Sg	Sg	02 58 21.4	+0.3
EORO				*i* IVmb_Lg		02 58 25.5	
TERF	Tercis-les-Bai	0.69	321	Pg	Pn	02 58 16.1	-0.1
MLZA	Monlezun-d-Arm	0.74	22	Pg	Pn	02 58 16.3	-0.5
MLZA				Sg	Sn	02 58 28.8	+0.7
EARA	Aranguren	0.87	245	Pg	Pn	02 58 18.2	-0.3
EARA				Sg	Sb	02 58 28.9	-0.2
EARA				*i* IVmb_Lg		02 58 38.4	
MELF	Melles	0.97	106	Pg	Pb	02 58 18.9	-0.4
VIER	Vielha - Casau	1.05	114	Pg	Pn	02 58 21.1	-0.1
VIER				Sg	Sn	02 58 35.0	-0.8
VIES	Vielha - Hospi	1.06	114	Pg	Pn	02 58 21.4	+0.2
VIES				Sg	Sn	02 58 35.1	-0.9
CRAS	Crastes	1.07	57	Pg	Pn	02 58 22.4	+1.0
CRAS				Sg	Sn	02 58 37.5	+1.2
MLS	Moulis	1.19	98	Pg	Pg	02 58 23.5	+0.3
SALF	Salau	1.30	106	Pg	Pg	02 58 25.1	-0.3
SALF				Sg	Sg	02 58 43.4	+1.1
ESAC	San Caprasio	1.42	179	Pg	Pg	02 58 27.8	+0.2
ESAC				Sg	Sg	02 58 46.1	+0.1
ESAC				*i* IVmb_Lg		02 58 54.4	
GENF	Genat	1.56	101	Pn	Pg	02 58 30.0	-0.3
DUNF	Dun	1.70	93	Pn	Pn	02 58 29.9	-0.2
DUNF				Pg	Pg	02 58 33.5	+0.4
MONQ	Montcuq	1.74	45	Pn	Pb	02 58 31.9	-0.4
MONQ				Sn	Sg	02 58 57.8	+1.6
FNEB	Nbias	1.93	96	Pg	Pg	02 58 37.5	+0.1
FNEB				Sg	Sg	02 59 03.3	+0.8
EMIR	Miracle	1.94	128	Pn	Pn	02 58 34.1	+0.7
EMIR				Sn	Sn	02 58 58.4	+0.6
EMIR				Sg	Sg	02 59 03.0	+0.3
EMIR				*i* IVmb_Lg		02 59 04.5	
MTLF	Montolieu	2.00	83	*e*Pg	Pg	02 58 38.3	-0.4
MTLF				*e*Sg	Sg	02 59 03.8	-0.9
	16nm,0.3s						
LFF	La Frestale	2.01	26	*e*Pg	Pg	02 58 39.5	+0.6
LFF				*e*Sg	Sg	02 59 05.1	+0.1
	5.5nm,0.2s						
VALC	Valcebollere	2.03	111	Pg	Pg	02 58 39.9	+0.6
VALC				Sg	Sg	02 59 07.8	+2.3
ELAN	Lanestosa	2.14	273	Pn	Pb	02 58 37.9	-1.3
ELAN				Sn	Sn	02 59 03.7	+1.0
ELAN				*i* IVmb_Lg		02 59 17.7	
EPOB	Poblet	2.14	146	Pn	Pb	02 58 37.8	-1.4
EPOB				Pg	Pg	02 58 40.3	-1.1
EPOB				Sn	Sn	02 59 03.3	+0.5
EPOB				Sg	Sg	02 59 07.7	-1.4
EPOB				*i* IVmb_Lg		02 59 08.9	
ERTA	Horta de San J	2.27	164	Pn	Pn	02 58 39.4	+1.5
ERTA				Pg	Pb	02 58 42.2	+0.8
ERTA				Sn	Sn	02 59 06.2	+0.3
ERTA				*i* IVmb_Lg		02 59 17.5	
CAF	Calviac	2.57	45	*e*Pg	Pg	02 58 50.2	+0.5
CAF				*e*Sg	Sg	02 59 22.3	-0.7
	4.4nm,0.2s						
ETOR	Torete	2.59	207	Pn	Pn	02 58 43.2	+0.8
ETOR				Sn	Sn	02 59 14.1	+0.2
ETOR				*i* IVmb_Lg		02 59 25.4	
RJF	Les Rejaudoux	2.61	33	*e*Pg	Pg	02 58 50.5	+0.2
RJF				*e*Sg	Sg	02 59 23.8	-0.3
	4.6nm,0.2s						
E0901	Celadas (Terue	2.70	190	Pn	Pn	02 58 44.6	+0.8
E0901				Sn	Sn	02 59 16.3	-0.3
E0901				*i* IVmb_Lg		02 59 51.1	
EMOS	Mosqueruela	2.78	179	Pn	Pn	02 58 46.0	+1.1
EMOS				Sn	Sn	02 59 18.1	-0.5
EMOS				*i* IVmb_Lg		02 59 29.9	
LASF	Ste Croix	3.31	72	*e*Pg	Pg	02 59 03.2	-0.5
LASF				*e*Sg	Sg	02 59 44.2	-2.3
	2.6nm,0.2s						
MFF	Saint Martin d	3.47	4	*e*Pg	Pg	02 59 06.1	-0.7
MFF				*e*Sg	Sg	02 59 50.9	-0.8
	1.7nm,0.2s						
MFF				*e*Sg	Sb	02 59 51.1	+7.1
	2.3nm,0.2s						
GUD	Guadarrama	3.69	229	Pn	Pn	02 58 58.6	+1.0
GUD				Sn	Sn	02 59 40.7	-0.5
GUD				*i* IVmb_Lg		03 00 18.2	
TCF	Toulx Ste Croi	3.69	31	*e*Pg	Pg	02 59 10.4	-0.7
TCF				*e*Sg	Sg	02 59 57.9	-1.1
	1.7nm,0.2s						
VIVF	Saint-Julien-l	4.11	64	*e*Sg	Sg	03 00 10.0	-2.4
	1.8nm,0.2s						
BGF	Bois d'Agland	4.17	34	*e*Pg	Pg	02 59 19.2	-0.9
BGF				*e*Sg	Sg	03 00 12.3	-1.8
	5.4nm,0.4s						
AVF	Avril sur Loir	4.56	36	*e*Pg	Pg	02 59 25.3	-2.4
AVF				*e*Sg	Sg	03 00 24.8	-2.0
	1.1nm,0.3s						
PAB	San Pablo	4.61	220	Pn	Pn	02 59 11.3	+1.3
PAB				Sn	Sn	03 00 02.8	-0.9
PAB				*i* IVmb_Lg		03 00 50.7	
SMF	Signal de Mont	4.67	40	*e*Sg	Sg	03 00 29.3	-1.0
	0.8nm,0.3s						
SSF	Saint Saulge	4.84	35	*e*Sg	Sg	03 00 33.3	-2.4
	2.0nm,0.5s						
CIBOR	Castaar de Ib	5.09	228	Pn	Pn	02 59 17.5	+0.8
CIBOR				Sn	Sn	03 00 14.7	-0.8
LOR	Lormes	5.15	35	*e*Sg	Sg	03 00 42.4	-3.3
	1.2nm,0.3s						

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*SKHL **30** 02:59:08.2±0.3, 47°.80N×146°.50E, h567^{km}±6^{km}, mb4.6/7, msha4.6/4*

*IDC **30** 02:59:14.6±1.2, 48°.18N×146°.37E, h487^{km}±16^{km}, mb3.0/16, mbtmp4.0/24, Error ellipse: s-maj=16.2km s-min=10.9km az=143.0*

ISC 30 02:59:13.4±0.6**, 47°.89N**±0°.06×**146°.60E**±0°.08**, h483**^{km}**, n33, σ1^{s}.94**/39**, mb3.2**/16**, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	Yuzhno-Sakhali	2.77	252	*e*P	P	03 00 22.4	+1.0
YSS				AMB	AMB	03 00 24.6	
	30nm,0.5s						
YSS				*e*S	S	03 01 20.5	+3.7
YSS				A	A	03 01 21.9	
	30nm,0.6s						
YSS				A	A	03 01 21.9	
	40nm,0.6s						
KUR	Kuril'sk	2.79	161	*e*P	P	03 00 23.2	+1.5
KUR				AMB	AMB	03 00 24.3	
	70nm,0.4s						
KUR				*e*S	S	03 01 21.5	+4.4
KUR				A	A	03 01 25.9	
	50nm,0.4s						
KUR				A	A	03 01 25.9	
	40nm,0.4s						
UGL	Uglegorsk	3.24	293	*e*P	P	03 00 23.7	-0.9
UGL				AMB	AMB	03 00 27.5	
	70nm,0.6s						
YUK	Yuzh-Kuril'sk	3.89	188	*e*P	P	03 00 28.8	-1.0
YUK				*e*S	S	03 01 33.9	+2.0
YUK				A	A	03 01 40.6	
	200nm,0.4s						
YUK				A	A	03 01 40.6	
	110nm,0.4s						
TYV	Tymovskoe	3.94	321	*e*P	P	03 00 31.1	+1.1
TYV				AMB	AMB	03 00 32.2	
	20nm,0.6s						
TYV				*e*S	S	03 01 37.0	+4.4
TYV				A	A	03 01 38.1	
	20nm,0.6s						
TYV				A	A	03 01 38.1	
	20nm,0.6s						
NMR	Nemuro--Hokkai	4.56	188	*e*P	P	03 00 34.9	-0.6
NMR				*e*S	S	03 01 39.8	-2.6
ASAJ	Asahikawa	4.69	218	P	P	03 00 39.1	+2.5
	7.0nm,0.6s,baz=345,slow=7.3,SNR=8.5						
AKK	Akkeshi	5.02	195	*e*P	P	03 00 39.3	-0.4
AKK				*e*S	S	03 01 46.5	-3.6
NKL	Nikolayevsk	6.48	327	*e*P	P	03 00 53.5	0.0
NKL				AMB	AMB	03 00 55.5	
	120nm,0.6s						
PETK	Petropavlovsk-	8.79	49	P	P	03 01 18.0	+0.5
	2.1nm,0.5s,baz=223,slow=6.4,SNR=5.1						
USRK	Ussuriysk Ar.	10.80	255	P	P	03 01 39.3	+0.2
	15nm,0.6s,baz=63,slow=13,SNR=26						
MA2	Magadan	11.96	10	P	P	03 01 50.4	-0.9
	10.0nm,0.6s,baz=181,slow=9.9,SNR=5.4						
MJAR	Matsushiro Arr	12.92	212	P	P	03 02 04.4	+2.5
	4.3nm,0.6s,baz=19,slow=11,SNR=13						
SEY	Seymchan	15.42	10	P	P	03 02 27.5	-0.4
	8.0nm,0.5s,baz=182,slow=10,SNR=18						
KSRS	Korea Array	17.20	240	P	P	03 02 48.4	+1.6
	3.9nm,0.8s,baz=43,slow=10,SNR=8.6						
HILR	Hailar Array B	17.76	285	P	P	03 02 50.3	-1.9
	1.0nm,0.3s,baz=81,slow=12,SNR=2.6						
TIXI	Tiksi	25.24	347	P	P	03 03 56.2	-3.2
	4.2nm,0.3s,baz=135,slow=4.3,SNR=3.9						
	4.2nm,0.3s						
SONM	Songino Array	26.76	285	P	P	03 04 12.9	-0.5
	0.6nm,0.8s,baz=92,slow=7.8,SNR=2.2						
	0.6nm,0.8s						
LZDM	Lanzhou Array	33.66	265	P	P	03 05 14.4	+1.0
	1.1nm,0.3s,baz=26,slow=5.1,SNR=4.7						
	1.1nm,0.3s						
ILAR	Eielson Array	38.45	39	P	P	03 05 52.5	+0.1
	0.5nm,0.7s,baz=278,slow=9.4,SNR=8.5						
	0.5nm,0.7s						
MKAR	Makanchi Array	42.45	293	P	P	03 06 24.4	-0.2
	0.5nm,0.7s,baz=76,slow=7.7,SNR=3.1						
	0.5nm,0.7s						
CMAR	Chiang Mai Arr	48.47	250	P	P	03 07 10.7	-0.5
	0.4nm,0.5s,baz=47,slow=7.9,SNR=1.7						
	0.4nm,0.5s						
SPITS	Spitsbergen Ar	50.65	348	P	P	03 07 24.7	-1.8
	8.2nm,1.0s,baz=45,slow=8.4,SNR=4.6						
	8.2nm,1.0s						
YKA	Yellowknife Ar	52.61	35	P	P	03 07 40.4	-0.4
	0.4nm,0.8s,baz=298,slow=8.2,SNR=5.2						
	0.4nm,0.8s						
ARCES	ARCESS Array B	55.24	338	P	P	03 07 58.1	-1.3
	3.1nm,0.9s,baz=50,slow=6.9,SNR=10						
	3.1nm,0.9s						
FINES	FINESS Array B	61.03	332	P	P	03 08 37.4	-1.4
	3.2nm,0.6s,baz=32,slow=7.7,SNR=22						
	3.2nm,0.6s						
NB2	NORSAR Subarra	65.61	338	P	P	03 09 07.3	-1.1
	comp=Z,0.6nm,0.3s,baz=38,slow=6.2						
NOA	NORSAR Array B	65.61	338	P	P	03 09 07.4	-0.9
	comp=Z,0.8nm,0.5s,baz=31,slow=6.7,SNR=9.6						
	comp=Z,0.8nm,0.5s						
HFS	Hagfors	65.74	336	P	P	03 09 07.5	-1.6
	comp=Z,1.5nm,0.3s,baz=32,slow=4.5,SNR=16						
	comp=Z,1.5nm,0.3s						
NVAR	Mina Array Bea	65.74	59	P	P	03 09 11.3	+1.5
	comp=Z,0.5nm,0.7s,baz=297,slow=7.4,SNR=4.0						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	67.56	51	P	P	03 09 21.1	+0.1
	comp=Z,0.4nm,0.6s,baz=357,slow=1.1,SNR=5.8						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	72.13	192	P	P	03 09 50.4	+2.3
	comp=Z,0.3nm,0.5s,baz=15,slow=6.2,SNR=4.9						
	comp=Z,0.3nm,0.5s						
TXAR	Lajitas Array	80.68	56	P	P	03 10 36.3	+0.8
	comp=Z,0.4nm,0.6s,baz=289,slow=3.5,SNR=5.0						
	comp=Z,0.4nm,0.6s						

IDC 30 03:27:19.5±22.0**, 16°.94S**×**177°.76W, h289**^{km}±221^{km}**, mb3.4**/4**, mbtmp4.1**/4**, Error ellipse: s-maj=144.2km s-min=54.2km az=164.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.64	240	P	P	03 34 23.9	-0.1
	1.6nm,0.5s,baz=80,slow=12,SNR=3.3						
	1.6nm,0.5s						
WRA	Warramunga Arr	45.43	259	P	P	03 35 10.4	-0.1
	1.1nm,0.4s,baz=94,slow=7.3,SNR=32						
	1.1nm,0.4s						
ASAR	Alice Springs	45.66	253	P	P	03 35 12.0	-0.2
	4.5nm,0.6s,baz=87,slow=8.8,SNR=62						
	4.5nm,0.6s						
TXAR	Lajitas Array	84.95	57	P	P	03 39 22.9	0.0
	0.3nm,0.6s,baz=235,slow=4.1,SNR=3.5						
	0.3nm,0.6s						
BRTR	Keskin Array B	144.53	316	PKP	PKPab	03 46 21.4	0.0
	0.4nm,0.8s,baz=48,slow=3.0,SNR=1.5						

IDC 30 03:33:26.3±6.2**, 5°.18S**×**152°.23E, h93**^{km}±49^{km}**, mb3.4**/3**, mbtmp3.8**/4**, Error ellipse: s-maj=135.6km s-min=33.1km az=126.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.55	230	P	Pn	03 35 01.0	+0.9
	8.7nm,0.4s,baz=15,slow=16,SNR=3.0						
PMG				S	Sn	03 36 09.8	-3.6
	16nm,0.3s,baz=126,slow=23,SNR=7.9						
WRA	Warramunga Arr	22.77	228	P	P	03 38 20.8	-0.4
	1.3nm,0.3s,baz=52,slow=9.9,SNR=17						
	1.3nm,0.3s						
ASAR	Alice Springs	25.49	222	P	P	03 38 46.1	0.0
	0.9nm,0.5s,baz=57,slow=8.9,SNR=13						
	0.9nm,0.5s						
ILAR	Eielson Array	82.73	22	P	P	03 45 39.0	-0.5
	0.3nm,0.8s,baz=231,slow=5.7,SNR=1.7						
	0.3nm,0.8s						
TORD	Torodi Ar. Bea	149.88	287	PKPbc	PKPbc	03 53 07.3	+0.4
	0.3nm,0.5s,baz=59,slow=4.5,SNR=2.4						

IDC 30 03:44:11.0±1.7**, 7°.09S**×**128°.14E, h0**^{km}**, mb3.6**/2**, mbtmp3.9**/5**, ML4.1**/3**, Error ellipse: s-maj=99.9km s-min=25.3km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.21	192	Pn	Pn	03 46 53.0	+0.5
	1.2nm,0.3s,baz=10,slow=14,SNR=30						
FITZ				Sn	Sn	03 48 44.6	-14
	1.0nm,0.3s,baz=118,slow=23,SNR=8.8						
	2.2nm,0.3s						
WRA	Warramunga Arr	14.12	155	Pn	Pn	03 47 31.4	-1.0
	0.8nm,0.3s,baz=333,slow=12,SNR=31						
WRA				Sn	Sn	03 49 54.9	-15
	1.4nm,0.3s,baz=337,slow=21,SNR=9.2						
	0.7nm,0.3s						
ASAR	Alice Springs	17.39	162	P	Pn	03 48 15.6	+0.4
	0.6nm,0.3s,baz=343,slow=11,SNR=47						
ASAR				S	Sn	03 51 14.6	-15
	1.0nm,0.5s,baz=351,slow=27,SNR=7.0						
	6.3nm,0.9s						
SONM	Songino Array	57.97	343	P	P	03 54 06.2	+0.8
	0.4nm,0.3s,baz=139,slow=6.8,SNR=3.0						
	0.4nm,0.3s						
MKAR	Makanchi Array	67.30	328	P	P	03 55 07.0	-0.7
	0.2nm,0.5s,baz=123,slow=5.3,SNR=4.2						
	0.2nm,0.5s						

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*NEIC **30** 04:01:33.3±2.7, 19°.73N±0°.05×105°.26W±0°.06, h35^{km}±2^{km}, mb4.7/421, Md4.8/145(MEX), Error ellipse: s-maj=10.5km s-min=7.2km az=234.0*

*MEX **30** 04:01:34.9±0.5, 19°.47N×105°.33W, h39^{km}±4^{km}, MD4.8*

*IDC **30** 04:01:35.0±1.7, 19°.79N×105°.24W, h59^{km}±18^{km}, mb4.3/20, mbtmp4.5/24, MS3.7/18, Error ellipse: s-maj=19.0km s-min=10.6km az=57.0*

*GCMT **30** 04:01:36.3±0.5, 19°.81N±0°.02×105°.20W±0°.03, h41^{km}±2^{km}, MW4.9/64, Moment Tensor Solution. s20,c23; s64,c83; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.01±.23; $M_{\theta\theta}$-2.69±.13; $M_{\phi\phi}$1.68±.13; $M_{r\theta}$0.02±.12; $M_{\theta\phi}$-0.84±.11; $M_{\phi r}$-0.61±.10; Best double couple: $M_0$2.50300×10^{16} NP1:ϕ_s121.00000°, δ70.00000°, λ160.00000°. NP2: ϕ_s218.00000°, δ72.00000°, λ21.00000°. Principal axes: T 2.1580, Plg28.0000°, Azm80.0000°; N 0.6910, Plg62.0000°, Azm257.0000°; P -2.8490, Plg1.0000°, Azm349.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 04:01:33.5±0.8**, 19°.62N**±0°.04×**105°.30W**±0°.05**, h54**^{km}±7^{km}**, n742, σ1^{s}.55**/666**, mb4.7**/156**, MS3.6**/14**, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	Chamela	0.26	116	*i* P	Pn	04 01 41.0	-1.8
CJM				*i* S	Sn	04 01 46.8	-2.5
CEGR	Campo Tres	1.37	99	*i* P	Pn	04 01 56.0	-0.6
CEGR				*i* S	Sn	04 02 13.0	-0.8
CDAR	Ciudad de Arme	1.39	119	*e*P	Pn	04 01 55.7	-0.8
CDAR				*i* S	Sn	04 02 11.9	-1.9
COMA	Comala	1.48	101		Pn	04 01 57.6	-0.2
COMA					Sn	04 02 14.7	-1.4
COMA	Comala	1.48	101	*i* P	Pn	04 01 57.6	-0.2
COMA				*i* S	Sn	04 02 14.7	-1.4
SOMAC	Volcano de Col	1.57	93	*i* P	Pn	04 01 59.6	+0.1
SOMAC				*e*S	Sn	04 02 18.4	-0.5
MNGA	Volcan de Coli	1.59	95	*i* P	Pn	04 01 59.9	+0.4
MNGA				*e*S	Sn	04 02 18.7	-0.3
INCO	Volcan de Coli	1.60	93	*i* P	Pn	04 01 60.0	+0.2
INCO				*e*S	Sn	04 02 18.9	-0.6
EZ5V		1.60	95		Pn	04 02 00.1	+0.4
EZ5V		1.60	95	*i* P	Pn	04 02 00.1	+0.4
EZ5V				*e*S	Sn	04 02 18.9	-0.6
ANIG	Ahuacatlan	1.60	27		Pn	04 01 57.5	-2.2
ANIG					Sn	04 02 16.1	-3.2
ANIG	Ahuacatlan	1.60	27	*i* P	Pn	04 01 57.5	-2.2
ANIG				*i* S	Sn	04 02 16.1	-3.2
TON2	Tonala	2.18	62		Pn	04 02 08.8	+1.2
TON2					Sn	04 02 31.6	-2.0
TON2	Tonala	2.18	62	*e*P	Pn	04 02 08.8	+1.2
TON2				*e*S	Sn	04 02 31.6	-2.0
MMIG	Aquila	2.27	125		Pn	04 02 07.8	-0.8
MMIG	Aquila	2.27	125	*e*P	Pn	04 02 07.8	-0.8
MMIG				*e*S	Sn	04 02 31.3	-4.1
URUA	Uruapan	3.04	93		Pn	04 02 19.8	+0.4
URUA					Sn	04 02 53.3	-1.4
URUA	Uruapan	3.04	93	*e*P	Pn	04 02 19.8	+0.4
URUA				*e*S	Sn	04 02 53.3	-1.4
MAIG	Mazatlaan	3.71	344		Pn	04 02 26.4	-1.9
MAIG	Mazatlaan	3.71	344	*e*P	Pn	04 02 26.4	-1.9
MAIG				*e*S	Sn	04 03 04.4	-6.4
MOIG	Morelia	3.87	88		Pn	04 02 31.3	+0.5
MOIG					Sn	04 03 13.8	-1.4
MOIG	Morelia	3.87	88	*i* P	Pn	04 02 31.3	+0.5
MOIG				*i* S	Sn	04 03 13.8	-1.4
IGIG	Irapuato, Guan	3.90	72		Pn	04 02 30.5	-0.6
IGIG	Irapuato, Guan	3.90	72	*e*P	Pn	04 02 30.5	-0.6
IGIG				*e*S	Sn	04 03 18.0	+2.3
ZAIG	Zacatecas	4.04	39		Pn	04 02 31.8	-1.4
ZAIG	Zacatecas	4.04	39	*e*P	Pn	04 02 31.8	-1.4
ZAIG				*e*S	Sn	04 03 12.7	-6.7
ZIIG	Zihuatanejo	4.14	118		Pn	04 02 33.7	-0.6
ZIIG	Zihuatanejo	4.14	118	*e*P	Pn	04 02 33.7	-0.6
ZIIG				*e*S	Sn	04 03 14.6	-6.9
JRQG	Juriquilla Cam	4.68	76		Pn	04 02 41.8	-0.1
JRQG	Juriquilla Cam	4.68	76	*e*P	Pn	04 02 40.8	-1.1
JRQG				*e*S	Sn	04 03 41.8	+6.7
ARIG	Puente Sto Nin	4.87	105		Pn	04 02 44.6	+0.4
ARIG					Sn	04 03 40.1	+0.8
ARIG	Puente Sto Nin	4.87	105	*e*P	Pn	04 02 44.6	+0.4
ARIG				*e*S	Sn	04 03 40.1	+0.8
ACIG	Acambay	5.11	85		Pn	04 02 50.0	+2.2
ACIG	Acambay	5.11	85	*i* P	Pn	04 02 50.0	+2.2
ACIG				*i* S	Sn	04 03 41.1	-4.5
TOVM	TOLUCA	5.31	93		Pn	04 02 52.0	+1.4
TOVM					Sn	04 03 47.8	-2.9
TOVM	TOLUCA	5.31	93	*e*P	Pn	04 02 52.0	+1.4
TOVM				*i* S	Sn	04 03 47.8	-2.9
H06E1	SOCORRO T-PHAS	5.38	262	P	Pn	04 02 53.2	+1.8
	SNR=10						
H06E1				T	T	04 08 23.7	
	SNR=174						
PDIG	Papasquiaro	5.40	359		Pn	04 02 52.0	+0.2
PDIG					Sn	04 03 52.0	-0.6
PDIG	Papasquiaro	5.40	359	*e*P	Pn	04 02 52.0	+0.2
PDIG				*e*S	Sn	04 03 52.0	-0.6
CAIG	El Cayaco	5.42	117		Pn	04 02 51.6	-0.1
CAIG	El Cayaco	5.42	117	*e*P	Pn	04 02 51.6	-0.1
CAIG				*e*S	Sn	04 03 47.7	-5.1
H06S1	SOCORRO T	5.42	262	P	Pn	04 02 53.9	+2.0
H06S1				T	T	04 08 31.7	
	SNR=74						
H06N1	SOCORRO T-PHAS	5.43	263	P	Pn	04 02 53.9	+2.0
H06N1				T	T	04 08 34.3	
	SNR=9.5						
RPIG	Rio Verde	5.46	65		Pn	04 02 52.6	+0.1
RPIG	Rio Verde	5.46	65	*e*P	Pn	04 02 52.6	+0.1
RPIG				*e*S	Sn	04 03 57.8	+3.7
MAVM	Malinalco, Edo	5.52	96		Pn	04 02 53.8	+0.4
MAVM					Sn	04 03 52.8	-2.9
MAVM	Malinalco, Edo	5.52	96	*e*P	Pn	04 02 53.8	+0.4
MAVM				*e*S	Sn	04 03 52.8	-2.9
INVM	La Marquesa	5.59	92		Pn	04 02 55.6	+1.1
INVM					Sn	04 03 54.1	-3.4
INVM	La Marquesa	5.59	92	*e*P	Pn	04 02 55.6	+1.1
INVM				*e*S	Sn	04 03 54.1	-3.4
PLIG	Platanillo	5.61	102		Pn	04 02 55.7	+1.1
PLIG					Sn	04 03 56.3	-1.6
PLIG	Platanillo	5.61	102	*e*P	Pn	04 02 55.7	+1.1
PLIG				*e*S	Sn	04 03 56.3	-1.6
MEIG	Mezcala	5.63	106		Pn	04 02 55.5	+0.7
MEIG					Sn	04 03 56.8	-1.5
MEIG	Mezcala	5.63	106	*e*P	Pn	04 02 55.5	+0.7
MEIG				*e*S	Sn	04 03 56.8	-1.5
AOVM	Tlapan	5.65	93		Pn	04 02 56.8	+1.4
AOVM					Sn	04 03 58.9	-0.3
AOVM	Tlapan	5.65	93	*e*P	Pn	04 02 56.8	+1.4
AOVM				*e*S	Sn	04 03 58.9	-0.3
AZVM	Cuida Lopez Ma	5.67	89		Pn	04 02 57.0	+1.5
AZVM	Cuida Lopez Ma	5.67	89	*e*P	Pn	04 02 57.0	+1.5
AZVM				*e*S	Sn	04 03 53.1	-6.4
APVM	Azcapotzalco	5.74	90		Pn	04 02 57.6	+1.2
APVM	Azcapotzalco	5.74	90	*e*P	Pn	04 02 57.6	+1.2
APVM				*e*S	Sn	04 04 09.6	+8.4
MHVM	Bosque de Chap	5.74	91		Pn	04 02 53.3	-3.3
MHVM					Sn	04 04 02.0	+0.7
MHVM	Bosque de Chap	5.74	91	*e*P	Pn	04 02 53.3	-3.3
MHVM				*e*S	Sn	04 04 02.0	+0.7
UNM	Universidad Na	5.78	92	Pn	Pn	04 02 57.8	+0.8
UNM	Universidad Na	5.78	92	*e*P	Pn	04 02 57.3	+0.3
UNM				*e*S	Sn	04 04 02.2	+0.1
BJVM	Benito Juarez	5.78	91		Pn	04 02 59.6	+2.6
BJVM	Benito Juarez	5.78	91	*e*P	Pn	04 02 59.6	+2.6
TLVM	San Miguel Top	5.81	93		Pn	04 02 55.3	-2.2
TLVM	San Miguel Top	5.81	93	*e*P	Pn	04 02 55.3	-2.2
TLVM				*e*S	Sn	04 03 59.2	-3.8
PTVM	Pico Tres Padr	5.83	89		Pn	04 02 59.2	+1.6
PTVM					Sn	04 04 04.2	+0.9
PTVM	Pico Tres Padr	5.83	89	*e*P	Pn	04 02 59.2	+1.6
PTVM				*e*S	Sn	04 04 04.2	+0.9
XCVM	Xochimilco	5.84	93		Pn	04 03 00.2	+2.3
XCVM	Xochimilco	5.84	93	*e*P	Pn	04 03 00.2	+2.3
XCVM				*e*S	Sn	04 03 55.7	-8.0
PBVM	Pinon	5.86	91	*e*P	Pn	04 02 54.0	-3.8
PBVM				*e*S	Sn	04 04 09.0	+5.3
ZUVM	ZUMPANGO	5.86	87		Pn	04 02 59.7	+1.6
ZUVM					Sn	04 04 05.9	+1.7
ZUVM	ZUMPANGO	5.86	87	*e*P	Pn	04 02 59.7	+1.6
ZUVM				*e*S	Sn	04 04 05.9	+1.7
SLBS	Sierra La Lagu	5.92	314	Pn	Pn	04 02 57.7	-1.2
DEIG	Demacu	5.93	82	*e*P	Pn	04 03 00.5	+1.5
DEIG				*i* S	Sn	04 04 13.5	+7.8
DHIG	Demacu	5.93	82		Pn	04 03 00.5	+1.5
YAIG	Yautepec	5.93	96		Pn	04 03 00.5	+1.5
YAIG					Sn	04 04 05.3	-0.4
YAIG	Yautepec	5.93	96	*e*P	Pn	04 03 00.5	+1.5
YAIG				*e*S	Sn	04 04 05.3	-0.4
MPVM	San Francisco	5.95	93		Pn	04 02 58.5	-0.7
MPVM	San Francisco	5.95	93	*e*P	Pn	04 02 58.5	-0.7
MPVM				*e*S	Sn	04 04 01.5	-4.7

DAIG	Los Arroyos	5.95	115		Pn	04 03 00.1	+1.0
DAIG	Los Arroyos	5.95	115	eP	Pn	04 03 00.1	+1.0
DAIG				eS	Sn	04 04 00.5	-5.5
THVM	De Xico	5.97	92	eP	Pn	04 02 54.4	-5.2
THVM				eS	Sn	04 03 59.2	-7.7
VTVM	Tizayuca	6.14	87		Pn	04 03 04.6	+2.5
VTVM	Tizayuca	6.14	87	eP	Pn	04 03 04.6	+2.5
VTVM				eS	Sn	04 04 06.3	-4.9
PPIG	Popocatepetl	6.32	94		Pn	04 03 06.3	+1.7
PPM	Popocatepetl	6.32	94	eP	Pn	04 03 06.3	+1.7
PPM				eS	Sn	04 04 20.6	+4.9
PPPT	Popocatepetl	6.33	95	eP	Pn	04 03 06.0	+1.2
PPPT				eS	Sn	04 04 14.9	-1.3
PPCL	Tochimilco	6.34	95	eP	Pn	04 03 06.1	+1.3
PPCL				eS	Sn	04 04 13.1	-3.0
PPSX	Xalitzintla	6.43	94	eP	Pn	04 03 08.0	+2.1
PPSX				eS	Sn	04 04 12.8	-5.3
CRIG	Cruz Grande	6.52	115		Pn	04 03 08.1	+1.1
CRIG	Cruz Grande	6.52	115	eP	Pn	04 03 08.1	+1.1
CRIG				eS	Sn	04 04 14.7	-5.3
TLIG	Tlapa	6.70	107		Pn	04 03 10.9	+1.4
TLIG	Tlapa	6.70	107	eP	Pn	04 03 10.9	+1.4
TLIG				eS	Sn	04 04 19.5	-5.1
MGIG	Malinaltepec	6.75	109		Pn	04 03 11.7	+1.4
MGIG	Malinaltepec	6.75	109	eP	Pn	04 03 11.7	+1.4
MGIG				eS	Sn	04 04 22.9	-3.0
CTUV	Llano Grande	6.76	73		Pn	04 03 10.9	+0.7
CTUV	Llano Grande	6.76	73	eP	Pn	04 03 10.9	+0.7
CTUV				eS	Sn	04 04 32.7	+6.8
FTIG	Fresnillo de T	7.00	103		Pn	04 03 14.8	+1.2
FTIG	Fresnillo de T	7.00	103	eP	Pn	04 03 14.8	+1.2
FTIG				eS	Sn	04 04 27.3	-4.6
CXUV	Coxquihui	7.27	84		Pn	04 03 19.8	+2.5
CXUV	Coxquihui	7.27	84	eP	Pn	04 03 19.8	+2.5
CXUV				eS	Sn	04 04 47.6	+9.2
HPIG		7.29	357	Pn	Pn	04 03 16.0	-1.7
HPIG		7.29	357	eP	Pn	04 03 17.9	+0.2
HPIG				eS	Sn	04 04 45.6	+6.4
HLIG	Huajuapan de L	7.32	103		Pn	04 03 19.4	+1.4
HLIG	Huajuapan de L	7.32	103	eP	Pn	04 03 19.4	+1.4
HLIG				eS	Sn	04 04 36.1	-3.8
TXIG	Tlaxiaco	7.52	107		Pn	04 03 22.6	+1.7
TXIG	Tlaxiaco	7.52	107	eP	Pn	04 03 22.6	+1.7
TXIG				eS	Sn	04 04 41.6	-3.3
LNIG	Linares	7.54	45	eP	Pn	04 03 20.1	-0.7
LNIG				eS	Sn	04 04 50.2	+5.3
PNIG	Pinotepa	7.54	114		Pn	04 03 22.1	+1.2
PNIG	Pinotepa	7.54	114	eP	Pn	04 03 22.1	+1.2
PNIG				eS	Sn	04 04 36.6	-8.3
MNIG	Monterrey	7.55	37		Pn	04 03 20.9	-0.1
MNIG					Sn	04 04 45.1	-0.2
MNIG	Monterrey	7.55	37	eP	Pn	04 03 20.9	-0.1
MNIG				eS	Sn	04 04 45.1	-0.2
TPIG	Tehuac#an	7.60	98		Pn	04 03 23.2	+1.4
TPIG					Sn	04 04 43.9	-2.8
TPIG	Tehuac#an	7.60	98	eP	Pn	04 03 23.2	+1.4
TPIG				eS	Sn	04 04 43.9	-2.8
CSIG	Choix	7.72	339		Pn	04 03 24.5	+1.2
CSIG	Choix	7.72	339	eP	Pn	04 03 24.5	+1.2
YOIG	Yosondua	7.86	109		Pn	04 03 27.4	+1.8
YOIG					Sn	04 04 52.5	-0.7
YOIG	Yosondua	7.86	109	eP	Pn	04 03 27.4	+1.8
YOIG				eS	Sn	04 04 52.5	-0.7
TOIG	Toxpalan	7.94	100		Pn	04 03 28.0	+1.6
TOIG					Sn	04 04 54.4	-0.6
TOIG	Toxpalan	7.94	100	eP	Pn	04 03 28.0	+1.6
TOIG				eS	Sn	04 04 54.4	-0.6
JAUV	Jalcomulco	8.01	90		Pn	04 03 29.8	+2.3
JAUV					Sn	04 04 53.8	-3.0
JAUV	Jalcomulco	8.01	90	eP	Pn	04 03 29.8	+2.3
JAUV				eS	Sn	04 04 53.8	-3.0
LVIG	Laguna Verde	8.37	88	eP	Pn	04 03 33.7	+1.5
OXIG	Oaxaca	8.52	106		Pn	04 03 35.3	+0.9
OXIG					Sn	04 05 06.4	-2.9
VHO	Vista Hermosa	8.52	106	eP	Pn	04 03 35.3	+0.9
VHO				eS	Sn	04 05 06.4	-2.9
PEIG	Puerto Escondi	8.55	114		Pn	04 03 36.6	+1.8
PEIG	Puerto Escondi	8.55	114	eP	Pn	04 03 36.6	+1.8
PEIG				eS	Sn	04 05 01.1	-8.9
MCIG	Muzquiz	8.93	22		Pn	04 03 40.4	+0.4
MCIG	Muzquiz	8.93	22	eP	Pn	04 03 40.4	+0.4
MCIG				eS	Sn	04 05 21.9	+2.7
NEUV	Arroyo Zacate	9.20	100		Pn	04 03 43.9	+0.3
NEUV					Sn	04 05 23.6	-2.1
NEUV	Arroyo Zacate	9.20	100	eP	Pn	04 03 43.9	+0.3
NEUV				eS	Sn	04 05 23.6	-2.1
HUIG	Huatulco	9.55	112		Pn	04 03 50.5	+2.0
HUIG	Huatulco	9.55	112	*i* P	Pn	04 03 50.5	+2.0
HUIG				eS	Sn	04 05 26.1	-8.3
PMUV	Sontecomapan	9.68	95		Pn	04 03 47.9	-2.4
PMUV	Sontecomapan	9.68	95	eP	Pn	04 03 47.9	-2.4
TX31	Lajitas Ar. Si	9.79	8	Pn	Pn	04 03 51.9	+0.1
TXAR	Lajitas Array	9.79	8	P	Pn	04 03 52.1	+0.4
	18nm,0.6s,baz=185,slow=14,SNR=107						
TXAR				LR	LR	04 07 58.7	
	comp=Z,867nm,18.1s,baz=191,slow=40						
CMIG	Matias Romero	10.20	103	P	Pn	04 03 58.3	+1.0
	81nm,0.7s,baz=292,slow=11,SNR=187						
CMIG				LR	LR	04 08 04.5	
	comp=Z,811nm,18.0s,baz=288,slow=38						
CMIG	Matias Romero	10.20	103		Pn	04 03 58.2	+0.8
CMIG	Matias Romero	10.20	103	eP	Pn	04 03 58.2	+0.8
CMIG				eS	Sn	04 05 46.7	-3.6
833A	Chaparral WMA,	10.21	31	Pn	Pn	04 03 57.1	-0.2
DRIO	Del Rio	10.65	23	Pn	Pn	04 04 01.6	-1.8
SAND	Sanderson	10.69	15	Pn	Pn	04 04 04.1	+0.1
EF02	Christine	11.01	33	Pn	Pn	04 04 06.8	-1.5
VHRN	Van Horn	11.13	1	Pn	Pn	04 04 11.4	+1.3
HNDO	Hondo	11.28	28	Pn	Pn	04 04 11.7	-0.4
TPB01	Permian Basin	11.36	7	Pn	Pn	04 04 13.8	+0.5
TPB05	Hovey Rd	11.40	9	Pn	Pn	04 04 16.0	+2.3
735A	Kenedy	11.45	35	Pn	Pn	04 04 15.6	+1.2
EF04	Eagle Ford 04	11.74	34	Pn	Pn	04 04 19.9	+1.5
PECS	Pecos	11.78	6	Pn	Pn	04 04 19.0	+0.1
OZNA	Ozona	11.87	18	Pn	Pn	04 04 22.5	+2.3
MNHN	Monahans	11.90	11	Pn	Pn	04 04 22.3	+1.8
JCT	Junction City	11.90	24	Pn	Pn	04 04 22.1	+1.5
JCT	Junction City	11.90	24	eP	Pn	04 04 22.7	+2.1
TGIG		11.91	102		Pn	04 04 19.3	-1.4
TGIG		11.91	102	eP	Pn	04 04 19.3	-1.4
MNTX	Cornudas Mount	12.03	360	Pn	Pn	04 04 23.8	+1.4
MNTX	Cornudas Mount	12.03	360	eP	Pn	04 04 22.4	+0.1
TPB06	Permian Basin	12.13	8	Pn	Pn	04 04 25.1	+1.5
PCIG		12.15	107		Pn	04 04 25.8	+1.8
PCIG		12.15	107	eP	Pn	04 04 25.8	+1.8
EPT	El Paso	12.15	355	Pn	Pn	04 04 25.7	+1.6
ODSA	Odessa	12.70	11	Pn	Pn	04 04 32.8	+1.3
HTMS	Hat Mesa	12.89	6	Pn	Pn	04 04 35.8	+1.7
CCIG	Comitan	12.95	103		Pn	04 04 33.6	-1.5
CCIG	Comitan	12.95	103	eP	Pn	04 04 33.6	-1.5
121A	Cookes Peak, D	13.06	351	Pn	Pn	04 04 37.4	+0.9
PATR	El Naranjo	13.24	108		Pn	04 04 40.3	+1.1
PATR	El Naranjo	13.24	108	eP	Pn	04 04 40.3	+1.1
PAVE	Pavencul	13.27	107		Pn	04 04 41.7	+2.2
PAVE	Pavencul	13.27	107	eP	Pn	04 04 41.7	+2.2
CHUJ	Union Juarez	13.37	108	eP	Pn	04 04 41.8	+0.9
HKT	Hockley	13.40	38	Pn	Pn	04 04 41.5	+0.6
CPRX	Cap Rock	13.42	5	Pn	Pn	04 04 41.2	-0.2
TUC	Tucson	13.57	340	Pn	Pn	04 04 43.9	+0.5
POST	Post	13.82	13	Pn	Pn	04 04 45.9	-0.8
HUEH	Huehuetenango	13.83	106	Pn	Pn	04 04 46.3	-0.9
SN07	Snyder 07	13.99	15	Pn	Pn	04 04 48.0	-1.0
CRNM	Carthage	14.34	355	Pn	Pn	04 04 52.3	-1.5
Y22A	Socorro	14.34	354	Pn	Pn	04 04 53.3	-0.6
APG	El Apazote	14.88	106	P	Pn	04 05 02.1	+1.1
	1.8nm,1.0s,baz=228,slow=20,SNR=11						
APG				LR	LR	04 10 47.7	
	comp=Z,25nm,19.0s,baz=295,slow=37						
PETF	Flores	14.90	98	Pn	Pn	04 05 00.5	-0.5
FW06	Azle	14.99	26	Pn	Pn	04 05 00.3	-1.8
VTX	Valle De La Tr	15.06	323	P	Pn	04 05 05.6	+2.5
113A	Mohawk Valley,	15.14	332	P	Pn	04 05 06.2	+2.2
113A				IAmb	IAmb	04 05 12.2	
	comp=Z,53nm,0.8s						
ABQ	Albuquerque	15.30	356	Pn	Pn	04 05 05.6	-0.8
ANMO	Albuquerque	15.31	356	P	Pn	04 05 06.2	-0.2
	comp=Z,3.2nm,1.1s,baz=179,slow=13,SNR=7.9						
ANMO				LR	LR	04 11 26.4	
	comp=Z,446nm,18.8s,baz=174,slow=39						
ANMO	Albuquerque	15.31	356	Pn	Pn	04 05 03.6	-2.8
TASM	ASL Pad, Albuq	15.31	356	P	P	04 05 08.1	-2.1
TASM	ASL Pad, Albuq	15.31	356	P	Pn	04 05 07.9	+1.5
TASM				IAmb	IAmb	04 05 12.6	
	comp=Z,13nm,1.2s						
TASM	ASL Pad, Albuq	15.31	356	P	P	04 05 08.1	-2.1
TASM				IAmb	IAmb	04 05 13.2	
	comp=Z,9.7nm,1.0s						
WTFS	Witchita Falls	15.35	22	Pn	Pn	04 05 05.9	-0.9
WTFS				IAmb	IAmb	04 05 10.7	
	comp=Z,46nm,0.7s						
NATX	Nacogdoches	15.42	36	Pn	Pn	04 05 05.2	-2.5
NATX				IAmb	IAmb	04 05 13.8	
	comp=Z,68nm,1.1s						
X18A	Snowflake	15.42	345	P	Pn	04 05 09.5	+1.7
Z35A	Perchaven, San	15.43	26	P	P	04 05 09.6	-1.9
Z35A				IAmb	IAmb	04 05 11.8	
	comp=Z,32nm,0.6s						
AMTX	Amarillo	15.54	11	IAmb	IAmb	04 05 13.9	
	comp=Z,50nm,0.8s						
CPBX	Cerro Prieto	15.59	327	Pn	Pn	04 05 09.5	-0.4
CPBX				IAmb	IAmb	04 05 35.2	
	comp=Z,81nm,1.2s						
ESJX	Sierra Juarez	15.61	324	IAmb	IAmb	04 05 18.2	
	comp=Z,67nm,1.3s						
GLA	Glamis	15.86	329	IAmb	IAmb	04 05 21.1	
	comp=Z,117nm,1.4s						
W18A	Petrified Fore	15.94	347	Pn	Pn	04 05 13.2	-1.2
LOOK	Love County	16.04	25	Pn	Pn	04 05 15.2	-0.4
LOOK				IAmb	IAmb	04 05 33.8	
	comp=Z,95nm,1.3s						
ESQI	Esquipulas	16.05	106	Pn	Pn	04 05 15.2	-0.8
ESQI				IAmb	IAmb	04 05 21.8	
	comp=Z,92nm,1.1s						
SMWD	Samnorwood	16.06	15	IAmb	IAmb	04 05 33.4	
	comp=Z,58nm,1.1s						
MTO3	Montecristo	16.09	106	IAmb	IAmb	04 05 22.2	
	comp=Z,86nm,1.2s						
YUH	Yuha Desert	16.09	326	Pn	Pn	04 05 14.9	-1.4
CBX	Cerro Bola	16.24	323	P	P	04 05 21.0	+0.5
CBX				IAmb	IAmb	04 05 26.3	
	comp=Z,77nm,1.3s						
BLYC	Blythe	16.30	332	IAmb	IAmb	04 05 25.2	
	comp=Z,66nm,1.1s						
X34A	Smith Ranch, M	16.33	22	IAmb	IAmb	04 05 26.4	
	comp=Z,88nm,1.3s						
BAR	Barrett	16.52	324	P	P	04 05 23.4	-0.2
BC3	Big Chuckawall	16.66	329	IAmb	IAmb	04 05 30.3	
	comp=Z,49nm,1.2s						
RTBA	Rita Blanca	16.91	7		Pn	04 05 26.3	-0.3
PMD	Palm Desert	17.11	327	P	P	04 05 31.4	+1.3
PMD				IAmb	IAmb	04 05 36.0	
	comp=Z,43nm,1.0s						
PFO	Pinyon Flats O	17.13	327	P	P	04 05 31.8	+1.4
	comp=Z,24nm,1.1s,baz=130,slow=11,SNR=23						
PFO				LR	LR	04 11 31.5	
	comp=Z,199nm,21.7s,baz=154,slow=35						
PFO	Pinyon Flats O	17.13	327	P	P	04 05 31.2	+0.8
DNR	Dunn Ranch,Anz	17.18	326	P	P	04 05 31.5	+0.5
DNR				IAmb	IAmb	04 05 35.6	
	comp=Z,40nm,1.0s						
W13A	Hualapai Mount	17.19	336	P	P	04 05 32.0	+0.8
DANC	Danby, Needles	17.43	331	P	P	04 05 34.8	+1.2
DANC				IAmb	IAmb	04 05 38.2	
	comp=Z,82nm,1.1s						
OK029	Liberty Lake	17.54	22	IAmb	IAmb	04 05 35.9	
	comp=Z,28nm,0.7s						
WLAR	White Oak Lake	17.73	35		P	04 05 38.0	+1.3
143A	Socs Landing,	18.01	41		P	04 05 39.0	-1.0
143A				IAmb	IAmb	04 05 43.8	
	comp=Z,69nm,1.3s						
TGUH	Tegucigalpa,Un	18.11	105		P	04 05 42.4	+1.1
TGUH				IAmb	IAmb	04 05 44.3	
	comp=Z,55nm,0.9s						
TUL3	Leonard	18.26	25	IAmb	IAmb	04 05 58.8	
	comp=Z,66nm,1.1s						
OK048	Pawnee Station	18.27	22	IAmb	IAmb	04 05 43.0	
	comp=Z,29nm,0.8s						
PASC	Pasadena Art C	18.48	324	P	P	04 05 45.3	+0.2
PV01	Paradox Valley	18.67	352	P	Pn	04 05 48.4	+0.1
RLO	Rose Lookout	18.80	27	P	P	04 05 46.8	-1.8
RLO				IAmb	IAmb	04 05 50.8	
	comp=Z,26nm,0.6s						
PV11	David Mesa, Pa	18.88	351	P	Pn	04 05 50.1	-0.6
T35A	Sooner Cattle	18.88	22	P	P	04 05 47.7	-1.7
PV12	Saucer Basin,	18.88	351	IAmb	IAmb	04 05 53.9	
	comp=Z,44nm,1.1s						
PV19	Morning Glory	18.90	351	P	P	04 05 49.8	-0.2
SHPR	Sheep Range	18.92	335	P	P	04 05 50.4	+0.2
PV20	West Nyswonger	18.93	351	IAmb	IAmb	04 05 54.0	
	comp=Z,44nm,1.2s						
PV10	Paradox Valley	18.98	351	IAmb	IAmb	04 06 11.3	
	comp=Z,56nm,1.2s						
PV07	Paradox Valley	18.98	352	P	Pn	04 05 51.7	-0.3
PV07				IAmb	IAmb	04 05 55.1	
	comp=Z,31nm,0.8s						
TPO	Tropico Hills	19.03	326	P	P	04 05 52.2	+1.0
TPO				IAmb	IAmb	04 05 56.9	
	comp=Z,76nm,1.5s						
HERN	Volcan Telica	19.05	109	P	P	04 05 53.1	+1.5
HERN				IAmb	IAmb	04 05 59.0	
	comp=Z,100nm,1.1s						
HHAR	Hobbs	19.37	29	P	P	04 05 54.0	-0.9
HHAR				IAmb	IAmb	04 05 56.1	
	comp=Z,57nm,1.3s						
CLC	China Lake	19.44	329	IAmb	IAmb	04 05 59.5	
	comp=Z,32nm,0.8s						
146A	Union	19.48	45	P	P	04 05 55.9	-0.1
146A				IAmb	IAmb	04 05 58.1	
	comp=Z,60nm,1.0s						
R32A	Long Quarter,	19.59	16	IAmb	IAmb	04 05 59.4	
	comp=Z,46nm,0.8s						
FURC	Furnace Creek,	19.62	331	IAmb	IAmb	04 06 01.5	
	comp=Z,41nm,1.2s						
CBKS	Cedar Bluff	19.73	13	P	P	04 05 57.7	-1.1
CBKS				IAmb	IAmb	04 06 01.9	
	comp=Z,52nm,0.9s						
ISA	Isabella, Lake	19.76	327	IAmb	IAmb	04 06 03.5	
	comp=Z,31nm,0.9s						
TCRU	Three Creeks R	19.92	343	IAmb	IAmb	04 06 04.4	
	comp=Z,26nm,1.0s						
FCAR	Ozark Folk Cen	19.93	33	IAmb	IAmb	04 06 01.4	
	comp=Z,32nm,1.0s						
Y45A	Yeager Farm, C	19.95	41	P	P	04 06 01.2	+0.1
Y45A				IAmb	IAmb	04 06 05.4	
	comp=Z,33nm,0.7s						
ISCO	Idaho Springs	20.12	359	P	P	04 06 02.8	-0.6
S11A	Rachel	20.14	335	P	P	04 06 03.0	-0.4
S11A				IAmb	IAmb	04 06 07.4	
	comp=Z,42nm,0.9s						
BOAB	BOACO BROADBAN	20.15	108	P	P	04 06 04.8	+1.3
VES	Vestal, Richgr	20.22	326	P	Pn	04 06 06.4	0.0
PSUT	Pine Spring	20.26	340	IAmb	IAmb	04 06 12.0	
	comp=Z,26nm,1.0s						
TMUT	Trail Mountain	20.27	347	IAmb	IAmb	04 06 11.3	
	comp=Z,20nm,0.8s						
GRAC	Grapevine Rang	20.29	331	IAmb	IAmb	04 06 09.2	
	comp=Z,61nm,0.9s						
P17A	Butcher Ranch,	20.34	348	IAmb	IAmb	04 06 08.0	
	comp=Z,29nm,0.9s						
HBAR	Harrisburg	20.46	36	P	P	04 06 03.9	-2.8
Z47A	Carrollton	20.48	45	P	P	04 06 05.2	-1.7
Z47A				IAmb	IAmb	04 06 10.8	
	comp=Z,47nm,0.8s						
GMN	Gold Mountain	20.49	332	IAmb	IAmb	04 06 12.0	
	comp=Z,75nm,1.4s						
SIUN	Universidad Ur	20.51	103	P	P	04 06 07.5	+0.1
SIUN				IAmb	IAmb	04 06 13.0	
	comp=Z,33nm,1.3s						
O20A	White River Ci	20.61	354	P	P	04 06 08.8	+0.3
O20A				IAmb	IAmb	04 06 25.5	
	comp=Z,27nm,1.0s						
KSU1	Kansas State U	20.82	19	P	P	04 06 09.2	-1.4
KSU1				IAmb	IAmb	04 06 14.0	
	comp=Z,49nm,0.8s						
MGMO	Mountain Grove	20.86	30	P	P	04 06 09.0	-2.0
MGMO				IAmb	IAmb	04 06 14.2	
	comp=Z,21nm,0.6s						
250A	Grady	21.06	50	P	P	04 06 12.0	-1.1
LRAL	Lakeview Retre	21.11	47	P	P	04 06 13.2	-0.6
LRAL				IAmb	IAmb	04 06 17.2	
	comp=Z,24nm,0.5s						
RDMU	Red Mountain	21.21	351	IAmb	IAmb	04 06 19.2	
	comp=Z,33nm,1.2s						
T42A	Van Buren	21.34	33	P	P	04 06 14.8	-1.4
PBMO	Poplar Bluff	21.49	34	P	P	04 06 16.1	-1.7
JTS	Las Juntas de	21.71	112	P	P	04 06 22.6	+2.3
	comp=Z,20nm,0.7s,baz=247,slow=6.3,SNR=15						
JTS				LR	LR	04 14 16.3	
	comp=Z,128nm,20.7s,baz=289,slow=35						
	comp=Z,20nm,0.7s						
JTS	Las Juntas de	21.71	112	P	P	04 06 22.4	+2.1
JTS				IAmb	IAmb	04 06 26.7	
	comp=Z,22nm,0.8s						
CTU	Camp Tracy	21.72	347	P	P	04 06 21.5	+1.1
CTU				IAmb	IAmb	04 06 24.3	
	comp=Z,22nm,0.9s						
R40A	Maddies Statio	21.78	29	IAmb	IAmb	04 06 22.4	
	comp=Z,26nm,0.9s						
NVAR	Mina Array Bea	21.89	332	P	P	04 06 24.7	+2.5
	comp=Z,21nm,0.9s,baz=149,slow=11,SNR=79						
NVAR				LR	LR	04 13 53.9	
	comp=Z,86nm,20.1s,baz=156,slow=34						
NVAR	Mina Array Bea	21.89	332	P	P	04 06 24.3	+2.1
UTMT	University of	22.04	37	P	P	04 06 22.2	-1.4
TCUT	Toone Canyon	22.06	348	IAmb	IAmb	04 06 27.5	
	comp=Z,28nm,0.8s						
CCM	Cathedral Cave	22.07	31	P	P	04 06 22.3	-1.6
CCM				IAmb	IAmb	04 06 24.9	
	comp=Z,30nm,0.7s						
RYN	Ryan	22.15	332	P	P	04 06 25.7	+0.7
P38A	Dawn	22.37	24	IAmb	IAmb	04 06 29.1	
	comp=Z,19nm,0.7s						
FVM	French Village	22.41	32	IAmb	IAmb	04 06 28.1	
	comp=Z,38nm,1.2s						
WVT	Waverly	22.50	39	P	P	04 06 27.2	-1.4
152A	Waverly Hall	22.54	51	IAmb	IAmb	04 06 28.1	
	comp=Z,27nm,0.5s						
HWUT	Hardware Ranch	22.56	348	P	P	04 06 29.2	-0.2
ELK	Elko	22.71	340	LR	LR	04 14 37.5	
	comp=Z,123nm,18.3s,baz=168,slow=35						
N35A	Tabor	22.73	19	IAmb	IAmb	04 06 47.6	
	comp=Z,38nm,1.2s						
S44A	Carbondale	22.80	34	P	P	04 06 30.3	-1.5
S44A				IAmb	IAmb	04 06 32.2	
	comp=Z,18nm,0.9s						
SIUC	Southern Illin	22.84	34	P	P	04 06 30.3	-1.8
SIUC				IAmb	IAmb	04 06 32.4	
	comp=Z,24nm,0.8s						
P40A	Paris	22.90	27	IAmb	IAmb	04 06 34.3	
	comp=Z,29nm,0.7s						
K22A	Casper	22.99	358	P	P	04 06 33.1	-0.8
K22A				IAmb	IAmb	04 06 50.8	
	comp=Z,19nm,1.0s						
HVU	Hansel Valley	22.99	346	IAmb	IAmb	04 06 36.5	
	comp=Z,20nm,0.8s						
PNTR	Pine Nut	23.01	331	P	P	04 06 35.6	+1.5
PNTR				IAmb	IAmb	04 06 38.7	
	comp=Z,39nm,0.8s						
SWET	Sewanee	23.11	44	IAmb	IAmb	04 06 35.0	
	comp=Z,30nm,1.1s						
PDAR	Pinedale Array	23.36	352	P	P	04 06 37.1	-0.4
	comp=Z,5.7nm,0.9s,baz=159,slow=10,SNR=36						
	comp=Z,5.7nm,0.9s						
PDAR	Pinedale Array	23.36	352	P	P	04 06 36.1	-1.4
MPK	Martis Peak	23.38	330	P	P	04 06 40.9	+3.1
CLTN	Cedars of Leba	23.39	42	IAmb	IAmb	04 06 37.7	
	comp=Z,20nm,0.9s						
X51A	Calhoun	23.45	46	IAmb	IAmb	04 06 37.5	
	comp=Z,26nm,0.8s						
Y52A	Lilburn	23.62	49	IAmb	IAmb	04 06 41.0	
	comp=Z,23nm,0.8s						
456A	Hilliard	23.74	58	P	P	04 06 39.2	-1.8
GOGA	Godfrey	23.82	50	IAmb	IAmb	04 06 41.1	
	comp=Z,31nm,0.9s						
BEKR	Beckworth	23.98	331	P	P	04 06 44.7	+1.4
CPCT	Cooper Cave	24.17	45	IAmb	IAmb	04 06 44.2	
	comp=Z,20nm,1.2s						
SUTB	Sutter Butte	24.18	327	P	P	04 06 46.5	+1.6
SUTB				IAmb	IAmb	04 06 49.4	
	comp=Z,41nm,0.9s						
SNOW	Snow King Moun	24.22	350	IAmb	IAmb	04 06 47.9	
	comp=Z,24nm,0.8s						
LOHW	Long Hollow	24.34	351	IAmb	IAmb	04 06 48.8	
	comp=Z,20nm,0.9s						
W52A	Murphy	24.37	46	IAmb	IAmb	04 06 46.4	
	comp=Z,29nm,0.8s						
FXWY	Fox Creek	24.43	350	IAmb	IAmb	04 06 49.3	
	comp=Z,23nm,1.0s						
RSSD	Black Hills	24.46	2	P	P	04 06 46.6	-1.0
SCIA	State Center	24.48	22	IAmb	IAmb	04 06 48.4	
	comp=Z,19nm,0.5s						
TKL	Tuckaleechee C	24.79	45	LR	LR	04 17 48.4	
	comp=Z,87nm,20.4s,baz=239,slow=40						
TKL	Tuckaleechee C	24.79	45	IAmb	IAmb	04 06 55.0	
	comp=Z,19nm,1.1s						
WCI	Wyandotte Cave	24.82	38	P	P	04 06 49.1	-1.6
WCI				IAmb	IAmb	04 06 53.3	
	comp=Z,32nm,0.8s						
T50A	Nancy	24.91	42	IAmb	IAmb	04 06 50.9	
	comp=Z,24nm,0.7s						
O03E	Paynes Creek	25.00	329	P	P	04 06 53.6	+1.1
HODGE	Hodges	25.09	50	IAmb	IAmb	04 06 53.5	
	comp=Z,34nm,1.2s						
LKWY	Lake	25.24	351	P	P	04 06 55.9	+1.1
HATC	Hat Creek Radi	25.25	330	P	P	04 06 57.5	+2.8
P46A	Rosedale	25.30	34	IAmb	IAmb	04 06 55.1	
	comp=Z,33nm,0.9s						
TZTN	Tazewell	25.45	44	IAmb	IAmb	04 06 56.6	
	comp=Z,28nm,0.9s						
BCYI	Bear Canyon	25.54	346	IAmb	IAmb	04 07 18.7	
	comp=Z,19nm,1.4s						
YNE	Yellowstone No	25.62	352	P	P	04 06 58.5	+0.2
YHL	Hebgen Lake	25.64	350	IAmb	IAmb	04 07 02.9	
	comp=Z,14nm,0.9s						
PAULI	Pauline	25.70	49	IAmb	IAmb	04 06 58.7	
	comp=Z,25nm,0.7s						
JSC	Jenkinsville	25.84	51	IAmb	IAmb	04 07 00.4	
	comp=Z,34nm,1.1s						
SFIN	Lafayette	25.91	33	P	P	04 06 58.7	-1.9
SFIN				IAmb	IAmb	04 07 00.4	
	comp=Z,26nm,1.1s						
L42A	Oliver, Polo	25.96	27	IAmb	IAmb	04 07 00.0	
	comp=Z,22nm,0.7s						
S51A	Beattyville	26.07	42	IAmb	IAmb	04 07 01.5	
	comp=Z,29nm,0.7s						
J08A	Circle Bar Ran	26.14	338	IAmb	IAmb	04 07 05.0	
	comp=Z,12nm,0.8s						
KMSC	Kings Mountain	26.21	49	IAmb	IAmb	04 07 03.0	
	comp=Z,29nm,0.7s						
Y57A	Sumter	26.36	52	IAmb	IAmb	04 07 08.5	
	comp=Z,27nm,0.8s						
DLMT	Dillon	26.38	348	IAmb	IAmb	04 07 07.1	
	comp=Z,15nm,0.8s						
BOZ	Bozeman (W)	26.44	350	P	P	04 07 05.2	-0.3
U54A	Nelsons Funny	26.59	46	IAmb	IAmb	04 07 06.8	
	comp=Z,53nm,1.5s						
V55A	Taylorsville	26.65	48	IAmb	IAmb	04 07 07.0	
	comp=Z,12nm,0.8s						
N47A	Urbana	27.01	34	IAmb	IAmb	04 07 10.2	
	comp=Z,17nm,1.0s						
BMO	Blue Mountains	27.08	341	P	P	04 07 11.1	0.0
Q51A	Peebles	27.09	40	IAmb	IAmb	04 07 11.0	
	comp=Z,20nm,0.7s						
I40A	Norwalk	27.15	24	IAmb	IAmb	04 07 10.8	
	comp=Z,14nm,0.8s						
U56A	King	27.48	47	IAmb	IAmb	04 07 15.1	
	comp=Z,40nm,1.2s						
HRY	Holter Researc	27.55	350	P	P	04 07 15.2	-0.2
SPMN	Marine on St.	27.56	19	IAmb	IAmb	04 07 14.6	
	comp=Z,8.8nm,0.7s						
S54A	Dingess, Beckl	27.63	44	IAmb	IAmb	04 07 15.6	
	comp=Z,11nm,0.8s						
MSO	Missoula	28.05	347	P	P	04 07 20.1	+0.3
MSO				IAmb	IAmb	04 07 21.6	
	comp=Z,22nm,1.0s						
I05D	Terrebonne, OR	28.05	335	IAmb	IAmb	04 07 22.2	
	comp=Z,22nm,0.8s						
F10A	Beach Ranch, E	28.07	342	IAmb	IAmb	04 07 21.4	
	comp=Z,15nm,1.0s						
OVMT	Ovando	28.09	349	P	P	04 07 17.2	-3.0
V58A	Windy Hill, Pi	28.11	50	IAmb	IAmb	04 07 20.5	
	comp=Z,26nm,1.0s						
P53A	Whipple	28.57	41	IAmb	IAmb	04 07 24.1	
	comp=Z,17nm,0.9s						
EGMT	Eagleton	28.57	354	IAmb	IAmb	04 07 26.1	
	comp=Z,9.5nm,0.8s						
T57A	Hurt	28.59	47	IAmb	IAmb	04 07 24.6	
	comp=Z,15nm,0.8s						
Q54A	Coxs Mills	28.62	42	IAmb	IAmb	04 07 24.1	
	comp=Z,9.8nm,0.7s						
R55A	Marlinton	28.68	44	IAmb	IAmb	04 07 25.7	
	comp=Z,16nm,0.9s						

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HOOD   Mount Hood Mea    29.00 336  IAmb    IAmb     04 07 31.0
       comp=Z,25nm,0.9s
S57A   Dark Hollow, R    29.19  46  IAmb    IAmb     04 07 29.4
       comp=Z,10nm,0.7s
E07A   Sunnyside         29.41 339  P       P        04 07 32.6 +0.8
Q56A   Snyder Ridge,     29.71  44  IAmb    IAmb     04 07 34.1
       comp=Z,17nm,0.8s
T59A   Double "B" Far    29.77  49  IAmb    IAmb     04 07 35.3
       comp=Z,17nm,0.8s
EPH    Ephrata           30.03 340  IAmb    IAmb     04 07 38.6
       comp=Z,5.8nm,0.8s
NEW    Newport           30.14 344  LR      LR       04 19 53.5
       comp=Z,185nm,21.7s,baz=170,slow=37
NEW    Newport           30.14 344  IAmb    IAmb     04 07 40.0
       comp=Z,7.5nm,0.7s
PAMR   Moraine State     30.23  40  IAmb    IAmb     04 07 39.0
       comp=Z,34nm,1.4s
LON    Longmire          30.26 337  IAmb    IAmb     04 07 41.6
       comp=Z,7.7nm,0.8s
LTY    Liberty           30.29 339  P       P        04 07 40.6 +0.8
LTY                                 IAmb    IAmb     04 07 42.0
       comp=Z,17nm,0.8s
B08A   Colville Reser    30.84 342  IAmb    IAmb     04 07 46.6
       comp=Z,20nm,0.8s
GNW    Green Mountain    31.32 337  IAmb    IAmb     04 07 50.9
       comp=Z,28nm,1.2s
SSPA   Standing Stone    31.42  42  P       P        04 07 47.9 -1.8
SSPA                                IAmb    IAmb     04 07 49.1
       comp=Z,14nm,0.7s
SDMD   Soldier’s Deli    31.45  45  IAmb    IAmb     04 07 49.4
       comp=Z,6.4nm,0.7s
ULM    Lac du Bonnet     31.47  12  P       P        04 07 48.4 -1.6
       comp=Z,6.2nm,0.5s,baz=190,slow=10,SNR=8.8
ULM                                 LR      LR       04 21 20.7
       comp=Z,358nm,20.7s,baz=194,slow=38
       comp=Z,6.2nm,0.5s
ULM    Lac du Bonnet     31.47  12  IAmb    IAmb     04 07 48.4
       comp=Z,20nm,1.3s
PAGS   Pennsylvania G    31.95  44  P       P        04 07 52.5 -1.8
N58A   Sunbury           32.28  43  IAmb    IAmb     04 07 56.1
       comp=Z,13nm,0.7s
M57A   Sunshine Farm,    32.29  42  IAmb    IAmb     04 07 56.4
       comp=Z,12nm,0.7s
WUPA   West Chester U    32.54  45  IAmb    IAmb     04 07 59.1
       comp=Z,10nm,0.8s
OTAV   Otavalo           32.60 123  P       P        04 08 02.9 +2.1
OTAV                                IAmb    IAmb     04 08 04.6
       comp=Z,9.1nm,0.8s
SLOR   San Lorenzo -     33.16 124  P       P        04 08 08.7 +3.0
SLOR                                IAmb    IAmb     04 08 15.6
       comp=Z,7.1nm,1.0s
SADO   Sadowa            33.18  35  LR      LR       04 21 48.9
       comp=Z,132nm,21.6s,baz=137,slow=37
ROSC   El Rosal          33.55 112  P       P        04 08 10.9 +1.8
       comp=Z,3.2nm,0.4s,baz=139,slow=19,SNR=1.7
       comp=Z,3.2nm,0.4s
ROSC   El Rosal          33.55 112  P       P        04 08 10.5 +1.4
ROSC                                IAmb    IAmb     04 08 13.7
       comp=Z,11nm,1.1s
EDM    Edmonton          34.12 351  IAmb    IAmb     04 08 13.5
       comp=Z,11nm,0.8s
FFC    Flin Flon         35.14   3  P       P        04 08 19.8 -2.1
FFC                                 IAmb    IAmb     04 08 21.3
       comp=Z,7.0nm,0.8s
SDV    Santo Domingo     35.17 103  P       P        04 08 23.9 +1.1
       comp=Z,48nm,0.8s,baz=307,slow=5.8,SNR=41
SDV                                 LR      LR       04 23 08.2
       comp=Z,196nm,21.4s,baz=308,slow=37
       comp=Z,48nm,0.8s
SDV    Santo Domingo     35.17 103  P       P        04 08 23.4 +0.5
SDV                                 IAmb    IAmb     04 08 25.0
       comp=Z,54nm,0.8s
SDV    Santo Domingo     35.17 103  eP      P        04 08 24.0 +1.2
J61A   Chester           36.23  42  P       P        04 08 30.1 -1.2
M65A   Busby, Falmout    36.63  46  P       P        04 08 33.7 -1.0
       baz=244
SJG    San Juan          37.02  86  LR      LR       04 25 38.2
       comp=Z,90nm,18.2s,baz=248,slow=39
BBB    Bella Bella       37.07 337  LR      LR       04 22 59.7
       comp=Z,284nm,20.1s,baz=129,slow=35
ATAH   Atahualpa         37.53 133  P       P        04 08 46.2 +3.1
       comp=Z,7.5nm,0.9s,baz=336,slow=7.3,SNR=5.0
       comp=Z,7.5nm,0.9s
H62A   Milan             37.72  41  IAmb    IAmb     04 08 44.5
       comp=Z,19nm,1.0s
G62A   West of Eustis    38.42  40  IAmb    IAmb     04 08 49.8
       comp=Z,14nm,0.8s
FCC    Fort Churchill    39.94   9  IAmb    IAmb     04 09 01.7
       comp=Z,9.6nm,0.7s
D62A   Allapoint, All    40.25  39  P       P        04 09 04.1 -1.1
D62A                                IAmb    IAmb     04 09 04.8
       comp=Z,14nm,0.8s
U35K   Hyder             40.73 339  P       P        04 09 07.7 -1.1
       baz=143
V35K   Ketchikan         40.83 337  P       P        04 09 08.4 -1.3
       baz=140
CRAG   Craig             41.49 336  P       P        04 09 14.6 -0.6
       baz=138
T35M   Bob Quinn         41.65 340  P       P        04 09 15.9 -0.6
       baz=143
TOAD   Toad River Com    41.78 345  P       P        04 09 17.5  0.0
       baz=151
WRAK   Wrangell Islan    41.93 338  P       P        04 09 19.4 +0.7
       baz=140
U33K   Whale Pass        41.98 337  P       P        04 09 19.4 +0.3
       baz=139
T33K   Petersburg        42.45 338  P       P        04 09 23.4 +0.4
       baz=140
LIRD   Liard River Hi    42.49 344  P       P        04 09 23.8 +0.6
       baz=150
S34M   Telegraph Cree    42.69 340  P       P        04 09 25.0 +0.1
       baz=143
YKAW1  Yellowknife Wh    43.30 354  P       P        04 09 28.1 -1.7
YKAW1                               IAmb    IAmb     04 09 29.7
       comp=Z,6.3nm,0.7s
YKA    Yellowknife Ar    43.33 354  P       P        04 09 29.0 -1.0
       comp=Z,3.0nm,0.8s,baz=173,slow=7.5,SNR=32
       comp=Z,3.0nm,0.8s
YKA    Yellowknife Ar    43.33 354  P       P        04 09 28.4 -1.5
YKAW3  Yellowknife Wh    43.39 354  P       P        04 09 28.3 -2.2
SIT    Sitka             43.50 337  P       P        04 09 31.3 -0.1
       baz=137
S32K   Killisnoo         43.52 337  P       P        04 09 31.4 -0.2
       baz=138
WTLY   Watson Lake, Y    43.80 343  IAmb    IAmb     04 10 06.2
       comp=Z,15nm,1.4s
WTLY   Watson Lake, Y    43.80 343  P       P        04 09 33.9  0.0
       baz=147
R33M   Jennings River    43.83 341  P       P        04 09 34.4 +0.1
       baz=144
Q32M   Nakina River      43.88 340  P       P        04 09 33.7 -1.1
       baz=142
R32K   Eaglecrest        44.11 338  P       P        04 09 35.5 -0.9
       baz=139
TAOE   Nuku Hiva Isla    44.48 234  eLR     LR       04 21 59.1
       comp=Z,118nm,23.7s
S31K   Pelican           44.49 337  P       P        04 09 39.4 +0.1
       baz=136
P32M   Atlin             44.84 340  P       P        04 09 42.1 -0.1
       baz=140
P33M   Teslin, Yukon     45.05 341  P       P        04 09 44.2 +0.3
       baz=142
BLKN   Baker Lake        45.11   6  P       P        04 09 42.0 -2.2
BLKN                                IAmb    IAmb     04 09 43.1
       comp=Z,6.9nm,0.9s
SKAG   Skagway           45.28 339  P       P        04 09 45.8 +0.2
       baz=138
WRGLY  Wrigley           45.32 349  IAmb    IAmb     04 09 47.3
       comp=Z,9.9nm,0.9s
WRGLY  Wrigley           45.32 349  P       P        04 09 45.9 +0.1
       baz=156
PLBC   Pleasant Camp     45.63 338  P       P        04 09 48.5  0.0
       baz=137
SCHQ   Schefferville     45.63  30  P       P        04 09 47.0 -1.5
       comp=Z,13nm,0.9s,baz=222,slow=5.4,SNR=17
SCHQ                                LR      LR       04 30 05.1
       comp=Z,74nm,20.2s,baz=244,slow=38
       comp=Z,13nm,0.9s
SCHQ   Schefferville     45.63  30  P       P        04 09 46.9 -1.7
N32M   Quiet Lake        45.87 342  IAmb    IAmb     04 09 54.2
       comp=Z,13nm,1.0s
N32M   Quiet Lake        45.87 342  P       P        04 09 50.4  0.0
       baz=142
WHY    Whitehorse        46.04 340  P       P        04 09 51.9 +0.1
       baz=140
TEFE   Tefe              46.09 115  eP      P        04 09 52.7  0.0
P29M   Windy Craggy      46.24 338  P       P        04 09 52.5 -0.8
       baz=136
P30M   Million Dollar    46.32 339  P       P        04 09 53.8 -0.2
       baz=137
O30N   Mendenhall        46.51 340  P       P        04 09 55.2 -0.2
       baz=138
N31M   Braeburn, Yuko    46.95 341  P       P        04 09 58.7 -0.1
       baz=139
BOAV   Boa Vista         46.96 106  P       P        04 09 59.5 -0.1
BOAV                                IAmb    IAmb     04 10 00.3
       comp=Z,9.0nm,0.9s
BOAV   Boa Vista         46.96 106  eP      P        04 09 59.7 +0.2
O29M   Mount Kennedy     47.02 338  P       P        04 09 59.3 -0.1
       baz=135
HYT    Haines Junctio    47.02 339  P       P        04 09 59.3 -0.2
       baz=137
M31M   Drury Creek, Y    47.08 342  P       P        04 09 59.2 -0.7
       baz=141
N30M   Aishikik Lake     47.35 340  P       P        04 10 01.2 -0.7
       baz=138
YUK6   Outpost Mounta    47.40 339  P       P        04 10 02.5  0.0
       baz=136
PINM   Pinnacle          47.48 337  P       P        04 10 02.9 -0.1
       baz=133
YUK4   Talbot Arm        47.78 339  P       P        04 10 04.7 -0.8
       baz=136
O28M   Mount Upton       47.92 338  P       P        04 10 06.1 -0.6
       baz=133
M30M   Minto, Yukon      48.09 341  P       P        04 10 08.0 +0.3
       baz=139
YUK8   Steele Glacier    48.12 338  P       P        04 10 08.6 +0.4
       baz=134
CTG    Chitna Glacier    48.46 337  P       P        04 10 11.3 +0.6
       baz=132
M29M   Somme Creek       48.52 340  P       P        04 10 11.3 +0.2
       baz=136
MAYO   Mayo, Yukon       48.60 342  P       P        04 10 12.3 +0.7
       baz=140
YUK3   Moose Creek       48.70 339  P       P        04 10 13.4 +0.8
       baz=134
L29M   L29M              48.90 341  P       P        04 10 14.6 +0.8
       baz=137
KAIM   Kayak Island      48.96 335  P       P        04 10 14.7 +0.5
       baz=128
CRQE   Cirque            48.97 336  P       P        04 10 15.0 +0.5
       baz=130
K29M   Barlow Dome       49.26 342  P       P        04 10 17.4 +0.7
       baz=138
BVCY   Beaver Creek      49.28 339  P       P        04 10 16.1 -0.7
       baz=134
MACA   Manacapuru-AM     49.32 112  P       P        04 10 17.1 -0.6
MCARA  McCarthy VSAT     49.35 337  P       P        04 10 17.4 +0.1
       baz=130
Q23K   Middleton Isla    49.45 334  P       P        04 10 18.1 +0.1
       baz=125
J30M   Hart River        49.48 343  P       P        04 10 19.0 +0.6
       baz=140
M27K   Edge Creek, AK    49.59 339  P       P        04 10 18.9 -0.4
       baz=132
BMRM   Bremner River     49.68 336  P       P        04 10 20.1 +0.3
       baz=128
EYAK   Cordova Ski Ar    49.87 335  P       P        04 10 21.4 +0.3
       baz=127
J29N   Klondike Camp     49.92 342  P       P        04 10 22.3 +0.6
       baz=138
H31M   Peel River        49.93 345  P       P        04 10 21.7  0.0
       baz=143
DAWY   Dawson            49.99 341  P       P        04 10 23.1 +1.0
DAWY                                IAmb    IAmb     04 10 24.0
       comp=Z,6.3nm,0.8s
DAWY   Dawson            49.99 341  P       P        04 10 22.5 +0.3
       baz=136
I30M   Mount Dempster    49.99 343  P       P        04 10 23.0 +0.7
       baz=140
M26K   Nabesna, AK       50.01 338  P       P        04 10 22.4 +0.1
       baz=131
L27K   Beaver Creek,     50.05 339  P       P        04 10 22.7 +0.1
       baz=133
N25K   Chitina, Valde    50.08 337  P       P        04 10 23.1 +0.2
       baz=129
P23K   Montague Islan    50.21 334  P       P        04 10 23.8  0.0
       baz=125
KLU    Klutina           50.50 336  P       P        04 10 26.2 +0.1
       baz=127
L26K   Log Cabin Wild    50.54 339  P       P        04 10 26.7 +0.3
       baz=131
FRB    Frobisher Bay     50.59  20  LR      LR       04 32 38.1
       comp=Z,193nm,18.9s,baz=235,slow=37
I29M   Ogilvie Camp,     50.63 343  P       P        04 10 26.4 -0.5
       baz=138
HARP   HAARP             50.78 337  P       P        04 10 28.2 +0.1
       baz=129
G31M   Satah River       50.82 346  P       P        04 10 28.3  0.0
       baz=144,SNR=11
M24K   Tolsona, Glenn    50.97 337  P       P        04 10 29.7  0.0
       baz=127
EPYK   Eagle Plains      50.98 344  P       P        04 10 29.8 +0.3
       baz=141
C36M   Paulatuk          51.05 352  P       P        04 10 29.7 -0.3
       baz=157
LPAZ   La Paz            51.06 132  P       P        04 10 32.4 +0.8
       comp=Z,1.9nm,0.6s,baz=313,slow=8.5,SNR=6.5
LPAZ                                LR      LR       04 30 12.8
       comp=Z,54nm,21.1s,baz=300,slow=34
       comp=Z,1.9nm,0.6s
LPAZ   La Paz            51.06 132  P       P        04 10 31.5  0.0
PWL    Port Wells        51.08 335  P       P        04 10 30.2 -0.2
       baz=124
F31M   Tsiigehtchic      51.12 346  IAmb    IAmb     04 10 32.0
       comp=Z,10nm,0.7s
F31M   Tsiigehtchic      51.12 346  P       P        04 10 30.3 -0.2
       baz=145,SNR=7.6
SEW    Seward            51.13 333  P       P        04 10 30.2 -0.4
       baz=122
I28M   Miner Creek       51.15 342  IAmb    IAmb     04 10 55.1
       comp=Z,8.9nm,1.4s
I28M   Miner Creek       51.15 342  P       P        04 10 30.7 -0.3
       baz=136
SCM    Sheep Creek Mo    51.25 336  P       P        04 10 31.2 -0.5
       baz=126
PAX    Paxson            51.25 338  IAmb    IAmb     04 10 33.8
       comp=Z,8.5nm,0.8s
PAX    Paxson            51.25 338  P       P        04 10 31.2 -0.6
       baz=129
H29M   Whitestone        51.29 344  P       P        04 10 31.8 -0.1
       baz=139
KDAK   Kodiak Island     51.37 330  P       P        04 10 32.6 +0.1
       baz=118
M23K   Glacier View      51.38 336  P       P        04 10 33.2 +0.6
       baz=126
SCRK   Sand Creek        51.39 339  IAmb    IAmb     04 10 34.8
       comp=Z,6.7nm,0.8s
SCRK   Sand Creek        51.39 339  P       P        04 10 33.0 +0.2
       baz=131
KNK    Knik Glacier      51.44 335  P       P        04 10 33.7 +0.6
       baz=124
O22K   Cooper Landing    51.44 334  P       P        04 10 33.9 +0.8
       baz=122
OHAK   Old Harbor        51.45 329  P       P        04 10 33.9 +0.7
       baz=116
BRSE   Bradley Lake S    51.49 333  P       P        04 10 33.6 +0.1
       baz=121
RIDG   Independent Ri    51.52 339  P       P        04 10 34.6 +0.9
       baz=130
PB16   IPOC Station P    51.54 135  P       P        04 10 34.7 -0.3
PB16                                IAmb    IAmb     04 11 00.4
       comp=Z,8.9nm,1.3s
J26L   Joseph Creek      51.60 340  P       P        04 10 34.8 +0.5
       baz=132
SII    Sitkinak Islan    51.61 328  P       P        04 10 34.7 +0.3
       baz=115
SML    Sawmill           51.62 336  P       P        04 10 34.9 +0.5
       baz=125
Q20K   Shuyak Island     51.67 331  P       P        04 10 35.1 +0.3
       baz=118
F30M   Barrier River     51.73 346  IAmb    IAmb     04 10 36.7
       comp=Z,12nm,0.9s
F30M   Barrier River     51.73 346  P       P        04 10 35.1  0.0
       baz=142
G29M   Pine Creek        51.73 344  P       P        04 10 35.9 +0.7
       baz=140
I27K   Kandik River      51.76 342  P       P        04 10 35.8 +0.4
       baz=135
RC01   Rabbit Creek A    51.78 334  P       P        04 10 36.1 +0.5
       baz=123
INK    Inuvik            51.79 347  P       P        04 10 35.6 +0.1
       baz=145,SNR=17
PMR    Palmer            51.81 335  P       P        04 10 35.9 +0.1
       baz=124
HOM    Homer             51.84 332  P       P        04 10 35.8 -0.2
       baz=120
WAT6   Susitna Watana    51.84 337  P       P        04 10 36.3  0.0
       baz=126
K24K   Donnelly Dome     51.88 339  P       P        04 10 36.9 +0.5
       baz=129
I26K   Coal Creek Min    52.01 341  IAmb    IAmb     04 10 39.6
       comp=Z,10nm,0.8s
I26K   Coal Creek Min    52.01 341  P       P        04 10 37.6 +0.4
       baz=133
CHIR   Chirikof Islan    52.04 327  P       P        04 10 37.5 -0.1
       baz=113
H27K   Steamboat Moun    52.17 342  IAmb    IAmb     04 10 40.8
       comp=Z,5.5nm,0.8s
H27K   Steamboat Moun    52.17 342  P       P        04 10 38.7 +0.2
       baz=135
CAPN   Captain Cook N    52.20 334  P       P        04 10 38.1 -0.6
       baz=121
J25K   Salcha River,     52.26 339  IAmb    IAmb     04 10 42.1
       comp=Z,7.2nm,0.9s
J25K   Salcha River,     52.26 339  P       P        04 10 39.1 -0.1
       baz=130,SNR=5.4
WAT1   Susitna Watana    52.29 337  P       P        04 10 39.0 -0.4
       baz=125
M22K   Willow            52.30 335  P       P        04 10 39.2 -0.2
       baz=123
SUA    Susitna One       52.39 334  P       P        04 10 40.0 -0.3
       baz=122
Q19K   Cape Douglas,     52.39 331  P       P        04 10 40.2  0.0
       baz=117
O20K   Slope Mountain    52.48 332  P       P        04 10 40.5 -0.4
       baz=119
P19K   Oil Pt            52.54 332  P       P        04 10 41.1 -0.2
       baz=118
G27K   Doyon Strip       52.62 343  IAmb    IAmb     04 10 43.4
       comp=Z,6.4nm,0.7s
G27K   Doyon Strip       52.62 343  P       P        04 10 41.4 -0.4
       baz=135
HDA    Harding Lake      52.66 339  P       P        04 10 41.9 -0.2
       baz=128
GO01   Chusmiza          52.69 136  P       P        04 10 45.5 +2.1
GO01                                IAmb    IAmb     04 11 02.3
       comp=Z,11nm,1.4s
CUT    Chulitna          52.71 336  P       P        04 10 42.8 +0.3
       baz=123
F28M   Old Crow          52.73 344  P       P        04 10 42.6  0.0
       baz=138,SNR=32
RND    Reindeer          52.74 337  P       P        04 10 43.4 +0.7
E29M   Blow River        52.83 345  IAmb    IAmb     04 10 45.3
       comp=Z,11nm,0.9s
E29M   Blow River        52.83 345  P       P        04 10 43.5 +0.2
       baz=140
SPCR   Spurr Chakacha    52.86 334  P       P        04 10 44.3 +0.7
       baz=120
ILAR   Eielson Array     52.87 339  P       P        04 10 44.5 +0.8
       comp=Z,8.5nm,0.8s,baz=162,slow=6.9,SNR=170
       comp=Z,8.5nm,0.8s
ILAR   Eielson Array     52.87 339  P       P        04 10 43.3 -0.3
PRP    Porcupine Dome    52.90 340  P       P        04 10 44.5 +0.5
       baz=130,SNR=15
MCK    McKinley          52.96 337  P       P        04 10 45.2 +0.9
       baz=125
SKT    Skwentna          52.98 335  P       P        04 10 45.1 +0.6
       baz=122
CCB    Clear Creek Bu    53.10 339  IAmb    IAmb     04 10 47.1
       comp=Z,9.8nm,0.8s
Q17K   Contact Creek     53.16 329  P       P        04 10 46.3 +0.3
       baz=114
MDP    Montagnes des     53.19  99  LR      LR       04 35 27.7
       comp=Z,65nm,19.5s,baz=296,slow=38
POKR   Poker Plat Res    53.27 339  IAmb    IAmb     04 10 48.2
       comp=Z,8.0nm,0.8s
POKR   Poker Plat Res    53.27 339  P       P        04 10 47.3 +0.8
       baz=128
O19K   Port Alsworth     53.28 332  P       P        04 10 47.4 +0.8
       baz=117
TRF    Thorofare Moun    53.30 337  P       P        04 10 47.2 +0.2
       baz=124
G26K   Porcupine Rive    53.32 342  IAmb    IAmb     04 10 48.9
       comp=Z,8.8nm,0.9s
G26K   Porcupine Rive    53.32 342  P       P        04 10 47.4 +0.5
       baz=133
P18K   Big Mountain,     53.33 331  P       P        04 10 47.4 +0.2
       baz=116
E28M   Babbage River     53.39 345  P       P        04 10 47.2 -0.2
E28M                                IAmb    IAmb     04 10 48.9
       comp=Z,11nm,0.8s
E28M   Babbage River     53.39 345  P       P        04 10 47.8 +0.4
       baz=139
NEA2   Nenana            53.51 338  IAmb    IAmb     04 10 49.9
       comp=Z,8.9nm,0.7s
NEA2   Nenana            53.51 338  P       P        04 10 48.7 +0.3
       baz=126
O18K   Koktuh Hills      53.52 331  P       P        04 10 48.2 -0.3
       baz=116
M20K   Styx River        53.58 334  IAmb    IAmb     04 10 50.9
       comp=Z,11nm,0.7s
M20K   Styx River        53.58 334  P       P        04 10 48.9 -0.2
       baz=120
E27K   Coleen River      53.60 344  IAmb    IAmb     04 10 51.0
       comp=Z,14nm,0.9s
E27K   Coleen River      53.60 344  P       P        04 10 49.3 +0.4
       baz=136
N19K   Bonanza Creek     53.64 333  P       P        04 10 49.2 -0.3
       baz=118
A36M   Sachs Harbour     53.64 352  P       P        04 10 48.8 -0.4
       baz=156,SNR=16
Q16K   King Salmon       53.70 330  P       P        04 10 50.1 +0.4
       baz=114
R16K   Pilot Point       53.71 328  P       P        04 10 50.1 +0.3
       baz=112
PPLA   Purkeypile        53.72 335  P       P        04 10 50.2 +0.1
       baz=121
CHNA   Chernabura Isl    53.81 324  P       P        04 10 51.2 +0.6
       baz=108
P17K   Kvichak River     53.81 330  P       P        04 10 51.1 +0.5
       baz=114
H24K   Noodor Dome       53.85 340  P       P        04 10 51.5 +0.6
       baz=128
G25K   Bearman Lake      53.88 341  P       P        04 10 51.7 +0.8
       baz=130
BPAW   Bear Paw Mtn.     53.91 337  P       P        04 10 52.0 +0.6
       baz=123
I23K   Minto, Yukon-K    53.94 339  IAmb    IAmb     04 10 53.4
       comp=Z,9.8nm,0.8s
I23K   Minto, Yukon-K    53.94 339  P       P        04 10 52.5 +1.1
       baz=126,SNR=5.6
F26K   Sheenjek River    53.94 343  IAmb    IAmb     04 10 53.5
       comp=Z,9.5nm,0.8s
F26K   Sheenjek River    53.94 343  P       P        04 10 51.9 +0.5
       baz=133
N18K   Kilae Creek       54.20 332  P       P        04 10 54.2 +0.8
       baz=116
D27M   Malcolm River     54.21 345  IAmb    IAmb     04 10 55.2
       comp=Z,13nm,0.9s
D27M   Malcolm River     54.21 345  P       P        04 10 54.2 +0.8
       baz=137
ITTB   Itaituba          54.23 111  eP      P        04 10 54.2 -0.2
G24K   Hadweenzic Riv    54.27 341  P       P        04 10 54.4 +0.6
       baz=129
CHUM   Lake Minchumin    54.29 336  P       P        04 10 53.8 -0.2
       baz=122
F25K   Christian Rive    54.29 342  IAmb    IAmb     04 10 56.3
       comp=Z,7.1nm,1.0s
F25K   Christian Rive    54.29 342  P       P        04 10 54.4 +0.3
       baz=131
O17K   Koliganek Bris    54.35 331  P       P        04 10 55.3 +0.7
       baz=114
L19K   White Mountain    54.44 334  P       P        04 10 55.8 +0.6
       baz=118,SNR=5.0
SDPT   Sand Point        54.45 325  P       P        04 10 55.8 +0.5
       baz=108
P16K   Nushagak River    54.48 330  P       P        04 10 55.7 +0.3
       baz=113
M18K   Stony River       54.53 333  P       P        04 10 56.2 +0.4
       baz=117
E25K   Arctic Village    54.62 343  P       P        04 10 56.7 +0.3
E25K                                IAmb    IAmb     04 10 57.9
       comp=Z,6.4nm,1.1s
E25K   Arctic Village    54.62 343  P       P        04 10 56.8 +0.3
       baz=132,SNR=6.3
K20K   Telida            54.69 335  P       P        04 10 57.6 +0.6
       baz=120
N17K   Nushagak Hills    54.71 332  P       P        04 10 57.5 +0.4
       baz=115
O16K   Kokwok River B    54.74 330  P       P        04 10 56.8 -0.5
       baz=113
I21K   Tanana            54.87 338  P       P        04 10 58.3 +0.1
       baz=123,SNR=6.5
```

F24K	**Squaw Lake**	**54.91**	**341**	IAmb	IAmb	04 11 00.8	
	comp=Z,5.3nm,0.9s						
F24K	**Squaw Lake**	**54.91**	**341**	P	**P**	**04 10 59.1**	**+0.7**
	baz=129						
VILB	**Vilhena**	**54.94**	**122**	*e*P	**P**	**04 10 59.6**	**+0.2**
H22K	**Ishtalitna Cre**	**55.05**	**339**	IAmb	IAmb	04 11 00.9	
	comp=Z,9.5nm,0.7s						
H22K	**Ishtalitna Cre**	**55.05**	**339**	P	**P**	**04 11 00.1**	**+0.5**
	baz=124						
G23K	**Bananza Creek**	**55.08**	**340**	IAmb	IAmb	04 11 01.5	
	comp=Z,7.6nm,1.0s						
G23K	**Bananza Creek**	**55.08**	**340**	P	**P**	**04 11 00.3**	**+0.5**
	baz=126						
J20K	**Nowinta River**	**55.13**	**336**	P	**P**	**04 11 00.6**	**+0.4**
	baz=120						
C27K	**Jago River**	**55.16**	**345**	IAmb	IAmb	04 11 02.6	
	comp=Z,14nm,1.2s						
C27K	**Jago River**	**55.16**	**345**	P	**P**	**04 11 01.2**	**+1.0**
	baz=134						
M17K	**Holitna River**	**55.19**	**332**	P	**P**	**04 11 01.1**	**+0.5**
	baz=115						
L18K	**Granite Mounta**	**55.22**	**334**	P	**P**	**04 11 01.2**	**+0.4**
	baz=116						
RES	**Resolute Bay**	**55.38**	**3**	P	**P**	**04 10 59.7**	**-2.0**
N16K	**Nishlik Lake**	**55.40**	**331**	P	**P**	**04 11 02.8**	**+0.7**
	baz=113						
O15K	**Ungalikthiuk R**	**55.41**	**329**	P	**P**	**04 11 02.8**	**+0.6**
	baz=111						
H21K	**Melozitna Rive**	**55.42**	**338**	P	**P**	**04 11 02.6**	**+0.4**
	baz=122						
S12K	**Black Hills**	**55.42**	**325**	P	**P**	**04 11 03.1**	**+0.7**
	baz=107						
E24K	**Your Creek**	**55.43**	**342**	IAmb	IAmb	04 11 07.9	
	comp=Z,3.9nm,0.8s						
E24K	**Your Creek**	**55.43**	**342**	P	**P**	**04 11 02.8**	**+0.5**
	baz=128						
COLD	**Coldfoot**	**55.44**	**341**	IAmb	IAmb	04 11 04.5	
	comp=Z,7.6nm,0.8s						
COLD	**Coldfoot**	**55.44**	**341**	P	**P**	**04 11 02.8**	**+0.5**
	baz=126,SNR=6.2						
I20K	**Naaghedeneel**	**55.57**	**337**	P	**P**	**04 11 03.5**	**+0.3**
	baz=120						
J19K	**Poorman**	**55.61**	**336**	P	**P**	**04 11 03.9**	**+0.3**
	baz=118						
D25K	**Kavik River**	**55.64**	**344**	P	**P**	**04 11 04.1**	**+0.3**
	baz=131						
C26K	**Camden Bay**	**55.67**	**345**	P	**P**	**04 11 04.5**	**+0.7**
	baz=133						
G22K	**Bettles**	**55.68**	**340**	P	**P**	**04 11 04.9**	**+0.9**
	baz=124						
M16K	**Timber Creek**	**55.70**	**332**	P	**P**	**04 11 05.2**	**+0.9**
	baz=113						
E23K	**Chandalar**	**55.76**	**341**	P	**P**	**04 11 05.7**	**+1.1**
	baz=127						
J18K	**Innoko River**	**55.79**	**335**	IAmb	IAmb	04 11 06.0	
	comp=Z,10nm,0.8s						
J18K	**Innoko River**	**55.79**	**335**	P	**P**	**04 11 05.5**	**+0.6**
	baz=117						
NPGB	**Novo Progresso**	**55.84**	**113**	*e*P	**P**	**04 11 05.3**	**-0.7**
L17K	**Donlin**	**55.87**	**333**	P	**P**	**04 11 05.8**	**+0.4**
	baz=114						
N15K	**Kwethluk River**	**55.90**	**330**	P	**P**	**04 11 06.2**	**+0.6**
	baz=112						
FALS	**False Pass**	**55.94**	**324**	P	**P**	**04 11 06.4**	**+0.4**
	baz=105						
SIV	**San Ignacio**	**56.06**	**126**	P	**P**	**04 11 07.6**	**+0.2**
	comp=Z,14nm,0.7s,baz=290,slow=7.3,SNR=77						
	comp=Z,14nm,0.7s						
H20K	**Anotleneega Mo**	**56.07**	**337**	P	**P**	**04 11 07.8**	**+1.0**
	baz=120						
TOLK	**Toolik Lake Re**	**56.10**	**342**	P	**P**	**04 11 07.6**	**+0.5**
	baz=128						
K17K	**Iditarod**	**56.11**	**334**	P	**P**	**04 11 07.9**	**+0.7**
	baz=115						
G21K	**Allakaket**	**56.12**	**339**	P	**P**	**04 11 07.5**	**+0.3**
	baz=122						
O14K	**Tigyukauivet M**	**56.13**	**329**	P	**P**	**04 11 07.4**	**+0.2**
	baz=110						
D24K	**Happy Valley**	**56.20**	**343**	IAmb	IAmb	04 11 10.7	
	comp=Z,8.8nm,1.2s						
D24K	**Happy Valley**	**56.20**	**343**	P	**P**	**04 11 08.0**	**+0.3**
	baz=129						
L16K	**Owhat River**	**56.20**	**332**	P	**P**	**04 11 08.4**	**+0.6**
	baz=113						
M15K	**Kasigluk River**	**56.36**	**331**	P	**P**	**04 11 09.0**	**0.0**
	baz=111						
GCSA	**Galena City Sc**	**56.45**	**336**	P	**P**	**04 11 09.7**	**+0.2**
	baz=118						
E22K	**Anaktuvuk Pass**	**56.47**	**341**	IAmb	IAmb	04 11 11.1	
	comp=Z,9.5nm,1.2s						
E22K	**Anaktuvuk Pass**	**56.47**	**341**	P	**P**	**04 11 10.3**	**+0.6**
	baz=125						
F21K	**Alatna River**	**56.49**	**340**	P	**P**	**04 11 09.8**	**0.0**
	baz=122						
C24K	**Franklin Bluff**	**56.53**	**343**	P	**P**	**04 11 10.2**	**+0.2**
	baz=129						
N14K	**Kuskokwak Cree**	**56.56**	**330**	P	**P**	**04 11 10.7**	**+0.4**
	baz=110						
D23K	**Nanushuk River**	**56.62**	**342**	P	**P**	**04 11 11.9**	**+1.3**
	baz=126						
H19K	**Roundabout Mou**	**56.66**	**337**	P	**P**	**04 11 11.0**	**0.0**
	baz=118						
J17K	**VABM Dome**	**56.72**	**334**	P	**P**	**04 11 11.2**	**-0.3**
	baz=114						
M14K	**Bethel**	**56.97**	**331**	P	**P**	**04 11 13.0**	**-0.3**
	baz=110						
PDRB	**Porto dos Gac**	**57.01**	**119**	*e*P	**P**	**04 11 13.1**	**-1.1**
PPT2	**Papeete2**	**57.08**	**232**	*e*LR	LR	04 27 50.3	
	comp=Z,133nm,25.2s						
PPT2				*e*LR	LR	04 27 51.2	
	comp=Z,151nm,27.8s						
L15K	**Ungalak Mounta**	**57.08**	**332**	P	**P**	**04 11 15.0**	**+1.0**
	baz=111						
C23K	**Itkillik River**	**57.12**	**343**	P	**P**	**04 11 14.9**	**+0.7**
	baz=127						
D22K	**Ayikyak River**	**57.16**	**341**	P	**P**	**04 11 14.7**	**+0.1**
D22K				IAmb	IAmb	04 11 17.2	
	comp=Z,21nm,1.5s						
D22K	**Ayikyak River**	**57.16**	**341**	P	**P**	**04 11 15.2**	**+0.7**
	baz=124						
G19K	**Purcell Mounta**	**57.18**	**338**	IAmb	IAmb	04 11 15.8	
	comp=Z,11nm,0.8s						
G19K	**Purcell Mounta**	**57.18**	**338**	P	**P**	**04 11 15.1**	**+0.4**
	baz=118						
H18K	**Honhosa River**	**57.20**	**336**	P	**P**	**04 11 14.8**	**-0.1**
	baz=116						
PTLB	**Pontes e Lacer**	**57.23**	**124**	IAmb	IAmb	04 11 16.9	
	comp=Z,10nm,0.8s						
PTLB	**Pontes e Lacer**	**57.23**	**124**	*e*P	**P**	**04 11 15.8**	**+0.1**
J16K	**Anvik River**	**57.30**	**334**	P	**P**	**04 11 15.9**	**+0.3**
	baz=113						
K15K	**Wolf Creek Mou**	**57.32**	**333**	P	**P**	**04 11 16.4**	**+0.6**
	baz=111						
CLDB	**Colider**	**57.40**	**118**	*e*P	**P**	**04 11 16.5**	**-0.4**
UNV	**Unalaska Valle**	**57.46**	**322**	P	**P**	**04 11 17.3**	**+0.4**
	baz=101						
I17K	**Unalakleet**	**57.58**	**334**	P	**P**	**04 11 18.2**	**+0.7**
	baz=113						
G18K	**Tagagawik**	**57.63**	**337**	P	**P**	**04 11 18.6**	**+0.6**
	baz=116						
H17K	**Granite Mounta**	**57.70**	**336**	P	**P**	**04 11 19.1**	**+0.8**
	baz=115						
F19K	**Shaleruckik Mo**	**57.75**	**338**	IAmb	IAmb	04 11 20.8	
	comp=Z,14nm,1.1s						
F19K	**Shaleruckik Mo**	**57.75**	**338**	P	**P**	**04 11 19.2**	**+0.6**
	baz=118						
E19K	**Redstone River**	**57.86**	**339**	IAmb	IAmb	04 11 38.1	
	comp=Z,6.1nm,1.1s						
E19K	**Redstone River**	**57.86**	**339**	P	**P**	**04 11 20.0**	**+0.5**
	baz=119						
E20K	**Nigu River**	**57.91**	**340**	P	**P**	**04 11 20.3**	**+0.4**
	baz=120						
C21K	**Knifeblade Rid**	**57.94**	**341**	P	**P**	**04 11 20.9**	**+0.9**
	baz=122						
B22K	**Teshekpuk Lake**	**58.20**	**343**	IAmb	IAmb	04 11 22.3	
	comp=Z,4.1nm,0.8s						
B22K	**Teshekpuk Lake**	**58.20**	**343**	P	**P**	**04 11 22.0**	**+0.3**
	baz=124						
G17K	**Kiwalik Mounta**	**58.21**	**336**	P	**P**	**04 11 22.8**	**+0.9**
	baz=114						
D20K	**Etivluk River**	**58.28**	**340**	IAmb	IAmb	04 11 24.7	
	comp=Z,9.6nm,1.2s						
D20K	**Etivluk River**	**58.28**	**340**	P	**P**	**04 11 22.8**	**+0.4**
	baz=120						
J14K	**Nanvaranak Lak**	**58.36**	**333**	P	**P**	**04 11 23.5**	**+0.5**
	baz=110						
H03N2	**Juan Fernandez**	**58.45**	**154**	T	T	05 14 52.3	
	baz=333,slow=77,SNR=18						
H03N1	**Juan Fernandez**	**58.46**	**154**	T	T	05 14 56.0	
	baz=333,slow=77,SNR=23						
H03N3	**Juan Fernandez**	**58.47**	**154**	T	T	05 14 49.9	
	baz=333,slow=77,SNR=18						
H16K	**Elim**	**58.49**	**335**	P	**P**	**04 11 24.3**	**+0.4**
	baz=112						
D19K	**Kuna River**	**58.65**	**340**	IAmb	IAmb	04 11 26.2	
	comp=Z,11nm,1.1s						
D19K	**Kuna River**	**58.65**	**340**	P	**P**	**04 11 25.6**	**+0.6**
	baz=118						
NIKH	**Nikolski High**	**58.69**	**321**	P	**P**	**04 11 25.4**	**-0.1**
	baz=99						
F17K	**Baldwin Pennin**	**58.82**	**337**	P	**P**	**04 11 26.6**	**+0.5**
	baz=114						
G16K	**Koyuk River**	**58.82**	**336**	P	**P**	**04 11 26.6**	**+0.4**
	baz=112						
M11K	**Mekoryuk**	**58.85**	**330**	P	**P**	**04 11 26.7**	**+0.3**
	baz=106						
A22K	**Sinclair Lake**	**59.00**	**343**	P	**P**	**04 11 27.4**	**+0.1**
	baz=123						
E18K	**Tukpahlearik C**	**59.00**	**338**	P	**P**	**04 11 27.7**	**+0.3**
	baz=115						
B20K	**Meade River**	**59.10**	**342**	P	**P**	**04 11 27.9**	**-0.1**
	baz=120						
E17K	**Hotham Inlet**	**59.29**	**338**	P	**P**	**04 11 29.5**	**+0.1**
	baz=114						
G15K	**Niukluk**	**59.34**	**335**	P	**P**	**04 11 29.4**	**-0.4**
	baz=110						
A21K	**Barrow**	**59.62**	**343**	P	**P**	**04 11 31.5**	**0.0**
	baz=121						
C18K	**Utukok River**	**59.73**	**339**	IAmb	IAmb	04 11 33.1	
	comp=Z,5.1nm,0.8s						
C18K	**Utukok River**	**59.73**	**339**	P	**P**	**04 11 32.5**	**0.0**
	baz=115						
ANM	**Nome**	**59.73**	**334**	P	**P**	**04 11 32.8**	**+0.3**
	baz=109						
F15K	**North Star Dit**	**59.83**	**336**	P	**P**	**04 11 33.0**	**-0.2**
	baz=110						
D17K	**Noatak River**	**59.98**	**338**	P	**P**	**04 11 34.5**	**+0.3**
	baz=113						
RDOG	**Red Dog Mine**	**60.06**	**339**	IAmb	IAmb	04 11 36.8	
	comp=Z,14nm,1.2s						
RDOG	**Red Dog Mine**	**60.06**	**339**	P	**P**	**04 11 35.1**	**+0.4**
	baz=113						
SPIA	**Saint Paul Isl**	**60.18**	**325**	P	**P**	**04 11 35.9**	**+0.2**
	baz=100						
SALV	**Santo Antonio**	**60.20**	**122**	*e*P	**P**	**04 11 36.8**	**+0.4**
PRPB	**Parauapebas**	**60.30**	**109**	*e*P	**P**	**04 11 37.2**	**0.0**
C17K	**DeLong Mountai**	**60.32**	**339**	P	**P**	**04 11 36.9**	**+0.4**
	baz=113						
A19K	**Wainwright**	**60.37**	**341**	P	**P**	**04 11 37.4**	**+0.6**
	baz=116						
F14K	**Arctic Creek**	**60.41**	**335**	P	**P**	**04 11 36.8**	**-0.3**
	baz=108						
TBI	**Tubuai**	**60.66**	**227**	*e*LR	LR	04 29 33.0	
	comp=Z,583nm,28.8s						
C16K	**Lisburne Hills**	**60.99**	**338**	P	**P**	**04 11 41.9**	**+0.9**
	baz=111						
TNA	**Tin City**	**61.07**	**335**	P	**P**	**04 11 41.8**	**+0.2**
	baz=107						
SNDB	**Serra Nova Dou**	**61.74**	**116**	*e*P	**P**	**04 11 47.8**	**+0.9**
PP1B	**Ponte de Pedra**	**61.80**	**123**	*e*P	**P**	**04 11 47.9**	**+0.7**
BDQN	**Bodoquena, MS**	**62.01**	**127**	*e*P	**P**	**04 11 48.8**	**+0.3**
MURT	**Porto Murtinho**	**62.10**	**129**	*e*P	**P**	**04 11 49.2**	**0.0**
CFA	**Coronel Fontan**	**62.10**	**144**	P	**P**	**04 11 50.7**	**+1.6**
	comp=Z,1.4nm,0.5s,baz=304,slow=6.2,SNR=6.6						
	comp=Z,1.4nm,0.5s						
GAMB	**Gambell**	**62.19**	**333**	P	**P**	**04 11 48.4**	**-0.7**
	baz=102						
AQDB	**Aquidauana**	**62.82**	**127**	P	**P**	**04 11 53.9**	**-0.1**
AQDB	**Aquidauana**	**62.82**	**127**	*e*P	**P**	**04 11 54.5**	**+0.5**
ARAG	**Araguaiana, MT**	**63.22**	**120**	*e*P	**P**	**04 11 57.1**	**+0.3**
AMBA	**Amambai (Brazi**	**64.80**	**128**	*e*P	**P**	**04 12 07.8**	**+0.8**
CPUP	**Villa Florida**	**65.21**	**133**	P	**P**	**04 12 10.6**	**+1.0**
	comp=Z,4.0nm,0.7s,baz=322,slow=8.9,SNR=17						
	comp=Z,4.0nm,0.7s						
CPUP	**Villa Florida**	**65.21**	**133**	P	**P**	**04 12 10.4**	**+0.8**
CPUP				IAmb	IAmb	04 12 11.6	
	comp=Z,11nm,1.3s						
BDFB	**Brasilia**	**66.33**	**118**	P	**P**	**04 12 18.1**	**+1.0**
	comp=Z,4.6nm,0.7s,baz=278,slow=7.1,SNR=12						
	comp=Z,4.6nm,0.7s						
BDFB	**Brasilia**	**66.33**	**118**	P	**P**	**04 12 18.1**	**+1.0**
BDFB				IAmb	IAmb	04 12 19.0	
	comp=Z,5.4nm,0.8s						
CPSB	**Cacapava Do Su**	**70.43**	**134**	*e*P	**P**	**04 12 41.2**	**-1.1**
SPITS	**Spitsbergen Ar**	**77.03**	**10**	P	**P**	**04 13 20.7**	**+0.4**
	comp=Z,3.6nm,0.5s,baz=282,slow=2.8,SNR=1.7						
	comp=Z,3.6nm,0.5s						
TIXI	**Tiksi**	**81.85**	**345**	P	**P**	**04 13 46.1**	**-0.5**
ARCES	**ARCESS Array B**	**84.51**	**16**	P	**P**	**04 14 00.3**	**-0.1**
	comp=Z,5.0nm,0.8s,baz=321,slow=4.1,SNR=16						
	comp=Z,5.0nm,0.8s						
ARCES	**ARCESS Array B**	**84.51**	**16**	P	**P**	**04 14 00.1**	**-0.3**
ARCES				IAmb	IAmb	04 14 23.8	
	comp=Z,7.2nm,0.9s						
NOA	**NORSAR Array B**	**85.03**	**26**	P	**P**	**04 14 03.0**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=300,slow=4.6,SNR=3.9						
	comp=Z,1.1nm,0.8s						
ESDC	**Sonseca Array**	**86.03**	**49**	P	**P**	**04 14 07.8**	**-0.9**
	comp=Z,1.4nm,0.9s,baz=304,slow=5.5,SNR=12						
	comp=Z,1.4nm,0.9s						
ESDC	**Sonseca Array**	**86.03**	**49**	P	**P**	**04 14 08.6**	**0.0**
FINES	**FINESS Array B**	**90.39**	**21**	P	**P**	**04 14 28.8**	**0.0**
	comp=Z,6.5nm,1.1s,baz=38,slow=3.4,SNR=3.9						
	comp=Z,6.5nm,1.1s						
NRIK	**Noril'sk**	**90.81**	**355**	P	**P**	**04 14 31.5**	**+0.8**
	comp=Z,2.7nm,0.6s,baz=342,slow=3.0,SNR=5.6						
	comp=Z,2.7nm,0.6s						
NRIK	**Noril'sk**	**90.81**	**355**	IAmb	IAmb	04 14 31.8	
	comp=Z,3.0nm,0.7s						
HHC	**Hu-ho-hao-te**	**110.78**	**331**	*e*P	**PKiKP**	**04 20 01.8**	**+0.9**
NJ2	**Nanjing**	**113.46**	**320**	*e*P	**Pdif**	**04 16 13.3**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,31nm,0.5s						
LZH	**Lanzhou**	**118.11**	**333**	*e*P	**PKPdf**	**04 20 14.5**	**-0.7**
LZH				pP	pPKPdf	04 20 29.3	-1.9
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
BOSA	**Boshof**	**134.25**	**111**	PKP	**PKPdf**	**04 20 48.4**	**+2.3**
	comp=Z,3.8nm,1.0s,baz=184,slow=4.8,SNR=3.6						
BOSA	**Boshof**	**134.25**	**111**		**PKPdf**	**04 20 47.9**	**+1.9**

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*BER **30** 04:05:58.7±1.9, 78°.75N×4°.34E, h10^{km}, Mw3.0, ML1.2(DNK), Confirmed Earthquake*

*DNK **30** 04:06:00.0±1.7, 78°.72N×4°.80E, h36^{km}±27^{km}, ML1.1, Presumed earthquake*

ISC 30 04:05:55.5±1.4**, 78°.8N**±0°.1×**4°.27E**±0°.05**, h10**^{km}**, n10, σ2**^{s}**13**/12**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.50**	**80**	*e*P	**Pn**	**04 06 22.3**	**-0.2**
KBS				IAML		04 06 23.3	
	comp=Z,20nm,0.3s						
KBS	**Kingsbay**	**1.50**	**80**	*i* P	**Pn**	**04 06 22.1**	**-0.4**
BRBB	**Barentsburg B**	**2.11**	**103**	*e*P	**Pn**	**04 06 32.4**	**+1.6**
BRBA	**Barentsburg A**	**2.13**	**104**	*e*P	**Pn**	**04 06 33.0**	**+2.0**
SPA0	**Spitsbergen Ar**	**2.50**	**97**	*e*P	**Pn**	**04 06 37.4**	**+1.3**
SPA0				IAML		04 06 37.9	
	comp=Z,6.1nm,0.3s						
NOR	**Nord**	**4.55**	**319**	*i* P	**Pn**	**04 07 06.0**	**+1.7**
NOR				IAML		04 07 58.1	
	comp=Z,1.2nm,0.3s						
NOR	**Nord**	**4.55**	**319**	*i* P	**Pn**	**04 07 06.0**	**+1.7**
NOR				IAML		04 07 58.1	
	comp=Z,1.2nm,0.3s						
DAG	**Danmarks Havn**	**5.24**	**259**	*e*	Pn	04 07 11.7	-2.0
	baz=65,slow=16						
DAG				*i* P	**Pn**	**04 07 15.5**	**+1.8**
DAG				*i* S	**Sn**	**04 08 10.9**	**-3.1**
DAG				IAML		04 08 18.1	
	comp=Z,0.9nm,0.3s						
DAG	**Danmarks Havn**	**5.24**	**259**	*e*	Pn	04 07 11.7	-2.0
	baz=65,slow=16						
DAG				*i* P	**Pn**	**04 07 15.5**	**+1.8**
DAG				*i* S	**Sn**	**04 08 10.9**	**-3.1**
DAG				IAML		04 08 18.1	
	comp=Z,0.9nm,0.3s						
DBG	**Daneborg**	**7.18**	**244**	*i* P	**Pn**	**04 07 41.6**	**+1.2**
DBG				*i* S	Sn	04 08 55.9	-5.9
DBG				IAML		04 09 02.3	
	comp=Z,0.4nm,0.2s						

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*KOLA **30** 04:10:35.3, 78°.74N×5°.82E, h0^{km}, ML1.9, Greenland sea,Knipovich ridge, middle,Knipovich ridge, north*

*DNK **30** 04:10:35.7±0.9, 78°.77N×5°.01E, h36^{km}±8^{km}, ML1.9, Presumed earthquake*

*FCIAR **30** 04:10:37.0, 78°.64N×5°.70E, h10^{km}, station OMEGA has station magnitude of 3.80*

BER 30 04:10:33.9±2.5**, 78°.79N×4°.48E, h10**^{km}**, Mw3.4, ML1.7**(DNK)**, 1C, Confirmed Earthquake, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.46**	**81**	P	Pn	04 10 58.3	-1.9
KBS				S	Sn	04 11 15.0	-4.3
KBS	**Kingsbay**	**1.46**	**81**	*e*P	Pn	04 10 58.6	-1.6
KBS				*e*S	Sn	04 11 15.0	-4.3
KBS				IAML		04 11 18.8	
	comp=Z,33nm,0.3s						
KBS	**Kingsbay**	**1.46**	**81**	*i* P	Pn	04 10 58.0	-2.2
KBS				*i* S	Sn	04 11 14.0	-5.3
BRBB	**Barentsburg B**	**2.08**	**105**	P	Pn	04 11 07.3	-1.5
BRBB				S	Sn	04 11 30.7	-4.0
BRBB	**Barentsburg B**	**2.08**	**105**	*e*P	Pn	04 11 07.6	-1.1
BRBB				*e*S	Sn	04 11 30.2	-4.5
BRBA	**Barentsburg A**	**2.10**	**106**	*e*P	Pn	04 11 08.6	-0.4
BRBA				*e*S	Sn	04 11 31.6	-3.5
BRBA				IAML		04 11 35.9	
	comp=Z,17nm,0.6s						
SPA0	**Spitsbergen Ar**	**2.46**	**99**	⇑*i*P	Pn	04 11 13.6	-0.4
SPA0				*i* S	Sn	04 11 40.4	-3.7
SPA0	**Spitsbergen Ar**	**2.46**	**99**	*e*P	Pn	04 11 13.7	-0.4
SPA0				*e*S	Sn	04 11 40.5	-3.6
SPA0				IAML		04 11 44.7	
	comp=Z,23nm,0.5s						
SPITS	**Spitsbergen Ar**	**2.46**	**99**	P	Pn	04 11 13.3	-0.7
SPITS				S	Sn	04 11 42.1	-2.0
HSPB	**Hornsund (broa**	**2.94**	**122**	S	Sn	04 11 52.2	-3.6
HSPB	**Hornsund (broa**	**2.94**	**122**	P	Pn	04 11 19.4	-1.2
HSPB				S	Sn	04 11 50.8	-5.0
HSPB	**Hornsund (broa**	**2.94**	**122**	*e*S	Sn	04 11 52.3	-3.6
NOR	**Nord**	**4.55**	**318**	*i* P	Pn	04 11 41.0	-1.7
NOR				*i* S	Sn	04 12 30.4	-5.1
NOR				IAML		04 12 39.2	
	comp=Z,3.2nm,0.4s						
NOR	**Nord**	**4.55**	**318**	*i* P	Pn	04 11 42.9	+0.2
NOR				*i* S	Sn	04 12 31.3	-4.2
NOR				IAML		04 12 33.3	
	comp=Z,7.0nm,0.6s						
DAG	**Danmarks Havn**	**5.29**	**259**	*i* P	Pn	04 11 51.0	-1.7
DAG				*i* S	Sn	04 12 45.1	-8.5
DAG				IAML		04 12 54.1	
	comp=Z,3.0nm,0.3s						
DAG	**Danmarks Havn**	**5.29**	**259**	*i* P	Pn	04 11 51.9	-0.8
DAG				*i* S	Sn	04 12 48.8	-4.7
DAG				IAML		04 12 52.3	
	comp=Z,5.1nm,0.6s						
DBG	**Daneborg**	**7.24**	**244**	*e*P	Pn	04 12 18.3	-1.2
DBG				*e*S	Sn	04 13 32.4	-9.2
DBG	**Daneborg**	**7.24**	**244**	*i* P	Pn	04 12 18.1	-1.4
DBG				*i* S	Sn	04 13 34.3	-7.3
DBG				IAML		04 13 36.9	
	comp=Z,2.0nm,0.9s						
ZFI2	**Zemlya Franca-**	**7.75**	**55**	*e*P	Pn	04 12 25.7	-0.9
ZFI2				*e*S	Sn	04 13 45.8	-8.4
OMEGA	**Omega**	**7.77**	**55**	*e*P	Pn	04 12 25.7	-1.0
OMEGA				*e*S	Sn	04 13 45.6	-9.0
	comp=Z,26nm,3.2s						

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*BJI **30** 04:11:05.1, 27°.77N×142°.82E, h7^{km}, mB5.3/47, mb5.2/81, Ms5.0/86, Ms7 5.0/83*

*IDC **30** 04:11:07.2±0.4, 27°.82N×142°.76E, h0^{km}, mb5.1/38, mbtmp5.0/43, ML4.5/5, MS4.6/73, Error ellipse: s-maj=12.1km s-min=10.1km az=76.0*

*MOS **30** 04:11:10.6±1.0, 27°.79N×142°.70E, h34^{km}, mb5.5/78, MS5.3/18, Error ellipse: s-maj=7.9km s-min=4.1km az=118.8*

*NEIC **30** 04:11:10.2±1.5, 27°.84N±0°.06×142°.82E±0°.08, h17^{km}±3^{km}, mb5.4/564, Mww5.1/20, Error ellipse: s-maj=11.2km s-min=8.4km az=112.0*

*NEIC **30** 04:11:10, 27°.84N×142°.83E, h22^{km}*

*NEIC **30** 04:11:10, 27°.64N×143°.05E, h22^{km}, Moment Tensor Solution. Duration: 1^{s}9 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.09; M$_{\theta\theta}$1.16; M$_{\phi\phi}$-2.25; M$_{r\theta}$1.90; M$_{\theta\phi}$-2.78; M$_{\phi r}$3.99; Fault plane solution: M$_0$5.57000×10^{16} NP1: φ$_s$239.88000°, δ17.78000°, λ129.78000°. NP2: φ$_s$18.71000°, δ76.43000°, λ78.40000°. Principal axes: T 3.7459, Plg57.0000°, Azm274.0000°; N 2.6604, Plg11.0000°, Azm21.0000°; P -6.4064, Plg30.0000°, Azm118.0000°;*

*NIED **30** 04:11:11.8, 27°.85N×142°.52E, h73^{km}, MW5.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.18; M$_{\theta\theta}$0.23; M$_{\phi\phi}$-1.41; M$_{r\theta}$5.93; M$_{\theta\phi}$-2.52; M$_{\phi r}$-6.41; Fault plane solution: M$_0$8.82000×10^{16} NP1: φ$_s$56.00000°, δ9.00000°, λ-176.00000°. NP2: φ$_s$322.00000°, δ89.00000°, λ-81.00000°.*

*JMA **30** 04:11:11.8±0.1, 27°.8N±0°.6×14 °3E± °, h73^{km}±2^{km}, MD5.1/36, MV5.1/36, NEAR CHICHIJIMA ISLAND*

JMA Felt I J1 at NEAR CHICHIJIMA ISLAND .

*GCMT **30** 04:11:12.0±0.2, 27°.83N±0°.01×142°.94E±0°.01, h20^{km}±1^{km}, MW5.1/119, Moment Tensor Solution. s48,c72; s119,c202; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.50±.13; M$_{\theta\theta}$0.30±.09; M$_{\phi\phi}$-1.80±.10; M$_{r\theta}$-0.10±.18; M$_{\theta\phi}$-3.10±.08; M$_{\phi r}$4.58±.34; Best double couple: M$_0$5.75700×10^{16} NP1: φ$_s$256.00000°, δ33.00000°, λ163.00000°. NP2: φ$_s$0.00000°, δ81.00000°, λ58.00000°. Principal axes: T 5.4730, Plg45.0000°, Azm238.0000°; N 0.5690, Plg32.0000°, Azm6.0000°; P -6.0410, Plg28.0000°, Azm116.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 04:11:10.0±0.4**, 27°.82N**±0°.03×**142°.79E**±0°.04**, h19**^{km}±1^{km}**, h19**^{km}**:pP-P, n915, σ1**^{s}**65**/757**, mb5.4**/420**, MS4.8**/122**, 59C-24D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**0.90**	**217**	P	**Pn**	**04 11 28.3**	**+0.7**
CBIJ				*e*S	**Sn**	**04 11 40.6**	**+0.6**
CBIJ	**Chichi jima**	**0.90**	**217**	A	A	04 11 28.3	
	comp=N,150nm,1.1s,comp=E,197nm,2.8s						
JCJ	**Chichijima**	**0.90**	**217**	Pn	Pb	04 11 16.8	-10
	comp=E,3μm,0.3s,baz=80,slow=23,SNR=468						
JCJ	**Chichijima**	**0.90**	**217**		**Pn**	**04 11 27.7**	**+0.2**
JHH2	**Haha-jima-NKT2**	**1.30**	**205**	P	**Pb**	**04 11 33.9**	**+0.1**
JHH2				*e*S	**Sb**	**04 11 50.0**	**-0.1**
JHH2	**Haha-jima-NKT2**	**1.30**	**205**	A	A	04 11 33.9	
	comp=N,109nm,2.5s,comp=E,78nm,2.9s						
JAOM	**Aogashimamukai**	**5.32**	**331**	*e*S	**Sn**	**04 13 26.3**	**-2.8**
JHCJ	**Hachijojimakas**	**5.84**	**335**	*e*P	**Pn**	**04 12 35.8**	**+0.3**
JHCJ				*e*S	**Sn**	**04 13 37.4**	**-4.5**
JHJ2	**Mitsune**	**5.86**	**335**	Pn	**Pn**	**04 12 36.3**	**+0.4**
JHJ2	**Mitsune**	**5.86**	**335**	*e*P	**Pn**	**04 12 36.5**	**+0.6**
JHJ2				*e*S	**Sn**	**04 13 37.4**	**-5.1**
JHJ	**Hachijo jima 2**	**5.88**	**335**	Pn	**Pn**	**04 12 36.8**	**+0.7**
	comp=E,20nm,0.3s,baz=104,slow=22,SNR=13						
JHJ				Sn	**Sn**	**04 13 34.8**	**-8.2**
	comp=E,46nm,0.3s,baz=75,slow=20,SNR=1.4						
JHJ				LR	LR	04 14 44.0	
	comp=E,5μm,20.2s,baz=157,slow=37						
	comp=E,112nm,0.2s						
JMKN	**Mikurajimanish**	**6.65**	**336**	*e*P	**Pn**	**04 12 46.9**	**+0.3**
JMKN				*e*S	**Sn**	**04 13 59.6**	**-2.3**
JMYK	**Miyake Tsubota**	**6.81**	**337**	*e*P	**Pn**	**04 12 48.8**	**-0.1**
JMYK				*e*S	**Sn**	**04 14 01.8**	**-4.1**
BSO1	**Boso 1**	**6.99**	**348**	*e*P	**Pn**	**04 12 50.8**	**0.0**
BSO1				*e*S	**Sn**	**04 14 06.5**	**-3.0**
TK02	**Tokai 2**	**7.48**	**326**	*e*P	**Pn**	**04 12 59.4**	**+1.5**
TTO1	**TONANKAI O.B.S**	**7.75**	**320**	*e*P	**Pn**	**04 13 01.1**	**-0.5**
JOD2	**Odawara 2**	**8.06**	**338**	*e*P	**Pn**	**04 13 05.4**	**-0.7**
JOD2				*e*S	**Sn**	**04 14 35.1**	**-1.6**
JYN	**Shimob**	**8.46**	**336**	*e*P	**Pn**	**04 13 12.2**	**+0.6**
JYN				*e*S	**Sn**	**04 14 45.8**	**-0.8**
JTNC	**Tanabenakahech**	**8.59**	**316**	*e*P	**Pn**	**04 13 14.4**	**+1.1**
JRY	**Ryogami san**	**8.81**	**339**	*e*P	**Pn**	**04 13 15.9**	**-0.5**
JRY				*e*S	**Sn**	**04 14 51.9**	**-3.3**
JWY	**Kouya**	**8.87**	**318**	*e*P	**Pn**	**04 13 18.1**	**+0.9**
INU	**Inuyama**	**8.97**	**328**	Pn	**Pn**	**04 13 18.9**	**+0.3**

JGF	**Kuroka**	**9.03**	**331**	Pn	**Pn**	**04 13 20.4**	**+1.1**
JAG	**Ashikaga**	**9.03**	**343**	*e*P	**Pn**	**04 13 18.3**	**-1.0**
JAG				*e*S	**Sn**	**04 14 52.7**	**-7.9**
JYTA	**Yamagatataniai**	**9.30**	**328**	*e*P	**Pn**	**04 13 23.5**	**+0.5**
MJAR	**Matsushiro Arr**	**9.52**	**337**	Pn	**Pn**	**04 13 25.5**	**-0.5**
	comp=E,1.2nm,0.3s,baz=156,slow=10,SNR=50						
MJAR				Sn	**Sn**	**04 15 07.6**	**-5.0**
	comp=E,1.1nm,0.3s,baz=151,slow=20,SNR=8.5						
MJAR				LR	LR	04 17 17.9	
	comp=E,2µm,18.9s,baz=156,slow=39						
	comp=E,29nm,0.7s						
MAJO	**Matsushiro**	**9.52**	**337**	Pn	**Pn**	**04 13 25.3**	**-0.8**
MAJO	**Matsushiro**	**9.52**	**337**	P	**Pn**	**04 13 25.3**	**-0.8**
MJB9	**Matsu-Tunnel**	**9.53**	**337**	Pn	**Pn**	**04 13 26.0**	**-0.2**
JMN	**Monobe**	**9.66**	**310**	Pn	**Pn**	**04 13 30.4**	**+2.3**
JTO	**Tosashimizu**	**9.98**	**303**	*e*P	**Pn**	**04 13 30.3**	**-2.1**
JMZ	**Minamidaito 2**	**10.52**	**262**	Pn	**Pn**	**04 13 42.4**	**+2.6**
JSD	**Sado**	**10.87**	**341**	Pn	**Pn**	**04 13 42.0**	**-2.5**
JNU	**Nakatsue**	**11.55**	**300**	Pn	**Pn**	**04 13 57.2**	**+3.3**
	comp=E,0.5nm,0.3s,baz=122,slow=12,SNR=8.5						
JNU				LR	LR	04 18 08.6	
	comp=E,6µm,18.3s,baz=110,slow=37						
JNU	**Nakatsue**	**11.55**	**300**	Pn	**Pn**	**04 13 56.1**	**+2.2**
JOW	**Kunigami**	**12.94**	**269**	Pn	**Pn**	**04 14 15.6**	**+2.7**
	comp=E,1.6nm,0.3s,baz=103,slow=12,SNR=22						
JOW				LR	LR	04 19 11.2	
	comp=E,6µm,18.2s,baz=116,slow=38						
JOW	**Kunigami**	**12.94**	**269**	Pn	**Pn**	**04 14 17.1**	**+4.2**
ERM	**Erimo**	**14.17**	**1**	Pn	**Pn**	**04 14 25.1**	**-4.4**
ERM	**Erimo**	**14.17**	**1**	P	**Pn**	**04 14 25.2**	**-4.4**
TJN	**Taejon**	**15.59**	**307**	Pn	**Pn**	**04 14 48.2**	**-0.5**
TJN	**Taejon**	**15.59**	**307**	P	**Pn**	**04 14 48.2**	**-0.5**
TJN				pmax	pmax		
	comp=Z,841nm,1.6s						
KSRS	**Korea Array**	**15.76**	**311**	Pn	**Pn**	**04 14 50.8**	**-0.2**
	comp=Z,3.4nm,0.3s,baz=119,slow=11,SNR=28						
KSRS				LR	LR	04 20 49.9	
	comp=Z,4µm,18.4s,baz=130,slow=37						
	comp=Z,7.9nm,0.8s						
KSAR	**Wonju Array Be**	**15.78**	**311**		**P**	**04 14 55.6**	**+0.7**
KSAR	**Wonju Array Be**	**15.78**	**311**	P	**P**	**04 14 55.6**	**+0.7**
KS19	**Wonju Array Si**	**15.83**	**311**	Pn	**Pn**	**04 14 52.6**	**+0.9**
ASAJ	**Asahikawa**	**16.26**	**360**	Pn	**Pn**	**04 14 56.7**	**-0.6**
	comp=Z,5.4nm,0.3s,baz=219,slow=10,SNR=17						
ASAJ				Sn	Sn	04 17 43.5	-14
	comp=Z,0.8nm,0.3s,baz=42,slow=13,SNR=2.1						
ASAJ				LR	LR	04 22 05.4	
	comp=Z,2µm,21.3s,baz=186,slow=40						
	comp=Z,14nm,0.4s						
ASAJ	**Asahikawa**	**16.26**	**360**	P	**Pn**	**04 14 57.2**	**-0.1**
ASAJ				pmax	pmax		
	comp=Z,41nm,1.0s						
JKA	**Kamikawa-asahi**	**16.26**	**360**	Pn	**Pn**	**04 14 57.2**	**-0.1**
INCN	**Inchon**	**16.65**	**309**	P	**P**	**04 15 05.0**	**+0.4**
INCN				P	**P**	**04 15 05.0**	**+0.4**
INCN	**Inchon**	**16.65**	**309**	P	**P**	**04 15 04.7**	**+0.1**
INCN	**Inchon**	**16.65**	**309**	P	**P**	**04 15 04.7**	**+0.1**
INCN				pmax	pmax		
	comp=Z,63nm,1.0s						
VLA	**Vladivostok**	**17.64**	**333**	*i* P	**Pn**	**04 15 13.1**	**-1.4**
VLA				pmax	pmax		
	comp=Z,274nm,1.0s						
TEY	**Ternei**	**17.88**	**346**	⇑*e*P	**Pn**	**04 15 10.6**	**-6.9**
TEY				pmax	pmax		
	comp=Z,20nm,1.2s						
YOJ	**Yonaguni jima**	**18.07**	**264**		**P**	**04 15 22.2**	**+1.9**
YOJ				IAmb	IAmb	04 15 23.6	
	comp=Z,154nm,0.7s						
YOJ	**Yonaguni jima**	**18.07**	**264**	P	**P**	**04 15 22.2**	**+1.9**
YOJ				pmax	pmax		
	comp=Z,154nm,0.7s						
USRK	**Ussuriysk Ar.**	**18.50**	**335**	P	**P**	**04 15 22.6**	**-2.3**
	comp=Z,2.5nm,0.3s,baz=140,slow=9.7,SNR=19						
	comp=Z,20nm,0.9s						
SSE	**Sheshan**	**19.09**	**285**	P	**P**	**04 15 31.0**	**-0.5**
SSE				pP	**Pn**	**04 15 33.5**	**+1.1**
SSE				S	**S**	**04 19 07.3**	**0.0**
SSE				pmax	pmax		
	comp=Z,13nm,0.6s						
SSE				pmax	pmax		
	comp=Z,230nm,4.0s						
SSE				LR	LR		
	comp=Z,660nm,15.3s						
YSS	**Yuzhno-Sakhali**	**19.10**	**360**	*de*P	**Pn**	**04 15 36.8**	**+4.4**
YSS				*e*S	**S**	**04 19 08.2**	**+0.9**
YSS				pmax	pmax		
	comp=Z,100nm,1.0s						
YSS				MLR	MLR		
	comp=Z,1µm,15.0s						
YSS				MLR	MLR		
	comp=N,2µm,16.0s						
YSS				MLR	MLR		
	comp=E,2µm,14.0s						
TATO	**Taipei**	**19.29**	**266**	P	**P**	**04 15 33.2**	**-0.5**
TATO				P	**P**	**04 15 33.2**	**-0.5**
TATO				S	**Sn**	**04 19 08.6**	**-2.0**
TATO				S	**Sn**	**04 19 08.6**	**-2.0**
TATO	**Taipei**	**19.29**	**266**	P	**Pn**	**04 15 34.7**	**-0.1**
TATO				IAmb	IAmb	04 15 36.4	
	comp=Z,169nm,1.0s						
NACB	**Ninganchiao**	**19.39**	**264**	P	**P**	**04 15 34.6**	**-0.2**
YHNB	**Yeheng**	**19.46**	**266**	P	**Pn**	**04 15 36.4**	**-0.5**
YHNB				IAmb	IAmb	04 15 37.9	
	comp=Z,160nm,0.9s						
MDJ	**Mudanjiang**	**19.81**	**331**	P	**P**	**04 15 39.3**	**0.0**
MDJ				S	**Sn**	**04 19 26.3**	**+3.3**
MDJ				pmax	pmax		
	comp=Z,30nm,0.8s						
MDJ				LR	LR		
	comp=Z,2µm,17.2s						
MDJ				LR	LR		
	comp=Z,2µm,16.8s						
MDJ				LR	LR		
	comp=Z,4µm,16.5s						
YULB	**Yu-li**	**19.87**	**262**	IAmb	IAmb	04 15 45.5	
	comp=Z,174nm,0.7s						
SSLB	**Suanglung**	**20.06**	**263**	P	Pn	04 15 44.2	+0.2
TWG	**Pinlang**	**20.24**	**261**	P	**P**	**04 15 45.0**	**+0.8**
TWG				IAmb	IAmb	04 15 49.2	
	comp=Z,189nm,1.0s						
TPUB	**Ta-pu**	**20.48**	**262**	P	Pn	04 15 48.5	-0.5
TPUB				IAmb	IAmb	04 15 59.2	
	comp=Z,259nm,1.1s						
DL2	**Dalian**	**20.80**	**308**	P	**P**	**04 15 43.0**	**-7.0**
DL2				S	**S**	**04 19 32.5**	**-8.8**
DL2				pmax	pmax		
	comp=Z,74nm,1.4s						
DL2				pmax	pmax		
	comp=Z,640nm,6.0s						
DL2				LR	LR		
	comp=N,3µm,14.5s						
DL2				LR	LR		
	comp=E,5µm,15.7s						
DL2				LR	LR		
	comp=Z,7µm,17.3s						
SNY	**Shenyang**	**21.00**	**317**	⇓P	**P**	**04 15 52.8**	**+0.5**
SNY				S	**S**	**04 19 45.0**	**-0.4**
SNY				pmax	pmax		
	comp=Z,29nm,1.2s						
SNY				LR	LR		
	comp=Z,2µm,17.1s						
SNY				LR	LR		
	comp=Z,930nm,15.9s						
SNY				LR	LR		
	comp=Z,2µm,18.9s						
NJ2	**Nanjing**	**21.15**	**287**	⇓*i*P	**P**	**04 15 54.0**	**+0.1**
NJ2				S	**S**	**04 19 48.0**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,92nm,1.1s						
NJ2				LR	LR		
	comp=Z,2µm,18.5s						
NJ2				LR	LR		
	comp=Z,1µm,19.0s						
NJ2				LR	LR		
	comp=Z,2µm,18.9s						
CN2	**Changchun**	**21.19**	**323**	*e*P	**P**	**04 15 53.0**	**-1.3**
CN2				*e*S	**S**	**04 19 43.0**	**-6.1**
CN2				pmax	pmax		
	comp=Z,500nm,10.5s						
CN2				LR	LR		
	comp=Z,5µm,16.0s						
CN2				LR	LR		
	comp=Z,4µm,16.0s						
CN2				LR	LR		
	comp=Z,5µm,19.1s						
BNX	**BinXian**	**21.65**	**330**	⇑P	**P**	**04 15 58.0**	**-1.2**
BNX				sP	**sP**	**04 16 04.8**	**-0.5**
BNX				S	**S**	**04 19 54.5**	**-3.6**
BNX				pmax	pmax		
	comp=Z,74nm,1.0s						
BNX				pmax	pmax		
	comp=Z,800nm,6.2s						
BNX				LR	LR		
	comp=Z,3µm,16.4s						
BNX				LR	LR		
	comp=Z,3µm,15.8s						
BNX				LR	LR		
	comp=Z,3µm,17.7s						
QZH	**Quanzhou**	**21.86**	**268**	P	**P**	**04 16 01.8**	**+0.2**
QZH				S	**S**	**04 20 03.0**	**+0.6**
QZH				pmax	pmax		
	comp=Z,96nm,0.9s						
QZH				LR	LR		
	comp=Z,1µm,16.8s						
QZH				LR	LR		
	comp=Z,3µm,18.5s						
QZH				LR	LR		
	comp=Z,2µm,16.0s						
TYV	**Tymovskoe**	**23.01**	**360**	*e*P	**P**	**04 16 15.1**	**+1.5**
TYV				*e*S	**S**	**04 20 25.0**	**+1.8**
TYV				pmax	pmax		
	comp=Z,200nm,3.0s						
TYV				pmax	pmax		
	comp=Z,22nm,0.9s						
TYV				smax	smax		
	comp=N,12nm,1.7s						
TYV				smax	smax		
	comp=E,9.0nm,1.7s						
TYV				smax	smax		
	comp=N,300nm,3.6s						
TYV				smax	smax		
	comp=E,500nm,3.6s						
TYV				MLR	MLR		
	comp=Z,2µm,20.0s						
GRNR	**Gornyy**	**23.42**	**350**	⇓*i*P	**P**	**04 16 19.2**	**+1.4**
GRNR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,680nm,10.0s						
GRNR				MLR	MLR		
	comp=N,380nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,650nm,17.0s						
H11N2	**WAKE ISLAND Hy**	**23.46**	**105**	T	T	04 40 47.9	
	baz=297,slow=75,SNR=69						
H11N1	**WAKE ISLAND Hy**	**23.46**	**105**	T	T	04 40 42.2	
	baz=297,slow=75,SNR=58						
H11N3	**WAKE ISLAND Hy**	**23.48**	**105**	T	T	04 40 49.0	
	baz=297,slow=75,SNR=46						
TGY	**Tagaytay City**	**24.49**	**241**	LR	LR	04 25 44.0	
	comp=Z,3µm,18.7s,baz=74,slow=36						
WHN	**Wuhan**	**24.95**	**283**	⇑P	**P**	**04 16 32.0**	**-0.2**
WHN				S	**S**	**04 21 00.5**	**+5.6**
WHN				pmax	pmax		
	comp=Z,310nm,0.8s						
WHN				pmax	pmax		
	comp=Z,1µm,3.9s						
WHN				LR	LR		
	comp=Z,4µm,14.0s						
WHN				LR	LR		
	comp=Z,7µm,14.6s						
WHN				LR	LR		
	comp=Z,6µm,15.3s						
BJI	**Beijing**	**25.12**	**306**	P	**P**	**04 16 32.5**	**-1.1**
BJI				S	**S**	**04 20 56.3**	**-1.1**
BJI				LR	LR		
	comp=Z,950nm,16.0s						
BJI				LR	LR		
	comp=Z,2µm,16.8s						
BJI				LR	LR		
	comp=Z,2µm,16.8s						
HEH	**HeiHe**	**25.29**	**337**	*e*P	**P**	**04 16 36.0**	**+1.0**
HEH				pP	**pP**	**04 16 39.8**	**-0.3**
HEH				S	**S**	**04 21 04.3**	**+4.4**
HEH				pmax	pmax		
	comp=Z,31nm,1.1s						
HEH				pmax	pmax		
	comp=Z,950nm,7.3s						
HEH				LR	LR		
	comp=Z,2µm,17.8s						
HEH				LR	LR		
	comp=Z,3µm,16.6s						
HEH				LR	LR		
	comp=Z,3µm,15.2s						
HNS	**HongShan**	**25.43**	**299**	⇑P	**P**	**04 16 34.5**	**-2.0**
HNS				S	**S**	**04 20 56.0**	**-6.4**
HNS				pmax	pmax		
	comp=Z,24nm,0.9s						
HNS				LR	LR		
	comp=Z,1µm,16.9s						
HNS				LR	LR		
	comp=Z,2µm,17.9s						
HNS				LR	LR		
	comp=Z,2µm,17.6s						
DAV	**Davao City (W)**	**26.30**	**222**	LR	LR	04 27 56.5	
	comp=Z,1µm,18.9s,baz=49,slow=38						
CNSH	**ChangSha**	**26.34**	**278**	P	**P**	**04 16 44.3**	**-0.5**
CNSH				S	**S**	**04 21 14.0**	**-2.9**
CNSH				pmax	pmax		
	comp=Z,43nm,1.5s						
CNSH				LR	LR		
	comp=Z,2µm,16.6s						
CNSH				LR	LR		
	comp=Z,2µm,17.4s						
CNSH				LR	LR		
	comp=Z,3µm,17.5s						
LYN	**LuoYang**	**26.73**	**292**	⇑P	**P**	**04 16 46.5**	**-1.8**
LYN				pP	pP	04 16 49.8	-3.4
LYN				pmax	pmax		
	comp=Z,43nm,1.1s						
LYN				pmax	pmax		
	comp=Z,540nm,5.6s						
LYN				LR	LR		
	comp=Z,3µm,12.7s						
LYN				LR	LR		
	comp=Z,3µm,18.1s						
LYN				LR	LR		
	comp=Z,6µm,17.4s						
XLT	**XiLinHaoTe**	**26.78**	**314**	*e*P	**P**	**04 16 48.3**	**-0.5**
XLT				pP	pP	04 16 52.0	-1.8
XLT				S	**S**	**04 21 27.0**	**+3.2**
XLT				pmax	pmax		
	comp=Z,30nm,0.9s						
XLT				pmax	pmax		
	comp=Z,430nm,10.1s						
XLT				LR	LR		
	comp=Z,2µm,17.1s						
XLT				LR	LR		
	comp=Z,2µm,16.2s						
TIY	**Taiyuan**	**27.26**	**299**	*e*P	**P**	**04 16 53.5**	**+0.4**
TIY				S	**S**	**04 21 38.3**	**+6.8**
TIY				SS	**SnSn**	**04 22 45.5**	**+5.5**
TIY				pmax	pmax		
	comp=Z,390nm,6.9s						
TIY				LR	LR		
	comp=Z,830nm,19.2s						
TIY				LR	LR		
	comp=Z,1µm,17.9s						
TIY				LR	LR		
	comp=Z,2µm,18.6s						
PEA0B	**Petropavlovsk-**	**27.58**	**20**	P	**P**	**04 16 56.2**	**+0.5**
PEA0B				IAmb	IAmb	04 17 19.5	
	comp=Z,178nm,1.9s						
PEA0B	**Petropavlovsk-**	**27.58**	**20**	P	**P**	**04 16 56.2**	**+0.5**
PEA0B				pmax	pmax		
	comp=Z,178nm,1.9s						
PETK	**Petropavlovsk-**	**27.58**	**20**	P	**P**	**04 16 54.8**	**-0.9**
	comp=Z,4.5nm,0.9s,baz=208,slow=6.0,SNR=4.9						
PETK				LR	LR	04 26 31.5	
	comp=Z,353nm,21.7s,baz=197,slow=34						
	comp=Z,4.5nm,0.9s						
PETK	**Petropavlovsk-**	**27.58**	**20**	P	**P**	**04 16 56.8**	**+1.1**
PETK	**Petropavlovsk-**	**27.58**	**20**	P	**P**	**04 16 56.8**	**+1.1**
HIA	**Hailar**	**27.79**	**327**	IAmb	IAmb	04 17 00.2	
	comp=Z,120nm,1.2s						
HILR	**Hailar Array B**	**27.98**	**327**	P	**P**	**04 16 59.9**	**+0.5**
	comp=Z,24nm,0.7s,baz=132,slow=10,SNR=39						
HILR				LR	LR	04 28 14.8	
	comp=Z,916nm,18.5s,baz=90,slow=37						
	comp=Z,24nm,0.7s						
ZEA	**Zeya**	**28.31**	**340**	*e*P	**P**	**04 17 03.1**	**+0.9**
ZEA				*e*S	**S**	**04 21 49.3**	**+1.8**
ZEA				pmax	pmax		
	comp=Z,300nm,4.5s						
ZEA				pmax	pmax		
	comp=N,30nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,60nm,1.3s						
ZEA				smax	smax		
	comp=E,300nm,6.3s						
ZEA				smax	smax		
	comp=N,400nm,9.4s						
ZEA				MLR	MLR		
	comp=E,100nm,15.0s						
ZEA				MLR	MLR		
	comp=N,500nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,11.0s						
HHC	**Hu-ho-hao-te**	**28.71**	**305**	⇑*i*P	**P**	**04 17 04.3**	**-1.8**
HHC				pP	pP	04 17 09.0	-2.1
HHC				S	**S**	**04 21 51.0**	**-3.4**
HHC				pmax	pmax		
	comp=Z,26nm,1.1s						
HHC				pmax	pmax		
	comp=Z,180nm,5.4s						
HHC				LR	LR		
	comp=Z,2µm,15.2s						
HHC				LR	LR		
	comp=Z,3µm,17.9s						
HHC				LR	LR		
	comp=Z,3µm,16.1s						
GULI	**GuiLin**	**29.07**	**273**	P	**P**	**04 17 05.8**	**-3.5**
GULI				S	**S**	**04 21 56.3**	**-3.7**
GULI				pmax	pmax		
	comp=Z,23nm,1.0s						
GULI				pmax	pmax		
	comp=Z,330nm,7.7s						
GULI				LR	LR		
	comp=Z,890nm,13.7s						
GULI				LR	LR		
	comp=Z,2µm,15.7s						
GULI				LR	LR		
	comp=Z,2µm,17.3s						
ENH	**Enshi**	**29.16**	**283**	IAmb	IAmb	04 17 10.2	
	comp=Z,75nm,0.8s						
XAN	**Xi'an**	**29.61**	**291**	⇑P	**P**	**04 17 13.3**	**-0.8**
XAN				pP	pwP	04 17 22.0	-1.1
XAN				PP	**PnPn**	**04 18 14.0**	**+4.9**
XAN				S	**S**	**04 22 07.5**	**-1.1**
XAN				sS	sS	04 22 22.5	+8.1
XAN				SS	**SnSn**	**04 23 46.3**	**+8.9**
XAN				pmax	pmax		
	comp=Z,96nm,1.1s						
XAN				pmax	pmax		
	comp=Z,410nm,3.6s						
XAN				LR	LR		
	comp=Z,1µm,16.3s						
XAN				LR	LR		
	comp=Z,4µm,16.3s						
XAN				LR	LR		
	comp=Z,6µm,16.3s						
BTO	**Baotou**	**29.77**	**304**	*e*P	**P**	**04 17 17.3**	**+1.8**
BTO				pP	**sP**	**04 17 21.5**	**-0.5**
BTO				sP	**pwP**	**04 17 24.3**	**-0.1**
BTO				PP	**PnPn**	**04 18 15.0**	**+3.8**
BTO				S	**S**	**04 22 15.5**	**+4.5**
BTO				sS	**sS**	**04 22 21.8**	**+4.5**
BTO				SS	**ScP**	**04 23 50.8**	**-9.2**
BTO				pmax	pmax		
	comp=Z,40nm,1.1s						
BTO				pmax	pmax		
	comp=Z,440nm,7.2s						
BTO				LR	LR		
	comp=Z,5µm,15.8s						
BTO				LR	LR		
	comp=Z,5µm,15.6s						
BTO				LR	LR		
	comp=Z,7µm,15.2s						
SIJI	**Sorong**	**30.60**	**203**	P	P	04 17 30.5	+7.6
QIZ	**Qiongzhong**	**31.39**	**261**	P	**P**	**04 17 29.5**	**-0.4**
QIZ				S	**S**	**04 22 40.8**	**+4.2**
QIZ				pmax	pmax		
	comp=Z,510nm,4.9s						
QIZ				LR	LR		
	comp=Z,800nm,13.1s						
QIZ				LR	LR		
	comp=Z,1µm,14.4s						
QIZ				LR	LR		
	comp=Z,1µm,16.5s						
GYA	**Guiyang**	**32.10**	**276**	⇑P	**P**	**04 17 35.8**	**-0.5**
GYA				pmax	pmax		
	comp=Z,71nm,1.0s						
GYA				LR	LR		
	comp=Z,1µm,14.7s						
GYA				LR	LR		
	comp=Z,2µm,20.0s						
GYA				LR	LR		
	comp=Z,4µm,17.6s						
FAKI	**Fak Fak**	**32.20**	**200**	P	**P**	**04 17 36.7**	**-0.3**
FAKI				IAmb	IAmb	04 18 14.7	
	comp=Z,54nm,1.2s						
MA2	**Magadan**	**32.22**	**8**	P	**P**	**04 17 37.1**	**+0.5**
	comp=Z,6.1nm,0.6s,baz=191,slow=16,SNR=2.0						
MA2				LR	LR	04 31 05.4	
	comp=Z,506nm,20.1s,baz=197,slow=37						
	comp=Z,6.1nm,0.6s						
MA2	**Magadan**	**32.22**	**8**	P	**P**	**04 17 36.4**	**-0.3**
MA2	**Magadan**	**32.22**	**8**	*i* P	**P**	**04 17 37.2**	**+0.5**
MA2				pmax	pmax		
	comp=Z,16nm,0.9s						
KMPI	**Kaimana, Papua**	**32.50**	**197**	P	**P**	**04 17 40.5**	**+0.9**
	comp=Z,97nm,1.0s						
CIT	**Chita**	**32.58**	**326**	*e*P	**P**	**04 17 41.0**	**+0.9**
CIT				*e*		04 17 48.4	
CIT				*e*		04 17 56.8	
CIT				*e*		04 18 56.6	
CIT				*e*		04 19 05.4	
CIT				*e*		04 20 34.0	
CIT				*e*S	**S**	**04 22 56.8**	**+2.1**
CIT				*e*		04 24 44.0	
CIT				pmax	pmax		
	comp=Z,244nm,2.4s						
GTOI	**Gorontalo**	**33.01**	**218**	P	**P**	**04 17 43.8**	**-0.3**
	comp=Z,749nmcomp=Z,66nm,0.9s						
KKM	**Kota Kinabalu**	**33.24**	**234**	P	**P**	**04 17 45.9**	**-0.3**
KKM				IAmb	IAmb	04 17 48.6	
	comp=Z,73nm,1.1s						
KKM	**Kota Kinabalu**	**33.24**	**234**	P	**P**	**04 17 46.7**	**+0.5**
	comp=Z,2µmcomp=Z,71nm,1.0s						
MRSI	**Marisa**	**33.74**	**220**	P	**P**	**04 17 50.8**	**+0.3**
SANI	**Sanana**	**33.81**	**211**	P	**P**	**04 17 49.8**	**-1.2**
	comp=Z,30nm,0.5s						
LZH	**Lanzhou**	**33.88**	**294**	⇑P	**P**	**04 17 50.5**	**-1.2**
LZH				sP	pP	04 17 57.3	+0.5
LZH				S	**S**	**04 23 15.0**	**-0.3**
LZH				SS	**SnSn**	**04 25 18.0**	**-3.2**
LZH				pmax	pmax		
	comp=Z,59nm,1.4s						
LZH				LR	LR		
	comp=Z,1µm,15.1s						
LZH				LR	LR		
	comp=Z,2µm,17.5s						
LZH				LR	LR		
	comp=Z,3µm,18.2s						
TOLI2	**Tolitoli**	**33.90**	**222**	P	**P**	**04 17 51.2**	**-0.7**
TOLI2				IAmb	IAmb	04 18 07.3	
	comp=Z,57nm,1.0s						
KRAI	**Karang Ratu**	**33.92**	**206**	P	**P**	**04 17 53.0**	**+1.0**
LZDM	**Lanzhou Array**	**33.99**	**294**	P	**P**	**04 17 51.7**	**-1.2**
	comp=Z,20nm,0.6s,baz=134,slow=6.4,SNR=33						
LZDM				LR	LR	04 32 51.2	
	comp=Z,2µm,18.3s,baz=95,slow=38						
	comp=Z,20nm,0.6s						
SHEM	**Shemya Is, Ala**	**34.03**	**34**	LR	LR	04 31 49.6	
	comp=Z,522nm,18.8s,baz=292,slow=36						
ULN	**Ulaanbaatar**	**34.17**	**316**	P	**P**	**04 17 54.8**	**+0.7**
ULN				P	**P**	**04 17 54.8**	**+0.7**
ULN	**Ulaanbaatar**	**34.17**	**316**	P	**P**	**04 17 54.0**	**-0.1**
ULN				IAmb	IAmb	04 17 56.2	
	comp=Z,53nm,1.1s						
ULN	**Ulaanbaatar**	**34.17**	**316**	P	**P**	**04 17 53.8**	**-0.3**
	comp=Z,2µmcomp=Z,195nm,1.2s						
ULN	**Ulaanbaatar**	**34.17**	**316**	P	**P**	**04 17 54.1**	**-0.1**
ULN				pmax	pmax		
	comp=Z,53nm,1.1s						
LUWI	**Luwuk**	**34.54**	**217**	P	**P**	**04 17 55.6**	**-1.8**
LUWI	**Luwuk**	**34.54**	**217**	P	**P**	**04 17 56.2**	**-1.2**
SONM	**Songino Array**	**34.57**	**315**	P	**P**	**04 17 57.4**	**-0.1**

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         comp=Z,17nm,1.0s,baz=122,slow=8.7,SNR=62
SONM                                ScP     ScP      04 24 22.9 +6.7
         comp=Z,1.9nm,0.8s,baz=116,slow=3.4,SNR=4.5
SONM                                LR      LR       04 32 54.3
         comp=Z,2µm,18.2s,baz=116,slow=38
         comp=Z,17nm,1.0s
SONM Songino Array      34.57 315   P       P        04 17 56.5 -1.1
SONM Songino Array      34.57 315   P       P        04 17 56.5 -1.1
SONM                                pmax    pmax
         comp=Z,32nm,1.2s
APSI Ampana             35.05 219   P       P        04 18 01.3 -0.5
         comp=Z,1µmcomp=Z,145nm,1.2s
MPSI Mapaga             35.05 223   P       P        04 18 01.3 -0.5
YAK  Yakutsk            35.30 349   P       P        04 18 02.3 -1.1
         comp=Z,18nm,0.6s,baz=177,slow=16,SNR=5.7
YAK                                 LR      LR       04 32 53.6
         comp=Z,562nm,20.4s,baz=138,slow=37
         comp=Z,18nm,0.6s
YAK  Yakutsk            35.30 349   P       P        04 18 01.9 -1.5
YAK                                 IAmb    IAmb     04 18 30.1
         comp=Z,52nm,0.8s
YAK  Yakutsk            35.30 349  eP       P        04 18 03.7 +0.2
YAK                                e*PP     pwP      04 18 14.2 +1.2
YAK                                e                 04 19 21.0
YAK                                e                 04 20 32.0
YAK                                eS       S        04 23 36.2 -0.1
YAK                                e*SS     sS       04 23 53.1 +9.1
YAK                                eSS      SnSn     04 26 00.7 +5.9
YAK                                eSSS     SSS      04 26 19.1
YAK                                 pmax    pmax
         comp=Z,23nm,0.9s
YAK                                 pmax    pmax
         comp=N,6.0nm,1.2s
YAK                                 pmax    pmax
         comp=E,4.0nm,1.1s
YAK                                 pmax    pmax
         comp=Z,270nm,5.4s
YAK                                 pmax    pmax
         comp=N,265nm,4.6s
YAK                                 pmax    pmax
         comp=E,71nm,3.2s
YAK                                 smax    smax
         comp=E,320nm,6.5s
YAK                                 smax    smax
         comp=N,155nm,4.3s
YAK                                 MLR     MLR
         comp=Z,933nm,23.0s
YAK                                 MLR     MLR
         comp=N,882nm,19.0s
YAK                                 MLR     MLR
         comp=E,372nm,23.0s
SEY  Seymchan           35.68   8   LR      LR       04 31 59.8
         comp=E,507nm,21.4s,baz=183,slow=35
SEY  Seymchan           35.68   8ceP        P        04 18 07.2 +0.5
SEY                                 pmax    pmax
         comp=Z,25nm,1.3s
KMI  Kunming            35.84 275 ⇑P        P        04 18 09.0 +0.1
KMI                                 S       S        04 23 42.0 -3.9
KMI                                 pmax    pmax
         comp=Z,71nm,1.0s
KMI                                 pmax    pmax
         comp=Z,400nm,7.1s
KMI                                 LR      LR
         comp=Z,1µm,15.6s
KMI                                 LR      LR
         comp=Z,1µm,17.5s
KMI                                 LR      LR
         comp=Z,2µm,20.0s
PCI  Palu               36.08 221   P       P        04 18 11.1 +0.5
         comp=Z,147nm,1.0s
BOD  Bodaibo            36.14 334  eP       P        04 18 11.0 +0.3
BOD                                 pmax    pmax
         comp=Z,50nm,1.2s
PZH  PanZhiHua          36.42 278 ⇑P        P        04 18 13.3 -0.4
PZH                                 S       S        04 23 50.5 -4.1
PZH                                 pmax    pmax
         comp=Z,80nm,1.2s
PZH                                 pmax    pmax
         comp=Z,230nm,4.7s
PZH                                 LR      LR
         comp=Z,1µm,17.9s
PZH                                 LR      LR
         comp=Z,2µm,21.0s
PZH                                 LR      LR
         comp=Z,2µm,19.2s
PMG  Port Moresby       37.25 173   P       P        04 18 18.8 -1.7
PMG  Port Moresby       37.25 173   P       P        04 18 25.9 +5.4
PMG  Port Moresby       37.25 173   P       P        04 18 18.8 -1.7
PMG                                 pmax    pmax
         comp=Z,33nm,0.9s
SAUI Saumlaki           37.28 199   P       P        04 18 20.5 -0.4
GTA  Gaotai             37.29 299   P       P        04 18 20.3 -0.6
GTA                                 sP      sP       04 18 28.0 +0.5
GTA                                 S       S        04 24 03.5 -4.0
GTA                                 ScS     ScS      04 28 32.3 -2.1
GTA                                 pmax    pmax
         comp=Z,81nm,1.4s
GTA                                 pmax    pmax
         comp=Z,330nm,4.7s
GTA                                 LR      LR
         comp=Z,1µm,16.4s
GTA                                 LR      LR
         comp=Z,1µm,16.7s
GTA                                 LR      LR
         comp=Z,2µm,15.6s
ZAK  Zakamensk          37.43 318  eP       P        04 18 22.1 +0.2
ZAK                                 pmax    pmax
         comp=Z,71nm,1.4s
ZAK                                 pmax    pmax
         comp=Z,17nm,2.0s
IRK  Irkutsk            37.60 321  eP       P        04 18 23.8 +0.5
IRK                                 pmax    pmax
         comp=Z,181nm,2.0s
TLY  Talaya             37.72 320   P       P        04 18 25.6 +1.3
TLY                                 IAmb    IAmb     04 18 27.1
         comp=Z,37nm,0.8s
KKSI Kolaka, Sulawe     37.77 216   P       P        04 18 27.8 +2.7
TTSI Tana Toraja        37.83 219   P       P        04 18 27.3 +1.8
KIWB Kanaga Island      38.32  40   P       P        04 18 29.3  0.0
SBUM Sibu               38.59 235   P       P        04 18 31.8 -0.2
SBUM Sibu               38.59 235   P       P        04 18 32.0 +0.1
SPSI Sidrap Palu        38.61 219   P       P        04 18 31.5 -0.6
         comp=Z,67nm,1.0s
MOY  Mondy              39.24 319  eP       P        04 18 37.9 +0.7
MOY                                 pmax    pmax
         comp=Z,55nm,2.7s
KAPI Kappang            39.49 218   P       P        04 18 39.1 -0.3
KAPI                                P       P        04 18 39.1 -0.3
KAPI                                S       S        04 24 38.6 -2.3
KAPI                                S       S        04 24 38.6 -2.3
KAPI Kappang            39.49 218   P       P        04 18 38.8 -0.7
KAPI Kappang            39.49 218   P       P        04 18 40.0 +0.5
KAPI Kappang            39.49 218   P       P        04 18 38.8 -0.7
KAPI                                pmax    pmax
         comp=Z,41nm,1.0s
TNCH TengChong          39.58 276 ⇑P        P        04 18 40.5  0.0
TNCH                                pP      pP       04 18 44.5 -1.0
TNCH                                sP      sP       04 18 46.8 -0.2
TNCH                                S       S        04 24 42.8 +0.2
TNCH                                sS      sS       04 24 52.3 +4.1
TNCH                                pmax    pmax
         comp=Z,180nm,1.0s
TNCH                                LR      LR
         comp=Z,650nm,13.8s
TNCH                                LR      LR
         comp=Z,3µm,16.8s
TNCH                                LR      LR
         comp=Z,5µm,16.7s
BSSI Bau Bau, Buton     40.05 216   P       P        04 18 43.2 -0.9
         comp=Z,1µmcomp=Z,90nm,0.7s
CHTO Chiang Mai         41.07 267   P       P        04 18 52.4 -0.2
CHTO                                P       P        04 18 52.4 -0.2
CHTO Chiang Mai         41.07 267   P       P        04 18 51.8 -0.8
CHTO Chiang Mai         41.07 267   P       P        04 18 52.6  0.0
CHTO Chiang Mai         41.07 267   P       P        04 18 51.8 -0.8
CHTO                                pmax    pmax
         comp=Z,33nm,1.1s
GOMU GeErMu             41.18 294   P       P        04 18 53.3 -0.5
GOMU                                S       S        04 25 04.5 -2.2
GOMU                                pmax    pmax
         comp=Z,61nm,1.1s
GOMU                                LR      LR
         comp=Z,710nm,16.8s
GOMU                                LR      LR
         comp=Z,1µm,15.6s
GOMU                                LR      LR
         comp=Z,2µm,15.2s
CM31 Chiang Mai Arr     41.20 267   P       P        04 18 53.6  0.0
CMAR Chiang Mai Arr     41.20 267   P       P        04 18 52.9 -0.8
         comp=Z,4.4nm,0.6s,baz=70,slow=5.7,SNR=26
CMAR                                PcP     PcP      04 20 53.7 +1.0
         comp=Z,8.0nm,1.0s,baz=92,slow=2.0,SNR=8.3
CMAR                                LR      LR       04 36 38.6
         comp=Z,994nm,18.9s,baz=70,slow=37
         comp=Z,4.4nm,0.6s
MMRI Maumere            41.34 212   P       P        04 18 55.0 +0.2
SOEI Soe                41.43 208   P       P        04 18 54.3 -1.4
         comp=Z,1µmcomp=Z,94nm,0.8s
COEN Coen               41.53 179   P       P        04 18 56.1 -0.2
COEN                                IAmb    IAmb     04 19 10.0
         comp=Z,62nm,0.9s
EDFI Ende, Flores       41.69 212   P       P        04 18 57.5 -0.3
         comp=Z,5µmcomp=Z,56nm,0.8s
BATI Baumata            42.09 209   LR      LR       04 34 39.2
         comp=Z,502nm,20.1s,baz=17,slow=34
BATI Baumata            42.09 209   P       P        04 18 59.8 -1.2
         comp=Z,114nm,0.7s
BILL Bilibino           42.63  13   P       P        04 19 05.2 +0.4
BILL Bilibino           42.63  13ceP        P        04 19 05.4 +0.6
BILL                                pmax    pmax
         comp=Z,9.0nm,0.7s
BILL                                MLR     MLR
         comp=Z,409nm,19.0s
DBNI Kabupaten Domp     43.18 217   P       P        04 19 08.9 -0.9
         comp=Z,36nm,0.7s
WBSI Waikabubak, Su     43.59 215   P       P        04 19 09.9 -3.2
         comp=Z,65nm,0.7s
PLAI Plampang           43.74 217   P       P        04 19 13.3 -1.0
         comp=Z,1µmcomp=Z,95nm,0.8s
TWSI Taliwang, Sumb     44.15 218   P       P        04 19 17.2 -0.4
         comp=Z,77nm,0.8s
KLNI Mataram            44.33 219   P       P        04 19 18.7 -0.3
         comp=Z,2µmcomp=Z,246nm,1.0s
KMMI Kalianget          44.47 223   P       P        04 19 20.6 +0.4
         comp=Z,64nm,0.9s
TIXI Tiksi              44.55 354   LR      LR       04 40 30.8
         comp=Z,284nm,21.1s,baz=194,slow=40
TIXI Tiksi              44.55 354   P       P        04 19 19.9 -0.2
TIXI Tiksi              44.55 354ceP        P        04 19 19.9 -0.2
TIXI                                pmax    pmax
         comp=Z,7.0nm,0.6s
KHKI Kahang-Kahang      44.56 220   P       P        04 19 21.5 +0.7
         comp=Z,2µmcomp=Z,220nm,1.0s
ABJI Asem Bagus         44.90 222   P       P        04 19 25.0 +1.4
         comp=Z,3µmcomp=Z,226nm,1.0s
LSA  Lhasa              45.00 285   P       P        04 19 25.7 +0.8
RTBI Rangdo, Negare     45.02 221   P       P        04 19 23.9 -0.6
         comp=Z,2µmcomp=Z,215nm,1.0s
SHL  Shillong           45.27 279   P       P        04 19 26.4 -0.3
         SNR=23
KNRA Kununurra          45.32 199   IAmb    IAmb     04 19 37.5
         comp=Z,40nm,0.8s
MYKOM Kota Tinggi       45.33 242   P       P        04 19 27.3 +0.2
MYKOM Kota Tinggi       45.33 242   P       P        04 19 27.7 +0.6
         comp=Z,95nm,1.2s
TPI  Tanjungpandan      45.46 234   P       P        04 19 27.7 -0.4
         comp=Z,55nm,1.2s
JAGI Jajag, Banyuwa     45.48 222   P       P        04 19 27.2 -1.1
JAGI Jajag, Banyuwa     45.48 222   P       P        04 19 27.6 -0.7
         comp=Z,119nm,0.8s
GMJI Gumukmas           45.75 223   P       P        04 19 29.0 -1.3
         comp=Z,47nm,0.9s
KULM Kulim              45.85 249   P       P        04 19 31.4 +0.2
KULM Kulim              45.85 249   P       P        04 19 31.4 +0.2
         comp=Z,1µmcomp=Z,109nm,1.2s
IPM  Ipoh               46.00 247   P       P        04 19 32.5 +0.2
IPM  Ipoh               46.00 247   P       P        04 19 32.8 +0.4
         comp=Z,1µmcomp=Z,111nm,1.0s
PPBI Pangkal Pinang     46.15 236   P       P        04 19 33.7 +0.1
DSRI Dabo               46.20 239   P       P        04 19 35.2 +1.2
NGJI Ngawi              46.27 226   P       P        04 19 36.4 +2.0
         comp=Z,69nm,1.0s
BRDH Bariadhala         46.28 276   LR      LR       04 39 55.5
         comp=Z,1µm,19.5s,baz=147,slow=37
SJI  Sawahan            46.36 225   P       P        04 19 35.0 -0.2
         comp=Z,28nm,0.7s
SNJI Sawahan-Nganju     46.40 225   P       P        04 19 35.8 +0.2
         comp=Z,31nm,0.9s
WMQ  Urumqi             46.59 305 ⇑P        P        04 19 37.0 +0.2
WMQ                                 ScP     ScP      04 25 02.5 -0.8
WMQ                                 S       S        04 26 27.0 +2.2
WMQ                                 pmax    pmax
         comp=Z,51nm,1.3s
WMQ                                 pmax    pmax
         comp=Z,400nm,3.7s
WMQ                                 LR      LR
         comp=Z,1µm,17.1s
WMQ                                 LR      LR
         comp=Z,1µm,17.9s
WMQ                                 LR      LR
         comp=Z,800nm,18.9s
PCJI Pacitan            47.08 225   P       P        04 19 38.7 -2.1
         comp=Z,56nm,1.7s
UGM  Wanagama           47.28 226   P       P        04 19 40.5 -1.9
         comp=Z,66nm,1.4s
YOGI Yogyakarta         47.35 226   P       P        04 19 41.4 -1.5
         comp=Z,133nm,1.4s
CTJI Waduk Cacaban      47.47 228   P       P        04 19 43.3 -0.5
         comp=Z,94nm,1.0s
CTA  Charters Tower     47.74 176   LR      LR       04 38 58.9
         comp=Z,195nm,21.9s,baz=4.5,slow=35
CTAO Charters Tower     47.74 176   P       P        04 19 45.8  0.0
CTAO                                IAmb    IAmb     04 19 58.4
         comp=Z,36nm,0.8s
CTAO Charters Tower     47.74 176   P       P        04 19 45.8  0.0
CTAO                                pmax    pmax
         comp=Z,36nm,0.8s
KPJI Karang Pucung      47.88 228   P       P        04 19 46.4 -0.6
WB0  Warramunga Arr     48.00 191   P       P        04 19 47.7 -0.1
WRAB Tennant Creek      48.17 191   P       P        04 19 48.6 -0.5
WRAB Tennant Creek      48.17 191ceP        P        04 19 49.1  0.0
WRAB                                pmax    pmax
         comp=Z,37nm,0.9s
WRA  Warramunga Arr     48.18 191   P       P        04 19 49.1 -0.1
         comp=Z,31nm,0.6s,baz=12,slow=8.4,SNR=73
WRA                                 S       S        04 26 42.7 -4.8
         comp=Z,6.6nm,1.0s,baz=13,slow=14,SNR=6.9
         comp=Z,31nm,0.6s
WRA  Warramunga Arr     48.18 191   P       P        04 19 47.7 -1.5
WRA  Warramunga Arr     48.18 191ceP        P        04 19 49.2  0.0
WRA                                 pmax    pmax
         comp=Z,34nm,0.6s
K13K Kusilvak Mount     48.42  30   IAmb    IAmb     04 19 58.8
         comp=Z,48nm,1.0s
FITZ Fitzroy Crossi     48.57 202   LR      LR       04 40 19.4
         comp=Z,202nm,18.3s,baz=22,slow=36
FITZ Fitzroy Crossi     48.57 202   P       P        04 19 52.3  0.0
PSI  Prapat             48.67 247   LR      LR       04 40 19.8
         comp=Z,600nm,18.4s,baz=52,slow=36
ZSN  Zaisan             48.68 310  eP       P        04 19 52.9 -0.1
         comp=Z,23nm,1.0s
ZSN  Zaisan             48.68 310  eP       P        04 19 52.8 -0.1
ZSN                                 pmax    pmax
         comp=Z,23nm,1.0s
DBJI Dramaga            48.78 231   P       P        04 19 53.7 -0.3
         comp=Z,89nm,1.1s
BBJI Bungbulang         48.82 229   P       P        04 19 51.8 -2.6
KLSI                    48.90 235   P       P        04 19 53.6 -1.3
         comp=Z,1µmcomp=Z,94nm,1.0s
LHMI Lhok Sumawe        48.96 251   P       P        04 19 56.7 +1.3
CNJI Cibinong           49.06 230   P       P        04 19 53.7 -2.4
         comp=Z,632nmcomp=Z,37nm,0.9s
ANM  Nome               49.08  27   P       P        04 19 56.9 +1.2
ANM  Nome               49.08  27   P       P        04 19 56.9 +1.2
ANM                                 pmax    pmax
         comp=Z,58nm,1.0s
SANVU Saraoutou         49.09 148   P       P        04 19 55.5 -0.7
MDSI Maura Dua          49.16 235   P       P        04 19 56.7 -0.2
J14K Nanvaranak Lak     49.18  29   IAmb    IAmb     04 20 05.0
         comp=Z,47nm,1.1s
KCSI Kotacane, Aceh     49.21 249   P       P        04 19 56.9 -0.5
         comp=Z,551nmcomp=Z,47nm,1.3s
O14K Tigyukauivet M     49.23  34   IAmb    IAmb     04 20 04.4
         comp=Z,48nm,1.0s
CNBA Chernabura Isl     49.23  40   P       P        04 19 56.9  0.0
ZAA0 Zalesovo Array     49.30 319   P       P        04 19 57.5  0.0
ZALV Zalesovo Beam      49.30 319   P       P        04 19 57.5  0.0
         comp=Z,60nm,0.9s,baz=102,slow=6.7,SNR=181
ZALV                                PcP     PcP      04 21 20.8 +0.7
         comp=Z,7.4nm,0.5s,baz=116,slow=3.4,SNR=2.0
ZALV                                ScP     ScP      04 25 22.4 +8.0
         comp=Z,3.2nm,0.8s,baz=129,slow=3.9,SNR=3.9
ZALV                                LR      LR       04 41 26.6
         comp=Z,2µm,18.6s,baz=96,slow=37
         comp=Z,60nm,0.9s
ZALV Zalesovo Beam      49.30 319   P       P        04 19 57.2 -0.3
ZALV Zalesovo Beam      49.30 319 i P       P        04 19 57.7 +0.2
ZALV                                pmax    pmax
         comp=Z,61nm,0.9s
MNSI Mandailing Nat     49.31 245   P       P        04 19 58.1  0.0
         comp=Z,82nm,1.1s
PPI  Padang Panjang     49.42 243   P       P        04 19 56.8 -2.1
         comp=Z,39nm,0.8s
LWLI Liwa               49.61 235   P       P        04 19 59.2 -1.3
         comp=Z,170nm,0.9s
KRJI Kerinci            49.62 240   P       P        04 20 01.9 +1.4
KASI Kota Agung         49.64 234   P       P        04 19 58.4 -2.2
         comp=Z,56nm,0.9s
PDSI Padang             49.65 242   P       P        04 20 00.3 -0.4
         comp=Z,23nm,0.8s
MASI Maura Aman, Be     49.70 238   P       P        04 20 00.9 -0.2
KSI  Kapahiang          49.77 238   P       P        04 20 01.5 -0.2
F15K North Star Dit     49.81  25   IAmb    IAmb     04 20 10.2
         comp=Z,42nm,1.1s
TPTI                    49.84 249   P       P        04 20 00.1 -2.1
         comp=Z,759nmcomp=Z,69nm,1.1s
K15K Wolf Creek Mou     49.92  30   IAmb    IAmb     04 20 10.3
         comp=Z,54nm,1.0s
O15K Ungalikthiuk R     49.93  35   IAmb    IAmb     04 20 09.8
         comp=Z,41nm,0.8s
MLSI Meulaboh, Aceh     49.94 251   P       P        04 20 01.3 -1.6
         comp=Z,123nm,0.8s
MNAI Manna              49.97 237   P       P        04 20 02.1 -1.0
         comp=Z,185nm,1.4s
MK31 Makanchi Array     50.43 309ceP        P        04 20 06.3  0.0
MKAR Makanchi Array     50.43 309   P       P        04 20 06.4 +0.1
         comp=Z,37nm,0.9s,baz=93,slow=8.8,SNR=203
MKAR                                PcP     PcP      04 21 23.1 -1.3
         comp=Z,5.8nm,0.8s,baz=79,slow=3.1,SNR=1.9
MKAR                                LR      LR       04 42 31.6
         comp=Z,2µm,18.4s,baz=82,slow=37
         comp=Z,37nm,0.9s
MKAR Makanchi Array     50.43 309   P       P        04 20 06.1 -0.2
C16K Lisburne Hills     50.62  22   IAmb    IAmb     04 20 15.0
         comp=Z,36nm,1.1s
J16K Anvik River        50.62  29   IAmb    IAmb     04 20 15.7
         comp=Z,29nm,0.9s
GSI  Gunungsitoli       50.63 247   P       P        04 20 07.3 -0.8
         comp=Z,174nm,1.2s
MAKZ Makanchi           50.65 309   P       P        04 20 07.8 -0.1
MAKZ Makanchi           50.65 309   P       P        04 20 07.8 -0.1
MAKZ                                pmax    pmax
         comp=Z,88nm,1.3s
I17K Unalakleet         50.76  28   P       P        04 20 09.1 +0.6
I17K                                IAmb    IAmb     04 20 16.6
         comp=Z,42nm,1.0s
M16K Timber Creek       50.77  32   IAmb    IAmb     04 20 10.3
         comp=Z,48nm,1.2s
SNSI Sinabang, Aceh     51.02 249   P       P        04 20 10.4 -0.7
EGSI Enggano, Bengk     51.13 236   P       P        04 20 09.7 -2.2
         comp=Z,129nm,0.8s
J17K VABM Dome          51.32  29   IAmb    IAmb     04 20 21.4
         comp=Z,54nm,0.9s
RDOG Red Dog Mine       51.36  23   IAmb    IAmb     04 20 21.7
         comp=Z,56nm,1.2s
F17K Baldwin Pennin     51.37  25   IAmb    IAmb     04 20 21.9
         comp=Z,45nm,1.1s
N17K Nushagak Hills     51.52  33   IAmb    IAmb     04 20 22.3
         comp=Z,42nm,1.0s
M17K Holitna River      51.58  32   IAmb    IAmb     04 20 35.6
         comp=Z,58nm,1.0s
SEM  Semipalatinsk      51.82 314⇑iP        P        04 20 16.6 -0.3
         comp=Z,35nm,1.0s
SEM  Semipalatinsk      51.82 314c iP       P        04 20 16.6 -0.3
SEM                                 pmax    pmax
         comp=Z,35nm,1.0s
ASAR Alice Springs      51.90 190   P       P        04 20 17.0 -0.5
         comp=Z,4.4nm,0.5s,baz=5.4,slow=5.5,SNR=89
ASAR                                S       S        04 27 41.6 +2.3
         comp=Z,0.4nm,0.7s,baz=17,slow=22,SNR=3.6
ASAR                                LR      LR       04 41 00.3
         comp=Z,993nm,21.8s,baz=10.0,slow=35
         comp=Z,4.4nm,0.5s
ASAR Alice Springs      51.90 190   P       P        04 20 17.0 -0.5
H18K Honhosa River      52.10  27   IAmb    IAmb     04 20 26.6
         comp=Z,35nm,1.0s
L18K Granite Mounta     52.10  31   IAmb    IAmb     04 20 26.8
         comp=Z,35nm,1.0s
NRIK Noril'sk           52.17 338   P       P        04 20 19.2 +0.2
         comp=Z,10.0nm,0.7s,baz=108,slow=12,SNR=12
NRIK                                LR      LR       04 43 44.2
         comp=Z,1µm,18.1s,baz=118,slow=38
         comp=Z,10.0nm,0.7s
NRIK Noril'sk           52.17 338   P       P        04 20 19.1 +0.2
NRIK                                IAmb    IAmb     04 20 48.4
         comp=Z,35nm,1.0s
NRIK Noril'sk           52.17 338 i P       P        04 20 19.5 +0.6
NRIK                                pmax    pmax
         comp=Z,12nm,1.0s
G18K Tagagawik          52.19  26   IAmb    IAmb     04 20 26.9
         comp=Z,43nm,1.1s
P18K Big Mountain,      52.28  35   P       P        04 20 19.9 -0.1
P18K                                IAmb    IAmb     04 20 29.5
         comp=Z,58nm,1.1s
PDGK Podgornoye         52.56 305   P       P        04 20 21.5 -0.9
SHLS Shalkode           52.60 305⇑iP        P        04 20 20.1 -2.7
         comp=Z,21nm,0.9s
SHLS Shalkode           52.60 305c iP       P        04 20 20.0 -2.7
SHLS                                pmax    pmax
         comp=Z,21nm,0.9s
O19K Port Alsworth      52.86  34   P       P        04 20 23.2 -0.9
O19K                                IAmb    IAmb     04 20 31.7
         comp=Z,62nm,1.0s
N19K Bonanza Creek      52.88  33   IAmb    IAmb     04 20 32.8
         comp=Z,55nm,1.2s
UZB  Uzynbulak          52.92 305⇑iP        P        04 20 24.9 -0.3
         comp=Z,16nm,0.9s
UZB  Uzynbulak          52.92 305c iP       P        04 20 24.8 -0.3
UZB                                 pmax    pmax
         comp=Z,16nm,0.9s
J19K Poorman            52.95  29   IAmb    IAmb     04 20 33.0
         comp=Z,49nm,1.0s
H19K Roundabout Mou     52.97  27   IAmb    IAmb     04 20 29.4
         comp=Z,67nm,1.3s
WUS  Wushi              52.98 302   IAmb    IAmb     04 20 27.3
         comp=Z,78nm,1.2s
D19K Kuna River         53.18  23   IAmb    IAmb     04 20 34.4
         comp=Z,43nm,1.2s
E19K Redstone River     53.19  25   IAmb    IAmb     04 20 34.6
         comp=Z,34nm,1.1s
TDK  Taldyqorghan       53.21 307  eP       P        04 20 26.9 -0.2
         comp=Z,26nm,0.8s
TDK  Taldyqorghan       53.21 307  eP       P        04 20 26.8 -0.2
TDK                                 pmax    pmax
         comp=Z,26nm,0.8s
SATY Saty               53.38 305  eP       P        04 20 28.1 -0.3
         comp=Z,29nm,1.4s
SATY Saty               53.38 305  eP       P        04 20 28.1 -0.3
SATY                                pmax    pmax
         comp=Z,29nm,1.4s
KDAK Kodiak Island      53.47  37   LR      LR       04 41 31.8
         comp=Z,469nm,21.6s,baz=241,slow=34
EIDS Eidsvold           53.48 171   IAmb    IAmb     04 20 55.6
         comp=Z,64nm,1.8s
MBWA Marble Bar         53.55 207   P       P        04 20 30.1 +0.5
MBWA Marble Bar         53.55 207   P       P        04 20 29.9 +0.3
D20K Etivluk River      53.78  23   IAmb    IAmb     04 20 52.2
         comp=Z,37nm,0.8s
B20K Meade River        53.99  22   IAmb    IAmb     04 20 40.3
         comp=Z,42nm,0.8s
CHKK Chushkaly          54.33 306  eP       P        04 20 35.0 -0.3
CHKK Chushkaly          54.33 306  eP       P        04 20 34.9 -0.3
MDOK Medeo              54.36 305  eP       P        04 20 35.4 -0.3
MDOK Medeo              54.36 305  eP       P        04 20 35.3 -0.3
G21K Allakaket          54.37  26   IAmb    IAmb     04 20 43.3
         comp=Z,24nm,0.9s
KDJ  Kajisay            54.38 304   IAmb    IAmb     04 20 37.5
         comp=Z,48nm,1.2s
TNSS Tian-Shan          54.45 305  eP       P        04 20 35.9 -0.7
TNSS Tian-Shan          54.45 305  eP       P        04 20 35.9 -0.7
SKT  Skwentna           54.45  32   IAmb    IAmb     04 20 43.2
         comp=Z,36nm,1.1s
AAA  Alma-Ata           54.45 305  eP       P        04 20 36.1 -0.2
AAA  Alma-Ata           54.45 305  eP       P        04 20 36.0 -0.2
H21K Melozitna Rive     54.48  27   IAmb    IAmb     04 20 44.9
         comp=Z,64nm,1.2s
DZM  Mont Dzumac        54.61 153   LR      LR       04 41 48.3
         comp=Z,668nm,21.7s,baz=350,slow=34
DZM  Mont Dzumac        54.61 153  eS       S        04 28 19.1 +2.7
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	comp=Z,157nm,28.4s						
DZM				eSS	SS	04 32 00.5	+0.7
	comp=Z,91nm,24.4s						
DZM				eLR	LR	04 36 27.6	
	comp=Z,1µm,23.0s						
DZM	Mont Dzumac	54.61	153	P	P	04 20 38.9	+1.4
DZM				IAmb	IAmb	04 20 51.2	
	comp=Z,38nm,1.0s						
I21K	Tanana	54.73	28	IAmb	IAmb	04 20 46.1	
	comp=Z,51nm,1.1s						
L22K	Petersville	54.87	31	IAmb	IAmb	04 20 45.5	
	comp=Z,34nm,0.8s						
ULHL	Ulahol	55.06	304	P	P	04 20 41.3	+0.5
	SNR=23						
H22K	Ishtalitna Cre	55.10	27	IAmb	IAmb	04 20 48.9	
	comp=Z,34nm,1.2s						
D22K	Ayikyak River	55.20	23	IAmb	IAmb	04 20 49.6	
	comp=Z,48nm,1.1s						
TRF	Thorofare Moun	55.20	30	P	P	04 20 40.8	-0.7
TRF				IAmb	IAmb	04 20 50.1	
	comp=Z,50nm,1.0s						
BOOM	Boomskoye usch	55.25	304	IAmb	IAmb	04 20 43.9	
	comp=Z,37nm,0.9s						
B22K	Teshekpuk Lake	55.30	22	IAmb	IAmb	04 20 50.5	
	comp=Z,32nm,1.0s						
KHLH	Kahului Airpor	55.33	83	P	P	04 20 43.4	+0.6
TKM2	Tokmak 2	55.44	305	P	P	04 20 44.4	+0.8
	SNR=43						
KSH	Kashi	55.67	301	P	P	04 20 48.5	+3.3
KSH				pP	pwP	04 20 54.5	+0.2
KSH				pmax	pmax		
	comp=Z,45nm,1.0s						
KSH				pmax	pmax		
	comp=Z,220nm,6.1s						
KSH				LR	LR		
	comp=Z,770nm,15.8s						
KSH				LR	LR		
	comp=Z,1µm,16.5s						
KSH				LR	LR		
	comp=Z,820nm,18.5s						
G23K	Bananza Creek	55.77	26	IAmb	IAmb	04 20 54.3	
	comp=Z,55nm,1.1s						
COLD	Coldfoot	55.79	26	P	P	04 20 45.9	+0.5
I23K	Minto, Yukon-K	55.82	28	IAmb	IAmb	04 21 09.1	
	comp=Z,73nm,1.6s						
RND	Reindeer	55.84	30	IAmb	IAmb	04 20 52.5	
	comp=Z,42nm,1.0s						
D23K	Nanushuk River	55.93	24	IAmb	IAmb	04 20 55.1	
	comp=Z,46nm,1.1s						
KBK	Karagaybulak	55.95	304	P	P	04 20 47.9	+0.7
	SNR=45						
CHMS	Chumysh	56.05	305	P	P	04 20 48.2	+0.5
	SNR=14						
E23K	Chandalar	56.15	25	IAmb	IAmb	04 20 59.0	
	comp=Z,40nm,1.1s						
USP	Ospenovka	56.19	305	P	P	04 20 49.1	+0.4
	SNR=22						
WRH	Wood River Hil	56.28	29	P	P	04 20 49.2	+0.3
BTLS	Baital	56.28	307	eP	P	04 20 47.6	-1.7
BTLS				pmax	pmax		
	comp=Z,54nm,1.1s						
AAK	Ala-Archa	56.28	304	P	P	04 20 49.9	+0.4
	SNR=26						
AAK	Ala-Archa	56.28	304	P	P	04 20 49.9	+0.4
	comp=Z,15nm,0.8s,baz=124,slow=4.8,SNR=53						
AAK				LR	LR	04 45 11.2	
	comp=Z,489nm,20.9s,baz=68,slow=36						
	comp=Z,15nm,0.8s						
AAK	Ala-Archa	56.28	304	P	P	04 20 50.0	+0.4
AAK	Ala-Archa	56.28	304	P	P	04 20 49.0	-0.6
AAK	Ala-Archa	56.28	304	iP	P	04 20 50.0	+0.4
	SNR=34						
AAK	Ala-Archa	56.28	304	ceP	P	04 20 49.2	-0.4
AAK				pmax	pmax		
	comp=Z,47nm,1.7s						
UCH	Uchtor	56.33	304	P	P	04 20 51.4	+1.1
	SNR=58						
CCB	Clear Creek Bu	56.42	29	IAmb	IAmb	04 20 53.5	
	comp=Z,55nm,1.8s						
POKR	Poker Plat Res	56.62	28	P	P	04 20 50.5	-0.9
BRZS	Berezniki	56.70	313	eP	P	04 20 52.1	-0.1
BRZS	Berezniki	56.70	313	eP	P	04 20 52.1	-0.1
HDA	Harding Lake	56.77	29	IAmb	IAmb	04 20 58.9	
	comp=Z,29nm,1.0s						
G24K	Hadweenzic Riv	56.77	26	IAmb	IAmb	04 21 01.1	
	comp=Z,38nm,1.1s						
IL31		56.82	29	P	P	04 20 51.6	-1.2
IL31				IAmb	IAmb	04 20 59.9	
	comp=Z,40nm,1.1s						
ILAR	Eielson Array	56.82	29	P	P	04 20 52.4	-0.4
	comp=Z,14nm,1.0s,baz=262,slow=5.6,SNR=55						
ILAR				LR	LR	04 45 29.6	
	comp=Z,262nm,19.7s,baz=256,slow=36						
	comp=Z,14nm,1.0s						
ILAR	Eielson Array	56.82	29	P	P	04 20 52.1	-0.7
CPK	Cone Peak	56.82	84	P	P	04 20 54.3	+0.7
KLU	Klutina	57.07	33	IAmb	IAmb	04 21 33.4	
	comp=Z,37nm,1.1s						
PAX	Paxson	57.34	31	IAmb	IAmb	04 21 04.5	
	comp=Z,38nm,1.3s						
D25K	Kavik River	57.51	23	IAmb	IAmb	04 21 26.1	
	comp=Z,21nm,0.8s						
F25K	Christian Rive	57.58	26	IAmb	IAmb	04 21 07.2	
	comp=Z,39nm,1.1s						
FYU	Fort Yukon	57.65	27	IAmb	IAmb	04 21 18.9	
	comp=Z,52nm,1.2s						
E25K	Arctic Village	57.66	25	P	P	04 20 59.2	+0.5
BVA0	Borovoye Array	57.88	317	iP	P	04 21 01.7	+1.3
BVAR	Borovoye Array	57.88	317	P	P	04 21 00.9	+0.5
	comp=Z,53nm,0.5s,baz=92,slow=7.0,SNR=64						
BVAR				S	S	04 28 59.1	0.0
	comp=Z,2.3nm,0.9s,baz=91,slow=10,SNR=6.3						
BVAR				LR	LR	04 46 54.5	
	comp=Z,1µm,18.6s,baz=77,slow=37						
	comp=Z,53nm,0.5s						
BORK	Borovoye	57.92	317	P	P	04 21 01.1	+0.4
BORK	Borovoye	57.92	317	ceP	P	04 21 01.3	+0.6
BORK				pmax	pmax		
	comp=Z,80nm,1.0s						
BMAR	Burnt Mountain	57.97	26	P	P	04 21 01.8	+0.9
DOT	Dot Lake	57.99	30	IAmb	IAmb	04 21 08.7	
	comp=Z,41nm,1.2s						
SCRK	Sand Creek	58.04	30	IAmb	IAmb	04 21 09.2	
	comp=Z,39nm,1.0s						
GLB	Gilahina Butte	58.08	33	IAmb	IAmb	04 21 09.9	
	comp=Z,56nm,1.2s						
MENT	Mentasta	58.13	31	IAmb	IAmb	04 21 32.0	
	comp=Z,29nm,1.0s						
F26K	Sheenjek River	58.16	25	IAmb	IAmb	04 21 25.6	
	comp=Z,47nm,1.2s						
J26L	Joseph Creek	58.24	29	IAmb	IAmb	04 21 09.8	
	comp=Z,35nm,0.9s						
G26K	Porcupine Rive	58.25	26	IAmb	IAmb	04 21 14.8	
	comp=Z,36nm,1.1s						
L26K	Log Cabin Wild	58.30	31	IAmb	IAmb	04 21 42.6	
	comp=Z,87nm,1.9s						
CRQM	Cirque	58.42	34	P	P	04 21 04.8	+0.5
C27K	Jago River	58.47	23	IAmb	IAmb	04 21 22.9	
	comp=Z,32nm,0.8s						
DZA	Taraz	58.54	305	eP	P	04 21 05.3	-0.1
	comp=Z,15nm,1.0s						
DZA	Taraz	58.54	305	eP	P	04 21 05.2	-0.1
DZA				pmax	pmax		
	comp=Z,15nm,1.0s						
M27K	Edge Creek, AK	58.99	32	IAmb	IAmb	04 21 31.9	
	comp=Z,55nm,1.5s						
L27K	Beaver Creek,	59.00	31	IAmb	IAmb	04 21 15.8	
	comp=Z,45nm,1.4s						
BCAR	Beaver Creek A	59.02	31	P	P	04 21 07.9	-0.4
NIL	Nilore	59.05	294	P	P	04 21 08.9	-0.1
NIL	Nilore	59.05	294	P	P	04 21 08.9	-0.1
NIL				pmax	pmax		
	comp=Z,259nm,1.7s						
G27K	Doyon Strip	59.09	27	IAmb	IAmb	04 21 33.9	
	comp=Z,40nm,1.6s						
KK31	Karatay Array	59.10	306	iP	P	04 21 09.5	+0.3
KKAR	Karatay Array	59.10	306	P	P	04 21 08.7	-0.5
KKAR	Karatay Array	59.10	306	P	P	04 21 08.7	-0.5
E27K	Coleen River	59.15	25	IAmb	IAmb	04 21 44.3	
	comp=Z,26nm,1.1s						
MANEM	Manem	59.36	299	IAmb	IAmb	04 21 21.4	
	comp=Z,105nm,0.9s						
STKA	Stephens Creek	59.38	181	P	P	04 21 11.3	+0.4
	comp=Z,10.0nm,0.6s,baz=350,slow=8.1,SNR=23						
STKA				LR	LR	04 46 36.2	
	comp=Z,528nm,20.6s,baz=3.2,slow=36						
	comp=Z,10.0nm,0.6s						
STKA	Stephens Creek	59.38	181	iP	P	04 21 10.9	-0.1
BRLS	Borolday	59.60	306	eP	P	04 21 13.5	+0.9
	comp=Z,14nm,1.1s						
BRLS	Borolday	59.60	306	eP	P	04 21 13.5	+0.9
BRLS				pmax	pmax		
	comp=Z,14nm,1.1s						
HYB	Hyderabad	59.62	275	eP	P	04 21 13.3	+0.2
HYB				IVmB_BB		04 21 13.5	
	comp=Z,499nm,1.3s						
HYB				epP	pP	04 21 18.9	+0.5
HYB				ePcP	PcP	04 22 00.9	+0.6
HYB				ePP	PP	04 23 25.3	+0.5
IUG	Iuzhnay	59.63	305	eP	P	04 21 12.8	-0.2
IUG	Iuzhnay	59.63	305	eP	P	04 21 12.7	-0.2
F28M	Old Crow	59.79	26	IAmb	IAmb	04 21 36.6	
	comp=Z,41nm,1.4s						
CHM	Chimkent	59.90	305	eP	P	04 21 14.6	-0.1
CHM	Chimkent	59.90	305	eP	P	04 21 14.6	-0.1
E28M	Babbage River	59.92	24	IAmb	IAmb	04 21 33.2	
	comp=Z,31nm,0.9s						
DAWY	Dawson	60.06	30	P	P	04 21 16.1	+0.6
DAWY				IAmb	IAmb	04 21 23.3	
	comp=Z,34nm,1.1s						
I29M	Ogilvie Camp,	60.47	28	P	P	04 21 18.4	+0.2
I29M				IAmb	IAmb	04 21 26.7	
	comp=Z,52nm,1.4s						
G29M	Pine Creek	60.52	26	IAmb	IAmb	04 21 41.7	
	comp=Z,41nm,1.1s						
E29M	Blow River	60.53	25	IAmb	IAmb	04 21 54.8	
	comp=Z,24nm,1.0s						
J29N	Klondike Camp	60.55	29	IAmb	IAmb	04 21 25.5	
	comp=Z,14nm,0.7s						
M29M	Somme Creek	60.57	32	IAmb	IAmb	04 21 38.5	
	comp=Z,23nm,0.9s						
O29M	Mount Kennedy	60.69	34	IAmb	IAmb	04 21 46.0	
	comp=Z,49nm,1.2s						
K29M	Barlow Dome	60.90	30	IAmb	IAmb	04 21 30.0	
	comp=Z,30nm,1.1s						
CHGR	Chuyangaron	61.03	301	iP	P	04 21 23.0	+0.4
EPYK	Eagle Plains	61.07	27	P	P	04 21 22.9	+0.6
HYT	Haines Junctio	61.17	33	IAmb	IAmb	04 21 51.4	
	comp=Z,20nm,0.9s						
I30M	Mount Dempster	61.29	28	IAmb	IAmb	04 22 01.9	
	comp=Z,37nm,1.4s						
M30M	Minto, Yukon	61.33	31	IAmb	IAmb	04 21 32.9	
	comp=Z,28nm,1.2s						
J30M	Hart River	61.36	29	IAmb	IAmb	04 21 33.0	
	comp=Z,69nm,1.8s						
MAYO	Mayo, Yukon	61.64	30	P	P	04 21 26.6	+0.5
N31M	Braeburn, Yuko	61.93	33	IAmb	IAmb	04 21 55.4	
	comp=Z,27nm,0.9s						
PALK	Pallekele	61.98	263	LR	LR	04 50 06.5	
	comp=Z,256nm,18.4s,baz=62,slow=38						
PALK	Pallekele	61.98	263	P	P	04 21 29.6	+0.3
PALK	Pallekele	61.98	263	P	P	04 21 29.4	+0.2
PALK	Pallekele	61.98	263	P	P	04 21 29.0	-0.3
PALK	Pallekele	61.98	263	iP	P	04 21 29.6	+0.3
	SNR=6.4						
PALK	Pallekele	61.98	263	P	P	04 21 29.5	+0.2
PALK				pmax	pmax		
	comp=Z,52nm,1.2s						
G31M	Satah River	62.00	26	IAmb	IAmb	04 21 57.9	
	comp=Z,26nm,0.9s						
H31M	Peel River	62.08	28	IAmb	IAmb	04 21 52.2	
	comp=Z,49nm,1.3s						
MORW	Morawa	62.09	206	P	P	04 21 29.6	0.0
MORW				IAmb	IAmb	04 21 42.9	
	comp=Z,28nm,0.9s						
SHAA	Shahritus	62.10	300	IAmb	IAmb	04 21 31.8	
	comp=Z,90nm,0.8s						
INK	Inuvik	62.15	25	IAmb	IAmb	04 21 37.7	
	comp=Z,35nm,1.4s						
F31M	Tsiigehtchic	62.15	26	IAmb	IAmb	04 22 07.6	
	comp=Z,26nm,1.2s						
KBL	Kabul	62.18	296	P	P	04 21 30.7	+0.1
	SNR=24						
KBL	Kabul	62.18	296	P	P	04 21 29.7	-0.9
KBL				IAmb	IAmb	04 21 31.7	
	comp=Z,34nm,0.9s						
KBL	Kabul	62.18	296	P	P	04 21 29.7	-0.9
KBL				pmax	pmax		
	comp=Z,34nm,1.0s						
M31M	Drury Creek, Y	62.49	32	IAmb	IAmb	04 21 58.7	
	comp=Z,24nm,1.0s						
SVE	Sverdlovsk	62.98	322	deP	P	04 21 36.4	+1.2
SVE				eS	S	04 30 08.0	+3.7
SVE				pmax	pmax		
	comp=Z,52nm,0.8s						
N32M	Quiet Lake	63.26	33	IAmb	IAmb	04 22 02.5	
	comp=Z,31nm,1.0s						
P33M	Teslin, Yukon	63.55	34	P	P	04 21 40.2	+1.1
P33M				IAmb	IAmb	04 21 47.5	
	comp=Z,33nm,1.2s						
ARTI	Arti	64.29	322	P	P	04 21 44.5	+0.6
	comp=Z,50nm,0.6s,baz=90,slow=3.5,SNR=87						
ARTI				LR	LR	04 51 53.7	
	comp=Z,527nm,18.4s,baz=80,slow=38						
	comp=Z,50nm,0.6s						
ARTI	Arti	64.29	322	P	P	04 21 43.9	+0.1
ARTI	Arti	64.29	322	c iP	P	04 21 44.5	+0.6
ARTI						04 22 16.6	
ARTI				S	S	04 30 25.4	+4.8
ARTI				pmax	pmax		
	comp=Z,65nm,0.8s						
ARTI				MLR	MLR		
	comp=Z,882nm,17.0s						
A36M	Sachs Harbour	64.42	20	IAmb	IAmb	04 22 12.2	
	comp=Z,27nm,0.9s						
S34M	Telegraph Cree	64.86	36	IAmb	IAmb	04 21 54.9	
	comp=Z,22nm,1.1s						
AB31	Akbulak array	64.97	314	iP	P	04 21 49.3	+0.8
ABKAR	Akbulak array	64.97	314	P	P	04 21 48.6	+0.1
TOO	Toolangi	65.10	178	P	P	04 21 49.1	-0.2
TOO	Toolangi	65.10	178	P	P	04 21 49.1	-0.2
TOO				pmax	pmax		
	comp=Z,12nm,1.0s						
C36M	Paulatuk	65.37	23	IAmb	IAmb	04 21 51.7	
	comp=Z,19nm,0.8s						
T35M	Bob Quinn	65.53	37	IAmb	IAmb	04 22 18.8	
	comp=Z,40nm,1.4s						
WTLY	Watson Lake, Y	65.54	33	P	P	04 21 51.9	-0.1
AKTO	Aktyubinsk	65.89	316	P	P	04 21 54.9	+0.5
	comp=Z,43nm,0.7s,baz=84,slow=5.9,SNR=99						
AKTO				S	S	04 30 41.0	+0.5
	comp=Z,2.8nm,1.0s,baz=296,slow=19,SNR=4.5						
AKTO				LR	LR	04 52 10.9	
	comp=Z,2µm,18.2s,baz=64,slow=37						
	comp=Z,43nm,0.7s						
AKTO	Aktyubinsk	65.89	316	P	P	04 21 55.0	+0.6
WRGLY	Wrigley	67.19	29	IAmb	IAmb	04 22 04.8	
	comp=Z,28nm,0.8s						
HRA	Herat	67.58	298	P	P	04 22 06.1	+0.4
BBB	Bella Bella	68.02	42	LR	LR	04 45 14.6	
	comp=Z,160nm,21.7s,baz=266,slow=30						
KIRV	Kirov	68.40	326	P	P	04 22 11.1	+1.0
	comp=Z,45nm,0.5s,baz=237,slow=1.2,SNR=22						
KIRV				LR	LR	04 54 58.6	
	comp=Z,1µm,18.2s,baz=69,slow=38						
	comp=Z,45nm,0.5s						
KIRV	Kirov	68.40	326	ceP	P	04 22 10.9	+0.8
RES	Resolute Bay	71.23	14	LR	LR	04 59 31.5	
	comp=Z,83nm,18.0s,baz=10.0,slow=41						
YKA	Yellowknife Ar	71.25	29	P	P	04 22 27.3	-0.4
	comp=Z,9.8nm,0.8s,baz=294,slow=6.6,SNR=79						
YKA				LR	LR	04 53 26.8	
	comp=Z,147nm,21.2s,baz=260,slow=36						
	comp=Z,9.8nm,0.8s						
YKA	Yellowknife Ar	71.25	29	ceP	P	04 22 28.0	+0.4
YKA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YKAW1	Yellowknife Wh	71.31	29	IAmb	IAmb	04 22 29.5	
	comp=Z,26nm,0.9s						
BELG	Belogornoye	71.46	320	iP	P	04 22 29.7	+0.7
BELG				pmax	pmax		
	comp=Z,41nm,0.9s						
CLRS	Cowichan Lake	71.53	44	IAmb	IAmb	04 22 34.0	
	comp=Z,48nm,1.4s						
APA	Apatity	71.58	338	⇓eP	P	04 22 30.0	+0.4
APA				e		04 22 39.7	
APA				e		04 25 05.7	
APA				pmax	pmax		
	comp=Z,22nm,0.9s						
APA				MLR	MLR		
	comp=Z,3µm,5.5s						
NGCH	Negor - Chabah	71.69	289	P	P	04 22 32.2	+1.2
PGC	Sidney	72.01	44	P	P	04 22 32.4	0.0
B04A	Port Angeles	72.19	45	IAmb	IAmb	04 22 35.5	
	comp=Z,18nm,0.7s						
NLWA	Neilton Lookou	72.21	45	IAmb	IAmb	04 22 36.0	
	comp=Z,20nm,0.8s						
KLMR	Klimovskoe	72.22	330	eP	P	04 22 31.2	-2.3
KLMR				S	S	04 31 54.1	-0.9
KLMR				SS	SS	04 36 34.4	+2.4
KLMR				pmax	pmax		
	comp=Z,54nm,1.5s						
A04D	Lummi Island	72.44	44	P	P	04 22 35.3	+0.3
A04D				IAmb	IAmb	04 22 39.6	
	comp=Z,37nm,1.1s						
GNW	Green Mountain	72.80	45	IAmb	IAmb	04 22 39.8	
	comp=Z,35nm,1.2s						
ARCES	ARCESS Array B	73.03	341	P	P	04 22 39.5	+1.3
	comp=Z,13nm,1.0s,baz=69,slow=8.6,SNR=25						
ARCES				LR	LR	04 59 16.1	
	comp=Z,431nm,18.1s,baz=68,slow=40						
	comp=Z,13nm,1.0s						
ARCES	ARCESS Array B	73.03	341	P	P	04 22 39.2	+1.0
ARCES				IAmb	IAmb	04 22 52.5	
	comp=Z,40nm,1.1s						
ARCES	ARCESS Array B	73.03	341	P	P	04 22 39.2	+1.0
ARCES				pmax	pmax		
	comp=Z,40nm,1.2s						
URZ	Urewera	73.17	152	LR	LR	04 56 17.0	
	comp=Z,161nm,18.1s,baz=328,slow=37						
D05A	Enumclaw	73.47	45	IAmb	IAmb	04 22 55.3	
	comp=Z,42nm,1.1s						
LON	Longmire	73.76	45	P	P	04 22 43.3	+0.3
LON	Longmire	73.76	45	P	P	04 22 43.3	+0.3
LON				pmax	pmax		
	comp=Z,13nm,0.9s						
RAR	Rarotonga	73.87	125	LR	LR	04 54 56.7	
	comp=Z,393nm,18.1s,baz=283,slow=36						
G04A	Mulino	73.94	47	P	P	04 22 44.1	+0.1
G04A				IAmb	IAmb	04 22 50.6	
	comp=Z,46nm,0.9s						
I03D	Drain, OR	73.96	49	IAmb	IAmb	04 22 46.7	
	comp=Z,54nm,1.2s						
H04D	Lebanon	74.04	48	IAmb	IAmb	04 23 28.6	
	comp=Z,67nm,1.4s						
TULEG	Thule	74.06	7	IAmb	IAmb	04 22 57.2	
	comp=Z,26nm,1.0s						
K02D	Willamette Mer	74.14	50	IAmb	IAmb	04 22 49.0	
	comp=Z,35nm,1.0s						
LTY	Liberty	74.27	45	P	P	04 22 45.4	-0.6
H04A	Detroit Lake	74.34	48	P	P	04 22 46.2	-0.2
H04A				IAmb	IAmb	04 22 47.8	
	comp=Z,26nm,0.9s						
JLN	Jalan Bani Buh	74.41	287	P	P	04 22 47.7	+0.6
	SNR=5.9						
HOOD	Mount Hood Mea	74.43	47	IAmb	IAmb	04 22 58.3	
	comp=Z,33nm,0.9s						
I04A	Tendick Farm,	74.55	48	IAmb	IAmb	04 22 49.5	
	comp=Z,27nm,1.0s						
WBK	Wadi Bani Khal	74.60	288	P	P	04 22 49.2	+1.0
	SNR=9.7						
G05A	Wamic	74.68	47	P	P	04 22 48.4	+0.1
MXC	Moxie City	74.78	45	IAmb	IAmb	04 22 51.1	
	comp=Z,29nm,1.1s						
KHMM	Horse Mountain	74.82	52	IAmb	IAmb	04 22 54.1	
	comp=Z,55nm,1.2s						
WIFE	Three Sisters-	74.83	48	IAmb	IAmb	04 22 55.8	
	comp=Z,44nm,1.0s						
EPH	Ephrata	74.90	44	IAmb	IAmb	04 22 55.1	
	comp=Z,24nm,1.3s						
BIDO	Bidbid	74.94	289	P	P	04 22 51.6	+1.4
	SNR=18						
J04A	Umpqua Nationa	74.97	49	IAmb	IAmb	04 22 52.4	
	comp=Z,32nm,0.7s						
E07A	Sunnyside	75.07	45	IAmb	IAmb	04 22 52.7	
	comp=Z,32nm,1.0s						
WAH2	Wahluke Slope	75.17	45	IAmb	IAmb	04 22 52.9	
	comp=Z,45nm,1.4s						
YBH	Yreka Blue Hor	75.18	51	P	P	04 22 52.3	+1.0
	comp=Z,1.2nm,0.8s,baz=167,slow=4.5,SNR=5.5						
YBH				LR	LR	04 49 58.8	
	comp=Z,30nm,20.8s,baz=290,slow=31						
YBH	Yreka Blue Hor	75.18	51	P	P	04 22 51.2	-0.2
YBH				IAmb	IAmb	04 22 55.7	
	comp=Z,38nm,1.3s						
YBH	Yreka Blue Hor	75.18	51	P	P	04 22 51.2	-0.2
YBH				pmax	pmax		
	comp=Z,38nm,1.3s						
SMDO	Samad	75.19	288	P	P	04 22 52.6	+0.8
	SNR=6.8						
MAK	Makhachkala	75.20	311	c iP	P	04 22 48.0	-3.3
MAK				ePPP	PPP	04 27 22.6	
MAK				eS	S	04 32 23.9	-5.3
MAK				eSS	SS	04 37 19.4	+1.2
MAK				eSSS	SSS	04 40 36.2	
MAK				pmax	pmax		
	comp=Z,191nm,1.0s						
MAK				MLR	MLR		
	comp=Z,3µm,17.0s						
L04D	Klamath Falls	75.26	50	IAmb	IAmb	04 22 55.9	
	comp=Z,68nm,1.4s						
VRH	Novokhopyorsk	75.29	320	eP	P	04 22 52.0	+0.3
VRH				pmax	pmax		
	comp=Z,55nm,0.5s						
KCPM	Cahto Peak	75.41	53	IAmb	IAmb	04 23 14.0	
	comp=Z,44nm,1.0s						
MOS	Moscow	75.41	326	eP	P	04 22 50.6	-1.7
MOS				e		04 23 04.1	
MOS				e		04 25 39.2	
MOS				pmax	pmax		
	comp=Z,102nm,1.4s						
MOS				MLR	MLR		
	comp=Z,1µm,17.0s						
JMDO	Jabal Madar	75.42	288	P	P	04 22 53.5	+0.5
	SNR=7.1						
K04D	Chiloquin, OR	75.46	49	IAmb	IAmb	04 23 04.4	
	comp=Z,32nm,0.9s						
BANOM	Banah	75.48	292	iP	P	04 22 54.1	+0.8
	SNR=6.1						
J05D	Fort Rock, OR	75.54	49	P	P	04 22 52.8	-0.7
J05D				IAmb	IAmb	04 22 55.3	
	comp=Z,22nm,0.8s						
SHME	Shamm	75.56	292	P	P	04 22 55.0	+1.3
	SNR=7.7						
SHME	Shamm	75.56	292	iP	P	04 22 54.5	+0.8
	SNR=8.3						
HOQ	Hoqain	75.59	289	P	P	04 22 55.0	+1.0
	SNR=26						
AKT	Akhty	75.66	309	c iP	P	04 22 55.1	+0.9
AKT				e		04 23 05.9	
AKT				eS	S	04 32 37.5	+2.8
AKT				pmax	pmax		
	comp=Z,95nm,0.9s						
AKT				MLR	MLR		
	comp=Z,1µm,17.0s						
O02D	Mt. Diablo Mer	75.76	52	IAmb	IAmb	04 23 02.9	
	comp=Z,30nm,1.1s						
M03C	McCloud	75.77	51	IAmb	IAmb	04 23 00.7	
	comp=Z,46nm,0.9s						
MASF	Masafi	75.82	291	P	P	04 22 56.8	+1.5
	SNR=15						
MSFE	Esma-Masafi	75.82	291	iP	P	04 22 55.9	+0.6
	SNR=12						
EDM	Edmonton	75.92	37	P	P	04 22 54.8	-0.5
EDM				IAmb	IAmb	04 22 58.5	
	comp=Z,29nm,1.0s						
EDM	Edmonton	75.92	37	P	P	04 22 54.8	-0.5
EDM				pmax	pmax		
	comp=Z,29nm,1.0s						
UOSS	Minazif	75.96	291	P	P	04 22 57.5	+1.5
UOSS				S	S	04 32 38.0	-0.2
UOSS	Minazif	75.96	291	P	P	04 22 55.8	-0.2
UOSS	Minazif	75.96	291	iP	P	04 22 55.9	-0.2
	SNR=9.2						
NEW	Newport	76.01	43	P	P	04 22 56.6	+0.7
	comp=Z,20nm,0.8s,baz=289,slow=5.0,SNR=54						
NEW				LR	LR	04 50 46.1	
	comp=Z,232nm,21.2s,baz=292,slow=31						
	comp=Z,20nm,0.8s						
NEW	Newport	76.01	43	IAmb	IAmb	04 22 57.7	
	comp=Z,22nm,0.8s						
SOHO	SOHO	76.02	290	P	P	04 22 57.4	+1.1
SOHO	SOHO	76.02	290	iP	P	04 22 56.2	-0.2
	SNR=27						
BSY	Bisya	76.03	288	P	P	04 22 57.5	+1.0
	SNR=16						
HATD	Hatta, Dubai	76.06	291	P	P	04 22 58.1	+1.5
	SNR=19						
HATD	Hatta, Dubai	76.06	291	iP	P	04 22 57.2	+0.6
	SNR=18						

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MHTO  MHTO             76.11 287  P       P      04 22 57.8 +0.9
      SNR=10
G08A  Pilot Rock       76.17  46  P       P      04 22 56.9 -0.1
G08A                              IAmb    IAmb   04 23 01.2
      comp=Z,34nm,1.4s
ASHO  Ashiyiah         76.19 291  P       P      04 22 58.7 +1.3
      SNR=16
ASHO  Ashiyiah         76.19 291 i P      P      04 22 57.5 +0.2
      SNR=15
LPSR  Galich'ya Gora   76.20 322 eP       P      04 22 54.8 -2.1
LPSR                              pmax    pmax
      comp=Z,50nm,1.0s
OBN   Obninsk          76.24 325  P       P      04 22 56.5 -0.5
OBN   Obninsk          76.24 325⇓iP       P      04 22 58.1 +1.1
OBN                              i               04 25 47.0
OBN                              eS       S      04 32 42.5 +2.3
OBN                               pmax    pmax
      comp=Z,37nm,1.0s
OBN                               MLR     MLR
      comp=Z,2µm,16.0s
OBN   Obninsk          76.24 325  P       P      04 22 58.4 +1.4
      comp=Z,47nm,0.8s
DGAR  Diego Garcia     76.34 254ceP       P      04 22 58.8 +0.6
DGAR                              pmax    pmax
      comp=Z,36nm,0.9s
LNOR  Lincton Mounta   76.34  45  IAmb    IAmb   04 23 23.5
      comp=Z,50nm,1.8s
ARQ   Araqi            76.36 289  P       P      04 22 59.7 +1.4
      SNR=17
NAZ   Nazwa, Dubai     76.39 291  P       P      04 22 60.0 +1.5
      SNR=9.2
NAZ                               S       S      04 32 42.7 -0.3
NAZ   Nazwa, Dubai     76.39 291 i P      P      04 22 58.9 +0.5
      SNR=7.2
O03E  Paynes Creek     76.40  52  IAmb    IAmb   04 23 08.2
      comp=Z,46nm,1.1s
HATC  Hat Creek Radi   76.42  51  IAmb    IAmb   04 23 27.0
      comp=Z,41nm,0.9s
VORR  Voronezh         76.48 321 eP       P      04 22 58.0 -0.5
VORR                              pmax    pmax
      comp=Z,30nm,1.0s
MNRC  McLaughlin Min   76.54  53  P       P      04 22 58.6 -0.5
MNRC                              IAmb    IAmb   04 23 35.8
      comp=Z,61nm,1.2s
FAQ   Al Faqa, Dubai   76.55 291  P       P      04 23 00.7 +1.3
      SNR=5.4
FAQ   Al Faqa, Dubai   76.55 291 i P      P      04 22 59.5 +0.2
      SNR=6.0
ALNE  Al Ain           76.70 290  P       P      04 23 01.3 +1.1
      SNR=14
ALNE                              S       S      04 32 45.9 -0.6
ALNE  Al Ain           76.70 290 i P      P      04 23 01.0 +0.8
      SNR=7.2
VSR   Storozhevoye     76.72 321 eP       P      04 22 59.2 -0.6
VSR                               pmax    pmax
      comp=Z,50nm,0.9s
VORD  Divnogorie       76.76 321 eP       P      04 22 58.8 -1.3
VORD                              pmax    pmax
      comp=Z,30nm,0.9s
ASUD  Al Ashush, Dub   76.81 291  P       P      04 23 02.4 +1.6
ASUD                              S       S      04 32 47.4 -0.2
ASUD  Al Ashush, Dub   76.81 291  P       P      04 23 01.7 +0.9
DQM   DQM              76.92 286  P       P      04 23 02.6 +1.1
ORV   Oroville         76.92  52  P       P      04 23 00.3 -0.9
ORV                               IAmb    IAmb   04 23 07.3
      comp=Z,32nm,1.1s
ORV   Oroville         76.92  52  P       P      04 23 00.3 -0.9
ORV                               pmax    pmax
      comp=Z,32nm,1.1s
AJN   Ajban            77.12 291  P       P      04 23 03.8 +1.2
GOF   Gofitskoye       77.22 314ceP       P      04 23 04.0 +1.2
J08A  Circle Bar Ran   77.33  48  IAmb    IAmb   04 23 05.2
      comp=Z,25nm,0.7s
BMO   Blue Mountains   77.41  46  IAmb    IAmb   04 23 05.5
      comp=Z,23nm,0.8s
BLKN  Baker Lake       77.42  22  P       P      04 23 03.2 -0.3
BLKN                              IAmb    IAmb   04 23 04.8
      comp=Z,26nm,0.9s
FIA1  FINESS Array S   77.53 334  P       P      04 23 04.5 +0.3
FINES FINESS Array B   77.53 334  P       P      04 23 04.8 +0.6
      comp=Z,12nm,0.4s,baz=65,slow=5.2,SNR=94
FINES                             LR      LR     05 00 19.0
      comp=Z,487nm,19.1s,baz=40,slow=38
      comp=Z,12nm,0.4s
FINES FINESS Array B   77.53 334  P       P      04 23 04.0 -0.2
NCK   Nalchik          77.56 313 i P      P      04 23 05.2 +0.5
NCK                               pmax    pmax
      comp=Z,17nm,1.0s
KBZ   Khabaz           77.91 313  P       P      04 23 08.0 +1.4
      comp=Z,42nm,0.9s,baz=85,slow=4.2,SNR=77
KBZ                               LR      LR     05 01 17.4
      comp=Z,304nm,18.9s,baz=63,slow=39
      comp=Z,42nm,0.9s
KBZ   Khabaz           77.91 313ceP       P      04 23 06.3 -0.3
KBZ                               pmax    pmax
      comp=Z,54nm,1.0s
KVAR  Kislovodsk Arr   77.93 313  LR      LR     05 01 59.5
      comp=Z,356nm,19.2s,baz=276,slow=39
KIV   Kislovodsk       77.94 313  P       P      04 23 08.2 +1.3
KIV   Kislovodsk       77.94 313  P       P      04 23 07.7 +0.8
KIV   Kislovodsk       77.94 313 ⇓P       P      04 23 08.9 +2.0
KIV   Kislovodsk       77.94 313 i P      P      04 23 08.5 +1.5
      SNR=8.9
KIV   Kislovodsk       77.94 313 eP       P      04 23 06.6 -0.4
KIV                              eS       S      04 33 00.2 +0.7
KIV                               pmax    pmax
      comp=Z,40nm,1.0s
KIV                               pmax    pmax
      comp=Z,32nm,3.8s
KIV                               MLR     MLR
      comp=Z,444nm,19.0s
KIV   Kislovodsk       77.94 313  P       P      04 23 09.2 +2.2
      comp=Z,822nmcomp=Z,45nm,0.9s
SHA1  Shidzhatmaz      78.06 313ceP       P      04 23 07.8  0.0
MPK   Martis Peak      78.06  52  IAmb    IAmb   04 23 35.3
      comp=Z,45nm,1.0s
PAHR  Pah Rah Range    78.33  51  IAmb    IAmb   04 23 11.1
      comp=Z,28nm,1.1s
CMB   Columbia Colle   78.36  53  P       P      04 23 09.5 +0.1
CMB                               IAmb    IAmb   04 23 10.6
      comp=Z,22nm,0.8s
CMB   Columbia Colle   78.36  53  P       P      04 23 09.5 +0.1
CMB                               pmax    pmax
      comp=Z,22nm,0.8s
MZWR  Madinat Zayed    78.38 291  P       P      04 23 10.3 +0.7
PNTR  Pine Nut         78.45  52  IAmb    IAmb   04 23 13.6
      comp=Z,27nm,0.8s
ERBR  Yeremizino-Bor   78.52 316 eP       P      04 23 10.0  0.0
ERBR                             e*PP     pP     04 23 13.1 -2.4
ERBR                             eS       S      04 33 02.8 -2.6
ERBR                              pmax    pmax
      comp=Z,126nm,1.1s
ERBR                              MLR     MLR
      comp=Z,925nm,16.0s
LABN  Labinsk          78.87 315 eP       P      04 23 11.2 -0.8
LABN                             e*PP     pP     04 23 14.3 -3.2
LABN                             e               04 26 13.7
LABN                             eS       S      04 33 09.3 +0.1
LABN                              pmax    pmax
      comp=Z,68nm,1.7s
MFID  Camas Ranch      79.02  47  IAmb    IAmb   04 23 15.0
      comp=Z,36nm,0.9s
MZR   Muzera           79.03 290 i P      P      04 23 13.5 +0.2
      SNR=6.8
BPMT  Black Pine Rid   79.07  43  P       P      04 23 12.9 -0.5
GHWR  Ruwais           79.12 291  P       P      04 23 13.9 +0.2
PPT   Papeete          79.50 116  LR      LR     04 50 59.7
      comp=Z,391nm,19.4s,baz=278,slow=30
LYMT  Lyon Mountain    79.51  42  P       P      04 23 14.7 -1.0
PPT2  Papeete2         79.52 116 eLQ      LQ     04 44 37.2
      comp=Z,315nm,27.8s
PPT2                             eLR      LR     04 47 49.6
      comp=Z,544nm,22.2s
PPT2                             eLR      LR     04 47 55.7
      comp=Z,668nm,22.2s
NVAR  Mina Array Bea   79.65  52  P       P      04 23 17.4 +0.8
      comp=Z,12nm,0.7s,baz=292,slow=6.0,SNR=91
NVAR                              LR      LR     04 53 10.1
      comp=Z,290nm,19.6s,baz=312,slow=32
      comp=Z,12nm,0.7s
NVAR  Mina Array Bea   79.65  52  P       P      04 23 16.8 +0.2
BCA   Borcka           79.79 311 ⇓P       P      04 23 18.4 +1.3
SHMA  Al-Shehemyia     79.86 294  P       P      04 23 18.1 +0.4
SUMG  Summit           79.87   0  P       P      04 23 18.1 +0.8
SUMG                              IAmb    IAmb   04 23 38.8
      comp=Z,83nm,1.7s
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SUMG  Summit           79.87   0  P       P      04 23 18.2 +0.8
SUMG                              pmax    pmax
      comp=Z,83nm,1.7s
SOC   Sochi            80.02 314 eP       P      04 23 16.4 -1.8
SOC                              e               04 26 14.0
SOC                              eS       S      04 33 20.0 -1.4
SOC                              eSS      SS     04 38 26.4 -4.3
SOC                              eSSS     SSS    04 41 57.4
SOC                               pmax    pmax
      comp=Z,32nm,0.8s
SOC                               MLR     MLR
      comp=Z,472nm,17.0s
DMTO  DMTO             80.08 285  P       P      04 23 19.8 +0.8
DLMT  Dillon           80.12  44  IAmb    IAmb   04 23 25.6
      comp=Z,32nm,1.1s
VES   Vestal, Richgr   80.28  55  IAmb    IAmb   04 23 20.9
      comp=Z,53nm,1.0s
TIN   Tinemaha, Big    80.33  53  P       P      04 23 21.1 +0.9
TIN   Tinemaha, Big    80.33  53  P       P      04 23 21.2 +0.9
TIN                               pmax    pmax
      comp=Z,64nm,0.3s
DOK   Doka             80.39 286  P       P      04 23 21.0 +0.3
EGMT  Eagleton         80.46  40  IAmb    IAmb   04 23 30.3
      comp=Z,35nm,1.1s
ELK   Elko             80.67  49  P       P      04 23 23.1 +1.0
      comp=Z,11nm,0.9s,baz=314,slow=5.8,SNR=42
      comp=Z,11nm,0.9s
MNK   Minsk            80.82 328 i P      P      04 23 22.1 -0.2
MNK                              i               04 26 25.6
MNK                              i PPP    PPP    04 28 14.2
MNK                              i S      S      04 33 31.0 +1.6
MNK                              i SS     SS     04 38 40.5 -1.5
MNK                               pmax    pmax
      comp=E,19nm,0.9s
MNK                               pmax    pmax
      comp=N,47nm,1.5s
MNK                               pmax    pmax
      comp=Z,41nm,1.0s
MNK                               MLR     MLR
      comp=N,479nm,18.0s
MNK                               MLR     MLR
      comp=E,635nm,16.0s
MNK                               MLR     MLR
      comp=Z,940nm,16.0s
FFC   Flin Flon        80.85  32  P       P      04 23 22.6 +0.2
FFC                               IAmb    IAmb   04 23 24.2
      comp=Z,24nm,0.8s
FFC   Flin Flon        80.85  32  P       P      04 23 22.6 +0.2
FFC                               pmax    pmax
      comp=Z,24nm,0.8s
ANN   Anapa            80.85 316 eP       P      04 23 23.2 +0.6
ANN                              e               04 26 31.4
ANN                              eS       S      04 33 31.0 +1.0
ANN                               pmax    pmax
      comp=Z,66nm,1.0s
GURO  Guroymak-BITLI   80.88 309  IAmb    IAmb   04 23 41.8
      comp=Z,28nm,0.8s
GRAC  Grapevine Rang   80.97  53  IAmb    IAmb   04 23 29.6
      comp=Z,29nm,1.1s
WHFO  Wadi Hawf        81.00 285  P       P      04 23 24.4 +0.4
OSI   Osito Audit: C   81.10  56  IAmb    IAmb   04 23 30.8
      comp=Z,24nm,0.8s
YHL   Hebgen Lake      81.24  44  IAmb    IAmb   04 23 27.6
      comp=Z,28nm,0.9s
CLC   China Lake       81.36  54  P       P      04 23 25.4 -0.3
CLC   China Lake       81.36  54  P       P      04 23 25.4 -0.3
CLC                               pmax    pmax
      comp=Z,13nm,0.8s
SCO   Scoresbysund     81.37 355  IAmb    IAmb   04 23 33.1
      comp=Z,70nm,1.7s
LRMC  Laurel Mtn Rad   81.46  54  IAmb    IAmb   04 23 27.3
      comp=Z,18nm,0.8s
FURC  Furnace Creek,   81.58  53  IAmb    IAmb   04 23 33.3
      comp=Z,43nm,1.0s
ABTO  Aybut            81.65 285  P       P      04 23 27.6 +0.1
CCCA  Chr Cany lake    81.67  54  IAmb    IAmb   04 23 33.8
      comp=Z,32nm,1.1s
YPP   Pitchstone Pla   81.77  44  IAmb    IAmb   04 24 08.2
      comp=Z,67nm,1.8s
HVU   Hansel Valley    81.78  47  P       P      04 23 27.6 -0.3
HVU   Hansel Valley    81.78  47  P       P      04 23 27.6 -0.3
HVU                               pmax    pmax
      comp=Z,16nm,0.8s
QSM   Queen of Sheba   81.81  54  IAmb    IAmb   04 23 29.6
      comp=Z,42nm,1.1s
GWY   Greenwater Val   81.85  53  IAmb    IAmb   04 23 34.6
      comp=Z,41nm,1.0s
YMP   Mirror Lake Pl   81.92  43  IAmb    IAmb   04 23 39.4
      comp=Z,34nm,1.0s
FXWY  Fox Creek        81.95  45  IAmb    IAmb   04 23 38.5
      comp=Z,32nm,1.2s
MOOW  Moose Ponds      82.07  45  P       P      04 23 29.7 +0.3
RLMT  Red Lodge        82.26  43  IAmb    IAmb   04 23 32.4
      comp=Z,21nm,0.7s
AK03  Malin Array Si   82.34 324  P       P      04 23 30.3 -0.1
AKASG Malin Array Be   82.35 324  P       P      04 23 30.5  0.0
      comp=Z,4.9nm,0.5s,baz=52,slow=5.3,SNR=18
AKASG                             PP      PP     04 26 34.6 -4.1
      comp=Z,3.0nm,0.8s,baz=54,slow=8.2,SNR=5.0
      comp=Z,4.9nm,0.5s
AKASG Malin Array Be   82.35 324  P       P      04 23 29.5 -1.0
AKBB  Malin Array Si   82.35 324  IAmb    IAmb   04 23 45.0
      comp=Z,20nm,0.8s
AKBB  Malin Array Si   82.35 324ceP       P      04 23 30.8 +0.3
AKBB                              pmax    pmax
      comp=Z,9.0nm,0.8s
AKBB  Malin Array Si   82.35 324  P       P      04 23 30.5  0.0
AK01  Malin Array Si   82.36 324  P       P      04 23 30.5  0.0
KIEV  Kiev             82.36 324  P       P      04 23 29.5 -1.1
KIEV  Kiev             82.36 324 ⇓P       P      04 23 30.3 -0.2
KIEV  Kiev             82.36 324 i P      P      04 23 30.4  0.0
      SNR=8.8
KIEV  Kiev             82.36 324 ⇓P       P      04 23 30.3 -0.2
KIEV  Kiev             82.36 324  P       P      04 23 30.5  0.0
      comp=Z,126nm,0.7s
AK23  Malin Array Si   82.36 324  P       P      04 23 30.6 +0.1
PRN   Pahroc Range     82.40  52  IAmb    IAmb   04 23 33.1
      comp=Z,21nm,0.9s
ELS   Elsinore Mount   82.50  56  IAmb    IAmb   04 23 40.4
      comp=Z,35nm,1.5s
DUG   Dugway, Tooele   82.55  48  P       P      04 23 31.9  0.0
DUG                               IAmb    IAmb   04 23 33.8
      comp=Z,24nm,0.7s
DUG   Dugway, Tooele   82.55  48  P       P      04 23 31.9  0.0
DUG                               pmax    pmax
      comp=Z,24nm,0.7s
HWUT  Hardware Ranch   82.65  47  P       P      04 23 32.7 +0.2
HWUT                              IAmb    IAmb   04 23 38.7
      comp=Z,33nm,1.1s
PSUT  Pine Spring      82.67  50  IAmb    IAmb   04 23 48.9
      comp=Z,19nm,0.9s
SIM   Simferopol'      82.79 317 eP       P      04 23 34.7 +1.8
SIM                               pmax    pmax
      comp=Z,52nm,1.0s
TBI   Tubuai           82.81 121 eLQ      LQ     04 45 52.4
      comp=Z,3µm,37.5s
TBI                              eLR      LR     04 49 21.9
      comp=Z,3µm,25.0s
TBI                              eLR      LR     04 49 33.6
      comp=Z,1µm,24.5s
TAOE  Nuku Hiva Isla   82.82 104 eLR      LR     04 49 24.3
      comp=Z,620nm,24.8s
NC303 NORSAR Array S   82.95 339  IAmb    IAmb   04 23 37.3
      comp=Z,34nm,1.1s
HFS   Hagfors          82.97 337  P       P      04 23 33.9 +0.4
      comp=Z,14nm,0.8s,baz=90,slow=4.4,SNR=18
HFS                               LR      LR     05 04 26.1
      comp=Z,389nm,18.6s,baz=46,slow=39
      comp=Z,14nm,0.8s
CTU   Camp Tracy       83.00  48  IAmb    IAmb   04 23 37.6
      comp=Z,33nm,1.2s
TCUT  Toone Canyon     83.00  47  IAmb    IAmb   04 23 42.4
      comp=Z,19nm,0.7s
DNR   Dunn Ranch,Anz   83.13  56  IAmb    IAmb   04 23 38.8
      comp=Z,35nm,1.0s
NB2   NORSAR Subarra   83.14 338  P       P      04 23 34.4  0.0
      comp=Z,29nm,1.0s,baz=42,slow=5.3
NB2   NORSAR Subarra   83.14 338  P       P      04 23 34.4  0.0
      baz=42,slow=5.3
NOA   NORSAR Array B   83.14 338  P       P      04 23 34.2 -0.2
      comp=Z,15nm,1.1s,baz=41,slow=5.1,SNR=14
NOA                               LR      LR     05 04 30.1
      comp=Z,324nm,19.2s,baz=25,slow=38
      comp=Z,15nm,1.1s
PFO   Pinyon Flats O   83.23  56  P       P      04 23 35.5 -0.1
      comp=Z,16nm,0.9s,baz=308,slow=4.4,SNR=37
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PFO                               LR      LR     04 54 11.4
      comp=Z,266nm,19.9s,baz=266,slow=31
      comp=Z,16nm,0.9s
PFO   Pinyon Flats O   83.23  56  P       P      04 23 35.1 -0.5
PFO                               IAmb    IAmb   04 23 41.2
      comp=Z,28nm,1.1s
PFO   Pinyon Flats O   83.23  56  P       P      04 23 35.1 -0.5
PFO                               pmax    pmax
      comp=Z,28nm,1.1s
PMD   Palm Desert      83.27  56  IAmb    IAmb   04 23 37.0
      comp=Z,31nm,1.2s
SUW   Suwalki          83.31 329 eP       P      04 23 35.2 -0.1
PDAR  Pinedale Array   83.32  45  P       P      04 23 36.4 +0.3
      comp=Z,9.3nm,0.9s,baz=278,slow=2.8,SNR=48
PDAR                              PP      PP     04 26 43.1 -4.1
      comp=Z,1.6nm,0.9s,baz=311,slow=9.3,SNR=5.2
PDAR                              LR      LR     04 55 42.7
      comp=Z,342nm,21.2s,baz=294,slow=32
      comp=Z,9.3nm,0.9s
PDAR  Pinedale Array   83.32  45  P       P      04 23 35.3 -0.7
LUBAR Lubar, Ukraine   83.57 324  P       P      04 23 36.9 +0.1
TCRU  Three Creeks R   83.59  50  IAmb    IAmb   04 24 03.8
      comp=Z,12nm,0.7s
RNPP9 Sopachiv         83.63 326  P       P      04 23 37.6 +0.5
CBX   Cerro Bola       83.70  57  IAmb    IAmb   04 23 43.5
      comp=Z,24nm,1.2s
RNPP5 Staryi Chortor   83.74 326  P       P      04 23 37.8 +0.1
BC3   Big Chuckawall   83.94  55  P       P      04 23 38.1 -1.2
BC3                               IAmb    IAmb   04 23 40.3
      comp=Z,19nm,0.8s
MTPU  Mount Pierson    84.06  50  IAmb    IAmb   04 23 49.3
      comp=Z,26nm,1.3s
P17A  Butcher Ranch,   84.29  48  IAmb    IAmb   04 23 42.9
      comp=Z,20nm,0.9s
SORM  Soroca           84.30 322 ⇑P       P      04 23 40.6  0.0
SORM  Soroca           84.30 322 ⇑P       P      04 23 40.6  0.0
ESJX  Sierra Juarez    84.39  57  P       P      04 23 41.1 -0.5
PURM  Purcari          84.39 320 ⇑P       P      04 23 41.3 +0.2
P18A  Preston Nutter   84.53  48  IAmb    IAmb   04 23 44.7
      comp=Z,18nm,0.8s
BLYC  Blythe           84.57  55  IAmb    IAmb   04 23 44.2
      comp=Z,40nm,1.6s
SRU   San Rafael Swe   84.62  48  IAmb    IAmb   04 23 44.2
      comp=Z,23nm,0.9s
GLA   Glamis           84.70  55  IAmb    IAmb   04 23 44.3
      comp=Z,15nm,0.8s
U15A  North Rim        84.81  51  IAmb    IAmb   04 23 47.3
      comp=Z,39nm,1.5s
SFJD  Kangerlussuaq    84.94   5  LR      LR     05 01 09.1
      comp=Z,140nm,21.9s,baz=350,slow=35
KMPD  K-Podol'skiy     85.06 323  P       P      04 23 44.7 +0.3
HMU   Henry Mountain   85.09  50  IAmb    IAmb   04 23 46.5
      comp=Z,23nm,0.8s
K22A  Casper           85.27  44  IAmb    IAmb   04 23 51.5
      comp=Z,36nm,1.2s
RAYN  Ar Rayn          85.34 294  P       P      04 23 47.5 +1.1
RAYN                              S       SKSac  04 34 09.1 -1.8
RAYN  Ar Rayn          85.34 294  P       P      04 23 46.8 +0.4
RAYN  Ar Rayn          85.34 294 i P      P      04 23 47.3 +0.9
      SNR=77
RAYN  Ar Rayn          85.34 294  P       P      04 23 46.8 +0.4
RAYN                              pmax    pmax
      comp=Z,76nm,0.9s
FRB   Frobisher Bay    85.45  13  LR      LR     05 04 51.5
      comp=Z,106nm,20.1s,baz=320,slow=38
O20A  White River Ci   85.57  47  IAmb    IAmb   04 23 55.2
      comp=Z,29nm,1.0s
Y14A  Wickenburg       85.57  54  IAmb    IAmb   04 23 49.1
      comp=Z,22nm,0.9s
BEL   Belsk            85.82 328 eP       P      04 23 47.9 -0.2
BR131 Keskin Array S   85.90 313  IAmb    IAmb   04 24 01.8
      comp=Z,26nm,0.8s
BR131 Keskin Array S   85.90 313 i P      P      04 23 49.2 +0.2
BRTR  Keskin Array B   85.90 313  P       P      04 23 49.0  0.0
      comp=Z,9.6nm,0.8s,baz=113,slow=2.9,SNR=37
BRTR                              LR      LR     05 05 09.1
      comp=Z,318nm,21.9s,baz=72,slow=38
      comp=Z,9.6nm,0.8s
BRTR  Keskin Array B   85.90 313  P       P      04 23 48.2 -0.8
BRTR  Keskin Array B   85.90 313ceP       P      04 23 49.2 +0.2
BRTR                              pmax    pmax
      comp=Z,10.0nm,0.8s
BR106 Keskin Array S   85.91 313  P       P      04 23 50.3 +1.3
      comp=Z,139nmcomp=Z,20nm,0.9s
WUAZ  Wupatki          85.91  52  IAmb    IAmb   04 23 51.1
      comp=Z,21nm,0.9s
BR105 Keskin Array S   85.92 313  P       P      04 23 51.3 +2.2
RSSD  Black Hills      85.93  42  P       P      04 23 48.5 -0.6
RSSD                              IAmb    IAmb   04 24 13.9
      comp=Z,18nm,1.1s
RSSD  Black Hills      85.93  42  P       P      04 23 48.5 -0.6
RSSD                              pmax    pmax
      comp=Z,18nm,1.1s
KIRS  Kirsehir-Merke   86.04 312 ⇓P       P      04 23 52.0 +2.4
PV16  Nyswonger Mesa   86.11  48  IAmb    IAmb   04 23 51.8
      comp=Z,24nm,0.8s
PV05  Paradox Valley   86.11  49  IAmb    IAmb   04 23 51.8
      comp=Z,22nm,0.8s
PV12  Saucer Basin,    86.18  48  P       P      04 23 49.6 -0.9
PV03  Paradox Valley   86.19  48  IAmb    IAmb   04 23 52.1
      comp=Z,31nm,1.1s
TESR  Tescani          86.20 322 ⇓P       P      04 23 49.9 -0.2
TESR  Tescani          86.20 322  P       P      04 23 52.4 +2.3
PV13  Radium Mtn., P   86.25  49  IAmb    IAmb   04 23 51.8
      comp=Z,19nm,0.8s
BUR08 Bucovina Ar. S   86.29 323  IAmb    IAmb   04 24 05.7
      comp=Z,24nm,1.1s
BURAR Bucovina Array   86.30 323  P       P      04 23 51.1 +0.3
BURAR Bucovina Array   86.30 323 ⇓P       P      04 23 52.1 +1.3
BURAR Bucovina Array   86.30 323 ⇓P       P      04 23 52.1 +1.3
KWP   Kalwaria Pacla   86.33 326 eP       P      04 23 51.4 +0.6
ANTO  Ankara           86.37 314  P       P      04 23 51.4 +0.2
ANTO                              IAmb    IAmb   04 24 04.2
      comp=Z,16nm,0.8s
ANTO  Ankara           86.37 314  P       P      04 23 51.4 +0.2
ANTO                              pmax    pmax
      comp=Z,16nm,0.8s
PV15  Paradox Valley   86.38  48  IAmb    IAmb   04 23 58.8
      comp=Z,23nm,1.1s
PV01  Paradox Valley   86.44  48  IAmb    IAmb   04 23 52.7
      comp=Z,14nm,0.8s
PIX   Pinacate         86.44  56  IAmb    IAmb   04 23 55.3
      comp=Z,23nm,1.1s
ONER  Baraj Valea Uz   86.45 322 ⇑P       P      04 23 54.7 +3.3
VRI   Vrincioaia       86.55 321 ⇑P       P      04 23 54.3 +2.4
VRI   Vrincioaia       86.55 321 ⇑P       P      04 23 54.3 +2.4
ULM   Lac du Bonnet    86.55  33  P       P      04 23 51.6 -0.1
      comp=Z,8.4nm,1.0s,baz=261,slow=4.7,SNR=6.6
ULM                               LR      LR     05 02 55.8
      comp=Z,194nm,20.3s,baz=353,slow=36
      comp=Z,8.4nm,1.0s
PLOR  Plostina         86.60 321 ⇑P       P      04 23 52.4 +0.2
PLOR  Plostina         86.60 321 ⇑P       P      04 23 52.4 +0.2
214A  Organ Pipe Nat   86.72  56  IAmb    IAmb   04 23 59.7
      comp=Z,23nm,1.0s
BORG  Borgarnes        86.91 353  LR      LR     05 03 44.6
      comp=Z,87nm,21.9s,baz=20,slow=36
OZUR                   86.93 322 ⇓P       P      04 23 54.9 +1.1
BOSR  Bodos            87.01 322 ⇓P       P      04 23 55.2 +1.1
MLR   Muntele Rosu     87.21 321  LR      LR     05 05 39.8
      comp=Z,671nm,18.8s,baz=68,slow=38
DOPR  Dopca            87.22 322 ⇓P       P      04 23 56.5 +1.3
OJC   Ojcow            87.36 327 eP       P      04 23 54.7 -1.1
NIE   Niedzica         87.66 327 eP       P      04 23 57.6 +0.4
ASF   Jabal al Asfar   87.69 305  LR      LR     05 08 18.4
      comp=Z,294nm,18.1s,baz=15,slow=39
AGMN  Agassiz Nation   87.83  35  IAmb    IAmb   04 23 59.3
      comp=Z,21nm,1.0s
EPLO  Experimental L   87.97  33  IAmb    IAmb   04 23 59.8
      comp=Z,20nm,0.8s
TUC   Tucson           88.00  54  P       P      04 23 58.8 -0.5
TUC   Tucson           88.00  54  P       P      04 23 58.8 -0.5
TUC                               pmax    pmax
      comp=Z,12nm,1.1s
MARR  Marisel-Cluj     88.01 323 ⇑P       P      04 23 59.0 -0.1
ARR   Arges            88.01 322 ⇓P       P      04 24 00.4 +1.3
TNR   Turnu Rosu       88.03 322 ⇑P       P      04 24 00.7 +1.6
TNR   Turnu Rosu       88.03 322 ⇑P       P      04 24 00.7 +1.6
KECS  Kecovo           88.19 326 eP       P      04 24 01.8 +2.1
KECS  Kecovo           88.19 326 eP       P      04 24 01.8 +2.1
LANS  Liptovska Anna   88.24 327 eP       P      04 24 00.8 +0.8
LANS                              pmax    pmax
      comp=Z,9.0nm,1.6s
LANS  Liptovska Anna   88.24 327 eP       P      04 24 00.8 +0.8
MMAI  Mount Meron Ar   88.31 307  P       P      04 24 01.2 +0.5
      comp=Z,8.5nm,0.6s,baz=32,slow=4.9,SNR=6.1
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MMAI				LR	LR	05 08 20.8	
	comp=Z,431nm,18.5s,baz=42,slow=39						
	comp=Z,8.5nm,0.6s						
OKC	Ostrava-Krasne	88.41	328	eP	P	04 24 01.1	+0.4
OKC				MLR	MLR		
	comp=Z,2µm,16.8s						
OKC	Ostrava-Krasne	88.41	328	eP	P	04 24 01.1	+0.4
OKC				AMS	AMS	05 07 50.0	
	comp=Z,2µm,16.8s						
KSP	Ksiaz	88.56	329	eP	P	04 24 00.7	-0.7
MORC	Moravsky Berou	88.73	328	IAmb	IAmb	04 24 33.1	
	comp=Z,39nm,2.0s						
MORC	Moravsky Berou	88.73	328	⇑P	P	04 24 02.3	0.0
MORC	Moravsky Berou	88.73	328	eP	P	04 24 02.3	0.0
MORC				e		04 27 35.1	
MORC	Moravsky Berou	88.73	328	⇑P	P	04 24 02.3	0.0
OSTC	Ostas	88.80	329	eP	P	04 24 03.8	+1.2
OSTC				MLR	MLR		
	comp=Z,1µm,16.5s						
OSTC	Ostas	88.80	329	eP	P	04 24 03.8	+1.2
OSTC				AMS	AMS	05 08 20.0	
	comp=Z,1µm,16.5s						
CHVC	Chvalec	88.85	329	eP	P	04 24 03.1	+0.3
CHVC				MLR	MLR		
	comp=Z,2µm,17.8s						
CHVC	Chvalec	88.85	329	eP	P	04 24 03.1	+0.3
CHVC				AMS	AMS	05 08 00.0	
	comp=Z,2µm,17.8s						
PSZ	Piszkesteto	88.86	326	IAmb	IAmb	04 24 18.6	
	comp=Z,19nm,1.1s						
PSZ	Piszkesteto	88.86	326	⇑P	P	04 24 04.1	+1.1
PSZ	Piszkesteto	88.86	326	⇑P	P	04 24 04.1	+1.1
KRLC	Kraliky	88.88	329	eP	P	04 24 03.3	+0.3
KRLC				MLR	MLR		
	comp=Z,1µm,21.0s						
KRLC	Kraliky	88.88	329	eP	P	04 24 03.3	+0.3
KRLC				AMS	AMS	05 07 40.0	
	comp=Z,1µm,21.0s						
DPC	Dobruska-Polom	88.90	329	eP	P	04 24 03.4	+0.3
DPC				MLR	MLR		
	comp=Z,1µm,15.7s						
DPC	Dobruska-Polom	88.90	329	eP	P	04 24 03.4	+0.3
DPC				AMS	AMS	05 08 30.0	
	comp=Z,1µm,15.7s						
UPC	Upice	88.93	329	eP	P	04 24 03.8	+0.6
UPC				MLR	MLR		
	comp=Z,2µm,18.0s						
UPC	Upice	88.93	329	eP	P	04 24 03.8	+0.6
UPC				AMS	AMS	05 08 20.0	
	comp=Z,2µm,18.0s						
SIRR	Siria	89.04	324	⇓P	P	04 24 04.4	+0.6
F33A	5 Mile Ranch,	89.21	37	IAmb	IAmb	04 24 26.5	
	comp=Z,21nm,1.0s						
JAVC	Velka Javorina	89.31	327	eP	P	04 24 06.3	+1.2
BZS	Buzias	89.49	323	⇑P	P	04 24 05.7	-0.2
BZS	Buzias	89.49	323	⇑P	P	04 24 05.7	-0.2
VRAC	Vranov	89.50	328	LR	LR	05 07 53.3	
	comp=Z,467nm,18.6s,baz=47,slow=38						
VRAC	Vranov	89.50	328	⇑P	P	04 24 06.4	+0.5
VRAC	Vranov	89.50	328	eP	P	04 24 06.3	+0.5
VRAC				e		04 27 37.1	
VRAC	Vranov	89.50	328	⇑P	P	04 24 06.4	+0.5
PVCC	Panska Ves	89.56	330	eP	P	04 24 06.8	+0.7
PVCC				MLR	MLR		
	comp=Z,800nm,7.2s						
PVCC	Panska Ves	89.56	330	eP	P	04 24 06.8	+0.7
PVCC				AMS	AMS	05 09 00.0	
	comp=Z,800nm,7.2s						
319A	Douglas	89.58	54	IAmb	IAmb	04 24 13.0	
	comp=Z,20nm,1.2s						
TASM	ASL Pad, Albuq	89.61	50	IAmb	IAmb	04 24 13.0	
	comp=Z,8.2nm,1.2s						
TASM	ASL Pad, Albuq	89.61	50	IAmb	IAmb	04 24 13.0	
	comp=Z,8.6nm,1.2s						
ANMO	Albuquerque	89.61	50	P	P	04 24 07.0	0.0
	comp=Z,3.4nm,0.9s,baz=302,slow=6.6,SNR=5.6						
ANMO				LR	LR	05 00 32.9	
	comp=Z,155nm,19.6s,baz=302,slow=33						
	comp=Z,3.4nm,0.9s						
ANMO	Albuquerque	89.61	50	P	P	04 24 07.3	+0.4
ANMO	Albuquerque	89.61	50	P	P	04 24 07.3	+0.4
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SMOL	Smolenice	89.66	327	eP	P	04 24 07.6	+1.0
SMOL				pmax	pmax		
	comp=Z,7.0nm,1.2s						
CLL	Collm	89.68	331	eP	P	04 24 07.0	+0.4
CLL	Collm	89.68	331	eP	P	04 24 07.0	+0.4
CLL				ePP	PP	04 27 39.0	+1.1
CLL				eSS	SS	04 40 48.0	-4.2
T25A	Trinidad	89.73	47	IAmb	IAmb	04 24 11.0	
	comp=Z,45nm,1.9s						
KRUC	Moravsky	89.77	328	eP	P	04 24 07.2	+0.1
KRUC				e		04 27 39.7	
MSEY	Mahe Island	89.78	265	P	P	04 24 08.8	+1.0
MODS	Modra-Piesok	89.83	327	eP	P	04 24 09.2	+1.7
MODS				pmax	pmax		
	comp=Z,32nm,1.1s						
MODS	Modra-Piesok	89.83	327	eP	P	04 24 09.2	+1.7
PRA	Prague	89.95	330	AMS	AMS	05 09 00.0	
	comp=Z,1µm,14.8s						
PRU	Pruhonice	89.96	330	eP	P	04 24 08.3	+0.3
PRU				MLR	MLR		
	comp=Z,1µm,18.0s						
PRU	Pruhonice	89.96	330	eP	P	04 24 08.3	+0.3
PRU				AMS	AMS	05 08 50.0	
	comp=Z,1µm,18.0s						
HSKC	Hora Svate Kat	90.00	330	eP	P	04 24 08.7	+0.5
HSKC				AMS	AMS	05 08 30.0	
	comp=Z,700nm,17.1s						
121A	Cookes Peak, D	90.02	53	IAmb	IAmb	04 24 12.9	
	comp=Z,26nm,1.4s						
TREC	Trest	90.03	329	eP	P	04 24 08.7	+0.3
TREC				MLR	MLR		
	comp=Z,1µm,20.8s						
TREC	Trest	90.03	329	eP	P	04 24 08.7	+0.3
TREC				AMS	AMS	05 08 30.0	
	comp=Z,1µm,20.8s						
EIL	Elat	90.43	304	LR	LR	05 10 05.2	
	comp=Z,374nm,18.6s,baz=0.0,slow=39						
ZVC	Zvikov	90.51	329	eP	P	04 24 10.6	0.0
ZVC				AMS	AMS	05 09 20.0	
	comp=Z,2µm,17.3s						
MORH	Mrgy, Hungar	90.64	325	⇑P	P	04 24 11.0	-0.2
RONA	Rosalia, Austr	90.77	327	ePcP	P	04 24 12.4	+0.5
	comp=Z,8.9nm,1.2s,SNR=7.2						
CONA	Conrad Observa	90.82	327	ePcP	PcP	04 24 12.8	-0.5
	comp=Z,10.0nm,1.0s						
CKRC	Cesky Krumlov	90.91	329	eP	P	04 24 12.6	+0.1
CKRC				MLR	MLR		
	comp=Z,1µm,18.0s						
CKRC	Cesky Krumlov	90.91	329	eP	P	04 24 12.6	+0.1
CKRC				AMS	AMS	05 09 00.0	
	comp=Z,1µm,18.0s						
KHC	Kasperske Hory	91.02	329	eP	P	04 24 13.2	+0.2
KHC				MLR	MLR		
	comp=Z,2µm,15.2s						
KHC	Kasperske Hory	91.02	329	eP	P	04 24 13.2	+0.2
KHC				AMS	AMS	05 09 30.0	
	comp=Z,2µm,15.2s						
GEC2	GERESS Array S	91.17	329	P	P	04 24 13.1	-0.7
GERES	GERESS Array B	91.17	329	P	P	04 24 13.5	-0.3
	comp=Z,2.4nm,0.8s,baz=35,slow=5.1,SNR=20						
GERES				LR	LR	05 09 16.7	
	comp=Z,614nm,18.7s,baz=46,slow=38						
	comp=Z,2.4nm,0.8s						
SPMN	Marine on St.	91.45	36	IAmb	IAmb	04 24 16.7	
	comp=Z,13nm,0.9s						
ARSA	Arzberg	91.46	327	IAmb	IAmb	04 24 45.5	
	comp=Z,24nm,1.5s						
ARSA	Arzberg	91.46	327	ePcP	P	04 24 15.4	+0.3
	comp=Z,6.0nm,1.2s						
MOA	Molln	91.63	328	i PcP	P	04 24 16.1	+0.3
	comp=Z,2.1nm,0.6s						
I37A	Lemond, Waseca	91.96	37	IAmb	IAmb	04 24 21.0	
	comp=Z,20nm,0.9s						
BIOA	Bad Ischl, Aus	92.03	328	i PcP	PcP	04 24 18.3	-0.2
	comp=Z,3.4nm,0.7s						
MNTX	Cornudas Mount	92.18	52	IAmb	IAmb	04 24 24.8	
	comp=Z,14nm,1.2s						
EKA	Eskdalemuir Ar	92.19	341	P	P	04 24 17.6	-0.7
	comp=Z,3.3nm,0.9s,baz=60,slow=4.9,SNR=3.5						
EKA				LR	LR	05 07 48.7	
	comp=Z,159nm,21.8s,baz=26,slow=37						
	comp=Z,3.3nm,0.9s						
PH02	Texas Public H	92.36	48	IAmb	IAmb	04 25 45.3	
	comp=Z,20nm,0.5s						
OBKA	Obir	92.46	327	ePcP	P	04 24 20.1	+0.3
	comp=Z,2.4nm,0.7s						
LESA	Schwarzleotal	92.67	329	ePcP	P	04 24 20.8	0.0
	comp=Z,1.5nm,0.4s						
LPIG	La Paz	92.69	61	LR	LR	04 59 20.1	
	comp=Z,295nm,20.1s,baz=264,slow=31						
VHRN	Van Horn	92.98	53	IAmb	IAmb	04 24 26.8	
	comp=Z,19nm,1.2s						
STU	Stuttgart	93.20	331	IAmb	IAmb	04 24 38.0	
	comp=Z,18nm,1.0s						
WATA	Walderalm	93.24	329	ePcP	PcP	04 24 23.9	-0.2
	comp=Z,0.9nm,0.4s						
ABTA	Abfaltersbach	93.25	328	eP	P	04 24 22.4	-1.0
	comp=Z,4.8nm,0.9s						
WTTA	Wattenberg	93.27	329	ePcP	P	04 24 23.5	-0.2
	comp=Z,1.2nm,0.6s						
ATD	Arta Tunnel	93.30	285	LR	LR	05 09 09.8	
	comp=Z,5.5nm,18.5s,baz=72,slow=37						
KSU1	Kansas State U	93.40	42	IAmb	IAmb	04 24 25.4	
	comp=Z,19nm,0.9s						
PECS	Pecos	93.43	52	P	P	04 24 25.2	+0.7
PECS				IAmb	IAmb	04 24 28.0	
	comp=Z,12nm,0.9s						
SQTA	Sankt Quirin	93.50	329	i PcP	P	04 24 24.9	+0.3
	comp=Z,5.2nm,1.5s						
STAL	STALIGIAL	93.51	328	IAmb	IAmb	04 24 27.2	
	comp=Z,15nm,0.9s						
OK038	West end E0370	93.76	45	IAmb	IAmb	04 24 29.8	
	comp=Z,14nm,0.8s						
SCHQ	Schefferville	93.83	17	LR	LR	05 09 09.2	
	comp=Z,144nm,21.2s,baz=313,slow=37						
FETA	Feichten	93.86	329	ePcP	P	04 24 26.1	-0.2
	comp=Z,3.3nm,0.8s						
BFO	Black Forest	93.91	331	P	P	04 24 25.9	-0.5
BFO				IAmb	IAmb	04 24 41.0	
	comp=Z,24nm,1.1s						
BFO	Black Forest	93.91	331	P	P	04 24 25.9	-0.5
BFO				pmax	pmax		
	comp=Z,24nm,1.1s						
DAVA	Damuels	94.04	330	ePcP	P	04 24 27.1	-0.1
	comp=Z,2.5nm,0.5s,SNR=6.2						
POST	Post	94.05	49	IAmb	IAmb	04 24 51.4	
	comp=Z,31nm,1.6s						
DKNS	Dickens	94.07	49	IAmb	IAmb	04 24 46.4	
	comp=Z,13nm,0.8s						
RKT	Rikitea	94.08	114	eLR	LR	04 54 36.0	
	comp=Z,3µm,26.0s						
IDI	Anoyia	94.13	314	LR	LR	05 09 59.9	
	comp=Z,130nm,21.3s,baz=324,slow=38						
DAVOX	Davos/Dischmat	94.42	330	LR	LR	05 13 12.6	
	comp=Z,433nm,18.2s,baz=36,slow=40						
SN07	Snyder 07	94.44	49	IAmb	IAmb	04 24 36.9	
	comp=Z,18nm,1.5s						
ECH	Echery	94.49	332	IAmb	IAmb	04 24 45.0	
	comp=Z,30nm,1.6s						
TX31	Lajitas Ar. Si	94.74	53	IAmb	IAmb	04 24 37.0	
	comp=Z,19nm,1.2s						
TXAR	Lajitas Array	94.74	53	P	P	04 24 31.9	+1.2
	comp=Z,9.8nm,1.0s,baz=324,slow=2.5,SNR=43						
TXAR				LR	LR	05 03 18.6	
	comp=Z,176nm,19.3s,baz=310,slow=33						
	comp=Z,9.8nm,1.0s						
TXAR	Lajitas Array	94.74	53	P	P	04 24 30.7	0.0
TXAR	Lajitas Array	94.74	53	P	P	04 24 30.7	0.0
APMT	Aspermont	94.81	48	IAmb	IAmb	04 24 49.4	
	comp=Z,9.4nm,0.7s						
WMOK	Wichita Mounta	94.82	47	IAmb	IAmb	04 24 34.4	
	comp=Z,16nm,1.2s						
P38A	Dawn	94.85	40	IAmb	IAmb	04 24 32.3	
	comp=Z,18nm,1.0s						
TUE	Stuetta	94.90	330	IAmb	IAmb	04 24 47.9	
	comp=Z,14nm,1.1s						
SGCY	Sterling City	94.99	50	IAmb	IAmb	04 24 40.9	
	comp=Z,12nm,1.1s						
SAND	Sanderson	95.47	52	P	P	04 24 33.6	-0.3
ABTX	Abilene, Hawle	95.56	49	IAmb	IAmb	04 24 43.1	
	comp=Z,14nm,1.1s						
WTFS	Witchita Falls	95.63	47	IAmb	IAmb	04 24 36.0	
	comp=Z,16nm,1.1s						
P40A	Paris	95.75	39	IAmb	IAmb	04 24 56.4	
	comp=Z,12nm,1.0s						
W35A	Tecumseh	95.77	45	IAmb	IAmb	04 24 36.7	
	comp=Z,15nm,1.1s						
U38A	Gravette	96.47	43	IAmb	IAmb	04 24 39.2	
	comp=Z,25nm,1.6s						
JCT	Junction City	96.76	51	IAmb	IAmb	04 24 47.3	
	comp=Z,28nm,1.8s						
FURI	Furi	98.16	285	LR	LR	05 10 55.7	
	comp=Z,69nm,18.2s,baz=45,slow=37						
SADO	Sadowa	98.25	29	LR	LR	05 12 55.5	
	comp=Z,98nm,18.6s,baz=354,slow=38						
ESDC	Sonseca Array	106.05	334	PP	PKiKP	04 29 33.3	+0.3
	comp=Z,0.6nm,0.9s,baz=21,slow=6.5,SNR=3.2						
QSPA	South Pole Qui	117.59	180		PKiKP	04 29 54.0	0.0
LSZ	Lusaka	118.51	267	PKP	PKiKP	04 29 58.1	+0.8
	comp=Z,1.4nm,0.3s,baz=351,slow=4.4,SNR=1.7						
LSZ	Lusaka	118.51	267	PKPdf	PKPdf	04 29 56.8	-0.5
LSZ	Lusaka	118.51	267	PKIKP	PKPdf	04 29 56.8	-0.5
SYO	Syowa Base	120.39	204	⇑ePdiff	Pdif	04 26 25.0	+1.2
SYO	Syowa Base	120.39	204	⇓epPdiff	pPdif	04 26 31.8	+2.7
TORD	Torodi Ar. Bea	124.50	312	PKP	PKiKP	04 30 09.3	+0.2
	comp=Z,2.4nm,0.8s,baz=20,slow=3.2,SNR=8.0						
TORD				PP	PP	04 31 42.4	-12
	comp=Z,1.2nm,0.9s,baz=21,slow=11,SNR=2.0						
BOSA	Boshof	125.53	253	PKP	PKiKP	04 30 11.4	+0.6
	comp=Z,2.9nm,1.0s,baz=117,slow=2.3,SNR=2.2						
NVL	N'lazarevskaya	129.08	199	ePKIKP	PKiKP	04 30 16.6	+0.2
NVL				e		04 32 27.3	
NVL				ePPP	PPP	04 35 13.7	
NVL				eSS	SS	04 49 46.1	+3.9
NVL				eSSS	SSS	04 54 32.2	
NVL				pmax	pmax		
	comp=Z,15nm,1.2s						
TROLL	Troll, Antarti	130.76	195	⇓P	PKPpre	04 30 15.1	
	comp=Z,200nm,0.6s						
SDV	Santo Domingo	131.24	46	PKP	PKiKP	04 30 22.6	-0.2
	comp=Z,3.0nm,0.5s,baz=320,slow=4.5,SNR=4.2						
SDV	Santo Domingo	131.24	46	eP	PKPdf	04 30 20.3	-1.6
SNAA	Sanae	132.20	194	PKP	PKiKP	04 30 22.5	-0.3
	comp=Z,1.8nm,0.6s,baz=184,slow=4.8,SNR=7.5						
SNAA	Sanae	132.20	194	PKPpre	PKPpre	04 30 14.9	
SNAA	Sanae	132.20	194	PKIKP	PKPpre	04 30 14.9	
DBIC	Dimbokro	133.60	313	PKP	PKPdf	04 30 24.2	-1.8
	comp=Z,3.1nm,0.7s,baz=70,slow=3.6,SNR=4.4						
VNA2	Neumayer--Watz	133.71	193	⇓P	PKiKP	04 30 26.1	+0.2
	comp=Z,9.9nm,0.6s,baz=112,slow=1.6						
VNA3	Neumayer Olymp	133.89	192	⇓P	PKPdf	04 30 24.4	-0.6
	comp=Z,7.9nm,0.8s						
H03N2	Juan Fernandez	143.84	109	T	T	07 11 11.9	
	baz=278,slow=75,SNR=9.2						
H03N3	Juan Fernandez	143.85	109	T	T	07 11 12.6	
	baz=278,slow=75,SNR=10						
H03N1	Juan Fernandez	143.86	109	T	T	07 11 09.7	
	baz=278,slow=75,SNR=8.1						
TEFE	Tefe	144.39	52	eP	PKPbc	04 30 44.3	+0.2
COYC	Coyhaique	147.23	132	PKPdf	PKPdf	04 30 50.2	+0.6
LL02	Futaleuf	148.17	128	PKPbc	PKPbc	04 30 54.9	+0.4
LPAZ	La Paz	149.22	75	PKPbc	PKiKP	04 30 59.8	-0.2
	comp=Z,20nm,0.8s,baz=327,slow=1.9,SNR=40						
LPAZ	La Paz	149.22	75	eP	PKPdf	04 30 53.1	-1.4
PLCA	Paso Flores	149.78	124	PKPbc	PKiKP	04 31 00.2	+0.5
	comp=Z,5.6nm,0.9s,baz=224,slow=17,SNR=5.3						
PLCA	Paso Flores	149.78	124	eP	PKPdf	04 30 55.0	+0.9
MT09	Talagante	150.47	110		PKPab	04 31 04.7	-2.6
ITTB	Itaituba	150.76	40	eP	PKPdf	04 30 55.7	-0.6
NPGB	Novo Progresso	153.12	43	eP	PKPdf	04 30 59.2	-0.6
VILB	Vilhena	153.94	60	eP	PKPdf	04 31 01.2	+0.2
PDRB	Porto dos Gac	155.62	52	eP	PKPdf	04 31 04.6	+1.3
MURT	Porto Murtinho	160.50	76	eP	PKPdf	04 31 10.1	+1.1
AQDB	Aquidauana	161.63	71	eP	PKPdf	04 31 09.8	-0.4
CPUP	Villa Florida	162.02	90	PKP	PKPdf	04 31 10.6	+0.1
	comp=Z,1.4nm,0.8s,baz=18,slow=5.5,SNR=2.9						
CPUP				PKPab	PKPab	04 31 57.3	+0.4
	comp=Z,3.4nm,0.7s,baz=268,slow=4.0,SNR=11						
CPSB	Cacapava Do Su	165.58	104	eP	PKPdf	04 31 12.8	-0.8

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*JMA **30** 04:32:29.3±0.1, 38°.5N±0°.3×142°.1E±0°.7, h41^{km}±1^{km}, MD4.0/40, MV4.1/40, E OFF MIYAGI PREF*

JMA Felt I J1 at E OFF MIYAGI PREF .

*NIED **30** 04:32:29.3, 38°.48N×142°.11E, h41^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.81; $M_{\theta\theta}$0.09; $M_{\phi\phi}$-0.91; $M_{r\theta}$0.47; $M_{\theta\phi}$-0.37; $M_{\phi r}$0.76; Fault plane solution: $M_0$1.29000×10^{15} NP1: ϕ_s184.00000°, δ25.00000°, λ67.00000°. NP2: ϕ_s29.00000°, δ67.00000°, λ100.00000°.*

*IDC **30** 04:32:30.9±2.5, 38°.50N×142°.08E, h53^{km}±21^{km}, mb3.8/20, mbtmp4.0/25, ML3.4/4, MS3.6/2 Error ellipse: s-maj=17.8km s-min=14.7km az=103.0*

*NEIC **30** 04:32:31.4±1.5, 38°.54N±0°.05×142°.0E±0°.1, h51^{km}±5^{km}, mb4.4/25, Error ellipse: s-maj=12.0km s-min=7.0km az=92.0*

ISC 30 04:32:29.2±0.6**, 38°.48N**±0°.06×**142°.16E**±0°.08**, h39**^{km}±3^{km}**, n95,** σ**1**^{s}**.03**/91**, mb4.3**/33**, 17D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.57	253	⇓iP	Pn	04 32 40.4	-0.6
JIKH				⇓eS	Sn	04 32 47.9	-1.2
JIKH	Ishinomakikobu	0.57	253	A	A	04 32 40.4	
	comp=N,18nm,0.3s,comp=E,20nm,0.3s						
JKMT	Kesennumamotoy	0.63	301	⇓iP	Pn	04 32 41.5	-0.2
JKMT				⇓eS	Sn	04 32 49.9	-0.6
JIO	Ouri	0.64	268	⇓P	Pn	04 32 41.4	-0.4
JIO				⇓S	Sn	04 32 49.6	-1.1
JIO	Ouri	0.64	268	A	A	04 32 41.4	
	comp=N,9.0nm,0.5s,comp=E,8.0nm,1.9s						
OFUJ	Ofunato	0.71	327	⇓P	Pn	04 32 42.7	0.0
OFUJ				⇓eS	Sn	04 32 52.1	-0.3
OFUJ	Ofunato	0.71	327	A	A	04 32 42.7	
	comp=N,8.0nm,1.3s,comp=E,10.0nm,0.3s						
JMK	Ichinoseki	0.87	303	⇓P	Pn	04 32 44.9	0.0
JMK				⇓eS	Sn	04 32 55.8	-0.6
JOFO	Osakifurukawao	0.99	277	A	A	04 32 46.4	
	comp=N,17nm,1.0s,comp=E,20nm,0.7s						
JOU	Okura	1.18	265	⇓P	Pn	04 32 49.1	-0.1
JOU				⇓eS	Sn	04 33 03.9	-0.1
JOU	Okura	1.18	265	A	A	04 32 49.1	
	comp=N,9.0nm,0.6s,comp=E,9.0nm,0.4s						
JOM	Ohasama	1.20	326	⇓P	Pn	04 32 49.9	+0.5
JOM				⇓eS	Sn	04 33 04.8	+0.4
JOM	Ohasama	1.20	326	A	A	04 32 49.9	
	comp=N,6.0nm,0.3s,comp=E,6.0nm,0.3s						
JMM	Marumori	1.24	241	⇓iP	Pn	04 32 49.3	-0.7
JYK	Kaneyama	1.48	288	⇓P	Pn	04 32 53.6	+0.4
JRG	Rokugo	1.50	308	⇓P	Pn	04 32 53.9	+0.4
JFK	Kawauchi	1.51	223	eP	Pn	04 32 52.9	-0.8
JYS	Shirataka	1.67	262	P	Pn	04 32 56.0	+0.1
JSD	Sado	3.10	263		Pn	04 33 14.9	-0.7
ERM	Erimo	3.61	12	Pn	Pn	04 33 22.4	0.0
MJAR	Matsushiro Arr	3.69	240	P	Pn	04 33 25.5	+1.8
	comp=E,0.9nm,0.3s,baz=32,slow=14,SNR=40						
MJAR				LR	LR	04 35 03.2	
	comp=E,339nm,20.9s,baz=88,slow=42						
	comp=E,7.5nm,0.5s						
MJAR	Matsushiro Arr	3.69	240	Pn	Pn	04 33 24.1	+0.4
MAJO	Matsushiro	3.69	240	Pn	Pn	04 33 23.5	-0.2
MJB9	Matsu-Tunnel	3.69	240	Pn	Pn	04 33 23.9	+0.2
JGF	Kuroka	4.80	235	Pn	Pn	04 33 40.9	+2.0
INU	Inuyama	5.17	234	Pn	Pn	04 33 45.2	+1.2
ASAJ	Asahikawa	5.64	3	P	Pn	04 33 51.9	+1.6
	comp=E,1.6nm,0.3s,baz=267,slow=14,SNR=6.9						
ASAJ				S	Sn	04 34 51.2	-2.6
	comp=E,5.0nm,0.3s,baz=112,slow=5.4,SNR=1.3						
	comp=E,4.3nm,0.3s						
JKA	Kamikawa-asahi	5.64	3	Pn	Pn	04 33 51.1	+0.7
JMN	Monobe	8.21	237	Pn	Pn	04 34 28.0	+2.3
USRK	Ussuriysk Ar.	9.54	310	P	Pn	04 34 44.8	+0.8
	comp=E,0.6nm,0.3s,baz=124,slow=14,SNR=11						
	comp=E,8.6nm,0.8s						
JNU	Nakatsue	10.61	243	P	Pn	04 34 59.6	+1.1
	comp=E,0.3nm,0.3s,baz=69,slow=8.6,SNR=2.2						
	comp=E,9.3nm,1.0s						
JNU	Nakatsue	10.61	243	Pn	Pn	04 35 00.5	+1.9
KSRS	Korea Array	11.29	269	P	Pn	04 35 11.8	+3.9
	comp=E,1.3nm,0.5s,baz=78,slow=14,SNR=3.0						
HILR	Hailar Array B	19.47	312	P	P	04 36 50.7	-1.9
	comp=E,2.2nm,0.4s,baz=115,slow=12,SNR=8.0						
SONM	Songino Array	27.50	301	P	P	04 38 12.1	+0.2
	comp=E,0.7nm,0.7s,baz=108,slow=9.3,SNR=2.5						
	comp=E,0.7nm,0.7s						
H11N2	WAKE ISLAND Hy	28.42	124	T	T	05 08 29.6	
	baz=316,slow=76,SNR=54						
H11N1	WAKE ISLAND Hy	28.43	124	T	T	05 08 43.3	
	baz=316,slow=76,SNR=44						
H11N3	WAKE ISLAND Hy	28.44	124	T	T	05 08 45.4	
	baz=316,slow=76,SNR=72						
H11S1	WAKE ISLAND Hy	29.19	126	T	T	05 09 33.8	
	baz=318,slow=76,SNR=52						
H11S3	WAKE ISLAND Hy	29.19	126	T	T	05 09 34.7	
	baz=318,slow=76,SNR=65						
H11S2	WAKE ISLAND Hy	29.21	126	T	T	05 09 35.7	
	baz=318,slow=76,SNR=57						
LZDM	Lanzhou Array	30.59	277	P	P	04 38 39.2	-0.4
	comp=E,2.2nm,0.5s,baz=132,slow=2.2,SNR=5.1						
	comp=E,2.2nm,0.5s						
ZAA0	Zalesovo Array	41.39	311	P	P	04 40 11.4	0.0
ZAA0				IAmb	IAmb	04 40 11.9	
	comp=Z,3.7nm,0.6s						
ZALV	Zalesovo Beam	41.39	311	P	P	04 40 11.2	-0.2
	comp=Z,3.9nm,0.5s,baz=87,slow=8.2,SNR=16						
	comp=Z,3.9nm,0.5s						
CMAR	Chiang Mai Arr	42.45	254	P	P	04 40 20.4	0.0
	comp=Z,0.6nm,0.4s,baz=71,slow=10,SNR=4.1						
	comp=Z,0.6nm,0.4s						
C18K	Utukok River	42.72	27	P	P	04 40 22.6	+0.5
G18K	Tagagawik	43.10	31	P	P	04 40 26.4	+1.2
G18K				IAmb	IAmb	04 40 41.2	
	comp=Z,8.3nm,1.5s						
D19K	Kuna River	43.78	27	P	P	04 40 32.1	+1.4
MKAR	Makanchi Array	43.87	301	P	P	04 40 31.5	-0.1
	comp=Z,1.7nm,0.6s,baz=88,slow=10,SNR=16						
	comp=Z,1.7nm,0.6s						
E19K	Redstone River	43.92	29	P	P	04 40 33.2	+1.5
D22K	Ayikyak River	45.80	27	P	P	04 40 48.4	+1.7
D22K				IAmb	IAmb	04 41 16.5	
	comp=Z,6.3nm,1.2s						
D23K	Nanushuk River	46.53	27	P	P	04 40 54.1	+1.7
E23K	Chandalar	46.86	29	P	P	04 40 56.6	+1.5
E23K				IAmb	IAmb	04 40 58.6	
	comp=Z,5.4nm,1.3s						
ILAR	Eielson Array	47.96	33	P	P	04 41 04.1	+0.5
	comp=Z,0.8nm,0.9s,baz=270,slow=5.9,SNR=10						
	comp=Z,0.8nm,0.9s						
D25K	Kavik River	48.09	27	P	P	04 41 05.7	+1.1
D25K				IAmb	IAmb	04 41 06.4	
	comp=Z,11nm,1.5s						
BOOM	Boomskoye usch	49.37	297	P	P	04 41 14.9	-0.1
BVAR	Borovoye Array	50.05	312	P	P	04 41 19.2	-0.5
	comp=Z,1.0nm,0.6s,baz=65,slow=7.5,SNR=6.8						
BVAR				PcP	PcP	04 42 39.2	+0.2
	comp=Z,1.8nm,0.6s,baz=90,slow=2.7,SNR=7.5						
	comp=Z,1.0nm,0.6s						
F28M	Old Crow	50.57	29	P	P	04 41 25.4	+1.9
I28M	Miner Creek	50.82	32	P	P	04 41 27.3	+1.8
I28M				IAmb	IAmb	04 41 32.5	
	comp=Z,6.2nm,1.4s						
G29M	Pine Creek	51.38	30	P	P	04 41 31.2	+1.7
G29M				IAmb	IAmb	04 41 32.3	
	comp=Z,14nm,1.4s						
KKAR	Karatay Array	52.92	299	P	P	04 41 41.4	0.0
H31M	Peel River	53.04	31	P	P	04 41 43.1	+1.2
H31M				IAmb	IAmb	04 42 07.3	
	comp=Z,5.6nm,1.2s						
ARTI	Arti	55.78	318	P	P	04 42 01.4	-0.5
AB31	Akbulak array	57.47	310	P	P	04 42 12.8	-1.2
AB31				IAmb	IAmb	04 42 14.1	
	comp=Z,2.0nm,0.6s						
ABKAR	Akbulak array	57.47	310	P	P	04 42 13.3	-0.7
WB0	Warramunga Arr	58.40	189	P	P	04 42 19.7	-1.1
WB0				IAmb	IAmb	04 42 21.8	
	comp=Z,3.5nm,0.9s						
WR8	Warramunga Arr	58.57	188	P	P	04 42 21.2	-0.7
WRA	Warramunga Arr	58.58	189	P	P	04 42 21.6	-0.4
	comp=Z,1.7nm,0.7s,baz=6.4,slow=6.9,SNR=8.1						
	comp=Z,1.7nm,0.7s						
YKA	Yellowknife Ar	62.26	31	P	P	04 42 45.9	-0.8
	comp=Z,0.3nm,0.6s,baz=300,slow=7.7,SNR=3.8						
	comp=Z,0.3nm,0.6s						
ASAR	Alice Springs	62.31	189	P	P	04 42 47.4	-0.1
	comp=Z,0.6nm,0.6s,baz=9.0,slow=5.5,SNR=9.3						
	comp=Z,0.6nm,0.6s						
ASAR	Alice Springs	62.31	189	P	P	04 42 47.8	+0.4
ARCES	ARCESS Array B	62.85	339	P	P	04 42 51.0	+0.4
	comp=Z,2.3nm,0.8s,baz=58,slow=6.4,SNR=5.6						
	comp=Z,2.3nm,0.8s						
ARCES	ARCESS Array B	62.85	339	P	P	04 42 51.0	+0.4
FIA1	FINESS Array S	67.81	332	P	P	04 43 22.1	-0.6

FINES	FINESS Array B	67.81	332	P	P	04 43 21.9	-0.8
	comp=Z,3.5nm,0.7s,baz=27,slow=11,SNR=8.8						
	comp=Z,3.5nm,0.7s						
FINES	FINESS Array B	67.81	332	P	P	04 43 21.6	-1.2
BLKN	Baker Lake	67.83	24	P	P	04 43 23.2	+0.4
BLKN				IAmb	IAmb	04 43 24.4	
	comp=Z,5.2nm,1.1s						
KBZ	Khabaz	70.41	311	P	P	04 43 39.2	0.0
	comp=Z,3.7nm,0.9s,baz=22,slow=2.6,SNR=6.3						
	comp=Z,3.7nm,0.9s						
HFS	Hagfors	73.01	336	P	P	04 43 54.6	0.0
	comp=Z,2.5nm,0.7s,baz=67,slow=3.7,SNR=7.4						
	comp=Z,2.5nm,0.7s						
NC204	NORSAR Array S	73.03	338	P	P	04 43 54.3	-0.4
NB2	NORSAR Subarra	73.08	337	P	P	04 43 55.1	+0.1
	comp=Z,1.2nm,0.6s,baz=38,slow=6.2						
NOA	NORSAR Array B	73.08	337	P	P	04 43 54.9	-0.1
	comp=Z,1.5nm,0.6s,baz=38,slow=6.0,SNR=4.9						
	comp=Z,1.5nm,0.6s						
AKASG	Malin Array Be	73.51	322	P	P	04 43 57.4	-0.3
	comp=Z,3.7nm,0.7s,baz=46,slow=6.1,SNR=11						
	comp=Z,3.7nm,0.7s						
ELK	Elko	74.17	50	LR	LR	05 09 29.7	
	comp=Z,122nm,21.7s,baz=358,slow=30						
PDAR	Pinedale Array	76.23	46	P	P	04 44 14.6	+0.7
	comp=Z,0.6nm,0.6s,baz=240,slow=1.8,SNR=5.8						
	comp=Z,0.6nm,0.6s						
PDAR	Pinedale Array	76.23	46	P	P	04 44 14.5	+0.6
BUR08	Bucovina Ar. S	77.53	322	P	P	04 44 21.1	+0.2
BUR08				IAmb	IAmb	04 45 04.9	
	comp=Z,3.6nm,1.2s						
BURAR	Bucovina Array	77.54	322	P	P	04 44 20.8	-0.2
BRTR	Keskin Array B	78.33	312	P	P	04 44 25.6	0.0
	comp=Z,0.4nm,0.5s,baz=112,slow=4.0,SNR=5.9						
	comp=Z,0.4nm,0.5s						
BRTR	Keskin Array B	78.33	312	P	P	04 44 24.9	-0.6
GERES	GERESS Array B	81.79	328	P	P	04 44 43.8	-0.2
	comp=Z,0.5nm,0.6s,baz=15,slow=5.5,SNR=4.6						
	comp=Z,0.5nm,0.6s						
STAL	STALIGIAL	84.24	327	P	P	04 44 55.3	-1.4
FUORN	Ofenpass-Fuorn	84.97	329	P	P	04 45 00.7	+0.1
FUORN				IAmb	IAmb	04 45 01.6	
	comp=Z,3.7nm,0.6s						
TXAR	Lajitas Array	88.77	53	P	P	04 45 19.1	0.0
	comp=Z,0.3nm,0.6s,baz=291,slow=3.4,SNR=4.2						
	comp=Z,0.3nm,0.6s						
LPAZ	La Paz	145.44	59	PKPbc	PKPab	04 52 05.0	+0.6
	comp=Z,0.7nm,0.8s,baz=181,slow=4.3,SNR=4.4						

ROM 30 04:37:35.4±0.1**, 42°.826N**±0°.004×**13°.122E**±0°.010**, h10**km**, ML1.4**/18**, 4C-2D, Error ellipse: s-maj=0.8km s-min=0.5km az=84.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRCA	Norcia	0.01	323	⇓P	Pg	04 37 37.5	+0.2
NRCA				S	Sg	04 37 38.5	-0.2
NRCA				AML	AML		
	comp=N,639μm,0.7s						
NRCA				AML	AML		
	comp=E,1220μm,0.1s						
NRCA				AML	AML		
	comp=N,590μm,0.7s						
NRCA				AML	AML		
	comp=E,1215μm,0.2s						
NRCA				AML	AML		
	comp=E,1216μm,0.1s						
NRCA				AML	AML		
	comp=N,509μm,0.1s						
NRCA				AML	AML		
	comp=N,536μm,0.1s						
NRCA				AML	AML		
	comp=E,1223μm,0.1s						
MC2	Monte Cornacci	0.10	30	⇑P	Pg	04 37 38.5	+0.3
MC2				S	Sg	04 37 41.0	+0.7
FDMO	Fiordimonte	0.21	353	⇑P	Pg	04 37 40.4	+0.6
FDMO				S	Sg	04 37 44.0	+1.1
FDMO				AML	AML		
	comp=E,57μm,3.0s						
FDMO				AML	AML		
	comp=N,36μm,1.2s						
MTRA	Matera	0.21	109	⇑P	Pg	04 37 40.5	+0.6
MTRA				AML	AML		
	comp=N,64μm,1.9s						
MTRA				AML	AML		
	comp=N,120μm,0.7s						
MTRA				AML	AML		
	comp=E,99μm,1.1s						
MTRA				AML	AML		
	comp=E,175μm,1.1s						
GAVE	Gavelli	0.21	231	P	Pb	04 37 40.9	-0.5
LNSS	Leonessa	0.23	195	P	Pb	04 37 41.0	-0.7
LNSS				S	Sg	04 37 45.0	+1.6
CESI	CESI - Serrava	0.24	318	⇑P	Pg	04 37 41.0	+0.7
CESI				S	Sg	04 37 45.1	+1.4
CESI				AML	AML		
	comp=N,48μm,1.6s						
CESI				AML	AML		
	comp=E,88μm,1.7s						
CESI				AML	AML		
	comp=E,196μm,1.7s						
CESI				AML	AML		
	comp=N,173μm,0.8s						
SMA1	SAN MARTINO	0.25	141	P	Pg	04 37 40.8	+0.3
CSP1	Cessapalombo	0.27	13	P	Pg	04 37 41.5	+0.6
CSP1				S	Sg	04 37 45.9	+1.1
CSP1				AML	AML		
	comp=E,106μm,1.8s						
CSP1				AML	AML		
	comp=N,77μm,7.5s						
MF5	Montefalcone A	0.30	57	⇓P	Pb	04 37 42.4	-0.5
MF5				AML	AML		
	comp=E,226μm,1.6s						
MF5				AML	AML		
	comp=N,192μm,1.6s						
MF5				AML	AML		
	comp=N,192μm,0.4s						
MF5				AML	AML		
	comp=E,226μm,0.4s						
MF5				AML	AML		
	comp=N,548μm,9.5s						
MF5				AML	AML		
	comp=E,521μm,15.9s						

VIE ***30*** *04:38:55.3±0.3, 51°.43N×15°.96E, h0km, mb2.2/1, ml2.5/5, Error ellipse: s-maj=2.5km s-min=2.0km az=72.0 82 km WNW of Wroclaw Suspected Mining induced.*

PRU ***30*** *04:38:55.9, 51°.48N×16°.09E, h0km*

ISC 30 04:38:52.4±1.3**, 51°.60N**±0°.06×**16°.10E**±0°.03**, h0**km**, n24, σ0**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.76	171	*e*Pg	Pg	04 39 07.5	+0.5
KSP				*e*Sg	Sg	04 39 17.2	+0.3
CHVC	Chvalec	1.01	182	*e*PG	Pb	04 39 12.3	-0.4
CHVC				*e*SG	Sg	04 39 25.5	+0.7
	comp=Z,21nm,0.6s						
OSTC	Ostas	1.04	176	*e*PG	Pb	04 39 13.0	-0.3
OSTC				*e*SG	Sg	04 39 26.5	+0.7
	comp=Z,20nm,0.4s						
UPC	Upice	1.09	183	*e*PG	Pg	04 39 13.4	+0.1
UPC				*e*SG	Sb	04 39 28.4	-0.5
	comp=Z,34nm,0.4s						
DPC	Dobruska-Polom	1.25	173	*e*PG	Pg	04 39 16.3	-0.1
DPC				*e*SG	Sg	04 39 32.1	-0.6
	comp=Z,21nm,0.8s						
PVCC	Panska Ves	1.44	223	*e*PG	Pb	04 39 20.2	+0.1
PVCC				*e*SG	Sb	04 39 39.1	+0.2
	comp=Z,59nm,0.4s						
KRLC	Kraliky	1.58	164	*e*PG	Pn	04 39 21.5	-0.2
KRLC				*e*SG	Sn	04 39 41.2	-1.7
	comp=Z,20nm,0.4s						
PRU	Pruhonice	1.89	212	*e*PN	Pn	04 39 25.5	-0.4
PRU				*e*PG	Pb	04 39 27.1	-0.6
PRU				*e*SG	Sb	04 39 51.8	0.0
	comp=Z,11nm,0.5s						
HSKC	Hora Svate Kat	1.95	241	*e*PN	Pn	04 39 27.3	+0.5
HSKC				*e*PG	Pb	04 39 29.0	+0.2
HSKC				*e*SG	Sb	04 39 54.3	+0.6
	comp=Z,20nm,0.4s						
CLL	Collm	1.96	263	*i* Pn	Pn	04 39 26.3	-0.5
CLL				*i* Pg	Pb	04 39 29.0	+0.1
CLL				*i* x	x	04 39 32.8	
CLL				*e*Sg	Sb	04 39 54.0	+0.2
MORC	Moravsky Berou	2.04	153	*e*SG	Sb	04 39 55.7	-0.5
MORC	Moravsky Berou	2.04	153	*e*PN	Pn	04 39 27.7	-0.3
OKC	Ostrava-Krasne	2.19	143	*e*PG	Pb	04 39 33.4	+0.6
OKC				*e*SG	Sb	04 40 01.0	+0.5
	comp=Z,22nm,0.6s						
VRAC	Vranov	2.31	172	*e*PN	Pn	04 39 31.7	0.0
VRAC				*e*SG	Sb	04 40 04.8	+0.8
ZVC	Zvikov	2.48	210	*e*PG	Pg	04 39 40.3	+0.5
ZVC				*e*SG	Sg	04 40 11.7	-0.2
	comp=Z,9.4nm,0.5s						
KRUC	Moravsky	2.54	176	*e*PN	Pn	04 39 34.8	-0.1
KRUC				*e*SG	Sb	04 40 12.1	+1.4
OJC	Ojcow	2.72	119	*e*Pg	Pg	04 39 44.3	-0.2
OJC				*e*Sg	Sg	04 40 20.2	+0.5
JAVC	Velka Javorina	2.92	159	*e*PN	Pn	04 39 39.6	-0.5
KHC	Kasperske Hory	2.95	214	*e*PN	Pn	04 39 40.2	-0.3
KHC				*e*PG	Pb	04 39 46.8	+1.0
KHC				*e*SN	Sn	04 40 16.2	-0.4
KHC				*e*SG	Sg	04 40 25.7	-1.3
	comp=Z,58nm,2.3s						
CKRC	Cesky Krumlov	3.01	203	*e*PN	Pn	04 39 41.9	+0.6
CKRC				*e*PG	Pb	04 39 48.0	+1.2
CKRC				*e*SG	Sg	04 40 28.6	-0.3
	comp=Z,8.0nm,0.7s						
MODS	Modra-Piesok	3.31	166	*e*PG	Pg	04 39 55.6	-0.3
MODS				*e*SG	Sg	04 40 38.3	-0.5
CONA	Conrad Observa	3.67	182	*e*Pn	Pn	04 39 51.7	+1.2
	0.7nm,0.3s						
CONA				Sg	Sg	04 40 50.5	+0.1
	3.4nm,0.3s						
RONA	Rosalia, Austr	3.90	178	*e*Pn	Pn	04 39 54.2	+0.6
	0.1nm,0.2s						
MOA	Molln	3.93	198	*i* Pn	Pn	04 39 54.4	+0.4
	2.5nm,0.3s						
MOA				Sg	Sg	04 40 57.5	-1.2
	3.6nm,0.6s						

RSPR 30 04:51:17.2, 17°.93N×66°.87W, h8km**, 5C-1D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.05	346	⇑*e*P	Pg	04 51 19.0	+0.1
GBPR	Guanica, Bosqu	0.05	346	*e*S	Sg	04 51 20.5	+0.4
MLPR	Magueyes Islan	0.17	284	⇑*e*P	Pg	04 51 21.0	+0.2
MLPR	Magueyes Islan	0.17	284	*e*S	Sg	04 51 24.1	+0.8
CRPR	Cabo Rojo, PR	0.24	289	⇑*e*P	Pg	04 51 22.4	+0.3
CRPR	Cabo Rojo, PR	0.24	289	*e*S	Sg	04 51 26.5	+1.1
OBIP	Obispado Ponce	0.27	65	⇓*e*P	Pg	04 51 22.8	+0.1
OBIP	Obispado Ponce	0.27	65	*e*S	Sg	04 51 27.4	+1.1
LSP	Las Mesas	0.32	320	*e*S	Sg	04 51 28.9	+0.9
AOPR	Arecibo Observ	0.43	14	⇑*e*P	Pg	04 51 25.5	-0.1
AOPR	Arecibo Observ	0.43	14	*e*S	Sg	04 51 31.9	+0.6
ECPR	Experimental S	0.62	51	⇑*e*P	Pg	04 51 28.8	-0.4
ECPR	Experimental S	0.62	51	*e*S	Sg	04 51 37.5	+0.2

IDC ***30*** *04:59:05.6±7.7, 49°.41N×156°.07E, h79km±62km, mb3.3/3, mbtmp3.6/4, ML2.6/1, Error ellipse: s-maj=70.7km s-min=29.2km az=154.0*

KRSC ***30*** *04:59:12.5±0.8, 49°.90N×157°.01E, h61km±20km, Ml4.0*

ISC 30 04:59:08.7±2.7**, 49°.6N**±0°.2×**156°.9E**±0°.1**, h53**km**, n20, σ2**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.23	337	*e*P	Pn	04 59 31.2	+1.6
SKR				*e*S	Sn	04 59 44.1	-1.1
PAU	Pauzhetka	1.92	359	*e*P	Pn	04 59 39.9	+1.1
PAU				*e*S	Sn	04 59 59.6	-2.2
KDTR	Khodutka, Kamc	2.38	18	*e*P	Pn	04 59 47.2	+1.9
KDTR				*e*S	Sn	05 00 11.8	-1.4
ASAK	Asacha	2.91	12	*e*P	Pn	04 59 54.4	+1.9
MTVR	Mutnovka	3.05	15	*e*P	Pn	04 59 56.3	+1.9
MTVR				*e*S	Sn	05 00 28.4	-1.3
RUS	Russkaya	3.06	19	*e*P	Pn	04 59 55.8	+1.3
GRL	Gorelyy	3.09	14	*e*P	Pn	04 59 57.3	+2.2
GRL				*e*S	Sn	05 00 29.5	-1.4
KRMR	Karymshinskiy	3.37	13	*e*P	Pn	05 00 00.3	+1.5
PETK	Petropavlovsk-	3.60	8	P	Pn	05 00 01.9	+0.1
	2.3nm,0.3s,baz=170,slow=11,SNR=36						
PETK				S	Sn	05 00 47.1	+4.1
	1.4nm,0.4s,baz=175,slow=19,SNR=0.9						
	7.2nm,0.5s						
PET	Petropavlovsk	3.65	17	*e*S	Sn	05 00 43.5	-0.8
DALK	Dalny	3.67	18	*e*S	Sn	05 00 43.7	-1.2
UGLR	Uglovaya	3.86	18	*e*P	Pn	05 00 07.7	+2.2
AVH	Avacha	3.89	17	*e*P	Pn	05 00 08.2	+2.2
KOK	Koryaka	3.90	16	*e*P	Pn	05 00 08.4	+2.3
KRER	Koryakskii	3.93	17	*e*P	Pn	05 00 08.5	+1.9
KRX	Arik	3.97	16	*e*P	Pn	05 00 09.0	+1.9
SPN	Mys Shipunski	4.06	28	*e*P	Pn	05 00 10.5	+2.3
SPN				*e*S	Sn	05 00 52.4	-2.0
ILAR	Eielson Array	32.78	41	P	P	05 05 34.5	-1.8
	0.3nm,0.8s,baz=270,slow=7.5,SNR=4.1						
	0.3nm,0.8s						
LZDM	Lanzhou Array	40.52	271	P	P	05 06 32.8	-10
	2.9nm,0.4s,baz=52,slow=12,SNR=7.5						
	2.9nm,0.4s						
MKAR	Makanchi Array	47.91	297	P	P	05 07 32.4	-9.0
	0.2nm,0.4s,baz=61,slow=6.8,SNR=2.7						
	0.2nm,0.4s						

TAP ***30*** *05:10:10.9, 24°.31N×122°.10E, h39km, ML4.0, C*

JMA ***30*** *05:10:11.0±0.2, 24°N±1°×122°.1E±0°.5, h48km±3km, MV3.2/11, TAIWAN REGION*

ISC 30 05:10:11.4±0.9**, 24°.25N**±0°.02×**122°.11E**±0°.02**, h29**km±6km**, n126, σ1**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS3	EOS3	0.19	79	⇑*i*P	Pb	05 10 17.5	+0.3
EOS3				*i* S	Sb	05 10 22.6	+1.3
EOS2	EOS2	0.20	33	⇓*i*P	Pb	05 10 17.3	-0.2
EOS2				*i* S	Sb	05 10 21.9	+0.3
EOS4	EOS4	0.23	124	⇑*i*P	Pb	05 10 17.7	+0.2
EAHA	Aohua	0.35	283	P	Pb	05 10 18.8	-0.7
EWUT	Wuta	0.36	303	⇓*i*P	Pb	05 10 18.6	-1.0
EWUT				S	Sb	05 10 23.8	-1.5
ENA	Nanau	0.38	298	⇓*i*P	Pb	05 10 19.0	-1.0
ENA				S	Sb	05 10 24.0	-1.8
TWC	Suao	0.43	326	⇓*i*P	Pb	05 10 19.5	-1.2
TWC				*i* S	Sb	05 10 24.9	-2.2
ETL	Fush Village	0.46	259	P	Pb	05 10 21.3	+0.2
ETL				S	Sn	05 10 28.6	-0.5
NACB	Ninganchiao	0.48	261	⇑*i*P	Pb	05 10 21.4	-0.1
NACB				S	Sn	05 10 29.7	0.0
TWD	Chiawan	0.50	250	⇑*i*P	Pb	05 10 22.0	+0.2
TWD				S	Sb	05 10 29.6	+0.6
NDS	Dongshan	0.53	317	⇓*i*P	Pb	05 10 21.4	-0.9
HWA	Hwalien	0.54	240	*e*P	Pb	05 10 22.9	+0.5
ETLH	Xiulin Townshi	0.58	266	P	Pb	05 10 23.1	-0.1
ETLH				*e*S	Sn	05 10 32.1	-0.2
TEYL	Yanliau Villag	0.60	231	*e*P	Pb	05 10 23.9	+0.3
TEYL				*e*S	Sn	05 10 34.4	+1.7
LATG	Datong	0.61	298	⇓*i*P	Pb	05 10 22.9	-0.7
ILA	Ilan	0.61	327	P	Pb	05 10 22.4	-1.3
ILA				*e*S	Sb	05 10 30.6	-1.4
EGS		0.61	345	⇓*i*P	Pb	05 10 23.0	-0.8
EGS				*e*S	Sb	05 10 31.2	-0.9
TWE	Neicheng	0.62	319	⇓*i*P	Pb	05 10 22.9	-0.9
ENTT	Nioudou	0.63	308	⇓*i*P	Pb	05 10 23.2	-0.8
ETM	Tongmen	0.63	244	*e*P	Pb	05 10 23.8	-0.2
LXIB	Xiulin Townshi	0.68	251	⇑*i*P	Pb	05 10 24.7	-0.2
LXIB				S	Sb	05 10 34.6	+0.6
SHUL	Shoufeng	0.68	228	*e*P	Pb	05 10 24.7	-0.1
NNSB	Datong	0.69	285	⇑*i*P	Pb	05 10 24.8	-0.2
NNSB				*e*S	Sb	05 10 34.7	+0.4
FUSB	Fushanzhiwuyua	0.70	317	⇓*i*P	Pb	05 10 24.5	-0.7
NNS	Nan Shan	0.70	286	*e*P	Pb	05 10 25.0	-0.2
NNS				*e*S	Sn	05 10 35.4	+0.1
ESL	Shilin	0.76	235	*e*P	Pb	05 10 25.3	-0.8
TWB1	Santiao Chiao	0.76	352	⇓*i*P	Pb	05 10 25.6	-0.6
TWB1				*e*S	Sb	05 10 35.1	-1.2
NWLT	Wulai	0.77	314	*e*P	Pb	05 10 25.7	-0.5
NWLT				*e*S	Sb	05 10 34.8	-1.5
TIPB	Shuangxi	0.77	340	⇓*i*P	Pb	05 10 25.6	-0.7
TIPB				*e*S	Sb	05 10 35.1	-1.3
WHF	Hehuan Shan	0.78	263	P	Pb	05 10 26.6	-0.2
WHF				S	Sn	05 10 37.9	+0.1
JYNG	Yonagunijimaku	0.79	75	P	Pb	05 10 26.5	0.0
JYNG				*e*S	Sb	05 10 37.3	+0.4
YHNB	Yeheng	0.79	302	⇑P	Pb	05 10 26.3	-0.4
YHNB				*e*S	Sb	05 10 36.0	-1.1
FUSS	Fushou	0.79	270	P	Pb	05 10 26.8	0.0
FUSS				*e*S	Sn	05 10 38.1	+0.3
NSK	Sanguang	0.81	302	⇑P	Pb	05 10 26.5	-0.5
NSK				*e*S	Sb	05 10 36.6	-1.0
YOJ	Yonaguni jima	0.85	75	⇑*i*P	Pb	05 10 27.3	-0.3
YOJ				*i* S	Sb	05 10 38.5	-0.1
YOJ	Yonaguni jima	0.85	75	P	Pb	05 10 27.5	0.0
YOJ				S	Sb	05 10 38.9	+0.3
WARBT	Fenglin Townsh	0.85	232	⇓*i*P	Pb	05 10 26.5	-1.2
TWT	Tachien	0.85	270	P	Pn	05 10 28.0	+0.4
TWT				*e*S	Sn	05 10 40.2	+0.9
SXI1	Grass Mountain	0.87	346	P	Pb	05 10 27.2	-0.8
SXI1				S	Sb	05 10 38.1	-1.2
TDCB	Techi	0.87	270	⇑P	Pb	05 10 28.0	-0.1
TDCB				*e*S	Sn	05 10 39.8	+0.2
WFSB	Wu-fen Shan	0.87	340	⇓P	Pb	05 10 27.6	-0.4
WFSB				S	Sb	05 10 38.4	-0.9
TWA	Mucha	0.87	327	*e*P	Pb	05 10 27.8	-0.2
OWD	Renai	0.91	251	⇑P	Pb	05 10 28.1	-0.6
OWD				S	Sb	05 10 40.1	-0.4
WUSB	Renai	0.94	254	⇑*i*P	Pb	05 10 28.8	-0.5
WUSB				S	Sb	05 10 41.6	+0.1
TNOU	National Taiwa	0.95	341	*e*P	Pb	05 10 28.7	-0.6
TNOU				*e*S	Sb	05 10 39.8	-1.7
HGSD	Ruisui	0.98	220	P	Pb	05 10 28.2	-1.6
NFF	Wufeng Townshi	0.98	293	P	Pn	05 10 29.7	+0.4
NFF				S	Sn	05 10 42.9	+0.6
KSHI	Guanxi Townshi	1.00	302	P	Pn	05 10 30.8	+1.3
KSHI				*e*S	Sn	05 10 45.3	+2.7
VWDT	VWDT	1.02	241	P	Pb	05 10 29.7	-0.7
YM01	YM01	1.02	331	P	Pb	05 10 30.1	-0.5
EHYH	Wanrong	1.03	223	P	Pb	05 10 29.0	-1.6
EHY	Hungye	1.03	225	*i* P	Pb	05 10 28.8	-1.9
ZUZH	Zhuzihu	1.04	331	P	Pn	05 10 30.8	+0.6
ZUZH				*e*S	Sb	05 10 43.9	-0.5
YM08	YM08	1.05	333	P	Pb	05 10 30.0	-1.0
TWS1	Kuangyinshan	1.06	323	⇑*i*P	Pn	05 10 31.1	+0.9
TWS1				S	Sn	05 10 45.1	+1.2
WHP	Taichung City	1.06	272	⇑*i*P	Pn	05 10 31.4	+0.9
WHP				*e*S	Sn	05 10 45.8	+1.5
LIOB	Emei	1.07	292	⇑*i*P	Pn	05 10 31.7	+1.2
LIOB				*e*S	Sn	05 10 46.4	+1.9
ANP	Anpu	1.08	330	P	Pn	05 10 31.2	+0.6
NSTT	Nanjuang	1.08	291	⇑*i*P	Pb	05 10 31.7	+0.1
NSTT				*e*S	Sn	05 10 46.0	+1.4
NTST	Danshui	1.09	327	P	Pb	05 10 31.8	+0.1
NTST				S	Sn	05 10 46.8	+1.9
NCU	National Centr	1.11	311	*e*P	Pn	05 10 30.0	-0.9
NCU				S	Sn	05 10 46.8	+1.6
NCUH	Zhongli	1.11	310	*e*P	Pb	05 10 31.7	-0.2
NCUH				*e*S	Sn	05 10 48.1	+2.9
WCS	Beigang Elemen	1.11	260	P	Pb	05 10 32.0	-0.1
TWY	Chenhua	1.12	336	P	Pb	05 10 31.9	-0.4
TWY				*e*S	Sn	05 10 46.5	+0.8
SSLB	Suanglung	1.16	247	P	Pn	05 10 32.0	+0.4
SSLB				*e*S	Sn	05 10 47.4	+1.0
SBCB	Hsinchu	1.16	298	P	Pb	05 10 33.1	+0.2
SBCB				S	Sn	05 10 50.1	+3.6
TWF1	Yuli	1.16	220	P	Pn	05 10 30.8	-0.9
SMLT	Sun Moon Lake	1.17	252	P	Pn	05 10 32.5	+0.6
HSN	Hsinchu	1.18	298	P	Pb	05 10 32.6	-0.5
HSN				S	Sn	05 10 49.6	+2.6
TYC	Yuchr	1.20	254	*e*P	Pn	05 10 32.7	+0.6
TYC				*e*S	Sn	05 10 49.0	+1.6
TWQ1	Liyutan	1.23	275	*e*P	Pb	05 10 34.2	+0.2
TWQ1				*e*S	Sn	05 10 50.3	+2.1
NMLH	Miaoli	1.24	284	*e*P	Pb	05 10 34.5	+0.3
CHKH	Chenggong	1.24	212	*e*P	Pn	05 10 32.7	-0.1
WHYT	Xinyi Township	1.28	245	*e*P	Pn	05 10 34.3	+1.0
FULB	Fuli	1.29	216	*e*P	Pn	05 10 32.7	-0.7
TCU	Taichung	1.32	266	*e*P	Pb	05 10 35.1	-0.4
TCU				*e*S	Sb	05 10 52.7	+0.7
CHKT	Chengkung	1.33	211	*e*P	Pn	05 10 32.9	-1.2
CHKT				*e*S	Sn	05 10 48.6	-2.2
WJS	Zhushan	1.34	252	*e*P	Pb	05 10 36.4	+0.5
WJS				*e*S	Sb	05 10 54.5	+1.9
WNT	Mingjian	1.36	254	*e*S	Sb	05 10 54.7	+1.5
EHD	Haiduan	1.38	217	*e*P	Pn	05 10 33.3	-1.3
PCYT	Pengchaiyu	1.38	358	*e*P	Pn	05 10 34.2	-0.4
ALS	Alishan	1.41	239	*e*P	Pn	05 10 36.3	+1.0
WCHH	Zhanghua	1.43	264	*e*P	Pb	05 10 36.6	-0.8
WCHH				*e*S	Sb	05 10 55.7	+0.5
WCH1	Changhua City	1.44	263	*e*S	Sb	05 10 56.6	+1.0
ELDTW	Lidau	1.46	224	*e*P	Pn	05 10 35.1	-0.8
CHN5	Tsauling	1.47	244	*e*S	Sb	05 10 57.0	+0.6
IRIF	Iriomote-Funau	1.48	86	P	Pn	05 10 36.7	+0.7
IRIF				*e*S	Sn	05 10 55.0	+0.7
WDLH	Douliu	1.54	249	*e*P	Pb	05 10 39.4	0.0
WDLH				*e*S	Sb	05 10 59.5	+1.0
WCKO	Fanlu	1.60	240	*e*P	Pn	05 10 39.1	+1.4
WCKO				*e*S	Sb	05 10 59.9	-0.3
STYH	Taoyuan	1.63	229	*e*P	Pn	05 10 39.0	+0.9
STYH				*e*S	Sn	05 10 59.9	+1.8
TPUB	Ta-pu	1.66	235	*e*P	Pb	05 10 40.3	-0.9
TPUB				*e*S	Sb	05 11 01.5	-0.2
CHN2	Minshiung	1.66	245	*e*S	Sb	05 11 03.5	+1.7
WTP	Ta-pu	1.70	234	*e*P	Pn	05 10 40.4	+1.3
WTP				*e*S	Sb	05 11 02.7	-0.3
TWGBT	Beinan	1.71	214	*e*S	Sn	05 10 59.7	-0.5
TWG	Pinlang	1.71	214	*e*S	Sn	05 10 59.7	-0.5
CHY	Chiayi	1.72	245	*e*P	Pb	05 10 41.7	-0.6
CHY				*e*S	Sb	05 11 03.8	+0.3
JKRS	Kuro-shima	1.73	90	P	Pn	05 10 40.7	+1.2
JKRS				S	Sn	05 11 02.4	+1.7
TWK	Hsinying	1.78	237	*e*P	Pn	05 10 42.1	+1.9
TWK				*e*S	Sb	05 11 05.1	-0.3
CHN1	Nanshi	1.80	234	*e*P	Pb	05 10 42.8	-0.9
CHN1				*e*S	Sb	05 11 05.9	0.0
SNST	Tainan City	1.80	236	*e*S	Sb	05 11 06.3	+0.4
WSF	Szhu	1.83	251	*e*S	Sb	05 11 07.2	+0.3
JIJ	Ishigaki jima	1.86	86	P	Pn	05 10 41.9	+0.6
JIJ				*e*S	Sn	05 11 03.0	-0.7
WSL	Shuilin Townsh	1.87	248	*e*P	Pn	05 10 43.3	+1.9
WSL				*e*S	Sb	05 11 07.5	-0.3
CHN8	Yiju	1.96	243	*e*S	Sb	05 11 09.7	-0.7
SSD	Sandimen	2.02	223	*e*P	Pn	05 10 45.6	+2.1
SSD				*e*S	Sb	05 11 10.8	-1.4
JISG	Ishigakijimahi	2.03	80	*e*P	Pn	05 10 44.2	+0.6
JISG				*e*S	Sn	05 11 07.9	-0.1
SCLT	Jiali	2.06	239	*e*S	Sb	05 11 12.2	-1.0
MASBT	Mashibuluo	2.12	220	*e*P	Pn	05 10 45.6	+0.7
MASBT				*e*S	Sb	05 11 13.3	-1.9
TSCK	Chigu Township	2.16	240	*e*P	Pn	05 10 47.2	+1.9
TSCK				*e*S	Sn	05 11 13.9	+2.8
LYUB	Lan-yu	2.29	192	*e*P	Pn	05 10 45.0	-2.1
LYUB				*e*S	Sn	05 11 10.8	-3.5
SCZT	Fangliau	2.32	217	*e*P	Pn	05 10 50.0	+2.4
JTJ	Tarama	2.39	80	*e*S	Sn	05 11 17.8	+0.9
PNG	Penghu	2.44	254	*e*P	Pn	05 10 49.4	+0.1
PNG				*e*S	Sn	05 11 18.7	+0.7
PHUB	P'eng-hu	2.44	253	*e*P	Pn	05 10 49.4	+0.2
PHUB				*e*S	Sn	05 11 19.0	+0.9
WDGT	Dungji	2.45	247	*e*P	Pn	05 10 50.5	+1.1
WDGT				*e*S	Sn	05 11 19.7	+1.2
VWUC	VWUC	2.53	287	*e*P	Pn	05 10 50.4	-0.2
VWUC				*e*S	Sn	05 11 19.5	-0.9
VCHM	Qimei	2.67	248	*e*P	Pn	05 10 53.1	+0.7
VCHM				*e*S	Sn	05 11 23.5	-0.3
MATB	Ma-tsu	2.73	314	*e*P	Pn	05 10 53.3	+0.1
PTMZ	Houxiangcun	2.83	287	*e*P	Pn	05 10 54.6	0.0
PTMZ				*e*S	Sn	05 11 26.4	-1.4
XPSS	Dashiqiu	3.18	327	*e*P	Pn	05 10 59.2	-0.3
MHZQ	Yeshan	3.35	304	*e*P	Pn	05 11 00.6	-1.1
KNM	Kinmen	3.36	274	*e*P	Pn	05 11 03.8	+1.8
AXDP	Jialang	3.83	281	*e*P	Pn	05 11 08.4	0.0
ZPLA	Ao Xicun	4.00	266	*e*P	Pn	05 11 10.8	+0.1
ZPLA				*e*S	Sn	05 11 54.2	-2.4
DSXP	Dongshan	4.32	264	*e*P	Pn	05 11 15.2	+0.1
SXFK	Yanhouchang	4.57	299	*e*P	Pn	05 11 18.3	-0.4

TAP ***30*** *05:11:46.3, 24°.29N×122°.15E, h40km, ML4.2, C*

JMA ***30*** *05:11:47.1±0.1, 24°.2N±0°.9×122°.1E±0°.3, h38km±3km, MV3.4/10, TAIWAN REGION*

ISC 30 05:11:47.4±0.9, 24°.29N±0°.02×122°.12E±0°.02, h28km±6km, n123, σ1ˢ16/203, 16C-12D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS2	EOS2	0.16	40	iP	Pb	05 11 52.9	+0.1
EOS2				iS	Sb	05 11 57.8	+1.2
EOS3	EOS3	0.18	92	⇑iP	Pb	05 11 53.2	+0.2
EOS3				iS	Sb	05 11 58.2	+1.4
EOS4	EOS4	0.25	133	⇑iP	Pb	05 11 53.4	-0.3
EOS4				iS	Sb	05 11 58.8	+0.9
EWUT	Wuta	0.34	296	iP	Pb	05 11 54.3	-1.0
EWUT				iS	Sb	05 11 59.1	-1.5
EAHA	Aohua	0.35	276	P	Pb	05 11 54.4	-0.9
ENA	Nanau	0.37	291	⇓iP	Pb	05 11 54.6	-1.1
ENA				S	Sb	05 12 00.1	-1.2
TWC	Suao	0.40	322	⇓iP	Pb	05 11 55.1	-1.0
TWC				iS	Sb	05 12 00.5	-1.5
ETL	Fush Village	0.47	254	P	Pb	05 11 56.9	-0.4
ETL				S	Sb	05 12 05.5	+1.5
NACB	Ninganchiao	0.49	256	⇑iP	Pb	05 11 57.0	-0.6
NACB				iS	Sb	05 12 05.3	+0.7
NDS	Dongshan	0.50	313	⇓iP	Pb	05 11 57.0	-0.7
TWD	Chiawan	0.52	246	⇑iP	Pb	05 11 57.7	-0.4
TWD				S	Sb	05 12 05.0	-0.3
HWA	Hwalien	0.56	236	eP	Pb	05 11 58.5	-0.3
EGS		0.57	343	⇓P	Pb	05 11 58.6	-0.4
EGS				S	Sb	05 12 06.6	-0.2
ILA	Ilan	0.58	325	P	Pb	05 11 58.0	-1.0
ILA				eS	Sb	05 12 06.1	-0.8
ETLH	Xiulin Townshi	0.59	262	iP	Pb	05 11 58.8	-0.5
ETLH				S	Sb	05 12 08.2	+1.0
LATG	Datong	0.59	294	⇓iP	Pb	05 11 58.6	-0.7
LATG				eS	Sb	05 12 07.4	+0.1
TWE	Neicheng	0.59	316	⇓P	Pb	05 11 58.5	-0.7
TWE				eS	Sb	05 12 06.4	-0.9
ENTT	Nioudou	0.61	305	⇓P	Pb	05 11 58.8	-0.7
ENTT				eS	Sb	05 12 06.8	-1.0
NTC	Toucheng	0.62	335	eP	Pb	05 11 59.3	-0.3
TEYL	Yanliau Villag	0.64	228	eP	Pb	05 11 60.0	0.0
TEYL				eS	Sb	05 12 08.8	+0.3
ETM	Tongmen	0.66	240	iP	Pb	05 11 59.6	-0.7
ETM				iS	Sb	05 12 09.5	+0.3
FUSB	Fushanzhiwuyua	0.67	314	⇓iP	Pb	05 12 00.1	-0.5
NNSB	Datong	0.68	281	⇑iP	Pb	05 12 00.4	-0.4
NNSB				iS	Sb	05 12 10.6	+0.6
NNS	Nan Shan	0.69	282	⇑iP	Pn	05 12 00.5	-1.0
NNS				iS	Sb	05 12 11.1	+0.7
LXIB	Xiulin Townshi	0.70	247	⇑iP	Pn	05 12 00.3	-1.2
TWB1	Santiao Chiao	0.72	351	⇓iP	Pn	05 12 01.2	-0.5
TWB1				eS	Sb	05 12 10.4	-0.5
TIPB	Shuangxi	0.72	339	⇓iP	Pn	05 12 01.1	-0.7
TIPB				S	Sb	05 12 10.1	-1.0
NWLT	Wulai	0.74	311	eP	Pn	05 12 01.2	-0.8
JYNG	Yonagunijimaku	0.77	78	eP	Pn	05 12 02.1	-0.2
JYNG				S	Sb	05 12 12.9	+0.5
YHNB	Yeheng	0.77	299	⇑P	Pn	05 12 01.9	-0.6
YHNB				S	Sb	05 12 11.4	-1.1
ESL	Shilin	0.79	233	eP	Pn	05 12 01.3	-1.3
NSK	Sanguang	0.79	299	eP	Pn	05 12 02.1	-0.6
NSK				eS	Sb	05 12 12.5	-0.5
WHF	Hehuan Shan	0.79	259	⇓iP	Pn	05 12 02.2	-0.9
WHF				S	Sb	05 12 13.6	+0.2
FUSS	Fushou	0.80	267	P	Pn	05 12 02.5	-0.5
FUSS				eS	Sb	05 12 13.9	+0.5
SXI1	Grass Mountain	0.83	345	⇓P	Pn	05 12 02.8	-0.4
SXI1				S	Sn	05 12 13.3	-1.3
NWF	Wu-fen Shan	0.83	339	P	Pn	05 12 03.5	+0.2
NWF				S	Sn	05 12 13.8	-0.9
WFSB	Wu-fen Shan	0.83	339	P	Pn	05 12 03.5	+0.3
WFSB				eS	Sn	05 12 13.1	-1.5
YOJ	Yonaguni jima	0.83	78	P	Pn	05 12 03.1	-0.2
YOJ				S	Sn	05 12 14.0	-0.5
YOJ	Yonaguni jima	0.83	78	P	Pn	05 12 03.2	0.0
YOJ				S	Sn	05 12 14.2	-0.3
TWA	Mucha	0.84	325	P	Pn	05 12 03.5	+0.1
NHDH	Xindian Distri	0.86	321	P	Pn	05 12 04.1	+0.6
NHDH				eS	Sb	05 12 17.6	+2.8
TWT	Tachien	0.86	268	⇑P	Pn	05 12 03.6	-0.1
TWT				eS	Sn	05 12 15.9	+0.4
TDCB	Techi	0.88	268	⇑iP	Pn	05 12 03.6	-0.3
TDCB				eS	Sn	05 12 15.2	-0.6
WARBT	Fenglin Townsh	0.88	229	eP	Pn	05 12 02.4	-1.6
NHY	Taipei	0.89	326	eP	Pn	05 12 05.1	+1.0
TNOU	National Taiwa	0.91	340	P	Pn	05 12 04.2	-0.1
TNOU				eS	Sn	05 12 15.8	-0.6
OWD	Renai	0.92	249	⇑iP	Pn	05 12 03.6	-1.0
OWD				eS	Sn	05 12 15.8	-1.2
WUSB	Renai	0.96	252	P	Pn	05 12 04.8	-0.4
WUSB				S	Sn	05 12 17.4	-0.5
NFF	Wufeng Townshi	0.97	291	P	Pn	05 12 05.3	+0.1
NFF				eS	Sn	05 12 18.6	+0.5
KSHI	Guanxi Townshi	0.98	299	⇑iP	Pn	05 12 06.3	+1.0
KSHI				S	Sn	05 12 19.4	+1.2
YM01	YM01	0.98	330	eP	Pn	05 12 05.6	+0.2
ZUZH	Zhuzihu	1.01	329	eP	Pn	05 12 05.8	+0.1
ZUZH				eS	Sn	05 12 19.0	0.0
YM08	YM08	1.01	332	eP	Pn	05 12 05.3	-0.4
HGSD	Ruisui	1.02	219	eP	Pn	05 12 04.2	-1.6
TWS1	Kuangyinshan	1.02	322	P	Pn	05 12 06.7	+0.8
TWS1				eS	Sn	05 12 21.3	+2.0
ANP	Anpu	1.04	329	eP	Pn	05 12 06.7	+0.5
VWDT	VWDT	1.04	239	eP	Pn	05 12 05.9	-0.2
NTST	Danshui	1.06	325	eP	Pn	05 12 07.3	+1.0
LIOB	Emei	1.06	289	⇑iP	Pn	05 12 07.3	+0.9
LIOB				eS	Sn	05 12 21.6	+1.3
EHYH	Wanrong	1.06	222	eP	Pn	05 12 04.7	-1.8
WHP	Taichung City	1.07	269	⇑iP	Pn	05 12 07.0	+0.4
WHP				eS	Sn	05 12 21.6	+1.1
EHY	Hungye	1.07	223	eP	Pn	05 12 04.7	-1.8
NSTT	Nanjuang	1.07	289	⇑iP	Pn	05 12 07.3	+0.8
NSTT				eS	Sn	05 12 21.8	+1.3
NCU	National Centr	1.08	309	eP	Pn	05 12 05.9	-0.8
NCU				eS	Sn	05 12 21.9	+1.2
NCUH	Zhongli	1.08	309	eP	Pn	05 12 07.2	+0.5
NCUH				eS	Sb	05 12 23.5	+2.3
TWY	Chenhua	1.08	334	eP	Pn	05 12 07.4	+0.7
TWY				eS	Sn	05 12 21.8	+1.0
WCS	Beigang Elemen	1.12	258	eP	Pn	05 12 07.7	+0.4
SBCB	Hsinchu	1.14	296	⇑P	Pn	05 12 08.4	+0.9
SBCB				eS	Sb	05 12 25.7	+2.7
HSN	Hsinchu	1.16	296	eP	Pn	05 12 08.1	+0.4
HSN				eS	Sn	05 12 23.4	+0.7
SSLB	Suanglung	1.18	245	eP	Pn	05 12 07.5	-0.5
SSLB				eS	Sn	05 12 23.9	+0.8
SMLT	Sun Moon Lake	1.19	250	eP	Pn	05 12 08.1	-0.1
SMLT				eS	Sn	05 12 23.0	-0.4
TWF1	Yuli	1.20	219	eP	Pn	05 12 06.6	-1.8
TYC	Yuchr	1.22	252	eP	Pn	05 12 08.4	0.0
TWQ1	Liyutan	1.23	273	eP	Pn	05 12 09.9	+1.3
TWQ1				eS	Sn	05 12 24.9	+0.5
NMLH	Miaoli	1.23	282	eP	Pn	05 12 09.9	+1.2
NSY	Sanyi	1.24	276	eP	Pn	05 12 10.4	+1.5
NSY				eS	Sb	05 12 27.7	+1.9
CHKH	Chenggong	1.28	211	eP	Pn	05 12 07.0	-2.4
WHYT	Xinyi Township	1.30	243	eP	Pn	05 12 10.0	+0.3
TCU	Taichung	1.32	264	eP	Pn	05 12 10.6	+0.6
TCU				eS	Sn	05 12 28.7	+2.0
FULB	Fuli	1.32	215	eP	Pn	05 12 08.3	-1.7
FULB				eS	Sn	05 12 26.8	+0.1
PCYT	Pengchaiyu	1.33	358	eP	Pn	05 12 09.5	-0.6
WJS	Zhushan	1.35	250	eP	Pn	05 12 12.0	+1.6
WJS				eS	Sn	05 12 29.5	+2.1
WNT	Mingjian	1.37	253	eP	Pn	05 12 11.6	+0.9
WNT				S	Sn	05 12 30.2	+2.3
CHKT	Chengkung	1.37	210	eP	Pn	05 12 08.5	-2.2
CHKT				eS	Sn	05 12 24.1	-3.8
ALS	Alishan	1.43	237	eP	Pn	05 12 11.9	+0.2
WCHH	Zhanghua	1.44	262	eP	Pn	05 12 12.6	+1.0
WCHH				S	Sn	05 12 31.9	+2.3
IRIF	Iriomote-Funau	1.47	88	P	Pn	05 12 12.4	+0.4
IRIF				S	Sn	05 12 30.9	+0.6
CHN5	Tsauling	1.49	243	eP	Pn	05 12 13.1	+0.8
CHN5				eS	Sn	05 12 32.7	+1.8
ELDTW	Lidau	1.49	223	eP	Pn	05 12 10.8	-1.6
WGK	Gukeng	1.54	247	eP	Pn	05 12 15.1	+2.0
WDL	Douliou City	1.55	249	eS	Sn	05 12 34.3	+2.0
WDLH	Douliu	1.56	248	eP	Pn	05 12 14.5	+1.2
WDLH				eS	Sn	05 12 35.1	+2.5
WCKO	Fanlu	1.62	239	eP	Pn	05 12 14.8	+0.7
WCKO				eS	Sn	05 12 35.6	+1.5
STYH	Taoyuan	1.66	228	eP	Pn	05 12 14.4	-0.2
TPUB	Ta-pu	1.68	234	eP	Pn	05 12 16.2	+1.2
TPUB				eS	Sn	05 12 36.9	+1.3
WTP	Ta-pu	1.73	233	eP	Pn	05 12 16.9	+1.3
WTP				eS	Sn	05 12 37.4	+0.7
JKRS	Kuro-shima	1.73	91	P	Pn	05 12 16.4	+0.9
JKRS				eS	Sn	05 12 38.0	+1.4
CHY	Chiayi	1.74	243	eP	Pn	05 12 17.4	+1.7
CHY				eS	Sn	05 12 39.9	+2.9
TWK	Hsinying	1.81	236	eP	Pn	05 12 18.1	+1.4
TWK				eS	Sn	05 12 40.2	+1.5
CHN1	Nanshi	1.83	233	eP	Pn	05 12 18.2	+1.3
CHN1				eS	Sn	05 12 41.4	+2.2
SNST	Tainan City	1.83	235	eP	Pn	05 12 18.2	+1.2
SNST				eS	Sn	05 12 41.0	+1.9
JIJ	Ishigaki jima	1.85	87	P	Pn	05 12 17.6	+0.3
JIJ				eS	Sn	05 12 40.2	+0.5
SGST	Jiashian	1.85	230	eP	Pn	05 12 17.0	-0.3
SGST				eS	Sn	05 12 40.8	+1.0
WSF	Szhu	1.85	250	eS	Sn	05 12 42.3	+2.5
WSL	Shuilin Townsh	1.89	246	eP	Pn	05 12 18.9	+1.1
WSL				eS	Sn	05 12 43.3	+2.6
JISG	Ishigakijimahi	2.02	81	eP	Pn	05 12 19.9	+0.3
JISG				eS	Sn	05 12 43.6	-0.3
SSD	Sandimen	2.06	222	eS	Sn	05 12 45.3	+0.5
MASBT	Mashibuluo	2.16	219	eP	Pn	05 12 21.1	-0.3
MASBT				eS	Sn	05 12 47.7	+0.3
TSCK	Chigu Township	2.18	239	eS	Sn	05 12 49.6	+1.7
EAST	Anshuo	2.23	212	eP	Pn	05 12 22.4	-0.1
TAWH	Dawu Township	2.25	210	eP	Pn	05 12 20.5	-2.2
LYUB	Lan-yu	2.33	192	eP	Pn	05 12 21.4	-2.5
PNG	Penghu	2.45	253	eS	Sn	05 12 55.1	+0.6
PHUB	P'eng-hu	2.46	252	eP	Pn	05 12 24.9	-0.7
PHUB				eS	Sn	05 12 53.7	-0.9
WDGT	Dungji	2.47	246	eP	Pn	05 12 25.9	+0.1
VWUC	VWUC	2.52	287	eP	Pn	05 12 25.9	-0.7
VWUC				eS	Sn	05 12 55.1	-1.3
VCHM	Qimei	2.69	247	eP	Pn	05 12 28.6	-0.1
VCHM				eS	Sn	05 13 00.0	-0.4
MATB	Ma-tsu	2.70	314	eP	Pn	05 12 28.9	0.0
PTMZ	Houxiangcun	2.83	286	eP	Pn	05 12 30.2	-0.4
PTMZ				eS	Sn	05 13 02.0	-1.8
XPSS	Dashiqiu	3.15	327	eP	Pn	05 12 35.0	0.0
AXDP	Jialang	3.82	280	eP	Pn	05 12 44.2	-0.2
ZPLA	Ao Xicun	4.01	266	eP	Pn	05 12 46.4	-0.5
DSXP	Dongshan	4.33	263	eP	Pn	05 12 51.0	-0.3
DSXP				eS	Sn	05 13 39.0	-1.9

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*IDC **30** 05:24:14.7±0.8, 54°.07S×133°.12W, h0km, mb4.0/8, mbtmp4.0/8, MS4.3/37, Error ellipse: s-maj=32.3km s-min=23.1km az=155.0*

*NEIC **30** 05:24:16.9±0.9, 54°.0S±0°.2×133°.17W±0°.08, h10km±1km, mb4.7/17, Error ellipse: s-maj=26.6km s-min=7.4km az=184.0*

*GCMT **30** 05:24:18.9±0.2, 54°.37S±0°.01×132°.93W±0°.02, h14km±1km, MW5.0/99, Moment Tensor Solution. s43,c57; s99,c145; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.35±.12; $M_{\theta\theta}$2.54±.13; $M_{\phi\phi}$-2.89±.12; $M_{r\theta}$0.05±.24; $M_{\theta\phi}$2.86±.10; $M_{\phi r}$-0.49±.22; Best double couple: $M_0$3.97100×10^{16} NP1:ϕ_s292.00000°,δ84.00000°,λ-2.00000°. NP2: ϕ_s22.00000°,δ88.00000°,λ-174.00000°. Principal axes: T 3.7750, Plg3.0000°, Azm157.0000°; N 0.3910, Plg84.0000°, Azm44.0000°; P -4.1670, Plg6.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 05:24:16.4±0.5, 54°.06S±0°.09×133°.1W±0°.1, h10km, n87, σ1ˢ00/38, mb4.5/18, MS4.4/37, 3C, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKT	Rikitea	30.93	357	eLR	LR	05 38 43.7	
	7µm,25.8s						
RPN	Rapa Nui	32.11	43	LR	LR	05 40 09.1	
	comp=Z,457nm,19.6s,baz=214,slow=30						
VNDA	Vanda	32.58	201	P	P	05 30 48.9	+1.6
	0.7nm,0.5s,baz=82,slow=5.3,SNR=3.7						
VNDA				LR	LR	05 40 02.1	
	comp=Z,192nm,19.1s,baz=86,slow=29						
	0.7nm,0.5s						
VNDA	Vanda	32.58	201	P	P	05 30 48.4	+1.1
TBI	Tubuai	33.04	332	eS	S	05 36 11.2	+0.9
	254nm,27.0s						
TBI				eLR	LR	05 39 26.7	
	6µm,28.0s						
TBI				eLR	LR	05 39 43.2	
	1µm,23.8s						
PMSA	Palmer Station	34.91	136	LR	LR	05 41 00.3	
	comp=Z,892nm,21.7s,baz=250,slow=29						
QSPA	South Pole Qui	36.11	180	LR	LR	05 44 01.0	
	comp=Z,284nm,19.5s,baz=77,slow=33						
QSPA	South Pole Qui	36.11	180	P	P	05 31 19.4	+1.2
QSPA				IAmb	IAmb	05 31 20.1	
	comp=Z,11nm,0.9s						
AMCZ	Amberley	36.59	265	P	P	05 31 21.8	-0.5
URZ	Urewera	37.07	275	LR	LR	05 43 44.5	
	comp=Z,581nm,18.1s,baz=142,slow=32						
RAR	Rarotonga	38.54	318	LR	LR	05 45 10.2	
	comp=Z,546nm,18.2s,baz=138,slow=33						
PPT2	Papeete2	38.57	334	eS	S	05 37 34.2	-1.0
	comp=Z,106nm,27.0s						
PPT2				eLR	LR	05 41 51.6	
	comp=Z,1µm,27.0s						
PPT2				eLR	LR	05 42 13.4	
	comp=Z,2µm,25.2s						
PPT	Papeete	38.59	334	LR	LR	05 43 16.3	
	comp=Z,717nm,18.3s,baz=128,slow=30						
BELA	Belgrano 2	39.55	161	P	P	05 31 47.2	+0.3
RAO	Raoul Island	40.68	289	LR	LR	05 45 41.9	
	comp=Z,191nm,18.8s,baz=122,slow=32						
H03S2	Juan Fernandez	42.72	84	T	T	06 17 44.2	
	baz=222,slow=74,SNR=129						
H03S1	Juan Fernandez	42.73	84	T	T	06 17 46.9	
	baz=222,slow=74,SNR=137						
H03S3	Juan Fernandez	42.74	84	T	T	06 17 46.1	
	baz=222,slow=74,SNR=139						
H03N3	Juan Fernandez	42.99	84	T	T	06 18 02.9	
	baz=226,slow=72,SNR=235						
H03N2	Juan Fernandez	43.00	84	T	T	06 17 52.9	
	baz=226,slow=72,SNR=450						
PLCA	Paso Flores	43.00	98	LR	LR	05 46 01.9	
	comp=Z,344nm,18.2s,baz=226,slow=30						
H03N1	Juan Fernandez	43.01	84	T	T	06 17 50.6	
	baz=226,slow=72,SNR=278						
TAOE	Nuku Hiva Isla	45.44	350	eLR	LR	05 45 19.6	
	comp=Z,1µm,24.7s						
BO02	Sierra Bellavi	46.85	92	P	P	05 32 46.7	+0.3
BO02				IAmb	IAmb	05 32 53.9	
	comp=Z,10.0nm,0.8s						
VA03	San Esteban	48.41	90	P	P	05 32 58.6	0.0
VNA3	Neumayer Olymp	48.76	159	⇑P	P	05 32 59.3	-1.4
	comp=Z,3.4nm,0.8s						
VNA2	Neumayer--Watz	49.48	159	⇑P	P	05 33 05.1	-1.1
	comp=Z,7.0nm,0.7s,baz=221,slow=9.3						
VNA1	Neumayer--Stat	49.51	159	⇑P	P	05 33 04.3	-2.1
	comp=Z,12nm,1.0s						
SNAA	Sanae	49.78	162	P	P	05 33 07.4	-1.1
	comp=Z,1.7nm,0.6s,baz=223,slow=17,SNR=4.0						
SNAA				LR	LR	05 52 00.1	
	comp=Z,596nm,21.9s,baz=189,slow=34						
	comp=Z,1.7nm,0.6s						
ZON	Zonda	50.39	91	P	P	05 33 13.9	+0.3
CFA	Coronel Fontan	50.61	91	LR	LR	05 49 25.4	
	comp=Z,168nm,21.4s,baz=255,slow=30						
DZM	Mont Dzumac	55.13	281	eLR	LR	05 50 23.9	
	comp=Z,500nm,28.8s						
MAW	Mawson	58.06	187	P	P	05 34 08.6	-0.4
	comp=Z,1.9nm,0.8s,baz=175,slow=12,SNR=2.4						
MAW				LR	LR	05 56 57.6	
	comp=Z,113nm,18.1s,baz=166,slow=34						
	comp=Z,1.9nm,0.8s						
PB16	IPOC Station P	59.91	80	P	P	05 34 23.2	0.0
PB16				IAmb	IAmb	05 34 35.9	
	comp=Z,9.4nm,1.4s						
NNA	Nana	60.87	69	LR	LR	05 54 17.5	
	comp=Z,644nm,18.6s,baz=210,slow=30						
CPUP	Villa Florida	60.92	95	P	P	05 34 28.2	-1.1
	comp=Z,1.5nm,1.0s,baz=215,slow=12,SNR=3.4						
CPUP				LR	LR	05 56 47.3	
	comp=Z,392nm,19.5s,baz=226,slow=32						
	comp=Z,1.5nm,1.0s						
STKA	Stephens Creek	62.23	253	LR	LR	05 57 31.5	
	comp=Z,348nm,19.0s,baz=182,slow=32						
LPAZ	La Paz	62.33	79	P	P	05 34 40.2	+0.5
	comp=Z,1.7nm,0.7s,baz=185,slow=5.4,SNR=5.3						
LPAZ				LR	LR	05 55 52.5	
	comp=Z,76nm,18.5s,baz=206,slow=30						
	comp=Z,1.7nm,0.7s						
LPAZ	La Paz	62.33	79	P	P	05 34 39.7	+0.1
LPAZ				IAmb	IAmb	05 35 01.3	
	comp=Z,5.5nm,1.1s						
ATAH	Atahualpa	64.06	64	LR	LR	05 56 47.1	
	comp=Z,176nm,18.1s,baz=204,slow=30						
CTA	Charters Tower	68.52	265	LR	LR	06 00 22.2	
	comp=Z,210nm,20.4s,baz=48,slow=32						
AS31	Alice Springs	72.87	253	P	P	05 35 45.5	0.0
ASAR	Alice Springs	72.87	253	P	P	05 35 45.5	0.0
	comp=Z,3.3nm,0.9s,baz=142,slow=5.8,SNR=19						
ASAR				LR	LR	06 04 13.6	
	comp=Z,363nm,18.8s,baz=132,slow=33						
	comp=Z,3.3nm,0.9s						
ASAR	Alice Springs	72.87	253	P	P	05 35 45.0	-0.5
H01W1	Cape Leeuwin H	74.16	232	T	T	06 57 50.0	
	baz=144,slow=75,SNR=46						
H01W2	Cape Leeuwin H	74.17	232	T	T	06 57 50.4	
	baz=144,slow=75,SNR=44						
H01W3	Cape Leeuwin H	74.18	232	T	T	06 57 51.2	
	baz=144,slow=75,SNR=44						
NWAO	Narrogin (SRO)	74.31	235	LR	LR	06 00 48.2	
	comp=Z,189nm,20.7s,baz=210,slow=30						
BDFB	Brasilia	74.65	95	LR	LR	06 05 26.5	
	comp=Z,177nm,19.6s,baz=183,slow=33						
WR8	Warramunga Arr	75.45	256	P	P	05 35 59.8	-0.8
WR8				IAmb	IAmb	05 36 06.3	
	comp=Z,7.5nm,1.1s						
WRA	Warramunga Arr	75.56	256	P	P	05 36 00.7	-0.5
	comp=Z,2.2nm,0.9s,baz=143,slow=5.5,SNR=8.6						
	comp=Z,2.2nm,0.9s						
WRA	Warramunga Arr	75.56	256	P	P	05 36 02.6	+1.5
BRU2	Volcan	75.62	52	P	P	05 36 01.9	+0.2
WB0	Warramunga Arr	75.66	256	P	P	05 36 02.2	+0.4
WB0				IAmb	IAmb	05 36 10.4	
	comp=Z,3.9nm,0.9s						
JTS	Las Juntas de	75.91	49	LR	LR	06 02 00.9	
	comp=Z,246nm,18.5s,baz=204,slow=30						
ROSC	El Rosal	76.32	61	LR	LR	06 03 16.5	
	comp=Z,252nm,20.6s,baz=149,slow=31						
PMG	Port Moresby	76.40	273	LR	LR	06 05 56.3	
	comp=Z,184nm,18.6s,baz=150,slow=33						
CMIG	Matias Romero	78.07	37	LR	LR	06 03 12.0	
	comp=Z,59nm,18.7s,baz=189,slow=30						
LPIG	La Paz	80.30	21	LR	LR	06 04 23.3	
	comp=Z,85nm,18.7s,baz=206,slow=30						
SDV	Santo Domingo	81.66	62	LR	LR	06 08 53.2	
	comp=Z,177nm,18.7s,baz=138,slow=33						
FITZ	Fitzroy Crossi	81.94	250	LR	LR	06 09 03.9	
	comp=Z,500nm,19.3s,baz=155,slow=33						
TXAR	Lajitas Array	86.88	25	P	P	05 37 01.6	+0.6
	comp=Z,0.4nm,0.8s,baz=244,slow=4.6,SNR=3.3						
	comp=Z,0.4nm,0.8s						
TXAR	Lajitas Array	86.88	25	P	P	05 37 01.9	+0.9
TX31	Lajitas Ar. Si	86.88	25	P	P	05 37 02.0	+1.0
TX31				IAmb	IAmb	05 37 24.9	
	comp=Z,4.1nm,1.4s						
ELS	Elsinore Mount	88.40	13	P	P	05 37 08.8	+0.7
ELS				IAmb	IAmb	05 37 18.1	
	comp=Z,10.0nm,1.4s						
MDP	Montagnes des	88.53	79	LR	LR	06 11 30.2	
	comp=Z,113nm,18.9s,baz=192,slow=32						
H11S2	WAKE ISLAND Hy	88.64	305	T	T	07 15 28.5	
	baz=147,slow=75,SNR=28						
H11S3	WAKE ISLAND Hy	88.65	305	T	T	07 15 29.9	
	baz=147,slow=75,SNR=20						
H11S1	WAKE ISLAND Hy	88.66	305	T	T	07 15 29.8	
	baz=147,slow=75,SNR=20						
IRM	Iron Mountain	89.23	15	P	P	05 37 12.7	+0.7
BATI	Baumata	89.44	253	LR	LR	06 16 21.6	
	comp=Z,181nm,18.2s,baz=125,slow=35						
H11N3	WAKE ISLAND Hy	89.59	305	T	T	07 16 37.5	
	baz=148,slow=76,SNR=5.0						
H11N1	WAKE ISLAND Hy	89.60	305	T	T	07 16 42.0	
	baz=148,slow=76,SNR=6.0						
H11N2	WAKE ISLAND Hy	89.61	305	T	T	07 16 40.4	
	baz=148,slow=76,SNR=8.3						
SUR	Sutherland	91.01	158	LR	LR	06 11 36.2	
	comp=Z,312nm,21.6s,baz=210,slow=31						
ANMO	Albuquerque	91.60	22	LR	LR	06 11 39.2	
	comp=Z,77nm,18.2s,baz=193,slow=31						
NVAR	Mina Array Bea	93.01	12	LR	LR	06 10 16.7	
	comp=Z,195nm,20.3s,baz=184,slow=30						
BOSA	Boshof	95.57	161	LR	LR	06 16 38.0	
	comp=Z,204nm,18.8s,baz=211,slow=33						
PDAR	Pinedale Array	98.55	17	LR	LR	06 14 54.6	
	comp=Z,114nm,18.8s,baz=188,slow=31						
TKL	Tuckaleechee C	98.98	39	LR	LR	06 15 31.8	
	comp=Z,76nm,20.5s,baz=282,slow=31						
LBTB	Lobatse	99.13	161	LR	LR	06 17 11.4	
	comp=Z,165nm,20.3s,baz=205,slow=32						
ILAR	Eielson Array	118.98	353	PKP	PKPdf	05 43 03.8	+0.2
	comp=Z,1.9nm,1.0s,baz=202,slow=1.8,SNR=6.2						
ILAR	Eielson Array	118.98	353		PKiKP	05 43 04.9	+1.2
TIXI	Tiksi	142.39	329	PKP	PKPdf	05 43 45.8	-1.7
	comp=Z,4.9nm,0.8s,baz=73,slow=1.2,SNR=9.2						
SONM	Songino Array	142.97	285	PKP	PKPdf	05 43 47.2	-2.3
	comp=Z,2.0nm,1.0s,baz=115,slow=2.1,SNR=5.8						
SONM	Songino Array	142.97	285	PKPdf	PKiKP	05 43 51.8	-0.9
RAYN	Ar Rayn	149.48	178	PKPbc	PKPbc	05 44 06.3	+0.7

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*IDC **30** 05:57:54.4±0.8, 36°.94N×97°.87W, h0km, mb3.6/2, mbtmp3.9/7, ML4.3/4, MS4.0/4, Error ellipse: s-maj=12.9km s-min=10.9km az=174.0*

*NEIC **30** 05:57:55.7±0.3, 36°.874N±0°.010×97°.913W±0°.006, h7km±2km, Error ellipse: s-maj=1.6km s-min=0.3km az=160.0*

*NEIC **30** 05:57:55, 36°.89N×97°.90W, h7km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.25; $M_{\theta\theta}$1.25; $M_{\phi\phi}$0.00; $M_{r\theta}$-0.46; $M_{\theta\phi}$1.09; $M_{\phi r}$0.76; Fault plane solution: $M_0$1.88000×10^{14} NP1:ϕ_s90.00000°, δ55.00000°,λ-45.00000°. NP2:ϕ_s210.00000°,δ55.00000°, λ-135.00000°. Principal axes: T 1.8815, Plg0.0000°, Azm150.0000°; N 0.0011, Plg35.0000°, Azm240.0000°; P -1.8826, Plg55.0000°, Azm60.0000°;*

*NEIC **30** 05:57:55.7±0.4, 36°.867N±0°.009×97°.91W±0°.01, h5km±1km, mb4.0/8, mb_Lg3.6/143, ML3.7/31, ML4.0/54, Mwr3.5/10(SLM) Error ellipse: s-maj=2.5km s-min=1.7km az=182.0*

ISC 30 05:57:55.1±1.1, 36°.91N±0°.03×97°.89W±0°.03, h13km±9km, n128, σ1ˢ54/73, MS4.1/4, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN01	Argonia South	0.27	22	Pg	Pb	05 58 02.1	+0.3
KAN08	Anthony NE Sta	0.33	348	Pg	Pb	05 58 03.0	+0.3
KAN08					Sb	05 58 08.1	+0.1
KAN13	South Haven SW	0.34	72		Pb	05 58 03.4	+0.3
KAN13					Sb	05 58 08.4	0.0
CROK	Carrier	0.41	191		Pg	05 58 03.2	0.0
CROK					Sg	05 58 08.6	-0.2
BLOK	Blackwell	0.56	105	Pg	Pb	05 58 06.9	+0.2
BLOK				Sg	Sb	05 58 14.8	+0.2
BLOK				IAML		05 58 15.3	
	comp=N,11µm,0.3s						
BLOK				IAML		05 58 18.3	
	comp=E,9µm,0.2s						
OK038	West end E0370	0.81	238	Pg	Pg	05 58 10.5	-0.3
OK038					Sg	05 58 21.1	-0.3
OK038				IAML		05 58 21.6	
	comp=E,9µm,0.4s						
OK038				IAML		05 58 37.0	
	comp=E,8µm,0.4s						
NOKA	Waynoka	0.88	252	Pg	Pg	05 58 11.8	-0.3
NOKA					Sg	05 58 23.4	-0.3
NOKA				IAML		05 58 32.9	
	comp=N,4µm,0.3s						
NOKA				IAML		05 58 39.2	
	comp=E,5µm,0.6s						
OK048	Pawnee Station	0.90	123	Pg	Pg	05 58 12.8	+0.3
OK048				IAML		05 58 31.1	
	comp=E,4µm,0.5s						
OK048	Pawnee Station	0.90	123		Pn	05 58 13.2	-0.2
OK048					Sn	05 58 25.5	-0.8
OK051	E0350 and S346	0.93	115	Pg	Pg	05 58 13.5	+0.4

T35A	**Sooner Cattle**	**1.10**	**89**	Pg	**Pg**	**05 58 16.9**	**+0.6**
T35A					**Sn**	**05 58 31.7**	**+0.4**
T35A				IAML		05 58 32.9	
	comp=E,4µm,0.1s						
T35A				IAML		05 58 36.7	
	comp=E,5µm,0.2s						
QUOK	**Quay**	**1.20**	**127**	Pg	**Pg**	**05 58 18.2**	**0.0**
OK052	**Battle Ridge R**	**1.26**	**136**		**Pb**	**05 58 19.0**	**+0.3**
ADOK	**Arcadia Dam**	**1.32**	**161**	Pg	**Pb**	**05 58 19.9**	**+0.2**
ELIS	**Ellis County**	**1.49**	**236**		**Pb**	**05 58 22.9**	**+0.2**
R32A	**Long Quarter,**	**1.65**	**337**		**Pg**	**05 58 26.5**	**-0.3**
R32A				IAmb_Lg		05 58 51.6	
	comp=Z,476nm,0.8s						
W35A	**Tecumseh**	**1.93**	**155**	Pn	**Pb**	**05 58 29.2**	**-0.9**
TUL3	**Leonard**	**1.96**	**120**	Pn	**Pb**	**05 58 29.7**	**-0.9**
WMOK	**Wichita Mounta**	**2.28**	**199**	Pn	**Pn**	**05 58 33.8**	**+1.3**
WMOK	**Wichita Mounta**	**2.28**	**199**	IAmb_Lg		05 59 08.8	
	comp=Z,414nm,0.9s						
X34A	**Smith Ranch, M**	**2.30**	**179**	Pn	**Pb**	**05 58 34.7**	**-1.7**
CBKS	**Cedar Bluff**	**2.40**	**323**	Pn	**Pb**	**05 58 37.1**	**-1.1**
KSU1	**Kansas State U**	**2.41**	**24**	Pn	**Pb**	**05 58 36.9**	**-1.4**
RLO	**Rose Lookout**	**2.42**	**107**	Pn	**Pn**	**05 58 36.5**	**+2.2**
SMWD	**Samnorwood**	**2.62**	**227**	Pn	**Pn**	**05 58 38.8**	**+1.7**
SMWD				IAmb_Lg		05 59 21.9	
	comp=Z,263nm,0.7s						
U38A	**Gravette**	**2.85**	**98**	Pn	**Pn**	**05 58 42.6**	**+2.4**
WTFS	**Witchita Falls**	**3.17**	**189**	Pn	**Pn**	**05 58 46.3**	**+1.7**
PH02	**Texas Public H**	**3.62**	**247**	Pn	**Pn**	**05 58 53.8**	**+2.9**
PH02				IAmb_Lg		05 59 54.9	
	comp=Z,194nm,0.8s						
AMTX	**Amarillo**	**3.68**	**238**	IAmb_Lg		05 59 52.6	
	comp=Z,148nm,0.8s						
RTBA	**Rita Blanca**	**3.93**	**265**	Pn	**Pn**	**05 58 57.7**	**+2.5**
APMT	**Aspermont**	**4.01**	**208**	IAmb_Lg		06 00 11.9	
	comp=Z,93nm,1.0s						
DKNS	**Dickens**	**4.08**	**218**	IAmb_Lg		06 00 03.1	
	comp=Z,148nm,0.7s						
PLPT	**Palo Pinto**	**4.10**	**185**	IAmb_Lg		06 00 14.5	
	comp=Z,113nm,0.8s						
MIAR	**Mount Ida**	**4.22**	**123**		**Pn**	**05 59 00.9**	**+1.8**
MIAR				IAmb_Lg		06 00 15.9	
	comp=Z,154nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.30**	**301**		Pb	05 59 05.6	-4.9
KSCO				IAmb_Lg		06 00 21.8	
	comp=Z,169nm,0.8s						
N35A	**Tabor**	**4.32**	**23**	Pn	**Pn**	**05 59 02.5**	**+2.1**
Z38A	**Mt. Pleasant**	**4.35**	**146**	Pn	**Pn**	**05 59 02.2**	**+1.4**
Z38A				IAmb_Lg		06 00 22.8	
	comp=Z,175nm,0.7s						
P38A	**Dawn**	**4.37**	**50**	Pn	**Pn**	**05 59 03.2**	**+2.1**
P38A				IAmb_Lg		06 00 16.6	
	comp=Z,152nm,0.8s						
BGNE	**Belgrade**	**4.50**	**357**	Pn	**Pn**	**05 59 05.5**	**+2.5**
ABTX	**Abilene, Hawle**	**4.51**	**199**	IAmb_Lg		06 00 26.7	
	comp=Z,106nm,0.8s						
SN07	**Snyder 07**	**4.54**	**214**	IAmb_Lg		06 00 20.8	
	comp=Z,123nm,0.7s						
FW13	**Cleburne**	**4.56**	**175**	IAmb_Lg		06 00 24.3	
	comp=Z,90nm,0.9s						
R40A	**Maddies Statio**	**4.67**	**71**	Pn	**Pn**	**05 59 06.8**	**+1.6**
X40A	**Basin Creek Fa**	**4.77**	**119**	IAmb_Lg		06 00 27.4	
	comp=Z,134nm,0.8s						
WHAR	**Wooly Hollow**	**4.81**	**108**	IAmb_Lg		06 00 30.3	
	comp=Z,148nm,0.9s						
POST	**Post**	**4.85**	**219**	IAmb_Lg		06 00 38.0	
	comp=Z,113nm,0.7s						
WHTX	**Lake Whitney,**	**4.92**	**176**	IAmb_Lg		06 00 42.7	
	comp=Z,85nm,0.9s						
UALR	**University of**	**4.98**	**114**	IAmb_Lg		06 00 36.6	
	comp=Z,147nm,0.9s						
WLAR	**White Oak Lake**	**5.05**	**128**	IAmb_Lg		06 00 48.9	
	comp=Z,123nm,0.8s						
OGNE	**Ogallala**	**5.17**	**323**	IAmb_Lg		06 00 44.3	
	comp=Z,140nm,0.7s						
237A	**Washetta, Mont**	**5.18**	**160**	IAmb_Lg		06 00 52.8	
	comp=Z,138nm,1.0s						
T25A	**Trinidad**	**5.23**	**275**	IAmb_Lg		06 00 51.9	
	comp=Z,115nm,0.9s						
P40A	**Paris**	**5.29**	**59**	Pn	**Pn**	**05 59 14.8**	**+1.0**
P40A				IAmb_Lg		06 00 45.3	
	comp=Z,143nm,0.7s						
N38A	**Joes South For**	**5.31**	**42**	IAmb_Lg		06 00 47.4	
	comp=Z,138nm,0.7s						
CCM	**Cathedral Cave**	**5.41**	**76**	IAmb_Lg		06 00 52.9	
	comp=Z,86nm,0.7s						
T42A	**Van Buren**	**5.44**	**87**	IAmb_Lg		06 00 48.8	
	comp=Z,132nm,1.0s						
Z41A	**Richland Creek**	**5.53**	**130**	IAmb_Lg		06 00 59.7	
	comp=Z,94nm,0.8s						
BRDY	**Brady**	**5.68**	**190**	IAmb_Lg		06 00 57.5	
	comp=Z,94nm,0.9s						
CCAR	**Cane Creek**	**5.81**	**119**	IAmb_Lg		06 01 11.2	
	comp=Z,146nm,0.8s						
Q24A	**Divide**	**6.10**	**292**	IAmb_Lg		06 01 08.8	
	comp=Z,62nm,0.8s						
435B	**Jarrell**	**6.11**	**178**	IAmb_Lg		06 01 21.7	
	comp=Z,136nm,0.9s						
SCIA	**State Center**	**6.17**	**34**	IAmb_Lg		06 01 28.6	
	comp=Z,120nm,0.7s						
SLM	**Saint Louis**	**6.30**	**72**	IAmb_Lg		06 01 17.3	
	comp=Z,110nm,0.8s						
OZNA	**Ozona**	**6.55**	**205**		**Pn**	**05 59 32.7**	**+1.6**
OZNA				IAmb_Lg		06 01 30.4	
	comp=Z,114nm,1.1s						
JCT	**Junction City**	**6.61**	**195**	IAmb_Lg		06 01 37.9	
	comp=Z,118nm,0.8s						
ISCO	**Idaho Springs**	**6.72**	**298**	Pn	**Pn**	**05 59 35.3**	**+1.5**
143A	**Socs Landing,**	**6.78**	**126**	IAmb_Lg		06 01 44.2	
	comp=Z,81nm,0.9s						
MNHN	**Monahans**	**6.87**	**217**	IAmb_Lg		06 01 42.1	
	comp=Z,82nm,1.1s						
ECSD	**EROS Data Cent**	**6.89**	**8**	Pn	**Pn**	**05 59 37.0**	**+1.3**
ECSD				IAmb_Lg		06 01 37.5	
	comp=Z,61nm,0.8s						
MLDN	**Muldoon**	**7.14**	**174**	IAmb_Lg		06 01 56.9	
	comp=Z,72nm,1.0s						
ANMO	**Albuquerque**	**7.22**	**257**	Pn	**Pn**	**05 59 44.9**	**+4.3**
	comp=Z,0.2nm,0.3s,baz=82,slow=18,SNR=7.1						
ANMO				Lg	Lg	06 01 37.2	
	comp=Z,4.8nm,0.3s,baz=352,slow=7.9,SNR=8.1						
ANMO	**Albuquerque**	**7.22**	**257**	Pn	**Pn**	**05 59 42.3**	**+1.8**
TASM	**ASL Pad, Albuq**	**7.23**	**257**	IAmb_Lg		06 01 46.8	
	comp=Z,26nm,1.0s						
TASM	**ASL Pad, Albuq**	**7.23**	**257**	IAmb_Lg		06 01 53.9	
	comp=Z,26nm,1.0s						
TASM	**ASL Pad, Albuq**	**7.23**	**257**	IAmb_Lg		06 01 49.3	
	comp=Z,18nm,0.7s						
L40A	**Anamosa**	**7.28**	**43**	IAmb_Lg		06 01 51.8	
	comp=Z,90nm,0.8s						
OXF	**Oxford**	**7.30**	**107**	IAmb_Lg		06 01 49.2	
	comp=Z,75nm,0.8s						
HNDO	**Hondo**	**7.45**	**189**	IAmb_Lg		06 02 04.8	
	comp=Z,74nm,0.9s						
Y45A	**Yeager Farm, C**	**7.46**	**112**	IAmb_Lg		06 01 59.1	
	comp=Z,80nm,0.8s						
SUSD	**Miller**	**7.57**	**354**	IAmb_Lg		06 01 56.0	
	comp=Z,102nm,0.9s						
VBMS	**Vicksburg**	**7.67**	**125**	IAmb_Lg		06 02 18.2	
	comp=Z,60nm,1.1s						
EF04	**Eagle Ford 04**	**7.67**	**179**	IAmb_Lg		06 02 09.7	
	comp=Z,64nm,0.8s						
DRIO	**Del Rio**	**7.81**	**198**	IAmb_Lg		06 02 23.2	
	comp=Z,50nm,0.7s						
I37A	**Lemond, Waseca**	**7.88**	**24**	IAmb_Lg		06 02 06.5	
	comp=Z,84nm,0.8s						
OLIL	**Olney**	**7.96**	**74**	IAmb_Lg		06 02 13.7	
	comp=Z,87nm,0.7s						
735A	**Kenedy**	**8.03**	**180**	IAmb_Lg		06 02 28.6	
	comp=Z,56nm,0.8s						
MNTX	**Cornudas Mount**	**8.09**	**232**	Pn	**Pn**	**05 59 53.3**	**+1.1**
MNTX				IAmb_Lg		06 02 21.7	
	comp=Z,38nm,0.8s						
EF02	**Christine**	**8.13**	**184**	IAmb_Lg		06 02 26.4	
	comp=Z,90nm,0.9s						
L42A	**Oliver, Polo**	**8.14**	**49**	IAmb_Lg		06 02 24.2	
	comp=Z,90nm,0.8s						
PLAL	**Pickwick Lake**	**8.18**	**101**	IAmb_Lg		06 02 17.7	
	comp=Z,62nm,0.7s						
JFWS	**Jewell Farm**	**8.39**	**42**	IAmb_Lg		06 02 34.1	
	comp=Z,69nm,0.8s						
146A	**Union**	**8.42**	**118**	IAmb_Lg		06 02 40.3	
	comp=Z,42nm,0.9s						
RSSD	**Black Hills**	**8.59**	**329**	IAmb_Lg		06 02 39.2	
	comp=Z,50nm,1.1s						
833A	**Chaparral WMA,**	**8.65**	**189**	IAmb_Lg		06 02 40.5	
	comp=Z,42nm,1.1s						
K22A	**Casper**	**8.78**	**313**	Pn	**Pn**	**06 00 04.8**	**+2.9**
K22A				IAmb_Lg		06 02 44.3	
	comp=Z,46nm,0.8s						
Z47A	**Carrollton**	**8.86**	**112**	IAmb_Lg		06 03 01.0	
	comp=Z,39nm,0.8s						
I40A	**Norwalk**	**8.91**	**36**	IAmb_Lg		06 02 41.8	
	comp=Z,39nm,0.8s						
TXAR	**Lajitas Array**	**8.97**	**214**	Pn	**Pn**	**06 00 04.1**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=34,slow=10,SNR=47						
TXAR				Pg	Pg	06 00 35.2	-12
	comp=Z,1.7nm,0.3s,baz=16,slow=15,SNR=10						
TXAR				Lg	Lg	06 02 27.6	
	comp=Z,1.2nm,0.3s,baz=28,slow=22,SNR=4.2						
	comp=Z,1.6nm,0.4s						
F33A	**5 Mile Ranch,**	**9.01**	**7**	IAmb_Lg		06 02 56.4	
	comp=Z,51nm,0.9s						
SPMN	**Marine on St.**	**9.15**	**23**	IAmb_Lg		06 02 58.6	
	comp=Z,52nm,0.9s						
I42A	**Draeger Farm,**	**9.77**	**42**	IAmb_Lg		06 03 27.9	
	comp=Z,43nm,0.9s						
E28A	**Huff**	**9.88**	**349**	IAmb_Lg		06 03 14.2	
	comp=Z,69nm,0.8s						
G40A	**Rib Lake**	**10.16**	**32**	Pn	**Pn**	**06 00 20.5**	**-0.2**
PD31	**Pinedale Array**	**10.71**	**307**		**Pn**	**06 00 29.9**	**+1.5**
PDAR	**Pinedale Array**	**10.71**	**307**	Pn	**Pn**	**06 00 30.6**	**+2.2**
	comp=Z,0.5nm,0.3s,baz=119,slow=14,SNR=15						
PDAR				Lg	Lg	06 03 30.1	
	comp=Z,1.3nm,0.3s,baz=111,slow=26,SNR=8.1						
	comp=Z,0.7nm,0.4s						
O49A	**Covington**	**11.11**	**69**		**Pn**	**06 00 33.0**	**-0.5**
TKL	**Tuckaleechee C**	**11.46**	**92**	Pn	**Pn**	**06 00 39.1**	**+0.7**
	comp=Z,1.4nm,0.3s,baz=228,slow=7.7,SNR=18						
TKL				Lg	Lg	06 03 49.4	
	comp=Z,1.6nm,0.3s,baz=162,slow=20,SNR=15						
	comp=Z,4.9nm,0.4s						
TKL	**Tuckaleechee C**	**11.46**	**92**		**Pn**	**06 00 37.6**	**-0.8**
M50A	**Fremont**	**12.36**	**64**		**Pn**	**06 00 50.9**	**+0.2**
N51A	**Ashland**	**12.73**	**67**		**Pn**	**06 00 55.3**	**-0.4**
S54A	**Dingess, Beckl**	**13.22**	**81**		**Pn**	**06 01 03.1**	**+0.6**
TBO	**Thunder Bay**	**13.27**	**25**	Pn	**Pn**	**06 01 01.2**	**-1.9**
ULM	**Lac du Bonnet**	**13.42**	**6**	Pn	**Pn**	**06 01 01.2**	**-3.8**
	comp=Z,3.3nm,0.5s,baz=181,slow=12,SNR=6.5						
ULM				Lg	Lg	06 04 50.1	
	comp=Z,0.9nm,0.3s,baz=129,slow=9.1,SNR=3.7						
Q54A	**Coxs Mills**	**13.62**	**76**	Pn	**Pn**	**06 01 07.7**	**-0.1**
E46A	**Sault Ste Mari**	**13.86**	**43**	Pn	**Pn**	**06 01 09.8**	**-1.2**
R55A	**Marlinton**	**14.16**	**79**	Pn	**Pn**	**06 01 15.0**	**-0.3**
T57A	**Hurt**	**14.90**	**84**	Pn	**Pn**	**06 01 25.3**	**-0.1**
SADO	**Sadowa**	**16.19**	**55**	Pn	**Pn**	**06 01 38.6**	**-3.6**
	comp=Z,0.4nm,0.3s,baz=258,slow=14,SNR=4.1						
SADO				Lg	Lg	06 06 12.5	
	comp=Z,0.3nm,0.3s,baz=195,slow=16,SNR=1.9						
	comp=Z,3.3nm,0.8s						
BUKO	**Buck Lake**	**16.30**	**53**	Pn	**Pn**	**06 01 41.3**	**-2.2**
BUKO				IAmb	IAmb	06 01 57.3	
	comp=Z,18nm,1.1s						
L56A	**Greenwood**	**16.52**	**65**	Pn	**Pn**	**06 01 44.4**	**-2.0**
L56A				IAmb	IAmb	06 02 24.9	
	comp=Z,27nm,1.5s						
FFC	**Flin Flon**	**18.04**	**352**		**P**	**06 02 07.4**	**+1.7**
J59A	**Piesco**	**19.00**	**63**	P	**P**	**06 02 14.3**	**-2.0**
YKA	**Yellowknife Ar**	**27.63**	**343**	P	**P**	**06 03 41.9**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=150,slow=8.0,SNR=4.1						
	comp=Z,0.2nm,0.7s						
ILAR	**Eielson Array**	**40.04**	**330**	LR	LR	06 24 14.4	
	comp=Z,299nm,18.6s,baz=188,slow=40						
EKA	**Eskdalemuir Ar**	**63.07**	**40**	P	**P**	**06 08 21.1**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=280,slow=4.8,SNR=3.7						
	comp=Z,1.3nm,0.7s						
TIXI	**Tiksi**	**66.85**	**345**	LR	LR	06 41 10.8	
	comp=Z,88nm,18.6s,baz=212,slow=39						
ESDC	**Sonseca Array**	**70.25**	**55**	LR	LR	06 39 09.6	
	comp=Z,47nm,18.2s,baz=248,slow=35						
MDT	**Midelt**	**73.51**	**61**	LR	LR	06 39 57.1	
	comp=Z,108nm,20.0s,baz=242,slow=34						

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*NEIC **30** 06:06:13.3±1.7, 18°.6N±0°.1×69°.06W±0°.05, h127^{km}±7^{km}, ML2.9/16, Md3.7/7(RSPR), Error ellipse: s-maj=15.8km s-min=7.0km az=177.0*

*OSPL **30** 06:06:13.2±2.5, 18°.42N×69°.00W, h138^{km}±22^{km}, ML2.7, Presumed earthquake*

*SDD **30** 06:06:13.2±2.6, 18°.45N×69°.10W, h138^{km}±13^{km}, MD3.2, ML2.9, MW3.0, Presumed earthquake*

*RSPR **30** 06:06:13.7, 18°.68N×68°.95W, h131^{km}±2^{km}, MD3.7/7*

ISC 30 06:06:12.9±1.4**, 18°.50N**±0°.07×**69°.08W**±0°.03**, h128**^{km}±8^{km}**, n51, σ0^{s}.77**/69**, 20C-10D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HIDR	**Higuey Centro**	**0.36**	**75**	⇓*e*Pg	**Pn**	**06 06 30.9**	**0.0**
HIDR				⇑*e*Sg	**Sn**	**06 06 45.3**	**+0.7**
HIDR				IAML		06 06 46.3	
	comp=N,591nm,0.2s						
DR12	**Loma Pena Alta**	**0.41**	**315**	Pn	**Pn**	**06 06 30.8**	**-0.5**
DR12				Sn	**Sn**	**06 06 45.0**	**-0.2**
HATOM	**Hato Mayor del**	**0.41**	**315**	⇓*e*Pg	**Pn**	**06 06 30.8**	**-0.5**
HATOM				⇑*e*Sg	**Sn**	**06 06 44.8**	**-0.4**
HATOM				IAML		06 06 45.6	
	comp=N,285nm,0.6s						
MIDR	**Miches**	**0.48**	**3**	⇓*e*Pg	**Pn**	**06 06 31.4**	**-0.2**
MIDR				⇑*e*Sg	**Sn**	**06 06 46.0**	**+0.2**
MIDR				IAML		06 06 46.9	
	comp=N,90nm,0.2s						
PCDR	**Punta Cana, DR**	**0.66**	**88**	⇓*e*Pg	**Pn**	**06 06 33.0**	**+0.2**
PCDR				⇑*e*Sg	**Sn**	**06 06 49.7**	**+2.0**
PCDR				IAML		06 06 51.5	
	comp=N,159nm,0.5s						
SDD	**Santo Domingo**	**0.79**	**267**	Pn	**Pn**	**06 06 33.4**	**-0.3**
SDD				Sn	**Sn**	**06 06 50.0**	**+0.5**
SDD	**Santo Domingo**	**0.79**	**267**	⇑*e*Pg	**Pn**	**06 06 33.1**	**-0.6**
SDD				⇑*e*Sg	**Sn**	**06 06 49.7**	**+0.2**
SDD				IAML		06 06 58.0	
	comp=N,23nm,1.9s						
SDD	**Santo Domingo**	**0.79**	**267**	*i* P	**Pn**	**06 06 33.4**	**-0.3**
SDD				*e*S	**Sn**	**06 06 49.8**	**+0.2**
SMDR	**Samana, DR**	**0.80**	**353**	⇑*e*P	**Pn**	**06 06 33.1**	**-0.6**
SMDR	**Samana, DR**	**0.80**	**353**	*e*S	**Sn**	**06 06 49.0**	**-0.6**
SMDR	**Samana, DR**	**0.80**	**353**	⇑*e*Pg	**Pn**	**06 06 33.1**	**-0.6**
SMDR				⇑*e*Sg	**Sn**	**06 06 49.8**	**+0.2**
SMDR				IAML		06 07 11.1	
	comp=N,135nm,0.7s						
DR08	**Loma La Naviza**	**1.01**	**298**	⇓*e*Pg	**Pn**	**06 06 35.5**	**-0.2**
DR08				⇓*e*Sg	**Sn**	**06 06 52.2**	**-0.9**
DR08				IAML		06 06 55.0	
	comp=N,4µm,0.1s						
NADR	**Nagua**	**1.13**	**319**	⇑*e*Pg	**Pn**	**06 06 36.2**	**-0.6**
NADR				⇑*e*Sg	**Sn**	**06 06 55.2**	**+0.2**
NADR				IAML		06 07 01.4	
	comp=N,416nm,0.7s						
SC01	**Santiago de lo**	**1.81**	**301**	Pn	**Pn**	**06 06 44.4**	**-0.1**
SC01				IAML		06 07 13.7	
	comp=N,103nm,0.5s						
SC01	**Santiago de lo**	**1.81**	**301**	⇑*e*Pg	**Pn**	**06 06 44.4**	**-0.1**
SC01				⇓*e*Sg	**Sn**	**06 07 09.7**	**+1.0**
SC01				IAML		06 07 12.2	
	comp=N,99nm,1.4s						
SC01	**Santiago de lo**	**1.81**	**301**	*i* P	**Pn**	**06 06 44.4**	**-0.1**
SC01				*e*S	**Sn**	**06 07 09.2**	**+0.6**
SC01				IAML		06 07 12.5	
	comp=Z,61nm,1.1s						
AGPR	**Aguadilla, PR**	**1.87**	**91**	Pn	**Pn**	**06 06 45.2**	**+0.1**
AGPR				IAML		06 07 18.1	
	comp=Z,104nm,2.3s						
AGPR	**Aguadilla, PR**	**1.87**	**91**	⇑*e*P	**Pn**	**06 06 46.6**	**+1.5**
AGPR	**Aguadilla, PR**	**1.87**	**91**	*e*S	**Sn**	**06 07 09.5**	**-0.2**
AGPR	**Aguadilla, PR**	**1.87**	**91**	⇑*e*Pg	**Pn**	**06 06 46.2**	**+1.1**
AGPR				IAML		06 07 18.1	
	comp=N,100nm,1.3s						
LSP	**Las Mesas**	**1.92**	**99**		**Pn**	**06 06 46.9**	**+1.1**
LSP					**Sn**	**06 07 11.5**	**+0.6**
LSP	**Las Mesas**	**1.92**	**99**	⇑*e*P	**Pn**	**06 06 46.9**	**+1.1**
LSP	**Las Mesas**	**1.92**	**99**	*e*S	**Sn**	**06 07 11.5**	**+0.6**
CRPR	**Cabo Rojo, PR**	**1.93**	**104**		**Pn**	**06 06 45.7**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.93**	**104**	⇑*e*P	**Pn**	**06 06 45.7**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.93**	**104**	*e*S	**Sn**	**06 07 10.9**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.93**	**104**	⇓*e*Pg	**Pn**	**06 06 45.8**	**-0.1**
CRPR				IAML		06 07 37.3	
	comp=N,42nm,1.6s						
CRPR	**Cabo Rojo, PR**	**1.93**	**104**	*i* P	**Pn**	**06 06 45.9**	**-0.1**
MLPR	**Magueyes Islan**	**2.00**	**105**	⇓*e*P	**Pn**	**06 06 46.4**	**-0.3**
MLPR	**Magueyes Islan**	**2.00**	**105**	*e*S	**Sn**	**06 07 13.2**	**+0.5**
MLPR	**Magueyes Islan**	**2.00**	**105**	⇑*e*Pg	**Pn**	**06 06 46.3**	**-0.4**
MLPR				IAML		06 07 31.1	
	comp=N,7.8nm,1.4s						
PODR	**Polo**	**2.12**	**261**	*i* P	**Pn**	**06 06 48.4**	**+0.1**
PODR				*e*S	**Sn**	**06 07 16.3**	**+0.8**
SDDR	**Presa de Saban**	**2.15**	**283**	Pn	**Pn**	**06 06 50.3**	**+1.7**
SDDR				IAML		06 07 22.9	
	comp=N,38nm,0.9s						
SDDR				IAML		06 07 24.1	
	comp=N,42nm,1.0s						
SDDR	**Presa de Saban**	**2.15**	**283**	*i* P	**Pn**	**06 06 50.1**	**+1.5**
SDDR				*e*S	**Sn**	**06 07 16.9**	**+0.9**
SDDR				IAML		06 07 23.6	
	comp=Z,25nm,0.5s						
AOPR	**Arecibo Observ**	**2.21**	**94**		**Pn**	**06 06 50.2**	**+0.8**
AOPR	**Arecibo Observ**	**2.21**	**94**		**Sn**	**06 07 16.6**	**-0.8**
AOPR	**Arecibo Observ**	**2.21**	**94**	⇑*e*P	**Pn**	**06 06 50.2**	**+0.8**
AOPR	**Arecibo Observ**	**2.21**	**94**	*e*S	**Sn**	**06 07 16.6**	**-0.8**
LONE3	**El Aguacate, B**	**2.26**	**273**	*i* P	**Pn**	**06 06 49.6**	**-0.5**
LONE3				*e*S	**Sn**	**06 07 18.1**	**-0.5**
LONE3				IAML		06 07 24.3	
	comp=Z,16nm,0.6s						
LODU1	**El Espartillar**	**2.28**	**267**	*i* P	**Pn**	**06 06 50.1**	**-0.1**
LODU1				IAML		06 07 26.9	
	comp=Z,30nm,1.1s						
OBIP	**Obispado Ponce**	**2.39**	**101**		**Pn**	**06 06 52.6**	**+1.0**
OBIP					**Sn**	**06 07 20.7**	**-0.7**
OBIP				IAML		06 07 28.2	
	comp=N,32nm,2.9s						
OBIP	**Obispado Ponce**	**2.39**	**101**	⇑*e*P	**Pn**	**06 06 52.1**	**+0.5**
OBIP	**Obispado Ponce**	**2.39**	**101**	*e*S	**Sn**	**06 07 21.9**	**+0.5**
LOBH	**Bahia de las A**	**2.51**	**256**	*i* P	**Pn**	**06 06 52.6**	**-0.5**
LOBH				*e*S	**Sn**	**06 07 22.7**	**-1.4**
LOBH				IAML		06 07 32.5	
	comp=Z,27nm,1.6s						
ECPR	**Experimental S**	**2.58**	**94**	Pn	**Pn**	**06 06 54.3**	**+0.2**
ECPR				IAML		06 07 30.6	
	comp=Z,57nm,0.2s						
ECPR	**Experimental S**	**2.58**	**94**	⇑*e*P	**Pn**	**06 06 54.3**	**+0.2**
ECPR	**Experimental S**	**2.58**	**94**	*e*S	**Sn**	**06 07 24.2**	**-1.6**
HUMP	**Col San Antoni**	**3.09**	**96**		**Pn**	**06 07 00.1**	**-0.4**
HUMP	**Col San Antoni**	**3.09**	**96**	IAML		06 07 40.8	
	comp=Z,25nm,0.9s						
HUMP				IAML		06 08 28.9	
	comp=Z,21nm,3.6s						
HUMP	**Col San Antoni**	**3.09**	**96**	⇓*e*P	**Pn**	**06 07 00.1**	**-0.4**
HUMP	**Col San Antoni**	**3.09**	**96**	*e*S	**Sn**	**06 07 35.3**	**-2.0**

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*IDC **30** 06:08:41.5±1.6, 39°.11N×72°.84E, h0^{km}, mb3.9/10, mbtmp3.9/15, ML2.9/5, MS2.9/2, Error ellipse: s-maj=28.4km s-min=16.0km az=158.0*

*KRNET **30** 06:08:43.6±0.1, 39°.48N×72°.71E, h14^{km}, mb3.9*

*NNC **30** 06:08:51.5±1.6, 39°.77N×72°.77E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=12.4km s-min=6.6km az=2.0*

*SOME **30** 06:08:51.9, 39°.82N×72°.77E, h5^{km}*

ISC 30 06:08:45.0±0.7**, 39°.51N**±0°.04×**72°.73E**±0°.03**, h10**^{km}**, n66, σ2^{s}.24**/97**, mb3.8**/9**, 24C-21D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**0.72**	**268**	⇑*i*P	**Pg**	**06 08 57.3**	**-1.7**
DRK				⇑*i*S	**Sg**	**06 09 07.1**	**-1.4**
SFK	**Sufi-Kurgan**	**0.78**	**49**	⇑*i*P	**Pg**	**06 08 59.1**	**-1.0**
SFK				⇑*i*S	**Sb**	**06 09 10.6**	**-0.9**
OHH	**Osh**	**1.02**	**2**	⇓*e*P	**Pg**	**06 09 03.5**	**-1.1**
OHH				⇓*e*S	**Sb**	**06 09 17.9**	**-0.3**
SALK	**Salom-Alik**	**1.61**	**31**	⇓*e*P	**Pb**	**06 09 14.3**	**-0.6**
SALK				⇓*e*S	**Sg**	**06 09 36.7**	**0.0**
ARSB	**Arslanbob**	**1.83**	**6**	⇑*i*P	**Pb**	**06 09 17.9**	**-0.7**
ARSB				⇑*i*S	**Sg**	**06 09 43.2**	**-0.5**
GAR	**Garm**	**1.94**	**256**	⇓*e*P	**Pb**	**06 09 19.1**	**-1.5**
GAR				⇓*i*S	**Sg**	**06 09 45.1**	**-2.4**
ARK	**Arkit**	**2.36**	**346**	⇓*i*P	**Pb**	**06 09 25.8**	**-1.9**
ARK				⇓*i*S	**Sb**	**06 09 56.9**	**-0.1**
ARLS	**Aral**	**2.65**	**27**	⇑*i*P	**Pb**	**06 09 29.8**	**-2.8**
ARLS				⇑*i*S	**Sb**	**06 10 03.6**	**-1.5**
MNAS	**Manas**	**2.98**	**357**	⇑*e*P	**Pb**	**06 09 34.6**	**-3.7**
MNAS				⇑*i*S	**Sb**	**06 10 11.8**	**-3.1**
UCH	**Uchtor**	**3.04**	**26**	P	**Pb**	**06 09 37.8**	**-1.6**
	SNR=19						
UCH	**Uchtor**	**3.04**	**26**	⇑*i*P	**Pn**	**06 09 35.4**	**+1.9**
UCH				⇑*i*S	**Sb**	**06 10 13.5**	**-3.2**
MRKS	**Merke**	**3.26**	**6**	Pg	**Pg**	**06 09 44.9**	**-2.5**
	34nm,0.3s						
MRKS				Lg	Lg	06 10 23.1	
	111nm,0.6s						
MRKS	**Merke**	**3.26**	**6**	*e*P	**Pg**	**06 09 46.0**	**-1.4**
	34nm,0.3s						
MRKS				*e*S	**Sb**	**06 10 24.7**	**+2.0**
	96nm,0.4s						
AAK	**Ala-Archa**	**3.40**	**22**	P	**Pb**	**06 09 43.0**	**-2.4**
	SNR=15						
AAK	**Ala-Archa**	**3.40**	**22**	Pn	**Pb**	**06 09 43.2**	**-2.2**
	6.5nm,0.3s,baz=169,slow=5.1,SNR=48						
AAK				Sn	**Sb**	**06 10 26.2**	**-0.7**
	7.0nm,0.3s,baz=337,slow=21,SNR=20						
AAK				LR	LR	06 10 30.8	
	comp=Z,49nm,18.9s,baz=255,slow=29						
	9.3nm,0.3s						
AAK	**Ala-Archa**	**3.40**	**22**	⇓*i*P	**Pn**	**06 09 40.3**	**+2.1**
AAK				⇓*i*S	**Sn**	**06 10 21.9**	**+3.2**
AAK	**Ala-Archa**	**3.40**	**22**	⇑Pn	**Pb**	**06 09 42.7**	**-2.8**
	15nm,0.6s						
AAK				⇓Lg	Lg	06 10 30.2	
	133nm,0.8s						
KBK	**Karagaybulak**	**3.56**	**27**	P	**Pb**	**06 09 45.3**	**-2.9**
	SNR=11						
KBK	**Karagaybulak**	**3.56**	**27**	⇑*i*P	**Pn**	**06 09 42.5**	**+2.0**
KBK				⇑*i*S	**Sn**	**06 10 25.7**	**+2.9**
FRU1	**Bishkek**	**3.60**	**23**	⇓*e*P	**Pn**	**06 09 43.1**	**+2.2**
FRU1				⇓*i*S	**Sn**	**06 10 26.8**	**+3.3**
CHM	**Chimkent**	**3.68**	**321**	*e*P	**Pg**	**06 09 56.4**	**+0.9**
	80nm,0.2s						
CHM				*e*S	**Sg**	**06 10 42.7**	**-0.3**
	367nm,0.4s						
CHMS	**Chumysh**	**3.81**	**23**	⇓*e*P	**Pn**	**06 09 46.0**	**+2.3**
CHMS				⇓*i*S	**Sn**	**06 10 31.3**	**+2.8**
ULHL	**Ulahol**	**3.82**	**43**	P	**Pn**	**06 09 46.9**	**+2.9**
	SNR=11						
ULHL	**Ulahol**	**3.82**	**43**	⇑*e*P	**Pn**	**06 09 46.1**	**+2.1**
ULHL				⇑*i*S	**Sn**	**06 10 31.9**	**+2.9**
BOOM	**Boomskoye usch**	**3.84**	**38**	⇑*i*P	**Pn**	**06 09 46.6**	**+2.2**
BOOM				⇑*i*S	**Sn**	**06 10 32.5**	**+2.8**
KK31	**Karatay Array**	**3.96**	**336**	⇑Pn	**Pn**	**06 09 49.4**	**+3.6**
	3.6nm,0.2s,baz=150,slow=12,SNR=56						
KK31				⇓Sn	**Sb**	**06 10 37.4**	**-5.6**
	20nm,0.3s,baz=150,slow=24,SNR=5.8						
USP	**Ospenovka**	**3.98**	**19**	P	Pb	06 09 50.2	-5.2
	SNR=6.1						
USP	**Ospenovka**	**3.98**	**19**	⇑*i*P	**Pn**	**06 09 48.5**	**+2.3**
USP				⇑*i*S	**Sn**	**06 10 35.6**	**+2.6**
TKM2	**Tokmak 2**	**4.04**	**31**	⇓*i*P	**Pn**	**06 09 49.4**	**+2.3**
TKM2				⇓*i*S	**Sn**	**06 10 37.1**	**+2.6**
BRLS	**Borolday**	**4.14**	**329**	*e*P	**Pg**	**06 10 00.7**	**-3.6**
	10nm,0.3s						
BRLS				*e*S	**Sb**	**06 10 49.9**	**+1.8**
	21nm,0.3s						
KDJ	**Kajisay**	**4.27**	**51**	⇓*i*P	**Pn**	**06 09 52.6**	**+2.4**
KDJ				⇓*i*S	**Sn**	**06 10 43.1**	**+2.9**
KST	**Kastek**	**4.29**	**34**	Pg	**Pg**	**06 10 07.4**	**+0.2**
	7.4nm,0.4s						
KST				Lg	Lg	06 11 02.3	
	50nm,0.7s						
KST	**Kastek**	**4.29**	**34**	*e*P	**Pg**	**06 10 07.4**	**+0.2**
	7.4nm,0.4s						
KST				*e*S	**Sg**	**06 11 02.2**	**-0.5**
	50nm,0.7s						
DGS	**Degeres**	**4.38**	**30**	Pg	**Pg**	**06 10 08.3**	**-0.5**
	14nm,0.6s						
DGS				Lg	Lg	06 11 03.7	
	46nm,0.8s						
MTBS	**Maitube**	**4.57**	**36**	Pg	**Pg**	**06 10 12.5**	**0.0**
	12nm,0.6s						
MTBS				Lg	Lg	06 11 10.1	
	37nm,0.9s						
MTBS	**Maitube**	**4.57**	**36**	*e*P	**Pg**	**06 10 12.5**	**0.0**
	12nm,0.6s						
MTBS				*e*S	**Sg**	**06 11 10.1**	**-1.5**
	37nm,0.9s						
TNSS	**Tian-Shan**	**4.75**	**41**	Pg	**Pg**	**06 10 14.9**	**-1.0**
	4.4nm,0.6s						
TNSS				Lg	Lg	06 11 14.5	
	16nm,0.7s						
TNSS	**Tian-Shan**	**4.75**	**41**	*e*P	**Pg**	**06 10 14.9**	**-1.0**
	4.4nm,0.6s						
TNSS				*e*S	**Sg**	**06 11 14.5**	**-2.9**

	16nm,0.7s						
MDOK	Medeo	4.89	40	Pg	Pg	06 10 17.3	-1.4
	8.9nm,0.6s						
MDOK				Lg	Lg	06 11 18.6	
	40nm,0.9s						
KOTS	Kotyrbulak	4.97	40	Pg	Pg	06 10 19.3	-0.9
	10nm,0.4s						
KOTS				Lg	Lg	06 11 22.5	
	173nm,0.8s						
KOTS	Kotyrbulak	4.97	40	eP	Pg	06 10 19.3	-0.9
	10nm,0.4s						
KOTS				eS	Sg	06 11 22.5	-2.1
	173nm,0.8s						
KUU	Kurty	5.15	30	Pg	Pg	06 10 21.7	-1.8
	4.1nm,0.1s						
KUU				Lg	Lg	06 11 26.2	
	25nm,0.4s						
KUU	Kurty	5.15	30	eP	Pg	06 10 21.7	-1.8
	4.1nm,0.1s						
KUU				eS	Sg	06 11 26.2	-4.0
	25nm,0.4s						
SATY	Saty	5.55	48	Pg	Pg	06 10 29.6	-1.8
	8.6nm,0.8s						
SATY				Lg	Lg	06 11 39.8	
	48nm,1.0s						
KURS	Kuram	5.70	44	Pg	Pg	06 10 32.8	-1.3
	14nm,0.7s						
KURS				Lg	Lg	06 11 45.1	
	20nm,1.9s						
KPKS	Kokpek	5.97	47	Pg	Pg	06 10 36.9	-2.4
	0.3nm,0.1s						
KPKS				Lg	Lg	06 11 52.6	
	11nm,0.8s						
KPKS	Kokpek	5.97	47	eP	Pg	06 10 36.9	-2.4
	0.3nm,0.1s						
KPKS				eS	Sg	06 11 52.6	-3.9
	11nm,0.8s						
PDGK	Podgornoye	6.35	51	Pn	Pn	06 10 22.0	+3.2
	2.6nm,0.7s						
PDGK				Pg	Pg	06 10 43.1	-3.6
	6.9nm,0.8s						
PDGK				Lg	Lg	06 12 04.4	
	20nm,0.8s						
MKAR	Makanchi Array	10.08	41	Pn	Pn	06 11 13.6	+3.8
	baz=220,slow=13,SNR=6.6						
MKAR				Lg	Lg	06 14 07.9	
	0.1nm,0.3s,baz=232,slow=26,SNR=3.0						
AB31	Akbulak array	13.35	321	⇓Pn	Pn	06 11 56.4	+2.0
	0.8nm,0.5s,baz=132,slow=13,SNR=32						
AB31				⇑Sn	Sn	06 14 26.9	+4.1
	2.1nm,0.8s,baz=125,slow=25,SNR=7.7						
BVAR	Borovoye Array	13.62	354	Pn	Pn	06 11 59.2	+1.1
	baz=163,slow=11,SNR=4.4						
	0.3nm,0.4s						
AKTO	Aktyubinsk	15.06	321	Pn	P	06 12 19.8	-3.4
	1.5nm,0.5s,baz=128,slow=12,SNR=27						
AKTO				Sn	Sn	06 14 59.9	-4.7
	0.1nm,0.3s,baz=347,slow=13,SNR=4.3						
AKTO	Aktyubinsk	15.06	321	⇑Pn	P	06 12 22.5	-0.7
	3.8nm,0.7s						
ZALV	Zalesovo Beam	16.62	26	Pn	P	06 12 41.0	+0.7
	0.1nm,0.3s,baz=221,slow=11,SNR=6.6						
	2.2nm,0.6s						
ARTI	Arti	19.36	335	P	Pn	06 13 13.0	+1.3
	0.2nm,0.3s,baz=144,slow=6.0,SNR=3.2						
	1.1nm,0.4s						
BELG	Belogornoye	21.57	315	P	P	06 13 34.6	+0.2
	8.3nm,0.7s,baz=119,slow=10,SNR=3.8						
	8.3nm,0.7s						
SONM	Songino Array	25.57	60	P	P	06 14 13.1	-1.1
	0.6nm,0.5s,baz=265,slow=9.7,SNR=4.5						
	0.6nm,0.5s						
FINES	FINESS Array B	35.82	323	P	P	06 15 44.5	+0.3
	5.7nm,1.0s,baz=251,slow=5.8,SNR=3.5						
	5.7nm,1.0s						
ARCES	ARCESS Array B	38.93	336	P	P	06 16 10.9	+0.3
	5.0nm,1.1s,baz=104,slow=8.7,SNR=7.2						
	5.0nm,1.1s						
HFS	Hagfors	41.60	320	P	P	06 16 33.3	+0.5
	2.5nm,0.7s,baz=98,slow=9.4,SNR=9.2						
	2.5nm,0.7s						
GERES	GERESS Array B	42.38	303	P	P	06 16 40.3	+0.8
	0.4nm,0.7s,baz=55,slow=8.5,SNR=4.5						
	0.4nm,0.7s						
NOA	NORSAR Array B	42.86	321	P	P	06 16 43.6	+0.6
	1.5nm,0.9s,baz=68,slow=8.2,SNR=2.1						
	1.5nm,0.9s						
JCJ	Chichijima	58.05	80	LR	LR	06 45 15.4	
	comp=Z,36nm,18.4s,baz=134,slow=38						
TORD	Torodi Ar. Bea	67.17	268	P	P	06 19 38.2	-1.2
	0.2nm,0.3s,baz=54,slow=6.3,SNR=5.5						
	0.2nm,0.3s						
ILAR	Eielson Array	71.51	17	P	P	06 20 05.8	+0.2
	0.7nm,0.9s,baz=329,slow=6.9,SNR=6.2						
	0.7nm,0.9s						
YKA	Yellowknife Ar	78.17	3	P	P	06 20 44.7	+0.6
	0.3nm,0.6s,baz=345,slow=5.9,SNR=6.6						
	0.3nm,0.6s						

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*IDC **30** 06:16:52.0±1.3, 8°.48S×76°.27W, h138^{km}±14^{km}, mb3.8/13, mbtmp4.3/19, Error ellipse: s-maj=19.4km s-min=10.5km az=57.0*

*VAO **30** 06:16:51.2±0.6, 8°.34S×75°.90W, h100^{km}, mb4.6, Presumed earthquake*

*NEIC **30** 06:16:52.3±1.4, 8°.39S±0°.08×76°.2W±0°.1, h128^{km}±6^{km}, mb4.6/129, Error ellipse: s-maj=19.4km s-min=10.4km az=67.0*

ISC 30 06:16:51.3±0.4**, 8°.38S**±0°.05×**76°.18W**±0°.06**, h128**^{km}**, n179,** σ**1^s.26**/133**, mb4.5**/67**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	2.52	299	P	Pn	06 17 33.0	+0.9
	645nm,0.4s,baz=75,slow=3.8,SNR=869						
ATAH				S	Sn	06 18 01.9	-1.5
	674nm,0.8s,baz=133,slow=15,SNR=7.5						
NNA	Nana	3.65	190	P	Pn	06 17 47.1	+0.8
	67nm,0.3s,baz=360,slow=8.0,SNR=71						
NNA				S	Sn	06 18 27.1	-1.9
	234nm,0.3s,baz=337,slow=12,SNR=3.8						
NNA	Nana	3.65	190		Pn	06 17 46.7	+0.4
NNA	Nana	3.65	190	P	Pn	06 17 46.8	+0.4
NNA				S	Sn	06 18 27.0	-2.0
MCRA	Macar, Loja	5.47	316	P	Pn	06 18 07.8	-3.0
MCRA				S	Sn	06 19 05.6	-7.2
COHC	Cochancay	6.62	332	Pn	Pn	06 18 26.3	+0.1
COHC	Cochancay	6.62	332	P	Pn	06 18 25.7	-0.5
PPLP	Puerto Lpez	8.19	326	P	Pn	06 18 45.3	-2.1
PTLC	Puerto Leguiza	8.61	9	P	Pn	06 18 47.6	-5.4
OTAV	Otavalo	8.86	345	Pn	Pn	06 18 57.7	+1.0
OTAV	Otavalo	8.86	345	eP	Pn	06 18 57.3	+0.5
OTAV	Otavalo	8.86	345	P	Pn	06 18 58.5	+1.8
	21nm,0.7s						
BONI	La Bonita	8.88	351	P	Pn	06 18 56.5	-0.3
	1µm33nm,0.5s						
CUSE	Cuicocha Este	8.91	345	P	Pn	06 18 59.9	+2.5
PAC1	Pacto, Paraso	8.97	343	P	Pn	06 18 59.9	+1.8
TULM	Tulcn-Chalpat	9.18	350	P	Pn	06 19 01.1	0.0
	588nm65nm,0.7s						
CMBC	Cumbal	9.40	350	P	Pn	06 19 04.5	+0.4
GCUF	Volcan Galeras	9.61	353	P	Pn	06 19 06.8	-0.2
	31nm,0.5s						
FLOC	Florencia	9.91	3	P	Pn	06 19 09.1	-1.4
	608nm32nm,0.7s						
CRUC	La Cruz	9.91	355	P	Pn	06 19 10.8	0.0
BBAC	Balboa, Cauca	10.39	354	P	Pn	06 19 17.6	+0.5
	479nm44nm,0.8s						
GARC	Garzon, Huila	10.52	4	P	Pn	06 19 17.4	-1.5
MACC	Macarena, Meta	10.71	13	P	Pn	06 19 19.1	-2.2
	605nm69nm,0.7s						
POPC	Popayan, Colom	10.86	357	P	Pn	06 19 23.4	0.0
	12nm,0.7s						
BETC	Betania	11.01	4	P	Pn	06 19 25.7	+0.4
LPAZ	La Paz	11.11	136	P	Pn	06 19 27.8	+0.6
	4.1nm,0.6s,baz=341,slow=8.8,SNR=25						
LPAZ	La Paz	11.11	136	eP	Pn	06 19 26.1	-1.1
URMC	La Uribe, Meta	11.69	9	P	Pn	06 19 33.1	-1.2
	531nm38nm,0.9s						
PB16	IPOC Station P	11.83	147	Pn	Pn	06 19 36.9	+0.3
PRAC	Prado	12.08	6	P	Pn	06 19 36.2	-3.2
	18nm,1.2s						
ORTC	Ortega, Tolima	12.24	4	P	Pn	06 19 40.8	-0.7
	20nm,1.0s						
SGC2	Sao Gabriel da	12.28	49	P	Pn	06 19 38.1	-3.9
	16nm,0.4s						
YOTC	Yotoco, Valle	12.28	359	P	Pn	06 19 40.8	-1.3
	12nm,1.1s						
TEFE	Tefe	12.46	68	eP	Pn	06 19 41.6	-2.6
VILC	Villavicencio,	12.65	11	P	Pn	06 19 46.7	-0.3
	1µm147nm,0.7s						
PB11	IPOC Station P	12.96	152	Pn	Pn	06 19 51.2	+0.3
GO01	Chusmiza	13.10	150	Pn	Pn	06 19 53.6	+0.5
CHIC	Chingaza	13.15	11	P	Pn	06 19 53.7	0.0
	18nm,1.2s						
ROSC	El Rosal	13.26	8	P	Pn	06 19 58.1	+3.0
	5.3nm,0.4s,baz=98,slow=20,SNR=4.3						
ROSC	El Rosal	13.26	8	Pn	Pn	06 19 55.0	-0.1
PB08	IPOC Station P	13.52	151	Pn	Pn	06 19 57.9	-0.5
SPBC	San Pablo de B	14.10	9	P	Pn	06 20 06.6	+1.1
	12nm,0.7s						
CBOC	Ciudad Bolivar	14.15	1	P	Pn	06 20 09.2	+2.9
	45nm,0.8s						
RUSC	La Rusia	14.51	12	P	Pn	06 20 11.1	0.0
	20nm,0.7s						
PB09	IPOC Station P	14.92	154	Pn	Pn	06 20 15.2	-0.7
PTBC	PUERTO BERRIO,	14.92	7	P	Pn	06 20 16.5	+0.7
	567nm53nm,1.0s						
DBBC	Dabeiba	15.29	360	P	P	06 20 24.3	+1.8
PAMC	Pamplona, Colo	15.99	13	P	Pn	06 20 31.1	+1.5
	288nm41nm,0.7s						
UREC	San Jos de Ur	16.04	2	P	Pn	06 20 30.4	+0.7
VILB	Vilhena	16.34	108		Pn	06 20 33.5	0.0
VILB	Vilhena	16.34	108	eP	Pn	06 20 33.0	-0.5
SIV	San Ignacio	16.58	119	P	Pn	06 20 35.2	-1.2
	20nm,0.7s,baz=298,slow=10,SNR=74						
OCAC	Ocana	16.75	10	P	Pn	06 20 38.7	+0.1
	779nm118nm,0.7s						
SDV	Santo Domingo	18.02	18	P	P	06 20 52.4	-0.3
	5.5nm,0.4s,baz=183,slow=9.7,SNR=11						
SDV				S	S	06 23 58.8	-14
	3.0nm,0.3s,baz=350,slow=19,SNR=2.7						
SDV	Santo Domingo	18.02	18	eP	P	06 20 53.3	+0.7
SDV	Santo Domingo	18.02	18	P	P	06 20 53.8	+1.2
	13nm,0.9s						
PTLB	Pontes e Lacer	18.08	114		P	06 20 53.0	-0.1
PTLB	Pontes e Lacer	18.08	114	eP	P	06 20 52.3	-0.8
SJCC	San Jacinto, C	18.18	3	P	P	06 20 55.8	+1.5
ARGC	Ariguani, Magd	18.22	6	P	P	06 20 55.5	+0.9
	24nm,0.7s						
BRU2	Volcan	18.25	339		Pn	06 20 57.6	+0.9
BRU2				IAmb	IAmb	06 21 00.5	
	comp=Z,28nm,0.8s						
BOAV	Boa Vista	18.93	56		P	06 21 03.5	+1.1
BOAV	Boa Vista	18.93	56	eP	P	06 21 02.6	+0.2
BOAV	Boa Vista	18.93	56	P	P	06 21 02.7	+0.3
PDRB	Porto dos Gac	19.42	101	eP	P	06 21 07.1	-0.7
CLDB	Colider	20.24	99	eP	P	06 21 15.7	-0.9
JTS	Las Juntas de	20.50	335	P	P	06 21 20.4	+1.0
	comp=Z,4.3nm,0.6s,baz=128,slow=6.5,SNR=4.3						
	comp=Z,4.3nm,0.6s						
NPGB	Novo Progresso	20.67	88	eP	P	06 21 19.7	-1.6
ITTB	Itaituba	20.70	80	eP	P	06 21 21.0	-0.5
SALV	Santo Antonio	21.36	112	eP	P	06 21 27.7	-0.9
MURT	Porto Murtinho	22.23	128	eP	P	06 21 36.8	-0.9
BDQN	Bodoquena, MS	22.28	125	eP	P	06 21 37.4	-0.8
PP1B	Ponte de Pedra	22.66	116	eP	P	06 21 42.5	+0.5
BOAB	BOACO BROADBA	22.74	335		P	06 21 43.8	+1.1
BOAB				IAmb	IAmb	06 22 20.2	
	comp=Z,27nm,1.2s						
AQDB	Aquidauana	23.16	123		P	06 21 46.8	+0.2
AQDB	Aquidauana	23.16	123	eP	P	06 21 46.2	-0.4
SNDB	Serra Nova Dou	24.74	100	eP	P	06 22 01.7	+0.6
C2SB	Chapadao do Su	24.89	117	eP	P	06 22 04.6	+2.2
ARAG	Araguaiana, MT	24.90	109	eP	P	06 22 02.9	+0.4
AMBA	Amambai (Brazi	24.95	128	eP	P	06 22 03.2	+0.2
CPUP	Villa Florida	25.28	137	P	P	06 22 06.3	+0.5
	comp=Z,0.7nm,0.7s,baz=334,slow=18,SNR=5.7						
	comp=Z,0.7nm,0.7s						
CPUP	Villa Florida	25.28	137		P	06 22 06.4	+0.5
MTO3	Montecristo	26.14	330		P	06 22 14.7	+0.8
MTO3				IAmb	IAmb	06 22 16.3	
	comp=Z,9.1nm,0.9s						
PRPB	Parauapebas	26.24	87	eP	P	06 22 13.8	-0.9
ITRB	Iturama	27.41	117	eP	P	06 22 26.6	+1.4
DR12	Loma Pena Alta	27.82	14		P	06 22 29.5	+0.9
PTGB	Pitanga	28.17	128	eP	P	06 22 32.1	+0.2
SMTB	Santa Maria do	28.27	93	eP	P	06 22 32.9	+0.1
BDFB	Brasilia	28.45	107	P	P	06 22 35.3	+0.7
	comp=Z,2.5nm,0.6s,baz=278,slow=10,SNR=9.4						
	comp=Z,2.5nm,0.6s						
BDFB	Brasilia	28.45	107	P	P	06 22 34.8	+0.3
BDFB				IAmb	IAmb	06 22 43.2	
	comp=Z,8.4nm,1.1s						
IPMB	Ipameri, GO	28.81	112	eP	P	06 22 37.4	-0.2
TEIG	Tepich	30.82	337		P	06 22 56.3	+1.1
TEIG				IAmb	IAmb	06 22 56.8	
	comp=Z,12nm,0.7s						
SDBA	SAO DESIDERIO	31.01	100	eP	P	06 22 57.1	+0.1
CAMR	Camarioca	31.66	351		P	06 23 04.4	+1.9
CAMR				IAmb	IAmb	06 23 05.5	
	comp=Z,155nm,1.3s						
JANB	Januaria	31.87	105	eP	P	06 23 04.2	-0.4
DIAM	Diamantina, MG	33.07	111	eP	P	06 23 16.4	+1.1
RIB01	Linhares ES	36.32	111	eP	P	06 23 44.1	+1.1
LRAL	Lakeview Retre	42.45	346		P	06 24 33.5	-0.1
LRAL				IAmb	IAmb	06 24 37.7	
	comp=Z,12nm,1.3s						
X58A	Rowland	42.80	356		P	06 24 37.4	+1.1
Y49A	Blount Mountai	43.11	348		P	06 24 38.8	-0.1
NATX	Nacogdoches	43.65	337		P	06 24 44.7	+1.4
DRIO	Del Rio	44.35	329	IAmb	IAmb	06 24 50.4	
	comp=Z,12nm,0.8s						
V48A	Smith Brothers	45.02	348	IAmb	IAmb	06 24 53.9	
	comp=Z,13nm,0.7s						
T59A	Double "B" Far	45.13	358	IAmb	IAmb	06 24 56.4	
	comp=Z,25nm,1.3s						
UALR	University of	45.56	341	IAmb	IAmb	06 24 58.9	
	comp=Z,12nm,0.8s						
TXAR	Lajitas Array	45.90	326	P	P	06 25 02.0	+0.7
	comp=Z,1.8nm,0.6s,baz=150,slow=8.4,SNR=26						
TXAR				PcP	PcP	06 26 36.6	+0.3
	comp=Z,0.9nm,0.8s,baz=146,slow=4.0,SNR=5.4						
	comp=Z,1.8nm,0.6s						
TXAR	Lajitas Array	45.90	326		P	06 25 01.6	+0.3
PLPT	Palo Pinto	46.08	334	IAmb	IAmb	06 25 03.8	
	comp=Z,8.4nm,0.8s						
LCAR	Lake Charles	46.41	343	IAmb	IAmb	06 25 05.0	
	comp=Z,8.2nm,0.9s						
ABTX	Abilene, Hawle	46.51	332	IAmb	IAmb	06 25 07.5	
	comp=Z,13nm,0.8s						
FCAR	Ozark Folk Cen	46.52	342	IAmb	IAmb	06 25 05.8	
	comp=Z,9.2nm,0.7s						
WTFS	Witchita Falls	46.95	334	IAmb	IAmb	06 25 11.5	
	comp=Z,24nm,1.4s						
MNHN	Monahans	46.99	328	IAmb	IAmb	06 25 11.1	
	comp=Z,8.7nm,0.6s						
APMT	Aspermont	47.31	332	IAmb	IAmb	06 25 13.9	
	comp=Z,13nm,0.8s						
S44A	Carbondale	47.44	346	IAmb	IAmb	06 25 12.6	
	comp=Z,16nm,0.9s						
SIUC	Southern Illin	47.45	346	IAmb	IAmb	06 25 12.7	
	comp=Z,15nm,0.9s						
HHAR	Hobbs	47.46	340	IAmb	IAmb	06 25 13.8	
	comp=Z,7.6nm,0.9s						
TUL3	Leonard	47.77	338	P	P	06 25 15.7	+0.2
TUL3				IAmb	IAmb	06 25 16.7	
	comp=Z,15nm,0.9s						
DKNS	Dickens	47.97	332	IAmb	IAmb	06 25 19.4	
	comp=Z,15nm,1.1s						
CCM	Cathedral Cave	48.29	344		P	06 25 19.1	-0.5
CCM				IAmb	IAmb	06 25 20.1	
	comp=Z,10nm,0.9s						
R40A	Maddies Statio	48.80	343	IAmb	IAmb	06 25 23.1	
	comp=Z,10nm,1.1s						
TASM	ASL Pad, Albuq	51.73	328	IAmb	IAmb	06 25 47.5	
	comp=Z,6.3nm,1.3s						
TASM	ASL Pad, Albuq	51.73	328	IAmb	IAmb	06 25 47.4	
	comp=Z,6.1nm,1.3s						
T25A	Trinidad	52.44	332	IAmb	IAmb	06 25 52.8	
	comp=Z,9.4nm,0.9s						
214A	Organ Pipe Nat	53.23	321	IAmb	IAmb	06 25 58.8	
	comp=Z,10nm,1.2s						
SDCO	Great Sand Dun	53.44	331	IAmb	IAmb	06 26 00.1	
	comp=Z,8.5nm,0.8s						
WUAZ	Wupatki	54.84	325	IAmb	IAmb	06 26 10.6	
	comp=Z,9.1nm,1.3s						
ECSD	EROS Data Cent	55.09	342	IAmb	IAmb	06 26 09.9	
	comp=Z,5.6nm,0.7s						
PV01	Paradox Valley	55.26	329	IAmb	IAmb	06 26 13.2	
	comp=Z,4.5nm,0.8s						
PV13	Radium Mtn., P	55.41	329	IAmb	IAmb	06 26 14.1	
	comp=Z,7.8nm,0.8s						
PV05	Paradox Valley	55.49	329	IAmb	IAmb	06 26 14.4	
	comp=Z,7.5nm,1.1s						
PV03	Paradox Valley	55.49	329	IAmb	IAmb	06 26 15.2	
	comp=Z,9.5nm,1.4s						
PV18	Skein Mesa, Pa	55.52	329	IAmb	IAmb	06 26 14.7	
	comp=Z,11nm,1.0s						
IRM	Iron Mountain	56.15	321	IAmb	IAmb	06 26 19.9	
	comp=Z,7.9nm,0.9s						
KNB	Kanab	56.73	325	IAmb	IAmb	06 26 24.2	
	comp=Z,7.2nm,0.9s						
Q16A	Castle Valley	57.20	328	IAmb	IAmb	06 26 27.2	
	comp=Z,4.1nm,1.0s						
P18A	Preston Nutter	57.25	329	IAmb	IAmb	06 26 27.2	
	comp=Z,4.7nm,1.1s						
P17A	Butcher Ranch,	57.38	329	IAmb	IAmb	06 26 27.9	
	comp=Z,4.9nm,0.9s						
BSUT	Blindstream Ca	58.19	329	IAmb	IAmb	06 26 34.0	
	comp=Z,3.9nm,0.9s						
PSUT	Pine Spring	58.38	326	IAmb	IAmb	06 26 35.0	
	comp=Z,3.6nm,0.8s						
SPR3	Spring Creek 3	58.97	326	IAmb	IAmb	06 26 38.6	
	comp=Z,2.9nm,0.7s						
DUG	Dugway, Tooele	59.00	328	IAmb	IAmb	06 26 39.5	
	comp=Z,5.1nm,0.8s						
PDAR	Pinedale Array	59.30	332	P	P	06 26 39.4	-0.5
	comp=Z,1.9nm,1.0s,baz=140,slow=7.7,SNR=8.2						
PDAR				PcP	sP	06 27 24.9	-0.2
	comp=Z,0.7nm,0.6s,baz=123,slow=4.7,SNR=4.9						
	comp=Z,1.9nm,1.0s						
DRLN	Deer Lake	59.68	14	P	P	06 26 42.7	+0.6
HVU	Hansel Valley	60.13	329	P	P	06 26 45.0	-0.5
HVU				IAmb	IAmb	06 26 46.5	
	comp=Z,4.3nm,0.9s						
ULM	Lac du Bonnet	60.85	346	P	P	06 26 49.4	-0.6
	comp=Z,11nm,0.6s,baz=147,slow=6.8,SNR=15						
	comp=Z,11nm,0.6s						
ULM	Lac du Bonnet	60.85	346		P	06 26 49.1	-0.9
NVAR	Mina Array Bea	60.87	323	P	P	06 26 52.0	+1.3
	comp=Z,1.9nm,0.7s,baz=118,slow=7.2,SNR=7.6						
	comp=Z,1.9nm,0.7s						
YNE	Yellowstone No	61.25	333	P	P	06 26 53.5	+0.4
YNE				IAmb	IAmb	06 26 54.2	
	comp=Z,4.8nm,1.0s						
PAHR	Pah Rah Range	62.34	323	IAmb	IAmb	06 27 02.0	
	comp=Z,5.6nm,1.0s						
MFID	Camas Ranch	62.87	329	IAmb	IAmb	06 27 05.6	
	comp=Z,11nm,0.9s						
SCHQ	Schefferville	63.46	6	P	P	06 27 07.2	-0.1
	comp=Z,5.1nm,0.7s,baz=211,slow=7.2,SNR=7.0						
	comp=Z,5.1nm,0.7s						
ORV	Oroville	63.51	322	IAmb	IAmb	06 27 10.1	
	comp=Z,11nm,1.1s						
WVOR	Wild Horse Val	63.70	326	IAmb	IAmb	06 27 10.6	
	comp=Z,8.5nm,1.2s						
MSO	Missoula	64.42	332	IAmb	IAmb	06 27 15.5	
	comp=Z,10nm,1.2s						
F10A	Beach Ranch, E	65.38	330	IAmb	IAmb	06 27 21.8	
	comp=Z,3.6nm,0.8s						
PINE	Pine Mountain	65.86	326	IAmb	IAmb	06 27 26.7	
	comp=Z,7.9nm,0.9s						
FCC	Fort Churchill	68.46	350	IAmb	IAmb	06 27 39.6	
	comp=Z,16nm,1.2s						
EDM	Edmonton	69.00	337	IAmb	IAmb	06 27 43.2	
	comp=Z,14nm,1.2s						
DBIC	Dimbokro	72.66	80	P	P	06 28 06.1	+0.5
	comp=Z,2.0nm,0.8s,baz=290,slow=12,SNR=1.4						
	comp=Z,2.0nm,0.8s						
BELA	Belgrano 2	72.66	172	P	P	06 28 05.7	+1.2
BLKN	Baker Lake	74.02	351	IAmb	IAmb	06 28 12.7	
	comp=Z,7.7nm,0.9s						
YKA	Yellowknife Ar	76.61	343	P	P	06 28 26.7	-0.7
	comp=Z,1.7nm,0.9s,baz=146,slow=5.3,SNR=16						
	comp=Z,1.7nm,0.9s						
MD01	Midelt array s	79.21	54	P	P	06 28 43.0	+0.3
TORD	Torodi Ar. Bea	80.22	75	P	P	06 28 48.6	+0.3
	comp=Z,1.3nm,0.8s,baz=288,slow=4.9,SNR=7.1						
	comp=Z,1.3nm,0.8s						
POIN	Pond Inlet	80.92	359	IAmb	IAmb	06 28 51.7	
	comp=Z,7.9nm,1.1s						
ESDC	Sonseca Array	81.88	48	P	P	06 28 57.9	+1.2
	comp=Z,0.5nm,0.6s,baz=246,slow=4.3,SNR=5.1						
	comp=Z,0.5nm,0.6s						
SUMG	Summit	84.39	11		P	06 29 09.6	+0.4
A36M	Sachs Harbour	86.33	346	IAmb	IAmb	06 29 18.5	
	comp=Z,6.5nm,0.8s						
BCAR	Beaver Creek A	86.72	335	P	P	06 29 21.5	+1.0
F28M	Old Crow	88.04	340	IAmb	IAmb	06 29 27.7	
	comp=Z,3.3nm,0.8s						
ILAR	Eielson Array	89.47	336	P	P	06 29 33.0	-0.5
	comp=Z,1.7nm,1.0s,baz=144,slow=3.6,SNR=9.3						
	comp=Z,1.7nm,1.0s						
BMAR	Burnt Mountain	89.60	339	P	P	06 29 34.8	+0.7
STKA	Stephens Creek	126.11	220	PKP	PKPdf	06 35 37.1	-2.0
	comp=Z,1.1nm,0.6s,baz=156,slow=3.2,SNR=3.2						
ZALV	Zalesovo Beam	132.05	15	PKP	PKPdf	06 35 49.0	-0.7
	comp=Z,0.8nm,0.4s,baz=321,slow=2.1,SNR=3.8						
ASAR	Alice Springs	136.66	222	PKP	PKPdf	06 35 59.3	0.0
	comp=Z,0.9nm,0.6s,baz=131,slow=2.0,SNR=13						
MKAR	Makanchi Array	137.53	22	PKP	PKPdf	06 36 00.1	-0.1
	comp=Z,0.6nm,0.7s,baz=36,slow=4.5,SNR=4.2						
WRA	Warramunga Arr	138.84	227	PKP	PKPdf	06 36 01.9	-1.5
	comp=Z,0.4nm,0.6s,baz=118,slow=2.4,SNR=7.3						
PZH	PanZhiHua	161.87	6	PKP	PKPdf	06 36 37.5	-0.7

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*CATAC **30** 06:19:54.6±0.9, 13°N±6°×8°9W±°, h29^{km}±5^{km}, M2.6/6, MLv2.6/6, Error ellipse: s-maj=14.0km s-min=10.8km az=40.7, confirmed*

*GCG **30** 06:19:55.8±0.3, 13°.10N×89°.30W, h58^{km}±6^{km}, MD3.7*

*SNET **30** 06:19:57.3±2.1, 13°.16N×89°.16W, h35^{km}, ML2.6*

ISC 30 06:19:55.5±2.7**, 13°.1N**±0°.2×**89°.23W**±0°.08**, h55**^{km}**, n21,** σ**0^s.72**/24**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.44	348	eP	Pn	06 20 06.3	-0.2
LFRS	El Faro	0.59	16	eP	Pn	06 20 06.1	-2.1
LOMA	Loma Larga	0.59	5	P	Pn	06 20 06.9	-1.4
JAYA	Jayaque - finc	0.64	340	eP	Pn	06 20 08.5	-0.4
JAYA				eS	Sn	06 20 18.8	+0.3
JAYA	Jayaque - finc	0.64	340	i P	Pn	06 20 08.5	-0.4
JAYA				eS	Sn	06 20 18.1	-0.4
JAYA	Jayaque - finc	0.64	340	P	Pn	06 20 08.4	-0.4
TECO	Alcaldia de Te	0.65	42	P	Pn	06 20 07.8	-1.0
UEES	Universidad Ev	0.66	359	P	Pn	06 20 08.8	-0.3
UEES	Universidad Ev	0.66	359	S	Sn	06 20 19.6	+0.7
PMON	Piamonte	0.66	352	P	Pn	06 20 08.9	-0.2
PMON	Piamonte	0.66	352	S	Sn	06 20 19.4	+0.4
BOQS	Boqueron	0.68	355	eP	Pn	06 20 09.3	-0.1
PAVA	Las Pavas	0.71	23	P	Pn	06 20 10.1	+0.3
PAVA	Las Pavas	0.71	23	S	Sn	06 20 20.8	+0.6
CEDA	San Andres	0.77	348	eS	Sn	06 20 22.0	+0.8
NUBE	Las Nubes	1.00	327	i P	Pn	06 20 13.3	-0.3
NUBE				i S	Sn	06 20 27.1	+0.3
NUBE	Las Nubes	1.00	327	P	Pn	06 20 13.2	-0.3
LCND	La Caada	1.32	79	eP	Pn	06 20 18.0	+0.3
MTO3	Montecristo	1.35	354	eP	Pn	06 20 18.5	+0.3
MTO3	Montecristo	1.35	354	P	Pn	06 20 18.4	+0.2
MTO3	Montecristo	1.35	354	S	Sn	06 20 35.3	+0.2

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*IDC **30** 06:22:40.4±0.8, 22°.23N×143°.56E, h116^{km}±6^{km}, mb3.7/15, mbtmp4.1/17, Error ellipse: s-maj=19.5km s-min=13.0km az=77.0*

*NEIC **30** 06:22:42.4±1.2, 22°.26N±0°.09×143°.5E±0°.2, h121^{km}±6^{km}, mb4.3/35, Error ellipse: s-maj=20.9km s-min=13.2km az=85.0*

*JMA **30** 06:22:42.3±0.4, 22°N±2°×14°4E±°, h136^{km}, IOTO ISLANDS REGION*

ISC 30 06:22:41.5±0.5**, 22°.25N**±0°.06×**143°.5E**±0°.1**, h121**^{km}**, n77,** σ**1^s.02**/84**, mb4.2**/33**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	4.53	344	eP	Pn	06 23 47.7	-0.5
JHH2				eS	Sn	06 24 39.4	-0.5
CBIJ	Chichi jima	4.97	346	eP	Pn	06 23 54.1	0.0
CBIJ				eS	Sn	06 24 49.0	-1.5
JCJ	Chichijima	4.97	346	P	Pn	06 23 42.5	-12
	102nm,0.3s,baz=109,slow=24,SNR=28						
JCJ				S	Sn	06 24 36.8	-14
	133nm,0.4s,baz=293,slow=22,SNR=11						
JCJ	Chichijima	4.97	346	Pn	Pn	06 23 54.3	+0.3
BSO4	Boso 4	12.99	348	eP	Pn	06 25 40.1	-1.3
JOD2	Odawara 2	13.53	344	eP	Pn	06 25 47.3	-1.3

JAO	Obara	14.08	338	eP	Pn	06 25 54.7	-0.9
INU	Inuyama	14.23	338	Pn	Pn	06 25 57.5	0.0
JRY	Ryogami san	14.29	345	eP	Pn	06 25 56.4	-1.9
JGF	Kuroka	14.35	339	Pn	Pn	06 25 58.4	-0.7
JAG	Ashikaga	14.56	347	eP	Pn	06 25 58.6	-3.0
MJAR	Matsushiro Arr	14.97	343	P	Pn	06 26 05.7	-1.1
	8.0nm,1.0s,baz=164,slow=11,SNR=5.6						
MJAR	Matsushiro Arr	14.97	343	P	P	06 26 10.4	+1.1
JNU	Nakatsue	15.56	317	P	Pn	06 26 13.5	-0.8
	10nm,1.0s,baz=111,slow=10,SNR=4.0						
JSD	Sado	16.37	345	P	Pn	06 26 22.1	-2.0
JSD				IAmb	IAmb	06 26 49.5	
	comp=Z,11nm,1.0s						
KSRS	Korea Array	20.27	322	P	P	06 27 08.1	+0.7
	comp=Z,2.5nm,0.7s,baz=146,slow=9.1,SNR=9.8						
	comp=Z,2.5nm,0.7s						
USRK	Ussuriysk Ar.	23.87	339	P	P	06 27 46.8	+3.1
	comp=Z,7.0nm,0.7s,baz=104,slow=9.5,SNR=8.5						
HILR	Hailar Array B	33.09	331	P	P	06 29 06.1	+0.4
	comp=Z,1.3nm,0.4s,baz=132,slow=8.2,SNR=0.9						
	comp=Z,1.3nm,0.4s						
COEN	Coen	35.99	181	P	P	06 29 31.1	+0.2
COEN				IAmb	IAmb	06 30 13.4	
	comp=Z,7.6nm,1.4s						
SONM	Songino Array	39.12	320	P	P	06 29 58.2	+1.0
	comp=Z,0.5nm,0.4s,baz=123,slow=10,SNR=2.6						
	comp=Z,0.5nm,0.4s						
SONM	Songino Array	39.12	320	P	P	06 29 57.7	+0.5
KNRA	Kununurra	40.38	202	P	P	06 30 07.2	-0.5
KNRA				IAmb	IAmb	06 30 27.6	
	comp=Z,8.0nm,1.1s						
CTAO	Charters Tower	42.17	176	P	P	06 30 22.5	+0.2
CTAO				IAmb	IAmb	06 30 29.4	
	comp=Z,10nm,1.2s						
WB0	Warramunga Arr	42.71	193	P	P	06 30 26.0	-0.6
WB0				IAmb	IAmb	06 31 01.7	
	comp=Z,7.1nm,1.3s						
WB2	Warramunga Arr	42.89	193	P	P	06 30 27.6	-0.5
WRA	Warramunga Arr	42.89	193	P	P	06 30 27.4	-0.8
	comp=Z,1.1nm,0.6s,baz=7.6,slow=8.0,SNR=12						
WRA				PcP	PcP	06 32 14.9	-2.0
	comp=Z,0.5nm,0.5s,baz=1.6,slow=3.3,SNR=5.3						
	comp=Z,1.1nm,0.6s						
WRA	Warramunga Arr	42.89	193	P	P	06 30 27.1	-1.0
FITZ	Fitzroy Crossi	43.76	205	P	P	06 30 34.9	-0.2
AS31	Alice Springs	46.59	192	P	P	06 30 57.3	-0.2
ASAR	Alice Springs	46.59	192	P	P	06 30 56.3	-1.2
	comp=Z,0.5nm,0.4s,baz=11,slow=8.4,SNR=16						
ASAR				PcP	PcP	06 32 29.0	-0.7
	comp=Z,0.4nm,0.6s,baz=25,slow=3.3,SNR=5.5						
	comp=Z,0.5nm,0.4s						
ASAR	Alice Springs	46.59	192	P	P	06 30 57.1	-0.4
ASAR				PcP	PcP	06 32 29.2	-0.5
GSI	Gunungsitoli	49.28	251	P	P	06 31 18.7	+0.3
MKAR	Makanchi Array	54.56	312	P	P	06 31 57.1	0.0
	comp=Z,0.5nm,0.5s,baz=89,slow=8.6,SNR=7.9						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	54.56	312	P	P	06 31 57.4	+0.3
MORW	Morawa	57.49	209	P	P	06 32 18.4	+0.4
G19K	Purcell Mounta	57.60	24	P	P	06 32 19.6	+1.2
G19K				IAmb	IAmb	06 32 45.3	
	comp=Z,7.6nm,1.5s						
D20K	Etivluk River	58.64	22	P	P	06 32 26.9	+1.3
B20K	Meade River	58.92	20	P	P	06 32 28.8	+1.3
B20K				IAmb	IAmb	06 32 46.7	
	comp=Z,5.9nm,1.4s						
BOOM	Boomskoye usch	59.03	307	P	P	06 32 29.4	+0.5
BOOM				IAmb	IAmb	06 33 03.1	
	comp=Z,3.1nm,1.1s						
D22K	Ayikyak River	60.05	22	P	P	06 32 36.5	+1.2
C23K	Itkillik River	61.02	21	P	P	06 32 43.3	+1.5
C23K				IAmb	IAmb	06 33 17.5	
	comp=Z,2.8nm,0.8s						
ILAR	Eielson Array	61.40	27	P	P	06 32 43.1	-1.4
	comp=Z,0.5nm,0.7s,baz=260,slow=5.4,SNR=6.7						
	comp=Z,0.5nm,0.7s						
D25K	Kavik River	62.35	22	P	P	06 32 52.0	+1.2
D25K				IAmb	IAmb	06 33 26.4	
	comp=Z,2.8nm,0.8s						
BVAR	Borovoye Array	62.46	319	P	P	06 32 51.8	0.0
	comp=Z,1.8nm,0.5s,baz=82,slow=8.6,SNR=10						
BVAR				pP	pP	06 33 19.6	-0.6
	comp=Z,1.7nm,0.5s,baz=90,slow=8.1,SNR=4.1						
	comp=Z,1.8nm,0.5s						
KK31	Karatay Array	62.96	308	P	P	06 32 55.5	+0.2
KK31				IAmb	IAmb	06 32 56.6	
	comp=Z,1.8nm,0.6s						
KKAR	Karatay Array	62.96	308	P	P	06 32 55.6	+0.3
BCAR	Beaver Creek A	63.47	29	P	P	06 32 59.0	+0.6
D27M	Malcolm River	64.25	23	P	P	06 33 05.0	+1.6
D27M				IAmb	IAmb	06 33 08.6	
	comp=Z,3.7nm,1.4s						
M29M	Somme Creek	64.98	30	P	P	06 33 09.2	+0.8
AB31	Akbulak array	69.37	316	P	P	06 33 35.5	-0.6
ABKAR	Akbulak array	69.37	316	P	P	06 33 35.5	-0.6
YKAW3	Yellowknife Wh	75.79	28	P	P	06 34 14.1	+0.2
YKAW3				IAmb	IAmb	06 34 14.2	
	comp=Z,7.0nm,1.5s						
YKA	Yellowknife Ar	75.82	28	P	P	06 34 13.6	-0.4
	comp=Z,0.5nm,0.5s,baz=295,slow=6.5,SNR=14						
YKA				pP	pP	06 34 42.3	-1.0
	comp=Z,0.1nm,0.4s,baz=275,slow=9.5,SNR=1.9						
	comp=Z,0.5nm,0.5s						
LTY	Liberty	77.77	44	P	P	06 34 25.9	+0.5
WIFE	Three Sisters-	78.07	47	P	P	06 34 27.9	+0.7
ARCES	ARCESS Array B	78.50	342	P	P	06 34 28.4	-0.5
	comp=Z,5.7nm,1.0s,baz=61,slow=6.4,SNR=8.4						
	comp=Z,5.7nm,1.0s						
J05D	Fort Rock, OR	78.73	48	P	P	06 34 31.8	+0.9
J05D				IAmb	IAmb	06 34 32.1	
	comp=Z,10nm,1.5s						
PINE	Pine Mountain	78.75	47	P	P	06 34 31.7	+0.6
PINE				IAmb	IAmb	06 34 33.2	
	comp=Z,3.6nm,0.8s						
TULEG	Thule	79.47	7	P	P	06 34 34.5	+0.4
TULEG				IAmb	IAmb	06 34 35.5	
	comp=Z,6.4nm,1.2s						
NEW	Newport	79.65	42	P	P	06 34 36.3	+0.6
BMO	Blue Mountains	80.81	45	P	P	06 34 42.6	+0.6
CMB	Columbia Colle	81.17	53	P	P	06 34 44.4	+0.4
CMB				IAmb	IAmb	06 34 45.0	
	comp=Z,2.3nm,0.6s						
POIN	Pond Inlet	81.28	12	P	P	06 34 44.1	+0.3
POIN				IAmb	IAmb	06 35 11.8	
	comp=Z,5.5nm,1.5s						
KBZ	Khabaz	82.22	314	P	P	06 34 49.8	+0.6
	comp=Z,2.2nm,0.8s,baz=90,slow=5.1,SNR=3.9						
	comp=Z,2.2nm,0.8s						
NVAR	Mina Array Bea	82.55	52	P	P	06 34 51.7	+0.3
	comp=Z,1.4nm,0.6s,baz=262,slow=5.9,SNR=8.7						
	comp=Z,1.4nm,0.6s						
FIA1	FINESS Array S	82.82	335	P	P	06 34 50.6	-1.4
FINES	FINESS Array B	82.82	335	P	P	06 34 50.4	-1.6
	comp=Z,1.2nm,0.3s,baz=61,slow=4.7,SNR=27						
	comp=Z,1.2nm,0.3s						
FINES	FINESS Array B	82.82	335	P	P	06 34 50.6	-1.4
FFC	Flin Flon	85.19	32	P	P	06 35 04.6	+0.4
FFC				IAmb	IAmb	06 35 42.2	
	comp=Z,5.5nm,1.2s						
PDAR	Pinedale Array	86.77	45	P	P	06 35 12.3	-0.3
	comp=Z,0.6nm,0.9s,baz=292,slow=6.4,SNR=4.2						
	comp=Z,0.6nm,0.9s						
PDAR	Pinedale Array	86.77	45	P	P	06 35 12.6	0.0
HFS	Hagfors	88.34	337	P	P	06 35 17.0	-2.3
	comp=Z,0.8nm,0.4s,baz=80,slow=3.2,SNR=7.8						
	comp=Z,0.8nm,0.4s						
TORD	Torodi Ar. Bea	128.64	310	PKP	PKPdf	06 41 34.5	-0.8
	comp=Z,2.6nm,0.3s,baz=31,slow=2.4,SNR=2.8						
PLCA	Paso Flores	145.88	131	PKPbc	PKPdf	06 42 06.5	+0.4
	comp=Z,3.0nm,0.5s,baz=237,slow=4.4,SNR=26						
PLCA	Paso Flores	145.88	131	PKPdf	PKPdf	06 42 06.8	+0.6
EFI	East Falkland	146.20	156	PKPdf	PKPdf	06 42 06.7	+0.5
LPAZ	La Paz	149.57	84	PKPbc	PKPbc	06 42 17.9	-0.4
	comp=Z,1.6nm,0.5s,baz=292,slow=1.9,SNR=8.7						
LPAZ				pPKPbc	pPKPbc	06 42 49.1	-0.5
	comp=Z,1.0nm,0.7s,baz=90,slow=4.0,SNR=1.5						

IDC 30 06:40:03.3±2.7, 15°.18S×177°.44W, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=380.0km s-min=31.6km az=157.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.10	257	P	P	06 48 28.9	-0.8
	0.3nm,0.3s,baz=93,slow=7.9,SNR=2.8						
	0.3nm,0.3s						
ASAR	Alice Springs	46.48	252	P	P	06 48 32.9	+0.3
	7.1nm,0.5s,baz=84,slow=8.4,SNR=183						
	7.1nm,0.5s						
TXAR	Lajitas Array	83.75	58	P	P	06 52 34.9	0.0
	0.4nm,0.7s,baz=221,slow=6.0,SNR=7.0						
	0.4nm,0.7s						

FUNV 30 06:46:12.2, 12°.08N×69°.17W, h21km, MW3.1
RSNC 30 06:46:21.9±0.0, 12°N±9°×7°0W±°, h200km±10km, M2.9, mB3.8, mb3.6, ML2.8, Mw(mB)2.7
ISC 30 06:46:15.5±1.8, 11°.89N±0°.10×69°.26W±0°.05, h48km±42km, n13, σ1§66/25, 1C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JACV	Jacura	0.90	152	eP	Pn	06 46 30.9	-1.0
JACV				eS	Sn	06 46 46.1	+2.2
TEPV	Terepaima	1.91	178	eP	Pn	06 46 45.1	-0.6
TEPV				eS	Sn	06 47 08.4	-0.2
BENV	Beln	2.52	139	eP	Pn	06 46 54.1	+0.1
BENV				eS	Sn	06 47 23.0	-0.5
URIC	Uribia, Colomb	2.68	266	P	Pn	06 46 56.0	-0.2
URIC				S	Sn	06 47 29.3	+1.9
TACV	Tcata	2.80	128	⇓eP	Pn	06 46 55.4	-2.5
TACV				eS	Sn	06 47 27.6	-2.8
MCQV	Machiques	3.69	241	eP	Pn	06 47 08.8	-1.3
MCQV				⇑eP		06 47 09.1	
MCQV				eS	Sn	06 47 52.5	0.0
SOCV	Socops	3.91	204	eP	Pn	06 47 13.4	+0.3
SOCV				eS	Sn	06 47 58.1	+0.3
CAPV	Capacho	5.00	217	eP	Pn	06 47 26.9	-1.4
CAPV				eS	Sn	06 48 23.3	-1.6
CACV	CAICARA DEL OR	5.06	148	eP	Pn	06 47 31.1	+2.2
CACV				eS	Sn	06 48 30.3	+4.1
ARGC	Ariguani, Magd	5.29	248	P	Pn	06 47 31.3	-0.8
OCAC	Ocana	5.39	228	P	Pn	06 47 33.2	-0.4
OCAC				S	Sn	06 48 33.4	-1.1
PAMC	Pamplona, Colo	5.65	217	P	Pn	06 47 38.0	+0.6
	170nm10nm,0.6s						
PAMC				S	Sn	06 48 40.0	-1.2
	170nm10nm,0.6s						
SJCC	San Jacinto, C	6.14	252	P	Pn	06 47 44.6	+0.8
SJCC				S	Sn	06 48 53.7	+1.0

SNET 30 06:58:13.0±1.2, 13°.93N×89°.99W, h62km±10km, ML2.1
GCG 30 06:58:12.1±0.5, 13°.64N×90°.10W, h64km±11km, MD3.8, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUBE	Las Nubes	0.41	49	i P	Pn	06 58 24.1	+0.4
CEVE	Cerro Verde	0.50	67	eP	Pn	06 58 25.2	+0.5
CEVE				eS	Sn	06 58 37.7	+3.9
JAYA	Jayaque - finc	0.63	88	eP	Pn	06 58 26.0	0.0
JAYA				eS	Sn	06 58 36.8	+0.6
JAYA	Jayaque - finc	0.63	88	i P	Pn	06 58 25.8	-0.2
JAYA				i S	Sn	06 58 36.5	+0.3
MTO3	Montecristo	1.04	43	eP	Pn	06 58 31.5	+0.5
MTO3	Montecristo	1.04	43	i P	Pn	06 58 31.4	+0.3

KRSC 30 07:18:28.8±0.5, 53°.99N×168°.93E, h32km±13km, Ml3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	2.11	306	eP	Pb	07 19 04.0	-2.3
BKI				eS	Sb	07 19 29.5	-2.5
KBTR	Krutoberegovo	4.16	305	eP	Pn	07 19 34.3	+4.4
KZV	Kizimen	5.15	286	eP	Pn	07 19 48.6	+4.9
AVH	Avacha	6.11	267	eP	Pn	07 20 01.7	+4.9
KRX	Arik	6.15	268	eP	Pn	07 20 02.2	+4.9
KOK	Koryaka	6.17	268	eP	Pn	07 20 02.4	+4.8
ASAK	Asacha	6.83	261	eP	Pn	07 20 12.0	+5.4

GUC 30 08:02:54.8±0.8, 30°.28S×71°.57W, h42km±2km, ML4.3
NEIC 30 08:02:55.8±1.5, 30°.27S±0°.03×71°.58W±0°.07, h33km±6km, mb4.3/7, ML4.3(GUC), Error ellipse: s-maj=8.2km s-min=3.7km az=91.0
SJA 30 08:02:56.9±1.2, 30°.33S×71°.46W, h50km, ML3.9, MW4.3
IDC 30 08:02:57.1±3.3, 30°.27S×71°.47W, h53km±27km, mb3.5/4, mbtmp3.7/9, ML3.7/5, MS3.3/4, Error ellipse: s-maj=37.4km s-min=23.8km az=95.0
ISC 30 08:02:53.3±1.7, 30°.22S±0°.03×71°.57W±0°.04, h18km±10km, n108, σ1§75/123, mb4.1/7, 4C-6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.42	44		Pn	08 03 05.4	+1.0
CO05					Sn	08 03 12.8	+1.1
CO06	Fray Jorge	0.45	187	Pg	Pb	08 03 04.2	+1.4
CO06					Sb	08 03 10.7	+1.4
CO06	Fray Jorge	0.45	187	⇑iP	Pb	08 03 04.2	+1.4
CO06				eS	Sb	08 03 10.4	+1.2
CO06				IAML		08 03 11.2	
	comp=E,38µm,0.2s						
GO04	Tololo Observa	0.67	86		Pn	08 03 08.6	+0.5
GO04				Sn	Sn	08 03 18.7	+0.4
GO04	Tololo Observa	0.67	86	⇓iP	Pn	08 03 08.5	+0.3
GO04				eS	Sn	08 03 18.6	+0.3
GO04				IAML		08 03 21.2	
	comp=N,47µm,0.4s						
CO03	El Pedregal	0.98	129		Pb	08 03 11.8	0.0
CO03	El Pedregal	0.98	129	⇓iP	Pb	08 03 11.8	0.0
CO03				eS	Sg	08 03 24.5	-0.8
CO03				IAML		08 03 26.1	
	comp=E,5µm,0.3s						
CO03	El Pedregal	0.98	129	eP	Pb	08 03 11.7	-0.2
CO03				IAML		08 03 36.4	
	comp=Z,1µm,0.2s						
CO02	Combarbal	1.10	153		Pb	08 03 13.7	-0.2
CO02	Combarbal	1.10	153	eP	Pb	08 03 13.6	-0.2
CO02				eS	Sb	08 03 27.6	-0.2
CO02				IAML		08 03 29.8	
	comp=N,27µm,0.2s						
CO02	Combarbal	1.10	153	eP	Pg	08 03 28.4	+14
CO02				IAML		08 03 53.3	
	comp=Z,1µm,0.8s						
CO01	Juntas del Tor	1.30	80		Pb	08 03 18.3	+0.9
CO01	Juntas del Tor	1.30	80	⇓iP	Pb	08 03 18.3	+0.9
CO01				eS	Sg	08 03 35.1	-0.5
CO01				IAML		08 03 36.2	
	comp=E,3µm,0.3s						
LCO	Las Campanas	1.43	32		Pn	08 03 19.9	+1.4
LCO	Las Campanas	1.43	32	⇑iP	Pn	08 03 19.9	+1.4
LCO				eS	Sb	08 03 39.0	+1.5
AC05	El Transito	1.79	40		Pb	08 03 25.5	0.0
AC05	El Transito	1.79	40	eP	Pb	08 03 25.6	0.0
AC05				IAML		08 03 54.6	
	comp=N,1µm,0.2s						
AROD	Rodeo	1.82	89	eP	Pb	08 03 27.3	+1.1
AROD				eS	Sn	08 03 46.1	-0.7
CO04	Los Peladeros	1.89	164	eP	Pn	08 03 25.6	+0.7
CO04				eS	Sn	08 03 49.0	+0.6
CO04				IAML		08 03 54.5	
	comp=N,3µm,0.3s						
AC04	Llanos de Chal	2.06	12	Pn	Pn	08 03 28.6	+1.6
AC04	Llanos de Chal	2.06	12	eP	Pn	08 03 28.6	+1.6
ACDV	Cuesta del Vie	2.12	89	eP	Pb	08 03 31.9	+0.5
ACDV				eS	Sg	08 04 00.0	-1.7
ACDV				IAML		08 04 01.1	
	comp=Z,941nm,0.9s						
ACCO	Cerro Coronel	2.20	100	eP	Pb	08 03 33.1	+0.4
ACCO				eS	Sn	08 03 57.1	+1.0
VA06	Catapilco	2.34	174		Pn	08 03 31.3	+0.4
VA06	Catapilco	2.34	174	eP	Pn	08 03 31.4	+0.5
VA06				IAML		08 04 11.5	
	comp=E,2µm,0.3s						
RTLS	Leoncito	2.51	129	eP	Pb	08 03 36.6	-1.4
RTLS				eS	Sg	08 04 17.1	+3.0
RTLS				IAML		08 04 22.1	
	comp=Z,1µm,0.4s						
VA03	San Esteban	2.68	161	Pn	Pn	08 03 37.3	+1.6
VA03	San Esteban	2.68	161	eP	Pn	08 03 37.2	+1.6
VA03				IAML		08 04 15.9	
	comp=E,2µm,0.2s						
VA03	San Esteban	2.68	161	eP	Pn	08 03 37.4	+1.6
VA03				eS	Sn	08 04 08.1	+0.4
VA03				IAML		08 04 19.3	
	comp=Z,644nm,0.3s						
ROCH	El Roble	2.78	170	eP	Pn	08 03 38.0	+0.8
ROCH				IAML		08 04 23.4	
	comp=N,1µm,0.3s						
VA01	Torpederas	2.79	181	eP	Pn	08 03 37.4	+0.3
VA01				IAML		08 04 23.2	
	comp=E,412nm,0.3s						
ZON	Zonda	2.82	119	Pn	Pb	08 03 40.6	-2.5
ZON	Zonda	2.82	119	eP	Pb	08 03 40.7	-2.5
ZON				eS	Sn	08 04 11.1	+0.1
ZON				IAML		08 04 31.7	
	comp=Z,337nm,0.8s						
GO03	Copiapo	2.87	24	Pn	Pn	08 03 40.4	+2.2
GO03	Copiapo	2.87	24	eP	Pn	08 03 40.3	+2.1
GO03				IAML		08 04 26.6	
	comp=E,692nm,0.4s						
RTLL	Cerro Villicun	2.89	113	eP	Pn	08 03 41.5	+3.1
RTLL				eS	Sn	08 04 13.1	+0.4
RTLL				IAML		08 04 34.5	
	comp=Z,712nm,0.9s						
PEL	Peldehue	3.01	166	eP	Pn	08 03 41.4	+1.2
PEL				IAML		08 04 28.2	
	comp=E,672nm,0.2s						
MT10	Hacienda Santa	3.17	164	⇓eP	Pn	08 03 43.8	+1.4
MT10				IAML		08 04 32.0	
	comp=N,2µm,0.5s						
CFA	Coronel Fontan	3.18	117	P	Pn	08 03 45.3	+2.8
	comp=N,17nm,0.3s,baz=301,slow=18,SNR=251						
CFA				S	Sn	08 04 23.0	+3.0
	comp=N,116nm,0.5s,baz=72,slow=18,SNR=11						
	comp=N,42nm,0.3s						
MT05	Renca	3.24	168	Pn	Pn	08 03 44.4	+1.2
MT05	Renca	3.24	168	eP	Pn	08 03 44.5	+1.2
MT05				IAML		08 04 38.7	
	comp=E,1µm,0.3s						
MT14	Cerro Cal¡n	3.29	165	eP	Pn	08 03 46.1	+2.1
VCA	Vinchina	3.29	64	⇑eP	Pb	08 03 49.2	-2.0
VCA	Vinchina	3.29	64	eP	Pb	08 03 49.2	-2.0
VCA				eS	Sb	08 04 28.1	-2.9
VCA				IAML		08 04 39.1	
	comp=Z,1µm,0.8s						
MT16	CCHEN	3.32	165	Pn	Pn	08 03 46.4	+2.0
MT16	CCHEN	3.32	165	eP	Pn	08 03 46.2	+1.8
MT16				IAML		08 04 36.3	
	comp=N,507nm,0.7s						
MT03	Universidad Ad	3.39	165	eP	Pn	08 03 47.1	+1.7
MT03				IAML		08 04 39.8	
	comp=E,1µm,0.2s						
MT04	Ro Olivares	3.40	159	⇑eP	Pn	08 03 48.7	+3.0
MT04				IAML		08 04 38.7	
	comp=E,858nm,0.5s						
VA05	Santo Domingo	3.43	181	Pn	Pn	08 03 45.3	-0.5
VA05	Santo Domingo	3.43	181	eP	Pn	08 03 45.2	-0.5
MT08	Bocatoma Ro	3.48	158	Pn	Pn	08 03 50.6	+3.9
MT08	Bocatoma Ro	3.48	158	eP	Pn	08 03 50.5	+3.8
MT08				IAML		08 04 40.5	
	comp=E,494nm,0.7s						
MT15	Las Vizcachas	3.49	165	eP	Pn	08 03 47.8	+1.1
MT15				IAML		08 04 44.0	
	comp=N,1µm,0.2s						
MT09	Talagante	3.58	172	⇓eP	Pn	08 03 49.0	+1.0
MT09				IAML		08 04 48.7	
	comp=N,547nm,0.6s						
MT12	Pirque	3.61	166	eP	Pn	08 03 49.5	+1.1
MT12				IAML		08 04 52.6	
	comp=N,1µm,0.7s						
MT01	Popeta	3.64	176	Pn	Pn	08 03 49.3	+0.5
MT01	Popeta	3.64	176	eP	Pn	08 03 48.9	+0.1
MT01				IAML		08 04 45.7	
	comp=N,361nm,0.2s						
MT13	San Alfonso	3.68	163	eP	Pn	08 03 51.7	+2.3
LMEL	Las Melosas	3.80	163		Pn	08 03 53.4	+2.3
LMEL	Las Melosas	3.80	163	⇓eP	Pn	08 03 53.3	+2.3
BO04	La Punta	3.84	168	eP	Pn	08 03 52.7	+1.1
AC02	Maricunga	4.00	33	Pn	Pn	08 03 56.7	+2.6
AC02	Maricunga	4.00	33	eP	Pn	08 03 56.5	+2.3
ACLC	CERRO LA CRUZ	4.09	80	eP	Pn	08 03 58.4	+3.3
ACLC				eS	Sn	08 04 42.6	-0.1
ACLC				IAML		08 04 54.8	
	comp=Z,181nm,1.7s						
TINO	Tinogasta	4.11	59	eP	Pn	08 03 59.3	+4.0
TINO				eS	Sn	08 04 49.1	+6.1
AC01	Pan de Azucar	4.15	12	eP	Pn	08 03 55.6	-0.2
BO01	Tunca	4.18	174	Pn	Pn	08 03 57.1	+0.9
BO01	Tunca	4.18	174	eP	Pn	08 03 56.3	+0.1
BO03	Pichilemu	4.28	184	eP	Pn	08 03 56.0	-1.4
AANI	Anillaco	4.28	72	eP	Pn	08 04 01.1	+3.5
AANI				eS	Sb	08 04 57.1	-2.4
ACHE	Chepes	4.33	104	eP	Pn	08 04 00.8	+2.4
ACHE				eS	Sn	08 04 48.6	+0.1
BO02	Sierra Bellavi	4.61	172	eP	Pn	08 04 02.6	+0.5
FSA	Cafayete	6.41	52	eP	Pn	08 04 31.1	+4.1
H03N1	Juan Fernandez	7.02	241	P	Pn	08 04 34.2	-0.7
	baz=114,slow=19,SNR=1885						
H03N1				T	T	08 11 37.4	
	baz=70,slow=72,SNR=2847						
H03N2	Juan Fernandez	7.04	241	P	Pn	08 04 34.3	-0.8
	baz=114,slow=19,SNR=1490						
H03N2				T	T	08 11 37.7	
	baz=70,slow=72,SNR=2804						
H03N3	Juan Fernandez	7.04	241	P	Pn	08 04 34.3	-0.9
	baz=114,slow=19,SNR=841						
H03N3				T	T	08 11 34.8	
	baz=70,slow=72,SNR=1808						
H03S3	Juan Fernandez	7.19	238	P	Pn	08 04 35.3	-1.9
	baz=58,slow=77,SNR=50						
H03S1	Juan Fernandez	7.20	238	P	Pn	08 04 34.5	-2.8
	baz=58,slow=77,SNR=56						
H03S2	Juan Fernandez	7.21	238	P	Pn	08 04 35.3	-2.2
	baz=58,slow=77,SNR=44						
PLCA	Paso Flores	10.52	176	P	Pn	08 05 23.7	+0.5
	comp=Z,0.1nm,0.3s,baz=355,slow=12,SNR=4.5						
	comp=Z,0.9nm,0.8s						
TRQA	Tornquist	11.14	137	Pn	Pn	08 05 32.2	+0.5
CPUP	Villa Florida	13.14	76	P	Pn	08 05 58.2	-0.7
	comp=Z,0.1nm,0.3s,baz=232,slow=12,SNR=3.2						
CPUP				LR	LR	08 11 42.2	
	comp=Z,100nm,18.3s,baz=270,slow=40						
	comp=Z,0.4nm,0.3s						
LPAZ	La Paz	14.22	14	P	Pn	08 06 17.1	+2.7
	comp=Z,0.2nm,0.3s,baz=164,slow=6.7,SNR=5.7						
LPAZ				LR	LR	08 12 18.7	
	comp=Z,89nm,18.9s,baz=188,slow=39						
	comp=Z,1.7nm,0.7s						
LPAZ	La Paz	14.22	14	Pn	Pn	08 06 16.0	+1.5
SIV	San Ignacio	17.13	37	P	Pn	08 06 53.1	+1.2
	baz=214,slow=11,SNR=22						
	comp=Z,3.2nm,0.6s						
PTLB	Pontes e Lacer	18.62	41		P	08 07 10.0	+0.1
BDFB	Brasilia	26.03	61	P	P	08 08 23.8	-1.9
	comp=Z,1.6nm,0.6s,baz=250,slow=11,SNR=3.3						
BDFB				LR	LR	08 19 47.9	
	comp=Z,57nm,18.7s,baz=44,slow=39						
	comp=Z,1.6nm,0.6s						
MDP	Montagnes des	39.53	31	LR	LR	08 27 12.4	
	comp=Z,56nm,19.7s,baz=223,slow=37						
BELA	Belgrano 2	50.52	171	P	P	08 11 49.8	-0.2
BELA				IAmb	IAmb	08 11 50.2	
	comp=Z,1.3nm,0.8s						
TEIG	Tepich	52.67	340	P	P	08 12 06.9	+0.3
SNAA	Sanae	54.94	159	P	P	08 12 20.8	-1.9
	comp=Z,1.3nm,0.9s,baz=281,slow=10,SNR=1.7						
	comp=Z,1.3nm,0.9s						
SNAA	Sanae	54.94	159	P	P	08 12 22.6	-0.2
SNAA				IAmb	IAmb	08 12 44.5	
	comp=Z,5.7nm,1.3s						
QSPA	South Pole Qui	60.00	180	P	P	08 12 58.6	0.0
QSPA				IAmb	IAmb	08 13 10.1	
	comp=Z,7.4nm,1.4s						
SAND	Sanderson	66.54	331	P	P	08 13 43.7	+1.5
SAND				IAmb	IAmb	08 13 44.2	
	comp=Z,4.9nm,1.1s						
TXAR	Lajitas Array	66.66	330	P	P	08 13 42.5	-0.5
	comp=Z,0.2nm,0.7s,baz=141,slow=8.0,SNR=2.7						
	comp=Z,0.2nm,0.7s						
TXAR	Lajitas Array	66.66	330	P	P	08 13 41.9	-1.1
TX31	Lajitas Ar. Si	66.66	330	P	P	08 13 42.0	-1.0
TX31				IAmb	IAmb	08 14 15.7	
	comp=Z,1.6nm,1.0s						
TORD	Torodi Ar. Bea	82.56	70	P	P	08 15 14.4	-1.1
	comp=Z,1.1nm,1.0s,baz=282,slow=5.1,SNR=3.9						
	comp=Z,1.1nm,1.0s						
H11S2	WAKE ISLAND Hy	126.14	272	T	T	10 40 35.8	

	baz=115,slow=75,SNR=109						
H11S1	**WAKE ISLAND Hy**	**126.15**	**272**	T	T	10 40 38.3	
	baz=115,slow=75,SNR=213						
H11S3	**WAKE ISLAND Hy**	**126.16**	**272**	T	T	10 40 37.1	
	baz=115,slow=75,SNR=164						
H11N3	**WAKE ISLAND Hy**	**126.46**	**273**	T	T	10 41 01.7	
	baz=116,slow=76,SNR=7.8						
H11N1	**WAKE ISLAND Hy**	**126.47**	**273**	T	T	10 41 02.3	
	baz=116,slow=76,SNR=18						
H11N2	**WAKE ISLAND Hy**	**126.47**	**273**	T	T	10 41 05.8	
	baz=116,slow=76,SNR=12						
BVAR	**Borovoye Array**	**144.19**	**39**	PKP	**PKPab**	**08 22 26.1**	**+0.8**
	comp=Z,0.4nm,0.4s,baz=270,slow=2.3,SNR=2.5						
AAK	**Ala-Archa**	**150.22**	**56**	PKPbc	**PKPbc**	**08 22 42.2**	**-1.1**
	comp=Z,1.7nm,0.6s,baz=249,slow=2.5,SNR=7.7						
ZALV	**Zalesovo Beam**	**150.78**	**29**	PKPbc	**PKPbc**	**08 22 43.4**	**-0.6**
	comp=Z,4.1nm,0.7s,baz=303,slow=2.9,SNR=16						
MKAR	**Makanchi Array**	**153.87**	**43**	PKPbc	**PKPbc**	**08 22 50.6**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=23,slow=4.7,SNR=3.3						

IDC 30 08:21:18.8±5.3**, 2°.47S**×**138°.94E, h0**^{km}**, mb3.7**/3**,**
mbtmp3.8/4**, ML3.9**/1**, Error ellipse: s-maj=100.1km**
s-min=27.7km az=151.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.77**	**91**	Pn	Pn	08 21 50.9	+0.2
	3.1nm,0.3s,baz=173,slow=9.8,SNR=6.6						
JAY				Sn	Sg	08 22 19.4	+3.7
	2.9nm,0.3s,baz=247,slow=4.6,SNR=4.1						
WRA	**Warramunga Arr**	**17.94**	**194**	P	P	08 25 30.6	+0.1
	0.4nm,0.3s,baz=15,slow=12,SNR=10						
	1.5nm,0.7s						
FITZ	**Fitzroy Crossi**	**20.28**	**219**	P	P	08 25 56.4	+0.2
	2.0nm,0.9s,baz=12,slow=9.3,SNR=2.1						
	2.0nm,0.9s						
ASAR	**Alice Springs**	**21.63**	**193**	P	P	08 26 10.9	+0.2
	1.1nm,0.6s,baz=18,slow=12,SNR=15						
	1.1nm,0.6s						
STKA	**Stephens Creek**	**29.36**	**175**	P	P	08 27 22.8	-0.7
	3.7nm,1.0s,baz=337,slow=8.6,SNR=3.7						
	3.7nm,1.0s						

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*IDC **30** 08:27:45.5±0.9, 43°.24N×83°.82E, h0^{km}, mb4.0/6,*
mbtmp3.9/11, ML3.2/5, MS2.8/2, Error ellipse:
s-maj=18.2km s-min=12.2km az=57.0
*SOME **30** 08:27:48.2, 43°.40N×83°.70E, h10^{km}*
*NNC **30** 08:27:50.4±1.0, 43°.36N×83°.64E, h0^{km}, mb4.5, mpv4.2,*
Error ellipse: s-maj=9.1km s-min=4.6km az=141.0
ISC 30 08:27:46.9±0.8**, 43°.32N**±0°.05×**83°.73E**±0°.04**, h10**^{km}**, n51,**
σ**2^{s}.57**/67**, mb3.8**/6**, 8C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.47**	**274**	Pg	**Pb**	**08 28 32.7**	**+1.3**
	54nm,0.2s						
KTMS				Lg	Lg	08 29 06.0	
	286nm,0.3s						
KTMS	**Ketmen**	**2.47**	**274**	*e*P	**Pb**	**08 28 33.3**	**+1.9**
	54nm,0.2s						
KTMS				*e*S	**Sg**	**08 29 05.8**	**-0.4**
	285nm,0.4s						
PDGK	**Podgornoye**	**3.09**	**272**	⇑Pn	**Pb**	**08 28 40.8**	**-1.4**
	43nm,0.3s						
PDGK				⇑Pg	**Pg**	**08 28 46.0**	**-0.3**
PDGK				⇑Lg	Lg	08 29 27.0	
	122nm,0.3s						
PDGK				⇑Lg	Lg	08 29 27.4	
SHLS	**Shalkode**	**3.12**	**268**	Pg	**Pn**	**08 28 39.9**	**+3.6**
	125nm,0.2s						
SHLS				Lg	Lg	08 29 18.4	
	663nm,0.3s						
SHLS	**Shalkode**	**3.12**	**268**	*e*P	**Pn**	**08 28 39.9**	**+3.6**
	125nm,0.2s						
SHLS				*e*S	**Sb**	**08 29 18.4**	**-2.4**
	663nm,0.3s						
UZB	**Uzynbulak**	**3.44**	**269**	Pg	**Pb**	**08 28 51.4**	**+3.2**
	27nm,0.2s						
UZB				Lg	Lg	08 29 36.9	
	165nm,0.3s						
UZB	**Uzynbulak**	**3.44**	**269**	*e*P	**Pb**	**08 28 51.4**	**+3.2**
	27nm,0.2s						
UZB				*e*S	**Sg**	**08 29 36.9**	**-0.7**
	166nm,0.3s						
MK31	**Makanchi Array**	**3.62**	**344**	Pn	**Pn**	**08 28 46.4**	**+3.3**
	1.1nm,0.3s,baz=158,slow=14,SNR=340						
MK31				Pg	**Pg**	**08 28 56.0**	**-0.3**
	9.0nm,0.3s,baz=158,slow=15,SNR=28						
MK31				⇓Lg	Lg	08 29 40.9	
	73nm,0.5s,baz=159,slow=29,SNR=9.2						
MKAR	**Makanchi Array**	**3.62**	**344**	Pn	**Pn**	**08 28 46.7**	**+3.6**
	2.3nm,0.3s,baz=153,slow=14,SNR=82						
MKAR				Pg	**Pg**	**08 28 54.7**	**-1.6**
	8.3nm,0.3s,baz=158,slow=15,SNR=26						
MKAR				Sn	**Sn**	**08 29 21.1**	**-4.8**
	6.7nm,0.3s,baz=156,slow=17,SNR=7.6						
MKAR				Lg	Lg	08 29 41.4	
	17nm,0.3s,baz=156,slow=30,SNR=7.1						
	2.6nm,0.3s						
KPKS	**Kokpek**	**3.68**	**274**	Pg	**Pg**	**08 28 55.9**	**-1.5**
	0.2nm,0.2s						
KPKS				Lg	Lg	08 29 44.9	
	315nm,0.4s						
KPKS	**Kokpek**	**3.68**	**274**	*e*P	**Pg**	**08 28 55.9**	**-1.5**
	0.2nm,0.2s						
KPKS				*e*S	**Sg**	**08 29 44.9**	**-0.2**
	315nm,0.4s						
MAKZ	**Makanchi**	**3.70**	**341**	Pg	**Pg**	**08 28 59.0**	**+1.1**
	15nm,0.6s						
MAKZ				Lg	Lg	08 29 44.9	
	64nm,0.5s						
BLB	**Baldybastay**	**3.89**	**283**	Pg	**Pg**	**08 29 00.9**	**-0.4**
	20nm,0.1s						
BLB				Lg	Lg	08 29 54.5	
	160nm,0.2s						
SATY	**Saty**	**3.90**	**268**	Pg	**Pg**	**08 29 00.1**	**-1.6**
	145nm,0.7s						
SATY				Lg	Lg	08 29 51.8	
	145nm,0.2s						
KURS	**Kuram**	**4.05**	**274**	Pg	**Pg**	**08 29 03.3**	**-1.3**
	48nm,0.4s						
KURS				Lg	Lg	08 29 57.9	
	91nm,0.6s						
TDK	**Taldyqorghan**	**4.18**	**296**	Pg	**Pg**	**08 29 05.1**	**-2.0**
	107nm,0.7s						
TDK				Lg	Lg	08 30 01.4	
	303nm,0.4s						
TDK	**Taldyqorghan**	**4.18**	**296**	*e*P	**Pg**	**08 29 05.1**	**-2.0**
	107nm,0.7s						
TDK				*e*S	**Sg**	**08 30 01.4**	**+0.1**
	303nm,0.4s						
ZSN	**Zaisan**	**4.21**	**11**	*e*P	**Pg**	**08 29 05.0**	**-2.5**
	12nm,0.5s						
ZSN				*e*S	**Sg**	**08 30 00.3**	**-1.7**
	279nm,0.6s						
KOTS	**Kotyrbulak**	**4.83**	**271**	Pg	**Pg**	**08 29 16.8**	**-2.7**
	33nm,0.4s						
KOTS				Lg	Lg	08 30 21.6	
	140nm,0.4s						
KOTS	**Kotyrbulak**	**4.83**	**271**	*e*P	**Pg**	**08 29 16.8**	**-2.7**
	33nm,0.4s						
KOTS				*e*S	**Sg**	**08 30 21.6**	**-0.5**
	140nm,0.4s						
MDOK	**Medeo**	**4.88**	**270**	Pg	**Pg**	**08 29 18.9**	**-1.6**
	13nm,0.4s						
MDOK				Lg	Lg	08 30 23.8	
	36nm,0.7s						
CHKK	**Chushkaly**	**4.93**	**279**	Pg	**Pg**	**08 29 18.4**	**-2.9**
	50nm,0.5s						
CHKK				Lg	Lg	08 30 23.7	
	35nm,0.3s						
CHKK	**Chushkaly**	**4.93**	**279**	*e*P	**Pg**	**08 29 18.4**	**-2.9**
	50nm,0.5s						
CHKK				*e*S	**Sg**	**08 30 23.7**	**-1.4**
	35nm,0.3s						
KNDC	**Almaty**	**4.94**	**271**	⇑Pg	**Pg**	**08 29 18.8**	**-2.7**
	46nm,0.6s						
KNDC				⇓Lg	Lg	08 30 27.4	
	109nm,0.5s						
TNSS	**Tian-Shan**	**4.97**	**269**	Pg	**Pg**	**08 29 19.2**	**-2.9**
	5.1nm,0.3s						
TNSS				Lg	Lg	08 30 25.3	
	14nm,0.7s						
TNSS	**Tian-Shan**	**4.97**	**269**	*e*P	**Pg**	**08 29 19.2**	**-2.9**
	5.1nm,0.3s						
TNSS				*e*S	**Sg**	**08 30 25.3**	**-1.1**
	14nm,0.7s						
MTBS	**Maitube**	**5.34**	**270**	Pg	**Pb**	**08 29 25.0**	**+4.6**
	10nm,0.3s						
MTBS				Lg	Lg	08 30 34.9	
	35nm,0.4s						
MTBS	**Maitube**	**5.34**	**270**	*e*P	**Pb**	**08 29 25.0**	**+4.6**
	10nm,0.3s						
MTBS				*e*S	**Sg**	**08 30 34.9**	**-3.4**
	35nm,0.4s						
KUU	**Kurty**	**5.40**	**279**	Pg	**Pg**	**08 29 28.7**	**-1.6**
	2.8nm,0.0s						
KUU				Lg	Lg	08 30 40.9	
	62nm,0.3s						
KUU	**Kurty**	**5.40**	**279**	*e*P	**Pg**	**08 29 28.7**	**-1.6**
	2.8nm,0.0s						
KUU				*e*S	**Sg**	**08 30 40.9**	**+0.7**
	62nm,0.3s						
KST	**Kastek**	**5.69**	**270**	Pg	**Pg**	**08 29 34.2**	**-1.7**
	13nm,0.5s						
KST				Lg	Lg	08 30 50.3	
	41nm,0.7s						
KST	**Kastek**	**5.69**	**270**	*e*P	**Pg**	**08 29 34.2**	**-1.7**
	13nm,0.5s						
KST				*e*S	**Sg**	**08 30 50.3**	**+0.8**
	41nm,0.7s						
DGS	**Degeres**	**5.81**	**272**	Pg	**Pg**	**08 29 34.4**	**-3.8**
	20nm,0.5s						
DGS				Lg	Lg	08 30 50.8	
	63nm,0.4s						
KRBS	**Karabastau**	**5.87**	**276**	Pg	**Pg**	**08 29 39.2**	**-0.1**
	12nm,0.4s						
KRBS				Lg	Lg	08 30 59.0	
	32nm,0.3s						
SGDS	**Sogindy**	**6.63**	**274**	Pg	**Pg**	**08 29 50.4**	**-3.5**
	2.1nm,0.2s						
SGDS				Lg	Lg	08 31 18.8	
	10nm,0.7s						
AAK	**Ala-Archa**	**6.81**	**267**	Pn	**Pn**	**08 29 30.0**	**+3.0**
	0.5nm,0.3s,baz=103,slow=8.3,SNR=4.9						
AAK				Pg	Pb	08 29 50.9	+5.5
	1.3nm,0.3s,baz=104,slow=6.6,SNR=10						
AAK				Lg	Lg	08 31 22.0	
	0.4nm,0.3s,baz=15,slow=20,SNR=1.2						
AAK				LR	LR	08 31 53.9	
	comp=Z,27nm,21.0s,baz=22,slow=36						
	1.0nm,0.3s						
AAK	**Ala-Archa**	**6.81**	**267**	⇓Pn	**Pn**	**08 29 30.3**	**+3.3**
	2.0nm,0.8s						
AAK				⇓Pg	Pg	08 29 52.4	-4.9
	12nm,0.8s						
AAK				⇑Lg	Lg	08 31 25.1	
	13nm,0.7s						
KSH	**Kashi**	**6.96**	**240**	Pn	Pb	08 29 41.5	-6.5
KSH				Sn	**Sb**	**08 31 05.0**	**-6.1**
KSH				smax	smax		
	comp=N,24nm,1.4s						
KSH				smax	smax		
	comp=E,22nm,0.9s						
KK31	**Karatay Array**	**9.66**	**273**	⇑Pg	Pn	08 30 46.9	+41
	comp=E,0.7nm,0.3s,baz=85,slow=16,SNR=4.8						
KK31				Lg	Lg	08 32 57.8	
	comp=E,3.5nm,0.5s,baz=82,slow=26,SNR=3.6						
ZALV	**Zalesovo Beam**	**10.66**	**3**	Pn	**Pn**	**08 30 20.2**	**+0.6**
	comp=E,1.8nm,0.3s,baz=185,slow=14,SNR=26						
ZALV				Sn	**Sn**	**08 32 13.5**	**-5.4**
	comp=E,1.7nm,0.3s,baz=186,slow=25,SNR=6.3						
ZALV				Lg	Lg	08 33 25.0	
	comp=E,0.3nm,0.3s,baz=176,slow=22,SNR=1.8						
	comp=E,6.2nm,0.4s						
BVA0	**Borovoye Array**	**13.15**	**322**	⇓Sn	**Sn**	**08 33 24.2**	**+4.3**
	comp=E,2.0nm,0.6s,baz=122,slow=24,SNR=5.5						
BVA0				⇑Lg	Lg	08 34 45.7	
	comp=E,9.6nm,1.1s,baz=127,slow=26,SNR=3.7						
BVAR	**Borovoye Array**	**13.15**	**322**	Pn	**Pn**	**08 30 55.3**	**+1.6**
	baz=119,slow=10,SNR=2.8						
BVAR				Sn	**Sn**	**08 33 15.4**	**-4.5**
	comp=E,0.1nm,0.3s,baz=124,slow=21,SNR=6.3						
BVAR				Lg	Lg	08 34 47.8	
	comp=E,0.1nm,0.3s,baz=259,slow=36,SNR=5.3						
	comp=E,0.4nm,0.4s						
SONM	**Songino Array**	**16.48**	**66**	Pn	**Pn**	**08 31 38.2**	**0.0**
	comp=E,0.1nm,0.3s,baz=262,slow=12,SNR=11						
	comp=E,2.8nm,0.9s						
LZH	**Lanzhou**	**17.06**	**108**	*e*P	**Pn**	**08 31 45.3**	**-0.4**
LZH				pP	sP	08 31 54.3	+1.9
LZH				pmax	pmax		
	comp=Z,22nm,1.4s						
NRIK	**Noril'sk**	**26.16**	**3**	P	**P**	**08 33 21.6**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=168,slow=9.3,SNR=2.7						
	comp=Z,0.8nm,0.3s						
ASF	**Jabal al Asfar**	**38.22**	**269**	LR	LR	08 52 13.5	
	comp=Z,40nm,18.3s,baz=262,slow=38						
HFS	**Hagfors**	**44.23**	**318**	P	**P**	**08 35 56.8**	**+0.8**
	comp=Z,16nm,1.2s,baz=77,slow=6.4,SNR=2.4						
	comp=Z,16nm,1.2s						
NOA	**NORSAR Array B**	**45.26**	**319**	P	**P**	**08 36 05.2**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=72,slow=6.0,SNR=2.6						
	comp=Z,0.4nm,0.4s						
ILAR	**Eielson Array**	**65.22**	**21**	P	**P**	**08 38 27.2**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=319,slow=4.2,SNR=5.5						
	comp=Z,0.3nm,0.7s						
WRA	**Warramunga Arr**	**78.23**	**132**	P	**P**	**08 39 46.8**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=332,slow=5.2,SNR=6.1						
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**81.04**	**135**	P	**P**	**08 40 02.0**	**0.0**
	comp=Z,0.7nm,0.7s,baz=327,slow=4.7,SNR=10.0						
	comp=Z,0.7nm,0.7s						

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*IDC **30** 09:08:24.3±9.1, 36°.87N×71°.21E, h224^{km}±58^{km}, mb3.4/4,*
mbtmp3.9/6, MS3.5/1, Error ellipse: s-maj=87.3km
s-min=42.6km az=1.0
ISC 30 09:08:22.9±2.0**, 36°.9N**±0°.2×**70°.9E**±0°.2**, h200**^{km}**, n10,**
σ**1^{s}.08**/12**, mb3.6**/4**, 1C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.22**	**358**	⇑Pn	**Pn**	**09 09 53.3**	**+0.4**
	7.0nm,0.5s,baz=178,slow=12,SNR=36						
KK31				⇓Sn	**Sn**	**09 11 02.5**	**-1.7**
	7.0nm,0.3s,baz=189,slow=26,SNR=6.2						
AAK	**Ala-Archa**	**6.38**	**25**	P	**Pn**	**09 09 56.1**	**+0.9**
	1.2nm,0.3s,baz=194,slow=8.8,SNR=5.7						
AAK				S	**Sn**	**09 11 08.7**	**+0.3**
	1.9nm,0.3s,baz=327,slow=21,SNR=8.5						
AAK	**Ala-Archa**	**6.38**	**25**	Pn	**Pn**	**09 09 55.8**	**+0.6**
	0.4nm,0.4s						
AAK				⇓Sn	**Sn**	**09 11 09.1**	**+0.8**
	4.6nm,0.9s						
MKAR	**Makanchi Array**	**13.04**	**37**	P	**Pn**	**09 11 20.0**	**-0.7**
	0.2nm,0.5s,baz=215,slow=12,SNR=1.5						
AKTO	**Aktyubinsk**	**16.40**	**330**	P	**P**	**09 12 02.5**	**+1.5**
	1.7nm,0.3s,baz=143,slow=8.2,SNR=5.7						
FINES	**FINESS Array B**	**37.11**	**326**	P	**P**	**09 15 13.7**	**0.0**
	7.3nm,1.1s,baz=128,slow=11,SNR=4.9						
	7.3nm,1.1s						
ARCES	**ARCESS Array B**	**40.75**	**337**	P	**P**	**09 15 44.5**	**+0.7**
	0.6nm,0.4s,baz=118,slow=8.5,SNR=6.8						
	0.6nm,0.4s						
PSI	**Prapat**	**42.63**	**136**	LR	LR	09 34 51.7	
	comp=Z,51nm,18.4s,baz=84,slow=37						
HFS	**Hagfors**	**42.70**	**322**	P	**P**	**09 16 00.2**	**+0.4**
	2.3nm,0.8s,baz=108,slow=14,SNR=1.8						
	2.3nm,0.8s						
YKA	**Yellowknife Ar**	**80.86**	**3**	P	**P**	**09 20 12.7**	**-1.5**
	0.2nm,0.5s,baz=353,slow=5.5,SNR=6.0						
	0.2nm,0.5s						

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*ASRS **30** 09:11:29.0±1.0, 54°.63N×83°.67E, h0^{km}, M2.3, The*
earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p +
CD-ROM, 2021.
IDC 30 09:11:30.1±1.8**, 54°.61N**×**83°.74E, h0**^{km}**, mbtmp3.0**/2**,**
ML2.3/2**, Error ellipse: s-maj=15.2km s-min=10.7km**
az=10.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.91**	**136**	I	I	09 16 58.6	
	0.1nm,2.0s,baz=316,slow=324,SNR=2.7						
ZALV	**Zalesovo Beam**	**0.91**	**136**	Pg	Pg	09 11 47.2	-0.4
	1.1nm,0.3s,baz=316,slow=14,SNR=12						
ZALV				Lg	Lg	09 12 00.7	
	6.0nm,0.3s,baz=316,slow=30,SNR=17						
MKAR	**Makanchi Array**	**7.88**	**187**	Pn	Pn	09 13 26.3	+0.4
	0.1nm,0.3s,baz=13,slow=12,SNR=2.5						
MKAR				Lg	Lg	09 15 42.8	
	0.1nm,0.3s,baz=13,slow=26,SNR=2.9						
	0.4nm,0.7s						
BVAR	**Borovoye Array**	**8.06**	**264**	Pn	Pn	09 13 27.4	-0.9
	baz=76,slow=12,SNR=3.9						
	0.8nm,0.5s						

IDC 30 09:37:02.1±2.8**, 29°.53S**×**177°.76W, h116**^{km}±22^{km}**,**
mb3.1/2**, mbtmp3.4**/2**, Error ellipse: s-maj=126.1km**
s-min=51.3km az=1.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.31**	**333**	P	Pn	09 37 20.6	+1.8
	1µm,0.3s,baz=196,slow=23,SNR=16						
RAO				S	Sn	09 37 32.5	+1.3
	732nm,0.3s,baz=93,slow=23,SNR=8.8						
ASAR	**Alice Springs**	**43.38**	**266**	P	P	09 44 52.6	-0.7
	0.3nm,0.9s,baz=95,slow=7.7,SNR=3.2						
	0.3nm,0.9s						
WRA	**Warramunga Arr**	**44.28**	**271**	P	P	09 44 59.5	-1.0
	0.4nm,0.4s,baz=110,slow=8.0,SNR=5.5						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**144.40**	**341**	PKP	PKPab	09 56 21.9	-0.4
	2.1nm,0.7s,baz=58,slow=4.0,SNR=11						

IDC 30 09:44:44.0±1.2**, 51°.58N**×**75°.38E, h0**^{km}**, mbtmp2.6**/3**,**
ML2.2/3**, 1C-1D, Error ellipse: s-maj=36.4km**
s-min=9.1km az=34.0, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BVA0	**Borovoye Array**	**3.39**	**297**	⇑Pg	Pb	09 45 43.0	-1.8
	2.2nm,0.8s,baz=120,slow=17,SNR=8.6						
BVA0				⇓Lg	Lg	09 46 24.8	
	5.0nm,0.6s,baz=115,slow=28,SNR=9.8						
BVAR	**Borovoye Array**	**3.39**	**297**	Pn	Pn	09 45 38.0	-0.1
	0.1nm,0.3s,baz=107,slow=13,SNR=9.4						
BVAR				Pg	Pb	09 45 43.9	-1.0
	0.1nm,0.3s,baz=114,slow=18,SNR=8.1						
BVAR				Lg	Lg	09 46 29.4	
	0.3nm,0.3s,baz=115,slow=27,SNR=12						
	0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**6.20**	**64**	Pn	Pn	09 46 15.8	-1.0
	0.4nm,0.3s,baz=252,slow=14,SNR=7.0						
	1.0nm,0.4s						
I46RU	**ZALESOVO INFRA**	**6.20**	**64**	I	I	10 20 10.0	
	baz=250,slow=310,SNR=1.2						
MKAR	**Makanchi Array**	**6.59**	**134**	Pn	Pn	09 46 22.2	0.0
	0.1nm,0.3s,baz=313,slow=10,SNR=2.1						
MKAR				Sn	Sn	09 47 36.5	-1.6
	0.1nm,0.3s,baz=317,slow=25,SNR=3.1						
MKAR				Lg	Lg	09 48 10.5	
	0.3nm,0.3s,baz=320,slow=34,SNR=5.9						
	0.2nm,0.5s						

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*IDC **30** 09:56:20.8±1.7, 30°.95N×49°.91E, h0^{km}, mb3.8/11,*
mbtmp3.8/12, ML3.3/1, Error ellipse: s-maj=38.3km
s-min=22.1km az=173.0
*TEH **30** 09:56:23.3, 30°.91N×50°.02E, h14^{km}±19^{km}*
*OMAN **30** 09:56:28.1±1.3, 30°.49N×50°.35E, h10^{km}, mb4.3/23, Error*
ellipse: s-maj=9.7km s-min=9.5km az=158.0
ISC 30 09:56:21.8±0.6**, 30°.82N**±0°.04×**50°.05E**±0°.04**, h10**^{km}**, n71,**
σ**1^{s}.99**/90**, mb3.7**/10**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMIS	**Naft Sefid**	**1.06**	**322**	Pg	**Pb**	**09 56 42.4**	**+0.1**
AHWZ	**Ahwaz**	**1.31**	**293**	Pg	**Pn**	**09 56 46.9**	**+0.8**
KLNJ	**Kolanjah**	**1.34**	**82**	Pg	**Pn**	**09 56 48.5**	**+1.6**
ZNGN	**Zangian**	**1.47**	**28**	Pg	**Pb**	**09 56 49.9**	**+0.5**
IBRJ	**Brojen**	**1.50**	**43**	Pg	**Pb**	**09 56 50.5**	**+0.6**
JHBN	**Jahan bin**	**1.50**	**20**	Pg	**Pb**	**09 56 50.4**	**+0.4**
KAZ2	**Kazeron-Fars-I**	**1.84**	**130**	Pn	**Pb**	**09 56 57.3**	**+1.6**
IPIR	**Pirpir**	**1.99**	**21**	Pn	**Pb**	**09 56 58.0**	**-0.3**
IRAM	**Ramesheh**	**2.23**	**63**	Pn	**Pb**	**09 57 02.0**	**-0.3**
SHI	**Shiraz**	**2.44**	**118**	Pn	**Pn**	**09 57 05.4**	**+3.6**
DSBU	**Dashti - Bushe**	**2.67**	**156**	Pn	**Pn**	**09 57 09.0**	**+4.1**
BDRS	**Dareh Seyedi**	**3.28**	**343**	Pn	**Pn**	**09 57 15.5**	**+2.0**
IDOB	**Doab**	**3.35**	**332**	Pn	**Pn**	**09 57 15.8**	**+1.3**
IMEH	**Mehriz**	**3.96**	**81**	Pn	**Pn**	**09 57 25.9**	**+3.1**
ISFB	**Sefidab**	**3.98**	**27**	Pn	**Pn**	**09 57 25.3**	**+2.3**
ICHK	**Chekchek**	**3.98**	**68**	Pn	**Pn**	**09 57 25.8**	**+2.6**
HAGD	**Aghdareh**	**4.06**	**349**	Pn	**Pn**	**09 57 25.5**	**+1.2**
IBZA	**Bozab**	**4.08**	**334**	Pn	**Pn**	**09 57 25.7**	**+1.2**
IQOM	**Qom**	**4.10**	**12**	Pn	**Pn**	**09 57 26.6**	**+1.8**
IVRN	**Varamin**	**4.40**	**18**	Pn	**Pn**	**09 57 31.2**	**+2.5**
SNQR	**Sonqor, Kerman**	**4.51**	**334**	Pn	**Pn**	**09 57 32.1**	**+1.7**
GLG1	**Gilan-e-Gharb**	**4.80**	**314**	Pn	**Pn**	**09 57 35.4**	**+1.2**
SAKB	**Bahrain**	**4.84**	**175**	S	**Sn**	**09 58 31.9**	**+1.0**
QABG	**Abgarm-Qazvin**	**4.89**	**356**	Pn	**Pn**	**09 57 37.5**	**+1.9**
IDHR	**Dehrash**	**4.95**	**322**	Pn	**Pn**	**09 57 37.8**	**+1.5**
SHMA	**Al-Shehemyia**	**5.01**	**171**	P	**Pn**	**09 57 38.6**	**+1.6**
	SNR=12						
SHMA				S	**Sn**	**09 58 35.9**	**+0.9**
IDMV	**Damavand**	**5.03**	**19**	Pn	**Pn**	**09 57 39.6**	**+2.0**
IALA	**Alasht**	**5.73**	**23**	Pn	**Pn**	**09 57 48.8**	**+1.6**
SMRA	**Abu-Samra**	**6.09**	**173**	P	**Pn**	**09 57 52.9**	**+1.0**
SMRA				S	**Sn**	**09 59 02.6**	**+0.9**
TRNA	**Turayna**	**6.15**	**170**	P	**Pn**	**09 57 54.1**	**+1.4**
	SNR=8.7						
TRNA				S	**Sn**	**09 59 03.4**	**+0.3**
IKIA	**Kiasar**	**6.17**	**29**	Pn	**Pn**	**09 57 55.8**	**+2.6**
JRN	**Qarnain Island**	**6.36**	**156**	S	**Sn**	**09 59 07.8**	**-0.4**
IGLO	**Ghaloghah**	**6.49**	**28**	Pn	**Pn**	**09 57 59.9**	**+2.4**
SLWR	**Sila**	**6.88**	**167**	P	**Pn**	**09 58 04.3**	**+1.6**
SLWR				S	**Sn**	**09 59 20.0**	**-1.1**
SHME	**Shamm**	**7.17**	**130**	S	**Sn**	**09 59 24.8**	**-3.4**
BANOM	**Banah**	**7.36**	**130**	P	**Pn**	**09 58 10.1**	**+0.8**
BANOM				S	**Sn**	**09 59 30.3**	**-2.6**
NAZ	**Nazwa, Dubai**	**7.64**	**138**	P	**Pn**	**09 58 15.5**	**+2.3**
NAZ				S	**Sn**	**09 59 39.2**	**-0.6**
MASF	**Masafi**	**7.65**	**134**	P	**Pn**	**09 58 14.6**	**+1.2**
MASF				S	**Sn**	**09 59 37.7**	**-2.5**
ASUD	**Al Ashush, Dub**	**7.74**	**142**	P	**Pn**	**09 58 16.7**	**+2.1**
ASUD				S	**Sn**	**09 59 41.1**	**-1.2**
MDH	**Madha**	**7.79**	**133**	P	**Pn**	**09 58 16.1**	**+0.8**
MDH				S	**Sn**	**09 59 40.1**	**-3.5**
MZWR	**Madinat Zayed**	**7.81**	**153**	P	**Pn**	**09 58 17.2**	**+1.6**
HATD	**Hatta, Dubai**	**8.04**	**136**	P	**Pn**	**09 58 19.6**	**+0.9**
HATD				S	**Sn**	**09 59 46.5**	**-3.3**
ASHO	**Ashiyiah**	**8.11**	**137**	P	**Pn**	**09 58 21.0**	**+1.4**
ASHO				S	**Sn**	**09 59 49.3**	**-2.1**
MZR	**Muzera**	**8.37**	**158**	P	**Pn**	**09 58 24.1**	**+0.9**
ALNE	**Al Ain**	**8.43**	**142**	P	**Pn**	**09 58 25.5**	**+1.5**
ALNE				S	**Sn**	**09 59 57.7**	**-1.6**
SOHO	**SOHO**	**8.80**	**138**	P	**Pn**	**09 58 29.6**	**+0.5**
SOHO				S	**Sn**	**10 00 07.2**	**-1.3**
UMZA	**Um Al Zommool**	**9.28**	**149**	P	**Pn**	**09 58 37.6**	**+2.0**
UMZA				S	**Sn**	**10 00 15.5**	**-4.6**
ARQ	**Araqi**	**9.42**	**141**	P	**Pn**	**09 58 38.9**	**+1.2**
HOQ	**Hoqain**	**9.68**	**136**	P	**Pn**	**09 58 42.6**	**+1.4**
BSY	**Bisya**	**10.27**	**140**	P	**Pn**	**09 58 50.7**	**+1.5**
	SNR=8.3						
BSY				S	**Sn**	**10 00 39.8**	**-4.7**
SMDO	**Samad**	**10.52**	**135**	P	**Pn**	**09 58 52.9**	**+0.2**
SMDO				S	**Sn**	**10 00 48.2**	**-2.6**
JMDO	**Jabal Madar**	**11.08**	**138**	P	**Pn**	**09 59 01.5**	**+1.1**
	SNR=5.3						
WBK	**Wadi Bani Khal**	**11.42**	**134**	P	**Pn**	**09 59 06.3**	**+1.3**
JLN	**Jalan Bani Buh**	**12.03**	**134**	P	**Pn**	**09 59 13.6**	**+0.2**
MHTO	**MHTO**	**12.11**	**142**	P	**Pn**	**09 59 15.0**	**+0.6**
MHTO				S	**Sn**	**10 01 24.4**	**-5.1**
DOK	**Doka**	**12.70**	**162**	P	**Pn**	**09 59 22.3**	**-0.3**
DOK				S	**Sn**	**10 01 39.9**	**-4.2**
WHFO	**Wadi Hawf**	**13.28**	**164**	P	**Pn**	**09 59 30.0**	**-0.5**
	SNR=5.3						
ABTO	**Aybut**	**13.73**	**167**	P	**Pn**	**09 59 35.2**	**-1.4**
ABTO				S	**Sn**	**10 02 04.7**	**-4.6**
DMTO	**DMTO**	**13.79**	**160**	P	**Pn**	**09 59 35.9**	**-1.4**
BRTR	**Keskin Array B**	**16.06**	**308**	Pn	**Pn**	**10 00 09.2**	**+1.3**
	0.1nm,0.3s,baz=129,slow=11,SNR=6.9						
	2.5nm,1.0s						
BELG	**Belogornoye**	**21.63**	**356**	P	**P**	**10 01 11.0**	**-1.0**
	11nm,0.9s,baz=352,slow=2.9,SNR=4.8						
	11nm,0.9s						
AKASG	**Malin Array Be**	**25.21**	**328**	P	**P**	**10 01 46.6**	**-0.9**
	0.3nm,0.4s,baz=127,slow=7.3,SNR=1.5						
	0.3nm,0.4s						
BVAR	**Borovoye Array**	**26.68**	**28**	P	**P**	**10 02 00.3**	**-0.5**
	0.5nm,0.7s,baz=218,slow=9.4,SNR=4.6						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**29.50**	**48**	P	**P**	**10 02 27.8**	**+1.6**

	0.3nm,0.6s,baz=240,slow=11,SNR=3.6						
	0.3nm,0.6s						
ZALV	Zalesovo Beam	34.01	37	P	P	10 03 07.2	+1.6
	0.6nm,0.5s,baz=232,slow=8.9,SNR=2.3						
	0.6nm,0.5s						
FINES	FINESS Array B	34.43	340	P	P	10 03 07.2	-1.9
	4.5nm,0.9s,baz=195,slow=3.0,SNR=4.7						
	4.5nm,0.9s						
HFS	Hagfors	37.99	331	P	P	10 03 38.6	-1.0
	1.9nm,0.6s,baz=128,slow=9.3,SNR=4.2						
	1.9nm,0.6s						
SONM	Songino Array	45.74	52	P	P	10 04 44.6	+1.3
	0.4nm,0.5s,baz=268,slow=7.0,SNR=2.1						
	0.4nm,0.5s						
TORD	Torodi Ar. Bea	47.77	259	P	P	10 04 59.7	+0.3
	0.7nm,0.7s,baz=60,slow=7.7,SNR=5.1						
	0.7nm,0.7s						
KSRS	Korea Array	63.09	61	P	P	10 06 49.0	-0.6
	1.2nm,0.6s,baz=285,slow=6.1,SNR=5.2						
	1.2nm,0.6s						
YKA	Yellowknife Ar	86.20	353	P	P	10 09 02.1	-1.0
	0.4nm,0.8s,baz=2.4,slow=5.1,SNR=6.5						
	0.4nm,0.8s						

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*TIR **30** 10:03:17.8, 40°.48N×20°.78E, h25km, Md2.3/6, Ml2.6/5*

*THE **30** 10:03:17.8, 40°.5N±0°.7×2°1E±°, h0km±1km, M2.5/14, MLh2.5/14*

*ATH **30** 10:03:17.4, 40°.49N×20°.74E, h14km±1km, ML2.6/7, Manual Solution by E.Daskalaki First location: 2019/12/30 10:04:33, This location: 2019/12/30 10:34:00 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*SKO **30** 10:03:19.3, 40°.45N×20°.67E, h6km, ML2.7*

ISC 30 10:03:17.5±0.8**, 40°.49N**±0°.02×**20°.71E**±0°.03**, h14**km±6km**, n38, σ1s.15**/60**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.14	25	Pg	Pg	10 03 21.6	+0.3
KBN				Sg	Sg	10 03 24.3	+0.4
KBN				AMd		10 03 55.2	
KBN	Korca	0.14	25	P	Pg	10 03 21.6	+0.3
KBN				S	Sg	10 03 24.1	+0.2
NEST	Nestorio	0.27	107	Pg	Pg	10 03 23.0	-0.2
NEST				Sg	Sg	10 03 26.8	-0.4
NEST				AML	AML	10 03 30.1	
	3.2nm,0.3s						
NEST				AMd		10 03 56.5	
NEST	Nestorio	0.27	107	P	Pg	10 03 23.1	-0.2
NEST				S	Sg	10 03 27.3	+0.1
NEST	Nestorio	0.27	107	P	Pg	10 03 23.1	-0.2
NEST				S	Sg	10 03 26.7	-0.6
PENT	Pentalofos	0.44	132	P	Pg	10 03 26.0	-0.3
PENT				S	Sb	10 03 32.7	-1.0
PENT	Pentalofos	0.44	132	P	Pg	10 03 26.0	-0.3
PENT				S	Sb	10 03 32.7	-1.0
LMS2	Laimos Florina	0.48	44	P	Pg	10 03 26.9	0.0
OHR	Ohrid	0.62	6	*i* Pg	Pb	10 03 31.3	+1.1
OHR				*i* Sg	Sn	10 03 41.6	-0.2
OHR				*e*Lg	Lg	10 03 41.9	
	comp=N,152nm,0.5s						
OHR				*e*Lg	Lg	10 03 41.9	
	comp=E,414nm,0.6s						
KPRO	Kipourio	0.74	137	P	Pg	10 03 31.0	-0.8
KPRO				S	Sb	10 03 42.5	+0.4
KPRO	Kipourio	0.74	137	P	Pg	10 03 30.8	-1.0
KPRO				S	Sg	10 03 41.2	-0.3
JAN	Janina	0.84	172	P	Pg	10 03 33.0	-0.9
JAN				S	Sb	10 03 45.5	+0.4
JAN	Janina	0.84	172	P	Pg	10 03 33.5	-0.3
JAN				S	Sb	10 03 45.0	-0.1
IGT	Igoumenitsa	1.00	197	Pg	Pb	10 03 36.9	+0.3
IGT				Sg	Sn	10 03 51.4	+0.4
IGT				AMd		10 04 32.9	
IGT	Igoumenitsa	1.00	197	P	Pg	10 03 37.3	+0.5
IGT	Igoumenitsa	1.00	197	*i* Pg	Pg	10 03 37.2	+0.3
IGT	Igoumenitsa	1.00	197	P	Pb	10 03 36.9	+0.3
PRMD	Pramanda	1.01	163	P	Pb	10 03 36.4	-0.4
KEK	Kerkira	1.04	222	Pn	Pn	10 03 38.1	+0.4
KEK				Sg	Sn	10 03 53.3	+1.2
KEK				AMd		10 04 37.9	
KEK	Kerkira	1.04	222	P	Pb	10 03 37.5	+0.2
KEK				S	Sb	10 03 51.2	+0.3
TIR	Tirane	1.07	324	Pn	Pn	10 03 38.7	+0.7
TIR				Sn	Sb	10 03 44.8	-6.7
TIR				AML	AML	10 03 46.6	
	comp=E,0.5nm,0.2s						
TIR				AMd		10 04 08.9	
PHP	Peshkopia	1.21	351	Pg	Pn	10 03 40.5	+0.4
PHP				Sg	Sg	10 03 57.4	+0.9
PHP				AML	AML	10 04 04.5	
	comp=E,0.3nm,0.6s						
PHP				AMd		10 04 33.9	
PHP	Peshkopia	1.21	351	P	Pg	10 03 41.5	+0.8
TETR	Tetrakomo, Epi	1.23	159	P	Pb	10 03 40.7	+0.2
TETR	Tetrakomo, Epi	1.23	159	P	Pn	10 03 40.0	-0.4
TETR				S	Sb	10 03 56.0	-0.2
THL	Klokotos Trika	1.37	132	P	Pb	10 03 42.7	-0.2
THL				S	Sg	10 04 02.9	+1.3
THL	Klokotos Trika	1.37	132	P	Pn	10 03 41.8	-0.4
GRG	Griva	1.37	70	P	Pg	10 03 43.7	-0.2
LIT	Litokhoron	1.42	105	P	Pg	10 03 44.3	-0.5
LIT				S	Sg	10 04 04.5	+1.3
LIT	Litokhoron	1.42	105	*i* Pg	Pg	10 03 44.9	+0.1
LIT				*i* Sg	Sg	10 04 04.6	+1.3
LIT	Litokhoron	1.42	105	P	Pb	10 03 43.7	-0.1
VAY	Valandovo	1.64	59	*i* Pn	Pb	10 03 48.0	+0.6
VAY				*i* Sn	Sg	10 04 13.0	+2.8
VAY				*e*Lg	Lg	10 04 15.0	
	comp=N,60nm,0.9s						
VAY				*e*Lg	Lg	10 04 17.0	
	comp=E,102nm,1.5s						
LKD2	Lefkada island	1.70	181	Sn	Sg	10 04 11.9	-0.4
LKD2				AML	AML	10 04 18.4	
	comp=E,0.3nm,0.7s						
KNT	Kendrikon	1.79	67	P	Pb	10 03 49.7	-0.4
KNT	Kendrikon	1.79	67	*i* Pn	Pb	10 03 50.5	+0.4
HORT	Hortiatis	1.83	86	P	Pn	10 03 49.2	+0.7
AGG	Agios Georgios	1.93	139	P	Pb	10 03 51.7	-0.7
BARS	Barje	2.47	19	*i* Pn	Pb	10 04 00.2	-1.4

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*ASRS **30** 10:15:28.0±0.8, 53°.80N×91°.10E, h0km, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 30 10:15:37.0±5.2**, 53°.40N×90°.58E, h0**km**, mbtmp2.9**/2**, ML2.4**/2**, Error ellipse: s-maj=49.7km s-min=28.4km az=51.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZALV	Zalesovo Beam	3.47	281	Pn	Pn	10 16 33.5	+1.2
	0.8nm,0.3s,baz=93,slow=16,SNR=8.5						
ZALV				Lg	Lg	10 17 26.4	
	1.0nm,0.3s,baz=95,slow=27,SNR=7.3						
	1.4nm,0.3s						
MKAR	Makanchi Array	8.49	222	Pn	Pn	10 17 41.8	+0.6
	0.1nm,0.3s,baz=42,slow=14,SNR=4.2						
MKAR				Lg	Lg	10 20 06.2	
	0.1nm,0.3s,baz=16,slow=16,SNR=3.7						
	0.4nm,0.5s						
I34MN	SONGINO INFRAS	11.50	113	I	I	11 20 30.0	
	baz=314,slow=330,SNR=0.7						

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*IDC **30** 10:27:07.0±1.2, 36°.62N×141°.21E, h0km, mb3.3/6, mbtmp3.3/8, ML2.8/2, MS2.6/2, Error ellipse: s-maj=26.2km s-min=23.5km az=79.0*

*NIED **30** 10:27:07.7, 36°.80N×141°.35E, h34km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.24; $M_{\theta\theta}$-1.63; $M_{\phi\phi}$1.87; $M_{r\theta}$-0.21; $M_{\theta\phi}$1.12; $M_{\phi r}$1.86; Fault plane solution: $M_0$2.72000×10^{14} NP1:ϕ_s65.00000°, δ50.00000°, λ1.00000°. NP2:ϕ_s334.00000°, δ89.00000°, λ140.00000°.*

*JMA **30** 10:27:07.7±0.1, 36°.8N±0°.2×141°.4E±0°.5, h34km, MD3.7/37, MV3.5/37, E OFF IBARAKI PREF*

JMA Felt I J1 at E OFF IBARAKI PREF .

ISC 30 10:27:08.9±1.7**, 36°.81N**±0°.05×**141°.27E**±0°.07**, h14**km±9km**, n29, σ1s.30**/23**, mb3.3**/6**, 2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	0.48	308	P	Pg	10 27 18.3	-0.1
ONAJ				*e*S	Sg	10 27 26.5	+1.7
ONAJ	Iwakimizuishiy	0.48	308	A	A	10 27 18.3	
	comp=N,6.0nm,0.3s,comp=E,14nm,0.3s						
JHO	Hitachi	0.59	251	⇓P	Pg	10 27 20.2	-0.4
JHO				⇓S	Sb	10 27 29.2	-0.2
JHO	Hitachi	0.59	251	A	A	10 27 20.2	
	comp=N,4.0nm,1.3s,comp=E,4.0nm,0.5s						
JFFD	Fukushimafurud	0.63	297	*i* P	Pg	10 27 20.7	-0.6
JFFD				*e*S	Sg	10 27 30.5	+0.9
JFK	Kawauchi	0.64	331	P	Pg	10 27 20.7	-0.8
JFK				S	Sg	10 27 29.9	-0.1
JFK	Kawauchi	0.64	331	A	A	10 27 20.7	
	comp=N,2.0nm,1.5s,comp=E,6.0nm,0.7s						
JHYU	Hitachinakayam	0.72	230	*e*P	Pg	10 27 21.9	-1.0
JMM	Marumori	1.12	340	*e*P	Pn	10 27 28.2	-2.1
JMM				S	Sb	10 27 43.4	-1.2
JFY	Yanaizu	1.39	296	P	Pn	10 27 33.1	-0.8
JFY				*e*S	Sn	10 27 51.9	-0.1
JYAR	Yonezawaarcadi	1.42	321	A	A	10 27 32.6	
	comp=N,4.0nm,0.5s,comp=E,5.0nm,1.4s						
MJAR	Matsushiro Arr	2.47	265	Pn	Pn	10 27 49.0	+0.1
	comp=E,0.5nm,0.3s,baz=89,slow=15,SNR=29						
MJAR				Sn	Sn	10 28 20.4	+1.4
	comp=E,2.1nm,0.3s,baz=79,slow=31,SNR=3.8						
MJAR				LR	LR	10 28 27.9	
	comp=E,51nm,20.8s,baz=40,slow=33						
	comp=E,4.5nm,0.5s						
ASAJ	Asahikawa	7.37	7	Pn	Pn	10 28 57.8	+1.7
	comp=E,0.3nm,0.3s,baz=200,slow=12,SNR=2.0						
ASAJ				Sn	Sn	10 30 18.3	-1.2
	comp=E,0.1nm,0.3s,baz=261,slow=20,SNR=2.4						
	comp=E,6.4nm,0.9s						
JCJ	Chichijima	9.71	175	LR	LR	10 33 46.1	
	comp=E,80nm,18.4s,baz=149,slow=42						
SONM	Songino Array	27.82	304	P	P	10 32 57.8	0.0
	comp=E,0.2nm,0.3s,baz=93,slow=8.7,SNR=1.1						
	comp=E,0.2nm,0.3s						
H11N2	WAKE ISLAND Hy	28.13	120	T	T	11 02 22.1	
	baz=313,slow=75,SNR=75						
H11N1	WAKE ISLAND Hy	28.14	120	T	T	11 02 22.7	
	baz=313,slow=75,SNR=57						
H11N3	WAKE ISLAND Hy	28.15	120	T	T	11 02 21.4	
	baz=313,slow=75,SNR=45						
H11S1	WAKE ISLAND Hy	28.84	122	T	T	11 03 14.8	
	baz=315,slow=76,SNR=58						
H11S3	WAKE ISLAND Hy	28.84	122	T	T	11 03 13.8	
	baz=315,slow=76,SNR=41						
H11S2	WAKE ISLAND Hy	28.85	122	T	T	11 03 14.9	
	baz=315,slow=76,SNR=26						
ZALV	Zalesovo Beam	41.98	313	P	P	10 34 60.0	+0.6
	comp=E,0.3nm,0.5s,baz=101,slow=7.5,SNR=4.1						
	comp=E,0.3nm,0.5s						
MKAR	Makanchi Array	44.14	302	P	P	10 35 16.3	-0.7
	comp=E,0.2nm,0.6s,baz=96,slow=8.9,SNR=2.0						
	comp=E,0.2nm,0.6s						
ILAR	Eielson Array	49.75	32	P	P	10 36 03.4	+2.8
	comp=E,0.3nm,0.7s,baz=271,slow=6.4,SNR=2.0						
	comp=E,0.3nm,0.7s						
WRA	Warramunga Arr	56.82	188	P	P	10 36 51.0	-2.0
	comp=E,0.4nm,0.6s,baz=1.7,slow=7.5,SNR=4.9						
	comp=E,0.4nm,0.6s						
ASAR	Alice Springs	60.55	188	P	P	10 37 18.3	-0.7
	comp=E,0.2nm,0.8s,baz=356,slow=6.3,SNR=1.2						
	comp=E,0.2nm,0.8s						
H03N2	Juan Fernandez	147.12	96	T	T	13 31 07.0	
	baz=291,slow=76,SNR=28						
H03N3	Juan Fernandez	147.13	96	T	T	13 31 08.4	
	baz=291,slow=76,SNR=30						
H03N1	Juan Fernandez	147.13	96	T	T	13 31 08.2	
	baz=291,slow=76,SNR=31						

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*IDC **30** 10:54:01.2±0.7, 54°.64N×117°.83W, h0km, mb3.3/3, mbtmp3.4/13, ML3.2/10, MS3.1/4, Error ellipse: s-maj=12.7km s-min=7.7km az=91.0*

ISC 30 10:54:00.6±0.8**, 54°.75N**±0°.06×**117°.44W**±0°.08**, h10**km**, n14, σ2s.44**/16**, mb3.4**/3**, Alberta**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEW	Newport	6.50	178	Pn	Pn	10 55 35.1	-1.1
	0.4nm,0.3s,baz=5.6,slow=10,SNR=7.6						
NEW				Pg	Pb	10 55 54.3	+0.6
	3.2nm,0.3s,baz=2.1,slow=15,SNR=10						
NEW				Lg	Lg	10 57 14.5	
	11nm,0.3s,baz=90,slow=20,SNR=7.4						
NEW				LR	LR	10 57 59.3	
	comp=Z,48nm,20.6s,baz=337,slow=37						
	1.0nm,0.3s						
BBB	Bella Bella	6.87	252	Pn	Pn	10 55 39.5	-1.7
	0.5nm,0.3s,baz=67,slow=7.7,SNR=1.0						
BBB				Pg	Pb	10 55 50.5	-9.4
	1.6nm,0.3s,baz=88,slow=16,SNR=4.3						
BBB				Lg	Lg	10 57 13.3	
	6.8nm,0.3s,baz=332,slow=19,SNR=6.6						
	18nm,1.0s						
YKA	Yellowknife Ar	7.91	10	Pn	Pn	10 55 58.8	+3.3
	0.3nm,0.3s,baz=192,slow=19,SNR=18						
YKA				Sn	Sn	10 57 24.4	-0.5
	1.2nm,0.3s,baz=211,slow=17,SNR=3.9						
YKA				Lg	Lg	10 58 09.8	
	1.7nm,0.3s,baz=192,slow=28,SNR=7.0						
	0.3nm,0.3s						
PDAR	Pinedale Array	13.06	153	Pn	Pn	10 57 08.5	+2.3
	0.1nm,0.3s,baz=330,slow=12,SNR=6.5						
PDAR				LR	LR	11 02 29.2	
	comp=Z,61nm,19.1s,baz=324,slow=39						
	0.5nm,0.8s						
YBH	Yreka Blue Hor	13.48	197	Pn	Pn	10 57 13.3	+1.5
	baz=5.5,slow=13,SNR=2.1						
	0.2nm,0.7s						
ULM	Lac du Bonnet	13.87	100	Pn	Pn	10 57 16.1	-0.9
	0.2nm,0.3s,baz=313,slow=13,SNR=1.8						
ULM				Sn	Sn	10 59 46.2	-4.7
	0.4nm,0.3s,baz=335,slow=19,SNR=3.8						
ULM				Lg	Lg	11 01 16.5	
	0.4nm,0.3s,baz=3.5,slow=19,SNR=4.0						
	1.0nm,0.5s						
ELK	Elko	14.09	173	Pn	Pn	10 57 21.1	+0.9
	0.1nm,0.3s,baz=5.6,slow=17,SNR=2.3						
ELK				Lg	Lg	11 01 13.4	
	baz=281,slow=19						
	0.3nm,0.4s						
INK	Inuvik	15.53	337	Pn	Pn	10 57 35.2	-4.1
	0.3nm,0.3s,baz=149,slow=7.7,SNR=22						
INK				Sn	Sn	11 00 15.5	-16
	0.1nm,0.3s,baz=161,slow=24,SNR=1.4						
	4.1nm,0.7s						
NVAR	Mina Array Bea	16.33	182	Pn	Pn	10 57 49.6	-0.4
	0.1nm,0.3s,baz=4.4,slow=11,SNR=4.0						
	0.5nm,0.7s						
ILAR	Eielson Array	17.72	316	Pn	Pn	10 58 05.3	-1.8
	baz=113,slow=11,SNR=8.0						
ILAR				Lg	Lg	11 03 07.7	
	baz=104,slow=29,SNR=1.6						
	0.6nm,0.8s						
ANMO	Albuquerque	21.23	154	P	P	10 58 48.0	+1.4
	1.9nm,1.1s,baz=328,slow=13,SNR=4.4						
ANMO				LR	LR	11 07 52.8	
	comp=Z,75nm,20.3s,baz=333,slow=39						
	1.9nm,1.1s						
RES	Resolute Bay	21.91	16	P	P	10 58 56.1	+2.7
	0.5nm,0.7s,baz=219,slow=13,SNR=1.4						
	0.5nm,0.7s						
TXAR	Lajitas Array	27.28	153	P	P	10 59 46.4	+1.4
	0.9nm,1.0s,baz=342,slow=9.8,SNR=6.2						
	0.9nm,1.0s						
SFJD	Kangerlussuaq	32.97	42	LR	LR	11 14 22.7	
	comp=Z,82nm,19.2s,baz=350,slow=37						

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*IDC **30** 11:22:26.5±0.8, 6°.53N×125°.14E, h0km, mb3.8/9, mbtmp3.8/9, MS3.1/1, Error ellipse: s-maj=20.5km s-min=8.9km az=122.0*

*NEIC **30** 11:22:28.6±1.1, 6°.60N±0°.08×125°.2E±0°.1, h10km±1km, mb4.2/11, Error ellipse: s-maj=20.8km s-min=8.5km az=305.0*

ISC 30 11:22:27.9±0.7**, 6°.57N**±0°.08×**125°.2E**±0°.1**, h10**km**, n23, σ0s.62**/21**, mb3.9**/15**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.62	37	Pg	Pg	11 22 39.5	-0.5
	167nm,0.3s,baz=254,slow=15,SNR=22						
DAV				LR	LR	11 22 46.8	
	comp=Z,177nm,19.6s,baz=336,slow=29						
DAV				Lg	Lg	11 22 49.9	
	503nm,0.3s,baz=163,slow=19,SNR=11						
DAV	Davao City (W)	0.62	37		Pg	11 22 39.4	-0.6
DAV	Davao City (W)	0.62	37	P	Pg	11 22 40.0	0.0
TOLI2	Tolitoli	6.99	219	Pn	Pn	11 24 09.9	-0.6
KNRA	Kununurra	22.38	171	P	P	11 27 26.9	+0.3
KNRA				IAmb	IAmb	11 27 33.2	
	comp=Z,14nm,0.9s						
FITZ	Fitzroy Crossi	24.52	179	P	P	11 27 47.5	-0.3
	comp=Z,2.5nm,0.8s,baz=358,slow=7.6,SNR=8.2						
	comp=Z,2.5nm,0.8s						
FITZ	Fitzroy Crossi	24.52	179	IAmb	IAmb	11 28 29.7	
	comp=Z,3.0nm,1.4s						
COEN	Coen	27.09	139	P	P	11 28 11.0	-0.2
COEN				IAmb	IAmb	11 28 20.9	
	comp=Z,7.1nm,1.1s						
WB0	Warramunga Arr	27.69	161	P	P	11 28 16.0	-0.5
WB0				IAmb	IAmb	11 28 29.4	
	comp=Z,6.6nm,1.1s						
WRAB	Tennant Creek	27.83	161	P	P	11 28 17.7	0.0
WRAB				IAmb	IAmb	11 28 33.3	
	comp=Z,3.5nm,0.9s						
WRA	Warramunga Arr	27.84	161	P	P	11 28 19.1	+1.3
	comp=Z,0.9nm,0.9s,baz=328,slow=11,SNR=6.3						
	comp=Z,0.9nm,0.9s						
WR8	Warramunga Arr	27.90	161	P	P	11 28 18.6	+0.2
WR8				IAmb	IAmb	11 28 58.7	
	comp=Z,5.0nm,1.1s						
WR0	Warramunga Arr	27.92	161	P	P	11 28 19.4	+0.9
WR0				IAmb	IAmb	11 28 52.5	
	comp=Z,8.8nm,1.4s						
CMAR	Chiang Mai Arr	28.18	297	P	P	11 28 20.7	-0.2
	comp=Z,0.2nm,0.3s,baz=101,slow=9.0,SNR=5.0						
	comp=Z,0.2nm,0.3s						
AS31	Alice Springs	31.23	164	P	P	11 28 47.8	-0.1
ASAR	Alice Springs	31.23	164	P	P	11 28 47.0	-0.9
	comp=Z,0.3nm,0.5s,baz=344,slow=7.1,SNR=9.2						
	comp=Z,0.3nm,0.5s						
BBOO	Buckleboo	40.50	166	P	P	11 30 07.9	+0.7
STKA	Stephens Creek	41.31	159	P	P	11 30 13.6	-0.3
	comp=Z,1.8nm,0.7s,baz=326,slow=11,SNR=2.9						
	comp=Z,1.8nm,0.7s						
PETK	Petropavlovsk-	53.42	24	P	P	11 31 48.4	+0.4
	comp=Z,5.5nm,1.0s,baz=225,slow=5.9,SNR=2.7						
	comp=Z,5.5nm,1.0s						
MKAR	Makanchi Array	54.37	325	P	P	11 31 54.5	-0.5
	comp=Z,0.8nm,1.0s,baz=126,slow=7.3,SNR=3.0						
	comp=Z,0.8nm,1.0s						
BVAR	Borovoye Array	64.12	327	P	P	11 33 03.6	+1.2
	comp=Z,0.4nm,0.6s,baz=98,slow=11,SNR=1.5						
	comp=Z,0.4nm,0.6s						
ILAR	Eielson Array	83.21	26	P	P	11 34 54.1	-0.2
	comp=Z,0.6nm,0.9s,baz=246,slow=5.6,SNR=5.5						
	comp=Z,0.6nm,0.9s						
ASF	Jabal al Asfar	85.12	302	LR	LR	12 17 57.4	
	comp=Z,8.9nm,18.7s,baz=204,slow=39						

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*IDC **30** 11:25:29.8±1.4, 1°.08N×96°.94E, h0km, mb3.7/6, mbtmp3.7/8, ML3.7/2, MS3.1/2, Error ellipse: s-maj=35.1km s-min=21.2km az=58.0*

*DJA **30** 11:25:32.7±1.0, 1°N±3°×9°7E±°, h20km±7km, M3.9/12, mb4.0/2, MLv3.9/12*

ISC 30 11:25:33.6±1.0**, 1°.14N**±0°.06×**96°.99E**±0°.07**, h25**km**, n34, σ0s.92**/22**, mb3.8**/6**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	Gunungsitoli	0.61	75	P	Pb	11 25 45.4	-0.3
GSI				S	Sb	11 25 54.1	+0.1
SNSI	Sinabang, Aceh	1.42	332	P	Pn	11 25 57.5	-0.4
PBSI	Pulau Batu	1.76	133	P	Pn	11 26 02.5	0.0
KCSI	Kotacane, Aceh	2.49	18	P	Pn	11 26 12.1	-0.5
PSI	Prapat	2.54	50	Pn	Pn	11 26 12.5	-0.9
	4.0nm,0.3s,baz=293,slow=7.6,SNR=17						
PSI				Sn	Sn	11 26 46.0	+2.3
	3.0nm,0.3s,baz=196,slow=18,SNR=4.6						
PSI				LR	LR	11 27 10.8	
	comp=Z,99nm,19.2s,baz=284,slow=40						
	8.7nm,0.3s						
PSI	Prapat	2.54	50	P	Pn	11 26 12.4	-1.1
MNSI	Mandailing Nat	2.62	98	P	Pn	11 26 13.3	-1.0
MLSI	Meulaboh, Aceh	3.16	349	P	Pn	11 26 20.9	-0.9
SISI	Saibi	3.23	139	P	Pn	11 26 21.3	-1.5
LHMI	Lhok Sumawe	4.06	359	P	Pn	11 26 33.6	-0.6
PPSI	Pulau Pagai	4.92	142	P	Pn	11 26 46.2	+0.2
IPM	Ipoh	5.22	51	P	Pn	11 26 49.9	-0.3
	0.1nm11nm,0.7s						
KULM	Kulim	5.51	42	P	Pn	11 26 53.1	-1.1
CMAR	Chiang Mai Arr	17.31	6	P	Pn	11 29 32.8	-1.0
	0.2nm,0.3s,baz=196,slow=11,SNR=6.5						
	1.0nm,0.7s						
H08S2	Diego Garcia H	25.94	250	T	T	11 58 02.2	
	baz=72,slow=76						
H08S3	Diego Garcia H	25.95	250	T	T	11 58 02.0	
	baz=72,slow=76						
H08S1	Diego Carcia H	25.96	250	T	T	11 58 04.3	
	baz=72,slow=76						
H01W3	Cape Leeuwin H	39.27	157	T	T	12 14 35.4	
	baz=333,slow=76						
H01W2	Cape Leeuwin H	39.29	157	T	T	12 14 38.4	
	baz=333,slow=76						
H01W1	Cape Leeuwin H	39.29	157	T	T	12 14 39.3	
	baz=333,slow=76						
WRA	Warramunga Arr	42.19	122	P	P	11 33 24.5	-0.3
	0.6nm,1.0s,baz=298,slow=8.1,SNR=2.1						
	0.6nm,1.0s						
ASAR	Alice Springs	43.53	127	P	P	11 33 35.9	+0.2
	0.2nm,0.3s,baz=299,slow=7.5,SNR=7.4						
	0.2nm,0.3s						
SONM	Songino Array	47.22	9	P	P	11 34 04.8	+0.2
	0.3nm,0.4s,baz=190,slow=8.2,SNR=3.5						
	0.3nm,0.4s						
MKAR	Makanchi Array	47.24	346	P	P	11 34 05.4	+0.6
	0.8nm,0.5s,baz=162,slow=8.8,SNR=12						
	0.8nm,0.5s						
ZALV	Zalesovo Beam	53.58	351	P	P	11 34 53.2	+0.7
	2.0nm,0.7s,baz=165,slow=6.2,SNR=6.8						
	2.0nm,0.7s						
BVAR	Borovoye Array	56.23	341	P	P	11 35 11.8	+0.1
	0.9nm,0.6s,baz=131,slow=8.4,SNR=4.1						
	0.9nm,0.6s						
H04N2	CROZET ISLANDS	61.61	214	T	T	12 42 45.1	
	baz=54,slow=75						
H04N1	CROZET ISLANDS	61.62	214	T	T	12 42 42.1	
	baz=54,slow=75						
H04N3	CROZET ISLANDS	61.62	214	T	T	12 42 41.9	
	baz=54,slow=75						
H04S1	CROZET ISLANDS	61.95	213	T	T	12 43 04.5	
	baz=54,slow=75						
H04S3	CROZET ISLANDS	61.96	213	T	T	12 43 04.1	
	baz=54,slow=75						
H04S2	CROZET ISLANDS	61.97	213	T	T	12 43 05.5	
	baz=54,slow=75						
BRTR	Keskin Array B	68.99	312	LR	LR	12 07 30.8	
	comp=Z,47nm,20.8s,baz=348,slow=36						
TXAR	Lajitas Array	143.83	31	PKP	PKPbc	11 45 05.5	+0.2
	0.1nm,0.4s,baz=298,slow=4.2,SNR=1.5						

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*IDC **30** 11:40:59.8±1.3, 0°.99N×97°.28E, h0km, mb4.0/9, mbtmp4.0/10, ML4.2/1, MS2.9/3, Error ellipse: s-maj=33.5km s-min=18.3km az=64.0*

*DJA **30** 11:41:00.5±1.7, 1°N±6°×9°7E±1°3, h13km±7km, M4.0/7, MLv4.0/7*

*NEIC **30** 11:41:05.3±0.8, 1°.07N±0°.09×97°.34E±0°.08, h31km±6km, mb4.4/12, Error ellipse: s-maj=15.8km s-min=6.3km az=137.0*

ISC 30 11:41:04.3±0.7**, 1°.09N**±0°.06×**97°.30E**±0°.07**, h27**km**, n52, σ0s.91**/43**, mb4.2**/19**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	Gunungsitoli	0.35	52		Pn	11 41 13.8	+0.2
GSI	Gunungsitoli	0.35	52	P	Pb	11 41 12.8	+0.6
PBSI	Pulau Batu	1.50	139	P	Pn	11 41 29.1	-0.3
TPTI		2.16	357	P	Pn	11 41 36.9	-1.6
RPSI	Rantau Prapat	2.27	45		Pn	11 41 39.7	-0.4
RPSI					Sb	11 42 12.7	+0.3
MNSI	Mandailing Nat	2.29	97	P	Pn	11 41 40.3	-0.1
PSI	Prapat	2.35	44	Pn	Pn	11 41 39.7	-1.6
	0.8nm,0.3s,baz=203,slow=12,SNR=6.4						

PSI				Sn	Sb	11 42 12.7	-2.0
	2.3nm,0.3s,baz=190,slow=7.9,SNR=5.9						
PSI				LR	LR	11 42 19.6	
	comp=Z,131nm,20.9s,baz=157,slow=34						
PSI	Prapat	2.35	44	P	Pn	11 41 42.7	+1.5
IPM	Ipoh	5.02	48		Pn	11 42 18.2	+0.4
KULM	Kulim	5.35	39		Pn	11 42 22.9	+0.5
CMBY	CAMPBELL BAY	6.78	330	IAML		11 42 01.1	
	comp=N,294nm,0.1s						
CMBY				IAML		11 42 03.8	
	comp=E,385nm,0.3s						
CMBY				eP	Pn	11 42 43.2	+1.1
CMBY				eS	Sn	11 43 57.9	-0.5
PBA	Port Blair	11.43	337	eP	Pn	11 43 45.2	-0.7
PBA				IAML		11 44 33.2	
	comp=E,97nm,0.3s						
PBA				IAML		11 44 33.6	
	comp=N,60nm,0.3s						
PBA				eS	Sn	11 45 43.5	-9.3
DGPR	DIGLIPUR	12.77	340	eP	Pn	11 44 03.8	-0.4
DGPR				eS	Sn	11 46 14.0	-12
DGPR				IAML		11 46 53.0	
	comp=N,31nm,0.1s						
DGPR				IAML		11 46 53.1	
	comp=E,48nm,0.1s						
CMAR	Chiang Mai Arr	17.34	5	P	Pn	11 45 03.5	-1.0
	comp=E,0.3nm,0.3s,baz=197,slow=11,SNR=22						
CMAR				LR	LR	11 52 05.3	
	comp=E,48nm,18.6s,baz=190,slow=38						
	comp=E,2.9nm,0.7s						
PALK	Pallekele	17.65	291	LR	LR	11 51 25.6	
	comp=E,73nm,18.4s,baz=118,slow=35						
AGT	Agartala	23.41	346	IAmb	IAmb	11 46 06.5	
	comp=Z,10nm,0.9s						
AGT				eP	P	11 46 10.5	-0.7
AGT				eS	S	11 50 24.9	+2.1
IMP	Imphal	23.83	352	IAmb	IAmb	11 42 39.5	
	comp=Z,3.9nm,0.4s						
IMP				eP	P	11 46 15.3	0.0
IMP				eS	S	11 50 30.7	+0.9
KOHI	KOHIMA	24.68	353	IAmb	IAmb	11 45 04.8	
	comp=Z,4.3nm,0.6s						
KOHI				eP	P	11 46 23.8	+0.5
KOHI				eS	S	11 50 42.9	-0.7
SHL	Shillong	24.89	348	P	P	11 46 25.0	-0.2
SHL				IAmb	IAmb	11 46 26.3	
	comp=Z,11nm,0.7s						
H08S2	Diego Garcia H	26.22	250	T	T	12 13 43.6	
	baz=71,slow=75,SNR=291						
H08S3	Diego Garcia H	26.23	250	T	T	12 13 47.1	
	baz=71,slow=75,SNR=1102						
H08S1	Diego Carcia H	26.24	250	T	T	12 13 48.2	
	baz=71,slow=75,SNR=110						
LZDM	Lanzhou Array	35.20	9	P	P	11 47 56.2	-0.4
	comp=Z,0.6nm,0.3s,baz=177,slow=5.8,SNR=1.6						
	comp=Z,0.6nm,0.3s						
GTA	Gaotai	38.21	3	eP	P	11 48 23.3	+1.3
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
H01W3	Cape Leeuwin H	39.10	158	T	T	12 29 52.1	
	baz=334,slow=76,SNR=32						
H01W2	Cape Leeuwin H	39.12	158	T	T	12 29 59.7	
	baz=334,slow=76,SNR=31						
H01W1	Cape Leeuwin H	39.12	158	T	T	12 29 51.6	
	baz=334,slow=76,SNR=26						
WB0	Warramunga Arr	41.86	122	P	P	11 48 51.3	-1.1
WB0				IAmb	IAmb	11 49 25.7	
	comp=Z,8.5nm,1.5s						
WRA	Warramunga Arr	41.89	122	P	P	11 48 51.4	-1.3
	comp=Z,0.7nm,0.8s,baz=296,slow=7.7,SNR=3.1						
	comp=Z,0.7nm,0.8s						
WRAB	Tennant Creek	41.89	122	P	P	11 48 52.3	-0.4
WRAB				IAmb	IAmb	11 49 34.4	
	comp=Z,5.3nm,1.3s						
WB2	Warramunga Arr	41.90	122	P	P	11 48 53.2	+0.4
WR8	Warramunga Arr	42.03	122	P	P	11 48 52.3	-1.6
ASAR	Alice Springs	43.25	127	P	P	11 49 03.1	-0.6
	comp=Z,0.4nm,0.8s,baz=301,slow=8.1,SNR=4.6						
	comp=Z,0.4nm,0.8s						
MANEM	Manem	43.28	330	P	P	11 49 05.1	+1.1
MANEM				IAmb	IAmb	11 49 17.6	
	comp=Z,13nm,0.8s						
KSRS	Korea Array	45.88	34	P	P	11 49 24.6	+0.1
	comp=Z,2.5nm,0.8s,baz=224,slow=9.1,SNR=7.6						
	comp=Z,2.5nm,0.8s						
SONM	Songino Array	47.23	8	P	P	11 49 35.3	+0.2
	comp=Z,1.1nm,0.6s,baz=195,slow=9.7,SNR=5.7						
	comp=Z,1.1nm,0.6s						
SONM	Songino Array	47.23	8	IAmb	IAmb	11 49 38.4	
	comp=Z,0.9nm,0.8s						
MK31	Makanchi Array	47.38	346	P	P	11 49 36.8	+0.7
MK31				IAmb	IAmb	11 49 38.1	
	comp=Z,2.6nm,0.9s						
MKAR	Makanchi Array	47.38	346	P	P	11 49 37.0	+0.9
	comp=Z,2.3nm,0.7s,baz=161,slow=8.7,SNR=22						
	comp=Z,2.3nm,0.7s						
STKA	Stephens Creek	53.20	132	P	P	11 50 20.0	-0.5
	comp=Z,3.0nm,0.9s,baz=315,slow=10.0,SNR=3.3						
	comp=Z,3.0nm,0.9s						
STKA	Stephens Creek	53.20	132	IAmb	IAmb	11 50 28.6	
	comp=Z,36nm,1.2s						
ZAA0	Zalesovo Array	53.69	351		P	11 50 23.6	0.0
ZAA0				IAmb	IAmb	11 50 24.7	
	comp=Z,4.9nm,0.8s						
ZALV	Zalesovo Beam	53.69	351	P	P	11 50 24.0	+0.4
	comp=Z,4.2nm,0.7s,baz=177,slow=6.8,SNR=23						
	comp=Z,4.2nm,0.7s						
ZALV	Zalesovo Beam	53.69	351		P	11 50 23.5	0.0
BVAR	Borovoye Array	56.39	341	P	P	11 50 43.1	-0.1
	comp=Z,1.4nm,0.7s,baz=131,slow=6.7,SNR=7.5						
	comp=Z,1.4nm,0.7s						
ABKAR	Akbulak array	57.66	332	P	P	11 50 52.4	+0.2
H04N2	CROZET ISLANDS	61.74	214	T	T	12 58 02.5	
	baz=54,slow=75,SNR=478						
H04N1	CROZET ISLANDS	61.75	214	T	T	12 58 03.1	
	baz=54,slow=75,SNR=563						
H04N3	CROZET ISLANDS	61.76	214	T	T	12 58 17.3	
	baz=54,slow=75,SNR=550						
H04S1	CROZET ISLANDS	62.08	214	T	T	12 58 30.2	
	baz=54,slow=75,SNR=46						
H04S3	CROZET ISLANDS	62.09	214	T	T	12 58 29.9	
	baz=54,slow=75,SNR=48						
H04S2	CROZET ISLANDS	62.09	214	T	T	12 58 29.5	
	baz=54,slow=75,SNR=37						

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*IDC **30** 11:45:57.7±2.7, 5°.73S×147°.64E, h0^{km}, mb3.9/2, mbtmp4.0/4, ML4.2/1, Error ellipse: s-maj=70.4km s-min=40.1km az=99.0*

ISC 30 11:45:58.7±1.9, **5°.8S**±0°.1×**147°.7E**±0°.4, **h10**^{km}, **n6**, σ**0^{s}.79**/7, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.64	188	Pn	Pn	11 46 55.5	+0.3
	17nm,0.4s,baz=8.1,slow=7.1,SNR=22						
PMG				Sn	Sn	11 47 37.4	-0.8
	12nm,0.3s,baz=344,slow=20,SNR=9.8						
WRA	Warramunga Arr	19.16	221	P	Pn	11 50 23.3	0.0
	0.8nm,0.3s,baz=44,slow=11,SNR=39						
	1.8nm,0.3s						
ASAR	Alice Springs	22.20	215	P	P	11 50 56.1	+0.8
	1.6nm,0.4s,baz=50,slow=9.4,SNR=93						
	1.6nm,0.4s						
STKA	Stephens Creek	26.58	192	P	P	11 51 37.4	+0.2
	1.0nm,0.4s,baz=10,slow=11,SNR=2.9						
	1.0nm,0.4s						
LPAZ	La Paz	138.31	122	PKP	PKiKP	12 05 28.4	+0.2
	1.2nm,0.8s,baz=225,slow=3.4,SNR=3.7						
TORD	Torodi Ar. Bea	145.71	285	PKPbc	PKPab	12 05 38.3	-1.0
	0.2nm,0.4s,baz=52,slow=4.6,SNR=1.3						

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*IDC **30** 11:51:47.4±1.3, 27°.24N×56°.60E, h0^{km}, mb4.0/22, mbtmp4.0/24, ML3.8/2, Error ellipse: s-maj=28.2km s-min=15.8km az=174.0*

*DSN **30** 11:51:50.0±0.9, 27°.45N×56°.83E, h10^{km}, ML3.8/17, Error ellipse: s-maj=15.1km s-min=8.5km az=108.0*

*NEIC **30** 11:51:50.6±1.7, 27°.38N±0°.08×56°.6E±0°.1, h10^{km}±1^{km}, mb4.4/39, Error ellipse: s-maj=16.8km s-min=13.5km az=94.0*

*OMAN **30** 11:51:51.5±0.2, 27°.35N×56°.77E, h10^{km}±2^{km}, mb4.7/10, ml4.1/23, Error ellipse: s-maj=3.2km s-min=1.2km az=18.0*

*TEH **30** 11:51:52.2, 27°.34N×56°.70E, h20^{km}±45^{km}*

ISC 30 11:51:52.5±0.9, **27°.37N**±0°.03×**56°.68E**±0°.03, **h28**^{km}±7^{km}, **n159**, σ**1^{s}.48**/186, **mb4.3**/46, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBND	Bandar-abas	0.15	305	Pg	Pb	11 51 56.9	-1.1
GENO	Geno	0.45	275	Pg	Pb	11 52 02.5	+0.3
BNDS	Bandar-Abbas	0.45	274	Pg	Pb	11 52 01.7	-0.5
KHNJ	Kahnooj	1.08	57	Pg	Pb	11 52 11.7	-0.9
SHME	Shamm	1.40	200	P	Pb	11 52 18.3	+0.4
	SNR=37						
SHME				S	Sb	11 52 37.5	+2.2
SHME	Shamm	1.40	200	eP	Pb	11 52 17.3	-0.6
	SNR=39						
SHME				S	Sb	11 52 37.8	+2.4
BANOM	Banah	1.48	193	P	Pb	11 52 18.8	-0.6
BANOM				S	Sb	11 52 40.0	+2.3
BANOM	Banah	1.48	193	eP	Pb	11 52 18.5	-0.8
	SNR=21						
BANOM				S	Sb	11 52 39.9	+2.3
MASF	Masafi	2.04	193	P	Pb	11 52 27.1	-1.8
	SNR=129						
MASF				S	Sb	11 52 53.8	-0.1
UMQ	Umm Al-Quwin	2.04	207	P	Pn	11 52 25.5	+0.4
	SNR=6.0						
UMQ				S	Sb	11 52 55.9	+1.9
MSFE	Esma-Masafi	2.05	193	eP	Pn	11 52 26.6	+1.5
	SNR=131						
LAR1	LAR	2.07	279	Pn	Pn	11 52 27.3	+1.9
MDH	Madha	2.09	189	P	Pn	11 52 25.6	0.0
	SNR=37						
MDH				S	Sn	11 52 52.1	+1.4
MDH	Madha	2.09	189	eP	Pn	11 52 25.7	+0.1
	SNR=37						
NGRK	Negar Kerman	2.27	1	Pn	Pn	11 52 30.4	+1.9
KBAM	BAM	2.36	41	Pn	Pn	11 52 31.6	+2.1
UOSS	Minazif	2.45	190	P	Pn	11 52 31.7	+1.1
UOSS				S	Sn	11 52 58.7	-0.9
UOSS	Minazif	2.45	190		Pn	11 52 31.3	+0.7
UOSS	Minazif	2.45	190	eP	Pn	11 52 31.2	+0.6
	SNR=26						
NAZ	Nazwa, Dubai	2.54	201	eP	Pn	11 52 34.2	+2.3
	SNR=8.0						
HATD	Hatta, Dubai	2.58	191	P	Pn	11 52 33.0	+0.6
	SNR=21						
HATD				S	Sb	11 53 08.6	-0.7
HATD	Hatta, Dubai	2.58	191	eP	Pn	11 52 33.1	+0.7
	SNR=21						
CHMN	Cheshme madani	2.60	17	Pn	Pn	11 52 35.7	+2.6
ASHO	Ashiyiah	2.73	192	P	Pn	11 52 36.6	+2.1
	SNR=93						
ASHO				S	Sb	11 53 12.3	-1.4
ASHO	Ashiyiah	2.73	192	eP	Pn	11 52 36.0	+1.5
	SNR=93						
FAQ	Al Faqa, Dubai	2.79	201	P	Pn	11 52 37.6	+2.4
	SNR=10						
FAQ				S	Sb	11 53 14.0	-1.3
FAQ	Al Faqa, Dubai	2.79	201	eP	Pn	11 52 37.3	+2.1
	SNR=10						
JHRM	Jahrom	2.97	293	Pn	Pn	11 52 39.8	+1.9
ASUD	Al Ashush, Dub	2.98	204	P	Pn	11 52 40.9	+2.9
	SNR=18						
ASUD				S	Sb	11 53 18.5	-2.5
ASUD	Al Ashush, Dub	2.98	204	i P	Pn	11 52 40.5	+2.5
	SNR=18						
KHGB	Koh Gabri	3.00	357	Pn	Pn	11 52 41.2	+2.7
KRM1	Kerman Provinc	3.17	9	Pn	Pn	11 52 43.1	+2.4
AJN	Ajban	3.18	209	P	Pn	11 52 42.9	+2.3
	SNR=10						
AJN				S	Sn	11 53 19.5	+1.9
AJN	Ajban	3.18	209	i P	Pn	11 52 42.7	+2.1
	SNR=9.9						
SOHO	SOHO	3.22	182	P	Pn	11 52 41.5	+0.3
SOHO	SOHO	3.22	182	i P	Pn	11 52 40.6	-0.6
	SNR=12						
ALNE	Al Ain	3.40	194	P	Pn	11 52 45.5	+1.8
	SNR=8.3						
ALNE				S	Sn	11 53 27.1	+4.0
ALNE	Al Ain	3.40	194	i P	Pn	11 52 45.2	+1.5
	SNR=8.3						
ZRDN	Zarand Kerman	3.59	358	Pn	Pn	11 52 48.8	+2.3
HOQ	Hoqain	3.81	171	P	Pn	11 52 49.7	+0.3
	SNR=25						
HOQ				S	Sn	11 53 32.2	-1.0
CHBR	Chabahar	3.84	116	Pn	Pn	11 52 51.0	+1.2
ARQ	Araqi	4.01	182	P	Pn	11 52 54.7	+2.5
	SNR=27						
ARQ				S	Sn	11 53 41.0	+2.7
BIDO	Bidbid	4.05	161	P	Pn	11 52 52.7	+0.1
	SNR=26						
BIDO				S	Sn	11 53 38.2	-0.9
IBAF	Bafgh	4.32	347	Pn	Pn	11 52 57.8	+1.3
MZWR	Madinat Zayed	4.39	216	P	Pn	11 52 58.5	+1.3
MZWR				S	Sn	11 53 48.5	+1.1
IMEH	Mehriz	4.40	336	Pn	Pn	11 52 59.7	+2.1
SMDO	Samad	4.46	164	P	Pn	11 52 59.4	+1.0
	SNR=38						
SMDO				S	Sn	11 53 50.2	+0.7
NGCH	Negor - Chabah	4.47	116	P	Pn	11 53 00.9	+2.4
	SNR=16						
NGCH				S	Sn	11 53 50.7	+1.1
NGCH	Negor - Chabah	4.47	116	Pn	Pn	11 53 00.1	+1.7
BSY	Bisya	4.62	174	P	Pn	11 53 03.0	+2.4
	SNR=28						
GHWR	Ruwais	4.82	226	P	Pn	11 53 04.1	+0.9
GHWR				S	Sn	11 53 58.0	-0.1
UMZA	Um Al Zommool	4.83	197	P	Pn	11 53 05.2	+1.8
DSBU	Dashti - Bushe	4.90	283	Pn	Pn	11 53 05.9	+1.6
NHDN	Nehbandan	4.98	35	Pn	Pn	11 53 08.3	+2.8
BSRN	Basiran	5.05	24	Pn	Pn	11 53 08.2	+1.7
SRVN	Saravan	5.09	88	Pn	Pn	11 53 09.5	+2.5
JMDO	Jabal Madar	5.14	165	P	Pn	11 53 09.4	+1.7
	SNR=49						
JMDO				S	Sn	11 54 08.6	+2.6
WBK	Wadi Bani Khal	5.17	156	P	Pn	11 53 08.7	+0.6
	SNR=67						
WBK				S	Sn	11 54 05.5	-1.4
MZR	Muzera	5.22	214	P	Pn	11 53 10.2	+1.5
	SNR=13						
MZR	Muzera	5.22	214	i P	Pn	11 53 09.7	+0.9
	SNR=13						
ICHK	Chekchek	5.25	338	Pn	Pn	11 53 10.8	+1.5
SHMA	Al-Shehemyia	5.33	255	P	Pn	11 53 12.1	+1.9
	SNR=25						
SHMA				S	Sn	11 54 11.0	+0.4
	SNR=9.5						
IKOO	Kooshah	5.43	21	Pn	Pn	11 53 14.3	+2.5
SLWR	Sila	5.56	235	P	Pn	11 53 15.3	+1.9
SLWR				S	Sn	11 54 15.6	-0.8
TRNA	Turayna	5.57	243	P	Pn	11 53 14.4	+0.9
	SNR=6.5						
TRNA				S	Sn	11 54 16.1	-0.5
	SNR=13						
TPRV	Parvadeh(Tabas	5.64	0	Pn	Pn	11 53 17.2	+2.6
JLN	Jalan Bani Buh	5.76	154	P	Pn	11 53 16.3	+0.2
	SNR=57						
JLN				S	Sn	11 54 19.1	-2.1
IRAM	Ramesheh	5.79	321	Pn	Pn	11 53 18.3	+1.5
ITEG	Tejag	5.80	18	Pn	Pn	11 53 19.2	+2.4
SMRA	Abu-Samra	5.87	245	P	Pn	11 53 19.1	+1.4
	SNR=7.4						
SMRA				S	Sn	11 54 24.6	+0.5
	SNR=7.0						
TKDS	Koohdasht(Taba	6.24	3	Pn	Pn	11 53 25.3	+2.5
ANAR	Anarak	6.34	337	Pn	Pn	11 53 25.6	+1.4
AFRZ	Afriz	6.37	18	Pn	Pn	11 53 27.2	+2.6
MHTO	MHTO	6.46	169	P	Pn	11 53 27.3	+1.5
	SNR=30						
MHTO				S	Sn	11 54 39.0	+0.4
IBRJ	Brojen	6.53	315	Pn	Pn	11 53 28.1	+1.0
ZNGN	Zangian	6.93	314	Pn	Pn	11 53 33.7	+1.3
DQM	DQM	7.45	174	P	Pn	11 53 40.1	+0.8
DQM				S	Sn	11 55 02.4	-0.5
KRSH	Karshahi	7.66	330	Pn	Pn	11 53 44.4	+2.1
DOK	Doka	9.02	196	P	Pn	11 54 01.0	+0.1
	SNR=15						
SHAO	Shalim	9.35	186	P	Pn	11 54 06.0	+0.5
	SNR=17						
SHAO	Shalim	9.35	186	i P	Pn	11 54 06.0	+0.5
	SNR=17						
DMTO	DMTO	9.73	190	P	Pn	11 54 11.0	+0.3
	SNR=15						
WHFO	Wadi Hawf	9.78	197	P	Pn	11 54 11.6	+0.3
	SNR=26						
RBK	Rabkut	10.08	194	P	Pn	11 54 15.5	+0.1
RAYN	Ar Rayn	10.80	252		Pn	11 54 23.1	-2.1
MANEM	Manem	16.21	47		P	11 55 40.7	-0.7
MANEM				IAmb	IAmb	11 55 52.6	
	comp=Z,12nm,0.7s						
GURO	Guroymak-BITLI	16.57	316		Pn	11 55 41.3	-1.7
MARD	Mardin	16.68	310		Pn	11 55 42.0	-2.4
MARD				IAmb	IAmb	11 55 57.2	
	comp=Z,18nm,0.6s						
DRK	Karamyk	17.45	42	P	Pn	11 55 55.1	+1.0
DRK				IAmb	IAmb	11 55 56.6	
	comp=Z,8.7nm,0.5s						
ASF	Jabal al Asfar	17.82	290	P	Pn	11 55 56.2	-2.4
	comp=Z,0.6nm,0.3s,baz=111,slow=8.6,SNR=1.6						
	comp=Z,2.4nm,0.4s						
GHAJ	Ghor Haditha	18.81	287	P	P	11 56 09.5	-0.4
KK31	Karatay Array	19.30	32	P	P	11 56 15.7	+0.5
KKAR	Karatay Array	19.30	32		P	11 56 16.1	+0.9
ARSB	Arslanbob	19.32	40	P	P	11 56 16.1	+0.4
KBZ	Khabaz	19.76	329	P	P	11 56 19.3	-0.8
	comp=Z,0.2nm,0.3s,baz=148,slow=9.0,SNR=4.3						
	comp=Z,0.9nm,0.5s						
KVAR	Kislovodsk Arr	20.03	329	P	P	11 56 22.6	-0.6
	comp=Z,1.4nm,0.3s,baz=117,slow=6.8,SNR=3.4						
	comp=Z,1.4nm,0.3s						
AAK	Ala-Archa	21.04	39	P	P	11 56 34.2	0.0
	comp=Z,1.3nm,0.5s,baz=192,slow=12,SNR=6.1						
	comp=Z,1.3nm,0.5s						
AAK	Ala-Archa	21.04	39	P	P	11 56 29.1	-5.1
AB31	Akbulak array	22.00	6		P	11 56 44.8	+0.4
ABKAR	Akbulak array	22.00	6		P	11 56 44.6	+0.3
KDJ	Kajisay	22.30	43		P	11 56 49.8	+2.0
KDJ				IAmb	IAmb	11 56 57.2	
	comp=Z,8.3nm,0.8s						
TARG	Taragay, Kyrgy	22.46	45		P	11 56 51.3	+1.5
BR131	Keskin Array S	22.74	309		P	11 56 52.7	+0.1
BRTR	Keskin Array B	22.74	309	P	P	11 56 52.8	+0.3
	comp=Z,2.3nm,0.6s,baz=132,slow=13,SNR=12						
	comp=Z,2.3nm,0.6s						
AKTO	Aktyubinsk	23.06	2	P	P	11 56 56.0	+0.5
	comp=Z,7.3nm,0.5s,baz=181,slow=8.5,SNR=14						
	comp=Z,7.3nm,0.5s						
BVAR	Borovoye Array	27.59	18	P	P	11 57 37.0	-0.2
	comp=Z,0.9nm,0.6s,baz=205,slow=6.6,SNR=4.3						
	comp=Z,0.9nm,0.6s						
MAKZ	Makanchi	27.80	39	P	P	11 57 40.6	+1.5
MAKZ				IAmb	IAmb	11 58 13.1	
	comp=Z,6.2nm,1.5s						
MKAR	Makanchi Array	27.97	39	P	P	11 57 41.5	+0.8
	comp=Z,0.4nm,0.3s,baz=218,slow=8.5,SNR=9.8						
	comp=Z,0.4nm,0.3s						
AKASG	Malin Array Be	31.27	326	P	P	11 58 09.3	-0.4
	comp=Z,0.9nm,0.4s,baz=132,slow=8.4,SNR=5.9						
	comp=Z,0.9nm,0.4s						
AKASG	Malin Array Be	31.27	326	IAmb	IAmb	11 58 46.9	
	comp=Z,4.9nm,1.2s						
AKBB	Malin Array Si	31.27	326	P	P	11 58 09.5	-0.3
AKBB				IAmb	IAmb	11 58 16.0	
	comp=Z,5.4nm,0.9s						
ZAA0	Zalesovo Array	33.66	30		P	11 58 31.7	+1.0
ZAA0				IAmb	IAmb	11 58 31.9	
	comp=Z,3.5nm,0.5s						
ZALV	Zalesovo Beam	33.66	30	P	P	11 58 31.6	+0.9
	comp=Z,2.4nm,0.3s,baz=238,slow=9.7,SNR=23						
	comp=Z,2.4nm,0.3s						
ZALV	Zalesovo Beam	33.66	30		P	11 58 31.0	+0.3
RONA	Rosalia, Austr	37.37	314	eP	P	11 59 02.9	+0.3
	comp=Z,2.5nm,0.5s						
MOA	Molln	38.72	313	eP	P	11 59 14.2	+0.2
	comp=Z,1.9nm,0.5s						
GERES	GERESS Array B	39.37	315	P	P	11 59 19.0	-0.5
	comp=Z,0.4nm,0.4s,baz=121,slow=7.1,SNR=5.7						
	comp=Z,0.4nm,0.4s						
ABTA	Abfaltersbach	39.59	311	eP	P	11 59 21.5	+0.1
	comp=Z,1.0nm,0.4s						
LESA	Schwarzleotal	39.64	312	eP	P	11 59 21.8	0.0
	comp=Z,1.5nm,0.4s						
FIA1	FINESS Array S	39.75	338	P	P	11 59 22.6	+0.2
FINES	FINESS Array B	39.75	338	P	P	11 59 22.4	0.0
	comp=Z,2.3nm,0.5s,baz=138,slow=8.5,SNR=13						
	comp=Z,2.3nm,0.5s						
WTTA	Wattenberg	40.29	312	eP	P	11 59 26.8	-0.5
	comp=Z,2.2nm,0.4s						
WATA	Walderalm	40.34	312	eP	P	11 59 27.1	-0.6
	comp=Z,0.7nm,0.2s						
CLL	Collm	40.56	318	ePx	Px	11 59 39.0	
CLL				i x	x	11 59 53.3	
SQTA	Sankt Quirin	40.56	312	eP	P	11 59 29.1	-0.4
	comp=Z,4.1nm,0.3s						
FETA	Feichten	40.84	311	eP	P	11 59 31.5	-0.3
	comp=Z,2.7nm,0.4s						
KEST	Kesra	40.86	294	P	P	11 59 32.1	0.0
	comp=Z,5.3nm,0.9s,baz=74,slow=7.4,SNR=1.9						
	comp=Z,5.3nm,0.9s						
FUORN	Ofenpass-Fuorn	41.07	311	P	P	11 59 34.0	+0.1
FUORN				IAmb	IAmb	11 59 37.4	
	comp=Z,11nm,1.5s						
DAVA	Damuels	41.46	311	eP	P	11 59 36.5	-0.5
	comp=Z,15nm,0.5s						
SENIN	Lac Senin/Sane	43.04	310	P	P	11 59 48.5	-1.5
SENIN				IAmb	IAmb	12 00 00.9	
	comp=Z,8.3nm,1.4s						
SONM	Songino Array	43.51	48	P	P	11 59 54.4	+0.8
	comp=Z,0.9nm,0.7s,baz=269,slow=8.9,SNR=5.8						
	comp=Z,0.9nm,0.7s						
HFS	Hagfors	43.82	330	P	P	11 59 55.5	-0.3
	comp=Z,3.5nm,0.7s,baz=128,slow=9.6,SNR=14						
	comp=Z,3.5nm,0.7s						
NC405	NORSAR Array S	45.15	331	P	P	12 00 06.2	-0.1
NC405				IAmb	IAmb	12 00 07.6	
	comp=Z,12nm,1.1s						
NOA	NORSAR Array B	45.33	331	P	P	12 00 07.1	-0.7
	comp=Z,0.8nm,0.7s,baz=131,slow=7.9,SNR=1.7						
	comp=Z,0.8nm,0.7s						
ARCES	ARCESS Array B	45.92	345	P	P	12 00 11.7	-0.6
	comp=Z,1.7nm,0.8s,baz=144,slow=8.1,SNR=4.0						
	comp=Z,1.7nm,0.8s						
ESDC	Sonseca Array	51.15	300	P	P	12 00 51.5	-1.7
	comp=Z,0.7nm,0.4s,baz=82,slow=7.5,SNR=11						
	comp=Z,0.7nm,0.4s						
PAB	San Pablo	51.46	300	P	P	12 00 55.6	+0.1
PAB				IAmb	IAmb	12 01 30.5	
	comp=Z,7.6nm,1.4s						
HILR	Hailar Array B	52.47	47	P	P	12 01 03.0	+0.3
	comp=Z,0.9nm,0.4s,baz=275,slow=10.0,SNR=4.1						
	comp=Z,0.9nm,0.4s						
TORD	Torodi Ar. Bea	53.09	266	P	P	12 01 07.0	-0.8
	comp=Z,0.9nm,0.6s,baz=62,slow=7.7,SNR=6.1						
	comp=Z,0.9nm,0.6s						
TORD	Torodi Ar. Bea	53.09	266	IAmb	IAmb	12 01 12.3	
	comp=Z,13nm,0.7s						
SPITS	Spitsbergen Ar	54.04	351	P	P	12 01 13.7	-0.1
	comp=Z,2.0nm,0.8s,baz=110,slow=12,SNR=0.8						
	comp=Z,2.0nm,0.8s						
LBTB	Lobatse	60.08	213	P	P	12 01 56.7	-0.7
LBTB				IAmb	IAmb	12 02 09.3	
	comp=Z,7.3nm,1.3s						
B20K	Meade River	79.91	11	P	P	12 03 59.3	+1.0
B20K				IAmb	IAmb	12 04 14.8	
	comp=Z,7.0nm,1.5s						
C18K	Utukok River	80.31	13	P	P	12 04 00.9	+0.3
C18K				IAmb	IAmb	12 04 39.9	
	comp=Z,4.6nm,1.4s						
A36M	Sachs Harbour	80.91	1	P	P	12 04 04.6	+1.0
D22K	Ayikyak River	81.65	10	P	P	12 04 08.7	+1.0
D22K				IAmb	IAmb	12 04 20.5	
	comp=Z,6.6nm,1.5s						
E19K	Redstone River	82.11	13	P	P	12 04 10.4	+0.3
E19K				IAmb	IAmb	12 04 28.3	
	comp=Z,6.2nm,1.4s						
TOLK	Toolik Lake Re	82.34	9	P	P	12 04 12.5	+1.2
TOLK				IAmb	IAmb	12 04 42.0	
	comp=Z,6.2nm,1.4s						
BMAR	Burnt Mountain	84.16	8	P	P	12 04 22.0	+1.3
INK	Inuvik	84.32	4	P	P	12 04 21.5	0.0
INK				IAmb	IAmb	12 04 28.4	
	comp=Z,4.8nm,1.4s						
F30M	Barrier River	84.86	5	P	P	12 04 25.2	+1.0
ILAR	Eielson Array	86.35	10	P	P	12 04 30.6	-1.1
	comp=Z,0.6nm,0.8s,baz=319,slow=3.2,SNR=6.6						
	comp=Z,0.6nm,0.8s						
I28M	Miner Creek	86.60	7	P	P	12 04 33.3	+0.2
I28M				IAmb	IAmb	12 05 00.1	
	comp=Z,4.0nm,1.2s						
H31M	Peel River	86.74	5	P	P	12 04 34.2	+0.6
H31M				IAmb	IAmb	12 05 13.9	
	comp=Z,8.0nm,1.4s						
PPLA	Purkeypile	87.15	13	P	P	12 04 37.6	+1.8
BCAR	Beaver Creek A	88.69	8	P	P	12 04 44.2	+1.2

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
SUA	Susitna One	88.74	13	P	P	12 04 43.6	+0.2
ASAR	Alice Springs	90.13	117	P	P	12 04 49.2	-1.1
	comp=Z,0.3nm,0.6s,baz=314,slow=5.2,SNR=1.8						
	comp=Z,0.3nm,0.6s						
YKA	Yellowknife Ar	90.18	356	P	P	12 04 50.5	+0.6
	comp=Z,0.4nm,0.8s,baz=356,slow=6.0,SNR=6.3						
	comp=Z,0.4nm,0.8s						

IDC ***30*** *11:56:36.1±0.8, 6°.51S×147°.17E, h98^{km}±6^{km}, mb3.8/14, mbtmp4.2/17, MS3.2/3, Error ellipse: s-maj=23.6km s-min=8.6km az=95.0*

NEIC ***30*** *11:56:36.3±1.9, 6°.51S±0°.01×147°.0E±0°.1, h87^{km}±7^{km}, mb4.4/32, Error ellipse: s-maj=16.1km s-min=2.1km az=88.0*

ISC 30 11:56:36.9±0.5**, 6°.51S**±0°.05×**146°.94E**±0°.08**, h100**^{km}**, n66, σ1^{s}06**/65**, mb4.3**/25**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.89	176	P	Pn	11 57 21.0	-0.2
	275nm,0.3s,baz=348,slow=5.4,SNR=275						
PMG				S	Sn	11 57 53.7	-1.6
	124nm,0.4s,baz=3.2,slow=15,SNR=4.1						
PMG				LR	LR	11 58 28.9	
	comp=Z,193nm,21.8s,baz=15,slow=39						
PMG	Port Moresby	2.89	176	P	Pn	11 57 20.8	-0.4
PMG	Port Moresby	2.89	176	P	Pn	11 57 21.0	-0.2
MANU	Manus Island	4.45	5		Pn	11 57 42.5	+0.2
RABL	Rabaul	5.69	66		Pn	11 57 59.2	+0.2
COEN	Coen	8.28	206		Pn	11 58 34.5	+0.3
COEN	Coen	8.28	206	P	Pn	11 58 34.7	+0.4
MTSU	Mount Surprise	11.84	192	P	Pn	11 59 23.3	+0.8
TATA	Tatamba Isabel	12.89	99	P	P	11 59 45.2	+1.9
CTA	Charters Tower	13.52	183	P	Pn	11 59 46.0	+1.4
	5.4nm,0.3s,baz=341,slow=7.4,SNR=34						
CTA				LR	LR	12 04 03.3	
	comp=Z,54nm,20.4s,baz=55,slow=33						
CTA	Charters Tower	13.52	183	P	P	11 59 47.4	-2.9
CTAO	Charters Tower	13.52	183		P	11 59 47.5	-2.7
CTAO	Charters Tower	13.52	183	P	P	11 59 47.4	-2.9
QIS	Mount Isa	15.68	206	P	P	12 00 13.6	-0.6
MTN	Manton Dam	16.80	247		P	12 00 27.7	+1.0
WB0	Warramunga Arr	17.95	222		P	12 00 39.2	-0.3
WR8	Warramunga Arr	18.02	221		P	12 00 40.4	+0.3
WRAB	Tennant Creek	18.10	221	P	Pn	12 00 41.5	-0.5
WRAB				IAmb	IAmb	12 00 45.2	
	comp=Z,10nm,0.6s						
WRAB	Tennant Creek	18.10	221	P	Pn	12 00 41.5	-0.5
WRA	Warramunga Arr	18.11	221	P	Pn	12 00 41.9	-0.2
	comp=Z,5.1nm,0.4s,baz=46,slow=11,SNR=79						
WRA	Warramunga Arr	18.11	221	P	P	12 00 40.7	-0.5
EIDS	Eidsvold	19.17	169	P	P	12 00 51.2	-1.5
KNRA	Kununurra	20.02	241	P	P	12 01 02.2	+0.3
KNRA				IAmb	IAmb	12 01 34.7	
	comp=Z,26nm,1.2s						
QLP	Quilpie	20.13	187	P	Pn	12 01 04.8	-1.0
AS31	Alice Springs	21.17	215		P	12 01 15.3	+1.0
AS31				IAmb	IAmb	12 01 20.4	
	comp=Z,6.9nm,0.3s						
ASAR	Alice Springs	21.17	215	P	P	12 01 15.2	+0.9
	comp=Z,6.4nm,0.6s,baz=54,slow=8.4,SNR=143						
ASAR				S	S	12 05 06.3	+2.0
	comp=Z,2.7nm,1.0s,baz=34,slow=23,SNR=6.6						
	comp=Z,6.4nm,0.6s						
ASAR	Alice Springs	21.17	215		P	12 01 14.9	+0.5
INKA	Innaminka	21.92	195		P	12 01 22.7	+0.5
INKA				IAmb	IAmb	12 01 26.7	
	comp=Z,8.5nm,0.7s						
AULRC	Lightning Ridg	22.82	178	P	P	12 01 32.3	+0.8
FITZ	Fitzroy Crossi	23.75	239		P	12 01 40.8	+0.5
ARMA	Armidale	24.19	170	P	P	12 01 43.6	-0.6
ARMA				IAmb	IAmb	12 01 44.8	
	comp=Z,26nm,1.4s						
STKA	Stephens Creek	25.73	191	P	P	12 01 58.4	+0.3
	comp=Z,4.2nm,0.4s,baz=360,slow=8.9,SNR=11						
	comp=Z,4.2nm,0.4s						
BBOO	Buckleboo	28.06	200	P	P	12 02 19.3	+0.3
FORT	Forrest	29.95	214	P	P	12 02 35.9	+0.1
FORT				IAmb	IAmb	12 03 05.4	
	comp=Z,9.8nm,0.8s						
MBWA	Marble Bar	30.09	238	P	P	12 02 37.0	-0.1
MORW	Morawa	36.79	229	P	P	12 03 35.7	+0.5
JOW	Kunigami	37.76	332	P	P	12 03 42.7	-0.7
MJAR	Matsushiro Arr	43.60	350	P	P	12 04 29.8	-1.4
	comp=Z,0.8nm,0.5s,baz=176,slow=6.8,SNR=5.6						
	comp=Z,0.8nm,0.5s						
MJAR	Matsushiro Arr	43.60	350	IAmb	IAmb	12 05 04.0	
	comp=Z,7.0nm,1.5s						
MAJO	Matsushiro	43.60	350	P	P	12 04 30.2	-1.0
MJB9	Matsu-Tunnel	43.60	350	P	P	12 04 30.2	-1.1
KSRS	Korea Array	47.20	339	P	P	12 04 59.4	-0.2
	comp=Z,2.5nm,0.8s,baz=146,slow=9.1,SNR=5.6						
	comp=Z,2.5nm,0.8s						
USRK	Ussuriysk Ar.	52.25	346	P	P	12 05 37.7	0.0
	comp=Z,1.9nm,0.6s,baz=168,slow=9.0,SNR=2.7						
	comp=Z,1.9nm,0.6s						
CM31	Chiang Mai Arr	53.44	299	P	P	12 05 46.8	-0.3
CM31				IAmb	IAmb	12 06 23.9	
	comp=Z,3.1nm,0.7s						
CMAR	Chiang Mai Arr	53.44	299	P	P	12 05 49.4	+2.4
	comp=Z,2.0nm,0.7s,baz=118,slow=5.7,SNR=14						
CMAR				pP	pP	12 06 11.8	+0.3
	comp=Z,1.7nm,0.9s,baz=116,slow=5.6,SNR=3.8						
	comp=Z,2.0nm,0.7s						
HILR	Hailar Array B	60.65	340	P	P	12 06 37.1	-0.3
	comp=Z,1.1nm,0.4s,baz=135,slow=6.7,SNR=2.2						
	comp=Z,1.1nm,0.4s						
SONM	Songino Array	64.81	331	P	P	12 07 04.2	-1.0
	comp=Z,0.2nm,0.3s,baz=151,slow=3.2,SNR=3.1						
SONM				pP	pP	12 07 30.1	-0.7
	comp=Z,0.2nm,0.5s,baz=132,slow=2.1,SNR=2.3						
	comp=Z,0.2nm,0.3s						
EVN	Everest	67.33	304	P	P	12 07 23.4	+1.1
EVN				IAmb	IAmb	12 07 50.0	
	comp=Z,3.0nm,0.7s						
MKAR	Makanchi Array	77.85	321	P	P	12 08 23.3	-0.3
	comp=Z,0.8nm,0.8s,baz=98,slow=7.7,SNR=6.4						
	comp=Z,0.8nm,0.8s						
K15K	Wolf Creek Mou	79.08	22	P	P	12 08 30.6	+0.6
K15K				IAmb	IAmb	12 08 43.7	
	comp=Z,8.3nm,1.2s						
ZALV	Zalesovo Beam	79.41	328	P	P	12 08 30.6	-1.3
	comp=Z,1.1nm,0.5s,baz=98,slow=6.5,SNR=6.5						
	comp=Z,1.1nm,0.5s						
BOOM	Boomskoye usch	80.59	315	P	P	12 08 39.3	+0.5
BOOM				IAmb	IAmb	12 08 53.7	
	comp=Z,5.2nm,1.2s						
QSPA	South Pole Qui	83.46	180	P	P	12 08 54.3	+1.0
C19K	Lookout Ridge	83.85	17	P	P	12 08 55.9	+0.8
C19K				IAmb	IAmb	12 08 56.9	
	comp=Z,5.7nm,1.1s						
RND	Reindeer	84.60	24	P	P	12 08 58.2	-0.8
B20K	Meade River	85.07	17	P	P	12 09 01.6	+0.5
B20K				IAmb	IAmb	12 09 02.0	
	comp=Z,7.9nm,1.4s						
NRIK	Noril'sk	85.74	342	P	P	12 09 03.6	-0.8
	comp=Z,1.4nm,0.5s,baz=139,slow=9.3,SNR=2.3						
	comp=Z,1.4nm,0.5s						
NRIK	Noril'sk	85.74	342	IAmb	IAmb	12 09 05.7	
	comp=Z,8.9nm,1.4s						
D22K	Ayikyak River	85.81	18	P	P	12 09 05.9	+1.0
D22K				IAmb	IAmb	12 09 44.1	
	comp=Z,6.4nm,1.4s						
IL31		85.97	23	P	P	12 09 04.6	-1.0
IL31				IAmb	IAmb	12 09 05.0	
	comp=Z,2.3nm,0.7s						
ILAR	Eielson Array	85.97	23	P	P	12 09 04.2	-1.4
	comp=Z,1.8nm,0.6s,baz=253,slow=5.0,SNR=32						
	comp=Z,1.8nm,0.6s						
BVAR	Borovoye Array	87.14	324	P	P	12 09 11.3	-0.4
	comp=Z,0.5nm,0.5s,baz=86,slow=7.4,SNR=2.2						
	comp=Z,0.5nm,0.5s						
BBB	Bella Bella	92.00	38	LR	LR	12 45 31.4	
	comp=Z,51nm,19.5s,baz=224,slow=32						
NVAR	Mina Array Bea	97.72	52	P	Pdif	12 10 01.2	-0.1
	comp=Z,0.3nm,0.8s,baz=282,slow=7.3,SNR=1.8						
	comp=Z,0.3nm,0.8s						
GERES	GERESS Array B	122.29	325	PKP	PKiKP	12 15 20.7	0.0
	comp=Z,0.5nm,0.5s,baz=87,slow=2.8,SNR=5.5						
TORD	Torodi Ar. Bea	145.16	284	PKPbc	PKPab	12 16 04.7	+1.0
	comp=Z,7.1nm,0.6s,baz=69,slow=5.2,SNR=28						
TORD				pPKPbc	pPKPab	12 16 29.6	-1.1
	comp=Z,3.7nm,0.9s,baz=74,slow=4.4,SNR=5.8						

VIE ***30*** *12:04:10.1±0.3, 50°.25N×18°.57E, h0^{km}, mb2.7/5, ml2.4/5, Error ellipse: s-maj=2.5km s-min=1.8km az=8.0 30 km W of Katowice Suspected Mining induced.*

IPEC ***30*** *12:04:10.8±0.2, 50°.17N×18°.63E, h1^{km}, ML2.2/6, Error ellipse: s-maj=1.8km s-min=1.0km az=166.0*

PRU ***30*** *12:04:13.1, 50°.16N×18°.51E, h0^{km}*

ISC 30 12:04:10.4±0.9**, 50°.15N**±0°.03×**18°.60E**±0°.03**, h0**^{km}**, n28, σ0^{s}74**/50**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.43	224	*e*PG	Pb	12 04 20.1	-0.7
OKC				*e*SG	Sb	12 04 27.0	-0.8
	comp=Z,68nm,0.6s						
STEB	Steborice	0.58	249	*e*PG	Pb	12 04 22.8	-0.5
STEB				*e*SG	Sb	12 04 31.1	-1.0
OJC	Ojcow	0.77	84	*e*Pg	Pg	12 04 25.3	+0.1
OJC				*e*Sg	Sb	12 04 36.8	-0.9
MORC	Moravsky Berou	0.78	242	*e*Pg	Pb	12 04 26.1	-0.7
	baz=61						
MORC				*e*Sg	Sg	12 04 36.1	+0.8
	67nm,0.5s,baz=61						
ANAC	Anensky vrch	0.79	265	*e*Pg	Pb	12 04 26.2	-0.8
	baz=83						
ANAC				*e*Sg	Sg	12 04 36.3	+0.5
	42nm,0.3s,baz=83						
LOSC	Losov	0.95	237	*e*Pg	Pb	12 04 29.5	-0.3
	baz=56						
LOSC				*e*Sg	Sg	12 04 41.5	+0.5
	52nm,0.5s,baz=56						
LANS	Liptovska Anna	1.15	150	*e*PG	Pn	12 04 33.4	-0.3
LANS				*e*SG	Sn	12 04 50.6	+0.5
LANS				*e*LG	Lg	12 04 56.2	
KRLC	Kraliky	1.18	267	*e*PG	Pg	12 04 32.4	-0.5
KRLC				*e*SG	Sg	12 04 48.5	+0.4
	comp=Z,62nm,0.5s						
NIE	Niedzica	1.32	123	*e*Pg	Pn	12 04 36.2	+0.1
NIE				*e*Sg	Sn	12 04 55.5	+1.1
JAVC	Velka Javorina	1.43	206	*e*PG	Pg	12 04 37.6	-0.1
JAVC	Velka Javorina	1.43	206	*e*Pg	Pg	12 04 37.5	-0.1
	baz=25						
DPC	Dobruska-Polom	1.48	279	*e*PG	Pn	12 04 38.1	-0.2
DPC				*e*SG	Sn	12 04 58.3	0.0
	comp=Z,33nm,0.6s						
VRAC	Vranov	1.55	238	*e*PN	Pb	12 04 39.7	-0.3
VRAC				*e*SG	Sg	12 05 00.2	+0.1
VRAC	Vranov	1.55	238	*e*Pn	Pb	12 04 39.6	-0.4
	baz=56						
VRAC				*e*Sg	Sg	12 05 00.1	-0.1
	20nm,0.5s,baz=56						
OSTC	Ostas	1.58	286	*e*PG	Pg	12 04 41.4	+0.7
OSTC				*e*SG	Sg	12 05 01.9	+0.7
	comp=Z,18nm,0.7s						
KSP	Ksiaz	1.63	296	*e*Pg	Pg	12 04 41.5	-0.1
KSP				*e*Sg	Sg	12 05 03.4	+0.7
CHVC	Chvalec	1.69	286	*e*PG	Pg	12 04 42.7	0.0
CHVC				*e*SG	Sg	12 05 04.4	-0.2
	comp=Z,49nm,1.3s						
UPC	Upice	1.70	283	*e*PG	Pb	12 04 42.1	-0.4
UPC				*e*SG	Sg	12 05 05.3	+0.4
	comp=Z,15nm,0.5s						
KRUC	Moravsky	1.80	234	*e*Pn	Pn	12 04 43.3	+0.6
	baz=52						
KRUC				*e*Sg	Sg	12 05 07.9	-0.3
	9.5nm,0.4s,baz=52						
MODS	Modra-Piesok	1.98	207	*e*PG	Pg	12 04 49.3	+1.1
MODS				*e*SG	Sg	12 05 13.7	-0.1
KECS	Kecovo	2.07	143	*e*PN	Pn	12 04 46.5	+0.1
KECS				*e*SN	Sn	12 05 12.9	0.0
KECS				*e*LG	Lg	12 05 21.1	
PRU	Pruhonice	2.62	268	*e*PG	Pg	12 04 59.9	-0.7
PRU				*e*SG	Sg	12 05 33.3	-1.2
	comp=Z,7.8nm,0.5s						
CONA	Conrad Observa	2.86	220	*i* Pn	Pn	12 04 58.4	+1.1
	0.5nm,0.3s						
CONA				*e*Sn	Sn	12 05 33.8	+1.3
	2.5nm,0.6s						
KHC	Kasperske Hory	3.42	255	*e*PG	Pb	12 05 13.5	+1.7
KHC				*e*SG	Sg	12 06 00.3	+0.1
	comp=Z,12nm,0.5s						
ARSA	Arzberg	3.54	216	*e*Sg	Sg	12 06 03.0	-1.2
	0.8nm,0.3s						
BIOA	Bad Ischl, Aus	4.09	235	*e*Sg	Sg	12 06 20.0	-1.8
	3.1nm,0.4s						
KBA	Koelnbreinsper	4.65	231	*e*Sg	Sg	12 06 40.4	+0.9
	0.9nm,0.5s						
WTTA	Wattenberg	5.44	241	*e*Sg	Sg	12 07 03.9	-1.1
	3.8nm,0.5s						

TIR ***30*** *12:09:06.3, 41°.49N×19°.51E, h26^{km}, Md2.7/4, Ml2.5/3*

BEO ***30*** *12:09:08.8±0.6, 41°.51N×19°.65E, h6^{km}±4^{km}, ML2.3/6*

PDG ***30*** *12:09:12.1±0.3, 41°.79N×19°.53E, h10^{km}±1^{km}, ML2.5/9, Error ellipse: s-maj=1.6km s-min=1.5km az=90.0*

ISC 30 12:09:07.6±1.1**, 41°.55N**±0°.03×**19°.50E**±0°.03**, h7**^{km}±9^{km}**, n34, σ0^{s}95**/57**, 11C-7D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.34	126	Pg	Pg	12 09 14.5	+0.3
TIR				Sg	Sg	12 09 18.6	0.0
TIR				AML	AML	12 09 19.6	
	2.0nm,0.1s						
ULC	Ulcinj	0.46	335	⇓*i*Pg	Pg	12 09 17.2	+0.7
ULC				*i* Sg	Sg	12 09 22.0	-0.6
SDA	Shkodra	0.51	360	Pg	Pg	12 09 17.8	+0.4
SDA				Sg	Sb	12 09 25.9	-0.5
SDA				AMd		12 10 06.6	
DRME	Dracevica, Mon	0.68	340	*e*Pg	Pg	12 09 21.4	+0.6
DRME				*e*Sg	Sn	12 09 34.0	-0.7
DRME	Dracevica, Mon	0.68	340	⇑*i*Pg	Pg	12 09 21.2	+0.4
DRME				*e*Sg	Sg	12 09 27.9	-1.8
PHP	Peshkopia	0.72	79	Pg	Pg	12 09 20.4	-1.0
PHP				Sg	Sg	12 09 30.6	-0.2
PHP				AML	AML	12 09 33.0	
	0.2nm,0.1s						
PHP				AML	AML	12 09 35.2	
	1.1nm,0.3s						
PHP				AMd		12 10 08.9	
BUM	Brajici-Budva	0.88	329	⇓*i*Pg	Pb	12 09 25.5	+0.2
BUM				*i* Sg	Sg	12 09 36.4	+0.4
PDG	Podgorica	0.90	348	Pg	Pg	12 09 24.6	-0.3
PDG				Sg	Sb	12 09 38.3	+0.4
PDG				AMd		12 10 07.2	
PDG	Podgorica	0.90	348	⇑P	Pb	12 09 25.9	+0.3
PDG				⇑S	Sn	12 09 40.4	+0.3
PDG	Podgorica	0.90	348	*e*Pg	Pb	12 09 25.9	+0.3
PDG				*e*Sg	Sn	12 09 40.1	+0.1
PDG	Podgorica	0.90	348	⇑*i*Pg	Pg	12 09 24.3	-0.7
PDG				*i* Sg	Sg	12 09 36.4	-0.3
HCY	Herceg Novi	1.17	320	⇓*i*Pg	Pn	12 09 30.7	+0.2
HCY				*i* Sg	Sb	12 09 46.1	+0.4
NKME	Niksic	1.29	342	⇑*i*Pg	Pn	12 09 31.4	-0.7
NKME				*e*Sg	Sb	12 09 49.0	0.0
BEY	Berane	1.36	12	*e*Pg	Pb	12 09 33.5	+0.1
IVA	Berane	1.36	12	⇓*i*Pg	Pn	12 09 33.0	-0.1
IVA				*i* Sg	Sb	12 09 50.2	-0.8
TREB	Trebinje	1.45	324	*e*Pg	Pg	12 09 35.4	0.0
BRY	Bratogost	1.53	332	⇑*i*Pg	Pb	12 09 36.5	+0.1
BRY				*i* Sg	Sg	12 09 57.9	+1.0
SJES	Sjenica	1.75	11	*e*Pg	Pg	12 09 40.9	-0.3
SJES				*e*Sg	Sg	12 10 04.6	+0.8
PLE	Pljevlja	1.79	357	*e*Pg	Pg	12 09 41.8	0.0
PLE	Pljevlja	1.79	357	⇑*i*Pg	Pb	12 09 40.6	-0.1
PLE				*i* Sg	Sb	12 10 03.0	-0.4
STON	Ston	1.88	315	*e*Pn	Pb	12 09 42.9	+0.6
NOCI	Noci	1.99	248	Pn	Pn	12 09 41.4	-0.4
NOCI				Sn	Sb	12 10 08.4	-0.8
NOCI				AML	AML	12 10 10.2	
	0.1nm,0.3s						
NOCI				AMd		12 10 49.8	
SELS	Selova	2.06	35	*e*Pn	Pn	12 09 43.8	+1.1
SELS				*e*Sn	Sn	12 10 08.7	+0.1
IVAS	Ivanjica	2.08	13	*e*Pn	Pn	12 09 44.0	+0.9
IVAS				*e*Sn	Sb	12 10 11.7	-0.3
IGT	Igoumenitsa	2.11	162	Sn	Sn	12 10 09.7	-0.1
IGT	Igoumenitsa	2.11	162	*e*Pn	Pn	12 09 43.9	+0.6
BARS	Barje	2.14	53	*e*Pn	Pn	12 09 45.0	+1.3
BBLS	Lazi&#263i	2.32	358	*e*Pn	Pb	12 09 48.7	-1.1
DIVS	Divibare	2.58	8	*e*Pn	Pn	12 09 52.0	+2.1
BOVS	Bovan	2.65	37	⇓P	Pn	12 09 51.7	+1.0
BOVS				⇑S	Sn	12 10 23.4	+0.4
BOVS	Bovan	2.65	37	*e*Pn	Pn	12 09 51.5	+0.8
BOVS				*e*Sn	Sn	12 10 22.8	-0.3
BLKB	Belogradchik	3.13	47	⇓S	Sn	12 10 36.1	+1.0
MDVR	Moldovita	3.62	26	⇑P	Pn	12 09 59.6	-4.5
MDVR				⇑S	Pg	12 10 04.3	-13
GZR	Gura Zlata	4.52	31	⇑P	Pn	12 10 15.5	-1.1
GZR				⇓S	Pg	12 10 35.6	+1.4

UPP ***30*** *12:25:11.2±0.1, 67°.85N×20°.23E, h0^{km}, ML2.7, Confirmed Induced event*

HEL ***30*** *12:25:12.1±0.2, 67°.83N×20°.21E, h0^{km}, ML1.3, Suspected explosion*

ISC 30 12:25:10.6±0.9**, 67°.82N**±0°.02×**20°.30E**±0°.03**, h0**^{km}**, n22, σ1^{s}01**/34**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.14	5	P	Pg	12 25 13.6	+0.3
KUA				S	Sg	12 25 15.1	+0.1
RATU	Laukkuluspa	0.27	272	P	Pg	12 25 16.0	+0.2
KOVU	Salmi	0.41	353	P	Pg	12 25 18.4	-0.1
LANU	Lannavaara	0.68	69	P	Pg	12 25 24.3	+0.6
LANU	Lannavaara	0.68	69	PG	Pb	12 25 24.5	-0.9
LANU				SG	Sb	12 25 34.2	-1.1
DUNU	Dundret	0.71	172	P	Pb	12 25 25.3	-0.5
SALU	Saltoluokta	0.82	238	P	Pg	12 25 26.5	+0.3
SALU	Saltoluokta	0.82	238	*e*P	Pg	12 25 26.0	-0.2
KIF	Kilpisjarvi	1.21	9	*e*P	Pb	12 25 34.2	-0.1
KIF	Kilpisjarvi	1.21	9	PG	Pb	12 25 34.5	+0.2
	baz=190						
KIF				MSG		12 25 49.4	
	comp=Z,3.5nm,0.2s						
KIF				SG	Sb	12 25 50.2	-0.3
HEF	Hetta	1.39	63	PG	Pb	12 25 37.5	0.0
	baz=246						
HEF				MSG		12 25 54.6	
	comp=Z,2.0nm,0.2s						
HEF				SG	Sn	12 25 56.4	+0.1
ERTU	Ertsjaerv	1.47	149	PG	Pb	12 25 39.0	+0.3
ERTU				SN	Sn	12 26 00.0	+1.8
KLF	Kolari	1.52	111	PG	Pg	12 25 40.2	+0.4
KLF				MSG		12 25 58.8	
	comp=Z,1.4nm,0.2s						
KLF				SN	Sn	12 26 01.5	+1.9
KTK1	Kautokeino	1.62	41	PG	Pg	12 25 42.4	+0.8
KTK1				SN	Sg	12 26 03.7	+1.1
TRO	Tromso	1.89	345	SN	Sb	12 26 10.0	-0.2
KALU	Kalix	2.31	147	PB	Pb	12 25 52.4	-0.7
KALU				SG	Sg	12 26 24.3	-0.4
TOF	Tornio	2.36	136	PG	Pb	12 25 53.3	-0.6
TOF				MSG		12 26 22.8	
	comp=Z,1.7nm,0.2s						
TOF				SG	Sg	12 26 26.0	-0.2
RNF	Rovaniemi	2.53	116	PB	Pb	12 25 55.8	-1.1
	baz=300						
RNF				SG	Sb	12 26 29.8	+1.2
ARA0	ARCESS Array S	2.57	45	PB	Pb	12 25 56.4	-1.1
ARA0				SB	Sb	12 26 28.7	-0.9
RAJF	Raja-Jooseppi	3.07	74	PG	Pg	12 26 08.8	-0.5
RAJF				SG	Sb	12 26 45.8	+1.8
KEV	Kevo	3.12	48	SB	Sb	12 26 43.1	-2.3
RANF	Ranua	3.13	122	SG	Sg	12 26 48.9	-2.2

IDC 30 12:27:31.2±1.8**, 3°.14N×128°.44E, h0**^{km}**, mb3.5**/5**, mbtmp3.5**/5**, Error ellipse: s-maj=113.6km s-min=19.7km az=73.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.28	187	P	P	12 32 20.4	+0.9
	0.8nm,0.6s,baz=16,slow=9.9,SNR=1.2						
	0.8nm,0.6s						
WRA	Warramunga Arr	23.66	166	P	P	12 32 44.5	-0.1
	0.5nm,0.3s,baz=343,slow=9.9,SNR=5.4						
	0.5nm,0.3s						
ASAR	Alice Springs	27.17	169	P	P	12 33 15.1	-1.6
	0.3nm,0.3s,baz=351,slow=7.5,SNR=12						
	0.3nm,0.3s						
MKAR	Makanchi Array	59.02	325	P	P	12 37 34.0	+1.0
	0.3nm,0.4s,baz=110,slow=8.4,SNR=8.4						
	0.3nm,0.4s						
ZALV	Zalesovo Beam	61.89	332	P	P	12 37 52.3	-0.2
	0.2nm,0.3s,baz=107,slow=5.0,SNR=1.7						
	0.2nm,0.3s						

HEL ***30*** *12:30:24.5±0.1, 63°.98N×28°.05E, h0^{km}, ML2.2, Suspected explosion*

UPP ***30*** *12:30:25.0±3.0, 63°.83N×27°.89E, h0^{km}, ML2.1, Presumed earthquake*

IDC ***30*** *12:30:26.2±1.5, 63°.90N×28°.50E, h0^{km}, mbtmp3.2/4, ML2.5/4, Error ellipse: s-maj=22.2km s-min=8.9km az=104.0*

ISC 30 12:30:24.5±0.8**, 63°.92N**±0°.03×**28°.05E**±0°.03**, h0**^{km}**, n44, σ1^{s}72**/69**, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIF	Nilsia	0.54	191	PG	Pb	12 30 35.5	-1.3
	baz=11						
NIF				MSG		12 30 43.7	
	comp=Z,34nm,0.2s						
NIF				SG	Sb	12 30 44.7	-0.4
RMF	Romuvaara	0.88	69	PG	Pg	12 30 40.2	-1.1
RMF				MSG		12 30 51.2	
	comp=Z,28nm,0.2s						
RMF				SB	Sg	12 30 52.5	-0.2
SUF	Sumiainen	1.48	216	PN	Pg	12 30 52.5	-0.2
SUF				MSG		12 31 10.4	
	comp=Z,12nm,0.2s						
SUF				SN	Sn	12 31 14.5	+2.3
OUL	Oulu	1.50	322	PG	Pn	12 30 49.6	-2.9
OUL				SN	Sn	12 31 12.4	-0.3
OUF	Merijarvi	1.52	289	PN	Pn	12 30 52.3	-0.6
OUF				MSG		12 31 09.6	
	comp=Z,21nm,0.2s						
OUF				SN	Sn	12 31 14.0	+0.7
OBF4	Vikkela, Lumij	1.56	306	PN	Pn	12 30 53.0	-0.4
	baz=126						
OBF4				MSG		12 31 10.4	
	comp=Z,22nm,0.2s						
OBF0	Syolatti, Pyha	1.76	291	PG	Pn	12 30 56.6	+0.4
OBF0				MSG		12 31 16.6	
	comp=Z,29nm,0.2s						
KU1	Kurvinen	1.77	21	PG	Pn	12 30 55.7	-0.6
JOF	Joensuu	1.78	123	*e*P	Pb	12 30 57.2	-0.7
JOF	Joensuu	1.78	123	PG	Pb	12 30 56.8	-1.1
	baz=310						
JOF				SG	Sg	12 31 21.7	+0.1
KU2	Taivalkoski	1.80	2	PG	Pn	12 30 55.9	-0.8
MSF	Maaselka	2.04	12	PG	Pn	12 30 60.0	-0.1
	baz=193						
MSF				SG	Sn	12 31 26.6	+0.3
RANF	Ranua	2.17	346	PG	Pn	12 31 02.8	+1.0
RANF				SG	Sn	12 31 31.0	+1.7
KU6	Riekki	2.26	20	PG	Pn	12 31 03.5	+0.5
	baz=203						
KU6				MSG		12 31 29.8	
	comp=Z,8.0nm,0.2s						
KU6				SG	Sn	12 31 32.8	+1.4
KEF	Keuruu	2.28	221	*e*P	Pb	12 31 06.6	+0.3
KEF	Keuruu	2.28	221	PG	Pb	12 31 06.1	-0.3
KEF				MSG		12 31 33.2	
	comp=Z,23nm,0.2s						
KEF				SG	Sg	12 31 37.7	+0.2
OLKF	Oulanka, Finla	2.48	13	PG	Pn	12 31 07.5	+1.5
OLKF				MSG		12 31 36.0	
	comp=Z,14nm,0.2s						
OLKF				SG	Sn	12 31 39.5	+2.5
RUF	Ruokolahti	2.54	170	PG	Pb	12 31 10.3	-0.6
	baz=347						
RUF				MSG		12 31 40.9	
	comp=Z,12nm,0.2s						
RUF				SG	Sg	12 31 44.8	-1.1
VAF	Ylistaro	2.57	252	*e*P	Pb	12 31 10.2	-1.0
VAF	Ylistaro	2.57	252	PG	Pb	12 31 10.3	-1.0
VAF				MSG		12 31 40.9	
	comp=Z,12nm,0.2s						
VAF				SG	Sb	12 31 45.0	+1.7
FIA0	FINESS Array S	2.65	201	PG	Pb	12 31 12.0	-0.7
FIA0				MSG		12 31 44.0	
	comp=Z,12nm,0.2s						

FIA0				SG	Sg	12 31 47.5	-1.8
FINES	FINESS Array B	2.65	201	Pn	Pb	12 31 11.9	-0.7
	comp=Z,2.6nm,0.3s,baz=22,slow=15,SNR=84						
FINES				Sn	Sg	12 31 47.3	-2.0
	comp=Z,2.6nm,0.3s,baz=22,slow=26,SNR=15						
	comp=Z,5.2nm,0.3s						
TOF	Tornio	2.68	326	PB	Pn	12 31 10.0	+1.2
TOF				MSG		12 31 42.2	
	comp=Z,4.0nm,0.2s						
TOF				SB	Sn	12 31 43.0	+1.0
KALU	Kalix	2.79	316	P	Pn	12 31 11.2	+0.9
KALU				S	Sn	12 31 46.5	+1.9
KALU	Kalix	2.79	316	PB	Pn	12 31 11.7	+1.4
KALU				SB	Sn	12 31 46.4	+1.8
RNF	Rovaniemi	2.83	343	PB	Pn	12 31 12.8	+1.9
RNF				SG	Sn	12 31 49.8	+4.1
BURU	Burvik	2.99	286	P	Pn	12 31 12.4	-0.5
BURU	Burvik	2.99	286	PB	Pn	12 31 13.5	+0.5
BURU				SB	Sn	12 31 52.2	+2.8
SJUU	Sjulsmark	3.19	303	P	Pn	12 31 16.6	+0.9
ODEU	Stanfors	3.25	282	P	Pn	12 31 16.3	-0.3
UMAU	Umeaa	3.26	273	P	Pn	12 31 16.7	+0.1
UMAU	Umeaa	3.26	273	PB	Pn	12 31 18.4	+1.7
	baz=82						
UMAU				SB	Sb	12 32 00.8	-2.3
VJF	Virojoki	3.40	184	PG	Pb	12 31 25.3	-0.2
	baz=0.0						
VJF				SG	Sg	12 32 09.7	-3.9
KPF	Kankaanpaa	3.44	235	PB	Pb	12 31 23.1	-3.1
	baz=48						
KPF				SB	Sb	12 32 06.1	-2.5
PVF	Pernaja	3.54	198	PG	Pb	12 31 26.6	-1.2
	baz=17						
ERTU	Ertsjaerv	3.61	320	PB	Pn	12 31 24.0	+2.4
VRF	Varrio	3.90	9	PB	Pn	12 31 28.7	+3.2
RAF	Rauma	4.12	228	*e*P	Pn	12 31 31.6	+3.2
RAF	Rauma	4.12	228	PG	Pb	12 31 40.1	+2.4
	baz=44						
HEMU	Hemsoen	4.69	259	PN	Pn	12 31 38.4	+2.1
AAL	Aland	5.33	229	*e*P	Pn	12 31 48.2	+3.0
ARCES	ARCESS Array B	5.73	351	Pn	Pn	12 31 52.2	+1.6
	comp=Z,0.1nm,0.3s,baz=164,slow=14,SNR=30						
ARCES				Sn	Sn	12 32 54.8	-2.2
	comp=Z,0.3nm,0.3s,baz=172,slow=22,SNR=7.2						
ARCES				Lg	Lg	12 33 18.2	
	comp=Z,0.4nm,0.3s,baz=164,slow=30,SNR=7.3						
	comp=Z,1.2nm,0.7s						
HFS	Hagfors	7.74	247	Pn	Pn	12 32 20.4	+2.2
	comp=Z,0.4nm,0.3s,baz=60,slow=12,SNR=12						
HFS				Sn	Sn	12 33 45.9	-0.4
	comp=Z,0.2nm,0.3s,baz=58,slow=25,SNR=5.3						
	comp=Z,1.5nm,0.6s						
NOA	NORSAR Array B	8.30	257	Pn	Pn	12 32 28.3	+2.3
	baz=67,slow=13,SNR=1.8						
	comp=Z,1.1nm,1.0s						

IDC 30 12:32:04.7±1.4**, 0°.26N×125°.84E, h0^{km}, mb3.5**/4**, mbtmp3.5**/4**, Error ellipse: s-maj=149.9km s-min=22.2km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.74	158	P	P	12 36 57.0	-0.9
	0.8nm,0.5s,baz=337,slow=11,SNR=7.0						
	0.8nm,0.5s						
ASAR	Alice Springs	25.04	162	P	P	12 37 31.4	+0.6
	0.5nm,0.5s,baz=344,slow=11,SNR=17						
	0.5nm,0.5s						
SONM	Songino Array	50.31	343	P	P	12 41 04.1	+0.8
	0.3nm,0.5s,baz=169,slow=8.4,SNR=2.6						
	0.3nm,0.5s						
MKAR	Makanchi Array	59.92	327	P	P	12 42 11.9	-0.8
	0.3nm,0.5s,baz=116,slow=8.0,SNR=5.0						
	0.3nm,0.5s						

TIR ***30*** *12:41:37.1, 41°.59N×19°.60E, h12^{km}, Md2.6/2, Ml2.1/2*
BEO ***30*** *12:41:38.4±0.5, 41°.54N×19°.60E, h1^{km}±3^{km}, ML1.9/7*
ISC 30 12:41:37.4±1.2**, 41°.57N**±0°.03×**19°.59E**±0°.03**, h2^{km}**±10^{km}**, n21, σ0ˢ88**/36**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.30	136	Pg	Pg	12 41 43.2	0.0
TIR				Sg	Sg	12 41 48.5	+1.4
TIR				AML	AML	12 41 49.8	
	1.0nm,0.1s						
TIR				AML	AML	12 41 51.0	
	1.1nm,0.3s						
SDA	Shkodra	0.49	352	Pg	Pg	12 41 46.4	-0.4
SDA				Sg	Sg	12 41 53.7	+0.5
SDA				AMd		12 42 29.2	
PHP	Peshkopia	0.65	79	Pg	Pg	12 41 49.4	-0.5
PHP				Sg	Sg	12 41 58.6	+0.4
PHP				AML	AML	12 42 04.0	
	0.2nm,0.3s						
PHP				AML	AML	12 42 05.9	
	0.9nm,0.4s						
PHP				AMd		12 42 31.3	
DRME	Dracevica, Mon	0.69	334	*e*Pg	Pg	12 41 51.1	+0.4
PDG	Podgorica	0.90	344	Sg	Sg	12 42 06.6	+0.3
PDG	Podgorica	0.90	344	*e*Pg	Pb	12 41 55.4	-0.3
PDG				*e*Sg	Sb	12 42 08.9	+0.8
PVY	Plav	1.06	15	*e*Pg	Pb	12 41 58.5	-0.1
PVY				*e*Sg	Sg	12 42 11.8	+0.2
BEY	Berane	1.32	10	*e*Pg	Pn	12 42 02.4	-0.6
BEY				*e*Sg	Sn	12 42 21.5	+0.3
TREB	Trebinje	1.47	322	*e*Pg	Pn	12 42 04.6	-0.4
TREB				*e*Sg	Sg	12 42 25.0	+0.2
SJES	Sjenica	1.72	9	*e*Pn	Pg	12 42 10.5	+0.2
SJES				*e*Sn	Sg	12 42 33.8	+1.2
PLE	Pljevlja	1.77	355	*e*Pg	Pg	12 42 11.2	-0.1
PLE				*e*Sg	Sg	12 42 35.3	+1.0
SELS	Selova	2.00	34	*e*Pn	Pb	12 42 13.7	-0.9
SELS				*e*Sn	Sb	12 42 39.8	-0.2
IVAS	Ivanjica	2.05	11	*e*Pn	Pb	12 42 14.1	-1.3
IVAS				*e*Sn	Sb	12 42 40.1	-1.3
NOCI	Noci	2.06	249	Sn	Sg	12 42 43.2	-0.3
RUDO	Rudo	2.06	356	*e*Pn	Pb	12 42 15.0	-0.5
BARS	Barje	2.07	52	*e*Pn	Pb	12 42 14.5	-1.2
BARS				*e*Sn	Sb	12 42 41.0	-0.9
IGT	Igoumenitsa	2.11	164	*e*Pn	Pn	12 42 14.2	+0.5
IGT				*e*Sn	Sn	12 42 40.5	+0.1
GOCS	Kraljevo Serbi	2.21	25	*e*Pn	Pb	12 42 16.6	-1.5
GOCS				*e*Sn	Sn	12 42 43.8	+0.7
GRUS	Gruza	2.46	19	*e*Pn	Pb	12 42 20.5	-1.9
DIVS	Divibare	2.55	7	*e*Pn	Pn	12 42 21.0	+1.2
BOVS	Bovan	2.59	36	*e*Pn	Pn	12 42 21.8	+1.5
BOVS				*e*Sn	Sn	12 42 53.3	+0.9

THE ***30*** *13:10:28.7, 39°N±8°×2°4E±°, h3^{km}±4^{km}, M2.5/6, MLh2.5/6*
ATH ***30*** *13:10:28.7, 39°.10N×24°.28E, h8^{km}±2^{km}, ML2.5/5, Manual Solution by F.Xalaris First location: 2019/12/30 13:11:54, This location: 2019/12/30 13:27:29 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
ISC 30 13:10:28.6±1.2**, 39°.11N**±0°.04×**24°.27E**±0°.06**, h14^{km}**±8^{km}**, n16, σ0ˢ27**/24**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AOS	Alonnisos	0.31	282	P	Pg	13 10 34.8	-0.2
AOS				S	Sg	13 10 39.2	-0.1
SKY	Skiros Island	0.32	136	S	Sg	13 10 39.6	-0.1
AOS2	Alonissos-2	0.33	277	P	Pg	13 10 35.5	0.0
AOS2				S	Sg	13 10 40.0	0.0
KYMI	Kymi, Euboea I	0.49	195	P	Pg	13 10 38.4	0.0
KYMI				S	Sg	13 10 45.1	+0.2
KYMI	Kymi, Euboea I	0.49	195	P	Pg	13 10 38.3	0.0
KYMI				S	Sg	13 10 44.7	-0.2
PLN1	Chaniotis	1.04	329	P	Pg	13 10 48.9	+0.2
DION	Dionisos Attik	1.06	194	P	Pb	13 10 48.9	+0.1
DION				S	Sn	13 11 03.4	-0.2
DION	Dionisos Attik	1.06	194	P	Pg	13 10 49.2	+0.1
DION				S	Sb	13 11 01.8	-0.7
KARY	Karystos	1.08	173	P	Pn	13 10 49.2	-0.1
LKR	Lokris	1.09	246	P	Pg	13 10 50.0	+0.4
LKR				S	Sn	13 11 04.1	-0.2
PTL	Penteli	1.10	197	P	Pb	13 10 49.5	0.0
PTL	Penteli	1.10	197	P	Pg	13 10 50.0	+0.1
OUR	Ouranopolis	1.25	350	P	Pn	13 10 51.6	0.0
VLY	Voula,Athens	1.30	197	P	Pb	13 10 53.1	+0.2
VLY	Voula,Athens	1.30	197	P	Pb	13 10 53.4	+0.5
VLY				S	Sb	13 11 09.9	+0.4
PLG	Polygyros	1.42	334	P	Pn	13 10 53.9	-0.1

NIED ***30*** *13:10:34.4, 36°.80N×141°.33E, h33^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.78; $M_{\theta\theta}$-0.66; $M_{\phi\phi}$1.44; $M_{r\theta}$0.96; $M_{\theta\phi}$1.33; $M_{\phi r}$0.57; Fault plane solution: $M_0$2.08000×10^{14} NP1: ϕ_s344.00000°, δ50.00000°, λ-163.00000°. NP2: ϕ_s243.00000°, δ77.00000°, λ-41.00000°.*
JMA 30 13:10:34.4±0.1**, 36°.8N**±0°.2×**141°.3E**±0°.5**, h33^{km}, MV3.5**/39**, 2D, E OFF IBARAKI PREF, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.53	305	P	Pb	13 10 44.9	-0.5
ONAJ				*e*S	Sb	13 10 52.7	-0.3
JHO	Hitachi	0.64	253	⇓P	Pn	13 10 46.8	-0.4
JHO				⇓*e*S	Sb	13 10 55.9	-0.2
JFK	Kawauchi	0.68	327	P	Pn	13 10 47.2	-0.5
JFK				*e*S	Sb	13 10 56.4	-0.7
JFFD	Fukushimafurud	0.69	296	*i* P	Pn	13 10 47.2	-0.5
JFFD				*e*S	Sb	13 10 56.4	-0.8
JHYU	Hitachinakayam	0.76	233	*e*P	Pn	13 10 48.6	-0.1
JOTO	OTAMA OYAMA	1.10	314	P	Pb	13 10 54.5	-0.4
JMM	Marumori	1.15	338	P	Pn	13 10 54.9	+0.7
JMM				*e*S	Sb	13 11 09.9	-0.4
JFY	Yanaizu	1.44	296	*e*P	Pb	13 11 00.1	-0.5

IDC ***30*** *13:18:47.5±1.1, 6°.69N×127°.16E, h0^{km}, mb3.8/6, mbtmp3.8/6, ML5.0/1, MS2.8/1, Error ellipse: s-maj=25.8km s-min=13.1km az=38.0*
NEIC ***30*** *13:18:58.3±1.0, 6°.47N±0°.09×126°.4E±0°.1, h82^{km}±10^{km}, mb4.2/16, Error ellipse: s-maj=20.1km s-min=11.0km az=61.0*
ISC 30 13:18:57.1±0.7**, 6°.41N**±0°.07×**126°.4E**±0°.1**, h68^{km}, n32, σ1ˢ17**/31**, mb3.9**/10**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.07	308	Pg	Pn	13 19 18.6	+2.1
	121nm,0.3s,baz=247,slow=16,SNR=8.6						
DAV				LR	LR	13 19 33.5	
	comp=Z,58nm,21.2s,baz=261,slow=28						
DAV				Lg	Lg	13 19 37.5	
	153nm,0.3s,baz=107,slow=7.4,SNR=4.9						
DAV	Davao City (W)	1.07	308		Pn	13 19 17.7	+1.2
TNTI	Ternate	5.68	170	Pn	Pn	13 20 20.3	+1.3
TOLI2	Tolitoli	7.71	227	Pn	Pn	13 20 44.7	-2.1
LUWI	Luwuk	8.26	206	Pn	Pn	13 20 55.1	+0.9
FAKI	Fak Fak	10.94	148	Pn	Pn	13 21 33.5	+2.6
KAPI	Kappang	13.16	211		Pn	13 22 01.8	+0.6
SOEI	Soe	16.20	188	Pn	Pn	13 22 41.4	+0.6
SOEI				IAmb	IAmb	13 22 46.2	
	comp=Z,46nm,1.4s						
BATI	Baumata	16.74	190	P	Pn	13 22 47.7	+0.3
	comp=Z,5.8nm,0.3s,baz=4.8,slow=12,SNR=11						
JAGI	Jajag, Banyuwa	19.19	220	P	P	13 23 15.7	+0.1
JAGI				IAmb	IAmb	13 23 40.0	
	comp=Z,17nm,1.0s						
MTN	Manton Dam	19.69	166	P	P	13 23 21.7	+0.7
MTN				IAmb	IAmb	13 23 41.0	
	comp=Z,13nm,1.4s						
JOW	Kunigami	20.39	5	LR	LR	13 30 11.6	
	comp=Z,32nm,21.2s,baz=28,slow=34						
KNRA	Kununurra	22.07	174	P	P	13 23 46.5	-0.1
KNRA				IAmb	IAmb	13 23 47.3	
	comp=Z,9.9nm,0.7s						
FITZ	Fitzroy Crossi	24.36	182	P	P	13 24 08.8	-0.1
WB0	Warramunga Arr	27.17	163	P	P	13 24 33.8	-0.5
WB0				IAmb	IAmb	13 24 57.0	
	comp=Z,12nm,1.4s						
WRAB	Tennant Creek	27.31	164	P	P	13 24 35.2	-0.5
WRAB				IAmb	IAmb	13 24 40.6	
	comp=Z,3.9nm,0.8s						
WRA	Warramunga Arr	27.32	164	P	P	13 24 34.0	-1.8
	comp=Z,0.6nm,0.6s,baz=340,slow=10,SNR=7.2						
	comp=Z,0.6nm,0.6s						
WR8	Warramunga Arr	27.38	163	P	P	13 24 35.8	-0.5
WR8				IAmb	IAmb	13 25 16.5	
	comp=Z,4.2nm,1.1s						
MBWA	Marble Bar	28.18	193	P	P	13 24 42.3	-1.1
AS31	Alice Springs	30.77	167	P	P	13 25 05.6	-0.8
ASAR	Alice Springs	30.77	167	P	P	13 25 06.2	-0.2
	comp=Z,1.0nm,0.6s,baz=343,slow=7.0,SNR=25						
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	30.77	167	P	P	13 25 06.0	-0.4
BBOO	Buckleboo	40.06	167	P	P	13 26 26.4	+0.5
NWAO	Narrogin (SRO)	40.09	192	P	P	13 26 26.0	-0.1
STKA	Stephens Creek	40.73	160	P	P	13 26 31.4	0.0
	comp=Z,1.6nm,0.5s,baz=320,slow=9.3,SNR=3.3						
	comp=Z,1.6nm,0.5s						
STKA	Stephens Creek	40.73	160	P	P	13 26 31.2	-0.2
SONM	Songino Array	44.68	341	P	P	13 27 02.9	-0.5
	comp=Z,0.6nm,0.8s,baz=164,slow=8.8,SNR=2.2						
	comp=Z,0.6nm,0.8s						
MKAR	Makanchi Array	55.21	324	P	P	13 28 23.6	+0.5
	comp=Z,0.8nm,0.6s,baz=119,slow=7.1,SNR=6.7						
	comp=Z,0.8nm,0.6s						
MKAR	Makanchi Array	55.21	324	P	P	13 28 22.7	-0.4
ZALV	Zalesovo Beam	58.08	332	P	P	13 28 42.0	-1.3
	comp=Z,0.6nm,0.6s,baz=102,slow=6.2,SNR=3.7						
	comp=Z,0.6nm,0.6s						
SHEM	Shemya Is, Ala	60.33	31	P	P	13 28 56.8	-2.0
SMY	Shemya	60.33	31	P	P	13 28 56.8	-2.0

AEIC ***30*** *13:23:00.8±1.0, 65°.79N±0°.02×150°.87W±0°.04, h8^{km}±5^{km}, ML3.8, ML3.9/218(NEIC), Mwr3.9/69(NEIC), Error ellipse: s-maj=2.6km s-min=2.3km az=78.0*
NEIC ***30*** *13:23:00.9±0.9, 65°.80N±0°.02×150°.88W±0°.05, h7^{km}±2^{km}, Error ellipse: s-maj=3.1km s-min=2.7km az=169.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.38; $M_{\theta\theta}$-4.34; $M_{\phi\phi}$5.72; $M_{r\theta}$1.79; $M_{\theta\phi}$-6.10; $M_{\phi r}$-1.66; Fault plane solution: $M_0$8.36000×10^{14} NP1: ϕ_s109.79000°, δ87.83000°, λ164.76000°. NP2: ϕ_s200.38000°, δ74.77000°, λ2.25000°. Principal axes: T 9.0875, Plg12.0000°, Azm64.0000°; N -1.7286, Plg75.0000°, Azm282.0000°; P -7.3588, Plg9.0000°, Azm156.0000°;*
NEIC ***30*** *13:23:01, 65°.80N×150°.87W, h7^{km}*
IDC ***30*** *13:23:05.8±2.8, 65°.50N×150°.19W, h0^{km}, mb3.3/2, mbtmp3.2/3, ML3.0/1, MS3.4/2, Error ellipse: s-maj=30.2km s-min=23.9km az=38.0*
ISC 30 13:23:01.9±0.7**, 65°.80N**±0°.03×**150°.90W**±0°.03**, h16^{km}, n201, σ0ˢ93**/175**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I21K	Tanana	0.77	217		Pg	13 23 15.4	-1.5
I21K				IAML		13 23 28.1	
	comp=E,4μm,0.7s						
H21K	Melozitna Rive	0.80	261	Pg	Pb	13 23 16.2	-1.3
H21K	Melozitna Rive	0.80	261		Pn	13 23 26.9	+8.3
H21K					Sb	13 23 27.1	-1.0
I23K	Minto, Yukon-K	0.92	135		Pb	13 23 18.3	-1.1
I23K				IAML		13 23 34.9	
	comp=E,4μm,1.2s						
I23K				IAML		13 23 35.0	
	comp=N,4μm,0.6s						
I23K	Minto, Yukon-K	0.92	135		Sb	13 23 30.6	-0.7
G23K	Bananza Creek	0.98	21		Pb	13 23 19.4	-1.2
G23K					Sb	13 23 32.8	-0.5
G23K	Bananza Creek	0.98	21	IAML		13 23 36.0	
	comp=N,4μm,0.6s						
G22K	Bettles	1.15	348		Pn	13 23 22.4	-1.0
G22K					Sn	13 23 38.8	0.0
H24K	Noodor Dome	1.24	87		Pn	13 23 23.8	-0.9
H24K				IAML		13 23 42.4	
	comp=N,2μm,0.7s						
G21K	Allakaket	1.28	305		Pn	13 23 24.6	-0.6
G21K	Allakaket	1.28	305		Sg	13 23 42.8	-0.5
NEA2	Nenana	1.44	147		Pn	13 23 26.9	-0.4
COLD	Coldfoot	1.46	11		Pn	13 23 28.1	+0.5
COLD				IAML		13 23 49.7	
	comp=E,2μm,1.0s						
COLD	Coldfoot	1.46	11		Sb	13 23 47.1	+0.1
COLA	College	1.58	125		Pn	13 23 28.8	-0.4
COLA	College	1.58	125		Sb	13 23 49.9	-0.5
POKR	Poker Plat Res	1.60	114		Pn	13 23 29.6	+0.1
POKR				IAML		13 23 53.3	
	comp=E,2μm,0.5s						
POKR				IAML		13 23 54.2	
	comp=N,2μm,0.2s						
G24K	Hadweenzic Riv	1.66	55		Pn	13 23 29.5	-0.8
G24K					Pb	13 23 29.7	-2.3
H20K	Anotleneega Mo	1.68	261		Pn	13 23 30.3	-0.3
BPAW	Bear Paw Mtn.	1.71	181		Pn	13 23 31.1	+0.1
BPAW				IAML		13 23 55.2	
	comp=E,2μm,0.9s						
CCB	Clear Creek Bu	1.74	130		Pn	13 23 31.4	0.0
CCB				IAML		13 23 56.1	
	comp=E,1μm,0.7s						
F21K	Alatna River	1.77	325		Pn	13 23 32.2	+0.4
WRH	Wood River Hil	1.79	137		Pn	13 23 32.2	+0.1
WRH				IAML		13 23 58.5	
	comp=E,999nm,1.0s						
I20K	Naaghedeneel	1.81	238		Pn	13 23 32.2	-0.2
IL31		1.98	120		Pn	13 23 34.7	0.0
ILAR	Eielson Array	1.98	120	Pg	Pn	13 23 34.1	-0.5
	comp=E,5.7nm,0.3s,baz=302,slow=13,SNR=253						
ILAR				Lg	Lg	13 23 56.9	
	comp=E,39nm,0.3s,baz=297,slow=15,SNR=6.6						
ILAR	Eielson Array	1.98	120		Pn	13 23 34.8	+0.1
CHUM	Lake Minchumin	2.02	198		Pn	13 23 35.2	-0.1
CHUM					Pb	13 23 36.3	-1.8
F24K	Squaw Lake	2.10	33		Pn	13 23 36.1	-0.4
F24K	Squaw Lake	2.10	33	IAML		13 24 07.8	
	comp=N,887nm,1.0s						
F24K				IAML		13 24 11.5	
	comp=E,862nm,0.8s						
J20K	Nowinta River	2.14	222		Pn	13 23 37.6	+0.7
J20K				IAML		13 24 12.4	
	comp=N,1μm,0.5s						
G25K	Bearman Lake	2.17	61		Pn	13 23 36.6	-0.7
HDA	Harding Lake	2.18	128		Pn	13 23 37.4	-0.1
HDA				IAML		13 24 08.7	
	comp=N,653nm,1.0s						
HDA				IAML		13 24 09.6	
	comp=E,676nm,0.6s						
MCK	McKinley	2.24	157		Pn	13 23 38.5	+0.1
PRP	Porcupine Dome	2.24	95		Pn	13 23 38.3	-0.2
PRP				IAML		13 24 11.1	
	comp=N,707nm,0.9s						
PRP				IAML		13 24 19.1	
	comp=E,527nm,0.6s						
KTH	Kantishna Hill	2.25	180		Pn	13 23 39.0	+0.4
KTH				IAML		13 24 15.3	
	comp=E,961nm,1.2s						
KTH				IAML		13 24 16.0	
	comp=N,745nm,1.2s						
H19K	Roundabout Mou	2.32	266		Pn	13 23 39.0	-0.4
E23K	Chandalar	2.33	12		Pn	13 23 39.6	0.0
E23K				IAML		13 24 17.4	
	comp=N,830nm,0.8s						
TRF	Thorofare Moun	2.37	173		Pn	13 23 41.0	+0.7
TRF				IAML		13 24 16.7	
	comp=E,733nm,0.9s						
E22K	Anaktuvuk Pass	2.37	352		Pn	13 23 40.8	+0.6
FYU	Fort Yukon	2.42	69		Pn	13 23 40.2	-0.6
FYU				IAML		13 24 19.3	
	comp=N,672nm,0.4s						
FYU				IAML		13 24 21.2	
	comp=E,568nm,0.7s						
E24K	Your Creek	2.48	21		Pn	13 23 41.6	0.0
E24K				IAML		13 24 22.6	
	comp=E,763nm,1.2s						
E24K				IAML		13 24 28.4	
	comp=N,641nm,1.0s						
G19K	Purcell Mounta	2.56	281		Pn	13 23 42.4	-0.3
RND	Reindeer	2.56	159		Pn	13 23 42.6	-0.2
J25K	Salcha River,	2.62	115		Pn	13 23 43.6	0.0
J19K	Poorman	2.71	230		Pn	13 23 44.4	-0.4
J19K				IAML		13 24 28.2	
	comp=N,494nm,0.6s						
J19K				IAML		13 24 34.3	
	comp=E,449nm,1.0s						
GCSA	Galena City Sc	2.73	250		Pn	13 23 44.9	-0.1
F25K	Christian Rive	2.76	47		Pn	13 23 44.9	-0.6
F25K	Christian Rive	2.76	47	IAML		13 24 31.3	
	comp=E,337nm,1.1s						
K20K	Telida	2.81	211		Pn	13 23 45.9	-0.3
K20K				IAML		13 24 31.1	
	comp=N,558nm,0.9s						
TOLK	Toolik Lake Re	2.90	10		Pn	13 23 47.6	+0.2
TOLK				IAML		13 24 41.4	
	comp=E,386nm,1.1s						
E21K	Killik River	2.91	337		Pn	13 23 48.7	+1.1
E21K	Killik River	2.91	337	IAML		13 24 37.9	
	comp=E,364nm,1.1s						
E21K				IAML		13 24 39.9	
	comp=N,342nm,0.9s						
F19K	Shaleruckik Mo	2.96	294		Pn	13 23 48.9	+0.6
F19K	Shaleruckik Mo	2.96	294	IAML		13 24 39.0	
	comp=N,422nm,1.0s						
F19K				IAML		13 24 43.2	
	comp=E,355nm,0.9s						
K24K	Donnelly Dome	2.97	130		Pn	13 23 48.0	-0.4
PPLA	Purkeypile	2.97	192		Pn	13 23 48.5	0.0
PPLA				IAML		13 24 38.0	
	comp=E,452nm,1.2s						
PPLA				IAML		13 24 41.6	
	comp=N,422nm,1.1s						
BMAR	Burnt Mountain	3.00	54		Pn	13 23 48.3	-0.5
E19K	Redstone River	3.02	306		Pn	13 23 49.8	+0.7
E19K				IAML		13 24 44.1	
	comp=E,383nm,0.9s						
G26K	Porcupine Rive	3.09	65		Pn	13 23 48.9	-1.1
G26K	Porcupine Rive	3.09	65	IAML		13 24 45.1	
	comp=E,484nm,1.1s						
G26K				IAML		13 24 53.5	
	comp=N,408nm,1.1s						
DHY	Denali Highway	3.13	149		Pn	13 23 51.9	+1.2
DHY	Denali Highway	3.13	149	IAML		13 24 31.1	
	comp=E,413nm,0.4s						
DHY				IAML		13 24 31.2	
	comp=N,277nm,0.6s						
E25K	Arctic Village	3.13	40		Pn	13 23 49.8	-0.9
E25K				IAML		13 24 44.1	
	comp=N,296nm,0.9s						
E25K				IAML		13 24 49.0	
	comp=E,283nm,1.1s						
D22K	Ayikyak River	3.17	348		Pn	13 23 52.2	+1.1
H18K	Honhosa River	3.18	262	IAML		13 24 53.2	
	comp=E,295nm,0.8s						
H18K				IAML		13 24 58.1	
	comp=N,308nm,1.1s						
D23K	Nanushuk River	3.18	1		Pn	13 23 52.6	+1.4
D23K	Nanushuk River	3.18	1	IAML		13 24 49.9	
	comp=N,399nm,1.1s						
G18K	Tagagawik	3.19	275		Pn	13 23 51.7	+0.3
G18K				IAML		13 24 47.2	
	comp=N,426nm,1.1s						
G18K				IAML		13 24 48.5	
	comp=E,277nm,0.9s						
E20K	Nigu River	3.23	322		Pn	13 23 53.0	+1.1
F26K	Sheenjek River	3.29	52		Pn	13 23 52.0	-0.7
L22K	Petersville	3.29	179		Pn	13 23 54.1	+1.4
L22K	Petersville	3.29	179	IAML		13 24 46.0	
	comp=N,249nm,0.5s						
RIDG	Independent Ri	3.31	126		Pn	13 23 52.6	-0.6
J26L	Joseph Creek	3.36	109		Pn	13 23 53.4	-0.3
J26L	Joseph Creek	3.36	109	IAML		13 24 53.1	
	comp=N,282nm,0.9s						
CUT	Chulitna	3.42	175		Pn	13 23 55.1	+0.6
J18K	Innoko River	3.43	230		Pn	13 23 54.0	-0.6
J18K	Innoko River	3.43	230	IAML		13 24 56.2	
	comp=E,231nm,0.4s						
D24K	Happy Valley	3.46	12		Pn	13 23 56.5	+1.4
SCRK	Sand Creek	3.47	119		Pn	13 23 55.4	+0.1
SCRK				IAML		13 25 01.7	
	comp=N,218nm,1.0s						
DOT	Dot Lake	3.64	123	IAML		13 24 59.9	
	comp=E,254nm,1.1s						
DOT				IAML		13 25 02.0	
	comp=N,183nm,1.2s						
D20K	Etivluk River	3.67	325		Pn	13 23 59.5	+1.5
D20K	Etivluk River	3.67	325	IAML		13 25 13.6	
	comp=E,177nm,1.1s						
C21K	Knifeblade Rid	3.69	338		Pn	13 23 59.7	+1.5
PAX	Paxson	3.69	138	IAML		13 24 44.4	

	comp=N,214nm,0.6s						
PAX				IAML		13 24 44.5	
	comp=E,185nm,0.8s						
I27K	**Kandik River**	**3.84**	**89**		**Pn**	**13 23 59.0**	**-1.4**
SKT	**Skwentna**	**3.84**	**184**		**Pn**	**13 24 01.3**	**+0.9**
SKT				IAML		13 25 06.0	
	comp=E,239nm,1.0s						
SKT				IAML		13 25 11.3	
	comp=N,147nm,1.1s						
H27K	**Steamboat Moun**	**3.85**	**79**		**Pn**	**13 23 59.3**	**-1.2**
H27K	**Steamboat Moun**	**3.85**	**79**	IAML		13 25 11.5	
	comp=E,148nm,1.0s						
H27K				IAML		13 25 13.6	
	comp=N,226nm,1.2s						
G27K	**Doyon Strip**	**3.87**	**71**		**Pn**	**13 24 00.5**	**-0.2**
H17K	**Granite Mounta**	**3.87**	**261**		**Pn**	**13 24 01.4**	**+0.7**
D19K	**Kuna River**	**3.91**	**317**		**Pn**	**13 24 02.4**	**+1.2**
D19K	**Kuna River**	**3.91**	**317**	IAML		13 25 09.6	
	comp=N,207nm,1.1s						
D19K				IAML		13 25 17.5	
	comp=E,225nm,0.8s						
D25K	**Kavik River**	**3.94**	**24**		**Pn**	**13 24 02.7**	**+1.0**
D25K	**Kavik River**	**3.94**	**24**	IAML		13 25 12.6	
	comp=N,181nm,0.8s						
D25K				IAML		13 25 18.2	
	comp=E,154nm,1.0s						
C24K	**Franklin Bluff**	**4.03**	**11**		**Pn**	**13 24 03.4**	**+0.6**
C24K				IAML		13 25 13.2	
	comp=N,205nm,0.9s						
C24K				IAML		13 25 14.3	
	comp=E,211nm,1.1s						
G17K	**Kiwalik Mounta**	**4.05**	**270**		**Pn**	**13 24 03.2**	**0.0**
M20K	**Styx River**	**4.05**	**195**		**Pn**	**13 24 03.8**	**+0.4**
M20K	**Styx River**	**4.05**	**195**	IAML		13 25 09.4	
	comp=N,121nm,0.9s						
C23K	**Itkillik River**	**4.06**	**1**		**Pn**	**13 24 04.1**	**+0.9**
C23K				IAML		13 25 37.0	
	comp=E,231nm,1.1s						
M22K	**Willow**	**4.08**	**175**		**Pn**	**13 24 04.2**	**+0.7**
GHO	**Glory Hole Cre**	**4.14**	**167**		**Pn**	**13 24 04.9**	**+0.5**
GHO	**Glory Hole Cre**	**4.14**	**167**	IAML		13 25 13.1	
	comp=N,110nm,0.8s						
GHO				IAML		13 25 18.1	
	comp=E,113nm,1.1s						
K27K	**Chicken**	**4.16**	**111**		**Pn**	**13 24 05.1**	**+0.5**
K27K	**Chicken**	**4.16**	**111**	IAML		13 25 21.8	
	comp=E,176nm,0.9s						
SML	**Sawmill**	**4.17**	**163**	IAML		13 25 17.7	
	comp=N,110nm,1.0s						
SML				IAML		13 25 22.1	
	comp=E,113nm,1.0s						
MENT	**Mentasta**	**4.24**	**129**	IAML		13 25 14.0	
	comp=N,162nm,1.0s						
MENT				IAML		13 25 15.2	
	comp=E,169nm,0.9s						
HARP	**HAARP**	**4.24**	**141**		**Pn**	**13 24 06.6**	**+0.8**
M24K	**Tolsona, Glenn**	**4.25**	**149**		**Pn**	**13 24 07.3**	**+1.4**
M24K	**Tolsona, Glenn**	**4.25**	**149**	IAML		13 25 21.2	
	comp=E,169nm,1.1s						
M24K				IAML		13 25 48.5	
	comp=N,116nm,1.2s						
F17K	**Baldwin Pennin**	**4.26**	**283**		**Pn**	**13 24 06.7**	**+0.7**
J17K	**VABM Dome**	**4.27**	**239**		**Pn**	**13 24 05.5**	**-0.7**
J17K					**Pn**	**13 24 06.5**	**+0.3**
SCM	**Sheep Creek Mo**	**4.28**	**157**		**Pn**	**13 24 07.5**	**+1.1**
SCM				IAML		13 25 03.5	
	comp=N,176nm,0.6s						
SCM				IAML		13 25 03.5	
	comp=E,122nm,0.6s						
PMR	**Palmer**	**4.30**	**169**		**Pn**	**13 24 07.6**	**+1.1**
PMR					**Pn**	**13 24 07.8**	**+1.3**
L26K	**Log Cabin Wild**	**4.30**	**127**	IAML		13 25 22.4	
	comp=E,156nm,0.4s						
L26K				IAML		13 25 26.3	
	comp=N,147nm,0.9s						
SUA	**Susitna One**	**4.35**	**179**		**Pn**	**13 24 08.3**	**+0.9**
SUA	**Susitna One**	**4.35**	**179**	IAML		13 25 21.7	
	comp=N,166nm,0.8s						
SUA				IAML		13 25 26.3	
	comp=E,154nm,1.0s						
E27K	**Coleen River**	**4.37**	**53**		**Pn**	**13 24 06.4**	**-1.1**
L18K	**Granite Mounta**	**4.40**	**218**		**Pn**	**13 24 07.8**	**-0.2**
K17K	**Iditarod**	**4.47**	**230**		**Pn**	**13 24 08.1**	**-0.8**
SPNN	**North Nagishla**	**4.52**	**191**		**Pn**	**13 24 10.6**	**+0.8**
KNK	**Knik Glacier**	**4.54**	**165**		**Pn**	**13 24 11.2**	**+1.4**
KNK	**Knik Glacier**	**4.54**	**165**	IAML		13 25 11.1	
	comp=E,122nm,0.6s						
I28M	**Miner Creek**	**4.56**	**89**		**Pn**	**13 24 09.1**	**-1.1**
I28M	**Miner Creek**	**4.56**	**89**	IAML		13 25 28.4	
	comp=N,102nm,1.1s						
E17K	**Hotham Inlet**	**4.57**	**291**		**Pn**	**13 24 11.6**	**+1.2**
E17K					**Pn**	**13 24 11.7**	**+1.4**
I17K	**Unalakleet**	**4.60**	**250**		**Pn**	**13 24 10.6**	**-0.1**
I17K	**Unalakleet**	**4.60**	**250**	IAML		13 25 27.7	
	comp=N,118nm,1.0s						
I17K				IAML		13 25 33.1	
	comp=E,128nm,1.1s						
SPCN	**Chakachatna No**	**4.63**	**188**		**Pn**	**13 24 12.7**	**+1.6**
B22K	**Teshekpuk Lake**	**4.66**	**349**		**Pn**	**13 24 11.7**	**+0.3**
B22K	**Teshekpuk Lake**	**4.66**	**349**	IAML		13 25 47.7	
	comp=N,107nm,1.1s						
B22K				IAML		13 25 52.5	
	comp=E,126nm,1.1s						
SPU	**Mount Spurr**	**4.67**	**187**		**Pn**	**13 24 12.6**	**+0.9**
CKL	**Chakachamna La**	**4.67**	**189**		**Pn**	**13 24 12.4**	**+0.7**
C19K	**Lookout Ridge**	**4.71**	**319**		**Pn**	**13 24 13.0**	**+0.7**
C19K	**Lookout Ridge**	**4.71**	**319**	IAML		13 25 35.0	
	comp=E,94nm,1.0s						
C19K				IAML		13 25 39.1	
	comp=N,92nm,1.1s						
C26K	**Camden Bay**	**4.71**	**26**		**Pn**	**13 24 13.2**	**+1.0**
C26K	**Camden Bay**	**4.71**	**26**	IAML		13 25 38.5	
	comp=N,103nm,1.1s						
F28M	**Old Crow**	**4.74**	**62**		**Pn**	**13 24 11.8**	**-0.8**
G16K	**Koyuk River**	**4.77**	**270**	IAML		13 25 46.0	
	comp=E,128nm,1.1s						
BC01	**Beaver Creek A**	**4.79**	**121**		**Pn**	**13 24 12.5**	**-0.9**
L27K	**Beaver Creek,**	**4.79**	**121**		**Pn**	**13 24 12.5**	**-0.9**
L27K	**Beaver Creek,**	**4.79**	**121**	IAML		13 25 42.1	
	comp=E,84nm,1.1s						
BC04	**Beaver Creek A**	**4.80**	**120**		**Pn**	**13 24 12.6**	**-1.0**
BCAR	**Beaver Creek A**	**4.81**	**121**		**Pn**	**13 24 13.1**	**-0.5**
B20K	**Meade River**	**4.84**	**334**		**Pn**	**13 24 14.0**	**0.0**
B20K				IAML		13 25 40.6	
	comp=E,98nm,0.9s						
B20K				IAML		13 26 22.7	
	comp=N,92nm,1.1s						
M18K	**Stony River**	**4.85**	**209**		**Pn**	**13 24 13.8**	**-0.3**
KLU	**Klutina**	**4.86**	**151**		**Pn**	**13 24 16.4**	**+2.0**
M26K	**Nabesna, AK**	**4.86**	**131**		**Pn**	**13 24 14.6**	**+0.2**
M26K	**Nabesna, AK**	**4.86**	**131**	IAML		13 25 35.0	
	comp=N,69nm,0.8s						
M26K				IAML		13 25 41.8	
	comp=E,67nm,1.1s						
J16K	**Anvik River**	**4.89**	**243**		**Pn**	**13 24 14.1**	**-0.5**
H16K	**Elim**	**4.91**	**261**		**Pn**	**13 24 15.5**	**+0.5**
L17K	**Donlin**	**4.91**	**225**		**Pn**	**13 24 15.2**	**+0.2**
C18K	**Utukok River**	**4.92**	**310**		**Pn**	**13 24 15.6**	**+0.5**
C18K	**Utukok River**	**4.92**	**310**	IAML		13 25 42.9	
	comp=E,62nm,0.9s						
C18K				IAML		13 25 49.0	
	comp=N,79nm,0.9s						
N25K	**Chitina, Valde**	**5.05**	**143**		**Pn**	**13 24 16.7**	**-0.3**
H29M	**Whitestone**	**5.13**	**80**		**Pn**	**13 24 16.9**	**-1.1**
H29M	**Whitestone**	**5.13**	**80**	IAML		13 25 50.5	
	comp=E,92nm,1.1s						
H29M				IAML		13 25 51.7	
	comp=N,89nm,1.0s						
D27M	**Malcolm River**	**5.14**	**43**		**Pn**	**13 24 18.0**	**-0.2**
D27M					**Pn**	**13 24 19.2**	**+1.0**
D27M	**Malcolm River**	**5.14**	**43**	IAML		13 25 56.0	
	comp=E,52nm,1.1s						
D27M				IAML		13 26 00.1	
	comp=N,64nm,1.1s						
DAWY	**Dawson**	**5.19**	**104**		**Pn**	**13 24 19.1**	**+0.2**
E28M	**Babbage River**	**5.24**	**52**	IAML		13 25 53.9	
	comp=N,49nm,1.0s						
M27K	**Edge Creek, AK**	**5.25**	**127**		**Pn**	**13 24 19.8**	**0.0**
M27K					**Pn**	**13 24 20.0**	**+0.3**
M27K	**Edge Creek, AK**	**5.25**	**127**	IAML		13 25 53.8	
	comp=E,99nm,0.8s						
N19K	**Bonanza Creek**	**5.26**	**200**	Pn	**Pn**	**13 24 19.6**	**-0.2**
N19K				IAML		13 25 54.3	
	comp=N,97nm,1.1s						
N19K				IAML		13 25 57.5	
	comp=E,78nm,1.1s						
M17K	**Holitna River**	**5.29**	**216**		**Pn**	**13 24 20.0**	**-0.2**
G29M	**Pine Creek**	**5.30**	**72**		**Pn**	**13 24 20.4**	**+0.1**
SLKM	**Skilak Lake**	**5.32**	**176**		**Pn**	**13 24 21.5**	**+0.8**
SLKM					**Pn**	**13 24 21.9**	**+1.2**
O22K	**Cooper Landing**	**5.37**	**174**		**Pn**	**13 24 21.2**	**0.0**
A22K	**Sinclair Lake**	**5.44**	**346**		**Pn**	**13 24 22.1**	**0.0**
J29N	**Klondike Camp**	**5.52**	**98**		**Pn**	**13 24 24.2**	**+0.8**
L16K	**Owhat River**	**5.59**	**227**		**Pn**	**13 24 24.0**	**-0.4**
L16K					**Pn**	**13 24 24.5**	**+0.1**
BMRM	**Bremner River**	**5.61**	**147**		**Pn**	**13 24 26.0**	**+1.4**
BMRM					**Pn**	**13 24 26.2**	**+1.5**
MCARA	**McCarthy VSAT**	**5.65**	**138**		**Pn**	**13 24 26.4**	**+1.2**
MCARA					**Pn**	**13 24 27.1**	**+1.9**
E29M	**Blow River**	**5.70**	**57**		**Pn**	**13 24 24.5**	**-1.3**
EPYK	**Eagle Plains**	**5.80**	**78**		**Pn**	**13 24 27.5**	**+0.4**
K15K	**Wolf Creek Mou**	**5.84**	**238**		**Pn**	**13 24 27.2**	**-0.6**
K15K					**Pn**	**13 24 28.1**	**+0.3**
D28M	**Stokes Point**	**5.84**	**47**		**Pn**	**13 24 29.0**	**+1.2**
ILSW	**Iliamna Southw**	**5.93**	**191**	Pn	**Pn**	**13 24 29.3**	**+0.2**
YUK2	**White River**	**6.00**	**127**		**Pn**	**13 24 29.6**	**-0.5**
YUK2					**Pn**	**13 24 30.6**	**+0.6**
M16K	**Timber Creek**	**6.00**	**221**		**Pn**	**13 24 29.6**	**-0.4**
N17K	**Nushagak Hills**	**6.01**	**211**		**Pn**	**13 24 29.9**	**-0.1**
N17K					**Pn**	**13 24 30.0**	**0.0**
BALM	**Baldy**	**6.13**	**137**		**Pn**	**13 24 33.2**	**+1.4**
L29M	**L29M**	**6.14**	**110**		**Pn**	**13 24 32.0**	**+0.1**
C16K	**Lisburne Hills**	**6.17**	**300**		**Pn**	**13 24 32.5**	**+0.3**
L15K	**Ungalak Mounta**	**6.26**	**234**		**Pn**	**13 24 33.4**	**0.0**
F30M	**Barrier River**	**6.26**	**66**		**Pn**	**13 24 33.2**	**-0.3**
BARN	**Barnard Glacie**	**6.30**	**135**	Pn	**Pn**	**13 24 33.1**	**-1.2**
N16K	**Nishlik Lake**	**6.42**	**217**		**Pn**	**13 24 35.6**	**-0.1**
CTGM	**Chitina Glacie**	**6.48**	**134**		**Pn**	**13 24 37.6**	**+1.0**
G31M	**Satah River**	**6.78**	**73**		**Pn**	**13 24 38.8**	**-1.8**
F31M	**Tsiigehtchic**	**7.02**	**69**		**Pn**	**13 24 42.9**	**-0.9**
N15K	**Kwethluk River**	**7.03**	**221**		**Pn**	**13 24 43.4**	**-0.6**
INK	**Inuvik**	**7.23**	**62**	LR	LR	13 27 42.1	
	comp=E,149nm,21.7s,baz=318,slow=39						
INK	**Inuvik**	**7.23**	**62**		**Pn**	**13 24 46.3**	**-0.5**
C36M	**Paulatuk**	**10.79**	**59**		**Pn**	**13 25 32.2**	**-3.2**
A36M	**Sachs Harbour**	**11.04**	**45**		**Pn**	**13 25 37.8**	**-1.1**
YKA	**Yellowknife Ar**	**16.01**	**85**	Pn	**Pn**	**13 26 44.8**	**-1.3**
	comp=E,0.1nm,0.3s,baz=292,slow=12,SNR=5.2						
	comp=E,0.2nm,0.6s						
PDAR	**Pinedale Array**	**32.40**	**115**	P	**P**	**13 29 34.5**	**+3.6**
	comp=E,0.6nm,0.9s,baz=334,slow=11,SNR=4.4						
	comp=E,0.6nm,0.9s						
TXAR	**Lajitas Array**	**46.49**	**118**	P	**P**	**13 31 31.3**	**+3.2**
	comp=E,0.2nm,0.6s,baz=340,slow=7.9,SNR=2.8						
	comp=E,0.2nm,0.6s						
TKL	**Tuckaleechee C**	**48.76**	**94**	LR	LR	13 53 43.1	
	comp=E,83nm,20.6s,baz=306,slow=38						

IDC 30 13:32:49.4±5.1, 8°.92S×156°.47E, h0^{km}, mb3.5/4, mbtmp3.5/4, MS3.4/1, Error ellipse: s-maj=149.1km s-min=33.8km az=116.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.03**	**240**	P	P	13 38 06.6	+0.2
	0.3nm,0.5s,baz=67,slow=9.3,SNR=1.8						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**26.09**	**233**	P	P	13 38 24.7	-0.4
	0.3nm,0.8s,baz=60,slow=9.5,SNR=5.4						
	0.3nm,0.8s						
STKA	**Stephens Creek**	**26.70**	**209**	LR	LR	13 49 43.7	
	comp=Z,69nm,18.4s,baz=24,slow=38						
SONM	**Songino Array**	**71.73**	**327**	P	P	13 44 14.1	+0.5
	0.9nm,0.8s,baz=142,slow=5.8,SNR=5.2						
	0.9nm,0.8s						
MKAR	**Makanchi Array**	**85.80**	**318**	P	P	13 45 30.5	-0.4
	0.6nm,0.6s,baz=98,slow=5.9,SNR=7.3						
	0.6nm,0.6s						

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*IDC **30** 13:49:43.3±0.5, 27°.39N×56°.62E, h0^{km}, mb4.7/37, mbtmp4.7/42, ML4.7/5, MS4.6/72, Error ellipse: s-maj=13.0km s-min=8.6km az=179.0*

*DSN **30** 13:49:44.6±1.9, 27°.39N×56°.78E, h6^{km}±14^{km}, mb5.6/3, ML5.0/21, Error ellipse: s-maj=12.9km s-min=5.9km az=100.0*

*BJI **30** 13:49:44.1, 27°.69N×56°.54E, h11^{km}, mB5.2/31, mb4.9/73, Ms5.1/71, Ms7 4.9/70*

*NEIC **30** 13:49:45.2, 27°.38N×56°.54E, h18^{km}*

*OMAN **30** 13:49:45.8±0.8, 27°.38N×56°.72E, h10^{km}, mb5.6/11, ml5.2/25, Mwp5.3/21, Error ellipse: s-maj=6.8km s-min=5.3km az=10.0*

*NEIC **30** 13:49:45.2, 27°.28N×56°.54E, h18^{km}, Moment Tensor Solution. Duration: 1^{s}5 Moment tensor: Scale 10^{16}Nm; M_{rr}3.48; $M_{\theta\theta}$-2.85; $M_{\phi\phi}$-0.63; $M_{r\theta}$1.77; $M_{\theta\phi}$-1.54; $M_{\phi r}$-1.14; Fault plane solution: $M_0$4.14000×10^{16} NP1: ϕ_s222.62000°, δ40.64000°, λ54.62000°. NP2: ϕ_s85.73000°, δ57.92000°, λ116.43000°. Principal axes: T 4.4067, Plg66.0000°, Azm46.0000°; N -0.5930, Plg22.0000°, Azm251.0000°; P -3.8137, Plg9.0000°, Azm157.0000°;*

*THR **30** 13:49:45.4±0.6, 27°.19N×56°.48E, h10^{km}, ML5.5*

*NEIC **30** 13:49:45.2±0.9, 27°.38N±0°.04×56°.54E±0°.06, h10^{km}±1^{km}, mb5.4/200, Mww5.0/12, Error ellipse: s-maj=10.8km s-min=4.9km az=238.0*

*MOS **30** 13:49:46.7±1.0, 27°.45N×56°.63E, h31^{km}, mb5.4/59, MS4.8/16, Error ellipse: s-maj=5.3km s-min=3.7km az=90.9*

*TEH **30** 13:49:46.0, 27°.32N×56°.71E, h20^{km}±20^{km}*

*GCMT **30** 13:49:46.2±0.2, 27°.13N±0°.01×56°.50E±0°.01, h18^{km}, MW5.2/110, Moment Tensor Solution. s86,c130; s110,c190; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.51±.01; $M_{\theta\theta}$-0.54±.01; $M_{\phi\phi}$0.03±.01; $M_{r\theta}$0.66±.03; $M_{\theta\phi}$-0.26±.01; $M_{\phi r}$-0.19±.03; Best double couple: $M_0$0.90400×10^{17} NP1: ϕ_s223.00000°, δ28.00000°, λ41.00000°. NP2: ϕ_s96.00000°, δ72.00000°, λ112.00000°. Principal axes: T 0.9190, Plg57.0000°, Azm35.0000°; N -0.0300, Plg21.0000°, Azm269.0000°; P -0.8880, Plg24.0000°, Azm169.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*GFZ **30** 13:49:47.1, 27°.51N×56°.67E, h28^{km}, MW5.1, Moment Tensor Solution. s74 Moment tensor: M_{rr}5.10; $M_{\theta\theta}$-3.68; $M_{\phi\phi}$-1.42; $M_{r\theta}$-0.80; $M_{\theta\phi}$-2.69; $M_{\phi r}$-1.21; Fault plane solution: NP1: ϕ_s63.00000°, δ38.00000°, λ100.00000°. NP2: ϕ_s230.00000°, δ52.00000°, λ82.00000°. Principal axes: T 5.3300, Plg80.0000°, Azm103.0000°; N 0.3000, Plg6.0000°, Azm235.0000°; P -5.6300, Plg7.0000°, Azm326.0000°;*

ISC 30 13:49:45.6±0.4, 27°.38N±0°.02×56°.62E±0°.02, h14^{km}±2^{km}, h14^{km}:pP-P, n952, σ1^{s}35/979, mb5.2/239, MS4.7/115, 26C-27D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBND	**Bandar-abas**	**0.10**	**313**	Pg	**Pb**	**13 49 51.5**	**+2.1**
GENO	**Geno**	**0.40**	**273**	Pg	**Pn**	**13 49 56.6**	**-0.6**
BNDS	**Bandar-Abbas**	**0.40**	**273**	Pg	**Pn**	**13 49 56.6**	**-0.5**
KHNJ	**Kahnooj**	**1.11**	**59**	Pg	**Pb**	**13 50 06.2**	**-0.4**
KHNJ				Sg	**Sb**	**13 50 21.3**	**+0.2**
SHME	**Shamm**	**1.39**	**198**	P	**Pg**	**13 50 13.5**	**+1.1**
	SNR=171						
SHME				P	**Pg**	**13 50 13.5**	**+1.1**
	SNR=171						
SHME				S	**Sg**	**13 50 31.6**	**+1.0**
SHME				S	**Sg**	**13 50 31.6**	**+1.0**
SHME	**Shamm**	**1.39**	**198**	*e*P	**Pb**	**13 50 11.9**	**+0.5**
	SNR=170						
SHME				S	**Sg**	**13 50 31.9**	**+1.3**
BANOM	**Banah**	**1.48**	**191**	P	**Pg**	**13 50 14.1**	**0.0**
BANOM				P	**Pg**	**13 50 14.1**	**0.0**
BANOM				S	**Sg**	**13 50 34.9**	**+1.5**
BANOM				S	**Sg**	**13 50 34.9**	**+1.5**
BANOM	**Banah**	**1.48**	**191**	*e*P	**Pb**	**13 50 13.0**	**+0.1**
	SNR=245						
LAR1	**LAR**	**2.02**	**279**	Pn	**Pb**	**13 50 22.2**	**+0.1**
UMQ	**Umm Al-Quwin**	**2.04**	**205**	P	**Pb**	**13 50 22.5**	**+0.1**
	SNR=14						
UMQ				P	**Pb**	**13 50 22.5**	**+0.1**
	SNR=14						
UMQ				S	**Sg**	**13 50 50.8**	**-0.4**
UMQ				S	**Sg**	**13 50 50.8**	**-0.4**
UMQ	**Umm Al-Quwin**	**2.04**	**205**	*e*P	**Pb**	**13 50 21.8**	**-0.6**
	SNR=15						
MASF	**Masafi**	**2.04**	**192**	P	**Pb**	**13 50 21.6**	**-0.9**
	SNR=41						
MASF				P	**Pb**	**13 50 21.6**	**-0.9**
	SNR=41						
MASF				S	**Sb**	**13 50 48.4**	**+0.5**
MASF				S	**Sb**	**13 50 48.4**	**+0.5**
MSFE	**Esma-Masafi**	**2.06**	**192**	*e*P	**Pn**	**13 50 20.4**	**+0.6**
	SNR=40						
MDH	**Madha**	**2.09**	**188**	P	**Pn**	**13 50 20.7**	**+0.5**
	SNR=83						
MDH				P	**Pn**	**13 50 20.7**	**+0.5**
	SNR=83						
MDH				S	**Sb**	**13 50 48.4**	**-0.9**
MDH				S	**Sb**	**13 50 48.4**	**-0.9**
MDH	**Madha**	**2.09**	**188**	*e*P	**Pn**	**13 50 20.0**	**-0.3**
	SNR=83						
NGRK	**Negar Kerman**	**2.26**	**2**	Pn	**Pb**	**13 50 25.1**	**-1.3**
KBAM	**BAM**	**2.38**	**42**	Pn	**Pb**	**13 50 26.5**	**-1.8**
UOSS	**Minazif**	**2.45**	**189**	P	**Pn**	**13 50 24.8**	**-0.5**
UOSS				S	**Sn**	**13 50 56.8**	**+1.7**
UOSS	**Minazif**	**2.45**	**189**		**Pn**	**13 50 25.0**	**-0.3**
UOSS	**Minazif**	**2.45**	**189**	Pn	**Pn**	**13 50 25.4**	**+0.1**
UOSS	**Minazif**	**2.45**	**189**	*e*P	**Pn**	**13 50 25.2**	**-0.1**
	SNR=27						
NAZ	**Nazwa, Dubai**	**2.53**	**200**	P	**Pb**	**13 50 28.7**	**-2.1**
	SNR=50						
NAZ				P	**Pb**	**13 50 28.7**	**-2.1**
	SNR=50						
NAZ				S	**Sn**	**13 50 59.5**	**+2.5**
NAZ				S	**Sn**	**13 50 59.5**	**+2.5**
NAZ	**Nazwa, Dubai**	**2.53**	**200**	*e*P	**Pn**	**13 50 28.4**	**+2.0**
	SNR=50						
HATD	**Hatta, Dubai**	**2.58**	**190**	P	**Pn**	**13 50 27.9**	**+0.9**
	SNR=65						
HATD				P	**Pn**	**13 50 27.9**	**+0.9**
	SNR=65						
HATD				S	**Sb**	**13 51 02.8**	**-0.5**
HATD				S	**Sb**	**13 51 02.8**	**-0.5**
HATD	**Hatta, Dubai**	**2.58**	**190**	*e*P	**Pn**	**13 50 27.6**	**+0.6**
	SNR=65						
CHMN	**Cheshme madani**	**2.60**	**18**	Pn	**Pb**	**13 50 30.1**	**-2.1**
ASHO	**Ashiyiah**	**2.73**	**191**	P	**Pn**	**13 50 30.8**	**+1.6**
	SNR=475						
ASHO				S	**Sb**	**13 51 06.4**	**-1.3**
ASHO	**Ashiyiah**	**2.73**	**191**	*e*P	**Pn**	**13 50 30.7**	**+1.6**
	SNR=166						
FAQ	**Al Faqa, Dubai**	**2.78**	**200**	P	**Pn**	**13 50 32.0**	**+2.2**
	SNR=106						
FAQ				P	**Pn**	**13 50 32.0**	**+2.2**
	SNR=106						
FAQ	**Al Faqa, Dubai**	**2.78**	**200**	*e*P	**Pn**	**13 50 32.1**	**+2.4**
	SNR=106						
JHRM	**Jahrom**	**2.92**	**293**	Pn	**Pn**	**13 50 34.4**	**+2.7**
KHL1	**Khalili_Fars**	**2.96**	**276**	Pn	**Pn**	**13 50 34.5**	**+2.3**
ASUD	**Al Ashush, Dub**	**2.98**	**203**	P	**Pn**	**13 50 35.5**	**+3.0**
	SNR=43						
ASUD				P	**Pn**	**13 50 35.5**	**+3.0**
	SNR=43						
ASUD	**Al Ashush, Dub**	**2.98**	**203**	*i* P	**Pn**	**13 50 34.8**	**+2.3**
	SNR=43						
KHGB	**Koh Gabri**	**2.99**	**358**	Pn	**Pn**	**13 50 35.5**	**+2.8**
LMD1	**Lamerd**	**3.08**	**270**	Pn	**Pn**	**13 50 36.2**	**+2.4**
KRM1	**Kerman Provinc**	**3.16**	**10**	Pn	**Pn**	**13 50 37.8**	**+2.7**
AJN	**Ajban**	**3.17**	**208**	P	**Pn**	**13 50 37.3**	**+2.2**
	SNR=52						
AJN				P	**Pn**	**13 50 37.3**	**+2.2**
	SNR=52						
AJN				S	**Sn**	**13 51 14.4**	**+1.8**
AJN				S	**Sn**	**13 51 14.4**	**+1.8**
AJN	**Ajban**	**3.17**	**208**	*i* P	**Pn**	**13 50 36.9**	**+1.8**
	SNR=52						
SOHO	**SOHO**	**3.23**	**181**	P	**Pn**	**13 50 35.4**	**-0.6**
SOHO				P	**Pn**	**13 50 35.4**	**-0.6**
SOHO				S	**Sb**	**13 51 20.1**	**-2.0**
SOHO				S	**Sb**	**13 51 20.1**	**-2.0**
SOHO	**SOHO**	**3.23**	**181**	*i* P	**Pn**	**13 50 35.0**	**-1.0**
	SNR=49						
QIR1	**Qir**	**3.35**	**290**	Pn	**Pn**	**13 50 40.2**	**+2.6**
ALNE	**Al Ain**	**3.40**	**194**	P	**Pn**	**13 50 39.9**	**+1.6**
	SNR=57						
ALNE				P	**Pn**	**13 50 39.9**	**+1.6**
	SNR=57						
ALNE				S	**Sb**	**13 51 24.5**	**-2.5**
ALNE				S	**Sb**	**13 51 24.5**	**-2.5**
ALNE	**Al Ain**	**3.40**	**194**	*i* P	**Pn**	**13 50 39.5**	**+1.2**
	SNR=56						
ZRDN	**Zarand Kerman**	**3.58**	**359**	Pn	**Pn**	**13 50 43.3**	**+2.5**
HOQ	**Hoqain**	**3.83**	**171**	P	**Pn**	**13 50 43.9**	**-0.3**
	SNR=148						
HOQ				P	**Pn**	**13 50 43.9**	**-0.3**
	SNR=148						
HOQ				S	**Sn**	**13 51 29.0**	**-0.1**
HOQ				S	**Sn**	**13 51 29.0**	**-0.1**
CHBR	**Chabahar**	**3.89**	**116**	Pn	**Pn**	**13 50 45.7**	**+0.8**
CHBR	**Chabahar**	**3.89**	**116**	*e*Pn	**Pn**	**13 50 45.8**	**+0.8**
CHBR				IAML		13 52 05.1	
	comp=Z,2μm,1.0s						
ARQ	**Araqi**	**4.03**	**181**	P	**Pn**	**13 50 48.6**	**+1.7**
	SNR=94						
ARQ				P	**Pn**	**13 50 48.6**	**+1.7**
	SNR=94						
ARQ				S	**Sn**	**13 51 33.3**	**-0.6**
ARQ				S	**Sn**	**13 51 33.3**	**-0.6**
BIDO	**Bidbid**	**4.08**	**160**	P	**Pn**	**13 50 47.1**	**-0.4**
	SNR=131						
BIDO				S	**Sn**	**13 51 33.5**	**-1.6**
JRN	**Qarnain Island**	**4.17**	**235**	P	**Pn**	**13 50 50.2**	**+1.4**
	SNR=17						
JRN				S	**Sn**	**13 51 37.3**	**-0.1**
SHI	**Shiraz**	**4.26**	**303**	Pn	**Pn**	**13 50 52.0**	**+1.7**
IBAF	**Bafgh**	**4.29**	**348**	Pn	**Pn**	**13 50 53.0**	**+2.3**
IMEH	**Mehriz**	**4.36**	**337**	Pn	**Pn**	**13 50 53.9**	**+2.2**
MZWR	**Madinat Zayed**	**4.37**	**215**	P	**Pn**	**13 50 53.1**	**+1.5**
MZWR				P	**Pn**	**13 50 53.1**	**+1.5**
MZWR				S	**Sn**	**13 51 42.4**	**0.0**
MZWR				S	**Sn**	**13 51 42.4**	**0.0**
SMDO	**Samad**	**4.49**	**163**	P	**Pn**	**13 50 53.7**	**+0.3**
	SNR=303						
SMDO				P	**Pn**	**13 50 53.7**	**+0.3**
	SNR=303						
SMDO				S	**Sn**	**13 51 46.3**	**+0.8**
SMDO				S	**Sn**	**13 51 46.3**	**+0.8**
WSAR	**Wadi Sarin**	**4.51**	**156**	LR	LR	13 52 22.5	
	comp=Z,16nm,21.6s,baz=346,slow=35						
NGCH	**Negor - Chabah**	**4.52**	**115**	P	**Pn**	**13 50 54.3**	**+0.7**
	SNR=81						
NGCH				S	**Sn**	**13 51 46.2**	**+0.2**
NGCH	**Negor - Chabah**	**4.52**	**115**	Pn	**Pn**	**13 50 54.3**	**+0.7**
BSY	**Bisya**	**4.65**	**173**	P	**Pn**	**13 50 57.2**	**+1.8**
	SNR=96						
BSY				P	**Pn**	**13 50 57.2**	**+1.8**
	SNR=96						
BSY				S	**Sn**	**13 51 55.0**	**+5.8**
BSY				S	**Sn**	**13 51 55.0**	**+5.8**
GHWR	**Ruwais**	**4.80**	**226**	P	**Pn**	**13 50 58.1**	**+0.6**
GHWR				P	**Pn**	**13 50 58.1**	**+0.6**
GHWR				S	**Sn**	**13 51 52.5**	**-0.4**
GHWR				S	**Sn**	**13 51 52.5**	**-0.4**
UMZA	**Um Al Zommool**	**4.83**	**196**	P	**Pn**	**13 50 58.4**	**+0.4**
UMZA				P	**Pn**	**13 50 58.4**	**+0.4**
UMZA				S	**Sn**	**13 51 56.3**	**+2.6**
UMZA				S	**Sn**	**13 51 56.3**	**+2.6**
DSBU	**Dashti - Bushe**	**4.85**	**283**	Pn	**Pn**	**13 51 00.8**	**+2.6**
NHDN	**Nehbandan**	**4.99**	**36**	Pn	**Pn**	**13 51 02.5**	**+2.3**
BSRN	**Basiran**	**5.06**	**25**	Pn	**Pn**	**13 51 02.7**	**+1.5**
BSRN	**Basiran**	**5.06**	**25**	*e*Pn	**Pn**	**13 51 03.1**	**+1.9**
BSRN				IAML		13 52 38.8	
	comp=Z,2μm,1.0s						
SRVN	**Saravan**	**5.13**	**88**	Pn	**Pn**	**13 51 03.3**	**+1.1**
SRVN	**Saravan**	**5.13**	**88**	*e*Pn	**Pn**	**13 51 04.4**	**+2.2**
SRVN				IAML		13 52 46.1	
	comp=Z,1μm,1.0s						
JMDO	**Jabal Madar**	**5.17**	**165**	P	**Pn**	**13 51 03.6**	**+1.0**
	SNR=110						
JMDO				P	**Pn**	**13 51 03.6**	**+1.0**
	SNR=110						
JMDO				S	**Sn**	**13 51 59.7**	**-2.3**
JMDO				S	**Sn**	**13 51 59.7**	**-2.3**
WBK	**Wadi Bani Khal**	**5.21**	**155**	P	**Pn**	**13 51 03.1**	**0.0**
	SNR=116						
WBK				S	**Sn**	**13 52 01.1**	**-1.9**

WBK	Wadi Bani Khal	5.21	155	Pn	Pn	13 51 03.1	0.0
MZR	Muzera	5.21	214	P	Pn	13 51 04.5	+1.4
	SNR=15						
MZR				S	Sn	13 52 02.4	-0.6
MZR	Muzera	5.21	214	i P	Pn	13 51 04.4	+1.3
	SNR=15						
ICHK	Chekchek	5.21	339	Pn	Pn	13 51 05.4	+2.0
SHMA	Al-Shehemyia	5.29	255	P	Pn	13 51 05.8	+1.6
	SNR=99						
SHMA				S	Sn	13 52 05.1	+0.1
	SNR=7.4						
YZKH	Yazd	5.29	341	ePn	Pn	13 51 06.2	+1.8
YZKH				IAML		13 52 57.4	
	comp=Z,960nm,1.0s						
IKOO	Kooshah	5.43	22	Pn	Pn	13 51 08.7	+2.2
TRNA	Turayna	5.53	243	P	Pn	13 51 08.6	+1.0
	SNR=64						
TRNA				S	Sn	13 52 11.5	+0.6
	SNR=13						
SLWR	Sila	5.54	235	P	Pn	13 51 08.0	+0.4
TPRV	Parvadeh(Tabas	5.63	1	Pn	Pn	13 51 11.2	+2.2
KLNJ	Kolanjah	5.69	311	Pn	Pn	13 51 12.4	+2.3
KLNJ	Kolanjah	5.69	311	ePn	Pn	13 51 11.5	+1.4
KLNJ				IAML		13 53 10.2	
	comp=Z,1µm,1.0s						
IRAM	Ramesheh	5.75	321	Pn	Pn	13 51 12.8	+2.0
JLN	Jalan Bani Buh	5.79	153	P	Pn	13 51 10.8	-0.4
	SNR=295						
ITEG	Tejag	5.80	18	Pn	Pn	13 51 13.7	+2.4
SMRA	Abu-Samra	5.84	245	P	Pn	13 51 13.4	+1.7
	SNR=61						
SMRA				S	Sn	13 52 20.7	+2.2
	SNR=9.6						
IDAH	Dahanechah	6.04	27	Pn	Pn	13 51 16.5	+1.8
TKDS	Koohdasht(Taba	6.23	4	Pn	Pn	13 51 19.9	+2.7
TABS	Tabas	6.26	4	i P	Pn	13 51 21.1	+3.4
ANAR	Anarak	6.31	337	Pn	Pn	13 51 20.3	+2.0
NASN	Na'in	6.33	329	ePn	Pn	13 51 20.2	+1.4
NASN				IAML		13 53 34.5	
	comp=Z,360nm,1.0s						
AFRZ	Afriz	6.37	18	Pn	Pn	13 51 21.4	+2.2
MHTO	MHTO	6.48	169	P	Pn	13 51 21.5	+0.9
	SNR=193						
MHTO				P	Pn	13 51 21.5	+0.9
	SNR=193						
MHTO				S	Sn	13 52 35.5	+1.0
MHTO				S	Sn	13 52 35.5	+1.0
IBRJ	Brojen	6.49	315	Pn	Pn	13 51 23.0	+2.0
TNSJ	Nastanj	6.56	360	Pn	Pn	13 51 24.6	+2.8
ZNGN	Zangian	6.89	315	Pn	Pn	13 51 28.2	+1.7
SHRT	Shahrakht	7.00	26	Pn	Pn	13 51 30.2	+2.4
SHRT	Shahrakht	7.00	26	ePn	Pn	13 51 30.7	+2.9
JHBN	Jahan bin	7.08	314	Pn	Pn	13 51 30.5	+1.4
IPIR	Pirpir	7.25	318	Pn	Pn	13 51 32.7	+1.3
IKLH	Kolahrood	7.35	325	Pn	Pn	13 51 34.1	+1.4
DQM	DQM	7.46	173	P	Pn	13 51 34.0	-0.1
	SNR=8.8						
DQM				S	Sn	13 52 59.0	+0.4
TAPT	Tabas- Tapeh t	7.49	3	Pn	Pn	13 51 37.4	+2.8
KRSH	Karshahi	7.62	331	Pn	Pn	13 51 39.1	+2.8
AMIS	Naft Sefid	7.69	305	Pn	Pn	13 51 39.1	+1.9
QAMS	Qamsar	7.77	326	Pn	Pn	13 51 40.4	+1.9
ISFB	Sefidab	7.90	333	Pn	Pn	13 51 42.1	+1.9
GTMR	Gotvand	8.26	310	ePn	Pn	13 51 45.1	+0.1
GHVR	GHOM	8.43	328	ePn	Pn	13 51 49.5	+2.2
TBJM	Torbat-e-JAM	8.48	21	Pn	Pn	13 51 50.8	+2.6
HRA	Herat	8.49	33		Pn	13 51 49.6	+1.2
KHMZ	Khomeyn	8.55	319	ePn	Pn	13 51 50.3	+1.1
ILAS	Lasjerd	8.57	339	Pn	Pn	13 51 52.2	+2.7
SHRO	Shahrood	8.60	357	ePn	Pn	13 51 51.2	+1.4
IVRN	Varamin	8.67	332	Pn	Pn	13 51 53.3	+2.6
IFIR	Firoozkooh	8.87	339	Pn	Pn	13 51 55.8	+2.2
IMOG	Moghan	9.00	14	Pn	Pn	13 51 58.3	+2.9
DOK	Doka	9.02	195	P	Pn	13 51 55.1	-0.4
	SNR=32						
IDMV	Damavand	9.06	336	Pn	Pn	13 51 58.7	+2.5
JRKH	Jarkhoshk	9.07	20	Pn	Pn	13 51 59.0	+2.7
ASAO	Ashtian	9.11	323	ePn	Pn	13 51 58.0	+1.0
DAMV	Damavand	9.13	335	ePn	Pn	13 51 58.7	+1.5
IKIA	Kiasar	9.15	345	Pn	Pn	13 52 00.6	+3.2
IALA	Alasht	9.26	340	Pn	Pn	13 52 02.2	+3.2
IPAY	Payeh	9.26	12	Pn	Pn	13 52 02.0	+3.1
BDRS	Dareh Seyedi	9.34	316	Pn	Pn	13 52 00.5	+0.3
SHAO	Shalim	9.36	186	P	Pn	13 51 58.5	-1.6
	SNR=116						
SHAO	Shalim	9.36	186	i P	Pn	13 51 58.7	-1.4
	SNR=124						
IAKL	Akhelmad	9.37	11	Pn	Pn	13 52 03.2	+2.7
IGLO	Ghaloghah	9.40	346	Pn	Pn	13 52 03.5	+2.7
IMYA	Miami	9.41	17	Pn	Pn	13 52 03.9	+2.9
IPRN	Peran	9.55	339	Pn	Pn	13 52 06.2	+3.3
IKRD	Kardeh	9.68	14	Pn	Pn	13 52 07.6	+2.9
CHTH	Charan	9.70	333	ePn	Pn	13 52 06.4	+1.4
ISFR	Sfrayin	9.71	7	Pn	Pn	13 52 08.0	+2.8
DMTO	DMTO	9.74	189	P	Pn	13 52 03.9	-1.5
	SNR=20						
WHFO	Wadi Hawf	9.78	196	P	Pn	13 52 04.6	-1.3
	SNR=61						
MZPU	Pul - Mazandar	10.00	336	Pn	Pn	13 52 12.7	+3.7
RBK	Rabkut	10.08	193	P	Pn	13 52 08.9	-1.2
	SNR=6.0						
IEMG	Emamgholi	10.15	9	Pn	Pn	13 52 14.0	+2.8
QABG	Abgarm-Qazvin	10.24	326	Pn	Pn	13 52 14.6	+2.2
MRVT	Maraveh tapeh	10.26	358	Pn	Pn	13 52 15.2	+2.7
BJRD	Bojnurd	10.31	3	i P	Pn	13 52 16.7	+3.5
IGZV	Ghazvin	10.50	330	Pn	Pn	13 52 18.3	+2.4
RAYN	Ar Rayn	10.76	252		Pn	13 52 16.9	-2.4
RAYN	Ar Rayn	10.76	252	P	Pn	13 52 16.9	-2.4
ILBA	Ilam Banvizeh	10.92	307	i P	Pn	13 52 20.9	-0.7
JIR1	Jirandeh	10.95	330	Pn	Pn	13 52 25.3	+3.3
GIDE	GILAN DEYLAMAN	11.08	331	Pn	Pn	13 52 27.7	+3.8
KBL	Kabul	12.82	53		Pn	13 52 48.4	+0.7
KBL	Kabul	12.82	53	P	Pn	13 52 48.4	+0.7
SRSL	SARDASHT	12.96	316	i P	Pn	13 52 49.8	+0.3
IAZR	Azarshahr	13.63	322	Pn	Pn	13 53 02.3	+3.6
SHAA	Shahritus	14.03	41		Pn	13 53 03.9	-0.2
CHGR	Chuyangaron	15.38	40		Pn	13 53 21.8	-0.5
CHGR	Chuyangaron	15.38	40	⇓eP	Pn	13 53 23.9	+1.6
NIL	Nilore	15.63	62		Pn	13 53 24.5	-1.0
NIL				IAmb	IAmb	13 53 34.3	
	comp=Z,166nm,0.8s						
NIL	Nilore	15.63	62	P	Pn	13 53 24.5	-1.0
NIL				pmax	pmax		
	comp=Z,166nm,0.9s						
AKT	Akhty	15.85	335	eP	Pn	13 53 30.1	+1.7
AKT				pmax	pmax		
	comp=Z,179nm,1.4s						
AKT				MLR	MLR		
	comp=Z,2µm,17.0s						
MANEM	Manem	16.23	48		Pn	13 53 33.5	0.0
MANEM				IAmb	IAmb	13 53 38.8	
	comp=Z,231nm,0.9s						
GURO	Guroymak-BITLI	16.53	316		Pn	13 53 37.7	+0.5
MARD	Mardin	16.63	310		Pn	13 53 35.0	-3.5
MARD				IAmb	IAmb	13 53 46.1	
	comp=Z,179nm,1.0s						
MAK	Makhachkala	17.22	337	eP	Pn	13 53 44.1	-1.6
MAK				eS	Sn	13 56 56.9	-0.1
MAK				pmax	pmax		
	comp=Z,368nm,1.1s						
MAK				MLR	MLR		
	comp=Z,4µm,16.0s						
KARS	Kars	17.31	323		Pn	13 53 47.5	+0.5
KARS				IAmb	IAmb	13 53 53.9	
	comp=Z,302nm,1.4s						
KARS	Kars	17.31	323	P	Pn	13 53 47.5	+0.5
KARS				pmax	pmax		
	comp=Z,302nm,1.4s						
DRK	Karamyk	17.46	42	Pn	Pn	13 53 49.1	0.0
DRK				IAmb	IAmb	13 53 52.4	
	comp=Z,232nm,1.0s						
DRK	Karamyk	17.46	42	P	Pn	13 53 49.1	0.0
DRK				pmax	pmax		
	comp=Z,232nm,1.0s						
ASF	Jabal al Asfar	17.77	290	P	Pn	13 53 51.2	-1.5
	comp=Z,4.6nm,0.3s,baz=64,slow=7.9,SNR=14						
ASF				S	Sn	13 57 04.1	-6.6
	comp=Z,8.5nm,0.5s,baz=293,slow=18,SNR=2.0						
ASF				LR	LR	14 02 43.2	
	comp=Z,2µm,18.1s,baz=67,slow=44						
	comp=Z,11nm,0.3s						
CHM	Chimkent	18.29	32	eP	Pn	13 53 59.0	+0.1
CHM	Chimkent	18.29	32	eP	Pn	13 53 58.9	+0.1
IUG	Iuzhnay	18.36	33	eP	Pn	13 53 59.9	0.0
IUG				eS	Sn	13 57 25.9	+1.1
IUG	Iuzhnay	18.36	33	eP	Pn	13 53 59.8	0.0
IUG				eS	Sn	13 57 25.8	+1.1
KOPT	Kop Dagi	18.37	317		Pn	13 53 59.5	-0.7
BCA	Borcka	18.67	323	⇓P	Pn	13 54 05.6	+2.1
BRLS	Borolday	18.94	31	eP	P	13 54 02.7	-3.6
BRLS				eS	Sn	13 57 32.8	-6.0
BRLS	Borolday	18.94	31	eP	P	13 54 02.6	-3.6
BRLS				eS	Sn	13 57 32.7	-6.0
GAZ	Gaziantep	19.07	306	P	P	13 54 08.1	+0.5
MMAI	Mount Meron Ar	19.17	292	P	Pn	13 54 09.6	-0.2
	comp=Z,6.3nm,0.3s,baz=93,slow=15,SNR=8.1						
MMAI				S	Sn	13 57 34.0	-10
	comp=Z,6.3nm,0.8s,baz=117,slow=28,SNR=1.5						
MMAI				LR	LR	14 03 39.8	
	comp=Z,2µm,18.3s,baz=96,slow=44						
	comp=Z,5.6nm,0.5s						
EIL	Elat	19.18	282	P	Pn	13 54 09.8	0.0
	comp=Z,1.5nm,0.3s,baz=83,slow=1.3,SNR=12						
EIL				S	S	13 57 45.7	-0.2
	comp=Z,14nm,0.8s,baz=294,slow=22,SNR=1.6						
EIL				LR	LR	14 03 56.4	
	comp=Z,2µm,20.7s,baz=88,slow=44						
	comp=Z,16nm,0.9s						
NCK	Nalchik	19.23	330	⇓eP	P	13 54 09.2	-0.1
NCK				pmax	pmax		
	comp=Z,35nm,0.8s						
KK31	Karatay Array	19.32	32	P	P	13 54 09.6	-0.7
KK31				IAmb	IAmb	13 54 14.7	
	comp=Z,170nm,1.2s						
KK31	Karatay Array	19.32	32	P	P	13 54 09.6	-0.7
KK31				pmax	pmax		
	comp=Z,170nm,1.2s						
KKAR	Karatay Array	19.32	32	P	P	13 54 09.6	-0.7
KKAR	Karatay Array	19.32	32	P	P	13 54 09.6	-0.7
ARSB	Arslanbob	19.34	40	P	P	13 54 10.5	-0.2
ARSB	Arslanbob	19.34	40	P	P	13 54 10.5	-0.2
ARSB				pmax	pmax		
	comp=Z,58nm,0.7s						
KBZ	Khabaz	19.72	329	P	Pn	13 54 16.1	-0.1
	comp=Z,0.6nm,0.3s,baz=113,slow=5.9,SNR=17						
	comp=Z,9.3nm,0.8s						
KBZ	Khabaz	19.72	329	⇓eP	Pn	13 54 16.4	+0.2
KBZ				pmax	pmax		
	comp=Z,16nm,0.8s						
SHA1	Shidzhatmaz	19.84	329	⇑eP	P	13 54 15.1	-1.1
KVAR	Kislovodsk Arr	19.99	329	P	Pn	13 54 18.8	-0.7
	baz=74,slow=20						
	comp=Z,5.5nm,0.4s						
KIV	Kislovodsk	20.00	329	P	P	13 54 16.4	-1.4
KIV				IAmb	IAmb	13 54 31.4	
	comp=Z,102nm,0.7s						
KIV	Kislovodsk	20.00	329	⇓P	Pn	13 54 19.9	+0.4
KIV	Kislovodsk	20.00	329	i P	Pn	13 54 19.9	+0.4
	SNR=13						
KIV	Kislovodsk	20.00	329	eP	Pn	13 54 19.3	-0.2
KIV				eS	S	13 58 02.6	+0.3
KIV				pmax	pmax		
	comp=Z,75nm,1.1s						
ATD	Arta Tunnel	20.40	222	P	P	13 54 23.3	+1.0
	comp=Z,2.4nm,0.9s,baz=50,slow=6.8,SNR=16						
ATD	Arta Tunnel	20.40	222	P	P	13 54 21.9	-0.5
ATD				IAmb	IAmb	13 54 29.4	
	comp=Z,115nm,1.2s						
GOF	Gofitskoye	20.71	332	ceP	P	13 54 26.4	+0.9
UCH	Uchtor	20.80	40	P	P	13 54 27.8	+0.8
	SNR=36						
VSLR	Vesyoloye	20.92	324	deP	Pn	13 54 29.5	-0.8
VSLR				pmax	pmax		
	comp=Z,224nm,1.8s						
AAK	Ala-Archa	21.05	39	P	P	13 54 29.7	+0.3
	SNR=65						
AAK	Ala-Archa	21.05	39	P	P	13 54 29.6	+0.2
	comp=Z,39nm,0.7s,baz=228,slow=6.8,SNR=128						
AAK				LR	LR	14 03 26.5	
	comp=Z,1µm,21.0s,baz=242,slow=39						
	comp=Z,39nm,0.7s						
AAK	Ala-Archa	21.05	39	P	P	13 54 29.3	-0.1
AAK	Ala-Archa	21.05	39	i P	P	13 54 29.2	-0.1
	SNR=83						
AAK	Ala-Archa	21.05	39	ceP	P	13 54 29.5	+0.2
AAK				pmax	pmax		
	comp=Z,63nm,1.0s						
TOKA	Tokat	21.07	313	P	P	13 54 28.4	-1.0
TOKA				IAmb	IAmb	13 54 42.0	
	comp=Z,356nm,1.7s						
SOC	Sochi	21.17	324	eP	P	13 54 30.1	-0.3
SOC				e		13 54 47.2	
SOC				ePPP	PPP	13 54 55.3	
SOC				eS	S	13 58 21.2	-4.2
SOC				eSS	SnSn	13 58 47.4	+0.1
SOC				pmax	pmax		
	comp=Z,167nm,1.2s						
SOC				MLR	MLR		
	comp=Z,2µm,13.0s						
CSS	Mathiatis	21.29	297	P	P	13 54 30.9	-0.9
KBK	Karagaybulak	21.32	40	P	P	13 54 34.3	+2.0
	SNR=27						
LABN	Labinsk	21.43	328	eP	P	13 54 33.6	+0.4
LABN				e		13 54 46.9	
LABN				eS	S	13 58 34.2	+3.6
LABN				eSS	SnSn	13 58 55.5	+1.7
LABN				pmax	pmax		
	comp=Z,305nm,1.2s						
CHMS	Chumysh	21.43	39	P	P	13 54 31.9	-1.4
	SNR=13						
USP	Ospenovka	21.47	38	P	P	13 54 34.0	+0.3
	SNR=24						
BOOM	Boomskoye usch	21.79	41	P	P	13 54 37.5	+0.2
BOOM				IAmb	IAmb	13 54 49.4	
	comp=Z,78nm,0.8s						
BOOM	Boomskoye usch	21.79	41	P	P	13 54 37.5	+0.2
BOOM				pmax	pmax		
	comp=Z,79nm,0.8s						
ULHL	Ulahol	21.82	42	P	P	13 54 38.8	+1.2
	SNR=7.3						
TKM2	Tokmak 2	21.86	40	P	P	13 54 38.8	+0.7
	SNR=43						
AB31	Akbulak array	21.99	6	P	P	13 54 39.1	-0.1
AB31				IAmb	IAmb	13 54 50.1	
	comp=Z,171nm,1.1s						
ABKAR	Akbulak array	21.99	6	P	P	13 54 39.0	-0.1
KIRS	Kirsehir-Merke	22.25	308	⇑P	P	13 54 43.5	+1.3
KDJ	Kajisay	22.32	43	IAmb	IAmb	13 54 47.4	
	comp=Z,196nm,0.9s						
ERBR	Yeremizino-Bor	22.35	329	eP	P	13 54 44.5	+1.4
ERBR				e*PP	pP	13 54 48.1	+1.0
ERBR				e		13 55 07.1	
ERBR				eSS	Sn	13 59 15.8	+15
ERBR				pmax	pmax		
	comp=Z,105nm,1.1s						
ERBR				MLR	MLR		
	comp=Z,705nm,13.0s						
BTLS	Baital	22.46	34	eP	P	13 54 43.8	-0.5
BTLS	Baital	22.46	34	eP	P	13 54 43.7	-0.5
TARG	Taragay, Kyrgy	22.48	45	P	P	13 54 45.1	+0.1
TARG				IAmb	IAmb	13 54 49.0	
	comp=Z,80nm,0.9s						
TARG	Taragay, Kyrgy	22.48	45	P	P	13 54 45.1	+0.1
TARG				pmax	pmax		
	comp=Z,80nm,0.9s						
HYB	Hyderabad	22.54	112	eP	P	13 54 46.1	+0.7
HYB				IVmB_BB		13 54 52.9	
	comp=Z,543nm,2.0s						
HYB				eS	Sn	13 59 02.8	-2.7
HYB				IVMs_BB	IVMs_BB	14 05 52.9	
	comp=Z,616nm,15.9s						
BR104	Keskin Array S	22.69	309	P	P	13 54 47.2	+0.3
	comp=Z,655nmcomp=Z,75nm,1.0s						
BR131	Keskin Array S	22.70	309	IAmb	IAmb	13 54 57.2	
	comp=Z,144nm,1.4s						
BR131	Keskin Array S	22.70	309	ceP	P	13 54 47.5	+0.5
BRTR	Keskin Array B	22.70	309	P	P	13 54 47.1	+0.1
	comp=Z,7.4nm,0.6s,baz=135,slow=11,SNR=43						
BRTR				LR	LR	14 05 16.5	
	comp=Z,3µm,21.9s,baz=112,slow=41						
	comp=Z,7.4nm,0.6s						
BRTR	Keskin Array B	22.70	309	P	P	13 54 46.4	-0.6
BRTR	Keskin Array B	22.70	309	i P	P	13 54 47.0	+0.1
BRTR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BR105	Keskin Array S	22.71	309	P	P	13 54 47.5	+0.4
	comp=Z,634nmcomp=Z,78nm,1.1s						
TNSS	Tian-Shan	22.71	41	eP	P	13 54 47.2	-0.2
TNSS	Tian-Shan	22.71	41	eP	P	13 54 47.1	-0.2
BR106	Keskin Array S	22.71	309	P	P	13 54 47.6	+0.4
	comp=Z,574nmcomp=Z,77nm,0.9s						
AAA	Alma-Ata	22.80	41	eP	P	13 54 48.0	0.0
	comp=Z,24nm,0.5s						
AAA	Alma-Ata	22.80	41	eP	P	13 54 47.9	0.0
AAA				pmax	pmax		
	comp=Z,24nm,0.5s						
MDOK	Medeo	22.84	41	eP	P	13 54 48.3	-0.3
MDOK				eS	S	13 58 58.8	+1.1
MDOK	Medeo	22.84	41	eP	P	13 54 48.2	-0.3
MDOK				eS	S	13 58 58.7	+1.1
AKTO	Aktyubinsk	23.05	2	LR	LR	14 06 06.7	
	comp=Z,2µm,20.7s,baz=177,slow=43						
WUS	Wushi	23.12	48	IAmb	IAmb	13 55 12.1	
	comp=Z,134nm,1.3s						
ANN	Anapa	23.20	324	eP	P	13 54 53.2	+1.3
ANN				e		13 55 16.9	
ANN				eSS	Sn	13 59 45.7	+25
ANN				pmax	pmax		
	comp=Z,170nm,1.2s						
ANN				MLR	MLR		
	comp=N,2µm,16.0s						
ANN				MLR	MLR		
	comp=Z,2µm,15.0s						
ANN				MLR	MLR		
	comp=E,1µm,16.0s						
ILGA	Ilgaz	23.25	312	IAmb	IAmb	13 55 10.6	
	comp=Z,196nm,1.4s						
PRZ	Przheval'sk	23.27	44	P	P	13 54 52.7	-0.2
PRZ				IAmb	IAmb	13 55 13.6	
	comp=Z,86nm,1.1s						
PRZ	Przheval'sk	23.27	44	P	P	13 54 52.7	-0.2
PRZ				pmax	pmax		
	comp=Z,86nm,1.1s						
ANTO	Ankara	23.35	308	P	P	13 54 52.9	-0.7
ANTO	Ankara	23.35	308	⇓P	P	13 54 54.5	+0.9
ANTO	Ankara	23.35	308	P	P	13 54 52.9	-0.7
ANTO				pmax	pmax		
	comp=Z,565nm,2.0s						
SATY	Saty	23.59	43	eP	P	13 54 56.0	-0.1
SATY				eS	S	13 59 11.5	+1.4
SATY	Saty	23.59	43	eP	P	13 54 56.0	-0.1
SATY				eS	S	13 59 11.4	+1.4
UZB	Uzynbulak	24.02	43	eP	P	13 55 00.0	-0.1
	comp=Z,40nm,1.0s						
UZB				eS	S	13 59 17.9	+1.1
UZB	Uzynbulak	24.02	43	eP	P	13 55 00.0	-0.1
UZB				eS	S	13 59 17.9	+1.1
UZB				pmax	pmax		
	comp=Z,40nm,1.0s						
SHLS	Shalkode	24.29	44	eP	P	13 55 05.0	+2.3
	comp=Z,31nm,0.7s						
SHLS	Shalkode	24.29	44	eP	P	13 55 05.0	+2.3
SHLS				pmax	pmax		
	comp=Z,31nm,0.7s						
MDUB	Mudurnu	24.71	308	IAmb	IAmb	13 55 35.5	
	comp=Z,114nm,0.9s						
TDK	Taldyqorghan	24.74	39	eP	P	13 55 06.7	0.0
	comp=Z,30nm,0.6s						
TDK	Taldyqorghan	24.74	39	eP	P	13 55 06.6	0.0
TDK				pmax	pmax		
	comp=Z,30nm,0.6s						
BORA	Eskisehir	25.00	307	IAmb	IAmb	13 55 14.9	
	comp=Z,318nm,1.9s						
FURI	Furi	25.01	226	LR	LR	14 06 36.3	
	comp=Z,5µm,21.1s,baz=44,slow=40						
SAHE	Sakarya_HENDEK	25.10	309	⇑P	P	13 55 10.9	+1.0
SIM	Simferopol'	25.12	320	eP	P	13 55 12.0	+2.0
SIM				S	S	13 59 36.0	+1.8
SIM				pmax	pmax		
	comp=Z,90nm,1.1s						
SIM				smax	smax		
	comp=N,400nm,10.0s						
BRZS	Berezniki	25.71	24	eP	P	13 55 15.4	+0.1
BRZS	Berezniki	25.71	24	eP	P	13 55 15.4	+0.1
BELG	Belogornoye	25.88	347	LR	LR	14 08 34.6	
	comp=N,2µm,18.4s,baz=135,slow=44						
BELG	Belogornoye	25.88	347	ceP	P	13 55 16.7	0.0
BELG				pmax	pmax		
	comp=Z,16nm,0.9s						
MANT	Manisa	25.93	302	IAmb	IAmb	13 55 43.1	
	comp=Z,51nm,0.9s						
VRH	Novokhopyorsk	26.34	339	eP	P	13 55 20.5	-0.4
VRH				pmax	pmax		
	comp=Z,70nm,0.9s						
EVN	Everest	26.72	82	P	P	13 55 25.4	0.0
EVN				IAmb	IAmb	13 55 47.0	
	comp=Z,75nm,0.8s						
VSR	Storozhevoye	27.23	336	eP	P	13 55 27.3	-1.7
VSR				pmax	pmax		
	comp=Z,30nm,1.1s						
VORR	Voronezh	27.59	336	eP	P	13 55 31.5	-0.7
VORR				pmax	pmax		
	comp=Z,90nm,1.0s						
BORK	Borovoye	27.59	18	P	P	13 55 32.3	+0.1
BORK				IAmb	IAmb	13 55 57.0	
	comp=Z,41nm,0.9s						
BORK	Borovoye	27.59	18	ceP	P	13 55 32.2	0.0
BORK				pmax	pmax		
	comp=Z,34nm,1.4s						
BVAR	Borovoye Array	27.59	18	P	P	13 55 32.9	+0.7
	comp=Z,13nm,0.6s,baz=212,slow=7.8,SNR=5.5						
BVAR				PcP	PcP	13 58 49.8	+0.1
	comp=Z,2.8nm,0.4s,baz=205,slow=3.7,SNR=6.0						
BVAR				LR	LR	14 07 41.4	
	comp=Z,2µm,18.8s,baz=207,slow=39						
	comp=Z,13nm,0.6s						
MAKZ	Makanchi	27.82	39	P	P	13 55 34.5	+0.1
MAKZ				IAmb	IAmb	13 55 51.7	
	comp=Z,60nm,1.1s						
MAKZ	Makanchi	27.82	39	P	P	13 55 34.5	+0.1
MAKZ				pmax	pmax		
	comp=Z,60nm,1.1s						
MK31	Makanchi Array	27.99	39	ceP	P	13 55 35.5	-0.4
MKAR	Makanchi Array	27.99	39	P	P	13 55 35.9	0.0
	comp=Z,13nm,0.7s,baz=215,slow=8.8,SNR=105						
MKAR				LR	LR	14 08 19.7	
	comp=Z,1µm,21.6s,baz=234,slow=40						
	comp=Z,13nm,0.7s						
MKAR	Makanchi Array	27.99	39	i P	P	13 55 35.9	0.0
MKAR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
IDI	Anoyia	28.14	294	LR	LR	14 11 15.7	
	comp=Z,940nm,18.0s,baz=112,slow=46						
LPSR	Galich'ya Gora	28.45	337	eP	P	13 55 39.4	-0.5
LPSR				pmax	pmax		
	comp=Z,60nm,1.0s						
TPGR	Topolog	28.48	315	⇑P	P	13 55 41.9	+1.6
ARTI	Arti	29.01	2	LR	LR	14 07 50.9	
	comp=Z,774nm,21.0s,baz=202,slow=38						
ARTI	Arti	29.01	2	P	P	13 55 44.9	0.0
ARTI				IAmb	IAmb	13 56 19.1	
	comp=Z,66nm,1.5s						
ARTI	Arti	29.01	2	c iP	P	13 55 46.3	+1.4
ARTI						13 56 33.3	
ARTI				PPP	PPP	13 56 50.8	
ARTI				S	S	14 00 40.4	+4.9
ARTI				SS	SnSn	14 02 03.9	+5.0
ARTI				pmax	pmax		
	comp=Z,22nm,1.6s						
ARTI				MLR	MLR		
	comp=Z,1µm,15.0s						
SVE	Sverdlovsk	29.57	4	eP	P	13 55 50.7	+1.0
SVE				pmax	pmax		
	comp=Z,27nm,1.4s						
SVE				MLR	MLR		
	comp=Z,2µm,15.0s						
ZSN	Zaisan	29.82	40	eP	P	13 55 52.2	+0.1
ZSN	Zaisan	29.82	40	eP	P	13 55 52.1	0.0
WMQ	Urumqi	29.89	49	eP	P	13 55 54.5	+1.6
WMQ				pP	sP	13 55 59.5	+0.5
WMQ				sP	pP	13 56 05.3	+8.0
WMQ				pmax	pmax		
	comp=Z,38nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,270nm,4.7s						
WMQ				LR	LR		
	comp=Z,2µm,13.9s						
WMQ				LR	LR		
	comp=Z,2µm,15.3s						
WMQ				LR	LR		
	comp=Z,2µm,23.3s						
COVR	Voineasa-Covas	30.33	316	⇓P	P	13 55 57.9	+1.2
MLR	Muntele Rosu	30.33	315	LR	LR	14 11 25.9	

	comp=Z,2µm,18.6s,baz=130,slow=43						
MLR	Muntele Rosu	30.33	315	⇑P	P	13 55 58.4	+1.5
MLR	Muntele Rosu	30.33	315	P	P	13 55 58.3	+1.5
PALK	Pallekele	30.35	127	LR	LR	14 08 48.9	
	comp=Z,1µm,18.4s,baz=324,slow=38						
LSA	Lhasa	30.36	77	P	P	13 55 55.0	-2.6
LSA				S	S	14 00 53.5	-4.5
LSA				pmax	pmax		
	comp=Z,22nm,0.7s						
LSA				LR	LR		
	comp=Z,1µm,18.2s						
LSA				LR	LR		
	comp=Z,420nm,15.5s						
ITM	Ithomi	30.77	297	IAmb	IAmb	13 56 09.4	
	comp=Z,185nm,1.8s						
DOPR	Dopca	30.89	315	⇑P	P	13 56 03.4	+1.7
AK09	Malin Array Si	31.15	326	P	P	13 56 03.4	-0.4
AK07	Malin Array Si	31.15	325	P	P	13 56 03.2	-0.6
AK10	Malin Array Si	31.15	326	P	P	13 56 04.2	+0.4
AK06	Malin Array Si	31.17	325	P	P	13 56 03.4	-0.6
AK08	Malin Array Si	31.17	326	P	P	13 56 03.4	-0.6
AK05	Malin Array Si	31.19	325	P	P	13 56 03.5	-0.7
AK02	Malin Array Si	31.21	326	P	P	13 56 03.7	-0.7
AK01	Malin Array Si	31.23	326	P	P	13 56 03.9	-0.6
AK12	Malin Array Si	31.23	325	P	P	13 56 03.9	-0.6
AKASG	Malin Array Be	31.23	326	P	P	13 56 03.9	-0.6
	comp=Z,11nm,0.5s,baz=131,slow=8.1,SNR=43						
	comp=Z,11nm,0.5s						
AKASG	Malin Array Be	31.23	326	P	P	13 56 04.2	-0.4
AKASG				IAmb	IAmb	13 56 11.7	
	comp=Z,58nm,0.9s						
AKASG	Malin Array Be	31.23	326	*i* P	P	13 56 03.9	-0.6
AKASG				pmax	pmax		
	comp=Z,10µm,0.5s						
AKBB	Malin Array Si	31.23	326	IAmb	IAmb	13 56 11.8	
	comp=Z,80nm,0.8s						
AKBB	Malin Array Si	31.23	326	*ce*P	P	13 56 04.2	-0.3
AKBB	Malin Array Si	31.23	326	P	P	13 56 03.9	-0.6
KIEV	Kiev	31.23	326	P	P	13 56 03.8	-0.7
KIEV				IAmb	IAmb	13 56 11.7	
	comp=Z,76nm,0.9s						
KIEV	Kiev	31.23	326	*i* P	P	13 56 03.9	-0.7
	SNR=19						
KIEV	Kiev	31.23	326	P	P	13 56 03.8	-0.7
KIEV				pmax	pmax		
	comp=Z,76nm,0.9s						
KIEV	Kiev	31.23	326	P	P	13 56 03.9	-0.7
	comp=Z,453nm,1.0s						
AK11	Malin Array Si	31.24	326	P	P	13 56 04.0	-0.6
AK14	Malin Array Si	31.25	325	P	P	13 56 04.0	-0.7
AK03	Malin Array Si	31.25	326	P	P	13 56 04.0	-0.7
AK13	Malin Array Si	31.26	325	P	P	13 56 04.1	-0.7
AK16	Malin Array Si	31.27	326	P	P	13 56 04.2	-0.7
AK04	Malin Array Si	31.27	326	P	P	13 56 04.2	-0.7
AK04				pP	pP	13 56 07.8	-1.5
AK15	Malin Array Si	31.28	326	P	P	13 56 04.3	-0.6
AK17	Malin Array Si	31.30	325	P	P	13 56 04.5	-0.7
OBN	Obninsk	31.31	338	P	P	13 56 05.2	0.0
OBN	Obninsk	31.31	338	*ce*P	P	13 56 05.7	+0.5
OBN				*i*		13 56 13.1	
OBN				*e*		13 57 15.0	
OBN				*i* S	S	14 01 11.8	+0.3
OBN				pmax	pmax		
	comp=Z,66nm,0.8s						
OBN				MLR	MLR		
	comp=Z,635nm,15.0s						
OBN	Obninsk	31.31	338	P	P	13 56 05.4	+0.2
	comp=Z,192nm,1.5s						
AK23	Malin Array Si	31.32	326	P	P	13 56 04.5	-0.8
AK18	Malin Array Si	31.32	326	P	P	13 56 04.5	-0.8
AK22	Malin Array Si	31.34	326	P	P	13 56 04.7	-0.8
AK19	Malin Array Si	31.35	326	P	P	13 56 04.8	-0.8
AK20	Malin Array Si	31.36	326	P	P	13 56 04.9	-0.8
AK21	Malin Array Si	31.37	326	P	P	13 56 04.9	-0.8
MOS	Moscow	31.48	339	*e*P	P	13 56 06.1	-0.6
MOS				*e*		13 57 11.0	
MOS				pmax	pmax		
	comp=Z,129nm,1.4s						
LUBAR	Lubar, Ukraine	31.52	323	P	P	13 56 06.3	-0.8
KIRV	Kirov	31.59	353	LR	LR	14 11 31.2	
	comp=Z,3µm,18.6s,baz=176,slow=41						
KIRV	Kirov	31.59	353	*d i*P	P	13 56 08.6	+1.0
LOT	Lotru	31.70	313	⇓P	P	13 56 09.0	0.0
BURAR	Bucovina Array	31.75	318	P	P	13 56 08.0	-1.3
BURAR	Bucovina Array	31.75	318	⇓P	P	13 56 11.0	+1.7
BURAR	Bucovina Array	31.75	318	P	P	13 56 11.0	+1.7
BRDH	Bariadhala	32.01	91	LR	LR	14 12 20.0	
	comp=Z,2µm,18.1s,baz=296,slow=42						
MI28	Mi28,Pidlybu	32.16	325	P	P	13 56 11.0	-1.7
GZR	Gura Zlata	32.33	313	⇓P	P	13 56 14.7	+0.3
GZR	Gura Zlata	32.33	313	P	P	13 56 14.7	+0.3
HERR	Herculane	32.38	312	⇑P	P	13 56 15.8	+1.1
BOVS	Bovan	32.44	309	⇓P	P	13 56 15.2	0.0
DGZ	Jazzator, Alta	32.45	38	⇑*e*P	P	13 56 15.6	+0.1
DGZ				pmax	pmax		
	comp=Z,15nm,0.6s						
MARR	Marisel-Cluj	32.62	315	⇑P	P	13 56 18.0	+1.1
MDVR	Moldovita	32.81	311	⇑P	P	13 56 18.7	+0.2
BZS	Buzias	33.17	313	⇑P	P	13 56 21.9	+0.2
BZS	Buzias	33.17	313	P	P	13 56 21.8	+0.2
RNPP5	Staryi Chortor	33.25	324	P	P	13 56 23.1	+0.9
RNPP8	Varash	33.33	324	P	P	13 56 23.7	+0.8
RNPP9	Sopachiv	33.35	324	P	P	13 56 23.8	+0.7
SIRR	Siria	33.38	314	⇑P	P	13 56 24.0	+0.5
GOMU	GeErMu	33.46	65	P	P	13 56 25.0	+0.3
GOMU				S	S	14 01 49.0	+2.8
GOMU				pmax	pmax		
	comp=Z,12nm,1.1s						
GOMU				LR	LR		
	comp=Z,970nm,17.3s						
GOMU				LR	LR		
	comp=Z,970nm,15.7s						
GOMU				LR	LR		
	comp=Z,1µm,17.1s						
ZAA0	Zalesovo Array	33.67	30	IAmb	IAmb	13 56 33.6	
	comp=Z,131nm,1.4s						
ZALV	Zalesovo Beam	33.67	30	P	P	13 56 25.3	-0.6
	comp=Z,32nm,0.4s,baz=235,slow=11,SNR=111						
ZALV				LR	LR	14 11 37.2	
	comp=Z,992nm,18.1s,baz=227,slow=39						
	comp=Z,32nm,0.4s						
ZALV	Zalesovo Beam	33.67	30	P	P	13 56 25.9	0.0
MNK	Minsk	34.27	330	*i* P	P	13 56 30.1	-1.0
	comp=E,40nm,0.9s						
MNK				*i* P	P	13 56 30.1	-1.0
	comp=N,36nm,0.8s						
MNK				*i* P	P	13 56 30.1	-1.0
	comp=Z,80nm,0.9s,baz=130						
MNK				*i* PP	PnPn	13 57 43.8	-1.5
MNK				*i* PPP	PPP	13 57 55.7	
MNK				*i* S	S	14 01 58.5	+0.9
MNK				*i* SS	SnSn	14 04 08.5	+1.8
MNK				*i* SSS	SSS	14 04 24.3	
MNK				*i* LQ	LQ	14 07 57.4	
MNK				*i* LR	LR	14 11 46.5	
MNK				*i* LRM	MLR	14 13 25.3	
	comp=N,813nm,25.5s						
MNK	Minsk	34.27	330	*i* P	P	13 56 30.1	-1.0
MNK				*i*		13 57 43.7	
MNK				*i* S	S	14 01 58.5	+0.9
MNK				*i* SS	SnSn	14 04 08.4	+1.8
MNK				*i* SSS	SSS	14 04 24.2	
MNK				pmax	pmax		
	comp=E,40nm,0.9s						
MNK				pmax	pmax		
	comp=Z,80nm,0.9s						
MNK				pmax	pmax		
	comp=N,36nm,0.8s						
MNK				MLR	MLR		
	comp=N,813nm,25.0s						
MNK				MLR	MLR		
	comp=Z,735nm,17.0s						
KIBK	Kibwezi	34.55	214	P	P	13 56 33.4	-0.6
KECS	Kecovo	34.98	317	*e*P	P	13 56 40.1	+2.8
KECS				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KECS	Kecovo	34.98	317	*e*P	P	13 56 40.1	+2.8
NACGM	Naroch	35.02	330	*e*P	P	13 56 39.5	+1.9
TIP	Timpagrande	35.08	300	⇑P	P	13 56 38.2	-0.1
PSZ	Piszkesteto	35.12	316	*e*P	P	13 56 39.1	+0.5
MORH	Mrgy, Hungar	35.32	312	⇑P	P	13 56 40.2	0.0
KLMR	Klimovskoe	35.42	346	*e*P	P	13 56 39.3	-1.6
KLMR				*e*		13 59 08.5	
KLMR				pmax	pmax		
	comp=Z,88nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,3µm,12.0s						
NIE	Niedzica	35.48	318	*e*P	P	13 56 49.4	+7.7
IIGN	Ignalina	35.55	330	*e*P	P	13 56 42.9	+0.7
LANS	Liptovska Anna	35.87	317	*e*P	P	13 56 47.3	+2.3
LANS				pmax	pmax		
	comp=Z,15nm,1.6s						
LANS	Liptovska Anna	35.87	317	*e*P	P	13 56 47.3	+2.3
CUC	Castrocucco	35.91	301	IAmb	IAmb	13 56 55.4	
	comp=Z,90nm,1.1s						
OJC	Ojcow	36.11	319	*e*P	P	13 56 47.5	+0.4
SUW	Suwalki	36.17	327	*e*P	P	13 56 46.9	-0.6
BEHE	Becsehely	36.63	312	IAmb	IAmb	13 57 00.3	
	comp=Z,89nm,1.8s						
PABE	Paberze	36.66	329	*e*P	P	13 56 52.1	+0.5
JAVC	Velka Javorina	36.85	316	*e*P	P	13 56 53.8	+0.4
MODS	Modra-Piesok	36.92	315	*e*P	P	13 56 55.2	+1.2
MODS				pmax	pmax		
	comp=Z,83nm,1.5s						
MODS	Modra-Piesok	36.92	315	*e*P	P	13 56 55.2	+1.2
OKC	Ostrava-Krasne	36.93	318	*e*P	P	13 56 55.7	+1.7
OKC				MLR	MLR		
	comp=Z,1µm,7.4s						
OKC	Ostrava-Krasne	36.93	318	*e*P	P	13 56 55.7	+1.7
OKC				AMS	AMS	14 18 20.0	
	comp=Z,1µm,7.4s						
KOGS	Kog	36.97	312	*i* P	P	13 56 54.3	-0.1
PAOL	Paolisi	37.00	303	IAmb	IAmb	13 57 04.2	
	comp=Z,112nm,1.6s						
PUL	Pulkovo	37.07	338	⇓*e*P	P	13 56 56.3	+1.3
PUL				pmax	pmax		
	comp=Z,100nm,1.1s						
MORC	Moravsky Berou	37.27	318	*e*P	P	13 56 57.5	+0.6
RONA	Rosalia, Austr	37.32	314	*i* P	P	13 56 57.4	0.0
	comp=Z,20nm,0.8s,SNR=12						
MBAR	Mbarara	37.33	226	LR	LR	14 14 18.2	
	comp=Z,4µm,19.4s,baz=42,slow=40						
VSU	Vasula	37.40	334	*e*P	P	13 56 58.6	+0.8
TNCH	TengChong	37.54	84	P	P	13 57 01.0	+1.3
TNCH				pP	pP	13 57 04.0	-0.1
TNCH				sP	sP	13 57 06.8	+1.0
TNCH				S	S	14 02 49.3	+0.6
TNCH				sS	sS	14 02 58.8	+2.9
TNCH				pmax	pmax		
	comp=Z,17nm,1.4s						
TNCH				LR	LR		
	comp=Z,440nm,13.1s						
TNCH				LR	LR		
	comp=Z,630nm,10.5s						
TNCH				LR	LR		
	comp=Z,1µm,12.4s						
INTR	Introdacqua	37.63	304	IAmb	IAmb	13 57 09.2	
	comp=Z,70nm,1.0s						
CONA	Conrad Observa	37.67	314	*i* P	P	13 57 00.0	-0.4
	comp=Z,13nm,1.3s						
VRAC	Vranov	37.67	316	LR	LR	14 16 36.1	
	comp=Z,749nm,19.1s,baz=125,slow=43						
VRAC	Vranov	37.67	316	⇑P	P	13 57 01.1	+0.7
VRAC	Vranov	37.67	316	*e*P	P	13 57 00.1	-0.2
VRAC	Vranov	37.67	316	P	P	13 57 01.0	+0.7
GTA	Gaotai	37.67	60	P	P	13 57 00.5	-0.1
GTA				sP	sP	13 57 08.0	+1.3
GTA				S	S	14 02 52.5	+2.2
GTA				pmax	pmax		
	comp=Z,53nm,0.9s						
GTA				LR	LR		
	comp=Z,1µm,18.5s						
GTA				LR	LR		
	comp=Z,1µm,16.7s						
GTA				LR	LR		
	comp=Z,1µm,15.3s						
ARSA	Arzberg	37.69	313	*i* P	P	13 57 00.8	+0.3
	comp=Z,12nm,1.1s						
KRUC	Moravsky	37.71	316	*e*P	P	13 57 00.9	+0.3
KRLC	Kraliky	37.84	318	*e*P	P	13 57 01.5	-0.2
KRLC				MLR	MLR		
	comp=Z,1µm,6.4s						
KRLC	Kraliky	37.84	318	*e*P	P	13 57 01.5	-0.2
KRLC				AMS	AMS	14 15 50.0	
	comp=Z,1µm,6.4s						
SOKA	Soboth	37.84	312	*e*P	P	13 57 01.8	-0.1
	comp=Z,21nm,1.3s						
CEY	Cerknica	38.01	310	*i* P	P	13 57 03.5	+0.2
OBKA	Obir	38.12	311	*i* P	P	13 57 04.9	+0.7
	comp=Z,26nm,1.5s						
DPC	Dobruska-Polom	38.21	318	*e*P	P	13 57 07.2	+2.3
DPC				MLR	MLR		
	comp=E,800nm,19.9s						
DPC	Dobruska-Polom	38.21	318	*e*P	P	13 57 07.2	+2.3
DPC				AMS	AMS	14 17 00.0	
NRCA	Norcia	38.34	305	IAmb	IAmb	13 57 22.5	
	comp=Z,76nm,1.4s						
TREC	Trest	38.35	316	AMS	AMS	14 16 20.0	
	comp=Z,1µm,14.5s						
OSTC	Ostas	38.35	318	AMS	AMS	14 18 20.0	
	comp=Z,900nm,18.3s						
ARBE	Arbavere	38.35	335	*e*P	P	13 57 06.1	+0.3
KSP	Ksiaz	38.41	319	*e*P	P	13 57 07.8	+1.2
UPC	Upice	38.45	318	*e*P	P	13 57 07.8	+0.9
UPC	Upice	38.45	318	*e*P	P	13 57 07.8	+0.9
CHVC	Chvalec	38.46	318	AMS	AMS	14 18 40.0	
	comp=Z,2µm,6.3s						
CADS	Cadrg	38.59	311	*i* P	P	13 57 08.5	+0.3
KNGR	Kungurtug, Tuv	38.66	42	*de*P	P	13 57 10.9	+2.2
KNGR				pmax	pmax		
	comp=Z,76nm,0.9s						
MOA	Molln	38.67	313	*i* P	P	13 57 08.7	0.0
	comp=Z,21nm,0.7s						
MTSE	Matsula	38.72	333	*e*P	P	13 57 09.5	+0.6
MYKA	Terra Mystica	38.76	311	*i* P	P	13 57 09.5	-0.1
	comp=Z,6.3nm,0.6s						
CKRC	Cesky Krumlov	38.93	315	*e*P	P	13 57 10.5	-0.4
CKRC				MLR	MLR		
	comp=Z,900nm,17.8s						
CKRC	Cesky Krumlov	38.93	315	*e*P	P	13 57 10.5	-0.4
CKRC				AMS	AMS	14 16 10.0	
	comp=Z,900nm,17.8s						
BIOA	Bad Ischl, Aus	39.04	313	*i* P	P	13 57 11.8	-0.1
	comp=Z,45nm,1.3s,SNR=10						
KBA	Koelnbreinsper	39.07	312	*i* P	P	13 57 12.2	0.0
	comp=Z,39nm,1.0s						
PRU	Pruhonice	39.16	317	AMS	AMS	14 17 00.0	
	comp=Z,1µm,15.4s						
ZVC	Zvikov	39.20	316	*e*P	P	13 57 13.1	0.0
ZVC				AMS	AMS	14 16 40.0	
	comp=Z,1µm,22.3s						
JOF	Joensuu	39.23	342	*e*P	P	13 57 13.5	+0.4
PRA	Prague	39.25	317	AMS	AMS	14 17 10.0	
	comp=Z,1µm,18.3s						
GEC2	GERESS Array S	39.32	315	*e*P	P	13 57 14.0	-0.3
	comp=Z,23nm,1.0s,baz=109,slow=8.1						
GERES	GERESS Array B	39.32	315	P	P	13 57 13.8	-0.6
	comp=Z,2.7nm,0.5s,baz=114,slow=7.5,SNR=32						
GERES				PcP	PcP	13 59 22.7	-0.1
	comp=Z,1.6nm,0.7s,baz=97,slow=4.4,SNR=2.1						
	comp=Z,2.7nm,0.5s						
PVCC	Panska Ves	39.32	318	AMS	AMS	14 17 20.0	
	comp=Z,1µm,18.3s						
MEF	Metsahovi	39.47	335	*e*P	P	13 57 16.2	+1.0
KHC	Kasperske Hory	39.48	315	IAmb	IAmb	13 57 23.2	
	comp=Z,44nm,0.9s						
KHC	Kasperske Hory	39.48	315	*e*P	P	13 57 15.2	-0.4
KHC				*e*		13 57 22.0	
KHC				MLR	MLR		
	comp=Z,900nm,19.8s						
KHC	Kasperske Hory	39.48	315	*e*P	P	13 57 15.2	-0.4
KHC				pP	sP	13 57 22.0	+0.3
KHC				AMS	AMS	14 16 30.0	
	comp=Z,900nm,19.8s						
KHC	Kasperske Hory	39.48	315	P	P	13 57 15.2	-0.4
	comp=Z,57nm,0.9s						
ABTA	Abfaltersbach	39.54	311	*i* P	P	13 57 16.1	-0.1
	comp=Z,7.0nm,0.6s						
LESA	Schwarzleotal	39.59	312	*i* P	P	13 57 15.8	-0.7
	comp=Z,17nm,1.0s,SNR=9.2						
RICC	Richard	39.61	317	*e*P	P	13 57 16.9	+0.3
RICC				AMS	AMS	14 17 40.0	
FINES	FINESS Array B	39.72	338	P	P	13 57 17.1	-0.2
	comp=Z,14nm,0.4s,baz=136,slow=8.7,SNR=125						
FINES				LR	LR	14 17 36.6	
	comp=Z,550nm,18.4s,baz=150,slow=42						
	comp=Z,14nm,0.4s						
CMAR	Chiang Mai Arr	39.82	94	P	P	13 57 19.2	+0.5
	comp=Z,0.5nm,0.3s,baz=292,slow=9.9,SNR=7.8						
CMAR				PcP	PcP	13 59 25.8	+1.0
	comp=Z,1.4nm,0.8s,baz=278,slow=4.8,SNR=5.1						
CMAR				LR	LR	14 18 06.2	
	comp=Z,864nm,19.4s,baz=280,slow=43						
	comp=Z,0.5nm,0.3s						
HSKC	Hora Svate Kat	40.03	317	AMS	AMS	14 17 40.0	
	comp=Z,1µm,18.0s						
PZH	PanZhiHua	40.06	81	P	P	13 57 21.8	+1.0
PZH				S	S	14 03 24.5	-2.1
PZH				pmax	pmax		
	comp=Z,40nm,1.4s						
PZH				pmax	pmax		
	comp=Z,190nm,4.3s						
PZH				LR	LR		
	comp=Z,760nm,15.1s						
PZH				LR	LR		
	comp=Z,430nm,15.3s						
PZH				LR	LR		
	comp=Z,720nm,12.6s						
WTTA	Wattenberg	40.24	312	*i* P	P	13 57 21.5	-0.6
	comp=Z,45nm,0.8s,SNR=15						
WATA	Walderalm	40.30	312	*i* P	P	13 57 21.6	-0.9
	comp=Z,9.8nm,0.5s,SNR=12						
SQTA	Sankt Quirin	40.52	312	*i* P	P	13 57 23.5	-0.8
	comp=Z,28nm,0.4s,SNR=25						
CLL	Collm	40.52	318	*i* P	P	13 57 24.1	0.0
CLL				pmax	pmax		
	comp=Z,43nm,1.4s						
CLL	Collm	40.52	318	*i* P	P	13 57 24.1	0.0
	comp=Z,43nm,1.4s						
CLL				*e*PP	PnPn	13 59 01.0	-0.2
CLL				*e*PPP	PPP	13 59 18.0	
CLL				*e*S	S	14 03 37.0	+4.4
CLL				*e*SS	SnSn	14 06 36.0	-1.6
CLL				AMS	AMS	14 18 00.0	
	comp=N,1µm,18.5s						
CLL				AMS	AMS	14 18 00.0	
	comp=E,500nm,21.8s						
ROTZ	Rotzenmuhle	40.53	316	*e*P	P	13 57 24.2	0.0
	comp=E,5.5nm,1.0s,baz=109,slow=8.1						
KEF	Keuruu	40.64	338	*e*P	P	13 57 25.1	+0.2
LZDM	Lanzhou Array	40.64	66	P	P	13 57 25.3	-0.4
	comp=E,2.0nm,0.4s,baz=267,slow=10,SNR=5.4						
LZDM				LR	LR	14 18 24.8	
	comp=E,1µm,18.7s,baz=330,slow=42						
	comp=E,2.0nm,0.4s						
MANZ	Manzenberg	40.65	316	*e*P	P	13 57 26.9	+1.7
	comp=E,16nm,2.0s,baz=109,slow=8.1						
LZH	Lanzhou	40.76	66	*e*P	P	13 57 28.0	+1.5
LZH				pP	sP	13 57 33.5	+0.9
LZH				sP	pP	13 57 36.8	+5.9
LZH				S	S	14 03 43.3	+6.4
LZH				pmax	pmax		
	comp=E,18nm,1.3s						
LZH				LR	LR		
	comp=E,1µm,19.2s						
LZH				LR	LR		
	comp=E,1µm,16.5s						
LZH				LR	LR		
	comp=E,2µm,20.6s						
FETA	Feichten	40.79	311	*i* P	P	13 57 26.0	-0.6
	comp=E,36nm,1.1s,SNR=12						
KEST	Kesra	40.81	294	P	P	13 57 27.1	+0.3
	comp=E,20nm,0.8s,baz=84,slow=4.1,SNR=12						
KEST				LR	LR	14 16 51.3	
	comp=E,694nm,21.6s,baz=66,slow=40						
	comp=E,20nm,0.8s						
RETA	Reutte	40.87	312	*i* P	P	13 57 26.0	-1.2
	comp=E,10nm,0.6s,SNR=11						
BSD	Bornholm Skovb	40.90	324	*e*P	P	13 57 27.6	+0.4
RAF	Rauma	40.98	335	*e*P	P	13 57 28.5	+0.7
MOY	Mondy	41.08	42	*e*P	P	13 57 29.4	+0.5
MOY				pmax	pmax		
	comp=Z,61nm,1.7s						
GRA1	Grafenberg Arr	41.12	315	IAmb	IAmb	13 57 36.9	
	comp=Z,44nm,0.8s						
GRF	Grafenberg Arr	41.12	315	*e*P	P	13 57 29.1	0.0
	comp=Z,49nm,0.8s,baz=109,slow=8.1						
GRF				*e*L	L	14 17 45.9	
	comp=Z,833nm,18.7s						
MOX	Moxa	41.15	317	*e*L	L	14 18 19.8	
	comp=Z,751nm,19.6s						
AAL	Aland	41.16	333	*e*P	P	13 57 28.7	-0.5
KMI	Kunming	41.24	82	⇑P	P	13 57 32.5	+1.8
KMI				S	S	14 03 45.3	+0.9
KMI				pmax	pmax		
	comp=Z,36nm,1.5s						
KMI				LR	LR		
	comp=Z,340nm,18.5s						
KMI				LR	LR		
	comp=Z,710nm,18.9s						
KMI				LR	LR		
	comp=Z,710nm,18.3s						
DAVOX	Davos/Dischmat	41.31	311	LR	LR	14 17 01.8	
	comp=Z,600nm,20.1s,baz=94,slow=40						
UBR	Ueberruh	41.35	312	*e*P	P	13 57 30.2	-0.8
	comp=Z,73nm,0.9s,baz=109,slow=8.1						
DAVA	Damuels	41.41	311	*i* P	P	13 57 30.9	-0.8
	comp=Z,43nm,0.4s,SNR=29						
FLTG	Flechtingen	41.89	319	*e*P	P	13 57 35.6	+0.3
	comp=Z,58nm,1.1s,baz=109,slow=8.1						
VAF	Ylistaro	41.98	338	*e*P	P	13 57 36.3	+0.4
ZAK	Zakamensk	42.08	44	*e*P	P	13 57 36.6	-0.5
ZAK				pmax	pmax		
	comp=Z,26nm,1.5s						
ASSE	Asse, Remlinge	42.16	319	*e*P	P	13 57 37.9	+0.5
	comp=Z,45nm,1.3s,baz=109,slow=8.1						
CLZ	Clausthal	42.24	318	*e*P	P	13 57 40.4	+2.1
	comp=Z,53nm,1.2s,baz=109,slow=8.1						
APA	Apatity	42.60	347	*e*P	P	13 57 39.7	-1.2
APA				*e*		13 59 22.7	
APA				*e*		13 59 27.2	
APA				pmax	pmax		
	comp=Z,19nm,1.1s						
APA				MLR	MLR		
	comp=Z,5µm,13.2s						
BFO	Black Forest	42.65	313	P	P	13 57 40.9	-0.7
BFO	Black Forest	42.65	313	P	P	13 57 40.9	-0.7
BFO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TNS	Taunus Mts	42.99	315	*e*P	P	13 57 44.6	+0.2
	comp=Z,120nm,1.8s,baz=109,slow=8.1						
IRK	Irkutsk	43.19	42	*e*P	P	13 57 45.3	-0.6
IRK				pmax	pmax		
	comp=Z,81nm,2.2s						
KASTN	Kahler Asten	43.25	317	*e*P	P	13 57 47.1	+0.7
	comp=Z,69nm,1.6s,baz=109,slow=8.1						
BNI	Bardonecchia	43.26	308	IAmb	IAmb	13 57 55.7	
	comp=Z,108nm,1.8s						
SONM	Songino Array	43.53	48	P	P	13 57 49.1	+0.1
	comp=Z,12nm,0.7s,baz=260,slow=7.2,SNR=66						
SONM				LR	LR	14 17 58.2	
	comp=Z,2µm,20.2s,baz=263,slow=39						
	comp=Z,12nm,0.7s						
SONM	Songino Array	43.53	48	P	P	13 57 49.3	+0.4
SONM	Songino Array	43.53	48	P	P	13 57 49.3	+0.4
SONM				pmax	pmax		
	comp=Z,20nm,0.9s						
HFS	Hagfors	43.79	330	P	P	13 57 50.3	-0.3
	comp=Z,8.7nm,0.4s,baz=128,slow=9.6,SNR=95						
HFS				LR	LR	14 19 18.9	
	comp=Z,907nm,20.7s,baz=128,slow=41						
	comp=Z,8.7nm,0.4s						
ULN	Ulaanbaatar	43.98	48	P	P	13 57 52.3	-0.2
ULN	Ulaanbaatar	43.98	48	P	P	13 57 52.3	-0.2
ULN				pmax	pmax		
	comp=Z,25nm,0.9s						
BUG	Bochum--Univer	44.00	317	*e*P	P	13 57 52.9	+0.5
	comp=Z,42nm,1.0s,baz=109,slow=8.1						
WLF	Walferdange	44.32	314	*e*P	P	13 57 54.7	-0.3
	comp=Z,29nm,1.1s,baz=109,slow=8.1						
WLF	Walferdange	44.32	314	*d*P	P	13 57 53.3	-1.7
GYA	Guiyang	44.38	79	P	P	13 57 55.3	-0.7
GYA				S	S	14 04 26.8	-3.6
GYA				LR	LR		
	comp=Z,750nm,12.8s						
MEM	Membach	44.59	315	*d*P	P	13 58 00.1	+2.9
	comp=Z,16nm,1.2s						
MEM				*d*PcP	PcP	13 59 40.5	+0.5
RCHB	Rochefort	45.00	315	*d*P	P	13 58 01.3	+0.9
	comp=Z,17nm,1.4s						
BCLA	Clavier	45.00	315	*d*P	P	13 58 00.7	+0.3
	comp=Z,18nm,1.2s						
NC602	NORSAR Array S	45.01	331	*e*P	P	13 58 00.1	-0.3
XAN	Xi'an	45.05	68	P	P	13 58 01.8	+0.6
XAN				S	S	14 04 41.5	+1.7
XAN				pmax	pmax		
	comp=Z,17nm,1.3s						

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XAN                                pmax     pmax
        comp=Z,350nm,4.6s
XAN                                LR       LR
        comp=Z,1µm,17.5s
XAN                                LR       LR
        comp=Z,1µm,16.7s
XAN                                LR       LR
        comp=Z,2µm,18.7s
NC405  NORSAR Array S   45.11 331  P        P        13 58 00.6  -0.7
BGES   Gesves           45.13 315  dP       P        13 58 02.1  +0.6
        comp=Z,20nm,1.2s
NB2    NORSAR Subarra   45.29 331  P        P        13 58 01.5  -1.2
        comp=Z,4.5nm,0.9s,baz=117,slow=8.6
NB2    NORSAR Subarra   45.29 331  P        P        13 58 01.5  -1.2
        baz=117,slow=8.6
NOA    NORSAR Array B   45.29 331  P        P        13 58 01.7  -1.0
        comp=Z,11nm,1.0s,baz=118,slow=7.6,SNR=12
NOA                                LR       LR       14 20 04.2
        comp=Z,662nm,18.6s,baz=120,slow=40
        comp=Z,11nm,1.0s
BMRD   Maredsous        45.31 315  dP       P        13 58 03.5  +0.5
        comp=Z,20nm,1.1s
NAO01  NORSAR Array S   45.35 330  P        P        13 58 02.2  -0.9
NAO01                              IAmb     IAmb     13 58 15.8
        comp=Z,117nm,1.4s
DOU    Dourbes          45.39 315  dP       P        13 58 04.1  +0.6
        comp=Z,26nm,1.1s
DOU                                dPcP     PcP      13 59 41.8  -0.9
KONO   Kongsberg        45.42 329  eP       P        13 58 03.0  -0.7
NBO00  NORSAR Array S   45.48 331  P        P        13 58 03.0  -1.2
NBO00                              IAmb     IAmb     13 58 16.3
        comp=Z,97nm,1.4s
BTO    Baotou           45.55  59  eP       P        13 58 06.3  +1.2
BTO                                pP       sP       13 58 10.8  -0.5
BTO                                sP       pP       13 58 13.3  +3.7
BTO                                S        S        14 04 47.0   0.0
BTO                                sS       pS       14 04 52.5  +0.3
BTO                                SS       ScS      14 07 59.8  -1.6
BTO                                pmax     pmax
        comp=Z,48nm,1.0s
BTO                                pmax     pmax
        comp=Z,340nm,9.0s
BTO                                LR       LR
        comp=Z,2µm,14.2s
BTO                                LR       LR
        comp=Z,3µm,14.8s
BTO                                LR       LR
        comp=Z,4µm,16.0s
VADS   Vadso            45.55 347  eP       P        13 58 04.3  -0.3
NRIK   Noril'sk         45.70  15  P        P        13 58 05.7  -0.1
        comp=Z,6.8nm,0.8s,baz=186,slow=3.2,SNR=11
NRIK                               LR       LR       14 20 22.1
        comp=Z,964nm,18.5s,baz=212,slow=40
        comp=Z,6.8nm,0.8s
NRIK   Noril'sk         45.70  15  P        P        13 58 05.8  +0.1
NRIK   Noril'sk         45.70  15⇓eP       P        13 58 06.6  +0.9
NRIK                               pmax     pmax
        comp=Z,21nm,1.1s
ARA0   ARCESS Array S   45.89 345  eP       P        13 58 08.9  +1.6
ARCES  ARCESS Array B   45.89 345  P        P        13 58 07.0  -0.2
        comp=Z,1.3nm,0.4s,baz=134,slow=8.9,SNR=23
ARCES                              LR       LR       14 20 18.3
        comp=Z,553nm,18.3s,baz=125,slow=40
        comp=Z,1.3nm,0.4s
ARCES  ARCESS Array B   45.89 345  IAmb     IAmb     13 58 36.9
        comp=Z,130nm,1.9s
KTK1   Kautokeino       46.03 344  eP       P        13 58 08.1  -0.3
TAM    Tamanrasset      46.25 276  P        P        13 58 10.0  -0.9
TAM                                IAmb     IAmb     13 58 24.4
        comp=Z,38nm,1.0s
TAM    Tamanrasset      46.25 276  P        P        13 58 10.0  -0.9
TAM                                pmax     pmax
        comp=Z,38nm,1.0s
SKAR   Skarslia         46.43 330  eP       P        13 58 12.2  +0.5
CORI   Orista           46.44 303  IAmb     IAmb     13 58 50.0
        comp=Z,32nm,1.1s
OPO    Ambohidratompo   46.59 192  LR       LR       14 15 46.5
        comp=Z,622nm,20.2s,baz=182,slow=34
DOMB   Dombas           46.66 331  eP       P        13 58 13.4   0.0
MOR8   Moi Rana         46.71 338  eP       P        13 58 12.6  -1.2
HHC    Hu-ho-hao-te     46.72  59⇓iP       P        13 58 15.0  +0.7
HHC                                S        S        14 05 02.0  -1.8
HHC                                pmax     pmax
        comp=Z,12nm,1.2s
HHC                                pmax     pmax
        comp=Z,190nm,4.4s
HHC                                LR       LR
        comp=Z,530nm,13.3s
HHC                                LR       LR
        comp=Z,710nm,14.2s
HHC                                LR       LR
        comp=Z,800nm,15.2s
BLS5   Blasjo           46.81 327  eP       P        13 58 15.5  +0.9
ODD1   Odda             46.91 328  eP       P        13 58 17.3  +1.9
RAUS   Rausandaksla     46.99 338  eP       P        13 58 15.7  -0.2
CEST   Esterri de Car   47.03 304  IAmb     IAmb     13 58 24.9
        comp=Z,21nm,0.9s
JETT   Jettan, Norway   47.13 344  eP       P        13 58 17.8  +0.8
FAUS   Fauske           47.15 340  eP       P        13 58 16.8  -0.3
PSI    Prapat           47.23 114  LR       LR       14 21 14.9
        comp=Z,606nm,18.6s,baz=301,slow=40
KMY    Karmoy           47.33 327  eP       P        13 58 19.2  +0.6
VAGH   Vaagaholmen      47.41 338  eP       P        13 58 19.4  +0.2
STEI   Steigen          47.49 340  eP       P        13 58 20.5  +0.7
TIY    Taiyuan          47.55  63  eP       P        13 58 23.0  +2.2
TIY                                PP       PP       14 00 15.0  +2.8
TIY                                S        S        14 05 16.0  +0.4
TIY                                SS       SS       14 08 31.0   -12
TIY                                pmax     pmax
        comp=Z,11nm,0.8s
TIY                                LR       LR
        comp=Z,590nm,13.7s
TIY                                LR       LR
        comp=Z,340nm,13.1s
TIY                                LR       LR
        comp=Z,850nm,15.8s
TRO    Tromso           47.56 343  eP       P        13 58 20.4  +0.2
AKN    Aaknes           47.60 331  eP       P        13 58 27.1  +6.3
BER    Bergen           47.68 328  eP       P        13 58 21.0  -0.3
ASK    Askoy            47.78 328  eP       P        13 58 21.4  -0.7
GULI   GuiLin           47.90  80  P        P        13 58 26.0  +2.4
GULI                               S        S        14 05 20.5  -0.2
GULI                               pmax     pmax
        comp=Z,19nm,1.0s
GULI                               LR       LR
        comp=Z,440nm,11.2s
GULI                               LR       LR
        comp=Z,430nm,11.6s
GULI                               LR       LR
        comp=Z,660nm,15.1s
LYN    LuoYang          47.91  67  P        P        13 58 25.0  +1.5
LYN                                pP       sP       13 58 31.0  +1.3
LYN                                S        S        14 05 22.5  +1.9
LYN                                sS       sS       14 05 34.5  +6.6
LYN                                pmax     pmax
        comp=Z,16nm,0.7s
LYN                                pmax     pmax
        comp=Z,230nm,8.7s
LYN                                LR       LR
        comp=Z,1µm,16.8s
LYN                                LR       LR
        comp=Z,970nm,16.9s
LYN                                LR       LR
        comp=Z,2µm,19.2s
CIT    Chita            48.74  44  eP       P        13 58 29.4  -0.3
CIT                                e                 13 58 35.0
CIT                                e                 13 58 44.2
CIT                                pmax     pmax
        comp=Z,93nm,1.9s
QIZ    Qiongzhong       49.31  88  P        P        13 58 33.5  -1.0
QIZ                                S        S        14 05 41.0  +0.2
QIZ                                ScS      ScS      14 08 24.5  -2.1
QIZ                                LR       LR
        comp=Z,250nm,13.6s
QIZ                                LR       LR
        comp=Z,640nm,17.0s
QIZ                                LR       LR
        comp=Z,650nm,16.5s
VOI    Vohitsoka        49.91 192  P        P        13 58 38.6  -0.4
BOD    Bodaibo          49.99  36  eP       P        13 58 38.4  -0.7
BOD                                pmax     pmax
        comp=Z,119nm,1.5s
XLT    XiLinHaoTe       50.00  54  eP       P        13 58 41.3  +1.7
XLT                                pP       sP       13 58 46.0  +0.2
XLT                                sP       pP       13 58 49.0  +4.9
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XLT                                pmax     pmax
        comp=Z,16nm,1.3s
XLT                                pmax     pmax
        comp=Z,190nm,4.3s
XLT                                LR       LR
        comp=Z,1µm,15.1s
XLT                                LR       LR
        comp=Z,1µm,14.3s
WHN    Wuhan            50.14  72  P        P        13 58 41.3  +0.6
WHN                                LR       LR
        comp=Z,2µm,25.1s
BJI    Beijing          50.28  59  P        P        13 58 42.5  +0.9
BJI                                S        S        14 05 54.5  +0.8
BJI                                pmax     pmax
        comp=Z,4.0nm,1.1s
BJI                                LR       LR
        comp=Z,490nm,14.5s
BJI                                LR       LR
        comp=Z,530nm,15.5s
BJI                                LR       LR
        comp=Z,730nm,16.9s
LSZ    Lusaka           50.59 216  LR       LR       14 24 00.2
        comp=Z,876nm,19.1s,baz=27,slow=41
EKA    Eskdalemuir Ar   50.87 320  P        P        13 58 45.2  -0.6
        comp=Z,1.4nm,0.3s,baz=95,slow=7.5,SNR=11
EKA                                LR       LR       14 24 30.9
        comp=Z,645nm,18.6s,baz=110,slow=41
        comp=Z,1.4nm,0.3s
ESDC   Sonseca Array    51.10 300  P        P        13 58 47.6  -0.3
        comp=Z,4.6nm,0.4s,baz=72,slow=7.1,SNR=76
ESDC                               LR       LR       14 23 00.0
        comp=Z,326nm,20.1s,baz=80,slow=39
        comp=Z,4.6nm,0.4s
ESDC   Sonseca Array    51.10 300  P        P        13 58 46.7  -1.2
PAB    San Pablo        51.41 300  P        P        13 58 49.8  -0.5
PAB    San Pablo        51.41 300  P        P        13 58 49.8  -0.5
PAB                                pmax     pmax
        comp=Z,16nm,1.0s
TIA    Tai'an           51.45  64  P        P        13 58 52.5  +2.0
TIA                                pmax     pmax
        comp=Z,19nm,2.1s
TIA                                LR       LR
        comp=Z,920nm,16.3s
TIA                                LR       LR
        comp=Z,830nm,13.5s
TIA                                LR       LR
        comp=Z,1µm,16.2s
HILR   Hailar Array B   52.49  47  P        P        13 58 58.2  +0.1
        comp=Z,14nm,0.5s,baz=260,slow=7.8,SNR=22
HILR                               LR       LR       14 24 08.7
        comp=Z,1µm,19.7s,baz=120,slow=39
        comp=Z,14nm,0.5s
DSB    Dublin           52.54 318  P        P        13 58 58.6  +0.3
MDT    Midelt           52.62 292  LR       LR       14 26 35.3
        comp=Z,282nm,18.2s,baz=99,slow=42
IWEX   Carrickbyrne,    52.73 316  P        P        13 58 59.7  -0.1
MD01   Midelt array s   52.73 292  P        P        13 59 00.3   0.0
TORD   Torodi Ar. Bea   53.05 266  P        P        13 59 01.8  -0.9
        comp=Z,20nm,0.9s,baz=63,slow=7.9,SNR=57
        comp=Z,20nm,0.9s
MVO    Moncorvo         53.28 302  eP       P        13 59 04.0  -0.1
MVO                                i IAmb   IAmb     13 59 12.3
        comp=Z,31nm,1.0s
MVO                                eLR      LR       14 21 51.6
MVO                                i IAMs_20 IAMs_20 14 26 02.0
        comp=Z,287nm,18.0s
IDGL   Inch Island, C   53.32 320  P        P        13 59 04.4  +0.4
NJ2    Nanjing          53.60  69  eP       P        13 59 06.0  -0.5
NJ2                                pmax     pmax
        comp=Z,11nm,0.5s
PBAR   Barrancos        53.66 299  eP       P        13 59 06.3  -0.6
PBAR                               i IAmb   IAmb     13 59 54.9
        comp=Z,37nm,1.6s
MTE    Manteigas        53.75 302  IAmb     IAmb     13 59 10.7
        comp=Z,40nm,1.4s
MTE    Manteigas        53.75 302  eP       P        13 59 06.9  -0.7
MTE                                i IAmb   IAmb     13 59 12.6
        comp=Z,50nm,1.7s
MTE                                eLR      LR       14 21 00.8
MTE                                i IAMs_20 IAMs_20 14 27 01.9
        comp=Z,372nm,16.0s
PMRV   Marv??o          53.76 300  eP       P        13 59 07.1  -0.5
PMRV                               i IAmb   IAmb     13 59 17.7
        comp=Z,28nm,1.2s
PMRV                               eLR      LR       14 21 40.0
PMRV                               i IAMs_20 IAMs_20 14 25 33.5
        comp=Z,242nm,20.0s
PCBR   Castelo Branco   53.77 301  eP       P        13 59 07.7  +0.1
PCBR                               i IAmb   IAmb     13 59 18.1
        comp=Z,41nm,1.2s
PVRL   Vila Real        53.78 303  eP       P        13 59 08.1  +0.3
PVRL                               i IAmb   IAmb     13 59 13.4
        comp=Z,45nm,1.6s
POLO   Lamas de Olo     53.83 303  eP       P        13 59 08.5  +0.3
POLO                               i IAmb   IAmb     13 59 18.7
        comp=Z,24nm,1.6s
PCAB   Cabril           53.96 303  eP       P        13 59 08.6  -0.5
PCAB                               i IAmb   IAmb     13 59 55.4
        comp=Z,56nm,1.8s
PVIS   Viseu            53.98 302  eP       P        13 59 09.7  +0.4
PESTR  Estremoz         53.99 300  eP       P        13 59 08.8  -0.5
PESTR                              i IAmb   IAmb     13 59 19.2
        comp=Z,22nm,2.7s
SPA0   Spitsbergen Ar   54.02 351  eP       P        13 59 08.9   0.0
SPITS  Spitsbergen Ar   54.02 351  P        P        13 59 08.6  -0.2
        comp=Z,2.5nm,0.4s,baz=125,slow=13,SNR=24
SPITS                              LR       LR       14 26 35.8
        comp=Z,2µm,18.1s,baz=127,slow=41
        comp=Z,2.5nm,0.4s
PGAV   Gavieira, Arco   54.12 304  eP       P        13 59 10.6  +0.4
PGAV                               i IAmb   IAmb     13 59 49.2
        comp=Z,53nm,1.5s
PGAV                               eLR      LR       14 21 49.4
PGAV                               i IAMs_20 IAMs_20 14 28 49.0
        comp=Z,346nm,18.0s
PVAQ   Vaqueiros        54.31 298  eP       P        13 59 11.8  +0.1
PVAQ                               eLR      LR       14 21 45.2
PVAQ                               i IAMs_20 IAMs_20 14 26 15.6
        comp=Z,245nm,18.0s
PSARD  Sardoal          54.33 301  eP       P        13 59 11.5  -0.2
PSARD                              i IAmb   IAmb     13 59 21.4
        comp=Z,44nm,1.6s
PBEJ   Beja             54.33 299  eP       P        13 59 10.8  -1.0
PBEJ                               i IAmb   IAmb     13 59 59.9
        comp=Z,22nm,1.6s
IGLA   Glengowla, Co    54.34 318  P        P        13 59 11.5   0.0
PARRA  Arraiolos        54.35 300  eP       P        13 59 11.2  -0.6
PARRA                              i IAmb   IAmb     13 59 21.1
        comp=Z,17nm,1.7s
EVO    Evora            54.37 299  eP       P        13 59 11.8  -0.2
EVO                                i IAmb   IAmb     13 59 16.6
        comp=Z,33nm,1.5s
PMTG   Montargil        54.45 300  eP       P        13 59 12.7  +0.1
PMTG                               i IAmb   IAmb     13 59 21.1
        comp=Z,24nm,1.8s
PCAS   Casmilo, Conde   54.52 301  eP       P        13 59 13.2  +0.1
PCAS                               i IAmb   IAmb     13 59 18.0
        comp=Z,28nm,1.8s
PCVE   Castro Verde     54.53 298  eP       P        13 59 14.4  +1.2
PCVE                               i IAmb   IAmb     13 59 32.7
        comp=Z,31nm,1.6s
DL2    Dalian           54.60  60  P        P        13 59 08.0  -5.7
DL2                                S        S        14 06 40.5   -12
DL2                                pmax     pmax
        comp=Z,99nm,1.6s
DL2                                pmax     pmax
        comp=Z,700nm,8.7s
DL2                                LR       LR
        comp=N,2µm,17.3s
DL2                                LR       LR
        comp=E,1µm,15.8s
DL2                                LR       LR
        comp=Z,1µm,16.5s
MOE    Montemor         54.63 299  eP       P        13 59 14.2  +0.2
MOE                                i IAmb   IAmb     13 59 18.6
        comp=Z,46nm,1.7s
MESJ   Messejana        54.64 299  eP       P        13 59 14.2  +0.1
MESJ                               i IAmb   IAmb     13 59 16.7
        comp=Z,31nm,1.7s
MATP   Matopo           54.77 213  LR       LR       14 24 58.9
        comp=Z,716nm,18.2s,baz=34,slow=39
PSBE   So Bento         54.83 301  eP       P        13 59 15.8  +0.4
PSBE                               i IAmb   IAmb     13 59 25.5
        comp=Z,52nm,1.6s
KBS    Kingsbay         55.17 350  eP       P        13 59 17.1  -0.1
PMAFR  Mafra            55.28 300  eP       P        13 59 19.2  +0.6
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PMAFR                              i IAmb   IAmb     13 59 27.6
        comp=Z,82nm,1.9s
JMIC   Jan Mayen        56.30 339  LR       LR       14 26 18.3
        comp=Z,425nm,18.8s,baz=104,slow=39
CN2    Changchun        56.76  54  eP       P        13 59 30.3  +1.1
CN2                                eS       S        14 07 20.3  -1.4
CN2                                pmax     pmax
        comp=Z,20nm,1.2s
CN2                                pmax     pmax
        comp=Z,100nm,4.0s
CN2                                LR       LR
        comp=Z,200nm,11.0s
CN2                                LR       LR
        comp=Z,300nm,11.0s
CN2                                LR       LR
        comp=Z,200nm,10.0s
ZEA    Zeya             57.10  42  eP       P        13 59 32.8  +1.5
ZEA                                pmax     pmax
        comp=N,10.0nm,0.9s
ZEA                                pmax     pmax
        comp=Z,20nm,1.2s
ZEA                                MLR      MLR
        comp=E,300nm,13.0s
ZEA                                MLR      MLR
        comp=Z,600nm,14.0s
HEH    HeiHe            57.41  46  eP       P        13 59 33.0  -0.6
HEH                                pmax     pmax
        comp=Z,35nm,1.1s
HEH                                LR       LR
        comp=Z,1µm,13.3s
HEH                                LR       LR
        comp=Z,2µm,11.8s
HEH                                LR       LR
        comp=Z,3µm,13.7s
SSLB   Suanglung        57.57  78  P        P        13 59 36.2  +1.1
SSLB                               IAmb     IAmb     13 59 51.0
        comp=Z,84nm,1.5s
BNX    BinXian          57.89  51 ⇑P       P        13 59 38.0  +0.9
BNX                                pmax     pmax
        comp=Z,22nm,1.2s
YAK    Yakutsk          58.29  32  LR       LR       14 25 24.5
        comp=Z,547nm,21.5s,baz=268,slow=37
YAK    Yakutsk          58.29  32  P        P        13 59 38.6  -1.0
YAK                                IAmb     IAmb     13 59 40.5
        comp=Z,95nm,1.3s
YAK    Yakutsk          58.29  32  eP       P        13 59 37.0  -2.6
YAK                                e*PP     pP       13 59 43.5  -0.6
YAK                                e                 14 00 26.3
YAK                                e                 14 01 45.0
YAK                                eS       S        14 07 39.6  -1.6
YAK                                e*SS     pS       14 07 45.8  -0.9
YAK                                e                 14 09 25.9
YAK                                eSS      SS       14 11 36.1  +3.5
YAK                                eSSS     SSS      14 13 56.9
YAK                                pmax     pmax
        comp=Z,62nm,1.4s
YAK                                pmax     pmax
        comp=N,5.0nm,1.1s
YAK                                pmax     pmax
        comp=E,20nm,1.5s
YAK                                pmax     pmax
        comp=Z,287nm,5.4s
YAK                                pmax     pmax
        comp=N,178nm,4.9s
YAK                                pmax     pmax
        comp=E,246nm,5.3s
YAK                                smax     smax
        comp=E,67nm,2.8s
YAK                                smax     smax
        comp=N,68nm,3.9s
YAK                                MLR      MLR
        comp=N,934nm,15.0s
YAK                                MLR      MLR
        comp=Z,1µm,16.0s
YAK                                MLR      MLR
        comp=N,336nm,15.0s
LPHEP  Lephephe         58.55 213  P        P        13 59 43.5  +1.5
LPHEP                              IAmb     IAmb     13 59 50.1
        comp=Z,30nm,1.4s
TIXI   Tiksi            58.68  21  LR       LR       14 28 32.2
        comp=Z,947nm,19.0s,baz=303,slow=40
TIXI   Tiksi            58.68  21  P        P        13 59 41.8  -0.4
TIXI                               IAmb     IAmb     13 59 49.9
        comp=Z,103nm,1.9s
TIXI   Tiksi            58.68  21  P        P        13 59 41.8  -0.4
TIXI                               pmax     pmax
        comp=Z,103nm,2.0s
KSRS   Korea Array      59.74  61  P        P        13 59 49.8  -0.3
        comp=Z,3.2nm,0.5s,baz=278,slow=7.0,SNR=13
KSRS                               LR       LR       14 29 18.7
        comp=Z,536nm,18.8s,baz=295,slow=40
        comp=Z,3.2nm,0.5s
KGCAE  Kacgae           60.00 217  P        P        13 59 51.6  -0.5
KGCAE                              IAmb     IAmb     14 00 05.9
        comp=Z,29nm,0.9s
LBTB   Lobatse          60.07 213  LR       LR       14 25 42.3
        comp=Z,620nm,20.6s,baz=32,slow=36
LBTB   Lobatse          60.07 213  P        P        13 59 53.1  +0.6
LBTB   Lobatse          60.07 213  P        P        13 59 53.1  +0.6
LBTB                               pmax     pmax
        comp=Z,12nm,0.9s
BORG   Borgarnes        60.47 331  LR       LR       14 29 37.7
        comp=Z,441nm,18.8s,baz=97,slow=40
TGY    Tagaytay City    61.01  88  LR       LR       14 27 47.4
        comp=Z,368nm,21.9s,baz=308,slow=37
MAKGR  Makgori          61.12 213  P        P        13 59 59.5  -0.2
MAKGR                              IAmb     IAmb     14 00 07.5
        comp=Z,13nm,0.7s
USRK   Ussuriysk Ar.    61.35  52  P        P        14 00 01.0   0.0
        comp=Z,4.1nm,0.6s,baz=271,slow=6.6,SNR=10
        comp=Z,4.1nm,0.6s
DBIC   Dimbokro         61.67 263  P        P        14 00 03.0  -0.5
        comp=Z,9.5nm,0.7s,baz=99,slow=9.2,SNR=13
DBIC                               LR       LR       14 28 41.5
        comp=Z,650nm,18.6s,baz=75,slow=38
        comp=Z,9.5nm,0.7s
DBIC   Dimbokro         61.67 263  P        P        14 00 02.4  -1.2
DBIC   Dimbokro         61.67 263  P        P        14 00 02.4  -1.2
DBIC                               pmax     pmax
        comp=Z,12nm,1.0s
JNU    Nakatsue         63.17  65  P        P        14 00 12.4  -1.0
        comp=Z,5.8nm,0.7s,baz=281,slow=5.2,SNR=1.7
JNU                                LR       LR       14 31 10.9
        comp=Z,869nm,19.7s,baz=292,slow=39
        comp=Z,5.8nm,0.7s
JNU    Nakatsue         63.17  65  IAmb     IAmb     14 00 35.8
        comp=Z,73nm,1.7s
BOSA   Boshof           63.28 211  P        P        14 00 13.6  -0.5
        comp=Z,25nm,1.2s,baz=21,slow=6.0,SNR=32
BOSA                               LR       LR       14 29 31.7
        comp=Z,427nm,18.5s,baz=28,slow=38
        comp=Z,25nm,1.2s
BOSA   Boshof           63.28 211  P        P        14 00 14.0  -0.1
BOSA                               IAmb     IAmb     14 00 26.1
        comp=Z,29nm,1.4s
BOSA   Boshof           63.28 211  P        P        14 00 14.0  -0.1
BOSA                               pmax     pmax
        comp=Z,29nm,1.4s
TYV    Tymovskoe        66.87  43  eP       P        14 00 36.6  -0.5
TYV                                eS       S        14 09 29.0  -0.3
TYV                                pmax     pmax
        comp=Z,19nm,1.1s
TYV                                pmax     pmax
        comp=Z,100nm,2.9s
TYV                                smax     smax
        comp=N,200nm,2.8s
TYV                                smax     smax
        comp=E,100nm,2.8s
MJAR   Matsushiro Arr   67.92  59  P        P        14 00 43.4  -0.7
        comp=E,2.8nm,0.9s,baz=292,slow=8.6,SNR=5.9
MJAR                               LR       LR       14 32 51.4
        comp=E,343nm,18.5s,baz=296,slow=38
        comp=E,2.8nm,0.9s
YSS    Yuzhno-Sakhali   68.02  47  P        P        14 00 43.7  -0.7
YSS    Yuzhno-Sakhali   68.02  47  eP       P        14 00 44.3  -0.1
YSS                                eS       S        14 09 41.4  -1.8
YSS                                pmax     pmax
        comp=Z,400nm,5.1s
YSS                                pmax     pmax
        comp=Z,70nm,0.9s
YSS                                MLR      MLR
        comp=Z,1µm,14.0s
YSS                                MLR      MLR
        comp=E,800nm,15.0s
DAV    Davao City (W)   68.11  93  LR       LR       14 34 20.7
        comp=E,418nm,20.1s,baz=316,slow=39
SUR    Sutherland       68.51 212  LR       LR       14 32 27.2
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	comp=E,292nm,19.6s,baz=30,slow=37						
SEY	Seymchan	68.53	29	*e*P	P	14 00 47.0	-0.4
SEY				pmax	pmax		
	comp=Z,46nm,1.5s						
SEY				MLR	MLR		
	comp=Z,2µm,13.0s						
ASAJ	Asahikawa	68.76	50	LR	LR	14 34 18.8	
	comp=Z,837nm,18.3s,baz=309,slow=39						
MA2	Magadan	68.83	33	P	P	14 00 49.3	0.0
	comp=Z,18nm,0.9s,baz=285,slow=9.6,SNR=6.1						
MA2				LR	LR	14 31 51.2	
	comp=Z,216nm,21.7s,baz=286,slow=37						
	comp=Z,18nm,0.9s						
MA2	Magadan	68.83	33	P	P	14 00 49.7	+0.4
MA2				IAmb	IAmb	14 00 56.5	
	comp=Z,33nm,1.0s						
MA2	Magadan	68.83	33	*de*P	P	14 00 50.0	+0.7
MA2				pmax	pmax		
	comp=Z,34nm,1.1s						
JHJ	Hachijo jima 2	70.27	62	LR	LR	14 37 39.9	
	comp=Z,396nm,20.5s,baz=28,slow=41						
TULEG	Thule	71.10	348	IAmb	IAmb	14 01 11.2	
	comp=Z,99nm,1.8s						
SFJD	Kangerlussuaq	71.52	337	LR	LR	14 35 10.3	
	comp=Z,594nm,18.9s,baz=52,slow=38						
JCJ	Chichijima	74.42	67	LR	LR	14 39 09.3	
	comp=Z,240nm,18.6s,baz=217,slow=40						
PETK	Petropavlovsk-	74.81	38	P	P	14 01 24.7	-0.6
	comp=Z,2.2nm,0.8s,baz=14,slow=3.1,SNR=4.5						
PETK				LR	LR	14 37 26.5	
	comp=Z,534nm,21.3s,baz=291,slow=38						
	comp=Z,2.2nm,0.8s						
BATI	Baumata	74.88	110	LR	LR	14 37 06.2	
	comp=Z,360nm,20.2s,baz=313,slow=38						
SOEI	Soe	75.14	109	P	P	14 01 27.5	-0.5
RES	Resolute Bay	76.51	353	P	P	14 01 34.4	-0.3
	comp=Z,2.5nm,0.7s,baz=31,slow=15,SNR=6.8						
RES				LR	LR	14 39 28.9	
	comp=Z,540nm,21.1s,baz=14,slow=39						
	comp=Z,2.5nm,0.7s						
RES	Resolute Bay	76.51	353	P	P	14 01 33.8	-0.8
RES	Resolute Bay	76.51	353	P	P	14 01 33.8	-0.8
RES				pmax	pmax		
	comp=Z,13nm,1.4s						
A21K	Barrow	78.84	10	P	P	14 01 48.0	+0.3
	baz=330						
ILON	Igloolik, Nuna	78.93	346	IAmb	IAmb	14 01 50.7	
	comp=Z,23nm,1.1s						
A19K	Wainwright	79.03	12	P	P	14 01 49.5	+0.7
	baz=326						
A22K	Sinclair Lake	79.39	10	P	P	14 01 50.8	+0.1
	baz=332						
FRB	Frobisher Bay	79.52	338	LR	LR	14 40 12.2	
	comp=Z,378nm,18.0s,baz=40,slow=38						
C16K	Lisburne Hills	79.72	15	P	P	14 01 52.8	+0.2
	baz=323						
B20K	Meade River	79.90	11	P	P	14 01 54.0	+0.5
	baz=330						
C17K	DeLong Mountai	80.03	14	P	P	14 01 54.4	0.0
	baz=325						
B22K	Teshekpuk Lake	80.22	10	P	P	14 01 56.0	+0.8
	baz=333						
C19K	Lookout Ridge	80.23	12	P	P	14 01 54.9	-0.6
	baz=328						
C18K	Utukok River	80.30	13	P	P	14 01 55.5	-0.4
	baz=327						
RDOG	Red Dog Mine	80.44	14	P	P	14 01 56.2	-0.3
	baz=325						
B21K	Ikpikpuk River	80.67	11	P	P	14 01 57.7	+0.1
	baz=332						
D17K	Noatak River	80.69	14	P	P	14 01 57.4	-0.4
	baz=325						
A36M	Sachs Harbour	80.89	1	P	P	14 01 59.3	+0.5
	baz=358						
D19K	Kuna River	81.04	12	P	P	14 02 00.1	+0.3
	baz=329						
C21K	Knifeblade Rid	81.05	11	P	P	14 02 00.1	+0.4
	baz=332						
C23K	Itkillik River	81.09	9	IAmb	IAmb	14 02 03.3	
	comp=Z,86nm,1.4s						
C23K	Itkillik River	81.09	9	P	P	14 02 00.3	+0.4
	baz=336						
D20K	Etivluk River	81.12	12	P	P	14 02 00.1	-0.1
	baz=331						
E18K	Tukpahlearik C	81.46	14	P	P	14 02 01.9	-0.1
	baz=327						
C24K	Franklin Bluff	81.46	9	P	P	14 02 02.2	+0.4
	baz=338						
E17K	Hotham Inlet	81.48	14	P	P	14 02 01.7	-0.3
	baz=326						
E20K	Nigu River	81.60	12	P	P	14 02 03.1	+0.3
	baz=331						
D22K	Ayikyak River	81.64	10	P	P	14 02 03.1	+0.1
	baz=334						
F14K	Arctic Creek	81.72	17	P	P	14 02 03.8	+0.4
	baz=322						
C26K	Camden Bay	81.74	7	P	P	14 02 03.6	+0.2
	baz=341						
E21K	Killik River	81.83	11	P	P	14 02 03.5	-0.4
	baz=333						
D23K	Nanushuk River	81.88	10	P	P	14 02 04.2	+0.1
	baz=336						
F15K	North Star Dit	81.95	16	IAmb	IAmb	14 02 07.4	
	comp=Z,36nm,1.2s						
F15K	North Star Dit	81.95	16	P	P	14 02 04.7	+0.1
	baz=324						
KNRA	Kununurra	81.96	112	IAmb	IAmb	14 02 22.4	
	comp=Z,16nm,0.9s						
D24K	Happy Valley	81.97	9	P	P	14 02 05.0	+0.3
	baz=337						
E19K	Redstone River	82.11	13	P	P	14 02 05.4	0.0
	baz=330						
D25K	Kavik River	82.13	8	P	P	14 02 06.0	+0.5
	baz=340						
F17K	Baldwin Pennin	82.14	14	P	P	14 02 05.9	+0.4
	baz=327						
TOLK	Toolik Lake Re	82.34	9	IAmb	IAmb	14 03 45.7	
	comp=Z,37nm,0.6s						
TOLK	Toolik Lake Re	82.34	9	P	P	14 02 06.7	0.0
	baz=337						
E22K	Anaktuvuk Pass	82.46	10	P	P	14 02 07.2	-0.1
	baz=335						
F19K	Shaleruckik Mo	82.54	13	P	P	14 02 07.6	0.0
	baz=330						
G15K	Niukluk	82.68	16	P	P	14 02 08.9	+0.5
	baz=324						
ANM	Nome	82.69	17	P	P	14 02 08.9	+0.5
	baz=323						
F20K	Avaraart Lake	82.75	12	P	P	14 02 08.2	-0.4
	baz=332						
G16K	Koyuk River	82.76	15	P	P	14 02 09.2	+0.4
	baz=326						
D27M	Malcolm River	82.81	6	P	P	14 02 09.1	0.0
	baz=344						
E23K	Chandalar	82.87	10	P	P	14 02 09.7	+0.2
	baz=337						
D28M	Stokes Point	82.92	5	P	P	14 02 09.8	+0.2
	baz=346						
F21K	Alatna River	83.00	11	P	P	14 02 10.3	+0.2
	baz=333						
E24K	Your Creek	83.02	9	P	P	14 02 10.4	+0.2
	baz=338						
G17K	Kiwalik Mounta	83.06	15	P	P	14 02 10.2	-0.2
	baz=327						
G18K	Tagagawik	83.17	14	IAmb	IAmb	14 02 18.3	
	comp=Z,42nm,1.5s						
G18K	Tagagawik	83.17	14	P	P	14 02 10.9	0.0
	baz=329						
G19K	Purcell Mounta	83.28	13	P	P	14 02 11.6	+0.1
	baz=330						
E25K	Arctic Village	83.37	8	P	P	14 02 12.0	+0.1
	baz=340						
H16K	Elim	83.42	16	P	P	14 02 12.4	+0.2
	baz=326						
SHEM	Shemya Is, Ala	83.47	33	LR	LR	14 43 05.0	
	comp=Z,454nm,18.5s,baz=299,slow=38						
COLD	Coldfoot	83.54	10	P	P	14 02 12.9	+0.1
	baz=336						
C36M	Paulatuk	83.56	0	IAmb	IAmb	14 02 14.0	
	comp=Z,26nm,0.8s						
C36M	Paulatuk	83.56	0	P	P	14 02 12.1	-0.7
	baz=360,SNR=23						
E28M	Babbage River	83.56	6	P	P	14 02 13.1	+0.1
	baz=346						
G22K	Bettles	83.61	11	P	P	14 02 12.9	-0.2
	baz=335						
F24K	Squaw Lake	83.62	9	P	P	14 02 13.2	-0.1
	baz=338						
G21K	Allakaket	83.63	12	P	P	14 02 13.0	-0.3
	baz=333						
H17K	Granite Mounta	83.71	15	IAmb	IAmb	14 02 15.4	
	comp=Z,12nm,0.7s						
H17K	Granite Mounta	83.71	15	P	P	14 02 13.6	-0.1
	baz=328						
E27K	Coleen River	83.76	7	P	P	14 02 14.2	+0.2
	baz=344						
F25K	Christian Rive	83.86	8	P	P	14 02 14.8	+0.3
	baz=340						
H18K	Honhosa River	83.87	14	IAmb	IAmb	14 02 22.3	
	comp=Z,35nm,1.4s						
H18K	Honhosa River	83.87	14	P	P	14 02 14.5	0.0
	baz=329						
E29M	Blow River	83.91	5	IAmb	IAmb	14 04 12.2	
	comp=Z,27nm,0.8s						
E29M	Blow River	83.91	5	P	P	14 02 14.7	0.0
	baz=347						
H19K	Roundabout Mou	83.94	13	P	P	14 02 14.4	-0.5
	baz=331						
F26K	Sheenjek River	83.95	8	P	P	14 02 14.6	-0.4
	baz=342						
G23K	Bananza Creek	84.05	10	P	P	14 02 15.7	+0.2
	baz=336						
BMAR	Burnt Mountain	84.15	8	P	P	14 02 16.7	+0.7
H20K	Anotleneega Mo	84.29	13	P	P	14 02 16.8	+0.2
	baz=332,SNR=10						
INK	Inuvik	84.30	4	P	P	14 02 16.4	-0.3
	comp=Z,5.6nm,0.5s,baz=5.2,slow=6.6,SNR=30						
INK				LR	LR	14 42 22.9	
	comp=Z,224nm,20.8s,baz=15,slow=38						
	comp=Z,5.6nm,0.5s						
INK	Inuvik	84.30	4	IAmb	IAmb	14 02 24.5	
	comp=Z,24nm,1.1s						
INK	Inuvik	84.30	4	P	P	14 02 17.0	+0.4
	baz=351,SNR=15						
I17K	Unalakleet	84.42	16	P	P	14 02 17.2	-0.1
	baz=327						
G24K	Hadweenzic Riv	84.44	9	P	P	14 02 17.2	-0.2
	baz=339						
F28M	Old Crow	84.49	6	IAmb	IAmb	14 04 08.9	
	comp=Z,32nm,0.9s						
F28M	Old Crow	84.49	6	P	P	14 02 17.9	+0.2
	baz=345,SNR=10						
H21K	Melozitna Rive	84.53	12	P	P	14 02 18.1	+0.2
	baz=334						
GCSA	Galena City Sc	84.54	14	P	P	14 02 18.1	+0.2
	baz=331,SNR=7.0						
H22K	Ishtalitna Cre	84.57	11	P	P	14 02 18.5	+0.3
	baz=335						
G25K	Bearman Lake	84.58	9	P	P	14 02 18.2	+0.2
	baz=340						
J14K	Nanvaranak Lak	84.64	17	P	P	14 02 18.6	+0.1
	baz=325						
G26K	Porcupine Rive	84.70	8	P	P	14 02 18.7	0.0
	baz=342						
F30M	Barrier River	84.84	5	IAmb	IAmb	14 02 21.4	
	comp=Z,29nm,1.1s						
F30M	Barrier River	84.84	5	P	P	14 02 19.4	0.0
	baz=349						
SCHQ	Schefferville	84.86	331	P	P	14 02 19.2	-0.6
	comp=Z,3.5nm,0.6s,baz=31,slow=2.9,SNR=13						
SCHQ				LR	LR	14 42 40.7	
	comp=Z,169nm,19.9s,baz=42,slow=37						
	comp=Z,3.5nm,0.6s						
J16K	Anvik River	84.95	16	IAmb	IAmb	14 02 22.2	
	comp=Z,18nm,0.8s						
J16K	Anvik River	84.95	16	P	P	14 02 19.9	-0.2
	baz=327						
I20K	Naaghedeneel	84.99	13	P	P	14 02 20.6	+0.4
	baz=333						
K13K	Kusilvak Mount	85.01	18	P	P	14 02 20.4	+0.1
	baz=324						
G27K	Doyon Strip	85.09	7	IAmb	IAmb	14 02 29.4	
	comp=Z,29nm,1.2s						
G27K	Doyon Strip	85.09	7	P	P	14 02 21.1	+0.4
	baz=344						
I21K	Tanana	85.11	12	P	P	14 02 20.7	-0.1
	baz=335,SNR=6.6						
F31M	Tsiigehtchic	85.15	4	P	P	14 02 20.8	-0.2
	baz=351,SNR=35						
H24K	Noodor Dome	85.19	10	P	P	14 02 21.2	-0.1
	baz=338,SNR=5.5						
J17K	VABM Dome	85.22	15	IAmb	IAmb	14 02 23.9	
	comp=Z,40nm,1.5s						
J17K	VABM Dome	85.22	15	P	P	14 02 21.4	+0.1
	baz=329						
G29M	Pine Creek	85.35	6	IAmb	IAmb	14 02 23.9	
	comp=Z,56nm,1.5s						
G29M	Pine Creek	85.35	6	P	P	14 02 22.0	-0.1
	baz=347,SNR=8.7						
J19K	Poorman	85.47	14	P	P	14 02 22.8	+0.2
	baz=332,SNR=9.0						
K15K	Wolf Creek Mou	85.55	17	P	P	14 02 23.9	+0.9
	baz=327						
I23K	Minto, Yukon-K	85.59	11	P	P	14 02 23.6	+0.4
	baz=337,SNR=7.7						
J20K	Nowinta River	85.61	13	P	P	14 02 23.6	+0.3
	baz=333						
G31M	Satah River	85.63	4	IAmb	IAmb	14 02 31.0	
	comp=Z,33nm,0.9s						
G31M	Satah River	85.63	4	P	P	14 02 23.3	0.0
	baz=350,SNR=17						
H27K	Steamboat Moun	85.66	7	P	P	14 02 23.9	+0.3
	baz=344						
J18K	Innoko River	85.70	14	IAmb	IAmb	14 02 26.4	
	comp=Z,64nm,1.8s						
J18K	Innoko River	85.70	14	P	P	14 02 24.2	+0.4
	baz=331						
PRP	Porcupine Dome	85.83	9	P	P	14 02 24.7	+0.1
	baz=340,SNR=7.9						
JAY	Jayapura	85.89	95	LR	LR	14 47 15.4	
	comp=Z,109nm,18.7s,baz=338,slow=40						
POKR	Poker Plat Res	85.93	10	P	P	14 02 25.4	+0.4
	baz=339,SNR=5.3						
K17K	Iditarod	85.99	15	P	P	14 02 24.8	-0.4
	baz=329						
EPYK	Eagle Plains	85.99	5	IAmb	IAmb	14 02 27.4	
	comp=Z,46nm,1.2s						
EPYK	Eagle Plains	85.99	5	P	P	14 02 24.9	-0.4
	baz=348,SNR=11						
H29M	Whitestone	86.00	6	IAmb	IAmb	14 02 33.7	
	comp=Z,33nm,1.0s						
H29M	Whitestone	86.00	6	P	P	14 02 25.0	-0.3
	baz=347						
L14K	Kuka Creek	86.04	18	IAmb	IAmb	14 02 33.9	
	comp=Z,35nm,1.1s						
L14K	Kuka Creek	86.04	18	P	P	14 02 25.4	0.0
	baz=326						
L15K	Ungalak Mounta	86.08	17	P	P	14 02 25.6	0.0
	baz=327						
BLKN	Baker Lake	86.12	348	IAmb	IAmb	14 02 36.1	
	comp=Z,28nm,1.5s						
NEA2	Nenana	86.16	11	P	P	14 02 25.8	-0.2
	baz=337,SNR=5.9						
CHUM	Lake Minchumin	86.23	12	P	P	14 02 26.2	-0.2
	baz=335						
I27K	Kandik River	86.25	7	P	P	14 02 26.1	-0.5
	baz=344						
BPAW	Bear Paw Mtn.	86.28	12	P	P	14 02 26.2	-0.4
	baz=336,SNR=14						
ILAR	Eielson Array	86.34	10	P	P	14 02 25.9	-1.1
	comp=Z,3.3nm,0.6s,baz=322,slow=4.1,SNR=52						
ILAR				LR	LR	14 49 05.9	
	comp=Z,271nm,18.5s,baz=308,slow=41						
	comp=Z,3.3nm,0.6s						
K20K	Telida	86.35	13	IAmb	IAmb	14 05 40.1	
	comp=Z,24nm,0.7s						
K20K	Telida	86.35	13	P	P	14 02 27.1	+0.1
	baz=333,SNR=9.4						
L17K	Donlin	86.49	16	P	P	14 02 26.5	-1.2
	baz=330						
L16K	Owhat River	86.56	16	P	P	14 02 27.8	-0.3
	baz=328						
I28M	Miner Creek	86.59	7	P	P	14 02 27.8	-0.5
	baz=345						
M13K	Dall Lake	86.62	19	P	P	14 02 27.4	-0.9
	baz=325						
HDA	Harding Lake	86.67	10	P	P	14 02 27.6	-0.9
	baz=339						
J25K	Salcha River,	86.71	9	P	P	14 02 28.0	-0.8
	baz=341						
M14K	Bethel	86.72	18	P	P	14 02 28.6	-0.3
	baz=326						
H31M	Peel River	86.73	5	P	P	14 02 28.4	-0.5
	baz=350						
L18K	Granite Mounta	86.79	15	P	P	14 02 28.6	-0.5
	baz=331						
I29M	Ogilvie Camp,	86.84	6	P	P	14 02 28.7	-0.7
	baz=347						
MCK	McKinley	86.98	11	P	P	14 02 29.4	-0.7
	baz=338,SNR=12						
SPIA	Saint Paul Isl	86.99	23	P	P	14 02 29.7	-0.5
	baz=320						
TRF	Thorofare Moun	87.00	12	P	P	14 02 29.6	-0.8
	baz=336						
J26L	Joseph Creek	87.07	9	P	P	14 02 30.0	-0.6
	baz=342,SNR=26						
M15K	Kasigluk River	87.11	17	P	P	14 02 30.2	-0.6
	baz=328						
PPLA	Purkeypile	87.15	13	P	P	14 02 30.3	-0.8
	baz=335						
I30M	Mount Dempster	87.15	5	IAmb	IAmb	14 02 38.7	
	comp=Z,24nm,0.8s						
I30M	Mount Dempster	87.15	5	P	P	14 02 30.4	-0.6
	baz=349						
L19K	White Mountain	87.24	14	IAmb	IAmb	14 05 48.2	
	comp=Z,32nm,1.4s						
L19K	White Mountain	87.24	14	P	P	14 02 30.9	-0.5
	baz=332						
M16K	Timber Creek	87.28	16	P	P	14 02 30.5	-1.1
	baz=329						
M17K	Holitna River	87.33	16	P	P	14 02 31.0	-0.8
	baz=330						
K24K	Donnelly Dome	87.42	10	P	P	14 02 31.9	-0.4
	baz=340						
N14K	Kuskokwak Cree	87.49	18	P	P	14 02 32.3	-0.3
	baz=327						
SCRK	Sand Creek	87.51	9	P	P	14 02 32.3	-0.5
	baz=342,SNR=18						
RIDG	Independent Ri	87.62	9	P	P	14 02 32.7	-0.6
	baz=341						
M18K	Stony River	87.63	15	P	P	14 02 32.9	-0.3
	baz=332						
N15K	Kwethluk River	87.72	17	P	P	14 02 33.6	-0.1
	baz=328						
J29N	Klondike Camp	87.74	6	IAmb	IAmb	14 02 42.1	
	comp=Z,32nm,1.0s						
J29N	Klondike Camp	87.74	6	P	P	14 02 33.3	-0.5
	baz=347,SNR=7.6						
J30M	Hart River	87.79	6	IAmb	IAmb	14 02 42.2	
	comp=Z,24nm,0.9s						
J30M	Hart River	87.79	6	P	P	14 02 33.7	-0.5
	baz=349						
N16K	Nishlik Lake	87.80	17	P	P	14 02 33.9	-0.3
	baz=329						
DHY	Denali Highway	87.85	11	P	P	14 02 34.0	-0.5
	baz=339						
M20K	Styx River	87.87	14	P	P	14 02 34.2	-0.4
	baz=334						
WAT1	Susitna Watana	87.88	11	P	P	14 02 34.0	-0.5
	baz=338						
CUT	Chulitna	87.96	12	P	P	14 02 34.5	-0.3
	baz=336						
DAWY	Dawson	87.99	7	P	P	14 02 34.8	-0.2
	baz=346,SNR=17						
SKT	Skwentna	88.11	13	IAmb	IAmb	14 05 40.3	
	comp=Z,23nm,0.7s						
SKT	Skwentna	88.11	13	P	P	14 02 35.2	-0.4
	baz=335						
N17K	Nushagak Hills	88.15	16	P	P	14 02 35.6	-0.1
	baz=330						
O14K	Tigyukauivet M	88.17	18	P	P	14 02 35.8	-0.1
	baz=327						
WAT6	Susitna Watana	88.25	11	P	P	14 02 36.1	-0.4
	baz=339						
PAX	Paxson	88.25	10	P	P	14 02 36.3	-0.1
	baz=341						
N18K	Kilae Creek	88.33	15	P	P	14 02 36.5	-0.2
	baz=332						
K29M	Barlow Dome	88.40	6	IAmb	IAmb	14 02 45.1	
	comp=Z,27nm,0.8s						
K29M	Barlow Dome	88.40	6	P	P	14 02 36.8	-0.2
	baz=348						
L26K	Log Cabin Wild	88.51	9	IAmb	IAmb	14 06 04.7	
	comp=Z,19nm,0.5s						
L26K	Log Cabin Wild	88.51	9	P	P	14 02 37.3	-0.1
	baz=342						
N19K	Bonanza Creek	88.54	15	P	P	14 02 37.4	-0.4
	baz=333						
MENT	Mentasta	88.54	9	IAmb	IAmb	14 06 03.5	
	comp=Z,15nm,0.6s						
M22K	Willow	88.59	12	P	P	14 02 37.6	-0.2
	baz=336						
O15K	Ungalikthiuk R	88.64	18	P	P	14 02 37.9	-0.2
	baz=328						
WB0	Warramunga Arr	88.65	113	IAmb	IAmb	14 02 55.1	
	comp=Z,17nm,1.0s						
L27K	Beaver Creek,	88.68	8	P	P	14 02 38.4	+0.1
	baz=344						
BCAR	Beaver Creek A	88.68	8	P	P	14 02 38.3	0.0
SPCR	Spurr Chakacha	88.68	14	P	P	14 02 37.9	-0.5
	baz=335						
WRA	Warramunga Arr	88.69	113	P	P	14 02 39.1	+0.1
	comp=Z,2.7nm,0.5s,baz=314,slow=4.0,SNR=38						
	comp=Z,2.7nm,0.5s						
WRA	Warramunga Arr	88.69	113	P	P	14 02 38.6	-0.4
WRA	Warramunga Arr	88.69	113	P	P	14 02 38.6	-0.4
WRA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
WRAB	Tennant Creek	88.69	113	P	P	14 02 38.8	-0.2
WRAB				IAmb	IAmb	14 02 55.9	
	comp=Z,15nm,0.8s						
WRAB	Tennant Creek	88.69	113	P	P	14 02 38.8	-0.2
WRAB				pmax	pmax		
	comp=Z,15nm,0.9s						
O16K	Kokwok River B	88.73	17	P	P	14 02 37.9	-0.7
	baz=330						
SUA	Susitna One	88.73	13	P	P	14 02 37.9	-0.8
	baz=336						
MAYO	Mayo, Yukon	88.79	6	P	P	14 02 38.3	-0.5
	baz=349						
WR8	Warramunga Arr	88.83	113	IAmb	IAmb	14 03 01.3	
	comp=Z,10nm,0.9s						
O17K	Koliganek Bris	88.83	16	P	P	14 02 38.4	-0.6
	baz=331						
HARP	HAARP	88.84	10	P	P	14 02 38.3	-0.7
	baz=341						
SML	Sawmill	88.87	12	P	P	14 02 38.6	-0.7
	baz=338						
PMR	Palmer	88.92	12	P	P	14 02 38.9	-0.5
	baz=337						
M24K	Tolsona, Glenn	88.96	11	P	P	14 02 38.9	-0.7
	baz=340						
M23K	Glacier View	88.99	11	P	P	14 02 38.9	-0.8
	baz=339						
SCM	Sheep Creek Mo	89.02	11	P	P	14 02 39.3	-0.7
	baz=339						
L29M	L29M	89.06	7	IAmb	IAmb	14 02 49.0	
	comp=Z,34nm,1.4s						
L29M	L29M	89.06	7	P	P	14 02 39.5	-0.6
	baz=347						
O19K	Port Alsworth	89.12	15	P	P	14 02 40.0	-0.3
	baz=333						
M26K	Nabesna, AK	89.16	9	P	P	14 02 40.3	-0.3
	baz=343						
KNK	Knik Glacier	89.21	12	P	P	14 02 40.7	-0.1
	baz=338						
O18K	Koktuh Hills	89.22	15	P	P	14 02 40.3	-0.6
	baz=332						
P16K	Nushagak River	89.25	17	P	P	14 02 40.6	-0.3
	baz=330						
RC01	Rabbit Creek A	89.28	12	P	P	14 02 41.0	-0.1
	baz=337						
CAPN	Captain Cook N	89.29	13	P	P	14 02 40.8	-0.3
	baz=336						
M27K	Edge Creek, AK	89.35	9	IAmb	IAmb	14 02 50.7	
	comp=Z,53nm,1.6s						
M27K	Edge Creek, AK	89.35	9	P	P	14 02 41.0	-0.6
	baz=344						
BVCY	Beaver Creek	89.42	8	P	P	14 02 41.4	-0.4
	baz=345						
P17K	Kvichak River	89.50	16	P	P	14 02 42.0	-0.1
	baz=331						
KLU	Klutina	89.58	11	P	P	14 02 41.9	-0.7
	baz=340						
O20K	Slope Mountain	89.60	14	P	P	14 02 42.0	-0.7
	baz=334						
P18K	Big Mountain,	89.62	16	P	P	14 02 42.1	-0.7
	baz=332						
M29M	Somme Creek	89.67	7	IAmb	IAmb	14 02 51.6	
	comp=Z,14nm,1.1s						
M29M	Somme Creek	89.67	7	P	P	14 02 42.1	-0.9
	baz=347						
N25K	Chitina, Valde	89.68	10	P	P	14 02 42.2	-0.9
	baz=341						
WRGLY	Wrigley	89.70	0	IAmb	IAmb	14 02 51.6	

	comp=Z,19nm,0.8s						
WRGLY	Wrigley	89.70	0	P	P	14 02 42.1	-0.8
	baz=0.0						
M30M	Minto, Yukon	89.71	6	P	P	14 02 42.1	-1.0
	baz=348						
PWL	Port Wells	89.75	12	P	P	14 02 42.5	-0.8
	baz=338						
O22K	Cooper Landing	89.84	13	P	P	14 02 43.0	-0.7
	baz=337						
P19K	Oil Pt	89.86	15	P	P	14 02 42.8	-1.0
	baz=334						
Q16K	King Salmon	89.90	17	P	P	14 02 42.9	-1.0
	baz=331						
YUK3	Moose Creek	90.09	8	P	P	14 02 43.6	-1.5
	baz=345						
YKAW3	Yellowknife Wh	90.10	356	P	P	14 02 44.7	-0.1
YKAW3				IAmb	IAmb	14 02 53.2	
	comp=Z,18nm,1.1s						
MCARA	McCarthy VSAT	90.13	9	P	P	14 02 43.9	-1.1
	baz=343						
YKA	Yellowknife Ar	90.16	356	P	P	14 02 45.5	+0.4
	comp=Z,3.6nm,0.8s,baz=352,slow=5.1,SNR=45						
YKA				LR	LR	14 49 32.7	
	comp=Z,427nm,18.1s,baz=340,slow=40						
	comp=Z,3.6nm,0.8s						
YKA	Yellowknife Ar	90.16	356	P	P	14 02 44.8	-0.3
YKAW1	Yellowknife Wh	90.17	356	P	P	14 02 45.0	-0.2
YKAW1				IAmb	IAmb	14 02 53.5	
	comp=Z,16nm,1.0s						
ASAR	Alice Springs	90.18	117	P	P	14 02 45.7	-0.2
	comp=Z,1.8nm,0.5s,baz=303,slow=4.6,SNR=101						
ASAR				LR	LR	14 46 31.6	
	comp=Z,90nm,18.1s,baz=281,slow=38						
	comp=Z,1.8nm,0.5s						
AS31	Alice Springs	90.18	117	P	P	14 02 45.8	-0.1
HOM	Homer	90.20	14	P	P	14 02 44.4	-1.0
	baz=335						
SEW	Seward	90.24	13	P	P	14 02 44.4	-1.2
	baz=337						
BMRM	Bremner River	90.28	10	P	P	14 02 44.9	-1.0
	baz=341						
M31M	Drury Creek, Y	90.29	5	IAmb	IAmb	14 02 51.0	
	comp=Z,35nm,1.7s						
M31M	Drury Creek, Y	90.29	5	P	P	14 02 44.9	-1.0
	baz=350						
BRSE	Bradley Lake S	90.31	13	P	P	14 02 44.9	-1.0
	baz=336						
Q19K	Cape Douglas,	90.41	15	P	P	14 02 45.4	-1.0
	baz=334						
EYAK	Cordova Ski Ar	90.50	11	P	P	14 02 45.9	-0.9
	baz=340						
R16K	Pilot Point	90.63	18	P	P	14 02 46.1	-1.3
	baz=330						
YUK8	Steele Glacier	90.65	8	P	P	14 02 46.7	-1.2
	baz=346						
CRQE	Cirque	90.72	10	P	P	14 02 46.4	-1.5
	baz=343						
P23K	Montague Islan	90.73	12	P	P	14 02 46.5	-1.3
	baz=339						
YUK4	Talbot Arm	90.73	7	P	P	14 02 46.5	-1.6
	baz=347						
NIKH	Nikolski High	90.73	26	P	P	14 02 46.9	-1.1
	baz=321						
CTG	Chitna Glacier	90.76	9	P	P	14 02 47.1	-1.1
	baz=344						
N30M	Aishikik Lake	90.78	7	P	P	14 02 47.3	-0.9
	baz=348						
FCC	Fort Churchill	90.79	345	IAmb	IAmb	14 02 59.2	
	comp=Z,24nm,1.5s						
N31M	Braeburn, Yuko	90.88	6	P	P	14 02 47.5	-1.1
	baz=349						
R17L	Mt. Peulik Vol	90.89	17	P	P	14 02 47.6	-1.1
	baz=331						
S12K	Black Hills	90.91	21	P	P	14 02 47.3	-1.4
	baz=326						
UNV	Unalaska Valle	90.92	24	P	P	14 02 47.9	-0.9
	baz=323						
Q20K	Shuyak Island	90.99	15	P	P	14 02 48.0	-1.1
	baz=335						
YUK6	Outpost Mounta	91.15	7	P	P	14 02 49.0	-1.1
	baz=347						
FALS	False Pass	91.17	22	P	P	14 02 49.3	-0.7
	baz=325						
KAIM	Kayak Island	91.30	10	P	P	14 02 49.6	-0.9
	baz=342						
HYT	Haines Junctio	91.36	7	IAmb	IAmb	14 02 59.5	
	comp=Z,25nm,1.0s						
HYT	Haines Junctio	91.36	7	P	P	14 02 49.8	-1.1
	baz=348						
N32M	Quiet Lake	91.43	5	P	P	14 02 50.3	-0.9
	baz=352						
Q23K	Middleton Isla	91.45	12	P	P	14 02 50.1	-1.1
	baz=340						
O30N	Mendenhall	91.56	6	P	P	14 02 50.4	-1.4
	baz=349						
KDAK	Kodiak Island	91.69	15	P	P	14 02 51.5	-0.8
	comp=Z,8.6nm,0.5s,baz=331,slow=3.1,SNR=14						
KDAK				LR	LR	14 50 42.2	
	comp=Z,475nm,18.7s,baz=325,slow=40						
	comp=Z,8.6nm,0.5s						
KDAK	Kodiak Island	91.69	15	P	P	14 02 51.4	-0.9
	baz=334						
SDPT	Sand Point	91.69	20	P	P	14 02 51.7	-0.7
	baz=328						
PINM	Pinnacle	91.75	8	P	P	14 02 51.9	-0.7
	baz=345						
O29M	Mount Kennedy	91.75	8	P	P	14 02 51.8	-1.0
	baz=347						
WHY	Whitehorse	91.78	6	P	P	14 02 51.7	-1.1
	baz=350						
OHAK	Old Harbor	92.03	16	P	P	14 02 53.5	-0.4
	baz=334						
P33M	Teslin, Yukon	92.39	5	P	P	14 02 54.9	-0.8
	baz=352						
SII	Sitkinak Islan	92.40	16	P	P	14 02 55.1	-0.6
	baz=333						
CHNA	Chernabura Isl	92.41	20	P	P	14 02 55.2	-0.5
	baz=328						
CHIR	Chirikof Islan	92.68	18	P	P	14 02 56.3	-0.7
	baz=332						
WTLY	Watson Lake, Y	92.72	3	P	P	14 02 56.2	-0.9
	baz=355						
PLBC	Pleasant Camp	92.82	7	P	P	14 02 56.8	-0.8
	baz=349						
SKAG	Skagway	92.92	6	P	P	14 02 57.2	-0.8
	baz=350						
P32M	Atlin	92.93	5	P	P	14 02 57.3	-0.9
	baz=351						
R33M	Jennings River	93.32	4	P	P	14 02 59.0	-1.0
	baz=353						
Q32M	Nakina River	93.67	5	P	P	14 03 01.1	-0.6
	baz=352						
TOAD	Toad River Com	94.08	1	P	P	14 03 02.7	-0.7
	baz=358						
R32K	Eaglecrest	94.17	6	P	P	14 03 02.8	-0.9
	baz=350						
S31K	Pelican	94.31	7	P	P	14 03 03.3	-1.1
	baz=349						
PMG	Port Moresby	94.73	98	LR	LR	14 51 35.1	
	comp=Z,40nm,20.6s,baz=348,slow=39						
S34M	Telegraph Cree	94.79	4	P	P	14 03 05.4	-1.2
	baz=353						
S32K	Killisnoo	94.96	6	P	P	14 03 06.2	-1.2
	baz=350						
SIT	Sitka	95.29	7	P	P	14 03 07.4	-1.5
	baz=350						
T35M	Bob Quinn	95.77	4	P	P	14 03 09.6	-1.6
	baz=354						
WRAK	Wrangell Islan	96.19	5	P	P	14 03 11.5	-1.5
	baz=352						
U33K	Whale Pass	96.43	5	P	P	14 03 12.1	-2.0
	baz=351						
U35K	Hyder	96.84	4	P	P	14 03 14.5	-1.5
	baz=354						
CRAG	Craig	97.06	6	P	P	14 03 15.7	-1.3
	baz=351						
V35K	Ketchikan	97.33	5	P	P	14 03 17.0	-1.2
	baz=353						
SADO	Sadowa	97.63	330	LR	LR	14 51 16.8	
	comp=Z,233nm,18.0s,baz=74,slow=38						
CTA	Charters Tower	98.67	108	LR	LR	14 52 37.4	
	comp=Z,229nm,19.0s,baz=256,slow=38						
ULM	Lac du Bonnet	98.95	343	LR	LR	14 51 25.2	
	comp=Z,281nm,20.6s,baz=14,slow=37						
EDM	Edmonton	99.27	354	IAmb	IAmb	14 03 35.1	
	comp=Z,27nm,1.4s						
NVL	N'lazarevskaya	102.86	194	eP	Pdif	14 03 43.8	+1.6
NVL				e		14 07 58.8	
NVL				ePPP	PPP	14 10 11.6	
NVL				eS	SKSac	14 14 23.6	+2.7
NVL				eSS	SS	14 22 40.4	+3.7
NVL				eSSS	SSS	14 26 34.7	
NVL				pmax	pmax		
	comp=Z,13nm,0.9s						
NVL				MLR	MLR		
	comp=Z,594nm,23.0s						
NVAR	Mina Array Bea	114.36	356	PKP	PKPdf	14 08 26.2	+0.7
	comp=Z,0.4nm,0.8s,baz=355,slow=3.3,SNR=4.2						
QSPA	South Pole Qui	117.22	180	PKP	PKiKP	14 08 30.0	+0.2
	comp=Z,0.7nm,0.4s,baz=232,slow=4.4,SNR=22						
TXAR	Lajitas Array	120.53	340	PKP	PKiKP	14 08 38.0	+0.5
	comp=Z,0.5nm,0.7s,baz=42,slow=3.9,SNR=4.8						
CPUP	Villa Florida	121.72	255	PKP	PKiKP	14 08 40.0	+0.3
	comp=Z,0.8nm,0.6s,baz=96,slow=7.3,SNR=3.2						
CPUP	Villa Florida	121.72	255	PKIKP	PKiKP	14 08 40.0	+0.3
LPAZ	La Paz	127.90	270	PKP	PKiKP	14 08 53.2	+0.2
	comp=Z,0.7nm,0.5s,baz=40,slow=3.8,SNR=4.4						

OMAN 30 13:53:32.6±1.4, 27°.32N×56°.81E, h10^{km}, ml3.8/5, Error ellipse: s-maj=10.6km s-min=9.0km az=175.0

TEH 30 13:53:33.2, 27°.55N×56°.70E, h8^{km}±28^{km}

ISC 30 13:53:32.1±1.3, 27°.42N±0°.04×56°.77E±0°.05, h17^{km}±10^{km}, n32, σ1^{s}29/48, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBND	Bandar-abas	0.21	279	Pg	Pg	13 53 37.0	-0.1
GENO	Geno	0.54	268	Pg	Pb	13 53 43.0	-0.2
KHNJ	Kahnooj	0.98	57	Pg	Pn	13 53 51.9	+0.8
SHME	Shamm	1.48	203	P	Pb	13 53 58.9	-0.2
	SNR=14						
SHME				S	Sb	13 54 17.8	+0.2
BANOM	Banah	1.55	196	P	Pn	13 53 59.4	+0.5
BANOM				P	Pn	13 53 59.5	+0.5
BANOM				S	Sb	13 54 20.4	+0.8
BANOM				S	Sb	13 54 20.5	+0.8
MASF	Masafi	2.11	195	P	Pb	13 54 09.9	-0.1
MASF				S	Sn	13 54 30.2	-2.3
MDH	Madha	2.15	192	P	Pn	13 54 07.3	0.0
MDH				S	Sn	13 54 32.2	-1.3
NGRK	Negar Kerman	2.22	359	Pn	Pb	13 54 10.7	-1.3
KBAM	BAM	2.26	40	Pn	Pb	13 54 12.5	0.0
UOSS	Minazif	2.52	192	P	Pb	13 54 15.2	-1.7
UOSS				S	Sn	13 54 43.2	+0.7
UOSS	Minazif	2.52	192	Pn	Pb	13 54 18.1	+1.3
NAZ	Nazwa, Dubai	2.62	203	P	Pn	13 54 15.1	+1.4
NAZ				S	Sn	13 54 48.0	+3.0
HATD	Hatta, Dubai	2.65	193	P	Pn	13 54 12.6	-1.4
HATD				S	Sn	13 54 46.6	+0.9
ASHO	Ashiyiah	2.80	193	P	Pn	13 54 16.3	+0.2
FAQ	Al Faqa, Dubai	2.87	202	P	Pn	13 54 17.9	+0.8
	SNR=15						
FAQ				S	Sn	13 54 51.9	+0.8
ASUD	Al Ashush, Dub	3.07	205	P	Pn	13 54 21.2	+1.3
AJN	Ajban	3.27	210	P	Pn	13 54 23.6	+1.1
	SNR=5.6						
AJN				S	Sn	13 54 59.4	-1.6
ALNE	Al Ain	3.47	196	P	Pn	13 54 25.5	+0.1
ALNE				S	Sn	13 55 07.1	+1.0
ZRDN	Zarand Kerman	3.54	357	Pn	Pn	13 54 29.3	+2.7
HOQ	Hoqain	3.85	173	P	Pn	13 54 29.5	-1.1
HOQ				S	Sn	13 55 12.3	-3.1
BIDO	Bidbid	4.07	162	P	Pn	13 54 33.4	-0.2
BIDO				S	Sn	13 55 19.1	-1.7
JRN	Qarnain Island	4.30	236	P	Pn	13 54 36.3	-0.4
JRN				S	Sn	13 55 25.2	-1.4
IMEH	Mehriz	4.38	335	Pn	Pn	13 54 40.2	+2.0
MZWR	Madinat Zayed	4.48	216	P	Pn	13 54 40.4	+1.2
MZWR				S	Sn	13 55 30.1	-0.9
BSY	Bisya	4.67	175	P	Pn	13 54 44.0	+2.2
JMDO	Jabal Madar	5.17	166	P	Pn	13 54 49.1	+0.4
WBK	Wadi Bani Khal	5.18	157	P	Pn	13 54 49.5	+0.5
MZR	Muzera	5.31	215	P	Pn	13 54 51.2	+0.5
SHMA	Al-Shehemyia	5.43	255	P	Pn	13 54 51.8	-0.4
TRNA	Turayna	5.67	243	P	Pn	13 54 55.1	-0.5
JLN	Jalan Bani Buh	5.76	155	P	Pn	13 54 57.4	+0.5
SMRA	Abu-Samra	5.97	245	P	Pn	13 54 59.9	+0.1

IDC 30 13:54:28.3±0.8, 27°.31N×56°.63E, h0^{km}, mb4.3/21, mbtmp4.3/23, ML3.7/1, Error ellipse: s-maj=19.5km s-min=16.7km az=15.0

NEIC 30 13:54:30.6±1.0, 27°.39N±0°.07×56°.64E±0°.09, h10^{km}±1^{km}, mb4.7/47, Error ellipse: s-maj=14.5km s-min=10.7km az=106.0

TEH 30 13:54:32.8, 27°.56N×56°.73E, h8^{km}±35^{km}

DSN 30 13:54:32.7±1.7, 27°.52N×56°.43E, h15^{km}, ML4.2/6, Error ellipse: s-maj=64.5km s-min=13.1km az=94.0

THR 30 13:54:39.7±0.0, 27°.46N×56°.60E, h10^{km}±12^{km}, ML4.3

ISC 30 13:54:30.2±0.4, 27°.38N±0°.03×56°.68E±0°.03, h10^{km}, n119, σ1^{s}33/122, mb4.5/51, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBND	Bandar-abas	0.14	300	Pg	Pg	13 54 37.2	+3.8
GENO	Geno	0.45	273	Pg	Pn	13 54 42.8	-0.1
GENO				Sg	Sb	13 54 51.4	+4.3
BNDS	Bandar-Abbas	0.45	273	IAML		13 54 51.6	
	comp=Z,15µm,1.0s						
KHNJ	Kahnooj	1.07	58	Pg	Pg	13 54 51.1	+0.2
SHME	Shamm	1.41	200	P	Pg	13 54 57.6	+0.4
SHME				S	Sg	13 55 18.2	+2.7
BANOM	Banah	1.49	193	P	Pg	13 54 59.2	+0.4
BANOM				S	Sg	13 55 21.3	+3.2
MSFE	Esma-Masafi	2.06	193	P	Pb	13 55 09.2	+1.4
MSFE				S	Sg	13 55 37.5	+1.0
MDH	Madha	2.10	189	P	Pb	13 55 09.8	+1.4
NGRK	Negar Kerman	2.26	1	Pn	Pb	13 55 10.4	-0.9
KBAM	BAM	2.35	41	Pn	Pb	13 55 12.3	-0.4
UOSS	Minazif	2.46	190	Pn	Pn	13 55 10.8	+0.4
UOSS	Minazif	2.46	190	Pn	Pg	13 55 17.6	+0.3
NAZ	Nazwa, Dubai	2.55	201	P	Pb	13 55 14.7	-1.3
KRBR	Kerman	2.59	2	ePn	Pg	13 55 21.2	+1.2
KRBR				IAML		13 56 03.2	
	comp=Z,2µm,1.0s						
KHGB	Koh Gabri	2.99	357	Pn	Pn	13 55 20.6	+2.7
LMD1	Lamerd	3.12	270	IAML		13 56 47.4	
	comp=Z,2µm,1.0s						
GHIR	Ghir-Karzin	3.39	286	IAML		13 57 12.0	
	comp=Z,100nm,1.0s						
ZRDN	Zarand Kerman	3.58	358	Pn	Pn	13 55 27.9	+2.0
CHBR	Chabahar	3.84	117	ePn	Pg	13 55 42.3	-1.6
CHBR				IAML		13 56 48.8	
	comp=Z,160nm,1.0s						
ZHSF	Zahedan	4.24	57	ePn	Pb	13 55 46.0	+1.1
ZHSF				IAML		13 56 37.1	
	comp=Z,150nm,1.0s						
IMEH	Mehriz	4.38	336	Pn	Pn	13 55 40.1	+3.0
BSRN	Basiran	5.04	24	ePn	Pb	13 55 58.1	-0.5
BSRN				IAML		13 57 30.2	
	comp=Z,200nm,1.0s						
SRVN	Saravan	5.09	88	Pn	Pn	13 55 51.2	+4.5
HRA	Herat	8.46	33	Pn	Pn	13 56 33.2	+0.2
RAYN	Ar Rayn	10.80	252	Pn	Pn	13 57 04.6	-0.4
NIL	Nilore	15.59	62	Pn	Pn	13 58 10.4	+0.4
NIL				IAmb	IAmb	13 58 22.5	
	comp=Z,23nm,0.9s						
MANEM	Manem	16.20	48	P	P	13 58 21.8	+0.4
MANEM				IAmb	IAmb	13 58 36.8	
	comp=Z,34nm,0.7s						
GURO	Guroymak-BITLI	16.56	316		P	13 58 25.7	+0.5
GURO				IAmb	IAmb	13 58 29.1	
	comp=Z,50nm,1.1s						
DRK	Karamyk	17.43	42	P	P	13 58 35.9	+0.8
DRK				IAmb	IAmb	13 58 41.7	
	comp=Z,39nm,1.2s						
ASF	Jabal al Asfar	17.82	290	P	Pn	13 58 37.1	-1.3
	comp=Z,12nm,0.6s,baz=262,slow=23,SNR=1.1						
ASF				S	Sn	14 01 49.6	-7.5
	comp=Z,5.6nm,0.8s,baz=254,slow=20,SNR=1.6						
KOPT	Kop Dagi	18.41	317	P	P	13 58 46.1	+0.3
KK31	Karatay Array	19.29	32	P	P	13 58 55.5	+0.3
KKAR	Karatay Array	19.29	32	P	P	13 58 55.4	+0.2
KBZ	Khabaz	19.75	329	P	Pn	13 59 02.0	+0.5
	comp=Z,0.2nm,0.3s,baz=144,slow=8.7,SNR=3.7						
	comp=Z,8.0nm,0.8s						
KVAR	Kislovodsk Arr	20.02	329	P	Pn	13 59 04.8	-0.2
	comp=Z,10nm,0.8s,baz=267,slow=23,SNR=3.4						
	comp=Z,10nm,0.8s						
KIV	Kislovodsk	20.02	329		Pn	13 59 05.3	+0.3
KIV				IAmb	IAmb	13 59 16.4	
	comp=Z,40nm,0.6s						
BNN	Bunyan	20.81	309		P	13 59 12.5	+0.6
BNN				IAmb	IAmb	13 59 28.3	
	comp=Z,26nm,1.0s						
BOOM	Boomskoye usch	21.76	41	P	P	13 59 22.6	+0.5
BOOM				IAmb	IAmb	13 59 40.4	
	comp=Z,20nm,1.0s						
AB31	Akbulak array	21.99	6	P	P	13 59 24.4	+0.2
AB31				IAmb	IAmb	13 59 34.2	
	comp=Z,19nm,0.8s						
ABKAR	Akbulak array	21.99	6	P	P	13 59 24.4	+0.1
TARG	Taragay, Kyrgy	22.45	45	P	P	13 59 29.4	-0.4
BR131	Keskin Array S	22.73	309		P	13 59 33.1	+0.5
BR131				IAmb	IAmb	13 59 52.1	
	comp=Z,23nm,1.1s						
BRTR	Keskin Array B	22.73	309	P	P	13 59 33.5	+1.0
	comp=Z,5.8nm,0.7s,baz=132,slow=12,SNR=5.4						
	comp=Z,5.8nm,0.7s						
BRTR	Keskin Array B	22.73	309		P	13 59 32.7	+0.2
BVAR	Borovoye Array	27.58	18	P	P	14 00 17.9	+0.6
	comp=Z,3.9nm,0.8s,baz=201,slow=7.9,SNR=2.8						
	comp=Z,3.9nm,0.8s						
MKAR	Makanchi Array	27.96	39	P	P	14 00 21.1	+0.3
	comp=Z,2.0nm,0.8s,baz=216,slow=9.0,SNR=3.2						
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	27.96	39	P	P	14 00 20.8	0.0
ITM	Ithomi	30.82	297	P	P	14 00 46.4	+0.1
AKASG	Malin Array Be	31.26	326	P	P	14 00 49.3	-0.7
	comp=Z,2.5nm,0.4s,baz=132,slow=8.3,SNR=11						
	comp=Z,2.5nm,0.4s						
AKASG	Malin Array Be	31.26	326	P	P	14 00 49.3	-0.7
AKBB	Malin Array Si	31.26	326	P	P	14 00 49.0	-0.9
KIEV	Kiev	31.26	326		P	14 00 49.0	-1.0
BUR08	Bucovina Ar. S	31.81	318	P	P	14 00 55.0	0.0
BUR08				IAmb	IAmb	14 00 58.7	
	comp=Z,10nm,1.4s						
ZAA0	Zalesovo Array	33.65	30	P	P	14 01 10.0	-0.9
ZAA0				IAmb	IAmb	14 01 12.1	
	comp=Z,9.1nm,1.1s						
ZALV	Zalesovo Beam	33.65	30	P	P	14 01 10.2	-0.7
	comp=Z,4.2nm,0.3s,baz=238,slow=9.2,SNR=6.1						
	comp=Z,4.2nm,0.3s						
KIBK	Kibwezi	34.57	214	P	P	14 01 19.3	-0.1
KIBK				IAmb	IAmb	14 01 27.8	
	comp=Z,5.7nm,0.8s						
OJC	Ojcow	36.15	319	P	P	14 01 32.3	-0.2
RONA	Rosalia, Austr	37.36	314	i P	P	14 01 42.6	-0.4
	comp=Z,3.8nm,0.6s						
GTA	Gaotai	37.63	60	eP	P	14 01 46.0	+0.5
GTA				pP	sP	14 01 51.8	+2.0
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CONA	Conrad Observa	37.71	314	eP	P	14 01 47.4	+1.5
	comp=Z,3.1nm,0.7s						
ARSA	Arzberg	37.72	313	i P	P	14 01 45.9	-0.1
	comp=Z,3.5nm,0.9s						
NRCA	Norcia	38.38	305	P	P	14 01 51.9	+0.2
NRCA				IAmb	IAmb	14 02 34.1	
	comp=Z,17nm,1.0s						
MOA	Molln	38.71	313	i P	P	14 01 54.9	+0.6
	comp=Z,8.7nm,0.6s,SNR=12						
BIOA	Bad Ischl, Aus	39.07	313	eP	P	14 01 56.3	-1.1
	comp=Z,5.4nm,0.7s						
KBA	Koelnbreinsper	39.10	312	i P	P	14 01 57.7	-0.1
	comp=Z,7.8nm,0.9s,SNR=4.5						
GEC2	GERESS Array S	39.36	315	P	P	14 01 59.0	-0.8
GERES	GERESS Array B	39.36	315	P	P	14 01 59.4	-0.4
	comp=Z,2.4nm,0.9s,baz=108,slow=8.6,SNR=4.8						
GERES				PcP	PcP	14 04 08.7	+0.6
	comp=Z,0.6nm,0.7s,baz=95,slow=4.4,SNR=2.1						
	comp=Z,2.4nm,0.9s						
KHC	Kasperske Hory	39.52	315		P	14 02 00.5	-0.6
KHC				IAmb	IAmb	14 02 01.6	
	comp=Z,9.9nm,0.9s						
KHC	Kasperske Hory	39.52	315	eP	P	14 02 00.0	-1.1
ABTA	Abfaltersbach	39.58	311	i P	P	14 02 01.2	-0.5
	comp=Z,4.9nm,0.8s						
LESA	Schwarzleotal	39.63	312	eP	P	14 02 00.7	-1.4
	comp=Z,10nm,1.1s						
FINES	FINESS Array B	39.74	338	P	P	14 02 02.6	-0.1
	comp=Z,5.1nm,0.5s,baz=136,slow=8.8,SNR=12						
	comp=Z,5.1nm,0.5s						
FINES	FINESS Array B	39.74	338	P	P	14 02 02.5	-0.2
CASP	Castiglione de	40.02	305	P	P	14 02 05.0	-0.3
CASP				IAmb	IAmb	14 02 26.0	
	comp=Z,45nm,1.4s						
WTTA	Wattenberg	40.28	312	i P	P	14 02 06.6	-1.0
	comp=Z,6.0nm,0.5s						
WATA	Walderalm	40.34	312	i P	P	14 02 06.7	-1.3
	comp=Z,12nm,1.3s						
SQTA	Sankt Quirin	40.55	312	i P	P	14 02 08.9	-0.9
	comp=Z,12nm,0.5s,SNR=5.2						
FETA	Feichten	40.83	311	i P	P	14 02 11.5	-0.7
	comp=Z,11nm,0.8s						
RETA	Reutte	40.91	312	i P	P	14 02 11.6	-1.1
	comp=Z,4.9nm,0.6s,SNR=5.1						
FUORN	Ofenpass-Fuorn	41.06	311	P	P	14 02 13.5	-0.7
FUORN				IAmb	IAmb	14 02 29.3	
	comp=Z,5.9nm,0.8s						
DAVA	Damuels	41.45	311	eP	P	14 02 16.2	-1.1
	comp=Z,36nm,1.0s						
TUE	Stuetta	41.66	310		P	14 02 18.0	-1.0
SENIN	Lac Senin/Sane	43.03	310	P	P	14 02 29.6	-0.7
BNI	Bardonecchia	43.29	308	P	P	14 02 31.5	-0.7
ECH	Echery	43.43	312	P	P	14 02 32.4	-0.8
ECH				IAmb	IAmb	14 02 33.0	
	comp=Z,7.5nm,0.9s						
SONM	Songino Array	43.50	48	P	P	14 02 34.5	+0.6
	comp=Z,3.9nm,1.1s,baz=259,slow=9.3,SNR=5.2						
	comp=Z,3.9nm,1.1s						
SONM	Songino Array	43.50	48	P	P	14 02 33.5	-0.4
HFS	Hagfors	43.81	330	P	P	14 02 36.0	0.0
	comp=Z,3.3nm,0.4s,baz=133,slow=8.6,SNR=8.9						
	comp=Z,3.3nm,0.4s						
NB201	NORSAR Array S	45.29	331	P	P	14 02 47.6	-0.3
NB2	NORSAR Subarra	45.32	331	P	P	14 02 46.9	-1.2
	comp=Z,10nm,1.0s,baz=117,slow=8.6						
NOA	NORSAR Array B	45.32	331	P	P	14 02 47.1	-1.0
	comp=Z,3.8nm,0.8s,baz=116,slow=8.0,SNR=7.5						
	comp=Z,3.8nm,0.8s						
ARCES	ARCESS Array B	45.91	345	P	P	14 02 53.0	+0.3
	comp=Z,6.3nm,1.1s,baz=148,slow=7.1,SNR=3.5						
	comp=Z,6.3nm,1.1s						
ARCES	ARCESS Array B	45.91	345	P	P	14 02 52.9	+0.3
CEST	Esterri de Car	47.07	304	P	P	14 03 01.9	-0.4
CEST				IAmb	IAmb	14 03 20.7	
	comp=Z,5.3nm,1.0s						
EKA	Eskdalemuir Ar	50.90	320	P	P	14 03 30.5	-0.7
	comp=Z,0.4nm,0.3s,baz=96,slow=7.6,SNR=4.5						
	comp=Z,0.4nm,0.3s						
ESDC	Sonseca Array	51.14	300	P	P	14 03 33.0	-0.5
	comp=Z,1.1nm,0.5s,baz=72,slow=6.8,SNR=7.2						
	comp=Z,1.1nm,0.5s						
ESDC	Sonseca Array	51.14	300	P	P	14 03 32.7	-0.7
PAB	San Pablo	51.45	300	P	P	14 03 35.3	-0.5
PAB				IAmb	IAmb	14 04 03.8	
	comp=Z,14nm,1.5s						
HILR	Hailar Array B	52.46	47	P	P	14 03 43.3	+0.2
	comp=Z,1.9nm,0.5s,baz=224,slow=4.1,SNR=3.7						
	comp=Z,1.9nm,0.5s						
MD01	Midelt array s	52.78	292	P	P	14 03 45.3	-0.6
TORD	Torodi Ar. Bea	53.10	266	P	P	14 03 46.3	-1.9
	comp=Z,1.6nm,0.5s,baz=63,slow=8.0,SNR=5.8						
	comp=Z,1.6nm,0.5s						
SPITS	Spitsbergen Ar	54.02	351	P	P	14 03 53.6	-0.6
	comp=Z,5.3nm,0.9s,baz=134,slow=6.2,SNR=5.3						
	comp=Z,5.3nm,0.9s						
LBTB	Lobatse	60.09	213	P	P	14 04 35.7	-2.2
LBTB				IAmb	IAmb	14 05 00.6	
	comp=Z,12nm,1.3s						
BOSA	Boshof	63.30	211	P	P	14 04 59.0	-0.5
	comp=Z,3.9nm,0.9s,baz=16,slow=3.7,SNR=4.7						
	comp=Z,3.9nm,0.9s						
BOSA	Boshof	63.30	211	P	P	14 04 59.1	-0.4
BOSA				IAmb	IAmb	14 05 40.1	
	comp=Z,8.2nm,1.1s						
C16K	Lisburne Hills	79.71	15	P	P	14 06 37.7	-0.1
C16K				IAmb	IAmb	14 06 51.2	
	comp=Z,17nm,1.2s						
A36M	Sachs Harbour	80.90	1		P	14 06 44.2	+0.2
D27M	Malcolm River	82.80	6	P	P	14 06 54.8	+0.5
C36M	Paulatuk	83.56	0		P	14 06 57.3	-0.8
C36M				IAmb	IAmb	14 06 58.1	
	comp=Z,7.5nm,0.8s						
F31M	Tsiigehtchic	85.15	4	P	P	14 07 06.1	-0.1

F31M				IAmb	IAmb	14 07 11.7	
	comp=Z,11nm,1.0s						
H31M	**Peel River**	**86.73**	**5**	P	**P**	**14 07 13.8**	**-0.4**
WB0	**Warramunga Arr**	**88.60**	**113**	P	**P**	**14 07 23.4**	**-0.4**
WB0				IAmb	IAmb	14 07 33.5	
	comp=Z,9.1nm,1.4s						
WRA	**Warramunga Arr**	**88.64**	**113**	P	**P**	**14 07 23.6**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=304,slow=4.2,SNR=4.3						
	comp=Z,0.8nm,0.7s						
GLB	**Gilahina Butte**	**89.95**	**10**	P	**P**	**14 07 29.4**	**-0.1**
ASAR	**Alice Springs**	**90.13**	**117**	P	**P**	**14 07 30.6**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=303,slow=4.6,SNR=5.2						
	comp=Z,0.4nm,0.6s						
ASAR	**Alice Springs**	**90.13**	**117**	P	**P**	**14 07 30.4**	**-0.5**
YKA	**Yellowknife Ar**	**90.17**	**356**	P	**P**	**14 07 30.8**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=354,slow=5.2,SNR=7.2						
	comp=Z,1.5nm,0.8s						
YKA	**Yellowknife Ar**	**90.17**	**356**	P	**P**	**14 07 30.5**	**0.0**
TXAR	**Lajitas Array**	**120.55**	**340**	PKP	**PKiKP**	**14 13 24.4**	**+1.5**
	comp=Z,0.8nm,1.1s,baz=0.0,slow=0.5,SNR=3.4						

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*NEIC **30** 14:02:37.8±0.5, 69.°58N±0.°04×144.°86W±0.°08, h8^{km}±7^{km},*
Error ellipse: s-maj=6.4km s-min=3.9km az=193.0

AEIC 30 14:02:38.0±0.5**, 69.°56N**±0.°04×**144.°87W**±0.°08**, h6**^{km}±6^{km}**,**
ML2.5, ML2.7/58(NEIC)**, Error ellipse: s-maj=6.1km**
s-min=3.8km az=189.0, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
C26K	**Camden Bay**	**0.36**	**358**		Pg	14 02 44.5	-0.4
C26K					Sg	14 02 50.3	+0.6
C26K	**Camden Bay**	**0.36**	**358**	IAML		14 02 50.7	
	comp=E,443nm,0.7s						
C26K				IAML		14 02 51.5	
	comp=N,656nm,0.4s						
D25K	**Kavik River**	**0.58**	**246**		Pg	14 02 47.8	-1.4
D25K	**Kavik River**	**0.58**	**246**	IAML		14 03 02.0	
	comp=E,124nm,0.6s						
D25K				IAML		14 03 02.1	
	comp=N,125nm,0.4s						
C24K	**Franklin Bluff**	**1.35**	**279**		Pn	14 03 02.5	-0.8
C24K					Sn	14 03 21.5	0.0
C24K	**Franklin Bluff**	**1.35**	**279**	IAML		14 03 23.1	
	comp=N,109nm,0.6s						
D27M	**Malcolm River**	**1.42**	**101**		Pn	14 03 02.8	-1.6
D27M				IAML		14 03 25.0	
	comp=N,143nm,0.3s						
D27M				IAML		14 03 27.7	
	comp=E,72nm,0.3s						
D27M	**Malcolm River**	**1.42**	**101**		Sg	14 03 23.5	0.0
D24K	**Happy Valley**	**1.46**	**256**		Pn	14 03 04.4	-0.4
D24K				IAML		14 03 27.2	
	comp=N,117nm,0.3s						
D24K				IAML		14 03 28.8	
	comp=E,98nm,0.7s						
E25K	**Arctic Village**	**1.47**	**190**		Pn	14 03 04.5	-0.5
E25K				IAML		14 03 26.8	
	comp=N,125nm,0.8s						
E25K				IAML		14 03 27.7	
	comp=E,124nm,0.5s						
E25K	**Arctic Village**	**1.47**	**190**		Sg	14 03 25.4	+0.3
E27K	**Coleen River**	**1.82**	**138**		Pn	14 03 09.4	-0.5
E27K				IAML		14 03 37.3	
	comp=E,49nm,0.3s						
E27K	**Coleen River**	**1.82**	**138**		Sb	14 03 34.4	-0.4
F26K	**Sheenjek River**	**1.90**	**172**		Pn	14 03 10.7	-0.2
F26K				IAML		14 03 41.6	
	comp=E,77nm,0.6s						
TOLK	**Toolik Lake Re**	**1.92**	**243**		Pn	14 03 11.0	-0.2
E24K	**Your Creek**	**1.99**	**223**		Pn	14 03 11.9	-0.3
F25K	**Christian Rive**	**2.00**	**188**		Pn	14 03 11.9	-0.4
F25K				IAML		14 03 44.7	
	comp=N,55nm,0.6s						
C23K	**Itkillik River**	**2.02**	**281**		Pn	14 03 12.2	-0.4
C23K				IAML		14 03 49.3	
	comp=E,67nm,0.3s						
C23K				IAML		14 03 52.7	
	comp=N,64nm,0.4s						
E28M	**Babbage River**	**2.14**	**114**		Pn	14 03 13.9	-0.4
E28M				IAML		14 03 47.8	
	comp=N,40nm,1.0s						
E28M				IAML		14 03 48.3	
	comp=E,35nm,0.5s						
BM05	**Burnt Mountain**	**2.15**	**177**		Pn	14 03 14.7	+0.4
D23K	**Nanushuk River**	**2.15**	**257**		Pn	14 03 14.2	-0.2
D28M	**Stokes Point**	**2.18**	**93**		Pn	14 03 14.3	-0.4
D28M				IAML		14 03 52.5	
	comp=N,53nm,0.9s						
E23K	**Chandalar**	**2.29**	**231**		Pn	14 03 15.9	-0.4
E23K				IAML		14 03 53.8	
	comp=N,35nm,0.5s						
E23K				IAML		14 03 56.0	
	comp=E,31nm,0.5s						
F24K	**Squaw Lake**	**2.33**	**210**		Pn	14 03 16.6	-0.3
F24K				IAML		14 03 53.1	
	comp=N,29nm,1.0s						
G26K	**Porcupine Rive**	**2.66**	**171**		Pn	14 03 21.1	-0.2
G26K				IAML		14 04 06.5	
	comp=N,30nm,0.8s						
G26K				IAML		14 04 08.7	
	comp=E,34nm,0.8s						
F28M	**Old Crow**	**2.68**	**134**		Pn	14 03 21.0	-0.7
F28M				IAML		14 04 07.7	
	comp=E,22nm,0.6s						
E29M	**Blow River**	**2.78**	**112**		Pn	14 03 22.1	-0.9
E29M				IAML		14 04 13.3	
	comp=E,22nm,0.7s						
G25K	**Bearman Lake**	**2.85**	**190**		Pn	14 03 23.4	-0.5
D22K	**Ayikyak River**	**2.87**	**260**		Pn	14 03 24.3	+0.1
D22K	**Ayikyak River**	**2.87**	**260**	IAML		14 04 19.0	
	comp=N,25nm,0.8s						
D22K				IAML		14 04 23.1	
	comp=E,19nm,0.8s						
E22K	**Anaktuvuk Pass**	**2.90**	**244**		Pn	14 03 24.2	-0.4
G24K	**Hadweenzic Riv**	**3.04**	**200**		Pn	14 03 26.1	-0.5
B22K	**Teshekpuk Lake**	**3.05**	**289**		Pn	14 03 25.9	-0.7
COLD	**Coldfoot**	**3.06**	**223**		Pn	14 03 26.5	-0.4
B21K	**Ikpikpuk River**	**3.41**	**276**		Pn	14 03 31.3	-0.3
B21K				IAML		14 04 37.5	
	comp=E,13nm,0.7s						
B21K				IAML		14 04 38.9	
	comp=N,16nm,0.9s						
E21K	**Killik River**	**3.46**	**255**		Pn	14 03 32.3	-0.1
C21K	**Knifeblade Rid**	**3.53**	**268**		Pn	14 03 33.6	+0.2
G29M	**Pine Creek**	**3.69**	**133**		Pn	14 03 35.3	-0.2
G29M	**Pine Creek**	**3.69**	**133**	IAML		14 04 48.0	
	comp=N,13nm,1.1s						
A22K	**Sinclair Lake**	**3.72**	**298**		Pn	14 03 35.1	-0.7

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*NEIC **30** 14:04:39.3±0.9, 65.°80N±0.°02×150.°87W±0.°05, h13^{km}±6^{km},*
Error ellipse: s-maj=3.6km s-min=0.6km az=52.0

AEIC 30 14:04:39.1±0.7**, 65.°79N**±0.°02×**150.°90W**±0.°05**, h11**^{km}±5^{km}**,**
ML3.5, ML3.7/202(NEIC)**, Error ellipse: s-maj=3.2km**
s-min=2.7km az=154.0, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H22K	**Ishtalitna Cre**	**0.22**	**297**	Pg	Pg	14 04 43.3	-0.4
I21K	**Tanana**	**0.76**	**217**	Pg	Pg	14 04 53.4	-0.4
H21K	**Melozitna Rive**	**0.80**	**261**	Pg	Pg	14 04 54.3	-0.2
H21K	**Melozitna Rive**	**0.80**	**261**		Sb	14 05 05.7	-0.1
I23K	**Minto, Yukon-K**	**0.91**	**135**		Pg	14 04 56.4	-0.3
I23K	**Minto, Yukon-K**	**0.91**	**135**		Sg	14 05 08.7	+0.1
G23K	**Bananza Creek**	**0.99**	**21**		Pg	14 04 57.2	-0.8
G23K				IAML		14 05 13.8	
	comp=N,3µm,0.5s						
G23K	**Bananza Creek**	**0.99**	**21**		Sg	14 05 10.3	-0.6
G22K	**Bettles**	**1.16**	**348**		Pb	14 05 00.4	-0.7
H24K	**Noodor Dome**	**1.25**	**87**		Pn	14 05 01.9	-0.6
H24K				IAML		14 05 20.0	
	comp=E,1µm,0.7s						
H24K				IAML		14 05 20.3	
	comp=N,2µm,0.8s						
G21K	**Allakaket**	**1.28**	**306**		Pn	14 05 02.4	-0.5
NEA2	**Nenana**	**1.43**	**147**		Pn	14 05 05.0	0.0
NEA2				IAML		14 05 26.0	
	comp=E,340nm,0.6s						
NEA2				IAML		14 05 26.4	
	comp=N,346nm,0.6s						
COLD	**Coldfoot**	**1.47**	**11**	Pn	Pn	14 05 05.4	0.0
COLD				IAML		14 05 27.1	
	comp=E,2µm,0.8s						
COLD				IAML		14 05 27.3	
	comp=N,1µm,0.5s						
COLA	**College**	**1.58**	**124**		Pn	14 05 06.9	0.0
POKR	**Poker Plat Res**	**1.60**	**114**		Pn	14 05 07.2	-0.1
POKR				IAML		14 05 31.3	
	comp=E,1µm,0.6s						
POKR				IAML		14 05 32.0	
	comp=N,768nm,0.7s						
G24K	**Hadweenzic Riv**	**1.66**	**55**		Pn	14 05 07.7	-0.5
G24K	**Hadweenzic Riv**	**1.66**	**55**	IAML		14 05 36.9	
	comp=E,728nm,0.8s						
G24K				IAML		14 05 37.2	
	comp=N,801nm,0.8s						
H20K	**Anotleneega Mo**	**1.68**	**261**		Pn	14 05 08.5	+0.1
BPAW	**Bear Paw Mtn.**	**1.70**	**181**		Pn	14 05 08.9	+0.2
BPAW				IAML		14 05 33.4	
	comp=E,632nm,0.7s						
CCB	**Clear Creek Bu**	**1.74**	**130**		Pn	14 05 09.1	-0.1
CCB				IAML		14 05 34.1	
	comp=E,704nm,0.6s						
CCB				IAML		14 05 34.5	
	comp=N,606nm,0.6s						
F21K	**Alatna River**	**1.77**	**325**		Pn	14 05 09.4	-0.3
F21K				IAML		14 05 35.2	
	comp=N,685nm,0.5s						
F21K				IAML		14 05 38.1	
	comp=E,538nm,0.7s						
WRH	**Wood River Hil**	**1.78**	**137**		Pn	14 05 09.8	0.0
I20K	**Naaghedeneel**	**1.81**	**238**		Pn	14 05 10.1	+0.1
I20K					Pb	14 05 10.7	-1.4
IL31		**1.98**	**119**		Pn	14 05 12.2	-0.2
ILAR	**Eielson Array**	**1.98**	**119**		Pn	14 05 12.2	-0.2
CHUM	**Lake Minchumin**	**2.01**	**198**		Pn	14 05 13.7	+0.8
F24K	**Squaw Lake**	**2.11**	**33**		Pn	14 05 14.4	+0.1
F24K	**Squaw Lake**	**2.11**	**33**	IAML		14 05 50.2	
	comp=N,677nm,0.6s						
J20K	**Nowinta River**	**2.13**	**222**		Pn	14 05 14.3	-0.2
J20K				IAML		14 05 50.6	
	comp=N,390nm,0.7s						
G25K	**Bearman Lake**	**2.17**	**61**		Pn	14 05 14.8	-0.3
HDA	**Harding Lake**	**2.17**	**128**		Pn	14 05 15.1	-0.1
HDA				IAML		14 05 46.7	
	comp=N,367nm,1.0s						
MCK	**McKinley**	**2.23**	**157**		Pn	14 05 16.6	+0.5
MCK				IAML		14 05 57.2	
	comp=E,96nm,0.8s						
MCK				IAML		14 06 05.3	
	comp=N,111nm,1.0s						
PRP	**Porcupine Dome**	**2.25**	**95**		Pn	14 05 16.4	+0.1
PRP				IAML		14 05 53.7	
	comp=E,496nm,0.5s						
KTH	**Kantishna Hill**	**2.25**	**180**		Pn	14 05 16.4	+0.1
KTH				IAML		14 05 53.4	
	comp=E,470nm,1.1s						
F20K	**Avaraart Lake**	**2.31**	**305**		Pn	14 05 18.2	+1.1
F20K	**Avaraart Lake**	**2.31**	**305**	IAML		14 05 54.2	
	comp=N,357nm,0.7s						
H19K	**Roundabout Mou**	**2.31**	**266**		Pn	14 05 17.1	+0.1
H19K	**Roundabout Mou**	**2.31**	**266**	IAML		14 05 57.4	
	comp=N,598nm,1.1s						
TRF	**Thorofare Moun**	**2.37**	**173**		Pn	14 05 18.6	+0.6
TRF				IAML		14 05 54.9	
	comp=E,317nm,0.9s						
E22K	**Anaktuvuk Pass**	**2.38**	**352**		Pn	14 05 19.2	+1.2
E22K					Pn	14 05 19.5	+1.4
E22K	**Anaktuvuk Pass**	**2.38**	**352**	IAML		14 05 55.9	
	comp=E,324nm,0.8s						
E24K	**Your Creek**	**2.48**	**21**		Pn	14 05 20.1	+0.6
E24K					Pn	14 05 20.3	+0.9
E24K	**Your Creek**	**2.48**	**21**	IAML		14 06 07.4	
	comp=N,526nm,1.1s						
RND	**Reindeer**	**2.56**	**159**		Pn	14 05 21.4	+1.0
G19K	**Purcell Mounta**	**2.56**	**281**		Pn	14 05 21.2	+0.8
J25K	**Salcha River,**	**2.62**	**114**		Pn	14 05 21.5	+0.2
J25K	**Salcha River,**	**2.62**	**114**	IAML		14 06 08.5	
	comp=N,290nm,0.8s						
J19K	**Poorman**	**2.70**	**230**		Pn	14 05 22.5	+0.1
J19K	**Poorman**	**2.70**	**230**	IAML		14 06 11.1	
	comp=E,229nm,0.9s						
J19K				IAML		14 06 15.5	
	comp=N,244nm,0.7s						
GCSA	**Galena City Sc**	**2.72**	**250**		Pn	14 05 22.9	+0.2
GCSA					Pn	14 05 23.1	+0.5
F25K	**Christian Rive**	**2.76**	**47**		Pn	14 05 23.1	-0.2
F25K	**Christian Rive**	**2.76**	**47**	IAML		14 06 08.4	
	comp=E,379nm,0.6s						
F25K				IAML		14 06 14.6	
	comp=N,250nm,0.8s						
K20K	**Telida**	**2.80**	**211**		Pn	14 05 23.8	-0.1
K20K				IAML		14 06 09.3	
	comp=N,211nm,0.9s						
K20K				IAML		14 06 12.7	
	comp=E,315nm,1.1s						
TOLK	**Toolik Lake Re**	**2.91**	**10**		Pn	14 05 26.2	+0.9
TOLK	**Toolik Lake Re**	**2.91**	**10**	IAML		14 06 18.5	
	comp=E,337nm,1.0s						
E21K	**Killik River**	**2.92**	**337**		Pn	14 05 26.7	+1.3
E21K	**Killik River**	**2.92**	**337**	IAML		14 06 16.1	
	comp=N,299nm,0.6s						
PPLA	**Purkeypile**	**2.96**	**191**		Pn	14 05 26.6	+0.4
PPLA	**Purkeypile**	**2.96**	**191**	IAML		14 06 27.1	
	comp=N,203nm,1.2s						
PPLA				IAML		14 06 28.6	
	comp=E,180nm,1.0s						
F19K	**Shaleruckik Mo**	**2.96**	**294**		Pn	14 05 27.3	+1.3
F19K	**Shaleruckik Mo**	**2.96**	**294**	IAML		14 06 21.8	
	comp=E,218nm,1.0s						
F19K				IAML		14 06 24.4	
	comp=N,180nm,1.0s						
K24K	**Donnelly Dome**	**2.97**	**130**	IAML		14 06 18.7	
	comp=N,303nm,1.2s						
E19K	**Redstone River**	**3.03**	**306**		Pn	14 05 28.4	+1.5
E19K	**Redstone River**	**3.03**	**306**	IAML		14 06 21.0	
	comp=E,296nm,0.6s						
G26K	**Porcupine Rive**	**3.09**	**65**		Pn	14 05 27.6	-0.2
G26K	**Porcupine Rive**	**3.09**	**65**	IAML		14 06 26.3	
	comp=N,223nm,1.0s						
DHY	**Denali Highway**	**3.13**	**149**		Pn	14 05 29.6	+1.2
E25K	**Arctic Village**	**3.14**	**39**		Pn	14 05 28.1	-0.4
E25K	**Arctic Village**	**3.14**	**39**	IAML		14 06 21.5	
	comp=N,261nm,0.8s						
E25K				IAML		14 06 24.7	
	comp=E,210nm,0.6s						
D22K	**Ayikyak River**	**3.18**	**348**		Pn	14 05 30.4	+1.5
H18K	**Honhosa River**	**3.18**	**262**		Pn	14 05 29.8	+0.8
H18K	**Honhosa River**	**3.18**	**262**	IAML		14 06 24.2	
	comp=E,160nm,0.8s						
H18K				IAML		14 06 35.5	
	comp=N,148nm,1.0s						
D23K	**Nanushuk River**	**3.19**	**1**		Pn	14 05 30.9	+1.8
G18K	**Tagagawik**	**3.19**	**275**		Pn	14 05 29.9	+0.8
G18K	**Tagagawik**	**3.19**	**275**	IAML		14 06 25.2	
	comp=N,210nm,1.1s						
G18K				IAML		14 06 26.4	
	comp=E,144nm,0.8s						
L22K	**Petersville**	**3.28**	**179**		Pn	14 05 32.5	+2.0
F26K	**Sheenjek River**	**3.29**	**51**		Pn	14 05 30.1	-0.4
F26K	**Sheenjek River**	**3.29**	**51**	IAML		14 06 25.0	
	comp=E,165nm,0.5s						
F26K				IAML		14 06 26.1	
	comp=N,189nm,0.6s						
RIDG	**Independent Ri**	**3.31**	**126**	IAML		14 06 29.4	
	comp=E,133nm,0.9s						
RIDG				IAML		14 06 30.0	
	comp=N,132nm,0.8s						
J26L	**Joseph Creek**	**3.36**	**109**		Pn	14 05 31.3	-0.2
J26L	**Joseph Creek**	**3.36**	**109**	IAML		14 06 25.2	
	comp=N,206nm,0.5s						
J26L				IAML		14 06 31.8	
	comp=E,164nm,0.8s						
CUT	**Chulitna**	**3.41**	**175**		Pn	14 05 33.7	+1.5
CUT	**Chulitna**	**3.41**	**175**	IAML		14 06 43.0	
	comp=E,200nm,1.0s						
J18K	**Innoko River**	**3.42**	**230**	IAML		14 06 29.8	
	comp=N,209nm,0.7s						
SCRK	**Sand Creek**	**3.47**	**119**	IAML		14 06 31.6	
	comp=E,126nm,0.9s						
SCRK				IAML		14 06 39.6	
	comp=N,111nm,1.0s						
D24K	**Happy Valley**	**3.47**	**12**		Pn	14 05 34.8	+1.8
DOT	**Dot Lake**	**3.64**	**123**	IAML		14 06 37.9	
	comp=N,130nm,0.9s						
DOT				IAML		14 06 38.4	
	comp=E,153nm,0.8s						
D20K	**Etivluk River**	**3.68**	**325**		Pn	14 05 37.5	+1.6
D20K	**Etivluk River**	**3.68**	**325**	IAML		14 06 46.4	
	comp=N,126nm,0.7s						
D20K				IAML		14 06 47.2	
	comp=E,150nm,0.7s						
PAX	**Paxson**	**3.69**	**138**	IAML		14 06 22.4	
	comp=N,103nm,0.7s						
C21K	**Knifeblade Rid**	**3.69**	**338**		Pn	14 05 37.7	+1.7
SKT	**Skwentna**	**3.84**	**184**	IAML		14 06 50.8	
	comp=E,110nm,1.1s						
I27K	**Kandik River**	**3.84**	**89**		Pn	14 05 37.3	-0.9
H27K	**Steamboat Moun**	**3.85**	**79**		Pn	14 05 37.9	-0.4
H27K					Pn	14 05 38.9	+0.6
H27K	**Steamboat Moun**	**3.85**	**79**	IAML		14 06 49.0	
	comp=E,126nm,0.8s						
H27K				IAML		14 06 52.1	
	comp=N,133nm,0.9s						
G27K	**Doyon Strip**	**3.87**	**71**		Pn	14 05 38.7	+0.2
G27K					Pn	14 05 38.9	+0.4
H17K	**Granite Mounta**	**3.87**	**261**		Pn	14 05 39.6	+1.1
H17K	**Granite Mounta**	**3.87**	**261**	IAML		14 06 47.4	
	comp=N,122nm,1.1s						
L19K	**White Mountain**	**4.02**	**207**	IAML		14 06 55.4	
	comp=E,146nm,1.2s						
L19K				IAML		14 07 02.9	
	comp=N,108nm,1.0s						
C24K	**Franklin Bluff**	**4.03**	**11**		Pn	14 05 42.0	+1.3
G17K	**Kiwalik Mounta**	**4.05**	**270**		Pn	14 05 41.9	+1.0
M20K	**Styx River**	**4.05**	**195**		Pn	14 05 42.0	+1.0
M20K	**Styx River**	**4.05**	**195**	IAML		14 06 47.5	
	comp=E,86nm,1.0s						
C23K	**Itkillik River**	**4.06**	**1**		Pn	14 05 41.9	+0.9
M22K	**Willow**	**4.07**	**175**		Pn	14 05 42.4	+1.2
M22K	**Willow**	**4.07**	**175**	IAML		14 06 56.5	
	comp=E,138nm,1.2s						
B21K	**Ikpikpuk River**	**4.10**	**341**		Pn	14 05 42.5	+1.0
GHO	**Glory Hole Cre**	**4.13**	**167**		Pn	14 05 43.2	+1.0
K27K	**Chicken**	**4.16**	**111**		Pn	14 05 43.2	+0.8
K27K	**Chicken**	**4.16**	**111**	IAML		14 06 52.5	
	comp=N,131nm,0.7s						
K27K				IAML		14 06 58.2	
	comp=E,106nm,0.8s						
SML	**Sawmill**	**4.16**	**163**		Pn	14 05 43.5	+1.0
SML	**Sawmill**	**4.16**	**163**	IAML		14 06 56.6	
	comp=E,69nm,1.2s						
MENT	**Mentasta**	**4.24**	**129**	IAML		14 06 53.1	
	comp=E,110nm,0.9s						
MENT				IAML		14 07 01.4	
	comp=N,91nm,0.8s						
HARP	**HAARP**	**4.24**	**141**		Pn	14 05 45.1	+1.6
M24K	**Tolsona, Glenn**	**4.25**	**148**		Pn	14 05 45.2	+1.5
M24K	**Tolsona, Glenn**	**4.25**	**148**	IAML		14 07 07.1	
	comp=E,110nm,1.2s						
M23K	**Glacier View**	**4.26**	**159**		Pn	14 05 44.9	+1.2
F17K	**Baldwin Pennin**	**4.26**	**283**		Pn	14 05 45.0	+1.3
F17K					Pn	14 05 45.2	+1.4
J17K	**VABM Dome**	**4.26**	**239**		Pn	14 05 44.0	+0.1
J17K					Pn	14 05 45.1	+1.3
SCM	**Sheep Creek Mo**	**4.28**	**157**	IAML		14 06 42.0	
	comp=N,73nm,0.8s						
L26K	**Log Cabin Wild**	**4.29**	**127**		Pn	14 05 43.8	-0.6
L26K	**Log Cabin Wild**	**4.29**	**127**	IAML		14 06 58.7	
	comp=E,113nm,0.5s						
L26K				IAML		14 07 01.4	
	comp=N,116nm,0.7s						
SUA	**Susitna One**	**4.35**	**179**		Pn	14 05 46.6	+1.4
SUA	**Susitna One**	**4.35**	**179**	IAML		14 07 03.9	
	comp=N,61nm,1.1s						
E27K	**Coleen River**	**4.37**	**52**		Pn	14 05 44.4	-1.0
E27K	**Coleen River**	**4.37**	**52**	IAML		14 07 04.3	
	comp=E,85nm,0.8s						
E27K				IAML		14 07 14.8	
	comp=N,64nm,0.8s						
L18K	**Granite Mounta**	**4.40**	**218**	IAML		14 07 10.3	
	comp=N,99nm,1.1s						
L18K				IAML		14 07 13.1	
	comp=E,108nm,1.1s						
K17K	**Iditarod**	**4.47**	**230**		Pn	14 05 46.2	-0.4
SPNN	**North Nagishla**	**4.52**	**191**		Pn	14 05 49.0	+1.5
KNK	**Knik Glacier**	**4.53**	**165**		Pn	14 05 49.5	+1.9
SPCG	**Spurr Capps Gl**	**4.55**	**187**		Pn	14 05 49.2	+1.4
E17K	**Hotham Inlet**	**4.57**	**291**		Pn	14 05 49.5	+1.4
SPU	**Mount Spurr**	**4.66**	**187**		Pn	14 05 50.6	+1.3
C19K	**Lookout Ridge**	**4.71**	**319**		Pn	14 05 51.0	+1.0
C19K	**Lookout Ridge**	**4.71**	**319**	IAML		14 07 10.8	
	comp=E,74nm,0.8s						
C19K				IAML		14 07 24.5	
	comp=N,64nm,1.1s						
F28M	**Old Crow**	**4.75**	**62**	IAML		14 07 15.8	
	comp=E,61nm,0.6s						
F28M				IAML		14 07 24.9	
	comp=N,57nm,1.1s						
G16K	**Koyuk River**	**4.77**	**270**		Pn	14 05 50.7	-0.1
G16K	**Koyuk River**	**4.77**	**270**	IAML		14 07 19.4	
	comp=E,55nm,0.9s						
G16K				IAML		14 07 23.5	
	comp=N,63nm,1.1s						
L27K	**Beaver Creek,**	**4.79**	**121**		Pn	14 05 50.5	-0.6
L27K	**Beaver Creek,**	**4.79**	**121**	IAML		14 07 15.1	
	comp=E,65nm,0.8s						
L27K				IAML		14 07 19.2	
	comp=N,51nm,0.8s						
M18K	**Stony River**	**4.84**	**209**		Pn	14 05 52.0	+0.2
B20K	**Meade River**	**4.85**	**334**		Pn	14 05 52.5	+0.6
KLU	**Klutina**	**4.85**	**151**		Pn	14 05 54.2	+2.2
KLU					Pn	14 05 54.6	+2.6
J16K	**Anvik River**	**4.88**	**243**		Pn	14 05 52.4	0.0
L17K	**Donlin**	**4.91**	**225**		Pn	14 05 53.1	+0.4
L17K					Pn	14 05 53.5	+0.8
H16K	**Elim**	**4.91**	**262**		Pn	14 05 53.3	+0.6
C18K	**Utukok River**	**4.92**	**310**		Pn	14 05 53.6	+0.7
C18K	**Utukok River**	**4.92**	**310**	IAML		14 07 26.0	
	comp=N,53nm,1.1s						
C18K				IAML		14 07 37.0	
	comp=E,41nm,1.0s						
H29M	**Whitestone**	**5.13**	**80**		Pn	14 05 55.3	-0.6
H29M	**Whitestone**	**5.13**	**80**	IAML		14 07 30.4	
	comp=N,55nm,1.0s						
D27M	**Malcolm River**	**5.15**	**43**		Pn	14 05 56.6	+0.6
D27M					Pn	14 05 57.0	+1.0
D27M	**Malcolm River**	**5.15**	**43**	IAML		14 07 31.7	
	comp=N,37nm,0.6s						
D27M				IAML		14 07 32.4	
	comp=E,34nm,1.1s						
DAWY	**Dawson**	**5.19**	**104**		Pn	14 05 56.9	+0.2
E28M	**Babbage River**	**5.24**	**52**	IAML		14 07 31.7	
	comp=N,41nm,0.9s						
E28M				IAML		14 07 52.2	
	comp=E,33nm,1.1s						
I29M	**Ogilvie Camp,**	**5.25**	**89**	IAML		14 07 41.3	
	comp=E,53nm,1.1s						
I29M				IAML		14 07 51.7	
	comp=N,48nm,0.8s						
M27K	**Edge Creek, AK**	**5.25**	**127**		Pn	14 05 58.2	+0.7
M27K	**Edge Creek, AK**	**5.25**	**127**	IAML		14 07 41.1	
	comp=E,62nm,1.1s						
N19K	**Bonanza Creek**	**5.25**	**200**		Pn	14 05 57.8	+0.2
N19K					Pn	14 05 58.2	+0.6
N19K	**Bonanza Creek**	**5.25**	**200**	IAML		14 07 29.1	
	comp=E,46nm,1.2s						
N19K				IAML		14 07 32.3	
	comp=N,39nm,0.9s						
M17K	**Holitna River**	**5.29**	**216**		Pn	14 05 58.1	+0.2
A22K	**Sinclair Lake**	**5.45**	**346**		Pn	14 06 00.0	0.0
L16K	**Owhat River**	**5.59**	**227**		Pn	14 06 02.1	0.0
L16K					Pn	14 06 02.6	+0.6
MCARA	**McCarthy VSAT**	**5.65**	**138**		Pn	14 06 05.1	+2.2
E29M	**Blow River**	**5.71**	**57**		Pn	14 06 02.7	-0.9
E29M					Pn	14 06 02.9	-0.7
D28M	**Stokes Point**	**5.85**	**47**		Pn	14 06 05.6	0.0
D28M					Pn	14 06 06.8	+1.2
M16K	**Timber Creek**	**6.00**	**221**		Pn	14 06 07.4	-0.3
N17K	**Nushagak Hills**	**6.00**	**211**		Pn	14 06 07.9	+0.2

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*OSPL **30** 14:06:32.9±1.6, 20.°03N×70.°60W, h0^{km}±8^{km}, ML2.0,*
Presumed earthquake

*SDD **30** 14:06:34.0±1.2, 20.°03N×70.°65W, h13^{km}±15^{km}, MD3.2,*
ML3.5, MW2.9, Presumed earthquake

ISC 30 14:06:32.7±1.9**, 20.°06N**±0.°05×**70.°63W**±0.°07**, h11**^{km}±12^{km}**,**
n12, σ1.^{s}18/16**, 1C-1D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUDR	**Luperon**	**0.35**	**242**	IAML		14 06 53.1	
	comp=E,6µm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LOPP1	Punta Rusia, P	0.57	250	*i* P	Pg	14 06 44.5	+0.5
LOPP1				*e*S	Sg	14 06 51.2	-0.3
LOPP1				IAML		14 06 56.0	
	comp=Z,77nm,0.2s						
MCDR	Montecristi	0.98	261	IAML		14 07 12.2	
	comp=E,606nm,0.3s						
REDR	Restauracion	1.14	219	⇑*e*Pg	Pb	14 06 55.0	+0.5
REDR				*e*Sg	Sn	14 07 12.3	+2.1
REDR				IAML		14 07 13.7	
	comp=N,779nm,0.3s						
SDDR	Presa de Saban	1.24	210	*e*Pg	Pn	14 06 54.3	-1.6
SDDR				IAML		14 07 12.6	
	comp=N,2µm,0.3s						
SDDR	Presa de Saban	1.24	210	*i* P	Pn	14 06 54.5	-1.4
SDDR				*e*S	Sb	14 07 10.6	-1.4
SDDR				IAML		14 07 12.0	
	comp=Z,31nm,0.7s						
GRTK	Grand Turk	1.52	342	*i* Sg	Sn	14 07 20.6	+0.9
GRTK				IAML		14 07 26.4	
	comp=N,2µm,0.3s						
GRTK	Grand Turk	1.52	342	*e*S	Sn	14 07 19.6	-0.1
LONE3	El Aguacate, B	1.64	209	*i* P	Pn	14 07 01.5	-0.1
LONE3				*e*S	Sn	14 07 22.2	-0.5
LONE3				IAML		14 07 25.1	
	comp=Z,20nm,0.6s						
HATOM	Hato Mayor del	1.73	137	⇓*i*P	Pn	14 07 01.9	-0.8
HATOM				*e*Sg	Sn	14 07 25.9	+1.2
HATOM				IAML		14 07 27.7	
	comp=N,202nm,0.2s						
PODR	Polo	1.98	198	*e*Pg	Pn	14 07 07.5	+1.2
PODR				IAML		14 07 38.5	
	comp=N,651nm,0.3s						
PODR	Polo	1.98	198	*i* P	Pb	14 07 08.4	-0.5
PODR				*e*S	Sb	14 07 33.6	0.0

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*NEIC **30** 14:07:14.9±0.8, 18°.75N±0°.07×145°.63E±0°.09, h223km±8km, mb4.3/31, Error ellipse: s-maj=14.9km s-min=6.3km az=55.0*

*IDC **30** 14:07:16.1±2.9, 18°.78N×145°.52E, h239km±30km, mb3.2/5, mbtmp3.8/7, Error ellipse: s-maj=52.4km s-min=15.3km az=102.0*

ISC 30 14:07:13.5±0.6**, 18°.77N**±0°.07×**145°.6E**±0°.1**, h214km, n43,** σ**0^{s}.81**/44**, mb4.2**/22**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DPSS	Saipan	3.51	177	Pn	Pn	14 08 09.5	-0.5
GUMO	Guam	5.20	188	P	Pn	14 08 34.0	+3.1
	48nm,0.4s,baz=192,slow=23,SNR=1.4						
GUMO				S	S	14 09 32.8	+0.9
	156nm,0.8s,baz=197,slow=21,SNR=2.0						
JOW	Kunigami	17.88	300	P	P	14 11 07.4	+0.3
JGF	Kuroka	18.29	338	P	P	14 11 11.8	+0.3
MJAR	Matsushiro Arr	18.87	341	P	P	14 11 18.4	+0.6
	1.4nm,0.9s,baz=172,slow=8.1,SNR=4.8						
DAV	Davao City (W)	22.70	242	P	P	14 11 57.6	+0.4
YULB	Yu-li	23.14	286	P	P	14 12 01.4	+0.3
SSLB	Suanglung	23.51	287	P	P	14 12 04.8	+0.4
KKM	Kota Kinabalu	31.31	250	P	P	14 13 14.1	-0.1
COEN	Coen	32.61	184	P	P	14 13 24.8	-0.5
COEN				IAmb	IAmb	14 13 29.6	
	comp=Z,13nm,1.4s						
QIZ	Qiongzhong	33.81	276	P	P	14 13 35.1	-0.6
MTN	Manton Dam	34.51	206	P	P	14 13 41.4	-0.3
MTN				IAmb	IAmb	14 14 04.9	
	comp=Z,8.6nm,1.3s						
SBUM	Sibu	36.50	248	P	P	14 13 59.0	+0.3
KNRA	Kununurra	38.04	207	P	P	14 14 11.2	-0.3
KNRA				IAmb	IAmb	14 14 54.0	
	comp=Z,12nm,1.3s						
CTAO	Charters Tower	38.62	179	P	P	14 14 15.9	-0.4
CTAO				IAmb	IAmb	14 14 26.1	
	comp=Z,5.2nm,1.0s						
WB0	Warramunga Arr	39.85	197	P	P	14 14 26.1	-0.4
WB0				IAmb	IAmb	14 14 27.0	
	comp=Z,5.8nm,0.7s						
WR8	Warramunga Arr	40.00	196	P	P	14 14 27.7	0.0
WR8				IAmb	IAmb	14 14 29.0	
	comp=Z,6.5nm,1.0s						
WRA	Warramunga Arr	40.03	197	P	P	14 14 28.1	+0.1
	comp=Z,4.8nm,0.6s,baz=20,slow=8.3,SNR=32						
	comp=Z,4.8nm,0.6s						
JAGI	Jajag, Banyuwa	41.18	232	P	P	14 14 37.1	-0.4
JAGI				IAmb	IAmb	14 14 59.1	
	comp=Z,27nm,1.3s						
FITZ	Fitzroy Crossi	41.57	209	P	P	14 14 40.4	-0.1
AS31	Alice Springs	43.70	196	P	P	14 14 57.1	-0.5
ASAR	Alice Springs	43.70	196	P	P	14 14 57.3	-0.3
	comp=Z,0.6nm,0.4s,baz=14,slow=7.6,SNR=29						
	comp=Z,0.6nm,0.4s						
ASAR	Alice Springs	43.70	196	P	P	14 14 57.0	-0.7
INKA	Innaminka	46.48	186	P	P	14 15 18.7	-0.6
MBWA	Marble Bar	47.09	214	P	P	14 15 22.5	-1.7
MBWA				IAmb	IAmb	14 15 25.4	
	comp=Z,29nm,1.4s						
ARMA	Armidale	49.24	173	P	P	14 15 40.0	-0.7
ARMA				IAmb	IAmb	14 15 55.3	
	comp=Z,34nm,1.5s						
C19K	Lookout Ridge	60.36	20	P	P	14 17 00.3	+0.5
D20K	Etivluk River	61.17	21	P	P	14 17 06.0	+0.9
D20K				IAmb	IAmb	14 17 31.5	
	comp=Z,7.6nm,1.5s						
L22K	Petersville	61.40	28	P	P	14 17 07.3	+0.4
L22K				IAmb	IAmb	14 17 08.3	
	comp=Z,14nm,1.4s						
D22K	Ayikyak River	62.55	21	P	P	14 17 15.7	+1.3
D22K				IAmb	IAmb	14 17 32.4	
	comp=Z,8.2nm,1.4s						
E22K	Anaktuvuk Pass	62.61	22	P	P	14 17 15.6	+0.8
C23K	Itkillik River	63.56	20	P	P	14 17 21.8	+0.8
C23K				IAmb	IAmb	14 17 57.3	
	comp=Z,8.5nm,1.4s						
ILAR	Eielson Array	63.62	26	P	P	14 17 20.5	-0.9
	comp=Z,0.3nm,0.7s,baz=255,slow=6.0,SNR=2.1						
	comp=Z,0.3nm,0.7s						
J25K	Salcha River,	64.22	27	P	P	14 17 25.4	0.0
J25K				IAmb	IAmb	14 17 37.2	
	comp=Z,4.2nm,1.3s						
D25K	Kavik River	64.85	21	P	P	14 17 30.6	+1.3
D25K				IAmb	IAmb	14 17 51.4	
	comp=Z,5.5nm,1.5s						
G31M	Satah River	69.02	25	P	P	14 17 56.2	+0.7
G31M				IAmb	IAmb	14 18 00.1	
	comp=Z,5.7nm,1.4s						
F31M	Tsiigehtchic	69.23	24	P	P	14 17 57.3	+0.5
F31M				IAmb	IAmb	14 18 33.0	
	comp=Z,5.9nm,1.5s						
AB31	Akbulak array	73.24	317	P	P	14 18 20.5	-0.7
ABKAR	Akbulak array	73.24	317	P	P	14 18 20.4	-0.8
YKA	Yellowknife Ar	77.96	28	P	P	14 18 47.8	+0.1
	comp=Z,0.2nm,0.6s,baz=290,slow=6.6,SNR=3.6						
	comp=Z,0.2nm,0.6s						
YKA	Yellowknife Ar	77.96	28	P	P	14 18 47.7	0.0
NVAR	Mina Array Bea	83.16	52	P	P	14 19 17.1	+1.0
	comp=Z,0.5nm,0.6s,baz=283,slow=6.5,SNR=6.1						
	comp=Z,0.5nm,0.6s						
NVAR	Mina Array Bea	83.16	52	P	P	14 19 15.9	-0.2

BUC 30 14:12:37.5±0.2**, 45°.68N**×**26°.72E, h108km**±1km**, ml3.7**/48**, 66C-23D, Error ellipse: s-maj=1.3km s-min=1.2km az=26.0, Romania**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BISRR	Bisoca	0.13	182	⇑P	Pn	14 12 53.3	+0.7
BISRR				⇓S	Sn	14 13 04.1	+0.2
PLOR	Plostina	0.18	345	⇑P	Pn	14 12 53.0	+0.4
PLOR				⇑S	Sn	14 13 04.8	+0.8
VRI	Vrincioaia	0.19	3	⇓P	Pn	14 12 53.0	+0.4
VRI				⇑S	Sn	14 13 04.4	+0.4
PANC	Panciu	0.36	57	⇓P	Pn	14 12 53.8	+0.6
PANC				⇑S	Sn	14 13 06.0	+0.9
NEHR	Nehoiu	0.39	230	⇑P	Pn	14 12 54.2	+0.7
NEHR				⇑S	Sn	14 13 06.2	+0.8
COVR	Voineasa-Covas	0.40	295	⇓P	Pn	14 12 53.6	+0.1
COVR				⇑S	Sn	14 13 05.6	+0.1
COSR	Cosmesti PH	0.45	67	⇑P	Pn	14 12 54.2	+0.4
COSR				⇓S	Sn	14 13 06.8	+0.8
ISR	Istrita	0.57	192	⇓P	Pn	14 12 55.2	+0.6
ISR				⇑S	Sn	14 13 07.2	-0.4
MLR	Muntele Rosu	0.57	251	⇑P	Pn	14 12 55.5	+0.8
MLR				⇓S	Sn	14 13 08.5	+0.7
GHRR		0.62	51	⇓P	Pn	14 12 55.3	+0.4
GHRR				⇑S	Sn	14 13 08.7	+0.7
TURR	Turia	0.62	308	⇑P	Pn	14 12 55.2	+0.3
TURR				⇓S	Sn	14 13 08.3	+0.1
TUDR		0.67	97	⇓P	Pn	14 12 55.4	+0.1
TUDR				⇑S	Sn	14 13 09.6	+0.7
ONER	Baraj Valea Uz	0.69	341	⇑P	Pn	14 12 55.6	+0.1
ONER				⇑S	Sn	14 13 09.1	-0.2
IZVR	Izvoarele	0.75	100	⇑P	Pn	14 12 56.0	0.0
IZVR				⇑S	Sn	14 13 09.7	-0.2
OZUR		0.77	303	⇑P	Pn	14 12 56.1	-0.2
PGOR	Pogoanele	0.79	166	⇑S	Sn	14 13 11.4	+0.7
SCHLR	Schela	0.81	104	⇑P	Pn	14 12 56.6	+0.1
SCHLR				⇑S	Sn	14 13 11.1	+0.2
VARL	Varlezi	0.82	74	⇑P	Pn	14 12 56.8	+0.2
VARL				⇓S	Sn	14 13 11.3	+0.1
NEGRR	Negrea	0.83	99	⇑P	Pn	14 12 57.2	+0.5
NEGRR				⇓S	Sn	14 13 11.9	+0.6
TESR	Tescani	0.83	357	⇑P	Pn	14 12 56.5	-0.4
BOSR	Bodos	0.84	299	⇑P	Pn	14 12 56.7	-0.2
BOSR				⇑S	Sn	14 13 11.4	-0.1
BIR	Birlad	0.87	47	⇓P	Pn	14 12 57.3	+0.2
BIR				⇓S	Sn	14 13 12.2	+0.3
SCTR	Scanteiesti	0.90	90	⇑P	Pn	14 12 57.6	+0.2
SCTR				⇑S	Sn	14 13 12.8	+0.4
TATR	Tatarca	0.94	94	⇑P	Pn	14 12 58.0	+0.2
TATR				⇑S	Sn	14 13 13.6	+0.4
GISR	Galati	0.97	104	⇑P	Pn	14 12 58.6	+0.4
GISR				⇑S	Sn	14 13 14.1	+0.4
VLDR	Vladesti	0.97	80	⇓P	Pn	14 12 58.5	+0.3
VLDR				⇑S	Sn	14 13 13.9	+0.2
DOPR	Dopca	0.97	288	⇑P	Pn	14 12 58.2	0.0
DOPR				⇑S	Sn	14 13 13.8	-0.1
SULR		1.05	198	⇑P	Pn	14 12 59.8	+0.8
SULR				⇑S	Sn	14 13 16.6	+1.4
GIUM	Giurgiulesti	1.07	100	⇑P	Pn	14 12 59.4	+0.2
GIUM				⇑S	Sn	14 13 15.9	+0.4
CFR	Carcaliu	1.12	116	⇑P	Pn	14 12 59.7	0.0
CFR				⇑S	Sn	14 13 16.9	+0.4
AMRR	Amara	1.16	157	⇑P	Pn	14 13 00.7	+0.6
AMRR				⇓S	Sn	14 13 18.0	+0.8
LEHL	Lehliu	1.21	176	⇑P	Pn	14 13 01.3	+0.6
LEHL				⇑S	Sn	14 13 19.2	+1.0
VASR	Vaslui	1.22	37	⇑P	Pn	14 13 00.7	-0.1
VASR				⇓S	Sn	14 13 18.2	-0.4
GIRR	Girov	1.29	353	⇑P	Pn	14 13 01.5	-0.2
GIRR				⇑S	Sn	14 13 19.4	-0.5
BUC1	Bucharest	1.42	200	⇑P	Pn	14 13 02.7	-0.4
BUC1				⇓S	Sn	14 13 22.9	+0.4
TPGR	Topolog	1.46	124	⇓P	Pn	14 13 03.2	-0.4
TLBR	Topalu	1.48	140	⇑P	Pn	14 13 04.0	+0.2
TLBR				⇑S	Sn	14 13 23.3	-0.5
ARR	Arges	1.50	259	⇑P	Pn	14 13 04.2	+0.1
ARR				⇑S	Sn	14 13 24.1	-0.3
CICN	Ciocanesti	1.50	171	⇓P	Pn	14 13 04.3	+0.3
CICN				⇑S	Sn	14 13 24.3	+0.1
SGRR	Singureni	1.55	200	⇑S	Sn	14 13 25.2	-0.1
TLCR		1.56	108	⇑P	Pn	14 13 05.0	+0.2
TLCR				⇑S	Sn	14 13 25.0	-0.6
CVDA	Cernavoda	1.64	145	⇓P	Pn	14 13 06.1	+0.3
CVDA				⇑S	Sn	14 13 26.9	-0.5
HUMR	Humele	1.68	228	⇓S	Sn	14 13 28.0	-0.3
TIRR	Tirgusor	1.71	135	⇑P	Pn	14 13 06.8	+0.1
TIRR				⇑S	Sn	14 13 28.4	-0.6
ICOR	Ion Corvin	1.74	153	⇑P	Pn	14 13 07.5	+0.4
ICOR				⇑S	Sn	14 13 29.3	-0.3
MFTR	Murfatlar	1.93	140	⇓P	Pn	14 13 09.6	+0.1
EFOR	EFORIE	2.10	139	⇑S	Sn	14 13 38.0	+0.3
RAZG	Razgrad	2.12	184	⇑P	Pn	14 13 12.0	+0.2
BURAR	Bucovina Array	2.19	332	⇑P	Pn	14 13 13.3	+0.4
ELND	Elena	2.81	193	⇑P	Pn	14 13 21.1	+0.2

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*IDC **30** 14:21:36.0±1.6, 0°.65N×96°.90E, h0km, mb3.7/7, mbtmp3.6/9, ML3.0/2, Error ellipse: s-maj=35.6km s-min=29.2km az=53.0*

*DJA **30** 14:21:42.3±0.7, 1°N±3°×9°7E±°, h24km±4km, M3.7/14, mb3.7/2, MLv3.6/14*

ISC 30 14:21:41.3±0.9**, 0°.99N**±0°.05×**97°.17E**±0°.06**, h25km, n35,** σ**1^{s}.29**/25**, mb3.7**/7**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.51	52	P	Pb	14 21 51.5	-0.3
GSI				S	Sb	14 21 58.5	-0.4
PBSI	Pulau Batu	1.52	133	P	Pb	14 22 07.5	-1.3
SNSI	Sinabang, Aceh	1.64	329	P	Pb	14 22 10.4	-0.6
TPTI		2.26	0	P	Pn	14 22 15.9	-1.2
MNSI	Mandailing Nat	2.42	95	P	Pn	14 22 18.9	-0.4
PSI	Prapat	2.51	44	Pn	Pn	14 22 23.0	+2.3
	1.8nm,0.3s,baz=180,slow=12,SNR=5.0						
PSI				Sn	Sb	14 22 59.5	+3.1
	2.4nm,0.3s,baz=318,slow=12,SNR=9.2						
	5.3nm,0.3s						
PSI	Prapat	2.51	44	P	Pn	14 22 18.4	-2.3
KCSI	Kotacane, Aceh	2.59	13	P	Pn	14 22 20.8	-0.9
TSI	Tuntungan	2.86	29	P	Pn	14 22 25.0	-0.4
MLSI	Meulaboh, Aceh	3.34	347	P	Pn	14 22 32.9	+0.8
PPI	Padang Panjang	3.53	114	P	Pn	14 22 34.8	+0.2
PDSI	Padang	3.79	120	P	Pn	14 22 39.0	+0.7
PPSI	Pulau Pagai	4.69	143	P	Pn	14 22 51.8	+1.3
IPM	Ipoh	5.18	48	P	Pn	14 22 56.4	-1.0
	0.1nm14nm,1.2s						
KULM	Kulim	5.51	39	P	Pn	14 23 00.9	-0.9
CMAR	Chiang Mai Arr	17.45	6	P	P	14 25 45.4	+1.1
	baz=196,slow=12,SNR=9.2						
	0.8nm,0.8s						
H08S2	Diego Garcia H	26.06	250	T	T	14 54 23.9	
	baz=72,slow=76,SNR=45						
H08S3	Diego Garcia H	26.07	250	T	T	14 54 21.1	
	baz=72,slow=76,SNR=857						
H08S1	Diego Carcia H	26.08	250	T	T	14 54 20.1	
	baz=72,slow=76,SNR=36						
H01W3	Cape Leeuwin H	39.06	158	T	T	15 10 27.2	
	baz=333,slow=76						
H01W2	Cape Leeuwin H	39.08	158	T	T	15 10 25.6	
	baz=333,slow=76						
H01W1	Cape Leeuwin H	39.08	158	T	T	15 10 26.9	
	baz=333,slow=76						
ASAR	Alice Springs	43.29	127	P	P	14 29 40.1	-1.3
	0.3nm,0.8s,baz=299,slow=8.6,SNR=1.9						
	0.3nm,0.8s						
SONM	Songino Array	47.34	8	P	P	14 30 13.9	+0.7
	0.3nm,0.4s,baz=189,slow=7.6,SNR=1.4						
	0.3nm,0.4s						
MKAR	Makanchi Array	47.44	346	P	P	14 30 14.7	+0.8
	0.4nm,0.4s,baz=162,slow=7.7,SNR=7.8						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	51.93	345	P	P	14 30 49.1	+1.2
	0.2nm,0.5s,baz=169,slow=6.6,SNR=3.4						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	53.76	351	P	P	14 31 01.6	+0.2
	0.9nm,0.4s,baz=169,slow=6.8,SNR=7.1						
	0.9nm,0.4s						
BVAR	Borovoye Array	56.44	341	P	P	14 31 21.3	+0.4
	0.3nm,0.5s,baz=132,slow=8.6,SNR=2.3						
	0.3nm,0.5s						
H04N2	CROZET ISLANDS	61.58	214	T	T	15 38 51.8	
	baz=54,slow=75						
H04N1	CROZET ISLANDS	61.59	214	T	T	15 39 02.0	
	baz=54,slow=75						
H04N3	CROZET ISLANDS	61.60	214	T	T	15 38 43.4	
	baz=54,slow=75						
H04S1	CROZET ISLANDS	61.92	214	T	T	15 39 05.2	
	baz=54,slow=76,SNR=30						
H04S3	CROZET ISLANDS	61.93	214	T	T	15 39 05.2	
	baz=54,slow=76,SNR=43						
H04S2	CROZET ISLANDS	61.94	214	T	T	15 39 05.2	
	baz=54,slow=76,SNR=27						
FINES	FINESS Array B	80.17	333	P	P	14 33 48.1	-1.2
	3.7nm,0.9s,baz=112,slow=7.6,SNR=3.7						
	3.7nm,0.9s						

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*DSN **30** 14:26:09.0±1.5, 27°.51N×56°.56E, h10km, ML3.0/8, Error ellipse: s-maj=28.6km s-min=13.8km az=106.0*

*OMAN **30** 14:26:09.6±1.4, 27°.40N×56°.71E, h10km, ml3.2/19, Error ellipse: s-maj=10.9km s-min=6.5km az=21.0*

*TEH **30** 14:26:10.3, 27°.40N×56°.78E, h16km±29km*

ISC 30 14:26:10.0±1.0**, 27°.39N**±0°.03×**56°.75E**±0°.03**, h14km**±8km**, n42,** σ**1^{s}.39**/64**, Southern Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IBND	Bandar-abas	0.19	288	Pg	Pg	14 26 15.4	+1.0
BNDS	Bandar-Abbas	0.51	271	Pg	Pb	14 26 21.0	+0.2
GENO	Geno	0.51	271	Pg	Pn	14 26 21.5	-1.5
KHNJ	Kahnooj	1.02	57	Pg	Pg	14 26 29.1	-0.5
KHNJ				Sg	Sg	14 26 43.2	+0.2
SHME	Shamm	1.44	202	P	Pg	14 26 36.9	-0.8
	SNR=14						
SHME				S	Sg	14 26 56.7	+0.3
SHME	Shamm	1.44	202	*e*P	Pn	14 26 36.1	+0.4
	SNR=46						
SHME				S	Sg	14 26 56.6	+0.2
BANOM	Banah	1.51	195	P	Pb	14 26 37.5	-0.4
BANOM				S	Sg	14 26 58.3	-0.5
BANOM	Banah	1.51	195	*e*P	Pn	14 26 37.2	+0.5
	SNR=41						
MASF	Masafi	2.08	195	P	Pb	14 26 46.8	-0.7
	SNR=8.7						
MASF				S	Sb	14 27 13.5	+0.3
MSFE	Esma-Masafi	2.09	195	P	Pn	14 26 45.5	+0.9
MDH	Madha	2.12	191	P	Pn	14 26 44.5	-0.5
	SNR=6.8						
MDH				S	Sn	14 27 11.0	-0.1
MDH	Madha	2.12	191	P	Pn	14 26 44.5	-0.5
NGRK	Negar Kerman	2.25	360	Pn	Pn	14 26 48.1	+1.1
KBAM	BAM	2.30	40	Pn	Pb	14 26 49.8	-1.5
UOSS	Minazif	2.48	191	P	Pb	14 26 52.8	-1.6
UOSS				S	Sn	14 27 21.7	+1.6
CHMN	Cheshme madani	2.56	16	Pn	Pb	14 26 53.8	-2.1
HATD	Hatta, Dubai	2.61	192	P	Pn	14 26 53.7	+1.9
ASHO	Ashiyiah	2.77	193	P	Pn	14 26 55.6	+1.7
	SNR=8.8						
ASHO				P	Pb	14 26 55.8	-3.4
ASHO				S	Sn	14 27 28.2	+1.0
ASHO	Ashiyiah	2.77	193	*e*P	Pn	14 26 55.6	+1.7
	SNR=9.9						
FAQ	Al Faqa, Dubai	2.83	202	P	Pn	14 26 57.0	+2.2
	SNR=7.3						
FAQ				S	Sn	14 27 30.7	+2.0
KHGB	Koh Gabri	2.98	356	Pn	Pn	14 26 58.8	+1.7
ASUD	Al Ashush, Dub	3.03	205	P	Pn	14 26 57.6	0.0
ASUD				S	Sn	14 27 34.7	+1.0
AJN	Ajban	3.23	210	P	Pn	14 27 01.5	+1.2
AJN				S	Sn	14 27 39.7	+1.1
SOHO	SOHO	3.25	183	P	Pn	14 27 00.8	+0.3
SOHO				S	Sn	14 27 37.8	-1.1
ALNE	Al Ain	3.44	195	P	Pn	14 27 03.9	+0.7
HOQ	Hoqain	3.83	172	P	Pn	14 27 08.6	+0.2
HOQ				S	Sn	14 27 53.8	+0.5
ARQ	Araqi	4.04	183	P	Pn	14 27 13.6	+2.2
ARQ				S	Sn	14 28 01.8	+3.1
BIDO	Bidbid	4.05	162	P	Pn	14 27 11.5	0.0
BIDO				S	Sn	14 27 57.6	-1.2
IMEH	Mehriz	4.40	335	Pn	Pn	14 27 17.7	+1.1
NGCH	Negor - Chabah	4.43	116	P	Pn	14 27 18.8	+2.0
	SNR=8.8						
NGCH				S	Sn	14 28 09.5	+1.4
NGCH	Negor - Chabah	4.43	116	Pn	Pn	14 27 18.0	+1.3
MZWR	Madinat Zayed	4.45	216	P	Pn	14 27 18.4	+1.5
MZWR				S	Sn	14 28 09.0	+0.5
SMDO	Samad	4.47	164	P	Pn	14 27 17.4	0.0
	SNR=7.5						
SMDO				S	Sn	14 28 09.5	+0.2
BSY	Bisya	4.64	175	P	Pn	14 27 21.8	+2.1
BSY				S	Sn	14 28 17.3	+3.8
JMDO	Jabal Madar	5.15	166	P	Pn	14 27 28.3	+1.6
JMDO				P	Pb	14 27 28.3	-11
	SNR=11						
JMDO				P	Pg	14 27 29.1	-20
WBK	Wadi Bani Khal	5.17	157	P	Pn	14 27 27.3	+0.3
	SNR=13						
WBK				S	Sn	14 28 26.4	0.0
MZR	Muzera	5.28	215	P	Pn	14 27 27.6	-0.8
MZR				S	Sn	14 28 28.1	-1.0
TRNA	Turayna	5.63	243	S	Sn	14 28 36.8	-1.1
	SNR=5.6						
JLN	Jalan Bani Buh	5.75	155	P	Pn	14 27 34.8	-0.2
	SNR=5.9						
MHTO	MHTO	6.47	170	P	Pn	14 27 45.9	+1.1
	SNR=8.0						
WHFO	Wadi Hawf	9.82	197	P	Pn	14 28 30.6	-0.2
	SNR=6.5						
ABTO	Aybut	10.48	198	P	Pn	14 28 38.4	-1.6

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*JMA **30** 14:36:54.9±0.3, 34°N±1°×13°7E±°, h377km±2km, MV4.0/35, SE OFF KII PENINSULA*

*IDC **30** 14:36:55.5±0.5, 33°.83N×136°.98E, h364km±5km, mb3.3/24, mbtmp4.1/32, Error ellipse: s-maj=9.3km s-min=8.3km az=89.0*

*BJI **30** 14:36:55.0, 33°.90N×137°.00E, h369km, mB4.7/3, mb4.5/13*

*NEIC **30** 14:36:56.0±1.3, 33°.85N±0°.07×136°.98E±0°.09, h368km±2km, mb4.1/42, Error ellipse: s-maj=11.0km s-min=9.8km az=143.0*

ISC 30 14:36:55.6±0.5**, 33°.85N**±0°.05×**136°.98E**±0°.04**, h366km**±5km**, n128,** σ**0^{s}.87**/147**, mb4.0**/46**, 2C-1D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TTO2	TONANKAI O.B.S	0.12	162	P	Pn	14 37 42.0	+1.1
TTO3	TONANKAI O.B.S	0.34	87	P	Pn	14 37 42.5	+1.3
TTO4	TONANKAI O.B.S	0.49	71	P	Pn	14 37 42.4	+1.2
TTO4				*e*S	S	14 38 19.7	+1.7
JIE	Ise	0.59	337	P	Pn	14 37 42.5	+0.7
JIE				*e*S	S	14 38 19.3	+0.4
TK02	Tokai 2	0.65	81	P	Pn	14 37 42.9	+1.2
JTNC	Tanabenakahech	1.14	269	P	Pn	14 37 43.9	+0.2
JTNC				*e*S	S	14 38 22.1	-0.2
JWY	Kouya	1.21	288	P	Pn	14 37 44.6	+0.5
JWY				*e*S	S	14 38 22.1	-0.8
JSG	Sagara	1.29	50	Pn	Pn	14 37 45.7	+1.5
JSG	Sagara	1.29	50	P	Pn	14 37 45.5	+1.2
INU	Inuyama	1.50	1		Pn	14 37 45.8	+0.5
INU	Inuyama	1.50	1	P	Pn	14 37 45.9	+0.6
JYTA	Yamagatataniai	1.75	353	*e*P	Pn	14 37 47.1	+0.4
JYTA				*e*S	S	14 38 27.1	-0.8
JGF	Kuroka	1.77	10		Pn	14 37 47.2	+0.2
JGF	Kuroka	1.77	10	P	Pn	14 37 47.2	+0.2
JWT	Wachi	1.94	318	P	Pn	14 37 48.3	+0.4
JWT				*e*S	S	14 38 29.0	-1.0
JYN	Shimob	2.09	38	P	Pn	14 37 49.6	+0.6
JYN				*e*S	S	14 38 32.9	+0.8
JAI	Aioi	2.11	269	P	Pn	14 37 49.2	+0.1
JAI				*e*S	S	14 38 31.3	-0.9
JOD2	Odawara 2	2.24	50	*e*P	Pn	14 37 50.0	-0.1
JOD2				*e*S	S	14 38 33.4	-0.5
JHJ	Hachijo jima 2	2.45	106	P	Pn	14 37 52.6	+0.9
	105nm,0.5s,baz=252,slow=19,SNR=2.3						
JHJ				S	S	14 38 37.5	+0.7
	63nm,0.4s,baz=0.0,slow=7.1,SNR=1.7						
JKG	Kaga	2.48	348	P	Pn	14 37 52.0	+0.2
JKG				*e*S	S	14 38 36.8	-0.3
JMN	Monobe	2.59	268		Pn	14 37 53.2	+0.3
JMN	Monobe	2.59	268	P	Pn	14 37 53.1	+0.3
JMN	Monobe	2.59	268	P	Pn	14 37 53.0	+0.2
JMN				*e*S	S	14 38 38.3	-0.5
JRY	Ryogami san	2.68	36	P	Pn	14 37 54.4	+0.9
JRY				*e*S	S	14 38 39.8	-0.2
MJAR	Matsushiro Arr	2.87	20	P	Pn	14 37 55.1	+0.1
	15nm,0.5s,baz=196,slow=9.4,SNR=115						
MJAR				S	S	14 38 41.9	-1.0
	32nm,0.8s,baz=195,slow=16,SNR=16						
MAJO	Matsushiro	2.87	20		Pn	14 37 55.0	0.0
MAJO	Matsushiro	2.87	20	P	Pn	14 37 55.4	+0.4
MAT	Matsushiro	2.87	20	P	Pn	14 37 55.0	0.0
MAT				*e*S	S	14 38 41.1	-1.8
MJB9	Matsu-Tunnel	2.87	20		Pn	14 37 55.1	+0.1
JAG	Ashikaga	3.27	38	P	Pn	14 37 57.4	-1.1
JAG				*e*S	S	14 38 46.5	-2.8
JHS	Saijyo	3.40	291	P	Pn	14 38 00.3	+0.6
JHS				*e*S	S	14 38 51.3	-0.2
BSO1	Boso 1	3.40	75	*e*P	Pn	14 37 57.9	-1.3
BSO1				*e*S	S	14 38 47.2	-3.4
JTO	Tosashimizu	3.64	255	⇓P	Pn	14 38 02.2	+0.2
JSD	Sado	4.31	14	P	Pn	14 38 08.6	0.0
JNU	Nakatsue	5.15	264	P	Pn	14 38 18.0	+0.3
	97nm,0.7s,baz=116,slow=1.4,SNR=79						
JNU				S	S	14 39 24.9	+0.7
	30nm,1.0s,baz=59,slow=19,SNR=2.7						

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JNU    Nakatsue            5.15 264         Pn      14 38 17.8 +0.1
JNU    Nakatsue            5.15 264  P      Pn      14 38 17.8 +0.1
       138nm,0.8s
JSU    Suzuyama            5.98 249  Pn     Pn      14 38 27.3 +0.4
JSU    Suzuyama            5.98 249  P      Pn      14 38 27.1 +0.3
       106nm,0.8s
JTU    Tsushima            6.32 278  P      Pn      14 38 30.7 +0.1
       140nm,2.3s
JCJ    Chichijima          8.09 145  P      Pn      14 38 49.8 -1.4
       74nm,0.8s,baz=285,slow=23,SNR=2.1
KSRS   Korea Array         8.21 299  P      P       14 38 53.0 -1.3
       8.8nm,0.6s,baz=114,slow=12,SNR=33
KS19   Wonju Array Si      8.27 299         Pn      14 38 53.2 +0.1
JOW    Kunigami           10.27 229  P      Pn      14 39 16.9  0.0
       24nm,0.7s,baz=82,slow=9.8,SNR=9.6
JOW    Kunigami           10.27 229         Pn      14 39 17.2 +0.3
JOW    Kunigami           10.27 229  P      Pn      14 39 16.9  0.0
       39nm,1.0s
USRK   Ussuriysk Ar.      11.04 341  P      Pn      14 39 26.1 +0.4
       2.2nm,0.5s,baz=134,slow=11,SNR=4.5
ASAJ   Asahikawa          11.14  21  P      Pn      14 39 27.5 +0.6
       7.0nm,0.6s,baz=270,slow=16,SNR=6.3
JKA    Kamikawa-asahi     11.14  21         Pn      14 39 26.7 -0.2
YHNB   Yeheng             16.39 240  P      P       14 40 23.9 -0.8
NACB   Ninganchiao        16.54 238  P      P       14 40 25.6 -0.7
TPUB   Ta-pu              17.77 238  P      P       14 40 38.2 -1.3
HNS    HongShan           18.45 287  ⇑P     P       14 40 46.5 +0.1
HNS                                  pmax   pmax
       comp=Z,18nm,0.7s
WHN    Wuhan              19.43 266  ⇑P     P       14 40 56.3 -0.5
WHN                                  pmax   pmax
       comp=Z,110nm,0.7s
HILR   Hailar Array B     20.22 326  P      P       14 41 04.9 +0.6
       3.4nm,0.5s,baz=136,slow=11,SNR=6.0
       3.4nm,0.5s
HHC    Hu-ho-hao-te       21.34 297  eP     P       14 41 13.8 -0.9
HHC                                  pmax   pmax
       comp=Z,8.0nm,0.7s
HHC                                  pmax   pmax
       comp=Z,200nm,5.9s
XAN    Xi'an              23.26 278  P      P       14 41 34.0 +1.9
XAN                                  pmax   pmax
       comp=Z,9.0nm,0.8s
ENH    Enshi              23.55 269         P       14 41 33.7 -1.1
ENH                                  IAmb   IAmb    14 41 36.6
       comp=Z,9.2nm,0.6s
PETK   Petropavlovsk-     24.27  31  P      P       14 41 41.4 +0.5
       comp=Z,3.8nm,0.9s,baz=273,slow=5.5,SNR=2.5
       comp=Z,3.8nm,0.9s
ULN    Ulaanbaatar        26.42 311  P      P       14 42 02.8 +2.4
ULN                                  IAmb   IAmb    14 42 03.4
       comp=Z,3.7nm,0.6s
SONM   Songino Array      26.83 311  P      P       14 42 05.1 +1.1
       comp=Z,2.3nm,0.7s,baz=126,slow=9.5,SNR=12
       comp=Z,2.3nm,0.7s
SONM   Songino Array      26.83 311  P      P       14 42 06.4 +2.4
SEY    Seymchan           30.68  14  P      P       14 42 38.0 +0.6
       comp=Z,1.3nm,0.8s,baz=15,slow=12,SNR=2.3
       comp=Z,1.3nm,0.8s
CM31   Chiang Mai Arr     37.19 255  P      P       14 43 33.7 +0.2
CM31                                 IAmb   IAmb    14 43 35.9
       comp=Z,3.3nm,0.7s
CMAR   Chiang Mai Arr     37.19 255  P      P       14 43 33.9 +0.4
       comp=Z,1.4nm,0.6s,baz=50,slow=7.8,SNR=16
       comp=Z,1.4nm,0.6s
CMAR   Chiang Mai Arr     37.19 255  P      P       14 43 34.2 +0.7
BILL   Bilibino           38.12  17         P       14 43 41.3 +0.8
BILL                                 IAmb   IAmb    14 43 42.3
       comp=Z,6.1nm,0.6s
ZALV   Zalesovo Beam      41.50 315  P      P       14 44 08.1 -0.1
       comp=Z,0.4nm,0.4s,baz=95,slow=7.4,SNR=2.4
ZALV                                 PcP    PcP     14 45 57.5 -0.3
       comp=Z,1.9nm,0.6s,baz=95,slow=2.7,SNR=9.2
       comp=Z,0.4nm,0.4s
ZALV   Zalesovo Beam      41.50 315         PcP     14 45 57.1 -0.7
MKAR   Makanchi Array     42.84 304  P      P       14 44 19.1 +0.1
       comp=Z,0.5nm,0.5s,baz=84,slow=10.0,SNR=8.8
MKAR                                 PcP    PcP     14 46 02.6 +0.1
       comp=Z,0.1nm,0.6s,baz=108,slow=3.2,SNR=0.9
       comp=Z,0.5nm,0.5s
MKAR   Makanchi Array     42.84 304  P      P       14 44 19.2 +0.2
MAKZ   Makanchi           43.05 304  P      P       14 44 20.6 -0.1
NRIK   Noril'sk           44.73 337  P      P       14 44 33.0 -0.5
       comp=Z,1.3nm,0.5s,baz=133,slow=8.0,SNR=2.3
       comp=Z,1.3nm,0.5s
MTN    Manton Dam         46.76 188  P      P       14 44 48.6 -1.2
MTN                                  IAmb   IAmb    14 44 49.4
       comp=Z,6.4nm,0.6s
GSI    Gunungsitoli       49.05 237  P      P       14 45 07.4 +0.1
GSI                                  IAmb   IAmb    14 45 10.9
       comp=Z,12nm,1.2s
KNRA   Kununurra          49.87 190  P      P       14 45 12.7 -0.6
KNRA                                 IAmb   IAmb    14 45 25.2
       comp=Z,20nm,1.4s
BVAR   Borovoye Array     50.09 314  P      P       14 45 14.3 -0.3
       comp=Z,0.7nm,0.7s,baz=94,slow=5.9,SNR=5.0
BVAR                                 PcP    PcP     14 46 27.5 -0.6
       comp=Z,0.9nm,0.6s,baz=98,slow=3.1,SNR=5.0
       comp=Z,0.7nm,0.7s
KDAK   Kodiak Island      51.87  40  P      P       14 45 28.2 +0.6
FITZ   Fitzroy Crossi     52.78 194  P      P       14 45 33.9 -0.7
TOLK   Toolik Lake Re     52.93  26  P      P       14 45 36.3 +1.1
RND    Reindeer           53.32  33  P      P       14 45 38.8 +0.7
RND                                  IAmb   IAmb    14 45 50.8
       comp=Z,12nm,1.5s
WRA    Warramunga Arr     53.55 183  P      P       14 45 39.3 -0.9
       comp=Z,2.3nm,0.6s,baz=359,slow=7.6,SNR=20
       comp=Z,2.3nm,0.6s
WRA    Warramunga Arr     53.55 183  IAmb   IAmb    14 45 40.0
       comp=Z,0.2nm,0.7s
WR8    Warramunga Arr     53.55 183  P      P       14 45 39.3 -0.9
WR8                                  IAmb   IAmb    14 45 40.0
       comp=Z,3.4nm,0.6s
SML    Sawmill            53.68  35  P      P       14 45 41.2 +0.5
SML                                  IAmb   IAmb    14 46 00.7
       comp=Z,31nm,1.2s
ILAR   Eielson Array      54.10  31  P      P       14 45 44.0 +0.5
       comp=Z,0.8nm,0.8s,baz=284,slow=7.7,SNR=8.5
       comp=Z,0.8nm,0.8s
E25K   Arctic Village     54.42  27  P      P       14 45 47.6 +1.7
BCAR   Beaver Creek A     56.54  33  P      P       14 46 02.2 +1.4
F28M   Old Crow           56.62  27  P      P       14 46 02.9 +1.6
MBWA   Marble Bar         57.12 199  P      P       14 46 04.7 -0.6
AB31   Akbulak array      57.24 311         P       14 46 05.4 -0.5
ABKAR  Akbulak array      57.24 311  P      P       14 46 05.2 -0.7
ASAR   Alice Springs      57.27 183  P      P       14 46 05.9 -0.5
       comp=Z,0.5nm,0.4s,baz=12,slow=12,SNR=19
       comp=Z,0.5nm,0.4s
ASAR   Alice Springs      57.27 183  P      P       14 46 05.6 -0.8
EPYK   Eagle Plains       58.06  28  P      P       14 46 11.8 +0.5
EPYK                                 IAmb   IAmb    14 46 14.0
       comp=Z,18nm,1.3s
INK    Inuvik             58.84  26  P      P       14 46 16.6 +0.1
G31M   Satah River        58.89  27  P      P       14 46 17.6 +0.8
G31M                                 IAmb   IAmb    14 46 22.6
       comp=Z,6.4nm,1.4s
A36M   Sachs Harbour      60.53  21  P      P       14 46 28.6 +0.7
A36M                                 IAmb   IAmb    14 46 30.3
       comp=Z,7.5nm,0.9s
STKA   Stephens Creek     65.52 176  P      P       14 47 00.6 -0.3
       comp=Z,2.6nm,0.8s,baz=104,slow=7.7,SNR=2.8
       comp=Z,2.6nm,0.8s
STKA   Stephens Creek     65.52 176  IAmb   IAmb    14 47 01.0
       comp=Z,20nm,1.0s
ARCES  ARCESS Array B     65.68 339  P      P       14 47 01.7 +0.2
       comp=Z,4.3nm,0.8s,baz=52,slow=7.9,SNR=4.6
       comp=Z,4.3nm,0.8s
YKA    Yellowknife Ar     68.35  28  P      P       14 47 18.4 +0.2
       comp=Z,0.5nm,0.9s,baz=294,slow=6.7,SNR=4.9
       comp=Z,0.5nm,0.9s
TULEG  Thule              68.69   6  P      P       14 47 19.5 -0.5
TULEG                                IAmb   IAmb    14 47 42.1
       comp=Z,3.2nm,0.9s
FIA1   FINESS Array S     69.91 331  P      P       14 47 27.3 -0.3
FINES  FINESS Array B     69.91 331  P      P       14 47 26.6 -1.0
       comp=Z,2.6nm,0.4s,baz=79,slow=6.1,SNR=30
       comp=Z,2.6nm,0.4s
FINES  FINESS Array B     69.91 331  P      P       14 47 27.3 -0.3
ILON   Igloolik, Nuna     73.23  13  P      P       14 47 47.4 +0.3
ILON                                 IAmb   IAmb    14 47 48.0
       comp=Z,4.4nm,0.8s
AKASG  Malin Array Be     74.55 321  P      P       14 47 54.3 -0.7
       comp=Z,0.5nm,0.4s,baz=52,slow=5.9,SNR=2.1
       comp=Z,0.5nm,0.4s
AKASG  Malin Array Be     74.55 321  IAmb   IAmb    14 48 07.4
       comp=Z,3.9nm,1.2s
AKBB   Malin Array Si     74.55 321  P      P       14 47 54.3 -0.7
AKBB                                 IAmb   IAmb    14 47 56.8
       comp=Z,5.1nm,1.2s
KIEV   Kiev               74.56 321  P      P       14 47 54.3 -0.7
KIEV                                 IAmb   IAmb    14 47 56.8
       comp=Z,4.6nm,1.2s
HFS    Hagfors            75.44 334  P      P       14 47 58.4 -1.5
       comp=Z,2.1nm,0.5s,baz=64,slow=3.4,SNR=11
       comp=Z,2.1nm,0.5s
NB2    NORSAR Subarra     75.67 336  P      P       14 48 01.0 -0.2
       comp=Z,1.0nm,0.7s,baz=43,slow=5.6
NOA    NORSAR Array B     75.67 336  P      P       14 48 01.1 -0.2
       comp=Z,1.3nm,0.7s,baz=42,slow=5.7,SNR=4.5
       comp=Z,1.3nm,0.7s
NAO01  NORSAR Array S     75.92 336  P      P       14 48 03.3 +0.7
BRTR   Keskin Array B     78.18 310  P      P       14 48 15.9 +0.2
       comp=Z,1.2nm,0.9s,baz=49,slow=3.3,SNR=3.0
       comp=Z,1.2nm,0.9s
FFC    Flin Flon          78.31  31  P      P       14 48 16.1 +0.3
FFC                                  IAmb   IAmb    14 48 39.3
       comp=Z,4.3nm,1.4s
BUR08  Bucovina Ar. S     78.49 320  P      P       14 48 17.4 +0.2
BUR08                                IAmb   IAmb    14 48 31.0
       comp=Z,4.7nm,1.2s
BURAR  Bucovina Array     78.50 320  P      P       14 48 17.4 +0.2
BURAR                                IAmb   IAmb    14 48 18.3
       comp=Z,2.4nm,1.0s
NVAR   Mina Array Bea     79.80  51  P      P       14 48 25.8 +1.3
       comp=Z,1.1nm,0.7s,baz=306,slow=4.8,SNR=7.7
       comp=Z,1.1nm,0.7s
CLL    Collm              81.97 328  eP     P       14 48 34.0 -1.3
BW06   Boulder Array      82.47  43  P      P       14 48 37.9 -0.5
BW06                                 IAmb   IAmb    14 48 39.7
       comp=Z,2.3nm,0.9s
PDAR   Pinedale Array     82.47  43  P      P       14 48 39.4 +1.1
       comp=Z,1.2nm,0.7s,baz=291,slow=2.0,SNR=11
       comp=Z,1.2nm,0.7s
GERES  GERESS Array B     83.42 326  P      P       14 48 42.6 -0.3
       comp=Z,0.4nm,0.5s,baz=36,slow=5.0,SNR=4.5
       comp=Z,0.4nm,0.5s
FUORN  Ofenpass-Fuorn     86.64 326  P      P       14 48 58.6 -0.3
TXAR   Lajitas Array      94.93  50  P      P       14 49 38.2 +0.7
       comp=Z,0.7nm,0.9s,baz=290,slow=1.8,SNR=5.7
       comp=Z,0.7nm,0.9s
QSPA   South Pole Qui    123.60 180  PKP    PKPdf   14 55 08.8 -0.4
       comp=Z,1.1nm,0.8s,baz=336,slow=2.8,SNR=7.6
LPAZ   La Paz            151.43  58  PKPbc  PKiKP   14 56 07.8 -0.5
       comp=Z,1.0nm,0.7s,baz=344,slow=4.1,SNR=4.8
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*DSN **30** 14:39:48.9±1.7, 27°.36N×56°.88E, h10^{km}, ML3.1/9, Error ellipse: s-maj=47.6km s-min=11.6km az=120.0*

*TEH **30** 14:39:49.2, 27°.39N×56°.74E, h18^{km}±16^{km}*

*OMAN **30** 14:39:50.7±1.2, 27°.24N×56°.81E, h10^{km}, ml3.3/16, Error ellipse: s-maj=13.8km s-min=6.2km az=27.0*

ISC 30 14:39:49.0±1.2**, 27°.34N**±0°.04×**56°.81E**±0°.05**, h12**^{km}±10^{km}**, n49, σ1^{s}40**/70**, Southern Iran**

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Code   Station Name         Δ°   AZ°   Phase ID           Time      Res
                                     Op     ISC        h  m  s     ISC
IBND   Bandar-abas         0.26 295  Pg     Pg      14 39 54.2 -0.3
GENO   Geno                0.57 276  Pg     Pg      14 39 59.7 -0.5
BNDS   Bandar-Abbas        0.57 276  Pg     Pg      14 39 59.5 -0.6
KHNJ   Kahnooj             1.00  53  Pg     Pb      14 40 08.3  0.0
KHNJ                                 Sg     Sn      14 40 23.2 +0.2
SHME   Shamm               1.42 205  P      Pb      14 40 16.1 +0.7
       SNR=18
SHME                                 S      Sg      14 40 35.6 +1.0
SHME   Shamm               1.42 205  eP     Pn      14 40 14.9 +0.3
       SNR=28
SHME                                 S      Sg      14 40 35.4 +0.8
BANOM  Banah               1.48 198  P      Pn      14 40 16.3 +0.8
BANOM                                S      Sn      14 40 35.4 +0.5
BANOM  Banah               1.48 198  eP     Pn      14 40 16.0 +0.4
       SNR=41
BANOM                                S      Sg      14 40 37.2 +0.4
MASF   Masafi              2.05 197  P      Pn      14 40 24.7 +1.4
MASF                                 S      Sb      14 40 52.7 +1.1
MSFE   Esma-Masafi         2.06 197  P      Pn      14 40 23.8 +0.4
MDH    Madha               2.08 193  P      Pn      14 40 23.1 -0.6
MDH                                  S      Sn      14 40 50.2 +0.5
MDH    Madha               2.08 193  P      Pn      14 40 23.1 -0.6
NGRK   Negar Kerman        2.30 358  Pn     Pn      14 40 27.4 +0.3
KBAM   BAM                 2.30  39  Pn     Pn      14 40 28.4 +1.5
UOSS   Minazif             2.45 193  P      Pb      14 40 32.2 -0.7
UOSS                                 S      Sn      14 41 00.3 +1.7
UOSS   Minazif             2.45 193  Pn     Pn      14 40 30.4 +1.6
UOSS   Minazif             2.45 193  eP     Pb      14 40 31.6 -1.3
       SNR=11
HATD   Hatta, Dubai        2.58 194  P      Pn      14 40 32.9 +2.3
       SNR=9.9
HATD   Hatta, Dubai        2.58 194  P      Pn      14 40 32.1 +1.5
CHMN   Cheshme madani      2.59  14  Pn     Pn      14 40 32.2 +1.1
ASHO   Ashiyiah            2.73 194  P      Pn      14 40 34.9 +2.2
       SNR=11
ASHO                                 S      Sb      14 41 10.3 -0.9
ASHO   Ashiyiah            2.73 194  eP     Pn      14 40 33.7 +1.0
       SNR=19
FAQ    Al Faqa, Dubai      2.81 203  P      Pn      14 40 35.6 +1.8
ASUD   Al Ashush, Dub      3.01 207  P      Pn      14 40 38.3 +1.8
       SNR=12
ASUD                                 S      Sb      14 41 17.4 -2.0
ASUD   Al Ashush, Dub      3.01 207  i P    Pn      14 40 38.3 +1.8
       SNR=12
KHGB   Koh Gabri           3.04 355  Pn     Pn      14 40 37.9 +0.8
SOHO   SOHO                3.20 184  P      Pn      14 40 38.5 -0.7
SOHO                                 S      Sn      14 41 21.2 +4.0
ALNE   Al Ain              3.41 196  P      Pn      14 40 43.3 +1.3
ALNE                                 S      Sb      14 41 27.8 -2.9
CHBR   Chabahar            3.73 117  Pn     Pn      14 40 48.1 +1.8
HOQ    Hoqain              3.77 173  P      Pn      14 40 47.3 +0.3
       SNR=20
HOQ                                  S      Sn      14 41 31.2 -0.1
BIDO   Bidbid              3.99 162  P      Pn      14 40 50.2 +0.2
BIDO                                 S      Sn      14 41 35.3 -1.4
ARQ    Araqi               4.00 184  P      Pn      14 40 51.9 +1.8
       SNR=6.5
ARQ                                  S      Sn      14 41 38.4 +1.5
NGCH   Negor - Chabah      4.36 116  P      Pn      14 40 56.8 +1.8
       SNR=16
NGCH                                 S      Sn      14 41 45.3 -0.4
NGCH   Negor - Chabah      4.36 116  Pn     Pn      14 40 57.6 +2.6
IBAF   Bafgh               4.37 346  Pn     Pn      14 40 55.4  0.0
SMDO   Samad               4.41 165  P      Pn      14 40 56.7 +0.9
       SNR=11
SMDO                                 S      Sn      14 41 47.1 -0.1
SRVN   Saravan             4.97  88  Pn     Pn      14 41 06.6 +2.9
BSRN   Basiran             5.03  23  Pn     Pn      14 41 05.9 +1.4
JMDO   Jabal Madar         5.09 166  P      Pn      14 41 06.6 +1.5
       SNR=17
JMDO                                 S      Sn      14 42 03.9 +0.1
WBK    Wadi Bani Khal      5.10 157  P      Pn      14 41 05.7 +0.4
       SNR=13
WBK                                  S      Sn      14 42 02.7 -1.6
SHMA   Al-Shehemyia        5.44 256  P      Pn      14 41 12.2 +2.3
SHMA                                 S      Sn      14 42 11.4 -0.9
JLN    Jalan Bani Buh      5.68 155  P      Pn      14 41 13.6 +0.3
       SNR=16
JLN                                  S      Sn      14 42 16.5 -2.0
KLNJ   Kolanjah            5.84 310  Pn     Pn      14 41 14.8 -1.0
MHTO   MHTO                6.41 170  P      Pn      14 41 25.0 +1.7
       SNR=12
DOK    Doka                9.03 196  P      Pn      14 41 59.0 -0.2
SHAO   Shalim              9.34 187  P      Pn      14 42 03.5  0.0
WHFO   Wadi Hawf           9.79 197  P      Pn      14 42 08.7 -1.0
RBK    Rabkut             10.08 194  P      Pn      14 42 13.7 -0.1
ABTO   Aybut              10.46 199  P      Pn      14 42 17.6 -1.3
```

IDC 30 14:44:16.3±5.4**, 10°.31S**×**163°.87E, h0**^{km}**, mb3.5**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=296.5km s-min=36.4km az=138.0, Bougainville-Solomon Islands region**

```
Code   Station Name         Δ°   AZ°   Phase ID           Time      Res
                                     Op     ISC        h  m  s     ISC
WRA    Warramunga Arr     30.02 248  P      P       14 50 27.6 +0.4
       0.4nm,0.6s,baz=79,slow=8.5,SNR=2.2
       0.4nm,0.6s
ASAR   Alice Springs      31.50 241  P      P       14 50 39.9 -0.3
       0.3nm,0.7s,baz=63,slow=10.0,SNR=7.4
       0.3nm,0.7s
ILAR   Eielson Array      83.42  19  P      P       14 56 45.3  0.0
       0.3nm,0.8s,baz=212,slow=6.7,SNR=1.5
       0.3nm,0.8s
```

IDC 30 15:08:18.4±9.1**, 19°.96S**×**173°.73W, h0**^{km}**, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=396.6km s-min=44.5km az=143.0, Tonga Islands**

```
Code   Station Name         Δ°   AZ°   Phase ID           Time      Res
                                     Op     ISC        h  m  s     ISC
ASAR   Alice Springs      48.54 256  P      P       15 17 02.8 -0.9
       0.5nm,1.0s,baz=90,slow=7.9,SNR=4.9
       0.5nm,1.0s
WRA    Warramunga Arr     48.65 261  P      P       15 17 05.2 +0.7
       0.2nm,0.6s,baz=97,slow=8.0,SNR=3.9
       0.2nm,0.6s
ILAR   Eielson Array      86.95  11  P      P       15 21 04.8  0.0
       0.5nm,1.1s,baz=191,slow=4.2,SNR=1.5
       0.5nm,1.1s
```

TRN 30 15:10:11.5, 15°.78N×61°.42W, h19^{km}**, MD3.9, North of Dominica., Leeward Islands**

```
Code   Station Name         Δ°   AZ°   Phase ID           Time      Res
                                     Op     ISC        h  m  s     ISC
TBG    Guadaloupe-3        0.23 289  eP     Pg      15 10 17.7 +0.8
DWS    Wesley              0.24 152  eP     Pg      15 10 19.4 +2.4
DWS                                  eS     Sg      15 10 23.8 +3.0
DSLB   Salisbury           0.34 179  eP     Pn      15 10 20.6 -1.0
DSLB                                 eS     Sb      15 10 25.7 +1.6
MMLZ   Guadeloupe Bro      0.35 318  eP     Pn      15 10 21.0 -0.7
MMLZ                                 eS     Sn      15 10 27.0 -1.2
ATGZ   Broadband at L      0.43 317  eP     Pn      15 10 22.3 -0.4
DLPL   La Plaine           0.48 159  eP     Pn      15 10 23.4  0.0
DLPL                                 eS     Sn      15 10 30.6 -0.7
DHSZ   Broadband at M      0.59 326  eP     Pn      15 10 25.2 +0.2
DHSZ                                 eS     Sn      15 10 34.3 +0.2
DSDZ   La Diserade, G      0.63  33  eP     Pn      15 10 26.5 +1.0
DSDZ                                 eS     Sn      15 10 36.0 +0.8
SVN    Savane Anatole      0.96 165  eP     Pg      15 10 31.8 +1.5
SVN                                  eS     Sn      15 10 46.3 +2.9
ILAM   Ilet Lapin Mar      1.13 152  eP     Pg      15 10 33.6 +0.1
ILAM                                 eS     Sg      15 10 49.3 +1.0
MBWH   Windy Hill          1.21 323  eP     Pg      15 10 35.5 +0.5
MBWH                                 eS     Sg      15 10 51.8 +1.0
BIM    Bigot               1.30 165  eP     Pg      15 10 36.6 -0.1
BIM                                  eS     Sg      15 10 54.5 +0.7
SLBI   Saint Lucia, B      1.80 166  eP     Pb      15 10 44.3 +0.4
SLBI                                 eS     Sb      15 11 06.1  0.0
ANWB   Willy Bob           1.91 350  eP     Pb      15 10 45.9 +0.1
ANWB                                 eS     Sb      15 11 09.8 +0.5
SLAC   Saint Lucia, A      1.94 165  eP     Pb      15 10 45.8 -0.5
SLAC                                 eS     Sb      15 11 10.6 +0.4
SKI    Saint Kitts         2.00 321  eP     Pb      15 10 46.8 -0.4
SKI                                  eS     Sb      15 11 11.7 -0.1
MCLT   Moule a Chique      2.11 167  eP     Pb      15 10 47.8 -1.4
MCLT                                 eS     Sb      15 11 14.4 -0.6
SVB    Belmont             2.50 176  eP     Pb      15 10 54.4 -1.4
BBGH   Gun Hill            3.18 145  eP     Pb      15 11 08.9 +1.4
GCMP   Grenada, Carri      3.27 180  eP     Pn      15 11 04.0 +2.1
GRW    Mount Saint Ca      3.60 184  eP     Pn      15 11 08.6 +2.1
GRW                                  eS     Sn      15 11 50.9 +2.2
GRGR   Grenville           3.63 184  eP     Pn      15 11 09.0 +2.2
GRGR                                 eS     Sn      15 11 50.5 +1.3
GRFF   Grenada Fort F      3.72 185  eS     Sn      15 11 53.3 +1.9
TRN    Trinidad (W)        5.10 180  eP     Pn      15 11 30.1 +3.1
AOPR   Arecibo Observ      5.70 297  eP     Pn      15 11 38.2 +2.9
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*IDC **30** 15:39:42.3±2.4, 27°.28N×56°.67E, h0^{km}, mb3.7/13, mbtmp3.7/15, ML3.5/2, MS3.3/1, Error ellipse: s-maj=51.0km s-min=19.1km az=165.0*

*DSN **30** 15:39:45.0±0.7, 27°.43N×56°.75E, h10^{km}, ML3.6/15, Error ellipse: s-maj=12.3km s-min=6.0km az=102.0*

*TEH **30** 15:39:46.4, 27°.32N×56°.65E, h20^{km}±92^{km}*

*OMAN **30** 15:39:49.1±0.2, 27°.09N×56°.81E, h10^{km}, mb4.5/6, ml3.7/20, Error ellipse: s-maj=3.8km s-min=2.8km az=342.0*

ISC 30 15:39:45.7±0.8**, 27°.25N**±0°.04×**56°.82E**±0°.05**, h10**^{km}**, n90, σ2^{s}05**/85**, mb3.7**/16**, Southern Iran**

```
Code   Station Name         Δ°   AZ°   Phase ID           Time      Res
                                     Op     ISC        h  m  s     ISC
IBND   Bandar-abas         0.32 308  Pg     Pg      15 39 51.3 -0.8
IBND                                 Sg     Sg      15 39 55.4 -1.0
GENO   Geno                0.60 285  Pg     Pg      15 39 56.1 -1.3
SHME   Shamm               1.34 207  P      Pg      15 40 12.8 +1.4
       SNR=55
SHME                                 S      Sn      15 40 32.2 +3.8
       SNR=5.6
SHME   Shamm               1.34 207  eP     Pb      15 40 11.6 +0.7
       SNR=54
SHME                                 S      Sn      15 40 31.8 +3.4
BANOM  Banah               1.40 200  P      Pb      15 40 12.8 +0.9
BANOM                                S      Sn      15 40 33.6 +3.7
BANOM  Banah               1.40 200  eP     Pb      15 40 12.7 +0.7
       SNR=12
BANOM                                S      Sn      15 40 34.4 +4.5
MASF   Masafi              1.96 198  P      Pb      15 40 21.4 -0.2
       SNR=14
MASF                                 S      Sb      15 40 45.0 -1.0
MSFE   Esma-Masafi         1.97 198  eP     Pn      15 40 20.8 +1.6
       SNR=63
MDH    Madha               2.00 194  P      Pn      15 40 20.4 +0.9
MDH                                  S      Sg      15 40 47.9 -2.1
MDH    Madha               2.00 194  eP     Pn      15 40 20.3 +0.8
       SNR=32
UOSS   Minazif             2.36 194  P      Pb      15 40 27.5 -0.8
UOSS                                 S      Sb      15 40 54.8 -2.7
KBAM   BAM                 2.37  37  Pn     Pn      15 40 26.0 +1.3
NGRK   Negar Kerman        2.39 358  Pn     Pn      15 40 24.9 -0.3
NAZ    Nazwa, Dubai        2.48 205  P      Pn      15 40 29.0 +2.8
       SNR=6.4
NAZ    Nazwa, Dubai        2.48 205  eP     Pn      15 40 28.3 +2.2
       SNR=6.6
HATD   Hatta, Dubai        2.49 195  P      Pn      15 40 27.9 +1.6
HATD                                 S      Sb      15 40 59.1 -2.2
HATD   Hatta, Dubai        2.49 195  P      Pn      15 40 27.6 +1.3
ASHO   Ashiyiah            2.65 195  P      Pn      15 40 31.3 +2.8
       SNR=19
ASHO                                 S      Sb      15 41 04.6 -1.1
ASHO   Ashiyiah            2.65 195  eP     Pn      15 40 31.0 +2.5
       SNR=30
CHMN   Cheshme madani      2.68  13  Pn     Pn      15 40 29.1 -0.1
FAQ    Al Faqa, Dubai      2.73 204  P      Pn      15 40 32.1 +2.6
FAQ                                  S      Sn      15 41 02.5 -0.1
FAQ    Al Faqa, Dubai      2.73 204  P      Pn      15 40 31.1 +1.6
ASUD   Al Ashush, Dub      2.94 208  P      Pn      15 40 35.3 +2.8
       SNR=17
ASUD                                 S      Sn      15 41 09.5 +1.7
ASUD   Al Ashush, Dub      2.94 208  i P    Pn      15 40 34.6 +2.1
       SNR=17
SOHO   SOHO                3.11 185  P      Pn      15 40 35.6 +0.7
KHGB   Koh Gabri           3.13 354  Pn     Pn      15 40 35.3  0.0
AJN    Ajban               3.15 212  P      Pn      15 40 37.5 +2.2
       SNR=8.5
AJN                                  S      Sn      15 41 14.1 +1.2
AJN    Ajban               3.15 212  i P    Pn      15 40 36.5 +1.2
       SNR=8.4
KRM1   Kerman Provinc      3.27   7  Pn     Pn      15 40 37.9 +0.8
ALNE   Al Ain              3.32 197  P      Pn      15 40 39.6 +1.8
CHBR   Chabahar            3.67 116  Pn     Pn      15 40 45.9 +3.4
HOQ    Hoqain              3.68 173  P      Pn      15 40 43.7 +1.0
       SNR=24
HOQ                                  S      Sn      15 41 23.8 -2.2
ZRDN   Zarand Kerman       3.71 356  Pn     Pn      15 40 43.2 -0.1
BIDO   Bidbid              3.89 162  P      Pn      15 40 47.2 +1.6
       SNR=15
BIDO                                 S      Sn      15 41 29.9 -1.4
ARQ    Araqi               3.90 184  P      Pn      15 40 49.0 +3.3
       SNR=15
ARQ                                  S      Sn      15 41 34.9 +3.2
NGCH   Negor - Chabah      4.30 115  P      Pn      15 40 55.1 +3.9
       SNR=33
NGCH                                 S      Sn      15 41 44.5 +3.1
       SNR=6.0
NGCH   Negor - Chabah      4.30 115  Pn     Pn      15 40 54.9 +3.7
SMDO   Samad               4.32 165  P      Pn      15 40 53.7 +2.2
       SNR=22
SMDO                                 S      Sn      15 41 40.7 -1.3
MZWR   Madinat Zayed       4.37 218  P      Pn      15 40 52.9 +0.7
MZWR                                 S      Sn      15 41 42.5 -0.7
IBAF   Bafgh               4.46 346  Pn     Pn      15 40 52.7 -0.9
BSY    Bisya               4.50 176  P      Pn      15 40 57.4 +3.4
       SNR=12
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BSY				S	Sn	15 41 43.9	-2.4
IMEH	Mehriz	4.56	335	Pn	Pn	15 40 53.7	-1.2
UMZA	Um Al Zommool	4.76	199	P	Pn	15 40 59.0	+1.5
UMZA				S	Sn	15 41 51.2	-1.6
SRVN	Saravan	4.96	87	Pn	Pn	15 41 03.8	+3.4
JMDO	Jabal Madar	4.99	166	P	Pn	15 41 03.7	+3.0
	SNR=14						
JMDO				S	Sn	15 41 56.7	-1.8
NHDN	Nehbandan	5.00	34	Pn	Pn	15 41 02.8	+1.9
WBK	Wadi Bani Khal	5.01	157	P	Pn	15 41 02.8	+1.8
	SNR=33						
WBK				S	Sn	15 41 59.5	+0.4
WBK	Wadi Bani Khal	5.01	157	Pn	Pn	15 41 03.1	+2.1
DSBU	Dashti - Bushe	5.05	284	Pn	Pn	15 41 00.6	-0.9
BSRN	Basiran	5.11	23	Pn	Pn	15 41 03.8	+1.3
IKOO	Kooshah	5.50	20	Pn	Pn	15 41 08.6	+0.8
JLN	Jalan Bani Buh	5.59	155	P	Pn	15 41 10.7	+1.8
	SNR=41						
JLN				S	Sn	15 42 11.8	-1.6
	SNR=30						
TRNA	Turayna	5.63	245	P	Pn	15 41 09.0	-0.6
	SNR=7.3						
TPRV	Parvadeh(Tabas	5.76	359	Pn	Pn	15 41 11.4	+0.1
SAKB	Bahrain	5.77	259	P	Pn	15 41 12.5	+1.1
KLNJ	Kolanjah	5.91	311	Pn	Pn	15 41 11.7	-2.0
SMRA	Abu-Samra	5.95	247	P	Pn	15 41 13.7	-0.1
IRAM	Ramesheh	5.97	321	Pn	Pn	15 41 12.8	-1.5
MHTO	MHTO	6.32	170	P	Pn	15 41 22.0	+3.0
	SNR=15						
MHTO				S	Sn	15 42 32.9	+1.6
ANAR	Anarak	6.50	336	Pn	Pn	15 41 19.8	-1.7
TNSJ	Nastanj	6.70	358	Pn	Pn	15 41 24.6	+0.4
ZNGN	Zangian	7.11	314	Pn	Pn	15 41 28.6	-1.5
JHBN	Jahan bin	7.30	314	Pn	Pn	15 41 30.5	-2.2
DQM	DQM	7.32	175	P	Pn	15 41 34.0	+1.4
DQM				S	Sn	15 42 53.7	-2.1
KRSH	Karshahi	7.82	330	Pn	Pn	15 41 38.7	-1.0
ISFB	Sefidab	8.10	332	Pn	Pn	15 41 42.4	-1.1
DOK	Doka	8.94	197	P	Pn	15 41 55.2	+0.2
DOK				S	Sn	15 43 35.0	-0.8
SHAO	Shalim	9.25	187	P	Pn	15 41 60.0	+0.8
	SNR=8.5						
SHAO				S	Sn	15 43 43.7	+0.3
DMTO	DMTO	9.64	191	P	Pn	15 42 04.8	+0.2
DMTO				S	Sn	15 43 50.6	-2.4
WHFO	Wadi Hawf	9.70	198	P	Pn	15 42 06.4	+0.9
	SNR=9.8						
ABTO	Aybut	10.37	199	P	Pn	15 42 14.0	-0.7
ASF	Jabal al Asfar	17.99	291	P	Pn	15 43 52.2	-3.8
	0.4nm,0.3s,baz=264,slow=21,SNR=1.8 1.5nm,0.4s						
KBZ	Khabaz	19.93	329	P	P	15 44 15.9	-1.7
	0.1nm,0.3s,baz=190,slow=3.5,SNR=2.2						
KBZ				LR	LR	15 52 06.9	
	comp=Z,84nm,18.1s,baz=346,slow=38 1.1nm,0.9s						
AAK	Ala-Archa	21.04	39	P	P	15 44 29.3	-0.6
	1.1nm,0.5s,baz=183,slow=4.7,SNR=7.9 1.1nm,0.5s						
BRTR	Keskin Array B	22.92	309	P	P	15 44 47.0	-3.0
	0.7nm,0.6s,baz=137,slow=8.3,SNR=6.2 0.7nm,0.6s						
BVAR	Borovoye Array	27.66	18	P	P	15 45 32.8	-0.7
	0.8nm,0.6s,baz=231,slow=42,SNR=3.3 0.8nm,0.6s						
MKAR	Makanchi Array	27.98	39	P	P	15 45 34.3	-2.2
	0.3nm,0.4s,baz=219,slow=8.6,SNR=11 0.3nm,0.4s						
KURBB	Kurchatov Arra	28.60	29	P	P	15 45 41.2	-0.8
	0.3nm,0.3s,baz=233,slow=4.3,SNR=2.9 0.3nm,0.3s						
AKASG	Malin Array Be	31.44	326	P	P	15 46 04.2	-2.9
	0.4nm,0.3s,baz=133,slow=8.3,SNR=2.2 0.4nm,0.3s						
ZALV	Zalesovo Beam	33.69	30	P	P	15 46 25.5	-1.3
	2.0nm,0.4s,baz=238,slow=9.1,SNR=10.0 2.0nm,0.4s						
GERES	GERESS Array B	39.54	315	P	P	15 47 13.6	-3.2
	0.2nm,0.4s,baz=147,slow=7.6,SNR=2.7 0.2nm,0.4s						
FINES	FINESS Array B	39.91	337	P	P	15 47 17.1	-2.5
	4.2nm,1.0s,baz=143,slow=8.4,SNR=11 4.2nm,1.0s						
WTTA	Wattenberg	40.47	312	eP	P	15 47 21.2	-3.4
	1.5nm,0.4s						
SQTA	Sankt Quirin	40.74	312	iP	P	15 47 23.3	-3.5
	2.8nm,0.4s						
FETA	Feichten	41.02	311	eP	P	15 47 25.6	-3.5
	1.6nm,0.5s						
DAVA	Damuels	41.64	312	iP	P	15 47 30.9	-3.4
	3.7nm,0.5s						
HFS	Hagfors	43.99	330	P	P	15 47 48.5	-4.4
	1.2nm,0.5s,baz=128,slow=9.3,SNR=6.5 1.2nm,0.5s						
ESDC	Sonseca Array	51.32	300	P	P	15 48 47.7	-2.6
	0.2nm,0.4s,baz=78,slow=6.9,SNR=4.9 0.2nm,0.4s						
TORD	Torodi Ar. Bea	53.22	266	P	P	15 49 02.2	-2.4
	0.4nm,0.5s,baz=63,slow=8.3,SNR=3.6 0.4nm,0.5s						
ILAR	Eielson Array	86.44	10	P	P	15 52 26.0	-2.1
	0.5nm,0.9s,baz=341,slow=6.2,SNR=4.3 0.5nm,0.9s						

IDC 30 15:41:50.0±3.6, 5°.34S×68°.53E, h0km, mb3.6/5, mbtmp3.6/5, MS2.9/3, Error ellipse: s-maj=92.9km s-min=28.8km az=63.0, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S3	Diego Garcia H	4.54	120	Pn	Pn	15 42 57.6	-2.2
	baz=322,slow=20						
H08S3				T	T	15 47 40.5	
	baz=312,slow=75						
H08S1	Diego Carcia H	4.54	120	Pn	Pn	15 42 58.3	-1.5
	baz=322,slow=20						
H08S1				Sn	Sn	15 43 47.3	-5.8
H08S1				T	T	15 47 41.6	
	baz=312,slow=75						
H08S2	Diego Garcia H	4.55	120	Pn	Pn	15 42 58.2	-1.8
	baz=322,slow=20						
H08S2				T	T	15 47 41.5	
	baz=312,slow=75						
PALK	Pallekele	17.45	44	LR	LR	15 50 22.9	
	comp=Z,26nm,21.4s,baz=167,slow=29						
PSI	Prapat	31.42	76	LR	LR	15 58 44.0	
	comp=Z,36nm,18.6s,baz=242,slow=32						
CMAR	Chiang Mai Arr	38.19	51	P	P	15 49 12.3	+0.5
	0.5nm,0.7s,baz=244,slow=9.5,SNR=7.0						
CMAR				LR	LR	16 04 16.1	
	comp=Z,12nm,18.1s,baz=90,slow=35 0.5nm,0.7s						
H04N2	CROZET ISLANDS	43.18	197	T	T	16 35 52.1	
	baz=26						
H04N1	CROZET ISLANDS	43.18	197	T	T	16 35 45.8	
	baz=26						
H04N3	CROZET ISLANDS	43.19	197	T	T	16 35 46.9	
	baz=26						
H01W3	Cape Leeuwin H	51.29	131	T	T	16 45 58.0	
	baz=294,slow=74						
H01W2	Cape Leeuwin H	51.30	131	T	T	16 46 02.5	
	baz=294,slow=74						
H01W1	Cape Leeuwin H	51.31	131	T	T	16 45 59.9	
	baz=294						
MKAR	Makanchi Array	53.33	12	P	P	15 51 09.2	-1.8
	0.2nm,0.7s,baz=196,slow=8.9,SNR=3.6 0.2nm,0.7s						
ZALV	Zalesovo Beam	60.64	11	P	P	15 52 03.4	+0.7
	0.5nm,0.6s,baz=207,slow=6.0,SNR=2.6 0.5nm,0.6s						
ASAR	Alice Springs	65.33	113	P	P	15 52 34.9	+0.3
	0.5nm,0.6s,baz=275,slow=5.9,SNR=5.2 0.5nm,0.6s						
WRA	Warramunga Arr	65.47	109	P	P	15 52 36.1	+0.6
	1.0nm,0.6s,baz=280,slow=6.0,SNR=2.2 1.0nm,0.6s						

MEX 30 16:29:00.5±0.5, 14°.26N×92°.71W, h16km±999km, MD4.0
GCG 30 16:29:07.2±0.4, 14°.67N×92°.15W, h14km±7km, MD3.9
ISC 30 16:28:50.8±2.8, 14°.0N±0°.2×92°.82W±0°.08, h31km±19km, n11, σ2s05/18, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PATR	El Naranjo	1.24	27	eP	Pb	16 29 15.6	+1.8
PATR				eS	Sn	16 29 27.8	-0.2
CHUJ	Union Juarez	1.28	32	eP	Pb	16 29 16.2	+1.8
CHUJ				eS	Sn	16 29 28.9	0.0
PAVE	Pavencul	1.33	28	eP	Pb	16 29 17.0	+1.7
PAVE				eS	Sn	16 29 30.3	0.0
STG2	El Palmar, Qui	1.46	73	eP	Pb	16 29 17.7	+0.3
STG5	El Palmar, Qui	1.48	74	eP	Pb	16 29 18.0	+0.3
STG8	El Palmar, Qui	1.49	73	eP	Pb	16 29 18.4	+0.4
PCIG		1.73	347	eP	Pb	16 29 24.2	+2.3
PCIG				eS	Sn	16 29 41.1	+1.3
CCIG	Comitan	2.35	16	eP	Pb	16 29 33.3	+0.7
CCIG				eS	Sn	16 29 58.1	+2.7
APG	El Apazote	2.48	66	eP	Pb	16 29 36.3	+1.4
TGIG		2.77	354	eP	Pb	16 29 39.1	-0.5
TGIG				iS	Sn	16 30 02.9	-2.6
CMIG	Matias Romero	3.65	327	eP	Pb	16 29 57.1	+2.4
CMIG				eS	Sb	16 30 34.1	-4.4

IDC 30 16:31:17.1±58.0, 16°.60S×178°.41W, h0km, mb4.2/3, mbtmp4.2/3, Error ellipse: s-maj=1064.0km s-min=173.6km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	39.27	240	P	P	16 38 48.0	+0.3
	3.5nm,0.9s,baz=100,slow=6.1,SNR=2.8 3.5nm,0.9s						
WRA	Warramunga Arr	44.88	258	P	P	16 39 33.4	-0.4
	0.4nm,0.3s,baz=94,slow=7.4,SNR=6.9 0.4nm,0.3s						
ASAR	Alice Springs	45.16	253	P	P	16 39 35.8	-0.2
	3.5nm,0.4s,baz=88,slow=8.7,SNR=124 3.5nm,0.4s						

BGR 30 16:58:47.3, 5°.25N×95°.31E, h33km, mb5.0, Ms5.7
BJI 30 16:58:58.3, 6°.26N×94°.28E, h100km, mB5.2/15, mb5.0/68
BKK 30 16:59:01.6±0.5, 7°N±4°×9°4E±°, h10km, M4.6/14, Mjma4.3/14, MLv4.7/4
MOS 30 16:59:03.2±1.0, 6°.76N×94°.53E, h110km, mb5.1/42, MS5.7/4, Error ellipse: s-maj=7.7km s-min=4.6km az=112.5
NEIC 30 16:59:04, 6°.69N×94°.41E, h100km, Moment Tensor Solution. Duration: 1s4 Moment tensor: Scale 10^{16}Nm; M_{rr}0.88; $M_{\theta\theta}$-1.32; $M_{\phi\phi}$0.44; $M_{r\theta}$0.53; $M_{\theta\phi}$-1.51; $M_{\phi r}$-0.57; Fault plane solution: $M_0$2.06000×10^{16} NP1: ϕ_s201.26000°, δ61.95000°, λ25.75000°. NP2: ϕ_s98.48000°, δ67.45000°, λ149.39000°. Principal axes: T 1.8859, Plg37.0000°, Azm58.0000°; N 0.3159, Plg53.0000°, Azm246.0000°; P -2.2018, Plg4.0000°, Azm151.0000°;
IDC 30 16:59:04.2±0.5, 6°.76N×94°.50E, h103km±4km, mb4.6/40, mbtmp4.9/43 Error ellipse: s-maj=9.2km s-min=8.5km az=86.0
NEIC 30 16:59:04±2.0, 6°.69N±0°.06×94°.40E±0°.08, h100km±3km, mb5.2/128, Mww4.8/12, Error ellipse: s-maj=12.0km s-min=7.2km az=67.0
NEIC 30 16:59:04, 6°.69N×94°.41E, h100km
DJA 30 16:59:05.8±0.3, 6°N±3°×9°4E±°, h119km±3km, M5.0/90, mb5.0/90, mB5.5/23, MLv5.2/12, Mw(mB)5.0/23, MwMwp4.5/4, Mwp4.9/4
ISC 30 16:59:03.6±0.3, 6°.70N±0°.03×94°.41E±0°.04, h104km±2km, h104km:pP-P, n626, σ1s49/686, mb5.0/220, 36C-20D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMBY	CAMPBELL BAY	0.57	303	eP	Pn	16 59 20.7	+0.5
CMBY				eS	Sn	16 59 33.5	+0.8
CMBY				IAML		16 59 39.6	
	comp=N,42µm,0.2s						
CMBY				IAML		16 59 40.2	
	comp=E,36µm,0.2s						
LHMI	Lhok Sumawe	2.92	120		Pn	16 59 48.5	+0.2
LHMI	Lhok Sumawe	2.92	120	P	Pn	16 59 49.7	+1.4
LHMI	Lhok Sumawe	2.92	120	S	Sn	17 00 24.7	+1.9
LHMI	Lhok Sumawe	2.92	120	P	Pn	16 59 49.9	+1.6
LHMI				S	Sn	17 00 24.1	+1.3
MLSI	Meulaboh, Aceh	3.13	140	P	Pn	16 59 51.6	+0.5
MLSI				S	Sn	17 00 26.6	-1.2
PKDT	Phuket	4.08	73	P	Pn	17 00 05.5	+1.7
TPTI		4.39	141	P	Pn	17 00 07.4	-0.7
KCSI	Kotacane, Aceh	4.60	133	P	Pn	17 00 11.8	+0.8
SNSI	Sinabang, Aceh	4.67	156	P	Pn	17 00 09.4	-2.5
RNTT	Ranong	4.84	56	P	Pn	17 00 16.1	+1.9
PBA	Port Blair	5.20	342		Pn	17 00 18.2	-0.8
PBA	Port Blair	5.20	342	eP	Pn	17 00 19.4	+0.4
PBA				eS	Sn	17 01 15.1	-2.7
PBA				IAML		17 01 22.6	
	comp=N,4µm,0.3s						
PBA				IAML		17 01 23.0	
	comp=E,4µm,0.4s						
TSI	Tuntungan	5.22	127	P	Pn	17 00 20.7	+1.4
SURA	Surathani	5.73	64	P	Pn	17 00 27.8	+1.6
SURA	Surathani	5.73	64	P	Pn	17 00 27.9	+1.7
PSI	Prapat	5.94	130	P	Pn	17 00 30.1	+1.0
	comp=E,156nm,0.6s,baz=306,slow=9.7,SNR=164						
PSI	Prapat	5.94	130	P	Pn	17 00 29.8	+0.6
	comp=E,1µmcomp=E,150nm,0.8s						
RPSI	Rantau Prapat	6.00	131		Pn	17 00 30.1	+0.2
GSI	Gunungsitoli	6.22	149		Pn	17 00 30.0	-2.9
GSI	Gunungsitoli	6.22	149	P	Pn	17 00 30.5	-2.4
	comp=E,0.8nmcomp=E,2µmcomp=E,158nm,0.6s						
KULM	Kulim	6.37	102		Pn	17 00 34.8	-0.1
KULM	Kulim	6.37	102	P	Pn	17 00 36.8	+1.9
KULM	Kulim	6.37	102	P	Pn	17 00 35.3	+0.4
DGPR	DIGLIPUR	6.60	347	eP	Pn	17 00 37.3	-0.8
DGPR				eS	Sn	17 01 47.0	-4.9
DGPR				IAML		17 01 54.1	
	comp=N,2µm,0.0s						
DGPR				IAML		17 01 55.1	
	comp=E,2µm,0.3s						
IPM	Ipoh	6.95	108		Pn	17 00 42.6	-0.2
IPM	Ipoh	6.95	108	P	Pn	17 00 43.1	+0.3
IPM	Ipoh	6.95	108	P	Pn	17 00 43.0	+0.3
	comp=E,0.5nmcomp=E,96nm,0.9s						
PBSI	Pulau Batu	7.74	150	P	Pn	17 00 51.7	-1.9
	comp=E,0.6nmcomp=E,129nm,0.6s						
MNSI	Mandailing Nat	7.81	138	P	Pn	17 00 53.3	-1.2
BKNI	Bangkinang	9.15	133		Pn	17 01 11.5	-1.3
BKNI	Bangkinang	9.15	133	P	Pn	17 01 11.7	-1.1
SISI	Saibi	9.24	149	P	Pn	17 01 12.4	-1.5
PPI	Padang Panjang	9.29	140	P	Pn	17 01 13.3	-1.3
	comp=E,2µmcomp=E,125nm,0.8s						
PDSI	Padang	9.68	141	P	Pn	17 01 18.1	-1.8
	comp=E,1µmcomp=E,76nm,0.7s						
UTHA	Uthaitani	10.10	29	P	Pn	17 01 28.6	+3.0
MYKOM	Kota Tinggi	10.60	117		Pn	17 01 32.5	0.0
MYKOM	Kota Tinggi	10.60	117	P	Pn	17 01 33.8	+1.3
MYKOM	Kota Tinggi	10.60	117	P	Pn	17 01 32.7	+0.2
	comp=E,55nm,1.3s						
PPSI	Pulau Pagai	10.94	149	P	Pn	17 01 34.6	-2.4
	comp=E,93nm,0.8s						
KRJI	Kerinci	11.21	141	P	Pn	17 01 38.8	-2.1
	comp=E,5µmcomp=E,147nm,0.7s						
TPRI	Tanjung Pinang	11.61	119	P	Pn	17 01 46.4	+0.3
	comp=E,3µmcomp=E,96nm,0.7s						
DSRI	Dabo	12.40	125	P	Pn	17 01 55.9	-0.7
	comp=E,27nm,0.7s						
CM31	Chiang Mai Arr	12.50	20		Pn	17 01 59.1	+1.2
CMAR	Chiang Mai Arr	12.50	20	P	Pn	17 01 59.0	+1.1
	comp=E,4.7nm,0.7s,baz=212,slow=14,SNR=80						
CMAR				S	Sn	17 04 19.4	+4.0
	comp=E,2.4nm,0.7s,baz=241,slow=17,SNR=2.3						
CMAR				ScP	ScP	17 10 52.2	-0.6
	comp=E,1.6nm,0.7s,baz=231,slow=2.9,SNR=12						
CMAR	Chiang Mai Arr	12.50	20		Pn	17 01 59.3	+1.5
CMAR	Chiang Mai Arr	12.50	20	P	Pn	17 01 59.0	+1.1
UTTA	Uttaradit	12.51	28	P	P	17 02 04.8	-0.7
MASI	Maura Aman, Be	12.52	141	P	Pn	17 01 56.4	-1.7
	comp=E,85nm,1.0s						
KHON	Khomkaen	12.64	40	P	P	17 02 10.1	+3.2
CHTO	Chiang Mai	12.83	20		Pn	17 02 03.6	+1.5
CHTO	Chiang Mai	12.83	20	P	Pn	17 02 04.7	+2.5
CHTO	Chiang Mai	12.83	20	P	Pn	17 02 03.7	+1.5
CHTO	Chiang Mai	12.83	20	P	Pn	17 02 04.6	+2.4
KSI	Kapahiang	13.13	141	P	Pn	17 02 03.3	-2.9
	comp=E,5µmcomp=E,102nm,0.7s						
PALK	Pallekele	13.62	273	P	P	17 02 16.2	-1.6
	comp=E,11nm,0.3s,baz=88,slow=16,SNR=23						
PALK				S	Sn	17 04 32.5	-10
	comp=E,56nm,0.3s,baz=34,slow=10,SNR=12						
PALK	Pallekele	13.62	273	P	P	17 02 17.0	-0.8
UBPT	Khong Chiam	13.80	51	P	P	17 02 18.8	-1.0
MNAI	Manna	13.91	142	Pn	Pn	17 02 12.8	-3.5
MNAI	Manna	13.91	142	P	Pn	17 02 13.4	-2.9
	comp=E,271nm,1.3s						
EGSI	Enggano, Bengk	14.32	147	P	Pn	17 02 17.9	-3.6
	comp=E,73nm,0.8s						
PANO	Nakornpanom	14.40	43	P	P	17 02 25.1	-1.4
MDSI	Maura Dua	14.78	138	P	Pn	17 02 24.2	-3.3
	comp=E,47nm,1.0s						
LWLI	Liwa	15.11	140	P	Pn	17 02 29.4	-2.3
	comp=E,120nm,0.7s						
KLSI		15.30	137	P	Pn	17 02 31.3	-2.7
	comp=E,45nm,1.0s						
VIS	Vishakhapatnam	15.39	316	eP	Pn	17 02 35.4	+0.2
VIS				eS	Sn	17 05 10.3	-15
SAIH	SAIHA	15.76	355	eP	Pn	17 02 40.5	+0.6
SAIH				eS	Sn	17 05 18.8	-16
KASI	Kota Agung	15.77	140	P	Pn	17 02 38.0	-1.9
	comp=E,31nm,0.5s						
BWNR	Bhubaneshwar	15.84	329	eP	P	17 02 41.6	-0.8
BWNR				eS	Sn	17 05 21.1	-15
TPI	Tanjungpandan	16.22	125	P	Pn	17 02 45.3	-0.2
BELO	BELONIA	16.70	350	eP	P	17 02 53.1	+1.2
MORE	Moreh	17.44	360	P	P	17 02 58.2	-1.9
IMP	Imphal	18.04	359	eP	Pn	17 03 10.2	+2.6
IMP				eS	S	17 06 10.5	-18
SBUM	Sibu	18.25	103	P	Pn	17 03 11.3	+1.1
TNCH	TengChong	18.65	12	⇓P	Pn	17 03 17.0	+1.9
TNCH				sP	sP	17 03 44.8	-0.3
TNCH				S	S	17 06 40.5	-0.4
TNCH				pmax	pmax		
	comp=E,110nm,1.0s						
HYB	Hyderabad	18.79	306	eP	P	17 03 15.6	+0.6
HYB				epP	pP	17 03 34.3	-0.1
HYB				eS	S	17 06 45.1	+1.5
CNJI	Cibinong	18.83	137	P	P	17 03 11.4	-4.0
BOK	Bokaro	18.87	335	eP	Pn	17 03 22.1	+4.6
COCO	West Island	18.92	173	P	P	17 03 14.8	-1.5
	comp=E,147nm,0.9s						
SHL	Shillong	18.92	353		P	17 03 15.4	-1.1
SHL	Shillong	18.92	353	P	P	17 03 15.4	-1.1
BBJI	Bungbulang	19.30	137	P	P	17 03 17.8	-2.8
QIZ	Qiongzhong	19.39	49		Pn	17 03 23.9	+0.3
QIZ	Qiongzhong	19.39	49	P	Pn	17 03 24.7	+1.1
KMI	Kunming	19.98	23	⇑P	Pn	17 03 31.3	+0.5
KMI				S	Sn	17 07 17.5	+1.4
KMI				pmax	pmax		
	comp=E,79nm,0.9s						
CTJI	Waduk Cacaban	20.07	132	P	P	17 03 26.5	-2.3
	comp=E,26nm,0.8s						
KPJI	Karang Pucung	20.10	134	P	P	17 03 28.0	-1.2
	comp=E,22nm,0.6s						
LKP	Lekhapani	20.57	4	eP	Pn	17 03 44.6	+7.3
LKP				eS	S	17 07 10.9	-7.6
ZIRO	ZIRO	20.73	359	eP	Pn	17 03 47.6	+8.2
ZIRO				eS	S	17 07 14.8	-7.1
PZH	PanZhiHua	20.90	19	P	Pn	17 03 40.8	-0.6
TAWA	Tawang	20.93	354	eP	Pn	17 03 49.4	+7.6
UGM	Wanagama	21.65	132	P	P	17 03 47.1	+1.2
	comp=E,66nm,1.9s						
KKM	Kota Kinabalu	21.68	90	P	P	17 03 46.9	+0.6
KKM	Kota Kinabalu	21.68	90	P	P	17 03 47.4	+1.1
	comp=E,37nm,1.0s						
MTKI	Muara Teweh, K	21.81	110	P	P	17 03 47.6	0.0
	comp=E,25nm,0.5s						
TBJI	Tambak Boyo	21.98	127	P	P	17 03 51.7	+2.4
NGJI	Ngawi	22.01	129	P	P	17 03 51.5	+1.8
	comp=E,110nm,0.9s						
SJI	Sawahan	22.48	129	P	P	17 03 53.7	-0.9
SNJI	Sawahan-Nganju	22.50	129	P	P	17 03 55.0	+0.1
	comp=E,33nm,0.8s						
BBKI	Banjar Baru	22.76	116	P	P	17 03 56.7	-0.7
	comp=E,66nm,0.9s						
GYA	Guiyang	22.86	29	⇑P	P	17 03 59.5	+1.1
GYA				pP	pP	17 04 18.0	-0.2
GYA				sP	sP	17 04 33.3	+2.5
GYA				S	S	17 07 51.8	-8.4
GYA				pmax	pmax		
	comp=E,150nm,1.0s						
KMMI	Kalianget	23.82	125	P	P	17 04 07.0	-0.2
	comp=E,44nm,0.8s						
BLJI	Banyuglugur	23.92	127	P	P	17 04 08.1	0.0
GMJI	Gumukmas	24.11	128	P	P	17 04 08.6	-1.3
	comp=E,35nm,0.9s						
ABJI	Asem Bagus	24.46	126	P	P	17 04 13.5	+0.5
	comp=E,132nm,0.9s						
JAGI	Jajag, Banyuwa	24.79	127		P	17 04 14.4	-1.6
JAGI	Jajag, Banyuwa	24.79	127	P	P	17 04 14.6	-1.5
	comp=E,17nm,0.7s						
KHKI	Kahang-Kahang	25.90	125	P	P	17 04 26.3	+0.2
	comp=E,40nm,0.9s						
H08S3	Diego Garcia H	26.09	237	T	T	17 30 15.0	
	baz=59,slow=76,SNR=87						
H08S2	Diego Garcia H	26.09	237	T	T	17 30 21.0	
	baz=59,slow=76,SNR=258						
H08S1	Diego Carcia H	26.10	237	T	T	17 30 11.6	
	baz=59,slow=76,SNR=140						
MMSI	Mamuju	26.18	110	P	P	17 04 29.5	+0.8
	comp=E,44nm,0.8s						
MPSI	Mapaga	26.20	103	P	P	17 04 29.6	+0.7
	comp=E,664nmcomp=E,81nm,1.0s						
PMSI	Majene	26.48	112	P	P	17 04 31.9	+0.5
	comp=E,86nm,0.8s						
TOLI2	Tolitoli	26.88	101		P	17 04 34.5	-0.5
TTSI	Tana Toraja	27.15	110	P	P	17 04 36.5	-0.9
	comp=E,1µmcomp=E,26nm,0.8s						
ENH	Enshi	27.40	29		P	17 04 39.5	0.0
ENH				IAmb	IAmb	17 04 40.6	
	comp=Z,31nm,0.7s						
ENH	Enshi	27.40	29	P	P	17 04 39.8	+0.3
SPSI	Sidrap Palu	27.44	112	P	P	17 04 40.6	+0.6
SZP	Santa	27.62	65	P	P	17 04 44.0	+2.5
KAPI	Kappang	27.84	114	P	P	17 04 43.9	+0.3
MRSI	Marisa	28.15	102	P	P	17 04 46.3	0.0
	comp=Z,51nm,0.7s						
APSI	Ampana	28.22	105	P	P	17 04 46.6	-0.3
	comp=Z,42nm,1.0s						
BKSI	Bulukumba	28.31	114	P	P	17 04 47.3	-0.4
GTOI	Gorontalo	29.16	101	P	P	17 04 53.7	-1.6
	comp=Z,782nmcomp=Z,51nm,0.6s						
LUWI	Luwuk	29.33	104	P	P	17 04 56.7	-0.1
LUWI	Luwuk	29.33	104	P	P	17 04 58.2	+1.4
LUWI	Luwuk	29.33	104	P	P	17 04 57.3	+0.5
GOMU	GeErMu	29.37	1	P	P	17 04 57.5	+0.2
LBFI	Labuhan Bajo,	29.54	120	P	P	17 04 56.7	-1.9
	comp=Z,25nm,1.0s						
WBSI	Waikabubak, Su	29.71	123	P	P	17 04 55.8	-4.4
	comp=Z,29nm,0.8s						
WHN	Wuhan	30.22	36	P	P	17 05 06.0	+1.6
WHN				pmax	pmax		
	comp=Z,110nm,1.0s						
TWG	Pinlang	30.27	55	IAmb	IAmb	17 05 08.6	
	comp=Z,48nm,0.8s						
TWGBT	Beinan	30.28	55	P	P	17 05 08.6	+3.5
LZDM	Lanzhou Array	30.34	15	P	P	17 05 06.2	+0.4
	comp=Z,6.0nm,0.3s,baz=190,slow=7.5,SNR=20						
LZDM				PcP	PcP	17 08 03.8	+0.1
	comp=Z,1.9nm,0.4s,baz=217,slow=7.1,SNR=4.9 comp=Z,6.0nm,0.3s						
XAN	Xi'an	30.34	24	P	P	17 05 05.5	-0.1
XAN				PcP	PcP	17 08 03.8	+0.4
XAN				S	S	17 09 54.5	-3.9
XAN				pmax	pmax		
	comp=Z,120nm,0.8s						
XAN				pmax	pmax		
	comp=Z,180nm,3.8s						
WSI	Waingapu	30.49	122	P	P	17 05 03.0	-4.0
LZH	Lanzhou	30.50	15	eP	P	17 05 07.5	+0.4
LZH				pP	pwP	17 05 34.5	+1.7
LZH				sP	sP	17 05 44.0	+2.8
LZH				pmax	pmax		
	comp=Z,26nm,1.1s						
SSLB	Suanglung	30.64	53	IAmb	IAmb	17 05 12.6	
	comp=Z,32nm,0.9s						
SSLB	Suanglung	30.64	53	P	P	17 05 10.2	+1.9
YULB	Yu-li	30.72	54	P	P	17 05 10.3	+1.3
YULB				IAmb	IAmb	17 05 12.6	
	comp=Z,47nm,0.9s						
YULB	Yu-li	30.72	54	P	P	17 05 11.4	+2.4
EDFI	Ende, Flores	31.23	119	P	P	17 05 10.3	-3.3
	comp=Z,11nm,0.8s						
NACB	Ninganchiao	31.34	53	P	P	17 05 16.0	+1.6

NACB				IAmb	IAmb	17 05 19.2	
	comp=Z,28nm,0.8s						
NACB	Ninganchiao	31.34	53	P	P	17 05 17.4	+3.0
MMRI	Maumere	31.65	118	P	P	17 05 14.2	-3.0
LYN	LuoYang	32.35	29	P	P	17 05 24.8	+1.7
LYN				PcP	PcP	17 08 09.3	+0.6
LYN				pmax	pmax		
	comp=Z,84nm,0.7s						
SANI	Sanana	32.70	104	P	P	17 05 25.4	-1.0
SANI	Sanana	32.70	104	P	P	17 05 24.6	-1.8
	comp=Z,18nm,0.7s						
GTA	Gaotai	32.93	8	eP	P	17 05 29.3	+1.0
GTA				pP	pwP	17 05 55.3	+1.3
GTA				PcP	PcP	17 08 11.3	+0.9
GTA				S	S	17 10 39.8	+1.0
GTA				ScP	ScP	17 11 42.5	-2.7
GTA				PcS	PcS	17 11 56.3	+0.4
GTA				pmax	pmax		
	comp=Z,12nm,1.0s						
NIL	Nilore	33.22	327		P	17 05 31.1	+0.3
NIL				IAmb	IAmb	17 06 05.9	
	comp=Z,18nm,0.8s						
NIL	Nilore	33.22	327	P	P	17 05 31.1	+0.3
NIL				pmax	pmax		
	comp=Z,18nm,0.8s						
BATI	Baumata	33.63	120	PcP	PcP	17 08 13.5	+0.9
	comp=Z,28nm,0.6s,baz=119,slow=2.2,SNR=4.7						
BATI	Baumata	33.63	120	P	P	17 05 31.4	-3.1
	comp=Z,36nm,0.7s						
SOEI	Soe	33.94	118	P	P	17 05 33.7	-3.7
	comp=Z,48nm,0.7s						
NJ2	Nanjing	34.00	39	⇑P	P	17 05 39.3	+1.8
NJ2				pmax	pmax		
	comp=Z,50nm,0.7s						
NLAI	Namlea	34.10	106	P	P	17 05 38.7	+0.1
	comp=Z,40nm,1.1s						
AAI	Ambon	35.27	106	P	P	17 05 48.2	-0.5
	comp=Z,46nm,0.7s						
KRAI	Karang Ratu	35.36	105	P	P	17 05 48.9	-0.6
	comp=Z,33nm,0.8s						
HNS	HongShan	35.71	28	⇑P	P	17 05 54.3	+2.1
HNS				pmax	pmax		
	comp=Z,96nm,0.9s						
MSAI	Masohi	35.88	105	P	P	17 05 53.2	-0.7
	comp=Z,902nmcomp=Z,30nm,0.8s						
TIA	Tai'an	35.99	32	P	P	17 05 55.8	+1.2
TIA				pmax	pmax		
	comp=Z,63nm,0.7s						
BTO	Baotou	36.54	20	eP	P	17 06 00.0	+0.7
BTO				pP	pP	17 06 22.5	+0.3
BTO				sP	sP	17 06 34.0	+0.2
BTO				pmax	pmax		
	comp=Z,67nm,0.9s						
BTO				pmax	pmax		
	comp=Z,410nm,7.2s						
KSH	Kashi	36.65	336	P	P	17 06 00.3	0.0
KSH				pmax	pmax		
	comp=Z,8.0nm,0.5s						
WUS	Wushi	36.93	341	IAmb	IAmb	17 06 04.9	
	comp=Z,18nm,0.7s						
WUS	Wushi	36.93	341	P	P	17 06 04.0	+1.3
WUS				pP	pP	17 06 25.3	-0.4
WUS				PcP	PcP	17 08 23.6	+1.6
MANEM	Manem	37.01	329		P	17 06 04.4	+0.9
MANEM				IAmb	IAmb	17 06 46.2	
	comp=Z,48nm,0.7s						
BNDI	Bandanaira	37.15	107	P	P	17 06 02.1	-2.6
	comp=Z,76nm,0.9s						
HHC	Hu-ho-hao-te	37.30	22	eP	P	17 06 07.0	+1.2
HHC				pmax	pmax		
	comp=Z,31nm,0.7s						
HHC				pmax	pmax		
	comp=Z,94nm,4.4s						
WMQ	Urumqi	37.45	352	eP	P	17 06 07.8	+0.9
WMQ				sP	sP	17 06 47.8	+6.3
WMQ				PcP	PcP	17 08 24.8	+1.4
WMQ				S	S	17 11 48.5	+0.7
WMQ				ScS	ScS	17 16 08.5	-1.3
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
SWI	Sorong	37.54	100	P	P	17 06 07.4	-0.6
	comp=Z,37nm,0.7s						
SIJI	Sorong	37.54	100	P	P	17 06 07.4	-0.7
	comp=Z,34nm,0.8s						
TARG	Taragay, Kyrgy	37.88	340		P	17 06 11.4	+0.4
TARG				IAmb	IAmb	17 06 13.8	
	comp=Z,13nm,0.7s						
TARG	Taragay, Kyrgy	37.88	340	P	P	17 06 11.4	+0.4
TARG				pmax	pmax		
	comp=Z,13nm,0.7s						
JOW	Kunigami	37.91	54	P	P	17 06 12.1	+1.1
	comp=Z,53nm,0.5s,baz=242,slow=8.3,SNR=30						
	comp=Z,53nm,0.5s						
JOW	Kunigami	37.91	54		P	17 06 12.3	+1.3
JOW	Kunigami	37.91	54	P	P	17 06 13.1	+2.1
KDJ	Kajisay	38.45	339	IAmb	IAmb	17 06 18.2	
	comp=Z,23nm,0.8s						
DRK	Karamyk	38.46	331	IAmb	IAmb	17 06 42.9	
	comp=Z,40nm,0.7s						
BJT	Baijiatuau	38.50	27		P	17 06 16.8	+1.1
BJT				IAmb	IAmb	17 06 19.0	
	comp=Z,68nm,1.3s						
BJT	Baijiatuau	38.50	27	P	P	17 06 18.3	+2.6
BJT	Baijiatuau	38.50	27	P	P	17 06 16.8	+1.1
BJT				pmax	pmax		
	comp=Z,68nm,1.3s						
BJT	Baijiatuau	38.50	27	P	P	17 06 17.8	+2.1
BJT				pP	pP	17 06 39.6	+0.9
BJI	Beijing	38.52	27	P	P	17 06 17.5	+1.6
BJI				PcP	PcP	17 08 27.5	+0.8
BJI				pmax	pmax		
	comp=Z,20nm,1.0s						
FAKI	Fak Fak	38.97	103	P	P	17 06 18.9	-1.1
	comp=Z,14nm,0.7s						
CHGR	Chuyangaron	39.16	328		P	17 06 20.9	-0.5
CHGR	Chuyangaron	39.16	328	⇑eP	P	17 06 21.0	-0.3
CHGR				pmax	pmax		
	comp=Z,15nm,0.9s						
ARSB	Arslanbob	39.41	334	IAmb	IAmb	17 06 26.3	
	comp=Z,17nm,0.7s						
FITZ	Fitzroy Crossi	39.46	129	PcP	PcP	17 08 30.8	+0.7
	comp=Z,7.3nm,0.5s,baz=334,slow=4.2,SNR=9.2						
FITZ				ScP	ScP	17 12 07.7	-1.8
	comp=Z,8.9nm,0.6s,baz=320,slow=3.4,SNR=20						
UCH	Uchtor	39.53	337	P	P	17 06 27.0	+2.1
	SNR=9.7						
TKM2	Tokmak 2	39.71	338	P	P	17 06 27.8	+1.8
	SNR=6.3						
KBK	Karagaybulak	39.73	337	P	P	17 06 28.6	+2.4
	SNR=21						
AAK	Ala-Archa	39.89	337	P	P	17 06 29.6	+2.1
	SNR=7.6						
AAK	Ala-Archa	39.89	337	ScP	ScP	17 12 09.5	-1.4
	comp=Z,1.8nm,0.6s,baz=109,slow=5.5,SNR=4.3						
AAK	Ala-Archa	39.89	337		P	17 06 28.2	+0.8
AAK	Ala-Archa	39.89	337	deP	P	17 06 29.8	+2.3
AAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AAK	Ala-Archa	39.89	337	P	P	17 06 29.8	+2.3
AAK				sP	sP	17 07 02.9	+0.2
AAK				PcP	PcP	17 08 32.8	+1.6
CHMS	Chumysh	40.10	337	P	P	17 06 30.5	+1.5
	SNR=6.3						
DL2	Dalian	40.40	33	P	P	17 06 33.0	+1.5
DL2				pmax	pmax		
	comp=Z,130nm,1.0s						
USP	Ospenovka	40.42	337	P	P	17 06 33.8	+2.1
	SNR=12						
KNRA	Kununurra	40.64	123	P	P	17 06 32.1	-1.7
KNRA				IAmb	IAmb	17 08 02.7	
	comp=Z,34nm,1.4s						
DRS	Darwin Rock St	40.95	118	P	P	17 06 35.8	-0.6
MK31	Makanchi Array	41.29	347	c iP	P	17 06 39.2	+0.5
MKAR	Makanchi Array	41.29	347	P	P	17 06 39.3	+0.6
	comp=Z,10.0nm,0.6s,baz=165,slow=7.9,SNR=127						
	comp=Z,10.0nm,0.6s						
MKAR	Makanchi Array	41.29	347		P	17 06 39.5	+0.8
MTN	Manton Dam	41.34	118		P	17 06 37.7	-1.8
MAKZ	Makanchi	41.37	347	P	P	17 06 40.0	+0.6
MAKZ				IAmb	IAmb	17 06 40.6	
	comp=Z,13nm,0.6s						
MAKZ	Makanchi	41.37	347	P	P	17 06 40.0	+0.6
MAKZ				pmax	pmax		
	comp=Z,13nm,0.6s						
MAKZ	Makanchi	41.37	347	P	P	17 06 39.9	+0.4
MAKZ				pP	pP	17 07 03.3	+0.7
MAKZ				PcP	PcP	17 08 36.3	+0.5
XLT	XiLinHaoTe	41.65	24	eP	P	17 06 43.0	+1.2
XLT				PcP	PcP	17 08 37.8	+1.0
XLT				pmax	pmax		
	comp=Z,24nm,1.2s						
XLT				pmax	pmax		
	comp=Z,180nm,5.3s						
KK31	Karatay Array	41.93	334		P	17 06 45.2	+1.3
KK31	Karatay Array	41.93	334	P	P	17 06 45.3	+1.3
KK31				pmax	pmax		
	comp=Z,11nm,1.1s						
KKAR	Karatay Array	41.93	334	P	P	17 06 44.7	+0.7
KKAR	Karatay Array	41.93	334	P	P	17 06 44.7	+0.7
TJN	Taejon	42.18	41		P	17 06 47.2	+1.0
TJN	Taejon	42.18	41	deP	P	17 06 46.5	+0.4
SONM	Songino Array	42.25	12	P	P	17 06 47.2	+0.5
	comp=Z,12nm,0.7s,baz=196,slow=7.9,SNR=66						
SONM				PcP	PcP	17 08 38.8	0.0
	comp=Z,12nm,0.8s,baz=194,slow=4.0,SNR=16						
SONM				ScP	ScP	17 12 18.5	-1.6
	comp=Z,1.5nm,0.9s,baz=197,slow=4.0,SNR=5.8						
	comp=Z,12nm,0.7s						
SONM	Songino Array	42.25	12	P	P	17 06 46.5	-0.2
SONM	Songino Array	42.25	12	P	P	17 06 46.5	-0.2
SONM						17 08 38.8	
SONM				pmax	pmax		
	comp=Z,16nm,0.9s						
ULN	Ulaanbaatar	42.42	13		P	17 06 48.3	+0.2
ULN	Ulaanbaatar	42.42	13	P	P	17 06 48.2	+0.2
ULN	Ulaanbaatar	42.42	13	P	P	17 06 48.3	+0.2
ULN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ULN	Ulaanbaatar	42.42	13	P	P	17 06 48.3	+0.2
ULN				PcP	PcP	17 08 39.9	+0.5
JNU	Nakatsue	42.84	47	P	P	17 06 52.6	+1.0
	comp=Z,49nm,0.8s,baz=262,slow=2.3,SNR=19						
	comp=Z,49nm,0.8s						
JNU	Nakatsue	42.84	47		P	17 06 52.5	+0.9
JNU				IAmb	IAmb	17 06 53.8	
	comp=Z,57nm,0.9s						
JNU	Nakatsue	42.84	47	P	P	17 06 52.9	+1.3
KSAR	Wonju Array Be	43.15	40	P	P	17 06 54.5	+0.5
KSAR	Wonju Array Be	43.15	40	P	P	17 06 54.5	+0.5
KSRS	Korea Array	43.18	40	P	P	17 06 54.6	+0.4
	comp=Z,12nm,0.8s,baz=220,slow=8.9,SNR=26						
KSRS				PcP	PcP	17 08 42.1	+0.2
	comp=Z,2.2nm,0.6s,baz=237,slow=3.1,SNR=5.2						
	comp=Z,12nm,0.8s						
DGZ	Jazzator, Alta	43.26	353	⇓eP	P	17 06 55.4	+0.6
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KNGR	Kungurtug, Tuv	43.84	3	⇓eP	P	17 07 00.4	+1.0
KNGR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ZAK	Zakamensk	44.17	8	eP	P	17 06 57.2	-4.9
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
JMN	Monobe	45.33	48	IAmb	IAmb	17 07 13.8	
	comp=Z,33nm,0.6s						
KURBB	Kurchatov Arra	45.75	346	P	P	17 07 15.4	+1.0
	comp=Z,15nm,0.6s,baz=176,slow=6.9,SNR=243						
KURBB				pP	pP	17 07 38.1	+0.2
	comp=Z,4.3nm,0.6s,baz=170,slow=6.8,SNR=4.1						
KURBB				PcP	PcP	17 08 51.0	+0.6
	comp=Z,6.1nm,0.8s,baz=162,slow=3.1,SNR=8.2						
KURBB				ScP	ScP	17 12 32.7	-1.5
	comp=Z,2.1nm,0.9s,baz=167,slow=3.5,SNR=6.0						
	comp=Z,15nm,0.6s						
KURK	Kurchatov	45.81	346	P	P	17 07 15.4	+0.5
KURK					pP	17 07 38.1	-0.3
KURK					PcP	17 08 51.0	+0.4
KURK					ScP	17 12 32.7	-1.7
KURK	Kurchatov	45.81	346	P	P	17 07 15.4	+0.5
KURK				*PP	pP	17 07 38.2	-0.3
KURK						17 08 51.1	
KURK	Kurchatov	45.81	346	P	P	17 07 16.0	+1.1
KURK				pP	pP	17 07 38.0	-0.4
KURK				PcP	PcP	17 08 51.3	+0.6
CN2	Changchun	45.89	31	eP	P	17 07 16.3	+0.7
CN2				pmax	pmax		
	comp=Z,30nm,0.6s						
GENI	Genyem	46.60	100	P	P	17 07 20.0	-1.7
	comp=Z,23nm,0.6s						
WRA	Warramunga Arr	47.37	125	P	P	17 07 27.1	-0.5
	comp=Z,34nm,0.6s,baz=305,slow=8.6,SNR=263						
WRA				pP	pP	17 07 52.6	+1.1
	comp=Z,7.1nm,0.6s,baz=302,slow=9.2,SNR=3.3						
WRA				PcP	PcP	17 08 56.9	+0.1
	comp=Z,5.3nm,0.6s,baz=311,slow=2.8,SNR=6.3						
WRA				ScP	ScP	17 12 39.4	-2.2
	comp=Z,2.6nm,0.6s,baz=316,slow=3.5,SNR=10						
WRA				S	S	17 14 08.2	-5.9
	comp=Z,4.5nm,1.0s,baz=301,slow=15,SNR=7.2						
	comp=Z,34nm,0.6s						
WRA	Warramunga Arr	47.37	125	P	P	17 07 26.7	-0.9
WRA	Warramunga Arr	47.37	125	i P	P	17 07 27.1	-0.5
WRA				pmax	pmax		
	comp=Z,47nm,0.6s						
WRAB	Tennant Creek	47.38	125	P	P	17 07 26.8	-0.8
WRAB	Tennant Creek	47.38	125	P	P	17 07 27.4	-0.2
WRAB	Tennant Creek	47.38	125	c iP	P	17 07 27.0	-0.6
WRAB				pmax	pmax		
	comp=Z,44nm,0.8s						
WRAB	Tennant Creek	47.38	125	P	P	17 07 27.2	-0.4
WRAB				x	x	17 07 53.9	
WRAB				PcP	PcP	17 08 57.3	+0.4
WB1	Warramunga Ar.	47.38	125	P	P	17 07 27.6	-0.1
HILR	Hailar Array B	47.74	22	P	P	17 07 30.6	+0.6
	comp=Z,9.5nm,0.4s,baz=197,slow=9.5,SNR=16						
HILR				PcP	PcP	17 08 57.3	-0.4
	comp=Z,7.5nm,0.6s,baz=197,slow=4.6,SNR=8.0						
	comp=Z,9.5nm,0.4s						
ZAA0	Zalesovo Array	47.75	352	IAmb	IAmb	17 07 31.7	
	comp=Z,25nm,1.1s						
ZALV	Zalesovo Beam	47.75	352	P	P	17 07 30.7	+0.7
	comp=Z,18nm,0.8s,baz=176,slow=6.8,SNR=74						
ZALV				ScP	ScP	17 12 40.0	-2.5
	comp=Z,2.3nm,0.7s,baz=168,slow=2.3,SNR=7.2						
ZALV				S	S	17 14 18.3	-0.1
	comp=Z,1.4nm,0.7s,baz=64,slow=22,SNR=5.2						
	comp=Z,18nm,0.8s						
BNX	BinXian	48.23	31	⇓P	P	17 07 34.8	+1.0
BNX				pmax	pmax		
	comp=Z,40nm,0.7s						
INU	Inuyama	48.37	48	P	P	17 07 35.8	+0.7
INU	Inuyama	48.37	48	P	P	17 07 35.8	+0.7
INU				PcP	PcP	17 09 00.4	+0.2
JGF	Kuroka	48.73	48	P	P	17 07 38.5	+0.6
AS31	Alice Springs	48.97	129	P	P	17 07 39.4	-0.5
AS31				IAmb	IAmb	17 07 40.2	
	comp=Z,9.3nm,0.5s						
ASAR	Alice Springs	48.97	129	P	P	17 07 39.5	-0.4
	comp=Z,28nm,0.7s,baz=302,slow=7.9,SNR=701						
ASAR				PcP	PcP	17 09 02.0	-0.6
	comp=Z,7.9nm,0.7s,baz=309,slow=4.2,SNR=10						
ASAR				ScP	ScP	17 12 45.9	-2.5
	comp=Z,2.3nm,0.8s,baz=311,slow=4.2,SNR=10						
ASAR				S	S	17 14 29.8	-6.7
	comp=Z,7.7nm,1.1s,baz=295,slow=14,SNR=13						
	comp=Z,28nm,0.7s						
USRK	Ussuriysk Ar.	49.71	35	P	P	17 07 45.9	+0.7
	comp=Z,12nm,0.7s,baz=250,slow=6.0,SNR=22						
	comp=Z,12nm,0.7s						
MJB9	Matsu-Tunnel	49.76	47	IAmb	IAmb	17 07 48.2	
	comp=Z,26nm,0.8s						
MAJO	Matsushiro	49.76	47	P	P	17 07 46.7	+1.0
MAJO				IAmb	IAmb	17 07 48.3	
	comp=Z,26nm,0.8s						
MAJO	Matsushiro	49.76	47	P	P	17 07 47.4	+1.7
MAJO	Matsushiro	49.76	47	P	P	17 07 46.7	+1.0
MAJO				pmax	pmax		
	comp=Z,26nm,0.8s						
MAJO	Matsushiro	49.76	47	P	P	17 07 46.8	+1.0
MAJO				PcP	PcP	17 09 05.5	+0.3
MJAR	Matsushiro Arr	49.76	47	P	P	17 07 46.9	+1.1
	comp=Z,15nm,0.7s,baz=241,slow=7.3,SNR=32						
MJAR				PcP	PcP	17 09 04.8	-0.4
	comp=Z,9.2nm,0.9s,baz=250,slow=3.5,SNR=9.6						
	comp=Z,15nm,0.7s						
MJAR	Matsushiro Arr	49.76	47		P	17 07 46.6	+0.9
MJAR					PcP	17 09 05.7	+0.4
MJAR	Matsushiro Arr	49.76	47	P	P	17 07 46.6	+0.9
MJAR						17 09 05.7	
MJAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
RAYN	Ar Rayn	49.81	295	P	P	17 07 48.2	+1.8
RAYN				IAmb	IAmb	17 07 49.4	
	comp=Z,11nm,0.8s						
RAYN	Ar Rayn	49.81	295	P	P	17 07 48.2	+1.8
RAYN				pmax	pmax		
	comp=Z,11nm,0.8s						
BVAR	Borovoye Array	50.18	341	P	P	17 07 48.7	+0.1
	comp=Z,12nm,0.6s,baz=144,slow=8.6,SNR=37						
BVAR				PcP	PcP	17 09 05.7	-0.7
	comp=Z,6.4nm,0.6s,baz=163,slow=2.9,SNR=7.2						
BVAR				S	S	17 14 50.9	-1.7
	comp=Z,2.2nm,0.7s,baz=138,slow=16,SNR=5.9						
	comp=Z,12nm,0.6s						
BORK	Borovoye	50.22	341	P	P	17 07 49.4	+0.5
BORK				IAmb	IAmb	17 07 50.4	
	comp=Z,20nm,0.6s						
BORK	Borovoye	50.22	341	ceP	P	17 07 49.4	+0.5
BORK				pmax	pmax		
	comp=Z,28nm,1.0s						
BORK	Borovoye	50.22	341	P	P	17 07 49.6	+0.8
BORK				pP	pP	17 08 13.6	+0.4
BORK				PcP	PcP	17 09 06.8	+0.3
AB31	Akbulak array	51.39	332	IAmb	IAmb	17 07 59.5	
	comp=Z,21nm,0.5s						
ABKAR	Akbulak array	51.39	332		P	17 07 58.9	+1.2
HEH	HeiHe	51.43	27	eP	P	17 07 58.5	+0.6
HEH				PcP	PcP	17 09 10.5	-0.5
HEH				pmax	pmax		
	comp=Z,42nm,0.6s						
QIS	Mount Isa	52.02	122	P	P	17 08 02.0	-0.8
AKTO	Aktyubinsk	53.10	332	S	S	17 15 31.1	-1.7
	comp=Z,2.8nm,0.8s,baz=353,slow=21,SNR=13						
ZEA	Zeya	53.92	23	eP	P	17 08 17.0	+0.8
ZEA				pmax	pmax		
	comp=E,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.7s						
AKT	Akhty	53.95	317	eP	P	17 08 15.7	-1.2
AKT				MLR	MLR		
	comp=Z,2µm,13.0s						
PMG	Port Moresby	54.94	106		P	17 08 23.4	-0.9
PMG	Port Moresby	54.94	106	P	P	17 08 23.8	-0.5
PMG	Port Moresby	54.94	106	P	P	17 08 23.4	-0.9
	comp=Z,45nm,0.8s						
PMG	Port Moresby	54.94	106	P	P	17 08 23.4	-0.9
PMG				pmax	pmax		
	comp=Z,32nm,0.7s						
PMG	Port Moresby	54.94	106	P	P	17 08 24.0	-0.3
PMG				pP	pP	17 08 47.4	-1.3
PMG				PcP	PcP	17 09 26.0	+0.9
MTSU	Mount Surprise	55.08	117	P	P	17 08 25.0	-0.3
BBOO	Buckleboo	55.77	137	IAmb	IAmb	17 08 30.6	
	comp=Z,20nm,0.7s						
INKA	Innaminka	56.35	130	IAmb	IAmb	17 08 35.3	
	comp=Z,14nm,0.9s						
SVE	Sverdlovsk	56.59	339	deP	P	17 08 36.7	+1.4
SVE				pmax	pmax		
	comp=Z,36nm,1.0s						
ARTI	Arti	57.11	337		P	17 08 39.6	+0.6
ARTI				IAmb	IAmb	17 08 40.5	
	comp=Z,41nm,1.0s						
ARTI	Arti	57.11	337	c iP	P	17 08 39.8	+0.7
ARTI				*PP	pP	17 09 03.0	-0.8
ARTI						17 09 32.5	
ARTI				S	S	17 16 30.2	+4.2
ARTI				SS	SS	17 20 13.0	-3.4
ARTI				pmax	pmax		
	comp=Z,46nm,1.3s						
ARTI	Arti	57.11	337	P	P	17 08 39.8	+0.7
MARD	Mardin	57.35	310		P	17 08 41.1	-0.1
CTA	Charters Tower	57.51	119	P	P	17 08 42.4	-0.1
CTAO	Charters Tower	57.51	119		P	17 08 41.7	-0.8
CTAO				IAmb	IAmb	17 08 42.9	
	comp=Z,16nm,0.8s						
CTAO	Charters Tower	57.51	119	P	P	17 08 42.4	-0.1
CTAO	Charters Tower	57.51	119	P	P	17 08 41.7	-0.8
CTAO				pmax	pmax		
	comp=Z,16nm,0.9s						
KBZ	Khabaz	58.13	318	P	P	17 08 46.2	-0.2
	comp=Z,5.0nm,0.9s,baz=120,slow=7.2,SNR=12						
	comp=Z,5.0nm,0.9s						
KBZ	Khabaz	58.13	318	deP	P	17 08 47.0	+0.6
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SHA1	Shidzhatmaz	58.30	318	c iP	P	17 08 48.1	+0.2
KIV	Kislovodsk	58.37	318		P	17 08 48.3	+0.1
KIV				IAmb	IAmb	17 08 49.3	
	comp=Z,18nm,1.0s						
KIV	Kislovodsk	58.37	318	eP	P	17 08 46.7	-1.5
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
KIV				MLR	MLR		
	comp=Z,7µm,17.0s						
KIV	Kislovodsk	58.37	318	P	P	17 08 48.5	+0.3
	comp=Z,14nm,1.0s						
QLP	Quilpie	58.52	127	P	P	17 08 49.5	+0.1
STKA	Stephens Creek	59.11	133	P	P	17 08 53.8	+0.3
	comp=Z,13nm,0.8s,baz=297,slow=6.1,SNR=16						
	comp=Z,13nm,0.8s						
STKA	Stephens Creek	59.11	133	P	P	17 08 53.5	+0.1
STKA	Stephens Creek	59.11	133	⇑eP	P	17 08 53.2	-0.2
BELG	Belogornoye	59.45	329	deP	P	17 08 55.6	+0.3
BELG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SOC	Sochi	60.21	317	eP	P	17 08 57.2	-3.6
SOC				e*PP	pP	17 09 23.6	-2.4
SOC				e		17 11 17.6	
SOC				ePPP	PPP	17 12 43.3	
SOC				eS	S	17 17 04.9	-1.8
SOC				pmax	pmax		
	comp=Z,18nm,0.8s						
SOC				MLR	MLR		
	comp=Z,7µm,18.0s						
YAK	Yakutsk	61.02	18	P	P	17 09 05.7	-0.2
	comp=Z,111nm,0.6s,baz=336,slow=0.2,SNR=57						
YAK	Yakutsk	61.02	18		P	17 09 05.7	-0.2
YAK	Yakutsk	61.02	18	c iP	P	17 09 05.6	-0.3
YAK				e*PP	pwP	17 09 33.6	-0.6
YAK				e		17 09 47.1	
YAK				e		17 11 21.4	
YAK				ePPP	PPP	17 12 47.8	
YAK				eS	S	17 17 16.2	-0.1
YAK				e		17 18 45.3	
YAK				eSS	SS	17 21 19.6	+2.1
YAK				eSSS	SSS	17 23 58.8	
YAK				pmax	pmax		
	comp=Z,77nm,0.9s						
YAK				pmax	pmax		
	comp=N,17nm,1.1s						
YAK				pmax	pmax		
	comp=E,15nm,1.4s						
YAK				pmax	pmax		
	comp=Z,156nm,3.7s						
YAK				pmax	pmax		
	comp=N,213nm,4.4s						
YAK				pmax	pmax		
	comp=E,159nm,4.3s						
YAK				smax	smax		
	comp=E,224nm,5.2s						
YAK				smax	smax		
	comp=N,81nm,3.8s						
YAK	Yakutsk	61.02	18	P	P	17 09 05.7	-0.3
CMSA	Cobar Meteorol	61.95	131	P	P	17 09 13.3	+0.5
KIRV	Kirov	62.19	335	ceP	P	17 09 14.3	+0.5
NRIK	Noril'sk	62.72	357	P	P	17 09 17.6	+0.3
	comp=N,24nm,0.5s,baz=156,slow=5.7,SNR=64						
	comp=N,24nm,0.5s						
NRIK	Noril'sk	62.72	357		P	17 09 17.2	0.0
NRIK				IAmb	IAmb	17 09 18.3	
	comp=Z,26nm,0.6s						
NRIK	Noril'sk	62.72	357	c iP	P	17 09 17.4	+0.2
NRIK				pmax	pmax		
	comp=Z,20nm,0.9s						
AULRC	Lightning Ridg	62.75	128	P	P	17 09 18.4	+0.3
BR104	Keskin Array S	63.39	311	P	P	17 09 22.1	-0.3
	comp=Z,122nmcomp=Z,14nm,0.7s						
BR131	Keskin Array S	63.40	311	IAmb	IAmb	17 09 22.9	
	comp=Z,12nm,0.7s						
BR131	Keskin Array S	63.40	311	c iP	P	17 09 21.8	-0.6
BRTR	Keskin Array B	63.40	311	P	P	17 09 22.1	-0.3
	comp=Z,8.3nm,0.6s,baz=131,slow=7.3,SNR=23						
	comp=Z,8.3nm,0.6s						
BRTR	Keskin Array B	63.40	311	i P	P	17 09 22.1	-0.3

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BRTR                                pmax     pmax
      comp=Z,9.0nm,0.6s
BR105 Keskin Array S    63.41 311   P        P        17 09 22.3 -0.2
      comp=Z,12nm,0.7s
BR106 Keskin Array S    63.41 311   P        P        17 09 22.1 -0.4
      comp=Z,110nmcomp=Z,12nm,0.7s
AUMTC Mt Clear Colle    63.76 138   P        P        17 09 26.2 +1.6
BRAT  Ballarat          63.76 138   P        P        17 09 26.3 +1.7
MBAR  Mbarara           63.94 266   P        P        17 09 29.3 +2.9
      comp=Z,2.5nm,0.3s,baz=85,slow=5.7,SNR=7.2
      comp=Z,2.5nm,0.3s
AUDCS Dubbo College     64.49 130   P        P        17 09 30.1 +0.6
TOO   Toolangi          64.82 137            P        17 09 32.6 +1.0
TOO   Toolangi          64.82 137   P        P        17 09 32.6 +1.0
TOO                                 pmax     pmax
      comp=Z,9.0nm,0.7s
H04N2 CROZET ISLANDS    64.86 211   T        T        18 18 33.1
      baz=47,slow=75,SNR=112
H04N1 CROZET ISLANDS    64.87 211   T        T        18 18 35.0
      baz=47,slow=75,SNR=106
H04N3 CROZET ISLANDS    64.88 211   T        T        18 18 32.5
      baz=47,slow=75,SNR=98
H04S1 CROZET ISLANDS    65.26 211   T        T        18 19 03.0
      baz=47,slow=75,SNR=23
H04S3 CROZET ISLANDS    65.27 211   T        T        18 19 18.2
      baz=47,slow=75,SNR=71
H04S2 CROZET ISLANDS    65.28 211   T        T        18 18 58.8
      baz=47,slow=75,SNR=28
ARMA  Armidale          66.04 127            P        17 09 41.0 +1.3
ARMA                                IAmb     IAmb     17 09 42.4
      comp=Z,26nm,1.1s
ARMA  Armidale          66.04 127   P        P        17 09 41.4 +1.7
CAN   Canberra          66.17 133            P        17 09 40.9 +0.5
CAN                                 IAmb     IAmb     17 09 42.1
      comp=Z,30nm,0.6s
CAN   Canberra          66.17 133   P        P        17 09 40.9 +0.5
CAN                                 pmax     pmax
      comp=Z,30nm,0.6s
CAN   Canberra          66.17 133   P        P        17 09 41.3 +0.9
MOS   Moscow            66.22 329  eP        P        17 09 38.7 -1.5
MOS                                 pmax     pmax
      comp=Z,84nm,0.7s
OBN   Obninsk           66.51 328   P        P        17 09 41.9 -0.2
OBN   Obninsk           66.51 328⇑eP        P        17 09 42.0 -0.1
OBN                                e                  17 12 10.8
OBN                                 pmax     pmax
      comp=Z,35nm,1.0s
OBN   Obninsk           66.51 328   P        P        17 09 41.9 -0.2
      comp=Z,47nm,1.5s
KLMR  Klimovskoe        67.62 334  eP        P        17 09 46.7 -2.3
KLMR                               e*PP      pP       17 10 12.6 -1.9
KLMR                               e*SP      sP       17 10 23.2 -2.4
KLMR                               e                  17 12 16.0
KLMR                                pmax     pmax
      comp=Z,47nm,1.3s
MA2   Magadan           67.68  27   P        P        17 09 48.1 -1.3
      comp=Z,8.3nm,0.7s,baz=216,slow=6.6,SNR=7.4
      comp=Z,8.3nm,0.7s
MA2   Magadan           67.68  27   IAmb     IAmb     17 10 40.8
      comp=Z,89nm,1.8s
TIXI  Tiksi             68.33  11            P        17 09 52.6 -0.7
TIXI  Tiksi             68.33  11ceP         P        17 09 52.5 -0.7
TIXI                                pmax     pmax
      comp=Z,46nm,0.9s
VLDR  Vladesti          68.80 317 ⇓P        P        17 09 57.3 +0.6
LSZ   Lusaka            69.13 251   P        P        17 10 02.0 +2.6
      comp=Z,5.5nm,0.5s,baz=79,slow=4.4,SNR=16
      comp=Z,5.5nm,0.5s
LSZ   Lusaka            69.13 251   P        P        17 10 01.9 +2.6
LSZ   Lusaka            69.13 251   P        P        17 10 02.0 +2.6
SORM  Soroca            69.14 319 ⇑P        P        17 09 58.6 -0.2
SORM  Soroca            69.14 319   P        P        17 09 58.5 -0.2
AK09  Malin Array Si    69.18 322   P        P        17 09 58.5 -0.4
AK10  Malin Array Si    69.19 322   P        P        17 09 58.6 -0.4
AK08  Malin Array Si    69.20 322   P        P        17 09 58.6 -0.4
AK07  Malin Array Si    69.21 322   P        P        17 09 58.6 -0.5
AK06  Malin Array Si    69.22 322   P        P        17 09 58.5 -0.7
AK05  Malin Array Si    69.23 322   P        P        17 09 58.6 -0.6
AK02  Malin Array Si    69.24 322   P        P        17 09 58.6 -0.7
AKASG Malin Array Be    69.24 322   P        P        17 09 58.7 -0.6
      comp=Z,1.6nm,0.3s,baz=90,slow=4.8,SNR=19
      comp=Z,1.6nm,0.3s
AKASG Malin Array Be    69.24 322   P        P        17 09 58.8 -0.4
AKASG Malin Array Be    69.24 322 i P        P        17 09 58.7 -0.6
AKASG                               pmax     pmax
      comp=Z,4.0nm,0.5s
AKBB  Malin Array Si    69.24 322⇑eP        P        17 09 58.6 -0.7
AKBB  Malin Array Si    69.24 322   P        P        17 09 58.5 -0.7
AK01  Malin Array Si    69.24 322   P        P        17 09 58.4 -0.9
AK03  Malin Array Si    69.25 322   P        P        17 09 58.5 -0.8
KIEV  Kiev              69.25 322            P        17 09 58.5 -0.8
KIEV  Kiev              69.25 322 ⇑P        P        17 09 58.4 -1.0
KIEV  Kiev              69.25 322   P        P        17 09 58.5 -0.8
KIEV                                pmax     pmax
      comp=Z,14nm,1.1s
KIEV  Kiev              69.25 322   P        P        17 09 58.6 -0.8
      comp=Z,56nm,0.9s
KIEV  Kiev              69.25 322   P        P        17 09 58.1 -1.3
AK12  Malin Array Si    69.26 322   P        P        17 09 58.6 -0.9
AK11  Malin Array Si    69.27 322   P        P        17 09 58.6 -0.9
AK04  Malin Array Si    69.28 322   P        P        17 09 58.7 -0.8
AK14  Malin Array Si    69.29 322   P        P        17 09 58.8 -0.8
AK15  Malin Array Si    69.30 322   P        P        17 09 59.0 -0.7
AK16  Malin Array Si    69.30 322   P        P        17 09 58.9 -0.8
AK13  Malin Array Si    69.31 322   P        P        17 09 59.1 -0.7
AK23  Malin Array Si    69.31 322   P        P        17 09 59.0 -0.8
AK17  Malin Array Si    69.33 322   P        P        17 09 59.1 -0.8
AK18  Malin Array Si    69.34 322   P        P        17 09 59.1 -0.8
AK22  Malin Array Si    69.35 322   P        P        17 09 59.2 -0.8
AK21  Malin Array Si    69.37 322   P        P        17 09 59.2 -0.9
AK19  Malin Array Si    69.37 322   P        P        17 09 59.3 -0.8
AK20  Malin Array Si    69.38 322   P        P        17 09 59.3 -0.9
VRI   Vrincioaia        69.73 316 ⇑P        P        17 10 03.0 +0.5
VRI   Vrincioaia        69.73 316   P        P        17 10 03.0 +0.5
VRI   Vrincioaia        69.73 316   P        P        17 10 03.5 +1.0
      comp=Z,40nm,0.9s
PLOR  Plostina          69.78 316 ⇑P        P        17 10 03.8 +0.9
PLOR  Plostina          69.78 316   P        P        17 10 03.7 +0.9
SEY   Seymchan          69.88  24   P        P        17 10 02.9 -0.2
      comp=Z,3.0nm,0.5s,baz=206,slow=8.2,SNR=7.0
      comp=Z,3.0nm,0.5s
SEY   Seymchan          69.88  24⇓eP        P        17 10 02.8 -0.2
SEY                                 pmax     pmax
      comp=Z,13nm,2.5s
TESR  Tescani           69.91 317 ⇑P        P        17 10 03.6  0.0
TESR  Tescani           69.91 317   P        P        17 10 03.9 +0.3
      comp=Z,29nm,1.2s
LUBAR Lubar, Ukraine    69.95 321   P        P        17 10 03.2 -0.5
MI29  MI29, Kamyanyy    70.01 321   P        P        17 10 03.8 -0.3
      comp=Z,202nm,1.8s
MLR   Muntele Rosu      70.19 316   IAmb     IAmb     17 10 07.4
      comp=Z,27nm,1.1s
MLR   Muntele Rosu      70.19 316 ⇑P        P        17 10 05.5  0.0
MLR   Muntele Rosu      70.19 316   P        P        17 10 05.5  0.0
MLR   Muntele Rosu      70.19 316   P        P        17 10 06.4 +0.9
      comp=Z,25nm,1.1s
TURR  Turia             70.25 317 ⇑P        P        17 10 05.6 -0.1
DOPR  Dopca             70.67 316 ⇓P        P        17 10 08.6 +0.5
PLVB  Pleven            70.76 314 ⇑P        P        17 10 09.6 +0.8
MNK   Minsk             71.04 326 i P        P        17 10 08.2 -2.0
      comp=E,15nm,1.2s
MNK                               i P        P        17 10 08.2 -2.0
      comp=N,43nm,1.0s
MNK                               i P        P        17 10 08.2 -2.0
      comp=Z,68nm,0.8s,baz=106
MNK                               i pP       pP       17 10 33.6 -2.3
MNK                               i PP       PP       17 12 47.4 -1.6
MNK                               i PPP      PPP      17 14 31.4
MNK                               i S        S        17 19 17.6 -0.5
MNK                               i SS       SS       17 23 55.8 +2.6
MNK                               i SSS      SSS      17 27 14.4
MNK                               i LQ       LQ       17 38 08.4
MNK                               i LR       LR       17 41 47.0
MNK                               i LRM      MLR      17 44 07.9
      comp=E,2µm,17.2s
MNK                               i LRM      MLR      17 44 07.9
      comp=N,10µm,17.2s
MNK   Minsk             71.04 326 i P        P        17 10 08.1 -2.1
MNK                               i *PP      pP       17 10 33.5 -2.4
MNK                               i                   17 12 47.3
MNK                               i PPP      PPP      17 14 31.3
MNK                               i S        S        17 19 17.6 -0.5
MNK                               i SS       SS       17 23 55.8 +2.6
MNK                                 pmax     pmax
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      comp=E,15nm,1.2s
MNK                                 pmax     pmax
      comp=Z,68nm,0.8s
MNK                                 pmax     pmax
      comp=N,43nm,1.0s
MNK                                 MLR      MLR
      comp=N,10µm,17.0s
MNK                                 MLR      MLR
      comp=E,2µm,17.0s
ARR   Arges             71.08 316 ⇑P        P        17 10 11.0 +0.2
BURAR Bucovina Array    71.09 318   P        P        17 10 11.3 +0.5
BURAR Bucovina Array    71.09 318 ⇑P        P        17 10 11.7 +0.9
BURAR Bucovina Array    71.09 318   P        P        17 10 11.7 +0.9
BROLN Tlhalogang        71.34 245 i P        P        17 10 15.2 +2.4
RNPP9 Sopachiv          71.45 322   P        P        17 10 12.6 -0.2
MREMI Moremi            71.63 244 i P        P        17 10 17.0 +2.5
CJR   Cluj-Napoca       72.02 317 ⇓P        P        17 10 17.7 +1.4
CJR   Cluj-Napoca       72.02 317   P        P        17 10 17.7 +1.4
MORS  Morshin           72.24 319   P        P        17 10 18.4 +0.8
MARR  Marisel-Cluj      72.34 317 ⇓P        P        17 10 18.8 +0.4
MEZ   Mezhgor'ye        72.38 319   P        P        17 10 19.7 +1.3
KSANE Kasane            72.53 249 i P        P        17 10 23.0 +3.0
HERR  Herculane         72.56 315 ⇑P        P        17 10 20.2 +0.7
SHIU  Shidnytsya        72.60 319   P        P        17 10 20.5 +0.8
BRIU  Brid              72.67 319   P        P        17 10 21.1 +1.0
LVZ   Lovozero          72.75 340   P        P        17 10 20.8 +0.5
LVZ   Lovozero          72.75 340   P        P        17 10 20.7 +0.5
      comp=E,67nm,1.7s
BOVS  Bovan             72.90 314 ⇑P        P        17 10 21.5  0.0
APA   Apatity           73.04 339⇓eP        P        17 10 20.9 -1.0
APA                                e                  17 10 35.3
APA                                 pmax     pmax
      comp=Z,18nm,1.2s
APA                                 MLR      MLR
      comp=Z,9µm,26.5s
MDVR  Moldovita         73.04 315 ⇓P        P        17 10 23.1 +0.6
KWP   Kalwaria Pacla    73.09 320   P        P        17 10 23.6 +1.0
      comp=Z,34nm,1.1s
BZS   Buzias            73.22 316 ⇓P        P        17 10 24.1 +0.7
BZS   Buzias            73.22 316   P        P        17 10 24.1 +0.7
LPHEP Lephephe          73.25 243 i P        P        17 10 26.7 +2.6
KHWEE KHWEE             73.26 245 i P        P        17 10 26.8 +2.6
SIRR  Siria             73.27 316 ⇑P        P        17 10 24.6 +0.9
SUW   Suwalki           73.61 324  eP        P        17 10 25.4 -0.1
FINES FINESS Array B    73.87 332   P        P        17 10 27.3 +0.4
      comp=Z,16nm,0.3s,baz=100,slow=5.2,SNR=337
FINES                               pP       pP       17 10 51.8 -1.0
      comp=Z,5.8nm,0.7s,baz=77,slow=8.2,SNR=2.7
      comp=Z,16nm,0.3s
LBTB  Lobatse           73.92 242   P        P        17 10 30.2 +2.2
      comp=Z,17nm,0.7s,baz=86,slow=5.0,SNR=29
      comp=Z,17nm,0.7s
LBTB  Lobatse           73.92 242            P        17 10 29.1 +1.1
LBTB  Lobatse           73.92 242   P        P        17 10 29.1 +1.1
LBTB                                pmax     pmax
      comp=Z,14nm,0.7s
LBTB  Lobatse           73.92 242   P        P        17 10 30.5 +2.5
LBTB                                pP       pwP      17 10 55.4 -1.1
KECS  Kecovo            74.36 318  eP        P        17 10 30.9 +0.8
KECS                                pmax     pmax
      comp=Z,11nm,0.8s
KECS  Kecovo            74.36 318  eP        P        17 10 30.9 +0.8
PDG   Podgorica         74.56 312 ⇑P        P        17 10 31.6 +0.3
NIE   Niedzica          74.61 319  eP        P        17 10 32.6 +1.1
NIE   Niedzica          74.61 319   P        P        17 10 32.6 +1.1
      comp=Z,9.9nm,1.2s
BEL   Belsk             74.65 322  eP        P        17 10 32.7 +1.1
PSZ   Piszkesteto       74.69 318 ⇑P        P        17 10 32.5 +0.5
PSZ   Piszkesteto       74.69 318   P        P        17 10 32.5 +0.5
OJC   Ojcow             75.04 320  eP        P        17 10 34.7 +0.8
OJC   Ojcow             75.04 320   P        P        17 10 34.7 +0.8
      comp=Z,53nm,0.8s
LANS  Liptovska Anna    75.12 319  eP        P        17 10 35.6 +1.2
LANS                                pmax     pmax
      comp=Z,4.0nm,0.9s
LANS  Liptovska Anna    75.12 319  eP        P        17 10 35.6 +1.2
BOSA  Boshof            75.19 238   P        P        17 10 37.7 +2.4
      comp=Z,20nm,0.6s,baz=82,slow=4.5,SNR=42
      comp=Z,20nm,0.6s
BOSA  Boshof            75.19 238   P        P        17 10 37.1 +1.8
BOSA                                IAmb     IAmb     17 10 38.4
      comp=Z,21nm,0.7s
BOSA  Boshof            75.19 238   P        P        17 10 37.1 +1.8
BOSA                                pmax     pmax
      comp=Z,21nm,0.7s
SKOMA Sekoma            75.25 243 i P        P        17 10 38.3 +2.6
MORH  Mrgy, Hungar      75.35 316 ⇑P        P        17 10 36.1 +0.4
MORH  Mrgy, Hungar      75.35 316   P        P        17 10 36.0 +0.3
      comp=Z,12nm,0.8s
VADS  Vadso             75.39 341  eP        P        17 10 36.6 +1.1
OKC   Ostrava-Krasne    76.05 320  eP        P        17 10 41.1 +1.4
OKC   Ostrava-Krasne    76.05 320  eP        P        17 10 41.1 +1.4
MPLH  Magyarpolny       76.19 317   P        P        17 10 41.7 +1.1
      comp=Z,132nm,0.9s
BLY   Banja Luka        76.24 314 ⇑P        P        17 10 41.6 +0.7
JAVC  Velka Javorina    76.26 319  eP        P        17 10 42.5 +1.5
KGCAE Kacgae            76.39 245   P        P        17 10 44.3 +2.1
KGCAE                               IAmb     IAmb     17 10 45.7
      comp=Z,21nm,0.9s
KGCAE Kacgae            76.39 245 i P        P        17 10 45.0 +2.7
SMOL  Smolenice         76.39 318  eP        P        17 10 42.7 +1.1
SMOL                                pmax     pmax
      comp=Z,5.0nm,1.1s
MORC  Moravsky Berou    76.44 320   IAmb     IAmb     17 10 44.0
      comp=Z,26nm,1.1s
MORC  Moravsky Berou    76.44 320 ⇓P        P        17 10 43.4 +1.4
MORC  Moravsky Berou    76.44 320  eP        P        17 10 43.0 +1.1
MORC  Moravsky Berou    76.44 320   P        P        17 10 43.3 +1.4
ARA0  ARCESS Array S    76.46 340  eP        P        17 10 42.3 +0.7
ARCES ARCESS Array B    76.46 340   P        P        17 10 42.0 +0.4
      comp=Z,11nm,0.4s,baz=92,slow=6.0,SNR=175
      comp=Z,11nm,0.4s
ARCES ARCESS Array B    76.46 340   P        P        17 10 42.3 +0.7
ARCES                               IAmb     IAmb     17 10 43.6
      comp=Z,78nm,1.4s
ARCES ARCESS Array B    76.46 340   P        P        17 10 42.3 +0.7
ARCES                               pmax     pmax
      comp=Z,78nm,1.4s
MODS  Modra-Piesok      76.48 318  eP        P        17 10 43.1 +0.9
MODS                                pmax     pmax
      comp=Z,23nm,0.8s
MODS  Modra-Piesok      76.48 318  eP        P        17 10 43.1 +0.9
KRLC  Kraliky           76.95 320  eP        P        17 10 46.4 +1.5
KRLC  Kraliky           76.95 320  eP        P        17 10 46.4 +1.5
VRAC  Vranov            77.01 319 ⇑P        P        17 10 45.2 +0.1
VRAC  Vranov            77.01 319  eP        P        17 10 45.8 +0.7
VRAC  Vranov            77.01 319   P        P        17 10 45.2 +0.1
KOGS  Kog               77.02 316 i P        P        17 10 46.0 +0.8
RONA  Rosalia, Austr    77.08 317 i P        P        17 10 46.3 +0.7
      comp=Z,8.5nm,0.7s
BILL  Bilibino          77.08  22deP         P        17 10 44.8 -0.3
BILL                                pmax     pmax
      comp=Z,18nm,2.5s
KTK1  Kautokeino        77.08 340  eP        P        17 10 45.8 +0.6
KRUC  Moravsky          77.12 319  eP        P        17 10 46.4 +0.7
DPC   Dobruska-Polom    77.27 320  eP        P        17 10 48.1 +1.5
DPC   Dobruska-Polom    77.27 320  eP        P        17 10 48.1 +1.5
DPC   Dobruska-Polom    77.27 320   P        P        17 10 48.2 +1.6
      comp=Z,14nm,0.8s
KSP   Ksiaz             77.33 321  eP        P        17 10 48.3 +1.4
KSP   Ksiaz             77.33 321   P        P        17 10 48.1 +1.2
      comp=Z,18nm,1.4s
OSTC  Ostas             77.36 320  eP        P        17 10 48.6 +1.5
OSTC  Ostas             77.36 320  eP        P        17 10 48.6 +1.5
HAMF  Hammerfest        77.38 341  eP        P        17 10 47.9 +1.2
CONA  Conrad Observa    77.39 318 i P        P        17 10 48.2 +0.8
      comp=Z,11nm,1.0s
MAW   Mawson            77.44 192   P        P        17 10 49.0 +2.0
      comp=Z,4.0nm,0.7s,baz=38,slow=1.8,SNR=6.8
      comp=Z,4.0nm,0.7s
MAW   Mawson            77.44 192   P        P        17 10 49.0 +2.0
CHVC  Chvalec           77.46 320  eP        P        17 10 49.2 +1.5
CHVC  Chvalec           77.46 320  eP        P        17 10 49.2 +1.5
UPC   Upice             77.48 320  eP        P        17 10 49.3 +1.6
UPC   Upice             77.48 320  eP        P        17 10 49.3 +1.6
GROS  Grobnik           77.54 316 i P        P        17 10 48.9 +0.6
LKGWB Lokgwabe          77.56 244 i P        P        17 10 48.9 +0.1
ARSA  Arzberg           77.57 317 i P        P        17 10 49.5 +1.2
      comp=Z,14nm,0.8s,SNR=5.7
TREC  Trest             77.73 319  eP        P        17 10 50.3 +1.1
TREC  Trest             77.73 319  eP        P        17 10 50.3 +1.1
PERS  Pernice           77.81 316 i P        P        17 10 50.8 +1.0
SOKA  Soboth            77.87 316 i P        P        17 10 51.3 +1.2
      comp=Z,35nm,1.0s,SNR=7.0
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JETT  Jettan, Norway    78.19 340  eP        P        17 10 52.3 +1.0
OBKA  Obir              78.20 316 i P        P        17 10 53.0 +1.1
      comp=Z,14nm,0.7s
KOOLE Kule              78.22 245 i P        P        17 10 55.4 +2.8
PRU   Pruhonice         78.39 320  eP        P        17 10 54.0 +1.3
PRU   Pruhonice         78.39 320  eP        P        17 10 54.0 +1.3
PVCC  Panska Ves        78.40 320  eP        P        17 10 54.1 +1.3
PVCC  Panska Ves        78.40 320  eP        P        17 10 54.1 +1.3
MOA   Molln             78.45 317 i P        P        17 10 53.8 +0.6
      comp=Z,8.6nm,0.8s
CKRC  Cesky Krumlov     78.47 318  eP        P        17 10 54.5 +1.2
CKRC  Cesky Krumlov     78.47 318  eP        P        17 10 54.5 +1.2
ZVC   Zvikov            78.58 319  eP        P        17 10 55.1 +1.3
RICC  Richard           78.70 320  eP        P        17 10 55.9 +1.4
TRO   Tromso            78.72 340  eP        P        17 10 54.4 +0.3
CADS  Cadrg             78.75 316 i P        P        17 10 55.4 +0.5
BRG   Berggiesshubel    78.82 320  eP        P        17 10 56.2 +1.1
      comp=Z,9.1nm,0.8s,baz=91,slow=5.2
MYKA  Terra Mystica     78.83 316 i P        P        17 10 56.1 +0.8
      comp=Z,9.7nm,0.6s
BIOA  Bad Ischl, Aus    78.87 317 i P        P        17 10 56.2 +0.7
      comp=Z,15nm,0.5s,SNR=7.5
GEC2  GERESS Array S    78.88 318   IAmb     IAmb     17 10 57.5
      comp=Z,25nm,0.8s
GEC2  GERESS Array S    78.88 318  eP        P        17 10 56.6 +1.0
      comp=Z,25nm,0.8s,baz=91,slow=5.2
GERES GERESS Array B    78.88 318   P        P        17 10 56.5 +1.0
      comp=Z,15nm,0.7s,baz=76,slow=5.6,SNR=123
GERES                               S        S        17 20 47.5 +1.9
      comp=Z,0.3nm,0.5s,baz=102,slow=5.6,SNR=3.9
      comp=Z,15nm,0.7s
KHC   Kasperske Hory    78.97 319  eP        P        17 10 57.0 +1.0
KHC   Kasperske Hory    78.97 319  eP        P        17 10 57.0 +1.0
KHC   Kasperske Hory    78.97 319   P        P        17 10 56.8 +0.8
      comp=Z,15nm,0.8s
RUE   Ruedersdorf       79.01 322  eP        P        17 10 56.9 +0.9
      comp=Z,46nm,0.7s,baz=91,slow=5.2
KBA   Koelnbreinsper    79.05 317 i P        P        17 10 56.8 +0.1
      comp=Z,7.5nm,0.6s
HSKC  Hora Svate Kat    79.13 320  eP        P        17 10 58.1 +1.2
WET   Wettzell          79.43 319  eP        P        17 10 59.5 +1.0
      comp=Z,16nm,1.0s,baz=91,slow=5.2
CLL   Collm             79.44 321 i P        P        17 10 58.6 +0.2
CLL                               i *PP      pP       17 11 24.5 -0.1
CLL                                 pmax     pmax
      comp=Z,9.0nm,1.0s
CLL   Collm             79.44 321 i P        P        17 10 58.6 +0.2
      comp=Z,9.0nm,1.0s
CLL                                ePcP      PcP      17 11 05.0 -1.2
CLL                               i pP       pP       17 11 24.5 -0.1
STAL  STALIGIAL         79.46 316   IAmb     IAmb     17 11 00.1
      comp=Z,65nm,1.3s
LESA  Schwarzleotal     79.51 317 i P        P        17 10 59.3 +0.2
      comp=Z,18nm,0.4s,SNR=17
HFS   Hagfors           79.60 330   P        P        17 10 59.1 -0.1
      comp=Z,7.4nm,0.5s,baz=104,slow=6.3,SNR=51
      comp=Z,7.4nm,0.5s
ABTA  Abfaltersbach     79.61 316 i P        P        17 10 59.7 +0.1
      comp=Z,7.7nm,0.6s
FAUS  Fauske            79.67 337  eP        P        17 11 00.2 +0.9
STEI  Steigen           79.76 338  eP        P        17 11 00.6 +0.8
MOR8  Moi Rana          79.86 336  eP        P        17 11 00.5  0.0
ROTZ  Rotzenmuhle       79.89 319  eP        P        17 11 02.1 +1.2
      comp=Z,2.8nm,0.7s,baz=91,slow=5.2
PLN   Plauen            79.94 320  eP        P        17 11 01.9 +0.7
      comp=Z,3.0nm,0.9s,baz=91,slow=5.2
MANZ  Manzenberg        79.96 319  eP        P        17 11 02.6 +1.3
      comp=Z,4.5nm,1.1s,baz=91,slow=5.2
RAUS  Rausandaksla      80.04 336  eP        P        17 11 01.9 +0.5
CTI   Castel Tesino     80.19 315   IAmb     IAmb     17 11 04.6
      comp=Z,31nm,0.8s
WTTA  Wattenberg        80.22 317 i P        P        17 11 03.2 +0.2
      comp=Z,20nm,0.5s,SNR=8.3
WATA  Walderalm         80.26 317 i P        P        17 11 03.0 -0.2
      comp=Z,13nm,0.5s,SNR=6.4
MOX   Moxa              80.29 320  eP        P        17 11 03.8 +0.7
      comp=Z,6.5nm,0.7s,baz=91,slow=5.2
LOF   Lofoten           80.42 338  eP        P        17 11 03.8 +0.5
SQTA  Sankt Quirin      80.51 317 i P        P        17 11 04.7 +0.3
      comp=Z,26nm,0.5s,SNR=15
ZCCA  Zocca             80.66 314   IAmb     IAmb     17 11 08.4
      comp=Z,34nm,0.8s
RETA  Reutte            80.81 317 i P        P        17 11 06.4 +0.4
      comp=Z,28nm,0.5s,SNR=12
FETA  Feichten          80.83 316 i P        P        17 11 06.6 +0.4
      comp=Z,13nm,0.6s
NB2   NORSAR Subarra    80.88 331   P        P        17 11 05.8 -0.3
      comp=Z,12nm,1.2s,baz=98,slow=5.6
NB2   NORSAR Subarra    80.88 331   P        P        17 11 05.8 -0.3
      baz=98,slow=5.6
NOA   NORSAR Array B    80.88 331   P        P        17 11 06.2 +0.1
      comp=Z,5.4nm,1.0s,baz=94,slow=5.7,SNR=6.2
      comp=Z,5.4nm,1.0s
SPB2  Spitsbergen Ar    81.03 348   IAmb     IAmb     17 11 07.6
      comp=Z,32nm,0.7s
SPA0  Spitsbergen Ar    81.04 348  eP        P        17 11 07.2 +0.6
SPITS Spitsbergen Ar    81.04 348   P        P        17 11 06.7 +0.2
      comp=Z,13nm,0.5s,baz=103,slow=10,SNR=98
SPITS                               pP       pP       17 11 32.3 -0.6
      comp=Z,7.5nm,0.7s,baz=99,slow=9.4,SNR=2.7
      comp=Z,13nm,0.5s
CLZ   Clausthal         81.09 321  eP        P        17 11 08.2 +0.8
      comp=Z,13nm,0.6s,baz=91,slow=5.2
BSEG  Bad Segeberg      81.15 323  eP        P        17 11 08.5 +1.0
      comp=Z,10nm,0.7s,baz=91,slow=5.2
UBR   Ueberruh          81.25 317  eP        P        17 11 08.6 +0.2
      comp=Z,12nm,0.6s,baz=91,slow=5.2
GTTG  Gottingen         81.34 321  eP        P        17 11 09.4 +0.8
      comp=Z,8.4nm,0.7s,baz=91,slow=5.2
DAVA  Damuels           81.41 317 i P        P        17 11 09.8 +0.5
      comp=Z,12nm,0.8s,SNR=8.1
KONO  Kongsberg         81.64 329  eP        P        17 11 10.5 +0.5
TUE   Stuetta           81.79 316   P        P        17 11 11.8 +0.4
      comp=Z,75nm,0.8s
KBS   Kingsbay          82.02 349   P        P        17 11 11.8 +0.2
KBS                                 IAmb     IAmb     17 11 13.4
      comp=Z,31nm,1.2s
KBS   Kingsbay          82.02 349   P        P        17 11 11.9 +0.2
KBS                                 pmax     pmax
      comp=Z,31nm,1.2s
KEST  Kesra             82.13 305   P        P        17 11 14.5 +1.2
      comp=Z,11nm,0.7s,baz=53,slow=1.3,SNR=14
      comp=Z,11nm,0.7s
BFO   Black Forest      82.44 318   P        P        17 11 14.9 +0.4
BFO   Black Forest      82.44 318   P        P        17 11 14.9 +0.4
BFO                                 pmax     pmax
      comp=Z,10.0nm,0.7s
BFO   Black Forest      82.44 318   P        P        17 11 14.9 +0.4
MOL   Molde             82.65 332  eP        P        17 11 15.9 +0.7
SENIN Lac Senin/Sane    83.21 316   IAmb     IAmb     17 11 21.2
      comp=Z,14nm,0.7s
BLS5  Blasjo            83.24 329  eP        P        17 11 19.8 +1.3
CCD   Concordia, Ant    83.51 173   P        P        17 11 21.5 +1.7
CCD                                 pP       pP       17 11 46.9 +0.6
BNI   Bardonecchia      83.71 315   P        P        17 11 21.4 +0.1
BNI   Bardonecchia      83.71 315   P        P        17 11 21.4 +0.1
BNI                                 pmax     pmax
      comp=Z,9.0nm,0.8s
SYO   Syowa Base        84.36 197⇓ePcP      PcP      17 11 29.2 +1.9
BKZ   Black Stump Fm    88.08 130   IAmb     IAmb     17 11 43.5
      comp=Z,20nm,1.1s
EKA   Eskdalemuir Ar    88.83 325   P        P        17 11 46.9 +0.9
      comp=Z,2.1nm,0.5s,baz=92,slow=4.9,SNR=12
EKA                                 pP       pP       17 12 12.9 +0.3
      comp=Z,2.8nm,0.7s,baz=101,slow=5.5,SNR=3.9
EKA                                 PKKPbc   PKKPbc   17 29 30.1 +3.0
      comp=Z,9.2nm,0.8s,baz=99,slow=4.5,SNR=5.0
      comp=Z,2.1nm,0.5s
E18K  Tukpahlearik C    89.56  22   IAmb     IAmb     17 11 50.9
      comp=Z,14nm,1.0s
H17K  Granite Mounta    90.55  24   IAmb     IAmb     17 11 55.3
      comp=Z,8.2nm,0.7s
F19K  Shaleruckik Mo    90.80  22   IAmb     IAmb     17 11 56.2
      comp=Z,26nm,1.2s
B22K  Teshekpuk Lake    91.03  18   IAmb     IAmb     17 11 57.2
      comp=Z,12nm,0.8s
H18K  Honhosa River     91.11  24   IAmb     IAmb     17 13 56.5
      comp=Z,29nm,1.8s
TORD  Torodi Ar. Bea    91.12 283   P        P        17 11 58.9 +1.5
      comp=Z,4.0nm,0.6s,baz=84,slow=5.2,SNR=25
TORD                                pP       pwP      17 12 25.4 -1.1
      comp=Z,2.0nm,0.9s,baz=96,slow=5.8,SNR=3.4
TORD                                PKKPbc   PKKPbc   17 29 20.7 +0.7
      comp=Z,1.1nm,0.6s,baz=304,slow=3.4,SNR=4.7
      comp=Z,4.0nm,0.6s
VNDA  Vanda             91.73 168   P        P        17 11 59.6 +0.7
      comp=Z,1.7nm,0.9s,baz=305,slow=2.8,SNR=6.3
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	comp=Z,1.7nm,0.9s						
VNDA	**Vanda**	**91.73**	**168**	IAmb	IAmb	17 15 26.9	
	comp=Z,20nm,1.9s						
ESDC	**Sonseca Array**	**92.17**	**310**	P	**P**	**17 12 02.9**	**+1.0**
	comp=Z,3.9nm,0.8s,baz=57,slow=4.1,SNR=25						
ESDC				pP	**pP**	**17 12 29.3**	**+0.7**
	comp=Z,1.6nm,0.9s,baz=50,slow=4.0,SNR=3.7						
	comp=Z,3.9nm,0.8s						
ESDC	**Sonseca Array**	**92.17**	**310**	P	**P**	**17 12 02.4**	**+0.5**
J19K	**Poorman**	**92.61**	**25**	IAmb	IAmb	17 12 05.2	
	comp=Z,13nm,0.9s						
H21K	**Melozitna Rive**	**93.10**	**23**	IAmb	IAmb	17 12 07.3	
	comp=Z,13nm,1.2s						
E23K	**Chandalar**	**93.22**	**20**	IAmb	IAmb	17 12 07.7	
	comp=Z,7.5nm,0.8s						
NVL	**N'lazarevskaya**	**93.83**	**199**	*e*P	**P**	**17 12 10.5**	**+1.8**
NVL				*e*		17 15 56.9	
NVL				*e*PPP	PPP	17 17 57.9	
NVL				*e*S	**SKSac**	**17 22 35.4**	**+1.9**
NVL				*e*SS	**SS**	**17 29 33.6**	**+3.4**
NVL				*e*SSS	SSS	17 33 15.2	
NVL				pmax	pmax		
	comp=Z,13nm,0.9s						
NVL				MLR	MLR		
	comp=Z,734nm,23.0s						
BPAW	**Bear Paw Mtn.**	**94.45**	**24**	IAmb	IAmb	17 12 13.1	
	comp=Z,21nm,1.3s						
E25K	**Arctic Village**	**94.53**	**19**	IAmb	IAmb	17 13 04.5	
	comp=Z,16nm,1.6s						
G26K	**Porcupine Rive**	**95.72**	**20**	IAmb	IAmb	17 12 18.8	
	comp=Z,7.4nm,0.8s						
IL31		**95.73**	**22**	P	**P**	**17 12 16.7**	**-0.8**
ILAR	**Eielson Array**	**95.73**	**22**	P	**P**	**17 12 16.9**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=292,slow=4.0,SNR=24						
ILAR				PP	**PP**	**17 16 04.2**	**-5.8**
	comp=Z,0.7nm,0.9s,baz=310,slow=6.1,SNR=5.0						
ILAR				PKKPbc	**PKKPdf**	**17 29 07.5**	**-1.8**
	comp=Z,0.5nm,0.7s,baz=121,slow=1.5,SNR=6.1						
	comp=Z,1.1nm,0.5s						
E27K	**Coleen River**	**95.75**	**18**	IAmb	IAmb	17 12 20.6	
	comp=Z,7.9nm,1.4s						
E28M	**Babbage River**	**96.13**	**17**	IAmb	IAmb	17 12 20.8	
	comp=Z,7.7nm,0.8s						
QSPA	**South Pole Qui**	**96.61**	**180**	P	**P**	**17 12 22.7**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=167,slow=0.3,SNR=5.5						
	comp=Z,0.6nm,0.6s						
INK	**Inuvik**	**98.04**	**16**	IAmb	IAmb	17 12 29.4	
	comp=Z,11nm,1.4s						
DBIC	**Dimbokro**	**98.36**	**278**	P	Pdif	17 12 31.8	+1.2
	comp=Z,2.7nm,0.8s,baz=139,slow=6.4,SNR=3.7						
	comp=Z,2.7nm,0.8s						
DBIC	**Dimbokro**	**98.36**	**278**	IAmb	IAmb	17 14 21.1	
	comp=Z,9.0nm,1.3s						
RES	**Resolute Bay**	**98.56**	**2**	IAmb	IAmb	17 12 32.0	
	comp=Z,8.5nm,0.8s						
YKA	**Yellowknife Ar**	**107.50**	**14**	Pdiff	**Pdif**	**17 13 10.5**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=321,slow=6.0,SNR=4.1						
YKA				PP	**PP**	**17 17 35.5**	**-2.7**
	comp=Z,0.9nm,0.8s,baz=330,slow=8.1,SNR=8.5						
YKA				PKKPbc	**PKKPbc**	**17 28 33.3**	**-2.3**
	comp=Z,0.2nm,0.5s,baz=159,slow=2.7,SNR=5.5						
ULM	**Lac du Bonnet**	**122.59**	**8**	PKP	**PKPdf**	**17 17 46.6**	**-0.5**
	comp=Z,5.7nm,0.6s,baz=49,slow=2.1,SNR=8.1						
NVAR	**Mina Array Bea**	**125.78**	**32**	PKP	**PKPdf**	**17 17 54.0**	**+0.1**
	comp=Z,4.6nm,0.7s,baz=322,slow=2.2,SNR=23						
NVAR	**Mina Array Bea**	**125.78**	**32**		**PKiKP**	**17 17 54.9**	**+0.5**
PDAR	**Pinedale Array**	**126.16**	**22**	PKP	**PKPdf**	**17 17 54.0**	**-0.6**
	comp=Z,3.4nm,0.7s,baz=165,slow=0.7,SNR=19						
PDAR				PKKPbc	**PKKPab**	**17 27 27.4**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=145,slow=6.3,SNR=8.2						
TXAR	**Lajitas Array**	**140.18**	**25**	PKhKP	PKPpre	17 18 12.9	
	comp=Z,0.8nm,0.5s,baz=246,slow=1.8,SNR=11						
TXAR				PKP	**PKPdf**	**17 18 21.1**	**0.0**
	comp=Z,3.5nm,0.6s,baz=139,slow=0.8,SNR=17						
TXAR				PP	**PP**	**17 21 19.2**	**+1.1**
	comp=Z,1.3nm,0.9s,baz=2.9,slow=5.0,SNR=5.4						
TXAR				SKPbc	**SKPbc**	**17 21 46.2**	**-1.7**
	comp=Z,1.1nm,0.6s,baz=37,slow=1.2,SNR=11						
BDFB	**Brasilia**	**142.13**	**253**	PKhKP	PKPpre	17 18 21.9	
	comp=Z,3.9nm,0.5s,baz=103,slow=5.9,SNR=5.4						
BDFB				SKPbc	**SKPbc**	**17 21 52.4**	**-0.8**
	comp=Z,1.1nm,0.4s,baz=135,slow=2.9,SNR=3.4						
PLCA	**Paso Flores**	**143.54**	**199**	PKP	**PKPdf**	**17 18 25.6**	**-1.1**
	comp=Z,4.3nm,0.7s,baz=312,slow=1.7,SNR=16						
PLCA				SKPbc	**SKPbc**	**17 21 54.9**	**-1.0**
	comp=Z,2.0nm,0.8s,baz=292,slow=3.1,SNR=3.7						
CPUP	**Villa Florida**	**146.74**	**231**	PKPbc	**PKPab**	**17 18 35.0**	**-0.6**
	comp=Z,10nm,0.8s,baz=100,slow=2.6,SNR=30						
CPUP	**Villa Florida**	**146.74**	**231**		**PKPbc**	**17 18 33.6**	**-0.6**
CPUP	**Villa Florida**	**146.74**	**231**	PKP2	**PKPbc**	**17 18 33.6**	**-0.6**
LPAZ	**La Paz**	**160.43**	**239**	PKP	**PKPdf**	**17 18 54.0**	**+1.2**
	comp=Z,4.2nm,0.8s,baz=100,slow=1.1,SNR=15						
LPAZ				PKPab	**PKPab**	**17 19 34.6**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=279,slow=0.7,SNR=4.5						

JMA ***30*** *17:03:39.5±0.1, 40.°3N±0.°3×142.°5E±0.°7, h34^{km}±1^{km}, MV3.8/32, NE OFF IWATE PREF*

NIED ***30*** *17:03:39.5, 40.°25N×142.°51E, h34^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$2.33; M$_{\theta\theta}$-0.14; M$_{\phi\phi}$-2.19; M$_{r\theta}$0.84; M$_{\theta\phi}$-0.83; M$_{\phi r}$4.33; Fault plane solution: M$_0$5.03000×10^{14} NP1: φ$_s$208.00000°, δ15.00000°, λ105.00000°. NP2: φ$_s$12.00000°, δ76.00000°, λ86.00000°.*

IDC ***30*** *17:03:41.8±3.1, 40.°39N×142.°53E, h53^{km}±24^{km}, mb3.8/8, mbtmp3.9/12, ML3.4/3, MS2.8/1 Error ellipse: s-maj=38.6km s-min=24.7km az=145.0*

ISC 30 17:03:37.8±1.7**, 40.°34N**±0.°05×**142.°51E**±0.°07**, h20**^{km}±5^{km}**, n29,** σ1^{s}**30**/31**, mb4.0**/8**, 17D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKEN	**Kujiedanarisaw**	**0.63**	**258**	⇓*i*P	**Pn**	**17 03 51.4**	**-0.2**
JKEN				⇓S	**Sb**	**17 03 59.9**	**+1.5**
JTH	**Tanohata**	**0.64**	**231**	⇓P	**Pn**	**17 03 51.2**	**-0.5**
JTH				⇓*e*S	**Sb**	**17 03 60.0**	**+1.3**
JANG	**Nango**	**0.76**	**273**	⇓P	**Pn**	**17 03 53.8**	**+0.4**
JANG				⇓*e*S	**Sn**	**17 04 04.3**	**-0.1**
MIYJ	**Miyakonagasawa**	**0.93**	**215**	⇓*i*P	**Pb**	**17 03 55.0**	**-0.2**
MIYJ				⇓*e*S	**Sb**	**17 04 06.8**	**-0.3**
JKZ	**Kuzumaki**	**0.97**	**249**	⇓P	**Pn**	**17 03 56.7**	**+0.3**
JKZ				⇓S	**Sg**	**17 04 09.2**	**-0.4**
JARK	**Aomorirokkasho**	**1.10**	**308**	⇓*i*P	**Pg**	**17 03 59.2**	**+0.1**
JARK				⇓*e*S	**Sg**	**17 04 13.4**	**-0.1**
JTM	**Tenmabayashi**	**1.19**	**293**	⇓P	**Pg**	**17 04 00.7**	**-0.1**
JOM	**Ohasama**	**1.27**	**228**	⇓P	**Pb**	**17 04 01.0**	**-0.2**
JOM				⇓*e*S	**Sb**	**17 04 16.8**	**-0.3**
JAH	**Hinai**	**1.44**	**265**	⇓P	**Pg**	**17 04 04.4**	**-1.3**
JAH				⇓*e*S	**Sn**	**17 04 20.2**	**-1.0**
ASAJ	**Asahikawa**	**3.78**	**1**	P	**Pn**	**17 04 37.3**	**+2.4**
	3.9nm,0.3s,baz=215,slow=12,SNR=25						
ASAJ				S	**Sb**	**17 05 26.0**	**-3.1**
	31nm,0.8s,baz=9.2,slow=27,SNR=4.4						
	7.3nm,0.3s						
MJAR	**Matsushiro Arr**	**5.08**	**223**	P	**Pn**	**17 04 56.0**	**+3.2**
	0.3nm,0.3s,baz=29,slow=14,SNR=42						
	3.7nm,0.5s						
USRK	**Ussuriysk Ar.**	**8.70**	**300**	P	**Pn**	**17 05 45.0**	**+2.5**
	0.4nm,0.3s,baz=96,slow=15,SNR=6.2						
	2.1nm,0.5s						
KSRS	**Korea Array**	**11.73**	**260**	LR	LR	17 10 22.4	
	comp=Z,48nm,20.9s,baz=75,slow=34						
TJN	**Taejon**	**12.53**	**256**	P	**P**	**17 06 48.2**	**+1.7**
HILR	**Hailar Array B**	**18.50**	**307**	P	**P**	**17 07 51.6**	**-1.0**
	2.9nm,0.6s,baz=108,slow=14,SNR=3.6						
H11N2	**WAKE ISLAND Hy**	**29.29**	**127**	T	T	17 40 29.1	
	baz=319,slow=75,SNR=48						
H11N1	**WAKE ISLAND Hy**	**29.30**	**127**	T	T	17 40 39.5	
	baz=319,slow=75,SNR=33						
H11N3	**WAKE ISLAND Hy**	**29.30**	**127**	T	T	17 40 26.3	
	baz=319,slow=75,SNR=26						
H11S1	**WAKE ISLAND Hy**	**30.11**	**129**	T	T	17 41 37.9	
	baz=321,slow=76,SNR=18						
H11S3	**WAKE ISLAND Hy**	**30.11**	**129**	T	T	17 41 34.3	
	baz=321,slow=76,SNR=11						
H11S2	**WAKE ISLAND Hy**	**30.12**	**129**	T	T	17 41 38.9	
	baz=321,slow=76,SNR=8.6						
ZALV	**Zalesovo Beam**	**40.40**	**310**	P	**P**	**17 11 14.0**	**-0.3**
	0.8nm,0.4s,baz=102,slow=7.1,SNR=2.8						
	0.8nm,0.4s						
MKAR	**Makanchi Array**	**43.17**	**299**	P	**P**	**17 11 36.5**	**-0.5**
	0.8nm,0.5s,baz=87,slow=11,SNR=7.4						
	0.8nm,0.5s						
KURBB	**Kurchatov Arra**	**44.71**	**306**	P	**P**	**17 11 49.1**	**-0.3**
	1.9nm,0.5s,baz=79,slow=8.8,SNR=12						
	1.9nm,0.5s						
ILAR	**Eielson Array**	**46.26**	**34**	P	**P**	**17 12 00.7**	**-0.8**
	0.4nm,0.6s,baz=266,slow=5.6,SNR=7.9						
	0.4nm,0.6s						
BVAR	**Borovoye Array**	**49.04**	**310**	P	**P**	**17 12 23.4**	**+0.2**
	2.2nm,0.4s,baz=75,slow=9.0,SNR=11						
	2.2nm,0.4s						
AKTO	**Aktyubinsk**	**57.14**	**311**	P	**P**	**17 13 23.1**	**+0.3**
	1.1nm,0.5s,baz=82,slow=14,SNR=2.6						
	1.1nm,0.5s						
HFS	**Hagfors**	**71.43**	**336**	P	**P**	**17 14 56.4**	**+0.1**
	4.8nm,0.9s,baz=33,slow=6.2,SNR=4.3						
	4.8nm,0.9s						
NOA	**NORSAR Array B**	**71.47**	**337**	P	**P**	**17 14 55.9**	**-0.7**
	0.5nm,0.6s,baz=37,slow=6.2,SNR=1.7						
	0.5nm,0.6s						

IDC ***30*** *17:12:30.6±0.6, 35.°53N×74.°51E, h0^{km}, mb4.2/19, mbtmp4.2/24, ML3.7/6, Error ellipse: s-maj=16.3km s-min=12.7km az=39.0*

BJI ***30*** *17:12:32.0, 35.°60N×74.°50E, h10^{km}, mB5.1/3, mb4.5/25, ML4.2/3*

NEIC ***30*** *17:12:33.5±1.4, 35.°67N±0.°05×74.°48E±0.°06, h10^{km}±1^{km}, mb4.6/45, Error ellipse: s-maj=11.3km s-min=2.8km az=133.0*

NNC ***30*** *17:12:35.4±4.3, 35.°69N×74.°21E, h0^{km}, mb4.8, mpv4.5, Error ellipse: s-maj=41.1km s-min=32.1km az=63.0*

ISC 30 17:12:36.3±0.4**, 35.°59N**±0.°04×**74.°55E**±0.°05**, h36**^{km}**, n129,** σ**1^{s}53**/136**, mb4.4**/52**, 1D, Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRNI	**Srinagar**	**1.55**	**172**	*e*P	**Pn**	**17 13 04.0**	**+3.3**
SRNI				IAML		17 13 23.5	
	comp=N,3μm,0.6s						
SRNI				*e*S	**Sn**	**17 13 24.2**	**+5.2**
SRNI				IAML		17 13 25.9	
	comp=E,4μm,0.6s						
NIL	**Nilore**	**2.21**	**209**		**Pn**	**17 13 12.5**	**+2.0**
ALCI	**Alchi Leh**	**2.56**	**122**	*e*P	**Pn**	**17 13 15.8**	**+0.2**
ALCI				*e*S	**Sn**	**17 13 46.2**	**+0.4**
ALCI				IAML		17 13 46.9	
	comp=E,3μm,0.4s						
ALCI				IAML		17 13 49.1	
	comp=N,1μm,0.5s						
JMU	**Jammu**	**2.81**	**175**	*e*P	**Pn**	**17 13 21.4**	**+1.8**
JMU				*e*S	**Sn**	**17 13 54.3**	**+1.3**
JMU				IAML		17 14 03.3	
	comp=N,3μm,0.6s						
JMU				IAML		17 14 04.4	
	comp=E,3μm,0.6s						
MANEM	**Manem**	**3.02**	**311**		**Pn**	**17 13 19.3**	**-2.6**
TSSA	**Tissa**	**3.05**	**154**	*e*P	**Pn**	**17 13 24.5**	**+2.4**
TSSA				*e*S	**Sn**	**17 13 59.3**	**+1.8**
TSSA				IAML		17 14 10.8	
	comp=E,4μm,0.5s						
TSSA				IAML		17 14 11.2	
	comp=N,4μm,0.7s						
DHRM	**DHARAMSHALA**	**3.63**	**156**	*e*P	**Pn**	**17 13 30.9**	**+0.7**
DHRM				*e*S	**Sn**	**17 14 12.4**	**+0.4**
DHRM				IAML		17 14 32.7	
	comp=E,2μm,0.6s						
DHRM				IAML		17 14 33.4	
	comp=N,2μm,0.5s						
KSH	**Kashi**	**4.08**	**16**	Pg	**Pn**	**17 13 35.0**	**-1.3**
KSH				Sg	**Sn**	**17 14 28.0**	**+5.1**
KBL	**Kabul**	**4.63**	**259**		**Pn**	**17 13 43.7**	**-0.3**
SMLA	**Simla**	**4.96**	**153**	*e*P	**Pn**	**17 13 49.0**	**+0.8**
SMLA				*e*S	**Sn**	**17 14 43.4**	**-0.9**
SMLA				IAML		17 14 45.0	
	comp=E,1μm,0.4s						
SMLA				IAML		17 14 47.6	
	comp=N,1μm,0.8s						
KLP	**Kalpa**	**5.09**	**142**	*e*P	**Pn**	**17 13 51.2**	**+0.9**
KLP				*e*S	**Sn**	**17 14 45.8**	**-2.3**
KLP				IAML		17 15 18.5	
	comp=N,1μm,0.4s						
KLP				IAML		17 15 22.3	
	comp=E,1μm,0.6s						
CHGR	**Chuyangaron**	**5.28**	**307**		**Pn**	**17 13 50.1**	**-2.7**
SHAA	**Shahritus**	**5.53**	**293**		**Pn**	**17 13 54.8**	**-1.3**
ARSB	**Arslanbob**	**5.86**	**348**		**Pn**	**17 13 58.6**	**-2.1**
DDI	**Dehra Dun**	**6.02**	**150**	*e*P	**Pn**	**17 14 03.2**	**+0.2**
DDI				*e*S	**Sn**	**17 15 08.3**	**-2.3**
DDI				IAML		17 15 12.3	
	comp=E,1μm,0.6s						
DDI				IAML		17 15 14.0	
	comp=N,1μm,0.4s						
UCH	**Uchtor**	**6.63**	**360**	P	**Pn**	**17 14 14.3**	**+2.7**
	SNR=24						
TARG	**Taragay, Kyrgy**	**6.64**	**22**		**Pn**	**17 14 10.8**	**-0.9**
WUS	**Wushi**	**6.70**	**32**		**Pn**	**17 14 11.4**	**-0.9**
KDJ	**Kajisay**	**6.85**	**17**	Pn	Pn	17 14 09.7	-4.7
BOOM	**Boomskoye usch**	**6.98**	**9**		**Pn**	**17 14 18.8**	**+2.7**
AAK	**Ala-Archa**	**7.04**	**360**	P	**Pn**	**17 14 19.9**	**+3.0**
	SNR=10						
AAK	**Ala-Archa**	**7.04**	**360**	Pn	**Pn**	**17 14 19.8**	**+2.8**
	comp=N,1.9nm,0.3s,baz=159,slow=7.2,SNR=21						
	comp=N,7.9nm,0.5s						
AAK	**Ala-Archa**	**7.04**	**360**		**Pn**	**17 14 16.8**	**-0.1**
AAK	**Ala-Archa**	**7.04**	**360**	Pn	**Pn**	**17 14 19.7**	**+2.8**
	comp=N,27nm,1.4s						
AAK				Sn	**Sn**	**17 15 39.8**	**+3.9**
	comp=N,45nm,1.3s						
AAK				Lg	Lg	17 16 17.7	
	comp=N,37nm,1.2s						
KBK	**Karagaybulak**	**7.07**	**2**	P	**Pn**	**17 14 20.0**	**+2.7**
	SNR=13						
TKM2	**Tokmak 2**	**7.37**	**6**	P	**Pn**	**17 14 23.9**	**+2.4**
	SNR=18						
CHMS	**Chumysh**	**7.40**	**1**	P	**Pn**	**17 14 24.7**	**+2.9**
	SNR=6.0						
PRZ	**Przheval'sk**	**7.51**	**22**		**Pn**	**17 14 24.7**	**+1.3**
KK31	**Karatay Array**	**8.13**	**339**		**Pn**	**17 14 30.3**	**-1.5**
KK31	**Karatay Array**	**8.13**	**339**	Pn	**Pn**	**17 14 32.4**	**+0.6**
	comp=N,23nm,0.8s,baz=147,slow=12,SNR=117						
KK31				⇓Sn	**Sn**	**17 16 02.3**	**-0.1**
	comp=N,5.5nm,0.3s,baz=156,slow=23,SNR=7.1						
KKAR	**Karatay Array**	**8.13**	**339**		**Pn**	**17 14 29.8**	**-2.0**
PDGK	**Podgornoye**	**8.62**	**25**	Pn	**Pn**	**17 14 40.2**	**+1.6**
	comp=N,28nm,1.2s						
PDGK				Lg	Lg	17 17 11.4	
	comp=N,32nm,1.1s						
MAKZ	**Makanchi**	**12.52**	**24**		**Pn**	**17 15 31.2**	**-0.6**
MKAR	**Makanchi Array**	**12.62**	**25**	Pn	**Pn**	**17 15 31.9**	**-1.2**
	comp=N,0.2nm,0.3s,baz=195,slow=14,SNR=6.5						
MKAR	**Makanchi Array**	**12.62**	**25**	Pn	**Pn**	**17 15 30.9**	**-2.3**
WMQ	**Urumqi**	**13.03**	**47**	*e*P	**Pn**	**17 15 41.5**	**+2.6**
KURBB	**Kurchatov Arra**	**15.30**	**10**	Pn	**Pn**	**17 16 07.0**	**-2.5**
	comp=N,0.1nm,0.3s,baz=199,slow=12,SNR=15						
	comp=N,3.4nm,0.8s						
KURK	**Kurchatov**	**15.41**	**10**		**Pn**	**17 16 07.0**	**-3.8**
GOMU	**GeErMu**	**16.44**	**82**	P	**Pn**	**17 16 21.5**	**-3.1**
GOMU				pmax	pmax		
	comp=N,3.0nm,1.1s						
AB31	**Akbulak array**	**17.36**	**326**	Pn	**Pn**	**17 16 34.1**	**-1.5**
ABKAR	**Akbulak array**	**17.36**	**326**		**Pn**	**17 16 34.5**	**-1.1**
BVAR	**Borovoye Array**	**17.68**	**352**	P	**Pn**	**17 16 38.0**	**-1.6**
	comp=N,0.2nm,0.3s,baz=158,slow=9.6,SNR=20						
	comp=N,10nm,0.8s						
BORK	**Borovoye**	**17.71**	**352**	P	**P**	**17 16 40.5**	**-0.1**
HYB	**Hyderabad**	**18.45**	**168**	*e*P	Pn	17 16 58.2	+9.0
AKTO	**Aktyubinsk**	**19.07**	**326**	P	**P**	**17 16 54.6**	**-0.9**
	comp=N,1.7nm,0.3s,baz=123,slow=5.3,SNR=16						
	comp=N,7.9nm,0.5s						
ZAA0	**Zalesovo Array**	**19.72**	**18**		**P**	**17 17 02.1**	**-0.4**
ZALV	**Zalesovo Beam**	**19.72**	**18**	P	**P**	**17 17 02.4**	**-0.1**
	comp=N,1.2nm,0.3s,baz=220,slow=12,SNR=22						
	comp=N,11nm,0.7s						
ZALV	**Zalesovo Beam**	**19.72**	**18**		**P**	**17 17 02.3**	**-0.2**
GTA	**Gaotai**	**20.39**	**72**	P	**P**	**17 17 10.5**	**+0.4**
GTA				pP	Pn	17 17 15.0	+2.7
GTA				pmax	pmax		
	comp=N,13nm,1.2s						
TNCH	**TengChong**	**23.16**	**110**	P	**P**	**17 17 40.0**	**+0.1**
TNCH				pP	pP	17 17 43.5	-7.2
TNCH				sP	sP	17 17 46.5	-9.3
TNCH				S	**S**	**17 21 46.8**	**-2.3**
TNCH				pmax	pmax		
	comp=N,27nm,1.0s						
TNCH				pmax	pmax		
	comp=N,120nm,3.2s						
ARTI	**Arti**	**23.53**	**337**	P	**P**	**17 17 41.9**	**-1.0**
ARTI				IAmb	IAmb	17 17 48.8	
	comp=Z,6.6nm,0.6s						
LZDM	**Lanzhou Array**	**23.62**	**81**	P	**P**	**17 17 44.0**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=261,slow=5.9,SNR=5.6						
	comp=Z,0.9nm,0.3s						
LZH	**Lanzhou**	**23.72**	**80**	*e*P	**P**	**17 17 45.5**	**+0.3**
LZH				sP	pP	17 17 55.5	-0.9
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
PZH	**PanZhiHua**	**24.93**	**104**	P	**P**	**17 17 58.5**	**+2.1**
SONM	**Songino Array**	**26.54**	**53**	P	**P**	**17 18 11.6**	**+0.8**
	comp=Z,4.2nm,0.7s,baz=251,slow=10,SNR=28						
	comp=Z,4.2nm,0.7s						
SONM	**Songino Array**	**26.54**	**53**	P	**P**	**17 18 12.0**	**+1.3**
CHTO	**Chiang Mai**	**27.27**	**121**	P	**P**	**17 18 16.8**	**-0.6**
CHTO				IAmb	IAmb	17 18 20.1	
	comp=Z,10nm,1.1s						
CM31	**Chiang Mai Arr**	**27.51**	**122**	P	**P**	**17 18 18.9**	**-0.6**
CM31				IAmb	IAmb	17 18 24.8	
	comp=Z,11nm,0.8s						
CMAR	**Chiang Mai Arr**	**27.51**	**122**	P	**P**	**17 18 18.9**	**-0.6**
	comp=Z,8.2nm,1.0s,baz=311,slow=11,SNR=38						
CMAR				PcP	**PcP**	**17 21 37.4**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=330,slow=3.2,SNR=4.0						
	comp=Z,8.2nm,1.0s						
CMAR	**Chiang Mai Arr**	**27.51**	**122**	P	**P**	**17 18 19.6**	**0.0**
HHC	**Hu-ho-hao-te**	**29.41**	**68**	*e*P	**P**	**17 18 37.0**	**+0.7**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,140nm,3.8s						
NRIK	**Noril'sk**	**34.56**	**8**	P	**P**	**17 19 21.1**	**0.0**
	comp=Z,4.1nm,0.8s,baz=176,slow=4.9,SNR=8.5						
	comp=Z,4.1nm,0.8s						
NRIK	**Noril'sk**	**34.56**	**8**	P	**P**	**17 19 21.0**	**-0.1**
NRIK				IAmb	IAmb	17 19 26.1	
	comp=Z,13nm,1.2s						
AKASG	**Malin Array Be**	**35.75**	**309**	P	**P**	**17 19 31.6**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=85,slow=6.9,SNR=6.6						
	comp=Z,0.4nm,0.4s						
AKASG	**Malin Array Be**	**35.75**	**309**	IAmb	IAmb	17 19 32.8	
	comp=Z,5.2nm,1.1s						
NJ2	**Nanjing**	**36.75**	**82**	*e*P	**P**	**17 19 41.0**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BURAR	**Bucovina Array**	**38.19**	**304**	P	**P**	**17 19 51.2**	**-1.2**
BUR08	**Bucovina Ar. S**	**38.20**	**304**	P	**P**	**17 19 52.4**	**-0.1**
BUR08				IAmb	IAmb	17 19 54.8	
	comp=Z,16nm,1.4s						
FINES	**FINESS Array B**	**39.85**	**326**	P	**P**	**17 20 06.5**	**+0.6**
	comp=Z,3.4nm,0.8s,baz=121,slow=6.8,SNR=8.9						
	comp=Z,3.4nm,0.8s						
FINES	**FINESS Array B**	**39.85**	**326**	P	**P**	**17 20 05.3**	**-0.6**
ARCES	**ARCESS Array B**	**43.09**	**337**	P	**P**	**17 20 33.4**	**+0.9**
	comp=Z,6.9nm,0.9s,baz=108,slow=6.9,SNR=14						
	comp=Z,6.9nm,0.9s						
RONA	**Rosalia, Austr**	**44.20**	**305**	*i* P	**P**	**17 20 42.6**	**+0.9**
	comp=Z,3.5nm,1.1s						
CONA	**Conrad Observa**	**44.47**	**305**	*i* P	**P**	**17 20 45.1**	**+1.2**
	comp=Z,12nm,1.4s						
ARSA	**Arzberg**	**44.77**	**304**	*i* P	**P**	**17 20 47.8**	**+1.5**
	comp=Z,7.8nm,1.7s						
SOKA	**Soboth**	**45.18**	**303**	*i* P	**P**	**17 20 50.6**	**+1.0**
	comp=Z,9.8nm,1.1s						
OBKA	**Obir**	**45.53**	**303**	*e*P	**P**	**17 20 52.5**	**0.0**
	comp=Z,15nm,1.4s						
HFS	**Hagfors**	**45.55**	**322**	P	**P**	**17 20 51.9**	**-0.4**
	comp=Z,4.1nm,0.7s,baz=106,slow=11,SNR=12						
	comp=Z,4.1nm,0.7s						
TIXI	**Tiksi**	**45.56**	**21**	P	**P**	**17 20 52.8**	**+0.6**
TIXI				IAmb	IAmb	17 21 19.9	
	comp=Z,9.6nm,1.4s						
NB2	**NORSAR Subarra**	**46.83**	**323**	P	**P**	**17 21 02.6**	**+0.2**
	comp=Z,3.8nm,0.7s,baz=93,slow=7.9						
NOA	**NORSAR Array B**	**46.83**	**323**	P	**P**	**17 21 02.6**	**+0.2**
	comp=Z,2.3nm,0.8s,baz=94,slow=7.6,SNR=5.9						
	comp=Z,2.3nm,0.8s						
ABTA	**Abfaltersbach**	**46.88**	**304**	*e*P	**P**	**17 21 03.2**	**+0.2**
	comp=Z,4.2nm,1.3s						
WTTA	**Wattenberg**	**47.39**	**305**	*e*P	**P**	**17 21 07.3**	**+0.2**
	comp=Z,6.5nm,1.1s						
WATA	**Walderalm**	**47.42**	**305**	*e*P	**P**	**17 21 07.1**	**-0.1**
	comp=Z,4.0nm,1.1s						
FUORN	**Ofenpass-Fuorn**	**48.43**	**304**	P	**P**	**17 21 15.1**	**-0.2**
FUORN				IAmb	IAmb	17 21 15.6	
	comp=Z,5.2nm,1.1s						
DAVA	**Damuels**	**48.56**	**305**	*e*P	**P**	**17 21 16.0**	**-0.2**
	comp=Z,7.2nm,1.0s						
KBS	**Kingsbay**	**50.14**	**347**	P	**P**	**17 21 27.6**	**0.0**
SENIN	**Lac Senin/Sane**	**50.49**	**304**	P	**P**	**17 21 31.2**	**+0.3**
SENIN				IAmb	IAmb	17 21 40.7	
	comp=Z,6.6nm,1.2s						
MJB9	**Matsu-Tunnel**	**50.60**	**69**	P	**P**	**17 21 31.5**	**-0.2**
MJB9				IAmb	IAmb	17 21 45.1	
	comp=Z,19nm,1.4s						
MAJO	**Matsushiro**	**50.60**	**69**	P	**P**	**17 21 31.5**	**-0.1**
MAJO				IAmb	IAmb	17 21 45.1	
	comp=Z,19nm,1.4s						
MJAR	**Matsushiro Arr**	**50.60**	**69**	P	**P**	**17 21 31.9**	**+0.2**
	comp=Z,2.5nm,0.7s,baz=288,slow=9.7,SNR=11						
	comp=Z,2.5nm,0.7s						
MJAR	**Matsushiro Arr**	**50.60**	**69**	P	**P**	**17 21 31.7**	**+0.1**
EKA	**Eskdalemuir Ar**	**54.93**	**317**	P	**P**	**17 22 03.7**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=75,slow=10,SNR=4.5						
	comp=Z,0.3nm,0.4s						
ESDC	**Sonseca Array**	**60.41**	**300**	P	**P**	**17 22 42.1**	**0.0**
	comp=Z,2.0nm,0.8s,baz=61,slow=6.9,SNR=16						
	comp=Z,2.0nm,0.8s						
ESDC	**Sonseca Array**	**60.41**	**300**	IAmb	IAmb	17 22 42.8	
	comp=Z,1.9nm,1.1s						
TORD	**Torodi Ar. Bea**	**68.59**	**271**	P	**P**	**17 23 34.1**	**-1.7**
	comp=Z,2.5nm,0.8s,baz=45,slow=5.5,SNR=12						
	comp=Z,2.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**68.59**	**271**	IAmb	IAmb	17 23 35.1	
	comp=Z,1.2nm,0.8s						
F15K	**North Star Dit**	**69.22**	**22**	P	**P**	**17 23 39.9**	**+0.9**
C23K	**Itkillik River**	**69.87**	**15**	P	**P**	**17 23 44.2**	**+1.3**
C23K				IAmb	IAmb	17 23 47.3	
	comp=Z,8.5nm,1.4s						
E25K	**Arctic Village**	**72.33**	**15**	P	**P**	**17 23 59.3**	**+1.3**
E25K				IAmb	IAmb	17 24 27.9	
	comp=Z,4.4nm,1.4s						
BMAR	**Burnt Mountain**	**73.12**	**15**	P	**P**	**17 24 04.9**	**+2.3**
J19K	**Poorman**	**73.15**	**21**	P	**P**	**17 24 04.0**	**+1.1**
J19K				IAmb	IAmb	17 24 25.1	
	comp=Z,5.9nm,1.3s						
J20K	**Nowinta River**	**73.43**	**20**	P	**P**	**17 24 05.8**	**+1.3**
J20K				IAmb	IAmb	17 24 09.6	
	comp=Z,3.6nm,0.8s						
INK	**Inuvik**	**74.31**	**10**	P	**P**	**17 24 10.0**	**+0.5**
INK				IAmb	IAmb	17 24 15.3	
	comp=Z,3.8nm,1.0s						
BPAW	**Bear Paw Mtn.**	**74.35**	**19**	P	**P**	**17 24 10.8**	**+0.9**
BPAW				IAmb	IAmb	17 24 19.0	
	comp=Z,12nm,1.5s						
NEA2	**Nenana**	**74.45**	**18**	P	**P**	**17 24 10.9**	**+0.5**
NEA2				IAmb	IAmb	17 24 20.0	
	comp=Z,7.3nm,1.3s						
C36M	**Paulatuk**	**74.48**	**7**	P	**P**	**17 24 10.6**	**+0.2**
WRH	**Wood River Hil**	**74.79**	**18**	P	**P**	**17 24 13.1**	**+0.7**
WRH				IAmb	IAmb	17 24 39.2	
	comp=Z,13nm,1.5s						
ILAR	**Eielson Array**	**74.84**	**17**	P	**P**	**17 24 12.3**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=297,slow=4.6,SNR=26						
	comp=Z,1.1nm,0.5s						
ILAR	**Eielson Array**	**74.84**	**17**	P	**P**	**17 24 12.6**	**-0.1**
PPLA	**Purkeypile**	**74.98**	**20**	P	**P**	**17 24 14.1**	**+0.4**
J25K	**Salcha River,**	**75.33**	**17**	P	**P**	**17 24 15.9**	**+0.3**
J25K				IAmb	IAmb	17 24 17.5	
	comp=Z,8.9nm,1.5s						
H29M	**Whitestone**	**75.40**	**13**	P	**P**	**17 24 16.1**	**+0.2**
H29M				IAmb	IAmb	17 24 17.1	
	comp=Z,4.2nm,0.8s						
DHY	**Denali Highway**	**76.13**	**18**	P	**P**	**17 24 20.6**	**+0.3**
DHY				IAmb	IAmb	17 24 21.2	
	comp=Z,7.8nm,1.1s						
SUA	**Susitna One**	**76.54**	**21**	P	**P**	**17 24 23.5**	**+1.0**
P18K	**Big Mountain,**	**76.80**	**24**	P	**P**	**17 24 25.2**	**+1.2**
SML	**Sawmill**	**76.93**	**19**	P	**P**	**17 24 25.8**	**+1.1**
KNK	**Knik Glacier**	**77.22**	**20**	P	**P**	**17 24 27.5**	**+1.2**
BOSA	**Boshof**	**78.97**	**223**	P	**P**	**17 24 35.9**	**-0.5**
	comp=Z,3.1nm,0.7s,baz=52,slow=3.0,SNR=4.9						
	comp=Z,3.1nm,0.7s						
BOSA	**Boshof**	**78.97**	**223**	P	**P**	**17 24 36.5**	**0.0**
BOSA				IAmb	IAmb	17 24 54.1	
	comp=Z,11nm,1.1s						
WRA	**Warramunga Arr**	**79.08**	**124**	P	**P**	**17 24 37.8**	**+0.6**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,1.5nm,0.6s,baz=326,slow=5.5,SNR=10						
	comp=Z,1.5nm,0.6s						
WRA	**Warramunga Arr**	**79.08**	**124**	P	**P**	**17 24 38.5**	**+1.4**
WR8	**Warramunga Arr**	**79.20**	**124**	P	**P**	**17 24 38.9**	**+1.1**
WR8				IAmb	IAmb	17 24 39.6	
	comp=Z,3.9nm,0.8s						
N31M	**Braeburn, Yuko**	**80.17**	**14**	P	**P**	**17 24 43.8**	**+1.2**
O30N	**Mendenhall**	**80.76**	**15**	P	**P**	**17 24 46.8**	**+1.0**
ASAR	**Alice Springs**	**81.39**	**127**	P	**P**	**17 24 48.8**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=311,slow=4.8,SNR=7.9						
	comp=Z,1.1nm,0.7s						
YKA	**Yellowknife Ar**	**81.98**	**4**	P	**P**	**17 24 51.6**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=335,slow=9.0,SNR=20						
	comp=Z,0.6nm,0.5s						
SCHQ	**Schefferville**	**84.03**	**339**	P	**P**	**17 25 03.0**	**+0.2**
	comp=Z,8.2nm,1.0s,baz=42,slow=9.7,SNR=3.6						
	comp=Z,8.2nm,1.0s						
SCHQ	**Schefferville**	**84.03**	**339**	IAmb	IAmb	17 25 06.5	
	comp=Z,201nm,1.1s						
CPUP	**Villa Florida**	**138.06**	**269**	PKP	**PKiKP**	**17 31 59.2**	**-0.3**
	comp=Z,1.2nm,1.0s,baz=13,slow=6.4,SNR=3.0						

IDC ***30*** *17:17:58.9±0.7, 49°.68S×122°.80E, h0^{km}, mb4.4/8, mbtmp4.5/9, ML2.4/1, MS4.0/6, Error ellipse: s-maj=40.4km s-min=15.9km az=99.0*

NEIC ***30*** *17:18:00.5±1.5, 49°.73S±0°.08×122°.9E±0°.4, h10^{km}±1^{km}, mb4.4/15, Error ellipse: s-maj=42.0km s-min=12.7km az=273.0*

ISC 30 17:18:00.1±0.6**, 49°.72S**±0°.09×**123°.1E**±0°.2**, h10^{km}, n35, σ1^{s}46**/29**, mb4.4**/11**, MS4.1**/5**, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W1	**Cape Leeuwin H**	**16.22**	**333**	T	T	17 38 16.6	
	baz=158,slow=74,SNR=48						
H01W2	**Cape Leeuwin H**	**16.22**	**333**	T	T	17 38 21.9	
	baz=158,slow=74,SNR=34						
H01W3	**Cape Leeuwin H**	**16.24**	**333**	T	T	17 38 18.3	
	baz=158,slow=74,SNR=38						
NWAO	**Narrogin (SRO)**	**17.35**	**343**	P	**P**	**17 22 02.6**	**-1.0**
	0.7nm,0.3s,baz=158,slow=9.8,SNR=6.7						
NWAO				LR	LR	17 27 06.5	
	comp=Z,630nm,19.4s,baz=169,slow=32						
	14nm,0.9s						
NWAO	**Narrogin (SRO)**	**17.35**	**343**		**P**	**17 22 03.5**	**0.0**
NWAO				IAmb	IAmb	17 22 06.7	
	comp=Z,69nm,1.5s						
CASY	**Casey**	**17.83**	**197**		**Pn**	**17 22 04.8**	**-3.2**
CASY				IAmb	IAmb	17 22 18.3	
	comp=Z,29nm,1.4s						
TAU	**Tasmania Unive**	**17.99**	**77**	Pn	**Pn**	**17 22 07.2**	**-3.0**
TAU				IAmb	IAmb	17 22 09.9	
	comp=Z,42nm,1.4s						
TOO	**Toolangi**	**20.14**	**61**	P	**P**	**17 22 36.0**	**+1.7**
TOO				IAmb	IAmb	17 22 48.4	
	comp=Z,17nm,1.4s						
STKA	**Stephens Creek**	**22.55**	**45**	P	**P**	**17 23 01.8**	**+1.6**
	comp=Z,6.4nm,0.9s,baz=216,slow=11,SNR=6.6						
	comp=Z,6.4nm,0.9s						
STKA	**Stephens Creek**	**22.55**	**45**	IAmb	IAmb	17 23 04.7	
	comp=Z,80nm,1.1s						
INKA	**Innaminka**	**25.77**	**38**		**P**	**17 23 28.0**	**-2.9**
INKA				IAmb	IAmb	17 23 56.9	
	comp=Z,9.0nm,1.4s						
ASAR	**Alice Springs**	**27.34**	**22**	P	**P**	**17 23 46.1**	**+0.8**
	comp=Z,11nm,0.9s,baz=193,slow=9.3,SNR=57						
ASAR				PcP	**PcP**	**17 27 03.6**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=215,slow=1.7,SNR=5.1						
ASAR				LR	LR	17 33 40.1	
	comp=Z,300nm,19.6s,baz=216,slow=34						
	comp=Z,11nm,0.9s						
ASAR	**Alice Springs**	**27.34**	**22**		**P**	**17 23 44.7**	**-0.6**
AS31	**Alice Springs**	**27.35**	**22**		**P**	**17 23 44.6**	**-0.6**
WRA	**Warramunga Arr**	**31.03**	**21**	P	**P**	**17 24 18.2**	**+0.2**
	comp=Z,3.7nm,1.0s,baz=197,slow=9.6,SNR=5.6						
	comp=Z,3.7nm,1.0s						
WRA	**Warramunga Arr**	**31.03**	**21**	IAmb	IAmb	17 24 26.6	
	comp=Z,0.7nm,1.2s						
WRAB	**Tennant Creek**	**31.04**	**21**	P	**P**	**17 24 17.1**	**-1.0**
WR8	**Warramunga Arr**	**31.06**	**21**	P	**P**	**17 24 17.9**	**-0.2**
WR8				IAmb	IAmb	17 24 27.6	
	comp=Z,17nm,1.3s						
WB0	**Warramunga Arr**	**31.21**	**21**	P	**P**	**17 24 18.9**	**-0.7**
WB0				IAmb	IAmb	17 24 30.0	
	comp=Z,12nm,1.4s						
VNDA	**Vanda**	**31.49**	**165**	P	**P**	**17 24 22.5**	**+1.0**
	comp=Z,3.2nm,0.9s,baz=308,slow=8.9,SNR=7.3						
VNDA				LR	LR	17 36 07.3	
	comp=Z,448nm,20.5s,baz=332,slow=34						
	comp=Z,3.2nm,0.9s						
VNDA	**Vanda**	**31.49**	**165**	IAmb	IAmb	17 24 38.6	
	comp=Z,10nm,1.4s						
FITZ	**Fitzroy Crossi**	**31.61**	**5**	P	**P**	**17 24 23.9**	**+0.8**
MAW	**Mawson**	**34.30**	**216**	LR	LR	17 36 20.1	
	comp=Z,56nm,19.0s,baz=110,slow=32						
SOEI	**Soe**	**39.85**	**2**	P	**P**	**17 25 34.0**	**+0.1**
QSPA	**South Pole Qui**	**40.40**	**180**	P	**P**	**17 25 38.6**	**+0.5**
	comp=Z,5.6nm,0.9s,baz=333,slow=3.5,SNR=14						
QSPA				LR	LR	17 42 06.1	
	comp=Z,308nm,18.0s,baz=354,slow=36						
	comp=Z,5.6nm,0.9s						
QSPA	**South Pole Qui**	**40.40**	**180**		**P**	**17 25 37.6**	**-0.4**
QSPA				IAmb	IAmb	17 25 41.6	
	comp=Z,8.7nm,1.1s						
SNAA	**Sanae**	**53.05**	**199**	P	**P**	**17 27 16.7**	**-0.1**
	comp=Z,3.8nm,0.2s,baz=144,slow=8.7,SNR=7.5						
SNAA				LR	LR	17 48 32.7	
	comp=Z,207nm,19.3s,baz=117,slow=35						
	comp=Z,3.8nm,0.2s						
CMAR	**Chiang Mai Arr**	**71.19**	**336**	P	**P**	**17 29 18.4**	**-0.6**
	comp=Z,3.8nm,0.9s,baz=191,slow=5.6,SNR=4.9						
	comp=Z,3.8nm,0.9s						
PLCA	**Paso Flores**	**89.12**	**170**	P	**P**	**17 30 58.0**	**+2.3**
	comp=Z,1.7nm,0.9s,baz=332,slow=6.8,SNR=3.2						
	comp=Z,1.7nm,0.9s						
YKA	**Yellowknife Ar**	**146.58**	**45**	PKPbc	**PKPbc**	**17 37 40.8**	**+0.3**
	comp=Z,3.7nm,0.9s,baz=277,slow=3.1,SNR=18						
YKAW3	**Yellowknife Wh**	**146.58**	**45**	PKPdf	**PKPdf**	**17 37 39.1**	**+0.2**
YKAW1	**Yellowknife Wh**	**146.63**	**45**	PKPdf	**PKPdf**	**17 37 39.9**	**+1.0**
EKA	**Eskdalemuir Ar**	**147.55**	**301**	PKPbc	**PKPbc**	**17 37 42.7**	**-0.8**
	comp=Z,2.1nm,1.0s,baz=93,slow=1.7,SNR=3.6						
RES	**Resolute Bay**	**150.37**	**19**	PKPbc	**PKPbc**	**17 37 49.6**	**-0.4**
	comp=Z,5.3nm,0.8s,baz=214,slow=0.4,SNR=10						
RES	**Resolute Bay**	**150.37**	**19**		**PKPdf**	**17 37 47.5**	**+2.8**

NNC ***30*** *17:18:49.1±3.4, 34°.93N×74°.34E, h0^{km}, mb5.8, mpv5.9, Error ellipse: s-maj=28.1km s-min=18.5km az=10.0*

BGR ***30*** *17:18:51.9, 34°.71N×75°.78E, h33^{km}, mb5.5, Ms5.3*

IDC ***30*** *17:18:54.7±0.3, 35°.54N×74°.66E, h0^{km}, mb5.1/42, mbtmp5.1/49, ML4.1/5, MS5.1/8, Error ellipse: s-maj=10.1km s-min=8.3km az=19.0*

NEIC ***30*** *17:18:57.4, 35°.59N×74°.63E, h22^{km}*

BJI ***30*** *17:18:57.0, 35°.50N×74°.70E, h20^{km}, mB5.5/40, mb5.1/83, ML5.5/4, Ms5.5/87, Ms7 5.3/86*

NEIC ***30*** *17:18:57.4, 35°.39N×74°.63E, h22^{km}, Moment Tensor Solution. Duration: 2^{s}9 Moment tensor: Scale 10^{17}Nm; M_{rr}-3.03; $M_{\theta\theta}$0.13; $M_{\phi\phi}$2.91; $M_{r\theta}$0.58; $M_{\theta\phi}$0.95; $M_{\phi r}$0.43; Fault plane solution: $M_0$3.20000×10^{17} NP1:ϕ_s9.00000°, δ40.32000°, λ-102.55000°. NP2:ϕ_s205.28000°, δ50.83000°, λ-79.56000°. Principal axes: T 3.2555, Plg5.0000°, Azm288.0000°; N -0.1070, Plg8.0000°, Azm19.0000°; P -3.1485, Plg80.0000°, Azm165.0000°;*

GCMT ***30*** *17:18:57.9±0.1, 35°.57N±0°.01×74°.65E±0°.01, h12^{km}, MW5.6/141, Moment Tensor Solution. s105,c183; s141,c269; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.83±.04; $M_{\theta\theta}$-0.74±.04; $M_{\phi\phi}$2.57±.03; $M_{r\theta}$0.81±.12; $M_{\theta\phi}$1.65±.03; $M_{\phi r}$-0.27±.09; Best double couple: $M_0$2.87900×10^{17} NP1:ϕ_s351.00000°, δ56.00000°, λ-139.00000°. NP2:ϕ_s234.00000°, δ57.00000°, λ-42.00000°. Principal axes: T 3.2520, Plg1.0000°, Azm293.0000°; N -0.7490, Plg38.0000°, Azm23.0000°; P -2.5060, Plg52.0000°, Azm202.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***30*** *17:18:57.4±1.5, 35°.59N±0°.05×74°.63E±0°.08, h14^{km}±3^{km}, mb5.6/315, Ms_20 5.4/268, Mww5.6/26 Error ellipse: s-maj=9.5km s-min=7.7km az=103.0*

MOS ***30*** *17:18:58.5±1.2, 35°.60N×74°.66E, h34^{km}, mb5.6/66, MS5.4/45, Error ellipse: s-maj=4.7km s-min=3.0km az=104.3*

GFZ ***30*** *17:18:59.5, 35°.49N×74°.71E, h21^{km}, MW5.6, Moment Tensor Solution. s107 Moment tensor: M_{rr}-2.36; $M_{\theta\theta}$-0.24; $M_{\phi\phi}$2.60; $M_{r\theta}$1.23; $M_{\theta\phi}$1.13; $M_{\phi r}$0.12; Fault plane solution: NP1:ϕ_s223.00000°, δ56.00000°, λ-58.00000°. NP2:ϕ_s355.00000°, δ45.00000°, λ-12.00000°. Principal axes: T 3.0500, Plg6.0000°, Azm291.0000°; N -0.0900, Plg25.0000°, Azm24.0000°; P -2.9600, Plg64.0000°, Azm189.0000°;*

ISC 30 17:18:58.5±0.3**, 35°.59N**±0°.03×**74°.68E**±0°.02**, h22^{km}**±2^{km}**, h22^{km}:pP-P, n1293, σ2^{s}03**/1199**, mb5.5**/354**, MS5.4**/203**, 69C-58D, Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRNI	**Srinagar**	**1.54**	**176**	*e*P	**Pb**	**17 19 28.7**	**+2.3**
SRNI				*e*S	**Sb**	**17 19 48.8**	**+3.3**
SRNI				IAML		17 19 55.4	
	comp=N,136µm,0.5s						
SRNI				IAML		17 19 59.2	
	comp=E,135µm,0.8s						
NIL	**Nilore**	**2.26**	**212**	P	**Pb**	**17 19 38.1**	**-0.6**
NIL	**Nilore**	**2.26**	**212**		**Pn**	**17 19 34.1**	**-0.5**
NIL	**Nilore**	**2.26**	**212**	P	**Pn**	**17 19 34.1**	**-0.5**
ALCI	**Alchi Leh**	**2.47**	**123**	*e*P	**Pn**	**17 19 39.9**	**+2.1**
ALCI				*e*S	**Sn**	**17 20 07.8**	**+0.3**
ALCI				IAML		17 20 20.4	
	comp=N,19µm,0.7s						
ALCI				IAML		17 20 22.5	
	comp=E,20µm,0.8s						
JMU	**Jammu**	**2.80**	**177**	*e*P	**Pb**	**17 19 46.5**	**-1.3**
JMU				*e*S	**Sn**	**17 20 18.3**	**+3.2**
JMU				IAML		17 20 30.2	
	comp=N,145µm,0.9s						
JMU				IAML		17 20 31.4	
	comp=E,81µm,1.0s						
TSSA	**Tissa**	**3.00**	**156**	*e*P	**Pb**	**17 19 48.6**	**-2.8**
TSSA				*e*S	**Sn**	**17 20 22.2**	**+1.9**
TSSA				IAML		17 20 34.1	
	comp=N,24µm,0.6s						
TSSA				IAML		17 20 35.3	
	comp=E,15µm,1.0s						
MANEM	**Manem**	**3.11**	**310**		**Pn**	**17 19 45.6**	**-0.8**
DHRM	**DHARAMSHALA**	**3.59**	**158**	*e*P	**Pn**	**17 19 56.1**	**+3.1**
DHRM				*e*S	**Sn**	**17 20 35.5**	**+0.7**
DHRM				IAML		17 20 56.8	
	comp=N,16µm,0.5s						
DHRM				IAML		17 21 12.1	
	comp=E,13µm,0.4s						
KSH	**Kashi**	**4.05**	**14**	Pn	**Pn**	**17 19 57.8**	**-1.5**
KSH				Sn	**Sn**	**17 20 46.5**	**+0.3**
KSH				smax	smax		
	comp=E,4µm,0.7s						
BHK	**Bhakra**	**4.42**	**161**	*e*P	Pn	17 20 09.7	+5.6
BHK				*e*S	**Sn**	**17 20 59.1**	**+4.2**
BHK				IAML		17 21 21.9	
	comp=N,11µm,1.1s						
BHK				IAML		17 21 22.2	
	comp=E,8µm,0.5s						
DRK	**Karamyk**	**4.51**	**330**		**Pn**	**17 20 05.4**	**-0.3**
DRK	**Karamyk**	**4.51**	**330**	P	**Pn**	**17 20 05.4**	**-0.3**
KBL	**Kabul**	**4.74**	**259**	P	**Pn**	**17 20 09.8**	**+1.0**
	SNR=648						
KBL				S	**Sn**	**17 21 10.0**	**+6.8**
KBL	**Kabul**	**4.74**	**259**		**Pn**	**17 20 07.9**	**-0.9**
KBL	**Kabul**	**4.74**	**259**	P	**Pn**	**17 20 07.9**	**-0.9**
SMLA	**Simla**	**4.91**	**154**	*e*P	**Pn**	**17 20 13.8**	**+2.9**
SMLA				*e*S	**Sn**	**17 21 06.1**	**-0.9**
SMLA				IAML		17 21 13.2	
	comp=E,7µm,0.9s						
SMLA				IAML		17 21 17.6	
	comp=N,5µm,1.4s						
KLP	**Kalpa**	**5.02**	**143**	*e*P	**Pn**	**17 20 15.9**	**+3.2**
KLP				*e*S	**Sn**	**17 21 07.9**	**-2.4**
KLP				IAML		17 21 23.4	
	comp=N,4µm,1.1s						
KLP				IAML		17 21 42.2	
	comp=E,6µm,0.6s						
CGRH	**CHANDIGARH**	**5.15**	**159**	*e*P	**Pn**	**17 20 17.3**	**+3.0**
CGRH				*e*S	**Sn**	**17 21 12.3**	**-0.7**
CGRH				IAML		17 21 57.4	
	comp=N,15µm,0.8s						
CGRH				IAML		17 22 04.5	
	comp=E,13µm,1.6s						
CHGR	**Chuyangaron**	**5.37**	**306**		**Pn**	**17 20 16.2**	**-1.2**
CHGR	**Chuyangaron**	**5.37**	**306**	*ce*P	**Pn**	**17 20 16.7**	**-0.7**
SHAA	**Shahritus**	**5.63**	**292**		**Pn**	**17 20 19.5**	**-1.4**
SRGN	**SRI GANGA NAGA**	**5.69**	**187**	*e*P	**Pn**	**17 20 25.4**	**+3.7**
SRGN				*e*S	**Sn**	**17 21 26.9**	**+0.6**
SRGN				IAML		17 21 39.7	
	comp=E,4µm,1.2s						
SRGN				IAML		17 21 42.7	
	comp=N,4µm,0.7s						
ARSB	**Arslanbob**	**5.88**	**347**		**Pn**	**17 20 25.0**	**+0.6**
ARSB	**Arslanbob**	**5.88**	**347**	P	**Pn**	**17 20 25.0**	**+0.6**
KKR	**Kurukshetra**	**5.89**	**162**	*e*P	**Pn**	**17 20 27.5**	**+3.0**
KKR				*e*S	**Sn**	**17 21 29.6**	**-1.7**
KKR				IAML		17 21 40.6	
	comp=N,6µm,0.7s						
KKR				IAML		17 21 40.8	
	comp=E,10µm,0.7s						
DDI	**Dehra Dun**	**5.97**	**151**	*e*P	**Pn**	**17 20 27.9**	**+2.4**
DDI				*e*S	**Sn**	**17 21 30.5**	**-2.7**
DDI				IAML		17 21 47.1	
	comp=N,4µm,1.2s						
DDI				IAML		17 21 56.3	
	comp=E,4µm,1.8s						
JOSI	**Joshimath**	**6.47**	**139**	*e*P	**Pn**	**17 20 34.4**	**+1.8**
JOSI				*e*S	**Sn**	**17 21 41.8**	**-4.1**
JOSI				IAML		17 21 51.4	
	comp=N,3µm,0.7s						
JOSI				IAML		17 21 56.1	
	comp=E,2µm,0.6s						
TARG	**Taragay, Kyrgy**	**6.60**	**21**		**Pn**	**17 20 36.2**	**+1.7**
TARG	**Taragay, Kyrgy**	**6.60**	**21**	P	**Pn**	**17 20 36.2**	**+1.7**
UCH	**Uchtor**	**6.63**	**359**	P	**Pn**	**17 20 37.5**	**+2.4**
	SNR=155						
WUS	**Wushi**	**6.64**	**31**		**Pn**	**17 20 36.3**	**+1.5**
ULHL	**Ulahol**	**6.76**	**10**	P	Pn	17 20 44.0	+7.4
	SNR=40						
BOOM	**Boomskoye usch**	**6.96**	**8**		**Pn**	**17 20 39.5**	**+0.2**
BOOM	**Boomskoye usch**	**6.96**	**8**	P	**Pn**	**17 20 39.5**	**+0.2**
AAK	**Ala-Archa**	**7.04**	**359**	P	**Pn**	**17 20 43.0**	**+2.6**
	SNR=46						
AAK	**Ala-Archa**	**7.04**	**359**	Pn	**Pn**	**17 20 42.7**	**+2.3**
	comp=E,8.1nm,0.3s,baz=168,slow=7.7,SNR=76						
AAK				Lg	Lg	17 22 42.6	
	comp=E,0.8nm,0.3s,baz=105,slow=16,SNR=2.0						
AAK				LR	LR	17 23 58.0	
	comp=E,7µm,19.6s,baz=186,slow=43						
	comp=E,36nm,0.5s						
AAK	**Ala-Archa**	**7.04**	**359**		**Pn**	**17 20 41.0**	**+0.6**
AAK	**Ala-Archa**	**7.04**	**359**	P	**Pn**	**17 20 43.0**	**+2.6**
	comp=E,980nm,1.4s						
AAK				S	Sb	17 22 12.4	-11
	comp=E,541nm,1.1s						
AAK	**Ala-Archa**	**7.04**	**359**	*i* P	**Pn**	**17 20 42.9**	**+2.5**
	SNR=80						
AAK	**Ala-Archa**	**7.04**	**359**	*de*P	**Pn**	**17 20 43.7**	**+3.3**
AAK				pmax	pmax		
	comp=Z,199nm,1.7s						
KBK	**Karagaybulak**	**7.06**	**2**	P	**Pn**	**17 20 44.6**	**+4.0**
	SNR=8.6						
NDI	**New Delhi**	**7.21**	**162**	*e*P	**Pn**	**17 20 45.3**	**+2.8**
NDI				*e*S	**Sn**	**17 22 00.7**	**-3.0**
NDI				IAML		17 22 06.7	
	comp=E,4µm,0.7s						
NDI				IAML		17 22 08.1	
	comp=N,3µm,0.8s						
FRU1	**Bishkek**	**7.21**	**360**		**Pn**	**17 20 43.4**	**+0.8**
FRU1	**Bishkek**	**7.21**	**360**	P	**Pn**	**17 20 43.4**	**+0.8**
NPLP	**NPLP New Delhi**	**7.24**	**162**	*e*P	**Pn**	**17 20 45.8**	**+2.8**
NPLP				*e*S	**Sn**	**17 22 01.4**	**-3.2**
NPLP				IAML		17 22 05.6	
	comp=E,4µm,0.9s						
NPLP				IAML		17 22 10.2	
	comp=N,4µm,0.8s						
LDR	**Lodi Road**	**7.31**	**162**	*e*P	**Pn**	**17 20 46.7**	**+2.9**
LDR				*e*S	**Sn**	**17 22 03.3**	**-2.8**
LDR				IAML		17 22 25.0	
	comp=N,5µm,0.6s						
LDR				IAML		17 22 25.1	
	comp=E,8µm,1.1s						
TKM2	**Tokmak 2**	**7.36**	**5**	P	Pn	17 20 49.6	+4.8
	SNR=55						
AYAN	**Aya Nagar**	**7.38**	**163**	*e*P	**Pn**	**17 20 47.7**	**+2.8**
AYAN				*e*S	**Sn**	**17 22 05.3**	**-2.7**
AYAN				IAML		17 22 09.7	
	comp=N,4µm,1.1s						
AYAN				IAML		17 22 11.7	
	comp=E,4µm,0.7s						
CHMS	**Chumysh**	**7.40**	**0**	P	**Pn**	**17 20 48.1**	**+2.9**
	SNR=12						
IUG	**Iuzhnay**	**7.49**	**332**	*e*P	**Pn**	**17 20 47.9**	**+1.4**
IUG				*e*S	**Sn**	**17 22 12.7**	**+2.0**
IUG				LQ	LQ	17 23 00.0	
IUG	**Iuzhnay**	**7.49**	**332**	*e*P	**Pn**	**17 20 47.8**	**+1.4**
IUG				*e*S	**Sn**	**17 22 12.7**	**+2.0**
PTH	**Pithoragarh**	**7.58**	**141**	*e*P	**Pn**	**17 20 49.6**	**+1.7**
PTH				*e*S	**Sn**	**17 22 09.1**	**-4.1**
BKNR	**BIKANER**	**7.64**	**189**	*e*P	**Pn**	**17 20 50.4**	**+2.0**
BKNR				*e*S	**Sn**	**17 22 08.6**	**-5.7**
BKNR				IAML		17 23 02.5	
	comp=E,6µm,0.6s						
BKNR				IAML		17 23 05.0	
	comp=N,7µm,1.4s						
TNSS	**Tian-Shan**	**7.64**	**13**	*e*P	**Pn**	**17 20 50.1**	**+1.3**
TNSS				*e*S	**Sn**	**17 22 16.9**	**+1.9**
TNSS				LQ	LQ	17 23 05.3	
TNSS	**Tian-Shan**	**7.64**	**13**	*e*P	**Pn**	**17 20 50.1**	**+1.3**
TNSS				*e*S	**Sn**	**17 22 16.8**	**+1.9**
USP	**Ospenovka**	**7.67**	**359**	P	**Pn**	**17 20 50.7**	**+1.8**
	SNR=45						
LGTI	**Lohaghat**	**7.67**	**142**	*e*P	**Pn**	**17 20 51.0**	**+1.9**
LGTI				*e*S	**Sn**	**17 22 12.3**	**-3.2**
LGTI				IAML		17 22 19.6	
	comp=N,4µm,1.2s						
LGTI				IAML		17 22 19.9	
	comp=E,4µm,1.0s						
MDOK	**Medeo**	**7.79**	**13**	*e*P	**Pn**	**17 20 52.1**	**+1.5**
MDOK				*e*S	**Sn**	**17 22 20.4**	**+2.4**
MDOK				LQ	LQ	17 23 10.0	
MDOK	**Medeo**	**7.79**	**13**	*e*P	**Pn**	**17 20 52.0**	**+1.5**
MDOK				*e*S	**Sn**	**17 22 20.4**	**+2.4**
CHM	**Chimkent**	**7.80**	**331**	*e*P	**Pn**	**17 20 52.1**	**+1.4**
CHM	**Chimkent**	**7.80**	**331**	*e*P	**Pn**	**17 20 52.0**	**+1.4**
AAA	**Alma-Ata**	**7.81**	**12**	*e*P	**Pn**	**17 20 52.1**	**+1.4**
AAA	**Alma-Ata**	**7.81**	**12**	*e*P	**Pn**	**17 20 52.1**	**+1.4**
KNDC	**Almaty**	**7.82**	**12**	⇑P	**Pn**	**17 20 55.3**	**+4.3**
	comp=E,879nm,1.2s						
KNDC				⇓S	Sn	17 22 32.3	+13
	comp=E,2µm,1.4s						
SGDS	**Sogindy**	**7.86**	**360**	*e*P	**Pn**	**17 20 52.9**	**+1.4**
SGDS				*e*S	**Sn**	**17 22 22.1**	**+2.5**
SGDS				LQ	LQ	17 23 12.0	
SATY	**Saty**	**8.00**	**20**	*e*P	**Pn**	**17 20 55.2**	**+1.7**
SATY	**Saty**	**8.00**	**20**	*e*P	**Pn**	**17 20 55.2**	**+1.7**
KK31	**Karatay Array**	**8.17**	**338**		**Pn**	**17 20 55.9**	**+0.2**
KK31	**Karatay Array**	**8.17**	**338**	P	**Pn**	**17 20 56.0**	**+0.2**
	comp=E,162nm,0.5s,baz=149,slow=12,SNR=1623						
KK31				⇓S	**Sn**	**17 22 32.7**	**+5.4**
	comp=E,730nm,1.1s,baz=155,slow=23,SNR=7.5						
KK31	**Karatay Array**	**8.17**	**338**	P	**Pn**	**17 20 55.9**	**+0.2**
KKAR	**Karatay Array**	**8.17**	**338**		**Pn**	**17 20 56.0**	**+0.3**
KKAR	**Karatay Array**	**8.17**	**338**	P	**Pn**	**17 20 56.0**	**+0.3**
UZB	**Uzynbulak**	**8.26**	**23**	*e*P	**Pn**	**17 20 58.7**	**+1.6**
UZB				*e*S	**Sn**	**17 22 32.1**	**+2.3**
UZB				LQ	LQ	17 23 25.3	
UZB	**Uzynbulak**	**8.26**	**23**	*e*P	**Pn**	**17 20 58.7**	**+1.6**
UZB				*e*S	**Sn**	**17 22 32.1**	**+2.3**
BRLS	**Borolday**	**8.33**	**335**	*e*P	**Pn**	**17 20 56.4**	**-1.5**
BRLS	**Borolday**	**8.33**	**335**	*e*P	**Pn**	**17 20 56.3**	**-1.5**
SHLS	**Shalkode**	**8.42**	**25**	*e*P	**Pn**	**17 21 03.1**	**+3.9**
SHLS	**Shalkode**	**8.42**	**25**	*e*P	**Pn**	**17 21 03.0**	**+3.9**
PDGK	**Podgornoye**	**8.58**	**24**	P	**Pn**	**17 21 03.9**	**+2.5**
	comp=E,263nm,1.1s						
PDGK				S	Sn	17 22 52.8	+15
	comp=E,1µm,1.2s						
ARXS	**Arharly**	**8.95**	**15**	*e*P	**Pn**	**17 21 08.6**	**+2.2**
AJM	**Ajmer**	**9.13**	**180**	*e*P	**Pn**	**17 21 12.4**	**+3.4**
AJM				*e*S	**Sn**	**17 22 47.0**	**-4.2**
AJM				IAML		17 23 46.2	
	comp=E,5µm,0.7s						
AJM				IAML		17 24 05.6	
	comp=N,5µm,0.7s						
BTLS	**Baital**	**9.46**	**357**	P	**Pn**	**17 21 15.2**	**+1.9**
BTLS				pmax	pmax		
	comp=Z,88nm,1.7s						
TDK	**Taldyqorghan**	**9.82**	**16**	*e*P	**Pn**	**17 21 20.3**	**+1.9**
TDK	**Taldyqorghan**	**9.82**	**16**	*e*P	**Pn**	**17 21 20.2**	**+1.9**
BRCI	**Bahraich**	**9.94**	**142**	*e*P	**Pn**	**17 21 20.7**	**+0.8**
BRCI				*e*S	**Sn**	**17 23 03.4**	**-7.3**
BRCI				IAML		17 23 11.0	
	comp=N,5µm,1.2s						
BRCI				IAML		17 23 14.5	
	comp=E,6µm,1.5s						
HRA	**Herat**	**10.28**	**267**		**Pn**	**17 21 24.4**	**-0.4**
JHNI	**Jhansi**	**10.65**	**160**	*e*P	**Pn**	**17 21 30.4**	**+0.7**
JHNI				*e*S	**Sn**	**17 23 21.2**	**-7.1**
JHNI				IAML		17 23 42.4	
	comp=E,4µm,1.1s						
JHNI				IAML		17 23 42.5	
	comp=N,4µm,1.3s						
UDPR	**Udaipur**	**11.00**	**185**	*e*P	**Pn**	**17 21 37.6**	**+3.0**
UDPR				*e*S	**Sn**	**17 23 31.6**	**-5.5**
GUNA	**GUNA**	**11.14**	**167**	*e*P	**Pn**	**17 21 36.5**	**0.0**
GUNA				*e*S	**Sn**	**17 23 33.3**	**-7.0**
GUNA				IAML		17 23 37.4	
	comp=N,5µm,0.8s						
GUNA				IAML		17 23 38.9	
	comp=E,7µm,0.9s						
MAKZ	**Makanchi**	**12.48**	**24**		**Pn**	**17 21 54.7**	**0.0**
MAKZ	**Makanchi**	**12.48**	**24**	P	**Pn**	**17 21 54.7**	**0.0**
BHPL	**Bhopal**	**12.53**	**168**	*e*P	**Pn**	**17 21 58.0**	**+2.5**
BHPL				*e*S	**Sn**	**17 24 06.1**	**-8.4**
BHPL				IAML		17 24 11.2	
	comp=N,5µm,0.8s						
BHPL				IAML		17 24 11.9	
	comp=E,4µm,1.7s						
MK31	**Makanchi Array**	**12.57**	**25**	⇑P	**Pn**	**17 21 56.7**	**+0.8**
	comp=E,107nm,1.2s,baz=216,slow=7.8,SNR=170						
MKAR	**Makanchi Array**	**12.57**	**25**	Pn	**Pn**	**17 21 56.6**	**+0.7**
	comp=E,0.4nm,0.3s,baz=199,slow=11,SNR=20						
MKAR				LR	LR	17 27 12.7	
	comp=E,4µm,20.8s,baz=202,slow=40						
	comp=E,6.0nm,0.8s						
MKAR	**Makanchi Array**	**12.57**	**25**		**Pn**	**17 21 55.7**	**-0.2**
MKAR	**Makanchi Array**	**12.57**	**25**	*ce*P	**Pn**	**17 21 57.2**	**+1.3**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
EVN	**Everest**	**12.82**	**123**		**Pn**	**17 21 55.2**	**-4.7**
WMQ	**Urumqi**	**12.95**	**47**	*e*P	**Pn**	**17 22 01.3**	**+0.1**
WMQ				S	**Sn**	**17 24 24.5**	**-0.1**
WMQ				pmax	pmax		
	comp=Z,36nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,320nm,3.7s						
WMQ				LR	LR		
	comp=Z,27µm,21.7s						
WMQ				LR	LR		
	comp=Z,20µm,15.1s						
WMQ				LR	LR		
	comp=Z,7µm,19.1s						
ZSN	**Zaisan**	**14.08**	**30**	*e*P	**Pn**	**17 22 18.1**	**+1.6**
ZSN	**Zaisan**	**14.08**	**30**	*e*P	**Pn**	**17 22 18.1**	**+1.6**
GTK	**Tadong**	**14.45**	**121**	*e*P	**Pn**	**17 22 21.8**	**0.0**
GTK				*e*S	Sn	17 24 48.8	-13
GTK				IAML		17 24 58.7	
	comp=N,3µm,0.8s						
GTK				IAML		17 25 03.0	
	comp=E,3µm,1.6s						
AKL	**Akola**	**14.97**	**172**	*e*P	**Pn**	**17 22 29.8**	**+1.0**
AKL				*e*S	Sn	17 25 03.8	-10
AKL				IAML		17 25 08.2	
	comp=E,4µm,1.0s						
AKL				IAML		17 25 11.5	
	comp=N,3µm,0.8s						
LSA	**Lhasa**	**15.06**	**108**	P	**Pn**	**17 22 25.8**	**-4.5**
BOK	**Bokaro**	**15.24**	**137**	*e*P	**Pn**	**17 22 33.3**	**+0.9**
BOK				*e*S	Sn	17 25 07.7	-13
BOK				IAML		17 25 23.5	
	comp=N,3µm,1.4s						
BOK				IAML		17 25 34.2	
	comp=E,3µm,1.4s						
KURBB	**Kurchatov Arra**	**15.29**	**9**	Pn	**Pn**	**17 22 30.2**	**-2.6**
	comp=E,0.3nm,0.3s,baz=198,slow=12,SNR=48						
KURBB				Lg	Lg	17 26 59.8	

	comp=E,0.1nm,0.3s,baz=192,slow=26,SNR=4.1						
	comp=E,26nm,0.8s						
KURK	Kurchatov	15.39	9		Pn	17 22 30.2	-3.9
KURK	Kurchatov	15.39	9	P	Pn	17 22 30.2	-3.9
NGCH	Negor - Chabah	15.48	233	P	Pn	17 22 36.1	+0.6
	SNR=17						
NGCH				S	S	17 25 42.0	+0.2
GOMU	GeErMu	16.33	82	P	Pn	17 22 44.5	-2.2
GOMU				S	Sn	17 25 48.3	+0.9
GOMU				pmax	pmax		
	comp=E,27nm,1.3s						
GOMU				LR	LR		
	comp=E,4µm,9.6s						
GOMU				LR	LR		
	comp=E,8µm,10.1s						
GOMU				LR	LR		
	comp=E,14µm,10.4s						
TAWA	Tawang	16.66	114	eP	Pn	17 22 51.9	+1.1
TAWA				eS	Sn	17 25 39.4	-16
TAWA				IAML		17 26 17.6	
	comp=E,2µm,0.4s						
TAWA				IAML		17 26 18.0	
	comp=N,3µm,1.6s						
DGZ	Jazzator, Alta	16.90	30	deP	Pn	17 22 54.2	+0.5
DGZ				pmax	pmax		
	comp=Z,119nm,1.8s						
AB31	Akbulak array	17.42	326	Pn	Pn	17 22 56.8	-3.2
AB31	Akbulak array	17.42	326	P	Pn	17 22 56.6	-3.3
	comp=Z,100nm,0.9s,baz=133,slow=12,SNR=349						
AB31				⇑S	S	17 26 19.9	-1.3
	comp=Z,33nm,0.8s,baz=162,slow=22,SNR=4.0						
ABKAR	Akbulak array	17.42	326	Pn	Pn	17 22 56.6	-3.3
BVA0	Borovoye Array	17.70	351	⇓P	Pn	17 23 02.2	-1.2
	comp=Z,191nm,0.9s,baz=167,slow=6.8,SNR=14						
BVAR	Borovoye Array	17.70	351	P	Pn	17 23 02.9	-0.5
	comp=Z,1.2nm,0.3s,baz=158,slow=8.2,SNR=25						
	comp=Z,67nm,0.7s						
BORK	Borovoye	17.73	351	P	Pn	17 23 01.0	-2.7
BORK	Borovoye	17.73	351	ceP	Pn	17 23 03.9	+0.2
BORK				pmax	pmax		
	comp=Z,126nm,1.2s						
SHL	Shillong	17.84	119	P	Pn	17 22 57.7	-7.8
	SNR=185						
SHL	Shillong	17.84	119	Pn	Pn	17 22 58.1	-7.4
SHL				IAmb	IAmb	17 23 10.1	
	comp=Z,514nm,1.1s						
SHL	Shillong	17.84	119	eP	P	17 23 08.0	+1.9
SHL	Shillong	17.84	119	P	Pn	17 22 58.1	-7.4
SHL				pmax	pmax		
	comp=Z,514nm,1.1s						
ZIRO	ZIRO	18.18	111	IAML		17 26 36.9	
	comp=N,4µm,2.7s						
ZIRO				IAML		17 26 54.5	
	comp=E,4µm,0.8s						
ITAN	ITANAGAR	18.29	112	eP	P	17 23 13.9	+3.1
ITAN				eS	Sn	17 26 16.7	-18
ITAN				IAML		17 26 46.4	
	comp=E,4µm,3.5s						
ITAN				IAML		17 26 49.3	
	comp=N,3µm,3.5s						
HYB	Hyderabad	18.42	168	eP	Pn	17 23 12.6	0.0
BANOM	Banah	18.48	244	iP	Pn	17 23 13.3	+0.1
	SNR=17						
SHME	Shamm	18.52	244	P	Pn	17 23 14.6	+1.0
	SNR=12						
SHME				P	Pn	17 23 14.6	+1.0
	SNR=12						
SHME				P	Pn	17 23 14.6	+1.0
	SNR=12						
SHME	Shamm	18.52	244	iP	Pn	17 23 13.7	+0.1
	SNR=20						
BIDO	Bidbid	18.73	235	P	Pn	17 23 17.7	+1.6
	SNR=25						
BIDO				P	Pn	17 23 17.7	+1.6
	SNR=25						
WBK	Wadi Bani Khal	18.83	231	P	Pn	17 23 17.9	+0.5
	SNR=44						
WBK				P	Pn	17 23 17.9	+0.5
	SNR=44						
WBK				P	Pn	17 23 17.9	+0.5
	SNR=44						
MDH	Madha	18.85	242	P	P	17 23 16.9	-0.1
	SNR=16						
MDH				P	P	17 23 16.9	-0.1
	SNR=16						
MDH				P	P	17 23 16.9	-0.1
	SNR=16						
MDH	Madha	18.85	242	iP	P	17 23 16.7	-0.3
	SNR=11						
JLN	Jalan Bani Buh	18.89	229	P	P	17 23 17.6	+0.2
	SNR=60						
JLN				P	P	17 23 17.6	+0.2
	SNR=60						
MASF	Masafi	18.91	242	P	Pn	17 23 18.8	+0.4
	SNR=29						
MASF				P	Pn	17 23 18.8	+0.4
	SNR=29						
MASF				P	Pn	17 23 18.8	+0.4
	SNR=29						
MSFE	Esma-Masafi	18.91	242	iP	Pn	17 23 19.1	+0.7
	SNR=20						
BELO	BELONIA	19.06	126	eP	Pn	17 23 24.3	+4.1
BELO				eS	Sn	17 26 36.5	-16
SMDO	Samad	19.10	234	P	Pn	17 23 21.1	+0.3
	SNR=48						
SMDO				P	Pn	17 23 21.1	+0.3
	SNR=48						
UOSS	Minazif	19.13	241	P	P	17 23 20.2	+0.1
UOSS				P	P	17 23 20.2	+0.1
UOSS				P	P	17 23 20.2	+0.1
UOSS	Minazif	19.13	241	P	P	17 23 18.2	-1.9
UOSS	Minazif	19.13	241	iP	P	17 23 20.2	+0.1
	SNR=22						
AKTO	Aktyubinsk	19.14	326	P	P	17 23 19.3	-0.7
	comp=N,108nm,0.5s,baz=120,slow=10.0,SNR=132						
AKTO	Aktyubinsk	19.14	326	⇑P	P	17 23 19.2	-0.8
	comp=N,227nm,0.8s						
AKTO				⇑S	S	17 26 58.8	+3.4
	comp=N,54nm,1.2s						
UMQ	Umm Al-Quwin	19.18	244	P	P	17 23 21.0	+0.4
HOQ	Hoqain	19.23	236	P	Pn	17 23 22.5	+0.2
	SNR=34						
HOQ				P	Pn	17 23 22.5	+0.2
	SNR=34						
HOQ				P	Pn	17 23 22.5	+0.2
	SNR=34						
HATD	Hatta, Dubai	19.26	241	P	Pn	17 23 23.5	+0.9
	SNR=26						
HATD				P	Pn	17 23 23.5	+0.9
	SNR=26						
HATD	Hatta, Dubai	19.26	241	iP	P	17 23 21.7	+0.2
	SNR=25						
MOKO	MOKOCHONG	19.33	113	eP	Pn	17 23 27.0	+3.4
MOKO				eS	Sn	17 26 40.8	-19
MOKO				IAML		17 27 10.1	
	comp=N,2µm,2.5s						
MOKO				IAML		17 27 12.8	
	comp=E,3µm,2.9s						
ASHO	Ashiyiah	19.40	241	P	Pn	17 23 23.9	-0.3
	SNR=62						
ASHO				P	Pn	17 23 23.9	-0.3
	SNR=62						
ASHO	Ashiyiah	19.40	241	iP	Pn	17 23 24.7	+0.5
	SNR=58						
SOHO	SOHO	19.41	239	P	P	17 23 23.0	-0.2
SOHO				P	P	17 23 23.0	-0.2
SOHO				P	P	17 23 23.0	-0.2
SOHO	SOHO	19.41	239	iP	P	17 23 23.4	+0.2
	SNR=12						
NAZ	Nazwa, Dubai	19.50	242	P	P	17 23 24.7	+0.6
	SNR=26						
NAZ				P	P	17 23 24.7	+0.6
	SNR=26						
NAZ				P	P	17 23 24.7	+0.6
	SNR=26						
NAZ	Nazwa, Dubai	19.50	242	iP	Pn	17 23 25.9	+0.5
	SNR=22						
JMDO	Jabal Madar	19.55	232	P	Pn	17 23 25.9	-0.2
	SNR=50						
JMDO				P	Pn	17 23 25.9	-0.2
	SNR=50						
JMDO				P	Pn	17 23 25.9	-0.2
	SNR=50						
BRDH	Bariadhala	19.58	126	P	P	17 23 24.6	-0.5
	comp=E,206nm,0.4s,baz=271,slow=4.2,SNR=6.4						
BRDH				LR	LR	17 33 19.8	
	comp=E,14µm,18.9s,baz=313,slow=44						
ZAA0	Zalesovo Array	19.68	18	P	P	17 23 24.6	-1.3
ZALV	Zalesovo Beam	19.68	18	P	P	17 23 25.1	-0.8
	comp=E,4.6nm,0.3s,baz=215,slow=9.4,SNR=75						
ZALV				LR	LR	17 32 15.3	
	comp=E,634nm,20.6s,baz=209,slow=41						
	comp=E,53nm,0.6s						
ZALV	Zalesovo Beam	19.68	18	P	P	17 23 24.7	-1.2
FAQ	Al Faqa, Dubai	19.69	242	P	Pn	17 23 28.4	+0.7
	SNR=29						
FAQ				P	Pn	17 23 28.4	+0.7
	SNR=29						
FAQ				P	Pn	17 23 28.4	+0.7
	SNR=29						
FAQ	Al Faqa, Dubai	19.69	242	iP	Pn	17 23 28.0	+0.3
	SNR=33						
IMP	Imphal	19.77	118	eP	Pn	17 23 33.5	+4.8
BSY	Bisya	19.88	235	P	Pn	17 23 32.0	+1.9
	SNR=41						
BSY				P	Pn	17 23 32.0	+1.9
	SNR=41						
BSY				P	Pn	17 23 32.0	+1.9
	SNR=41						
ARQ	Araqi	19.94	237	P	Pn	17 23 30.5	-0.2
	SNR=74						
ARQ				P	Pn	17 23 30.5	-0.2
	SNR=74						
ARQ				P	Pn	17 23 30.5	-0.2
	SNR=74						
ASUD	Al Ashush, Dub	19.95	242	P	Pn	17 23 31.4	+0.5
	SNR=12						
ASUD				P	Pn	17 23 31.4	+0.5
	SNR=12						
ASUD	Al Ashush, Dub	19.95	242	iP	Pn	17 23 30.2	-0.7
	SNR=14						
ALNE	Al Ain	20.01	240	P	Pn	17 23 30.7	-0.8
	SNR=85						
ALNE				P	Pn	17 23 30.7	-0.8
	SNR=85						
ALNE				P	Pn	17 23 30.7	-0.8
	SNR=85						
ALNE	Al Ain	20.01	240	iP	Pn	17 23 31.0	-0.5
	SNR=55						
AJN	Ajban	20.24	243	P	P	17 23 33.1	+0.9
	SNR=14						
AJN				P	P	17 23 33.1	+0.9
	SNR=14						
AJN	Ajban	20.24	243	iP	Pn	17 23 33.6	-0.6
	SNR=15						
GTA	Gaotai	20.28	72	eP	P	17 23 32.3	-0.4
GTA				S	S	17 27 17.3	-1.9
GTA				pmax	pmax		
	comp=E,47nm,1.3s						
GTA				pmax	pmax		
	comp=E,1µm,7.3s						
GTA				LR	LR		
	comp=E,9µm,12.0s						
GTA				LR	LR		
	comp=E,3µm,8.0s						
GTA				LR	LR		
	comp=E,8µm,13.1s						
MHTO	MHTO	20.65	230	P	Pn	17 23 38.0	-1.0
	SNR=98						
MHTO				P	Pn	17 23 38.0	-1.0
	SNR=98						
UMZA	Um Al Zommool	21.29	238	P	P	17 23 44.9	+1.4
UMZA				P	P	17 23 44.9	+1.4
UMZA				P	P	17 23 44.9	+1.4
MZWR	Madinat Zayed	21.53	242	P	P	17 23 45.9	-0.2
MZWR				P	P	17 23 45.9	-0.2
JRN	Qarnain Island	21.59	247	P	P	17 23 43.7	-3.0
	SNR=10						
DQM	DQM	21.70	229	P	P	17 23 48.7	+0.7
	SNR=48						
DQM				P	P	17 23 48.7	+0.7
	SNR=48						
AKT	Akhty	21.84	294	eP	P	17 23 47.1	-2.4
AKT				e		17 24 08.0	
AKT				eS	S	17 27 46.9	-3.0
AKT				pmax	pmax		
	comp=Z,330nm,1.1s						
GHWR	Ruwais	22.14	244	P	P	17 23 52.0	-0.6
GHWR				P	P	17 23 52.0	-0.6
MAK	Makhachkala	22.23	298	d iP	P	17 23 52.2	-1.3
MAK				eS	S	17 27 56.0	-1.0
MAK				pmax	pmax		
	comp=Z,408nm,1.5s						
MAK				MLR	MLR		
	comp=Z,22µm,15.0s						
MZR	Muzera	22.29	241	P	P	17 23 54.7	+0.4
	SNR=42						
MZR				P	P	17 23 54.7	+0.4
	SNR=42						
MZR	Muzera	22.29	241	iP	P	17 23 54.9	+0.6
	SNR=64						
KNGR	Kungurtug, Tuv	22.31	41	⇑eP	P	17 23 56.3	+1.9
KNGR				pmax	pmax		
	comp=Z,538nm,1.8s						
SHMA	Al-Shehemyia	22.53	251	P	P	17 23 54.8	-2.1
	SNR=10						
SAKB	Bahrain	22.80	252	P	P	17 23 57.9	-1.7
TRNA	Turayna	22.94	248	P	P	17 23 55.5	-5.6
	SNR=14						
SLWR	Sila	22.95	246	P	P	17 24 00.4	-1.0
TNCH	TengChong	23.06	111	⇑P	P	17 24 01.3	-1.3
TNCH				pP	pP	17 24 07.0	-3.1
TNCH				sP	sP	17 24 10.0	-3.2
TNCH				S	S	17 28 04.8	-7.7
TNCH				SS	SnSn	17 28 55.3	+10
TNCH				pmax	pmax		
	comp=Z,370nm,1.0s						
TNCH				LR	LR		
	comp=Z,4µm,15.0s						
TNCH				LR	LR		
	comp=Z,6µm,13.7s						
TNCH				LR	LR		
	comp=Z,14µm,24.5s						
SMRA	Abu-Samra	23.23	249	P	P	17 24 02.2	-1.9
	SNR=15						
SVE	Sverdlovsk	23.27	340	eP	P	17 24 03.8	-0.5
SVE				eS	S	17 28 17.3	+2.2
SVE				pmax	pmax		
	comp=Z,150nm,1.2s						
SVE				MLR	MLR		
	comp=Z,9µm,14.0s						
LZDM	Lanzhou Array	23.51	81	P	P	17 24 07.2	-0.1
	comp=Z,26nm,0.8s,baz=262,slow=10,SNR=15						
LZDM				LR	LR	17 34 02.3	
	comp=Z,5µm,18.1s,baz=325,slow=39						
	comp=Z,26nm,0.8s						
ARTI	Arti	23.57	337	P	P	17 24 06.8	-0.4
	comp=Z,15nm,0.5s,baz=144,slow=5.5,SNR=40						
	comp=Z,15nm,0.5s						
ARTI	Arti	23.57	337	P	P	17 24 06.5	-0.8
ARTI				IAMs_20	IAMs_20	17 33 49.2	
	comp=Z,11µm,20.0s						
ARTI	Arti	23.57	337	c iP	P	17 24 05.8	-1.4
ARTI						17 24 33.2	
ARTI				S	S	17 28 18.9	-1.1
ARTI				SS	SnSn	17 28 59.6	+2.4
ARTI				pmax	pmax		
	comp=Z,170nm,1.8s						
ARTI				MLR	MLR		
	comp=Z,11µm,18.0s						
LZH	Lanzhou	23.61	80	eP	P	17 24 08.0	0.0
LZH				pP	pP	17 24 12.0	-3.6
LZH				S	S	17 28 16.3	-5.1
LZH				SS	SnSn	17 29 07.8	+9.0
LZH				pmax	pmax		
	comp=Z,30nm,1.3s						
LZH				pmax	pmax		
	comp=Z,920nm,6.9s						
LZH				LR	LR		
	comp=Z,4µm,14.1s						
LZH				LR	LR		
	comp=Z,5µm,17.5s						
LZH				LR	LR		
	comp=Z,7µm,18.9s						
SHAO	Shalim	24.32	229	P	P	17 24 16.3	+1.7
	SNR=8.3						
SHAO				P	P	17 24 16.3	+1.7
	SNR=8.3						
SHAO				P	P	17 24 16.3	+1.7
	SNR=8.3						
SHAO	Shalim	24.32	229	iP	P	17 24 16.1	+1.4
	SNR=12						
MOY	Mondy	24.73	41	eP	P	17 24 19.2	+1.0
MOY				pmax	pmax		
	comp=Z,140nm,2.0s						
DOK	Doka	24.82	232	P	P	17 24 18.1	-1.0
	SNR=31						
DOK				P	P	17 24 18.1	-1.0
	SNR=31						
DOK				P	P	17 24 18.1	-1.0
	SNR=31						
PZH	PanZhiHua	24.83	104	⇑P	P	17 24 18.3	-1.0
PZH				pP	pP	17 24 23.3	-3.6
PZH				S	S	17 28 33.3	-7.6
PZH				sS	pS	17 28 47.0	-2.7
PZH				pmax	pmax		
	comp=Z,110nm,1.5s						
PZH				pmax	pmax		
	comp=Z,1µm,5.7s						
PZH				LR	LR		
	comp=Z,6µm,21.0s						
PZH				LR	LR		
	comp=Z,6µm,20.8s						
PZH				LR	LR		
	comp=Z,6µm,22.0s						
DMTO	DMTO	24.97	230	P	P	17 24 20.8	+0.3
	SNR=9.6						
DMTO				P	P	17 24 20.8	+0.3
	SNR=9.6						
NCK	Nalchik	25.13	298	⇓eP	P	17 24 24.0	+2.2
NCK				pmax	pmax		
	comp=Z,55nm,1.1s						
KARS	Kars	25.29	291	IAmb	IAmb	17 24 44.9	
	comp=Z,97nm,1.0s						
ZAK	Zakamensk	25.42	46	eP	P	17 24 25.5	+1.1
ZAK				pmax	pmax		
	comp=Z,177nm,1.8s						
ZAK				pmax	pmax		
	comp=Z,38nm,1.9s						
BELG	Belogornoye	25.49	320	P	P	17 24 24.8	-0.1
	comp=Z,74nm,0.9s,baz=134,slow=3.1,SNR=20						
	comp=Z,74nm,0.9s						
BELG	Belogornoye	25.49	320	deP	P	17 24 24.6	-0.3
BELG				pmax	pmax		
	comp=Z,27nm,1.5s						
WHFO	Wadi Hawf	25.57	232	P	P	17 24 25.1	-0.8
	SNR=18						
WHFO				P	P	17 24 25.1	-0.8
	SNR=18						
RBK	Rabkut	25.60	231	P	P	17 24 26.2	0.0
	SNR=12						
RBK				P	P	17 24 26.2	0.0
	SNR=12						
RBK				P	P	17 24 26.5	+0.3
RBK				P	P	17 24 26.5	+0.3
KBZ	Khabaz	25.67	298	P	P	17 24 27.1	+0.5
	comp=Z,18nm,0.9s,baz=121,slow=6.8,SNR=35						
	comp=Z,18nm,0.9s						
KBZ	Khabaz	25.67	298	ceP	P	17 24 26.9	+0.3
KBZ				pmax	pmax		
	comp=Z,28nm,1.0s						
GOF	Gofitskoye	25.77	301	ceP	P	17 24 28.3	+0.7
SHA1	Shidzhatmaz	25.84	298	ceP	P	17 24 29.5	+1.0
KVAR	Kislovodsk Arr	25.84	299	P	P	17 24 28.3	-0.1
	comp=Z,5.9nm,0.8s,baz=265,slow=22,SNR=12						
	comp=Z,5.9nm,0.8s						
KIV	Kislovodsk	25.85	299	P	P	17 24 28.1	-0.2
KIV				IAMs_20	IAMs_20	17 36 28.9	
	comp=Z,9µm,21.0s						
KIV	Kislovodsk	25.85	299	⇑P	P	17 24 29.9	+1.5
KIV	Kislovodsk	25.85	299	iP	P	17 24 29.1	+0.7
	SNR=13						
KIV	Kislovodsk	25.85	299	eP	P	17 24 27.7	-0.7
KIV				e		17 25 05.4	
KIV				eS	S	17 28 55.5	-1.4
KIV				pmax	pmax		
	comp=Z,46nm,1.0s						
KIV				MLR	MLR		
	comp=Z,6µm,15.0s						
KIV	Kislovodsk	25.85	299	P	P	17 24 29.3	+0.9
	comp=Z,1µmcomp=Z,46nm,1.4s						
TLY	Talaya	26.19	43	P	P	17 24 16.5	-15
TLY	Talaya	26.19	43	P	P	17 24 31.9	+0.6
TLY	Talaya	26.19	43	deP	P	17 24 33.8	+2.5
TLY				pmax	pmax		
	comp=Z,30nm,1.5s						
TLY	Talaya	26.19	43	P	P	17 24 16.5	-15
KMI	Kunming	26.28	106	P	P	17 24 33.3	+0.7
KMI				S	S	17 29 02.5	-1.7
KMI				pmax	pmax		
	comp=Z,39nm,1.2s						
KMI				pmax	pmax		
	comp=Z,760nm,5.5s						
KMI				LR	LR		
	comp=Z,6µm,22.3s						
KMI				LR	LR		
	comp=Z,2µm,20.6s						
KMI				LR	LR		
	comp=Z,4µm,20.3s						
ABTO	Aybut	26.29	232	P	P	17 24 32.6	+0.2
	SNR=21						
ABTO				P	P	17 24 32.6	+0.2
	SNR=21						
ABTO				P	P	17 24 32.7	+0.2
ABTO				P	P	17 24 32.7	+0.2
SONM	Songino Array	26.46	53	P	P	17 24 34.5	+0.6
	comp=Z,30nm,0.8s,baz=252,slow=8.6,SNR=78						
	comp=Z,30nm,0.8s						
SONM	Songino Array	26.46	53	P	P	17 24 34.1	+0.3
SONM				IAmb	IAmb	17 24 40.2	
	comp=Z,182nm,1.4s						
SONM	Songino Array	26.46	53	P	P	17 24 34.2	+0.3
SONM				pmax	pmax		
	comp=Z,182nm,1.4s						
IRK	Irkutsk	26.79	42	eP	P	17 24 39.2	+2.5
IRK				pmax	pmax		
	comp=Z,112nm,2.1s						
ULN	Ulaanbaatar	26.89	53	P	P	17 24 23.5	-14
ULN	Ulaanbaatar	26.89	53	P	P	17 24 38.7	+0.8
ULN	Ulaanbaatar	26.89	53	IAMs_20	IAMs_20	17 36 34.4	
	comp=Z,10µm,18.0s						
ULN	Ulaanbaatar	26.89	53	P	P	17 24 38.7	+0.8
ULN				pmax	pmax		
	comp=Z,34nm,0.8s						
ULN				MLR	MLR		
	comp=Z,10µm,18.0s						
ULN	Ulaanbaatar	26.89	53	P	P	17 24 23.5	-14
ULN	Ulaanbaatar	26.89	53	P	P	17 24 23.5	-14
CHTO	Chiang Mai	27.18	122	P	P	17 24 38.0	-2.5
CHTO	Chiang Mai	27.18	122	P	P	17 24 38.5	-2.0
CHTO	Chiang Mai	27.18	122	P	P	17 24 39.6	-0.9
CHTO	Chiang Mai	27.18	122	P	P	17 24 38.5	-2.0
CHTO				pmax	pmax		
	comp=Z,257nm,1.2s						
LABN	Labinsk	27.34	300	eP	P	17 24 42.6	+0.9
LABN				pmax	pmax		
	comp=Z,55nm,0.9s						
LABN				MLR	MLR		
	comp=N,4µm,15.0s						
LABN				MLR	MLR		
	comp=Z,10µm,14.0s						
LABN				MLR	MLR		
	comp=E,17µm,13.0s						
CMAR	Chiang Mai Arr	27.42	122	P	P	17 24 42.0	-0.6
	comp=E,46nm,0.8s,baz=311,slow=8.9,SNR=120						
CMAR				PcP	PcP	17 28 02.6	+1.4
	comp=E,7.9nm,0.7s,baz=296,slow=4.2,SNR=6.5						
	comp=E,46nm,0.8s						
CMAR	Chiang Mai Arr	27.42	122	P	P	17 24 41.5	-1.1
CMAR	Chiang Mai Arr	27.42	122	ceP	P	17 24 41.0	-1.6
CMAR				pmax	pmax		
	comp=Z,33nm,0.8s						
ERBR	Yeremizino-Bor	27.66	302	eP	P	17 24 44.9	+0.3
ERBR				e*PP	sP	17 24 55.6	+0.6
ERBR				eS	S	17 29 26.1	+0.9
ERBR				pmax	pmax		
	comp=Z,60nm,1.0s						
ERBR				MLR	MLR		
	comp=Z,6µm,15.0s						
ERBR				MLR	MLR		
	comp=N,4µm,15.0s						
ERBR				MLR	MLR		
	comp=E,10µm,13.0s						
VSLR	Vesyoloye	27.71	297	deP	P	17 24 44.6	-0.4
VSLR				pmax	pmax		
	comp=Z,85nm,2.0s						
SOC	Sochi	27.95	297	eP	P	17 24 46.3	-0.8
SOC				e*PP	pP	17 24 55.8	+0.9
SOC				e		17 25 32.4	

SOC				*e*PPP	PPP	17 25 42.2	
SOC				*e*S	S	17 29 28.1	-1.6
SOC				*e*SS	SnSn	17 30 42.5	-1.8
SOC				pmax	pmax		
	comp=Z,15nm,1.2s						
SOC				MLR	MLR		
	comp=Z,6µm,17.0s						
RAYN	Ar Rayn	27.98	253	P	P	17 24 47.2	-0.4
RAYN				IAmb	IAmb	17 24 50.2	
	comp=Z,67nm,0.9s						
RAYN	Ar Rayn	27.98	253	IAMs_20	IAMs_20	17 37 38.6	
	comp=Z,9µm,21.0s						
RAYN	Ar Rayn	27.98	253	*i* P	P	17 24 46.8	-0.8
	SNR=17						
RAYN	Ar Rayn	27.98	253	P	P	17 24 48.1	+0.4
XAN	Xi'an	28.07	83	P	P	17 24 47.5	-1.0
XAN				S	S	17 29 30.8	-1.3
XAN				pmax	pmax		
	comp=Z,27nm,1.3s						
XAN				pmax	pmax		
	comp=Z,460nm,5.0s						
XAN				LR	LR		
	comp=Z,6µm,14.6s						
XAN				LR	LR		
	comp=Z,6µm,13.9s						
XAN				LR	LR		
	comp=Z,6µm,15.3s						
BTO	Baotou	28.14	69	*e*P	P	17 24 50.8	+1.8
BTO				pP	pP	17 24 56.5	-0.4
BTO				sP	sP	17 24 59.8	-0.3
BTO				PP	PnPn	17 25 40.5	+3.6
BTO				S	S	17 29 41.0	+8.0
BTO				sS	sS	17 29 44.8	-1.1
BTO				SS	SnSn	17 30 56.3	+7.1
BTO				pmax	pmax		
	comp=Z,71nm,1.6s						
BTO				pmax	pmax		
	comp=Z,1µm,9.3s						
BTO				LR	LR		
	comp=Z,12µm,18.0s						
BTO				LR	LR		
	comp=Z,7µm,21.5s						
BTO				LR	LR		
	comp=Z,13µm,20.7s						
VRH	Novokhopyorsk	28.29	314	*e*P	P	17 24 50.7	+0.6
VRH				pmax	pmax		
	comp=Z,40nm,0.8s						
VRH				MLR	MLR		
	comp=Z,9µm,16.0s						
KIRV	Kirov	28.41	332	P	P	17 24 51.1	+0.1
	comp=Z,42nm,1.0s,baz=135,slow=9.8,SNR=16						
	comp=Z,42nm,1.0s						
PALK	Pallekele	28.72	167	LR	LR	17 36 21.8	
	comp=Z,10µm,18.1s,baz=356,slow=36						
PALK	Pallekele	28.72	167	P	P	17 24 54.8	+0.5
PALK	Pallekele	28.72	167	IAMs_20	IAMs_20	17 36 11.6	
	comp=Z,11µm,18.0s						
PALK	Pallekele	28.72	167	P	P	17 24 59.7	+5.5
PALK	Pallekele	28.72	167	⇑*e*P	P	17 24 55.5	+1.3
PALK				pmax	pmax		
	comp=Z,54nm,1.3s						
GYA	Guiyang	28.78	99	⇑P	P	17 24 56.5	+1.7
GYA				S	S	17 29 39.5	-3.9
GYA				pmax	pmax		
	comp=Z,240nm,6.8s						
GYA				LR	LR		
	comp=Z,6µm,19.7s						
GYA				LR	LR		
	comp=Z,6µm,19.6s						
GYA				LR	LR		
	comp=Z,13µm,19.4s						
HHC	Hu-ho-hao-te	29.30	68	⇑*i*P	P	17 25 02.3	+2.9
HHC				pP	pP	17 25 05.5	-1.8
HHC				S	S	17 29 51.3	-0.1
HHC				sS	pS	17 30 01.5	+1.4
HHC				pmax	pmax		
	comp=Z,17nm,1.9s						
HHC				pmax	pmax		
	comp=Z,200nm,4.7s						
HHC				LR	LR		
	comp=Z,4µm,17.9s						
HHC				LR	LR		
	comp=Z,3µm,18.8s						
HHC				LR	LR		
	comp=Z,4µm,21.3s						
ENH	Enshi	29.59	90	P	P	17 25 01.3	-0.7
VORD	Divnogorie	29.66	312	*e*P	P	17 25 00.4	-1.8
VORD				pmax	pmax		
	comp=Z,40nm,1.0s						
ANN	Anapa	29.68	300	*e*P	P	17 25 02.3	-0.3
ANN				*e**PP	sP	17 25 12.8	-0.2
ANN				*e*		17 26 02.6	
ANN				*e*S	S	17 29 58.5	+1.5
ANN				pmax	pmax		
	comp=Z,67nm,0.9s						
ANN				MLR	MLR		
	comp=E,6µm,15.0s						
ANN				MLR	MLR		
	comp=N,3µm,16.0s						
ANN				MLR	MLR		
	comp=Z,5µm,15.0s						
VSR	Storozhevoye	29.81	313	*e*P	P	17 25 03.1	-0.5
VSR				pmax	pmax		
	comp=Z,60nm,0.9s						
VSR				MLR	MLR		
	comp=Z,9µm,15.0s						
VORR	Voronezh	29.93	314	*e*P	P	17 25 04.3	-0.3
VORR				pmax	pmax		
	comp=Z,80nm,0.5s						
TIY	Taiyuan	30.23	75	*e*P	P	17 25 12.5	+4.9
TIY				pP	sP	17 25 22.0	+3.3
TIY				S	S	17 30 03.8	-2.2
TIY				sS	sS	17 30 23.5	+4.7
TIY				SS	SnSn	17 31 42.5	+2.2
TIY				pmax	pmax		
	comp=Z,36nm,0.9s						
TIY				LR	LR		
	comp=Z,3µm,15.1s						
TIY				LR	LR		
	comp=Z,1µm,11.7s						
TIY				LR	LR		
	comp=Z,3µm,13.7s						
LPSR	Galich'ya Gora	30.39	315	*e*P	P	17 25 08.3	-0.4
LPSR				pmax	pmax		
	comp=Z,50nm,1.0s						
LPSR				MLR	MLR		
	comp=Z,14µm,17.0s						
LYN	LuoYang	30.82	81	P	P	17 25 13.5	+0.8
LYN				pP	pP	17 25 18.0	-2.6
LYN				PP	PP	17 26 18.8	-3.6
LYN				S	S	17 30 16.5	+1.4
LYN				pmax	pmax		
	comp=Z,45nm,1.1s						
LYN				pmax	pmax		
	comp=Z,620nm,5.0s						
LYN				LR	LR		
	comp=Z,6µm,11.7s						
LYN				LR	LR		
	comp=Z,5µm,15.4s						
LYN				LR	LR		
	comp=Z,7µm,19.4s						
ASF	Jabal al Asfar	31.43	275	P	P	17 25 18.4	+0.1
	comp=Z,5.9nm,1.0s,baz=266,slow=2.3,SNR=5.8						
	comp=Z,5.9nm,1.0s						
CIT	Chita	32.04	47	*e*P	P	17 25 24.8	+1.4
CIT				*e*		17 25 37.2	
CIT				*e*		17 26 43.0	
CIT				pmax	pmax		
	comp=Z,93nm,1.8s						
SIM	Simferopol'	32.05	300	*e*P	P	17 25 25.0	+1.6
SIM				pmax	pmax		
	comp=Z,61nm,1.1s						
SIM				MLR	MLR		
	comp=Z,4µm,21.0s						
HNS	HongShan	32.06	75	⇑P	P	17 25 26.3	+2.7
HNS				S	S	17 30 36.8	+2.4
HNS				pmax	pmax		
	comp=Z,19nm,1.8s						
HNS				LR	LR		
	comp=Z,3µm,11.0s						
HNS				LR	LR		
	comp=Z,4µm,12.4s						
HNS				LR	LR		
	comp=Z,3µm,12.8s						
MOS	Moscow	32.26	320	*e*P	P	17 25 23.1	-2.0
MOS				*e*		17 26 29.1	
MOS				pmax	pmax		
	comp=Z,119nm,1.5s						
MOS				MLR	MLR		
	comp=Z,11µm,14.0s						
GULI	GuiLin	32.28	99	P	P	17 25 26.3	+0.7
GULI				S	S	17 30 35.8	-2.2
GULI				pmax	pmax		
	comp=Z,37nm,1.3s						
GULI				pmax	pmax		
	comp=Z,410nm,4.9s						
GULI				LR	LR		
	comp=Z,2µm,13.7s						
GULI				LR	LR		
	comp=Z,6µm,19.1s						
GULI				LR	LR		
	comp=Z,9µm,21.8s						
KIRS	Kirsehir-Merke	32.40	289	⇓P	P	17 25 28.2	+1.4
MMAI	Mount Meron Ar	32.41	277	PcP	PcP	17 28 14.9	+1.0
	comp=Z,14nm,0.9s,baz=53,slow=5.5,SNR=3.7						
BALJ	Balqa	32.47	275	P	P	17 25 26.6	-0.7
BR104	Keskin Array S	32.55	290	P	P	17 25 28.8	+0.7
	comp=Z,134nmcomp=Z,14nm,1.0s						
BR131	Keskin Array S	32.55	290	*c i*P	P	17 25 28.7	+0.6
BRTR	Keskin Array B	32.55	290	P	P	17 25 28.8	+0.6
	comp=Z,8.1nm,0.8s,baz=99,slow=7.3,SNR=37						
BRTR				PcP	PcP	17 28 15.0	+0.7
	comp=Z,4.9nm,0.9s,baz=98,slow=2.3,SNR=4.0						
	comp=Z,8.1nm,0.8s						
BRTR	Keskin Array B	32.55	290	P	P	17 25 27.7	-0.4
BR106	Keskin Array S	32.57	290	P	P	17 25 28.9	+0.7
	comp=Z,131nmcomp=Z,14nm,0.8s						
OBN	Obninsk	32.58	319	P	P	17 25 28.7	+0.8
	comp=Z,92nm,0.6s,baz=38,slow=4.9,SNR=26						
	comp=Z,92nm,0.6s						
OBN	Obninsk	32.58	319	P	P	17 25 28.1	+0.2
OBN	Obninsk	32.58	319	⇑*e*P	P	17 25 28.5	+0.5
OBN				*e*		17 26 37.4	
OBN				*i* S	S	17 30 49.1	+7.0
OBN				pmax	pmax		
	comp=Z,78nm,1.6s						
OBN				MLR	MLR		
	comp=Z,7µm,16.0s						
OBN	Obninsk	32.58	319	P	P	17 25 28.4	+0.5
	comp=Z,4µmcomp=Z,183nm,0.7s						
XLT	XiLinHaoTe	32.62	62	*e*P	P	17 25 32.0	+3.5
XLT				sP	sP	17 25 42.0	+2.2
XLT				S	S	17 30 47.5	+4.4
XLT				pmax	pmax		
	comp=Z,29nm,1.7s						
XLT				pmax	pmax		
	comp=Z,370nm,5.1s						
XLT				LR	LR		
	comp=Z,5µm,17.3s						
XLT				LR	LR		
	comp=Z,6µm,18.2s						
GHAJ	Ghor Haditha	32.77	274	IAmb	IAmb	17 25 33.9	
	comp=Z,128nm,1.6s						
BJI	Beijing	32.87	70	P	P	17 25 32.5	+1.9
BJI				S	S	17 30 48.3	+1.5
BJI				pmax	pmax		
	comp=Z,12nm,0.9s						
BJI				LR	LR		
	comp=Z,1µm,14.3s						
BJI				LR	LR		
	comp=Z,1µm,14.3s						
BJI				LR	LR		
	comp=Z,2µm,16.8s						
CNSH	ChangSha	33.15	92	P	P	17 25 36.5	+3.3
CNSH				S	S	17 30 55.0	+3.5
CNSH				pmax	pmax		
	comp=Z,34nm,1.1s						
CNSH				LR	LR		
	comp=Z,3µm,20.6s						
CNSH				LR	LR		
	comp=Z,3µm,18.6s						
CNSH				LR	LR		
	comp=Z,5µm,27.9s						
ANTO	Ankara	33.19	290	⇑P	P	17 25 35.4	+1.9
ANTO	Ankara	33.19	290	P	P	17 25 35.4	+1.9
WHN	Wuhan	33.46	87	P	P	17 25 35.8	-0.1
WHN				sP	sP	17 25 50.0	+3.0
WHN				S	S	17 31 01.3	+5.0
WHN				pmax	pmax		
	comp=Z,160nm,1.0s						
WHN				LR	LR		
	comp=Z,20µm,18.9s						
WHN				LR	LR		
	comp=Z,15µm,18.4s						
WHN				LR	LR		
	comp=Z,37µm,28.9s						
KLMR	Klimovskoe	33.76	330	*e*P	P	17 25 36.2	-2.0
KLMR				*e*		17 28 15.7	
KLMR				S	S	17 30 57.1	-3.2
KLMR				SS	SnSn	17 33 06.7	+1.4
KLMR				pmax	pmax		
	comp=Z,195nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,10µm,14.0s						
EIL	Elat	33.81	271	P	P	17 25 38.9	-0.1
	comp=Z,30nm,1.0s,baz=59,slow=5.1,SNR=12						
	comp=Z,30nm,1.0s						
UBPT	Khong Chiam	34.16	118	P	P	17 25 42.1	0.0
TIA	Tai'an	34.19	76	P	P	17 25 45.3	+3.1
TIA				S	S	17 31 08.0	+0.5
TIA				pmax	pmax		
	comp=Z,37nm,1.6s						
TIA				LR	LR		
	comp=Z,4µm,13.5s						
TIA				LR	LR		
	comp=Z,3µm,12.0s						
TIA				LR	LR		
	comp=Z,3µm,12.0s						
BOD	Bodaibo	34.22	37	*e*P	P	17 25 41.4	-0.8
BOD				pmax	pmax		
	comp=Z,87nm,1.6s						
NRIK	Noril'sk	34.55	8	P	P	17 25 45.4	+0.5
	comp=Z,74nm,1.0s,baz=195,slow=6.6,SNR=50						
	comp=Z,74nm,1.0s						
NRIK	Noril'sk	34.55	8	P	P	17 25 45.0	+0.1
NRIK	Noril'sk	34.55	8	*de*P	P	17 25 45.1	+0.1
NRIK				pmax	pmax		
	comp=Z,171nm,1.0s						
SURA	Surathani	34.77	133	P	P	17 25 49.6	+2.2
PURM	Purcari	35.08	302	⇑P	P	17 25 51.3	+1.5
QIZ	Qiongzhong	35.10	109	P	P	17 25 51.5	+1.3
QIZ				S	S	17 31 17.5	-4.3
QIZ				pmax	pmax		
	comp=Z,22nm,2.2s						
QIZ				LR	LR		
	comp=Z,3µm,16.1s						
QIZ				LR	LR		
	comp=Z,2µm,17.9s						
QIZ				LR	LR		
	comp=Z,4µm,22.3s						
BAL3X	Bal3x, Balta	35.33	305	P	P	17 25 53.3	+1.4
HIA	Hailar	35.42	53	IAMs_20	IAMs_20	17 41 57.5	
	comp=Z,8µm,18.0s						
HILR	Hailar Array B	35.46	53	P	P	17 25 54.2	+1.2
	comp=Z,2.7nm,0.4s,baz=247,slow=7.9,SNR=8.0						
HILR				PcP	PcP	17 28 23.8	+1.5
	comp=Z,8.8nm,0.6s,baz=264,slow=2.6,SNR=6.7						
	comp=Z,2.7nm,0.4s						
GZH	Guangzhou	35.71	100	*e*P	P	17 25 54.5	-0.9
GZH				S	S	17 31 29.0	-2.1
GZH				LR	LR		
	comp=Z,6µm,18.1s						
GZH				LR	LR		
	comp=Z,7µm,16.3s						
GZH				LR	LR		
	comp=Z,14µm,18.7s						
AK09	Malin Array Si	35.79	309	P	P	17 25 54.9	-0.9
AK10	Malin Array Si	35.81	309	P	P	17 25 55.0	-1.0
AK08	Malin Array Si	35.81	309	P	P	17 25 55.1	-0.9
AK07	Malin Array Si	35.83	309	P	P	17 25 55.2	-1.0
AKASG	Malin Array Be	35.84	309	P	P	17 25 55.3	-0.9
	comp=Z,11nm,0.7s,baz=86,slow=6.1,SNR=33						
AKASG				PcP	PcP	17 28 24.0	+0.7
	comp=Z,3.6nm,0.7s,baz=80,slow=3.4,SNR=4.4						
	comp=Z,11nm,0.7s						
AKASG	Malin Array Be	35.84	309	P	P	17 25 55.5	-0.8
AKASG	Malin Array Be	35.84	309	*ce*P	P	17 25 55.7	-0.5
AKASG				pmax	pmax		
	comp=Z,29nm,0.8s						
AKBB	Malin Array Si	35.84	309	IAmb	IAmb	17 26 00.6	
	comp=Z,83nm,1.2s						
AKBB	Malin Array Si	35.84	309	*de*P	P	17 25 55.8	-0.4
AKBB	Malin Array Si	35.84	309	P	P	17 25 55.3	-0.9
AK06	Malin Array Si	35.84	309	P	P	17 25 55.3	-1.0
AK05	Malin Array Si	35.84	309	P	P	17 25 55.3	-1.0
AK03	Malin Array Si	35.84	309	P	P	17 25 55.3	-1.0
AK01	Malin Array Si	35.84	309	P	P	17 25 55.3	-1.0
AK02	Malin Array Si	35.84	309	P	P	17 25 55.4	-0.9
KIEV	Kiev	35.85	309	P	P	17 25 54.4	-1.9
KIEV				IAmb	IAmb	17 26 00.6	
	comp=Z,75nm,1.2s						
KIEV	Kiev	35.85	309	IAMs_20	IAMs_20	17 42 09.2	
	comp=Z,5µm,19.0s						
KIEV	Kiev	35.85	309	⇑P	P	17 25 57.4	+1.0
KIEV	Kiev	35.85	309	*i* P	P	17 25 55.0	-1.3
	SNR=20						
KIEV	Kiev	35.85	309	P	P	17 25 54.4	-1.9
KIEV				pmax	pmax		
	comp=Z,75nm,1.2s						
KIEV				MLR	MLR		
	comp=Z,5µm,19.0s						
KIEV	Kiev	35.85	309	P	P	17 25 55.3	-1.0
AK11	Malin Array Si	35.87	309	P	P	17 25 55.6	-0.9
AK12	Malin Array Si	35.87	309	P	P	17 25 55.6	-0.9
AK04	Malin Array Si	35.88	309	P	P	17 25 55.6	-1.0
AK14	Malin Array Si	35.90	309	P	P	17 25 55.9	-0.9
AK23	Malin Array Si	35.91	309	P	P	17 25 55.9	-0.9
AK16	Malin Array Si	35.91	309	P	P	17 25 55.9	-0.9
ELL	Elmali	35.92	285	IAmb	IAmb	17 26 03.0	
	comp=Z,56nm,0.8s						
AK13	Malin Array Si	35.93	309	P	P	17 25 56.1	-0.9
AK18	Malin Array Si	35.94	309	P	P	17 25 56.2	-0.9
AK17	Malin Array Si	35.94	309	P	P	17 25 56.2	-0.9
AK22	Malin Array Si	35.94	309	P	P	17 25 56.2	-0.9
AK21	Malin Array Si	35.96	309	P	P	17 25 56.4	-0.9
EFOR	EFORIE	35.97	298	⇓P	P	17 25 59.1	+1.7
AK19	Malin Array Si	35.97	309	P	P	17 25 56.5	-0.9
AK20	Malin Array Si	35.98	309	P	P	17 25 56.5	-0.9
TPGR	Topolog	36.09	299	⇓P	P	17 25 59.7	+1.1
CFR	Carcaliu	36.29	300	⇑P	P	17 26 01.2	+1.1
CFR	Carcaliu	36.29	300	P	P	17 26 01.2	+1.1
VLDR	Vladesti	36.32	301	⇑P	P	17 26 02.0	+1.6
SCTR	Scanteiesti	36.38	301	⇓P	P	17 26 02.7	+1.8
NEGRR	Negrea	36.46	300	⇑P	P	17 26 04.0	+2.4
MI30	MI30,Zelenitsa	36.50	309	P	P	17 26 00.7	-1.2
VASR	Vaslui	36.52	302	⇓P	P	17 26 03.4	+1.2
IZVR	Izvoarele	36.54	300	⇑P	P	17 26 04.7	+2.4
ICOR	Ion Corvin	36.57	298	⇑P	P	17 26 04.9	+2.3
TUDR		36.61	301	⇓P	P	17 26 04.7	+1.8
BIR	Birlad	36.63	302	⇑P	P	17 26 04.2	+1.1
BIR	Birlad	36.63	302	P	P	17 26 04.2	+1.1
NJ2	Nanjing	36.64	83	*e*P	P	17 26 05.8	+2.5
NJ2				pP	pP	17 26 08.3	-2.9
NJ2				pmax	pmax		
	comp=Z,18nm,0.6s						
NJ2				LR	LR		
	comp=Z,4µm,21.8s						
NJ2				LR	LR		
	comp=Z,2µm,19.9s						
NJ2				LR	LR		
	comp=Z,3µm,18.9s						
MI29	MI29, Kamyanyy	36.68	309	P	P	17 26 03.5	+0.1
HKPS	Hong Kong Po S	36.75	100	IAMs_20	IAMs_20	17 42 06.4	
	comp=Z,8µm,22.0s						
GHRR		36.78	301	⇓P	P	17 26 06.6	+2.3
AMRR	Amara	36.88	299	⇑P	P	17 26 07.5	+2.3
AMRR	Amara	36.88	299	P	P	17 26 07.5	+2.3
PANC	Panciu	36.97	301	⇓P	P	17 26 08.4	+2.4
ODBI	Odobesti	37.03	301	⇑P	P	17 26 08.6	+2.1
DL2	Dalian	37.20	71	P	P	17 26 09.5	+1.5
DL2				S	S	17 31 54.5	+0.9
DL2				pmax	pmax		
	comp=Z,110nm,1.7s						
DL2				pmax	pmax		
	comp=Z,490nm,8.0s						
DL2				LR	LR		
	comp=Z,3µm,14.3s						
DL2				LR	LR		
	comp=Z,4µm,15.5s						
DL2				LR	LR		
	comp=Z,4µm,14.3s						
MNK	Minsk	37.25	315	*i* P	P	17 26 07.2	-1.0
	comp=E,38nm,1.0s						
MNK				*i* P	P	17 26 07.2	-1.0
	comp=N,46nm,1.0s						
MNK				*i* P	P	17 26 07.2	-1.0
	comp=Z,41nm,0.9s,baz=101						
MNK				*i* PP	PP	17 27 33.1	-0.1
MNK				*i* PPP	PPP	17 27 51.0	
MNK				*i* S	S	17 31 52.6	-1.3
MNK				*i* SS	SnSn	17 34 32.1	+2.3
MNK				*i* SSS	SSS	17 34 50.9	
MNK				*i* LQ	LQ	17 38 49.8	
MNK				*i* LR	LR	17 41 30.0	
MNK				*i* LRM	MLR	17 42 57.4	
	comp=Z,7µm,11.3s						
MNK	Minsk	37.25	315	*i* P	P	17 26 07.2	-1.0
MNK				*i*		17 27 33.0	
MNK				*i* PPP	PPP	17 27 50.9	
MNK				*i* S	S	17 31 52.6	-1.3
MNK				*i* SS	SnSn	17 34 32.1	+2.3
MNK				*i* SSS	SSS	17 34 50.8	
MNK				pmax	pmax		
	comp=Z,41nm,0.9s						
MNK				pmax	pmax		
	comp=N,46nm,1.0s						
MNK				pmax	pmax		
	comp=E,38nm,1.0s						
MNK				MLR	MLR		
	comp=Z,7µm,11.0s						
VRI	Vrincioaia	37.26	301	⇓P	P	17 26 10.6	+2.1
VRI	Vrincioaia	37.26	301	P	P	17 26 10.6	+2.1
BISRR	Bisoca	37.28	300	⇑P	P	17 26 10.6	+1.9
TESR	Tescani	37.31	302	⇓P	P	17 26 09.9	+1.1
PLOR	Plostina	37.32	301	⇓P	P	17 26 11.1	+2.1
PLOR	Plostina	37.32	301	P	P	17 26 11.1	+2.1
PUL	Pulkovo	37.38	324	⇑*e*P	P	17 26 10.2	+0.9
PUL				pmax	pmax		
	comp=Z,74nm,0.7s						
GIRR	Girov	37.41	303	⇑P	P	17 26 11.0	+1.3
ISR	Istrita	37.42	300	⇑P	P	17 26 11.6	+1.7
ISR	Istrita	37.42	300	P	P	17 26 11.6	+1.7
ATD	Arta Tunnel	37.46	238	P	P	17 26 11.5	+1.0
	comp=Z,1.5nm,0.9s,baz=356,slow=6.6,SNR=12						
ONER	Baraj Valea Uz	37.48	302	⇓P	P	17 26 12.9	+2.5
HORU	Horodok	37.51	307	P	P	17 26 11.3	+0.8
PRAR	RASCA	37.59	303	⇓P	P	17 26 12.7	+1.4
COVR	Voineasa-Covas	37.63	301	⇑P	P	17 26 13.0	+1.4
SULR		37.64	299	⇓P	P	17 26 12.7	+1.0
TURR	Turia	37.75	301	⇑P	P	17 26 14.6	+1.9
MLR	Muntele Rosu	37.82	300	P	P	17 26 14.3	+1.0
	comp=Z,78nm,0.8s,baz=133,slow=11,SNR=64						
	comp=Z,78nm,0.8s						
MLR	Muntele Rosu	37.82	300	⇓P	P	17 26 14.9	+1.5
OZUR		37.91	301	⇑P	P	17 26 15.3	+1.3
NACGM	Naroch	37.95	316	*e*P	P	17 26 14.7	+0.6
	comp=Z,83nm,0.9s,baz=100						
RNPP2	Kostyukhnivka	38.00	310	P	P	17 26 15.0	+0.4
ELND	Elena	38.05	296	⇑P	P	17 26 16.8	+1.6
JOF	Joensuu	38.16	329	*e*P	P	17 26 16.1	+0.3
DOPR	Dopca	38.19	301	⇓P	P	17 26 18.0	+1.6
SNY	Shenyang	38.24	65	⇓P	P	17 26 22.5	+5.7
SNY				S	S	17 32 09.0	-0.3
SNY				pmax	pmax		
	comp=Z,40nm,1.0s						
SNY				LR	LR		
	comp=Z,4µm,15.4s						
SNY				LR	LR		
	comp=Z,2µm,13.7s						
SNY				LR	LR		
	comp=Z,3µm,16.3s						
BURAR	Bucovina Array	38.28	304	P	P	17 26 16.6	-0.5
BURAR	Bucovina Array	38.28	304	⇑P	P	17 26 18.3	+1.1
BURAR	Bucovina Array	38.28	304	P	P	17 26 18.2	+1.1
KARP	Karpathos	38.35	284	*e*P	P	17 26 17.3	-0.6
KCSI	Kotacane, Aceh	38.40	141	P	P	17 26 18.9	+0.6
KULM	Kulim	38.48	136	P	P	17 26 18.9	-0.1
KULM	Kulim	38.48	136	P	P	17 26 21.5	+2.4
KULM	Kulim	38.48	136	P	P	17 26 18.5	-0.6
STFAR	Stefanesti-Arg	38.55	299	⇑P	P	17 26 20.6	+1.2
HUMR	Humele	38.56	299	⇓P	P	17 26 21.1	+1.6
SNSI	Sinabang, Aceh	38.63	144	P	P	17 26 19.8	-0.5
	comp=Z,4µmcomp=Z,169nm,1.1s						
ARR	Arges	38.75	300	⇓P	P	17 26 22.6	+1.5
VSU	Vasula	38.76	321	*e*P	P	17 26 21.5	+0.7

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SSE   Sheshan          38.83  83  P        P        17 26 20.0 -1.8
SSE                               pP       pP       17 26 25.0 -4.8
SSE                               S        S        17 32 19.5 +1.1
SSE                               pmax     pmax
      comp=Z,8.0nm,0.8s
SSE                               pmax     pmax
      comp=Z,270nm,3.7s
MDB   Medias           38.89 302 ⇑P        P        17 26 24.3 +2.1
MDB   Medias           38.89 302  P        P        17 26 24.3 +2.1
TNR   Turnu Rosu       38.99 301 ⇑P        P        17 26 24.2 +1.1
TNR   Turnu Rosu       38.99 301  P        P        17 26 24.1 +1.1
QZH   Quanzhou         39.10  93  P        P        17 26 25.3 +1.1
QZH                               S        S        17 32 24.8 +2.2
QZH                               LR       LR
      comp=Z,5µm,13.9s
QZH                               LR       LR
      comp=Z,3µm,12.4s
QZH                               LR       LR
      comp=Z,5µm,18.1s
LOT   Lotru            39.35 300 ⇓P        P        17 26 27.6 +1.4
IPM   Ipoh             39.36 136  P        P        17 26 28.1 +1.7
IPM   Ipoh             39.36 136  P        P        17 26 24.8 -1.6
      comp=Z,1µmcomp=Z,44nm,0.8s
ARBE  Arbavere         39.38 323 eP        P        17 26 26.9 +0.8
CN2   Changchun        39.39  62 eP        P        17 26 28.0 +1.6
CN2                               pmax     pmax
      comp=Z,10.0nm,1.0s
CN2                               pmax     pmax
      comp=Z,100nm,3.0s
CN2                               LR       LR
      comp=Z,5µm,17.0s
CN2                               LR       LR
      comp=Z,2µm,17.0s
CN2                               LR       LR
      comp=Z,4µm,16.1s
CJR   Cluj-Napoca      39.40 302 ⇓P        P        17 26 28.8 +2.2
CJR   Cluj-Napoca      39.40 302  P        P        17 26 28.7 +2.2
LVZ   Lovozero         39.43 337  P        P        17 26 26.2 -0.2
LVZ                               IAmb     IAmb     17 26 32.6
      comp=Z,191nm,1.3s
LVZ   Lovozero         39.43 337deP        P        17 26 26.0 -0.4
LVZ                               pmax     pmax
      comp=Z,85nm,0.9s
PSI   Prapat           39.61 140  LR       LR       17 43 41.2
      comp=Z,4µm,21.6s,baz=298,slow=38
PSI   Prapat           39.61 140  P        P        17 26 30.0 +1.4
APA   Apatity          39.64 337⇓eP        P        17 26 28.5 +0.3
APA                              e                  17 27 58.8
APA                              e                  17 28 35.4
APA                               pmax     pmax
      comp=Z,21nm,1.3s
APA                               MLR      MLR
      comp=Z,9µm,23.5s
PABE  Paberze          39.64 316  IAmb     IAmb     17 26 37.4
      comp=Z,258nm,1.6s
PABE  Paberze          39.64 316 eP        P        17 26 27.6 -0.7
MARR  Marisel-Cluj     39.73 302 ⇑P        P        17 26 30.5 +1.1
MESR  Meseseni         39.83 303 ⇑P        P        17 26 32.0 +2.0
SUW   Suwalki          39.90 314 eP        P        17 26 30.9 +0.4
SUW   Suwalki          39.90 314  P        P        17 26 30.6 +0.1
SUW   Suwalki          39.90 314  P        P        17 26 30.6 +0.1
SUW                               MLR      MLR
      comp=Z,12µm,20.0s
FINES FINESS Array B   39.91 326  P        P        17 26 31.2 +0.7
      comp=Z,74nm,0.8s,baz=109,slow=7.9,SNR=35
      comp=Z,74nm,0.8s
FINES FINESS Array B   39.91 326  P        P        17 26 30.1 -0.4
DEV   Deva             39.93 301 ⇑P        P        17 26 32.9 +2.1
DEV   Deva             39.93 301  P        P        17 26 32.9 +2.1
KWP   Kalwaria Pacla   39.95 307 eP        P        17 26 31.3 +0.3
GZR   Gura Zlata       40.05 300 ⇑P        P        17 26 32.5 +0.5
GZR   Gura Zlata       40.05 300  P        P        17 26 32.5 +0.5
GSI   Gunungsitoli     40.20 143  P        P        17 26 33.2 -0.2
GSI                               IAMs_20  IAMs_20  17 44 36.7
      comp=Z,5µm,20.0s
MTSE  Matsula          40.30 321 eP        P        17 26 33.7  0.0
HERR  Herculane        40.35 300 ⇑P        P        17 26 35.9 +1.5
MEF   Metsahovi        40.36 324 eP        P        17 26 33.4 -0.8
HEH   HeiHe            40.44  52 eP        P        17 26 35.0  0.0
HEH                               pmax     pmax
      comp=Z,50nm,1.2s
HEH                               LR       LR
      comp=Z,11µm,17.3s
HEH                               LR       LR
      comp=Z,6µm,15.9s
HEH                               LR       LR
      comp=Z,9µm,15.5s
ZEA   Zeya             40.51  47 eP        P        17 26 38.8 +3.3
ZEA                               pmax     pmax
      comp=Z,20nm,1.0s
ZEA                               MLR      MLR
      comp=E,2µm,14.0s
ZEA                               MLR      MLR
      comp=Z,3µm,16.0s
LTVH  Ltavrtes, Hu     40.53 304 ⇑P        P        17 26 37.9 +2.1
BNX   BinXian          40.60  59 ⇑P        P        17 26 38.8 +2.4
BNX                               pmax     pmax
      comp=Z,33nm,1.2s
BORR  Bors             40.62 303 ⇑P        P        17 26 38.2 +1.6
KEF   Keuruu           40.67 327 eP        P        17 26 36.9 +0.1
SIRR  Siria            40.77 302 ⇑P        P        17 26 39.8 +2.0
BZS   Buzias           40.85 301 ⇓P        P        17 26 40.1 +1.6
BZS   Buzias           40.85 301  P        P        17 26 40.1 +1.6
MDVR  Moldovita        40.86 300 ⇑P        P        17 26 39.3 +0.6
BOVS  Bovan            41.00 298 ⇑P        P        17 26 40.6 +0.8
BEL   Belsk            41.20 310 eP        P        17 26 41.8 +0.5
INCN  Inchon           41.35  71  P        P        17 26 46.8 +4.1
KECS  Kecovo           41.43 305 eP        P        17 26 43.3 +0.1
KECS                              pmax     pmax
      comp=Z,33nm,1.5s
KECS  Kecovo           41.43 305 eP        P        17 26 43.3 +0.1
YHNB  Yeheng           41.49  92  IAMs_20  IAMs_20  17 47 17.8
      comp=Z,4µm,21.0s
TPUB  Ta-pu            41.50  94  IAMs_20  IAMs_20  17 45 10.3
      comp=Z,4µm,21.0s
NIE   Niedzica         41.52 307 eP        P        17 26 44.2 +0.3
SSLB  Suanglung        41.54  93  IAmb     IAmb     17 26 52.0
      comp=Z,77nm,1.0s
SSLB  Suanglung        41.54  93  P        P        17 26 46.4 +1.9
BSZH  Besenyszg        41.65 304 ⇓P        P        17 26 46.8 +1.8
MNSI  Mandailing Nat   41.65 141  P        P        17 26 44.0 -1.3
      comp=Z,56nm,1.4s
PBSI  Pulau Batu       41.72 143  P        P        17 26 47.1 +1.2
OJC   Ojcow            41.82 308 eP        P        17 26 46.1 -0.3
PSZ   Piszkesteto      41.86 305 ⇑P        P        17 26 47.9 +1.0
PSZ   Piszkesteto      41.86 305 eP        P        17 26 45.9 -0.9
PSZ   Piszkesteto      41.86 305  P        P        17 26 47.8 +1.0
NACB  Ninganchiao      41.89  93  IAMs_20  IAMs_20  17 45 50.4
      comp=Z,4µm,19.0s
NACB  Ninganchiao      41.89  93  P        P        17 26 49.9 +2.7
VAF   Ylistaro         41.90 327 eP        P        17 26 47.4 +0.6
YULB  Yu-li            42.00  94  P        P        17 26 49.5 +1.3
LANS  Liptovska Anna   42.07 306 eP        P        17 26 50.2 +1.7
LANS                              pmax     pmax
      comp=Z,10.0nm,1.1s
LANS  Liptovska Anna   42.07 306 eP        P        17 26 50.2 +1.7
LANS                             ePP       PcP      17 28 38.2 -4.8
TWG   Pinlang          42.09  95  P        P        17 26 49.2 +0.3
TWG                               IAmb     IAmb     17 26 57.3
      comp=Z,151nm,1.1s
TJN   Taejon           42.19  73  P        P        17 26 51.0 +1.4
TJN   Taejon           42.19  73⇑eP        P        17 26 49.5 -0.1
FURI  Furi             42.22 240  IAMs_20  IAMs_20  17 46 13.3
      comp=Z,4µm,22.0s
VADS  Vadso            42.23 339 eP        P        17 26 50.8 +1.4
MDJ   Mudanjiang       42.26  60  IAMs_20  IAMs_20  17 46 01.5
      comp=Z,6µm,22.0s
MDJ   Mudanjiang       42.26  60  P        P        17 26 50.8 +0.8
MDJ                               pmax     pmax
      comp=Z,45nm,2.3s
KSAR  Wonju Array Be   42.33  71  P        P        17 26 50.7  0.0
KSAR  Wonju Array Be   42.33  71  P        P        17 26 50.7  0.0
KSRS  Korea Array      42.35  71  P        P        17 26 51.1 +0.3
      comp=Z,22nm,1.0s,baz=278,slow=7.0,SNR=28
KSRS                              PcP      PcP      17 28 43.6 -0.5
      comp=Z,1.7nm,0.6s,baz=279,slow=1.6,SNR=7.6
      comp=Z,22nm,1.0s
KEV   Kevo             42.76 338  P        P        17 26 53.7 -0.1
KEV                               IAmb     IAmb     17 27 00.3
      comp=Z,193nm,1.5s
KEV   Kevo             42.76 338  P        P        17 26 53.7 -0.1
KEV                               pmax     pmax
      comp=Z,193nm,1.5s
KEV                               MLR      MLR
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      comp=Z,8µm,20.0s
MORH  Mrgy, Hungar     42.85 302 ⇑P        P        17 26 55.7 +0.9
PDG   Podgorica        42.96 297 ⇑P        P        17 26 56.4 +0.7
YAK   Yakutsk          43.00  34  P        P        17 26 55.6 -0.2
YAK                               IAmb     IAmb     17 27 01.5
      comp=Z,86nm,0.7s
YAK   Yakutsk          43.00  34 eP        P        17 26 55.2 -0.6
YAK                              e*PP      pP       17 27 02.7 -0.6
YAK                              e                  17 28 32.9
YAK                              e                  17 28 44.3
YAK                              ePPP      PPP      17 29 10.0
YAK                              eS        S        17 33 18.8 -0.9
YAK                              e*SS      sS       17 33 34.9 +2.0
YAK                              e                  17 36 52.9
YAK                              eSSS      SSS      17 37 09.5
YAK                               pmax     pmax
      comp=Z,89nm,1.0s
YAK                               pmax     pmax
      comp=E,59nm,1.5s
YAK                               pmax     pmax
      comp=N,9.0nm,1.0s
YAK                               pmax     pmax
      comp=Z,79nm,2.3s
YAK                               pmax     pmax
      comp=N,164nm,3.3s
YAK                               pmax     pmax
      comp=E,147nm,2.3s
YAK                               smax     smax
      comp=E,326nm,4.3s
YAK                               smax     smax
      comp=N,318nm,3.5s
YAK                               MLR      MLR
      comp=N,2µm,18.0s
YAK                               MLR      MLR
      comp=Z,3µm,22.0s
YAK                               MLR      MLR
      comp=E,1µm,18.0s
PPI   Padang Panjang   43.13 141  P        P        17 27 00.5 +3.1
      comp=E,2µmcomp=E,60nm,0.9s
ARA0  ARCESS Array S   43.14 337 eP        P        17 26 56.9  0.0
ARCES ARCESS Array B   43.14 337  P        P        17 26 56.9  0.0
      comp=E,34nm,0.8s,baz=111,slow=8.3,SNR=62
      comp=E,34nm,0.8s
ARCES ARCESS Array B   43.14 337  P        P        17 26 57.0 +0.2
ARCES ARCESS Array B   43.14 337  P        P        17 26 57.0 +0.2
ARCES                             pmax     pmax
      comp=Z,277nm,1.4s
SISI  Saibi            43.22 143  P        P        17 27 00.2 +2.1
      comp=Z,2µmcomp=Z,62nm,1.0s
JAVC  Velka Javorina   43.27 306 eP        P        17 26 58.6 +0.3
MORC  Moravsky Berou   43.30 307  IAmb     IAmb     17 27 03.7
      comp=Z,109nm,1.4s
MORC  Moravsky Berou   43.30 307 ⇑P        P        17 26 59.2 +0.7
MORC  Moravsky Berou   43.30 307 eP        P        17 26 57.9 -0.6
MORC  Moravsky Berou   43.30 307  P        P        17 26 59.1 +0.7
GKP   Gorka Klasztor   43.40 313 eP        P        17 26 59.8 +0.7
PSTR  Posyet           43.42  63ceP        P        17 27 02.0 +2.5
SMOL  Smolenice        43.46 306 eP        P        17 26 59.7  0.0
SMOL                              pmax     pmax
      comp=Z,18nm,1.2s
PDSI  Padang           43.55 141  P        P        17 27 00.3 -0.5
      comp=Z,2µmcomp=Z,87nm,0.9s
MODS  Modra-Piesok     43.57 305 eP        P        17 27 01.7 +1.1
MODS                              pmax     pmax
      comp=Z,130nm,1.4s
MODS  Modra-Piesok     43.57 305 eP        P        17 27 01.7 +1.1
KTK1  Kautokeino       43.66 336 eP        P        17 27 01.0  0.0
KRLC  Kraliky          43.77 308 eP        P        17 27 02.9 +0.6
KRLC                              MLR      MLR
      comp=Z,3µm,13.9s
KRLC  Kraliky          43.77 308 eP        P        17 27 02.9 +0.6
KRLC                              AMS      AMS      17 47 30.0
      comp=Z,3µm,13.9s
MSEY  Mahe Island      43.92 208  P        P        17 27 03.4 -0.4
MSEY  Mahe Island      43.92 208  P        P        17 27 03.4 -0.4
MSEY                              pmax     pmax
      comp=Z,62nm,1.2s
MSEY                              MLR      MLR
      comp=Z,1µm,20.0s
VRAC  Vranov           43.94 307 ⇓P        P        17 27 04.5 +0.9
VRAC  Vranov           43.94 307 eP        P        17 27 02.2 -1.4
VRAC  Vranov           43.94 307  P        P        17 27 04.5 +0.9
USRK  Ussuriysk Ar.    44.02  61  P        P        17 27 04.5 +0.3
      comp=Z,8.6nm,0.8s,baz=271,slow=6.5,SNR=7.4
      comp=Z,8.6nm,0.8s
KSP   Ksiaz            44.04 309 eP        P        17 27 03.0 -1.3
DPC   Dobruska-Polom   44.05 308 eP        P        17 27 05.2 +0.7
DPC                               MLR      MLR
      comp=Z,4µm,13.6s
DPC   Dobruska-Polom   44.05 308 eP        P        17 27 05.2 +0.7
DPC                               AMS      AMS      17 47 40.0
      comp=Z,4µm,13.6s
BLY   Banja Luka       44.06 300 ⇓P        P        17 27 05.7 +1.1
KRUC  Moravsky         44.09 306 eP        P        17 27 04.5 -0.3
OSTC  Ostas            44.10 309 eP        P        17 27 07.6 +2.7
OSTC                              MLR      MLR
      comp=Z,5µm,16.9s
OSTC  Ostas            44.10 309 eP        P        17 27 07.6 +2.7
OSTC                              AMS      AMS      17 47 40.0
      comp=Z,5µm,16.9s
HAMF  Hammerfest       44.17 338 eP        P        17 27 05.8 +0.6
CHVC  Chvalec          44.20 309 eP        P        17 27 06.5 +0.8
CHVC                              MLR      MLR
      comp=Z,6µm,14.6s
CHVC  Chvalec          44.20 309 eP        P        17 27 06.5 +0.8
CHVC                              AMS      AMS      17 47 50.0
      comp=Z,6µm,14.6s
UPC   Upice            44.23 309 eP        P        17 27 06.7 +0.8
UPC                               MLR      MLR
      comp=Z,6µm,15.0s
UPC   Upice            44.23 309 eP        P        17 27 06.7 +0.8
UPC                               AMS      AMS      17 47 50.0
      comp=Z,6µm,15.0s
RONA  Rosalia, Austr   44.29 305 i P       P        17 27 06.4 -0.1
      comp=Z,55nm,1.2s,SNR=14
KOGS  Kog              44.47 303 i P       P        17 27 07.0 -0.9
CONA  Conrad Observa   44.56 305 i P       P        17 27 08.5 -0.2
      comp=Z,143nm,1.4s,SNR=40
TREC  Trest            44.67 307 eP        P        17 27 10.0 +0.6
TREC                              MLR      MLR
      comp=Z,4µm,16.2s
TREC  Trest            44.67 307 eP        P        17 27 10.0 +0.6
TREC                              AMS      AMS      17 49 20.0
      comp=Z,4µm,16.2s
BSD   Bornholm Skovb   44.77 315 i P       P        17 27 14.9 +4.8
JETT  Jettan, Norway   44.79 336 eP        P        17 27 10.5 +0.3
ARSA  Arzberg          44.86 304 i P       P        17 27 10.9 -0.1
      comp=Z,38nm,1.4s,SNR=7.4
PPSI  Pulau Pagai      44.92 143  P        P        17 27 16.3 +4.6
      comp=Z,3µmcomp=Z,177nm,1.1s
KRJI  Kerinci          45.08 141  P        P        17 27 18.0 +4.9
PVCC  Panska Ves       45.15 309 eP        P        17 27 14.6 +1.4
PVCC                              MLR      MLR
      comp=Z,5µm,16.7s
PVCC  Panska Ves       45.15 309 eP        P        17 27 14.6 +1.4
PVCC                              AMS      AMS      17 48 20.0
      comp=Z,5µm,16.7s
PRU   Pruhonice        45.22 308 eP        P        17 27 14.5 +0.7
PRU                               MLR      MLR
      comp=Z,4µm,13.3s
PRU   Pruhonice        45.22 308 eP        P        17 27 14.5 +0.7
PRU                               AMS      AMS      17 48 20.0
      comp=Z,4µm,13.3s
SOKA  Soboth           45.27 303 eP        P        17 27 14.4  0.0
      comp=Z,111nm,1.3s,SNR=19
BOJS  Bojanci          45.30 302 i P       P        17 27 15.7 +1.2
TRO   Tromso           45.31 336 eP        P        17 27 14.2 +0.1
DEL   Delary           45.37 317 i P       P        17 27 15.6 +0.7
DSRI  Dabo             45.43 136  P        P        17 27 22.3 +6.5
CKRC  Cesky Krumlov    45.49 306 eP        P        17 27 17.3 +1.4
CKRC                              MLR      MLR
      comp=Z,3µm,23.6s
CKRC  Cesky Krumlov    45.49 306 eP        P        17 27 17.3 +1.4
CKRC                              AMS      AMS      17 46 40.0
      comp=Z,3µm,23.6s
ZVC   Zvikov           45.49 307 eP        P        17 27 16.2 +0.2
ZVC                               AMS      AMS      17 49 50.0
      comp=Z,4µm,15.1s
BRG   Berggiesshubel   45.52 309 eP        P        17 27 16.4 +0.3
      comp=Z,51nm,1.2s,baz=82,slow=7.7
TIXI  Tiksi            45.52  21  P        P        17 27 15.3 -0.6
TIXI                              IAmb     IAmb     17 27 23.2
      comp=Z,60nm,0.9s
TIXI  Tiksi            45.52  21deP        P        17 27 15.9  0.0
TIXI                              pmax     pmax
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      comp=Z,20nm,0.9s
HFS   Hagfors          45.62 322  P        P        17 27 16.5 -0.3
      comp=Z,29nm,0.7s,baz=96,slow=9.1,SNR=45
      comp=Z,29nm,0.7s
OBKA  Obir             45.63 303 i P       P        17 27 17.3 +0.2
      comp=Z,80nm,1.6s,SNR=8.2
MOA   Molln            45.63 305 i P       P        17 27 17.5 +0.4
      comp=Z,90nm,1.4s,SNR=10
LJU   Ljubljana        45.71 302 i P       P        17 27 17.6 -0.2
HSKC  Hora Svate Kat   45.87 309 eP        P        17 27 21.1 +2.2
HSKC                              AMS      AMS      17 48 40.0
      comp=Z,5µm,17.6s
GEC2  GERESS Array S   45.88 306 eP        P        17 27 19.1  0.0
      comp=Z,43nm,1.4s,baz=82,slow=7.7
GERES GERESS Array B   45.88 306  P        P        17 27 17.8 -1.3
      comp=Z,7.1nm,1.1s,baz=106,slow=4.9,SNR=22
GERES                             PP       PP       17 29 08.7 +2.0
      comp=Z,4.1nm,1.0s,baz=76,slow=8.4,SNR=4.0
JNU   Nakatsue         45.92  76  P        P        17 27 20.7 +1.1
KHC   Kasperske Hory   45.93 307 ex        x        17 29 06.0
KHC                               AMS      AMS      17 50 00.0
      comp=Z,4µm,14.5s
BORU  Boraas           45.99 319 i P       P        17 27 20.1 +0.4
FAUS  Fauske           45.99 332 eP        P        17 27 20.8 +1.2
BIOA  Bad Ischl, Aus   46.07 305 i P       P        17 27 20.0 -0.6
      comp=Z,47nm,1.1s,SNR=9.0
MOR8  Moi Rana         46.07 331 eP        P        17 27 19.7 -0.6
CLL   Collm            46.08 310  IAMs_20  IAMs_20  17 49 09.0
      comp=Z,4µm,20.0s
CLL   Collm            46.08 310 i P       P        17 27 20.8 +0.3
CLL                              e*PP      pP       17 27 27.0 -1.1
CLL                              eS        S        17 34 07.0 +2.3
CLL                               pmax     pmax
      comp=Z,66nm,1.6s
CLL                               MLR      MLR
      comp=Z,4µm,20.3s
CLL   Collm            46.08 310 eP        P        17 27 20.2 -0.3
      comp=Z,53nm,1.5s,baz=82,slow=7.7
CLL   Collm            46.08 310 i P       P        17 27 20.8 +0.3
      comp=Z,66nm,1.6s
CLL                              i sP      pP       17 27 27.4 -0.7
CLL                              ePP       PP       17 29 08.0 -0.5
CLL                              ex        x        17 29 19.0
CLL                              ePPP      PPP      17 29 54.0
CLL                              eS        S        17 34 07.0 +2.3
CLL                              ex        x        17 35 07.0
CLL                              eSS       SS       17 37 31.0 +1.5
CLL                               AMS      AMS      17 49 00.0
      comp=N,2µm,18.5s
CLL                               AMS      AMS      17 49 00.0
      comp=E,3µm,21.5s
CLL                               AMS      AMS      17 49 00.0
      comp=Z,4µm,20.3s
STEI  Steigen          46.13 333 eP        P        17 27 21.5 +0.8
GRNR  Gornyy           46.16  51⇓iP        P        17 27 21.0 -0.2
GRNR                              pmax     pmax
      comp=Z,4.0nm,0.7s
GRNR                              MLR      MLR
      comp=E,2µm,15.0s
GRNR                              MLR      MLR
      comp=N,1µm,13.0s
GRNR                              MLR      MLR
      comp=Z,3µm,15.0s
JOW   Kunigami         46.18  85  P        P        17 27 24.5 +2.8
MYKA  Terra Mystica    46.23 303 i P       P        17 27 21.5 -0.4
      comp=Z,24nm,1.1s
RAUS  Rausandaksla     46.28 331 eP        P        17 27 22.2 +0.3
KBA   Koelnbreinsper   46.36 304 i P       P        17 27 23.4 +0.3
      comp=Z,43nm,1.6s
MASI  Maura Aman, Be   46.37 140  P        P        17 27 22.5 -0.7
      comp=Z,2µmcomp=Z,220nm,1.0s
WET   Wettzell         46.38 307 eP        P        17 27 23.0  0.0
      comp=Z,62nm,1.5s,baz=82,slow=7.7
TANN  Tannenbergstha   46.50 309 eP        P        17 27 24.1 +0.1
      comp=Z,168nm,2.1s,baz=82,slow=7.7
LEIR  Leirfjorden      46.59 330 eP        P        17 27 24.9 +0.6
VAGH  Vaagaholmen      46.64 331 eP        P        17 27 26.1 +1.4
STOK  Stokkvaagen      46.67 331 eP        P        17 27 25.1 +0.2
PLN   Plauen           46.69 309 eP        P        17 27 25.5 +0.1
      comp=Z,22nm,1.6s,baz=82,slow=7.7
NC602 NORSAR Array S   46.72 323 eP        P        17 27 25.9 +0.4
ROTZ  Rotzenmuhle      46.74 308 eP        P        17 27 26.4 +0.6
      comp=Z,23nm,1.5s,baz=82,slow=7.7
LESA  Schwarzleotal    46.76 305 i P       P        17 27 25.6 -0.4
      comp=Z,62nm,1.2s,SNR=17
MANZ  Manzenberg       46.78 308 eP        P        17 27 26.5 +0.4
      comp=Z,29nm,1.7s,baz=82,slow=7.7
LOF   Lofoten          46.80 333 eP        P        17 27 26.4 +0.4
STRU  Stroemstad       46.85 321 i P       P        17 27 28.0 +1.6
NB2   NORSAR Subarra   46.90 323  P        P        17 27 26.2 -0.7
      comp=Z,9.4nm,0.6s,baz=92,slow=7.9
NB2   NORSAR Subarra   46.90 323  P        P        17 27 26.2 -0.7
      baz=92,slow=7.9
NOA   NORSAR Array B   46.90 323  P        P        17 27 26.1 -0.7
      comp=Z,15nm,0.7s,baz=93,slow=7.6,SNR=41
      comp=Z,15nm,0.7s
STAL  STALIGIAL        46.92 303  P        P        17 27 26.6 -0.7
STAL                              IAmb     IAmb     17 27 31.2
      comp=Z,84nm,1.1s
ABTA  Abfaltersbach    46.98 304 i P       P        17 27 27.1 -0.7
      comp=Z,36nm,1.2s,SNR=5.7
KSI   Kapahiang        46.99 140  P        P        17 27 28.1  0.0
MOX   Moxa             47.02 309 eP        P        17 27 28.1 +0.1
      comp=Z,86nm,1.6s,baz=82,slow=7.7
MOX                              eL        L        17 49 47.6
      comp=Z,4µm,20.5s
NAO01 NORSAR Array S   47.05 323  IAmb     IAmb     17 27 33.3
      comp=Z,34nm,0.8s
FLTG  Flechtingen      47.08 311 eP        P        17 27 27.8 -0.6
      comp=Z,47nm,1.1s,baz=82,slow=7.7
NBO00 NORSAR Array S   47.11 323  IAmb     IAmb     17 27 33.8
      comp=Z,48nm,0.7s
NC204 NORSAR Array S   47.13 324  IAmb     IAmb     17 27 34.1
      comp=Z,47nm,0.7s
GRA1  Grafenberg Arr   47.38 308  IAMs_20  IAMs_20  17 50 09.7
      comp=Z,3µm,19.0s
GRF   Grafenberg Arr   47.38 308 eP        P        17 27 31.8 +0.9
      comp=Z,124nm,1.5s,baz=82,slow=7.7
GRF                              eL        L        17 50 11.2
      comp=Z,3µm,20.1s
GRFO  Grafenberg       47.39 308  IAMs_20  IAMs_20  17 50 10.1
      comp=Z,4µm,19.0s
WTTA  Wattenberg       47.48 305 i P       P        17 27 31.0 -0.8
      comp=Z,67nm,1.1s,SNR=9.2
WATA  Walderalm        47.51 305 i P       P        17 27 31.1 -0.9
      comp=Z,56nm,1.4s,SNR=7.8
FUR   Furstenfeldbru   47.57 306 eP        P        17 27 32.5 +0.2
      comp=Z,157nm,1.3s,baz=82,slow=7.7
CLZ   Clausthal        47.66 311 eP        P        17 27 33.1 +0.2
      comp=Z,54nm,1.3s,baz=82,slow=7.7
KONO  Kongsberg        47.66 321  P        P        17 27 32.2 -0.6
KONO  Kongsberg        47.66 321 eP        P        17 27 32.5 -0.3
KONO  Kongsberg        47.66 321  P        P        17 27 32.2 -0.6
KONO                              pmax     pmax
      comp=Z,186nm,1.8s
KONO                              MLR      MLR
      comp=Z,9µm,19.0s
CTI   Castel Tesino    47.69 303  IAmb     IAmb     17 27 36.7
      comp=Z,74nm,1.4s
CESX  Cesi             47.75 298  IAmb     IAmb     17 27 38.0
      comp=Z,60nm,1.1s
SQTA  Sankt Quirin     47.77 305 i P       P        17 27 33.2 -0.9
      comp=Z,40nm,1.5s,SNR=8.3
TEOL  Teolo            47.81 302  IAmb     IAmb     17 27 37.7
      comp=Z,56nm,1.0s
SBUM  Sibu             47.91 125  P        P        17 27 35.4 +0.1
SBUM  Sibu             47.91 125  P        P        17 27 37.5 +2.3
GTTG  Gottingen        47.94 310 eP        P        17 27 35.4 +0.3
      comp=Z,78nm,1.2s,baz=82,slow=7.7
DOMB  Dombas           47.97 325 eP        P        17 27 36.1 +0.9
UBBA  Unterbreizbach   48.01 310 eP        P        17 27 35.6 +0.1
      comp=Z,158nm,2.4s,baz=82,slow=7.7
RETA  Reutte           48.03 305 i P       P        17 27 35.0 -0.9
      comp=Z,48nm,1.9s,SNR=6.8
JMN   Monobe           48.08  74  P        P        17 27 36.7 +0.2
JMN   Monobe           48.08  74  P        P        17 27 39.7 +3.2
FETA  Feichten         48.13 304 i P       P        17 27 35.5 -1.4
      comp=Z,30nm,1.2s,SNR=6.7
KKM   Kota Kinabalu    48.13 118  P        P        17 27 36.7 -0.4
KKM   Kota Kinabalu    48.13 118  P        P        17 27 39.3 +2.2
KKM   Kota Kinabalu    48.13 118  P        P        17 27 37.2 +0.1
      comp=Z,1µmcomp=Z,91nm,1.0s
HOMB  Homborsund       48.25 320 i P       P        17 27 39.9 +2.6
EGSI  Enggano, Bengk   48.27 142  P        P        17 27 38.5 +0.5
SKAR  Skarslia         48.31 323 eP        P        17 27 41.2 +3.3
LODK  Lodwar           48.41 238  IAmb     IAmb     17 27 45.4
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	comp=Z,56nm,1.1s						
UBR	Ueberruh	48.43	305	eP	P	17 27 38.6	-0.4
	comp=Z,102nm,1.4s,baz=82,slow=7.7						
OSSC	Osservatorio P	48.49	300	IAmb	IAmb	17 27 43.5	
	comp=Z,96nm,1.4s						
FUORN	Ofenpass-Fuorn	48.52	304	IAmb	IAmb	17 27 43.1	
	comp=Z,73nm,1.4s						
FUORN				IAMs_20	IAMs_20	17 52 03.8	
	comp=Z,3µm,18.0s						
MDSI	Maura Dua	48.53	139	P	P	17 27 38.3	-1.7
	comp=Z,31nm,1.1s						
DAVA	Damuels	48.65	305	i P	P	17 27 40.0	-0.8
	comp=Z,134nm,1.4s,SNR=27						
MOL	Molde	48.69	325	eP	P	17 27 41.6	+0.9
HSPB	Hornsund (broa	48.78	345	eP	P	17 27 42.6	+1.4
STU	Stuttgart	48.84	307	IAmb	IAmb	17 27 46.2	
	comp=Z,64nm,1.3s						
STU				IAMs_20	IAMs_20	17 50 03.2	
	comp=Z,3µm,18.0s						
LWLI	Liwa	48.91	140	P	P	17 27 43.6	+0.6
	comp=Z,110nm,1.0s						
AKN	Aaknes	48.94	325	eP	P	17 27 46.4	+3.7
KASTN	Kahler Asten	48.95	310	eP	P	17 27 42.8	-0.1
	comp=Z,330nm,3.4s,baz=82,slow=7.7						
KLSI		48.99	139	P	P	17 27 41.4	-2.2
	comp=Z,57nm,0.9s						
SPA0	Spitsbergen Ar	49.07	347	eP	P	17 27 44.1	+0.7
SPITS	Spitsbergen Ar	49.07	347	P	P	17 27 43.5	+0.1
	comp=Z,31nm,0.9s,baz=104,slow=10,SNR=32						
	comp=Z,31nm,0.9s						
SPITS	Spitsbergen Ar	49.07	347	P	P	17 27 43.6	+0.1
SPITS				pmax	pmax		
	comp=Z,162nm,1.4s						
TUE	Stuetta	49.17	304	IAMs_20	IAMs_20	17 51 17.0	
	comp=Z,3µm,22.0s						
BFO	Black Forest	49.48	306	P	P	17 27 46.0	-1.0
BFO	Black Forest	49.48	306	P	P	17 27 46.0	-1.0
BFO				pmax	pmax		
	comp=Z,19nm,1.1s						
BFO	Black Forest	49.48	306	eP	P	17 27 46.4	-0.7
	comp=Z,17nm,1.1s,baz=82,slow=7.7						
MSSA	Maissana	49.53	301	IAmb	IAmb	17 27 55.1	
	comp=Z,70nm,1.1s						
KASI	Kota Agung	49.57	139	P	P	17 27 47.1	-0.8
	comp=Z,65nm,1.1s						
BUG	Bochum--Univer	49.62	311	eP	P	17 27 48.0	0.0
	comp=Z,50nm,1.3s,baz=82,slow=7.7						
INU	Inuyama	49.98	71	IAmb	IAmb	17 27 57.1	
	comp=Z,72nm,1.0s						
INU	Inuyama	49.98	71	P	P	17 27 53.3	+2.3
UGL	Uglegorsk	50.02	52	eP	P	17 27 53.2	+2.2
UGL				eS	S	17 34 53.9	-6.5
UGL				pmax	pmax		
	comp=Z,100nm,1.3s						
TYV	Tymovskoe	50.07	50	eP	P	17 27 54.1	+2.7
TYV				eS	S	17 35 04.7	+3.5
TYV				pmax	pmax		
	comp=Z,22nm,1.4s						
TYV				pmax	pmax		
	comp=Z,100nm,2.3s						
TYV				smax	smax		
	comp=N,200nm,5.4s						
TYV				smax	smax		
	comp=E,300nm,5.4s						
TYV				MLR	MLR		
	comp=Z,4µm,17.0s						
JGF	Kuroka	50.16	71	P	P	17 27 56.8	+4.4
KBS	Kingsbay	50.16	347	P	P	17 27 52.0	+0.2
KBS				IAmb	IAmb	17 27 59.9	
	comp=Z,61nm,1.0s						
KBS	Kingsbay	50.16	347	eP	P	17 27 52.1	+0.4
KBS	Kingsbay	50.16	347	P	P	17 27 52.0	+0.2
KBS				pmax	pmax		
	comp=Z,61nm,1.0s						
KBS				MLR	MLR		
	comp=Z,5µm,19.0s						
KBS	Kingsbay	50.16	347	i P	P	17 27 53.5	+1.8
ECH	Echery	50.27	307	IAMs_20	IAMs_20	17 50 59.1	
	comp=Z,3µm,18.0s						
BTNL	Ternell	50.48	310	dP	P	17 27 54.4	-0.1
	comp=Z,13nm,1.3s						
MJB9	Matsu-Tunnel	50.50	69	IAmb	IAmb	17 27 59.7	
	comp=Z,60nm,0.8s						
MAJO	Matsushiro	50.50	69	P	P	17 27 53.8	-1.1
MAJO				IAmb	IAmb	17 27 59.7	
	comp=Z,61nm,0.8s						
MAJO	Matsushiro	50.50	69	P	P	17 27 53.8	-1.1
MAJO				pmax	pmax		
	comp=Z,61nm,0.8s						
MJAR	Matsushiro Arr	50.50	69	P	P	17 27 54.8	-0.1
	comp=Z,44nm,0.8s,baz=291,slow=7.8,SNR=48						
	comp=Z,44nm,0.8s						
MJAR	Matsushiro Arr	50.50	69	P	P	17 27 53.6	-1.3
MJAR				IAmb	IAmb	17 28 01.4	
	comp=Z,51nm,0.9s						
MJAR	Matsushiro Arr	50.50	69	P	P	17 27 53.6	-1.3
MJAR				pmax	pmax		
	comp=Z,51nm,0.9s						
MEM	Membach	50.55	310	dP	P	17 27 55.4	+0.4
	comp=Z,14nm,1.2s						
SENIN	Lac Senin/Sane	50.58	304	IAmb	IAmb	17 28 04.1	
	comp=Z,137nm,1.6s						
SENIN				IAMs_20	IAMs_20	17 52 53.2	
	comp=Z,3µm,19.0s						
BHOU	Houvegnez	50.60	309	dP	P	17 27 56.9	+1.4
	comp=Z,12nm,1.2s						
WLF	Walferdange	50.64	309	IAMs_20	IAMs_20	17 52 08.7	
	comp=Z,5µm,19.0s						
WLF	Walferdange	50.64	309	eP	P	17 27 56.0	+0.3
	comp=Z,53nm,1.2s,baz=82,slow=7.7						
WLF	Walferdange	50.64	309	dP	P	17 27 56.0	+0.3
	comp=Z,18nm,1.4s						
BSTI	Sart Tilman	50.83	310	dP	P	17 27 59.2	+2.1
	comp=Z,2.6nm,1.6s						
YSS	Yuzhno-Sakhali	50.91	55	IAMs_20	IAMs_20	17 51 44.0	
	comp=Z,4µm,19.0s						
YSS	Yuzhno-Sakhali	50.91	55	eP	P	17 27 59.0	+1.2
YSS				eS	S	17 35 13.4	+0.5
YSS				pmax	pmax		
	comp=Z,50nm,1.1s						
YSS				MLR	MLR		
	comp=Z,4µm,15.0s						
YSS				MLR	MLR		
	comp=E,3µm,13.0s						
KIBK	Kibwezi	50.95	230	P	P	17 27 58.7	+0.1
KIBK				IAmb	IAmb	17 28 06.1	
	comp=Z,106nm,1.2s						
RCHB	Rochefort	51.13	309	dP	P	17 28 01.5	+2.1
	comp=Z,7.9nm,1.2s						
BGES	Gesves	51.17	310	dP	P	17 28 01.5	+1.8
	comp=Z,9.9nm,1.3s						
BNI	Bardonecchia	51.31	303	IAmb	IAmb	17 28 09.7	
	comp=Z,62nm,1.1s						
BMRD	Maredsous	51.39	310	dP	P	17 28 00.4	-1.0
	comp=Z,21nm,1.4s						
DOU	Dourbes	51.54	309	dP	P	17 28 01.7	-0.8
	comp=Z,17nm,1.4s						
DOU				dPcP	PcP	17 29 17.5	+1.2
DBJI	Dramaga	51.64	138	P	P	17 28 05.0	+1.4
	comp=Z,7µmcomp=Z,34nm,0.9s						
COCO	West Island	51.94	152	IAMs_20	IAMs_20	17 49 42.4	
	comp=Z,2µm,18.0s						
COCO	West Island	51.94	152	P	P	17 28 09.5	+3.8
KEST	Kesra	52.15	291	P	P	17 28 07.9	+0.5
	comp=Z,16nm,0.8s,baz=329,slow=1.3,SNR=11						
	comp=Z,16nm,0.8s						
KEST	Kesra	52.15	291	IAmb	IAmb	17 28 12.0	
	comp=Z,125nm,1.4s						
SSB	Saint Sauveur	52.72	303	P	P	17 28 11.1	-0.3
SSB	Saint Sauveur	52.72	303	P	P	17 28 11.1	-0.3
SSB				pmax	pmax		
	comp=Z,34nm,1.2s						
SSB				MLR	MLR		
	comp=Z,2µm,19.0s						
BBJI	Bungbulang	52.89	137	P	P	17 28 12.8	-0.1
BBJI	Bungbulang	52.89	137	P	P	17 28 13.9	+1.0
MA2	Magadan	53.24	38	P	P	17 28 15.2	+0.2
MA2				IAmb	IAmb	17 28 20.9	
	comp=Z,55nm,0.8s						
MA2	Magadan	53.24	38	deP	P	17 28 16.4	+1.4
MA2				pmax	pmax		
	comp=Z,40nm,1.1s						
CTJI	Waduk Cacaban	53.38	136	P	P	17 28 17.0	+0.5
	comp=Z,37nm,1.3s						
CLF	Chambon-Foret	53.51	307	IAmb	IAmb	17 28 20.6	
	comp=Z,66nm,1.4s						
SEY	Seymchan	53.52	34	eP	P	17 28 15.8	-1.1
SEY				eS	S	17 35 39.6	-8.6
SEY				pmax	pmax		
	comp=Z,52nm,1.2s						
SEY				smax	smax		
	comp=E,333nm,21.7s						
SEY				smax	smax		
	comp=N,100nm,11.7s						
SEY				MLR	MLR		
	comp=Z,1µm,14.0s						
BBKI	Banjar Baru	54.05	127	P	P	17 28 22.0	+0.5
	comp=Z,2µmcomp=Z,117nm,1.0s						
MBAR	Mbarara	54.49	238	P	P	17 28 25.0	+0.1
MBAR				IAmb	IAmb	17 28 29.7	
	comp=Z,32nm,0.8s						
MBAR	Mbarara	54.49	238	IAMs_20	IAMs_20	17 54 17.6	
	comp=Z,2µm,18.0s						
MBAR	Mbarara	54.49	238	ceP	P	17 28 24.8	-0.1
MBAR				pmax	pmax		
	comp=Z,53nm,1.3s						
MBAR				pmax	pmax		
	comp=Z,46nm,1.0s						
TOLI2	Tolitoli	54.81	118	P	P	17 28 27.2	+0.2
EKA	Eskdalemuir Ar	55.00	317	P	P	17 28 27.9	0.0
	comp=Z,19nm,0.8s,baz=91,slow=7.5,SNR=22						
	comp=Z,19nm,0.8s						
NOR	Nord	55.24	350	i P	P	17 28 27.4	-1.8
NOR				IAmb	IAmb	17 28 35.5	
	comp=Z,53nm,1.2s						
CEST	Esterri de Car	55.78	301	IAmb	IAmb	17 28 37.8	
	comp=Z,52nm,1.1s						
DAG	Danmarks Havn	56.44	344	i P	P	17 28 36.0	-1.8
DAG				IAmb	IAmb	17 28 43.3	
	comp=Z,80nm,1.0s						
DBG	Daneborg	57.42	341	i P	P	17 28 46.4	+1.6
DBG				IAmb	IAmb	17 28 50.4	
	comp=Z,27nm,1.0s						
BILL	Bilibino	58.11	26	P	P	17 28 49.8	0.0
BILL	Bilibino	58.11	26	ceP	P	17 28 50.8	+1.0
BILL				pmax	pmax		
	comp=Z,15nm,0.9s						
PETK	Petropavlovsk-	58.54	45	P	P	17 28 52.8	-0.2
	comp=Z,4.2nm,0.6s,baz=284,slow=2.5,SNR=13						
	comp=Z,4.2nm,0.6s						
SCO	Scoresbysund	59.07	337	IAmb	IAmb	17 29 03.3	
	comp=Z,27nm,0.9s						
SCO				IAMs_20	IAMs_20	17 53 57.4	
	comp=Z,4µm,20.0s						
SCO	Scoresbysund	59.07	337	i P	P	17 28 59.3	+2.9
SCO				IAmb	IAmb	17 29 02.9	
	comp=Z,80nm,1.6s						
CART	Cartagena	59.20	296	IAmb	IAmb	17 28 59.5	
	comp=Z,39nm,0.8s						
TNTI	Ternate	59.88	113	P	P	17 29 05.1	+2.3
ABPO	Ambohimpanom	60.22	210	P	P	17 29 04.3	-0.9
ABPO				IAmb	IAmb	17 29 11.7	
	comp=Z,72nm,1.2s						
ABPO	Ambohimpanom	60.22	210	P	P	17 29 04.3	-0.9
ABPO				pmax	pmax		
	comp=Z,73nm,1.2s						
ESDC	Sonseca Array	60.51	300	P	P	17 29 05.5	-1.4
	comp=Z,21nm,1.0s,baz=57,slow=6.7,SNR=84						
ESDC				PKP2ab	P'P'ab	17 58 45.2	-7.8
	comp=Z,1.0nm,1.0s,baz=250,slow=2.3,SNR=4.8						
	comp=Z,21nm,1.0s						
ESDC	Sonseca Array	60.51	300	P	P	17 29 05.3	-1.7
TAM	Tamanrasset	60.61	278	P	P	17 29 07.0	-0.9
TAM	Tamanrasset	60.61	278	P	P	17 29 07.0	-0.9
TAM				pmax	pmax		
	comp=Z,50nm,0.2s						
TAM				MLR	MLR		
	comp=Z,1µm,20.0s						
PAB	San Pablo	60.84	300	P	P	17 29 07.8	-1.4
PAB				IAmb	IAmb	17 29 18.4	
	comp=Z,56nm,1.3s						
PAB	San Pablo	60.84	300	P	P	17 29 07.8	-1.4
PAB				pmax	pmax		
	comp=Z,56nm,1.3s						
MVO	Moncorvo	62.06	302	eP	P	17 29 17.6	+0.2
MVO				i IAmb	IAmb	17 29 21.6	
	comp=Z,46nm,1.2s						
MVO				eS	S	17 37 43.6	+2.6
MVO				eLR	LR	17 49 23.6	
MVO				i IAMs_20	IAMs_20	17 59 07.6	
	comp=Z,1µm,22.0s						
POLO	Lamas de Olo	62.50	303	eP	P	17 29 21.2	+0.8
POLO				i IAmb	IAmb	17 29 23.9	
	comp=Z,12nm,1.5s						
PCAB	Cabril	62.52	303	eP	P	17 29 21.6	+1.1
PCAB				i IAmb	IAmb	17 29 24.7	
	comp=Z,76nm,1.5s						
NEEM	North Greenlan	62.54	348	i P	P	17 29 20.3	0.0
NEEM				IAmb	IAmb	17 29 25.9	
	comp=Z,97nm,0.9s						
PGAV	Gavieira, Arco	62.58	304	eP	P	17 29 20.3	-0.6
PGAV				i IAmb	IAmb	17 29 24.7	
	comp=Z,55nm,1.3s						
PGAV				eS	S	17 37 52.3	+4.8
PGAV				eLR	LR	17 49 49.2	
PGAV				i IAMs_20	IAMs_20	18 03 28.6	
	comp=Z,1µm,18.0s						
MTE	Manteigas	62.73	302	IAmb	IAmb	17 29 26.4	
	comp=Z,47nm,1.1s						
MTE	Manteigas	62.73	302	eP	P	17 29 22.6	+0.7
MTE				i IAmb	IAmb	17 29 26.6	
	comp=Z,77nm,1.4s						
MTE				eS	S	17 37 49.6	+0.2
MTE				eLR	LR	17 49 39.4	
MTE				i IAMs_20	IAMs_20	17 59 51.1	
	comp=Z,1µm,20.0s						
MMRI	Maumere	62.77	125	IAmb	IAmb	17 29 49.4	
	comp=Z,56nm,1.1s						
MMRI	Maumere	62.77	125	P	P	17 29 24.0	+1.7
PVIS	Viseu	62.84	302	eP	P	17 29 23.3	+0.7
PCBR	Castelo Branco	62.92	301	eP	P	17 29 23.3	+0.3
PCBR				i IAmb	IAmb	17 29 27.4	
	comp=Z,34nm,1.7s						
PMRV	Marv??o	63.03	301	eP	P	17 29 24.1	+0.3
PMRV				i IAmb	IAmb	17 29 28.2	
	comp=Z,45nm,1.5s						
PMRV				eS	S	17 37 52.2	-0.9
PMRV				eLR	LR	17 49 53.5	
PMRV				i IAMs_20	IAMs_20	18 01 55.0	
	comp=Z,864nm,18.0s						
PBAR	Barrancos	63.31	299	eP	P	17 29 25.2	-0.6
PBAR				i IAmb	IAmb	17 29 30.9	
	comp=Z,122nm,1.5s						
PESTR	Estremoz	63.41	300	P	P	17 29 26.0	-0.3
PESTR	Estremoz	63.41	300	eP	P	17 29 26.2	-0.1
PESTR				i IAmb	IAmb	17 29 30.5	
	comp=Z,48nm,1.4s						
SFS	San Fernando	63.45	297	IAMs_20	IAMs_20	18 00 46.2	
	comp=Z,2µm,19.0s						
PSARD	Sardoal	63.50	301	eP	P	17 29 27.0	+0.1
PSARD				i IAmb	IAmb	17 29 31.3	
	comp=Z,64nm,1.5s						
PCAS	Casmilo, Conde	63.54	302	eP	P	17 29 27.0	-0.2
PCAS				i IAmb	IAmb	17 29 31.7	
	comp=Z,36nm,1.6s						
PARRA	Arraiolos	63.75	300	eP	P	17 29 27.9	-0.7
PARRA				i IAmb	IAmb	17 29 32.7	
	comp=Z,31nm,1.7s						
PMTG	Montargil	63.77	301	eP	P	17 29 27.5	-1.2
PMTG				i IAmb	IAmb	17 29 32.7	
	comp=Z,43nm,1.8s						
EVO	Evora	63.85	300	eP	P	17 29 29.7	+0.4
EVO				i IAmb	IAmb	17 29 33.6	
	comp=Z,71nm,1.6s						
PBEJ	Beja	63.97	299	eP	P	17 29 29.8	-0.2
PBEJ				i IAmb	IAmb	17 29 34.4	
	comp=Z,55nm,1.6s						
PSBE	So Bento	63.98	301	eP	P	17 29 29.6	-0.5
PSBE				i IAmb	IAmb	17 29 34.7	
	comp=Z,97nm,1.4s						
MD01	Midelt array s	63.98	293	P	P	17 29 28.6	-1.8
MD31	MD31	63.98	293	IAmb	IAmb	17 29 33.7	
	comp=Z,56nm,1.6s						
MOE	Montemor	64.09	300	eP	P	17 29 31.3	+0.5
MOE				i IAmb	IAmb	17 29 36.1	
	comp=Z,84nm,1.5s						
PVAQ	Vaqueiros	64.13	299	IAmb	IAmb	17 29 35.2	
	comp=Z,76nm,1.3s						
PVAQ	Vaqueiros	64.13	299	eP	P	17 29 32.0	+0.8
PVAQ				i IAmb	IAmb	17 29 35.4	
	comp=Z,104nm,1.6s						
PVAQ				eS	S	17 38 08.0	+1.2
PVAQ				eLR	LR	17 50 40.6	
PVAQ				i IAMs_20	IAMs_20	18 02 58.1	
	comp=Z,809nm,18.0s						
PCVE	Castro Verde	64.26	299	eP	P	17 29 32.6	+0.7
PCVE				i IAmb	IAmb	17 29 36.3	
	comp=Z,57nm,1.7s						
MESJ	Messejana	64.30	299	eP	P	17 29 32.4	+0.2
MESJ				eS	S	17 38 10.6	+1.7
MESJ				IAMs_20	IAMs_20	18 03 33.1	
	comp=Z,1µm,17.0s						
MESJ	Messejana	64.30	299	IAmb	IAmb	17 29 36.5	
	comp=Z,46nm,1.2s						
MESJ	Messejana	64.30	299	eP	P	17 29 31.7	-0.5
MESJ				i IAmb	IAmb	17 29 36.6	
	comp=Z,64nm,1.5s						
PBDV	Barranco-do-Ve	64.36	299	eP	P	17 29 33.1	+0.5
PBDV				i IAmb	IAmb	17 29 37.9	
	comp=Z,105nm,1.5s						
PMAFR	Mafra	64.56	301	eP	P	17 29 35.3	+1.4
PMAFR				i IAmb	IAmb	17 29 38.2	
	comp=Z,75nm,1.4s						
PTEO	Sao Teotonio	64.79	299	eP	P	17 29 36.4	+1.0
PTEO				i IAmb	IAmb	17 29 39.6	
	comp=Z,83nm,1.8s						
MORF	Marmelete	64.85	299	eS	S	17 38 17.5	+1.7
MORF				IAMs_20	IAMs_20	18 04 07.0	
	comp=E,2µm,24.8s						
BNDI	Bandanaira	65.28	116	P	P	17 29 42.0	+3.1
TULEG	Thule	65.81	351	P	P	17 29 40.5	-0.9
TULEG				IAMs_20	IAMs_20	18 01 06.8	
	comp=Z,2µm,19.0s						
TULEG	Thule	65.81	351	i P	P	17 29 44.2	+2.8
TULEG				IAmb	IAmb	17 29 47.7	
	comp=Z,183nm,1.4s						
FAKI	Fak Fak	65.97	113	P	P	17 29 46.8	+3.5
ANGG	Ammassalik, Gr	66.51	335	P	P	17 29 46.4	+0.4
ANGG	Ammassalik, Gr	66.51	335	i P	P	17 29 46.2	+0.2
ANGG				IAmb	IAmb	17 29 51.7	
	comp=Z,85nm,0.8s						
LSZ	Lusaka	67.05	229	P	P	17 29 49.4	-0.9
	comp=Z,29nm,1.1s,baz=58,slow=13,SNR=9.7						
	comp=Z,29nm,1.1s						
LSZ	Lusaka	67.05	229	P	P	17 29 49.6	-0.7
LSZ	Lusaka	67.05	229	P	P	17 29 49.6	-0.7
LSZ				pmax	pmax		
	comp=Z,26nm,1.0s						
LSZ				MLR	MLR		
	comp=Z,1µm,21.0s						
A19K	Wainwright	67.14	18	P	P	17 29 48.5	-1.5
	baz=313						
EDA	Edea	67.19	258	P	P	17 29 49.4	-1.7
EDA				IAMs_20	IAMs_20	18 01 25.5	
	comp=Z,2µm,19.0s						
C16K	Lisburne Hills	67.29	20	IAmb	IAmb	17 29 59.3	
	comp=Z,36nm,0.9s						
C16K	Lisburne Hills	67.29	20	P	P	17 29 49.5	-1.5
	baz=310						
A21K	Barrow	67.40	16	P	P	17 29 50.0	-1.6
	baz=316						
SHEM	Shemya Is, Ala	67.74	40	LR	LR	18 01 25.9	
	comp=Z,988nm,19.8s,baz=299,slow=38						
C17K	DeLong Mountai	67.76	20	P	P	17 29 52.6	-1.4
	baz=312						
A22K	Sinclair Lake	68.00	16	P	P	17 29 54.3	-1.0
	baz=318						
GAMB	Gambell	68.04	26	P	P	17 29 54.1	-1.6
	baz=306						
RDOG	Red Dog Mine	68.12	20	P	P	17 29 54.4	-1.8
	baz=312						
C18K	Utukok River	68.18	19	IAMs_20	IAMs_20	18 03 48.5	
	comp=Z,2µm,20.0s						
C18K	Utukok River	68.18	19	P	P	17 29 55.4	-1.3
	baz=314						
B20K	Meade River	68.23	17	P	P	17 29 55.8	-1.0
	baz=316						
C19K	Lookout Ridge	68.28	18	P	P	17 29 56.3	-1.0
	baz=315						
D17K	Noatak River	68.31	20	P	P	17 29 56.2	-1.2
	baz=312						
SAUI	Saumlaki	68.64	117	P	P	17 30 00.1	-0.1
SAUI	Saumlaki	68.64	117	P	P	17 30 02.0	+1.8
TORD	Torodi Ar. Bea	68.70	271	P	P	17 29 58.5	-2.2
	comp=Z,21nm,0.8s,baz=47,slow=5.1,SNR=66						
	comp=Z,21nm,0.8s						
TORD	Torodi Ar. Bea	68.70	271	IAmb	IAmb	17 30 03.0	
	comp=Z,22nm,1.0s						
F14K	Arctic Creek	68.80	23	P	P	17 29 59.7	-0.8
	baz=310						
B22K	Teshekpuk Lake	68.84	16	IAmb	IAmb	17 30 10.3	
	comp=Z,52nm,1.1s						
B22K	Teshekpuk Lake	68.84	16	P	P	17 29 59.9	-0.7
	baz=320						
E17K	Hotham Inlet	69.09	20	P	P	17 30 01.3	-1.0
	baz=313						
D19K	Kuna River	69.10	18	P	P	17 30 00.9	-1.5
	baz=316						
B21K	Ikpikpuk River	69.12	17	P	P	17 30 01.3	-1.1
	baz=319						
F15K	North Star Dit	69.18	22	IAmb	IAmb	17 30 12.0	
	comp=Z,56nm,0.9s						
F15K	North Star Dit	69.18	22	P	P	17 30 01.4	-1.4
	baz=312						
E18K	Tukpahlearik C	69.20	20	IAmb	IAmb	17 30 11.9	
	comp=Z,54nm,1.0s						
E18K	Tukpahlearik C	69.20	20	P	P	17 30 01.2	-1.8
	baz=314						
D20K	Etivluk River	69.31	18	IAmb	IAmb	17 30 10.3	
	comp=Z,41nm,0.8s						
D20K	Etivluk River	69.31	18	P	P	17 30 02.6	-1.1
	baz=317						
C21K	Knifeblade Rid	69.43	17	P	P	17 30 03.1	-1.2
	baz=319						
F17K	Baldwin Pennin	69.70	21	P	P	17 30 04.6	-1.4
	baz=314						
ANM	Nome	69.71	24	IAMs_20	IAMs_20	18 02 47.0	
	comp=Z,2µm,20.0s						
ANM	Nome	69.71	24	P	P	17 30 04.5	-1.7
	baz=311						
RES	Resolute Bay	69.79	357	P	P	17 30 06.2	-0.2
	comp=Z,18nm,1.0s,baz=28,slow=10,SNR=14						
	comp=Z,18nm,1.0s						
C23K	Itkillik River	69.84	15	P	P	17 30 04.8	-2.1
	baz=322						
G15K	Niukluk	69.85	23	P	P	17 30 04.8	-2.2
	baz=312						
E19K	Redstone River	70.08	19	IAmb	IAmb	17 30 16.1	
	comp=Z,98nm,1.7s						
E19K	Redstone River	70.08	19	P	P	17 30 07.3	-1.1
	baz=317						
G16K	Koyuk River	70.10	22	IAmb	IAmb	17 30 17.6	
	comp=Z,40nm,0.9s						
G16K	Koyuk River	70.10	22	P	P	17 30 06.7	-1.7
	baz=313						
D22K	Ayikyak River	70.13	16	IAmb	IAmb	17 30 17.8	
	comp=Z,34nm,0.9s						
D22K	Ayikyak River	70.13	16	P	P	17 30 07.0	-1.7
	baz=320						
E21K	Killik River	70.17	17	P	P	17 30 07.4	-1.5
	baz=320						
C24K	Franklin Bluff	70.34	15	P	P	17 30 08.5	-1.4
	baz=324						
F19K	Shaleruckik Mo	70.39	19	P	P	17 30 09.1	-1.2
	baz=317						
D23K	Nanushuk River	70.52	16	P	P	17 30 10.0	-1.0
	baz=322						
G17K	Kiwalik Mounta	70.53	21	P	P	17 30 10.0	-1.2
	baz=315						
H16K	Elim	70.66	22	P	P	17 30 10.9	-1.0
	baz=314,SNR=11						
MBWA	Marble Bar	70.76	136	P	P	17 30 12.8	-0.3
MBWA				IAmb	IAmb	17 30 17.8	
	comp=Z,51nm,1.1s						
MBWA	Marble Bar	70.76	136	P	P	17 30 14.8	+1.7
D24K	Happy Valley	70.77	15	P	P	17 30 11.9	-0.7
	baz=324						
F20K	Avaraart Lake	70.78	19	P	P	17 30 11.2	-1.4
	baz=318						
G18K	Tagagawik	70.83	20	P	P	17 30 12.1	-0.9
	baz=316						
KSANE	Kasane	70.85	230	IAmb	IAmb	17 30 20.5	
	comp=Z,65nm,1.2s						
E22K	Anaktuvuk Pass	70.92	17	P	P	17 30 12.0	-1.5
	baz=321						
C26K	Camden Bay	70.93	13	P	P	17 30 12.2	-1.3
	baz=327						
TOLK	Toolik Lake Re	71.02	16	P	P	17 30 12.2	-2.0
	baz=323						
G19K	Purcell Mounta	71.09	20	P	P	17 30 13.7	-0.9

	baz=318							
D25K	Kavik River	71.14	14		P	P	17 30 14.0	-0.9
	baz=326							
H17K	Granite Mounta	71.16	22		IAmb	IAmb	17 30 23.8	
	comp=Z,34nm,0.9s							
H17K	Granite Mounta	71.16	22		P	P	17 30 15.0	0.0
	baz=316							
F21K	Alatna River	71.22	18		IAmb	IAmb	17 30 23.0	
	comp=Z,41nm,1.0s							
F21K	Alatna River	71.22	18		P	P	17 30 13.5	-1.9
	baz=320							
F22K	John River	71.32	17		P	P	17 30 14.7	-1.3
	baz=321							
C27K	Jago River	71.40	13		P	P	17 30 15.4	-1.0
	baz=328							
DRS	Darwin Rock St	71.41	121		P	P	17 30 17.6	+0.4
H18K	Honhosa River	71.45	21		IAmb	IAmb	17 30 24.7	
	comp=Z,101nm,1.6s							
H18K	Honhosa River	71.45	21		P	P	17 30 15.7	-1.1
	baz=317							
E23K	Chandalar	71.48	16		P	P	17 30 15.4	-1.6
	baz=323							
J14K	Nanvaranak Lak	71.53	24		P	P	17 30 15.6	-1.6
	baz=313							
I17K	Unalakleet	71.66	23		P	P	17 30 16.6	-1.4
	baz=315							
K13K	Kusilvak Mount	71.71	25		IAmb	IAmb	17 30 27.0	
	comp=Z,31nm,0.9s							
K13K	Kusilvak Mount	71.71	25		P	P	17 30 17.6	-0.7
	baz=312							
E24K	Your Creek	71.72	16		P	P	17 30 18.0	-0.4
	baz=324							
H19K	Roundabout Mou	71.72	20		P	P	17 30 17.2	-1.1
	baz=318							
G21K	Allakaket	71.76	18		P	P	17 30 16.4	-2.2
	baz=320,SNR=21							
A36M	Sachs Harbour	71.81	6		P	P	17 30 16.9	-1.8
	baz=343,SNR=97							
GENI	Genyem	71.83	107		P	P	17 30 21.1	+1.3
MTN	Manton Dam	71.86	121		P	P	17 30 19.0	-0.8
G22K	Bettles	71.94	17		P	P	17 30 18.4	-1.2
	baz=322							
NUUK	Nuuk	72.00	338	*i*	P	P	17 30 21.1	+1.0
NUUK					IAmb	IAmb	17 30 25.8	
	comp=Z,93nm,1.1s							
COLD	Coldfoot	72.01	17		IAmb	IAmb	17 30 28.0	
	comp=Z,35nm,0.9s							
COLD					IAMs_20	IAMs_20	18 07 11.5	
	comp=Z,2µm,18.0s							
COLD	Coldfoot	72.01	17		P	P	17 30 18.3	-1.8
	baz=323,SNR=32							
NRS	Narsarsuaq	72.03	334		IAmb	IAmb	17 30 26.1	
	comp=Z,48nm,1.0s							
BROLN	Tlhalogang	72.04	226	*i*	P	P	17 30 17.6	-3.4
J16K	Anvik River	72.12	23		IAmb	IAmb	17 30 30.6	
	comp=Z,46nm,0.9s							
J16K	Anvik River	72.12	23		P	P	17 30 19.1	-1.7
	baz=315,SNR=16							
H20K	Anotleneega Mo	72.18	19		P	P	17 30 19.5	-1.6
	baz=319							
GCSA	Galena City Sc	72.18	21		P	P	17 30 19.8	-1.3
	baz=318,SNR=5.7							
M11K	Mekoryuk	72.19	27		P	P	17 30 20.5	-0.7
	baz=312							
D27M	Malcolm River	72.23	13		P	P	17 30 19.4	-2.0
	baz=330							
E25K	Arctic Village	72.31	15		P	P	17 30 19.9	-2.0
	baz=326,SNR=5.7							
F24K	Squaw Lake	72.31	16		P	P	17 30 19.8	-2.1
	baz=325							
G23K	Bananza Creek	72.47	17		P	P	17 30 21.7	-1.2
	baz=323							
J17K	VABM Dome	72.52	22		P	P	17 30 20.7	-2.5
	baz=316							
K15K	Wolf Creek Mou	72.52	24		P	P	17 30 21.9	-1.4
	baz=315							
D28M	Stokes Point	72.54	12		P	P	17 30 21.1	-2.0
	baz=332							
H21K	Melozitna Rive	72.61	19		IAmb	IAmb	17 30 33.3	
	comp=Z,49nm,1.2s							
H21K	Melozitna Rive	72.61	19		P	P	17 30 22.3	-1.4
	baz=321,SNR=15							
SPIA	Saint Paul Isl	72.67	31		P	P	17 30 21.8	-2.4
	baz=310							
F25K	Christian Rive	72.73	15		P	P	17 30 21.7	-2.7
	baz=327							
H22K	Ishtalitna Cre	72.79	18		IAmb	IAmb	17 30 31.8	
	comp=Z,72nm,1.8s							
H22K	Ishtalitna Cre	72.79	18		P	P	17 30 22.4	-2.3
	baz=322							
L14K	Kuka Creek	72.80	25		IAmb	IAmb	17 30 35.0	
	comp=Z,40nm,0.9s							
L14K	Kuka Creek	72.80	25		P	P	17 30 23.2	-1.7
	baz=314							
I20K	Naaghedeneel	72.82	20		IAmb	IAmb	17 30 33.9	
	comp=Z,71nm,1.1s							
I20K	Naaghedeneel	72.82	20		P	P	17 30 23.6	-1.3
	baz=320							
F26K	Sheenjek River	72.96	14		P	P	17 30 24.5	-1.3
	baz=328,SNR=8.1							
L15K	Ungalak Mounta	72.97	24		P	P	17 30 24.2	-1.7
	baz=315							
E27K	Coleen River	73.04	13		IAmb	IAmb	17 30 32.7	
	comp=Z,32nm,0.8s							
E27K	Coleen River	73.04	13		P	P	17 30 24.0	-2.2
	baz=330,SNR=41							
E28M	Babbage River	73.05	12		IAmb	IAmb	17 30 34.6	
	comp=Z,56nm,1.2s							
E28M	Babbage River	73.05	12		P	P	17 30 24.4	-1.9
	baz=331							
G24K	Hadweenzic Riv	73.07	16		IAmb	IAmb	17 30 34.7	
	comp=Z,38nm,1.1s							
G24K	Hadweenzic Riv	73.07	16		P	P	17 30 24.7	-1.8
	baz=325							
BMAR	Burnt Mountain	73.09	15		P	P	17 30 27.2	+0.6
J19K	Poorman	73.11	21		IAmb	IAmb	17 30 35.6	
	comp=Z,41nm,0.8s							
J19K	Poorman	73.11	21		P	P	17 30 25.2	-1.5
	baz=319,SNR=26							
MREMI	Moremi	73.11	225	*i*	P	P	17 30 23.3	-4.0
J18K	Innoko River	73.19	22		P	P	17 30 25.9	-1.3
	baz=318							
I21K	Tanana	73.20	19		IAmb	IAmb	17 30 33.4	
	comp=Z,73nm,1.6s							
I21K	Tanana	73.20	19		P	P	17 30 26.2	-0.9
	baz=322							
M13K	Dall Lake	73.21	26		P	P	17 30 25.4	-1.9
	baz=314							
K17K	Iditarod	73.26	23		P	P	17 30 26.1	-1.5
	baz=317							
G25K	Bearman Lake	73.33	16		P	P	17 30 26.2	-1.7
	baz=326							
J20K	Nowinta River	73.39	20		IAmb	IAmb	17 30 36.7	
	comp=Z,66nm,1.3s							
J20K	Nowinta River	73.39	20		P	P	17 30 26.3	-2.1
	baz=320,SNR=20							
M14K	Bethel	73.47	25		P	P	17 30 26.4	-2.3
	baz=315							
E29M	Blow River	73.52	12		P	P	17 30 27.4	-1.6
	baz=333							
L16K	Owhat River	73.62	24		P	P	17 30 28.5	-1.2
	baz=317							
G26K	Porcupine Rive	73.67	15		IAmb	IAmb	17 30 37.5	
	comp=Z,62nm,1.6s							
G26K	Porcupine Rive	73.67	15		P	P	17 30 28.9	-0.9
	baz=328							
FYU	Fort Yukon	73.68	16		IAmb	IAmb	17 30 37.0	
	comp=Z,47nm,0.8s							
H24K	Noodor Dome	73.69	17		P	P	17 30 29.0	-1.1
	baz=325,SNR=8.4							
L17K	Donlin	73.69	23		P	P	17 30 28.9	-1.3
	baz=317							
F28M	Old Crow	73.86	13		IAmb	IAmb	17 30 39.3	
	comp=Z,87nm,1.5s							
F28M	Old Crow	73.86	13		P	P	17 30 29.8	-1.2
	baz=331,SNR=23							
I23K	Minto, Yukon-K	73.89	18		IAmb	IAmb	17 30 43.1	
	comp=Z,57nm,1.2s							
I23K	Minto, Yukon-K	73.89	18		P	P	17 30 30.2	-1.0
	baz=324,SNR=12							
ILON	Igloolik, Nuna	73.93	352		IAmb	IAmb	17 30 37.8	
	comp=Z,96nm,1.4s							
M15K	Kasigluk River	73.95	25		P	P	17 30 29.5	-2.2
	baz=316							
K20K	Telida	74.05	21		P	P	17 30 30.0	-2.2
	baz=320							
CHUM	Lake Minchumin	74.13	20		P	P	17 30 31.0	-1.6
	baz=322,SNR=7.8							
L18K	Granite Mounta	74.13	22		P	P	17 30 30.6	-2.1
	baz=319							
N14K	Kuskokwak Cree	74.15	26		P	P	17 30 31.5	-1.3
	baz=315							
G27K	Doyon Strip	74.22	14		P	P	17 30 31.3	-1.9
	baz=330							
INK	Inuvik	74.29	11		P	P	17 30 33.5	0.0
	comp=Z,31nm,0.8s,baz=3.9,slow=5.8,SNR=35							
	comp=Z,31nm,0.8s							
INK	Inuvik	74.29	11		P	P	17 30 31.0	-2.5
	baz=336,SNR=53							
M16K	Timber Creek	74.29	24		IAmb	IAmb	17 30 44.0	
	comp=Z,38nm,0.9s							
M16K	Timber Creek	74.29	24		P	P	17 30 31.5	-2.2
	baz=317							
BPAW	Bear Paw Mtn.	74.32	19		IAmb	IAmb	17 30 43.0	
	comp=Z,52nm,1.1s							
BPAW	Bear Paw Mtn.	74.32	19		P	P	17 30 31.0	-2.8
	baz=323,SNR=20							
POKR	Poker Plat Res	74.39	17		IAmb	IAmb	17 30 40.6	
	comp=Z,41nm,0.6s							
POKR	Poker Plat Res	74.39	17		P	P	17 30 31.5	-2.7
	baz=326,SNR=17							
NEA2	Nenana	74.42	18		IAmb	IAmb	17 30 42.5	
	comp=Z,54nm,0.9s							
NEA2	Nenana	74.42	18		P	P	17 30 33.0	-1.3
	baz=324,SNR=44							
C36M	Paulatuk	74.46	7		P	P	17 30 32.7	-1.7
	baz=344,SNR=50							
PRP	Porcupine Dome	74.50	16		P	P	17 30 31.8	-3.2
	baz=327,SNR=12							
M17K	Holitna River	74.51	23		IAmb	IAmb	17 30 44.8	
	comp=Z,55nm,0.9s							
M17K	Holitna River	74.51	23		P	P	17 30 31.8	-3.1
	baz=318							
MEEK	Meekatharra	74.51	140		P	P	17 30 38.8	+3.4
N15K	Kwethluk River	74.53	25		P	P	17 30 33.4	-1.7
	baz=316							
F30M	Barrier River	74.57	12		P	P	17 30 32.4	-2.8
	baz=335							
LPHEP	Lephephe	74.65	226		P	P	17 30 35.8	-0.5
LPHEP					IAmb	IAmb	17 30 41.7	
	comp=Z,72nm,1.4s							
LPHEP	Lephephe	74.65	226	*i*	P	P	17 30 35.5	-0.8
L19K	White Mountain	74.72	22		P	P	17 30 33.8	-2.4
	baz=320							
H27K	Steamboat Moun	74.75	14		P	P	17 30 34.1	-2.2
	baz=330							
N16K	Nishlik Lake	74.76	24		P	P	17 30 34.7	-1.8
	baz=317							
WRH	Wood River Hil	74.76	18		IAmb	IAmb	17 30 45.0	
	comp=Z,76nm,1.7s							
KTH	Kantishna Hill	74.77	19		IAmb	IAmb	17 30 44.7	
	comp=Z,65nm,0.9s							
O14K	Tigyukauivet M	74.78	26		P	P	17 30 34.3	-2.1
	baz=316							
IL31		74.81	17		IAmb	IAmb	17 30 42.4	
	comp=Z,128nm,1.8s							
ILAR	Eielson Array	74.81	17		P	P	17 30 36.4	-0.2
	comp=Z,11nm,0.8s,baz=315,slow=4.4,SNR=43							
	comp=Z,11nm,0.8s							
ILAR	Eielson Array	74.81	17		P	P	17 30 35.8	-0.8
G29M	Pine Creek	74.82	13		IAmb	IAmb	17 30 44.8	
	comp=Z,46nm,1.0s							
G29M	Pine Creek	74.82	13		P	P	17 30 33.9	-2.7
	baz=333							
PPLA	Purkeypile	74.94	20		IAmb	IAmb	17 30 49.0	
	comp=Z,48nm,1.0s							
PPLA	Purkeypile	74.94	20		P	P	17 30 35.0	-2.6
	baz=322,SNR=8.1							
M18K	Stony River	74.95	23		P	P	17 30 34.7	-2.8
	baz=320							
TRF	Thorofare Moun	75.02	19		IAmb	IAmb	17 31 00.6	
	comp=Z,64nm,1.6s							
TRF	Thorofare Moun	75.02	19		P	P	17 30 35.3	-2.8
	baz=324							
F31M	Tsiigehtchic	75.05	11		P	P	17 30 35.5	-2.4
	baz=336,SNR=25							
HDA	Harding Lake	75.09	17		IAmb	IAmb	17 30 42.9	
	comp=Z,24nm,0.6s							
HDA	Harding Lake	75.09	17		P	P	17 30 35.7	-2.6
	baz=326,SNR=8.2							
MCK	McKinley	75.15	19		P	P	17 30 36.1	-2.5
	baz=324,SNR=9.5							
MORW	Morawa	75.19	143		IAmb	IAmb	17 30 44.3	
	comp=Z,41nm,1.0s							
MORW	Morawa	75.19	143		P	P	17 30 42.7	+3.5
N17K	Nushagak Hills	75.25	24		IAmb	IAmb	17 30 48.6	
	comp=Z,67nm,1.2s							
N17K	Nushagak Hills	75.25	24		P	P	17 30 36.9	-2.3
	baz=319							
I27K	Kandik River	75.28	15		P	P	17 30 36.5	-2.9
	baz=330							
J25K	Salcha River,	75.30	17		P	P	17 30 36.8	-2.8
	baz=327,SNR=8.6							
O15K	Ungalikthiuk R	75.35	26		IAmb	IAmb	17 30 51.4	
	comp=Z,53nm,1.1s							
O15K	Ungalikthiuk R	75.35	26		P	P	17 30 38.1	-1.7
	baz=317							
H29M	Whitestone	75.37	13		IAmb	IAmb	17 30 48.4	
	comp=Z,64nm,0.8s							
H29M	Whitestone	75.37	13		P	P	17 30 37.7	-2.1
	baz=333							
RND	Reindeer	75.44	19		IAmb	IAmb	17 30 45.5	
	comp=Z,37nm,0.5s							
G31M	Satah River	75.45	11		P	P	17 30 38.1	-2.1
	baz=336,SNR=29							
M20K	Styx River	75.47	21		P	P	17 30 37.9	-2.7
	baz=322							
EPYK	Eagle Plains	75.54	13		IAmb	IAmb	17 30 48.3	
	comp=Z,133nm,1.8s							
EPYK	Eagle Plains	75.54	13		P	P	17 30 38.0	-2.9
	baz=334,SNR=7.5							
N18K	Kilae Creek	75.55	23		IAmb	IAmb	17 30 50.0	
	comp=Z,48nm,1.3s							
N18K	Kilae Creek	75.55	23		P	P	17 30 38.2	-2.8
	baz=320							
L22K	Petersville	75.64	20		IAmb	IAmb	17 30 49.7	
	comp=Z,34nm,0.8s							
O16K	Kokwok River B	75.64	25		IAmb	IAmb	17 30 51.3	
	comp=Z,66nm,1.2s							
O16K	Kokwok River B	75.64	25		P	P	17 30 39.7	-1.8
	baz=318,SNR=14							
I28M	Miner Creek	75.75	14		P	P	17 30 38.4	-3.7
	baz=332							
J26L	Joseph Creek	75.81	16		IAmb	IAmb	17 30 48.4	
	comp=Z,33nm,0.8s							
J26L	Joseph Creek	75.81	16		P	P	17 30 39.9	-2.6
	baz=329,SNR=30							
O17K	Koliganek Bris	75.84	24		P	P	17 30 40.5	-2.1
	baz=319							
SKT	Skwentna	75.86	21		IAmb	IAmb	17 30 50.4	
	comp=Z,65nm,1.0s							
SKT	Skwentna	75.86	21		P	P	17 30 40.3	-2.4
	baz=323,SNR=15							
CUT	Chulitna	75.87	20		P	P	17 30 40.3	-2.4
	baz=324							
K24K	Donnelly Dome	75.88	17		P	P	17 30 40.2	-2.6
	baz=327,SNR=5.8							
N19K	Bonanza Creek	75.89	22		IAmb	IAmb	17 30 54.5	
	comp=Z,74nm,1.3s							
N19K	Bonanza Creek	75.89	22		P	P	17 30 40.5	-2.5
	baz=321							
GRTLG	Ghanzi	75.97	231		IAmb	IAmb	17 30 48.9	
	comp=Z,66nm,1.3s							
GRTLG	Ghanzi	75.97	231	*i*	P	P	17 30 44.0	+0.1
WAT1	Susitna Watana	75.99	19		P	P	17 30 40.0	-3.5
	baz=325							
NIKH	Nikolski High	76.01	34		P	P	17 30 40.7	-3.0
	baz=311							
LBTB	Lobatse	76.07	225		IAmb	IAmb	17 30 48.9	
	comp=Z,63nm,1.1s							
DHY	Denali Highway	76.09	18		P	P	17 30 40.3	-3.9
	baz=326,SNR=34							
P16K	Nushagak River	76.10	25		P	P	17 30 41.2	-2.8
	baz=318							
I29M	Ogilvie Camp,	76.15	14		IAmb	IAmb	17 30 52.2	
	comp=Z,54nm,1.1s							
I29M	Ogilvie Camp,	76.15	14		P	P	17 30 41.6	-2.7
	baz=333,SNR=20							
RIDG	Independent Ri	76.16	17		IAmb	IAmb	17 30 52.2	
	comp=Z,65nm,1.0s							
RIDG	Independent Ri	76.16	17		P	P	17 30 41.4	-3.1
	baz=328							
SCRK	Sand Creek	76.16	16		IAmb	IAmb	17 30 52.4	
	comp=Z,38nm,1.0s							
SCRK	Sand Creek	76.16	16		P	P	17 30 41.4	-3.1
	baz=328,SNR=20							
SPCR	Spurr Chakacha	76.28	21		P	P	17 30 42.3	-2.9
	baz=322							
SPU	Mount Spurr	76.34	21		IAmb	IAmb	17 32 09.4	
	comp=Z,69nm,1.8s							
O18K	Koktuh Hills	76.40	23		P	P	17 30 42.8	-3.0
	baz=320,SNR=20							
WAT6	Susitna Watana	76.41	19		P	P	17 30 42.2	-3.8
	baz=326,SNR=9.9							
DOT	Dot Lake	76.42	17		IAmb	IAmb	17 30 54.8	
	comp=Z,31nm,0.8s							
O19K	Port Alsworth	76.42	23		P	P	17 30 43.9	-2.0
	baz=321							
M22K	Willow	76.44	20		P	P	17 30 43.6	-2.4
	baz=324							
KGCAE	Kacgae	76.45	229	*i*	P	P	17 30 45.4	-1.3
H31M	Peel River	76.46	12		P	P	17 30 43.0	-3.1
	baz=336							
UNV	Unalaska Valle	76.47	32		P	P	17 30 42.6	-3.6
	baz=313							
SUA	Susitna One	76.50	21		IAmb	IAmb	17 30 54.6	
	comp=Z,30nm,0.7s							
SUA	Susitna One	76.50	21		P	P	17 30 43.7	-2.7
	baz=323							
P17K	Kvichak River	76.50	24		P	P	17 30 43.6	-2.8
	baz=319							
I30M	Mount Dempster	76.64	13		IAmb	IAmb	17 30 54.8	
	comp=Z,57nm,0.9s							
I30M	Mount Dempster	76.64	13		P	P	17 30 43.9	-3.3
	baz=334							
PAX	Paxson	76.66	18		IAmb	IAmb	17 30 55.4	
	comp=Z,57nm,0.9s							
PAX	Paxson	76.66	18		P	P	17 30 44.6	-2.8
	baz=327,SNR=19							
SKOMA	Sekoma	76.66	226	*i*	P	P	17 30 44.6	-3.2
P18K	Big Mountain,	76.75	24		IAmb	IAmb	17 30 56.9	
	comp=Z,68nm,1.0s							
P18K	Big Mountain,	76.75	24		P	P	17 30 45.6	-2.3
	baz=320							
BLDU	Ballidu	76.80	144		P	P	17 30 52.7	+4.4
PMR	Palmer	76.85	20		P	P	17 30 45.0	-3.2
	baz=325							
SML	Sawmill	76.89	19		P	P	17 30 46.3	-2.3
	baz=325,SNR=5.8							
CAPN	Captain Cook N	76.94	21		P	P	17 30 46.5	-2.3
	baz=323							
J29N	Klondike Camp	76.98	14		IAmb	IAmb	17 30 55.5	
	comp=Z,47nm,1.0s							
J29N	Klondike Camp	76.98	14		P	P	17 30 46.6	-2.5
	baz=333							
S12K	Black Hills	77.02	29		P	P	17 30 47.1	-2.3
	baz=316							
O20K	Slope Mountain	77.04	22		P	P	17 30 46.5	-3.0
	baz=322							
M23K	Glacier View	77.07	19		P	P	17 30 47.7	-1.8
	baz=326,SNR=9.9							
FALS	False Pass	77.08	30		P	P	17 30 46.6	-3.1
	baz=315							
DAWY	Dawson	77.09	15		IAmb	IAmb	17 30 57.9	
	comp=Z,39nm,1.0s							
DAWY	Dawson	77.09	15		P	P	17 30 47.0	-2.7
	baz=332,SNR=20							
RC01	Rabbit Creek A	77.09	20		IAmb	IAmb	17 30 55.2	
	comp=Z,28nm,0.6s							
RC01	Rabbit Creek A	77.09	20		P	P	17 30 46.5	-3.2
	baz=324							
L26K	Log Cabin Wild	77.12	17		IAmb	IAmb	17 30 59.8	
	comp=Z,92nm,1.8s							
L26K	Log Cabin Wild	77.12	17		P	P	17 30 46.2	-3.7
	baz=329							
SCM	Sheep Creek Mo	77.14	19		IAmb	IAmb	17 30 58.6	
	comp=Z,58nm,1.0s							
SCM	Sheep Creek Mo	77.14	19		P	P	17 30 46.6	-3.5
	baz=326							
KNK	Knik Glacier	77.18	20		IAmb	IAmb	17 30 59.0	
	comp=Z,50nm,1.0s							
KNK	Knik Glacier	77.18	20		P	P	17 30 47.1	-3.1
	baz=325							
P19K	Oil Pt	77.19	23		P	P	17 30 47.1	-3.2
	baz=322							
M24K	Tolsona, Glenn	77.21	18		P	P	17 30 46.8	-3.6
	baz=327							
HARP	HAARP	77.22	18		P	P	17 30 47.9	-2.5
	baz=328,SNR=18							
J30M	Hart River	77.23	13		IAmb	IAmb	17 30 59.1	
	comp=Z,72nm,1.2s							
J30M	Hart River	77.23	13		P	P	17 30 47.0	-3.6
	baz=335							
R16K	Pilot Point	77.34	26		P	P	17 30 48.5	-2.6
	baz=319							
Q17K	Contact Creek	77.40	25		P	P	17 30 47.9	-3.7
	baz=320							
SLKM	Skilak Lake	77.42	21		IAmb	IAmb	17 30 59.1	
	comp=Z,41nm,1.0s							
L27K	Beaver Creek,	77.44	16		P	P	17 30 48.4	-3.3
	baz=330							
BCAR	Beaver Creek A	77.45	16		P	P	17 30 52.0	+0.3
S14K	Fog Glacier	77.57	28		P	P	17 30 48.9	-3.7
	baz=318							
O22K	Cooper Landing	77.59	21		P	P	17 30 49.0	-3.5
	baz=324							
Q19K	Cape Douglas,	77.63	23		P	P	17 30 49.6	-3.2
	baz=322							
DBIC	Dimbokro	77.65	269		P	P	17 30 51.6	-1.9
	comp=Z,11nm,0.9s,baz=79,slow=6.8,SNR=14							
	comp=Z,11nm,0.9s							
DBIC	Dimbokro	77.65	269		P	P	17 30 52.0	-1.5
DBIC					IAmb	IAmb	17 30 56.6	
	comp=Z,76nm,1.8s							
DBIC	Dimbokro	77.65	269		P	P	17 30 52.0	-1.5
DBIC					pmax	pmax		
	comp=Z,76nm,1.8s							
K29M	Barlow Dome	77.66	14		IAmb	IAmb	17 31 01.6	
	comp=Z,56nm,0.9s							
K29M	Barlow Dome	77.66	14		P	P	17 30 49.4	-3.6
	baz=334							
PWL	Port Wells	77.67	20		P	P	17 30 49.4	-3.5
	baz=325							
HOM	Homer	77.68	22		P	P	17 30 50.4	-2.6
	baz=323							
MUN	Mundaring	77.69	145		P	P	17 30 57.7	+4.4
R17L	Mt. Peulik Vol	77.72	25		P	P	17 30 50.6	-2.6
	baz=320							
M26K	Nabesna, AK	77.75	17		IAmb	IAmb	17 31 10.8	
	comp=Z,53nm,1.4s							
M26K	Nabesna, AK	77.75	17		P	P	17 30 50.5	-2.9
	baz=329							
KLU	Klutina	77.79	19		P	P	17 30 51.2	-2.5
	baz=327							
KOOLE	Kule	77.80	230	*i*	P	P	17 30 54.8	+0.5
BRSE	Bradley Lake S	77.89	22		P	P	17 30 51.2	-3.0
	baz=324							
SDPT	Sand Point	77.90	29		P	P	17 30 51.7	-2.6
	baz=317							
SEW	Seward	77.97	21		P	P	17 30 52.0	-2.6
	baz=325							
LKGWB	Lokgwabe	77.99	229	*i*	P	P	17 30 53.2	-2.1
N25K	Chitina, Valde	78.04	18		IAmb	IAmb	17 31 10.4	
	comp=Z,87nm,1.3s							
N25K	Chitina, Valde	78.04	18		P	P	17 30 51.7	-3.3
	baz=328							
M27K	Edge Creek, AK	78.05	16		IAmb	IAmb	17 31 10.4	
	comp=Z,54nm,1.2s							
M27K	Edge Creek, AK	78.05	16		P	P	17 30 51.9	-3.3
	baz=330							
L29M	L29M	78.20	15		IAmb	IAmb	17 31 04.7	
	comp=Z,68nm,1.1s							
L29M	L29M	78.20	15		P	P	17 30 53.3	-2.6
	baz=333							
MAYO	Mayo, Yukon	78.20	13		P	P	17 30 53.2	-2.7
	baz=335							
BVCY	Beaver Creek	78.23	16		P	P	17 30 52.7	-3.4
	baz=331							
Q20K	Shuyak Island	78.28	23		P	P	17 30 52.9	-3.5
	baz=323							
R18K	Karluk	78.43	25		P	P	17 30 54.4	-2.8
	baz=321							
BMRM	Bremner River	78.58	18		P	P	17 30 53.8	-4.2
	baz=328							
MCARA	McCarthy VSAT	78.62	17		P	P	17 30 54.4	-3.8
	baz=330							
CHNA	Chernabura Isl	78.63	29		P	P	17 30 55.6	-2.7
	baz=318							
EYAK	Cordova Ski Ar	78.64	19		P	P	17 30 54.5	-3.7
	baz=328							
P23K	Montague Islan	78.65	20		P	P	17 30 54.9	-3.4
	baz=326							
VRDI	Verde Repeater	78.65	18		IAmb	IAmb	17 31 07.2	
	comp=Z,43nm,0.9s							

M29M	Somme Creek	78.73	15	P	P	17 30 55.8	-3.1
	baz=333,SNR=9.4						
KDAK	Kodiak Island	78.88	24	P	P	17 30 59.8	+0.2
KDAK				IAmb	IAmb	17 31 08.2	
	comp=Z,75nm,0.9s						
KDAK	Kodiak Island	78.88	24	P	P	17 30 59.8	+0.2
KDAK				pmax	pmax		
	comp=Z,75nm,1.0s						
KDAK	Kodiak Island	78.88	24	P	P	17 30 56.2	-3.4
	baz=322						
YUK3	Moose Creek	78.88	16	P	P	17 30 56.4	-3.5
	baz=332						
WB0	Warramunga Arr	78.91	124	IAmb	IAmb	17 31 05.9	
	comp=Z,101nm,1.4s						
M30M	Minto, Yukon	78.95	14	P	P	17 30 57.1	-3.0
	baz=334						
NWAO	Narrogin (SRO)	78.96	145	P	P	17 30 59.3	-0.9
	comp=Z,16nm,0.7s,baz=281,slow=6.1,SNR=4.4						
	comp=Z,16nm,0.7s						
WRA	Warramunga Arr	78.99	124	P	P	17 31 00.1	-0.7
	comp=Z,15nm,0.6s,baz=325,slow=5.4,SNR=45						
WRA				PKKPbc	PKKPbc	17 49 52.8	-0.3
	comp=Z,1.3nm,0.5s,baz=136,slow=2.2,SNR=7.9						
	comp=Z,15nm,0.6s						
WRA	Warramunga Arr	78.99	124	P	P	17 30 59.8	-1.0
WRA	Warramunga Arr	78.99	124	*i* P	P	17 31 00.1	-0.7
WRA				pmax	pmax		
	comp=Z,18nm,0.6s						
WRAB	Tennant Creek	78.99	124	P	P	17 31 00.2	-0.6
WRAB				IAmb	IAmb	17 31 06.5	
	comp=Z,40nm,0.7s						
WRAB	Tennant Creek	78.99	124	*ce*P	P	17 31 00.5	-0.3
WRAB				pmax	pmax		
	comp=Z,43nm,1.5s						
BOSA	Boshof	79.04	223	P	P	17 30 59.8	-1.3
	comp=Z,37nm,0.9s,baz=53,slow=6.3,SNR=33						
	comp=Z,37nm,0.9s						
BOSA	Boshof	79.04	223	IAmb	IAmb	17 31 06.8	
	comp=Z,48nm,0.8s						
OHAK	Old Harbor	79.09	24	IAmb	IAmb	17 31 15.2	
	comp=Z,89nm,1.3s						
OHAK	Old Harbor	79.09	24	P	P	17 31 08.6	+7.8
OHAK	Old Harbor	79.09	24	P	P	17 30 58.0	-2.8
	baz=322						
WR8	Warramunga Arr	79.11	124	IAmb	IAmb	17 31 07.0	
	comp=Z,28nm,0.7s						
CRQE	Cirque	79.15	18	P	P	17 30 58.5	-2.8
	baz=330						
SII	Sitkinak Islan	79.30	25	P	P	17 30 59.6	-2.5
	baz=322						
CHIR	Chirikof Islan	79.37	26	P	P	17 30 59.9	-2.5
	baz=320						
CTG	Chitna Glacier	79.39	17	P	P	17 30 59.0	-3.6
	baz=331						
Q23K	Middleton Isla	79.42	20	P	P	17 30 58.5	-4.0
	baz=327						
WIN	Windhoek	79.47	233	IAMs_20	IAMs_20	18 06 39.7	
	comp=Z,1µm,22.0s						
YUK8	Steele Glacier	79.47	16	P	P	17 30 59.0	-4.2
	baz=332						
KAIM	Kayak Island	79.52	19	P	P	17 31 00.3	-2.8
	baz=329						
YUK4	Talbot Arm	79.67	16	P	P	17 31 00.5	-3.7
	baz=333						
M31M	Drury Creek, Y	79.76	13	IAmb	IAmb	17 31 14.1	
	comp=Z,118nm,1.4s						
M31M	Drury Creek, Y	79.76	13	P	P	17 31 01.6	-2.8
	baz=336						
O28M	Mount Upton	79.83	17	P	P	17 31 02.2	-3.0
	baz=332						
N30M	Aishikik Lake	79.90	15	P	P	17 31 03.5	-1.7
	baz=334						
YUK6	Outpost Mounta	80.09	16	P	P	17 31 03.5	-3.0
	baz=333						
N31M	Braeburn, Yuko	80.14	14	P	P	17 31 04.4	-2.2
	baz=335,SNR=15						
BLKN	Baker Lake	80.16	356	IAmb	IAmb	17 31 13.3	
	comp=Z,71nm,1.2s						
HYT	Haines Junctio	80.38	15	IAmb	IAmb	17 31 17.4	
	comp=Z,57nm,0.9s						
HYT	Haines Junctio	80.38	15	P	P	17 31 04.8	-3.2
	baz=334,SNR=10						
PINM	Pinnacle	80.41	17	P	P	17 31 03.8	-4.2
	baz=332						
WRGLY	Wrigley	80.46	8	P	P	17 31 05.2	-2.9
	baz=345,SNR=11						
O29M	Mount Kennedy	80.62	16	P	P	17 31 06.0	-3.2
	baz=333						
O30N	Mendenhall	80.73	15	P	P	17 31 06.6	-3.1
	baz=335,SNR=6.9						
N32M	Quiet Lake	80.98	13	IAmb	IAmb	17 31 20.1	
	comp=Z,54nm,1.1s						
N32M	Quiet Lake	80.98	13	P	P	17 31 07.9	-3.1
	baz=338						
WHY	Whitehorse	81.08	14	IAmb	IAmb	17 31 20.8	
	comp=Z,91nm,1.3s						
WHY	Whitehorse	81.08	14	P	P	17 31 07.6	-4.1
	baz=336						
P30M	Million Dollar	81.14	15	P	P	17 31 09.0	-2.9
	baz=334						
COEN	Coen	81.30	114	IAmb	IAmb	17 31 17.0	
	comp=Z,78nm,1.6s						
ASAR	Alice Springs	81.31	127	P	P	17 31 11.9	-1.3
	comp=Z,7.3nm,0.8s,baz=315,slow=4.8,SNR=68						
ASAR				PKKPbc	PKKPbc	17 49 46.0	-2.0
	comp=Z,0.9nm,0.7s,baz=131,slow=2.4,SNR=9.5						
	comp=Z,7.3nm,0.8s						
ASAR	Alice Springs	81.31	127	P	P	17 31 12.3	-0.9
ASAR	Alice Springs	81.31	127	P	P	17 31 12.3	-0.9
P29M	Windy Craggy	81.41	16	P	P	17 31 09.6	-3.8
	baz=334						
PMG	Port Moresby	81.48	108	P	P	17 31 14.4	+0.1
PMG	Port Moresby	81.48	108	P	P	17 31 14.4	+0.1
PMG				pmax	pmax		
	comp=Z,31nm,1.1s						
KUQ	Kuujjuuaa	81.66	341	P	P	17 31 13.6	-1.0
KUQ				IAmb	IAmb	17 31 21.9	
	comp=Z,88nm,1.2s						
PLBC	Pleasant Camp	81.87	15	P	P	17 31 12.1	-3.6
	baz=335,SNR=8.1						
P33M	Teslin, Yukon	81.90	13	P	P	17 31 12.5	-3.4
	baz=338,SNR=22						
YKA	Yellowknife Ar	81.97	4	P	P	17 31 15.6	-0.6
	comp=Z,18nm,0.8s,baz=342,slow=5.6,SNR=47						
YKA				PP	PP	17 34 23.6	+0.6
	comp=Z,4.1nm,1.0s,baz=353,slow=8.5,SNR=5.2						
YKA				PKKPbc	PKKPbc	17 49 44.0	-2.0
	comp=Z,0.4nm,0.6s,baz=181,slow=2.1,SNR=7.8						
	comp=Z,18nm,0.8s						
YKAW1	Yellowknife Wh	81.99	4	IAmb	IAmb	17 31 22.3	
	comp=Z,82nm,1.2s						
SKAG	Skagway	82.09	15	P	P	17 31 14.3	-2.5
	baz=336						
P32M	Atlin	82.30	14	P	P	17 31 14.2	-3.8
	baz=337						
WTLY	Watson Lake, Y	82.70	12	IAmb	IAmb	17 31 27.0	
	comp=Z,92nm,1.6s						
WTLY	Watson Lake, Y	82.70	12	P	P	17 31 16.3	-3.8
	baz=341,SNR=8.9						
FORT	Forrest	82.91	136	IAmb	IAmb	17 31 26.9	
	comp=Z,29nm,1.0s						
R31K	City Hall, Gus	82.95	16	P	P	17 31 18.0	-3.3
	baz=336						
R33M	Jennings River	83.00	13	IAmb	IAmb	17 31 30.2	
	comp=Z,51nm,1.1s						
R33M	Jennings River	83.00	13	P	P	17 31 18.3	-3.5
	baz=339						
Q32M	Nakina River	83.17	14	P	P	17 31 19.4	-3.3
	baz=338						
S31K	Pelican	83.26	16	P	P	17 31 19.0	-3.9
	baz=335						
R32K	Eaglecrest	83.34	15	IAMs_20	IAMs_20	17 59 36.0	
	comp=Z,1µm,19.0s						
R32K	Eaglecrest	83.34	15	P	P	17 31 19.9	-3.6
	baz=336						
SCHQ	Schefferville	84.06	339	P	P	17 31 26.6	-0.6
	comp=Z,9.8nm,0.9s,baz=337,slow=2.3,SNR=9.1						
	comp=Z,9.8nm,0.9s						
S32K	Killisnoo	84.07	15	P	P	17 31 23.6	-3.5
	baz=336						
SIT	Sitka	84.29	16	P	P	17 31 24.5	-3.7
	baz=336						
S34M	Telegraph Cree	84.36	14	P	P	17 31 24.9	-3.8
	baz=339						
TOAD	Toad River Com	84.46	10	P	P	17 31 26.1	-3.1
	baz=344						
T35M	Bob Quinn	85.40	13	P	P	17 31 31.1	-2.9
	baz=340						
WRAK	Wrangell Islan	85.52	15	P	P	17 31 30.9	-3.5
	baz=338						
U33K	Whale Pass	85.64	15	P	P	17 31 31.0	-3.9
	baz=338						
CRAG	Craig	86.23	15	P	P	17 31 33.5	-4.4
	baz=338						
V35K	Ketchikan	86.68	15	P	P	17 31 36.4	-3.8
	baz=339						
CTAO	Charters Tower	87.46	117	P	P	17 31 43.8	-0.7
CTAO				IAmb	IAmb	17 31 51.1	
	comp=Z,41nm,1.2s						
CTAO	Charters Tower	87.46	117	IAMs_20	IAMs_20	18 18 53.2	
	comp=Z,2µm,18.0s						
CTAO	Charters Tower	87.46	117	P	P	17 31 43.8	-0.7
CTAO				pmax	pmax		
	comp=Z,41nm,1.2s						
CTAO				MLR	MLR		
	comp=Z,2µm,18.0s						
FFC	Flin Flon	90.01	358	P	P	17 31 55.6	-0.4
FFC				IAmb	IAmb	17 32 01.5	
	comp=Z,26nm,1.1s						
FFC	Flin Flon	90.01	358	IAMs_20	IAMs_20	18 16 44.4	
	comp=Z,2µm,20.0s						
FFC	Flin Flon	90.01	358	P	P	17 31 55.6	-0.4
FFC				pmax	pmax		
	comp=Z,26nm,1.1s						
FFC				MLR	MLR		
	comp=Z,2µm,20.0s						
BBB	Bella Bella	90.35	14	LR	LR	18 17 33.0	
	comp=Z,542nm,20.2s,baz=310,slow=39						
STKA	Stephens Creek	91.87	128	P	P	17 32 05.1	+0.3
	comp=Z,3.4nm,0.7s,baz=327,slow=7.7,SNR=4.6						
	comp=Z,3.4nm,0.7s						
LLLB	Lillooet	92.94	10	IAmb	IAmb	17 32 17.7	
	comp=Z,38nm,1.3s						
VLDQ	Val d'Or	93.03	342	IAmb	IAmb	17 32 16.1	
	comp=Z,27nm,0.9s						
ULM	Lac du Bonnet	94.13	354	P	P	17 32 14.8	-0.4
	comp=Z,12nm,0.9s,baz=9.1,slow=4.7,SNR=7.0						
	comp=Z,12nm,0.9s						
LONY	Lake Ozonia	95.44	338	IAMs_20	IAMs_20	18 13 52.0	
	comp=Z,1µm,22.0s						
B08A	Colville Reser	95.50	9	IAmb	IAmb	17 32 28.2	
	comp=Z,50nm,1.8s						
AGMN	Agassiz Nation	96.06	354	IAmb	IAmb	17 32 30.8	
	comp=Z,40nm,1.6s						
AGMN				IAMs_20	IAMs_20	18 16 57.5	
	comp=Z,2µm,20.0s						
DGMT	Dagmar	96.31	359	IAMs_20	IAMs_20	18 19 18.2	
	comp=Z,2µm,20.0s						
J59A	Piesco	96.46	338	IAMs_20	IAMs_20	18 15 41.2	
	comp=Z,1µm,21.0s						
L64A	Middleborough	96.64	335	IAMs_20	IAMs_20	18 16 04.9	
	comp=Z,1µm,19.0s						
J57A	Williamstown	96.96	339	IAMs_20	IAMs_20	18 15 23.3	
	comp=Z,2µm,22.0s						
E38A	The Farm, Brul	97.25	350	IAMs_20	IAMs_20	18 13 24.9	
	comp=Z,1µm,21.0s						
LAO	LASA Array	98.09	1	IAmb	IAmb	17 32 40.2	
	comp=Z,23nm,1.2s						
G40A	Rib Lake	98.36	349	IAMs_20	IAMs_20	18 22 30.4	
	comp=Z,1µm,20.0s						
SPMN	Marine on St.	98.77	351	IAMs_20	IAMs_20	18 21 13.1	
	comp=Z,2µm,20.0s						
CAN	Canberra	98.82	127	IAMs_20	IAMs_20	18 17 22.9	
	comp=Z,2µm,22.0s						
DLMT	Dillon	99.16	5	IAMs_20	IAMs_20	18 17 07.7	
	comp=Z,891nm,21.0s						
BMO	Blue Mountains	99.20	9	IAMs_20	IAMs_20	18 21 43.0	
	comp=Z,1µm,22.0s						
ERPA	Erie	99.27	341	IAMs_20	IAMs_20	18 18 16.3	
	comp=Z,2µm,20.0s						
N58A	Sunbury	99.53	338	IAMs_20	IAMs_20	18 15 35.3	
	comp=Z,2µm,21.0s						
SSPA	Standing Stone	100.06	339	IAMs_20	IAMs_20	18 17 17.4	
	comp=Z,2µm,20.0s						
LKWY	Lake	100.09	4	IAMs_20	IAMs_20	18 19 10.3	
	comp=Z,1µm,19.0s						
SUSD	Miller	100.14	355	IAMs_20	IAMs_20	18 20 55.3	
	comp=Z,2µm,20.0s						
K43A	Burlington	100.55	347	IAMs_20	IAMs_20	18 20 16.2	
	comp=Z,1µm,20.0s						
RSSD	Black Hills	100.66	359	IAMs_20	IAMs_20	18 22 35.2	
	comp=Z,1µm,20.0s						
JFWS	Jewell Farm	100.67	349	IAMs_20	IAMs_20	18 19 53.4	
	comp=Z,1µm,21.0s						
N51A	Ashland	101.00	342	IAMs_20	IAMs_20	18 19 24.2	
	comp=Z,1µm,18.0s						
P57A	Homestead Farm	101.16	339	IAMs_20	IAMs_20	18 15 13.5	
	comp=Z,1µm,21.0s						
L42A	Oliver, Polo	101.46	348	IAMs_20	IAMs_20	18 21 43.4	
	comp=Z,1µm,20.0s						
L40A	Anamosa	101.65	349	IAMs_20	IAMs_20	18 20 25.4	
	comp=Z,1µm,20.0s						
Q56A	Snyder Ridge,	101.91	339	IAMs_20	IAMs_20	18 18 14.4	
	comp=Z,2µm,20.0s						
PDAR	Pinedale Array	101.92	3	Pdiff	Pdif	17 32 51.9	+1.1
	comp=Z,0.7nm,0.7s,baz=344,slow=4.4,SNR=7.6						
PDAR				PP	PP	17 36 55.4	-5.3
	comp=Z,1.9nm,1.1s,baz=354,slow=4.5,SNR=4.3						
PDAR				PKiKP	PKiKP	17 37 14.1	+0.6
	comp=Z,0.5nm,0.6s,baz=85,slow=4.4,SNR=4.9						
BBSR	BB Station	102.41	326	IAMs_20	IAMs_20	18 17 30.3	
	comp=Z,1µm,22.0s						
R58B	Mineral	102.53	338	IAMs_20	IAMs_20	18 19 22.6	
	comp=Z,2µm,20.0s						
HDIL	Hopedale	102.81	348	IAMs_20	IAMs_20	18 22 42.9	
	comp=Z,1µm,19.0s						
N41A	Harden Midland	102.92	349	IAMs_20	IAMs_20	18 20 22.9	
	comp=Z,1µm,22.0s						
HWUT	Hardware Ranch	102.97	5	IAMs_20	IAMs_20	18 26 14.5	
	comp=Z,1µm,18.0s						
Q51A	Peebles	103.03	343	IAMs_20	IAMs_20	18 20 27.9	
	comp=Z,978nm,20.0s						
N38A	Joes South For	103.18	351	IAMs_20	IAMs_20	18 23 05.9	
	comp=Z,1µm,21.0s						
T59A	Double "B" Far	103.34	337	IAMs_20	IAMs_20	18 20 31.1	
	comp=Z,1µm,18.0s						
OGNE	Ogallala	103.78	357	IAMs_20	IAMs_20	18 23 18.8	
	comp=Z,1µm,20.0s						
R50A	Paris	103.97	343	IAMs_20	IAMs_20	18 20 50.8	
	comp=Z,2µm,21.0s						
Q44A	Meyer Farm, Va	104.36	347	IAMs_20	IAMs_20	18 20 36.1	
	comp=Z,1µm,22.0s						
P38A	Dawn	104.37	351	IAMs_20	IAMs_20	18 24 32.4	
	comp=Z,1µm,20.0s						
S51A	Beattyville	104.41	342	IAMs_20	IAMs_20	18 23 04.3	
	comp=Z,1µm,21.0s						
O20A	White River Ci	104.60	2	IAMs_20	IAMs_20	18 25 56.7	
	comp=Z,1µm,19.0s						
V58A	Windy Hill, Pi	104.90	338	IAMs_20	IAMs_20	18 21 20.6	
	comp=Z,1µm,19.0s						
ISCO	Idaho Springs	104.98	0	IAMs_20	IAMs_20	18 25 35.7	
	comp=Z,1µm,20.0s						
U54A	Nelsons Funny	105.00	341	IAMs_20	IAMs_20	18 20 38.1	
	comp=Z,2µm,22.0s						
W59A	Clinton	105.28	337	IAMs_20	IAMs_20	18 21 48.5	
	comp=Z,1µm,20.0s						
NVAR	Mina Array Bea	105.38	11	Pdiff	Pdif	17 33 08.3	+2.1
	comp=Z,0.8nm,0.8s,baz=10,slow=3.3,SNR=3.7						
NVAR				PKiKP	PKiKP	17 37 21.2	+1.3
	comp=Z,1.7nm,0.9s,baz=19,slow=0.7,SNR=5.3						
CCM	Cathedral Cave	105.57	349	IAMs_20	IAMs_20	18 22 19.2	
	comp=Z,1µm,22.0s						
KSCO	Kaye Shedlock'	105.73	358	IAMs_20	IAMs_20	18 24 19.4	
	comp=Z,1µm,20.0s						
CBKS	Cedar Bluff	105.79	355	IAMs_20	IAMs_20	18 24 04.9	
	comp=Z,1µm,20.0s						
T47A	Sharon Grove	105.83	345	IAMs_20	IAMs_20	18 22 15.1	
	comp=Z,1µm,20.0s						
U49A	Red Boiling Sp	106.00	344	IAMs_20	IAMs_20	18 22 15.5	
	comp=Z,1µm,20.0s						
R32A	Long Quarter,	106.11	355	IAMs_20	IAMs_20	18 28 30.3	
	comp=Z,1µm,19.0s						
T45A	Paducah	106.12	346	IAMs_20	IAMs_20	18 25 20.7	
	comp=Z,886nm,19.0s						
X58A	Rowland	106.12	338	IAMs_20	IAMs_20	18 21 06.8	
	comp=Z,2µm,22.0s						
KMSC	Kings Mountain	106.16	340	IAMs_20	IAMs_20	18 20 10.8	
	comp=Z,2µm,21.0s						
S39A	Bolivar	106.25	350	IAMs_20	IAMs_20	18 25 57.9	
	comp=Z,1µm,18.0s						
Y58A	Scranton	106.82	338	IAMs_20	IAMs_20	18 22 46.4	
	comp=Z,1µm,20.0s						
V48A	Smith Brothers	106.97	344	IAMs_20	IAMs_20	18 24 50.3	
	comp=Z,2µm,21.0s						
SDCO	Great Sand Dun	107.04	0	IAMs_20	IAMs_20	18 26 08.0	
	comp=Z,1µm,20.0s						
W50A	Signal Mountai	107.14	343	IAMs_20	IAMs_20	18 25 26.8	
	comp=Z,1µm,20.0s						
HULI	Fort Hunter Li	107.23	13	IAMs_20	IAMs_20	18 28 46.9	
	comp=Z,1µm,18.0s						
T35A	Sooner Cattle	107.40	353	IAMs_20	IAMs_20	18 21 26.6	
	comp=Z,1µm,19.0s						
SYO	Syowa Base	107.46	193	⇓*e*Pdiff	Pdif	17 33 16.8	+2.7
SYO	Syowa Base	107.46	193	⇑*e*pPdiff	pPdif	17 33 21.8	-0.7
SYO	Syowa Base	107.46	193	⇑*e*PKiKP	PKiKP	17 37 23.2	+1.0
MVCO	Mesa Verde	107.51	3	IAMs_20	IAMs_20	18 27 25.0	
	comp=Z,931nm,18.0s						
U38A	Gravette	107.62	351	IAMs_20	IAMs_20	18 26 43.4	
	comp=Z,1µm,19.0s						
OK048	Pawnee Station	107.94	353	IAMs_20	IAMs_20	18 20 47.8	
	comp=Z,1µm,20.0s						
TUL3	Leonard	108.32	352	IAMs_20	IAMs_20	18 23 21.8	
	comp=Z,1µm,21.0s						
OK052	Battle Ridge R	108.34	353	IAMs_20	IAMs_20	18 23 16.5	
	comp=Z,1µm,21.0s						
OK029	Liberty Lake	108.60	353	IAMs_20	IAMs_20	18 25 03.4	
	comp=Z,1µm,20.0s						
OXF	Oxford	108.70	346	IAMs_20	IAMs_20	18 26 26.8	
	comp=Z,1µm,19.0s						
154A	Montrose	109.03	340	IAMs_20	IAMs_20	18 25 59.8	
	comp=Z,1µm,20.0s						
MIAR	Mount Ida	109.37	350	IAMs_20	IAMs_20	18 28 09.7	
	comp=Z,1µm,18.0s						
LRAL	Lakeview Retre	109.61	344	IAMs_20	IAMs_20	18 24 18.0	
	comp=Z,1µm,19.0s						
WMOK	Wichita Mounta	109.77	354	IAMs_20	IAMs_20	18 24 52.3	
	comp=Z,1µm,20.0s						
ANMO	Albuquerque	109.82	1	IAMs_20	IAMs_20	18 28 11.8	
	comp=Z,2µm,19.0s						
ANMO	Albuquerque	109.82	1	IAMs_20	IAMs_20	18 28 11.8	
	comp=Z,2µm,19.0s						
TIGA	Tifton	110.27	340	IAMs_20	IAMs_20	18 28 18.7	
	comp=Z,1µm,19.0s						
146A	Union	110.44	345	IAMs_20	IAMs_20	18 25 01.1	
	comp=Z,1µm,19.0s						
Z38A	Mt. Pleasant	110.83	351	IAMs_20	IAMs_20	18 22 55.4	
	comp=Z,887nm,20.0s						
Z35A	Perchaven, San	111.03	353	IAMs_20	IAMs_20	18 27 26.5	
	comp=Z,1µm,20.0s						
346A	Big Creek Wild	111.73	345	IAMs_20	IAMs_20	18 25 59.3	
	comp=Z,1µm,20.0s						
ABTX	Abilene, Hawle	111.94	355	IAMs_20	IAMs_20	18 30 07.7	
	comp=Z,1µm,21.0s						
WHTX	Lake Whitney,	112.37	353	IAMs_20	IAMs_20	18 30 43.2	
	comp=Z,922nm,20.0s						
DWPF	Disney Wildern	112.75	337	IAMs_20	IAMs_20	18 22 47.7	
	comp=Z,973nm,22.0s						
ELIB	Princess Elisa	113.06	195	*d*PKiKP	PKiKP	17 37 32.7	-0.3
MNTX	Cornudas Mount	113.07	0	IAMs_20	IAMs_20	18 30 48.8	
	comp=Z,1µm,22.0s						
SEUS	St. Eustatius	113.70	315	IAMs_20	IAMs_20	18 24 12.7	
	comp=Z,975nm,20.0s						
JCT	Junction City	114.08	355	IAMs_20	IAMs_20	18 27 51.4	
	comp=Z,946nm,20.0s						
HKT	Hockley	114.20	351	IAMs_20	IAMs_20	18 33 01.3	
	comp=Z,1µm,19.0s						
SJG	San Juan	114.96	319	IAMs_20	IAMs_20	18 25 45.0	
	comp=Z,1µm,19.0s						
NVL	N'lazarevskaya	115.05	199	*i* PKIKP	PKiKP	17 37 27.1	-9.5
NVL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NVL				MLR	MLR		
	comp=Z,709nm,19.0s						
TXAR	Lajitas Array	115.41	358	PKP	PKiKP	17 37 37.3	-1.6
	comp=Z,0.9nm,0.8s,baz=90,slow=1.3,SNR=5.9						
TXAR				PKKPbc	PKKPbc	17 48 16.4	+4.1
	comp=Z,0.5nm,0.8s,baz=190,slow=6.2,SNR=3.8						
SDDR	Presa de Saban	116.86	324	IAMs_20	IAMs_20	18 31 59.1	
	comp=Z,1µm,19.0s						
GTBY	Guantanamo Bay	117.81	328	IAMs_20	IAMs_20	18 25 58.7	
	comp=Z,1µm,20.0s						
OXZ	Oxford	118.18	125	IAMs_20	IAMs_20	18 28 36.6	
	comp=Z,1µm,21.0s						
TROLL	Troll, Antarti	118.23	200	⇓PKPdf	PKiKP	17 37 44.4	+1.5
	comp=Z,282nm,0.6s						
SNAA	Sanae	119.59	201	PKP	PKiKP	17 37 46.4	+0.9
	comp=Z,3.3nm,0.8s,baz=201,slow=1.6,SNR=6.7						
MTDJ	Mount Denham	120.35	329	IAMs_20	IAMs_20	18 26 23.1	
	comp=Z,884nm,22.0s						
VNA2	Neumayer--Watz	120.68	202	⇓PKPdf	PKiKP	17 37 47.7	+0.2
	comp=Z,18nm,0.6s,baz=26,slow=2.9						
VNA1	Neumayer--Stat	120.85	203	⇓PKPdf	PKPdf	17 37 46.8	-1.0
	comp=Z,17nm,1.0s						
VNA3	Neumayer Olymp	121.48	202	⇓PKPdf	PKPdf	17 37 48.9	-0.1
	comp=Z,14nm,0.7s						
TEIG	Tepich	122.19	341	IAMs_20	IAMs_20	18 32 23.3	
	comp=Z,902nm,20.0s						
DIAM	Diamantina, MG	123.27	270	*e*P	PKPdf	17 37 53.6	-0.5
VNDA	Vanda	123.83	165	PKP	PKiKP	17 37 53.8	+0.2
	comp=Z,2.4nm,0.9s,baz=310,slow=6.2,SNR=7.1						
QSPA	South Pole Qui	125.38	180	PKP	PKPdf	17 37 56.0	-0.7
	comp=Z,6.3nm,0.7s,baz=329,slow=3.1,SNR=28						
BDFB	Brasilia	125.41	276	PKP	PKPdf	17 37 56.8	-1.5
	comp=Z,4.2nm,0.8s,baz=340,slow=3.3,SNR=6.2						
TGUH	Tegucigalpa,Un	127.75	338	IAMs_20	IAMs_20	18 36 16.8	
	comp=Z,716nm,22.0s						
SPB	Sao Paulo	128.91	267	IAMs_20	IAMs_20	18 35 06.7	
	comp=Z,736nm,20.0s						
HDC	Heredia	130.43	332	IAMs_20	IAMs_20	18 31 11.0	
	comp=Z,829nm,22.0s						
JTS	Las Juntas de	130.48	333	IAMs_20	IAMs_20	18 35 50.3	
	comp=Z,612nm,20.0s						
CPUP	Villa Florida	138.17	269	PKhKP	PKPpre	17 38 11.8	
	comp=Z,2.2nm,0.9s,baz=56,slow=3.0,SNR=6.2						
CPUP				PKP	PKPdf	17 38 22.4	+0.5
	comp=Z,11nm,1.0s,baz=68,slow=2.6,SNR=12						
LPAZ	La Paz	141.73	290	PKP	PKPdf	17 38 27.1	-2.3
	comp=Z,3.3nm,0.9s,baz=23,slow=8.2,SNR=4.1						
PLCA	Paso Flores	152.30	249	PKP	PKPdf	17 38 46.8	+1.2
	comp=Z,5.4nm,1.1s,baz=59,slow=10,SNR=4.4						
PLCA				PKPbc	PKPbc	17 38 52.1	-0.3
	comp=Z,15nm,0.9s,baz=67,slow=4.0,SNR=15						
LL01	San Ignacio de	153.65	245	IAMs_20	IAMs_20	18 39 31.6	
	comp=Z,619nm,19.0s						

IDC ***30*** *17:20:17.8±1.1, 35.°69N×74.°81E, h0km, mb4.8/10, mbtmp4.8/11, ML4.3/1, MS5.0/3, Error ellipse: s-maj=34.8km s-min=21.0km az=38.0*

ISC 30 17:20:21.7±1.1**, 35.°7N**±0.°2×**74.°8E**±0.°2**, h25km, n14, σ1.s50**/11**, mb4.7**/10**, MS5.1**/3**, Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	19.50	18	P	P	17 24 45.2	-1.6
	4.3nm,0.3s,baz=207,slow=11,SNR=5.2						
	39nm,0.9s						
SONM	Songino Array	26.27	53	P	P	17 25 56.2	+1.1
	28nm,0.9s,baz=257,slow=9.5,SNR=3.7						
	28nm,0.9s						
CMAR	Chiang Mai Arr	27.40	123	P	P	17 26 05.5	+0.1
	44nm,0.9s,baz=313,slow=12,SNR=4.2						
	44nm,0.9s						
AKASG	Malin Array Be	35.83	309	P	P	17 27 19.7	+0.7
	5.2nm,0.7s,baz=85,slow=10.0,SNR=4.3						
	5.2nm,0.7s						
JNU	Nakatsue	45.77	76	LR	LR	17 52 05.8	
	comp=Z,2µm,20.5s,baz=282,slow=42						
GERES	GERESS Array B	45.88	306	P	P	17 28 40.1	-1.9
	5.7nm,1.1s,baz=76,slow=11,SNR=4.1						
	5.7nm,1.1s						
MJAR	Matsushiro Arr	50.34	69	P	P	17 29 14.9	-1.7
	18nm,0.9s,baz=278,slow=5.8,SNR=4.9						
	18nm,0.9s						
JHJ	Hachijo jima 2	52.76	73	LR	LR	17 53 22.1	
	comp=Z,1µm,18.7s,baz=287,slow=38						
ILAR	Eielson Array	74.63	17	P	P	17 31 59.8	+1.4
	4.4nm,0.8s,baz=295,slow=4.5,SNR=6.9						
	4.4nm,0.8s						
FRB	Frobisher Bay	76.67	344	LR	LR	18 09 07.4	
	comp=Z,500nm,19.2s,baz=32,slow=38						
WRA	Warramunga Arr	78.98	124	P	P	17 32 22.1	-1.4
	6.5nm,0.7s,baz=315,slow=6.0,SNR=1.8						
	6.5nm,0.7s						
ASAR	Alice Springs	81.31	127	P	P	17 32 37.2	+1.2
	6.2nm,0.9s,baz=312,slow=5.4,SNR=1.7						
	6.2nm,0.9s						
YKA	Yellowknife Ar	81.81	4	P	P	17 32 39.4	+1.3
	4.5nm,0.7s,baz=32,slow=10,SNR=7.2						
	4.5nm,0.7s						
ULM	Lac du Bonnet	93.99	354	P	P	17 33 38.0	+0.6
	3.8nm,0.7s,baz=351,slow=3.6,SNR=3.0						
	3.8nm,0.7s						

WBNET 30 17:24:24.3,50°.39N×12°.46E,h9^{km},Ml0.5,6C-4D, Germany

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POCW	Potky	0.07	196	⇓P	Pg	17 24 26.6	+0.2
POCW				S	Sg	17 24 28.2	+0.3
KRCW	Kraslice	0.07	139	⇓P	Pg	17 24 26.4	0.0
KRCW				S	Sg	17 24 28.0	0.0
LBCW	Luby	0.12	193	⇑P	Pg	17 24 27.3	+0.2
LBCW				S	Sg	17 24 29.4	+0.3
STCW	Studenec	0.13	162	⇓P	Pg	17 24 27.3	0.0
STCW				S	Sg	17 24 29.3	0.0
NKC	Novy Kostel	0.15	182	⇑P	Pg	17 24 27.6	0.0
NKC				S	Sg	17 24 29.9	0.0
VAC	Vackov	0.16	199	⇑P	Pg	17 24 27.8	+0.1
VAC				S	Sg	17 24 30.1	+0.1
KVC	Kvetna	0.18	168	⇓P	Pg	17 24 28.4	+0.2
KVC				S	Sg	17 24 30.8	+0.1
KOCW	Kopaniny	0.19	230	⇑P	Pg	17 24 28.2	0.0
KOCW				S	Sg	17 24 30.9	0.0
TRCW	Trojmez	0.22	248	⇑P	Pg	17 24 28.7	0.0
TRCW				S	Sg	17 24 31.8	+0.1
ZHC	Zelena Hora	0.33	197	⇑P	Pg	17 24 30.8	-0.1
ZHC				S	Sg	17 24 35.2	+0.1
LACW	Lazy	0.35	162	S	Sg	17 24 36.2	+0.3

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*IDC **30** 17:28:22.8±0.7,35°.45N×74°.47E,h0^{km},mb4.3/18, mbtmp4.3/24,ML3.7/6,MS3.8/1,Error ellipse: s-maj=16.1km s-min=15.4km az=69.0*

*NEIC **30** 17:28:26.4±2.7,35°.71N±0°.06×74°.58E±0°.10,h10^{km}±1^{km}, mb4.5/20,Error ellipse: s-maj=13.2km s-min=10.0km az=97.0*

ISC 30 17:28:24.8±0.5,35°.62N±0°.05×74°.68E±0°.05,h10^{km},n71, σ1^s.50/67,mb4.3/23,Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIL	Nilore	2.29	211	Pn	Pn	17 29 06.0	+3.2
NIL					Sn	17 29 35.0	+3.9
ALCI	Alchi Leh	2.49	124	*e*P	Pn	17 29 04.6	-1.2
ALCI				*e*S	Sn	17 29 30.7	-5.7
ALCI				IAML		17 29 39.2	
	comp=N,4µm,0.3s						
ALCI				IAML		17 29 39.2	
	comp=E,4µm,0.4s						
JMU	Jammu	2.83	177	*e*P	Pn	17 29 13.8	+2.8
JMU				IAML		17 29 57.4	
	comp=N,2µm,0.0s						
JMU				IAML		17 29 57.9	
	comp=E,3µm,0.5s						
TSSA	Tissa	3.03	156	*e*P	Pn	17 29 15.3	+2.2
TSSA				*e*x	x	17 29 54.3	
MANEM	Manem	3.08	309		Pb	17 29 17.6	-2.3
MANEM					Sn	17 29 49.2	-1.7
DHRM	DHARAMSHALA	3.62	158	*e*P	Pn	17 29 22.6	+1.4
DHRM				*e*S	Sn	17 30 01.9	-2.3
DHRM				IAML		17 30 26.5	
	comp=N,670nm,0.6s						
DHRM				IAML		17 30 29.4	
	comp=E,773nm,1.1s						
DRK	Karamyk	4.48	330	Pn	Pn	17 29 34.0	+0.9
SDNR	Sundarnagar	4.53	154	*e*P	Pn	17 29 33.7	+0.2
KBL	Kabul	4.75	259	Pn	Pn	17 29 38.0	+1.3
SMLA	Simla	4.94	154	*e*P	Pn	17 29 40.0	+0.9
SMLA				*e*S	Sn	17 30 32.0	-4.3
SMLA				IAML		17 30 39.0	
	comp=N,1µm,1.2s						
SMLA				IAML		17 30 39.1	
	comp=E,1µm,0.6s						
CHGR	Chuyangaron	5.35	306	Pn	Pn	17 29 45.6	+0.8
SHAA	Shahritus	5.62	292	Pn	Pn	17 29 49.3	+0.8
ARSB	Arslanbob	5.85	347	Pn	Pn	17 29 52.5	+0.8
DDI	Dehra Dun	6.00	151	*e*S	Sn	17 30 55.5	-7.0
JOSI	Joshimath	6.50	140	IAML		17 30 06.5	
	comp=N,620nm,0.6s						
JOSI				IAML		17 30 09.4	
	comp=E,685nm,0.8s						
TARG	Taragay, Kyrgy	6.57	21	Pn	Pn	17 30 04.2	+2.3
WUS	Wushi	6.61	31	Pn	Pn	17 29 59.7	-2.5
BOOM	Boomskoye usch	6.93	8	Pn	Pn	17 30 07.1	+0.5
AAK	Ala-Archa	7.01	359	Pn	Pn	17 30 13.8	+6.1
	comp=E,0.9nm,0.3s,baz=147,slow=8.4,SNR=9.1						
AAK				LR	LR	17 32 58.7	
	comp=E,704nm,21.3s,baz=240,slow=38						
	comp=E,5.5nm,0.5s						
AAK	Ala-Archa	7.01	359		Pn	17 30 08.3	+0.7
PRZ	Przheval'sk	7.44	22		Pn	17 30 19.0	+5.4
KK31	Karatay Array	8.14	338	Pn	Pn	17 30 24.4	+1.3
KKAR	Karatay Array	8.14	338	Pn	Pn	17 30 25.1	+2.1
KKAR				Sn	Sn	17 31 54.2	-0.8
MAKZ	Makanchi	12.45	24	Pn	Pn	17 31 22.3	+0.3
MKAR	Makanchi Array	12.54	25	Pn	Pn	17 31 28.5	+5.2
	comp=E,0.7nm,0.3s,baz=111,slow=7.7,SNR=34						
	comp=E,2.8nm,0.7s						
EVN	Everest	12.84	123	Pn	Pn	17 31 24.9	-3.0
KURBB	Kurchatov Arra	15.25	9	Pn	Pn	17 32 00.3	+0.2
	comp=E,0.2nm,0.3s,baz=201,slow=11,SNR=7.3						
	comp=E,5.1nm,0.9s						
KURK	Kurchatov	15.36	9		Pn	17 32 00.3	-1.2
AB31	Akbulak array	17.39	326	Pn	Pn	17 32 26.3	-1.1
ABKAR	Akbulak array	17.39	326	Pn	Pn	17 32 26.9	-0.5
BVAR	Borovoye Array	17.66	351	P	P	17 32 33.2	+1.4
	comp=E,0.1nm,0.3s,baz=157,slow=9.2,SNR=14						
	comp=E,4.1nm,0.6s						
BORK	Borovoye	17.69	351	P	Pn	17 32 31.4	+0.2
AKTO	Aktyubinsk	19.11	326	P	P	17 32 47.3	-0.4
	comp=E,1.5nm,0.3s,baz=122,slow=8.4,SNR=17						
	comp=E,6.5nm,0.5s						
ZAA0	Zalesovo Array	19.65	18	P	P	17 32 54.6	+1.0
ZALV	Zalesovo Beam	19.65	18	P	P	17 32 55.2	+1.6
	comp=E,0.8nm,0.3s,baz=208,slow=11,SNR=14						
	comp=E,9.0nm,0.7s						
SONM	Songino Array	26.44	53	P	P	17 34 03.6	+1.7
	comp=E,4.3nm,0.9s,baz=261,slow=11,SNR=5.2						
	comp=E,4.3nm,0.9s						
SONM	Songino Array	26.44	53	IAmb	IAmb	17 34 09.3	
	comp=Z,4.7nm,1.1s						
CHTO	Chiang Mai	27.20	122	P	P	17 34 09.2	+0.3
CHTO				IAmb	IAmb	17 34 15.6	
	comp=Z,9.0nm,1.0s						
CM31	Chiang Mai Arr	27.44	122	P	P	17 34 10.1	-0.9
CM31				IAmb	IAmb	17 34 15.7	
	comp=Z,11nm,0.9s						
CMAR	Chiang Mai Arr	27.44	122	P	P	17 34 11.2	+0.2
	comp=Z,5.4nm,0.8s,baz=311,slow=10,SNR=19						
	comp=Z,5.4nm,0.8s						
CMAR	Chiang Mai Arr	27.44	122	P	P	17 34 10.2	-0.8
RAYN	Ar Rayn	27.99	252	P	P	17 34 14.2	-1.8
RAYN				IAmb	IAmb	17 34 17.4	
	comp=Z,5.8nm,1.0s						
NRIK	Noril'sk	34.52	8	P	P	17 35 12.8	0.0
	comp=Z,7.1nm,0.8s,baz=194,slow=7.3,SNR=10						
	comp=Z,7.1nm,0.8s						
NRIK	Noril'sk	34.52	8	P	P	17 35 13.9	+1.1
NRIK				IAmb	IAmb	17 35 16.5	
	comp=Z,8.1nm,0.9s						
AKASG	Malin Array Be	35.81	309	P	P	17 35 23.6	-0.6
	comp=Z,1.5nm,0.7s,baz=90,slow=8.3,SNR=3.2						
	comp=Z,1.5nm,0.7s						
BUR08	Bucovina Ar. S	38.27	304	P	P	17 35 46.0	+0.7
BUR08				IAmb	IAmb	17 35 51.2	
	comp=Z,13nm,1.4s						
FINES	FINESS Array B	39.88	326	P	P	17 35 57.0	-1.4
	comp=Z,7.7nm,1.0s,baz=90,slow=5.7,SNR=7.2						
	comp=Z,7.7nm,1.0s						
FINES	FINESS Array B	39.88	326	P	P	17 35 57.2	-1.2
ARCES	ARCESS Array B	43.10	337	P	P	17 36 24.9	+0.1
	comp=Z,4.4nm,0.8s,baz=109,slow=6.9,SNR=9.0						
	comp=Z,4.4nm,0.8s						
ARCES	ARCESS Array B	43.10	337	P	P	17 36 25.3	+0.5
TIXI	Tiksi	45.49	21	P	P	17 36 45.5	+1.6
	comp=Z,2.3nm,0.3s,baz=284,slow=4.1,SNR=4.8						
	comp=Z,2.3nm,0.3s						
HFS	Hagfors	45.59	322	P	P	17 36 45.0	+0.2
	comp=Z,4.3nm,0.7s,baz=108,slow=9.5,SNR=6.2						
	comp=Z,4.3nm,0.7s						
NB2	NORSAR Subarra	46.87	323	P	P	17 36 55.5	+0.5
	comp=Z,2.7nm,0.8s,baz=93,slow=7.9						
NOA	NORSAR Array B	46.87	323	P	P	17 36 55.4	+0.5
	comp=Z,1.6nm,0.7s,baz=94,slow=7.6,SNR=5.3						
	comp=Z,1.6nm,0.7s						
JWT	Wachi	48.75	72	P	P	17 37 11.3	+1.5
MJAR	Matsushiro Arr	50.49	69	P	P	17 37 23.6	+0.5
	comp=Z,2.7nm,0.7s,baz=294,slow=8.6,SNR=9.6						
	comp=Z,2.7nm,0.7s						
MJAR	Matsushiro Arr	50.49	69	P	P	17 37 23.8	+0.7
ESDC	Sonseca Array	60.49	300	P	P	17 38 34.9	-0.2
	comp=Z,1.1nm,0.8s,baz=56,slow=7.7,SNR=10.0						
	comp=Z,1.1nm,0.8s						
TORD	Torodi Ar. Bea	68.70	271	P	P	17 39 26.0	-2.9
	comp=Z,1.9nm,0.9s,baz=35,slow=5.2,SNR=6.1						
	comp=Z,1.9nm,0.9s						
D19K	Kuna River	69.06	18	P	P	17 39 31.5	+1.1
TOLK	Toolik Lake Re	70.99	16	IAmb	IAmb	17 40 15.9	
	comp=Z,7.6nm,1.4s						
INK	Inuvik	74.26	11	P	P	17 40 01.9	+0.3
	comp=Z,4.1nm,0.8s,baz=353,slow=6.5,SNR=10						
	comp=Z,4.1nm,0.8s						
INK	Inuvik	74.26	11	P	P	17 40 02.6	+1.0
INK				IAmb	IAmb	17 40 04.6	
	comp=Z,5.8nm,0.9s						
ILAR	Eielson Array	74.77	17	P	P	17 40 06.0	+1.2
	comp=Z,1.5nm,0.8s,baz=320,slow=4.8,SNR=12						
	comp=Z,1.5nm,0.8s						
ILAR	Eielson Array	74.77	17	P	P	17 40 04.6	-0.2
LBTB	Lobatse	76.09	225	P	P	17 40 11.9	-1.0
	comp=Z,2.4nm,0.9s,baz=22,slow=6.2,SNR=3.6						
	comp=Z,2.4nm,0.9s						
WRA	Warramunga Arr	79.01	124	P	P	17 40 29.3	0.0
	comp=Z,1.0nm,0.7s,baz=317,slow=5.7,SNR=1.5						
	comp=Z,1.0nm,0.7s						
BOSA	Boshof	79.06	223	P	P	17 40 27.9	-1.6
	comp=Z,2.9nm,0.7s,baz=59,slow=6.6,SNR=3.7						
	comp=Z,2.9nm,0.7s						
YKA	Yellowknife Ar	81.94	4	P	P	17 40 44.9	+0.5
	comp=Z,1.3nm,0.7s,baz=342,slow=5.6,SNR=14						
	comp=Z,1.3nm,0.7s						
YKA	Yellowknife Ar	81.94	4	P	P	17 40 45.2	+0.9
YKAW1	Yellowknife Wh	81.96	4	IAmb	IAmb	17 40 47.5	
	comp=Z,8.4nm,1.2s						

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*IDC **30** 17:31:33.6±1.7,33°.31S×178°.51W,h0^{km},mb4.5/3, mbtmp4.5/4,ML4.2/1,Error ellipse: s-maj=52.6km s-min=29.6km az=137.0*

*WEL **30** 17:31:35.2±0.8,33°S±9°×17°8W±1°8,h12^{km},mB5.0/10, ML4.4/20,MLv4.6/15,Mw(mB)4.3/10,Error ellipse: s-maj=25.5km s-min=5.3km az=115.3,confirmed*

*NOU **30** 17:31:35.7,33°.65S×178°.05W,h4^{km},MLv4.5/8,South of Kermadec Islands*

*NEIC **30** 17:31:37.8±1.3,32°.8S±0°.1×178°.7W±0°.2,h10^{km}±2^{km}, mb4.4/14,Error ellipse: s-maj=40.6km s-min=9.4km az=55.0*

ISC 30 17:31:35.9±1.0,33°.41S±0°.07×178°.0W±0°.1,h35^{km},n81, σ1^s.23/95,mb4.5/11,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	4.13	1	P	Pn	17 32 33.8	-2.7
GLKZ				S	Sn	17 33 20.1	-3.5
MXZ	Matakaoa Point	5.14	215	Pn	Pn	17 32 49.8	-0.4
MXZ	Matakaoa Point	5.14	215	P	Pn	17 32 50.8	+0.5
MXZ	Matakaoa Point	5.14	215	P	Pn	17 32 50.6	+0.4
MXZ				S	Sn	17 33 47.5	-0.9
WMGZ	Waiomatatini S	5.29	213	P	Pn	17 32 52.7	+0.3
WMGZ				S	Sn	17 33 54.5	+2.3
PKGZ	Pakihiroa	5.49	215	P	Pn	17 32 55.0	-0.1
PKGZ				S	Sn	17 33 56.8	-0.2
HAZ	Te Kaha	5.55	217	P	Pn	17 32 55.9	0.0
HAZ				S	Sn	17 33 58.5	+0.1
PUZ	Puketiti	5.57	212	P	Pn	17 32 55.9	-0.4
PUZ				S	Sn	17 33 59.7	+0.6
RUGZ	Raukumara Rang	5.76	217	P	Pn	17 32 58.6	-0.4
RUGZ				S	Sn	17 34 03.7	-0.3
TWGZ	Tauwhareparae	5.79	214	P	Pn	17 33 00.1	+0.9
TWGZ				S	Sn	17 34 04.1	-0.3
CNGZ	Carnagh Statio	5.94	210	P	Pn	17 33 00.9	-0.3
TKGZ	Te Karaka	6.06	213	P	Pn	17 33 03.1	+0.2
TKGZ				S	Sn	17 34 10.3	-0.7
MWZ	Matawai	6.12	215	P	Pn	17 33 03.3	-0.6
MWZ				S	Sn	17 34 10.5	-2.2
KUZ	Kuaotunu	6.15	235	P	Pn	17 33 04.1	-0.1
URZ	Urewera	6.28	218	Pn	Pn	17 33 05.2	-0.7
	6.1nm,0.3s,baz=248,slow=4.3,SNR=42						
URZ				Sn	Sn	17 34 14.3	-2.1
	4.0nm,0.3s,baz=231,slow=22,SNR=9.5						
	21nm,0.3s						
URZ	Urewera	6.28	218	P	Pn	17 33 05.8	-0.1
URZ	Urewera	6.28	218	P	Pn	17 33 04.5	-1.4
URZ				S	Sn	17 34 14.3	-2.1
OPRZ	Ohinepanea	6.28	224	P	Pn	17 33 07.7	+1.7
RAGZ	Rawiri	6.31	215	P	Pn	17 33 06.3	-0.1
RAGZ				S	Sn	17 34 16.6	-0.6
RIGZ	Rimuhau	6.32	212	P	Pn	17 33 06.2	-0.3
RIGZ				S	Sn	17 34 16.5	-0.9
PRGZ	Paritu Road	6.44	210	P	Pn	17 33 07.3	-1.0
SNGZ	Shannon Statio	6.57	214	P	Pn	17 33 10.8	+0.8
SNGZ				S	Sn	17 34 23.6	0.0
RTZ	Ruatahuna	6.61	217		Pn	17 33 10.0	-0.6
RTZ	Ruatahuna	6.61	217	P	Pn	17 33 10.6	0.0
MHGZ	Mahia Peninsul	6.63	209	P	Pn	17 33 10.1	-0.6
WCZ	Waipu Caves	6.82	246	P	Pn	17 33 13.4	0.0
WHHZ	Waihua	6.86	213	P	Pn	17 33 15.1	+1.2
MTHZ	Maungataniwha	6.87	216	P	Pn	17 33 14.0	0.0
MTHZ				S	Sn	17 34 29.9	-1.1
NMHZ	Naumai	7.07	215	P	Pn	17 33 17.5	+0.6
OUZ	Omahuta	7.21	253	P	Pn	17 33 20.1	+1.4
OUZ	Omahuta	7.21	253	P	Pn	17 33 19.9	+1.2
BKZ	Black Stump Fm	7.28	216	P	Pn	17 33 19.4	-0.4
BKZ	Black Stump Fm	7.28	216	P	Pn	17 33 19.3	-0.4
MCHZ	McNeill Hill	7.40	214	P	Pn	17 33 21.5	+0.2
CKHZ	Cape Kidnapper	7.40	211	P	Pn	17 33 21.1	-0.2
KWHZ	Kaweka Forest	7.51	215	P	Pn	17 33 22.3	-0.6
KATZ	Kakaramea	7.55	221	P	Pn	17 33 24.2	+0.6
KAHZ	Kahuranaki	7.60	212	P	Pn	17 33 22.1	-2.0
TMVZ	Te Maari	7.65	220	P	Pn	17 33 24.1	-0.7
NTVZ	North Tongarir	7.65	220	P	Pn	17 33 24.3	-0.6
OTVZ	Oturere	7.71	220	P	Pn	17 33 25.1	-0.6
NNVZ	North Ngauruho	7.71	220	P	Pn	17 33 27.4	+1.7
SNVZ	South Ngauruho	7.74	220	P	Pn	17 33 25.9	-0.2
NGZ	Ngauruhoe	7.75	220	P	Pn	17 33 26.3	0.0
MOVZ	Moawhango	7.84	218	P	Pn	17 33 27.1	-0.3
WNVZ	Wahianoa	7.86	219	P	Pn	17 33 27.2	-0.6
PNHZ	Pukenui	8.00	214	P	Pn	17 33 27.6	-2.1
PRHZ	Porangahau	8.10	211	P	Pn	17 33 29.8	-1.0
TSZ	Takapari Road	8.23	215	P	Pn	17 33 30.6	-2.1
DVHZ	Dannevirke	8.33	213	P	Pn	17 33 33.2	-0.9
BFZ	Birch Farm	8.61	211	P	Pn	17 33 36.5	-1.4
BFZ	Birch Farm	8.61	211	P	Pn	17 33 36.1	-1.7
MRZ	Mangatainoka R	8.89	214	P	Pn	17 33 38.9	-2.8
OGWZ	Otaki Gorge	9.20	215	P	Pn	17 33 43.6	-2.4
KHZ	Kahutara	11.21	214	P	Pn	17 34 13.5	0.0
ODZ	Otahua Downs	14.57	214	P	Pn	17 34 59.4	0.0
CTAO	Charters Tower	34.42	284	P	P	17 38 20.3	+0.2
CTAO				IAmb	IAmb	17 38 30.1	
	comp=Z,8.5nm,1.1s						
INKA	Innaminka	35.82	268	P	P	17 38 32.9	+0.9
INKA				IAmb	IAmb	17 38 37.5	
	comp=Z,3.4nm,1.1s						
COEN	Coen	40.21	289	P	P	17 39 07.4	-1.7
AS31	Alice Springs	43.06	270	P	P	17 39 31.6	-1.0
AS31				IAmb	IAmb	17 39 32.9	
	comp=Z,2.2nm,0.5s						
ASAR	Alice Springs	43.06	270	P	P	17 39 31.9	-0.6
	comp=Z,5.9nm,0.6s,baz=110,slow=7.5,SNR=85						
	comp=Z,5.9nm,0.6s						
ASAR	Alice Springs	43.06	270	P	P	17 39 31.4	-1.2
WR0	Warramunga Arr	44.14	275	P	P	17 39 40.2	-1.0
WR0				IAmb	IAmb	17 40 06.0	
	comp=Z,5.3nm,1.1s						
WR8	Warramunga Arr	44.18	275	P	P	17 39 40.8	-0.7
WR8				IAmb	IAmb	17 40 13.9	
	comp=Z,12nm,1.4s						
WB2	Warramunga Arr	44.31	275	P	P	17 39 42.1	-0.4
WRA	Warramunga Arr	44.32	275	P	P	17 39 41.8	-0.9
	comp=Z,3.6nm,0.5s,baz=116,slow=8.2,SNR=32						
	comp=Z,3.6nm,0.5s						
WRA	Warramunga Arr	44.32	275	P	P	17 39 41.1	-1.5
WB0	Warramunga Arr	44.35	275	P	P	17 39 41.8	-1.2
MTN	Manton Dam	50.54	281	P	P	17 40 29.9	-1.1
MTN				IAmb	IAmb	17 41 10.8	
	comp=Z,7.7nm,1.2s						
KNRA	Kununurra	51.02	277	P	P	17 40 34.2	-0.5
FITZ	Fitzroy Crossi	52.44	272	P	P	17 40 44.5	-0.8
	comp=Z,2.0nm,0.5s,baz=139,slow=7.7,SNR=7.6						
	comp=Z,2.0nm,0.5s						
FITZ	Fitzroy Crossi	52.44	272	P	P	17 40 44.3	-0.9
QSPA	South Pole Qui	56.71	180	P	P	17 41 26.3	+11
QSPA				IAmb	IAmb	17 41 41.0	
	comp=Z,3.2nm,0.9s						
BELA	Belgrano 2	66.81	172	P	P	17 42 33.9	+11
BELA				IAmb	IAmb	17 43 01.6	
	comp=Z,5.0nm,1.3s						
KURK	Kurchatov	123.12	312		PKiKP	17 50 30.4	+2.0
KURBB	Kurchatov Arra	123.15	312	PKP	PKiKP	17 50 30.4	+1.9
	comp=Z,0.3nm,0.5s,baz=108,slow=1.8,SNR=4.7						
FIA1	FINESS Array S	147.96	338		PKPab	17 51 19.9	+0.6
FINES	FINESS Array B	147.96	338	PKPbc	PKPbc	17 51 18.1	+1.5
	comp=Z,1.6nm,0.5s,baz=48,slow=2.8,SNR=17						
FINES	FINESS Array B	147.96	338		PKiKP	17 51 18.5	0.0
HFS	Hagfors	152.19	347	PKPbc	PKiKP	17 51 30.7	+3.4
	comp=Z,2.2nm,0.8s,baz=315,slow=0.4,SNR=4.3						
BRTR	Keskin Array B	153.93	293	PKPbc	PKiKP	17 51 33.5	+1.8
	comp=Z,0.9nm,0.7s,baz=126,slow=2.0,SNR=3.6						

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*IDC **30** 17:34:15.9±2.9,32°.78S×178°.51W,h0^{km},mb3.8/3, mbtmp3.9/4,ML3.7/1,Error ellipse: s-maj=71.3km s-min=46.1km az=127.0*

*NEIC **30** 17:34:23.8±1.9,32°.5S±0°.1×178°.7W±0°.1,h35^{km}±2^{km}, mb4.4/10,Error ellipse: s-maj=22.7km s-min=18.7km az=12.0*

ISC 30 17:34:24.1±1.7,32°.4S±0°.2×178°.8W±0°.2,h35^{km},n16, σ1^s.20/15,mb4.2/9,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.73	209	Pn	Pn	17 35 51.9	-8.4
	1.6nm,0.3s,baz=37,slow=7.0,SNR=1.0						
URZ				Sn	Sn	17 37 03.5	-12
	1.0nm,0.3s,baz=157,slow=14,SNR=1.3						
	6.0nm,0.5s						
RTZ	Ruatahuna	7.09	208	Pn	Pn	17 36 02.9	-2.5
RTZ				Sn	Sn	17 37 12.1	-13
HIZ	Hauiti	8.00	219	Pn	Pn	17 36 17.5	-0.3
FOZ	Fox Glacier	14.27	216		Pn	17 37 44.7	+1.1
STKA	Stephens Creek	33.42	260	P	P	17 41 00.7	+1.1
CTAO	Charters Tower	33.52	283	P	P	17 41 00.6	+0.1
CTAO				IAmb	IAmb	17 41 23.0	
	comp=Z,8.8nm,1.3s						
ASAR	Alice Springs	42.37	269	P	P	17 42 13.6	-1.7
	comp=Z,0.5nm,0.6s,baz=110,slow=7.8,SNR=3.5						
	comp=Z,0.5nm,0.6s						
WR8	Warramunga Arr	43.40	275	P	P	17 42 23.0	-0.6
WR8				IAmb	IAmb	17 43 03.5	
	comp=Z,6.5nm,1.4s						
WB2	Warramunga Arr	43.53	275	P	P	17 42 24.1	-0.6
WB2				IAmb	IAmb	17 42 50.0	
	comp=Z,21nm,1.3s						
WRA	Warramunga Arr	43.54	275	P	P	17 42 23.5	-1.2
	comp=Z,1.0nm,0.4s,baz=114,slow=8.4,SNR=8.6						
	comp=Z,1.0nm,0.4s						
WB0	Warramunga Arr	43.58	275	P	P	17 42 24.2	-0.7
WB0				IAmb	IAmb	17 43 01.1	
	comp=Z,5.4nm,1.3s						
VNDA	Vanda	46.03	186	P	P	17 42 45.1	+1.4
VNDA				IAmb	IAmb	17 43 22.6	
	comp=Z,5.8nm,1.4s						
KNRA	Kununurra	50.22	276	P	P	17 43 16.0	-0.9
FITZ	Fitzroy Crossi	51.72	272	P	P	17 43 28.1	0.0
	comp=Z,1.6nm,0.9s,baz=126,slow=14,SNR=1.6						
	comp=Z,1.6nm,0.9s						
QSPA	South Pole Qui	57.71	180	P	P	17 44 10.9	-0.1
QSPA				IAmb	IAmb	17 44 19.9	
	comp=Z,4.8nm,1.3s						
FINES	FINESS Array B	146.78	338	PKPbc	PKPdf	17 53 59.4	-0.5
	comp=Z,3.7nm,0.9s,baz=46,slow=5.5,SNR=8.6						

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*IDC **30** 17:39:14.2±1.8,35°.49N×74°.46E,h0^{km},mb3.8/4, mbtmp3.6/10,ML3.2/6,MS4.0/1,Error ellipse: s-maj=38.0km s-min=21.7km az=53.0*

ISC 30 17:39:18.9±1.8,35°.4N±0°.2×74°.4E±0°.2,h36^{km},n10, σ1^s.55/10,mb3.7/4,Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	7.20	0	Pn	Pn	17 41 03.3	+1.6
	0.3nm,0.3s,baz=153,slow=12,SNR=5.3						
	0.5nm,0.3s						
MKAR	Makanchi Array	12.81	25	Pn	Pn	17 42 19.6	+1.3
	0.1nm,0.3s,baz=207,slow=12,SNR=4.2						
MKAR				LR	LR	17 47 13.8	
	comp=Z,657nm,19.9s,baz=229,slow=38						
	0.1nm,0.5s						
KURBB	Kurchatov Arra	15.48	10	Pn	Pn	17 42 51.4	-3.0
	0.1nm,0.3s,baz=202,slow=11,SNR=7.8						
	0.4nm,0.7s						
BVAR	Borovoye Array	17.82	352	P	P	17 43 24.3	-0.1
	0.1nm,0.3s,baz=164,slow=8.1,SNR=6.0						
	1.2nm,0.6s						
AKTO	Aktyubinsk	19.15	327	P	P	17 43 39.4	+0.5
	0.7nm,0.3s,baz=115,slow=9.9,SNR=11						
	2.6nm,0.5s						
ZALV	Zalesovo Beam	19.90	18	P	P	17 43 45.8	-1.3
	0.3nm,0.3s,baz=214,slow=10,SNR=11						
	1.7nm,0.6s						
SONM	Songino Array	26.73	53	P	P	17 44 54.1	-0.8
	0.2nm,0.5s,baz=251,slow=9.0,SNR=2.7						
	0.2nm,0.5s						
CMAR	Chiang Mai Arr	27.52	121	P	P	17 45 02.8	+0.6
	1.0nm,0.8s,baz=313,slow=10,SNR=9.9						
	1.0nm,0.8s						
FINES	FINESS Array B	39.92	326	P	P	17 46 48.3	-0.8
	1.3nm,0.8s,baz=95,slow=12,SNR=3.8						
	1.3nm,0.8s						
ARCES	ARCESS Array B	43.20	337	P	P	17 47 16.5	+0.6
	3.4nm,0.9s,baz=118,slow=8.6,SNR=2.0						
	3.4nm,0.9s						

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*IDC **30** 17:40:59.0±2.8,35°.39N×74°.31E,h0^{km},mb3.6/1, mbtmp3.4/6,ML2.8/4,Error ellipse: s-maj=61.2km s-min=26.3km az=64.0*

ISC 30 17:41:02.7±2.4,35°.3N±0°.2×74°.1E±0°.3,h35^{km},n6,σ1^s.57/6, Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	13.00	26	Pn	Pn	17 44 06.2	+1.3
	baz=199,slow=11,SNR=1.5						
	0.1nm,0.4s						
KURBB	Kurchatov Arra	15.61	11	Pn	Pn	17 44 39.0	-0.9
	baz=200,slow=10,SNR=5.2						
	0.3nm,0.8s						
BVAR	Borovoye Array	17.87	353	P	Pn	17 45 08.2	-0.2
	baz=151,slow=7.6,SNR=2.5						
	0.4nm,0.4s						
AKTO	Aktyubinsk	19.06	327	P	Pn	17 45 23.7	+0.9
	1.2nm,0.4s,baz=118,slow=12,SNR=3.8						
ZALV	Zalesovo Beam	20.07	19	P	P	17 45 30.8	-2.0
	0.2nm,0.3s,baz=214,slow=12,SNR=4.4						
	1.1nm,0.6s						
CMAR	Chiang Mai Arr	27.72	121	P	P	17 46 48.0	+0.1
	0.6nm,0.7s,baz=308,slow=10,SNR=5.3						
	0.6nm,0.7s						

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*IDC **30** 17:44:41.5±0.9,36°.69S×78°.47E,h0^{km},mb4.0/8, mbtmp4.0/8,MS4.7/22,Error ellipse: s-maj=30.0km s-min=22.2km az=160.0*

*NEIC **30** 17:44:43.3±1.3,37°.1S±0°.1×78°.4E±0°.1,h10^{km}±1^{km}, mb4.8/18,Error ellipse: s-maj=23.8km s-min=10.0km az=137.0*

*GCMT **30** 17:44:46.3±0.2,36°.86S±0°.01×78°.49E±0°.01,h12^{km}, MW5.1/113,Moment Tensor Solution. s41,c55; s113,c180; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.37±.14; $M_{\theta\theta}$-5.94±.12; $M_{\phi\phi}$6.31±.12; $M_{r\theta}$0.94±.37; $M_{\theta\phi}$0.39±.13; $M_{\phi r}$-0.99±.39; Best double couple: $M_0$6.28800×10^{16} NP1:ϕ_s227.00000°,δ77.00000°, λ-1.00000°. NP2:ϕ_s317.00000°,δ89.00000°, λ-167.00000°. Principal axes: T 6.4590, Plg8.0000°, Azm91.0000°; N -0.3390, Plg77.0000°, Azm322.0000°; P -6.1170, Plg10.0000°, Azm183.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 17:44:43.7±0.6,37°.0S±0°.1×78°.3E±0°.1,h15^{km},n63,

$\sigma 1^{s}34$/33, mb4.7/15, MS4.7/22, 1C, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AIS	Amsterdam Isla	1.01	217		Pn	17 45 00.9	-2.4
H04N2	CROZET ISLANDS	21.79	237	T	T	18 12 20.6	
	baz=73,slow=75						
H04N1	CROZET ISLANDS	21.80	237	T	T	18 12 20.7	
	baz=73,slow=75						
H04N3	CROZET ISLANDS	21.80	237	T	T	18 12 19.5	
	baz=73,slow=75						
H01W2	Cape Leeuwin H	28.95	97	T	T	18 20 51.0	
	baz=255,slow=75,SNR=1464						
H01W3	Cape Leeuwin H	28.95	97	T	T	18 20 51.4	
	baz=255,slow=75,SNR=920						
H01W1	Cape Leeuwin H	28.96	97	T	T	18 20 51.8	
	baz=255,slow=75,SNR=1148						
H08S2	Diego Garcia H	29.69	348	T	T	18 21 46.5	
	baz=170,slow=76,SNR=379						
H08S1	Diego Carcia H	29.70	348	T	T	18 21 45.0	
	baz=170,slow=76,SNR=249						
H08S3	Diego Garcia H	29.71	348	T	T	18 21 46.8	
	baz=170,slow=76,SNR=1020						
MAW	Mawson	31.89	191	LR	LR	18 01 37.8	
	comp=Z,2μm,18.9s,baz=16,slow=32						
NWAO	Narrogin (SRO)	31.98	94	LR	LR	18 01 26.1	
	comp=Z,2μm,20.4s,baz=282,slow=32						
OPO	Ambohidratompo	32.90	295	LR	LR	18 02 43.3	
	comp=Z,430nm,18.5s,baz=322,slow=33						
BOSA	Boshof	44.91	265	P	P	17 52 58.3	+0.3
	4.6nm,0.9s,baz=100,slow=8.6,SNR=4.0						
	4.6nm,0.9s						
MATP	Matopo	46.20	277	LR	LR	18 08 43.3	
	comp=Z,582nm,21.9s,baz=72,slow=31						
LBTB	Lobatse	46.24	269	LR	LR	18 09 49.0	
	comp=Z,1μm,18.6s,baz=60,slow=32						
LBTB	Lobatse	46.24	269	P	P	17 53 07.2	-1.3
MAKGR	Makgori	46.51	268	P	P	17 53 11.2	+0.5
LPHEP	Lephephe	46.82	272		P	17 53 13.4	+0.3
KHWEE	KHWEE	47.85	273	P	P	17 53 20.8	-0.4
ASAR	Alice Springs	49.13	91	P	P	17 53 30.2	-0.7
	1.3nm,1.0s,baz=242,slow=6.3,SNR=7.9						
	1.3nm,1.0s						
ASAR	Alice Springs	49.13	91	P	P	17 53 31.4	+0.4
LSZ	Lusaka	49.31	282	LR	LR	18 11 39.6	
	comp=Z,878nm,19.7s,baz=66,slow=33						
LSZ	Lusaka	49.31	282		P	17 53 31.6	-0.8
PHDHD	Phuduhudu	49.48	274	P	P	17 53 34.5	+0.8
PHDHD				IAmb	IAmb	17 53 48.3	
	comp=Z,17nm,1.1s						
KSANE	Kasane	50.27	277	P	P	17 53 39.8	0.0
KSANE				IAmb	IAmb	17 53 41.9	
	comp=Z,15nm,1.1s						
TROLL	Troll, Antarti	50.92	203	⇑P	P	17 53 46.3	+2.4
	comp=Z,304nm,0.8s						
WRA	Warramunga Arr	51.36	87	P	P	17 53 47.1	-0.8
	comp=Z,3.1nm,1.1s,baz=236,slow=6.8,SNR=4.7						
	comp=Z,3.1nm,1.1s						
WRA	Warramunga Arr	51.36	87	P	P	17 53 46.6	-1.3
WRAB	Tennant Creek	51.38	87	P	P	17 53 46.9	-1.1
WRAB				IAmb	IAmb	17 53 54.9	
	comp=Z,14nm,1.3s						
WR8	Warramunga Arr	51.48	87		P	17 53 48.4	-0.4
WB0	Warramunga Arr	51.50	87		P	17 53 47.9	-1.0
WB0				IAmb	IAmb	17 53 55.1	
	comp=Z,11nm,1.1s						
KOOLE	Kule	51.53	269		P	17 53 49.2	-0.1
KOOLE				IAmb	IAmb	17 53 52.9	
	comp=Z,14nm,0.9s						
GRTLG	Ghanzi	51.53	271		P	17 53 49.2	-0.1
GRTLG				IAmb	IAmb	17 53 50.9	
	comp=Z,14nm,1.1s						
STKA	Stephens Creek	51.58	104	P	P	17 53 50.2	+0.9
	comp=Z,2.1nm,0.8s,baz=260,slow=8.2,SNR=3.0						
	comp=Z,2.1nm,0.8s						
SNAA	Sanae	52.62	203	P	P	17 53 59.0	+2.5
	comp=Z,1.8nm,0.6s,baz=68,slow=8.7,SNR=3.8						
SNAA				LR	LR	18 12 23.9	
	comp=Z,269nm,21.6s,baz=122,slow=31						
	comp=Z,1.8nm,0.6s						
SNAA	Sanae	52.62	203	P	P	17 53 56.1	-0.5
VNDA	Vanda	52.81	164	LR	LR	18 14 25.9	
	comp=Z,636nm,18.6s,baz=280,slow=34						
QSPA	South Pole Qui	53.17	180	P	P	17 54 02.4	+1.6
	comp=Z,4.1nm,1.0s,baz=292,slow=2.9,SNR=7.2						
QSPA				LR	LR	18 15 08.1	
	comp=Z,2μm,19.0s,baz=292,slow=34						
	comp=Z,4.1nm,1.0s						
QSPA	South Pole Qui	53.17	180	P	P	17 54 00.3	-0.5
QSPA				IAmb	IAmb	17 54 17.1	
	comp=Z,16nm,1.2s						
VNA2	Neumayer--Watz	54.17	204	P	P	17 54 10.2	+2.3
	baz=82,slow=7.1						
VNA1	Neumayer--Stat	54.51	204	P	P	17 54 15.6	+5.4
LODK	Lodwar	56.69	305	P	P	17 54 27.1	+0.3
LODK				IAmb	IAmb	17 54 35.7	
	comp=Z,24nm,1.9s						
MBAR	Mbarara	56.90	298	LR	LR	18 14 22.7	
	comp=Z,560nm,21.2s,baz=72,slow=31						
MBAR	Mbarara	56.90	298	P	P	17 54 28.4	0.0
CMAR	Chiang Mai Arr	58.48	23	P	P	17 54 36.1	-3.0
	comp=Z,0.5nm,1.0s,baz=214,slow=7.6,SNR=6.0						
	comp=Z,0.5nm,1.0s						
CMAR	Chiang Mai Arr	58.48	23	P	P	17 54 38.3	-0.8
BELA	Belgrano 2	58.70	193		P	17 54 38.4	-1.7
BELA				IAmb	IAmb	17 54 48.7	
	comp=Z,12nm,1.3s						
BRDH	Bariadhala	60.66	14	LR	LR	18 18 48.6	
	comp=Z,501nm,18.3s,baz=155,slow=34						
CTA	Charters Tower	60.82	94	LR	LR	18 19 12.9	
	comp=Z,1μm,19.2s,baz=267,slow=34						
PMG	Port Moresby	67.49	85	LR	LR	18 22 33.7	
	comp=Z,701nm,21.8s,baz=229,slow=34						
LZDM	Lanzhou Array	76.30	21	LR	LR	18 26 41.2	
	comp=Z,296nm,21.0s,baz=305,slow=33						
AAK	Ala-Archa	79.33	357	LR	LR	18 28 34.3	
	comp=Z,593nm,20.7s,baz=180,slow=33						
MKAR	Makanchi Array	83.48	3	LR	LR	18 31 34.8	
	comp=Z,509nm,20.9s,baz=186,slow=34						
TORD	Torodi Ar. Bea	87.44	288	P	P	17 57 32.5	+1.7
	comp=Z,0.4nm,0.6s,baz=138,slow=3.9,SNR=5.4						
	comp=Z,0.4nm,0.6s						
DBIC	Dimbokro	88.56	279	LR	LR	18 34 06.3	
	comp=Z,500nm,19.7s,baz=90,slow=34						
AKTO	Aktyubinsk	88.88	347	LR	LR	18 34 14.8	
	comp=Z,269nm,19.8s,baz=304,slow=34						
BVAR	Borovoye Array	89.91	355	LR	LR	18 36 34.6	
	comp=Z,243nm,18.4s,baz=197,slow=35						
ZALV	Zalesovo Beam	90.74	4	LR	LR	18 36 36.9	
	comp=Z,193nm,19.8s,baz=194,slow=34						
ARTI	Arti	94.55	349	LR	LR	18 39 01.8	
	comp=Z,255nm,18.6s,baz=101,slow=35						
KIRV	Kirov	98.24	345	LR	LR	18 39 30.7	
	comp=Z,174nm,19.3s,baz=99,slow=34						
ILAR	Eielson Array	141.53	29	PKP	PKPdf	18 04 13.8	+0.5
	comp=Z,0.8nm,0.9s,baz=281,slow=5.4,SNR=1.9						
TXAR	Lajitas Array	172.18	167	PKP	PKPdf	18 04 53.8	+1.6
	comp=Z,0.3nm,0.8s,baz=129,slow=3.6,SNR=4.2						

WEL ***30*** *17:47:41.5±0.9, 33°S±6°×17°8W±1°5, h12^{km}, mB5.2/6, ML4.8/16, MLv4.9/15, Mw(mB)4.7/6, Error ellipse: s-maj=20.0km s-min=4.4km az=108.3, confirmed*

IDC ***30*** *17:47:42.9±0.7, 33°.23S×178°.62W, h0^{km}, mb4.6/5, mbtmp4.6/6, ML4.7/1, MS3.9/1, Error ellipse: s-maj=31.4km s-min=23.3km az=80.0*

NEIC ***30*** *17:47:46.8±2.0, 33°.37S±0°.07×178°.9W±0°.1, h10^{km}±1^{km}, mb4.7/19, Error ellipse: s-maj=14.6km s-min=11.3km az=256.0*

ISC 30 17:47:47.4±0.6**, 33°.46S**±0°.06×**178°.36W**±0°.10**, h41**^{km}**, n119, $\sigma 2^{s}05$**/125**, mb4.7**/14**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.20	5	P	Pn	17 48 44.6	-4.2
GLKZ				S	Sn	17 49 30.5	-6.1
RAO	Raoul Island	4.21	5	Pn	Pn	17 48 48.5	-0.5
MXZ	Matakaoa Point	4.92	213	Pn	Pn	17 48 57.0	-1.7
MXZ	Matakaoa Point	4.92	213	P	Pn	17 48 57.2	-1.5
WMGZ	Waiomatatini S	5.08	210	P	Pn	17 48 59.8	-1.2
WMGZ				S	Sn	17 49 59.4	+1.0
PKGZ	Pakihiroa	5.27	212	P	Pn	17 49 01.8	-1.7
PKGZ				S	Sn	17 50 02.2	-0.8
HAZ	Te Kaha	5.32	215	P	Pn	17 49 03.1	-1.1
PUZ	Puketiti	5.36	210	P	Pn	17 49 02.6	-2.3
PUZ				S	Sn	17 50 05.5	+0.2
RUGZ	Raukumara Rang	5.53	214	P	Pn	17 49 05.6	-1.7
TWGZ	Tauwhareparae	5.57	211	P	Pn	17 49 06.2	-1.6
CNGZ	Carnagh Statio	5.74	208	P	Pn	17 49 07.8	-2.2
TKGZ	Te Karaka	5.84	211	P	Pn	17 49 10.8	-0.6
KUZ	Kuaotunu	5.86	234	P	Pn	17 49 12.0	+0.4
MWZ	Matawai	5.90	213	P	Pn	17 49 10.2	-2.1
MWZ				S	Sn	17 50 18.1	-0.5
OPRZ	Ohinepanea	6.02	222	P	Pn	17 49 14.6	+0.7
URZ	Urewera	6.04	216	Pn	Pn	17 49 12.8	-1.3
	17nm,0.3s,baz=254,slow=4.0,SNR=38						
URZ				Sn	Sn	17 50 20.2	-1.8
	8.0nm,0.3s,baz=144,slow=20,SNR=8.7						
	48nm,0.3s						
URZ	Urewera	6.04	216	P	Pn	17 49 12.7	-1.4
URZ				S	Sn	17 50 19.6	-2.3
TARZ	Mount Tarawera	6.33	220	P	Pn	17 49 19.7	+1.4
RTZ	Ruatahuna	6.38	215		Pn	17 49 17.4	-1.5
RRRZ	Republican Roa	6.41	219	P	Pn	17 49 20.3	+1.1
KNZ	Kokohu	6.41	209	P	Pn	17 49 18.1	-1.1
MHGZ	Mahia Peninsul	6.43	207	P	Pn	17 49 16.9	-2.7
WCZ	Waipu Caves	6.50	246	P	Pn	17 49 21.2	+0.8
TOZ	Tahuroa Road	6.57	228		Pn	17 49 20.8	-0.6
TOZ	Tahuroa Road	6.57	228	P	Pn	17 49 21.4	0.0
WHHZ	Waihua	6.64	211	P	Pn	17 49 21.7	-0.7
WHHZ				S	Sn	17 50 35.8	-1.0
NMHZ	Naumai	6.85	213	P	Pn	17 49 24.9	-0.4
OUZ	Omahuta	6.88	253	P	Pn	17 49 27.3	+1.6
ARHZ	Aropaoanui	6.90	212	P	Pn	17 49 25.2	-0.7
BKZ	Black Stump Fm	7.05	215		Pn	17 49 25.7	-2.3
MCHZ	McNeill Hill	7.18	212	P	Pn	17 49 28.9	-0.9
CKHZ	Cape Kidnapper	7.20	209	P	Pn	17 49 27.9	-2.0
CKHZ				S	Sn	17 50 47.2	-3.2
RITZ	Rihia Road	7.22	219	P	Pn	17 49 29.5	-0.9
KWHZ	Kaweka Forest	7.29	214	P	Pn	17 49 30.7	-0.6
KATZ	Kakaramea	7.31	219	P	Pn	17 49 31.6	0.0
KAHZ	Kahuranaki	7.39	210	P	Pn	17 49 28.9	-3.8
TMVZ	Te Maari	7.41	219	P	Pn	17 49 31.0	-2.0
NTVZ	North Tongarir	7.41	219	P	Pn	17 49 31.1	-1.9
ETVZ	East Tongariro	7.42	218	P	Pn	17 49 31.8	-1.4
KRVZ	Karewarewa	7.42	219	P	Pn	17 49 32.2	-1.0
HIZ	Hauiti	7.46	226	P	Pn	17 49 34.7	+1.1
OTVZ	Oturere	7.46	219	P	Pn	17 49 32.6	-1.2
NNVZ	North Ngauruho	7.46	219	P	Pn	17 49 32.8	-1.0
WTVZ	West Tongariro	7.46	219	P	Pn	17 49 33.1	-0.7
KRHZ	Kereru	7.49	213	P	Pn	17 49 31.3	-2.8
SNVZ	South Ngauruho	7.49	219	P	Pn	17 49 32.8	-1.4
NGZ	Ngauruhoe	7.50	219	P	Pn	17 49 34.3	0.0
TWVZ	Taurewa	7.51	220	P	Pn	17 49 28.9	-5.5
PXZ	Pawanui	7.60	209	P	Pn	17 49 30.5	-5.0
MOVZ	Moawhango	7.60	217	P	Pn	17 49 34.2	-1.4
WNVZ	Wahianoa	7.62	218	P	Pn	17 49 34.6	-1.3
TRVZ	Turoa	7.62	218	P	Pn	17 49 36.9	+0.8
PKVZ	Pokaka	7.72	219	P	Pn	17 49 36.0	-1.3
PNHZ	Pukenui	7.78	213	P	Pn	17 49 34.9	-3.2
PRHZ	Porangahau	7.89	209	P	Pn	17 49 34.8	-4.8
TSZ	Takapari Road	8.01	213	P	Pn	17 49 37.9	-3.2
DVHZ	Dannevirke	8.11	211	P	Pn	17 49 39.3	-3.3
ANWZ	Angora Road	8.12	209	P	Pn	17 49 42.2	-0.4
BFZ	Birch Farm	8.40	209	Pn	Pn	17 49 43.6	-2.9
BFZ	Birch Farm	8.40	209	P	Pn	17 49 42.4	-4.1
PRWZ	Pori Road	8.41	211	P	Pn	17 49 44.5	-2.1
OHWZ	Ohakea	8.43	215	P	Pn	17 49 42.6	-4.3
TIWZ	Tintock	8.63	210	P	Pn	17 49 47.4	-2.3
HOWZ	Holdsworth Sta	8.89	212	P	Pn	17 49 50.6	-2.6
TMWZ	Te Maipa	8.90	209	P	Pn	17 49 49.6	-3.8
OGWZ	Otaki Gorge	8.98	213	P	Pn	17 49 50.3	-4.1
KIW	Kapiti Island	9.13	214	P	Pn	17 49 52.4	-4.2
MSWZ	Moikau Station	9.43	211	P	Pn	17 49 57.4	-3.1
TCW	Tory Channel	9.71	215	P	Pn	17 49 59.4	-4.9
TUWZ	Tuamarina	10.03	215	P	Pn	17 50 06.9	-1.9
MRNZ	Matariki Terra	10.61	219	P	Pn	17 50 15.2	-1.6
KHZ	Kahutara	10.99	213	P	Pn	17 50 18.3	-3.6
GVZ	Greta Valley S	11.65	213	P	Pn	17 50 27.6	-3.4
LTZ	Lake Taylor	11.87	216	P	Pn	17 50 30.0	-4.0
DZM	Mont Dzumac	17.57	306	LR	LR	17 57 19.1	
	comp=Z,388nm,19.4s,baz=154,slow=33						
ARMA	Armidale	25.61	269	P	P	17 53 11.7	-1.3
ARMA				IAmb	IAmb	17 53 35.2	
	comp=Z,22nm,1.4s						
EIDS	Eidsvold	27.74	279	P	P	17 53 29.4	-2.7
EIDS				IAmb	IAmb	17 53 34.5	
	comp=Z,15nm,1.1s						
TAU	Tasmania Unive	28.41	241	P	P	17 53 36.7	-1.3
CTAO	Charters Tower	34.11	284		P	17 54 29.8	+1.5
CTAO				IAmb	IAmb	17 54 30.1	
	comp=Z,8.5nm,0.7s						
INKA	Innaminka	35.49	268	P	P	17 54 41.3	+1.2
BBOO	Buckleboo	37.94	258	P	P	17 54 57.8	-3.1
PMG	Port Moresby	39.73	299	P	P	17 55 15.5	-0.5
PMG				IAmb	IAmb	17 55 22.6	
	comp=Z,7.4nm,0.8s						
COEN	Coen	39.91	290		P	17 55 17.3	-0.3
COEN				IAmb	IAmb	17 55 18.9	
	comp=Z,17nm,1.4s						
AS31	Alice Springs	42.73	270		P	17 55 40.6	-0.1
ASAR	Alice Springs	42.73	270	P	P	17 55 40.5	-0.2
	comp=Z,12nm,0.7s,baz=111,slow=7.4,SNR=168						
ASAR				PcP	PcP	17 57 32.4	+0.5
	comp=Z,2.1nm,0.8s,baz=115,slow=4.0,SNR=5.0						
ASAR				S	S	18 01 59.6	-2.1
	comp=Z,0.9nm,0.8s,baz=116,slow=15,SNR=6.8						
	comp=Z,12nm,0.7s						
ASAR	Alice Springs	42.73	270		P	17 55 39.4	-1.3
WR8	Warramunga Arr	43.85	276		P	17 55 48.9	-0.9
WR8				IAmb	IAmb	17 55 50.7	
	comp=Z,14nm,0.8s						
WRAB	Tennant Creek	43.99	276	P	P	17 55 50.1	-0.8
WRA	Warramunga Arr	43.99	276	P	P	17 55 50.5	-0.5
	comp=Z,14nm,0.7s,baz=117,slow=7.7,SNR=58						
	comp=Z,14nm,0.7s						
WRA	Warramunga Arr	43.99	276	P	P	17 55 48.9	-2.1
WB0	Warramunga Arr	44.03	276		P	17 55 50.6	-0.7
MTN	Manton Dam	50.23	282	P	P	17 56 38.6	-1.0
MTN				IAmb	IAmb	17 56 40.8	
	comp=Z,7.0nm,1.0s						
KNRA	Kununurra	50.70	277	P	P	17 56 42.4	-0.8
KNRA				IAmb	IAmb	17 56 59.2	
	comp=Z,11nm,0.9s						
FITZ	Fitzroy Crossi	52.11	272	P	P	17 56 53.1	-0.5
CASY	Casey	52.31	209		P	17 56 56.2	+1.7
CASY				IAmb	IAmb	17 56 57.2	
	comp=Z,10nm,0.8s						
QSPA	South Pole Qui	56.66	180	P	P	17 57 30.1	+3.9
	comp=Z,2.4nm,0.8s,baz=20,slow=1.4,SNR=12						
	comp=Z,2.4nm,0.8s						
QSPA	South Pole Qui	56.66	180		P	17 57 31.6	+5.4
QSPA				IAmb	IAmb	17 57 40.9	
	comp=Z,8.7nm,0.8s						
SNAA	Sanae	75.12	179	P	P	17 59 27.6	+2.9
	comp=Z,1.1nm,0.4s,baz=139,slow=5.1,SNR=8.3						
	comp=Z,1.1nm,0.4s						
SNAA	Sanae	75.12	179	P	P	17 59 27.4	+2.6
SNAA				IAmb	IAmb	17 59 38.0	
	comp=Z,6.1nm,0.9s						
PETK	Petropavlovsk-	88.69	346	P	P	18 00 36.7	+0.8
	comp=Z,4.3nm,0.9s,baz=142,slow=8.3,SNR=4.7						
	comp=Z,4.3nm,0.9s						
MKAR	Makanchi Array	119.47	309	PKP	PKiKP	18 06 32.3	+0.1
	comp=Z,0.4nm,0.6s,baz=76,slow=6.1,SNR=5.8						
KURBB	Kurchatov Arra	122.94	312	PKP	PKiKP	18 06 38.9	0.0
	comp=Z,0.7nm,0.5s,baz=113,slow=1.9,SNR=7.9						
BVAR	Borovoye Array	128.34	314	PKP	PKiKP	18 06 50.6	+1.0
	comp=Z,0.8nm,0.5s,baz=138,slow=1.8,SNR=4.3						
KBZ	Khabaz	146.47	300	PKPbc	PKPab	18 07 24.9	+0.1
	comp=Z,7.7nm,1.1s,baz=134,slow=3.1,SNR=6.0						
GURO	Guroymak-BITLI	147.12	291	PKPdf	PKPbc	18 07 25.3	-0.8
FIA1	FINESS Array S	147.88	338	PKPdf	PKPbc	18 07 26.9	-0.3
FINES	FINESS Array B	147.88	338	PKPbc	PKPbc	18 07 27.9	+0.7
	comp=Z,6.7nm,0.6s,baz=43,slow=3.2,SNR=18						
ASF	Jabal al Asfar	150.42	277	PKPbc	PKiKP	18 07 35.5	+0.1
	comp=Z,7.1nm,0.8s,baz=91,slow=5.9,SNR=4.7						
GAZ	Gaziantep	150.84	287	PKPbc	PKiKP	18 07 36.3	+0.2
EIL	Elat	151.44	272	PKPbc	PKiKP	18 07 38.6	+1.2
	comp=Z,16nm,0.9s,baz=60,slow=4.7,SNR=7.6						
NB2	NORSAR Subarra	151.71	350	PKP	PKiKP	18 07 39.7	+2.6
	comp=Z,2.4nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	151.71	350	PKPbc	PKiKP	18 07 39.0	+2.0
	comp=Z,1.9nm,0.8s,baz=17,slow=4.6,SNR=6.3						
MMAI	Mount Meron Ar	151.82	279	PKPbc	PKiKP	18 07 39.2	+1.0
	comp=Z,8.1nm,0.7s,baz=204,slow=3.2,SNR=3.7						
BNN	Bunyan	151.97	291	PKPbc	PKiKP	18 07 39.0	+0.6
HFS	Hagfors	152.16	347	PKPbc	PKiKP	18 07 38.1	+0.2
	comp=Z,4.6nm,0.7s,baz=132,slow=2.2,SNR=4.1						
AKASG	Malin Array Be	153.47	319	PKPbc	PKiKP	18 07 41.3	+0.3
	comp=Z,0.3nm,0.3s,baz=68,slow=2.3,SNR=1.4						
BRTR	Keskin Array B	153.65	293	PKPbc	PKiKP	18 07 42.0	+0.1
	comp=Z,2.1nm,0.9s,baz=132,slow=1.8,SNR=4.7						
TORD	Torodi Ar. Bea	159.78	180	PKPab	PKPab	18 08 23.5	+2.3
	comp=Z,1.6nm,0.8s,baz=176,slow=2.4,SNR=5.9						
CLL	Collm	160.33	338	*e*PKPab	PKPab	18 08 26.0	+3.3

IDC ***30*** *17:49:55.2±0.4, 35°.51N×74°.69E, h0^{km}, mb4.9/33, mbtmp5.0/40, ML4.0/5, MS4.6/42, Error ellipse: s-maj=11.5km s-min=9.4km az=10.0*

NNC ***30*** *17:49:56.3±2.4, 35°.53N×74°.08E, h0^{km}, mb5.5, mpv5.5, Error ellipse: s-maj=20.0km s-min=16.5km az=168.0*

GFZ ***30*** *17:49:57.3, 35°.40N×74°.73E, h18^{km}, MW5.1, Moment Tensor Solution. s19 Moment tensor: M_{rr}-4.73; $M_{\theta\theta}$2.04; $M_{\phi\phi}$2.69; $M_{r\theta}$-0.51; $M_{\theta\phi}$2.70; $M_{\phi r}$0.54; Fault plane solution: NP1:ϕ_s212.00000°, δ46.00000°, λ-102.00000°. NP2:ϕ_s51.00000°, δ45.00000°, λ-76.00000°.*

MOS ***30*** *17:49:58.9±1.1, 35°.60N×74°.70E, h34^{km}, mb5.3/63, MS4.7/12 Error ellipse: s-maj=4.9km s-min=3.1km az=100.1*

NEIC ***30*** *17:49:58.5, 35°.63N×74°.63E, h18^{km}, Moment Tensor Solution. Duration: $1^{s}8$ Moment tensor: Scale 10^{16}Nm; M_{rr}-3.84; $M_{\theta\theta}$0.10; $M_{\phi\phi}$3.74; $M_{r\theta}$0.91; $M_{\theta\phi}$2.00; $M_{\phi r}$0.24; Fault plane solution: $M_0$4.38000×10^{16} NP1:ϕ_s11.13000°, δ42.50000°, λ-108.86000°. NP2:ϕ_s215.99000°, δ50.26000°, λ-73.50000°. Principal axes: T 4.6578, Plg4.0000°, Azm294.0000°; N -0.6162, Plg13.0000°, Azm25.0000°; P -4.0416, Plg77.0000°, Azm187.0000°;*

NEIC ***30*** *17:49:58.5, 35°.63N×74°.63E, h18^{km}*

GCMT ***30*** *17:49:59.5±0.2, 35°.49N±0°.02×74°.52E±0°.02, h12^{km}, MW5.1/116, Moment Tensor Solution. s49,c57; s116,c193; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.86±.12; $M_{\theta\theta}$1.34±.12; $M_{\phi\phi}$3.52±.11; $M_{r\theta}$-1.30±.42; $M_{\theta\phi}$3.42±.09; $M_{\phi r}$1.95±.38; Best double couple: $M_0$6.00600×10^{16} NP1:ϕ_s59.00000°, δ46.00000°, λ-55.00000°. NP2:ϕ_s193.00000°, δ54.00000°, λ-121.00000°. Principal axes: T 6.0830, Plg4.0000°, Azm305.0000°; N -0.1540, Plg25.0000°, Azm213.0000°; P -5.9290, Plg65.0000°, Azm44.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***30*** *17:49:59.5±1.3, 35°.63N±0°.05×74°.64E±0°.08, h24^{km}±4^{km}, mb5.3/231, Mww5.0/13 Error ellipse: s-maj=9.8km s-min=7.9km az=102.0*

BJI ***30*** *17:50:02.9, 35°.69N×75°.24E, h40^{km}, mB5.5/28, mb4.8/70, ML5.2/4, Ms4.9/55, Ms7 4.7/55*

ISC 30 17:49:60.0±0.3**, 35°.67N**±0°.03×**74°.78E**±0°.03**, h28**^{km}±2^{km}**, h28**^{km}**:pP-P, n1044, $\sigma 1^{s}98$**/1038**, mb5.2**/263**, MS4.6**/66**, 52C-45D, Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRNI	Srinagar	1.61	179	*e*P	Pn	17 50 26.9	+0.2
SRNI				*e*S	Sn	17 50 46.9	+0.3
SRNI				IAML		17 51 47.1	
	comp=E,32μm,0.7s						
SRNI				IAML		17 51 50.2	
	comp=N,29μm,1.8s						
NIL	Nilore	2.37	212		Pn	17 50 35.9	-1.1
NIL	Nilore	2.37	212	P	Pn	17 50 35.9	-1.1
ALCI	Alchi Leh	2.45	126	*e*P	Pn	17 50 38.5	+0.1
ALCI				*e*S	Sn	17 51 06.5	-1.0
ALCI				IAML		17 51 11.8	
	comp=E,14μm,0.5s						
ALCI				IAML		17 51 11.9	
	comp=N,14μm,0.8s						
JMU	Jammu	2.88	179	*e*P	Pn	17 50 44.5	+0.6
JMU				*e*S	Sn	17 51 17.2	-0.5
JMU				IAML		17 51 28.3	
	comp=N,18μm,0.6s						
JMU				IAML		17 51 32.3	
	comp=E,14μm,0.7s						
TSSA	Tissa	3.04	158	*e*P	Pn	17 50 46.9	+0.5
TSSA				*e*S	Sn	17 51 21.3	-0.7
TSSA				IAML		17 51 32.6	
	comp=E,8μm,1.3s						
TSSA				IAML		17 51 34.7	
	comp=N,8μm,0.2s						
MANEM	Manem	3.12	308		Pn	17 50 46.3	-1.2
DHRM	DHARAMSHALA	3.63	159	*e*P	Pn	17 50 54.5	-0.1
DHRM				*e*S	Sn	17 51 34.4	-2.2
DHRM				IAML		17 52 09.8	
	comp=N,8μm,1.2s						
DHRM				IAML		17 52 15.0	
	comp=E,10μm,0.9s						
TLWR	Talawar	3.83	165	*e*P	Pn	17 50 57.6	+0.6
TLWR				*e*S	Sn	17 51 38.8	-2.3
TLWR				IAML		17 52 03.7	
	comp=N,10μm,0.7s						
TLWR				IAML		17 52 04.8	
	comp=E,10μm,0.5s						
KSH	Kashi	3.96	13	P	Pn	17 50 58.0	-0.9
KSH				S	Sn	17 51 42.0	-2.5
KSH				smax	smax		
	comp=E,3μm,0.9s						
KSH				smax	smax		
	comp=E,3μm,1.2s						
BHK	Bhakra	4.46	162	*e*P	Pn	17 51 08.0	+2.2
BHK				*e*S	Sn	17 51 57.5	+0.7
BHK				IAML		17 52 26.1	
	comp=N,6μm,0.8s						
BHK				IAML		17 52 35.8	
	comp=E,7μm,1.1s						
DRK	Karamyk	4.48	329		Pn	17 51 05.5	-0.7
DRK	Karamyk	4.48	329	P	Pn	17 51 05.5	-0.7
KBL	Kabul	4.83	258	P	Pn	17 51 12.8	+1.7
	SNR=322						
KBL				S	Sn	17 52 09.5	+3.3
KBL	Kabul	4.83	258		Pn	17 51 09.1	-1.9
KBL	Kabul	4.83	258	P	Pn	17 51 09.1	-1.9
SMLA	Simla	4.95	156	*e*P	Pn	17 51 12.2	-0.2
SMLA				*e*S	Sn	17 52 05.0	-3.6
SMLA				IAML		17 52 14.2	
	comp=E,7μm,0.8s						
SMLA				IAML		17 52 15.8	
	comp=N,5μm,0.9s						
KLP	Kalpa	5.04	144	*e*P	Pn	17 51 13.3	-0.6
KLP				*e*S	Sn	17 52 06.7	-4.6
CGRH	CHANDIGARH	5.20	161	*e*P	Pn	17 51 15.6	-0.3
CGRH				*e*S	Sn	17 52 11.0	-3.8
CGRH				IAML		17 52 57.6	
	comp=E,4μm,0.6s						
CGRH				IAML		17 53 22.4	
	comp=N,4μm,0.6s						
CHGR	Chuyangaron	5.39	305		Pn	17 51 16.5	-2.0
CHGR	Chuyangaron	5.39	305	⇓*e*P	Pn	17 51 17.7	-0.9
CHGR				pmax	pmax		
	comp=Z,39nm,0.3s						
SHAA	Shahritus	5.68	291		Pn	17 51 21.0	-1.5
SRGN	SRI GANGA NAGA	5.78	188	*e*P	Pn	17 51 24.2	+0.4
SRGN				*e*S	Sn	17 52 25.9	-3.2
SRGN				IAML		17 53 04.1	
	comp=N,3μm,1.2s						
SRGN				IAML		17 53 09.3	
	comp=E,4μm,0.9s						
ARSB	Arslanbob	5.82	347		Pn	17 51 26.4	+1.9
ARSB	Arslanbob	5.82	347	P	Pn	17 51 26.4	+1.9
KKR	Kurukshetra	5.94	163	*e*P	Pn	17 51 25.8	-0.3
KKR				*e*S	Sn	17 52 28.4	-4.8
KKR				IAML		17 52 43.4	
	comp=E,3μm,0.8s						
KKR				IAML		17 52 44.4	
	comp=N,5μm,1.1s						
DDI	Dehra Dun	6.00	152	*e*P	Pn	17 51 26.4	-0.4
DDI				*e*S	Sn	17 52 29.6	-5.0
DDI				IAML		17 52 48.5	
	comp=E,4μm,2.2s						
DDI				IAML		17 52 54.4	
	comp=N,4μm,1.4s						
JOSI	Joshimath	6.48	140	*e*P	Pn	17 51 33.0	-0.6
JOSI				*e*S	Sn	17 52 41.1	-5.8
TARG	Taragay, Kyrgy	6.50	20		Pn	17 51 38.4	+4.3
TARG	Taragay, Kyrgy	6.50	20	P	Pn	17 51 38.4	+4.3
WUS	Wushi	6.53	31		Pn	17 51 36.0	+1.7
UCH	Uchtor	6.55	358	P	Pn	17 51 38.8	+3.9
	SNR=148						

ULHL	Ulahol	6.67	9	P	Pn	17 51 42.7	+6.5
	SNR=8.1						
KDJ	Kajisay	6.72	15		Pn	17 51 41.1	+4.2
KDJ	Kajisay	6.72	15	P	Pn	17 51 41.1	+4.2
BOOM	Boomskoye usch	6.87	7		Pn	17 51 42.5	+3.5
BOOM	Boomskoye usch	6.87	7	P	Pn	17 51 42.5	+3.5
AAK	Ala-Archa	6.96	358	P	Pn	17 51 44.4	+4.1
	SNR=77						
AAK	Ala-Archa	6.96	358	Pn	Pn	17 51 44.6	+4.4
	comp=N,7.2nm,0.3s,baz=170,slow=7.4,SNR=85						
AAK				Sn	Sn	17 53 05.4	+6.8
	comp=N,6.3nm,0.3s,baz=349,slow=19,SNR=6.3						
AAK				Lg	Lg	17 53 45.4	
	comp=N,4.6nm,0.3s,baz=313,slow=22,SNR=3.6						
AAK				LR	LR	17 54 42.4	
	comp=N,4µm,21.3s,baz=184,slow=40						
	comp=N,48nm,0.5s						
AAK	Ala-Archa	6.96	358		Pn	17 51 41.5	+1.2
AAK	Ala-Archa	6.96	358	P	Pn	17 51 42.5	+2.2
	comp=N,256nm,1.1s						
AAK				⇓S	Sn	17 53 04.8	+6.2
	comp=N,778nm,1.4s						
AAK	Ala-Archa	6.96	358	*i* P	Pn	17 51 44.2	+3.9
	SNR=98						
AAK	Ala-Archa	6.96	358	⇑*i*P	Pn	17 51 42.9	+2.7
AAK				pmax	pmax		
	comp=Z,47nm,0.5s						
KBK	Karagaybulak	6.98	1	P	Pn	17 51 44.6	+4.2
	SNR=84						
FRU1	Bishkek	7.13	359		Pn	17 51 46.4	+3.9
FRU1	Bishkek	7.13	359	P	Pn	17 51 46.4	+3.9
NDI	New Delhi	7.26	163	*e*P	Pn	17 51 43.6	-0.5
NDI				*e*S	Sn	17 52 59.5	-6.2
NDI				IAML		17 53 08.5	
	comp=N,3µm,1.1s						
NDI				IAML		17 53 12.9	
	comp=E,3µm,1.2s						
TKM2	Tokmak 2	7.27	5	P	Pn	17 51 49.6	+5.1
	SNR=17						
NPLP	NPLP New Delhi	7.29	163	*e*P	Pn	17 51 44.1	-0.5
CHMS	Chumysh	7.32	360	P	Pn	17 51 49.2	+4.2
	SNR=16						
LDR	Lodi Road	7.36	163	*e*P	Pn	17 51 45.0	-0.5
LDR				*e*S	Sn	17 53 01.8	-6.3
LDR				IAML		17 53 11.4	
	comp=E,2µm,1.1s						
LDR				IAML		17 53 21.4	
	comp=N,1µm,1.0s						
PRZ	Przheval'sk	7.37	21		Pn	17 51 50.8	+5.1
PRZ	Przheval'sk	7.37	21	P	Pn	17 51 50.8	+5.0
IUG	Iuzhnay	7.45	332	*e*P	Pn	17 51 47.9	+1.0
IUG				*e*S	Sn	17 53 12.1	+1.6
IUG				LQ	LQ	17 53 59.0	
IUG	Iuzhnay	7.45	332	*e*P	Pn	17 51 47.8	+1.0
IUG				*e*S	Sn	17 53 12.1	+1.6
TNSS	Tian-Shan	7.55	12	*e*P	Pn	17 51 50.0	+1.6
TNSS				*e*S	Sn	17 53 15.6	+2.3
TNSS				LQ	LQ	17 54 03.6	
TNSS	Tian-Shan	7.55	12	*e*P	Pn	17 51 50.0	+1.6
TNSS				*e*S	Sn	17 53 15.6	+2.3
PTH	Pithoragarh	7.59	141	*e*P	Pn	17 51 48.4	-0.6
PTH				*e*S	Sn	17 53 06.7	-7.4
PTH				IAML		17 54 08.2	
	comp=N,3µm,2.1s						
PTH				IAML		17 54 28.4	
	comp=E,3µm,0.8s						
USP	Ospenovka	7.59	358	P	Pn	17 51 52.6	+3.9
	SNR=8.5						
MDOK	Medeo	7.69	12	*e*P	Pn	17 51 51.8	+1.7
MDOK				*e*S	Sn	17 53 18.9	+2.5
MDOK				LQ	LQ	17 54 07.8	
MDOK	Medeo	7.69	12	*e*P	Pn	17 51 51.8	+1.7
MDOK				*e*S	Sn	17 53 18.9	+2.5
AAA	Alma-Ata	7.71	12	*e*P	Pn	17 51 52.5	+2.1
AAA	Alma-Ata	7.71	12	*e*P	Pn	17 51 52.5	+2.1
KNDC	Almaty	7.73	12	⇓P	Pn	17 51 55.0	+4.4
	comp=E,334nm,0.9s						
KNDC				⇓S	Sn	17 53 27.1	+10
	comp=E,884nm,1.1s						
CHM	Chimkent	7.77	330	*e*P	Pn	17 51 52.6	+1.5
CHM	Chimkent	7.77	330	*e*P	Pn	17 51 52.6	+1.5
SGDS	Sogindy	7.78	359	*e*P	Pn	17 51 52.9	+1.7
SGDS				*e*S	Sn	17 53 20.8	+2.4
SGDS				LQ	LQ	17 54 10.4	
SATY	Saty	7.90	20	*e*P	Pn	17 51 54.6	+1.6
SATY				*e*S	Sn	17 53 23.9	+2.4
SATY				LQ	LQ	17 54 14.4	
SATY	Saty	7.90	20	*e*P	Pn	17 51 54.5	+1.6
SATY				*e*S	Sn	17 53 23.8	+2.4
KK31	Karatay Array	8.13	337		Pn	17 51 56.2	+0.2
KK31	Karatay Array	8.13	337	P	Pn	17 51 55.0	-1.0
	comp=E,365nm,0.9s,baz=151,slow=12,SNR=1859						
KK31				⇑S	Sn	17 53 26.3	-0.7
	comp=E,926nm,0.9s,baz=156,slow=22,SNR=15						
KK31	Karatay Array	8.13	337	P	Pn	17 51 56.2	+0.2
KKAR	Karatay Array	8.13	337		Pn	17 51 56.1	+0.1
KKAR	Karatay Array	8.13	337	P	Pn	17 51 56.1	+0.1
UZB	Uzynbulak	8.16	22	*e*P	Pn	17 51 58.5	+1.9
UZB				*e*S	Sn	17 53 30.7	+2.7
UZB				LQ	LQ	17 54 22.7	
UZB	Uzynbulak	8.16	22	*e*P	Pn	17 51 58.5	+1.9
UZB				*e*S	Sn	17 53 30.6	+2.7
BRLS	Borolday	8.29	334	*e*P	Pn	17 51 56.5	-1.8
BRLS	Borolday	8.29	334	*e*P	Pn	17 51 56.4	-1.8
SHLS	Shalkode	8.31	24	*e*P	Pn	17 52 02.5	+3.9
SHLS	Shalkode	8.31	24	*e*P	Pn	17 52 02.5	+3.9
PDGK	Podgornoye	8.47	24	P	Pn	17 52 03.2	+2.4
	comp=E,261nm,1.4s						
PDGK				S	Sn	17 53 47.5	+12
	comp=E,198nm,1.1s						
BTLS	Baital	9.38	357	*e*P	Pn	17 52 14.5	+1.3
BTLS	Baital	9.38	357	*e*P	Pn	17 52 14.4	+1.3
TDK	Taldyqorghan	9.73	15	*e*P	Pn	17 52 19.4	+1.5
TDK	Taldyqorghan	9.73	15	*e*P	Pn	17 52 19.4	+1.5
HRA	Herat	10.36	267		Pn	17 52 24.3	-2.5
UDPR	Udaipur	11.09	185	*e*P	Pn	17 52 35.1	-1.5
UDPR				*e*S	Sn	17 54 29.3	-10
UDPR				IAML		17 55 04.4	
	comp=N,991nm,0.7s						
UDPR				IAML		17 55 05.8	
	comp=E,1000nm,1.4s						
MAKZ	Makanchi	12.37	24		Pn	17 52 55.3	+1.2
MAKZ	Makanchi	12.37	24	⇑P	Pn	17 52 56.2	+2.1
	comp=E,60nm,1.1s						
MAKZ	Makanchi	12.37	24	P	Pn	17 52 55.3	+1.2
MK31	Makanchi Array	12.46	25	P	Pn	17 52 59.3	+3.9
	comp=E,88nm,1.6s,baz=204,slow=13,SNR=128						
MK31	Makanchi Array	12.46	25	*de*P	Pn	17 52 56.4	+1.0
MKAR	Makanchi Array	12.46	25	Pn	Pn	17 52 56.8	+1.4
	comp=E,0.3nm,0.3s,baz=190,slow=11,SNR=23						
MKAR				LR	LR	17 58 26.4	
	comp=E,1µm,19.7s,baz=201,slow=40						
	comp=E,5.0nm,0.8s						
MKAR	Makanchi Array	12.46	25		Pn	17 52 56.0	+0.7
MKAR	Makanchi Array	12.46	25	*ce*P	Pn	17 52 56.7	+1.4
MKAR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BHPL	Bhopal	12.59	169	*e*P	Pn	17 52 55.8	-1.5
BHPL				*e*S	Sn	17 55 04.8	-12
BHPL				IAML		17 55 11.4	
	comp=E,157nm,0.9s						
BHPL				IAML		17 55 11.6	
	comp=N,216nm,1.1s						
EVN	Everest	12.79	124	Pn	Pn	17 52 56.2	-4.3
WMQ	Urumqi	12.84	47	*e*P	P	17 53 08.5	-2.6
WMQ				S	Sn	17 55 24.0	+1.5
WMQ				pmax	pmax		
	comp=Z,41nm,1.1s						
BHUJ	Bhuj	13.15	201	*e*P	Pn	17 53 04.8	0.0
ZSN	Zaisan	13.97	29	*e*P	Pn	17 53 18.1	+2.1
ZSN	Zaisan	13.97	29	*e*P	Pn	17 53 18.0	+2.1
GTK	Tadong	14.42	121	*e*P	Pn	17 53 20.7	-1.6
GTK				*e*S	Sn	17 55 47.7	-14
GTK				IAML		17 55 56.4	
	comp=N,112nm,1.1s						
GTK				IAML		17 56 06.0	
	comp=E,100nm,2.3s						
LSA	Lhasa	15.01	109	P	Pn	17 53 22.3	-8.2
LSA				S	Sn	17 56 10.3	-5.8
LSA				LR	LR		
	comp=N,1µm,15.7s						
LSA				LR	LR		
	comp=E,820nm,12.6s						
LSA	Lhasa	15.01	109	*i* P	Pn	17 53 25.7	-4.8
	SNR=11						
AKL	Akola	15.04	172	*e*P	Pn	17 53 28.9	-1.6
AKL				*e*S	Sn	17 56 02.6	-14
AKL				IAML		17 56 42.7	
	comp=E,110nm,0.6s						
AKL				IAML		17 56 50.9	
	comp=N,83nm,1.0s						
KURBB	Kurchatov Arra	15.19	9	Pn	Pn	17 53 30.9	-1.5
	comp=N,0.1nm,0.3s,baz=198,slow=12,SNR=67						
KURBB				Lg	Lg	17 58 07.4	
	baz=195,slow=28,SNR=4.8						
	comp=N,17nm,0.9s						
BOK	Bokaro	15.25	138	*e*P	Pn	17 53 31.7	-1.7
BOK				*e*S	Sn	17 56 06.7	-15
BOK				IAML		17 56 35.1	
	comp=E,132nm,1.7s						
BOK				IAML		17 56 35.4	
	comp=N,98nm,1.3s						
KURK	Kurchatov	15.30	9		Pn	17 53 30.9	-2.9
KURK	Kurchatov	15.30	9	P	Pn	17 53 30.9	-2.9
NGCH	Negor - Chabah	15.60	233	P	P	17 53 41.7	0.0
	SNR=6.7						
GOMU	GeErMu	16.24	82	P	Pn	17 53 45.3	-1.1
GOMU				pmax	pmax		
	comp=N,15nm,1.0s						
GOMU				LR	LR		
	comp=N,1µm,9.7s						
GOMU				LR	LR		
	comp=N,2µm,10.1s						
GOMU				LR	LR		
	comp=N,2µm,9.7s						
DGZ	Jazzator, Alta	16.80	29	⇓*e*P	Pn	17 53 53.7	+0.6
DGZ				pmax	pmax		
	comp=Z,16nm,0.5s						
AB31	Akbulak array	17.40	326	Pn	Pn	17 53 56.0	-4.5
AB31	Akbulak array	17.40	326	P	Pn	17 53 57.2	-3.3
	comp=Z,15nm,0.6s,baz=135,slow=12,SNR=272						
AB31				S	Sn	17 57 09.8	-3.4
	comp=Z,16nm,0.7s,baz=135,slow=26,SNR=5.2						
ABKAR	Akbulak array	17.40	326	Pn	Pn	17 53 56.2	-4.3
BVA0	Borovoye Array	17.63	351	⇑P	Pn	17 54 02.8	-0.5
	comp=Z,177nm,1.1s,baz=158,slow=9.3,SNR=8.0						
BVAR	Borovoye Array	17.63	351	P	P	17 54 04.1	-0.1
	comp=Z,1.0nm,0.3s,baz=158,slow=9.4,SNR=44						
BVAR				S	S	17 57 27.2	+1.5
	comp=Z,19nm,1.0s,baz=176,slow=21,SNR=3.6						
BVAR				LR	LR	18 01 02.0	
	comp=Z,2µm,19.9s,baz=167,slow=38						
	comp=Z,124nm,0.9s						
BORK	Borovoye	17.66	351		Pn	17 54 02.2	-1.5
BORK				IAmb	IAmb	17 54 09.6	
	comp=Z,216nm,1.1s						
BORK	Borovoye	17.66	351	*ce*P	Pn	17 54 03.6	-0.1
BORK				pmax	pmax		
	comp=Z,182nm,1.0s						
ITAN	ITANAGAR	18.24	112	*e*S	Sn	17 57 16.8	-17
HYB	Hyderabad	18.48	169	*e*P	P	17 54 13.8	0.0
HYB				*e*sP	sP	17 54 31.7	+5.3
HYB				*e*S	S	17 57 44.0	+0.7
BANOM	Banah	18.58	244	P	P	17 54 14.5	-0.4
BANOM				P	P	17 54 14.5	-0.4
BANOM	Banah	18.58	244	*i* P	P	17 54 14.9	0.0
	SNR=10.0						
SHME	Shamm	18.63	244	P	Pn	17 54 16.0	+0.3
SHME				P	Pn	17 54 16.0	+0.3
SHME	Shamm	18.63	244	*i* P	Pn	17 54 15.6	-0.1
	SNR=8.0						
BIDO	Bidbid	18.84	235	P	Pn	17 54 20.0	+1.7
	SNR=9.1						
WBK	Wadi Bani Khal	18.94	231	P	Pn	17 54 20.0	+0.4
	SNR=14						
WBK				P	Pn	17 54 20.0	+0.4
	SNR=14						
WBK				S	S	17 57 57.5	+5.2
WBK				S	S	17 57 57.5	+5.2
MDH	Madha	18.96	242	P	P	17 54 18.6	-0.4
MDH				P	P	17 54 18.6	-0.4
MDH	Madha	18.96	242	*i* P	P	17 54 18.3	-0.7
	SNR=5.6						
JLN	Jalan Bani Buh	19.00	229	P	Pn	17 54 21.0	+0.7
	SNR=13						
JLN				P	Pn	17 54 21.0	+0.7
	SNR=13						
JLN				S	S	17 57 57.5	+4.0
JLN				S	S	17 57 57.5	+4.0
MASF	Masafi	19.01	242	P	Pn	17 54 21.1	+0.6
	SNR=9.6						
MASF				P	Pn	17 54 21.1	+0.6
	SNR=9.6						
MASF				S	S	17 57 55.3	+1.5
MASF				S	S	17 57 55.3	+1.5
MSFE	Esma-Masafi	19.02	242	*i* P	P	17 54 19.1	-0.5
	SNR=11						
AKTO	Aktyubinsk	19.11	326	P	P	17 54 20.6	+0.2
	comp=Z,162nm,0.6s,baz=122,slow=9.4,SNR=335						
AKTO				LR	LR	18 02 19.3	
	comp=Z,5µm,20.3s,baz=115,slow=39						
AKTO	Aktyubinsk	19.11	326	⇓P	P	17 54 20.2	-0.3
	comp=Z,118nm,0.8s						
SMDO	Samad	19.21	234	P	Pn	17 54 22.9	0.0
	SNR=14						
UOSS	Minazif	19.24	241	P	P	17 54 21.4	-0.6
UOSS				P	P	17 54 21.4	-0.6
UOSS				S	S	17 57 59.0	+0.7
UOSS				S	S	17 57 59.0	+0.7
UOSS	Minazif	19.24	241	P	P	17 54 19.6	-2.5
UOSS	Minazif	19.24	241	*i* P	P	17 54 21.3	-0.7
	SNR=8.7						
HOQ	Hoqain	19.34	236	P	Pn	17 54 24.7	+0.3
	SNR=11						
HOQ				P	Pn	17 54 24.7	+0.3
	SNR=11						
HATD	Hatta, Dubai	19.36	241	P	Pn	17 54 25.4	+0.8
	SNR=8.3						
HATD				P	Pn	17 54 25.4	+0.8
	SNR=8.3						
HATD				S	Sn	17 58 03.9	+2.9
HATD				S	Sn	17 58 03.9	+2.9
HATD	Hatta, Dubai	19.36	241	*i* P	Pn	17 54 24.1	-0.6
	SNR=8.0						
ASHO	Ashiyiah	19.50	241	P	Pn	17 54 27.1	+0.8
	SNR=22						
ASHO				P	Pn	17 54 27.1	+0.8
	SNR=22						
ASHO	Ashiyiah	19.50	241	*i* P	Pn	17 54 25.8	-0.5
	SNR=26						
SOHO	SOHO	19.52	239	P	P	17 54 25.0	0.0
SOHO				P	P	17 54 25.0	0.0
SOHO	SOHO	19.52	239	*i* P	P	17 54 24.6	-0.5
	SNR=10						
BRDH	Bariadhala	19.57	127	P	P	17 54 24.8	-0.8
	comp=Z,136nm,0.3s,baz=92,slow=6.8,SNR=4.8						
BRDH				LR	LR	18 04 20.0	
	comp=Z,3µm,19.9s,baz=306,slow=44						
ZAA0	Zalesovo Array	19.58	18		P	17 54 25.1	-0.4
ZAA0				IAmb	IAmb	17 54 31.0	
	comp=Z,140nm,0.8s						
ZALV	Zalesovo Beam	19.58	18	P	P	17 54 26.2	+0.7
	comp=Z,3.7nm,0.3s,baz=218,slow=9.4,SNR=144						
ZALV				LR	LR	18 02 38.8	
	comp=Z,1µm,18.1s,baz=211,slow=39						
	comp=Z,177nm,0.8s						
ZALV	Zalesovo Beam	19.58	18		P	17 54 25.0	-0.5
ZALV	Zalesovo Beam	19.58	18	*i* P	P	17 54 25.2	-0.3
ZALV				pmax	pmax		
	comp=Z,116nm,0.9s						
NAZ	Nazwa, Dubai	19.60	242	P	Pn	17 54 27.1	-0.4
	SNR=13						
NAZ				P	Pn	17 54 27.1	-0.4
	SNR=13						
NAZ	Nazwa, Dubai	19.60	242	*i* P	P	17 54 26.6	+0.6
	SNR=9.5						
JMDO	Jabal Madar	19.66	232	P	Pn	17 54 28.3	+0.1
	SNR=16						
FAQ	Al Faqa, Dubai	19.80	242	P	Pn	17 54 30.2	+0.4
	SNR=10						
FAQ	Al Faqa, Dubai	19.80	242	P	Pn	17 54 29.3	-0.5
BSY	Bisya	19.99	235	P	Pn	17 54 31.9	-0.3
	SNR=15						
ARQ	Araqi	20.05	237	P	Pn	17 54 33.3	+0.5
	SNR=36						
ARQ				S	Sn	17 58 21.2	+3.6
ASUD	Al Ashush, Dub	20.06	242	P	Pn	17 54 32.6	-0.3
ALNE	Al Ain	20.12	240	P	P	17 54 31.3	-0.3
	SNR=21						
ALNE	Al Ain	20.12	240	*i* P	P	17 54 32.3	+0.6
	SNR=27						
GTA	Gaotai	20.18	72	P	P	17 54 33.0	+0.6
GTA				pmax	pmax		
	comp=Z,51nm,1.5s						
GTA				pmax	pmax		
	comp=Z,390nm,4.4s						
GTA				LR	LR		
	comp=Z,2µm,10.2s						
GTA				LR	LR		
	comp=Z,1µm,10.9s						
GTA				LR	LR		
	comp=Z,2µm,9.8s						
AJN	Ajban	20.35	242	P	Pn	17 54 35.5	-0.7
AJN				P	Pn	17 54 35.5	-0.7
AJN	Ajban	20.35	242	P	Pn	17 54 35.2	-1.0
UMZA	Um Al Zommool	21.39	238	P	P	17 54 46.6	+1.2
UMZA				P	P	17 54 46.6	+1.2
DQM	DQM	21.82	229	P	P	17 54 50.3	+0.3
	SNR=11						
DQM				P	P	17 54 50.3	+0.3
	SNR=11						
AKT	Akhty	21.88	294	*e*P	P	17 54 49.0	-1.7
AKT				*e**PP	pP	17 55 00.9	+1.5
AKT				*e*		17 55 10.0	
AKT				*e*S	S	17 58 47.5	-3.5
AKT				*e**SS	sS	17 59 06.3	+2.0
AKT				pmax	pmax		
	comp=Z,138nm,1.4s						
AKT				MLR	MLR		
	comp=Z,488nm,13.0s						
KNGR	Kungurtug, Tuv	22.19	41	*ce*P	P	17 54 56.7	+2.8
KNGR				pmax	pmax		
	comp=Z,84nm,1.1s						
MAK	Makhachkala	22.26	297	*c i*P	P	17 54 51.7	-2.9
MAK				*e*S	S	17 58 55.5	-2.4
MAK				pmax	pmax		
	comp=Z,421nm,1.3s						
MAK				MLR	MLR		
	comp=Z,5µm,14.0s						
MZR	Muzera	22.39	241	P	P	17 54 56.2	0.0
	SNR=11						
MZR	Muzera	22.39	241	*i* P	P	17 54 55.9	-0.2
	SNR=11						
SHMA	Al-Shehemyia	22.63	251	P	P	17 54 56.9	-1.8
SAKB	Bahrain	22.90	252	P	P	17 55 00.3	-1.2
TNCH	TengChong	23.01	111	⇓P	P	17 55 02.0	-0.9
TNCH				S	S	17 59 09.8	-2.1
TNCH				sS	pS	17 59 16.3	-5.8
TNCH				pmax	pmax		
	comp=Z,36nm,1.3s						
TNCH				LR	LR		
	comp=Z,830nm,13.3s						
TNCH				LR	LR		
	comp=Z,930nm,12.5s						
TNCH				LR	LR		
	comp=Z,2µm,13.5s						
TRNA	Turayna	23.04	248	P	P	17 55 02.5	-0.5
SLWR	Sila	23.06	246	P	P	17 55 02.6	-0.6
SVE	Sverdlovsk	23.22	340	*e*P	P	17 55 05.7	+1.2
SVE				*e*S	S	17 59 13.4	-1.1
SVE				pmax	pmax		
	comp=Z,100nm,1.2s						
SVE				MLR	MLR		
	comp=Z,1µm,10.0s						
SMRA	Abu-Samra	23.33	249	P	P	17 55 04.2	-1.6
	SNR=5.2						
LZDM	Lanzhou Array	23.42	81	P	P	17 55 07.2	+0.2
	comp=Z,9.0nm,0.6s,baz=266,slow=8.9,SNR=17						
LZDM				LR	LR	18 05 01.2	
	comp=Z,774nm,19.3s,baz=245,slow=38						
	comp=Z,9.0nm,0.6s						
LZH	Lanzhou	23.52	80	*e*P	P	17 55 08.5	+0.7
LZH				sP	pP	17 55 18.5	+1.6
LZH				pmax	pmax		
	comp=Z,49nm,1.2s						
LZH				LR	LR		
	comp=Z,1µm,11.7s						
LZH				LR	LR		
	comp=Z,1µm,11.0s						
LZH				LR	LR		
	comp=Z,1µm,17.2s						
ARTI	Arti	23.53	337	LR	LR	18 04 49.4	
	comp=Z,3µm,18.9s,baz=140,slow=38						
ARTI	Arti	23.53	337		P	17 55 07.0	-0.5
ARTI	Arti	23.53	337	*d i*P	P	17 55 07.9	+0.4
ARTI						17 55 32.4	
ARTI				S	S	17 59 21.1	+1.6
ARTI				SS	SnSn	17 59 59.0	+2.2
ARTI				pmax	pmax		
	comp=Z,195nm,1.9s						
ARTI				MLR	MLR		
	comp=Z,2µm,16.0s						
MOY	Mondy	24.61	41	*e*P	P	17 55 19.2	+1.4
MOY				pmax	pmax		
	comp=Z,81nm,1.6s						
PZH	PanZhiHua	24.77	104	P	P	17 55 19.8	+0.3
PZH				S	S	17 59 40.5	+0.3
PZH				sS	pS	17 59 48.8	-1.9
PZH				pmax	pmax		
	comp=Z,210nm,5.6s						
PZH				LR	LR		
	comp=Z,700nm,19.8s						
PZH				LR	LR		
	comp=Z,1µm,21.6s						
PZH				LR	LR		
	comp=Z,1µm,21.0s						
DOK	Doka	24.94	232	P	P	17 55 21.2	+0.4
	SNR=5.5						
DMTO	DMTO	25.09	230	P	P	17 55 22.7	+0.5
NCK	Nalchik	25.17	298	⇑*e*P	P	17 55 23.9	+1.1
NCK				pmax	pmax		
	comp=Z,68nm,1.2s						
ZAK	Zakamensk	25.30	46	*e*P	P	17 55 25.0	+0.9
ZAK				pmax	pmax		
	comp=Z,89nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,19nm,2.1s						
KARS	Kars	25.34	291	IAmb	IAmb	17 55 32.9	
	comp=Z,55nm,0.9s						
BELG	Belogornoye	25.48	319	LR	LR	18 06 40.1	
	comp=Z,2µm,21.7s,baz=121,slow=39						
BELG	Belogornoye	25.48	319	*de*P	P	17 55 25.5	0.0
BELG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WHFO	Wadi Hawf	25.68	232	P	P	17 55 27.6	0.0
KBZ	Khabaz	25.70	298	P	P	17 55 27.1	-0.5
	comp=Z,19nm,0.9s,baz=94,slow=6.9,SNR=35						
KBZ				LR	LR	18 07 44.8	
	comp=Z,2µm,19.2s,baz=85,slow=42						
	comp=Z,19nm,0.9s						
KBZ	Khabaz	25.70	298	*ce*P	P	17 55 28.1	+0.6
KBZ				pmax	pmax		
	comp=Z,23nm,0.9s						
RBK	Rabkut	25.71	231	P	P	17 55 27.9	0.0
	SNR=5.4						
GOF	Gofitskoye	25.80	301	*ce*P	P	17 55 29.4	+0.9
SHA1	Shidzhatmaz	25.87	298	*de*P	P	17 55 29.5	+0.1
KVAR	Kislovodsk Arr	25.87	298	LR	LR	18 08 03.0	
	comp=Z,1µm,18.8s,baz=264,slow=42						
KIV	Kislovodsk	25.88	298		P	17 55 28.0	-1.3
KIV				IAmb	IAmb	17 55 36.1	
	comp=Z,58nm,0.7s						
KIV	Kislovodsk	25.88	298	*i* P	P	17 55 29.8	+0.5
	SNR=14						
KIV	Kislovodsk	25.88	298	*e*P	P	17 55 27.7	-1.6
KIV				*e*S	S	17 59 55.4	-2.1
KIV				pmax	pmax		
	comp=Z,54nm,1.1s						
KIV				MLR	MLR		
	comp=Z,1µm,15.0s						
KIV	Kislovodsk	25.88	298	P	P	17 55 30.3	+1.0
	comp=Z,53nm,0.9s						
TLY	Talaya	26.07	43		P	17 55 32.0	+1.1
TLY	Talaya	26.07	43	*de*P	P	17 55 32.8	+1.9
TLY				pmax	pmax		
	comp=Z,25nm,1.1s						
KMI	Kunming	26.23	106	P	P	17 55 32.5	-0.3
KMI				S	S	18 00 02.5	-1.0
KMI				pmax	pmax		
	comp=Z,21nm,1.1s						
KMI				LR	LR		
	comp=Z,450nm,13.4s						
KMI				LR	LR		
	comp=Z,820nm,11.7s						
KMI				LR	LR		
	comp=Z,1µm,18.0s						

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SONM  Songino Array     26.34  53  P       P       17 55 34.7 +1.2
      comp=Z,34nm,0.8s,baz=250,slow=8.3,SNR=54
SONM                               LR      LR      18 07 30.6
      comp=Z,1µm,18.7s,baz=244,slow=40
      comp=Z,34nm,0.8s
SONM  Songino Array     26.34  53          P       17 55 34.4 +0.8
SONM                               IAmb    IAmb    17 55 41.1
      comp=Z,46nm,0.8s
SONM  Songino Array     26.34  53  P       P       17 55 34.4 +0.8
SONM                               pmax    pmax
      comp=Z,46nm,0.8s
ABTO  Aybut             26.40 232  P       P       17 55 33.8 -0.4
IRK   Irkutsk           26.67  42 eP       P       17 55 37.4 +1.1
IRK                                pmax    pmax
      comp=Z,58nm,1.2s
ULN   Ulaanbaatar       26.78  53          P       17 55 38.3 +0.8
ULN   Ulaanbaatar       26.78  53  P       P       17 55 41.0 +3.5
ULN   Ulaanbaatar       26.78  53  P       P       17 55 38.3 +0.8
ULN                                pmax    pmax
      comp=Z,26nm,0.8s
CHTO  Chiang Mai        27.15 122  P       P       17 55 40.7 -0.2
CHTO  Chiang Mai        27.15 122          P       17 55 39.6 -1.3
CHTO  Chiang Mai        27.15 122  P       P       17 55 41.4 +0.5
CHTO  Chiang Mai        27.15 122  P       P       17 55 42.4 +1.5
      comp=Z,851nmcomp=Z,71nm,1.3s
CHTO  Chiang Mai        27.15 122  P       P       17 55 39.6 -1.3
CHTO                               pmax    pmax
      comp=Z,168nm,1.6s
MARD  Mardin            27.30 284  P       P       17 55 40.5 -1.8
LABN  Labinsk           27.37 300 eP       P       17 55 43.1 +0.5
LABN                              e*PP     sP      17 55 53.9 -1.7
LABN                              eS       S       18 00 24.2 +3.4
LABN                               pmax    pmax
      comp=Z,40nm,0.8s
LABN                               MLR     MLR
      comp=N,2µm,15.0s
LABN                               MLR     MLR
      comp=Z,3µm,15.0s
LABN                               MLR     MLR
      comp=E,4µm,14.0s
CMAR  Chiang Mai Arr    27.39 122  P       P       17 55 43.0 -0.1
      comp=E,39nm,0.7s,baz=308,slow=10.0,SNR=95
CMAR                               PcP     PcP     17 59 02.4 +0.7
      comp=E,3.1nm,0.7s,baz=296,slow=3.4,SNR=5.5
      comp=E,39nm,0.7s
CMAR  Chiang Mai Arr    27.39 122          P       17 55 42.8 -0.3
CMAR                                       PcP     17 59 01.9 +0.2
CMAR  Chiang Mai Arr    27.39 122ceP       P       17 55 43.0 -0.1
CMAR                               pmax    pmax
      comp=Z,40nm,0.8s
ERBR  Yeremizino-Bor    27.69 302 eP       P       17 55 44.9 -0.6
ERBR                              e*PP     pP      17 55 55.6 +1.2
ERBR                              eS       S       18 00 29.4 +3.6
ERBR                               pmax    pmax
      comp=Z,31nm,0.9s
ERBR                               MLR     MLR
      comp=E,3µm,16.0s
ERBR                               MLR     MLR
      comp=Z,1µm,16.0s
SOC   Sochi             27.98 297 eP       P       17 55 46.4 -1.7
SOC                               eS       S       18 00 29.0 -1.4
SOC                               eSS      SnSn    18 01 50.3 +4.5
SOC                                pmax    pmax
      comp=Z,14nm,0.7s
SOC                                MLR     MLR
      comp=Z,1µm,18.0s
XAN   Xi'an             27.99  83  P       P       17 55 48.5 +0.2
XAN                                S       S       18 00 30.8  0.0
XAN                                pmax    pmax
      comp=Z,32nm,1.1s
XAN                                pmax    pmax
      comp=Z,280nm,5.3s
XAN                                LR      LR
      comp=Z,960nm,9.6s
XAN                                LR      LR
      comp=Z,1µm,10.6s
XAN                                LR      LR
      comp=Z,2µm,11.7s
BTO   Baotou            28.03  69 eP       P       17 55 49.3 +0.5
BTO                                pP      sP      17 56 01.0 -1.0
BTO                                sP      pP      17 56 06.5 +8.4
BTO                                PP      PP      17 56 39.8  -12
BTO                                S       S       18 00 27.5 -4.1
BTO                                sS      sS      18 00 47.5 +0.6
BTO                                SS      SS      18 01 49.0  -41
BTO                                pmax    pmax
      comp=Z,24nm,1.0s
BTO                                pmax    pmax
      comp=Z,700nm,5.5s
BTO                                LR      LR
      comp=Z,2µm,12.7s
BTO                                LR      LR
      comp=Z,2µm,16.1s
BTO                                LR      LR
      comp=Z,2µm,16.1s
RAYN  Ar Rayn           28.08 252  P       P       17 55 49.1 -0.1
RAYN  Ar Rayn           28.08 252          P       17 55 47.0 -2.2
RAYN  Ar Rayn           28.08 252 i P      P       17 55 48.6 -0.6
      SNR=30
RAYN  Ar Rayn           28.08 252  P       P       17 55 47.0 -2.2
RAYN                               pmax    pmax
      comp=Z,35nm,0.9s
VRH   Novokhopyorsk     28.29 314 eP       P       17 55 52.6 +1.8
VRH                                pmax    pmax
      comp=Z,30nm,0.7s
KIRV  Kirov             28.37 332  LR      LR      18 08 15.3
      comp=Z,2µm,20.8s,baz=137,slow=39
KIRV  Kirov             28.37 332deP       P       17 55 52.2 +0.8
GYA   Guiyang           28.71 100  P       P       17 55 54.0 -0.9
GYA                                LR      LR
      comp=Z,2µm,18.5s
PALK  Pallekele         28.78 168  P       P       17 55 58.1 +2.7
PALK  Pallekele         28.78 168  P       P       17 55 55.1 -0.3
PALK  Pallekele         28.78 168  P       P       17 55 58.2 +2.7
PALK  Pallekele         28.78 168⇑eP       P       17 55 55.5 +0.1
PALK                               pmax    pmax
      comp=Z,66nm,2.6s
HHC   Hu-ho-hao-te      29.20  69 eP       P       17 56 01.3 +2.2
HHC                                pmax    pmax
      comp=Z,8.0nm,0.8s
HHC                                pmax    pmax
      comp=Z,180nm,4.4s
ENH   Enshi             29.51  91  P       P       17 56 02.3 +0.4
ENH   Enshi             29.51  91  P       P       17 56 02.6 +0.7
VORD  Divnogorie        29.66 312 eP       P       17 56 00.9 -2.1
VORD                               pmax    pmax
      comp=Z,30nm,1.0s
ANN   Anapa             29.72 299 eP       P       17 56 03.8 +0.3
ANN                               e*PP     sP      17 56 15.0 -1.5
ANN                               eS       S       18 01 02.4 +4.7
ANN                                pmax    pmax
      comp=Z,27nm,0.7s
ANN                                MLR     MLR
      comp=E,1µm,16.0s
ANN                                MLR     MLR
      comp=N,697nm,14.0s
ANN                                MLR     MLR
      comp=Z,833nm,15.0s
VSR   Storozhevoye      29.82 313 eP       P       17 56 02.5 -1.8
VSR                                pmax    pmax
      comp=Z,20nm,0.9s
VORR  Voronezh          29.93 313 eP       P       17 56 05.0 -0.3
VORR                               pmax    pmax
      comp=Z,27nm,0.4s
TIY   Taiyuan           30.13  75 eP       P       17 56 09.8 +2.4
TIY                                pmax    pmax
      comp=Z,26nm,0.7s
TIY                                LR      LR
      comp=Z,590nm,8.9s
TIY                                LR      LR
      comp=Z,450nm,8.9s
TIY                                LR      LR
      comp=Z,380nm,7.6s
LPSR  Galich'ya Gora    30.39 315 eP       P       17 56 09.5 +0.1
LPSR                               pmax    pmax
      comp=Z,40nm,0.9s
LYN   LuoYang           30.73  81  P       P       17 56 14.3 +1.7
LYN                                sP      sP      17 56 31.5 +5.6
LYN                                pmax    pmax
      comp=Z,23nm,0.8s
LYN                                LR      LR
      comp=Z,1µm,17.9s
LYN                                LR      LR
      comp=Z,660nm,18.5s
LYN                                LR      LR
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      comp=Z,1µm,17.4s
ASF   Jabal al Asfar    31.50 275  LR      LR      18 10 43.0
      comp=Z,712nm,19.8s,baz=59,slow=40
CIT   Chita             31.93  47 eP       P       17 56 24.4 +1.3
CIT                               e                17 57 25.4
CIT                               e                17 57 47.0
HNS   HongShan          31.97  75 ⇑P       P       17 56 25.3 +1.9
HNS                                pmax    pmax
      comp=Z,20nm,1.1s
GULI  GuiLin            32.21  99  P       P       17 56 29.0 +3.3
GULI                               pmax    pmax
      comp=Z,16nm,1.2s
GULI                               pmax    pmax
      comp=Z,280nm,6.3s
GULI                               LR      LR
      comp=Z,750nm,15.5s
GULI                               LR      LR
      comp=Z,790nm,11.2s
GULI                               LR      LR
      comp=Z,2µm,22.8s
MOS   Moscow            32.25 320 eP       P       17 56 24.1 -1.6
MOS                               e                17 57 31.6
MOS                                pmax    pmax
      comp=Z,59nm,1.2s
MOS                                MLR     MLR
      comp=Z,4µm,14.0s
MOS                                MLR     MLR
      comp=E,3µm,15.0s
KIRS  Kirsehir-Merke    32.45 289 ⇑P       P       17 56 28.7 +0.9
OBN   Obninsk           32.57 319  LR      LR      18 10 52.0
      comp=E,2µm,18.6s,baz=46,slow=38
OBN   Obninsk           32.57 319          P       17 56 28.1 -0.4
OBN   Obninsk           32.57 319deP       P       17 56 28.7 +0.2
OBN                               e                17 57 35.4
OBN                               eSS      SS      18 03 40.2  -22
OBN                                pmax    pmax
      comp=Z,130nm,2.6s
OBN                                MLR     MLR
      comp=Z,2µm,17.0s
OBN   Obninsk           32.57 319  P       P       17 56 28.6 +0.1
      comp=Z,35nm,0.6s
BR104 Keskin Array S    32.60 290  P       P       17 56 29.2  0.0
      comp=Z,12nm,0.9s
BR131 Keskin Array S    32.60 290d iP      P       17 56 29.0 -0.2
BRTR  Keskin Array B    32.60 290  P       P       17 56 29.2 +0.1
      comp=Z,7.5nm,0.7s,baz=103,slow=9.2,SNR=39
BRTR                               PcP     PcP     17 59 15.3 +0.3
      comp=Z,2.0nm,0.8s,baz=97,slow=4.5,SNR=3.6
BRTR                               LR      LR      18 13 25.8
      comp=Z,539nm,18.1s,baz=81,slow=43
      comp=Z,7.5nm,0.7s
BRTR  Keskin Array B    32.60 290          P       17 56 28.0 -1.1
BRTR                                       PcP     17 59 14.7 -0.3
BJT   Baijiatuau        32.76  70  P       P       17 56 32.4 +2.0
BJI   Beijing           32.76  70  P       P       17 56 32.0 +1.6
BJI                                pmax    pmax
      comp=Z,6.0nm,1.0s
BJI                                LR      LR
      comp=Z,430nm,16.8s
WHN   Wuhan             33.38  87  P       P       17 56 36.3 +0.4
WHN                                sP      sP      17 56 50.8 +1.6
WHN                                pmax    pmax
      comp=Z,130nm,1.1s
WHN                                LR      LR
      comp=Z,1µm,12.6s
WHN                                LR      LR
      comp=Z,2µm,11.0s
WHN                                LR      LR
      comp=Z,7µm,32.2s
KLMR  Klimovskoe        33.73 329 eP       P       17 56 36.7 -1.9
KLMR                              e                17 59 14.3
KLMR                               pmax    pmax
      comp=Z,106nm,1.2s
KLMR                               MLR     MLR
      comp=Z,2µm,14.0s
TIA   Tai'an            34.09  76  P       P       17 56 41.5 -0.5
TIA                                pmax    pmax
      comp=Z,25nm,2.1s
BOD   Bodaibo           34.11  37 eP       P       17 56 42.5 +0.6
BOD                                pmax    pmax
      comp=Z,41nm,1.2s
UBPT  Khong Chiam       34.12 119  P       P       17 56 43.5 +1.0
NRIK  Noril'sk          34.46   8  P       P       17 56 45.9 +1.0
      comp=Z,36nm,0.9s,baz=189,slow=6.4,SNR=51
      comp=Z,36nm,0.9s
NRIK  Noril'sk          34.46   8          P       17 56 45.5 +0.7
NRIK  Noril'sk          34.46   8d iP      P       17 56 45.4 +0.6
NRIK                               pmax    pmax
      comp=Z,49nm,1.0s
SURA  Surathani         34.77 133  P       P       17 56 49.9 +1.9
KAAM  Kaadhehdhoo       35.03 183  P       P       17 56 51.4 +1.1
      comp=Z,114nm,1.9s
QIZ   Qiongzhong        35.05 109  P       P       17 56 50.3 -0.2
QIZ                                LR      LR
      comp=Z,320nm,16.5s
QIZ                                LR      LR
      comp=Z,560nm,19.6s
QIZ                                LR      LR
      comp=Z,720nm,21.6s
PURM  Purcari           35.11 302 ⇑P       P       17 56 51.6 +1.0
HILR  Hailar Array B    35.35  53  P       P       17 56 53.9 +1.1
      comp=Z,4.0nm,0.4s,baz=243,slow=6.5,SNR=6.0
HILR                               PcP     PcP     17 59 23.1 +0.5
      comp=Z,3.5nm,0.6s,baz=234,slow=5.0,SNR=3.8
      comp=Z,4.0nm,0.4s
BAL3X Bal3x, Balta      35.35 304  P       P       17 56 53.2 +0.4
AK09  Malin Array Si    35.80 309  P       P       17 56 56.2 -0.4
AK10  Malin Array Si    35.82 309  P       P       17 56 56.4 -0.3
AK08  Malin Array Si    35.82 309  P       P       17 56 56.4 -0.3
AK07  Malin Array Si    35.84 309  P       P       17 56 56.6 -0.3
AKASG Malin Array Be    35.85 309  P       P       17 56 56.7 -0.3
      comp=Z,8.7nm,0.7s,baz=82,slow=7.9,SNR=26
AKASG                              PP      PnPn    17 58 16.6 -0.8
      comp=Z,3.5nm,0.7s,baz=94,slow=12,SNR=4.9
AKASG                              PcP     PcP     17 59 23.9  0.0
      comp=Z,2.2nm,0.6s,baz=75,slow=3.4,SNR=4.3
AKASG                              LR      LR      18 13 18.3
      comp=Z,753nm,18.7s,baz=99,slow=39
      comp=Z,8.7nm,0.7s
AKASG Malin Array Be    35.85 309  P       P       17 56 56.2 -0.8
AKASG                                      PcP     17 59 23.1 -0.8
AKASG Malin Array Be    35.85 309ceP       P       17 56 56.7 -0.3
AKASG                              pmax    pmax
      comp=Z,11nm,0.6s
AKBB  Malin Array Si    35.85 309deP       P       17 56 56.7 -0.3
AKBB  Malin Array Si    35.85 309  P       P       17 56 56.5 -0.5
AK06  Malin Array Si    35.85 309  P       P       17 56 56.8 -0.2
AK05  Malin Array Si    35.85 309  P       P       17 56 56.8 -0.2
AK03  Malin Array Si    35.85 309  P       P       17 56 56.2 -0.8
AK01  Malin Array Si    35.85 309  P       P       17 56 56.4 -0.6
AK02  Malin Array Si    35.85 309  P       P       17 56 56.4 -0.6
KIEV  Kiev              35.86 309          P       17 56 55.7 -1.4
KIEV  Kiev              35.86 309 ⇑P       P       17 56 57.3 +0.3
KIEV  Kiev              35.86 309 i P      P       17 56 56.1 -1.0
      SNR=13
KIEV  Kiev              35.86 309  P       P       17 56 57.3 +0.3
KIEV  Kiev              35.86 309  P       P       17 56 56.5 -0.6
      comp=Z,151nm,1.9s
AK11  Malin Array Si    35.88 309  P       P       17 56 56.7 -0.6
AK12  Malin Array Si    35.88 309  P       P       17 56 56.7 -0.6
AK04  Malin Array Si    35.89 309  P       P       17 56 56.7 -0.6
AK14  Malin Array Si    35.91 309  P       P       17 56 56.9 -0.7
AK23  Malin Array Si    35.92 309  P       P       17 56 57.0 -0.6
AK16  Malin Array Si    35.92 309  P       P       17 56 57.0 -0.6
AK13  Malin Array Si    35.94 309  P       P       17 56 57.4 -0.4
AK18  Malin Array Si    35.95 309  P       P       17 56 57.0 -0.9
AK17  Malin Array Si    35.95 309  P       P       17 56 57.2 -0.7
AK22  Malin Array Si    35.95 309  P       P       17 56 57.2 -0.7
AK21  Malin Array Si    35.97 309  P       P       17 56 57.3 -0.8
AK19  Malin Array Si    35.98 309  P       P       17 56 57.5 -0.7
AK20  Malin Array Si    35.99 309  P       P       17 56 57.5 -0.7
TPGR  Topolog           36.12 299 ⇓P       P       17 57 00.1 +0.6
CFR   Carcaliu          36.32 300 ⇑P       P       17 57 01.5 +0.4
CFR   Carcaliu          36.32 300  P       P       17 57 01.5 +0.4
VLDR  Vladesti          36.34 301 ⇓P       P       17 57 02.3 +1.0
SCTR  Scanteiesti       36.41 301 ⇑P       P       17 57 02.6 +0.8
VARL  Varlezi           36.51 301 ⇑P       P       17 57 03.8 +1.1
VASR  Vaslui            36.54 302 ⇓P       P       17 57 03.9 +0.9
NJ2   Nanjing           36.55  83 eP       P       17 57 04.3 +1.1
NJ2                                pmax    pmax
      comp=Z,9.0nm,0.5s
NJ2                                LR      LR
      comp=Z,680nm,13.3s
BIR   Birlad            36.66 302 ⇓P       P       17 57 04.5 +0.5
BIR   Birlad            36.66 302  P       P       17 57 04.4 +0.5
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LUBAR Lubar, Ukraine    36.70 308  P       P       17 57 04.0 -0.3
MI28  Mi28,Pidlybu      36.85 309  P       P       17 57 06.7 +1.1
PANC  Panciu            37.00 301 ⇓P       P       17 57 08.5 +1.6
ODBI  Odobesti          37.06 301 ⇑P       P       17 57 09.0 +1.5
DL2   Dalian            37.10  71  P       P       17 57 09.5 +1.7
DL2                                S       S       18 02 53.0 +0.8
DL2                                pmax    pmax
      comp=Z,52nm,1.0s
DL2                                pmax    pmax
      comp=Z,740nm,9.6s
DL2                                LR      LR
      comp=Z,1µm,20.4s
DL2                                LR      LR
      comp=Z,930nm,22.9s
DL2                                LR      LR
      comp=Z,1µm,20.2s
MNK   Minsk             37.25 315 i P      P       17 57 07.1 -1.8
      comp=E,21nm,0.9s
MNK                               i P      P       17 57 07.1 -1.8
      comp=N,17nm,0.9s
MNK                               i P      P       17 57 07.1 -1.8
      comp=Z,23nm,0.9s,baz=101
MNK                               i PP     PP      17 58 32.1 -1.8
MNK                               i PPP    PPP     17 58 51.3
MNK                               i S      S       18 02 52.6 -1.4
MNK                               i SS     SnSn    18 05 32.1 +1.7
MNK                               i SSS    SSS     18 05 50.7
MNK                               i LQ     LQ      18 09 53.4
MNK                               i LR     LR      18 12 38.6
MNK                               i LRM    MLR     18 14 23.9
      comp=E,743nm,18.6s
MNK                               i LRM    MLR     18 15 09.5
      comp=N,2µm,17.5s
MNK                               i LRM    MLR     18 15 14.4
      comp=Z,3µm,17.2s
MNK   Minsk             37.25 315 eP       P       17 57 07.0 -1.8
VRI   Vrincioaia        37.29 301 ⇑P       P       17 57 10.6 +1.2
VRI   Vrincioaia        37.29 301  P       P       17 57 10.6 +1.2
BISRR Bisoca            37.31 300 ⇓P       P       17 57 11.5 +1.8
TESR  Tescani           37.33 302 ⇑P       P       17 57 10.6 +0.9
TESR  Tescani           37.33 302  P       P       17 57 10.2 +0.5
      comp=Z,57nm,0.9s
PLOR  Plostina          37.34 301 ⇑P       P       17 57 11.7 +1.8
PLOR  Plostina          37.34 301  P       P       17 57 11.6 +1.8
GIRR  Girov             37.43 303 ⇑P       P       17 57 11.3 +0.7
ISR   Istrita           37.45 300 ⇑P       P       17 57 12.3 +1.5
ISR   Istrita           37.45 300  P       P       17 57 12.2 +1.5
KMPD  K-Podol'skiy      37.48 305  P       P       17 57 10.5 -0.4
KMPD                               P       P       17 57 10.5 -0.4
HORU  Horodok           37.52 306  P       P       17 57 11.4 +0.1
PRAR  RASCA             37.62 303 ⇑P       P       17 57 12.8 +0.7
COVR  Voineasa-Covas    37.66 301 ⇑P       P       17 57 14.1 +1.6
TURR  Turia             37.78 301 ⇑P       P       17 57 15.2 +1.6
MLR   Muntele Rosu      37.85 300  LR      LR      18 16 09.3
      comp=Z,892nm,21.0s,baz=68,slow=42
MLR   Muntele Rosu      37.85 300 ⇓P       P       17 57 16.0 +1.7
MLR   Muntele Rosu      37.85 300  P       P       17 57 15.9 +1.7
OZUR                    37.94 301 ⇓P       P       17 57 16.5 +1.6
NACGM Naroch            37.95 316 eP       P       17 57 15.6 +0.8
      comp=Z,41nm,0.9s,baz=100
RNPP5 Staryi Chortor    38.00 310  P       P       17 57 15.5 +0.2
RNPP9 Sopachiv          38.02 310  P       P       17 57 15.6 +0.2
RNPP8 Varash            38.03 310  P       P       17 57 15.7 +0.2
ELND  Elena             38.09 296 ⇑P       P       17 57 16.7 +0.5
JOF   Joensuu           38.13 329 eP       P       17 57 17.2 +1.0
DOPR  Dopca             38.22 301 ⇑P       P       17 57 18.2 +0.9
BURAR Bucovina Array    38.30 304          P       17 57 17.4 -0.6
BURAR Bucovina Array    38.30 304 ⇑P       P       17 57 18.8 +0.8
BURAR Bucovina Array    38.30 304  P       P       17 57 18.8 +0.8
IIGN  Ignalina          38.34 316 eP       P       17 57 19.2 +1.1
KSV   Kosov             38.40 305  P       P       17 57 18.6 -0.1
KCSI  Kotacane, Aceh    38.41 141  P       P       17 57 22.1 +3.0
KARP  Karpathos         38.41 284 eP       P       17 57 18.6 -0.4
HUMR  Humele            38.59 299 ⇓P       P       17 57 21.8 +1.4
VSU   Vasula            38.74 321 eP       P       17 57 21.0 -0.4
ARR   Arges             38.78 300 ⇑P       P       17 57 23.0 +1.0
STNU  Starunia          38.78 306  P       P       17 57 22.5 +0.6
TNR   Turnu Rosu        39.02 301 ⇑P       P       17 57 25.4 +1.5
TNR   Turnu Rosu        39.02 301  P       P       17 57 25.4 +1.5
LVV   L'vov             39.11 307  P       P       17 57 25.2 +0.6
IPM   Ipoh              39.36 136  P       P       17 57 28.5 +1.4
IPM   Ipoh              39.36 136  P       P       17 57 29.8 +2.7
      comp=Z,22nm,1.1s
ARBE  Arbavere          39.37 323 eP       P       17 57 27.8 +1.2
LOT   Lotru             39.38 300 ⇑P       P       17 57 27.8 +0.7
LVZ   Lovozero          39.38 337  P       P       17 57 27.4 +0.6
LVZ   Lovozero          39.38 337⇓eP       P       17 57 28.1 +1.3
LVZ                                pmax    pmax
      comp=Z,94nm,1.2s
LVZ   Lovozero          39.38 337  P       P       17 57 28.0 +1.3
      comp=Z,126nm,1.2s
CJR   Cluj-Napoca       39.43 302 ⇑P       P       17 57 28.8 +1.4
CJR   Cluj-Napoca       39.43 302  P       P       17 57 28.8 +1.4
SHIU  Shidnytsya        39.53 306  P       P       17 57 29.4 +1.2
APA   Apatity           39.60 337 eP       P       17 57 27.1 -1.4
APA                                pmax    pmax
      comp=Z,20nm,1.2s
APA                                MLR     MLR
      comp=Z,4µm,6.9s
PSI   Prapat            39.62 140  P       P       17 57 34.3 +5.0
PABE  Paberze           39.64 316  IAmb    IAmb    17 57 33.0
      comp=Z,46nm,1.1s
PABE  Paberze           39.64 316 eP       P       17 57 29.6 +0.7
MARR  Marisel-Cluj      39.76 302 ⇓P       P       17 57 31.3 +1.1
FIA1  FINESS Array S    39.89 326          P       17 57 31.2 +0.3
FINES FINESS Array B    39.89 326  P       P       17 57 31.2 +0.3
      comp=Z,22nm,0.7s,baz=110,slow=9.1,SNR=66
FINES                              LR      LR      18 14 53.0
      comp=Z,3µm,18.9s,baz=104,slow=38
      comp=Z,22nm,0.7s
FINES FINESS Array B    39.89 326          P       17 57 31.1 +0.1
SUW   Suwalki           39.90 314 eP       P       17 57 30.5 -0.7
DEV   Deva              39.96 301 ⇑P       P       17 57 32.7 +1.0
DEV   Deva              39.96 301  P       P       17 57 32.7 +1.0
KWP   Kalwaria Pacla    39.96 307 eP       P       17 57 32.8 +1.1
KWP   Kalwaria Pacla    39.96 307  P       P       17 57 32.7 +0.9
      comp=Z,97nm,0.7s
MUKU  Mukachevo         39.99 305  P       P       17 57 32.9 +1.0
BERU  Beregovo          40.02 305  P       P       17 57 33.1 +0.9
GZR   Gura Zlata        40.08 300 ⇓P       P       17 57 33.6 +0.7
GZR   Gura Zlata        40.08 300  P       P       17 57 33.5 +0.7
MTSE  Matsula           40.29 321 eP       P       17 57 35.0 +0.8
HEH   HeiHe             40.33  52 eP       P       17 57 35.0 +0.2
HEH                                pmax    pmax
      comp=Z,19nm,1.3s
HEH                                LR      LR
      comp=Z,1µm,15.3s
HEH                                LR      LR
      comp=Z,880nm,15.9s
HEH                                LR      LR
      comp=Z,1µm,16.7s
MEF   Metsahovi         40.34 324 eP       P       17 57 35.8 +1.1
ZEA   Zeya              40.39  47 eP       P       17 57 37.4 +2.2
ZEA                                pmax    pmax
      comp=N,10.0nm,0.9s
ZEA                                pmax    pmax
      comp=E,10.0nm,0.9s
ZEA                                pmax    pmax
      comp=Z,20nm,1.1s
BNX   BinXian           40.49  59 ⇓P       P       17 57 37.8 +1.6
BNX                                pmax    pmax
      comp=Z,19nm,1.4s
KEF   Keuruu            40.65 327 eP       P       17 57 37.8 +0.6
SIRR  Siria             40.79 302 ⇑P       P       17 57 40.0 +1.3
BZS   Buzias            40.88 301 ⇑P       P       17 57 40.5 +1.1
BZS   Buzias            40.88 301  P       P       17 57 40.4 +1.1
MDVR  Moldovita         40.89 300 ⇑P       P       17 57 40.4 +0.9
BOVS  Bovan             41.03 298 ⇑P       P       17 57 41.4 +0.8
BEL   Belsk             41.21 310 eP       P       17 57 42.7 +0.7
NIE   Niedzica          41.53 307 eP       P       17 57 46.2 +1.4
NIE   Niedzica          41.53 307  P       P       17 57 46.1 +1.3
MNSI  Mandailing Nat    41.66 141  P       P       17 57 48.9 +2.9
      comp=Z,19nm,0.9s
BSZH  Besenyszg         41.67 304 ⇑P       P       17 57 46.7 +0.9
PBSI  Pulau Batu        41.74 143  P       P       17 57 49.1 +2.4
OJC   Ojcow             41.84 308 eP       P       17 57 47.8 +0.6
VAF   Ylistaro          41.87 327 eP       P       17 57 48.0 +0.7
PSZ   Piszkesteto       41.88 304          P       17 57 46.5 -1.1
PSZ   Piszkesteto       41.88 304 ⇑P       P       17 57 48.8 +1.2
PSZ   Piszkesteto       41.88 304 eP       P       17 57 48.6 +1.0
PSZ   Piszkesteto       41.88 304  P       P       17 57 46.5 -1.1
PSZ                                pmax    pmax
      comp=Z,15nm,1.0s
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TWG	**Pinlang**	**42.01**	**95**	P	**P**	**17 57 49.8**	**+0.9**
TWG				IAmb	IAmb	17 57 56.7	
	comp=Z,76nm,1.0s						
LANS	**Liptovska Anna**	**42.09**	**306**	*e*P	**P**	**17 57 50.8**	**+1.5**
VADS	**Vadso**	**42.19**	**339**	*e*P	**P**	**17 57 50.9**	**+1.1**
KSAR	**Wonju Array Be**	**42.23**	**71**		**P**	**17 57 50.6**	**+0.1**
KSAR	**Wonju Array Be**	**42.23**	**71**	P	**P**	**17 57 50.6**	**+0.1**
KSRS	**Korea Array**	**42.25**	**71**	P	**P**	**17 57 50.3**	**-0.4**
	comp=Z,10nm,0.9s,baz=276,slow=8.1,SNR=15						
KSRS				PcP	**PcP**	**17 59 44.4**	**+0.1**
	comp=Z,3.5nm,0.9s,baz=277,slow=3.5,SNR=4.4						
	comp=Z,10nm,0.9s						
FURI	**Furi**	**42.33**	**240**	LR	LR	18 17 34.1	
	comp=Z,686nm,20.0s,baz=54,slow=39						
KEV	**Kevo**	**42.72**	**338**	P	**P**	**17 57 54.9**	**+0.8**
KEV				IAmb	IAmb	17 57 56.3	
	comp=Z,49nm,1.1s						
KEV	**Kevo**	**42.72**	**338**	P	**P**	**17 57 54.9**	**+0.8**
KEV				pmax	pmax		
	comp=Z,49nm,1.1s						
MORH	**Mrgy, Hungar**	**42.88**	**302**	⇑P	**P**	**17 57 56.5**	**+0.8**
YAK	**Yakutsk**	**42.89**	**35**		**P**	**17 57 55.4**	**-0.2**
YAK				IAmb	IAmb	17 57 58.6	
	comp=Z,42nm,0.8s						
YAK	**Yakutsk**	**42.89**	**35**	*e*P	**P**	**17 57 55.1**	**-0.4**
YAK				e*PP	**sP**	**17 58 07.5**	**-1.3**
YAK				*e*		17 59 32.0	
YAK				*e*		17 59 44.4	
YAK				*e*PPP	PPP	18 00 08.0	
YAK				*e*S	**S**	**18 04 17.2**	**-1.0**
YAK				*e*SS	**SS**	**18 07 27.0**	**-2.8**
YAK				*e*		18 07 47.0	
YAK				*e*SSS	SSS	18 08 13.1	
YAK				pmax	pmax		
	comp=Z,55nm,1.2s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,36nm,1.5s						
YAK				pmax	pmax		
	comp=Z,352nm,5.1s						
YAK				pmax	pmax		
	comp=N,233nm,4.2s						
YAK				pmax	pmax		
	comp=E,163nm,3.9s						
YAK				smax	smax		
	comp=E,266nm,4.7s						
YAK				smax	smax		
	comp=N,174nm,3.3s						
PDG	**Podgorica**	**42.99**	**296**	⇑P	**P**	**17 57 57.0**	**+0.3**
ARA0	**ARCESS Array S**	**43.09**	**337**	*e*P	**P**	**17 57 58.4**	**+1.2**
ARCES	**ARCESS Array B**	**43.09**	**337**	P	**P**	**17 57 58.3**	**+1.2**
	comp=N,44nm,0.9s,baz=112,slow=7.2,SNR=77						
ARCES				LR	LR	18 16 37.2	
	comp=N,1µm,20.6s,baz=113,slow=37						
	comp=N,44nm,0.9s						
ARCES	**ARCESS Array B**	**43.09**	**337**	P	**P**	**17 57 57.7**	**+0.6**
ARCES	**ARCESS Array B**	**43.09**	**337**	P	**P**	**17 57 57.7**	**+0.6**
ARCES				pmax	pmax		
	comp=Z,144nm,1.3s						
SISI	**Saibi**	**43.24**	**143**	P	**P**	**17 58 02.1**	**+3.2**
	comp=Z,19nm,0.8s						
JAVC	**Velka Javorina**	**43.29**	**306**	*e*P	**P**	**17 57 59.4**	**+0.3**
MORC	**Moravsky Berou**	**43.31**	**307**	IAmb	IAmb	17 58 02.7	
	comp=Z,63nm,1.6s						
MORC	**Moravsky Berou**	**43.31**	**307**	⇓P	**P**	**17 58 00.1**	**+0.9**
MORC	**Moravsky Berou**	**43.31**	**307**	*e*P	**P**	**17 57 59.6**	**+0.4**
MORC	**Moravsky Berou**	**43.31**	**307**	P	**P**	**17 58 00.1**	**+0.9**
SMOL	**Smolenice**	**43.48**	**306**	*e*P	**P**	**17 58 01.4**	**+0.9**
PDSI	**Padang**	**43.57**	**141**	P	**P**	**17 58 03.7**	**+2.1**
	comp=Z,36nm,0.8s						
MODS	**Modra-Piesok**	**43.59**	**305**	*e*P	**P**	**17 58 02.3**	**+0.9**
MODS				pmax	pmax		
	comp=Z,344nm,3.0s						
MODS	**Modra-Piesok**	**43.59**	**305**	*e*P	**P**	**17 58 02.3**	**+0.9**
MODS				*e*PP	**PcP**	**17 59 49.0**	**+0.4**
KTK1	**Kautokeino**	**43.62**	**336**	*e*P	**P**	**17 58 01.9**	**+0.5**
KRLC	**Kraliky**	**43.78**	**308**	*e*P	**P**	**17 58 03.8**	**+0.8**
KRLC	**Kraliky**	**43.78**	**308**	*e*P	**P**	**17 58 03.8**	**+0.8**
USRK	**Ussuriysk Ar.**	**43.91**	**61**	P	**P**	**17 58 06.3**	**+2.3**
	comp=Z,3.1nm,0.8s,baz=265,slow=12,SNR=4.1						
	comp=Z,3.1nm,0.8s						
VRAC	**Vranov**	**43.96**	**307**	P	**P**	**17 58 05.4**	**+1.0**
	comp=Z,12nm,0.9s,baz=92,slow=8.0,SNR=18						
VRAC				LR	LR	18 20 29.2	
	comp=Z,614nm,18.3s,baz=64,slow=42						
	comp=Z,12nm,0.9s						
VRAC	**Vranov**	**43.96**	**307**	⇑P	**P**	**17 58 05.8**	**+1.4**
VRAC	**Vranov**	**43.96**	**307**	*e*P	**P**	**17 58 04.9**	**+0.5**
KSP	**Ksiaz**	**44.05**	**309**	*e*P	**P**	**17 58 04.7**	**-0.4**
DPC	**Dobruska-Polom**	**44.06**	**308**	*e*P	**P**	**17 58 06.3**	**+1.1**
DPC	**Dobruska-Polom**	**44.06**	**308**	*e*P	**P**	**17 58 06.3**	**+1.1**
BLY	**Banja Luka**	**44.09**	**300**	⇑P	**P**	**17 58 06.3**	**+0.8**
KRUC	**Moravsky**	**44.11**	**306**	*e*P	**P**	**17 58 06.0**	**+0.4**
OSTC	**Ostas**	**44.12**	**309**	*e*P	**P**	**17 58 06.7**	**+1.1**
OSTC	**Ostas**	**44.12**	**309**	*e*P	**P**	**17 58 06.7**	**+1.1**
HAMF	**Hammerfest**	**44.13**	**338**	*e*P	**P**	**17 58 05.8**	**+0.4**
CHVC	**Chvalec**	**44.22**	**309**	*e*P	**P**	**17 58 07.5**	**+1.0**
CHVC	**Chvalec**	**44.22**	**309**	*e*P	**P**	**17 58 07.5**	**+1.0**
UPC	**Upice**	**44.25**	**309**	*e*P	**P**	**17 58 07.5**	**+0.8**
UPC	**Upice**	**44.25**	**309**	*e*P	**P**	**17 58 07.5**	**+0.8**
RONA	**Rosalia, Austr**	**44.31**	**304**	*e*P	**P**	**17 58 07.6**	**+0.3**
	comp=Z,19nm,1.2s,SNR=7.7						
KOGS	**Kog**	**44.50**	**303**	*i* P	**P**	**17 58 09.0**	**+0.3**
CONA	**Conrad Observa**	**44.58**	**305**	*e*P	**P**	**17 58 09.7**	**+0.3**
	comp=Z,39nm,1.0s,SNR=21						
JETT	**Jettan, Norway**	**44.75**	**336**	*e*P	**P**	**17 58 11.6**	**+1.1**
ARSA	**Arzberg**	**44.89**	**304**	*e*P	**P**	**17 58 12.4**	**+0.5**
	comp=Z,22nm,1.8s						
PRU	**Pruhonice**	**45.23**	**308**	*e*P	**P**	**17 58 15.5**	**+1.0**
PRU	**Pruhonice**	**45.23**	**308**	*e*P	**P**	**17 58 15.5**	**+1.0**
PERS	**Pernice**	**45.25**	**303**	*i* P	**P**	**17 58 15.2**	**+0.4**
TRO	**Tromso**	**45.27**	**336**	*e*P	**P**	**17 58 15.1**	**+0.6**
SOKA	**Soboth**	**45.30**	**303**	*i* P	**P**	**17 58 15.7**	**+0.5**
	comp=Z,38nm,1.1s,SNR=24						
TIXI	**Tiksi**	**45.42**	**21**	LR	LR	18 18 38.9	
	comp=Z,882nm,18.4s,baz=263,slow=38						
TIXI	**Tiksi**	**45.42**	**21**		**P**	**17 58 15.3**	**-0.4**
TIXI				IAmb	IAmb	17 58 20.6	
	comp=Z,39nm,1.1s						
TIXI	**Tiksi**	**45.42**	**21**	⇓*e*P	**P**	**17 58 15.8**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,43nm,1.0s						
ZVC	**Zvikov**	**45.51**	**307**	*e*P	**P**	**17 58 17.9**	**+1.2**
HFS	**Hagfors**	**45.61**	**322**	P	**P**	**17 58 17.8**	**+0.5**
	comp=Z,30nm,0.7s,baz=98,slow=11,SNR=55						
HFS				LR	LR	18 18 29.8	
	comp=Z,1µm,18.8s,baz=100,slow=38						
	comp=Z,30nm,0.7s						
MOA	**Molln**	**45.65**	**305**	*e*P	**P**	**17 58 17.9**	**0.0**
	comp=Z,9.2nm,0.8s,SNR=10.0						
OBKA	**Obir**	**45.65**	**303**	*i* P	**P**	**17 58 18.9**	**+0.9**
	comp=Z,34nm,1.4s,SNR=5.2						
LJU	**Ljubljana**	**45.74**	**302**	*i* P	**P**	**17 58 19.3**	**+0.7**
JNU	**Nakatsue**	**45.83**	**76**		**P**	**17 58 19.8**	**+0.3**
JNU				IAmb	IAmb	17 58 22.3	
	comp=Z,44nm,0.9s						
JNU	**Nakatsue**	**45.83**	**76**	P	**P**	**17 58 20.5**	**+1.0**
GERES	**GERESS Array B**	**45.90**	**306**	P	**P**	**17 58 20.2**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=87,slow=7.0,SNR=12						
GERES				PP	**PP**	**18 00 09.2**	**+1.6**
	comp=Z,1.3nm,0.8s,baz=93,slow=8.0,SNR=5.3						
GERES				LR	LR	18 21 39.2	
	comp=Z,630nm,18.1s,baz=62,slow=42						
	comp=Z,1.2nm,0.6s						
KHC	**Kasperske Hory**	**45.95**	**307**	*e*P	**P**	**17 58 21.0**	**+0.8**
KHC	**Kasperske Hory**	**45.95**	**307**	*e*P	**P**	**17 58 21.0**	**+0.8**
FAUS	**Fauske**	**45.96**	**332**	*e*P	**P**	**17 58 21.0**	**+1.0**
MOR8	**Moi Rana**	**46.04**	**331**	*e*P	**P**	**17 58 20.7**	**0.0**
CUC	**Castrocucco**	**46.04**	**294**	IAmb	IAmb	17 58 22.5	
	comp=Z,26nm,0.7s						
GRNR	**Gornyy**	**46.05**	**51**	⇓*i*P	**P**	**17 58 21.9**	**+0.9**
GRNR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GRNR				MLR	MLR		
	comp=E,440nm,16.0s						
GRNR				MLR	MLR		
	comp=N,670nm,15.0s						
GRNR				MLR	MLR		
	comp=Z,147nm,13.0s						
CLL	**Collm**	**46.09**	**310**	*i* P	**P**	**17 58 21.0**	**-0.2**
CLL				i *PP	**sP**	**17 58 32.6**	**-1.8**
CLL				pmax	pmax		
	comp=Z,15nm,1.0s						
CLL				MLR	MLR		
	comp=Z,900nm,19.4s						
CLL	**Collm**	**46.09**	**310**	*i* P	**P**	**17 58 21.0**	**-0.2**
	comp=Z,15nm,1.0s						
CLL				*i* pP	**pP**	**17 58 26.4**	**-4.1**
CLL				*e*PP	**PP**	**18 00 10.0**	**+0.6**
CLL				AMS	AMS	18 20 00.0	
	comp=Z,900nm,19.4s						
BIOA	**Bad Ischl, Aus**	**46.09**	**305**	*i* P	**P**	**17 58 21.2**	**-0.2**
	comp=Z,13nm,1.1s						
JOW	**Kunigami**	**46.09**	**85**	LR	LR	18 20 29.5	
	comp=Z,424nm,20.5s,baz=300,slow=40						
STEI	**Steigen**	**46.10**	**333**	*e*P	**P**	**17 58 22.3**	**+1.2**
RAUS	**Rausandaksla**	**46.25**	**331**	*e*P	**P**	**17 58 23.8**	**+1.5**
CADS	**Cadrg**	**46.25**	**303**	*i* P	**P**	**17 58 22.7**	**0.0**
MYKA	**Terra Mystica**	**46.25**	**303**	*e*P	**P**	**17 58 23.1**	**+0.4**
	comp=Z,12nm,1.0s						
MASI	**Maura Aman, Be**	**46.38**	**141**	P	**P**	**17 58 26.9**	**+2.9**
KBA	**Koelnbreinsper**	**46.38**	**304**	*i* P	**P**	**17 58 23.6**	**-0.3**
	comp=Z,14nm,1.1s						
LEIR	**Leirfjorden**	**46.56**	**330**	*e*P	**P**	**17 58 25.6**	**+0.9**
VAGH	**Vaagaholmen**	**46.60**	**331**	*e*P	**P**	**17 58 27.0**	**+2.0**
STOK	**Stokkvaagen**	**46.64**	**331**	*e*P	**P**	**17 58 26.0**	**+0.7**
NC602	**NORSAR Array S**	**46.71**	**323**	*e*P	**P**	**17 58 26.2**	**+0.2**
LOF	**Lofoten**	**46.77**	**333**	*e*P	**P**	**17 58 27.0**	**+0.7**
LESA	**Schwarzleotal**	**46.78**	**305**	*e*P	**P**	**17 58 26.8**	**0.0**
	comp=Z,13nm,0.9s,SNR=4.2						
NSS	**Namsos**	**46.82**	**328**	*e*P	P	17 58 32.6	+5.8
NB2	**NORSAR Subarra**	**46.88**	**323**	P	**P**	**17 58 27.1**	**-0.3**
	comp=Z,32nm,0.9s,baz=92,slow=7.9						
NB2	**NORSAR Subarra**	**46.88**	**323**	P	**P**	**17 58 27.1**	**-0.3**
	baz=92,slow=7.9						
NOA	**NORSAR Array B**	**46.88**	**323**	P	**P**	**17 58 27.2**	**-0.2**
	comp=Z,20nm,0.7s,baz=93,slow=7.6,SNR=58						
NOA				LR	LR	18 19 29.7	
	comp=Z,1µm,19.4s,baz=95,slow=38						
	comp=Z,20nm,0.7s						
STAL	**STALIGIAL**	**46.95**	**303**	IAmb	IAmb	17 58 38.7	
	comp=Z,28nm,1.1s						
ABTA	**Abfaltersbach**	**47.00**	**304**	*i* P	**P**	**17 58 28.0**	**-0.6**
	comp=Z,9.0nm,0.8s						
NBO00	**NORSAR Array S**	**47.09**	**323**	IAmb	IAmb	17 58 30.4	
	comp=Z,35nm,1.1s						
NC204	**NORSAR Array S**	**47.11**	**324**	IAmb	IAmb	17 58 29.9	
	comp=Z,28nm,0.8s						
WTTA	**Wattenberg**	**47.50**	**305**	*i* P	**P**	**17 58 32.1**	**-0.5**
	comp=Z,16nm,1.4s,SNR=5.9						
WATA	**Walderalm**	**47.53**	**305**	*e*P	**P**	**17 58 32.0**	**-0.8**
	comp=Z,11nm,1.2s						
KONO	**Kongsberg**	**47.65**	**321**	*e*P	**P**	**17 58 33.8**	**+0.5**
KONO	**Kongsberg**	**47.65**	**321**	P	**P**	**17 58 33.6**	**+0.2**
CTI	**Castel Tesino**	**47.71**	**303**		**P**	**17 58 33.3**	**-0.9**
CTI	**Castel Tesino**	**47.71**	**303**	P	**P**	**17 58 33.3**	**-0.9**
CTI				pmax	pmax		
	comp=Z,11nm,0.9s						
SQTA	**Sankt Quirin**	**47.80**	**305**	*i* P	**P**	**17 58 34.0**	**-0.9**
	comp=Z,5.0nm,0.6s,SNR=4.7						
TEOL	**Teolo**	**47.83**	**302**	IAmb	IAmb	17 58 39.1	
	comp=Z,24nm,0.9s						
SBUM	**Sibu**	**47.89**	**125**	P	**P**	**17 58 36.6**	**+0.9**
SBUM	**Sibu**	**47.89**	**125**	P	**P**	**17 58 36.5**	**+0.8**
SBUM	**Sibu**	**47.89**	**125**	P	**P**	**17 58 40.3**	**+4.6**
DOMB	**Dombas**	**47.95**	**325**	*e*P	**P**	**17 58 36.2**	**+0.5**
RETA	**Reutte**	**48.05**	**305**	*i* P	**P**	**17 58 36.1**	**-0.6**
	comp=Z,13nm,1.3s						
FETA	**Feichten**	**48.15**	**304**	*i* P	**P**	**17 58 36.9**	**-0.7**
	comp=Z,8.6nm,0.8s,SNR=11						
EGSI	**Enggano, Bengk**	**48.29**	**142**	P	P	17 58 48.3	+10
MDSI	**Maura Dua**	**48.53**	**139**	P	P	17 58 47.3	+6.6
	comp=Z,12nm,0.5s						
MOL	**Molde**	**48.67**	**325**	*e*P	**P**	**17 58 42.5**	**+1.4**
DAVA	**Damuels**	**48.67**	**305**	*i* P	**P**	**17 58 41.3**	**-0.4**
	comp=Z,35nm,0.6s,SNR=4.1						
DAVOX	**Davos/Dischmat**	**48.77**	**304**	P	**P**	**17 58 41.9**	**-0.5**
	comp=Z,14nm,0.8s,baz=100,slow=6.5,SNR=31						
DAVOX				LR	LR	18 21 23.8	
	comp=Z,791nm,21.8s,baz=44,slow=39						
	comp=Z,14nm,0.8s						
STU	**Stuttgart**	**48.85**	**307**	IAmb	IAmb	17 58 45.2	
	comp=Z,18nm,0.9s						
KLSI		**49.00**	**139**	P	**P**	**17 58 44.8**	**+0.6**
	comp=Z,19nm,1.0s						
SPA0	**Spitsbergen Ar**	**49.01**	**347**	*e*P	**P**	**17 58 45.1**	**+1.5**
SPITS	**Spitsbergen Ar**	**49.01**	**347**	P	**P**	**17 58 45.0**	**+1.5**
	comp=Z,27nm,0.9s,baz=112,slow=11,SNR=25						
SPITS				LR	LR	18 21 54.6	
	comp=Z,893nm,20.9s,baz=108,slow=39						
	comp=Z,27nm,0.9s						
SPITS	**Spitsbergen Ar**	**49.01**	**347**	P	**P**	**17 58 44.8**	**+1.2**
SPITS				pmax	pmax		
	comp=Z,42nm,1.0s						
TUE	**Stuetta**	**49.19**	**304**		**P**	**17 58 44.8**	**-1.0**
TUE				IAmb	IAmb	17 58 46.5	
	comp=Z,54nm,1.9s						
BFO	**Black Forest**	**49.50**	**306**	P	**P**	**17 58 46.7**	**-1.1**
BFO				IAmb	IAmb	17 58 49.5	
	comp=Z,35nm,1.7s						
BFO	**Black Forest**	**49.50**	**306**	P	**P**	**17 58 46.7**	**-1.1**
BFO				pmax	pmax		
	comp=Z,35nm,1.7s						
INU	**Inuyama**	**49.88**	**71**	IAmb	IAmb	17 58 56.3	
	comp=Z,23nm,0.9s						
INU	**Inuyama**	**49.88**	**71**	P	**P**	**17 58 52.6**	**+1.8**
TYV	**Tymovskoe**	**49.96**	**50**	*e*P	**P**	**17 58 54.6**	**+3.4**
TYV				pmax	pmax		
	comp=Z,12nm,1.2s						
TYV				pmax	pmax		
	comp=Z,200nm,2.6s						
KBS	**Kingsbay**	**50.10**	**347**	P	**P**	**17 58 52.3**	**+0.4**
KBS	**Kingsbay**	**50.10**	**347**	*e*P	**P**	**17 58 53.0**	**+1.0**
KBS	**Kingsbay**	**50.10**	**347**	P	**P**	**17 58 52.3**	**+0.4**
KBS				pmax	pmax		
	comp=Z,64nm,1.3s						
KBS	**Kingsbay**	**50.10**	**347**	*i* P	**P**	**17 58 52.9**	**+1.0**
MAJO	**Matsushiro**	**50.40**	**69**	P	**P**	**17 58 53.9**	**-0.9**
MAJO	**Matsushiro**	**50.40**	**69**	P	**P**	**17 58 54.5**	**-0.3**
MAJO	**Matsushiro**	**50.40**	**69**	P	**P**	**17 58 53.9**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,94nm,1.7s						
MJAR	**Matsushiro Arr**	**50.40**	**69**	P	**P**	**17 58 54.9**	**+0.1**
	comp=Z,23nm,1.0s,baz=292,slow=9.1,SNR=27						
	comp=Z,23nm,1.0s						
MJAR	**Matsushiro Arr**	**50.40**	**69**	P	**P**	**17 58 53.9**	**-0.9**
MJAR	**Matsushiro Arr**	**50.40**	**69**	P	**P**	**17 58 53.9**	**-0.9**
MJAR				pmax	pmax		
	comp=Z,17nm,0.9s						
MEM	**Membach**	**50.56**	**310**	*d*P	**P**	**17 58 56.2**	**+0.4**
	comp=Z,11nm,1.1s						
SENIN	**Lac Senin/Sane**	**50.60**	**304**	IAmb	IAmb	17 58 57.6	
	comp=Z,17nm,0.7s						
WLF	**Walferdange**	**50.65**	**309**	IAmb	IAmb	17 58 59.9	
	comp=Z,74nm,1.8s						
WLF	**Walferdange**	**50.65**	**309**	*d*P	**P**	**17 58 56.6**	**+0.1**
	comp=Z,11nm,0.9s						
YSS	**Yuzhno-Sakhali**	**50.80**	**55**	*e*P	**P**	**17 58 59.0**	**+1.4**
YSS				pmax	pmax		
	comp=Z,60nm,1.1s						
YSS				MLR	MLR		
	comp=Z,1µm,19.0s						
KIBK	**Kibwezi**	**51.06**	**230**	P	**P**	**17 59 00.8**	**+0.7**
	SNR=6.2						
KIBK	**Kibwezi**	**51.06**	**230**	P	**P**	**17 58 59.1**	**-1.0**
RCHB	**Rochefort**	**51.14**	**309**	*d*PcP	**PcP**	**18 00 15.9**	**+0.5**
BNI	**Bardonecchia**	**51.34**	**303**	IAmb	IAmb	17 59 09.2	
	comp=Z,49nm,1.5s						
BMRD	**Maredsous**	**51.40**	**310**	*d*P	**P**	**17 59 02.7**	**+0.7**
	comp=Z,11nm,1.4s						
DOU	**Dourbes**	**51.55**	**309**	*d*P	**P**	**17 59 02.6**	**-0.5**
	comp=Z,7.6nm,1.0s						
DOU				*d*PcP	**PcP**	**18 00 15.0**	**-1.9**
KEST	**Kesra**	**52.20**	**291**	P	**P**	**17 59 07.6**	**-0.8**
	comp=Z,11nm,0.9s,baz=28,slow=3.2,SNR=5.9						
	comp=Z,11nm,0.9s						
MA2	**Magadan**	**53.13**	**38**	P	**P**	**17 59 15.4**	**+0.6**
MA2				IAmb	IAmb	17 59 21.8	
	comp=Z,54nm,1.2s						
MA2	**Magadan**	**53.13**	**38**	P	**P**	**17 59 18.0**	**+3.2**
MA2	**Magadan**	**53.13**	**38**	*ce*P	**P**	**17 59 15.7**	**+0.9**
MA2				pmax	pmax		
	comp=Z,35nm,1.0s						
SEY	**Seymchan**	**53.41**	**34**	⇑*e*P	**P**	**17 59 16.9**	**+0.2**
SEY				pmax	pmax		
	comp=Z,21nm,1.0s						
KPJI	**Karang Pucung**	**53.50**	**136**	P	**P**	**17 59 21.7**	**+3.7**
	comp=Z,15nm,1.1s						
MBAR	**Mbarara**	**54.60**	**239**	P	**P**	**17 59 25.3**	**-1.0**
	comp=Z,4.4nm,0.2s,baz=49,slow=7.0,SNR=9.6						
	comp=Z,4.4nm,0.2s						
MBAR	**Mbarara**	**54.60**	**239**	P	**P**	**17 59 26.2**	**-0.1**
MBAR	**Mbarara**	**54.60**	**239**	P	**P**	**17 59 25.4**	**-0.9**
MBAR	**Mbarara**	**54.60**	**239**	*de*P	**P**	**17 59 25.7**	**-0.6**
MBAR				pmax	pmax		
	comp=Z,16nm,1.1s						
MPSI	**Mapaga**	**54.69**	**120**	P	**P**	**17 59 27.6**	**+0.9**
	comp=Z,592nmcomp=Z,27nm,1.2s						
TOLI2	**Tolitoli**	**54.78**	**118**	P	**P**	**17 59 29.1**	**+1.7**
EKA	**Eskdalemuir Ar**	**55.00**	**317**	P	**P**	**17 59 28.6**	**+0.1**
	comp=Z,14nm,0.9s,baz=93,slow=6.7,SNR=15						
EKA				PcP	**PcP**	**18 00 30.5**	**+0.6**
	comp=Z,4.7nm,0.9s,baz=90,slow=5.0,SNR=3.9						
EKA				LR	LR	18 25 17.6	
	comp=Z,1µm,19.4s,baz=66,slow=38						
	comp=Z,14nm,0.9s						
NOR	**Nord**	**55.17**	**350**	*i* P	**P**	**17 59 30.4**	**+1.1**
NOR				IAmb	IAmb	17 59 32.7	
	comp=Z,20nm,1.1s						
CEST	**Esterri de Car**	**55.81**	**301**	IAmb	IAmb	17 59 35.2	
	comp=Z,20nm,0.8s						
MRSI	**Marisa**	**56.05**	**118**	P	**P**	**17 59 36.8**	**+0.3**
	comp=Z,55nm,1.1s						
MMSI	**Mamuju**	**56.17**	**123**	P	**P**	**17 59 41.2**	**+3.8**
	comp=Z,40nm,0.9s						
APSI	**Ampana**	**56.81**	**119**	P	**P**	**17 59 46.6**	**+4.7**
	comp=Z,779nmcomp=Z,68nm,1.3s						
DBG	**Daneborg**	**57.37**	**341**	*i* P	**P**	**17 59 45.4**	**+0.3**
DBG				IAmb	IAmb	17 59 49.8	
	comp=Z,20nm,1.1s						
BILL	**Bilibino**	**58.00**	**26**	P	**P**	**17 59 50.2**	**+0.5**
BILL	**Bilibino**	**58.00**	**26**	⇓*e*P	**P**	**17 59 50.6**	**+0.9**
BILL				pmax	pmax		
	comp=Z,23nm,1.7s						
KHKI	**Kahang-Kahang**	**58.28**	**130**	P	**P**	**17 59 53.6**	**+1.4**
	comp=Z,22nm,0.9s						
PETK	**Petropavlovsk-**	**58.42**	**45**	P	**P**	**17 59 52.7**	**-0.2**
	comp=Z,4.1nm,0.8s,baz=269,slow=5.2,SNR=4.8						
PETK				LR	LR	18 27 52.0	
	comp=Z,484nm,18.2s,baz=292,slow=39						
	comp=Z,4.1nm,0.8s						
SCO	**Scoresbysund**	**59.03**	**337**	IAmb	IAmb	18 00 00.5	
	comp=Z,35nm,1.4s						
SCO	**Scoresbysund**	**59.03**	**337**	*i* P	**P**	**17 59 58.3**	**+1.6**
SCO				IAmb	IAmb	18 00 00.8	
	comp=Z,19nm,1.1s						
OPO	**Ambohidratompo**	**59.95**	**211**	LR	LR	18 23 00.8	
	comp=Z,110nm,19.3s,baz=184,slow=33						
ABPO	**Ambohimpanom**	**60.33**	**210**	P	**P**	**18 00 05.6**	**-0.9**
ABPO				IAmb	IAmb	18 00 08.9	
	comp=Z,22nm,1.2s						
ABPO	**Ambohimpanom**	**60.33**	**210**	P	**P**	**18 00 05.6**	**-0.9**
ABPO				pmax	pmax		
	comp=Z,22nm,1.2s						
ESBB	**Sonseca Array**	**60.54**	**300**	P	**P**	**18 00 07.1**	**-0.6**
ESBB				IAmb	IAmb	18 00 08.2	
	comp=Z,14nm,0.8s						
ESDC	**Sonseca Array**	**60.54**	**300**	P	**P**	**18 00 07.3**	**-0.4**
	comp=Z,14nm,0.7s,baz=59,slow=7.0,SNR=103						
ESDC				PP	**PP**	**18 02 22.4**	**+1.3**
	comp=Z,3.2nm,1.0s,baz=56,slow=9.3,SNR=4.4						
ESDC				LR	LR	18 29 45.8	
	comp=Z,243nm,21.6s,baz=60,slow=40						
	comp=Z,14nm,0.7s						
ESDC	**Sonseca Array**	**60.54**	**300**	P	**P**	**18 00 06.7**	**-1.1**
SANI	**Sanana**	**60.71**	**117**	P	**P**	**18 00 08.0**	**-1.1**
SANI	**Sanana**	**60.71**	**117**	P	**P**	**18 00 08.6**	**-0.5**
	comp=Z,695nmcomp=Z,51nm,1.2s						
BORG	**Borgarnes**	**60.84**	**331**	LR	LR	18 26 37.1	
	comp=Z,1µm,18.7s,baz=75,slow=36						
PAB	**San Pablo**	**60.87**	**300**	P	**P**	**18 00 08.8**	**-1.2**
PAB	**San Pablo**	**60.87**	**300**	P	**P**	**18 00 08.8**	**-1.2**
PAB				pmax	pmax		
	comp=Z,17nm,1.2s						
MVO	**Moncorvo**	**62.08**	**302**	*e*P	**P**	**18 00 18.1**	**-0.1**
NLAI	**Namlea**	**62.33**	**117**	P	P	18 00 26.4	+6.4
	comp=Z,36nm,1.1s						
NEEM	**North Greenlan**	**62.48**	**348**	*i* P	**P**	**18 00 21.3**	**+0.8**
NEEM				IAmb	IAmb	18 00 23.2	
	comp=Z,36nm,1.0s						
POLO	**Lamas de Olo**	**62.52**	**303**	*e*P	**P**	**18 00 20.8**	**-0.3**
PCAB	**Cabril**	**62.54**	**303**	*e*P	**P**	**18 00 21.8**	**+0.6**
PGAV	**Gavieira, Arco**	**62.60**	**304**	*e*P	**P**	**18 00 21.8**	**+0.1**
PGAV				*i* IAmb	IAmb	18 00 40.0	
	comp=Z,49nm,1.7s						
MTE	**Manteigas**	**62.75**	**302**	IAmb	IAmb	18 00 24.7	
	comp=Z,21nm,1.0s						
MTE	**Manteigas**	**62.75**	**302**	*e*P	**P**	**18 00 22.5**	**-0.2**
MTE				*i* IAmb	IAmb	18 00 37.7	
	comp=Z,30nm,1.4s						
PVIS	**Viseu**	**62.86**	**302**	*e*P	**P**	**18 00 23.5**	**+0.1**
PCBR	**Castelo Branco**	**62.94**	**301**	*e*P	**P**	**18 00 23.9**	**+0.1**
PMRV	**Marv??o**	**63.06**	**301**	*e*P	**P**	**18 00 25.0**	**+0.4**
KRAI	**Karang Ratu**	**63.33**	**116**	P	**P**	**18 00 28.4**	**+1.7**
	comp=Z,22nm,1.4s						
PBAR	**Barrancos**	**63.35**	**299**	*e*P	**P**	**18 00 26.1**	**-0.4**
PBAR				*i* IAmb	IAmb	18 00 34.9	
	comp=Z,40nm,1.7s						
PESTR	**Estremoz**	**63.44**	**300**	*e*P	**P**	**18 00 26.6**	**-0.6**
PSARD	**Sardoal**	**63.52**	**301**	*e*P	**P**	**18 00 27.6**	**-0.1**
PSARD				*i* IAmb	IAmb	18 00 46.8	
	comp=Z,26nm,2.4s						
PCAS	**Casmilo, Conde**	**63.56**	**302**	*e*P	**P**	**18 00 27.9**	**-0.1**
PARRA	**Arraiolos**	**63.78**	**300**	*e*P	**P**	**18 00 28.9**	**-0.5**
PMTG	**Montargil**	**63.80**	**301**	*e*P	**P**	**18 00 29.2**	**-0.3**
PMTG				*i* IAmb	IAmb	18 00 41.0	
	comp=Z,16nm,1.6s						
SIJI	**Sorong**	**63.84**	**112**	P	**P**	**18 00 33.5**	**+3.4**
	comp=Z,21nm,1.1s						
EVO	**Evora**	**63.88**	**300**	*e*P	**P**	**18 00 30.0**	**-0.1**
EVO				*i* IAmb	IAmb	18 00 37.9	
	comp=Z,28nm,1.4s						
PBEJ	**Beja**	**64.00**	**299**	*e*P	**P**	**18 00 30.6**	**-0.3**
PBEJ				*i* IAmb	IAmb	18 00 41.3	
	comp=Z,19nm,1.5s						
PSBE	**So Bento**	**64.00**	**301**	*e*P	**P**	**18 00 30.8**	**0.0**
PSBE				*i* IAmb	IAmb	18 00 38.8	
	comp=Z,26nm,2.3s						
MD01	**Midelt array s**	**64.03**	**293**	P	**P**	**18 00 30.0**	**-1.3**
MD31	**MD31**	**64.03**	**293**	P	**P**	**18 00 29.7**	**-1.5**
MOE	**Montemor**	**64.12**	**300**	*e*P	**P**	**18 00 31.6**	**-0.1**
MOE				*i* IAmb	IAmb	18 00 35.7	
	comp=Z,30nm,2.5s						
PVAQ	**Vaqueiros**	**64.17**	**299**	P	**P**	**18 00 31.0**	**-1.0**
PVAQ				IAmb	IAmb	18 00 35.0	
	comp=Z,19nm,1.0s						
PVAQ	**Vaqueiros**	**64.17**	**299**	*e*P	**P**	**18 00 31.7**	**-0.2**
PVAQ				*i* IAmb	IAmb	18 00 39.5	
	comp=Z,41nm,1.6s						
PCVE	**Castro Verde**	**64.29**	**299**	*e*P	**P**	**18 00 32.9**	**+0.1**
MESJ	**Messejana**	**64.33**	**299**	*e*P	**P**	**18 00 32.6**	**-0.4**
MESJ				IAmb	IAmb	18 00 33.7	
	comp=Z,21nm,1.1s						
MESJ	**Messejana**	**64.33**	**299**	*e*P	**P**	**18 00 33.0**	**0.0**
MESJ				*i* IAmb	IAmb	18 00 37.9	
	comp=Z,28nm,1.2s						
PBDV	**Barranco-do-Ve**	**64.39**	**299**	*e*P	**P**	**18 00 33.7**	**+0.3**
PBDV				*i* IAmb	IAmb	18 01 40.6	
	comp=Z,87nm,1.8s						
PMAFR	**Mafra**	**64.59**	**301**	*e*P	**P**	**18 00 33.6**	**-1.1**
PTEO	**Sao Teotonio**	**64.82**	**299**	*e*P	**P**	**18 00 35.9**	**-0.3**
SOEI	**Soe**	**64.93**	**124**	P	**P**	**18 00 35.6**	**-1.7**
SOEI	**Soe**	**64.93**	**124**	P	**P**	**18 00 35.8**	**-1.5**
SOEI	**Soe**	**64.93**	**124**	P	**P**	**18 00 37.9**	**+0.6**
TULEG	**Thule**	**65.75**	**351**	P	**P**	**18 00 41.3**	**-0.3**
TULEG				IAmb	IAmb	18 00 44.3	
	comp=Z,52nm,1.5s						
TULEG	**Thule**	**65.75**	**351**	*i* P	**P**	**18 00 41.7**	**+0.2**
TULEG				IAmb	IAmb	18 00 44.6	
	comp=Z,38nm,1.3s						
GUMO	**Guam**	**66.10**	**90**	LR	LR	18 30 42.8	
	comp=Z,172nm,20.1s,baz=350,slow=37						
ANGG	**Ammassalik, Gr**	**66.47**	**335**	P	**P**	**18 00 46.2**	**-0.2**
A19K	**Wainwright**	**67.04**	**18**	P	**P**	**18 00 47.6**	**-2.3**
	baz=313						
LSZ	**Lusaka**	**67.17**	**230**	P	**P**	**18 00 49.7**	**-1.8**
	comp=Z,5.7nm,0.8s,baz=45,slow=6.1,SNR=13						
LSZ				LR	LR	18 31 08.3	
	comp=Z,248nm,20.1s,baz=2.0,slow=37						
	comp=Z,5.7nm,0.8s						
LSZ	**Lusaka**	**67.17**	**230**	P	**P**	**18 00 49.8**	**-1.8**
LSZ	**Lusaka**	**67.17**	**230**	P	**P**	**18 00 49.8**	**-1.8**
LSZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
C16K	**Lisburne Hills**	**67.19**	**21**	IAmb	IAmb	18 00 56.1	
	comp=Z,20nm,1.0s						

C16K	Lisburne Hills	67.19	21	P	P	18 00 48.5	-2.4
	baz=310						
EDA	Edea	67.28	258	P	P	18 00 50.8	-1.5
EDA				IAmb	IAmb	18 00 52.4	
	comp=Z,19nm,0.9s						
A21K	Barrow	67.30	16	P	P	18 00 49.1	-2.4
	baz=317						
C17K	DeLong Mountai	67.66	20	P	P	18 00 51.1	-2.8
	baz=312						
A22K	Sinclair Lake	67.90	16	P	P	18 00 52.8	-2.6
	baz=318						
GAMB	Gambell	67.93	26	P	P	18 00 53.2	-2.4
	baz=306						
RDOG	Red Dog Mine	68.02	20	P	P	18 00 53.6	-2.6
	baz=312						
C18K	Utukok River	68.08	19	P	P	18 00 54.9	-1.8
	baz=314						
TNA	Tin City	68.13	23	P	P	18 00 54.6	-2.3
	baz=309						
B20K	Meade River	68.14	17	P	P	18 00 54.6	-2.2
	baz=316						
ILULI	Ilulissat	68.17	342	*i* P	P	18 00 57.7	+0.6
ILULI				IAmb	IAmb	18 00 59.6	
	comp=Z,62nm,1.2s						
C19K	Lookout Ridge	68.18	18	P	P	18 00 53.9	-3.4
	baz=315						
D17K	Noatak River	68.21	20	P	P	18 00 54.8	-2.5
	baz=312						
SAUI	Saumlaki	68.60	117	P	P	18 01 01.7	+1.1
SAUI	Saumlaki	68.60	117	P	P	18 01 04.7	+4.1
F14K	Arctic Creek	68.70	23	P	P	18 00 58.0	-2.4
	baz=310						
B22K	Teshekpuk Lake	68.74	16	P	P	18 00 58.7	-1.9
	baz=320						
TORD	Torodi Ar. Bea	68.78	271	P	P	18 00 59.4	-2.3
	comp=Z,16nm,0.8s,baz=44,slow=6.1,SNR=69						
	comp=Z,16nm,0.8s						
TORD	Torodi Ar. Bea	68.78	271	P	P	18 00 58.8	-3.0
E17K	Hotham Inlet	68.99	21	P	P	18 01 00.1	-2.1
	baz=313						
D19K	Kuna River	69.00	18	P	P	18 01 00.2	-2.1
	baz=316						
B21K	Ikpikpuk River	69.02	17	P	P	18 00 59.9	-2.5
	baz=319						
F15K	North Star Dit	69.08	22	IAmb	IAmb	18 01 08.8	
	comp=Z,36nm,1.1s						
F15K	North Star Dit	69.08	22	P	P	18 01 00.7	-2.1
	baz=312						
E18K	Tukpahlearik C	69.09	20	IAmb	IAmb	18 01 10.8	
	comp=Z,26nm,1.1s						
E18K	Tukpahlearik C	69.09	20	P	P	18 01 00.8	-2.1
	baz=314						
D20K	Etivluk River	69.22	18	IAmb	IAmb	18 01 08.8	
	comp=Z,21nm,1.1s						
D20K	Etivluk River	69.22	18	P	P	18 01 01.4	-2.2
	baz=317						
C21K	Knifeblade Rid	69.33	17	P	P	18 01 01.9	-2.4
	baz=319						
F17K	Baldwin Pennin	69.59	21	P	P	18 01 03.6	-2.3
	baz=314						
ANM	Nome	69.60	24	P	P	18 01 03.8	-2.2
	baz=311						
SFJD	Kangerlussuaq	69.61	340	LR	LR	18 32 02.0	
	comp=Z,234nm,21.3s,baz=40,slow=36						
SFJD	Kangerlussuaq	69.61	340	*i* P	P	18 01 07.0	+1.0
SFJD				IAmb	IAmb	18 01 08.7	
	comp=Z,91nm,1.6s						
G15K	Niukluk	69.74	23	P	P	18 01 04.4	-2.6
	baz=312						
C23K	Itkillik River	69.75	15	P	P	18 01 04.3	-2.5
	baz=322						
E19K	Redstone River	69.98	19	P	P	18 01 05.6	-2.8
	baz=317						
G16K	Koyuk River	69.99	22	IAmb	IAmb	18 01 14.3	
	comp=Z,31nm,1.1s						
G16K	Koyuk River	69.99	22	P	P	18 01 06.0	-2.5
	baz=314						
D22K	Ayikyak River	70.03	17	P	P	18 01 06.2	-2.5
	baz=320						
E21K	Killik River	70.06	17	P	P	18 01 06.4	-2.5
	baz=320						
C24K	Franklin Bluff	70.24	15	P	P	18 01 07.1	-2.8
	baz=324						
SMPI	Sarmi	70.27	107	P	P	18 01 14.7	+3.8
	comp=Z,59nm,1.4s						
F19K	Shaleruckik Mo	70.29	19	P	P	18 01 07.6	-2.6
	baz=317						
D23K	Nanushuk River	70.42	16	P	P	18 01 08.3	-2.7
	baz=322						
G17K	Kiwalik Mounta	70.43	21	P	P	18 01 08.5	-2.6
	baz=315						
H16K	Elim	70.55	23	P	P	18 01 08.9	-2.9
	baz=314						
D24K	Happy Valley	70.67	15	P	P	18 01 10.2	-2.4
	baz=324						
F20K	Avaraart Lake	70.68	19	P	P	18 01 10.2	-2.4
	baz=318						
G18K	Tagagawik	70.73	20	P	P	18 01 11.1	-1.9
	baz=316						
E22K	Anaktuvuk Pass	70.82	17	P	P	18 01 10.9	-2.6
	baz=321						
C26K	Camden Bay	70.83	14	P	P	18 01 11.4	-2.1
	baz=327						
TOLK	Toolik Lake Re	70.92	16	P	P	18 01 12.1	-2.1
	baz=323						
KSANE	Kasane	70.96	230	IAmb	IAmb	18 01 19.3	
	comp=Z,17nm,0.9s						
G19K	Purcell Mounta	70.99	20	P	P	18 01 12.4	-2.1
	baz=318						
D25K	Kavik River	71.04	14	P	P	18 01 12.7	-2.2
	baz=326						
H17K	Granite Mounta	71.05	22	P	P	18 01 12.2	-2.8
	baz=316						
F21K	Alatna River	71.12	18	IAmb	IAmb	18 01 22.0	
	comp=Z,20nm,1.1s						
F21K	Alatna River	71.12	18	P	P	18 01 12.6	-2.7
	baz=320						
F22K	John River	71.22	17	P	P	18 01 13.7	-2.3
	baz=321						
C27K	Jago River	71.31	13	P	P	18 01 14.4	-2.0
	baz=328						
H18K	Honhosa River	71.35	21	P	P	18 01 14.4	-2.3
	baz=317						
E23K	Chandalar	71.38	16	IAmb	IAmb	18 01 22.1	
	comp=Z,22nm,1.1s						
E23K	Chandalar	71.38	16	P	P	18 01 14.7	-2.3
	baz=323						
J14K	Nanvaranak Lak	71.42	24	IAmb	IAmb	18 01 23.3	
	comp=Z,30nm,0.9s						
J14K	Nanvaranak Lak	71.42	24	P	P	18 01 14.8	-2.3
	baz=313						
I17K	Unalakleet	71.56	23	P	P	18 01 16.0	-2.0
	baz=315						
K13K	Kusilvak Mount	71.60	25	IAmb	IAmb	18 01 24.2	
	comp=Z,21nm,0.9s						
K13K	Kusilvak Mount	71.60	25	P	P	18 01 15.5	-2.8
	baz=313						
E24K	Your Creek	71.62	16	P	P	18 01 15.8	-2.6
	baz=324						
H19K	Roundabout Mou	71.62	20	P	P	18 01 15.9	-2.4
	baz=318						
G21K	Allakaket	71.66	18	P	P	18 01 16.2	-2.4
	baz=320						
A36M	Sachs Harbour	71.72	6	P	P	18 01 16.5	-2.4
	baz=343,SNR=21						
GENI	Genyem	71.78	107	P	P	18 01 21.3	+1.2
GENI	Genyem	71.78	107	P	P	18 01 21.4	+1.3
G22K	Bettles	71.84	17	P	P	18 01 17.4	-2.2
	baz=322						
COLD	Coldfoot	71.91	17	IAmb	IAmb	18 01 25.3	
	comp=Z,45nm,1.2s						
COLD	Coldfoot	71.91	17	P	P	18 01 18.1	-2.0
	baz=323						
NUUK	Nuuk	71.96	338	*i* P	P	18 01 20.8	+0.4
NUUK				IAmb	IAmb	18 01 21.6	
	comp=Z,52nm,1.1s						
NRS	Narsarsuaq	72.00	334	*i* P	P	18 01 21.0	+0.4
NRS				IAmb	IAmb	18 01 22.4	
	comp=Z,40nm,1.1s						
J16K	Anvik River	72.02	23	IAmb	IAmb	18 01 26.9	
	comp=Z,20nm,0.9s						
J16K	Anvik River	72.02	23	P	P	18 01 18.7	-2.1
	baz=315						
H20K	Anotleneega Mo	72.08	20	P	P	18 01 19.0	-2.1
	baz=320						
GCSA	Galena City Sc	72.08	21	P	P	18 01 18.7	-2.4
	baz=318						
M11K	Mekoryuk	72.08	27	P	P	18 01 18.9	-2.3
	baz=312						
D27M	Malcolm River	72.14	13	P	P	18 01 19.2	-2.3
	baz=330						
E25K	Arctic Village	72.21	15	P	P	18 01 19.7	-2.2
	baz=327						
F24K	Squaw Lake	72.21	16	P	P	18 01 19.6	-2.3
	baz=325						
KNRA	Kununurra	72.22	125	P	P	18 01 22.6	0.0
G23K	Bananza Creek	72.37	17	P	P	18 01 20.2	-2.7
	baz=323						
J17K	VABM Dome	72.42	22	P	P	18 01 20.8	-2.3
	baz=317						
K15K	Wolf Creek Mou	72.42	24	P	P	18 01 21.0	-2.2
	baz=315						
D28M	Stokes Point	72.45	12	P	P	18 01 20.8	-2.4
	baz=332						
H21K	Melozitna Rive	72.51	19	P	P	18 01 21.5	-2.2
	baz=321						
SPIA	Saint Paul Isl	72.57	31	P	P	18 01 21.5	-2.6
	baz=310						
F25K	Christian Rive	72.63	15	P	P	18 01 21.5	-3.0
	baz=327						
H22K	Ishtalitna Cre	72.69	18	P	P	18 01 22.4	-2.4
	baz=322						
L14K	Kuka Creek	72.70	25	IAmb	IAmb	18 01 31.1	
	comp=Z,27nm,0.9s						
L14K	Kuka Creek	72.70	25	P	P	18 01 22.6	-2.2
	baz=314						
I20K	Naaghedeneel	72.72	20	P	P	18 01 22.7	-2.2
	baz=320						
F26K	Sheenjek River	72.86	15	P	P	18 01 23.8	-2.0
	baz=328						
L15K	Ungalak Mounta	72.87	25	P	P	18 01 23.8	-2.1
	baz=315						
IVI	Ivigtut	72.93	335	*i* P	P	18 01 27.9	+1.7
IVI				IAmb	IAmb	18 01 29.6	
	comp=Z,14nm,1.0s						
E27K	Coleen River	72.94	13	IAmb	IAmb	18 01 31.7	
	comp=Z,39nm,1.2s						
E27K	Coleen River	72.94	13	P	P	18 01 24.8	-1.5
	baz=330						
E28M	Babbage River	72.95	12	IAmb	IAmb	18 01 31.8	
	comp=Z,41nm,1.3s						
E28M	Babbage River	72.95	12	P	P	18 01 24.0	-2.3
	baz=332,SNR=16						
G24K	Hadweenzic Riv	72.97	16	IAmb	IAmb	18 01 32.0	
	comp=Z,34nm,1.1s						
G24K	Hadweenzic Riv	72.97	16	P	P	18 01 24.6	-1.9
	baz=325						
BMAR	Burnt Mountain	73.00	15	P	P	18 01 26.8	+0.2
J19K	Poorman	73.01	21	IAmb	IAmb	18 01 32.4	
	comp=Z,26nm,1.1s						
J19K	Poorman	73.01	21	P	P	18 01 25.1	-1.6
	baz=319,SNR=9.7						
J18K	Innoko River	73.09	22	P	P	18 01 25.5	-1.7
	baz=318						
I21K	Tanana	73.09	19	IAmb	IAmb	18 01 31.8	
	comp=Z,53nm,1.6s						
I21K	Tanana	73.09	19	P	P	18 01 25.6	-1.6
	baz=322,SNR=7.1						
M13K	Dall Lake	73.11	26	P	P	18 01 26.0	-1.2
	baz=314						
K17K	Iditarod	73.16	23	P	P	18 01 25.9	-1.7
	baz=317						
G25K	Bearman Lake	73.23	16	P	P	18 01 25.8	-2.1
	baz=326						
P08K	Saint George I	73.23	31	P	P	18 01 26.6	-1.5
	baz=310						
J20K	Nowinta River	73.29	20	IAmb	IAmb	18 01 34.0	
	comp=Z,28nm,1.1s						
J20K	Nowinta River	73.29	20	P	P	18 01 27.1	-1.2
	baz=320,SNR=9.6						
M14K	Bethel	73.36	25	P	P	18 01 27.1	-1.7
	baz=315						
E29M	Blow River	73.42	12	P	P	18 01 27.3	-1.8
	baz=333						
L16K	Owhat River	73.52	24	P	P	18 01 27.8	-1.9
	baz=317						
G26K	Porcupine Rive	73.57	15	IAmb	IAmb	18 01 34.8	
	comp=Z,45nm,1.8s						
G26K	Porcupine Rive	73.57	15	P	P	18 01 28.5	-1.4
	baz=328						
L17K	Donlin	73.59	23	P	P	18 01 28.8	-1.3
	baz=318						
H24K	Noodor Dome	73.59	17	IAmb	IAmb	18 01 35.7	
	comp=Z,27nm,1.2s						
H24K	Noodor Dome	73.59	17	P	P	18 01 28.6	-1.6
	baz=325						
F28M	Old Crow	73.76	13	IAmb	IAmb	18 01 36.5	
	comp=Z,29nm,1.2s						
F28M	Old Crow	73.76	13	P	P	18 01 29.4	-1.7
	baz=331,SNR=14						
I23K	Minto, Yukon-K	73.79	18	IAmb	IAmb	18 01 36.7	
	comp=Z,34nm,1.2s						
I23K	Minto, Yukon-K	73.79	18	P	P	18 01 29.5	-1.7
	baz=324,SNR=10						
M15K	Kasigluk River	73.84	25	P	P	18 01 30.1	-1.5
	baz=316						
ILON	Igloolik, Nuna	73.86	352	IAmb	IAmb	18 01 33.9	
	comp=Z,29nm,1.4s						
KHWEE	KHWEE	73.92	227	P	P	18 01 30.9	-1.8
KHWEE				IAmb	IAmb	18 01 36.1	
	comp=Z,30nm,0.9s						
K20K	Telida	73.94	21	IAmb	IAmb	18 01 37.9	
	comp=Z,39nm,1.1s						
K20K	Telida	73.94	21	P	P	18 01 30.2	-2.1
	baz=321						
CHUM	Lake Minchumin	74.03	20	P	P	18 01 30.4	-2.3
	baz=322						
L18K	Granite Mounta	74.03	22	IAmb	IAmb	18 01 38.6	
	comp=Z,24nm,1.2s						
L18K	Granite Mounta	74.03	22	P	P	18 01 30.5	-2.2
	baz=319						
N14K	Kuskokwak Cree	74.04	26	P	P	18 01 30.3	-2.5
	baz=315						
G27K	Doyon Strip	74.12	14	IAmb	IAmb	18 01 38.8	
	comp=Z,34nm,1.3s						
G27K	Doyon Strip	74.12	14	P	P	18 01 31.2	-2.1
	baz=330,SNR=9.8						
M16K	Timber Creek	74.19	24	IAmb	IAmb	18 01 42.4	
	comp=Z,30nm,1.1s						
M16K	Timber Creek	74.19	24	P	P	18 01 31.9	-1.8
	baz=317						
INK	Inuvik	74.20	11	P	P	18 01 31.6	-1.9
	baz=336,SNR=28						
BPAW	Bear Paw Mtn.	74.22	19	IAmb	IAmb	18 01 41.4	
	comp=Z,30nm,1.1s						
BPAW	Bear Paw Mtn.	74.22	19	P	P	18 01 31.9	-1.9
	baz=323,SNR=8.5						
POKR	Poker Plat Res	74.29	17	P	P	18 01 32.5	-1.7
	baz=326,SNR=13						
NEA2	Nenana	74.31	18	IAmb	IAmb	18 01 39.3	
	comp=Z,48nm,1.1s						
NEA2	Nenana	74.31	18	P	P	18 01 32.2	-2.1
	baz=324,SNR=24						
C36M	Paulatuk	74.38	7	P	P	18 01 32.6	-2.0
	baz=344,SNR=44						
PRP	Porcupine Dome	74.40	16	P	P	18 01 33.5	-1.5
	baz=327						
M17K	Holitna River	74.41	23	IAmb	IAmb	18 01 41.5	
	comp=Z,33nm,1.1s						
M17K	Holitna River	74.41	23	P	P	18 01 33.5	-1.5
	baz=318						
N15K	Kwethluk River	74.43	25	P	P	18 01 33.6	-1.4
	baz=316						
F30M	Barrier River	74.48	12	P	P	18 01 33.6	-1.6
	baz=335						
CCB	Clear Creek Bu	74.59	18	IAmb	IAmb	18 01 40.6	
	comp=Z,73nm,1.8s						
L19K	White Mountain	74.62	22	IAmb	IAmb	18 01 38.5	
	comp=Z,31nm,1.3s						
L19K	White Mountain	74.62	22	P	P	18 01 34.3	-1.9
	baz=320						
H27K	Steamboat Moun	74.65	14	P	P	18 01 34.4	-2.0
	baz=330						
N16K	Nishlik Lake	74.66	24	P	P	18 01 34.4	-2.0
	baz=317						
KTH	Kantishna Hill	74.67	19	IAmb	IAmb	18 01 42.0	
	comp=Z,44nm,1.0s						
O14K	Tigyukauivet M	74.67	26	P	P	18 01 34.6	-1.8
	baz=316						
IL31		74.71	17	IAmb	IAmb	18 01 40.8	
	comp=Z,27nm,1.1s						
ILAR	Eielson Array	74.71	17	P	P	18 01 36.1	-0.5
	comp=Z,14nm,0.9s,baz=313,slow=4.8,SNR=53						
	comp=Z,14nm,0.9s						
ILAR	Eielson Array	74.71	17	P	P	18 01 36.0	-0.6
G29M	Pine Creek	74.72	13	IAmb	IAmb	18 01 42.1	
	comp=Z,40nm,1.3s						
G29M	Pine Creek	74.72	13	P	P	18 01 35.0	-1.7
	baz=333						
PPLA	Purkeypile	74.84	20	P	P	18 01 35.3	-2.3
	baz=322						
M18K	Stony River	74.85	23	P	P	18 01 35.2	-2.3
	baz=320						
TRF	Thorofare Moun	74.92	19	P	P	18 01 35.1	-3.0
	baz=324						
F31M	Tsiigehtchic	74.96	11	IAmb	IAmb	18 01 42.9	
	comp=Z,59nm,1.3s						
F31M	Tsiigehtchic	74.96	11	P	P	18 01 35.9	-2.0
	baz=336,SNR=15						
HDA	Harding Lake	74.99	17	IAmb	IAmb	18 01 42.0	
	comp=Z,28nm,1.3s						
HDA	Harding Lake	74.99	17	P	P	18 01 36.3	-2.0
	baz=326						
MCK	McKinley	75.05	19	P	P	18 01 36.9	-1.8
	baz=325						
N17K	Nushagak Hills	75.14	24	IAmb	IAmb	18 01 45.9	
	comp=Z,41nm,1.1s						
N17K	Nushagak Hills	75.14	24	P	P	18 01 37.4	-1.8
	baz=319						
I27K	Kandik River	75.18	15	P	P	18 01 37.4	-2.0
	baz=330						
J25K	Salcha River,	75.20	17	P	P	18 01 37.7	-1.9
	baz=327,SNR=11						
O15K	Ungalikthiuk R	75.24	26	IAmb	IAmb	18 01 45.8	
	comp=Z,32nm,1.0s						
O15K	Ungalikthiuk R	75.24	26	P	P	18 01 37.8	-2.0
	baz=317						
H29M	Whitestone	75.28	13	IAmb	IAmb	18 01 45.2	
	comp=Z,46nm,1.2s						
H29M	Whitestone	75.28	13	P	P	18 01 37.8	-2.1
	baz=333,SNR=10.0						
G31M	Satah River	75.35	11	P	P	18 01 38.1	-2.1
	baz=336,SNR=11						
M20K	Styx River	75.37	21	P	P	18 01 38.6	-2.0
	baz=322						
EPYK	Eagle Plains	75.44	13	IAmb	IAmb	18 01 45.5	
	comp=Z,42nm,1.4s						
EPYK	Eagle Plains	75.44	13	P	P	18 01 38.6	-2.2
	baz=334						
N18K	Kilae Creek	75.45	23	P	P	18 01 38.7	-2.3
	baz=320						
L22K	Petersville	75.53	20	IAmb	IAmb	18 01 46.0	
	comp=Z,34nm,1.1s						
O16K	Kokwok River B	75.54	25	P	P	18 01 38.8	-2.7
	baz=318						
I28M	Miner Creek	75.66	14	P	P	18 01 39.9	-2.3
	baz=332						
J26L	Joseph Creek	75.71	16	P	P	18 01 40.3	-2.2
	baz=329						
O17K	Koliganek Bris	75.74	24	P	P	18 01 40.1	-2.5
	baz=319						
SKT	Skwentna	75.76	21	IAmb	IAmb	18 01 47.7	
	comp=Z,36nm,1.0s						
SKT	Skwentna	75.76	21	P	P	18 01 40.5	-2.2
	baz=323,SNR=7.5						
CUT	Chulitna	75.77	20	P	P	18 01 40.6	-2.2
	baz=324						
K24K	Donnelly Dome	75.78	17	P	P	18 01 40.6	-2.3
	baz=327						
N19K	Bonanza Creek	75.79	23	IAmb	IAmb	18 03 07.0	
	comp=Z,84nm,1.8s						
N19K	Bonanza Creek	75.79	23	P	P	18 01 40.4	-2.6
	baz=321						
WAT1	Susitna Watana	75.89	19	P	P	18 01 40.6	-2.8
	baz=325						
NIKH	Nikolski High	75.90	34	P	P	18 01 40.7	-2.9
	baz=311						
P16K	Nushagak River	75.99	25	P	P	18 01 41.0	-3.0
	baz=318						
DHY	Denali Highway	75.99	18	IAmb	IAmb	18 01 50.7	
	comp=Z,17nm,0.7s						
DHY	Denali Highway	75.99	18	P	P	18 01 41.0	-3.2
	baz=326						
I29M	Ogilvie Camp,	76.06	14	IAmb	IAmb	18 01 48.9	
	comp=Z,42nm,1.2s						
I29M	Ogilvie Camp,	76.06	14	P	P	18 01 41.0	-3.4
	baz=333,SNR=12						
RIDG	Independent Ri	76.06	17	IAmb	IAmb	18 01 48.8	
	comp=Z,44nm,1.0s						
RIDG	Independent Ri	76.06	17	P	P	18 01 40.9	-3.6
	baz=328						
SCRK	Sand Creek	76.06	17	IAmb	IAmb	18 01 49.6	
	comp=Z,24nm,1.0s						
SCRK	Sand Creek	76.06	17	P	P	18 01 41.1	-3.4
	baz=328,SNR=13						
SPCR	Spurr Chakacha	76.18	21	P	P	18 01 42.0	-3.2
	baz=322						
O18K	Koktuh Hills	76.30	23	P	P	18 01 43.3	-2.5
	baz=320,SNR=11						
WAT6	Susitna Watana	76.31	19	P	P	18 01 43.1	-2.9
	baz=326						
O19K	Port Alsworth	76.32	23	P	P	18 01 43.3	-2.6
	baz=321						
M22K	Willow	76.34	20	P	P	18 01 43.2	-2.7
	baz=324						
UNV	Unalaska Valle	76.36	32	P	P	18 01 44.1	-2.1
	baz=313						
H31M	Peel River	76.37	12	P	P	18 01 43.5	-2.6
	baz=336						
SUA	Susitna One	76.39	21	IAmb	IAmb	18 01 46.9	
	comp=Z,58nm,1.5s						
SUA	Susitna One	76.39	21	P	P	18 01 44.3	-2.1
	baz=324						
P17K	Kvichak River	76.40	24	P	P	18 01 43.9	-2.5
	baz=319						
I30M	Mount Dempster	76.54	13	IAmb	IAmb	18 01 52.0	
	comp=Z,34nm,1.1s						
I30M	Mount Dempster	76.54	13	P	P	18 01 45.2	-2.0
	baz=334,SNR=12						
PAX	Paxson	76.56	18	IAmb	IAmb	18 01 52.1	
	comp=Z,39nm,1.1s						
PAX	Paxson	76.56	18	P	P	18 01 45.0	-2.4
	baz=327,SNR=12						
P18K	Big Mountain,	76.65	24	IAmb	IAmb	18 01 53.8	
	comp=Z,39nm,1.0s						
P18K	Big Mountain,	76.65	24	P	P	18 01 45.6	-2.2
	baz=320						
FRB	Frobisher Bay	76.73	344	LR	LR	18 40 13.3	
	comp=Z,308nm,20.1s,baz=20,slow=39						
PMR	Palmer	76.75	20	P	P	18 01 45.6	-2.6
	baz=325						
SML	Sawmill	76.79	19	P	P	18 01 46.1	-2.5
	baz=325						
CAPN	Captain Cook N	76.83	21	P	P	18 01 46.7	-2.0
	baz=323						
J29N	Klondike Camp	76.88	14	IAmb	IAmb	18 01 54.4	
	comp=Z,36nm,1.1s						
J29N	Klondike Camp	76.88	14	P	P	18 01 46.5	-2.6
	baz=333,SNR=8.8						
S12K	Black Hills	76.92	29	P	P	18 01 47.0	-2.4
	baz=316						
O20K	Slope Mountain	76.94	22	P	P	18 01 47.0	-2.5
	baz=322						
M23K	Glacier View	76.96	19	P	P	18 01 47.0	-2.6
	baz=326						
FALS	False Pass	76.97	30	P	P	18 01 47.1	-2.5
	baz=315						
RC01	Rabbit Creek A	76.99	20	P	P	18 01 47.0	-2.7
	baz=324						
DAWY	Dawson	76.99	15	IAmb	IAmb	18 01 54.6	
	comp=Z,27nm,1.1s						
DAWY	Dawson	76.99	15	P	P	18 01 47.0	-2.7
	baz=332,SNR=11						
L26K	Log Cabin Wild	77.03	17	IAmb	IAmb	18 02 00.3	
	comp=Z,36nm,1.4s						
L26K	Log Cabin Wild	77.03	17	P	P	18 01 46.7	-3.2
	baz=329						
SCM	Sheep Creek Mo	77.04	19	P	P	18 01 46.8	-3.3
	baz=326						
KNK	Knik Glacier	77.08	20	P	P	18 01 47.5	-2.7
	baz=325						
P19K	Oil Pt	77.09	23	P	P	18 01 47.3	-3.0
	baz=322						
M24K	Tolsona, Glenn	77.11	18	P	P	18 01 46.8	-3.6
	baz=327						
HARP	HAARP	77.12	18	P	P	18 01 47.1	-3.3
	baz=328,SNR=12						
J30M	Hart River	77.14	13	IAmb	IAmb	18 01 55.7	
	comp=Z,49nm,1.4s						
J30M	Hart River	77.14	13	P	P	18 01 47.7	-3.0
	baz=335						
R16K	Pilot Point	77.23	26	P	P	18 01 48.1	-3.0
	baz=319						
Q17K	Contact Creek	77.29	25	P	P	18 01 48.2	-3.3
	baz=320						

L27K	Beaver Creek,	77.35	16	P	P	18 01 48.6	-3.2
	baz=330						
BCAR	Beaver Creek A	77.35	16	P	P	18 01 51.7	-0.1
S14K	Fog Glacier	77.46	28	P	P	18 01 49.0	-3.5
	baz=318						
O22K	Cooper Landing	77.48	21	P	P	18 01 48.9	-3.6
	baz=324						
Q19K	Cape Douglas,	77.52	23	P	P	18 01 50.0	-2.8
	baz=322						
K29M	Barlow Dome	77.57	14	IAmb	IAmb	18 01 58.3	
	comp=Z,28nm,1.1s						
K29M	Barlow Dome	77.57	14	P	P	18 01 50.3	-2.7
	baz=334						
PWL	Port Wells	77.57	20	P	P	18 01 50.4	-2.6
	baz=326						
HOM	Homer	77.58	22	P	P	18 01 50.4	-2.5
	baz=323						
R17L	Mt. Peulik Vol	77.61	25	P	P	18 01 50.2	-3.1
	baz=320						
M26K	Nabesna, AK	77.65	17	IAmb	IAmb	18 02 05.3	
	comp=Z,71nm,1.7s						
M26K	Nabesna, AK	77.65	17	P	P	18 01 50.6	-2.8
	baz=330						
KLU	Klutina	77.69	19	P	P	18 01 50.7	-3.1
	baz=327						
DBIC	Dimbokro	77.73	269	P	P	18 01 53.2	-1.4
	comp=Z,7.6nm,0.8s,baz=61,slow=7.1,SNR=8.6						
	comp=Z,7.6nm,0.8s						
DBIC	Dimbokro	77.73	269	P	P	18 01 52.6	-2.0
DBIC	Dimbokro	77.73	269	P	P	18 01 52.6	-2.0
DBIC				pmax	pmax		
	comp=Z,11nm,1.0s						
BRSE	Bradley Lake S	77.78	22	P	P	18 01 51.7	-2.5
	baz=324						
SDPT	Sand Point	77.79	29	P	P	18 01 51.9	-2.3
	baz=317						
SEW	Seward	77.87	21	P	P	18 01 51.5	-3.1
	baz=325						
KOOLE	Kule	77.91	230	IAmb	IAmb	18 01 59.7	
	comp=Z,22nm,1.0s						
N25K	Chitina, Valde	77.94	18	P	P	18 01 51.7	-3.4
	baz=328						
M27K	Edge Creek, AK	77.95	17	P	P	18 01 52.0	-3.2
	baz=330						
L29M	L29M	78.10	15	IAmb	IAmb	18 02 01.4	
	comp=Z,53nm,1.2s						
L29M	L29M	78.10	15	P	P	18 01 53.0	-3.0
	baz=333,SNR=14						
BVCY	Beaver Creek	78.13	16	P	P	18 01 52.9	-3.2
	baz=331						
Q20K	Shuyak Island	78.18	23	P	P	18 01 53.7	-2.6
	baz=323						
R18K	Karluk	78.32	25	P	P	18 01 54.7	-2.4
	baz=321						
BMRM	Bremner River	78.48	18	P	P	18 01 55.2	-2.8
	baz=328						
MCARA	McCarthy VSAT	78.52	18	P	P	18 01 55.0	-3.2
	baz=330						
CHNA	Chernabura Isl	78.52	29	P	P	18 01 54.7	-3.6
	baz=318						
EYAK	Cordova Ski Ar	78.53	19	P	P	18 01 55.1	-3.2
	baz=328						
P23K	Montague Islan	78.54	20	P	P	18 01 55.5	-2.8
	baz=326						
M29M	Somme Creek	78.63	15	IAmb	IAmb	18 02 04.0	
	comp=Z,51nm,1.5s						
M29M	Somme Creek	78.63	15	P	P	18 01 55.5	-3.4
	baz=333						
KDAK	Kodiak Island	78.77	24	P	P	18 01 56.6	-3.0
	baz=323						
YUK3	Moose Creek	78.78	16	P	P	18 01 56.8	-3.2
	baz=332						
M30M	Minto, Yukon	78.86	14	P	P	18 01 57.4	-2.6
	baz=334						
WB0	Warramunga Arr	78.89	124	IAmb	IAmb	18 02 04.5	
	comp=Z,52nm,1.1s						
WRA	Warramunga Arr	78.97	124	P	P	18 02 00.9	-0.3
	comp=Z,17nm,0.9s,baz=325,slow=5.5,SNR=39						
	comp=Z,17nm,0.9s						
WRA	Warramunga Arr	78.97	124	P	P	18 02 01.0	-0.3
WRAB	Tennant Creek	78.97	124	P	P	18 02 00.8	-0.5
WRAB				IAmb	IAmb	18 02 05.1	
	comp=Z,31nm,1.1s						
WRAB	Tennant Creek	78.97	124	P	P	18 02 01.0	-0.3
WRAB	Tennant Creek	78.97	124	*de*P	P	18 02 01.0	-0.3
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
OHAK	Old Harbor	78.98	24	P	P	18 01 57.1	-3.7
	baz=322						
WB1	Warramunga Ar.	78.99	124	P	P	18 02 00.8	-0.6
CRQE	Cirque	79.05	18	P	P	18 01 57.8	-3.5
	baz=330						
WR8	Warramunga Arr	79.09	124	IAmb	IAmb	18 02 05.5	
	comp=Z,22nm,0.9s						
BOSA	Boshof	79.15	223	P	P	18 02 00.7	-1.5
	comp=Z,22nm,0.9s,baz=34,slow=6.1,SNR=19						
	comp=Z,22nm,0.9s						
BOSA	Boshof	79.15	223	IAmb	IAmb	18 02 05.9	
	comp=Z,21nm,0.8s						
SII	Sitkinak Islan	79.20	25	P	P	18 01 58.1	-4.0
	baz=322						
CHIR	Chirikof Islan	79.26	26	P	P	18 01 58.8	-3.5
	baz=320						
CTG	Chitna Glacier	79.29	17	P	P	18 01 58.5	-4.1
	baz=331						
Q23K	Middleton Isla	79.31	20	P	P	18 01 58.8	-3.7
	baz=327						
YUK8	Steele Glacier	79.38	16	P	P	18 01 59.5	-3.7
	baz=332						
KAIM	Kayak Island	79.42	19	P	P	18 01 59.6	-3.6
	baz=329						
YUK4	Talbot Arm	79.57	16	P	P	18 02 00.2	-4.1
	baz=333						
M31M	Drury Creek, Y	79.66	13	P	P	18 02 01.2	-3.3
	baz=336						
O28M	Mount Upton	79.73	17	P	P	18 02 01.5	-3.7
	baz=332						
N30M	Aishikik Lake	79.80	15	IAmb	IAmb	18 02 11.0	
	comp=Z,30nm,1.1s						
N30M	Aishikik Lake	79.80	15	P	P	18 02 01.9	-3.4
	baz=334						
YUK6	Outpost Mounta	79.99	16	P	P	18 02 02.9	-3.7
	baz=333						
N31M	Braeburn, Yuko	80.05	14	IAmb	IAmb	18 02 12.3	
	comp=Z,30nm,0.9s						
N31M	Braeburn, Yuko	80.05	14	P	P	18 02 03.2	-3.4
	baz=335						
BLKN	Baker Lake	80.08	356	P	P	18 02 06.8	+0.2
HYT	Haines Junctio	80.29	15	P	P	18 02 08.7	+0.7
HYT				IAmb	IAmb	18 02 13.6	
	comp=Z,51nm,1.3s						
HYT	Haines Junctio	80.29	15	P	P	18 02 04.1	-3.9
	baz=334						
PINM	Pinnacle	80.31	17	P	P	18 02 04.4	-3.7
	baz=332						
WRGLY	Wrigley	80.37	8	P	P	18 02 04.8	-3.4
	baz=345						
O29M	Mount Kennedy	80.52	16	P	P	18 02 06.4	-2.9
	baz=333						
O30N	Mendenhall	80.64	15	IAmb	IAmb	18 02 15.0	
	comp=Z,56nm,1.4s						
O30N	Mendenhall	80.64	15	P	P	18 02 06.8	-3.0
	baz=335						
N32M	Quiet Lake	80.88	13	P	P	18 02 07.9	-3.2
	baz=338						
WHY	Whitehorse	80.98	14	P	P	18 02 09.1	-2.7
	baz=336						
P30M	Million Dollar	81.04	15	P	P	18 02 09.7	-2.3
	baz=334						
COEN	Coen	81.26	114	P	P	18 02 13.5	-0.2
COEN				IAmb	IAmb	18 02 16.9	
	comp=Z,47nm,1.4s						
COEN	Coen	81.26	114	P	P	18 02 16.5	+2.8
ASAR	Alice Springs	81.29	127	P	P	18 02 13.0	-0.7
	comp=Z,6.3nm,1.0s,baz=319,slow=5.1,SNR=4.1						
ASAR				PKKPbc	PKKPbc	18 20 48.3	-0.4
	comp=Z,0.9nm,1.0s,baz=140,slow=1.5,SNR=4.0						
ASAR				LR	LR	18 43 32.0	
	comp=Z,159nm,20.1s,baz=315,slow=40						
	comp=Z,6.3nm,1.0s						
ASAR	Alice Springs	81.29	127	P	P	18 02 13.3	-0.4
ASAR	Alice Springs	81.29	127	P	P	18 02 13.3	-0.4
P29M	Windy Craggy	81.31	16	P	P	18 02 10.6	-2.8
	baz=334						
PMG	Port Moresby	81.43	108	P	P	18 02 14.8	+0.1
PMG				IAmb	IAmb	18 02 18.3	
	comp=Z,47nm,1.6s						
PMG	Port Moresby	81.43	108	P	P	18 02 17.4	+2.8
PMG	Port Moresby	81.43	108	P	P	18 02 17.7	+3.1
	comp=Z,16nm,1.6s						
PMG	Port Moresby	81.43	108	P	P	18 02 14.8	+0.1
PMG				pmax	pmax		
	comp=Z,47nm,1.6s						
PLBC	Pleasant Camp	81.77	15	P	P	18 02 12.8	-3.0
	baz=335						
P33M	Teslin, Yukon	81.80	14	IAmb	IAmb	18 02 20.8	
	comp=Z,54nm,1.4s						
P33M	Teslin, Yukon	81.80	14	P	P	18 02 13.4	-2.7
	baz=338						
YKAW3	Yellowknife Wh	81.82	4	IAmb	IAmb	18 02 20.9	
	comp=Z,31nm,1.2s						
YKA	Yellowknife Ar	81.89	4	P	P	18 02 16.4	+0.1
	comp=Z,12nm,1.0s,baz=341,slow=5.4,SNR=56						
YKA				PP	PP	18 05 25.6	+2.6
	comp=Z,2.8nm,1.0s,baz=351,slow=7.7,SNR=5.7						
	comp=Z,12nm,1.0s						
YKA	Yellowknife Ar	81.89	4	P	P	18 02 16.2	-0.1
YKA	Yellowknife Ar	81.89	4	*ce*P	P	18 02 16.3	0.0
YKA				pmax	pmax		
	comp=Z,15nm,1.1s						
YKAW1	Yellowknife Wh	81.91	4	IAmb	IAmb	18 02 21.2	
	comp=Z,26nm,1.1s						
SKAG	Skagway	81.99	15	P	P	18 02 14.0	-2.8
	baz=336						
P32M	Atlin	82.20	14	P	P	18 02 15.1	-3.0
	baz=337						
WTLY	Watson Lake, Y	82.61	12	P	P	18 02 17.4	-2.8
	baz=341						
R33M	Jennings River	82.91	13	IAmb	IAmb	18 02 26.9	
	comp=Z,30nm,1.2s						
R33M	Jennings River	82.91	13	P	P	18 02 18.4	-3.5
	baz=339						
QIS	Mount Isa	83.00	121	P	P	18 02 22.5	-0.2
Q32M	Nakina River	83.07	14	P	P	18 02 18.6	-4.2
	baz=338						
S31K	Pelican	83.16	16	P	P	18 02 19.2	-3.8
	baz=335						
R32K	Eaglecrest	83.25	15	P	P	18 02 19.6	-3.9
	baz=336						
LIRD	Liard River Hi	83.70	11	P	P	18 02 22.6	-3.2
	baz=343						
S32K	Killisnoo	83.97	15	P	P	18 02 23.9	-3.3
	baz=336						
SCHQ	Schefferville	84.02	339	LR	LR	18 39 19.1	
	comp=Z,453nm,21.5s,baz=20,slow=35						
SIT	Sitka	84.19	16	P	P	18 02 24.8	-3.4
	baz=336						
TOAD	Toad River Com	84.37	10	P	P	18 02 26.0	-3.3
	baz=344						
MTSU	Mount Surprise	84.77	117	P	P	18 02 32.9	+1.1
T35M	Bob Quinn	85.31	13	P	P	18 02 30.0	-4.1
	baz=340						
WRAK	Wrangell Islan	85.42	15	P	P	18 02 30.6	-3.8
	baz=338						
U33K	Whale Pass	85.54	15	P	P	18 02 31.4	-3.7
	baz=338						
CRAG	Craig	86.14	15	P	P	18 02 34.7	-3.4
	baz=338						
V35K	Ketchikan	86.59	15	P	P	18 02 36.6	-3.6
	baz=339						
CTA	Charters Tower	87.42	117	LR	LR	18 48 44.2	
	comp=Z,208nm,18.3s,baz=261,slow=40						
CTA	Charters Tower	87.42	117	P	P	18 02 45.1	+0.2
CTAO	Charters Tower	87.42	117	P	P	18 02 44.1	-0.8
CTAO				IAmb	IAmb	18 02 48.0	
	comp=Z,23nm,1.2s						
CTAO	Charters Tower	87.42	117	P	P	18 02 45.6	+0.7
CTAO	Charters Tower	87.42	117	P	P	18 02 44.1	-0.8
CTAO				pmax	pmax		
	comp=Z,23nm,1.2s						
FFC	Flin Flon	89.93	358	P	P	18 02 56.1	-0.2
FFC	Flin Flon	89.93	358	P	P	18 02 56.1	-0.2
FFC				pmax	pmax		
	comp=Z,12nm,1.2s						
STKA	Stephens Creek	91.85	129	LR	LR	18 50 25.9	
	comp=Z,118nm,18.1s,baz=298,slow=40						
LLLB	Lillooet	92.84	11	IAmb	IAmb	18 03 14.7	
	comp=Z,11nm,1.0s						
ULM	Lac du Bonnet	94.06	354	P	P	18 03 14.6	-0.8
	comp=Z,5.4nm,0.8s,baz=0.4,slow=3.7,SNR=5.6						
	comp=Z,5.4nm,0.8s						
SYO	Syowa Base	107.56	193	⇓*e*Pdiff	Pdif	18 04 19.7	+4.6
SYO	Syowa Base	107.56	193	⇓*e*pPdiff	pPdif	18 04 25.0	-0.5
SYO	Syowa Base	107.56	193	⇓*e*sPdiff	Pdif	18 04 27.0	+12
SYO	Syowa Base	107.56	193	⇑*e*pPKiKP	PKiKP	18 08 31.6	+8.7
TXAR	Lajitas Array	115.33	358	PKP	PKPdf	18 08 39.5	+0.2
	comp=Z,0.3nm,0.7s,baz=48,slow=1.9,SNR=3.5						
SMTB	Santa Maria do	121.31	282	*e*P	PKiKP	18 08 51.9	+0.9
SDV	Santo Domingo	124.98	317	PKP	PKPdf	18 08 57.1	-1.2
	comp=Z,4.3nm,0.8s,baz=198,slow=1.4,SNR=4.7						
SDV	Santo Domingo	124.98	317	*e*P	PKPdf	18 08 57.3	-1.0
QSPA	South Pole Qui	125.46	180	PKP	PKPdf	18 08 56.4	-0.9
	comp=Z,4.3nm,0.9s,baz=281,slow=3.2,SNR=10						
NPGB	Novo Progresso	126.28	290	*e*P	PKiKP	18 09 00.9	0.0
IPMB	Ipameri, GO	126.88	274	*e*P	PKPdf	18 09 01.3	-0.3
ARAG	Araguaiana, MT	128.58	278	*e*P	PKiKP	18 09 05.3	-0.1
PDRB	Porto dos Gac	130.15	286	*e*P	PKiKP	18 09 08.4	-0.2
SALV	Santo Antonio	131.81	281	*e*P	PKiKP	18 09 11.5	-0.4
PP1B	Ponte de Pedra	132.08	278	*e*P	PKiKP	18 09 11.9	-0.5
PTLB	Pontes e Lacer	134.29	284	*e*P	PKPdf	18 09 15.6	+0.1
CPUP	Villa Florida	138.25	269	PKP	PKPdf	18 09 22.3	-0.3
	comp=Z,4.8nm,0.9s,baz=108,slow=2.0,SNR=9.9						
LPAZ	La Paz	141.78	291	PKP	PKPdf	18 09 29.8	-0.3
	comp=Z,1.4nm,0.7s,baz=6.6,slow=3.1,SNR=6.2						
LPAZ	La Paz	141.78	291	*e*P	PKPdf	18 09 30.1	+0.1
TRQA	Tornquist	145.55	253		PKPdf	18 09 34.3	-1.1
TRQA	Tornquist	145.55	253	PKIKP	PKPdf	18 09 34.3	-1.1
PLCA	Paso Flores	152.40	249	PKP	PKPdf	18 09 46.1	-0.2
	comp=Z,2.1nm,1.0s,baz=24,slow=2.9,SNR=3.4						
PLCA				PKPbc	PKiKP	18 09 53.9	+0.4
	comp=Z,5.1nm,0.7s,baz=126,slow=3.0,SNR=14						
PLCA	Paso Flores	152.40	249	*e*P	PKPdf	18 09 46.7	+0.3

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*IDC **30** 17:50:33.9±1.5, 36.°05N×2.°12W, h0^{km}, mb3.5/2, mbtmp3.7/7, ML4.0/4, Error ellipse: s-maj=34.2km s-min=21.9km az=100.0*

*SFS **30** 17:50:34.3, 36.°05N×2.°15W, h0^{km}, mb4.5/6, ML4.2/24, ML4.5/25, MLv4.1/25*

*CNRM **30** 17:50:35.7, 36.°05N×2.°12W, h47^{km}, ML4.0*

*INMG **30** 17:50:36.6±1.7, 36.°02N×2.°18W, h23^{km}±5^{km}, ML3.5, Error ellipse: s-maj=4.2km s-min=3.0km az=150.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Alboran*

*IGIL **30** 17:50:36.0, 35.°99N×2.°20W, h10^{km}, ML3.3*

*MDD **30** 17:50:38.1±0.3, 35.°99N×2.°20W, h30^{km}, mb_Lg3.8/52, Error ellipse: s-maj=3.1km s-min=1.8km az=155.0*

ISC 30 17:50:33.7±1.1**, 36.°04N**±0.°02×**2.°20W**±0.°02**, h7**^{km}±8^{km}**, n167, σ1^{s}83**/286**, mb4.8**/3**, 2C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EALB	Alboran	0.68	261	P	Pb	17 50 48.7	+0.8
EALB				S	Sb	17 50 58.7	+1.2
EALB	Alboran	0.68	261	Sg	Sn	17 50 59.5	-1.1
EALB				Pg	Pn	17 50 49.0	-0.7
EALB	Alboran	0.68	261	Pg	Pn	17 50 49.3	-0.4
EALB				Sg	Sn	17 50 59.2	-1.4
WMELI	Melilla	0.95	220	S	Sg	17 51 04.4	+0.3
WMELI				P	Pg	17 50 51.6	-0.2
WMELI	Melilla	0.95	220	Sg	Sg	17 51 04.1	0.0
WMELI				Pg	Pg	17 50 51.7	-0.1
EMLI	Melilla	0.96	220	P	Pg	17 50 51.7	-0.4
EMLI				S	Sg	17 51 03.7	-0.8
EMLI	Melilla	0.96	220	Pg	Pg	17 50 51.6	-0.4
EMLI				Sg	Sg	17 51 04.2	-0.3
EMEL	Melilla	0.96	220	Pg	Pg	17 50 51.9	-0.2
EMEL				Sg	Sn	17 51 08.3	+0.8
TAF	Taforalt	1.24	188	P	Pg	17 50 55.7	-1.7
TAF	Taforalt	1.24	188	S	Sg	17 51 13.6	+0.1
ELGU	Los Guajares,	1.41	306	P	Pn	17 50 59.3	-0.6
ELGU				S	Sb	17 51 17.8	-0.8
ELGU	Los Guajares,	1.41	306	Pn	Pn	17 50 59.5	-0.4
ELGU				Sn	Sb	17 51 16.7	-1.9
ELGU	Los Guajares,	1.41	306	Pn	Pn	17 50 60.0	+0.1
ELGU				Sn	Sb	17 51 18.2	-0.4
EQUE	Quentar	1.53	320	Pg	Pg	17 51 02.9	-0.1
EQUE				Sg	Sg	17 51 23.5	+0.7
EQTA	Presa de Quent	1.53	320	S	Sg	17 51 23.0	+0.1
EQTA				P	Pg	17 51 02.9	-0.1
EQTA	Presa de Quent	1.53	320	Pn	Pg	17 51 02.8	-0.2
ELOR	Lorca, Murcia	1.63	13	Pn	Pb	17 51 03.7	-0.5
ELOR				Sn	Sn	17 51 22.8	-1.4
PALE	Palemas	1.64	240	P	Pb	17 51 03.7	-0.5
PALE	Palemas	1.64	240	S	Sn	17 51 23.2	-1.0
TLOR	Lorca, Murcia	1.66	14	P	Pb	17 51 04.1	-0.5
TLOR				S	Sn	17 51 23.2	-1.7
TLOR	Lorca, Murcia	1.66	14	Pn	Pn	17 51 03.1	-0.1
TLOR				Sn	Sn	17 51 23.4	-1.5
CART	Cartagena	1.82	32	S	Sn	17 51 24.9	-3.8
CART				P	Pn	17 51 03.8	-1.5
CART	Cartagena	1.82	32	Pn	Pn	17 51 04.1	-1.3
CART				Sn	Sn	17 51 25.8	-2.9
CART	Cartagena	1.82	32	P	Pn	17 51 04.2	-1.1
CART	Cartagena	1.82	32	S	Sn	17 51 25.6	-3.1
EGOR	Sierra Gorda,	1.87	305	S	Sg	17 51 34.3	+0.6
EGOR				P	Pn	17 51 07.0	+0.8
EGOR	Sierra Gorda,	1.87	305	Pn	Pn	17 51 06.4	+0.2
EGOR	Sierra Gorda,	1.87	305	Pn	Pb	17 51 08.3	+0.1
EGOR				Sn	Sb	17 51 31.9	+0.1
EGOR				*i* IVmb_Lg		17 51 46.5	
EQES	Quesada	1.89	339	Pn	Pg	17 51 09.5	-0.4
EQES				Sn	Sb	17 51 33.2	+0.8
EQES				*i* IVmb_Lg		17 51 35.5	
EMUR	La Murta	1.95	23	P	Pn	17 51 07.2	-0.1
EMUR				S	Sn	17 51 29.0	-3.1
EMUR	La Murta	1.95	23	Pn	Pn	17 51 07.3	0.0
EMUR				Sn	Sn	17 51 29.6	-2.5
EMUR	La Murta	1.95	23	Pn	Pn	17 51 07.6	+0.3
EMUR				Sn	Sn	17 51 29.9	-2.2
EMUR				*i* IVmb_Lg		17 51 31.2	
AKLM	AKL	2.05	222	P	Pn	17 51 07.9	-0.7
AKLM	AKL	2.05	222	S	Sn	17 51 34.9	+0.5
EMIJ	Mijas	2.14	285	P	Pn	17 51 08.7	-1.2
EMIJ				S	Sn	17 51 34.1	-2.5
EMIJ	Mijas	2.14	285	Pn	Pn	17 51 08.9	-1.0
EMIJ				Sn	Sn	17 51 34.2	-2.5
EMIJ	Mijas	2.14	285	Pn	Pn	17 51 09.0	-0.9
EMIJ				Sn	Sn	17 51 33.5	-3.2
E0802	Ubeda,Jaen	2.19	335	Pn	Pb	17 51 13.6	-0.1
E0802				Sn	Sn	17 51 38.3	+0.4
ECEU	Ceuta	2.58	268	S	Sn	17 51 45.1	-2.4
ECEU				P	Pn	17 51 15.2	-0.7
ECEU	Ceuta	2.58	268	Pn	Pn	17 51 14.7	-1.2
ECEU				Sn	Sn	17 51 43.5	-3.9
SMIR	Smir Dam	2.61	263	P	Pn	17 51 14.8	-1.4
ETOB	Tobarra	2.65	11	P	Pn	17 51 18.3	+1.4
ETOB				S	Sn	17 51 49.1	-0.2
ETOB	Tobarra	2.65	11	Pn	Pn	17 51 18.2	+1.4
ETOB				Sn	Sn	17 51 48.0	-1.3
ETOB	Tobarra	2.65	11	Pn	Pn	17 51 18.4	+1.5
ETOB				Sn	Sn	17 51 48.2	-1.1
ETOB				*i* IVmb_Lg		17 51 53.7	
EJIF	Jimena Fronter	2.67	280	Pn	Pn	17 51 18.1	+0.9
EJIF				Sn	Sn	17 51 47.8	-2.0
CHEFC	Chefchaouen	2.72	251	P	Pn	17 51 19.1	+1.2
CHEFC	Chefchaouen	2.72	251	S	Sn	17 51 50.8	-0.4
EADA	Adamuz	2.84	319	P	Pn	17 51 20.7	+1.2
EADA				S	Sn	17 51 56.0	+1.9
EADA	Adamuz	2.84	319	Pn	Pn	17 51 20.3	+0.7
EADA				Sn	Sn	17 51 52.8	-1.3
EADA	Adamuz	2.84	319	Pn	Pn	17 51 21.1	+1.6
EADA				Sn	Sn	17 51 53.4	-0.7
EADA				*i* IVmb_Lg		17 52 04.1	
AFON	Font Roja	2.93	26	Pn	Pn	17 51 21.6	+0.8
AFON				Sn	Sn	17 51 55.1	-1.3
AFON				*i* IVmb_Lg		17 52 00.4	
PSIM	Granatula de C	3.04	336	Pn	Pn	17 51 24.5	+2.4
PSIM				Sn	Sn	17 51 57.2	-1.6
ESPR	Espera	3.06	287	S	Sn	17 52 00.9	+1.6
ESPR				P	Pn	17 51 24.6	+2.2
ESPR	Espera	3.06	287	Pn	Pn	17 51 23.2	+0.8
ESPR	Espera	3.06	287	Pn	Pn	17 51 24.6	+2.2
ESPR				Sn	Sn	17 51 57.2	-2.1
ESPR				*i* IVmb_Lg		17 52 11.5	
EBEN2	Beniarda presa	3.08	31	Pn	Pn	17 51 22.8	+0.1
EBEN2				Sn	Sn	17 51 58.1	-1.7
EBEN2				*i* IVmb_Lg		17 52 02.1	
CNIL	Conil	3.13	277	P	Pn	17 51 24.8	+1.4
RSA	Sarsar	3.17	250	P	Pn	17 51 24.2	+0.2
RSA	Sarsar	3.17	250	S	Sn	17 52 02.9	+0.8
ECAB	El Cabril	3.27	309	S	Sn	17 52 05.8	+1.1
ECAB				P	Pn	17 51 25.9	+0.4
ECAB	El Cabril	3.27	309	Pn	Pn	17 51 26.2	+0.8
ECAB				Sn	Sn	17 52 03.3	-1.4
ECAB				*i* IVmb_Lg		17 52 21.1	
EVIV	Cofrentes, Val	3.33	15	Pn	Pn	17 51 29.3	+3.1
EVIV				Sn	Sn	17 52 04.2	-1.9
EVIV				*i* IVmb_Lg		17 52 14.4	
IFR	Ifrane	3.48	225	S	Sn	17 52 13.3	+3.2
IFR				P	Pn	17 51 28.4	-0.1
ECHE	Chera	3.67	15	S	Sn	17 52 16.1	+1.6
ECHE				P	Pn	17 51 31.7	+0.8
ECHE	Chera	3.67	15	Pn	Pn	17 51 33.0	+2.1
ECHE				Sn	Sn	17 52 11.3	-3.2
MDT	Midelt	3.79	212	Pn	Pn	17 51 32.3	-0.3
	3.4nm,0.3s,baz=42,slow=17,SNR=446						
MDT				Sn	Sn	17 52 16.2	-1.1
	3.3nm,0.3s,baz=64,slow=19,SNR=6.1						
	12nm,0.3s						
MDT	Midelt	3.79	212	P	Pn	17 51 32.2	-0.4
MDT	Midelt	3.79	212	S	Sn	17 52 17.5	+0.2
MD31	MD31	3.81	214	P	Pn	17 51 32.8	0.0
MD31	MD31	3.81	214	S	Sn	17 52 18.2	+0.3
CZD	Col de Zad	3.81	219	P	Pn	17 51 33.7	+0.6
CZD	Col de Zad	3.81	219	S	Sn	17 52 16.9	-1.4
ESBB	Sonseca Array	3.88	340	Pn	Pn	17 51 36.4	+2.6
ESBB				Sn	Sn	17 52 17.3	-2.4
ESBB				Sg	Sb	17 52 31.6	+1.8
ESBB				*i* IVmb_Lg		17 52 34.6	
ESDC	Sonseca Array	3.88	340	Pn	Pn	17 51 36.2	+2.4
ESDC				Sn	Sn	17 52 16.0	-3.7
ESDC				Sg	Sb	17 52 33.0	+3.2
ESDC				*i* IVmb_Lg		17 52 34.6	
ESDC	Sonseca Array	3.88	340	Pn	Pn	17 51 35.2	+1.4
	7.1nm,0.3s,baz=156,slow=14,SNR=173						
ESDC				Sn	Sn	17 52 17.2	-2.5
	5.5nm,0.3s,baz=152,slow=16,SNR=2.1						
ESDC				Lg	Lg	17 52 33.9	
	22nm,0.3s,baz=151,slow=29,SNR=14						
	16nm,0.3s						
PAB	San Pablo	3.89	335	Pn	Pn	17 51 36.6	+2.6
PAB				Pg	Pb	17 51 43.0	+0.4
PAB				Sn	Sn	17 52 18.8	-1.0
PAB				Sg	Sb	17 52 32.5	+2.6
PAB				*i* IVmb_Lg		17 52 36.7	
EMIN	Mina Concepcio	3.97	297	P	Pn	17 51 35.1	+0.1
EMIN				S	Sn	17 52 19.8	-2.1
EMIN	Mina Concepcio	3.97	297	Pn	Pn	17 51 35.3	+0.3
EMIN				Sn	Sn	17 52 19.7	-2.1
EMIN				*i* IVmb_Lg		17 52 23.7	
FIGM	Figuig	3.98	168	P	Pn	17 51 34.3	-1.0
FIGM	Figuig	3.98	168	S	Sn	17 52 20.8	-1.4
EIBI	Ibiza	4.10	42	P	Pn	17 51 36.4	-0.4
EIBI				S	Sn	17 52 22.1	-2.9
EIBI	Ibiza	4.10	42	Pn	Pn	17 51 36.5	-0.3
EIBI				*i* IVmb_Lg		17 51 37.7	
EIBI				Sn	Sn	17 52 21.2	-3.8
RTC	Rabat Centre	4.33	243	S	Sn	17 52 30.7	-0.1
CIBOR	Castaar de Ib	4.40	326	Pn	Pn	17 51 42.9	+2.0
CIBOR				Sn	Sn	17 52 30.1	-2.3
PBAR	Barrancos	4.41	300	P	Pn	17 51 41.3	+0.3
PBAR				S	Sn	17 52 30.4	-2.2
PBAR	Barrancos	4.41	300	*e*Pn	Pn	17 51 41.5	+0.5
PBAR				*e*Sn	Sn	17 52 31.7	-0.9
PBAR				*i* IAML		17 52 35.3	
PBAR				*i* IAML		17 52 35.4	
PBAR				*i* IAML		17 52 35.7	
ECOL	Islas Columbre	4.47	30	Pn	Pn	17 51 42.2	+0.3
ECOL				Sn	Sn	17 52 31.7	-2.5
EGRO	El Granado	4.49	291	P	Pn	17 51 42.1	0.0
EGRO				S	Sn	17 52 32.4	-2.2
EGRO	El Granado	4.49	291	Pn	Pn	17 51 42.1	0.0
EGRO				Sn	Sn	17 52 32.2	-2.4
EGRO				*i* IVmb_Lg		17 52 34.6	
E0901	Celadas (Terue	4.51	10	Pn	Pn	17 51 45.5	+3.0
E0901				Sn	Sn	17 52 33.0	-2.3
E0901				*i* IVmb_Lg		17 53 07.7	
EMOS	Mosqueruela	4.52	17	Pn	Pn	17 51 45.1	+2.3
EMOS				Sn	Sn	17 52 33.5	-2.2
PVAQ	Vaqueiros	4.63	289	*e*Pn	Pn	17 51 44.2	+0.1
PVAQ				*e*Sn	Sn	17 52 35.5	-2.6

PVAQ				i IAML		17 52 39.1	
PVAQ				i IAML		17 52 40.6	
PVAQ				i IAML		17 52 41.0	
PVAQ	Vaqueiros	4.63	289	P	Pn	17 51 44.0	-0.1
PVAQ	Vaqueiros	4.63	289	S	Sn	17 52 37.0	-1.1
EBAD	Badajoz	4.69	307	P	Pn	17 51 45.3	+0.4
EBAD				S	Sn	17 52 37.8	-1.7
EBAD	Badajoz	4.69	307	Pn	Pn	17 51 45.5	+0.7
EBAD				Sn	Sn	17 52 36.3	-3.2
PBDV	Barranco-do-Ve	4.76	286	P	Pn	17 51 46.3	+0.5
PBDV				S	Sn	17 52 39.0	-2.3
PBDV	Barranco-do-Ve	4.76	286	ePn	Pn	17 51 46.6	+0.8
PBDV				eSn	Sn	17 52 39.7	-1.6
PBDV				i IAML		17 52 44.6	
PBDV				i IAML		17 52 44.8	
PBDV				i IAML		17 52 44.9	
ETOR	Torete	4.77	1	Pn	Pn	17 51 48.0	+2.0
ETOR				Sn	Sn	17 52 39.1	-2.5
ETOR				Sg	Sb	17 52 59.2	+3.9
ETOR				i IVmb_Lg		17 53 10.3	
GUD	Guadarrama	4.84	342	Pn	Pn	17 51 49.1	+2.0
GUD				Pg	Pb	17 51 58.4	-0.5
GUD				Sn	Sn	17 52 41.0	-2.5
GUD				Sg	Sb	17 52 59.8	+2.4
GUD				i IVmb_Lg		17 53 10.1	
GOLM	Goulmima	4.89	209	P	Pn	17 51 50.1	+2.3
GOLM	Goulmima	4.89	209	S	Sn	17 52 45.2	+0.4
PCVE	Castro Verde	4.94	290	P	Pn	17 51 48.4	+0.1
PCVE				S	Sn	17 52 43.5	-2.2
PCVE	Castro Verde	4.94	290	ePn	Pn	17 51 48.8	+0.5
PCVE				eSn	Sn	17 52 43.0	-2.7
PCVE				i IAML		17 52 46.6	
PCVE				i IAML		17 52 48.2	
PCVE				i IAML		17 52 49.4	
PBEJ	Beja	4.94	295	ePn	Pn	17 51 49.2	+0.8
PBEJ				eSn	Sn	17 52 43.4	-2.4
PBEJ				i IAML		17 52 45.7	
PBEJ				i IAML		17 52 47.8	
PBEJ				i IAML		17 52 49.0	
EPLA	Plasencia	5.05	324	Pn	Pn	17 51 51.8	+2.0
EPLA				Pg	Pb	17 51 58.2	-4.1
EPLA				Sn	Sn	17 52 46.2	-2.2
EPLA				i IVmb_Lg		17 53 34.0	
AVE	Averroes	5.09	239	S	Sn	17 52 49.9	+0.4
PESTR	Estremoz	5.13	305	P	Pn	17 51 51.4	+0.5
PESTR				S	Sn	17 52 48.4	-2.0
PESTR	Estremoz	5.13	305	ePn	Pn	17 51 52.0	+1.1
PESTR				eSn	Sn	17 52 48.3	-2.1
PESTR				i IAML		17 52 49.9	
PESTR				i IAML		17 52 50.4	
PESTR				i IAML		17 53 05.1	
PESTR	Estremoz	5.13	305	P	Pn	17 51 51.4	+0.5
PESTR	Estremoz	5.13	305	S	Sn	17 52 49.9	-0.4
MESJ	Messejana	5.14	292	eP	Pn	17 51 51.2	+0.2
MESJ				eS	Sn	17 52 46.4	-4.3
MESJ				IAML		17 52 51.1	
	comp=N,38nm,0.5s						
MESJ	Messejana	5.14	292	ePn	Pn	17 51 51.3	+0.2
MESJ				eSn	Sn	17 52 47.8	-2.9
MESJ				i IAML		17 52 51.2	
MESJ				i IAML		17 52 52.1	
MESJ				i IAML		17 52 53.2	
EVO	Evora	5.26	300	S	Sn	17 52 50.6	-2.9
EVO				P	Pn	17 51 53.2	+0.6
EVO	Evora	5.26	300	ePn	Pn	17 51 53.6	+1.0
EVO				eSn	Sn	17 52 50.7	-2.8
EVO				i IAML		17 52 52.6	
EVO				i IAML		17 52 54.6	
EVO				i IAML		17 52 55.7	
ERTA	Horta de San J	5.29	21	Pn	Pn	17 51 54.7	+1.5
ERTA				Sn	Sn	17 52 49.5	-5.0
ERTA				i IVmb_Lg		17 52 54.3	
PMRV	Marv??o	5.32	311	ePn	Pn	17 51 54.5	+0.9
PMRV				eSn	Sn	17 52 54.6	-0.5
PMRV				i IAML		17 53 31.0	
PMRV				i IAML		17 53 34.7	
PMRV				i IAML		17 53 35.4	
MORF	Marmelete	5.33	286	eP	Pn	17 51 53.9	+0.1
MORF	Marmelete	5.33	286	ePn	Pn	17 51 54.0	+0.3
MORF				eSn	Sn	17 52 53.5	-2.0
MORF				i IAML		17 52 57.5	
MORF				i IAML		17 52 58.3	
MORF				i IAML		17 52 58.5	
PARRA	Arraiolos	5.41	303	ePn	Pn	17 51 55.5	+0.8
PARRA				eSn	Sn	17 52 54.8	-2.4
PARRA				i IAML		17 52 57.2	
PARRA				i IAML		17 53 00.6	
PARRA				i IAML		17 53 11.9	
ETOS	Mallorca	5.44	45	P	Pn	17 51 55.0	-0.2
ETOS				S	Sn	17 52 55.8	-2.2
ETOS	Mallorca	5.44	45	Pn	Pn	17 51 54.8	-0.4
ETOS				i IVmb_Lg		17 51 59.1	
ETOS				Sn	Sn	17 52 52.8	-5.2
PFVI	Vila Bisbo	5.44	283	P	Pn	17 51 55.1	-0.1
PFVI				S	Sn	17 52 55.7	-2.3
PFVI	Vila Bisbo	5.44	283	ePn	Pn	17 51 55.3	+0.2
PFVI				eSn	Sn	17 52 55.3	-2.7
PFVI				i IAML		17 52 59.8	
PFVI				i IAML		17 53 00.2	
PFVI				i IAML		17 53 00.9	
PFVI	Vila Bisbo	5.44	283	P	Pn	17 51 55.2	0.0
PTEO	Sao Teotonio	5.44	288	ePn	Pn	17 51 56.2	+1.0
PTEO				eSn	Sn	17 52 55.6	-2.5
PTEO				i IAML		17 52 59.1	
PTEO				i IAML		17 53 00.5	
PTEO				i IAML		17 53 01.5	
MOE	Montemor	5.49	299	ePn	Pn	17 51 56.5	+0.6
MOE				eSn	Sn	17 52 55.8	-3.5
MOE				i IAML		17 52 57.3	
MOE				i IAML		17 52 59.1	
MOE				i IAML		17 52 59.1	
TISM	Timmit	5.57	220	P	Pn	17 51 56.5	-0.4
TISM	Timmit	5.57	220	S	Sn	17 53 01.9	+0.7
PCBR	Castelo Branco	5.63	314	ePn	Pn	17 51 59.6	+1.8
PCBR				eSn	Sn	17 53 01.6	-1.1
PCBR				i IAML		17 53 12.9	
PCBR				i IAML		17 53 38.8	
PCBR				i IAML		17 53 46.4	
PMTG	Montargil	5.66	304	ePn	Pn	17 51 58.7	+0.6
PMTG				eSn	Sn	17 52 59.8	-3.5
PMTG				i IAML		17 53 01.5	
PMTG				i IAML		17 53 01.5	
PMTG				i IAML		17 53 03.5	
ESAC	San Caprasio	5.83	13	Pn	Pn	17 52 03.1	+2.5
ESAC				i IVmb_Lg		17 53 38.4	
EPOB	Poblet	5.89	25	Pn	Pn	17 52 02.7	+1.2
EPOB				Sn	Sn	17 53 05.0	-4.2
PSARD	Sardoal	5.90	309	ePn	Pn	17 52 02.6	+1.1
PSARD				eSn	Sn	17 53 07.5	-2.0
PSARD				i IAML		17 53 08.5	
PSARD				i IAML		17 53 08.5	
PSARD				i IAML		17 53 08.9	
MTE	Manteigas	6.05	318	ePn	Pn	17 52 05.4	+1.8
MTE				eSn	Sn	17 53 11.9	-1.2
MTE				i IAML		17 53 52.6	
MTE				i IAML		17 54 05.0	
MTE				i IAML		17 54 08.4	
LIS	Lisbon	6.14	298	ePn	Pn	17 52 06.1	+1.3
LIS				eSn	Sn	17 53 12.9	-2.4
LIS				i IAML		17 53 13.9	
LIS				i IAML		17 53 15.4	
PSBE	So Bento	6.26	306	ePn	Pn	17 52 07.6	+1.1
PSBE				eSn	Sn	17 53 16.0	-2.4
PSBE				i IAML		17 53 25.5	
PSBE				i IAML		17 54 03.1	
PSBE				i IAML		17 54 06.8	
PMAFR	Mafra	6.33	299	P	Pn	17 52 08.3	+0.8
PMAFR				S	Sn	17 53 16.7	-3.4
PMAFR	Mafra	6.33	299	⇑ePn	Pn	17 52 08.4	+1.0
PMAFR				eSn	Sn	17 53 18.0	-2.0
PMAFR				i IAML		17 53 18.8	
PMAFR				i IAML		17 53 19.1	
PMAFR				i IAML		17 53 20.9	
MVO	Moncorvo	6.36	325	⇑ePn	Pn	17 52 10.1	+2.2
MVO				eSn	Sn	17 53 18.8	-1.9
MVO				i IAML		17 53 22.1	
MVO				i IAML		17 53 22.6	
MVO				i IAML		17 54 20.2	
PCAS	Casmilo, Conde	6.38	311	ePn	Pn	17 52 09.3	+1.2
PCAS				eSn	Sn	17 53 19.0	-2.2
PCAS				i IAML		17 53 54.5	
PCAS				i IAML		17 53 58.5	
PCAS				i IAML		17 54 09.4	
OUZM	OUZ	6.38	218	P	Pn	17 52 09.3	+1.1
OUZM	OUZ	6.38	218	S	Sn	17 53 24.4	+3.0
PVIS	Viseu	6.46	318	ePn	Pn	17 52 10.5	+1.3
PVIS				eSn	Sn	17 53 20.6	-2.6
TIO	Tiouine	6.62	221	P	Pn	17 52 11.1	-0.6
TIO				S	Sn	17 53 25.4	-2.1
TIO	Tiouine	6.62	221	P	Pn	17 52 12.2	+0.6
OUK	Oukaimeden	6.75	226	P	Pn	17 52 13.2	-0.3
OUK	Oukaimeden	6.75	226	S	Sn	17 53 30.3	-0.5
PVRL	Vila Real	6.77	322	ePn	Pn	17 52 15.3	+1.7
PVRL				eSn	Sn	17 53 29.6	-1.3
PVRL				i IAML		17 54 21.1	
PVRL				i IAML		17 54 23.2	
POLO	Lamas de Olo	6.89	322	ePn	Pn	17 52 17.0	+1.9
POLO				eSn	Sn	17 53 31.4	-2.3
POLO				i IAML		17 54 23.6	
POLO				i IAML		17 54 30.9	
POLO				i IAML		17 54 35.2	
PTO	Porto	7.14	317	ePn	Pn	17 52 19.9	+1.4
ELAN	Lanestosa	7.24	353	Pn	Pn	17 52 22.0	+2.1
ELAN				Sn	Sn	17 53 38.0	-4.4
ELAN				i IVmb_Lg		17 54 46.7	
PCAB	Cabril	7.25	323	ePn	Pn	17 52 21.8	+1.7
PCAB				eSn	Sn	17 53 38.2	-4.5
PCAB				i IAML		17 53 43.2	
PCAB				i IAML		17 53 43.3	
PCAB				i IAML		17 54 28.1	
ELOB	Lobios	7.39	324	Pn	Pn	17 52 23.7	+1.7
ELOB				Sn	Sn	17 53 40.8	-5.4
ELOB				i IVmb_Lg		17 53 47.7	
ALT01	Santillana del	7.47	349	Pn	Pn	17 52 25.9	+2.9
ALT01				i IVmb_Lg		17 55 58.1	
PGAV	Gavieira, Arco	7.57	323	ePn	Pn	17 52 26.5	+2.0
PGAV				eSn	Sn	17 53 47.2	-3.3
PGAV				i IAML		17 53 51.1	
PGAV				i IAML		17 54 43.8	
PGAV				i IAML		17 54 44.5	
KEST	Kesra	9.38	89	Pn	Pn	17 52 48.9	-0.4
	comp=N,0.7nm,0.3s,baz=289,slow=6.1,SNR=8.8						
	comp=N,7.3nm,0.9s						
FETA	Feichten	14.61	37	i Pn	P	17 54 05.6	-1.8
	comp=N,3.8nm,0.8s						
SQTA	Sankt Quirin	14.98	38	i Pn	P	17 54 13.1	+1.6
	comp=N,6.0nm,0.9s						
WTTA	Wattenberg	15.23	38	ePn	P	17 54 12.4	-1.9
	comp=N,8.7nm,1.5s						
WATA	Walderalm	15.25	38	ePn	P	17 54 14.1	-0.3
	comp=N,6.0nm,1.3s						
GERES	GERESS Array B	17.32	37	Pn	Pn	17 54 35.0	-0.9
	comp=N,0.9nm,0.7s,baz=229,slow=12,SNR=5.8						
EKA	Eskdalemuir Ar	19.30	358	P	Pn	17 55 01.4	+1.3
	baz=180,slow=14						
	comp=N,1.1nm,0.6s						
TORD	Torodi Ar. Bea	23.07	170	P	P	17 55 42.3	+2.4
	comp=N,0.3nm,0.4s,baz=350,slow=9.5,SNR=5.4						
	comp=N,0.3nm,0.4s						
BR106	Keskin Array S	28.39	72	P	P	17 56 29.4	+0.6
	comp=N,133nmcomp=N,14nm,0.9s						
BR105	Keskin Array S	28.39	72	P	P	17 56 29.4	+0.6
	comp=N,131nmcomp=N,14nm,0.9s						
MKAR	Makanchi Array	61.38	51	P	P	18 00 50.9	+0.6
	comp=N,1.1nm,0.7s,baz=294,slow=3.3,SNR=2.1						
	comp=N,1.1nm,0.7s						

AWI 30 17:59:30.6±0.3, 71°.31S×8°.64W, h10km, 1C-2D, Error ellipse: s-maj=6.3km s-min=2.0km az=340.0, ANTARCTICA, Antarctica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	Neumayer Olymp	0.34	280	⇓P	Pb	17 59 38.3	-0.4
	comp=Z,18nm,0.7s						
VNA2	Neumayer--Watz	0.56	47	⇑P	Pg	17 59 40.8	-0.6
	comp=Z,16nm,0.7s,baz=182,slow=4.7						
VNA1	Neumayer--Stat	0.67	11	⇓P	Pg	17 59 42.4	-1.1
	comp=Z,14nm,0.9s						

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*UPP **30** 18:01:07.6±0.1, 67°.06N×20°.96E, h0km, ML2.2, Suspected explosion*

*IDC **30** 18:01:08.7±1.0, 67°.03N×21°.20E, h0km, mbtmp3.0/4, ML1.7/4, Error ellipse: s-maj=19.3km s-min=8.5km az=111.0*

*HEL **30** 18:01:08.0±0.2, 67°.07N×20°.92E, h0km, ML2.1, Suspected explosion*

ISC 30 18:01:07.8±0.8, 67°.06N±0°.02×20°.93E±0°.02, h0km, n49, σ1s15/72, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	Dundret	0.15	293	P	Pg	18 01 11.1	+0.4
DUNU				S	Sg	18 01 13.2	+0.5
MASU	Masugnsbyn	0.57	46	P	Pg	18 01 18.6	-0.2
ERTU	Ertsjaerv	0.71	135	P	Pg	18 01 20.8	-0.6
ERTU	Ertsjaerv	0.71	135	PG	Pg	18 01 20.5	-0.9
ERTU				SG	Sg	18 01 32.0	+1.4
PAJU	Pajala	0.86	92	P	Pg	18 01 23.4	-0.8
HARU	Harads	0.90	179	P	Pg	18 01 24.4	-0.6
RATU	Laukkuluspa	0.92	327	P	Pg	18 01 24.8	-0.7
KUA	Kurravaara	0.93	346	P	Pg	18 01 24.8	-0.7
SALU	Saltoluokta	1.00	290	P	Pg	18 01 26.4	-0.4
SALU	Saltoluokta	1.00	290	eP	Pg	18 01 26.9	+0.1
LANU	Lannavaara	1.07	22	P	Pg	18 01 27.3	-1.0
LANU	Lannavaara	1.07	22	PG	Pg	18 01 27.2	-1.0
LANU				SN	Sb	18 01 44.0	+0.3
KLF	Kolari	1.20	80	PG	Pg	18 01 29.6	-1.1
KLF				MSG		18 01 44.3	
	comp=Z,19nm,0.2s						
KLF				SB	Sg	18 01 46.4	+0.2
KOVU	Salmi	1.20	346	P	Pg	18 01 30.0	-0.9
KALU	Kalix	1.55	140	P	Pn	18 01 35.8	-0.8
KALU	Kalix	1.55	140	PG	Pn	18 01 35.8	-0.8
KALU				SN	Sg	18 01 59.0	+1.4
SJUU	Sjulsmark	1.58	170	P	Pn	18 01 36.5	-0.6
TOF	Tornio	1.68	124	PG	Pn	18 01 38.0	-0.3
TOF				MSG		18 01 58.3	
	comp=Z,13nm,0.2s						
TOF				SN	Sn	18 02 00.4	-0.1
HEF	Hetta	1.71	36	eP	Pn	18 01 39.0	+0.3
HEF	Hetta	1.71	36	PG	Pn	18 01 38.6	-0.2
	baz=220						
HEF				MSG		18 01 58.8	
	comp=Z,19nm,0.2s						
HEF				SN	Sg	18 02 02.6	+0.1
KIF	Kilpisjarvi	1.95	359	PG	Pb	18 01 43.5	-0.6
KIF				MSG		18 02 07.1	
	comp=Z,39nm,0.2s						
KIF				SG	Sg	18 02 10.8	+0.4
RNF	Rovaniemi	2.06	100	PG	Pn	18 01 44.2	+0.6
RNF				SG	Sb	18 02 13.0	+0.9
KTK1	Kautokeino	2.14	23	PG	Pn	18 01 45.8	+1.1
BURU	Burvik	2.50	176	PB	Pn	18 01 50.8	+1.2
BURU				SG	Sb	18 02 25.2	+0.6
RANF	Ranua	2.57	111	PN	Pn	18 01 50.7	+0.1
	baz=292						
RANF				SG	Sb	18 02 26.4	-0.3
TRO	Tromso	2.69	345	SG	Sb	18 02 29.2	-1.0
OBF4	Vikkela, Lumij	2.83	141	PN	Pn	18 01 54.8	+0.6
	baz=324						
OBF4				MSG		18 02 31.4	
	comp=Z,3.1nm,0.2s						
OUL	Oulu	2.83	132	PB	Pn	18 01 55.1	+0.9
OBF0	Syolatti, Pyha	2.91	151	PB	Pn	18 01 56.9	+1.6
OBF0				MSG		18 02 33.8	
	comp=Z,5.7nm,0.2s						
ARA0	ARCESS Array S	3.01	32	PN	Pn	18 01 57.1	+0.5
ARA0				SG	Sb	18 02 39.2	-0.3
ARCES	ARCESS Array B	3.01	32	Pn	Pn	18 01 56.8	+0.1
	comp=Z,0.2nm,0.3s,baz=218,slow=13,SNR=41						
ARCES				Sn	Sn	18 02 35.5	+2.1
	comp=Z,0.5nm,0.3s,baz=215,slow=22,SNR=9.2						
	comp=Z,1.6nm,0.2s						
OUF	Merijarvi	3.13	148	PN	Pn	18 01 59.0	+0.7
OUF				MSG		18 02 40.0	
	comp=Z,2.6nm,0.2s						
OUF				SG	Sg	18 02 45.9	-2.2
RAJF	Raja-Jooseppi	3.14	60	PB	Pn	18 01 60.0	+1.5
RAJF				SB	Sb	18 02 41.8	-1.5
UMAU	Umeaa	3.19	182	PN	Pn	18 01 59.7	+0.6
UMAU				SN	Sn	18 02 39.7	+1.9
KU2	Taivalkoski	3.24	111	PN	Pn	18 02 00.2	+0.4
	baz=299						
VRF	Varrio	3.42	74	PN	Pn	18 02 03.5	+1.2
VRF				SG	Sb	18 02 53.0	+1.8
OLKF	Oulanka, Finla	3.45	99	PN	Pn	18 02 03.3	+0.6
OLKF				SB	Sn	18 02 47.1	+2.9
MSF	Maaselka	3.45	106	PN	Pn	18 02 03.0	+0.3
MSF				SB	Sb	18 02 50.3	-1.8
KEV	Kevo	3.52	37	PN	Pn	18 02 04.0	+0.4
KU6	Riekki	3.73	102	PN	Pn	18 02 07.0	+0.4
KU6				SG	Sb	18 03 03.2	+3.1
KU1	Kurvinen	3.79	109	PN	Pn	18 02 08.2	+0.8
HUSU	Husum	3.81	192	PN	Pn	18 02 08.6	+1.1
VAF	Ylistaro	4.10	169	PN	Pn	18 02 12.8	+1.1
HEMU	Hemsoen	4.57	197	PN	Pn	18 02 18.7	+0.6
	baz=14						
HEMU				SN	Sn	18 03 11.4	-0.5
NIF	Nilsia	4.69	139	PN	Pn	18 02 21.0	+1.4
RMF	Romuvaara	4.69	123	PN	Pn	18 02 21.0	+1.2
FINES	FINESS Array B	6.07	156	Pn	Pn	18 02 39.2	+0.6
	comp=Z,0.1nm,0.3s,baz=345,slow=13,SNR=7.1						
FINES				Sn	Sn	18 03 47.2	-1.4
	comp=Z,0.2nm,0.3s,baz=344,slow=20,SNR=8.3						
	comp=Z,1.8nm,0.8s						
NOA	NORSAR Array B	7.39	220	Pn	Pn	18 02 56.4	-0.3
	baz=37,slow=12,SNR=1.1						
	comp=Z,0.6nm,0.9s						
HFS	Hagfors	7.66	208	Pn	Pn	18 03 00.1	-0.3
	baz=27,slow=13,SNR=1.1						
HFS				Sn	Sn	18 04 24.2	-3.6
	comp=Z,0.1nm,0.3s,baz=30,slow=25,SNR=1.5						
	comp=Z,1.3nm,0.8s						

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*NAO **30** 18:01:13.6, 39°.14N×22°.22E, h10km, MB3.8*

*IDC **30** 18:01:40.0±0.7, 42°.21N×23°.50E, h0km, mb3.8/11, mbtmp3.9/20, ML3.6/9, MS4.0/3, Error ellipse: s-maj=12.0km s-min=10.0km az=27.0*

*MOS **30** 18:01:39.6±1.1, 42°.18N×23°.54E, h10km, mb4.4/7, Error ellipse: s-maj=5.9km s-min=3.6km az=81.1*

*SOF **30** 18:01:40.2, 42°.17N±0°.01×23°.55E±0°.01, h12km±1km, MD4.3/12*

*THE **30** 18:01:40.6, 42°N±1°×2°4E±°, h0km±1km, M4.0/20, MLh4.0/20*

*SKO **30** 18:01:41.8, 42°.20N×23°.50E, h0km, ML4.2*

*BEO **30** 18:01:41.9±0.2, 42°.22N×23°.54E, h12km±1km, ML4.1/25*

*NEIC **30** 18:01:41.7±1.6, 42°.21N±0°.05×23°.58E±0°.04, h10km±1km, mb4.4/10, Error ellipse: s-maj=8.7km s-min=4.9km az=196.0*

*AFAD **30** 18:01:41.8, 42°.24N×23°.47E, h23km±6km, MW4.4*

*ISK **30** 18:01:41.2, 42°.20N×23°.57E, h11km, ML4.4/32*

*PDG **30** 18:01:43.5±1.0, 42°.18N×23°.46E, h40km±11km, ML3.7/11, Error ellipse: s-maj=1.0km s-min=1.0km az=0.0*

*MCSM **30** 18:01:45.3±2.3, 42°N±21°×2°4E±°, h10km, mb4.5, MLv4.7*

*PRU **30** 18:01:47.3, 42°.13N×23°.20E, h28km, M4.5*

ISC 30 18:01:41.2±0.9, 42°.18N±0°.01×23°.53E±0°.02, h9km±6km, n438, σ1s54/548, mb4.3/18, MS4.4/4, 80C-32D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLNA	Plana	0.30	346	⇑iPg	Pg	18 01 47.3	0.0
PLNA				Sg	Sg	18 01 52.2	+0.8
KKB	Krupnik	0.45	221	P	Pg	18 01 49.6	-0.3
KKB				S	Sg	18 01 56.0	+0.1
KKB	Krupnik	0.45	221	⇑iPg	Pg	18 01 49.8	-0.1
KKB				Sg	Sg	18 01 55.9	+0.1
KKB	Krupnik	0.45	221	⇑iPg	Pg	18 01 49.9	-0.1
KKB				i Sg	Sg	18 01 56.2	+0.3
VTS	Vitosha	0.49	334	P	Pg	18 01 50.1	-0.5
VTS				S	Sg	18 01 56.8	-0.3
VTS	Vitosha	0.49	334	⇑iPg	Pg	18 01 50.2	-0.5
VTS				Sg	Sg	18 01 56.7	-0.5
VTS	Vitosha	0.49	334	ePg	Pg	18 01 50.2	-0.5
VTS				eSg	Sg	18 01 56.9	-0.3
SOF	Sofia	0.51	347	⇑iPg	Pg	18 01 51.1	0.0
SOF				Sg	Sg	18 01 57.8	0.0
PGB	Panagyurishte	0.58	55	⇓iPg	Pg	18 01 52.2	-0.3
PGB				Sg	Sg	18 01 59.8	-0.4
MMB	Musomishta	0.65	165	P	Pg	18 01 53.3	-0.5
MMB				S	Sg	18 02 03.4	+1.0
MMB	Musomishta	0.65	165	⇑iPg	Pg	18 01 53.3	-0.5
MMB				Sg	Sg	18 02 02.2	-0.2
MMB	Musomishta	0.65	165	⇑iPg	Pg	18 01 53.3	-0.5
MMB				i Sg	Sg	18 02 02.4	0.0
BLSH	Balsha	0.70	345	⇑iPg	Pg	18 01 55.0	+0.3
BLSH				Sg	Sb	18 02 04.7	-0.7
PLD	Plovdiv	0.91	92	P	Pg	18 01 57.3	-1.3
PLD	Plovdiv	0.91	92	⇓iPg	Pg	18 01 57.4	-1.3
PLD				Sg	Sg	18 02 09.4	-1.0
PLD	Plovdiv	0.91	92	Pg	Pg	18 01 58.2	-0.4
PLD				Sg	Sg	18 02 09.9	-0.5
PLD	Plovdiv	0.91	92	i Pg	Pg	18 01 57.3	-1.3
PLD				i Sg	Sg	18 02 09.9	-0.5
PLD	Plovdiv	0.91	92	ePg	Pg	18 01 57.5	-1.1
PLD				eSg	Sg	18 02 10.0	-0.5
TRAN	Tran	0.92	316	⇑iPg	Pg	18 01 58.5	-0.4
TRAN				Sg	Sg	18 02 10.8	-0.1
RZN	Rozhen	1.03	118	P	Pg	18 02 00.2	-0.8
RZN				S	Sg	18 02 14.9	+0.7
RZN	Rozhen	1.03	118	i Pg	Pg	18 02 00.1	-0.8
RZN				Sg	Sg	18 02 14.1	-0.2
SRS	Serrai	1.06	177	P	Pb	18 02 00.7	-1.0
SRS	Serrai	1.06	177	⇑iPg	Pb	18 02 00.9	-0.8
SRS				i Sg	Sn	18 02 18.2	+1.1
SRS	Serrai	1.06	177	ePg	Pb	18 02 00.9	-0.8
SRS				eSg	Sg	18 02 15.6	+0.2
VAY	Valandovo	1.12	220	⇑iPg	Pb	18 02 02.2	-0.4
VAY				i Sg	Sb	18 02 17.2	-0.1
VAY				eLg	Lg	18 02 19.0	
	comp=N,9μm,0.3s						
VAY				eLg	Lg	18 02 19.8	
	comp=E,8μm,0.4s						
KNT	Kendrikon	1.12	205	P	Pb	18 02 01.9	-0.8
KNT	Kendrikon	1.12	205	i Pg	Pb	18 02 01.9	-0.8
KNT				i Sg	Sb	18 02 17.5	+0.1
MPEP	Malo Peshtene	1.19	8	⇑iP	Pb	18 02 03.5	-0.3
ZAPS	Zavoj	1.28	329	ePg	Pn	18 02 05.3	+0.1
ZAPS				eSg	Sn	18 02 22.6	+0.2
KAVA	Kavala	1.40	148	P	Pn	18 02 06.2	-0.6
BARS	Barje	1.42	297	i Pg	Pn	18 02 07.3	+0.2
BARS				i Sg	Sn	18 02 26.0	+0.1
BARS	Barje	1.42	297	ePg	Pn	18 02 07.6	+0.5
BARS				eSg	Sn	18 02 26.0	+0.1
PLVB	Pleven	1.45	33	⇑P	Pb	18 02 08.1	-0.2
PLVB				⇑S	Sg	18 02 28.6	+0.8
KDZ	Kurdzhali	1.46	112	P	Pn	18 02 07.6	-0.1
KDZ				S	Sb	18 02 27.9	+0.8
KDZ	Kurdzhali	1.46	112	i P	Pn	18 02 07.8	+0.1
KDZ				Sg	Sb	18 02 27.7	+0.6
KDZ	Kurdzhali	1.46	112	Pn	Pn	18 02 08.2	+0.5
KDZ				Sn	Sn	18 02 27.2	+0.3
GRG	Griva	1.49	215	P	Pn	18 02 08.2	+0.2
GRG				S	Sn	18 02 27.9	+0.3
GRG	Griva	1.49	215	i Pg	Pn	18 02 08.6	+0.6
GRG				i Sg	Sn	18 02 28.1	+0.5
VALD	Valchedram	1.51	357	⇑iP	Pn	18 02 08.5	+0.2
DIM	Dimitrovgrad	1.53	94	P	Pn	18 02 08.4	-0.2
DIM	Dimitrovgrad	1.53	94	i P	Pn	18 02 09.1	+0.5
DIM				S	Sb	18 02 29.5	+0.3
PVL	Pavlikeni	1.54	52	⇑iP	Pn	18 02 09.3	+0.6
PVL				S	Sb	18 02 29.8	+0.5
SKO	Skopje	1.57	263	i Pn	Pn	18 02 09.5	+0.4
BLKB	Belogradchik	1.57	337	⇑S	Sb	18 02 30.5	+0.1
BLKB	Belogradchik	1.57	337	ePg	Pn	18 02 09.8	+0.5
BLKB				eSg	Sb	18 02 30.7	+0.3
THE	Thessaloniki	1.60	195	P	Pn	18 02 09.8	+0.1
THE	Thessaloniki	1.60	195	i Pn	Pn	18 02 09.7	+0.1
HORT	Hortiatis	1.61	192	P	Pn	18 02 09.9	0.0
PLG	Polygyros	1.81	182	P	Pn	18 02 12.6	+0.1
THAS	Thassos island	1.81	150	P	Pn	18 02 12.1	-0.3
RDO	Rodhopi	1.83	124	P	Pn	18 02 12.7	+0.1
RDO	Rodhopi	1.83	124	Pn	Pn	18 02 13.5	+0.8
RDO				Sn	Sn	18 02 36.3	+0.4
RDO	Rodhopi	1.83	124		Pn	18 02 12.8	+0.1
BAIL	Bailesti	1.84	356	P	Pn	18 02 12.7	-0.3
BAIL				S	Sn	18 02 32.7	-3.6
BAIL	Bailesti	1.84	356	⇑P	Pn	18 02 12.9	0.0

Sta	Name	Dist	Az	Phase	ISC	Time	Res
OUR	Ouranopolis	1.88	169	P	Pn	18 02 13.3	-0.1
OUR	Ouranopolis	1.88	169	Pn	Pn	18 02 13.6	+0.2
OUR				Sn	Sn	18 02 38.8	+1.7
ZAGS	Zajecar	1.89	330	ePn	Pn	18 02 14.4	+0.9
ZAGS				eSn	Sn	18 02 37.4	0.0
ELND	Elena	1.89	66	⇑P	Pn	18 02 14.0	+0.4
ELND				⇑S	Sg	18 02 41.2	-0.7
VLAD	Vladila	1.93	19	⇑P	Pn	18 02 14.5	+0.4
BOVS	Bovan	1.98	318	⇓P	Pn	18 02 15.1	+0.4
BOVS				⇑S	Sn	18 02 40.1	+0.5
BOVS	Bovan	1.98	318	ePn	Pn	18 02 15.1	+0.4
BOVS				eSn	Sn	18 02 39.4	-0.2
ZIMR		2.00	42	⇑P	Pn	18 02 15.4	+0.3
ZIMR		2.00	42	P	Pn	18 02 15.3	+0.3
SELS	Selova	2.06	301	ePn	Pn	18 02 16.1	+0.2
SELS				eSn	Sn	18 02 41.3	-0.4
SZH	Strazhitsa	2.10	58	P	Pn	18 02 16.5	-0.1
SZH	Strazhitsa	2.10	58	⇑iP	Pn	18 02 16.9	+0.4
SZH				S	Sg	18 02 47.8	-1.0
PUNG	Punghina	2.14	348	⇑S	Sn	18 02 43.9	+0.2
PUNG	Punghina	2.14	348	ePn	Pn	18 02 16.8	-0.2
LIT	Litokhoron	2.22	201	P	Pn	18 02 18.2	0.0
LIT	Litokhoron	2.22	201		Pn	18 02 18.0	-0.1
LIT	Litokhoron	2.22	201	i Pn	Pn	18 02 18.2	0.0
LIT	Litokhoron	2.22	201	P	Pn	18 02 18.0	-0.1
JMB	Yambol	2.25	81	P	Pn	18 02 18.4	0.0
JMB	Yambol	2.25	81	P	Pn	18 02 18.7	+0.2
JMB				S	Sn	18 02 46.5	+0.2
JMB	Yambol	2.25	81	Pn	Pn	18 02 19.6	+1.1
SMTH	Samothraki Isl	2.28	138	P	Pn	18 02 18.5	-0.5
ALN	Alexandroupoli	2.28	123	P	Pn	18 02 19.0	+0.1
ALN	Alexandroupoli	2.28	123	Pn	Pn	18 02 20.2	+1.2
ALN				Sn	Sn	18 02 47.9	+0.7
ALN	Alexandroupoli	2.28	123		Pn	18 02 19.2	+0.2
ALN	Alexandroupoli	2.28	123	P	Pn	18 02 19.2	+0.2
KZN	Kozani	2.29	216	P	Pn	18 02 19.3	+0.1
OHR	Ohrid	2.31	243	i Pn	Pn	18 02 20.6	+1.3
OHR				i Sn	Sn	18 02 49.3	+1.4
OHR				eLg	Lg	18 02 49.8	
	comp=E,613nm,0.6s						
OHR				eLg	Lg	18 02 50.1	
	comp=N,825nm,1.0s						
PHP	Peshkopia	2.35	259	P	Pn	18 02 17.4	-2.7
GOCS	Kraljevo Serbi	2.39	306	ePn	Pn	18 02 20.5	-0.1
GOCS				eSn	Sn	18 02 49.0	-1.0
EDRB	Edirne	2.42	97	P	Pn	18 02 20.1	-0.8
EDRB				S	Sn	18 02 49.3	-1.2
EDRB	Edirne	2.42	97	Pn	Pn	18 02 21.8	+0.9
EDRB				Sn	Sn	18 02 50.3	-0.3
ENEZ	Enez	2.44	125	Pn	Pn	18 02 22.3	+1.1
SRE	Strehaia	2.49	355	⇓P	Pn	18 02 21.8	-0.1
SRE	Strehaia	2.49	355	P	Pn	18 02 21.8	-0.1
LOZB	Loznitsa	2.55	61	⇓P	Pn	18 02 24.2	+1.6
UKOP	Uzunkopru-Edir	2.55	113	P	Pb	18 02 27.4	+0.3
UKOP				S	Sb	18 02 57.9	-0.7
UKOP	Uzunkopru-Edir	2.55	113	Pn	Pn	18 02 23.6	+0.9
RMGR	Halanga-Turnu	2.56	347	⇑P	Pn	18 02 22.7	0.0
NEST	Nestorio	2.57	227	P	Pn	18 02 23.5	+0.5
HUMR	Humele	2.58	24	⇑P	Pn	18 02 23.4	+0.4
KBN	Korca	2.58	234	P	Pn	18 02 24.5	+1.3
KBN				S	Sn	18 02 46.4	-8.3
DJES	Djerdap	2.59	344	ePn	Pn	18 02 23.3	+0.1
DJES				eSn	Sn	18 02 54.2	-0.6
RAZG	Razgrad	2.59	57	⇑P	Pn	18 02 23.7	+0.4
KUBS	Kucevo	2.61	329	ePn	Pn	18 02 22.6	-0.9
KUBS				eSn	Sn	18 02 54.4	-0.9
GADA	Gvkgeada	2.67	137	Pn	Pn	18 02 25.5	+1.2
PVY	Plav	2.68	280	ePn	Pn	18 02 25.6	+1.1
PVY	Plav	2.68	280	⇓iPn	Pn	18 02 24.0	-0.5
PVY				i Sn	Sn	18 02 54.0	-3.1
GRUS	Gruza	2.68	311	ePn	Pn	18 02 24.3	-0.1
GRUS				eSn	Sn	18 02 56.1	-0.8
PENT	Pentalofos	2.68	223	P	Pn	18 02 25.0	+0.5
SVIS	Svilajnac	2.68	322	ePn	Pn	18 02 24.8	+0.3
SVIS				eSn	Sn	18 02 57.5	+0.5
GOAD	anakkale-G¶	2.70	137	P	Pn	18 02 24.3	-0.4
ERIK	Erikli-Kesan	2.71	123	P	Pn	18 02 26.1	+1.3
ERIK	Erikli-Kesan	2.71	123	Pn	Pn	18 02 26.1	+1.3
SGRR	Singureni	2.71	40	⇑P	Pn	18 02 26.5	+1.6
KESN	Edirne-Kesan	2.73	119	P	Pn	18 02 25.3	-0.2
KESN				S	Sn	18 02 58.1	-0.6
KPRO	Kipourio	2.76	217	P	Pn	18 02 25.8	+0.2
BEY	Berane	2.77	286	ePn	Pn	18 02 26.8	+1.0
IVA	Berane	2.77	286	⇓iPn	Pn	18 02 26.6	+0.8
IVA				i Sn	Sn	18 02 57.4	-2.0
HERR	Herculane	2.82	344	P	Pn	18 02 25.4	-0.9
HERR				S	Sn	18 02 56.1	-4.3
SJES	Sjenica	2.83	294	ePn	Pn	18 02 27.2	+0.6
SJES				eSn	Sn	18 03 00.0	-0.9
BUC1	Bucharest	2.83	39	⇑P	Pn	18 02 27.1	+0.5
BUC1	Bucharest	2.83	39	P	Pn	18 02 27.0	+0.5
GELI	Tayfur-Gelibol	2.85	128	Pn	Pn	18 02 27.9	+1.2
IVAS	Ivanjica	2.85	300	ePn	Pn	18 02 26.5	-0.3
IVAS				eSn	Sn	18 03 01.1	-0.1
THL	Klokotos Trika	2.85	204	P	Pn	18 02 27.1	+0.3
MDVR	Moldovita	2.92	334	⇑P	Pn	18 02 27.8	0.0
MDVR	Moldovita	2.92	334	ePn	Pn	18 02 27.7	0.0
ARMN	Kirklareli, Me	2.92	95	P	Pn	18 02 27.4	-0.5
ARMN				S	Sn	18 02 58.4	-4.7
ECEA	Canakkale, Ece	2.92	136	P	Pn	18 02 27.4	-0.4
BOZC	Bozcaada	3.02	140	Pn	Pn	18 02 30.7	+1.6
LPK	Lapseki	3.03	125	Pn	Pn	18 02 30.9	+1.6
PHSR	Pinarhisar	3.03	99	Pn	Pn	18 02 30.5	+1.2
TRUS	Trudelj	3.06	313	ePn	Pn	18 02 29.4	-0.3
TRUS				eSn	Sn	18 03 05.7	-0.7
RKY	Sarkoy-Tekirda	3.12	117	P	Pn	18 02 32.7	+2.1
RKY	Sarkoy-Tekirda	3.12	117	Pn	Pn	18 02 31.9	+1.3
EZN	Ezine	3.17	137	P	Pn	18 02 31.3	+0.2
EZN	Ezine	3.17	137	Pn	Pn	18 02 31.9	+0.8
PDG	Podgorica	3.18	276		Pn	18 02 31.9	+0.6
PDG	Podgorica	3.18	276	ePn	Pn	18 02 32.7	+1.4
PDG	Podgorica	3.18	276	⇑iPn	Pn	18 02 31.0	-0.3
PDG				i Sn	Sn	18 03 05.9	-3.4
SULR		3.19	38	⇑P	Pn	18 02 32.0	+0.6
GAZK	Gazikoy-TEKIRD	3.19	115	Pn	Pn	18 02 33.2	+1.7
ULC	Ulcinj	3.20	268	⇓iPn	Pn	18 02 31.9	+0.3
ULC				i Sn	Sn	18 03 06.3	-3.5
DIVS	Divibare	3.22	308	ePn	Pn	18 02 31.7	-0.3
DIVS				eSn	Sn	18 03 09.0	-1.4
PRMD	Pramanda	3.23	216	P	Pn	18 02 32.5	+0.5
DRME	Dracevica, Mon	3.23	272	ePn	Pn	18 02 34.0	+2.0
DRME	Dracevica, Mon	3.23	272	⇓iPn	Pn	18 02 30.9	-1.1
DRME				eSn	Sn	18 03 06.9	-3.6
EZNE	Ezine-Canakkal	3.24	137	Pn	Pn	18 02 33.4	+1.3
CICN	Ciocanesti	3.26	51	⇑P	Pn	18 02 33.5	+1.1
PLE	Pljevlja	3.26	292	ePn	Pn	18 02 33.4	+0.9
PLE	Pljevlja	3.26	292	⇑iPn	Pn	18 02 32.5	0.0
PLE				i Sn	Sn	18 03 07.7	-3.7
GZR	Gura Zlata	3.26	351	ePn	Pn	18 02 32.1	-0.3
GZR	Gura Zlata	3.26	351	P	Pn	18 02 31.8	-0.6
LOT	Lotru	3.27	3	Pn	Pn	18 02 32.9	+0.2
PLAR	PLOIESTI	3.28	33	⇑P	Pn	18 02 34.3	+1.7
AGG	Agios Georgios	3.28	197	P	Pn	18 02 33.0	+0.2
ARR	Arges	3.29	14	⇓P	Pn	18 02 33.2	+0.4
LEHL	Lehliu	3.32	45	P	Pn	18 02 34.3	+1.1
LEHL	Lehliu	3.32	45	⇓P	Pn	18 02 34.7	+1.4
BIGA	Biga-Canakkale	3.33	124	Pn	Pn	18 02 34.9	+1.6
MAKR	Makrakomi, Fth	3.34	199	P	Pn	18 02 33.8	+0.2
AVAS	Avala Beograd	3.34	320	ePn	Pn	18 02 32.1	-1.4
AVAS				eSn	Sn	18 03 10.9	-2.3
VRSS	Vrsac	3.35	332	ePn	Pn	18 02 33.2	-0.4
VRSS				eSn	Sn	18 03 13.0	-0.5
KRBG	Karabiga-Canak	3.35	121	Pn	Pn	18 02 35.4	+1.7
RUDO	Rudo	3.38	297	ePn	Pn	18 02 33.3	-0.7
RUDO	Rudo	3.38	297	ePn	Pn	18 02 33.6	-0.4
CANM	Can-anakkale	3.43	128	Pn	Pn	18 02 35.9	+1.1
NKME	Niksic	3.43	281	⇓iPn	Pn	18 02 34.9	0.0
NKME				eSn	Sn	18 03 11.3	-4.4
CEME	Cevo	3.44	278	⇑iPn	Pn	18 02 36.0	+1.1
CEME				eSn	Sn	18 03 12.5	-3.2
BEO	Beograd	3.44	321	ePn	Pn	18 02 34.3	-0.6
BEO				eSn	Sn	18 03 14.4	-1.4
BUM	Brajici-Budva	3.44	274	⇑iPn	Pn	18 02 35.5	+0.5
BUM				i Sn	Sn	18 03 11.9	-4.0
BBLS	Lazi&#263i	3.46	301	ePn	Pn	18 02 35.5	+0.3
BBLS				eSn	Sn	18 03 16.8	+0.5
TNR	Turnu Rosu	3.51	9	⇑P	Pn	18 02 36.6	+0.7
TNR	Turnu Rosu	3.51	9	P	Pn	18 02 36.6	+0.7
IGT	Igoumenitsa	3.59	224	ePn	Pn	18 02 39.7	+2.8
IGT				eSn	Sn	18 03 20.0	+0.6
YENI	Yenice-Canakka	3.59	127	Pn	Pn	18 02 38.2	+1.2
CTYL	Yalikoy Yolu	3.63	100	Pn	Pn	18 02 39.0	+1.6
SLVT	Silivri	3.63	104	P	Pn	18 02 40.6	+3.1
SLVT	Silivri	3.63	104	Pn	Pn	18 02 39.2	+1.7
BANR	Banloc	3.64	332	⇑P	Pn	18 02 38.6	+1.0
BANR	Banloc	3.64	332	ePn	Pn	18 02 38.7	+1.1
ISR	Istrita	3.66	36	⇑P	Pn	18 02 40.1	+2.1
ISR	Istrita	3.66	36	P	Pn	18 02 40.1	+2.1
ISR	Istrita	3.66	36	P	Pn	18 02 40.1	+2.1
ICOR	Ion Corvin	3.68	57	⇑P	Pn	18 02 39.3	+1.2
AMRR	Amara	3.69	48	⇓P	Pn	18 02 39.7	+1.4
AMRR	Amara	3.69	48	P	Pn	18 02 39.6	+1.4
BZS	Buzias	3.70	339	ePn	Pn	18 02 37.8	-0.7
BZS	Buzias	3.70	339	P	Pn	18 02 37.7	-0.7
PGOR	Pogoanele	3.71	42	⇑P	Pn	18 02 40.7	+2.1
YAYO	Edremit-Balk	3.72	133	Pn	Pn	18 02 39.5	+0.8
DEV	Deva	3.73	353	⇓P	Pn	18 02 39.7	+0.8
DEV	Deva	3.73	353	P	Pn	18 02 39.2	+0.3
AYVA	Ayvalik	3.74	139	P	Pn	18 02 38.5	-0.5
AYVA				S	Sn	18 03 15.0	-8.1
HCY	Herceg Novi	3.74	276	⇑iPn	Pn	18 02 39.3	+0.3
HCY				i Sn	Sn	18 03 19.0	-4.2
MLR	Muntele Rosu	3.74	27	Pn	Pn	18 02 40.2	+1.0
	comp=N,24nm,0.3s,baz=239,slow=4.6,SNR=64						
MLR				Sn	Sb	18 03 29.5	-3.5
	comp=N,29nm,0.3s,baz=149,slow=23,SNR=5.7						
MLR				LR	LR	18 04 12.3	
	comp=N,620nm,21.0s,baz=11,slow=41						
MLR	Muntele Rosu	3.74	27	Pn	Pn	18 02 40.5	+1.3
MLR	Muntele Rosu	3.74	27		Pn	18 02 39.6	+0.5
MLR					Sn	18 03 20.6	-2.8
MLR	Muntele Rosu	3.74	27	⇓P	Pn	18 02 40.7	+1.6
MLR	Muntele Rosu	3.74	27	ePn	Pn	18 02 40.7	+1.6
MLR	Muntele Rosu	3.74	27	P	Pn	18 02 40.8	+1.6
EDC	Edincik	3.75	118	Pn	Pn	18 02 40.7	+1.6
KEK	Kerkira	3.75	230	Pn	Pn	18 02 41.0	+1.9
BRY	Bratogost	3.76	283	⇑iPn	Pn	18 02 41.1	+1.7
BRY				i Sn	Sn	18 03 19.0	-4.7
TEKS	Tekeris	3.76	310	ePn	Pn	18 02 38.5	-0.7
TEKS				eSn	Sn	18 03 20.8	-2.8
KLINJ	Klinje	3.78	287	ePn	Pn	18 02 40.8	+1.2
GONE	Gonen-Balikesi	3.80	123	P	Pn	18 02 39.3	-0.5
GONE	Gonen-Balikesi	3.80	123	Pn	Pn	18 02 41.0	+1.2
NEHR	Nehoiu	3.81	31	⇑P	Pn	18 02 41.7	+1.7
CTKS	Kestanelik-??a	3.84	103	Pn	Pn	18 02 41.9	+1.5
TREB	Trebinje	3.87	280	ePn	Pn	18 02 42.8	+2.0
TREB	Trebinje	3.87	280	ePn	Pn	18 02 43.0	+2.2
BAND	Balkesir-Ban	3.90	116	⇑P	Pn	18 02 41.5	+0.3
CVDA	Cernavoda	3.94	55	⇑P	Pn	18 02 44.3	+2.7
MDB	Medias	4.01	9	⇓P	Pn	18 02 44.6	+1.9
MDB	Medias	4.01	9	P	Pn	18 02 44.6	+1.9
FRGS	Fruska Gora	4.02	319	ePn	Pn	18 02 42.3	-0.5
FRGS				eSn	Sn	18 03 28.0	-2.0
DOPR	Dopca	4.02	19	⇑P	Pn	18 02 44.0	+1.2
DKL	Dikili	4.03	139	P	Pn	18 02 35.2	-7.8
DKL				S	Sn	18 03 19.2	-11
DKL	Dikili	4.03	139	Pn	Pn	18 02 44.2	+1.2
TLBR	Topalu	4.05	53	⇑P	Pn	18 02 44.5	+1.2
MANR	Mangalia	4.06	65	P	Pn	18 02 44.8	+1.5
MANR	Mangalia	4.06	65	⇑P	Pn	18 02 44.3	+1.0
GRER		4.06	37	⇓P	Pn	18 02 46.6	+3.2
BISRR	Bisoca	4.08	33	⇑P	Pn	18 02 46.1	+2.4
BISRR	Bisoca	4.08	33	P	Pn	18 02 46.1	+2.4
SUSR	Susurluk-Balik	4.09	121	Pn	Pn	18 02 44.9	+1.0
MFTR	Murfatlar	4.10	59	⇓P	Pn	18 02 45.1	+1.1
COVR	Voineasa-Covas	4.14	27	⇑P	Pn	18 02 46.1	+1.6
BALB	Balikesir	4.16	126	Pn	Pn	18 02 45.5	+0.7
BALB	Balikesir	4.16	126		Pn	18 02 45.4	+0.7
BOSR	Bodos	4.19	21	⇓P	Pn	18 02 46.4	+1.3
TIRR	Tirgusor	4.23	56	Pn	Pn	18 02 46.6	+0.9
TIRR	Tirgusor	4.23	56		Pn	18 02 46.2	+0.5
TIRR	Tirgusor	4.23	56	P	Pn	18 02 46.2	+0.5
OZUR		4.24	22	⇑P	Pn	18 02 47.3	+1.4
TURR	Turia	4.27	24	⇑P	Pn	18 02 47.8	+1.5
KAVV	Kandilli-Istan	4.29	103	P	Pn	18 02 44.8	-1.8
KAVV	Kandilli-Istan	4.29	103	Pn	Pn	18 02 48.5	+1.9
SIRR	Siria	4.30	342	ePn	Pn	18 02 46.1	-0.6
PLOR	Plostina	4.30	30	⇓P	Pn	18 02 49.0	+2.1
PLOR	Plostina	4.30	30	P	Pn	18 02 48.7	+1.9
ARMT	Armutlu	4.33	110	Pn	Pn	18 02 48.8	+1.7
VRI	Vrincioaia	4.35	31	⇑P	Pn	18 02 49.4	+2.0
VRI	Vrincioaia	4.35	31	P	Pn	18 02 49.3	+1.9
VRI	Vrincioaia	4.35	31	P	Pn	18 02 49.4	+2.0
STON	Ston	4.36	281	ePn	Pn	18 02 49.1	+1.6
ODBI	Odobesti	4.39	34	⇓P	Pn	18 02 50.8	+2.8
TPGR	Topolog	4.45	51	⇑P	Pn	18 02 49.8	+1.0
CFR	Carcaliu	4.49	47	⇓P	Pn	18 02 50.1	+0.8
CFR	Carcaliu	4.49	47	P	Pn	18 02 50.0	+0.8
MARR	Marisel-Cluj	4.50	356	⇑P	Pn	18 02 49.4	-0.2
PANC	Panciu	4.52	34	⇑P	Pn	18 02 51.5	+1.8
IZVR	Izvoarele	4.55	41	⇑P	Pn	18 02 50.3	+0.2
COSR	Cosmesti PH	4.58	35	⇓P	Pn	18 02 51.9	+1.4
NEGRR	Negrea	4.60	42	⇑P	Pn	18 02 51.2	+0.4
ONER	Baraj Valea Uz	4.64	25	⇑P	Pn	18 02 52.7	+1.4
DRGR		4.65	353	ePn	Pn	18 02 51.1	-0.4
JURR	Jurilovca	4.67	55	⇑P	Pn	18 02 52.7	+0.9
TATR	Tatarca	4.73	42	⇓P	Pn	18 02 54.5	+1.9
GIUM	Giurgiulesti	4.73	44	⇑P	Pn	18 02 53.6	+1.0
SCTR	Scanteiesti	4.75	41	⇑P	Pn	18 02 53.7	+0.8
GHRR		4.78	34	⇓P	Pn	18 02 54.7	+1.5
GHRR		4.78	34	P	Pn	18 02 54.4	+1.1
TLCR		4.87	50	⇑P	Pn	18 02 55.8	+1.3
TLCR		4.87	50	P	Pn	18 02 55.8	+1.3
TESR	Tescani	4.88	26	⇑P	Pn	18 02 55.5	+0.9
TESR	Tescani	4.88	26	P	Pn	18 02 56.2	+1.6
VLDR	Vladesti	4.92	40	⇓P	Pn	18 02 56.4	+1.2
BIR	Birlad	5.04	34	⇓P	Pn	18 02 57.9	+1.0
BIR	Birlad	5.04	34	P	Pn	18 02 57.8	+1.0
ITM	Ithomi	5.14	194		Pn	18 03 00.4	+2.0
BLY	Banja Luka	5.28	301	ePn	Pn	18 03 00.6	+0.4
BLY	Banja Luka	5.28	301	ePn	Pn	18 03 01.3	+1.1
MANT	Manisa	5.32	132		Pn	18 03 01.9	+0.9
LTVH	Ltavrtes, Hu	5.33	348	⇑P	Pn	18 03 01.0	+0.1
APE	Apeiranthos	5.33	162	⇓P	Pn	18 03 00.9	0.0
APE	Apeiranthos	5.33	162	P	Pn	18 03 00.9	0.0
MORH	Mrgy, Hungar	5.35	321	ePn	Pn	18 03 00.2	-0.9
MORH	Mrgy, Hungar	5.35	321	⇑P	Pn	18 03 00.6	-0.5
MORH	Mrgy, Hungar	5.35	321	ePn	Pn	18 03 00.7	-0.4
VASR	Vaslui	5.41	33	⇑P	Pn	18 03 02.7	+0.8
LEOM	Leova	5.47	37	P	Pn	18 03 04.7	+2.0
BURAR	Bucovina Array	5.56	12		Pn	18 03 04.7	+0.5
BURAR	Bucovina Array	5.56	12	⇓P	Pn	18 03 05.3	+1.1
BURAR	Bucovina Array	5.56	12	P	Pn	18 03 05.3	+1.1
BUR08	Bucovina Ar. S	5.59	12		Pn	18 03 05.0	+0.5
BORA	Eskisehir	5.72	111		Pn	18 03 05.7	-0.6
ACER	Acerenza	5.86	259		Pn	18 03 08.5	+0.2
MILM	Milestii Mici	6.06	37	P	Pn	18 03 18.7	+7.9
CUC	Castrocucco	6.22	252		Pn	18 03 14.2	+1.0
PSZ	Piszkesteto	6.29	337		Pn	18 03 14.7	+0.6
PSZ	Piszkesteto	6.29	337	P	Pn	18 03 14.7	+0.6
BEHE	Becsehely	6.47	314	ePn	Pn	18 03 16.9	+0.4
MPLH	Magyarpolny	6.56	321	P	Pn	18 03 18.5	+0.7
	comp=N,0.5nmcomp=N,122nm,0.8s						
KECS	Kecovo	6.66	342	eP	Pn	18 03 19.1	0.0
KECS				e		18 04 32.6	
KECS	Kecovo	6.66	342	ePN	Pn	18 03 19.0	0.0
KECS				eSN	Sn	18 04 32.6	-2.4
PAOL	Paolisi	6.81	263		Pn	18 03 22.2	+1.0
BOJS	Bojanci	6.84	302	ePn	Pn	18 03 22.2	+0.6
NE56	Odesa	6.93	47	P	Pn	18 03 23.8	+1.0
IDI	Anoyia	6.96	171	Pn	Pn	18 03 23.3	-0.1
	comp=N,15nm,0.9s,baz=344,slow=8.4,SNR=12						
IDI	Anoyia	6.96	171		Pn	18 03 22.4	-1.0
INTR	Introdacqua	7.16	272		Pn	18 03 27.0	+0.9
CEY	Cerknica	7.47	302	ePn	Pn	18 03 27.5	-2.7
AQU	L'Aquila	7.51	275	ePn	Pn	18 03 31.9	+1.0
LANS	Liptovska Anna	7.53	339	eP	Pn	18 03 33.5	+2.5
LANS	Liptovska Anna	7.53	339	ePN	Pn	18 03 33.5	+2.5
RONA	Rosalia, Austr	7.53	320	ePn	Pn	18 03 31.5	+0.4
	comp=N,2.3nm,0.4s,SNR=8.5						
RONA				i Sn	Sn	18 04 52.2	-4.4
	comp=N,5.3nm,0.3s						
SOKA	Soboth	7.56	309	i Pn	Pn	18 03 31.1	-0.5
	comp=N,2.1nm,0.3s						
SOKA				eSn	Sn	18 04 52.1	-5.2
	comp=N,8.2nm,0.4s						
GUMA	Gualdo di Mace	7.57	280		Pn	18 03 32.4	+0.8
NIE	Niedzica	7.58	344	P	Pn	18 03 33.1	+1.3
	comp=N,0.1nmcomp=N,6.5nm,0.8s						
MODS	Modra-Piesok	7.60	327	eP	Pn	18 03 33.6	+1.6
MODS				e		18 04 54.8	
MODS	Modra-Piesok	7.60	327	ePN	Pn	18 03 33.6	+1.6
MODS				eSN	Sn	18 04 54.8	-3.4
ARSA	Arzberg	7.63	314		Pn	18 03 32.3	-0.1
ARSA	Arzberg	7.63	314	ePn	Pn	18 03 32.5	+0.1
	comp=N,4.4nm,0.4s						
ARSA				i Sn	Sn	18 04 53.8	-5.1
	comp=N,13nm,0.4s						
ARSA	Arzberg	7.63	314	ePn	Pn	18 03 32.5	+0.1
OBKA	Obir	7.75	307	i Pn	Pn	18 03 35.9	+1.7
	comp=N,1.1nm,0.2s						
OBKA				i Sn	Sn	18 04 57.3	-4.8
	comp=N,9.3nm,0.5s						
SEV	Sevastopol'	7.76	69	eP	Pn	18 03 33.5	-0.7
SEV				eS	Sn	18 04 58.0	-4.1
JAVC	Velka Javorina	7.84	330	ePN	Pn	18 03 36.8	+1.4
CONA	Conrad Observa	7.90	319	i Pn	Pn	18 03 35.8	-0.4
	comp=N,3.8nm,0.4s,SNR=11						
CONA				i Sn	Sn	18 05 01.0	-4.7
	comp=N,5.5nm,0.5s						
BR131	Keskin Array S	8.04	104	⇑eP	Pn	18 03 39.3	+1.1
BRTR	Keskin Array B	8.04	104	Pn	Pn	18 03 39.0	+0.9
	comp=N,0.3nm,0.3s,baz=283,slow=15,SNR=13						
	comp=N,0.6nm,0.4s						
BRTR	Keskin Array B	8.04	104		Pn	18 03 37.3	-0.9
BRTR	Keskin Array B	8.04	104	i P	Pn	18 03 40.4	+2.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YAL	Yalta	8.08	70	eP	Pn	18 03 38.4	-0.2
YAL				eS	Sn	18 05 06.9	-3.1
SIM	Simferopol'	8.17	67	eP	Pn	18 03 40.3	+0.4
SIM				eS	Sn	18 05 10.9	-1.4
MURB	Monte Urbino	8.17	281		Pn	18 03 40.8	+0.9
ALU	Alushta	8.30	69	eP	Pn	18 03 41.4	-0.2
ALU				eS	Sn	18 05 11.9	-3.5
MYKA	Terra Mystica	8.36	306	i Pn	Pn	18 03 44.5	+2.1
	comp=Z,4.1nm,0.4s						
MYKA				i Sn	Sn	18 05 13.4	-3.5
	comp=Z,8.6nm,0.5s						
KRUC	Moravsky	8.50	326	ePN	Pn	18 03 46.2	+1.8
KRUC				eSN	Sn	18 05 15.9	-4.5
VRAC	Vranov	8.62	328	Pn	Pn	18 03 45.6	-0.4
	comp=Z,0.7nm,0.3s,baz=136,slow=11,SNR=9.2						
	comp=Z,2.7nm,0.5s						
VRAC	Vranov	8.62	328	ePN	Pn	18 03 46.4	+0.4
MORC	Moravsky Berou	8.66	333		Pn	18 03 47.2	+0.6
MORC	Moravsky Berou	8.66	333	⇑P	Pn	18 03 47.6	+0.9
MORC	Moravsky Berou	8.66	333	ePN	Pn	18 03 47.8	+1.2
MORC	Moravsky Berou	8.66	333	P	Pn	18 03 47.5	+0.9
MOA	Molln	8.67	314	i Pn	Pn	18 03 48.2	+1.5
	comp=Z,2.4nm,0.5s						
MOA				i Sn	Sn	18 05 23.4	-1.1
	comp=Z,4.5nm,0.4s						
KBA	Koelnbreinsper	8.76	307	i Pn	Pn	18 03 51.9	+3.9
	comp=Z,0.7nm,0.3s						
KBA				i Sn	Sn	18 05 22.9	-3.9
	comp=Z,6.8nm,0.4s						
SUDU	Sudak	8.76	68	⇑iP	Pn	18 03 48.5	+0.6
SUDU				i S	Sn	18 05 24.9	-1.9
BIOA	Bad Ischl, Aus	8.92	312	i Pn	Pn	18 03 51.6	+1.6
	comp=Z,2.9nm,0.3s						
BIOA				i Sn	Sn	18 05 26.9	-3.7
	comp=Z,6.3nm,0.4s						
FEO	Feodosiya	9.06	68	eP	Pn	18 03 52.2	+0.2
FEO				eS	Sn	18 05 31.1	-3.0
ABTA	Abfaltersbach	9.10	304	i Pn	Pn	18 03 54.3	+1.6
	comp=Z,4.7nm,0.8s						
ABTA				i Sn	Sn	18 05 32.2	-3.0
	comp=Z,3.8nm,0.5s						
KRLC	Kraliky	9.18	332	eP	Pn	18 03 56.6	+2.9
KRLC				e		18 05 34.8	
KRLC	Kraliky	9.18	332	ePN	Pn	18 03 56.6	+2.9
KRLC				eSN	Sn	18 05 34.8	-2.2
CKRC	Cesky Krumlov	9.27	319	eP	Pn	18 03 57.3	+2.4
CKRC	Cesky Krumlov	9.27	319	ePN	Pn	18 03 57.3	+2.4
AK10	Malin Array Si	9.30	23	P	Pn	18 03 55.0	-0.3
AK05	Malin Array Si	9.30	23	P	Pn	18 03 55.0	-0.3
AK12	Malin Array Si	9.31	23	P	Pn	18 03 55.1	-0.3
AK16	Malin Array Si	9.32	22	P	Pn	18 03 55.0	-0.6
AK17	Malin Array Si	9.32	22	P	Pn	18 03 55.0	-0.6
LESA	Schwarzleotal	9.32	308	i Pn	Pn	18 03 57.6	+1.8
	comp=Z,2.5nm,0.4s						
LESA				i Sn	Sn	18 05 37.6	-3.0
	comp=Z,42nm,1.0s						
AK09	Malin Array Si	9.32	23	P	Pn	18 03 55.1	-0.5
AK08	Malin Array Si	9.33	23	P	Pn	18 03 55.2	-0.5
KIEV	Kiev	9.37	23		Pn	18 03 55.8	-0.5
KIEV	Kiev	9.37	23	P	Pn	18 03 55.8	-0.5
CTI	Castel Tesino	9.38	298		Pn	18 03 56.6	+0.1
CTI	Castel Tesino	9.38	298	P	Pn	18 03 56.6	+0.1
AKASG	Malin Array Be	9.38	23	Pn	Pn	18 03 56.2	-0.2
	comp=Z,2.9nm,0.3s,baz=206,slow=11,SNR=8.4						
	comp=Z,4.6nm,0.7s						
AKASG	Malin Array Be	9.38	23		Pn	18 03 53.2	-3.3
AKASG	Malin Array Be	9.38	23	i P	Pn	18 03 56.2	-0.2
AKASG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AKBB	Malin Array Si	9.38	23	⇑iP	Pn	18 03 55.7	-0.7
DPC	Dobruska-Polom	9.57	331	eP	Pn	18 04 00.2	+1.2
DPC	Dobruska-Polom	9.57	331	ePN	Pn	18 04 00.2	+1.2
GERES	GERESS Array B	9.59	317	Pn	Pn	18 03 59.6	+0.3
	baz=124,slow=14,SNR=7.2						
GERES				Sn	Sn	18 05 42.0	-5.1
	comp=Z,0.1nm,0.3s,baz=124,slow=24,SNR=3.9						
	comp=Z,0.7nm,0.5s						
KHC	Kasperske Hory	9.83	318	eP	Pn	18 04 06.1	+3.4
KHC				e		18 05 48.1	
KHC	Kasperske Hory	9.83	318	ePN	Pn	18 04 06.1	+3.4
KHC				eSN	Sn	18 05 48.1	-5.0
WTTA	Wattenberg	9.87	305	ePn	Pn	18 04 06.8	+3.5
	comp=Z,2.4nm,0.3s						
WTTA				i Sn	Sn	18 05 52.1	-2.1
	comp=Z,10nm,0.6s						
WATA	Walderalm	9.94	305	ePn	Pn	18 04 06.8	+2.6
	comp=Z,4.4nm,0.4s						
WATA				i Sn	Sn	18 05 53.1	-2.7
	comp=Z,5.0nm,0.4s						
SQTA	Sankt Quirin	10.11	304	ePn	Pn	18 04 09.5	+2.9
	comp=Z,5.2nm,0.4s						
SQTA				i Sn	Sn	18 05 58.7	-1.3
	comp=Z,9.9nm,0.7s						
FETA	Feichten	10.33	302	i Pn	Pn	18 04 11.6	+2.1
	comp=Z,2.3nm,0.6s						
FETA				eSn	Sn	18 06 05.3	-0.1
	comp=Z,2.4nm,0.6s						
MSSA	Maissana	10.44	287	Pn	Pn	18 04 11.1	+0.1
FUORN	Ofenpass-Fuorn	10.47	300	Pn	Pn	18 04 11.9	+0.3
RETA	Reutte	10.50	305	ePn	Pn	18 04 14.9	+3.1
	comp=Z,2.2nm,0.5s						
RETA				i Sn	Sn	18 06 09.5	-0.1
	comp=Z,3.7nm,0.5s						
DAVOX	Davos/Dischmat	10.78	300	Pn	Pn	18 04 16.2	+0.4
	comp=Z,1.1nm,0.3s,baz=143,slow=14,SNR=5.6						
	comp=Z,3.7nm,0.5s						
DAVA	Damuels	10.96	302	ePn	Pn	18 04 16.5	-1.7
	comp=Z,2.0nm,0.2s						
VSLR	Vesyoloye	12.19	78	⇑eP	Pn	18 04 34.0	-0.9
SHA1	Shidzhatmaz	14.10	77	deP	Pn	18 05 00.2	-0.9
KIV	Kislovodsk	14.12	76	eP	Pn	18 05 00.5	-0.8
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KBZ	Khabaz	14.27	77	⇑eP	Pn	18 05 03.8	+0.5
KBZ				pmax	pmax		
	comp=Z,11nm,2.3s						
BMRD	Maredsous	15.28	309	dP	Pn	18 05 18.7	+1.8
OBN	Obninsk	15.51	29	⇑eP	Pn	18 05 20.7	+0.8
OBN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
HFS	Hagfors	18.97	345	P	P	18 06 02.0	-0.5
	comp=Z,0.4nm,0.3s,baz=150,slow=13,SNR=9.1						
	comp=Z,2.8nm,0.7s						
HFS	Hagfors	18.97	345	P	P	18 06 02.0	-0.5
BELG	Belogornoye	19.19	50	P	Pn	18 06 05.9	+0.1
	comp=Z,0.7nm,0.3s,baz=188,slow=1.9,SNR=5.2						
	comp=Z,14nm,0.9s						
BELG	Belogornoye	19.19	50	⇑eP	P	18 06 05.0	+0.1
BELG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
FINES	FINESS Array B	19.35	4	P	Pn	18 06 07.4	-0.4
	comp=Z,0.2nm,0.3s,baz=164,slow=12,SNR=7.2						
	comp=Z,3.9nm,1.0s						
FINES	FINESS Array B	19.35	4	P	P	18 06 06.2	-0.4
FINES	FINESS Array B	19.35	4	P	P	18 06 06.2	-0.4
NAO01	NORSAR Array S	20.21	342	P	P	18 06 16.1	+0.1

NAO01				IAmb	IAmb	18 06 20.4	
	comp=Z,33nm,1.2s						
NB201	NORSAR Array S	20.30	343	P	P	18 06 16.8	-0.3
NB201				IAmb	IAmb	18 06 18.5	
	comp=Z,46nm,1.4s						
NB2	NORSAR Subarra	20.31	343	P	P	18 06 17.0	-0.1
	comp=Z,2.7nm,0.7s,baz=158,slow=10						
NOA	NORSAR Array B	20.31	343	P	P	18 06 16.5	-0.6
	comp=Z,2.0nm,0.8s,baz=157,slow=11,SNR=4.8						
	comp=Z,2.0nm,0.8s						
NC204	NORSAR Array S	20.62	342	P	P	18 06 20.0	-0.5
NC204				IAmb	IAmb	18 06 25.5	
	comp=Z,17nm,0.9s						
ESDC	Sonseca Array	20.89	272	P	P	18 06 23.6	-0.1
	comp=Z,3.0nm,0.9s,baz=66,slow=9.8,SNR=13						
	comp=Z,3.0nm,0.9s						
ESDC	Sonseca Array	20.89	272	P	P	18 06 22.7	-0.9
KLMR	Klimovskoe	21.07	22	eP	P	18 06 24.8	-0.5
KLMR				pmax	pmax		
	comp=Z,19nm,1.3s						
EKA	Eskdalemuir Ar	21.80	316	P	P	18 06 33.5	+0.2
	comp=Z,1.7nm,0.5s,baz=112,slow=11,SNR=11						
	comp=Z,1.7nm,0.5s						
ESK	Eskdalemuir	21.82	316	eP	P	18 06 35.8	+2.4
MVO	Moncorvo	22.79	278	eP	P	18 06 44.4	+0.3
KIRV	Kirov	23.06	36⇑	eP	P	18 06 45.7	-0.8
PCBR	Castelo Branco	23.45	275	eP	P	18 06 51.0	+0.3
PMRV	Marv??o	23.50	274	eP	P	18 06 51.0	-0.2
PGAV	Gavieira, Arco	23.54	280	eP	P	18 06 50.9	-0.7
PBAR	Barrancos	23.63	270	eP	P	18 06 52.7	+0.2
PBAR				i IAmb	IAmb	18 06 53.9	
	comp=Z,18nm,1.5s						
PESTR	Estremoz	23.82	272	P	P	18 06 53.0	-1.4
PESTR				IAmb	IAmb	18 06 55.4	
	comp=Z,16nm,1.1s						
PESTR	Estremoz	23.82	272	eP	P	18 06 54.1	-0.2
PSARD	Sardoal	24.02	275	eP	P	18 06 56.1	-0.2
PSARD				i IAmb	IAmb	18 07 00.4	
	comp=Z,20nm,2.2s						
PARRA	Arraiolos	24.17	273	eP	P	18 06 57.2	-0.4
MD01	Midelt array s	24.19	257	P	P	18 06 58.7	+0.7
PMTG	Montargil	24.23	273	eP	P	18 06 57.7	-0.5
EVO	Evora	24.24	272	eP	P	18 06 58.3	0.0
ARTI	Arti	26.47	45d	iP	P	18 07 19.3	+1.0
ARTI				S	S	18 11 55.1	+3.1
ARTI				pmax	pmax		
	comp=Z,25nm,2.1s						
TORD	Torodi Ar. Bea	34.58	220	P	P	18 08 30.8	+0.5
	comp=Z,3.0nm,0.7s,baz=28,slow=8.7,SNR=12						
	comp=Z,3.0nm,0.7s						
CHGR	Chuyangaron	34.60	80⇑	eP	P	18 08 31.4	+1.0
CHGR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KURBB	Kurchatov Arra	38.07	58	P	P	18 08 58.7	-1.1
	comp=Z,0.2nm,0.8s,baz=201,slow=11,SNR=4.6						
	comp=Z,0.2nm,0.8s						
KURK	Kurchatov	38.11	58	P	P	18 08 58.7	-1.4
KURK	Kurchatov	38.11	58	P	P	18 08 58.7	-1.4
MKAR	Makanchi Array	41.33	63	P	P	18 09 27.7	+0.7
	comp=Z,1.7nm,0.6s,baz=285,slow=7.1,SNR=13						
	comp=Z,1.7nm,0.6s						
MKAR	Makanchi Array	41.33	63	P	P	18 09 27.4	+0.4
ZALV	Zalesovo Beam	41.35	52	P	P	18 09 26.7	-0.3
	comp=Z,0.4nm,0.4s,baz=280,slow=8.1,SNR=7.9						
	comp=Z,0.4nm,0.4s						
ZALV	Zalesovo Beam	41.35	52	P	P	18 09 27.1	0.0
ZALV	Zalesovo Beam	41.35	52	i P	P	18 09 30.7	+3.6
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
DBIC	Dimbokro	43.39	223	P	P	18 09 44.3	+0.3
	comp=Z,4.8nm,0.6s,baz=52,slow=8.3,SNR=6.0						
	comp=Z,4.8nm,0.6s						
DBIC	Dimbokro	43.39	223	P	P	18 09 43.5	-0.4
DBIC				IAmb	IAmb	18 09 48.6	
	comp=Z,4.2nm,0.7s						
DBIC	Dimbokro	43.39	223	P	P	18 09 43.6	-0.4
DBIC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WMQ	Urumqi	45.89	65	eP	P	18 10 06.0	+2.1
WMQ				PcP	PcP	18 11 44.5	+3.6
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WMQ				LR	LR		
	comp=Z,470nm,24.5s						
SONM	Songino Array	56.18	54	P	P	18 11 23.1	+1.8
	comp=Z,0.8nm,0.8s,baz=290,slow=7.7,SNR=6.3						
	comp=Z,0.8nm,0.8s						
HHC	Hu-ho-hao-te	62.92	58	eP	P	18 12 07.8	0.0
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,290nm,4.8s						
PZH	PanZhiHua	64.34	77	P	P	18 12 18.3	+0.8
CMAR	Chiang Mai Arr	67.16	85	P	P	18 12 37.3	+1.7
	comp=Z,0.4nm,0.3s,baz=307,slow=7.5,SNR=5.6						
	comp=Z,0.4nm,0.3s						
CMAR	Chiang Mai Arr	67.16	85	P	P	18 12 35.5	-0.1
CMAR	Chiang Mai Arr	67.16	85	i P	P	18 12 38.5	+2.9
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	Yellowknife Ar	70.40	341	P	P	18 12 54.8	-0.3
	comp=Z,0.4nm,0.8s,baz=31,slow=5.5,SNR=5.6						
	comp=Z,0.4nm,0.8s						
YKA	Yellowknife Ar	70.40	341	P	P	18 12 54.5	-0.5
NJ2	Nanjing	72.86	62	eP	P	18 13 08.5	-1.9
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KS19	Wonju Array Si	74.98	53	P	P	18 13 23.2	+0.5
PPLA	Purkeypile	75.22	358	P	P	18 13 24.4	+0.6
SKT	Skwentna	76.11	358	P	P	18 13 28.2	-0.6
SKT				IAmb	IAmb	18 13 29.9	
	comp=Z,1.8nm,0.9s						
ANMO	Albuquerque	90.62	321	LR	LR	18 57 01.0	
	comp=Z,149nm,18.1s,baz=10,slow=37						
DAV	Davao City (W)	94.14	77	LR	LR	19 01 26.4	
	comp=Z,115nm,21.2s,baz=352,slow=38						
NVL	N'lazarevskaya	112.95	184	i PKIKP	PKiKP	18 20 17.8	+0.6
NVL				e		18 21 06.2	
NVL				ePPP	PPP	18 23 28.9	
NVL				eSS	SS	18 36 51.1	+1.2
NVL				eSSS	SSS	18 41 03.1	
NVL				pmax	pmax		
	comp=Z,19nm,1.3s						
NVL				MLR	MLR		
	comp=Z,741nm,23.0s						

IDC ***30*** *18:10:50.5±0.7, 6.°80N×72.°94W, h156^{km}±11^{km}, mb3.4/5, mbtmp4.0/7, Error ellipse: s-maj=33.9km s-min=7.6km az=131.0*

RSNC ***30*** *18:10:51.3±0.0, 7°N±1°×7°3W±°, h147^{km}±1^{km}, M3.6, mb3.9, ML3.3*

ISC 30 18:10:50.3±0.8**, 6.°84N**±0.°03×**73.°11W**±0.°04**, h150**^{km}±5^{km}**, n45,** σ**1.^{s}21**/80**, mb3.8**/5**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.26	197	P	Pn	18 11 11.3	+0.2
BARC				S	Sn	18 11 25.3	-1.6
PAMC	Pamplona, Colo	0.64	39	P	Pn	18 11 14.2	+1.1
PAMC				S	Sn	18 11 30.9	+0.6
BRJC	Barrancabermej	0.65	282	P	Pn	18 11 13.1	+0.6
BRJC				S	Sn	18 11 29.4	0.0
RUSC	La Rusia	0.94	179	P	Pn	18 11 15.1	-0.1
RUSC				S	Sn	18 11 33.3	-0.9
PTBC	PUERTO BERRIO,	1.37	258	P	Pn	18 11 17.8	-0.8
PTBC				S	Sn	18 11 38.8	-1.4
OCAC	Ocana	1.41	351	P	Pn	18 11 19.7	+0.6
OCAC				S	Sn	18 11 41.5	+0.3
SPBC	San Pablo de B	1.52	219	P	Pn	18 11 20.2	0.0
SPBC				S	Sn	18 11 42.0	-1.1
NORC	Norcasia	2.16	234	P	Pn	18 11 27.1	-0.4
NORC				S	Sn	18 11 55.3	-0.7
CHIC	Chingaza	2.28	196	P	Pn	18 11 29.3	0.0
CHIC				S	Sn	18 11 59.0	-0.2
ROSC	El Rosal	2.33	211	P	Pn	18 11 31.6	+1.9
	195nm,0.3s,baz=340,slow=4.7,SNR=125						
ROSC				S	Sn	18 12 02.4	+2.3
	420nm,0.4s,baz=343,slow=22,SNR=10.0						
HELC	Santa Helena	2.49	255	P	Pn	18 11 31.9	+0.2
HELC				S	Sn	18 12 02.8	-0.8
CVER	Cruz Verde, Cu	2.50	203	P	Pn	18 11 32.8	+0.9
CVER				S	Sn	18 12 04.4	+0.5
UREC	San Jos de Ur	2.57	291	P	Pn	18 11 32.6	+0.2
UREC				S	Sn	18 12 02.9	-1.9
VILC	Villavicencio,	2.77	192	P	Pn	18 11 34.7	-0.3
VILC				S	Sn	18 12 09.4	-0.1
PTGC	Puerto Gaitan,	2.80	160	P	Pn	18 11 34.5	-0.7
PTGC				S	Sn	18 12 08.1	-1.7
RECRC	Villamaria, Ca	2.91	230	P	Pn	18 11 39.3	+2.2
NIZA	Niza - Manizal	2.94	233	P	Pn	18 11 39.7	+2.4
CBOC	Ciudad Bolivar	3.05	252	P	Pn	18 11 39.5	+1.0
CBOC				S	Sn	18 12 14.7	-1.0
DBBC	Dabeiba	3.09	273	P	Pn	18 11 39.5	+0.6
DBBC				S	Sn	18 12 15.7	-0.7
SDV	Santo Domingo	3.18	50	P	Pn	18 11 41.0	+0.8
	103nm,0.3s,baz=139,slow=3.1,SNR=196						
SDV				S	Sn	18 12 17.2	-1.7
	151nm,0.6s,baz=62,slow=24,SNR=26						
SDV	Santo Domingo	3.18	50	P	Pn	18 11 40.9	+0.7
SDV				S	Sn	18 12 18.8	0.0
ARGC	Ariguani, Magd	3.20	339	P	Pn	18 11 42.1	+1.8
ARGC				S	Sn	18 12 20.9	+1.8
ANIL	Santa Ana	3.27	225	P	Pn	18 11 42.2	+0.8
ANIL				S	Sn	18 12 21.3	+0.4
PRAC	Prado	3.58	210	P	Pn	18 11 44.5	-0.7
PRAC				S	Sn	18 12 27.5	-0.2
APAC	Apartado, Choc	3.60	287	P	Pn	18 11 46.0	+0.6
APAC				S	Sn	18 12 27.2	-1.0
ORTC	Ortega, Tolima	3.61	216	P	Pn	18 11 45.7	+0.1
ORTC				S	Sn	18 12 29.6	+1.2
SJCC	San Jacinto, C	3.67	326	P	Pn	18 11 45.5	-0.8
SJCC				S	Sn	18 12 27.8	-2.0
PLMC	San Jos del P	3.70	239	P	Pn	18 11 47.6	+0.8
PLMC				S	Sn	18 12 29.9	-0.6
URMC	La Uribe, Meta	3.79	200	P	Pn	18 11 48.0	+0.1
URMC				S	Sn	18 12 33.1	+0.4
GUVC	San Jose del G	4.29	174	P	Pn	18 11 53.7	-0.8
GUVC				S	Sn	18 12 44.8	+0.4
YOTC	Yotoco, Valle	4.29	229	P	Pn	18 11 54.3	-0.3
YOTC				S	Sn	18 12 43.2	-1.4
SMRC	Santa Marta, M	4.44	346	P	Pn	18 11 56.4	+0.1
SMRC				S	Sn	18 12 45.3	-2.5
PIZC	Pizarro, Choco	4.62	246	P	Pn	18 12 00.2	+1.4
PIZC				S	Sn	18 12 51.6	-0.5
PTAC	Punta Ardita,	4.68	274	P	Pn	18 11 58.7	-0.8
PTAC				S	Sn	18 12 51.7	-1.7
MACC	Macarena, Meta	4.72	189	P	Pn	18 11 58.4	-1.7
MACC				S	Sn	18 12 50.7	-3.9
BETC	Betania	4.74	210	P	Pn	18 11 59.3	-1.1
BETC				S	Sn	18 12 53.9	-1.2
URIC	Uribia, Colomb	4.96	13	P	Pn	18 12 01.8	-1.4
URIC				S	Sn	18 12 57.3	-2.7
JAMC	Jamundi, Valle	5.06	225	P	Pn	18 12 06.1	+1.3
TXAR	Lajitas Array	36.46	312	P	P	18 17 42.1	+1.0
	0.3nm,0.4s,baz=132,slow=8.6,SNR=5.1						
	0.3nm,0.4s						
ULM	Lac du Bonnet	47.27	340	P	P	18 19 08.2	-0.2
	2.2nm,0.4s,baz=157,slow=7.0,SNR=5.3						
	2.2nm,0.4s						
PDAR	Pinedale Array	48.07	324	P	P	18 19 15.1	+0.1
	0.3nm,0.5s,baz=126,slow=8.7,SNR=5.8						
	0.3nm,0.5s						
SCHQ	Schefferville	48.12	5	P	P	18 19 15.8	+0.9
	4.8nm,0.9s,baz=176,slow=6.9,SNR=4.2						
	4.8nm,0.9s						
YKA	Yellowknife Ar	63.25	340	P	P	18 21 02.7	+0.1
	0.8nm,0.6s,baz=136,slow=6.2,SNR=17						
	0.8nm,0.6s						
ASAR	Alice Springs	149.13	234	PKPbc	PKPbc	18 30 20.7	-1.2
	0.3nm,0.6s,baz=118,slow=3.3,SNR=9.0						
WRA	Warramunga Arr	150.36	241	PKPbc	PKPbc	18 30 24.5	-0.4
	0.4nm,0.5s,baz=106,slow=3.5,SNR=2.2						

IDC ***30*** *18:14:05.2±1.6, 36.°74S×78.°46E, h0^{km}, mb3.9/4, mbtmp3.9/4, MS4.1/8, Error ellipse: s-maj=46.5km s-min=36.4km az=99.0*

NEIC ***30*** *18:14:06.1±1.9, 37.°08S±0.°05×78.°3E±0.°2, h10^{km}±1^{km}, mb4.5/5, Error ellipse: s-maj=25.7km s-min=8.2km az=98.0*

ISC 30 18:14:06.9±0.9**, 37.°0S**±0.°2×**78.°4E**±0.°2**, h15**^{km}**, n29,** σ**1.^{s}13**/12**, mb4.2**/6**, MS4.0**/8**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AIS	Amsterdam Isla	1.03	219		Pb	18 14 25.9	-0.5
H04N2	CROZET ISLANDS	21.81	237	T	T	18 41 45.8	
	baz=73,slow=74,SNR=301						
H04N1	CROZET ISLANDS	21.82	237	T	T	18 41 47.9	
	baz=73,slow=74,SNR=263						
H04N3	CROZET ISLANDS	21.83	237	T	T	18 41 48.3	
	baz=73,slow=74,SNR=232						
H01W2	Cape Leeuwin H	28.92	97	T	T	18 50 13.5	
	baz=255,slow=75,SNR=211						
H01W3	Cape Leeuwin H	28.92	97	T	T	18 50 04.5	
	baz=255,slow=75,SNR=286						
H01W1	Cape Leeuwin H	28.93	97	T	T	18 50 14.8	
	baz=255,slow=75,SNR=246						
H08S2	Diego Garcia H	29.70	348	T	T	18 51 06.0	
	baz=170,slow=76,SNR=167						
H08S1	Diego Carcia H	29.70	348	T	T	18 51 06.2	
	baz=170,slow=76,SNR=164						
H08S3	Diego Garcia H	29.72	348	T	T	18 51 09.7	
	baz=170,slow=76,SNR=501						
MAW	Mawson	31.89	191	LR	LR	18 30 21.2	
	comp=Z,268nm,22.0s,baz=20,slow=30						
PALK	Pallekele	44.09	3	LR	LR	18 37 00.8	
	comp=Z,173nm,18.0s,baz=265,slow=31						
BOSA	Boshof	44.94	265	LR	LR	18 36 43.7	
	comp=Z,258nm,19.5s,baz=22,slow=30						
MATP	Matopo	46.23	277	LR	LR	18 39 56.8	
	comp=Z,132nm,20.4s,baz=6.5,slow=34						
LBTB	Lobatse	46.27	269	LR	LR	18 38 17.1	
	comp=Z,208nm,19.8s,baz=40,slow=31						
ASAR	Alice Springs	49.10	91	P	P	18 22 55.0	+1.0
	0.8nm,1.0s,baz=244,slow=6.5,SNR=4.6						
	0.8nm,1.0s						
LSZ	Lusaka	49.34	282	LR	LR	18 41 24.3	
	comp=Z,160nm,19.8s,baz=357,slow=33						
WRA	Warramunga Arr	51.33	87	P	P	18 23 09.9	-0.9
	1.0nm,0.8s,baz=236,slow=7.0,SNR=5.1						
	1.0nm,0.8s						
WR8	Warramunga Arr	51.45	87	P	P	18 23 12.6	+0.9
WB0	Warramunga Arr	51.47	87	P	P	18 23 11.4	-0.4
WB0				IAmb	IAmb	18 23 19.4	
	comp=Z,7.0nm,0.9s						
STKA	Stephens Creek	51.55	104	P	P	18 23 11.2	-1.1
QSPA	South Pole Qui	53.16	180	P	P	18 23 26.5	+2.5
	comp=Z,2.8nm,1.2s,baz=276,slow=3.1,SNR=5.7						
	comp=Z,2.8nm,1.2s						
QSPA	South Pole Qui	53.16	180	P	P	18 23 23.4	-0.6
QSPA				IAmb	IAmb	18 23 33.4	
	comp=Z,6.9nm,1.2s						
DZM	Mont Dzumac	75.58	107	LR	LR	18 53 10.5	
	comp=Z,335nm,19.5s,baz=357,slow=31						
KK31	Karatay Array	80.04	354		P	18 26 15.9	+0.4
KK31				IAmb	IAmb	18 26 18.4	
	comp=Z,8.6nm,1.2s						
KKAR	Karatay Array	80.04	354		P	18 26 15.8	+0.3
MKAR	Makanchi Array	83.48	3	P	P	18 26 33.1	-0.5
	comp=Z,1.6nm,1.0s,baz=164,slow=4.8,SNR=9.6						
	comp=Z,1.6nm,1.0s						
MKAR	Makanchi Array	83.48	3	P	P	18 26 33.3	-0.2
DBIC	Dimbokro	88.60	279	LR	LR	19 03 21.4	
	comp=Z,98nm,19.3s,baz=6.0,slow=33						

ATH ***30*** *18:14:15.6, 40.°06N×24.°46E, h18^{km}±1^{km}, ML2.5/6, Manual Solution by F.Xalaris First location: 2019/12/30 18:15:40, This location: 2019/12/30 18:33:22 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

THE 30 18:14:16.0, 40°N±2°×**24.°5E**±1.°0**, h17**^{km}±2^{km}**, M2.4**/13**,** **MLh2.4**/13**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUR	Ouranopolis	0.45	306	P	Pg	18 14 24.8	-0.2
OUR				S	Sb	18 14 31.8	-0.1
OUR	Ouranopolis	0.45	306	P	Pg	18 14 25.0	-0.1
OUR	Ouranopolis	0.45	306	P	Pg	18 14 24.9	-0.1
OUR				S	Sb	18 14 31.5	-0.4
THAS	Thassos island	0.57	21	P	Pg	18 14 26.9	-0.4
THAS				S	Sb	18 14 36.0	+0.5
THAS	Thassos island	0.57	21	P	Pb	18 14 28.2	+0.6
THAS				S	Sb	18 14 36.6	+1.1
THAS	Thassos island	0.57	21	P	Pg	18 14 27.2	-0.2
THAS				S	Sg	18 14 35.2	+0.2
LIA	Limnos Island	0.59	107	P	Pg	18 14 27.5	-0.1
LIA	Limnos Island	0.59	107	P	Pb	18 14 27.9	0.0
LIA				S	Sg	18 14 35.0	-0.5
LIA	Limnos Island	0.59	107	P	Pg	18 14 27.4	-0.2
LIA				S	Sg	18 14 34.7	-0.8
THS1	Thassos, Thass	0.67	8	P	Pb	18 14 29.6	+0.2
THS1				S	Sb	18 14 38.7	+0.3
PLN1	Chaniotis	0.68	264	P	Pg	18 14 29.2	-0.1
PLN1				S	Sb	18 14 38.5	-0.1
PLG	Polygyros	0.83	292	P	Pb	18 14 31.6	-0.4
PLG				S	Sg	18 14 43.3	+0.1
PLG	Polygyros	0.83	292	P	Pb	18 14 31.7	-0.3
PLG				S	Sb	18 14 42.5	-0.4
PLG	Polygyros	0.83	292	P	Pb	18 14 31.7	-0.3
PLG				S	Sb	18 14 42.4	-0.5
SMTH	Samothraki Isl	0.92	64	P	Pb	18 14 32.7	-0.8
SMTH				S	Sg	18 14 46.0	+0.1
SMTH	Samothraki Isl	0.92	64	P	Pb	18 14 32.8	-0.7
SMTH	Samothraki Isl	0.92	64	P	Pb	18 14 33.0	-0.5
SMTH				S	Sb	18 14 45.4	0.0
KAVA	Kavala	0.93	3	P	Pb	18 14 33.6	0.0
KAVA				S	Sg	18 14 46.3	+0.1
KAVA	Kavala	0.93	3	P	Pg	18 14 33.8	-0.2
KAVA				S	Sg	18 14 46.3	0.0
KAVA	Kavala	0.93	3	P	Pb	18 14 33.7	0.0
XANC	Avdira	0.98	23	P	Pb	18 14 34.2	-0.4
GADA	Gvkgeada	1.11	83	P	Pb	18 14 36.0	-0.8
HORT	Hortiatis	1.16	297	P	Pn	18 14 37.0	-0.6
HORT	Hortiatis	1.16	297	P	Pn	18 14 37.4	-0.2
HORT	Hortiatis	1.16	297	P	Pb	18 14 37.7	0.0
SRS	Serrai	1.23	328	P	Pn	18 14 38.1	-0.5
SRS	Serrai	1.23	328	P	Pn	18 14 38.1	-0.5
RDO	Rodhopi	1.35	37	P	Pn	18 14 39.4	-0.8
RDO	Rodhopi	1.35	37	P	Pn	18 14 39.3	-0.9
RDO	Rodhopi	1.35	37	P	Pn	18 14 39.2	-1.0
EZN	Ezine	1.46	99	P	Pn	18 14 40.5	-1.1
ALN	Alexandroupoli	1.47	55	P	Pn	18 14 41.0	-0.7
ALN	Alexandroupoli	1.47	55	P	Pn	18 14 41.2	-0.5
ALN	Alexandroupoli	1.47	55	P	Pn	18 14 41.3	-0.5
MMB	Musomishta	1.57	340	P	Pn	18 14 42.9	-0.3
KNT	Kendrikon	1.61	313	P	Pn	18 14 43.6	-0.2
RZN	Rozhen	1.64	8	P	Pn	18 14 43.9	-0.3

IDC ***30*** *18:22:28.1±3.4, 42.°97N×105.°21W, h0^{km}, mbtmp3.5/2, ML3.3/2, Error ellipse: s-maj=76.7km s-min=12.9km az=161.0*

NEIC ***30*** *18:22:28.2±1.7, 43.°61N±0.°06×105.°21W±0.°09, h0^{km}±1^{km}, ML3.2/52, Error ellipse: s-maj=14.8km s-min=3.1km az=49.0*

ISC 30 18:22:28.8±1.0**, 43.°59N**±0.°05×**105.°28W**±0.°06**, h0**^{km}**, n48,** σ**2.^{s}11**/30**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.05	59		Pn	18 22 50.1	-0.9
K22A	Casper	1.31	225		Pg	18 22 54.0	+0.1
LAO	LASA Array	3.17	348	Pn	Pn	18 23 20.0	-0.1
LAO				IAML		18 24 19.5	
	87nm,1.2s						
BW06	Boulder Array	3.24	257		Pn	18 23 22.2	+1.1
BW06				IAML		18 24 16.9	
	42nm,0.8s						
BW06				IAML		18 24 17.7	
	42nm,0.7s						
PD31	Pinedale Array	3.24	257		Pn	18 23 21.9	+0.8
PDAR	Pinedale Array	3.24	257	Pn	Pn	18 23 23.5	+2.4
	2.9nm,0.3s,baz=66,slow=14,SNR=53						
PDAR				Lg	Lg	18 24 07.3	
	6.5nm,0.3s,baz=67,slow=27,SNR=2.5						
	1.9nm,0.3s						
PDAR	Pinedale Array	3.24	257		Pn	18 23 23.1	+2.1
RLMT	Red Lodge	3.25	300	Pn	Pn	18 23 22.8	+1.6
RLMT				IAML		18 24 36.6	
	38nm,5.0s						
OGNE	Ogallala	3.57	137		Pn	18 23 26.5	+0.9
OGNE				IAML		18 24 37.7	
	110nm,0.5s						
OGNE				IAML		18 24 38.0	
	138nm,1.4s						
YNE	Yellowstone No	3.68	294		Pn	18 23 28.6	+1.4
YNE				IAML		18 24 28.4	
	comp=E,47nm,0.4s						
YNE				IAML		18 24 29.6	
	comp=N,42nm,0.4s						
YMP	Mirror Lake Pl	3.69	290		Pn	18 23 28.9	+1.5
ISCO	Idaho Springs	3.79	184		Pn	18 23 29.2	+0.4
ISCO				IAML		18 25 40.9	
	comp=N,29nm,3.0s						
ISCO				IAML		18 25 53.2	
	comp=N,31nm,3.5s						
LOHW	Long Hollow	3.87	272		Pn	18 23 29.6	-0.1
LOHW				IAML		18 25 26.3	
	comp=N,25nm,4.0s						
LOHW				IAML		18 25 27.5	
	comp=N,23nm,4.1s						
MOOW	Moose Ponds	3.97	274		Pn	18 23 32.4	+1.3
YNR	Norris Junctio	4.05	288	IAML		18 26 14.7	
	comp=E,22nm,4.5s						
YPP	Pitchstone Pla	4.05	282		Pn	18 23 34.6	+2.3
YPP				IAML		18 25 46.0	
	comp=E,26nm,4.9s						
YPP				IAML		18 25 57.3	
	comp=N,31nm,4.5s						
O20A	White River Ci	4.10	214	Pn	Pn	18 23 36.0	+3.1
YFT	Old Faithful	4.10	284	IAML		18 25 46.2	
	comp=E,26nm,0.1s						
YFT				IAML		18 26 04.6	
	comp=N,29nm,4.7s						
FXWY	Fox Creek	4.17	273		Pn	18 23 36.3	+2.3
YMR	Madison River	4.23	287	IAML		18 26 22.3	
	comp=N,34nm,4.9s						
RDMU	Red Mountain	4.39	228		Pg	18 23 54.0	+1.0
RDMU				IAML		18 25 13.3	
	comp=E,32nm,1.3s						
RDMU				IAML		18 26 22.0	
	comp=N,32nm,4.8s						
YHB	Horse Butte	4.41	287	IAML		18 26 13.6	
	comp=E,17nm,2.0s						
YHL	Hebgen Lake	4.43	289	IAML		18 24 58.2	
	comp=N,22nm,2.7s						
YHL				IAML		18 26 10.9	
	comp=E,22nm,4.6s						
DGMT	Dagmar	4.94	8		Pg	18 24 04.1	+0.6
BOZ	Bozeman (W)	4.96	296	IAML		18 26 01.1	
	comp=E,15nm,4.9s						
BOZ				IAML		18 26 48.4	
	comp=E,23nm,4.7s						
BSUT	Blindstream Ca	5.09	235		Pb	18 23 55.5	-3.5
BSUT					Pg	18 24 06.3	-0.1
BSUT				IAML		18 25 25.0	
	comp=E,17nm,4.2s						
BSUT				IAML		18 25 54.4	
	comp=N,14nm,4.5s						
P18A	Preston Nutter	5.43	225		Pn	18 23 57.4	+6.0
PV22	Blue Mesa, Par	5.70	209		Pg	18 24 18.6	+0.5
PV07	Paradox Valley	5.74	207		Pb	18 24 05.4	-4.5
PV07					Pg	18 24 12.2	-6.6
PV21	Cone Mtn., Par	5.75	210		Pg	18 24 21.3	+2.4
PV15	Paradox Valley	5.77	206		Pg	18 24 20.6	+1.2
P17A	Butcher Ranch,	5.80	227		Pg	18 24 19.6	-0.4
PV23	Carpenter Ridg	5.86	210		Pb	18 24 06.5	-5.4
PV04	Paradox Valley	5.87	209		Pb	18 24 06.2	-5.9
PV04					Pg	18 24 16.5	-4.8
PV12	Saucer Basin,	5.90	208		Pb	18 24 07.1	-5.6
PV14	Lion Creek, Pa	5.93	210		Pg	18 24 25.2	+2.8
PV20	West Nyswonger	5.94	209		Pn	18 24 03.1	+5.0
PV11	David Mesa, Pa	5.94	208		Pn	18 24 03.0	+4.8
PV16	Nyswonger Mesa	5.95	209		Pn	18 24 02.5	+4.2
SRU	San Rafael Swe	5.96	223		Pb	18 24 08.7	-5.0
PV03	Paradox Valley	5.97	208		Pb	18 24 07.4	-6.5
PV02	Paradox Valley	5.98	207		Pb	18 24 07.7	-6.3
PV18	Skein Mesa, Pa	6.00	208		Pn	18 24 04.5	+5.4
PV05	Paradox Valley	6.22	209		Pn	18 24 09.9	+7.8
HMU	Henry Mountain	7.00	218		Pn	18 24 15.3	+2.5
I10CA	LAC DU BONNET	9.15	40	I	I	19 24 31.3	
	baz=223,slow=268,SNR=3.2						
ULM	Lac du Bonnet	9.26	41	Pn	Pn	18 24 45.8	+2.3
	comp=N,0.6nm,0.3s,baz=228,slow=13,SNR=2.5						
	comp=N,1.8nm,0.4s						
I56US	NEWPORT INFRAS	9.49	304	I	I	19 21 20.0	

comp=N,0.1nm,1.1s,baz=121,slow=329,SNR=3.9

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*IDC **30** 18:24:29.1±2.7, 47°.54N×92°.70W, h0km, mb2.6/1, mbtmp2.9/3, ML1.6/1, Error ellipse: s-maj=34.2km s-min=14.2km az=79.0*
*OTT **30** 18:24:30.1±0.2, 47°.56N×92°.67W, h0km, MN2.8/8, Blast, Minnesota, U.S. 128km southeast from Fort Frances, On Mining explosion.*
ISC 30 18:24:27.9±1.1, **47°.52N**±0°.07×**92°.70W**±0°.04, **h0km, n12, σ1ˢ.22**/21, **Minnesota**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATKO	**Atikokan Iron**	1.50	29	PG	Pn	18 24 55.1	-0.9
ATKO				SG	Sg	18 25 15.6	-0.2
ATKO				Trac		18 25 19.0	
	comp=Z,37nm,0.2s						
EPLO	**Experimental L**	2.26	343	PN	Pn	18 25 08.2	+1.7
EPLO				SN	Sn	18 25 35.7	+0.7
EPLO				Trac		18 25 42.1	
	comp=Z,16nm,0.3s						
TBO	**Thunder Bay**	2.48	62	PN	Pn	18 25 11.0	+1.5
TBO				SN	Sn	18 25 41.1	+0.6
TBO				Trac		18 25 51.0	
	comp=Z,23nm,0.2s						
SOLO	**Sioux Lookout**	2.53	9	PN	Pn	18 25 11.4	+1.2
SOLO				SN	Sn	18 25 42.5	+0.8
SOLO				Trac		18 25 47.8	
	comp=Z,7.1nm,0.2s						
ULM	**Lac du Bonnet**	3.44	324	Pn	Pn	18 25 23.1	+0.5
	0.9nm,0.3s,baz=144,slow=14,SNR=8.9						
ULM				Pg	Pb	18 25 29.8	+0.2
	0.9nm,0.3s,baz=141,slow=14,SNR=2.9						
ULM				Sn	Sn	18 26 01.9	-2.2
	1.5nm,0.3s,baz=160,slow=9.3,SNR=4.6						
ULM				Lg	Lg	18 26 15.1	
	11nm,0.3s,baz=206,slow=13,SNR=24						
	3.5nm,0.6s						
ULM	**Lac du Bonnet**	3.44	324	PN	Pn	18 25 24.2	+1.5
ULM				SN	Sn	18 26 04.0	-0.1
ULM				Trac		18 26 17.1	
	comp=Z,19nm,0.3s						
I10CA	**LAC DU BONNET**	3.46	322	I	I	18 44 20.0	
	0.1nm,0.7s,baz=136,slow=348,SNR=6.8						
PKLO	**Pickle Lake**	4.26	20	PN	Pn	18 25 34.3	+0.3
PKLO				SN	Sn	18 26 22.9	-1.6
PKLO				Trac		18 26 26.6	
	comp=Z,5.4nm,0.2s						
GTOO	**Geraldton**	4.41	58	PN	Pn	18 25 37.5	+1.5
GTOO				SN	Sn	18 26 26.6	-1.4
GTOO				Trac		18 26 52.8	
	comp=Z,11nm,0.2s						
PNPO	**Pukaskwa Natio**	4.44	74	PN	Pn	18 25 37.2	+0.8
PNPO				SN	Sn	18 26 27.6	-1.1
PNPO				Trac		18 26 47.3	
	comp=Z,10nm,0.3s						
PNPO				LG	Lg	18 26 47.8	
PDAR	**Pinedale Array**	12.81	254	Pn	Pn	18 27 30.1	-1.3
	0.3nm,0.6s,baz=43,slow=12,SNR=1.7						
PDAR				Lg	Lg	18 31 04.0	
	baz=68,slow=29,SNR=2.4						
TXAR	**Lajitas Array**	20.05	209	P	P	18 29 03.2	+0.6
	0.2nm,0.5s,baz=21,slow=14,SNR=2.4						
	0.2nm,0.5s						

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*IDC **30** 18:25:29.1±2.3, 35°.49N×74°.47E, h0km, mb3.5/4, mbtmp3.5/8, ML3.0/4, Error ellipse: s-maj=55.7km s-min=21.5km az=78.0*
ISC 30 18:25:36.9±0.8, **35°.67N**±0°.05×**75°.04E**±0°.09, **h35km, n16, σ1ˢ.70**/25, **mb3.4**/4, **Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRNI	**Srinagar**	1.62	187	*e*P	Pn	18 26 00.8	-1.5
SRNI				*e*S	Sn	18 26 24.5	+3.1
SRNI				IAML		18 26 28.1	
	comp=N,1µm,0.4s						
SRNI				IAML		18 26 28.5	
	comp=E,1µm,0.0s						
ALCI	**Alchi Leh**	2.28	129	*e*P	Pn	18 26 11.3	-1.0
ALCI				*e*S	Sn	18 26 42.2	+2.8
ALCI				IAML		18 26 44.3	
	comp=E,252nm,0.4s						
ALCI				IAML		18 26 44.9	
	comp=N,150nm,0.1s						
JMU	**Jammu**	2.88	184	*e*P	Pn	18 26 20.6	-0.6
JMU				*e*S	Sn	18 26 54.2	-1.1
JMU				IAML		18 27 00.7	
	comp=N,1µm,0.4s						
JMU				IAML		18 27 01.9	
	comp=E,724nm,0.7s						
TSSA	**Tissa**	2.97	162	*e*P	Pn	18 26 21.6	-0.1
TSSA				*e*S	Sn	18 26 59.0	+2.8
TSSA				IAML		18 27 04.2	
	comp=N,437nm,0.3s						
TSSA				IAML		18 27 08.3	
	comp=E,428nm,0.6s						
DHRM	**DHARAMSHALA**	3.56	163	*e*P	Pn	18 26 29.1	-0.8
DHRM				*e*S	Sn	18 27 12.3	+1.4
DHRM				IAML		18 27 15.8	
	comp=E,177nm,0.3s						
DHRM				IAML		18 27 22.4	
	comp=N,172nm,0.3s						
SMLA	**Simla**	4.86	158	*e*P	Pn	18 26 46.2	-1.3
SMLA				*e*S	Sn	18 27 41.5	-1.0
SMLA				IAML		18 27 43.5	
	comp=N,96nm,0.6s						
SMLA				IAML		18 27 43.6	
	comp=E,118nm,0.3s						
KLP	**Kalpa**	4.92	146	*e*P	Pn	18 26 47.8	-0.8
KLP				*e*S	Sn	18 27 43.7	-0.7
KLP				IAML		18 27 49.2	
	comp=N,33nm,0.8s						
KLP				IAML		18 27 50.4	
	comp=E,48nm,0.4s						
JOSI	**Joshimath**	6.35	142	*e*P	Pn	18 27 07.3	-0.9
JOSI				*e*S	Sn	18 28 18.1	-1.5
JOSI				IAML		18 28 24.0	
	comp=N,31nm,1.0s						
JOSI				IAML		18 28 26.0	
	comp=E,28nm,0.4s						
AAK	**Ala-Archa**	6.97	357	Pn	Pn	18 27 18.1	+1.5
	comp=E,0.5nm,0.3s,baz=155,slow=7.3,SNR=7.9						
	comp=E,1.2nm,0.3s						
MKAR	**Makanchi Array**	12.38	24	Pn	Pn	18 28 33.0	+2.5
	baz=195,slow=16,SNR=1.3						
MKAR				Sn	Sn	18 30 44.0	-3.0
	comp=E,0.2nm,0.3s,baz=189,slow=23,SNR=9.3						
MKAR				Lg	Lg	18 32 13.7	
	comp=E,0.1nm,0.3s,baz=188,slow=24,SNR=4.5						
	comp=E,0.2nm,0.7s						
BVAR	**Borovoye Array**	17.66	351	P	Pn	18 29 38.8	-1.2
	baz=158,slow=8.4,SNR=5.6						
	comp=E,1.7nm,0.7s						
ZALV	**Zalesovo Beam**	19.52	17	P	P	18 30 00.9	0.0
	comp=E,0.3nm,0.3s,baz=216,slow=10,SNR=9.3						
	comp=E,1.1nm,0.4s						
SONM	**Songino Array**	26.17	53	P	P	18 31 10.2	+2.1
	comp=E,0.8nm,0.8s,baz=260,slow=9.6,SNR=7.6						
	comp=E,0.8nm,0.8s						
CMAR	**Chiang Mai Arr**	27.21	123	P	P	18 31 16.6	-0.9
	comp=E,0.9nm,0.8s,baz=312,slow=12,SNR=7.3						
	comp=E,0.9nm,0.8s						
ILAR	**Eielson Array**	74.64	17	P	P	18 37 11.8	-0.4
	comp=E,0.2nm,0.5s,baz=316,slow=5.9,SNR=1.9						
	comp=E,0.2nm,0.5s						
ASAR	**Alice Springs**	81.12	127	P	P	18 37 48.4	-0.4
	comp=E,0.1nm,0.7s,baz=321,slow=5.8,SNR=1.2						
	comp=E,0.1nm,0.7s						

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*NOU **30** 18:25:42.5, 37°.51S×177°.56E, h172km, mb4.2/6, Off E. Coast of N. Island, N.Z.*
*WEL **30** 18:25:47.0±1.0, 37°S±6°×17°7E±°, h121km±10km, M2.5/12, ML2.4/6, MLv2.5/12, Error ellipse: s-maj=7.7km s-min=7.2km az=100.4, confirmed*
ISC 30 18:25:43.4±2.2, **37°.48S**±0°.07×**177°.33E**±0°.06, **h156km**±13km, **n55, σ1ˢ.42**/68, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAZ	**Te Kaha**	0.46	128	P	Pn	18 26 05.3	+0.1
HAZ				S	Sn	18 26 19.2	-2.7
RUGZ	**Raukumara Rang**	0.56	150	P	Pn	18 26 05.6	-0.3
RUGZ				S	Sn	18 26 20.0	-3.1
PKGZ	**Pakihiroa**	0.71	123	P	Pn	18 26 07.9	+1.3
PKGZ				S	Sn	18 26 22.0	-2.4
MXZ	**Matakaoa Point**	0.78	96	P	Pn	18 26 08.2	+1.1
MXZ	**Matakaoa Point**	0.78	96	P	Pn	18 26 08.2	+1.1
MXZ				S	Sn	18 26 25.2	+0.1
URZ	**Urewera**	0.80	192	P	Pn	18 26 07.5	+0.3
URZ	**Urewera**	0.80	192	P	Pn	18 26 07.6	+0.5
URZ				S	Sn	18 26 23.5	-1.9
MWZ	**Matawai**	0.87	170	P	Pn	18 26 08.6	+0.8
MWZ				S	Sn	18 26 25.7	-0.8
TWGZ	**Tauwhareparae**	0.87	144	P	Pn	18 26 09.2	+1.4
TWGZ				S	Sn	18 26 27.0	+0.6
WMGZ	**Waiomatatini S**	0.93	112	P	Pn	18 26 09.2	+1.1
WMGZ				S	Sn	18 26 27.2	+0.1
PUZ	**Puketiti**	0.95	129	P	Pn	18 26 09.5	+1.2
PUZ				S	Sn	18 26 26.3	-1.1
KMRZ	**Kaimai**	1.16	251	P	Pn	18 26 10.8	+0.7
RTZ	**Ruatahuna**	1.17	193	P	Pn	18 26 10.9	+0.6
RTZ				S	Sn	18 26 30.7	-0.3
CNGZ	**Carnagh Statio**	1.22	146	P	Pn	18 26 12.6	+1.9
RIGZ	**Rimuhau**	1.27	164	P	Pn	18 26 12.8	+1.6
RIGZ				S	Sn	18 26 33.2	+0.6
SNGZ	**Shannon Statio**	1.30	180	P	Pn	18 26 13.0	+1.6
SNGZ				S	Sn	18 26 32.7	-0.4
MTHZ	**Maungataniwha**	1.43	195	P	Pn	18 26 14.6	+1.9
MTHZ				S	Sn	18 26 35.5	+0.2
TOZ	**Tahuroa Road**	1.47	260	P	Pn	18 26 14.2	+1.1
NMHZ	**Naumai**	1.67	194	P	Pn	18 26 17.6	+2.3
MHGZ	**Mahia Peninsul**	1.73	165	P	Pn	18 26 18.1	+2.2
MKAZ	**Moumakai**	1.77	282	P	Pn	18 26 17.4	+1.1
BKZ	**Black Stump Fm**	1.81	201	P	Pn	18 26 18.1	+1.3
BKZ	**Black Stump Fm**	1.81	201	P	Pn	18 26 17.8	+1.0
WIAZ	**Waiheke Island**	1.88	291	P	Pn	18 26 18.7	+1.1
MCHZ	**McNeill Hill**	2.02	194	P	Pn	18 26 21.4	+2.2
KWHZ	**Kaweka Forest**	2.07	200	P	Pn	18 26 20.8	+1.1
TMVZ	**Te Maari**	2.07	217	P	Pn	18 26 21.7	+1.9
NTVZ	**North Tongarir**	2.08	218	P	Pn	18 26 22.0	+2.1
NNVZ	**North Ngauruho**	2.13	219	P	Pn	18 26 22.8	+2.2
OTVZ	**Oturere**	2.13	217	P	Pn	18 26 22.4	+1.9
SNVZ	**South Ngauruho**	2.16	217	P	Pn	18 26 22.8	+1.9
NGZ	**Ngauruhoe**	2.17	218	P	Pn	18 26 23.2	+2.2
TWVZ	**Taurewa**	2.18	222	P	Pn	18 26 23.1	+2.0
HIZ	**Hauiti**	2.21	241	P	Pn	18 26 23.7	+2.4
TUVZ	**Tukino**	2.22	216	P	Pn	18 26 23.5	+1.9
FWVZ	**Far West T-bar**	2.26	218	P	Pn	18 26 23.4	+1.3
KRHZ	**Kereru**	2.29	199	P	Pn	18 26 23.0	+0.8
MOVZ	**Moawhango**	2.29	212	P	Pn	18 26 23.3	+1.0
WNVZ	**Wahianoa**	2.29	216	P	Pn	18 26 24.3	+1.8
PKVZ	**Pokaka**	2.39	220	P	Pn	18 26 25.6	+2.1
PNHZ	**Pukenui**	2.59	200	P	Pn	18 26 26.3	+0.4
TSZ	**Takapari Road**	2.79	202	P	Pn	18 26 29.0	+0.7
PRHZ	**Porangahau**	2.84	191	P	Pn	18 26 29.7	+0.8
DVHZ	**Dannevirke**	2.96	197	P	Pn	18 26 31.0	+0.6
BFZ	**Birch Farm**	3.31	194	P	Pn	18 26 34.7	-0.1
BFZ	**Birch Farm**	3.31	194	P	Pn	18 26 34.7	-0.1
MRZ	**Mangatainoka R**	3.46	203	P	Pn	18 26 36.7	0.0
TIWZ	**Tintock**	3.48	198	P	Pn	18 26 37.2	+0.1
HOWZ	**Holdsworth Sta**	3.69	202	P	Pn	18 26 39.4	-0.4
OGWZ	**Otaki Gorge**	3.73	206	P	Pn	18 26 40.2	-0.1
MTW	**Mount Morrison**	3.94	200	P	Pn	18 26 42.2	-0.7
TCW	**Tory Channel**	4.41	211	P	Pn	18 26 48.3	-0.8
QRZ	**Quartz Range**	5.01	227	P	Pn	18 26 57.3	+0.3
QRZ	**Quartz Range**	5.01	227	P	Pn	18 26 56.3	-0.7
THZ	**Tophouse**	5.47	217	P	Pn	18 27 02.3	-0.8

GUC 30 18:27:28.3±0.6, **30°.57S**×**71°.70W, h34km**±1km, **ML3.5, 2C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	0.11	153	⇑*i*P	Pb	18 27 33.8	-0.5
CO06				*e*S	Sb	18 27 37.3	-1.0
CO02	**Combarbal**	0.87	137	⇓*e*P	Pn	18 27 43.8	-0.4
CO02				*e*S	Sn	18 27 55.4	-0.4
CO02				IAML		18 27 58.9	
	comp=N,6µm,0.1s						
GO04	**Tololo Observa**	0.87	63	*e*P	Pn	18 27 44.0	-0.4
GO04				*e*S	Sb	18 27 56.7	+0.1
GO04				IAML		18 27 59.1	
	comp=N,3µm,0.4s						
CO03	**El Pedregal**	0.91	107	⇓*i*P	Pn	18 27 44.5	-0.3
CO03				IAML		18 27 58.2	
	comp=E,2µm,0.2s						
CO01	**Juntas del Tor**	1.51	67	*e*P	Pn	18 27 54.3	+1.1
CO04	**Los Peladeros**	1.59	157	*e*P	Pn	18 27 55.7	+1.3
CO04				*e*S	Sb	18 28 16.5	-0.6
CO04				IAML		18 28 19.9	
	comp=N,1µm,0.3s						
LCO	**Las Campanas**	1.78	29	⇑*e*P	Pn	18 27 57.5	+0.6
VA06	**Catapilco**	2.01	170	*e*P	Pn	18 28 01.9	+2.1
VA06				IAML		18 28 34.4	
	comp=E,529nm,0.4s						
AC05	**El Transito**	2.13	36	*e*P	Pn	18 28 03.3	+1.7
AC05				*e*S	Sb	18 28 30.6	-1.8
AC05				IAML		18 28 39.3	
	comp=N,276nm,0.4s						
VA03	**San Esteban**	2.39	156	*e*P	Pn	18 28 07.5	+2.3
VA03				IAML		18 28 42.6	
	comp=N,485nm,0.2s						
AC04	**Llanos de Chal**	2.42	13	*e*P	Pn	18 28 05.6	0.0
AC04				IAML		18 28 51.7	
	comp=N,133nm,0.2s						
ROCH	**El Roble**	2.46	166	IAML		18 28 45.8	
	comp=E,153nm,0.3s						
PEL	**Peldehue**	2.70	162	*e*P	Pn	18 28 11.4	+2.0
PEL				IAML		18 28 52.8	
	comp=E,244nm,0.3s						
MT03	**Universidad Ad**	3.08	161	*e*P	Pn	18 28 16.9	+2.2
MT08	**Bocatoma Ro**	3.20	154	*e*P	Pn	18 28 20.1	+3.6
MT08				IAML		18 29 12.2	
	comp=E,116nm,0.6s						
GO03	**Copiapo**	3.23	24	*e*P	Pn	18 28 17.6	+0.9
GO03				IAML		18 29 12.8	
	comp=N,129nm,0.2s						
MT01	**Popeta**	3.30	174	*e*P	Pn	18 28 19.3	+1.6
AC06	**Mina Casimiro**	3.41	20	*e*P	Pn	18 28 21.3	+2.1
AC06				IAML		18 29 17.9	
	comp=E,74nm,0.5s						
LMEL	**Las Melosas**	3.50	159	*e*P	Pn	18 28 23.4	+2.9
LMEL				IAML		18 29 18.5	
	comp=N,107nm,0.2s						
BO04	**La Punta**	3.53	165	*e*P	Pn	18 28 22.4	+1.6
BO04				IAML		18 29 19.1	
	comp=N,88nm,0.3s						
AC02	**Maricunga**	4.35	32	*e*P	Pn	18 28 34.2	+1.7

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*BEO **30** 18:34:20.6±0.4, 41°.47N×19°.51E, h10km±3km, ML2.7/13*
*SKO **30** 18:34:21.7, 41°.54N×19°.53E, h2km, ML2.8*
*TIR **30** 18:34:21.4, 41°.56N×19°.59E, h15km±1km, Ml3.1/4*
*THE **30** 18:34:22.3, 41°N±7°×1°9E±°, h12km, M3.0/10, MLh3.0/10*
*PDG **30** 18:34:22.9±0.3, 41°.64N×19°.55E, h11km±1km, ML2.7/11, Error ellipse: s-maj=1.3km s-min=1.3km az=90.0*
ISC 30 18:34:20.8±1.0, **41°.52N**±0°.02×**19°.53E**±0°.02, **h8km**±8km, **n84, σ0ˢ.94**/134, **22C-12D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	0.30	124	Pg	Pg	18 34 26.6	-0.2
TIR				Sg	Sg	18 34 30.8	+0.1
TIR				AML	AML	18 34 30.9	
	15nm,0.3s						
ULC	**Ulcinj**	0.50	334	⇓*i*Pg	Pg	18 34 29.1	-1.4
ULC				*i* Sg	Sg	18 34 36.5	-0.5
SDA	**Shkodra**	0.54	357	Pg	Pg	18 34 30.9	-0.3
SDA				S	Sg	18 34 38.9	+0.7
PHP	**Peshkopia**	0.70	76	Pg	Pg	18 34 33.2	-1.2
PHP				S	Sg	18 34 43.5	0.0
PHP				AML	AML	18 34 46.8	
	3.6nm,0.3s						
PHP	**Peshkopia**	0.70	76	P	Pg	18 34 33.1	-1.2
DRME	**Dracevica, Mon**	0.72	339	*e*Pg	Pg	18 34 34.4	-0.3
DRME	**Dracevica, Mon**	0.72	339	⇑*i*Pg	Pg	18 34 34.1	-0.6
DRME				*e*Sg	Sg	18 34 44.6	+0.5
BUM	**Brajici-Budva**	0.92	329	⇓*i*Pg	Pg	18 34 38.6	+0.1
BUM				*i* Sg	Sb	18 34 51.1	-0.3
PDG	**Podgorica**	0.94	347	Pg	Pg	18 34 39.0	+0.2
PDG				Sg	Sb	18 34 52.2	+0.3
PDG	**Podgorica**	0.94	347	⇑P	Pn	18 34 40.9	+0.6
PDG				⇑S	Sb	18 34 51.8	-0.1
PDG	**Podgorica**	0.94	347	*e*Pg	Pg	18 34 38.2	-0.6
PDG				*e*Sg	Sb	18 34 52.2	+0.3
PDG	**Podgorica**	0.94	347	⇑*i*Pg	Pg	18 34 38.4	-0.4
PDG				*i* Sg	Sn	18 34 53.4	-0.4
OHR	**Ohrid**	1.03	113	*i* Pg	Pb	18 34 39.8	-1.2
OHR				*i* Sg	Sn	18 34 56.5	+0.1
OHR				*e*Lg	Lg	18 34 58.3	
	comp=E,276nm,0.5s						
OHR				*e*Lg	Lg	18 34 59.0	
	comp=N,232nm,0.3s						
VLO	**Vlora**	1.05	182	P	Pn	18 34 42.4	+0.7
VLO				Sg	Sn	18 34 57.2	+0.8
VLO				AML	AML	18 35 03.4	
	comp=N,4.1nm,0.2s						
PVY	**Plav**	1.12	16	*e*Pg	Pb	18 34 41.5	-1.1
PVY	**Plav**	1.12	16	⇑*i*Pg	Pb	18 34 41.2	-1.4
PVY				*i* Sg	Sg	18 34 57.6	+0.6
CEME	**Cevo**	1.13	336	⇑*i*Pg	Pb	18 34 42.0	-0.6
CEME				*e*Sg	Sn	18 34 58.3	-0.4
HCY	**Herceg Novi**	1.21	321	⇑*i*Pg	Pb	18 34 43.6	-0.4
HCY				*i* Sg	Sn	18 35 01.2	+0.6
KBN	**Korca**	1.30	133	Pg	Pn	18 34 45.6	+0.3
KBN				Sg	Sn	18 35 03.7	+0.8
KBN	**Korca**	1.30	133	P	Pn	18 34 45.9	+0.5
NKME	**Niksic**	1.32	341	⇓*i*Pg	Pn	18 34 45.9	+0.3
NKME				*e*Sg	Sg	18 35 04.3	+0.9
BEY	**Berane**	1.38	11	*e*Pg	Pn	18 34 45.9	-0.6
IVA	**Berane**	1.38	11	⇓*i*Pg	Pn	18 34 46.1	-0.4
IVA				*i* Sg	Sg	18 35 05.7	+0.5
TREB	**Trebinje**	1.49	324	*e*Pg	Pb	18 34 48.7	0.0
TREB				*e*Sg	Sb	18 35 08.0	+0.2
SKO	**Skopje**	1.50	72	*i* Pg	Pb	18 34 48.9	+0.1
SKO				*i* Sg	Sb	18 35 08.2	+0.2
BRY	**Bratogost**	1.57	332	⇓*i*Pg	Pb	18 34 49.9	-0.3
BRY				*i* Sg	Sg	18 35 12.2	+0.9
NEST	**Nestorio**	1.59	133	Pn	Pn	18 34 50.1	+0.7
NEST				Sn	Sg	18 35 13.4	+1.5
NEST				AML	AML	18 35 16.1	
	comp=N,0.5nm,0.4s						
NEST	**Nestorio**	1.59	133	P	Pn	18 34 50.0	+0.7
NEST				S	Sb	18 35 11.6	+0.9
SJES	**Sjenica**	1.77	10	*e*Pn	Pb	18 34 53.0	-0.6
SJES				*e*Sn	Sb	18 35 16.3	+0.2
PENT	**Pentalofos**	1.79	137	P	Pn	18 34 52.7	+0.6
KEK	**Kerkira**	1.81	174	P	Pn	18 34 51.1	-1.2
KEK				S	Sn	18 35 13.2	-2.2
PLE	**Pljevlja**	1.82	357	*e*Pg	Pb	18 34 53.9	-0.5
PLE	**Pljevlja**	1.82	357	⇑*i*Pn	Pn	18 34 53.5	+1.0
PLE				*i* Sn	Sb	18 35 17.4	+0.1
NOCI	**Noci**	2.00	250	P	Pb	18 34 57.2	-0.2
NOCI				Sn	Sg	18 35 25.9	+0.8
SELS	**Selova**	2.07	34	*e*Pn	Pn	18 34 56.2	+0.3
SELS				*e*Sn	Sn	18 35 22.1	+0.3
IGT	**Igoumenitsa**	2.07	163	P	Pn	18 34 55.0	-0.8
IGT				S	Sn	18 35 20.2	-1.7
IGT	**Igoumenitsa**	2.07	163	*e*Pn	Pn	18 34 54.5	-1.4
IGT	**Igoumenitsa**	2.07	163	*e*Pn	Pn	18 34 56.4	+0.5
IGT				*e*Sn	Sn	18 35 19.3	-2.6
KPRO	**Kipourio**	2.09	138	P	Pn	18 34 56.8	+0.7
KPRO				S	Sn	18 35 23.3	+0.9
IVAS	**Ivanjica**	2.11	12	*e*Pn	Pn	18 34 56.5	+0.1
IVAS				*e*Sn	Sb	18 35 24.7	-1.0
BARS	**Barje**	2.14	52	*i* Pn	Pn	18 34 57.5	+0.7
BARS				*i* Sn	Sb	18 35 27.0	+0.6
BARS	**Barje**	2.14	52	*e*Pn	Pn	18 34 56.9	+0.1
BARS				*e*Sn	Sn	18 35 24.4	+0.9
GOCS	**Kraljevo Serbi**	2.27	25	*e*Pn	Pn	18 34 59.5	+0.8
GOCS				*e*Sn	Sn	18 35 27.2	+0.2
VAY	**Valandovo**	2.29	94	*i* Pn	Pn	18 34 59.3	+0.4
VAY				*i* Sn	Sn	18 35 28.8	+1.5
VAY				*e*Lg	Lg	18 35 29.0	
	comp=N,38nm,0.6s						
VAY				*e*Lg	Lg	18 35 29.8	
	comp=E,27nm,0.7s						
MATE	**Matera**	2.31	249	⇓P	Pb	18 35 03.0	+0.3
BBLS	**Lazi&#263i**	2.35	358	*e*Pn	Pn	18 35 01.0	+1.2
BBLS				*e*Sn	Sn	18 35 29.7	+0.8
GRUS	**Gruza**	2.53	20	*e*Pn	Pn	18 35 02.6	+0.5
TETR	**Tetrakomo, Epi**	2.54	148	P	Pn	18 35 02.5	0.0
DIVS	**Divibare**	2.60	7	*e*Pn	Pn	18 35 02.6	-0.7
DIVS				*e*Sn	Sn	18 35 35.8	+0.7
BOVS	**Bovan**	2.66	36	⇑P	Pn	18 35 04.4	+0.5
BOVS				⇑S	Sn	18 35 36.0	-0.2
BOVS	**Bovan**	2.66	36	*e*Pn	Pn	18 35 04.0	+0.1
BOVS				*e*Sn	Sn	18 35 35.8	-0.5
KKB	**Krupnik**	2.71	82	*i* Pn	Pn	18 35 05.4	+0.7
TRUS	**Trudelj**	2.78	13	*e*Pn	Pn	18 35 05.5	-0.1
TSLK	**Tsoukalades, L**	2.82	162	P	Pn	18 35 05.3	-0.9
LKD2	**Lefkada island**	2.86	162	P	Pn	18 35 05.6	-1.0
ZAPS	**Zavoj**	2.89	52	*e*Pn	Pn	18 35 07.7	+0.5
ZAPS				*e*Sn	Sn	18 35 42.9	+0.8
AMPL	**Ampelaki**	2.89	153	P	Pn	18 35 07.0	-0.1
NYDR	**Nydri-Lefkada**	2.94	162	P	Pn	18 35 06.6	-1.1
VTS	**Vitosha**	2.97	67	*e*Pn	Pn	18 35 08.6	+0.3
EVGI	**Lefkada island**	3.02	163	P	Pn	18 35 07.5	-1.3
TEKS	**Tekeris**	3.03	360	*e*Pn	Pn	18 35 08.1	-1.0
ZAGS	**Zajecar**	3.04	40	*e*Pn	Pn	18 35 09.4	+0.3
ZAGS				*e*Sn	Sn	18 35 45.8	+0.1
SRS	**Serrai**	3.08	96	*e*Pn	Pn	18 35 09.8	0.0
BLKB	**Belogradchik**	3.13	47	⇑S	Sn	18 35 48.7	+0.6
BLKB	**Belogradchik**	3.13	47	*e*Pn	Pn	18 35 11.0	+0.5
KUBS	**Kucevo**	3.29	28	*e*Pn	Pn	18 35 11.4	-1.3
KUBS				*e*Sn	Sn	18 35 50.3	-1.7
MDVR	**Moldovita**	3.63	25	⇑P	Pn	18 35 17.5	+0.1
MDVR				⇑S	Sn	18 35 59.5	-0.9
MDVR	**Moldovita**	3.63	25	*e*Pn	Pn	18 35 17.3	-0.1
FRGS	**Fruska Gora**	3.65	3	*e*Pn	Pn	18 35 16.5	-1.0
VRSS	**Vrsac**	3.83	19	*e*Pn	Pn	18 35 20.3	+0.2
HERR	**Herculane**	3.97	31	⇑P	Pn	18 35 22.2	+0.3
HERR				⇑S	Sn	18 36 07.9	-0.7
BZS	**Buzias**	4.37	20	⇑P	Pn	18 35 28.3	+0.8
BZS				⇑S	Sn	18 36 16.3	-2.2
GZR	**Gura Zlata**	4.54	30	⇓P	Pn	18 35 31.0	+1.2
GZR				⇑S	Sn	18 36 23.0	+0.2
MORH	**Mrgy, Hungar**	4.74	353	⇑P	Pn	18 35 33.8	+1.3
MORH				⇓S	Sn	18 36 24.9	-2.7
ELND	**Elena**	4.92	71	⇑S	Sn	18 36 32.3	+0.3
SIRR	**Siria**	4.99	17	⇓P	Pn	18 35 36.5	+0.5
SIRR				⇓S	Sn	18 36 32.0	-1.9
LOT	**Lotru**	5.00	37	⇑P	Pn	18 35 37.1	+1.0
LOT				⇑S	Sn	18 36 33.0	-1.1
MARR	**Marisel-Cluj**	5.77	25	⇓P	Pn	18 35 47.7	+1.0
MARR				⇓S	Sn	18 36 51.0	-2.1
SOKA	**Soboth**	6.09	329	*i* Pn	Pn	18 35 53.8	+2.7
	comp=E,1.2nm,0.5s						
OBKA	**Obir**	6.15	326	*e*Pn	Pn	18 35 54.2	+2.2
	comp=E,0.8nm,0.4s						
RONA	**Rosalia, Austr**	6.60	341	*e*Pn	Pb	18 36 17.5	+1.7
	comp=E,0.2nm,0.3s						
MOA	**Molln**	7.36	331	*e*Pn	Pn	18 36 15.7	+7.1
	comp=E,0.4nm,0.2s						
WTTA	**Wattenberg**	8.06	318	*e*Pn	Pn	18 36 19.5	+1.2
	comp=E,0.3nm,0.2s						
WATA	**Walderalm**	8.14	318	*e*Pn	Pn	18 36 18.5	-0.8
	comp=E,1.3nm,0.5s						

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*OMAN **30** 18:43:00.5±0.3, 27°.31N×56°.87E, h10km±11km, ml2.8/12, Error ellipse: s-maj=21.7km s-min=1.9km az=4.0*
*TEH **30** 18:43:00.1, 27°.48N×56°.73E, h10km±102km*
*DSN **30** 18:43:01.5±1.5, 27°.32N×56°.66E, h10km, ML2.2/6, Error ellipse: s-maj=50.3km s-min=11.2km az=112.0*
ISC 30 18:42:59.4±1.3, **27°.34N**±0°.04×**56°.81E**±0°.05, **h3km**±12km, **n27, σ0ˢ.66**/38, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBND	**Bandar-abas**	0.26	295	Pg	Pg	18 43 04.4	-0.1
GENO	**Geno**	0.57	277	Pg	Pg	18 43 10.0	-0.3
BNDS	**Bandar-Abbas**	0.57	276	Pg	Pg	18 43 10.1	-0.3
KHNJ	**Kahnooj**	1.00	52	Pg	Pg	18 43 18.5	-0.1
SHME	**Shamm**	1.41	205	P	Pb	18 43 26.2	-0.2
	SNR=19						
SHME				S	Sg	18 43 45.6	+0.8
SHME	**Shamm**	1.41	205	P	Pb	18 43 26.0	-0.4
SHME				S	Sg	18 43 45.5	+0.7
BANOM	**Banah**	1.48	198	P	Pb	18 43 27.1	-0.4
BANOM				S	Sg	18 43 47.3	+0.4

BANOM	Banah	1.48	198	P	Pn	18 43 26.6	-0.3
BANOM				S	Sg	18 43 47.0	+0.1
MSFE	Esma-Masafi	2.05	197	P	Pb	18 43 36.6	-0.7
MDH	Madha	2.08	193	P	Pn	18 43 35.2	0.0
MDH				S	Sn	18 44 01.5	-0.1
MDH	Madha	2.08	193	P	Pn	18 43 35.9	+0.7
NGRK	Negar Kerman	2.30	358	Pn	Pn	18 43 37.5	-1.0
KBAM	BAM	2.31	39	Pn	Pn	18 43 39.8	+1.4
UOSS	Minazif	2.44	193	P	Pn	18 43 41.9	+1.7
NAZ	Nazwa, Dubai	2.56	204	P	Pn	18 43 41.9	+0.2
HATD	Hatta, Dubai	2.57	194	P	Pn	18 43 42.9	+1.0
CHMN	Cheshme madani	2.60	14	Pn	Pn	18 43 43.6	+1.0
ASHO	Ashiyiah	2.73	194	P	Pn	18 43 44.7	+0.6
ASHO				S	Sn	18 44 18.3	+0.7
KHGB	Koh Gabri	3.04	355	Pn	Pn	18 43 48.3	-0.3
HOQ	Hoqain	3.77	173	P	Pn	18 43 58.0	-0.4
HOQ				S	Sn	18 44 42.8	-0.5
BIDO	Bidbid	3.98	162	P	Pn	18 44 00.6	-0.7
BIDO				S	Sn	18 44 48.1	-0.5
SMDO	Samad	4.41	165	P	Pn	18 44 07.1	-0.1
SMDO				S	Sn	18 44 59.4	+0.2
BSY	Bisya	4.59	175	P	Pn	18 44 10.1	+0.4
BSY				S	Sn	18 45 03.8	+0.3
JMDO	Jabal Madar	5.08	166	P	Pn	18 44 17.4	+0.8
JMDO				S	Sn	18 45 15.9	+0.2
WBK	Wadi Bani Khal	5.10	157	P	Pn	18 44 16.2	-0.5
	SNR=14						
JLN	Jalan Bani Buh	5.68	155	P	Pn	18 44 24.0	-0.6
	SNR=8.8						
MHTO	MHTO	6.41	170	P	Pn	18 44 35.0	+0.3
	SNR=11						

BJI ***30*** *18:43:32.4, 28°.80N×142°.58E, h10km, mB5.3/12, mb4.8/66, Ms4.5/20, Ms7 4.3/23*

IDC ***30*** *18:43:34.9±0.5, 28°.91N×142°.41E, h0km, mb4.5/26, mbtmp4.5/30, ML4.1/4, MS3.9/21, Error ellipse: s-maj=16.2km s-min=12.8km az=73.0*

NEIC ***30*** *18:43:36.4±1.2, 28°.88N±0°.01×142°.5E±0°.1, h10km±1km, mb4.9/149, Error ellipse: s-maj=15.7km s-min=2.8km az=84.0*

NIED ***30*** *18:43:37.9, 28°.55N×141°.06E, h50km, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale* 10^{16}*Nm;* M_{rr}*-0.17;* $M_{\theta\theta}$*-0.25;* $M_{\phi\phi}$*0.41;* $M_{r\theta}$*-0.98;* $M_{\theta\phi}$*-0.08;* $M_{\phi r}$*1.35; Fault plane solution:* M_0*1.71000×*10^{16} *NP1:*ϕ_s*34.00000°, δ10.00000°, λ-20.00000°. NP2:*ϕ_s*144.00000°, δ86.00000°, λ-100.00000°.*

ISC 30 18:43:37.1±0.9**, 28°.90N**±0°.05×**142°.42E**±0°.06**, h15**km±4km**, n228, **σ1§**19**/190**, mb4.9**/120**, MS4.1**/24**, 4D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	1.81	187	Pn	Pn	18 43 55.8	-12
	51nm,0.3s,baz=284,slow=23,SNR=17						
JCJ	Chichijima	1.81	187		Pn	18 44 06.6	-1.2
JHJ2	Mitsune	4.75	333	Pn	Pn	18 44 48.5	+0.3
JHJ	Hachijo jima 2	4.77	332	LR	LR	18 46 41.1	
	comp=Z,1μm,18.5s,baz=175,slow=39						
INU	Inuyama	7.89	326		Pn	18 45 31.4	+0.1
JGF	Kuroka	7.93	329		Pn	18 45 32.0	+0.1
MJAR	Matsushiro Arr	8.40	336	Pn	Pn	18 45 38.8	+0.5
	1.8nm,0.3s,baz=164,slow=12,SNR=131						
MJAR				Sn	Sn	18 47 13.2	+0.3
	0.4nm,0.3s,baz=337,slow=14,SNR=5.9						
MJAR				LR	LR	18 48 42.5	
	comp=Z,460nm,21.0s,baz=147,slow=37						
	13nm,0.5s						
MJAR	Matsushiro Arr	8.40	336		Pn	18 45 36.6	-1.7
MJAR					Sn	18 47 10.7	-2.2
MAJO	Matsushiro	8.40	336		Pn	18 45 38.7	+0.4
MJB9	Matsu-Tunnel	8.41	336		Pn	18 45 38.9	+0.6
JSD	Sado	9.75	340	Pn	Pn	18 45 55.3	-1.4
JNU	Nakatsue	10.76	296	LR	LR	18 50 13.7	
	comp=Z,807nm,18.4s,baz=114,slow=37						
JOW	Kunigami	12.68	264	LR	LR	18 50 34.8	
	comp=Z,721nm,21.9s,baz=228,slow=33						
TJN	Taejon	14.70	304	P	P	18 47 11.3	+0.7
KSRS	Korea Array	14.82	309	Pn	Pn	18 47 07.0	+0.9
	1.1nm,0.3s,baz=124,slow=9.7,SNR=21						
KSRS				LR	LR	18 52 50.8	
	comp=Z,376nm,18.6s,baz=125,slow=38						
	8.6nm,1.0s						
KSAR	Wonju Array Be	14.84	309	P	P	18 47 09.7	-2.4
KS19	Wonju Array Si	14.88	309	P	P	18 47 11.3	-1.4
ASAJ	Asahikawa	15.18	0	Pn	Pn	18 47 09.3	-1.7
	1.2nm,0.3s,baz=215,slow=9.6,SNR=11						
ASAJ				Sn	Sn	18 49 46.2	-13
	1.0nm,0.3s,baz=185,slow=27,SNR=4.2						
	5.5nm,0.4s						
JKA	Kamikawa-asahi	15.18	0		Pn	18 47 06.2	-4.8
JKA				IAmb	IAmb	18 47 09.6	
	comp=Z,203nm,2.0s						
USRK	Ussuriysk Ar.	17.39	334	P	Pn	18 47 37.0	-2.1
	comp=Z,0.8nm,0.3s,baz=154,slow=12,SNR=10.0						
	comp=Z,5.2nm,0.7s						
MDJ	Mudanjiang	18.71	330	P	P	18 47 53.8	-1.2
MDJ	Mudanjiang	18.71	330	P	Pn	18 47 56.0	+0.6
MDJ				pmax	pmax		
	comp=Z,47nm,0.8s						
YULB	Yu-li	19.73	259	P	P	18 48 06.6	+0.3
YULB				IAmb	IAmb	18 48 11.7	
	comp=Z,84nm,1.0s						
SSLB	Suanglung	19.89	260	Pn	Pn	18 48 09.9	+0.2
SNY	Shenyang	20.00	315	⇓P	P	18 48 08.5	-0.6
SNY				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2	Changchun	20.14	322	*e*P	P	18 48 11.0	+0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TPUB	Ta-pu	20.34	259	P	P	18 48 13.3	+0.4
TPUB				IAmb	IAmb	18 48 22.0	
	comp=Z,89nm,1.1s						
NJ2	Nanjing	20.54	285	*e*P	P	18 48 15.5	+0.4
NJ2				pmax	pmax		
	comp=Z,22nm,0.7s						
BNX	BinXian	20.56	329	⇓P	P	18 48 15.5	+0.4
BNX				pmax	pmax		
	comp=Z,66nm,1.1s						
TIA	Tai'an	22.49	295	P	P	18 48 35.5	-0.5
TIA				pmax	pmax		
	comp=Z,18nm,1.2s						
H11N2	WAKE ISLAND Hy	24.06	107	T	T	19 14 00.0	
	baz=296,slow=74,SNR=29						
H11N1	WAKE ISLAND Hy	24.07	107	T	T	19 13 59.9	
	baz=296,slow=74,SNR=19						
H11N3	WAKE ISLAND Hy	24.08	107	T	T	19 14 00.9	
	baz=296,slow=74,SNR=27						
HEH	HeiHe	24.17	336	*e*P	P	18 48 53.8	+1.2
HEH				pmax	pmax		
	comp=Z,23nm,1.0s						
BJI	Beijing	24.23	304	P	P	18 48 53.5	+0.2
BJI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WHN	Wuhan	24.41	281	P	P	18 48 55.0	0.0
WHN				pmax	pmax		
	comp=Z,46nm,0.6s						
HNS	HongShan	24.63	297	⇓P	P	18 49 03.0	+6.0
HNS				pmax	pmax		
	comp=Z,8.0nm,1.3s						
HNS				LR	LR		
	comp=N,250nm,15.5s						
HNS				LR	LR		
	comp=E,620nm,15.5s						
HNS				LR	LR		
	comp=Z,510nm,16.2s						
TGY	Tagaytay City	24.77	238	LR	LR	18 58 19.4	
	comp=Z,198nm,20.2s,baz=136,slow=36						
LYN	LuoYang	26.04	290	P	P	18 49 10.3	+0.6
LYN				pmax	pmax		
	comp=Z,14nm,0.9s						
PETK	Petropavlovsk-	26.68	21	P	P	18 49 14.8	-0.6
	comp=Z,3.8nm,0.9s,baz=200,slow=6.1,SNR=4.5						
PETK				LR	LR	19 00 44.7	
	comp=Z,188nm,20.0s,baz=203,slow=39						
	comp=Z,3.8nm,0.9s						
PETK	Petropavlovsk-	26.68	21	P	P	18 49 14.9	-0.4
HIA	Hailar	26.71	326	P	P	18 49 15.1	-0.6
HIA				IAmb	IAmb	18 49 19.2	
	comp=Z,45nm,1.1s						
HILR	Hailar Array B	26.90	326	P	P	18 49 17.1	-0.4
	comp=Z,13nm,0.6s,baz=129,slow=12,SNR=23						
HILR				LR	LR	19 00 10.6	
	comp=Z,222nm,18.4s,baz=115,slow=37						
	comp=Z,13nm,0.6s						
HHC	Hu-ho-hao-te	27.83	304	*e*P	P	18 49 25.3	-0.7
HHC				LR	LR		
	comp=Z,310nm,17.6s						
HHC				LR	LR		
	comp=Z,570nm,14.8s						
HHC				LR	LR		
	comp=Z,830nm,14.9s						
ENH	Enshi	28.62	281		P	18 49 31.1	-1.9
ENH				IAmb	IAmb	18 49 36.2	
	comp=Z,67nm,2.0s						
BTO	Baotou	28.91	302	*e*P	P	18 49 36.5	+0.9
BTO				pP	sP	18 49 41.0	+0.7
BTO				sP	pwP	18 49 43.5	-1.2
BTO				PP	PnPn	18 50 30.5	+3.5
BTO				S	S	18 54 26.0	+0.4
BTO				pmax	pmax		
	comp=Z,24nm,1.3s						
BTO				pmax	pmax		
	comp=Z,370nm,6.3s						
BTO				LR	LR		
	comp=Z,1μm,14.1s						
BTO				LR	LR		
	comp=Z,2μm,18.0s						
BTO				LR	LR		
	comp=Z,2μm,14.6s						
XAN	Xi'an	28.95	289	P	P	18 49 35.3	-0.6
XAN				pmax	pmax		
	comp=Z,14nm,0.6s						
GYA	Guiyang	31.68	274	⇓P	P	18 50 00.3	0.0
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				LR	LR		
	comp=Z,390nm,17.6s						
LZH	Lanzhou	33.15	293	*e*P	P	18 50 13.5	+0.4
LZH				pP	sP	18 50 20.3	+2.5
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
ULN	Ulaanbaatar	33.18	315		P	18 50 13.2	0.0
ULN				IAmb	IAmb	18 50 15.8	
	comp=Z,16nm,1.0s						
ULN	Ulaanbaatar	33.18	315	P	P	18 50 13.8	+0.6
	comp=Z,72nm,1.1s						
LZDM	Lanzhou Array	33.27	292	P	P	18 50 12.8	-1.6
	comp=Z,3.7nm,0.6s,baz=131,slow=6.8,SNR=8.2						
	comp=Z,3.7nm,0.6s						
SHEM	Shemya Is, Ala	33.33	36	LR	LR	19 03 13.3	
	comp=Z,59nm,18.9s,baz=36,slow=35						
SONM	Songino Array	33.58	314	P	P	18 50 17.4	+0.7
	comp=Z,7.1nm,0.6s,baz=119,slow=8.0,SNR=39						
SONM				PcP	PcP	18 52 57.7	+0.8
	comp=Z,2.7nm,1.0s,baz=149,slow=3.1,SNR=4.1						
	comp=Z,7.1nm,0.6s						
SONM	Songino Array	33.58	314		P	18 50 16.8	+0.1
SONM				IAmb	IAmb	18 50 19.1	
	comp=Z,10nm,0.9s						
SONM					PcP	18 52 57.3	+0.4
MRSI	Marisa	34.38	218	P	P	18 50 25.4	+1.7
	comp=Z,538nmcomp=Z,40nm,1.1s						
TOLI2	Tolitoli	34.50	221	P	P	18 50 23.6	-1.2
TOLI2				IAmb	IAmb	18 50 59.8	
	comp=Z,11nm,0.9s						
SANI	Sanana	34.58	210	P	P	18 50 24.2	-1.2
	comp=Z,20nm,0.8s						
KRAI	Karang Ratu	34.76	205	P	P	18 50 30.9	+3.9
	comp=Z,3μmcomp=Z,22nm,0.4s						
KMI	Kunming	35.44	273	P	P	18 50 34.0	+0.9
KMI				pmax	pmax		
	comp=Z,16nm,0.9s						
KMI				LR	LR		
	comp=Z,190nm,12.9s						
KMI				LR	LR		
	comp=Z,270nm,18.4s						
KMI				LR	LR		
	comp=Z,310nm,19.1s						
PZH	PanZhiHua	35.97	276	P	P	18 50 37.0	-0.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GTA	Gaotai	36.48	298	*e*P	P	18 50 41.0	-0.8
GTA				pP	pP	18 50 44.3	-0.9
GTA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GTA				LR	LR		
	comp=Z,360nm,15.3s						
GTA				LR	LR		
	comp=Z,190nm,15.3s						
GTA				LR	LR		
	comp=Z,280nm,17.1s						
TLY	Talaya	36.69	319		P	18 50 43.8	+0.5
TLY				IAmb	IAmb	18 50 46.0	
	comp=Z,32nm,0.8s						
TNCH	TengChong	39.15	275	P	P	18 51 04.8	+0.2
TNCH				pP	pP	18 51 08.3	+0.1
TNCH				sP	sP	18 51 09.5	-0.2
TNCH				S	S	18 56 59.8	-4.5
TNCH				sS	sS	18 57 12.8	+2.5
TNCH				pmax	pmax		
	comp=Z,49nm,0.9s						
TNCH				LR	LR		
	comp=Z,230nm,5.1s						
TNCH				LR	LR		
	comp=Z,230nm,6.9s						
TNCH				LR	LR		
	comp=Z,540nm,19.9s						
MTKI	Muara Teweh, K	39.68	226	P	P	18 51 09.7	+0.9
	comp=Z,20nm,0.8s						
GOMU	GeErMu	40.45	293	P	P	18 51 13.8	-1.7
GOMU				pmax	pmax		
	comp=Z,12nm,1.0s						
CHTO	Chiang Mai	40.81	266		P	18 51 18.2	0.0
CHTO	Chiang Mai	40.81	266	P	P	18 51 18.3	0.0
	comp=Z,17nm,1.0s						
CMAR	Chiang Mai Arr	40.95	265	P	P	18 51 19.7	+0.3
	comp=Z,4.4nm,0.9s,baz=48,slow=9.3,SNR=33						
CMAR				LR	LR	19 09 07.0	
	comp=Z,127nm,19.4s,baz=75,slow=37						
	comp=Z,4.4nm,0.9s						
CMAR	Chiang Mai Arr	40.95	265		P	18 51 18.7	-0.7
MMRI	Maumere	42.10	211	P	P	18 51 30.8	+2.1
	comp=Z,45nm,0.8s						
SOEI	Soe	42.24	207	P	P	18 51 28.5	-1.5
SOEI				IAmb	IAmb	18 51 57.8	
	comp=Z,23nm,0.8s						
EDFI	Ende, Flores	42.44	211	P	P	18 51 31.8	+0.2
	comp=Z,22nm,0.8s						
MTN	Manton Dam	42.91	196		P	18 51 34.2	-1.1
TIXI	Tiksi	43.44	354		P	18 51 38.7	-0.2
UNV	Unalaska Valle	44.46	41	P	P	18 51 45.8	-1.6
LVA	Lava Point	44.80	41	P	P	18 51 49.0	-1.2
KLNI	Mataram	44.97	218	P	P	18 51 52.5	+0.7
	comp=Z,34nm,0.9s						
WMQ	Urumqi	45.71	304	*e*P	P	18 51 58.8	+1.2
WMQ				PcP	PcP	18 53 36.3	+0.9
WMQ				pmax	pmax		
	comp=Z,23nm,0.9s						
WMQ				LR	LR		
	comp=Z,130nm,20.3s						
KULM	Kulim	45.95	247	P	P	18 52 00.2	+0.5
KULM				IAmb	IAmb	18 52 01.0	
	comp=Z,9.9nm,0.7s						
JAGI	Jajag, Banyuwa	46.09	221	P	P	18 51 59.6	-1.1
JAGI				IAmb	IAmb	18 52 18.3	
	comp=Z,28nm,1.3s						
IPM	Ipoh	46.13	246	P	P	18 52 00.3	-0.8
IPM				IAmb	IAmb	18 52 02.4	
	comp=Z,24nm,1.4s						
KNRA	Kununurra	46.24	198	P	P	18 52 02.4	+0.5
KNRA				IAmb	IAmb	18 52 13.0	
	comp=Z,22nm,1.2s						
ZAA0	Zalesovo Array	48.27	318	IAmb	IAmb	18 52 18.9	
	comp=Z,14nm,1.1s						
ZALV	Zalesovo Beam	48.27	318	P	P	18 52 17.7	+0.3
	comp=Z,3.7nm,0.3s,baz=99,slow=6.8,SNR=37						
ZALV				PcP	PcP	18 53 44.2	+0.1
	comp=Z,4.1nm,0.6s,baz=105,slow=3.3,SNR=6.4						
	comp=Z,3.7nm,0.3s						
ZALV	Zalesovo Beam	48.27	318		P	18 52 17.7	+0.3
ZALV					PcP	18 53 43.1	-1.0
KPJI	Karang Pucung	48.37	227	P	P	18 52 19.2	+0.7
	comp=Z,44nm,0.9s						
N14K	Kuskokwak Cree	48.47	34	P	P	18 52 18.1	-0.7
WB0	Warramunga Arr	49.00	190		P	18 52 22.9	-0.5
WR8	Warramunga Arr	49.17	190		P	18 52 24.1	-0.5
WR8				IAmb	IAmb	18 52 28.8	
	comp=Z,19nm,0.9s						
WRAB	Tennant Creek	49.17	190	P	P	18 52 24.0	-0.6
WRAB				IAmb	IAmb	18 52 28.7	
	comp=Z,20nm,0.8s						
WRA	Warramunga Arr	49.18	190	P	P	18 52 24.3	-0.4
	comp=Z,16nm,0.8s,baz=7.8,slow=7.8,SNR=40						
	comp=Z,16nm,0.8s						
O15K	Ungalikthiuk R	49.23	35	P	P	18 52 25.4	+0.8
KLSI		49.27	234	P	P	18 52 25.8	+0.3
	comp=Z,55nm,0.9s						
MKAR	Makanchi Array	49.50	308	P	P	18 52 27.0	0.0
	comp=Z,8.8nm,0.8s,baz=91,slow=9.7,SNR=91						
MKAR				PcP	PcP	18 53 49.5	+0.6
	comp=Z,1.4nm,0.5s,baz=82,slow=7.5,SNR=7.2						
MKAR				ScP	ScP	18 57 45.7	+2.0
	comp=Z,0.6nm,0.8s,baz=75,slow=5.2,SNR=3.5						
MKAR				LR	LR	19 14 32.1	
	comp=Z,191nm,18.3s,baz=54,slow=38						
	comp=Z,8.8nm,0.8s						
MKAR	Makanchi Array	49.50	308		P	18 52 27.0	0.0
MKAR					PcP	18 53 47.9	-0.9
MDSI	Maura Dua	49.52	234	P	P	18 52 26.9	-0.5
MAKZ	Makanchi	49.72	308		P	18 52 28.7	+0.1
MASI	Maura Aman, Be	50.01	237	P	P	18 52 32.7	+1.5
MNAI	Manna	50.31	235	P	P	18 52 32.7	-0.8
M17K	Holitna River	50.83	33	IAmb	IAmb	18 52 42.7	
	comp=Z,36nm,1.3s						
NRIK	Noril'sk	51.05	338	P	P	18 52 38.9	+0.6
	comp=Z,9.5nm,0.8s,baz=107,slow=9.5,SNR=20						
NRIK				LR	LR	19 14 34.7	
	comp=Z,160nm,20.7s,baz=104,slow=36						
	comp=Z,9.5nm,0.8s						
NRIK	Noril'sk	51.05	338		P	18 52 38.6	+0.3
NRIK				IAmb	IAmb	18 52 39.9	
	comp=Z,13nm,0.9s						
P18K	Big Mountain,	51.59	35	P	P	18 52 42.4	-0.2
WUS	Wushi	52.13	301	P	P	18 52 46.8	-0.3
J19K	Poorman	52.17	30	P	P	18 52 47.2	+0.5
J19K				IAmb	IAmb	18 54 02.2	
	comp=Z,31nm,1.8s						
E19K	Redstone River	52.34	25	IAmb	IAmb	18 53 01.7	
	comp=Z,10nm,0.8s						
K20K	Telida	52.73	30	IAmb	IAmb	18 53 04.8	
	comp=Z,12nm,0.9s						
J20K	Nowinta River	52.84	29	IAmb	IAmb	18 53 11.4	
	comp=Z,18nm,1.5s						
ASAR	Alice Springs	52.91	190	P	P	18 52 52.4	-0.3
	comp=Z,1.1nm,0.5s,baz=6.9,slow=6.7,SNR=25						
	comp=Z,1.1nm,0.5s						
ASAR	Alice Springs	52.91	190	P	P	18 52 51.2	-1.5
D20K	Etivluk River	52.91	24	P	P	18 52 53.0	+0.7
D20K				IAmb	IAmb	18 53 05.3	
	comp=Z,14nm,0.9s						
TARG	Taragay, Kyrgy	53.11	302	IAmb	IAmb	18 52 56.7	
	comp=Z,11nm,0.9s						
PPLA	Purkeypile	53.51	31	P	P	18 52 57.5	+0.7
BPAW	Bear Paw Mtn.	54.20	30	P	P	18 53 02.6	+0.9
BPAW				IAmb	IAmb	18 53 09.5	
	comp=Z,40nm,1.8s						
TKM2	Tokmak 2	54.57	304	P	P	18 53 05.5	+0.5
	SNR=8.7						
KSH	Kashi	54.85	300	P	P	18 53 10.3	+3.3
KSH				PcP	PcP	18 54 14.0	+4.9
KSH				pmax	pmax		
	comp=Z,11nm,0.7s						
G23K	Bananza Creek	54.95	27	IAmb	IAmb	18 53 21.1	
	comp=Z,12nm,0.8s						
RND	Reindeer	55.07	31	P	P	18 53 07.9	-0.2
RND				IAmb	IAmb	18 53 20.4	
	comp=Z,11nm,0.9s						
KBK	Karagaybulak	55.08	304	P	P	18 53 09.3	+0.7
	SNR=16						
FRU1	Bishkek	55.28	304	IAmb	IAmb	18 53 12.5	
	comp=Z,28nm,1.3s						
E23K	Chandalar	55.30	25	IAmb	IAmb	18 53 14.6	
	comp=Z,12nm,0.8s						
USP	Ospenovka	55.31	305	P	P	18 53 10.4	+0.2
	SNR=7.8						
AAK	Ala-Archa	55.41	304	P	P	18 53 11.5	+0.4
	SNR=7.1						
AAK	Ala-Archa	55.41	304	LR	LR	19 17 16.1	
	comp=Z,83nm,18.7s,baz=30,slow=36						
AAK	Ala-Archa	55.41	304		P	18 53 11.0	0.0
UCH	Uchtor	55.46	303	P	P	18 53 12.4	+0.7
	SNR=11						
IL31		56.03	29		P	18 53 14.7	-0.2
ILAR	Eielson Array	56.03	29	P	P	18 53 14.5	-0.4
	comp=Z,2.0nm,0.8s,baz=261,slow=6.1,SNR=19						
	comp=Z,2.0nm,0.8s						
INKA	Innaminka	56.35	182		P	18 53 16.9	-0.6
E25K	Arctic Village	56.82	25		P	18 53 21.4	+0.8
E25K				IAmb	IAmb	18 53 34.6	
	comp=Z,9.9nm,0.8s						
BVAR	Borovoye Array	56.87	317	P	P	18 53 21.7	+0.7
	comp=Z,9.0nm,0.5s,baz=90,slow=7.2,SNR=32						
BVAR				LR	LR	19 18 34.1	
	comp=Z,137nm,18.5s,baz=64,slow=37						
	comp=Z,9.0nm,0.5s						
BORK	Borovoye	56.91	317		P	18 53 22.0	+0.7
BORK				IAmb	IAmb	18 53 22.9	
	comp=Z,10nm,0.6s						
SCRK	Sand Creek	57.26	30		P	18 53 23.6	-0.3
SCRK				IAmb	IAmb	18 53 28.3	
	comp=Z,36nm,1.9s						
F26K	Sheenjek River	57.33	26	IAmb	IAmb	18 53 38.3	
	comp=Z,8.1nm,0.8s						
KK31	Karatay Array	58.21	305	IAmb	IAmb	18 53 32.0	
	comp=Z,14nm,0.8s						
KKAR	Karatay Array	58.21	305		P	18 53 31.1	+0.3
E27K	Coleen River	58.31	25	IAmb	IAmb	18 53 34.2	
	comp=Z,22nm,1.8s						
MANEM	Manem	58.56	298	IAmb	IAmb	18 53 35.3	
	comp=Z,18nm,0.7s						
F28M	Old Crow	58.96	26		P	18 53 35.7	+0.2
F28M				IAmb	IAmb	18 53 50.1	
	comp=Z,23nm,1.7s						
E28M	Babbage River	59.07	25	IAmb	IAmb	18 53 51.0	
	comp=Z,11nm,1.1s						
DAWY	Dawson	59.28	30	IAmb	IAmb	18 53 55.9	
	comp=Z,17nm,1.3s						
H29M	Whitestone	59.59	28	P	P	18 53 40.7	+0.7
L29M	L29M	59.92	31	IAmb	IAmb	18 53 48.4	
	comp=Z,10nm,1.0s						
EPYK	Eagle Plains	60.25	27	IAmb	IAmb	18 53 58.0	
	comp=Z,15nm,0.8s						
STKA	Stephens Creek	60.45	181	P	P	18 53 46.5	+0.4
	comp=Z,2.8nm,0.8s,baz=342,slow=4.1,SNR=5.1						
	comp=Z,2.8nm,0.8s						
STKA	Stephens Creek	60.45	181	P	P	18 53 44.7	-1.5
G31M	Satah River	61.17	27		P	18 53 51.2	+0.6
SHAA	Shahritus	61.28	299	IAmb	IAmb	18 54 05.6	
	comp=Z,14nm,0.7s						
INK	Inuvik	61.30	25	IAmb	IAmb	18 54 04.8	
	comp=Z,7.5nm,0.8s						
F31M	Tsiigehtchic	61.32	26	IAmb	IAmb	18 54 05.8	
	comp=Z,8.5nm,0.8s						
KBL	Kabul	61.41	296		P	18 53 53.0	-0.2
KBL				IAmb	IAmb	18 54 06.0	
	comp=Z,5.7nm,0.8s						
M31M	Drury Creek, Y	61.74	32	P	P	18 53 55.2	+0.6
ARTI	Arti	63.24	322	LR	LR	19 23 31.6	
	comp=Z,145nm,18.0s,baz=58,slow=38						
ARTI	Arti	63.24	322		P	18 54 04.9	+0.2
AB31	Akbulak array	63.99	314		P	18 54 10.2	+0.4
AB31				IAmb	IAmb	18 54 12.0	
	comp=Z,14nm,1.0s						
ABKAR	Akbulak array	63.99	314		P	18 54 10.1	+0.3
C36M	Paulatuk	64.50	23	IAmb	IAmb	18 54 17.8	
	comp=Z,11nm,0.9s						
NWAO	Narrogin (SRO)	65.97	203	P	P	18 54 22.9	+0.2
TOO	Toolangi	66.19	177	P	P	18 54 24.2	+0.1
TOO				IAmb	IAmb	18 55 28.0	
	comp=Z,9.3nm,1.2s						
SPITS	Spitsbergen Ar	68.65	350	P	P	18 54 40.0	+0.8
	comp=Z,8.7nm,1.1s,baz=102,slow=6.4,SNR=4.5						
	comp=Z,8.7nm,1.1s						
KBS	Kingsbay	68.79	351	P	P	18 54 41.2	+1.2
YKAW3	Yellowknife Wh	70.43	29		P	18 54 50.5	+0.1
YKAW3				IAmb	IAmb	18 54 53.6	
	comp=Z,8.9nm,1.2s						
YKA	Yellowknife Ar	70.46	29	P	P	18 54 50.7	+0.2
	comp=Z,2.7nm,0.8s,baz=294,slow=6.6,SNR=18						
	comp=Z,2.7nm,0.8s						
YKA	Yellowknife Ar	70.46	29	P	P	18 54 50.3	-0.3
YKAW1	Yellowknife Wh	70.51	29		P	18 54 50.9	0.0
YKAW1				IAmb	IAmb	18 54 54.1	
	comp=Z,7.7nm,1.0s						
ARCES	ARCESS Array B	71.91	341	P	P	18 54 59.2	0.0

	comp=Z,5.9nm,0.8s,baz=64,slow=5.5,SNR=4.0						
	comp=Z,5.9nm,0.8s						
ARCES	ARCESS Array B	71.91	341	P	P	18 54 57.7	-1.6
URZ	Urewera	74.28	152	LR	LR	19 21 00.3	
	comp=Z,59nm,22.0s,baz=110,slow=30						
RAR	Rarotonga	74.76	125	LR	LR	19 22 54.4	
	comp=Z,139nm,18.9s,baz=115,slow=32						
PINE	Pine Mountain	75.04	48	IAmb	IAmb	18 55 23.7	
	comp=Z,7.6nm,0.9s						
FIA1	FINESS Array S	76.42	334	P	P	18 55 25.1	-0.6
FINES	FINESS Array B	76.42	334	P	P	18 55 25.8	+0.1
	comp=Z,4.7nm,0.8s,baz=77,slow=5.4,SNR=20						
	comp=Z,4.7nm,0.8s						
FINES	FINESS Array B	76.42	334	P	P	18 55 25.7	0.0
BLKN	Baker Lake	76.54	22		P	18 55 26.2	-0.1
BLKN				IAmb	IAmb	18 55 29.8	
	comp=Z,11nm,1.1s						
ILON	Igloolik, Nuna	76.88	15		P	18 55 28.0	-0.1
ILON				IAmb	IAmb	18 55 32.8	
	comp=Z,8.6nm,1.0s						
BMO	Blue Mountains	76.89	46	IAmb	IAmb	18 55 48.0	
	comp=Z,22nm,1.9s						
KBZ	Khabaz	76.93	313	P	P	18 55 29.4	+0.5
	comp=Z,9.9nm,0.8s,baz=100,slow=3.1,SNR=28						
KBZ				LR	LR	19 32 16.3	
	comp=Z,79nm,18.6s,baz=20,slow=38						
	comp=Z,9.9nm,0.8s						
NVAR	Mina Array Bea	79.24	52	P	P	18 55 42.9	+0.7
	comp=Z,4.3nm,1.1s,baz=283,slow=4.7,SNR=8.9						
NVAR				LR	LR	19 25 16.7	
	comp=Z,169nm,20.7s,baz=29,slow=32						
	comp=Z,4.3nm,1.1s						
NVAR	Mina Array Bea	79.24	52	P	P	18 55 42.2	+0.1
GURO	Guroymak-BITLI	79.95	308	IAmb	IAmb	18 55 50.6	
	comp=Z,14nm,1.0s						
FFC	Flin Flon	80.10	32		P	18 55 46.4	+0.2
KOPT	Kop Dagi	80.28	310	IAmb	IAmb	18 56 03.5	
	comp=Z,11nm,1.0s						
HVU	Hansel Valley	81.28	47	IAmb	IAmb	18 56 11.7	
	comp=Z,16nm,1.9s						
AKASG	Malin Array Be	81.29	324	P	P	18 55 52.3	-0.3
	comp=Z,2.4nm,0.5s,baz=53,slow=5.4,SNR=12						
AKASG				LR	LR	19 34 27.2	
	comp=Z,162nm,18.6s,baz=44,slow=38						
	comp=Z,2.4nm,0.5s						
AKASG	Malin Array Be	81.29	324	P	P	18 55 51.6	-1.0
AKBB	Malin Array Si	81.29	324	P	P	18 55 52.2	-0.5
AKBB				IAmb	IAmb	18 56 07.1	
	comp=Z,38nm,1.9s						
KIEV	Kiev	81.30	324	P	P	18 55 52.2	-0.5
KIEV				IAmb	IAmb	18 56 07.1	
	comp=Z,34nm,1.9s						
MARD	Mardin	81.42	308	IAmb	IAmb	18 56 00.0	
	comp=Z,11nm,0.7s						
GWY	Greenwater Val	81.47	53	P	P	18 55 53.8	-0.3
NC405	NORSAR Array S	81.80	338	P	P	18 55 55.1	-0.1
HFS	Hagfors	81.85	337	P	P	18 55 55.1	-0.4
	comp=Z,7.4nm,0.8s,baz=90,slow=5.9,SNR=15						
	comp=Z,7.4nm,0.8s						
NB201	NORSAR Array S	81.98	338	P	P	18 55 55.8	-0.4
NB2	NORSAR Subarra	82.01	338	P	P	18 55 56.3	0.0
	comp=Z,2.3nm,0.6s,baz=41,slow=5.1						
NOA	NORSAR Array B	82.01	338	P	P	18 55 56.0	-0.3
	comp=Z,4.6nm,0.8s,baz=42,slow=5.2,SNR=12						
NOA				LR	LR	19 37 16.8	
	comp=Z,74nm,18.1s,baz=310,slow=39						
	comp=Z,4.6nm,0.8s						
DUG	Dugway, Tooele	82.07	48		P	18 55 56.9	-0.3
PDAR	Pinedale Array	82.79	45	P	P	18 56 01.2	+0.2
	comp=Z,1.3nm,0.8s,baz=330,slow=2.9,SNR=8.5						
	comp=Z,1.3nm,0.8s						
PDAR	Pinedale Array	82.79	45	P	P	18 55 58.5	-2.5
LCMT	Little Creek M	83.43	51	IAmb	IAmb	18 56 30.5	
	comp=Z,14nm,1.8s						
KNB	Kanab	83.71	51	IAmb	IAmb	18 56 10.3	
	comp=Z,13nm,1.3s						
SRU	San Rafael Swe	84.14	48	IAmb	IAmb	18 56 12.5	
	comp=Z,17nm,1.7s						
RAYN	Ar Rayn	84.61	294		P	18 56 11.0	+0.6
BR131	Keskin Array S	84.93	313	IAmb	IAmb	18 56 13.9	
	comp=Z,10nm,0.9s						
BRTR	Keskin Array B	84.93	313	P	P	18 56 12.4	+0.5
	comp=Z,7.5nm,0.9s,baz=93,slow=4.5,SNR=25						
	comp=Z,7.5nm,0.9s						
BRTR	Keskin Array B	84.93	313		P	18 56 11.9	0.0
PV21	Cone Mtn., Par	85.46	48	IAmb	IAmb	18 56 19.1	
	comp=Z,4.6nm,0.8s						
PV10	Paradox Valley	85.52	48	P	P	18 56 15.1	0.0
PV04	Paradox Valley	85.59	48	IAmb	IAmb	18 56 35.0	
	comp=Z,5.4nm,0.9s						
PV16	Nyswonger Mesa	85.63	48	IAmb	IAmb	18 56 20.6	
	comp=Z,5.6nm,0.9s						
PV05	Paradox Valley	85.64	49	IAmb	IAmb	18 56 28.3	
	comp=Z,5.4nm,0.8s						
PV11	David Mesa, Pa	85.67	48	IAmb	IAmb	18 56 20.2	
	comp=Z,9.1nm,0.8s						
PV18	Skein Mesa, Pa	85.67	48	IAmb	IAmb	18 56 20.7	
	comp=Z,12nm,1.0s						
PV03	Paradox Valley	85.71	48	IAmb	IAmb	18 56 20.4	
	comp=Z,6.0nm,1.0s						
PV01	Paradox Valley	85.96	48	IAmb	IAmb	18 56 35.4	
	comp=Z,21nm,1.7s						
EPLO	Experimental L	87.23	33	P	P	18 56 22.8	-0.1
MODS	Modra-Piesok	88.75	327	*e*P	P	18 56 31.2	+1.0
GERES	GERESS Array B	90.07	329	P	P	18 56 36.3	-0.2
	comp=Z,0.3nm,0.6s,baz=55,slow=12,SNR=3.9						
	comp=Z,0.3nm,0.6s						
DKNS	Dickens	93.60	48	IAmb	IAmb	18 57 55.5	
	comp=Z,9.9nm,1.2s						
TX31	Lajitas Ar. Si	94.36	53	IAmb	IAmb	18 57 30.9	
	comp=Z,5.4nm,1.2s						
TXAR	Lajitas Array	94.36	53	P	P	18 56 57.8	+1.1
	comp=Z,1.2nm,0.7s,baz=298,slow=2.5,SNR=14						
	comp=Z,1.2nm,0.7s						
TXAR	Lajitas Array	94.36	53	P	P	18 56 57.1	+0.4
QSPA	South Pole Qui	118.67	180	PKP	PKPdf	19 02 23.3	-0.5
	comp=Z,2.9nm,0.9s,baz=276,slow=1.0,SNR=12						
QSPA	South Pole Qui	118.67	180		PKPdf	19 02 21.8	-2.0
TORD	Torodi Ar. Bea	123.54	312	PKP	PKPdf	19 02 34.2	-0.5
	comp=Z,1.2nm,0.6s,baz=13,slow=2.8,SNR=8.9						
DBIC	Dimbokro	132.63	313	PKP	PKiKP	19 02 53.0	-0.1
	comp=Z,1.3nm,0.6s,baz=342,slow=4.3,SNR=3.2						
LPAZ	La Paz	149.22	73	PKPbc	PKPbc	19 03 26.7	+0.2
	comp=Z,4.7nm,0.8s,baz=214,slow=2.1,SNR=10						
LPAZ	La Paz	149.22	73		PKPbc	19 03 25.8	-0.8
PLCA	Paso Flores	150.64	122	PKPbc	PKiKP	19 03 29.6	+0.3
	comp=Z,4.5nm,1.2s,baz=298,slow=6.6,SNR=3.9						

DJA 30 18:44:01.2±0.4**,7°S**±3°×**10°4E**±°**,h10**^{km}**,M3.8**/13**,mb4.0**/5**,**
MLv3.7/13**,Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	Kota Agung	1.29	32	P	Pn	18 44 24.1	-1.2
KASI				S	Sb	18 44 42.1	-0.1
LWLI	Liwa	1.61	9	P	Pn	18 44 29.5	-0.4
LWLI				S	Sn	18 44 51.2	+0.4
BLSI	Bandar Lampung	1.90	49	P	Pn	18 44 33.5	-0.2
BLSI				S	Sn	18 44 58.2	+0.4
EGSI	Enggano, Bengk	1.97	310	P	Pn	18 44 34.8	+0.1
EGSI				S	Sn	18 45 00.6	+1.2
KLSI		2.13	26	P	Pn	18 44 37.7	+0.8
MDSI	Maura Dua	2.15	10	P	Pn	18 44 37.4	+0.2
MDSI				S	Sn	18 45 05.4	+1.4
MNAI	Manna	2.40	339	P	Pn	18 44 39.8	-0.8
KSI	Kapahiang	3.18	338	P	Pn	18 44 50.7	-0.7
CNJI	Cibinong	3.38	102	P	Pn	18 44 53.9	-0.1
BBJI	Bungbulang	3.91	103	P	Pn	18 45 00.8	-0.7
KPJI	Karang Pucung	5.14	98	P	Pn	18 45 18.4	+0.1
	0.1nm14nm,1.7s						
PPSI	Pulau Pagai	5.38	315	P	Pn	18 45 21.6	0.0
PCJI	Pacitan	7.48	103	P	Pn	18 45 49.8	-0.7
	33nm,1.1s						
SNJI	Sawahan-Nganju	7.98	99	P	Pn	18 45 58.0	+0.5

UPA ***30*** *18:58:17.2±1.0, 7°.13N×78°.49W, h20^{km}±7^{km}, MW4.6*
IDC ***30*** *18:58:18.5±1.2, 7°.38N×78°.81W, h0^{km}, mb3.9/9, mbtmp4.0/12, ML2.8/3, MS3.9/4, Error ellipse: s-maj=36.7km s-min=20.0km az=23.0*
NEIC ***30*** *18:58:20.2±1.4, 7°.27N±0°.09×78°.70W±0°.07, h10^{km}±1^{km}, mb4.6/66, Error ellipse: s-maj=15.9km s-min=11.6km az=203.0*
CATAC ***30*** *18:58:21.2±1.0, 7°N±3°×7°9W±°, h23^{km}±9^{km}, M4.1/13, mb3.9/1, MLv4.2/13, Error ellipse: s-maj=8.0km s-min=3.5km az=35.1, confirmed*
RSNC ***30*** *18:58:21.9±0.0, 7°N±2°×7°9W±°, h16^{km}±2^{km}, M3.5, mb4.4, mB4.6, ML2.8, Mw(mB)3.8*
ISC 30 18:58:19.5±2.0**, 7°.36N**±0°.03×**78°.65W**±0°.03**, h10**^{km}±13^{km}**,**
n145, σ1^{s}30/158**, mb4.6**/34**, MS4.0**/3**, 2D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTAC	Punta Ardita,	0.87	104	P	Pb	18 58 35.8	-0.9
PTAC				S	Sb	18 58 47.3	-1.1
UPD2	Meteti	1.34	28	*e*P	Pn	18 58 42.4	-2.0
UPD2				*e*S	Sn	18 59 00.7	-1.5
PEDA3	Pedasi	1.37	277	⇓*i*P	Pn	18 58 42.6	-2.1
PEDA3				*e*S	Sn	18 59 02.5	-0.5
PCRI3	Pocri, Los San	1.48	282	*e*P	Pn	18 58 45.1	-1.2
PCRI3				*e*S	Sb	18 59 06.4	+0.2
ACHO3	Achotines, Los	1.51	272	*e*P	Pn	18 58 45.1	-1.5
ACHO3				*e*S	Sn	18 59 05.6	-0.8
TOTI	Torti	1.59	12	*e*P	Pn	18 58 46.6	-1.3
TOTI				*e*S	Sn	18 59 08.0	-0.6
AZU	Azuero	1.66	285	⇓*i*P	Pn	18 58 47.5	-1.3
AZU				*e*S	Sn	18 59 10.9	+0.6
SOLC	Bahia Solano	1.68	132	P	Pn	18 58 47.0	-2.0
SOLC				S	Sg	18 59 12.6	-0.9
TABO3	Taboga, Panama	1.68	328	*e*P	Pn	18 58 48.7	-0.3
TABO3				*e*S	Sb	18 59 12.2	+0.4
FLAM	Flamenco Islan	1.77	330	*e*P	Pn	18 58 50.0	-0.3
FLAM				*e*S	Sb	18 59 15.0	+0.5
TOSI3	Tonosi	1.77	272	*e*P	Pn	18 58 48.7	-1.6
CAPC	Capurgana	1.81	46	P	Pn	18 58 50.3	-0.5
CAPC				S	Sn	18 59 13.3	-0.5
CAP2	Capurgana	1.81	45	P	Pn	18 58 50.4	-0.5
CAP2				S	Sn	18 59 11.9	-2.1
UPA	Univ. de Panam	1.83	332	*e*P	Pn	18 58 51.4	+0.3
UPA				*e*S	Sb	18 59 16.8	+0.7
CHIT3	Chitre	1.84	289	*e*P	Pn	18 58 50.6	-0.7
CHIT3				*e*S	Sn	18 59 14.9	+0.1
CNTA3	Canitas, Panam	1.86	353	*e*P	Pn	18 58 50.7	-0.8
CNTA3				*e*S	Sb	18 59 16.4	-0.7
CHOR3	La Chorrera	1.88	324	*e*P	Pn	18 58 51.5	-0.3
CHOR3				*e*S	Sb	18 59 18.2	+0.6
GAMB1	Gamboa	2.03	329	*i* P	Pn	18 58 53.1	-0.8
GAMB1				*e*S	Sb	18 59 21.8	-0.3
APAC	Apartado, Choc	2.12	75	P	Pb	18 58 57.7	-0.5
APAC				S	Sb	18 59 25.7	+1.0
FRIJ	El Hiral	2.13	330	*e*P	Pn	18 58 54.4	-0.9
FRIJ				*e*S	Sb	18 59 23.5	-1.3
CRIS3	El Cristo, Coc	2.14	295	*e*P	Pn	18 58 54.0	-1.3
CACAO	El Cacao, Vera	2.19	270	*e*P	Pn	18 58 53.6	-2.4
CACAO				*e*S	Sn	18 59 23.0	-0.3
MARI3	Mariato, Verag	2.33	277	*e*P	Pn	18 58 57.0	-1.1
CALO3	Calobre, Verag	2.37	294	*e*P	Pn	18 58 57.9	-0.7
CALO3				*e*S	Sn	18 59 29.1	+1.4
STIA3	Santiago, Vera	2.41	288	*e*P	Pn	18 58 58.2	-0.9
DBBC	Dabeiba	2.45	98	P	Pn	18 59 00.7	+1.0
DBBC				S	Sn	18 59 28.5	-1.4
SFRA3	San Francisco,	2.46	291	*e*P	Pn	18 58 59.4	-0.4
RSUS3	Rio de Jesus,	2.56	284	*e*P	Pn	18 59 00.1	-1.1
GMAL	Guarumal, Vera	2.59	279	*e*P	Pn	18 59 01.1	-0.4
MESA3	La Mesa, Verag	2.63	287	*e*P	Pn	18 59 00.9	-1.2
MESA3				*e*S	Sn	18 59 34.5	+0.5
PIZC	Pizarro, Choco	2.71	152	P	Pn	18 59 02.3	-0.9
PIZC				S	Sn	18 59 36.7	+0.6
PVID3	Puerto Vidal,	3.01	283	*e*P	Pn	18 59 06.4	-0.9
CBOC	Ciudad Bolivar	3.02	119	P	Pn	18 59 07.0	-0.6
CBOC				S	Sn	18 59 42.2	-1.8
UREC	San Jos de Ur	3.12	83	P	Pn	18 59 09.8	+0.9
UREC				S	Sn	18 59 46.9	+0.6
NANC3	Nancito, Chiri	3.17	286	*e*P	Pn	18 59 09.1	-0.5
NANC3				*e*S	Sn	18 59 48.1	+0.5
HELC	Santa Helena	3.31	110	P	Pn	18 59 12.9	+1.0
HELC				S	Sn	18 59 49.3	-2.3
HELC	Santa Helena	3.31	110	P	Pn	18 59 12.9	+1.0
HELC				S	Sn	18 59 52.0	+0.4
CHGR2	Aguacate	3.79	295	*e*P	Pn	18 59 17.2	-1.0
CHGR2				*e*S	Sn	19 00 03.3	+0.4
PSOM3	Paja de Sombre	3.86	290	*e*P	Pn	18 59 17.9	-1.3
LOCO3	Loma Colorada,	3.87	286	*e*P	Pn	18 59 18.6	-0.7
DVD	David	3.91	286	*e*P	Pn	18 59 18.4	-1.3
YOTC	Yotoco, Valle	4.07	145	P	Pn	18 59 21.7	-0.4
BRU2	Volcan	4.24	290		Pn	18 59 24.2	-0.3
BRU2	Volcan	4.24	290	*e*P	Pn	18 59 24.0	-0.5
BRU2				*e*S	Sn	19 00 14.4	+0.2
BRU2	Volcan	4.24	290	P	Pn	18 59 25.4	+0.9
PTBC	PUERTO BERRIO,	4.25	101	P	Pn	18 59 26.7	+2.3
PTBC				S	Sn	19 00 14.3	+0.1
SJCC	San Jacinto, C	4.26	54	P	Pn	18 59 26.7	+2.1
SJCC				S	Sn	19 00 14.3	-0.2
PTPM	Petroterminale	4.27	282	*e*P	Pn	18 59 23.6	-1.1
ANIL	Santa Ana	4.31	131	P	Pn	18 59 26.3	+0.7
CDITO	Canoas	4.35	286	P	Pn	18 59 30.6	+4.8
JAMC	Jamundi, Valle	4.57	154	P	Pn	18 59 29.7	+0.7
PIRO	Carate, Puerto	4.75	283		Pn	18 59 32.0	+0.7
ORTC	Ortega, Tolima	4.83	135	P	Pn	18 59 35.3	+2.9
DRK0	Durika	4.92	293	*e*P	Pn	18 59 33.5	-0.3
DRK0	Durika	4.92	293	P	Pn	18 59 33.6	-0.2
ROSC	El Rosal	4.99	120	Pn	Pn	18 59 38.0	+3.1
	4.1nm,0.3s,baz=68,slow=20,SNR=4.0						
	11nm,0.5s						
ROSC	El Rosal	4.99	120		Pn	18 59 34.1	-0.8
POPC	Popayan, Colom	5.18	158	P	Pn	18 59 38.9	+1.4
	21nm,0.8s						
PRAC	Prado	5.22	134	P	Pn	18 59 41.3	+3.6
PRAC	Prado	5.22	134	P	Pn	18 59 40.2	+2.4
BARC	Barichara	5.49	98	P	Pn	18 59 42.6	+0.9
	675nm42nm,0.7s						
CHIC	Chingaza	5.60	119	P	Pn	18 59 43.9	+0.5
	454nm20nm,1.0s						
RUSC	La Rusia	5.72	104	P	Pn	18 59 47.0	+1.8
	420nm39nm,0.9s						
PAMC	Pamplona, Colo	5.91	90	P	Pn	18 59 48.6	+0.9
	266nm25nm,0.7s						
PAMC				S	Sn	19 00 55.6	-0.1
	266nm25nm,0.7s						
GARC	Garzon, Huila	6.03	148	P	Pn	18 59 51.9	+2.7
PRVC	Isla de Provid	6.54	336	P	Pn	18 59 56.1	+0.1
PRVC				S	Sn	19 01 05.4	-5.3
JTS	Las Juntas de	6.87	296	Pn	Pn	18 59 58.9	-1.6
	0.7nm,0.3s,baz=272,slow=5.0,SNR=5.1						
JTS				LR	LR	19 02 42.6	
	comp=Z,316nm,20.0s,baz=60,slow=39						
	1.9nm,0.4s						
JTS	Las Juntas de	6.87	296		Pn	19 00 01.1	+0.6
OTAV	Otavalo	7.08	178		Pn	19 00 03.5	-0.3
JUD3	Juan Diaz 3	7.35	293	Pn	Pn	19 00 08.1	+1.0
SDV	Santo Domingo	8.08	79	Pn	Pn	19 00 20.2	+2.9
	0.7nm,0.3s,baz=247,slow=5.7,SNR=13						
SDV				Sn	Sn	19 01 47.7	-1.3
	2.5nm,0.3s,baz=338,slow=19,SNR=3.7						
	23nm,0.9s						
SDV	Santo Domingo	8.08	79		Pn	19 00 17.7	+0.3
SDV	Santo Domingo	8.08	79	P	Pn	19 00 20.1	+2.8
BOAB	BOACO BROADBAN	8.56	307	Pn	Pn	19 00 17.7	-5.9
SIUN	Universidad Ur	8.72	317	Pn	Pn	19 00 23.2	-2.6
SDDR	Presa de Saban	13.59	31		Pn	19 01 34.8	+2.2
AOPR	Arecibo Observ	15.92	46	Pn	Pn	19 02 05.3	+1.4
AOPR				IAmb	IAmb	19 02 13.5	
	comp=Z,50nm,1.1s						
HODGE	Hodges	26.94	353	P	P	19 04 02.2	+0.9
Y49A	Blount Mountai	27.32	346	P	P	19 04 05.3	+0.6
V48A	Smith Brothers	29.22	346	P	P	19 04 22.6	+1.0
V48A				IAmb	IAmb	19 04 30.1	
	comp=Z,9.8nm,0.7s						
TX31	Lajitas Ar. Si	32.12	316		P	19 04 47.6	+0.1
TX31				IAmb	IAmb	19 04 55.1	
	comp=Z,8.2nm,1.1s						
TXAR	Lajitas Array	32.12	316	P	P	19 04 47.4	-0.1
	comp=Z,1.2nm,0.8s,baz=134,slow=11,SNR=11						
	comp=Z,1.2nm,0.8s						
N58A	Sunbury	33.38	3	P	P	19 04 58.4	+0.2
VHRN	Van Horn	33.91	317		P	19 05 02.9	-0.3
ELIS	Ellis County	34.30	329	P	P	19 05 07.2	+0.8
MNTX	Cornudas Mount	34.74	318		P	19 05 09.8	-0.4
MNTX				IAmb	IAmb	19 05 17.4	
	comp=Z,10nm,0.9s						
Y22A	Socorro	37.18	319	P	P	19 05 31.8	+0.5
319A	Douglas	37.25	314	IAmb	IAmb	19 05 40.8	
	comp=Z,15nm,1.0s						
ABQ	Albuquerque	37.50	321		P	19 05 33.7	-0.3
ABQ				IAmb	IAmb	19 05 42.0	
	comp=Z,11nm,0.9s						
ANMO	Albuquerque	37.50	321		P	19 05 34.1	+0.1
ANMO				IAmb	IAmb	19 05 42.0	
	comp=Z,11nm,0.9s						
TASM	ASL Pad, Albuq	37.50	321	IAmb	IAmb	19 05 42.0	
	comp=Z,11nm,0.9s						
TASM	ASL Pad, Albuq	37.50	321	IAmb	IAmb	19 05 42.0	
	comp=Z,11nm,0.9s						
TASM	ASL Pad, Albuq	37.50	321	IAmb	IAmb	19 05 42.1	
	comp=Z,10nm,0.9s						
TASM	ASL Pad, Albuq	37.50	321	IAmb	IAmb	19 05 42.0	
	comp=Z,11nm,1.0s						
T25A	Trinidad	37.78	325		P	19 05 37.4	+1.0
T25A				IAmb	IAmb	19 05 45.6	
	comp=Z,19nm,1.2s						
BDFB	Brasilia	37.99	127	LR	LR	19 22 11.4	
	comp=Z,236nm,20.2s,baz=303,slow=38						
SDCO	Great Sand Dun	38.82	325	IAmb	IAmb	19 05 53.9	
	comp=Z,20nm,1.5s						
GGN	Saint George	38.99	13	P	P	19 05 46.9	+0.8
X18A	Snowflake	39.50	318	P	P	19 05 51.7	+0.9
PV01	Paradox Valley	40.87	323	IAmb	IAmb	19 06 10.8	
	comp=Z,17nm,1.4s						
PV15	Paradox Valley	40.95	323	IAmb	IAmb	19 06 11.5	
	comp=Z,15nm,1.1s						
WUAZ	Wupatki	41.03	318	P	P	19 06 04.5	+1.1
WUAZ				IAmb	IAmb	19 06 12.1	
	comp=Z,9.5nm,0.8s						
PV13	Radium Mtn., P	41.03	323	IAmb	IAmb	19 06 12.5	
	comp=Z,13nm,1.1s						
PV12	Saucer Basin,	41.12	323	IAmb	IAmb	19 06 12.8	
	comp=Z,22nm,1.2s						
PV18	Skein Mesa, Pa	41.14	323		P	19 06 04.7	+0.3
PV18				IAmb	IAmb	19 06 06.0	
	comp=Z,13nm,1.0s						
PV05	Paradox Valley	41.15	323	IAmb	IAmb	19 06 12.3	
	comp=Z,11nm,1.0s						
PV11	David Mesa, Pa	41.15	323	IAmb	IAmb	19 06 12.7	
	comp=Z,11nm,1.1s						
PV16	Nyswonger Mesa	41.19	323	IAmb	IAmb	19 06 13.1	
	comp=Z,10nm,1.2s						
PV19	Morning Glory	41.23	323	IAmb	IAmb	19 06 13.4	
	comp=Z,16nm,1.3s						
PV10	Paradox Valley	41.30	323	IAmb	IAmb	19 06 13.6	
	comp=Z,16nm,1.3s						
HMU	Henry Mountain	42.06	321	IAmb	IAmb	19 06 20.6	
	comp=Z,15nm,1.1s						
SRU	San Rafael Swe	42.66	323	IAmb	IAmb	19 06 24.9	
	comp=Z,10nm,1.1s						
BSUT	Blindstream Ca	43.72	324		P	19 06 25.7	+0.1
PD31	Pinedale Array	44.53	327	P	P	19 06 32.5	+0.6
PDAR	Pinedale Array	44.53	327	P	P	19 06 32.5	+0.6
	comp=Z,0.9nm,0.8s,baz=125,slow=12,SNR=7.0						
	comp=Z,0.9nm,0.8s						
PDAR	Pinedale Array	44.53	327	P	P	19 06 31.3	-0.6
ULM	Lac du Bonnet	45.10	344	P	P	19 06 34.7	-1.3
	comp=Z,3.5nm,0.7s,baz=150,slow=8.2,SNR=4.0						
	comp=Z,3.5nm,0.7s						
ULM	Lac du Bonnet	45.10	344	IAmb	IAmb	19 06 35.8	
	comp=Z,13nm,1.3s						
MOOW	Moose Ponds	45.84	328		P	19 06 42.6	+0.4
NV11	Mina Array Sit	47.16	317	IAmb	IAmb	19 07 01.2	
	comp=Z,8.5nm,1.2s						
NVAR	Mina Array Bea	47.26	317	P	P	19 06 53.6	+0.1
	comp=Z,1.9nm,0.9s,baz=128,slow=7.1,SNR=8.4						
	comp=Z,1.9nm,0.9s						
NVAR	Mina Array Bea	47.26	317	P	P	19 06 53.3	-0.2
SCHQ	Schefferville	48.28	9	P	P	19 07 01.9	+1.0
	comp=Z,3.1nm,0.6s,baz=189,slow=7.1,SNR=4.0						
	comp=Z,3.1nm,0.6s						
SCHQ	Schefferville	48.28	9	P	P	19 07 01.5	+0.7
YKAW1	Yellowknife Wh	60.91	342	P	P	19 08 31.0	-1.3
YKAW1				IAmb	IAmb	19 08 39.1	
	comp=Z,4.6nm,0.8s						
YKA	Yellowknife Ar	60.95	342	P	P	19 08 32.0	-0.6
	comp=Z,1.5nm,0.7s,baz=136,slow=6.5,SNR=30						
	comp=Z,1.5nm,0.7s						
YKA	Yellowknife Ar	60.95	342	P	P	19 08 31.7	-1.0
YKAW3	Yellowknife Wh	61.00	342		P	19 08 32.1	-0.9
ESDC	Sonseca Array	73.56	51	P	P	19 09 54.2	+1.0
	comp=Z,0.9nm,0.9s,baz=278,slow=7.5,SNR=6.2						
	comp=Z,0.9nm,0.9s						
ESDC	Sonseca Array	73.56	51	P	P	19 09 53.1	-0.1
ILAR	Eielson Array	74.18	336	P	P	19 09 55.8	-0.5
	comp=Z,1.0nm,1.0s,baz=119,slow=4.8,SNR=5.0						
ILAR				LR	LR	19 47 02.9	
	comp=Z,108nm,18.0s,baz=176,slow=40						
	comp=Z,1.0nm,1.0s						
ILAR	Eielson Array	74.18	336	P	P	19 09 56.4	+0.1
RND	Reindeer	74.64	334	P	P	19 09 59.4	+0.3
J20K	Nowinta River	77.10	334	P	P	19 10 13.4	+0.4
J20K				IAmb	IAmb	19 10 25.4	
	comp=Z,5.9nm,1.2s						
N18K	Kilae Creek	77.37	331	P	P	19 10 14.8	+0.2
H18K	Honhosa River	79.03	335	P	P	19 10 24.1	+0.4
SDPT	Sand Point	79.33	325	P	P	19 10 26.0	+0.5
GERES	GERESS Array B	86.06	41	P	P	19 11 01.9	+1.1
	comp=Z,0.4nm,0.8s,baz=249,slow=3.7,SNR=4.0						
	comp=Z,0.4nm,0.8s						
TIXI	Tiksi	99.08	351	LR	LR	20 00 07.2	
	comp=Z,45nm,18.4s,baz=19,slow=37						
ASAR	Alice Springs	144.82	239	PKP	PKPbc	19 17 56.9	0.0
	comp=Z,3.1nm,0.9s,baz=124,slow=4.2,SNR=14						
ASAR	Alice Springs	144.82	239		PKPab	19 17 56.1	-0.7
WRA	Warramunga Arr	145.67	245	PKPbc	PKPdf	19 17 58.8	-0.6
	comp=Z,2.5nm,1.0s,baz=109,slow=3.0,SNR=6.8						
WRA	Warramunga Arr	145.67	245		PKPdf	19 17 58.0	-1.4
CMAR	Chiang Mai Arr	154.23	5	PKPbc	PKiKP	19 18 21.5	+0.4
	comp=Z,1.3nm,0.9s,baz=325,slow=1.8,SNR=9.3						
CMAR	Chiang Mai Arr	154.23	5		PKPdf	19 18 10.8	-2.1

UPA ***30*** *19:05:09.8±1.1, 7°.36N×78°.63W, h5^{km}±5^{km}, MD4.2, MW4.3*
IDC ***30*** *19:05:10.5±1.8, 7°.69N×78°.64W, h0^{km}, mb3.5/5, mbtmp3.6/7, ML3.1/2, Error ellipse: s-maj=50.8km s-min=26.4km az=13.0*
CATAC ***30*** *19:05:13.5±1.1, 7°N±5°×7°9W±°, h29^{km}±11^{km}, M3.8/9, MLv3.8/9, Error ellipse: s-maj=12.0km s-min=3.9km az=29.6, confirmed*
RSNC ***30*** *19:05:15.2±0.5, 7°N±2°×7°8W±°, h11^{km}±3^{km}, M3.1, mb4.3, mB4.8, ML2.5, Mw(mB)4.0*
ISC 30 19:05:08.1±1.3**, 7°.34N**±0°.03×**78°.67W**±0°.02**, h0**^{km}±9^{km}**, n54,**
σ1^{s}79/81**, mb3.5**/5**, 2D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTAC	Punta Ardita,	0.88	103	P	Pn	19 05 26.4	-1.2
PTAC				S	Sb	19 05 37.8	-0.6
PEDA3	Pedasi	1.36	278	*e*P	Pg	19 05 35.1	+1.0
PEDA3				*e*S	Sg	19 05 54.3	+2.6
UPD2	Meteti	1.36	28	⇓*i*P	Pg	19 05 34.1	-0.2
UPD2				*e*S	Sg	19 05 52.0	+0.1
PCRI3	Pocri, Los San	1.47	283	*e*P	Pg	19 05 35.9	-0.4
ACHO3	Achotines, Los	1.49	273	*e*P	Pb	19 05 35.9	-0.7
ACHO3				*e*S	Sg	19 05 57.4	+1.4
TOTI	Torti	1.62	13	⇓*i*P	Pb	19 05 37.7	-1.1
TOTI				*e*S	Sg	19 05 58.7	-1.5
AZU	Azuero	1.65	286	*e*P	Pb	19 05 38.3	-1.1
AZU				*e*S	Sg	19 06 01.2	0.0
SOLC	Bahia Solano	1.67	131	P	Pb	19 05 39.2	-0.5
SOLC				S	Sn	19 05 57.3	-3.4
TABO3	Taboga, Panama	1.69	329	*e*P	Pb	19 05 39.4	-0.6
FLAM	Flamenco Islan	1.78	331	*e*P	Pn	19 05 39.5	-0.6
FLAM				*e*S	Sb	19 06 03.3	-1.2
CAPC	Capurgana	1.83	45	P	Pb	19 05 41.4	-1.1
CAPC				S	Sn	19 06 02.9	-1.8
CHIT3	Chitre	1.84	290	*e*P	Pb	19 05 41.1	-1.4
CHIT3				*e*S	Sb	19 06 05.6	-0.5
CAP2	Capurgana	1.84	45	P	Pb	19 05 41.6	-1.0
CAP2				S	Sn	19 06 02.6	-2.3
UPA	Univ. de Panam	1.84	332	*e*P	Pb	19 05 42.1	-0.5
UPA				*e*S	Sb	19 06 05.1	-1.1
CNTA3	Canitas, Panam	1.88	353	*e*P	Pb	19 05 42.0	-1.3
CNTA3				*e*S	Sb	19 06 05.8	-1.5
CHOR3	La Chorrera	1.89	325	*e*P	Pb	19 05 42.1	-1.4
CHOR3				*e*S	Sb	19 06 06.7	-0.9
GAMB1	Gamboa	2.05	330	*e*P	Pb	19 05 44.6	-1.5
GAMB1				*e*S	Sb	19 06 10.3	-1.8
FRIJ	El Hiral	2.14	331	*e*P	Pn	19 05 44.9	-0.1
FRIJ				*e*S	Sb	19 06 13.3	-1.6
APAC	Apartado, Choc	2.15	75	P	Pg	19 05 49.1	-0.1
APAC				S	Sb	19 06 15.0	0.0
CACAO	El Cacao, Vera	2.17	270	*e*P	Pb	19 05 47.2	-1.0
CACAO				*e*S	Sb	19 06 14.8	-1.0

MARI3	Mariato, Verag	2.32	278	eP	Pb	19 05 48.3	-2.5
MARI3				eS	Sb	19 06 18.9	-1.1
CALO3	Calobre, Verag	2.36	295	eP	Pb	19 05 49.4	-2.0
SFRA3	San Francisco,	2.45	292	eP	Pb	19 05 51.0	-2.1
GMAL	Guarumal, Vera	2.58	280	eP	Pb	19 05 52.3	-2.8
MESA3	La Mesa, Verag	2.62	288	eP	Pb	19 05 53.0	-2.9
SAFE3	Santa Fe, Vera	2.66	296	eP	Pb	19 05 54.0	-2.5
PIZC	Pizarro, Choco	2.69	151	P	Pn	19 05 52.7	+0.1
PIZC				S	Sn	19 06 22.9	-3.1
CBOC	Ciudad Bolivar	3.02	119	P	Pn	19 05 57.5	+0.2
CBOC				S	Sn	19 06 31.8	-2.5
UREC	San Jos de Ur	3.14	82	P	Pb	19 06 01.2	-3.5
UREC				S	Sn	19 06 38.0	+1.0
NANC3	Nancito, Chiri	3.16	287	eP	Pn	19 06 01.1	+2.0
HELC	Santa Helena	3.32	110	P	Pn	19 06 03.3	+1.7
HELC				S	Sn	19 06 42.9	+1.0
HELC	Santa Helena	3.32	110	P	Pn	19 06 03.3	+1.7
HELC				S	Sn	19 06 40.5	-1.5
PLMC	San Jos del P	3.39	135	P	Pn	19 06 01.4	-0.9
PLMC				S	Sn	19 06 40.3	-2.9
YOTC	Yotoco, Valle	4.06	145	P	Pn	19 06 11.8	+0.3
NORC	Norcasia	4.17	115	P	Pn	19 06 14.9	+1.9
NORC				S	Sn	19 07 00.0	-2.5
PTBC	PUERTO BERRIO,	4.26	100	P	Pn	19 06 16.8	+2.6
PTBC				S	Sn	19 07 04.5	-0.1
SJCC	San Jacinto, C	4.29	53	P	Pn	19 06 15.7	+1.1
SJCC				S	Sn	19 07 05.1	-0.2
SJCC	San Jacinto, C	4.29	53	P	Pb	19 06 18.5	-5.9
POPC	Popayan, Colom	5.17	157	P	Pn	19 06 28.8	+1.9
PRAC	Prado	5.21	134	P	Pn	19 06 31.3	+4.0
OCAC	Ocana	5.38	80	P	Pn	19 06 33.5	+3.8
	4μm60nm,0.7s						
OCAC				S	Sn	19 07 34.0	+1.6
	4μm60nm,0.7s						
CHIC	Chingaza	5.60	118	P	Pn	19 06 37.1	+4.1
RUSC	La Rusia	5.73	104	P	Pn	19 06 38.1	+3.2
	15nm,1.2s						
URMC	La Uribe, Meta	5.90	133	P	Pn	19 06 39.0	+2.2
PAMC	Pamplona, Colo	5.92	90	P	Pn	19 06 40.7	+3.2
	92nm9.5nm,0.6s						
GARC	Garzon, Huila	6.02	148	P	Pn	19 06 41.5	+2.9
JTS	Las Juntas de	6.87	296	Pn	Pn	19 06 52.2	+2.1
	1.1nm,0.3s,baz=86,slow=6.5,SNR=6.9						
	3.5nm,0.6s						
SDV	Santo Domingo	8.11	79	Pn	Pn	19 07 10.1	+2.9
	1.0nm,0.3s,baz=335,slow=20,SNR=6.2						
SDV				Sn	Sn	19 08 38.5	-1.3
	0.7nm,0.3s,baz=82,slow=18,SNR=1.4						
	2.9nm,0.4s						
TXAR	Lajitas Array	32.13	316	P	P	19 11 37.8	+0.3
	0.5nm,0.8s,baz=134,slow=7.3,SNR=5.7						
	0.5nm,0.8s						
PDAR	Pinedale Array	44.54	327	P	P	19 13 22.7	+0.8
	0.4nm,0.7s,baz=128,slow=9.6,SNR=4.9						
	0.4nm,0.7s						
NVAR	Mina Array Bea	47.27	317	P	P	19 13 44.6	+1.1
	0.3nm,0.5s,baz=139,slow=6.4,SNR=5.3						
	0.3nm,0.5s						
YKA	Yellowknife Ar	60.97	342	P	P	19 15 22.1	-0.6
	0.6nm,0.8s,baz=136,slow=6.5,SNR=11						
	0.6nm,0.8s						
ESDC	Sonseca Array	73.58	51	P	P	19 16 45.5	+2.1
	0.3nm,0.8s,baz=256,slow=5.0,SNR=2.2						
	0.3nm,0.8s						
ASAR	Alice Springs	144.79	239	PKPbc	PKPdf	19 24 47.5	-0.4
	0.9nm,1.0s,baz=116,slow=3.9,SNR=9.3						

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*ATH **30** 19:08:27.9, 36°.35N×23°.28E, h12^{km}±1^{km}, ML2.8/7, Manual Solution by F.Xalaris First location: 2019/12/30 19:09:34, This location: 2019/12/30 19:15:26 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*

*THE **30** 19:08:28.5, 36°N±2°×2°3E±°, h6^{km}±3^{km}, M2.5/5, MLh2.5/5*

ISC 30 19:08:28.0±1.0**, 36°.35N**±0°.03×**23°.27E**±0°.05**, h11**^{km}±10^{km}**, n24,** σ0^s.**28**/30**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTHA	Kythira Island	0.19	242	P	Pg	19 08 32.0	-0.1
KTHA				S	Sg	19 08 34.6	-0.3
NPS1	Neapolis Lacon	0.23	314	P	Pg	19 08 33.2	+0.4
NPS1				S	Sg	19 08 36.3	+0.1
MNVA	Monemvasia	0.39	331	P	Pg	19 08 36.1	+0.5
MNVA				S	Sg	19 08 41.0	+0.2
VLI	Veliai	0.46	324	P	Pg	19 08 37.1	+0.1
VLI				S	Sg	19 08 42.9	-0.1
VLI	Veliai	0.46	324	P	Pg	19 08 37.0	+0.1
VLI				S	Sg	19 08 42.7	-0.3
ANKY	Antikythira Is	0.48	177	P	Pg	19 08 37.6	+0.2
ANKY				S	Sg	19 08 44.2	+0.4
ANKY	Antikythira Is	0.48	177	P	Pg	19 08 37.5	+0.2
ANKY				S	Sg	19 08 44.1	+0.3
IMMV	Iera Moni Meta	1.06	147	P	Pg	19 08 48.6	+0.3
IMMV	Iera Moni Meta	1.06	147	P	Pg	19 08 48.2	-0.1
VAM	Vamos	1.21	141	P	Pg	19 08 51.4	+0.3
MET1	Methana Town,	1.23	4	P	Pn	19 08 51.0	-0.1
MET6	Megalochori,Me	1.24	3	P	Pn	19 08 51.2	0.0
MET5	Makryloggos,Me	1.27	3	P	Pn	19 08 52.1	+0.4
PYL	PYLOS	1.34	294	P	Pn	19 08 52.8	+0.1
PYL	PYLOS	1.34	294	P	Pn	19 08 52.7	+0.1
ITM	Ithomi	1.36	308	P	Pn	19 08 53.0	+0.1
ITM	Ithomi	1.36	308	P	Pn	19 08 53.0	+0.1
PYL1	Pylos	1.39	294	P	Pn	19 08 53.8	+0.5
VLY	Voula,Athens	1.56	15	P	Pn	19 08 55.4	-0.2
IDI	Anoyia	1.69	128	P	Pn	19 08 57.2	-0.3
THR6	Thira Island,	1.72	89	P	Pn	19 08 53.0	-4.7
AMT	Artemida-Makis	1.72	314	P	Pb	19 08 59.3	-0.3
GUR	Goura	1.75	335	P	Pn	19 08 58.2	-0.1
KLV	Kalavryta, Ach	1.91	332	P	Pn	19 09 00.7	+0.1

IDC 30 19:15:01.8±2.4**, 6°.12S**×**126°.95E, h0**^{km}**, mb3.6**/1**, mbtmp3.4**/3**, ML3.4**/2**, Error ellipse: s-maj=321.9km s-min=30.9km az=64.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	15.50	153	Pn	Pn	19 18 43.5	+1.6
	0.2nm,0.3s,baz=332,slow=12,SNR=5.6						
	0.7nm,0.7s						
ASAR	Alice Springs	18.68	160	P	P	19 19 20.9	-0.8
	0.1nm,0.3s,baz=342,slow=12,SNR=12						
	0.3nm,0.3s						
MKAR	Makanchi Array	65.86	328	P	P	19 25 49.3	0.0
	0.3nm,0.4s,baz=119,slow=7.7,SNR=4.2						
	0.3nm,0.4s						

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*IDC **30** 19:20:07.2±0.9, 12°.10N×144°.04E, h0^{km}, mb3.6/7, mbtmp3.6/7, Error ellipse: s-maj=40.4km s-min=16.5km az=108.0*

ISC 30 19:20:11.1±0.8**, 12°.1N**±0°.1×**144°.1E**±0°.2**, h26**^{km}**, n9,** σ0^s.**74**/10**, mb3.8**/8**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.71	27	Pn	Pn	19 20 39.7	+0.4
	85nm,0.3s,baz=3.9,slow=4.6,SNR=20						
GUMO				Sn	Sn	19 21 00.3	0.0
	119nm,0.3s,baz=195,slow=21,SNR=9.7						
GUMO				LR	LR	19 21 09.3	
	comp=Z,167nm,21.1s,baz=98,slow=37						
WRA	Warramunga Arr	33.21	197	P	P	19 26 46.0	-0.1
	0.6nm,0.9s,baz=356,slow=11,SNR=1.5						
	0.6nm,0.9s						
ASAR	Alice Springs	36.87	196	P	P	19 27 18.8	+1.1
	0.4nm,0.9s,baz=18,slow=12,SNR=5.5						
	0.4nm,0.9s						
STKA	Stephens Creek	43.75	183	P	P	19 28 13.9	-0.6
	0.6nm,0.5s,baz=349,slow=6.0,SNR=3.0						
	0.6nm,0.5s						
MKAR	Makanchi Array	62.05	317	P	P	19 30 29.7	+0.2
	0.2nm,0.6s,baz=95,slow=8.9,SNR=2.0						
	0.2nm,0.6s						
ILAR	Eielson Array	70.28	25	P	P	19 31 21.0	-1.0
	0.5nm,0.5s,baz=254,slow=5.8,SNR=11						
	0.5nm,0.5s						
BVAR	Borovoye Array	70.64	322	P	P	19 31 23.7	-0.7
	0.8nm,0.5s,baz=94,slow=8.3,SNR=5.1						
	0.8nm,0.5s						
YKA	Yellowknife Ar	84.57	27	P	P	19 32 42.3	+0.4
	0.3nm,0.4s,baz=287,slow=5.4,SNR=8.3						
	0.3nm,0.4s						
FINES	FINESS Array B	92.21	335	P	P	19 33 19.1	+0.7
	4.4nm,0.9s,baz=36,slow=5.2,SNR=5.1						

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*IDC **30** 19:20:13.9±0.7, 35°.44N×74°.52E, h0^{km}, mb3.9/15, mbtmp4.0/21, ML3.4/5, Error ellipse: s-maj=20.1km s-min=14.3km az=49.0*

*BJI **30** 19:20:14.7, 35°.55N×74°.70E, h10^{km}, mB4.9/6, mb4.2/14, ML3.8/3, Ms4.0/1, Ms7 3.9/1*

*NEIC **30** 19:20:16.9±1.8, 35°.57N±0°.03×74°.57E±0°.09, h10^{km}±1^{km}, mb4.5/45, Error ellipse: s-maj=12.4km s-min=4.3km az=101.0*

*NNC **30** 19:20:18.0±3.7, 35°.75N×74°.41E, h0^{km}, mb4.2, mpv4.1, Error ellipse: s-maj=33.6km s-min=26.3km az=140.0*

ISC 30 19:20:16.7±0.4**, 35°.62N**±0°.04×**74°.54E**±0°.05**, h10**^{km}**, n113,** σ**2**^{s}.**04**/123**, mb4.2**/34**, 3C, Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRNI	Srinagar	1.58	172	eP	Pg	19 20 47.3	+1.1
SRNI				eS	Sg	19 21 07.1	+0.9
SRNI				IAML		19 21 20.9	
	comp=E,2μm,0.2s						
SRNI				IAML		19 21 21.4	
	comp=N,2μm,0.5s						
NIL	Nilore	2.23	209		Pn	19 20 53.4	-0.4
ALCI	Alchi Leh	2.59	122	eP	Pn	19 21 00.2	+1.2
ALCI				eS	Sn	19 21 29.4	-1.4
ALCI				IAML		19 21 30.1	
	comp=E,2μm,0.9s						
ALCI				IAML		19 21 31.1	
	comp=N,2μm,0.4s						
JMU	Jammu	2.84	175	eP	Pn	19 21 05.1	+2.0
JMU				eS	Sn	19 21 36.7	-1.4
JMU				IAML		19 21 47.4	
	comp=E,3μm,0.7s						
JMU				IAML		19 21 48.1	
	comp=N,3μm,0.6s						
MANEM	Manem	2.99	311		Pn	19 21 05.2	+0.7
TSSA	Tissa	3.08	154	eP	Pn	19 21 07.5	+1.9
TSSA				eS	Sn	19 21 42.4	-0.2
TSSA				IAML		19 21 53.2	
	comp=E,2μm,0.8s						
TSSA				IAML		19 21 54.3	
	comp=N,2μm,0.9s						
DHRM	DHARAMSHALA	3.67	156	eP	Pn	19 21 15.4	+1.6
DHRM				eS	Sn	19 21 55.3	-1.9
DHRM				IAML		19 22 11.5	
	comp=E,2μm,0.5s						
DHRM				IAML		19 22 15.6	
	comp=N,2μm,0.9s						
KSH	Kashi	4.05	16	Pg	Pn	19 21 17.5	-1.4
KSH				Sn	Sn	19 22 01.0	-5.5
DRK	Karamyk	4.42	331		Pn	19 21 24.8	+0.7
BHK	Bhakra	4.49	159	eP	Pn	19 21 28.9	+4.2
BHK				eS	Sn	19 22 20.7	+3.9
BHK				IAML		19 22 37.6	
	comp=N,2μm,0.5s						
BHK				IAML		19 22 39.5	
	comp=E,2μm,0.4s						
KBL	Kabul	4.63	258		Pn	19 21 27.1	+0.2
SMLA	Simla	4.99	153	eP	Pn	19 21 32.2	+0.5
SMLA				eS	Sn	19 22 26.6	-2.9
SMLA				IAML		19 22 32.0	
	comp=N,1μm,0.5s						
SMLA				IAML		19 22 32.9	
	comp=E,1μm,0.4s						
CHGR	Chuyangaron	5.26	307		Pn	19 21 36.7	+1.3
SHAA	Shahritus	5.51	292		Pn	19 21 39.7	+0.8
ARSB	Arslanbob	5.82	348		Pn	19 21 45.1	+1.9
JOSI	Joshimath	6.58	139	eP	Pn	19 21 54.0	+0.3
UCH	Uchtor	6.60	360	P	Pn	19 21 57.4	+3.2
	SNR=24						
TARG	Taragay, Kyrgy	6.61	22		Pn	19 21 53.4	-0.9
WUS	Wushi	6.67	32		Pn	19 21 55.7	+0.8
BOOM	Boomskoye usch	6.95	9	Pn	Pn	19 22 01.9	+3.2
AAK	Ala-Archa	7.01	360	P	Pn	19 22 03.6	+4.1
	SNR=7.0						
AAK	Ala-Archa	7.01	360	Pn	Pn	19 22 03.3	+3.8
	comp=E,1.8nm,0.3s,baz=158,slow=6.2,SNR=30						
AAK				Sn	Sn	19 23 23.8	+4.5
	comp=E,0.3nm,0.3s,baz=308,slow=14,SNR=4.2						
	comp=E,3.4nm,0.4s						
AAK	Ala-Archa	7.01	360		Pn	19 21 59.8	+0.3
AAK	Ala-Archa	7.01	360	P	Pn	19 22 01.5	+2.0
	comp=E,7.9nm,1.2s						
AAK				S	Sn	19 23 21.7	+2.4
	comp=E,13nm,1.2s						
KBK	Karagaybulak	7.03	2	P	Pn	19 22 04.4	+4.5
	SNR=7.8						
TKM2	Tokmak 2	7.33	6	P	Pn	19 22 08.6	+4.5
	SNR=6.0						
CHMS	Chumysh	7.37	1	P	Pn	19 22 07.5	+3.2
	SNR=12						
PRZ	Przheval'sk	7.48	23		Pn	19 22 07.7	+1.7
PTH	Pithoragarh	7.68	140	eP	Pn	19 22 08.9	-0.4
KK31	Karatay Array	8.10	339		Pn	19 22 15.7	+1.4
KK31	Karatay Array	8.10	339	⇑P	Pn	19 22 15.6	+1.4
	comp=E,9.5nm,0.3s,baz=151,slow=12,SNR=138						
KK31				S	Sn	19 23 45.6	-0.3
	comp=E,5.3nm,0.5s,baz=156,slow=21,SNR=8.9						
KKAR	Karatay Array	8.10	339		Pn	19 22 15.7	+1.3
PDGK	Podgornoye	8.60	25	P	Pn	19 22 23.3	+2.0
	comp=E,6.3nm,1.1s						
PDGK				S	Sn	19 23 59.1	+0.7
	comp=E,7.1nm,1.0s						
MKAR	Makanchi Array	12.59	25	Pn	Pn	19 23 18.0	+2.2
	comp=E,0.1nm,0.3s,baz=207,slow=15,SNR=4.2						
	comp=E,0.4nm,0.7s						
WMQ	Urumqi	13.01	47	eP	Pn	19 23 24.5	+2.8
WMQ				S	Sn	19 25 49.3	+2.8
WMQ				pmax	pmax		
	comp=E,8.0nm,0.7s						
LSA	Lhasa	15.18	108	P	P	19 23 55.7	-1.1
KURBB	Kurchatov Arra	15.27	10	Pn	Pn	19 23 50.4	-1.8
	baz=199,slow=11,SNR=11						
	comp=E,2.0nm,0.8s						
KURK	Kurchatov	15.37	10		Pn	19 23 50.4	-3.2
AB31	Akbulak array	17.32	326		Pn	19 24 16.6	-1.9
AB31	Akbulak array	17.32	326	⇑P	Pn	19 24 18.8	+0.3
	comp=E,0.9nm,0.5s,baz=131,slow=11,SNR=5.3						
ABKAR	Akbulak array	17.32	326	Pn	Pn	19 24 16.6	-2.0
BVAR	Borovoye Array	17.65	352	P	P	19 24 24.3	+0.8
	comp=E,0.1nm,0.3s,baz=156,slow=9.0,SNR=28						
	comp=E,5.6nm,0.7s						
BORK	Borovoye	17.68	352		Pn	19 24 24.1	+1.2
HYB	Hyderabad	18.48	168	eP	Pn	19 24 40.5	+7.4
AKTO	Aktyubinsk	19.04	326	P	P	19 24 39.3	+0.4
	comp=E,7.8nm,0.4s,baz=120,slow=11,SNR=36						
AKTO	Aktyubinsk	19.04	326	⇑P	P	19 24 38.3	-0.5
	comp=E,5.5nm,0.6s						
ZAA0	Zalesovo Array	19.69	18		P	19 24 44.1	-1.8
ZAA0				IAmb	IAmb	19 24 50.0	
	comp=Z,11nm,0.7s						
ZALV	Zalesovo Beam	19.69	18	P	P	19 24 46.1	+0.3
	comp=Z,1.4nm,0.3s,baz=216,slow=11,SNR=31						
	comp=Z,12nm,0.6s						
ZALV	Zalesovo Beam	19.69	18		P	19 24 44.2	-1.6
GTA	Gaotai	20.38	72	eP	P	19 24 52.3	-1.4
GTA				pP	Pn	19 24 55.8	0.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TNCH	TengChong	23.18	110	P	P	19 25 22.3	-1.5
TNCH				pP	pP	19 25 25.3	-2.0
TNCH				sP	sP	19 25 28.3	-0.6
TNCH				PP	PnPn	19 25 55.5	+6.4
TNCH				S	S	19 29 26.3	-9.5
TNCH				sS	pS	19 29 32.3	-7.9
TNCH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TNCH				pmax	pmax		
	comp=Z,84nm,4.9s						
TNCH				LR	LR		
	comp=Z,86nm,4.1s						
TNCH				LR	LR		
	comp=Z,120nm,5.5s						
ARTI	Arti	23.49	337	P	P	19 25 27.0	+0.6
LZH	Lanzhou	23.72	80	eP	P	19 25 27.3	-1.8
KIV	Kislovodsk	25.73	299	P	P	19 25 48.8	+1.5
KIV				IAmb	IAmb	19 26 23.6	
	comp=Z,8.6nm,1.1s						
SONM	Songino Array	26.53	53	P	P	19 25 53.2	-1.4
	comp=Z,1.1nm,0.8s,baz=253,slow=9.2,SNR=6.5						
	comp=Z,1.1nm,0.8s						
SONM	Songino Array	26.53	53	P	P	19 25 55.8	+1.2
CHTO	Chiang Mai	27.30	121	P	P	19 26 00.2	-1.4
CHTO				IAmb	IAmb	19 26 06.5	
	comp=Z,5.1nm,0.9s						
CM31	Chiang Mai Arr	27.54	122	P	P	19 26 03.7	-0.1
CM31				IAmb	IAmb	19 26 07.5	
	comp=Z,8.2nm,0.9s						
CMAR	Chiang Mai Arr	27.54	122	P	P	19 26 01.9	-1.9
	comp=Z,3.1nm,0.7s,baz=311,slow=10,SNR=27						
	comp=Z,3.1nm,0.7s						
CMAR	Chiang Mai Arr	27.54	122	P	P	19 26 03.6	-0.1
RAYN	Ar Rayn	27.88	252	P	P	19 26 07.7	+0.9
HHC	Hu-ho-hao-te	29.40	69	eP	P	19 26 20.3	0.0
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,170nm,5.2s						
BALJ	Balqa	32.35	275	P	P	19 26 47.9	+1.6
BALJ				IAmb	IAmb	19 27 10.6	
	comp=Z,17nm,1.0s						
NRIK	Noril'sk	34.53	8	P	P	19 27 04.8	-0.1
	comp=Z,1.9nm,0.8s,baz=159,slow=10.0,SNR=5.4						
	comp=Z,1.9nm,0.8s						
NRIK	Noril'sk	34.53	8	IAmb	IAmb	19 27 11.6	
	comp=Z,2.6nm,0.8s						
AKASG	Malin Array Be	35.72	309	P	P	19 27 14.4	-1.0
	comp=Z,0.3nm,0.4s,baz=81,slow=8.0,SNR=4.7						
	comp=Z,0.3nm,0.4s						
AKASG	Malin Array Be	35.72	309	IAmb	IAmb	19 27 57.4	
	comp=Z,4.3nm,1.2s						
ELL	Elmali	35.79	285	P	P	19 27 16.4	+0.1
NJ2	Nanjing	36.75	83	eP	P	19 27 23.8	-0.5
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BURAR	Bucovina Array	38.16	304	P	P	19 27 35.9	-0.3
BUR08	Bucovina Ar. S	38.17	304	P	P	19 27 36.6	+0.3
BUR08				IAmb	IAmb	19 28 05.8	
	comp=Z,8.3nm,1.4s						
FIA1	FINESS Array S	39.81	326	P	P	19 27 48.9	-0.8
FINES	FINESS Array B	39.81	326	P	P	19 27 49.1	-0.7
	comp=Z,2.0nm,0.7s,baz=123,slow=9.9,SNR=9.9						
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	39.81	326	P	P	19 27 49.0	-0.7
ARCES	ARCESS Array B	43.06	337	P	P	19 28 16.7	+0.4
	comp=Z,2.7nm,0.8s,baz=105,slow=9.2,SNR=14						
	comp=Z,2.7nm,0.8s						
ARCES	ARCESS Array B	43.06	337	P	P	19 28 16.8	+0.4
ARCES				IAmb	IAmb	19 28 37.2	
	comp=Z,26nm,1.4s						
HFS	Hagfors	45.52	322	P	P	19 28 36.1	0.0
	comp=Z,1.9nm,0.6s,baz=99,slow=9.8,SNR=7.8						
	comp=Z,1.9nm,0.6s						
CLL	Collm	45.96	310	eP	P	19 28 37.0	-2.7
NC303	NORSAR Array S	46.73	324	P	P	19 28 45.9	+0.2
NB201	NORSAR Array S	46.76	323	P	P	19 28 45.8	-0.1
NB2	NORSAR Subarra	46.80	323	P	P	19 28 46.0	-0.2
	comp=Z,1.0nm,0.6s,baz=93,slow=7.9						
NOA	NORSAR Array B	46.80	323	P	P	19 28 46.1	-0.2
	comp=Z,1.0nm,0.5s,baz=94,slow=7.6,SNR=5.5						
	comp=Z,1.0nm,0.5s						
NC204	NORSAR Array S	47.03	324	P	P	19 28 48.2	+0.2
CESX	Cesi	47.63	298	P	P	19 28 53.1	+0.1
FUORN	Ofenpass-Fuorn	48.41	304	P	P	19 28 59.2	0.0
FUORN				IAmb	IAmb	19 29 18.1	
	comp=Z,13nm,1.5s						
CASP	Castiglione de	48.82	299	P	P	19 29 02.9	+0.7
SPB2	Spitsbergen Ar	49.00	347	P	P	19 29 03.8	+0.8
SPB2				IAmb	IAmb	19 29 42.0	
	comp=Z,11nm,1.2s						
SPITS	Spitsbergen Ar	49.01	347	P	P	19 29 03.5	+0.4
	comp=Z,1.0nm,0.5s,baz=116,slow=9.4,SNR=8.8						
	comp=Z,1.0nm,0.5s						
SENIN	Lac Senin/Sane	50.46	304	P	P	19 29 15.5	+0.6
UGM	Wanagama	54.99	135	P	P	19 29 48.1	-0.3
ESBB	Sonseca Array	60.39	300	P	P	19 30 25.9	-0.3
ESBB				IAmb	IAmb	19 30 28.5	
	comp=Z,6.0nm,1.5s						
ESDC	Sonseca Array	60.39	300	P	P	19 30 25.6	-0.7
	comp=Z,0.8nm,0.8s,baz=59,slow=6.7,SNR=8.3						
	comp=Z,0.8nm,0.8s						
ESDC	Sonseca Array	60.39	300	IAmb	IAmb	19 30 26.8	
	comp=Z,2.3nm,1.4s						
TORD	Torodi Ar. Bea	68.58	271	P	P	19 31 18.1	-2.0
	comp=Z,1.0nm,0.6s,baz=49,slow=6.8,SNR=8.7						
	comp=Z,1.0nm,0.6s						
TORD	Torodi Ar. Bea	68.58	271	IAmb	IAmb	19 31 51.3	
	comp=Z,2.1nm,1.3s						
ANM	Nome	69.72	23	P	P	19 31 26.8	+0.4
H18K	Honhosa River	71.46	21	P	P	19 31 38.4	+1.4
H18K				IAmb	IAmb	19 31 48.2	
	comp=Z,6.3nm,1.4s						
G21K	Allakaket	71.76	18	P	P	19 31 39.5	+0.7
G21K				IAmb	IAmb	19 31 43.8	
	comp=Z,2.2nm,1.1s						
E25K	Arctic Village	72.30	15	P	P	19 31 42.4	+0.3
E25K				IAmb	IAmb	19 31 55.8	
	comp=Z,3.1nm,1.5s						
KNRA	Kununurra	72.36	125	P	P	19 31 41.8	-1.2
ILAR	Eielson Array	74.81	17	P	P	19 31 58.1	+1.4
	comp=Z,0.5nm,0.5s,baz=288,slow=4.9,SNR=9.8						
	comp=Z,0.5nm,0.5s						
ILAR	Eielson Array	74.81	17	P	P	19 31 55.8	-1.0
PPLA	Purkeypile	74.95	20	P	P	19 31 56.8	-1.1
PPLA				IAmb	IAmb	19 32 16.1	
	comp=Z,8.9nm,1.2s						
RC01	Rabbit Creek A	77.10	20	P	P	19 32 11.2	+1.3
RC01				IAmb	IAmb	19 32 54.1	
	comp=Z,15nm,1.3s						
SCM	Sheep Creek Mo	77.14	19	P	P	19 32 11.1	+0.8
M29M	Somme Creek	78.72	15	P	P	19 32 18.9	-0.2
M29M				IAmb	IAmb	19 32 38.7	
	comp=Z,8.2nm,1.3s						
WB0	Warramunga Arr	79.03	124	P	P	19 32 19.3	-1.9
WB0				IAmb	IAmb	19 32 52.1	
	comp=Z,4.8nm,1.2s						
WRA	Warramunga Arr	79.11	124	P	P	19 32 19.8	-1.8
	comp=Z,0.9nm,0.6s,baz=316,slow=4.6,SNR=7.5						
	comp=Z,0.9nm,0.6s						
WRA	Warramunga Arr	79.11	124	P	P	19 32 19.9	-1.8
WR8	Warramunga Arr	79.23	124	P	P	19 32 20.2	-2.1
WR8				IAmb	IAmb	19 32 23.8	
	comp=Z,2.5nm,0.9s						
ASAR	Alice Springs	81.42	127	P	P	19 32 32.2	-1.9
	comp=Z,0.4nm,0.6s,baz=299,slow=4.9,SNR=9.0						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	81.42	127	P	P	19 32 32.8	-1.3
YKA	Yellowknife Ar	81.95	4	P	P	19 32 37.5	+1.3
	comp=Z,0.2nm,0.6s,baz=346,slow=5.7,SNR=6.1						
	comp=Z,0.2nm,0.6s						

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*UPA **30** 19:29:01.5±0.9, 7°.23N×78°.58W, h30^{km}±7^{km}, MW4.2*

*RSNC **30** 19:29:03.9±1.0, 7°N±4°×7°9W±°, h9^{km}±4^{km}, M2.5, ML2.1*

ISC 30 19:28:57.9±1.6**, 7°.23N**±0°.04×**78°.60W**±0°.03**, h6**^{km}±13^{km}**, n24,** σ**1**^{s}.**13**/41**, 1D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTAC	Punta Ardita,	0.79	96	P	Pn	19 29 17.8	+2.2
PTAC				S	Sn	19 29 29.1	+1.4
UPD2	Meteti	1.43	24	i P	Pg	19 29 25.3	-0.1
UPD2				eS	Sb	19 29 43.0	-0.6
PCRI3	Pocri, Los San	1.56	286	eP	Pn	19 29 27.3	+1.0
ACHO3	Achotines, Los	1.57	277	eP	Pn	19 29 27.9	+1.6
ACHO3				eS	Sn	19 29 47.2	+0.2
TOTI	Torti	1.71	10	eP	Pn	19 29 28.7	+0.4
TOTI				eS	Sn	19 29 49.3	-1.2
AZU	Azuero	1.75	289	eP	Pn	19 29 29.5	+0.7
AZU				eS	Sn	19 29 51.4	0.0
TABO3	Taboga, Panama	1.82	329	eP	Pn	19 29 30.8	+1.1
CAPC	Capurgana	1.86	41	P	Pg	19 29 33.1	-0.6
CAPC				S	Sb	19 29 55.4	-0.6
FLAM	Flamenco Islan	1.91	331	eP	Pn	19 29 32.5	+1.5
FLAM				eS	Sn	19 29 55.4	0.0
CHIT3	Chitre	1.94	292	eP	Pn	19 29 32.2	+0.7
CHIT3				eS	Sn	19 29 56.6	+0.5
UPA	Univ. de Panam	1.97	332	eP	Pn	19 29 32.8	+1.0
UPA				eS	Sn	19 29 56.9	+0.1
CNTA3	Canitas, Panam	2.00	352	eP	Pn	19 29 33.6	+1.4
CHOR3	La Chorrera	2.02	325	eP	Pn	19 29 33.6	+1.1
CHOR3				eS	Sn	19 29 57.3	-0.7
APAC	Apartado, Choc	2.11	72	P	Pg	19 29 40.1	+1.7
APAC				S	Sg	19 30 05.9	+0.1
CACAO	El Cacao, Vera	2.25	273	eP	Pn	19 29 36.4	+0.8

CACAO				eS	Sn	19 30 03.0	-0.6
FRIJ	El Hiral	2.27	331	⇓iP	Pn	19 29 37.3	+1.4
FRIJ				eS	Sn	19 30 04.3	0.0
DBBC	Dabeiba	2.38	95	P	Pg	19 29 42.9	-0.7
MARI3	Mariato, Verag	2.41	280	eP	Pn	19 29 39.3	+1.4
MARI3				eS	Sn	19 30 07.9	+0.3
STIA3	Santiago, Vera	2.50	290	eP	Pn	19 29 40.1	+0.9
GMAL	Guarumal, Vera	2.66	282	eP	Pn	19 29 42.8	+1.4
GMAL				eS	Sn	19 30 13.8	-0.1
MESA3	La Mesa, Verag	2.72	290	eP	Pn	19 29 43.1	+1.0
CBOC	Ciudad Bolivar	2.91	118	P	Pb	19 29 49.4	-0.9
CBOC				S	Sb	19 30 24.1	-2.1
HELC	Santa Helena	3.22	109	P	Pb	19 29 55.9	+0.1
HELC				S	Sb	19 30 33.0	-2.4
DRK0	Durika	5.02	294	eP	Pn	19 30 15.0	+1.0

*TAP **30** 19:35:05.7, 23°.99N×122°.82E, h14^{km}, ML2.5, D*
*JMA **30** 19:35:05.8±0.3, 24°N±1°×122°.9E±0°.6, h17^{km}±4^{km}, MV2.6/9, NEAR ISHIGAKIJIMA ISLAND*
ISC 30 19:35:04.9±1.1**, 23°.92N**±0°.03×**122°.85E**±0°.02**, h15**^{km}±9^{km}**,**
n87, σ0^{s}.79/144**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	EOS4	0.53	293	eP	Pg	19 35 15.6	+0.3
EOS4				eS	Sb	19 35 23.8	+0.8
JYNG	Yonagunijimaku	0.54	9	eP	Pb	19 35 15.9	-0.2
JYNG				eS	Sg	19 35 22.6	-0.2
YOJ	Yonaguni jima	0.56	15	i P	Pg	19 35 16.2	+0.2
YOJ				S	Sg	19 35 23.2	-0.4
YOJ	Yonaguni jima	0.56	15	eP	Pb	19 35 16.3	-0.1
EOS3	EOS3	0.61	307	eP	Pb	19 35 17.4	+0.1
EOS3				eS	Sb	19 35 26.4	+0.8
EOS2	EOS2	0.76	312	eP	Pb	19 35 20.4	+0.7
EOS2				eS	Sn	19 35 31.8	-0.2
HATJ	Hateruma jima	0.88	81	eP	Pb	19 35 21.7	-0.2
HATJ				eS	Sb	19 35 33.7	+0.2
IRIF	Iriomote-Funau	0.90	62	eP	Pb	19 35 22.5	+0.2
EHP	Heping Village	1.09	291	P	Pb	19 35 25.0	-0.5
EHP				i S	Sn	19 35 40.5	+0.1
EAHA	Aohua	1.10	292	P	Pb	19 35 25.6	0.0
EAHA				S	Sn	19 35 41.0	+0.4
JKRS	Kuro-shima	1.10	73	eP	Pb	19 35 26.0	+0.3
EWUT	Wuta	1.11	298	P	Pb	19 35 25.5	-0.4
EWUT				S	Sg	19 35 40.6	-0.4
ESAO	Su ao	1.13	306	P	Pb	19 35 26.1	0.0
ESAO				S	Sb	19 35 40.0	-0.7
ENA	Nanau	1.14	297	i P	Pb	19 35 25.9	-0.3
ENA				S	Sg	19 35 41.6	-0.1
HWA	Hwalien	1.14	273	eP	Pb	19 35 26.8	+0.5
HWA				i S	Sg	19 35 42.8	+0.9
TWC	Suao	1.15	307	P	Pb	19 35 26.0	-0.5
TWC				S	Sb	19 35 40.4	-0.8
TEYL	Yanliau Villag	1.15	268	P	Pn	19 35 26.6	+0.2
TEYL				S	Sg	19 35 42.5	+0.4
ETL	Fush Village	1.15	282	eP	Pb	19 35 26.9	+0.4
ETL				S	Sg	19 35 43.1	+0.9
TWD	Chiawan	1.16	278	P	Pn	19 35 26.1	-0.5
TWD				i S	Sn	19 35 42.3	+0.1
NACB	Ninganchiao	1.18	283	P	Pn	19 35 26.9	0.0
NACB				eS	Sb	19 35 41.9	-0.2
SHUL	Shoufeng	1.19	264	eP	Pn	19 35 27.2	+0.3
SHUL				eS	Sn	19 35 43.5	+0.7
TEGC	Jichi Village	1.22	261	i S	Sn	19 35 44.4	+0.7
ETM	Tongmen	1.25	273	eP	Pn	19 35 26.7	-1.0
ETM				eS	Sb	19 35 43.3	-0.7
JIJ	Ishigaki jima	1.26	69	eP	Pn	19 35 28.3	+0.3
JIJ				eS	Sb	19 35 44.7	+0.3
NDS	Dongshan	1.26	305	eP	Pb	19 35 28.5	+0.1
ETLH	Xiulin Townshi	1.29	283	eP	Pn	19 35 28.2	-0.2
ETLH				eS	Sb	19 35 45.3	+0.1
ESL	Shilin	1.30	266	eP	Pn	19 35 27.3	-1.3
ILA	Ilan	1.32	310	eP	Pg	19 35 30.3	0.0
LXIB	Xiulin Townshi	1.32	275	i P	Pn	19 35 28.8	-0.1
LXIB				eS	Sb	19 35 46.5	+0.2
NTC	Toucheng	1.32	315	eP	Pn	19 35 28.8	0.0
NTC				i S	Sn	19 35 45.9	-0.3
EGFH	Guangfu	1.33	260	eS	Sn	19 35 45.9	-0.4
TWB1	Santiao Chiao	1.34	324	eP	Pn	19 35 29.1	0.0
TWB1				eS	Sg	19 35 47.0	-1.3
TWE	Neicheng	1.35	307	P	Pb	19 35 30.0	+0.2
TWE				S	Sg	19 35 47.9	-0.5
WARBT	Fenglin Townsh	1.36	262	P	Pn	19 35 28.8	-0.5
WARBT				i S	Sn	19 35 46.1	-0.9
LATG	Datong	1.36	297	P	Pb	19 35 30.1	0.0
LATG				eS	Sg	19 35 48.8	-0.1
HGSD	Ruisui	1.38	252	i P	Pn	19 35 28.6	-0.9
HGSD				S	Sn	19 35 46.2	-1.3
ENTT	Nioudou	1.38	302	i P	Pb	19 35 30.4	0.0
ENTT				eS	Sb	19 35 47.6	-0.2
TIPB	Shuangxi	1.41	319	P	Pb	19 35 31.1	+0.2
TIPB				S	Sg	19 35 49.7	-0.7
ECBN	Changbin	1.42	245	P	Pn	19 35 30.8	+0.7
ECBN				S	Sn	19 35 49.5	+1.0
FUSB	Fushanzhiwuyua	1.43	306	P	Pg	19 35 32.0	-0.5
FUSB				eS	Sg	19 35 51.5	+0.4
NNSB	Datong	1.44	291	P	Pb	19 35 31.4	0.0
EHYH	Wanrong	1.44	253	eP	Pn	19 35 30.2	-0.3
EHYH				eS	Sn	19 35 49.1	0.0
NNS	Nan Shan	1.45	291	P	Pb	19 35 32.0	+0.3
NNS				eS	Sn	19 35 48.9	-0.6
EHY	Hungye	1.46	254	eP	Pn	19 35 30.4	-0.3
EHY				eS	Sn	19 35 49.0	-0.6
WHF	Hehuan Shan	1.47	279	P	Pn	19 35 31.4	+0.2
WHF				eS	Sn	19 35 50.4	0.0
SXI1	Grass Mountain	1.47	323	eP	Pb	19 35 31.8	-0.3
JISG	Ishigakijimahi	1.49	63	eS	Sb	19 35 51.4	+0.4
NWLT	Wulai	1.50	305	eP	Pb	19 35 33.1	+0.6
FUSS	Fushou	1.51	283	P	Pn	19 35 32.6	+1.0
FUSS				eS	Sg	19 35 52.9	-0.7
YULB	Yu-li	1.52	250	i P	Pn	19 35 31.2	-0.3
YULB				eS	Sn	19 35 50.0	-1.0
CHKH	Chenggong	1.52	242	eP	Pn	19 35 31.7	+0.2
CHKH				eS	Sn	19 35 47.9	-3.0
TWF1	Yuli	1.53	249	i P	Pn	19 35 31.3	-0.5
TWF1				eS	Sn	19 35 51.3	-0.1
OWD	Renai	1.54	272	eP	Pn	19 35 32.1	+0.2
OWD				eS	Sn	19 35 51.5	-0.1
YHNB	Yeheng	1.54	299	i P	Pb	19 35 33.2	0.0
YHNB				eS	Sb	19 35 53.1	+0.5
NSK	Sanguang	1.56	299	P	Pb	19 35 33.6	0.0
NSK				eS	Sg	19 35 54.0	-1.2
TWA	Mucha	1.57	313	eP	Pb	19 35 33.7	+0.1
TWT	Tachien	1.57	283	eP	Pn	19 35 33.5	+1.1
TWT				eS	Sn	19 35 52.1	-0.4
VWDT	VWDT	1.57	264	P	Pn	19 35 32.3	0.0
VWDT				eS	Sn	19 35 51.0	-1.4
TDCB	Techi	1.58	283	eP	Pn	19 35 32.7	+0.1
WUSB	Renai	1.59	273	eP	Pn	19 35 33.2	+0.6
FULB	Fuli	1.60	244	P	Pn	19 35 31.4	-1.3
EHD	Haiduan	1.69	244	eP	Pn	19 35 33.1	-0.8
EHD				eS	Sn	19 35 53.7	-1.6
ZUZH	Zhuzihu	1.72	316	eP	Pb	19 35 36.7	+0.5
NFF	Wufeng Townshi	1.74	295	eP	Pb	19 35 36.8	+0.3
NFF				eS	Sg	19 35 59.4	-1.5
SSLB	Suanglung	1.74	266	eP	Pn	19 35 35.8	+1.1
WHP	Taichung City	1.78	282	eP	Pb	19 35 37.5	+0.2
SMLT	Sun Moon Lake	1.79	269	eP	Pb	19 35 37.8	+0.3
SMLT				eS	Sb	19 35 59.6	0.0
LIOB	Emei	1.83	294	eP	Pb	19 35 38.2	+0.1
ELDTW	Lidau	1.83	247	eP	Pn	19 35 35.4	-0.6
ELDTW				eS	Sn	19 35 56.8	-2.1
NSTT	Nanjuang	1.83	293	eP	Pb	19 35 37.8	-0.3
WHYT	Xinyi Township	1.84	264	eS	Sb	19 36 02.2	+1.0
ALS	Alishan	1.92	258	eP	Pn	19 35 38.1	+0.8
WJS	Zhushan	1.95	268	eS	Sb	19 36 05.2	+1.0
STYH	Taoyuan	2.04	249	eP	Pn	19 35 39.1	+0.4
STYH				eS	Sn	19 36 04.1	+0.1
WCKO	Fanlu	2.12	257	eP	Pn	19 35 41.6	+1.8
WCKO				eS	Sn	19 36 07.8	+2.0
TPUB	Ta-pu	2.13	254	eP	Pn	19 35 41.5	+1.6
TPUB				eS	Sn	19 36 06.7	+0.6
WDLH	Douliu	2.13	264	eP	Pb	19 35 43.2	0.0
WDLH				eS	Sb	19 36 10.8	+1.3
WTP	Ta-pu	2.16	252	eP	Pn	19 35 42.2	+1.9
WTP				eS	Sb	19 36 10.4	+0.1
SGST	Jiashian	2.24	249	eS	Sn	19 36 09.6	+0.7
CHN1	Nanshi	2.25	252	eP	Pn	19 35 43.9	+2.2
CHN1				eS	Sb	19 36 12.2	-0.8
TWK	Hsinying	2.26	254	eP	Pn	19 35 44.4	+2.6
TWK				eS	Sb	19 36 13.1	-0.2
SNST	Tainan City	2.27	253	eP	Pb	19 35 45.0	-0.6
SNST				eS	Sb	19 36 12.5	-0.9
SSD	Sandimen	2.35	241	eP	Pn	19 35 43.6	+0.7
EAST	Anshuo	2.39	231	eP	Pn	19 35 43.1	-0.5
MASBT	Mashibuluo	2.42	238	eP	Pn	19 35 44.4	+0.5
SCZT	Fangliau	2.57	234	eP	Pn	19 35 47.3	+1.4
SMST	Manzhou Townsh	2.65	225	eP	Pn	19 35 47.1	+0.1

*RHSSO **30** 20:12:31.4±0.4, 43°.19N×18°.06E, h7^{km}, ML2.6/4*
*BEO **30** 20:12:31.8±0.3, 43°.21N×18°.09E, h12^{km}±2^{km}, ML2.3/11*
ISC 30 20:12:31.2±1.0**, 43°.20N**±0°.02×**18°.08E**±0°.02**, h10**^{km}±9^{km}**,**
n38, σ0^{s}.81/68**, 3C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLINJ	Klinje	0.37	95	⇑iPg	Pg	20 12 38.8	+0.2
KLINJ				eSg	Sg	20 12 44.8	+1.3
STON	Ston	0.43	220	ePg	Pg	20 12 39.5	-0.2
STON				Sg	Sg	20 12 46.0	+0.6
TREB	Trebinje	0.52	158	⇑iPg	Pg	20 12 40.9	-0.5
TREB				eSg	Sg	20 12 48.9	+0.6
TREB	Trebinje	0.52	158	ePg	Pg	20 12 40.9	-0.5
TREB				eSg	Sg	20 12 48.9	+0.6
DBRK	Dubrovnik	0.54	175	ePg	Pg	20 12 41.4	-0.3
DBRK				Sg	Sg	20 12 48.9	+0.2
RICI	Ricice	0.75	293	ePg	Pg	20 12 45.5	-0.2
RICI				Sg	Sb	20 12 56.7	0.0
MAKA	Makarska	0.78	277	ePg	Pg	20 12 45.8	-0.5
MAKA				Sg	Sb	20 12 57.6	+0.1
PLE	Pljevlja	0.96	82	ePg	Pg	20 12 49.8	0.0
LSTV	Lastovo	0.98	244	ePg	Pg	20 12 48.7	-1.3
LSTV				Sg	Sb	20 13 03.4	+0.3
RUDO	Rudo	1.02	66	⇑iPg	Pg	20 12 50.0	-1.0
RUDO				eSg	Sg	20 13 05.0	+0.7
RUDO	Rudo	1.02	66	ePg	Pg	20 12 50.0	-1.0
RUDO				eSg	Sg	20 13 03.7	-0.6
PDG	Podgorica	1.16	131	ePg	Pb	20 12 52.3	-1.0
PDG				eSg	Sn	20 13 10.0	+0.7
BBLS	Lazi&#263i	1.17	55	ePg	Pb	20 12 53.3	-0.2
BBLS				eSg	Sb	20 13 09.4	+0.7
HVAR	Hvar	1.20	269	ePg	Pb	20 12 53.2	-0.8
HVAR				Sg	Sn	20 13 10.6	+0.3
DRME	Dracevica, Mon	1.30	141	ePg	Pn	20 12 55.6	+0.2
BEY	Berane	1.37	103	ePg	Pn	20 12 56.7	+0.3
SJES	Sjenica	1.38	87	ePg	Pn	20 12 57.3	+0.6
SJES				eSg	Sg	20 13 16.4	+0.7
KIJV	Kijevo	1.46	304	ePn	Pb	20 12 59.2	+0.7
KIJV				Sn	Sg	20 13 19.7	+1.6
PVY	Plav	1.51	113	ePg	Pn	20 12 59.2	+0.8
IVAS	Ivanjica	1.55	75	ePg	Pn	20 12 58.9	-0.1
IVAS				eSg	Sn	20 13 19.7	+0.5
DIVS	Divibare	1.65	56	ePg	Pn	20 13 00.1	-0.2
DIVS				eSg	Sg	20 13 24.6	+0.3
BLY	Banja Luka	1.68	338	ePn	Pn	20 13 01.6	+1.0
BLY				eSn	Sb	20 13 23.6	+0.3
BLY	Banja Luka	1.68	338	ePg	Pg	20 13 03.4	0.0
TEKS	Tekeris	1.70	37	ePn	Pn	20 13 00.3	-0.7
TEKS				eSn	Sn	20 13 22.2	-0.6
ZIRJ	Zirje	1.83	285	ePn	Pb	20 13 04.5	-0.3
ZIRJ				Sn	Sb	20 13 29.0	+1.2
MORI	Morici	1.85	292	ePn	Pb	20 13 05.0	0.0
MORI				Sn	Sg	20 13 29.9	-0.8
TRUS	Trudelj	1.97	58	ePn	Pn	20 13 04.6	0.0
TRUS				eSn	Sn	20 13 30.1	+0.8
GRUS	Gruza	2.03	69	ePn	Pn	20 13 05.0	-0.5
GRUS				eSn	Sn	20 13 31.4	+0.5
UDBI	Udbina	2.14	309	ePn	Pb	20 13 09.9	-0.1
UDBI				Sn	Sb	20 13 37.5	+0.9
SELS	Selova	2.22	89	ePn	Pn	20 13 08.4	+0.3
SELS				eSn	Sn	20 13 36.3	+0.7
AVAS	Avala Beograd	2.30	49	eSn	Sn	20 13 36.4	-1.2
FRGS	Fruska Gora	2.31	32	ePn	Pn	20 13 09.8	+0.4
DUGI	Dugi Otok	2.33	291	ePn	Pn	20 13 11.3	+1.7
DUGI				Sn	Sb	20 13 40.8	-1.4
VIRC	Vir	2.45	297	ePn	Pb	20 13 13.8	-1.5
VIRC				Sn	Sb	20 13 44.5	-1.0
NVLJ	Novalja	2.69	301	ePn	Pb	20 13 17.5	-1.9
NVLJ				Sn	Sb	20 13 50.4	-2.1
BARS	Barje	2.77	97	ePn	Pn	20 13 15.8	+0.2
MORH	Mrgy, Hungar	3.04	7	ePn	Pn	20 13 19.4	+0.1
MORH				eSn	Sn	20 13 55.9	+0.2
BOJS	Bojanci	3.07	320	ePn	Pn	20 13 21.0	+1.3
BOJS				eSn	Sn	20 13 56.6	+0.2

*IDC **30** 20:25:30.8±2.7, 35°.65N×74°.45E, h0^{km}, mb3.8/1, mbtmp3.4/6, ML3.1/5, MS3.9/2, Error ellipse: s-maj=61.2km s-min=23.8km az=63.0*
ISC 30 20:25:35.4±2.2**, 35°.6N**±0°.2×**74°.3E**±0°.2**, h36**^{km}**, n8, σ0^{s}.98**/6**,**
Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	7.07	1	Pn	Pn	20 27 17.2	+0.8
	0.2nm,0.3s,baz=189,slow=13,SNR=4.9						
	0.5nm,0.3s						
MKAR	Makanchi Array	12.71	26	Pn	Pn	20 28 33.8	+0.3
	0.1nm,0.3s,baz=210,slow=13,SNR=2.3						
	0.2nm,0.6s						
BVAR	Borovoye Array	17.68	352	P	Pn	20 29 37.2	-1.4
	baz=157,slow=9.8,SNR=5.5						
	0.4nm,0.4s						
AKTO	Aktyubinsk	19.00	326	P	P	20 29 54.1	+0.3
	0.2nm,0.3s,baz=120,slow=13,SNR=5.0						
	1.4nm,0.5s						
ZALV	Zalesovo Beam	19.79	19	P	P	20 30 02.3	-0.1
	0.3nm,0.3s,baz=216,slow=9.2,SNR=4.9						
	0.7nm,0.6s						
CMAR	Chiang Mai Arr	27.64	122	P	P	20 31 19.8	+0.1
	0.9nm,0.7s,baz=312,slow=12,SNR=11						
	0.9nm,0.7s						
JOW	Kunigami	46.46	85	LR	LR	20 53 43.6	
	comp=Z,326nm,20.7s,baz=326,slow=36						
KEST	Kesra	51.90	290	LR	LR	21 02 06.6	
	comp=Z,56nm,18.0s,baz=316,slow=42						

*OMAN **30** 20:33:57.9±0.1, 27°.41N×56°.75E, h10^{km}, ml3.1/18, Error ellipse: s-maj=2.0km s-min=1.1km az=28.0*
*TEH **30** 20:33:57.7, 27°.29N×56°.76E, h14^{km}±42^{km}*
*DSN **30** 20:33:59.2±0.8, 27°.34N×56°.77E, h10^{km}, ML2.7/7, Error ellipse: s-maj=24.4km s-min=5.6km az=116.0*
ISC 30 20:33:58.1±1.2**, 27°.36N**±0°.04×**56°.77E**±0°.04**, h10**^{km}±11^{km}**,**
n42, σ0^{s}.88/49**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBND	Bandar-abas	0.22	294	Pg	Pg	20 34 03.1	+0.5
GENO	Geno	0.53	275	Pg	Pg	20 34 08.8	+0.3
BNDS	Bandar-Abbas	0.53	275	Pg	Pg	20 34 08.7	+0.3
KHNJ	Kahnooj	1.02	55	Pg	Pg	20 34 17.7	0.0
SHME	Shamm	1.42	203	P	Pg	20 34 24.4	-0.9
	SNR=42						
SHME				S	Sg	20 34 44.6	+0.9
SHME	Shamm	1.42	203	P	Pg	20 34 24.7	-0.6
SHME				S	Sg	20 34 44.5	+0.8
BANOM	Banah	1.49	196	P	Pb	20 34 25.5	-0.3
BANOM				S	Sg	20 34 46.2	+0.2
BANOM	Banah	1.49	196	P	Pb	20 34 25.3	-0.5
BANOM				S	Sg	20 34 45.8	-0.1
MASF	Masafi	2.05	196	P	Pn	20 34 33.4	+0.8
MASF				S	Sb	20 35 00.1	-0.9
MSFE	Esma-Masafi	2.06	195	P	Pb	20 34 34.0	-1.7
MDH	Madha	2.09	192	P	Pn	20 34 34.0	+0.8
MDH	Madha	2.09	192	P	Pn	20 34 34.0	+0.8
NGRK	Negar Kerman	2.28	359	Pn	Pn	20 34 36.6	+0.6
KBAM	BAM	2.31	40	Pn	Pb	20 34 38.5	-1.4
UOSS	Minazif	2.46	192	P	Pn	20 34 39.0	+0.9
CHMN	Cheshme madani	2.58	15	Pn	Pn	20 34 42.4	+2.1
HATD	Hatta, Dubai	2.59	193	P	Pn	20 34 41.0	+1.0
HATD	Hatta, Dubai	2.59	193	P	Pn	20 34 41.1	+1.2
ASHO	Ashiyiah	2.74	194	P	Pn	20 34 43.1	+1.0
ASHO	Ashiyiah	2.74	194	P	Pn	20 34 43.5	+1.4
ASUD	Al Ashush, Dub	3.01	206	P	Pn	20 34 46.5	+0.6
KHGB	Koh Gabri	3.02	355	Pn	Pn	20 34 47.4	+1.3
AJN	Ajban	3.21	210	P	Pn	20 34 49.2	+0.6
SOHO	SOHO	3.22	184	P	Pn	20 34 49.6	+1.0
HOQ	Hoqain	3.79	172	P	Pn	20 34 57.1	+0.6
HOQ				S	Sn	20 35 42.5	+1.2
ARQ	Araqi	4.01	183	P	Pn	20 35 00.8	+1.2
BIDO	Bidbid	4.01	162	P	Pn	20 34 59.4	-0.2
MZWR	Madinat Zayed	4.43	217	P	Pn	20 35 06.0	+0.7
SMDO	Samad	4.43	165	P	Pn	20 35 06.2	+0.7
SMDO				S	Sn	20 35 58.4	+1.1
BSY	Bisya	4.61	175	P	Pn	20 35 08.9	+1.1
JMDO	Jabal Madar	5.11	166	P	Pn	20 35 15.7	+1.0
WBK	Wadi Bani Khal	5.13	157	P	Pn	20 35 15.3	+0.3
	SNR=30						
WBK	Wadi Bani Khal	5.13	157	Pn	Pn	20 35 15.1	+0.1
MZR	Muzera	5.26	215	P	Pn	20 35 17.0	+0.2
TRNA	Turayna	5.64	244	P	Pn	20 35 21.6	-0.3
	SNR=8.0						
JLN	Jalan Bani Buh	5.71	155	P	Pn	20 35 23.1	+0.2
	SNR=11						
SMRA	Abu-Samra	5.95	245	P	Pn	20 35 25.4	-0.7
MHTO	MHTO	6.44	170	P	Pn	20 35 33.9	+1.0
SHAO	Shalim	9.35	187	P	Pn	20 36 13.1	+0.2
DMTO	DMTO	9.74	190	P	Pn	20 36 18.4	+0.1
WHFO	Wadi Hawf	9.79	197	P	Pn	20 36 18.7	-0.3
ABTO	Aybut	10.46	199	P	Pn	20 36 27.8	-0.4

*IDC **30** 20:34:21.4±1.4, 56°.23N×148°.83W, h0^{km}, mb3.6/5, mbtmp3.4/9, ML3.0/4, MS3.1/1, Error ellipse: s-maj=27.3km s-min=22.3km az=35.0*
*NEIC **30** 20:34:22.4±1.4, 56°.48N±0°.09×148°.51W±0°.10, h10^{km}±2^{km}, ML3.4/60, ML3.2(AEIC), Error ellipse: s-maj=17.6km s-min=3.8km az=151.0*
*AEIC **30** 20:34:24.9±0.3, 56°.3N±0°.1×148°.4W±0°.2, h12^{km}±9^{km}, Error ellipse: s-maj=18.7km s-min=11.4km az=156.0*
ISC 30 20:34:22.2±0.9**, 56°.48N**±0°.07×**148°.67W**±0°.04**, h10**^{km}**, n78,**
σ1^{s}.48/64**, mb3.7**/5**, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.50	303	Pn	Pn	20 35 03.1	+0.2
	2.1nm,0.3s,baz=95,slow=0.7,SNR=41						
KDAK				Sn	Sn	20 35 33.4	0.0
	2.7nm,0.3s,baz=61,slow=19,SNR=12						
	12nm,0.5s						
KDAK	Kodiak Island	2.50	303		Pn	20 35 03.3	+0.3
KDAK					Sn	20 35 35.0	+1.5
OHAK	Old Harbor	2.64	288		Sn	20 35 34.8	-2.2
OHAK					Sb	20 35 37.5	-4.6
OHAK	Old Harbor	2.64	288		Pn	20 35 04.8	-0.1
SYI	Shuyak Island	2.93	318		Sn	20 35 44.2	+0.1
SYI	Shuyak Island	2.93	318		Pn	20 35 09.4	+0.6
SII	Sitkinak Islan	3.06	274	Pn	Pn	20 35 11.9	+1.4
SII				IAML		20 35 55.5	
	comp=E,111nm,1.0s						
SII				IAML		20 35 58.8	
	comp=N,94nm,1.0s						
MID	Middleton Isla	3.21	22		Sn	20 35 49.2	-1.6
MID	Middleton Isla	3.21	22	Pn	Pn	20 35 13.1	+0.5
CNPM	China Poot	3.35	337		Sn	20 35 54.9	+0.5
CNPM	China Poot	3.35	337		Pn	20 35 15.0	+0.5
BRSE	Bradley Lake S	3.45	342		Pn	20 35 16.6	+0.6
BRSE					Sn	20 35 55.2	-1.8
BRLK	Bradley Lake	3.50	341		Pn	20 35 16.9	+0.3
BRLK				IAML		20 36 02.8	
	comp=N,43nm,0.9s						
BRLK				IAML		20 36 12.1	
	comp=E,37nm,1.2s						
HOM	Homer	3.56	335	Pn	Pn	20 35 18.4	+1.0
P23K	Montague Islan	3.59	10		Pn	20 35 18.4	+0.5
P23K					Sn	20 35 58.5	-1.9
SEW	Seward	3.66	354		Pn	20 35 19.0	+0.2
KAHG	Katmai Hook Gl	3.76	305		Pn	20 35 22.1	+1.8
KAWH	Katmai	3.82	303		Pn	20 35 23.7	+2.5
AUI	Augustine Isla	3.83	320		Pn	20 35 22.8	+1.6
KAKN	Katmai Knife C	3.91	300		Pn	20 35 24.0	+1.6
CHIR	Chirikof Islan	3.94	263		Sn	20 36 05.4	-3.6
P19K	Oil Pt	4.00	325		Pn	20 35 24.7	+1.2
P19K	Oil Pt	4.00	325	IAML		20 36 14.8	
	comp=N,47nm,0.9s						
P19K				IAML		20 36 20.5	
	comp=E,54nm,0.5s						
ACHA	Angle Creek He	4.00	298		Pn	20 35 24.6	+1.0
HIN	Hinchinbrook I	4.09	15	Pn	Pn	20 35 25.4	+0.6
SLKM	Skilak Lake	4.12	349	IAML		20 36 17.8	
	comp=N,35nm,1.0s						
SLKM				IAML		20 36 19.1	
	comp=E,40nm,0.3s						
KAIM	Kayak Island	4.12	31	Pn	Pn	20 35 25.8	+0.6
ILS	Iliamna Low So	4.19	328		Pn	20 35 27.4	+1.1
IVE	Iliamna Volcan	4.23	329		Pn	20 35 27.1	+0.4
PLK4	Peulik 4	4.35	289	IAML		20 36 36.0	
	comp=N,40nm,1.0s						
PLK4				IAML		20 36 37.0	
	comp=E,33nm,0.8s						
EYAK	Cordova Ski Ar	4.36	19		Pn	20 35 28.9	+0.4
EYAK	Cordova Ski Ar	4.36	19	IAML		20 36 19.0	
	comp=N,49nm,0.6s						
EYAK				IAML		20 36 25.4	
	comp=E,41nm,1.0s						
PWL	Port Wells	4.40	2		Pn	20 35 29.6	+0.6
PWL	Port Wells	4.40	2	IAML		20 36 22.0	
	comp=E,35nm,0.8s						
PWL				IAML		20 36 54.2	
	comp=N,30nm,1.2s						
FID	Port Fidalgo	4.43	14		Pn	20 35 29.6	+0.2
FID	Port Fidalgo	4.43	14	IAML		20 36 18.1	
	comp=N,37nm,1.2s						
FID				IAML		20 36 22.8	
	comp=E,44nm,1.2s						
P18K	Big Mountain,	4.55	313		Pn	20 35 31.9	+0.7
RC01	Rabbit Creek A	4.66	354	IAML		20 36 28.6	
	comp=E,30nm,1.2s						
RC01				IAML		20 36 32.2	
	comp=N,26nm,1.2s						
DIV	Divide	4.90	17		Pn	20 35 36.2	+0.2
DIV	Divide	4.90	17	IAML		20 37 00.1	
	comp=N,16nm,1.2s						
KNK	Knik Glacier	4.95	1		Pn	20 35 37.7	+1.1
KNK	Knik Glacier	4.95	1	IAML		20 36 47.0	
	comp=E,21nm,0.9s						
KNK				IAML		20 38 00.6	
	comp=N,13nm,1.0s						
BMRM	Bremner River	4.97	23	IAML		20 36 49.2	
	comp=N,24nm,0.9s						
BMRM				IAML		20 36 55.0	
	comp=E,27nm,1.0s						
SPU	Mount Spurr	5.03	341		Pn	20 35 38.6	+0.8
CKL	Chakachamna La	5.10	340		Pn	20 35 39.4	+0.7
KLU	Klutina	5.23	15		Pn	20 35 41.1	+0.7
KLU	Klutina	5.23	15	IAML		20 36 46.6	
	comp=E,22nm,1.0s						
KLU				IAML		20 36 55.2	
	comp=N,24nm,0.7s						
TGL	Tana Glacier	5.26	33	IAML		20 36 42.4	
	comp=E,17nm,1.0s						
TGL				IAML		20 38 30.4	
	comp=N,20nm,1.2s						
GHO	Glory Hole Cre	5.31	359		Pn	20 35 43.3	+1.7
GHO	Glory Hole Cre	5.31	359	IAML		20 36 53.2	
	comp=E,24nm,1.1s						
SPNN	North Nagishla	5.33	339		Pn	20 35 43.0	+1.1
SML	Sawmill	5.35	2		Pn	20 35 43.3	+1.2
SML	Sawmill	5.35	2	IAML		20 36 49.3	
	comp=N,25nm,1.1s						
SML				IAML		20 37 02.7	
	comp=E,15nm,1.2s						
KIAG	Kiagna River	5.54	34		Pn	20 35 44.9	+0.1
N25K	Chitina, Valde	5.55	21		Pn	20 35 46.0	+1.1
GRNC	Granite Creek	5.59	37		Pn	20 35 45.4	-0.1
PTPK	Patty Peak	5.71	32		Pn	20 35 48.1	+0.9
PCA	Pinnacle	5.73	47		Pn	20 35 47.4	+0.1
BARN	Barnard Glacie	5.86	36		Pn	20 35 49.8	+0.6
CTGM	Chitina Glacie	5.90	37		Pn	20 35 50.1	+0.4
O28M	Mount Upton	6.17	42		Pn	20 35 53.5	-0.1
P29M	Windy Craggy	6.61	57		Pn	20 35 58.6	-0.7
S31K	Pelican	6.92	72		Pn	20 36 01.6	-1.9
ILAR	Eielson Array	8.37	5	Pn	Pn	20 36 25.1	+1.7
	comp=E,0.1nm,0.3s,baz=186,slow=13,SNR=9.0						
ILAR				Sn	Sn	20 37 56.3	-1.5
	comp=E,0.2nm,0.3s,baz=247,slow=3.9,SNR=5.7						
ILAR				LR	LR	20 39 39.5	
	comp=E,120nm,18.0s,baz=238,slow=37						
	comp=E,0.6nm,0.8s						
INK	Inuvik	13.73	24	Pn	P	20 37 41.1	-4.1

	comp=E,0.1nm,0.3s,baz=251,slow=14,SNR=3.6						
	comp=E,1.6nm,1.1s						
INK	Inuvik	13.73	24	Pn	Pn	20 37 37.4	+0.9
YKA	Yellowknife Ar	18.15	57	P	P	20 38 37.4	+3.1
	baz=261,slow=11,SNR=2.9						
	comp=E,0.4nm,0.8s						
NVAR	Mina Array Bea	27.01	119	P	P	20 40 04.6	+0.2
	comp=E,0.1nm,0.3s,baz=320,slow=13,SNR=1.8						
	comp=E,0.1nm,0.3s						
H11N2	WAKE ISLAND Hy	49.28	240	T	T	21 36 18.0	
	baz=31,slow=76,SNR=5.2						
H11N3	WAKE ISLAND Hy	49.28	240	T	T	21 36 23.4	
	baz=31,slow=76,SNR=4.7						
H11N1	WAKE ISLAND Hy	49.29	240	T	T	21 36 19.7	
	baz=31,slow=76,SNR=4.2						
H11S1	WAKE ISLAND Hy	50.42	240	T	T	21 37 48.0	
	baz=29,SNR=5.1						
H11S2	WAKE ISLAND Hy	50.43	240	T	T	21 37 46.2	
	baz=29,slow=74,SNR=4.5						
H11S3	WAKE ISLAND Hy	50.44	240	T	T	21 37 45.6	
	baz=29,slow=74,SNR=5.4						
SONM	Songino Array	58.77	310	P	P	20 44 22.3	+2.1
	comp=E,0.9nm,0.8s,baz=38,slow=4.9,SNR=6.5						
	comp=E,0.9nm,0.8s						
ZALV	Zalesovo Beam	61.58	327	P	P	20 44 40.9	+1.8
	comp=E,0.3nm,0.4s,baz=9.6,slow=10,SNR=2.3						
	comp=E,0.3nm,0.4s						
MKAR	Makanchi Array	68.63	325	P	P	20 45 25.8	+0.7
	comp=E,0.5nm,0.9s,baz=0.0,slow=3.8,SNR=3.6						
	comp=E,0.5nm,0.9s						
CMAR	Chiang Mai Arr	86.49	298	P	P	20 47 06.3	+1.1
	comp=E,0.4nm,0.8s,baz=20,slow=3.5,SNR=4.1						
	comp=E,0.4nm,0.8s						

*VIE **30** 20:35:06.0±0.9, 51°.40N×16°.30E, h0^{km}, mb2.5/1, ml2.0/2, Error ellipse: s-maj=6.8km s-min=5.6km az=54.0 60 km NW of Wroclaw Suspected Mining induced.*

*PRU **30** 20:35:07.9, 51°.39N×16°.19E, h0^{km}*

ISC 30 20:35:05.7±1.6**, 51°.44N**±0°.07×**16°.19E**±0°.04**, h0**^{km}**, n16, σ0^{s}.72**/33**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.60	174	*e*Pg	Pg	20 35 17.5	+0.3
KSP				*e*Sg	Sg	20 35 25.6	+0.6
CHVC	Chvalec	0.86	186	*e*PG	Pg	20 35 22.6	+0.5
CHVC				*e*SG	Sb	20 35 34.7	-0.9
	comp=Z,8.0nm,0.6s						
OSTC	Ostas	0.89	179	*e*PG	Pg	20 35 23.0	+0.3
OSTC				*e*SG	Sg	20 35 34.6	+0.5
	comp=Z,24nm,1.0s						
UPC	Upice	0.94	187	*e*PG	Pg	20 35 24.0	+0.3
UPC				*e*SG	Sb	20 35 37.8	-0.1
	comp=Z,20nm,0.4s						
DPC	Dobruska-Polom	1.10	176	*e*PG	Pg	20 35 26.5	-0.2
DPC				*e*SG	Sg	20 35 40.8	-0.1
	comp=Z,5.4nm,0.4s						
PVCC	Panska Ves	1.37	229	*e*PG	Pb	20 35 32.3	0.0
PVCC				*e*SG	Sn	20 35 51.2	+0.2
	comp=Z,32nm,0.4s						
KRLC	Kraliky	1.42	164	*e*PG	Pn	20 35 32.5	-0.3
KRLC				*e*SG	Sg	20 35 51.3	+0.1
	comp=Z,4.1nm,0.3s						
PRU	Pruhonice	1.79	216	*e*PG	Pb	20 35 39.1	-0.3
PRU				*e*SG	Sg	20 36 03.0	-0.3
	comp=Z,6.8nm,0.6s						
MORC	Moravsky Berou	1.88	152	*e*PN	Pn	20 35 38.1	-1.0
MORC				*e*SG	Sb	20 36 05.0	+0.2
CLL	Collm	2.00	267	*e*Pg	Pb	20 35 43.0	0.0
CLL				*e*Sg	Sg	20 36 10.0	0.0
VRAC	Vranov	2.15	173	*e*PN	Pn	20 35 42.9	+0.1
VRAC				*e*SG	Sb	20 36 13.3	+0.6
KRUC	Moravsky	2.39	177	*e*PN	Pn	20 35 46.1	+0.1
KRUC				*e*SG	Sg	20 36 21.1	-1.2
KHC	Kasperske Hory	2.86	217	*e*PN	Pn	20 35 52.2	-0.4
KHC				*e*PG	Pb	20 35 58.4	+0.8
KHC				*e*SG	Sg	20 36 36.2	-1.2
LANS	Liptovska Anna	3.11	136	*e*PG	Pb	20 36 00.9	-1.0
LANS				*e*SG	Sg	20 36 47.2	+1.6
CONA	Conrad Observa	3.52	184	*i* Pn	Pn	20 36 02.6	+0.9
	0.3nm,0.3s						
CONA				*e*Sg	Sg	20 36 60.0	+1.1
	2.0nm,0.3s						
RONA	Rosalia, Austr	3.75	179	*i* Pn	Pn	20 36 05.0	+0.3
	0.2nm,0.3s						
RONA				*e*Sg	Sg	20 37 04.3	-1.6
	0.7nm,0.3s						

*IDC **30** 20:43:55.9±3.0, 33°.55S×178°.63W, h0^{km}, mb3.9/2, mbtmp4.0/3, ML4.0/1, Error ellipse: s-maj=70.6km s-min=36.0km az=118.0*

*WEL **30** 20:43:56.1±0.8, 33°S±11°×17°9W±2°7, h12^{km}, mB4.9/7, ML4.3/12, MLv4.3/10, Mw(mB)4.2/7, Error ellipse: s-maj=38.0km s-min=4.0km az=111.3, confirmed*

ISC 30 20:43:54.2±1.8**, 33°.5S**±0°.1×**178°.3W**±0°.3**, h10**^{km}**, n20, σ1^{s}.45**/34**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.22	5	P	Pn	20 44 59.1	+0.5
GLKZ				S	Sn	20 45 44.9	-3.1
MXZ	Matakaoa Point	4.92	213	P	Pn	20 45 08.9	+0.7
MXZ				S	Sn	20 46 03.2	-2.0
WMGZ	Waiomatatini S	5.09	211	P	Pn	20 45 11.3	+0.8
WMGZ				S	Sn	20 46 08.7	-0.6
PKGZ	Pakihiroa	5.27	213	P	Pn	20 45 13.4	+0.3
PKGZ				S	Sn	20 46 12.3	-1.7
HAZ	Te Kaha	5.32	216	P	Pn	20 45 14.5	+0.7
HAZ				S	Sn	20 46 16.1	+1.0
PUZ	Puketiti	5.37	210	P	Pn	20 45 14.6	+0.2
PUZ				S	Sn	20 46 15.9	-0.3
RUGZ	Raukumara Rang	5.54	215	P	Pn	20 45 17.8	+0.9
RUGZ				S	Sn	20 46 20.0	-0.6
TWGZ	Tauwhareparae	5.57	212	P	Pn	20 45 17.6	+0.4
TWGZ				S	Sn	20 46 21.3	-0.1
TKGZ	Te Karaka	5.85	211	P	Pn	20 45 22.9	+1.9
TKGZ				S	Sn	20 46 26.0	-2.0
MWZ	Matawai	5.91	214	P	Pn	20 45 22.2	+0.4
MWZ				S	Sn	20 46 28.0	-1.5
URZ	Urewera	6.05	217	Pn	Pn	20 45 23.6	-0.1
	4.4nm,0.3s,baz=259,slow=4.3,SNR=51						
URZ				Sn	Sn	20 46 31.2	-1.8
	4.2nm,0.3s,baz=291,slow=5.9,SNR=9.7						
	10.0nm,0.3s						
URZ	Urewera	6.05	217	P	Pn	20 45 23.7	-0.1
URZ				S	Sn	20 46 30.3	-2.7
RAGZ	Rawiri	6.09	214	P	Pn	20 45 26.3	+2.0
KNZ	Kokohu	6.41	209	P	Pn	20 45 29.5	+0.8
KNZ				S	Sn	20 46 39.2	-2.7
TOZ	Tahuroa Road	6.59	228	P	Pn	20 45 33.1	+2.0
MTHZ	Maungataniwha	6.64	215	P	Pn	20 45 33.2	+1.3
MTHZ				S	Sn	20 46 45.6	-2.2
OTVZ	Oturere	7.47	219	P	Pn	20 45 43.4	0.0
ASAR	Alice Springs	42.78	270	P	P	20 51 53.1	+0.9
	0.9nm,0.7s,baz=113,slow=7.3,SNR=18						
	0.9nm,0.7s						
WRA	Warramunga Arr	44.05	275	P	P	20 52 03.4	+0.9
	0.8nm,0.3s,baz=116,slow=7.9,SNR=12						
	0.8nm,0.3s						
FINES	FINESS Array B	147.92	338	PKPbc	PKiKP	21 03 41.3	+0.6
	3.6nm,1.0s,baz=45,slow=4.1,SNR=6.1						

*IDC **30** 20:44:08.6±1.2, 59°.30N×150°.45W, h0^{km}, mb3.2/1, mbtmp3.7/4, ML3.7/3, Error ellipse: s-maj=32.4km s-min=12.1km az=113.0*

*NEIC **30** 20:44:10.3±0.6, 59°.73N±0°.04×152°.29W±0°.05, h70^{km}±6^{km}, Error ellipse: s-maj=5.1km s-min=3.4km az=189.0*

*AEIC **30** 20:44:11.2±0.8, 59°.72N±0°.03×152°.29W±0°.04, h67^{km}±5^{km}, ML3.4, ML3.5/180(NEIC), Error ellipse: s-maj=4.9km s-min=1.7km az=208.0*

ISC 30 20:44:09.5±0.9**, 59°.71N**±0°.03×**152°.26W**±0°.03**, h76**^{km}±7^{km}**, n199, σ0^{s}.77**/165**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOM	Homer	0.32	98		Pn	20 44 21.8	+0.4
HOM					Sn	20 44 30.1	0.0
ILS	Iliamna Low So	0.48	302		Pn	20 44 22.8	0.0
ILS					Sn	20 44 32.3	-0.3
IVE	Iliamna Volcan	0.49	310		Pn	20 44 22.9	0.0
IVE					Sn	20 44 32.5	-0.3
P19K	Oil Pt	0.49	264		Sn	20 44 32.6	0.0
P19K	Oil Pt	0.49	264		Pn	20 44 23.0	+0.2
ILSW	Iliamna Southw	0.52	302		Pn	20 44 23.0	-0.2
ILSW					Sn	20 44 32.2	-1.1
CNPM	China Poot	0.55	109		Sn	20 44 34.0	+0.4
CNPM	China Poot	0.55	109		Pn	20 44 23.9	+0.5
AU22	Augustine Moun	0.65	239		Pn	20 44 24.8	+0.6
AUL	Augustine Lava	0.68	242		Pn	20 44 25.2	+0.6
AUF	Augustine Flow	0.69	243		Pn	20 44 25.0	+0.4
AUF					Sn	20 44 37.0	+1.1
AGU	Augustine-Summ	0.69	240		Sn	20 44 37.5	+1.4
AUCH	Augustine Cone	0.69	241		Sn	20 44 36.6	+0.4
AUI	Augustine Isla	0.70	238		Pn	20 44 25.2	+0.4
BRLK	Bradley Lake	0.70	85		Sn	20 44 36.6	+0.4
BRLK	Bradley Lake	0.70	85		Pn	20 44 25.0	+0.2
BRLK				IAML		20 44 38.1	
	comp=N,2µm,0.3s						
BRSE	Bradley Lake S	0.77	87		Sn	20 44 38.1	+0.5
RDWB	Redoubt West	0.84	340		Pn	20 44 26.5	0.0
RDWB					Sn	20 44 38.8	-0.3
RDT	Redoubt	0.87	355		Sn	20 44 39.7	0.0
DFR	Drift River	0.91	347		Pn	20 44 27.4	+0.1
DFR					Sn	20 44 40.6	0.0
Q19K	Cape Douglas,	1.05	223		Pn	20 44 29.4	+0.4
SYI	Shuyak Island	1.10	183		Pn	20 44 30.4	+1.0
SYI				IAML		20 44 48.3	
	comp=N,1µm,0.5s						
O19K	Port Alsworth	1.15	296		Sn	20 44 45.4	0.0
O19K	Port Alsworth	1.15	296		Pn	20 44 30.0	0.0
CAPN	Captain Cook N	1.20	27		Pn	20 44 32.6	+1.9
SLKM	Skilak Lake	1.30	51		Pn	20 44 32.5	+0.5
SLKM				IAML		20 44 51.2	
	comp=N,756nm,0.2s						
SLKM				IAML		20 44 56.2	
	comp=E,1µm,0.2s						
SEW	Seward	1.47	73		Pn	20 44 34.9	+0.7
SEW				IAML		20 45 00.1	
	comp=E,524nm,0.5s						
SPU	Mount Spurr	1.48	4		Pn	20 44 35.0	+0.6
O22K	Cooper Landing	1.49	57		Pn	20 44 35.2	+0.7
O18K	Koktuh Hills	1.50	277		Pn	20 44 34.3	-0.2
O18K				IAML		20 44 53.9	
	comp=N,1µm,0.7s						
O18K				IAML		20 44 54.2	
	comp=E,723nm,0.7s						
SPCR	Spurr Chakacha	1.50	1		Sn	20 44 54.4	+0.7
SPCN	Chakachatna No	1.52	1		Pn	20 44 35.9	+1.0
P18K	Big Mountain,	1.54	260		Pn	20 44 34.8	-0.4
KAPH	Katmai Pasha	1.55	225		Pn	20 44 35.9	+0.6
SPBG	Spurr Blockage	1.56	358		Pn	20 44 36.3	+0.9
N19K	Bonanza Creek	1.57	316		Pn	20 44 35.7	+0.1
N19K				IAML		20 44 55.5	
	comp=E,573nm,0.6s						
N19K				IAML		20 44 56.4	
	comp=N,500nm,0.5s						
SPCG	Spurr Capps Gl	1.60	4		Sn	20 44 57.0	+1.0
KARR	Katmai Rainbow	1.75	227		Pn	20 44 38.7	+0.8
RC01	Rabbit Creek A	1.87	41		Sn	20 45 03.7	+1.4
RC01	Rabbit Creek A	1.87	41		Pn	20 44 40.1	+0.7
RC01				IAML		20 45 08.7	
	comp=N,481nm,0.4s						
RC01				IAML		20 45 10.9	
	comp=E,472nm,0.5s						
SUA	Susitna One	1.92	22		Pn	20 44 41.2	+1.0
KDAK	Kodiak Island	1.94	185	Pn	Pn	20 44 40.7	+0.3
	comp=E,21nm,0.3s,baz=48,slow=4.6,SNR=611						
KDAK				Sn	Sn	20 45 03.9	0.0
	comp=E,36nm,0.3s,baz=211,slow=23,SNR=10.0						
KDAK	Kodiak Island	1.94	185		Pn	20 44 40.6	+0.3
KDAK				IAML		20 45 12.2	
	comp=E,393nm,0.6s						
KDAK				IAML		20 45 16.2	
	comp=E,366nm,0.8s						
KAKN	Katmai Knife C	2.02	227		Pn	20 44 42.2	+0.6
N18K	Kilae Creek	2.06	300		Pn	20 44 42.1	+0.1
N18K				IAML		20 45 06.4	
	comp=N,351nm,0.5s						
KABU	Katmai Buttres	2.12	229		Pn	20 44 43.8	+0.8
ACHA	Angle Creek He	2.18	228		Pn	20 44 44.4	+0.6
P17K	Kvichak River	2.19	258		Pn	20 44 43.9	+0.2
M20K	Styx River	2.23	349		Pn	20 44 45.1	+0.8
ANCK	Angle Creek	2.25	229		Pn	20 44 45.4	+0.7
PWL	Port Wells	2.27	58		Pn	20 44 44.8	-0.1
PWL				IAML		20 45 23.1	
	comp=N,392nm,0.4s						
PWL				IAML		20 45 23.1	
	comp=E,295nm,0.7s						
M22K	Willow	2.31	26		Pn	20 44 46.1	+0.8
SKT	Skwentna	2.31	9		Pn	20 44 46.0	+0.6
SKT				IAML		20 45 19.0	
	comp=E,298nm,0.7s						
SKT				IAML		20 45 26.9	
	comp=N,205nm,0.6s						
CNTC	Contact Creek	2.37	234		Pn	20 44 46.7	+0.5
R18K	Karluk	2.43	209		Pn	20 44 47.8	+0.8
PMR	Palmer	2.44	38		Pn	20 44 47.1	+0.1
PMR				IAML		20 45 23.0	
	comp=E,240nm,0.5s						
PMR				IAML		20 45 23.3	
	comp=N,290nm,0.3s						
O17K	Koliganek Bris	2.45	274		Pn	20 44 47.6	+0.4
P23K	Montague Islan	2.47	81		Pn	20 44 48.1	+0.6
P23K				IAML		20 45 29.5	
	comp=N,209nm,0.8s						
P23K				IAML		20 45 34.7	
	comp=E,247nm,1.0s						
Q16K	King Salmon	2.48	247		Pn	20 44 48.6	+0.9
M18K	Stony River	2.51	317		Pn	20 44 48.3	+0.3
KNK	Knik Glacier	2.54	46		Pn	20 44 48.5	0.0
KNK				IAML		20 45 28.9	
	comp=N,281nm,0.5s						
KNK				IAML		20 45 29.0	
	comp=E,357nm,0.7s						
N17K	Nushagak Hills	2.60	291		Pn	20 44 49.4	+0.2
N17K	Nushagak Hills	2.60	291	IAML		20 45 19.3	
	comp=N,238nm,0.5s						
N17K				IAML		20 45 19.9	
	comp=E,212nm,0.6s						
L19K	White Mountain	2.79	334	IAML		20 45 25.2	
	comp=N,143nm,0.7s						
SML	Sawmill	2.86	41	IAML		20 45 38.4	
	comp=E,184nm,1.1s						
SML				IAML		20 45 40.0	
	comp=N,195nm,1.0s						
PLK2	Peulik 2	2.88	229		Pn	20 44 54.3	+1.3
PLK3	Peulik 3	2.91	228		Pn	20 44 54.9	+1.4
L22K	Petersville	2.92	14		Pn	20 44 54.9	+1.2
L22K	Petersville	2.92	14	IAML		20 45 36.6	
	comp=N,202nm,0.4s						
L22K				IAML		20 45 37.5	
	comp=E,252nm,0.3s						
O16K	Kokwok River B	2.96	270		Pn	20 44 54.7	+0.5
O16K	Kokwok River B	2.96	270	IAML		20 45 44.8	
	comp=N,146nm,1.0s						
PLK1	Peulik 1	2.96	232		Pn	20 44 55.4	+1.3
HIN	Hinchinbrook I	2.97	74		Pn	20 44 54.1	-0.3
HIN	Hinchinbrook I	2.97	74	IAML		20 45 29.1	
	comp=N,113nm,0.9s						
HIN				IAML		20 45 32.4	
	comp=E,141nm,0.8s						
PLK4	Peulik 4	2.98	228	IAML		20 45 33.2	
	comp=E,155nm,0.8s						
PLK4				IAML		20 45 33.4	
	comp=N,173nm,1.1s						
P16K	Nushagak River	3.01	259	IAML		20 45 51.8	
	comp=N,204nm,0.6s						
P16K				IAML		20 45 56.2	
	comp=E,183nm,1.2s						
M23K	Glacier View	3.06	45		Pn	20 44 56.1	+0.6
M17K	Holitna River	3.07	306		Pn	20 44 56.3	+0.7
PLBL	Peulik Blue Cr	3.11	232		Pn	20 44 57.2	+1.0
PPLA	Purkeypile	3.20	1		Pn	20 44 59.0	+1.5
PPLA	Purkeypile	3.20	1	IAML		20 45 46.7	
	comp=N,92nm,0.9s						
PPLA				IAML		20 46 02.1	
	comp=E,85nm,1.2s						
SCM	Sheep Creek Mo	3.23	46		Pn	20 44 58.1	+0.3
SCM	Sheep Creek Mo	3.23	46	IAML		20 45 53.1	
	comp=E,144nm,0.7s						
SCM				IAML		20 45 56.6	
	comp=N,164nm,1.0s						
L18K	Granite Mounta	3.32	321	IAML		20 45 37.0	
	comp=N,116nm,0.9s						
EYAK	Cordova Ski Ar	3.37	73		Pn	20 44 58.8	-0.9
DIV	Divide	3.52	63		Pn	20 45 01.4	-0.4
M16K	Timber Creek	3.58	295		Pn	20 45 03.3	+0.8
M16K	Timber Creek	3.58	295	IAML		20 45 59.5	
	comp=E,73nm,1.1s						
M16K				IAML		20 46 07.2	
	comp=N,92nm,0.7s						
KLU	Klutina	3.60	57	IAML		20 45 48.9	
	comp=E,74nm,0.8s						
KLU				IAML		20 45 48.9	
	comp=N,117nm,0.4s						
K20K	Telida	3.77	348		Pn	20 45 05.9	+0.8
L17K	Donlin	3.82	312		Pn	20 45 06.1	+0.3
M24K	Tolsona, Glenn	3.83	48		Pn	20 45 06.6	+0.6
M24K	Tolsona, Glenn	3.83	48	IAML		20 46 15.2	
	comp=N,106nm,1.1s						
GOAT	Goat Mountain	3.87	74		Pn	20 45 05.8	-0.8
TRF	Thorofare Moun	3.87	13		Pn	20 45 07.0	+0.3
TRF	Thorofare Moun	3.87	13	IAML		20 46 13.9	
	comp=N,114nm,1.0s						
O15K	Ungalikthiuk R	3.90	265		Pn	20 45 07.9	+1.1
KTH	Kantishna Hill	3.91	9		Pn	20 45 07.8	+0.7
KTH	Kantishna Hill	3.91	9	IAML		20 46 07.2	
	comp=E,85nm,0.8s						
KTH				IAML		20 46 19.4	
	comp=N,80nm,1.0s						
N15K	Kwethluk River	3.97	280		Pn	20 45 09.2	+1.3
N15K	Kwethluk River	3.97	280	IAML		20 46 20.1	
	comp=N,95nm,0.8s						
KAIM	Kayak Island	3.97	83		Pn	20 45 08.0	+0.2
KAIM	Kayak Island	3.97	83	IAML		20 46 00.8	
	comp=E,82nm,0.6s						
KAIM				IAML		20 46 03.9	
	comp=N,103nm,1.2s						
BMRM	Bremner River	4.01	68		Pn	20 45 07.6	-0.9
BMRM	Bremner River	4.01	68	IAML		20 46 20.6	
	comp=N,44nm,0.9s						
BMRM				IAML		20 46 23.3	
	comp=E,46nm,0.8s						
RND	Reindeer	4.06	22		Pn	20 45 09.8	+0.7
RND	Reindeer	4.06	22	IAML		20 46 18.0	
	comp=N,64nm,0.9s						
RND				IAML		20 46 24.2	
	comp=E,56nm,1.2s						
L16K	Owhat River	4.07	303		Pn	20 45 09.8	+0.6
L16K	Owhat River	4.07	303	IAML		20 45 56.7	
	comp=E,43nm,1.0s						
DHY	Denali Highway	4.12	33	IAML		20 46 14.6	
	comp=E,71nm,1.2s						
DHY				IAML		20 46 18.0	
	comp=N,55nm,0.9s						
K17K	Iditarod	4.20	319		Pn	20 45 11.5	+0.6
K17K	Iditarod	4.20	319	IAML		20 45 58.0	
	comp=E,48nm,1.1s						
K17K				IAML		20 46 21.0	
	comp=N,44nm,1.1s						
N25K	Chitina, Valde	4.23	60	IAML		20 46 28.4	
	comp=N,38nm,0.5s						
ANPB	Aniakchak Plen	4.31	230		Pn	20 45 14.4	+1.8
M15K	Kasigluk River	4.32	287		Pn	20 45 13.2	+0.7
J18K	Innoko River	4.33	333		Pn	20 45 13.5	+0.7
MCK	McKinley	4.34	20		Pn	20 45 13.8	+0.9
MCK	McKinley	4.34	20	IAML		20 46 13.8	
	comp=E,42nm,0.6s						
MCK				IAML		20 46 24.5	
	comp=N,66nm,1.0s						
BPAW	Bear Paw Mtn.	4.45	7		Pn	20 45 15.0	+0.6
WACK	Wrangell Chich	4.50	56		Pn	20 45 15.5	+0.2
GLB	Gilahina Butte	4.52	64	IAML		20 46 07.8	
	comp=N,29nm,0.7s						
WASW	Wrangell South	4.54	57		Pn	20 45 16.3	+0.4
J20K	Nowinta River	4.57	350	IAML		20 46 43.9	
	comp=N,28nm,0.7s						
J19K	Poorman	4.59	341		Pn	20 45 16.9	+0.7
O14K	Tigyukauivet M	4.61	268		Pn	20 45 17.8	+1.2
O14K	Tigyukauivet M	4.61	268	IAML		20 46 36.4	
	comp=N,38nm,1.1s						
VRDI	Verde Repeater	4.62	67		Pn	20 45 16.3	-0.6
PAX	Paxson	4.63	42	IAML		20 46 27.9	
	comp=N,40nm,1.1s						
PAX				IAML		20 46 29.3	
	comp=E,32nm,0.7s						
CRQM	Cirque	4.67	73		Pn	20 45 18.3	+0.7
CRQM	Cirque	4.67	73	IAML		20 46 11.4	
	comp=N,46nm,1.1s						
CRQM				IAML		20 46 12.1	
	comp=E,32nm,0.8s						
N14K	Kuskokwak Cree	4.76	277		Pn	20 45 19.8	+1.2
SNH	Sunshine Point	4.76	80		Pn	20 45 19.8	+1.1
SNH	Sunshine Point	4.76	80	IAML		20 48 09.9	
	comp=E,62nm,1.1s						
TGL	Tana Glacier	4.82	73		Pn	20 45 19.9	+0.4
TGL	Tana Glacier	4.82	73	IAML		20 46 12.3	
	comp=E,24nm,1.2s						
MCARA	McCarthy VSAT	4.86	66		Pn	20 45 20.6	+0.6
MCARA	McCarthy VSAT	4.86	66	IAML		20 46 54.3	
	comp=N,40nm,0.8s						
MCARA				IAML		20 47 17.7	
	comp=E,43nm,1.0s						
J17K	VABM Dome	4.93	322		Pn	20 45 21.2	+0.3
J17K	VABM Dome	4.93	322	IAML		20 46 32.1	
	comp=E,23nm,0.7s						
L15K	Ungalak Mounta	4.95	298		Pn	20 45 22.1	+1.0
M14K	Bethel	4.95	286		Pn	20 45 22.2	+1.1
M14K	Bethel	4.95	286	IAML		20 46 45.4	
	comp=N,29nm,1.1s						
M14K				IAML		20 46 59.7	
	comp=E,39nm,1.1s						
BARK	Barkley Ridge	4.95	78		Pn	20 45 22.1	+0.9
KIAG	Kiagna River	5.07	72		Pn	20 45 23.1	+0.1
PTPK	Patty Peak	5.08	69		Pn	20 45 23.3	+0.2
BALM	Baldy	5.10	71		Pn	20 45 23.6	+0.2
NEA2	Nenana	5.13	16		Pn	20 45 24.2	+0.6
WRH	Wood River Hil	5.17	20		Pn	20 45 24.4	+0.3
VNFG	Fog Glacier, M	5.18	232		Pn	20 45 26.8	+2.4
VNSS	Veniaminof 8	5.18	231		Pn	20 45 26.9	+2.4
K15K	Wolf Creek Mou	5.20	304		Pn	20 45 25.6	+1.0
K15K	Wolf Creek Mou	5.20	304	IAML		20 46 23.8	
	comp=N,31nm,0.5s						
M26K	Nabesna, AK	5.25	55		Pn	20 45 26.2	+0.8
M26K	Nabesna, AK	5.25	55	IAML		20 47 07.4	
	comp=N,22nm,0.6s						
YAH	Yahtse	5.32	78		Pn	20 45 27.3	+0.9
YAH	Yahtse	5.32	78	IAML		20 46 27.0	
	comp=E,33nm,0.9s						
YAH				IAML		20 46 30.6	
	comp=N,34nm,0.5s						
HDA	Harding Lake	5.34	26	IAML		20 46 32.3	
	comp=E,35nm,0.5s						
GRNC	Granite Creek	5.34	74		Pn	20 45 27.4	+0.7
GRNC	Granite Creek	5.34	74	IAML		20 46 31.4	
	comp=N,24nm,1.1s						
RIDG	Independent Ri	5.37	38		Pn	20 45 27.6	+0.7
J16K	Anvik River	5.37	316		Pn	20 45 27.2	+0.3
J16K	Anvik River	5.37	316	IAML		20 47 11.7	
	comp=N,17nm,0.9s						
CCB	Clear Creek Bu	5.38	21	IAML		20 46 46.1	
	comp=E,18nm,1.0s						
L14K	Kuka Creek	5.40	292		Pn	20 45 28.6	+1.3
L14K	Kuka Creek	5.40	292	IAML		20 47 10.3	
	comp=N,42nm,1.1s						
L14K				IAML		20 47 15.5	
	comp=E,44nm,1.1s						
BARN	Barnard Glacie	5.43	71		Pn	20 45 28.6	+0.6
DOT	Dot Lake	5.56	41		Pn	20 45 29.3	-0.1
CTGM	Chitina Glacie	5.58	72		Pn	20 45 30.7	+0.8
M13K	Dall Lake	5.60	282		Pn	20 45 31.4	+1.4
CHX	Chaix Hills	5.63	82		Pn	20 45 31.7	+1.2
ILAR	Eielson Array	5.67	24	Pn	Pn	20 45 31.4	+0.4
	comp=E,4.2nm,0.3s,baz=203,slow=14,SNR=179						
ILAR				Sn	Sn	20 46 33.5	-1.2
	comp=E,2.0nm,0.3s,baz=198,slow=22,SNR=4.4						
	comp=E,9.9nm,0.3s						
LOGN	Logan Glacier	5.72	74		Pn	20 45 32.4	+0.6
I17K	Unalakleet	5.79	320		Pn	20 45 32.2	-0.4
SAMH	Samovar Hills	5.79	81		Pn	20 45 34.2	+1.4
SCRK	Sand Creek	5.80	39		Pn	20 45 32.7	-0.2
POKR	Poker Plat Res	5.88	20		Pn	20 45 34.2	+0.4
J25K	Salcha River,	5.89	30		Pn	20 45 34.5	+0.4
YUK2	White River	5.98	65		Pn	20 45 35.4	+0.1
BC01	Beaver Creek A	6.04	52		Pn	20 45 36.2	+0.1
L27K	Beaver Creek,	6.04	52		Pn	20 45 36.2	+0.1
PCA	Pinnacle	6.06	81		Pn	20 45 37.0	+0.6
O28M	Mount Upton	6.11	75		Pn	20 45 38.1	+0.8
YUK3	Moose Creek	6.15	65		Pn	20 45 37.5	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H19K	**Roundabout Mou**	**6.15**	**344**		**Pn**	**20 45 38.1**	**+0.5**
PRP	**Porcupine Dome**	**6.61**	**25**		**Pn**	**20 45 43.8**	**0.0**
G19K	**Purcell Mounta**	**6.82**	**343**		**Pn**	**20 45 47.7**	**+1.0**
M29M	**Somme Creek**	**7.23**	**62**		**Pn**	**20 45 52.4**	**0.0**
P29M	**Windy Craggy**	**7.36**	**84**		**Pn**	**20 45 54.6**	**+0.5**
HYT	**Haines Junctio**	**7.43**	**75**		**Pn**	**20 45 55.6**	**+0.5**
COLD	**Coldfoot**	**7.61**	**6**		**Pn**	**20 45 57.2**	**-0.2**
M30M	**Minto, Yukon**	**8.02**	**62**		**Pn**	**20 46 02.6**	**-0.4**
PLBC	**Pleasant Camp**	**8.07**	**85**		**Pn**	**20 46 04.4**	**+0.6**
I28M	**Miner Creek**	**8.09**	**39**		**Pn**	**20 46 04.4**	**+0.4**
O30N	**Mendenhall**	**8.12**	**75**		**Pn**	**20 46 04.5**	**+0.1**
H27K	**Steamboat Moun**	**8.16**	**32**		**Pn**	**20 46 04.4**	**-0.6**
BM01	**Burnt Mountain**	**8.50**	**21**		**Pn**	**20 46 09.1**	**-0.5**
INK	**Inuvik**	**11.86**	**36**	Pn	**Pn**	**20 46 55.6**	**+0.4**
	comp=E,0.1nm,0.3s,baz=243,slow=9.0,SNR=4.3						
	comp=E,0.5nm,0.4s						
YKA	**Yellowknife Ar**	**18.24**	**65**	P	**P**	**20 48 15.5**	**-0.7**
	comp=E,0.4nm,0.3s,baz=279,slow=13,SNR=29						
	comp=E,2.7nm,0.6s						
NVAR	**Mina Array Bea**	**30.25**	**119**	P	**P**	**20 50 12.0**	**-1.1**
	comp=E,0.1nm,0.3s,baz=290,slow=6.1,SNR=3.6						
	comp=E,0.1nm,0.3s						

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*SJA **30** 20:46:01.2±0.7, 24°.79S×70°.00W, h72^{km}±3^{km}, ML3.9, MW4.0*
*NEIC **30** 20:46:02.6±1.1, 24°.79S±0°.05×69°.90W±0°.06, h72^{km}±6^{km}, mb3.9/2, ML4.0(GUC), Error ellipse: s-maj=9.2km s-min=5.6km az=56.0*
*IDC **30** 20:46:03.2±0.8, 24°.85S×69°.74W, h79^{km}±6^{km}, mb3.4/5, mbtmp3.8/8, Error ellipse: s-maj=26.6km s-min=16.6km az=86.0*
*GUC **30** 20:46:03.6±0.7, 24°.80S×69°.93W, h68^{km}±5^{km}, ML4.0*
ISC 30 20:46:02.3±0.6, **24°.82S**±0°.03×**69°.92W**±0°.04, **h75**^{km}±5^{km}, **n84**, σ**1^{s}.65**/101, **mb3.8**/5, **3C-6D**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**0.45**	**139**		**Pn**	**20 46 15.8**	**+0.2**
GO02				Sn	**Sn**	**20 46 25.5**	**+0.2**
GO02	**Mina Guanaco**	**0.45**	**139**	⇓*i*P	**Pn**	**20 46 16.0**	**+0.4**
GO02				*i* S	**Sn**	**20 46 25.8**	**+0.4**
GO02	**Mina Guanaco**	**0.45**	**139**	*e*P	**Pn**	**20 46 15.8**	**+0.2**
GO02				*e*S	**Sn**	**20 46 26.2**	**+0.8**
GO02				IAML		20 46 28.7	
	comp=Z,7μm,0.2s						
PB10	**IPOC Station P**	**1.43**	**336**		**Pn**	**20 46 27.3**	**+0.8**
PB10				Sn	**Sn**	**20 46 45.1**	**+0.4**
PB10	**IPOC Station P**	**1.43**	**336**	⇓*i*P	**Pn**	**20 46 27.5**	**+1.0**
PB10				*i* S	**Sn**	**20 46 45.1**	**+0.4**
PB10				IAML		20 46 54.2	
	comp=E,2μm,0.5s						
PB10	**IPOC Station P**	**1.43**	**336**	*e*P	**Pn**	**20 46 26.9**	**+0.3**
PB10				*e*S	**Sn**	**20 46 45.1**	**+0.4**
PB10				IAML		20 46 54.0	
	comp=Z,764nm,0.4s						
AC01	**Pan de Azucar**	**1.46**	**205**		**Pn**	**20 46 28.1**	**+1.1**
AC01	**Pan de Azucar**	**1.46**	**205**	⇑*i*P	**Pn**	**20 46 28.1**	**+1.1**
AC01				*i* S	**Sn**	**20 46 47.7**	**+2.1**
AC01				IAML		20 46 49.7	
	comp=E,2μm,0.5s						
AC01	**Pan de Azucar**	**1.46**	**205**	*e*P	**Pn**	**20 46 27.4**	**+0.4**
AC01				*e*S	**Sn**	**20 46 46.0**	**+0.4**
AC01				IAML		20 46 51.7	
	comp=Z,2μm,0.3s						
PB05	**IPOC Station P**	**1.98**	**352**		**Pn**	**20 46 33.6**	**-0.4**
PB05	**IPOC Station P**	**1.98**	**352**	⇓*i*P	**Pn**	**20 46 34.0**	**+0.1**
PB05				*i* S	**Sn**	**20 46 55.8**	**-2.1**
PB05				IAML		20 47 07.1	
	comp=E,1μm,0.3s						
PB05	**IPOC Station P**	**1.98**	**352**	*e*P	**Pn**	**20 46 33.8**	**-0.2**
PB05				*e*S	**Sn**	**20 46 59.5**	**+1.6**
PB05				IAML		20 47 05.4	
	comp=Z,794nm,0.6s						
PB06	**IPOC Station P**	**2.13**	**9**		**Pn**	**20 46 36.0**	**0.0**
PB06	**IPOC Station P**	**2.13**	**9**	⇓*i*P	**Pn**	**20 46 36.2**	**+0.2**
PB06				*i* S	**Sn**	**20 47 01.5**	**-0.1**
PB06				IAML		20 47 07.3	
	comp=N,1μm,0.4s						
PB06	**IPOC Station P**	**2.13**	**9**	*e*P	**Pn**	**20 46 36.3**	**+0.2**
PB06				*e*S	**Sn**	**20 47 02.1**	**+0.4**
AC02	**Maricunga**	**2.13**	**161**		**Pn**	**20 46 38.0**	**+1.7**
AC02	**Maricunga**	**2.13**	**161**	⇓*i*P	**Pn**	**20 46 38.4**	**+2.0**
AC02				*i* S	**Sn**	**20 47 04.7**	**+2.5**
AC02				IAML		20 47 06.5	
	comp=E,2μm,0.4s						
AC02	**Maricunga**	**2.13**	**161**	*e*P	**Pn**	**20 46 37.8**	**+1.4**
AC02				*e*S	**Sn**	**20 46 57.8**	**-4.4**
AC02				*e*S		20 47 06.3	
AC02				IAML		20 47 06.5	
	comp=Z,762nm,0.5s						
AF01	**San Pedro de A**	**2.45**	**41**		**Pn**	**20 46 40.4**	**0.0**
AF01	**San Pedro de A**	**2.45**	**41**	⇑*i*P	**Pn**	**20 46 41.6**	**+1.2**
AF01				*i* S	**Sn**	**20 47 11.8**	**+2.3**
AF01				IAML		20 47 18.1	
	comp=N,3μm,0.2s						
AF01	**San Pedro de A**	**2.45**	**41**	*e*P	**Pn**	**20 46 41.4**	**+0.9**
AF01				*e*S	**Sn**	**20 47 12.0**	**+2.5**
AC06	**Mina Casimiro**	**2.56**	**189**		**Pn**	**20 46 41.9**	**+0.2**
AC06	**Mina Casimiro**	**2.56**	**189**	*e*P	**Pn**	**20 46 42.1**	**+0.4**
GO03	**Copiapo**	**2.78**	**186**		**Pn**	**20 46 45.0**	**+0.3**
GO03	**Copiapo**	**2.78**	**186**	*e*P	**Pn**	**20 46 45.5**	**+0.8**
GO03				*e*S	Sn	20 47 03.3	-14
PB09	**IPOC Station P**	**3.07**	**12**		**Pn**	**20 46 48.2**	**-0.6**
PB09	**IPOC Station P**	**3.07**	**12**	*e*P	**Pn**	**20 46 49.4**	**+0.6**
PB09	**IPOC Station P**	**3.07**	**12**	*e*P	**Pn**	**20 46 49.1**	**+0.3**
PB07	**IPOC Station P**	**3.08**	**1**		**Pn**	**20 46 48.1**	**-0.8**
PB07	**IPOC Station P**	**3.08**	**1**	⇓*e*P	**Pn**	**20 46 48.1**	**-0.8**
PB07	**IPOC Station P**	**3.08**	**1**	*e*P	**Pn**	**20 46 48.1**	**-0.8**
PB07				*e*S	**Sn**	**20 47 29.3**	**+4.6**
SALTA		**3.31**	**80**	⇑*i*P	**Pn**	**20 46 53.7**	**+1.4**
SALTA		**3.31**	**80**	*e*P	**Pn**	**20 46 54.0**	**+1.7**
SALTA				*e*S	**Sn**	**20 47 22.3**	**-8.5**
PB02	**IPOC Station P**	**3.48**	**0**		**Pn**	**20 46 53.4**	**-1.0**
AC04	**Llanos de Chal**	**3.53**	**197**		**Pn**	**20 46 55.4**	**+0.6**
PB01	**IPOC Station P**	**3.78**	**6**		**Pn**	**20 46 57.7**	**-0.6**
PB01	**IPOC Station P**	**3.78**	**6**	*e*P	**Pn**	**20 46 57.8**	**-0.6**
PB01				*e*S	Sn	20 47 26.8	-15
FSA	**Cafayete**	**3.78**	**111**	*e*P	**Pn**	**20 47 00.4**	**+2.0**
TINO	**Tinogasta**	**3.85**	**147**	*e*P	**Pn**	**20 47 01.5**	**+2.1**
PATCX	**Punta Patache**	**3.99**	**357**	Pn	**Pn**	**20 46 59.3**	**-1.8**
SLA	**San Lorenzo**	**4.01**	**90**	*e*P	**Pn**	**20 47 04.1**	**+2.6**
AC05	**El Transito**	**4.01**	**184**		**Pn**	**20 47 02.0**	**+0.4**
VCA	**Vinchina**	**4.19**	**159**	*e*P	**Pn**	**20 47 06.5**	**+2.5**
LCO	**Las Campanas**	**4.23**	**189**		**Pn**	**20 47 04.9**	**+0.2**
LCO	**Las Campanas**	**4.23**	**189**	*e*P	**Pn**	**20 47 07.2**	**+2.6**
TA01	**Diego Aracena**	**4.24**	**357**	Pn	**Pn**	**20 47 02.1**	**-2.5**
AZAP	**Zapla**	**4.46**	**83**	*e*P	**Pn**	**20 47 09.9**	**+2.2**
HMBC	**Humberstone**	**4.52**	**0**		**Pn**	**20 47 06.6**	**-1.9**
PB08	**IPOC Station P**	**4.71**	**9**		**Pn**	**20 47 09.8**	**-1.4**
AGUA	**GUANDACOL**	**4.82**	**165**	*e*P	**Pn**	**20 47 16.1**	**+3.6**
YJA	**Yavi**	**4.82**	**58**	*e*P	**Pn**	**20 47 15.3**	**+2.5**
PB11	**IPOC Station P**	**5.04**	**3**		**Pn**	**20 47 13.4**	**-2.2**
CO01	**Juntas del Tor**	**5.14**	**182**		**Pn**	**20 47 17.4**	**+0.4**
GO01	**Chusmiza**	**5.17**	**8**		**Pn**	**20 47 15.6**	**-2.1**
GO01	**Chusmiza**	**5.17**	**8**	*e*P	**Pn**	**20 47 18.7**	**+1.0**
CO03	**El Pedregal**	**6.04**	**186**		**Pn**	**20 47 29.4**	**+0.3**
PB16	**IPOC Station P**	**6.46**	**3**		**Pn**	**20 47 33.8**	**-1.6**
CFA	**Coronel Fontan**	**6.92**	**168**	P	**Pn**	**20 47 41.0**	**-0.1**
	comp=N,6.4nm,0.3s,baz=348,slow=14,SNR=23						
CFA				S	**Sn**	**20 48 58.0**	**-0.5**
	comp=N,19nm,0.8s,baz=185,slow=14,SNR=5.8						
PB18	**Visviri**	**7.21**	**3**	Pn	**Pn**	**20 47 45.3**	**-0.2**
LPAZ	**La Paz**	**8.65**	**11**	P	**Pn**	**20 48 04.5**	**-0.8**
	comp=N,1.4nm,0.4s,baz=218,slow=3.1,SNR=7.3						
LPAZ	**La Paz**	**8.65**	**11**	Pn	**Pn**	**20 48 04.7**	**-0.6**
H03N1	**Juan Fernandez**	**11.64**	**220**	T	T	21 00 49.5	
	baz=44,slow=72,SNR=54						
H03N2	**Juan Fernandez**	**11.65**	**220**	T	T	21 00 32.7	
	baz=44,slow=72,SNR=50						
H03N3	**Juan Fernandez**	**11.66**	**220**	T	T	21 00 55.8	
	baz=44,slow=72,SNR=51						
SIV	**San Ignacio**	**12.07**	**45**	P	**Pn**	**20 48 49.8**	**-1.7**
	comp=N,4.9nm,0.5s,baz=232,slow=9.9,SNR=25						
SIV				S	Sn	20 50 53.9	-11
	comp=N,1.2nm,0.5s,baz=146,slow=20,SNR=2.4						
TRQA	**Tornquist**	**14.82**	**155**	Pn	**Pn**	**20 49 27.2**	**-0.7**
ITAB	**Concordia**	**16.17**	**102**	Pn	**Pn**	**20 49 45.2**	**+0.3**
ITAB				IAmb	IAmb	20 50 20.0	
	comp=Z,9.1nm,1.1s						
BDFB	**Brasilia**	**22.46**	**70**	P	**P**	**20 50 55.0**	**-0.5**
	comp=Z,3.4nm,0.6s,baz=244,slow=11,SNR=5.8						
	comp=Z,3.4nm,0.6s						
BDFB	**Brasilia**	**22.46**	**70**	P	**P**	**20 50 54.7**	**-0.9**
BDFB				IAmb	IAmb	20 51 27.5	
	comp=Z,5.7nm,1.1s						
TXAR	**Lajitas Array**	**62.85**	**327**	P	**P**	**20 56 22.1**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=151,slow=11,SNR=3.4						
	comp=Z,0.4nm,0.7s						
QSPA	**South Pole Qui**	**65.39**	**180**	pP	pP	20 56 57.7	+0.7
	comp=Z,1.0nm,0.5s,baz=237,slow=1.3,SNR=3.3						
PDAR	**Pinedale Array**	**76.53**	**331**	P	**P**	**20 57 45.3**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=155,slow=3.0,SNR=2.3						
	comp=Z,0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**79.34**	**70**	P	**P**	**20 57 59.7**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=249,slow=3.4,SNR=5.5						
TORD				pP	**pP**	**20 58 21.1**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=265,slow=4.5,SNR=3.1						
	comp=Z,0.7nm,0.6s						
YKA	**Yellowknife Ar**	**94.00**	**341**	P	**P**	**20 59 11.1**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=145,slow=4.0,SNR=3.4						
	comp=Z,0.3nm,0.7s						
ASAR	**Alice Springs**	**126.56**	**207**	PKP	**PKPdf**	**21 04 57.1**	**-0.4**
	comp=Z,0.1nm,0.6s,baz=140,slow=1.6,SNR=4.7						
ASAR				pPKP	**pPKPdf**	**21 05 19.4**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=127,slow=1.3,SNR=2.9						
H11S2	**WAKE ISLAND Hy**	**127.30**	**275**	T	T	23 24 59.1	
	baz=108,slow=75,SNR=7.7						
H11S1	**WAKE ISLAND Hy**	**127.31**	**275**	T	T	23 24 56.5	
	baz=108,slow=75,SNR=9.5						
H11S3	**WAKE ISLAND Hy**	**127.32**	**275**	T	T	23 24 57.5	
	baz=108,slow=75,SNR=9.8						
KURK	**Kurchatov**	**144.58**	**35**		**PKPab**	**21 05 29.2**	**+0.5**
KURBB	**Kurchatov Arra**	**144.59**	**35**	PKP	**PKPab**	**21 05 29.2**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=302,slow=3.5,SNR=9.1						
KURBB				pPKP	**pPKPdf**	**21 05 50.8**	**-1.3**
	comp=Z,0.5nm,0.7s,baz=305,slow=3.1,SNR=3.6						
ZAA0	**Zalesovo Array**	**145.33**	**26**	PKPbc	**PKPbc**	**21 05 30.6**	**-0.4**
ZALV	**Zalesovo Beam**	**145.33**	**26**	PKPbc	**PKPab**	**21 05 31.9**	**+0.6**
	comp=Z,3.1nm,0.7s,baz=306,slow=5.0,SNR=16						
ZALV				pPKPbc	**pPKPdf**	**21 05 53.6**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=318,slow=4.0,SNR=5.8						
ZALV	**Zalesovo Beam**	**145.33**	**26**		**PKPbc**	**21 05 31.1**	**+0.1**
MKAR	**Makanchi Array**	**148.83**	**38**	PKPbc	**PKPbc**	**21 05 41.4**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=316,slow=2.6,SNR=9.6						
MKAR				pPKPbc	**pPKPbc**	**21 06 03.1**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=325,slow=2.8,SNR=3.3						

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*IDC **30** 20:57:42.0±0.8, 20°.24S×174°.00W, h0^{km}, mb3.9/8, mbtmp4.0/9, ML4.2/1, MS3.6/3, Error ellipse: s-maj=35.7km s-min=21.2km az=132.0*
ISC 30 20:57:46.3±0.8, **20°.3S**±0°.2×**174°.0W**±0°.2, **h27**^{km}, **n12**, σ**0^{s}.75**/9, **mb4.0**/8, **MS3.3**/3, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**19.48**	**201**	P	**Pn**	**21 02 12.3**	**-0.2**
	0.6nm,0.3s,baz=26,slow=6.2,SNR=4.2						
	12nm,0.8s						
PPT	**Papeete**	**23.27**	**87**	LR	LR	21 09 50.2	
	comp=Z,93nm,18.8s,baz=308,slow=31						
CTA	**Charters Tower**	**37.23**	**263**	LR	LR	21 20 22.9	
	comp=Z,46nm,18.3s,baz=42,slow=36						
ASAR	**Alice Springs**	**48.20**	**256**	P	**P**	**21 06 24.8**	**-0.1**
	3.0nm,0.9s,baz=100,slow=7.3,SNR=31						
	3.0nm,0.9s						
WRA	**Warramunga Arr**	**48.33**	**261**	P	**P**	**21 06 25.2**	**-0.6**
	1.8nm,0.8s,baz=96,slow=7.7,SNR=8.1						
	1.8nm,0.8s						
VNDA	**Vanda**	**58.47**	**186**	P	**P**	**21 07 40.0**	**+0.6**
	2.0nm,0.9s,baz=34,slow=5.6,SNR=3.9						
	2.0nm,0.9s						
QSPA	**South Pole Qui**	**69.77**	**180**	P	**P**	**21 08 54.0**	**0.0**
	1.2nm,0.8s,baz=66,slow=1.8,SNR=4.2						
	1.2nm,0.8s						
NVAR	**Mina Array Bea**	**78.35**	**41**	P	**P**	**21 09 44.6**	**+0.1**
	0.8nm,0.7s,baz=228,slow=11,SNR=5.0						
	0.8nm,0.7s						
TXAR	**Lajitas Array**	**83.82**	**56**	P	**P**	**21 10 12.6**	**-1.1**
	0.5nm,0.8s,baz=225,slow=6.7,SNR=4.3						
	0.5nm,0.8s						
NEW	**Newport**	**85.06**	**34**	LR	LR	21 44 21.2	
	comp=Z,68nm,18.3s,baz=268,slow=33						
PDAR	**Pinedale Array**	**86.28**	**42**	P	**P**	**21 10 25.8**	**-0.2**
	0.2nm,0.7s,baz=276,slow=5.7,SNR=2.6						
	0.2nm,0.7s						
ILAR	**Eielson Array**	**87.33**	**11**	P	**P**	**21 10 31.4**	**+1.2**
	0.7nm,0.9s,baz=214,slow=5.7,SNR=4.1						
	0.7nm,0.9s						

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*CATAC **30** 20:59:35.3±0.3, 13°N±2°×8°2W±°, h15^{km}±1^{km}, M3.7/11, MLv3.7/11, Error ellipse: s-maj=4.0km s-min=3.6km az=76.0, confirmed*
*RSNC **30** 20:59:36.7±0.0, 13°N±4°×8°2W±°, h16^{km}±2^{km}, mb3.9, ML2.6*
ISC 30 20:59:35.9±1.0, **12°.57N**±0°.04×**81°.72W**±0°.05, **h20**^{km}±3^{km}, **n17**, σ**1^{s}.62**/25, **Caribbean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAIC	**Isla e San And**	**0.03**	**169**	P	**Pg**	**20 59 39.3**	**0.0**
SAIC				S	**Sg**	**20 59 41.8**	**+0.2**
PRVC	**Isla de Provid**	**0.88**	**23**	P	**Pb**	**20 59 51.8**	**-0.6**
PRVC				S	**Sb**	**21 00 03.2**	**-0.5**
PRVC	**Isla de Provid**	**0.88**	**23**	P	**Pb**	**20 59 51.6**	**-0.8**
PRVC				S	**Sg**	**21 00 03.8**	**-0.8**
BILN	**Bilwi Airport**	**2.19**	**313**	P	**Pn**	**21 00 09.6**	**-1.5**
BILN				S	**Sn**	**21 00 39.6**	**+2.0**
TRT2	**Tortugero**	**2.81**	**225**	P	**Pn**	**21 00 20.4**	**+0.6**
TRT2	**Tortugero**	**2.81**	**225**	S	**Sn**	**21 00 54.8**	**+1.7**
SIUN	**Universidad Ur**	**3.19**	**291**	P	**Pn**	**21 00 24.9**	**-0.1**
SIUN				S	**Sn**	**21 01 06.0**	**+3.5**
LCR2	**La Lucha 2**	**3.59**	**219**	S	**Sn**	**21 01 15.3**	**+2.5**
DRK0	**Durika**	**3.61**	**205**	P	**Pn**	**21 00 31.1**	**+0.2**
DRK0	**Durika**	**3.61**	**205**	S	**Sn**	**21 01 14.1**	**+1.0**
BOAB	**BOACO BROADBAN**	**3.86**	**269**	P	**Pn**	**21 00 34.4**	**+0.2**
BOAB	**BOACO BROADBAN**	**3.86**	**269**	S	**Sb**	**21 01 28.3**	**-1.4**
JTS	**Las Juntas de**	**3.90**	**235**	P	**Pn**	**21 00 35.2**	**+0.4**
JTS				S	**Sn**	**21 01 20.9**	**+0.9**
JTS	**Las Juntas de**	**3.90**	**235**	P	**Pn**	**21 00 35.1**	**+0.4**
JTS				S	**Sn**	**21 01 20.8**	**+0.9**
OCHAL	**Ojochal**	**3.93**	**209**	P	**Pb**	**21 00 41.7**	**-2.9**
OCHAL	**Ojochal**	**3.93**	**209**	S	**Sn**	**21 01 24.1**	**+3.3**
SJCC	**San Jacinto, C**	**6.94**	**112**	P	**Pn**	**21 01 17.5**	**+0.9**
SJCC				S	**Sn**	**21 02 35.8**	**+0.7**

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*TAP **30** 21:04:59.9, 24°.67N×122°.31E, h103^{km}, ML3.2, C*
*JMA **30** 21:04:59.9±0.3, 25°N±2°×122°.4E±0°.6, h93^{km}±3^{km}, NW OFF ISHIGAKIJIMA IS*
ISC 30 21:05:00.1±1.5, **24°.64N**±0°.04×**122°.43E**±0°.03, **h93**^{km}±8^{km}, **n79**, σ**0^{s}.87**/140, **2C-6D**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.29**	**220**	P	**Pn**	**21 05 14.3**	**+0.6**
EOS2				S	**Sn**	**21 05 25.6**	**+2.0**
EOS3	**EOS3**	**0.37**	**197**	P	**Pn**	**21 05 14.9**	**+0.8**
EOS3				S	**Sn**	**21 05 26.6**	**+2.1**
EOS4	**EOS4**	**0.53**	**192**	*e*P	**Pn**	**21 05 15.1**	**+0.1**
EOS4				*e*S	**Sn**	**21 05 26.6**	**+0.6**
TWC	**Suao**	**0.53**	**267**	P	**Pn**	**21 05 15.2**	**-0.2**
TWC				S	**Sn**	**21 05 26.0**	**-0.8**
ESAO	**Su ao**	**0.54**	**263**	*e*S	**Sn**	**21 05 26.9**	**0.0**
YOJ	**Yonaguni jima**	**0.56**	**109**	*e*S	**Sn**	**21 05 27.1**	**0.0**
YOJ	**Yonaguni jima**	**0.56**	**109**	*e*S	**Sn**	**21 05 27.2**	**+0.1**
TIPB	**Shuangxi**	**0.64**	**301**	P	**Pn**	**21 05 16.3**	**-0.1**
TIPB				S	**Sn**	**21 05 28.0**	**-0.5**
NDS	**Dongshan**	**0.65**	**269**	*e*P	**Pn**	**21 05 17.0**	**+0.6**
ENA	**Nanau**	**0.67**	**251**	P	**Pn**	**21 05 16.7**	**+0.1**
ENA				S	**Sn**	**21 05 28.9**	**+0.1**
TWE	**Neicheng**	**0.70**	**277**	P	**Pn**	**21 05 17.0**	**+0.2**
TWE				S	**Sn**	**21 05 28.8**	**-0.6**
EAHA	**Aohua**	**0.70**	**244**	P	**Pn**	**21 05 16.9**	**0.0**
EAHA				S	**Sn**	**21 05 29.8**	**+0.3**
NWF	**Wu-fen Shan**	**0.73**	**306**	*e*P	**Pn**	**21 05 17.4**	**+0.1**
NWF				*e*S	**Sn**	**21 05 29.7**	**-0.4**
WFSB	**Wu-fen Shan**	**0.73**	**306**	*e*P	**Pn**	**21 05 17.3**	**+0.1**
WFSB				*e*S	**Sn**	**21 05 29.6**	**-0.3**
FUSB	**Fushanzhiwuyua**	**0.78**	**279**	⇓*i*P	**Pn**	**21 05 17.7**	**0.0**
FUSB				*e*S	**Sn**	**21 05 30.1**	**-0.8**
ENTT	**Nioudou**	**0.79**	**270**	P	**Pn**	**21 05 18.3**	**+0.5**
LATG	**Datong**	**0.83**	**263**	P	**Pn**	**21 05 18.6**	**+0.2**
LATG				S	**Sn**	**21 05 32.2**	**+0.3**
TWA	**Mucha**	**0.84**	**294**	*e*S	**Sn**	**21 05 31.1**	**-0.8**
NWLT	**Wulai**	**0.86**	**279**	*e*P	**Pn**	**21 05 18.4**	**-0.1**
NWLT				*e*S	**Sn**	**21 05 31.0**	**-1.3**
ETL	**Fush Village**	**0.88**	**237**	P	**Pn**	**21 05 18.2**	**-0.6**
ETL				S	**Sn**	**21 05 32.0**	**-0.7**
NACB	**Ninganchiao**	**0.90**	**239**	P	**Pn**	**21 05 18.4**	**-0.4**
NACB				S	**Sn**	**21 05 31.9**	**-1.0**
YM01	**YM01**	**0.93**	**303**	P	**Pn**	**21 05 19.0**	**-0.3**
YM01				S	**Sn**	**21 05 32.7**	**-1.0**
YM08	**YM08**	**0.94**	**306**	*e*P	**Pn**	**21 05 18.9**	**-0.5**
TWD	**Chiawan**	**0.95**	**234**	*e*P	**Pn**	**21 05 19.0**	**-0.5**
TWD				*e*S	**Sn**	**21 05 33.3**	**-0.6**
ZUZH	**Zhuzihu**	**0.96**	**303**	*e*P	**Pn**	**21 05 19.3**	**-0.3**
ZUZH				*e*S	**Sn**	**21 05 32.9**	**-1.4**
YHNB	**Yeheng**	**0.96**	**272**	⇓*i*P	**Pn**	**21 05 20.0**	**+0.3**
YHNB				S	**Sn**	**21 05 34.3**	**-0.1**
ETLH	**Xiulin Townshi**	**0.97**	**244**	P	**Pn**	**21 05 19.5**	**-0.2**
ETLH				S	**Sn**	**21 05 33.8**	**-0.7**
NSK	**Sanguang**	**0.98**	**272**	⇓*i*P	**Pn**	**21 05 20.0**	**+0.2**
NSK				S	**Sn**	**21 05 34.5**	**-0.2**
NNSB	**Datong**	**0.98**	**258**	⇓P	**Pn**	**21 05 20.0**	**+0.1**
NNSB				S	**Sn**	**21 05 34.4**	**-0.4**
NNS	**Nan Shan**	**0.99**	**258**	P	**Pn**	**21 05 20.1**	**+0.1**
NNS				S	**Sn**	**21 05 34.6**	**-0.3**
TWS1	**Kuangyinshan**	**1.03**	**297**	⇓*i*P	**Pn**	**21 05 20.2**	**-0.1**
TWS1				*e*S	**Sn**	**21 05 35.2**	**-0.3**
NTST	**Danshui**	**1.03**	**300**	S	**Sn**	**21 05 34.7**	**-0.9**
TEYL	**Yanliau Villag**	**1.08**	**225**	P	**Pn**	**21 05 20.4**	**-0.5**
TEYL				S	**Sn**	**21 05 36.2**	**-0.4**
ETM	**Tongmen**	**1.09**	**232**	P	**Pn**	**21 05 20.6**	**-0.4**
ETM				S	**Sn**	**21 05 35.6**	**-1.2**
LXIB	**Xiulin Townshi**	**1.12**	**237**	⇑*i*P	**Pn**	**21 05 20.9**	**-0.7**
LXIB				*i* S	**Sn**	**21 05 36.1**	**-1.5**
KSHI	**Guanxi Townshi**	**1.15**	**277**	P	**Pn**	**21 05 22.3**	**+0.5**
KSHI				S	**Sn**	**21 05 38.3**	**+0.3**
FUSS	**Fushou**	**1.15**	**250**	P	**Pn**	**21 05 22.3**	**+0.3**
FUSS				S	**Sn**	**21 05 37.5**	**-1.0**
SHUL	**Shoufeng**	**1.17**	**223**	P	**Pn**	**21 05 21.7**	**-0.3**
SHUL				S	**Sn**	**21 05 38.3**	**0.0**
WHF	**Hehuan Shan**	**1.18**	**245**	P	**Pn**	**21 05 22.3**	**-0.1**
WHF				S	**Sn**	**21 05 38.3**	**-1.0**
NCUH	**Zhongli**	**1.18**	**286**	*e*S	**Sn**	**21 05 38.7**	**+0.1**
NFF	**Wufeng Townshi**	**1.20**	**270**	P	**Pn**	**21 05 22.7**	**+0.3**
NFF				S	**Sn**	**21 05 38.5**	**-0.6**
TWT	**Tachien**	**1.21**	**252**	P	**Pn**	**21 05 23.4**	**+0.7**
TWT				S	**Sn**	**21 05 39.8**	**+0.2**
IRIF	**Iriomote-Funau**	**1.22**	**104**	*e*P	**Pn**	**21 05 22.6**	**+0.1**
TDCB	**Techi**	**1.23**	**252**	P	**Pn**	**21 05 23.4**	**+0.6**
TDCB				S	**Sn**	**21 05 39.6**	**-0.2**
ESL	**Shilin**	**1.23**	**228**	P	**Pn**	**21 05 21.9**	**-0.8**
ESL				S	**Sn**	**21 05 38.0**	**-1.7**
LIOB	**Emei**	**1.29**	**270**	P	**Pn**	**21 05 23.6**	**+0.1**
LIOB				S	**Sn**	**21 05 40.6**	**-0.4**
NSTT	**Nanjuang**	**1.30**	**270**	S	**Sn**	**21 05 41.0**	**-0.3**
WARBT	**Fenglin Townsh**	**1.33**	**226**	⇑*i*P	**Pn**	**21 05 22.9**	**-1.0**
WARBT				S	**Sn**	**21 05 40.0**	**-1.8**
EGFH	**Guangfu**	**1.34**	**224**	*e*P	**Pn**	**21 05 23.3**	**-0.7**
EGFH				*e*S	**Sn**	**21 05 40.4**	**-1.6**
OWD	**Renai**	**1.34**	**239**	*e*P	**Pn**	**21 05 24.0**	**-0.2**
OWD				*e*S	**Sn**	**21 05 41.1**	**-1.1**
WUSB	**Renai**	**1.36**	**242**	P	**Pn**	**21 05 24.7**	**+0.3**
WUSB				S	**Sn**	**21 05 41.9**	**-0.9**
WHP	**Taichung City**	**1.40**	**255**	P	**Pn**	**21 05 25.9**	**+1.0**
WHP				S	**Sn**	**21 05 44.2**	**+0.6**
HGSD	**Ruisui**	**1.47**	**219**	⇓P	**Pn**	**21 05 25.2**	**-0.5**
VWDT	**VWDT**	**1.48**	**233**	P	**Pn**	**21 05 25.8**	**+0.1**
VWDT				S	**Sn**	**21 05 44.4**	**-0.6**
JKRS	**Kuro-shima**	**1.49**	**105**	*e*P	**Pn**	**21 05 26.3**	**+0.4**
JKRS				*e*S	**Sn**	**21 05 45.8**	**+0.4**
NMLH	**Miaoli**	**1.50**	**266**	S	**Sn**	**21 05 45.0**	**-0.7**
EHYH	**Wanrong**	**1.52**	**221**	P	**Pn**	**21 05 25.4**	**-0.8**
EHY	**Hungye**	**1.52**	**222**	P	**Pn**	**21 05 25.3**	**-1.0**
JIJ	**Ishigaki jima**	**1.58**	**100**	*e*P	**Pn**	**21 05 27.0**	**0.0**
JIJ				*e*S	**Sn**	**21 05 46.6**	**-0.8**
SMLT	**Sun Moon Lake**	**1.59**	**242**	*e*P	**Pn**	**21 05 28.5**	**+1.3**
SMLT				S	**Sn**	**21 05 49.9**	**+2.0**
SSLB	**Suanglung**	**1.60**	**238**	P	**Pn**	**21 05 28.2**	**+0.9**
SSLB				*e*S	**Sn**	**21 05 48.0**	**+0.1**
TYC	**Yuchr**	**1.62**	**243**	P	**Pn**	**21 05 28.6**	**+1.1**
TYC				S	**Sn**	**21 05 49.3**	**+1.1**
YULB	**Yu-li**	**1.62**	**220**	P	**Pn**	**21 05 26.5**	**-1.0**
YULB				S	**Sn**	**21 05 46.3**	**-2.1**
JISG	**Ishigakijimahi**	**1.71**	**91**	*e*S	**Sn**	**21 05 50.1**	**-0.2**
WHYT	**Xinyi Township**	**1.72**	**237**	P	**Pn**	**21 05 29.9**	**+1.0**
WHYT				S	**Sn**	**21 05 52.0**	**+1.3**
WJS	**Zhushan**	**1.76**	**243**	P	**Pn**	**21 05 30.5**	**+1.2**
WJS				S	**Sn**	**21 05 52.7**	**+1.2**
WNT	**Mingjian**	**1.77**	**245**	*e*P	**Pn**	**21 05 30.4**	**+1.0**
FULB	**Fuli**	**1.78**	**216**	P	**Pn**	**21 05 29.1**	**-0.5**
FULB				S	**Sn**	**21 05 52.6**	**+0.7**
CHKT	**Chengkung**	**1.82**	**213**	P	**Pn**	**21 05 29.1**	**-1.1**
CHKT				S	**Sn**	**21 05 50.5**	**-2.4**
ALS	**Alishan**	**1.87**	**233**	P	**Pn**	**21 05 31.9**	**+0.9**
ALS				*e*S	**Sn**	**21 05 56.0**	**+1.6**
CHN5	**Tsauling**	**1.91**	**237**	*e*P	**Pn**	**21 05 32.4**	**+1.0**
CHN5				*e*S	**Sn**	**21 05 56.3**	**+1.1**
ELDTW	**Lidau**	**1.94**	**222**	*e*P	**Pn**	**21 05 30.9**	**-0.9**
WCKO	**Fanlu**	**2.06**	**235**	*e*P	**Pn**	**21 05 33.3**	**+0.1**
WCKO				*e*S	**Sn**	**21 05 59.3**	**+0.9**
STYH	**Taoyuan**	**2.11**	**226**	*e*P	**Pn**	**21 05 34.7**	**+0.9**
STYH				*e*S	**Sn**	**21 06 00.4**	**+0.8**
TPUB	**Ta-pu**	**2.12**	**231**	*e*P	**Pn**	**21 05 34.8**	**+0.7**
TPUB				*e*S	**Sn**	**21 06 01.3**	**+1.3**
WTP	**Ta-pu**	**2.17**	**231**	*e*P	**Pn**	**21 05 36.1**	**+1.4**
WTP				*e*S	**Sn**	**21 06 02.7**	**+1.6**
TWGBT	**Beinan**	**2.20**	**215**	*e*P	**Pn**	**21 05 34.3**	**-0.8**
TWGBT				*e*S	**Sn**	**21 05 59.5**	**-2.3**
CHN1	**Nanshi**	**2.27**	**231**	*e*P	**Pn**	**21 05 37.1**	**+1.2**
CHN1				*e*S	**Sn**	**21 06 04.8**	**+1.3**
SGST	**Jiashian**	**2.30**	**228**	*e*P	**Pn**	**21 05 36.5**	**+0.1**
SGST				*e*S	**Sn**	**21 06 04.4**	**+0.3**

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*IDC **30** 21:14:06.1±1.4, 35°.39N×74°.33E, h0^{km}, mb3.7/6, mbtmp3.7/9, ML2.8/3, Error ellipse: s-maj=30.9km s-min=24.4km az=42.0*
ISC 30 21:14:11.4±1.3, **35°.5N**±0°.2×**74°.4E**±0°.2, **h36**^{km}, **n9**, σ**1^{s}.03**/9, **mb3.6**/5, **Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**15.42**	**10**	Pn	**Pn**	**21 17 46.0**	**-0.2**
	baz=199,slow=11,SNR=5.9						
	0.5nm,0.8s						
BVAR	**Borovoye Array**	**17.76**	**352**	P	**P**	**21 18 16.4**	**+0.2**
	baz=155,slow=11,SNR=6.9						
	1.1nm,0.6s						
ZALV	**Zalesovo Beam**	**19.85**	**18**	P	**P**	**21 18 37.9**	**-1.1**
	0.2nm,0.3s,baz=210,slow=11,SNR=9.0						
	1.6nm,0.7s						
SONM	**Songino Array**	**26.70**	**53**	P	**P**	**21 19 48.6**	**+1.3**
	0.3nm,0.8s,baz=260,slow=8.2,SNR=2.9						
	0.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**27.57**	**122**	P	**P**	**21 19 54.9**	**-0.3**
	0.4nm,0.4s,baz=307,slow=10,SNR=5.5						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**39.86**	**326**	P	**P**	**21 21 42.5**	**+1.4**
	3.3nm,0.9s,baz=118,slow=15,SNR=3.4						
	3.3nm,0.9s						
ARCES	**ARCESS Array B**	**43.13**	**337**	P	**P**	**21 22 06.9**	**-1.0**
	6.1nm,1.1s,baz=100,slow=10,SNR=1.7						
	6.1nm,1.1s						
NOA	**NORSAR Array B**	**46.84**	**323**	P	**P**	**21 22 37.8**	**+0.3**
	0.5nm,0.7s,baz=92,slow=7.8,SNR=1.4						
	0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**68.46**	**271**	P	**P**	**21 25 10.0**	**-0.2**
	0.2nm,0.5s,baz=38,slow=7.0,SNR=1.9						
	0.2nm,0.5s						

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*IDC **30** 21:41:46.7±2.3, 52°.04N×178°.41E, h107^{km}±17^{km}, mb3.3/10, mbtmp3.7/13, MS3.3/1, Error ellipse: s-maj=44.1km s-min=13.6km az=3.0*
*AEIC **30** 21:41:49.4±2.0, 51°.9N±0°.2×178°.2E±0°.1, h147^{km}±5^{km}, Error ellipse: s-maj=24.5km s-min=9.0km az=186.0*
*NEIC **30** 21:41:49.8±1.7, 52°.0N±0°.2×178°.2E±0°.1, h140^{km}±7^{km}, mb4.1/71, ML3.5/10, ML3.2(AEIC), Error ellipse: s-maj=27.6km s-min=9.2km az=186.0*
ISC 30 21:41:49.2±0.8, **52°.0N**±0°.1×**178°.16E**±0°.04, **h143**^{km}±6^{km}, **n108**, σ**0^{s}.97**/117, **mb4.0**/32, **Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSSA	Little Sitkin	0.22	94		Pn	21 42 09.0	+0.4
LSSA					Sn	21 42 23.8	+0.5
LSSE	Little Sitkin	0.25	97		Pn	21 42 08.8	+0.1
CETU	Semis' Tuman	0.82	89		Pn	21 42 11.3	-0.4
CESW	Semis' Southwe	0.87	94		Pn	21 42 11.5	-0.5
CERB	Semis' Cerberu	0.91	92		Pn	21 42 12.1	-0.3
CERB					Sn	21 42 31.2	+1.1
CEPE	Semis' Perret	0.92	89		Pn	21 42 12.4	-0.1
AMKA	Amchitka	0.92	129		Pn	21 42 11.7	-0.8
AMKA					Sn	21 42 28.7	-1.5
AMKA				IAML		21 42 30.8	
	comp=N,896nm,0.5s						
GAKI	Gareloi-Kavalg	1.92	101		Pn	21 42 21.9	-1.0
GAKI					Sn	21 42 48.0	-0.7
TASE	Tanaga Southea	2.36	92		Pn	21 42 27.1	-1.1
TASE					Sn	21 42 57.5	-0.7
TAFL	Tanaga Flats	2.45	93		Pn	21 42 28.9	-0.4
TAFL					Sn	21 42 59.2	-0.8
SHEM	Shemya Is, Ala	2.61	289	P	Pn	21 42 30.1	-1.0
	comp=N,56nm,0.3s,baz=75,slow=4.4,SNR=4.2						
SHEM				S	Sn	21 43 01.7	-1.8
	comp=N,108nm,0.3s,baz=248,slow=22,SNR=10						
SHEM	Shemya Is, Ala	2.61	289	Pn	Pn	21 42 30.0	-1.2
SHEM				IAML		21 43 03.6	
	comp=E,156nm,0.3s						
SMY	Shemya	2.61	289	Pn	Pn	21 42 30.5	-0.6
SMY				IAML		21 43 03.0	
	comp=E,192nm,0.7s						
KIMD	Kanaga Island	2.86	92		Pn	21 42 33.0	-1.3
KIMD					Sn	21 43 08.5	-0.8
KIWB	Kanaga Island	2.90	90	Pn	Pn	21 42 33.4	-1.6
KIWB				IAML		21 43 11.7	
	comp=E,118nm,1.3s						
ADK	Adak	3.19	89	Pn	Pn	21 42 37.6	-0.9
ADK				IAML		21 43 20.9	
	comp=E,89nm,1.2s						
ADK				IAML		21 44 00.4	
	comp=E,79nm,1.5s						
PETK	Petropavlovsk-	12.51	283	P	Pn	21 44 43.4	+1.4
	comp=E,3.0nm,0.9s,baz=100,slow=18,SNR=5.9						
PETK				S	Sn	21 46 56.7	-3.4
	comp=E,2.5nm,0.8s,baz=99,slow=18,SNR=2.1						
PETK				LR	LR	21 49 07.7	
	comp=E,119nm,18.6s,baz=119,slow=35						
O15K	Ungalikthiuk R	14.34	51	Pn	Pn	21 45 06.3	+0.9
N15K	Kwethluk River	14.60	47	Pn	Pn	21 45 09.3	+0.7
K15K	Wolf Creek Mou	15.04	39		P	21 45 17.3	+1.3
M16K	Timber Creek	15.47	45		Pn	21 45 19.5	+0.1
M16K				IAmb	IAmb	21 45 25.5	
	comp=Z,21nm,1.4s						
L16K	Owhat River	15.56	42		P	21 45 21.6	-0.2
L16K				IAmb	IAmb	21 45 47.8	
	comp=Z,16nm,1.4s						
M17K	Holitna River	16.30	45		P	21 45 30.5	+0.6
M17K				IAmb	IAmb	21 45 39.2	
	comp=Z,19nm,1.4s						
K17K	Iditarod	16.54	40	P	P	21 45 33.5	+1.0
K17K				IAmb	IAmb	21 45 48.9	
	comp=Z,15nm,1.4s						
P18K	Big Mountain,	16.66	53	P	P	21 45 34.7	+0.8
P18K				IAmb	IAmb	21 45 38.8	
	comp=Z,8.5nm,1.0s						
G16K	Koyuk River	16.73	29	P	P	21 45 35.1	+0.5
O18K	Koktuh Hills	16.79	52	P	Pn	21 45 36.8	+1.2
O18K				IAmb	IAmb	21 45 39.7	
	comp=Z,13nm,1.1s						
Q19K	Cape Douglas,	17.35	55	P	P	21 45 41.2	-0.3
P19K	Oil Pt	17.71	53	P	Pn	21 45 47.0	+0.4
KDAK	Kodiak Island	17.72	59	P	P	21 45 44.1	-1.4
	comp=Z,4.5nm,0.5s,baz=243,slow=0.1,SNR=12						
KDAK	Kodiak Island	17.72	59	P	P	21 45 43.5	-2.0
H18K	Honhosa River	17.86	33	P	Pn	21 45 48.1	-0.2
H18K				IAmb	IAmb	21 45 56.7	
	comp=Z,12nm,1.3s						
G18K	Tagagawik	18.21	31	P	Pn	21 45 51.6	-0.9
K20K	Telida	18.55	41	P	Pn	21 45 56.1	-0.4
K20K				IAmb	IAmb	21 46 06.7	
	comp=Z,14nm,1.5s						
J20K	Nowinta River	18.88	39	P	P	21 45 57.5	-0.7
J20K				IAmb	IAmb	21 46 05.0	
	comp=Z,10nm,1.4s						
SKT	Skwentna	19.13	47	P	P	21 46 01.4	+0.5
C18K	Utukok River	19.43	23	P	P	21 46 04.1	0.0
L22K	Petersville	19.64	45	P	P	21 46 06.5	0.0
L22K				IAmb	IAmb	21 46 10.3	
	comp=Z,7.7nm,0.7s						
E19K	Redstone River	19.65	29	P	P	21 46 06.8	+0.4
F20K	Avaraart Lake	19.85	31	P	P	21 46 09.1	+0.5
KTH	Kantishna Hill	19.92	42	P	P	21 46 10.2	+0.6
KTH				IAmb	IAmb	21 46 14.2	
	comp=Z,8.6nm,0.8s						
H21K	Melozitna Rive	20.09	36	P	P	21 46 11.4	+0.2
H21K				IAmb	IAmb	21 46 16.1	
	comp=Z,7.2nm,0.9s						
D19K	Kuna River	20.09	26	P	P	21 46 11.6	+0.3
D19K				IAmb	IAmb	21 46 15.7	
	comp=Z,6.6nm,1.0s						
C19K	Lookout Ridge	20.16	23	P	P	21 46 13.2	+1.3
C19K				IAmb	IAmb	21 46 16.1	
	comp=Z,10nm,1.2s						
SML	Sawmill	20.55	48	P	P	21 46 16.9	+0.7
D20K	Etivluk River	20.65	26	P	P	21 46 17.5	+0.4
RND	Reindeer	20.75	44	P	P	21 46 19.1	+0.8
RND				IAmb	IAmb	21 46 28.9	
	comp=Z,8.5nm,1.2s						
SCM	Sheep Creek Mo	21.02	49	P	P	21 46 21.1	-0.1
NEA2	Nenana	21.06	41	P	P	21 46 21.6	0.0
NEA2				IAmb	IAmb	21 46 24.1	
	comp=Z,6.4nm,0.9s						
DHY	Denali Highway	21.29	45	P	P	21 46 23.3	-1.0
B20K	Meade River	21.40	23	P	P	21 46 24.3	-0.8
WRH	Wood River Hil	21.41	41	P	P	21 46 24.0	-1.4
WRH				IAmb	IAmb	21 46 27.3	
	comp=Z,10nm,1.4s						
M24K	Tolsona, Glenn	21.61	48	P	P	21 46 27.7	+0.2
E22K	Anaktuvuk Pass	21.71	30	P	P	21 46 28.9	+0.4
E22K				IAmb	IAmb	21 46 30.5	
	comp=Z,4.4nm,0.7s						
H24K	Noodor Dome	22.00	38	P	P	21 46 31.9	+0.4
H24K				IAmb	IAmb	21 46 34.7	
	comp=Z,6.5nm,1.0s						
IL31		22.00	41	P	P	21 46 30.2	-1.3
IL31				IAmb	IAmb	21 46 39.0	
	comp=Z,9.0nm,1.4s						
ILAR	Eielson Array	22.00	41	P	P	21 46 29.6	-1.9
	comp=Z,0.8nm,0.4s,baz=246,slow=8.9,SNR=13						
	comp=Z,0.8nm,0.4s						
PAX	Paxson	22.11	46	P	P	21 46 33.1	+0.3
N25K	Chitina, Valde	22.25	50	P	P	21 46 34.5	+0.3
E23K	Chandalar	22.37	32	P	P	21 46 35.3	0.0
G24K	Hadweenzic Riv	22.49	36	P	P	21 46 37.1	+0.8
G24K				IAmb	IAmb	21 46 39.0	
	comp=Z,7.6nm,1.1s						
RIDG	Independent Ri	22.57	44	P	P	21 46 35.5	-1.6
RIDG				IAmb	IAmb	21 46 41.1	
	comp=Z,14nm,1.4s						
B22K	Teshekpuk Lake	22.57	25	P	P	21 46 37.0	0.0
B22K				IAmb	IAmb	21 46 38.6	
	comp=Z,7.0nm,0.7s						
F24K	Squaw Lake	22.69	34	P	P	21 46 39.4	+1.1
F24K				IAmb	IAmb	21 46 41.0	
	comp=Z,6.1nm,0.6s						
CRQM	Cirque	22.85	52	P	P	21 46 40.8	+0.8
SCRK	Sand Creek	22.99	44	P	P	21 46 40.2	-1.0
D24K	Happy Valley	23.18	30	P	P	21 46 42.6	-0.1
D24K				IAmb	IAmb	21 46 44.0	
	comp=Z,6.7nm,0.7s						
J26L	Joseph Creek	23.30	43	P	P	21 46 43.1	-0.9
F25K	Christian Rive	23.51	35	P	P	21 46 46.4	+0.6
L27K	Beaver Creek,	23.76	47	P	P	21 46 48.4	+0.3
G26K	Porcupine Rive	23.94	37	P	P	21 46 49.9	+0.3
F26K	Sheenjek River	24.07	35	P	P	21 46 51.5	+0.5
I28M	Miner Creek	25.02	41	P	P	21 46 59.2	-0.4
M29M	Somme Creek	25.22	49	P	P	21 47 01.3	-0.1
D27M	Malcolm River	25.74	32	P	P	21 47 06.3	+0.3
D27M				IAmb	IAmb	21 47 08.4	
	comp=Z,2.6nm,0.6s						
H29M	Whitestone	25.81	40	P	P	21 47 06.3	-0.4
I30M	Mount Dempster	26.45	42	P	P	21 47 12.1	-0.3
I30M				IAmb	IAmb	21 47 34.4	
	comp=Z,6.7nm,1.4s						
E29M	Blow River	26.52	35	P	P	21 47 13.6	+0.7
H31M	Peel River	27.37	41	P	P	21 47 20.2	-0.3
H31M				IAmb	IAmb	21 47 54.5	
	comp=Z,7.6nm,1.4s						
INK	Inuvik	28.08	36	P	P	21 47 26.8	0.0
YKAW3	Yellowknife Wh	36.18	46	P	P	21 48 37.6	+0.2
YKAW3				IAmb	IAmb	21 48 38.9	
	comp=Z,2.1nm,0.7s						
YKA	Yellowknife Ar	36.20	46	P	P	21 48 38.2	+0.6
	comp=Z,1.2nm,0.5s,baz=285,slow=9.1,SNR=21						
	comp=Z,1.2nm,0.5s						
YKA	Yellowknife Ar	36.20	46	P	P	21 48 36.6	-1.0
J05D	Fort Rock, OR	40.67	77	P	P	21 49 16.3	+1.0
J05D				IAmb	IAmb	21 49 19.4	
	comp=Z,4.1nm,1.2s						
K05A	Summer Lake	41.19	78	P	P	21 49 19.6	0.0
K05A				IAmb	IAmb	21 49 37.4	
	comp=Z,8.6nm,1.4s						
BLKN	Baker Lake	43.39	39	P	P	21 49 36.2	-0.6
BLKN				IAmb	IAmb	21 49 36.3	
	comp=Z,7.4nm,1.5s						
PNTR	Pine Nut	44.14	81	P	P	21 49 44.3	+0.7
PNTR				IAmb	IAmb	21 49 45.6	
	comp=Z,3.6nm,0.6s						
SONM	Songino Array	44.69	294	P	P	21 49 48.4	+0.7
	comp=Z,0.2nm,0.7s,baz=48,slow=12,SNR=1.6						
	comp=Z,0.2nm,0.7s						
BCYI	Bear Canyon	44.75	72	P	P	21 49 47.1	-1.2
RYN	Ryan	45.08	81	P	P	21 49 51.3	+0.4
RYN				IAmb	IAmb	21 50 05.2	
	comp=Z,7.0nm,1.4s						
NVAR	Mina Array Bea	45.34	81	P	P	21 49 52.8	-0.3
	comp=Z,0.6nm,0.7s,baz=298,slow=7.7,SNR=5.2						
	comp=Z,0.6nm,0.7s						
ILON	Igloolik, Nuna	45.85	29	P	P	21 49 55.8	-0.5
YHH	Holmes Hill	45.96	69	P	P	21 49 57.7	-0.3
PDAR	Pinedale Array	47.92	71	P	P	21 50 12.3	-0.8
	comp=Z,0.3nm,0.4s,baz=301,slow=4.0,SNR=4.9						
	comp=Z,0.3nm,0.4s						
PDAR	Pinedale Array	47.92	71	P	P	21 50 11.2	-1.9
GSC	Goldstone, Bar	48.27	83	P	P	21 50 16.6	+0.9
SPITS	Spitsbergen Ar	49.64	355	P	P	21 50 24.8	-0.6
	comp=Z,3.5nm,0.8s,baz=40,slow=6.6,SNR=4.7						
	comp=Z,3.5nm,0.8s						
U15A	North Rim	50.29	79	P	P	21 50 31.6	+0.4
U15A				IAmb	IAmb	21 50 32.8	
	comp=Z,3.5nm,1.4s						
PV19	Morning Glory	51.06	75	P	P	21 50 36.4	-0.5
PV19				IAmb	IAmb	21 50 55.6	
	comp=Z,5.7nm,1.2s						
PV13	Radium Mtn., P	51.26	75	P	P	21 50 38.1	-0.3
PV13				IAmb	IAmb	21 50 38.8	
	comp=Z,2.4nm,0.6s						
EPLO	Experimental L	52.37	55	P	P	21 50 45.4	-0.8
KURK	Kurchatov	57.23	312	P	P	21 51 23.9	+2.9
KURBB	Kurchatov Arra	57.34	312	P	P	21 51 23.9	+2.1
	comp=Z,0.3nm,0.4s,baz=41,slow=6.7,SNR=5.8						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	58.17	306	P	P	21 51 30.1	+2.2
	comp=Z,0.1nm,0.5s,baz=36,slow=8.0,SNR=1.5						
	comp=Z,0.1nm,0.5s						
MKAR	Makanchi Array	58.17	306	P	P	21 51 29.0	+1.2
BVAR	Borovoye Array	59.20	318	P	P	21 51 36.7	+2.0
	comp=Z,0.7nm,0.4s,baz=55,slow=6.9,SNR=12						
	comp=Z,0.7nm,0.4s						
TXAR	Lajitas Array	60.42	79	P	P	21 51 43.0	-0.5
	comp=Z,0.3nm,0.6s,baz=289,slow=3.8,SNR=4.7						
	comp=Z,0.3nm,0.6s						
TXAR	Lajitas Array	60.42	79	P	P	21 51 43.7	+0.2

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*IDC **30** 21:48:42.5±5.6, 44.°01N×148.°59E, h0km, mb3.8/8, mbtmp3.8/9, ML3.2/1, Error ellipse: s-maj=109.7km s-min=45.1km az=151.0*

ISC 30 21:48:50.6±4.8**, 44.°2N**±0.°5×**148.°3E**±0.°4**, h47km, n9, σ1.s34**/9**, mb3.7**/6**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	Asahikawa	4.08	271	Pn	Pn	21 49 51.0	+0.5
	0.9nm,0.3s,baz=100,slow=24,SNR=7.2						
	10nm,0.9s						
HILR	Hailar Array B	20.17	296	P	P	21 53 19.4	-1.6
	1.3nm,0.5s,baz=93,slow=15,SNR=2.9						
	1.3nm,0.5s						
YAK	Yakutsk	20.95	335	P	P	21 53 29.1	-0.1
	4.2nm,0.4s,baz=27,slow=1.1,SNR=4.1						
	4.2nm,0.4s						
SONM	Songino Array	29.06	292	P	P	21 54 46.1	-0.3
	1.0nm,0.8s,baz=90,slow=7.5,SNR=6.2						
	1.0nm,0.8s						
ZALV	Zalesovo Beam	41.40	307	P	P	21 56 34.1	+2.1
	0.3nm,0.4s,baz=67,slow=11,SNR=2.2						
	0.3nm,0.4s						
MKAR	Makanchi Array	45.11	298	P	P	21 57 02.6	+0.5
	1.0nm,0.8s,baz=76,slow=8.7,SNR=9.3						
	1.0nm,0.8s						
KURBB	Kurchatov Arra	46.06	304	P	P	21 57 09.6	+0.1
	0.7nm,0.7s,baz=78,slow=8.0,SNR=6.1						
	0.7nm,0.7s						
FINES	FINESS Array B	64.87	333	P	P	21 59 25.4	+1.0
	1.4nm,0.7s,baz=26,slow=7.8,SNR=5.7						
	1.4nm,0.7s						
AKASG	Malin Array Be	71.72	324	P	P	22 00 06.0	-1.4
	0.3nm,0.4s,baz=40,slow=6.4,SNR=2.0						
	0.3nm,0.4s						

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*IDC **30** 21:57:12.4±4.6, 31.°57S×179.°83E, h350km±37km, mb3.1/4, mbtmp3.9/5, Error ellipse: s-maj=47.5km s-min=20.9km az=49.0*

*WEL **30** 21:57:20.5±0.9, 32°S±6°×18°0W±1°5, h319km±15km, mB4.5/7, ML4.7/8, MLv4.8/15, Mw(mB)3.7/7, Error ellipse: s-maj=20.3km s-min=5.9km az=108.3, confirmed*

ISC 30 21:57:14.3±1.0**, 31.°59S**±0.°08×**179.°2E**±0.°1**, h350km, n69, σ1.s77**/67**, mb3.3**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.39	48	P	Pn	21 58 17.8	+0.5
GLKZ				S	S	21 59 08.3	+0.2
OUZ	Omahuta	5.93	231	P	Pn	21 58 53.7	+9.5
WCZ	Waipu Caves	5.94	222	P	Pn	21 58 52.9	+8.6
MXZ	Matakaoa Point	6.01	187	P	Pn	21 58 48.0	+2.9
MXZ				S	S	21 59 57.9	-0.7
WIAZ	Waiheke Island	6.20	212	P	Pn	21 58 55.4	+8.2
WMGZ	Waiomatatini S	6.25	186	P	Pn	21 58 50.1	+2.2
WMGZ				S	S	22 00 04.8	+0.9
HAZ	Te Kaha	6.27	190	P	Pn	21 58 51.1	+3.1
PKGZ	Pakihiroa	6.33	188	P	Pn	21 58 53.1	+4.2
RUGZ	Raukumara Rang	6.49	191	P	Pn	21 58 54.2	+3.4
PUZ	Puketiti	6.52	187	P	Pn	21 58 53.9	+2.9
PUZ				S	S	22 00 08.0	-1.5
TWGZ	Tauwhareparae	6.65	188	P	Pn	21 58 57.3	+4.8
MWZ	Matawai	6.87	191	P	Pn	21 58 58.2	+3.1
URZ	Urewera	6.88	194	P	Pn	21 58 56.0	+0.9
	14nm,0.3s,baz=263,slow=3.9,SNR=28						
URZ				S	S	22 00 17.1	+0.1
	44nm,0.3s,baz=284,slow=23,SNR=25						
URZ	Urewera	6.88	194	P	Pn	21 58 56.3	+1.2
URZ				S	S	22 00 16.8	-0.3
TKGZ	Te Karaka	6.93	189	P	Pn	21 58 56.8	+1.1
TKGZ				S	S	22 00 17.6	-0.5
CNGZ	Carnagh Statio	6.93	187	P	Pn	21 58 59.2	+3.5
RAGZ	Rawiri	7.05	192	P	Pn	21 59 00.4	+3.2
MUGZ	Murupara	7.16	196	P	Pn	21 59 03.3	+4.8
RIGZ	Rimuhau	7.20	189	P	Pn	21 59 01.7	+2.8
RTZ	Ruatahuna	7.25	194	P	Pn	21 59 02.4	+2.8
SNGZ	Shannon Statio	7.34	192	P	Pn	21 59 03.0	+2.5
PRGZ	Paritu Road	7.40	188	P	Pn	21 59 04.7	+3.5
MTHZ	Maungataniwha	7.50	194	P	Pn	21 59 05.7	+3.2
RAHZ	Arahi	7.52	193	P	Pn	21 59 05.1	+2.5
KNZ	Kokohu	7.52	189	P	Pn	21 59 05.5	+2.8
MHGZ	Mahia Peninsul	7.62	188	P	Pn	21 59 06.3	+2.4
WHHZ	Waihua	7.64	192	P	Pn	21 59 08.6	+4.5
NMHZ	Naumai	7.75	194	P	Pn	21 59 08.3	+2.9
HIZ	Hauiti	7.78	206	P		21 59 14.5	
ARHZ	Aropaoanui	7.87	193	P	P	21 59 09.1	+2.3
BKZ	Black Stump Fm	7.88	196	P	P	21 59 08.9	+2.0
TMVZ	Te Maari	8.04	200	P	P	21 59 12.2	+0.2
MCHZ	McNeill Hill	8.10	194	P	P	21 59 12.3	-0.2
SNVZ	South Ngauruho	8.12	200	P	P	21 59 13.5	+0.6
KWHZ	Kaweka Forest	8.14	195	P	P	21 59 12.7	-0.3
CKHZ	Cape Kidnapper	8.24	192	P	P	21 59 14.3	+0.3
WNVZ	Wahianoa	8.27	200	P	P	21 59 14.2	-0.3
MOVZ	Moawhango	8.29	199	P	P	21 59 14.3	-0.4
KRHZ	Kereru	8.36	195	P	P	21 59 14.1	-1.3
KAHZ	Kahuranaki	8.41	192	P	P	21 59 15.4	-0.5
PXZ	Pawanui	8.64	192	P	Pn	21 59 16.7	+0.9
PNHZ	Pukenui	8.66	196	P	Pn	21 59 16.6	+0.4
TSZ	Takapari Road	8.86	196	P	P	21 59 19.9	-1.0
PRHZ	Porangahau	8.91	193	P	P	21 59 21.1	-0.4
DVHZ	Dannevirke	9.04	195	P	P	21 59 22.0	-0.9
ANWZ	Angora Road	9.13	193	P	P	21 59 23.3	-0.6
PRWZ	Pori Road	9.32	195	P	P	21 59 25.4	-0.7
BFZ	Birch Farm	9.39	194	P	P	21 59 26.2	-0.6
MRZ	Mangatainoka R	9.52	197	P	Pn	21 59 26.4	+0.1
HOWZ	Holdsworth Sta	9.76	197	P	P	21 59 30.4	-0.5
OGWZ	Otaki Gorge	9.77	198	P	Pn	21 59 28.4	-1.0
TMWZ	Te Maipa	9.87	195	P	P	21 59 32.2	0.0
KIW	Kapiti Island	9.88	199	P	Pn	21 59 30.9	+0.2
CAW	Cannon Point	10.07	198	P	Pn	21 59 33.8	+0.9
DUWZ	D'Urville Isla	10.14	203	P	Pn	21 59 34.0	+0.2
TCW	Tory Channel	10.39	201	P	Pn	21 59 37.0	+0.2
QRZ	Quartz Range	10.68	208	P	Pn	21 59 41.6	+1.4
NNZ	Nelson	10.69	204	P	Pn	21 59 39.4	-1.0
TUWZ	Tuamarina	10.70	202	P	Pn	21 59 40.9	+0.6
MRNZ	Matariki Terra	11.08	206	P	Pn	21 59 45.8	+0.9
THZ	Tophouse	11.34	205	P	Pn	21 59 48.4	+0.2
KHZ	Kahutara	11.72	201	P	Pn	21 59 53.1	+0.6
GVZ	Greta Valley S	12.37	202	P	P	22 00 00.2	+0.3
INZ	Inchbonnie	12.72	207	P	P	22 00 03.9	+0.2
ASAR	Alice Springs	40.68	270	P	P	22 04 24.5	+2.4
	0.4nm,0.6s,baz=106,slow=7.1,SNR=9.8						
	0.4nm,0.6s						
WRA	Warramunga Arr	41.78	275	P	P	22 04 32.9	+1.9
	0.5nm,0.4s,baz=112,slow=8.1,SNR=8.6						
	0.5nm,0.4s						
QSPA	South Pole Qui	58.52	180	P	P	22 06 33.4	-1.4
	1.7nm,0.8s,baz=50,slow=1.6,SNR=10						
	1.7nm,0.8s						
SNAA	Sanae	77.02	179	P	P	22 08 26.1	-2.8
	0.9nm,1.0s,baz=192,slow=19,SNR=1.5						
	0.9nm,1.0s						
FINES	FINESS Array B	145.38	338	PKPbc	PKPdf	22 16 08.3	-1.7
	3.5nm,0.7s,baz=43,slow=4.7,SNR=18						

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*IDC **30** 22:05:46.1±1.1, 9.°52S×118.°69E, h0km, mb3.8/10, mbtmp3.8/13, ML3.7/3, MS2.9/1, Error ellipse: s-maj=54.9km s-min=15.5km az=51.0*

*DJA **30** 22:05:58.0±0.2, 9°S±2°×11°9E±°, h56km±4km, M4.2/19, mB4.8/4, mb4.1/11, MLv4.2/19, Mw(mB)4.1/4*

ISC 30 22:05:55.1±0.7**, 9.°40S**±0.°05×**119.°35E**±0.°05**, h50km, n40, σ3.s51**/41**, mb4.0**/11**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.24	170	P	Pn	22 06 07.9	+4.0
WBSI				S	Sn	22 06 16.1	+6.0
WSI	Waingapu	0.97	106	P	Pn	22 06 15.7	+3.2
WSI				S	Sn	22 06 30.2	+4.9
LBFI	Labuhan Bajo,	1.06	30	P	Pn	22 06 15.9	+2.2
LBFI				S	Sn	22 06 30.6	+3.3
DBNI	Kabupaten Domp	1.36	311	P	Pn	22 06 19.8	+2.1
BASI	Baing, Sumba	1.46	124	P	Pn	22 06 23.3	+4.2
PLAI	Plampang	1.65	290	P	Pn	22 06 23.2	+1.4
EDFI	Ende, Flores	2.40	75	P	Pn	22 06 34.9	+2.8
MMRI	Maumere	2.95	75	P	Pn	22 06 43.7	+4.1
KLNI	Mataram	3.36	287	P	Pn	22 06 48.1	+3.0
BSSI	Bau Bau, Buton	3.43	19	P	Pn	22 06 48.9	+2.8
KHKI	Kahang-Kahang	3.84	285	P	Pn	22 06 55.1	+3.4
BKSI	Bulukumba	4.12	11	P	Pn	22 06 58.4	+2.8
IGBI	Denpasar	4.19	278	P	Pn	22 07 00.3	+3.7
BATI	Baumata	4.33	101	Pn	Pn	22 07 02.0	+3.5
	10nm,0.3s,baz=275,slow=2.0,SNR=10.0						
BATI				Sn	Sn	22 07 49.9	+2.2
	9.9nm,0.3s,baz=288,slow=16,SNR=11						
	29nm,0.4s						
BATI	Baumata	4.33	101	P	Pn	22 07 01.8	+3.3
KAPI	Kappang	4.37	5	P	Pn	22 07 02.1	+3.0
RTBI	Rangdo, Negare	4.45	282	P	Pn	22 07 04.0	+3.8
SOEI	Soe	4.86	95	P	Pn	22 07 09.9	+4.0
JAGI	Jajag, Banyuwa	5.22	280	P	Pn	22 07 11.9	+1.2
SPSI	Sidrap Palu	5.42	4	P	Pn	22 07 14.7	+1.3
	0.1nm689nm31nm,0.8s						
PMSI	Majene	5.88	356	P	Pn	22 07 22.6	+2.9
GMJI	Gumukmas	5.94	280	P	Pn	22 07 24.2	+3.6
	0.3nm22nm,0.7s						
MMSI	Mamuju	6.68	356	P	Pn	22 07 33.8	+3.0
	0.1nm588nm37nm,0.8s						
SNJI	Sawahan-Nganju	7.67	282	P	Pn	22 07 48.6	+4.0
	0.2nm22nm,2.2s						
PCJI	Pacitan	8.16	278	P	Pn	22 07 55.4	+4.3
	19nm,1.4s						
FITZ	Fitzroy Crossi	10.59	145	Pn	Pn	22 08 23.4	-0.8
	0.6nm,0.3s,baz=352,slow=7.9,SNR=14						
FITZ				Sn	Sn	22 10 15.6	-5.9
	0.6nm,0.3s,baz=265,slow=16,SNR=7.9						
	5.0nm,0.6s						
WRA	Warramunga Arr	17.88	128	P	Pn	22 10 00.6	+0.2
	0.1nm,0.3s,baz=302,slow=13,SNR=2.8						
WRA				S	Sn	22 13 11.8	-7.2
	0.7nm,0.7s,baz=315,slow=19,SNR=2.6						
	1.2nm,0.7s						
ASAR	Alice Springs	19.87	137	P	P	22 10 23.4	+1.0
	1.5nm,0.6s,baz=330,slow=15,SNR=28						
ASAR				S	S	22 13 58.3	-5.3
	0.4nm,0.7s,baz=326,slow=28,SNR=1.4						
	1.5nm,0.6s						
STKA	Stephens Creek	30.43	141	P	P	22 12 03.4	+0.4
	3.0nm,0.9s,baz=333,slow=7.9,SNR=3.5						
	3.0nm,0.9s						
CMAR	Chiang Mai Arr	34.23	324	P	P	22 12 30.4	-6.0
	0.2nm,0.8s,baz=159,slow=7.1,SNR=5.0						
CMAR				LR	LR	22 27 49.8	
	comp=Z,16nm,18.0s,baz=30,slow=39						
	0.2nm,0.8s						
LZDM	Lanzhou Array	47.46	343	P	P	22 14 24.0	-1.5
	0.7nm,0.3s,baz=88,slow=6.6,SNR=1.9						
	0.7nm,0.3s						
GTA	Gaotai	51.84	341	*e*P	P	22 14 58.3	-0.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
SONM	Songino Array	58.13	350	P	P	22 15 41.4	-2.3
	comp=Z,1.8nm,0.8s,baz=168,slow=8.6,SNR=17						
	comp=Z,1.8nm,0.8s						
HILR	Hailar Array B	58.70	0	P	P	22 15 46.3	-1.4
	comp=Z,0.5nm,0.3s,baz=164,slow=6.5,SNR=1.8						
	comp=Z,0.5nm,0.3s						
KSH	Kashi	63.13	323	P	P	22 16 25.5	+7.5
KSH				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	64.97	333	P	P	22 16 27.2	-2.6
	comp=Z,0.8nm,0.6s,baz=140,slow=6.9,SNR=10						
	comp=Z,0.8nm,0.6s						
KURBB	Kurchatov Arra	69.48	334	P	P	22 16 55.4	-2.8
	comp=Z,0.2nm,0.4s,baz=144,slow=5.0,SNR=6.6						
	comp=Z,0.2nm,0.4s						
ZALV	Zalesovo Beam	69.53	339	P	P	22 16 55.2	-3.3
	comp=Z,0.7nm,0.5s,baz=139,slow=4.8,SNR=5.8						
	comp=Z,0.7nm,0.5s						
BVAR	Borovoye Array	74.81	332	P	P	22 17 27.0	-3.1
	comp=Z,0.2nm,0.5s,baz=126,slow=7.3,SNR=2.1						
	comp=Z,0.2nm,0.5s						
TORD	Torodi Ar. Bea	118.87	280	PKP	PKPdf	22 24 36.5	-2.6
	comp=Z,0.4nm,0.8s,baz=64,slow=3.4,SNR=2.2						

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*IDC **30** 22:31:44.2±1.6, 9.°91S×113.°21E, h0km, mb3.7/9, mbtmp3.7/10, ML3.7/1, Error ellipse: s-maj=76.3km s-min=17.7km az=51.0*

*DJA **30** 22:31:48.4±0.8, 10°S±5°×11°3E±°, h13km±6km, M3.8/15, mb3.9/2, MLv3.8/15*

ISC 30 22:31:48.9±0.8**, 10.°05S**±0.°08×**113.°07E**±0.°04**, h35km, n34, σ1.s49**/37**, mb3.9**/9**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMJI	Gumukmas	1.80	12	P	Pn	22 32 16.9	-0.5
GMJI				S	Sn	22 32 37.8	-1.3
JAGI	Jajag, Banyuwa	1.89	34	P	Pn	22 32 17.7	-1.1
JAGI				S	Sn	22 32 42.0	+0.6
BLJI	Banyuglugur	2.34	13	P	Pn	22 32 21.5	-3.4
RTBI	Rangdo, Negare	2.43	50	P	Pn	22 32 25.8	-0.3
RTBI				S	Sn	22 32 56.3	+1.7
DNP	Denpasar	2.51	57	P	Pn	22 32 28.1	+0.9
DNP				S	Sn	22 32 59.4	+2.8
ABJI	Asem Bagus	2.51	27	P	Pn	22 32 29.3	+2.0
SNJI	Sawahan-Nganju	2.60	330	P	Pn	22 32 29.7	+1.1

PCJI	Pacitan	2.62	314	P	Pn	22 32 29.0	+0.2
SJI	Sawahan	2.63	331	P	Pn	22 32 30.3	+1.3
KHKI	Kahang-Kahang	3.01	56	P	Pn	22 32 35.9	+1.8
UGM	Wanagama	3.29	310	P	Pn	22 32 37.9	-0.1
UGM				S	Sn	22 33 16.6	+0.6
KLNI	Mataram	3.39	62	P	Pn	22 32 39.7	+0.3
KLNI				S	Sn	22 33 20.8	+2.4
PLAI	Plampang	4.80	76	P	Pn	22 32 58.8	+0.1
CTJI	Waduk Cacaban	4.89	308	P	Pn	22 33 00.7	+0.7
KPJI	Karang Pucung	4.90	303	P	Pn	22 33 00.5	+0.4
KPJI				S	Sn	22 33 57.8	+2.1
DBNI	Kabupaten Domp	5.39	74	P	Pn	22 33 07.6	+0.7
	0.1nm16nm,0.8s						
DBNI				S	Sn	22 34 10.4	+2.5
	0.1nm16nm,0.8s						
BBJI	Bungbulang	5.94	295	P	Pn	22 33 16.4	+1.9
FITZ	Fitzroy Crossi	14.58	125	Pn	Pn	22 35 09.9	-2.8
	0.2nm,0.3s,baz=314,slow=9.4,SNR=7.2						
FITZ				Sn	Sn	22 37 41.2	-12
	0.1nm,0.3s,baz=347,slow=18,SNR=1.7						
	2.0nm,0.8s						
WRA	Warramunga Arr	22.75	118	P	P	22 36 47.1	-1.2
	0.4nm,0.5s,baz=291,slow=13,SNR=4.8						
	0.4nm,0.5s						
ASAR	Alice Springs	24.05	127	P	P	22 37 01.8	+0.7
	1.0nm,0.7s,baz=298,slow=9.1,SNR=12						
ASAR				PcP	PcP	22 40 43.7	+1.4
	0.4nm,0.9s,baz=292,slow=2.3,SNR=1.9						
	1.0nm,0.7s						
CMAR	Chiang Mai Arr	31.57	334	P	P	22 38 09.8	+1.5
	0.7nm,0.8s,baz=170,slow=8.7,SNR=7.5						
	0.7nm,0.8s						
H08S2	Diego Garcia H	40.15	270	T	T	23 22 04.5	
	baz=97,slow=76,SNR=8.4						
H08S3	Diego Garcia H	40.16	270	T	T	23 22 15.6	
	baz=97,slow=76,SNR=45						
H08S1	Diego Carcia H	40.17	270	T	T	23 22 07.5	
	baz=97,slow=76,SNR=5.9						
LZDM	Lanzhou Array	46.60	350	P	P	22 40 14.4	+0.4
	0.7nm,0.3s,baz=197,slow=14,SNR=4.3						
	0.7nm,0.3s						
KSRS	Korea Array	49.26	16	P	P	22 40 33.3	-0.8
	1.3nm,0.7s,baz=209,slow=7.1,SNR=3.0						
	1.3nm,0.7s						
SONM	Songino Array	57.93	355	P	P	22 41 37.2	-0.5
	0.7nm,0.5s,baz=174,slow=8.1,SNR=8.0						
	0.7nm,0.5s						
MKAR	Makanchi Array	62.91	337	P	P	22 42 11.4	-0.2
	0.4nm,0.4s,baz=150,slow=7.0,SNR=22						
	0.4nm,0.4s						
H04N2	CROZET ISLANDS	63.02	223	T	T	23 50 49.8	
	baz=74,slow=75,SNR=17						
H04N1	CROZET ISLANDS	63.04	223	T	T	23 50 50.2	
	baz=74,slow=75,SNR=16						
H04N3	CROZET ISLANDS	63.04	223	T	T	23 50 49.1	
	baz=74,slow=75,SNR=19						
ZALV	Zalesovo Beam	68.10	342	P	P	22 42 43.8	-1.2
	0.5nm,0.5s,baz=155,slow=4.7,SNR=3.1						
	0.5nm,0.5s						
BVAR	Borovoye Array	72.59	335	P	P	22 43 11.8	-0.7
	0.6nm,0.7s,baz=126,slow=7.5,SNR=3.6						
	0.6nm,0.7s						
TKL	Tuckaleechee C	150.25	28	PKPbc	PKiKP	22 51 37.3	-0.4
	3.2nm,0.9s,baz=254,slow=7.4,SNR=4.2						

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*NEIC **30** 22:36:57.9±1.1, 19.°33N±0.°04×66.°24W±0.°06, h10^{km}±2^{km},*
ML2.4/14, Md3.2/6(RSPR), Error ellipse: s-maj=9.4km
s-min=6.3km az=65.0
*RSPR **30** 22:37:00.6, 19.°44N×66.°21W, h33^{km}±17^{km}, MD3.2/6*
ISC 30 22:36:57.7±2.3**, 19.°34N**±0.°10×**66.°21W**±0.°07**, h11**^{km}±11^{km}**,**
n29, σ0.^{s}47/33**, 5C-4D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECPR	Experimental S	1.02	188	⇑eP	Pn	22 37 18.4	+0.4
ECPR	Experimental S	1.02	188	eS	Sn	22 37 32.2	-0.2
GCPR	Guaynabo City	1.03	174		Pn	22 37 18.1	+0.1
GCPR					Sb	22 37 31.1	+0.1
GCPR	Guaynabo City	1.03	174	⇑eP	Pn	22 37 18.6	+0.6
GCPR	Guaynabo City	1.03	174	eS	Sn	22 37 32.3	-0.2
AOPR	Arecibo Observ	1.11	208	Pn	Pb	22 37 19.0	0.0
AOPR				Sn	Sb	22 37 33.6	+0.1
AOPR				IAML		22 37 35.0	
	comp=N,243nm,0.2s						
AOPR	Arecibo Observ	1.11	208	⇑eP	Pn	22 37 19.3	+0.1
AOPR	Arecibo Observ	1.11	208	eS	Sg	22 37 34.2	+0.5
SJG	San Juan	1.22	178	Pn	Pn	22 37 20.4	-0.2
SJG				IAML		22 37 42.4	
	comp=N,88nm,0.4s						
SJG				IAML		22 37 42.7	
	comp=N,80nm,0.2s						
SJG	San Juan	1.22	178	⇓eP	Pg	22 37 21.5	+0.3
SJG	San Juan	1.22	178	eS	Sn	22 37 37.7	+0.5
HUMP	Col San Antoni	1.24	164	Pn	Pg	22 37 21.3	-0.2
HUMP				Sn	Sg	22 37 37.2	-0.4
HUMP	Col San Antoni	1.24	164	IAML		22 37 43.5	
	comp=N,86nm,0.2s						
HUMP	Col San Antoni	1.24	164	⇓eP	Pg	22 37 21.6	+0.1
HUMP	Col San Antoni	1.24	164	eS	Sn	22 37 38.2	+0.7
OBIP	Obispado Ponce	1.34	196	Pn	Pn	22 37 22.3	0.0
OBIP				Sn	Sb	22 37 39.3	-0.8
OBIP				IAML		22 37 45.1	
	comp=N,49nm,0.8s						
OBIP				IAML		22 37 45.6	
	comp=E,54nm,0.9s						
OBIP	Obispado Ponce	1.34	196	⇓eP	Pb	22 37 22.7	-0.1
OBIP	Obispado Ponce	1.34	196	eS	Sn	22 37 40.4	+0.3
LSP	Las Mesas	1.43	216		Pn	22 37 23.7	+0.2
LSP					Sn	22 37 42.2	-0.1
LSP	Las Mesas	1.43	216	⇓eP	Pn	22 37 23.7	+0.2
LSP	Las Mesas	1.43	216	eS	Sn	22 37 42.2	-0.1
MLPR	Magueyes Islan	1.58	210	⇑eP	Pb	22 37 26.3	-0.5
MLPR	Magueyes Islan	1.58	210	eS	Sn	22 37 45.9	0.0
CRPR	Cabo Rojo, PR	1.58	213	Pn	Pn	22 37 25.1	-0.4
CRPR				Sn	Sn	22 37 45.9	-0.1
CRPR	Cabo Rojo, PR	1.58	213	IAML		22 38 05.3	
	comp=E,51nm,2.6s						
CRPR				IAML		22 38 08.7	
	comp=E,47nm,2.6s						
CRPR	Cabo Rojo, PR	1.58	213	⇑eP	Pn	22 37 26.1	+0.5
CRPR	Cabo Rojo, PR	1.58	213	eS	Sn	22 37 46.4	+0.5
DR12	Loma Pena Alta	3.05	260	Pn	Pn	22 37 47.3	+1.3
SDDR	Presa de Saban	4.82	267	Pn	Pn	22 38 09.3	-0.9

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*SNET **30** 22:45:57.2±1.4, 12.°24N×87.°01W, h66^{km}, ML4.1*
*CATAC **30** 22:45:57.4±0.2, 12°N±2°×8°7W±°, h48^{km}±3^{km}, M4.3/43,*
MLv4.3/43, Error ellipse: s-maj=4.1km s-min=1.7km
az=35.1, confirmed
ISC 30 22:45:57.5±1.2**, 12.°19N**±0.°04×**87.°07W**±0.°03**, h67**^{km}±7^{km}**,**
n78, σ0.^{s}67/96**, 26D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALEN	Leon	0.33	35	P	Pn	22 46 08.0	-0.6
ALEN	Leon	0.33	35	S	Sn	22 46 16.6	-0.2
TEL3	Telica 3	0.44	29	⇓P	Pn	22 46 08.4	-1.2
COPN	Copaltepe	0.47	91	⇓P	Pn	22 46 08.6	-1.1
CNGA	Al SSO del Vol	0.47	49	⇓P	Pn	22 46 09.7	-0.2
CNGA				S	Sn	22 46 19.6	+0.7
HOYN	Al Sur del Vol	0.47	30	⇓P	Pn	22 46 09.7	-0.2
CNGN	Cerro Negro	0.48	49	⇓P	Pn	22 46 09.6	-0.3
HERN	Volcan Telica	0.48	29	⇓P	Pn	22 46 09.7	-0.3
PKGN	Cerro Pekin	0.49	10	⇓P	Pn	22 46 09.7	-0.2
PKGN				S	Sn	22 46 20.0	+0.9
CRIN	San Cristobal	0.51	2	S	Sn	22 46 20.3	+0.7
CRIN	San Cristobal	0.51	2	⇓P	Pn	22 46 10.2	-0.1
POLN	Al Sur del Vol	0.52	28	⇓P	Pn	22 46 10.0	-0.3
POLN				S	Sn	22 46 20.0	+0.2
MOM2	El Cardon	0.62	66	P	Pn	22 46 11.1	-0.2
MOM2				S	Sn	22 46 22.3	+0.8
AMTN	Mateare	0.62	85	S	Sn	22 46 22.4	+0.9
AMTN	Mateare	0.62	85	⇓P	Pn	22 46 11.2	-0.1
APQ3	Volcan Apoyequ	0.69	83	⇓P	Pn	22 46 11.9	-0.2
APQ3				S	Sn	22 46 23.1	+0.3
APYN	Apoyeque	0.70	86	P	Pn	22 46 12.1	-0.1
APYN				S	Sn	22 46 23.7	+0.6
APQ2	Apoyeque	0.73	89	P	Pn	22 46 12.5	0.0
APQ2				S	Sn	22 46 24.3	+0.7
ALLN	Telcor Managua	0.78	92	P	Pn	22 46 13.1	0.0
UNAN	Cigeo UNAN	0.78	95	⇓P	Pn	22 46 13.1	-0.1
UNAN				S	Sn	22 46 25.1	+0.3
MGAN	Managua	0.80	93	⇓P	Pn	22 46 13.2	-0.2
MGAN	Managua	0.80	93	S	Sn	22 46 25.2	+0.1
AERN	Aeropuerto Man	0.88	93	P	Pn	22 46 14.6	+0.2
MAS3	Al N del Volca	0.89	100	⇓P	Pn	22 46 14.0	-0.4
MAS3				S	Sn	22 46 26.8	-0.3
POTN	Potosi Cosigui	0.92	332	⇓P	Pn	22 46 14.5	-0.3
POTN				S	Sn	22 46 27.6	0.0
MASN	Masaya	0.92	102	P	Pn	22 46 14.7	-0.1
MASN				S	Sn	22 46 28.0	+0.3
CSGN	Cosiguina Volc	0.92	329	⇓P	Pn	22 46 14.6	-0.4
CSGN				S	Sn	22 46 27.6	-0.3
NANN	Nandasmo	0.96	105	⇓P	Pn	22 46 16.1	+0.7
NANN	Nandasmo	0.96	105	S	Sn	22 46 29.8	+1.3
NADN	Granada	1.10	113	P	Pn	22 46 16.4	-0.7
NADN				S	Sn	22 46 31.1	-0.7
LIMN	Finca el Limon	1.11	38	P	Pn	22 46 17.1	-0.2
LIMN				S	Sn	22 46 31.7	-0.4
CNCH	Conchagua	1.32	326	eP	Pn	22 46 19.5	-0.6
CNCH	Conchagua	1.32	326	⇓P	Pn	22 46 19.5	-0.6
CNCH	Conchagua	1.32	326	S	Sn	22 46 36.5	-0.5
MATN	Matagalpa	1.34	56	⇓P	Pn	22 46 19.2	-1.1
MATN	Matagalpa	1.34	56	S	Sn	22 46 36.3	-1.1
LCND	La Caada	1.38	324	eP	Pn	22 46 20.1	-0.6
LCND				eP		22 46 20.3	
LCND	La Caada	1.38	324	P	Pn	22 46 20.1	-0.6
BOAB	BOACO BROADBAN	1.40	79	⇓P	Pn	22 46 20.5	-0.4
BOAB	BOACO BROADBAN	1.40	79	S	Sn	22 46 38.2	-0.4
MORN	Al O del Volca	1.53	114	P	Pn	22 46 22.1	-0.7
MORN				S	Sn	22 46 41.8	0.0
OCON	Estacion meteo	1.55	22	⇓P	Pn	22 46 23.2	+0.2
RCON	San Juan de Ri	1.57	34	⇓P	Pn	22 46 23.7	+0.3
RCON	San Juan de Ri	1.57	34	S	Sn	22 46 43.0	0.0
RCVN	Varillal2	1.63	31	⇓P	Pn	22 46 24.5	+0.3
RCVN	Varillal2	1.63	31	S	Sn	22 46 44.5	0.0
RCPN	Sur Rio San Ju	1.64	35	⇓P	Pn	22 46 24.6	+0.3
BLLM	Bellamira	1.69	318	eP	Pn	22 46 24.7	-0.3
LCY	Lacayo	1.72	316	eP	Pn	22 46 25.4	0.0
RANC	El Ranchito	1.72	316	eP	Pn	22 46 25.5	0.0
RANC				eS	Sn	22 46 47.4	+0.8
PACA	Pacayal	1.77	316	eP	Pn	22 46 26.7	+0.6
PACA	Pacayal	1.77	316	P	Pn	22 46 26.0	-0.1
PACA	Pacayal	1.77	316	S	Sn	22 46 47.9	+0.2
YUSH	Yuscaran	1.77	7	⇓P	Pn	22 46 26.4	+0.3
YUSH	Yuscaran	1.77	7	S	Sn	22 46 47.1	-0.7
TGUH	Tegucigalpa,Un	1.87	354	⇓P	Pn	22 46 27.8	+0.3
TGUH				S	Sn	22 46 49.6	-0.6
TECA	Tecapa	1.91	313	eP	Pn	22 46 28.3	+0.3
TECO	Alcaldia de Te	2.14	309	S	Sn	22 46 55.8	-0.8
SCLA	Alcaldia de Sa	2.21	313	eP	Pn	22 46 32.2	+0.2
SCLA	Alcaldia de Sa	2.21	313	S	Sn	22 46 59.7	+1.3
UESV	Universidad de	2.21	311	S	Sn	22 46 58.7	+0.4
UPAL	Upala	2.39	122	S	Sn	22 47 02.1	-0.4
LOMA	Loma Larga	2.51	306	P	Pn	22 46 35.7	-0.5
LOMA	Loma Larga	2.51	306	S	Sn	22 47 04.4	-1.4
LALI	Alcalda de L	2.55	301	S	Sn	22 47 05.2	-1.3
PMON	Piamonte	2.67	305	eP	Pn	22 46 38.9	+0.7
PMON	Piamonte	2.67	305	P	Pn	22 46 39.0	+0.8
CMARA	Lajas Hojancha	2.69	143	S	Sn	22 47 09.4	-0.6
JAYA	Jayaque - finc	2.74	302	eP	Pn	22 46 39.7	+0.5
JAYA	Jayaque - finc	2.74	302	P	Pn	22 46 39.8	+0.5
JAYA	Jayaque - finc	2.74	302	S	Sn	22 47 09.9	-1.6
JTS	Las Juntas de	2.80	132	P	Pn	22 46 39.6	-0.4
JTS				S	Sn	22 47 13.5	+0.8
SNJE	San Jose	2.99	304	eP	Pn	22 46 45.5	+2.8
NUBE	Las Nubes	3.15	303	P	Pn	22 46 45.8	+1.0
NUBE	Las Nubes	3.15	303	S	Sn	22 47 21.2	-0.1
FAME	Alcaldia de Sa	3.31	300	S	Sn	22 47 24.5	-0.6
TRT2	Tortugero	3.65	116	P	Pn	22 46 51.4	-0.1
TRT2	Tortugero	3.65	116	S	Sn	22 47 33.9	+0.6

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*KRNET **30** 23:36:54.0±0.1, 41.°02N×79.°13E, h25^{km}, mb2.7*
*SOME **30** 23:36:53.2, 40.°55N×78.°55E, h10^{km}*
*NNC **30** 23:36:54.4±2.0, 40.°60N×78.°50E, h0^{km}, mb3.4, mpv3.0,*
Error ellipse: s-maj=13.3km s-min=12.3km az=145.0
ISC 30 23:36:50.2±2.7**, 40.°5N**±0.°1×**78.°28E**±0.°05**, h18**^{km}±5^{km}**, n19,**
σ1.^{s}54/30**, 12C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.30	344	⇑eP	Pg	23 37 16.6	+1.2
TARG				⇑eS	Sg	23 37 33.1	+0.6
KDJ	Kajisay	1.85	334	⇓eP	Pg	23 37 26.7	+1.0
KDJ				⇓eS	Sg	23 37 50.6	+0.8
PRZ	Przheval'sk	2.00	3	⇑iP	Pn	23 37 22.7	-0.6
PRZ				⇑eS	Sn	23 37 43.7	-4.3
ULHL	Ulahol	2.34	320	⇑eP	Pg	23 37 36.0	+0.9
ULHL				⇑eS	Sg	23 38 06.5	+1.0
SATY	Saty	2.58	2	Pg	Pg	23 37 40.5	+0.8
	4.0nm,0.6s						
SATY				Lg	Lg	23 38 14.4	
	7.1nm,0.3s						
BOOM	Boomskoye usch	2.67	320	⇑eP	Pg	23 37 40.3	-1.1
BOOM				⇑eS	Sg	23 38 14.1	-2.0
UZB	Uzynbulak	2.72	12	Pg	Pb	23 37 41.0	+2.5
	3.2nm,0.1s						
UZB				Lg	Lg	23 38 15.3	
	9.5nm,0.7s						
UZB	Uzynbulak	2.72	12	eP	Pb	23 37 41.0	+2.5
	3.2nm,0.1s						
UZB				eS	Sg	23 38 15.3	-2.5
	9.5nm,0.7s						
SHLS	Shalkode	2.82	18	Pg	Pg	23 37 44.3	+0.1
	5.5nm,0.3s						
SHLS				Lg	Lg	23 38 21.1	
	12nm,0.6s						
SHLS	Shalkode	2.82	18	eP	Pg	23 37 44.3	+0.1
	5.5nm,0.3s						
SHLS				eS	Sg	23 38 21.1	+0.3
	12nm,0.6s						
KOTS	Kotyrbulak	2.89	343	Pg	Pg	23 37 46.2	+0.6
	2.1nm,0.3s						
KOTS				Lg	Lg	23 38 24.2	
	13nm,0.6s						
KOTS	Kotyrbulak	2.89	343	eP	Pg	23 37 46.2	+0.6
	2.1nm,0.3s						
KOTS				eS	Sg	23 38 24.1	+1.1
	13nm,0.6s						
KNDC	Almaty	2.91	341	⇑Pg	Pg	23 37 45.4	-0.5
	9.8nm,0.8s						
KNDC				⇑Lg	Lg	23 38 24.1	
	24nm,0.6s						
PDGK	Podgornoye	2.99	17	Pg	Pb	23 37 45.4	+2.4
	2.1nm,0.5s						
PDGK				Lg	Lg	23 38 23.0	
	6.1nm,0.6s						
KPKS	Kokpek	3.00	6	Pg	Pg	23 37 47.1	-0.6
	0.2nm,0.1s						
KPKS				Lg	Lg	23 38 25.7	
	5.4nm,0.6s						
KPKS	Kokpek	3.00	6	eP	Pg	23 37 47.1	-0.6
	0.2nm,0.1s						
KPKS				eS	Sg	23 38 25.7	-0.9
	5.4nm,0.6s						
TKM2	Tokmak 2	3.16	321	⇑eP	Pb	23 37 46.5	+0.6
TKM2				⇑eS	Sb	23 38 24.9	+0.7
ARLS	Aral	3.29	296	⇓iP	Pg	23 37 52.7	-0.6
ARLS				⇓eS	Sg	23 38 35.7	-0.2
KNOS	Konyrlen	3.93	9	Pg	Pg	23 38 04.1	-1.4
	0.3nm,0.2s						
KNOS				Lg	Lg	23 38 54.7	
	2.2nm,0.3s						

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*RSNC **31** 00:10:43.9±0.0, 5°N±1°×7°6W±°, h151^{km}±1^{km}, M3.3,*
mB4.7, mb4.3, ML3.0, Mw(mB)3.9
*IDC **31** 00:10:45.1±1.5, 4.°77N×75.°60W, h168^{km}±15^{km}, mb2.9/3,*
mbtmp3.5/4, Error ellipse: s-maj=36.3km s-min=25.6km
az=133.0
ISC 31 00:10:42.8±0.8**, 4.°54N**±0.°04×**75.°76W**±0.°04**, h155**^{km}±6^{km}**,**
n41, σ0.^{s}87/54**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANIL	Santa Ana	0.36	97	P	Pn	00 11 04.9	+0.4
ANIL				S	Sn	00 11 21.3	+0.4
RECRC	Villamaria, Ca	0.59	44	P	Pn	00 11 07.0	+1.2
RECRC				S	Sn	00 11 23.9	+0.6
NIZA	Niza - Manizal	0.59	29	P	Pn	00 11 05.8	+0.3
NIZA				S	Sn	00 11 22.8	-0.1
PLMC	San Jos del P	0.63	305	P	Pn	00 11 06.0	+0.5
PLMC				S	Sn	00 11 22.7	-0.1
YOTC	Yotoco, Valle	0.80	227	P	Pn	00 11 06.3	-0.3
YOTC				S	Sn	00 11 23.8	-1.0
ORTC	Ortega, Tolima	0.81	140	P	Pn	00 11 06.6	0.0
ORTC				S	Sn	00 11 24.1	-0.7
PRAC	Prado	1.20	133	P	Pn	00 11 09.9	+0.1
PRAC				S	Sn	00 11 30.2	-0.3
CBOC	Ciudad Bolivar	1.34	349	P	Pn	00 11 11.5	+0.2
CBOC				S	Sn	00 11 31.7	-1.6
ROSC	El Rosal	1.47	78	P	Pn	00 11 13.8	+0.9
	24nm,0.4s,baz=270,slow=18,SNR=8.6						
ROSC				S	Sn	00 11 36.9	+1.1
	30nm,0.4s,baz=231,slow=23,SNR=9.8						
JAMC	Jamundi, Valle	1.60	215	P	Pn	00 11 13.9	-0.1
JAMC				S	Sn	00 11 37.0	-0.9
PIZC	Pizarro, Choco	1.65	285	P	Pn	00 11 15.7	+1.4
HELC	Santa Helena	1.66	8	P	Pn	00 11 15.3	+0.5
CVER	Cruz Verde, Cu	1.69	90	P	Pn	00 11 16.3	+1.1
BETC	Betania	1.87	170	P	Pn	00 11 16.7	-0.1
URMC	La Uribe, Meta	1.88	133	P	Pn	00 11 16.7	-0.3
SPBC	San Pablo de B	2.02	57	P	Pn	00 11 18.7	+0.2
VILC	Villavicencio,	2.11	101	P	Pn	00 11 20.1	+0.5
POPC	Popayan, Colom	2.18	205	P	Pn	00 11 20.2	-0.4
POPC				S	Sn	00 11 48.6	-1.1
SOLC	Bahia Solano	2.35	316	P	Pn	00 11 22.6	+0.3
GARC	Garzon, Huila	2.35	173	P	Pn	00 11 22.5	-0.1
PTBC	PUERTO BERRIO,	2.38	33	P	Pn	00 11 22.3	-0.4
DBBC	Dabeiba	2.50	350	P	Pn	00 11 25.3	+1.0
GR1C	Gorgona, Isla	2.84	238	P	Pn	00 11 27.6	-0.8
BBAC	Balboa, Cauca	2.90	211	P	Pn	00 11 29.1	-0.3
BBAC				S	Sn	00 12 05.5	+0.1
FLOC	Florencia	2.94	178	P	Pn	00 11 29.9	+0.3
RUSC	La Rusia	2.99	63	P	Pn	00 11 30.9	+0.2
CRUC	La Cruz	3.18	202	P	Pn	00 11 34.0	+1.0
UREC	San Jos de Ur	3.20	4	P	Pn	00 11 33.4	+0.4
BARC	Barichara	3.28	51	P	Pn	00 11 34.6	+0.4
PTAC	Punta Ardita,	3.30	322	P	Pn	00 11 34.2	+0.1
GCUF	Volcan Galeras	3.65	206	P	Pn	00 11 39.3	+0.2
PAMC	Pamplona, Colo	4.13	47	P	Pn	00 11 45.4	+0.1
OCAC	Ocana	4.41	33	P	Pn	00 11 49.2	+0.5
PAC1	Pacto, Paraso	5.21	216	P	Pn	00 11 59.2	-0.1
SDV	Santo Domingo	6.68	49	P	Pn	00 12 18.3	-0.5
	5.3nm,0.3s,baz=176,slow=2.3,SNR=16						
SDV				S	Sn	00 13 30.3	-3.8
	34nm,0.6s,baz=271,slow=16,SNR=25						
SDV	Santo Domingo	6.68	49	P	Pn	00 12 18.3	-0.5
URIC	Uribia, Colomb	8.04	27	P	Pn	00 12 35.2	-1.5
PDAR	Pinedale Array	48.45	327	P	P	00 19 10.7	+0.8
	0.2nm,0.6s,baz=137,slow=9.3,SNR=1.9						
	0.2nm,0.6s						
TORD	Torodi Ar. Bea	76.78	78	P	P	00 22 17.7	-0.4
	0.6nm,1.1s,baz=283,slow=6.1,SNR=1.9						
	0.6nm,1.1s						
ILAR	Eielson Array	77.92	335	P	P	00 22 23.0	-0.4
	0.2nm,0.5s,baz=122,slow=5.0,SNR=6.6						
	0.2nm,0.5s						
WRA	Warramunga Arr	146.93	240	PKPbc	PKPbc	00 30 09.2	+1.1
	0.2nm,0.5s,baz=111,slow=3.5,SNR=1.4						

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*IDC **31** 00:12:03.7±3.5, 35.°42N×74.°59E, h0^{km}, mb3.4/2,*
mbtmp3.3/6, ML2.6/4, MS3.7/2, Error ellipse: s-maj=86.2km
s-min=31.0km az=80.0
*NNC **31** 00:12:11.9±2.4, 36.°00N×74.°54E, h0^{km}, mb3.8, mpv3.8,*
Error ellipse: s-maj=64.7km s-min=21.0km az=66.0
ISC 31 00:12:09.5±1.8**, 35.°6N**±0.°2×**74.°6E**±0.°2**, h36**^{km}**, n10,**
σ0.^{s}71/10**, Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	8.18	338	P	Pn	00 14 06.3	+0.7
	1.7nm,0.3s,baz=140,slow=9.7,SNR=56						
KK31				S	Sn	00 15 35.6	-1.1
	6.5nm,0.9s,baz=152,slow=23,SNR=10						
MKAR	Makanchi Array	12.63	25	Pn	Pn	00 15 06.5	+0.1
	baz=210,slow=17,SNR=1.4						
	0.2nm,0.8s						
KURBB	Kurchatov Arra	15.33	9	Pn	Pn	00 15 43.0	0.0
	baz=199,slow=11,SNR=3.7						
	0.2nm,0.2s						
AB31	Akbulak array	17.41	326	P	P	00 16 10.7	+0.3
	1.4nm,0.9s,baz=133,slow=13,SNR=6.2						
BVA0	Borovoye Array	17.72	352	P	P	00 16 14.3	+0.5
	2.6nm,1.2s,baz=156,slow=8.5,SNR=5.9						
BVAR	Borovoye Array	17.72	352	P	P	00 16 13.6	-0.2
	baz=180,slow=10,SNR=6.8						
BVAR				LR	LR	00 22 07.4	
	comp=Z,61nm,19.0s,baz=343,slow=34						
	0.6nm,0.6s						
ZALV	Zalesovo Beam	19.73	18	P	P	00 16 35.2	-0.7
	0.1nm,0.3s,baz=219,slow=11,SNR=6.4						
	0.9nm,0.6s						
SONM	Songino Array	26.53	53	P	P	00 17 44.5	+0.8
	0.1nm,0.3s,baz=246,slow=9.3,SNR=1.5						
	0.1nm,0.3s						
JOW	Kunigami	46.25	85	LR	LR	00 42 18.0	
	comp=Z,261nm,19.4s,baz=298,slow=39						
WRA	Warramunga Arr	79.03	124	P	P	00 24 09.4	-0.6
	0.3nm,0.8s,baz=312,slow=6.1,SNR=0.7						
	0.3nm,0.8s						

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*KRSC **31** 00:21:05.6±0.8, 55.°14N×161.°63E, h108^{km}±17^{km}, Ml5.2,*
Felt [III-IV] at kordon Istok; [II] at kordon Cape Nalichevo.
*MOS **31** 00:21:07.2±0.8, 55.°21N×161.°35E, h111^{km}, mb4.4/26,*
Error ellipse: s-maj=8.4km s-min=3.8km az=74.5
*NEIC **31** 00:21:08.7±1.4, 55.°24N±0.°08×161.°2E±0.°1, h107^{km}±6^{km},*
mb4.5/249, Error ellipse: s-maj=13.6km s-min=9.7km
az=135.0
*IDC **31** 00:21:08.1±0.4, 55.°30N×161.°16E, h103^{km}±3^{km}, mb3.8/32,*
mbtmp4.2/38, MS3.3/9, Error ellipse: s-maj=10.0km
s-min=7.0km az=146.0
ISC 31 00:21:07.9±0.4**, 55.°16N**±0.°03×**161.°47E**±0.°03**, h104**^{km}±3^{km}**,**
n454, σ1.^{s}12/483**, mb4.5**/160**, 12C-4D, Near east coast of**
Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZV	Kizimen	0.68	266	PN	Pn	00 21 25.1	-0.5
KZV	Kizimen	0.68	266	eP	Pn	00 21 25.2	-0.5
TUMR	Tumrok	0.77	280	PN	Pn	00 21 26.7	+0.3
TUMR	Tumrok	0.77	280	eP	Pn	00 21 26.7	+0.3
BZGR	Bezymyannyi-Gr	0.90	331	PN	Pn	00 21 27.3	-0.3
BZGR	Bezymyannyi-Gr	0.90	331	eP	Pn	00 21 27.4	-0.3
BZP	Bezymyannyi-Pe	0.92	325	PN	Pn	00 21 27.6	-0.3
BZP	Bezymyannyi-Pe	0.92	325	eP	Pn	00 21 27.7	-0.3
KMNR	Kamenistaya	0.92	311	PN	Pn	00 21 28.0	+0.2
KMNR	Kamenistaya	0.92	311	eP	Pn	00 21 28.1	+0.2
ZLN	Zelenaya	0.94	337	PN	Pn	00 21 28.0	0.0
ZLN	Zelenaya	0.94	337	eP	Pn	00 21 28.1	0.0
BZWR	Bezymyannyi-We	0.98	326	PN	Pn	00 21 28.2	-0.3
BZWR	Bezymyannyi-We	0.98	326	eP	Pn	00 21 28.3	-0.3
KIRR	Kirishev	1.02	322	PN	Pn	00 21 29.1	+0.2
KIRR	Kirishev	1.02	322	eP	Pn	00 21 29.2	+0.2
LGNR	Loginova	1.02	335	PN	Pn	00 21 29.5	+0.4
LGNR	Loginova	1.02	335	eP	Pn	00 21 29.5	+0.4
CIRR	Tsirk	1.04	337	PN	Pn	00 21 29.3	+0.2
CIRR	Tsirk	1.04	337	eP	Pn	00 21 29.4	+0.2
KPT	Kopyto	1.07	319	PN	Pn	00 21 29.4	0.0
KPT	Kopyto	1.07	319	eP	Pn	00 21 29.5	0.0
KOZ	Kozyrevsk	1.27	316	PN	Pn	00 21 31.7	0.0
KOZ				S	Sn	00 21 50.7	+1.0
KOZ	Kozyrevsk	1.27	316	eP	Pn	00 21 31.7	0.0
KOZ				eS	Sn	00 21 50.7	+1.0
KBTR	Krutoberegovo	1.30	36	PN	Pn	00 21 31.4	-0.5
KBTR	Krutoberegovo	1.30	36	eP	Pn	00 21 31.5	-0.5
KBG	Krutoberegovo	1.30	32	PN	Pn	00 21 31.3	-0.6
KBG				S	Sn	00 21 49.5	-0.6
KBG	Krutoberegovo	1.30	32	eP	Pn	00 21 31.3	-0.6
KBG				eS	Sn	00 21 49.6	-0.6
BDR	Baidarnaya	1.42	354	eS	Sn	00 21 54.5	+1.7
SMKR	Semkarok	1.43	0	PN	Pn	00 21 33.6	+0.1
SMKR	Semkarok	1.43	0	eP	Pn	00 21 33.6	+0.1
SRDR	Sredinnyy	1.52	320	PN	Pn	00 21 34.5	-0.1
SRDR	Sredinnyy	1.52	320	eP	Pn	00 21 34.5	-0.1
KII	Karymskiy	1.63	227	PN	Pn	00 21 36.5	+0.6
KII	Karymskiy	1.63	227	eP	Pn	00 21 36.6	+0.6
ESO	Esso	1.75	297	PN	Pn	00 21 37.5	+0.1
ESO				S	Sn	00 21 59.9	0.0
ESO	Esso	1.75	297	eP	Pn	00 21 37.5	+0.1
ESO				eS	Sn	00 21 59.9	0.0
NLC	Nalytchevo	2.35	213	PN	Pn	00 21 44.9	-0.2
NLC				S	Sn	00 22 12.8	-0.8
NLC	Nalytchevo	2.35	213	eP	Pn	00 21 44.9	-0.2

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NLC                                eS      Sn       00 22 12.8 -0.8
KRX    Arik               2.45 224  PN     Pn       00 21 47.2 +0.7
KRX    Arik               2.45 224 eP      Pn       00 21 47.2 +0.7
KRER   Koryakskii         2.45 222  PN     Pn       00 21 47.3 +0.7
KRER   Koryakskii         2.45 222 eP      Pn       00 21 47.4 +0.7
AVH    Avacha             2.48 221  PN     Pn       00 21 47.6 +0.7
AVH                                 S      Sn       00 22 18.2 +1.4
AVH    Avacha             2.48 221 eP      Pn       00 21 47.6 +0.7
AVH                                eS      Sn       00 22 18.3 +1.4
UGLR   Uglovaya           2.50 220  PN     Pn       00 21 47.6 +0.5
UGLR   Uglovaya           2.50 220 eP      Pn       00 21 47.7 +0.5
KOK    Koryaka            2.50 223  PN     Pn       00 21 48.0 +0.8
KOK    Koryaka            2.50 223 eP      Pn       00 21 48.1 +0.8
GNL    Ganaly             2.53 236  PN     Pn       00 21 48.6 +1.1
GNL    Ganaly             2.53 236 eP      Pn       00 21 48.6 +1.1
BKI    Bering             2.58  87  PN     Pn       00 21 46.7 -1.4
BKI                                 S      Sn       00 22 14.8 -4.2
BKI    Bering             2.58  87 eP      Pn       00 21 46.7 -1.4
BKI                                eS      Sn       00 22 14.8 -4.2
DALK   Dalny              2.67 218  PN     Pn       00 21 49.3 +0.1
DALK                                S      Sn       00 22 20.6 -0.3
DALK   Dalny              2.67 218 eP      Pn       00 21 49.4 +0.1
DALK                               eS      Sn       00 22 20.7 -0.3
INSR   Institute          2.69 220  PN     Pn       00 21 50.2 +0.7
INSR                                S      Sn       00 22 22.3 +0.7
INSR   Institute          2.69 220 eP      Pn       00 21 50.3 +0.7
INSR                               eS      Sn       00 22 22.4 +0.7
PET    Petropavlovsk      2.71 219         Pn       00 21 50.1 +0.3
PET                                 Sn     Sn       00 22 23.1 +1.1
PET    Petropavlovsk      2.71 219c iPN    Pn       00 21 50.1 +0.3
PET                                 pmax   pmax
       comp=Z,2µm,1.7s
PET    Petropavlovsk      2.71 219 eP      Pn       00 21 50.2 +0.5
PET                                eS      Sn       00 22 22.5 +0.5
PEA0B  Petropavlovsk-     3.02 229         Pn       00 21 54.6 +0.6
PEA0B  Petropavlovsk-     3.02 229  PN     Pn       00 21 54.5 +0.5
PETK   Petropavlovsk-     3.02 229  P      Pn       00 21 54.2 +0.2
       comp=Z,239nm,0.6s,baz=60,slow=16,SNR=596
PETK                                S      Sn       00 22 30.0 +0.5
       comp=Z,174nm,0.7s,baz=38,slow=19,SNR=5.9
PETK   Petropavlovsk-     3.02 229         Pn       00 21 53.8 -0.2
KRMR   Karymshinskiy      3.05 222  PN     Pn       00 21 54.7 +0.4
KRMR   Karymshinskiy      3.05 222 eP      Pn       00 21 54.8 +0.4
RUS    Russkaya           3.25 214  PN     Pn       00 21 56.6 -0.3
RUS    Russkaya           3.25 214 eP      Pn       00 21 56.7 -0.3
GRL    Gorelyy            3.30 219  PN     Pn       00 21 58.7 +1.0
GRL    Gorelyy            3.30 219 eP      Pn       00 21 58.8 +1.0
MTVR   Mutnovka           3.31 217  PN     Pn       00 21 58.5 +0.5
MTVR                                S      Sn       00 22 36.5 -0.1
MTVR   Mutnovka           3.31 217 eP      Pn       00 21 58.5 +0.5
MTVR                               eS      Sn       00 22 36.5 -0.1
APC    Apacha             3.39 230  PN     Pn       00 22 00.1 +1.3
APC    Apacha             3.39 230 eP      Pn       00 22 00.1 +1.3
ASAK   Asacha             3.50 219  PN     Pn       00 22 01.2 +0.8
ASAK   Asacha             3.50 219 eP      Pn       00 22 01.2 +0.8
KDTR   Khodutka, Kamc     3.92 212  PN     Pn       00 22 05.4 -0.5
KDTR                                S      Sn       00 22 47.8 -3.2
KDTR   Khodutka, Kamc     3.92 212 eP      Pn       00 22 05.5 -0.5
KDTR                               eS      Sn       00 22 47.8 -3.2
MIPR   Malaya Ipel'ka     4.02 226  PN     Pn       00 22 09.0 +1.7
MIPR   Malaya Ipel'ka     4.02 226 eP      Pn       00 22 09.0 +1.7
PALN   Palana             4.02 349  PN     Pn       00 22 07.9 +0.6
PALN   Palana             4.02 349 eP      Pn       00 22 07.9 +0.6
OSSR   Ossora             4.19  11  PN     Pn       00 22 08.9 -0.6
OSSR   Ossora             4.19  11 eP      Pn       00 22 09.0 -0.6
PAU    Pauzhetka          4.63 219  PN     Pn       00 22 16.4 +0.8
PAU    Pauzhetka          4.63 219 eP      Pn       00 22 16.5 +0.8
SKR    Severo-Kuril’s     5.53 218cePN     Pn       00 22 27.6 -0.1
TILK   Tilichiki          5.86  23  PN     Pn       00 22 32.8 +0.7
TILK   Tilichiki          5.86  23 eP      Pn       00 22 32.8 +0.7
MA2    Magadan            7.28 312  P      Pn       00 22 49.2 -2.1
       comp=Z,10nm,0.6s,baz=112,slow=9.8,SNR=4.9
MA2                                 LR     LR       00 25 49.4
       comp=Z,105nm,19.7s,baz=79,slow=40
MA2    Magadan            7.28 312  Pn     Pn       00 22 50.1 -1.3
MA2    Magadan            7.28 312⇑ePN     Pn       00 22 52.5 +1.1
SHEM   Shemya Is, Ala     7.84 103  P      Pn       00 23 02.1 +3.0
       comp=Z,51nm,0.4s,baz=276,slow=18,SNR=1.9
SHEM                                S      Sn       00 24 19.4 -6.7
       comp=Z,148nm,0.7s,baz=158,slow=21,SNR=6.2
SEY    Seymchan           9.08 333  P      Pn       00 23 14.8 -1.0
       comp=Z,3.6nm,0.7s,baz=123,slow=8.5,SNR=4.4
SEY    Seymchan           9.08 333⇑ePN     Pn       00 23 17.3 +1.5
SEY                                 pmax   pmax
       comp=Z,23nm,2.5s
TYV    Tymovskoe         12.11 257 ePN     P        00 23 59.9 -5.1
TYV                                 pmax   pmax
       comp=Z,21nm,0.9s
TYV                                 pmax   pmax
       comp=Z,700nm,4.5s
BILL   Bilibino          13.12   8         P        00 24 15.7 -0.3
BILL   Bilibino          13.12   8⇑ePN     Pn       00 24 11.1 +1.3
BILL                                pmax   pmax
       comp=Z,4.0nm,0.8s
ATKA   Atka Island       14.70  92  Pn     Pn       00 24 32.9 +2.6
JKA    Kamikawa-asahi    16.42 235         P        00 24 53.0 +0.2
ASAJ   Asahikawa         16.42 236  P      Pn       00 24 51.7 -0.1
       comp=Z,11nm,0.4s,baz=75,slow=11,SNR=13
ASAJ                                LR     LR       00 31 13.9
       comp=Z,43nm,19.8s,baz=0.5,slow=37
YAK    Yakutsk           17.79 306  P      P        00 25 06.1 -1.6
       comp=Z,12nm,0.4s,baz=91,slow=2.1,SNR=1.5
YAK    Yakutsk           17.79 306⇑eP      Pn       00 25 07.2 -1.2
YAK                                 pmax   pmax
       comp=Z,6.0nm,0.4s
ERM    Erimo             17.80 230  P      P        00 25 07.1 -0.9
ERM    Erimo             17.80 230  P      P        00 25 07.1 -0.9
ERM                                 pmax   pmax
       comp=Z,84nm,0.5s
ANM    Nome              18.90  47  Pn     Pn       00 25 24.0 +2.4
ANM    Nome              18.90  47  P      Pn       00 25 24.0 +2.4
ANM                                 pmax   pmax
       comp=Z,19nm,1.3s
C16K   Lisburne Hills    20.14  36  P      P        00 25 33.9 +0.7
G16K   Koyuk River       20.34  45  P      P        00 25 37.0 +1.6
I17K   Unalakleet        20.78  50         P        00 25 42.2 +2.1
I17K                                IAmb   IAmb     00 26 05.0
       comp=Z,18nm,0.9s
HEH    HeiHe             21.07 271 eP      P        00 25 41.3 -2.1
J17K   VABM Dome         21.45  51  P      P        00 25 50.0 +2.6
J17K                                IAmb   IAmb     00 26 19.0
       comp=Z,19nm,1.0s
TIXI   Tiksi             21.58 332  P      P        00 25 46.8 -1.8
       comp=Z,1.4nm,0.3s,baz=126,slow=11,SNR=6.9
       comp=Z,1.4nm,0.3s
TIXI   Tiksi             21.58 332  P      P        00 25 48.5 -0.1
TIXI                                IAmb   IAmb     00 26 15.4
       comp=Z,42nm,1.4s
TIXI   Tiksi             21.58 332⇓eP      P        00 25 48.1 -0.5
TIXI                                pmax   pmax
       comp=Z,11nm,2.0s
C18K   Utukok River      21.70  37         P        00 25 50.3 +0.3
K17K   Iditarod          21.77  53  P      P        00 25 52.5 +1.8
K17K                                IAmb   IAmb     00 26 25.8
       comp=Z,19nm,0.8s
L18K   Granite Mounta    22.51  55  P      P        00 26 00.0 +1.5
R16K   Pilot Point       22.57  67  P      P        00 26 02.2 +3.1
N18K   Kilae Creek       22.98  59  P      P        00 26 04.6 +1.4
N18K                                IAmb   IAmb     00 26 17.5
       comp=Z,22nm,1.5s
JSD    Sado              23.22 232  P      P        00 26 04.6 -1.0
L19K   White Mountain    23.37  55  P      P        00 26 07.3 +0.5
O18K   Koktuh Hills      23.41  61  P      P        00 26 06.8 -0.4
O18K                                IAmb   IAmb     00 26 42.8
       comp=Z,48nm,1.3s
P18K   Big Mountain,     23.46  62  P      P        00 26 07.5 -0.2
B20K   Meade River       23.50  35         P        00 26 07.7 -0.1
N19K   Bonanza Creek     23.65  58  P      P        00 26 10.7 +1.2
J20K   Nowinta River     23.68  50  IAmb   IAmb     00 26 44.2
       comp=Z,25nm,1.4s
K20K   Telida            23.70  52  P      P        00 26 10.4 +0.6
K20K                                IAmb   IAmb     00 26 44.6
       comp=Z,15nm,1.1s
CHIR   Chirikof Islan    24.04  71  P      P        00 26 14.4 +1.5
G21K   Allakaket         24.10  44  P      P        00 26 14.4 +1.1
G21K                                IAmb   IAmb     00 26 47.8
       comp=Z,22nm,1.4s
F21K   Alatna River      24.19  42  P      P        00 26 15.3 +1.1
M20K   Styx River        24.20  55  P      P        00 26 15.9 +1.5
M20K                                IAmb   IAmb     00 26 21.9
       comp=Z,22nm,1.4s
E21K   Killik River      24.21  39  P      P        00 26 13.2 -1.1
B21K   Ikpikpuk River    24.24  36  P      P        00 26 15.4 +0.9
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H21K   Melozitna Rive    24.31  46  P      P        00 26 15.2 -0.1
Q19K   Cape Douglas,     24.35  63  P      P        00 26 16.5 +0.8
ILSW   Iliamna Southw    24.42  60  P      P        00 26 18.1 +1.7
ILSW                                IAmb   IAmb     00 26 52.2
       comp=Z,41nm,1.3s
MJB9   Matsu-Tunnel      24.48 230  P      P        00 26 17.2 +0.1
MAJO   Matsushiro        24.48 230  P      P        00 26 17.6 +0.5
MAJO   Matsushiro        24.48 230  P      P        00 26 17.6 +0.5
MAJO                                pmax   pmax
       comp=Z,41nm,0.7s
MJAR   Matsushiro Arr    24.48 230  P      P        00 26 17.7 +0.6
       comp=Z,20nm,0.7s,baz=27,slow=8.7,SNR=47
MJAR                                LR     LR       00 35 32.7
       comp=Z,65nm,19.9s,baz=68,slow=35
       comp=Z,20nm,0.7s
MJAR   Matsushiro Arr    24.48 230         P        00 26 17.1  0.0
MJAR   Matsushiro Arr    24.48 230  P      P        00 26 17.1  0.0
MJAR                                pmax   pmax
       comp=Z,8.0nm,0.8s
PPLA   Purkeypile        24.57  53  P      P        00 26 19.0 +1.2
PPLA                                IAmb   IAmb     00 26 52.9
       comp=Z,38nm,1.4s
I21K   Tanana            24.63  47  P      P        00 26 18.6 +0.5
D22K   Ayikyak River     24.75  38  P      P        00 26 19.9 +0.6
SPU    Mount Spurr       24.79  57  P      P        00 26 21.0 +1.3
B22K   Teshekpuk Lake    24.81  35         P        00 26 19.6 -0.1
B22K                                IAmb   IAmb     00 26 54.4
       comp=Z,24nm,1.3s
STLK   Strandline Lak    24.86  56  P      P        00 26 21.4 +1.1
H22K   Ishtalitna Cre    24.91  46  P      P        00 26 21.5 +0.8
E22K   Anaktuvuk Pass    24.95  40  P      P        00 26 21.6 +0.5
SKT    Skwentna          24.95  55  P      P        00 26 21.8 +0.7
SKT                                 IAmb   IAmb     00 26 58.2
       comp=Z,20nm,1.2s
BPAW   Bear Paw Mtn.     25.06  50  P      P        00 26 22.0 -0.1
BPAW                                IAmb   IAmb     00 27 00.7
       comp=Z,22nm,1.5s
KTH    Kantishna Hill    25.11  51  P      P        00 26 22.7 +0.1
KTH                                 IAmb   IAmb     00 26 54.7
       comp=Z,25nm,1.4s
L22K   Petersville       25.25  54  P      P        00 26 24.5 +0.6
SUA    Susitna One       25.38  56  P      P        00 26 25.7 +0.6
SUA                                 IAmb   IAmb     00 27 01.4
       comp=Z,16nm,1.0s
TRF    Thorofare Moun    25.40  51  P      P        00 26 25.9 +0.6
TRF                                 IAmb   IAmb     00 26 59.8
       comp=Z,21nm,1.0s
COLD   Coldfoot          25.46  43  P      P        00 26 26.0 +0.3
COLD                                IAmb   IAmb     00 27 00.1
       comp=Z,13nm,1.2s
D23K   Nanushuk River    25.48  38  P      P        00 26 26.3 +0.5
C23K   Itkillik River    25.64  36  P      P        00 26 27.7 +0.5
C23K                                IAmb   IAmb     00 26 28.6
       comp=Z,22nm,1.3s
JGF    Kuroka            25.64 230  P      P        00 26 28.2 +0.5
I23K   Minto, Yukon-K    25.74  47  P      P        00 26 29.1 +0.9
I23K                                IAmb   IAmb     00 27 03.1
       comp=Z,13nm,1.0s
E23K   Chandalar         25.76  41  P      P        00 26 29.0 +0.6
HILR   Hailar Array B    25.78 275  P      P        00 26 27.1 -1.7
       comp=Z,1.1nm,0.6s,baz=72,slow=9.5,SNR=4.2
       comp=Z,1.1nm,0.6s
TOLK   Toolik Lake Re    25.84  39  P      P        00 26 29.8 +0.7
TOLK                                IAmb   IAmb     00 27 07.8
       comp=Z,14nm,0.9s
INU    Inuyama           26.01 230  P      P        00 26 31.0 +0.1
RND    Reindeer          26.05  51  P      P        00 26 31.2 +0.1
RND                                 IAmb   IAmb     00 27 03.4
       comp=Z,18nm,1.3s
RND    Reindeer          26.05  51  P      P        00 26 31.2 +0.1
RND                                 pmax   pmax
       comp=Z,18nm,1.3s
D24K   Happy Valley      26.17  38  P      P        00 26 33.2 +1.2
D24K                                IAmb   IAmb     00 26 56.7
       comp=Z,14nm,1.2s
E24K   Your Creek        26.18  41  P      P        00 26 33.0 +0.8
E24K                                IAmb   IAmb     00 27 04.6
       comp=Z,11nm,1.1s
GHO    Glory Hole Cre    26.20  55  P      P        00 26 32.8 +0.3
GHO                                 IAmb   IAmb     00 27 14.1
       comp=Z,16nm,1.1s
C24K   Franklin Bluff    26.28  37  P      P        00 26 33.2 +0.2
C24K                                IAmb   IAmb     00 27 09.1
       comp=Z,18nm,1.0s
WRH    Wood River Hil    26.31  49  P      P        00 26 33.9 +0.6
WRH                                 IAmb   IAmb     00 27 06.2
       comp=Z,12nm,1.0s
H24K   Noodor Dome       26.35  46  P      P        00 26 35.2 +1.5
F24K   Squaw Lake        26.38  42  P      P        00 26 35.0 +1.1
COLA   College           26.39  48⇑eP      P        00 26 34.0  0.0
COLA                                pmax   pmax
       comp=Z,13nm,2.3s
CCB    Clear Creek Bu    26.42  49  P      P        00 26 34.8 +0.5
CCB                                 IAmb   IAmb     00 27 06.6
       comp=Z,15nm,1.2s
SML    Sawmill           26.47  55  P      P        00 26 36.2 +1.3
SML                                 IAmb   IAmb     00 27 09.8
       comp=Z,16nm,0.9s
KNK    Knik Glacier      26.47  56  P      P        00 26 36.0 +1.1
KNK                                 IAmb   IAmb     00 27 18.7
       comp=Z,35nm,1.3s
G24K   Hadweenzic Riv    26.51  44  P      P        00 26 36.0 +0.8
G24K                                IAmb   IAmb     00 27 10.2
       comp=Z,16nm,1.2s
PWL    Port Wells        26.63  57  P      P        00 26 38.5 +2.3
PWL                                 IAmb   IAmb     00 27 17.9
       comp=Z,23nm,0.9s
DHY    Denali Highway    26.75  52  P      P        00 26 37.9 +0.5
IL31                     26.81  48         P        00 26 37.8 +0.1
ILAR   Eielson Array     26.81  48  P      P        00 26 37.7 -0.1
       comp=Z,1.4nm,0.9s,baz=271,slow=11,SNR=13
ILAR                                PcP    PcP      00 29 56.5 -1.1
       comp=Z,0.4nm,0.7s,baz=284,slow=3.3,SNR=4.6
       comp=Z,1.4nm,0.9s
ILAR   Eielson Array     26.81  48  P      P        00 26 38.5 +0.7
SCM    Sheep Creek Mo    26.94  55  P      P        00 26 40.1 +1.0
SCM                                 IAmb   IAmb     00 27 11.0
       comp=Z,18nm,0.8s
SCM    Sheep Creek Mo    26.94  55  P      P        00 26 40.1 +1.0
SCM                                 pmax   pmax
       comp=Z,18nm,0.8s
D25K   Kavik River       27.05  38  P      P        00 26 40.3 +0.3
D25K                                IAmb   IAmb     00 26 41.0
       comp=Z,9.2nm,0.6s
F25K   Christian Rive    27.24  42  P      P        00 26 41.8 +0.1
E25K   Arctic Village    27.28  41  P      P        00 26 42.6 +0.5
PRP    Porcupine Dome    27.34  46  P      P        00 26 43.6 +0.9
PRP                                 IAmb   IAmb     00 27 14.9
       comp=Z,9.3nm,1.0s
M24K   Tolsona, Glenn    27.43  54  P      P        00 26 44.0 +0.5
J25K   Salcha River,     27.47  48  P      P        00 26 42.7 -1.1
BMAR   Burnt Mountain    27.65  42  P      P        00 26 46.1 +0.7
RIDG   Independent Ri    27.79  50  P      P        00 26 46.2 -0.5
RIDG                                IAmb   IAmb     00 27 21.0
       comp=Z,10nm,1.2s
G26K   Porcupine Rive    27.97  43  P      P        00 26 48.8 +0.7
G26K                                IAmb   IAmb     00 27 24.2
       comp=Z,9.9nm,1.3s
SCRK   Sand Creek        28.14  50  P      P        00 26 49.7 -0.1
SCRK                                IAmb   IAmb     00 27 20.2
       comp=Z,6.6nm,0.9s
GLB    Gilahina Butte    28.66  55  P      P        00 26 56.0 +1.6
GLB                                 IAmb   IAmb     00 27 09.8
       comp=Z,25nm,1.4s
KSRS   Korea Array       28.77 246  LR     LR       00 39 29.4
       comp=Z,31nm,18.7s,baz=75,slow=38
M26K   Nabesna, AK       28.84  53  P      P        00 26 57.8 +1.8
M26K                                IAmb   IAmb     00 27 40.7
       comp=Z,13nm,1.5s
H27K   Steamboat Moun    28.92  45  P      P        00 26 57.0 +0.4
K27K   Chicken           28.97  49  P      P        00 26 57.0  0.0
D27M   Malcolm River     28.97  38         P        00 26 57.4 +0.3
CRQM   Cirque            29.14  56  P      P        00 26 59.1 +0.3
BCAR   Beaver Creek A    29.26  51  P      P        00 26 59.5 -0.2
M27K   Edge Creek, AK    29.36  53  P      P        00 27 01.8 +1.1
M27K                                IAmb   IAmb     00 27 37.6
       comp=Z,10nm,1.1s
F28M   Old Crow          29.45  42  P      P        00 27 02.1 +0.9
I28M   Miner Creek       29.66  46  P      P        00 27 03.8 +0.6
BARN   Barnard Glacie    29.76  55  P      P        00 27 05.2 +0.9
GRNC   Granite Creek     29.80  56  P      P        00 27 05.9 +1.2
CTGM   Chitina Glacie    29.94  55  P      P        00 27 07.2 +1.4
DAWY   Dawson            30.12  49  P      P        00 27 07.8 +0.5
DAWY                                IAmb   IAmb     00 27 43.3
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       comp=Z,11nm,1.5s
E29M   Blow River        30.13  40  P      P        00 27 08.0 +0.8
LOGN   Logan Glacier     30.13  55  P      P        00 27 07.1 -0.5
H29M   Whitestone        30.19  44  P      P        00 27 08.9 +1.1
G29M   Pine Creek        30.23  43  P      P        00 27 09.7 +1.4
G29M                                IAmb   IAmb     00 27 44.7
       comp=Z,25nm,1.5s
EPYK   Eagle Plains      30.83  44  P      P        00 27 14.5 +1.0
M29M   Somme Creek       30.89  52  P      P        00 27 15.2 +1.1
M29M                                IAmb   IAmb     00 27 44.5
       comp=Z,10nm,1.3s
F30M   Barrier River     31.00  41  P      P        00 27 17.0 +2.0
F30M                                IAmb   IAmb     00 27 39.8
       comp=Z,10nm,1.3s
I30M   Mount Dempster    31.17  46  P      P        00 27 16.1 -0.5
JCJ    Chichijima        31.36 214  P      P        00 27 18.1 -0.4
M30M   Minto, Yukon      31.61  51  P      P        00 27 21.6 +1.3
M30M                                IAmb   IAmb     00 27 34.6
       comp=Z,10.0nm,1.5s
G31M   Satah River       31.69  43  P      P        00 27 21.2 +0.2
INK    Inuvik            31.75  40  P      P        00 27 22.2 +0.8
INK    Inuvik            31.75  40  P      P        00 27 22.2 +0.8
INK                                 pmax   pmax
       comp=Z,5.0nm,1.0s
HYT    Haines Junctio    31.78  54  P      P        00 27 23.4 +1.4
HYT                                 IAmb   IAmb     00 27 32.3
       comp=Z,15nm,1.3s
F31M   Tsiigehtchic      31.81  41  P      P        00 27 22.7 +0.8
F31M                                IAmb   IAmb     00 28 02.1
       comp=Z,8.9nm,1.4s
H31M   Peel River        31.88  45  P      P        00 27 23.2 +0.4
P29M   Windy Craggy      32.05  57  P      P        00 27 26.1 +1.9
P29M                                IAmb   IAmb     00 28 04.0
       comp=Z,22nm,1.4s
JSU    Suzuyama          32.22 236  P      P        00 27 25.2 -0.8
O30N   Mendenhall        32.45  54  P      P        00 27 29.1 +1.4
O30N                                IAmb   IAmb     00 27 53.1
       comp=Z,17nm,1.4s
M31M   Drury Creek, Y    32.78  51  P      P        00 27 32.1 +1.5
M31M                                IAmb   IAmb     00 28 00.4
       comp=Z,11nm,1.4s
WHY    Whitehorse        33.05  54  P      P        00 27 35.0 +1.9
SONM   Songino Array     34.25 281  P      P        00 27 42.2 -1.5
       comp=Z,0.4nm,0.5s,baz=64,slow=6.1,SNR=4.7
SONM                                PcP    PcP      00 30 17.9 +0.3
       comp=Z,1.0nm,0.6s,baz=86,slow=1.5,SNR=7.3
SONM                                pPcP            00 30 43.5
       comp=Z,0.8nm,0.6s,baz=91,slow=2.1,SNR=4.4
SONM                                ScP    ScP      00 33 51.9 -0.9
       comp=Z,0.9nm,0.9s,baz=64,slow=3.4,SNR=5.1
SONM                                LR     LR       00 42 00.4
       comp=Z,49nm,18.7s,baz=100,slow=37
       comp=Z,0.4nm,0.5s
SONM   Songino Array     34.25 281  P      P        00 27 42.5 -1.1
SONM   Songino Array     34.25 281  P      P        00 27 42.5 -1.1
SONM                                pmax   pmax
       comp=Z,1.0nm,1.1s
NRIK   Noril'sk          34.71 323  LR     LR       00 42 38.8
       comp=Z,91nm,18.5s,baz=62,slow=37
C36M   Paulatuk          34.90  37         P        00 27 46.7 -2.0
C36M                                IAmb   IAmb     00 27 50.2
       comp=Z,7.8nm,0.7s
HHC    Hu-ho-hao-te      35.51 267 eP      P        00 27 58.8 +4.3
HHC                                 pmax   pmax
       comp=Z,6.0nm,0.8s
HHC                                 pmax   pmax
       comp=Z,140nm,6.5s
H11N2  WAKE ISLAND Hy    35.61 171  T      T        01 05 21.3
       baz=354,slow=76,SNR=327
H11N3  WAKE ISLAND Hy    35.62 171  T      T        01 05 24.7
       baz=354,slow=76,SNR=275
H11N1  WAKE ISLAND Hy    35.63 171  T      T        01 05 18.2
       baz=354,slow=76,SNR=284
H11S1  WAKE ISLAND Hy    36.80 172  T      T        01 06 48.3
       baz=352,slow=76,SNR=12
H11S3  WAKE ISLAND Hy    36.82 172  T      T        01 06 49.3
       baz=352,slow=76,SNR=7.3
H11S2  WAKE ISLAND Hy    36.82 172  T      T        01 06 52.2
       baz=352,slow=76,SNR=6.9
NJ2    Nanjing           37.71 250 eP      P        00 28 13.0 -0.1
NJ2                                 pmax   pmax
       comp=Z,9.0nm,0.5s
YKAW3  Yellowknife Wh    41.07  45  P      P        00 28 41.7 +1.0
RES    Resolute Bay      41.10  23  P      P        00 28 41.4 +0.7
RES    Resolute Bay      41.10  23  P      P        00 28 41.4 +0.7
RES                                 pmax   pmax
       comp=Z,4.0nm,1.1s
YKA    Yellowknife Ar    41.10  45  P      P        00 28 41.7 +0.8
       comp=Z,1.2nm,0.7s,baz=301,slow=8.4,SNR=25
YKA                                 pP     pP       00 29 05.2 +0.6
       comp=Z,1.5nm,0.7s,baz=301,slow=8.5,SNR=7.9
YKA                                 PcP    PcP      00 30 38.1 -0.1
       comp=Z,0.5nm,0.7s,baz=307,slow=4.2,SNR=5.3
       comp=Z,1.2nm,0.7s
YKA    Yellowknife Ar    41.10  45  P      P        00 28 41.2 +0.3
YKAW1  Yellowknife Wh    41.16  45  P      P        00 28 42.0 +0.6
ZALV   Zalesovo Beam     42.36 301  P      P        00 28 49.2 -2.1
       comp=Z,0.2nm,0.4s,baz=67,slow=8.0,SNR=2.0
ZALV                                PcP    PcP      00 30 42.0 -0.6
       comp=Z,0.6nm,0.5s,baz=0.0,slow=4.9,SNR=4.9
       comp=Z,0.2nm,0.4s
GTA    Gaotai            43.20 275 eP      P        00 28 56.5 -1.9
GTA                                 pP     pP       00 29 23.3 +0.5
GTA                                 pmax   pmax
       comp=Z,2.0nm,0.8s
DGZ    Jazzator, Alta    43.50 295⇓eP      P        00 28 59.9 -0.8
DGZ                                 pmax   pmax
       comp=Z,10.0nm,3.4s
CLRS   Cowichan Lake     44.23  66  P      P        00 29 06.9 +0.6
LLLB   Lillooet          44.31  63  P      P        00 29 08.5 +1.5
LLLB                                IAmb   IAmb     00 29 16.0
       comp=Z,7.9nm,1.1s
SPITS  Spitsbergen Ar    45.23 350  P      P        00 29 12.8 -1.1
       comp=Z,2.9nm,0.6s,baz=71,slow=8.3,SNR=8.9
       comp=Z,2.9nm,0.6s
SPITS  Spitsbergen Ar    45.23 350  P      P        00 29 14.1 +0.2
SPITS                               pmax   pmax
       comp=Z,33nm,1.2s
SPB2   Spitsbergen Ar    45.23 350  P      P        00 29 13.4 -0.5
GNW    Green Mountain    45.69  67  P      P        00 29 18.8 +0.9
EDM    Edmonton          46.90  55         P        00 29 28.7 +1.4
EDM                                 IAmb   IAmb     00 29 29.2
       comp=Z,11nm,0.8s
EDM    Edmonton          46.90  55  P      P        00 29 28.7 +1.4
EDM                                 pmax   pmax
       comp=Z,11nm,0.8s
BLKN   Baker Lake        46.93  36         P        00 29 27.7 +0.3
BLKN                                IAmb   IAmb     00 29 28.3
       comp=Z,14nm,1.0s
B08A   Colville Reser    47.01  64         P        00 29 29.5 +1.3
B08A                                IAmb   IAmb     00 29 30.2
       comp=Z,7.0nm,0.8s
KURK   Kurchatov         47.34 301  P      P        00 29 29.2 -1.6
KURK                                                00 30 59.4
KURBB  Kurchatov Arra    47.45 301  P      P        00 29 29.2 -2.4
       comp=Z,1.5nm,0.5s,baz=55,slow=7.8,SNR=7.1
KURBB                               PcP    PcP      00 30 59.4 -0.8
       comp=Z,2.4nm,0.2s,baz=41,slow=2.9,SNR=6.3
       comp=Z,1.5nm,0.5s
EPH    Ephrata           47.52  65  P      P        00 29 32.9 +0.6
EPH                                 IAmb   IAmb     00 29 33.7
       comp=Z,4.1nm,0.9s
ILON   Igloolik, Nuna    47.59  25  P      P        00 29 32.5 +0.1
ILON                                IAmb   IAmb     00 29 44.0
       comp=Z,6.8nm,1.3s
H04D   Lebanon           47.70  70  P      P        00 29 35.1 +1.5
H04D                                IAmb   IAmb     00 30 14.0
       comp=Z,17nm,1.3s
HOOD   Mount Hood Mea    47.76  68  P      P        00 29 35.5 +1.3
WAH2   Wahluke Slope     47.92  65  P      P        00 29 36.6 +1.3
WAH2                                IAmb   IAmb     00 29 37.0
       comp=Z,5.5nm,0.7s
MK31   Makanchi Array    48.00 295deP      P        00 29 36.0  0.0
MKAR   Makanchi Array    48.00 295  P      P        00 29 33.4 -2.6
       comp=Z,1.0nm,0.6s,baz=53,slow=6.2,SNR=13
       comp=Z,1.0nm,0.6s
MKAR   Makanchi Array    48.00 295  P      P        00 29 35.0 -1.0
MKAR   Makanchi Array    48.00 295  P      P        00 29 35.0 -1.0
MAKZ   Makanchi          48.16 295  P      P        00 29 35.2 -1.9
MAKZ                                IAmb   IAmb     00 30 01.8
       comp=Z,8.4nm,1.2s
MAKZ   Makanchi          48.16 295  P      P        00 29 35.2 -1.9
MAKZ                                pmax   pmax
       comp=Z,8.0nm,1.3s
NEW    Newport           48.20  62  P      P        00 29 37.3 -0.2
       comp=Z,1.5nm,0.8s,baz=15,slow=4.4,SNR=3.4
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      comp=Z,1.5nm,0.8s
WIFE  Three Sisters-   48.50  70    P       P       00 29 41.6 +1.5
WIFE                                IAmb    IAmb    00 29 42.0
      comp=Z,11nm,1.2s
BBOR  Butler Butte     48.82  71    P       P       00 29 43.6 +1.1
BBOR                                IAmb    IAmb    00 29 47.4
      comp=Z,6.9nm,1.2s
PINE  Pine Mountain    49.15  69    P       P       00 29 46.4 +1.3
PINE                                IAmb    IAmb    00 30 19.2
      comp=Z,9.0nm,1.2s
J05D  Fort Rock, OR    49.34  70    P       P       00 29 47.9 +1.6
J05D                                IAmb    IAmb    00 29 48.5
      comp=Z,5.9nm,0.8s
L04D  Klamath Falls    49.48  72    P       P       00 29 48.8 +1.3
F10A  Beach Ranch, E   49.65  65    P       P       00 29 50.2 +1.5
F10A                                IAmb    IAmb    00 29 54.2
      comp=Z,6.6nm,1.3s
BVAR  Borovoye Array   49.75 308    P       P       00 29 47.3 -1.9
      comp=Z,1.9nm,0.6s,baz=56,slow=7.4,SNR=14
BVAR                                PcP     PcP     00 31 08.0 -0.6
      comp=Z,0.7nm,0.4s,baz=75,slow=3.3,SNR=4.2
BVAR                                ScP     ScP     00 34 53.9 -0.3
      comp=Z,0.7nm,0.7s,baz=77,slow=6.2,SNR=4.1
      comp=Z,1.9nm,0.6s
BORK  Borovoye         49.77 308    P       P       00 29 49.5 +0.2
BORK  Borovoye         49.77 308⇓eP     P       00 29 48.4 -0.9
BORK                                pmax    pmax
      comp=Z,1.0nm,0.8s
K05A  Summer Lake      49.90  70    P       P       00 29 52.4 +1.7
K05A                                IAmb    IAmb    00 30 00.8
      comp=Z,12nm,1.5s
BMO   Blue Mountains   50.37  66    P       P       00 29 55.2 +1.1
BMO   Blue Mountains   50.37  66    P       P       00 29 55.2 +1.1
BMO                                 pmax    pmax
      comp=Z,3.0nm,1.5s
MSO   Missoula         50.76  62            P       00 29 58.0 +0.9
MSO                                 IAmb    IAmb    00 30 19.6
      comp=Z,10nm,1.4s
PLID  Pearl Lake       50.89  65            P       00 29 59.4 +1.2
PLID                                IAmb    IAmb    00 29 59.8
      comp=Z,8.7nm,1.4s
BPMT  Black Pine Rid   51.28  62    P       P       00 30 02.3 +1.2
FCC   Fort Churchill   51.37  40    P       P       00 30 01.8 +0.6
FCC   Fort Churchill   51.37  40    P       P       00 30 01.8 +0.6
FCC                                 pmax    pmax
      comp=Z,14nm,1.2s
PZH   PanZhiHua        51.48 262    P       P       00 30 03.8 +1.1
ARTI  Arti             52.53 317    P       P       00 30 08.8 -1.1
      comp=Z,0.8nm,0.4s,baz=43,slow=10,SNR=3.6
ARTI                                pP      pP      00 30 33.4 -1.7
      comp=Z,2.9nm,0.7s,baz=31,slow=7.9,SNR=4.2
      comp=Z,0.8nm,0.4s
BCYI  Bear Canyon      52.77  64    P       P       00 30 12.9 +0.8
BOZ   Bozeman (W)      52.78  62    P       P       00 30 13.7 +1.6
BOZ                                 IAmb    IAmb    00 30 14.2
      comp=Z,3.4nm,0.8s
BOZ   Bozeman (W)      52.78  62    P       P       00 30 13.7 +1.6
BOZ                                 pmax    pmax
      comp=Z,3.0nm,0.9s
PNTR  Pine Nut         53.13  73    P       P       00 30 17.1 +2.2
WUS   Wushi            53.43 291            pP      00 30 41.5 -0.6
YHH   Holmes Hill      53.74  62    P       P       00 30 20.8 +1.5
YMR   Madison River    53.76  62    P       P       00 30 21.6 +2.2
YMR                                 IAmb    IAmb    00 30 21.8
      comp=Z,5.2nm,0.8s
YNE   Yellowstone No   54.01  61    P       P       00 30 22.4 +1.2
YNE                                 IAmb    IAmb    00 30 48.4
      comp=Z,4.4nm,0.8s
RYN   Ryan             54.05  72    P       P       00 30 23.2 +1.7
RYN                                 IAmb    IAmb    00 30 23.7
      comp=Z,4.1nm,0.7s
NVAR  Mina Array Bea   54.31  72    P       P       00 30 25.4 +1.9
      comp=Z,3.7nm,0.7s,baz=304,slow=7.3,SNR=25
NVAR                                pP      pP      00 30 49.8 +2.2
      comp=Z,1.4nm,0.6s,baz=308,slow=7.7,SNR=3.2
      comp=Z,3.7nm,0.7s
NVAR  Mina Array Bea   54.31  72    P       P       00 30 25.2 +1.7
ELK   Elko             54.31  68            P       00 30 25.4 +1.9
ELK   Elko             54.31  68    P       P       00 30 25.4 +1.9
ELK                                 pmax    pmax
      comp=Z,3.0nm,0.9s
NV11  Mina Array Sit   54.39  72    P       P       00 30 26.2 +2.2
FXWY  Fox Creek        54.46  63    P       P       00 30 26.4 +1.9
FXWY                                IAmb    IAmb    00 30 52.1
      comp=Z,3.3nm,0.8s
MOOW  Moose Ponds      54.52  63    P       P       00 30 26.7 +1.8
AAK   Ala-Archa        54.90 296⇑eP     P       00 30 25.6 -1.9
AAK                                 pmax    pmax
      comp=Z,11nm,3.3s
HWUT  Hardware Ranch   55.63  65    P       P       00 30 34.8 +1.9
HWUT                                IAmb    IAmb    00 30 35.6
      comp=Z,7.5nm,0.9s
BW06  Boulder Array    55.83  63    P       P       00 30 35.8 +1.5
BW06                                IAmb    IAmb    00 30 36.3
      comp=Z,3.4nm,0.8s
PD31  Pinedale Array   55.83  63            P       00 30 35.8 +1.4
PD31                                IAmb    IAmb    00 30 36.3
      comp=Z,3.2nm,0.8s
PDAR  Pinedale Array   55.83  63    P       P       00 30 36.0 +1.6
      comp=Z,2.6nm,0.7s,baz=330,slow=2.7,SNR=23
PDAR                                pP      pP      00 31 00.5 +1.6
      comp=Z,3.1nm,0.9s,baz=335,slow=2.8,SNR=8.4
      comp=Z,2.6nm,0.7s
PDAR  Pinedale Array   55.83  63    P       P       00 30 36.1 +1.7
DUG   Dugway, Tooele   55.99  67            P       00 30 37.2 +1.8
DUG                                 IAmb    IAmb    00 30 38.4
      comp=Z,4.9nm,0.9s
DUG   Dugway, Tooele   55.99  67    P       P       00 30 37.2 +1.8
DUG                                 pmax    pmax
      comp=Z,5.0nm,0.9s
SPR3  Spring Creek 3   56.05  69            P       00 30 38.2 +2.1
SPR3                                IAmb    IAmb    00 31 05.0
      comp=Z,7.1nm,1.0s
CTU   Camp Tracy       56.20  66    P       P       00 30 38.1 +1.3
CTU                                 IAmb    IAmb    00 30 39.3
      comp=Z,4.5nm,0.9s
KSH   Kashi            56.37 292    P       P       00 30 43.5 +5.5
KSH                                 pP      pP      00 31 06.5 +2.9
KSH                                 pmax    pmax
      comp=Z,5.0nm,3.6s
KKAR  Karatay Array    56.59 299    P       P       00 30 38.9 -0.6
KKAR  Karatay Array    56.59 299    P       P       00 30 38.9 -0.6
CLC   China Lake       56.59  74    P       P       00 30 40.8 +1.2
CLC                                 IAmb    IAmb    00 31 17.1
      comp=Z,9.7nm,1.4s
CLC   China Lake       56.59  74    P       P       00 30 40.8 +1.2
CLC                                 pmax    pmax
      comp=Z,10.0nm,1.4s
ARSB  Arslanbob        56.62 296    P       P       00 30 40.3 +0.4
ARSB                                IAmb    IAmb    00 31 06.7
      comp=Z,5.5nm,1.0s
ARSB  Arslanbob        56.62 296    P       P       00 30 40.3 +0.4
ARSB                                pmax    pmax
      comp=Z,6.0nm,1.0s
MPU   Maple Canyon     56.75  66    P       P       00 30 42.4 +1.5
MPU                                 IAmb    IAmb    00 31 08.5
      comp=Z,9.4nm,1.4s
WSHM  Spangler Hills   56.81  74    P       P       00 30 42.9 +1.8
WSHM                                IAmb    IAmb    00 30 43.6
      comp=Z,3.7nm,0.8s
PRN   Pahroc Range     56.82  71    P       P       00 30 43.4 +2.1
PRN                                 IAmb    IAmb    00 30 46.4
      comp=Z,5.1nm,1.0s
BSUT  Blindstream Ca   56.83  65            P       00 30 43.6 +2.0
BSUT                                IAmb    IAmb    00 31 12.7
      comp=Z,8.6nm,1.0s
ULM   Lac du Bonnet    56.83  48    P       P       00 30 40.5 -0.5
      comp=Z,2.1nm,0.4s,baz=322,slow=6.4,SNR=5.2
ULM                                 pP      pP      00 31 07.0 +0.9
      comp=Z,2.9nm,0.9s,baz=307,slow=6.7,SNR=2.8
      comp=Z,2.1nm,0.4s
ULM   Lac du Bonnet    56.83  48    P       P       00 30 41.4 +0.4
ULM                                 IAmb    IAmb    00 30 42.4
      comp=Z,12nm,1.3s
ULM   Lac du Bonnet    56.83  48    P       P       00 30 41.4 +0.4
ULM                                 pmax    pmax
      comp=Z,12nm,1.3s
GWY   Greenwater Val   56.83  73    P       P       00 30 43.1 +1.6
GWY                                 IAmb    IAmb    00 30 43.9
      comp=Z,3.2nm,0.7s
CCCA  Chr Cany lake    56.94  74    P       P       00 30 44.2 +2.2
AB31  Akbulak array    57.07 310    P       P       00 30 42.9 +0.2
ABKAR Akbulak array    57.07 310    P       P       00 30 43.2 +0.5
TMUT  Trail Mountain   57.50  67    P       P       00 30 48.0 +1.7
TMUT                                IAmb    IAmb    00 31 25.4
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      comp=Z,3.9nm,0.8s
RSSD  Black Hills      57.61  58            P       00 30 47.8 +1.0
RSSD                                IAmb    IAmb    00 30 49.0
      comp=Z,6.8nm,0.8s
RSSD  Black Hills      57.61  58    P       P       00 30 47.8 +1.0
RSSD                                pmax    pmax
      comp=Z,7.0nm,0.8s
P18A  Preston Nutter   57.76  66    P       P       00 30 50.9 +2.8
P18A                                IAmb    IAmb    00 31 27.0
      comp=Z,5.6nm,1.1s
MTPU  Mount Pierson    57.90  68    P       P       00 30 50.9 +1.8
SRU   San Rafael Swe   57.99  66    P       P       00 30 50.8 +1.2
SRU                                 IAmb    IAmb    00 30 52.2
      comp=Z,5.7nm,0.8s
SRU   San Rafael Swe   57.99  66    P       P       00 30 50.8 +1.2
SRU                                 pmax    pmax
      comp=Z,6.0nm,0.8s
EPLO  Experimental L   58.18  48    P       P       00 30 50.9 +0.4
EPLO                                IAmb    IAmb    00 30 52.3
      comp=Z,9.3nm,1.1s
O20A  White River Ci   58.43  64    P       P       00 30 54.2 +1.6
FIA1  FINESS Array S   58.54 337    P       P       00 30 51.7 -1.0
FINES FINESS Array B   58.54 337    P       P       00 30 50.9 -1.8
      comp=Z,3.0nm,0.5s,baz=36,slow=7.8,SNR=29
FINES                               pP      pP      00 31 17.4 -1.0
      comp=Z,2.7nm,0.8s,baz=41,slow=7.8,SNR=1.7
      comp=Z,3.0nm,0.5s
FINES FINESS Array B   58.54 337    P       P       00 30 52.2 -0.6
FINES FINESS Array B   58.54 337  i P       P       00 30 50.7 -2.1
FINES                               pmax    pmax
      comp=Z,3.0nm,0.5s
HMU   Henry Mountain   58.74  68            P       00 30 56.4 +1.5
PV22  Blue Mesa, Par   59.33  66    P       P       00 30 59.9 +1.0
PV22                                IAmb    IAmb    00 31 02.3
      comp=Z,8.6nm,1.3s
PV19  Morning Glory    59.40  66    P       P       00 31 00.7 +1.3
CMAR  Chiang Mai Arr   59.40 258    P       P       00 30 58.5 -0.8
      comp=Z,1.3nm,0.6s,baz=22,slow=7.0,SNR=11
      comp=Z,1.3nm,0.6s
CMAR  Chiang Mai Arr   59.40 258ceP     P       00 30 59.5 +0.2
CMAR                                pmax    pmax
      comp=Z,1.0nm,0.6s
PV18  Skein Mesa, Pa   59.48  66            P       00 31 01.1 +1.1
PV12  Saucer Basin,    59.48  66    P       P       00 31 01.8 +1.9
PV03  Paradox Valley   59.51  66    P       P       00 31 01.4 +1.3
PV03                                IAmb    IAmb    00 31 02.5
      comp=Z,3.5nm,0.9s
PV05  Paradox Valley   59.51  66    P       P       00 31 01.3 +1.2
PV13  Radium Mtn., P   59.59  66    P       P       00 31 02.0 +1.3
PV13                                IAmb    IAmb    00 31 03.1
      comp=Z,5.9nm,0.8s
PV15  Paradox Valley   59.63  66    P       P       00 31 02.9 +1.8
PV15                                IAmb    IAmb    00 31 38.3
      comp=Z,6.1nm,1.0s
KUQ   Kuujjuuaa        60.15  28    P       P       00 31 03.1 -0.8
ESJX  Sierra Juarez    60.34  76    P       P       00 31 07.1 +1.3
BORG  Borgarnes        60.40   1  i P       P       00 31 05.4 -0.1
EYMN  Ely              60.45  48    P       P       00 31 06.7 +0.5
NC204 NORSAR Array S   61.62 344    P       P       00 31 13.5 -0.4
NB201 NORSAR Array S   61.75 344    P       P       00 31 13.8 -1.0
NB2   NORSAR Subarra   61.78 344    P       P       00 31 14.6 -0.3
      comp=Z,2.1nm,0.6s,baz=20,slow=6.9
NOA   NORSAR Array B   61.78 344    P       P       00 31 13.9 -1.0
      comp=Z,0.8nm,0.5s,baz=20,slow=6.8,SNR=4.1
NOA                                 pP      pP      00 31 38.8 -2.1
      comp=Z,3.2nm,0.8s,baz=19,slow=6.9,SNR=4.9
      comp=Z,0.8nm,0.5s
HFS   Hagfors          62.22 342    P       P       00 31 17.2 -0.7
      comp=Z,1.5nm,0.5s,baz=64,slow=3.4,SNR=9.4
      comp=Z,1.5nm,0.5s
ANMO  Albuquerque      63.26  67    P       P       00 31 26.9 +1.5
      comp=Z,1.6nm,0.8s,baz=323,slow=6.8,SNR=5.6
ANMO                                LR      LR      00 56 44.8
      comp=Z,32nm,18.4s,baz=308,slow=34
      comp=Z,1.6nm,0.8s
SCHQ  Schefferville    63.44  29    P       P       00 31 25.8 -0.3
      comp=Z,2.1nm,0.5s,baz=284,slow=7.0,SNR=5.5
SCHQ                                pP      pP      00 31 50.8 -1.0
      comp=Z,4.5nm,0.9s,baz=278,slow=9.1,SNR=2.4
      comp=Z,2.1nm,0.5s
RTBA  Rita Blanca      64.05  63    P       P       00 31 31.3 +0.8
RTBA                                IAmb    IAmb    00 31 32.0
      comp=Z,6.2nm,0.8s
VLDQ  Val d'Or         65.84  39    P       P       00 31 40.2 -1.4
AKASG Malin Array Be   67.25 329    P       P       00 31 50.1 -0.5
      comp=Z,0.7nm,0.3s,baz=29,slow=6.8,SNR=4.3
      comp=Z,0.7nm,0.3s
AKASG Malin Array Be   67.25 329ceP     P       00 31 51.0 +0.4
WMOK  Wichita Mounta   67.39  62            P       00 31 52.6 +0.8
WMOK                                IAmb    IAmb    00 31 53.4
      comp=Z,6.8nm,0.9s
WMOK  Wichita Mounta   67.39  62    P       P       00 31 52.6 +0.8
WMOK                                pmax    pmax
      comp=Z,7.0nm,0.9s
PECS  Pecos            67.40  67    P       P       00 31 51.7 -0.3
R40A  Maddies Statio   67.74  55            P       00 31 54.0 +0.1
CCM   Cathedral Cave   68.40  54    P       P       00 31 57.9 -0.2
CCM   Cathedral Cave   68.40  54    P       P       00 31 57.9 -0.2
CCM                                 pmax    pmax
      comp=Z,17nm,1.3s
SGCY  Sterling City    68.41  65    P       P       00 31 59.5 +1.2
SGCY                                IAmb    IAmb    00 32 00.3
      comp=Z,4.7nm,0.8s
HHAR  Hobbs            68.55  57    P       P       00 31 59.2 +0.2
HHAR                                IAmb    IAmb    00 31 59.7
      comp=Z,11nm,0.9s
KBZ   Khabaz           68.58 317    P       P       00 31 59.2 +0.2
      comp=Z,2.0nm,0.8s,baz=188,slow=23,SNR=8.1
      comp=Z,2.0nm,0.8s
KBZ   Khabaz           68.58 317⇑eP     P       00 31 59.5 +0.4
KBZ                                 pmax    pmax
      comp=Z,3.0nm,0.9s
MGMO  Mountain Grove   68.65  55    P       P       00 31 59.6 -0.1
MGMO                                IAmb    IAmb    00 32 00.2
      comp=Z,7.9nm,0.7s
TX31  Lajitas Ar. Si   69.11  69            P       00 32 04.1 +1.5
TX31                                IAmb    IAmb    00 32 05.0
      comp=Z,4.6nm,0.8s
TXAR  Lajitas Array    69.11  69    P       P       00 32 03.9 +1.2
      comp=Z,3.9nm,0.7s,baz=298,slow=4.5,SNR=40
TXAR                                pP      pP      00 32 30.8 +2.6
      comp=Z,1.8nm,0.6s,baz=293,slow=4.4,SNR=5.5
      comp=Z,3.9nm,0.7s
TXAR  Lajitas Array    69.11  69    P       P       00 32 04.0 +1.3
PLPT  Palo Pinto       69.15  62    P       P       00 32 02.7 -0.1
PLPT                                IAmb    IAmb    00 32 21.9
      comp=Z,10nm,1.4s
EKA   Eskdalemuir Ar   69.15 351    P       P       00 32 01.6 -0.8
      comp=Z,0.9nm,0.8s,baz=22,slow=6.1,SNR=1.4
EKA                                 pP      PcP     00 32 26.6 +1.0
      comp=Z,1.5nm,0.6s,baz=16,slow=5.2,SNR=3.5
      comp=Z,0.9nm,0.8s
N49A  Columbus Grove   69.20  48    P       P       00 32 02.8 -0.1
S44A  Carbondale       69.61  53    P       P       00 32 06.0 +0.4
SIUC  Southern Illin   69.61  53    P       P       00 32 05.6 +0.1
FCAR  Ozark Folk Cen   69.74  56    P       P       00 32 06.5 +0.1
FCAR                                IAmb    IAmb    00 32 07.4
      comp=Z,6.9nm,0.7s
CGM3  Cape Girardeau   69.75  54    P       P       00 32 08.3 +1.9
PBMO  Poplar Bluff     69.82  54    P       P       00 32 07.5 +0.7
E62A  Clayton Lake     69.86  35    P       P       00 32 06.7 -0.3
P48A  Milroy           69.88  49    P       P       00 32 06.9 -0.3
N51A  Ashland          69.96  46    P       P       00 32 07.5 -0.2
BRDY  Brady            70.01  64    P       P       00 32 08.7 +0.6
MIAR  Mount Ida        70.12  58    P       P       00 32 09.5 +0.8
MIAR                                IAmb    IAmb    00 32 10.2
      comp=Z,4.2nm,0.7s
MIAR  Mount Ida        70.12  58    P       P       00 32 09.5 +0.8
MIAR                                pmax    pmax
      comp=Z,4.0nm,0.7s
WHAR  Wooly Hollow     70.14  57    P       P       00 32 09.5 +0.6
WHAR                                IAmb    IAmb    00 32 09.8
      comp=Z,10nm,0.9s
T47A  Sharon Grove     71.17  52    P       P       00 32 16.1 +1.1
WVT   Waverly          71.55  53    P       P       00 32 18.0 +0.7
WVT                                 IAmb    IAmb    00 32 18.7
      comp=Z,6.6nm,0.7s
WVT   Waverly          71.55  53    P       P       00 32 18.0 +0.7
WVT                                 pmax    pmax
      comp=Z,7.0nm,0.7s
P53A  Whipple          71.58  47    P       P       00 32 17.9 +0.4
P53A                                IAmb    IAmb    00 32 31.2
      comp=Z,16nm,1.3s
OXF   Oxford           72.14  55            P       00 32 21.7 +0.8
OXF   Oxford           72.14  55    P       P       00 32 21.7 +0.8
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OXF                                 pmax    pmax
      comp=Z,19nm,0.8s
T50A  Nancy            72.16  50    P       P       00 32 21.2 +0.3
T50A                                IAmb    IAmb    00 32 22.0
      comp=Z,5.2nm,0.8s
U49A  Red Boiling Sp   72.16  51            P       00 32 21.4 +0.4
U49A                                IAmb    IAmb    00 32 22.0
      comp=Z,4.9nm,0.8s
GERES GERESS Array B   72.89 338    P       P       00 32 24.7 -0.5
      comp=Z,0.4nm,0.4s,baz=34,slow=5.2,SNR=5.5
GERES                               pP      pP      00 32 51.2 -0.5
      comp=Z,0.7nm,0.7s,baz=14,slow=5.9,SNR=3.0
      comp=Z,0.4nm,0.4s
TKL   Tuckaleechee C   73.77  50    LR      LR      01 06 23.8
      comp=Z,58nm,18.0s,baz=326,slow=37
Z47A  Carrollton       73.86  55            P       00 32 31.8 +0.8
BRTR  Keskin Array B   75.53 321    P       P       00 32 41.0 +0.2
      comp=Z,0.8nm,0.6s,baz=27,slow=0.7,SNR=6.4
BRTR                                pP      pP      00 33 07.2 -0.3
      comp=Z,1.0nm,0.7s,baz=46,slow=4.2,SNR=3.1
      comp=Z,0.8nm,0.6s
DAVOX Davos/Dischmat   75.64 340    LR      LR      01 14 20.9
      comp=Z,33nm,18.5s,baz=50,slow=42
WB0   Warramunga Arr   78.12 206            P       00 32 55.6 +0.4
WB0                                 IAmb    IAmb    00 32 56.4
      comp=Z,3.8nm,0.7s
WR8   Warramunga Arr   78.27 206    P       P       00 32 56.2 +0.2
WRAB  Tennant Creek    78.29 206⇑eP     P       00 32 56.3 +0.2
WRAB                                pmax    pmax
      comp=Z,3.0nm,0.9s
WRA   Warramunga Arr   78.30 206    P       P       00 32 56.6 +0.5
      comp=Z,3.1nm,0.7s,baz=21,slow=5.9,SNR=13
WRA                                 pP      pP      00 33 21.6 -1.4
      comp=Z,1.4nm,0.6s,baz=19,slow=5.7,SNR=3.0
      comp=Z,3.1nm,0.7s
WRA   Warramunga Arr   78.30 206    P       P       00 32 56.7 +0.5
WRA   Warramunga Arr   78.30 206  i P       P       00 32 55.5 -0.7
WRA                                 pmax    pmax
      comp=Z,3.0nm,0.7s
MURB  Monte Urbino     78.45 337    P       P       00 32 58.1 +1.1
FDMO  Fiordimonte      78.55 337    P       P       00 32 56.0 -1.4
NRCA  Norcia           78.73 337    P       P       00 32 59.1 +0.5
FITZ  Fitzroy Crossi   79.06 215    P       P       00 33 00.8 +0.5
EIDS  Eidsvold         80.69 190    P       P       00 33 10.5 +1.5
EIDS                                IAmb    IAmb    00 33 54.6
      comp=Z,17nm,1.4s
CEST  Esterri de Car   81.17 345    P       P       00 33 12.7 +1.0
CEST                                IAmb    IAmb    00 33 21.2
      comp=Z,14nm,1.5s
CORI  Orista           81.66 345    P       P       00 33 14.1 -0.1
CORI                                IAmb    IAmb    00 33 30.4
      comp=Z,16nm,1.3s
AS31  Alice Springs    81.97 205    P       P       00 33 17.0 +1.1
ASAR  Alice Springs    81.98 205    P       P       00 33 16.9 +1.0
      comp=Z,4.7nm,0.7s,baz=15,slow=5.9,SNR=62
ASAR                                pP      pP      00 33 41.6 -1.4
      comp=Z,2.0nm,0.7s,baz=14,slow=5.5,SNR=4.2
      comp=Z,4.7nm,0.7s
ASAR  Alice Springs    81.98 205    P       P       00 33 16.6 +0.7
MTE   Manteigas        84.35 352    P       P       00 33 28.1  0.0
MTE                                 IAmb    IAmb    00 33 30.6
      comp=Z,8.1nm,1.1s
RAYN  Ar Rayn          84.58 304    P       P       00 33 28.9 -0.6
RAYN  Ar Rayn          84.58 304    P       P       00 33 29.0 -0.6
RAYN                                pmax    pmax
      comp=Z,2.0nm,0.6s
ESBB  Sonseca Array    84.72 349    P       P       00 33 30.6 +0.6
ESBB                                IAmb    IAmb    00 33 31.2
      comp=Z,3.2nm,0.8s
ESDC  Sonseca Array    84.72 349    P       P       00 33 30.1 +0.1
      comp=Z,3.0nm,0.7s,baz=0.2,slow=4.5,SNR=29
ESDC                                pP      pP      00 33 55.7 -1.3
      comp=Z,2.3nm,0.9s,baz=355,slow=5.7,SNR=6.4
      comp=Z,3.0nm,0.7s
ESDC  Sonseca Array    84.72 349    P       P       00 33 30.4 +0.4
ESDC                                IAmb    IAmb    00 33 31.3
      comp=Z,3.8nm,0.9s
PAB   San Pablo        84.89 349    P       P       00 33 31.1 +0.2
PAB                                 IAmb    IAmb    00 33 57.0
      comp=Z,9.4nm,1.4s
PAB   San Pablo        84.89 349    P       P       00 33 31.1 +0.2
PAB                                 pmax    pmax
      comp=Z,9.0nm,1.4s
KEST  Kesra            86.36 338    P       P       00 33 37.8 -0.5
      comp=Z,8.1nm,1.1s,baz=41,slow=2.1,SNR=5.8
      comp=Z,8.1nm,1.1s
KEST  Kesra            86.36 338    P       P       00 33 37.8 -0.5
FORT  Forrest          90.27 208    P       P       00 33 56.9 +0.5
FORT                                IAmb    IAmb    00 33 59.6
      comp=Z,5.1nm,0.8s
BOSA  Boshof          138.97 292    PKP     PKPdf   00 40 22.1 +0.3
      comp=Z,1.7nm,1.0s,baz=174,slow=20,SNR=1.4
CPUP  Villa Florida   139.70  60    PKP     PKPdf   00 40 23.1  0.0
      comp=Z,0.6nm,0.7s,baz=198,slow=3.9,SNR=4.1
PLCA  Paso Flores     143.20  89    PKhKP   PKPpre  00 40 25.5
      comp=Z,2.4nm,0.9s,baz=286,slow=4.9,SNR=5.6
QSPA  South Pole Qui  144.91 180    PKPbc   PKPbc   00 40 30.3 -0.3
      comp=Z,16nm,0.7s,baz=333,slow=1.1,SNR=93
QSPA                                pPKPbc  pPKPdf  00 40 58.5 -1.2
      comp=Z,6.6nm,0.9s,baz=258,slow=1.1,SNR=3.0
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IDC ***31*** *00:37:22.4±0.7, 55°.64S×26°.81W, h0km, mb4.2/7, mbtmp4.1/8, ML3.7/1, MS3.4/6, Error ellipse: s-maj=27.8km s-min=19.1km az=73.0*

NEIC ***31*** *00:37:24.4±1.5, 55°.67S±0°.06×26°.8W±0°.2, h10km±1km, mb4.6/17, Error ellipse: s-maj=18.6km s-min=2.8km az=59.0*

ISC 31 00:37:25.9±0.5**, 55°.67S**±0°.09×**26°.97W**±0°.08**, h25km, n87, σ1ˢ.10**/79**, mb4.5**/10**, MS3.5**/5**, 1C-3D, South Sandwich Islands region**

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Code  Station Name       Δ°   AZ°     Phase ID          Time     Res
                                    Op      ISC       h  m  s    ISC
HOPE  Hope Point        5.66 280    Pn      Pn      00 38 48.9 +0.6
HOPE                                Sn      Sn      00 39 49.1 -3.3
VNA1  Neumayer--Stat   17.11 159 ⇓P     P       00 41 25.8 +1.4
      comp=Z,7.1nm,0.8s
VNA3  Neumayer Olymp   17.31 161 ⇑P     P       00 41 27.0 +0.3
      comp=Z,5.7nm,0.6s
VNA2  Neumayer--Watz   17.50 159 ⇓P     Pn      00 41 27.4 -0.5
      comp=Z,3.3nm,0.6s,baz=318,slow=16
EFI   East Falkland    18.76 269    P       Pn      00 41 44.5 +1.2
EFI                                 IAmb    IAmb    00 42 06.3
      comp=Z,59nm,1.5s
SNAA  Sanae            19.04 157 ⇓P     P       00 41 42.3 -3.5
      comp=Z,60nm,0.6s
SNAA  Sanae            19.04 157    P       P       00 41 43.9 -1.9
      comp=Z,0.2nm,0.3s,baz=237,slow=4.5,SNR=3.5
SNAA                                LR      LR      00 47 32.8
      comp=Z,48nm,21.0s,baz=340,slow=32
      comp=Z,0.7nm,0.4s
SNAA  Sanae            19.04 157    P       P       00 41 45.3 -0.5
BELA  Belgrano 2       22.47 184    P       P       00 42 21.6 -1.1
BELA                                IAmb    IAmb    00 42 26.8
      comp=Z,13nm,1.0s
QSPA  South Pole Qui   34.59 180    P       P       00 44 13.1 +0.7
      comp=Z,3.9nm,0.6s,baz=201,slow=2.0,SNR=18
QSPA                                LR      LR      00 57 47.9
      comp=Z,36nm,21.0s,baz=14,slow=35
      comp=Z,3.9nm,0.6s
QSPA  South Pole Qui   34.59 180    P       P       00 44 13.5 +1.1
QSPA                                IAmb    IAmb    00 44 19.4
      comp=Z,6.4nm,0.9s
CPUP  Villa Florida    36.66 311    P       P       00 44 30.8 +0.5
      comp=Z,1.7nm,0.8s,baz=138,slow=10,SNR=5.3
      comp=Z,1.7nm,0.8s
CPUP  Villa Florida    36.66 311    P       P       00 44 30.4 +0.1
MAW   Mawson           40.38 144    LR      LR      01 00 41.0
      comp=Z,38nm,20.0s,baz=104,slow=35
SUR   Sutherland       40.42  75    LR      LR      00 59 48.6
      comp=Z,57nm,18.2s,baz=202,slow=33
AC02  Maricunga        41.82 296    P       P       00 45 14.1 +0.1
AC02                                IAmb    IAmb    00 45 26.1
      comp=Z,8.9nm,1.0s
GO02  Mina Guanaco     43.43 297    P       P       00 45 28.0 +1.1
GO02                                IAmb    IAmb    00 45 28.7
      comp=Z,8.9nm,0.8s
BOSA  Boshof           45.75  76    P       P       00 45 45.1 -0.1
      comp=Z,2.6nm,1.0s,baz=204,slow=12,SNR=1.4
BOSA                                LR      LR      01 01 08.5
      comp=Z,68nm,19.1s,baz=200,slow=31
      comp=Z,2.6nm,1.0s
BOSA  Boshof           45.75  76    P       P       00 45 43.6 -1.5
PB07  IPOC Station P   46.45 299    P       P       00 45 51.6 +0.9
VNDA  Vanda            46.96 183    P       P       00 45 55.4 +1.4
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	comp=Z,3.7nm,0.8s,baz=203,slow=4.6,SNR=13						
	comp=Z,3.7nm,0.8s						
VNDA	Vanda	46.96	183	P	P	00 45 55.5	+1.5
VNDA				IAmb	IAmb	00 46 02.7	
	comp=Z,5.8nm,0.8s						
PTLB	Pontes e Lacer	47.11	316	P	P	00 45 55.9	+0.2
PTLB				IAmb	IAmb	00 45 57.2	
	comp=Z,5.8nm,0.9s						
H04S2	CROZET ISLANDS	47.59	114	T	T	01 37 42.3	
	baz=230						
H10S2	ASCENSION HYDR	47.59	17	T	T	01 37 25.9	
	baz=189,slow=74,SNR=12						
H04S3	CROZET ISLANDS	47.60	114	T	T	01 37 44.3	
	baz=230						
H10S3	ASCENSION HYDR	47.60	17	T	T	01 37 26.2	
	baz=31,slow=74,SNR=12						
H04S1	CROZET ISLANDS	47.61	114	T	T	01 37 44.9	
	baz=230						
GO01	Chusmiza	47.85	301	P	P	00 46 03.3	+1.3
H10N1	ASCENSION HYDR	48.71	17	T	T	01 38 53.4	
	baz=188,slow=75,SNR=4.0						
H10N3	ASCENSION HYDR	48.72	17	T	T	01 38 55.8	
	baz=188,slow=75,SNR=8.0						
H10N2	ASCENSION HYDR	48.73	17	T	T	01 38 56.8	
	baz=188,slow=75,SNR=7.6						
PB16	IPOC Station P	49.14	302	P	P	00 46 12.3	+0.1
LPAZ	La Paz	50.26	305	P	P	00 46 21.5	+0.8
	comp=Z,2.6nm,0.7s,baz=172,slow=8.5,SNR=11						
	comp=Z,2.6nm,0.7s						
LPAZ	La Paz	50.26	305	P	P	00 46 21.1	+0.4
LPAZ				IAmb	IAmb	00 46 32.6	
	comp=Z,4.9nm,0.8s						
LSZ	Lusaka	58.12	69	LR	LR	01 09 52.9	
	comp=Z,48nm,18.8s,baz=152,slow=34						
BOAV	Boa Vista	64.05	322	P	P	00 47 57.2	-0.2
BOAV				IAmb	IAmb	00 48 38.9	
	comp=Z,6.5nm,1.3s						
TORD	Torodi Ar. Bea	72.66	29	P	P	00 48 51.7	+0.5
	comp=Z,0.8nm,0.5s,baz=198,slow=6.3,SNR=12						
	comp=Z,0.8nm,0.5s						
TORD	Torodi Ar. Bea	72.66	29	P	P	00 48 51.8	+0.6
ASAR	Alice Springs	99.32	162	P	Pdif	00 51 04.8	-1.1
	comp=Z,0.4nm,0.8s,baz=227,slow=2.7,SNR=4.9						
	comp=Z,0.4nm,0.8s						
ASAR	Alice Springs	99.32	162	P	Pdif	00 51 05.9	0.0
FINES	FINESS Array B	123.98	28	PKP	PKiKP	00 56 20.0	-0.6
	comp=Z,4.7nm,1.1s,baz=224,slow=3.8,SNR=4.4						
FINES	FINESS Array B	123.98	28		PKiKP	00 56 20.0	-0.6
CMAR	Chiang Mai Arr	125.08	110	PKP	PKiKP	00 56 24.0	-0.1
	comp=Z,0.2nm,0.3s,baz=223,slow=2.4,SNR=2.5						
YKA	Yellowknife Ar	135.97	318	PKP	PKPdf	00 56 41.7	-1.3
	comp=Z,0.4nm,0.8s,baz=153,slow=1.3,SNR=7.2						
YKA	Yellowknife Ar	135.97	318		PKPdf	00 56 42.0	-1.0
J26L	Joseph Creek	148.50	312	PKPbc	PKiKP	00 57 10.1	-0.3
NRIK	Noril'sk	148.63	38	PKPbc	PKPbc	00 57 09.0	0.0
	comp=Z,1.4nm,0.6s,baz=198,slow=2.7,SNR=5.3						
ILAR	Eielson Array	149.95	312	PKPbc	PKiKP	00 57 12.8	-0.5
	comp=Z,3.2nm,0.8s,baz=134,slow=2.0,SNR=30						
ILAR	Eielson Array	149.95	312		PKiKP	00 57 12.7	-0.7
WRH	Wood River Hil	150.40	311	PKPbc	PKiKP	00 57 14.1	-0.2
G24K	Hadweenzic Riv	150.51	316	PKPbc	PKiKP	00 57 14.7	+0.3
RND	Reindeer	150.52	309	PKPbc	PKiKP	00 57 15.2	+0.6
H24K	Noodor Dome	150.55	314	PKPbc	PKiKP	00 57 14.3	-0.3
SONM	Songino Array	150.57	86	PKPbc	PKiKP	00 57 14.8	-0.5
	comp=Z,2.3nm,0.7s,baz=222,slow=2.4,SNR=18						
SONM	Songino Array	150.57	86		PKiKP	00 57 15.0	-0.4
MCK	McKinley	150.62	310	PKPbc	PKiKP	00 57 14.7	0.0
F24K	Squaw Lake	150.76	318	PKPbc	PKiKP	00 57 15.6	+0.6
TLY	Talaya	150.98	77	PKPbc	PKPbc	00 57 13.7	-1.6
E24K	Your Creek	151.04	319	PKPbc	PKiKP	00 57 16.4	+0.8
C24K	Franklin Bluff	151.19	322		PKPab	00 57 23.5	+0.2
L22K	Petersville	151.19	307	PKPbc	PKiKP	00 57 16.5	+0.5
D24K	Happy Valley	151.22	321	PKPbc	PKiKP	00 57 15.7	-0.1
SKT	Skwentna	151.42	306	PKPbc	PKiKP	00 57 16.1	-0.3
STLK	Strandline Lak	151.45	305	PKPbc	PKiKP	00 57 16.4	-0.2
KTH	Kantishna Hill	151.46	309	PKPbc	PKiKP	00 57 16.9	+0.4
TOLK	Toolik Lake Re	151.47	320	PKPbc	PKiKP	00 57 16.8	+0.4
G23K	Bananza Creek	151.52	316	PKPbc	PKiKP	00 57 17.4	+0.9
BPAW	Bear Paw Mtn.	151.58	310	PKPbc	PKiKP	00 57 16.6	-0.1
COLD	Coldfoot	151.63	317	PKPbc	PKiKP	00 57 17.6	+0.9
C23K	Itkillik River	151.85	322	PKPbc	PKiKP	00 57 17.6	+0.5
D23K	Nanushuk River	151.88	320	PKPbc	PKiKP	00 57 17.9	+0.7
PPLA	Purkeypile	151.90	307	PKPbc	PKiKP	00 57 17.5	-0.1
H22K	Ishtalitna Cre	151.98	314	PKPbc	PKiKP	00 57 17.9	+0.3
M20K	Styx River	152.14	305	PKPbc	PKiKP	00 57 17.7	-0.3
I21K	Tanana	152.16	312	PKPbc	PKiKP	00 57 17.7	-0.2
E22K	Anaktuvuk Pass	152.28	319	PKPdf	PKPdf	00 57 12.7	+1.7
H21K	Melozitna Rive	152.55	313	PKPbc	PKiKP	00 57 19.4	+0.7
D22K	Ayikyak River	152.60	320	PKPbc	PKiKP	00 57 19.7	+1.0
O18K	Koktuh Hills	152.67	300	PKPbc	PKiKP	00 57 19.1	0.0
B22K	Teshekpuk Lake	152.79	323	PKPbc	PKiKP	00 57 19.2	+0.3
G21K	Allakaket	152.89	315	PKPbc	PKiKP	00 57 20.1	+0.8
B21K	Ikpikpuk River	153.25	322	PKPbc	PKiKP	00 57 23.6	+3.6
B21K				PKPab	PKPab	00 57 34.2	+2.2
L18K	Granite Mounta	153.85	305	PKPbc	PKiKP	00 57 22.7	+1.2
L18K				PKPab	PKPab	00 57 32.3	-2.4
G19K	Purcell Mounta	154.32	314	PKPbc	PKiKP	00 57 23.3	+1.0
D19K	Kuna River	154.61	320	PKPbc	PKiKP	00 57 23.7	+0.8
K17K	Iditarod	154.65	306	PKPbc	PKiKP	00 57 24.1	+1.0

RSPR 31 00:39:07.2, 17.°98N×66.°79W, h7^{km}, 4C-1D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.08	270	⇓*e*P	Pg	00 39 09.5	+0.3
GBPR	Guanica, Bosqu	0.08	270	*e*S	Sg	00 39 10.8	+0.3
GBPR	Guanica, Bosqu	0.08	270	⇑*e*P	Pg	00 39 09.5	+0.4
GBPR	Guanica, Bosqu	0.08	270	*e*S	Sg	00 39 11.1	+0.5
MLPR	Magueyes Islan	0.24	269	⇑*e*P	Pg	00 39 11.9	0.0
MLPR	Magueyes Islan	0.24	269	*e*S	Sg	00 39 16.5	+1.3
MLPR	Magueyes Islan	0.24	269	⇑*e*P	Pg	00 39 12.3	+0.3
MLPR	Magueyes Islan	0.24	269	*e*S	Sg	00 39 16.5	+1.3
CRPR	Cabo Rojo, PR	0.30	276	*e*S	Sg	00 39 18.5	+1.3
CRPR	Cabo Rojo, PR	0.30	276	⇑*e*P	Pg	00 39 13.4	+0.3
CRPR	Cabo Rojo, PR	0.30	276	*e*S	Sg	00 39 18.4	+1.2

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*IDC **31** 00:52:46.6±0.8, 35.°40N×74.°81E, h0^{km}, mb3.9/21, mbtmp3.9/26, ML3.3/5, Error ellipse: s-maj=18.4km s-min=14.6km az=28.0*

*NEIC **31** 00:52:51.1±2.4, 35.°67N±0.°07×74.°7E±0.°1, h10^{km}±1^{km}, mb4.2/16, Error ellipse: s-maj=18.6km s-min=11.4km az=88.0*

*BJI **31** 00:52:53.6, 35.°48N×75.°40E, h10^{km}, mB4.5/2, mb3.9/14, ML3.9/3*

*NNC **31** 00:52:55.6±5.0, 35.°66N×73.°83E, h15^{km}±65^{km}, mb4.3, mpv4.3, Error ellipse: s-maj=52.2km s-min=19.6km az=164.0*

ISC 31 00:52:49.8±0.4, 35.°60N±0.°04×74.°67E±0.°06, h10^{km}, n87, σ2.^{s}31/93, mb4.0/30, 1C-5D, Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRNI	Srinagar	1.55	176	*e*P	Pg	00 53 22.1	+3.5
SRNI				*e*S	Sb	00 53 40.6	+3.7
SRNI				IAML		00 53 45.1	
	comp=N,2µm,0.7s						
SRNI				IAML		00 53 54.1	
	comp=E,3µm,0.7s						
NIL	Nilore	2.27	211	Pn	Pn	00 53 30.6	+3.2
ALCI	Alchi Leh	2.49	123	*e*P	Pn	00 53 32.1	+1.4
ALCI				*e*S	Sn	00 53 59.3	-2.0
ALCI				IAML		00 54 12.1	
	comp=N,1µm,0.8s						
ALCI				IAML		00 54 14.2	
	comp=E,1µm,0.8s						
JMU	Jammu	2.81	177	*e*P	Pn	00 53 38.8	+3.0
JMU				*e*S	Sn	00 54 09.2	-1.3
JMU				IAML		00 54 20.4	
	comp=N,2µm,0.2s						
JMU				IAML		00 54 21.4	
	comp=E,2µm,0.3s						
TSSA	Tissa	3.02	156	*e*P	Pn	00 53 41.1	+3.3
TSSA				*e*S	Sn	00 54 13.3	-0.9
TSSA				IAML		00 54 24.1	
	comp=N,609nm,0.8s						
TSSA				IAML		00 54 24.4	
	comp=E,656nm,0.7s						
MANEM	Manem	3.09	310		Pb	00 53 43.2	-1.9
DHRM	DHARAMSHALA	3.60	157	*e*P	Pn	00 53 48.6	+2.7
DHRM				*e*S	Sn	00 54 26.8	-1.9
DHRM				IAML		00 54 47.2	
	comp=E,645nm,0.7s						
DHRM				IAML		00 54 47.6	
	comp=N,567nm,0.5s						
KSH	Kashi	4.05	14	Pn	Pn	00 53 51.3	-0.6
KSH				Sn	Sn	00 54 33.3	-6.1
DRK	Karamyk	4.50	330		Pn	00 53 58.0	-0.3
KBL	Kabul	4.73	259		Pn	00 54 03.2	+1.7
SMLA	Simla	4.92	154	*e*P	Pn	00 54 05.6	+1.7
SMLA				*e*S	Sn	00 54 57.1	-3.8
SMLA				IAML		00 55 28.7	
	comp=E,481nm,0.4s						
SMLA				IAML		00 55 30.4	
	comp=N,547nm,0.8s						
BTK	Batken	5.39	327	Pn	Pn	00 54 14.3	+3.9
SHAA	Shahritus	5.62	292		Pn	00 54 14.7	+1.2
DDI	Dehra Dun	5.98	151	*e*P	Pn	00 54 20.3	+1.8
DDI				*e*S	Sn	00 55 21.9	-5.2
DDI				IAML		00 55 24.9	
	comp=N,379nm,0.3s						
DDI				IAML		00 55 27.3	
	comp=E,387nm,1.2s						
JOSI	Joshimath	6.49	139	*e*P	Pn	00 54 26.8	+1.1
JOSI				*e*S	Sn	00 55 32.9	-6.9
JOSI				IAML		00 55 43.0	
	comp=E,313nm,0.6s						
JOSI				IAML		00 55 43.8	
	comp=N,318nm,1.2s						
KDJ	Kajisay	6.81	16	Pn	Pn	00 54 35.0	+5.1
BOOM	Boomskoye usch	6.95	8	Pn	Pn	00 54 36.4	+4.5
AAK	Ala-Archa	7.03	359	Pn	Pn	00 54 36.7	+3.8
	comp=N,0.7nm,0.3s,baz=166,slow=7.4,SNR=15						
AAK				Sn	Sn	00 55 57.0	+4.0
	comp=N,0.5nm,0.3s,baz=288,slow=10,SNR=3.6						
AAK				Lg	Lg	00 56 28.8	
	comp=N,0.2nm,0.3s,baz=241,slow=16,SNR=1.7						
	comp=N,1.7nm,0.3s						
AAK	Ala-Archa	7.03	359	⇑P	Pn	00 54 37.1	+4.2
PRZ	Przheval'sk	7.46	22		Pn	00 54 43.6	+4.7
IUG	Iuzhnay	7.47	332	Pg	Pn	00 54 41.4	+2.4
	comp=N,16nm,0.3s						
IUG				Lg	Lg	00 55 58.0	
	comp=N,36nm,0.7s						
PTH	Pithoragarh	7.60	141	*e*P	Pn	00 54 41.9	+0.6
KOTS	Kotyrbulak	7.86	13	P	Pn	00 54 50.8	+6.5
	comp=N,6.2nm,0.5s						
SATY	Saty	7.99	20	P	Pn	00 54 54.5	+8.3
	comp=N,22nm,0.7s						
KK31	Karatay Array	8.15	338		Pn	00 54 50.5	+2.2
KK31	Karatay Array	8.15	338	⇓P	Pn	00 54 50.1	+1.8
	comp=N,5.0nm,0.4s,baz=153,slow=12,SNR=143						
KK31				⇓S	Sn	00 56 19.1	-1.3
	comp=N,40nm,0.8s,baz=158,slow=24,SNR=12						
KKAR	Karatay Array	8.15	338		Pn	00 54 50.5	+2.2
SHLS	Shalkode	8.41	25	P	Pn	00 55 02.9	+11
	comp=N,6.2nm,0.7s						
MAKZ	Makanchi	12.47	24	Pn	Pn	00 55 51.0	+3.7
MKAR	Makanchi Array	12.56	25	Pn	Pn	00 55 50.1	+1.5
	comp=N,0.1nm,0.3s,baz=196,slow=14,SNR=4.7						
MKAR	Makanchi Array	12.56	25	Pn	Pn	00 55 53.4	+4.8
EVN	Everest	12.83	123	Pn	Pn	00 55 49.6	-3.3
WMQ	Urumqi	12.95	47	*e*P	Pn	00 55 57.3	+3.4
KURBB	Kurchatov Arra	15.28	9	Pn	Pn	00 56 24.4	-1.0
	comp=N,0.2nm,0.3s,baz=200,slow=10,SNR=7.6						
	comp=N,0.5nm,0.3s						
AB31	Akbulak array	17.40	326		Pn	00 56 51.6	-1.1
AB31	Akbulak array	17.40	326	⇓P	Pn	00 56 51.1	-1.5
	comp=N,1.7nm,0.6s,baz=132,slow=12,SNR=6.7						
ABKAR	Akbulak array	17.40	326	Pn	Pn	00 56 52.2	-0.4
BVA0	Borovoye Array	17.68	351	⇓P	P	00 56 58.1	+1.0
	comp=N,3.1nm,0.8s,baz=155,slow=9.0,SNR=13						
BVAR	Borovoye Array	17.68	351	P	P	00 56 57.6	+0.6
	comp=N,0.1nm,0.3s,baz=158,slow=9.7,SNR=14						
	comp=N,3.3nm,0.7s						
BORK	Borovoye	17.71	351	P	P	00 56 58.7	+1.4
AKTO	Aktyubinsk	19.12	326	P	P	00 57 13.9	+1.1
	comp=N,16nm,0.5s,baz=117,slow=8.8,SNR=51						
AKTO	Aktyubinsk	19.12	326	⇓P	P	00 57 13.6	+0.7
	comp=N,8.6nm,0.6s						
ZAA0	Zalesovo Array	19.67	18		P	00 57 18.9	+0.1
ZAA0				IAmb	IAmb	00 57 24.5	
	comp=Z,6.2nm,0.7s						
ZALV	Zalesovo Beam	19.67	18	P	P	00 57 18.4	-0.5
	comp=Z,0.5nm,0.3s,baz=214,slow=9.9,SNR=27						
	comp=Z,7.8nm,0.7s						
ZALV	Zalesovo Beam	19.67	18		P	00 57 18.9	+0.1
GTA	Gaotai	20.29	72	*e*P	Pn	00 57 28.3	+0.5
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
LZH	Lanzhou	23.62	80	*e*P	P	00 58 04.8	+3.6
LZH				pmax	pmax		
	comp=Z,19nm,1.5s						
KBZ	Khabaz	25.65	298	P	P	00 58 20.2	+0.6
	comp=Z,1.4nm,0.8s,baz=120,slow=8.7,SNR=5.2						
	comp=Z,1.4nm,0.8s						
SONM	Songino Array	26.46	53	P	P	00 58 26.1	-0.9
	comp=Z,0.6nm,0.7s,baz=254,slow=10,SNR=5.5						
	comp=Z,0.6nm,0.7s						
CHTO	Chiang Mai	27.19	122	P	P	00 58 34.2	+0.4
CHTO				IAmb	IAmb	00 58 36.2	
	comp=Z,2.4nm,0.7s						
CM31	Chiang Mai Arr	27.44	122	P	P	00 58 35.9	0.0
CM31				IAmb	IAmb	00 58 42.7	
	comp=Z,7.4nm,1.1s						
CMAR	Chiang Mai Arr	27.44	122	P	P	00 58 35.7	-0.2
	comp=Z,2.0nm,0.7s,baz=315,slow=8.9,SNR=16						
CMAR	Chiang Mai Arr	27.44	122	P	P	00 58 36.0	0.0
RAYN	Ar Rayn	27.97	252		P	00 58 41.0	+0.2
RAYN				IAmb	IAmb	00 58 42.2	
	comp=Z,2.6nm,0.9s						
HHC	Hu-ho-hao-te	29.31	68	*e*P	P	00 58 54.5	+1.9
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BRTR	Keskin Array B	32.54	290	P	P	00 59 21.6	+0.4
	comp=Z,0.6nm,0.6s,baz=108,slow=7.9,SNR=3.7						
	comp=Z,0.6nm,0.6s						
NRIK	Noril'sk	34.54	8	P	P	00 59 36.6	-1.4
	comp=Z,1.2nm,0.4s,baz=218,slow=5.6,SNR=5.7						
	comp=Z,1.2nm,0.4s						
AKASG	Malin Array Be	35.82	309	P	P	00 59 49.4	+0.2
	comp=Z,0.9nm,0.5s,baz=108,slow=8.6,SNR=4.7						
	comp=Z,0.9nm,0.5s						
ELL	Elmali	35.90	285	P	P	00 59 50.9	+0.5
BURAR	Bucovina Array	38.26	304	P	P	01 00 10.9	+0.6
BUR08	Bucovina Ar. S	38.27	304	P	P	01 00 11.0	+0.7
FIA1	FINESS Array S	39.89	326	P	P	01 00 23.4	-0.1
FIA1				IAmb	IAmb	01 00 31.9	
	comp=Z,19nm,1.0s						
FINES	FINESS Array B	39.89	326	P	P	01 00 23.9	+0.3
	comp=Z,3.9nm,0.7s,baz=99,slow=10,SNR=12						
	comp=Z,3.9nm,0.7s						
ARCES	ARCESS Array B	43.12	337	P	P	01 00 50.4	+0.4
	comp=Z,1.6nm,0.5s,baz=101,slow=6.3,SNR=11						
	comp=Z,1.6nm,0.5s						
ARCES	ARCESS Array B	43.12	337	P	P	01 00 50.6	+0.7
HFS	Hagfors	45.60	322	P	P	01 01 10.4	+0.5
	comp=Z,3.5nm,0.7s,baz=98,slow=11,SNR=6.2						
	comp=Z,3.5nm,0.7s						
GERES	GERESS Array B	45.87	306	P	P	01 01 12.3	+0.1
	comp=Z,0.1nm,0.5s,baz=72,slow=7.5,SNR=2.0						
	comp=Z,0.1nm,0.5s						
NC303	NORSAR Array S	46.82	324	P	P	01 01 18.1	-1.4
NB2	NORSAR Subarra	46.88	323	P	P	01 01 19.8	-0.2
	comp=Z,1.2nm,0.6s,baz=92,slow=7.9						
NOA	NORSAR Array B	46.88	323	P	P	01 01 20.1	0.0
	comp=Z,1.8nm,0.7s,baz=93,slow=7.6,SNR=7.3						
	comp=Z,1.8nm,0.7s						
NC204	NORSAR Array S	47.11	324	P	P	01 01 21.6	-0.2
SPITS	Spitsbergen Ar	49.05	347	P	P	01 01 37.5	+0.9
	comp=Z,9.1nm,0.9s,baz=117,slow=10,SNR=5.8						
	comp=Z,9.1nm,0.9s						
MJAR	Matsushiro Arr	50.51	69	P	P	01 01 47.1	-1.1
	comp=Z,1.7nm,0.8s,baz=292,slow=8.5,SNR=2.4						
	comp=Z,1.7nm,0.8s						
EKA	Eskdalemuir Ar	54.98	317	P	P	01 02 20.7	-0.3
	comp=Z,1.6nm,0.8s,baz=96,slow=6.8,SNR=3.9						
	comp=Z,1.6nm,0.8s						
CART	Cartagena	59.19	296	P	P	01 02 49.6	-1.4
ESDC	Sonseca Array	60.50	300	P	P	01 02 59.5	-0.6
	comp=Z,0.8nm,0.7s,baz=53,slow=7.4,SNR=17						
	comp=Z,0.8nm,0.7s						
TORD	Torodi Ar. Bea	68.69	271	P	P	01 03 51.7	-2.2
	comp=Z,0.7nm,0.7s,baz=45,slow=6.3,SNR=5.9						
	comp=Z,0.7nm,0.7s						
TOLK	Toolik Lake Re	71.01	16	P	P	01 04 07.0	-0.4
TOLK				IAmb	IAmb	01 04 28.8	
	comp=Z,2.3nm,0.9s						
I17K	Unalakleet	71.66	23	P	P	01 04 12.8	+1.5
I17K				IAmb	IAmb	01 04 24.9	
	comp=Z,4.7nm,1.1s						
FITZ	Fitzroy Crossi	71.99	129	P	P	01 04 10.6	-3.3
	comp=Z,1.6nm,0.9s,baz=354,slow=10,SNR=1.7						
	comp=Z,1.6nm,0.9s						
E25K	Arctic Village	72.30	15	P	P	01 04 17.1	+1.9
E25K				IAmb	IAmb	01 04 18.2	
	comp=Z,1.8nm,1.1s						
INK	Inuvik	74.28	11	P	P	01 04 25.6	-1.1
	comp=Z,1.0nm,0.8s,baz=359,slow=4.9,SNR=4.4						
	comp=Z,1.0nm,0.8s						
ILAR	Eielson Array	74.80	17	P	P	01 04 29.1	-0.8
	comp=Z,0.7nm,0.8s,baz=332,slow=5.9,SNR=7.5						
	comp=Z,0.7nm,0.8s						
WRA	Warramunga Arr	79.01	124	P	P	01 04 52.4	-1.8
	comp=Z,0.8nm,0.7s,baz=326,slow=5.5,SNR=5.6						
	comp=Z,0.8nm,0.7s						
ASAR	Alice Springs	81.32	127	P	P	01 05 03.5	-3.2
	comp=Z,0.4nm,0.8s,baz=312,slow=5.8,SNR=4.3						
	comp=Z,0.4nm,0.8s						
YKA	Yellowknife Ar	81.96	4	P	P	01 05 09.0	-0.4
	comp=Z,0.3nm,0.7s,baz=335,slow=9.2,SNR=6.5						
	comp=Z,0.3nm,0.7s						
PDAR	Pinedale Array	101.91	3	P	Pdif	01 06 43.1	-0.9
	comp=Z,0.4nm,0.9s,baz=342,slow=4.7,SNR=1.6						

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*IDC **31** 00:53:30.8±1.0, 35.°30N×74.°28E, h0^{km}, mb3.8/13, mbtmp3.8/15, ML2.9/2, Error ellipse: s-maj=27.7km s-min=19.4km az=48.0*

ISC 31 00:53:32.4±0.9, 35.°3N±0.°1×74.°3E±0.°1, h10^{km}, n15, σ0.^{s}54/15, mb3.6/11, Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	15.58	10	Pn	Pn	00 57 12.0	+0.1
	0.1nm,0.3s,baz=200,slow=11,SNR=4.2						
	0.7nm,0.3s						
BVAR	Borovoye Array	17.89	352	P	Pn	00 57 41.3	+0.1
	baz=161,slow=10,SNR=1.6						
	1.2nm,0.6s						
ZALV	Zalesovo Beam	20.01	18	P	P	00 58 04.0	-1.1
	3.0nm,0.7s,baz=218,slow=9.4,SNR=3.8						
	3.0nm,0.7s						
SONM	Songino Array	26.85	52	P	P	00 59 14.0	+0.8
	0.9nm,0.6s,baz=254,slow=9.6,SNR=3.8						
	0.9nm,0.6s						
CMAR	Chiang Mai Arr	27.55	121	P	P	00 59 18.9	-0.7
	1.3nm,0.6s,baz=318,slow=8.9,SNR=2.3						
	1.3nm,0.6s						
FINES	FINESS Array B	39.94	326	P	P	01 01 06.7	+0.2
	3.9nm,0.9s,baz=112,slow=8.1,SNR=2.0						
	3.9nm,0.9s						
ARCES	ARCESS Array B	43.24	337	P	P	01 01 34.0	+0.5
	2.6nm,0.8s,baz=93,slow=9.0,SNR=1.7						
	2.6nm,0.8s						
HFS	Hagfors	45.63	322	P	P	01 01 52.7	+0.1
	2.6nm,0.8s,baz=79,slow=7.8,SNR=1.5						
	2.6nm,0.8s						
SPITS	Spitsbergen Ar	49.23	347	P	P	01 02 20.8	+0.3
	8.4nm,1.0s,baz=116,slow=13,SNR=1.9						
	8.4nm,1.0s						
ESDC	Sonseca Array	60.37	300	P	P	01 03 41.9	+0.1
	0.2nm,0.7s,baz=68,slow=7.5,SNR=1.5						
	0.2nm,0.7s						
TORD	Torodi Ar. Bea	68.40	271	P	P	01 04 34.2	-0.5
	0.4nm,0.6s,baz=42,slow=5.6,SNR=1.9						
	0.4nm,0.6s						
ILAR	Eielson Array	75.13	17	P	P	01 05 14.0	-0.3
	0.4nm,0.8s,baz=328,slow=7.7,SNR=2.0						
	0.4nm,0.8s						
WRA	Warramunga Arr	79.11	124	P	P	01 05 38.0	+0.7
	0.3nm,0.6s,baz=314,slow=5.9,SNR=1.7						
	0.3nm,0.6s						
ASAR	Alice Springs	81.40	127	P	P	01 05 49.9	+0.2
	0.3nm,0.7s,baz=307,slow=6.0,SNR=1.7						
	0.3nm,0.7s						
YKA	Yellowknife Ar	82.24	4	P	P	01 05 53.3	-0.2
	0.2nm,0.6s,baz=348,slow=5.2,SNR=1.9						
	0.2nm,0.6s						

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*JSN **31** 01:00:14.8±0.5, 18.°05N×76.°63W, h15^{km}±2^{km}, MD2.2*

*SSNC **31** 01:00:15.5±2.2, 18.°26N×76.°68W, h5^{km}±13^{km}, MD3.0, ML1.9*

ISC 31 01:00:12.2±1.2, 18.°32N±0.°06×76.°65W±0.°07, h11^{km}±12^{km}, n9, σ1.^{s}07/16, 2C, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STH	Stony Hill	0.28	212	⇑*i*P	Pg	01 00 18.9	+1.0
HOJ	Hope	0.32	196	⇑*i*P	Pg	01 00 18.3	-0.4
MTDJ	Mount Denham	0.84	264	*e*P	Pn	01 00 30.1	+0.1
MTDJ				*e*S	Sn	01 00 42.3	-0.2
MTDJ				IAML		01 00 42.9	
	52nm,0.4s						
MTDJ				IAML		01 00 42.9	
	comp=Z,30nm,0.2s						
LMGC	Las Mercedes	1.77	349	*e*P	Pb	01 00 44.3	-0.3
LMGC				*e*S	Sb	01 01 07.4	+0.5
LMGC				IAML		01 01 09.7	
	comp=E,12nm,0.1s						
LMGC				IAML		01 01 09.8	
	comp=N,14nm,0.0s						
MARVS	Santiago de Cu	1.82	23	*e*P	Pg	01 00 47.4	+0.3
MARVS				*e*S	Sg	01 01 10.6	-0.1
MARVS				IAML		01 01 11.8	
	comp=E,3.2nm,0.2s						
RCC	Rio Carpintero	1.90	28	*e*P	Pb	01 00 47.0	+0.1
RCC				*e*S	Sb	01 01 11.3	+0.7
GTBY	Guantanamo Bay	2.17	42	*e*P	Pb	01 00 51.9	+0.5
GTBY				*e*S	Sb	01 01 18.9	+0.6
GTBY				IAML		01 01 23.2	
	comp=E,16nm,1.3s						
GTBY				IAML		01 01 23.5	
	comp=E,37nm,2.1s						
PINC	Pinares de May	2.31	21	*e*P	Pb	01 00 52.5	-1.3
PINC				*e*S	Sb	01 01 20.6	-1.8
PINC				IAML		01 01 25.2	
	comp=E,4.2nm,0.0s						
PINC				IAML		01 01 25.4	
	comp=N,3.1nm,0.5s						
QMBU	Quimbuelo	2.56	43	*e*P	Pb	01 00 56.0	-2.0
QMBU				*e*S	Sn	01 01 26.2	+1.5
QMBU				IAML		01 01 27.6	
	comp=E,4.1nm,0.3s						
QMBU				IAML		01 01 30.3	
	comp=N,4.8nm,0.3s						

IDC 31 01:02:13.1±12.0, 6.°40N×95.°02E, h235^{km}±41^{km}, mb3.0/2, mbtmp3.6/4, MS2.8/1, Error ellipse: s-maj=261.4km s-min=33.2km az=78.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	5.28	132	P	Pn	01 03 32.9	+0.9
	2.6nm,0.3s,baz=315,slow=15,SNR=6.1						
PSI				S	S	01 04 32.0	-2.8
	3.2nm,0.5s,baz=328,slow=22,SNR=2.2						
CMAR	Chiang Mai Arr	12.58	17	P	Pn	01 05 04.4	+0.1
	1.7nm,0.7s,baz=209,slow=11,SNR=14						
PALK	Pallekele	14.25	274	LR	LR	01 10 12.9	
	comp=Z,38nm,20.2s,baz=356,slow=34						
H08S3	Diego Garcia H	26.45	239	T	T	01 34 14.5	
	baz=56						
H08S2	Diego Garcia H	26.45	239	T	T	01 34 12.6	
	baz=56						
H08S1	Diego Carcia H	26.46	239	T	T	01 34 39.3	
	baz=56						
WRA	Warramunga Arr	46.70	125	P	P	01 10 18.6	-0.3
	0.3nm,0.3s,baz=305,slow=8.5,SNR=13						
	0.3nm,0.3s						
ASAR	Alice Springs	48.30	130	P	P	01 10 31.3	+0.2
	0.2nm,0.3s,baz=303,slow=7.8,SNR=5.3						
	0.2nm,0.3s						
H04N2	CROZET ISLANDS	64.93	212	T	T	02 22 03.2	
	baz=48						
H04N1	CROZET ISLANDS	64.94	212	T	T	02 21 36.5	
	baz=48						
H04N3	CROZET ISLANDS	64.94	212	T	T	02 21 50.3	
	baz=48						

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*IDC **31** 01:02:47.1±0.7, 35.°40N×74.°59E, h0^{km}, mb3.9/18, mbtmp3.9/24, ML3.0/5, MS3.4/7, Error ellipse:*

s-maj=17.0km s-min=14.0km az=51.0

*NEIC **31** 01:02:55.7±1.9, 35°.55N±0°.06×74°.66E±0°.08, h64km±3km, mb4.3/29, Error ellipse: s-maj=9.9km s-min=8.9km az=135.0*

*NNC **31** 01:02:57.4±5.3, 35°.73N×74°.45E, h62km±50km, mb3.8, mpv4.3, Error ellipse: s-maj=59.1km s-min=30.3km az=38.0*

ISC 31 01:02:52.9±0.4**, 35°.52N**±0°.05×**74°.59E**±0°.06**, h36km, n90, σ1s.78**/93**, mb4.1**/24**, MS3.4**/4**, 1C-3D, Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRNI	Srinagar	1.47	173	*e*P	Pn	01 03 20.8	+4.5
SRNI				*e*S	Sn	01 03 38.9	+5.1
SRNI				IAML		01 03 40.4	
	comp=N,4µm,0.4s						
SRNI				IAML		01 03 46.2	
	comp=E,4µm,0.3s						
NIL	Nilore	2.16	211		Pn	01 03 30.8	+4.4
TSSA	Tissa	2.97	154	*e*P	Pn	01 03 40.8	+3.1
TSSA				*e*S	Sn	01 04 13.9	+1.7
TSSA				IAML		01 04 26.2	
	comp=E,892nm,0.4s						
TSSA				IAML		01 04 27.7	
	comp=N,747nm,0.6s						
MANEM	Manem	3.10	312		Pn	01 03 42.5	+3.0
DHRM	DHARAMSHALA	3.55	156	*e*P	Pn	01 03 48.2	+2.5
DHRM				*e*S	Sn	01 04 27.0	+0.4
DHRM				IAML		01 04 47.9	
	comp=N,809nm,1.1s						
DHRM				IAML		01 04 51.4	
	comp=E,822nm,0.4s						
DRK	Karamyk	4.54	332	Pn	Pn	01 04 02.5	+3.2
KBL	Kabul	4.65	260		Pn	01 04 03.2	+2.4
SMLA	Simla	4.88	153	*e*P	Pn	01 04 05.9	+2.2
SMLA				*e*S	Sn	01 04 57.4	-1.5
SMLA				IAML		01 05 02.9	
	comp=E,581nm,0.5s						
SMLA				IAML		01 05 10.2	
	comp=N,593nm,1.1s						
BTK	Batken	5.43	328	Pn	Pn	01 04 15.3	+4.0
SHAA	Shahritus	5.59	293		Pn	01 04 14.0	+0.4
ARSB	Arslanbob	5.94	348		Pn	01 04 18.9	+0.6
DDI	Dehra Dun	5.94	150	*e*P	Pn	01 04 20.3	+1.9
DDI				*e*S	Sn	01 05 22.8	-2.5
DDI				IAML		01 05 34.3	
	comp=N,366nm,1.4s						
DDI				IAML		01 05 39.8	
	comp=E,385nm,0.8s						
TARG	Taragay, Kyrgy	6.70	21		Pn	01 04 30.6	+1.6
WUS	Wushi	6.74	31	Pn	Pn	01 04 31.2	+1.9
BOOM	Boomskoye usch	7.04	8		Pn	01 04 36.1	+2.5
AAK	Ala-Archa	7.11	359	Pn	Pn	01 04 37.3	+2.8
	comp=E,0.5nm,0.3s,baz=168,slow=5.1,SNR=18						
AAK				Sn	Sn	01 06 00.7	+6.5
	comp=E,0.3nm,0.3s,baz=10,slow=23,SNR=1.1						
AAK				Lg	Lg	01 06 29.8	
	baz=284,slow=8.4						
AAK				LR	LR	01 07 32.1	
	comp=E,256nm,18.1s,baz=176,slow=39						
	comp=E,3.1nm,0.5s						
AAK	Ala-Archa	7.11	359	P	Pn	01 04 37.9	+3.4
PRZ	Przheval'sk	7.56	22	Pn	Pn	01 04 42.7	+2.0
PTH	Pithoragarh	7.58	140	*e*P	Pn	01 04 42.5	+1.1
LGTI	Lohaghat	7.67	141	*e*P	Pn	01 04 43.8	+1.3
KK31	Karatay Array	8.21	339		Pn	01 04 49.6	+0.2
KK31	Karatay Array	8.21	339	⇓P	Pn	01 04 49.6	+0.2
	comp=E,8.4nm,0.6s,baz=149,slow=12,SNR=118						
KK31				⇓S	Sn	01 06 19.7	-1.2
	comp=E,7.9nm,0.6s,baz=155,slow=22,SNR=9.7						
KKAR	Karatay Array	8.21	339		Pn	01 04 49.6	+0.1
MK31	Makanchi Array	12.66	25	P	Pn	01 05 50.9	+0.5
	comp=E,0.8nm,0.8s,baz=214,slow=12,SNR=5.7						
MKAR	Makanchi Array	12.66	25	Pn	Pn	01 05 50.5	+0.1
	baz=218,slow=14,SNR=5.8						
	comp=E,0.3nm,0.7s						
MKAR	Makanchi Array	12.66	25		Pn	01 05 50.3	-0.1
EVN	Everest	12.84	123	Pn	Pn	01 05 48.3	-5.1
KURBB	Kurchatov Arra	15.37	10	Pn	Pn	01 06 24.9	-2.0
	baz=200,slow=12,SNR=6.2						
	comp=E,0.7nm,0.3s						
KURK	Kurchatov	15.47	10		Pn	01 06 24.9	-3.3
AB31	Akbulak array	17.44	326		Pn	01 06 53.4	+0.2
AB31	Akbulak array	17.44	326	P	Pn	01 06 53.3	+0.2
	comp=E,1.6nm,0.7s,baz=130,slow=11,SNR=12						
ABKAR	Akbulak array	17.44	326		Pn	01 06 53.1	0.0
BVA0	Borovoye Array	17.76	352	⇓P	P	01 06 57.9	+0.3
	comp=E,7.5nm,1.2s,baz=151,slow=10.0,SNR=15						
BVAR	Borovoye Array	17.76	352	P	Pn	01 06 56.9	-0.2
	comp=E,0.1nm,0.3s,baz=152,slow=9.6,SNR=14						
BVAR				LR	LR	01 14 18.8	
	comp=E,70nm,20.9s,baz=147,slow=39						
	comp=E,3.3nm,0.8s						
BORK	Borovoye	17.79	352	P	Pn	01 06 57.7	+0.3
HYB	Hyderabad	18.37	168	*e*P	Pn	01 07 13.2	+8.4
AKTO	Aktyubinsk	19.15	326	P	P	01 07 13.2	+0.2
	comp=E,9.0nm,0.5s,baz=126,slow=7.6,SNR=22						
AKTO				LR	LR	01 15 12.3	
	comp=E,137nm,21.4s,baz=66,slow=39						
AKTO	Aktyubinsk	19.15	326	⇑P	P	01 07 12.8	-0.1
	comp=E,7.5nm,0.7s						
ZAA0	Zalesovo Array	19.77	18		P	01 07 20.4	+0.8
ZALV	Zalesovo Beam	19.77	18	P	P	01 07 19.7	+0.1
	comp=E,0.3nm,0.3s,baz=214,slow=10,SNR=17						
	comp=E,4.6nm,0.8s						
SONM	Songino Array	26.56	53	P	P	01 08 26.7	-0.7
	comp=E,2.1nm,1.1s,baz=260,slow=9.0,SNR=12						
SONM				LR	LR	01 20 44.3	
	comp=E,38nm,18.2s,baz=342,slow=40						
	comp=E,2.1nm,1.1s						
SONM	Songino Array	26.56	53	P	P	01 08 26.4	-1.1
CHTO	Chiang Mai	27.21	121	P	P	01 08 33.9	+0.5
CHTO				IAmb	IAmb	01 08 36.1	
	comp=Z,5.6nm,1.0s						
CM31	Chiang Mai Arr	27.45	122	P	P	01 08 36.8	+1.3
CM31				IAmb	IAmb	01 08 39.4	
	comp=Z,8.4nm,0.9s						
CMAR	Chiang Mai Arr	27.45	122	P	P	01 08 32.7	-2.8
	comp=Z,0.4nm,0.4s,baz=312,slow=10,SNR=33						
	comp=Z,0.4nm,0.4s						
CMAR	Chiang Mai Arr	27.45	122	P	P	01 08 33.3	-2.2
RAYN	Ar Rayn	27.88	253	P	P	01 08 39.3	-0.1
KIRV	Kirov	28.43	332	LR	LR	01 20 42.8	
	comp=Z,189nm,18.2s,baz=94,slow=38						
PALK	Pallekele	28.66	167	LR	LR	01 20 34.0	
	comp=Z,62nm,18.8s,baz=0.5,slow=37						
BRTR	Keskin Array B	32.51	290	P	P	01 09 19.9	-0.4
	comp=Z,0.5nm,0.8s,baz=109,slow=6.9,SNR=3.7						
	comp=Z,0.5nm,0.8s						
BRTR	Keskin Array B	32.51	290	P	P	01 09 20.0	-0.3
NRIK	Noril'sk	34.63	8	P	P	01 09 39.8	+1.6
	comp=Z,2.6nm,0.9s,baz=174,slow=9.5,SNR=4.0						
	comp=Z,2.6nm,0.9s						
NRIK	Noril'sk	34.63	8	P	P	01 09 38.7	+0.4
NRIK				IAmb	IAmb	01 09 48.0	
	comp=Z,3.4nm,0.9s						
AKASG	Malin Array Be	35.82	309	P	P	01 09 49.2	+0.5
	comp=Z,0.2nm,0.3s,baz=79,slow=7.9,SNR=2.5						
	comp=Z,0.2nm,0.3s						
AKASG	Malin Array Be	35.82	309	P	P	01 09 49.3	+0.6
AKASG				IAmb	IAmb	01 10 14.9	
	comp=Z,3.6nm,1.1s						
ELL	Elmali	35.86	285	P	P	01 09 48.7	-0.7
BURAR	Bucovina Array	38.25	304	P	P	01 10 09.9	+0.4
BUR08	Bucovina Ar. S	38.27	304	P	P	01 10 10.2	+0.6
BUR08				IAmb	IAmb	01 10 18.2	
	comp=Z,6.5nm,1.2s						
FINES	FINESS Array B	39.92	326	P	P	01 10 23.2	0.0
	comp=Z,2.5nm,0.8s,baz=92,slow=10,SNR=6.3						
	comp=Z,2.5nm,0.8s						
FINES	FINESS Array B	39.92	326	P	P	01 10 23.7	+0.5
ARCES	ARCESS Array B	43.17	337	P	P	01 10 49.8	+0.2
	comp=Z,3.3nm,0.9s,baz=35,slow=4.4,SNR=6.6						
	comp=Z,3.3nm,0.9s						
ARCES	ARCESS Array B	43.17	337	P	P	01 10 49.9	+0.2
ARCES				IAmb	IAmb	01 11 32.9	
	comp=Z,18nm,1.4s						
TIP	Timpagrande	45.45	293	P	P	01 11 07.5	-0.9
HFS	Hagfors	45.63	322	P	P	01 11 10.3	+0.9
	comp=Z,4.7nm,1.0s,baz=61,slow=8.9,SNR=2.1						
	comp=Z,4.7nm,1.0s						
KHC	Kasperske Hory	45.91	307	P	P	01 11 11.7	-0.2
KHC				IAmb	IAmb	01 11 48.4	
	comp=Z,5.7nm,1.4s						
NOA	NORSAR Array B	46.91	323	P	P	01 11 19.9	+0.3
	comp=Z,0.9nm,0.7s,baz=93,slow=7.6,SNR=3.4						
NOA				LR	LR	01 32 49.4	
	comp=Z,64nm,19.2s,baz=0.0,slow=38						
	comp=Z,0.9nm,0.7s						
NBO00	NORSAR Array S	47.12	323	P	P	01 11 20.4	-0.7
NBO00				IAmb	IAmb	01 11 26.5	
	comp=Z,14nm,1.1s						
SENIN	Lac Senin/Sane	50.55	304	P	P	01 11 47.9	0.0
SENIN				IAmb	IAmb	01 12 21.1	
	comp=Z,6.7nm,1.4s						
MJAR	Matsushiro Arr	50.60	69	P	P	01 11 49.5	+1.3
	comp=Z,1.8nm,0.8s,baz=289,slow=10,SNR=3.1						
	comp=Z,1.8nm,0.8s						
YSS	Yuzhno-Sakhali	51.01	55	P	P	01 11 51.3	+0.3
ERM	Erimo	52.57	61	P	P	01 12 02.5	-0.2
CEST	Esterri de Car	55.75	301	P	P	01 12 26.3	+0.2
CEST				IAmb	IAmb	01 13 08.8	
	comp=Z,4.5nm,1.1s						
PEA0B	Petropavlovsk-	58.64	45	P	P	01 12 45.4	-0.8
ABPO	Ambohimpanom	60.12	210	P	P	01 12 56.6	-0.4
ESDC	Sonseca Array	60.48	300	P	P	01 12 59.1	0.0
	comp=Z,0.7nm,0.8s,baz=64,slow=6.4,SNR=7.8						
	comp=Z,0.7nm,0.8s						
ESDC	Sonseca Array	60.48	300	P	P	01 12 58.8	-0.4
ESDC				IAmb	IAmb	01 13 13.6	
	comp=Z,1.6nm,1.4s						
BORG	Borgarnes	60.90	331	P	P	01 13 00.3	-1.2
TORD	Torodi Ar. Bea	68.62	271	P	P	01 13 51.3	-1.3
	comp=Z,1.3nm,1.0s,baz=36,slow=5.8,SNR=6.7						
	comp=Z,1.3nm,1.0s						
INK	Inuvik	74.37	10	P	P	01 14 26.0	-0.4
	comp=Z,0.5nm,0.5s,baz=328,slow=4.8,SNR=5.0						
	comp=Z,0.5nm,0.5s						
INK	Inuvik	74.37	10	P	P	01 14 25.7	-0.7
INK				IAmb	IAmb	01 14 32.5	
	comp=Z,2.5nm,1.2s						
ILAR	Eielson Array	74.90	17	P	P	01 14 30.5	+1.0
	comp=Z,0.5nm,0.8s,baz=298,slow=4.0,SNR=5.1						
	comp=Z,0.5nm,0.8s						
ILAR	Eielson Array	74.90	17	P	P	01 14 29.7	+0.2
BOSA	Boshof	78.94	223	P	P	01 14 52.1	-0.7
	comp=Z,2.4nm,1.0s,baz=18,slow=13,SNR=1.6						
	comp=Z,2.4nm,1.0s						
BOSA	Boshof	78.94	223	P	P	01 14 52.4	-0.5
BOSA				IAmb	IAmb	01 15 20.0	
	comp=Z,7.0nm,1.1s						
WRA	Warramunga Arr	79.02	124	P	P	01 14 53.0	-0.4
	comp=Z,0.6nm,0.6s,baz=324,slow=4.9,SNR=5.7						
	comp=Z,0.6nm,0.6s						
WRA	Warramunga Arr	79.02	124	P	P	01 14 50.8	-2.5
ASAR	Alice Springs	81.32	127	P	P	01 15 07.1	+1.4
	comp=Z,1.0nm,1.0s,baz=328,slow=6.8,SNR=5.8						
	comp=Z,1.0nm,1.0s						
ASAR	Alice Springs	81.32	127	P	P	01 15 04.9	-0.8
YKA	Yellowknife Ar	82.05	4	P	P	01 15 09.8	+0.8
	comp=Z,0.2nm,0.7s,baz=343,slow=6.0,SNR=4.4						
	comp=Z,0.2nm,0.7s						
YKA	Yellowknife Ar	82.05	4	P	P	01 15 07.9	-1.1

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*AEIC **31** 01:04:03.1±1.6, 56°.40N±0°.10×148°.2W±0°.1, h1km±8km, Error ellipse: s-maj=15.1km s-min=8.0km az=159.0*

NEIC 31 01:03:59.5±1.6**, 56°.40N**±0°.09×**148°.24W**±0°.02**, h10km**±2km**, ML3.5**/72**, ML3.2**(AEIC)**, Error ellipse: s-maj=15.1km s-min=3.0km az=175.0, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.74	302		Pn	01 04 43.6	0.0
KDAK					Sn	01 05 13.7	-3.1
OHAK	Old Harbor	2.89	289	Pn	Pn	01 04 44.7	-0.9
OHAK				Sn	Sn	01 05 17.4	-3.0
SYI	Shuyak Island	3.15	316		Pn	01 04 49.1	0.0
SYI					Sn	01 05 26.3	-0.4
MID	Middleton Isla	3.20	18	Pn	Pn	01 04 50.0	+0.2
MID				IAML		01 06 00.5	
	comp=N,191nm,1.3s						
SII	Sitkinak Islan	3.30	275	Pn	Pn	01 04 51.7	+0.4
SII				IAML		01 05 39.1	
	comp=N,98nm,1.3s						
SII				IAML		01 06 40.1	
	comp=E,104nm,1.5s						
CNPM	China Poot	3.52	334	Pn	Pn	01 04 53.9	-0.3
CNPM				Sn	Sn	01 05 33.8	-2.0
R18K	Karluk	3.59	292		Pn	01 04 55.4	+0.2
R18K					Sn	01 05 35.7	-1.9
R18K				IAML		01 05 37.0	
	comp=N,116nm,0.4s						
R18K				IAML		01 05 37.5	
	comp=E,124nm,0.3s						
BRSE	Bradley Lake S	3.60	339		Pn	01 04 55.4	0.0
BRSE					Sn	01 05 36.2	-1.7
P23K	Montague Islan	3.63	7	Pn	Pn	01 04 54.6	-1.2
P23K				Sn	Sn	01 05 35.8	-2.9
P23K				IAML		01 05 42.0	
	comp=N,110nm,1.5s						
P23K				IAML		01 05 44.3	
	comp=E,96nm,1.5s						
BRLK	Bradley Lake	3.65	339	Pn	Pn	01 04 55.8	-0.3
BRLK				IAML		01 07 02.8	
	comp=E,79nm,0.1s						
BRLK				IAML		01 07 03.4	
	comp=N,67nm,0.1s						
HOM	Homer	3.73	332	Pn	Pn	01 04 58.1	+0.9
SEW	Seward	3.77	351	Pn	Pn	01 04 56.5	-1.1
SEW					Sn	01 05 38.8	-3.2
SEW				IAML		01 05 40.4	
	comp=E,36nm,1.2s						
Q19K	Cape Douglas,	3.85	313	Pn	Pn	01 04 59.8	+1.0
Q19K				IAML		01 05 53.2	
	comp=N,90nm,1.0s						
KAHG	Katmai Hook Gl	4.00	304		Pn	01 05 01.4	+0.5
KAHG					Pb	01 05 02.3	-7.8
KAHG					Sn	01 05 46.2	-1.6
AUCH	Augustine Cone	4.07	319		Pn	01 05 02.8	+1.0
KAWH	Katmai	4.07	302		Pn	01 05 02.6	+0.8
KAWH					Sn	01 05 47.8	-1.7
KAIM	Kayak Island	4.07	28	Pn	Pn	01 05 01.9	+0.1
KAIM	Kayak Island	4.07	28		Sn	01 05 47.3	-2.2
KARR	Katmai Rainbow	4.07	304		Pn	01 05 03.0	+1.1
KARR					Sn	01 05 48.1	-1.5
HIN	Hinchinbrook I	4.11	12	Pn	Pn	01 05 01.9	-0.5
HIN	Hinchinbrook I	4.11	12		Sn	01 05 48.8	-1.7
MGLS	Mageik Landsli	4.14	298		Pn	01 05 03.2	+0.5
KAKN	Katmai Knife C	4.15	300		Pn	01 05 03.6	+0.6
KAKN					Sn	01 05 50.4	-1.3
O22K	Cooper Landing	4.17	350	Pn	Pn	01 05 02.9	-0.2
CHIR	Chirikof Islan	4.17	265	Pn	Pn	01 05 03.2	0.0
CHIR				IAML		01 06 26.8	
	comp=E,66nm,1.5s						
CAHL	Cahill	4.18	296		Pn	01 05 04.1	+0.7
P19K	Oil Pt	4.20	323	Pn	Pn	01 05 04.3	+0.6
P19K				IAML		01 05 57.3	
	comp=N,58nm,0.7s						
P19K				IAML		01 05 57.5	
	comp=E,74nm,0.4s						
P19K	Oil Pt	4.20	323		Sn	01 05 51.3	-1.4
ACHA	Angle Creek He	4.25	298	Pn	Pn	01 05 03.5	-0.8
SLKM	Skilak Lake	4.25	347	Pn	Pn	01 05 03.5	-0.8
SLKM				IAML		01 05 53.4	
	comp=N,50nm,0.6s						
SLKM				IAML		01 05 54.4	
	comp=E,57nm,0.2s						
SLKM	Skilak Lake	4.25	347		Sn	01 05 52.4	-1.5
KABU	Katmai Buttres	4.25	299		Pn	01 05 04.9	+0.6
EYAK	Cordova Ski Ar	4.36	16	Pn	Pn	01 05 05.3	-0.4
EYAK				IAML		01 06 00.2	
	comp=E,38nm,0.6s						
EYAK				IAML		01 06 01.3	
	comp=N,61nm,0.9s						
EYAK	Cordova Ski Ar	4.36	16		Sn	01 05 54.6	-1.9
ILS	Iliamna Low So	4.39	326		Pn	01 05 06.2	0.0
RAGM	Ragged Mountai	4.42	24	Pn	Pn	01 05 06.3	-0.3
IVE	Iliamna Volcan	4.42	327		Pn	01 05 06.6	-0.1
ILSW	Iliamna Southw	4.43	326	Pn	Pn	01 05 06.6	-0.2
ILSW				IAML		01 06 20.2	
	comp=E,31nm,1.3s						
PWL	Port Wells	4.47	359	Pn	Pn	01 05 07.5	+0.2
PWL				IAML		01 06 01.5	
	comp=E,46nm,1.1s						
PWL				IAML		01 06 06.6	
	comp=N,44nm,1.0s						
RDT	Redoubt	4.72	334		Pn	01 05 10.4	-0.4
SNH	Sunshine Point	4.74	35	Pn	Pn	01 05 11.0	0.0
RC01	Rabbit Creek A	4.77	351	Pn	Pn	01 05 11.1	-0.3
RC01				IAML		01 06 05.1	
	comp=E,39nm,0.8s						
RC01				IAML		01 06 10.5	
	comp=N,29nm,1.1s						
P18K	Big Mountain,	4.78	312	Pn	Pn	01 05 11.9	+0.3
NCT	North Crescent	4.84	331		Pn	01 05 11.8	-0.7
DIV	Divide	4.91	14	Pn	Pn	01 05 15.0	+1.6
DIV				IAML		01 06 28.9	
	comp=N,17nm,1.4s						
BMRM	Bremner River	4.96	21	Pn	Pn	01 05 14.1	0.0
BMRM				IAML		01 06 10.8	
	comp=N,30nm,1.2s						
BMRM				IAML		01 06 14.0	
	comp=E,26nm,1.1s						
O19K	Port Alsworth	4.97	322	Pn	Pn	01 05 15.1	+0.9
O19K				IAML		01 06 23.7	
	comp=N,45nm,0.4s						
KNK	Knik Glacier	5.03	359	Pn	Pn	01 05 15.5	+0.6
KNK				IAML		01 06 21.1	
	comp=N,20nm,1.3s						
KNK				IAML		01 06 26.0	
	comp=E,22nm,1.2s						
O18K	Koktuh Hills	5.06	316	Pn	Pn	01 05 15.3	-0.1
CRQM	Cirque	5.12	29	Pn	Pn	01 05 16.1	-0.2
CRQM				IAML		01 06 16.9	
	comp=E,33nm,1.2s						
CRQM				IAML		01 06 19.2	
	comp=N,32nm,1.4s						
SPU	Mount Spurr	5.19	339	Pn	Pn	01 05 16.8	-0.4
P17K	Kvichak River	5.20	306	Pn	Pn	01 05 18.7	+1.4
TGL	Tana Glacier	5.20	31	Pn	Pn	01 05 17.4	0.0
TGL				IAML		01 06 15.2	
	comp=N,14nm,1.3s						
TGL				IAML		01 06 19.8	
	comp=E,27nm,0.8s						
SUA	Susitna One	5.24	347	Pn	Pn	01 05 17.1	-0.9
SUA				IAML		01 06 37.7	
	comp=E,13nm,1.3s						
KLU	Klutina	5.25	12	Pn	Pn	01 05 17.9	-0.1
KLU				IAML		01 06 20.4	
	comp=E,27nm,0.4s						
KLU				IAML		01 06 22.4	
	comp=N,29nm,0.6s						
GHO	Glory Hole Cre	5.40	357	Pn	Pn	01 05 21.2	+1.1
M23K	Glacier View	5.42	3		Pn	01 05 20.7	+0.4
SML	Sawmill	5.42	360	Pn	Pn	01 05 20.5	+0.1
VRDI	Verde Repeater	5.44	25	Pn	Pn	01 05 20.2	-0.6
SCM	Sheep Creek Mo	5.47	5	Pn	Pn	01 05 20.2	-0.8
KIAG	Kiagna River	5.48	32		Pn	01 05 20.9	-0.3
SPNN	North Nagishla	5.49	337		Pn	01 05 22.0	+0.6
N19K	Bonanza Creek	5.50	326	Pn	Pn	01 05 20.6	-0.9
GRNC	Granite Creek	5.51	35	Pn	Pn	01 05 21.5	-0.3
N25K	Chitina, Valde	5.55	18	Pn	Pn	01 05 23.0	+0.8
GLB	Gilahina Butte	5.55	23	Pn	Pn	01 05 21.8	-0.4
BALM	Baldy	5.57	31		Pn	01 05 22.0	-0.5
PCA	Pinnacle	5.61	45	Pn	Pn	01 05 21.4	-1.6
PTPK	Patty Peak	5.66	30		Pn	01 05 23.9	+0.1
MCARA	McCarthy VSAT	5.68	26	Pn	Pn	01 05 25.1	+1.2
BCPM	Bancas Point	5.78	48	Pn	Pn	01 05 25.7	+0.4
BARN	Barnard Glacie	5.79	34	Pn	Pn	01 05 25.9	+0.3
M24K	Tolsona, Glenn	5.82	10	Pn	Pn	01 05 27.2	+1.3
LOGN	Logan Glacier	5.83	37		Pn	01 05 25.5	-0.5
SKT	Skwentna	5.84	345		Pn	01 05 25.8	-0.4
P16K	Nushagak River	5.85	301	Pn	Pn	01 05 27.0	+0.8
O28M	Mount Upton	6.08	41	Pn	Pn	01 05 29.6	+0.1
O29M	Mount Kennedy	6.42	48	Pn	Pn	01 05 34.9	+0.8
M18K	Stony River	6.43	326		Pn	01 05 33.8	-0.4
P29M	Windy Craggy	6.45	56	Pn	Pn	01 05 34.2	-0.3
WAT1	Susitna Watana	6.45	359		Pn	01 05 34.4	-0.1
WAT7	Susitna Watana	6.46	358		Pn	01 05 34.6	-0.1
DHY	Denali Highway	6.71	3		Pn	01 05 37.8	-0.4
L19K	White Mountain	6.71	332	Pn	Pn	01 05 37.5	-0.6
PPLA	Purkeypile	6.81	345	Pn	Pn	01 05 41.0	+1.4
YUK6	Outpost Mounta	6.87	44		Pn	01 05 42.1	+1.6
HYT	Haines Junctio	7.15	47	Pn	Pn	01 05 43.3	-0.8
MCK	McKinley	7.36	358	Pn	Pn	01 05 49.2	+2.2
RIDG	Independent Ri	7.55	12	Pn	Pn	01 05 51.5	+1.8
K20K	Telida	7.56	340	Pn	Pn	01 05 49.7	-0.1
N30M	Aishikik Lake	7.68	44	Pn	Pn	01 05 51.7	+0.3
M29M	Somme Creek	7.84	35	Pn	Pn	01 05 54.9	+1.2
BPAW	Bear Paw Mtn.	7.84	351		Pn	01 05 53.6	0.0
WHY	Whitehorse	8.19	53	Pn	Pn	01 05 58.8	+0.4
N31M	Braeburn, Yuko	8.21	46	Pn	Pn	01 05 59.4	+0.8
IL31		8.43	4	Pn	Pn	01 06 01.1	-0.3
J26L	Joseph Creek	8.45	14	Pn	Pn	01 06 03.0	+1.1
M30M	Minto, Yukon	8.49	38	Pn	Pn	01 06 03.4	+0.9
P33M	Teslin, Yukon	8.97	58	Pn	Pn	01 06 08.9	-0.2
K29M	Barlow Dome	9.17	31	Pn	Pn	01 06 12.3	+0.5

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*SOME **31** 01:08:22.4, 39°.82N×77°.43E, h10km*

*NNC **31** 01:08:23.2±1.5, 39°.88N×77°.39E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=10.4km s-min=7.9km az=170.0*

*KRNET **31** 01:08:25.8±0.1, 39°.96N×77°.47E, mb2.8*

ISC 31 01:08:22.8±3.1**, 39°.9N**±0°.1×**77°.33E**±0°.06**, h10km, n21, σ1s.66**/33**, 14C, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.91	11	⇑*i*P	Pg	01 08 59.2	-0.3
TARG				⇑*i*S	Sg	01 09 23.4	-0.9
KDJ	Kajisay	2.28	357	⇑*i*P	Pb	01 09 05.1	+0.9
KDJ				⇑*i*S	Sb	01 09 34.1	+1.6
ULHL	Ulahol	2.53	341	⇑*e*P	Pb	01 09 09.4	+0.9
ULHL				⇑*i*S	Sb	01 09 41.3	+1.6
PRZ	Przheval'sk	2.75	17	⇑*e*P	Pb	01 09 11.7	-0.5
PRZ				⇑*e*S	Sb	01 09 45.4	-0.6
ARLS	Aral	3.04	312	⇑*e*P	Pb	01 09 17.4	+0.3
ARLS				⇑*i*S	Sb	01 09 55.1	+0.8
UCH	Uchtor	3.19	319	⇑*e*P	Pb	01 09 19.7	-0.1
UCH				⇑*i*S	Sb	01 09 59.0	0.0
TNSS	Tian-Shan	3.20	355	*e*P	Pb	01 09 21.6	+1.7
	0.4nm,0.1s						
TNSS				*e*S	Sg	01 10 04.2	-1.3
	1.6nm,0.5s						
SATY	Saty	3.31	14	Pg	Pb	01 09 23.4	+1.7
	3.5nm,0.4s						
SATY				Lg	Lg	01 10 07.3	
	8.1nm,0.3s						
MDOK	Medeo	3.32	356	Pg	Pb	01 09 24.0	+2.2
	3.8nm,0.5s						
MDOK				Lg	Lg	01 10 08.4	
	7.3nm,0.6s						
KBK	Karagaybulak	3.33	328	⇑*e*P	Pb	01 09 21.1	-0.9
KBK				⇑*i*S	Sb	01 10 01.6	-1.1
KST	Kastek	3.35	343	Pg	Pb	01 09 24.8	+2.4
	1.5nm,0.2s						
KST				Lg	Lg	01 10 09.7	
	9.5nm,0.7s						
KST	Kastek	3.35	343	*e*P	Pb	01 09 24.8	+2.4
	1.5nm,0.2s						
KST				*e*S	Sg	01 10 09.7	-0.8
	9.5nm,0.7s						
KOTS	Kotyrbulak	3.38	357	Pg	Pb	01 09 25.2	+2.2
	5.0nm,0.3s						
KOTS				Lg	Lg	01 10 10.4	
	17nm,0.7s						
KOTS	Kotyrbulak	3.38	357	*e*P	Pb	01 09 25.2	+2.2
	5.0nm,0.3s						
KOTS				*e*S	Sg	01 10 10.4	-1.1
	17nm,0.7s						
AAK	Ala-Archa	3.51	323	Pg	Pb	01 09 25.6	+0.5
AAK				Lg	Lg	01 10 14.4	
UZB	Uzynbulak	3.53	21	Pg	Pb	01 09 26.9	+1.4
	3.7nm,0.2s						
UZB				Lg	Lg	01 10 13.4	
	3.0nm,0.5s						
UZB	Uzynbulak	3.53	21	*e*P	Pb	01 09 26.9	+1.4
	3.7nm,0.2s						
UZB				*e*S	Sg	01 10 13.3	-2.8
	3.0nm,0.5s						
DGS	Degeres	3.58	341	Pg	Pb	01 09 29.2	+2.8
	3.3nm,0.4s						
DGS				Lg	Lg	01 10 17.3	
	4.7nm,0.8s						
KPKS	Kokpek	3.75	15	Pg	Pb	01 09 30.9	+1.8
	0.6nm,0.3s						
KPKS				Lg	Lg	01 10 20.2	
	4.7nm,0.5s						
KPKS	Kokpek	3.75	15	*e*P	Pb	01 09 30.9	+1.8
	0.6nm,0.3s						
KPKS				*e*S	Sg	01 10 20.2	-3.1
	4.7nm,0.5s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	Podgornoye	3.83	24	Pg	Pb	01 09 31.4	+0.8
PDGK				Lg	Lg	01 10 22.5	

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*IDC **31** 01:40:04.9±5.5, 15°.31S×167°.62E, h212^{km}±43^{km}, mb3.2/5, mbtmp3.7/6, Error ellipse: s-maj=48.5km s-min=35.4km az=46.0*

ISC 31 01:40:03.6±2.0**, 15°.2S**±0°.1×**167°.7E**±0°.3**, h200^{km}, n6, σ1^{s}.17**/7**, mb3.4**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.90	189	P	Pn	01 41 43.2	+0.7
	2.4nm,0.3s,baz=128,slow=18,SNR=15						
DZM				S	Sn	01 43 00.8	-0.4
	5.9nm,0.7s,baz=160,slow=22,SNR=6.2						
STKA	Stephens Creek	28.96	231	P	P	01 45 45.8	+1.3
	1.0nm,0.4s,baz=32,slow=9.5,SNR=3.8						
	1.0nm,0.4s						
WRA	Warramunga Arr	32.07	257	P	P	01 46 11.4	-0.6
	0.9nm,0.9s,baz=84,slow=7.6,SNR=4.8						
	0.9nm,0.9s						
ASAR	Alice Springs	32.85	250	P	P	01 46 17.4	-1.4
	0.3nm,0.5s,baz=81,slow=8.9,SNR=5.8						
	0.3nm,0.5s						
VNDA	Vanda	62.37	181	P	P	01 50 03.6	-0.9
	1.6nm,0.9s,baz=356,slow=7.2,SNR=1.6						
	1.6nm,0.9s						
SONM	Songino Array	83.12	323	P	P	01 52 07.5	+0.4
	0.1nm,0.4s,baz=141,slow=7.1,SNR=1.5						
	0.1nm,0.4s						

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*NOU **31** 01:43:05.3, 39°.79S×174°.00E, h227^{km}, MLv3.8/19, North Island, New Zealand*

*WEL **31** 01:43:06.7±1.2, 40˚S±9˚×17˚4E±1˚0, h224^{km}±9^{km}, M3.5/80, MLv3.5/80, Error ellipse: s-maj=14.2km s-min=10.8km az=124.3, confirmed*

ISC 31 01:43:03.1±1.8**, 39°.75S**±0°.05×**173°.96E**±0°.06**, h251^{km}**±10^{km}**, n130, σ1^{s}.25**/136**, Off west coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NMEZ	Namu Road	0.34	350	P	Pn	01 43 36.9	+1.2
NMEZ				S	S	01 44 00.9	-0.4
PREZ	Palmer Road	0.43	21	P	Pn	01 43 37.0	+1.0
LREZ	Lake Rotokare	0.45	51	P	Pn	01 43 37.3	+1.4
LREZ				S	S	01 44 01.2	-0.5
KHEZ	Kahui Hut	0.45	6	P	Pn	01 43 37.1	+1.0
KHEZ	Kahui Hut	0.45	6	S	S	01 44 01.3	-0.7
KHEZ	Kahui Hut	0.45	6	P	Pn	01 43 37.1	+1.0
KHEZ				S	S	01 44 00.7	-1.3
NBEZ	Newall Road No	0.48	352	P	Pn	01 43 37.3	+1.2
NEZ	North Egmont	0.49	13	P	Pn	01 43 38.0	+1.8
NEZ				S	S	01 44 01.5	-0.7
PKE	Pukeiti	0.55	2	P	Pn	01 43 37.4	+1.0
DREZ	Durham Road	0.59	19	P	Pn	01 43 37.5	+1.1
DREZ				S	S	01 44 01.7	-0.9
INHS	Inglewood High	0.62	17	P	Pn	01 43 37.4	+0.9
MHEZ	Mangahewa	0.73	23	P	Pn	01 43 38.0	+1.1
WAZ	Wanganui	0.79	91	P	Pn	01 43 39.0	+1.9
WAZ				S	S	01 44 03.5	-0.5
DUWZ	D'Urville Isla	1.05	181	P	Pn	01 43 39.8	+1.4
OHWZ	Ohakea	1.14	114	P	Pn	01 43 40.8	+1.9
PKVZ	Pokaka	1.17	67	P	Pn	01 43 40.1	+0.8
MTVZ	Mangateitei	1.23	73	P	Pn	01 43 40.7	+1.0
TRVZ	Turoa	1.31	71	P	Pn	01 43 41.3	+0.9
FWVZ	Far West T-bar	1.33	69	P	Pn	01 43 41.5	+0.9
KIW	Kapiti Island	1.33	147	P	Pn	01 43 41.3	+1.1
MAVZ	Matarangi	1.33	69	P	Pn	01 43 41.6	+1.0
TWVZ	Taurewa	1.33	60	P	Pn	01 43 41.0	+0.6
WNVZ	Wahianoa	1.34	72	P	Pn	01 43 41.5	+1.0
COVZ	Chateau Observ	1.34	67	P	Pn	01 43 41.4	+0.9
WHVZ	Whangaehu Hut	1.34	70	P	Pn	01 43 41.6	+0.9
NGZ	Ngauruhoe	1.40	66	P	Pn	01 43 41.8	+0.9
TUVZ	Tukino	1.40	71	P	Pn	01 43 42.2	+1.3
WTVZ	West Tongariro	1.41	64	P	Pn	01 43 41.9	+0.9
HIZ	Hauiti	1.42	30	P	Pn	01 43 41.2	+0.3
HIZ	Hauiti	1.42	30	P	Pn	01 43 41.3	+0.4
OGWZ	Otaki Gorge	1.42	139	P	Pn	01 43 42.2	+1.4
SNVZ	South Ngauruho	1.42	67	P	Pn	01 43 42.2	+1.1
NNVZ	North Ngauruho	1.42	65	P	Pn	01 43 42.0	+0.9
MOVZ	Moawhango	1.43	77	P	Pn	01 43 41.7	+0.7
OTVZ	Oturere	1.45	67	P	Pn	01 43 42.4	+1.1
KRVZ	Karewarewa	1.46	64	P	Pn	01 43 42.3	+1.0
NTVZ	North Tongarir	1.48	65	P	Pn	01 43 42.5	+1.0
TCW	Tory Channel	1.48	171	P	Pn	01 43 42.9	+1.7
ETVZ	East Tongariro	1.49	66	P	Pn	01 43 42.6	+1.0
TMVZ	Te Maari	1.49	66	P	Pn	01 43 42.7	+1.1
TKNZ	Takaka Hill	1.49	210	P	Pn	01 43 42.5	+1.1
NNZ	Nelson	1.53	196	P	Pn	01 43 43.0	+1.3
QRZ	Quartz Range	1.53	225	P	Pn	01 43 42.5	+0.8
QRZ	Quartz Range	1.53	225	S	S	01 44 09.7	-2.4
QRZ	Quartz Range	1.53	225	P	Pn	01 43 42.7	+1.0
MRZ	Mangatainoka R	1.54	127	P	Pn	01 43 43.0	+1.2
KATZ	Kakaramea	1.55	61	P	Pn	01 43 43.1	+1.1
TSZ	Takapari Road	1.57	102	P	Pn	01 43 43.4	+1.4
CAW	Cannon Point	1.60	148	P	Pn	01 43 43.5	+1.3
HOWZ	Holdsworth Sta	1.66	134	P	Pn	01 43 43.9	+1.2
RATZ	Rangitukua	1.66	59	P	Pn	01 43 43.8	+1.0
RITZ	Rihia Road	1.66	63	P	Pn	01 43 44.0	+1.2
SNZO	South Karori	1.66	160	P	Pn	01 43 43.4	+0.8
SNZO	South Karori	1.66	160	S	S	01 44 12.0	-1.9
TUWZ	Tuamarina	1.68	180	P	Pn	01 43 45.0	+2.3
WATZ	Wairara	1.73	54	P	Pn	01 43 44.4	+1.1
PNHZ	Pukenui	1.74	96	P	Pn	01 43 44.7	+1.4
PRWZ	Pori Road	1.74	118	P	Pn	01 43 45.1	+1.8
DVHZ	Dannevirke	1.79	109	P	Pn	01 43 45.1	+1.4
BHW	Baring Head	1.80	158	P	Pn	01 43 44.9	+1.1
MTW	Mount Morrison	1.84	141	P	Pn	01 43 45.4	+1.3
HATZ	Hinemaiaia	1.86	63	P	Pn	01 43 44.9	+0.5
KRHZ	Kereru	1.86	88	P	Pn	01 43 45.8	+1.3
TLZ	Tolley Road	1.88	42	P	Pn	01 43 44.9	+0.3
MRNZ	Matariki Terra	1.89	209	P	Pn	01 43 45.7	+1.2
KUTZ	Kaahu Road	1.92	50	P	Pn	01 43 46.0	+1.0
KWHZ	Kaweka Forest	1.93	81	P	Pn	01 43 46.6	+1.5
MSWZ	Moikau Station	1.94	150	P	Pn	01 43 46.3	+1.3
BSWZ	Blackbirch Sta	1.97	182	P	Pn	01 43 46.7	+1.4
BFZ	Birch Farm	1.99	119	P	Pn	01 43 46.8	+1.4
BFZ	Birch Farm	1.99	119	S	S	01 44 16.9	-2.0
BFZ	Birch Farm	1.99	119	P	Pn	01 43 46.9	+1.4
TMWZ	Te Maipa	2.01	133	P	Pn	01 43 47.1	+1.4
CMWZ	Cape Campbell	2.01	174	P	Pn	01 43 47.8	+2.2
BKZ	Black Stump Fm	2.05	74	P	Pn	01 43 46.9	+0.8
BKZ	Black Stump Fm	2.05	74	P	S	01 44 17.3	-2.7
BKZ	Black Stump Fm	2.05	74	P	Pn	01 43 47.0	+0.9
ANWZ	Angora Road	2.06	111	P	Pn	01 43 48.0	+1.9
CPWZ	Castlepoint	2.07	125	P	Pn	01 43 48.3	+2.1
WPRZ	Whakapapatarin	2.11	55	P	Pn	01 43 47.3	+0.7
TRWZ	Traveller	2.11	142	P	Pn	01 43 48.1	+1.5
MRHZ	Matea Rd	2.12	65	P	Pn	01 43 47.0	+0.3
PRHZ	Porangahau	2.12	105	P	Pn	01 43 48.5	+1.8
MCHZ	McNeill Hill	2.14	83	P	Pn	01 43 48.9	+2.0
THZ	Tophouse	2.17	201	P	Pn	01 43 48.4	+1.2
ALRZ	Allen Road	2.20	58	P	Pn	01 43 48.0	+0.5
KAHZ	Kahuranaki	2.25	92	P	Pn	01 43 49.9	+2.0
PXZ	Pawanui	2.25	98	P	Pn	01 43 49.7	+1.8
HRRZ	Handcock Road	2.26	54	P	Pn	01 43 48.9	+0.8
PRRZ	Plateau Road	2.27	57	P	Pn	01 43 47.4	-0.8
HSRZ	Hossack Road	2.29	52	P	Pn	01 43 49.3	+0.9
NMHZ	Naumai	2.30	75	P	Pn	01 43 50.4	+1.9
TOZ	Tahuroa Road	2.35	31	P	Pn	01 43 49.5	+0.6
ARHZ	Aropaoanui	2.40	79	P	Pn	01 43 51.1	+1.7
CKHZ	Cape Kidnapper	2.41	89	P	Pn	01 43 51.5	+2.1
MTHZ	Maungataniwha	2.41	69	P	Pn	01 43 50.4	+0.8
RRRZ	Republican Roa	2.44	56	P	Pn	01 43 50.5	+0.6
KMRZ	Kaimai	2.45	40	P	Pn	01 43 51.0	+1.0
TARZ	Mount Tarawera	2.50	54	P	Pn	01 43 51.2	+0.7
OMRZ	Omania	2.50	50	P	Pn	01 43 51.4	+0.9
MUGZ	Murupara	2.53	61	P	Pn	01 43 51.0	+0.3
RAHZ	Arahi	2.56	72	P	Pn	01 43 52.4	+1.3
DSZ	Denniston Nort	2.58	219	P	Pn	01 43 52.1	+0.9
RTZ	Ruatahuna	2.61	65	P	Pn	01 43 52.0	+0.4
WHHZ	Waihua	2.63	76	P	Pn	01 43 53.3	+1.6
KHZ	Kahutara	2.69	187	P	Pn	01 43 53.1	+1.0
KHZ	Kahutara	2.69	187	P	S	01 44 29.5	-1.6
KHZ	Kahutara	2.69	187	P	Pn	01 43 53.1	+1.0
AWAZ	Awhitu Peninsu	2.73	12	P	Pn	01 43 54.1	+1.3
SNGZ	Shannon Statio	2.80	71	P	Pn	01 43 54.6	+1.1
MKAZ	Moumakai	2.80	20	P	Pn	01 43 54.8	+1.2
URZ	Urewera	2.87	60	P	Pn	01 43 54.2	0.0
URZ	Urewera	2.87	60	P	Pn	01 43 54.3	0.0
ETAZ	East Tamaki Re	2.89	16	P	Pn	01 43 55.9	+1.4
RAGZ	Rawiri	2.97	66	P	Pn	01 43 56.1	+0.8
KNZ	Kokohu	2.97	77	P	Pn	01 43 56.5	+1.3
MBAZ	Motutapu North	3.06	14	P	Pn	01 43 57.6	+1.3
WIAZ	Waiheke Island	3.09	18	P	Pn	01 43 58.2	+1.5
MHGZ	Mahia Peninsul	3.12	80	P	Pn	01 43 58.6	+1.7
MWZ	Matawai	3.12	64	P	Pn	01 43 57.4	+0.4
RIGZ	Rimuhau	3.13	72	P	Pn	01 43 58.3	+1.2
GVZ	Greta Valley S	3.29	192	P	Pn	01 43 59.4	+0.7
TKGZ	Te Karaka	3.30	68	P	Pn	01 43 60.0	+1.1
KUZ	Kuaotunu	3.30	25	P	Pn	01 44 00.0	+1.0
RUGZ	Raukumara Rang	3.41	60	P	Pn	01 43 59.7	-0.5
HAZ	Te Kaha	3.59	58	P	Pn	01 44 01.7	-0.5
MXZ	Matakaoa Point	4.04	59	P	Pn	01 44 07.9	+0.5
RPZ	Rata Peaks	4.52	208	P	Pn	01 44 13.4	+0.4
OUZ	Omahuta	4.53	356	P	Pn	01 44 15.1	+1.9
ODZ	Otahua Downs	5.83	204	P	Pn	01 44 29.8	+0.8

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*SDD **31** 01:51:26.0±2.0, 20°.33N×70°.62W, h19^{km}±42^{km}, MD3.0, ML2.7, MW3.1, Presumed earthquake*

*OSPL **31** 01:51:30.5±2.5, 20°.07N×70°.60W, h0^{km}±13^{km}, ML2.6, Presumed earthquake*

ISC 31 01:51:28.8±1.3**, 20°.13N**±0°.04×**70°.60W**±0°.05**, h7^{km}**±11^{km}**, n11, σ1^{s}.20**/21**, 7C-5D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUDR	Luperon	0.41	235	⇑*e*Pg	Pg	01 51 36.1	-0.6
LUDR				⇑*e*Sg	Sg	01 51 43.2	+1.1
LOPP1	Punta Rusia, P	0.63	245	*i* P	Pg	01 51 41.1	+0.1
LOPP1				*e*S	Sg	01 51 50.0	+0.9
LOPP1				IAML		01 51 54.7	
	comp=Z,89nm,0.8s						
SC01	Santiago de lo	0.71	190	⇑*e*Pg	Pg	01 51 40.4	-2.0
SC01				⇓*e*Sg	Sb	01 51 54.7	+1.2
SC01				IAML		01 52 04.3	
	comp=N,106nm,0.6s						
SC01	Santiago de lo	0.71	190	*i* P	Pg	01 51 42.5	0.0
SC01				*e*S	Sg	01 51 50.7	-0.9
SFDR	San Fco. de Ma	0.90	158	⇑*e*Pg	Pg	01 51 45.9	-0.3
SFDR				⇑*e*Sg	Sg	01 51 59.2	+1.4
SFDR				IAML		01 52 03.0	
	comp=N,178nm,0.5s						
REDR	Restauracion	1.22	218	⇑*e*Pg	Pn	01 51 51.6	-0.6
REDR				⇓*e*Sg	Sg	01 52 08.9	+1.0
REDR				IAML		01 52 10.9	
	comp=N,262nm,0.1s						
SDDR	Presa de Saban	1.31	210	*e*S	Sb	01 52 07.8	-3.1
GRTK	Grand Turk	1.47	340	*i* P	Pg	01 51 56.2	-0.8
GRTK				*e*S	Sg	01 52 16.9	+0.8
GRTK				IAML		01 52 17.3	
	comp=Z,79nm,1.1s						
HATOM	Hato Mayor del	1.76	139	⇓*e*Pg	Pn	01 51 59.6	-0.2
HATOM				⇓*e*Sg	Sn	01 52 22.9	+0.4
HATOM				IAML		01 52 26.7	
	comp=N,22nm,0.3s						
LODU1	El Espartillar	1.95	205	*i* P	Pn	01 52 02.8	+0.4
LODU1				*e*S	Sn	01 52 27.2	+0.1
LODU1				IAML		01 52 27.9	
	comp=Z,76nm,1.4s						
PODR	Polo	2.05	198	⇓*e*Pg	Pn	01 52 04.9	+0.9
PODR				⇑*e*Sg	Sb	01 52 33.1	+0.7
PODR				IAML		01 52 34.4	
	comp=N,65nm,0.9s						

IDC 31 01:59:23.1±1.3**, 6°.58N×125°.27E, h0^{km}, mb3.4**/4**, mbtmp3.4**/4**, Error ellipse: s-maj=36.9km s-min=9.8km az=116.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.57	32	Pg	Pg	01 59 33.4	-0.7
	160nm,0.3s,baz=254,slow=9.6,SNR=9.6						
DAV				Lg	Lg	01 59 42.7	
	217nm,0.3s,baz=312,slow=21,SNR=30						
DAV				LR	LR	02 00 02.6	
	comp=Z,244nm,21.0s,baz=348,slow=69						
WRA	Warramunga Arr	27.83	161	P	P	02 05 13.8	-0.6
	0.6nm,0.8s,baz=343,slow=9.2,SNR=1.8						
	0.6nm,0.8s						
ASAR	Alice Springs	31.22	165	P	P	02 05 45.5	+1.0
	0.3nm,0.5s,baz=343,slow=7.5,SNR=5.7						
	0.3nm,0.5s						
MKAR	Makanchi Array	54.40	325	P	P	02 08 52.5	+0.5
	0.1nm,0.5s,baz=120,slow=8.7,SNR=1.4						
	0.1nm,0.5s						
ILAR	Eielson Array	83.17	26	P	P	02 11 50.3	-0.6
	0.4nm,0.8s,baz=251,slow=5.0,SNR=5.0						
	0.4nm,0.8s						

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*NOU **31** 02:02:47.1, 33°.17S×177°.04W, h0^{km}, mb5.0/13, South of Kermadec Islands*

*BJI **31** 02:02:58.7, 33°.87S×178°.76W, h9^{km}, mb5.2/9*

*WEL **31** 02:02:58.7±1.1, 33˚S±6˚×17˚8W±1˚6, h33^{km}, mB5.2/34, ML4.9/13, MLv5.2/46, Mw(mB)4.6/4, Error ellipse: s-maj=21.7km s-min=4.4km az=107.7, confirmed*

*IDC **31** 02:02:58.7±0.5, 33°.13S×178°.45W, h0^{km}, mb4.6/12, mbtmp4.6/14, ML4.8/2, MS4.1/28, Error ellipse: s-maj=21.2km s-min=17.0km az=81.0*

*NEIC **31** 02:03:00.8±1.7, 33°.28S±0°.08×178°.5W±0°.1, h10^{km}±1^{km}, mb4.9/25, Error ellipse: s-maj=20.7km s-min=11.9km az=107.0*

ISC 31 02:03:01.6±2.4**, 33°.28S**±0°.05×**178°.29W**±0°.08**, h25^{km}**±16^{km}**, n214, σ1^{s}.65**/204**, mb4.9**/28**, MS4.1**/29**, 5C-5D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.01	5	P	Pn	02 03 59.3	-2.3
GLKZ				S	Sn	02 04 43.4	-4.4
RAO	Raoul Island	4.02	5	Pn	Pn	02 03 59.1	-2.6
	76nm,0.3s,baz=82,slow=23,SNR=1.6						
RAO				Sn	Sn	02 04 41.8	-6.2
	262nm,0.3s,baz=101,slow=20,SNR=4.4						
	330nm,0.5s						
RAO	Raoul Island	4.02	5	Pn	Pn	02 04 02.5	+0.8
MXZ	Matakaoa Point	5.10	212	Pn	Pn	02 04 14.8	-1.7
MXZ	Matakaoa Point	5.10	212	P	Pn	02 04 14.7	-1.7
MXZ	Matakaoa Point	5.10	212	P	Pn	02 04 14.8	-1.7
MXZ				S	Sn	02 05 13.7	-0.9
WMGZ	Waiomatatini S	5.27	210	P	Pn	02 04 17.9	-0.9
WMGZ				S	Sn	02 05 19.4	+0.6
HAZ	Te Kaha	5.50	215	P	Pn	02 04 21.0	-0.9
HAZ				S	Sn	02 05 25.6	+1.2
PUZ	Puketiti	5.55	209	P	Pn	02 04 20.7	-2.0
PUZ				S	Sn	02 05 24.3	-1.4
WIZ	White Island	5.62	220	P	Pn	02 04 24.4	+0.7
RUGZ	Raukumara Rang	5.72	214	P	Pn	02 04 23.3	-1.8
RUGZ				S	Sn	02 05 30.9	+1.0
TWGZ	Tauwhareparae	5.75	211	P	Pn	02 04 23.6	-1.9
TWGZ				S	Sn	02 05 29.9	-0.9
CNGZ	Carnagh Statio	5.92	208	P	Pn	02 04 26.0	-1.8
CNGZ				S	Sn	02 05 34.9	+0.1
WHRZ	Whale Island	5.98	219	P	Pn	02 04 29.1	+0.5
MYRZ	Mayor Island	6.00	227	P	Pn	02 04 30.0	+1.2
KUZ	Kuaotunu	6.01	233	P	Pn	02 04 29.5	+0.5
KUZ	Kuaotunu	6.01	233	P	Pn	02 04 30.0	+1.0
TKGZ	Te Karaka	6.03	210	P	Pn	02 04 28.3	-0.9
TKGZ				S	Sn	02 05 36.3	-1.2
MWZ	Matawai	6.08	213	P	Pn	02 04 28.1	-1.9
OPRZ	Ohinepanea	6.20	221	P	Pn	02 04 32.1	+0.5
URZ	Urewera	6.22	216	Pn	Pn	02 04 30.6	-1.3
	22nm,0.3s,baz=282,slow=4.4,SNR=88						
URZ				Sn	Sn	02 05 39.7	-2.5
	7.8nm,0.3s,baz=258,slow=7.4,SNR=3.8						
	72nm,0.4s						
URZ	Urewera	6.22	216	P	Pn	02 04 30.7	-1.2
URZ	Urewera	6.22	216	P	Pn	02 04 29.7	-2.1
RAGZ	Rawiri	6.27	213	P	Pn	02 04 30.3	-2.3
TGRZ	Tauranga	6.29	223	P	Pn	02 04 35.1	+2.4
EDRZ	Edgecumbe	6.29	219	P	Pn	02 04 32.8	-0.1
RIGZ	Rimuhau	6.29	209	P	Pn	02 04 31.0	-1.8
PRGZ	Paritu Road	6.43	208	P	Pn	02 04 32.2	-2.6
WIAZ	Waiheke Island	6.44	235	P	Pn	02 04 36.4	+1.6
TARZ	Mount Tarawera	6.51	219	P	Pn	02 04 35.7	-0.2
SNGZ	Shannon Statio	6.54	212	P	Pn	02 04 34.6	-1.6
KMRZ	Kaimai	6.55	224	P	Pn	02 04 37.2	+0.8
MUGZ	Murupara	6.56	216	P	Pn	02 04 35.7	-0.8
RTZ	Ruatahuna	6.57	214	Pn	Pn	02 04 34.3	-2.4
RTZ	Ruatahuna	6.57	214	P	Pn	02 04 35.5	-1.2
MKAZ	Moumakai	6.58	233	P	Pn	02 04 40.0	+3.1
KNZ	Kokohu	6.60	209	P	Pn	02 04 35.1	-2.0
MHGZ	Mahia Peninsul	6.62	207	P	Pn	02 04 35.2	-2.2
WCZ	Waipu Caves	6.63	244	P	Pn	02 04 39.1	+1.6
TOZ	Tahuroa Road	6.74	227	Pn	Pn	02 04 38.3	-0.7
TOZ	Tahuroa Road	6.74	227	P	Pn	02 04 39.4	+0.4
RAHZ	Arahi	6.76	212	P	Pn	02 04 39.3	0.0
MTHZ	Maungataniwha	6.82	214	P	Pn	02 04 39.4	-0.8
WHHZ	Waihua	6.83	211	P	Pn	02 04 40.1	-0.1
ALRZ	Allen Road	6.84	218	P	Pn	02 04 39.8	-0.6
OUZ	Omahuta	7.00	252	P	Pn	02 04 44.6	+2.1
OUZ	Omahuta	7.00	252	P	Pn	02 04 43.9	+1.4
MRHZ	Matea Rd	7.01	216	P	Pn	02 04 41.2	-1.6
NMHZ	Naumai	7.03	213	P	Pn	02 04 42.3	-0.8
ARHZ	Aropaoanui	7.08	211	P	Pn	02 04 42.9	-0.8
BKZ	Black Stump Fm	7.23	214	Pn	Pn	02 04 43.9	-1.9
BKZ	Black Stump Fm	7.23	214	P	Pn	02 04 43.8	-2.0
BKZ	Black Stump Fm	7.23	214	P	Pn	02 04 44.4	-1.4
MCHZ	McNeill Hill	7.37	212	P	Pn	02 04 46.4	-1.2
RATZ	Rangitukua	7.37	219	P	Pn	02 04 47.1	-0.5
CKHZ	Cape Kidnapper	7.38	209	P	Pn	02 04 45.8	-2.0
RITZ	Rihia Road	7.40	218	P	Pn	02 04 47.0	-1.1
KWHZ	Kaweka Forest	7.47	213	P	Pn	02 04 46.9	-2.2
KATZ	Kakaramea	7.49	219	P	Pn	02 04 48.7	-0.6
KAHZ	Kahuranaki	7.58	210	P	Pn	02 04 45.9	-4.6
TMVZ	Te Maari	7.58	218	P	Pn	02 04 49.0	-1.7
NTVZ	North Tongarir	7.59	218	P	Pn	02 04 49.2	-1.5
ETVZ	East Tongariro	7.60	218	P	Pn	02 04 49.2	-1.7
HIZ	Hauiti	7.63	225	Pn	Pn	02 04 50.4	-0.9
HIZ	Hauiti	7.63	225	P	Pn	02 04 51.2	0.0
HIZ	Hauiti	7.63	225	P	Pn	02 04 51.6	+0.4
OTVZ	Oturere	7.64	218	P	Pn	02 04 50.0	-1.5
NNVZ	North Ngauruho	7.64	218	P	Pn	02 04 50.2	-1.4
WTVZ	West Tongariro	7.64	219	P	Pn	02 04 50.1	-1.4
SNVZ	South Ngauruho	7.67	218	P	Pn	02 04 50.3	-1.6
KRHZ	Kereru	7.67	213	P	Pn	02 04 49.1	-2.7
NGZ	Ngauruhoe	7.68	218	P	Pn	02 04 51.2	-0.9
TWVZ	Taurewa	7.69	219	P	Pn	02 04 53.1	+0.9
MOVZ	Moawhango	7.78	216	P	Pn	02 04 51.5	-1.8
PXZ	Pawanui	7.79	209	P	Pn	02 04 51.7	-1.6
WNVZ	Wahianoa	7.80	218	P	Pn	02 04 52.0	-1.7
PKVZ	Pokaka	7.90	219	P	Pn	02 04 53.1	-1.9
PNHZ	Pukenui	7.97	212	P	Pn	02 04 52.3	-3.6
PRHZ	Porangahau	8.08	209	P	Pn	02 04 54.2	-3.1
BFZ	Birch Farm	8.59	209	Pn	Pn	02 04 59.7	-4.6
BFZ	Birch Farm	8.59	209	P	Pn	02 05 01.0	-3.3
BFZ	Birch Farm	8.59	209	P	Pn	02 05 00.6	-3.7
KHEZ	Kahui Hut	8.64	224	P	Pn	02 05 05.1	0.0
MRZ	Mangatainoka R	8.85	212	Pn	Pn	02 05 03.0	-5.0
MRZ	Mangatainoka R	8.85	212	P	Pn	02 05 03.1	-4.8
MSWZ	Moikau Station	9.61	210	Pn	Pn	02 05 12.6	-5.8
SNZO	South Karori	9.77	213	P	Pn	02 05 17.1	-3.4
BHW	Baring Head	9.77	212	Pn	Pn	02 05 14.5	-6.1
QRZ	Quartz Range	10.51	222	P	Pn	02 05 30.4	-0.3
THZ	Tophouse	10.98	217	Pn	Pn	02 05 34.7	-2.4
KHZ	Kahutara	11.17	213	P	Pn	02 05 35.3	-4.4
RPZ	Rata Peaks	13.34	216	P	Pn	02 06 07.0	-2.4
ODZ	Otahua Downs	14.54	213	P	Pn	02 06 24.8	-0.9
DZM	Mont Dzumac	17.51	306	P	P	02 07 07.8	+2.5
	17nm,0.8s,baz=97,slow=15,SNR=5.1						
DZM	Mont Dzumac	17.51	306	P	P	02 07 03.9	-1.3
RAR	Rarotonga	20.34	58	LR	LR	02 13 25.7	
	comp=Z,154nm,21.7s,baz=252,slow=31						
EIDS	Eidsvold	27.77	278	P	P	02 08 47.9	-0.8
EIDS				IAmb	IAmb	02 08 50.6	
	comp=Z,20nm,0.9s						
PPT	Papeete	30.15	66	LR	LR	02 21 49.5	
	comp=Z,207nm,18.3s,baz=232,slow=37						
STKA	Stephens Creek	33.69	261	P	P	02 09 41.1	+0.3
	comp=Z,3.0nm,0.7s,baz=121,slow=9.4,SNR=3.7						
STKA				PcP	PcP	02 12 20.1	-0.1
	comp=Z,3.1nm,0.6s,baz=63,slow=2.3,SNR=5.2						
STKA				LR	LR	02 22 48.3	
	comp=Z,796nm,18.4s,baz=73,slow=35						
	comp=Z,3.0nm,0.7s						
STKA	Stephens Creek	33.69	261	P	P	02 09 39.7	-1.1
STKA					PcP	02 12 20.4	+0.1
CTA	Charters Tower	34.13	284	P	P	02 09 45.7	+1.0
	comp=Z,13nm,0.5s,baz=118,slow=10,SNR=64						
CTA				LR	LR	02 22 06.6	
	comp=Z,196nm,19.0s,baz=54,slow=34						
	comp=Z,13nm,0.5s						
CTAO	Charters Tower	34.13	284	P	P	02 09 45.5	+0.8
CTAO				IAmb	IAmb	02 09 46.8	
	comp=Z,16nm,0.6s						
INKA	Innaminka	35.56	268	P	P	02 09 56.4	-0.6
BBOO	Buckleboo	38.04	258	P	P	02 10 16.8	-1.2
PMG	Port Moresby	39.70	299	P	P	02 10 32.5	+0.4
	comp=Z,6.6nm,0.6s,baz=174,slow=10.0,SNR=4.1						
PMG				LR	LR	02 24 38.8	
	comp=Z,328nm,18.8s,baz=158,slow=33						
	comp=Z,6.6nm,0.6s						
PMG	Port Moresby	39.70	299	P	P	02 10 31.7	-0.4
COEN	Coen	39.91	289	P	P	02 10 33.6	-0.2
AS31	Alice Springs	42.79	270	P	P	02 10 56.9	-0.7
AS31				IAmb	IAmb	02 10 58.0	
	comp=Z,12nm,0.7s						
ASAR	Alice Springs	42.79	270	P	P	02 10 57.0	-0.6
	comp=Z,33nm,0.7s,baz=110,slow=7.5,SNR=400						
ASAR				PcP	PcP	02 12 48.6	0.0
	comp=Z,3.9nm,0.8s,baz=122,slow=3.9,SNR=7.0						
ASAR				S	S	02 17 15.6	-4.8
	comp=Z,1.3nm,0.9s,baz=114,slow=16,SNR=5.4						
ASAR				LR	LR	02 27 10.0	
	comp=Z,213nm,19.6s,baz=108,slow=34						
	comp=Z,33nm,0.7s						
ASAR	Alice Springs	42.79	270	P	P	02 10 56.6	-0.9
ASAR					PcP	02 12 48.9	+0.2
WR8	Warramunga Arr	43.90	275	P	P	02 11 05.5	-0.9
WR8				IAmb	IAmb	02 11 06.5	
	comp=Z,17nm,0.7s						
WRAB	Tennant Creek	44.03	275	P	P	02 11 06.0	-1.6
WRAB				IAmb	IAmb	02 11 07.5	
	comp=Z,19nm,0.6s						
WRA	Warramunga Arr	44.04	275	P	P	02 11 06.6	-1.0
	comp=Z,14nm,0.5s,baz=117,slow=7.8,SNR=112						
WRA				PcP	PcP	02 12 52.5	-0.4
	comp=Z,2.0nm,0.8s,baz=120,slow=2.9,SNR=2.4						
WRA				S	S	02 17 33.1	-5.5
	comp=Z,1.2nm,0.9s,baz=116,slow=15,SNR=3.4						
	comp=Z,14nm,0.5s						
WRA	Warramunga Arr	44.04	275	P	P	02 11 05.3	-2.3
WRA					PcP	02 12 52.1	-0.8
WRA					S	02 17 34.7	-3.9
WB0	Warramunga Arr	44.08	276	P	P	02 11 07.1	-0.8
FORT	Forrest	45.14	258	P	P	02 11 14.5	-1.7
FORT				IAmb	IAmb	02 11 29.7	
	comp=Z,9.5nm,0.8s						
VNDA	Vanda	45.22	186	LR	LR	02 27 55.0	
	comp=Z,138nm,18.1s,baz=4.5,slow=33						
JAY	Jayapura	49.05	300	LR	LR	02 32 57.6	
	comp=Z,139nm,18.2s,baz=307,slow=37						
MTN	Manton Dam	50.25	281	P	P	02 11 54.7	-1.4
MTN				IAmb	IAmb	02 11 55.2	
	comp=Z,10nm,0.9s						
KNRA	Kununurra	50.74	277	P	P	02 11 58.4	-1.3
KNRA				IAmb	IAmb	02 12 00.3	
	comp=Z,13nm,0.9s						
FITZ	Fitzroy Crossi	52.17	272	LR	LR	02 34 27.7	
	comp=Z,431nm,18.0s,baz=115,slow=36						
FITZ	Fitzroy Crossi	52.17	272	P	P	02 12 09.6	-0.9
CASY	Casey	52.50	209	P	P	02 12 12.8	+0.6
FAKI	Fak Fak	55.15	292	P	P	02 12 31.6	-0.7
FAKI				IAmb	IAmb	02 12 51.9	
	comp=Z,20nm,1.0s						
QSPA	South Pole Qui	56.84	180	P	P	02 12 47.3	+3.4
	comp=Z,6.7nm,0.9s,baz=29,slow=1.1,SNR=21						
	comp=Z,6.7nm,0.9s						
QSPA	South Pole Qui	56.84	180	P	P	02 12 46.9	+3.0
QSPA				IAmb	IAmb	02 12 58.0	
	comp=Z,15nm,0.8s						
SOEI	Soe	57.57	280	P	P	02 12 49.0	-0.7
BATI	Baumata	57.83	279	LR	LR	02 37 44.9	
	comp=Z,204nm,18.1s,baz=106,slow=36						
RPN	Rapa Nui	58.95	104	LR	LR	02 35 11.6	
	comp=Z,152nm,18.2s,baz=248,slow=33						
BELA	Belgrano 2	66.98	172	P	P	02 13 51.9	+0.2
BELA				IAmb	IAmb	02 14 19.2	
	comp=Z,10.0nm,1.2s						
MAW	Mawson	69.54	201	P	P	02 14 08.2	+0.4
	comp=Z,2.6nm,0.9s,baz=133,slow=5.2,SNR=2.1						

MAW				LR	LR	02 43 23.8	
	comp=Z,206nm,20.3s,baz=114,slow=35						
	comp=Z,2.6nm,0.9s						
PMSA	**Palmer Station**	**69.75**	**155**	LR	LR	02 40 20.2	
	comp=Z,92nm,18.4s,baz=309,slow=32						
ELIB	**Princess Elisa**	**73.97**	**187**	*d*P	**P**	**02 14 36.7**	**+2.0**
	comp=Z,9.1nm,0.8s						
SYO	**Syowa Base**	**74.27**	**193**	⇓*e*P	**P**	**02 14 36.1**	**-0.1**
SYO	**Syowa Base**	**74.27**	**193**	⇑*e*pP	**P**	**02 14 38.2**	**+2.0**
SNAA	**Sanae**	**75.30**	**179**	⇑P	**P**	**02 14 43.8**	**+1.6**
	comp=Z,174nm,0.8s						
SNAA	**Sanae**	**75.30**	**179**	P	**P**	**02 14 43.9**	**+1.7**
	comp=Z,2.6nm,0.7s,baz=178,slow=15,SNR=21						
	comp=Z,2.6nm,0.7s						
SNAA	**Sanae**	**75.30**	**179**	P	**P**	**02 14 43.5**	**+1.3**
SNAA				IAmb	IAmb	02 14 54.6	
	comp=Z,15nm,1.1s						
VNA3	**Neumayer Olymp**	**75.46**	**176**	⇑P	**P**	**02 14 44.2**	**+1.1**
	comp=Z,34nm,0.7s						
VNA2	**Neumayer--Watz**	**75.89**	**177**	⇑P	**P**	**02 14 47.3**	**+1.8**
	comp=Z,22nm,0.6s,baz=168,slow=5.6						
VNA1	**Neumayer--Stat**	**76.12**	**177**	⇑P	**P**	**02 14 48.5**	**+1.7**
	comp=Z,18nm,0.8s						
MJAR	**Matsushiro Arr**	**80.47**	**326**	P	**P**	**02 15 09.6**	**-1.7**
	comp=Z,1.4nm,0.8s,baz=144,slow=8.7,SNR=4.0						
	comp=Z,1.4nm,0.8s						
MJAR	**Matsushiro Arr**	**80.47**	**326**	P	**P**	**02 15 09.9**	**-1.4**
MJAR				IAmb	IAmb	02 17 19.5	
	comp=Z,17nm,1.6s						
PLCA	**Paso Flores**	**80.73**	**133**	LR	LR	02 44 29.7	
	comp=Z,65nm,18.3s,baz=236,slow=31						
PSI	**Prapat**	**85.50**	**276**	LR	LR	02 54 30.7	
	comp=Z,104nm,20.2s,baz=127,slow=36						
LPIG	**La Paz**	**86.26**	**58**	LR	LR	02 49 19.4	
	comp=Z,123nm,18.1s,baz=226,slow=32						
KSRS	**Korea Array**	**86.38**	**320**	P	**P**	**02 15 41.4**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=157,slow=6.4,SNR=2.6						
KSRS				LR	LR	02 53 30.3	
	comp=Z,41nm,18.1s,baz=90,slow=35						
	comp=Z,1.7nm,0.8s						
NJ2	**Nanjing**	**87.93**	**311**	*e*P	**P**	**02 15 51.5**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
PFO	**Pinyon Flats O**	**88.33**	**47**	LR	LR	02 52 40.5	
	comp=Z,93nm,18.3s,baz=230,slow=34						
PETK	**Petropavlovsk-**	**88.53**	**346**	P	**P**	**02 15 52.1**	**+0.6**
	comp=Z,6.4nm,0.8s,baz=122,slow=5.1,SNR=9.3						
	comp=Z,6.4nm,0.8s						
PETK	**Petropavlovsk-**	**88.53**	**346**	P	**P**	**02 15 53.0**	**+1.4**
YBH	**Yreka Blue Hor**	**90.44**	**38**	LR	LR	02 52 10.0	
	comp=Z,6.7nm,18.6s,baz=248,slow=33						
NVAR	**Mina Array Bea**	**90.51**	**43**	P	**P**	**02 16 04.1**	**+2.6**
	comp=Z,0.8nm,0.8s,baz=228,slow=7.6,SNR=4.5						
NVAR				LR	LR	02 48 36.6	
	comp=Z,96nm,19.4s,baz=271,slow=30						
	comp=Z,0.8nm,0.8s						
NVAR	**Mina Array Bea**	**90.51**	**43**	P	**P**	**02 16 02.4**	**+0.9**
CN2	**Changchun**	**92.28**	**323**	P	**P**	**02 16 11.5**	**+2.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.9s						
NNA	**Nana**	**92.86**	**106**	LR	LR	02 51 48.2	
	comp=Z,127nm,18.0s,baz=244,slow=32						
CMIG	**Matias Romero**	**93.87**	**72**	LR	LR	02 53 23.0	
	comp=Z,57nm,18.1s,baz=188,slow=32						
CMAR	**Chiang Mai Arr**	**94.12**	**289**	LR	LR	03 00 15.5	
	comp=Z,28nm,20.1s,baz=135,slow=37						
ATAH	**Atahualpa**	**94.33**	**101**	LR	LR	02 50 21.3	
	comp=Z,61nm,19.6s,baz=316,slow=30						
MA2	**Magadan**	**95.99**	**345**	LR	LR	02 54 38.8	
	comp=Z,69nm,20.5s,baz=110,slow=32						
PZH	**PanZhiHua**	**96.41**	**297**	P	**P**	**02 16 31.0**	**+2.1**
LPAZ	**La Paz**	**97.18**	**115**	LR	LR	02 50 39.2	
	comp=Z,26nm,20.9s,baz=240,slow=29						
NEW	**Newport**	**97.83**	**36**	LR	LR	02 54 35.1	
	comp=Z,155nm,19.2s,baz=231,slow=32						
HHC	**Hu-ho-hao-te**	**98.05**	**314**	*e*P	Pdif	02 16 36.8	+0.9
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
JTS	**Las Juntas de**	**98.33**	**83**	LR	LR	02 54 59.8	
	comp=Z,56nm,18.1s,baz=290,slow=32						
CPUP	**Villa Florida**	**98.38**	**129**	LR	LR	02 56 33.6	
	comp=Z,99nm,18.1s,baz=222,slow=33						
LZH	**Lanzhou**	**100.23**	**306**	*e*P	**Pdif**	**02 16 48.5**	**+2.6**
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
YKA	**Yellowknife Ar**	**108.13**	**26**	PKKPbc	PKKPbc	02 32 40.3	+0.3
	comp=Z,0.5nm,1.0s,baz=41,slow=2.6,SNR=5.6						
WMQ	**Urumqi**	**114.79**	**307**	*e*PKP	**PKiKP**	**02 21 40.8**	**+0.9**
MKAR	**Makanchi Array**	**119.41**	**309**	PKP	**PKPdf**	**02 21 48.2**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=85,slow=0.7,SNR=6.6						
ZALV	**Zalesovo Beam**	**120.00**	**317**	PKP	**PKiKP**	**02 21 49.7**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=94,slow=3.4,SNR=3.9						
ZALV	**Zalesovo Beam**	**120.00**	**317**		**PKiKP**	**02 21 49.3**	**-0.2**
KURK	**Kurchatov**	**122.83**	**313**		**PKiKP**	**02 21 55.4**	**+0.2**
KURBB	**Kurchatov Arra**	**122.87**	**312**	PKP	**PKPdf**	**02 21 54.7**	**-0.4**
	comp=Z,1.7nm,0.5s,baz=117,slow=1.9,SNR=27						
LSZ	**Lusaka**	**125.50**	**212**	PKP	**PKiKP**	**02 22 03.2**	**+1.4**
	comp=Z,1.0nm,0.3s,baz=152,slow=0.9,SNR=5.5						
LSZ	**Lusaka**	**125.50**	**212**		**PKPdf**	**02 22 01.1**	**-0.3**
KK31	**Karatay Array**	**126.42**	**302**		**PKiKP**	**02 22 02.5**	**-0.1**
KKAR	**Karatay Array**	**126.42**	**302**		**PKiKP**	**02 22 02.8**	**+0.1**
SHAA	**Shahritus**	**126.72**	**295**		**PKiKP**	**02 22 04.5**	**+1.0**
BVAR	**Borovoye Array**	**128.26**	**314**	PKP	**PKiKP**	**02 22 06.3**	**+0.3**
	comp=Z,2.4nm,0.5s,baz=141,slow=2.1,SNR=22						
BORK	**Borovoye**	**128.31**	**314**		**PKPdf**	**02 22 04.7**	**-0.7**
SPITS	**Spitsbergen Ar**	**134.55**	**356**	PKP	**PKiKP**	**02 22 18.2**	**+0.2**
	comp=Z,4.8nm,0.9s,baz=254,slow=5.1,SNR=4.5						
ARCES	**ARCESS Array B**	**141.33**	**347**	PKhKP	PKPpre	02 22 25.4	
	comp=Z,6.0nm,1.2s,baz=46,slow=6.9,SNR=4.8						
KBZ	**Khabaz**	**146.43**	**300**	PKPbc	**PKPab**	**02 22 40.6**	**-0.6**
	comp=Z,6.3nm,0.8s,baz=172,slow=4.1,SNR=16						
FINES	**FINESS Array B**	**147.74**	**338**	PKPbc	**PKPbc**	**02 22 43.8**	**+0.5**
	comp=Z,14nm,0.7s,baz=41,slow=4.6,SNR=55						
FINES	**FINESS Array B**	**147.74**	**338**		**PKPbc**	**02 22 42.9**	**-0.4**
NB2	**NORSAR Subarra**	**151.54**	**350**	PKP	**PKiKP**	**02 22 53.4**	**+0.1**
	comp=Z,4.7nm,0.8s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**151.54**	**350**	PKPbc	**PKiKP**	**02 22 53.6**	**+0.3**
	comp=Z,5.6nm,0.8s,baz=25,slow=4.2,SNR=11						
MMAI	**Mount Meron Ar**	**151.86**	**279**	PKPbc	**PKiKP**	**02 22 55.5**	**+0.6**
	comp=Z,16nm,0.6s,baz=62,slow=7.9,SNR=11						
HFS	**Hagfors**	**152.00**	**347**	PKPbc	**PKiKP**	**02 22 54.1**	**-0.1**
	comp=Z,7.4nm,0.8s,baz=156,slow=4.7,SNR=11						
NACGM	**Naroch**	**152.13**	**328**	*e*PKiKP	**PKiKP**	**02 22 55.8**	**+1.2**
	comp=Z,21nm,0.8s,baz=50						
DBIC	**Dimbokro**	**152.83**	**166**	PKPbc	**PKiKP**	**02 22 58.0**	**+0.7**
	comp=Z,3.8nm,0.7s,baz=179,slow=3.1,SNR=5.0						
DBIC	**Dimbokro**	**152.83**	**166**		**PKiKP**	**02 22 57.7**	**+0.3**
AKASG	**Malin Array Be**	**153.37**	**319**	PKPbc	**PKiKP**	**02 22 57.6**	**+0.3**
	comp=Z,2.2nm,0.4s,baz=50,slow=3.0,SNR=11						
BR131	**Keskin Array S**	**153.63**	**293**		**PKPbc**	**02 22 58.0**	**-0.3**
BRTR	**Keskin Array B**	**153.63**	**293**	PKPbc	**PKiKP**	**02 22 58.7**	**+0.2**
	comp=Z,6.4nm,0.9s,baz=127,slow=3.9,SNR=25						
BRTR	**Keskin Array B**	**153.63**	**293**		**PKPbc**	**02 22 58.0**	**-0.3**
LANS	**Liptovska Anna**	**159.35**	**325**	*e*PKP	**PKPab**	**02 23 39.5**	**+4.4**
TORD	**Torodi Ar. Bea**	**159.96**	**180**	PKP	**PKPdf**	**02 23 00.5**	**+1.3**
	comp=Z,1.2nm,1.1s,baz=169,slow=1.9,SNR=3.7						
TORD				PKPab	**PKPab**	**02 23 39.7**	**+1.2**
	comp=Z,2.1nm,0.6s,baz=175,slow=3.5,SNR=12						
TORD	**Torodi Ar. Bea**	**159.96**	**180**		**PKPdf**	**02 22 59.9**	**+0.7**
TORD				PKPab	**PKPab**	**02 23 38.1**	**-0.4**
RONA	**Rosalia, Austr**	**161.86**	**327**	*e*PKP	**PKPab**	**02 23 48.3**	**+2.2**
	comp=Z,6.4nm,2.1s						
CONA	**Conrad Observa**	**161.89**	**328**	*e*PKP	**PKPab**	**02 23 46.6**	**+0.3**
	comp=Z,2.6nm,0.9s						
GERES	**GERESS Array B**	**162.05**	**334**	PKPab	**PKPab**	**02 23 46.8**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=31,slow=8.3,SNR=5.0						
MEM	**Membach**	**162.39**	**351**	*d*PKP	**PKPab**	**02 23 48.9**	**+0.7**
MOA	**Molln**	**162.63**	**331**	*e*PKP	**PKPab**	**02 23 49.6**	**+0.2**
	comp=Z,6.4nm,2.0s						
BMRD	**Maredsous**	**162.84**	**353**	*d*PKP	**PKPab**	**02 23 49.5**	**-0.7**
BIOA	**Bad Ischl, Aus**	**163.01**	**331**	*e*PKP	**PKPab**	**02 23 51.9**	**+0.7**
	comp=Z,1.3nm,0.8s						
WLF	**Walferdange**	**163.30**	**350**	*d*PKP	**PKPab**	**02 23 53.2**	**+1.0**
WATA	**Walderalm**	**164.09**	**335**	*e*PKP	**PKPab**	**02 23 55.5**	**-0.6**
	comp=Z,3.9nm,1.2s						
ABTA	**Abfaltersbach**	**164.23**	**332**	*e*PKP	**PKPab**	**02 23 55.9**	**-0.7**
	comp=Z,11nm,2.3s						
RETA	**Reutte**	**164.24**	**337**	*e*PKP	**PKPab**	**02 23 56.6**	**+0.1**
	comp=Z,6.4nm,1.1s						
SQTA	**Sankt Quirin**	**164.32**	**335**	*e*PKP	**PKPab**	**02 23 57.2**	**+0.2**
	comp=Z,2.1nm,0.7s						
FETA	**Feichten**	**164.66**	**336**	*e*PKP	**PKPab**	**02 23 57.7**	**-0.8**
	comp=Z,2.6nm,1.0s						
DAVA	**Damuels**	**164.69**	**339**	*e*PKP	**PKPab**	**02 23 58.7**	**+0.1**
	comp=Z,6.3nm,1.0s						

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*IDC **31** 02:07:43.7±0.8, 33°.29S×178°.59W, h0^{km}, mb4.4/4, mbtmp4.4/5, ML4.1/1, Error ellipse: s-maj=31.9km s-min=25.4km az=76.0*

*WEL **31** 02:07:43.6±1.5, 33°S±7°×17°8W±2°6, h33^{km}, M4.6/6, mB5.0/4, ML4.7/8, MLv4.7/6, Mw(mB)4.3/4, Error ellipse: s-maj=34.3km s-min=5.9km az=103.0, confirmed*

*NEIC **31** 02:07:45.4±1.7, 33°.11S±0°.07×178°.47W±0°.05, h10^{km}±1^{km}, mb4.5/16, Error ellipse: s-maj=12.2km s-min=7.8km az=173.0*

ISC 31 02:07:49.8±0.7**, 33°.36S**±0°.09×**178°.6W**±0°.1**, h41**^{km}**, n64, σ1^{s}27**/63**, mb4.5**/11**, 3C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.13**	**8**	P	Pn	02 08 45.0	-5.3
GLKZ				S	Sn	02 09 28.1	-9.3
RAO	**Raoul Island**	**4.14**	**8**	Sn	Sn	02 09 28.4	-9.3
	100nm,0.3s,baz=338,slow=23,SNR=2.1						
RAO	**Raoul Island**	**4.14**	**8**	Pn	Pn	02 08 43.7	-6.8
RAO					Sn	02 09 30.0	-7.7
MXZ	**Matakaoa Point**	**4.88**	**210**	Pn	**Pn**	**02 09 02.2**	**+1.5**
MXZ	**Matakaoa Point**	**4.88**	**210**	P	**Pn**	**02 09 01.0**	**+0.4**
WMGZ	**Waiomatatini S**	**5.06**	**208**	P	**Pn**	**02 09 05.0**	**+1.9**
HAZ	**Te Kaha**	**5.28**	**213**	P	**Pn**	**02 09 05.6**	**-0.4**
PUZ	**Puketiti**	**5.34**	**208**	P	**Pn**	**02 09 07.6**	**+0.6**
RUGZ	**Raukumara Rang**	**5.49**	**212**	P	**Pn**	**02 09 08.3**	**-0.9**
TWGZ	**Tauwhareparae**	**5.54**	**209**	P	**Pn**	**02 09 10.3**	**+0.5**
CNGZ	**Carnagh Statio**	**5.72**	**206**	P	**Pn**	**02 09 09.9**	**-2.2**
MWZ	**Matawai**	**5.87**	**211**	P	**Pn**	**02 09 12.2**	**-2.0**
URZ	**Urewera**	**5.99**	**214**	Pn	**Pn**	**02 09 14.1**	**-1.8**
	4.7nm,0.3s,baz=262,slow=3.9,SNR=17						
URZ				Sn	**Sn**	**02 10 24.1**	**+0.9**
	7.2nm,0.3s,baz=144,slow=20,SNR=5.8						
	20nm,0.4s						
RTZ	**Ruatahuna**	**6.34**	**213**		**Pn**	**02 09 20.0**	**-0.7**
TOZ	**Tahuroa Road**	**6.48**	**226**		**Pn**	**02 09 24.3**	**+1.8**
OUZ	**Omahuta**	**6.71**	**252**	P	Pn	02 09 30.0	+4.4
BKZ	**Black Stump Fm**	**7.01**	**213**	Pn	**Pn**	**02 09 28.5**	**-1.4**
BKZ	**Black Stump Fm**	**7.01**	**213**	P	**Pn**	**02 09 28.5**	**-1.4**
NGZ	**Ngauruhoe**	**7.45**	**217**	P	**Pn**	**02 09 35.6**	**-0.4**
BFZ	**Birch Farm**	**8.38**	**208**	P	**Pn**	**02 09 44.6**	**-4.0**
MRZ	**Mangatainoka R**	**8.63**	**211**	P	**Pn**	**02 09 48.2**	**-4.0**
TMWZ	**Te Maipa**	**8.88**	**208**	P	**Pn**	**02 09 53.7**	**-1.8**
KIW	**Kapiti Island**	**9.09**	**213**	P	**Pn**	**02 09 56.3**	**-2.1**
TCW	**Tory Channel**	**9.66**	**214**	P	**Pn**	**02 10 03.8**	**-2.3**
WHZ	**Wether Hill Ro**	**16.21**	**216**	Pn	**P**	**02 11 36.0**	**-1.1**
WHZ				IAmb	IAmb	02 11 47.0	
	comp=Z,35nm,1.4s						
CTAO	**Charters Tower**	**33.88**	**284**	P	**P**	**02 14 30.0**	**+1.2**
COEN	**Coen**	**39.68**	**290**	P	**P**	**02 15 17.2**	**-0.9**
AS31	**Alice Springs**	**42.52**	**270**	P	**P**	**02 15 41.5**	**+0.1**
ASAR	**Alice Springs**	**42.52**	**270**	P	**P**	**02 15 41.3**	**-0.1**
	comp=Z,9.4nm,0.7s,baz=110,slow=7.5,SNR=45						
ASAR				PcP	**PcP**	**02 17 33.7**	**+0.1**
	comp=Z,0.9nm,0.9s,baz=129,slow=3.8,SNR=4.4						
	comp=Z,9.4nm,0.7s						
ASAR	**Alice Springs**	**42.52**	**270**	P	**P**	**02 15 40.9**	**-0.5**
ASAR					**PcP**	**02 17 33.3**	**-0.3**
WR8	**Warramunga Arr**	**43.63**	**276**	P	**P**	**02 15 50.2**	**-0.2**
WR8				IAmb	IAmb	02 15 50.9	
	comp=Z,4.5nm,0.7s						
WRAB	**Tennant Creek**	**43.77**	**276**	P	**P**	**02 15 51.5**	**0.0**
WRAB				IAmb	IAmb	02 15 51.8	
	comp=Z,5.2nm,0.6s						
WRA	**Warramunga Arr**	**43.77**	**276**	P	**P**	**02 15 51.4**	**-0.3**
	comp=Z,5.1nm,0.6s,baz=116,slow=7.8,SNR=35						
	comp=Z,5.1nm,0.6s						
WRA	**Warramunga Arr**	**43.77**	**276**	P	**P**	**02 15 51.3**	**-0.3**
WB0	**Warramunga Arr**	**43.81**	**276**		**P**	**02 15 51.6**	**-0.3**
WB0				IAmb	IAmb	02 15 52.2	
	comp=Z,8.5nm,0.6s						
FORT	**Forrest**	**44.85**	**258**	P	**P**	**02 15 59.8**	**-0.3**
FORT				IAmb	IAmb	02 16 16.1	
	comp=Z,8.6nm,0.9s						
MTN	**Manton Dam**	**50.00**	**282**	P	**P**	**02 16 39.4**	**-0.8**
MTN				IAmb	IAmb	02 17 02.6	
	comp=Z,4.2nm,1.0s						
FITZ	**Fitzroy Crossi**	**51.90**	**273**	P	**P**	**02 16 53.8**	**-0.7**
CASY	**Casey**	**52.29**	**209**	P	**P**	**02 16 57.9**	**+1.2**
FAKI	**Fak Fak**	**54.93**	**293**	P	**P**	**02 17 15.9**	**-0.9**
QSPA	**South Pole Qui**	**56.75**	**180**	P	**P**	**02 17 30.1**	**+0.8**
	comp=Z,3.3nm,1.0s,baz=45,slow=2.4,SNR=5.4						
	comp=Z,3.3nm,1.0s						
QSPA	**South Pole Qui**	**56.75**	**180**	P	**P**	**02 17 30.3**	**+0.9**
QSPA				IAmb	IAmb	02 17 57.0	
	comp=Z,5.3nm,0.9s						
SNAA	**Sanae**	**75.22**	**179**	⇑P	**P**	**02 19 30.0**	**+2.3**
	comp=Z,78nm,1.0s						
SNAA	**Sanae**	**75.22**	**179**	P	**P**	**02 19 28.0**	**+0.3**
	comp=Z,1.8nm,0.9s,baz=196,slow=12,SNR=8.7						
	comp=Z,1.8nm,0.9s						
SNAA	**Sanae**	**75.22**	**179**	P	**P**	**02 19 28.4**	**+0.7**
SNAA				IAmb	IAmb	02 19 53.0	
	comp=Z,8.5nm,1.3s						
VNA3	**Neumayer Olymp**	**75.39**	**176**	⇑P	**P**	**02 19 29.2**	**+0.6**
	comp=Z,9.9nm,0.7s						
VNA2	**Neumayer--Watz**	**75.82**	**177**	⇑P	**P**	**02 19 32.1**	**+1.0**
	comp=Z,7.7nm,0.6s,baz=177,slow=4.8						
HMU	**Henry Mountain**	**94.93**	**47**	P	**P**	**02 21 06.7**	**-1.3**
MKAR	**Makanchi Array**	**119.25**	**309**	PKP	**PKPdf**	**02 26 33.6**	**-0.5**
	comp=Z,0.3nm,0.8s,baz=116,slow=3.4,SNR=1.7						
MKAR	**Makanchi Array**	**119.25**	**309**		**PKPdf**	**02 26 34.1**	**0.0**
KURBB	**Kurchatov Arra**	**122.72**	**312**	PKP	**PKPdf**	**02 26 39.9**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=116,slow=2.0,SNR=8.6						
BVAR	**Borovoye Array**	**128.12**	**314**	PKP	**PKPdf**	**02 26 51.5**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=168,slow=1.7,SNR=7.3						
ARTI	**Arti**	**135.11**	**319**	PKP	**PKPdf**	**02 27 04.7**	**+0.8**
	comp=Z,1.9nm,0.9s,baz=356,slow=18,SNR=2.0						
KBZ	**Khabaz**	**146.24**	**300**	PKPbc	**PKPbc**	**02 27 25.6**	**+0.1**
	comp=Z,1.3nm,1.0s,baz=122,slow=7.5,SNR=3.8						
FINES	**FINESS Array B**	**147.72**	**338**	PKPbc	**PKPdf**	**02 27 27.9**	**+1.6**
	comp=Z,4.2nm,0.6s,baz=54,slow=4.6,SNR=19						
FINES	**FINESS Array B**	**147.72**	**338**		**PKPbc**	**02 27 28.3**	**-0.9**
NOA	**NORSAR Array B**	**151.58**	**350**	PKPbc	**PKiKP**	**02 27 39.7**	**+0.5**
	comp=Z,2.4nm,1.1s,baz=24,slow=3.9,SNR=2.2						
MMAI	**Mount Meron Ar**	**151.60**	**279**	PKPbc	**PKiKP**	**02 27 40.8**	**+0.6**
	comp=Z,2.9nm,0.5s,baz=104,slow=2.7,SNR=3.6						
HFS	**Hagfors**	**152.02**	**347**	PKPbc	**PKPbc**	**02 27 40.1**	**+0.4**
	comp=Z,3.2nm,0.8s,baz=111,slow=3.7,SNR=6.7						
AKASG	**Malin Array Be**	**153.26**	**319**	PKPbc	**PKPbc**	**02 27 42.5**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=54,slow=2.8,SNR=2.5						
AKASG	**Malin Array Be**	**153.26**	**319**		**PKPbc**	**02 27 43.0**	**+0.2**
BRTR	**Keskin Array B**	**153.42**	**293**	PKPbc	**PKPbc**	**02 27 43.1**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=162,slow=3.7,SNR=6.1						
TORD	**Torodi Ar. Bea**	**159.87**	**181**	PKPab	**PKPab**	**02 28 24.3**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=171,slow=2.9,SNR=4.7						
TORD	**Torodi Ar. Bea**	**159.87**	**181**		**PKPab**	**02 28 24.5**	**+0.5**

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*IDC **31** 02:10:25.8±1.8, 33°.27S×178°.39W, h0^{km}, mb3.9/4, mbtmp4.0/5, ML4.0/1, Error ellipse: s-maj=46.8km s-min=32.2km az=52.0*

*NEIC **31** 02:10:27.3±0.8, 33°.4S±0°.1×178°.4W±0°.2, h10^{km}±1^{km}, mb4.2/10, Error ellipse: s-maj=26.6km s-min=21.3km az=113.0*

*WEL **31** 02:10:28.9±0.5, 33°S±8°×17°9W±1°7, h33^{km}, M4.3/5, mB5.2/2, ML4.4/23, MLv4.3/5, Mw(mB)4.5/2, Error ellipse: s-maj=24.6km s-min=3.5km az=112.6, confirmed*

ISC 31 02:10:32.4±0.9**, 33°.45S**±0°.09×**178°.6W**±0°.1**, h41**^{km}**, n72, σ2^{s}19**/98**, mb4.1**/9**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.22**	**8**	P	Pn	02 11 22.3	-12
GLKZ				S	Sn	02 12 10.5	-12
MXZ	**Matakaoa Point**	**4.81**	**211**	Pn	**Pn**	**02 11 41.7**	**-0.6**
MXZ	**Matakaoa Point**	**4.81**	**211**	P	Pn	02 11 36.8	-5.4
MXZ				S	**Sn**	**02 12 38.9**	**+2.2**
WMGZ	**Waiomatatini S**	**4.99**	**208**	P	**Pn**	**02 11 44.5**	**-0.2**
WMGZ				S	**Sn**	**02 12 45.3**	**+4.3**
PKGZ	**Pakihiroa**	**5.17**	**211**	P	**Pn**	**02 11 46.4**	**-0.7**
PKGZ				S	**Sn**	**02 12 49.2**	**+3.7**
HAZ	**Te Kaha**	**5.21**	**213**	P	**Pn**	**02 11 47.1**	**-0.6**
HAZ				S	**Sn**	**02 12 52.4**	**+5.9**
PUZ	**Puketiti**	**5.27**	**208**	P	**Pn**	**02 11 50.3**	**+1.7**
PUZ				S	**Sn**	**02 12 49.2**	**+1.1**
RUGZ	**Raukumara Rang**	**5.42**	**213**	P	**Pn**	**02 11 50.9**	**+0.1**
RUGZ				S	**Sn**	**02 12 56.2**	**+4.2**
TWGZ	**Tauwhareparae**	**5.47**	**210**	P	**Pn**	**02 11 51.6**	**+0.2**
TWGZ				S	**Sn**	**02 12 58.8**	**+5.7**
CNGZ	**Carnagh Statio**	**5.65**	**206**	P	**Pn**	**02 11 52.2**	**-1.5**
CNGZ				S	**Sn**	**02 12 53.0**	**-4.3**
TKGZ	**Te Karaka**	**5.75**	**209**	P	**Pn**	**02 11 56.7**	**+1.6**
TKGZ				S	**Sn**	**02 13 02.6**	**+2.8**
MWZ	**Matawai**	**5.80**	**212**	P	**Pn**	**02 11 57.3**	**+1.5**
MWZ				S	**Sn**	**02 13 00.7**	**-0.4**
GWTS	**Gisborne Waipa**	**5.88**	**208**	S	**Sn**	**02 13 07.7**	**+4.7**
URZ	**Urewera**	**5.93**	**215**	Pn	**Pn**	**02 11 58.4**	**+0.9**
	3.2nm,0.3s,baz=253,slow=4.1,SNR=6.4						
URZ				Sn	**Sn**	**02 13 06.3**	**+2.2**
	2.8nm,0.3s,baz=148,slow=19,SNR=2.3						
	9.3nm,0.3s						
URZ	**Urewera**	**5.93**	**215**	P	**Pn**	**02 11 55.4**	**-2.1**
URZ				S	**Sn**	**02 13 06.4**	**+2.3**
RAGZ	**Rawiri**	**5.98**	**212**	P	**Pn**	**02 11 57.3**	**-1.0**
RAGZ				S	**Sn**	**02 13 07.7**	**+2.1**
RIGZ	**Rimuhau**	**6.01**	**208**	P	**Pn**	**02 11 57.3**	**-1.5**
RIGZ				S	**Sn**	**02 13 09.0**	**+2.7**
PRGZ	**Paritu Road**	**6.15**	**207**	S	**Sn**	**02 13 10.9**	**+1.1**
SNGZ	**Shannon Statio**	**6.25**	**211**	P	**Pn**	**02 12 02.4**	**+0.4**
SNGZ				S	**Sn**	**02 13 13.5**	**+1.3**
KNZ	**Kokohu**	**6.32**	**207**	P	**Pn**	**02 12 01.2**	**-1.8**
MHGZ	**Mahia Peninsul**	**6.35**	**205**	P	**Pn**	**02 12 06.3**	**+2.9**
MHGZ				S	**Sn**	**02 13 16.0**	**+1.5**
RAHZ	**Arahi**	**6.47**	**211**	P	**Pn**	**02 12 05.0**	**-0.1**
RAHZ				S	**Sn**	**02 13 21.2**	**+3.5**
MTHZ	**Maungataniwha**	**6.53**	**213**	P	**Pn**	**02 12 06.9**	**+1.1**
MTHZ				S	**Sn**	**02 13 22.4**	**+3.4**
WHHZ	**Waihua**	**6.54**	**210**	S	**Sn**	**02 13 19.9**	**+0.5**
OUZ	**Omahuta**	**6.69**	**253**	P	Pn	02 12 12.6	+4.5
MRHZ	**Matea Rd**	**6.71**	**215**	P	**Pn**	**02 12 10.1**	**+1.7**
MRHZ				S	**Sn**	**02 13 25.0**	**+1.4**
NMHZ	**Naumai**	**6.74**	**212**	P	**Pn**	**02 12 09.5**	**+0.6**
NMHZ				S	**Sn**	**02 13 25.6**	**+1.2**
ARHZ	**Aropaoanui**	**6.80**	**210**	P	**Pn**	**02 12 08.8**	**-0.7**
ARHZ				S	**Sn**	**02 13 26.9**	**+1.3**
BKZ	**Black Stump Fm**	**6.94**	**213**	Pn	**Pn**	**02 12 11.0**	**-0.6**
BKZ	**Black Stump Fm**	**6.94**	**213**	P	**Pn**	**02 12 10.1**	**-1.4**
BKZ				S	**Sn**	**02 13 26.3**	**-3.0**
MCHZ	**McNeill Hill**	**7.08**	**211**	P	**Pn**	**02 12 12.7**	**-0.7**
MCHZ				S	**Sn**	**02 13 31.4**	**-1.1**
CKHZ	**Cape Kidnapper**	**7.10**	**208**	S	**Sn**	**02 13 31.4**	**-1.7**
KFHS	**Kaweka Forest**	**7.17**	**212**	S	Sn	02 13 24.4	-10
KWHZ	**Kaweka Forest**	**7.18**	**213**	P	**Pn**	**02 12 15.2**	**+0.4**
KWHZ				S	**Sn**	**02 13 35.2**	**+0.1**
TMVZ	**Te Maari**	**7.28**	**218**	S	**Sn**	**02 13 33.3**	**-4.5**
NTVZ	**North Tongarir**	**7.29**	**218**	P	**Pn**	**02 12 17.2**	**+0.8**
ETVZ	**East Tongariro**	**7.30**	**217**	P	**Pn**	**02 12 16.5**	**0.0**
ETVZ				S	**Sn**	**02 13 36.5**	**-1.6**
KAHZ	**Kahuranaki**	**7.30**	**209**	P	**Pn**	**02 12 14.0**	**-2.5**
KAHZ				S	**Sn**	**02 13 38.4**	**+0.5**
SNVZ	**South Ngauruho**	**7.37**	**217**	P	**Pn**	**02 12 15.9**	**-1.7**
SNVZ				S	**Sn**	**02 13 39.7**	**-0.2**
KRHZ	**Kereru**	**7.38**	**212**	S	**Sn**	**02 13 38.4**	**-1.7**
MOVZ	**Moawhango**	**7.48**	**216**	S	**Sn**	**02 13 40.4**	**-2.2**
PXZ	**Pawanui**	**7.51**	**208**	S	**Sn**	**02 13 39.7**	**-3.3**
PNHZ	**Pukenui**	**7.68**	**211**	P	**Pn**	**02 12 18.4**	**-3.2**
PNHZ				S	**Sn**	**02 13 46.1**	**-1.3**
PRHZ	**Porangahau**	**7.80**	**208**	P	**Pn**	**02 12 20.4**	**-2.9**
PRHZ				S	**Sn**	**02 13 47.4**	**-2.8**
DVHZ	**Dannevirke**	**8.02**	**210**	P	Pn	02 12 21.0	-5.2
DVHZ				S	**Sn**	**02 13 53.1**	**-2.4**
POWZ	**Post Office Ro**	**8.26**	**211**	S	**Sn**	**02 14 00.2**	**-1.4**
BFZ	**Birch Farm**	**8.31**	**208**	Pn	**Pn**	**02 12 29.7**	**-0.5**
BFZ	**Birch Farm**	**8.31**	**208**	P	Pn	02 12 22.5	-7.7
BFZ				S	**Sn**	**02 14 01.5**	**-1.2**
MRZ	**Mangatainoka R**	**8.56**	**211**	P	**Pn**	**02 12 32.0**	**-1.7**
MRZ				S	**Sn**	**02 14 05.3**	**-3.8**
TMWZ	**Te Maipa**	**8.81**	**208**	S	**Sn**	**02 14 09.7**	**-5.4**
KIW	**Kapiti Island**	**9.03**	**213**	S	**Sn**	**02 14 17.3**	**-3.0**
TCW	**Tory Channel**	**9.59**	**214**	S	**Sn**	**02 14 29.4**	**-4.9**
LTZ	**Lake Taylor**	**11.76**	**215**	Pn	**Pn**	**02 13 17.2**	**-0.2**
MGBR	**Mount Gambier**	**33.29**	**251**	P	**P**	**02 17 06.2**	**+0.2**
CTAO	**Charters Tower**	**33.91**	**284**	P	**P**	**02 17 12.3**	**+0.7**
CTAO				IAmb	IAmb	02 17 12.6	
	comp=Z,5.7nm,1.3s						
AS31	**Alice Springs**	**42.53**	**271**	P	**P**	**02 18 24.8**	**+0.6**
ASAR	**Alice Springs**	**42.53**	**271**	P	**P**	**02 18 24.8**	**+0.7**
	comp=Z,3.0nm,0.7s,baz=111,slow=7.4,SNR=10						
	comp=Z,3.0nm,0.7s						
ASAR	**Alice Springs**	**42.53**	**271**	P	**P**	**02 18 24.5**	**+0.4**
WR8	**Warramunga Arr**	**43.66**	**276**	P	**P**	**02 18 32.5**	**-0.8**
WR8				IAmb	IAmb	02 18 34.3	
	comp=Z,2.2nm,0.9s						
WRA	**Warramunga Arr**	**43.80**	**276**	P	**P**	**02 18 34.4**	**0.0**
	comp=Z,1.5nm,0.6s,baz=116,slow=7.9,SNR=9.3						
	comp=Z,1.5nm,0.6s						
WRA	**Warramunga Arr**	**43.80**	**276**	P	**P**	**02 18 33.6**	**-0.7**
WB0	**Warramunga Arr**	**43.83**	**276**	P	**P**	**02 18 34.9**	**+0.2**
WB0				IAmb	IAmb	02 18 39.1	
	comp=Z,10nm,1.5s						
FORT	**Forrest**	**44.85**	**258**	P	**P**	**02 18 42.9**	**+0.3**
FITZ	**Fitzroy Crossi**	**51.92**	**273**	P	**P**	**02 19 36.9**	**-0.4**
FITZ				IAmb	IAmb	02 19 38.5	
	comp=Z,1.6nm,1.4s						
QSPA	**South Pole Qui**	**56.66**	**180**	P	**P**	**02 20 11.9**	**+0.7**
	comp=Z,0.3nm,0.8s,baz=45,slow=10.0,SNR=0.7						
	comp=Z,0.3nm,0.8s						
QSPA	**South Pole Qui**	**56.66**	**180**	P	**P**	**02 20 11.3**	**0.0**
BELA	**Belgrano 2**	**66.84**	**172**	P	**P**	**02 21 20.4**	**+1.1**
BELA				IAmb	IAmb	02 21 28.9	
	comp=Z,4.3nm,1.3s						
SNAA	**Sanae**	**75.12**	**179**	P	**P**	**02 22 09.9**	**+0.1**
	comp=Z,1.7nm,1.1s,baz=201,slow=5.0,SNR=1.9						
	comp=Z,1.7nm,1.1s						
SNAA	**Sanae**	**75.12**	**179**	P	**P**	**02 22 09.5**	**-0.3**
SNAA				IAmb	IAmb	02 22 17.1	
	comp=Z,3.7nm,1.3s						
KIV	**Kislovodsk**	**146.43**	**300**	PKPdf	**PKPdf**	**02 30 05.5**	**-1.9**
FINES	**FINESS Array B**	**147.80**	**338**	PKPbc	**PKPbc**	**02 30 11.2**	**-0.7**
	comp=Z,2.1nm,0.7s,baz=20,slow=4.0,SNR=5.4						
FINES	**FINESS Array B**	**147.80**	**338**		**PKPdf**	**02 30 09.5**	**+0.5**

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*GCG **31** 02:33:54.8±1.3, 14°.70N×91°.04W, h4^{km}±8^{km}, MD3.7, ML3.0, MW2.8*

*CATAC **31** 02:33:57.2±0.2, 15°N±2°×9°1W±°, h1^{km}±1^{km}, M3.3/14, MLv3.3/14, Error ellipse: s-maj=4.6km s-min=2.3km az=32.1, confirmed*

ISC 31 02:33:56.7±0.9**, 14°.71N**±0°.04×**91°.00W**±0°.03**, h10**^{km}**, n35, σ1^{s}75**/35**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESSG	**Sabana Grande**	**0.36**	**152**	*i* P	**Pg**	**02 34 03.6**	**-0.3**
SOKI	**Kika Raxquin**	**0.40**	**286**	*i* P	**Pg**	**02 34 03.1**	**-1.7**
SOKI				IAML		02 34 13.5	
	comp=E,2µm,0.6s						
STG8	**El Palmar, Qui**	**0.42**	**233**	*i* P	**Pb**	**02 34 07.1**	**+0.7**
STG8				IAML		02 34 20.7	
	comp=N,494nm,0.3s						
STG5	**El Palmar, Qui**	**0.45**	**228**	*i* P	**Pg**	**02 34 05.5**	**-0.1**
STG5				*i* S	**Sb**	**02 34 14.6**	**+1.0**
GCG4	**OSOP**	**0.47**	**104**	*i* P	**Pg**	**02 34 06.2**	**+0.2**
QUEO	**Labor Ovalle**	**0.52**	**288**	*i* P	**Pg**	**02 34 06.9**	**-0.1**
QUIS	**Sacapulas**	**0.59**	**352**	*i* P	**Pg**	**02 34 07.6**	**-0.6**
QUIS				IAML		02 34 16.4	
	comp=E,2µm,0.2s						
APG	**El Apazote**	**0.60**	**60**	*i* P	**Pg**	**02 34 08.0**	**-0.4**
FG16	**Alotenango, Sa**	**0.64**	**132**	*i* P	Pg	02 34 02.3	-7.0
FG16				IAML		02 34 11.1	
	comp=E,6µm,0.1s						
PCG5	**San Vicente Pa**	**0.78**	**129**	*i* P	Pg	02 34 06.2	-5.6
PCG5				*i* P	Pb	02 34 06.3	-6.1
PCG5				*i* S	**Sg**	**02 34 13.7**	**-8.2**
FAME	**Alcaldia de Sa**	**1.29**	**132**	P	**Pn**	**02 34 20.2**	**-0.5**
FAME	**Alcaldia de Sa**	**1.29**	**132**	S	**Sb**	**02 34 38.3**	**+0.7**
SLOZ	**Alcaldia de Sa**	**1.36**	**120**	P	**Pn**	**02 34 21.5**	**-0.3**
SLOZ	**Alcaldia de Sa**	**1.36**	**120**	S	**Sb**	**02 34 40.4**	**+0.6**
LOAL	**Lomas de Alarc**	**1.38**	**121**	S	**Sn**	**02 34 41.2**	**+0.8**
NUBE	**Las Nubes**	**1.43**	**124**	S	**Sg**	**02 34 43.4**	**+0.6**
NUBE	**Las Nubes**	**1.43**	**124**	P	**Pn**	**02 34 23.3**	**+0.5**
UNIC	**Universidad Ca**	**1.58**	**117**	P	**Pn**	**02 34 25.4**	**+0.5**
UNIC	**Universidad Ca**	**1.58**	**117**	S	**Sn**	**02 34 46.5**	**+1.0**
CEVE	**Cerro Verde**	**1.60**	**123**	P	**Pb**	**02 34 26.5**	**+0.1**
CEVE	**Cerro Verde**	**1.60**	**123**	S	**Sb**	**02 34 47.8**	**+0.9**
MTO3	**Montecristo**	**1.62**	**101**	P	**Pn**	**02 34 25.8**	**+0.3**
MTO3	**Montecristo**	**1.62**	**101**	S	**Sb**	**02 34 48.8**	**+1.4**
CEDA	**San Andres**	**1.80**	**120**	S	**Sb**	**02 34 52.8**	**+0.3**
CEDA	**San Andres**	**1.80**	**120**	P	**Pn**	**02 34 29.1**	**+1.2**
JAYA	**Jayaque - finc**	**1.83**	**125**	P	**Pn**	**02 34 29.7**	**+1.3**
JAYA	**Jayaque - finc**	**1.83**	**125**	S	**Sb**	**02 34 54.2**	**+0.6**
PMON	**Piamonte**	**1.91**	**121**	P	**Pn**	**02 34 31.0**	**+1.5**
PMON	**Piamonte**	**1.91**	**121**	S	**Sn**	**02 34 55.3**	**+1.6**

UTEC	Universidad Te	2.01	120	S	Sb	02 34 58.3	-0.3
LALI	Alcalda de L	2.03	126	P	Pb	02 34 33.3	-0.4
LALI	Alcalda de L	2.03	126	S	Sb	02 34 59.9	+0.8
SARH	Santa Rosa de	2.17	88	S	Sb	02 35 03.7	+0.6
SCLA	Alcaldia de Sa	2.42	114	P	Pn	02 34 38.3	+1.8
PACA	Pacayal	2.88	115	P	Pn	02 34 45.3	+2.5

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*IDC **31** 02:34:10.7±1.3,23°.28S×179°.80W,h510km±14km, mb3.9/19,mbtmp4.8/22,Error ellipse: s-maj=13.8km s-min=11.0km az=176.0*

*NOU **31** 02:34:12.4,23°.37S×179°.61W,h549km,mb4.8/49,South of Fiji Islands*

*NEIC **31** 02:34:12.3±1.7,23°.35S±0°.10×179°.78W±0°.10, h526km±5km,mb4.6/104,Error ellipse: s-maj=14.2km s-min=12.6km az=187.0*

ISC 31 02:34:12.2±0.3**,23°.42S**±0°.06×**179°.77W**±0°.05**,h532**km**,**
n237,σ1ˢ**25**/242**,mb4.5**/72**,3D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	6.04	164	P	P	02 35 49.0	-1.2
	292nm,0.3s,baz=120,slow=6.4,SNR=5.3						
RAO	Raoul Island	6.04	164	P	P	02 35 48.0	-2.2
GLKZ	Green Lake	6.05	165	P	P	02 35 49.8	-0.4
NIUE	Niue	10.14	67		P	02 36 30.9	-0.5
NIUE	Niue	10.14	67	P	P	02 36 30.6	-0.8
NIUE	Niue	10.14	67	S	S	02 38 24.7	-1.1
NIUE	Niue	10.14	67	P	P	02 36 30.5	-0.8
NIUE				S	S	02 38 26.5	+0.7
MARNC	Mare, Loyalty	11.45	277	P	P	02 36 45.4	+0.4
MARNC	Mare, Loyalty	11.45	277	P	P	02 36 45.2	+0.2
PINNC	Pines Island,	11.80	271	P	P	02 36 49.9	+1.2
PINNC	Pines Island,	11.80	271	P	P	02 36 51.4	+2.7
PINNC	Pines Island,	11.80	271	P	P	02 36 50.8	+2.1
AFI	Afiamalu	12.11	40	P	P	02 36 49.7	-2.4
OUENC	Ouen Island, N	12.38	272	P	P	02 36 57.7	+3.0
DZM	Mont Dzumac	12.79	273	P	P	02 36 58.2	-0.9
	18nm,0.8s,baz=72,slow=16,SNR=8.3						
DZM	Mont Dzumac	12.79	273		P	02 37 00.4	+1.3
DZM	Mont Dzumac	12.79	273	P	P	02 37 00.3	+1.2
DZM	Mont Dzumac	12.79	273	P	P	02 37 00.4	+1.3
OUZ	Omahuta	13.10	205	P	P	02 37 03.5	+1.5
GRZ	Great Barrier	13.44	197	P	P	02 37 06.4	+0.9
WCZ	Waipu Caves	13.48	201	P	P	02 37 07.4	+1.4
KUZ	Kuaotunu	13.84	195	P	P	02 37 09.0	-0.7
KUZ	Kuaotunu	13.84	195	P	P	02 37 09.8	+0.1
MXZ	Matakaoa Point	14.20	186	P	P	02 37 14.8	+1.4
MXZ	Matakaoa Point	14.20	186	P	P	02 37 14.5	+1.1
MXZ				S	S	02 39 42.7	0.0
WMGZ	Waiomatatini S	14.44	186	P	P	02 37 17.6	+1.7
HAZ	Te Kaha	14.45	188	P	P	02 37 15.2	-0.7
HAZ				S	S	02 39 43.8	-3.7
RUGZ	Raukumara Rang	14.66	188	P	P	02 37 16.9	-1.5
TGRZ	Tauranga	14.67	193	P	P	02 37 17.5	-0.7
PUZ	Puketiti	14.70	186	P	P	02 37 19.6	+0.9
TWGZ	Tauwhareparae	14.84	187	P	P	02 37 20.2	+0.1
EDRZ	Edgecumbe	14.94	191	P	P	02 37 22.3	+1.1
URZ	Urewera	15.03	190	P	P	02 37 17.9	-4.2
	39nm,0.3s,baz=260,slow=3.3,SNR=76						
URZ				S	S	02 39 52.2	-6.4
	9.4nm,0.3s,baz=58,slow=23,SNR=11						
URZ	Urewera	15.03	190	P	P	02 37 21.0	-1.1
URZ	Urewera	15.03	190	P	P	02 37 20.3	-1.8
MWZ	Matawai	15.05	188	P	P	02 37 20.9	-1.4
TKGZ	Te Karaka	15.11	187	P	P	02 37 21.4	-1.5
MUGZ	Murupara	15.30	190	P	P	02 37 23.4	-1.5
HIZ	Hauiti	15.73	196	P	P	02 37 30.3	+1.0
HIZ	Hauiti	15.73	196	P	P	02 37 32.0	+2.7
BKZ	Black Stump Fm	16.02	191	P	P	02 37 30.7	-1.6
BKZ	Black Stump Fm	16.02	191	P	P	02 37 28.8	-3.5
KHEZ	Kahui Hut	16.69	197	P	P	02 37 39.8	+1.1
BFZ	Birch Farm	17.54	190	P	P	02 37 43.0	-3.5
SNZO	South Karori	18.43	193	P	P	02 37 52.7	-1.9
QRZ	Quartz Range	18.53	199	P	P	02 37 55.5	0.0
QRZ	Quartz Range	18.53	199	P	P	02 37 56.6	+1.1
RAR	Rarotonga	18.63	87	P	P	02 37 56.6	-0.2
	18nm,0.8s,baz=224,slow=2.7,SNR=4.8						
RAR	Rarotonga	18.63	87	P	P	02 37 56.1	-0.7
KHZ	Kahutara	19.75	195	P	P	02 38 05.9	-0.7
KHZ	Kahutara	19.75	195	P	P	02 38 07.1	+0.5
RPZ	Rata Peaks	21.61	198	P	P	02 38 23.4	-0.1
RPZ	Rata Peaks	21.61	198	P	P	02 38 25.1	+1.6
ODZ	Otahua Downs	22.95	198	P	P	02 38 36.8	+1.3
ODZ	Otahua Downs	22.95	198	P	P	02 38 37.1	+1.6
TW1H	Toowoomba 1 Ha	25.82	255	P	P	02 39 02.3	+1.1
ARMA	Armidale	26.39	248		P	02 39 07.4	+1.0
ARMA				IAmb	IAmb	02 39 08.5	
	comp=Z,32nm,0.9s						
ARMA	Armidale	26.39	248	P	P	02 39 08.1	+1.8
EIDS	Eidsvold	26.60	260		P	02 39 08.4	+0.3
EIDS	Eidsvold	26.60	260	P	P	02 39 08.9	+0.8
EIDS	Eidsvold	26.60	260	P	P	02 39 08.7	+0.6
AUPHS	Peel High Scho	27.13	247	P	P	02 39 13.7	+1.0
CNB	Canberra Magne	29.28	239	P	P	02 39 32.9	+1.4
AULRC	Lightning Ridg	29.44	251	P	P	02 39 33.4	+0.6
AUDAR	Daramalan Coll	29.44	239	P	P	02 39 34.0	+1.2
CAN	Canberra	29.57	239	P	P	02 39 34.5	+0.6
CAN	Canberra	29.57	239	P	P	02 39 34.8	+0.9
TV1H	Townsville Har	31.38	271	P	P	02 39 50.0	+0.4
CMSA	Cobar Meteorol	31.59	248	P	P	02 39 51.5	+0.1
CTA	Charters Tower	31.69	269	P	P	02 39 52.7	+0.4
	comp=Z,85nm,0.6s,baz=97,slow=12,SNR=99						
	comp=Z,85nm,0.6s						
CTA	Charters Tower	31.69	269	P	P	02 39 52.4	+0.1
CTAO	Charters Tower	31.69	269		P	02 39 52.9	+0.6
CTAO	Charters Tower	31.69	269	P	P	02 39 52.4	+0.1
QLP	Quilpie	32.71	257	P	P	02 40 00.8	-0.1
TOO	Toolangi	32.89	236		P	02 40 02.6	+0.3
TAU	Tasmania Unive	33.42	226	P	P	02 40 07.0	+0.4
MTSU	Mount Surprise	33.93	272	P	P	02 40 11.4	0.0
BRAT	Ballarat	34.08	237	P	P	02 40 13.5	+1.2
AUMTC	Mt Clear Colle	34.14	237	P	P	02 40 14.5	+1.7
PMG	Port Moresby	34.54	288	P	P	02 40 15.5	-0.9
	comp=Z,48nm,0.7s,baz=97,slow=8.1,SNR=17						
	comp=Z,48nm,0.7s						
PMG	Port Moresby	34.54	288	P	P	02 40 16.4	-0.1
STKA	Stephens Creek	35.10	247	P	P	02 40 21.2	+0.2
	comp=Z,17nm,0.6s,baz=90,slow=10,SNR=40						
	comp=Z,17nm,0.6s						
STKA	Stephens Creek	35.10	247	P	P	02 40 21.5	+0.5
STKA	Stephens Creek	35.10	247	P	P	02 40 21.3	+0.3
INKA	Innaminka	35.77	255	P	P	02 40 27.7	+1.2
INKA				IAmb	IAmb	02 40 28.6	
	comp=Z,19nm,0.9s						
COEN	Coen	36.25	278		P	02 40 30.9	+0.1
COEN				IAmb	IAmb	02 40 32.2	
	comp=Z,17nm,1.1s						
COEN	Coen	36.25	278	P	P	02 40 31.4	+0.7
AUMBR	Murray Bridge	37.34	242	P	P	02 40 39.3	0.0
HTT	Hallett	37.47	245	P	P	02 40 40.5	0.0
QIS	Mount Isa	37.70	266	P	P	02 40 42.1	-0.4
MANU	Manus Island	38.27	299	P	P	02 40 46.6	-0.7
WHYH	Whyalla	38.57	246	P	P	02 40 49.4	0.0
BBOO	Buckleboo	39.83	246		P	02 40 59.1	-0.5
BBOO	Buckleboo	39.83	246	P	P	02 40 59.4	-0.2
AS31	Alice Springs	42.33	260		P	02 41 19.4	-0.2
AS31				IAmb	IAmb	02 41 20.7	
	comp=Z,12nm,0.8s						
ASAR	Alice Springs	42.33	260	P	P	02 41 19.4	-0.2
	comp=Z,54nm,0.8s,baz=94,slow=8.1,SNR=373						
ASAR				ScP	ScP	02 46 04.7	+3.6
	comp=Z,3.2nm,0.8s,baz=82,slow=3.8,SNR=6.5						
ASAR				S	S	02 46 59.2	-3.2
	comp=Z,1.6nm,0.9s,baz=97,slow=14,SNR=4.6						
	comp=Z,54nm,0.8s						
WR0	Warramunga Arr	42.47	266	P	P	02 41 19.6	-1.1
WR0				IAmb	IAmb	02 41 20.8	
	comp=Z,27nm,0.8s						
WR8	Warramunga Arr	42.50	266		P	02 41 20.3	-0.7
WB2	Warramunga Arr	42.64	266	P	P	02 41 21.9	-0.3
WB0	Warramunga Arr	42.65	266		P	02 41 21.4	-0.8
WRAB	Tennant Creek	42.65	266	P	P	02 41 21.4	-0.7
WRAB	Tennant Creek	42.65	266	P	P	02 41 20.8	-1.3
WRA	Warramunga Arr	42.65	266	P	P	02 41 20.9	-1.3
	comp=Z,43nm,0.7s,baz=90,slow=5.7,SNR=298						
WRA				ScP	ScP	02 46 05.4	+3.0
	comp=Z,3.2nm,0.9s,baz=102,slow=4.2,SNR=4.8						
WRA				S	S	02 47 02.9	-4.1
	comp=Z,2.5nm,1.0s,baz=102,slow=14,SNR=5.5						
	comp=Z,43nm,0.7s						
WRA	Warramunga Arr	42.65	266	P	P	02 41 20.5	-1.7
JAY	Jayapura	43.52	293	P	P	02 41 27.7	-1.4
	comp=Z,23nm,1.0s,baz=43,slow=6.7,SNR=3.8						
	comp=Z,23nm,1.0s						
FORT	Forrest	46.68	249		P	02 41 52.5	-0.5
MTN	Manton Dam	47.63	274		P	02 41 59.6	-0.8
MTN				IAmb	IAmb	02 42 00.0	
	comp=Z,9.9nm,0.7s						
OVEH	Oceanview Est	48.36	31	P	P	02 42 05.8	-0.1
OVEH				IAmb	IAmb	02 42 25.3	
	comp=Z,128nm,1.3s						
MWH	Mokuaweoweo	48.73	31	P	P	02 42 07.4	-1.6
KNRA	Kununurra	48.90	269		P	02 42 09.6	-0.3
KNRA				IAmb	IAmb	02 42 10.6	
	comp=Z,36nm,0.8s						
FAKI	Fak Fak	50.65	286	P	P	02 42 22.0	-0.8
FAKI				IAmb	IAmb	02 42 51.3	
	comp=Z,17nm,1.0s						
FITZ	Fitzroy Crossi	51.08	265	P	P	02 42 25.8	0.0
	comp=Z,16nm,0.6s,baz=99,slow=7.0,SNR=50						
	comp=Z,16nm,0.6s						
FITZ	Fitzroy Crossi	51.08	265		P	02 42 25.9	+0.1
FITZ	Fitzroy Crossi	51.08	265	P	P	02 42 25.8	0.0
VNDA	Vanda	54.88	185	P	P	02 42 53.6	+1.8
	comp=Z,1.5nm,0.7s,baz=24,slow=6.8,SNR=3.2						
	comp=Z,1.5nm,0.7s						
VNDA	Vanda	54.88	185	P	P	02 42 53.7	+1.8
SOEI	Soe	55.02	274	P	P	02 42 54.9	+0.8
KLBR	Kellerberrin	55.37	247	P	P	02 42 55.7	-0.5
BATI	Baumata	55.41	274	P	P	02 42 57.6	+1.0
	comp=Z,29nm,0.6s,baz=97,slow=1.9,SNR=6.8						
	comp=Z,29nm,0.6s						
NWAO	Narrogin (SRO)	55.63	245	P	P	02 42 57.5	-0.4
NWAO				IAmb	IAmb	02 42 58.1	
	comp=Z,17nm,0.9s						
MBWA	Marble Bar	55.67	260		P	02 42 57.7	-0.6
MBWA				IAmb	IAmb	02 42 58.6	
	comp=Z,36nm,0.9s						
MBWA	Marble Bar	55.67	260	P	P	02 42 58.0	-0.3
BLDU	Ballidu	56.41	248	P	P	02 43 02.8	-0.5
SANI	Sanana	56.60	284	P	P	02 43 04.0	-0.9
MORW	Morawa	57.24	250	P	P	02 43 08.9	-0.2
MORW				IAmb	IAmb	02 43 09.6	
	comp=Z,28nm,0.9s						
MORW	Morawa	57.24	250	P	P	02 43 08.7	-0.4
GIRL	Giralia	60.23	256	P	P	02 43 27.9	-1.4
TOLI2	Tolitoli	62.66	284	P	P	02 43 45.0	-0.3
TOLI2				IAmb	IAmb	02 43 46.5	
	comp=Z,16nm,0.7s						
TOLI2	Tolitoli	62.66	284	P	P	02 43 44.9	-0.4
QSPA	South Pole Qui	66.66	180	P	P	02 44 10.9	+1.1
	comp=Z,7.3nm,1.0s,baz=28,slow=0.9,SNR=24						
	comp=Z,7.3nm,1.0s						
QSPA	South Pole Qui	66.66	180	P	P	02 44 10.6	+0.8
QSPA				IAmb	IAmb	02 44 13.3	
	comp=Z,11nm,1.1s						
UGM	Wanagama	68.31	271	P	P	02 44 20.1	-0.6
MJAR	Matsushiro Arr	71.62	325	P	P	02 44 39.9	0.0
	comp=Z,1.8nm,0.8s,baz=148,slow=4.4,SNR=2.9						
	comp=Z,1.8nm,0.8s						
MAW	Mawson	78.27	200	P	P	02 45 18.3	+1.7
	comp=Z,2.9nm,0.8s,baz=174,slow=8.1,SNR=4.2						
	comp=Z,2.9nm,0.8s						
PEA0B	Petropavlovsk-	78.68	346	P	P	02 45 19.3	+0.4
PEA0B				IAmb	IAmb	02 46 03.4	
	comp=Z,59nm,1.3s						
PETK	Petropavlovsk-	78.68	346	P	P	02 45 18.8	-0.1
	comp=Z,5.8nm,0.7s,baz=137,slow=6.6,SNR=8.3						
	comp=Z,5.8nm,0.7s						
PETK	Petropavlovsk-	78.68	346	P	P	02 45 19.0	+0.1
NJ2	Nanjing	80.51	311	*e*P	P	02 45 31.3	+2.3
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
DPP	Dos Picos Cty	82.05	49	P	P	02 45 37.2	+0.3
SLBS	Sierra La Lagu	82.38	60	P	P	02 45 39.9	+1.0
SLBS				IAmb	IAmb	02 45 54.3	
	comp=Z,21nm,1.5s						
ISA	Isabella, Lake	82.53	46	P	P	02 45 39.6	+0.2
O02D	Mt. Diablo Mer	82.55	40	P	P	02 45 39.0	-0.4
O02D				IAmb	IAmb	02 45 43.1	
	comp=Z,20nm,1.2s						
CMB	Columbia Colle	82.70	43		P	02 45 41.2	+1.1
ORV	Oroville	82.94	41		P	02 45 41.5	+0.2
PLK4	Peulik 4	83.09	12	P	P	02 45 42.6	+1.0
WSHM	Spangler Hills	83.15	47	P	P	02 45 42.2	-0.3
CLC	China Lake	83.20	46	P	P	02 45 43.2	+0.5
ELIB	Princess Elisa	83.56	187	*d*P	P	02 45 45.1	+1.0
IRM	Iron Mountain	83.94	49	P	P	02 45 47.0	+0.6
IRM				IAmb	IAmb	02 45 49.3	
	comp=Z,17nm,1.4s						
GWY	Greenwater Val	84.03	46	P	P	02 45 47.2	+0.2
DANC	Danby, Needles	84.04	48		P	02 45 48.3	+1.4
DANC				IAmb	IAmb	02 45 49.6	
	comp=Z,9.7nm,1.0s						
NVAR	Mina Array Bea	84.26	44	P	P	02 45 49.3	+1.1
	comp=Z,3.7nm,1.0s,baz=250,slow=5.7,SNR=13						
	comp=Z,3.7nm,1.0s						
NVAR	Mina Array Bea	84.26	44	P	P	02 45 48.5	+0.3
PAHR	Pah Rah Range	84.33	42	P	P	02 45 48.4	0.0
NV11	Mina Array Sit	84.36	44		P	02 45 48.5	0.0
N15K	Kwethluk River	84.83	10	IAmb	IAmb	02 45 52.2	
	comp=Z,26nm,1.0s						
P18K	Big Mountain,	84.95	12	P	P	02 45 50.8	+0.1
P18K				IAmb	IAmb	02 45 50.9	
	comp=Z,8.2nm,0.8s						
SNAA	Sanae	85.14	179	P	P	02 45 51.3	-0.5
	comp=Z,0.8nm,0.7s,baz=332,slow=15,SNR=1.4						
	comp=Z,0.8nm,0.7s						
SNAA	Sanae	85.14	179	P	P	02 45 51.5	-0.2
O18K	Koktuh Hills	85.38	12	P	P	02 45 52.0	-0.8
O18K				IAmb	IAmb	02 45 53.7	
	comp=Z,18nm,0.8s						
J05D	Fort Rock, OR	85.40	39	P	P	02 45 53.7	+0.2
J05D				IAmb	IAmb	02 45 56.0	
	comp=Z,6.4nm,0.8s						
PRN	Pahroc Range	85.79	46	P	P	02 45 55.6	+0.1
O19K	Port Alsworth	85.87	12		P	02 45 54.0	-1.1
PINE	Pine Mountain	85.88	38	P	P	02 45 55.9	0.0
PINE				IAmb	IAmb	02 45 58.0	
	comp=Z,6.7nm,0.9s						
TUC	Tucson	86.06	52		P	02 45 57.5	+0.7
TUC				IAmb	IAmb	02 45 60.0	
	comp=Z,6.7nm,0.9s						
WVOR	Wild Horse Val	86.41	41		P	02 45 58.8	+0.5
X16A	Lo Mia Camp, P	86.67	50	P	P	02 45 59.9	+0.1
LCMT	Little Creek M	86.79	47	P	P	02 46 00.4	+0.2
CCUT	Cedar City	87.00	47	P	P	02 46 02.5	+1.2
SLKM	Skilak Lake	87.02	14	P	P	02 46 00.5	-0.1
SLKM				IAmb	IAmb	02 46 01.6	
	comp=Z,21nm,0.9s						
U15A	North Rim	87.12	48	P	P	02 46 03.2	+1.2
U15A				IAmb	IAmb	02 46 04.7	
	comp=Z,7.9nm,0.9s						
GNW	Green Mountain	87.22	35	P	P	02 46 01.3	-0.4
GNW				IAmb	IAmb	02 46 21.3	
	comp=Z,15nm,1.4s						
SPU	Mount Spurr	87.23	13	P	P	02 46 00.4	-1.1
SPU				IAmb	IAmb	02 46 36.5	
	comp=Z,8.5nm,1.2s						
LON	Longmire	87.24	36	P	P	02 46 03.0	+1.0
PKCU	Pink Cliffs	87.65	47	P	P	02 46 05.8	+1.3
PKCU				IAmb	IAmb	02 46 07.6	
	comp=Z,5.4nm,0.9s						
SUA	Susitna One	87.76	13	P	P	02 46 04.1	-0.1
SUA				IAmb	IAmb	02 46 04.8	
	comp=Z,13nm,0.7s						
G08A	Pilot Rock	87.92	38		P	02 46 06.7	+1.4
G08A				IAmb	IAmb	02 46 07.6	
	comp=Z,6.1nm,0.9s						
MXC	Moxie City	87.95	36	P	P	02 46 05.8	+0.5
MXC				IAmb	IAmb	02 46 07.5	
	comp=Z,5.1nm,0.8s						
MTPU	Mount Pierson	88.05	47	P	P	02 46 08.3	+1.9
SKT	Skwentna	88.06	13	P	P	02 46 04.8	-0.7
SKT				IAmb	IAmb	02 46 48.0	
	comp=Z,18nm,1.5s						
LTY	Liberty	88.17	36	P	P	02 46 07.1	+0.7
LTY				IAmb	IAmb	02 46 08.3	
	comp=Z,6.7nm,1.0s						
E07A	Sunnyside	88.18	37		P	02 46 06.1	-0.2
E07A				IAmb	IAmb	02 46 08.4	
	comp=Z,7.7nm,0.9s						
KNK	Knik Glacier	88.22	14	P	P	02 46 07.1	+0.9
PMR	Palmer	88.23	14	P	P	02 46 06.8	+0.7
PMR				IAmb	IAmb	02 46 07.0	
	comp=Z,20nm,1.1s						
GHO	Glory Hole Cre	88.44	14		P	02 46 07.8	+0.6
CUT	Chulitna	88.71	13	P	P	02 46 08.1	-0.3
L22K	Petersville	88.71	13	P	P	02 46 08.2	-0.2
L22K				IAmb	IAmb	02 46 09.1	
	comp=Z,8.9nm,0.9s						
BMRM	Bremner River	88.78	16	P	P	02 46 09.3	+0.4
EPH	Ephrata	88.80	36	P	P	02 46 10.2	+1.0
EPH				IAmb	IAmb	02 46 10.7	
	comp=Z,3.6nm,0.7s						
HMU	Henry Mountain	88.97	48	P	P	02 46 10.9	+0.4
TGL	Tana Glacier	89.07	17	P	P	02 46 10.7	+0.5
TMUT	Trail Mountain	89.35	46	P	P	02 46 13.5	+1.1
TMUT				IAmb	IAmb	02 46 15.1	
	comp=Z,9.4nm,0.9s						
GLB	Gilahina Butte	89.39	16	P	P	02 46 12.7	+1.0
GLB				IAmb	IAmb	02 46 53.9	
	comp=Z,19nm,1.4s						
CMAR	Chiang Mai Arr	89.56	290	P	P	02 46 14.5	+1.1
	comp=Z,0.9nm,0.5s,baz=135,slow=3.1,SNR=9.2						
	comp=Z,0.9nm,0.5s						
HLID	Hailey	89.59	41		P	02 46 14.7	+1.5
HLID				IAmb	IAmb	02 46 15.6	
	comp=Z,4.2nm,1.0s						
LOGN	Logan Glacier	89.63	18	P	P	02 46 13.8	+0.9
TRF	Thorofare Moun	89.64	13		P	02 46 12.7	-0.2
TRF				IAmb	IAmb	02 46 13.2	
	comp=Z,10nm,0.9s						
HVU	Hansel Valley	89.64	44		P	02 46 14.8	+1.4
HVU				IAmb	IAmb	02 46 15.1	
	comp=Z,4.3nm,0.8s						
SRU	San Rafael Swe	89.71	47	P	P	02 46 14.9	+1.0
SRU				IAmb	IAmb	02 46 16.0	
	comp=Z,9.0nm,0.9s						
RND	Reindeer	89.90	13	P	P	02 46 14.2	+0.2
RND				IAmb	IAmb	02 46 14.7	
	comp=Z,16nm,1.2s						
TX31	Lajitas Ar. Si	90.00	58		P	02 46 16.7	+1.4
TX31				IAmb	IAmb	02 46 18.1	
	comp=Z,4.4nm,1.1s						
TXAR	Lajitas Array	90.00	58	P	P	02 46 17.2	+1.9
	comp=Z,2.0nm,0.8s,baz=208,slow=6.8,SNR=15						
	comp=Z,2.0nm,0.8s						
TXAR	Lajitas Array	90.00	58	P	P	02 46 16.9	+1.6
P18A	Preston Nutter	90.16	46	P	P	02 46 15.9	-0.2
TCUT	Toone Canyon	90.17	45		P	02 46 16.9	+0.8
TCUT				IAmb	IAmb	02 46 18.2	
	comp=Z,8.1nm,0.8s						
HHC	Hu-ho-hao-te	90.23	315	*e*P	P	02 46 17.3	+1.2
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,4.6s						
BSUT	Blindstream Ca	90.29	45		P	02 46 17.2	+0.5
BSUT				IAmb	IAmb	02 46 19.0	
	comp=Z,11nm,0.9s						
HWUT	Hardware Ranch	90.32	44	P	P	02 46 16.5	-0.1
HWUT				IAmb	IAmb	02 46 18.2	
	comp=Z,3.4nm,0.8s						
PV10	Paradox Valley	90.35	48	P	P	02 46 17.1	+0.1
PV10				IAmb	IAmb	02 46 18.4	
	comp=Z,6.1nm,1.0s						
PZH	PanZhiHua	90.64	299	P	P	02 46 19.3	+0.9
ILAR	Eielson Array	91.52	13	P	P	02 46 20.5	-0.8
	comp=Z,0.8nm,0.8s,baz=213,slow=5.4,SNR=8.0						
	comp=Z,0.8nm,0.8s						
PDAR	Pinedale Array	92.20	44	P	P	02 46 24.9	-0.5
	comp=Z,1.4nm,0.8s,baz=236,slow=3.3,SNR=9.6						
	comp=Z,1.4nm,0.8s						
PDAR	Pinedale Array	92.20	44	P	P	02 46 25.0	-0.3
DRIO	Del Rio	92.42	59		P	02 46 26.8	+0.5
DRIO				IAmb	IAmb	02 46 28.2	
	comp=Z,5.5nm,0.8s						
LZH	Lanzhou	93.25	308	*e*P	P	02 46 27.0	-3.2
LZH				pP	PcP	02 46 40.0	+10
LZH				pmax	pmax		
	comp=Z,21nm,1.6s						
MKAR	Makanchi Array	111.98	313	PKiKP	PKiKP	02 51 45.7	-1.2
	comp=Z,0.2nm,0.5s,baz=75,slow=1.6,SNR=2.1						
BVAR	Borovoye Array	120.22	319	PKP	PKPdf	02 52 01.8	-0.6
	comp=Z,0.6nm,0.4s,baz=152,slow=0.8,SNR=6.6						
SPITS	Spitsbergen Ar	124.66	356	PKP	PKPdf	02 52 10.1	-0.2
	comp=Z,14nm,1.1s,baz=298,slow=3.1,SNR=2.6						
ARCES	ARCESS Array B	131.46	348	PKP	PKPdf	02 52 23.2	-0.3
	comp=Z,4.0nm,0.9s,baz=29,slow=2.8,SNR=5.5						
FINES	FINESS Array B	138.06	342	PKhKP	PKPpre	02 52 28.2	
	comp=Z,5.0nm,1.0s,baz=57,slow=7.0,SNR=3.5						
FINES				PKP	PKPdf	02 52 36.3	+0.4
	comp=Z,6.3nm,1.1s,baz=68,slow=5.9,SNR=2.4						
FINES				SKPbc	SKPbc	02 55 20.8	+0.8
	comp=Z,2.2nm,0.8s,baz=354,slow=1.4,SNR=3.4						
FINES	FINESS Array B	138.06	342		PKPdf	02 52 35.9	0.0
NB2	NORSAR Subarra	141.64	351	PKP	PKPpre	02 52 37.6	
	comp=Z,0.7nm,0.6s,baz=21,slow=3.5						
NOA	NORSAR Array B	141.64	351	PKhKP	PKPpre	02 52 37.9	
	comp=Z,0.9nm,0.6s,baz=15,slow=4.5,SNR=3.5						
HFS	Hagfors	142.12	349	PKhKP	PKPpre	02 52 39.2	
	comp=Z,4.9nm,0.4s,baz=61,slow=3.6,SNR=66						
AKASG	Malin Array Be	144.68	328	PKP	PKPdf	02 52 47.8	-0.3
	comp=Z,1.6nm,0.4s,baz=46,slow=4.2,SNR=9.2						
AKASG	Malin Array Be	144.68	328		PKPbc	02 52 48.3	0.0
BRTR	Keskin Array B	147.46	308	PKPbc	PKPbc	02 52 56.2	-0.4
	comp=Z,0.6nm,0.6s,baz=167,slow=5.7,SNR=4.3						
BRTR	Keskin Array B	147.46	308		PKPdf	02 52 54.3	+1.1
MMAI	Mount Meron Ar	147.69	295	PKPbc	PKPbc	02 52 57.6	+0.2
	comp=Z,1.6nm,0.3s,baz=96,slow=5.8,SNR=1.9						
EKA	Eskdalemuir Ar	148.03	4	PKPbc	PKPbc	02 52 56.5	-0.9
	comp=Z,0.8nm,0.4s,baz=340,slow=2.3,SNR=14						
CLL	Collm	150.46	344	*i* PKPbc	PKiKP	02 53 03.6	-0.3
	comp=Z,6.0nm,0.7s						
CLL				*i* PKPab	PKPab	02 53 12.3	0.0
GERES	GERESS Array B	152.48	341	PKPbc	PKPbc	02 53 07.6	-0.6
	comp=Z,0.4nm,0.7s,baz=0.0,slow=0.4,SNR=2.2						
BMRD	Maredsous	152.93	354	*d*PKP	PKPab	02 53 22.3	-0.4
RCHB	Rochefort	153.03	353	*d*PKP	PKPbc	02 53 08.3	-0.9
FUORN	Ofenpass-Fuorn	155.48	343		PKPab	02 53 34.0	-0.2
ESDC	Sonseca Array	163.41	11	PKPab	PKPab	02 54 08.4	-0.3
	comp=Z,1.9nm,1.1s,baz=345,slow=3.7,SNR=7.1						
TORD	Torodi Ar. Bea	169.69	188	PKPab	PKPab	02 54 37.5	+0.6
	comp=Z,0.8nm,1.1s,baz=185,slow=1.4,SNR=2.3						

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*IDC **31** 02:41:17.1±2.2,6°.52S×146°.91E,h110km±19km,mb3.6/8, mbtmp4.0/11,Error ellipse: s-maj=29.1km s-min=16.3km az=72.0*

ISC 31 02:41:16.4±1.0**,6°.50S**±0°.07×**146°.9E**±0°.2**,h100**km**,n13,**
σ1ˢ**25**/16**,mb3.8**/8**,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	2.90	174	P	Pn	02 42 03.0	+2.2
	58nm,0.4s,baz=23,slow=6.0,SNR=21						
PMG				S	Sn	02 42 36.2	+1.1
	102nm,0.5s,baz=346,slow=9.0,SNR=5.5						
JAY	Jayapura	7.30	303	P	Pn	02 43 01.4	+1.0
	6.9nm,0.4s,baz=171,slow=7.3,SNR=6.8						
CTA	Charters Tower	13.52	182	P	P	02 44 29.6	-0.1
	3.9nm,0.3s,baz=354,slow=14,SNR=12						
CTA				S	Sn	02 46 51.2	-1.7
	0.7nm,0.4s,baz=7.1,slow=16,SNR=1.2						
WRA	Warramunga Arr	18.06	221	P	P	02 45 20.0	-0.1
	5.8nm,0.6s,baz=43,slow=12,SNR=21						
ASAR	Alice Springs	21.13	215	P	P	02 45 53.7	+0.4
	2.9nm,0.4s,baz=55,slow=8.9,SNR=47						
ASAR				S	S	02 49 41.1	-1.8
	0.4nm,0.7s,baz=31,slow=20,SNR=2.8						
	2.9nm,0.4s						
FITZ	Fitzroy Crossi	23.68	239	P	P	02 46 18.6	-0.5
	13nm,0.6s,baz=57,slow=13,SNR=47						
	13nm,0.6s						
STKA	Stephens Creek	25.72	190	P	P	02 46 36.2	-1.3
	1.9nm,0.6s,baz=352,slow=8.9,SNR=4.1						
	1.9nm,0.6s						
CMAR	Chiang Mai Arr	53.36	299	P	P	02 50 26.9	+0.9
	1.6nm,0.6s,baz=122,slow=5.7,SNR=14						
	1.6nm,0.6s						
MKAR	Makanchi Array	77.79	321	P	P	02 53 02.9	+0.1
	0.2nm,0.5s,baz=102,slow=6.6,SNR=4.0						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	79.36	328	P	P	02 53 09.3	-1.9
	0.4nm,0.6s,baz=131,slow=4.4,SNR=2.2						
	0.4nm,0.6s						
QSPA	South Pole Qui	83.47	180	P	P	02 53 33.0	+0.2
	0.8nm,0.6s,baz=279,slow=1.1,SNR=7.7						
	0.8nm,0.6s						
ILAR	Eielson Array	86.00	23	P	P	02 53 44.4	-0.9
	0.2nm,0.6s,baz=98,slow=9.5,SNR=4.8						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**145.07**	**284**	PKPbc	**PKPbc**	**03 00 43.0**	**+0.2**
	1.2nm,0.6s,baz=70,slow=4.4,SNR=8.2						

IDC 31 02:57:03.5±3.1**,33°.02S×178°.41W,h0^{km},mb3.8**/2**,**
mbtmp3.8/3**,ML3.7**/1**,Error ellipse: s-maj=72.6km**
s-min=45.7km az=124.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.38**	**214**	Pn	Pn	02 58 38.4	-0.3
	1.7nm,0.3s,baz=256,slow=5.4,SNR=11						
URZ				Sn	Sn	02 59 48.8	-3.3
	2.1nm,0.3s,baz=145,slow=20,SNR=8.5						
	5.0nm,0.3s						
ASAR	**Alice Springs**	**42.69**	**270**	P	P	03 05 02.4	0.0
	0.9nm,0.6s,baz=110,slow=7.5,SNR=23						
	0.9nm,0.6s						
WRA	**Warramunga Arr**	**43.91**	**275**	P	P	03 05 12.0	-0.2
	0.7nm,0.5s,baz=117,slow=8.2,SNR=9.3						
	0.7nm,0.5s						
FINES	**FINESS Array B**	**147.46**	**338**	PKPbc	PKPbc	03 16 47.8	-0.8
	3.2nm,0.9s,baz=45,slow=4.3,SNR=6.0						

*JMA **31** 03:13:26.7±0.3,33°N±4°×13°7E±°,h410^{km},MV3.3/29,*
FAR S OFF TOKAI DISTRICT

*IDC **31** 03:13:27.5±1.9,33°.15N×137°.29E,h421^{km}±33^{km},mb2.6/3,*
mbtmp3.4/6,Error ellipse: s-maj=68.7km s-min=25.5km
az=61.0

ISC 31 03:13:26.9±1.1**,33°.1N**±0°.1×**137°.2E**±0°.1**,h400^{km},n17,**
σ1^{s}.88/18**,mb2.8**/3**,Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTO2	**TONANKAI O.B.S**	**0.67**	**346**	eP	**Pn**	**03 14 19.2**	**+2.6**
TTO4	**TONANKAI O.B.S**	**0.96**	**16**	eP	**Pn**	**03 14 20.1**	**+2.6**
TK02	**Tokai 2**	**0.97**	**27**	eP	**Pn**	**03 14 20.2**	**+2.7**
JIE	**Ise**	**1.37**	**342**	eP	**Pn**	**03 14 21.3**	**+1.9**
JHMK	**Hamakita**	**1.79**	**14**	eP	**Pn**	**03 14 23.6**	**+2.2**
JNY	**Yasuok**	**2.33**	**13**	eP	**Pn**	**03 14 27.4**	**+2.3**
JOD2	**Odawara 2**	**2.67**	**35**	P	**Pn**	**03 14 29.7**	**+2.2**
BSO4	**Boso 4**	**3.21**	**53**	eP	**Pn**	**03 14 32.8**	**+1.0**
BSO4				eS	**S**	**03 15 23.9**	**-0.3**
BSO3	**Boso 3**	**3.23**	**57**	eP	**Pn**	**03 14 32.5**	**+0.8**
JRY	**Ryogami san**	**3.24**	**25**	P	**Pn**	**03 14 34.3**	**+2.3**
BSO1	**Boso 1**	**3.50**	**62**	eP	**Pn**	**03 14 33.9**	**+0.2**
MJAR	**Matsushiro Arr**	**3.55**	**13**	P	**Pn**	**03 14 36.2**	**+1.5**
	2.8nm,0.4s,baz=188,slow=8.5,SNR=14						
MJAR				S	S	03 15 18.6	-11
	1.4nm,0.5s,baz=176,slow=6.8,SNR=5.0						
KSRS	**Korea Array**	**8.76**	**302**	P	**Pn**	**03 15 31.5**	**+1.0**
	0.8nm,0.5s,baz=118,slow=13,SNR=1.8						
USRK	**Ussuriysk Ar.**	**11.83**	**341**	P	**P**	**03 16 03.5**	**-1.0**
	2.1nm,0.6s,baz=146,slow=13,SNR=4.6						
MKAR	**Makanchi Array**	**43.43**	**305**	P	**P**	**03 20 51.1**	**-1.1**
	0.2nm,0.5s,baz=80,slow=8.5,SNR=4.9						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**45.84**	**311**	P	**P**	**03 21 09.8**	**-1.0**
	0.2nm,0.4s,baz=85,slow=8.9,SNR=4.1						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**52.80**	**183**	P	**P**	**03 22 02.3**	**-0.8**
	0.4nm,0.6s,baz=1.2,slow=7.4,SNR=2.0						
	0.4nm,0.6s						

IDC 31 03:33:42.3±3.0**,23°.03S×148°.39E,h0^{km},mbtmp3.3**/3**,**
ML3.2/3**,Error ellipse: s-maj=36.5km s-min=32.8km**
az=156.0,Queensland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**10.68**	**213**	Pn	Pn	03 36 16.6	0.0
	0.2nm,0.3s,baz=31,slow=12,SNR=1.5						
STKA				Sn	Sn	03 38 17.3	+0.4
	0.1nm,0.3s,baz=261,slow=23,SNR=1.8						
STKA				Lg	Lg	03 39 20.6	
	0.2nm,0.3s,baz=294,slow=15,SNR=3.4						
	1.8nm,0.9s						
ASAR	**Alice Springs**	**13.33**	**264**	Pn	Pn	03 36 51.6	-1.3
	0.1nm,0.3s,baz=90,slow=13,SNR=4.8						
ASAR				Sn	Sn	03 39 23.5	+1.6
	0.1nm,0.3s,baz=80,slow=18,SNR=2.7						
ASAR				Lg	Lg	03 40 46.7	
	baz=85,slow=26,SNR=4.6						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**13.44**	**281**	Pn	Pn	03 36 53.1	-1.3
	0.1nm,0.3s,baz=104,slow=11,SNR=1.4						
WRA				Sn	Sn	03 39 21.6	-3.0
	0.1nm,0.3s,baz=102,slow=23,SNR=0.9						
WRA				Lg	Lg	03 40 51.2	
	0.1nm,0.3s,baz=105,slow=27,SNR=5.7						
	0.6nm,0.8s						
I07AU	**WARRAMUNGA INF**	**3.45**	**281**	I	I	05 00 00.0	
	baz=105,slow=304,SNR=3.2						
TORD	**Torodi Ar. Bea**	**146.93**	**259**	PKPbc	PKPbc	03 53 27.4	-0.2
	0.3nm,0.7s,baz=108,slow=2.1,SNR=2.1						

IDC 31 04:05:12.0±1.7**,35°.82N×95°.61E,h0^{km},mb3.3**/1**,**
mbtmp3.3/5**,ML3.5**/3**,MS3.2**/5**,Error ellipse:**
s-maj=65.1km s-min=26.8km az=65.0,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**14.43**	**30**	Pn	Pn	04 08 38.3	+0.8
	0.1nm,0.3s,baz=216,slow=14,SNR=2.5						
SONM				LR	LR	04 13 26.9	
	comp=Z,26nm,21.0s,baz=76,slow=34						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**14.82**	**322**	Pn	Pn	04 08 38.6	-4.2
	0.1nm,0.3s,baz=133,slow=15,SNR=7.3						
MKAR				LR	LR	04 15 02.8	
	comp=Z,99nm,18.4s,baz=141,slow=40						
	0.6nm,0.7s						
CMAR	**Chiang Mai Arr**	**17.55**	**169**	P	Pn	04 09 18.2	+0.1
	0.2nm,0.3s,baz=355,slow=12,SNR=4.6						
CMAR				LR	LR	04 16 34.9	
	comp=Z,32nm,19.9s,baz=300,slow=39						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**19.26**	**325**	P	P	04 09 37.8	-0.1
	0.9nm,0.9s,baz=133,slow=11,SNR=6.9						
BVAR	**Borovoye Array**	**24.70**	**322**	LR	LR	04 21 17.1	
	comp=Z,98nm,21.0s,baz=83,slow=39						
HFS	**Hagfors**	**55.83**	**323**	LR	LR	04 38 38.3	
	comp=Z,99nm,18.9s,baz=356,slow=36						
ASAR	**Alice Springs**	**69.38**	**143**	P	P	04 16 21.7	0.0
	0.2nm,0.5s,baz=325,slow=6.1,SNR=2.1						
	0.2nm,0.5s						

*IDC **31** 04:27:55.8±1.6,35°.53N×74°.46E,h0^{km},mb3.6/5,*
mbtmp3.6/10,ML3.1/5,MS4.2/1,Error ellipse:
s-maj=38.3km s-min=19.0km az=66.0

*NNC **31** 04:28:06.9±8.9,35°.72N×73°.83E,h35^{km}±109^{km},mb3.5,*
mpv3.6,Error ellipse: s-maj=143.5km s-min=47.1km
az=78.0

ISC 31 04:28:00.9±1.2**,35°.5N**±0°.1×**74°.3E**±0°.2**,h36^{km},n15,**
σ1^{s}.47/16**,mb3.6**/5**,3C-1D,Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**7.14**	**1**	Pn	**Pn**	**04 29 44.1**	**+1.2**
	0.3nm,0.3s,baz=74,slow=7.1,SNR=4.4						
AAK				Sn	**Sn**	**04 31 02.7**	**-0.1**
	0.1nm,0.3s,baz=24,slow=9.1,SNR=3.8						
AAK				Lg	Lg	04 31 40.5	
	0.1nm,0.3s,baz=340,slow=22,SNR=1.6						
	0.5nm,0.3s						
KK31	**Karatay Array**	**8.16**	**340**	⇑P	**Pn**	**04 29 56.9**	**+0.2**
	1.1nm,0.3s,baz=151,slow=12,SNR=29						
KK31				⇓S	**Sn**	**04 31 25.2**	**-2.5**
	2.9nm,0.6s,baz=156,slow=22,SNR=6.6						
MKAR	**Makanchi Array**	**12.78**	**25**	Pn	**Pn**	**04 31 01.0**	**+1.0**
	baz=207,slow=12,SNR=2.4						
	0.2nm,0.7s						
AB31	**Akbulak array**	**17.34**	**327**	⇑P	**P**	**04 32 02.6**	**+1.5**
	0.7nm,0.8s,baz=134,slow=12,SNR=6.8						
BVA0	**Borovoye Array**	**17.75**	**352**	P	**P**	**04 32 08.5**	**+3.0**
	1.6nm,0.7s,baz=146,slow=8.1,SNR=6.9						
BVAR	**Borovoye Array**	**17.75**	**352**	P	**Pn**	**04 32 04.0**	**-1.1**
	baz=148,slow=8.7,SNR=5.9						
	1.2nm,0.7s						
AKTO	**Aktyubinsk**	**19.06**	**327**	P	**P**	**04 32 20.0**	**+0.1**
	0.4nm,0.3s,baz=123,slow=7.8,SNR=7.9						
	1.9nm,0.5s						
AKTO	**Aktyubinsk**	**19.06**	**327**	⇑P	**P**	**04 32 20.2**	**+0.3**
	2.5nm,1.0s						
ZALV	**Zalesovo Beam**	**19.87**	**18**	P	**P**	**04 32 26.9**	**-1.8**
	0.3nm,0.3s,baz=217,slow=10,SNR=11						
	1.4nm,0.5s						
SONM	**Songino Array**	**26.75**	**53**	P	**P**	**04 33 36.4**	**-0.7**
	0.2nm,0.4s,baz=260,slow=10,SNR=2.6						
	0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**27.61**	**121**	P	**P**	**04 33 43.7**	**-1.3**
	0.7nm,0.5s,baz=312,slow=10,SNR=5.5						
	0.7nm,0.5s						
FINES	**FINESS Array B**	**39.83**	**326**	P	**P**	**04 35 30.6**	**+0.2**
	2.8nm,1.0s,baz=97,slow=11,SNR=1.7						
	2.8nm,1.0s						
DAV	**Davao City (W)**	**54.72**	**109**	LR	LR	05 02 27.8	
	comp=Z,228nm,21.4s,baz=349,slow=38						
ILAR	**Eielson Array**	**74.98**	**17**	P	**P**	**04 39 39.1**	**+1.0**
	0.2nm,0.7s,baz=314,slow=6.1,SNR=1.5						
	0.2nm,0.7s						
WRA	**Warramunga Arr**	**79.18**	**124**	P	**P**	**04 40 02.5**	**+0.3**
	0.5nm,0.6s,baz=315,slow=6.1,SNR=1.9						
	0.5nm,0.6s						

*IDC **31** 04:39:59.8±1.6,13°.33N×91°.55W,h0^{km},mb3.5/3,*
mbtmp3.5/6,ML3.4/3,MS2.9/1,Error ellipse: s-maj=31.6km
s-min=20.6km az=23.0

*GCG **31** 04:40:02.2±1.2,13°.50N×91°.63W,h13^{km}±13^{km},MD4.5,*
ML3.7

*CATAC **31** 04:40:03.2±0.5,13°N±2°×9°1W±°,h7^{km}±3^{km},M3.8/18,*
MLv3.8/18,Error ellipse: s-maj=6.0km s-min=3.4km
az=44.4,confirmed

*SNET **31** 04:40:05.0±1.2,13°.19N×91°.49W,h40^{km}±13^{km},ML3.8*

ISC 31 04:40:04.1±1.0**,13°.42N**±0°.06×**91°.52W**±0°.05**,h28^{km},n73,**
σ1^{s}.44/78**,mb3.7**/3**,Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG8	**El Palmar, Qui**	**1.04**	**9**	eP	**Pb**	**04 40 24.7**	**+1.0**
STG8				eS	**Sb**	**04 40 42.1**	**+5.0**
STG8				IAML		04 40 47.2	
	comp=N,1μm,0.2s						
RTAL	**Retalhuleu**	**1.12**	**351**	eP	**Pn**	**04 40 22.5**	**-1.3**
RTAL				eS	**Sn**	**04 40 37.4**	**-0.9**
RTAL	**Retalhuleu**	**1.12**	**351**	P	**Pn**	**04 40 22.7**	**-1.2**
ESSG	**Sabana Grande**	**1.17**	**35**	eP	**Pn**	**04 40 23.3**	**-1.4**
ESSG				IAML		04 40 40.1	
	comp=E,1μm,0.3s						
PCG5	**San Vicente Pa**	**1.37**	**54**	eP	**Pn**	**04 40 25.0**	**-2.4**
SOKI	**Kika Raxquin**	**1.40**	**5**	eP	**Pn**	**04 40 26.7**	**-1.4**
FAME	**Alcaldia de Sa**	**1.52**	**74**	P	**Pn**	**04 40 28.5**	**-0.9**
FAME	**Alcaldia de Sa**	**1.52**	**74**	S	**Sn**	**04 40 48.1**	**-0.3**
NUBE	**Las Nubes**	**1.76**	**74**	eP	**Pn**	**04 40 32.2**	**-0.6**
NUBE	**Las Nubes**	**1.76**	**74**	P	**Pn**	**04 40 32.0**	**-0.8**
NUBE	**Las Nubes**	**1.76**	**74**	S	**Sn**	**04 40 54.7**	**+0.3**
LOAL	**Lomas de Alarc**	**1.79**	**71**	P	**Pn**	**04 40 33.7**	**+0.5**
LOAL	**Lomas de Alarc**	**1.79**	**71**	S	**Sb**	**04 40 56.0**	**-2.2**
APG	**El Apazote**	**1.88**	**33**	Pn	**Pn**	**04 40 35.4**	**+0.8**
	comp=E,2.7nm,0.3s,baz=209,slow=16,SNR=130						
APG				Sn	**Sb**	**04 41 01.0**	**-0.2**
	comp=E,2.7nm,0.3s,baz=90,slow=15,SNR=6.4						
APG	**El Apazote**	**1.88**	**33**	eP	**Pn**	**04 40 35.0**	**+0.4**
RTR	**El Retiro**	**1.88**	**75**	eP	**Pn**	**04 40 35.2**	**+0.7**
CEVE	**Cerro Verde**	**1.89**	**77**	eP	**Pn**	**04 40 35.1**	**+0.4**
CEVE	**Cerro Verde**	**1.89**	**77**	P	**Pn**	**04 40 35.2**	**+0.5**
CEVE	**Cerro Verde**	**1.89**	**77**	S	**Sb**	**04 40 58.8**	**-2.5**
HUEH	**Huehuetenango**	**1.89**	**1**	P	**Pb**	**04 40 35.9**	**-2.2**
SBLS	**San Blas**	**1.89**	**77**	eP	**Pn**	**04 40 34.5**	**-0.2**
RBDL	**Robledal**	**1.91**	**69**	eP	**Pn**	**04 40 35.4**	**+0.4**
UNIC	**Universidad Ca**	**2.00**	**73**	P	**Pn**	**04 40 36.5**	**+0.4**
UNIC	**Universidad Ca**	**2.00**	**73**	S	**Sn**	**04 41 01.3**	**+1.1**
JAYA	**Jayaque - finc**	**2.03**	**83**	eP	**Pn**	**04 40 36.2**	**-0.3**
JAYA	**Jayaque - finc**	**2.03**	**83**	eP	**Pn**	**04 40 36.3**	**-0.3**
JAYA	**Jayaque - finc**	**2.03**	**83**	P	**Pn**	**04 40 36.2**	**-0.3**
JAYA	**Jayaque - finc**	**2.03**	**83**	S	**Sn**	**04 41 02.4**	**+1.3**
CEDA	**San Andres**	**2.10**	**79**	S	**Sn**	**04 41 04.1**	**+1.4**
LALI	**Alcalda de L**	**2.14**	**88**	eP	**Pn**	**04 40 39.4**	**+1.5**
LALI	**Alcalda de L**	**2.14**	**88**	S	**Sn**	**04 41 04.9**	**+1.3**
PMON	**Piamonte**	**2.17**	**82**	eP	**Pn**	**04 40 38.3**	**-0.1**
PMON	**Piamonte**	**2.17**	**82**	P	**Pn**	**04 40 39.3**	**+0.9**
PMON	**Piamonte**	**2.17**	**82**	S	**Sn**	**04 41 05.7**	**+1.3**
UEES	**Universidad Ev**	**2.24**	**82**	P	**Pn**	**04 40 40.1**	**+0.7**
UEES	**Universidad Ev**	**2.24**	**82**	S	**Sn**	**04 41 07.6**	**+1.5**
PANCS	**Alcalda de**	**2.29**	**85**	S	**Sn**	**04 41 08.9**	**+1.6**
LOMA	**Loma Larga**	**2.30**	**84**	P	**Pn**	**04 40 40.2**	**0.0**
LOMA	**Loma Larga**	**2.30**	**84**	S	**Sn**	**04 41 09.0**	**+1.4**
IGN	**Direccin Gen**	**2.31**	**82**	S	**Sn**	**04 41 09.3**	**+1.5**
MTO3	**Montecristo**	**2.31**	**65**	eP	**Pn**	**04 40 40.9**	**+0.4**
MTO3	**Montecristo**	**2.31**	**65**	eP	**Pn**	**04 40 40.9**	**+0.4**
MTO3	**Montecristo**	**2.31**	**65**	P	**Pn**	**04 40 41.0**	**+0.4**
MTO3	**Montecristo**	**2.31**	**65**	S	**Sb**	**04 41 11.4**	**-2.1**
LFRS	**El Faro**	**2.40**	**85**	eP	**Pn**	**04 40 42.7**	**+1.1**
ESQI	**Esquipulas**	**2.40**	**61**	P	**Pn**	**04 40 42.5**	**+0.9**
ESQI	**Esquipulas**	**2.40**	**61**	S	**Sn**	**04 41 11.7**	**+1.5**
PAVA	**Las Pavas**	**2.53**	**83**	P	**Pn**	**04 40 44.0**	**+0.6**
PAVA	**Las Pavas**	**2.53**	**83**	S	**Sn**	**04 41 14.8**	**+1.4**
LLGN	**La Laguna**	**2.61**	**73**	P	**Pn**	**04 40 45.5**	**+1.0**
LLGN	**La Laguna**	**2.61**	**73**	S	**Sn**	**04 41 16.8**	**+1.5**
UESV	**Universidad de**	**2.67**	**85**	S	**Sb**	**04 41 19.8**	**-3.7**
TECO	**Alcaldia de Te**	**2.67**	**87**	S	**Sn**	**04 41 18.2**	**+1.5**
SCLA	**Alcaldia de Sa**	**2.73**	**84**	P	**Pn**	**04 40 47.1**	**+1.0**
SCLA	**Alcaldia de Sa**	**2.73**	**84**	S	**Sn**	**04 41 19.9**	**+1.6**
SARH	**Santa Rosa de**	**3.00**	**63**	eP	**Pn**	**04 40 50.6**	**+0.8**
SARH	**Santa Rosa de**	**3.00**	**63**	P	**Pn**	**04 40 50.6**	**+0.8**
PACA	**Pacayal**	**3.11**	**89**	S	**Sn**	**04 41 29.9**	**+2.1**
LCND	**La Caada**	**3.54**	**91**	P	**Pn**	**04 40 57.8**	**+0.7**
CNCH	**Conchagua**	**3.59**	**92**	P	**Pn**	**04 40 58.2**	**+0.2**
CNCH	**Conchagua**	**3.59**	**92**	S	**Sn**	**04 41 41.4**	**+1.8**
CSGN	**Cosiguina Volc**	**3.88**	**96**	P	**Pn**	**04 41 02.7**	**+0.7**
CSGN				S	**Sn**	**04 41 47.6**	**+0.8**
YUSH	**Yuscaran**	**4.58**	**83**	P	**Pn**	**04 41 12.8**	**+1.2**
YUSH	**Yuscaran**	**4.58**	**83**	S	**Sn**	**04 42 06.2**	**+2.2**
CMIG	**Matias Romero**	**4.89**	**319**	Pn	**Pn**	**04 41 16.4**	**+0.7**
	comp=E,0.8nm,0.3s,baz=135,slow=9.3,SNR=11						
CMIG				Sn	**Sn**	**04 42 10.8**	**-0.6**
	comp=E,1.7nm,0.3s,baz=97,slow=13,SNR=4.1						
CMIG				Lg	Lg	04 42 26.2	
	comp=E,4.2nm,0.3s,baz=71,slow=21,SNR=6.4						
	comp=E,2.1nm,0.3s						
JTS	**Las Juntas de**	**7.14**	**115**	Pn	**Pn**	**04 41 46.9**	**+0.2**
	comp=E,0.5nm,0.3s,baz=297,slow=21,SNR=1.9						
JTS				Sn	**Sn**	**04 43 03.4**	**-3.6**
	comp=E,0.3nm,0.3s,baz=176,slow=23,SNR=1.4						
JTS				Lg	Lg	04 43 45.6	
	comp=E,0.3nm,0.3s,baz=143,slow=20,SNR=4.0						
	comp=E,1.1nm,0.3s						
TEIG	**Tepich**	**7.45**	**24**	Pn	**Pn**	**04 41 52.1**	**+1.1**
	baz=311,slow=24,SNR=22						
TXAR	**Lajitas Array**	**19.44**	**326**	P	**Pn**	**04 44 29.4**	**-0.4**
	comp=E,0.1nm,0.3s,baz=154,slow=12,SNR=8.5						
	comp=E,0.8nm,0.8s						
TKL	**Tuckaleechee C**	**23.22**	**16**	LR	LR	04 54 09.6	
	comp=E,33nm,21.3s,baz=244,slow=36						
NVAR	**Mina Array Bea**	**34.42**	**321**	P	**P**	**04 46 51.4**	**+2.0**
	comp=E,0.7nm,0.8s,baz=129,slow=8.3,SNR=5.2						
	comp=E,0.7nm,0.8s						
YKA	**Yellowknife Ar**	**51.70**	**347**	P	**P**	**04 49 06.9**	**-1.5**
	comp=E,0.3nm,0.7s,baz=152,slow=7.4,SNR=9.9						
	comp=E,0.3nm,0.7s						
ILAR	**Eielson Array**	**63.56**	**337**	P	**P**	**04 50 31.6**	**-0.2**
	comp=E,0.6nm,0.9s,baz=171,slow=4.9,SNR=9.7						
	comp=E,0.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**146.69**	**342**	PKPbc	**PKPbc**	**04 59 44.3**	**+0.2**
	comp=E,0.6nm,0.7s,baz=352,slow=4.6,SNR=4.9						

GCG 31 04:51:49.2±1.2**,13°.60N×91°.52W,h50^{km}**±123^{km}**,MD3.8,**
Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG5	**El Palmar, Qui**	**0.82**	**12**	i P	Pn	04 52 08.2	+3.6
STG8	**El Palmar, Qui**	**0.86**	**11**	i P	Pn	04 52 09.2	+3.8
ESSG	**Sabana Grande**	**1.03**	**41**	eP	Pn	04 52 07.3	-0.1
ESSG				eS	Sn	04 52 22.4	+1.6
SOKI	**Kika Raxquin**	**1.22**	**5**	eP	Pn	04 52 10.3	+0.1
NUBE	**Las Nubes**	**1.72**	**80**	i P	Pn	04 52 17.5	+0.7
NUBE				eS	Sn	04 52 37.4	-0.3
APG	**El Apazote**	**1.73**	**36**	eP	Pn	04 52 19.3	+2.2
JAYA	**Jayaque - finc**	**2.01**	**88**	i P	Pn	04 52 21.3	+0.4
JAYA				eS	Sn	04 52 45.0	0.0
MTO3	**Montecristo**	**2.24**	**69**	eP	Pn	04 52 22.8	-1.3

AUST 31 05:10:44.6±0.3**,29°S**±4°×**12°4E**±°**,h10^{km},mb3.5**/1**,**
ML2.4/1**,Error ellipse: s-maj=7.6km s-min=4.9km**
az=1.0,Western Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMBL	**Kambalda**	**2.95**	**227**	P	Pn	05 11 22.5	-9.0
DNDOZ	**Balladonia**	**3.11**	**188**	P	Pn	05 11 33.3	-0.4
DNDOZ				S	Sb	05 12 16.9	-1.1
FORT	**Forrest**	**3.46**	**115**	P	Pn	05 11 39.8	+1.3
FORT				S	Sn	05 12 18.2	-1.3
WRKA	**Warakurna**	**5.54**	**40**	P	Pn	05 12 08.4	+1.3
WRKA				S	Sn	05 13 11.6	+0.7
MEEK	**Meekatharra**	**5.80**	**297**	P	Pn	05 12 13.1	+2.3
	comp=Z,0.1nmcomp=Z,13nm,2.6s						
MEEK	**Meekatharra**	**5.80**	**297**	S	Sn	05 13 14.9	-2.6
BLDU	**Ballidu**	**6.79**	**258**	P	Pn	05 12 24.7	+0.3
BLDU	**Ballidu**	**6.79**	**258**	S	Sn	05 13 43.6	+1.9

*ISK **31** 05:10:58.2,39°.71N×43°.63E,h6^{km},ML2.5/9*

*AFAD **31** 05:10:58.8,39°.72N×43°.56E,h7^{km}±3^{km},ML2.4*

ISC 31 05:10:58.9±1.0**,39°.74N**±0°.02×**43°.60E**±0°.03**,h9^{km}**±9^{km}**,**
n27,σ0^{s}.50/38**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DYDN	**Diyadin**	**0.21**	**161**	P	**Pg**	**05 11 03.4**	**+0.1**
DYDN				S	**Sg**	**05 11 07.1**	**+0.8**
KOTA	**Agri, Merkez-K**	**0.31**	**281**	P	**Pg**	**05 11 04.9**	**-0.3**
KOTA				S	**Sg**	**05 11 09.4**	**+0.1**
IGDI	**IGDIR**	**0.39**	**71**	P	**Pg**	**05 11 06.2**	**-0.4**
IGDI				S	**Sg**	**05 11 11.1**	**-0.7**
IGDI				i IAML		05 11 12.0	
	comp=N,684nm,0.4s						
IGDI				i IAML		05 11 13.0	
	comp=E,312nm,0.2s						
AGRB	**Hanur-Agry**	**0.50**	**251**	Pg	**Pg**	**05 11 08.7**	**+0.1**
AGRB				Sg	**Sg**	**05 11 15.8**	**+0.6**
TASB	**TASBURUN-IGDIR**	**0.55**	**64**	Pg	**Pg**	**05 11 09.0**	**-0.6**
TASB				Sg	**Sg**	**05 11 17.2**	**+0.4**
DIGO	**Kars**	**0.69**	**346**	P	**Pg**	**05 11 11.8**	**-0.6**
DIGO				i IAML		05 11 26.0	
	comp=N,294nm,0.4s						
DORK	**Agr/Tutak/Do**	**0.73**	**241**	P	**Pg**	**05 11 12.7**	**-0.2**
DORK				S	**Sg**	**05 11 21.8**	**-0.6**
DORK				i IAML		05 11 23.0	
	comp=E,208nm,0.4s						
DORK				i IAML		05 11 30.0	
	comp=N,180nm,0.5s						
VMUR	**Van-Muradiye**	**0.75**	**182**	P	**Pg**	**05 11 13.3**	**-0.1**
VMUR				S	**Sg**	**05 11 23.4**	**+0.1**
EATA	**Eleskirt**	**0.86**	**278**	P	**Pg**	**05 11 15.4**	**-0.1**
EATA				S	**Sb**	**05 11 27.5**	**-0.6**
EATA				i IAML		05 11 33.0	
	comp=N,91nm,0.6s						
EATA				i IAML		05 11 37.0	
	comp=E,111nm,0.3s						
EAK	**Akyaka**	**0.94**	**0**	P	**Pn**	**05 11 18.6**	**+0.1**
EAK				S	**Sn**	**05 11 33.7**	**+1.4**
EAK				i IAML		05 11 39.0	
	comp=E,129nm,1.0s						
EAK				i IAML		05 11 41.0	
	comp=N,106nm,0.6s						
KARS	**Kars**	**0.97**	**336**	Pg	**Pb**	**05 11 17.9**	**-0.1**
BOZK	**Kars-Merkez-Bo**	**0.97**	**331**	P	**Pg**	**05 11 17.9**	**+0.3**
MLAZ	**Malazgirt-MUS**	**1.01**	**234**	Pg	**Pb**	**05 11 18.3**	**-0.4**
MLAZ				Sg	**Sb**	**05 11 31.7**	**-0.5**
OZAP	**Van, Ozalp-Mer**	**1.12**	**164**	P	**Pn**	**05 11 21.4**	**+0.3**
ADCV	**BITLIS_Adilcev**	**1.15**	**216**	P	**Pn**	**05 11 21.6**	**+0.1**
ADCV				S	**Sn**	**05 11 36.5**	**-1.0**
VANB	**Van**	**1.16**	**188**	Pn	**Pn**	**05 11 22.1**	**+0.7**
TVAN	**Van**	**1.22**	**187**	P	**Pg**	**05 11 23.0**	**+0.7**
TVAN				i IAML		05 11 42.0	
	comp=E,49nm,0.6s						
SENK	**Senkaya-Erzuru**	**1.26**	**311**	Pn	**Pg**	**05 11 23.3**	**+0.2**
GOLE	**Ardahan-G¶le**	**1.33**	**325**	P	**Pg**	**05 11 25.1**	**+0.5**
KOPR	**Koprukoy-ERZUR**	**1.37**	**281**	Pn	**Pb**	**05 11 24.8**	**0.0**
AKDM	**Akdamar-Van**	**1.49**	**199**	Pn	**Pn**	**05 11 25.9**	**-0.2**
GURO	**Guroymak-BITLI**	**1.70**	**226**	Pn	**Pn**	**05 11 29.2**	**+0.3**
ERZM	**Erzurum**	**1.73**	**276**	P	**Pg**	**05 11 32.2**	**+0.2**
AKDA	**Akdag**	**1.76**	**283**	P	**Pg**	**05 11 32.6**	**0.0**
AKDA				i IAML		05 11 59.0	
	comp=E,32nm,0.8s						
AKDA				i IAML		05 12 09.0	
	comp=N,31nm,0.7s						
VRTB	**Varto-Mus**	**1.76**	**251**	P	**Pg**	**05 11 32.2**	**-0.4**
VRTB				i IAML		05 12 05.0	
	comp=N,55nm,0.7s						
EKONA	**Konakl - Erz**	**1.83**	**272**	P	**Pg**	**05 11 33.9**	**-0.1**
MUSM	**Mu-Merkez**	**1.91**	**239**	P	**Pb**	**05 11 34.0**	**-0.1**

IDC 31 05:13:22.7±7.7**,16°.67S×174°.78W,h0^{km},mb3.9**/3**,**
mbtmp3.9/3**,Error ellipse: s-maj=336.5km**
s-min=37.5km az=140.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**48.27**	**258**	P	P	05 22 05.2	-0.8
	0.7nm,0.6s,baz=96,slow=7.6,SNR=9.1						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**48.46**	**253**	P	P	05 22 07.9	+0.5
	1.8nm,0.4s,baz=87,slow=8.1,SNR=53						
	1.8nm,0.4s						
ILAR	**Eielson Array**	**83.94**	**12**	P	P	05 25 54.2	0.0
	0.5nm,1.0s,baz=212,slow=8.5,SNR=5.1						
	0.5nm,1.0s						

IDC 31 05:13:49.9±9.7**,6°.78S×127°.38E,h555^{km}**±146^{km}**,mb2.7**/2**,**
mbtmp3.5/4**,Error ellipse: s-maj=213.0km**
s-min=52.0km az=67.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.73**	**153**	P	P	05 16 55.0	-1.6
	0.6nm,0.6s,baz=332,slow=10.0,SNR=1.8						
WRA				S	S	05 19 29.1	-1.1
	1.2nm,1.1s,baz=310,slow=15,SNR=3.1						
ASAR	**Alice Springs**	**17.93**	**160**	P	P	05 17 27.6	+0.6
	0.4nm,0.5s,baz=332,slow=8.8,SNR=11						
MKAR	**Makanchi Array**	**66.64**	**328**	P	P	05 23 45.7	-0.1
	0.2nm,0.5s,baz=119,slow=8.1,SNR=5.9						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**70.25**	**335**	P	P	05 24 07.6	+0.1
	0.5nm,0.5s,baz=125,slow=7.2,SNR=2.2						
	0.5nm,0.5s						

*NEIC **31** 05:18:19.3±1.3,20°.76N±0°.08×122°.1E±0°.1,h153^{km}±8^{km},*
mb4.5/30,Error ellipse: s-maj=16.9km s-min=11.7km
az=74.0

*TAP **31** 05:18:21.0,20°.94N×121°.97E,h175^{km}±1^{km},ML5.0,D*

*JMA **31** 05:18:22.2±0.4,21°N±2°×12°2E±°,h134^{km},MV3.3/7,*
PHILIPPINE ISL REGION

*IDC **31** 05:18:22.4±4.8,20°.78N×122°.16E,h192^{km}±46^{km},*
mb3.6/16,mbtmp4.1/17,Error ellipse: s-maj=24.0km
s-min=11.8km az=70.0

ISC 31 05:18:20.3±0.8**,20°.87N**±0°.05×**122°.00E**±0°.05**,h168^{km}**±6^{km}**,**
n170,σ1^{s}.36/258**,mb4.2**/31**,4C,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LYUB	**Lan-yu**	**1.20**	**341**	P	**Pn**	**05 18 48.5**	**+0.1**
LYUB				S	**Sn**	**05 19 09.5**	**-0.7**
LAY	**Lan-yu**	**1.24**	**340**	eP	**Pn**	**05 18 49.5**	**+0.7**
LAY				eS	**Sn**	**05 19 09.6**	**-1.4**
TSEB	**Hengchuen, Pin**	**1.45**	**315**	P	**Pn**	**05 18 52.2**	**+1.5**
TSEB				S	**Sn**	**05 19 14.8**	**+0.4**
TWKBT	**Hengchun**	**1.54**	**314**	⇑i P	**Pn**	**05 18 52.8**	**+1.2**
TWKBT				i S	**Sn**	**05 19 15.2**	**-0.7**
TWK1	**Hengchun**	**1.55**	**314**	P	**Pn**	**05 18 52.9**	**+1.2**
TWK1				i S	**Sn**	**05 19 15.6**	**-0.5**
SMST	**Manzhou Townsh**	**1.58**	**317**	eP	**Pn**	**05 18 53.0**	**+0.9**
SMST				eS	**Sn**	**05 19 15.6**	**-1.0**
HEN	**Hengchun**	**1.64**	**314**	eP	**Pn**	**05 18 53.7**	**+1.1**
HEN				S	**Sn**	**05 19 16.9**	**-0.7**
SLIU	**Shizi**	**1.75**	**320**	eP	**Pn**	**05 18 55.1**	**+1.3**
SLIU				i S	**Sn**	**05 19 18.5**	**-1.3**
TAWH	**Dawu Township**	**1.80**	**325**	eP	**Pn**	**05 18 55.1**	**+0.8**
TAWH				S	**Sn**	**05 19 19.0**	**-1.6**

TAW	Tawu	1.81	325	eP	Pn	05 18 54.5	+0.1
TAW				eS	Sn	05 19 18.4	-2.5
EAST	Anshuo	1.85	325	eP	Pn	05 18 55.1	+0.1
EAST				eS	Sn	05 19 19.9	-1.9
SCZT	Fangliau	1.97	320	P	Pn	05 18 56.8	+0.5
SCZT				S	Sn	05 19 23.6	-0.5
ECL	Taimali	1.98	331	P	Pn	05 18 56.3	0.0
ECL				eS	Sn	05 19 21.1	-3.1
TTN	Taitung	2.04	337	eP	Pn	05 18 58.2	+1.3
TTN				eS	Sn	05 19 23.5	-2.0
WLCH	Liuqiu	2.11	315	eP	Pn	05 18 59.9	+2.1
TWP	Hsiaoliuchiu	2.12	314	⇑eP	Pn	05 18 59.6	+1.7
TWGBT	Beinan	2.12	336	P	Pn	05 18 57.9	-0.1
TWGBT				eS	Sn	05 19 24.9	-2.3
TWG	Pinlang	2.13	336		Pn	05 18 57.6	-0.4
TWG	Pinlang	2.13	336	P	Pn	05 18 57.7	-0.3
TWG				eS	Sn	05 19 24.4	-2.9
MASBT	Mashibuluo	2.15	324	i P	Pn	05 18 58.8	+0.6
MASBT				eS	Sn	05 19 25.5	-2.3
SSD	Sandimen	2.26	326	i P	Pn	05 18 59.9	+0.4
SSD				eS	Sn	05 19 27.5	-2.5
TSPT	Pingtung City	2.28	322	eP	Pn	05 19 00.7	+1.0
TSPT				eS	Sn	05 19 30.5	+0.2
ECS	Chishang	2.33	342	eP	Pn	05 19 00.3	0.0
ECS				eS	Sn	05 19 30.6	-0.9
CHKH	Chenggong	2.38	346	eP	Pn	05 19 01.1	+0.2
CHKH				i S	Sn	05 19 31.0	-1.5
EHD	Haiduan	2.39	342	eP	Pn	05 19 00.1	-0.9
EHD				eS	Sn	05 19 29.6	-3.1
WSSB	Gushan	2.40	318	eP	Pn	05 19 02.2	+1.2
FULB	Fuli	2.41	344	P	Pn	05 19 02.0	+0.7
FULB				eS	Sn	05 19 32.4	-0.8
TWM1	Shoushan	2.44	323	eP	Pn	05 19 03.8	+2.2
ELDTW	Lidau	2.48	339	eP	Pn	05 19 02.5	+0.3
ELDTW				eS	Sn	05 19 31.9	-3.0
TWF1	Yuli	2.56	345	eP	Pn	05 19 03.9	+0.9
TWF1				S	Sn	05 19 34.6	-1.7
STYH	Taoyuan	2.56	334	i P	Pn	05 19 03.6	+0.6
STYH				eS	Sn	05 19 34.5	-1.8
SGST	Jiashian	2.57	329	eP	Pn	05 19 02.8	-0.4
SGST				eS	Sn	05 19 33.7	-2.7
YULB	Yu-li	2.60	346		Pn	05 19 03.3	-0.2
YULB	Yu-li	2.60	346	eP	Pn	05 19 03.8	+0.3
YULB				i S	Sn	05 19 35.3	-1.8
SHHT	Tainan City	2.64	325	eP	Pn	05 19 05.1	+1.1
SHHT				eS	Sn	05 19 36.4	-1.5
HGSD	Ruisui	2.67	349	eP	Pn	05 19 04.3	0.0
HGSD				eS	Sn	05 19 38.0	-0.6
CHN1	Nanshi	2.68	330	P	Pn	05 19 04.8	+0.3
CHN1				S	Sn	05 19 37.2	-1.7
EHYH	Wanrong	2.68	347	eP	Pn	05 19 04.5	-0.1
EHYH				S	Sn	05 19 37.4	-1.6
WTP	Ta-pu	2.69	332	P	Pn	05 19 04.9	+0.2
WTP				i S	Sn	05 19 36.8	-2.5
EHY	Hungye	2.70	347	eP	Pn	05 19 04.5	-0.3
EHY				eS	Sn	05 19 36.3	-3.1
TAI1	Yung-k'ang	2.72	323	eP	Pn	05 19 05.4	+0.5
TAI1				eS	Sn	05 19 38.5	-1.1
SNST	Tainan City	2.73	329	i P	Pn	05 19 05.2	+0.2
SNST				eS	Sn	05 19 36.2	-3.7
TPUB	Ta-pu	2.74	333		Pn	05 19 05.2	+0.1
TPUB	Ta-pu	2.74	333	i P	Pn	05 19 05.3	+0.2
TPUB				i S	Sn	05 19 38.0	-2.2
SSHA	Shanhua	2.76	325	eP	Pn	05 19 06.4	+0.9
SSHA				eS	Sn	05 19 39.6	-1.0
TWK	Hsinying	2.77	330	eP	Pn	05 19 05.8	+0.1
TWK				eS	Sn	05 19 38.9	-2.0
SCLT	Jiali	2.84	324	eP	Pn	05 19 07.0	+0.5
SCLT				eS	Sn	05 19 41.2	-1.2
ALS	Alishan	2.85	337	eP	Pn	05 19 07.1	+0.2
ALS				eS	Sn	05 19 41.6	-1.6
WCKO	Fanlu	2.87	333	eP	Pn	05 19 05.8	-1.0
WCKO				eS	Sn	05 19 40.7	-2.3
TSCK	Chigu Township	2.88	322	⇑iP	Pn	05 19 07.6	+0.7
TSCK				eS	Sn	05 19 41.3	-2.0
WARBT	Fenglin Townsh	2.89	349	eP	Pn	05 19 07.2	+0.1
WARBT				eS	Sn	05 19 40.9	-2.7
SHUL	Shoufeng	2.94	352	eP	Pn	05 19 09.0	+1.4
CHN8	Yiju	2.97	326	eP	Pn	05 19 08.4	+0.3
CHN8				eS	Sn	05 19 43.5	-1.7
ESL	Shilin	2.98	350	eP	Pn	05 19 08.9	+0.8
ESL				eS	Sn	05 19 43.2	-2.3
CHN5	Tsauling	2.98	336	P	Pn	05 19 08.3	0.0
CHN5				eS	Sn	05 19 43.0	-2.6
VWDT	VWDT	2.98	345	P	Pn	05 19 09.3	+1.2
VWDT				eS	Sn	05 19 43.4	-2.0
CHY	Chiayi	3.00	331	eP	Pn	05 19 08.0	-0.4
CHY				eS	Sn	05 19 43.8	-2.0
CHN2	Minshiung	3.01	332	eP	Pn	05 19 08.6	+0.1
CHN2				eS	Sn	05 19 44.3	-1.7
WHYT	Xinyi Township	3.01	340	eP	Pn	05 19 08.7	+0.1
WHYT				eS	Sn	05 19 44.7	-1.4
SSLB	Suanglung	3.06	342		Pn	05 19 09.2	0.0
SSLB	Suanglung	3.06	342	P	Pn	05 19 08.9	-0.3
SSLB				eS	Sn	05 19 45.2	-2.1
WGK	Gukeng	3.11	335	eP	Pn	05 19 09.8	+0.1
WGK				eS	Sn	05 19 46.4	-1.9
WSL	Shuilin Townsh	3.11	328	eP	Pn	05 19 09.7	-0.1
WSL				eS	Sn	05 19 46.3	-2.0
WDLH	Douliu	3.12	334	eP	Pn	05 19 09.8	0.0
WDLH				eS	Sn	05 19 46.5	-2.0
ETM	Tongmen	3.12	351	eP	Pn	05 19 10.5	+0.6
ETM				eS	Sn	05 19 45.8	-2.7
OWD	Renai	3.17	346	eP	Pn	05 19 10.9	+0.3
OWD				eS	Sn	05 19 48.2	-1.6
WJS	Zhushan	3.17	338	eP	Pn	05 19 11.1	+0.7
WJS				eS	Sn	05 19 48.5	-1.1
SMLT	Sun Moon Lake	3.17	341	eP	Pn	05 19 10.6	0.0
SMLT				eS	Sn	05 19 48.9	-1.0
LXIB	Xiulin Townshi	3.19	350	eP	Pn	05 19 11.2	+0.3
LXIB				eS	Sn	05 19 48.4	-1.9
TYC	Yuchr	3.20	341	eP	Pn	05 19 11.8	+0.9
TYC				i S	Sn	05 19 49.1	-1.3
WSF	Szhu	3.21	329	eP	Pn	05 19 11.0	0.0
WSF				eS	Sn	05 19 48.3	-2.3
WUSB	Renai	3.22	345	eP	Pn	05 19 11.8	+0.6
WUSB				eS	Sn	05 19 50.3	-0.6
TWD	Chiawan	3.22	353	eP	Pn	05 19 11.5	+0.4
TWD				eS	Sn	05 19 49.7	-1.1
WDGT	Dungji	3.22	318	eP	Pn	05 19 11.3	+0.2
WDGT				eS	Sn	05 19 48.4	-2.4
WNT	Mingjian	3.24	338	eP	Pn	05 19 11.3	0.0
WNT				eS	Sn	05 19 49.6	-1.5
NACB	Ninganchiao	3.31	354		Pn	05 19 11.8	-0.5
NACB					Sn	05 19 51.5	-1.4
NACB	Ninganchiao	3.31	354	eP	Pn	05 19 12.4	+0.2
NACB				eS	Sn	05 19 51.5	-1.4
WCS	Beigang Elemen	3.33	343	eP	Pn	05 19 13.3	+0.8
WCS				eS	Sn	05 19 51.9	-1.4
WHF	Hehuan Shan	3.33	348	eP	Pn	05 19 13.6	+0.6
WHF				eS	Sn	05 19 52.4	-1.6
VCHM	Qimei	3.34	315	i P	Pn	05 19 12.8	+0.2
VCHM				i S	Sn	05 19 51.3	-2.0
ETLH	Xiulin Townshi	3.36	352	eP	Pn	05 19 13.1	+0.1
WTCT	Ta-ch'eng	3.38	332	eP	Pn	05 19 13.7	+0.6
WTCT				eS	Sn	05 19 52.0	-2.4
FUSS	Fushou	3.44	348	eP	Pn	05 19 15.4	+1.4
FUSS				eS	Sn	05 19 55.1	-1.0
TWT	Tachien	3.46	347	eP	Pn	05 19 15.4	+1.2
TWT				eS	Sn	05 19 56.0	-0.3
TDCB	Techi	3.46	347	eP	Pn	05 19 14.8	+0.6
TDCB				eS	Sn	05 19 56.1	-0.3
WCHH	Zhanghua	3.46	338	eP	Pn	05 19 14.7	+0.5
WCHH				S	Sn	05 19 54.3	-1.9
PHUB	P'eng-hu	3.47	320	i P	Pn	05 19 14.1	-0.1
PHUB				i S	Sn	05 19 53.1	-3.2
PNG	Penghu	3.52	320	i P	Pn	05 19 14.8	0.0
PNG				i S	Sn	05 19 54.7	-2.7
WHP	Taichung City	3.53	344	i P	Pn	05 19 15.5	+0.4
WHP				eS	Sn	05 19 57.1	-0.9
EOS2	EOS2	3.54	3	eP	Pn	05 19 15.3	+0.3
ENA	Nanau	3.55	356	eP	Pn	05 19 16.0	+0.8
ENA				eS	Sn	05 19 57.3	-1.0
NNSB	Datong	3.59	351	eP	Pn	05 19 16.9	+1.0
NNSB				eS	Sn	05 19 58.6	-0.7
NNS	Nan Shan	3.60	351	eP	Pn	05 19 16.9	+0.8
NNS				eS	Sn	05 19 58.4	-1.3
TWQ1	Liyutan	3.65	342	eP	Pn	05 19 16.9	+0.4
TWQ1				eS	Sn	05 19 58.3	-2.1
LATG	Datong	3.68	353	eP	Pn	05 19 18.9	+1.9
LATG				eS	Sn	05 20 00.5	-0.8
TWC	Suao	3.73	358	eP	Pn	05 19 19.8	+2.3
TWC				eS	Sn	05 20 02.1	-0.1
IRIF	Iriomote-Funau	3.80	24	eP	Pn	05 19 19.3	+0.8
YHNB	Yeheng	3.83	351		Pn	05 19 19.6	+0.7
YHNB	Yeheng	3.83	351	eP	Pn	05 19 20.1	+1.3
NFF	Wufeng Townshi	3.83	348	eP	Pn	05 19 19.9	+0.9
NFF				eS	Sn	05 20 02.6	-2.2
NSK	Sanguang	3.84	351	eP	Pn	05 19 20.3	+1.3
NSK				eS	Sn	05 20 03.7	-1.2
LIOB	Emei	3.87	347	eP	Pn	05 19 19.5	+0.2
FUSB	Fushanzhiwuyua	3.89	354	eP	Pn	05 19 21.1	+1.4
NWLT	Wulai	3.92	353	eP	Pn	05 19 20.6	+0.6
JIJ	Ishigaki jima	4.00	29	eP	Pn	05 19 21.4	+0.4
TIPB	Shuangxi	4.09	358	eP	Pn	05 19 23.4	+1.2
JISG	Ishigakijimahi	4.27	29	eP	Pn	05 19 24.8	+0.3
VWUC	VWUC	4.73	331	eP	Pn	05 19 30.4	-0.1
VWUC				S	Sn	05 20 21.0	-4.4
KNM	Kinmen	4.83	318	⇑P	Pn	05 19 33.1	+1.3
KNM				eS	Sn	05 20 26.7	-1.1
KNMB	Chin-men Tao	4.89	318		Pn	05 19 32.6	0.0
PTMZ	Houxiangcun	4.93	328	eP	Pn	05 19 32.9	-0.1
PTMZ				eS	Sn	05 20 26.7	-3.4
ZPLA	Ao Xicun	4.98	309	eP	Pn	05 19 34.4	+0.7
DSXP	Dongshan	5.09	305	eP	Pn	05 19 35.6	+0.4
AXDP	Jialang	5.47	318	eP	Pn	05 19 40.3	+0.1
MATB	Ma-tsu	5.59	341	eP	Pn	05 19 40.5	-1.2
MHZQ	Yeshan	5.88	333	eP	Pn	05 19 44.9	-0.7
LYJJ	Jianjiangzhen	6.02	340	eP	Pn	05 19 46.2	-1.2
SXFK	Yanhouchang	6.80	325	eP	Pn	05 19 58.2	+0.5
KSRS	Korea Array	17.31	16	P	Pn	05 22 12.1	+0.3
	1.2nm,0.5s,baz=197,slow=12,SNR=4.5						
CMAR	Chiang Mai Arr	21.84	268	P	P	05 23 01.5	+1.9
	0.3nm,0.3s,baz=79,slow=8.5,SNR=1.8						
	0.3nm,0.3s						
LZDM	Lanzhou Array	21.97	317	P	P	05 23 02.7	+1.6
	0.7nm,0.3s,baz=153,slow=11,SNR=4.1						
	0.7nm,0.3s						
SONM	Songino Array	29.71	339	P	P	05 24 10.4	-0.1
	0.5nm,0.4s,baz=157,slow=10.0,SNR=5.9						
	0.5nm,0.4s						
SONM	Songino Array	29.71	339	IAmb	IAmb	05 24 15.1	
	comp=Z,0.9nm,0.8s						
MTN	Manton Dam	34.68	164	P	P	05 24 52.0	-2.0
MTN				IAmb	IAmb	05 24 53.7	
	comp=Z,12nm,1.2s						
KNRA	Kununurra	36.92	169	P	P	05 25 11.2	-1.8
FITZ	Fitzroy Crossi	38.89	174	P	P	05 25 27.7	-1.8
	comp=Z,2.7nm,0.4s,baz=354,slow=9.2,SNR=2.2						
	comp=Z,2.7nm,0.4s						
FITZ	Fitzroy Crossi	38.89	174	IAmb	IAmb	05 25 30.3	
	comp=Z,1.9nm,1.0s						
COEN	Coen	40.38	147	P	P	05 25 41.5	-0.4
MKAR	Makanchi Array	41.27	318	P	P	05 25 51.1	+2.2
	comp=Z,2.3nm,0.5s,baz=110,slow=9.1,SNR=33						
MKAR				PcP	PcP	05 27 43.7	-0.7
	comp=Z,0.5nm,0.7s,baz=106,slow=3.2,SNR=2.9						
	comp=Z,2.3nm,0.5s						
MKAR	Makanchi Array	41.27	318	P	P	05 25 51.2	+2.3
MAKZ	Makanchi	41.47	318	P	P	05 25 50.3	-0.3
WRA	Warramunga Arr	42.32	163	P	P	05 25 56.0	-1.7
	comp=Z,1.5nm,0.4s,baz=344,slow=9.1,SNR=5.7						
	comp=Z,1.5nm,0.4s						
WRA	Warramunga Arr	42.32	163	IAmb	IAmb	05 25 57.9	
	comp=Z,0.7nm,1.4s						
WR8	Warramunga Arr	42.38	162	P	P	05 25 56.7	-1.4
WR8				IAmb	IAmb	05 26 23.7	
	comp=Z,6.2nm,0.9s						
ZALV	Zalesovo Beam	43.44	329	P	P	05 26 07.5	+1.1
	comp=Z,1.0nm,0.4s,baz=121,slow=7.1,SNR=4.6						
	comp=Z,1.0nm,0.4s						
ASAR	Alice Springs	45.76	165	P	P	05 26 24.4	-0.7
	comp=Z,1.6nm,0.4s,baz=347,slow=8.5,SNR=8.7						
ASAR				PcP	PcP	05 27 58.6	-1.2
	comp=Z,0.6nm,0.6s,baz=345,slow=3.0,SNR=1.9						
	comp=Z,1.6nm,0.4s						
MORW	Morawa	49.98	187	P	P	05 26 56.0	-1.3
BVAR	Borovoye Array	50.73	322	PcP	PcP	05 28 16.8	-0.6
	comp=Z,1.2nm,0.6s,baz=108,slow=4.7,SNR=4.6						
BBOO	Buckleboo	55.04	166	P	P	05 27 33.8	-0.6
STKA	Stephens Creek	55.70	160	P	P	05 27 38.8	-0.5
AB31	Akbulak array	56.31	316	P	P	05 27 45.4	+2.0
ABKAR	Akbulak array	56.31	316	P	P	05 27 44.5	+1.0
J14K	Nanvaranak Lak	64.54	29	P	P	05 28 40.0	+1.1
L16K	Owhat River	66.42	31	P	P	05 28 52.1	+1.0
L16K				IAmb	IAmb	05 29 18.1	
	comp=Z,15nm,1.4s						
J17K	VABM Dome	66.60	29	P	P	05 28 53.5	+1.3
J17K				IAmb	IAmb	05 28 55.0	
	comp=Z,7.0nm,0.9s						
K17K	Iditarod	66.96	30	P	P	05 28 56.0	+1.6
K17K				IAmb	IAmb	05 28 59.6	
	comp=Z,22nm,1.4s						
O18K	Koktuh Hills	68.60	33	P	P	05 29 06.0	+1.2
F21K	Alatna River	68.84	25	P	P	05 29 07.0	+0.9
F21K				IAmb	IAmb	05 29 31.7	
	comp=Z,5.1nm,1.4s						
PPLA	Purkeypile	69.75	29	P	P	05 29 12.7	+0.7
PPLA				IAmb	IAmb	05 29 40.6	
	comp=Z,24nm,1.5s						
BPAW	Bear Paw Mtn.	70.15	28	P	P	05 29 14.6	+0.4
BPAW				IAmb	IAmb	05 29 16.3	
	comp=Z,9.7nm,1.2s						
SKT	Skwentna	70.16	30	P	P	05 29 14.7	+0.4
SKT				IAmb	IAmb	05 29 18.6	
	comp=Z,11nm,1.4s						
KDAK	Kodiak Island	70.18	35	P	P	05 29 14.2	-0.3
SUA	Susitna One	70.60	31	P	P	05 29 17.6	+0.5
SUA				IAmb	IAmb	05 29 24.2	
	comp=Z,10nm,1.1s						
MCK	McKinley	71.10	28	P	P	05 29 20.2	+0.2
MCK				IAmb	IAmb	05 29 22.3	
	comp=Z,12nm,1.3s						
D25K	Kavik River	71.24	22	P	P	05 29 22.1	+1.4
ILAR	Eielson Array	71.81	27	P	P	05 29 23.8	-0.4
	comp=Z,0.6nm,0.5s,baz=269,slow=4.8,SNR=17						
	comp=Z,0.6nm,0.5s						
BMAR	Burnt Mountain	72.23	24	P	P	05 29 28.4	+1.7
ARCES	ARCESS Array B	72.89	339	P	P	05 29 30.6	+0.1
	comp=Z,6.1nm,1.0s,baz=63,slow=5.5,SNR=4.5						
	comp=Z,6.1nm,1.0s						
ARCES	ARCESS Array B	72.89	339	IAmb	IAmb	05 30 11.7	
	comp=Z,18nm,1.2s						
RIDG	Independent Ri	72.89	28	P	P	05 29 31.1	+0.5
RIDG				IAmb	IAmb	05 30 14.2	
	comp=Z,14nm,1.4s						
MCARA	McCarthy VSAT	74.26	30	P	P	05 29 40.1	+1.5
MCARA				IAmb	IAmb	05 30 08.8	
	comp=Z,24nm,1.3s						
BCAR	Beaver Creek A	74.39	28	P	P	05 29 41.4	+2.0
FINES	FINESS Array B	74.68	330	P	P	05 29 41.2	+0.2
	comp=Z,1.6nm,0.7s,baz=41,slow=6.1,SNR=7.2						
	comp=Z,1.6nm,0.7s						
BARN	Barnard Glacie	74.98	30	P	P	05 29 43.9	+0.9
BARN				IAmb	IAmb	05 29 59.8	
	comp=Z,21nm,1.5s						
DAWY	Dawson	75.14	27	P	P	05 29 44.9	+1.2
DAWY				IAmb	IAmb	05 29 46.1	
	comp=Z,5.9nm,1.4s						
BRTR	Keskin Array B	75.76	307	P	P	05 29 48.4	+0.5
	comp=Z,0.4nm,0.6s,baz=93,slow=4.0,SNR=1.5						
	comp=Z,0.4nm,0.6s						
HFS	Hagfors	80.82	331	P	P	05 30 15.0	0.0
	comp=Z,4.2nm,0.8s,baz=139,slow=7.0,SNR=4.5						
	comp=Z,4.2nm,0.8s						
NOA	NORSAR Array B	81.50	333	P	P	05 30 18.3	-0.3
	comp=Z,1.0nm,0.8s,baz=51,slow=2.0,SNR=4.0						
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	85.72	23	P	P	05 30 40.3	+0.3
	comp=Z,1.2nm,0.6s,baz=313,slow=8.6,SNR=41						
	comp=Z,1.2nm,0.6s						
EKA	Eskdalemuir Ar	90.98	332	P	P	05 31 05.4	+0.3
	comp=Z,1.5nm,0.9s,baz=38,slow=3.6,SNR=1.7						
	comp=Z,1.5nm,0.9s						

NEIC ***31*** *05:18:24.8±2.8, 1°.19N±0°.08×120°.73E±0°.08, h34^{km}±5^{km}, mb4.8/30, Error ellipse: s-maj=13.3km s-min=8.9km az=223.0*

IDC ***31*** *05:18:25.6±3.0, 1°.15N×120°.84E, h45^{km}±28^{km}, mb4.1/16, mbtmp4.4/17, ML5.0/1, MS3.8/36, Error ellipse: s-maj=31.5km s-min=11.3km az=60.0*

ISC 31 05:18:24.1±1.0**, 1°.16N**±0°.07×**120°.78E**±0°.09**, h32**^{km}±7^{km}**, n85, σ1^{s}.03**/59**, mb4.7**/32**, MS3.9**/33**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOLI2	Tolitoli	0.05	180		Pb	05 18 28.6	-0.9
LUWI	Luwuk	2.96	138		Pn	05 19 13.2	+4.3
BKB	Balikpapan	4.57	238	Pn	Pn	05 19 30.9	-0.2
KAPI	Kappang	6.22	190		Pn	05 19 56.5	+2.8
KKM	Kota Kinabalu	6.66	317		Pn	05 19 59.3	-0.6
DAV	Davao City (W)	7.57	39	LR	LR	05 23 10.4	
	comp=Z,1µm,19.6s,baz=326,slow=38						
SOEI	Soe	11.38	162		Pn	05 21 06.9	+2.1
FAKI	Fak Fak	12.16	109		Pn	05 21 16.6	+1.4
TGY	Tagaytay City	12.86	1	LR	LR	05 26 32.1	
	comp=Z,438nm,20.6s,baz=141,slow=38						
MTN	Manton Dam	17.29	144		Pn	05 22 24.3	+1.1
MTN				IAmb	IAmb	05 22 27.6	
	comp=Z,48nm,1.2s						
KNRA	Kununurra	18.49	155		P	05 22 38.9	+1.2
KNRA				IAmb	IAmb	05 22 49.1	
	comp=Z,53nm,0.9s						
FITZ	Fitzroy Crossi	19.72	166	P	P	05 22 52.2	+1.0
	comp=Z,3.0nm,0.3s,baz=3.7,slow=7.3,SNR=115						
FITZ				LR	LR	05 31 57.3	
	comp=Z,290nm,20.6s,baz=348,slow=41						
	comp=Z,51nm,0.9s						
FITZ	Fitzroy Crossi	19.72	166		P	05 22 51.4	+0.2
RPSI	Rantau Prapat	21.90	274	P	P	05 23 16.4	+1.6
PSI	Prapat	21.91	275	P	P	05 23 16.4	+1.4
	comp=Z,6.1nm,0.8s,baz=114,slow=3.8,SNR=6.8						
	comp=Z,6.1nm,0.8s						
MBWA	Marble Bar	22.20	183	P	P	05 23 16.2	-1.8
MBWA				IAmb	IAmb	05 23 30.7	
	comp=Z,72nm,1.4s						
GSI	Gunungsitoli	23.20	271	P	P	05 23 27.5	-1.1
GSI				IAmb	IAmb	05 23 28.9	
	comp=Z,42nm,1.0s						
WB0	Warramunga Arr	24.71	148	P	P	05 23 41.6	-1.1
WRAB	Tennant Creek	24.83	148	P	P	05 23 42.7	-1.0
WRAB				IAmb	IAmb	05 24 01.1	
	comp=Z,42nm,0.9s						
WRA	Warramunga Arr	24.83	148	P	P	05 23 42.8	-0.9
	comp=Z,34nm,0.8s,baz=328,slow=10,SNR=86						
	comp=Z,34nm,0.8s						
WRA	Warramunga Arr	24.83	148	P	P	05 23 42.0	-1.7
WR8	Warramunga Arr	24.93	148	P	P	05 23 43.8	-0.8
JOW	Kunigami	26.52	15	LR	LR	05 33 23.7	
	comp=Z,322nm,21.5s,baz=122,slow=34						
COEN	Coen	26.79	125	P	P	05 24 00.4	-1.2
CMAR	Chiang Mai Arr	27.48	310	P	P	05 24 08.3	+0.7
	comp=Z,1.4nm,0.9s,baz=131,slow=7.0,SNR=11						
CMAR				LR	LR	05 37 48.5	
	comp=Z,94nm,18.2s,baz=125,slow=42						
	comp=Z,1.4nm,0.9s						
CHTO	Chiang Mai	27.68	311		P	05 24 09.0	-0.6
AS31	Alice Springs	27.78	153	P	P	05 24 10.2	-0.1
ASAR	Alice Springs	27.78	153	P	P	05 24 10.2	-0.1
	comp=Z,9.3nm,0.7s,baz=330,slow=7.4,SNR=107						
ASAR				PcP	PcP	05 27 26.8	+0.3
	comp=Z,1.6nm,0.8s,baz=345,slow=2.3,SNR=4.2						
ASAR				ScP	ScP	05 31 04.1	-1.0
	comp=Z,0.4nm,0.8s,baz=351,slow=4.1,SNR=2.7						
ASAR				LR	LR	05 36 14.0	
	comp=Z,321nm,18.4s,baz=323,slow=38						
	comp=Z,9.3nm,0.7s						
ASAR	Alice Springs	27.78	153		P	05 24 09.7	-0.7
PMG	Port Moresby	28.29	112	LR	LR	05 38 40.0	
	comp=Z,116nm,19.1s,baz=310,slow=43						
PMG	Port Moresby	28.29	112	P	P	05 24 13.4	-1.6
PMG				IAmb	IAmb	05 24 18.1	
	comp=Z,15nm,1.0s						
FORT	Forrest	32.51	168		P	05 24 51.3	-0.7
FORT				IAmb	IAmb	05 24 52.9	
	comp=Z,16nm,0.8s						
CTA	Charters Tower	32.70	132	LR	LR	05 38 35.4	
	comp=Z,136nm,18.4s,baz=355,slow=37						
CTAO	Charters Tower	32.70	132		P	05 24 53.7	-0.2
CTAO				IAmb	IAmb	05 24 55.8	
	comp=Z,24nm,1.6s						
JNU	Nakatsue	33.18	16	LR	LR	05 38 05.7	
	comp=Z,152nm,20.7s,baz=188,slow=36						
INKA	Innaminka	34.55	148		P	05 25 09.4	-0.4
INKA				IAmb	IAmb	05 25 11.8	
	comp=Z,12nm,1.1s						
BRDH	Bariadhala	35.49	309	LR	LR	05 41 19.3	
	comp=Z,82nm,18.1s,baz=170,slow=39						
KSRS	Korea Array	36.71	10	LR	LR	05 40 20.2	
	comp=Z,106nm,20.6s,baz=190,slow=36						
BBOO	Buckleboo	36.74	158		P	05 25 27.3	-1.3
SHL	Shillong	36.95	313		P	05 25 30.1	-0.6
SHL				IAmb	IAmb	05 25 43.0	
	comp=Z,12nm,0.9s						
STKA	Stephens Creek	38.32	151	P	P	05 25 41.9	-0.2
	comp=Z,21nm,0.9s,baz=322,slow=8.6,SNR=30						
	comp=Z,21nm,0.9s						
STKA	Stephens Creek	38.32	151		P	05 25 41.6	-0.4
EVN	Everest	42.02	312	P	P	05 26 13.4	-0.1
EVN				IAmb	IAmb	05 26 15.4	
	comp=Z,11nm,1.0s						
GTA	Gaotai	42.61	336	eP	P	05 26 19.3	+1.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ASAJ	Asahikawa	46.96	21	LR	LR	05 46 43.9	
	comp=Z,113nm,20.6s,baz=164,slow=36						
SONM	Songino Array	48.14	347	P	P	05 27 01.8	+0.6
	comp=Z,2.2nm,1.0s,baz=170,slow=8.7,SNR=8.7						
SONM				LR	LR	05 49 30.6	
	comp=Z,123nm,19.6s,baz=170,slow=39						
	comp=Z,2.2nm,1.0s						
HEH	HeiHe	49.24	6	eP	P	05 27 09.8	+0.3
DZM	Mont Dzumac	50.16	120	P	P	05 27 17.3	+0.2
	comp=Z,15nm,0.9s,baz=117,slow=23,SNR=4.4						
	comp=Z,15nm,0.9s						
DZM	Mont Dzumac	50.16	120		P	05 27 17.6	+0.5
KSH	Kashi	55.85	319	P	P	05 27 59.5	+0.7
KSH				pP	pP	05 28 05.5	-2.9
KSH				pmax	pmax		
	comp=Z,3.0nm,1.2s						
MKAR	Makanchi Array	56.48	329	P	P	05 28 03.6	+0.5
	comp=Z,0.6nm,0.6s,baz=134,slow=8.7,SNR=5.4						
MKAR				LR	LR	05 54 36.7	
	comp=Z,73nm,18.5s,baz=144,slow=38						
	comp=Z,0.6nm,0.6s						
AAK	Ala-Archa	58.44	321	LR	LR	05 55 10.2	
	comp=Z,78nm,20.6s,baz=127,slow=38						
PETK	Petropavlovsk-	60.14	25	LR	LR	05 53 54.5	
	comp=Z,50nm,19.7s,baz=156,slow=35						
ZALV	Zalesovo Beam	60.36	336	P	P	05 28 29.2	-0.8
	comp=Z,3.5nm,0.9s,baz=123,slow=5.5,SNR=11						
ZALV				LR	LR	05 55 02.7	
	comp=Z,92nm,19.8s,baz=53,slow=36						
	comp=Z,3.5nm,0.9s						
ZALV	Zalesovo Beam	60.36	336		P	05 28 28.9	-1.1
KURK	Kurchatov	60.88	331	P	P	05 28 34.1	+0.5
KURK				IAmb	IAmb	05 28 35.2	
	comp=Z,7.5nm,1.1s						
YAK	Yakutsk	61.09	5	LR	LR	05 55 21.7	
	comp=Z,61nm,20.4s,baz=118,slow=36						
MA2	Magadan	62.74	17	LR	LR	05 56 12.9	
	comp=Z,67nm,20.1s,baz=110,slow=36						
URZ	Urewera	64.91	134	LR	LR	05 56 37.8	
	comp=Z,54nm,21.7s,baz=330,slow=35						
SEY	Seymchan	65.96	15	LR	LR	06 00 18.3	
	comp=Z,70nm,18.2s,baz=193,slow=38						
BVAR	Borovoye Array	66.36	329	P	P	05 29 10.6	+0.8
	comp=Z,1.0nm,0.8s,baz=99,slow=4.5,SNR=2.7						
BVAR				LR	LR	06 00 29.8	
	comp=Z,70nm,18.6s,baz=97,slow=38						
	comp=Z,1.0nm,0.8s						
TIXI	Tiksi	70.58	3	LR	LR	06 02 10.0	
	comp=Z,120nm,20.4s,baz=201,slow=37						
NRIK	Noril'sk	71.60	348	P	P	05 29 41.1	-0.9
	comp=Z,2.0nm,0.6s,baz=142,slow=6.7,SNR=4.2						
NRIK				LR	LR	06 03 12.9	
	comp=Z,89nm,18.1s,baz=140,slow=38						
	comp=Z,2.0nm,0.6s						
AKTO	Aktyubinsk	72.06	323	LR	LR	06 04 10.3	
	comp=Z,90nm,20.8s,baz=107,slow=38						
MAW	Mawson	79.34	199	P	P	05 30 26.1	-0.2
	comp=Z,6.2nm,1.0s,baz=37,slow=7.0,SNR=6.0						
	comp=Z,6.2nm,1.0s						
KBZ	Khabaz	80.45	314	P	P	05 30 33.5	+0.6
	comp=Z,1.2nm,1.0s,baz=177,slow=3.7,SNR=6.3						
	comp=Z,1.2nm,1.0s						
VNDA	Vanda	81.70	172	P	P	05 30 38.4	-0.5
	comp=Z,5.2nm,0.8s,baz=311,slow=6.9,SNR=12						
VNDA				LR	LR	06 05 30.8	

	comp=Z,68nm,21.6s,baz=332,slow=35						
	comp=Z,5.2nm,0.8s						
VNDA	**Vanda**	**81.70**	**172**	P	**P**	**05 30 38.4**	**-0.5**
C19K	**Lookout Ridge**	**85.22**	**21**	P	**P**	**05 30 58.5**	**+1.3**
C19K				IAmb	IAmb	05 31 06.0	
	comp=Z,17nm,1.3s						
D19K	**Kuna River**	**85.66**	**21**	P	**P**	**05 30 59.6**	**+0.2**
D19K				IAmb	IAmb	05 31 07.5	
	comp=Z,16nm,1.4s						
E19K	**Redstone River**	**85.86**	**23**	IAmb	IAmb	05 31 08.6	
	comp=Z,9.1nm,1.2s						
D20K	**Etivluk River**	**86.23**	**21**	P	**P**	**05 31 02.6**	**+0.4**
D20K				IAmb	IAmb	05 31 10.4	
	comp=Z,17nm,1.4s						
BRTR	**Keskin Array B**	**87.06**	**310**	P	**P**	**05 31 06.7**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=142,slow=6.3,SNR=5.2						
	comp=Z,1.1nm,0.8s						
KDAK	**Kodiak Island**	**87.23**	**32**	LR	LR	06 05 42.7	
	comp=Z,158nm,21.1s,baz=230,slow=32						
MBAR	**Mbarara**	**90.06**	**269**	LR	LR	06 09 29.5	
	comp=Z,43nm,18.7s,baz=73,slow=34						
QSPA	**South Pole Qui**	**91.08**	**180**	P	**P**	**05 31 24.0**	**-1.4**
	comp=Z,3.9nm,1.1s,baz=359,slow=3.6,SNR=8.0						
QSPA				LR	LR	06 12 56.5	
	comp=Z,45nm,18.3s,baz=348,slow=36						
	comp=Z,3.9nm,1.1s						
QSPA	**South Pole Qui**	**91.08**	**180**	P	**P**	**05 31 24.9**	**-0.5**
FINES	**FINESS Array B**	**91.25**	**331**	LR	LR	06 16 38.1	
	comp=Z,44nm,21.0s,baz=222,slow=38						
SPITS	**Spitsbergen Ar**	**91.81**	**348**	LR	LR	06 18 20.4	
	comp=Z,64nm,18.2s,baz=79,slow=39						
MATP	**Matopo**	**92.54**	**250**	LR	LR	06 08 54.5	
	comp=Z,50nm,18.2s,baz=56,slow=33						
LSZ	**Lusaka**	**92.80**	**255**	LR	LR	06 09 47.3	
	comp=Z,91nm,20.1s,baz=119,slow=33						
LBTB	**Lobatse**	**95.19**	**245**	LR	LR	06 14 36.3	
	comp=Z,31nm,18.7s,baz=126,slow=35						
NOA	**NORSAR Array B**	**98.36**	**332**	LR	LR	06 20 36.3	
	comp=Z,34nm,18.8s,baz=350,slow=38						
SUR	**Sutherland**	**99.04**	**238**	LR	LR	06 09 45.2	
	comp=Z,92nm,21.5s,baz=132,slow=31						
TORD	**Torodi Ar. Bea**	**117.97**	**285**	PKP	**PKPdf**	**05 37 07.5**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=54,slow=1.9,SNR=4.0						

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*KOLA **31** 06:03:41.2, 67°.70N×34°.15E, h0^{km}, ML1.3, Error ellipse: s-maj=2.7km s-min=0.9km az=140.0, Khibiny Massif*

HEL 31 06:03:42.3±0.2**, 67°.79N×34°.02E, h0^{km}, ML1.1, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVZ	**Lovozero**	**0.27**	**64**	P	Pg	06 03 47.0	-0.4
LVZ				S	Sg	06 03 50.7	-0.1
LVZ	**Lovozero**	**0.27**	**64**	PG	Pg	06 03 47.3	-0.1
LVZ				SG	Sg	06 03 50.8	0.0
APA	**Apatity**	**0.32**	**228**	S	Sg	06 03 51.9	-0.6
APA0	**Apatity Array**	**0.43**	**246**	P	Pg	06 03 49.8	-0.8
APA0				S	Sg	06 03 56.3	+0.2
KVDA	**Kovda**	**1.19**	**203**	P	Pg	06 04 01.2	-3.8
KVDA				S	Sg	06 04 15.9	-4.4
VRF	**Varrio**	**1.68**	**271**	PG	Pn	06 04 12.8	-0.1
	baz=83						
VRF				MSG		06 04 32.6	
	comp=Z,0.9nm,0.2s						
VRF				SN	Sb	06 04 35.9	+0.2
RAJF	**Raja-Jooseppi**	**2.25**	**291**	PG	Pb	06 04 22.4	-1.3
RAJF				SG	Sb	06 04 52.1	+0.1
OLKF	**Oulanka, Finla**	**2.33**	**233**	PB	Pn	06 04 23.1	+1.3
OLKF				MSG		06 04 51.2	
	comp=Z,0.6nm,0.2s						
OLKF				SB	Sb	06 04 53.0	-1.5
KU6	**Riekki**	**2.40**	**225**	PB	Pn	06 04 23.4	+0.6
	baz=39						
KU6				MSG		06 04 53.3	
	comp=Z,0.5nm,0.2s						
KU6				SB	Sb	06 04 54.8	-1.7
ARCES	**ARCESS Array B**	**3.57**	**303**	S	Sn	06 05 18.3	-3.5
HEF	**Hetta**	**3.93**	**284**	PB	Pb	06 04 49.3	-3.1

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*DNK **31** 06:04:00.6±0.7, 67°.87N×20°.19E, h0^{km}, ML2.9(UPP), Suspected explosion*

*HEL **31** 06:04:01.6±0.3, 67°.85N×20°.28E, h0^{km}, ML1.4, Suspected explosion*

UPP 31 06:04:00.1±0.0**, 67°.87N×20°.22E, h0^{km}, ML2.9, Confirmed Induced event, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.10**	**28**	P	Pg	06 04 01.8	-0.2
KUA				S	Sg	06 04 03.7	+0.5
KUA	**Kurravaara**	**0.10**	**28**	P	Pg	06 04 01.8	-0.2
KUA				S	Sg	06 04 03.7	+0.5
RATU	**Laukkuluspa**	**0.24**	**259**	P	Pg	06 04 04.7	0.0
RATU	**Laukkuluspa**	**0.24**	**259**	P	Pg	06 04 04.7	0.0
KOVU	**Salmi**	**0.35**	**357**	P	Pg	06 04 07.6	+0.8
KOVU	**Salmi**	**0.35**	**357**	P	Pg	06 04 07.6	+0.8
LANU	**Lannavaara**	**0.69**	**74**	P	Pg	06 04 13.5	+0.2
LANU	**Lannavaara**	**0.69**	**74**	P	Pg	06 04 13.5	+0.2
LANU	**Lannavaara**	**0.69**	**74**	PG	Pg	06 04 13.5	+0.1
	baz=257						
LANU				SG	Sg	06 04 20.6	-1.8
DUNU	**Dundret**	**0.76**	**170**	P	Pg	06 04 14.4	-0.2
DUNU	**Dundret**	**0.76**	**170**	P	Pg	06 04 14.4	-0.2
MASU	**Masugnsbyn**	**0.80**	**121**	P	Pg	06 04 15.8	+0.5
MASU	**Masugnsbyn**	**0.80**	**121**	P	Pg	06 04 15.8	+0.5
SALU	**Saltoluokta**	**0.82**	**234**	P	Pg	06 04 15.4	-0.3
SALU	**Saltoluokta**	**0.82**	**234**	*e*P	Pg	06 04 15.6	-0.1
SALU	**Saltoluokta**	**0.82**	**234**	P	Pg	06 04 15.4	-0.3
KIF	**Kilpisjarvi**	**1.16**	**10**	*e*P	Pn	06 04 24.0	+0.5
KIF	**Kilpisjarvi**	**1.16**	**10**	PG	Pn	06 04 23.9	+0.4
KIF				MSG		06 04 38.4	
	comp=Z,5.4nm,0.2s						
KIF				SG	Sb	06 04 39.2	+0.7
HEF	**Hetta**	**1.40**	**66**	PG	Pn	06 04 26.6	-0.2
	baz=250						
HEF				MSG		06 04 43.3	
	comp=Z,2.2nm,0.2s						
HEF				SB	Sn	06 04 46.2	+0.3
PAJU	**Pajala**	**1.40**	**126**	P	Pn	06 04 26.2	-0.7
PAJU	**Pajala**	**1.40**	**126**	P	Pn	06 04 26.2	-0.7
ERTU	**Ertsjaerv**	**1.53**	**149**	P	Pn	06 04 28.3	-0.3
ERTU	**Ertsjaerv**	**1.53**	**149**	P	Pn	06 04 28.3	-0.3
ERTU	**Ertsjaerv**	**1.53**	**149**	PG	Pn	06 04 28.5	-0.1
ERTU				SN	Sn	06 04 49.3	+0.2
KLF	**Kolari**	**1.57**	**112**	PG	Pn	06 04 29.3	+0.1
	baz=295						
KLF				MSG		06 04 48.0	
	comp=Z,1.7nm,0.2s						
KLF				SN	Sg	06 04 51.2	+0.6
KTK1	**Kautokeino**	**1.60**	**43**	PN	Pg	06 04 30.7	0.0
KTK1				SN	Sg	06 04 54.2	+2.8
HARU	**Harads**	**1.74**	**170**	P	Pn	06 04 31.6	+0.1
HARU	**Harads**	**1.74**	**170**	P	Pn	06 04 31.6	+0.1
TRO	**Tromso**	**1.83**	**346**	PG	Pb	06 04 34.3	-0.1
	baz=163						
TRO				SG	Sg	06 04 59.5	+0.6
KALU	**Kalix**	**2.37**	**147**	PG	Pn	06 04 41.6	+1.5
KALU				SG	Sb	06 05 11.9	-1.4
TOF	**Tornio**	**2.42**	**136**	PB	Pb	06 04 42.8	-1.6
TOF				MSG		06 05 12.3	
	comp=Z,2.1nm,0.2s						
TOF				SG	Sb	06 05 15.2	+0.6
ARA0	**ARCESS Array S**	**2.55**	**47**	PG	Pb	06 04 46.8	+0.1
ARA0				SB	Sb	06 05 18.5	-0.1
RNF	**Rovaniemi**	**2.58**	**117**	PB	Pb	06 04 45.5	-1.8
	baz=301						
RNF				SG	Sb	06 05 19.6	+0.1
RAJF	**Raja-Jooseppi**	**3.08**	**75**	SG	Sb	06 05 34.0	+0.1
KEV	**Kevo**	**3.11**	**49**	SN	Sn	06 05 30.6	+2.6
RANF	**Ranua**	**3.19**	**123**	PG	Pb	06 04 58.5	+1.0
RANF				SG	Sg	06 05 39.9	-2.4
VRF	**Varrio**	**3.57**	**88**	SG	Sg	06 05 51.5	-3.0
OUL	**Oulu**	**3.60**	**138**	SG	Sb	06 05 50.6	+1.8
OLKF	**Oulanka, Finla**	**3.91**	**109**	SG	Sb	06 06 01.6	+3.9
KU6	**Riekki**	**4.23**	**111**	PG	Pb	06 05 17.2	+1.9

GCG 31 06:23:32.5±0.4**, 14°.03N×91°.19W, h64^{km}±29^{km}, MD3.6, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG5	**El Palmar, Qui**	**0.40**	**338**	*i* P	Pn	06 23 48.0	+3.9
STG5				*i* S	Sn	06 23 58.8	+6.5
ESSG	**Sabana Grande**	**0.50**	**45**	*i* P	Pn	06 23 44.9	0.0
ESSG				*i* S	Sn	06 23 54.7	+0.7
FG16	**Alotenango, Sa**	**0.71**	**70**	*i* P	Pn	06 23 46.1	-1.2

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*IDC **31** 06:24:15.6±3.4, 33°.32S×178°.46W, h0^{km}, mb3.6/2, mbtmp3.6/3, ML3.6/1, Error ellipse: s-maj=78.1km s-min=37.9km az=115.0*

*WEL **31** 06:24:24.6±1.3, 34°S±14°×17°8W±2°0, h238^{km}±32^{km}, M4.0/6, mB4.2/3, ML4.0/8, MLv4.1/6, Mw(mB)3.3/3, Error ellipse: s-maj=28.0km s-min=15.2km az=113.0, confirmed*

ISC 31 06:24:16.7±2.1**, 33°.6S**±0°.1×**177°.7W**±0°.2**, h35^{km}, n18, σ2^{s}.31**/29**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.12**	**218**	P	**Pn**	**06 25 33.5**	**+2.6**
WMGZ	**Waiomatatini S**	**5.26**	**215**	P	**Pn**	**06 25 36.6**	**+3.8**
HAZ	**Te Kaha**	**5.54**	**220**	P	**Pn**	**06 25 38.7**	**+2.1**
HAZ				S	**Sn**	**06 26 40.6**	**+1.7**
PUZ	**Puketiti**	**5.54**	**215**	P	**Pn**	**06 25 39.9**	**+3.3**
RUGZ	**Raukumara Rang**	**5.75**	**219**	P	**Pn**	**06 25 41.0**	**+1.4**
RUGZ				S	**Sn**	**06 26 41.8**	**-2.5**
TWGZ	**Tauwhareparae**	**5.75**	**216**	P	**Pn**	**06 25 43.6**	**+3.9**
TWGZ				S	**Sn**	**06 26 46.1**	**+1.7**
MWZ	**Matawai**	**6.10**	**218**	P	**Pn**	**06 25 46.7**	**+2.3**
MWZ				S	**Sn**	**06 26 53.2**	**+0.2**
URZ	**Urewera**	**6.26**	**220**	Pn	**Pn**	**06 25 47.5**	**+0.9**
	1.5nm,0.3s,baz=217,slow=1.3,SNR=8.2						
URZ				Sn	**Sn**	**06 26 57.0**	**+0.1**
	0.6nm,0.3s,baz=156,slow=18,SNR=1.7						
	2.9nm,0.3s						
URZ	**Urewera**	**6.26**	**220**	P	**Pn**	**06 25 48.1**	**+1.5**
URZ				S	**Sn**	**06 26 56.3**	**-0.6**
SNGZ	**Shannon Statio**	**6.54**	**216**	P	**Pn**	**06 25 53.3**	**+2.9**
SNGZ				S	**Sn**	**06 27 03.8**	**0.0**
RAHZ	**Arahi**	**6.77**	**217**	P	**Pn**	**06 25 56.4**	**+2.8**
RAHZ				S	**Sn**	**06 27 05.8**	**-3.7**
MTHZ	**Maungataniwha**	**6.84**	**218**	P	**Pn**	**06 25 55.6**	**+0.9**
MTHZ				S	**Sn**	**06 27 10.3**	**-1.0**
BKZ	**Black Stump Fm**	**7.26**	**218**	P	**Pn**	**06 26 01.4**	**+1.1**
BKZ				S	**Sn**	**06 27 19.2**	**-2.3**
OUZ	**Omahuta**	**7.35**	**255**	P	**Pn**	**06 26 03.6**	**+2.1**
BFZ	**Birch Farm**	**8.56**	**212**	P	**Pn**	**06 26 17.2**	**-0.9**
BFZ				S	**Sn**	**06 27 49.2**	**-4.2**
ASAR	**Alice Springs**	**43.26**	**270**	P	**P**	**06 32 13.8**	**-1.1**
	0.3nm,0.4s,baz=112,slow=8.2,SNR=10						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**44.53**	**275**	P	**P**	**06 32 24.2**	**-1.0**
	0.3nm,0.4s,baz=118,slow=7.6,SNR=4.9						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**148.19**	**338**	PKPbc	**PKPab**	**06 44 00.6**	**-0.6**
	4.3nm,1.0s,baz=48,slow=2.1,SNR=1.8						

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*ASRS **31** 06:40:33.0±1.2, 53°.74N×88°.11E, h0^{km}, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 31 06:40:31.8±6.0**, 53°.92N×88°.82E, h0^{km}, mbtmp2.6**/3**, ML2.0**/3**, Error ellipse: s-maj=65.3km s-min=30.7km az=66.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.37**	**272**	I	I	06 58 10.0	
	baz=88,slow=340,SNR=2.8						
ZALV	**Zalesovo Beam**	**2.37**	**272**	Pn	Pn	06 41 13.1	+1.2
	0.7nm,0.3s,baz=90,slow=15,SNR=11						
ZALV				Sn	Sn	06 41 40.9	-0.7
	1.1nm,0.3s,baz=99,slow=25,SNR=9.2						
	3.0nm,0.5s						
KURBB	**Kurchatov Arra**	**7.12**	**247**	Pn	Pn	06 42 17.0	-0.2
	baz=58,slow=13,SNR=1.9						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**8.26**	**213**	Pn	Pn	06 42 34.0	+1.1
	0.1nm,0.3s,baz=25,slow=13,SNR=1.7						
	0.1nm,0.3s						

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*IDC **31** 06:49:42.2±2.0, 51°.11N×150°.70E, h493^{km}±24^{km}, mb2.8/10, mbtmp3.8/13, Error ellipse: s-maj=23.8km s-min=14.7km az=170.0*

ISC 31 06:49:42.5±1.0**, 51°.1N**±0°.2×**150°.7E**±0°.1**, h500^{km}, n13, σ0^{s}.67**/13**, mb3.1**/10**, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**4.76**	**62**	P	**P**	**06 51 06.1**	**-1.0**
	5.9nm,0.9s,baz=270,slow=5.8,SNR=2.2						
SEY	**Seymchan**	**11.90**	**4**	P	**P**	**06 52 20.8**	**+1.1**
	1.5nm,0.5s,baz=176,slow=11,SNR=5.7						
YAK	**Yakutsk**	**15.86**	**322**	P	**P**	**06 53 00.1**	**-1.1**
	5.4nm,0.3s,baz=121,slow=2.7,SNR=1.1						
SONM	**Songino Array**	**28.66**	**281**	P	**P**	**06 54 57.6**	**-0.5**
	0.2nm,0.4s,baz=59,slow=6.2,SNR=2.1						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**34.27**	**42**	P	**P**	**06 55 45.5**	**-0.2**
	0.4nm,0.7s,baz=256,slow=6.1,SNR=8.0						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**43.67**	**292**	P	**P**	**06 57 02.1**	**0.0**
	0.4nm,0.6s,baz=61,slow=9.9,SNR=5.4						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**43.85**	**299**	P	**P**	**06 57 03.4**	**0.0**
	1.1nm,0.6s,baz=67,slow=8.3,SNR=8.0						
	1.1nm,0.6s						
BVAR	**Borovoye Array**	**46.96**	**305**	P	**P**	**06 57 27.7**	**+0.6**
	0.7nm,0.4s,baz=52,slow=5.8,SNR=4.1						
	0.7nm,0.4s						
YKA	**Yellowknife Ar**	**48.43**	**38**	P	**P**	**06 57 38.1**	**+0.1**
	0.4nm,0.7s,baz=304,slow=7.5,SNR=9.1						
	0.4nm,0.7s						
FINES	**FINESS Array B**	**59.44**	**333**	P	**P**	**06 58 55.9**	**0.0**
	3.7nm,1.0s,baz=13,slow=6.3,SNR=5.9						
	3.7nm,1.0s						
PDAR	**Pinedale Array**	**63.47**	**54**	P	**P**	**06 59 23.4**	**+0.4**
	0.2nm,0.4s,baz=318,slow=4.4,SNR=4.2						
	0.2nm,0.4s						
HFS	**Hagfors**	**63.83**	**338**	P	**P**	**06 59 24.6**	**0.0**
	4.9nm,1.0s,baz=54,slow=8.0,SNR=2.1						
	4.9nm,1.0s						
ASAR	**Alice Springs**	**75.89**	**196**	P	**P**	**07 00 37.6**	**+0.6**
	0.3nm,0.6s,baz=9.1,slow=6.0,SNR=5.3						
	0.3nm,0.6s						

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*ASRS **31** 07:15:03.0±0.9, 53°.65N×87°.92E, h0^{km}, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 31 07:14:59.5±5.8**, 53°.93N×88°.67E, h0^{km}, mbtmp2.7**/3**, ML2.2**/3**, Error ellipse: s-maj=63.8km s-min=28.6km az=63.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.27**	**272**	I	I	07 32 00.0	
	baz=89,slow=340,SNR=1.5						
ZALV	**Zalesovo Beam**	**2.27**	**272**	Pn	Pn	07 15 38.7	+0.4
	0.9nm,0.3s,baz=93,slow=16,SNR=13						
ZALV				Sn	Sn	07 16 06.2	-0.9
	1.9nm,0.3s,baz=105,slow=25,SNR=17						
	1.9nm,0.4s						
KURBB	**Kurchatov Arra**	**7.04**	**246**	Pn	Pn	07 16 44.1	+0.3
	baz=61,slow=14,SNR=4.5						
KURBB				Lg	Lg	07 18 33.7	
	baz=62,slow=29,SNR=4.6						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**8.22**	**212**	Pn	Pn	07 17 01.0	+1.0
	0.1nm,0.3s,baz=27,slow=14,SNR=6.7						
	0.1nm,0.2s						

IDC 31 07:27:38.0±2.7**, 1°.75N×126°.39E, h0^{km}, mb3.2**/3**, mbtmp3.2**/3**, Error ellipse: s-maj=254.9km s-min=29.2km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.93**	**160**	P	P	07 32 43.4	-0.5
	0.4nm,0.5s,baz=340,slow=11,SNR=1.4						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**26.30**	**164**	P	P	07 33 16.0	+0.4
	0.1nm,0.5s,baz=328,slow=10.0,SNR=4.5						
	0.1nm,0.5s						
MKAR	**Makanchi Array**	**58.98**	**326**	P	P	07 37 39.5	0.0
	0.1nm,0.4s,baz=123,slow=8.0,SNR=2.1						
	0.1nm,0.4s						

IDC 31 07:39:02.1±5.2**, 6°.47S×130°.08E, h183^{km}**±49^{km}**, mb3.1**/1**, mbtmp3.5**/4**, MS3.1**/1**, Error ellipse: s-maj=65.1km s-min=22.0km az=73.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.34**	**200**	P	Pn	07 41 52.1	+0.4
	1.3nm,0.4s,baz=35,slow=9.9,SNR=22						
FITZ				S	Sn	07 44 07.5	-1.5
	1.9nm,0.9s,baz=252,slow=9.6,SNR=2.0						
WRA	**Warramunga Arr**	**14.01**	**163**	P	Pn	07 42 11.9	-1.0
	0.4nm,0.6s,baz=347,slow=13,SNR=6.4						
WRA				S	Sn	07 44 41.5	-7.7
	0.6nm,0.5s,baz=329,slow=22,SNR=5.5						
ASAR	**Alice Springs**	**17.48**	**168**	P	Pn	07 42 55.1	+0.1
	0.6nm,0.6s,baz=354,slow=9.3,SNR=11						
ASAR				S	S	07 46 06.1	+0.2
	0.3nm,0.7s,baz=286,slow=37,SNR=1.5						
JNU	**Nakatsue**	**39.38**	**1**	LR	LR	08 07 01.3	
	comp=Z,26nm,18.1s,baz=71,slow=43						
MKAR	**Makanchi Array**	**67.83**	**327**	P	P	07 49 40.3	-0.1
	0.2nm,0.4s,baz=124,slow=7.0,SNR=4.6						
	0.2nm,0.4s						

IDC 31 07:55:11.3±2.3**, 6°.91S×129°.51E, h0^{km}, mb3.4**/1**, mbtmp3.3**/3**, ML3.5**/2**, Error ellipse: s-maj=148.8km s-min=32.7km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.78**	**161**	Pn	Pn	07 58 26.6	-1.5
	0.3nm,0.3s,baz=342,slow=13,SNR=4.7						
WRA				Sn	Sn	08 00 46.8	-15
	0.2nm,0.3s,baz=341,slow=19,SNR=1.3						
	1.2nm,1.0s						
ASAR	**Alice Springs**	**17.19**	**166**	P	P	07 59 14.2	-0.5
	0.1nm,0.3s,baz=352,slow=9.9,SNR=7.4						
ASAR				S	Sn	08 02 13.3	-12
	0.2nm,0.6s,baz=330,slow=33,SNR=4.6						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**67.89**	**327**	P	P	08 06 11.7	0.0
	0.2nm,0.5s,baz=118,slow=7.7,SNR=4.8						
	0.2nm,0.5s						

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*IDC **31** 08:18:47.3±1.9, 49°.68N×82°.12E, h0^{km}, mbtmp2.5/2, ML2.1/2, Error ellipse: s-maj=42.4km s-min=12.1km az=99.0*

*NNC **31** 08:18:49.1±4.3, 49°.46N×81°.14E, h0^{km}, mb2.9, mpv2.5, Error ellipse: s-maj=98.8km s-min=12.7km az=54.0, Suspected Mining explosion.*

ISC 31 08:18:47.4±1.2**, 49°.73N**±0°.06×**81°.48E**±0°.08**, h0^{km}, n6, σ1^{s}.04**/8**, 3C-2D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR16	**Kurchatov Arra**	**2.12**	**296**	⇑Pn	**Pn**	**08 19 23.7**	**-0.3**
	2.1nm,0.6s						
KUR16				⇓Sn	**Sb**	**08 19 53.0**	**-0.4**
	7.6nm,0.7s						
MAKZ	**Makanchi**	**2.94**	**173**	Pn	**Pn**	**08 19 35.1**	**-0.3**
MAKZ				⇓Lg	Lg	08 20 14.9	
MK31	**Makanchi Array**	**2.98**	**169**	⇑Pn	**Pn**	**08 19 35.2**	**-0.8**
	0.9nm,0.4s,baz=352,slow=12,SNR=45						
MK31				⇑Lg	Lg	08 20 14.6	
	13nm,0.8s,baz=3.9,slow=26,SNR=13						
MKAR	**Makanchi Array**	**2.98**	**169**	Pn	**Pn**	**08 19 35.1**	**-0.8**
	1.0nm,0.3s,baz=356,slow=12,SNR=34						
MKAR				Sn	**Sn**	**08 20 12.8**	**+0.4**
	0.5nm,0.3s,baz=355,slow=25,SNR=14						
MKAR				Lg	Lg	08 20 17.9	
	1.4nm,0.3s,baz=358,slow=29,SNR=20						
	1.5nm,0.3s						
ZALV	**Zalesovo Beam**	**4.71**	**25**	Pn	**Pn**	**08 19 58.3**	**-1.4**
	0.1nm,0.3s,baz=216,slow=13,SNR=4.1						
ZALV				Pg	**Pb**	**08 20 12.1**	**+1.3**
	0.1nm,0.3s,baz=214,slow=15,SNR=3.9						
ZALV				Lg	Lg	08 21 12.8	
	0.3nm,0.3s,baz=200,slow=25,SNR=18						
	0.4nm,0.4s						
I46RU	**ZALESOVO INFRA**	**4.71**	**25**	I	I	08 46 20.0	
	0.1nm,1.2s,baz=199,slow=323,SNR=5.5						

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*SNET **31** 08:37:16.0±1.2, 13°.48N×91°.56W, h4^{km}±24^{km}, ML4.4*

*CATAC **31** 08:37:17.0±0.6, 13°N±2°×9°2W±°, h7^{km}±4^{km}, M4.4/16, MLv4.4/16, Error ellipse: s-maj=6.0km s-min=3.7km az=44.1, confirmed*

*GCG **31** 08:37:20.5±1.7, 13°.67N×91°.50W, h50^{km}±56^{km}, MD4.7, ML4.3*

*NEIC **31** 08:37:23.3±2.6, 13°.67N±0°.09×91°.28W±0°.07, h43^{km}±9^{km}, mb4.3/91, Error ellipse: s-maj=14.9km s-min=6.0km az=213.0*

*IDC **31** 08:37:26.6±2.4, 13°.69N×91°.06W, h100^{km}±18^{km}, mb3.7/9, mbtmp4.0/11, MS3.7/15, Error ellipse: s-maj=32.7km s-min=15.0km az=55.0*

ISC 31 08:37:20.7±1.4**, 13°.51N**±0°.07×**91°.48W**±0°.06**, h47^{km}**±12^{km}**, n161, σ1^{s}.65**/121**, mb4.3**/41**, MS3.6**/16**, 1C-1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG5	**El Palmar, Qui**	**0.89**	**8**	⇓*i*P	**Pn**	**08 37 38.3**	**+1.2**
STG2	**El Palmar, Qui**	**0.92**	**7**	*e*P	**Pn**	**08 37 39.0**	**+1.5**
STG8	**El Palmar, Qui**	**0.94**	**8**	*e*P	**Pn**	**08 37 39.3**	**+1.5**
RTAL	**Retalhuleu**	**1.03**	**349**	Pn	**Pn**	**08 37 36.8**	**-2.0**
RTAL	**Retalhuleu**	**1.03**	**349**	*e*P	**Pn**	**08 37 36.7**	**-2.0**
RTAL				*e*S	**Sn**	**08 37 49.2**	**-2.8**
RTAL	**Retalhuleu**	**1.03**	**349**	P	**Pn**	**08 37 36.9**	**-1.9**
RTAL	**Retalhuleu**	**1.03**	**349**	S	**Sn**	**08 37 53.3**	**+1.3**
ESSG	**Sabana Grande**	**1.07**	**36**	*e*P	**Pn**	**08 37 37.9**	**-1.6**
ESSG				*e*S	**Sn**	**08 37 51.4**	**-1.9**
ESSG				IAML		08 38 01.4	
	comp=N,4μm,0.5s						
FG16	**Alotenango, Sa**	**1.21**	**51**	*e*P	**Pn**	**08 37 38.8**	**-2.6**
PCG5	**San Vicente Pa**	**1.28**	**57**	*e*P	**Pn**	**08 37 39.7**	**-2.6**
SOKI	**Kika Raxquin**	**1.30**	**3**	*e*P	**Pn**	**08 37 41.3**	**-1.6**
SOKI				*e*S	**Sn**	**08 37 57.0**	**-2.3**
SOKI				IAML		08 38 07.4	
	comp=N,6μm,0.6s						
QUEO	**Labor Ovalle**	**1.35**	**359**	*e*P	**Pn**	**08 37 42.1**	**-1.3**
QUEO				IAML		08 38 30.7	
	comp=E,5μm,0.7s						
SMCA	**Catarina**	**1.45**	**337**	*e*P	**Pn**	**08 37 42.7**	**-1.8**
FAME	**Alcaldia de Sa**	**1.47**	**77**	P	**Pn**	**08 37 43.2**	**-1.5**
FAME	**Alcaldia de Sa**	**1.47**	**77**	S	**Sn**	**08 38 03.2**	**+0.4**
NUBE	**Las Nubes**	**1.70**	**77**	*e*P	**Pn**	**08 37 46.8**	**-1.3**
NUBE	**Las Nubes**	**1.70**	**77**	*e*P	**Pn**	**08 37 46.8**	**-1.3**
NUBE				*e*S	**Sn**	**08 38 09.8**	**+1.0**
NUBE	**Las Nubes**	**1.70**	**77**	P	**Pn**	**08 37 46.9**	**-1.2**
LOAL	**Lomas de Alarc**	**1.72**	**74**	*e*P	**Pn**	**08 37 47.9**	**-0.4**
LOAL	**Lomas de Alarc**	**1.72**	**74**	P	**Pn**	**08 37 47.8**	**-0.5**
LOAL	**Lomas de Alarc**	**1.72**	**74**	S	**Sn**	**08 38 11.0**	**+1.8**
SLOZ	**Alcaldia de Sa**	**1.73**	**73**	P	Pn	08 37 43.0	-5.4
APG	**El Apazote**	**1.78**	**34**	P	**Pn**	**08 37 50.3**	**+1.0**
	comp=E,37nm,0.4s,baz=162,slow=10,SNR=350						
APG				S	**Sn**	**08 38 12.6**	**+1.7**
	comp=E,46nm,0.6s,baz=235,slow=22,SNR=5.8						
APG				LR	LR	08 38 36.2	
	comp=E,55nm,20.3s,baz=296,slow=49						
APG	**El Apazote**	**1.78**	**34**	*e*P	**Pn**	**08 37 49.6**	**+0.4**
RTR	**El Retiro**	**1.83**	**78**	*e*P	**Pn**	**08 37 49.3**	**-0.5**
CEVE	**Cerro Verde**	**1.83**	**80**	*e*P	**Pn**	**08 37 49.2**	**-0.8**
CEVE	**Cerro Verde**	**1.83**	**80**	P	**Pn**	**08 37 49.3**	**-0.8**
CEVE	**Cerro Verde**	**1.83**	**80**	S	**Sn**	**08 38 14.2**	**+2.0**
SBLS	**San Blas**	**1.84**	**80**	*e*P	**Pn**	**08 37 49.0**	**-1.1**
RBDL	**Robledal**	**1.84**	**71**	*e*P	**Pn**	**08 37 49.9**	**-0.2**
UNIC	**Universidad Ca**	**1.94**	**76**	P	**Pn**	**08 37 50.7**	**-0.6**
UNIC	**Universidad Ca**	**1.94**	**76**	S	**Sn**	**08 38 16.8**	**+2.3**
JAYA	**Jayaque - finc**	**1.98**	**86**	*e*P	**Pn**	**08 37 50.8**	**-1.2**
JAYA	**Jayaque - finc**	**1.98**	**86**	*e*P	**Pn**	**08 37 50.8**	**-1.2**
JAYA				*e*S	**Sn**	**08 38 16.3**	**+0.6**
JAYA	**Jayaque - finc**	**1.98**	**86**	P	**Pn**	**08 37 51.0**	**-1.0**
JAYA	**Jayaque - finc**	**1.98**	**86**	S	**Sn**	**08 38 17.5**	**+1.7**
LALI	**Alcalda de L**	**2.10**	**90**	*e*P	**Pn**	**08 37 52.8**	**-0.7**
PMON	**Piamonte**	**2.12**	**84**	*e*P	**Pn**	**08 37 53.2**	**-0.6**
BOQS	**Boqueron**	**2.15**	**84**	*e*P	**Pn**	**08 37 53.9**	**-0.5**
MTO3	**Montecristo**	**2.24**	**67**		**Pn**	**08 37 55.6**	**+0.1**

MTO3	Montecristo	2.24	67	*e*P	Pn	08 37 55.5	-0.1
MTO3	Montecristo	2.24	67	*e*P	Pn	08 37 55.7	+0.1
LFU	La Fuente	2.32	84	*e*P	Pn	08 37 56.7	+0.2
ESQI	Esquipulas	2.33	63		Pn	08 37 57.1	+0.5
ESQI	Esquipulas	2.33	63	*e*P	Pn	08 37 56.9	+0.3
LBRS	Las Brisas	2.38	84	*e*P	Pn	08 37 57.4	0.0
SCLA	Alcaldia de Sa	2.69	86	*e*P	Pn	08 38 01.6	+0.1
PQSS	Presa 15 de Se	2.85	87	P	Pn	08 38 00.4	-3.2
PQSS	Presa 15 de Se	2.85	87	S	Sn	08 38 36.3	-0.4
TECA	Tecapa	2.90	90	*e*P	Pn	08 38 04.7	+0.1
SARH	Santa Rosa de	2.92	64	⇑*i*P	Pn	08 38 05.4	+0.5
SARH	Santa Rosa de	2.92	64	P	Pn	08 38 05.4	+0.5
PACA	Pacayal	3.08	90	P	Pn	08 38 06.9	0.0
LCND	La Caada	3.50	93	P	Pn	08 38 12.6	-0.1
CNCH	Conchagua	3.56	93	P	Pn	08 38 13.2	-0.4
PETF	Flores	3.73	25		Pn	08 38 17.2	+1.5
PETF	Flores	3.73	25	P	Pn	08 38 17.2	+1.5
CSGN	Cosiguina Volc	3.86	98	P	Pn	08 38 17.1	-0.5
POTN	Potosi Cosigui	3.91	97	P	Pn	08 38 17.8	-0.4
TGUH	Tegucigalpa,Un	4.13	82		Pn	08 38 21.2	-0.1
TGUH	Tegucigalpa,Un	4.13	82	P	Pn	08 38 21.5	+0.1
CRIN	San Cristobal	4.39	100		Pn	08 38 24.9	-0.1
HERN	Volcan Telica	4.62	101		Pn	08 38 26.9	-1.3
CNGN	Cerro Negro	4.77	102		Pn	08 38 30.0	-0.2
CMIG	Matias Romero	4.84	318	P	Pn	08 38 29.9	-1.2
	comp=E,8.6nm,0.3s,baz=163,slow=13,SNR=46						
CMIG				S	Sn	08 39 23.3	-2.6
	comp=E,63nm,0.6s,baz=89,slow=6.7,SNR=5.6						
BOAB	BOACO BROADBAN	5.77	100		Pn	08 38 42.3	-1.5
SIUN	Universidad Ur	6.53	87		Pn	08 38 54.8	+0.5
JUD3	Juan Diaz 3	6.70	119		Pn	08 38 57.5	+0.8
JTS	Las Juntas de	7.15	116	P	Pn	08 39 04.0	+1.2
	comp=E,5.0nm,0.4s,baz=309,slow=23,SNR=11						
JTS				S	Sn	08 40 17.7	-5.1
	comp=E,5.8nm,0.4s,baz=266,slow=19,SNR=1.3						
JTS	Las Juntas de	7.15	116		Pn	08 39 04.2	+1.4
TEIG	Tepich	7.35	24	P	Pn	08 39 06.5	+1.1
	comp=E,0.1nm,0.5s,baz=131,slow=24,SNR=54						
PIRO	Carate, Puerto	9.47	122		Pn	08 39 37.2	+2.6
BRU2	Volcan	9.82	118		Pn	08 39 41.6	+2.1
JRQG	Juriquilla Cam	11.16	311		Pn	08 40 05.8	+7.9
SOR	Soroa	12.24	40		Pn	08 40 13.4	+0.9
MTDJ	Mount Denham	14.21	69	P	P	08 40 45.0	-0.7
HBVL	Hebbronville	15.07	335	IAmb	IAmb	08 40 58.8	
	comp=Z,15nm,0.9s						
JCT	Junction City	18.55	337	P	Pn	08 41 36.8	+2.5
HPIG		18.83	317	P	Pn	08 41 40.1	+2.3
BRDY	Brady	18.99	340	P	Pn	08 41 40.1	+0.6
SAND	Sanderson	19.09	331	P	Pn	08 41 41.5	+0.7
TXAR	Lajitas Array	19.38	326	P	Pn	08 41 44.6	+0.4
	comp=Z,4.3nm,0.8s,baz=155,slow=13,SNR=47						
TXAR	Lajitas Array	19.38	326	P	Pn	08 41 44.9	+0.7
OZNA	Ozona	19.47	334	P	Pn	08 41 45.7	+0.4
OZNA				IAmb	IAmb	08 41 46.9	
	comp=Z,10nm,0.7s						
Z47A	Carrollton	19.84	8		Pn	08 41 50.8	+1.2
LRAL	Lakeview Retre	19.86	11	P	P	08 41 47.3	-0.6
152A	Waverly Hall	20.05	17	IAmb	IAmb	08 41 56.1	
	comp=Z,12nm,0.7s						
FW06	Azle	20.15	345	IAmb	IAmb	08 41 59.7	
	comp=Z,14nm,0.9s						
PLPT	Palo Pinto	20.20	343	IAmb	IAmb	08 41 54.0	
	comp=Z,15nm,0.8s						
SGCY	Sterling City	20.34	336	IAmb	IAmb	08 41 55.2	
	comp=Z,16nm,0.8s						
ABTX	Abilene, Hawle	20.43	340	IAmb	IAmb	08 41 55.9	
	comp=Z,9.0nm,0.8s						
SDV	Santo Domingo	20.96	100	P	P	08 41 56.9	-3.3
	comp=Z,2.0nm,0.5s,baz=283,slow=7.3,SNR=3.7						
	comp=Z,2.0nm,0.5s						
PECS	Pecos	21.11	329	P	P	08 42 01.9	+0.4
VHRN	Van Horn	21.22	326	IAmb	IAmb	08 42 07.0	
	comp=Z,11nm,1.1s						
SN07	Snyder 07	21.30	338	IAmb	IAmb	08 42 05.7	
	comp=Z,5.5nm,0.6s						
POST	Post	21.50	337	IAmb	IAmb	08 42 09.8	
	comp=Z,11nm,0.8s						
WHAR	Wooly Hollow	21.70	358	IAmb	IAmb	08 42 09.9	
	comp=Z,10nm,0.9s						
MNTX	Cornudas Mount	22.14	327	IAmb	IAmb	08 42 17.0	
	comp=Z,11nm,0.8s						
SWET	Sewanee	22.18	12	IAmb	IAmb	08 42 14.2	
	comp=Z,10nm,0.9s						
FCAR	Ozark Folk Cen	22.29	359	IAmb	IAmb	08 42 14.8	
	comp=Z,6.0nm,0.8s						
FNO	Franklin	22.30	347	P	P	08 42 14.7	+0.5
LCAR	Lake Charles	22.46	1	P	P	08 42 14.1	-1.8
LCAR				IAmb	IAmb	08 42 16.3	
	comp=Z,9.0nm,0.7s						
MSTX	Muleshoe	22.80	335	IAmb	IAmb	08 42 21.1	
	comp=Z,11nm,0.7s						
TKL	Tuckaleechee C	23.12	16	LR	LR	08 51 59.9	
	comp=Z,188nm,20.5s,baz=206,slow=38						
TKL	Tuckaleechee C	23.12	16	P	P	08 42 22.6	-0.2
PBMO	Poplar Bluff	23.19	2	IAmb	IAmb	08 42 23.9	
	comp=Z,8.5nm,0.9s						
MGMO	Mountain Grove	23.55	358	IAmb	IAmb	08 42 26.8	
	comp=Z,12nm,1.1s						
121A	Cookes Peak, D	24.09	324	IAmb	IAmb	08 42 43.2	
	comp=Z,9.9nm,1.0s						
319A	Douglas	24.16	320	P	P	08 42 37.9	+5.2
319A				IAmb	IAmb	08 42 38.7	
	comp=Z,10nm,0.9s						
S44A	Carbondale	24.16	4	P	P	08 42 32.4	-0.1
SIUC	Southern Illin	24.19	4	P	P	08 42 32.4	-0.4
ATAH	Atahualpa	24.29	147	LR	LR	08 50 18.0	
	comp=Z,69nm,20.5s,baz=357,slow=32						
CCM	Cathedral Cave	24.44	0	P	P	08 42 33.8	-1.3
R40A	Maddies Statio	24.69	359	IAmb	IAmb	08 42 38.0	
	comp=Z,9.5nm,0.9s						
Y22A	Socorro	24.72	328	IAmb	IAmb	08 42 43.6	
	comp=Z,9.8nm,1.1s						
SJG	San Juan	24.79	76	LR	LR	08 53 23.1	
	comp=Z,176nm,18.8s,baz=277,slow=39						
ANMO	Albuquerque	25.27	330	P	P	08 42 44.0	+1.2
TASM	ASL Pad, Albuq	25.27	330	P	P	08 42 44.3	+1.4
TUC	Tucson	25.73	320		P	08 42 52.9	+5.9
T25A	Trinidad	26.21	336	IAmb	IAmb	08 43 24.5	
	comp=Z,14nm,1.5s						
PV18	Skein Mesa, Pa	29.09	331	IAmb	IAmb	08 43 20.1	
	comp=Z,7.4nm,0.9s						
PV19	Morning Glory	29.18	331	IAmb	IAmb	08 43 30.0	
	comp=Z,10nm,1.2s						
PV04	Paradox Valley	29.21	331	IAmb	IAmb	08 43 21.3	
	comp=Z,4.7nm,0.8s						
PV23	Carpenter Ridg	29.30	331	IAmb	IAmb	08 43 23.6	
	comp=Z,6.8nm,0.8s						
MTPU	Mount Pierson	30.58	327	IAmb	IAmb	08 43 35.6	
	comp=Z,4.3nm,0.8s						
SZCU	Shurtz Canyon	30.75	325	IAmb	IAmb	08 43 36.2	
	comp=Z,3.5nm,0.9s						
PSUT	Pine Spring	31.84	326	IAmb	IAmb	08 43 49.0	
	comp=Z,3.3nm,0.8s						
CTU	Camp Tracy	32.37	331	IAmb	IAmb	08 43 48.9	
	comp=Z,3.4nm,0.9s						
TCUT	Toone Canyon	32.54	331	IAmb	IAmb	08 43 50.4	
	comp=Z,6.3nm,1.0s						
SADO	Sadowa	32.88	16	LR	LR	08 58 24.8	
	comp=Z,114nm,18.9s,baz=276,slow=39						
HWUT	Hardware Ranch	33.00	332	IAmb	IAmb	08 44 08.6	
	comp=Z,2.7nm,0.8s						
PDAR	Pinedale Array	33.07	335	P	P	08 43 52.0	-0.2
	comp=Z,0.6nm,0.7s,baz=136,slow=12,SNR=5.7						
PDAR				PcP	PcP	08 46 35.8	+0.9
	comp=Z,0.3nm,0.7s,baz=128,slow=4.3,SNR=2.4						
	comp=Z,0.6nm,0.7s						
ELK	Elko	34.17	327	IAmb	IAmb	08 44 05.5	
	comp=Z,2.6nm,0.8s						
LOHW	Long Hollow	34.20	335	IAmb	IAmb	08 44 18.6	
	comp=Z,7.0nm,1.4s						
NVAR	Mina Array Bea	34.36	321	P	P	08 44 05.7	+2.2
	comp=Z,4.0nm,0.8s,baz=132,slow=8.3,SNR=16						
NVAR				PcP	PcP	08 46 39.1	+0.5
	comp=Z,0.3nm,0.5s,baz=124,slow=7.6,SNR=3.4						
NVAR				LR	LR	09 01 25.2	
	comp=Z,103nm,18.0s,baz=246,slow=42						
	comp=Z,4.0nm,0.8s						
NVAR	Mina Array Bea	34.36	321	P	P	08 44 05.9	+2.4
MACA	Manacapuru-AM	34.76	116	P	P	08 44 07.2	+0.2
HLID	Hailey	35.84	331	IAmb	IAmb	08 44 30.5	
	comp=Z,4.0nm,1.2s						
ULM	Lac du Bonnet	36.81	355	P	P	08 44 21.6	-2.4
	comp=Z,2.4nm,0.6s,baz=168,slow=6.4,SNR=4.6						
ULM				LR	LR	09 03 14.1	
	comp=Z,55nm,18.4s,baz=202,slow=42						
	comp=Z,2.4nm,0.6s						
WVOR	Wild Horse Val	37.17	326	IAmb	IAmb	08 44 34.5	
	comp=Z,4.2nm,1.0s						
LPAZ	La Paz	37.55	141	P	P	08 44 31.4	0.0
	comp=Z,0.3nm,0.5s,baz=310,slow=8.7,SNR=1.6						
	comp=Z,0.3nm,0.5s						
PLID	Pearl Lake	37.74	331	IAmb	IAmb	08 44 33.8	
	comp=Z,4.6nm,1.1s						
YBH	Yreka Blue Hor	39.06	322	LR	LR	09 02 57.5	
	comp=Z,7.2nm,21.8s,baz=222,slow=39						
PINE	Pine Mountain	39.34	326	IAmb	IAmb	08 44 48.8	
	comp=Z,4.8nm,0.8s						
H04A	Detroit Lake	40.59	326	P	P	08 44 57.3	+1.4
HOOD	Mount Hood Mea	40.73	327	P	P	08 45 00.8	+3.6
C09A	Chrisman Ranch	40.81	332		P	08 44 59.5	+1.9
C09A				IAmb	IAmb	08 45 02.6	
	comp=Z,5.1nm,0.7s						
RPN	Rapa Nui	43.96	203	LR	LR	08 58 55.1	
	comp=Z,60nm,20.4s,baz=44,slow=29						
SCHQ	Schefferville	45.51	20	P	P	08 45 32.5	-2.9
	comp=Z,5.5nm,0.8s,baz=217,slow=6.7,SNR=6.1						
SCHQ				LR	LR	09 05 34.2	
	comp=Z,189nm,18.5s,baz=234,slow=37						
	comp=Z,5.5nm,0.8s						
YKA	Yellowknife Ar	51.61	347	P	P	08 46 21.2	-0.9
	comp=Z,1.6nm,0.7s,baz=154,slow=7.4,SNR=38						
YKA				PcP	PcP	08 47 35.6	+0.2
	comp=Z,0.7nm,0.7s,baz=159,slow=3.2,SNR=9.1						
	comp=Z,1.6nm,0.7s						
FRB	Frobisher Bay	52.67	13	LR	LR	09 08 58.0	
	comp=Z,56nm,20.1s,baz=284,slow=36						
SFJD	Kangerlussuaq	59.83	17	LR	LR	09 14 03.4	
	comp=Z,125nm,18.5s,baz=228,slow=37						
RES	Resolute Bay	61.19	359	LR	LR	09 18 25.1	
	comp=Z,75nm,18.6s,baz=14,slow=40						
ILAR	Eielson Array	63.48	337	P	P	08 47 46.1	+0.4
	comp=Z,2.5nm,0.9s,baz=172,slow=4.7,SNR=34						
	comp=Z,2.5nm,0.9s						
PPT	Papeete	65.12	243	LR	LR	09 08 02.4	
	comp=Z,64nm,19.3s,baz=328,slow=28						
BORG	Borgarnes	69.43	26	LR	LR	09 18 01.2	
	comp=Z,52nm,18.4s,baz=313,slow=35						
JMIC	Jan Mayen	75.03	20	LR	LR	09 23 10.6	
	comp=Z,38nm,18.3s,baz=277,slow=37						
EKA	Eskdalemuir Ar	78.06	36	P	P	08 49 11.7	-2.8
	comp=Z,1.6nm,0.8s,baz=281,slow=4.7,SNR=3.0						
	comp=Z,1.6nm,0.8s						
NRIK	Noril'sk	97.36	0	LR	LR	09 39 57.8	
	comp=Z,40nm,18.1s,baz=28,slow=39						
ASAR	Alice Springs	135.97	250	PKP	PKPdf	08 56 37.5	+0.1
	comp=Z,0.3nm,0.7s,baz=95,slow=1.1,SNR=4.3						
CMAR	Chiang Mai Arr	146.61	342	PKPbc	PKPbc	08 56 58.7	+0.6
	comp=Z,4.4nm,0.9s,baz=347,slow=4.8,SNR=24						

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*ATH **31** 08:58:24.9, 40°.32N×20°.69E, h32km±4km, ML2.6/6, Manual Solution by A.Fokaefs First location: 2019/12/31 08:59:38, This location: 2019/12/31 10:53:26 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*

*TIR **31** 08:58:27.0, 40°.25N×20°.80E, h2km±1km, Ml2.6/3*

*THE **31** 08:58:26.0, 40°N±1°×2°1E±°, h0km±2km, M2.5/13, MLh2.5/13*

*BEO **31** 08:58:27.6±0.6, 40°.19N×21°.00E, h10km, ML2.7/5*

*SKO **31** 08:58:28.5, 40°.26N×20°.77E, h13km, ML2.5*

ISC 31 08:58:27.1±1.0**, 40°.24N**±0°.02×**20°.74E**±0°.02**, h8**km±9km**, n60,** σ1^{s}**43**/84**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEST	Nestorio	0.29	53	Pg	Pg	08 58 32.6	-0.4
NEST				Sg	Sg	08 58 36.7	-0.2
NEST				AML	AML	08 58 39.6	
	2.1nm,0.4s						
NEST	Nestorio	0.29	53	P	Pg	08 58 32.8	-0.2
NEST				S	Sb	08 58 38.6	-1.1
NEST	Nestorio	0.29	53	P	Pg	08 58 32.7	-0.2
NEST				S	Sb	08 58 38.2	-1.5
PENT	Pentalofos	0.31	98	P	Pb	08 58 33.7	-1.2
PENT	Pentalofos	0.31	98	P	Pb	08 58 33.7	-1.2
KBN	Korca	0.38	5	Pg	Pg	08 58 34.2	-0.5
KBN				Sg	Sg	08 58 39.7	0.0
KBN	Korca	0.38	5	P	Pg	08 58 33.2	-1.4
KBN				S	Sg	08 58 39.3	-0.4
KPRO	Kipourio	0.56	121	P	Pg	08 58 38.1	+0.2
KPRO				S	Sn	08 58 48.6	-2.3
KPRO	Kipourio	0.56	121	P	Pg	08 58 37.9	0.0
KPRO				S	Sb	08 58 46.0	-1.3
JAN	Janina	0.59	172	P	Pg	08 58 38.3	-0.2
JAN				S	Sb	08 58 48.7	+0.5
JAN	Janina	0.59	172	P	Pg	08 58 38.3	-0.2
JAN				S	Sb	08 58 48.1	-0.1
PRMD	Pramanda	0.76	159	P	Pg	08 58 41.6	-0.2
PRMD				S	Sn	08 58 55.6	-0.3
IGT	Igoumenitsa	0.78	204	P	Pg	08 58 42.3	+0.2
IGT				S	Sb	08 58 55.0	+1.5
IGT				AML	AML	08 58 56.8	
	0.9nm,0.4s						
IGT	Igoumenitsa	0.78	204	P	Pg	08 58 41.7	-0.3
IGT	Igoumenitsa	0.78	204	*i* Pg	Pg	08 58 41.8	-0.3
IGT				*i* Sg	Sn	08 58 56.0	-0.1
IGT	Igoumenitsa	0.78	204	*e*Pg	Pg	08 58 41.6	-0.4
IGT				*e*Sg	Sn	08 58 55.5	-0.7
IGT	Igoumenitsa	0.78	204	P	Pg	08 58 40.3	-1.7
IGT				S	Sg	08 58 52.0	-0.1
KZN	Kozani	0.79	85	P	Pn	08 58 43.9	-0.7
KZN				S	Sn	08 58 57.5	+0.8
KZN	Kozani	0.79	85	P	Pg	08 58 41.9	-0.4
OHR	Ohrid	0.87	3	*i* Pg	Pb	08 58 43.7	-0.8
OHR				*i* Sg	Sn	08 58 56.5	-2.1
OHR				*e*Lg	Lg	08 58 58.1	
	comp=E,132nm,0.5s						
OHR				*e*Lg	Lg	08 58 59.1	
	comp=N,73nm,0.3s						
KEK	Kerkira	0.90	234	P	Pg	08 58 42.5	-1.9
KEK	Kerkira	0.90	234	P	Pg	08 58 41.8	-2.6
VLO	Vlora	0.98	284	Pg	Pb	08 58 46.3	0.0
VLO				Sg	Sn	08 59 01.2	0.0
TETR	Tetrakomo, Epi	0.98	155	P	Pb	08 58 46.4	-0.1
TETR				S	Sn	08 59 02.8	+1.3
TETR	Tetrakomo, Epi	0.98	155	P	Pg	08 58 44.0	-2.1
THL	Klokotos Trika	1.19	124	P	Pg	08 58 49.7	-0.3
THL				S	Sn	08 59 10.3	+4.0
THL	Klokotos Trika	1.19	124	P	Pb	08 58 47.2	-2.6
TIR	Tirane	1.29	329	Pn	Pg	08 58 53.5	+1.6
TIR				Sn	Sg	08 59 12.1	+3.4
LIT	Litokhoron	1.35	95	P	Pg	08 58 53.2	+0.2
LIT	Litokhoron	1.35	95	*i* Pg	Pg	08 58 53.1	+0.2
LIT				*i* Sg	Sg	08 59 15.6	+5.2
AMPL	Ampelaki	1.37	164	P	Pg	08 58 53.2	-0.1
TSLK	Tsoukalades, L	1.42	183	P	Pn	08 58 51.1	-2.1
GRG	Griva	1.45	60	P	Pg	08 58 54.5	-0.5
GRG	Griva	1.45	60	*i* Pg	Pg	08 58 54.4	-0.6
GRG				*i* Sg	Sg	08 59 16.6	+2.8
PHP	Peshkopia	1.46	351	Pg	Pg	08 58 54.5	-0.6
PHP				Sg	Sg	08 59 16.2	+2.2
PHP				AML	AML	08 59 18.6	
	comp=N,0.5nm,0.5s						
DRAG	Dragano-Lefkad	1.56	185	P	Pb	08 58 56.7	+0.5
AGG	Agios Georgios	1.73	134	P	Pb	08 58 59.3	+0.2
THE	Thessaloniki	1.74	76	*i* Pg	Pb	08 58 57.8	-1.5
VAY	Valandovo	1.76	52	*i* Pn	Pb	08 58 58.0	-1.6
VAY				*i* Sn	Sb	08 59 21.4	-0.4
VAY				*e*Lg	Lg	08 59 22.8	
	comp=N,49nm,0.8s						
VAY				*e*Lg	Lg	08 59 26.2	
	comp=E,28nm,0.5s						
HORT	Hortiatis	1.83	78	P	Pn	08 58 59.1	+0.2
KNT	Kendrikon	1.88	60	P	Pb	08 58 60.0	-1.7
KNT	Kendrikon	1.88	60	*i* Pn	Pb	08 58 59.9	-1.7
DRME	Dracevica, Mon	2.27	329	*e*Pn	Pn	08 59 05.7	+0.8
KKB	Krupnik	2.41	48	*i* Pn	Pn	08 59 07.6	+0.7
PVY	Plav	2.42	346	*e*Pn	Pb	08 59 10.1	-0.9
MMB	Musomishta	2.63	59	*i* Pn	Pn	08 59 09.9	+0.1
BARS	Barje	2.70	17	*i* Pn	Pn	08 59 10.7	-0.1
BARS	Barje	2.70	17	*e*Pn	Pn	08 59 10.6	-0.1
BEY	Berane	2.70	347	*e*Pn	Pb	08 59 13.8	-2.0
SELS	Selova	2.99	5	*e*Pn	Pn	08 59 16.4	+1.6
SJES	Sjenica	3.07	349	*e*Pn	Pn	08 59 18.4	+2.4
ZAPS	Zavoj	3.34	24	*e*Pn	Pn	08 59 19.9	+0.2
IVAS	Ivanjica	3.36	353	*e*Pn	Pn	08 59 20.2	+0.2
BOVS	Bovan	3.47	12	*e*Pn	Pn	08 59 20.8	-0.5
GRUS	Gruza	3.64	360	*e*Pn	Pn	08 59 26.1	+2.3
ZAGS	Zajecar	3.74	17	*e*Pn	Pn	08 59 25.3	+0.3
DIVS	Divibare	3.89	352	*e*Pn	Pn	08 59 29.2	+1.9
TRUS	Trudelj	3.99	357	*e*Pn	Pn	08 59 29.5	+1.0
KUBS	Kucevo	4.22	9	*e*Pn	Pn	08 59 32.1	+0.3
TEKS	Tekeris	4.40	349	*e*Pn	Pn	08 59 34.4	+0.2

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*IDC **31** 09:22:47.0±1.2, 3°.35N×74°.37W, h0km, mb3.6/3, mbtmp3.9/4, ML3.5/1, MS2.9/1, Error ellipse: s-maj=47.6km s-min=14.7km az=92.0*

*RSNC **31** 09:22:47.9±0.0, 3°N±1°×7°4W±°, h0km±2km, M3.6, mB5.0, mb4.4, ML3.4, Mw(mB)4.3*

*CATAC **31** 09:22:51.6±1.2, 4°N±4°×7°4W±°, h7km±5km, M4.2/7, MLv4.2/7, Error ellipse: s-maj=13.6km s-min=4.8km az=118.9, confirmed*

ISC 31 09:22:47.5±1.1**, 3°.49N**±0°.02×**74°.26W**±0°.03**, h2**km±9km**, n54,** σ1^{s}**61**/84**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	La Uribe, Meta	0.27	207	P	Pb	09 22 54.8	-0.4
URMC				S	Sb	09 22 58.8	-1.5
PRAC	Prado	0.67	290	P	Pb	09 23 02.7	+0.8
PRAC				S	Sn	09 23 13.0	-2.1
PRAC	Prado	0.67	290	P	Pb	09 23 02.6	+0.7
PRAC				S	Sn	09 23 12.9	-2.3
VILC	Villavicencio,	0.84	42	P	Pg	09 23 04.1	+0.5
VILC				S	Sg	09 23 15.5	+1.0
CVER	Cruz Verde, Cu	1.04	10	P	Pb	09 23 08.3	-0.3
CVER				S	Sg	09 23 21.8	+0.7
ORTC	Ortega, Tolima	1.07	293	P	Pn	09 23 09.8	+0.2
ORTC				S	Sn	09 23 25.2	0.0
CHIC	Chingaza	1.25	25	P	Pg	09 23 11.4	-0.1
CHIC				S	Sg	09 23 26.4	-1.3
ROSC	El Rosal	1.34	357	Pg	Pb	09 23 14.8	+1.1
	85nm,0.3s,baz=201,slow=14,SNR=104						
ROSC				Lg	Lg	09 23 35.3	
	210nm,0.3s,baz=353,slow=23,SNR=7.7						
MACC	Macarena, Meta	1.40	163	P	Pn	09 23 13.4	-0.7
MACC				S	Sb	09 23 31.1	-1.6
BETC	Betania	1.43	236	P	Pg	09 23 15.7	+0.8
BETC				S	Sg	09 23 34.5	+1.0
ANIL	Santa Ana	1.52	311	P	Pg	09 23 17.3	+0.7
ANIL				S	Sg	09 23 38.7	+2.4
GARC	Garzon, Huila	1.79	224	P	Pg	09 23 21.5	-0.3
GARC				S	Sg	09 23 45.3	+0.3
RECRC	Villamaria, Ca	1.82	323	P	Pg	09 23 22.7	+0.1
RECRC				S	Sg	09 23 46.9	+0.6
NIZA	Niza - Manizal	1.97	322	P	Pg	09 23 25.0	-0.4
NIZA				S	Sg	09 23 51.3	+0.3
CMAN1	Manizales, Cal	2.02	321	P	Pg	09 23 26.5	+0.3
CMAN1				S	Sg	09 23 52.2	-0.2
YOTC	Yotoco, Valle	2.14	283	P	Pb	09 23 26.3	-0.8
YOTC				S	Sg	09 23 57.1	+0.7
SPBC	San Pablo de B	2.16	5	P	Pb	09 23 27.9	+0.5
SPBC				S	Sg	09 23 58.2	+1.3
FLOC	Florencia	2.35	216	P	Pb	09 23 30.0	-0.7
FLOC				S	Sb	09 24 01.4	+1.2
FLOC	Florencia	2.35	216	P	Pb	09 23 30.5	-0.2
FLOC				S	Sb	09 24 00.9	+0.7
JAMC	Jamundi, Valle	2.43	264	P	Pb	09 23 31.7	-0.4
JAMC				S	Sg	09 24 06.9	+1.3
PLMC	San Jos del P	2.46	305	P	Pb	09 23 31.7	-0.9
PLMC				S	Sg	09 24 06.6	-0.1
POPC	Popayan, Colom	2.59	249	P	Pb	09 23 34.1	-0.8
POPC				S	Sg	09 24 11.0	+0.1
RUSC	La Rusia	2.66	26	P	Pb	09 23 34.3	-1.9
RUSC				S	Sb	09 24 07.0	-2.5
RUSC	La Rusia	2.66	26	P	Pb	09 23 34.3	-1.9
RUSC				S	Sb	09 24 07.6	-1.9
CBOC	Ciudad Bolivar	2.94	324	P	Pb	09 23 39.2	-1.6
CBOC				S	Sg	09 24 20.8	-1.2
PTBC	PUERTO BERRIO,	3.04	356	P	Pn	09 23 38.4	+1.7
PTBC				S	Sb	09 24 18.0	-2.0
BARC	Barichara	3.26	19	P	Pn	09 23 41.8	+1.8
BARC				S	Sb	09 24 23.0	-3.7
CRUC	La Cruz	3.30	235	P	Pb	09 23 45.1	-1.9
CRUC				S	Sg	09 24 31.6	-2.0
BBAC	Balboa, Cauca	3.32	244	P	Pb	09 23 44.8	-2.6
BBAC				S	Sg	09 24 32.7	-1.7
PTLC	Puerto Leguiza	3.34	189	P	Pb	09 23 47.1	-0.4
PTLC				S	Sg	09 24 36.8	+1.9
BRJC	Barrancabermej	3.50	8	P	Pn	09 23 43.9	+0.9
BRJC				S	Sb	09 24 30.9	-2.4
GCUF	Volcan Galeras	3.82	234	P	Pb	09 23 52.8	-3.2
GCUF				S	Sg	09 24 48.5	-1.8
GR1C	Gorgona, Isla	3.93	263	P	Pn	09 23 51.2	+2.2
PAMC	Pamplona, Colo	4.13	22	P	Pn	09 23 54.9	+2.8
UREC	San Jos de Ur	4.42	343	P	Pn	09 23 59.1	+3.4
BONI	La Bonita	4.45	227	P	Pb	09 24 09.4	+2.8
TUMC	Tumaco	4.76	250	P	Pn	09 24 04.5	+4.1
OCAC	Ocana	4.81	11	P	Pn	09 24 03.2	+2.0
OTAV	Otavalo	5.29	232	P	Pn	09 24 12.6	+4.5
	17nm,0.8s						
PAC1	Pacto, Paraso	5.55	235	P	Pn	09 24 16.7	+5.3
ARGC	Ariguani, Magd	6.33	0	P	Pn	09 24 25.9	+4.0
	32nm,0.7s						
SJCC	San Jacinto, C	6.43	352	P	Pn	09 24 24.1	+0.7
SJCC				S	Sn	09 25 39.5	+1.9
SJCC	San Jacinto, C	6.43	352	P	Pn	09 24 23.9	+0.5
	30nm,2.1s						
SDV	Santo Domingo	6.46	34	Pn	Pn	09 24 25.0	+1.1
	8.6nm,0.3s,baz=211,slow=4.4,SNR=28						
SDV				Sn	Sn	09 25 39.5	+1.1
	4.6nm,0.3s,baz=343,slow=16,SNR=3.3						
SDV				Lg	Lg	09 26 10.3	
	15nm,0.3s,baz=354,slow=14,SNR=4.8						
	17nm,0.3s						
SDV	Santo Domingo	6.46	34	P	Pn	09 24 25.4	+1.5
	691nm24nm,0.6s						
SGC2	Sao Gabriel da	8.12	116	P	Pn	09 24 45.2	-1.4
URI	Uribia	8.46	15	S	Sn	09 26 28.8	+1.4
URIC	Uribia, Colomb	8.46	15	P	Pn	09 24 51.4	+0.1
JTS	Las Juntas de	12.58	303	LR	LR	09 30 37.1	
	comp=Z,54nm,18.3s,baz=336,slow=37						
LPAZ	La Paz	20.56	163	P	P	09 27 28.8	+0.4
	0.4nm,0.5s,baz=350,slow=6.1,SNR=2.1						
LPAZ				Lg	Lg	09 33 37.6	
	baz=348,slow=19,SNR=3.5						
	0.4nm,0.5s						
SCHQ	Schefferville	51.54	5	P	P	09 31 55.5	+0.7
	3.2nm,0.7s,baz=212,slow=9.5,SNR=4.3						
	3.2nm,0.7s						
TORD	Torodi Ar. Bea	75.54	77	P	P	09 34 34.7	+0.3
	0.3nm,0.7s,baz=288,slow=4.9,SNR=1.4						
	0.3nm,0.7s						
ASAR	Alice Springs	146.20	231	PKPbc	PKPdf	09 42 28.7	-0.9
	0.6nm,0.5s,baz=113,slow=4.0,SNR=7.2						
WRA	Warramunga Arr	147.67	237	PKPbc	PKPdf	09 42 33.0	+0.9
	0.3nm,0.6s,baz=113,slow=3.4,SNR=1.7						

WEL 31 09:32:50.5±0.6**, 33°S**±15°×**18°0W**±3°5**, h12**km**, M4.2**/10**, mB4.8**/7**, ML4.3**/13**, MLv4.3**/10**, Mw(mB)4.0**/7**, Error ellipse: s-maj=49.4km s-min=4.0km az=112.4, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.01	21	P	Pn	09 33 50.2	-1.5
GLKZ				S	Sn	09 34 39.4	+0.8
WMGZ	Waiomatatini S	5.06	198	P	Pn	09 34 05.8	-0.4
WMGZ				S	Sn	09 35 06.2	+1.6
HAZ	Te Kaha	5.19	204	P	Pn	09 34 09.3	+1.3
HAZ				S	Sn	09 35 11.7	+3.9
PKGZ	Pakihiroa	5.20	201	P	Pn	09 34 07.1	-0.9
PKGZ				S	Sn	09 35 09.5	+1.5
PUZ	Puketiti	5.34	199	P	Pn	09 34 08.5	-1.5
PUZ				S	Sn	09 35 10.8	-0.7
RUGZ	Raukumara Rang	5.42	204	P	Pn	09 34 11.4	+0.3
RUGZ				S	Sn	09 35 14.7	+1.2
TWGZ	Tauwhareparae	5.52	200	P	Pn	09 34 12.1	-0.3
TWGZ				S	Sn	09 35 17.2	+1.3
CNGZ	Carnagh Statio	5.74	198	P	Pn	09 34 16.8	+1.2
OUZ	Omahuta	6.07	247	P	Pb	09 34 33.3	-2.8
RTZ	Ruatahuna	6.24	206	P	Pn	09 34 24.1	+1.6
RTZ				S	Sn	09 35 34.6	+0.8
SNGZ	Shannon Statio	6.27	203	P	Pn	09 34 22.5	-0.3
SNGZ				S	Sn	09 35 34.7	+0.4
RAHZ	Arahi	6.47	204	P	Pn	09 34 27.7	+2.1

RAHZ				S	Sn	09 35 40.2	+0.7
MTHZ	**Maungataniwha**	**6.50**	**205**	P	Pn	09 34 26.5	+0.4
MTHZ				S	Sn	09 35 42.1	+2.0
NMHZ	**Naumai**	**6.73**	**205**	P	Pn	09 34 32.1	+2.9
NMHZ				S	Sn	09 35 45.9	0.0
BKZ	**Black Stump Fm**	**6.91**	**206**	P	Pn	09 34 32.5	+0.9
BKZ				S	Sn	09 35 49.6	-0.5
MCHZ	**McNeill Hill**	**7.08**	**204**	P	Pn	09 34 34.9	+1.0
MCHZ				S	Sn	09 35 54.3	-0.1
KWHZ	**Kaweka Forest**	**7.16**	**206**	P	Pn	09 34 34.9	-0.2
KWHZ				S	Sn	09 35 55.8	-0.6

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*IDC **31** 09:35:12.5±1.6, 4°.90N×125°.01E, h366^{km}±19^{km}, mb3.3/10, mbtmp4.0/11, Error ellipse: s-maj=39.4km s-min=10.6km az=65.0*

ISC 31 09:35:11.4±0.8**, 4°.9N**±0°.1×**125°.0E**±0°.2**, h350**^{km}**, n11,** σ**1^{s}.37**/12**, mb3.5**/10**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**2.22**	**15**	P	**Pn**	**09 36 07.1**	**+2.8**
	105nm,0.4s,baz=232,slow=12,SNR=2.3						
DAV				S	**S**	**09 36 44.5**	**-2.3**
	179nm,0.5s,baz=240,slow=20,SNR=3.8						
WRA	**Warramunga Arr**	**26.36**	**160**	P	**P**	**09 40 15.6**	**-1.4**
	1.0nm,0.4s,baz=333,slow=10,SNR=14						
	1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**28.77**	**300**	P	**P**	**09 40 38.7**	**+0.3**
	0.8nm,0.5s,baz=115,slow=6.9,SNR=6.6						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**29.71**	**163**	P	**P**	**09 40 46.1**	**-0.5**
	1.1nm,0.3s,baz=341,slow=7.9,SNR=75						
	1.1nm,0.3s						
STKA	**Stephens Creek**	**39.87**	**158**	P	**P**	**09 42 13.0**	**+0.5**
	3.1nm,0.4s,baz=339,slow=9.2,SNR=7.2						
	3.1nm,0.4s						
SONM	**Songino Array**	**45.64**	**343**	P	**P**	**09 42 57.7**	**-0.6**
	0.7nm,0.9s,baz=152,slow=8.4,SNR=5.3						
	0.7nm,0.9s						
MKAR	**Makanchi Array**	**55.60**	**326**	P	**P**	**09 44 11.7**	**-0.1**
	1.6nm,0.5s,baz=120,slow=8.7,SNR=28						
	1.6nm,0.5s						
ZALV	**Zalesovo Beam**	**58.75**	**334**	P	**P**	**09 44 33.0**	**-0.5**
	0.7nm,0.7s,baz=120,slow=7.4,SNR=4.4						
	0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**59.81**	**328**	P	**P**	**09 44 40.7**	**-0.1**
	1.6nm,0.2s,baz=127,slow=6.4,SNR=14						
	1.6nm,0.2s						
BVAR	**Borovoye Array**	**65.38**	**327**	P	**P**	**09 45 16.7**	**-0.6**
	0.8nm,0.7s,baz=126,slow=11,SNR=3.2						
	0.8nm,0.7s						
ILAR	**Eielson Array**	**84.78**	**25**	P	**P**	**09 47 06.6**	**-0.2**
	0.6nm,1.0s,baz=248,slow=4.5,SNR=6.3						
	0.6nm,1.0s						

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*NNC **31** 09:35:58.2±0.6, 43°.93N×77°.22E, h0^{km}, mpv2.7, Error ellipse: s-maj=6.3km s-min=3.5km az=148.0, Suspected Mining explosion.*

*SOME **31** 09:35:59.3, 43°.93N×77°.23E, h20^{km}*

ISC 31 09:35:57.8±0.9**, 43°.91N**±0°.05×**77°.24E**±0°.03**, h0**^{km}**, n15,** σ**0^{s}.43**/30**, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHKK	**Chushkaly**	**0.19**	**254**	*e*P	**Pg**	**09 36 02.5**	**+1.1**
	18nm,0.0s						
CHKK				*e*S	**Sg**	**09 36 04.6**	**+0.8**
	173nm,0.2s						
ARXS	**Arharly**	**0.52**	**54**	P	**Pg**	**09 36 08.5**	**+0.6**
	0.4nm,0.0s						
ARXS				S	**Sg**	**09 36 14.9**	**+0.2**
	11nm,0.1s						
ARXS	**Arharly**	**0.52**	**54**	*e*P	**Pg**	**09 36 08.4**	**+0.5**
	0.4nm,0.0s						
ARXS				*e*S	**Sg**	**09 36 14.6**	**0.0**
	11nm,0.1s						
KOTS	**Kotyrbulak**	**0.68**	**188**	P	**Pb**	**09 36 12.7**	**+0.1**
	3.5nm,0.1s						
KOTS				S	**Sb**	**09 36 22.1**	**-0.5**
	3.2nm,0.2s						
KOTS	**Kotyrbulak**	**0.68**	**188**	*e*P	**Pb**	**09 36 12.7**	**+0.1**
	3.5nm,0.1s						
KOTS				*e*S	**Sb**	**09 36 22.1**	**-0.5**
	3.2nm,0.2s						
MTBS	**Maitube**	**0.97**	**217**	P	**Pb**	**09 36 17.8**	**+0.2**
	1.2nm,0.1s						
MTBS				S	**Sb**	**09 36 31.0**	**-0.1**
	7.0nm,0.2s						
MTBS	**Maitube**	**0.97**	**217**	*e*P	**Pb**	**09 36 17.8**	**+0.2**
	1.2nm,0.1s						
MTBS				*e*S	**Sb**	**09 36 31.0**	**-0.1**
	7.0nm,0.2s						
KRBS	**Karabastau**	**1.15**	**260**	P	**Pg**	**09 36 19.8**	**-0.1**
	0.4nm,0.1s						
KRBS				S	**Sg**	**09 36 34.3**	**-0.5**
	3.1nm,0.1s						
KRBS	**Karabastau**	**1.15**	**260**	*e*P	**Pg**	**09 36 19.8**	**-0.1**
	0.4nm,0.1s						
KRBS				*e*S	**Sg**	**09 36 34.3**	**-0.5**
	3.1nm,0.1s						
SATY	**Saty**	**1.20**	**134**	P	**Pb**	**09 36 21.7**	**+0.2**
	0.9nm,0.1s						
SATY				S	**Sb**	**09 36 37.6**	**0.0**
	15nm,0.1s						
KST	**Kastek**	**1.27**	**227**	P	**Pb**	**09 36 22.5**	**-0.1**
	0.8nm,0.1s						
KST				S	**Sb**	**09 36 39.2**	**-0.3**
	3.1nm,0.1s						
KST	**Kastek**	**1.27**	**227**	*e*P	**Pb**	**09 36 22.5**	**-0.1**
	0.8nm,0.1s						
KST				*e*S	**Sb**	**09 36 39.2**	**-0.3**
	3.1nm,0.1s						
KNOS	**Konyrlen**	**1.47**	**71**	P	**Pn**	**09 36 25.5**	**-0.2**
	0.6nm,0.1s						
KNOS				S	**Sg**	**09 36 44.0**	**-1.0**
	2.8nm,0.3s						
UZB	**Uzynbulak**	**1.50**	**120**	P	**Pb**	**09 36 26.7**	**0.0**
	1.7nm,0.1s						
UZB				S	**Sg**	**09 36 46.2**	**+0.1**
	2.0nm,0.1s						
UZB	**Uzynbulak**	**1.50**	**120**	*e*P	**Pb**	**09 36 26.7**	**0.0**
	1.7nm,0.1s						
UZB				*e*S	**Sg**	**09 36 46.2**	**+0.1**
	2.0nm,0.1s						

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*NEIC **31** 09:50:41.9±2.1, 0°.1N±0°.1×123°.5E±0°.1, h129^{km}±10^{km}, mb4.3/23, Error ellipse: s-maj=20.7km s-min=12.7km az=64.0*

*IDC **31** 09:50:44.4±2.8, 0°.07N×123°.58E, h167^{km}±27^{km}, mb3.7/14, mbtmp4.2/15, Error ellipse: s-maj=28.0km s-min=10.7km az=68.0*

ISC 31 09:50:43.5±0.4**, 0°.05S**±0°.06×**123°.44E**±0°.08**, h157**^{km}**, n59,** σ**1^{s}.35**/62**, mb4.2**/27**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**1.19**	**214**	Pn	**Pn**	**09 51 08.7**	**-1.9**
LUWI				Sn	**Sn**	**09 51 27.5**	**-4.0**
TOLI2	**Tolitoli**	**2.89**	**293**	Pn	**Pn**	**09 51 28.3**	**-1.5**
SANI	**Sanana**	**3.23**	**128**	P	**Pn**	**09 51 31.3**	**-2.9**
FAKI	**Fak Fak**	**9.26**	**108**	P	**Pn**	**09 52 52.7**	**-1.0**
KNRA	**Kununurra**	**16.40**	**162**	P	**Pn**	**09 54 26.3**	**+1.4**
KNRA				IAmb	IAmb	09 54 27.1	
	comp=Z,22nm,1.1s						
FITZ	**Fitzroy Crossi**	**18.07**	**173**	P	**P**	**09 54 43.9**	**+0.7**
	comp=Z,4.7nm,0.3s,baz=2.9,slow=7.6,SNR=39						
FITZ	**Fitzroy Crossi**	**18.07**	**173**	P	**P**	**09 54 44.2**	**+1.1**
FITZ	**Fitzroy Crossi**	**18.07**	**173**	P	**P**	**09 54 44.0**	**+0.9**
WB0	**Warramunga Arr**	**22.35**	**152**	P	**P**	**09 55 28.6**	**-0.1**
WB0				IAmb	IAmb	09 55 29.7	
	comp=Z,10nm,0.5s						
BKNI	**Bangkinang**	**22.40**	**271**	P	P	09 55 18.7	-11
WRAB	**Tennant Creek**	**22.47**	**152**	P	**P**	**09 55 30.2**	**+0.3**
WRAB				IAmb	IAmb	09 55 31.3	
	comp=Z,7.4nm,0.6s						
WRAB	**Tennant Creek**	**22.47**	**152**	P	**P**	**09 55 30.0**	**+0.1**
WRA	**Warramunga Arr**	**22.47**	**152**	P	**P**	**09 55 29.5**	**-0.4**
	comp=Z,5.2nm,0.5s,baz=330,slow=10,SNR=86						
	comp=Z,5.2nm,0.5s						
WR8	**Warramunga Arr**	**22.56**	**152**	P	**P**	**09 55 30.7**	**-0.1**
WR8				IAmb	IAmb	09 55 39.9	
	comp=Z,9.9nm,0.7s						
COEN	**Coen**	**23.93**	**126**	P	**P**	**09 55 44.3**	**+0.9**
COEN	**Coen**	**23.93**	**126**	P	**P**	**09 55 44.8**	**+1.4**
AS31	**Alice Springs**	**25.58**	**157**	P	**P**	**09 55 58.3**	**0.0**
ASAR	**Alice Springs**	**25.58**	**157**	P	**P**	**09 55 59.0**	**+0.8**
	comp=Z,0.9nm,0.5s,baz=344,slow=14,SNR=20						
ASAR				PcP	**PcP**	**09 59 25.5**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=343,slow=2.3,SNR=2.4						
ASAR				ScP	**ScP**	**10 02 49.9**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=329,slow=2.4,SNR=2.0						
	comp=Z,0.9nm,0.5s						
ASAR	**Alice Springs**	**25.58**	**157**	P	**P**	**09 55 58.9**	**+0.6**
QIS	**Mount Isa**	**25.80**	**143**	P	**P**	**09 56 01.5**	**+1.2**
ALOT	**Alotau**	**28.74**	**112**	P	**P**	**09 56 27.3**	**+0.7**
CM31	**Chiang Mai Arr**	**30.29**	**309**	P	**P**	**09 56 42.1**	**+1.9**
CM31				IAmb	IAmb	09 56 43.1	
	comp=Z,3.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**30.29**	**309**	P	**P**	**09 56 41.5**	**+1.3**
	comp=Z,2.1nm,0.7s,baz=134,slow=7.1,SNR=19						
	comp=Z,2.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**30.29**	**309**	P	**P**	**09 56 41.6**	**+1.4**
CHTO	**Chiang Mai**	**30.49**	**309**	P	**P**	**09 56 44.2**	**+2.2**
CHTO				IAmb	IAmb	09 56 44.7	
	comp=Z,5.0nm,0.8s						
FORT	**Forrest**	**30.88**	**172**	P	**P**	**09 56 45.6**	**+0.4**
FORT				IAmb	IAmb	09 56 46.1	
	comp=Z,5.6nm,0.6s						
BLDU	**Ballidu**	**31.07**	**191**	P	**P**	**09 56 46.1**	**-0.8**
BBOO	**Buckleboo**	**34.69**	**161**	P	**P**	**09 57 18.6**	**+0.2**
STKA	**Stephens Creek**	**36.02**	**153**	P	**P**	**09 57 30.8**	**+1.1**
	comp=Z,3.4nm,0.7s,baz=321,slow=8.6,SNR=5.7						
	comp=Z,3.4nm,0.7s						
STKA	**Stephens Creek**	**36.02**	**153**	P	**P**	**09 57 31.0**	**+1.2**
HTT	**Hallett**	**36.26**	**158**	P	**P**	**09 57 32.4**	**+0.6**
CMSA	**Cobar Meteorol**	**37.75**	**148**	P	**P**	**09 57 45.8**	**+1.4**
MAJO	**Matsushiro**	**38.90**	**19**	P	P	09 57 46.5	-7.4
MJAR	**Matsushiro Arr**	**38.90**	**19**	P	**P**	**09 57 52.5**	**-1.4**
	comp=Z,2.5nm,0.8s,baz=195,slow=8.8,SNR=4.5						
	comp=Z,2.5nm,0.8s						
LZDM	**Lanzhou Array**	**40.26**	**335**	P	**P**	**09 58 06.7**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=140,slow=7.5,SNR=1.5						
	comp=Z,0.5nm,0.3s						
ARMA	**Armidale**	**40.38**	**141**	P	**P**	**09 58 09.0**	**+2.6**
ARMA	**Armidale**	**40.38**	**141**	P	**P**	**09 58 08.2**	**+1.8**
CAN	**Canberra**	**42.42**	**148**	P	**P**	**09 58 25.4**	**+2.6**
EVN	**Everest**	**44.80**	**312**	P	**P**	**09 58 43.4**	**+0.8**
EVN				IAmb	IAmb	09 58 44.5	
	comp=Z,7.6nm,0.8s						
GTA	**Gaotai**	**44.83**	**334**	*e*P	**P**	**09 58 43.8**	**+1.7**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
HILR	**Hailar Array B**	**49.51**	**357**	P	**P**	**09 59 17.0**	**-1.1**
	comp=Z,2.1nm,0.4s,baz=174,slow=10,SNR=5.9						
	comp=Z,2.1nm,0.4s						
ULN	**Ulaanbaatar**	**49.80**	**346**	P	**P**	**09 59 21.3**	**+0.8**
ULN				IAmb	IAmb	09 59 21.7	
	comp=Z,2.2nm,0.6s						
SONM	**Songino Array**	**49.94**	**345**	P	**P**	**09 59 20.8**	**-0.7**
	comp=Z,2.8nm,0.8s,baz=160,slow=8.7,SNR=22						
SONM				PcP	**PcP**	**10 00 38.3**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=176,slow=3.4,SNR=3.7						
	comp=Z,2.8nm,0.8s						
SONM	**Songino Array**	**49.94**	**345**	P	**P**	**09 59 21.8**	**+0.3**
MKAR	**Makanchi Array**	**58.88**	**328**	P	**P**	**10 00 25.3**	**-0.6**
	comp=Z,1.4nm,0.4s,baz=119,slow=8.7,SNR=28						
MKAR				PcP	**PcP**	**10 01 12.4**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=132,slow=4.0,SNR=8.1						
	comp=Z,1.4nm,0.4s						
MAKZ	**Makanchi**	**59.06**	**328**	P	**P**	**10 00 27.6**	**+0.4**
MAKZ				IAmb	IAmb	10 00 27.6	
	comp=Z,1.3nm,0.6s						
PETK	**Petropavlovsk-**	**60.16**	**23**	P	**P**	**10 00 34.3**	**-0.2**
	comp=Z,5.4nm,0.9s,baz=201,slow=4.1,SNR=6.4						
	comp=Z,5.4nm,0.9s						
ZAA0	**Zalesovo Array**	**62.54**	**335**	P	**P**	**10 00 50.1**	**-0.4**
ZALV	**Zalesovo Beam**	**62.54**	**335**	P	**P**	**10 00 49.1**	**-1.3**
	comp=Z,0.8nm,0.5s,baz=114,slow=6.6,SNR=6.0						
	comp=Z,0.8nm,0.5s						
ZALV	**Zalesovo Beam**	**62.54**	**335**	P	**P**	**10 00 50.2**	**-0.2**
KURBB	**Kurchatov Arra**	**63.22**	**330**	P	**P**	**10 00 53.4**	**-1.7**
	comp=Z,1.3nm,0.2s,baz=124,slow=7.3,SNR=1.7						
	comp=Z,1.3nm,0.2s						
KURK	**Kurchatov**	**63.23**	**330**	P	**P**	**10 00 55.4**	**+0.3**
KURK				IAmb	IAmb	10 00 57.2	
	comp=Z,3.4nm,0.5s						
TIXI	**Tiksi**	**71.67**	**2**	P	**P**	**10 01 47.0**	**-0.7**
TIXI				IAmb	IAmb	10 01 47.0	
	comp=Z,3.5nm,0.9s						
L16K	**Owhat River**	**83.93**	**28**	P	**P**	**10 02 57.3**	**+1.6**
H17K	**Granite Mounta**	**84.40**	**25**	P	**P**	**10 02 59.4**	**+1.4**
H17K				IAmb	IAmb	10 03 02.6	
	comp=Z,4.9nm,1.3s						
ILAR	**Eielson Array**	**89.90**	**25**	P	**P**	**10 03 22.1**	**-2.4**
	comp=Z,0.3nm,0.8s,baz=246,slow=5.0,SNR=5.4						
	comp=Z,0.3nm,0.8s						
BMAR	**Burnt Mountain**	**90.81**	**23**	P	**P**	**10 03 29.6**	**+0.8**
SPITS	**Spitsbergen Ar**	**93.52**	**349**	P	**P**	**10 03 39.5**	**-1.5**
	comp=Z,1.1nm,0.4s,baz=85,slow=9.3,SNR=7.4						
	comp=Z,1.1nm,0.4s						
F31M	**Tsiigehtchic**	**94.95**	**22**	P	**P**	**10 03 47.3**	**-0.4**

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*IDC **31** 09:51:26.7±1.2, 51°.83N×75°.37E, h0^{km}, mbtmp2.5/3, ML2.0/3, Error ellipse: s-maj=32.0km s-min=9.1km az=31.0*

*NNC **31** 09:51:27.8±0.8, 51°.49N×75°.30E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=29.1km s-min=4.7km az=28.0, Suspected Mining explosion.*

ISC 31 09:51:27.6±1.2**, 51°.3N**±0°.2×**74°.8E**±0°.1**, h0**^{km}**, n10,** σ**0^{s}.98**/7**, 3C-3D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR17	**Kurchatov Arra**	**2.42**	**104**	⇑Pg	**Pn**	**09 52 07.9**	**-0.5**
	1.1nm,0.4s						
KUR17				⇓Lg	Lg	09 52 36.0	
	2.8nm,0.5s						
KURBB	**Kurchatov Arra**	**2.46**	**104**	Pg	**Pn**	**09 52 08.8**	**-0.1**
	0.4nm,0.3s,baz=303,slow=18,SNR=13						
KURBB				Lg	Lg	09 52 38.5	
	0.7nm,0.3s,baz=303,slow=32,SNR=8.9						
BVA0	**Borovoye Array**	**3.23**	**305**	⇓Pg	**Pg**	**09 52 30.1**	**+0.7**
	2.2nm,0.7s,baz=111,slow=14,SNR=5.0						
BVA0				⇑Lg	Lg	09 53 16.0	
	11nm,1.0s,baz=120,slow=28,SNR=11						
BVAR	**Borovoye Array**	**3.23**	**305**	Pn	**Pn**	**09 52 18.6**	**-0.9**
	baz=107,slow=13,SNR=4.3						
BVAR				Lg	Lg	09 53 11.3	
	0.3nm,0.3s,baz=109,slow=26,SNR=10						
	0.6nm,0.6s						
BRVK	**Borovoye**	**3.30**	**305**	Lg	Lg	09 53 14.9	
MAKZ	**Makanchi**	**6.50**	**130**	Lg	Lg	09 54 53.2	
MK31	**Makanchi Array**	**6.66**	**129**	⇓Sn	**Sn**	**09 54 22.1**	**-1.2**
	0.5nm,0.6s,baz=326,slow=18,SNR=5.0						
MK31				⇑Lg	Lg	09 54 56.3	
	1.4nm,0.5s,baz=316,slow=24,SNR=8.4						
MKAR	**Makanchi Array**	**6.66**	**129**	Pn	**Pn**	**09 53 06.9**	**+0.3**
	0.1nm,0.3s,baz=316,slow=12,SNR=2.1						
MKAR				Sn	**Sn**	**09 54 24.1**	**+0.9**
	0.2nm,0.3s,baz=327,slow=20,SNR=6.6						
MKAR				Lg	Lg	09 55 00.7	
	0.6nm,0.3s,baz=325,slow=27,SNR=6.5						
	0.1nm,0.4s						
I46RU	**ZALESOVO INFRA**	**6.69**	**62**	I	I	10 25 30.0	
	baz=253,slow=338,SNR=6.7						
ZALV	**Zalesovo Beam**	**6.69**	**62**	Pn	Pn	09 52 59.6	-7.3
	0.3nm,0.3s,baz=258,slow=14,SNR=7.5						
	0.9nm,0.4s						

IDC 31 10:01:14.7±2.9**, 4°.63S**×**138°.54E, h104**^{km}±31^{km}**, mb3.2**/1**, mbtmp3.5**/5**, Error ellipse: s-maj=59.1km s-min=17.8km az=115.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**3.02**	**46**	P	Pn	10 01 58.8	-2.0
	5.3nm,0.5s,baz=200,slow=15,SNR=5.7						
JAY				S	Sn	10 02 37.5	+1.2
	10nm,0.4s,baz=124,slow=20,SNR=4.7						
WRA	**Warramunga Arr**	**15.76**	**195**	P	Pn	10 04 50.9	0.0
	0.6nm,0.5s,baz=15,slow=12,SNR=5.2						
WRA				S	Sn	10 07 30.5	-15
	0.3nm,0.4s,baz=6.1,slow=24,SNR=1.7						
FITZ	**Fitzroy Crossi**	**18.39**	**222**	P	Pn	10 05 22.3	-0.6
	4.0nm,1.2s,baz=38,slow=12,SNR=1.6						
ASAR	**Alice Springs**	**19.44**	**193**	P	P	10 05 32.6	-0.5
	0.3nm,0.5s,baz=20,slow=9.0,SNR=12						
ASAR				S	S	10 09 08.5	+1.1
	0.1nm,0.5s,baz=20,slow=27,SNR=1.4						
ILAR	**Eielson Array**	**87.64**	**24**	P	P	10 13 50.8	-0.3
	0.4nm,0.9s,baz=236,slow=7.3,SNR=2.4						
	0.4nm,0.9s						

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*IDC **31** 10:16:51.2±3.1, 56°.07N×161°.90W, h132^{km}±26^{km}, mb3.4/10, mbtmp3.7/13, MS3.6/1, Error ellipse: s-maj=28.2km s-min=16.2km az=6.0*

*NEIC **31** 10:16:53.0±1.5, 55°.70N±0°.08×161°.8W±0°.1, h155^{km}±6^{km}, mb3.7/14, ML3.6/44, ML3.5(AEIC), Error ellipse: s-maj=12.9km s-min=7.5km az=153.0*

*AEIC **31** 10:16:54.1±1.8, 55°.62N±0°.08×161°.7W±0°.1, h156^{km}±5^{km}, Error ellipse: s-maj=12.7km s-min=6.8km az=148.0*

ISC 31 10:16:53.1±0.6**, 55°.71N**±0°.06×**161°.72W**±0°.04**, h159**^{km}±5^{km}**, n125,** σ**0^{s}.97**/137**, mb3.5**/11**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
S12K	**Black Hills**	**0.19**	**269**		**Pn**	**10 17 13.9**	**-0.6**
S12K					**Sn**	**10 17 29.8**	**-1.0**
S12K				IAML		10 17 30.2	
	comp=E,806nm,0.6s						
S12K				IAML		10 17 30.2	
	comp=N,796nm,0.6s						
PS1A	**Pavlof South-1**	**0.29**	**183**		**Pn**	**10 17 14.2**	**-0.5**
PS1A					**Sn**	**10 17 30.4**	**-0.7**
PN7A	**Pavlof North-7**	**0.32**	**210**		**Pn**	**10 17 14.5**	**-0.4**
PS4A	**Pavlof South-4**	**0.37**	**192**		**Pn**	**10 17 14.3**	**-0.7**
PS4A					**Sn**	**10 17 31.0**	**-0.6**
DOL	**Dolgoi Island**	**0.57**	**188**		**Pn**	**10 17 15.0**	**-0.9**
DOL					**Sn**	**10 17 31.9**	**-1.3**
DTNA	**Dutton South F**	**0.64**	**209**		**Pn**	**10 17 15.8**	**-0.4**
DTNA					**Sn**	**10 17 33.2**	**-0.7**
DT1	**Dutton Round H**	**0.68**	**208**		**Pn**	**10 17 15.8**	**-0.6**
DT1					**Sn**	**10 17 33.8**	**-0.5**
SDPT	**Sand Point**	**0.79**	**116**		**Pn**	**10 17 16.4**	**-0.7**
SDPT					**Sn**	**10 17 34.1**	**-1.4**
FALS	**False Pass**	**1.29**	**229**		**Pn**	**10 17 20.6**	**-0.7**
FALS	**False Pass**	**1.29**	**229**		**Sn**	**10 17 41.7**	**-1.1**
VNFG	**Fog Glacier, M**	**1.35**	**64**		**Pn**	**10 17 22.3**	**+0.4**
VNFG					**Sn**	**10 17 45.3**	**+1.2**
VNFG	**Fog Glacier, M**	**1.35**	**64**		**Pn**	**10 17 22.3**	**+0.4**
VNFG	**Fog Glacier, M**	**1.35**	**64**	IAML		10 17 51.3	
	comp=E,731nm,0.7s						
VNKR	**Veniaminof 5**	**1.36**	**75**		**Pn**	**10 17 22.1**	**+0.1**
VNKR					**Sn**	**10 17 44.9**	**+0.7**
ISNN	**Isanotski Nort**	**1.47**	**234**		**Sn**	**10 17 45.7**	**-0.3**
CNBA	**Chernabura Isl**	**1.51**	**125**		**Pn**	**10 17 22.3**	**-1.1**
CNBA	**Chernabura Isl**	**1.51**	**125**		**Sn**	**10 17 44.6**	**-2.0**
VNSG	**Veniaminof 6**	**1.54**	**73**		**Pn**	**10 17 23.9**	**+0.1**
SSBA	**Shishaldin**	**1.67**	**237**		**Pn**	**10 17 24.6**	**-0.6**
SSBA					**Sn**	**10 17 49.9**	**+0.2**
ANPB	**Aniakchak Plen**	**2.21**	**59**		**Pn**	**10 17 31.2**	**0.0**
ANPB					**Sn**	**10 18 02.6**	**+2.0**
AZAC	**Aniakchak**	**2.28**	**57**		**Pn**	**10 17 32.2**	**+0.1**
ANNW	**Aniakchak Nort**	**2.32**	**56**		**Pn**	**10 17 33.3**	**+0.7**
ANNW					**Sn**	**10 18 05.2**	**+2.2**
AKSA	**Akutan Strait**	**2.78**	**237**		**Pn**	**10 17 38.8**	**+0.7**
AKSA					**Sn**	**10 18 13.7**	**+0.8**
AKUT	**Akutan**	**2.82**	**238**		**Pn**	**10 17 38.5**	**0.0**
AKUT					**Sn**	**10 18 14.1**	**+0.4**
AKUT	**Akutan**	**2.82**	**238**	IAML		10 18 20.3	
	comp=N,126nm,1.4s						
AKUT				IAML		10 18 46.6	
	comp=E,98nm,1.2s						
AHB	**Akutan Harbor**	**2.85**	**238**		**Pn**	**10 17 38.9**	**-0.1**
AHB					**Sn**	**10 18 16.1**	**+1.6**
AKV	**Akutan Volcano**	**2.92**	**239**		**Pn**	**10 17 40.0**	**+0.1**
R16K	**Pilot Point**	**2.95**	**49**	Pn	**Pn**	**10 17 40.8**	**+0.7**
R16K				IAML		10 18 52.4	
	comp=E,171nm,1.5s						
R16K				IAML		10 19 16.3	
	comp=N,140nm,1.4s						
CHIR	**Chirikof Islan**	**3.45**	**86**		**Pn**	**10 17 45.6**	**-0.8**
PLK1	**Peulik 1**	**3.51**	**51**		**Pn**	**10 17 48.0**	**+0.8**
PLK4	**Peulik 4**	**3.53**	**55**		**Pn**	**10 17 48.4**	**+0.9**
PLK4				IAML		10 18 31.7	
	comp=N,75nm,1.4s						
PLK4				IAML		10 19 24.9	
	comp=E,77nm,1.4s						
O14K	**Tigyukauivet M**	**3.56**	**4**		**Pn**	**10 17 48.0**	**+0.2**
PLK3	**Peulik 3**	**3.60**	**54**		**Pn**	**10 17 49.1**	**+0.7**
O15K	**Ungalikthiuk R**	**3.63**	**16**		**Pn**	**10 17 48.2**	**-0.4**
P16K	**Nushagak River**	**3.90**	**30**	Pn	**Pn**	**10 17 52.8**	**+0.7**
P16K				IAML		10 19 13.1	
	comp=N,69nm,1.3s						
P16K				IAML		10 19 24.5	
	comp=E,58nm,1.3s						
CNTC	**Contact Creek**	**4.09**	**49**		**Pn**	**10 17 54.9**	**+0.1**
ANCK	**Angle Creek**	**4.22**	**51**		**Pn**	**10 17 57.0**	**+0.5**
N14K	**Kuskokwak Cree**	**4.23**	**0**	Pn	**Pn**	**10 17 55.9**	**-0.5**
N14K				IAML		10 19 02.4	
	comp=E,71nm,1.4s						
N14K				IAML		10 19 20.3	
	comp=N,53nm,1.5s						
CAHL	**Cahill**	**4.23**	**54**		**Pn**	**10 17 56.5**	**0.0**
SII	**Sitkinak Islan**	**4.30**	**75**	Pn	**Pn**	**10 17 57.4**	**-0.1**
ACHA	**Angle Creek He**	**4.31**	**52**	Pn	**Pn**	**10 17 58.6**	**+1.1**
O16K	**Kokwok River B**	**4.36**	**25**		**Pn**	**10 17 58.0**	**0.0**
KABU	**Katmai Buttres**	**4.36**	**51**		**Pn**	**10 17 58.8**	**+0.6**
N15K	**Kwethluk River**	**4.56**	**10**	Pn	**Pn**	**10 18 00.8**	**0.0**
N15K				IAML		10 19 33.7	
	comp=E,29nm,1.4s						
M13K	**Dall Lake**	**4.80**	**350**		**Pn**	**10 18 03.7**	**-0.2**
M13K	**Dall Lake**	**4.80**	**350**	IAML		10 19 48.6	
	comp=N,35nm,1.5s						
M13K				IAML		10 20 12.3	
	comp=E,21nm,1.4s						
OHAK	**Old Harbor**	**4.92**	**69**		**Pn**	**10 18 03.8**	**-1.6**
OHAK	**Old Harbor**	**4.92**	**69**	IAML		10 18 58.5	
	comp=N,36nm,0.5s						
OHAK				IAML		10 19 23.6	
	comp=E,36nm,1.4s						
M15K	**Kasigluk River**	**5.03**	**6**		**Pn**	**10 18 05.9**	**-1.0**
M14K	**Bethel**	**5.06**	**359**	Pn	**Pn**	**10 18 06.8**	**-0.5**
M14K				IAML		10 20 11.1	
	comp=E,25nm,1.4s						
M14K				IAML		10 20 11.3	
	comp=N,27nm,1.5s						
P18K	**Big Mountain,**	**5.08**	**41**		**Pn**	**10 18 08.4**	**+0.7**
M11K	**Mekoryuk**	**5.26**	**335**	Pn	**Pn**	**10 18 08.6**	**-1.3**
M11K				IAML		10 20 10.8	
	comp=N,33nm,1.4s						
M11K				IAML		10 21 27.4	
	comp=E,32nm,1.4s						
N17K	**Nushagak Hills**	**5.40**	**25**	Pn	**Pn**	**10 18 12.5**	**+0.8**
O18K	**Koktuh Hills**	**5.42**	**37**	Pn	**Pn**	**10 18 13.1**	**+1.0**
Q19K	**Cape Douglas,**	**5.44**	**50**	Pn	**Pn**	**10 18 12.9**	**+0.6**
KDAK	**Kodiak Island**	**5.44**	**64**	P	**Pn**	**10 18 11.0**	**-1.4**
	comp=E,3.7nm,0.3s,baz=53,slow=3.2,SNR=39						
KDAK				S	**Sn**	**10 19 08.8**	**-5.6**
	comp=E,7.7nm,0.5s,baz=260,slow=3.7,SNR=4.1						
KDAK	**Kodiak Island**	**5.44**	**64**		**Pn**	**10 18 11.2**	**-1.1**
M16K	**Timber Creek**	**5.52**	**14**		**Pn**	**10 18 12.9**	**-0.5**
L14K	**Kuka Creek**	**5.67**	**355**		**Pn**	**10 18 14.9**	**-0.4**
SYI	**Shuyak Island**	**5.85**	**56**		**Pn**	**10 18 17.3**	**-0.4**
M17K	**Holitna River**	**6.13**	**20**	Pn	**Pn**	**10 18 21.6**	**+0.1**
L16K	**Owhat River**	**6.13**	**10**		**Pn**	**10 18 20.8**	**-0.7**
N19K	**Bonanza Creek**	**6.38**	**34**	Pn	**Pn**	**10 18 25.7**	**+0.8**
K13K	**Kusilvak Mount**	**6.43**	**348**		**Pn**	**10 18 24.6**	**-0.8**
K15K	**Wolf Creek Mou**	**6.61**	**1**		**Pn**	**10 18 27.4**	**-0.3**
CNPM	**China Poot**	**6.81**	**51**	Pn	**Pn**	**10 18 30.2**	**-0.2**
L18K	**Granite Mounta**	**7.03**	**20**	Pn	**Pn**	**10 18 33.4**	**0.0**
J14K	**Nanvaranak Lak**	**7.12**	**353**	Pn	**Pn**	**10 18 34.2**	**-0.4**
K17K	**Iditarod**	**7.24**	**13**	Pn	**Pn**	**10 18 35.6**	**-0.6**
SPU	**Mount Spurr**	**7.47**	**39**	Pn	**Pn**	**10 18 40.6**	**+1.4**
J16K	**Anvik River**	**7.62**	**4**	Pn	**Pn**	**10 18 40.9**	**-0.3**
SLKM	**Skilak Lake**	**7.76**	**47**	Pn	**Pn**	**10 18 42.9**	**-0.2**
J17K	**VABM Dome**	**7.83**	**9**	Pn	**Pn**	**10 18 43.0**	**-1.0**
SUA	**Susitna One**	**8.13**	**40**	Pn	**Pn**	**10 18 48.2**	**+0.1**
J18K	**Innoko River**	**8.18**	**16**	Pn	**Pn**	**10 18 48.9**	**+0.2**
K20K	**Telida**	**8.59**	**24**	Pn	**Pn**	**10 18 55.5**	**+1.3**
J19K	**Poorman**	**8.86**	**18**	Pn	**Pn**	**10 18 58.0**	**+0.4**
J20K	**Nowinta River**	**9.30**	**21**	Pn	**Pn**	**10 19 02.8**	**-0.6**
H17K	**Granite Mounta**	**9.30**	**5**	Pn	**Pn**	**10 19 04.5**	**+1.0**
HIN	**Hinchinbrook I**	**9.33**	**54**	Pn	**Pn**	**10 19 02.9**	**-1.0**
G16K	**Koyuk River**	**9.72**	**358**	Pn	**Pn**	**10 19 09.9**	**+0.8**
KLU	**Klutina**	**10.06**	**48**	Pn	**Pn**	**10 19 12.2**	**-1.4**
BMRM	**Bremner River**	**10.41**	**53**	Pn	**Pn**	**10 19 17.3**	**-0.9**
N25K	**Chitina, Valde**	**10.68**	**49**	Pn	**Pn**	**10 19 20.9**	**-0.8**

G19K	Purcell Mounta	10.71	10	Pn	Pn	10 19 22.3	+0.4
GLB	Gilahina Butte	10.95	51	Pn	Pn	10 19 24.2	-1.0
CRQM	Cirque	11.01	55	Pn	Pn	10 19 26.2	+0.1
PAX	Paxson	11.01	42	Pn	Pn	10 19 25.1	-0.9
VRDI	Verde Repeater	11.03	52	Pn	Pn	10 19 25.7	-0.7
YAH	Yahtse	11.55	58	Pn	Pn	10 19 33.7	+0.4
ILAR	Eielson Array	11.66	33	P	Pn	10 19 29.9	-4.5
	comp=E,0.2nm,0.4s,baz=212,slow=12,SNR=7.8						
ILAR				S	Sn	10 21 34.0	-9.3
	comp=E,0.5nm,0.9s,baz=191,slow=9.2,SNR=1.5						
BARN	Barnard Glacie	11.79	55	Pn	Pn	10 19 36.7	+0.4
BCAR	Beaver Creek A	12.51	46	Pn	Pn	10 19 44.3	-1.1
O29M	Mount Kennedy	13.07	60	Pn	Pn	10 19 53.8	+1.1
F24K	Squaw Lake	13.50	23	Pn	Pn	10 19 58.7	+0.6
M29M	Somme Creek	13.67	51	Pn	Pn	10 20 00.6	+0.2
I27K	Kandik River	13.90	36	Pn	Pn	10 20 03.3	+0.2
B22K	Teshekpuk Lake	15.14	11	Pn	Pn	10 20 17.4	-1.0
B22K				IAmb	IAmb	10 20 59.6	
	comp=Z,6.1nm,1.5s						
J30M	Hart River	15.34	44		Pn	10 20 21.4	+0.3
J30M				IAmb	IAmb	10 20 26.4	
	comp=Z,2.7nm,0.8s						
I30M	Mount Dempster	15.59	42	Pn	Pn	10 20 23.8	-0.4
I30M				IAmb	IAmb	10 20 26.5	
	comp=Z,3.1nm,0.9s						
F28M	Old Crow	15.69	32		Pn	10 20 25.4	+0.3
F28M				IAmb	IAmb	10 21 03.7	
	comp=Z,5.5nm,1.4s						
G29M	Pine Creek	15.85	35		Pn	10 20 27.7	+0.5
G29M				IAmb	IAmb	10 20 29.1	
	comp=Z,4.8nm,0.9s						
C27K	Jago River	16.11	23		Pn	10 20 30.7	+0.3
C27K				IAmb	IAmb	10 21 08.5	
	comp=Z,3.8nm,1.2s						
H31M	Peel River	16.61	42		P	10 20 36.0	-0.1
F30M	Barrier River	16.96	35		P	10 20 39.8	-0.1
F30M				IAmb	IAmb	10 20 48.3	
	comp=Z,7.6nm,1.5s						
INK	Inuvik	18.05	35	P	P	10 20 50.3	-1.5
	comp=Z,0.8nm,0.5s,baz=192,slow=7.0,SNR=10						
INK	Inuvik	18.05	35	P	P	10 20 50.8	-1.0
PETK	Petropavlovsk-	23.52	281	P	P	10 21 48.0	-0.4
	comp=Z,2.6nm,0.8s,baz=82,slow=14,SNR=7.8						
	comp=Z,2.6nm,0.8s						
YKAW3	Yellowknife Wh	24.62	55	P	P	10 21 59.5	+1.2
YKA	Yellowknife Ar	24.63	55	P	P	10 21 59.0	+0.6
	comp=Z,0.9nm,0.6s,baz=278,slow=10,SNR=22						
	comp=Z,0.9nm,0.6s						
YKA	Yellowknife Ar	24.63	55	P	P	10 21 58.5	+0.1
YKAW1	Yellowknife Wh	24.69	55	P	P	10 22 00.3	+1.4
PDAR	Pinedale Array	35.57	89	P	P	10 23 36.5	+1.4
	comp=Z,0.2nm,0.4s,baz=305,slow=2.9,SNR=4.7						
	comp=Z,0.2nm,0.4s						
FRB	Frobisher Bay	43.58	40	LR	LR	10 43 51.9	
	comp=Z,70nm,19.4s,baz=313,slow=37						
TXAR	Lajitas Array	48.45	98	P	P	10 25 21.4	+2.0
	comp=Z,0.2nm,0.5s,baz=308,slow=5.9,SNR=5.3						
TXAR				PcP	PcP	10 26 44.4	+1.4
	comp=Z,0.2nm,0.5s,baz=313,slow=3.1,SNR=4.9						
	comp=Z,0.2nm,0.5s						
SONM	Songino Array	53.37	303	P	P	10 25 55.4	-0.4
	comp=Z,0.3nm,0.5s,baz=43,slow=6.4,SNR=4.3						
SONM				PcP	PcP	10 27 00.5	-0.5
	comp=Z,0.7nm,0.8s,baz=60,slow=3.5,SNR=4.3						
	comp=Z,0.3nm,0.5s						
SONM	Songino Array	53.37	303	P	P	10 25 55.5	-0.4
FINES	FINESS Array B	63.03	356	P	P	10 27 01.5	-1.0
	comp=Z,3.1nm,0.9s,baz=10,slow=7.0,SNR=4.3						
	comp=Z,3.1nm,0.9s						
HFS	Hagfors	64.45	3	P	P	10 27 10.0	-1.8
	comp=Z,7.0nm,1.1s,baz=5.7,slow=1.4,SNR=5.3						
	comp=Z,7.0nm,1.1s						
AB31	Akbulak array	69.77	332	P	P	10 27 46.0	+0.5
AB31				IAmb	IAmb	10 28 23.4	
	comp=Z,1.1nm,0.8s						
ABKAR	Akbulak array	69.77	332	P	P	10 27 45.9	+0.4
BOOM	Boomskoye usch	70.68	319	P	P	10 27 52.3	+0.9
AKASG	Malin Array Be	73.57	353	P	P	10 28 07.3	-0.9
	comp=Z,0.4nm,0.4s,baz=14,slow=6.3,SNR=2.3						
	comp=Z,0.4nm,0.4s						
CMAR	Chiang Mai Arr	80.08	288	P	P	10 28 44.1	-1.0
	comp=Z,0.9nm,0.6s,baz=37,slow=5.3,SNR=7.1						
	comp=Z,0.9nm,0.6s						
ESDC	Sonseca Array	83.11	17	P	P	10 29 00.8	0.0
	comp=Z,0.7nm,0.8s,baz=345,slow=5.1,SNR=5.1						
	comp=Z,0.7nm,0.8s						

PRU 31 10:30:36.9, 50°.39N × 18°.82E, h0^{km}, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STEB	Steborice	0.81	236	*e*PG	Pg	10 30 52.4	-0.1
STEB				*e*SG	Sg	10 31 03.3	+0.3
MORC	Moravsky Berou	1.03	234	*e*PG	Pb	10 30 57.4	-0.2
MORC				*e*SG	Sg	10 31 09.7	-0.1
LANS	Liptovska Anna	1.31	161	*e*PG	Pg	10 31 01.2	-0.8
LANS				*e*SG	Sg	10 31 18.5	-0.4
DPC	Dobruska-Polom	1.60	270	*e*PG	Pn	10 31 05.4	-1.1
DPC				*e*SG	Sn	10 31 27.6	-0.3

BEO 31 10:31:47.8±0.3**, 44°.12N × 22°.13E, h0^{km}, ML1.6**/16**, 2C-7D, Mining explosion., Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORS2	Bor- Borsko je	0.09	252	*e*Pg	Pg	10 31 46.4	-3.1
BORS2				*e*Sg	Sg	10 31 48.8	-1.8
ZAGS	Zajecar	0.31	167	*e*Pg	Pg	10 31 53.6	-0.2
ZAGS				*e*Sg	Sg	10 31 59.4	+1.6
KUBS	Kucevo	0.44	312	*e*Pg	Pg	10 31 53.1	-3.2
KUBS				*e*Sg	Sg	10 32 01.9	-0.1
BOVS	Bovan	0.57	213	⇓P	Pg	10 31 57.3	-1.4
BOVS				⇓S	Sg	10 32 06.1	-0.1
BOVS	Bovan	0.57	213	*e*Pg	Pg	10 31 58.0	-0.8
BOVS				*e*Sg	Sg	10 32 05.9	-0.3
BLKB	Belogradchik	0.63	141	⇑S	Sg	10 32 09.0	+0.9
MDVR	Moldovita	0.73	336	⇓P	Pg	10 31 60.0	-1.8
MDVR				⇓S	Sg	10 32 10.7	-0.5
MDVR	Moldovita	0.73	336	*e*Pg	Pg	10 31 59.9	-1.9
MDVR				*e*Sg	Sg	10 32 12.0	+0.8
HERR	Herculane	0.79	15	⇓P	Pg	10 32 01.6	-1.3
HERR				⇓S	Sg	10 32 12.1	-1.1
ZAPS	Zavoj	0.92	157	*e*Pg	Pg	10 32 03.5	-1.9
ZAPS				*e*Sg	Sg	10 32 17.3	0.0
GRUS	Gruza	1.05	258	*e*Pg	Pg	10 32 07.3	-0.6
GRUS				*e*Sg	Sg	10 32 21.8	+0.4
GOCS	Kraljevo Serbi	1.07	239	*e*Pg	Pg	10 32 07.3	-0.9
GOCS				*e*Sg	Sb	10 32 23.0	-0.7
VRSS	Vrsac	1.16	330	*e*Pg	Pg	10 32 08.9	-1.1
VRSS				*e*Sg	Sb	10 32 25.9	-0.4
SELS	Selova	1.16	220	*e*Pg	Pg	10 32 08.7	-1.3
SELS				*e*Sg	Sg	10 32 25.5	+0.4
TRUS	Trudelj	1.25	275	*e*Pg	Pg	10 32 10.9	-0.8
TRUS				*e*Sg	Sn	10 32 29.9	-0.1
GZR	Gura Zlata	1.35	20	*e*Pg	Pg	10 32 11.5	-2.3
GZR				*e*Sg	Sg	10 32 31.2	-0.2
IVAS	Ivanjica	1.53	250	*e*Pg	Pn	10 32 14.1	-2.4
IVAS				*e*Sg	Sg	10 32 35.5	-1.5
DIVS	Divibare	1.54	270	*e*Pg	Pn	10 32 14.8	-1.8
DIVS				*e*Sg	Sg	10 32 36.2	-1.1
BZS	Buzias	1.54	346	⇓P	Pn	10 32 15.0	-1.6
BZS				⇑S	Sn	10 32 35.5	-1.8
BZS	Buzias	1.54	346	*e*Pg	Pn	10 32 15.0	-1.6
BZS				*e*Sg	Sg	10 32 37.4	0.0
SJES	Sjenica	1.79	242	*e*Pg	Pn	10 32 18.3	-1.7
SJES				*e*Sg	Sg	10 32 44.8	-0.3

TAP 31 10:53:46.6, 24°.39N × 121°.73E, h7^{km}±1^{km}, ML1.4, 2C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENA	Nanau	0.04	13	⇑*i*P	Pg	10 53 48.8	+0.6
ENA				*i* S	Sg	10 53 49.8	+0.6
EAHA	Aohua	0.06	171	P	Pg	10 53 49.1	+0.8
EAHA				S	Sg	10 53 50.5	+1.0
EWUT	Wuta	0.07	36	*i* P	Pg	10 53 48.9	+0.4
EWUT				S	Sg	10 53 50.1	+0.2
LATG	Datong	0.24	309	⇑*i*P	Pg	10 53 52.7	+1.3
LATG				S	Sg	10 53 56.7	+2.1
NACB	Ninganchiao	0.24	210	P	Pg	10 53 52.5	+1.0
NACB				S	Sg	10 53 56.6	+1.9
ETL	Fush Village	0.24	203	P	Pg	10 53 52.5	+1.0
ETL				*e*S	Sg	10 53 56.2	+1.5
TWC	Suao	0.25	26	P	Pg	10 53 53.0	+1.5
TWC				*e*S	Sg	10 53 57.7	+2.9
ETLH	Xiulin Townshi	0.29	232	*e*P	Pb	10 53 54.8	+0.7
ETLH				*e*S	Sb	10 53 57.9	-1.2
ENTT	Nioudou	0.29	330	*i* P	Pb	10 53 53.6	-0.6
NNSB	Datong	0.32	278	*e*P	Pg	10 53 53.5	+0.5
NNSB				*e*S	Sg	10 53 58.6	+1.5
YHNB	Yeheng	0.43	311	P	Pb	10 53 56.6	0.0
YHNB				*e*S	Sb	10 54 03.6	+0.4

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*SOME **31** 11:01:20.9, 43°.62N × 69°.78E*

NNC 31 11:01:19.4±1.1**, 43°.55N × 69°.56E, h0^{km}, mb3.5, mpv3.1, 1C, Error ellipse: s-maj=11.0km s-min=5.5km az=40.0, Suspected Mining explosion., Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	0.83	122	P	Pg	11 01 35.2	+0.1
	0.5nm,0.1s,baz=320,slow=17,SNR=73						
KK31				⇑S	Sg	11 01 47.0	+1.1
	16nm,0.5s,baz=304,slow=30,SNR=15						
MRKS	Merke	2.80	105	Pg	Pb	11 02 10.9	+0.6
	1.2nm,0.3s						
MRKS				Lg	Lg	11 02 47.2	
	4.6nm,0.5s						
SGDS	Sogindy	3.69	90	Pg	Pb	11 02 27.3	+1.8
	1.0nm,0.0s						
SGDS				Lg	Lg	11 03 14.9	
	1.8nm,0.1s						
DGS	Degeres	4.54	92	Pg	Pg	11 02 43.4	-3.0
DGS				Lg	Lg	11 03 42.3	
	5.7nm,0.6s						
KST	Kastek	4.70	94	Pg	Pg	11 02 46.5	-2.9
	2.8nm,0.3s						
KST				Lg	Lg	11 03 47.7	
	4.7nm,0.3s						

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*IDC **31** 11:03:44.4±1.1, 17°.98N × 66°.88W, h0^{km}, mb3.4/8, mbtmp3.4/8, Error ellipse: s-maj=34.7km s-min=24.4km az=32.0*

*NEIC **31** 11:03:44.9±1.9, 17°.91N±0°.04 × 66°.88W±0°.01, h10^{km}±1^{km}, mb4.2/3, ML3.8/30, Md3.5/10(RSPR), Mwr3.6/10(SLM), Error ellipse: s-maj=6.1km s-min=2.8km az=4.0*

*NEIC **31** 11:03:44.8, 17°.91N × 66°.89W, h6^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.22; $M_{\theta\theta}$1.96; $M_{\phi\phi}$-1.75; $M_{r\theta}$0.41; $M_{\theta\phi}$3.00; $M_{\phi r}$-0.75; Fault plane solution: $M_0$3.63000×10^{14} NP1:ϕ_s17.00000°, δ80.00000°, λ-170.00000°. NP2:ϕ_s285.00000°, δ80.00000°, λ-10.00000°. Principal axes: T 3.6342, Plg0.0000°, Azm151.0000°; N 0.0013, Plg76.0000°, Azm60.0000°; P -3.6355, Plg14.0000°, Azm241.0000°;*

*OSPL **31** 11:03:44.2±0.3, 17°.84N × 66°.93W, h18^{km}±4^{km}, ML3.5, Presumed earthquake*

*RSPR **31** 11:03:44.8, 17°.91N × 66°.89W, h7^{km}, MD3.5/10*

ISC 31 11:03:44.9±1.0**, 17°.91N**±0°.04 × **66°.86W**±0°.02**, h5^{km}**±7^{km}**, n71, σ0^{s}.75**/73**, mb3.5**/9**, 8C-5D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	Guanica, Bosqu	0.07	347		Pg	11 03 46.2	-0.3
GBPR	Guanica, Bosqu	0.07	347	⇓*e*P	Pg	11 03 46.2	-0.3
MLPR	Magueyes Islan	0.18	289	⇑*e*P	Pg	11 03 48.2	-0.4
MLPR	Magueyes Islan	0.18	289	*e*S	Sg	11 03 50.9	-0.1
CRPR	Cabo Rojo, PR	0.25	292		Pg	11 03 49.4	-0.4
CRPR				IAML		11 03 53.9	
	26μm,0.4s						
CRPR	Cabo Rojo, PR	0.25	292		Sg	11 03 53.2	0.0
CRPR	Cabo Rojo, PR	0.25	292	⇑*e*P	Pg	11 03 49.4	-0.4
CRPR	Cabo Rojo, PR	0.25	292	*e*S	Sg	11 03 53.4	+0.2
CRPR	Cabo Rojo, PR	0.25	292	*i* P	Pg	11 03 49.3	-0.6
CRPR				*e*S	Sg	11 03 53.0	-0.3
CRPR				IAML		11 03 53.6	
	comp=Z,27μm,0.3s						
OBIP	Obispado Ponce	0.28	62		Pg	11 03 50.7	+0.3
OBIP	Obispado Ponce	0.28	62		Sg	11 03 55.5	+1.5
OBIP				IAML		11 03 57.3	
	comp=E,5μm,0.5s						
OBIP				IAML		11 03 58.7	
	comp=N,5μm,0.8s						
OBIP	Obispado Ponce	0.28	62	⇓*e*P	Pg	11 03 50.7	+0.3
OBIP	Obispado Ponce	0.28	62	*e*S	Sb	11 03 55.6	-1.7
CELP	Cerrillos	0.32	59	Pg	Pg	11 03 51.3	+0.2
CELP				IAML		11 03 59.8	
	comp=N,5μm,0.6s						
LSP	Las Mesas	0.34	321		Pg	11 03 51.2	-0.3
LSP	Las Mesas	0.34	321	⇓*e*P	Pg	11 03 51.2	-0.3
UUPR	Utuado, UPR, P	0.37	22	Pg	Pg	11 03 52.0	0.0
PRSN	Puerto Rico Se	0.41	319	Pg	Pg	11 03 52.4	-0.4
PRSN	Puerto Rico Se	0.41	319		Sg	11 03 58.8	+0.7
PRSN	Puerto Rico Se	0.41	319	⇓*i*P	Pg	11 03 52.4	-0.4
PRSN	Puerto Rico Se	0.41	319	*e*S	Sg	11 03 58.8	+0.7
AOPR	Arecibo Observ	0.45	13		Pg	11 03 53.1	-0.4
AOPR					Sg	11 03 59.6	+0.2
AOPR				IAML		11 04 02.7	
	comp=N,15μm,0.4s						
AOPR	Arecibo Observ	0.45	13	⇑*e*P	Pg	11 03 53.3	-0.3
AOPR	Arecibo Observ	0.45	13	*e*S	Sg	11 03 59.5	+0.2
AGPR	Aguadilla, PR	0.60	337		Pg	11 03 55.7	-0.8
AGPR				IAML		11 04 05.0	
	comp=N,8μm,0.4s						
AGPR				IAML		11 04 11.4	
	comp=N,4μm,0.6s						
AGPR	Aguadilla, PR	0.60	337	⇑*i*P	Pg	11 03 56.0	-0.5
AGPR	Aguadilla, PR	0.60	337	*e*S	Sg	11 04 04.5	0.0
AGPR	Aguadilla, PR	0.60	337	*i* P	Pg	11 03 55.7	-0.8
AGPR				*e*S	Sg	11 04 04.4	0.0
AGPR				IAML		11 04 06.3	
	comp=Z,2μm,0.5s						
ECPR	Experimental S	0.63	49	Pg	Pg	11 03 56.5	-0.4
ECPR				IAML		11 04 07.4	
	comp=Z,4μm,0.2s						
ECPR				IAML		11 04 11.6	
	comp=Z,5μm,0.2s						
ECPR	Experimental S	0.63	49	⇑*e*P	Pg	11 03 56.8	-0.1
ECPR	Experimental S	0.63	49	*e*S	Sg	11 04 04.0	-1.1
EMPR	Esperanza - Ma	0.65	29	Pg	Pg	11 03 57.3	0.0
EMPR				IAML		11 04 09.6	
	comp=Z,5μm,0.8s						
EMPR				IAML		11 04 10.9	
	comp=Z,5μm,0.5s						
EMPR	Esperanza - Ma	0.65	29	⇑*e*P	Pg	11 03 57.5	+0.1
EMPR	Esperanza - Ma	0.65	29	*e*S	Sb	11 04 07.1	-0.9
SJG	San Juan	0.71	73	LR	LR	11 03 52.8	
	comp=Z,38nm,21.0s,baz=160,slow=12						
SJG	San Juan	0.71	73		Pg	11 03 58.3	-0.3
SJG	San Juan	0.71	73		Sb	11 04 08.7	-1.0
SJG	San Juan	0.71	73	IAML		11 04 09.4	
	comp=Z,1μm,0.6s						
SJG				IAML		11 04 16.0	
	comp=Z,981nm,0.7s						
SJG	San Juan	0.71	73	⇓*e*P	Pg	11 03 58.3	-0.3
SJG	San Juan	0.71	73	*e*S	Sb	11 04 08.9	-0.9
SJG	San Juan	0.71	73	*i* P	Pg	11 03 58.2	-0.3
SJG				*e*S	Sb	11 04 08.6	-1.1
SJG				IAML		11 04 11.7	
	comp=Z,968nm,0.6s						
IDE	Isla Desecheo	0.75	309		Pg	11 03 58.4	-0.9
IDE					Sg	11 04 08.6	-0.5
IDE	Isla Desecheo	0.75	309	⇑*e*P	Pg	11 03 58.4	-0.9
IDE	Isla Desecheo	0.75	309	*e*S	Sg	11 04 08.6	-0.5
GCPR	Guaynabo City	0.84	62		Pg	11 04 00.5	-0.6
GCPR	Guaynabo City	0.84	62		Sg	11 04 11.9	-0.1
GCPR				IAML		11 04 12.5	
	comp=N,1μm,0.5s						
GCPR	Guaynabo City	0.84	62	⇑*e*P	Pg	11 04 00.5	-0.6
GCPR	Guaynabo City	0.84	62	*e*S	Sg	11 04 11.5	-0.5
HUMP	Col San Antoni	0.99	76		Pg	11 04 03.0	-1.0
HUMP	Col San Antoni	0.99	76	IAML		11 04 21.6	
	comp=N,971nm,0.5s						
HUMP	Col San Antoni	0.99	76	⇑*e*P	Pg	11 04 03.0	-1.0
HUMP	Col San Antoni	0.99	76	*e*S	Sg	11 04 15.8	-1.0
DR12	Loma Pena Alta	2.55	290		Pn	11 04 26.8	-0.1
SABA	Saba	3.46	94		Pn	11 04 39.2	-0.3
SABA				IAML		11 05 24.3	
	comp=E,307nm,1.0s						
SABA				IAML		11 05 31.3	
	comp=N,216nm,0.7s						
SC01	Santiago de lo	3.96	293		Pn	11 04 49.0	+2.6
SC01				IAML		11 06 01.6	
	comp=E,258nm,1.2s						
SDDR	Presa de Saban	4.33	285		Pn	11 04 52.6	+1.1
SDDR				IAML		11 05 58.8	
	comp=E,137nm,0.8s						
SDDR				IAML		11 05 59.4	
	comp=E,87nm,0.7s						
TDBA	Terre de Bas,	5.41	111	Pn	Pn	11 05 07.4	+1.1
SDV	Santo Domingo	9.69	203		Pn	11 06 05.5	+0.3
LPAZ	La Paz	34.01	182	P	P	11 10 30.9	+0.4
	comp=E,0.4nm,0.4s,baz=0.0,slow=3.0,SNR=1.9						
	comp=E,0.4nm,0.4s						
LPAZ	La Paz	34.01	182	P	P	11 10 30.8	+0.3
LPAZ				IAmb	IAmb	11 10 47.4	
	comp=Z,1.4nm,0.9s						
TXAR	Lajitas Array	35.45	296	P	P	11 10 42.5	+0.1
	comp=Z,0.2nm,0.5s,baz=96,slow=8.3,SNR=8.1						
	comp=Z,0.2nm,0.5s						
TXAR	Lajitas Array	35.45	296	P	P	11 10 41.9	-0.5
TX31	Lajitas Ar. Si	35.45	296	P	P	11 10 41.9	-0.5
TX31				IAmb	IAmb	11 10 51.8	
	comp=Z,4.9nm,1.4s						
PB16	IPOC Station P	36.11	184	P	P	11 10 47.7	-0.9
PB16				IAmb	IAmb	11 11 28.4	
	comp=Z,6.9nm,1.4s						
PDAR	Pinedale Array	43.77	314	P	P	11 11 51.8	0.0
	comp=Z,0.2nm,0.6s,baz=93,slow=4.4,SNR=1.5						
	comp=Z,0.2nm,0.6s						
NVAR	Mina Array Bea	49.05	306	P	P	11 12 34.6	+1.2
	comp=Z,0.1nm,0.4s,baz=76,slow=7.7,SNR=1.9						
	comp=Z,0.1nm,0.4s						
YKA	Yellowknife Ar	55.39	335	P	P	11 13 18.5	-1.3
	comp=Z,0.2nm,0.6s,baz=120,slow=6.0,SNR=7.5						
	comp=Z,0.2nm,0.6s						
ESDC	Sonseca Array	58.05	54	P	P	11 13 40.3	+1.1
	comp=Z,0.4nm,0.7s,baz=260,slow=5.9,SNR=2.5						
	comp=Z,0.4nm,0.7s						
TORD	Torodi Ar. Bea	65.91	83	P	P	11 14 32.6	+0.3
	comp=Z,0.4nm,0.6s,baz=286,slow=5.8,SNR=2.0						
	comp=Z,0.4nm,0.6s						
BCAR	Beaver Creek A	67.36	332	P	P	11 14 42.0	+1.1
ILAR	Eielson Array	69.70	333	P	P	11 14 54.6	-0.8
	comp=Z,0.4nm,0.9s,baz=87,slow=5.5,SNR=4.1						
	comp=Z,0.4nm,0.9s						

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*IDC **31** 11:09:43.2±2.0, 24°.20S × 179°.80E, h515^{km}±21^{km}, mb3.4/13, mbtmp4.2/15, Error ellipse: s-maj=16.6km s-min=15.8km az=11.0*

*NEIC **31** 11:09:45.0±1.7, 24°.3S±0°.2 × 179°.87E±0°.08, h527^{km}±9^{km}, mb4.3/19, Error ellipse: s-maj=23.3km s-min=10.1km az=176.0*

ISC 31 11:09:43.4±0.5**, 24°.34S**±0°.07 × **179°.84E**±0°.09**, h517^{km}, n58, σ1^{s}.28**/70**, mb4.2**/23**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	5.29	158		P	11 11 15.2	+1.5
GLKZ	Green Lake	5.29	158	P	P	11 11 15.1	+1.2
GLKZ				S	S	11 12 28.5	+0.7
MARNC	Mare, Loyalty	11.25	282		P	11 12 15.3	+1.1
PINNC	Pines Island,	11.51	276		P	11 12 19.7	+3.0
DZM	Mont Dzumac	12.53	278	P	P	11 12 28.1	+0.4
	11nm,0.6s,baz=108,slow=19,SNR=14						
DZM	Mont Dzumac	12.53	278	P	P	11 12 29.6	+2.0
URZ	Urewera	14.07	189	P	P	11 12 43.2	-0.3
	9.0nm,0.5s,baz=11,slow=2.8,SNR=12						
URZ				S	S	11 15 08.1	-3.8
	8.3nm,0.6s,baz=54,slow=19,SNR=9.2						
BKZ	Black Stump Fm	15.05	190	P	P	11 12 53.1	-0.7
BKZ				P	S	11 15 31.5	+0.8
MCHZ	McNeill Hill	15.29	189	P	P	11 12 55.8	-0.5
MCHZ				S	S	11 15 32.5	-2.7
KWHZ	Kaweka Forest	15.31	190	P	P	11 12 58.1	+1.5
KWHZ				P	S	11 15 33.6	-2.1
KRHZ	Kereru	15.54	190	P	P	11 12 56.8	-2.0
KRHZ				P	S	11 15 39.9	+0.2
KAHZ	Kahuranaki	15.61	189	P	P	11 12 59.1	-0.5
KAHZ				P	S	11 15 40.9	-0.3
DVHZ	Dannevirke	16.21	190	P	P	11 13 04.7	-1.0
DVHZ				P	S	11 15 50.3	-1.6
ANWZ	Angora Road	16.32	189	P	P	11 13 06.0	-0.8
ANWZ				P	S	11 15 51.8	-1.9
BFZ	Birch Farm	16.57	190	P	P	11 13 07.8	-1.5
BFZ				P	S	11 15 56.1	-2.0
MRZ	Mangatainoka R	16.66	191	P	P	11 13 08.8	-1.5
MRZ				P	S	11 15 58.1	-1.5
MSWZ	Moikau Station	17.45	192	P	P	11 13 15.6	-2.2
TCW	Tory Channel	17.45	194	P	P	11 13 16.6	-1.2
TCW				P	S	11 16 11.7	-1.0
CTAO	Charters Tower	31.34	271	P	P	11 15 22.3	+0.9
TOO	Toolangi	32.09	238	P	P	11 15 28.8	+1.2
TOO				IAmb	IAmb	11 16 02.6	
	comp=Z,10nm,1.5s						
STKA	Stephens Creek	34.42	249	P	P	11 15 47.8	+0.4
	comp=Z,3.2nm,0.5s,baz=88,slow=9.3,SNR=11						
	comp=Z,3.2nm,0.5s						
STKA	Stephens Creek	34.42	249	P	P	11 15 48.4	+0.9
PMG	Port Moresby	34.50	290	P	P	11 15 48.3	0.0
COEN	Coen	36.04	280	P	P	11 16 01.6	+0.4
COEN				IAmb	IAmb	11 16 03.7	
	comp=Z,5.8nm,0.6s						
AS31	Alice Springs	41.82	261	P	P	11 16 47.9	0.0
AS31				IAmb	IAmb	11 16 49.7	
	comp=Z,2.9nm,0.3s						
ASAR	Alice Springs	41.82	261	P	P	11 16 47.6	-0.3
	comp=Z,3.3nm,0.4s,baz=100,slow=8.1,SNR=109						
ASAR				ScP	ScP	11 21 32.9	-0.1
	comp=Z,0.6nm,0.9s,baz=100,slow=4.0,SNR=5.4						
	comp=Z,3.3nm,0.4s						
WRAB	Tennant Creek	42.23	267	P	P	11 16 50.7	-0.4
WRAB				IAmb	IAmb	11 16 50.9	
	comp=Z,8.1nm,0.8s						
WRA	Warramunga Arr	42.23	267	P	P	11 16 50.2	-1.0
	comp=Z,7.6nm,0.3s,baz=104,slow=8.1,SNR=184						
WRA				ScP	ScP	11 21 33.9	-0.8
	comp=Z,2.4nm,1.0s,baz=104,slow=3.9,SNR=7.4						
	comp=Z,7.6nm,0.3s						
WRA	Warramunga Arr	42.23	267	P	P	11 16 49.3	-1.9
FORT	Forrest	46.02	250	P	P	11 17 19.7	-0.7
FORT				IAmb	IAmb	11 17 20.0	
	comp=Z,6.9nm,0.7s						
VNDA	Vanda	53.93	185	P	P	11 18 18.1	+0.5
	comp=Z,0.7nm,0.6s,baz=24,slow=6.9,SNR=1.8						
	comp=Z,0.7nm,0.6s						
QSPA	South Pole Qui	65.74	180	P	P	11 19 37.6	+1.0
	comp=Z,5.2nm,0.7s,baz=19,slow=3.8,SNR=29						
	comp=Z,5.2nm,0.7s						
QSPA	South Pole Qui	65.74	180	P	P	11 19 38.1	+1.4
QSPA				IAmb	IAmb	11 19 38.6	
	comp=Z,5.7nm,0.8s						
MJAR	Matsushiro Arr	72.18	326	P	P	11 20 14.4	-1.3
	comp=Z,1.7nm,0.8s,baz=158,slow=5.6,SNR=2.6						
	comp=Z,1.7nm,0.8s						
BELA	Belgrano 2	76.02	173	P	P	11 20 36.9	+0.1
KSRS	Korea Array	78.49	320	P	P	11 20 50.0	-0.7
	comp=Z,0.8nm,0.7s,baz=123,slow=8.3,SNR=2.6						
	comp=Z,0.8nm,0.7s						
SLBS	Sierra La Lagu	83.15	60	P	P	11 21 16.4	+1.1
SLBS				IAmb	IAmb	11 21 17.1	
	comp=Z,7.4nm,0.8s						
O02D	Mt. Diablo Mer	83.49	41	P	P	11 21 18.2	+1.5
O02D				IAmb	IAmb	11 21 24.6	
	comp=Z,14nm,1.4s						
NVAR	Mina Array Bea	85.17	44	P	P	11 21 24.9	-0.3
	comp=Z,1.0nm,0.8s,baz=242,slow=4.7,SNR=6.4						
	comp=Z,1.0nm,0.8s						
PLCA	Paso Flores	88.06	134	P	P	11 21 39.7	+0.9
	comp=Z,0.9nm,0.6s,baz=254,slow=8.8,SNR=5.1						
	comp=Z,0.9nm,0.6s						
SPU	Mount Spurr	88.21	13	P	P	11 21 37.6	-1.1
L19K	White Mountain	88.57	12	P	P	11 21 40.9	+0.5
L19K				IAmb	IAmb	11 22 16.8	
	comp=Z,9.5nm,1.3s						
CMAR	Chiang Mai Arr	89.54	290	P	P	11 21 46.2	+0.2
	comp=Z,0.9nm,0.9s,baz=115,slow=5.1,SNR=7.2						
	comp=Z,0.9nm,0.9s						
CMAR	Chiang Mai Arr	89.54	290	P	P	11 21 45.6	-0.3
HVU	Hansel Valley	90.56	44	IAmb	IAmb	11 21 51.5	
	comp=Z,2.4nm,0.8s						
TX31	Lajitas Ar. Si	90.79	58	P	P	11 21 52.8	+1.2
TXAR	Lajitas Array	90.79	58	P	P	11 21 52.2	+0.6
	comp=Z,1.7nm,0.7s,baz=244,slow=4.6,SNR=24						
	comp=Z,1.7nm,0.7s						
BSUT	Blindstream Ca	91.19	46	IAmb	IAmb	11 21 54.7	

	comp=Z,2.8nm,0.7s						
ILAR	Eielson Array	92.49	14	P	P	11 21 57.1	-1.4
	comp=Z,0.2nm,0.7s,baz=205,slow=5.0,SNR=1.5						
	comp=Z,0.2nm,0.7s						
PDAR	Pinedale Array	93.11	44	P	P	11 22 00.6	-1.5
	comp=Z,0.4nm,0.6s,baz=247,slow=5.1,SNR=4.4						
	comp=Z,0.4nm,0.6s						
PDAR	Pinedale Array	93.11	44	P	P	11 22 01.1	-1.0
KURBB	Kurchatov Arra	115.46	316	PKP	PKPdf	11 27 25.0	-1.1
	comp=Z,0.2nm,0.5s,baz=117,slow=2.4,SNR=2.1						
BVAR	Borovoye Array	120.67	319	PKP	PKPdf	11 27 34.9	-1.1
	comp=Z,0.4nm,0.3s,baz=105,slow=2.2,SNR=3.4						
FINES	FINESS Array B	138.81	341	SKPbc	SKPbc	11 30 55.2	-0.9
	comp=Z,4.3nm,0.8s,baz=35,slow=3.4,SNR=7.2						
HFS	Hagfors	142.95	349	PKhKP	PKPpre	11 28 14.0	
	comp=Z,1.8nm,0.3s,baz=11,slow=0.4,SNR=28						
BRTR	Keskin Array B	147.72	307	PKPbc	PKPbc	11 28 29.4	-0.7
	comp=Z,0.7nm,0.7s,baz=82,slow=2.5,SNR=1.5						
BRTR				PKPab	PKPab	11 28 33.8	-0.6
	comp=Z,1.6nm,1.0s,baz=72,slow=2.1,SNR=4.1						
EKA	Eskdalemuir Ar	148.96	3	PKPbc	PKPbc	11 28 31.3	-1.1
	comp=Z,0.6nm,0.4s,baz=360,slow=3.0,SNR=10						
TORD	Torodi Ar. Bea	168.73	189	PKPab	PKPab	11 30 05.2	0.0
	comp=Z,1.0nm,0.7s,baz=181,slow=2.5,SNR=6.0						

*IDC **31** 11:22:46.9±0.5, 33°.26S×178°.80W, h0^{km}, mb4.5/11, mbtmp4.6/13, ML4.8/2, MS4.0/22, Error ellipse: s-maj=18.3km s-min=14.5km az=162.0*

*NOU **31** 11:22:48.6, 33°.80S×177°.70W, h41^{km}, mb4.8/23, South of Kermadec Islands*

*NEIC **31** 11:22:49.7±1.1, 33°.6S±0°.1×178°.5W±0°.1, h10^{km}±1^{km}, mb5.0/27, Error ellipse: s-maj=23.0km s-min=6.8km az=138.0*

ISC 31 11:22:53.1±0.4, **33°.64S**±0°.07×**178°.40W**±0°.07, **h41**^{km}, **n130**, **σ1^{s}29**/118, **mb4.9**/28, **MS4.0**/22, **2C-10D**, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	4.40	6	Pn	Pn	11 23 50.3	-7.0
	108nm,0.3s,baz=135,slow=20,SNR=2.1						
RAO				Sn	Sn	11 24 36.9	-10
	130nm,0.3s,baz=120,slow=20,SNR=4.6						
	265nm,0.4s						
MXZ	Matakaoa Point	4.74	213	Pn	Pn	11 24 01.0	-1.1
MXZ	Matakaoa Point	4.74	213	P	Pn	11 24 01.2	-0.8
KUZ	Kuaotunu	5.72	236	P	Pn	11 24 16.6	+1.1
KUZ	Kuaotunu	5.72	236	P	Pn	11 24 17.1	+1.6
URZ	Urewera	5.87	217	Pn	Pn	11 24 16.7	-0.8
	13nm,0.3s,baz=28,slow=12,SNR=60						
URZ				Sn	Sn	11 25 23.3	-0.2
	11nm,0.3s,baz=60,slow=20,SNR=12						
	41nm,0.3s						
URZ	Urewera	5.87	217	P	Pn	11 24 16.8	-0.8
URZ	Urewera	5.87	217	P	Pn	11 24 17.0	-0.5
TOZ	Tahuroa Road	6.42	229		Pn	11 24 26.0	+0.9
OUZ	Omahuta	6.79	254	P	Pn	11 24 32.0	+1.8
OUZ	Omahuta	6.79	254	P	Pn	11 24 31.4	+1.2
BKZ	Black Stump Fm	6.88	215		Pn	11 24 30.4	-1.0
BKZ	Black Stump Fm	6.88	215	P	Pn	11 24 30.5	-1.0
BKZ	Black Stump Fm	6.88	215	P	Pn	11 24 30.3	-1.1
HIZ	Hauiti	7.31	226		Pn	11 24 39.1	+1.8
HIZ	Hauiti	7.31	226	P	Pn	11 24 38.4	+1.1
BFZ	Birch Farm	8.22	210	P	Pn	11 24 47.3	-2.5
KHEZ	Kahui Hut	8.31	225	P	Pn	11 24 51.9	+0.8
QRZ	Quartz Range	10.18	223	P	Pn	11 25 16.2	-0.4
QRZ	Quartz Range	10.18	223	P	Pn	11 25 16.8	+0.2
KHZ	Kahutara	10.81	214	P	Pn	11 25 23.1	-2.2
ODZ	Otahua Downs	14.18	213	P	Pn	11 26 08.8	-2.4
OUENC	Ouen Island, N	17.14	307	P	P	11 26 52.5	+1.6
YATNC	Mamie plateau,	17.36	308	P	P	11 26 56.3	+3.0
DZM	Mont Dzumac	17.65	307	P	P	11 26 56.3	-0.3
	44nm,0.9s,baz=127,slow=16,SNR=12						
DZM	Mont Dzumac	17.65	307		Pn	11 26 55.5	-0.5
DZM				IAmb	IAmb	11 26 58.6	
	comp=Z,81nm,1.1s						
DZM	Mont Dzumac	17.65	307	P	P	11 26 57.9	+1.3
KOUNC	Koumac, New Ca	20.15	306	P	Pn	11 27 25.3	-0.7
RAR	Rarotonga	20.62	58	P	P	11 27 28.4	-0.6
	comp=Z,18nm,0.9s,baz=225,slow=7.1,SNR=3.7						
RAR				LR	LR	11 34 57.3	
	comp=Z,323nm,18.8s,baz=246,slow=35						
	comp=Z,18nm,0.9s						
TW1H	Toowoomba 1 Ha	26.16	275	P	P	11 28 25.0	+1.3
EIDS	Eidsvold	27.73	279	P	P	11 28 37.5	-0.3
EIDS				IAmb	IAmb	11 28 50.7	
	comp=Z,12nm,0.8s						
EIDS	Eidsvold	27.73	279	P	P	11 28 38.4	+0.6
AULRC	Lightning Ridg	28.88	269	P	P	11 28 50.3	+2.3
CMSA	Cobar Meteorol	30.23	264	P	P	11 29 01.0	+1.0
PPT	Papeete	30.39	65	LR	LR	11 39 41.6	
	comp=Z,278nm,18.3s,baz=204,slow=33						
QLP	Quilpie	32.95	272	P	P	11 29 24.5	+0.6
STKA	Stephens Creek	33.54	262	P	P	11 29 27.8	-1.3
	comp=Z,4.0nm,0.9s,baz=118,slow=14,SNR=5.0						
STKA				LR	LR	11 42 10.8	
	comp=Z,231nm,19.4s,baz=44,slow=35						
	comp=Z,4.0nm,0.9s						
CTA	Charters Tower	34.12	284	LR	LR	11 42 11.0	
	comp=Z,118nm,18.0s,baz=54,slow=34						
CTAO	Charters Tower	34.12	284		P	11 29 34.4	+0.2
CTAO				IAmb	IAmb	11 29 36.7	
	comp=Z,34nm,1.4s						
CTAO	Charters Tower	34.12	284	P	P	11 29 34.4	+0.2
AUMBR	Murray Bridge	34.76	255	P	P	11 29 40.4	+0.9
INKA	Innaminka	35.45	268		P	11 29 45.2	-0.4
INKA				IAmb	IAmb	11 29 48.8	
	comp=Z,14nm,1.1s						
MTSU	Mount Surprise	36.70	285	P	P	11 29 56.5	+0.2
QIS	Mount Isa	39.33	278	P	P	11 30 18.0	-0.5
PMG	Port Moresby	39.79	299	LR	LR	11 46 05.5	
	comp=Z,162nm,18.6s,baz=160,slow=36						
PMG	Port Moresby	39.79	299		P	11 30 21.6	-0.7
PMG	Port Moresby	39.79	299	P	P	11 30 21.9	-0.4
PMG	Port Moresby	39.79	299	P	P	11 30 22.0	-0.4
COEN	Coen	39.94	290	P	P	11 30 23.3	-0.4
AS31	Alice Springs	42.70	271	P	P	11 30 45.5	-0.7
ASAR	Alice Springs	42.70	271	P	P	11 30 44.3	-1.9
	comp=Z,19nm,0.9s,baz=114,slow=8.1,SNR=157						
ASAR				PcP	PcP	11 32 36.5	-1.0
	comp=Z,6.3nm,0.9s,baz=110,slow=4.0,SNR=7.1						
ASAR				S	S	11 37 04.7	-2.3
	comp=Z,1.9nm,1.1s,baz=113,slow=14,SNR=4.4						
ASAR				LR	LR	11 48 05.9	
	comp=Z,152nm,18.1s,baz=112,slow=36						
	comp=Z,19nm,0.9s						
ASAR	Alice Springs	42.70	271	P	P	11 30 45.5	-0.7
WRAB	Tennant Creek	43.97	276	P	P	11 30 55.1	-1.4
WRAB				IAmb	IAmb	11 31 07.8	
	comp=Z,20nm,0.8s						
WRAB	Tennant Creek	43.97	276	P	P	11 30 55.2	-1.4
WRA	Warramunga Arr	43.98	276	P	P	11 30 55.0	-1.6
	comp=Z,23nm,0.9s,baz=117,slow=8.2,SNR=67						
WRA				PcP	PP	11 32 39.7	+0.3
	comp=Z,2.9nm,0.8s,baz=123,slow=3.2,SNR=3.0						
WRA				S	S	11 37 22.0	-3.8
	comp=Z,1.1nm,1.0s,baz=115,slow=15,SNR=3.1						
	comp=Z,23nm,0.9s						
WRA	Warramunga Arr	43.98	276	P	P	11 30 54.8	-1.7
WB0	Warramunga Arr	44.01	276	P	P	11 30 55.7	-1.1
FORT	Forrest	44.97	258	P	P	11 31 03.3	-1.1
FITZ	Fitzroy Crossi	52.09	273	LR	LR	11 54 37.2	
	comp=Z,276nm,18.6s,baz=132,slow=37						
FITZ	Fitzroy Crossi	52.09	273		P	11 31 58.2	-1.0
CASY	Casey	52.13	209	P	P	11 31 59.7	+0.8
CASY				IAmb	IAmb	11 32 12.8	
	comp=Z,21nm,0.8s						
QSPA	South Pole Qui	56.48	180	P	P	11 32 33.1	+2.4
	comp=Z,12nm,0.9s,baz=32,slow=3.6,SNR=34						
QSPA				LR	LR	11 53 58.2	
	comp=Z,209nm,19.5s,baz=31,slow=33						
	comp=Z,12nm,0.9s						
QSPA	South Pole Qui	56.48	180	P	P	11 32 32.7	+2.0
SOEI	Soe	57.54	280		P	11 32 38.5	-0.4
SOEI	Soe	57.54	280	P	P	11 32 39.2	+0.3
RPN	Rapa Nui	58.96	104	LR	LR	11 53 24.4	
	comp=Z,164nm,19.0s,baz=248,slow=31						
BELA	Belgrano 2	66.63	172	P	P	11 33 39.5	+0.6
BELA				IAmb	IAmb	11 33 41.2	
	comp=Z,15nm,1.1s						
ELIB	Princess Elisa	73.60	187	*d*P	P	11 34 23.0	+1.2
	comp=Z,8.0nm,1.0s						
ELIB				*d*pP	pP	11 34 32.0	0.0
SYO	Syowa Base	73.89	193	⇓*e*P	P	11 34 23.0	-0.3
SYO	Syowa Base	73.89	193	⇑*e*pP	P	11 34 26.8	+3.5
SYO	Syowa Base	73.89	193	⇓*e*PcP	PcP	11 34 39.1	+0.5
SNAA	Sanae	74.93	179	⇓P	P	11 34 30.3	+0.9
	comp=Z,139nm,0.9s						
SNAA	Sanae	74.93	179	P	P	11 34 30.6	+1.2
	comp=Z,5.8nm,1.0s,baz=180,slow=9.1,SNR=10						
SNAA				LR	LR	12 06 24.7	
	comp=Z,105nm,18.3s,baz=290,slow=35						
	comp=Z,5.8nm,1.0s						
SNAA	Sanae	74.93	179	P	P	11 34 30.5	+1.0
SNAA				IAmb	IAmb	11 34 54.1	
	comp=Z,12nm,1.0s						
VNA3	Neumayer Olymp	75.10	176	⇓P	P	11 34 30.9	+0.5
	comp=Z,28nm,0.8s						
VNA3				⇑PcP	PcP	11 34 42.9	-0.9
VNA2	Neumayer--Watz	75.53	177	⇓P	P	11 34 33.3	+0.5
	comp=Z,29nm,1.1s,baz=185,slow=5.2						
VNA2				⇓PcP	PcP	11 34 45.7	0.0
	baz=174,slow=4.5						
VNA1	Neumayer--Stat	75.76	177	⇓P	P	11 34 35.2	+1.2
	comp=Z,38nm,1.0s						
VNA1				⇓PcP	PcP	11 34 46.8	+0.2
PLCA	Paso Flores	80.56	133	LR	LR	12 04 11.5	
	comp=Z,67nm,18.6s,baz=246,slow=31						
MJAR	Matsushiro Arr	80.72	326	P	P	11 34 59.3	-2.6
	comp=Z,3.0nm,1.1s,baz=158,slow=6.5,SNR=1.8						
	comp=Z,3.0nm,1.1s						
JNU	Nakatsue	81.76	319	LR	LR	12 09 23.8	
	comp=Z,83nm,18.2s,baz=80,slow=34						
PSI	Prapat	85.44	276	LR	LR	12 14 19.7	
	comp=Z,61nm,19.0s,baz=142,slow=36						
GSI	Gunungsitoli	85.73	274	P	P	11 35 28.1	-0.2
LPIG	La Paz	86.53	58	LR	LR	12 07 44.2	
	comp=Z,147nm,18.1s,baz=273,slow=31						
KSRS	Korea Array	86.60	320	LR	LR	12 12 37.9	
	comp=Z,36nm,18.7s,baz=85,slow=35						
NJ2	Nanjing	88.10	311	*e*P	P	11 35 42.0	+2.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PFO	Pinyon Flats O	88.65	47	LR	LR	12 11 35.4	
	comp=Z,134nm,18.1s,baz=238,slow=33						
PETK	Petropavlovsk-	88.86	346	P	P	11 35 39.1	-3.3
	comp=Z,7.3nm,1.0s,baz=160,slow=5.4,SNR=4.1						
	comp=Z,7.3nm,1.0s						
WSHM	Spangler Hills	89.37	45	IAmb	IAmb	11 37 01.7	
	comp=Z,26nm,1.9s						
DANC	Danby, Needles	90.00	47	P	P	11 35 48.7	+0.5
DANC				IAmb	IAmb	11 36 02.7	
	comp=Z,14nm,1.2s						
NVAR	Mina Array Bea	90.84	43	P	P	11 35 52.5	+0.1
	comp=Z,1.5nm,0.9s,baz=247,slow=5.1,SNR=8.6						
	comp=Z,1.5nm,0.9s						
NVAR	Mina Array Bea	90.84	43	P	P	11 35 53.1	+0.8
Y14A	Wickenburg	91.02	49	IAmb	IAmb	11 35 55.4	
	comp=Z,5.2nm,1.0s						
TUC	Tucson	91.39	52	P	P	11 35 56.0	+1.1
TUC				IAmb	IAmb	11 36 08.8	
	comp=Z,17nm,1.8s						
CN2	Changchun	92.51	323	P	P	11 36 00.5	+0.9
CMIG	Matias Romero	94.07	72	LR	LR	12 10 38.8	
	comp=Z,63nm,19.6s,baz=192,slow=30						
CM31	Chiang Mai Arr	94.14	289	P	P	11 36 07.6	-0.2
CM31				IAmb	IAmb	11 37 27.8	
	comp=Z,5.6nm,1.1s						
CMAR	Chiang Mai Arr	94.14	289	P	P	11 36 06.8	-1.0
	comp=Z,0.4nm,0.5s,baz=120,slow=4.6,SNR=1.9						
CMAR				LR	LR	12 22 21.1	
	comp=Z,25nm,18.4s,baz=65,slow=38						
	comp=Z,0.4nm,0.5s						
CMAR	Chiang Mai Arr	94.14	289	P	P	11 36 07.4	-0.3
TX31	Lajitas Ar. Si	94.42	58	P	P	11 36 10.2	+1.3
TX31				IAmb	IAmb	11 36 22.7	
	comp=Z,7.8nm,1.4s						
TXAR	Lajitas Array	94.42	58	P	P	11 36 09.2	+0.3
	comp=Z,0.5nm,0.8s,baz=249,slow=5.3,SNR=5.5						
	comp=Z,0.5nm,0.8s						
TXAR	Lajitas Array	94.42	58	P	P	11 36 09.8	+0.9
ANMO	Albuquerque	95.86	52	LR	LR	12 15 22.4	
	comp=Z,92nm,18.0s,baz=292,slow=33						
MA2	Magadan	96.32	345	LR	LR	12 14 44.6	
	comp=Z,57nm,19.5s,baz=103,slow=32						
PZH	PanZhiHua	96.49	297	P	P	11 36 20.3	+1.8
LPAZ	La Paz	97.12	115	LR	LR	12 11 26.1	
	comp=Z,28nm,19.6s,baz=342,slow=30						
CPUP	Villa Florida	98.23	129	LR	LR	12 15 57.7	
	comp=Z,93nm,18.1s,baz=249,slow=32						
HHC	Hu-ho-hao-te	98.23	314	*e*P	Pdif	11 36 27.5	+1.5
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,57nm,6.0s						
LZH	Lanzhou	100.37	306	*e*P	Pdif	11 36 35.8	+0.1
LZH				sP	sPdif	11 36 51.5	+1.2
LZH				pmax	pmax		
	comp=Z,22nm,1.6s						
WMQ	Urumqi	114.93	307	*e*PKP	PKiKP	11 41 30.8	+1.5
MKAR	Makanchi Array	119.56	309	PKP	PKPdf	11 41 36.4	-1.6
	comp=Z,1.5nm,1.0s,baz=112,slow=1.1,SNR=7.8						
ZALV	Zalesovo Beam	120.20	317	PKP	PKPdf	11 41 37.5	-1.4
	comp=Z,0.3nm,0.4s,baz=101,slow=1.5,SNR=1.9						
KURBB	Kurchatov Arra	123.04	312	PKP	PKPdf	11 41 43.4	-1.2
	comp=Z,1.9nm,0.9s,baz=106,slow=2.0,SNR=14						
KKAR	Karatay Array	126.53	302		PKPdf	11 41 51.0	-0.5
BVAR	Borovoye Array	128.44	314	PKP	PKPdf	11 41 53.5	-1.4
	comp=Z,2.7nm,1.0s,baz=103,slow=3.1,SNR=6.9						
ARCES	ARCESS Array B	141.67	347	PKhKP	PKPpre	11 42 20.6	
	comp=Z,4.8nm,1.0s,baz=12,slow=4.6,SNR=4.7						
KARS	Kars	146.44	294	PKPbc	PKPbc	11 42 30.0	+0.2
KBZ	Khabaz	146.53	300	PKPbc	PKPbc	11 42 29.3	-0.5
	comp=Z,8.5nm,1.0s,baz=135,slow=1.4,SNR=13						
GURO	Guroymak-BITLI	147.15	290	PKPbc	PKPbc	11 42 32.5	+0.6
FIA1	FINESS Array S	148.04	338	PKPdf	PKPdf	11 42 31.1	+0.9
MARD	Mardin	148.04	288		PKPbc	11 42 34.5	+0.1
FINES	FINESS Array B	148.04	338	PKPbc	PKPdf	11 42 30.9	+0.8
	comp=Z,12nm,0.9s,baz=54,slow=2.6,SNR=14						
FINES	FINESS Array B	148.04	338	PKPdf	PKPdf	11 42 31.5	+1.3
MMAI	Mount Meron Ar	151.81	278	PKPbc	PKPbc	11 42 43.7	+0.1
	comp=Z,5.2nm,0.6s,baz=104,slow=6.1,SNR=4.1						
NB2	NORSAR Subarra	151.89	350	PKP	PKPbc	11 42 41.4	-1.4
	comp=Z,14nm,1.2s,baz=21,slow=3.2						
NOA	NORSAR Array B	151.89	350	PKPbc	PKPbc	11 42 42.3	-0.5
	comp=Z,3.5nm,1.0s,baz=20,slow=3.8,SNR=3.8						
HFS	Hagfors	152.33	347	PKPbc	PKPbc	11 42 42.7	-1.1
	comp=Z,3.2nm,0.8s,baz=17,slow=1.5,SNR=6.7						
AKASG	Malin Array Be	153.58	318	PKPbc	PKPbc	11 42 45.9	-0.9
	comp=Z,3.2nm,0.8s,baz=66,slow=2.2,SNR=6.5						
BRTR	Keskin Array B	153.69	293	PKPbc	PKPbc	11 42 46.5	-1.2
	comp=Z,2.9nm,0.9s,baz=112,slow=3.5,SNR=9.7						
TORD	Torodi Ar. Bea	159.60	180	PKP	PKPdf	11 42 49.3	+1.4
	comp=Z,0.8nm,0.9s,baz=172,slow=4.4,SNR=4.7						
TORD				PKPab	PKPab	11 43 26.8	+0.7
	comp=Z,5.3nm,0.9s,baz=171,slow=3.1,SNR=12						
CLL	Collm	160.49	338	*i* PKPab	PKPab	11 43 27.7	-1.4
	comp=Z,9.0nm,1.1s						
CLL				*i* x	x	11 43 34.2	

*SOME **31** 11:34:25.8, 43°.70N×69°.80E*

NNC 31 11:34:26.1±1.4, **43°.66N**×**69°.73E**, **h0**^{km}, **mb3.6**, **mpv3.0**, **2C-1D**, **Error ellipse: s-maj=8.4km s-min=6.8km az=144.0**, **Suspected Mining explosion.**, **Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRLS	Borolday	0.63	173	P	Pn	11 34 42.0	-0.3
	0.6nm,0.1s						
BRLS				S	Sn	11 34 53.7	+0.6
	15nm,0.6s						
KK31	Karatay Array	0.79	134	P	Pg	11 34 41.3	0.0
	1.5nm,0.5s,baz=323,slow=18,SNR=62						
KK31				⇑S	Sg	11 34 52.7	+1.1
	20nm,0.6s,baz=325,slow=11,SNR=98						
IUG	Iuzhnay	1.52	171	P	Pg	11 34 55.6	+0.3
	12nm,0.4s						
IUG				S	Sn	11 35 17.2	+1.9
	52nm,0.5s						
MRKS	Merke	2.71	108	Pg	Pb	11 35 16.0	+0.3
	2.3nm,0.5s						
MRKS				Lg	Lg	11 35 51.9	
	5.9nm,0.6s						
BTLS	Baital	3.39	64	Pg	Pb	11 35 29.0	+1.9
	11nm,0.5s						
BTLS				Lg	Lg	11 36 14.4	
	4.3nm,0.5s						
SGDS	Sogindy	3.57	92	Pg	Pb	11 35 30.9	+0.8
	0.6nm,0.1s						
SGDS				Lg	Lg	11 36 17.7	
	4.4nm,0.5s						
AAK	Ala-Archa	3.63	105	⇓Pg	Pb	11 35 31.9	+0.6
AAK				⇑Lg	Lg	11 36 22.6	
KST	Kastek	4.59	96	Pg	Pb	11 35 50.8	+3.2
	2.4nm,0.3s						
KST				Lg	Lg	11 36 51.7	
	7.8nm,0.5s						

*IDC **31** 11:48:35.7±0.9, 7°.00S×80°.45W, h0^{km}, mb3.6/9, mbtmp3.6/11, ML3.9/2, MS3.1/5, Error ellipse: s-maj=29.7km s-min=14.2km az=19.0*

*NEIC **31** 11:48:43.4±0.9, 7°.07S±0°.03×80°.3W±0°.1, h40^{km}±8^{km}, mb4.5/13, Error ellipse: s-maj=17.0km s-min=4.7km az=91.0*

ISC 31 11:48:40.9±0.6, **7°.09S**±0°.08×**80°.29W**±0°.09, **h29**^{km}, **n44**, **σ1^{s}08**/33, **mb4.3**/9, **Off coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	1.88	92	Pg	Pb	11 49 14.6	-0.3
	34nm,0.3s,baz=270,slow=5.1,SNR=282						
ATAH				Lg	Lg	11 49 41.1	
	40nm,0.3s,baz=319,slow=11,SNR=10						
ATAH				LR	LR	11 50 06.6	
	comp=Z,221nm,21.1s,baz=275,slow=44						
COHC	Cochancay	4.71	13		Pn	11 49 51.6	+1.7
NNA	Nana	5.94	145	Pn	Pn	11 50 07.3	+0.3
	3.3nm,0.3s,baz=334,slow=14,SNR=5.3						
NNA				Sn	Sn	11 51 13.3	-0.9
	2.9nm,0.3s,baz=326,slow=11,SNR=1.2						
	3.5nm,0.3s						
NNA	Nana	5.94	145	Pn	Pn	11 50 08.4	+1.4
SLOR	San Lorenzo -	6.56	16		Pn	11 50 17.6	+1.7
OTAV	Otavalo	7.50	14	Pn	Pn	11 50 29.4	+0.5
PAYG	Puerto Ayora	11.83	302	Pn	Pn	11 51 29.4	+1.6
LPAZ	La Paz	15.01	129	Pn	Pn	11 52 11.4	-0.3
	0.3nm,0.3s,baz=299,slow=6.8,SNR=6.2						
LPAZ				LR	LR	11 59 08.6	
	comp=Z,62nm,19.6s,baz=1.5,slow=42						
	0.6nm,0.5s						
LPAZ	La Paz	15.01	129		Pn	11 52 12.8	+1.1
SDV	Santo Domingo	18.56	31	LR	LR	12 01 00.5	
	comp=Z,110nm,18.2s,baz=64,slow=40						
SDV	Santo Domingo	18.56	31	P	P	11 52 56.0	+0.2
PB10	IPOC Station P	18.82	151	P	P	11 52 58.2	-0.3
PB10				IAmb	IAmb	11 53 20.7	
	comp=Z,28nm,1.4s						
MACA	Manacapuru-AM	19.91	80	P	P	11 53 11.0	+0.6
MACA				IAmb	IAmb	11 53 13.1	
	comp=Z,27nm,0.6s						
MGAN	Managua	20.00	343	P	P	11 53 10.1	-1.3
VILB	Vilhena	20.62	108	P	P	11 53 18.9	+0.7
SIV	San Ignacio	20.79	117	P	P	11 53 21.3	+1.3
	comp=Z,4.5nm,0.7s,baz=296,slow=12,SNR=23						
	comp=Z,4.5nm,0.7s						
PCRV	Puerto La Cruz	23.18	42	LR	LR	12 03 40.6	
	comp=Z,30nm,19.3s,slow=39						
H03N2	Juan Fernandez	26.25	177	T	T	12 21 47.9	
	baz=356,slow=76,SNR=70						
H03N1	Juan Fernandez	26.26	177	T	T	12 21 48.8	
	baz=356,slow=76,SNR=94						
H03N3	Juan Fernandez	26.27	177	T	T	12 21 47.6	
	baz=356,slow=76,SNR=82						
MDP	Montagnes des	30.13	67	LR	LR	12 07 57.4	
	comp=Z,59nm,19.5s,baz=291,slow=38						
441A	DeRidder	39.60	342	P	P	11 56 09.2	-0.7
TXAR	Lajitas Array	42.63	329	P	P	11 56 34.5	-0.5
	comp=Z,0.1nm,0.6s,baz=135,slow=11,SNR=1.9						
	comp=Z,0.1nm,0.6s						
YKA	Yellowknife Ar	74.21	344	P	P	12 00 13.0	-1.7
	baz=149,slow=4.7,SNR=3.2						
DBIC	Dimbokro	76.48	81	P	P	12 00 28.4	-0.4
	comp=Z,2.4nm,0.8s,baz=263,slow=2.7,SNR=4.0						
	comp=Z,2.4nm,0.8s						
DBIC	Dimbokro	76.48	81	P	P	12 00 28.6	-0.2
DBIC				IAmb	IAmb	12 00 29.7	
	comp=Z,5.7nm,1.0s						
QSPA	South Pole Qui	83.01	180	P	P	12 01 03.7	+0.4
	comp=Z,0.5nm,0.6s,baz=150,slow=4.1,SNR=2.0						
	comp=Z,0.5nm,0.6s						
QSPA	South Pole Qui	83.01	180	P	P	12 01 03.9	+0.5
QSPA				IAmb	IAmb	12 01 43.1	
	comp=Z,4.3nm,1.3s						
TORD	Torodi Ar. Bea	83.85	76	P	P	12 01 08.4	-0.2
	comp=Z,0.7nm,0.8s,baz=275,slow=6.2,SNR=4.1						
	comp=Z,0.7nm,0.8s						
ESDC	Sonseca Array	84.08	49	P	P	12 01 08.1	-1.2
	comp=Z,0.5nm,0.8s,baz=250,slow=4.7,SNR=4.2						
	comp=Z,0.5nm,0.8s						
ILAR	Eielson Array	86.66	337	P	P	12 01 21.0	-0.5
	comp=Z,0.1nm,0.7s,baz=121,slow=7.1,SNR=2.2						
	comp=Z,0.1nm,0.7s						
EKA	Eskdalemuir Ar	88.53	34	P	P	12 01 29.7	-0.9
	comp=Z,1.6nm,0.9s,baz=236,slow=5.0,SNR=2.0						
	comp=Z,1.6nm,0.9s						
E22K	Anaktuvuk Pass	89.76	339	P	P	12 01 37.0	+0.7
E22K				IAmb	IAmb	12 01 55.1	
	comp=Z,2.7nm,1.1s						
G21K	Allakaket	89.85	337	P	P	12 01 38.0	+1.4
G21K				IAmb	IAmb	12 02 00.7	
	comp=Z,4.2nm,1.2s						
C23K	Itkillik River	89.95	341	P	P	12 01 38.6	+1.6
C23K				IAmb	IAmb	12 02 00.7	
	comp=Z,6.8nm,1.4s						
B22K	Teshekpuk Lake	91.02	341	P	P	12 01 43.3	+1.3
H11N3	WAKE ISLAND Hy	113.79	288	T	T	14 10 32.7	
	baz=90,slow=75,SNR=8.9						
H11N2	WAKE ISLAND Hy	113.80	288	T	T	14 10 32.1	
	baz=90,slow=75,SNR=5.3						
H11N1	WAKE ISLAND Hy	113.81	288	T	T	14 10 34.6	
	baz=90,slow=75,SNR=6.2						
H11S2	WAKE ISLAND Hy	114.00	287	T	T	14 10 47.0	
	baz=90,slow=75,SNR=7.5						
H11S1	WAKE ISLAND Hy	114.00	287	T	T	14 10 49.8	
	baz=90,slow=75,SNR=11						
H11S3	WAKE ISLAND Hy	114.01	287	T	T	14 10 47.2	
	baz=90,slow=75,SNR=5.9						
ASAR	Alice Springs	134.73	226	PKP	PKPdf	12 07 55.7	-2.1
	comp=Z,0.2nm,0.7s,baz=103,slow=1.7,SNR=2.0						
WRA	Warramunga Arr	136.61	231	PKP	PKPdf	12 08 01.3	0.0
	comp=Z,0.2nm,0.6s,baz=125,slow=2.7,SNR=1.8						

IDC 31 11:53:04.2±2.3, **2°.90S**×**130°.57E**, **h0**^{km}, **mb3.6**/3, **mbtmp3.6**/5, **ML4.0**/2, **Error ellipse: s-maj=124.7km s-min=25.1km az=75.0**, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	15.86	197	Pn	Pn	11 56 48.8	-0.1
	0.2nm,0.3s,baz=21,slow=8.6,SNR=2.3						
FITZ				Sn	Sn	11 59 36.0	-9.5
	0.1nm,0.3s,baz=8.1,slow=7.1,SNR=1.7						
	2.5nm,0.6s						
WRA	Warramunga Arr	17.33	168	Pn	Pn	11 57 05.6	-2.1
	0.8nm,0.3s,baz=348,slow=11,SNR=26						
WRA				Sn	Sn	12 00 06.9	-14
	0.1nm,0.3s,baz=348,slow=25,SNR=1.7						
	0.3nm,0.3s						
ASAR	Alice Springs	20.89	171	P	P	11 57 49.2	+0.9
	3.3nm,0.5s,baz=350,slow=10.0,SNR=107						
ASAR				S	S	12 01 38.6	-3.6
	1.1nm,0.7s,baz=352,slow=18,SNR=10						
	3.3nm,0.5s						
MKAR	Makanchi Array	65.16	326	P	P	12 03 48.0	+0.9
	0.2nm,0.6s,baz=116,slow=6.6,SNR=1.8						
	0.2nm,0.6s						
KURBB	Kurchatov Arra	69.36	328	P	P	12 04 12.7	-0.9
	0.3nm,0.4s,baz=126,slow=5.8,SNR=2.7						
	0.3nm,0.4s						

WEL 31 12:44:34.3±1.1, **34°S**±27°×**17°9W**±4°0, **h12**^{km}, **M3.9**/7, **mB4.3**/1, **ML3.9**/12, **MLv3.9**/7, **Mw(mB)3.4**/1, **Error ellipse: s-maj=62.2km s-min=8.4km az=123.3**, **confirmed**, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.62	213	P	Pn	12 45 42.8	-1.0
MXZ				S	Sn	12 46 37.6	+0.1
WMGZ	Waiomatatini S	4.79	211	P	Pn	12 45 42.6	-3.5
WMGZ				S	Sn	12 46 44.6	+3.1
PKGZ	Pakihiroa	4.97	213	P	Pn	12 45 47.9	-0.8

PKGZ				S	Sn	12 46 48.3	+2.1
HAZ	Te Kaha	5.02	216	P	Pn	12 45 50.2	+0.8
HAZ				S	Sn	12 46 50.1	+2.8
PUZ	Puketiti	5.06	210	P	Pn	12 45 49.5	-0.5
PUZ				S	Sn	12 46 49.0	+0.6
RUGZ	Raukumara Rang	5.24	215	P	Pn	12 45 52.2	-0.4
RUGZ				S	Sn	12 46 53.8	+0.9
TWGZ	Tauwhareparae	5.27	212	P	Pn	12 45 54.1	+1.2
TWGZ				S	Sn	12 46 54.9	+1.3
CNGZ	Carnagh Statio	5.44	208	P	Pn	12 45 53.2	-1.9
MWZ	Matawai	5.60	214	P	Pn	12 45 56.8	-0.7
MWZ				S	Sn	12 47 02.6	+0.8
URZ	Urewera	5.75	217	P	Pn	12 45 59.8	+0.4
URZ				S	Sn	12 47 05.5	+0.3
RAGZ	Rawiri	5.79	214	P	Pn	12 46 01.1	+1.1
RIGZ	Rimuhau	5.81	210	P	Pn	12 46 01.7	+1.4
RIGZ				S	Sn	12 47 06.8	0.0
SNGZ	Shannon Statio	6.05	212	P	Pn	12 46 04.6	+1.0
SNGZ				S	Sn	12 47 13.0	+0.1
RTZ	Ruatahuna	6.09	215	P	Pn	12 46 04.0	-0.1
RTZ				S	Sn	12 47 13.4	-0.3
MTHZ	Maungataniwha	6.34	215	P	Pn	12 46 07.9	+0.3
MTHZ				S	Sn	12 47 20.0	+0.1

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*KRNET **31** 12:45:50.4±0.1, 41°.68N×71°.69E, h17^{km}, mb2.2*
*SOME **31** 12:45:51.1, 41°.70N×71°.72E, h15^{km}*
*NNC **31** 12:45:51.7±1.6, 41°.79N×71°.69E, h0^{km}, mb2.4, mpv2.6, Error ellipse: s-maj=14.7km s-min=5.5km az=5.0*
ISC 31 12:45:50.8±1.2**, 41°.71N**±0°.04×**71°.71E**±0°.03**, h11**^{km}±9^{km}**, n19, σ1^{s}.12**/34**, 12C-4D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARK	Arkit	0.21	64	⇑*i*P	Pg	12 45 55.4	+0.1
ARK				⇑*i*S	Sg	12 45 58.7	+0.3
MNAS	Manas	0.98	37	⇑*i*P	Pb	12 46 09.4	-0.4
MNAS				⇑*i*S	Sg	12 46 23.3	+0.9
ARSB	Arslanbob	1.03	111	⇓*e*P	Pb	12 46 09.8	-0.8
ARSB				⇓*e*S	Sb	12 46 24.0	-0.1
IUG	Iuzhnay	1.33	290	P	Pn	12 46 14.7	-0.6
	2.8nm,0.3s						
IUG				S	Sg	12 46 34.1	+0.5
	22nm,0.2s						
MRKS	Merke	1.53	47	P	Pn	12 46 17.8	-0.2
	1.0nm,0.3s						
MRKS				S	Sb	12 46 39.7	+1.1
	8.5nm,0.3s						
MRKS	Merke	1.53	47	*e*P	Pb	12 46 19.4	+0.2
	2.5nm,0.3s						
MRKS				*e*S	Sb	12 46 39.7	+1.1
	8.5nm,0.3s						
KK31	Karatay Array	1.66	328	⇑P	Pb	12 46 21.1	-0.2
	0.4nm,0.2s,baz=141,slow=17,SNR=21						
KK31				⇑S	Sb	12 46 42.0	-0.1
	2.1nm,0.4s,baz=157,slow=31,SNR=11						
SALK	Salom-Alik	1.79	117	⇓*e*P	Pb	12 46 23.6	0.0
SALK				⇓*e*S	Sb	12 46 47.2	+1.1
BRLS	Borolday	1.92	314	Pg	Pn	12 46 23.7	+0.4
	0.3nm,0.1s						
BRLS				Lg	Lg	12 46 49.8	
	12nm,0.2s						
BRLS	Borolday	1.92	314	*e*P	Pb	12 46 25.4	-0.4
	0.6nm,0.2s						
BRLS				*e*S	Sb	12 46 49.8	+0.1
	12nm,0.2s						
ARLS	Aral	1.96	85	⇑*i*P	Pb	12 46 25.9	-0.6
ARLS				⇑*i*S	Sb	12 46 52.3	+1.3
UCH	Uchtor	2.15	75	⇑*e*P	Pb	12 46 29.0	-1.0
UCH				⇑*i*S	Sb	12 46 57.0	+0.2
SFK	Sufi-Kurgan	2.17	141	⇑*e*P	Pn	12 46 28.6	+1.6
SFK				⇑*i*S	Sb	12 46 56.1	-1.0
AAK	Ala-Archa	2.27	65	Pn	Pb	12 46 32.3	+0.5
AAK				Sn	Sg	12 47 02.6	-1.0
SGDS	Sogindy	2.77	50	Pg	Pb	12 46 39.8	-0.5
	0.7nm,0.1s						
SGDS				Lg	Lg	12 47 17.7	
	5.1nm,0.2s						
DGS	Degeres	3.37	62	Pg	Pb	12 46 50.7	+0.1
	0.8nm,0.5s						
DGS				Lg	Lg	12 47 36.0	
	4.3nm,0.6s						
DGS	Degeres	3.37	62	*e*P	Pb	12 46 52.2	+1.6
	1.0nm,0.3s						
DGS				*e*S	Sg	12 47 36.0	-3.1
	4.3nm,0.6s						
KST	Kastek	3.42	66	Pg	Pb	12 46 51.8	+0.4
	0.6nm,0.1s						
KST				Lg	Lg	12 47 37.8	
	7.1nm,0.5s						
KST	Kastek	3.42	66	*e*P	Pb	12 46 53.1	+1.7
	1.9nm,0.8s						
KST				*e*S	Sg	12 47 37.8	-2.8
	7.1nm,0.5s						

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*ISN **31** 12:50:57.7±0.5, 32°.50N×46°.87E, h10^{km}±2^{km}, ML2.8*
*TEH **31** 12:50:57.0, 32°.51N×46°.93E, h10^{km}±49^{km}*
ISC 31 12:50:57.3±1.2**, 32°.50N**±0°.05×**46°.95E**±0°.04**, h10**^{km}**, n11, σ1^{s}.34**/15**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAFI	Al-Rafai	1.05	223	*e*Pg	Pb	12 51 17.5	-0.1
RAFI				*e*Sg	Sb	12 51 31.5	+0.1
RAFI				AML	AML	12 51 43.7	
	comp=E,291nm,0.5s						
RAFI				AML	AML	12 51 47.1	
	comp=N,501nm,0.4s						
IBDR	Badra	1.05	306	*e*Pg	Pb	12 51 17.0	-0.7
IBDR				*e*Sg	Sb	12 51 31.0	-0.5
IBDR				AML	AML	12 51 37.7	
	comp=E,204nm,0.4s						
IBDR				AML	AML	12 51 52.6	
	comp=N,169nm,0.6s						
ILBA	Ilam Banvizeh	1.28	331	Pg	Pb	12 51 21.0	-0.7
IDOB	Doab	1.65	38	Pg	Pb	12 51 27.8	-0.1
GLG1	Gilan-e-Gharb	1.83	332	Pn	Pb	12 51 30.5	-0.5
IGHG	Ghaleghazi	1.85	350	Pn	Pb	12 51 30.9	-0.5
AMIS	Naft Sefid	2.15	112	Pn	Pb	12 51 35.1	-1.2
BDRS	Dareh Seyedi	2.17	48	Pn	Pb	12 51 35.1	-1.8
BHD	Baghdad	2.30	290	*e*Pn	Pb	12 51 36.7	-2.1
BHD				*e*Sn	Sb	12 52 05.0	-2.3
SNQR	Sonqor, Kerman	2.42	13	Pn	Pn	12 51 38.4	+1.1
IKRK	Kirkuk	3.62	324	*e*Pn	Pn	12 51 55.0	+1.6
IKRK				*e*Sn	Sn	12 52 37.5	+1.3

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*TAP **31** 13:09:29.2, 23°.12N×121°.18E, h11^{km}, ML3.5, B*
ISC 31 13:09:29.4±0.8**, 23°.12N**±0°.01×**121°.19E**±0°.02**, h17**^{km}±4^{km}**, n132, σ0^{s}.72**/182**, 3C-19D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ECS	Chishang	0.03	135	⇑*i*P	Pg	13 09 31.9	-0.5
ECS				S	Sg	13 09 34.3	-0.2
FULB	Fuli	0.12	50	⇓*i*P	Pg	13 09 32.9	-0.3
FULB				*i* S	Sg	13 09 36.2	+0.4
CHKT	Chengkung	0.16	97	⇓*i*P	Pb	13 09 33.9	0.0
CHKT				*i* S	Sg	13 09 38.0	+1.5
ELDTW	Lidau	0.18	293	⇓*i*P	Pg	13 09 33.1	-0.8
ELDTW				*i* S	Sg	13 09 35.6	-1.5
CHKH	Chenggong	0.20	69	*e*P	Pg	13 09 33.8	-0.5
CHKH				*e*S	Sg	13 09 38.0	+0.6
YULB	Yu-li	0.29	19	P	Pg	13 09 34.8	-0.9
YULB	Yu-li	0.29	19	P	Pg	13 09 35.0	-0.7
YULB	Yu-li	0.29	19	⇑*i*P	Pg	13 09 34.8	-0.9
YULB				*e*S	Sg	13 09 38.6	-1.3
ECBN	Changbin	0.31	50	*e*P	Pg	13 09 36.1	+0.1
ECBN				*e*S	Sb	13 09 41.7	+0.5
TWG	Pinlang	0.32	201	⇓P	Pg	13 09 35.8	-0.3
TWG				S	Sb	13 09 41.0	-0.4
TWGBT	Beinan	0.32	199	P	Pg	13 09 35.8	-0.4
TWGBT	Beinan	0.32	199	P	Pg	13 09 35.9	-0.3
TWGBT	Beinan	0.32	199	P	Pn	13 09 40.8	+1.5
TWGBT	Beinan	0.32	199	*e*P	Pg	13 09 35.8	-0.4
TWGBT				S	Sb	13 09 40.9	-0.6
TTN	Taitung	0.37	187	*e*P	Pb	13 09 37.4	-0.1
TTN				*e*S	Sb	13 09 44.1	+1.3
STYH	Taoyuan	0.39	278	⇓*i*P	Pg	13 09 37.2	-0.2
STYH				S	Sg	13 09 42.5	-0.3
EHYH	Wanrong	0.40	21	*e*P	Pg	13 09 36.6	-1.0
EHYH				*e*S	Sg	13 09 42.2	-1.0
EHY	Hungye	0.40	17	P	Pg	13 09 37.0	-0.6
EHY				*e*S	Sg	13 09 42.1	-1.2
STYT	Tauyuan	0.40	276	⇓*i*P	Pg	13 09 37.5	-0.2
STYT				*e*S	Sg	13 09 43.1	-0.2
HGSD	Ruisui	0.43	30	*e*P	Pg	13 09 37.7	-0.4
HGSD				*e*S	Sb	13 09 45.0	+0.4
YUS	Yu-Shan	0.43	329	⇓*i*P	Pg	13 09 37.8	-0.5
YUS				*e*S	Sg	13 09 43.2	-1.2
ALS	Alishan	0.53	318	⇓*i*P	Pg	13 09 40.0	-0.1
ALS				S	Sg	13 09 46.9	-0.3
WTP	Ta-pu	0.55	283	⇓*i*P	Pb	13 09 40.6	0.0
WTP				*e*S	Sb	13 09 48.5	+0.3
TPUB	Ta-pu	0.55	289	P	Pb	13 09 40.7	+0.1
TPUB	Ta-pu	0.55	289	P	Pb	13 09 40.6	0.0
TPUB	Ta-pu	0.55	289	⇓P	Pb	13 09 40.7	+0.1
TPUB				S	Sb	13 09 48.5	+0.4
SGST	Jiashian	0.56	266	⇓*i*P	Pg	13 09 40.1	-0.5
SGST				S	Sg	13 09 47.8	-0.3
ECL	Taimali	0.56	203	*e*P	Pg	13 09 40.0	-0.7
ECL				*e*S	Sg	13 09 47.8	-0.4
CHN1	Nanshi	0.62	276	⇓P	Pb	13 09 42.2	+0.5
CHN1				*e*S	Sb	13 09 51.2	+1.1
WARBT	Fenglin Townsh	0.62	17	*e*P	Pg	13 09 39.8	-1.9
WARBT				*e*S	Sg	13 09 48.2	-1.8
WCKO	Fanlu	0.63	301	*e*P	Pg	13 09 41.4	-0.4
VWDT	VWDT	0.63	356	⇓P	Pg	13 09 41.3	-0.6
VWDT				S	Sb	13 09 50.7	+0.2
SSD	Sandimen	0.64	234	*e*P	Pg	13 09 41.4	-0.6
SSD				*e*S	Sg	13 09 49.1	-1.4
WHYT	Xinyi Township	0.65	332	⇓*e*P	Pg	13 09 42.1	-0.2
WHYT				*e*S	Sg	13 09 50.4	-0.7
TWK	Hsinying	0.67	283	⇓*e*P	Pb	13 09 42.7	+0.1
TWK				*e*S	Sb	13 09 52.5	+0.9
CHN5	Tsauling	0.67	315	⇓*e*P	Pb	13 09 42.9	+0.2
CHN5				*e*S	Sb	13 09 53.1	+1.4
SSLB	Suanglung	0.70	342	P	Pg	13 09 42.4	-0.8
SSLB	Suanglung	0.70	342	S	Sg	13 09 52.1	-0.4
SSLB	Suanglung	0.70	342	P	Pg	13 09 42.6	-0.6
SSLB	Suanglung	0.70	342	S	Sg	13 09 52.0	-0.4
SSLB	Suanglung	0.70	342	⇓P	Pg	13 09 42.4	-0.8
SSLB				*e*S	Sg	13 09 50.7	-1.8
MASBT	Mashibuluo	0.72	226	⇑P	Pg	13 09 43.0	-0.6
MASBT				*e*S	Sg	13 09 51.7	-1.4
ESL	Shilin	0.72	18	*e*P	Pg	13 09 42.7	-0.9
SHUL	Shoufeng	0.75	27	*e*P	Pg	13 09 44.0	0.0
CHN3	Shinhua	0.76	267	*e*P	Pn	13 09 45.4	+0.1
TWM1	Shoushan	0.77	248	*e*P	Pn	13 09 45.2	-0.2
CHN2	Minshiung	0.78	302	*e*P	Pb	13 09 44.9	+0.5
SHHT	Tainan City	0.79	263	*e*P	Pn	13 09 46.1	+0.5
EAST	Anshuo	0.80	204	*e*P	Pg	13 09 44.3	-0.7
EAST				*e*S	Sg	13 09 54.9	-0.8
CHY	Chiayi	0.80	298	*e*P	Pb	13 09 45.3	+0.5
SMLT	Sun Moon Lake	0.81	341	*e*P	Pg	13 09 44.8	-0.4
WGK	Gukeng	0.81	314	*e*P	Pb	13 09 45.5	+0.5
WDLH	Douliu	0.83	313	*e*P	Pb	13 09 46.0	+0.7
WDLH				*e*S	Sn	13 09 58.2	+0.2
SSHA	Shanhua	0.83	271	*e*P	Pb	13 09 45.5	+0.1
TYC	Yuchr	0.84	338	*e*P	Pg	13 09 45.3	-0.5
WDL	Douliou City	0.84	315	*e*P	Pg	13 09 45.5	-0.4
WUSB	Renai	0.87	355	*e*P	Pg	13 09 45.3	-1.1
WUSB				*e*S	Sg	13 09 56.7	-1.3
ETM	Tongmen	0.89	18	*e*P	Pg	13 09 45.8	-0.9
ETM				*e*S	Sg	13 09 57.1	-1.2
WNT	Mingjian	0.89	328	*e*P	Pn	13 09 47.5	+0.4
WNT				*e*S	Sn	13 09 60.0	+0.4
SCZT	Fangliau	0.91	216	*e*P	Pg	13 09 46.5	-0.7
SCZT				*e*S	Sg	13 09 58.5	-0.7
WNT1	Nantou City	0.91	329	*e*P	Pn	13 09 47.9	+0.4
WNT1				*e*S	Sn	13 10 01.1	+0.9
WPL	Puli Township	0.91	346	*e*P	Pg	13 09 46.9	-0.3
SCLT	Jiali	0.92	274	*e*P	Pn	13 09 47.8	+0.2
CHN8	Yiju	0.93	284	*e*P	Pb	13 09 47.3	+0.3
CHN8				*e*S	Sn	13 10 00.5	-0.1
HWA	Hwalien	0.93	24	*e*P	Pg	13 09 47.2	-0.3
DPDB	Guoxing	0.94	345	*e*P	Pg	13 09 47.0	-0.7
WSL	Shuilin Townsh	0.97	295	*e*P	Pn	13 09 48.4	+0.1
WSSB	Gushan	0.98	241	*e*P	Pn	13 09 50.2	+1.8
WYL	Yuanlin Townsh	1.01	326	*e*P	Pg	13 09 48.2	-0.8
WYL				*e*S	Sn	13 10 03.1	+0.6
WHF	Hehuan Shan	1.02	4	*e*P	Pg	13 09 48.3	-1.1
WHF				*e*S	Sg	13 10 02.6	-0.3
TWD	Chiawan	1.02	21	*e*P	Pb	13 09 48.6	-0.1
WWF	Wufeng	1.02	334	*e*P	Pn	13 09 50.0	+1.0
WSF	Szhu	1.03	300	*e*P	Pg	13 09 49.1	-0.3
WSF				*e*S	Sn	13 10 03.3	+0.2
RLNB	Erlin	1.08	315	*e*P	Pn	13 09 50.5	+0.8
ETL	Fush Village	1.11	21	*e*P	Pb	13 09 49.8	-0.3
NACB	Ninganchiao	1.11	19	P	Pb	13 09 50.0	-0.2
NACB	Ninganchiao	1.11	19	S	Sb	13 10 04.8	+0.4
NACB	Ninganchiao	1.11	19	P	Pb	13 09 50.3	+0.1
NACB	Ninganchiao	1.11	19	S	Sb	13 10 04.9	+0.5
NACB	Ninganchiao	1.11	19	*e*P	Pb	13 09 49.6	-0.6
NACB				*e*S	Sb	13 10 05.0	+0.6
ETLH	Xiulin Townshi	1.11	14	*e*P	Pb	13 09 50.1	-0.2
ETLH				*e*S	Sb	13 10 05.3	+0.7
WCH1	Changhua City	1.12	328	*e*P	Pn	13 09 51.7	+1.4
WTCT	Ta-ch'eng	1.12	312	*e*P	Pn	13 09 51.1	+0.9
WTCT				*e*S	Sn	13 10 06.3	+1.1
WCHH	Zhanghua	1.12	329	*e*P	Pn	13 09 51.6	+1.4
FUSS	Fushou	1.12	2	*e*P	Pb	13 09 50.1	-0.5
FUSS				*e*S	Sb	13 10 04.9	0.0
TCU	Taichung	1.13	335	*e*P	Pg	13 09 51.6	+0.3
TDCB	Techi	1.13	358	*e*P	Pb	13 09 50.2	-0.3
TWT	Tachien	1.13	359	*e*P	Pb	13 09 50.4	-0.1
SMST	Manzhou Townsh	1.14	197	*e*P	Pb	13 09 50.6	-0.1
LYUB	Lan-yu	1.17	162	*e*P	Pb	13 09 49.7	-1.5
WHP	Taichung City	1.18	349	*e*P	Pn	13 09 51.6	+0.5
TWQ1	Liyutan	1.28	343	*e*P	Pg	13 09 53.8	-0.4
EAHA	Aohua	1.30	22	*e*P	Pn	13 09 53.1	+0.3
NNSB	Datong	1.31	8	⇓*e*P	Pn	13 09 53.4	+0.3
NNS	Nan Shan	1.32	7	*e*P	Pn	13 09 53.2	-0.1
NNS				*e*S	Sb	13 10 10.6	0.0
WDGT	Dungji	1.42	276	*e*P	Pb	13 09 55.1	-0.2
WDGT				*e*S	Sb	13 10 13.6	+0.4
EOS4	EOS4	1.43	46	*e*P	Pn	13 09 54.2	-0.1
LATG	Datong	1.44	12	⇓*e*P	Pn	13 09 55.6	+0.8
LATG				*e*S	Sn	13 10 14.4	+0.9
NMLH	Miaoli	1.46	345	*e*P	Pn	13 09 55.5	+0.6
NFF	Wufeng Townshi	1.51	357	*e*P	Pb	13 09 57.5	+0.5
NSTT	Nanjuang	1.52	353	*e*P	Pb	13 09 57.2	+0.1
LIOB	Emei	1.53	354	*e*P	Pb	13 09 57.3	+0.1
PHUB	P'eng-hu	1.54	285	*e*P	Pn	13 09 56.7	+0.6
PHUB				*e*S	Sn	13 10 15.4	-0.3
ENTT	Nioudou	1.55	13	*e*P	Pn	13 09 56.7	+0.5
YHNB	Yeheng	1.55	6	P	Pb	13 09 58.1	+0.4
YHNB	Yeheng	1.55	6	*e*P	Pb	13 09 57.8	0.0
YHNB				*e*S	Sn	13 10 16.3	+0.2
NSK	Sanguang	1.56	6	*e*P	Pn	13 09 57.3	+0.9
PNG	Penghu	1.57	287	*e*P	Pn	13 09 56.7	+0.3
NDS	Dongshan	1.58	18	*e*P	Pn	13 09 57.6	+0.9
TWC	Suao	1.60	22	*e*P	Pb	13 09 58.9	+0.4
VCHM	Qimei	1.63	273	*e*P	Pn	13 09 58.1	+0.9
KSHI	Guanxi Townshi	1.65	359	*e*P	Pb	13 09 59.7	+0.3
TWE	Neicheng	1.65	15	*e*P	Pb	13 09 59.8	+0.4
FUSB	Fushanzhiwuyua	1.67	12	*e*P	Pn	13 09 58.9	+0.9
NWLT	Wulai	1.67	10	*e*P	Pn	13 09 58.5	+0.5
TATO	Taipei	1.87	8	*e*P	Pb	13 10 02.5	-0.6
TIPB	Shuangxi	1.93	17	*e*P	Pn	13 10 02.6	+1.1
NWF	Wu-fen Shan	2.02	15	*e*P	Pn	13 10 03.2	+0.5
WFSB	Wu-fen Shan	2.02	15	*e*P	Pn	13 10 03.2	+0.6
ZUZH	Zhuzihu	2.06	9	*e*P	Pn	13 10 04.3	+1.0
SXI1	Grass Mountain	2.06	17	*e*P	Pn	13 10 04.4	+1.1
ANP	Anpu	2.08	8	*e*P	Pn	13 10 05.5	+1.9
VWUC	VWUC	2.45	320	*e*P	Pn	13 10 09.3	+0.7
PTMZ	Houxiangcun	2.69	316	*e*P	Pn	13 10 11.2	-0.7
KNMB	Chin-men Tao	2.90	298	*e*P	Pn	13 10 14.0	-0.7
MATB	Ma-tsu	3.23	340	*e*P	Pn	13 10 19.4	+0.2
AXDP	Jialang	3.44	302	*e*P	Pn	13 10 22.3	+0.1
MHZQ	Yeshan	3.56	327	*e*P	Pn	13 10 24.6	+0.8
LYJJ	Jianjiangzhen	3.66	339	*e*P	Pn	13 10 25.5	+0.3
XPSS	Dashiqiu	3.90	347	*e*P	Pn	13 10 29.2	+0.6
JMJ	Miyako jima 2	4.11	65	*e*P	Pn	13 10 31.8	+0.3
SXFK	Yanhouchang	4.59	316	*e*P	Pn	13 10 37.8	-0.2

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*IDC **31** 13:50:33.8±3.4, 14°.86S×167°.35E, h116^{km}±26^{km}, mb3.6/9, mbtmp3.9/9, Error ellipse: s-maj=30.0km s-min=22.1km az=80.0*
*NEIC **31** 13:50:33.3±1.2, 14°.86S±0°.10×167°.5E±0°.1, h112^{km}±4^{km}, mb4.4/20, Error ellipse: s-maj=18.5km s-min=10.9km az=126.0*
*NOU **31** 13:50:36.3, 14°.97S×167°.20E, h84^{km}, MLv4.9/12, Vanuatu Islands*
ISC 31 13:50:35.1±0.7**, 14°.91S**±0°.08×**167°.4E**±0°.1**, h129**^{km}**, n42, σ1^{s}.06**/44**, mb4.2**/17**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.56	196		Pn	13 50 51.2	-3.2
SANVU	Saraoutou	0.56	196	P	Pn	13 50 52.0	-2.4
DVP	Devils Point	2.91	164	P	Pn	13 51 20.8	+0.3
RTV	Rentapao	3.04	161	P	Pn	13 51 23.0	+0.8
MARNC	Mare, Loyalty	6.57	175	Pn	Pn	13 52 07.0	-2.2
DZM	Mont Dzumac	7.18	187	P	Pn	13 52 18.4	+0.9
	baz=360,slow=7.2						
DZM				S	Sn	13 53 37.0	-0.7
	13nm,0.4s,baz=353,slow=17,SNR=9.8						
DZM	Mont Dzumac	7.18	187		Pn	13 52 16.4	-1.1
OUENC	Ouen Island, N	7.49	184	P	Pn	13 52 21.8	+0.2
PINNC	Pines Island,	7.66	179	Pn	Pn	13 52 22.7	-1.3
NGOA	Tingoa Renbel	7.85	294	P	Pn	13 52 26.1	-0.5
SAVO	Savo Central	9.34	307	P	Pn	13 52 47.5	+0.8
TATA	Tatamba Isabel	9.84	310	P	Pn	13 52 53.6	+0.3
EIDS	Eidsvold	18.47	233	Pn	Pn	13 54 43.2	+0.4
ARMA	Armidale	21.15	220	P	P	13 55 11.3	+1.2
TOZ	Tahuroa Road	23.85	164	P	P	13 55 36.7	+0.3
TOZ				IAmb	IAmb	13 55 40.1	
	comp=Z,9.9nm,0.6s						
BKZ	Black Stump Fm	25.46	163	P	P	13 55 51.5	+0.3
BKZ				IAmb	IAmb	13 55 54.2	
	comp=Z,20nm,1.4s						
MRZ	Mangatainoka R	26.64	166	P	P	13 56 01.6	-0.1
MRZ				IAmb	IAmb	13 56 40.1	
	comp=Z,26nm,1.3s						
BFZ	Birch Farm	26.82	165	P	P	13 56 02.7	-0.6
INKA	Innaminka	27.82	238	P	P	13 56 13.3	+1.0
LTZ	Lake Taylor	28.09	172	P	P	13 56 15.1	+0.5
LTZ				IAmb	IAmb	13 56 48.2	
	comp=Z,25nm,1.5s						
STKA	Stephens Creek	28.95	230	P	P	13 56 23.7	+1.4
	comp=Z,4.5nm,0.5s,baz=60,slow=12,SNR=14						
	comp=Z,4.5nm,0.5s						
STKA	Stephens Creek	28.95	230	P	P	13 56 23.4	+1.0
WB0	Warramunga Arr	31.81	257	P	P	13 56 47.1	-0.7
WRAB	Tennant Creek	31.86	256	P	P	13 56 47.1	-1.1
WRAB				IAmb	IAmb	13 57 03.3	
	comp=Z,4.1nm,0.6s						
WRA	Warramunga Arr	31.87	256	P	P	13 56 47.4	-0.9
	comp=Z,0.4nm,0.8s,baz=83,slow=8.3,SNR=2.0						
	comp=Z,0.4nm,0.8s						
WRA	Warramunga Arr	31.87	256	P	P	13 56 47.1	-1.1
AS31	Alice Springs	32.69	249	P	P	13 56 54.3	-1.1
ASAR	Alice Springs	32.70	249	P	P	13 56 54.7	-0.8
	comp=Z,0.6nm,0.7s,baz=83,slow=8.6,SNR=17						
ASAR				ScP	ScP	14 03 12.5	+2.0
	comp=Z,0.3nm,0.9s,baz=99,slow=3.0,SNR=1.5						
	comp=Z,0.6nm,0.7s						
ASAR	Alice Springs	32.70	249	P	P	13 56 54.3	-1.2
FORT	Forrest	39.28	239	P	P	13 57 51.8	+0.4
FORT				IAmb	IAmb	13 58 15.6	
	comp=Z,12nm,1.4s						
SMRI	Semarang	56.30	271	P	P	14 00 02.3	-0.6
VNDA	Vanda	62.69	181	P	P	14 00 45.6	0.0
	comp=Z,0.6nm,0.6s,baz=11,slow=5.2,SNR=1.6						
	comp=Z,0.6nm,0.6s						
VNDA	Vanda	62.69	181	P	P	14 00 46.0	+0.3
VNDA				IAmb	IAmb	14 00 57.7	
	comp=Z,3.8nm,1.1s						
SBA	Scott Base	62.96	180	P	P	14 00 47.7	+0.3
QSPA	South Pole Qui	75.12	180	P	P	14 02 03.2	+0.4
	comp=Z,3.6nm,0.8s,baz=7.6,slow=15,SNR=23						
	comp=Z,3.6nm,0.8s						
QSPA	South Pole Qui	75.12	180	P	P	14 02 03.3	+0.4
QSPA				IAmb	IAmb	14 02 05.7	
	comp=Z,3.6nm,0.8s						
SONM	Songino Array	82.69	324	P	P	14 02 44.4	0.0
	comp=Z,0.2nm,0.4s,baz=134,slow=4.2,SNR=1.6						
	comp=Z,0.2nm,0.4s						
BELA	Belgrano 2	86.54	175	P	P	14 03 03.1	-0.1
BELA				IAmb	IAmb	14 03 12.4	
	comp=Z,5.0nm,1.3s						
ILAR	Eielson Array	86.67	18	P	P	14 03 03.8	0.0
	comp=Z,0.3nm,0.7s,baz=237,slow=5.0,SNR=1.7						
	comp=Z,0.3nm,0.7s						
U15A	North Rim	91.17	53	P	P	14 03 25.2	-0.9
U15A				IAmb	IAmb	14 03 34.8	
	comp=Z,0.8nm,0.8s						
MKAR	Makanchi Array	97.40	316	P	P	14 03 54.2	+0.2
	comp=Z,0.4nm,0.8s,baz=84,slow=6.5,SNR=2.8						
	comp=Z,0.4nm,0.8s						
ZALV	Zalesovo Beam	97.59	324	P	P	14 03 54.6	0.0
	comp=Z,0.2nm,0.3s,baz=90,slow=7.2,SNR=1.9						
	comp=Z,0.2nm,0.3s						

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*IDC **31** 14:10:53.4±9.3, 36°.61N×70°.77E, h204^{km}±60^{km}, mb3.8/1, mbtmp3.5/6, Error ellipse: s-maj=86.1km s-min=59.8km az=170.0*
*NNC **31** 14:10:58.5±3.8, 36°.94N×70°.54E, h180^{km}±53^{km}, mb2.4, mpv3.0, Error ellipse: s-maj=36.3km s-min=19.5km az=5.0*
ISC 31 14:10:52.9±1.2**, 36°.54N**±0°.08×**70°.9E**±0°.1**, h200**^{km}**, n14, σ2^{s}.45**/21**, 1C, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSSA	Tissa	5.69	129	*e*P	Pn	14 12 18.8	+2.4
TSSA				*e*S	Sn	14 13 19.4	-2.8
TSSA				IAML		14 13 25.2	
	comp=N,178nm,0.2s						
TSSA				IAML		14 13 26.1	
	comp=E,197nm,0.4s						
DHRM	DHARAMSHALA	6.18	132	*e*P	Pn	14 12 25.3	+2.5
DHRM				*e*S	Sn	14 13 31.1	-2.7
DHRM				IAML		14 13 36.4	
	comp=E,112nm,0.3s						
DHRM				IAML		14 13 37.1	
	comp=N,110nm,0.3s						
KK31	Karatay Array	6.56	358	P	Pn	14 12 27.8	+0.5
	comp=N,0.5nm,0.3s,baz=174,slow=12,SNR=19						
KK31				S	Sn	14 13 38.0	-4.4
	comp=N,1.6nm,0.3s,baz=178,slow=14,SNR=8.7						
AAK	Ala-Archa	6.70	23	P	Pn	14 12 29.5	+0.3
	comp=N,1.1nm,0.3s,baz=197,slow=14,SNR=7.6						
AAK				S	Sn	14 13 46.1	+0.5
	comp=N,2.2nm,0.5s,baz=127,slow=20,SNR=12						
AAK	Ala-Archa	6.70	23	⇑P	Pn	14 12 30.5	+1.3
AAK				S	Sn	14 13 45.3	-0.4
SMLA	Simla	7.50	134	*e*P	Pn	14 12 43.2	+3.5
SMLA				*e*S	Sn	14 14 01.7	-2.9
SMLA				IAML		14 14 06.0	
	comp=N,45nm,0.3s						
SMLA				IAML		14 14 06.6	
	comp=E,37nm,0.4s						
KLP	Kalpa	7.88	127	*e*P	Pn	14 12 47.0	+2.0
KLP				*e*S	Sn	14 14 08.8	-5.3
KLP				IAML		14 14 14.7	
	comp=E,34nm,0.3s						
KLP				IAML		14 14 16.4	
	comp=N,23nm,0.5s						
MK31	Makanchi Array	13.31	36	P	P	14 13 59.0	+2.1
	comp=N,0.5nm,0.7s,baz=204,slow=10,SNR=5.1						
MKAR	Makanchi Array	13.31	36	P	Pn	14 13 54.7	+0.6
	comp=N,0.3nm,0.7s,baz=219,slow=16,SNR=5.7						
AB31	Akbulak array	15.01	331	P	Pn	14 14 14.8	-0.2
	comp=N,0.6nm,0.6s,baz=138,slow=11,SNR=20						
KURBB	Kurchatov Arra	15.12	19	P	Pn	14 14 15.8	-0.5
	comp=N,0.2nm,0.5s,baz=206,slow=12,SNR=2.7						
BVAR	Borovoye Array	16.49	359	P	P	14 14 31.8	-0.2
	comp=N,0.6nm,0.5s,baz=165,slow=12,SNR=4.6						
ZALV	Zalesovo Beam	19.92	25	P	P	14 15 09.2	+0.1
	comp=N,0.9nm,0.4s,baz=217,slow=9.7,SNR=7.3						
ARCES	ARCESS Array B	41.08	338	P	P	14 18 15.6	-1.0
	comp=N,5.1nm,0.9s,baz=118,slow=7.7,SNR=3.8						
	comp=N,5.1nm,0.9s						

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*NEIC **31** 14:35:55.8±1.0, 25°.7S±0°.1×177°.3W±0°.1, h89^{km}±7^{km}, mb4.5/18, Error ellipse: s-maj=19.2km s-min=13.7km az=149.0*
*IDC **31** 14:36:08.0±11.0, 26°.02S×177°.47W, h208^{km}±109^{km}, mb3.3/6, mbtmp3.9/7, Error ellipse: s-maj=83.9km s-min=26.7km az=173.0*

ISC 31 14:36:02.2±0.6,25°.97S±0°.09×177°.3W±0°.1,h161^{km},n33, σ0^s.96/34,mb4.0/12,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.31	189	Pn	Pn	14 36 47.4	-6.5
NIUE	Niue	9.67	46	Pn	Pn	14 38 16.0	-1.7
AFI	Afiamalu	13.07	24	Pn	Pn	14 38 54.0	-8.1
AFI				Sn	Sn	14 41 03.6	-23
URZ	Urewera	13.13	200	P	P	14 39 05.3	-1.5
	5.7nm,0.8s,baz=272,slow=20,SNR=2.3						
URZ				S	Sn	14 41 28.0	-0.1
	3.5nm,0.3s,baz=256,slow=21,SNR=11						
BFZ	Birch Farm	15.62	199	Pn	P	14 39 34.1	-0.3
BFZ				IAmb	IAmb	14 40 18.2	
	comp=Z,52nm,1.4s						
MRNZ	Matariki Terra	17.45	206	P	P	14 39 54.5	-0.1
SANVU	Saraoutou	17.87	303	P	P	14 39 56.4	-2.9
SANVU				IAmb	IAmb	14 40 20.2	
	comp=Z,32nm,0.9s						
LTZ	Lake Taylor	18.82	204	P	Pn	14 40 11.1	-0.8
LTZ				IAmb	IAmb	14 40 24.9	
	comp=Z,16nm,1.3s						
LHI	Lord Howe Isla	21.43	250	P	P	14 40 37.6	-0.1
LHI				IAmb	IAmb	14 40 56.3	
	comp=Z,64nm,1.1s						
CTAO	Charters Tower	33.98	272	P	P	14 42 31.5	+0.9
CTAO				IAmb	IAmb	14 43 00.8	
	comp=Z,6.1nm,1.4s						
STKA	Stephens Creek	36.30	251	P	P	14 42 51.1	+0.7
	comp=Z,1.0nm,0.6s,baz=101,slow=16,SNR=1.7						
	comp=Z,1.0nm,0.6s						
STKA	Stephens Creek	36.30	251	P	P	14 42 51.1	+0.7
STKA				IAmb	IAmb	14 43 22.5	
	comp=Z,30nm,1.2s						
BBOO	Buckleboo	40.95	249	P	P	14 43 31.1	+2.0
BBOO				IAmb	IAmb	14 43 35.4	
	comp=Z,19nm,1.2s						
AS31	Alice Springs	44.15	262	P	P	14 43 55.0	-0.1
ASAR	Alice Springs	44.15	262	P	P	14 43 55.0	0.0
	comp=Z,0.9nm,0.5s,baz=91,slow=7.1,SNR=38						
	comp=Z,0.9nm,0.5s						
ASAR	Alice Springs	44.15	262	P	P	14 43 54.9	-0.2
WR8	Warramunga Arr	44.59	267	P	P	14 43 59.0	+0.4
WR8				IAmb	IAmb	14 43 59.8	
	comp=Z,5.7nm,1.4s						
WRAB	Tennant Creek	44.73	267	P	P	14 43 59.9	+0.2
WRAB				IAmb	IAmb	14 44 33.0	
	comp=Z,4.9nm,1.2s						
WRA	Warramunga Arr	44.74	267	P	P	14 43 59.1	-0.7
	comp=Z,0.7nm,0.5s,baz=103,slow=8.4,SNR=5.4						
	comp=Z,0.7nm,0.5s						
WRA	Warramunga Arr	44.74	267	P	P	14 43 59.6	-0.2
WB0	Warramunga Arr	44.74	268	P	P	14 43 59.3	-0.5
FORT	Forrest	47.93	251	P	P	14 44 25.1	+0.6
FORT				IAmb	IAmb	14 44 45.1	
	comp=Z,8.0nm,1.2s						
KNRA	Kununurra	51.14	270	P	P	14 44 48.9	-0.1
FITZ	Fitzroy Crossi	53.13	266	P	P	14 45 03.8	+0.2
KSRS	Korea Array	81.41	319	P	P	14 48 00.8	-0.3
	comp=Z,1.5nm,0.8s,baz=116,slow=5.5,SNR=3.7						
	comp=Z,1.5nm,0.8s						
S12K	Black Hills	82.38	9	P	P	14 48 06.8	+1.1
SII	Sitkinak Islan	84.51	13	P	P	14 48 17.4	+0.9
NVAR	Mina Array Bea	84.57	43	P	P	14 48 18.6	+1.0
	comp=Z,0.3nm,0.5s,baz=230,slow=8.6,SNR=3.6						
	comp=Z,0.3nm,0.5s						
TXAR	Lajitas Array	89.47	57	P	P	14 48 42.0	+0.7
	comp=Z,0.2nm,0.7s,baz=284,slow=5.0,SNR=2.1						
	comp=Z,0.2nm,0.7s						
HFS	Hagfors	145.02	350	PKPbc	PKPbc	14 55 18.7	-0.7
	comp=Z,1.8nm,0.4s,baz=42,slow=3.2,SNR=20						
AKASG	Malin Array Be	148.03	328	PKPbc	PKPbc	14 55 28.3	0.0
	comp=Z,0.9nm,0.6s,baz=49,slow=4.1,SNR=2.0						
EKA	Eskdalemuir Ar	150.36	7	PKPbc	PKPbc	14 55 33.7	-0.3
	comp=Z,1.5nm,1.0s,baz=343,slow=3.6,SNR=2.0						
EKA				PKPab	PKPab	14 55 42.5	+1.6
	comp=Z,0.6nm,0.5s,baz=359,slow=3.5,SNR=4.0						
BRTR	Keskin Array B	150.78	306	PKPbc	PKPbc	14 55 35.8	0.0
	comp=Z,0.4nm,0.3s,baz=148,slow=4.1,SNR=1.7						
BRTR				PKPab	PKPab	14 55 43.5	+0.1
	comp=Z,0.9nm,0.8s,baz=106,slow=4.1,SNR=4.6						

TEH 31 14:49:12.6,34°.76N×45°.55E,h10^{km}±158^{km}
ISN 31 14:49:13.3±1.1,34°.76N×45°.59E,h19^{km}±53^{km},ML2.8
ISC 31 14:49:12.8±1.4,34°.76N±0°.05×45°.57E±0°.04,h12^{km}±12^{km}, n9,σ0^s.61/14,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDHR	Dehrash	0.68	94	Pg	Pg	14 49 26.3	+0.3
IDHR				Sg	Sb	14 49 36.9	+0.8
GLG1	Gilan-e-Gharb	0.70	156	Pg	Pg	14 49 26.0	-0.4
IGHG	Ghaleghazi	0.93	117	Pg	Pb	14 49 30.4	-0.5
IGHG				Sg	Sn	14 49 45.0	-0.3
IKRK	Kirkuk	1.19	303	ePg	Pg	14 49 36.0	+0.2
IKRK				eSg	Sn	14 49 51.0	-0.4
IKRK				AML	AML	14 50 04.3	
	comp=E,184nm,0.5s						
IKRK				AML	AML	14 50 12.9	
	comp=N,240nm,0.6s						
ILBA	Ilam Banvizeh	1.25	155	Pg	Pg	14 49 37.4	+0.6
KCHF	Cheshme Sefid,	1.31	111	Pg	Pg	14 49 38.6	+0.6
IBDR	Badra	1.67	169	ePn	Pb	14 49 43.0	-0.4
IBDR				eSn	Sg	14 50 06.0	-0.4
IBDR				AML	AML	14 50 17.3	
	comp=E,148nm,0.6s						
IBDR				AML	AML	14 50 17.5	
	comp=N,162nm,0.4s						
SNQR	Sonqor, Kerman	1.70	86	Pg	Pg	14 49 45.3	-0.1
BHD	Baghdad	1.78	214	ePn	Pb	14 49 45.0	-0.3
BHD				eSn	Sb	14 50 08.5	+1.0

BGSI 31 14:49:38.3±3.4,28°.77S×28°.98E,h0^{km}±790^{km}
IDC 31 14:50:09.7±1.4,26°.37S×27°.58E,h0^{km},mb3.5/4, mbtmp3.7/8,ML3.7/4,Error ellipse: s-maj=23.9km s-min=14.4km az=66.0
PRE 31 14:50:09.5±4.8,26°.43S×27°.61E,h2^{km}±20^{km},ML2.8
ISC 31 14:50:10.0±1.5,26°.42S±0°.04×27°.61E±0°.05,h7^{km}±10^{km}, n24,σ1^s.51/34,mb3.8/3,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HRAO	HartRAO	0.53	7	eP	Pg	14 50 19.9	-0.4
HRAO				eS	Sg	14 50 26.5	-0.8
HRAO				IAML		14 50 34.1	
	comp=Z,150nm,0.3s						
SNKL	Senekal, Frees	1.85	176	eP	Pn	14 50 41.7	-0.6
SNKL				eS	Sn	14 51 05.8	-0.3
SNKL				IAML		14 51 09.9	
	comp=Z,363nm,0.6s						
CRLN	Carolina, Mapu	2.21	79	eP	Pn	14 50 47.8	+0.6
CRLN				eS	Sn	14 51 14.9	0.0
CRLN				IAML		14 51 21.1	
	comp=Z,44nm,0.6s						
LBTB	Lobatse	2.29	307	Pn	Pn	14 50 49.4	+1.1
	comp=Z,33nm,0.3s,baz=130,slow=17,SNR=437						
LBTB				Pg	Pb	14 50 51.0	-0.7
	comp=Z,33nm,0.3s,baz=128,slow=17,SNR=131						
LBTB				Lg	Lg	14 51 20.6	
	comp=Z,81nm,0.3s,baz=218,slow=20,SNR=49						
	comp=Z,90nm,0.3s						
LBTB	Lobatse	2.29	307	eP	Pn	14 50 49.0	+0.6
LBTB				eS	Sn	14 51 17.3	+0.4
LBTB				IAML		14 51 21.6	
	comp=Z,253nm,0.3s						
NWCL	Newcastle	2.42	123	eP	Pn	14 50 49.9	-0.2
NWCL				eS	Sn	14 51 20.0	0.0
NWCL				IAML		14 51 32.4	
	comp=Z,104nm,0.3s						
LEPH	Lephalale, Lim	2.56	4	eP	Pn	14 50 52.3	+0.3
LEPH				eS	Sn	14 51 23.9	+0.5
LEPH				IAML		14 51 30.4	
	comp=Z,57nm,0.3s						
BOSA	Boshof	3.02	223	Pn	Pn	14 50 58.5	+0.1
	comp=Z,3.2nm,0.3s,baz=43,slow=15,SNR=108						
BOSA				Pg	Pb	14 51 05.9	+1.7
	comp=Z,2.0nm,0.3s,baz=39,slow=20,SNR=29						
BOSA				Lg	Lg	14 51 42.0	
	comp=Z,16nm,0.3s,baz=320,slow=18,SNR=15						
	comp=Z,8.4nm,0.3s						
BOSA	Boshof	3.02	223	eP	Pn	14 50 58.1	-0.3
BOSA				eS	Sn	14 51 34.5	-0.5
BOSA				IAML		14 51 46.0	
	comp=Z,40nm,0.3s						
PILG	Pilgrimsrest,	3.16	63	eP	Pn	14 51 00.8	+0.3
PILG				eS	Sn	14 51 38.0	-0.6
PILG				IAML		14 51 55.5	
	comp=Z,66nm,0.6s						
LPHEP	Lephephe	3.44	332	i P	Pn	14 51 04.8	+0.8
SKOMA	Sekoma	3.83	299	i P	Pn	14 51 09.5	0.0
MREMI	Moremi	3.84	358	i P	Pn	14 51 10.5	+0.9
KHWEE	KHWEE	4.88	336	i P	Pn	14 51 26.3	+2.5
BROLN	Tlhalogang	5.30	357	i P	Pn	14 51 30.0	+0.2
KGCAE	Kacgae	6.07	305	i P	Pn	14 51 40.8	+0.5
LKGWB	Lokgwabe	6.23	290	i P	Pn	14 51 35.2	-7.2
GRTLG	Ghanzi	7.72	309	i P	Pn	14 52 01.5	-1.5
SUR	Sutherland	8.39	223	Pn	Pn	14 52 12.8	+0.6
	comp=Z,0.8nm,0.3s,baz=51,slow=15,SNR=27						
SUR				Sn	Sn	14 53 40.6	-6.7
	comp=Z,1.9nm,0.3s,baz=41,slow=3.3,SNR=3.5						
SUR				Lg	Lg	14 54 33.2	
	comp=Z,1.7nm,0.3s,baz=129,slow=22,SNR=4.6						
	comp=Z,9.0nm,0.6s						
LSZ	Lusaka	11.10	3	Pn	Pn	14 52 48.8	-0.6
	comp=Z,0.4nm,0.3s,baz=181,slow=15,SNR=4.6						
	comp=Z,1.7nm,0.4s						
TORD	Torodi Ar. Bea	46.71	324	P	P	14 58 39.4	-0.4
	comp=Z,0.5nm,0.7s,baz=143,slow=5.2,SNR=2.9						
	comp=Z,0.5nm,0.7s						
SNAA	Sanae	48.36	192	P	P	14 58 53.0	+0.9
	comp=Z,0.9nm,1.0s,baz=17,slow=14,SNR=1.6						
	comp=Z,0.9nm,1.0s						
QSPA	South Pole Qui	63.76	180	P	P	15 00 44.1	+1.7
	comp=Z,0.7nm,1.1s,baz=252,slow=3.2,SNR=1.4						
	comp=Z,0.7nm,1.1s						
ESDC	Sonseca Array	72.05	335	P	P	15 01 35.3	+0.6
	comp=Z,0.1nm,0.4s,baz=157,slow=6.1,SNR=1.8						
	comp=Z,0.1nm,0.4s						

IDC 31 14:50:45.2±1.1,26°.43S×27°.50E,h0^{km},mb3.7/5, mbtmp3.9/8,ML4.0/3,Error ellipse: s-maj=19.3km s-min=14.1km az=81.0
ISC 31 14:50:45.6±0.9,26°.37S±0°.07×27°.4E±0°.1,h5^{km},n9, σ1^s.95/11,mb3.9/4,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	Lobatse	2.14	309	Pg	Pb	14 51 26.1	+1.1
	40nm,0.3s,baz=130,slow=16,SNR=11						
LBTB				Lg	Lg	14 51 55.8	
	73nm,0.3s,baz=30,slow=23,SNR=17						
LBTB				Rg	Rg	14 52 06.1	
	67nm,0.3s,baz=188,slow=3.1,SNR=7.3						
BOSA	Boshof	2.96	221	Pn	Pn	14 51 33.8	+0.4
	7.3nm,0.3s,baz=38,slow=16,SNR=11						
BOSA				Lg	Lg	14 52 17.8	
	19nm,0.3s,baz=320,slow=14,SNR=7.6						
BOSA				Rg	Rg	14 52 34.1	
	20nm,0.3s,baz=154,slow=18,SNR=1.3						
	21nm,0.3s						
SUR	Sutherland	8.33	222	Pn	Pn	14 52 48.5	+1.3
	1.6nm,0.3s,baz=47,slow=14,SNR=13						
SUR				Sn	Sn	14 54 18.2	-3.6
	3.1nm,0.3s,baz=9.9,slow=13,SNR=3.8						
SUR				Lg	Lg	14 55 06.0	
	2.5nm,0.3s,baz=144,slow=23,SNR=2.3						
	16nm,0.6s						
LSZ	Lusaka	11.06	4	Pn	Pn	14 53 24.4	-0.2
	1.0nm,0.3s,baz=184,slow=14,SNR=5.4						
LSZ				Sn	Sn	14 55 25.5	-3.4
	0.5nm,0.3s,baz=253,slow=14,SNR=2.1						
LSZ				Lg	Lg	14 56 35.4	
	0.6nm,0.3s,baz=254,slow=22,SNR=3.4						
	2.9nm,0.4s						
TORD	Torodi Ar. Bea	46.58	324	P	P	14 59 15.1	+0.3
	0.6nm,0.5s,baz=137,slow=6.5,SNR=8.9						
	0.6nm,0.5s						
SNAA	Sanae	48.38	192	P	P	14 59 27.6	-0.6
	1.4nm,0.8s,baz=43,slow=7.2,SNR=3.5						
	1.4nm,0.8s						
QSPA	South Pole Qui	63.82	180	P	P	15 01 19.1	+0.3
	0.8nm,0.9s,baz=275,slow=4.0,SNR=2.5						
	0.8nm,0.9s						
ESDC	Sonseca Array	71.94	335	P	P	15 02 11.6	+1.6
	0.4nm,0.5s,baz=154,slow=5.8,SNR=6.9						
	0.4nm,0.5s						
MKAR	Makanchi Array	88.06	34	P	P	15 03 37.1	+0.2
	0.2nm,0.6s,baz=236,slow=6.5,SNR=2.2						
	0.2nm,0.6s						

IDC 31 14:57:21.7±0.8,14°.93S×167°.99E,h0^{km},mb4.2/15, mbtmp4.1/16,ML3.8/1,MS3.4/4,Error ellipse: s-maj=26.1km s-min=14.2km az=145.0
NEIC 31 14:57:23.8±1.5,15°.00S±0°.08×167°.85E±0°.07,h4^{km}±4^{km}, mb4.6/37,Error ellipse: s-maj=14.5km s-min=5.6km az=141.0
NOU 31 14:57:25.7,15°.11S×167°.82E,h9^{km},MLv4.9/15,Vanuatu Islands
ISC 31 14:57:24.0±0.5,15°.04S±0°.06×167°.90E±0°.07,h10^{km},n74, σ1^s.08/75,mb4.5/35,MS3.2/4,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.78	239		Pg	14 57 38.6	-0.5
SANVU				Sg	Sg	14 57 48.1	-1.2
SANVU	Saraoutou	0.78	239	P	Pg	14 57 38.9	-0.2
DVP	Devils Point	2.68	174	P	Pn	14 58 07.8	+0.5
MARNC	Mare, Loyalty	6.40	179	Pn	Pn	14 58 59.4	+1.0
KOUNC	Koumac, New Ca	6.47	212	P	Pn	14 59 00.5	+1.2
YATNC	Mamie plateau,	7.04	188	P	Pn	14 59 09.0	+1.7
DZM	Mont Dzumac	7.12	191	Pn	Pn	14 59 08.2	-0.3
	1.7nm,0.3s,baz=55,slow=10.0,SNR=34						
DZM				Sn	Sn	15 00 29.3	-0.3
	1.2nm,0.3s,baz=323,slow=23,SNR=2.1						
	4.9nm,0.3s						
DZM	Mont Dzumac	7.12	191		Pn	14 59 08.7	+0.2
DZM	Mont Dzumac	7.12	191	P	Pn	14 59 09.1	+0.6
OUENC	Ouen Island, N	7.40	188	P	Pn	14 59 13.2	+1.0
PINNC	Pines Island,	7.54	183	Pn	Pn	14 59 15.3	+1.2
NGOA	Tingoa Renbel	8.38	294	P	Pn	14 59 26.2	+0.6
SAVO	Savo Central	9.84	306	P	Pn	14 59 47.9	+2.2
TATA	Tatamba Isabel	10.32	309	P	Pn	14 59 53.5	+1.2
EIDS	Eidsvold	18.81	234	P	Pn	15 01 44.3	-0.1
PMG	Port Moresby	21.02	283	LR	LR	15 09 13.0	
	comp=Z,158nm,18.3s,baz=350,slow=34						
CTA	Charters Tower	21.23	253	P	P	15 02 12.1	+1.7
	1.7nm,0.6s,baz=82,slow=10,SNR=5.2						
CTA				S	Sn	15 06 10.3	-3.1
	1.6nm,0.9s,baz=356,slow=19,SNR=3.0						
CTA				LR	LR	15 09 25.3	
	comp=Z,91nm,19.3s,baz=53,slow=34						
	1.7nm,0.6s						
CTAO	Charters Tower	21.23	253	P	P	15 02 10.5	+0.2
COEN	Coen	23.96	269	P	P	15 02 37.8	-1.0
BKZ	Black Stump Fm	25.19	164	P	P	15 02 50.8	+1.0
INKA	Innaminka	28.19	239		P	15 03 17.4	+0.5
STKA	Stephens Creek	29.26	230	P	P	15 03 27.1	+0.7
	1.0nm,0.5s,baz=42,slow=8.4,SNR=6.3						
STKA				LR	LR	15 12 57.3	
	comp=Z,70nm,21.0s,baz=25,slow=32						
	1.0nm,0.5s						
WR8	Warramunga Arr	32.19	256	P	P	15 03 51.4	-1.1
WR8				IAmb	IAmb	15 04 25.9	
	comp=Z,6.4nm,1.3s						
WB0	Warramunga Arr	32.28	257		P	15 03 52.1	-1.2
WB0				IAmb	IAmb	15 03 55.9	
	comp=Z,10.0nm,1.4s						
WRA	Warramunga Arr	32.34	256	P	P	15 03 53.3	-0.5
	comp=Z,0.8nm,0.5s,baz=82,slow=7.2,SNR=9.9						
WRA				PcP	PcP	15 06 41.0	-0.7
	comp=Z,0.9nm,0.9s,baz=86,slow=2.6,SNR=3.4						
	comp=Z,0.8nm,0.5s						
WRA	Warramunga Arr	32.34	256	P	P	15 03 53.2	-0.6
MGBR	Mount Gambier	33.09	222	P	P	15 04 01.2	+1.0
AS31	Alice Springs	33.13	250		P	15 04 00.4	-0.3
ASAR	Alice Springs	33.13	250	P	P	15 04 00.3	-0.4
	comp=Z,3.0nm,0.6s,baz=78,slow=8.8,SNR=90						
ASAR				PcP	PcP	15 06 43.1	-0.8
	comp=Z,0.8nm,0.8s,baz=71,slow=2.5,SNR=5.9						
ASAR				LR	LR	15 16 31.1	
	comp=Z,39nm,18.5s,baz=54,slow=35						
	comp=Z,3.0nm,0.6s						
BBOO	Buckleboo	33.87	233	P	P	15 04 07.9	+0.9
BBOO				IAmb	IAmb	15 04 27.0	
	comp=Z,33nm,1.5s						
KNRA	Kununurra	37.71	264	P	P	15 04 39.7	-0.4
KNRA				IAmb	IAmb	15 05 04.4	
	comp=Z,25nm,1.2s						
FORT	Forrest	39.66	240		P	15 04 56.7	+0.3
FORT				IAmb	IAmb	15 05 02.1	
	comp=Z,11nm,0.7s						
FITZ	Fitzroy Crossi	40.55	260	P	P	15 05 03.1	-0.8
MBWA	Marble Bar	46.05	255	P	P	15 05 46.6	-1.7
MBWA				IAmb	IAmb	15 05 57.6	
	comp=Z,15nm,0.9s						
JGF	Kuroka	58.09	331	P	P	15 07 16.9	-0.8
JMN	Monobe	58.34	327	P	P	15 07 18.1	-1.4
MJAR	Matsushiro Arr	58.46	332	P	P	15 07 18.9	-1.4
	comp=Z,3.2nm,1.0s,baz=176,slow=8.7,SNR=6.9						
	comp=Z,3.2nm,1.0s						
MJAR	Matsushiro Arr	58.46	332	P	P	15 07 18.3	-2.0
MJAR				IAmb	IAmb	15 07 20.7	
	comp=Z,3.5nm,1.1s						
JNU	Nakatsue	59.53	324	P	P	15 07 27.3	-0.5
MNAI	Manna	64.69	272	P	P	15 08 02.7	-0.1
NJ2	Nanjing	66.32	316	eP	P	15 08 15.0	+2.0
NJ2				pmax	pmax		
	comp=Z,12nm,0.9s						
ATKA	Atka Island	68.75	12	P	P	15 08 29.4	+1.6
QSPA	South Pole Qui	74.99	180	P	P	15 09 05.5	+0.1
	comp=Z,1.5nm,1.0s,baz=352,slow=2.6,SNR=3.5						
	comp=Z,1.5nm,1.0s						
QSPA	South Pole Qui	74.99	180	IAmb	IAmb	15 09 48.4	
	comp=Z,3.6nm,1.2s						
CMAR	Chiang Mai Arr	75.63	294	P	P	15 09 09.7	-0.2
	comp=Z,0.7nm,0.8s,baz=120,slow=4.7,SNR=7.0						
	comp=Z,0.7nm,0.8s						
HHC	Hu-ho-hao-te	76.22	319	eP	P	15 09 12.5	-0.4
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,5.3s						
PZH	PanZhiHua	76.38	303	P	P	15 09 15.8	+1.7
SII	Sitkinak Islan	78.04	20	P	P	15 09 23.1	+0.4
LZH	Lanzhou	78.98	312	eP	P	15 09 33.5	+5.0
LZH				pP	PcP	15 09 41.8	+4.7
LZH				pmax	pmax		
	comp=Z,19nm,1.5s						
M16K	Timber Creek	80.29	16	P	P	15 09 34.9	0.0
M16K				IAmb	IAmb	15 09 50.2	
	comp=Z,26nm,1.4s						
ULN	Ulaanbaatar	82.75	324		P	15 09 48.0	-0.3
ULN				IAmb	IAmb	15 09 49.2	
	comp=Z,5.8nm,1.0s						
SONM	Songino Array	83.11	323	P	P	15 09 49.3	-0.9
	comp=Z,1.6nm,0.7s,baz=141,slow=5.9,SNR=13						
	comp=Z,1.6nm,0.7s						
SONM	Songino Array	83.11	323	P	P	15 09 50.7	+0.5
SONM				IAmb	IAmb	15 09 50.9	
	comp=Z,6.2nm,1.2s						
GTA	Gaotai	83.32	314	eP	P	15 09 52.5	+1.0
GTA				sP	pwP	15 10 00.5	+2.7
GTA				pmax	pmax		
	comp=Z,5.0nm,1.6s						
J20K	Nowinta River	84.16	16	P	P	15 09 55.0	0.0
J20K				IAmb	IAmb	15 09 58.4	
	comp=Z,6.6nm,1.5s						
RAGM	Ragged Mountai	84.22	22	P	P	15 09 56.7	+1.3
I21K	Tanana	85.53	16	P	P	15 10 01.7	-0.2
I21K				IAmb	IAmb	15 10 02.7	
	comp=Z,10nm,1.1s						
H21K	Melozitna Rive	85.69	15	P	P	15 10 03.1	+0.4
H21K				IAmb	IAmb	15 10 03.9	
	comp=Z,2.9nm,0.9s						
E19K	Redstone River	86.12	13	P	P	15 10 04.9	+0.1
E19K				IAmb	IAmb	15 10 06.3	
	comp=Z,4.5nm,0.8s						
IL31		86.64	18	P	P	15 10 05.2	-2.1
IL31				IAmb	IAmb	15 10 06.4	
	comp=Z,2.6nm,0.8s						
ILAR	Eielson Array	86.64	18	P	P	15 10 05.3	-2.1
	comp=Z,2.7nm,0.8s,baz=239,slow=5.2,SNR=29						
	comp=Z,2.7nm,0.8s						
ILAR	Eielson Array	86.64	18	P	P	15 10 05.2	-2.2
NVAR	Mina Array Bea	87.02	49	P	P	15 10 09.8	-0.3
	comp=Z,0.5nm,0.6s,baz=235,slow=8.1,SNR=4.1						
	comp=Z,0.5nm,0.6s						
E22K	Anaktuvuk Pass	87.88	14	P	P	15 10 13.7	+0.2
E22K				IAmb	IAmb	15 10 14.0	
	comp=Z,1.4nm,0.8s						
TOLK	Toolik Lake Re	88.81	14	P	P	15 10 18.4	+0.6
ELK	Elko	90.05	48	P	P	15 10 23.9	-0.7
	comp=Z,0.6nm,0.6s,baz=276,slow=10,SNR=3.4						
	comp=Z,0.6nm,0.6s						
ELK	Elko	90.05	48	P	P	15 10 25.1	+0.6
SPR3	Spring Creek 3	90.12	50	P	P	15 10 25.6	+0.6
SPR3				IAmb	IAmb	15 10 26.6	
	comp=Z,1.9nm,0.9s						
PV10	Paradox Valley	93.89	51	P	P	15 10 41.9	-0.5
PV10				IAmb	IAmb	15 10 44.0	
	comp=Z,7.5nm,1.3s						
TXAR	Lajitas Array	95.89	61	P	P	15 10 50.7	-0.9
	comp=Z,0.2nm,0.6s,baz=300,slow=3.9,SNR=2.1						
	comp=Z,0.2nm,0.6s						
YKA	Yellowknife Ar	97.55	27	P	P	15 10 56.4	-1.7
	comp=Z,0.7nm,0.8s,baz=260,slow=5.2,SNR=13						
	comp=Z,0.7nm,0.8s						
MKAR	Makanchi Array	97.85	316	P	P	15 10 59.3	-0.6
	comp=Z,1.3nm,0.7s,baz=91,slow=5.7,SNR=14						
	comp=Z,1.3nm,0.7s						
ZALV	Zalesovo Beam	98.00	324	P	P	15 10 58.8	-1.6
	comp=Z,1.2nm,0.7s,baz=121,slow=5.7,SNR=7.6						
	comp=Z,1.2nm,0.7s						
BORK	Borovoye	106.41	321		Pdif	15 11 35.8	-2.0

IDC 31 15:17:36.7±2.2,33°.43S×178°.56W,h0^{km},mb3.8/2, mbtmp3.9/3,ML3.9/1,Error ellipse: s-maj=64.3km s-min=42.4km az=135.0
WEL 31 15:17:39.7±0.5,33°S±11°×18°0W±2°5,h12^{km},M4.0/12, mB4.5/6,ML4.2/17,MLv4.2/12,Mw(mB)3.7/6,Error ellipse: s-maj=34.9km s-min=3.7km az=112.5,confirmed
NEIC 31 15:17:39.5±0.8,33°.8S±0°.1×178°.6W±0°.2,h10^{km}±1^{km}, mb4.4/7,Error ellipse: s-maj=32.0km s-min=11.3km az=117.0
ISC 31 15:17:42.0±1.0,33°.59S±0°.07×178°.5W±0°.1,h41^{km},n41, σ1^s.65/64,mb3.9/6,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.35	7	P	Pn	15 18 43.8	-1.7
GLKZ				S	Sn	15 19 29.3	-5.6
RAO	Raoul Island	4.36	7	Pn	Pn	15 18 47.9	+2.1
MXZ	Matakaoa Point	4.74	212	Pn	Pn	15 18 47.7	-3.2
MXZ	Matakaoa Point	4.74	212	P	Pn	15 18 51.1	+0.2
MXZ				S	Sn	15 19 44.4	-0.1
WMGZ	Waiomatatini S	4.90	210	P	Pn	15 18 52.5	-0.7
WMGZ				S	Sn	15 19 50.3	+1.7
HAZ	Te Kaha	5.13	215	P	Pn	15 18 56.9	+0.6
HAZ				S	Sn	15 19 55.7	+1.4
PUZ	Puketiti	5.18	210	P	Pn	15 18 54.7	-2.4
PUZ				S	Sn	15 19 55.7	+0.1
RUGZ	Raukumara Rang	5.35	214	P	Pn	15 18 59.2	-0.3
RUGZ				S	Sn	15 19 59.9	+0.1
TWGZ	Tauwhareparae	5.39	211	P	Pn	15 19 00.7	+0.8
TWGZ				S	Sn	15 20 01.4	+0.7
CNGZ	Carnagh Statio	5.56	208	P	Pn	15 19 01.2	-0.9
CNGZ				S	Sn	15 20 08.2	+3.4
TKGZ	Te Karaka	5.67	210	P	Pn	15 19 04.4	+0.8
TKGZ				S	Sn	15 20 07.8	+0.3
MWZ	Matawai	5.72	213	P	Pn	15 19 01.2	-3.3
MWZ				S	Sn	15 20 08.7	-0.2
URZ	Urewera	5.86	216	Pn	Pn	15 19 06.0	-0.2
	3.1nm,0.3s,baz=262,slow=3.7,SNR=20						
URZ				Sn	Sn	15 20 10.2	-1.9
	3.0nm,0.3s,baz=173,slow=20,SNR=7.9						
	9.4nm,0.4s						
URZ	Urewera	5.86	216	P	Pn	15 19 06.3	+0.1
URZ				S	Sn	15 20 10.8	-1.4
RAGZ	Rawiri	5.90	213	P	Pn	15 19 05.2	-1.8
RAGZ				S	Sn	15 20 12.6	-0.8
RIGZ	Rimuhau	5.93	210	P	Pn	15 19 06.6	-0.7
RIGZ				S	Sn	15 20 14.1	+0.1
SNGZ	Shannon Statio	6.17	212	P	Pn	15 19 11.1	+0.5
SNGZ				S	Sn	15 20 19.5	-0.4
MUGZ	Murupara	6.20	217	P	Pn	15 19 11.1	+0.2
MUGZ				S	Sn	15 20 18.5	-2.0
RTZ	Ruatahuna	6.20	215	Pn	Pn	15 19 07.2	-3.9
RTZ	Ruatahuna	6.20	215	P	Pn	15 19 10.7	-0.4
RTZ				S	Sn	15 20 20.4	-0.4
RAHZ	Arahi	6.39	213	P	Pn	15 19 14.1	+0.4

RAHZ				S	Sn	15 20 23.9	-1.5
MTHZ	Maungataniwha	6.46	214	P	Pn	15 19 14.8	+0.2
MTHZ				S	Sn	15 20 24.9	-2.1
MRHZ	Matea Rd	6.65	217	P	Pn	15 19 16.8	-0.3
MRHZ				S	Sn	15 20 28.9	-2.7
NMHZ	Naumai	6.67	213	P	Pn	15 19 18.1	+0.6
NMHZ				S	Sn	15 20 32.1	-0.1
OUZ	Omahuta	6.72	254	P	Pn	15 19 20.0	+1.8
BKZ	Black Stump Fm	6.87	215	Pn	Pn	15 19 18.2	-2.0
BKZ	Black Stump Fm	6.87	215	P	Pn	15 19 19.3	-0.9
BKZ				S	Sn	15 20 33.6	-3.5
MRZ	Mangatainoka R	8.49	212	Pn	Pn	15 19 40.0	-2.3
LHI	Lord Howe Isla	19.02	270	P	Pn	15 22 01.0	-0.4
LHI				IAmb	IAmb	15 22 37.1	
	comp=Z,57nm,1.0s						
AS31	Alice Springs	42.61	271	P	P	15 25 34.6	+0.2
AS31				IAmb	IAmb	15 26 16.4	
	comp=Z,1.4nm,1.3s						
ASAR	Alice Springs	42.61	271	P	P	15 25 34.1	-0.3
	comp=Z,0.8nm,0.7s,baz=113,slow=7.3,SNR=15						
ASAR				PcP	PcP	15 27 25.9	-0.3
	comp=Z,0.2nm,0.8s,baz=104,slow=3.6,SNR=1.6						
	comp=Z,0.8nm,0.7s						
ASAR	Alice Springs	42.61	271	P	P	15 25 33.9	-0.5
WR8	Warramunga Arr	43.75	276	P	P	15 25 44.1	+0.4
WR8				IAmb	IAmb	15 26 20.7	
	comp=Z,4.5nm,1.4s						
WRA	Warramunga Arr	43.88	276	P	P	15 25 45.3	+0.6
	comp=Z,0.6nm,0.3s,baz=115,slow=8.5,SNR=11						
	comp=Z,0.6nm,0.3s						
WRA	Warramunga Arr	43.88	276	P	P	15 25 45.4	+0.6
WB0	Warramunga Arr	43.92	276	P	P	15 25 45.6	+0.5
WB0				IAmb	IAmb	15 25 56.2	
	comp=Z,7.1nm,1.4s						
KNRA	Kununurra	50.59	277	P	P	15 26 37.8	+0.8
KNRA				IAmb	IAmb	15 27 18.3	
	comp=Z,23nm,1.5s						
CASY	Casey	52.13	209	P	P	15 26 48.7	+0.8
DES	Desert	57.07	26	P	P	15 27 26.7	+2.5
FINES	FINESS Array B	147.96	338	PKPbc	PKPbc	15 37 22.9	+0.8
	comp=Z,2.4nm,0.9s,baz=55,slow=5.3,SNR=6.4						
BRTR	Keskin Array B	153.59	293	PKPbc	PKPbc	15 37 36.3	-0.1
	comp=Z,0.5nm,0.8s,baz=23,slow=4.8,SNR=2.5						

IDC ***31*** *15:55:27.9±0.7,52°.29S×13°.51E,h0^{km},mb4.2/12, mbtmp4.2/12,MS3.8/22,Error ellipse: s-maj=28.3km s-min=16.3km az=89.0*

NEIC ***31*** *15:55:30.1±1.3,52°.29S±0°.07×13°.8E±0°.2,h10^{km}±1^{km}, mb4.7/24,Error ellipse: s-maj=20.4km s-min=12.3km az=90.0*

ISC 31 15:55:29.6±0.5**,52°.26S**±0°.08×**13°.8E**±0°.1**,h10**^{km}**,n57, σ0^{s}.78**/40**,mb4.6**/17**,MS3.8**/22**,3C-1D,Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	Sutherland	20.52	17	P	Pn	16 00 09.7	-0.5
	7.6nm,1.1s,baz=173,slow=7.8,SNR=11						
SUR				S	S	16 03 47.2	-10
	5.3nm,0.8s,baz=176,slow=8.9,SNR=1.8						
SUR				LR	LR	16 06 09.7	
	comp=Z,241nm,21.0s,baz=182,slow=31						
	7.6nm,1.1s						
SUR	Sutherland	20.52	17	P	P	16 00 09.2	+1.1
SNAA	Sanae	20.83	195	⇑P	P	16 00 11.2	+0.1
	comp=Z,908nm,0.8s						
SNAA	Sanae	20.83	195	P	P	16 00 11.3	+0.2
	comp=Z,40nm,0.8s,baz=26,slow=11,SNR=96						
SNAA				LR	LR	16 06 19.3	
	comp=Z,191nm,20.5s,baz=320,slow=31						
	comp=Z,40nm,0.8s						
SNAA	Sanae	20.83	195	P	P	16 00 11.0	0.0
VNA1	Neumayer--Stat	21.00	200	⇑P	P	16 00 12.8	0.0
	comp=Z,25nm,0.9s						
VNA2	Neumayer--Watz	21.03	199	⇑P	P	16 00 12.2	-1.0
	comp=Z,27nm,0.6s,baz=29,slow=11						
VNA3	Neumayer Olymp	21.75	200	⇓P	P	16 00 20.4	-0.5
	comp=Z,67nm,0.8s						
BOSA	Boshof	25.12	24	P	P	16 00 56.5	+1.8
	comp=Z,2.2nm,1.0s,baz=281,slow=13,SNR=2.1						
BOSA				LR	LR	16 08 57.0	
	comp=Z,233nm,21.6s,baz=198,slow=32						
	comp=Z,2.2nm,1.0s						
BOSA	Boshof	25.12	24	P	P	16 00 54.9	+0.3
BOSA				IAmb	IAmb	16 01 26.0	
	comp=Z,19nm,1.5s						
CRZF	Crozet Islands	25.26	92	P	P	16 00 55.7	0.0
MAW	Mawson	28.01	142	LR	LR	16 10 11.9	
	comp=Z,151nm,21.3s,baz=294,slow=32						
LBTB	Lobatse	28.65	23	LR	LR	16 11 13.1	
	comp=Z,165nm,19.6s,baz=202,slow=33						
HOPE	Hope Point	29.63	246	P	P	16 01 34.2	-0.5
BELA	Belgrano 2	31.00	198	P	P	16 01 46.9	+0.3
MATP	Matopo	33.77	25	LR	LR	16 14 55.3	
	comp=Z,207nm,19.1s,baz=206,slow=34						
KSANE	Kasane	35.53	19	P	P	16 02 26.8	0.0
QSPA	South Pole Qui	37.97	180	P	P	16 02 47.2	-0.1
	comp=Z,12nm,1.0s,baz=232,slow=6.5,SNR=18						
QSPA				LR	LR	16 17 02.3	
	comp=Z,139nm,22.0s,baz=206,slow=34						
	comp=Z,12nm,1.0s						
QSPA	South Pole Qui	37.97	180	P	P	16 02 47.3	0.0
QSPA				IAmb	IAmb	16 02 51.6	
	comp=Z,14nm,1.1s						
LSZ	Lusaka	38.64	23	LR	LR	16 17 41.3	
	comp=Z,171nm,18.4s,baz=178,slow=34						
PMSA	Palmer Station	39.81	221	LR	LR	16 15 25.7	
	comp=Z,132nm,18.8s,baz=113,slow=30						
CASY	Casey	46.20	146	P	P	16 03 54.7	+0.6
CASY				IAmb	IAmb	16 04 13.0	
	comp=Z,14nm,1.1s						
MG02	Cerro Sombrero	47.78	235	P	P	16 04 06.9	+0.3
VNDA	Vanda	48.97	171	P	P	16 04 15.3	-0.2
	comp=Z,2.2nm,0.9s,baz=229,slow=8.6,SNR=5.8						
VNDA				LR	LR	16 23 35.8	
	comp=Z,180nm,21.1s,baz=204,slow=34						
	comp=Z,2.2nm,0.9s						
VNDA	Vanda	48.97	171	IAmb	IAmb	16 04 38.0	
	comp=Z,13nm,1.5s						
MBAR	Mbarara	53.41	21	LR	LR	16 26 48.3	
	comp=Z,155nm,19.0s,baz=202,slow=35						
PLCA	Paso Flores	56.03	246	LR	LR	16 25 17.4	
	comp=Z,32nm,21.5s,baz=82,slow=32						
CPUP	Villa Florida	58.23	267	P	P	16 05 22.2	-1.8
	comp=Z,2.0nm,0.9s,baz=121,slow=7.4,SNR=5.5						
	comp=Z,2.0nm,0.9s						
CPUP	Villa Florida	58.23	267	P	P	16 05 24.3	+0.3
BI02	San Fabin de	59.24	249	P	P	16 05 32.2	+1.2
BI02				IAmb	IAmb	16 05 47.6	
	comp=Z,7.9nm,1.1s						
BO02	Sierra Bellavi	60.27	251	P	P	16 05 39.4	+1.2
BDFB	Brasilia	60.59	283	P	P	16 05 41.9	+1.3
BDFB				IAmb	IAmb	16 05 43.0	
	comp=Z,6.6nm,1.2s						
DBIC	Dimbokro	60.83	339	P	P	16 05 41.0	-1.0
	comp=Z,4.2nm,1.0s,baz=195,slow=3.8,SNR=3.4						
DBIC				LR	LR	16 27 05.2	
	comp=Z,76nm,19.8s,baz=223,slow=31						
	comp=Z,4.2nm,1.0s						
DBIC	Dimbokro	60.83	339	P	P	16 05 41.7	-0.2
DBIC				IAmb	IAmb	16 05 59.9	
	comp=Z,9.3nm,1.3s						
FURI	Furi	64.55	27	LR	LR	16 32 15.5	
	comp=Z,107nm,21.7s,baz=193,slow=34						
AC02	Maricunga	65.05	258	P	P	16 06 10.7	0.0
AC02				IAmb	IAmb	16 06 47.6	
	comp=Z,8.4nm,1.1s						
TORD	Torodi Ar. Bea	65.97	347	P	P	16 06 15.2	-0.7
	comp=Z,2.4nm,1.0s,baz=172,slow=9.2,SNR=9.0						
	comp=Z,2.4nm,1.0s						
PTLB	Pontes e Lacer	67.49	274	P	P	16 06 26.3	+0.5
PB11	IPOC Station P	70.66	263	P	P	16 06 45.2	-0.4
PB11				IAmb	IAmb	16 06 60.0	
	comp=Z,8.7nm,1.1s						
LPAZ	La Paz	72.38	266	P	P	16 06 55.1	-1.5
	comp=Z,2.3nm,1.0s,baz=82,slow=4.6,SNR=5.0						
	comp=Z,2.3nm,1.0s						
LPAZ	La Paz	72.38	266	P	P	16 06 56.6	0.0
LPAZ				IAmb	IAmb	16 07 14.5	
	comp=Z,7.2nm,1.2s						
MDP	Montagnes des	79.92	292	LR	LR	16 38 07.3	
	comp=Z,66nm,19.9s,baz=308,slow=32						
EIL	Elat	83.66	18	LR	LR	16 45 06.7	
	comp=Z,115nm,18.6s,baz=205,slow=36						
UOSS	Minazif	85.35	38	P	P	16 08 06.2	-0.5
MDT	Midelt	86.23	345	LR	LR	16 44 15.6	
	comp=Z,34nm,18.9s,baz=210,slow=34						
MD01	Midelt array s	86.31	344	P	P	16 08 11.3	-0.1
ASF	Jabal al Asfar	86.48	19	LR	LR	16 45 48.0	
	comp=Z,42nm,20.0s,baz=210,slow=35						
MMAI	Mount Meron Ar	87.00	18	LR	LR	16 48 12.3	
	comp=Z,67nm,18.0s,baz=174,slow=36						
ASAR	Alice Springs	88.16	127	P	P	16 08 20.8	0.0
	comp=Z,1.5nm,0.8s,baz=202,slow=5.1,SNR=17						
	comp=Z,1.5nm,0.8s						
WRA	Warramunga Arr	91.51	126	P	P	16 08 35.4	-1.1
	comp=Z,0.4nm,0.9s,baz=196,slow=2.6,SNR=1.4						
	comp=Z,0.4nm,0.9s						
ESDC	Sonseca Array	92.86	346	P	P	16 08 41.0	-1.1
	comp=Z,1.5nm,1.1s,baz=176,slow=5.1,SNR=6.6						
ESDC				LR	LR	16 47 46.8	
	comp=Z,42nm,18.0s,baz=296,slow=34						
	comp=Z,1.5nm,1.1s						
ESDC	Sonseca Array	92.86	346	P	P	16 08 42.3	+0.3
ESDC				IAmb	IAmb	16 08 45.4	
	comp=Z,2.8nm,1.2s						
DAVOX	Davos/Dischmat	98.72	357	LR	LR	16 51 22.1	
	comp=Z,26nm,21.0s,baz=286,slow=34						
KBZ	Khabaz	98.86	21	LR	LR	16 54 06.3	
	comp=Z,52nm,19.9s,baz=346,slow=36						
YKA	Yellowknife Ar	151.15	311	PKPbc	PKiKP	16 15 22.1	-0.1
	comp=Z,0.5nm,0.6s,baz=91,slow=1.9,SNR=10						
ILAR	Eielson Array	164.00	329	PKPab	PKPab	16 16 25.9	+1.0
	comp=Z,1.0nm,1.2s,baz=38,slow=3.4,SNR=3.6						
ILAR	Eielson Array	164.00	329		PKPab	16 16 24.5	-0.3

IDC ***31*** *15:59:08.2±1.0,17°.69N×66°.80W,h0^{km},mb3.6/7, mbtmp3.6/8,ML3.1/1,MS3.4/2,Error ellipse: s-maj=23.6km s-min=9.6km az=152.0*

SDD ***31*** *15:59:10.9±1.8,17°.89N×66°.82W,h13^{km}±27^{km},MD3.7, ML3.7,MW3.8,Presumed earthquake*

OSPL ***31*** *15:59:10.4±0.3,17°.87N×66°.86W,h21^{km}±4^{km},ML3.6, Presumed earthquake*

NEIC ***31*** *15:59:10.7,17°.92N×66°.84W,h8^{km},Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.54; $M_{\theta\theta}$0.98; $M_{\phi\phi}$0.56; $M_{r\theta}$1.42; $M_{\theta\phi}$3.25; $M_{\phi r}$-1.36; Fault plane solution: $M_0$4.03000×10^{14} NP1:ϕ_s265.00000°, δ65.00000°,λ-30.00000°. NP2:ϕ_s9.00000°,δ63.00000°, λ-152.00000°. Principal axes: T 4.0296, Plg1.0000°, Azm317.0000°; N 0.0041, Plg52.0000°, Azm49.0000°; P -4.0336, Plg38.0000°, Azm226.0000°;*

RSPR ***31*** *15:59:10.8,17°.92N×66°.84W,h6^{km},MD3.4/10*

NEIC ***31*** *15:59:10.4±1.3,17°.88N±0°.03×66°.82W±0°.01,h7^{km}±5^{km}, mb4.2/3,ML3.9/32,Md3.4/10(RSPR),Mwr3.7/11(SLM), Error ellipse: s-maj=4.6km s-min=1.6km az=185.0*

ISC 31 15:59:10.1±0.9**,17°.86N**±0°.04×**66°.82W**±0°.02**,h14**^{km}±6^{km}**, n80,σ1^{s}.09**/87**,mb3.7**/7**,16C-8D,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLPR	Magueyes Islan	0.24	297	⇓eP	Pg	15 59 15.1	-0.2
MLPR	Magueyes Islan	0.24	297	eS	Sg	15 59 18.8	+0.1
MLPR	Magueyes Islan	0.24	297	⇑ePg	Pg	15 59 15.1	-0.2
MLPR				IAML		15 59 19.6	
	comp=E,6µm,0.6s						
MLPR				IAML		15 59 20.1	
	comp=N,7µm,0.5s						
OBIP	Obispado Ponce	0.28	49		Pg	15 59 15.8	-0.1
OBIP	Obispado Ponce	0.28	49		Sb	15 59 20.5	-1.0
OBIP	Obispado Ponce	0.28	49	⇓eP	Pg	15 59 16.0	0.0
OBIP	Obispado Ponce	0.28	49	eS	Sb	15 59 20.5	-1.0
CRPR	Cabo Rojo, PR	0.31	298		Pg	15 59 16.3	-0.2
CRPR				IAML		15 59 22.1	
	comp=N,14µm,0.5s						
CRPR				IAML		15 59 22.2	
	comp=N,15µm,0.3s						
CRPR	Cabo Rojo, PR	0.31	298		Sg	15 59 20.4	-0.4
CRPR	Cabo Rojo, PR	0.31	298	⇑eP	Pg	15 59 16.3	-0.2
CRPR	Cabo Rojo, PR	0.31	298	eS	Sg	15 59 20.8	-0.1
CRPR	Cabo Rojo, PR	0.31	298	⇑ePg	Pg	15 59 16.3	-0.2
CRPR				⇓eSg	Sg	15 59 20.7	-0.2
CRPR				IAML		15 59 22.1	
	comp=E,22µm,0.3s						
CRPR				IAML		15 59 24.1	
	comp=N,15µm,0.3s						
CRPR	Cabo Rojo, PR	0.31	298	i P	Pg	15 59 16.3	-0.2
CRPR				eS	Sg	15 59 20.6	-0.2
CRPR				IAML		15 59 20.8	
	comp=Z,15µm,0.5s						
LSP	Las Mesas	0.40	322		Pg	15 59 17.9	-0.3
LSP					Sg	15 59 23.8	+0.1
LSP	Las Mesas	0.40	322	⇑eP	Pg	15 59 17.9	-0.3
LSP	Las Mesas	0.40	322	eS	Sg	15 59 23.8	+0.1
PRSN	Puerto Rico Se	0.47	319		Pg	15 59 19.0	-0.5
PRSN	Puerto Rico Se	0.47	319	IAML		15 59 27.4	
	comp=Z,21µm,0.3s						
PRSN				IAML		15 59 29.1	
	comp=Z,44µm,0.3s						
PRSN	Puerto Rico Se	0.47	319	⇓eP	Pg	15 59 19.0	-0.5
PRSN				eS	Sg	15 59 25.6	-0.2
PRSN	Puerto Rico Se	0.47	319	⇑ePg	Pg	15 59 18.8	-0.7
PRSN				IAML		15 59 27.4	
	comp=E,12µm,0.3s						
PRSN				IAML		15 59 29.1	
	comp=N,26µm,0.3s						
AOPR	Arecibo Observ	0.49	8		Pg	15 59 18.9	-0.9
AOPR					Sg	15 59 24.8	-1.6
AOPR				IAML		15 59 33.1	
	comp=N,12µm,0.6s						
AOPR	Arecibo Observ	0.49	8	⇓eP	Pg	15 59 19.2	-0.7
AOPR	Arecibo Observ	0.49	8	eS	Sg	15 59 25.8	-0.6
AOPR	Arecibo Observ	0.49	8	⇑ePg	Pg	15 59 19.1	-0.7
AOPR				⇑eSg	Sg	15 59 25.4	-1.0
AOPR				IAML		15 59 25.7	
	comp=E,22µm,0.4s						
AOPR				IAML		15 59 33.0	
	comp=N,11µm,0.4s						
ECPR	Experimental S	0.63	44	⇑eP	Pg	15 59 22.1	-0.4
ECPR	Experimental S	0.63	44	eS	Sg	15 59 30.8	-0.1
AGPR	Aguadilla, PR	0.66	336		Pg	15 59 22.1	-1.0
AGPR				IAML		15 59 31.1	
	comp=N,5µm,0.4s						
AGPR				IAML		15 59 31.6	
	comp=N,5µm,0.3s						
AGPR	Aguadilla, PR	0.66	336	⇑eP	Pg	15 59 22.2	-0.9
AGPR	Aguadilla, PR	0.66	336	eS	Sg	15 59 30.9	-1.0
AGPR	Aguadilla, PR	0.66	336	⇑ePg	Pg	15 59 22.2	-0.9
AGPR				⇑eSg	Sg	15 59 31.0	-1.0
AGPR				IAML		15 59 31.1	
	comp=N,5µm,0.3s						
AGPR				IAML		15 59 34.7	
	comp=E,4µm,0.5s						
AGPR	Aguadilla, PR	0.66	336	i P	Pg	15 59 22.2	-0.9
AGPR				eP	Pg	15 59 22.2	-0.9
AGPR				eS	Sg	15 59 30.7	-1.2
AGPR				IAML		15 59 31.2	
	comp=Z,3µm,0.8s						
EMPR	Esperanza - Ma	0.67	24		Pg	15 59 23.0	-0.3
EMPR					Sg	15 59 32.2	-0.1
EMPR	Esperanza - Ma	0.67	24	IAML		15 59 35.1	
	comp=Z,8µm,0.6s						
EMPR				IAML		15 59 36.3	
	comp=Z,7µm,0.8s						
EMPR	Esperanza - Ma	0.67	24	⇓eP	Pg	15 59 23.0	-0.3
EMPR	Esperanza - Ma	0.67	24	eS	Sg	15 59 32.2	-0.1
SJG	San Juan	0.69	69	LR	LR	15 59 15.8	
	comp=Z,19nm,21.4s,baz=233,slow=10						
SJG				Pg	Pg	15 59 23.4	-0.2
	comp=Z,141nm,0.3s,baz=266,slow=14,SNR=86						
SJG				Lg	Lg	15 59 33.0	
	comp=Z,521nm,0.3s,baz=237,slow=23,SNR=35						
SJG	San Juan	0.69	69		Pg	15 59 23.3	-0.2
SJG				IAML		15 59 34.4	
	comp=Z,3µm,0.3s						
SJG	San Juan	0.69	69	⇑eP	Pg	15 59 23.5	0.0
SJG	San Juan	0.69	69	eS	Sb	15 59 33.2	-0.1
SJG	San Juan	0.69	69	⇓ePg	Pg	15 59 23.4	-0.2
SJG	San Juan	0.69	69	i P	Pg	15 59 23.3	-0.2
SJG				eS	Sb	15 59 33.0	-0.3
SJG				IAML		15 59 34.4	
	comp=Z,2µm,0.7s						
IDE	Isla Desecheo	0.81	310		Pg	15 59 24.9	-1.0
IDE					Sg	15 59 36.2	-0.3
IDE	Isla Desecheo	0.81	310	⇑eP	Pg	15 59 24.9	-1.0
IDE	Isla Desecheo	0.81	310	eS	Sg	15 59 36.2	-0.3
GCPR	Guaynabo City	0.83	58		Pg	15 59 25.5	-0.8
GCPR					Sg	15 59 36.5	-0.8
GCPR	Guaynabo City	0.83	58	⇑eP	Pg	15 59 25.6	-0.7
GCPR	Guaynabo City	0.83	58	eS	Sg	15 59 36.9	-0.4
HUMP	Col San Antoni	0.97	73		Pb	15 59 27.9	-0.8
HUMP				IAML		15 59 46.0	
	comp=Z,2µm,0.3s						
HUMP	Col San Antoni	0.97	73		Sb	15 59 41.2	-0.2
HUMP	Col San Antoni	0.97	73	⇑eP	Pb	15 59 28.1	-0.6
HUMP	Col San Antoni	0.97	73	eS	Sb	15 59 41.2	-0.2
HIDR	Higuey Centro	1.94	292	ePg	Pn	15 59 43.9	+1.2
HIDR				IAML		16 00 17.8	
	comp=N,525nm,0.3s						
HIDR				IAML		16 00 19.4	
	comp=E,434nm,0.3s						
MIDR	Miches	2.39	298	ePg	Pb	15 59 53.5	+0.5
MIDR				IAML		16 00 30.5	
	comp=E,299nm,0.5s						
MIDR				IAML		16 00 35.4	
	comp=N,235nm,0.4s						
MIDR				IAML		16 00 35.4	
	comp=N,235nm,0.4s						
DR12	Loma Pena Alta	2.60	291		Pn	15 59 52.9	+1.0
HATOM	Hato Mayor del	2.60	291	⇑ePg	Pn	15 59 53.9	+2.1
HATOM				IAML		16 00 43.6	
	comp=E,237nm,0.5s						
HATOM				IAML		16 00 45.2	
	comp=N,215nm,0.7s						
SMDR	Samana, DR	2.66	303	⇓ePg	Pb	15 59 55.9	-1.6
SMDR				IAML		16 00 45.4	
	comp=E,322nm,0.7s						
SMDR				IAML		16 00 48.2	
	comp=N,408nm,0.7s						
SDD	Santo Domingo	3.00	282	Pn	Pn	15 59 58.9	+1.6
SABA	Saba	3.42	93		Pn	16 00 04.7	+1.5
SABA				IAML		16 01 04.2	
	comp=E,364nm,0.7s						
SABA				IAML		16 01 07.6	
	comp=N,274nm,0.7s						
SEUS	St. Eustatius	3.68	95	Pn	Pn	16 00 08.4	+1.7
SEUS				IAML		16 01 06.3	
	comp=N,366nm,0.1s						
SC01	Santiago de lo	4.02	293		Pn	16 00 11.7	+0.4
SC01				IAML		16 01 28.6	
	comp=N,317nm,0.7s						
SDDR	Presa de Saban	4.38	285		Pn	16 00 17.5	+1.1
SDDR				IAML		16 01 39.0	
	comp=N,136nm,1.1s						
SDDR				IAML		16 01 43.2	
	comp=N,143nm,1.0s						
GDHS	Morne Mazeau,	5.09	107	Pn	Pn	16 00 26.7	+0.6
ABD	La Joyeuse, An	5.28	104	Pn	Pn	16 00 29.7	+1.0
ABD				IAML		16 02 02.7	
	comp=N,122nm,2.1s						
GDSD	La Dsirade Is	5.72	105	Pn	Pn	16 00 35.1	+0.4
MPOM	Morne Pois Mar	6.66	120	Pn	Pn	16 00 49.5	+1.9
SDV	Santo Domingo	9.66	203	Pn	Pn	16 01 26.8	-2.2
	comp=N,2.0nm,0.3s,baz=30,slow=8.1,SNR=9.7						
SDV				Sn	Sn	16 03 11.6	-5.9
	comp=N,0.4nm,0.3s,baz=344,slow=12,SNR=1.9						
	comp=N,1.9nm,0.2s						
SDV	Santo Domingo	9.66	203		Pn	16 01 30.9	+1.9
MTDJ	Mount Denham	10.20	274	Pn	Pn	16 01 37.2	+0.9
ATAH	Atahualpa	27.34	206	LR	LR	16 17 34.8	
	comp=N,46nm,18.2s,baz=358,slow=41						
TXAR	Lajitas Array	35.50	296	P	P	16 06 08.3	+1.5
	comp=N,0.5nm,0.6s,baz=114,slow=11,SNR=8.1						
	comp=N,0.5nm,0.6s						
CPUP	Villa Florida	44.88	168	P	P	16 07 23.9	-0.5
	comp=N,1.0nm,0.7s,baz=354,slow=11,SNR=3.4						
	comp=N,1.0nm,0.7s						
CPUP	Villa Florida	44.88	168	IAmb	IAmb	16 07 47.0	
	comp=Z,4.8nm,1.4s						
NVAR	Mina Array Bea	49.12	306	P	P	16 07 58.7	+1.0
	comp=Z,0.1nm,0.3s,baz=90,slow=5.7,SNR=1.4						
	comp=Z,0.1nm,0.3s						
CFA	Coronel Fontan	49.20	182	LR	LR	16 32 07.4	
	comp=Z,78nm,19.9s,baz=350,slow=40						
YKA	Yellowknife Ar	55.45	335	P	P	16 08 45.2	+1.2
	comp=Z,0.6nm,0.7s,baz=113,slow=6.5,SNR=6.6						
	comp=Z,0.6nm,0.7s						
ESDC	Sonseca Array	58.05	54	P	P	16 09 03.6	+0.5
	comp=Z,0.5nm,0.7s,baz=266,slow=6.8,SNR=5.6						
	comp=Z,0.5nm,0.7s						
ESDC	Sonseca Array	58.05	54	IAmb	IAmb	16 09 46.7	
	comp=Z,1.4nm,1.3s						
TORD	Torodi Ar. Bea	65.88	83	P	P	16 09 54.8	-1.2
	comp=Z,0.4nm,0.7s,baz=320,slow=6.1,SNR=2.3						
	comp=Z,0.4nm,0.7s						
TORD	Torodi Ar. Bea	65.88	83	IAmb	IAmb	16 10 17.7	
	comp=Z,2.0nm,0.7s						
ILAR	Eielson Array	69.77	333	P	P	16 10 20.7	+1.0
	comp=Z,0.7nm,1.1s,baz=90,slow=4.7,SNR=7.0						
	comp=Z,0.7nm,1.1s						

IDC ***31*** *16:06:00.8±4.3,32°.64S×179°.04W,h0^{km},mb3.7/3, mbtmp3.7/3,Error ellipse: s-maj=224.6km s-min=36.2km az=164.0*

WEL ***31*** *16:06:03.6±1.2,34°S±10°×17°9W±1°7,h12^{km},M4.0/7, mB4.4/1,ML3.9/11,MLv4.0/7,Mw(mB)3.6/1,Error ellipse: s-maj=24.6km s-min=8.4km az=116.9,confirmed*

ISC 31 16:06:03.8±1.3**,33°.7S**±0°.1×**178°.5W**±0°.2**,h35**^{km}**,n17, σ1^{s}.22**/29**,mb3.5**/3**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	4.65	213	P	Pn	16 07 12.4	+0.9
MXZ				S	Sn	16 08 03.7	-0.4
WMGZ	Waiomatatini S	4.81	211	P	Pn	16 07 13.3	-0.4
WMGZ				S	Sn	16 08 07.9	-0.3
PKGZ	Pakihiroa	5.00	213	P	Pn	16 07 15.6	-0.7
PKGZ				S	Sn	16 08 13.5	+0.6
HAZ	Te Kaha	5.05	216	P	Pn	16 07 17.3	+0.3
HAZ				S	Sn	16 08 16.3	+2.2
PUZ	Puketiti	5.09	210	P	Pn	16 07 16.9	-0.7
PUZ				S	Sn	16 08 16.3	+1.1
RUGZ	Raukumara Rang	5.27	215	P	Pn	16 07 19.7	-0.4
RUGZ				S	Sn	16 08 20.5	+0.9
CNGZ	Carnagh Statio	5.46	208	P	Pn	16 07 23.4	+0.7
CNGZ				S	Sn	16 08 27.1	+2.8
TKGZ	Te Karaka	5.57	211	P	Pn	16 07 25.4	+1.2
TKGZ				S	Sn	16 08 25.5	-1.5
MWZ	Matawai	5.63	214	P	Pn	16 07 24.0	-1.0
MWZ				S	Sn	16 08 30.3	+1.7
URZ	Urewera	5.77	217	P	Pn	16 07 27.0	0.0
URZ				S	Sn	16 08 31.7	-0.3
RIGZ	Rimuhau	5.83	210	P	Pn	16 07 27.8	0.0
RIGZ				S	Sn	16 08 33.4	-0.1
RTZ	Ruatahuna	6.12	216	P	Pn	16 07 31.3	-0.5
RTZ				S	Sn	16 08 39.8	-0.7
OUZ	Omahuta	6.71	255	P	Pn	16 07 41.3	+1.4
ASAR	Alice Springs	42.63	271	P	P	16 13 54.8	-2.3
	0.4nm,0.7s,baz=116,slow=7.1,SNR=7.3						
	0.4nm,0.7s						
WRA	Warramunga Arr	43.92	276	P	P	16 14 05.7	-1.7
	0.4nm,0.5s,baz=116,slow=8.3,SNR=6.1						
	0.4nm,0.5s						
NVAR	Mina Array Bea	90.94	43	P	P	16 19 04.9	+0.7
	0.6nm,0.5s,baz=237,slow=3.3,SNR=4.2						
	0.6nm,0.5s						
FINES	FINESS Array B	148.08	338	PKPbc	PKPdf	16 25 42.9	+1.3
	4.2nm,1.0s,baz=67,slow=6.7,SNR=3.6						

ECX ***31*** *17:05:37.8±0.5,31°.84N×114°.71W,h10^{km}±5^{km},ML3.0*

MEX ***31*** *17:05:38.7±0.5,31°.76N×114°.74W,h6^{km}±13^{km},MD3.6*

ISC 31 17:05:35.9±2.1**,31°.85N**±0°.04×**114°.7W**±0°.1**,h16**^{km}±11^{km}**, n13,σ0^{s}.54**/20**,2C-5D,Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDOMX	El Doctor, EDO	0.13	323	⇓iP	Pb	17 05 40.5	+0.4
EDOMX				eS	Sb	17 05 42.8	-0.2
EDOMX				⇓e		17 05 43.9	
EDOMX				IAML		17 05 43.9	
	comp=E,5µm,0.1s						
ECBX	El Chinero	0.51	222	⇓iP	Pn	17 05 47.6	-1.0
ECBX				eS	Sb	17 05 54.4	+0.7
GUVIX	Guadalupe Vict	0.58	321	eS	Sb	17 05 55.7	0.0
AGSX	Ej. Aguas Cali	0.60	314	eP	Pb	17 05 48.1	0.0
AGSX				eS	Sg	17 05 55.9	+0.2
AGSX				IAML		17 05 57.4	
	comp=N,809nm,0.2s						
AGSX				⇓e		17 05 57.4	
AGSX				⇑e		17 05 57.6	

AGSX				IAML		17 05 57.6	
	comp=E,975nm,0.2s						
RHX	**Rio Hardy**	**0.61**	**298**	⇑*e*P	**Pg**	**17 05 47.6**	**-0.3**
MBIG	**Mexicali**	**0.72**	**320**	*e*S	**Sn**	**17 06 01.8**	**-0.5**
CPBX	**Cerro Prieto**	**0.79**	**316**	IAML		17 06 11.1	
	comp=E,804nm,0.2s						
CPBX				⇓*e*		17 06 11.1	
SFX	**San Felipe**	**0.83**	**192**	*e*P	**Pn**	**17 05 52.9**	**-0.1**
SFX				*e*S	**Sb**	**17 06 02.8**	**-0.1**
ALAMX	**Rancho Alamar**	**0.91**	**280**	*e*P	**Pb**	**17 05 53.4**	**0.0**
ALAMX				*e*S	**Sb**	**17 06 04.5**	**-0.9**
ALAMX				IAML		17 06 05.3	
	comp=E,576nm,0.2s						
SPIG	**San Pedro Mart**	**1.06**	**221**	*e*P	**Pn**	**17 05 56.5**	**-0.1**
SPIG				*e*S	**Sg**	**17 06 11.2**	**+0.7**
YUH2	**Yuha Desert**	**1.34**	**307**	*e*P	**Pb**	**17 06 00.6**	**-0.1**
YUH2				*e*S	**Sb**	**17 06 17.9**	**+0.3**
IKP	**In-Ko-Pah, Jac**	**1.47**	**303**	*e*P	**Pn**	**17 06 02.2**	**+0.3**
TJIG	**Tijuana**	**1.81**	**289**	*e*P	**Pb**	**17 06 08.5**	**-0.3**
TJIG				*e*S	**Sn**	**17 06 30.3**	**+1.1**

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*KRSC **31** 17:09:52.0±1.3, 59°.01N×158°.54E, h17^{km}±8^{km}, Ml3.5*

*NERS **31** 17:09:59.4, 58°.83N×158°.40E, h33^{km}*

ISC 31 17:09:57.3±0.9**, 58°.79N**±0°.04×**158°.88E**±0°.04**, h10^{km}, n13,** σ**2ˢ.91**/17**, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALN	**Palana**	**0.64**	**62**	*e*P	Pg	17 10 06.6	-3.0
PALN				*e*S	**Sg**	**17 10 15.6**	**-2.3**
TIGL	**Tigil**	**1.04**	**186**	*e*P	**Pg**	**17 10 14.7**	**-2.5**
TIGL				*e*S	**Sg**	**17 10 32.0**	**+1.3**
OSSR	**Ossora**	**2.21**	**76**	*e*P	Pn	17 10 32.0	-1.9
OSSR				*e*S	**Sn**	**17 11 00.9**	**-0.4**
SRDR	**Sredinnyy**	**2.52**	**169**	*e*P	**Pn**	**17 10 38.4**	**0.0**
SMKR	**Semkarok**	**2.62**	**147**	*e*P	**Pn**	**17 10 40.4**	**+0.8**
KOZ	**Kozyrevsk**	**2.79**	**168**	*e*P	**Pn**	**17 10 42.4**	**+0.3**
ESO	**Esso**	**2.88**	**182**	*e*P	**Pn**	**17 10 41.8**	**-1.3**
GADL	**Gadlja**	**3.98**	**286**	*e*Sg	**Sb**	**17 11 59.0**	**+3.4**
GADL				Sgmax		17 12 09.4	
	100nm,0.6s						
TLAR	**Talaya**	**4.01**	**308**	*e*Pg	**Pb**	**17 11 10.2**	**+2.2**
TLAR				*e*P	**Pg**	**17 11 15.3**	**+1.2**
TLAR				*e*S	**Sn**	**17 11 44.1**	**-1.7**
TLAR				*e*Sg	**Sb**	**17 11 59.9**	**+3.3**
TLAR				Sgmax		17 12 04.9	
	40nm,0.2s						
MA2	**Magadan**	**4.25**	**284**	*e*Sg	**Sg**	**17 12 08.6**	**-4.9**
MA2				Sgmax		17 12 14.3	
	20nm,1.0s						
MGD	**Magadan 1**	**4.35**	**290**	*e*Sg	**Sb**	**17 12 09.3**	**+3.2**
MGD				Sgmax		17 12 22.4	
	30nm,0.6s						
SEY	**Seymchan**	**5.23**	**325**	*e*P	Pb	17 11 34.0	+5.4
SEY				*e*Sg	**Sg**	**17 12 41.9**	**-3.0**
SEY				Sgmax		17 12 46.3	
	10.0nm,0.4s						
SUUS	**Susuman**	**6.59**	**312**	*e*Sg	**Sg**	**17 13 23.2**	**-5.4**
SUUS				Sgmax		17 13 30.8	
	10.0nm,0.7s						

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*IDC **31** 17:10:13.5±0.6, 30°.10N×142°.51E, h0^{km}, mb4.0/18, mbtmp3.9/21, ML3.3/3, MS4.2/49, Error ellipse: s-maj=19.5km s-min=15.3km az=61.0*

*NEIC **31** 17:10:14.8±2.0, 30°.11N±0°.06×142°.45E±0°.09, h10^{km}±1^{km}, mb4.7/51, Error ellipse: s-maj=13.1km s-min=10.2km az=271.0*

*GCMT **31** 17:10:17.9±0.4, 30°.30N±0°.04×142°.51E±0°.03, h22^{km}±1^{km}, MW4.9/69, Moment Tensor Solution. s22,c23; s69,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.48±.20; M$_{\theta\theta}$-0.69±.10; M$_{\phi\phi}$-1.79±.12; M$_{r\theta}$-0.88±.21; M$_{\theta\phi}$0.49±.07; M$_{\phi r}$0.56±.15; Best double couple: M$_0$2.44200×10^{16} NP1:ϕ_s167.00000°, δ35.00000°, λ107.00000°. NP2: ϕ_s327.00000°, δ57.00000°, λ78.00000°. Principal axes: T 2.7480, Plg75.0000°, Azm202.0000°; N -0.6150, Plg10.0000°, Azm333.0000°; P -2.1360, Plg11.0000°, Azm65.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 17:10:18.1±0.5**, 30°.12N**±0°.06×**142°.38E**±0°.09**, h35^{km}, n120,** σ**1ˢ.36**/80**, mb4.6**/40**, MS4.3**/43**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.02**	**183**	Pn	Pn	17 10 54.4	-9.0
	10.0nm,0.3s,baz=339,slow=23,SNR=1.7						
JCJ				Sn	Sn	17 11 23.9	-14
	27nm,0.3s,baz=111,slow=21,SNR=7.8						
JCJ	**Chichijima**	**3.02**	**183**		**Pn**	**17 11 01.6**	**-1.8**
JCJ				Sn	**Sn**	**17 11 35.0**	**-3.3**
JHJ	**Hachijo jima 2**	**3.72**	**324**	LR	LR	17 12 36.9	
	comp=Z,3µm,18.9s,baz=124,slow=38						
INU	**Inuyama**	**6.90**	**320**	Pn	**Pn**	**17 11 56.0**	**-0.6**
JGF	**Kuroka**	**6.91**	**324**	Pn	**Pn**	**17 11 55.8**	**-1.1**
MJAR	**Matsushiro Arr**	**7.29**	**333**	Pn	**Pn**	**17 11 59.8**	**-2.3**
	0.2nm,0.3s,baz=155,slow=11,SNR=44						
MJAR				Sn	**Sn**	**17 13 19.9**	**-3.8**
	0.1nm,0.3s,baz=167,slow=17,SNR=6.7						
MJAR				LR	LR	17 14 56.4	
	comp=Z,1µm,19.3s,baz=136,slow=38						
	7.9nm,0.7s						
MJAR	**Matsushiro Arr**	**7.29**	**333**		**Pn**	**17 12 00.2**	**-1.9**
MAJO	**Matsushiro**	**7.29**	**333**		**Pn**	**17 12 00.3**	**-1.8**
MJB9	**Matsu-Tunnel**	**7.30**	**333**		**Pn**	**17 12 00.1**	**-2.1**
JNU	**Nakatsue**	**10.25**	**290**	LR	LR	17 16 46.0	
	comp=Z,2µm,19.1s,baz=122,slow=38						
JOW	**Kunigami**	**12.83**	**259**	LR	LR	17 17 49.4	
	comp=Z,817nm,21.5s,baz=112,slow=35						
ASAJ	**Asahikawa**	**13.97**	**1**	Pn	**Pn**	**17 13 29.9**	**-3.6**
	0.4nm,0.3s,baz=216,slow=14,SNR=1.8						
ASAJ				LR	LR	17 20 38.7	
	comp=Z,945nm,20.1s,baz=176,slow=45						
JKA	**Kamikawa-asahi**	**13.97**	**1**		**Pn**	**17 13 29.9**	**-3.5**
KSRS	**Korea Array**	**14.06**	**305**	Pn	**Pn**	**17 13 35.4**	**+0.7**
	0.2nm,0.3s,baz=112,slow=12,SNR=7.2						
KSRS				LR	LR	17 19 07.0	
	comp=Z,949nm,19.7s,baz=120,slow=38						
	1.1nm,0.7s						
USRK	**Ussuriysk Ar.**	**16.29**	**332**	Pn	**Pn**	**17 14 03.0**	**-1.1**
	0.3nm,0.3s,baz=127,slow=13,SNR=5.3						
	1.4nm,0.6s						
MDJ	**Mudanjiang**	**17.65**	**329**	P	**Pn**	**17 14 21.0**	**-0.1**
TATO	**Taipei**	**19.21**	**260**	P	**P**	**17 14 38.6**	**-0.4**
YHNB	**Yeheng**	**19.41**	**259**	P	**P**	**17 14 40.0**	**-1.4**
YHNB				IAmb	IAmb	17 14 53.4	
	comp=Z,74nm,1.2s						
YULB	**Yu-li**	**19.97**	**255**	P	**P**	**17 14 46.7**	**-0.7**
YULB				IAmb	IAmb	17 15 02.9	
	comp=Z,52nm,1.2s						
SSLB	**Suanglung**	**20.10**	**257**	P	**P**	**17 14 49.5**	**+0.6**
SSLB				IAmb	IAmb	17 15 12.9	
	comp=Z,55nm,1.1s						
TWG	**Pinlang**	**20.39**	**254**	P	**P**	**17 14 53.4**	**+1.4**
TWG				IAmb	IAmb	17 15 30.7	
	comp=Z,57nm,1.1s						
TPUB	**Ta-pu**	**20.57**	**256**	P	**P**	**17 14 55.4**	**+1.5**
PETK	**Petropavlovsk-**	**25.56**	**22**	LR	LR	17 26 23.8	
	comp=Z,579nm,20.4s,baz=214,slow=38						
HIA	**Hailar**	**25.70**	**324**	P	**P**	**17 15 42.2**	**-2.7**
HILR	**Hailar Array B**	**25.88**	**325**	P	**P**	**17 15 48.4**	**+1.9**
	comp=Z,6.0nm,0.6s,baz=130,slow=10,SNR=11						
	comp=Z,6.0nm,0.6s						
DAV	**Davao City (W)**	**27.84**	**218**	LR	LR	17 25 49.2	
	comp=Z,485nm,21.5s,baz=316,slow=34						
MA2	**Magadan**	**30.00**	**9**	LR	LR	17 29 17.1	
	comp=Z,228nm,21.1s,baz=140,slow=38						
ULN	**Ulaanbaatar**	**32.31**	**313**		**P**	**17 16 42.7**	**-1.2**
ULN				IAmb	IAmb	17 17 18.9	
	comp=Z,11nm,1.2s						
SHEM	**Shemya Is, Ala**	**32.38**	**37**	LR	LR	17 28 35.7	
	comp=Z,399nm,18.9s,baz=258,slow=34						
SONM	**Songino Array**	**32.72**	**313**	P	**P**	**17 16 48.8**	**+1.4**
	comp=Z,1.1nm,0.9s,baz=117,slow=7.3,SNR=19						
SONM				LR	LR	17 30 45.9	
	comp=Z,876nm,18.4s,baz=104,slow=38						
	comp=Z,1.1nm,0.9s						
SONM	**Songino Array**	**32.72**	**313**	P	**P**	**17 16 47.5**	**+0.1**
YAK	**Yakutsk**	**32.98**	**349**	LR	LR	17 33 38.8	
	comp=Z,192nm,19.1s,baz=126,slow=43						
CHTO	**Chiang Mai**	**40.88**	**264**		**P**	**17 17 57.0**	**-0.1**
CMAR	**Chiang Mai Arr**	**41.03**	**264**	P	**P**	**17 17 59.6**	**+1.4**
	comp=Z,0.4nm,0.8s,baz=87,slow=4.2,SNR=5.2						
CMAR				LR	LR	17 37 05.4	
	comp=Z,302nm,18.2s,baz=65,slow=39						
	comp=Z,0.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**41.03**	**264**	P	**P**	**17 17 58.0**	**-0.3**
TIXI	**Tiksi**	**42.23**	**354**	LR	LR	17 41 56.5	
	comp=Z,163nm,18.4s,baz=195,slow=45						
BATI	**Baumata**	**43.95**	**207**	LR	LR	17 35 21.5	
	comp=Z,198nm,21.5s,baz=3.0,slow=34						
MTN	**Manton Dam**	**44.07**	**196**	P	**P**	**17 18 22.0**	**-0.8**
MTN				IAmb	IAmb	17 18 50.3	
	comp=Z,17nm,1.1s						
BRDH	**Bariadhala**	**45.74**	**273**	LR	LR	17 40 20.7	
	comp=Z,207nm,19.9s,baz=5.0,slow=39						
ZAA0	**Zalesovo Array**	**47.35**	**317**		**P**	**17 18 48.7**	**+0.4**
ZALV	**Zalesovo Beam**	**47.35**	**317**	P	**P**	**17 18 50.0**	**+1.6**
	comp=Z,0.9nm,0.7s,baz=98,slow=7.5,SNR=7.4						
ZALV				PcP	**PcP**	**17 20 20.4**	**+1.6**
	comp=Z,0.9nm,0.7s,baz=86,slow=1.8,SNR=4.0						
ZALV				LR	LR	17 39 33.2	
	comp=Z,665nm,18.2s,baz=92,slow=37						
	comp=Z,0.9nm,0.7s						
ZALV	**Zalesovo Beam**	**47.35**	**317**	P	**P**	**17 18 48.5**	**+0.1**
ZALV					**PcP**	**17 20 18.6**	**-0.2**
F15K	**North Star Dit**	**47.90**	**26**	P	**P**	**17 18 53.5**	**+1.0**
F15K				IAmb	IAmb	17 18 56.1	
	comp=Z,10nm,1.2s						
C16K	**Lisburne Hills**	**48.64**	**23**	P	**P**	**17 18 58.6**	**+0.5**
C16K				IAmb	IAmb	17 19 24.5	
	comp=Z,8.5nm,1.4s						
MKAR	**Makanchi Array**	**48.73**	**308**	P	**P**	**17 19 00.0**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=94,slow=8.4,SNR=14						
MKAR				LR	LR	17 40 54.4	
	comp=Z,393nm,18.8s,baz=83,slow=38						
	comp=Z,1.8nm,0.8s						
PSI	**Prapat**	**49.27**	**245**	LR	LR	17 40 35.4	
	comp=Z,83nm,18.1s,baz=73,slow=37						
NRIK	**Noril'sk**	**49.91**	**338**	LR	LR	17 41 10.7	
	comp=Z,274nm,20.0s,baz=112,slow=37						
NRIK	**Noril'sk**	**49.91**	**338**	P	**P**	**17 19 07.6**	**-0.2**
NRIK				IAmb	IAmb	17 19 24.2	
	comp=Z,7.5nm,1.1s						
CTA	**Charters Tower**	**50.06**	**175**	LR	LR	17 41 57.2	
	comp=Z,64nm,18.6s,baz=343,slow=38						
WB0	**Warramunga Arr**	**50.19**	**190**	P	**P**	**17 19 09.3**	**-1.2**
WB0				IAmb	IAmb	17 19 33.5	
	comp=Z,12nm,1.4s						
C18K	**Utukok River**	**50.20**	**23**	P	**P**	**17 19 09.8**	**-0.3**
G18K	**Tagagawik**	**50.30**	**27**	P	**P**	**17 19 11.9**	**+1.1**
WR8	**Warramunga Arr**	**50.36**	**190**	P	**P**	**17 19 10.7**	**-1.1**
WRA	**Warramunga Arr**	**50.37**	**190**	P	**P**	**17 19 11.3**	**-0.6**
	comp=Z,1.8nm,0.8s,baz=7.6,slow=7.6,SNR=6.1						
	comp=Z,1.8nm,0.8s						
C19K	**Lookout Ridge**	**50.90**	**23**	P	**P**	**17 19 14.5**	**-0.9**
C19K				IAmb	IAmb	17 20 00.8	
	comp=Z,12nm,1.2s						
KURK	**Kurchatov**	**51.03**	**313**	P	**P**	**17 19 17.4**	**+0.9**
KURK				IAmb	IAmb	17 19 35.3	
	comp=Z,7.6nm,1.0s						
KURBB	**Kurchatov Arra**	**51.09**	**313**	P	**P**	**17 19 18.2**	**+1.2**
	comp=Z,2.1nm,0.9s,baz=91,slow=7.7,SNR=12						
KURBB				LR	LR	17 41 55.4	
	comp=Z,901nm,18.1s,baz=166,slow=37						
	comp=Z,2.1nm,0.9s						
H19K	**Roundabout Mou**	**51.10**	**28**	P	**P**	**17 19 16.6**	**-0.2**
H19K				IAmb	IAmb	17 19 33.9	
	comp=Z,15nm,1.4s						
E19K	**Redstone River**	**51.26**	**25**	P	**P**	**17 19 17.1**	**-1.0**
D20K	**Etivluk River**	**51.82**	**24**	P	**P**	**17 19 21.6**	**-0.6**
D20K				IAmb	IAmb	17 19 41.0	
	comp=Z,13nm,1.3s						
KDAK	**Kodiak Island**	**51.87**	**38**	LR	LR	17 39 55.2	
	comp=Z,646nm,21.3s,baz=220,slow=34						
B20K	**Meade River**	**51.99**	**22**	P	**P**	**17 19 22.5**	**-1.0**
H21K	**Melozitna Rive**	**52.61**	**28**	IAmb	IAmb	17 19 50.2	
	comp=Z,19nm,1.5s						
BOOM	**Boomskoye usch**	**53.69**	**303**	P	**P**	**17 19 37.5**	**+0.9**
G23K	**Bananza Creek**	**53.88**	**27**	P	**P**	**17 19 37.8**	**+0.3**
G23K				IAmb	IAmb	17 19 54.9	
	comp=Z,9.1nm,1.1s						
D23K	**Nanushuk River**	**53.97**	**24**	IAmb	IAmb	17 19 57.0	
	comp=Z,11nm,1.4s						
ASAR	**Alice Springs**	**54.09**	**190**	P	**P**	**17 19 40.1**	**+0.7**
	comp=Z,0.8nm,0.9s,baz=17,slow=10,SNR=7.5						
ASAR				LR	LR	17 41 55.6	
	comp=Z,334nm,20.7s,baz=12,slow=35						
	comp=Z,0.8nm,0.9s						
ASAR	**Alice Springs**	**54.09**	**190**	P	**P**	**17 19 38.4**	**-1.1**
C23K	**Itkillik River**	**54.15**	**23**	P	**P**	**17 19 40.2**	**+0.9**
C23K				IAmb	IAmb	17 19 57.3	
	comp=Z,9.4nm,1.3s						
D24K	**Happy Valley**	**54.66**	**24**	IAmb	IAmb	17 20 01.7	
	comp=Z,15nm,1.4s						
AAK	**Ala-Archa**	**54.71**	**303**	LR	LR	17 44 59.8	
	comp=Z,275nm,18.6s,baz=71,slow=38						
ILAR	**Eielson Array**	**54.99**	**30**	P	**P**	**17 19 45.5**	**-0.1**
	comp=Z,1.3nm,1.0s,baz=263,slow=5.8,SNR=5.7						
	comp=Z,1.3nm,1.0s						
E25K	**Arctic Village**	**55.74**	**26**	IAmb	IAmb	17 20 35.2	
	comp=Z,9.0nm,1.3s						
BVAR	**Borovoye Array**	**55.96**	**316**	P	**P**	**17 19 54.6**	**+1.9**
	comp=Z,0.7nm,0.5s,baz=97,slow=6.9,SNR=4.4						
BVAR				LR	LR	17 44 51.0	
	comp=Z,559nm,18.5s,baz=76,slow=37						
	comp=Z,0.7nm,0.5s						
BMAR	**Burnt Mountain**	**56.07**	**26**	P	**P**	**17 19 54.2**	**+0.9**
H27K	**Steamboat Moun**	**57.26**	**28**	IAmb	IAmb	17 20 19.5	
	comp=Z,12nm,1.2s						
DRK	**Karamyk**	**57.37**	**300**	IAmb	IAmb	17 20 10.8	
	comp=Z,16nm,1.4s						
KK31	**Karatay Array**	**57.49**	**304**		**P**	**17 20 04.3**	**+0.6**
KK31				IAmb	IAmb	17 20 24.0	
	comp=Z,9.5nm,1.2s						
KKAR	**Karatay Array**	**57.49**	**304**		**P**	**17 20 04.0**	**+0.2**
MANEM	**Manem**	**57.95**	**298**	IAmb	IAmb	17 20 34.6	
	comp=Z,26nm,1.2s						
CHGR	**Chuyangaron**	**59.57**	**300**		**P**	**17 20 18.8**	**+0.4**
SHAA	**Shahritus**	**60.66**	**299**	IAmb	IAmb	17 20 35.0	
	comp=Z,45nm,1.3s						
STKA	**Stephens Creek**	**61.66**	**181**	P	**P**	**17 20 32.5**	**+0.1**
	comp=Z,2.5nm,0.9s,baz=299,slow=8.6,SNR=3.6						
	comp=Z,2.5nm,0.9s						
PALK	**Pallekele**	**61.93**	**262**	LR	LR	17 50 34.0	
	comp=Z,45nm,18.2s,baz=62,slow=39						
ARTI	**Arti**	**62.27**	**321**	LR	LR	17 50 18.0	
	comp=Z,320nm,19.1s,baz=59,slow=39						
ARTI	**Arti**	**62.27**	**321**		**P**	**17 20 37.4**	**+1.2**
ARTI				IAmb	IAmb	17 20 44.2	
	comp=Z,9.0nm,1.0s						
AB31	**Akbulak array**	**63.13**	**313**	P	**P**	**17 20 42.9**	**+0.7**
AKTO	**Aktyubinsk**	**64.00**	**315**	LR	LR	17 49 48.8	
	comp=Z,327nm,18.5s,baz=58,slow=37						
RES	**Resolute Bay**	**69.09**	**14**	LR	LR	17 53 11.0	
	comp=Z,65nm,20.6s,baz=343,slow=37						
RES	**Resolute Bay**	**69.09**	**14**	P	**P**	**17 21 20.8**	**+0.8**
RES				IAmb	IAmb	17 21 22.6	
	comp=Z,9.7nm,1.4s						
YKA	**Yellowknife Ar**	**69.41**	**29**	P	**P**	**17 21 22.0**	**-0.2**
	comp=Z,1.0nm,0.9s,baz=293,slow=6.8,SNR=10						
	comp=Z,1.0nm,0.9s						
ARCES	**ARCESS Array B**	**70.75**	**341**	LR	LR	17 58 08.7	
	comp=Z,176nm,19.2s,baz=36,slow=41						
YBH	**Yreka Blue Hor**	**74.00**	**51**	LR	LR	17 48 05.6	
	comp=Z,23nm,21.0s,baz=314,slow=31						
NEW	**Newport**	**74.57**	**43**	LR	LR	17 49 44.9	
	comp=Z,144nm,20.5s,baz=306,slow=32						
FINES	**FINESS Array B**	**75.32**	**334**	P	**P**	**17 21 58.5**	**+1.1**
	comp=Z,4.5nm,1.0s,baz=51,slow=2.7,SNR=3.8						
	comp=Z,4.5nm,1.0s						
RAR	**Rarotonga**	**75.49**	**125**	LR	LR	17 49 33.6	
	comp=Z,360nm,19.7s,baz=295,slow=31						
KBZ	**Khabaz**	**76.09**	**313**	P	**P**	**17 22 03.3**	**+1.2**
	comp=Z,3.1nm,1.1s,baz=125,slow=2.1,SNR=5.3						
KBZ				LR	LR	17 58 15.2	
	comp=Z,161nm,19.1s,baz=37,slow=38						
	comp=Z,3.1nm,1.1s						
NVAR	**Mina Array Bea**	**78.53**	**52**	P	**P**	**17 22 16.2**	**0.0**
	comp=Z,0.6nm,0.7s,baz=277,slow=6.9,SNR=3.8						
NVAR				LR	LR	17 51 21.0	
	comp=Z,188nm,21.0s,baz=302,slow=31						
	comp=Z,0.6nm,0.7s						
ELK	**Elko**	**79.43**	**49**	LR	LR	17 52 29.6	
	comp=Z,408nm,20.7s,baz=322,slow=32						
PPT	**Papeete**	**80.84**	**116**	LR	LR	17 54 42.2	
	comp=Z,127nm,18.1s,baz=350,slow=33						
NOA	**NORSAR Array B**	**80.87**	**338**	LR	LR	18 05 06.3	
	comp=Z,221nm,19.1s,baz=40,slow=41						
PDAR	**Pinedale Array**	**81.95**	**45**	P	**P**	**17 22 35.3**	**+0.7**
	comp=Z,0.3nm,0.9s,baz=306,slow=8.9,SNR=2.1						
PDAR				LR	LR	17 54 10.2	
	comp=Z,82nm,19.3s,baz=308,slow=32						
	comp=Z,0.3nm,0.9s						
PDAR	**Pinedale Array**	**81.95**	**45**	P	**P**	**17 22 35.1**	**+0.5**
PFO	**Pinyon Flats O**	**82.23**	**56**	LR	LR	17 53 03.2	
	comp=Z,253nm,20.7s,baz=282,slow=31						
BR131	**Keskin Array S**	**84.08**	**313**	P	**P**	**17 22 46.4**	**+0.9**
BR131				IAmb	IAmb	17 23 02.5	
	comp=Z,6.9nm,1.1s						
BRTR	**Keskin Array B**	**84.08**	**313**	P	**P**	**17 22 47.9**	**+2.4**
	comp=Z,1.4nm,0.8s,baz=93,slow=3.7,SNR=7.6						
BRTR				LR	LR	18 04 42.2	
	comp=Z,104nm,18.3s,baz=90,slow=39						
	comp=Z,1.4nm,0.8s						
BRTR	**Keskin Array B**	**84.08**	**313**	P	**P**	**17 22 47.0**	**+1.5**
RAYN	**Ar Rayn**	**84.09**	**294**		**P**	**17 22 46.0**	**+0.2**
RAYN				IAmb	IAmb	17 23 16.1	
	comp=Z,4.5nm,0.8s						
ULM	**Lac du Bonnet**	**84.83**	**33**	LR	LR	17 59 41.2	
	comp=Z,168nm,20.7s,baz=292,slow=35						
ASF	**Jabal al Asfar**	**86.08**	**305**	LR	LR	18 05 59.8	
	comp=Z,56nm,18.1s,baz=27,slow=39						
VRAC	**Vranov**	**87.37**	**328**	LR	LR	18 05 11.2	
	comp=Z,200nm,19.1s,baz=42,slow=38						
ANMO	**Albuquerque**	**88.41**	**50**	LR	LR	17 57 36.8	
	comp=Z,329nm,21.4s,baz=312,slow=32						
GERES	**GERESS Array B**	**89.02**	**329**	LR	LR	18 06 44.0	
	comp=Z,156nm,19.9s,baz=34,slow=38						
LPIG	**La Paz**	**91.88**	**61**	LR	LR	17 57 05.0	
	comp=Z,146nm,20.5s,baz=272,slow=31						
TXAR	**Lajitas Array**	**93.66**	**53**	P	**P**	**17 23 33.0**	**+1.6**
	comp=Z,1.3nm,1.0s,baz=318,slow=3.5,SNR=6.9						
	comp=Z,1.3nm,1.0s						
TXAR	**Lajitas Array**	**93.66**	**53**	P	**P**	**17 23 31.3**	**-0.1**
SADO	**Sadowa**	**96.41**	**28**	LR	LR	18 08 28.7	
	comp=Z,66nm,20.8s,baz=320,slow=36						
LPAZ	**La Paz**	**148.88**	**71**	PKPbc	**PKiKP**	**17 30 04.1**	**-0.7**
	comp=Z,3.2nm,0.9s,baz=4.3,slow=2.5,SNR=7.8						
LPAZ	**La Paz**	**148.88**	**71**		**PKiKP**	**17 30 05.4**	**+0.6**
PLCA	**Paso Flores**	**151.31**	**121**	PKPbc	**PKiKP**	**17 30 10.2**	**+1.7**
	comp=Z,1.5nm,0.9s,baz=320,slow=7.9,SNR=2.9						

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*DNK **31** 17:15:47.4±0.8, 67°.86N×20°.14E, h0^{km}, ML2.8(UPP), Suspected explosion*

*UPP **31** 17:15:47.0±0.1, 67°.86N×20°.19E, h0^{km}, ML2.8, Confirmed Induced event*

*HEL **31** 17:15:49.1±0.4, 67°.83N×20°.33E, h0^{km}, ML1.2, Suspected explosion*

ISC 31 17:15:47.2±0.9**, 67°.84N**±0°.03×**20°.21E**±0°.03**, h0^{km}, n23,** σ**0ˢ.69**/30**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.13**	**22**	P	**Pg**	**17 15 49.1**	**-0.5**
KUA				S	**Sg**	**17 15 51.2**	**-0.1**
KUA	**Kurravaara**	**0.13**	**22**	P	**Pg**	**17 15 49.1**	**-0.5**
KUA				S	**Sg**	**17 15 51.2**	**-0.1**
RATU	**Laukkuluspa**	**0.23**	**268**	P	**Pg**	**17 15 51.5**	**-0.2**
RATU	**Laukkuluspa**	**0.23**	**268**	P	**Pg**	**17 15 51.5**	**-0.2**
KOVU	**Salmi**	**0.39**	**357**	P	**Pg**	**17 15 54.3**	**-0.3**
	baz=184						
KOVU	**Salmi**	**0.39**	**357**	P	**Pg**	**17 15 54.3**	**-0.3**
	baz=184						
LANU	**Lannavaara**	**0.71**	**72**	P	**Pg**	**17 16 00.7**	**0.0**
LANU	**Lannavaara**	**0.71**	**72**	P	**Pg**	**17 16 00.7**	**0.0**
LANU	**Lannavaara**	**0.71**	**72**	PG	**Pg**	**17 16 00.6**	**0.0**
LANU				SG	**Sg**	**17 16 10.4**	**+0.5**
SALU	**Saltoluokta**	**0.80**	**236**	P	**Pg**	**17 16 02.1**	**-0.3**
SALU	**Saltoluokta**	**0.80**	**236**	P	**Pg**	**17 16 02.1**	**-0.3**
KIF	**Kilpisjarvi**	**1.20**	**10**	PG	**Pn**	**17 16 11.4**	**+0.3**
	baz=191						
KIF				MSG		17 16 26.4	
	comp=Z,2.7nm,0.2s						
KIF				SB	**Sb**	**17 16 26.6**	**0.0**
PAJU	**Pajala**	**1.39**	**125**	P	**Pg**	**17 16 12.6**	**-1.1**
PAJU	**Pajala**	**1.39**	**125**	P	**Pg**	**17 16 12.6**	**-1.1**
HEF	**Hetta**	**1.42**	**64**	MSG		17 16 30.6	
	comp=Z,1.1nm,0.2s						
HEF				SN	**Sn**	**17 16 35.3**	**+1.9**
ERTU	**Ertsjaerv**	**1.50**	**148**	PN	**Pg**	**17 16 17.0**	**+1.1**
ERTU				SN	**Sn**	**17 16 36.3**	**+0.7**
KLF	**Kolari**	**1.56**	**111**	PG	**Pn**	**17 16 16.0**	**-0.2**
	baz=294						
KLF				MSG		17 16 34.7	
	comp=Z,1.0nm,0.2s						
KLF				SN	**Sg**	**17 16 38.3**	**+1.0**
KTK1	**Kautokeino**	**1.63**	**42**	PG	**Pg**	**17 16 17.9**	**-0.4**
KTK1				SN	**Sg**	**17 16 40.1**	**+0.7**
TRO	**Tromso**	**1.86**	**346**	SG	**Sg**	**17 16 47.8**	**+0.8**
KALU	**Kalix**	**2.34**	**146**	PG	**Pb**	**17 16 29.0**	**-1.1**
TOF	**Tornio**	**2.39**	**136**	MSG		17 16 59.1	
	comp=Z,1.0nm,0.2s						
TOF				SG	**Sb**	**17 17 01.3**	**+0.3**
RNF	**Rovaniemi**	**2.57**	**116**	SN	**Sn**	**17 17 01.2**	**-0.7**
ARA0	**ARCESS Array S**	**2.58**	**46**	SG	**Sb**	**17 17 06.7**	**+0.2**

IDC 31 17:29:59.2±3.5**, 5°.42S**×**145°.74E, h0^{km}, mb3.0**/2**, mbtmp3.3**/5**, ML3.4**/2**, Error ellipse: s-maj=76.0km s-min=30.2km az=67.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.21**	**161**	Pn	Pn	17 31 04.4	-0.3
	8.5nm,0.3s,baz=333,slow=6.8,SNR=18						
PMG				Sn	Sn	17 31 47.1	-7.5
	2.5nm,0.3s,baz=178,slow=2.4,SNR=3.9						
CTA	**Charters Tower**	**14.59**	**178**	Pn	Pn	17 33 27.6	+0.4
	0.1nm,0.3s,baz=9.5,slow=18,SNR=1.8						
	1.2nm,0.9s						
WRA	**Warramunga Arr**	**18.21**	**217**	P	Pn	17 34 13.2	-0.4
	0.1nm,0.3s,baz=31,slow=13,SNR=4.7						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**21.43**	**211**	P	P	17 34 49.5	+0.3
	0.2nm,0.7s,baz=52,slow=7.7,SNR=6.0						
	0.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**51.87**	**298**	P	P	17 39 09.8	-0.2
	0.2nm,0.4s,baz=111,slow=4.1,SNR=4.5						
	0.2nm,0.4s						

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*IDC **31** 17:41:10.2±0.6, 44°.01N×150°.25E, h0^{km}, mb4.1/25, mbtmp4.0/30, ML3.4/5, MS3.8/12, Error ellipse: s-maj=17.0km s-min=12.3km az=163.0*

*NIED **31** 17:41:12.6, 44°.33N×150°.18E, h30^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.03; M$_{\theta\theta}$-1.37; M$_{\phi\phi}$-0.66; M$_{r\theta}$0.98; M$_{\theta\phi}$-1.24; M$_{\phi r}$-0.08; Fault plane solution: M$_0$2.39000×10^{15} NP1: ϕ_s216.00000°, δ38.00000°, λ63.00000°. NP2:ϕ_s69.00000°, δ57.00000°, λ110.00000°.*

*NEIC **31** 17:41:12.2±1.1, 44°.00N±0°.08×150°.2E±0°.1, h10^{km}±1^{km}, mb4.5/81 Error ellipse: s-maj=15.3km s-min=12.3km az=143.0*

*JMA **31** 17:41:12.6±0.8, 44°N±4°×15°0E±°, h30^{km}, MV4.7/14, SE OFF ETOROFU*

*SKHL **31** 17:41:14.2±0.3, 43°.90N×150°.20E, h52^{km}±1^{km}, mb5.0/4*

*MOS **31** 17:41:16.1±1.5, 44°.03N×150°.03E, h53^{km}, mb4.6/22, Error ellipse: s-maj=9.2km s-min=6.5km az=125.5*

ISC 31 17:41:16.9±0.5**, 43°.92N**±0°.06×**150°.13E**±0°.05**, h51^{km}, n215,** σ**1ˢ.88**/218**, mb4.4**/86**, MS3.9**/13**, 3C-4D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.08**	**310**	*e*PN	**Pn**	**17 41 45.6**	**-3.8**
KUR				*i* S	**Sn**	**17 42 10.8**	**-3.3**
KUR				pmax	pmax		
	comp=Z,320nm,0.4s						
KUR				smax	smax		
	comp=N,1µm,0.3s						
KUR				smax	smax		
	comp=E,1µm,0.3s						
KUR	**Kuril'sk**	**2.08**	**310**	*e*P	**Pn**	**17 41 46.5**	**-2.9**
KUR				AMB	AMB	17 41 46.9	
	comp=E,240nm,0.4s						
KUR				*e*S	**Sn**	**17 42 10.9**	**-3.2**
KUR				A	A	17 42 13.2	
	comp=E,1µm,0.4s						
KUR				A	A	17 42 13.2	
	comp=E,900nm,0.4s						

YUK	Yuzh-Kuril'sk	3.08	274	ePN	Pn	17 42 01.5	-1.5
YUK				eS	Sn	17 42 34.7	-3.9
YUK				pmax	pmax		
	comp=Z,276nm,0.3s						
YUK				pmax	pmax		
	comp=N,96nm,0.2s						
YUK				pmax	pmax		
	comp=E,82nm,0.3s						
YUK				smax	smax		
	comp=N,480nm,0.2s						
YUK				smax	smax		
	comp=E,241nm,0.1s						
YUK	Yuzh-Kuril'sk	3.08	274	eP	Pn	17 42 00.4	-2.6
YUK				AMB	AMB	17 42 02.4	
	comp=E,180nm,0.3s						
YUK				eS	Sn	17 42 36.6	-2.0
YUK				A	A	17 42 38.9	
	comp=E,340nm,0.4s						
YUK				A	A	17 42 38.9	
	comp=E,520nm,0.4s						
NEM2	Nemuro 2	3.23	262	eP	Pn	17 42 02.2	-2.9
NEM2				eS	Sn	17 42 39.0	-3.3
NMR	Nemuro--Hokkai	3.24	262	ePN	Pn	17 42 02.0	-3.2
NMR				eS	Sn	17 42 39.0	-3.5
NMR	Nemuro--Hokkai	3.24	262	eP	Pn	17 42 02.0	-3.2
NMR				eS	Sn	17 42 39.0	-3.5
GLVR	Golovnino	3.34	269	ePN	Pn	17 42 04.6	-2.0
GLVR				eS	Sn	17 42 42.4	-2.6
GLVR				pmax	pmax		
	comp=Z,233nm,0.2s						
GLVR				pmax	pmax		
	comp=E,70nm,0.3s						
GLVR				smax	smax		
	comp=N,722nm,0.3s						
GLVR				smax	smax		
	comp=E,1µm,0.3s						
GLVR	Golovnino	3.34	269	eP	Pn	17 42 04.6	-2.0
GLVR				AMB	AMB	17 42 05.1	
	comp=E,230nm,0.3s						
GLVR				eS	Sn	17 42 42.4	-2.6
GLVR				A	A	17 42 50.4	
	comp=E,720nm,0.3s						
GLVR				A	A	17 42 50.4	
	comp=E,1µm,0.3s						
RUSJ	Misakicho	3.53	275	ePN	Pn	17 42 07.6	-1.5
RUSJ				eS	Sn	17 42 46.2	-3.4
JRA	Rausu	3.62	272	eP	Pn	17 42 08.6	-1.7
JRA				eS	Sn	17 42 50.7	-1.1
JNK	Nakash	3.93	267	eP	Pn	17 42 12.6	-2.1
JAK	Akkeshi	4.06	259	eP	Pn	17 42 14.0	-2.4
JAK				eS	Sn	17 42 59.0	-3.7
JTKR	Abashiri--Toko	4.49	273	eP	Pn	17 42 21.3	-1.1
JAR	Ashorobuto	4.66	265	P	Pn	17 42 23.1	-1.5
JAR				eS	Sn	17 43 16.8	-0.7
JOB	Onbets	4.70	260	eP	Pn	17 42 23.7	-1.5
JOB				eS	Sn	17 43 16.0	-2.3
JCH	Churui	5.11	258	eP	Pn	17 42 28.7	-2.2
JCH				eS	Sn	17 43 25.7	-2.8
JKA	Kamikawa-asahi	5.43	275	Pn	Pn	17 42 34.5	-0.8
JKA	Kamikawa-asahi	5.43	275		Sn	17 43 37.7	+1.2
JKA	Kamikawa-asahi	5.43	275	eP	Pn	17 42 34.5	-0.8
ASAJ	Asahikawa	5.44	275	Pn	Pn	17 42 34.0	-1.3
	comp=E,2.4nm,0.3s,baz=90,slow=19,SNR=15						
ASAJ				Sn	Sn	17 43 37.7	+1.1
	baz=3.4,slow=25						
	comp=E,4.7nm,0.4s						
ASAJ	Asahikawa	5.44	275	PN	Pn	17 42 34.5	-0.8
ASAJ						17 43 37.7	
ERM	Erimo	5.46	252	Pn	Pn	17 42 34.0	-1.6
ERM	Erimo	5.46	252	PN	Pn	17 42 34.0	-1.6
JNBK	Urakawa-nobuka	5.64	256	eP	Pn	17 42 36.2	-1.9
JAB	Ashibetsu	5.75	269	eP	Pn	17 42 38.8	-0.8
YSS	Yuzhno-Sakhali	6.01	303	Pn	Pn	17 42 40.6	-2.6
YSS	Yuzhno-Sakhali	6.01	303	ePN	Pn	17 42 42.9	-0.3
YSS				eS	Sn	17 43 49.7	-0.9
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
YSS				smax	smax		
	comp=N,30nm,1.1s						
YSS				smax	smax		
	comp=E,20nm,1.0s						
YSS				MLR	MLR		
	comp=N,800nm,17.0s						
YSS				MLR	MLR		
	comp=Z,100nm,17.0s						
YSS				MLR	MLR		
	comp=E,700nm,13.0s						
YSS	Yuzhno-Sakhali	6.01	303	eP	Pn	17 42 42.3	-0.9
YSS				eS	Sn	17 43 48.3	-2.3
JANG	Nango	7.31	244	eP	Pn	17 42 57.3	-3.8
JANG				eS	Sn	17 44 14.7	-8.0
TYV	Tymovskoe	8.60	327	eP	Pn	17 43 17.6	-1.0
PAU	Pauzhetka	8.79	28	eP	Pn	17 43 20.4	-0.8
PEA0B	Petropavlovsk-	10.47	26	Pn	Pn	17 43 40.9	-3.3
PEA0B	Petropavlovsk-	10.47	26	PN	Pn	17 43 40.9	-3.3
PETK	Petropavlovsk-	10.47	26	Pn	Pn	17 43 40.3	-4.0
	comp=E,0.3nm,0.3s,baz=174,slow=10.0,SNR=4.5						
	comp=E,3.0nm,0.8s						
PETK	Petropavlovsk-	10.47	26	Pn	Pn	17 43 40.6	-3.6
PETK	Petropavlovsk-	10.47	26	PN	Pn	17 43 40.6	-3.6
NKL	Nikolayevsk	11.15	329	eP	Pn	17 43 51.4	-2.1
MJAR	Matsushiro Arr	11.71	235	Pn	Pn	17 43 59.1	-2.1
	comp=E,0.1nm,0.3s,baz=31,slow=15,SNR=14						
MJAR				Sn	Sn	17 46 12.0	+1.6
	baz=58,slow=29,SNR=2.0						
	comp=E,3.6nm,0.9s						
MJAR	Matsushiro Arr	11.71	235	Pn	Pn	17 43 58.2	-3.0
MJB9	Matsu-Tunnel	11.71	235	Pn	Pn	17 43 58.3	-2.9
JGF	Kuroka	12.85	234	Pn	Pn	17 44 14.1	-2.7
USRK	Ussuriysk Ar.	13.05	278	Pn	Pn	17 44 16.5	-3.0
	comp=E,0.3nm,0.3s,baz=134,slow=45,SNR=1.5						
	comp=E,1.8nm,0.7s						
INU	Inuyama	13.23	234	Pn	Pn	17 44 18.9	-3.0
MA2	Magadan	15.69	1	LR	LR	17 50 54.6	
	comp=E,152nm,19.0s,baz=172,slow=38						
MA2	Magadan	15.69	1	i P	Pn	17 44 50.4	-3.9
MA2				pmax	pmax		
	comp=Z,247nm,2.9s						
HEH	HeiHe	16.68	300	eP	Pn	17 45 05.5	-1.5
HEH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ZEA	Zeya	17.91	311	eP	P	17 45 22.5	+0.4
SEY	Seymchan	19.10	3	P	P	17 45 32.4	-2.7
	comp=Z,0.2nm,0.3s,baz=164,slow=9.4,SNR=4.1						
	comp=Z,3.6nm,0.9s						
HILR	Hailar Array B	21.48	296	P	P	17 46 00.2	-0.9
	comp=Z,5.4nm,0.3s,baz=87,slow=12,SNR=16						
	comp=Z,5.4nm,0.3s						
YAK	Yakutsk	21.75	334	P	P	17 46 01.2	-2.5
	comp=Z,8.4nm,0.3s,baz=120,slow=4.2,SNR=9.9						
YAK				LR	LR	17 55 29.5	
	comp=Z,196nm,18.7s,baz=108,slow=40						
	comp=Z,8.4nm,0.3s						
YAK	Yakutsk	21.75	334	P	P	17 45 59.3	-4.5
YAK				IAmb	IAmb	17 46 22.6	
	comp=Z,24nm,1.1s						
YAK	Yakutsk	21.75	334	i P	P	17 46 02.1	-1.7
YAK	Yakutsk	21.75	334	eP	P	17 46 02.1	-1.7
BILL	Bilibino	25.64	14	i P	P	17 46 40.0	-1.3
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BILL	Bilibino	25.64	14	eP	P	17 46 40.0	-1.3
NJ2	Nanjing	27.19	255	eP	P	17 46 55.0	-0.6
NJ2				pmax	pmax		
	comp=Z,11nm,0.7s						
H11N2	WAKE ISLAND Hy	27.90	144	T	T	18 16 10.3	
	baz=334,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	27.91	145	T	T	18 16 17.4	
	baz=334,slow=76,SNR=10						
H11N3	WAKE ISLAND Hy	27.91	144	T	T	18 16 16.1	
	baz=334,slow=76,SNR=12						
HHC	Hu-ho-hao-te	28.48	277	eP	P	17 47 08.8	+1.6
HHC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,140nm,5.1s						
H11S1	WAKE ISLAND Hy	28.91	146	T	T	18 17 31.6	
	baz=336,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	28.92	146	T	T	18 17 29.4	
	baz=336,slow=76,SNR=11						
H11S2	WAKE ISLAND Hy	28.93	146	T	T	18 17 30.0	
	baz=336,slow=76,SNR=13						
TIK	Tiksi	29.65	347	eP	P	17 47 15.9	-1.2
TIXI	Tiksi	29.67	347	LR	LR	18 00 13.2	
	comp=Z,63nm,18.3s,baz=196,slow=39						
TIXI	Tiksi	29.67	347	i P	P	17 47 15.9	-1.3
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ULN	Ulaanbaatar	29.95	293		P	17 47 20.5	+0.3
ULN	Ulaanbaatar	29.95	293	⇑iP	P	17 47 21.4	+1.1
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ULN	Ulaanbaatar	29.95	293	eP	P	17 47 21.4	+1.1
SONM	Songino Array	30.39	293	P	P	17 47 24.2	+0.1
	comp=Z,1.0nm,0.3s,baz=87,slow=8.6,SNR=16						
SONM				ScP	ScP	17 54 08.9	+8.1
	comp=Z,0.2nm,0.3s,baz=48,slow=3.5,SNR=7.1						
SONM				LR	LR	18 00 48.6	
	comp=Z,117nm,20.3s,baz=18,slow=39						
	comp=Z,1.0nm,0.3s						
SONM	Songino Array	30.39	293	P	P	17 47 24.7	+0.6
SONM	Songino Array	30.39	293	eP	P	17 47 25.2	+1.1
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
C16K	Lisburne Hills	33.56	28	P	P	17 47 50.4	-1.1
C16K				IAmb	IAmb	17 48 05.1	
	comp=Z,13nm,1.4s						
M16K	Timber Creek	34.35	42	P	P	17 47 56.9	-1.6
F17K	Baldwin Pennin	34.42	32	P	P	17 47 58.1	-0.8
F17K				IAmb	IAmb	17 47 59.9	
	comp=Z,6.1nm,0.8s						
C18K	Utukok River	35.12	29	P	P	17 48 04.1	-1.0
C18K				IAmb	IAmb	17 48 23.2	
	comp=Z,6.7nm,1.1s						
G18K	Tagagawik	35.30	34		P	17 48 06.1	-0.5
G18K				IAmb	IAmb	17 48 08.1	
	comp=Z,6.6nm,1.0s						
C19K	Lookout Ridge	35.82	28	IAmb	IAmb	17 48 12.8	
	comp=Z,5.1nm,0.9s						
LZH	Lanzhou	35.92	274	eP	P	17 48 14.5	+2.1
LZH				pP	pP	17 48 21.8	-1.6
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZDM	Lanzhou Array	36.08	274	P	P	17 48 15.3	+1.3
	comp=Z,1.2nm,0.3s,baz=83,slow=4.5,SNR=3.7						
	comp=Z,1.2nm,0.3s						
H19K	Roundabout Mou	36.12	35	P	P	17 48 13.4	-0.1
D19K	Kuna River	36.15	29		P	17 48 13.5	-0.4
E19K	Redstone River	36.21	31	P	P	17 48 13.7	-0.7
E19K				IAmb	IAmb	17 48 15.5	
	comp=Z,4.6nm,0.8s						
D20K	Etivluk River	36.74	29	P	P	17 48 18.6	-0.3
D20K				IAmb	IAmb	17 48 20.0	
	comp=Z,9.3nm,0.9s						
B20K	Meade River	36.91	27	IAmb	IAmb	17 48 38.2	
	comp=Z,13nm,1.0s						
GTA	Gaotai	37.39	281	eP	P	17 48 26.5	+1.7
GTA				pP	pP	17 48 31.8	-4.0
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
H21K	Melozitna Rive	37.64	35	P	P	17 48 26.5	0.0
B21K	Ikpikpuk River	37.66	28	P	P	17 48 26.5	-0.1
B21K				IAmb	IAmb	17 48 53.0	
	comp=Z,12nm,0.9s						
D22K	Ayikyak River	38.17	30		P	17 48 30.9	-0.1
B22K	Teshekpuk Lake	38.23	27	P	P	17 48 31.5	+0.1
B22K				IAmb	IAmb	17 48 46.3	
	comp=Z,9.1nm,1.2s						
E22K	Anaktuvuk Pass	38.36	31		P	17 48 32.3	-0.3
E22K				IAmb	IAmb	17 48 33.8	
	comp=Z,7.9nm,0.8s						
D23K	Nanushuk River	38.90	30	IAmb	IAmb	17 49 13.0	
	comp=Z,16nm,1.4s						
GYA	Guiyang	39.06	258	P	P	17 48 40.5	+1.5
GYA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
C23K	Itkillik River	39.07	28	P	P	17 48 37.8	-0.6
C23K				IAmb	IAmb	17 48 39.3	
	comp=Z,7.8nm,0.8s						
E23K	Chandalar	39.17	31	P	P	17 48 39.2	-0.2
D24K	Happy Valley	39.59	29	P	P	17 48 42.3	-0.5
G24K	Hadweenzic Riv	39.88	33	P	P	17 48 45.9	+0.7
G24K				IAmb	IAmb	17 49 00.7	
	comp=Z,14nm,1.2s						
ILAR	Eielson Array	40.08	36	P	P	17 48 46.0	-0.9
	comp=Z,2.6nm,1.1s,baz=256,slow=6.7,SNR=9.9						
	comp=Z,2.6nm,1.1s						
ILAR	Eielson Array	40.08	36	eP	P	17 48 50.0	+3.1
ILAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NRIK	Noril'sk	40.15	331	LR	LR	18 04 48.9	
	comp=Z,77nm,22.0s,baz=102,slow=35						
NRIK	Noril'sk	40.15	331	i P	P	17 48 47.2	-0.2
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
BMAR	Burnt Mountain	41.04	32	P	P	17 48 55.1	+0.2
F26K	Sheenjek River	41.21	32	P	P	17 48 56.1	-0.2
G26K	Porcupine Rive	41.35	33	P	P	17 48 57.6	+0.3
G26K				IAmb	IAmb	17 48 59.8	
	comp=Z,14nm,1.4s						
E27K	Coleen River	42.18	31	P	P	17 49 03.6	-0.5
DGZ	Jazzator, Alta	42.19	301	d iP	P	17 49 06.6	+2.0
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GOMU	GeErMu	42.35	279	P	P	17 49 06.5	+0.2
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
L27K	Beaver Creek,	42.40	39	P	P	17 49 05.7	-0.3
PZH	PanZhiHua	42.54	262	P	P	17 49 08.3	+0.6
ZAA0	Zalesovo Array	42.61	308	P	P	17 49 06.5	-1.3
ZALV	Zalesovo Beam	42.61	308	P	P	17 49 07.2	-0.6
	comp=Z,0.4nm,0.3s,baz=84,slow=6.8,SNR=4.7						
ZALV				PcP	PcP	17 50 59.6	+0.5
	comp=Z,1.3nm,0.8s,baz=87,slow=2.4,SNR=6.4						
	comp=Z,0.4nm,0.3s						
ZALV	Zalesovo Beam	42.61	308	eP	P	17 49 07.9	+0.1
E29M	Blow River	43.54	31	P	P	17 49 14.0	-1.2
E29M				IAmb	IAmb	17 49 17.2	
	comp=Z,7.9nm,1.0s						
WMQ	Urumqi	44.03	293	eP	P	17 49 23.3	+3.9
WMQ				PP	PP	17 51 03.3	+0.8
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
I30M	Mount Dempster	44.49	35		P	17 49 22.5	-0.4
I30M				IAmb	IAmb	17 49 24.1	
	comp=Z,4.9nm,0.8s						
INK	Inuvik	45.16	31		P	17 49 27.6	-0.3
INK				IAmb	IAmb	17 49 31.1	
	comp=Z,10.0nm,1.2s						
INK	Inuvik	45.16	31	P	P	17 49 27.7	-0.3
INK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MK31	Makanchi Array	46.41	299	d iP	P	17 49 38.9	+0.7
MKAR	Makanchi Array	46.41	299	P	P	17 49 39.0	+0.8
	comp=Z,2.5nm,0.6s,baz=76,slow=8.7,SNR=27						
MKAR				PcP	PcP	17 51 12.6	+0.3
	comp=Z,0.3nm,0.5s,baz=69,slow=2.4,SNR=0.9						
MKAR				LR	LR	18 11 12.8	
	comp=Z,188nm,18.2s,baz=49,slow=39						
	comp=Z,2.5nm,0.6s						
MKAR	Makanchi Array	46.41	299		P	17 49 38.2	0.0
MAKZ	Makanchi	46.60	299		P	17 49 40.0	+0.3
MAKZ				IAmb	IAmb	17 49 41.5	
	comp=Z,4.1nm,0.9s						
MAKZ	Makanchi	46.60	299	P	P	17 49 40.0	+0.3
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURK	Kurchatov	47.22	305	P	P	17 49 45.0	+0.6
KURK	Kurchatov	47.22	305	IAmb	IAmb	17 49 45.6	
	comp=Z,2.7nm,0.8s						
KURK	Kurchatov	47.22	305	P	P	17 49 45.0	+0.6
KURK						17 51 15.4	
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	Kurchatov	47.22	305	eP	P	17 49 45.0	+0.6
KURBB	Kurchatov Arra	47.30	305	P	P	17 49 45.0	0.0
	comp=Z,1.1nm,0.3s,baz=73,slow=8.7,SNR=18						
KURBB				PcP	PcP	17 51 15.4	+0.1
	comp=Z,0.8nm,0.8s,baz=70,slow=3.9,SNR=4.1						
	comp=Z,1.1nm,0.3s						
A36M	Sachs Harbour	47.32	25	P	P	17 49 45.0	+0.1
A36M				IAmb	IAmb	17 50 20.7	
	comp=Z,5.8nm,0.9s						
CMAR	Chiang Mai Arr	49.65	256	P	P	17 50 05.0	+1.4
	comp=Z,0.4nm,0.4s,baz=45,slow=7.4,SNR=5.6						
	comp=Z,0.4nm,0.4s						
CMAR	Chiang Mai Arr	49.65	256	P	P	17 50 03.9	+0.4
CMAR	Chiang Mai Arr	49.65	256	eP	P	17 50 05.4	+1.9
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WUS	Wushi	50.81	293		P	17 50 12.8	+0.5
WUS				IAmb	IAmb	17 50 19.6	
	comp=Z,5.9nm,0.9s						
BVAR	Borovoye Array	51.05	310	P	P	17 50 14.2	+0.5
	comp=Z,2.0nm,0.7s,baz=69,slow=9.9,SNR=8.0						
BVAR				LR	LR	18 14 51.9	
	comp=Z,115nm,18.3s,baz=49,slow=40						
	comp=Z,2.0nm,0.7s						
BORK	Borovoye	51.08	310		P	17 50 14.1	+0.2
BORK				IAmb	IAmb	17 50 18.5	
	comp=Z,5.7nm,1.1s						
BORK	Borovoye	51.08	310	⇓iP	P	17 50 15.3	+1.4
BORK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
EVN	Everest	52.45	275	P	P	17 50 25.1	-0.1
EVN				IAmb	IAmb	17 50 28.1	
	comp=Z,10nm,1.3s						
AAK	Ala-Archa	53.22	297	LR	LR	18 15 07.2	
	comp=Z,71nm,18.5s,baz=48,slow=38						
AAK	Ala-Archa	53.22	297	⇑iP	P	17 50 30.8	+0.7
AAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
AAK	Ala-Archa	53.22	297	eP	P	17 50 30.8	+0.7
RES	Resolute Bay	54.18	17		P	17 50 36.2	-0.3
RES				IAmb	IAmb	17 51 00.4	
	comp=Z,5.1nm,0.8s						
RES	Resolute Bay	54.18	17	P	P	17 50 36.2	-0.3
RES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YKA	Yellowknife Ar	54.45	35	P	P	17 50 37.8	-0.8
	comp=Z,0.8nm,0.8s,baz=299,slow=7.6,SNR=9.1						
	comp=Z,0.8nm,0.8s						
YKA	Yellowknife Ar	54.45	35	eP	P	17 50 38.6	0.0
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KK31	Karatay Array	55.53	299		P	17 50 46.7	-0.1
KK31	Karatay Array	55.53	299	P	P	17 50 46.7	-0.1
KK31				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KKAR	Karatay Array	55.53	299		P	17 50 47.2	+0.4
KKAR	Karatay Array	55.53	299	P	P	17 50 47.2	+0.4
ARTI	Arti	55.79	318	LR	LR	18 17 30.3	
	comp=Z,98nm,19.1s,baz=49,slow=39						
ARTI	Arti	55.79	318		P	17 50 48.6	+0.2
ARTI	Arti	55.79	318	d iP	P	17 50 48.9	+0.5
ARTI						17 51 48.6	
ARTI						17 52 49.5	
ARTI				S	S	17 58 37.2	+5.9
ARTI				SS	SS	18 02 21.0	+4.3
ARTI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AB31	Akbulak array	58.63	310		P	17 51 08.3	-0.2
AB31				IAmb	IAmb	17 51 09.9	
	comp=Z,5.0nm,1.0s						
ABKAR	Akbulak array	58.63	310		P	17 51 08.5	0.0
CHGR	Chuyangaron	58.75	295		P	17 51 10.1	+0.4
CHGR	Chuyangaron	58.75	295	P	P	17 51 10.1	+0.4
CHGR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AKTO	Aktyubinsk	59.05	312	LR	LR	18 18 50.9	
	comp=Z,135nm,18.2s,baz=78,slow=38						
ARCES	ARCESS Array B	59.83	340	P	P	17 51 16.1	-0.3
	comp=Z,12nm,1.2s,baz=34,slow=6.9,SNR=5.2						
	comp=Z,12nm,1.2s						
ARCES	ARCESS Array B	59.83	340	IAmb	IAmb	17 51 18.3	
	comp=Z,27nm,1.4s						
ARCES	ARCESS Array B	59.83	340	P	P	17 51 16.2	-0.3
ARCES				pmax	pmax		
	comp=Z,27nm,1.4s						
KLMR	Klimovskoe	61.43	329	eP	P	17 51 26.4	-1.1
KLMR				pmax	pmax		
	comp=Z,26nm,1.5s						
O03E	Paynes Creek	62.36	60		P	17 51 34.4	+0.2
PLID	Pearl Lake	63.05	52		P	17 51 38.6	-0.2
PLID				IAmb	IAmb	17 51 39.6	
	comp=Z,4.5nm,0.9s						
BELG	Belogornoye	63.24	318	i P	P	17 51 41.5	+1.8
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SUMG	Summit	63.65	3	P	P	17 51 42.6	0.0
SUMG	Summit	63.65	3	P	P	17 51 42.6	0.0
SUMG				pmax	pmax		
	comp=Z,21nm,1.4s						
WRA	Warramunga Arr	65.17	196	P	P	17 51 52.9	+0.2
	comp=Z,0.3nm,0.4s,baz=15,slow=7.0,SNR=1.8						
	comp=Z,0.3nm,0.4s						
NVAR	Mina Array Bea	65.65	60	P	P	17 51 55.8	-0.2
	comp=Z,1.7nm,0.7s,baz=288,slow=7.3,SNR=11						
	comp=Z,1.7nm,0.7s						
FINES	FINESS Array B	65.69	334	P	P	17 51 54.1	-1.4
	comp=Z,5.5nm,0.8s,baz=46,slow=4.0,SNR=9.4						
	comp=Z,5.5nm,0.8s						
FINES	FINESS Array B	65.69	334	i P	P	17 51 53.9	-1.6
FINES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ELK	Elko	66.11	56	P	P	17 51 58.0	-0.9
	comp=Z,0.9nm,0.7s,baz=323,slow=5.7,SNR=3.8						
	comp=Z,0.9nm,0.7s						
YNE	Yellowstone No	66.46	50	P	P	17 52 01.5	+0.3
MOOW	Moose Ponds	66.85	51	IAmb	IAmb	17 52 05.4	
	comp=Z,4.5nm,1.2s						
PDAR	Pinedale Array	68.14	51	P	P	17 52 10.9	-0.9
	comp=Z,0.9nm,0.9s,baz=256,slow=2.4,SNR=6.4						
	comp=Z,0.9nm,0.9s						
ASAR	Alice Springs	68.88	196	P	P	17 52 17.2	+1.1
	comp=Z,0.2nm,0.5s,baz=12,slow=6.9,SNR=6.6						
ASAR				LR	LR	18 21 17.2	
	comp=Z,53nm,19.9s,baz=40,slow=35						
	comp=Z,0.2nm,0.5s						
CCUT	Cedar City	69.25	58	IAmb	IAmb	17 52 21.9	
	comp=Z,4.9nm,1.2s						
TMUT	Trail Mountain	69.42	55	P	P	17 52 21.4	+1.5
MTPU	Mount Pierson	69.64	57	IAmb	IAmb	17 53 05.5	
	comp=Z,4.4nm,1.3s						
LCMT	Little Creek M	69.66	58	IAmb	IAmb	17 52 22.8	
	comp=Z,3.7nm,0.8s						
KNB	Kanab	69.92	58		P	17 52 23.4	+0.6
KNB	Kanab	69.92	58	P	P	17 52 23.4	+0.6
KNB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SRU	San Rafael Swe	69.94	55	IAmb	IAmb	17 52 23.9	
	comp=Z,4.9nm,0.9s						
NB2	NORSAR Subarra	70.20	340	P	P	17 52 24.2	+0.2
	comp=Z,0.5nm,0.3s,baz=30,slow=6.5						
NOA	NORSAR Array B	70.20	340	P	P	17 52 24.4	+0.4
	comp=Z,0.8nm,0.6s,baz=29,slow=6.6,SNR=5.1						
	comp=Z,0.8nm,0.6s						
HFS	Hagfors	70.35	339	P	P	17 52 25.0	+0.2
	comp=Z,3.5nm,0.7s,baz=29,slow=4.8,SNR=21						
	comp=Z,3.5nm,0.7s						
HFS	Hagfors	70.35	339	P	P	17 52 25.0	+0.2
HMU	Henry Mountain	70.58	56	IAmb	IAmb	17 52 27.6	
	comp=Z,5.0nm,0.9s						
U15A	North Rim	70.62	58	IAmb	IAmb	17 52 28.8	
	comp=Z,5.8nm,1.0s						
KIV	Kislovodsk	71.24	313	eP	P	17 52 32.8	+2.2
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,111nm,18.0s						
KBZ	Khabaz	71.28	313	P	P	17 52 31.9	+1.2
	comp=Z,4.1nm,0.9s,baz=29,slow=4.1,SNR=8.7						
KBZ				LR	LR	18 29 04.1	
	comp=Z,148nm,18.6s,baz=34,slow=40						
	comp=Z,4.1nm,0.9s						
KBZ	Khabaz	71.28	313	eP	P	17 52 32.5	+1.8
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KBZ	Khabaz	71.28	313	eP	P	17 52 32.5	+1.8
SHA1	Shidzhatmaz	71.40	313	⇑iP	P	17 52 33.5	+1.7
PV13	Radium Mtn., P	71.57	55	IAmb	IAmb	17 52 35.8	
	comp=Z,5.9nm,1.1s						
AKASG	Malin Array Be	72.70	325	P	P	17 52 39.7	+0.6
	comp=Z,0.7nm,0.3s,baz=36,slow=6.3,SNR=4.9						
	comp=Z,0.7nm,0.3s						
AKASG	Malin Array Be	72.70	325	eP	P	17 52 41.0	+1.9
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKBB	Malin Array Si	72.70	325	i P	P	17 52 39.0	-0.1
AKBB				pmax	pmax		
	comp=Z,28nm,3.2s						
SOC	Sochi	73.04	315	eP	P	17 52 43.6	+2.3
SOC				e		17 55 24.2	
SOC				ePPP	PPP	17 57 03.5	
SOC				eS	SKiKP	18 02 09.5	+0.5
SOC				eSS	SS	18 06 45.0	-0.1

SOC				eSSS	SSS	18 10 01.9	
SOC				MLR	MLR		
	comp=Z,48nm,7.0s						
BUR08	Bucovina Ar. S	76.74	325		P	17 53 02.9	+0.2
BUR08				IAmb	IAmb	17 53 31.6	
	comp=Z,8.9nm,1.4s						
CLL	Collm	78.13	334	eP	P	17 53 10.0	-0.3
CLL	Collm	78.13	334	eP	P	17 53 10.0	-0.3
CLL				AMS	AMS	18 11 00.0	
	comp=N,100nm,18.2s						
CLL				AMS	AMS	18 11 00.0	
	comp=E,200nm,20.1s						
EKA	Eskdalemuir Ar	78.56	345	P	P	17 53 13.6	+1.1
	comp=E,0.2nm,0.3s,baz=337,slow=3.4,SNR=1.4						
	comp=E,0.2nm,0.3s						
VHRN	Van Horn	78.92	58		P	17 53 15.4	+0.3
BRTR	Keskin Array B	78.97	315	P	P	17 53 16.9	+1.6
	comp=E,0.7nm,0.7s,baz=60,slow=2.4,SNR=4.5						
	comp=E,0.7nm,0.7s						
GERES	GERESS Array B	80.04	332	P	P	17 53 21.2	+0.3
	comp=E,0.3nm,0.5s,baz=46,slow=8.4,SNR=4.4						
	comp=E,0.3nm,0.5s						
WATA	Walderalm	82.05	333	eP	P	17 53 31.1	-0.6
	comp=E,6.1nm,1.3s						
WTTA	Wattenberg	82.10	333	eP	P	17 53 32.3	+0.4
	comp=E,4.8nm,1.7s						
BRDY	Brady	82.14	54	IAmb	IAmb	17 53 33.1	
	comp=Z,4.3nm,0.9s						
RETA	Reutte	82.19	334	eP	P	17 53 34.2	+2.0
	comp=Z,4.9nm,1.3s						
SQTA	Sankt Quirin	82.28	333	eP	P	17 53 33.9	+1.1
	comp=Z,3.1nm,1.0s						
DRIO	Del Rio	82.53	56		P	17 53 34.1	-0.2
BELA	Belgrano 2	145.88	178	PKPdf	PKPbc	18 00 48.9	-0.2
BDFB	Brasilia	147.87	34	PKPbc	PKPbc	18 00 56.8	+0.2
	comp=Z,1.9nm,0.6s,baz=214,slow=2.8,SNR=4.3						
PLCA	Paso Flores	149.97	98	PKPbc	PKiKP	18 01 01.9	-0.2
	comp=Z,1.7nm,0.8s,baz=0.0,slow=4.0,SNR=4.2						
PLCA	Paso Flores	149.97	98	PKIKP	PKiKP	18 01 02.0	-0.2
CPUP	Villa Florida	151.69	61	PKPbc	PKiKP	18 01 06.3	+0.2
	comp=Z,1.6nm,0.8s,baz=235,slow=3.1,SNR=3.9						

UPP ***31*** *17:45:16.9±0.1, 67°.84N×20°.19E, h0^{km}, ML2.7, Confirmed Induced event*
HEL ***31*** *17:45:17.5±0.3, 67°.87N×20°.09E, h0^{km}, ML1.3, Suspected explosion*
ISC 31 17:45:17.7±0.9**, 67°.87N**±0°.03×**20°.21E**±0°.03**, h0**^{km}**, n21, σ0^{s}.99**/33**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.10	29	P	Pg	17 45 19.1	-0.6
KUA				S	Sg	17 45 21.4	+0.5
RATU	Laukkuluspa	0.24	260	P	Pg	17 45 21.3	-1.0
KOVU	Salmi	0.36	357	P	Pg	17 45 25.2	+0.6
LANU	Lannavaara	0.70	74	P	Pg	17 45 31.0	-0.1
LANU	Lannavaara	0.70	74	PG	Pg	17 45 30.9	-0.2
LANU				SG	Sg	17 45 40.5	+0.3
SALU	Saltoluokta	0.81	234	eP	Pg	17 45 33.0	-0.2
KIF	Kilpisjarvi	1.16	11	eP	Pb	17 45 40.6	-0.1
KIF	Kilpisjarvi	1.16	11	PN	Pb	17 45 40.9	+0.2
KIF				MSG		17 45 54.1	
	comp=Z,3.7nm,0.2s						
KIF				SN	Sb	17 45 56.6	+0.3
HEF	Hetta	1.40	66	PG	Pn	17 45 43.6	-0.9
	baz=252						
HEF				MSG		17 46 00.8	
	comp=Z,1.4nm,0.2s						
HEF				SB	Sg	17 46 02.7	0.0
ERTU	Ertsjaerv	1.53	149	PN	Pn	17 45 45.9	-0.4
	baz=329						
ERTU				SN	Sn	17 46 06.6	-0.2
KLF	Kolari	1.58	112	PG	Pn	17 45 46.6	-0.3
KLF				MSG		17 46 06.0	
	comp=Z,1.8nm,0.2s						
KLF				SG	Sb	17 46 07.7	-0.4
KTK1	Kautokeino	1.60	43	PN	Pn	17 45 47.5	+0.2
KTK1				SN	Sb	17 46 09.2	+0.2
TRO	Tromso	1.83	346	SN	Sb	17 46 15.9	+0.3
KALU	Kalix	2.37	147	PN	Pn	17 45 55.8	-1.9
KALU				SG	Sb	17 46 30.3	-0.6
TOF	Tornio	2.42	136	PB	Pn	17 45 59.7	+1.3
TOF				MSG		17 46 29.8	
	comp=Z,1.4nm,0.2s						
TOF				SG	Sb	17 46 32.5	+0.2
ARA0	ARCESS Array S	2.56	47	PG	Pb	17 46 02.7	-1.8
	baz=232						
ARA0				SG	Sb	17 46 35.1	-1.3
RNF	Rovaniemi	2.59	117	PB	Pn	17 46 02.4	+1.6
RNF				SG	Sb	17 46 36.4	-0.8
RAJF	Raja-Jooseppi	3.09	75	PB	Pn	17 46 09.7	+2.1
RAJF				SG	Sb	17 46 51.5	-0.2
KEV	Kevo	3.11	49	SB	Sb	17 46 50.8	-1.5
BURU	Burvik	3.33	171	PB	Pn	17 46 13.1	+2.1
KU6	Riekki	4.23	111	PG	Pb	17 46 34.0	+1.0
	baz=301						

MEX ***31*** *17:48:52.7±0.4, 13°.86N×93°.34W, h23^{km}±17^{km}, MD4.2*
GCG ***31*** *17:48:53.0±1.7, 13°.91N×93°.14W, h26^{km}±30^{km}, MD4.5, ML3.6*
ISC 31 17:48:43.0±1.9**, 13°.81N**±0°.07×**93°.43W**±0°.03**, h2**^{km}±11^{km}**, n30, σ1^{s}.66**/45**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.57	46	i P	Pg	17 49 16.1	+2.9
THIG				eS	Sg	17 49 33.0	-0.6
SMCA	Catarina	1.68	52	eP	Pg	17 49 16.8	+1.6
SMCA				eS	Sg	17 49 36.1	-0.9
SMCA				IAML		17 49 37.0	
	comp=E,911nm,0.3s						
PATR	El Naranjo	1.74	42	eP	Pg	17 49 17.4	+1.0
PATR				eS	Sg	17 49 37.6	-1.4
CHUJ	Union Juarez	1.81	45	eP	Pg	17 49 18.4	+0.6
CHUJ				eS	Sb	17 49 39.1	-1.2
RTAL	Retalhuleu	1.83	67	i P	Pg	17 49 19.0	+0.9
RTAL				eS	Sn	17 49 38.6	-0.6
PAVE	Pavencul	1.83	41	eP	Pg	17 49 19.0	+0.8
PAVE				eS	Sb	17 49 39.7	-1.3
PCIG		1.89	6	eP	Pg	17 49 20.5	+1.1
PCIG				eS	Sg	17 49 41.9	-2.1
STG2	El Palmar, Qui	2.09	72	eP	Pn	17 49 20.7	+1.4
STG2				eS	Sn	17 49 42.7	-3.2
STG5	El Palmar, Qui	2.10	74	eP	Pn	17 49 20.6	+1.2
STG8	El Palmar, Qui	2.12	72	eP	Pn	17 49 21.2	+1.5
STG8				eS	Sn	17 49 44.0	-2.7
STG8				IAML		17 49 46.4	
	comp=N,1µm,0.2s						
SOKI	Kika Raxquin	2.21	63	eP	Pb	17 49 25.1	+1.1
HUEH	Huehuetenango	2.39	51	eP	Pb	17 49 27.1	0.0
HUEH				i S	Sn	17 49 53.6	0.0
CCIG	Comitan	2.76	27	eP	Pg	17 49 35.0	-0.9
CCIG				eS	Sb	17 50 06.9	-0.6
TGIG		2.96	6	eP	Pb	17 49 37.4	+0.7
TGIG				eS	Sb	17 50 11.0	-2.4
APG	El Apazote	3.11	67	eP	Pb	17 49 38.7	-0.6
HUIG	Huatulco	3.24	307	eP	Pb	17 49 41.0	-0.3
HUIG				eS	Sn	17 50 14.2	+0.1
CMIG	Matias Romero	3.55	337	eP	Pb	17 49 45.0	-1.6
CMIG				eS	Sn	17 50 23.9	+2.2
PEIG	Puerto Escondi	4.20	302	eP	Pb	17 49 54.7	-3.0
PEIG				eS	Sn	17 50 37.4	-0.5
NEUV	Arroyo Zacate	4.50	330	eP	Pn	17 49 57.8	+5.5
NEUV				eS	Sn	17 50 45.5	+0.3
VHO	Vista Hermosa	4.54	316	eP	Pb	17 50 00.7	-3.0
VHO				eS	Sn	17 50 48.5	+1.9
YOIG	Yosondua	4.99	308	eP	Pb	17 50 08.1	-3.3
YOIG				eS	Sn	17 50 55.3	-2.5
PNIG	Pinotepa	5.21	300	eP	Pn	17 50 09.8	+7.7
PNIG				eS	Sn	17 51 02.1	-0.7
TXIG	Tlaxiaco	5.40	310	eP	Pb	17 50 14.2	-4.2
TXIG				eS	Sn	17 51 08.6	+0.7
TOIG	Toxpalan	5.51	321	eP	Pb	17 50 16.0	-4.1
TOIG				eS	Sn	17 51 10.3	0.0
SCIG	Sabancuy	5.56	23	eS	Sn	17 51 10.7	-0.7
HLIG	Huajuapan de L	5.80	314	eP	Pb	17 50 19.7	-5.5
HLIG				eS	Sn	17 51 18.2	+0.6
FTIG	Fresnillo de T	6.09	313	eP	Pb	17 50 24.1	-5.8
FTIG				eS	Sn	17 51 25.8	+1.2
JAUV	Jalcomulco	6.40	330	eP	Pn	17 50 22.5	+4.0
JAUV				eS	Sn	17 51 32.2	0.0
PLIG	Platanillo	7.40	309	eP	Pn	17 50 42.2	+10
ARIG	Puente Sto Nin	8.00	305	eP	Pn	17 50 51.0	+11

UPP ***31*** *18:03:26.7±0.1, 67°.86N×20°.16E, h1^{km}, ML2.5, Confirmed Induced event*
HEL ***31*** *18:03:27.0±0.5, 67°.86N×20°.10E, h0^{km}, ML1.1, Suspected explosion*
ISC 31 18:03:26.5±1.0**, 67°.83N**±0°.03×**20°.15E**±0°.04**, h0**^{km}**, n14, σ0^{s}.65**/19**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.14	29	P	Pg	18 03 28.9	-0.3
KUA				S	Sg	18 03 30.9	-0.1
RATU	Laukkuluspa	0.21	268	P	Pg	18 03 30.9	+0.3
KOVU	Salmi	0.39	0	P	Pg	18 03 34.0	0.0
LANU	Lannavaara	0.73	72	P	Pg	18 03 40.6	+0.1
LANU	Lannavaara	0.73	72	PG	Pg	18 03 40.5	+0.1
LANU				SG	Sg	18 03 49.8	0.0
KIF	Kilpisjarvi	1.20	11	PN	Pn	18 03 50.5	0.0
KIF				MSG		18 04 03.8	
	comp=Z,1.5nm,0.2s						
KIF				SN	Sn	18 04 07.3	-0.2
HEF	Hetta	1.44	65	MSG		18 04 10.3	
	comp=Z,1.0nm,0.2s						
HEF				SN	Sn	18 04 15.2	+1.9
ERTU	Ertsjaerv	1.51	147	PG	Pb	18 03 55.0	-0.3
	baz=330						
ERTU				SN	Sn	18 04 15.8	+0.7
KLF	Kolari	1.58	111	PG	Pn	18 03 55.5	-0.3
KLF				MSG		18 04 15.2	
	comp=Z,1.0nm,0.2s						
KLF				SN	Sg	18 04 18.0	+0.7
KTK1	Kautokeino	1.65	42	PN	Pb	18 03 57.5	-0.1
KALU	Kalix	2.35	146	PB	Pb	18 04 08.5	-1.1
TOF	Tornio	2.41	135	MSG		18 04 39.3	
	comp=Z,0.7nm,0.2s						
TOF				SG	Sb	18 04 41.0	+0.3
RNF	Rovaniemi	2.59	116	SB	Sb	18 04 45.3	-0.7
ARA0	ARCESS Array S	2.60	46	SG	Sb	18 04 46.3	0.0

IDC 31 18:34:21.2±2.2**, 5°.44N**×**125°.05E, h0**^{km}**, mb3.4**/4**, mbtmp3.4**/4**, Error ellipse: s-maj=251.6km s-min=22.6km az=65.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	26.83	160	P	P	18 40 03.5	0.0
	0.2nm,0.5s,baz=339,slow=10,SNR=1.6						
	0.2nm,0.5s						
ASAR	Alice Springs	30.19	164	P	P	18 40 33.6	+0.1
	0.3nm,0.6s,baz=344,slow=7.3,SNR=11						
	0.3nm,0.6s						
MKAR	Makanchi Array	55.20	325	P	P	18 43 56.4	+0.4
	0.2nm,0.4s,baz=127,slow=6.2,SNR=6.0						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	59.41	328	P	P	18 44 25.0	-0.6
	0.2nm,0.5s,baz=128,slow=6.2,SNR=5.1						
	0.2nm,0.5s						

IDC ***31*** *18:40:51.6±0.5, 30°.40N×41°.95W, h0^{km}, mb4.2/24, mbtmp4.2/24, MS4.0/65, Error ellipse: s-maj=16.2km s-min=13.4km az=162.0*
NEIC ***31*** *18:40:52.7±1.7, 30°.5N±0°.1×42°.1W±0°.1, h10^{km}±1^{km}, mb4.8/98, Error ellipse: s-maj=17.9km s-min=16.4km az=155.0*
GCMT ***31*** *18:40:55.7±0.2, 30°.54N±0°.02×41°.88W±0°.01, h12^{km}, MW4.9/116, Moment Tensor Solution. s29,c33; s116,c166; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.05±.07; M$_{\theta\theta}$0.31±.08; M$_{\phi\phi}$2.74±.06; M$_{r\theta}$0.51±.31; M$_{\theta\phi}$0.15±.06; M$_{\phi r}$-0.28±.23; Best double couple: M$_0$2.95000×10^{16} NP1:ϕ_s192.00000°, δ43.00000°, λ-77.00000°. NP2:ϕ_s355.00000°, δ48.00000°, λ-102.00000°. Principal axes: T 2.7600, Plg2.0000°, Azm93.0000°; N 0.3790, Plg9.0000°, Azm3.0000°; P -3.1410, Plg81.0000°, Azm199.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 31 18:40:53.1±0.4**, 30°.49N**±0°.08×**42°.10W**±0°.07**, h15**^{km}**, n190, σ1^{s}.16**/129**, mb4.7**/80**, MS4.0**/68**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATG	Bathurst New B	24.93	319	P	P	18 46 12.9	-2.7
BATG				IAmb	IAmb	18 46 41.4	
	comp=Z,59nm,1.6s						
SJG	San Juan	25.09	246	LR	LR	18 54 19.8	
	comp=Z,245nm,21.1s,baz=32,slow=32						
D62A	Allapoint, All	26.57	316	P	P	18 46 27.5	-2.9
MDP	Montagnes des	27.14	204	LR	LR	18 54 52.8	
	comp=Z,300nm,21.8s,baz=346,slow=31						
BBTS	Babate	28.28	118	LR	LR	18 55 28.0	
	comp=Z,746nm,20.2s,baz=260,slow=31						
PESTR	Estremoz	29.45	64	P	P	18 46 55.2	-1.0
PESTR				IAmb	IAmb	18 47 58.4	
	comp=Z,29nm,1.7s						
SCHQ	Schefferville	30.08	331	P	P	18 47 03.4	+1.7
	comp=Z,7.1nm,1.0s,baz=144,slow=7.4,SNR=3.5						
SCHQ				LR	LR	18 58 03.2	
	comp=Z,420nm,20.4s,baz=134,slow=34						
	comp=Z,7.1nm,1.0s						
SCHQ	Schefferville	30.08	331	P	P	18 47 00.1	-1.6
IVI	Ivigtut	30.98	354	P	P	18 47 07.7	-1.8
DELO	Deloro Mine	31.20	307	P	P	18 47 09.8	-1.9
MD01	Midelt array s	31.76	76	P	P	18 47 14.7	-2.2
MDT	Midelt	31.89	76	LR	LR	18 57 09.9	
	comp=Z,510nm,20.9s,baz=295,slow=31						
SADO	Sadowa	32.32	307	LR	LR	18 58 15.4	
	comp=Z,419nm,21.6s,baz=148,slow=32						
ESDC	Sonseca Array	32.32	63	P	P	18 47 22.7	+1.0
	comp=Z,1.3nm,0.9s,baz=265,slow=7.7,SNR=8.0						
ESDC				LR	LR	18 57 31.4	
	comp=Z,286nm,20.9s,baz=264,slow=31						
	comp=Z,1.3nm,0.9s						
ESDC	Sonseca Array	32.32	63	P	P	18 47 20.7	-1.0
CHIV	Chivirico	32.65	259	P	P	18 47 23.4	-1.2
CHIV				IAmb	IAmb	18 47 40.3	
	comp=Z,43nm,1.7s						
N53A	Lisbon	32.89	299	P	P	18 47 25.2	-1.4
KUQ	Kuujjuuaa	33.01	334	P	P	18 47 25.1	-2.3
SDV	Santo Domingo	34.23	237	LR	LR	18 59 45.0	
	comp=Z,189nm,20.8s,baz=68,slow=33						
SDV	Santo Domingo	34.23	237		P	18 47 37.7	-0.9
SDV				IAmb	IAmb	18 47 53.4	
	comp=Z,13nm,1.2s						
TKL	Tuckaleechee C	35.11	290	LR	LR	18 59 25.1	
	comp=Z,542nm,19.9s,baz=98,slow=32						
BORG	Borgarnes	36.65	15	LR	LR	18 58 43.7	
	comp=Z,63nm,19.2s,baz=293,slow=29						
SFJD	Kangerlussuaq	36.90	354	LR	LR	18 59 43.6	
	comp=Z,153nm,20.4s,baz=223,slow=31						
EKA	Eskdalemuir Ar	37.06	37	LR	LR	18 59 32.1	
	comp=Z,103nm,18.1s,baz=250,slow=30						
FRB	Frobisher Bay	37.26	341	LR	LR	19 01 27.2	
	comp=Z,96nm,21.6s,baz=148,slow=33						
ROSC	El Rosal	39.65	236	P	P	18 48 26.3	+1.3
	comp=Z,9.9nm,0.4s,baz=48,slow=14,SNR=5.8						
ROSC				LR	LR	19 03 56.4	
	comp=Z,244nm,21.0s,baz=55,slow=35						
	comp=Z,9.9nm,0.4s						
BNI	Bardonecchia	40.59	55	P	P	18 48 31.1	-1.1
BFO	Black Forest	42.02	50		P	18 48 42.6	-1.1
UALR	University of	42.18	290	P	P	18 48 44.1	-1.1
UALR				IAmb	IAmb	18 48 54.6	
	comp=Z,20nm,1.1s						
SUMG	Summit	42.19	2	P	P	18 48 43.8	-1.5
DBIC	Dimbokro	42.20	116	P	P	18 48 45.4	-0.2
	comp=Z,8.8nm,1.2s,baz=325,slow=8.0,SNR=4.1						
DBIC				LR	LR	19 03 35.2	
	comp=Z,552nm,21.5s,baz=325,slow=32						
	comp=Z,8.8nm,1.2s						
DBIC	Dimbokro	42.20	116	P	P	18 48 43.8	-1.7
TUE	Stuetta	42.55	53		P	18 48 47.0	-1.4
TUE				IAmb	IAmb	18 48 56.6	
	comp=Z,27nm,1.6s						
S39A	Bolivar	42.59	294	P	P	18 48 45.6	-3.0
S39A				IAmb	IAmb	18 48 54.0	
	comp=Z,35nm,1.7s						
DAVOX	Davos/Dischmat	42.93	53	LR	LR	19 03 47.5	
	comp=Z,158nm,19.0s,baz=258,slow=32						
DAVA	Damuels	42.97	52	i P	P	18 48 52.5	+0.8
	comp=Z,16nm,1.2s						
KEST	Kesra	43.01	69	LR	LR	19 03 40.7	
	comp=Z,198nm,21.5s,baz=285,slow=32						
FUORN	Ofenpass-Fuorn	43.19	53		P	18 48 52.3	-1.3
FETA	Feichten	43.53	52	i P	P	18 48 57.8	+1.5
	comp=Z,10nm,1.4s						
RETA	Reutte	43.58	52	i P	P	18 48 57.8	+1.2
	comp=Z,11nm,1.2s						
ZCCA	Zocca	43.63	56		P	18 48 56.3	-0.7
ZCCA				IAmb	IAmb	18 49 12.6	
	comp=Z,33nm,1.4s						
OSSC	Osservatorio P	43.84	57	P	P	18 48 58.1	-0.5
OSSC				IAmb	IAmb	18 49 24.2	
	comp=Z,20nm,1.2s						
TORD	Torodi Ar. Bea	43.85	103	P	P	18 48 58.0	-1.0
	comp=Z,1.9nm,0.9s,baz=307,slow=6.5,SNR=9.0						
TORD				PcP	PcP	18 50 43.8	-1.5
	comp=Z,0.5nm,0.8s,baz=324,slow=3.7,SNR=2.0						
	comp=Z,1.9nm,0.9s						
TORD	Torodi Ar. Bea	43.85	103	P	P	18 48 58.6	-0.5
SQTA	Sankt Quirin	43.86	52	i P	P	18 48 60.0	+1.1
	comp=Z,18nm,1.3s						
WATA	Walderalm	44.12	52	i P	P	18 49 01.7	+0.7
	comp=Z,12nm,1.3s						
CTI	Castel Tesino	44.13	54		P	18 49 00.4	-0.6
CTI				IAmb	IAmb	18 49 13.5	
	comp=Z,27nm,1.5s						
WTTA	Wattenberg	44.16	52	i P	P	18 49 02.0	+0.7
	comp=Z,11nm,1.7s						
ULM	Lac du Bonnet	44.40	312	P	P	18 49 03.2	+0.3
	comp=Z,3.0nm,0.6s,baz=70,slow=7.8,SNR=4.4						
ULM				LR	LR	19 06 14.1	
	comp=Z,142nm,20.0s,baz=26,slow=34						
	comp=Z,3.0nm,0.6s						
JTS	Las Juntas de	44.57	253	LR	LR	19 07 43.3	
	comp=Z,183nm,18.4s,baz=40,slow=36						
ABTA	Abfaltersbach	44.74	53	i P	P	18 49 02.8	-3.1
	comp=Z,15nm,1.2s						
LESA	Schwarzleotal	44.87	52	i P	P	18 49 07.2	+0.3
	comp=Z,7.2nm,1.3s						
FCC	Fort Churchill	44.94	324		P	18 49 07.0	-0.1
FCC				IAmb	IAmb	18 49 12.5	
	comp=Z,19nm,1.3s						
ILON	Igloolik, Nuna	44.98	341		P	18 49 07.0	-0.3
FDMO	Fiordimonte	45.20	58	P	P	18 49 09.4	-0.1
CLL	Collm	45.33	46	eS	S	18 55 50.0	-0.4
CLL				eSS	ScS	18 59 08.0	+1.5
CLL				eSSS	SSS	19 00 00.0	
CLL				AMS	AMS	19 05 00.0	
	comp=Z,300nm,20.3s						
MYKA	Terra Mystica	45.52	53	i P	P	18 49 13.2	+1.1
	comp=Z,11nm,1.6s						
BIOA	Bad Ischl, Aus	45.53	51	i P	P	18 49 12.8	+0.7
	comp=Z,9.0nm,1.1s						
KHC	Kasperske Hory	45.54	49		P	18 49 12.1	0.0
KHC				IAmb	IAmb	18 49 19.8	
	comp=Z,31nm,1.9s						
KHC	Kasperske Hory	45.54	49	eP	P	18 49 10.2	-2.0
KHC				ex	x	18 49 19.8	
GEC2	GERESS Array S	45.61	50	P	P	18 49 12.4	-0.3
GEC2				IAmb	IAmb	18 49 20.9	
	comp=Z,16nm,1.6s						
GERES	GERESS Array B	45.61	50	P	P	18 49 12.5	-0.3
	comp=Z,0.3nm,0.5s,baz=260,slow=8.0,SNR=6.4						
GERES				PcP	PcP	18 50 51.9	+0.9
	comp=Z,0.3nm,0.5s,baz=273,slow=1.8,SNR=2.5						
GERES				LR	LR	19 05 10.4	
	comp=Z,116nm,20.6s,baz=270,slow=32						
	comp=Z,0.3nm,0.5s						
OTAV	Otavalo	45.79	236		P	18 49 14.0	-0.9
OTAV				IAmb	IAmb	18 49 29.7	
	comp=Z,13nm,1.4s						
MOA	Molln	45.96	51	i P	P	18 49 14.7	-0.7
	comp=Z,10nm,1.3s						
OBKA	Obir	46.14	53	i P	P	18 49 17.5	+0.5
	comp=Z,11nm,1.6s						
NOA	NORSAR Array B	46.21	33	LR	LR	19 06 29.6	
	comp=Z,39nm,19.6s,baz=250,slow=33						
BDFB	Brasilia	46.22	188	LR	LR	19 06 16.4	
	comp=Z,160nm,18.9s,baz=131,slow=33						
POIN	Pond Inlet	46.29	346		P	18 49 17.1	-0.6
POIN				IAmb	IAmb	18 49 21.3	
	comp=Z,13nm,1.5s						
H10N2	ASCENSION HYDR	46.40	141	T	T	19 38 37.7	
	baz=327,slow=75,SNR=763						
H10N3	ASCENSION HYDR	46.41	141	T	T	19 38 37.9	
	baz=327,slow=75,SNR=711						
H10N1	ASCENSION HYDR	46.42	141	T	T	19 38 39.1	
	baz=327,slow=75,SNR=918						
SOKA	Soboth	46.47	53	eP	P	18 49 18.8	-0.8
	comp=Z,7.9nm,1.3s						
VAE	Valguarnera	46.78	66	LR	LR	19 05 48.4	
	comp=Z,494nm,20.7s,baz=302,slow=32						
ARSA	Arzberg	46.80	52		P	18 49 20.8	-1.3
ARSA				IAmb	IAmb	18 49 29.5	
	comp=Z,15nm,1.3s						
ARSA	Arzberg	46.80	52	i P	P	18 49 21.4	-0.7
	comp=Z,15nm,1.5s						
APG	El Apazote	46.84	262	LR	LR	19 06 28.7	
	comp=Z,14nm,21.0s,baz=72,slow=33						
CONA	Conrad Observa	47.03	51	eP	P	18 49 23.8	-0.1
	comp=Z,6.4nm,1.5s						
HFS	Hagfors	47.16	34	P	P	18 49 25.5	+0.9
	comp=Z,2.8nm,0.8s,baz=238,slow=8.3,SNR=2.0						
HFS				LR	LR	19 05 51.4	
	comp=Z,176nm,20.3s,baz=260,slow=32						
	comp=Z,2.8nm,0.8s						
H10S3	ASCENSION HYDR	47.24	142	T	T	19 39 46.0	
	baz=256,slow=74						
H10S2	ASCENSION HYDR	47.26	142	T	T	19 39 41.2	
	baz=324,slow=74						
RONA	Rosalia, Austr	47.33	51	eP	P	18 49 25.9	-0.3
	comp=Z,16nm,1.5s						
BLKN	Baker Lake	47.47	331	P	P	18 49 26.1	-0.9
BLKN				IAmb	IAmb	18 49 31.6	
	comp=Z,13nm,1.4s						
TULEG	Thule	47.82	352		P	18 49 29.4	-0.1
MODS	Modra-Piesok	47.98	51	eP	P	18 49 38.0	+6.8
BRDY	Brady	48.36	286	P	P	18 49 34.8	+0.4
APMT	Aspermont	48.79	289	P	P	18 49 38.2	+0.5
APMT				IAmb	IAmb	18 49 46.5	
	comp=Z,12nm,1.2s						
JCT	Junction City	49.24	286	P	P	18 49 40.6	-0.6
JCT				IAmb	IAmb	18 49 50.3	
	comp=Z,15nm,1.0s						
SIV	San Ignacio	49.69	204	LR	LR	19 08 30.8	
	comp=Z,152nm,21.0s,baz=163,slow=33						
CMIG	Matias Romero	49.70	267	LR	LR	19 11 31.1	
	comp=Z,128nm,18.5s,baz=64,slow=37						
DRIO	Del Rio	50.21	284	P	P	18 49 48.2	-0.3
DRIO				IAmb	IAmb	18 49 57.5	
	comp=Z,9.9nm,1.1s						
OZNA	Ozona	50.22	286		P	18 49 49.0	+0.3
OZNA				IAmb	IAmb	18 49 57.5	
	comp=Z,16nm,1.3s						
ATAH	Atahualpa	51.09	229	LR	LR	19 11 13.4	
	comp=Z,242nm,21.6s,baz=15,slow=36						
RES	Resolute Bay	51.29	344	LR	LR	19 12 17.5	
	comp=Z,102nm,18.2s,baz=242,slow=37						
RES	Resolute Bay	51.29	344		P	18 49 57.3	+1.3
TXAR	Lajitas Array	52.78	285	P	P	18 50 10.1	+2.1
	comp=Z,1.2nm,0.9s,baz=93,slow=7.7,SNR=7.9						
TXAR				LR	LR	19 11 29.7	
	comp=Z,129nm,20.0s,baz=64,slow=35						
	comp=Z,1.2nm,0.9s						
TXAR	Lajitas Array	52.78	285	P	P	18 50 08.3	+0.3
TX31	Lajitas Ar. Si	52.78	285		P	18 50 08.6	+0.7
LPAZ	La Paz	52.83	212	P	P	18 50 10.3	+1.4
	comp=Z,1.4nm,0.8s,baz=20,slow=3.2,SNR=4.3						
LPAZ				LR	LR	19 10 36.4	
	comp=Z,241nm,21.4s,baz=32,slow=34						
	comp=Z,1.4nm,0.8s						
LPAZ	La Paz	52.83	212	P	P	18 50 09.8	+0.9
FINES	FINESS Array B	53.35	34	P	P	18 50 12.4	+1.0
	comp=Z,8.5nm,1.0s,baz=264,slow=4.2,SNR=4.7						
FINES				LR	LR	19 09 51.2	
	comp=Z,81nm,20.1s,baz=250,slow=33						
	comp=Z,8.5nm,1.0s						
VHRN	Van Horn	53.44	288		P	18 50 12.2	-0.7
ANMO	Albuquerque	53.51	293	LR	LR	19 10 47.4	
	comp=Z,443nm,21.3s,baz=104,slow=34						
ARCES	ARCESS Array B	53.97	24	P	P	18 50 17.2	+1.3
	comp=Z,8.4nm,1.0s,baz=280,slow=5.4,SNR=2.7						
ARCES				LR	LR	19 09 17.8	
	comp=Z,90nm,19.1s,baz=307,slow=32						

	comp=Z,8.4nm,1.0s						
ARCES	**ARCESS Array B**	**53.97**	**24**	P	**P**	**18 50 16.0**	**+0.1**
SPITS	**Spitsbergen Ar**	**54.05**	**13**	P	**P**	**18 50 18.5**	**+2.1**
	comp=Z,8.2nm,1.1s,baz=298,slow=3.1,SNR=2.3						
	comp=Z,8.2nm,1.1s						
YNE	**Yellowstone No**	**54.12**	**306**	IAmb	IAmb	18 50 23.2	
	comp=Z,9.2nm,1.0s						
MLR	**Muntele Rosu**	**54.13**	**54**	LR	LR	19 13 51.8	
	comp=Z,159nm,18.1s,baz=260,slow=37						
BW06	**Boulder Array**	**54.18**	**303**		**P**	**18 50 17.8**	**-0.4**
BW06				IAmb	IAmb	18 50 23.2	
	comp=Z,20nm,1.4s						
PD31	**Pinedale Array**	**54.18**	**303**		**P**	**18 50 17.8**	**-0.4**
PD31				IAmb	IAmb	18 50 23.2	
	comp=Z,20nm,1.4s						
PDAR	**Pinedale Array**	**54.18**	**303**	P	**P**	**18 50 20.2**	**+2.0**
	comp=Z,3.0nm,0.9s,baz=87,slow=8.4,SNR=22						
PDAR				LR	LR	19 12 26.4	
	comp=Z,541nm,19.1s,baz=98,slow=35						
	comp=Z,3.0nm,0.9s						
PDAR	**Pinedale Array**	**54.18**	**303**		**P**	**18 50 18.1**	**-0.2**
LOHW	**Long Hollow**	**54.78**	**304**	P	**P**	**18 50 22.5**	**0.0**
LOHW				IAmb	IAmb	18 50 36.1	
	comp=Z,13nm,1.7s						
YHB	**Horse Butte**	**54.99**	**306**	P	**P**	**18 50 25.1**	**+1.0**
YHB				IAmb	IAmb	18 50 30.3	
	comp=Z,17nm,1.2s						
EDM	**Edmonton**	**55.24**	**316**		**P**	**18 50 25.1**	**-0.3**
P18A	**Preston Nutter**	**55.33**	**299**	P	**P**	**18 50 26.9**	**+0.2**
YKA	**Yellowknife Ar**	**55.42**	**327**	P	**P**	**18 50 28.1**	**+1.6**
	comp=Z,1.7nm,1.1s,baz=90,slow=6.5,SNR=13						
YKA				LR	LR	19 13 57.2	
	comp=Z,294nm,19.2s,baz=101,slow=36						
	comp=Z,1.7nm,1.1s						
YKA	**Yellowknife Ar**	**55.42**	**327**	P	**P**	**18 50 26.9**	**+0.4**
AKASG	**Malin Array Be**	**55.57**	**47**	P	**P**	**18 50 27.8**	**0.0**
	comp=Z,0.6nm,0.4s,baz=279,slow=6.1,SNR=5.4						
AKASG				LR	LR	19 12 30.6	
	comp=Z,274nm,18.2s,baz=243,slow=34						
	comp=Z,0.6nm,0.4s						
AKASG	**Malin Array Be**	**55.57**	**47**	IAmb	IAmb	18 50 33.9	
	comp=Z,8.3nm,1.6s						
SRU	**San Rafael Swe**	**55.66**	**299**	P	**P**	**18 50 29.5**	**+0.6**
HWUT	**Hardware Ranch**	**55.88**	**302**	IAmb	IAmb	18 50 36.3	
	comp=Z,13nm,1.4s						
GO01	**Chusmiza**	**56.27**	**211**	P	**P**	**18 50 34.4**	**+0.7**
PLID	**Pearl Lake**	**58.27**	**307**		**P**	**18 50 47.7**	**+0.3**
PLID				IAmb	IAmb	18 50 52.8	
	comp=Z,12nm,1.4s						
CPUP	**Villa Florida**	**58.35**	**196**	P	**P**	**18 50 48.2**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=18,slow=13,SNR=3.1						
CPUP				LR	LR	19 13 45.0	
	comp=Z,76nm,21.4s,baz=72,slow=34						
	comp=Z,1.1nm,0.8s						
CPUP	**Villa Florida**	**58.35**	**196**	IAmb	IAmb	18 52 35.4	
	comp=Z,16nm,1.9s						
NEW	**Newport**	**58.36**	**311**	LR	LR	19 13 54.8	
	comp=Z,266nm,21.8s,baz=312,slow=34						
MFID	**Camas Ranch**	**58.54**	**305**	IAmb	IAmb	18 50 58.6	
	comp=Z,8.1nm,1.1s						
SPR3	**Spring Creek 3**	**58.56**	**300**	IAmb	IAmb	18 50 60.0	
	comp=Z,9.2nm,1.2s						
OBN	**Obninsk**	**59.29**	**41**	LR	LR	19 14 49.4	
	comp=Z,142nm,18.4s,baz=189,slow=34						
LPIG	**La Paz**	**60.15**	**282**	LR	LR	19 15 42.3	
	comp=Z,130nm,20.9s,baz=36,slow=35						
BRTR	**Keskin Array B**	**60.96**	**59**	P	**P**	**18 51 06.5**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=296,slow=5.1,SNR=7.0						
BRTR				LR	LR	19 17 11.8	
	comp=Z,92nm,18.1s,baz=270,slow=36						
	comp=Z,1.2nm,0.8s						
NVAR	**Mina Array Bea**	**61.70**	**300**	P	**P**	**18 51 12.7**	**+1.7**
	comp=Z,1.7nm,0.9s,baz=74,slow=6.3,SNR=5.8						
NVAR				LR	LR	19 16 43.1	
	comp=Z,642nm,20.5s,baz=73,slow=35						
	comp=Z,1.7nm,0.9s						
NVAR	**Mina Array Bea**	**61.70**	**300**	P	**P**	**18 51 11.5**	**+0.5**
PFO	**Pinyon Flats O**	**61.81**	**294**	LR	LR	19 16 04.5	
	comp=Z,400nm,20.6s,baz=80,slow=34						
PAHR	**Pah Rah Range**	**62.11**	**302**	P	**P**	**18 51 14.0**	**+0.4**
PAHR				IAmb	IAmb	18 51 26.8	
	comp=Z,18nm,1.7s						
INK	**Inuvik**	**62.57**	**335**	LR	LR	19 16 56.5	
	comp=Z,232nm,20.9s,baz=78,slow=34						
INK	**Inuvik**	**62.57**	**335**		**P**	**18 51 16.8**	**+0.8**
INK				IAmb	IAmb	18 51 29.3	
	comp=Z,12nm,1.1s						
ISA	**Isabella, Lake**	**62.70**	**297**		**P**	**18 51 17.3**	**-0.3**
ISA				IAmb	IAmb	18 51 31.9	
	comp=Z,7.8nm,1.0s						
YBH	**Yreka Blue Hor**	**63.89**	**305**	LR	LR	19 17 44.5	
	comp=Z,14nm,21.3s,baz=62,slow=35						
BBB	**Bella Bella**	**64.23**	**317**	LR	LR	19 18 39.4	
	comp=Z,421nm,20.4s,baz=7.0,slow=35						
MMAI	**Mount Meron Ar**	**64.48**	**65**	LR	LR	19 18 39.4	
	comp=Z,58nm,19.7s,baz=286,slow=35						
F28M	**Old Crow**	**65.06**	**335**		**P**	**18 51 32.2**	**-0.4**
F28M				IAmb	IAmb	18 51 46.7	
	comp=Z,8.7nm,1.0s						
EIL	**Elat**	**65.35**	**69**	LR	LR	19 19 22.8	
	comp=Z,98nm,21.4s,baz=172,slow=35						
ASF	**Jabal al Asfar**	**65.97**	**66**	LR	LR	19 19 37.1	
	comp=Z,37nm,20.5s,baz=208,slow=35						
H27K	**Steamboat Moun**	**66.16**	**334**	P	**P**	**18 51 39.5**	**-0.2**
H27K				IAmb	IAmb	18 51 45.2	
	comp=Z,14nm,1.4s						
KBZ	**Khabaz**	**66.28**	**52**	LR	LR	19 18 51.9	
	comp=Z,50nm,19.5s,baz=320,slow=34						
E25K	**Arctic Village**	**66.88**	**337**	IAmb	IAmb	18 51 50.9	
	comp=Z,11nm,1.4s						
PRP	**Porcupine Dome**	**67.95**	**334**	IAmb	IAmb	18 52 05.6	
	comp=Z,8.8nm,1.0s						
E23K	**Chandalar**	**68.27**	**337**	IAmb	IAmb	18 51 59.9	
	comp=Z,8.8nm,1.3s						
IL31		**68.80**	**334**		**P**	**18 51 56.9**	**+0.7**
ILAR	**Eielson Array**	**68.80**	**334**	P	**P**	**18 51 58.9**	**+2.5**
	comp=Z,2.8nm,1.0s,baz=51,slow=4.4,SNR=22						
ILAR				LR	LR	19 22 01.6	
	comp=Z,302nm,19.1s,baz=110,slow=36						
	comp=Z,2.8nm,1.0s						
ILAR	**Eielson Array**	**68.80**	**334**	P	**P**	**18 51 57.5**	**+1.2**
E22K	**Anaktuvuk Pass**	**68.96**	**338**	P	**P**	**18 51 57.8**	**+0.5**
E22K				IAmb	IAmb	18 52 03.8	
	comp=Z,7.6nm,1.2s						
CCB	**Clear Creek Bu**	**69.20**	**334**		**P**	**18 51 59.0**	**+0.2**
WRH	**Wood River Hil**	**69.39**	**334**		**P**	**18 52 01.8**	**+1.7**
D20K	**Etivluk River**	**70.17**	**339**	IAmb	IAmb	18 52 11.0	
	comp=Z,8.3nm,1.1s						
I21K	**Tanana**	**70.50**	**335**	P	**P**	**18 52 07.2**	**+0.4**
I21K				IAmb	IAmb	18 52 17.6	
	comp=Z,12nm,1.2s						
ARTI	**Arti**	**70.60**	**35**		**P**	**18 52 08.1**	**+0.5**
AKTO	**Aktyubinsk**	**73.07**	**41**	LR	LR	19 23 03.0	
	comp=Z,167nm,19.6s,baz=228,slow=35						
H17K	**Granite Mounta**	**73.43**	**337**	IAmb	IAmb	18 52 38.7	
	comp=Z,15nm,1.2s						
NRIK	**Noril'sk**	**73.95**	**17**	P	**P**	**18 52 29.5**	**+2.2**
	comp=Z,3.8nm,1.0s,baz=309,slow=2.5,SNR=4.1						
	comp=Z,3.8nm,1.0s						
NRIK	**Noril'sk**	**73.95**	**17**		**P**	**18 52 27.9**	**+0.6**
NRIK				IAmb	IAmb	18 52 36.8	
	comp=Z,9.7nm,1.3s						
AB31	**Akbulak array**	**74.73**	**42**	P	**P**	**18 52 33.0**	**+0.8**
MBAR	**Mbarara**	**75.55**	**99**	LR	LR	19 24 57.2	
	comp=Z,307nm,19.7s,baz=302,slow=35						
PLCA	**Paso Flores**	**75.61**	**202**	P	**P**	**18 52 39.1**	**+1.8**
	comp=Z,1.0nm,0.7s,baz=0.0,slow=13,SNR=3.2						
PLCA				LR	LR	19 24 54.6	
	comp=Z,74nm,20.2s,baz=7.5,slow=35						
	comp=Z,1.0nm,0.7s						
PLCA	**Paso Flores**	**75.61**	**202**	P	**P**	**18 52 37.7**	**+0.4**
PLCA				IAmb	IAmb	18 54 28.0	
	comp=Z,14nm,1.5s						
TIXI	**Tiksi**	**77.95**	**3**		**P**	**18 52 50.4**	**+0.4**
BORK	**Borovoye**	**78.25**	**35**		**P**	**18 52 52.8**	**+0.7**
BORK				IAmb	IAmb	18 52 57.4	
	comp=Z,22nm,1.8s						
BVAR	**Borovoye Array**	**78.29**	**35**	P	**P**	**18 52 54.0**	**+1.7**
	comp=Z,1.6nm,0.6s,baz=302,slow=4.2,SNR=12						
	comp=Z,1.6nm,0.6s						
ATD	**Arta Tunnel**	**79.93**	**83**	LR	LR	19 27 39.2	
	comp=Z,14nm,19.7s,baz=325,slow=35						
LSZ	**Lusaka**	**81.44**	**113**	LR	LR	19 28 02.6	
	comp=Z,134nm,20.2s,baz=320,slow=35						
KHWEE	**KHWEE**	**83.19**	**120**	P	**P**	**18 53 17.7**	**-1.4**
ZAA0	**Zalesovo Array**	**84.22**	**28**	P	**P**	**18 53 23.8**	**0.0**
ZAA0				IAmb	IAmb	18 53 32.5	
	comp=Z,9.3nm,1.2s						
ZALV	**Zalesovo Beam**	**84.22**	**28**	P	**P**	**18 53 24.8**	**+1.0**
	comp=Z,5.0nm,1.1s,baz=308,slow=5.3,SNR=15						
	comp=Z,5.0nm,1.1s						
ZALV	**Zalesovo Beam**	**84.22**	**28**	P	**P**	**18 53 23.6**	**-0.1**
MATP	**Matopo**	**84.62**	**117**	LR	LR	19 26 23.3	
	comp=Z,91nm,21.9s,baz=291,slow=32						
LBTB	**Lobatse**	**85.13**	**123**	LR	LR	19 24 30.6	
	comp=Z,132nm,21.9s,baz=314,slow=31						
CHGR	**Chuyangaron**	**86.04**	**47**	P	**P**	**18 53 32.9**	**-0.5**
RPN	**Rapa Nui**	**86.06**	**235**	LR	LR	19 28 51.1	
	comp=Z,31nm,18.8s,baz=307,slow=33						
SUR	**Sutherland**	**86.36**	**131**	LR	LR	19 23 56.1	
	comp=Z,108nm,21.3s,baz=332,slow=30						
GAR	**Garm**	**86.56**	**46**	P	**P**	**18 53 35.7**	**-0.3**
GAR				IAmb	IAmb	18 53 44.6	
	comp=Z,13nm,1.3s						
AAK	**Ala-Archa**	**86.81**	**41**	LR	LR	19 31 59.1	
	comp=Z,117nm,19.6s,baz=360,slow=35						
AAK	**Ala-Archa**	**86.81**	**41**		**P**	**18 53 36.0**	**-1.2**
BOSA	**Boshof**	**87.04**	**126**	LR	LR	19 27 06.9	
	comp=Z,95nm,18.3s,baz=354,slow=32						
SHEM	**Shemya Is, Ala**	**91.31**	**339**	LR	LR	19 38 31.1	
	comp=Z,75nm,18.2s,baz=54,slow=38						
WMQ	**Urumqi**	**92.95**	**34**	*e*P	**P**	**18 54 07.5**	**+1.6**
WMQ				LR	LR		
	comp=N,590nm,8.9s						
WMQ				LR	LR		
	comp=E,830nm,8.3s						
WMQ				LR	LR		
	comp=Z,280nm,11.3s						
OPO	**Ambohidratompo**	**98.60**	**106**	LR	LR	19 39 17.8	
	comp=Z,68nm,18.4s,baz=134,slow=36						
CMAR	**Chiang Mai Arr**	**118.57**	**43**	PKP	**PKPdf**	**18 59 40.8**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=314,slow=3.6,SNR=4.5						
QSPA	**South Pole Qui**	**120.39**	**180**	PKP	**PKPdf**	**18 59 42.4**	**-0.7**
	comp=Z,0.9nm,1.0s,baz=137,slow=4.7,SNR=3.1						
ASAR	**Alice Springs**	**172.33**	**29**	PKPab	**PKPab**	**19 02 26.3**	**+0.4**
	comp=Z,0.5nm,1.0s,baz=328,slow=3.3,SNR=4.1						

*MEX **31** 18:47:57.3±0.5, 14°.83N×93°.34W, h16^{km}±87^{km}, MD3.8*

*GCG **31** 18:47:58.4±0.3, 15°.82N×92°.26W, h114^{km}±57^{km}, MD4.1, ML3.2*

ISC 31 18:47:48.0±2.3**, 14°.6N**±0°.2×**93°.5W**±0°.1**, h87**^{km}±41^{km}**, n9, σ3^s.27**/18**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**1.12**	**14**	*e*P	**Pn**	**18 48 11.2**	**+2.2**
PCIG				*e*S	**Sn**	**18 48 21.8**	**-3.0**
PATR	**El Naranjo**	**1.32**	**67**	*e*P	**Pn**	**18 48 14.4**	**+2.7**
PATR				*e*S	**Sn**	**18 48 27.4**	**-2.1**
PAVE	**Pavencul**	**1.41**	**65**	*i* P	**Pn**	**18 48 15.9**	**+3.2**
PAVE				*i* S	**Sn**	**18 48 30.3**	**-1.0**
CHUJ	**Union Juarez**	**1.43**	**70**	*e*P	**Pn**	**18 48 16.0**	**+3.0**
CHUJ				*e*S	**Sn**	**18 48 30.8**	**-1.0**
STG2	**El Palmar, Qui**	**2.06**	**94**	*e*P	**Pn**	**18 48 23.2**	**+2.0**
STG2				*e*S	**Sn**	**18 48 42.5**	**-3.9**
STG8	**El Palmar, Qui**	**2.09**	**94**	*e*P	**Pn**	**18 48 23.4**	**+1.9**
STG8				*e*S	**Sn**	**18 48 43.2**	**-3.9**
STG8				IAML		18 48 47.3	
	comp=N,297nm,0.2s						
STG5	**El Palmar, Qui**	**2.09**	**95**	*e*P	**Pn**	**18 48 23.9**	**+2.4**
STG5				*e*S	**Sn**	**18 48 43.6**	**-3.5**
TGIG		**2.19**	**10**	*e*P	**Pn**	**18 48 26.8**	**+4.0**
TGIG				*e*S	**Sn**	**18 48 43.8**	**-5.5**
CMIG	**Matias Romero**	**2.81**	**332**	*e*P	**Pn**	**18 48 30.4**	**-0.5**
CMIG				*e*S	**Sn**	**18 49 04.5**	**+0.6**

*NEIC **31** 18:48:22.7±1.4, 29°.45N±0°.08×104°.70E±0°.08, h10^{km}±1^{km}, mb4.6/35, Error ellipse: s-maj=13.8km s-min=11.9km az=207.0*

*IDC **31** 18:48:27.1±2.8, 29°.50N×104°.70E, h41^{km}±25^{km}, mb3.6/13, mbtmp3.8/16, ML3.1/2, MS3.5/3, Error ellipse: s-maj=21.7km s-min=14.1km az=67.0*

ISC 31 18:48:26.0±0.6**, 29°.47N**±0°.07×**104°.72E**±0°.07**, h35**^{km}**, n58, σ0^s.77**/55**, mb4.4**/28**, MS3.2**/3**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENH	**Enshi**	**4.22**	**78**		**Pn**	**18 49 28.2**	**+0.4**
ENH				Sn	**Sn**	**18 50 15.8**	**-0.1**
LZDM	**Lanzhou Array**	**6.53**	**353**	P	**Pn**	**18 50 00.1**	**+0.3**
	8.2nm,0.3s,baz=174,slow=14,SNR=23						
LZDM				S	**Sn**	**18 51 12.8**	**-0.4**
	21nm,0.7s,baz=175,slow=26,SNR=10						
CMAR	**Chiang Mai Arr**	**12.16**	**207**	P	**Pn**	**18 51 19.0**	**+2.2**
	baz=8.7,slow=12,SNR=4.4						
	0.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**12.16**	**207**		**Pn**	**18 51 15.9**	**-0.9**
YHNB	**Yeheng**	**15.59**	**104**		**P**	**18 52 05.3**	**-1.7**
SONM	**Songino Array**	**18.39**	**4**	P	**Pn**	**18 52 39.5**	**+1.4**
	0.1nm,0.3s,baz=179,slow=10,SNR=9.2						
	1.1nm,0.8s						
SONM	**Songino Array**	**18.39**	**4**	P	**P**	**18 52 37.0**	**-0.9**
KSRS	**Korea Array**	**20.90**	**62**	P	**P**	**18 53 06.0**	**+0.8**
	3.1nm,0.9s,baz=243,slow=10,SNR=6.3						
KSRS				LR	LR	19 01 59.5	
	comp=Z,30nm,18.7s,baz=95,slow=39						
	3.1nm,0.9s						
WUS	**Wushi**	**23.78**	**306**		**P**	**18 53 34.9**	**-0.6**
MKAR	**Makanchi Array**	**24.57**	**321**	P	**P**	**18 53 42.5**	**0.0**
	1.7nm,0.7s,baz=124,slow=12,SNR=15						
	1.7nm,0.7s						
MKAR	**Makanchi Array**	**24.57**	**321**	P	**P**	**18 53 41.4**	**-1.1**
MAKZ	**Makanchi**	**24.75**	**321**	P	**P**	**18 53 42.9**	**-1.3**
MAKZ				IAmb	IAmb	18 53 46.9	
	comp=Z,5.1nm,1.1s						
JMN	**Monobe**	**25.16**	**73**	P	**P**	**18 53 48.6**	**+0.6**
USRK	**Ussuriysk Ar.**	**26.16**	**48**	P	**P**	**18 53 57.9**	**+0.9**
	comp=Z,3.5nm,0.7s,baz=255,slow=11,SNR=5.5						
	comp=Z,3.5nm,0.7s						
BOOM	**Boomskoye usch**	**26.53**	**307**	P	**P**	**18 54 01.7**	**+1.2**
AAK	**Ala-Archa**	**27.58**	**307**	LR	LR	19 05 13.2	
	comp=Z,68nm,19.0s,baz=32,slow=36						
JGF	**Kuroka**	**28.10**	**69**	P	**P**	**18 54 14.2**	**-0.4**
JGF				IAmb	IAmb	18 54 15.0	
	comp=Z,12nm,1.0s						
ZALV	**Zalesovo Beam**	**28.42**	**335**	P	**P**	**18 54 17.5**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=142,slow=12,SNR=1.6						
	comp=Z,0.4nm,0.6s						
ASAJ	**Asahikawa**	**33.35**	**54**	LR	LR	19 07 51.1	
	comp=Z,373nm,18.5s,baz=160,slow=35						
BVAR	**Borovoye Array**	**34.41**	**323**	P	**P**	**18 55 09.9**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=116,slow=9.8,SNR=2.4						
BVAR				PcP	**PcP**	**18 57 44.6**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=92,slow=3.3,SNR=2.9						
	comp=Z,0.3nm,0.4s						
AB31	**Akbulak array**	**39.16**	**313**	P	**P**	**18 55 49.2**	**-1.1**
ABKAR	**Akbulak array**	**39.16**	**313**	P	**P**	**18 55 49.2**	**-1.1**
NRIK	**Noril'sk**	**41.12**	**351**	P	**P**	**18 56 07.2**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=169,slow=9.5,SNR=4.0						
	comp=Z,1.9nm,0.6s						
NRIK	**Noril'sk**	**41.12**	**351**	P	**P**	**18 56 06.3**	**+0.1**
RAYN	**Ar Rayn**	**52.85**	**278**	P	**P**	**18 57 38.1**	**-0.4**
WB0	**Warramunga Arr**	**56.70**	**146**	P	**P**	**18 58 05.3**	**-0.8**
WB0				IAmb	IAmb	18 58 09.7	
	comp=Z,5.4nm,1.3s						
WRAB	**Tennant Creek**	**56.82**	**146**	P	**P**	**18 58 06.2**	**-0.8**
WRAB				IAmb	IAmb	18 58 08.6	
	comp=Z,4.7nm,1.0s						
WRA	**Warramunga Arr**	**56.82**	**146**	P	**P**	**18 58 07.0**	**0.0**
	comp=Z,1.8nm,0.8s,baz=328,slow=9.1,SNR=7.3						
	comp=Z,1.8nm,0.8s						
BRTR	**Keskin Array B**	**58.02**	**301**	P	**P**	**18 58 15.7**	**+0.1**
	comp=Z,0.9nm,1.0s,baz=62,slow=9.9,SNR=3.8						
	comp=Z,0.9nm,1.0s						
FIA1	**FINESS Array S**	**59.22**	**327**	P	**P**	**18 58 23.6**	**+0.3**
FINES	**FINESS Array B**	**59.22**	**327**	P	**P**	**18 58 23.7**	**+0.4**
	comp=Z,7.0nm,1.0s,baz=96,slow=8.8,SNR=4.0						
	comp=Z,7.0nm,1.0s						
AS31	**Alice Springs**	**59.82**	**149**	P	**P**	**18 58 28.5**	**+0.5**
ASAR	**Alice Springs**	**59.82**	**149**	P	**P**	**18 58 28.6**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=330,slow=6.7,SNR=18						
	comp=Z,1.3nm,0.8s						
KBS	**Kingsbay**	**61.83**	**347**	P	**P**	**18 58 39.9**	**-1.1**
C16K	**Lisburne Hills**	**62.96**	**25**	P	**P**	**18 58 48.8**	**+0.3**
C18K	**Utukok River**	**64.36**	**24**	P	**P**	**18 58 58.1**	**+0.1**
C18K				IAmb	IAmb	18 59 22.1	
	comp=Z,6.5nm,1.5s						
C19K	**Lookout Ridge**	**64.80**	**23**	P	**P**	**18 59 01.2**	**+0.4**
C19K				IAmb	IAmb	18 59 12.7	
	comp=Z,3.5nm,1.1s						
G16K	**Koyuk River**	**64.80**	**28**	P	**P**	**18 59 01.5**	**+0.8**
B20K	**Meade River**	**65.34**	**22**	P	**P**	**18 59 04.7**	**+0.5**
D19K	**Kuna River**	**65.49**	**24**		**P**	**18 59 05.2**	**-0.1**
D19K				IAmb	IAmb	18 59 08.1	
	comp=Z,5.0nm,0.9s						
D20K	**Etivluk River**	**65.94**	**23**		**P**	**18 59 08.1**	**-0.1**
D20K				IAmb	IAmb	18 59 11.6	
	comp=Z,4.2nm,0.9s						
B21K	**Ikpikpuk River**	**66.30**	**22**	P	**P**	**18 59 10.9**	**+0.5**
B21K				IAmb	IAmb	18 59 13.5	
	comp=Z,4.5nm,0.9s						
B22K	**Teshekpuk Lake**	**66.43**	**21**		**P**	**18 59 11.7**	**+0.5**
C23K	**Itkillik River**	**67.51**	**21**		**P**	**18 59 18.6**	**+0.5**
C23K				IAmb	IAmb	18 59 21.7	
	comp=Z,3.8nm,0.8s						
D23K	**Nanushuk River**	**67.85**	**22**	P	**P**	**18 59 20.9**	**+0.7**
D24K	**Happy Valley**	**68.37**	**22**	P	**P**	**18 59 24.1**	**+0.6**
D24K				IAmb	IAmb	18 59 27.1	
	comp=Z,3.4nm,0.8s						
E24K	**Your Creek**	**68.96**	**23**	IAmb	IAmb	18 59 30.3	
	comp=Z,2.9nm,0.8s						
GERES	**GERESS Array B**	**69.07**	**315**	P	**P**	**18 59 28.6**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=75,slow=6.9,SNR=3.0						
	comp=Z,0.3nm,0.6s						
C27K	**Jago River**	**69.75**	**20**	IAmb	IAmb	18 59 34.9	
	comp=Z,4.9nm,0.9s						
PPLA	**Purkeypile**	**69.84**	**28**	P	**P**	**18 59 33.4**	**+0.5**
NEA2	**Nenana**	**70.33**	**26**	IAmb	IAmb	18 59 37.9	
	comp=Z,4.5nm,0.9s						
ILAR	**Eielson Array**	**71.08**	**25**	P	**P**	**18 59 39.9**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=284,slow=5.2,SNR=7.5						
	comp=Z,0.6nm,0.7s						
ILAR	**Eielson Array**	**71.08**	**25**	P	**P**	**18 59 39.2**	**-1.1**
PRP	**Porcupine Dome**	**71.21**	**24**	P	**P**	**18 59 40.8**	**-0.5**
PRP				IAmb	IAmb	18 59 43.4	
	comp=Z,3.6nm,0.7s						
J26L	**Joseph Creek**	**72.45**	**25**	IAmb	IAmb	18 59 49.8	
	comp=Z,5.2nm,0.8s						
INK	**Inuvik**	**73.52**	**19**	P	**P**	**18 59 54.2**	**-0.5**
INK				IAmb	IAmb	18 59 55.9	
	comp=Z,3.4nm,0.9s						
YKA	**Yellowknife Ar**	**83.09**	**17**	P	**P**	**19 00 48.4**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=323,slow=5.2,SNR=11						
	comp=Z,0.5nm,0.7s						
YKA	**Yellowknife Ar**	**83.09**	**17**	P	**P**	**19 00 47.5**	**-0.2**

*IDC **31** 19:02:53.6±0.4, 43°.94N×150°.26E, h0^{km}, mb4.5/31, mbtmp4.4/38, ML3.8/7, MS3.7/9, Error ellipse: s-maj=12.2km s-min=10.9km az=140.0*

*MOS **31** 19:02:54.5±1.1, 43°.93N×150°.21E, h19^{km}, mb5.0/41, Error ellipse: s-maj=6.6km s-min=5.0km az=116.7*

*NEIC **31** 19:02:55.6±1.6, 44°.08N±0°.08×150°.2E±0°.1, h10^{km}±1^{km}, mb4.8/285, Error ellipse: s-maj=14.0km s-min=10.9km az=138.0*

*NIED **31** 19:02:56.2, 44°.29N×150°.22E, h30^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-3.41; $M_{\theta\theta}$2.62; $M_{\phi\phi}$0.79; $M_{r\theta}$1.54; $M_{\theta\phi}$1.48; $M_{\phi r}$-0.22; Fault plane solution: $M_0$3.76000×10^{15} NP1:ϕ_s48.00000°, δ37.00000°, λ-112.00000°. NP2:ϕ_s255.00000°, δ57.00000°, λ-74.00000°.*

*JMA **31** 19:02:56.2±1.0, 44°N±4°×15°0E±°, h30^{km}, MV4.8/15, SE OFF ETOROFU*

*SKHL **31** 19:02:57.8±0.2, 44°.00N×150°.20E, h44^{km}±6^{km}, mb5.1/4*

ISC 31 19:03:00.0±0.3**, 43°.98N**±0°.04×**150°.19E**±0°.04**, h51**^{km}**, n663, σ1^s.51**/568**, mb4.7**/208**, MS4.2**/15**, 27C-14D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.08**	**308**α	*i*PN	**Pn**	**19 03 29.2**	**-3.2**
KUR				pmax	pmax		
	comp=Z,832nm,0.6s						
KUR	**Kuril'sk**	**2.08**	**308**	*e*P	**Pn**	**19 03 30.6**	**-1.8**
KUR				AMB	AMB	19 03 31.7	
	comp=Z,850nm,0.7s						
KUR				*i* S	**Sn**	**19 03 55.1**	**-2.0**
KUR				A	A	19 03 55.8	
	comp=Z,2μm,0.6s						
KUR				A	A	19 03 55.8	
	comp=Z,4μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**3.12**	**273**	*e*PN	Pn	19 03 42.8	-3.9
YUK				pmax	pmax		
	comp=Z,232nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.12**	**273**	*e*P	Pn	19 03 42.8	-3.9
YUK				AMB	AMB	19 03 46.8	
	comp=Z,230nm,0.4s						
YUK				*e*S	**Sn**	**19 04 18.9**	**-3.8**
YUK				A	A	19 04 24.4	
	comp=Z,1μm,0.6s						
YUK				A	A	19 04 24.4	
	comp=Z,1μm,0.6s						
NEM2	**Nemuro 2**	**3.28**	**261**	*e*P	Pn	19 03 45.8	-3.0
NEM2				*e*S	**Sn**	**19 04 22.4**	**-4.3**
NMR	**Nemuro--Hokkai**	**3.29**	**261**	*e*PN	Pn	19 03 45.2	-3.8
NMR	**Nemuro--Hokkai**	**3.29**	**261**	*e*P	Pn	19 03 45.2	-3.8
NMR				*e*S	**Sn**	**19 04 22.2**	**-4.7**
GLVR	**Golovnino**	**3.38**	**268**	*e*PN	**Pn**	**19 03 47.8**	**-2.5**
GLVR				pmax	pmax		
	comp=Z,438nm,0.3s						
GLVR				pmax	pmax		
	comp=N,36nm,0.2s						
GLVR	**Golovnino**	**3.38**	**268**	*e*P	**Pn**	**19 03 47.8**	**-2.5**
GLVR				AMB	AMB	19 03 48.8	
	comp=N,440nm,0.3s						
GLVR				*e*S	**Sn**	**19 04 25.8**	**-3.4**
GLVR				A	A	19 04 32.2	
	comp=N,1μm,0.3s						
GLVR				A	A	19 04 32.2	
	comp=N,1μm,0.3s						
RUSJ	**Misakicho**	**3.56**	**274**	*e*PN	**Pn**	**19 03 51.5**	**-1.2**
RUSJ				*e*S	**Sn**	**19 04 32.0**	**-1.6**
JRA	**Rausu**	**3.66**	**271**	*e*P	**Pn**	**19 03 52.5**	**-1.5**
JNK	**Nakash**	**3.98**	**266**	*e*P	**Pn**	**19 03 56.5**	**-2.0**
JNK				*e*S	**Sn**	**19 04 40.8**	**-3.1**
JAK	**Akkeshi**	**4.11**	**258**	*e*P	**Pn**	**19 03 57.9**	**-2.4**
JAK				*e*S	**Sn**	**19 04 43.1**	**-4.0**
JTKR	**Abashiri--Toko**	**4.53**	**272**	*e*P	**Pn**	**19 04 05.0**	**-1.0**
JAR	**Ashorobuto**	**4.71**	**264**	*e*P	**Pn**	**19 04 06.8**	**-1.6**
JAR				*e*S	**Sn**	**19 05 00.7**	**-1.0**
JOB	**Onbets**	**4.75**	**259**	*e*P	**Pn**	**19 04 07.4**	**-1.6**
JCH	**Churui**	**5.16**	**257**	*e*P	**Pn**	**19 04 12.3**	**-2.4**
JCH				*e*S	**Sn**	**19 05 09.3**	**-3.6**
JKK2	**Kamakawa 2**	**5.37**	**271**	*e*P	**Pn**	**19 04 19.1**	**+1.5**
JKA	**Kamikawa-asahi**	**5.47**	**274**		**Pn**	**19 04 17.5**	**-1.4**
JKA	**Kamikawa-asahi**	**5.47**	**274**	*e*P	**Pn**	**19 04 18.2**	**-0.7**
ASAJ	**Asahikawa**	**5.47**	**274**	Pn	**Pn**	**19 04 18.2**	**-0.7**
	comp=N,6.3nm,0.3s,baz=94,slow=7.2,SNR=15						
ASAJ				Sn	Sn	19 05 03.5	-17
	comp=N,4.1nm,0.3s,baz=99,slow=12,SNR=2.0						
	comp=N,9.7nm,0.4s						
ERM	**Erimo**	**5.52**	**252**		**Pn**	**19 04 17.9**	**-1.6**
ERM				Sn	**Sn**	**19 05 18.8**	**-2.8**
ERM	**Erimo**	**5.52**	**252**	PN	**Pn**	**19 04 17.9**	**-1.6**
JNBK	**Urakawa-nobuka**	**5.70**	**255**	P	**Pn**	**19 04 19.9**	**-2.1**
JAB	**Ashibetsu**	**5.79**	**268**	*e*P	**Pn**	**19 04 24.1**	**+0.9**
YSS	**Yuzhno-Sakhali**	**6.01**	**302**	Pn	**Pn**	**19 04 23.2**	**-3.1**
YSS				Sn	**Sn**	**19 05 33.1**	**-0.7**
YSS	**Yuzhno-Sakhali**	**6.01**	**302**	P	**Pn**	**19 04 27.7**	**+1.4**
YSS	**Yuzhno-Sakhali**	**6.01**	**302**	*e*PN	**Pn**	**19 04 26.6**	**+0.3**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				MLR	MLR		
	comp=Z,900nm,16.0s						
YSS				MLR	MLR		
	comp=N,600nm,13.0s						
YSS				MLR	MLR		
	comp=E,1μm,11.0s						
YSS	**Yuzhno-Sakhali**	**6.01**	**302**	*e*P	**Pn**	**19 04 26.0**	**-0.3**
YSS				*e*S	**Sn**	**19 05 31.6**	**-2.2**
JANG	**Nango**	**7.38**	**244**	*e*P	Pn	19 04 41.0	-4.1
SKR	**Severo-Kuril's**	**7.82**	**29**	*i* PN	**Pn**	**19 04 49.0**	**-2.0**
SKR	**Severo-Kuril's**	**7.82**	**29**	*e*P	**Pn**	**19 04 50.7**	**-0.3**
TYV	**Tymovskoe**	**8.57**	**326**	*e*PN	Pn	19 05 08.7	+7.4
TYV				*e*S	Sn	19 06 47.7	+11
TYV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TYV				pmax	pmax		
	comp=Z,900nm,4.8s						
TYV				smax	smax		
	comp=E,700nm,5.6s						
TYV				smax	smax		

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         comp=N,13nm,1.3s
TYV                                  smax    smax
         comp=E,11nm,1.3s
TYV      Tymovskoe        8.57 326  eP       Pn      19 05 01.1  -0.2
TYV                                 eS       Sn      19 06 34.1  -2.4
PAU      Pauzhetka        8.72  28  eP       Pn      19 05 05.0  +1.7
PEA0B    Petropavlovsk-  10.40  26   Pn      Pn      19 05 21.6  -4.7
PEA0B    Petropavlovsk-  10.40  26   PN      Pn      19 05 21.6  -4.7
PETK     Petropavlovsk-  10.40  26   Pn      Pn      19 05 25.3  -1.0
         comp=E,0.6nm,0.3s,baz=182,slow=11,SNR=4.8
PETK                                 LR      LR      19 09 23.3
         comp=E,125nm,20.7s,baz=226,slow=37
         comp=E,5.7nm,0.8s
PETK     Petropavlovsk-  10.40  26   Pn      Pn      19 05 22.0  -4.3
NKL      Nikolayevsk     11.12 329  eP       Pn      19 05 34.7  -1.4
MAJO     Matsushiro      11.78 235           Pn      19 05 41.5  -3.8
MAJO     Matsushiro      11.78 235   P       Pn      19 05 42.0  -3.3
MAJO     Matsushiro      11.78 235  i PN     Pn      19 05 42.0  -3.3
MJAR     Matsushiro Arr  11.78 235   Pn      Pn      19 05 42.6  -2.7
         comp=E,0.3nm,0.3s,baz=32,slow=14,SNR=50
         comp=E,12nm,0.8s
MJAR     Matsushiro Arr  11.78 235           Pn      19 05 41.0  -4.2
MJB9     Matsu-Tunnel    11.78 235           Pn      19 05 41.6  -3.7
JGF      Kuroka          12.92 234           Pn      19 05 58.0  -3.0
JGF      Kuroka          12.92 234   P       Pn      19 05 58.0  -3.0
USRK     Ussuriysk Ar.   13.09 277   Pn      Pn      19 06 02.2  -0.9
         comp=E,0.6nm,0.3s,baz=91,slow=15,SNR=9.1
         comp=E,6.8nm,0.7s
INU      Inuyama         13.30 234   Pn      Pn      19 06 02.8  -3.3
INU      Inuyama         13.30 234   P       Pn      19 06 02.7  -3.3
PSTR     Posyet          14.18 271  i P      Pn      19 06 15.9  -1.9
PSTR     Posyet          14.18 271  eP       Pn      19 06 15.9  -1.9
MA2      Magadan         15.62   1   LR      LR      19 13 20.3
         comp=E,200nm,19.5s,baz=158,slow=40
MA2      Magadan         15.62   1   Pn      Pn      19 06 33.9  -2.7
MA2                                  IAmb    IAmb    19 06 38.0
         comp=Z,93nm,1.6s
MA2      Magadan         15.62   1   P       Pn      19 06 33.9  -2.7
MA2                                  pmax    pmax
         comp=Z,93nm,1.6s
MA2      Magadan         15.62   1  eP       Pn      19 06 33.9  -2.7
BNX      BinXian         16.24 284  ⇑P       Pn      19 06 42.3  -2.3
BNX                                  pmax    pmax
         comp=Z,8.0nm,0.9s
JMN      Monobe          16.29 237   Pn      Pn      19 06 44.1  -1.1
JMN                                  IAmb    IAmb    19 06 51.5
         comp=Z,175nm,1.9s
JMN      Monobe          16.29 237   P       Pn      19 06 43.5  -1.7
HEH      HeiHe           16.69 300  eP       Pn      19 06 47.5  -2.6
HEH                                  pmax    pmax
         comp=Z,11nm,0.8s
CN2      Changchun       17.82 278   P       Pn      19 07 04.0  -0.2
CN2                                  pmax    pmax
         comp=Z,10.0nm,0.7s
ZEA      Zeya            17.90 311  eP       Pn      19 07 04.9  -0.2
ZEA                                  pmax    pmax
         comp=Z,20nm,0.7s
JCJ      Chichijima      18.05 204   P       P       19 07 05.9  -1.0
KSRS     Korea Array     18.07 256   P       P       19 07 06.6  -0.5
         comp=Z,0.2nm,0.3s,baz=62,slow=13,SNR=4.7
         comp=Z,1.7nm,0.8s
JNU      Nakatsue        18.55 241   P       P       19 07 12.1  -0.3
         comp=Z,0.2nm,0.3s,baz=214,slow=13,SNR=4.0
         comp=Z,11nm,0.9s
JNU      Nakatsue        18.55 241   P       P       19 07 11.4  -1.1
JNU                                  IAmb    IAmb    19 07 13.4
         comp=Z,101nm,1.8s
SEY      Seymchan        19.03   3   P       P       19 07 16.6  -0.9
         comp=Z,0.3nm,0.3s,baz=178,slow=12,SNR=13
         comp=Z,3.9nm,0.6s
SEY      Seymchan        19.03   3  eP       P       19 07 16.9  -0.6
SEY                                  pmax    pmax
         comp=Z,22nm,1.9s
JSU      Suzuyama        19.90 238   P       P       19 07 28.5  +1.2
JSU                                  IAmb    IAmb    19 07 29.8
         comp=Z,108nm,1.7s
HILR     Hailar Array B  21.49 296   P       P       19 07 43.6  -0.7
         comp=Z,18nm,0.4s,baz=96,slow=12,SNR=30
         comp=Z,18nm,0.4s
YAK      Yakutsk         21.71 333   P       P       19 07 45.8  -0.7
         comp=Z,21nm,0.3s,baz=133,slow=4.8,SNR=13
YAK                                  LR      LR      19 17 13.9
         comp=Z,244nm,18.6s,baz=104,slow=40
         comp=Z,21nm,0.3s
YAK      Yakutsk         21.71 333           P       19 07 43.4  -3.1
YAK                                  IAmb    IAmb    19 07 48.8
         comp=Z,30nm,0.7s
YAK      Yakutsk         21.71 333ceP        P       19 07 45.0  -1.5
YAK                                  pmax    pmax
         comp=Z,23nm,0.9s
XLT      XiLinHaoTe      24.46 282  eP       P       19 08 14.8  +0.7
XLT                                  pP      pP      19 08 18.0  -6.8
XLT                                  pmax    pmax
         comp=Z,16nm,0.7s
XLT                                  pmax    pmax
         comp=Z,250nm,4.4s
BJI      Beijing         25.47 273   P       P       19 08 24.0  +0.9
BJI                                  pmax    pmax
         comp=Z,4.0nm,1.1s
BJT      Baijiatuau      25.48 273           P       19 08 22.9  -0.3
BJT      Baijiatuau      25.48 273   P       P       19 08 22.9  -0.3
BJT                                  pmax    pmax
         comp=Z,17nm,1.3s
BILL     Bilibino        25.57  14   P       P       19 08 23.6  -0.2
BILL     Bilibino        25.57  14  i P      P       19 08 23.6  -0.2
BILL                                 pmax    pmax
         comp=Z,4.0nm,0.7s
BILL     Bilibino        25.57  14  eP       P       19 08 23.6  -0.2
TIA      Tai'an          26.32 264   P       P       19 08 32.5  +1.6
TIA                                  pmax    pmax
         comp=Z,14nm,1.0s
NJ2      Nanjing         27.24 255  eP       P       19 08 39.3  +0.1
NJ2                                  pmax    pmax
         comp=Z,20nm,1.1s
HNS      HongShan        27.54 268  ⇓P       P       19 08 46.0  +4.2
HNS                                  pmax    pmax
         comp=Z,10.0nm,1.0s
HNS                                  LR      LR
         comp=N,2µm,10.2s
HNS                                  LR      LR
         comp=E,1µm,10.8s
HNS                                  LR      LR
         comp=Z,2µm,11.4s
H11N2    WAKE ISLAND Hy  27.93 145   T       T       19 38 11.8
         baz=334,slow=76,SNR=9.6
H11N1    WAKE ISLAND Hy  27.94 145   T       T       19 37 55.6
         baz=334,slow=76,SNR=7.6
SPIA     Saint Paul Isl  27.94  48   P       P       19 08 44.3  -0.9
         baz=259
H11N3    WAKE ISLAND Hy  27.94 145   T       T       19 37 52.2
         baz=334,slow=76,SNR=8.9
P08K     Saint George I  28.21  49   P       P       19 08 46.9  -0.7
         baz=261
NIKH     Nikolski High   28.26  57   P       P       19 08 48.3  +0.2
         baz=268
HHC      Hu-ho-hao-te    28.51 277  eP       P       19 08 52.3  +1.7
HHC                                  pP      pP      19 08 56.8  -4.6
HHC                                  pmax    pmax
         comp=Z,16nm,0.7s
HHC                                  pmax    pmax
         comp=Z,220nm,3.8s
HHC                                  LR      LR
         comp=N,870nm,11.0s
HHC                                  LR      LR
         comp=E,410nm,13.2s
HHC                                  LR      LR
         comp=Z,740nm,14.6s
H11S1    WAKE ISLAND Hy  28.94 146   T       T       19 39 15.9
         baz=336,slow=76,SNR=13
H11S3    WAKE ISLAND Hy  28.95 146   T       T       19 39 16.2
         baz=336,slow=76,SNR=13
H11S2    WAKE ISLAND Hy  28.96 146   T       T       19 39 17.1
         baz=336,slow=76,SNR=11
GAMB     Gambell         29.27  34   P       P       19 08 56.4  -0.6
         baz=246
TIXI     Tiksi           29.61 347   LR      LR      19 21 57.2
         comp=Z,116nm,19.4s,baz=174,slow=39
TIXI     Tiksi           29.61 347   P       P       19 08 57.8  -2.2
TIXI                                 IAmb    IAmb    19 09 31.3
         comp=Z,41nm,2.0s
TIXI     Tiksi           29.61 347ceP        P       19 08 57.7  -2.2
TIXI                                 pmax    pmax
         comp=Z,5.0nm,0.7s
UNV      Unalaska Valle  29.69  55   P       P       19 09 00.5  -0.3
         baz=269
BTO      Baotou          29.70 278  eP       P       19 09 01.0  -0.1
BTO                                  pP      pP      19 09 05.5  -6.5
BTO                                  sP      sP      19 09 08.0  -9.1
BTO                                  PP      PnPn    19 09 57.3  -0.7
BTO                                  pmax    pmax
         comp=Z,9.0nm,1.3s
BTO                                  pmax    pmax
         comp=Z,320nm,10.8s
BTO                                  LR      LR
         comp=N,4µm,11.4s
BTO                                  LR      LR
         comp=E,2µm,10.6s
BTO                                  LR      LR
         comp=Z,5µm,10.7s
ULN      Ulaanbaatar     29.96 293           P       19 09 04.2  +0.7
ULN                                  IAmb    IAmb    19 09 05.5
         comp=Z,9.5nm,0.7s
ULN      Ulaanbaatar     29.96 293ceP        P       19 09 05.0  +1.5
ULN                                  pmax    pmax
         comp=Z,10.0nm,0.7s
ULN      Ulaanbaatar     29.96 293  eP       P       19 09 05.0  +1.5
AKUT     Akutan          30.13  55   P       P       19 09 05.2  +0.6
SONM     Songino Array   30.41 293   P       P       19 09 08.7  +1.3
         comp=Z,7.3nm,0.7s,baz=80,slow=8.3,SNR=56
SONM                                 PcP     PcP     19 12 06.6  +0.7
         comp=Z,0.7nm,0.6s,baz=79,slow=2.7,SNR=3.6
         comp=Z,7.3nm,0.7s
SONM     Songino Array   30.41 293           P       19 09 07.9  +0.5
SONM                                 IAmb    IAmb    19 09 09.4
         comp=Z,6.4nm,0.6s
M11K     Mekoryuk        30.66  42   P       P       19 09 08.6  -0.6
         baz=258
TNA      Tin City        31.48  32   P       P       19 09 16.0  -0.3
         baz=247
K13K     Kusilvak Mount  31.74  40   P       P       19 09 18.4  -0.3
         baz=257
TPUB     Ta-pu           31.84 239   P       P       19 09 20.5  +0.5
M13K     Dall Lake       32.06  43   P       P       19 09 19.7  -1.8
         baz=260
F14K     Arctic Creek    32.06  33   P       P       19 09 20.6  -1.0
         baz=249
ANM      Nome            32.14  35   P       P       19 09 21.9  -0.4
         baz=252
S12K     Black Hills     32.31  52   P       P       19 09 20.7  -3.1
         baz=269
J14K     Nanvaranak Lak  32.43  38   P       P       19 09 23.4  -1.4
         baz=257
L14K     Kuka Creek      32.54  41   P       P       19 09 23.3  -2.5
         baz=260
M14K     Bethel          32.79  42   P       P       19 09 26.8  -1.2
         baz=261
F15K     North Star Dit  32.80  33   P       P       19 09 26.4  -1.6
         baz=251
N14K     Kuskokwak Cree  32.81  44   P       P       19 09 25.9  -2.2
         baz=263
G15K     Niukluk         32.82  34   P       P       19 09 28.4  +0.2
         baz=253
L15K     Ungalak Mounta  33.16  41   P       P       19 09 31.1  -0.1
         baz=260
SDPT     Sand Point      33.21  52   P       P       19 09 30.7  -1.0
         baz=271
K15K     Wolf Creek Mou  33.25  40   P       P       19 09 31.2  -0.8
         baz=259
XAN      Xi'an           33.26 267   P       P       19 09 33.3  +0.8
XAN                                  pmax    pmax
         comp=Z,7.0nm,0.7s
M15K     Kasigluk River  33.40  43   P       P       19 09 33.1  -0.2
         baz=263
H16K     Elim            33.46  35   P       P       19 09 33.3  -0.4
         baz=255
C16K     Lisburne Hills  33.48  28   P       P       19 09 32.3  -1.6
         baz=246
G16K     Koyuk River     33.62  34   P       P       19 09 34.9  -0.2
G16K                                 IAmb    IAmb    19 10 39.3
         comp=Z,27nm,1.9s
G16K     Koyuk River     33.62  34   P       P       19 09 32.9  -2.2
         baz=254
N15K     Kwethluk River  33.63  44   P       P       19 09 33.6  -1.7
         baz=264
O15K     Ungalikthiuk R  33.67  45   P       P       19 09 34.1  -1.6
         baz=266
S14K     Fog Glacier     33.72  51   P       P       19 09 35.4  -0.9
         baz=270
CHNA     Chernabura Isl  33.73  53   P       P       19 09 35.3  -0.9
         baz=273
J16K     Anvik River     33.86  38   P       P       19 09 36.0  -1.2
         baz=259
I17K     Unalakleet      33.94  37   P       P       19 09 36.6  -1.3
         baz=258
D17K     Noatak River    34.06  30   P       P       19 09 37.6  -1.3
         baz=250,SNR=6.7
L16K     Owhat River     34.12  41   P       P       19 09 40.0  +0.5
L16K     Owhat River     34.12  41   P       P       19 09 38.4  -1.1
         baz=262
RDOG     Red Dog Mine    34.25  29   P       P       19 09 39.1  -1.5
         baz=250
M16K     Timber Creek    34.28  42   P       P       19 09 39.8  -1.1
         baz=264
C17K     DeLong Mountai  34.30  28   P       P       19 09 40.3  -0.8
         baz=249
N16K     Nishlik Lake    34.31  43   P       P       19 09 38.7  -2.6
         baz=265
E17K     Hotham Inlet    34.32  31   P       P       19 09 40.7  -0.5
         baz=252,SNR=12
G17K     Kiwalik Mounta  34.33  34   P       P       19 09 41.1  -0.2
         baz=256
F17K     Baldwin Pennin  34.34  32   IAmb    IAmb    19 09 43.7
         comp=Z,14nm,0.8s
F17K     Baldwin Pennin  34.34  32   P       P       19 09 40.1  -1.3
         baz=254
H17K     Granite Mounta  34.50  35   P       P       19 09 41.4  -1.4
         baz=257
J17K     VABM Dome       34.55  38   P       P       19 09 41.9  -1.4
         baz=260
O16K     Kokwok River B  34.59  45   P       P       19 09 42.5  -1.1
         baz=267
P16K     Nushagak River  34.61  46   P       P       19 09 43.0  -0.8
         baz=268
L17K     Donlin          34.72  40   P       P       19 09 42.5  -2.3
         baz=263
K17K     Iditarod        34.80  39   P       P       19 09 44.0  -1.4
         baz=262
R16K     Pilot Point     34.80  48   P       P       19 09 44.1  -1.3
         baz=270
ENH      Enshi           34.86 261   P       P       19 09 46.3   0.0
ENH                                  IAmb    IAmb    19 09 47.6
         comp=Z,10nm,0.8s
E18K     Tukpahlearik C  34.87  31   P       P       19 09 44.3  -1.7
         baz=253
C18K     Utukok River    35.05  29   IAmb    IAmb    19 09 49.4
         comp=Z,9.4nm,0.8s
C18K     Utukok River    35.05  29   P       P       19 09 46.4  -1.1
         baz=251
M17K     Holitna River   35.05  42   P       P       19 09 46.2  -1.4
         baz=265
N17K     Nushagak Hills  35.10  43   P       P       19 09 46.3  -1.7
         baz=266
O17K     Koliganek Bris  35.10  44   P       P       19 09 46.3  -1.7
         baz=267
H18K     Honhosa River   35.19  35   IAmb    IAmb    19 09 50.8
         comp=Z,7.3nm,0.8s
H18K     Honhosa River   35.19  35   P       P       19 09 45.5  -3.2
         baz=258
G18K     Tagagawik       35.23  34   IAmb    IAmb    19 10 04.2
         comp=Z,10nm,0.9s
G18K     Tagagawik       35.23  34   P       P       19 09 46.5  -2.6
         baz=257
R17L     Mt. Peulik Vol  35.45  48   P       P       19 09 49.4  -1.7
         baz=271
L18K     Granite Mounta  35.48  40   P       P       19 09 49.3  -2.0
         baz=264
J18K     Innoko River    35.62  38   P       P       19 09 49.8  -2.6
         baz=262
KNGR     Kungurtug, Tuv  35.68 300  i P      P       19 09 54.1  +0.8
GCSA     Galena City Sc  35.73  36   P       P       19 09 50.8  -2.5
         baz=261
C19K     Lookout Ridge   35.75  28   IAmb    IAmb    19 09 56.3
         comp=Z,7.6nm,0.7s
C19K     Lookout Ridge   35.75  28   P       P       19 09 51.2  -2.3
         baz=252
N18K     Kilae Creek     35.75  43   P       P       19 09 51.9  -1.7
         baz=267
F19K     Shaleruckik Mo  35.79  32   P       P       19 09 52.4  -1.4
         baz=257
M18K     Stony River     35.83  42   P       P       19 09 51.9  -2.3
         baz=266
G19K     Purcell Mounta  35.91  33   P       P       19 09 52.6  -2.3
         baz=258
CHIR     Chirikof Islan  35.94  51   P       P       19 09 53.6  -1.7
         baz=274
LZH      Lanzhou         35.95 274  eP       P       19 09 57.5  +1.7
LZH                                  pP      pP      19 10 02.5  -4.0
LZH                                  sP      sP      19 10 04.5  -7.0
LZH                                  pmax    pmax
         comp=Z,41nm,0.7s
P18K     Big Mountain,   36.04  45   P       P       19 09 54.1  -2.1
         baz=270
H19K     Roundabout Mou  36.05  35   P       P       19 09 54.7  -1.4
         baz=260
O18K     Koktuh Hills    36.06  44   P       P       19 09 54.8  -1.5
         baz=269
LZDM     Lanzhou Array   36.12 273   P       P       19 09 58.3  +0.9
         comp=Z,6.8nm,0.7s,baz=59,slow=5.6,SNR=10
         comp=Z,6.8nm,0.7s
E19K     Redstone River  36.14  31   IAmb    IAmb    19 09 59.0
         comp=Z,7.9nm,0.7s
E19K     Redstone River  36.14  31   P       P       19 09 55.4  -1.4
         baz=256
J19K     Poorman         36.17  37   P       P       19 09 56.8  -0.3
J19K     Poorman         36.17  37   P       P       19 09 56.0  -1.1
         baz=263,SNR=5.2
L19K     White Mountain  36.34  40   P       P       19 09 59.2  +0.6
         baz=266
N19K     Bonanza Creek   36.44  43   P       P       19 09 59.3  -0.4
         baz=268
O19K     Port Alsworth   36.51  44   P       P       19 09 58.7  -1.4
         baz=269
F20K     Avaraart Lake   36.62  32   P       P       19 09 58.9  -2.0
         baz=259
D20K     Etivluk River   36.67  29   IAmb    IAmb    19 10 25.6
         comp=Z,17nm,0.8s
D20K     Etivluk River   36.67  29   P       P       19 09 59.0  -2.3
         baz=256
H20K     Anotleneega Mo  36.69  35   P       P       19 09 59.8  -1.7
         baz=262
SII      Sitkinak Islan  36.69  50   P       P       19 09 59.9  -1.7
         baz=274
I20K     Naaghedeneel    36.76  36   P       P       19 10 02.2  +0.1
         baz=263
K20K     Telida          36.79  38   P       P       19 10 03.0  +0.6
         baz=265
J20K     Nowinta River   36.83  37   P       P       19 10 03.0  +0.2
J20K     Nowinta River   36.83  37   P       P       19 10 01.3  -1.4
         baz=264
B20K     Meade River     36.83  27   P       P       19 10 03.1  +0.4
         baz=253
Q19K     Cape Douglas,   36.86  46   P       P       19 10 01.9  -1.2
         baz=272
P19K     Oil Pt          37.06  45   P       P       19 10 01.8  -3.0
         baz=271
M20K     Styx River      37.13  41   P       P       19 10 04.8  -0.7
         baz=268
G21K     Allakaket       37.39  33   P       P       19 10 07.3  -0.3
         baz=262
A21K     Barrow          37.40  25   P       P       19 10 07.6  +0.1
         baz=252
GTA      Gaotai          37.41 281  eP       P       19 10 09.8  +1.6
GTA                                  pmax    pmax
         comp=Z,9.0nm,1.2s
C21K     Knifeblade Rid  37.42  29   P       P       19 10 08.6  +0.9
         baz=257
E21K     Killik River    37.55  30   P       P       19 10 08.0  -0.9
         baz=259
H21K     Melozitna Rive  37.56  35   P       P       19 10 09.9  +1.0
H21K                                 IAmb    IAmb    19 10 11.8
         comp=Z,15nm,1.2s
H21K     Melozitna Rive  37.56  35   P       P       19 10 08.1  -0.9
         baz=263,SNR=8.6
B21K     Ikpikpuk River  37.58  28   IAmb    IAmb    19 10 42.5
         comp=Z,19nm,0.8s
B21K     Ikpikpuk River  37.58  28   P       P       19 10 08.8  -0.2
         baz=256
CHUM     Lake Minchumin  37.61  38   P       P       19 10 07.9  -1.4
         baz=266
A22K     Sinclair Lake   37.82  26   P       P       19 10 09.9  -1.1
         baz=254
I21K     Tanana          37.86  36   P       P       19 10 12.2  +0.8
I21K     Tanana          37.86  36   P       P       19 10 09.1  -2.3
         baz=265
SKT      Skwentna        37.89  41   P       P       19 10 09.1  -2.7
         baz=269
F22K     John River      38.06  32   P       P       19 10 12.2  -0.9
         baz=262
D22K     Ayikyak River   38.10  30   P       P       19 10 13.2  -0.3
         baz=259
B22K     Teshekpuk Lake  38.15  27   P       P       19 10 13.0  -0.8
         baz=257
H22K     Ishtalitna Cre  38.17  34   P       P       19 10 14.7  +0.5
H22K                                 IAmb    IAmb    19 11 10.8
         comp=Z,32nm,1.9s
H22K     Ishtalitna Cre  38.17  34   P       P       19 10 13.2  -0.9
         baz=264
BPAW     Bear Paw Mtn.   38.21  37   P       P       19 10 13.5  -0.9
         baz=267
KTH      Kantishna Hill  38.21  38           P       19 10 15.2  +0.7
KTH                                  IAmb    IAmb    19 10 19.1
         comp=Z,20nm,1.3s
SUA      Susitna One     38.26  42   P       P       19 10 14.6  -0.4
         baz=271
E22K     Anaktuvuk Pass  38.29  31   P       P       19 10 15.6  +0.5
E22K                                 IAmb    IAmb    19 10 17.3
         comp=Z,17nm,0.8s
E22K     Anaktuvuk Pass  38.29  31   P       P       19 10 15.7  +0.5
         baz=261,SNR=19
BRSE     Bradley Lake S  38.32  44   P       P       19 10 13.0  -2.4
         baz=273
CUT      Chulitna        38.48  40   P       P       19 10 13.8  -2.9
         baz=270
TRF      Thorofare Moun  38.49  38   P       P       19 10 15.6  -1.4
         baz=269
RC01     Rabbit Creek A  38.76  42   P       P       19 10 15.8  -3.3
         baz=272
COLD     Coldfoot        38.78  32   P       P       19 10 19.7  +0.6
COLD     Coldfoot        38.78  32   P       P       19 10 18.0  -1.2
         baz=264
O22K     Cooper Landing  38.79  43   P       P       19 10 17.3  -2.0
         baz=273
G23K     Bananza Creek   38.80  33   P       P       19 10 17.0  -2.4
         baz=265
D23K     Nanushuk River  38.83  30   P       P       19 10 19.0  -0.6
         baz=261
SEW      Seward          38.95  44   P       P       19 10 17.7  -2.9
         baz=274
C23K     Itkillik River  38.99  28   IAmb    IAmb    19 10 23.2
         comp=Z,17nm,0.8s
C23K     Itkillik River  38.99  28   P       P       19 10 20.7  -0.2
         baz=260
PMR      Palmer          39.03  41   P       P       19 10 19.0  -2.3
         baz=272
NEA2     Nenana          39.06  37   P       P       19 10 22.1  +0.6
NEA2                                 IAmb    IAmb    19 11 32.8
         comp=Z,37nm,2.0s
NEA2     Nenana          39.06  37   P       P       19 10 21.0  -0.6
         baz=268
E23K     Chandalar       39.09  31   P       P       19 10 21.2  -0.7
         baz=263
MCK      McKinley        39.10  38   P       P       19 10 21.3  -0.6
         baz=270
GYA      Guiyang         39.11 258  ⇑P       P       19 10 23.8  +1.2
GYA                                  pmax    pmax
         comp=Z,17nm,0.9s
TOLK     Toolik Lake Re  39.18  30   P       P       19 10 23.5  +0.9
TOLK     Toolik Lake Re  39.18  30   P       P       19 10 21.3  -1.2
         baz=263,SNR=6.8
WAT1     Susitna Watana  39.28  39   P       P       19 10 22.2  -1.2
         baz=271
KNK      Knik Glacier    39.36  42   P       P       19 10 22.3  -1.8
         baz=273
SML      Sawmill         39.41  41   P       P       19 10 22.1  -2.4
         baz=272
PWL      Port Wells      39.45  43   P       P       19 10 21.0  -3.9
         baz=274
WRH      Wood River Hil  39.48  37   P       P       19 10 25.5  +0.5
D24K     Happy Valley    39.52  29   P       P       19 10 23.5  -1.7
         baz=263
E24K     Your Creek      39.52  31   P       P       19 10 24.7  -0.7
         baz=264
COLA     College         39.59  36   P       P       19 10 27.9  +2.0
COLA     College         39.59  36   P       P       19 10 27.9  +2.0
H24K     Noodor Dome     39.61  35   P       P       19 10 24.9  -1.2
         baz=268
CCB      Clear Creek Bu  39.61  37   P       P       19 10 26.1   0.0
C24K     Franklin Bluff  39.63  29   IAmb    IAmb    19 10 47.5
         comp=Z,15nm,0.8s
C24K     Franklin Bluff  39.63  29   P       P       19 10 23.0  -3.2
         baz=262
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WAT6	Susitna Watana	39.66	40	P	P	19 10 22.7	-4.0
	baz=272						
F24K	Squaw Lake	39.70	32	P	P	19 10 24.8	-2.1
	baz=266						
POKR	Poker Plat Res	39.77	36	P	P	19 10 25.1	-2.4
	baz=269						
G24K	Hadweenzic Riv	39.81	33	IAmb	IAmb	19 10 30.5	
	comp=Z,15nm,0.9s						
G24K	Hadweenzic Riv	39.81	33	P	P	19 10 26.6	-1.2
	baz=267						
DHY	Denali Highway	39.81	39	P	P	19 10 25.4	-2.6
	baz=272						
SCM	Sheep Creek Mo	39.88	41	P	P	19 10 25.4	-3.1
	baz=273						
HDA	Harding Lake	39.98	37	P	P	19 10 29.2	0.0
HDA	Harding Lake	39.98	37	P	P	19 10 27.7	-1.5
	baz=270						
P23K	Montague Islan	39.98	44	P	P	19 10 26.9	-2.4
	baz=275						
IL31		40.00	36	P	P	19 10 28.9	-0.4
ILAR	Eielson Array	40.00	36	P	P	19 10 29.8	+0.4
	comp=Z,2.7nm,0.9s,baz=268,slow=8.7,SNR=18						
ILAR				PcP	PcP	19 12 33.0	-0.5
	comp=Z,0.7nm,0.7s,baz=255,slow=3.8,SNR=2.1						
	comp=Z,2.7nm,0.9s						
NRIK	Noril'sk	40.12	331	P	P	19 10 30.9	+0.7
	comp=Z,1.9nm,0.4s,baz=92,slow=16,SNR=6.7						
	comp=Z,1.9nm,0.4s						
NRIK	Noril'sk	40.12	331	P	P	19 10 29.3	-1.0
NRIK	Noril'sk	40.12	331	i P	P	19 10 29.7	-0.6
NRIK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
G25K	Bearman Lake	40.36	33	P	P	19 10 32.0	-0.3
	baz=268						
D25K	Kavik River	40.40	29	IAmb	IAmb	19 10 53.3	
	comp=Z,11nm,0.6s						
D25K	Kavik River	40.40	29	P	P	19 10 31.2	-1.5
	baz=265						
M24K	Tolsona, Glenn	40.41	41	P	P	19 10 31.3	-1.6
	baz=274						
F25K	Christian Rive	40.56	32	P	P	19 10 34.9	+0.9
	baz=268						
PRP	Porcupine Dome	40.58	35	P	P	19 10 34.2	0.0
	baz=270						
E25K	Arctic Village	40.61	31	P	P	19 10 34.5	+0.1
	baz=267,SNR=5.1						
J25K	Salcha River,	40.66	37	P	P	19 10 32.5	-2.4
	baz=272						
PAX	Paxson	40.68	39	P	P	19 10 33.5	-1.6
	baz=273						
FYU	Fort Yukon	40.70	34	P	P	19 10 35.4	+0.4
FYU				IAmb	IAmb	19 10 38.5	
	comp=Z,18nm,1.0s						
HARP	HAARP	40.86	40	P	P	19 10 35.8	-0.7
	baz=274						
C26K	Camden Bay	40.96	28	P	P	19 10 37.4	+0.2
	baz=266						
BMAR	Burnt Mountain	40.97	32	P	P	19 10 38.1	+0.7
F26K	Sheenjek River	41.14	32	P	P	19 10 41.1	+2.3
	baz=269,SNR=6.2						
N25K	Chitina, Valde	41.20	41	P	P	19 10 37.0	-2.4
	baz=276						
G26K	Porcupine Rive	41.27	33	P	P	19 10 38.3	-1.5
	baz=270						
SCRK	Sand Creek	41.29	38	P	P	19 10 39.3	-0.9
	baz=274						
C27K	Jago River	41.36	29	P	P	19 10 39.8	-0.7
	baz=267						
L26K	Log Cabin Wild	41.64	39	P	P	19 10 41.4	-1.5
	baz=275						
M26K	Nabesna, AK	41.87	40	IAmb	IAmb	19 11 13.5	
	comp=Z,20nm,1.4s						
M26K	Nabesna, AK	41.87	40	P	P	19 10 46.4	+1.6
	baz=276						
CRQE	Cirque	42.02	42	P	P	19 10 44.5	-1.7
	baz=278						
E27K	Coleen River	42.10	31	P	P	19 10 46.7	+0.1
	baz=271						
DGZ	Jazzator, Alta	42.20	301	i P	P	19 10 49.5	+1.7
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
H27K	Steamboat Moun	42.20	34	P	P	19 10 49.1	+1.7
	baz=273						
L27K	Beaver Creek,	42.33	39	P	P	19 10 48.6	+0.1
	baz=276						
BCAR	Beaver Creek A	42.35	39	P	P	19 10 48.7	0.0
M27K	Edge Creek, AK	42.39	40	P	P	19 10 47.5	-1.7
	baz=277						
PZH	PanZhiHua	42.59	262	P	P	19 10 52.5	+1.3
DAV	Davao City (W)	42.60	218	P	P	19 10 50.6	-0.6
	comp=Z,55nm,0.3s,baz=282,slow=12,SNR=2.6						
ZAA0	Zalesovo Array	42.61	307	P	P	19 10 50.7	-0.1
ZALV	Zalesovo Beam	42.61	307	P	P	19 10 50.3	-0.6
	comp=Z,1.5nm,0.4s,baz=82,slow=9.4,SNR=16						
ZALV				PcP	PcP	19 12 43.2	+1.0
	comp=Z,4.1nm,0.7s,baz=72,slow=2.9,SNR=14						
	comp=Z,1.5nm,0.4s						
KMI	Kunming	42.72	260	P	P	19 10 54.3	+2.0
KMI				pmax	pmax		
	comp=Z,15nm,1.2s						
F28M	Old Crow	42.77	32	P	P	19 10 51.3	-0.7
	baz=273,SNR=5.4						
CTG	Chitna Glacier	42.84	42	P	P	19 10 51.1	-1.7
	baz=279						
BVCY	Beaver Creek	42.85	40	P	P	19 10 51.2	-1.6
	baz=278						
E28M	Babbage River	42.85	31	P	P	19 10 49.6	-3.1
	baz=272						
I28M	Miner Creek	42.91	35	IAmb	IAmb	19 11 26.9	
	comp=Z,40nm,2.0s						
I28M	Miner Creek	42.91	35	P	P	19 10 52.4	-0.8
	baz=275						
D28M	Stokes Point	43.11	29	P	P	19 10 54.1	-0.6
	baz=272						
YUK3	Moose Creek	43.13	41	P	P	19 10 52.7	-2.6
	baz=279						
DAWY	Dawson	43.29	37	P	P	19 10 56.4	0.0
	baz=277						
E29M	Blow River	43.47	31	IAmb	IAmb	19 11 14.3	
	comp=Z,19nm,1.2s						
E29M	Blow River	43.47	31	P	P	19 10 58.5	+0.9
	baz=274						
H29M	Whitestone	43.47	34	P	P	19 10 57.8	+0.1
	baz=276						
G29M	Pine Creek	43.54	33	IAmb	IAmb	19 11 26.4	
	comp=Z,23nm,1.3s						
G29M	Pine Creek	43.54	33	P	P	19 10 60.0	+1.7
	baz=276						
I29M	Ogilvie Camp,	43.59	35	P	P	19 10 58.8	+0.1
	baz=277						
M29M	Somme Creek	43.95	39	P	P	19 11 01.7	0.0
	baz=280						
L29M	L29M	43.99	38	P	P	19 11 02.0	0.0
	baz=279						
WMQ	Urumqi	44.04	293	eP	P	19 11 05.3	+2.6
WMQ				pmax	pmax		
	comp=Z,21nm,1.1s						
WMQ				LR	LR		
	comp=N,400nm,10.1s						
WMQ				LR	LR		
	comp=E,860nm,11.5s						
WMQ				LR	LR		
	comp=Z,300nm,15.9s						
YUK4	Talbot Arm	44.06	41	P	P	19 11 02.8	+0.1
	baz=281						
EPYK	Eagle Plains	44.12	34	IAmb	IAmb	19 11 35.5	
	comp=Z,27nm,1.5s						
EPYK	Eagle Plains	44.12	34	P	P	19 11 03.8	+0.9
	baz=277						
K29M	Barlow Dome	44.14	37	P	P	19 11 04.8	+1.6
	baz=279						
YUK6	Outpost Mounta	44.27	42	P	P	19 11 05.9	+1.4
	baz=281						
F30M	Barrier River	44.33	32	IAmb	IAmb	19 11 55.5	
	comp=Z,13nm,0.8s						
F30M	Barrier River	44.33	32	P	P	19 11 05.5	+0.9
	baz=277						
I30M	Mount Dempster	44.42	35	IAmb	IAmb	19 11 07.6	
	comp=Z,8.8nm,0.8s						
I30M	Mount Dempster	44.42	35	P	P	19 11 06.2	+0.7
	baz=279						
M30M	Minto, Yukon	44.69	39	P	P	19 11 10.0	+2.5
	baz=281						
HYT	Haines Junctio	44.71	42	P	P	19 11 08.0	+0.2
HYT				IAmb	IAmb	19 11 11.0	
	comp=Z,15nm,1.3s						
HYT	Haines Junctio	44.71	42	P	P	19 11 10.1	+2.3
	baz=282						
P29M	Windy Craggy	44.85	43	P	P	19 11 08.9	+0.1
	baz=283						
INK	Inuvik	45.09	31	IAmb	IAmb	19 11 12.8	
	comp=Z,8.4nm,0.9s						
INK	Inuvik	45.09	31	P	P	19 11 12.0	+1.5
	baz=278,SNR=8.2						
P30M	Million Dollar	45.12	42	P	P	19 11 11.1	0.0
	baz=283						
F31M	Tsiigehtchic	45.13	32	P	P	19 11 12.7	+1.8
	baz=279						
H31M	Peel River	45.16	34	IAmb	IAmb	19 11 44.4	
	comp=Z,18nm,1.2s						
H31M	Peel River	45.16	34	P	P	19 11 12.1	+0.9
	baz=280						
N31M	Braeburn, Yuko	45.38	40	P	P	19 11 13.9	+0.9
	baz=283						
TNCH	TengChong	45.79	263	P	P	19 11 18.5	+1.6
TNCH				pmax	pmax		
	comp=Z,25nm,1.0s						
M31M	Drury Creek, Y	45.86	39	IAmb	IAmb	19 11 21.0	
	comp=Z,12nm,1.2s						
M31M	Drury Creek, Y	45.86	39	P	P	19 11 17.7	+0.9
	baz=283						
WHY	Whitehorse	46.00	41	P	P	19 11 19.6	+1.6
	baz=284						
S31K	Pelican	46.03	45	P	P	19 11 16.7	-1.5
	baz=286						
MK31	Makanchi Array	46.41	299	i P	P	19 11 22.1	+0.7
MK31				pmax	pmax		
	comp=Z,16nm,0.7s						
MKAR	Makanchi Array	46.41	299	P	P	19 11 22.6	+1.3
	comp=Z,9.3nm,0.6s,baz=78,slow=8.4,SNR=101						
	comp=Z,9.3nm,0.6s						
MKAR	Makanchi Array	46.41	299	P	P	19 11 22.0	+0.6
MKAR	Makanchi Array	46.41	299	P	P	19 11 22.0	+0.6
MAKZ	Makanchi	46.61	299	P	P	19 11 23.1	+0.2
MAKZ	Makanchi	46.61	299	P	P	19 11 23.1	+0.2
MAKZ				pmax	pmax		
	comp=Z,11nm,0.7s						
P33M	Teslin, Yukon	47.10	42	P	P	19 11 28.2	+1.6
	baz=286						
KURK	Kurchatov	47.21	305	P	P	19 11 28.3	+0.8
KURK				IAmb	IAmb	19 11 29.1	
	comp=Z,8.5nm,0.7s						
KURK	Kurchatov	47.21	305	P	P	19 11 28.3	+0.8
KURK						19 12 59.5	
KURK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KURK	Kurchatov	47.21	305	eP	P	19 11 28.3	+0.8
A36M	Sachs Harbour	47.24	25	P	P	19 11 29.4	+2.1
	baz=282,SNR=6.3						
KURBB	Kurchatov Arra	47.30	305	P	P	19 11 29.0	+0.9
	comp=Z,7.0nm,0.6s,baz=72,slow=9.0,SNR=57						
KURBB				PcP	PcP	19 12 59.5	+1.0
	comp=Z,2.3nm,0.7s,baz=72,slow=3.5,SNR=5.1						
	comp=Z,7.0nm,0.6s						
R33M	Jennings River	48.24	42	P	P	19 11 36.2	+0.7
	baz=288						
C36M	Paulatuk	48.24	28	P	P	19 11 36.2	+1.1
	baz=285,SNR=7.0						
CHTO	Chiang Mai	49.47	256	P	P	19 11 46.2	+1.0
CHTO				IAmb	IAmb	19 11 47.9	
	comp=Z,6.7nm,0.8s						
CHTO	Chiang Mai	49.47	256	P	P	19 11 46.2	+1.0
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CM31	Chiang Mai Arr	49.70	256	P	P	19 11 47.6	+0.5
CMAR	Chiang Mai Arr	49.70	256	P	P	19 11 49.0	+1.9
	comp=Z,3.0nm,0.7s,baz=43,slow=7.4,SNR=43						
CMAR				PcP	PcP	19 13 10.1	+2.4
	comp=Z,0.9nm,0.8s,baz=21,slow=3.1,SNR=5.3						
	comp=Z,3.0nm,0.7s						
CMAR	Chiang Mai Arr	49.70	256	P	P	19 11 46.1	-0.9
SHL	Shillong	50.24	269	P	P	19 11 50.5	-0.7
SHL	Shillong	50.24	269	P	P	19 11 50.5	-0.7
WUS	Wushi	50.83	293	IAmb	IAmb	19 12 03.1	
	comp=Z,13nm,0.7s						
POHA	Pohakuloa	50.99	100	P	P	19 11 55.9	-1.1
BVAR	Borovoye Array	51.05	310	P	P	19 11 58.5	+1.7
	comp=Z,6.3nm,0.8s,baz=58,slow=8.9,SNR=22						
BVAR				PcP	PcP	19 13 13.1	+1.1
	comp=Z,2.3nm,0.7s,baz=82,slow=4.9,SNR=1.8						
	comp=Z,6.3nm,0.8s						
BORK	Borovoye	51.08	310	P	P	19 11 57.2	+0.2
BORK				IAmb	IAmb	19 12 12.5	
	comp=Z,7.1nm,0.8s						
BORK	Borovoye	51.08	310	ceP	P	19 11 58.1	+1.1
BORK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BOOM	Boomskoye usch	52.36	296	P	P	19 12 07.7	+0.7
BOOM	Boomskoye usch	52.36	296	P	P	19 12 07.7	+0.7
BOOM				pmax	pmax		
	comp=Z,64nm,1.5s						
EVN	Everest	52.49	275	P	P	19 12 09.1	+0.5
EVN				IAmb	IAmb	19 12 11.2	
	comp=Z,13nm,0.8s						
AAK	Ala-Archa	53.23	297	P	P	19 12 13.5	+0.2
AAK	Ala-Archa	53.23	297	ceP	P	19 12 14.4	+1.1
AAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AAK	Ala-Archa	53.23	297	eP	P	19 12 14.4	+1.1
KSH	Kashi	53.81	293	P	P	19 12 22.8	+5.2
KSH				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KSH				LR	LR		
	comp=N,400nm,12.0s						
KSH				LR	LR		
	comp=E,460nm,13.4s						
KSH				LR	LR		
	comp=Z,500nm,13.2s						
RES	Resolute Bay	54.11	17	P	P	19 12 19.5	+0.5
RES				IAmb	IAmb	19 12 43.9	
	comp=Z,12nm,0.8s						
RES	Resolute Bay	54.11	17	P	P	19 12 19.5	+0.5
RES				pmax	pmax		
	comp=Z,12nm,0.9s						
YKA	Yellowknife Ar	54.38	35	P	P	19 12 22.1	+1.0
	comp=Z,1.9nm,0.8s,baz=297,slow=7.7,SNR=24						
YKA				PcP	PcP	19 13 25.2	+0.9
	comp=Z,0.2nm,0.5s,baz=291,slow=4.6,SNR=4.3						
	comp=Z,1.9nm,0.8s						
YKA	Yellowknife Ar	54.38	35	P	P	19 12 20.8	-0.4
YKA	Yellowknife Ar	54.38	35	P	P	19 12 20.8	-0.4
YKA						19 13 25.2	
SVE	Sverdlovsk	54.47	318	eP	P	19 12 23.5	+1.6
SVE				pmax	pmax		
	comp=Z,25nm,0.6s						
KBS	Kingsbay	54.91	351	P	P	19 12 24.8	-0.1
KBS	Kingsbay	54.91	351	P	P	19 12 24.8	-0.1
KBS				pmax	pmax		
	comp=Z,58nm,1.7s						
SPITS	Spitsbergen Ar	54.97	350	P	P	19 12 26.6	+1.3
	comp=Z,1.9nm,0.6s,baz=54,slow=9.7,SNR=7.7						
	comp=Z,1.9nm,0.6s						
SPB2	Spitsbergen Ar	54.97	350	P	P	19 12 24.2	-1.1
KK31	Karatay Array	55.53	299	IAmb	IAmb	19 12 36.3	
	comp=Z,6.0nm,0.8s						
KKAR	Karatay Array	55.53	299	P	P	19 12 30.4	+0.5
KKAR	Karatay Array	55.53	299	P	P	19 12 30.4	+0.5
ARTI	Arti	55.77	318	P	P	19 12 31.8	+0.5
ARTI	Arti	55.77	318	d iP	P	19 12 32.1	+0.8
ARTI						19 13 29.7	
ARTI						19 14 32.2	
ARTI				S	S	19 20 19.7	+5.5
ARTI				SS	SS	19 23 58.5	-1.0
ARTI				pmax	pmax		
	comp=Z,24nm,0.7s						
DRK	Karamyk	56.59	295	P	P	19 12 37.3	-0.5
DRK				IAmb	IAmb	19 12 47.2	
	comp=Z,6.2nm,0.6s						
DRK	Karamyk	56.59	295	P	P	19 12 37.3	-0.5
DRK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TULEG	Thule	57.23	10	IAmb	IAmb	19 12 43.1	
	comp=Z,12nm,1.2s						
MANEM	Manem	57.71	293	IAmb	IAmb	19 13 01.9	
	comp=Z,12nm,1.0s						
GAR	Garm	57.82	295	P	P	19 12 45.3	-0.9
GAR				IAmb	IAmb	19 12 48.3	
	comp=Z,11nm,0.9s						
KULM	Kulim	58.00	243	P	P	19 12 49.5	+1.9
COEN	Coen	58.01	188	P	P	19 12 47.2	-0.4
	comp=Z,11nm,0.7s						
COEN	Coen	58.01	188	P	P	19 12 48.2	+0.7
COEN				IAmb	IAmb	19 12 49.4	
	comp=Z,4.6nm,0.7s						
ABKAR	Akbulak array	58.62	310	P	P	19 12 52.5	+0.9
KDU	Kakadu	58.66	200	P	P	19 12 50.9	-1.2
	comp=Z,11nm,0.7s						
KIRV	Kirov	58.75	323	ceP	P	19 12 52.9	+0.7
NIL	Nilore	58.82	288	P	P	19 12 54.2	+1.0
NIL	Nilore	58.82	288	P	P	19 12 54.2	+1.0
NIL				pmax	pmax		
	comp=Z,18nm,0.9s						
POIN	Pond Inlet	58.92	15	P	P	19 12 53.3	0.0
POIN				IAmb	IAmb	19 13 29.7	
	comp=Z,15nm,1.5s						
EDM	Edmonton	59.73	44	P	P	19 12 58.7	-0.5
EDM				IAmb	IAmb	19 13 00.6	
	comp=Z,7.6nm,0.8s						
EDM	Edmonton	59.73	44	P	P	19 12 58.7	-0.5
EDM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ARCES	ARCESS Array B	59.78	340	P	P	19 13 00.6	+1.3
	comp=Z,4.8nm,0.7s,baz=28,slow=5.5,SNR=8.0						
	comp=Z,4.8nm,0.7s						
ARCES	ARCESS Array B	59.78	340	P	P	19 13 00.6	+1.3
ARCES				pmax	pmax		
	comp=Z,124nm,1.9s						
E07A	Sunnyside	59.92	53	P	P	19 13 00.6	0.0
SHAA	Shahritus	60.05	295	IAmb	IAmb	19 13 10.5	
	comp=Z,16nm,0.6s						
BLKN	Baker Lake	60.27	27	P	P	19 13 03.2	+0.5
BLKN				IAmb	IAmb	19 13 29.7	
	comp=Z,8.2nm,0.8s						
ILON	Igloolik, Nuna	60.69	19	P	P	19 13 05.3	-0.1
ILON				IAmb	IAmb	19 13 06.7	
	comp=Z,8.1nm,0.8s						
YBH	Yreka Blue Hor	60.91	59	P	P	19 13 08.3	+0.8
YBH	Yreka Blue Hor	60.91	59	P	P	19 13 08.3	+0.8
YBH				pmax	pmax		
	comp=Z,19nm,1.5s						
KBL	Kabul	61.16	291	P	P	19 13 09.2	-0.3
KBL				IAmb	IAmb	19 13 10.6	
	comp=Z,8.0nm,0.8s						
KBL	Kabul	61.16	291	P	P	19 13 09.2	-0.3
KBL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KLMR	Klimovskoe	61.40	329	eP	P	19 13 09.5	-0.9
KLMR				pmax	pmax		
	comp=Z,17nm,1.0s						
MTSU	Mount Surprise	62.04	186	P	P	19 13 15.0	-0.2
	comp=Z,3.2nm,1.0s						
O03E	Paynes Creek	62.29	60	P	P	19 13 16.9	+0.1
BMO	Blue Mountains	62.36	53	IAmb	IAmb	19 13 19.3	
	comp=Z,9.2nm,1.4s						
J08A	Circle Bar Ran	62.54	55	IAmb	IAmb	19 13 20.4	
	comp=Z,5.5nm,0.7s						
PLID	Pearl Lake	62.97	53	IAmb	IAmb	19 13 23.2	
	comp=Z,7.6nm,0.9s						
WVOR	Wild Horse Val	62.98	56	IAmb	IAmb	19 13 24.1	
	comp=Z,6.3nm,0.9s						
MSO	Missoula	63.10	50	P	P	19 13 22.6	+0.5
MSO				IAmb	IAmb	19 13 24.1	
	comp=Z,7.1nm,0.9s						
BELG	Belogornoye	63.22	318	i P	P	19 13 23.8	+1.2
BELG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SUMG	Summit	63.59	3	P	P	19 13 25.1	-0.2
SUMG	Summit	63.59	3	P	P	19 13 25.1	-0.2
SUMG				pmax	pmax		
	comp=Z,21nm,0.9s						
CTA	Charters Tower	63.85	184	P	P	19 13 26.9	-0.2
	comp=Z,2.4nm,0.7s,baz=344,slow=6.6,SNR=5.8						
	comp=Z,2.4nm,0.7s						
MFID	Camas Ranch	64.07	54	IAmb	IAmb	19 13 30.5	
	comp=Z,5.0nm,1.1s						
PAHR	Pah Rah Range	64.14	59	IAmb	IAmb	19 13 31.2	
	comp=Z,8.3nm,1.2s						
CMB	Columbia Colle	64.52	61	IAmb	IAmb	19 13 35.2	
	comp=Z,6.0nm,0.9s						
FCC	Fort Churchill	64.71	31	IAmb	IAmb	19 13 33.1	
	comp=Z,5.9nm,0.6s						
WRA	Warramunga Arr	65.25	196	P	P	19 13 36.1	-0.2
	comp=Z,1.8nm,0.8s,baz=13,slow=6.5,SNR=6.4						
WRA				PcP	PcP	19 14 08.2	0.0
	comp=Z,0.9nm,0.5s,baz=14,slow=4.8,SNR=4.9						
	comp=Z,1.8nm,0.8s						
RYN	Ryan	65.33	60	IAmb	IAmb	19 13 39.0	
	comp=Z,6.7nm,0.8s						
NVAR	Mina Array Bea	65.58	60	P	P	19 13 39.9	+1.3
	comp=Z,4.5nm,0.6s,baz=292,slow=6.9,SNR=31						
	comp=Z,4.5nm,0.6s						
NVAR	Mina Array Bea	65.58	60	P	P	19 13 39.2	+0.5
FINES	FINESS Array B	65.65	334	P	P	19 13 39.0	+0.6
	comp=Z,6.4nm,0.6s,baz=48,slow=6.4,SNR=22						
	comp=Z,6.4nm,0.6s						
FINES	FINESS Array B	65.65	334	P	P	19 13 39.0	+0.6
NV11	Mina Array Sit	65.67	59	IAmb	IAmb	19 13 40.7	
	comp=Z,4.0nm,0.8s						
HRA	Herat	65.77	295	IAmb	IAmb	19 13 41.9	
	comp=Z,3.8nm,0.6s						
YHB	Horse Butte	65.89	51	IAmb	IAmb	19 14 39.7	
	comp=Z,12nm,1.2s						
ELK	Elko	66.04	56	IAmb	IAmb	19 14 24.5	
	comp=Z,15nm,2.0s						
YNE	Yellowstone No	66.39	50	IAmb	IAmb	19 15 36.4	
	comp=Z,11nm,1.4s						
OBN	Obninsk	66.41	325	⇑eP	P	19 13 44.4	+1.1
OBN				i *SP	pP	19 13 49.1	-6.0
OBN				i		19 14 14.2	
OBN				S	S	19 22 39.0	+10
OBN				pmax	pmax		
	comp=Z,65nm,2.8s						
OBN				MLR	MLR		
	comp=Z,103nm,19.0s						
OBN	Obninsk	66.41	325	eP	P	19 13 44.4	+1.1
H17A	Grant Village	66.46	51	IAmb	IAmb	19 13 49.6	
	comp=Z,7.9nm,1.2s						
MOOW	Moose Ponds	66.77	51	IAmb	IAmb	19 13 48.9	
	comp=Z,9.8nm,1.3s						
VRH	Novokhopyorsk	66.80	320	eP	P	19 13 45.0	-0.9
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LPSR	Galich'ya Gora	67.13	322	eP	P	19 13 47.7	-0.3
LPSR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MPMC	Manual Prospec	67.56	61	P	P	19 13 50.6	-0.6
MPMC				IAmb	IAmb	19 13 53.5	
	comp=Z,12nm,1.5s						
SPR3	Spring Creek 3	67.67	57	IAmb	IAmb	19 13 56.3	
	comp=Z,4.6nm,0.8s						
DUG	Dugway, Tooele	67.82	55	IAmb	IAmb	19 13 55.0	
	comp=Z,6.7nm,1.0s						
VSR	Storozhevoye	67.97	321	eP	P	19 13 53.2	-0.1
VSR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PDAR	Pinedale Array	68.07	51	P	P	19 13 55.0	+0.5
	comp=Z,2.7nm,1.0s,baz=249,slow=1.7,SNR=14						
	comp=Z,2.7nm,1.0s						
PDAR	Pinedale Array	68.07	51	P	P	19 13 54.7	+0.3
VORD	Divnogorie	68.08	320	eP	P	19 13 53.3	-0.7
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BSUT	Blindstream Ca	68.81	54	IAmb	IAmb	19 14 03.1	
	comp=Z,9.2nm,1.3s						
AS31	Alice Springs	68.95	196	P	P	19 14 01.0	+1.3
ASAR	Alice Springs	68.95	196	P	P	19 14 00.6	+0.8
	comp=Z,2.1nm,0.8s,baz=16,slow=6.7,SNR=23						
	comp=Z,2.1nm,0.8s						
CCUT	Cedar City	69.18	58	IAmb	IAmb	19 14 05.4	
	comp=Z,9.8nm,1.2s						
TMUT	Trail Mountain	69.35	55	IAmb	IAmb	19 16 29.8	
	comp=Z,3.6nm,0.6s						
P17A	Butcher Ranch,	69.51	55	IAmb	IAmb	19 14 05.5	
	comp=Z,10.0nm,1.2s						
MTPU	Mount Pierson	69.58	57	IAmb	IAmb	19 14 06.6	
	comp=Z,5.1nm,0.8s						
LCMT	Little Creek M	69.59	58	IAmb	IAmb	19 14 06.3	
	comp=Z,7.3nm,0.8s						
KNB	Kanab	69.85	58	IAmb	IAmb	19 14 08.1	
	comp=Z,10nm,1.0s						
SRU	San Rafael Swe	69.87	55	IAmb	IAmb	19 14 07.5	
	comp=Z,10nm,0.9s						
AKT	Akhty	70.15	309	eP	P	19 14 08.4	+1.2
AKT				e		19 14 29.5	
AKT				ePPP	PPP	19 18 26.2	
AKT				pmax	pmax		
	comp=Z,39nm,1.6s						
NB2	NORSAR Subarra	70.16	340	P	P	19 14 07.4	+0.6
	comp=Z,5.4nm,0.7s,baz=43,slow=5.3						
NOA	NORSAR Array B	70.16	340	P	P	19 14 07.7	+0.9
	comp=Z,2.8nm,0.5s,baz=31,slow=6.6,SNR=18						

	comp=Z,2.8nm,0.5s						
RSSD	Black Hills	70.20	47	P	P	19 14 07.3	-0.3
RSSD				IAmb	IAmb	19 14 08.8	
	comp=Z,10nm,1.1s						
RSSD	Black Hills	70.20	47	P	P	19 14 07.3	-0.3
RSSD				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PALK	Pallekele	70.24	261	LR	LR	19 45 16.3	
	comp=Z,90nm,21.9s,baz=318,slow=36						
MNK	Minsk	70.30	328	iP	P	19 14 06.1	-1.6
MNK				i		19 16 42.4	
MNK				iPPP	PPP	19 18 24.5	
MNK				iS	S	19 23 18.8	+3.1
MNK				iSS	SS	19 27 45.4	-0.3
MNK				iSSS	SSS	19 30 57.2	
MNK				pmax	pmax		
	comp=N,19nm,1.2s						
MNK				pmax	pmax		
	comp=E,29nm,1.2s						
MNK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MNK				MLR	MLR		
	comp=E,2µm,21.0s						
MNK				MLR	MLR		
	comp=N,1µm,19.0s						
MNK				MLR	MLR		
	comp=Z,114nm,18.0s						
HFS	Hagfors	70.31	339	P	P	19 14 08.4	+0.8
	comp=Z,6.4nm,0.5s,baz=38,slow=4.9,SNR=32						
	comp=Z,6.4nm,0.5s						
U15A	North Rim	70.56	58	IAmb	IAmb	19 14 12.4	
	comp=Z,7.5nm,0.9s						
KIV	Kislovodsk	71.23	313	P	P	19 14 15.0	+1.3
KIV	Kislovodsk	71.23	313	⇓P	P	19 14 15.9	+2.3
KIV	Kislovodsk	71.23	313	eP	P	19 14 15.8	+2.1
KIV				pmax	pmax		
	comp=Z,19nm,1.1s						
KIV				MLR	MLR		
	comp=Z,112nm,18.0s						
PV14	Lion Creek, Pa	71.24	55	IAmb	IAmb	19 14 15.3	
	comp=Z,6.3nm,0.8s						
KBZ	Khabaz	71.27	313	P	P	19 14 15.9	+2.2
	comp=Z,11nm,0.8s,baz=78,slow=3.2,SNR=25						
KBZ				LR	LR	19 50 37.6	
	comp=Z,172nm,18.5s,baz=56,slow=40						
	comp=Z,11nm,0.8s						
KBZ	Khabaz	71.27	313	ceP	P	19 14 16.3	+2.5
KBZ				pmax	pmax		
	comp=Z,14nm,0.9s						
PV22	Blue Mesa, Par	71.27	54	IAmb	IAmb	19 14 15.9	
	comp=Z,9.9nm,1.2s						
PV04	Paradox Valley	71.30	55	IAmb	IAmb	19 14 17.9	
	comp=Z,9.1nm,1.3s						
PV17	East Wray Mesa	71.34	55	IAmb	IAmb	19 14 16.4	
	comp=Z,9.2nm,0.8s						
PV16	Nyswonger Mesa	71.35	55	IAmb	IAmb	19 14 16.4	
	comp=Z,12nm,1.2s						
PV11	David Mesa, Pa	71.38	55	IAmb	IAmb	19 14 17.3	
	comp=Z,9.9nm,0.9s						
SHA1	Shidzhatmaz	71.39	313	ceP	P	19 14 16.6	+1.8
PV05	Paradox Valley	71.39	55	IAmb	IAmb	19 14 17.0	
	comp=Z,12nm,1.0s						
PV03	Paradox Valley	71.42	55	IAmb	IAmb	19 14 16.9	
	comp=Z,5.3nm,1.0s						
PV13	Radium Mtn., P	71.50	55	IAmb	IAmb	19 14 17.5	
	comp=Z,6.3nm,0.8s						
PV01	Paradox Valley	71.67	55	IAmb	IAmb	19 14 41.7	
	comp=Z,7.8nm,1.2s						
AK03	Malin Array Si	72.65	325	P	P	19 14 22.4	+0.5
AK23	Malin Array Si	72.67	325	P	P	19 14 22.6	+0.6
AKASG	Malin Array Be	72.67	325	P	P	19 14 23.0	+1.0
	comp=Z,5.7nm,0.6s,baz=37,slow=6.1,SNR=14						
	comp=Z,5.7nm,0.6s						
AKASG	Malin Array Be	72.67	325	IAmb	IAmb	19 14 26.8	
	comp=Z,4.2nm,1.1s						
AKASG	Malin Array Be	72.67	325	P	P	19 14 23.0	+1.0
AKASG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
AKBB	Malin Array Si	72.67	325	P	P	19 14 22.1	+0.1
AKBB	Malin Array Si	72.67	325	ceP	P	19 14 22.2	+0.1
AKBB				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AKBB	Malin Array Si	72.67	325	P	P	19 14 22.7	+0.7
AK04	Malin Array Si	72.68	325	P	P	19 14 22.7	+0.6
AK01	Malin Array Si	72.68	325	P	P	19 14 22.8	+0.7
KIEV	Kiev	72.68	325	P	P	19 14 22.1	0.0
KIEV				IAmb	IAmb	19 14 24.9	
	comp=Z,9.9nm,1.0s						
KIEV	Kiev	72.68	325	⇓P	P	19 14 23.0	+0.9
KIEV	Kiev	72.68	325	P	P	19 14 22.1	0.0
KIEV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AK21	Malin Array Si	72.69	325	P	P	19 14 22.8	+0.7
AK22	Malin Array Si	72.69	325	P	P	19 14 22.8	+0.7
AK08	Malin Array Si	72.71	325	P	P	19 14 22.9	+0.6
AK02	Malin Array Si	72.71	325	P	P	19 14 22.9	+0.6
AK09	Malin Array Si	72.71	325	P	P	19 14 22.9	+0.6
AK11	Malin Array Si	72.71	325	P	P	19 14 22.9	+0.6
AK15	Malin Array Si	72.72	325	P	P	19 14 23.0	+0.7
AK18	Malin Array Si	72.72	325	P	P	19 14 23.0	+0.7
AK20	Malin Array Si	72.73	325	P	P	19 14 23.0	+0.6
AK10	Malin Array Si	72.74	325	P	P	19 14 23.1	+0.7
AK05	Malin Array Si	72.74	325	P	P	19 14 23.1	+0.6
AK19	Malin Array Si	72.74	325	P	P	19 14 23.1	+0.6
AK12	Malin Array Si	72.74	325	P	P	19 14 23.1	+0.6
AK06	Malin Array Si	72.77	325	P	P	19 14 22.8	+0.2
F33A	5 Mile Ranch,	72.94	42	IAmb	IAmb	19 14 24.8	
	comp=Z,11nm,0.8s						
LUBAR	Lubar, Ukraine	73.87	325	P	P	19 14 29.4	+0.2
ECSD	EROS Data Cent	74.30	44	IAmb	IAmb	19 14 32.9	
	comp=Z,18nm,1.4s						
SORM	Soroca	75.01	324	⇓P	P	19 14 36.6	+0.8
SORM	Soroca	75.01	324	P	P	19 14 36.5	+0.8
TASM	ASL Pad, Albuq	75.07	56	IAmb	IAmb	19 14 40.4	
	comp=Z,17nm,1.9s						
TASM	ASL Pad, Albuq	75.07	56	IAmb	IAmb	19 14 40.4	
	comp=Z,16nm,1.9s						
TASM	ASL Pad, Albuq	75.07	56	IAmb	IAmb	19 14 40.4	
	comp=Z,18nm,2.0s						
TASM	ASL Pad, Albuq	75.07	56	IAmb	IAmb	19 14 40.4	
	comp=Z,3.3nm,1.0s						
ANMO	Albuquerque	75.07	56	P	P	19 14 37.1	+0.5
ANMO				IAmb	IAmb	19 14 40.4	
	comp=Z,13nm,1.8s						
ANMO	Albuquerque	75.07	56	ceP	P	19 14 37.0	+0.3
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
121A	Cookes Peak, D	75.92	58	IAmb	IAmb	19 14 44.7	
	comp=Z,12nm,1.3s						
SCHQ	Schefferville	76.65	21	P	P	19 14 45.6	+0.5
	comp=Z,4.0nm,0.9s,baz=35,slow=7.7,SNR=2.2						
	comp=Z,4.0nm,0.9s						
BUR08	Bucovina Ar. S	76.71	325	IAmb	IAmb	19 14 52.0	
	comp=Z,9.5nm,0.7s						
BURAR	Bucovina Array	76.73	325	P	P	19 14 46.5	+0.7
BURAR	Bucovina Array	76.73	325	⇑P	P	19 14 47.2	+1.5
BURAR	Bucovina Array	76.73	325	P	P	19 14 47.2	+1.5
MARD	Mardin	76.91	309	IAmb	IAmb	19 14 50.2	
	comp=Z,9.5nm,0.8s						
ARPR	Arapgir-MALATY	76.97	312	IAmb	IAmb	19 15 07.5	
	comp=Z,8.7nm,0.8s						
TESR	Tescani	77.00	324	⇑P	P	19 14 47.8	+0.6
TLCR		77.09	322	⇓P	P	19 14 49.5	+1.9
TLCR		77.09	322	P	P	19 14 49.5	+1.9
VRI	Vrincioaia	77.47	323	⇑P	P	19 14 51.2	+1.3
VRI	Vrincioaia	77.47	323	P	P	19 14 51.1	+1.3
TPGR	Topolog	77.52	322	⇑P	P	19 14 52.0	+1.8
STEB	Steborice	77.67	331	eP	P	19 14 52.8	+1.9
OSTC	Ostas	77.69	332	eP	P	19 14 54.1	+3.1
OSTC	Ostas	77.69	332	eP	P	19 14 54.1	+3.1
OZUR		77.69	324	⇑P	P	19 14 53.6	+2.4
LANS	Liptovska Anna	77.72	329	eP	P	19 14 53.6	+2.4
LANS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LANS	Liptovska Anna	77.72	329	eP	P	19 14 53.6	+2.4
DPC	Dobruska-Polom	77.83	332	eP	P	19 14 53.3	+1.5
DPC	Dobruska-Polom	77.83	332	eP	P	19 14 53.3	+1.5
MORC	Moravsky Berou	77.89	331	IAmb	IAmb	19 14 56.1	
	comp=Z,8.6nm,1.2s						
MORC	Moravsky Berou	77.89	331	⇑P	P	19 14 53.8	+1.6
MORC	Moravsky Berou	77.89	331	eP	P	19 14 53.3	+1.2
MORC	Moravsky Berou	77.89	331	P	P	19 14 53.7	+1.6
CLL	Collm	78.10	334	IAmb	IAmb	19 14 59.2	
	comp=Z,14nm,1.3s						
CLL	Collm	78.10	334	iP	P	19 14 54.1	+0.9
CLL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CLL	Collm	78.10	334	iP	P	19 14 54.1	+0.9
	comp=Z,8.0nm,0.8s						
CLL				ePP	PP	19 17 49.0	-0.2
PVCC	Panska Ves	78.26	333	eP	P	19 14 57.3	+3.2
PVCC	Panska Ves	78.26	333	eP	P	19 14 57.3	+3.2
DRGR		78.41	326	⇓P	P	19 14 56.2	+1.1
DRGR		78.41	326	P	P	19 14 56.2	+1.1
BNN	Bunyan	78.46	313	IAmb	IAmb	19 15 05.2	
	comp=Z,6.4nm,0.8s						
EKA	Eskdalemuir Ar	78.51	345	P	P	19 14 56.9	+1.5
	comp=Z,0.5nm,0.4s,baz=19,slow=5.3,SNR=5.5						
	comp=Z,0.5nm,0.4s						
PSZ	Piszkesteto	78.58	328	IAmb	IAmb	19 15 02.7	
	comp=Z,4.9nm,0.8s						
PSZ	Piszkesteto	78.58	328	⇓P	P	19 14 57.9	+1.8
PSZ	Piszkesteto	78.58	328	P	P	19 14 57.8	+1.8
JAVC	Velka Javorina	78.61	330	eP	P	19 14 58.7	+2.5
VRAC	Vranov	78.62	331	⇑P	P	19 14 57.7	+1.6
VRAC	Vranov	78.62	331	eP	P	19 14 57.4	+1.3
VRAC	Vranov	78.62	331	P	P	19 14 57.7	+1.6
PRU	Pruhonice	78.74	333	eP	P	19 14 58.2	+1.5
PRU	Pruhonice	78.74	333	eP	P	19 14 58.2	+1.5
KRUC	Moravsky	78.89	331	eP	P	19 14 58.9	+1.3
BR131	Keskin Array S	78.95	315	iP	P	19 14 59.6	+1.3
BRTR	Keskin Array B	78.95	315	P	P	19 14 59.8	+1.5
	comp=Z,1.6nm,0.7s,baz=103,slow=3.5,SNR=11						
	comp=Z,1.6nm,0.7s						
MODS	Modra-Piesok	79.17	330	eP	P	19 15 02.1	+3.0
MODS	Modra-Piesok	79.17	330	eP	P	19 15 02.1	+3.0
DKNS	Dickens	79.23	53	IAmb	IAmb	19 15 03.4	
	comp=Z,29nm,1.9s						
SIRR	Siria	79.25	326	⇑P	P	19 15 01.2	+1.6
KIRS	Kirsehir-Merke	79.25	315	⇓P	P	19 15 01.6	+1.7
POST	Post	79.32	54	IAmb	IAmb	19 15 02.1	
	comp=Z,8.4nm,0.9s						
GZR	Gura Zlata	79.52	325	⇑P	P	19 15 02.4	+1.3
GZR	Gura Zlata	79.52	325	P	P	19 15 02.4	+1.3
WMOK	Wichita Mounta	79.68	51		P	19 15 02.8	+0.6
WMOK	Wichita Mounta	79.68	51	P	P	19 15 02.8	+0.6
WMOK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
P40A	Paris	79.71	44	IAmb	IAmb	19 15 03.5	
	comp=Z,17nm,1.0s						
KHC	Kasperske Hory	79.79	333	P	P	19 15 03.4	+0.8
KHC				IAmb	IAmb	19 15 21.6	
	comp=Z,5.0nm,0.7s						
KHC	Kasperske Hory	79.79	333	ceP	P	19 15 04.7	+2.1
KHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KHC	Kasperske Hory	79.79	333	eP	P	19 15 03.6	+1.0
BZS	Buzias	79.80	326	⇑P	P	19 15 03.5	+0.9
BZS	Buzias	79.80	326	P	P	19 15 03.5	+0.9
CKRC	Cesky Krumlov	79.82	332	eP	P	19 15 03.7	+1.0
CKRC	Cesky Krumlov	79.82	332	eP	P	19 15 03.7	+1.0
APMT	Aspermont	79.94	53	IAmb	IAmb	19 15 05.0	
	comp=Z,7.9nm,0.8s						
GEC2	GERESS Array S	80.00	332	IAmb	IAmb	19 15 22.2	
	comp=Z,15nm,1.6s						
GERES	GERESS Array B	80.00	332	P	P	19 15 04.9	+1.2
	comp=Z,1.7nm,0.6s,baz=35,slow=5.4,SNR=17						
	comp=Z,1.7nm,0.6s						
GERES	GERESS Array B	80.00	332	P	P	19 15 05.0	+1.2
CONA	Conrad Observa	80.05	331	iP	P	19 15 05.4	+1.4
	comp=Z,3.8nm,0.9s						
HERR	Herculane	80.08	325	⇑P	P	19 15 05.8	+1.7
RONA	Rosalia, Austr	80.09	330	eP	P	19 15 01.2	-3.0
	comp=Z,2.4nm,0.6s						
SGCY	Sterling City	80.37	55	IAmb	IAmb	19 15 07.6	
	comp=Z,12nm,0.8s						
R40A	Maddies Statio	80.54	45	IAmb	IAmb	19 15 07.2	
	comp=Z,10nm,0.6s						
MOA	Molln	80.67	332	eP	P	19 15 08.1	+0.8
	comp=Z,1.8nm,0.7s						
TX31	Lajitas Ar. Si	80.68	58	IAmb	IAmb	19 15 09.5	
	comp=Z,7.3nm,0.9s						
TXAR	Lajitas Array	80.68	58	P	P	19 15 08.7	+0.9
	comp=Z,5.0nm,0.7s,baz=299,slow=3.9,SNR=53						
	comp=Z,5.0nm,0.7s						
TXAR	Lajitas Array	80.68	58	P	P	19 15 07.8	+0.1
ARSA	Arzberg	80.74	331	eP	P	19 15 06.2	-1.5
	comp=Z,1.2nm,0.8s						
BIOA	Bad Ischl, Aus	81.02	332	iP	P	19 15 10.6	+1.4
	comp=Z,5.6nm,1.2s						
OZNA	Ozona	81.08	55	IAmb	IAmb	19 15 11.3	
	comp=Z,11nm,1.2s						
SAND	Sanderson	81.18	57	IAmb	IAmb	19 15 12.0	
	comp=Z,6.7nm,1.0s						
CCM	Cathedral Cave	81.24	45	P	P	19 15 10.2	-0.2
CCM				IAmb	IAmb	19 15 11.6	
	comp=Z,12nm,0.8s						
CCM	Cathedral Cave	81.24	45	P	P	19 15 10.3	-0.2
CCM				pmax	pmax		
	comp=Z,13nm,0.9s						
BMRD	Maredsous	81.38	338	dP	P	19 15 12.2	+1.3
BOVS	Bovan	81.39	325	⇓P	P	19 15 11.9	+0.7
SOKA	Soboth	81.41	331	iP	P	19 15 12.3	+0.9
	comp=Z,5.5nm,1.0s						
LESA	Schwarzleotal	81.58	332	iP	P	19 15 13.6	+1.4
	comp=Z,2.5nm,0.7s						
KBA	Koelnbreinsper	81.65	332	eP	P	19 15 12.6	-0.1
	comp=Z,5.9nm,0.6s						
FVM	French Village	81.71	44	IAmb	IAmb	19 15 14.2	
	comp=Z,9.0nm,0.7s						
OBKA	Obir	81.72	331	eP	P	19 15 13.5	+0.5
	comp=Z,3.2nm,0.8s						
WATA	Walderalm	82.02	333	iP	P	19 15 15.8	+1.2
	comp=Z,2.2nm,0.5s						
WTTA	Wattenberg	82.06	333	iP	P	19 15 16.5	+1.7
	comp=Z,2.3nm,0.5s						
BRDY	Brady	82.07	54	IAmb	IAmb	19 15 16.6	
	comp=Z,8.8nm,0.8s						
RETA	Reutte	82.15	334	eP	P	19 15 16.2	+1.0
	comp=Z,2.7nm,1.0s						
ABTA	Abfaltersbach	82.22	332	eP	P	19 15 12.9	-2.7
	comp=Z,4.8nm,1.3s						
SQTA	Sankt Quirin	82.24	333	iP	P	19 15 16.9	+1.1
	comp=Z,3.4nm,0.9s						
FETA	Feichten	82.57	333	iP	P	19 15 19.0	+1.5
	comp=Z,1.7nm,1.0s						
DAVA	Damuels	82.61	334	iP	P	19 15 19.0	+1.4
	comp=Z,5.6nm,1.1s						
ASF	Jabal al Asfar	82.84	308	LR	LR	19 56 20.2	
	comp=Z,35nm,18.3s,baz=26,slow=39						
MMAI	Mount Meron Ar	83.05	310	P	P	19 15 22.5	+2.4
	comp=Z,3.4nm,0.5s,baz=42,slow=6.7,SNR=4.2						
MMAI				LR	LR	19 58 45.9	
	comp=Z,61nm,18.5s,baz=350,slow=40						
	comp=Z,3.4nm,0.5s						
RAYN	Ar Rayn	83.88	297	P	P	19 15 24.1	-0.4
RAYN				IAmb	IAmb	19 15 27.0	
	comp=Z,5.0nm,1.1s						
RAYN	Ar Rayn	83.88	297	P	P	19 15 24.1	-0.4
RAYN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
WVT	Waverly	84.45	44	P	P	19 15 26.6	-0.6
WVT				IAmb	IAmb	19 15 28.6	
	comp=Z,7.1nm,0.8s						
WVT	Waverly	84.45	44	P	P	19 15 26.6	-0.6
WVT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CLTN	Cedars of Leba	85.22	43	IAmb	IAmb	19 15 33.0	
	comp=Z,6.9nm,1.0s						
FDMO	Fiordimonte	85.25	330	IAmb	IAmb	19 15 39.2	
	comp=Z,6.9nm,0.8s						
SWET	Sewanee	86.12	43	P	P	19 15 35.4	-0.2
ESDC	Sonseca Array	93.52	340	P	P	19 16 10.6	+0.3
	comp=Z,0.2nm,0.7s,baz=359,slow=3.2,SNR=2.0						
	comp=Z,0.2nm,0.7s						
ESDC	Sonseca Array	93.52	340	IAmb	IAmb	19 16 16.6	
	comp=Z,3.1nm,1.4s						
FURI	Furi	98.93	291	LR	LR	20 06 08.2	
	comp=Z,40nm,19.7s,baz=70,slow=38						
TORD	Torodi Ar. Bea	116.31	325	PKP	PKPdf	19 21 38.1	-0.1
	comp=Z,0.4nm,0.4s,baz=28,slow=2.1,SNR=4.6						
DBIC	Dimbokro	124.77	329	PKP	PKPdf	19 21 54.7	+0.3
	comp=Z,1.5nm,0.6s,baz=359,slow=6.5,SNR=1.3						
QSPA	South Pole Qui	133.72	180	PKP	PKiKP	19 22 12.3	+1.2
	comp=Z,1.4nm,0.6s,baz=278,slow=1.0,SNR=12						
BDFB	Brasilia	147.79	34	PKPbc	PKiKP	19 22 40.7	-0.8
	comp=Z,8.4nm,0.7s,baz=233,slow=4.5,SNR=17						
BDFB	Brasilia	147.79	34		PKiKP	19 22 41.0	-0.5
BDFB	Brasilia	147.79	34	PKP2	PKiKP	19 22 41.0	-0.5
SNAA	Sanae	149.31	196	⇓P	PKPbc	19 22 42.9	+1.1
	comp=Z,86nm,0.7s						
SNAA	Sanae	149.31	196	PKPbc	PKPbc	19 22 42.7	+0.9
	comp=Z,4.2nm,0.9s,baz=179,slow=5.9,SNR=12						
SNAA	Sanae	149.31	196		PKiKP	19 22 43.2	+0.3
SNAA	Sanae	149.31	196	PKP2	PKiKP	19 22 43.3	+0.3
PLCA	Paso Flores	149.94	98	PKPbc	PKiKP	19 22 45.6	+0.5
	comp=Z,3.9nm,0.8s,baz=240,slow=2.7,SNR=9.0						
PLCA	Paso Flores	149.94	98		PKiKP	19 22 45.4	+0.2
PLCA	Paso Flores	149.94	98	PKP2	PKiKP	19 22 45.4	+0.2
VNA2	Neumayer--Watz	150.80	195	⇓P	PKiKP	19 22 46.6	+0.7
	comp=Z,14nm,0.7s,baz=102,slow=1.7						
VNA3	Neumayer Olymp	150.93	193	⇓P	PKiKP	19 22 46.7	+0.5
	comp=Z,8.3nm,0.8s						
CPUP	Villa Florida	151.62	61	PKPbc	PKiKP	19 22 49.4	+0.4
	comp=Z,2.5nm,0.7s,baz=312,slow=4.3,SNR=8.6						

RSNC 31 19:09:20.8±0.0**, 10.°80N×73.°47W, h72**^{km}±2^{km}**, M2.1, mb3.5, ML2.1, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMRC	Santa Marta, M	0.82	296	P	Pn	19 09 36.7	-0.6
SMRC				S	Sn	19 09 49.2	-0.3
ARGC	Ariguani, Magd	1.21	219	P	Pn	19 09 41.7	-0.4
ARGC				S	Sn	19 09 58.0	0.0
URIC	Uribia, Colomb	1.70	58	P	Pn	19 09 48.0	-0.5
URIC				S	Sn	19 10 09.1	-0.5
SJCC	San Jacinto, C	1.91	242	P	Pn	19 09 51.2	-0.1
SJCC				S	Sn	19 10 15.9	+1.4
OCAC	Ocana	2.55	177	P	Pn	19 09 58.3	-1.8
OCAC				S	Sn	19 10 28.8	-1.4
SDV	Santo Domingo	3.38	124	P	Pn	19 10 10.6	-0.8
SDV				S	Sn	19 10 48.1	-2.4
PAMC	Pamplona, Colo	3.52	167	P	Pn	19 10 10.7	-2.9
PAMC				S	Sn	19 10 52.5	-1.9
BARC	Barichara	4.19	176	P	Pn	19 10 24.0	+1.5
BARC				S	Sn	19 11 10.3	-0.1
HELC	Santa Helena	5.01	204	P	Pn	19 10 35.3	+1.4
HELC				S	Sn	19 11 33.6	+2.9

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*BJI **31** 19:10:09.8, 24.°03N×121.°74E, h10^{km}, mB5.0/15, mb4.4/59, ML4.8/7, Ms4.7/52, Ms7 4.7/48*

*TAP **31** 19:10:10.5, 24.°08N×121.°67E, h11^{km}, ML5.0, B*

*ASIES **31** 19:10:10.5, 24.°09N×121.°66E, h7^{km}, Mw4.5, Fault plane solution: NP1:ϕ_s241.00000°, δ19.00000°, λ120.00000°. NP2:ϕ_s30.00000°, δ74.00000°, λ80.00000°.*

*NIED **31** 19:10:10.4, 24.°05N×121.°67E, h5^{km}, MW4.8, Moment Tensor Solution. s2 Moment tensor: Scale 10^{16}Nm; M_{rr}0.95; $M_{\theta\theta}$-0.79; $M_{\phi\phi}$-0.16; $M_{r\theta}$0.91; $M_{\theta\phi}$-0.55; $M_{\phi r}$0.76; Fault plane solution: $M_0$1.57000×10^{16} NP1: ϕ_s250.00000°, δ21.00000°, λ107.00000°. NP2: ϕ_s52.00000°, δ70.00000°, λ84.00000°.*

*NEIC **31** 19:10:10.3±1.9, 24.°07N±0.°02×121.°69E±0.°04, h12^{km}±1^{km}, mb4.8/123, Mwr4.6/24 Error ellipse: s-maj=5.6km s-min=2.7km az=107.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-1.11; $M_{\theta\theta}$0.19; $M_{\phi\phi}$0.91; $M_{r\theta}$0.11; $M_{\theta\phi}$-0.51; $M_{\phi r}$0.19; Fault plane solution: $M_0$1.16000×10^{16} NP1:ϕ_s162.16000°, δ48.69000°, λ-76.95000°. NP2:ϕ_s322.81000°, δ42.96000°, λ-104.41000°. Principal axes: T 1.1837, Plg3.0000°, Azm243.0000°; N -0.0392, Plg10.0000°, Azm333.0000°; P -1.1445, Plg80.0000°, Azm137.0000°;*

*NEIC **31** 19:10:10, 24.°08N×121.°70E, h10^{km}*

*JMA **31** 19:10:10.4±0.1, 24.°1N±0.°3×121.°7E±0.°7, h5^{km}±2^{km}, MD4.6/14, MV4.5/14, TAIWAN REGION*

*IDC **31** 19:10:13.3±3.5, 24.°08N×121.°73E, h29^{km}±24^{km}, mb4.1/28, mbtmp4.3/33, ML4.1/4, MS3.9/27, Error ellipse: s-maj=14.8km s-min=10.7km az=63.0*

ISC 31 19:10:10.8±0.5**, 24.°07N**±0.°01×**121.°69E**±0.°02**, h16**^{km}±2^{km}**, n619, σ1ˢ33**/661**, mb4.7**/89**, MS3.9**/23**, 18C-43D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWD	Chiawan	0.09	276	⇓iP	Pg	19 10 13.0	-1.1
TWD				S	Sg	19 10 14.5	-1.7
ETL	Fush Village	0.11	324	⇓iP	Pg	19 10 13.2	-1.1
ETL				iS	Sg	19 10 15.2	-1.4
HWA	Hwalien	0.12	221	⇓P	Pg	19 10 14.2	-0.2
HWA				S	Sg	19 10 17.1	+0.2
NACB	Ninganchiao	0.14	319	Pg	Pg	19 10 13.4	-1.3
NACB				Sg	Sg	19 10 15.4	-1.8
NACB	Ninganchiao	0.14	319	P	Pg	19 10 13.3	-1.3
NACB	Ninganchiao	0.14	319	⇓iP	Pg	19 10 13.5	-1.1
NACB				iS	Sg	19 10 15.5	-1.6
ETM	Tongmen	0.21	240	⇓iP	Pg	19 10 14.9	-0.8
ETM				iS	Sg	19 10 17.9	-1.1
TEYL	Yanliau Villag	0.22	203	P	Pg	19 10 15.9	+0.1
TEYL				eS	Sb	19 10 20.1	-0.1
ETLH	Xiulin Townshi	0.24	305	⇓iP	Pg	19 10 15.3	-0.8
ETLH				S	Sg	19 10 18.5	-1.3
EHP	Heping Village	0.24	10	P	Pg	19 10 15.8	-0.4
EHP				S	Sg	19 10 19.5	-0.4
EAHA	Aohua	0.26	9	⇓P	Pg	19 10 16.0	-0.5
EAHA				iS	Sg	19 10 19.8	-0.6
SHUL	Shoufeng	0.31	203	eP	Pb	19 10 18.0	0.0
SHUL				eS	Sb	19 10 24.3	+1.6
ESL	Shilin	0.35	223	⇓iP	Pg	19 10 17.5	-0.5
ESL				eS	Sg	19 10 22.4	-0.5
ENA	Nanau	0.36	7	⇓iP	Pg	19 10 17.9	-0.3
ENA				iS	Sg	19 10 22.8	-0.5
TEGC	Jichi Village	0.39	201	eP	Pb	19 10 19.6	+0.4
TEGC				eS	Sb	19 10 26.9	+1.9
WHF	Hehuan Shan	0.40	281	⇓P	Pg	19 10 18.4	-0.7
WHF				iS	Sg	19 10 23.8	-1.0
FUSS	Fushou	0.45	293	⇓eP	Pg	19 10 19.5	-0.4
FUSS				S	Sg	19 10 25.8	-0.2
WARBT	Fenglin Townsh	0.45	219	⇓iP	Pg	19 10 19.3	-0.5
WARBT				S	Sg	19 10 26.6	+0.6
NNSB	Datong	0.46	321	⇓iP	Pg	19 10 19.6	-0.4
NNSB				S	Sg	19 10 25.6	-0.6
NNS	Nan Shan	0.47	322	⇓iP	Pg	19 10 19.8	-0.5
NNS				S	Sg	19 10 26.0	-0.6
LATG	Datong	0.49	342	⇓iP	Pg	19 10 20.1	-0.4
LATG				iS	Sg	19 10 26.7	-0.5
OWD	Renai	0.49	256	⇓P	Pg	19 10 20.1	-0.5
OWD				eS	Sg	19 10 26.4	-0.8
TWT	Tachien	0.51	291	⇓iP	Pg	19 10 20.9	-0.1
TWT				S	Sg	19 10 28.1	+0.3
ESAO	Su ao	0.52	15	eP	Pg	19 10 20.9	-0.2
ESAO				eS	Sg	19 10 28.0	-0.1
TDCB	Techi	0.52	290	⇓iP	Pg	19 10 20.9	-0.3
TDCB				iS	Sg	19 10 27.2	-1.0
WUSB	Renai	0.53	262	⇓iP	Pg	19 10 21.1	-0.3
WUSB				S	Sg	19 10 28.1	-0.4
TWC	Suao	0.55	15	⇓iP	Pg	19 10 21.6	-0.2
TWC				S	Sg	19 10 29.1	-0.1
NDS	Dongshan	0.56	2	⇓P	Pg	19 10 21.7	-0.2
NDS				eS	Sg	19 10 29.1	-0.3
EOS4	EOS4	0.57	85	eP	Pn	19 10 23.7	-0.3
ENTT	Nioudou	0.58	348	⇓iP	Pg	19 10 22.0	-0.2
ENTT				S	Sg	19 10 29.9	-0.1
VWDT	VWDT	0.60	238	⇓iP	Pg	19 10 22.3	-0.3
VWDT				S	Sg	19 10 30.5	0.0
EOS2	EOS2	0.60	55	eP	Pn	19 10 24.5	-0.1
EOS3	EOS3	0.61	69	eP	Pn	19 10 25.3	+0.6
HGSD	Ruisui	0.63	203	eP	Pb	19 10 23.8	+0.4
HGSD				eS	Sn	19 10 34.5	-0.2
TWE	Neicheng	0.65	358	⇓iP	Pg	19 10 23.4	-0.2
TWE				S	Sg	19 10 32.3	+0.1
EHY	Hungye	0.66	211	⇑iP	Pg	19 10 23.2	-0.5
EHY				eS	Sb	19 10 33.3	+0.5
EHYH	Wanrong	0.66	209	⇑eP	Pg	19 10 23.3	-0.4
YHNB	Yeheng	0.66	334		Pg	19 10 23.5	-0.3
YHNB				Sg	Sg	19 10 31.8	-0.9
YHNB	Yeheng	0.66	334	P	Pg	19 10 23.8	0.0
YHNB	Yeheng	0.66	334	⇓iP	Pg	19 10 23.7	-0.2
YHNB				iS	Sg	19 10 32.3	-0.4
NSK	Sanguang	0.68	333	⇓iP	Pg	19 10 23.8	-0.3
NSK				S	Sg	19 10 32.5	-0.6
WPL	Puli Township	0.68	265	eP	Pg	19 10 24.1	+0.1
WPL				eS	Sg	19 10 32.4	-0.6
FUSB	Fushanzhiwuyua	0.69	352	⇓iP	Pg	19 10 24.1	-0.2
FUSB				S	Sg	19 10 32.8	-0.8
ILA	Ilan	0.69	4	eP	Pg	19 10 23.8	-0.6
DPDB	Guoxing	0.70	267	⇓P	Pg	19 10 24.4	-0.2
DPDB				eS	Sg	19 10 34.0	+0.1
WHP	Taichung City	0.71	287	⇓P	Pg	19 10 24.8	0.0

WHP				*i* S	Sg	19 10 34.5	+0.2
SSLB	Suanglung	0.73	248		Pg	19 10 24.6	-0.5
SSLB				Sg	Sg	19 10 33.4	-1.4
SSLB	Suanglung	0.73	248	P	Pg	19 10 24.8	-0.3
SSLB	Suanglung	0.73	248	S	Sg	19 10 34.6	-0.2
SSLB	Suanglung	0.73	248	⇓*i*P	Pg	19 10 24.7	-0.5
SSLB				S	Sg	19 10 33.8	-1.0
SMLT	Sun Moon Lake	0.75	256	⇓*i*P	Pg	19 10 25.2	-0.3
SMLT				S	Sg	19 10 35.2	-0.2
NFF	Wufeng Townshi	0.77	317	⇓*e*P	Pg	19 10 25.6	-0.2
NFF				S	Sg	19 10 35.5	-0.4
YULB	Yu-li	0.77	208		Pg	19 10 24.5	-1.2
YULB				Sg	Sb	19 10 36.2	+0.2
YULB	Yu-li	0.77	208	P	Pn	19 10 27.8	+0.8
YULB	Yu-li	0.77	208	S	Sn	19 10 37.6	-0.7
YULB	Yu-li	0.77	208	⇑*e*P	Pg	19 10 24.7	-1.1
YULB				*e*S	Sb	19 10 36.9	+0.9
ECBN	Changbin	0.78	197	*e*P	Pg	19 10 26.4	+0.3
ECBN				*e*S	Sn	19 10 38.0	-0.7
TYC	Yuchr	0.78	258	⇓*i*P	Pb	19 10 25.5	-0.5
TYC				S	Sg	19 10 35.3	-1.1
EGS		0.80	16	*e*P	Pb	19 10 26.6	+0.2
TWF1	Yuli	0.80	207	⇑*e*P	Pb	19 10 25.3	-1.1
LIOB	Emei	0.84	313	⇓*e*P	Pb	19 10 27.3	+0.2
LIOB				*e*S	Sb	19 10 38.1	-0.1
NSTT	Nanjuang	0.84	312	⇓*e*P	Pb	19 10 27.1	+0.1
NSTT				*e*S	Sb	19 10 37.8	-0.4
KSHI	Guanxi Townshi	0.85	326	*e*P	Pg	19 10 27.7	+0.4
KSHI				*e*S	Sg	19 10 39.1	+0.6
WHYT	Xinyi Township	0.85	244	*e*P	Pb	19 10 27.0	-0.3
WHYT				*e*S	Sg	19 10 39.3	+0.6
NJD	Zhudong	0.86	320	*e*P	Pg	19 10 28.1	+0.5
TWQ1	Liyutan	0.89	288	*e*P	Pb	19 10 27.7	-0.1
TWQ1				*e*S	Sg	19 10 40.4	+0.8
YUS	Yu-Shan	0.89	230	*e*P	Pb	19 10 27.8	-0.4
YUS				*e*S	Sb	19 10 40.3	+0.2
NHDH	Xindian Distri	0.90	350	*e*P	Pb	19 10 28.2	+0.2
TIPB	Shuangxi	0.91	8	*e*P	Pb	19 10 27.9	-0.3
TIPB				*e*S	Sb	19 10 39.2	-0.8
WWF	Wufeng	0.91	268	*e*P	Pn	19 10 29.2	+0.3
TWA	Mucha	0.91	354	*e*P	Pb	19 10 28.3	0.0
TWA				S	Sb	19 10 39.8	-0.4
CHKH	Chenggong	0.92	197	*e*P	Pb	19 10 28.2	-0.2
NSY	Sanyi	0.92	292	*e*P	Pg	19 10 29.0	+0.4
NSY				*e*S	Sg	19 10 41.3	+0.6
WJS	Zhushan	0.92	255	⇑*e*P	Pg	19 10 29.0	+0.4
TATO	Taipei	0.92	348		Pb	19 10 28.4	0.0
TATO				Sg	Sb	19 10 39.8	-0.6
TATO	Taipei	0.92	348	P	Pn	19 10 29.3	+0.2
TATO	Taipei	0.92	348	S	Sb	19 10 40.6	+0.2
TATO	Taipei	0.92	348	⇓*e*P	Pb	19 10 28.7	+0.3
TATO				S	Sb	19 10 39.8	-0.6
TCU	Taichung	0.93	275	⇑*e*P	Pn	19 10 29.9	+0.6
HSN1	Hsinchu	0.94	319	*e*P	Pn	19 10 29.5	+0.2
WNT1	Nantou City	0.94	260	*e*P	Pn	19 10 29.9	+0.5
WNT1				*e*S	Sn	19 10 43.0	+0.5
FULB	Fuli	0.94	203	*e*P	Pb	19 10 28.5	-0.3
WNT	Mingjian	0.94	258	⇑P	Pn	19 10 30.0	+0.6
WNT				S	Sn	19 10 43.0	+0.4
NMLH	Miaoli	0.95	300	*e*P	Pn	19 10 29.9	+0.5
BACT	New Taipei Cit	0.95	346	*e*P	Pn	19 10 29.8	+0.2
SBCB	Hsinchu	0.97	318	*e*P	Pn	19 10 30.6	+0.9
SBCB				*e*S	Sb	19 10 41.6	-0.2
NJN	Zhunan	0.97	309	*e*P	Pg	19 10 29.6	0.0
NHY	Taipei	0.97	353	*e*P	Pb	19 10 29.4	+0.2
TWB1	Santiao Chiao	0.97	16	⇑P	Pb	19 10 29.6	+0.4
TAP	Taipei	0.98	350	*e*P	Pg	19 10 29.9	+0.2
TAP				*e*S	Sb	19 10 42.4	+0.3
ALS	Alishan	0.99	236	*e*P	Pb	19 10 29.7	0.0
ALS				*e*S	Sn	19 10 43.8	-0.3
NTY	Taoyuan	0.99	339	*e*P	Pg	19 10 30.3	+0.2
NWF	Wu-fen Shan	1.00	5	*e*P	Pb	19 10 30.0	+0.2
WFSB	Wu-fen Shan	1.00	5	⇓*e*P	Pb	19 10 29.8	+0.1
WFSB				S	Sb	19 10 42.4	-0.3
NCUH	Zhongli	1.01	333	*e*P	Pg	19 10 30.8	+0.5
NCU	National Centr	1.01	333	*e*P	Pb	19 10 29.3	-0.6
NCU				*e*S	Sn	19 10 44.4	+0.2
CHKT	Chengkung	1.01	197	*e*P	Pb	19 10 29.2	-0.8
CHKT				*e*S	Sn	19 10 45.3	+1.0
EHD	Haiduan	1.02	206	*e*P	Pb	19 10 29.7	-0.5
WYL	Yuanlin Townsh	1.02	264	⇑*e*P	Pg	19 10 31.0	+0.4
SXI1	Grass Mountain	1.03	9	⇓*i*P	Pb	19 10 30.5	+0.2
SXI1				*e*S	Sg	19 10 44.3	-0.1
WCHH	Zhanghua	1.04	271	⇑*e*P	Pg	19 10 31.1	+0.2
CHN5	Tsauling	1.04	243	*e*P	Pg	19 10 31.2	+0.2
CHN5				*e*S	Sn	19 10 46.4	+1.2
WCH1	Changhua City	1.05	270	⇑*e*P	Pg	19 10 31.4	+0.4
TWS1	Kuangyinshan	1.06	346	*e*P	Pg	19 10 31.5	+0.3
TWS1				*e*S	Sn	19 10 46.1	+0.7
ECS	Chishang	1.06	204	*e*P	Pb	19 10 30.6	-0.3
ELDTW	Lidau	1.07	215	*e*P	Pb	19 10 30.0	-1.1
TNOU	National Taiwa	1.08	4	*e*P	Pn	19 10 31.6	+0.3
YM01	YM01	1.08	354	⇓P	Pg	19 10 31.8	+0.1
ZUZH	Zhuzihu	1.09	353	*e*P	Pb	19 10 31.7	+0.3
NHW	Xinwu Township	1.10	328	*e*P	Pb	19 10 31.4	-0.1
WGK	Gukeng	1.10	250	*e*P	Pg	19 10 32.3	+0.2
NTST	Danshui	1.11	348	*e*P	Pg	19 10 32.3	0.0
WDL	Douliou City	1.11	252	*e*P	Pg	19 10 32.6	+0.3
YM08	YM08	1.12	355	⇓*e*P	Pb	19 10 31.8	0.0
ANP	Anpu	1.12	352	*e*P	Pb	19 10 31.9	0.0
WDLH	Douliu	1.12	250	*e*P	Pg	19 10 32.4	-0.1
NWRT	Kuosheng	1.13	358	*e*P	Pg	19 10 32.9	+0.3
WCKO	Fanlu	1.18	238	*e*P	Pb	19 10 33.1	+0.2
WCKO				*e*S	Sg	19 10 49.6	+0.6
JYNG	Yonagunijimaku	1.20	71	*e*P	Pb	19 10 33.7	+0.5
JYNG	Yonagunijimaku	1.20	71	A	A	19 10 33.7	
	comp=N,22nm,1.6s,comp=E,15nm,2.4s						
TWY	Chenhua	1.20	356	*e*P	Pg	19 10 34.0	0.0
STYH	Taoyuan	1.23	223	*e*P	Pn	19 10 33.4	+0.1
STYH				*e*S	Sg	19 10 50.6	+0.1
RLNB	Erlin	1.23	262	⇑P	Pb	19 10 34.3	+0.6
RLNB				*e*S	Sg	19 10 51.3	+0.6
CHN4	Tsaushan	1.24	235	⇑*e*P	Pb	19 10 34.3	+0.5
CHN4				*e*S	Sg	19 10 52.4	+1.6
TPUB	Ta-pu	1.24	232		Pb	19 10 34.4	+0.6
TPUB					Sg	19 10 51.3	+0.3
TPUB	Ta-pu	1.24	232	P	Pg	19 10 34.8	+0.1
TPUB	Ta-pu	1.24	232	S	Sg	19 10 52.4	+1.4
TPUB	Ta-pu	1.24	232	⇑*e*P	Pb	19 10 34.5	+0.6
TPUB				*e*S	Sg	19 10 51.2	+0.3
STYT	Tauyuan	1.25	224	⇑P	Pn	19 10 33.8	+0.1
STYT				*e*S	Sg	19 10 50.8	-0.3
YOJ	Yonaguni jima	1.26	72		Pn	19 10 34.2	+0.4
YOJ	Yonaguni jima	1.26	72	P	Pg	19 10 35.1	-0.1
YOJ	Yonaguni jima	1.26	72	⇓P	Pn	19 10 34.2	+0.4
YOJ	Yonaguni jima	1.26	72	*e*P	Pb	19 10 34.5	+0.2
YOJ				*e*S	Sg	19 10 52.9	+1.2
YOJ	Yonaguni jima	1.26	72	A	A	19 10 34.5	
	comp=N,17nm,2.2s,comp=E,24nm,2.2s						
WTP	Ta-pu	1.29	231	⇑P	Pb	19 10 35.1	+0.4
WTP				*e*S	Sg	19 10 52.9	+0.5
CHY	Chiayi	1.30	244	*e*P	Pg	19 10 35.9	+0.1
CHY				*e*S	Sg	19 10 53.6	+0.9
WTCT	Ta-ch'eng	1.31	261	*e*P	Pb	19 10 34.9	-0.1
WTCT				*e*S	Sg	19 10 53.0	-0.1
TWK	Hsinying	1.36	234	*e*P	Pb	19 10 36.6	+0.5
TWK				*e*S	Sb	19 10 54.0	+0.8
TWG	Pinlang	1.37	205		Pn	19 10 33.5	-1.8
TWG	Pinlang	1.37	205	*e*P	Pn	19 10 33.6	-1.7
TWGBT	Beinan	1.37	204	P	Pb	19 10 36.0	-0.1
TWGBT	Beinan	1.37	204	*e*P	Pn	19 10 33.6	-1.7
WMLT	Mailiao	1.37	259	*e*P	Pb	19 10 36.2	+0.2
CHN1	Nanshi	1.39	231	*e*P	Pb	19 10 36.4	0.0
CHN1				*e*S	Sg	19 10 56.1	+0.5
TTN	Taitung	1.40	201	*e*P	Pn	19 10 35.1	-0.7
WSF	Szhu	1.42	253	*e*P	Pb	19 10 37.1	+0.3
SGST	Jiashian	1.42	226	⇑*e*P	Pn	19 10 36.0	+0.1
SGST				*e*S	Sg	19 10 56.0	-0.5
WSL	Shuilin Townsh	1.45	248	*e*P	Pb	19 10 37.8	+0.3
CHN8	Yiju	1.54	242	*e*P	Pb	19 10 38.9	-0.1
CHN8				*e*S	Sg	19 10 60.0	-0.5
CHN3	Shinhua	1.57	231	*e*P	Pb	19 10 39.6	+0.1
PCYT	Pengchaiyu	1.59	12	*e*P	Pb	19 10 39.5	-0.3
SSHA	Shanhua	1.59	234	*e*P	Pb	19 10 39.4	-0.4
ECL	Taimali	1.62	205	*e*P	Pn	19 10 37.0	-1.6
SHHT	Tainan City	1.62	230	*e*P	Pb	19 10 40.8	+0.5
SCLT	Jiali	1.64	237	*e*P	Pb	19 10 40.0	-0.6
SSD	Sandimen	1.64	217	*e*P	Pn	19 10 39.5	+0.5
TWM1	Shoushan	1.70	223	*e*P	Pb	19 10 41.5	-0.3
SGLT	Jiouru	1.74	220	*e*P	Pn	19 10 41.2	+0.9
TAI	Tainan	1.74	232	*e*P	Pn	19 10 41.4	+1.0
MASBT	Mashibuluo	1.75	214	*e*P	Pn	19 10 41.6	+1.1
MASBT				*e*S	Sb	19 11 04.2	-0.1
TSPT	Pingtung City	1.77	219	*e*P	Pb	19 10 43.0	+0.1
EAST	Anshuo	1.85	205	*e*P	Pn	19 10 41.0	-0.9
TAW	Tawu	1.86	203	*e*P	Pb	19 10 44.6	+0.2
TAWH	Dawu Township	1.88	203	*e*P	Pn	19 10 42.9	+0.7
IRIF	Iriomote-Funau	1.88	82	*e*P	Pn	19 10 43.0	+0.7
IRIF				*e*S	Sb	19 11 07.4	-0.6
IRIF	Iriomote-Funau	1.88	82	A	A	19 10 43.0	
	comp=N,14nm,4.2s,comp=E,7.0nm,1.3s						
HATJ	Hateruma jima	1.93	90	*e*P	Pn	19 10 44.0	+1.1
HATJ	Hateruma jima	1.93	90	A	A	19 10 44.0	
	comp=N,22nm,3.4s,comp=E,16nm,4.5s						
WSSB	Gushan	1.94	223	*e*P	Pb	19 10 45.1	-0.7
SCZT	Fangliau	1.96	211	*e*P	Pb	19 10 45.0	-1.1
PHUB	P'eng-hu	2.02	254	*e*P	Pn	19 10 45.1	+0.9
PHUB				*e*S	Sn	19 11 10.6	+1.4
LAY	Lan-yu	2.03	184	*e*P	Pn	19 10 42.6	-1.7
WDGT	Dungji	2.03	247	*e*P	Pn	19 10 44.9	+0.5
LYUB	Lan-yu	2.06	183	*e*P	Pn	19 10 42.5	-2.3
WLCH	Liuqiu	2.10	216	*e*P	Pb	19 10 49.9	+1.4
TWP	Hsiaoliuchiu	2.11	216	*e*P	Pb	19 10 49.4	+0.7
JKRS	Kuro-shima	2.12	85	*e*P	Pn	19 10 46.9	+1.3
SMST	Manzhou Townsh	2.19	201	*e*P	Pn	19 10 48.3	+1.8
HEN	Hengchun	2.24	203	*e*P	Pb	19 10 50.1	-0.8
VWUC	VWUC	2.24	295	*e*P	Pn	19 10 47.3	+0.1
VCHM	Qimei	2.25	248	*e*P	Pn	19 10 48.3	+0.9
VCHM				*e*S	Sn	19 11 16.6	+1.8
JIJ	Ishigaki jima	2.25	82	*e*P	Pn	19 10 48.0	+0.5
TWKBT	Hengchun	2.27	201	*e*P	Pn	19 10 48.1	+0.4
TWKBT				*e*S	Sb	19 11 18.7	-0.6
TSEB	Hengchuen, Pin	2.28	199	*e*P	Pn	19 10 48.2	+0.3
JISG	Ishigakijimahi	2.44	77	*e*P	Pn	19 10 50.5	+0.5
JISG				*e*S	Sn	19 11 20.7	+1.2
PTMZ	Houxiangcun	2.53	293	*e*P	Pn	19 10 51.3	0.0
MATB	Ma-tsu	2.61	323	*e*P	Pn	19 10 52.2	-0.1
JTJ	Tarama	2.80	78	*e*P	Pn	19 10 56.0	+1.1
QZH	Quanzhou	2.96	288	⇓*i*Pn	Pn	19 10 57.5	+0.4
QZH				Sn	Sn	19 11 32.5	+0.2
QZH				smax	smax		
	comp=E,4µm,0.9s						
QZH				smax	smax		
	comp=E,3µm,1.0s						
QZH				LR	LR		
	comp=E,10µm,8.8s						
QZH				LR	LR		
	comp=E,11µm,10.3s						
KNM	Kinmen	3.00	277	*e*P	Pn	19 10 59.3	+1.7
LYJJ	Jianjiangzhen	3.03	325	*e*P	Pn	19 10 58.2	+0.2
KNMB	Chin-men Tao	3.04	278		Pn	19 10 58.0	-0.3
KNMB	Chin-men Tao	3.04	278	*e*P	Pn	19 10 58.5	+0.2
MHZQ	Yeshan	3.15	310	*e*P	Pn	19 10 59.8	0.0
XPSS	Dashiqiu	3.15	335	*e*P	Pn	19 10 59.9	0.0
JMJ	Miyako jima 2	3.36	77	*e*P	Pn	19 11 04.7	+2.0
JMJ2	Miyako jima3	3.38	78	*e*P	Pn	19 11 04.7	+1.8
AXDP	Jialang	3.49	284	*e*P	Pn	19 11 04.8	+0.3
ZPLA	Ao Xicun	3.61	269	*e*P	Pn	19 11 06.3	+0.2
DSXP	Dongshan	3.92	266	*e*P	Pn	19 11 10.8	+0.4
SXFK	Yanhouchang	4.34	303	*e*P	Pn	19 11 16.4	+0.3
JOW	Kunigami	6.55	64	Pn	Pn	19 11 46.7	+0.1
	comp=E,16nm,0.3s,baz=236,slow=11,SNR=15						
JOW				Sn	Sn	19 13 02.9	+1.9
	baz=24,slow=27						
	comp=E,33nm,0.3s						
JOW	Kunigami	6.55	64	Pn	Pn	19 11 46.3	-0.3
SSE	Sheshan	7.01	356	Pn	Pn	19 11 52.5	-0.3
SSE				Sn	Sn	19 13 14.0	+1.7
SSE				LR	LR		
	comp=E,990nm,8.6s						
SSE				LR	LR		
	comp=E,510nm,8.6s						
HKPS	Hong Kong Po S	7.17	257	Pn	Pn	19 11 53.2	-1.9
HKPS	Hong Kong Po S	7.17	257	*e*P	Pn	19 11 54.9	-0.2
GZH	Guangzhou	7.72	264	Pn	Pn	19 11 58.8	-3.8
GZH				Sn	Sn	19 13 22.5	-7.3
GZH				smax	smax		
	comp=E,640nm,0.9s						
GZH				smax	smax		
	comp=E,510nm,0.9s						
NJ2	Nanjing	8.34	343	*e*P	Pn	19 12 11.0	0.0
NJ2				S	Sn	19 13 44.0	-0.9
NJ2				pmax	pmax		
	comp=E,22nm,0.5s						
NJ2				smax	smax		
	comp=E,200nm,0.9s						
NJ2				smax	smax		
	comp=E,270nm,1.1s						
NJ2				LR	LR		
	comp=E,2µm,7.1s						
NJ2				LR	LR		
	comp=E,600nm,5.9s						
NJ2				LR	LR		
	comp=E,3µm,7.6s						
JMZ	Minamidaito 2	8.82	77	Pn	Pn	19 12 15.6	-2.1
WHN	Wuhan	9.18	316	P	Pn	19 12 23.0	+0.5
WHN				sP		19 12 29.3	
WHN				S	Sn	19 14 03.5	-2.0
WHN				LR	LR		
	comp=E,7µm,7.1s						
WHN				LR	LR		
	comp=E,13µm,9.3s						
JSU	Suzuyama	10.72	44	Pn	Pn	19 12 41.9	-1.9
JNU	Nakatsue	12.09	40	Pn	Pn	19 13 04.0	+1.4
	comp=E,0.2nm,0.3s,baz=208,slow=19,SNR=4.3						
JNU				LR	LR	19 18 38.1	
	comp=E,518nm,18.1s,baz=211,slow=42						
	comp=E,16nm,1.0s						
JNU	Nakatsue	12.09	40	Pn	Pn	19 12 59.7	-2.8
QIZ	Qiongzhong	12.11	248	P	Pn	19 13 02.8	0.0
QIZ				S	Sn	19 15 20.0	+2.3
QIZ				pmax	pmax		
	comp=E,47nm,1.1s						
QIZ				LR	LR		
	comp=E,710nm,9.1s						
QIZ				LR	LR		
	comp=E,390nm,11.1s						
QIZ				LR	LR		
	comp=E,500nm,9.1s						
ENH	Enshi	12.49	302		Pn	19 13 07.0	-1.1
TJN	Taejon	13.20	20	Pn	Pn	19 13 16.5	-1.2
GYA	Guiyang	13.81	283	P	Pn	19 13 26.8	+0.7
GYA				S	Sn	19 16 00.0	+0.8
GYA				pmax	pmax		
	comp=E,12nm,1.0s						
GYA				LR	LR		
	comp=E,1µm,10.0s						
GYA				LR	LR		
	comp=E,4µm,10.2s						
INCN	Inchon	14.02	16	Pn	Pn	19 13 26.9	-2.0
KSAR	Wonju Array Be	14.35	20	Pn	Pn	19 13 32.4	-0.9
JMN	Monobe	14.36	45	Pn	Pn	19 13 30.8	-2.7
KSRS	Korea Array	14.37	20	Pn	Pn	19 13 34.9	+1.4
	comp=E,1.6nm,0.3s,baz=200,slow=11,SNR=50						
KSRS				LR	LR	19 19 26.1	
	comp=E,136nm,18.8s,baz=195,slow=39						
	comp=E,2.5nm,0.7s						
KS19	Wonju Array Si	14.39	20		Pn	19 13 32.3	-1.7
HNS	HongShan	14.57	337	⇓P	P	19 13 42.3	-0.5
HNS				pmax	pmax		
	comp=E,6.0nm,0.8s						
DL2	Dalian	14.79	360	P	P	19 13 48.5	+3.3
DL2				S	S	19 16 39.0	-2.2
DL2				pmax	pmax		
	comp=Z,44nm,0.9s						
DL2				pmax	pmax		
	comp=Z,370nm,4.4s						
DL2				LR	LR		
	comp=N,1µm,11.8s						
DL2				LR	LR		
	comp=E,940nm,9.2s						
DL2				LR	LR		
	comp=Z,1µm,8.6s						
XAN	Xi'an	14.93	315	P	Pn	19 13 42.0	+0.7
XAN				S	Sn	19 16 29.5	+3.0
XAN				pmax	pmax		
	comp=Z,26nm,1.4s						
XAN				pmax	pmax		
	comp=Z,380nm,4.3s						
XAN				LR	LR		
	comp=Z,2µm,7.9s						
XAN				LR	LR		
	comp=Z,4µm,9.6s						
BJT	Baijiatuau	16.57	345	Pn	Pn	19 14 02.7	+0.2
BJI	Beijing	16.59	345	P	P	19 14 09.0	+3.9
BJI				S	S	19 17 17.8	-0.2
BJI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BJI				LR	LR		
	comp=Z,430nm,12.7s						
BJI				LR	LR		
	comp=Z,250nm,12.5s						
BJI				LR	LR		
	comp=Z,440nm,13.3s						
CD2	Chengdu	17.30	297	P	P	19 14 13.8	+0.6
CD2				pP	pP	19 14 16.5	-1.2
CD2				sP	sP	19 14 20.0	+0.2
CD2				S	Sn	19 17 24.5	+0.4
CD2				pmax	pmax		
	comp=Z,40nm,0.9s						
CD2				LR	LR		
	comp=Z,2µm,8.9s						
CD2				LR	LR		
	comp=Z,3µm,14.6s						
CD2				LR	LR		
	comp=Z,2µm,12.1s						
DAV	Davao City (W)	17.31	167	LR	LR	19 21 33.5	
	comp=Z,193nm,19.1s,baz=317,slow=39						
INU	Inuyama	17.40	46	P	Pn	19 14 11.9	-1.0
JGF	Kuroka	17.77	46	P	Pn	19 14 17.2	-0.4
PZH	PanZhiHua	18.20	282	P	P	19 14 24.0	+0.7
JHJ	Hachijo jima 2	18.24	56	LR	LR	19 21 40.8	
	comp=Z,218nm,18.9s,baz=232,slow=38						
JCJ	Chichijima	18.73	76	LR	LR	19 21 36.1	
	comp=Z,259nm,18.2s,baz=282,slow=36						
HHC	Hu-ho-hao-te	18.76	335	*e*P	Pn	19 14 31.0	+1.2
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,310nm,5.8s						
HHC				LR	LR		
	comp=Z,880nm,10.6s						
HHC				LR	LR		
	comp=Z,400nm,11.2s						
HHC				LR	LR		
	comp=Z,740nm,13.6s						
MJB9	Matsu-Tunnel	18.88	45	P	P	19 14 27.8	-2.8
MAJO	Matsushiro	18.88	45	P	P	19 14 28.0	-2.5
MJAR	Matsushiro Arr	18.88	45	P	P	19 14 30.7	+0.2
	comp=Z,4.7nm,0.9s,baz=246,slow=8.6,SNR=8.4						
MJAR				LR	LR	19 22 40.1	
	comp=Z,301nm,21.5s,baz=225,slow=40						
MJAR	Matsushiro Arr	18.88	45	P	P	19 14 28.1	-2.4
BTO	Baotou	19.18	332	*e*P	Pn	19 14 40.8	+6.0
BTO				pP	sP	19 14 44.5	+3.9
BTO				sP	pP	19 14 48.0	+10
BTO				S	S	19 18 13.5	+2.6
BTO				sS	sS	19 18 19.5	+1.9
BTO				pmax	pmax		
	comp=Z,14nm,0.9s						
BTO				pmax	pmax		
	comp=Z,800nm,6.2s						
BTO				LR	LR		
	comp=Z,2µm,11.2s						
BTO				LR	LR		
	comp=Z,5µm,11.0s						
LZH	Lanzhou	19.51	312	*e*P	Pn	19 14 41.0	+2.2
LZH				sP	sP	19 14 50.0	+5.8
LZH				pmax	pmax		
	comp=Z,27nm,1.5s						
LZH				pmax	pmax		
	comp=Z,360nm,4.5s						
LZH				LR	LR		
	comp=Z,1µm,12.0s						
LZH				LR	LR		
	comp=Z,2µm,10.7s						
LZH				LR	LR		
	comp=Z,2µm,12.0s						
LZDM	Lanzhou Array	19.54	311	P	Pn	19 14 41.0	+1.6
	baz=133,slow=15						
LZDM				LR	LR	19 23 19.8	
	comp=Z,197nm,20.5s,baz=55,slow=40						
	comp=Z,12nm,0.9s						
CN2	Changchun	19.92	8	P	Pn	19 14 44.5	+1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XLT	XiLinHaoTe	20.31	348	*e*P	P	19 14 46.5	+0.4
XLT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,250nm,5.9s						
XLT				LR	LR		
	comp=Z,70nm,12.8s						
XLT				LR	LR		
	comp=Z,230nm,11.0s						
XLT				LR	LR		
	comp=Z,690nm,11.8s						
TNCH	TengChong	21.10	277	P	P	19 14 58.0	+3.0
TNCH				S	S	19 18 45.5	-4.0
TNCH				pmax	pmax		
	comp=Z,27nm,1.1s						
TNCH				LR	LR		
	comp=Z,750nm,7.8s						
TNCH				LR	LR		
	comp=Z,3µm,9.8s						
USRK	Ussuriysk Ar.	21.78	20	P	P	19 15 02.3	+0.5
	comp=Z,3.3nm,0.8s,baz=177,slow=7.6,SNR=4.6						
	comp=Z,3.3nm,0.8s						
CHTO	Chiang Mai	21.80	261		P	19 15 00.5	-1.9
CM31	Chiang Mai Arr	21.91	260	P	P	19 15 02.2	-1.4
CMAR	Chiang Mai Arr	21.91	260	P	P	19 15 05.3	+1.8
	comp=Z,2.6nm,0.8s,baz=61,slow=8.2,SNR=17						
CMAR				PcP	PcP	19 19 03.5	+0.8
	comp=Z,1.2nm,1.0s,baz=85,slow=2.4,SNR=6.0						
CMAR				LR	LR	19 24 06.3	
	comp=Z,219nm,19.7s,baz=75,slow=38						
	comp=Z,2.6nm,0.8s						
CMAR	Chiang Mai Arr	21.91	260		P	19 15 01.3	-2.3
CMAR					PcP	19 19 00.7	-1.9
BNX	BinXian	22.11	11	⇑P	P	19 15 07.5	+2.1
BNX				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GTA	Gaotai	24.00	315	*e*P	P	19 15 26.5	+1.6
GTA				sP	sP	19 15 37.5	+5.6
GTA				pmax	pmax		
	comp=Z,7.0nm,1.4s						
GUMO	Guam	24.25	111	LR	LR	19 25 43.4	
	comp=Z,125nm,18.7s,baz=36,slow=38						
HILR	Hailar Array B	25.48	357	P	P	19 15 39.8	+1.5
	comp=Z,11nm,1.0s,baz=169,slow=12,SNR=7.0						
	comp=Z,11nm,1.0s						
GOMU	GeErMu	26.11	304	P	P	19 15 46.5	+2.0
GOMU				pmax	pmax		
	comp=Z,13nm,1.1s						
ASAJ	Asahikawa	26.31	35	P	P	19 15 46.8	+1.1
	comp=Z,22nm,0.9s,baz=288,slow=6.4,SNR=4.2						
ASAJ				LR	LR	19 27 11.9	
	comp=Z,216nm,19.5s,baz=122,slow=39						
	comp=Z,22nm,0.9s						
JKA	Kamikawa-asahi	26.31	35	P	P	19 15 46.8	+1.1
JKA	Kamikawa-asahi	26.31	35	IAmb	IAmb	19 15 49.9	
	comp=Z,65nm,1.2s						
ULN	Ulaanbaatar	26.45	338	P	P	19 15 47.0	-0.1
HEH	HeiHe	26.51	8	*e*P	P	19 15 51.5	+4.0
HEH				pmax	pmax		
	comp=Z,13nm,0.8s						
SONM	Songino Array	26.65	337	P	P	19 15 50.6	+1.7
	comp=Z,3.2nm,0.8s,baz=154,slow=10,SNR=22						
SONM				LR	LR	19 26 52.2	
	comp=Z,353nm,21.3s,baz=118,slow=38						
	comp=Z,3.2nm,0.8s						
SONM	Songino Array	26.65	337		P	19 15 48.3	-0.7
SHL	Shillong	27.07	279		P	19 15 52.8	-0.3
SHL				IAmb	IAmb	19 16 00.8	
	comp=Z,22nm,1.1s						
LSA	Lhasa	27.77	288	P	P	19 15 59.7	+0.1
PSI	Prapat	30.51	230	LR	LR	19 29 08.4	
	comp=Z,68nm,18.1s,baz=56,slow=37						
JAY	Jayapura	32.25	142	LR	LR	19 27 14.8	
	comp=Z,106nm,20.4s,baz=320,slow=32						
WMQ	Urumqi	34.07	314	*e*P	P	19 16 54.3	-0.2
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WMQ				LR	LR		
	comp=Z,590nm,10.3s						
WMQ				LR	LR		
	comp=Z,300nm,15.1s						
YAK	Yakutsk	38.33	6	P	P	19 17 30.2	-0.4
	comp=Z,5.4nm,0.6s,baz=225,slow=20,SNR=5.0						

YAK				LR	LR	19 35 26.0	
	comp=Z,154nm,18.8s,baz=92,slow=40						
	comp=Z,5.4nm,0.6s						
YAK	Yakutsk	38.33	6	IAmb	IAmb	19 17 36.6	
	comp=Z,14nm,1.1s						
MKAR	Makanchi Array	38.74	316	P	P	19 17 35.1	+0.8
	comp=Z,6.4nm,0.9s,baz=102,slow=10,SNR=21						
MKAR				ScP	S	19 23 32.7	+1.7
	comp=Z,0.8nm,1.0s,baz=126,slow=3.7,SNR=4.0						
	comp=Z,6.4nm,0.9s						
MKAR	Makanchi Array	38.74	316		P	19 17 34.2	-0.1
MAKZ	Makanchi	38.95	316		P	19 17 36.4	+0.4
ZAA0	Zalesovo Array	40.59	327		P	19 17 48.4	-1.2
ZALV	Zalesovo Beam	40.59	327	P	P	19 17 49.4	-0.2
	comp=Z,7.3nm,0.8s,baz=111,slow=8.1,SNR=25						
ZALV				LR	LR	19 35 38.0	
	comp=Z,231nm,18.2s,baz=56,slow=38						
	comp=Z,7.3nm,0.8s						
ZALV	Zalesovo Beam	40.59	327		P	19 17 48.8	-0.8
KSH	Kashi	41.35	303	P	P	19 18 00.5	+4.3
KSH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KSH				LR	LR		
	comp=Z,400nm,12.7s						
KSH				LR	LR		
	comp=Z,460nm,13.1s						
KSH				LR	LR		
	comp=Z,500nm,12.4s						
PMG	Port Moresby	41.54	140	P	P	19 17 58.8	+1.0
	comp=Z,18nm,0.9s,baz=328,slow=9.1,SNR=8.3						
	comp=Z,18nm,0.9s						
PMG	Port Moresby	41.54	140		P	19 17 56.6	-1.2
PMG				IAmb	IAmb	19 18 01.1	
	comp=Z,20nm,0.9s						
H11N1	WAKE ISLAND Hy	42.03	87	T	T	20 03 27.9	
	baz=283,slow=74,SNR=12						
H11N2	WAKE ISLAND Hy	42.03	87	T	T	20 03 16.1	
	baz=283,slow=74,SNR=13						
H11N3	WAKE ISLAND Hy	42.04	87	T	T	20 03 16.9	
	baz=283,slow=74,SNR=9.5						
H11S3	WAKE ISLAND Hy	42.16	89	T	T	20 03 10.0	
	baz=284,slow=74						
H11S1	WAKE ISLAND Hy	42.16	89	T	T	20 03 10.7	
	baz=284,slow=74						
H11S2	WAKE ISLAND Hy	42.17	89	T	T	20 03 11.7	
	baz=284,slow=74						
KURK	Kurchatov	42.48	320	P	P	19 18 05.8	+0.7
KURBB	Kurchatov Arra	42.49	320	P	P	19 18 05.7	+0.5
	comp=Z,2.9nm,0.8s,baz=114,slow=8.2,SNR=14						
	comp=Z,2.9nm,0.8s						
COEN	Coen	43.23	149		P	19 18 11.8	+0.2
COEN				IAmb	IAmb	19 18 13.4	
	comp=Z,26nm,1.1s						
WRAB	Tennant Creek	45.44	163		P	19 18 28.5	-0.7
WRA	Warramunga Arr	45.45	163	P	P	19 18 28.8	-0.5
	comp=Z,4.5nm,0.6s,baz=344,slow=8.6,SNR=20						
	comp=Z,4.5nm,0.6s						
WR8	Warramunga Arr	45.51	163		P	19 18 29.1	-0.6
WR8				IAmb	IAmb	19 18 31.0	
	comp=Z,7.8nm,0.6s						
GAR	Garm	45.67	302		P	19 18 31.3	+0.2
KKAR	Karatay Array	45.91	307		P	19 18 33.2	+0.4
CHGR	Chuyangaron	46.56	301		P	19 18 38.0	0.0
CHGR				IAmb	IAmb	19 18 50.2	
	comp=Z,12nm,1.0s						
KBL	Kabul	46.63	295		P	19 18 38.8	0.0
KBL				IAmb	IAmb	19 18 52.1	
	comp=Z,13nm,1.1s						
SHAA	Shahritus	47.35	300		P	19 18 43.6	-0.6
SHAA				IAmb	IAmb	19 18 52.3	
	comp=Z,44nm,1.3s						
TIXI	Tiksi	47.78	3	LR	LR	19 39 01.6	
	comp=Z,112nm,18.2s,baz=198,slow=36						
TIXI	Tiksi	47.78	3		P	19 18 45.1	-1.8
BVAR	Borovoye Array	48.06	321	P	P	19 18 50.0	+0.6
	comp=Z,1.6nm,0.5s,baz=112,slow=8.2,SNR=11						
	comp=Z,1.6nm,0.5s						
BORK	Borovoye	48.10	321		P	19 18 49.5	-0.2
BORK				IAmb	IAmb	19 18 58.6	
	comp=Z,5.0nm,0.8s						
AS31	Alice Springs	48.91	165		P	19 18 54.8	-1.5
ASAR	Alice Springs	48.91	165	P	P	19 18 56.5	+0.3
	comp=Z,3.1nm,0.8s,baz=337,slow=7.6,SNR=33						
	comp=Z,3.1nm,0.8s						
ASAR	Alice Springs	48.91	165	P	P	19 18 55.8	-0.4
NRIK	Noril'sk	49.63	345	P	P	19 19 00.8	-0.4
	comp=Z,3.9nm,0.9s,baz=123,slow=4.8,SNR=4.6						
NRIK				LR	LR	19 40 56.7	
	comp=Z,110nm,19.5s,baz=64,slow=37						
	comp=Z,3.9nm,0.9s						
NRIK	Noril'sk	49.63	345		P	19 19 00.2	-0.9
NRIK				IAmb	IAmb	19 19 24.1	
	comp=Z,8.2nm,1.1s						
CTA	Charters Tower	49.99	149	P	P	19 19 05.8	+1.3
	comp=Z,3.3nm,0.8s,baz=334,slow=12,SNR=5.6						
	comp=Z,3.3nm,0.8s						
CTAO	Charters Tower	49.99	149	P	P	19 19 03.7	-0.8
CTAO				IAmb	IAmb	19 19 06.5	
	comp=Z,7.6nm,1.1s						
AB31	Akbulak array	53.85	314		P	19 19 32.0	-1.0
ABKAR	Akbulak array	53.85	314	P	P	19 19 32.1	-0.9
ARTI	Arti	55.57	323	P	P	19 19 43.5	-1.9
ARTI				IAmb	IAmb	19 19 52.8	
	comp=Z,7.4nm,0.8s						
SPIA	Saint Paul Isl	58.25	36	P	P	19 20 03.5	-0.8
	baz=266						
GAMB	Gambell	58.36	29	P	P	19 20 03.9	-1.0
	baz=260						
P08K	Saint George I	58.60	37	P	P	19 20 05.8	-0.9
	baz=266						
STKA	Stephens Creek	58.80	160	P	P	19 20 08.9	+0.5
	comp=Z,2.7nm,0.6s,baz=319,slow=7.5,SNR=7.5						
	comp=Z,2.7nm,0.6s						
NIKH	Nikolski High	58.87	41	P	P	19 20 08.0	-0.7
	baz=269						
TNA	Tin City	60.23	27	P	P	19 20 17.3	-0.6
	baz=263						
UNV	Unalaska Valle	60.27	40	P	P	19 20 17.5	-0.9
	baz=271						
M11K	Mekoryuk	60.56	33	P	P	19 20 19.6	-0.6
	baz=267						
F14K	Arctic Creek	60.88	27	P	P	19 20 22.1	-0.3
	baz=264						
ANM	Nome	61.21	28	P	P	19 20 23.9	-0.7
	baz=266						
K13K	Kusilvak Mount	61.38	31	P	P	19 20 25.2	-0.6
	baz=268						
C16K	Lisburne Hills	61.57	24	IAmb	IAmb	19 21 10.8	
	comp=Z,5.8nm,1.1s						
C16K	Lisburne Hills	61.57	24	P	P	19 20 26.3	-0.7
	baz=264						
F15K	North Star Dit	61.60	27	P	P	19 20 26.1	-1.1
	baz=266						
G15K	Niukluk	61.80	28	P	P	19 20 27.4	-1.2
	baz=267						
J14K	Nanvaranak Lak	61.92	30	P	P	19 20 28.7	-0.7
	baz=268						
M13K	Dall Lake	61.98	33	P	P	19 20 29.1	-0.7
	baz=270						
FALS	False Pass	62.05	39	P	P	19 20 29.3	-1.1
	baz=273						
L14K	Kuka Creek	62.30	32	P	P	19 20 30.7	-1.3
	baz=270						
D17K	Noatak River	62.36	25	P	P	19 20 31.3	-1.1
	baz=266						
C17K	DeLong Mountai	62.38	24	P	P	19 20 32.1	-0.4
	baz=266						
RDOG	Red Dog Mine	62.45	24	P	P	19 20 32.4	-0.5
	baz=266						
G16K	Koyuk River	62.53	27	P	P	19 20 33.1	-0.4
	baz=268						
H16K	Elim	62.56	28	P	P	19 20 32.9	-0.8
	baz=268						
M14K	Bethel	62.66	32	P	P	19 20 33.0	-1.4
	baz=271						
S12K	Black Hills	62.78	38	P	P	19 20 34.6	-0.7
	baz=273						
N14K	Kuskokwak Cree	62.81	33	P	P	19 20 33.8	-1.6
	baz=271						
E17K	Hotham Inlet	62.81	25	P	P	19 20 34.9	-0.4
	baz=268						
K15K	Wolf Creek Mou	62.85	31	P	P	19 20 34.6	-1.1
	baz=270						
L15K	Ungalak Mounta	62.88	31	P	P	19 20 35.2	-0.6
	baz=271						
F17K	Baldwin Pennin	63.02	26	P	P	19 20 35.4	-1.3
	baz=268						
O14K	Tigyukauivet M	63.05	34	P	P	19 20 35.8	-1.2
	baz=272						
C18K	Utukok River	63.12	24	P	P	19 20 37.1	-0.4
	baz=267						
DZM	Mont Dzumac	63.22	133	LR	LR	19 47 17.1	
	comp=Z,61nm,18.1s,baz=35,slow=35						
I17K	Unalakleet	63.23	29	P	P	19 20 37.3	-0.8
	baz=270						
G17K	Kiwalik Mounta	63.25	27	P	P	19 20 37.9	-0.3
	baz=270						
J16K	Anvik River	63.27	30	P	P	19 20 38.4	0.0
	baz=271						
M15K	Kasigluk River	63.29	33	P	P	19 20 37.0	-1.5
	baz=272						
E18K	Tukpahlearik C	63.30	25	IAmb	IAmb	19 20 40.5	
	comp=Z,6.7nm,1.1s						
E18K	Tukpahlearik C	63.30	25	P	P	19 20 38.0	-0.5
	baz=268						
H17K	Granite Mounta	63.56	28	IAmb	IAmb	19 20 42.8	
	comp=Z,8.6nm,1.0s						
H17K	Granite Mounta	63.56	28	P	P	19 20 39.2	-1.2
	baz=270						
N15K	Kwethluk River	63.60	33	P	P	19 20 39.6	-1.1
	baz=273						
SDPT	Sand Point	63.70	39	P	P	19 20 40.6	-0.8
	baz=275						
C19K	Lookout Ridge	63.72	23	IAmb	IAmb	19 20 45.5	
	comp=Z,7.5nm,1.1s						
C19K	Lookout Ridge	63.72	23	P	P	19 20 40.6	-0.8
	baz=269						
O15K	Ungalikthiuk R	63.79	34	P	P	19 20 41.0	-0.9
	baz=273						
L16K	Owhat River	63.84	31	P	P	19 20 40.9	-1.3
	baz=272						
J17K	VABM Dome	63.96	29	P	P	19 20 41.7	-1.3
	baz=272						
G18K	Tagagawik	64.07	27	P	P	19 20 42.8	-0.9
	baz=271						
M16K	Timber Creek	64.12	32	P	P	19 20 42.8	-1.2
	baz=273						
S14K	Fog Glacier	64.15	37	P	P	19 20 42.9	-1.5
	baz=275						
H18K	Honhosa River	64.21	28	P	P	19 20 43.5	-1.2
	baz=272						
N16K	Nishlik Lake	64.24	33	P	P	19 20 43.6	-1.4
	baz=274						
CHNA	Chernabura Isl	64.26	39	P	P	19 20 43.8	-1.3
	baz=276						
K17K	Iditarod	64.34	30	P	P	19 20 44.4	-1.1
	baz=273						
L17K	Donlin	64.37	31	P	P	19 20 44.7	-1.0
	baz=273						
F19K	Shaleruckik Mo	64.41	26	P	P	19 20 44.7	-1.1
	baz=271						
B20K	Meade River	64.58	22	IAmb	IAmb	19 20 50.7	
	comp=Z,5.1nm,0.9s						
B20K	Meade River	64.58	22	P	P	19 20 46.2	-0.7
	baz=270						
E19K	Redstone River	64.60	25	IAmb	IAmb	19 21 23.7	
	comp=Z,6.6nm,0.9s						
E19K	Redstone River	64.60	25	P	P	19 20 46.1	-1.0
	baz=272						
O16K	Kokwok River B	64.64	34	P	P	19 20 46.5	-1.0
	baz=275						
G19K	Purcell Mounta	64.70	26	P	P	19 20 46.7	-1.2
	baz=272						
P16K	Nushagak River	64.74	34	P	P	19 20 46.6	-1.6
	baz=275						
D20K	Etivluk River	64.80	24		P	19 20 47.8	-0.6
D20K				IAmb	IAmb	19 20 52.3	
	comp=Z,9.4nm,1.1s						
D20K	Etivluk River	64.80	24	P	P	19 20 47.3	-1.2
	baz=272						
M17K	Holitna River	64.83	32	P	P	19 20 47.5	-1.2
	baz=274						
GCSA	Galena City Sc	64.86	28	P	P	19 20 47.6	-1.2
	baz=273						
H19K	Roundabout Mou	65.00	27	P	P	19 20 48.6	-1.1
	baz=273						
J18K	Innoko River	65.01	29	P	P	19 20 48.6	-1.3
	baz=274						
N17K	Nushagak Hills	65.02	33	P	P	19 20 48.4	-1.6
	baz=275						
R16K	Pilot Point	65.10	36	P	P	19 20 49.2	-1.4
	baz=276						
L18K	Granite Mounta	65.12	31	P	P	19 20 48.9	-1.7
	baz=275						
O17K	Koliganek Bris	65.13	33	P	P	19 20 49.5	-1.2
	baz=275						
F20K	Avaraart Lake	65.20	25	P	P	19 20 50.3	-0.8
	baz=273						
A22K	Sinclair Lake	65.29	21	P	P	19 20 50.7	-0.8
	baz=272						
C21K	Knifeblade Rid	65.44	23	P	P	19 20 52.0	-0.6
	baz=273						
J19K	Poorman	65.46	29	IAmb	IAmb	19 20 55.3	
	comp=Z,8.1nm,0.9s						
J19K	Poorman	65.46	29	P	P	19 20 51.7	-1.1
	baz=275						
Q16K	King Salmon	65.47	35	P	P	19 20 51.5	-1.3
	baz=276						
B21K	Ikpikpuk River	65.48	22	P	P	19 20 51.7	-1.1
	baz=273						
P17K	Kvichak River	65.53	34	P	P	19 20 51.9	-1.3
	baz=276						
M18K	Stony River	65.59	31	P	P	19 20 52.2	-1.5
	baz=276						
N18K	Kilae Creek	65.64	32	P	P	19 20 52.3	-1.7
	baz=276						
H20K	Anotleneega Mo	65.65	27	P	P	19 20 52.6	-1.4
	baz=275						
R17L	Mt. Peulik Vol	65.75	36	P	P	19 20 53.3	-1.4
	baz=277						
E21K	Killik River	65.78	24	P	P	19 20 54.9	+0.1
	baz=274						
B22K	Teshekpuk Lake	65.84	22	P	P	19 20 55.3	+0.2
	baz=274						
I20K	Naaghedeneel	65.88	28	P	P	19 20 55.5	+0.1
	baz=275						
KBZ	Khabaz	65.91	309	P	P	19 20 57.1	+1.0
	comp=Z,2.9nm,1.0s,baz=51,slow=13,SNR=4.6						
	comp=Z,2.9nm,1.0s						
Q17K	Contact Creek	65.92	35	P	P	19 20 55.8	-0.2
	baz=277						
L19K	White Mountain	65.98	31	P	P	19 20 55.4	-0.8
	baz=276						
F21K	Alatna River	66.07	25	P	P	19 20 56.4	-0.3
	baz=275						
O18K	Koktuh Hills	66.07	33	P	P	19 20 55.9	-1.0
	baz=277						
J20K	Nowinta River	66.09	28	P	P	19 20 56.1	-0.7
	baz=276						
P18K	Big Mountain,	66.12	34	P	P	19 20 55.8	-1.3
	baz=277						
G21K	Allakaket	66.12	26	P	P	19 20 56.2	-0.8
	baz=275						
K20K	Telida	66.21	29	P	P	19 20 56.8	-0.8
	baz=276						
D22K	Ayikyak River	66.22	23	P	P	19 20 57.3	-0.3
	baz=275						
N19K	Bonanza Creek	66.31	32	P	P	19 20 57.5	-0.9
	baz=277						
CHIR	Chirikof Islan	66.39	38	P	P	19 20 57.6	-1.3
	baz=278						
O19K	Port Alsworth	66.47	33	P	P	19 20 58.1	-1.2
	baz=278						
H21K	Melozitna Rive	66.50	27	IAmb	IAmb	19 21 02.0	
	comp=Z,6.1nm,0.7s						
H21K	Melozitna Rive	66.50	27	P	P	19 20 57.9	-1.6
	baz=276						
F22K	John River	66.54	25	P	P	19 20 58.2	-1.5
	baz=276						
E22K	Anaktuvuk Pass	66.61	24	IAmb	IAmb	19 21 06.6	
	comp=Z,8.4nm,0.9s						
E22K	Anaktuvuk Pass	66.61	24	P	P	19 20 59.2	-1.0
	baz=276						
M20K	Styx River	66.82	31	P	P	19 21 00.3	-1.4
	baz=278						
C23K	Itkillik River	66.85	22		P	19 21 01.5	-0.1
C23K				IAmb	IAmb	19 21 07.5	
	comp=Z,6.4nm,1.0s						
C23K	Itkillik River	66.85	22	P	P	19 21 00.2	-1.3
	baz=277						
I21K	Tanana	66.89	27	P	P	19 21 01.1	-0.8
	baz=277						
CHUM	Lake Minchumin	66.92	29	P	P	19 21 01.2	-1.0
	baz=278						
D23K	Nanushuk River	66.93	23	P	P	19 21 01.3	-0.8
	baz=277						
Q19K	Cape Douglas,	66.99	34	P	P	19 21 01.5	-1.2
	baz=279						
H22K	Ishtalitna Cre	67.05	26	P	P	19 21 02.0	-1.0
	baz=278						
SII	Sitkinak Islan	67.07	37	P	P	19 21 02.1	-1.1
	baz=279						
P19K	Oil Pt	67.09	33	P	P	19 21 01.8	-1.6
	baz=279						
PPLA	Purkeypile	67.11	30	P	P	19 21 01.7	-1.9
	baz=278						
O20K	Slope Mountain	67.33	33	P	P	19 21 03.3	-1.6
	baz=279						
COLD	Coldfoot	67.33	25	P	P	19 21 02.7	-2.0
	baz=278						
SPCR	Spurr Chakacha	67.36	32	P	P	19 21 03.1	-1.9
	baz=279						
TOLK	Toolik Lake Re	67.37	23	P	P	19 21 02.6	-2.4
	baz=278						
E23K	Chandalar	67.44	24	IAmb	IAmb	19 21 13.4	
	comp=Z,7.7nm,0.9s						
E23K	Chandalar	67.44	24	P	P	19 21 03.4	-2.1
	baz=278						
OHAK	Old Harbor	67.45	36	P	P	19 21 04.0	-1.6
	baz=280						
BPAW	Bear Paw Mtn.	67.47	28	P	P	19 21 04.1	-1.6
	baz=279						
G23K	Bananza Creek	67.48	25	IAmb	IAmb	19 21 13.7	
	comp=Z,6.8nm,1.1s						
G23K	Bananza Creek	67.48	25	P	P	19 21 04.6	-1.1
	baz=278						
C24K	Franklin Bluff	67.52	22	P	P	19 21 04.5	-1.4
	baz=278						
SKT	Skwentna	67.56	31	P	P	19 21 03.9	-2.4
	baz=279						
D24K	Happy Valley	67.56	23	P	P	19 21 05.8	-0.3
	baz=279						
Q20K	Shuyak Island	67.69	34	P	P	19 21 04.7	-2.3
	baz=280						
KDAK	Kodiak Island	67.73	35	P	P	19 21 03.6	-3.7
	baz=280						
E24K	Your Creek	67.85	24	IAmb	IAmb	19 21 10.0	
	comp=Z,8.7nm,1.1s						
E24K	Your Creek	67.85	24	P	P	19 21 06.8	-1.2
	baz=279						
TRF	Thorofare Moun	67.88	29	P	P	19 21 06.7	-1.7
	baz=280						
CAPN	Captain Cook N	67.94	32	P	P	19 21 06.8	-1.8
	baz=280						
I23K	Minto, Yukon-K	67.99	27	P	P	19 21 07.4	-1.4
	baz=280						
SUA	Susitna One	68.01	31	P	P	19 21 07.8	-1.4
	baz=280						
F24K	Squaw Lake	68.17	24	P	P	19 21 09.1	-1.0
	baz=280						
NEA2	Nenana	68.21	28	P	P	19 21 08.6	-1.8
	baz=280						
BRSE	Bradley Lake S	68.32	33	P	P	19 21 09.0	-2.1
	baz=281						
D25K	Kavik River	68.39	22	IAmb	IAmb	19 21 17.9	
	comp=Z,6.9nm,0.8s						
D25K	Kavik River	68.39	22	P	P	19 21 10.8	-0.7
	baz=281						
MCK	McKinley	68.43	29	P	P	19 21 10.2	-1.6
	baz=281						
G24K	Hadweenzic Riv	68.48	25	IAmb	IAmb	19 21 13.7	
	comp=Z,9.9nm,1.2s						
G24K	Hadweenzic Riv	68.48	25	P	P	19 21 10.2	-1.8
	baz=281						
H24K	Noodor Dome	68.48	26	IAmb	IAmb	19 21 32.9	
	comp=Z,11nm,1.2s						
H24K	Noodor Dome	68.48	26	P	P	19 21 09.7	-2.4
	baz=281						
RC01	Rabbit Creek A	68.56	31	P	P	19 21 10.2	-2.4
	baz=281						
COLA	College	68.67	27	P	P	19 21 13.1	0.0
COLA				IAmb	IAmb	19 21 17.9	
	comp=Z,9.6nm,1.1s						
COLA	College	68.67	27	P	P	19 21 10.9	-2.3
	baz=281						
O22K	Cooper Landing	68.68	32	P	P	19 21 11.5	-1.8
	baz=281						
PMR	Palmer	68.75	31	P	P	19 21 12.2	-1.5
	baz=281						
WAT1	Susitna Watana	68.77	30	P	P	19 21 12.3	-1.6
	baz=281						
C26K	Camden Bay	68.78	22	P	P	19 21 12.3	-1.4
	baz=282						
POKR	Poker Plat Res	68.80	27	IAmb	IAmb	19 21 16.8	
	comp=Z,8.0nm,0.9s						
POKR	Poker Plat Res	68.80	27	P	P	19 21 13.0	-1.0
	baz=281						
SEW	Seward	68.89	32	P	P	19 21 12.5	-2.1
	baz=282						
MARD	Mardin	68.91	302		P	19 21 15.3	0.0
MARD				IAmb	IAmb	19 21 39.9	
	comp=Z,7.1nm,0.8s						
E25K	Arctic Village	68.92	24	IAmb	IAmb	19 21 47.5	
	comp=Z,8.2nm,1.3s						
E25K	Arctic Village	68.92	24	P	P	19 21 11.9	-2.8
	baz=282						
G25K	Bearman Lake	69.00	25	P	P	19 21 14.0	-1.2
	baz=282						
F25K	Christian Rive	69.00	24	IAmb	IAmb	19 21 17.8	
	comp=Z,7.8nm,1.1s						
F25K	Christian Rive	69.00	24	P	P	19 21 15.1	-0.2
	baz=282						
SML	Sawmill	69.08	31	P	P	19 21 14.2	-1.6
	baz=282						
KNK	Knik Glacier	69.10	31	P	P	19 21 13.0	-2.9
	baz=282						
ILAR	Eielson Array	69.10	27	P	P	19 21 15.2	-0.7
	comp=Z,1.2nm,0.8s,baz=274,slow=5.0,SNR=16						
	comp=Z,1.2nm,0.8s						
HDA	Harding Lake	69.15	28	P	P	19 21 12.5	-3.7
	baz=282						
WAT6	Susitna Watana	69.19	30	P	P	19 21 13.5	-3.1
	baz=282						
DHY	Denali Highway	69.25	29	P	P	19 21 16.1	-0.9
	baz=282						
C27K	Jago River	69.25	22	IAmb	IAmb	19 21 19.3	
	comp=Z,7.4nm,1.0s						
C27K	Jago River	69.25	22	P	P	19 21 16.9	+0.2
	baz=283						
PWL	Port Wells	69.27	32	P	P	19 21 16.0	-1.0
	baz=282						
M23K	Glacier View	69.36	31	P	P	19 21 16.8	-0.8
	baz=282						
BMAR	Burnt Mountain	69.44	24		P	19 21 17.6	-0.3
PRP	Porcupine Dome	69.50	26	P	P	19 21 17.6	-0.9
	baz=283						
SCM	Sheep Creek Mo	69.54	30	P	P	19 21 17.8	-0.8
	baz=283						
F26K	Sheenjek River	69.54	24	IAmb	IAmb	19 21 21.4	
	comp=Z,5.8nm,0.8s						
F26K	Sheenjek River	69.54	24	P	P	19 21 17.9	-0.7
	baz=283						
SPITS	Spitsbergen Ar	69.69	348	LR	LR	19 55 49.4	
	comp=Z,89nm,19.4s,baz=15,slow=39						
J25K	Salcha River,	69.77	27	P	P	19 21 19.5	-0.5
	baz=283						
K24K	Donnelly Dome	69.78	28	P	P	19 21 17.8	-2.4
	baz=283						
G26K	Porcupine Rive	69.85	25	IAmb	IAmb	19 21 23.2	
	comp=Z,6.6nm,0.7s						
G26K	Porcupine Rive	69.85	25	P	P	19 21 20.0	-0.4
	baz=284,SNR=5.8						
P23K	Montague Islan	69.92	32	P	P	19 21 20.7	-0.2
	baz=283						
M24K	Tolsona, Glenn	70.00	30	P	P	19 21 21.8	+0.2
	baz=284						
PAX	Paxson	70.12	29	P	P	19 21 23.0	+0.8
	baz=284						
RIDG	Independent Ri	70.20	28	P	P	19 21 22.5	-0.3
	baz=284						
KLU	Klutina	70.27	31	P	P	19 21 22.1	-1.1
	baz=284						
D27M	Malcolm River	70.29	22	P	P	19 21 20.8	-2.4
	baz=286						
E27K	Coleen River	70.35	23	P	P	19 21 22.5	-1.0
	baz=285,SNR=5.8						
HARP	HAARP	70.40	30	P	P	19 21 23.1	-0.8
	baz=284						
SCRK	Sand Creek	70.51	28	P	P	19 21 23.5	-1.2
	baz=285						
J26L	Joseph Creek	70.55	27	IAmb	IAmb	19 21 27.1	
	comp=Z,7.2nm,0.9s						
J26L	Joseph Creek	70.55	27	P	P	19 21 24.1	-0.8
	baz=285						

DOT	Dot Lake	70.56	28	IAmb	IAmb	19 21 26.7	
	comp=Z,5.6nm,0.9s						
EYAK	Cordova Ski Ar	70.58	32	P	P	19 21 22.6	-2.3
	baz=284						
G27K	Doyon Strip	70.70	25	P	P	19 21 24.7	-1.0
	baz=286						
N25K	Chitina, Valde	70.85	30	P	P	19 21 24.8	-2.0
	baz=285						
H27K	Steamboat Moun	70.91	25	IAmb	IAmb	19 21 33.9	
	comp=Z,6.8nm,1.1s						
H27K	Steamboat Moun	70.91	25	P	P	19 21 26.0	-1.0
	baz=286						
E28M	Babbage River	70.97	23	IAmb	IAmb	19 21 29.5	
	comp=Z,6.3nm,0.9s						
E28M	Babbage River	70.97	23	P	P	19 21 26.3	-1.0
	baz=287						
BMRM	Bremner River	71.02	31	P	P	19 21 26.9	-0.8
	baz=285						
D28M	Stokes Point	71.02	22	P	P	19 21 26.6	-0.9
	baz=288						
L26K	Log Cabin Wild	71.04	29	P	P	19 21 25.9	-1.9
	baz=286						
I27K	Kandik River	71.05	26		P	19 21 28.0	+0.1
I27K				IAmb	IAmb	19 21 30.4	
	comp=Z,7.8nm,0.8s						
I27K	Kandik River	71.05	26	P	P	19 21 26.3	-1.6
	baz=286						
F28M	Old Crow	71.14	24	IAmb	IAmb	19 21 30.6	
	comp=Z,6.9nm,0.9s						
F28M	Old Crow	71.14	24	P	P	19 21 27.3	-1.0
	baz=287,SNR=7.1						
K27K	Chicken	71.31	28	IAmb	IAmb	19 21 32.9	
	comp=Z,7.3nm,0.9s						
M26K	Nabesna, AK	71.37	29	P	P	19 21 29.0	-0.8
	baz=286						
KAIM	Kayak Island	71.39	32	P	P	19 21 29.1	-0.8
	baz=286						
E29M	Blow River	71.61	23	IAmb	IAmb	19 21 34.0	
	comp=Z,6.5nm,1.1s						
E29M	Blow River	71.61	23	P	P	19 21 30.4	-0.7
	baz=289						
MCARA	McCarthy VSAT	71.64	30	P	P	19 21 29.6	-1.9
	baz=286						
L27K	Beaver Creek,	71.69	28	IAmb	IAmb	19 21 35.0	
	comp=Z,8.6nm,0.9s						
L27K	Beaver Creek,	71.69	28	P	P	19 21 29.9	-1.9
	baz=287,SNR=7.7						
BCAR	Beaver Creek A	71.71	28		P	19 21 32.1	+0.2
I28M	Miner Creek	71.77	26	P	P	19 21 30.6	-1.7
	baz=288						
FINES	FINESS Array B	71.78	330	P	P	19 21 32.3	+0.1
	comp=Z,4.4nm,0.9s,baz=77,slow=3.0,SNR=9.8						
FINES				LR	LR	19 56 46.7	
	comp=Z,194nm,18.2s,baz=56,slow=39						
	comp=Z,4.4nm,0.9s						
CRQE	Cirque	71.79	31	P	P	19 21 31.5	-1.0
	baz=287						
M27K	Edge Creek, AK	71.88	29	P	P	19 21 31.3	-1.8
	baz=287						
G29M	Pine Creek	72.04	24	P	P	19 21 33.3	-0.5
	baz=289						
H29M	Whitestone	72.14	25	P	P	19 21 33.3	-1.0
	baz=289						
BVCY	Beaver Creek	72.31	29	P	P	19 21 34.7	-0.8
	baz=288						
DAWY	Dawson	72.42	27	IAmb	IAmb	19 21 38.0	
	comp=Z,6.6nm,0.7s						
DAWY	Dawson	72.42	27	P	P	19 21 35.6	-0.6
	baz=289,SNR=10.0						
I29M	Ogilvie Camp,	72.44	26	P	P	19 21 35.2	-1.0
	baz=289						
CTG	Chitna Glacier	72.54	31	P	P	19 21 35.5	-1.5
	baz=288						
F30M	Barrier River	72.62	23	P	P	19 21 37.0	-0.2
	baz=291						
YUK3	Moose Creek	72.69	30	P	P	19 21 36.4	-1.6
	baz=288						
EPYK	Eagle Plains	72.71	24	P	P	19 21 35.9	-1.9
	baz=290						
J29N	Klondike Camp	72.78	27	P	P	19 21 36.1	-2.2
	baz=290						
O28M	Mount Upton	73.14	31	P	P	19 21 38.0	-2.8
	baz=289						
INK	Inuvik	73.15	22	IAmb	IAmb	19 21 42.2	
	comp=Z,6.2nm,0.9s						
INK	Inuvik	73.15	22	P	P	19 21 38.0	-2.3
	baz=293,SNR=5.4						
YUK8	Steele Glacier	73.17	30	P	P	19 21 38.4	-2.5
	baz=289						
I30M	Mount Dempster	73.25	26	IAmb	IAmb	19 21 46.3	
	comp=Z,6.7nm,0.9s						
I30M	Mount Dempster	73.25	26	P	P	19 21 38.9	-2.3
	baz=291						
AKASG	Malin Array Be	73.26	318	P	P	19 21 40.3	-1.0
	comp=Z,0.6nm,0.5s,baz=82,slow=1.3,SNR=2.0						
	comp=Z,0.6nm,0.5s						
L29M	L29M	73.27	28	P	P	19 21 42.4	+1.2
L29M	L29M	73.27	28	P	P	19 21 39.0	-2.2
	baz=290,SNR=7.2						
K29M	Barlow Dome	73.28	27	P	P	19 21 39.0	-2.3
	baz=290						
PINM	Pinnacle	73.33	31	P	P	19 21 39.9	-1.7
	baz=289						
M29M	Somme Creek	73.36	29	IAmb	IAmb	19 21 45.2	
	comp=Z,7.4nm,0.7s						
M29M	Somme Creek	73.36	29	P	P	19 21 40.1	-1.7
	baz=290,SNR=8.7						
F31M	Tsiigehtchic	73.41	23	IAmb	IAmb	19 21 43.1	
	comp=Z,9.6nm,0.9s						
F31M	Tsiigehtchic	73.41	23	P	P	19 21 39.5	-2.3
	baz=293,SNR=5.5						
J30M	Hart River	73.50	26	P	P	19 21 39.3	-3.4
	baz=291						
BRTR	Keskin Array B	73.61	307	P	P	19 21 44.2	+0.5
	comp=Z,1.4nm,0.8s,baz=105,slow=6.2,SNR=9.9						
BRTR				LR	LR	19 56 54.9	
	comp=Z,53nm,19.2s,baz=8.5,slow=38						
	comp=Z,1.4nm,0.8s						
YUK4	Talbot Arm	73.66	30	P	P	19 21 41.1	-2.6
	baz=290						
H31M	Peel River	73.82	25	IAmb	IAmb	19 21 52.0	
	comp=Z,7.1nm,0.9s						
H31M	Peel River	73.82	25	P	P	19 21 41.1	-3.2
	baz=293						
YUK6	Outpost Mounta	73.92	30	P	P	19 21 42.8	-2.5
	baz=290						
M30M	Minto, Yukon	74.04	28	IAmb	IAmb	19 21 50.5	
	comp=Z,12nm,1.1s						
M30M	Minto, Yukon	74.04	28	P	P	19 21 44.0	-1.7
	baz=291,SNR=8.4						
O29M	Mount Kennedy	74.05	31	P	P	19 21 42.8	-3.1
	baz=290						
A36M	Sachs Harbour	74.09	17	P	P	19 21 44.3	-1.4
	baz=299						
N30M	Aishikik Lake	74.31	29	P	P	19 21 45.9	-1.4
	baz=291						
HYT	Haines Junctio	74.36	30	IAmb	IAmb	19 21 51.0	
	comp=Z,8.8nm,1.0s						
HYT	Haines Junctio	74.36	30	P	P	19 21 46.2	-1.5
	baz=291						
P29M	Windy Craggy	74.68	31	P	P	19 21 47.0	-2.5
	baz=291						
P30M	Million Dollar	74.87	31	P	P	19 21 49.7	-0.9
	baz=292						
N31M	Braeburn, Yuko	74.89	29	P	P	19 21 49.8	-0.9
	baz=292						
O30N	Mendenhall	75.02	30	P	P	19 21 49.7	-1.7
	baz=292						
M31M	Drury Creek, Y	75.21	28	P	P	19 21 50.6	-1.9
	baz=294						
PLBC	Pleasant Camp	75.40	31	P	P	19 21 51.6	-1.9
	baz=292						
WHY	Whitehorse	75.61	30	P	P	19 21 52.9	-2.1
	baz=293						
C36M	Paulatuk	75.75	19	IAmb	IAmb	19 21 56.8	
	comp=Z,12nm,1.4s						
C36M	Paulatuk	75.75	19	P	P	19 21 53.4	-2.0
	baz=301						
EIL	Elat	75.82	296	LR	LR	20 00 46.0	
	comp=Z,57nm,18.1s,baz=336,slow=40						
SKAG	Skagway	75.88	31	P	P	19 21 53.3	-3.0
	baz=293						
S31K	Pelican	76.04	32	P	P	19 21 54.3	-3.0
	baz=293						
N32M	Quiet Lake	76.22	29	P	P	19 21 56.3	-2.0
	baz=295						
P32M	Atlin	76.58	30	P	P	19 21 58.1	-2.3
	baz=295						
P33M	Teslin, Yukon	76.73	30	P	P	19 21 58.1	-3.1
	baz=295						
R32K	Eaglecrest	76.75	32	P	P	19 21 58.5	-2.8
	baz=294						
SIT	Sitka	76.85	33	P	P	19 21 58.8	-3.0
	baz=294						
S32K	Killisnoo	77.05	33	P	P	19 21 60.0	-3.0
	baz=294						
Q32M	Nakina River	77.52	31	P	P	19 22 03.4	-2.5
	baz=296						
HFS	Hagfors	77.89	331	P	P	19 22 08.9	+1.2
	comp=Z,3.8nm,0.8s,baz=76,slow=6.1,SNR=2.8						
HFS				LR	LR	19 58 48.1	
	comp=Z,250nm,20.1s,baz=56,slow=37						
	comp=Z,3.8nm,0.8s						
R33M	Jennings River	77.93	30	P	P	19 22 04.9	-3.2
	baz=297						
T33K	Petersburg	78.13	33	P	P	19 22 06.0	-3.0
	baz=296						
U33K	Whale Pass	78.35	33	P	P	19 22 07.5	-2.7
	baz=296						
NB2	NORSAR Subarra	78.54	332	P	P	19 22 16.2	+4.9
	comp=Z,3.5nm,0.9s,baz=63,slow=5.3						
NOA	NORSAR Array B	78.54	332	P	P	19 22 12.2	+0.9
	comp=Z,2.1nm,1.0s,baz=61,slow=5.4,SNR=2.7						
NOA				LR	LR	19 59 41.9	
	comp=Z,127nm,18.2s,baz=65,slow=38						
	comp=Z,2.1nm,1.0s						
CRAG	Craig	78.63	34	P	P	19 22 08.8	-3.0
	baz=296						
WRGLY	Wrigley	79.18	25	P	P	19 22 11.2	-3.5
	baz=302						
T35M	Bob Quinn	79.38	32	P	P	19 22 12.3	-3.7
	baz=298						
V35K	Ketchikan	79.47	34	P	P	19 22 13.6	-2.8
	baz=297						
KOTAN	Kotaneelee Air	80.61	28	P	P	19 22 19.4	-3.1
	baz=302						
TOAD	Toad River Com	80.78	29	P	P	19 22 21.1	-2.3
	baz=302						
URZ	Urewera	80.89	139	LR	LR	19 56 12.5	
	comp=Z,55nm,20.1s,baz=14,slow=34						
MODS	Modra-Piesok	81.34	319	*e*P	P	19 22 32.6	+5.9
YKAW3	Yellowknife Wh	82.85	23		P	19 22 33.8	-0.4
YKAW3				IAmb	IAmb	19 22 38.2	
	comp=Z,10nm,1.1s						
YKA	Yellowknife Ar	82.89	23	P	P	19 22 34.6	+0.2
	comp=Z,3.0nm,0.9s,baz=310,slow=5.6,SNR=34						
	comp=Z,3.0nm,0.9s						
YKAW1	Yellowknife Wh	82.94	23	IAmb	IAmb	19 22 38.2	
	comp=Z,7.2nm,1.1s						
GERES	GERESS Array B	83.22	321	P	P	19 22 38.0	+1.4
	comp=Z,0.9nm,1.0s,baz=64,slow=3.1,SNR=5.7						
	comp=Z,0.9nm,1.0s						
BORG	Borgarnes	86.95	345	LR	LR	20 04 32.1	
	comp=Z,62nm,19.5s,baz=345,slow=38						
EKA	Eskdalemuir Ar	88.03	332	P	P	19 23 00.6	+0.3
	comp=Z,0.8nm,0.7s,baz=46,slow=3.1,SNR=1.9						
EKA				LR	LR	20 06 04.6	
	comp=Z,134nm,18.7s,baz=44,slow=38						
	comp=Z,0.8nm,0.7s						
EDM	Edmonton	89.47	30	IAmb	IAmb	19 23 13.7	
	comp=Z,8.8nm,1.2s						
NEW	Newport	90.83	35	P	P	19 23 14.7	+1.1
	comp=Z,2.1nm,0.7s,baz=346,slow=4.2,SNR=2.8						
	comp=Z,2.1nm,0.7s						
YBH	Yreka Blue Hor	91.52	42	P	P	19 23 19.1	+2.0
	comp=Z,0.2nm,0.9s,baz=299,slow=3.2,SNR=3.5						
FFC	Flin Flon	93.05	24	P	P	19 23 23.6	-0.1
NVAR	Mina Array Bea	96.20	43	P	P	19 23 39.5	+0.8
	comp=Z,0.8nm,0.7s,baz=289,slow=3.6,SNR=4.8						
	comp=Z,0.8nm,0.7s						
NVAR	Mina Array Bea	96.20	43	P	P	19 23 37.4	-1.3
M65A	Busby, Falmout	113.70	10	P	PKiKP	19 28 46.8	-2.0
	baz=348						

IDC 31 19:14:07.4±1.2**, 0°.18S×125°.46E, h0**^{km}**, mb3.7**/6**,**
mbtmp3.7/6**, Error ellipse: s-maj=158.7km**
s-min=19.9km az=66.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.48	157	P	P	19 18 56.9	-0.9
	2.6nm,0.4s,baz=335,slow=11,SNR=42						
	2.6nm,0.4s						
ASAR	Alice Springs	24.74	161	P	P	19 19 31.7	+0.8
	0.9nm,0.7s,baz=342,slow=9.3,SNR=4.9						
	0.9nm,0.7s						
SONM	Songino Array	50.62	343	P	P	19 23 08.1	-0.2
	0.7nm,1.0s,baz=158,slow=5.5,SNR=3.8						
	0.7nm,1.0s						
MKAR	Makanchi Array	60.08	327	P	P	19 24 16.6	+0.1
	0.4nm,0.4s,baz=124,slow=7.6,SNR=13						
	0.4nm,0.4s						
ZALV	Zalesovo Beam	63.51	335	P	P	19 24 40.0	+0.6
	0.5nm,0.5s,baz=126,slow=4.2,SNR=3.6						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	64.37	329	P	P	19 24 44.6	-0.5
	0.7nm,0.6s,baz=130,slow=6.3,SNR=12						
	0.7nm,0.6s						

GUC 31 19:14:21.2±0.6**, 37°.97S×73°.11W, h26**^{km}±10^{km}**, ML3.5,**
Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BI04	Isla Mocha	0.76	234	*e*P	Pb	19 14 34.0	-1.7
BI04				*e*S	Sb	19 14 44.9	-0.8
BI04				IAML		19 14 47.0	
	comp=N,7μm,0.3s						
LC02	Puerto Saavedr	0.85	195	*e*P	Pb	19 14 35.8	-1.6
LC01	Cunco	1.34	134	*e*P	Pn	19 14 43.7	-0.5
LC01				IAML		19 15 03.3	
	comp=E,1μm,0.1s						
LR03	Panguipulli	1.77	161	*e*P	Pn	19 14 50.2	+0.1
LR03				IAML		19 15 14.7	
	comp=E,1μm,0.4s						
LR04	Corral	1.93	187	*e*P	Pn	19 14 53.0	+0.8
LR04				IAML		19 15 23.0	
	comp=E,1μm,0.3s						
BI02	San Fabin de	1.96	49	*e*P	Pn	19 14 53.7	+0.9
GO06	Curarrehue	2.06	142	*e*P	Pn	19 14 54.3	+0.1
GO06				IAML		19 15 24.1	
	comp=E,141nm,0.3s						
ML02	Panimavida	2.58	32	IAML		19 15 52.2	
	comp=N,202nm,0.5s						
LL05	Los Muermos	3.44	185	*e*P	Pn	19 15 13.8	+0.7
LL05				IAML		19 16 20.5	
	comp=E,121nm,0.3s						
BO03	Pichilemu	3.59	15	*e*P	Pn	19 15 15.8	+0.7
BO03				IAML		19 16 22.9	
	comp=E,54nm,0.5s						
BO02	Sierra Bellavi	3.68	31	*e*P	Pn	19 15 17.1	+0.5
BO01	Tunca	3.93	25	*e*P	Pn	19 15 19.4	-0.4
BO01				IAML		19 16 24.7	
	comp=N,30nm,0.5s						

SCB 31 19:18:29.8±1.1**, 17°.12S×68°.31W, h239**^{km}±10^{km}**, ML3.7**/4**,**
Error ellipse: s-maj=5.4km s-min=3.2km az=0.0, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBOJ	La Paz, Jacaqu	0.18	37	Pg	Pn	19 19 01.6	+0.1
BBOE	La Paz, Chanca	0.43	45	Pg	Pn	19 19 02.3	+0.3
LPAZ	La Paz	0.84	11	Pg	Pn	19 19 03.5	-0.2
BBOB	La Paz, Bander	0.99	10	Pg	Pn	19 19 03.8	-0.5
SOEO	Opoqueri	1.49	165	Pg	Pn	19 19 08.5	+0.9
PB16	IPOC Station P	1.67	223	Pg	Pn	19 19 09.9	+0.8
SOET	ToroToro	2.58	113	Pg	Pn	19 19 18.0	+0.5
GO01	Chusmiza	2.67	198	Pg	Pn	19 19 20.0	+1.4
PB11	IPOC Station P	2.92	206	Pg	Pn	19 19 21.6	+0.7
PB11				Sg	S	19 20 00.4	-0.9
PB11				IAML		19 20 03.8	
	101nm,0.2s						
AOEA	Aiquile	3.11	110	Pg	Pn	19 19 23.8	+0.6
AOEA				Sg	S	19 20 04.3	-0.9
AOEA				IAML		19 20 08.7	
	16nm,0.4s						
PB01	IPOC Station P	4.06	196	Pg	Pn	19 19 34.9	+1.0
PB01				Sg	S	19 20 22.9	-1.8
PB01				IAML		19 20 27.3	
	235nm,0.2s						
PB02	IPOC Station P	4.44	200	Pg	Pn	19 19 39.0	+0.5
PB02				Sg	S	19 20 30.9	-2.1
PB02				IAML		19 20 35.0	
	143nm,0.3s						
PB09	IPOC Station P	4.73	191	Pg	Pn	19 19 43.0	+0.8
PB06	IPOC Station P	5.68	192	Pg	Pn	19 19 54.3	+0.4

SNET ***31*** *19:25:25.9*±*1.3, 13°.18N×90°.09W, h5*^{km}*, ML3.6*
CATAC ***31*** *19:25:25.2*±*0.5, 13°N*±*2°×9°0W*±*°, h9*^{km}±*2*^{km}*, M3.7/19,*
MLv3.7/19, Error ellipse: s-maj=5.2km s-min=4.9km
az=40.0, confirmed
GCG ***31*** *19:25:26.2*±*1.1, 13°.22N×90°.18W, h18*^{km}±*10*^{km}*, MD3.8*
ISC 31 19:25:26.0±1.7**, 13°.18N**±0°.06×**90°.09W**±0°.04**, h11**^{km}±9^{km}**,**
n59, σ**0**^{s}**93**/69**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	Alcaldia de Sa	0.67	6	P	Pg	19 25 39.1	+0.1
FAME	Alcaldia de Sa	0.67	6	S	Sg	19 25 48.3	+0.5
NUBE	Las Nubes	0.78	22	*e*P	Pg	19 25 41.2	0.0
NUBE				*e*S	Sb	19 25 53.0	+0.6
NUBE	Las Nubes	0.78	22	*e*P	Pg	19 25 41.2	0.0
NUBE				*e*S	Sb	19 25 52.8	+0.4
NUBE	Las Nubes	0.78	22	P	Pg	19 25 41.2	0.0
NUBE	Las Nubes	0.78	22	S	Sg	19 25 51.7	+0.3
JAYA	Jayaque - finc	0.78	52	*e*P	Pg	19 25 41.4	+0.1
JAYA				*e*S	Sb	19 25 52.9	+0.5
JAYA	Jayaque - finc	0.78	52	*e*P	Pg	19 25 41.2	0.0
JAYA				*e*S	Sb	19 25 52.7	+0.3
JAYA	Jayaque - finc	0.78	52	P	Pg	19 25 41.3	+0.1
CEVE	Cerro Verde	0.79	35	*e*P	Pb	19 25 41.9	0.0
CEVE				*e*S	Sb	19 25 54.2	+1.5
CEVE	Cerro Verde	0.79	35	P	Pg	19 25 41.5	+0.2
CEVE	Cerro Verde	0.79	35	S	Sg	19 25 52.4	+0.7
SBLS	San Blas	0.80	34	*e*P	Pg	19 25 41.7	+0.2
SBLS				*e*S	Sb	19 25 54.0	+1.0
LALI	Alcalda de L	0.81	67	*e*P	Pb	19 25 42.5	+0.4
LALI	Alcalda de L	0.81	67	S	Sg	19 25 53.2	+1.0
LALI	Alcalda de L	0.81	67	P	Pg	19 25 41.8	+0.2
LOAL	Lomas de Alarc	0.87	20	P	Pg	19 25 42.9	0.0
LOAL	Lomas de Alarc	0.87	20	S	Sb	19 25 55.2	+0.3
SLOZ	Alcaldia de Sa	0.90	19	P	Pg	19 25 38.9	-4.4
CEDA	San Andres	0.92	47	S	Sb	19 25 56.8	+0.6
CEDA	San Andres	0.92	47	P	Pg	19 25 43.2	-0.5
PMON	Piamonte	0.92	55	*e*P	Pg	19 25 43.3	-0.5
PMON				*e*S	Sb	19 25 57.0	+0.6
PMON	Piamonte	0.92	55	P	Pg	19 25 43.3	-0.5
UNIC	Universidad Ca	0.96	33	P	Pg	19 25 43.3	-1.2
UNIC	Universidad Ca	0.96	33	S	Sb	19 25 57.7	+0.3
BOQS	Boqueron	0.96	55	*e*P	Pg	19 25 44.3	-0.3
BOQS				*e*S	Sb	19 25 58.3	+0.6
UEES	Universidad Ev	0.98	57	P	Pg	19 25 44.2	-0.8
UEES	Universidad Ev	0.98	57	S	Sb	19 25 58.7	+0.5
LOMA	Loma Larga	1.00	62	P	Pg	19 25 44.5	-0.9
RBDL	Robledal	1.01	23	*e*P	Pg	19 25 45.1	-0.4
IGN	Direccin Gen	1.04	59	S	Sg	19 26 00.3	+0.7
IGN	Direccin Gen	1.04	59	P	Pb	19 25 46.5	+0.4
UDBS	Universidad Do	1.05	59	S	Sb	19 26 00.8	+0.7
LFRS	El Faro	1.09	66	*e*P	Pg	19 25 45.7	-1.4
JUAM	Asuncion Mita	1.21	18	*e*P	Pb	19 25 48.2	-0.8
PAVA	Las Pavas	1.24	64	P	Pn	19 25 48.3	-1.1
PAVA	Las Pavas	1.24	64	S	Sb	19 26 05.5	0.0
TECO	Alcaldia de Te	1.32	74	P	Pn	19 25 50.0	-0.4
TECO	Alcaldia de Te	1.32	74	S	Sb	19 26 07.7	-0.1
MTO3	Montecristo	1.41	30	*e*P	Pn	19 25 51.5	-0.3
MTO3				*e*S	Sn	19 26 11.2	+0.7
MTO3	Montecristo	1.41	30	*e*P	Pn	19 25 51.0	-0.8
MTO3	Montecristo	1.41	30	P	Pn	19 25 51.3	-0.5
MTO3	Montecristo	1.41	30	S	Sb	19 26 10.8	+0.3
SCLA	Alcaldia de Sa	1.42	68	S	Sn	19 26 10.9	+0.3
SCLA	Alcaldia de Sa	1.42	68	P	Pn	19 25 51.2	-0.7
LLGN	La Laguna	1.48	48	P	Pn	19 25 51.8	-0.9
LLGN	La Laguna	1.48	48	S	Sn	19 26 11.9	-0.3
PQSS	Presa 15 de Se	1.55	73	P	Pn	19 25 49.9	-3.6
ESQI	Esquipulas	1.55	28	S	Sn	19 26 14.4	+0.4
STG5	El Palmar, Qui	1.73	315	*e*P	Pg	19 25 59.2	0.0
PACA	Pacayal	1.74	80	P	Pn	19 25 56.1	-0.2
STG8	El Palmar, Qui	1.76	316	*e*P	Pg	19 25 60.0	0.0
APG	El Apazote	1.85	349	*e*P	Pn	19 25 57.5	-0.5
LCND	La Caada	2.14	86	P	Pn	19 26 01.0	-0.7
CNCH	Conchagua	2.20	87	P	Pn	19 26 01.4	-1.2
CNCH	Conchagua	2.20	87	S	Sn	19 26 30.6	+0.8
CSGN	Cosiguina Volc	2.47	94	P	Pn	19 26 06.3	-0.1
POTN	Potosi Cosigui	2.52	94	P	Pn	19 26 06.7	-0.2
POTN				S	Sn	19 26 38.3	+0.6
TGUH	Tegucigalpa,Un	2.87	72	P	Pn	19 26 11.4	-0.5

TAP 31 19:47:49.4, 23°.47N×120°.72E, h19^{km}**, ML1.0, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALS	Alishan	0.09	61	P	Pg	19 47 54.0	+0.5
ALS				S	Sg	19 47 57.0	+0.8
WCKO	Fanlu	0.11	255	*e*P	Pg	19 47 52.9	-0.4
WCKO				*e*S	Sg	19 47 55.8	-0.3
CHN5	Tsauling	0.13	342	P	Pg	19 47 54.2	+0.6
CHN5				S	Sg	19 47 57.5	+1.0
TPUB	Ta-pu	0.19	207	P	Pg	19 47 54.7	+0.4
TPUB				*e*S	Sg	19 47 58.3	+0.7
WTP	Ta-pu	0.24	205	*e*P	Pg	19 47 55.8	+0.7
WTP				*e*S	Sg	19 47 59.9	+0.8
WHYT	Xinyi Township	0.26	28	S	Sg	19 48 00.6	+1.2
TWK	Hsinying	0.30	227	P	Pb	19 47 56.4	+0.3
TWK				S	Sb	19 48 01.3	+0.7
CHN1	Nanshi	0.34	213	*e*S	Sb	19 48 02.9	+1.0

IDC ***31*** *19:52:43.9*±*1.5, 13°.23N×90°.70W, h0*^{km}*, mb3.4/3,*
mbtmp3.6/5, ML3.2/3, Error ellipse: s-maj=30.2km
s-min=17.8km az=41.0
CATAC ***31*** *19:52:50.9*±*0.5, 14°N*±*2°×9°1W*±*°, h16*^{km}±*4*^{km}*, M4.2/34,*
mb4.2/1, MLv4.2/34, Error ellipse: s-maj=5.5km
s-min=2.7km az=27.3, confirmed
SNET ***31*** *19:52:51.3*±*1.4, 13°.57N×90°.78W, h59*^{km}*, ML4.3*
GCG ***31*** *19:52:51.9*±*1.0, 13°.67N×90°.81W, h32*^{km}±*6*^{km}*, MD4.3*
ISC 31 19:52:48.2±1.4**, 13°.59N**±0°.05×**90°.78W**±0°.03**, h4**^{km}±9^{km}**,**
n78, σ**1**^{s}**34**/87**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCG5	San Vicente Pa	0.73	32	*e*P	Pn	19 53 05.9	+0.3
FAME	Alcaldia de Sa	0.78	71	P	Pn	19 53 06.4	+0.3
ESSG	Sabana Grande	0.79	356	*e*P	Pn	19 53 05.7	-0.6
ESSG				*e*S	Sb	19 53 16.0	+0.2
STG5	El Palmar, Qui	0.98	326	*e*P	Pn	19 53 13.4	+4.5
STG8	El Palmar, Qui	1.02	327	*e*P	Pn	19 53 13.9	+4.4
NUBE	Las Nubes	1.02	72	*e*P	Pn	19 53 09.9	+0.4
NUBE				*e*S	Sb	19 53 23.6	+1.2
NUBE	Las Nubes	1.02	72	*e*P	Pn	19 53 09.9	+0.4
NUBE	Las Nubes	1.02	72	P	Pn	19 53 10.1	+0.5
STG2	El Palmar, Qui	1.02	326	*i* P	Pn	19 53 14.5	+5.0
LOAL	Lomas de Alarc	1.05	67	S	Sn	19 53 25.4	+0.4
LOAL	Lomas de Alarc	1.05	67	P	Pn	19 53 10.8	+1.0
SLOZ	Alcaldia de Sa	1.06	66	P	Pg	19 53 06.0	-2.6
SLOZ	Alcaldia de Sa	1.06	66	S	Sg	19 53 20.8	-1.5
CEVE	Cerro Verde	1.15	78	*e*P	Pn	19 53 12.1	+0.8
CEVE	Cerro Verde	1.15	78	P	Pn	19 53 12.1	+0.8
CEVE	Cerro Verde	1.15	78	S	Sn	19 53 28.0	+0.3
RBDL	Robledal	1.18	64	*i* P	Pn	19 53 12.9	+1.2
RBDL				*e*S	Sn	19 53 29.2	+0.8
UNIC	Universidad Ca	1.26	72	P	Pn	19 53 13.6	+0.9
UNIC	Universidad Ca	1.26	72	S	Sn	19 53 30.2	+0.1
JUAM	Asuncion Mita	1.28	55	*e*P	Pn	19 53 13.9	+1.0
RTAL	Retalhuleu	1.28	316	S	Sg	19 53 28.4	-1.2
RTAL	Retalhuleu	1.28	316	P	Pg	19 53 12.7	-0.2
JAYA	Jayaque - finc	1.29	87	*e*P	Pn	19 53 13.8	+0.5
JAYA				*e*S	Sg	19 53 30.0	+0.1
JAYA	Jayaque - finc	1.29	87	*e*P	Pn	19 53 13.8	+0.5
JAYA	Jayaque - finc	1.29	87	P	Pb	19 53 13.9	+0.6
CEDA	San Andres	1.36	81	*e*P	Pg	19 53 15.1	+0.8
CEDA				*e*S	Sg	19 53 32.7	+0.6
CEDA	San Andres	1.36	81	S	Sn	19 53 33.6	+0.9
CEDA	San Andres	1.36	81	P	Pg	19 53 15.2	+0.8
LALI	Alcalda de L	1.42	94	*e*P	Pb	19 53 15.8	+0.5
LALI				*e*S	Sb	19 53 34.1	+0.2
LALI	Alcalda de L	1.42	94	*e*P	Pb	19 53 15.8	+0.5
LALI	Alcalda de L	1.42	94	P	Pb	19 53 15.9	+0.5
PMON	Piamonte	1.43	85	P	Pg	19 53 16.2	+0.6
APG	El Apazote	1.44	12	Pn	Pg	19 53 16.4	+0.6
	22nm,0.3s,baz=182,slow=13,SNR=773						

APG				Sn	Sn	19 53 36.2	+1.4
	9.5nm,0.3s,baz=101,slow=13,SNR=15						
BOQS	Boqueron	1.47	84	eP	Pg	19 53 16.9	+0.5
UEES	Universidad Ev	1.50	85	S	Sn	19 53 36.8	+0.5
UEES	Universidad Ev	1.50	85	P	Pb	19 53 17.4	+0.6
PANCS	Alcalda de	1.56	89	P	Pg	19 53 19.5	+1.4
LOMA	Loma Larga	1.56	88	eP	Pn	19 53 17.0	0.0
LOMA				eS	Sn	19 53 36.9	-0.9
LOMA	Loma Larga	1.56	88	P	Pn	19 53 17.1	+0.1
UDBS	Universidad Do	1.58	85	S	Sb	19 53 39.0	+0.4
UDBS	Universidad Do	1.58	85	P	Pb	19 53 18.7	+0.5
MTO3	Montecristo	1.59	60	eP	Pn	19 53 18.2	+0.8
MTO3	Montecristo	1.59	60	P	Pn	19 53 18.3	+0.8
ESQI	Esquipulas	1.69	55	P	Pb	19 53 19.9	-0.2
ESQI	Esquipulas	1.69	55	S	Sb	19 53 42.1	+0.3
SMCA	Catarina	1.78	315	eP	Pn	19 53 19.6	-0.2
PAVA	Las Pavas	1.79	86	P	Pn	19 53 21.5	+1.3
PAVA	Las Pavas	1.79	86	S	Sb	19 53 45.7	+0.9
LLGN	La Laguna	1.87	72	P	Pn	19 53 21.7	+0.6
UESV	Universidad de	1.94	88	P	Pb	19 53 24.7	+0.5
UESV	Universidad de	1.94	88	S	Sb	19 53 48.5	-0.3
TECO	Alcaldia de Te	1.94	91	P	Pn	19 53 23.7	+1.6
PQSS	Presa 15 de Se	2.16	89	P	Pn	19 53 23.5	-1.6
SARH	Santa Rosa de	2.29	59	eP	Pn	19 53 28.2	+1.3
SARH	Santa Rosa de	2.29	59	P	Pn	19 53 28.2	+1.3
PACA	Pacayal	2.39	93	P	Pn	19 53 30.6	+2.2
LCND	La Caada	2.83	95	P	Pn	19 53 36.4	+2.2
CNCH	Conchagua	2.88	96	P	Pn	19 53 36.5	+1.3
CNCH	Conchagua	2.88	96	S	Sn	19 54 11.8	+1.4
CSGN	Cosiguina Volc	3.19	101	P	Pn	19 53 40.7	+1.3
POTN	Potosi Cosigui	3.24	100	P	Pn	19 53 41.9	+2.0
PKGN	Cerro Pekin	3.82	103	P	Pn	19 53 49.9	+2.0
PKGN				S	Sn	19 54 34.1	+0.8
YUSH	Yuscaran	3.84	84	P	Pn	19 53 49.8	+1.5
POLN	Al Sur del Vol	3.98	103	P	Pn	19 53 51.4	+1.3
CNGA	Al SSO del Vol	4.12	105	P	Pn	19 53 54.7	+2.6
CNGN	Cerro Negro	4.12	105	P	Pn	19 53 53.9	+1.7
MOMN	Momotombo	4.30	105	P	Pn	19 53 56.5	+2.0
COPN	Copaltepe	4.32	108	P	Pn	19 53 56.0	+1.2
LIMN	Finca el Limon	4.33	96	P	Pn	19 53 56.7	+1.7
RCON	San Juan de Ri	4.50	91	P	Pn	19 53 58.7	+1.3
BOAB	BOACO BROADBAN	5.11	102	P	Pn	19 54 06.6	+0.9
CMIG	Matias Romero	5.27	312	Pn	Pn	19 54 08.9	+1.0
	2.8nm,0.3s,baz=134,slow=10,SNR=21						
CMIG				Sn	Sn	19 55 08.2	-1.0
	5.1nm,0.3s,baz=294,slow=16,SNR=6.2						
	6.6nm,0.3s						
JTS	Las Juntas de	6.58	119	Pn	Pn	19 54 18.3	-7.6
	0.9nm,0.3s,baz=301,slow=19,SNR=2.2						
JTS				Pg	Pb	19 54 40.6	-2.7
	3.1nm,0.3s,baz=58,slow=6.4,SNR=6.2						
JTS				Lg	Lg	19 56 05.9	
	1.1nm,0.3s,baz=100,slow=20,SNR=6.3						
	2.8nm,0.4s						
TEIG	Tepich	7.02	20	Pn	Pn	19 54 33.1	+1.2
	baz=131,slow=23,SNR=10.0						
TEIG				Lg	Lg	19 56 35.4	
	baz=311,slow=24,SNR=1.3						
TXAR	Lajitas Array	19.70	325	P	P	19 57 19.0	+0.2
	0.8nm,0.7s,baz=146,slow=11,SNR=6.8						
	0.8nm,0.7s						
PDAR	Pinedale Array	33.29	334	P	P	19 59 26.2	-1.1
	0.2nm,0.7s,baz=146,slow=9.2,SNR=1.7						
	0.2nm,0.7s						
NVAR	Mina Array Bea	34.73	320	P	P	19 59 39.2	-0.7
	1.6nm,0.7s,baz=134,slow=9.1,SNR=10						
	1.6nm,0.7s						
CMAR	Chiang Mai Arr	146.74	343	PKPbc	PKPdf	20 12 28.2	-2.6
	1.6nm,0.7s,baz=13,slow=3.1,SNR=18						

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*IDC **31** 19:58:50.4±1.4, 39°.55N×74°.19E, h0^{km}, mb3.7/2, mbtmp3.4/4, ML2.9/2, MS3.5/1, Error ellipse: s-maj=32.1km s-min=16.3km az=106.0*

*KRNET **31** 19:58:52.1±0.1, 39°.75N×74°.44E, h17^{km}, mb3.5*

*SOME **31** 19:58:53.1, 39°.90N×74°.50E, h10^{km}*

*NNC **31** 19:58:56.6±1.4, 40°.01N×74°.49E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=10.9km s-min=5.7km az=175.0*

ISC 31 19:58:52.4±1.4**, 39°.73N**±0°.04×**74°.35E**±0°.03**, h3**^{km}±9^{km}**, n66, σ2^{s}01**/101**, 26C-18D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	0.71	294	⇑iP	Pg	19 59 06.9	+0.8
SFK				⇑iS	Sg	19 59 17.5	+2.2
SALK	Salom-Alik	1.22	341	⇓eP	Pn	19 59 14.5	-2.1
SALK				⇓eS	Sb	19 59 31.9	-0.7
OHH	Osh	1.44	304	⇑iP	Pn	19 59 19.8	+0.3
OHH				⇑iS	Sg	19 59 39.8	+1.1
ARSB	Arslanbob	1.91	327	⇓iP	Pb	19 59 27.4	-0.5
ARSB				⇓iS	Sb	19 59 53.2	+1.0
DRK	Karamyk	1.98	264	⇑iP	Pb	19 59 29.4	0.0
DRK				⇑iS	Sg	19 59 57.3	+1.1
ARLS	Aral	2.13	359	⇑iP	Pn	19 59 30.0	+0.9
ARLS				⇑iS	Sb	19 59 57.6	-1.1
UCH	Uchtor	2.50	3	P	Pb	19 59 37.1	-1.2
	SNR=31						
UCH	Uchtor	2.50	3	⇑iP	Pn	19 59 35.3	+0.8
UCH				⇑iS	Sn	20 00 06.8	+1.1
BTK	Batken	2.74	278	⇑iP	Pn	19 59 39.5	+2.1
BTK				⇑iS	Sb	20 00 14.1	-2.0
ARK	Arkit	2.75	320	⇑iP	Pn	19 59 39.3	+1.7
ARK				⇑iS	Sn	20 00 13.8	+2.4
ULHL	Ulahol	2.90	29	P	Pb	19 59 44.5	-0.3
	SNR=23						
ULHL	Ulahol	2.90	29	⇓iP	Pn	19 59 40.4	+0.7
ULHL				⇓iS	Sn	20 00 15.5	+0.4
AAK	Ala-Archa	2.91	2	P	Pb	19 59 42.9	-2.1
	SNR=30						
AAK	Ala-Archa	2.91	2	Pn	Pb	19 59 43.3	-1.8
	3.3nm,0.3s,baz=178,slow=6.8,SNR=34						
AAK				Sn	Sb	20 00 23.2	+2.0
	5.1nm,0.3s,baz=298,slow=22,SNR=14						
	18nm,0.4s						
AAK	Ala-Archa	2.91	2	⇑iP	Pn	19 59 40.9	+1.1
AAK				⇑iS	Sn	20 00 16.4	+1.0
AAK	Ala-Archa	2.91	2	Pn	Pn	19 59 41.8	+2.0
AAK				Lg	Lg	20 00 22.6	
KBK	Karagaybulak	2.96	9	P	Pb	19 59 43.5	-2.4
	SNR=7.3						
KBK	Karagaybulak	2.96	9	⇓iP	Pn	19 59 41.4	+0.9
KBK				⇓iS	Sn	20 00 17.5	+0.8
BOOM	Boomskoye usch	3.01	23	⇓iP	Pn	19 59 41.9	+0.7
BOOM				⇓iS	Sn	20 00 18.3	+0.4
FRU1	Bishkek	3.09	4	⇓iP	Pn	19 59 43.6	+1.4
FRU1				⇓iS	Sn	20 00 20.9	+1.3
MNAS	Manas	3.09	334	⇑eP	Pn	19 59 43.8	+1.5
MNAS				⇑iS	Sn	20 00 21.5	+1.7
MRKS	Merke	3.13	345	Pg	Pb	19 59 49.3	+0.5
	16nm,0.5s						
MRKS				Lg	Lg	20 00 29.8	
	37nm,0.5s						
MRKS	Merke	3.13	345	eP	Pb	19 59 49.3	+0.5
	16nm,0.5s						
MRKS				eS	Sb	20 00 29.8	+2.3
	37nm,0.5s						
GAR	Garm	3.21	258	⇓iP	Pn	19 59 46.2	+2.3
GAR				⇓iS	Sn	20 00 25.6	+2.9
KDJ	Kajisay	3.22	41	⇓iP	Pn	19 59 44.6	+0.5
KDJ				⇓iS	Sn	20 00 23.0	0.0
CHMS	Chumysh	3.28	5	P	Pb	19 59 48.2	-3.2
	SNR=8.2						
CHMS	Chumysh	3.28	5	⇑iP	Pn	19 59 45.8	+1.0
CHMS				⇑iS	Sn	20 00 25.0	+0.6
TKM2	Tokmak 2	3.33	16	P	Pn	19 59 48.6	+3.0
	SNR=13						
TKM2	Tokmak 2	3.33	16	⇑iP	Pn	19 59 46.4	+0.8
TKM2				⇑iS	Sn	20 00 26.1	+0.4
KST	Kastek	3.53	20	eP	Pn	19 59 51.5	+3.2
	16nm,0.7s						
KST				eS	Sn	20 00 33.3	+2.7
	68nm,0.7s						
USP	Ospenovka	3.54	2	P	Pb	19 59 56.6	+0.9
	SNR=10						
USP	Ospenovka	3.54	2	⇑iP	Pn	19 59 49.4	+1.1
USP				⇑iS	Sn	20 00 31.4	+0.7
DGS	Degeres	3.67	16	Pg	Pb	19 59 55.6	-2.4
	10.0nm,0.3s						
DGS				Lg	Lg	20 00 41.0	
	22nm,0.7s						
SGDS	Sogindy	3.73	3	Pg	Pb	19 59 57.2	-1.7
	1.1nm,0.1s						
SGDS				Lg	Lg	20 00 43.5	
	18nm,0.6s						
MTBS	Maitube	3.74	24	Pg	Pb	19 59 59.8	+0.6
	17nm,0.6s						
MTBS				Lg	Lg	20 00 47.9	
	16nm,0.6s						
MTBS	Maitube	3.74	24	eP	Pb	19 59 59.8	+0.6
	17nm,0.6s						
MTBS				eS	Sb	20 00 47.9	+2.9
	16nm,0.6s						
TNSS	Tian-Shan	3.84	30	Pg	Pb	20 00 01.3	+0.2
	9.6nm,0.6s						
TNSS				Lg	Lg	20 00 50.8	
	5.7nm,0.5s						
TNSS	Tian-Shan	3.84	30	eP	Pb	20 00 01.3	+0.2
	9.6nm,0.6s						
TNSS				eS	Sb	20 00 50.8	+2.6
	5.7nm,0.5s						
MDOK	Medeo	3.99	30	Pg	Pb	20 00 03.7	+0.3
	11nm,0.4s						
MDOK				Lg	Lg	20 00 55.1	
	13nm,0.7s						
IUG	Iuzhnay	4.07	308	Pg	Pn	19 59 59.5	+3.8
	6.2nm,0.3s						
IUG				Lg	Lg	20 00 47.8	
	63nm,0.4s						
KOTS	Kotyrbulak	4.07	30	Pg	Pb	20 00 05.6	+0.7
	19nm,0.6s						
KOTS				Lg	Lg	20 00 58.1	
	41nm,0.8s						
KOTS	Kotyrbulak	4.07	30	eP	Pb	20 00 05.6	+0.7
	19nm,0.6s						
KOTS				eS	Sb	20 00 58.1	+3.5
	41nm,0.8s						
PRZ	Przheval'sk	4.12	47	⇓iP	Pn	19 59 57.2	+0.8
PRZ				⇓iS	Sn	20 00 44.7	-0.5
CHGR	Chuyangaron	4.17	257	⇑iP	Pn	19 59 59.5	+2.4
CHGR				⇑iS	Sn	20 00 48.7	+2.2
KK31	Karatay Array	4.44	321	Pn	Pn	20 00 03.8	+3.1
	0.7nm,0.3s,baz=127,slow=12,SNR=26						
KK31				Pg	Pg	20 00 15.4	-2.1
	1.1nm,0.3s,baz=136,slow=16,SNR=14						
KK31				Sn	Sn	20 00 56.9	+4.0
	2.6nm,0.3s,baz=128,slow=21,SNR=5.1						
KK31				Lg	Lg	20 01 14.1	
	6.1nm,0.3s,baz=129,slow=28,SNR=4.0						
SATY	Saty	4.51	41	Pg	Pb	20 00 13.6	+1.2
	4.9nm,0.4s						
SATY				Lg	Lg	20 01 11.6	
	13nm,0.5s						
KURS	Kuram	4.72	36	Pg	Pb	20 00 16.6	+0.7
	7.9nm,0.6s						
KURS				Lg	Lg	20 01 16.5	
	7.5nm,0.8s						
BRLS	Borolday	4.73	316	Pg	Pb	20 00 15.7	-0.4
BRLS				Lg	Lg	20 01 14.9	
UZB	Uzynbulak	4.90	44	Pg	Pb	20 00 20.5	+1.5
	3.6nm,0.2s						
UZB				Lg	Lg	20 01 24.1	
	5.5nm,0.8s						
UZB	Uzynbulak	4.90	44	eP	Pb	20 00 20.5	+1.5
	3.6nm,0.2s						
UZB				eS	Sg	20 01 24.1	-5.6
	5.5nm,0.8s						
KPKS	Kokpek	4.95	40	Pg	Pb	20 00 21.5	+1.7
	0.2nm,0.1s						
KPKS				Lg	Lg	20 01 25.3	
	16nm,0.6s						
KPKS	Kokpek	4.95	40	eP	Pb	20 00 21.6	+1.7
	0.2nm,0.1s						
KPKS				eS	Sb	20 01 25.3	+5.5
	16nm,0.6s						
SHLS	Shalkode	5.15	47	Pg	Pg	20 00 29.7	-1.3
	9.9nm,0.7s						
SHLS				Lg	Lg	20 01 39.3	
	11nm,0.5s						
SHLS	Shalkode	5.15	47	eP	Pg	20 00 29.7	-1.3
	9.9nm,0.7s						
SHLS				eS	Sg	20 01 39.2	+1.5
	11nm,0.5s						
ARXS	Arharly	5.18	29	Pg	Pb	20 00 24.3	+0.6
	13nm,0.4s						
ARXS				Lg	Lg	20 01 29.7	
	3.6nm,0.1s						
ARXS	Arharly	5.18	29	eP	Pb	20 00 24.2	+0.6
	13nm,0.4s						
ARXS				eS	Sb	20 01 29.6	+3.4
	3.6nm,0.1s						
PDGK	Podgornoye	5.28	45	Pn	Pn	20 00 13.5	+1.2
PDGK				Pg	Pb	20 00 27.9	+2.6
PDGK				Lg	Lg	20 01 38.0	
BTLS	Baital	5.32	358	Pg	Pb	20 00 26.9	+0.9
	2.2nm,0.7s						
BTLS				Lg	Lg	20 01 33.9	
	2.5nm,0.4s						
BTLS	Baital	5.32	358	eP	Pb	20 00 26.9	+0.9
	2.2nm,0.7s						
BTLS				eS	Sb	20 01 33.9	+3.7
	2.5nm,0.4s						
BLB	Baldybastay	5.34	34	Pg	Pb	20 00 28.6	+2.1
	12nm,0.1s						
BLB				Lg	Lg	20 01 37.1	
	17nm,0.8s						
KNOS	Konyrlen	5.86	36	Pg	Pb	20 00 38.5	+3.2
	3.8nm,1.0s						
KNOS				Lg	Lg	20 01 54.5	
	3.9nm,0.6s						
MKAR	Makanchi Array	9.13	37	Pn	Pn	20 01 08.6	+3.5
	0.1nm,0.3s,baz=216,slow=15,SNR=2.7						
MKAR				Lg	Lg	20 03 49.4	
	baz=253,slow=29,SNR=1.9						
	0.2nm,0.7s						
AB31	Akbulak array	13.99	318	Pn	P	20 02 16.1	-3.6
	0.4nm,0.6s,baz=130,slow=12,SNR=6.8						
HILR	Hailar Array B	33.31	58	LR	LR	20 21 10.8	
	comp=Z,66nm,18.5s,baz=205,slow=40						
TORD	Torodi Ar. Bea	68.42	269	P	P	20 09 54.3	-1.5
	0.7nm,0.5s,baz=46,slow=7.0,SNR=5.9						
	0.7nm,0.5s						
ASAR	Alice Springs	84.02	127	P	P	20 11 22.1	-2.3
	0.2nm,0.5s,baz=321,slow=5.7,SNR=4.2						
	0.2nm,0.5s						

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*IDC **31** 20:33:48.8±1.1, 31°.48N×93°.22E, h0^{km}, mb3.3/5, mbtmp3.3/9, ML3.2/4, MS3.2/1, Error ellipse: s-maj=36.5km s-min=19.9km az=64.0*

ISC 31 20:33:53.6±1.0**, 31°.5N**±0°.1×**93°.3E**±0°.2**, h35**^{km}**, n10, σ0^{s}86**/9**, mb3.3**/4**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LZDM	Lanzhou Array	9.73	60	Pn	Pn	20 36 11.1	-0.2
	baz=265,slow=7.4						
	0.9nm,0.4s						
CMAR	Chiang Mai Arr	13.95	157	Pn	Pn	20 37 07.8	-0.9
	baz=336,slow=11,SNR=4.1						
	0.3nm,0.9s						
MKAR	Makanchi Array	17.47	334	P	P	20 37 54.9	-0.5
	baz=140,slow=13,SNR=5.1						
	0.4nm,0.9s						
SONM	Songino Array	19.14	28	P	P	20 38 13.7	0.0
	0.1nm,0.3s,baz=216,slow=11,SNR=4.9						
	0.4nm,0.7s						
KURBB	Kurchatov Arra	22.04	334	P	P	20 38 45.4	+0.5
	0.5nm,0.7s,baz=146,slow=9.9,SNR=5.3						
	0.5nm,0.7s						
ZALV	Zalesovo Beam	23.26	347	P	P	20 38 57.0	-0.6
	0.1nm,0.3s,baz=178,slow=11,SNR=1.7						
	0.1nm,0.3s						
NOA	NORSAR Array B	59.24	326	LR	LR	21 11 49.8	
	comp=Z,22nm,20.7s,baz=355,slow=38						
WRA	Warramunga Arr	64.54	137	P	P	20 44 28.6	+1.4
	0.4nm,0.7s,baz=335,slow=5.9,SNR=1.9						
	0.4nm,0.7s						
ASAR	Alice Springs	67.22	140	P	P	20 44 45.2	+0.8
	0.4nm,0.7s,baz=321,slow=6.1,SNR=7.2						
	0.4nm,0.7s						
TORD	Torodi Ar. Bea	84.60	282	P	P	20 46 23.7	-0.1
	0.7nm,1.0s,baz=36,slow=6.7,SNR=4.0						
	0.7nm,1.0s						

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*INMG **31** 21:07:56.0±1.1, 32°.74N×3°.42W, h0^{km}, ML2.2, Error ellipse: s-maj=7.6km s-min=4.2km az=118.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Fez (Marr)*

MDD 31 21:07:58.0±0.9**, 32°.74N**×**3°.55W, h0**^{km}**, Mb3.9**/6**, M_mb3.2**/6**, 6C, Error ellipse: s-maj=9.1km s-min=4.9km az=126.0, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMIJ	Mijas	3.95	346	Pn	Pn	21 08 59.1	-0.7
EMIJ				⇑iIVmb_VC		21 08 59.1	
	97nm,SNR=1.2						
EMIJ				Sn	Sn	21 09 43.4	-3.5
ELGU	Los Guajares,	4.12	359	Pn	Pn	21 09 01.0	-1.2
ELGU				⇑iIVmb_VC		21 09 01.5	
	112nm,SNR=2.0						
ELGU				Sn	Sn	21 09 48.1	-3.0
EQES	Quesada	5.07	4	Pn	Pn	21 09 15.3	0.0
EQES				⇑iIVmb_VC		21 09 19.7	
	62nm,SNR=1.2						
ECAB	El Cabril	5.54	345	Pn	Pn	21 09 20.4	-1.3
ECAB				⇑iIVmb_VC		21 09 28.5	
	62nm,SNR=1.5						
ECAB				Sn	Sn	21 10 21.3	-4.8
EMIN	Mina Concepcio	5.63	334	Pn	Pn	21 09 21.6	-1.3
EMIN				⇑iIVmb_VC		21 09 27.2	
	78nm,SNR=1.3						
PBDV	Barranco-do-Ve	5.75	323	eP	Pn	21 09 22.5	-2.2
PBDV				eS	Sn	21 10 27.8	-3.6
EGRO	El Granado	5.77	327	Pn	Pn	21 09 21.8	-3.0
EGRO				Sn	Sn	21 10 25.8	-5.9
PVAQ	Vaqueiros	5.77	325	eP	Pn	21 09 22.2	-2.7
PVAQ				eS	Sn	21 10 27.8	-4.1
PVAQ				i IAML		21 10 33.1	
PVAQ				i IAML		21 10 36.0	
PBAR	Barrancos	6.12	333	eP	Pn	21 09 27.2	-2.5
PBAR				eS	Sn	21 10 36.5	-4.0
PBAR				i IAML		21 10 38.0	
PBAR				i IAML		21 10 40.2	
PBAR				i IAML		21 10 41.1	
EBAD	Badajoz	6.63	336	Pn	Pn	21 09 34.2	-2.4
EBAD				⇑iIVmb_VC		21 09 36.3	
	74nm,SNR=1.1						
EBAD				Sn	Sn	21 10 46.2	-6.7
PESTR	Estremoz	6.94	333	eP	Pn	21 09 39.2	-1.7
PARRA	Arraiolos	7.08	330	eP	Pn	21 09 40.5	-2.2
PMRV	Marv??o	7.36	336	eP	Pn	21 09 44.4	-2.4
PMTG	Montargil	7.37	330	eP	Pn	21 09 44.3	-2.4
PSARD	Sardoal	7.79	333	eP	Pn	21 09 50.3	-2.4

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*INMG **31** 21:11:16.1±1.0, 32°.77N×3°.42W, h0^{km}, ML2.2, Error ellipse: s-maj=6.5km s-min=4.1km az=119.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Fez (Marr)*

MDD 31 21:11:14.6±1.5**, 32°.88N**×**3°.10W, h0**^{km}**, Mb4.1**/3**, M_mb3.5**/3**, 3C, Error ellipse: s-maj=13.3km s-min=6.9km az=109.0, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMIN	Mina Concepcio	5.69	330	Pn	Pn	21 12 39.0	-1.4
EMIN				⇑iIVmb_VC		21 12 43.3	
	76nm,SNR=1.2						
EGRO	El Granado	5.87	324	Pn	Pn	21 12 41.9	-1.0
EGRO				⇑iIVmb_VC		21 12 49.6	
	144nm,SNR=1.6						
EGRO				Sn	Sn	21 13 45.2	-5.7
PBDV	Barranco-do-Ve	5.89	319	eP	Pn	21 12 42.1	-1.0
PBDV				eS	Sn	21 13 47.3	-4.1
PBDV				i IAML		21 13 48.2	
PBDV				i IAML		21 13 53.5	
PVAQ	Vaqueiros	5.89	321	eP	Pn	21 12 42.2	-1.0
PVAQ				eS	Sn	21 13 47.8	-3.6
PVAQ				i IAML		21 13 54.8	
PVAQ				i IAML		21 13 57.0	
PBAR	Barrancos	6.18	330	eP	Pn	21 12 47.1	-0.1
PBAR				eS	Sn	21 13 56.1	-2.6
PBAR				i IAML		21 14 00.3	
PBAR				i IAML		21 14 04.1	
PBAR				i IAML		21 14 07.1	
MORF	Marmelete	6.34	316	eP	Pn	21 12 48.3	-1.1
PTEO	Sao Teotonio	6.55	317	eP	Pn	21 12 51.6	-0.6
PTEO				eS	Sn	21 14 03.4	-4.2
EBAD	Badajoz	6.67	333	Pn	Pn	21 12 54.2	+0.3
EBAD				⇑iIVmb_VC		21 13 04.0	
	111nm,SNR=1.7						
EBAD				Sn	Sn	21 14 04.6	-6.0
PESTR	Estremoz	7.00	330	eP	Pn	21 12 59.0	+0.5
PARRA	Arraiolos	7.16	327	eP	Pn	21 13 00.4	-0.1
PARRA				eS	Sn	21 14 18.7	-3.9
PMRV	Marv??o	7.40	333	eP	Pn	21 13 04.3	+0.4
PMTG	Montargil	7.45	328	eP	Pn	21 13 04.0	-0.6
PSARD	Sardoal	7.86	330	eP	Pn	21 13 10.2	0.0
PSBE	So Bento	8.06	327	eP	Pn	21 13 12.8	-0.2

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*IDC **31** 21:26:19.6±1.2, 43°.87N×142°.85E, h192^{km}±6^{km}, mb3.1/7, mbtmp3.6/8, Error ellipse: s-maj=50.3km s-min=20.4km az=60.0*

*JMA **31** 21:26:19.3±0.3, 43°.8N±0°.9×14°3E±°, h196^{km}±2^{km}, MV2.8/30, KAMIKAWA-SORACHI REGION*

ISC 31 21:26:19.6±0.8**, 43°.78N**±0°.06×**142°.78E**±0°.06**, h194**^{km}±6^{km}**, n25, σ0^{s}72**/34**, mb3.3**/7**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKK2	Kamakawa 2	0.09	346	P	Pn	21 26 45.3	+0.1
JKK2				S	Sn	21 27 04.8	-0.2
ASAJ	Asahikawa	0.36	338	P	Pn	21 26 46.0	+0.5
	49nm,0.4s,baz=90,slow=1.0,SNR=17						
ASAJ				S	Sn	21 27 05.2	-0.5
	20nm,0.7s,baz=162,slow=16,SNR=1.9						
ASAJ	Asahikawa	0.36	338	P	Pn	21 26 45.5	-0.1
JAB	Ashibetsu	0.49	236	P	Pn	21 26 46.4	+0.3
JAB				eS	Sn	21 27 06.6	+0.3
JHR	Hokuryu	0.77	267	P	Pn	21 26 47.4	+0.1
JTKR	Abashiri--Toko	0.84	77	P	Pn	21 26 48.3	+0.6
JTKR				S	Sn	21 27 09.6	+0.2
JAR	Ashorobuto	0.87	124	P	Pn	21 26 48.5	+0.6
JAR				S	Sn	21 27 10.2	+0.5
JSE	Soyaes	1.18	353	P	Pn	21 26 49.7	-0.4
JCH	Churui	1.24	160	P	Pn	21 26 50.0	-0.6
JCH				S	Sn	21 27 12.7	-1.9
JEW	Eniwo	1.35	226	P	Pn	21 26 51.8	+0.2
JEW				eS	Sn	21 27 15.5	-0.7
JNBK	Urakawa-nobuka	1.50	181	eP	Pn	21 26 53.0	+0.2
JAK	Akkeshi	1.60	119	P	Pn	21 26 53.3	-0.4
JAK				eS	Sn	21 27 19.6	-0.6
JWK2	Keihoku	1.66	338	P	Pn	21 26 53.9	-0.3
JRA	Rausu	1.70	84	P	Pn	21 26 55.7	+1.1
JRBN	Rebuntou	2.05	324	P	Pn	21 26 56.9	-1.2
NEM2	Nemuro 2	2.19	100	P	Pn	21 26 58.9	-0.8
NEM2				S	Sn	21 27 29.0	-1.8
JOT	Ohata	2.72	209	eP	Pn	21 27 05.2	-0.4
HILR	Hailar Array B	16.80	298	P	P	21 30 02.5	-0.1
	0.4nm,0.3s,baz=92,slow=10,SNR=1.8						
SONM	Songino Array	25.53	292	P	P	21 31 31.1	+0.8
	0.8nm,0.6s,baz=82,slow=8.0,SNR=8.1						
	0.8nm,0.6s						
ZALV	Zalesovo Beam	38.44	306	P	P	21 33 21.8	-0.4
	0.3nm,0.4s,baz=84,slow=6.8,SNR=3.0						
	0.3nm,0.4s						
MKAR	Makanchi Array	41.74	296	P	P	21 33 49.8	+0.2
	0.3nm,0.7s,baz=82,slow=8.7,SNR=3.6						
	0.3nm,0.7s						
KURBB	Kurchatov Arra	42.95	303	P	P	21 33 59.1	0.0
	0.6nm,0.5s,baz=71,slow=8.8,SNR=9.6						
	0.6nm,0.5s						
WRA	Warramunga Arr	63.88	189	P	P	21 36 32.1	+0.6
	0.3nm,0.7s,baz=5.9,slow=6.5,SNR=1.4						
	0.3nm,0.7s						
ASAR	Alice Springs	67.61	189	P	P	21 36 56.1	+0.8
	0.3nm,0.9s,baz=9.8,slow=6.8,SNR=2.1						
	0.3nm,0.9s						
HFS	Hagfors	68.38	335	P	P	21 36 59.5	-0.2
	2.9nm,1.0s,baz=35,slow=5.4,SNR=5.4						
	2.9nm,1.0s						

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*TEH **31** 21:33:43.3, 27°.27N×56°.75E, h14^{km}±91^{km}*

*OMAN **31** 21:33:49.3±0.1, 27°.02N×56°.94E, h12^{km}±1^{km}, ml2.8/19, Error ellipse: s-maj=3.1km s-min=1.0km az=347.0*

ISC 31 21:33:44.1±1.1**, 27°.33N**±0°.03×**56°.74E**±0°.05**, h17**^{km}±9^{km}**, n27, σ1^{s}55**/41**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBND	Bandar-abas	0.22	305	Pg	Pb	21 33 48.9	-0.7
IBND				Sg	Sg	21 33 53.2	+0.6
GENO	Geno	0.51	278	Pg	Pg	21 33 54.0	-0.4
KHNJ	Kahnooj	1.06	54	Pg	Pb	21 34 03.7	-0.3
SHME	Shamm	1.38	203	P	Pg	21 34 10.4	-0.3
	SNR=47						
SHME				S	Sg	21 34 28.8	+0.1
BANOM	Banah	1.45	196	P	Pg	21 34 11.8	-0.2
BANOM				S	Sg	21 34 31.5	+0.5
MASF	Masafi	2.02	195	P	Pb	21 34 20.7	+0.4
	SNR=7.6						
MDH	Madha	2.06	191	P	Pn	21 34 18.5	+0.6
MDH				S	Sn	21 34 43.5	+0.3
NGRK	Negar Kerman	2.31	360	Pn	Pn	21 34 22.4	+0.7
UOSS	Minazif	2.42	192	P	Pb	21 34 25.5	-1.7
NAZ	Nazwa, Dubai	2.52	203	P	Pb	21 34 27.3	-1.6
HATD	Hatta, Dubai	2.55	193	P	Pb	21 34 28.1	-1.3
HATD				S	Sn	21 34 57.0	+1.6
CHMN	Cheshme madani	2.62	15	Pn	Pb	21 34 29.2	-1.6
ASHO	Ashiyiah	2.70	193	P	Pn	21 34 29.0	+2.2
FAQ	Al Faqa, Dubai	2.77	202	P	Pn	21 34 30.2	+2.5
ASUD	Al Ashush, Dub	2.97	206	P	Pb	21 34 34.0	-2.7
	SNR=8.2						
SOHO	SOHO	3.18	183	P	Pn	21 34 35.1	+1.7
SOHO				S	Sn	21 35 09.9	-1.1
ALNE	Al Ain	3.38	196	P	Pn	21 34 39.2	+3.1
HOQ	Hoqain	3.76	172	P	Pn	21 34 42.6	+1.2
HOQ				S	Sn	21 35 23.7	-1.6
ARQ	Araqi	3.98	183	P	Pn	21 34 46.7	+2.3
BIDO	Bidbid	3.99	161	P	Pn	21 34 45.0	+0.4
BIDO				S	Sn	21 35 29.8	-1.1
NGCH	Negor - Chabah	4.40	115	P	Pn	21 34 53.2	+3.0
	SNR=7.2						
NGCH				S	Sn	21 35 41.2	+0.1
SMDO	Samad	4.41	164	P	Pn	21 34 51.6	+1.2
SMDO				S	Sn	21 35 40.6	-0.9
UMZA	Um Al Zommool	4.81	198	P	Pn	21 34 57.7	+1.9
JMDO	Jabal Madar	5.09	166	P	Pn	21 35 01.2	+1.6
JMDO				S	Sn	21 35 56.8	-1.2
WBK	Wadi Bani Khal	5.11	156	P	Pn	21 35 01.3	+1.3
	SNR=12						
WBK				S	Sn	21 35 56.9	-1.7
JLN	Jalan Bani Buh	5.70	154	P	Pn	21 35 08.7	+0.8
JLN				S	Sn	21 36 11.0	-2.0
MHTO	MHTO	6.41	170	P	Pn	21 35 19.6	+1.8
MHTO				S	Sn	21 36 30.8	+0.2

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*IDC **31** 21:33:51.3±3.1, 2°.99S×100°.60E, h0^{km}, mb3.3/7, mbtmp3.3/7, Error ellipse: s-maj=133.3km s-min=21.2km az=56.0*

ISC 31 21:33:57.1±2.7**, 2°.9S**±0°.4×**100°.8E**±0°.7**, h35^{km}, n20,** σ1^{s}**30**/8**, mb3.4**/7**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	21.28	355	P	P	21 38 40.5	-0.1
	0.7nm,0.7s,baz=186,slow=10,SNR=10						
	0.7nm,0.7s						
H08S2	Diego Garcia H	28.58	259	T	T	22 08 53.3	
	baz=81,slow=76,SNR=6.6						
H08S3	Diego Garcia H	28.59	259	T	T	22 08 51.1	
	baz=81,slow=76,SNR=24						
H08S1	Diego Carcia H	28.60	259	T	T	22 08 22.8	
	baz=81,slow=76,SNR=5.0						
H01W3	Cape Leeuwin H	34.17	160	T	T	22 17 01.2	
	baz=337						
H01W2	Cape Leeuwin H	34.19	160	T	T	22 16 58.6	
	baz=337						
H01W1	Cape Leeuwin H	34.19	160	T	T	22 17 01.8	
	baz=337						
WRA	Warramunga Arr	36.86	120	P	P	21 41 02.6	+0.2
	0.6nm,0.9s,baz=300,slow=8.0,SNR=2.3						
	0.6nm,0.9s						
ASAR	Alice Springs	38.09	126	P	P	21 41 12.5	-0.4
	0.2nm,0.6s,baz=291,slow=7.4,SNR=5.4						
	0.2nm,0.6s						
SONM	Songino Array	50.74	5	P	P	21 42 54.1	+0.5
	0.2nm,0.6s,baz=197,slow=7.6,SNR=2.3						
	0.2nm,0.6s						
MKAR	Makanchi Array	52.09	344	P	P	21 43 05.2	+1.6
	0.2nm,0.4s,baz=162,slow=9.2,SNR=6.0						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	56.61	343	P	P	21 43 35.1	-1.3
	0.1nm,0.3s,baz=152,slow=6.0,SNR=1.3						
	0.1nm,0.3s						
ZALV	Zalesovo Beam	58.17	349	P	P	21 43 45.6	-1.8
	0.4nm,0.5s,baz=146,slow=8.0,SNR=4.0						
	0.4nm,0.5s						
H04N2	CROZET ISLANDS	60.58	217	T	T	22 49 03.9	
	baz=59,slow=75,SNR=18						
H04N1	CROZET ISLANDS	60.59	217	T	T	22 49 06.8	
	baz=59,slow=75,SNR=15						
H04N3	CROZET ISLANDS	60.60	217	T	T	22 49 04.8	
	baz=59,slow=75,SNR=14						
H04S1	CROZET ISLANDS	60.85	216	T	T	22 49 29.7	
	baz=59						
H04S3	CROZET ISLANDS	60.87	216	T	T	22 49 29.6	
	baz=59						
H04S2	CROZET ISLANDS	60.87	216	T	T	22 49 24.8	
	baz=59						
TXAR	Lajitas Array	144.89	39	PKPbc	PKPdf	21 53 32.2	+0.8
	0.3nm,0.8s,baz=290,slow=1.4,SNR=2.1						

ATH 31 21:41:56.3, 38°.56N×21°.93E, h18^{km}±1^{km}, ML1.3/6**, Manual Solution by S.Liakopoulos First location: 2019/12/31 21:42:50, This location: 2019/12/31 21:57:12 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANX	Ano Chora	0.04	354	P	Pg	21 41 59.8	+0.1
EFP	Efpalio	0.13	187	P	Pg	21 42 00.4	+0.1
EFP				S	Sg	21 42 03.4	+0.4
MG00	Magoula, Dorid	0.14	173	P	Pg	21 42 00.5	+0.1
MG00				S	Sg	21 42 03.8	+0.5
MALA	Malamata, Dori	0.17	194	P	Pg	21 42 00.9	+0.1
MALA				S	Sg	21 42 04.2	+0.4
SERG	Sergoula	0.18	144	P	Pg	21 42 01.1	+0.2
SERG				S	Sg	21 42 04.5	+0.5
TRIZ	Trizonia	0.22	149	P	Pb	21 42 01.7	0.0
TRIZ				S	Sb	21 42 05.6	+0.4
AGRP	Agrapidokambos	0.23	225	P	Pg	21 42 01.6	0.0
AGRP				S	Sb	21 42 05.5	+0.2
ZIRI	Ziria, Aigiali	0.25	176	P	Pb	21 42 02.3	0.0
ZIRI				S	Sb	21 42 06.4	+0.2
UPR	University Cam	0.29	202	P	Pb	21 42 03.6	+0.6
UPR				S	Sb	21 42 08.2	+0.7
AGEO	AgiosGiorgios,	0.31	160	P	Pb	21 42 03.3	0.0
AGEO				S	Sb	21 42 08.5	+0.5
PVO	Paravola	0.32	281	P	Pb	21 42 03.7	+0.2
PVO				S	Sb	21 42 08.4	+0.1
TEME	Temeni, Aigial	0.36	155	P	Pb	21 42 04.8	+0.7
TEME				S	Sb	21 42 09.9	+0.4
EVR	Evrytania	0.37	346	P	Pb	21 42 04.4	-0.1
EVR				S	Sb	21 42 10.1	+0.2
MAKR	Makrakomi, Fth	0.48	19	P	Pb	21 42 06.8	+0.5
MAKR				S	Sb	21 42 14.1	+1.0
KLV	Kalavryta, Ach	0.54	161	P	Pg	21 42 06.9	-0.3
KLV				S	Sb	21 42 14.8	+0.1
AGG	Agios Georgios	0.56	34	P	Pb	21 42 08.0	+0.4
AGG				S	Sb	21 42 15.6	+0.3
AXS	Araxos	0.56	230	P	Pb	21 42 07.8	+0.3
AXS				S	Sb	21 42 15.5	+0.2
RLS	Riolos of Patr	0.62	216	P	Pg	21 42 08.8	+0.3
GUR	Goura	0.70	152	P	Pb	21 42 09.7	-0.3

TRN 31 21:42:23.9, 16°.10N×60°.92W, h30^{km}, MD3.6, East of Guadeloupe., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DSDZ	La Diserade, G	0.25	327	*e*P	Pn	21 42 32.2	+0.6
DSDZ				*e*S	Sn	21 42 37.4	+0.9
DWS	Wesley	0.65	215	*e*P	Pn	21 42 38.8	+1.7
DWS				*e*S	Sn	21 42 49.4	+3.0
MMLZ	Guadeloupe Bro	0.72	266	*e*P	Pn	21 42 40.2	+2.1
MMLZ				*e*S	Sn	21 42 50.8	+2.7
TBG	Guadaloupe-3	0.74	251	*e*P	Pn	21 42 40.4	+2.0
TBG				*e*S	Sn	21 42 51.6	+3.0
ATGZ	Broadband at L	0.77	270	*e*P	Pb	21 42 41.1	+2.3
ATGZ				*e*S	Sn	21 42 51.5	+2.1
DSLB	Salisbury	0.82	216	*e*P	Pb	21 42 41.3	+1.7
DSLB				*e*S	Sn	21 42 52.5	+2.0
DLPL	La Plaine	0.83	202	*e*P	Pb	21 42 40.5	+0.7
DLPL				*e*S	Sn	21 42 53.0	+2.2
DHSZ	Broadband at M	0.83	282	*e*P	Pb	21 42 41.3	+1.5
DHSZ				*e*S	Sn	21 42 53.0	+2.2
SVN	Savane Anatole	1.27	191	*e*P	Pb	21 42 48.1	+0.7
SVN				*e*S	Sb	21 43 03.9	+0.5
BIM	Bigot	1.58	185	*e*S	Sb	21 43 12.6	+0.4
ANWB	Willy Bob	1.76	332	*e*P	Pn	21 42 53.9	+1.4
SLBI	Saint Lucia, B	2.07	181	*e*P	Pn	21 42 57.3	+0.7
SLAC	Saint Lucia, A	2.19	179	*e*P	Pn	21 43 00.5	+2.1
MCLT	Moule a Chique	2.38	180	*e*P	Pn	21 43 01.6	+0.6
SVB	Belmont	2.83	187	*e*P	Pn	21 43 09.3	+2.1

IDC 31 21:45:03.8±2.3**, 6°.47N×125°.92E, h0^{km}, mb3.3**/4**, mbtmp3.3**/4**, ML5.2**/1**, Error ellipse: s-maj=223.2km s-min=9.9km az=64.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.69	331	Pg	Pg	21 45 17.0	+0.1
	277nm,0.3s,baz=241,slow=19,SNR=32						
DAV				Lg	Lg	21 45 26.6	
	616nm,0.3s,baz=87,slow=24,SNR=14						
TGY	Tagaytay City	9.03	328	Pn	Pn	21 47 16.3	+0.7
	23nm,0.3s,baz=168,slow=9.3,SNR=2.3						
WRA	Warramunga Arr	27.52	163	P	P	21 50 53.6	+1.3
	0.6nm,1.0s,baz=341,slow=10,SNR=1.7						
	0.6nm,1.0s						
ASAR	Alice Springs	30.95	166	P	P	21 51 21.6	-1.1
	0.1nm,0.4s,baz=349,slow=7.6,SNR=5.3						
	0.1nm,0.4s						
MKAR	Makanchi Array	54.87	325	P	P	21 54 36.2	+0.2
	0.2nm,0.6s,baz=112,slow=6.1,SNR=1.5						
	0.2nm,0.6s						
KURBB	Kurchatov Arra	59.02	327	P	P	21 55 04.9	-0.5
	0.3nm,0.8s,baz=123,slow=7.3,SNR=4.0						
	0.3nm,0.8s						

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*RHSSO **31** 21:45:11.9±0.5, 43°.46N×16°.99E, h8^{km}±3^{km}, ML2.9/6*
*PDG **31** 21:45:13.6±0.3, 43°.58N×17°.21E, h15^{km}±1^{km}, MD3.1/1, ML3.0/12, Error ellipse: s-maj=0.8km s-min=0.9km az=0.0*
*PRU **31** 21:45:14.2, 43°.55N×17°.01E, h1^{km}*

ISC 31 21:45:13.1±0.8**, 43°.53N**±0°.02×**17°.08E**±0°.02**, h13^{km}**±5^{km}**, n71,** σ1^{s}**36**/130**, 14C-13D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RICI	Ricice	0.05	132	*e*Pg	Pg	21 45 15.7	0.0
RICI				Sg	Sg	21 45 17.9	+0.5
MAKA	Makarska	0.24	191	*e*Pg	Pg	21 45 17.7	-0.6
MAKA				Sg	Sg	21 45 21.4	-0.5
HVAR	Hvar	0.58	233	*e*Pg	Pg	21 45 23.1	-1.3
HVAR				Sg	Sg	21 45 31.7	-0.4
KIJV	Kijevo	0.69	314	*e*Pg	Pb	21 45 26.0	-0.9
KIJV				Sg	Sb	21 45 36.9	+0.6
LSTV	Lastovo	0.77	190	*e*Pg	Pg	21 45 26.2	-1.8
LSTV				Sg	Sg	21 45 36.9	-1.3
STON	Ston	0.80	145	*e*Pg	Pg	21 45 27.5	-1.1
STON				Sg	Sg	21 45 38.5	-0.5
MORI	Morici	1.05	289	*e*Pg	Pg	21 45 32.3	-1.1
MORI				Sg	Sb	21 45 47.8	+0.9
ZIRJ	Zirje	1.05	277	*e*Pg	Pg	21 45 32.8	-0.6
ZIRJ				Sg	Sg	21 45 46.9	-0.3
KLINJ	Klinje	1.15	108	*e*Pg	Pg	21 45 33.3	-2.0
KLINJ				*e*Sg	Sb	21 45 50.7	+0.9
DBRK	Dubrovnik	1.16	137	*e*Pg	Pb	21 45 35.4	+0.4
DBRK				Sg	Sg	21 45 50.0	-0.5
BLY	Banja Luka	1.22	3	⇓*i*Pg	Pn	21 45 35.8	-0.1
BLY				*e*Sg	Sn	21 45 52.9	+0.6
BLY	Banja Luka	1.22	3	⇑P	Pn	21 45 35.8	-0.1
BLY				⇑S	Sn	21 45 53.1	+0.8
TREB	Trebinje	1.23	131	*e*Pg	Pg	21 45 33.7	-3.1
TREB				*e*Sg	Sg	21 45 51.9	-0.9
BRY	Bratogost	1.23	120	⇓*i*Pg	Pg	21 45 35.2	-1.7
BRY				*i* Sg	Sn	21 45 53.9	+1.1
UPM	Unac-Piva	1.37	103	⇑*i*Pg	Pg	21 45 37.9	-1.5
UPM				*i* Sg	Sn	21 45 58.7	+2.6
UDBI	Udbina	1.38	317	*e*Pn	Pb	21 45 39.5	+0.7
UDBI				Sn	Sn	21 45 59.7	+3.5
HCY	Herceg Novi	1.50	136	⇑*i*Pg	Pn	21 45 39.0	-0.6
HCY				*i* Sg	Sn	21 46 01.4	+2.4
DUGI	Dugi Otok	1.54	288	*e*Pn	Pb	21 45 41.1	-0.4
DUGI				Sn	Sb	21 46 01.5	+0.6
NKME	Niksic	1.57	118	⇓*i*Pg	Pn	21 45 41.2	+0.6
NKME				*e*Sg	Sg	21 46 03.3	-0.2
VIRC	Vir	1.65	298	*e*Pn	Pb	21 45 43.1	-0.2
VIRC				Sn	Sg	21 46 05.3	-1.0
CEME	Cevo	1.67	125	⇑*i*Pn	Pn	21 45 42.7	+0.7
CEME				*e*Sn	Sg	21 46 06.5	-0.2
RUDO	Rudo	1.67	86	*e*Pn	Pn	21 45 41.9	-0.1
RUDO				*e*Sn	Sg	21 46 04.8	-1.9
PLE	Pljevlja	1.69	96	⇑*i*Pn	Pb	21 45 43.7	-0.4
PLE				*i* Sn	Sb	21 46 05.4	0.0
PLIT	Plitvice	1.71	323	*e*Pn	Pg	21 45 44.3	-1.6
PLIT				Sn	Sg	21 46 07.4	-0.8
BUM	Brajici-Budva	1.81	132	⇓*i*Pn	Pn	21 45 45.0	+1.0
BUM				*i* Sn	Sb	21 46 10.1	+1.4
NVLJ	Novalja	1.90	304	*e*Pn	Pb	21 45 46.7	-0.9
NVLJ				Sn	Sb	21 46 11.2	0.0
PDG	Podgorica	1.94	124	⇓P	Pn	21 45 46.9	+1.3
PDG				⇑S	Sb	21 46 13.2	+1.0
PDG	Podgorica	1.94	124	⇑*i*Pn	Pn	21 45 46.3	+0.6
PDG				*i* Sn	Sb	21 46 12.6	+0.4
DRME	Dracevica, Mon	2.05	130	⇓*i*Pn	Pn	21 45 48.0	+0.8
DRME				*e*Sn	Sb	21 46 15.6	+0.2
RABC	Rab	2.06	307	*e*Pn	Pn	21 45 48.2	+0.9
RABC				Sn	Sn	21 46 14.6	+1.7
IVA	Berane	2.16	107	⇓*i*Pn	Pn	21 45 50.0	+1.2
IVA				*i* Sn	Sn	21 46 17.1	+1.7
ULC	Ulcinj	2.23	134	⇑*i*Pn	Pn	21 45 50.3	+0.5
ULC				*i* Sn	Sn	21 46 19.8	+2.6
PVY	Plav	2.31	113	⇑*i*Pn	Pn	21 45 52.6	+1.7
PVY				*i* Sn	Sn	21 46 20.8	+1.7
OZLJ	Ozalj	2.38	332	*e*Pn	Pn	21 45 53.1	+1.3
OZLJ				Sn	Sb	21 46 23.2	-1.9
MATE	Matera	2.89	186	⇑P	Pn	21 45 57.4	-1.4
MORH	Mrgy, Hungar	2.91	22	*e*Pn	Pn	21 45 59.4	+0.4
MORH				*e*Sn	Sn	21 46 35.6	+1.8
MORH	Mrgy, Hungar	2.91	22	⇓P	Pn	21 45 58.6	-0.4
AQU	L'Aquila	2.95	248	*e*Pn	Pn	21 45 58.4	-1.2
AQU				*e*Sn	Sn	21 46 31.9	-2.9
BEHE	Becsehely	2.95	356	*e*Pn	Pn	21 45 59.4	-0.2
BEHE				*e*Sn	Sn	21 46 36.7	+1.8
BOVS	Bovan	3.36	87	⇓P	Pn	21 46 06.1	+0.8
SOKA	Soboth	3.47	336	*i* Pn	Pn	21 46 07.9	+1.1
	9.7nm,0.2s,SNR=64						
SOKA				*e*Sn	Sn	21 46 47.9	+0.1
	2.8nm,0.4s						
OBKA	Obir	3.48	330	*i* Pn	Pn	21 46 08.3	+1.3
	4.1nm,0.3s,SNR=9.4						
OBKA				*i* Sn	Sn	21 46 51.6	+3.5
	15nm,0.3s						
MDVR	Moldovita	3.56	68	⇓P	Pn	21 46 08.0	-0.1
BZS	Buzias	3.85	56	⇓P	Pn	21 46 11.8	-0.2
ARSA	Arzberg	3.88	344	*i* Pn	Pn	21 46 13.6	+1.1
	14nm,0.3s,SNR=9.5						
ARSA				*i* Sn	Sn	21 46 58.6	+0.7
	2.8nm,0.3s						
MYKA	Terra Mystica	3.94	323	*i* Pn	Pn	21 46 15.2	+1.8
	3.2nm,0.4s						
MYKA				*i* Sn	Sn	21 47 01.4	+1.9
	3.1nm,0.4s						
HERR	Herculane	4.07	69	⇓P	Pn	21 46 14.9	-0.1
RONA	Rosalia, Austr	4.21	353	*i* Pn	Pn	21 46 17.9	+0.9
	1.2nm,0.1s,SNR=8.5						
RONA				*i* Sn	Sn	21 47 07.7	+1.7
	2.7nm,0.4s						
SIRR	Siria	4.25	48	⇑P	Pn	21 46 17.7	+0.2
GZR	Gura Zlata	4.48	63	⇑P	Pn	21 46 20.7	0.0
CONA	Conrad Observa	4.48	349	*i* Pn	Pn	21 46 21.7	+0.9
	2.5nm,0.3s,SNR=10.0						
CONA				*i* Sn	Sn	21 47 11.4	-1.4
	1.3nm,0.3s						
ABTA	Abfaltersbach	4.56	316	*i* Pn	Pn	21 46 22.3	+0.4
	3.0nm,0.5s,SNR=4.5						
ABTA				*i* Sn	Sn	21 47 18.1	+3.3
	2.7nm,0.3s						
MOA	Molln	4.75	336	*i* Pn	Pn	21 46 26.5	+2.1
	7.4nm,0.2s,SNR=40						
MOA				*i* Sn	Sn	21 47 20.4	+1.1
	1.4nm,0.4s						
PSZ	Piszkesteto	4.81	23	⇑P	Pn	21 46 24.8	-0.5
BIOA	Bad Ischl, Aus	4.81	331	*i* Pn	Pn	21 46 27.3	+2.0
	3.4nm,0.3s,SNR=11						
BIOA				*i* Sn	Sn	21 47 23.5	+2.6
	6.8nm,0.6s						
MODS	Modra-Piesok	4.85	2	*e*PN	Pn	21 46 26.2	+0.5
MODS				*e*SN	Sn	21 47 21.2	-0.5
LESA	Schwarzleotal	4.98	323	*i* Pn	Pn	21 46 29.2	+1.6
	1.1nm,0.4s,SNR=15						
LESA				*i* Sn	Sn	21 47 25.8	+0.8
	1.8nm,0.5s						
DRGR		5.15	49	⇓P	Pn	21 46 30.5	+0.7
WTTA	Wattenberg	5.35	316	*i* Pn	Pn	21 46 34.2	+1.4
	4.1nm,0.2s						
WTTA				*i* Sn	Sn	21 47 36.8	+2.4
	0.2nm,0.3s						
WATA	Walderalm	5.43	316	*i* Pn	Pn	21 46 35.6	+1.8
	2.6nm,0.2s,SNR=14						
WATA				*i* Sn	Sn	21 47 38.6	+2.4
	1.9nm,0.5s						
SQTA	Sankt Quirin	5.54	314	*i* Pn	Pn	21 46 37.0	+1.6
	1.7nm,0.2s,SNR=9.7						
SQTA				*i* Sn	Sn	21 47 39.8	+0.8
	3.1nm,0.4s						
KRUC	Moravsky	5.56	355	*e*PN	Pn	21 46 36.2	+0.8
KRUC				*e*SN	Sn	21 47 40.5	+1.4
CKRC	Cesky Krumlov	5.63	341	*e*PN	Pn	21 46 37.7	+1.2
CKRC				*e*SN	Sn	21 47 39.7	-1.3
FETA	Feichten	5.68	310	*i* Pn	Pn	21 46 38.2	+0.9
	0.6nm,0.3s						
FETA				*i* Sn	Sn	21 47 43.9	+1.4
	0.9nm,0.4s						
VRAC	Vranov	5.79	357	*e*PN	Pn	21 46 39.3	+0.6
VRAC				*e*SN	Sn	21 47 45.5	+0.6
MAUC	Maruska	5.86	5	*e*SN	Sn	21 47 47.7	+1.0
RETA	Reutte	5.95	314	*i* Pn	Pn	21 46 42.4	+1.5
	0.8nm,0.4s						
RETA				*i* Sn	Sn	21 47 48.1	-0.7
	1.7nm,0.3s						
KHC	Kasperske Hory	6.11	338	*e*PN	Pn	21 46 44.4	+1.4
KHC				*e*SN	Sn	21 47 51.9	-0.8
ZVC	Zvikov	6.24	342	*e*PN	Pn	21 46 46.3	+1.5
MORC	Moravsky Berou	6.26	3	*e*PN	Pn	21 46 45.5	+0.4
MORC				*e*SN	Sn	21 47 57.8	+1.3
DAVA	Damuels	6.31	309	*e*Pn	Pn	21 46 48.6	+2.6
	0.4nm,0.2s						
DAVA				*i* Sn	Sn	21 47 57.9	-0.1
	2.9nm,0.3s						

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*NEIC **31** 22:02:56.9±1.5, 17°.91N±0°.03×66°.86W±0°.01, h10^{km}±1^{km}, ML3.7/28, Md3.2/9(RSPR), Mwr3.7/10(SLM), Error ellipse: s-maj=5.4km s-min=2.8km az=180.0*
*OSPL **31** 22:02:56.3±0.4, 17°.84N×66°.93W, h21^{km}±8^{km}, ML3.3, Presumed earthquake*
*RSPR **31** 22:02:56.9, 17°.91N×66°.89W, h6^{km}, MD3.2/9*
*NEIC **31** 22:02:56.8, 17°.90N×66°.89W, h7^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.22; M$_{\theta\theta}$2.54; M$_{\phi\phi}$-2.32; M$_{r\theta}$0.36; M$_{\theta\phi}$2.72; M$_{\phi r}$-0.81; Fault plane solution: M$_{0}$3.76000×10^{14} NP1:ϕ_s22.00000°, δ80.00000°, λ-170.00000°. NP2:ϕ_s290.00000°, δ80.00000°, λ-10.00000°. Principal axes: T 3.7584, Plg0.0000°, Azm156.0000°; N 0.0011, Plg76.0000°, Azm65.0000°; P -3.7595, Plg14.0000°, Azm246.0000°;*
*IDC **31** 22:02:57.0±1.1, 17°.90N×66°.86W, h0^{km}, mb3.5/5, mbtmp3.5/6, ML2.4/1 Error ellipse: s-maj=22.2km s-min=9.5km az=168.0*

ISC 31 22:02:56.6±1.2**, 17°.85N**±0°.05×**66°.87W**±0°.02**, h5^{km}**±9^{km}**, n59,** σ1^{s}**21**/70**, mb3.5**/5**, 8C-6D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.12	355		Pg	22 02 58.8	-0.4
GBPR	Guanica, Bosqu	0.12	355	⇓*e*P	Pg	22 02 58.8	-0.4
MLPR	Magueyes Islan	0.21	305		Pg	22 03 00.6	-0.1
MLPR					Sg	22 03 03.5	0.0
MLPR	Magueyes Islan	0.21	305	⇑*e*P	Pg	22 03 00.6	-0.1
MLPR	Magueyes Islan	0.21	305	*e*S	Sg	22 03 03.5	0.0
CRPR	Cabo Rojo, PR	0.28	304		Pg	22 03 01.6	-0.4
CRPR					Sg	22 03 05.6	-0.2
CRPR	Cabo Rojo, PR	0.28	304	IAML		22 03 07.4	
	13μm,0.6s						
CRPR				IAML		22 03 07.5	
	12μm,0.6s						
CRPR	Cabo Rojo, PR	0.28	304	⇑*e*P	Pg	22 03 01.9	-0.2
CRPR	Cabo Rojo, PR	0.28	304	*e*S	Sg	22 03 05.8	0.0
CRPR	Cabo Rojo, PR	0.28	304	*i* P	Pg	22 03 01.8	-0.3
CRPR				*e*S	Sg	22 03 05.5	-0.2
CRPR				IAML		22 03 06.0	
	comp=Z,10μm,0.4s						
OBIP	Obispado Ponce	0.31	52	Pg	Pg	22 03 02.7	0.0
OBIP				Sg	Sg	22 03 07.6	+0.7
OBIP	Obispado Ponce	0.31	52	⇓*e*P	Pg	22 03 03.0	+0.2
OBIP	Obispado Ponce	0.31	52	*e*S	Sg	22 03 07.9	+1.0
LSP	Las Mesas	0.39	327		Pg	22 03 03.5	-0.6
LSP					Sg	22 03 09.0	-0.2
LSP	Las Mesas	0.39	327	⇓*e*P	Pg	22 03 03.5	-0.6
LSP	Las Mesas	0.39	327	*e*S	Sg	22 03 09.0	-0.2
PRSN	Puerto Rico Se	0.45	324		Pg	22 03 04.7	-0.7
PRSN					Sg	22 03 11.1	-0.2
PRSN	Puerto Rico Se	0.45	324	IAML		22 03 14.3	
	comp=Z,13μm,0.4s						
PRSN				IAML		22 03 16.1	
	comp=Z,8μm,0.6s						
PRSN	Puerto Rico Se	0.45	324	⇑*e*P	Pg	22 03 04.7	-0.7
PRSN	Puerto Rico Se	0.45	324	*e*S	Sg	22 03 11.1	-0.2
AOPR	Arecibo Observ	0.51	12	Pg	Pg	22 03 05.3	-1.1
AOPR				Sg	Sg	22 03 11.5	-1.5
AOPR				IAML		22 03 12.9	
	comp=N,6μm,0.4s						
AOPR	Arecibo Observ	0.51	12	⇑*e*P	Pg	22 03 05.5	-0.9
AOPR	Arecibo Observ	0.51	12	*e*S	Sg	22 03 11.7	-1.3
AGPR	Aguadilla, PR	0.66	339	Pg	Pg	22 03 08.1	-1.2
AGPR				IAML		22 03 22.1	
	comp=N,3μm,0.9s						
AGPR				IAML		22 03 23.5	
	comp=N,2μm,0.5s						
AGPR	Aguadilla, PR	0.66	339	⇑*e*P	Pg	22 03 08.2	-1.2
AGPR	Aguadilla, PR	0.66	339	*e*S	Sg	22 03 16.9	-1.0
AGPR	Aguadilla, PR	0.66	339	*i* P	Pg	22 03 08.1	-1.2
AGPR				*e*S	Sg	22 03 16.8	-1.0
AGPR				IAML		22 03 18.5	
	comp=Z,1μm,0.6s						
ECPR	Experimental S	0.67	46	⇓*e*P	Pg	22 03 08.9	-0.6
ECPR	Experimental S	0.67	46	*e*S	Sg	22 03 18.0	-0.3
EMPR	Esperanza - Ma	0.70	27		Pg	22 03 09.9	-0.2
EMPR					Sg	22 03 19.3	0.0
EMPR	Esperanza - Ma	0.70	27	IAML		22 03 21.3	
	comp=Z,3μm,1.0s						
EMPR				IAML		22 03 27.3	
	comp=Z,4μm,1.1s						
EMPR	Esperanza - Ma	0.70	27	⇑*e*P	Pg	22 03 09.9	-0.2
EMPR	Esperanza - Ma	0.70	27	*e*S	Sg	22 03 19.3	0.0
SJG	San Juan	0.73	69	Pg	Pg	22 03 10.6	0.0
	comp=Z,72nm,0.3s,baz=253,slow=14,SNR=98						
SJG				LR	LR	22 03 13.8	
	comp=Z,46nm,19.3s,baz=163,slow=24						
SJG				Lg	Lg	22 03 20.4	
	comp=Z,361nm,0.3s,baz=332,slow=15,SNR=40						
SJG	San Juan	0.73	69	Pg	Pg	22 03 10.3	-0.3
SJG				IAML		22 03 21.4	
	comp=Z,2μm,0.4s						
SJG	San Juan	0.73	69	⇓*e*P	Pg	22 03 10.4	-0.3
SJG	San Juan	0.73	69	*e*S	Sb	22 03 21.1	-1.1
SJG	San Juan	0.73	69	*i* P	Pg	22 03 10.3	-0.3
SJG				*e*S	Sb	22 03 21.1	-1.1
SJG				IAML		22 03 21.8	
	comp=Z,1μm,0.7s						
IDE	Isla Desecheo	0.79	313		Pg	22 03 10.7	-1.0
IDE					Sg	22 03 21.8	-0.2
IDE	Isla Desecheo	0.79	313	⇑*e*P	Pg	22 03 10.7	-1.0
IDE	Isla Desecheo	0.79	313	*e*S	Sg	22 03 21.8	-0.2
GCPR	Guaynabo City	0.87	58	Pg	Pg	22 03 12.5	-0.9
GCPR				Sg	Sg	22 03 23.7	-1.1

GCPR	Guaynabo City	0.87	58	⇑*e*P	Pg	22 03 12.6	-0.9
GCPR	Guaynabo City	0.87	58	*e*S	Sg	22 03 23.8	-1.0
HUMP	Col San Antoni	1.01	73	Pg	Pg	22 03 14.8	-1.3
HUMP				Sg	Sg	22 03 28.9	-0.2
HUMP	Col San Antoni	1.01	73	⇓*e*P	Pg	22 03 15.0	-1.0
HUMP	Col San Antoni	1.01	73	*e*S	Sg	22 03 29.4	+0.2
DR12	Loma Pena Alta	2.56	292	Pn	Pn	22 03 39.1	+0.1
SABA	Saba	3.46	93	Pn	Pn	22 03 52.1	+0.8
SABA				IAML		22 04 37.3	
	comp=N,194nm,0.7s						
SABA				IAML		22 05 03.5	
	comp=E,341nm,0.8s						
SC01	Santiago de lo	3.98	294	Pn	Pn	22 03 58.7	+0.2
SDDR	Presa de Saban	4.35	286	Pn	Pn	22 04 04.5	+1.0
SDDR				IAML		22 05 15.9	
	comp=E,86nm,1.0s						
SDDR				IAML		22 05 17.5	
	comp=E,116nm,0.9s						
GDHS	Morne Mazeau,	5.13	107	Pn	Pn	22 04 13.8	-0.4
CBE	Ff, Capester	5.34	109	Pn	Pn	22 04 13.8	-3.2
SDV	Santo Domingo	9.63	203	Pn	Pn	22 05 17.7	+1.5
	comp=E,0.3nm,0.3s,baz=355,slow=8.1,SNR=3.6						
SDV				Sn	Sn	22 06 58.3	-6.8
	comp=E,0.3nm,0.3s,baz=39,slow=15,SNR=1.2						
	comp=E,1.4nm,0.3s						
TXAR	Lajitas Array	35.47	296	P	P	22 09 55.1	+0.7
	comp=E,0.2nm,0.5s,baz=112,slow=9.1,SNR=4.1						
	comp=E,0.2nm,0.5s						
PDAR	Pinedale Array	43.81	314	P	P	22 11 05.7	+1.8
	comp=E,0.1nm,0.3s,baz=103,slow=5.4,SNR=1.2						
	comp=E,0.1nm,0.3s						
CPUP	Villa Florida	44.88	168	P	P	22 11 13.5	+1.3
	comp=E,1.0nm,0.7s,baz=12,slow=9.3,SNR=3.3						
	comp=E,1.0nm,0.7s						
YKA	Yellowknife Ar	55.44	335	P	P	22 12 31.7	-0.3
	comp=E,0.4nm,0.8s,baz=119,slow=5.8,SNR=6.3						
	comp=E,0.4nm,0.8s						
ESDC	Sonseca Array	58.09	54	P	P	22 12 52.8	+1.5
	comp=E,0.8nm,0.9s,baz=255,slow=6.2,SNR=6.6						
	comp=E,0.8nm,0.9s						

*SOME **31** 22:03:03.7, 42°.42N×84°.30E, h15^{km}*
*NNC **31** 22:03:07.9±2.5, 42°.15N×83°.86E, h0^{km}, mb3.5, mpv3.4, Error ellipse: s-maj=18.9km s-min=11.9km az=150.0*
ISC 31 22:03:09.5±3.3, **42°.3N**±0°.2×**83°.9E**±0°.1, **h10**^{km}, **n12**, σ**2.^{s}21**/15, **1C-1D**, **Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	3.39	286	Pg	Pn	22 04 03.6	+1.0
	4.7nm,0.4s						
SHLS				Lg	Lg	22 04 46.5	
	12nm,0.4s						
SHLS	Shalkode	3.39	286	*e*P	Pn	22 04 03.6	+1.0
	4.7nm,0.4s						
SHLS				*e*S	Sn	22 04 46.5	+3.7
	12nm,0.4s						
PDGK	Podgornoye	3.41	289	Pg	Pb	22 04 10.2	+0.1
PDGK				Lg	Lg	22 04 56.4	
UZB	Uzynbulak	3.70	285	Pg	Pb	22 04 16.0	+0.9
	2.8nm,0.3s						
UZB				Lg	Lg	22 05 08.0	
	4.2nm,0.5s						
UZB	Uzynbulak	3.70	285	*e*P	Pb	22 04 15.9	+0.9
	2.8nm,0.3s						
UZB				*e*S	Sg	22 05 08.0	-0.3
	4.2nm,0.5s						
KPKS	Kokpek	4.01	289	Pg	Pg	22 04 22.5	-3.9
	0.2nm,0.1s						
KPKS				Lg	Lg	22 05 19.4	
	2.2nm,0.3s						
KPKS	Kokpek	4.01	289	*e*P	Pg	22 04 22.5	-3.9
	0.2nm,0.1s						
KPKS				*e*S	Sg	22 05 19.4	+1.1
	2.2nm,0.3s						
KNOS	Konyrlen	4.02	302	Pg	Pb	22 04 20.5	0.0
	0.7nm,0.2s						
KNOS				Lg	Lg	22 05 15.9	
	3.1nm,0.6s						
SATY	Saty	4.13	282	Pg	Pb	22 04 23.7	+1.3
	1.1nm,0.2s						
SATY				Lg	Lg	22 05 21.5	
	5.4nm,0.2s						
BLB	Baldybastay	4.36	296	Pg	Pb	22 04 26.6	+0.3
	15nm,0.1s						
BLB				Lg	Lg	22 05 25.8	
	6.8nm,0.3s						
MK31	Makanchi Array	4.64	346	⇑Pg	Pg	22 04 36.4	-2.0
	0.7nm,0.5s,baz=169,slow=15,SNR=21						
MK31				Lg	Lg	22 05 38.0	
	2.8nm,0.6s,baz=166,slow=28,SNR=6.3						
MAKZ	Makanchi	4.72	344	Pg	Pg	22 04 38.0	-1.8
MAKZ				⇓Lg	Lg	22 05 41.4	

*IDC **31** 22:13:16.0±0.8, 1°.51N×125°.96E, h0^{km}, mb3.7/7, mbtmp3.7/8, ML3.3/1, Error ellipse: s-maj=63.8km s-min=16.8km az=72.0*
ISC 31 22:13:23.1±0.9, **1°.5N**±0°.1×**126°.0E**±0°.4, **h54**^{km}, **n8**, σ**0.^{s}48**/10, **mb3.8**/7, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.44	181	P	P	22 17 45.2	-0.1
	0.1nm,0.3s,baz=297,slow=3.9,SNR=1.5						
	1.6nm,0.9s						
WRA	Warramunga Arr	22.80	159	P	P	22 18 20.9	-0.6
	2.0nm,0.5s,baz=339,slow=11,SNR=24						
WRA				PcP	PcP	22 22 12.0	+0.4
	0.3nm,0.8s,baz=340,slow=2.3,SNR=1.4						
	2.0nm,0.5s						
ASAR	Alice Springs	26.14	163	P	P	22 18 52.8	+0.3
	0.5nm,0.5s,baz=343,slow=7.6,SNR=21						
ASAR				PcP	PcP	22 22 19.4	+0.6
	0.3nm,0.5s,baz=348,slow=2.5,SNR=7.5						
	0.5nm,0.5s						
SONM	Songino Array	49.21	343	P	P	22 22 06.2	+0.1
	0.2nm,0.5s,baz=150,slow=6.7,SNR=2.2						
	0.2nm,0.5s						
PETK	Petropavlovsk-	57.80	22	P	P	22 23 08.9	0.0
	0.6nm,0.3s,baz=203,slow=8.1,SNR=0.8						
	0.6nm,0.3s						
MKAR	Makanchi Array	59.00	326	P	P	22 23 17.5	+0.1
	0.5nm,0.5s,baz=119,slow=7.8,SNR=14						
	0.5nm,0.5s						
ZALV	Zalesovo Beam	62.27	334	P	P	22 23 38.8	-0.6
	0.2nm,0.3s,baz=132,slow=7.1,SNR=1.8						
	0.2nm,0.3s						
KURBB	Kurchatov Arra	63.25	328	P	P	22 23 45.8	-0.2
	0.8nm,0.6s,baz=129,slow=6.1,SNR=2.5						
	0.8nm,0.6s						

IDC 31 22:26:05.9±3.1, **33°.24S**×**178°.53W**, **h0**^{km}, **mb3.6**/2, **mbtmp3.6**/3, **ML3.2**/1, **Error ellipse: s-maj=73.6km s-min=36.6km az=118.0**, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.14	214	Pn	Pn	22 27 38.2	+0.4
	0.6nm,0.3s,baz=52,slow=19,SNR=6.8						
URZ				Sn	Sn	22 28 47.7	-1.0
	1.8nm,0.3s,baz=30,slow=20,SNR=9.3						
	3.5nm,0.6s						
ASAR	Alice Springs	42.59	270	P	P	22 34 04.0	+0.1
	0.6nm,0.6s,baz=110,slow=7.8,SNR=16						
	0.6nm,0.6s						
WRA	Warramunga Arr	43.84	275	P	P	22 34 13.8	-0.2
	0.4nm,0.6s,baz=116,slow=8.3,SNR=1.4						
	0.4nm,0.6s						
FINES	FINESS Array B	147.63	338	PKPbc	PKPbc	22 45 50.5	-1.0
	1.5nm,0.9s,baz=45,slow=3.0,SNR=5.8						

*IDC **31** 22:28:45.8±8.0, 31°.98S×179°.80E, h503^{km}±106^{km}, mb2.2/2, mbtmp3.4/3, Error ellipse: s-maj=130.9km s-min=49.4km az=4.0*
*WEL **31** 22:28:47.6±1.0, 32°S±12°×18°0E±2°2, h430^{km}±32^{km}, mB4.2/7, MLv4.5/9, Mw(mB)3.2/7, Error ellipse: s-maj=29.0km s-min=14.9km az=99.1, confirmed*
ISC 31 22:28:43.2±2.2, **31°.7S**±0°.1×**179°.9E**±0°.2, **h450**^{km}, **n22**, σ**1.^{s}70**/36, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	6.04	192	P	P	22 30 19.5	+1.7
MXZ				S	S	22 31 32.8	-2.4
WMGZ	Waiomatatini S	6.28	191	P	P	22 30 20.9	+0.7
WMGZ				S	S	22 31 40.5	+0.9
HAZ	Te Kaha	6.34	196	P	P	22 30 21.2	+0.3
HAZ				S	S	22 31 39.2	-1.6
OUZ	Omahuta	6.37	234	P	P	22 30 22.3	+1.1
PKGZ	Pakihiroa	6.38	193	P	P	22 30 22.8	+1.4
PKGZ				S	S	22 31 39.6	-2.1
PUZ	Puketiti	6.55	192	P	P	22 30 24.7	+1.6
PUZ				S	S	22 31 45.5	+0.7
RUGZ	Raukumara Rang	6.56	196	P	P	22 30 24.4	+1.0
RUGZ				S	S	22 31 44.9	-0.4
TWGZ	Tauwhareparae	6.70	193	P	P	22 30 27.2	+2.5
TWGZ				S	S	22 31 49.6	+1.8
MWZ	Matawai	6.95	196	P	P	22 30 29.2	+1.9
CNGZ	Carnagh Statio	6.96	191	P	P	22 30 28.2	+0.9
CNGZ				S	S	22 31 48.2	-4.5
TKGZ	Te Karaka	6.98	194	P	P	22 30 29.5	+2.0
URZ	Urewera	6.98	198	P	P	22 30 28.8	+1.2
	7.9nm,0.4s,baz=0.0,slow=6.1,SNR=22						
URZ				S	S	22 31 52.3	-0.9
	18nm,0.4s,baz=20,slow=21,SNR=18						
URZ	Urewera	6.98	198	P	P	22 30 28.7	+1.2
URZ				S	S	22 31 51.1	-2.0
RAGZ	Rawiri	7.13	196	P	P	22 30 31.2	+1.9
RAGZ				S	S	22 31 56.1	-0.1
RIGZ	Rimuhau	7.26	193	P	P	22 30 32.4	+1.9
RIGZ				S	S	22 31 57.2	-1.4
RTZ	Ruatahuna	7.35	198	P	P	22 30 32.9	+1.3
RTZ				S	S	22 31 58.8	-1.8
SNGZ	Shannon Statio	7.42	196	P	P	22 30 34.2	+1.9
SNGZ				S	S	22 32 02.8	+1.0
KNZ	Kokohu	7.58	193	P	P	22 30 34.1	+0.2
KNZ				S	S	22 32 03.5	-1.2
RAHZ	Arahi	7.61	197	P	P	22 30 35.8	+1.5
RAHZ				S	S	22 32 05.8	+0.3
ASAR	Alice Springs	41.28	269	P	P	22 35 46.3	-1.8
	0.2nm,0.9s,baz=102,slow=6.9,SNR=1.4						
	0.2nm,0.9s						
WRA	Warramunga Arr	42.39	275	P	P	22 35 54.8	-2.1
	0.3nm,0.7s,baz=111,slow=8.0,SNR=1.5						
	0.3nm,0.7s						
FINES	FINESS Array B	145.67	338	PKPbc	PKPdf	22 47 27.1	-1.5
	3.6nm,1.0s,baz=25,slow=4.6,SNR=4.5						

*BGSI **31** 22:30:51.4±4.2, 28°.18S×28°.68E, h0^{km}±927^{km}*
*PRE **31** 22:31:11.8±5.8, 26°.38S×27°.36E, h2^{km}, ML2.9*
*IDC **31** 22:31:14.6±1.5, 26°.38S×27°.56E, h0^{km}, mb3.9/3, mbtmp4.0/7, ML3.9/4, Error ellipse: s-maj=22.4km s-min=17.9km az=76.0*
ISC 31 22:31:13.1±0.7, **26°.41S**±0°.04×**27°.43E**±0°.05, **h5**^{km}, **n27**, σ**2.^{s}73**/43, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HRAO	HartRAO	0.57	24	*e*P	Pg	22 31 23.6	-0.4
HRAO				*e*S	Sg	22 31 31.3	-0.1
HRAO				IAML		22 31 38.4	
	comp=Z,298nm,0.5s						
LBTB	Lobatse	2.16	310	Pn	Pg	22 31 54.4	-0.2
	comp=Z,37nm,0.3s,baz=132,slow=14,SNR=488						
LBTB				Pg	Pb	22 31 56.0	+3.1
	comp=Z,16nm,0.3s,baz=116,slow=10,SNR=10						
LBTB				Lg	Lg	22 32 25.0	
	comp=Z,70nm,0.3s,baz=36,slow=19,SNR=45						
	comp=Z,98nm,0.3s						
BOSA	Boshof	2.92	221	Pn	Pb	22 32 03.5	-2.4
	comp=Z,5.7nm,0.3s,baz=40,slow=12,SNR=237						
BOSA				Pg	Pg	22 32 10.0	+0.9
	comp=Z,3.4nm,0.3s,baz=42,slow=12,SNR=4.8						
BOSA				Sn	Sn	22 32 38.1	+2.1
	comp=Z,6.1nm,0.3s,baz=24,slow=14,SNR=6.1						
BOSA				Lg	Lg	22 32 46.4	
	comp=Z,21nm,0.3s,baz=331,slow=17,SNR=19						
	comp=Z,15nm,0.3s						
BOSA	Boshof	2.92	221	*e*P	Pn	22 32 00.3	-0.1
BOSA				*e*S	Sn	22 32 34.4	-1.5
BOSA				IAML		22 32 49.1	
	comp=Z,71nm,0.4s						
LPHEP	Lephephe	3.35	334	*i* P	Pb	22 32 09.9	-3.3
SKOMA	Sekoma	3.68	300	*i* P	Pn	22 32 12.7	+1.9
MREMI	Moremi	3.83	0	*i* P	Pn	22 32 15.4	+2.6
PMBG	Pietermaritzbu	4.12	139	*e*P	Pn	22 32 18.0	+1.3
PMBG				*e*S	Sn	22 33 05.2	-0.1
PMBG				IAML		22 33 21.4	
	comp=Z,49nm,0.3s						
KSTD	Kokstad	4.50	159	*e*P	Pn	22 32 22.6	+0.4
KSTD				*e*S	Sn	22 33 15.5	+0.5
KSTD				IAML		22 33 44.0	
	comp=Z,21nm,0.4s						
MUSN	Musina, Limpop	4.67	29	*e*P	Pn	22 32 25.3	+1.0
MUSN				*e*S	Sn	22 33 17.0	-1.9
MUSN				IAML		22 33 39.0	
	comp=Z,22nm,0.5s						
KHWEE	KHWEE	4.80	337	*i* P	Pn	22 32 30.4	+4.2
BROLN	Tlhalogang	5.29	359	*i* P	Pn	22 32 34.3	+1.4
ALKP	Alkanpan, Nort	5.77	231	*e*P	Pn	22 32 39.3	-0.2
ALKP				*e*S	Sn	22 33 43.6	-2.6
ALKP				IAML		22 34 30.0	
	comp=Z,30nm,0.4s						
UPI	Upington	5.83	249	*e*P	Pn	22 32 39.8	-0.5
UPI				*e*S	Sn	22 33 42.9	-4.6
UPI				IAML		22 34 25.3	
	comp=Z,31nm,0.4s						
KGCAE	Kacgae	5.93	306	*i* P	Pn	22 32 44.9	+3.1
LKGWB	Lokgwabe	6.07	291	*i* P	Pn	22 32 40.2	-3.5
GRAF	Camdeboo Natio	6.38	203	*e*P	Pn	22 32 49.0	+1.0
GRAF				*e*S	Sn	22 33 58.1	-3.2
GRAF				IAML		22 34 38.5	
	comp=Z,13nm,0.5s						
BRAK	Brakfontein	6.66	216	*e*P	Pn	22 32 52.1	+0.4
BRAK				*e*S	Sn	22 34 04.3	-3.8
BRAK				IAML		22 34 13.0	
	comp=Z,12nm,0.3s						
KOOLE	Kule	7.41	296	*i* P	Pn	22 33 03.9	+1.8
GRAN	Grantham	7.45	217	*e*P	Pn	22 33 03.3	+0.7
GRAN				*e*S	Sn	22 34 23.3	-4.2
GRAN				IAML		22 35 11.3	
	comp=Z,21nm,0.7s						
GRTLG	Ghanzi	7.59	310	*i* P	Pn	22 33 08.6	+4.0
FRAZ	Fraserburg	7.61	222	*e*P	Pn	22 33 04.4	-0.4
FRAZ				*e*S	Sn	22 34 27.0	-4.5
FRAZ				IAML		22 35 18.0	
	comp=Z,13nm,0.6s						
SUR	Sutherland	8.29	223	Pn	Pn	22 33 17.6	+3.4
	comp=Z,1.5nm,0.3s,baz=46,slow=8.9,SNR=35						
SUR				Sn	Sn	22 34 47.0	-1.3
	comp=Z,2.3nm,0.3s,baz=324,slow=23,SNR=7.7						
SUR				Lg	Lg	22 35 35.5	
	comp=Z,2.6nm,0.3s,baz=323,slow=19,SNR=4.2						
	comp=Z,11nm,0.5s						
LSZ	Lusaka	11.10	4	Pn	Pn	22 33 53.3	+0.5
	comp=Z,0.7nm,0.3s,baz=182,slow=12,SNR=7.7						
LSZ				Sn	Sn	22 35 49.5	-8.0
	comp=Z,0.5nm,0.3s,baz=262,slow=19,SNR=4.1						
LSZ				Lg	Lg	22 37 01.5	
	comp=Z,0.3nm,0.3s,baz=112,slow=16,SNR=3.3						
	comp=Z,2.3nm,0.4s						
TORD	Torodi Ar. Bea	46.61	324	P	P	22 39 44.5	+2.0
	comp=Z,0.4nm,0.5s,baz=138,slow=6.4,SNR=8.8						
	comp=Z,0.4nm,0.5s						
ESDC	Sonseca Array	71.97	335	P	P	22 42 40.5	+2.8
	comp=Z,0.3nm,0.6s,baz=150,slow=6.3,SNR=8.3						
	comp=Z,0.3nm,0.6s						
FINES	FINESS Array B	87.55	359	P	P	22 44 03.4	+1.9
	comp=Z,6.5nm,1.2s,baz=191,slow=3.7,SNR=1.5						
	comp=Z,6.5nm,1.2s						

*IDC **31** 23:07:41.2±0.5, 17°.85N×66°.83W, h0^{km}, mb4.1/21, mbtmp4.2/23, ML3.2/2, MS3.5/14, Error ellipse: s-maj=14.6km s-min=7.9km az=162.0*
*NEIC **31** 23:07:42.7, 17°.92N×66°.84W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.20; $M_{\theta\theta}$0.86; $M_{\phi\phi}$-0.66; $M_{r\theta}$1.07; $M_{\theta\phi}$1.80; $M_{\phi r}$-0.36; Fault plane solution: $M_0$2.26000×10^{15} NP1:ϕ_s280.00000°, δ85.00000°, λ-30.00000°. NP2:ϕ_s13.00000°, δ60.00000°, λ-174.00000°. Principal axes: T 2.2636, Plg17.0000°, Azm330.0000°; N -0.0002, Plg60.0000°, Azm91.0000°; P -2.2634, Plg24.0000°, Azm232.0000°;*
*RSPR **31** 23:07:42.7, 17°.92N×66°.84W, h6^{km}, MD3.4/11*
*OSPL **31** 23:07:42.5±0.3, 17°.87N×66°.86W, h19^{km}±4^{km}, ML4.1, Presumed earthquake*
*NEIC **31** 23:07:43.3±1.4, 17°.94N±0°.05×66°.78W±0°.07, h10^{km}±1^{km}, mb4.6/83, ML4.4/36, ML4.2/11(RSPR), Mwr4.2/12(SLM), Error ellipse: s-maj=11.5km s-min=7.7km az=95.0*
ISC 31 23:07:41.9±0.8, **17°.83N**±0°.04×**66°.83W**±0°.02, **h9**^{km}±5^{km}, **n213**, σ**1.^{s}28**/223, **mb4.6**/59, **MS3.5**/12, **8C-9D**, **Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.15	343		Pg	23 07 44.6	-0.5
GBPR	Guanica, Bosqu	0.15	343	⇓*e*P	Pg	23 07 44.6	-0.5
MLPR	Magueyes Islan	0.24	304		Pg	23 07 47.0	+0.2
MLPR					Sg	23 07 50.4	+0.3
MLPR	Magueyes Islan	0.24	304	⇑*e*P	Pg	23 07 47.0	+0.2
MLPR	Magueyes Islan	0.24	304	*e*S	Sg	23 07 50.4	+0.3
OBIP	Obispado Ponce	0.30	46		Pg	23 07 47.8	-0.2
OBIP				Sg	Sg	23 07 51.9	-0.1
OBIP	Obispado Ponce	0.30	46	⇓*e*P	Pg	23 07 48.0	+0.1
OBIP	Obispado Ponce	0.30	46	*e*S	Sg	23 07 52.4	+0.4
CRPR	Cabo Rojo, PR	0.31	303	Pg	Pg	23 07 47.9	-0.2
CRPR				Sg	Sg	23 07 52.2	-0.1
CRPR	Cabo Rojo, PR	0.31	303	IAML		23 07 54.0	
	59µm,0.4s						
CRPR				IAML		23 07 54.4	
	54µm,0.7s						
CRPR	Cabo Rojo, PR	0.31	303	⇑*e*P	Pg	23 07 48.3	+0.1
CRPR	Cabo Rojo, PR	0.31	303	*e*S	Sg	23 07 52.5	+0.1
CRPR	Cabo Rojo, PR	0.31	303	*i* P	Pg	23 07 48.2	+0.1
CRPR				*e*S	Sg	23 07 52.4	0.0
CRPR				IAML		23 07 52.7	
	comp=Z,43µm,0.3s						
CELP	Cerrillos	0.34	45	Pg	Pg	23 07 48.6	-0.1
LSP	Las Mesas	0.42	325		Pg	23 07 49.7	-0.4
LSP	Las Mesas	0.42	325	⇓*e*P	Pg	23 07 49.7	-0.4
UUPR	Utuado, UPR, P	0.43	15	Pg	Pg	23 07 49.9	-0.5
PRSN	Puerto Rico Se	0.48	322	Pg	Pg	23 07 50.7	-0.6
PRSN				IAML		23 08 03.1	
	comp=Z,59µm,0.3s						
PRSN	Puerto Rico Se	0.48	322	⇑*e*P	Pg	23 07 50.8	-0.6
PRSN	Puerto Rico Se	0.48	322	*e*S	Sg	23 07 57.9	+0.2
AOPR	Arecibo Observ	0.52	9	Pg	Pg	23 07 50.8	-1.1
AOPR				Sg	Sg	23 07 57.1	-1.7
AOPR				IAML		23 07 58.0	
	comp=N,47µm,0.6s						
AOPR	Arecibo Observ	0.52	9	⇑*e*P	Pg	23 07 51.1	-0.9
AOPR	Arecibo Observ	0.52	9	*e*S	Sg	23 07 57.3	-1.5
AOPR	Arecibo Observ	0.52	9	*e*P	Pg	23 07 51.3	-0.7
ECPR	Experimental S	0.66	43	Pg	Pg	23 07 53.6	-1.0
ECPR				IAML		23 08 03.3	
	comp=N,37µm,0.2s						
ECPR				IAML		23 08 04.2	
	comp=N,42µm,0.2s						
ECPR	Experimental S	0.66	43	⇓*e*P	Pg	23 07 54.1	-0.6
ECPR	Experimental S	0.66	43	*e*S	Sg	23 08 02.9	-0.4
AGPR	Aguadilla, PR	0.68	337	Pg	Pg	23 07 53.9	-1.3
AGPR				Sg	Sg	23 08 02.6	-1.4
AGPR				IAML		23 08 08.4	
	comp=N,16µm,0.7s						
AGPR				IAML		23 08 11.3	
	comp=N,17µm,1.0s						
AGPR	Aguadilla, PR	0.68	337	⇑*e*P	Pg	23 07 54.1	-1.0
AGPR	Aguadilla, PR	0.68	337	*e*S	Sg	23 08 02.7	-1.4
AGPR	Aguadilla, PR	0.68	337	*i* P	Pg	23 07 54.1	-1.1
AGPR				*e*S	Sg	23 08 02.6	-1.5
AGPR				IAML		23 08 07.8	
	comp=Z,10µm,0.6s						
EMPR	Esperanza - Ma	0.70	24		Sg	23 08 04.3	-0.4
EMPR	Esperanza - Ma	0.70	24	Pg	Pg	23 07 54.7	-0.8
EMPR				IAML		23 08 07.1	
	comp=Z,37µm,0.6s						
EMPR	Esperanza - Ma	0.70	24	⇓*e*P	Pg	23 07 55.1	-0.4
EMPR	Esperanza - Ma	0.70	24	*e*S	Sg	23 08 04.3	-0.4
SJG	San Juan	0.71	67	Pg	Pg	23 07 55.3	-0.2
	comp=Z,556nm,0.3s,baz=258,slow=14,SNR=358						
SJG				Lg	Lg	23 08 04.9	
	comp=Z,558nm,0.3s,baz=258,slow=14,SNR=851						
SJG	San Juan	0.71	67	Pg	Pg	23 07 54.9	-0.7
SJG				IAML		23 08 05.8	
	comp=Z,11µm,0.7s						
SJG	San Juan	0.71	67	⇓*e*P	Pg	23 07 55.4	-0.2
SJG	San Juan	0.71	67	*e*S	Sg	23 08 05.3	+0.5
SJG	San Juan	0.71	67	*e*P	Pg	23 07 55.4	-0.2
SJG	San Juan	0.71	67	*i* P	Pg	23 07 55.4	-0.2
SJG				*e*S	Sg	23 08 04.9	+0.1
SJG				IAML		23 08 05.7	
	comp=Z,5µm,0.6s						
IDE	Isla Desecheo	0.82	312		Pg	23 07 56.8	-1.0
IDE					Sg	23 08 08.0	-0.4
IDE	Isla Desecheo	0.82	312	⇓*e*P	Pg	23 07 56.8	-1.0
IDE	Isla Desecheo	0.82	312	*e*S	Sg	23 08 08.0	-0.4
GCPR	Guaynabo City	0.86	56	Pg	Pg	23 07 57.5	-0.9
GCPR				Sg	Sg	23 08 08.2	-1.4
GCPR	Guaynabo City	0.86	56	⇑*e*P	Pg	23 07 57.7	-0.7
GCPR	Guaynabo City	0.86	56	*e*S	Sg	23 08 08.8	-0.8
HUMP	Col San Antoni	0.99	72	Pg	Pg	23 07 59.8	-1.1
HUMP				Sg	Sg	23 08 13.3	-0.4
HUMP	Col San Antoni	0.99	72	⇓*e*P	Pg	23 08 00.1	-0.8
HUMP	Col San Antoni	0.99	72	*e*S	Sg	23 08 13.5	-0.2
DR12	Loma Pena Alta	2.60	292		Pn	23 08 24.9	+0.7
SMDR	Samana, DR	2.66	303	⇓*e*P	Pb	23 08 27.9	-1.8
SDD	Santo Domingo	2.99	282	Pn	Pn	23 08 30.6	+1.1
SDD				IAML		23 09 33.1	
	comp=N,519nm,1.1s						
SABA	Saba	3.43	93	Pn	Pn	23 08 36.4	+0.8
SABA				IAML		23 09 39.6	
	comp=N,953nm,0.7s						
SABA				IAML		23 09 51.5	
	comp=E,2µm,0.8s						
SABA	Saba	3.43	93	⇑*e*P	Pn	23 08 37.5	+2.0
SKI	Saint Kitts	3.94	97	*e*P	Pn	23 08 43.5	+0.9
SC01	Santiago de lo	4.02	294	Pn	Pn	23 08 45.8	+2.1
SDDR	Presa de Saban	4.38	286	*e*P	Pn	23 08 54.0	+5.3
SDDR				*e*S	Sb	23 09 49.1	-3.0
SDDR				IAML		23 09 58.5	
	comp=E,388nm,0.5s						
SDDR				IAML		23 10 00.3	
	comp=E,461nm,0.5s						
ANWB	Willy Bob	4.81	91	Pn	Pn	23 08 54.9	+0.3
ANWB				IAML		23 10 04.0	
	comp=E,152nm,1.1s						
ANWB				IAML		23 10 07.0	
	comp=E,144nm,1.2s						
ANWB	Willy Bob	4.81	91	*e*P	Pn	23 08 55.7	+1.1
ANWB	Willy Bob	4.81	91	*e*S	Sn	23 09 53.7	+3.2
DHSZ	Broadband at M	5.09	107	*e*P	Pn	23 09 00.4	+2.0
DHSZ	Broadband at M	5.09	107	*e*S	Sn	23 09 55.9	-1.5
GDHS	Morne Mazeau,	5.09	107	Pn	Pn	23 08 58.6	+0.1
MMLZ	Guadeloupe Bro	5.25	109	*e*P	Pn	23 09 01.6	+0.9
MMLZ	Guadeloupe Bro	5.25	109	*e*S	Sn	23 09 59.1	-2.2
ABD	La Joyeuse, An	5.29	104	Pn	Pn	23 09 01.5	+0.4
ABD				IAML		23 10 27.4	
	comp=N,154nm,1.4s						
ABD				IAML		23 10 56.1	
	comp=E,172nm,1.6s						
ABD	La Joyeuse, An	5.29	104	⇑*e*P	Pn	23 09 01.9	+0.8
CBE	Ff, Capester	5.30	109	Pn	Pn	23 09 02.3	+1.0
CBE				IAML		23 09 50.7	
	comp=E,303nm,0.5s						
TDBA	Terre de Bas,	5.35	111	Pn	Pn	23 09 03.2	+1.2
GRTK	Grand Turk	5.46	313	*e*P	Pn	23 09 03.6	+0.2
GRTK				*e*S	Sn	23 10 06.8	+0.4
GRTK				IAML		23 10 08.4	
	comp=E,202nm,0.3s						
GRTK				IAML		23 10 08.8	
	comp=E,234nm,0.3s						
MAGL	Barre de l’ile	5.63	109	Pn	Pn	23 09 06.3	+0.4
DSLB	Salisbury	5.71	114	*e*P	Pn	23 09 07.7	+0.7
DSLB	Salisbury	5.71	114	*e*S	Sn	23 10 08.4	-4.2
GDSD	La Dsirade Is	5.72	104	Pn	Pn	23 09 07.0	-0.1
H05N1	Guadeloupe/Mar	5.73	104	Pn	Pn	23 09 06.8	-0.3
H05N1				Sn	Sn	23 10 09.2	-3.9
SVN	Savane Anatole	6.20	118	*e*P	Pn	23 09 15.0	+1.3
CXM	Morne La Croix	6.21	118	Pn	Pn	23 09 14.1	+0.1
BIM	Bigot	6.44	120	Pn	Pn	23 09 16.4	-0.6
BIM	Bigot	6.44	120	*e*P	Pn	23 09 17.2	+0.1
BIM	Bigot	6.44	120	*e*S	Sn	23 10 25.5	-5.3
MPOM	Morne Pois Mar	6.66	120	Pn	Pn	23 09 21.4	+1.5
H05S1	Guadeloupe/Mar	6.69	120	Pn	Pn	23 09 21.0	+0.7
H05S1				Sn	Sn	23 10 27.2	-9.4
SLBI	Saint Lucia, B	6.79	123	*e*P	Pn	23 09 22.7	+0.9

SLBI	Saint Lucia, B	6.79	123	*e*S	Sn	23 10 33.0	-6.3
SVB	Belmont	7.04	129	*e*S	Sn	23 10 42.1	-3.3
MASC	Masc	7.38	290	*e*P	Pn	23 09 28.8	-1.0
MASC				*e*S	Sn	23 10 51.5	-2.1
MASC				IAML		23 10 59.0	
	comp=E,15nm,0.3s						
MASC				IAML		23 11 02.2	
	comp=N,20nm,0.3s						
QMBU	Quimbuelo	7.91	289	*e*P	Pn	23 09 37.2	+0.1
QMBU				*e*S	Sn	23 11 04.4	-2.4
QMBU				IAML		23 11 12.2	
	comp=E,27nm,0.3s						
QMBU				IAML		23 11 16.4	
	comp=N,27nm,0.3s						
GTBY	Guantanamo Bay	8.11	286	*e*P	Pn	23 09 40.0	+0.2
GTBY				*e*S	Sn	23 11 10.9	-0.8
GTBY				IAML		23 11 15.6	
	comp=N,10nm,0.4s						
GTBY				IAML		23 11 24.7	
	comp=N,22nm,0.7s						
NMDO	Nuevo Mundo	8.16	291	Pn	Pn	23 09 41.0	+0.3
MOAC	Moa	8.17	291	*e*P	Pn	23 09 41.3	+0.5
MOAC				*e*S	Sn	23 11 10.7	-2.7
MOAC				IAML		23 12 00.9	
	comp=E,13nm,0.5s						
MOAC				IAML		23 12 04.7	
	comp=N,34nm,0.6s						
RCC	Rio Carpintero	8.66	286	*e*P	Pn	23 09 47.5	+0.1
RCC				*e*S	Sn	23 11 22.2	-3.0
RCC				IAML		23 11 25.6	
	comp=E,11nm,0.4s						
RCC				IAML		23 11 31.9	
	comp=N,5.8nm,0.4s						
SDV	Santo Domingo	9.63	203	Pn	Pn	23 10 03.0	+2.1
	comp=N,4.0nm,0.3s,baz=34,slow=11,SNR=18						
SDV				Sn	Sn	23 11 43.4	-6.0
	comp=N,0.7nm,0.3s,baz=311,slow=17,SNR=1.6						
SDV				LR	LR	23 13 47.2	
	comp=N,112nm,21.6s,baz=67,slow=38						
	comp=N,16nm,0.4s						
MTDJ	Mount Denham	10.19	274	Pn	Pn	23 10 08.8	+0.3
MTDJ	Mount Denham	10.19	274	*e*P	Pn	23 10 09.6	+1.1
BBSR	BB Station	14.61	7	Pn	Pn	23 11 06.9	-1.9
ROSC	El Rosal	14.85	210	Pn	Pn	23 11 14.8	+2.2
	comp=N,1.5nm,0.3s,baz=125,slow=18,SNR=10						
	comp=N,8.5nm,0.6s						
ROSC	El Rosal	14.85	210	Pn	Pn	23 11 13.5	+1.0
SOR	Soroa	15.95	291		P	23 11 31.9	+1.6
MDP	Montagnes des	18.78	131	LR	LR	23 21 49.1	
	comp=N,116nm,18.4s,baz=323,slow=45						
BIRD	Birdtown, Kers	20.69	327		P	23 12 23.1	+0.8
BIRD				IAmb	IAmb	23 12 39.0	
	comp=Z,21nm,0.8s						
154A	Montrose	20.77	318	P	P	23 12 23.5	+0.2
154A				IAmb	IAmb	23 12 29.9	
	comp=Z,34nm,0.8s						
OTAV	Otavalo	20.89	214		P	23 12 26.0	+0.9
V58A	Windy Hill, Pi	20.95	331	Pn	Pn	23 12 26.6	-1.0
HODGE	Hodges	21.37	323	P	P	23 12 30.8	+1.1
HODGE				IAmb	IAmb	23 12 35.4	
	comp=Z,29nm,1.0s						
GOGA	Godfrey	21.53	319	P	P	23 12 31.6	+0.2
GOGA				IAmb	IAmb	23 12 38.3	
	comp=Z,45nm,1.3s						
KMSC	Kings Mountain	21.53	326	P	P	23 12 31.8	+0.4
KMSC				IAmb	IAmb	23 12 45.7	
	comp=Z,20nm,0.5s						
SLOR	San Lorenzo -	21.73	213	P	P	23 12 34.3	+0.1
152A	Waverly Hall	21.86	316	P	P	23 12 36.3	+1.4
152A				IAmb	IAmb	23 12 39.6	
	comp=Z,18nm,0.7s						
T57A	Hurt	22.01	333	P	P	23 12 37.6	+1.1
T57A				IAmb	IAmb	23 12 41.6	
	comp=Z,34nm,1.3s						
Y52A	Lilburn	22.20	319	P	P	23 12 37.2	-1.5
R58B	Mineral	22.27	336	P	P	23 12 38.5	-0.8
BLA	Blacksburg	22.71	331	P	P	23 12 44.3	+0.3
BLA				IAmb	IAmb	23 12 48.0	
	comp=Z,20nm,0.9s						
V53A	Saluda	22.73	325	P	P	23 12 44.4	+0.1
V53A				IAmb	IAmb	23 13 01.3	
	comp=Z,16nm,0.8s						
TKL	Tuckaleechee C	23.26	323	LR	LR	23 21 16.8	
	comp=Z,114nm,20.9s,baz=288,slow=35						
CPCT	Cooper Cave	23.55	322	P	P	23 12 53.4	+0.8
CPCT				IAmb	IAmb	23 13 12.9	
	comp=Z,15nm,0.5s						
LRAL	Lakeview Retre	23.61	314	P	P	23 12 54.0	+0.7
LRAL				IAmb	IAmb	23 12 57.1	
	comp=Z,15nm,1.1s						
TZTN	Tazewell	23.77	325	P	P	23 12 57.0	+2.1
TZTN				IAmb	IAmb	23 13 27.8	
	comp=Z,43nm,1.4s						
W50A	Signal Mountai	23.86	320	P	P	23 12 55.7	0.0
W50A				IAmb	IAmb	23 12 57.8	
	comp=Z,15nm,0.8s						
SSPA	Standing Stone	24.64	340	P	P	23 13 02.6	-0.2
SSPA				IAmb	IAmb	23 13 29.8	
	comp=Z,26nm,1.2s						
T50A	Nancy	24.83	324	P	P	23 13 04.4	-0.2
T50A				IAmb	IAmb	23 13 06.8	
	comp=Z,11nm,0.8s						
O54A	Avella	25.16	335	P	P	23 13 09.2	+1.7
R50A	Paris	25.48	327	P	P	23 13 11.1	+0.7
R50A				IAmb	IAmb	23 13 13.6	
	comp=Z,14nm,0.8s						
PLAL	Pickwick Lake	25.48	316	P	P	23 13 10.7	+0.2
PLAL				IAmb	IAmb	23 13 14.0	
	comp=Z,12nm,0.7s						
WVT	Waverly	26.02	319	P	P	23 13 15.8	+0.4
WVT				IAmb	IAmb	23 13 17.3	
	comp=Z,9.0nm,0.9s						
OXF	Oxford	26.10	314	P	P	23 13 16.2	+0.1
OXF				IAmb	IAmb	23 13 19.9	
	comp=Z,20nm,0.8s						
CMIG	Matias Romero	26.76	273	LR	LR	23 23 38.2	
	comp=Z,89nm,21.1s,baz=87,slow=36						
O49A	Covington	26.93	329	P	P	23 13 23.6	+0.1
O49A				IAmb	IAmb	23 13 31.8	
	comp=Z,33nm,1.5s						
SIUC	Southern Illin	27.88	320	P	P	23 13 32.7	+0.6
N47A	Urbana	28.12	329	P	P	23 13 34.7	+0.5
LCAR	Lake Charles	28.16	315	P	P	23 13 35.2	+0.7
WHAR	Wooly Hollow	28.52	313	P	P	23 13 39.0	+1.1
WHAR				IAmb	IAmb	23 13 49.0	
	comp=Z,14nm,1.2s						
CCM	Cathedral Cave	29.36	318	P	P	23 13 45.3	+0.1
CCM				IAmb	IAmb	23 13 47.1	
	comp=Z,8.7nm,0.9s						
MGMO	Mountain Grove	29.50	316	P	P	23 13 46.9	+0.3
MGMO				IAmb	IAmb	23 13 48.4	
	comp=Z,9.9nm,0.8s						
R40A	Maddies Statio	30.15	318	P	P	23 13 52.4	+0.2
HHAR	Hobbs	30.18	313	P	P	23 13 53.5	+0.9
HHAR				IAmb	IAmb	23 13 54.4	
	comp=Z,5.3nm,0.7s						
P40A	Paris	30.75	320	P	P	23 13 56.5	-1.0
P40A				IAmb	IAmb	23 13 58.8	
	comp=Z,8.2nm,0.8s						
TUL3	Leonard	31.31	311	P	P	23 14 03.7	+1.1
WMOK	Wichita Mounta	33.04	307	P	P	23 14 17.9	+0.1
WMOK				IAmb	IAmb	23 14 19.2	
	comp=Z,6.8nm,0.7s						
LPAZ	La Paz	33.93	182	P	P	23 14 26.2	0.0
	comp=Z,0.9nm,0.7s,baz=16,slow=9.3,SNR=3.5						
LPAZ				LR	LR	23 28 34.4	
	comp=Z,83nm,21.1s,baz=310,slow=37						
	comp=Z,0.9nm,0.7s						
LPAZ	La Paz	33.93	182	P	P	23 14 27.6	+1.4
SIV	San Ignacio	34.09	170	LR	LR	23 28 21.1	
	comp=Z,88nm,19.5s,baz=343,slow=36						
TXAR	Lajitas Array	35.50	296	P	P	23 14 40.8	+1.5
	comp=Z,1.7nm,0.7s,baz=112,slow=10.0,SNR=22						
TXAR				PcP	PcP	23 17 08.7	-0.1
	comp=Z,0.1nm,0.5s,baz=100,slow=3.3,SNR=1.6						
TXAR				ScP	ScP	23 20 56.0	+1.0
	comp=Z,0.6nm,0.7s,baz=128,slow=7.0,SNR=8.0						
	comp=Z,1.7nm,0.7s						
TXAR	Lajitas Array	35.50	296	P	P	23 14 40.1	+0.8
TX31	Lajitas Ar. Si	35.51	296	P	P	23 14 39.8	+0.5
MSTX	Muleshoe	35.88	304	IAmb	IAmb	23 14 44.6	
	comp=Z,9.0nm,0.9s						
ECSD	EROS Data Cent	36.00	322	P	P	23 14 43.8	+0.5
PB16	IPOC Station P	36.04	184	P	P	23 14 44.2	-0.2
PB16				IAmb	IAmb	23 14 49.3	
	comp=Z,5.6nm,0.8s						
SCHQ	Schefferville	36.93	0	P	P	23 14 52.0	+0.9
	comp=Z,7.2nm,1.1s,baz=187,slow=8.0,SNR=7.8						
	comp=Z,7.2nm,1.1s						
BDFB	Brasilia	38.08	150	LR	LR	23 30 52.8	
	comp=Z,120nm,19.1s,baz=20,slow=36						
EPLO	Experimental L	38.44	332	IAmb	IAmb	23 15 04.8	
	comp=Z,7.7nm,0.7s						
ANMO	Albuquerque	39.08	304	LR	LR	23 32 31.2	
	comp=Z,73nm,21.8s,baz=294,slow=38						
SDCO	Great Sand Dun	39.18	308	P	P	23 15 11.9	+1.2
ULM	Lac du Bonnet	39.83	331	P	P	23 15 15.2	-0.3
	comp=Z,6.4nm,0.8s,baz=122,slow=9.0,SNR=9.2						
	comp=Z,6.4nm,0.8s						
LPIG	La Paz	40.95	286	LR	LR	23 33 12.4	
	comp=Z,79nm,19.0s,baz=242,slow=37						
PV13	Radium Mtn., P	41.80	308	P	P	23 15 32.5	+0.3
PV13				IAmb	IAmb	23 15 35.5	
	comp=Z,7.6nm,0.8s						
PDAR	Pinedale Array	43.84	314	P	P	23 15 49.4	+0.6
	comp=Z,1.4nm,0.8s,baz=115,slow=6.4,SNR=11						
PDAR				PcP	PcP	23 17 34.7	-0.5
	comp=Z,0.3nm,0.5s,baz=89,slow=2.4,SNR=3.2						
	comp=Z,1.4nm,0.8s						
PDAR	Pinedale Array	43.84	314	P	P	23 15 49.1	+0.3
RLMT	Red Lodge	44.55	317	P	P	23 15 55.0	+0.7
CPUP	Villa Florida	44.86	168	P	P	23 15 56.0	-0.7
	comp=Z,3.7nm,0.8s,baz=338,slow=13,SNR=3.1						
CPUP				LR	LR	23 34 56.4	
	comp=Z,47nm,20.1s,baz=291,slow=36						
	comp=Z,3.7nm,0.8s						
CPUP	Villa Florida	44.86	168	P	P	23 15 56.0	-0.7
FCC	Fort Churchill	45.48	340	P	P	23 16 01.3	0.0
FFC	Flin Flon	45.59	332	P	P	23 16 01.9	-0.4
FFC				IAmb	IAmb	23 16 04.1	
	comp=Z,6.7nm,0.8s						
SPR3	Spring Creek 3	46.19	307	P	P	23 16 08.5	+0.8
ELK	Elko	47.28	309	LR	LR	23 39 34.8	
	comp=Z,105nm,18.4s,baz=321,slow=40						
NVAR	Mina Array Bea	49.12	306	P	P	23 16 31.8	+1.5
	comp=Z,0.8nm,0.6s,baz=92,slow=6.3,SNR=7.8						
	comp=Z,0.8nm,0.6s						
NVAR	Mina Array Bea	49.12	306	P	P	23 16 31.6	+1.3
EDM	Edmonton	50.41	326	P	P	23 16 40.1	+0.5
EDM				IAmb	IAmb	23 16 42.2	
	comp=Z,4.9nm,0.8s						
YKA	Yellowknife Ar	55.47	335	P	P	23 17 17.1	+0.3
	comp=Z,3.0nm,0.6s,baz=114,slow=6.8,SNR=64						
	comp=Z,3.0nm,0.6s						
YKA	Yellowknife Ar	55.47	335	P	P	23 17 16.1	-0.7
SUMG	Summit	57.13	10	P	P	23 17 28.9	0.0
ESDC	Sonseca Array	58.08	54	P	P	23 17 36.9	+1.1
	comp=Z,3.0nm,0.8s,baz=268,slow=6.8,SNR=21						
ESDC				LR	LR	23 37 26.5	
	comp=Z,36nm,21.5s,baz=282,slow=31						
	comp=Z,3.0nm,0.8s						
PLCA	Paso Flores	58.37	183	P	P	23 17 39.8	+2.2
	comp=Z,1.5nm,0.8s,baz=3.4,slow=3.0,SNR=4.4						
PLCA				LR	LR	23 43 58.2	
	comp=Z,53nm,18.3s,baz=16,slow=37						
	comp=Z,1.5nm,0.8s						
PLCA	Paso Flores	58.37	183	P	P	23 17 38.5	+0.9
PLCA				IAmb	IAmb	23 18 00.0	
	comp=Z,6.7nm,1.4s						
EKA	Eskdalemuir Ar	60.58	36	P	P	23 17 52.5	-0.3
	comp=Z,0.8nm,0.7s,baz=313,slow=3.1,SNR=1.7						
	comp=Z,0.8nm,0.7s						
DBIC	Dimbokro	61.34	92	P	P	23 17 58.1	-0.5
	comp=Z,6.1nm,1.0s,baz=206,slow=6.4,SNR=4.6						
	comp=Z,6.1nm,1.0s						
DBIC	Dimbokro	61.34	92	P	P	23 17 58.2	-0.3
DBIC				IAmb	IAmb	23 18 02.7	
	comp=Z,8.0nm,1.1s						
P33M	Teslin, Yukon	62.79	329	P	P	23 18 08.2	+0.5
P33M				IAmb	IAmb	23 18 46.2	
	comp=Z,3.0nm,1.0s						
A36M	Sachs Harbour	63.61	343	P	P	23 18 13.1	+0.4
INK	Inuvik	65.00	338	P	P	23 18 22.2	+0.3
INK				IAmb	IAmb	23 18 22.7	
	comp=Z,4.1nm,0.8s						
M30M	Minto, Yukon	65.11	331	P	P	23 18 23.3	+0.5
EPYK	Eagle Plains	65.76	335	P	P	23 18 26.8	-0.2
EPYK				IAmb	IAmb	23 19 04.1	
	comp=Z,7.8nm,1.4s						
TORD	Torodi Ar. Bea	65.89	83	P	P	23 18 28.6	-0.1
	comp=Z,1.4nm,0.8s,baz=290,slow=6.2,SNR=7.1						
	comp=Z,1.4nm,0.8s						
TORD	Torodi Ar. Bea	65.89	83	P	P	23 18 28.1	-0.6
F28M	Old Crow	67.19	337	P	P	23 18 36.5	+0.4
BCAR	Beaver Creek A	67.44	332	P	P	23 18 38.4	+0.6
SCRK	Sand Creek	68.49	332	P	P	23 18 45.9	+1.4
SCRK				IAmb	IAmb	23 18 47.0	
	comp=Z,4.9nm,0.9s						
KEST	Kesra	68.77	58	P	P	23 18 46.1	-0.6
	comp=Z,3.3nm,0.8s,baz=270,slow=3.0,SNR=4.5						
KEST				LR	LR	23 44 07.0	
	comp=Z,49nm,21.1s,baz=296,slow=32						
	comp=Z,3.3nm,0.8s						
KEST	Kesra	68.77	58	IAmb	IAmb	23 18 51.4	
	comp=Z,30nm,1.5s						
NOA	NORSAR Array B	68.78	31	P	P	23 18 46.0	-0.2
	comp=Z,1.1nm,0.8s,baz=268,slow=6.4,SNR=3.6						
	comp=Z,1.1nm,0.8s						
BMAR	Burnt Mountain	68.97	336	P	P	23 18 47.9	+0.6
J25K	Salcha River,	69.13	333	P	P	23 18 49.3	+0.9
J25K				IAmb	IAmb	23 18 57.7	
	comp=Z,5.8nm,1.4s						
E25K	Arctic Village	69.39	337	P	P	23 18 50.4	+0.5
E25K				IAmb	IAmb	23 18 51.4	
	comp=Z,3.2nm,0.8s						
ILAR	Eielson Array	69.79	333	P	P	23 18 52.5	+0.1
	comp=Z,1.5nm,0.8s,baz=103,slow=4.7,SNR=18						
	comp=Z,1.5nm,0.8s						
SCM	Sheep Creek Mo	69.97	330	P	P	23 18 54.6	+1.0
HFS	Hagfors	70.00	32	P	P	23 18 54.7	+0.9
	comp=Z,4.2nm,1.0s,baz=309,slow=9.1,SNR=2.4						
	comp=Z,4.2nm,1.0s						
SML	Sawmill	70.44	330	P	P	23 18 57.9	+1.4
GERES	GERESS Array B	70.61	44	P	P	23 18 58.8	+0.9
	comp=Z,0.3nm,0.7s,baz=278,slow=6.6,SNR=2.3						
	comp=Z,0.3nm,0.7s						
GHO	Glory Hole Cre	70.72	330	P	P	23 18 59.5	+1.3
G23K	Bananza Creek	71.08	335	P	P	23 19 01.4	+1.1
G23K				IAmb	IAmb	23 19 03.0	
	comp=Z,4.9nm,1.0s						
C23K	Itkillik River	71.26	339	P	P	23 19 02.1	+0.9
KTH	Kantishna Hill	71.57	332	P	P	23 19 04.0	+0.6
KTH				IAmb	IAmb	23 19 05.7	
	comp=Z,8.9nm,1.0s						
G21K	Allakaket	72.48	335	P	P	23 19 09.2	+0.5
G21K				IAmb	IAmb	23 19 15.9	
	comp=Z,3.6nm,0.9s						
ARCES	ARCESS Array B	74.26	21	P	P	23 19 20.4	+1.3
	comp=Z,3.0nm,0.7s,baz=281,slow=2.3,SNR=6.8						
	comp=Z,3.0nm,0.7s						
ARCES	ARCESS Array B	74.26	21	P	P	23 19 20.2	+1.1
H17K	Granite Mounta	75.31	334	P	P	23 19 26.7	+1.5
FINES	FINESS Array B	75.90	30	P	P	23 19 29.6	+0.9
	comp=Z,1.2nm,0.7s,baz=294,slow=9.4,SNR=3.8						
	comp=Z,1.2nm,0.7s						
FINES	FINESS Array B	75.90	30	P	P	23 19 29.1	+0.5
BRTR	Keskin Array B	86.55	49	P	P	23 20 26.5	+0.5
	comp=Z,0.7nm,0.9s,baz=336,slow=3.2,SNR=2.6						
	comp=Z,0.7nm,0.9s						
BRTR	Keskin Array B	86.55	49	P	P	23 20 26.7	+0.8
ASAR	Alice Springs	159.76	250	PKP	PKPdf	23 27 40.8	-1.3
	comp=Z,0.3nm,0.8s,baz=115,slow=1.2,SNR=4.4						
ASAR				PKPab	pPKPab	23 28 23.1	-0.4
	comp=Z,0.4nm,0.4s,baz=107,slow=4.0,SNR=18						
ASAR	Alice Springs	159.76	250		PKPdf	23 27 40.3	-1.9
WRA	Warramunga Arr	159.86	261	PKP	PKPdf	23 27 44.1	+1.9
	comp=Z,0.7nm,0.8s,baz=89,slow=1.9,SNR=3.3						

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*IDC **31** 23:09:41.8±1.6, 11.°64S×65.°94E, h0^{km}, mb3.5/8, mbtmp3.5/8, MS3.4/1, Error ellipse: s-maj=57.2km s-min=27.9km az=52.0*

ISC 31 23:09:43.6±1.6**, 11.°7S**±0.°3×**65.°9E**±0.°3**, h12**^{km}**, n20, σ0.^{s}33**/10**, mb3.7**/8**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	Diego Carcia H	7.59	59	T	T	23 19 36.2	
	baz=237,slow=76,SNR=15						
H08S2	Diego Garcia H	7.61	59	T	T	23 19 21.6	
	baz=237,slow=76,SNR=17						
H08S3	Diego Garcia H	7.61	59	T	T	23 19 22.7	
	baz=237,slow=76,SNR=24						
H04N2	CROZET ISLANDS	36.43	197	T	T	23 55 07.4	
	baz=25						
H04N1	CROZET ISLANDS	36.44	197	T	T	23 55 26.7	
	baz=25						
H04N3	CROZET ISLANDS	36.45	197	T	T	23 55 17.7	
	baz=25						
LBTB	Lobatse	40.35	245	LR	LR	23 32 22.0	
	comp=Z,48nm,18.3s,baz=342,slow=34						
H01W3	Cape Leeuwin H	49.40	126	T	T	00 11 23.3	
	baz=286,slow=75,SNR=5.0						
H01W2	Cape Leeuwin H	49.40	126	T	T	00 11 24.6	
	baz=286,slow=75,SNR=6.4						
H01W1	Cape Leeuwin H	49.41	126	T	T	00 11 26.0	
	baz=286,slow=75,SNR=6.6						
MKAR	Makanchi Array	60.00	13	P	P	23 19 49.8	-0.3
	0.2nm,0.6s,baz=206,slow=8.0,SNR=4.3						
	0.2nm,0.6s						
KURBB	Kurchatov Arra	62.98	9	P	P	23 20 10.0	0.0
	0.4nm,0.8s,baz=211,slow=7.1,SNR=3.4						
	0.4nm,0.8s						
BVAR	Borovoye Array	64.53	3	P	P	23 20 20.5	+0.3
	0.5nm,0.7s,baz=153,slow=4.8,SNR=2.1						
	0.5nm,0.7s						
ASAR	Alice Springs	65.37	111	P	P	23 20 26.2	-0.3
	0.4nm,0.7s,baz=273,slow=6.6,SNR=6.7						
	0.4nm,0.7s						
WRA	Warramunga Arr	65.99	107	P	P	23 20 31.0	+0.5
	0.4nm,0.7s,baz=277,slow=9.0,SNR=2.4						
	0.4nm,0.7s						
ZALV	Zalesovo Beam	67.29	12	P	P	23 20 37.9	-0.1
	0.5nm,0.6s,baz=176,slow=4.5,SNR=4.0						
	0.5nm,0.6s						
SONM	Songino Array	69.28	28	P	P	23 20 50.9	+0.1
	0.1nm,0.3s,baz=222,slow=7.4,SNR=2.5						
	0.1nm,0.3s						
ESDC	Sonseca Array	82.38	313	P	P	23 22 06.0	+0.2
	0.5nm,0.8s,baz=109,slow=5.3,SNR=4.3						
	0.5nm,0.8s						
PDAR	Pinedale Array	148.75	354	PKPbc	PKPbc	23 29 31.2	-0.4
	0.7nm,0.8s,baz=26,slow=0.9,SNR=5.3						
NVAR	Mina Array Bea	153.06	7	PKPbc	PKiKP	23 29 41.9	-0.1
	0.6nm,0.8s,baz=360,slow=4.4,SNR=1.5						

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*NEIC **31** 23:09:44.6±0.7, 9.°9N±0.°1×84.°46W±0.°04, h60^{km}±8^{km}, ML4.0/24, Error ellipse: s-maj=15.3km s-min=2.9km az=199.0*

*UCR **31** 23:09:44.5±1.1, 9.°96N×84.°46W, h59^{km}±3^{km}, MW4.2*

*CATAC **31** 23:09:45.3±0.2, 10°N±3°×8°4W±°, h41^{km}±7^{km}, M4.1/20, MLv4.1/20, Error ellipse: s-maj=7.9km s-min=3.4km az=44.8, confirmed*

ISC 31 23:09:45.2±1.3**, 9.°96N**±0.°04×**84.°45W**±0.°03**, h57**^{km}±6^{km}**, n123, σ0.^{s}69**/130**, 9C-17D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATEO	Atenas	0.07	74	*e*P	Pn	23 09 53.3	-0.6
ATEO				*e*S	Sn	23 09 60.0	-0.1
PALD	Palmares	0.10	10	⇓*e*P	Pn	23 09 53.4	-0.7
RAMO	San Ramon	0.13	353	*e*S	Sn	23 10 00.8	+0.3
RAMO	San Ramon	0.13	353	*e*P	Pn	23 09 53.7	-0.5
NARAN	Naranjo de Ala	0.16	28	*e*P	Pn	23 09 54.0	-0.3
SARCI	Sarchi	0.17	38	*e*P	Pn	23 09 54.1	-0.2
TCS1	Tacares	0.17	61	⇓P	Pn	23 09 54.0	-0.4
TCS1	Tacares	0.17	61	⇓*e*P	Pn	23 09 54.0	-0.4
PURI	Puriscal	0.18	129	*e*P	Pn	23 09 53.7	-0.7
GREC	Grecia	0.18	51	*e*P	Pn	23 09 54.1	-0.3
ARZA	Esparza	0.22	279	*e*P	Pn	23 09 54.0	-0.4
ZARE	Zarcero	0.23	15	⇓*e*P	Pn	23 09 54.6	-0.2
POAS	San Pedro de P	0.24	60	*e*P	Pn	23 09 54.4	-0.3
BELE	Belen	0.26	86	⇓*e*P	Pn	23 09 54.2	-0.6
SANTA	Santa Ana	0.26	95	*e*P	Pn	23 09 54.0	-0.8
ROBF	Roble, Puntare	0.28	274	*e*P	Pn	23 09 54.4	-0.5
VPS8	V Poas	0.30	43	⇓*e*P	Pn	23 09 55.0	-0.4
VPL1	V. Platanar	0.31	16	⇓*e*P	Pn	23 09 54.8	-0.6
HEME	Heredia, Merce	0.31	83	*e*P	Pn	23 09 55.9	+0.7
VPS5	V. Poas	0.32	43	⇓*e*P	Pn	23 09 54.9	-0.6
ACOS	Acosta	0.33	120	*e*P	Pn	23 09 54.6	-0.8
ACOS				*e*S	Sn	23 10 02.8	0.0
PAVB	Pavas, San Jos	0.33	93	*e*P	Pn	23 09 54.9	-0.5
HDC	Heredia	0.34	83	Pn	Pn	23 09 54.9	-0.6
HDC				Sn	Sn	23 10 02.7	-0.1
HDC				IAML		23 10 04.4	
	comp=N,5µm,0.8s						
HDC				IAML		23 10 04.6	
	comp=E,4µm,0.6s						
HDC	Heredia	0.34	83	*e*P	Pn	23 09 55.1	-0.4
MEXI	Barrio Mexico	0.36	93	*e*P	Pn	23 09 55.4	-0.3
QUEU	Ciudad Quesada	0.36	3	⇓*e*P	Pn	23 09 55.8	+0.1
CENT	San Jose	0.37	94	*e*P	Pn	23 09 56.4	+0.7
LUJA	Lujan	0.38	95	*e*P	Pn	23 09 55.4	-0.5
LUJA				*e*S	Sn	23 10 04.2	+0.7
BITO	Garabito Jaco	0.38	206	*e*P	Pn	23 09 55.1	-0.6
AMPA	Desamparados	0.39	99	*e*P	Pn	23 09 55.3	-0.7
AMPA				*e*S	Sn	23 10 03.9	+0.2
LUPE	Guadalupe	0.39	91	*e*P	Pn	23 09 54.4	-1.6
ECI	Escuela Centro	0.39	93	*e*P	Pn	23 09 55.7	-0.3
SJS3	Mercedes San J	0.39	93	*e*P	Pn	23 09 55.9	-0.2
CORON	Coronado	0.44	88	*e*P	Pn	23 09 56.5	0.0
ARTO	Ro Cuarto	0.45	31	*e*P	Pn	23 09 56.2	-0.3
TRIO	Tres Rios	0.45	97	*e*P	Pn	23 09 56.1	-0.5
CVIMO	Finca Echandi	0.51	82	⇓*e*P	Pn	23 09 57.0	-0.2
PITB	Pirrs, San	0.52	125	⇑*e*P	Pn	23 09 56.4	-0.9
TAGO	Cartago	0.53	100	*e*P	Pn	23 09 57.1	-0.4
CASO	Castillo	0.55	330	*e*P	Pn	23 09 57.8	+0.2
FORC	Fortuna	0.55	337	*e*P	Pn	23 09 57.5	-0.1
VACR	Volcan Arenal	0.56	337	⇓*e*P	Pn	23 09 57.6	-0.1
ARE1	Arenal 1	0.56	332	*e*P	Pn	23 09 57.8	0.0
VARE2	V. Arenal	0.56	332	⇓*e*P	Pn	23 09 57.8	0.0
CEDE	Laguna Cedeo	0.58	335	*e*P	Pn	23 09 58.1	+0.1
REPA	Paraso	0.59	103	*e*P	Pn	23 09 57.8	-0.4
PIEC	Cerro El Cedra	0.59	124	*e*P	Pn	23 09 57.3	-1.0
JTS	Las Juntas de	0.59	304	Pn	Pn	23 09 57.5	-0.6
JTS				Sn	Sn	23 10 07.2	-0.2
JTS				IAML		23 10 07.8	
	comp=E,7µm,0.4s						
JTS				IAML		23 10 08.2	
	comp=E,5µm,0.3s						
JTS	Las Juntas de	0.59	304	P	Pn	23 09 57.5	-0.6
JTS	Las Juntas de	0.59	304	⇑*e*P	Pn	23 09 57.5	-0.6
JUNT	Juntas	0.59	303	⇑*e*P	Pn	23 09 57.6	-0.5
VICA	Volcano Irazu	0.60	87	⇓*e*P	Pn	23 09 58.2	-0.3
REZ	Monterrey de S	0.62	337	*e*P	Pn	23 09 58.4	0.0
TABAC	Tabacon	0.62	330	*e*P	Pn	23 09 58.5	+0.1
RAFA	San Farael, Vo	0.63	90		Pn	23 09 58.6	-0.2
RAFA					Sn	23 10 07.8	-0.9
RAFA				IAML		23 10 16.0	
	comp=E,13µm,0.4s						
RAFA				IAML		23 10 16.9	
	comp=N,11µm,0.4s						
PCAYA	Pacayas	0.63	94	*e*P	Pn	23 09 58.7	0.0
CHIK	Chiripa	0.66	317	*e*P	Pn	23 09 58.8	-0.2
VTR0	Volcan Turrial	0.68	85	*e*P	Pn	23 09 59.2	-0.3
CVTR	Volcan Turrial	0.69	85	*e*P	Pn	23 09 59.3	-0.3
CVTV	Tajo	0.69	86	*e*P	Pn	23 09 59.4	-0.2
VINA	Juan Vinas	0.70	95	*e*P	Pn	23 09 59.0	-0.4
PILE	Guapiles	0.70	69	*e*P	Pn	23 09 59.2	-0.1
VTCV	VTCV, Calle Va	0.71	88	⇑*e*P	Pn	23 09 59.7	0.0
ABRB	Las Abras (San	0.72	86	*e*P	Pn	23 09 60.0	+0.1
TURIB	Turrialba	0.76	94	*e*P	Pn	23 09 59.6	-0.4
COVE	Coope Vega, Sa	0.76	4	⇓P	Pn	23 09 59.4	-0.7
COVE	Coope Vega, Sa	0.76	4	S	Sn	23 10 10.8	0.0
CNAS	Canas	0.79	307	*e*S	Sn	23 10 13.8	+2.4
CNAS	Canas	0.79	307	*e*P	Pn	23 10 01.3	+0.9
INVE	Universidad In	0.79	311	⇑*e*P	Pn	23 10 00.4	-0.1
QUEB	Quebradon, Cot	0.79	327	*e*P	Pn	23 10 00.1	-0.4
CARI	Cariari	0.81	60	*e*P	Pn	23 10 00.7	-0.1
TIMP	Tierras Morena	0.83	318	⇑*e*P	Pn	23 10 00.7	-0.4
RVLA	Villa Bonita	0.86	80	*e*P	Pn	23 10 01.6	+0.2
LCOCO	El Coco	0.89	82	*e*P	Pn	23 10 01.7	-0.1
TRT2	Tortugero	0.92	50	⇓P	Pn	23 10 01.5	-0.7
TRT2	Tortugero	0.92	50	S	Sn	23 10 14.5	-0.1
TRT2	Tortugero	0.92	50	*e*P	Pn	23 10 01.4	-0.7
MOTZ	Rio Naranjo	0.95	320	*e*P	Pn	23 10 02.3	-0.2
CMARA	Lajas Hojancha	0.96	274	P	Pn	23 10 01.9	-0.8
PLVR	Palo Verde	0.97	294	*e*P	Pn	23 10 02.5	-0.4
CUI	Cuipilapa	0.99	315	*e*P	Pn	23 10 02.7	-0.4
HORNC	Hornillas	1.04	316	⇑*e*P	Pn	23 10 03.2	-0.6
INDI	Punta indio, G	1.04	265	*e*P	Pn	23 10 02.1	-1.6
UPAL	Upala	1.08	329	P	Pn	23 10 01.2	-3.1
UPAL	Upala	1.08	329	S	Sn	23 10 18.4	0.0

JUD3	Juan Diaz 3	1.09	281		Pn	23 10 03.8	-0.7
SAJE	San Jernim	1.11	123	eP	Pn	23 10 04.2	-0.6
OCHAL	Ojochal	1.17	137	P	Pn	23 10 04.8	-0.7
VRLE	La Escondida,	1.22	313	eP	Pn	23 10 05.6	-0.6
SAJU	San Juanillo,	1.25	275	eP	Pn	23 10 05.0	-1.5
ALIBA	Liberia Airpor	1.25	300	eP	Pn	23 10 06.6	+0.1
LAPC	Finca la Perla	1.26	310	⇑eP	Pn	23 10 05.9	-0.7
ELI1	Hacienda Flor	1.28	302	P	Pn	23 10 06.6	-0.3
ELI1	Hacienda Flor	1.28	302	S	Sn	23 10 23.6	+0.5
DRK0	Durika	1.38	120	P	Pn	23 10 07.0	-1.4
DRK0	Durika	1.38	120	S	Sn	23 10 25.2	-0.5
PTJ1	Puerto Jimnez	1.81	141	P	Pn	23 10 16.3	+2.2
ALCO	Alturas Coton,	1.89	122	eP	Pn	23 10 14.6	-0.7
PIRO	Carate, Puerto	1.90	144	Pn	Pn	23 10 16.3	+1.0
PIRO	Carate, Puerto	1.90	144	P	Pn	23 10 16.1	+0.8
MORN	Al O del Volca	1.97	323	P	Pn	23 10 15.8	-0.4
JAPN	Al SSO del Vol	1.97	322	P	Pn	23 10 15.2	-1.1
BRU2	Volcan	2.09	124	Pn	Pn	23 10 17.6	-0.4
BRU2	Volcan	2.09	124	P	Pn	23 10 17.7	-0.3
BOAB	BOACO BROADBAN	2.75	334		Pn	23 10 26.1	-0.8
BOAB				IAML		23 10 59.4	
	comp=E,207nm,0.6s						
BOAB				IAML		23 11 16.1	
	comp=N,157nm,0.8s						
BOAB	BOACO BROADBAN	2.75	334	⇑P	Pn	23 10 26.3	-0.6
MGAN	Managua	2.80	321	Pn	Pn	23 10 26.9	-0.7
COPN	Copaltepe	3.05	317	⇓P	Pn	23 10 30.0	-1.0
MATN	Matagalpa	3.29	334	P	Pn	23 10 32.9	-1.5
CNGA	Al SSO del Vol	3.35	319	P	Pn	23 10 35.8	+0.6
CNGN	Cerro Negro	3.35	319	Pn	Pn	23 10 35.0	-0.2
CNGN				IAML		23 11 24.9	
	comp=N,760nm,0.4s						
CNGN				IAML		23 11 59.6	
	comp=E,566nm,1.1s						
CNGN	Cerro Negro	3.35	319	P	Pn	23 10 35.2	-0.1
HERN	Volcan Telica	3.52	319	Pn	Pn	23 10 37.4	-0.2
HERN				IAML		23 12 04.3	
	comp=E,939nm,0.6s						
HERN				IAML		23 12 06.2	
	comp=N,811nm,0.6s						
LIMN	Finca el Limon	3.61	329	⇓P	Pn	23 10 38.5	-0.3
PKGN	Cerro Pekin	3.66	318	P	Pn	23 10 40.0	+0.6
CRIN	San Cristobal	3.73	317	Pn	Pn	23 10 40.0	-0.4
CRIN				IAML		23 11 10.0	
	comp=E,155nm,0.8s						
CRIN				IAML		23 12 22.3	
	comp=N,166nm,0.8s						
SIUN	Universidad Ur	3.75	355	Pn	Pn	23 10 40.1	-0.6
SIUN				IAML		23 11 36.0	
	comp=E,25nm,0.5s						
SIUN				IAML		23 11 37.1	
	comp=N,35nm,0.7s						
SIUN	Universidad Ur	3.75	355	P	Pn	23 10 40.3	-0.3
RCPN	Sur Rio San Ju	3.89	336	P	Pn	23 10 43.0	+0.3
RCVN	Varillal2	3.99	335	P	Pn	23 10 44.1	+0.1
MTO3	Montecristo	6.52	313	Pn	Pn	23 11 18.7	-0.2
TEIG	Tepich	10.86	341	Pn	Pn	23 12 18.7	+0.7

*CATAC **31** 23:10:26.6±0.4, 8°N±3°×8°3W±°, h21^{km}±1^{km}, M4.3/11, MLv4.3/11, Error ellipse: s-maj=6.2km s-min=4.0km az=178.8, confirmed*
*UCR **31** 23:10:26.5±1.1, 8°.33N×82°.82W, h29^{km}±3^{km}, MW4.3*
*UPA **31** 23:10:27.2±1.5, 8°.39N×82°.80W, h25^{km}±2^{km}, MW4.1, Fault plane solution: NP1:ϕ_s120.00000°, δ71.00000°, λ38.00000°.*
ISC 31 23:10:27.3±0.9, **8°.38N**±0°.02×**82°.80W**±0°.02, **h35**^{km}±4^{km}, **n114**, σ**1^{s}.43**/162, **8C-10D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	La Esperanza,	0.03	13	eP	Pb	23 10 31.8	-1.3
LESP3				eS	Sb	23 10 34.9	-2.1
ARIEL	Armuelles	0.10	211	⇑eP	Pb	23 10 36.7	+3.4
LPPC	Paso Canoas	0.16	345	⇑eP	Pn	23 10 32.5	-0.5
LPPC				eS	Sb	23 10 37.5	-0.7
PTPA	Petro Terminal	0.19	202	⇑eP	Pn	23 10 32.5	-1.0
PTPA				eS	Sb	23 10 38.4	-0.2
PTPM	Petroterminale	0.19	205	eP	Pn	23 10 32.6	-0.9
PTPM				eS	Sb	23 10 38.4	-0.2
CDITO	Canoas	0.21	339	P	Pb	23 10 33.0	-1.2
CDITO	Canoas	0.21	339	S	Sn	23 10 38.3	+0.4
LIMO3	Limones	0.28	194	eP	Pb	23 10 33.8	-1.2
LMNES	Limones	0.28	193	⇑iP	Pb	23 10 33.6	-1.4
LMNES	Limones	0.28	193	⇑eP	Pb	23 10 33.6	-1.4
BAGA3	Bagala, Chiriq	0.28	71	eP	Pb	23 10 34.5	-0.5
BAGA3				eS	Sb	23 10 39.6	-0.6
DMCAL	E. de Neily	0.29	1	eP	Pb	23 10 34.5	-0.7
NELY	Ciudad Neily	0.31	332	⇑eP	Pb	23 10 34.2	-1.2
DVD	David	0.35	80	eP	Pb	23 10 35.0	-0.8
DVD				eS	Sb	23 10 40.4	-1.3
LOCO3	Loma Colorada,	0.38	85	eP	Pb	23 10 35.4	-0.8
LOCO3				eS	Sn	23 10 42.1	-0.1
JEFFS	S de V. Baru	0.39	42	⇓eP	Pb	23 10 36.0	-0.5
LOMA3	Las Lomas, Chi	0.41	82	eP	Pb	23 10 35.6	-1.0
LOMA3				eS	Sb	23 10 42.7	-0.3
CLLRA	Cordillera,	0.41	26	⇓iP	Pb	23 10 36.0	-0.8
CLLRA	Cordillera,	0.41	26	eP	Pb	23 10 36.0	-0.8
MLIR3	Monte Lirio, C	0.41	356	eP	Pb	23 10 36.6	-0.2
MLIR3				eS	Sb	23 10 42.3	-1.1
BRU2	Volcan	0.43	14	⇓iP	Pb	23 10 36.4	-0.7
BRU2				eP	Pb	23 10 36.4	-0.7
BRU2				eS	Sn	23 10 44.1	+0.3
BRU2				eS	Sn	23 10 44.1	+0.3
BRU2	Volcan	0.43	14	S	Sb	23 10 43.7	-0.1
BRU2	Volcan	0.43	14	P	Pb	23 10 36.3	-0.8
BRU2	Volcan	0.43	14	eP	Pb	23 10 36.3	-0.7
BRU2				eS	Sn	23 10 44.0	+0.3
FITO	Golfito	0.43	305	eP	Pb	23 10 34.8	-2.2
FITO				eS	Sb	23 10 41.6	-2.0
PTAR3	Potrerillos Ar	0.43	43	eP	Pb	23 10 36.5	-0.6
PTAR3				eS	Sb	23 10 43.2	-0.6
EDAD	Golfito	0.46	307	⇓eP	Pb	23 10 35.3	-2.1
EDAD				eS	Sb	23 10 42.6	-1.8
CHIR3	Chiriqui UPA,	0.46	88	eP	Pb	23 10 36.4	-1.0
CHIR3				eS	Sb	23 10 43.9	-0.5
VITO	San Vito	0.47	339	⇑eP	Pb	23 10 37.1	-0.6
BQTLY	Boquete Panama	0.50	41	⇓iP	Pb	23 10 37.3	-0.9
BQTLY	Boquete Panama	0.50	41	⇓eP	Pb	23 10 37.3	-0.9
BQSF3	Alto Boquete,	0.51	45	eP	Pb	23 10 37.3	-1.0
BQSF3				eS	Sb	23 10 44.5	-1.4
PTJ1	Puerto Jimnez	0.52	288	eP	Pb	23 10 37.0	-1.4
PTJ1				eS	Sb	23 10 43.6	-2.4
PTJ1	Puerto Jimnez	0.52	288	P	Pb	23 10 37.0	-1.4
PTJ1	Puerto Jimnez	0.52	288	S	Sb	23 10 46.1	+0.1
PIRO	Carate, Puerto	0.54	273	eP	Pb	23 10 36.6	-1.9
PIRO				eS	Sb	23 10 45.6	-0.6
PIRO	Carate, Puerto	0.54	273	P	Pb	23 10 36.4	-2.1
PIRO	Carate, Puerto	0.54	273	⇓eP	Pb	23 10 36.5	-2.0
LNBQ3	Los Naranjos,	0.54	40	eP	Pb	23 10 37.6	-1.2
LNBQ3				eS	Sb	23 10 46.0	-0.7
PSOM3	Paja de Sombre	0.56	57	eP	Pb	23 10 37.8	-1.2
PSOM3				eS	Sb	23 10 46.7	-0.4
ALCO	Alturas Coton,	0.57	356	eP	Pb	23 10 38.4	-0.8
RBALA	Bur	0.81	52	⇓iP	Pn	23 10 41.8	-0.5
RBALA				eS	Sn	23 10 53.0	0.0
RBALA	Bur	0.81	52	⇓eP	Pn	23 10 41.8	-0.5
CHGR2	Aguacate	0.85	49	eP	Pn	23 10 42.2	-0.6
CHGR2				eS	Sn	23 10 53.9	-0.3
PANP	Palmar Norte	0.88	312	eP	Pn	23 10 42.3	-0.8
REME3	Remedios, Chir	0.97	99	eP	Pn	23 10 44.0	-0.4
RMDIO	Remedios, Chir	0.97	99	⇑iP	Pn	23 10 44.2	-0.1
DRK0	Durika	0.99	333	eP	Pn	23 10 44.1	-0.8
DRK0				eS	Sn	23 10 57.6	-0.1
DRK0	Durika	0.99	333	S	Sn	23 10 56.6	-1.0
DRK0	Durika	0.99	333	P	Pn	23 10 43.7	-1.1
DRK0	Durika	0.99	333	eP	Pn	23 10 43.9	-0.9
NANC3	Nancito, Chiri	1.06	97	eP	Pn	23 10 44.9	-0.8
NANC3				eS	Sn	23 10 59.2	-0.1
KKNTU	Kakintº	1.08	65	⇓iP	Pn	23 10 45.3	-0.7
KKNTU	Kakintº	1.08	65	eP	Pn	23 10 45.3	-0.7
CNI2	El Empalme, Bo	1.09	17	eP	Pn	23 10 45.5	-0.6
CNI2				eS	Sn	23 10 59.0	-1.0
EDPE	Pejibaye, P	1.09	316	eP	Pn	23 10 45.9	-0.2
PDCAN	Manzana , Fuen	1.09	94	eP	Pn	23 10 45.2	-0.9
OCHAL	Ojochal	1.10	311	P	Pn	23 10 45.6	-0.7
OCHAL	Ojochal	1.10	311	S	Sn	23 11 01.3	+1.0
PVID3	Puerto Vidal,	1.22	105	eP	Pn	23 10 46.5	-1.4
MESA3	La Mesa, Verag	1.61	98	eP	Pn	23 10 53.4	+0.1
MESA3				eS	Sn	23 11 13.4	+0.6
GMAL	Guarumal, Vera	1.66	111	eP	Pn	23 10 54.3	+0.3
GMAL				eS	Sn	23 11 12.4	-1.7
GMAL	Guarumal, Vera	1.66	111	eP	Pn	23 10 53.1	-0.9
RSUS3	Rio de Jesus,	1.67	103	eP	Pn	23 10 53.2	-0.8
RSUS3				eS	Sn	23 11 13.9	-0.3
PIEC	Cerro El Cedra	1.69	317	eP	Pn	23 10 55.1	+0.5
RAZU	San Marcos de	1.76	317	eP	Pn	23 10 57.4	+2.0
LCR2	La Lucha 2	1.81	319	S	Sn	23 11 19.0	+1.0
STIA3	Santiago, Vera	1.83	99	eP	Pn	23 10 55.8	-0.5
STIA3				eS	Sn	23 11 19.4	+1.2
VTCV	VTCV, Calle Va	1.84	330	eP	Pn	23 10 58.1	+1.4
RESJ	San Isidro (Tu	1.84	333	eP	Pn	23 10 58.2	+1.7
LCOCO	El Coco	1.85	336	eP	Pn	23 10 58.5	+1.9
ABRB	Las Abras (San	1.86	331	eP	Pn	23 10 58.4	+1.5
RAFA	San Farael, Vo	1.86	328	eP	Pn	23 10 59.2	+2.2
CVTV	Tajo	1.87	330	eP	Pn	23 10 59.0	+1.9
VTR0	Volcan Turrial	1.89	330	eP	Pn	23 10 58.8	+1.3
CVTR	Volcan Turrial	1.89	330	eP	Pn	23 10 59.0	+1.6
MARI3	Mariato, Verag	1.93	112	eP	Pn	23 10 59.1	+1.4
MARI3				eS	Sn	23 11 21.1	+0.4
CALO3	Calobre, Verag	1.94	91	eP	Pn	23 10 58.1	+0.3
CALO3				eS	Sn	23 11 19.7	-1.2
CORON	Coronado	1.98	323	eP	Pb	23 11 01.8	-1.1
SJS3	Mercedes San J	1.99	321	eP	Pn	23 11 01.1	+2.5
SJS	Escuela Geolog	1.99	321	eP	Pn	23 11 00.9	+2.3
HEME	Heredia, Merce	2.08	321	eP	Pb	23 11 03.4	-1.1
BELE	Belen	2.10	319	eP	Pn	23 11 02.0	+1.9
CRIS3	El Cristo, Coc	2.16	93	eP	Pn	23 11 01.3	+0.5
CRIS3				eS	Sn	23 11 27.6	+1.2
CACAO	El Cacao, Vera	2.17	118	eP	Pn	23 11 02.9	+1.9
CACAO				eS	Sn	23 11 29.0	+2.3
TCS1	Tacares	2.22	318	P	Pn	23 11 04.8	+3.0
TCS1	Tacares	2.22	318	eP	Pn	23 11 04.4	+2.6
TRT2	Tortugero	2.36	337	P	Pn	23 11 05.1	+1.6
TRT2	Tortugero	2.36	337	S	Sn	23 11 32.8	+1.5
TRT2	Tortugero	2.36	337	eP	Pn	23 11 05.0	+1.6
CHIT3	Chitre	2.39	100	eP	Pn	23 11 04.5	+0.6
CHIT3				eS	Sn	23 11 33.0	+0.9
TOSI3	Tonosi	2.52	112	eP	Pn	23 11 08.1	+2.3
TOSI3				eS	Sn	23 11 37.2	+1.9
AZU	Azuero	2.56	103	eP	Pn	23 11 08.2	+1.8
AZU				eS	Sn	23 11 36.9	+0.6
AZU	Azuero	2.56	103	eP	Pn	23 11 08.3	+2.0
PCRI3	Pocri, Los San	2.75	105	eP	Pn	23 11 12.2	+3.3
PCRI3				eS	Sn	23 11 40.7	-0.2
ACHO3	Achotines, Los	2.77	110	eP	Pn	23 11 11.2	+2.0
ACHO3				eS	Sn	23 11 42.7	+1.3
ARE1	Arenal 1	2.81	318	eP	Pn	23 11 13.7	+3.9
VARE2	V. Arenal	2.81	318	eP	Pn	23 11 13.7	+3.9
JTS	Las Juntas de	2.85	312	eP	Pn	23 11 11.7	+1.3
JTS				eS	Sn	23 11 44.8	+1.2
JTS	Las Juntas de	2.85	312	P	Pn	23 11 10.9	+0.5
JTS				S	Sn	23 11 44.9	+1.2
ZANG	Zanguenga, Cho	2.95	79	eP	Pn	23 11 15.2	+3.5
ZANG				eS	Sn	23 11 45.9	-0.1
QUEB	Quebradon, Cot	3.04	317	eP	Pn	23 11 16.6	+3.6
CMARA	Lajas Hojancha	3.06	302	S	Sn	23 11 49.7	+0.8
CMARA	Lajas Hojancha	3.06	302	P	Pn	23 11 13.9	+0.6
GAMB1	Gamboa	3.14	76	eP	Pn	23 11 15.7	+1.4
GAMB1				eS	Sn	23 11 51.3	+0.7
FRIJ	El Hiral	3.15	74	eP	Pn	23 11 17.2	+2.8
FRIJ				eS	Sn	23 11 52.3	+1.5
UPA	Univ. de Panam	3.28	79	eP	Pn	23 11 16.6	+0.4
UPA				eS	Sn	23 11 54.2	+0.1
ALIBA	Liberia Airpor	3.49	309	eP	Pn	23 11 21.6	+2.5
BUAI	Buenos Aires	3.52	315	eP	Pn	23 11 22.1	+2.5
ELI1	Hacienda Flor	3.53	310	P	Pn	23 11 22.5	+2.8
ELI1	Hacienda Flor	3.53	310	S	Sn	23 12 02.1	+1.8
CNTA3	Canitas, Panam	3.95	77	eP	Pn	23 11 25.8	+0.4
TOTI	Torti	4.47	83	eP	Pn	23 11 33.0	+0.4
TOTI				eS	Sn	23 12 23.3	-0.1
UPD2	Meteti	4.73	88	eP	Pn	23 11 36.2	0.0
UPD2				eS	Sn	23 12 30.7	+0.7

IDC 31 23:49:27.4±7.8, **6°.96S**×**129°.45E**, **h218**^{km}±82^{km}, **mb3.5**/1, **mbtmp3.8**/5, **Error ellipse: s-maj=76.9km s-min=21.5km az=44.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	6.57	240	P	Pn	23 51 02.9	+0.6
	4.0nm,0.3s,baz=0.0,slow=0.0,SNR=1.2						
BATI				S	S	23 52 18.5	+0.8
	4.4nm,0.4s,baz=30,slow=20,SNR=1.5						
FITZ	Fitzroy Crossi	11.68	198	P	Pn	23 52 07.0	-0.8
	0.7nm,0.3s,baz=308,slow=14,SNR=1.6						
FITZ				S	S	23 54 12.4	-4.5
	2.1nm,0.9s,baz=80,slow=17,SNR=1.6						
WRA	Warramunga Arr	13.75	160	P	Pn	23 52 33.0	-0.8
	0.5nm,0.4s,baz=337,slow=13,SNR=13						
WRA				S	S	23 54 57.8	-8.2
	0.2nm,0.3s,baz=13,slow=21,SNR=6.0						
ASAR	Alice Springs	17.15	166	P	P	23 53 13.4	+0.4
	0.9nm,0.5s,baz=343,slow=9.2,SNR=30						
MKAR	Makanchi Array	67.89	327	P	P	00 00 02.5	0.0
	0.7nm,0.4s,baz=114,slow=8.2,SNR=22 0.7nm,0.4s						

*IDC **31** 23:56:55.0±1.1, 20°.26S×169°.03E, h0^{km}, mb3.9/9, mbtmp3.8/10, ML3.0/1, MS3.2/1, Error ellipse: s-maj=36.6km s-min=22.6km az=153.0*
*NEIC **31** 23:56:59.9±1.0, 20°.54S±0°.07×168°.96E±0°.04, h21^{km}±7^{km}, mb4.3/11, Error ellipse: s-maj=10.2km s-min=5.2km az=185.0*
ISC 31 23:56:59.9±0.7, **20°.50S**±0°.07×**169°.01E**±0°.08, **h31**^{km}, **n28**, σ**0^{s}.96**/32, **mb4.0**/12, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	1.33	223		Pn	23 57 22.1	-0.3
MARNC				Sn	Sn	23 57 38.1	-1.0
PINNC	Pines Island,	2.55	214	Pn	Pn	23 57 39.2	0.0
PINNC				Sn	Sn	23 58 09.6	+0.4
DZM	Mont Dzumac	2.85	236	Pn	Pn	23 57 44.0	+0.5
	2.0nm,0.3s,baz=114,slow=15,SNR=59						
DZM				Sn	Sn	23 58 17.2	+0.4
	baz=90,slow=20 6.6nm,0.3s						
DZM	Mont Dzumac	2.85	236	Pn	Pn	23 57 43.4	0.0
DZM				Sn	Sn	23 58 16.1	-0.7
SANVU	Saraoutou	5.31	341	Pn	Pn	23 58 17.7	+0.5
RAO	Raoul Island	14.71	129	Pn	Pn	00 00 26.0	+0.1
CTA	Charters Tower	21.34	267	P	P	00 01 45.9	+1.2
	3.9nm,0.7s,baz=90,slow=12,SNR=8.2						
CTA				LR	LR	00 09 47.5	
	comp=Z,56nm,18.0s,baz=36,slow=36 3.9nm,0.7s						
CTAO	Charters Tower	21.34	267		P	00 01 46.5	+1.8
CTAO				IAmb	IAmb	00 01 50.0	
	comp=Z,4.4nm,0.7s						
COEN	Coen	25.50	281	P	P	00 02 27.7	+2.0
STKA	Stephens Creek	27.00	240	P	P	00 02 40.5	+1.3
	comp=Z,1.5nm,0.6s,baz=63,slow=10,SNR=3.8 comp=Z,1.5nm,0.6s						
STKA	Stephens Creek	27.00	240	P	P	00 02 39.2	0.0
STKA				IAmb	IAmb	00 02 41.9	
	comp=Z,7.7nm,0.8s						
WR8	Warramunga Arr	32.35	265	P	P	00 03 26.3	-0.5
WR8				IAmb	IAmb	00 03 34.5	
	comp=Z,5.3nm,1.1s						
WB0	Warramunga Arr	32.47	265	P	P	00 03 27.4	-0.5
WB0				IAmb	IAmb	00 03 28.3	
	comp=Z,6.3nm,1.2s						
WRA	Warramunga Arr	32.50	265	P	P	00 03 27.9	-0.3
	comp=Z,0.7nm,0.5s,baz=93,slow=8.5,SNR=11 comp=Z,0.7nm,0.5s						
WRA	Warramunga Arr	32.50	265	P	P	00 03 26.4	-1.7
AS31	Alice Springs	32.63	258	P	P	00 03 29.6	+0.4
AS31				IAmb	IAmb	00 03 30.7	
	comp=Z,1.7nm,0.8s						
ASAR	Alice Springs	32.63	258	P	P	00 03 29.7	+0.5
	comp=Z,4.4nm,0.7s,baz=82,slow=9.1,SNR=58 comp=Z,4.4nm,0.7s						
ASAR	Alice Springs	32.63	258	P	P	00 03 28.6	-0.6
MTN	Manton Dam	37.01	276	P	P	00 04 07.2	+0.2
KNRA	Kununurra	38.49	270	P	P	00 04 19.9	+0.3
QSPA	South Pole Qui	69.56	180	P	P	00 08 06.7	+1.0
	comp=Z,1.2nm,1.1s,baz=356,slow=2.8,SNR=4.4 comp=Z,1.2nm,1.1s						
QSPA	South Pole Qui	69.56	180	P	P	00 08 07.0	+1.3
QSPA				IAmb	IAmb	00 08 19.3	
	comp=Z,3.8nm,1.2s						
CMAR	Chiang Mai Arr	78.83	295	P	P	00 08 58.3	-2.1
	comp=Z,0.3nm,0.4s,baz=113,slow=7.0,SNR=4.0 comp=Z,0.3nm,0.4s						
SONM	Songino Array	88.10	323	P	P	00 09 46.0	-1.5
	comp=Z,0.4nm,0.8s,baz=146,slow=4.7,SNR=2.8 comp=Z,0.4nm,0.8s						
SONM	Songino Array	88.10	323	P	P	00 09 47.4	-0.1
SONM				IAmb	IAmb	00 09 59.0	
	comp=Z,1.3nm,1.0s						
NVAR	Mina Array Bea	89.80	49	P	P	00 09 55.7	-0.1
	comp=Z,0.1nm,0.3s,baz=205,slow=2.2,SNR=1.4 comp=Z,0.1nm,0.3s						
TXAR	Lajitas Array	97.56	62	P	P	00 10 31.5	-0.1
	comp=Z,0.1nm,0.3s,baz=246,slow=4.4,SNR=1.0 comp=Z,0.1nm,0.3s						
GERES	GERESS Array B	145.49	331	PKPbc	PKPdf	00 16 34.5	-0.5
	comp=Z,0.6nm,0.7s,baz=46,slow=4.7,SNR=8.9						

ISC Computed Locations for December 2019

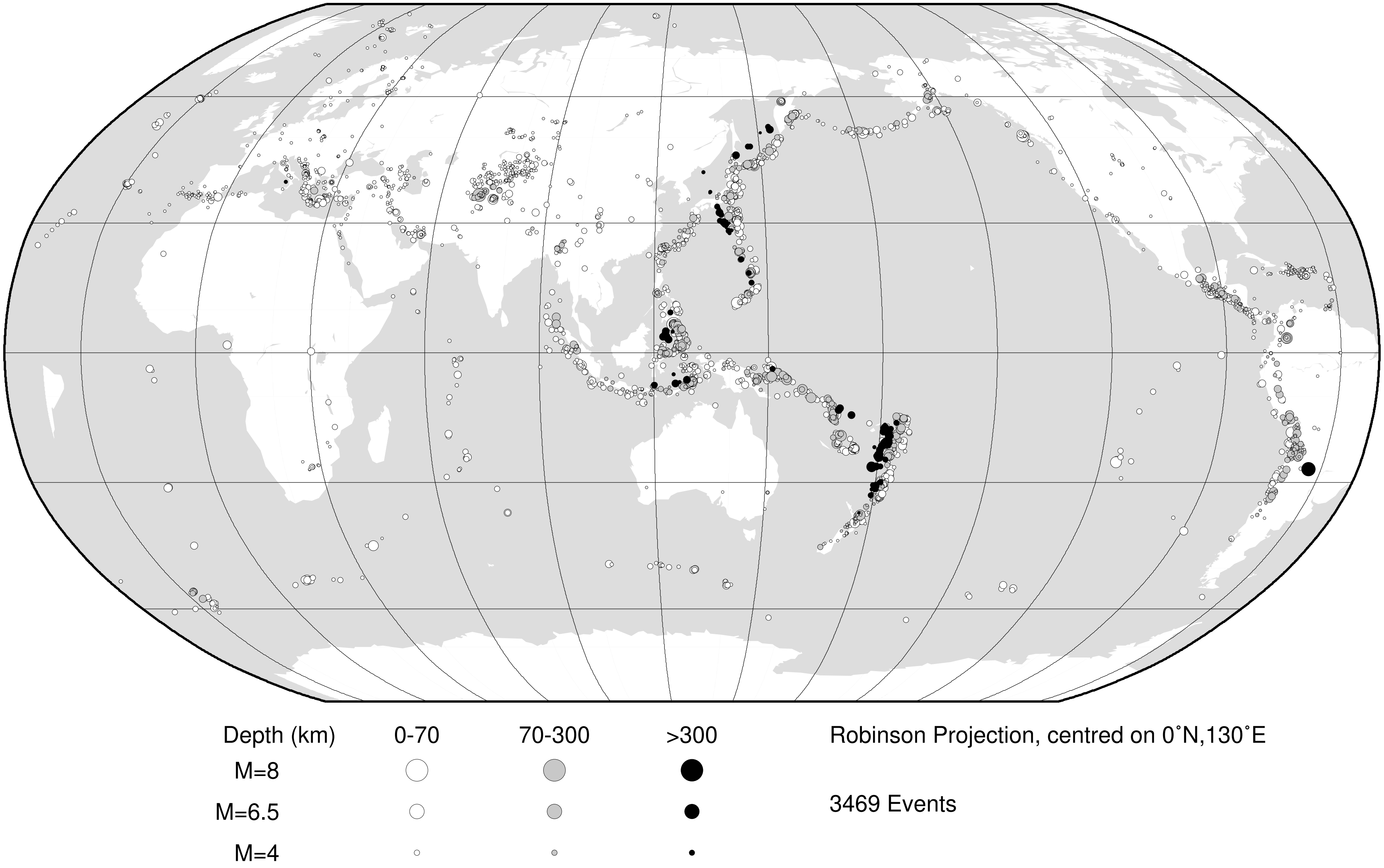

Robinson Projection, centred on 0˚N,130˚E

3469 Events